



Town of Johnstown

TOWN COUNCIL REGULAR MEETING

450 S. Parish, Johnstown, CO
Monday, March 20, 2023 at 7:00 PM

MISSION STATEMENT: Enhancing the quality of life of our residents, businesses, and visitors through community focused leadership.

AGENDA

CALL TO ORDER

Pledge of Allegiance

ROLL CALL

AGENDA APPROVAL

SPECIAL PRESENTATIONS

1. Night of Champions Proclamation

PUBLIC COMMENT

Members of the audience are invited to speak at the Council meeting. Public Comment is reserved for citizen comments on items not contained on the Public Hearing portion of the agenda. Citizen comments are limited to three (3) minutes per speaker. When several people wish to speak on the same position on a given item, they are requested to select a spokesperson to state that position.

CONSENT AGENDA

The Consent Agenda is a group of routine matters to be acted on with a single motion and vote. Council or staff may request an item be removed from the Consent Agenda and placed on the Regular Agenda for discussion.

- [2.](#) March 6, 2023 Meeting Minutes
- [3.](#) Ordinance 2023-243 An Ordinance concerning Municipal Court procedures
- [4.](#) Resolution No. 2023-15 Appointing Deputy Municipal Judges for the Municipal Court
- [5.](#) First Amendment to the Intergovernmental Agreement with Larimer County for Contributions to Roadway Improvements Concerning Maintenance of Public Roadway (LCR 14)
- [6.](#) Second Amendment to Intergovernmental Agreement Between the Town Of Johnstown and the Little Thompson Water District
- [7.](#) Intergovernmental Agreement with Larimer County For County Road 3
- [8.](#) February 2023 Financial Statements

TOWN MANAGER REPORT

TOWN ATTORNEY REPORT

The Community That Cares

johnstown.colorado.gov

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO 80534 | F: 970.587.0141

NEW BUSINESS

- [9.](#) An Agreement Between the Town of Johnstown and D2C Architects for the Design and Expansion of the Police Department
- [10.](#) A Guaranteed Maximum Price (GMP) Construction Award to Moltz Construction for the Central Wastewater Treatment Plant
- [11.](#) An Amendment to Construction Engineering Services with Aqua Engineering for the Central Wastewater Treatment Plant
- [12.](#) WTP North Ground Storage Tank Emergency Repair
- [13.](#) RFP Award for Aquatic Center Feasibility Study
- [14.](#) Downtown Johnstown Branding & Wayfinding Project - Final Brand Presentation
- [15.](#) Resolution 2023-16 Findings of Fact and Conclusions Regarding the Archdiocese Annexation No. 1 and Archdiocese Annexation No. 2

PUBLIC HEARING

- [16.](#) Ordinance 2023-244 regarding the Archdiocese Annexation No. 1 and Archdiocese Annexation No. 2
- [17.](#) Ordinance 2023-245 Approving H-A Zoning for the property known as Archdiocese Annexation No. 1 and PUD-MU Zoning for the property known as Archdiocese Annexation No. 2
- [18.](#) Ordinance 2023-246 Approving the Outline Development Plan for Dove Solar
- [19.](#) Resolution 2023-17 Approving a Use by Special Review for the Dove Solar Array

COUNCIL REPORTS AND COMMENTS

MAYOR'S COMMENTS

INFORMATIONAL ITEMS

- [20.](#) Informational Items

ADJOURN

AMERICANS WITH DISABILITIES ACT NOTICE

In accordance with the Americans with Disabilities Act, and other applicable laws, persons who need accommodation in order to attend or participate in this meeting should contact Town Hall at (970) 587-4664 no later than 48 hours before the meeting in order to request such assistance.



Town of Johnstown

TOWN COUNCIL REGULAR MEETING

450 S. Parish, Johnstown, CO
Monday, March 06, 2023 at 7:00 PM

MINUTES

CALL TO ORDER

Mayor Gary Lebsack called the meeting to order at 7:00 p.m. and led the Pledge of Allegiance.

Pledge of Allegiance

ROLL CALL

Present:

Mayor Lebsack

Councilmember Dominguez

Councilmember Mellon

Councilmember Molinar

Councilmember Morris

Councilmember Young

Absent:

Councilmember Berg

AGENDA APPROVAL

Councilmember Young moved to approve the agenda.

Councilmember Mellon seconded and the motion passed.

SPECIAL PRESENTATIONS

1. Business of the Month

Sarah Crosthwaite, Economic Development Manager presented Crumble Cookie with Business of the Month.

PUBLIC COMMENT

A comment from was read into the record regarding vehicle thefts.

CONSENT AGENDA

Councilmember Mellon moved to approve the consent agenda.

Councilmember Molinar seconded and the motion passed.

2. February 22, 2023 Meeting Minutes

3. Ordinance 2023-242 Amending Article II of Chapter 11 of the Johnstown Municipal Code concerning Use and Excavation of Public Right-of-way.

4. Resolution 2023-12 Approving the Right of Way Dedication depicted on the 2534 West Second Filing Subdivision Plat

5. Resolution 2023-14, Resolution Approving Johnstown Village Metropolitan District No. 2's Request for a Recurring Fee for a Limited Duration

The Community That Cares

johnstown.colorado.gov

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO 80534 | F: 970.587.0141

6. February 2023 List of Bills
7. Updated December 2022 FS

TOWN MANAGER REPORT

8. Town Manager's Report

Matt LeCerf, Town Manager, presented the monthly report was Council requested more information on the Town's website compliance and a first quarter sales tax report.

TOWN ATTORNEY REPORT

There was no Town Attorney report.

NEW BUSINESS

9. Resolution 2023-11 Amending the Town of Johnstown Fee Schedule

Devon McCarty, Finance Director, the updated fee schedule for 2023, noting the most changed were fees for Municipal Court and right-of-way fees that was finalized earlier on this agenda.

Councilmember Morris moved to approve Resolution 2023.-11 amending the Consolidated Town Fee Schedule as presented.

Councilmember Mellon seconded and the motion passed.

10. Construction Contract with Morton Electric Inc for SH 60 and Carlson Blvd Intersection Improvements

Troy White, Public Works Director, reviewed the budget for this project, noting there were four bids submitted.

Councilmember Mellon moved to approve the construction contract with Morton Electric, INC. for the SH 60 and Carlson Blvd Intersection Improvements in the amount of \$714,670.70.

Councilmember Molinar provided the second and the motion passed.

11. Design contract with JWO Engineering for the Design of Interim Improvements to the SH 60 and Colorado Blvd.

Mr. White presented this item noted some preliminary design work needed to be done for this project as the current angle of the intersection is skewed.

Councilmember Mellon approve the design contract with JWO Engineering for the design of Interim Improvements to the SH 60 and Colorado Blvd Intersection in the amount of \$431,435.00.

Councilmember Young seconded and the motion passed.

PUBLIC HEARING

12. Ordinance 2023-243: An Ordinance Concerning Municipal Court Procedures

Mayor Lebsack opened the public hearing. Avi Rocklin, Town Attorney, reviewed the proposed municipal code procedures that were listed in the agenda packet.

Mayor Lebsack opened the public hearing for comment for residents wishing to speak in favor of the item, to which there was none.

Mayor Lebsack opened the public hearing for comments opposed, to which there was none.

Mayor Lebsack closed the public hearing.

Councilmember Young moved to approve Ordinance 2023-243, an Ordinance concerning Municipal Court procedures; Amending Sections 2-74, 8-26 and 8-83 of the Johnstown Municipal Code concerning respectively Fines, Court Costs and Surcharges, Judgments of Liability by Default and Mandatory Truck Route Fines; Adding Sections 2-75 and 2-76 to the

Johnstown Municipal Code concerning respectively Alternatives in Sentencing and Collection of Unpaid Monetary Sentences; Omitting Sections 8-46, 8-81 and 8-82 from the Johnstown Municipal Code.

Councilmember Morris seconded and the motion passed.

13. Resolution 2023-13 Approving the Site Development Plan for Uncle Benny's Marketplace

Mayor Lebsack opened the public hearing. Kim Meyer, Planning Director presented this hearing noting the location and design elements of the plan. Ms. Meyer noted the site plan is in conformance with Town codes, standards and regulations and the Planning Zoning Board does recommend approval.

Council asked for clarification on the color scheme being complementary to surrounding areas.

The applicant, Jason Hepp, Aegis Construction Management, spoke to Council on the process and history of the proposed project.

Mayor Lebsack opened the public hearing for comment for residents wishing to speak in favor of the item, to which there was none.

Mayor Lebsack opened the public hearing for comments opposed, to which there was none.

Mayor Lebsack closed the public hearing.

Councilmember Morris moved based on findings and analysis presented at this hearing, I move to approve Resolution 2023-13 approving the Site Development Plan for Uncle Benny's Marketplace.

Councilmember Young seconded and the motion passed.

COUNCIL REPORTS AND COMMENTS

Councilmember Young reported on an upcoming Historical Society fundraiser.

Councilmember Mellon reported on transportation meetings and on meetings with the YMCA director.

Councilmember Molinar reported on the Senior Housing Authority.

MAYOR'S COMMENTS

Mayor Lebsack noted it was time for the Town Manager Performance Review and asked for Councilmembers to provide their reports to him prior to the next meeting.

EXECUTIVE SESSION

14. An executive session under C.R.S. Section 24-6-402(4)(f) for the Request for Proposal regarding a Relief Judge for Municipal Court

Councilmember moved to recess to Executive Session under C.R.S. Section 24-6-402(4)(f) regarding the Request for Proposal regarding a Relief Judge for Municipal Court.

Councilmember seconded and the motion passed.

Council recessed into executive session at 8:05 pm.

Council reconvened at 8:19 p.m.

ADJOURN

Mayor adjourned the March 6, 2023 Council meeting at 8:20 p.m.

Gary Lebsack, Mayor

Hannah Hill, Town Clerk



Town of Johnstown

TOWN COUNCIL CONSENT AGENDA COMMUNICATIONS

AGENDA DATE: March 20, 2023

SUBJECT: Ordinance 2023-243 An Ordinance concerning Municipal Court procedures; Amending Sections 2-74 And 8-26 of the Johnstown Municipal Code concerning respectively Fines, Court Costs and Surcharges and Judgments of Liability by Default; Adding Sections 2-75 and 2-76 to the Johnstown Municipal Code concerning respectively Alternatives in Sentencing and Collection Of Unpaid Monetary Sentences; Omitting Sections 8-46, 8-81 and 8-82 from the Johnstown Municipal Code

ATTACHMENTS: 1. Ordinance No. 2023-243

PRESENTED BY: Avi Rocklin, Town Attorney
Hannah Hill, Town Clerk

AGENDA ITEM DESCRIPTION: Town staff recommends that the Town Council adopt amendments to the Johnstown Municipal Code (“Code”) concerning municipal court procedures, including authorization for the municipal court judge to impose alternative sentencing and enter judgments of liability by default, allowing the Town to retain a collection agency to collect unpaid municipal court monetary sentences, omitting certain sections of the Code that are duplicative of provisions contained in the Town-adopted Model Traffic Code for Colorado and clarifying that surcharges shall be a set amount rather than a percentage of the fine. The rationale is as follows.

Alternatives in Sentencing. While the municipal court judge has sentencing authority, the addition of Section 2-75 regarding alternatives in sentencing would explicitly set out that the municipal judge’s authority to: suspend all or part of a defendant’s sentence; defer the entry of judgment; order restitution; require the defendant to attend a class, perform community service or participate in drug or alcohol evaluations and/or classes; and allow a defendant to participate in restorative justice. Restorative justice is a program being implemented by the Johnstown Police Department with the purpose of rehabilitating a defendant by classes or mediation rather than engaging in the municipal court process.

Default Judgments. The addition of Section 8-26(3) would explicitly recognize the municipal judge’s authority to enter judgments by default for traffic infractions. Thus, if a defendant with a traffic ticket fails to appear or fails to perform the obligations contained in a plea agreement, the municipal court judge would be entitled to enter judgment on the traffic violation, report the points to Colorado Department of Motor Vehicles and send the fine and fees to collections.

The Community That Cares

www.TownofJohnstown.com

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141

Collection Agency. In recent years, the Colorado General Assembly has amended the law to prohibit a municipal court judge from issuing warrants for a defendant's "failure to pay." The result is that, if a defendant fails to pay or fails to appear to pay, the municipal court has limited recourse to collect unpaid monetary sentences. As such, many municipal courts have opted to utilize a collection agency or private counsel to collect such funds. The collection agency or private counsel may add collection costs to the amount due to the Town in an amount that does not exceed twenty-five percent (25%) of the total amount assigned for collection.

Section 8-81 and 8-82. Town staff is recommending the omission of Sections 8-81 (Compulsory Proof of Insurance) and 8-82 (Mandatory Use of Seat Belt) because the Colorado Model Traffic Code, adopted in Article II of Chapter 8 of the Code, contains provisions for those traffic violations and Sections 8-81 and 8-82 are duplicative.

Surcharge. To provide more predictability and consistency, Town staff recommends amending Section 2-74(a)(3) to clarify that surcharges shall be a set amount set forth in the Town fee schedule and not be a percentage of the fine.

LEGAL ADVICE:

The Town Attorney prepared Ordinance No. 2023-243

FINANCIAL ADVICE:

N/A

RECOMMENDED ACTION: Approve Ordinance No. 2023-243 on second reading.

Reviewed and Approved for Presentation,



Town Manager

TOWN OF JOHNSTOWN, COLORADO

ORDINANCE NO. 2023-243

AN ORDINANCE CONCERNING MUNICIPAL COURT PROCEDURES; AMENDING SECTIONS 2-74, 8-26 AND 8-83 OF THE JOHNSTOWN MUNICIPAL CODE CONCERNING RESPECTIVELY FINES, COURT COSTS AND SURCHARGES, JUDGMENTS OF LIABILITY BY DEFAULT AND MANDATORY TRUCK ROUTE FINES; ADDING SECTIONS 2-75 AND 2-76 TO THE JOHNSTOWN MUNICIPAL CODE CONCERNING RESPECTIVELY ALTERNATIVES IN SENTENCING AND COLLECTION OF UNPAID MONETARY SENTENCES; OMITTING SECTIONS 8-46, 8-81 AND 8-82 FROM THE JOHNSTOWN MUNICIPAL CODE

WHEREAS, the Town of Johnstown, Colorado is a municipal corporation duly organized and existing under its Home Rule Charter adopted pursuant to Article XX of the Constitution of the State of Colorado; and

WHEREAS, the Town Council is vested with authority to administer the affairs of the Town; and

WHEREAS, the Town staff recommends that the Town Council adopt amendments to the Johnstown Municipal Code ("Code") concerning Municipal Court procedures, including, among others, authorization for the municipal court judge to impose alternative sentencing and enter judgments of liability by default, allowing the Town to retain a collection agency to collect unpaid municipal court monetary sentences, and the omission of sections of the Code that are duplicative of provisions contained in the Town-adopted Model Traffic Code for Colorado; and

WHEREAS, based on the recommendation of Town staff, the Town Council desires to: amend Section 2-74 ("Fines, court costs and surcharge imposed by the Municipal Court"), Section 8-26 ("Penalties") and Section 8-83 ("Mandatory routes for overweight trucks") of the Code; add Section 2-75 ("Alternatives in sentencing") and Section 2-76 ("Collection of unpaid municipal court monetary sentences") to the Code; and omit Section 8-46 ("Violation; penalty"), Section 8-81 ("Compulsory proof of insurance") and Section 8-82 ("Mandatory use of safety belt") from the Code; and

WHEREAS, the Town Council hereby finds, determines and declares that this Ordinance is promulgated under the general police power of the Town, that it is promulgated for the preservation of the public health, welfare, peace, safety and property and that this Ordinance is in the best interests of the citizens of the Town.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF JOHNSTOWN, COLORADO, AS FOLLOWS:

Section 1. Section 2-74. Section 2-74 of the Johnstown Municipal Code shall be amended to in full to read as follows:

Sec. 2-74. Fines, court costs and surcharge imposed by the Municipal Court.

(a) *Sentencing.* For each person who is convicted or enters a plea of guilty or nolo contendere to a violation of the Charter, ordinances or other enactments of the Town, the municipal judge shall, except as otherwise provided in this Article:

- (1) Impose a fine in an amount not to exceed the maximum fine permitted under state law;
- (2) Assess court costs in the amount provided by resolution of the Town Council in the Town Fee Schedule; and
- (3) Assess a surcharge in the amount provided by resolution of the Town Council in the Town Fee Schedule.

(b) *Disposition of surcharge proceeds.* All proceeds of the surcharges shall be paid into the General Fund of the Town to be used for the purpose of law enforcement training or for the purchase of equipment for traffic enforcement and traffic safety.

Section 2. Section 2-75. Section 2-75 shall be added to the Johnstown Municipal Code to read as follows:

Sec. 2-75. Alternatives in sentencing.

When a person is convicted or enters a plea of guilty or nolo contendere to a violation of the Charter, ordinances or other enactments of the Town, the municipal judge may:

- (a) Sentence the defendant as provided in this Article;
- (b) Suspend all or part of the defendant's sentence;
- (c) Defer the entry of judgment;
- (d) Order that the defendant make restitution to the victim who suffered damages as a result of defendant's conduct;
- (e) Require the defendant to attend a driver-training course or other appropriate class or program;
- (f) Require the defendant to perform a specified number of hours of useful public service;
- (g) Require the defendant to participate in a mental health or drug and alcohol evaluation and rehabilitation class or program; and/or
- (h) Impose additional sentencing orders as the municipal judge deems reasonable and appropriate, including restorative justice.

Section 3. Section 2-76. Section 2-76 shall be added to the Johnstown Municipal Code to read as follows:

Sec. 2-76. Collection of unpaid municipal court monetary sentences.

In the event a defendant fails to pay any fine, cost, surcharge or restitution ordered by the municipal judge by the date so ordered, the Town may employ any method available to collect the past due funds, including, but not limited to, assignment of all or a portion of the receivables to a collection agency or private counsel. The collection agency or private counsel tasked with collection of the receivables may add collection costs to the amount due to the Town, but such collection costs shall not exceed twenty-five percent (25%) of the total amount assigned for collection.

Section 4. Section 8-26. Section 8-26 of the Johnstown Municipal Code shall be amended to in full to read as follows:

Sec. 8-26. Penalties.

- (1) It is unlawful for any person to violate any of the provisions adopted in this Chapter.
- (2) Every person convicted of a violation of any of the provisions stated or adopted in this Chapter shall be punished by a fine not exceeding the maximum amount permitted under state law.
- (3) For each person who fails to appear for an arraignment or trial, the municipal judge may enter judgment of liability by default for traffic infractions, assess the appropriate fine, court costs and surcharge and report the judgment to the state motor vehicle division who may assess points against the defendant's driver license and take any other action permitted by law.

Section 5. Section 8-46. Section 8-46 of the Johnstown Municipal Code shall be omitted from the Code and marked "Reserved."

Section 7. Section 8-81. Section 8-81 of the Johnstown Municipal Code shall be omitted from the Code.

Section 8. Section 8-82. Section 8-82 of the Johnstown Municipal Code shall be omitted from the Code.

Section 9. Section 8-83. Section 8-83 of the Johnstown Municipal Code shall be renumbered to Section 8-81 and Subsection (a) contained therein shall be amended to remove the last sentence and shall thereafter read as follows:

Sec. 8-81. Mandatory routes for overweight trucks.

(a) All trucks weighing over seven thousand (7,000) pounds empty weight are prohibited from traveling on all streets, alleys, viaducts, bridges or other public ways in the Town except on designated truck routes. Trucks of larger sizes may use the prohibited streets to make deliveries on such streets or nearby streets, provided that such trucks use the shortest route between an established truck route and point of delivery.

Section 10. Severability. If any part or provision of this Ordinance, or its application to any person or circumstance, is adjudged to be invalid or unenforceable, the invalidity or unenforceability of such part, provision, or application shall not affect any of the remaining parts, provisions or applications of this Ordinance that can be given effect without the invalid provision,

part or application, and to this end the provisions and parts of this Ordinance are declared to be severable.

Section 11. Code revisions. Minor changes such as the format and other changes to unify the revised Code may be necessary. The Town Clerk is hereby authorized to make such changes, provided that neither the intent nor substantive content will be altered by such changes.

Section 12. Publication; Effective Date. This Ordinance, after its passage on final reading, shall be numbered, recorded, published and posted as required by the Home Rule Charter of the Town of Johnstown, Colorado ("Charter") and the adoption, posting and publication shall be authenticated by the signature of the Mayor and the Town Clerk. This Ordinance shall become effective upon final passage as provided by the Charter. Copies of the entire Ordinance are available at the office of the Town Clerk.

INTRODUCED AND APPROVED on first reading by the Town Council of the Town of Johnstown, Colorado, this 6 day of March, 2023.

TOWN OF JOHNSTOWN, COLORADO

ATTEST:

By: Hannah Hill

Hannah Hill, Town Clerk



By: Gary Lebsack

Gary Lebsack, Mayor

PASSED UPON FINAL APPROVAL AND ADOPTED on second reading by the Town Council of the Town of Johnstown, Colorado, this ____ day of _____, 2023.

TOWN OF JOHNSTOWN, COLORADO

ATTEST:

By: _____

Hannah Hill, Town Clerk

By: _____

Gary Lebsack, Mayor



Town of Johnstown

TOWN COUNCIL CONSENT AGENDA COMMUNICATIONS

AGENDA DATE: March 20, 2023

SUBJECT: Resolution No. 2023-15 Appointing Deputy Municipal Judges for the Municipal Court

ATTACHMENTS: 1. Resolution No. 2023-15
2. Letters of Acceptance

PRESENTED BY: Hannah Hill, Town Clerk

AGENDA ITEM DESCRIPTION:

The Johnstown Municipal Court processes approximately 60 citations on each Court docket, which occurs twice a month. Substantial disruption can occur if the Council's appointed Judge is not available on scheduled court dates for any reason. In an effort to maintain services and minimize disruption to defendant's schedules, Staff has been evaluating the potential of utilizing the services of a relief Judge when needed.

As Town Council is aware, Staff opened a Request for Proposal for a Relief Judge. The proposal opened on January 11, 2023 and closed on February 4. The Town Clerk sent the RFP to Colorado Municipal League (CML) listservs, Colorado Association for Municipal Court Administration listservs and posted on the Town's webpage. The Town received four responses which were discussed with Council at the Council meeting on March 6, 2023. Consequently, Staff has provided the attached resolution for Council's consideration. Approval of this item would appoint three relief judges for Municipal Court.

LEGAL ADVICE:

The Town Attorney drafted the Resolution.

FINANCIAL ADVICE:

NA

The Community That Cares

www.TownofJohnstown.com

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141

RECOMMENDED ACTION: Approve Resolution 2023-15 Appointing Deputy Municipal Judges for the Municipal Court.

Reviewed and Approved for Presentation,



Town Manager

**TOWN OF JOHNSTOWN, COLORADO
RESOLUTION NO. 2023-15**

**APPOINTING DEPUTY MUNICIPAL JUDGES
FOR THE MUNICIPAL COURT**

WHEREAS, the Town of Johnstown, Colorado (the “Town”) is a Colorado home rule municipality, duly organized and existing under the laws of the State of Colorado and the Town’s Home Rule Charter; and

WHEREAS, the Town Council is vested with authority to administer the affairs of the Town; and

WHEREAS, Article 10 of the Town of Johnstown Home Rule Charter provides that the Town Council may appoint, by the majority vote of the entire Council, deputy municipal judges for the Johnstown Municipal Court; and

WHEREAS, the Town Council desires to appoint three deputy municipal judges to serve when the presiding judge of the Johnstown Municipal Court is not available; and

WHEREAS, the Town Council finds that adoption of this Resolution is in the best interests of the Town.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF JOHNSTOWN, COLORADO THAT Teresea Ablao, David J. Thrower and Thomas A. Ramunda, Jr. are hereby appointed as deputy municipal judges for the Johnstown Municipal Court.

PASSED, SIGNED, APPROVED, AND ADOPTED this ____ day of _____, 2023.

TOWN OF JOHNSTOWN, COLORADO

ATTEST:

By: _____
Hannah Hill, Town Clerk

By: _____
Gary Lebsack, Mayor



Town of Johnstown

MEMORANDUM

TO: Honorable Mayor Gary Lebsack and Town Councilmembers

FROM: Hannah Hill

CC: Mitzi McCoy, Matt LeCerf, Teresa Ablao

DATE: March 20, 2023

SUBJECT: Relief Judge Appointment

Honorable Mayor Lebsack and Town Councilmembers:

The Deputy Municipal Judge shall have all judicial powers and duties as provided in the Town's Municipal Code and ordinances and in the Colorado Revised Statutes applicable to municipal judges, except as otherwise provided by ordinance.

The Deputy Judge is authorized to exercise contempt powers, and enforce subpoenas issued by any board, commission, hearing officer, or other body or officer of the Town authorized by law or ordinance to issue subpoenas, and all other powers inherent with the office.

On March 20, 2023 Town Council appointed as Deputy Municipal Judge Teresa Ablao to provide relief services to the Johnstown Municipal Court as needed. An agreed upon rate of \$500 flat rate on regularly scheduled court sessions with an addition of \$150 per hour for additional administrative or quasi-judicial duties as may be assigned by the Town Board per the proposal accepted by Council.

Teresa Ablao, Deputy Municipal Judge

TOWN OF JOHNSTOWN:

Gary Lebsack, Mayor

Hannah Hill, Town Clerk

The Community That Cares

www.TownofJohnstown.com

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141



Town of Johnstown

MEMORANDUM

TO: Honorable Mayor Gary Lebsack and Town Councilmembers

FROM: Hannah Hill

CC: Mitzi McCoy, Matt LeCerf, David J. Thrower

DATE: March 20, 2023

SUBJECT: Relief Judge Appointment

Honorable Mayor Lebsack and Town Councilmembers:

The Deputy Municipal Judge shall have all judicial powers and duties as provided in the Town's Municipal Code and ordinances and in the Colorado Revised Statutes applicable to municipal judges, except as otherwise provided by ordinance.

The Deputy Judge is authorized to exercise contempt powers, and enforce subpoenas issued by any board, commission, hearing officer, or other body or officer of the Town authorized by law or ordinance to issue subpoenas, and all other powers inherent with the office.

On March 20, 2023 Town Council appointed as Deputy Municipal Judge David. J Thrower to provide relief services to the Johnstown Municipal Court as needed. An agreed upon rate of \$125 an hour on regularly scheduled court sessions per the proposal accepted by Council.

David J. Thrower, Deputy Municipal Judge

TOWN OF JOHNSTOWN:

Gary Lebsack, Mayor

Hannah Hill, Town Clerk

The Community That Cares

www.TownofJohnstown.com

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141



Town of Johnstown

MEMORANDUM

TO: Honorable Mayor Gary Lebsack and Town Councilmembers

FROM: Hannah Hill

CC: Mitzi McCoy, Matt LeCerf, Thomas A. Ramunda Jr.

DATE: March 20, 2023

SUBJECT: Relief Judge Appointment

Honorable Mayor Lebsack and Town Councilmembers:

The Deputy Municipal Judge shall have all judicial powers and duties as provided in the Town's Municipal Code and ordinances and in the Colorado Revised Statutes applicable to municipal judges, except as otherwise provided by ordinance.

The Deputy Judge is authorized to exercise contempt powers, and enforce subpoenas issued by any board, commission, hearing officer, or other body or officer of the Town authorized by law or ordinance to issue subpoenas, and all other powers inherent with the office.

On March 20, 2023 Town Council appointed as Deputy Municipal Judge Thomas A. Ramunda Jr. to provide relief services to the Johnstown Municipal Court as needed. An agreed upon rate of \$150 hourly rate on regularly scheduled court sessions per the proposal accepted by Council.

Thomas A. Ramunda Jr., Deputy Municipal Judge

TOWN OF JOHNSTOWN:

Gary Lebsack, Mayor

Hannah Hill, Town Clerk

The Community That Cares

www.TownofJohnstown.com

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141



Town of Johnstown

TOWN COUNCIL CONSENT AGENDA COMMUNICATIONS

AGENDA DATE: March 20, 2023

SUBJECT: First Amendment to an Intergovernmental Agreement with Larimer County

ATTACHMENTS: 1. Intergovernmental Agreement with Larimer County
2. Area map

PRESENTED BY: Troy White, Public Works Director

AGENDA ITEM DESCRIPTION:

On May 14, 2019, the Town of Johnstown and Larimer County entered into an Intergovernmental Agreement for a cost share to complete the paving of Larimer County Road 14 (LCR 14). The IGA also included terms that Johnstown was to annex the roadway after the project was completed. However, it was later discovered that Larimer County does not have prescriptive right-of-way, rather, an easement from the property owners for public use of the road. Therefore, simple annexation of the roadway from Larimer County is not possible.

To honor the intent of the agreement, this IGA provides that Johnstown will operate and maintain the roadway, until such time the property owners decide to annex into Johnstown. Operations and maintenance of the roadway will include all maintenance activities and the permitting of future work within the right-of-way.

LEGAL ADVICE:

The Town Attorney reviewed the IGA.

FINANCIAL ADVICE:

NA

RECOMMENDED ACTION:

The Community That Cares

www.TownofJohnstown.com

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141

Staff recommends approval of the First Amendment to the Intergovernmental Agreement with Larimer County for Contributions to Roadway Improvements Concerning Maintenance of Public Roadway.

Reviewed and Approved for Presentation,



Town Manager

**FIRST AMENDMENT TO INTERGOVERNMENTAL AGREEMENT
FOR CONTRIBUTION TO ROADWAY IMPROVEMENTS
CONCERNING MAINTENANCE OF PUBLIC ROADWAY
(LCR 14)**

This First Amendment to Intergovernmental Agreement for Contribution to Roadway Improvements Concerning Maintenance of Public Roadway (“Agreement”) dated March _____, 2023, is entered into by and between THE TOWN OF JOHNSTOWN, a Colorado home rule municipality (“Town”), and the BOARD OF COUNTY COMMISSIONERS FOR THE COUNTY OF LARIMER (“County”).

RECITALS

1. Portions of the Town’s corporate limits extend into eastern Larimer County; and
2. Larimer County Road 14 (“LCR 14”) is an important roadway which is seeing increasing use as population within the Town limits continues to grow in the area; and
3. On May 14, 2019, the Town and County entered into an Intergovernmental Agreement titled INTERGOVERNMENTAL AGREEMENT FOR CONTRIBUTION TO ROADWAY IMPROVEMENTS (“IGA”); and
4. Pursuant to the IGA, the County agreed to pay \$200,000 to the Town for improvements to LCR 14 between I-25 and Larimer County Road 1 and, in return, the Town agreed to annex the segments of LCR 14 that have not been annexed as shown and depicted in Exhibit A, attached hereto and incorporated herein by reference (“Maintenance Segments”); and
5. The County paid the \$200,000 and the Town improved LCR 14, but the Town and County have been unable to effectuate the annexation. Rather than annexation of LCR 14 at this time, the parties desire to modify the IGA to provide that the Town agrees to accept maintenance responsibility for the Maintenance Segments; and
6. The parties desire to set forth their understandings regarding ongoing maintenance of the Maintenance Segments herein; and
7. The Colorado Local Government Land Use Control Enabling Act, § 29-20-101, *et. seq.*, authorizes local governments to enter into agreements for the provision of services and governmental functions otherwise reserved to each party by law.

NOW, THEREFORE, the parties agree as follows:

1. The Town shall maintain the Maintenance Segments, consisting of the roadway, shoulders and abutting stormwater drainage facilities. Maintenance shall include but not be limited to all routine surface and pothole repairs, overlay, temporary full-depth patches, expansion bump removal on bituminous surfaces, crack and joint sealing, striping, cleaning and litter pickup, snow and ice control, sweeping, traffic control devices, appurtenances and traffic

control signage maintenance and other maintenance services necessary to maintain the road. Maintenance shall also include any reconstruction done by the County in the future if maintenance of the reconstructed section is accepted by the Town in writing.

2. The County shall bear no expense associated with the maintenance responsibility undertaken by the Town under this Agreement. All maintenance costs incurred by the Town under this Agreement shall be its sole responsibility.
3. Except as to the maintenance responsibility delegated to the Town hereunder, the County shall retain ownership of and control over the Maintenance Segments. However, the Town shall issue all required utility permits for the Maintenance Segments. The County shall issue all other permits, including access permits. The County acknowledges that the Town shall not be responsible for any additional maintenance to any improvements or modifications to the Maintenance Segments made by the County subsequent to the date of this Agreement unless the Town agrees in writing.
4. All work within the Maintenance Segments performed by the Town shall be undertaken consistent with commonly accepted local industry standards and the most-current edition of the Manual on Uniform Traffic Control Devices. Each party shall maintain adequate automobile, workers compensation and liability insurance with respect to any Town or County employees performing work within the Maintenance Segments. Each party will promptly notify the other of any claims, notice of which is received by either party. Neither party will look to the other for indemnification for any claims arising out the allocation of authority pursuant to this Agreement.
5. The parties agree that it would be best if the Maintenance Segments were under the jurisdiction of the Town. Based on this, the Town will continue to work with the County to annex the Maintenance Segments.
6. This Agreement shall be of indefinite duration until such time as the Maintenance Segments are annexed by the Town, except as set forth below or otherwise agreed by the parties in writing. The parties agree that, until annexed into the Town, subsequent improvements to the Maintenance Segments will be based primarily on the Town's standards, rules and regulations in a manner acceptable to the County and the Town ("Road Improvements"). If the Town and the County do not agree upon the Road Improvements, then the Town may, at its discretion, provide thirty (30) days written notice to the County to terminate this Agreement. Subsequent to annexation, County approval shall not be required.
7. Should any dispute arise with respect to the parties' rights and obligations hereunder, the parties will first refer the matter to alternative dispute resolution, the cost of which shall be borne in equal shares. The specific method of alternative dispute resolution shall be subject to further discussion, taking into account the nature of the controversy, the amount in dispute, and long history of cooperation enjoyed by the parties. Each party shall bear its own attorney fees and costs in the event of a dispute.

8. The financial undertakings of the parties herein are and shall be subject to appropriation. Nothing herein shall be deemed a multiple fiscal-year obligation of either party.
9. The Town assumes responsibility and liability for the work done by the Town on the Maintenance Segments, and for and suits arising solely from such work.
10. Nothing herein shall be deemed a waiver or modification of any immunity enjoyed by either party under the Colorado Governmental Immunity Act or at common law.
11. This Agreement shall benefit only the signatories hereto. There are no third-party beneficiaries intended.
12. This Agreement may be executed in counterparts which, when assembled, shall be deemed a completed agreement.

ATTEST:**TOWN OF JOHNSTOWN, COLORADO**

By: _____
 Hannah Hill, Town Clerk

By: _____
 Gary Lebsack, Mayor

BOARD OF COMMISSIONERS OF

LARIMER COUNTY, COLORADO

By: _____

Chair

ATTEST:

County Clerk

Date: _____

APPROVED AS TO FORM

COUNTY ATTORNEY

Site Map

Item #5.





Town of Johnstown

TOWN COUNCIL CONSENT AGENDA COMMUNICATIONS

AGENDA DATE: March 20, 2023

SUBJECT: Second Amendment To Intergovernmental Agreement Between The Town Of Johnstown and The Little Thompson Water District

ATTACHMENTS: 1. Second Amendment To Intergovernmental Agreement Between The Town Of Johnstown and The Little Thompson Water District

PRESENTED BY: Matt LeCerf, Town Manager

AGENDA ITEM DESCRIPTION:

Enclosed for your review and consideration is the Second Amendment To Intergovernmental Agreement (IGA) Between The Town Of Johnstown and The Little Thompson Water District (LTWD). A first amendment was approved in August extending the current IGA agreement until March 2023. In an effort to continue the negotiations for the benefit of both parties, this agreement is being extended in its current form until June 30, 2023. It is our intention to bring a new IGA between the Town and LTWD prior to this expiration.

LEGAL ADVICE:

The Town Attorney reviewed the first amendment presented.

FINANCIAL ADVICE:

Not Applicable.

RECOMMENDED ACTION: Approve the Second Amendment to the IGA as presented.

Reviewed and Approved for Presentation,

Town Manager

The Community That Cares

www.TownofJohnstown.com

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141

**SECOND AMENDMENT TO INTERGOVERNMENTAL AGREEMENT
BETWEEN THE TOWN OF JOHNSTOWN AND
THE LITTLE THOMPSON WATER DISTRICT**

THIS SECOND AMENDMENT TO INTERGOVERNMENTAL AGREEMENT (“Second Amendment”) is made and entered into on this ____ day of _____, 2023, by and between the TOWN OF JOHNSTOWN, COLORADO, a home-rule municipality of the Counties of Larimer and Weld, State of Colorado (“Town”), and the LITTLE THOMPSON WATER DISTRICT, a special district organized pursuant to Colorado law (“District”) (collectively, the “Parties”).

RECITALS

WHEREAS, on or about October 21, 2002, the Parties entered into that certain Intergovernmental Agreement concerning, among other matters, the establishment of emergency and temporary water service (“2002 Agreement”); and

WHEREAS, the 2002 Agreement provides that it shall remain in full force and effect for twenty (20) years, to and including October 21, 2022, and that, during the year prior to termination, the Parties shall review the 2002 Agreement for purposes of considering the advisability of extending, altering or modifying the terms thereof; and

WHEREAS, on or about January 21, 2009, the Parties entered into a separate Intergovernmental Agreement concerning, among other matters, the designation of water providers for properties within the Town for a term of twenty (20) years (“2009 Agreement”), providing that, if any terms conflict with the 2002 Agreement, the terms of 2009 Agreement will control; and

WHEREAS, the Parties are diligently negotiating the terms of a new agreement, but have not concluded such negotiations; and

WHEREAS, Section 9.08 of the 2002 Agreement provides that the Parties may modify the 2002 Agreement in writing; and

WHEREAS, to effectuate the foregoing, on or about August 15, 2022, the Parties entered into that certain First Amendment to Intergovernmental Agreement, extending the term of the 2002 Agreement to March 1, 2023; and

WHEREAS, because the Parties have not yet finalized a new agreement, the Parties desire to enter into this Second Amendment to extend the term of the 2002 Agreement to June 30, 2023.

AGREEMENT

NOW, THEREFORE, in consideration of the terms, conditions and covenants set forth in this Second Amendment and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. Recitals. The Recitals set forth above are incorporated herein by reference.
2. Amendment. Paragraph 7 of the 2002 Agreement is hereby deleted in its entirety and in its place inserted the following:

7. ***Term***. This Agreement shall remain in full force and effect until June 30, 2023. The Town and the District agree that not less than one (1) year prior to the expiration of the Agreement both parties shall jointly review the Agreement for the purpose of considering the advisability of extending, altering or modifying this Agreement.

3. Effect of Amendment. Except as expressly provided in this Second Amendment, the 2002 Agreement has not been amended, supplemented or altered in any way by this Second Amendment and the Agreement shall remain in full force and effect in accordance with its terms. If there is any inconsistency between the terms of the Agreement and the terms of this Second Amendment, the provisions of this Second Amendment will govern and control.

IN WITNESS WHEREOF, the Parties have executed this Second Amendment as of the date set forth above.

THE TOWN OF JOHNSTOWN,
a home-rule municipality of the
State of Colorado

By: _____
Gary Lebsack, Mayor

ATTEST:

Hannah Hill, Town Clerk

LITTLE THOMPSON WATER DISTRICT,
a special district of the State of Colorado

By: _____
Emily McMurtrey, President

ATTEST:

Amber Kauffman, Secretary



Town of Johnstown

TOWN COUNCIL CONSENT AGENDA COMMUNICATIONS

AGENDA DATE: March 20, 2023

SUBJECT: Intergovernmental Agreement with Larimer County

ATTACHMENTS: 1. Intergovernmental Agreement with Larimer County
2. Area Map

PRESENTED BY: Troy White, Public Works Director

AGENDA ITEM DESCRIPTION:

The Town of Johnstown has been maintaining Larimer County Road 3 (LCR 3), now High Plains Blvd, from Larimer County Road 18 to Larimer County Road 20c (LCR 20c) as part of a previous agreement with Larimer County. However, with the Thompson River Ranch development the Town has annexed part of this roadway and a new agreement is needed to redefine the limits of the portion of LCR 3 (High Plains Blvd) that the Town will maintain and operate. The new limits of the Intergovernmental Agreement will include LCR3 from the north side of the bridge to LCR 20c.

The Town currently maintains LCR 3 from LCR 20c north to US Hwy 34 and LCR 3 south to CLCR 18, therefore, this will ensure a continuity of maintenance service along this stretch of roadway. The IGA does not make the Town responsible for future widening of the roadway, nor is the Town responsible for the LCR 3 Bridge over the Big Thompson River.

LEGAL ADVICE:

The Town Attorney has reviewed the IGA.

FINANCIAL ADVICE:

NA

RECOMMENDED ACTION: Town recommends approval of the IGA with Larimer County for the maintenance and operations of LCR 3 from the Big Thompson River Bridge north to LCR20C.

The Community That Cares

www.TownofJohnstown.com

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141

Reviewed and Approved for Presentation,



Town Manager

The Community That Cares

www.TownofJohnstown.com

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141

**INTERGOVERNMENTAL AGREEMENT
FOR
MAINTENANCE OF PUBLIC ROADWAY
(High Plains Boulevard)**

This Intergovernmental Agreement for Maintenance of Public Roadway (“Agreement”) dated March _____, 2023, is entered into by and between THE TOWN OF JOHNSTOWN, a Colorado home rule municipality (“Town”) and the BOARD OF COUNTY COMMISSIONERS FOR THE COUNTY OF LARIMER (“County”).

RECITALS

1. Portions of the Town’s corporate limits extend into eastern Larimer County; and
2. High Plains Boulevard (“LCR 3”) is an important roadway which is seeing increasing use as population within the Town limits continues to grow in the area; and
3. In the vicinity of High Plains Boulevard between LCR 18 and LCR 20C, portions of the Road right-of-way do not lie in the Town’s corporate limits as shown and depicted in Exhibit A, attached hereto and incorporated herein by reference (“Maintenance Segment”); and
4. At present, the County is responsible for the Maintenance Segment; and
5. The parties agree that the Town, or a developer in the Town, may design and make certain improvements to the Maintenance Segment based primarily on the Town’s standards, rules and regulations in a manner acceptable to the County and the Town (“Road Improvements”); and
6. In light of the growth within the Town’s limits impacting the Maintenance Segment and the fact that the Town has not annexed the Maintenance Segment, the parties have concluded that responsibility for ongoing maintenance of the Maintenance Segment should more appropriately fall on the Town; and
7. The parties agree that while the bridge that crosses the Big Thompson River is physically located within the Maintenance Segment it is not included as part of this Agreement; and
8. The parties desire to set forth their understandings regarding ongoing maintenance of the Maintenance Segment herein; and
9. The Colorado Local Government Land Use Control Enabling Act, § 29-20-101, *et. seq.*, authorizes local governments to enter into agreements for the provision of services and governmental functions otherwise reserved to each party by law.

NOW, THEREFORE, the parties agree as follows:

1. The Town shall maintain the Maintenance Segment, consisting of the roadway, shoulders and abutting stormwater drainage facilities. Maintenance shall include but not be limited to all routine surface and pothole repairs, overlay, temporary full-depth patches, expansion bump removal on bituminous surfaces, crack and joint sealing, striping, cleaning and litter pickup, snow and ice control, sweeping, traffic control devices, appurtenances and traffic control signage maintenance and other maintenance services necessary to maintain the road. Maintenance shall also include any reconstruction done by the County in the future if maintenance of the reconstructed section is accepted by the Town in writing. Maintenance shall not include the bridge that crosses the Big Thompson River that is physically located within the Maintenance Segment.
2. The County shall bear no expense associated with the maintenance responsibility undertaken by the Town under this Agreement. All maintenance costs incurred by the Town under this Agreement shall be its sole responsibility.
3. Except as to the maintenance responsibility delegated to the Town hereunder, the County shall retain ownership of and control over the Maintenance Segment. However, the Town shall issue all required utility permits for the Maintenance Segment. The County shall issue all other permits, including access permits. The County acknowledges that the Town shall not be responsible for any additional maintenance to any improvements or modifications to the Maintenance Segment made by the County subsequent to the date of this Agreement unless the Town agrees in writing.
4. All work within the Maintenance Segment performed by the Town shall be undertaken consistent with commonly accepted local industry standards and the most-current edition of the Manual on Uniform Traffic Control Devices. Each party shall maintain adequate automobile, workers compensation and liability insurance with respect to any Town or County employees performing work within the Maintenance Segment. Each party will promptly notify the other of any claims, notice of which is received by either party. Neither party will look to the other for indemnification for any claims arising out the allocation of authority pursuant to this Agreement.
5. The parties agree that it would be best if the Maintenance Segment was under the jurisdiction of the Town. Based on this, the Town will continue to work with the County to annex the Maintenance Segment.
6. This Agreement shall be of indefinite duration until such time as the Maintenance Segment is annexed by the Town, except that, if the Town and the County do not agree upon the Road Improvements referenced in Paragraph 5 of the Recitals then the Town may, at its discretion, provide thirty (30) days written notice to the County to terminate this Agreement.
7. Should any dispute arise with respect to the parties' rights and obligations hereunder, the parties will first refer the matter to alternative dispute resolution, the cost of which shall be borne in equal shares. The specific method of alternative dispute resolution shall be subject to further discussion, taking into account the nature of the controversy, the amount in

dispute, and long history of cooperation enjoyed by the parties. Each party shall bear its own attorney fees and costs in the event of a dispute.

8. The financial undertakings of the parties herein are and shall be subject to appropriation. Nothing herein shall be deemed a multiple fiscal-year obligation of either party.
9. The Town assumes responsibility and liability for the work done by the Town on the Maintenance Segment, and for and suits arising solely from such work.
10. Nothing herein shall be deemed a waiver or modification of any immunity enjoyed by either party under the Colorado Governmental Immunity Act or at common law.
11. This Agreement shall benefit only the signatories hereto. There are no third party beneficiaries intended.
12. This Agreement may be executed in counterparts which, when assembled, shall be deemed a completed agreement.

ATTEST:

TOWN OF JOHNSTOWN, COLORADO

By: _____
Hannah Hill, Town Clerk

By: _____
Gary Lebsack, Mayor

**BOARD OF COMMISSIONERS OF
LARIMER COUNTY, COLORADO**

By: _____

Chair

ATTEST:

County Clerk

Date: _____

APPROVED AS TO FORM

COUNTY ATTORNEY

Site Map

Item #7.



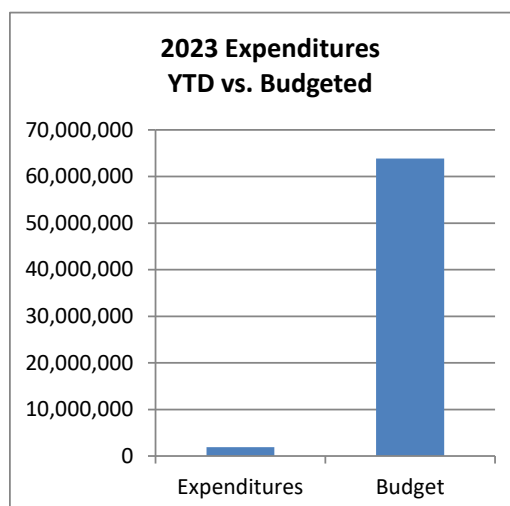
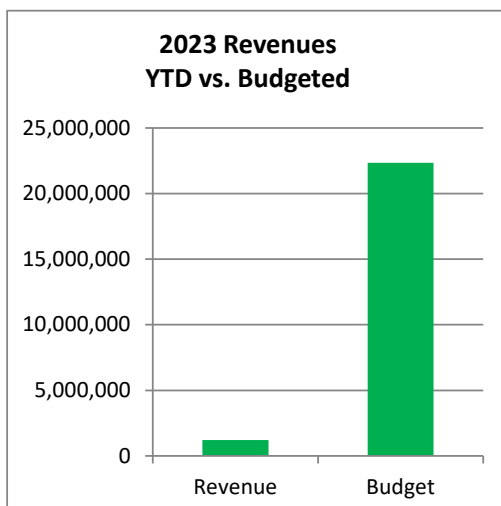
Town of Johnstown, Colorado
Statement of Revenues, Expenditures, and Changes in
Fund Balances - General Fund
Period Ending February 28, 2023
Unaudited

Item #8.

General Fund	2023 Actuals February	2023 Adopted Budget	% Complete
Beginning Fund Balance*	87,924,330	87,924,330	
Revenues:			
Taxes & Fees	353,181	19,417,534	1.8%
Licenses & Permits	445,331	1,963,700	22.7%
Fines & Forfeitures	35,541	175,500	20.3%
Intergovernmental	5,442	25,000	21.8%
Earnings on Investment	244,118	15,000	1627.5%
Miscellaneous Revenue	119,727	757,500	15.8%
Transfers In	-	-	
Total Operating Revenues	1,203,340	22,354,234	5.4%
Expenditures:			
Legislative	182,019	831,440	21.9%
Town Manager	171,942	1,442,430	11.9%
Town Clerk	76,681	441,910	17.4%
Finance	40,762	450,870	9.0%
Planning	60,350	566,310	10.7%
Reimbursements	42,826	700,000	6.1%
Building Inspections	42,809	413,820	10.3%
Police	870,621	6,006,610	14.5%
Public Works	136,351	761,350	17.9%
Buildings	56,056	288,100	19.5%
Transfers Out	207,573	51,945,508	0.4%
Total Expenditures	1,887,990	63,848,348	3.0%
Excess (Deficiency) of Revenues and Other Sources over Expenditures	(684,650)	(41,494,114)	
Prior Period Adjustment			
Ending Fund Balance*	87,239,680	46,430,216	

* - Unaudited

16.7% of the fiscal year has elapsed



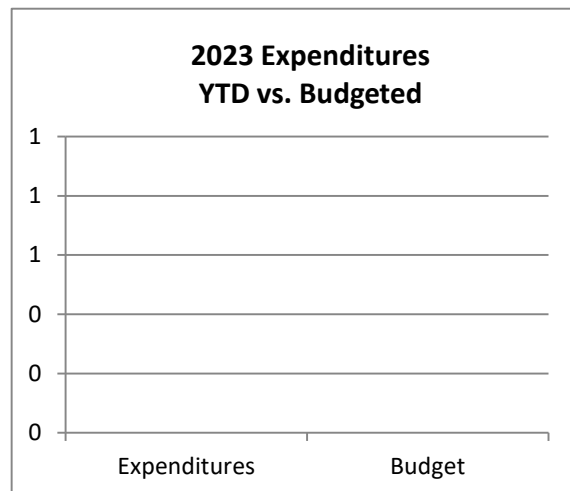
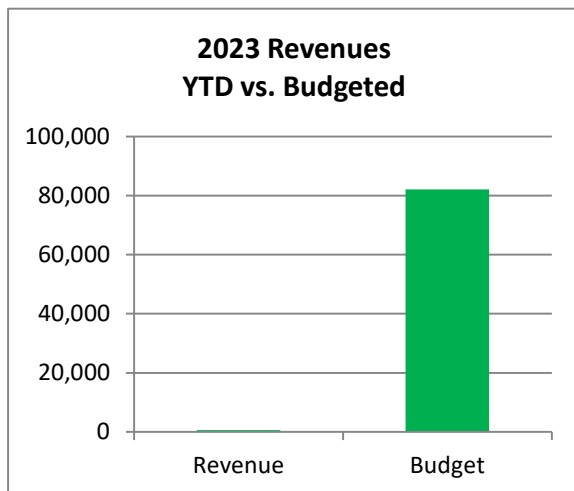
Town of Johnstown, Colorado
Statement of Revenues, Expenditures, and Changes in
Fund Balances - Conservation Trust Fund
Period Ending February 28, 2023
Unaudited

Item #8.

Conservation Trust Fund	2023 Actuals February	2023 Adopted Budget	% Complete
Beginning Fund Balance*	132,112	132,112	
Revenues:			
Intergovernmental	-	82,000	0.0%
Earnings on Investment	604	50	1208.5%
Total Operating Revenues	604	82,050	0.7%
Expenditures:			
Operations	-	-	
Capital Outlay	-	-	
Total Expenditures	-	-	
Excess (Deficiency) of Revenues and Other Sources over Expenditures	604	82,050	
Ending Fund Balance*	132,716	214,162	

* - Unaudited

16.7% of the fiscal year has elapsed



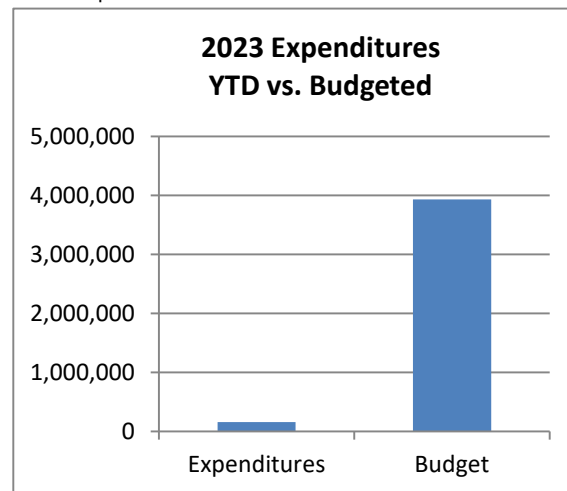
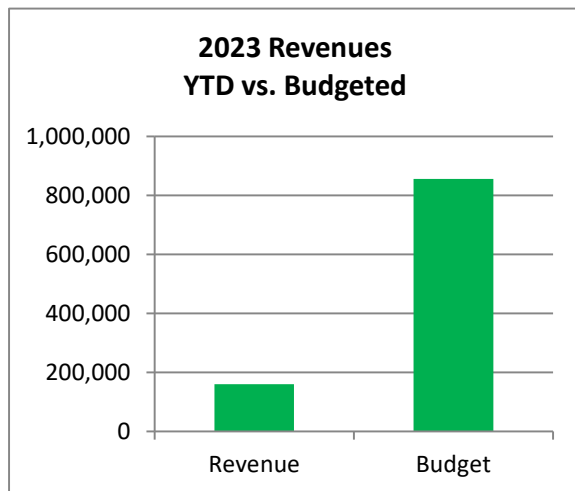
Town of Johnstown, Colorado
Statement of Revenues, Expenditures, and Changes in
Fund Balances - Parks and Open Space Fund
Period Ending February 28, 2023
Unaudited

Item #8.

	2023 Actuals February	2023 Adopted Budget	% Complete
Parks and Open Space Fund			
Beginning Fund Balance*	6,865,289	6,865,289	
<u>Revenues:</u>			
Taxes & Fees	129,617	786,030	16.5%
Miscellaneous Revenue	9,575	17,000	56.3%
Transfers In	0	50,000	0.0%
Total Operating Revenues	160,598	855,530	18.8%
<u>Expenditures:</u>			
Operations	91,952	2,905,000	3.2%
Capital Outlay	65,559	1,024,940	6.4%
Transfers Out	-	-	
Total Expenditures	157,511	3,929,940	4.0%
Excess (Deficiency) of Revenues and Other Sources over Expenditures	3,087	(3,074,410)	
Ending Fund Balance*	6,868,376	3,790,879	

* - Unaudited

16.7% of the fiscal year has elapsed



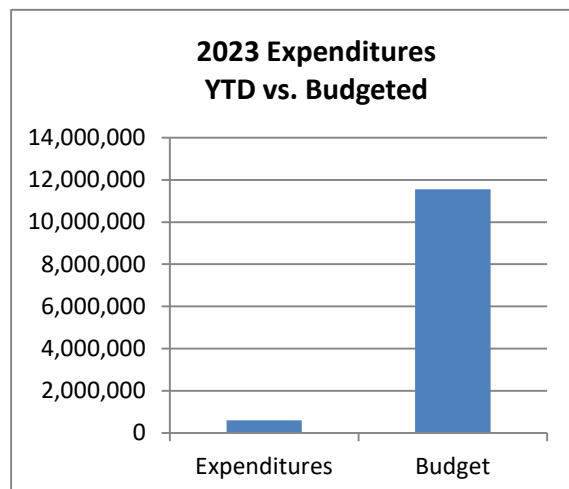
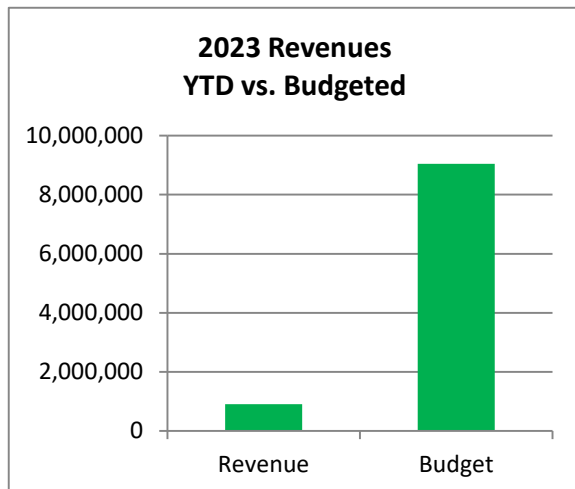
Town of Johnstown, Colorado
Statement of Revenues, Expenditures, and Changes in
Fund Balances - Street and Alley Fund
Period Ending February 28, 2023
Unaudited

Item #8.

Street and Alley Fund	2023 Actuals February	2023 Adopted Budget	% Complete
Beginning Fund Balance*	17,606,494	17,606,494	
<u>Revenues:</u>			
Taxes & Fees	362,011	4,171,405	8.7%
Intergovernmental	72,537	1,290,000	5.6%
Charges for Services	164,457	945,000	17.4%
Capital Investment Fees	250,502	1,174,000	21.3%
Earnings on Investment	52,656	10,200	516.2%
Miscellaneous Revenues	-	-	0.0%
Total Operating Revenues	902,163	9,040,605	10.0%
<u>Expenditures:</u>			
Operations & Maintenance	350,770	3,698,790	9.5%
Capital	253,275	7,848,000	3.2%
Total Expenditures	604,044	11,546,790	5.2%
Excess (Deficiency) of Revenues and Other Sources over Expenditures	298,118	(2,506,185)	
Ending Fund Balance*	17,904,612	15,100,309	

* - Unaudited

16.7% of the fiscal year has elapsed



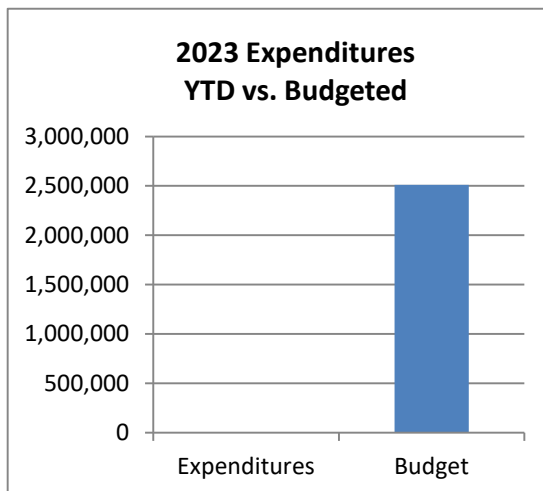
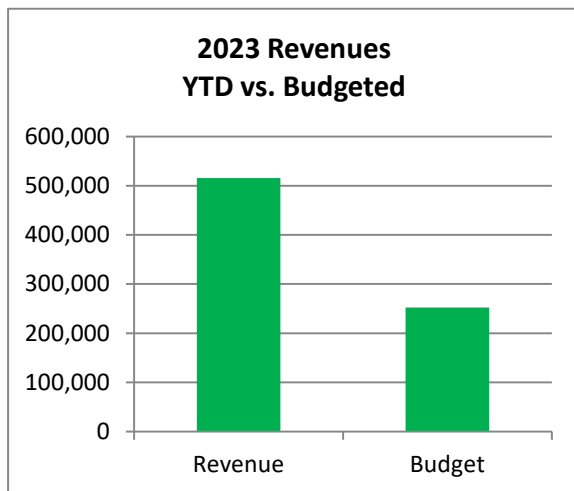
Town of Johnstown, Colorado
Statement of Revenues, Expenditures, and Changes in
Fund Balances - Capital Projects Fund
Period Ending February 28, 2023
Unaudited

Item #8.

	2023 Actuals February	2023 Adopted Budget	% Complete
Capital Projects Fund			
Beginning Fund Balance*	12,343,821	12,343,821	
<u>Revenues:</u>			
Taxes and Fees	436,871	300,000	145.6%
Miscellaneous Revenue	-	-	
Interest	79,072	2,200	3594.2%
<i>Transfers In</i>	-	(50,000)	0.0%
Total Operating Revenues	515,943	252,200	204.6%
<u>Expenditures:</u>			
Capital Outlay	847	2,511,500	0.0%
<i>Transfers Out</i>	-	-	0.0%
Total Expenditures	847	2,511,500	0.0%
Excess (Deficiency) of Revenues and Other Sources over Expenditures	515,096	(2,259,300)	
Ending Fund Balance*	12,858,917	10,084,521	

* - Unaudited

16.7% of the fiscal year has elapsed



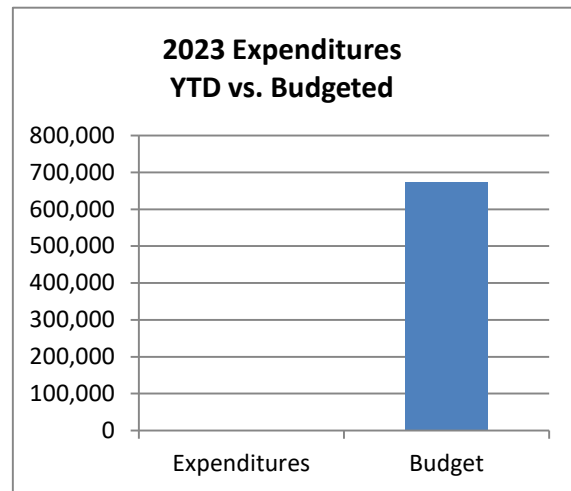
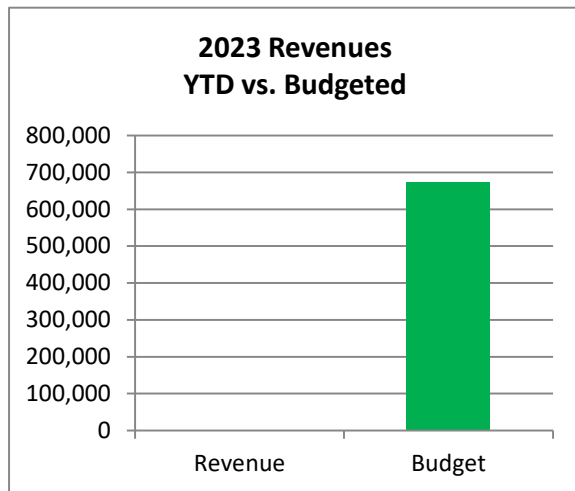
Town of Johnstown, Colorado
Statement of Revenues, Expenditures, and Changes in
Fund Balances - Tax Allocation Fund
Period Ending February 28, 2023
Unaudited

Item #8.

Tax Allocation Fund	2023 Actuals February	2023 Adopted Budget	% Complete
Beginning Fund Balance*	41,435	41,435	
<u>Revenues:</u>			
Taxes & Fees	-	675,000	0.0%
Earnings on Investment	-	-	
Total Operating Revenues	-	675,000	0.0%
<u>Expenditures:</u>			
Miscellaneous	-	675,000	0.0%
Total Expenditures	-	675,000	0.0%
Excess (Deficiency) of Revenues and Other Sources over Expenditures	-	-	
Ending Fund Balance*	41,435	41,435	

* - Unaudited

16.7% of the fiscal year has elapsed



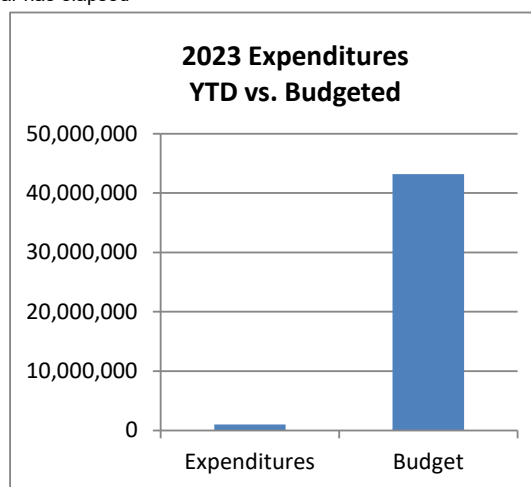
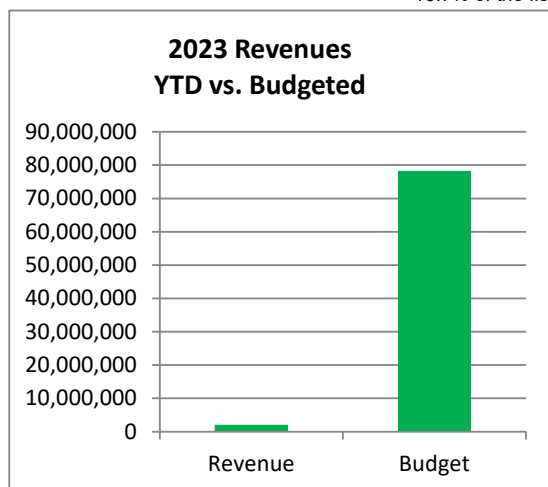
Town of Johnstown, Colorado
Statement of Revenues, Expenditures, and Changes in
Fund Balances - Water Fund
Period Ending February 28, 2023
Unaudited

Item #8.

Water Fund	2023 Actuals February	2023 Adopted Budget	%
			Complete
Beginning Cash Balance*	37,380,557	37,380,557	
<u>Revenues:</u>			
Charges for Services	564,193	4,555,000	12.4%
Total Operating Revenues	564,193	4,555,000	12.4%
<u>Expenses:</u>			
Administration	20,043	235,300	8.5%
Operations	562,331	4,365,350	12.9%
Capital Outlay	349,977	36,417,280	1.0%
Depreciation	72,465	970,000	7.5%
Transfers Out	-	600,000	
Total Operating Expenses	1,004,816	43,187,930	2.3%
Operating Income (Loss)	(440,623)	(38,632,930)	
<u>Non-Operating Revenues (Expenses)</u>			
Tap Fees	408,420	1,357,605	30.1%
Capital Investment Fees	351,143	1,147,945	30.6%
Misc. Revenues	624,903	71,226,500	0.9%
Interest Expense	111,988	20,000	559.9%
Total Non-Operating Revenues (Expenses)	1,496,454	73,752,050	2.0%
Excess (Deficiency) of Revenues and Other Sources over Expenses	1,055,831	35,119,120	
Ending Cash Balance*	38,436,388	72,499,677	

* - Unaudited

16.7% of the fiscal year has elapsed



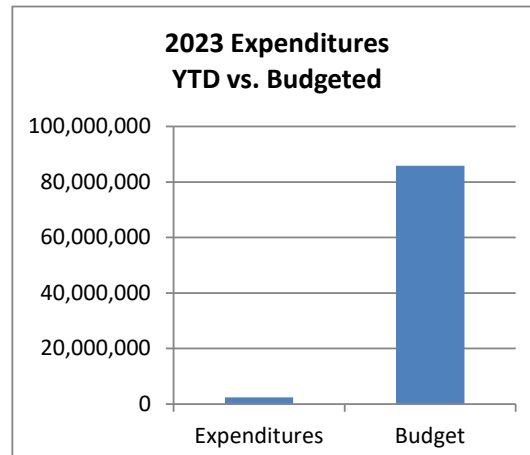
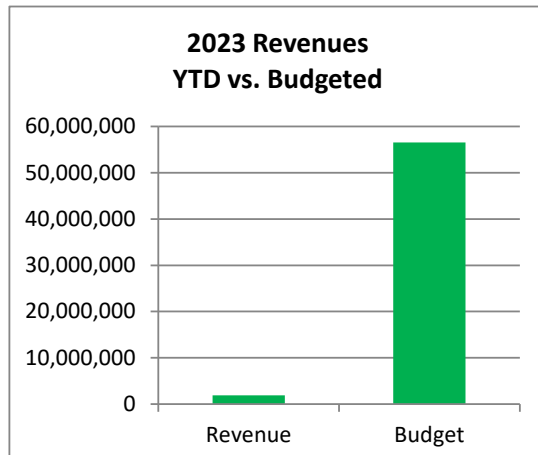
Town of Johnstown, Colorado
Statement of Revenues, Expenditures, and Changes in
Fund Balances - Sewer Fund
Period Ending February 28, 2023
Unaudited

Item #8.

Sewer Fund	2023 Actuals February	2023 Adopted Budget	% Complete
Beginning Cash Balance*	47,151,463	47,151,463	
<u>Revenues:</u>			
Charges for Services	548,719	3,181,500	17.2%
Total Operating Revenues	548,719	3,181,500	17.2%
<u>Expenses:</u>			
Administration	20,200	227,750	8.9%
Operations	300,196	2,687,960	11.2%
Capital Outlay	2,105,556	78,381,000	2.7%
Depreciation	38,253	1,200,000	3.2%
Debt Service	-	2,764,000	0.0%
Transfers Out	-	600,000	0.0%
Total Operating Expenses	2,464,205	85,860,710	2.9%
Operating Income (Loss)	(1,915,486)	(82,679,210)	
<u>Non-Operating Revenues (Expenses)</u>			
Capital Improvement Fees	856,130	3,218,560	26.6%
Misc. Revenues	8,375	18,900	44.3%
Interest Expense	448,802	100,000	448.8%
Debt Proceeds	-	50,000,000	
Total Non-Operating Revenues (Expenses)	1,313,307	53,337,460	2.5%
Excess (Deficiency) of Revenues and Other Sources over Expenses	(602,179)	(29,341,750)	
Ending Cash Balance*	46,549,284	17,809,713	

* - Unaudited

16.7% of the fiscal year has elapsed



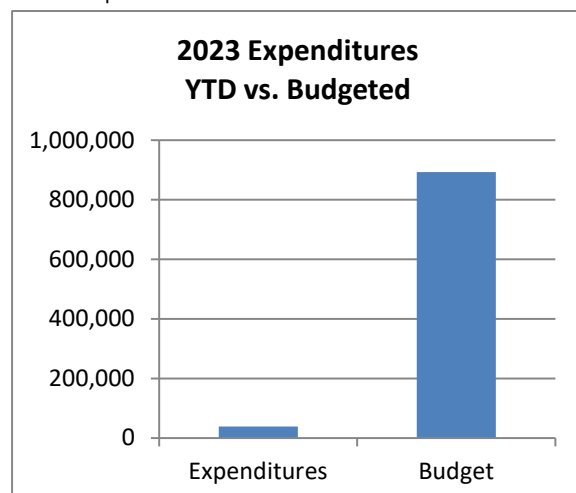
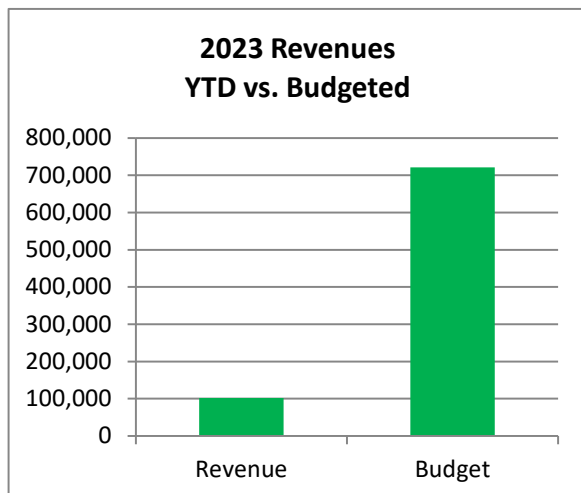
Town of Johnstown, Colorado
Statement of Revenues, Expenditures, and Changes in
Fund Balances - Drainage Fund
Period Ending February 28, 2023
Unaudited

Item #8.

Drainage Fund	2023 Actuals February	2023 Adopted Budget	% Complete
Beginning Cash Balance*	4,232,022	4,232,022	
<u>Revenues:</u>			
Charges for Services	86,744	500,000	17.3%
Total Operating Revenues	86,744	500,000	17.3%
<u>Expenses:</u>			
Administration	15,471	150,400	10.3%
Operations	23,097	493,025	4.7%
Capital Improvements	-	-	
Transfer Out	-	250,000	
Total Operating Expenses	38,568	893,425	4.3%
Operating Income (Loss)	48,176	(393,425)	
<u>Non-Operating Revenues (Expenses)</u>			
Capital Revenues	-	220,000	0.0%
Misc. Revenues	-	-	
Interest Expense	15,046	1,000	1504.6%
Total Non-Operating Revenues (Expenses)	15,046	221,000	6.8%
Excess (Deficiency) of Revenues and Other Sources over Expenses	63,222	(172,425)	
Ending Cash Balance*	4,295,244	4,059,597	

* - Unaudited

16.7% of the fiscal year has elapsed



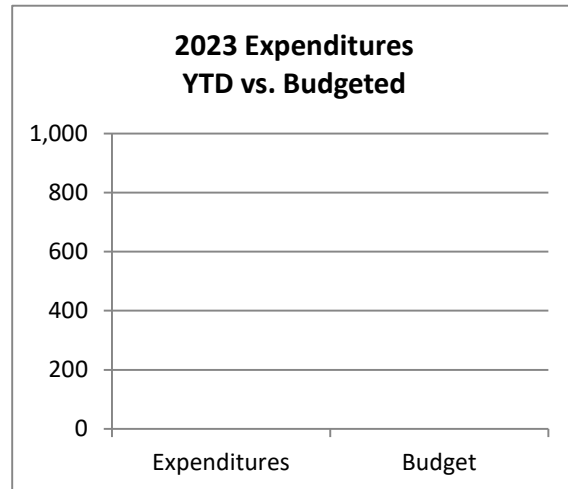
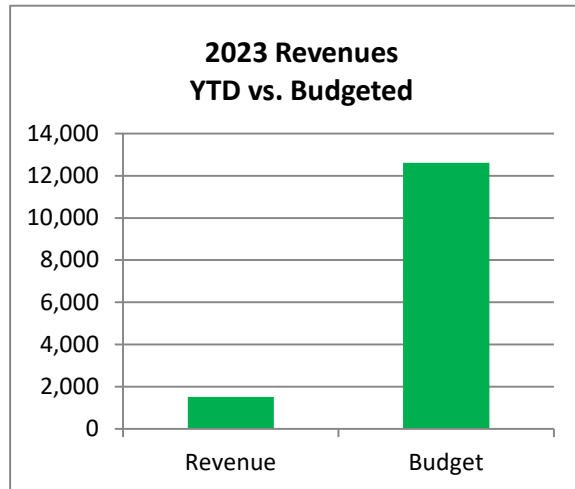
Town of Johnstown, Colorado
Statement of Revenues, Expenditures, and Changes in
Fund Balances - Cemetery Perpetual Fund
Period Ending February 28, 2023
Unaudited

Item #8.

Cemetery Perpetual Fund	2023 Actuals February	2023 Adopted Budget	% Complete
Beginning Fund Balance*	168,889	168,889	
<u>Revenues:</u>			
Miscellaneous Revenue	630	12,560	5.0%
Earnings on Investment	881	60	1468.1%
Total Operating Revenues	1,511	12,620	12.0%
<u>Expenditures:</u>			
Operations & Maintenance	-	-	
Capital Outlay	-	-	
Transfers Out	-	-	
Total Expenditures	-	-	
Excess (Deficiency) of Revenues and Other Sources over Expenditures	1,511	12,620	
Ending Fund Balance*	170,400	181,509	

* - Unaudited

16.7% of the fiscal year has elapsed



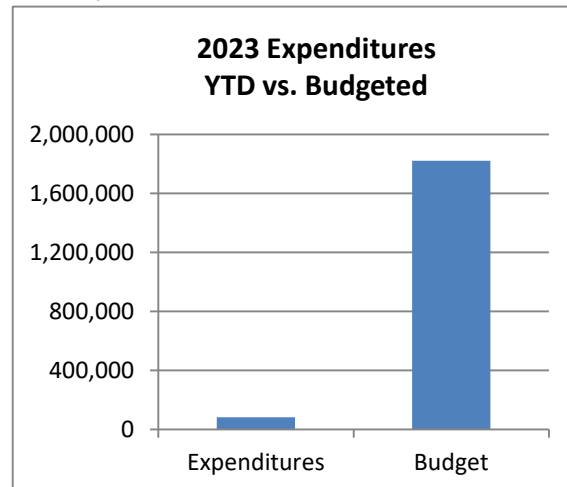
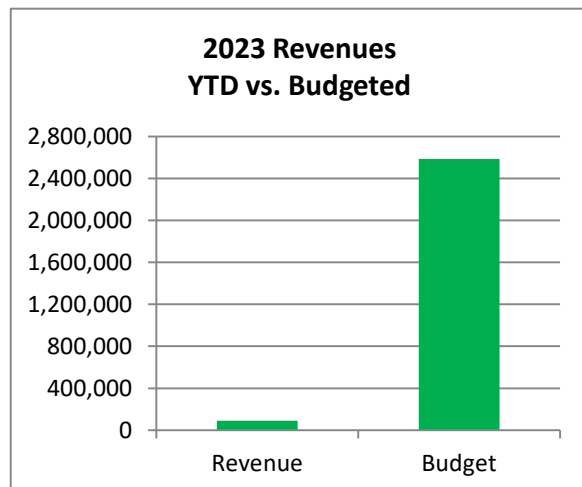
Town of Johnstown, Colorado
Statement of Revenues, Expenditures, and Changes in
Fund Balances - Library Fund
Period Ending February 28, 2023
Unaudited

Item #8.

Library Fund	2023 Actuals February	2023 Adopted Budget	% Complete
Beginning Fund Balance*	8,580,860	8,580,860	
<u>Revenues:</u>			
Intergovernmental	-	819,186	0.0%
Miscellaneous Revenue	-	11,000	0.0%
Capital Investment Fees	87,369	439,410	19.9%
Interest	4,160	75,000	5.5%
<i>Transfers In</i>	-	1,243,246	0.0%
Total Operating Revenues	91,529	2,587,842	3.5%
<u>Expenditures:</u>			
Operations	82,313	1,821,000	4.5%
Capital Outlay	-	-	0.0%
Total Expenditures	82,313	1,821,000	4.5%
Excess (Deficiency) of Revenues and Other Sources over Expenditures	9,216	766,842	
Ending Fund Balance*	8,590,076	9,347,702	

* - Unaudited

16.7% of the fiscal year has elapsed



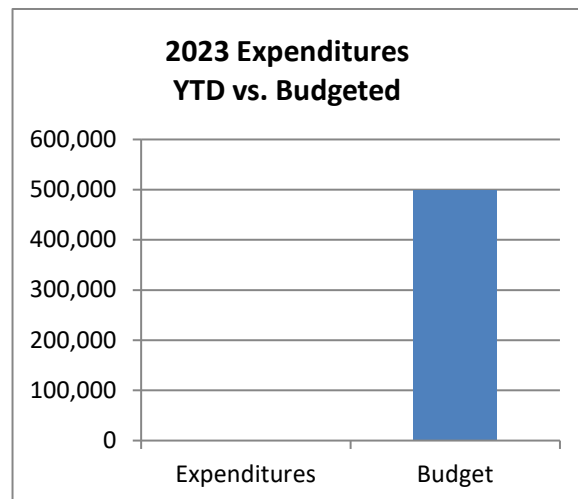
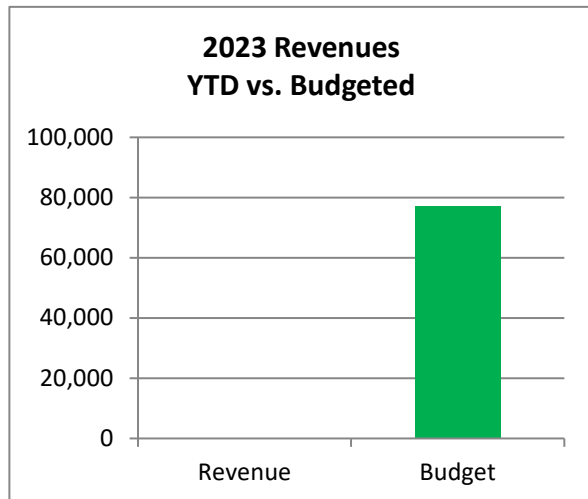
Town of Johnstown, Colorado
Statement of Revenues, Expenditures, and Changes in
Fund Balances - Recreation Center Fund
Period Ending February 28, 2023
Unaudited

Item #8.

Recreation Center Fund	2023 Actuals February	2023 Adopted Budget	% Complete
Beginning Fund Balance*	922,738	922,738	
<u>Revenues:</u>			
State Grants	-	0	
Transfers In	-	77,262	
Earnings on Investment	-	-	
Total Operating Revenues	-	77,262	
<u>Expenditures:</u>			
Operations & Maintenance	-	500,000	0.0%
Capital Outlay	-	-	
Total Expenditures	-	500,000	0.0%
Excess (Deficiency) of Revenues and Other Sources over Expenditures	-	(422,738)	
Ending Fund Balance*	922,738	500,000	

* - Unaudited

16.7% of the fiscal year has elapsed





Town of Johnstown

TOWN COUNCIL AGENDA COMMUNICATIONS

AGENDA DATE: March 20, 2023

SUBJECT: Standard Form of Agreement between the Town and D2C architects for the design of expansion of the police department.

ACTION PROPOSED: Consider approval of the D2C agreement.

ATTACHMENTS: 1. D2C agreement

PRESENTED BY: Brian Phillips, Chief of Police

AGENDA ITEM DESCRIPTION:

This design agreement between the Town and D2C architects is a breakdown of costs for the process from pre design to bidding and negotiation of construction contracts for the proposed expansion of the police department.

The police department's evidence storage space is near capacity and will be filled to capacity within the next year at current rates. To maintain compliance with State of Colorado and Federal Statutes that apply to evidence storage, this expansion is critical.

Concurrently, the anticipated growth of personnel within the police department, we no longer have enough office space, training room space or public access meeting room space to maintain efficient operations.

\$450,000 was allocated for this design agreement in the approved 2023 budget. This agreement is for \$393,809.00.

LEGAL ADVICE:

The Town Attorney has reviewed the agreement.

FINANCIAL ADVICE:

NA

The Community That Cares

www.TownofJohnstown.com

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141

RECOMMENDED ACTION: Approve the agreement between the Town and D2C Architects.

SUGGESTED MOTIONS:

For Approval:

I move to approve the Standard Form Agreement Between the Town and D2C Architects.

For Denial:

Based on information presented, I move to deny the Agreement between the Town and D2C Architects.

Reviewed and Approved for Presentation,



Town Manager

AIA[®] Document B101[™] – 2017

Standard Form of Agreement Between Owner and Architect

AGREEMENT made as of the day of **March** in the year **2023**
(In words, indicate day, month and year.)

BETWEEN the Architect's client identified as the Owner:
(Name, legal status, address and other information)

Town of Johnstown
 450 S Parish Ave
 Johnstown, CO 80534

and the Architect:
(Name, legal status, address and other information)

D2C Architects, Inc.
 1212 S Broadway, Suite 250
 Denver, CO 80210

for the following Project:
(Name, location and detailed description)

Town of Johnstown – Police Department Renovation
 430 S Parish Ave
 Johnstown, CO 80534

This project entails a renovation and addition to the existing police department based on a prioritized list of goals. The spaces and associated renovation include:

- a. Implementing 5 core components (priorities) into the existing Johnstown PD:
 - a. Evidence Storage
 - b. Sally Port
 - c. Training Room
 - d. Workout Area
 - e. Patrol Officer Space

The Owner and Architect agree as follows.

ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

ELECTRONIC COPYING of any portion of this AIA[®] Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

TABLE OF ARTICLES

1	INITIAL INFORMATION
2	ARCHITECT'S RESPONSIBILITIES
3	SCOPE OF ARCHITECT'S BASIC SERVICES
4	SUPPLEMENTAL AND ADDITIONAL SERVICES
5	OWNER'S RESPONSIBILITIES
6	COST OF THE WORK
7	COPYRIGHTS AND LICENSES
8	CLAIMS AND DISPUTES
9	TERMINATION OR SUSPENSION
10	MISCELLANEOUS PROVISIONS
11	COMPENSATION
12	SPECIAL TERMS AND CONDITIONS
13	SCOPE OF THE AGREEMENT

ARTICLE 1 INITIAL INFORMATION

§ 1.1 This Agreement is based on the Initial Information set forth in this Section 1.1.

(For each item in this section, insert the information or a statement such as "not applicable" or "unknown at time of execution.")

§ 1.1.1 The Owner's program for the Project:

(Insert the Owner's program, identify documentation that establishes the Owner's program, or state the manner in which the program will be developed.)

« See Exhibit A »

§ 1.1.2 The Project's physical characteristics:

(Identify or describe pertinent information about the Project's physical characteristics, such as size; location; dimensions; geotechnical reports; site boundaries; topographic surveys; traffic and utility studies; availability of public and private utilities and services; legal description of the site, etc.)

The existing PD will be renovated with some expansion/additions included. Owner shall furnish:

- 1.) Survey – appropriate to the design team's need
- 2.) Geotechnical Exploration and report to establish soil conditions and design parameters
- 3.) Traffic Study
- 4.) Any other content necessary for design to commence which has not been included by the Architect

§ 1.1.3 The Owner's budget for the Cost of the Work, as defined in Section 6.1:

(Provide total and, if known, a line item breakdown.)

To Be Determined

§ 1.1.4 The anticipated design and construction milestone dates are to be determined as the project proceeds.

§ 1.1.5 The Owner intends the following procurement and delivery method for the Project:
(Identify method such as competitive bid or negotiated contract, as well as any requirements for accelerated or fast-track design and construction, multiple bid packages, or phased construction.)

CM/GC

§ 1.1.6 The Owner's anticipated Sustainable Objective for the Project:
(Identify and describe the Owner's Sustainable Objective for the Project, if any.)

Not Applicable. The Owner has no sustainable objective for this project.

§ 1.1.6.1 If the Owner identifies a Sustainable Objective, the Owner and Architect shall complete and incorporate AIA Document E204™–2017, Sustainable Projects Exhibit, into this Agreement to define the terms, conditions and services related to the Owner's Sustainable Objective. If E204–2017 is incorporated into this agreement, the Owner and Architect shall incorporate the completed E204–2017 into the agreements with the consultants and contractors performing services or Work in any way associated with the Sustainable Objective.

§ 1.1.7 The Owner identifies the following representative in accordance with Section 5.3:
(List name, address, and other contact information.)

Town of Johnstown
 Matt LeCerf, Town Manager
 450 S Parish Ave
 Johnstown, CO 80534
 Email: MLeCerf@TownofJohnstown.com

§ 1.1.8 The persons or entities, in addition to the Owner's representative, who are required to review the Architect's submittals to the Owner are as follows:
(List name, address, and other contact information.)

Not Applicable

§ 1.1.9 The Owner shall retain the following consultants and contractors:
(List name, legal status, address, and other contact information.)

- .1 Geotechnical Engineer:

TBD

- .2 Survey Engineer:

TBD

- .3 Other, if any:

(List any other consultants and contractors retained by the Owner.)

Environmental, Traffic Impact Study (TIS), Traffic Survey, CM/GC Contractor, 3rd Party Cost Estimators/Opinions (if desired)

§ 1.1.10 The Architect identifies the following representative in accordance with Section 2.3:
(List name, address, and other contact information.)

D2C Architects, Inc.
 Eric Combs, Vice President
 1212 S Broadway, Suite 250
 Denver, CO 80210

Email: ECombs@D2CArchitects.com

§ 1.1.11 The Architect shall retain the consultants identified in Sections 1.1.11.1 and 1.1.11.2:
(List name, legal status, address, and other contact information.)

§ 1.1.11.1 Consultants retained under Basic Services:

.1 Structural Engineer:

Corbel Engineers
301 Boardwalk Driver #273353
Fort Collins, CO 80527

.2 Mechanical Engineer:

ME Engineers
14143 Denver West Parkway, Suite 300
Golden, CO 80401

.3 Electrical Engineer:

ME Engineers
14143 Denver West Parkway, Suite 300
Golden, CO 80401

§ 1.1.11.2 Consultants retained under Supplemental Services:

Landscape and Civil Engineering

§ 1.1.12 Other Initial Information on which the Agreement is based:

See Exhibit A

§ 1.2 The Owner and Architect may rely on the Initial Information. Both parties, however, recognize that the Initial Information may materially change and, in that event, the Owner and the Architect shall appropriately adjust the Architect's services, schedule for the Architect's services, and the Architect's compensation. The Owner shall adjust the Owner's budget for the Cost of the Work and the Owner's anticipated design and construction milestones, as necessary, to accommodate material changes in the Initial Information.

§ 1.3 The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties may use AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.3.1 Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™-2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™-2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 ARCHITECT'S RESPONSIBILITIES

§ 2.1 The Architect shall provide professional services as set forth in this Agreement. The Architect represents that it is properly licensed in the jurisdiction where the Project is located to provide the services required by this Agreement, or shall cause such services to be performed by appropriately licensed design professionals.

§ 2.2 The Architect shall perform its services consistent with the professional skill and care ordinarily provided by architects practicing in Colorado under the same or similar circumstances. The Architect shall perform its services as expeditiously as is consistent with such professional skill and care and the orderly progress of the Project.

§ 2.3 The Architect shall identify a representative authorized to act on behalf of the Architect with respect to the Project.

§ 2.4 Except with the Owner's knowledge and consent, the Architect shall not engage in any activity, or accept any employment, interest or contribution that would reasonably appear to compromise the Architect's professional judgment with respect to this Project.

§ 2.5 The Architect shall maintain the following insurance until termination of this Agreement.

§ 2.5.1 Commercial General Liability with policy limits of not less than **One Million Dollars (\$ 1,000,000)** for each occurrence and **Two Million Dollars (\$ 2,000,000)** in the aggregate for bodily injury and property damage.

§ 2.5.2 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Architect with policy limits of not less than **One Million Dollars (\$ 1,000,000)** per accident for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles, along with any other statutorily required automobile coverage.

§ 2.5.3 The Architect may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella liability insurance policies result in the same or greater coverage as the coverages required under Sections 2.5.1 and 2.5.2, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ 2.5.4 Workers' Compensation at statutory limits.

§ 2.5.5 Employers' Liability with policy limits not less than **One Million Dollars (\$ 1,000,000)** each accident, **One Million Dollars (\$ 1,000,000)** each employee, and **One Million Dollars (\$ 1,000,000)** policy limit.

§ 2.5.6 Professional Liability covering negligent acts, errors and omissions in the performance of professional services with policy limits of not less than **One Million Dollars (\$ 1,000,000)** per claim and **Two Million Dollars (\$ 2,000,000)** in the aggregate.

§ 2.5.7 **Additional Insured Obligations.** To the fullest extent permitted by law, the Architect shall cause the primary and excess or umbrella policies for Commercial General Liability and Automobile Liability to include the Owner as an additional insured for claims caused in whole or in part by the Architect's negligent acts or omissions. The additional insured coverage shall be primary and non-contributory to any of the Owner's insurance policies and shall apply to both ongoing and completed operations. The additional insured endorsement shall not contain any exclusion for bodily injury or property damage arising from completed operations. The Architect shall be solely responsible for any deductible losses under each of the policies required.

§ 2.5.8 The Architect shall provide certificates of insurance to the Owner that evidence compliance with the requirements in this Section 2.5. Each certificate shall identify the Project and shall provide that the coverages afforded under the policies shall not be cancelled, terminated or materially changed until at least 30 days prior written notice has been given to Owner. If the words "endeavor to" appear in the portion of the certificate addressing cancellation, those words shall be stricken from the certificate by the agent(s) completing the certificate. Owner reserves the right to request and receive a certified copy of any policy and any endorsement thereto.

§ 2.5.9 Failure on the part of the Architect to procure or maintain policies providing the required coverages, conditions, and minimum limits shall constitute a material breach of the Agreement upon which the Owner may terminate this Agreement.

§ 2.6 The Architect agrees to remedy any design defects arising from the Architect's performance of, or failure to perform this Agreement that constitute a breach of the professional standard of care.

§ 2.7 The Architect shall furnish all services as described herein, required in connection with the Project, and shall be responsible to the Owner for the employment of properly trained, qualified and

competent persons in such regard.

§ 2.8. The Architect shall not specify that asbestos containing building materials be used as a building material in any construction document for the Project.

ARTICLE 3 SCOPE OF ARCHITECT'S BASIC SERVICES

§ 3.1 The Architect's Basic Services consist of those described in this Article 3 and include usual and customary structural, mechanical, and electrical engineering services. Services not set forth in this Article 3 are Supplemental or Additional Services.

§ 3.1.1 The Architect shall manage the Architect's services, research applicable design criteria, attend Project meetings, communicate with members of the Project team, and report progress to the Owner.

§ 3.1.2 The Architect shall coordinate its services with those services provided by the Owner and the Owner's consultants. The Architect shall be entitled to rely on, and shall not be responsible for, the accuracy, completeness, and timeliness of, services and information furnished by the Owner and the Owner's consultants. The Architect shall provide prompt written notice to the Owner if the Architect becomes aware of any error, omission, or inconsistency in such services or information.

§ 3.1.3 As soon as practicable after the date of this Agreement, the Architect shall submit for the Owner's approval a schedule for the performance of the Architect's services. The schedule initially shall include anticipated dates for the commencement of construction and for Substantial Completion of the Work as set forth in the Initial Information. The schedule shall include allowances for periods of time required for the Owner's review, for the performance of the Owner's consultants, and for approval of submissions by authorities having jurisdiction over the Project. Once approved by the Owner, time limits established by the schedule shall not, except for reasonable cause, be exceeded by the Architect or Owner. With the Owner's approval, the Architect shall adjust the schedule, if necessary, as the Project proceeds until the commencement of construction.

§ 3.1.4 The Architect shall not be responsible for an Owner's directive or substitution, or for the Owner's acceptance of non-conforming Work, made or given without the Architect's written approval.

§ 3.1.5 The Architect shall contact governmental authorities required to approve the Construction Documents and entities providing utility services to the Project. The Architect shall respond to applicable design requirements imposed by those authorities and entities.

§ 3.1.6 The Architect shall assist the Owner in connection with the Owner's responsibility for filing documents required for the approval of governmental authorities having jurisdiction over the Project.

§ 3.2 Schematic Design Phase Services

§ 3.2.1 The Architect shall review the program and other information furnished by the Owner, and shall review laws, codes, and regulations applicable to the Architect's services.

§ 3.2.2 The Architect shall prepare a preliminary evaluation of the Owner's program, schedule, budget for the Cost of the Work, Project site, the proposed procurement and delivery method, and other Initial Information, each in terms of the other, to ascertain the requirements of the Project. The Architect shall notify the Owner of (1) any inconsistencies discovered in the information, and (2) other information or consulting services that may be reasonably needed for the Project.

§ 3.2.3 The Architect shall present its preliminary evaluation to the Owner and shall discuss with the Owner alternative approaches to design and construction of the Project. The Architect shall reach an understanding with the Owner regarding the requirements of the Project.

§ 3.2.4 Based on the Project requirements agreed upon with the Owner, the Architect shall prepare and present, for the Owner's approval, a preliminary design illustrating the scale and relationship of the Project components.

§ 3.2.5 Based on the Owner's approval of the preliminary design, the Architect shall prepare Schematic Design Documents for the Owner's approval. The Schematic Design Documents shall consist of drawings and other documents including a site plan, if appropriate, and preliminary building plans, sections and elevations; and may

include some combination of study models, perspective sketches, or digital representations. Preliminary selections of major building systems and construction materials shall be noted on the drawings or described in writing.

§ 3.2.5.1 The Architect shall consider sustainable design alternatives, such as material choices and building orientation, together with other considerations based on program and aesthetics, in developing a design that is consistent with the Owner's program, schedule and budget for the Cost of the Work. The Owner may obtain more advanced sustainable design services as a Supplemental Service under Section 4.1.1.

§ 3.2.5.2 The Architect shall consider the value of alternative materials, building systems and equipment, together with other considerations based on program and aesthetics, in developing a design for the Project that is consistent with the Owner's program, schedule, and budget for the Cost of the Work.

§ 3.2.6 The Architect shall submit to the Owner an estimate of the Cost of the Work prepared in accordance with Section 6.3.

§ 3.2.7 The Architect shall submit the Schematic Design Documents to the Owner, and request the Owner's approval.

§ 3.3 Design Development Phase Services

§ 3.3.1 Based on the Owner's approval of the Schematic Design Documents, and on the Owner's authorization of any adjustments in the Project requirements and the budget for the Cost of the Work, the Architect shall prepare Design Development Documents for the Owner's approval. The Design Development Documents shall illustrate and describe the development of the approved Schematic Design Documents and shall consist of drawings and other documents including plans, sections, elevations, typical construction details, and diagrammatic layouts of building systems to fix and describe the size and character of the Project as to architectural, structural, mechanical and electrical systems, and other appropriate elements. The Design Development Documents shall also include outline specifications that identify major materials and systems and establish, in general, their quality levels.

§ 3.3.2 The Architect shall update the estimate of the Cost of the Work prepared in accordance with Section 6.3.

§ 3.3.3 The Architect shall submit the Design Development Documents to the Owner, advise the Owner of any adjustments to the estimate of the Cost of the Work, and request the Owner's approval.

§ 3.4 Construction Documents Phase Services

§ 3.4.1 Based on the Owner's approval of the Design Development Documents, and on the Owner's authorization of any adjustments in the Project requirements and the budget for the Cost of the Work, the Architect shall prepare Construction Documents for the Owner's approval. The Construction Documents shall illustrate and describe the further development of the approved Design Development Documents and shall consist of Drawings and Specifications setting forth in detail the quality levels and performance criteria of materials and systems and other requirements for the construction of the Work. The Owner and Architect acknowledge that, in order to perform the Work, the Contractor will provide additional information, including Shop Drawings, Product Data, Samples and other similar submittals, which the Architect shall review in accordance with Section 3.6.4.

§ 3.4.2 The Architect shall incorporate the design requirements of governmental authorities having jurisdiction over the Project into the Construction Documents.

§ 3.4.3 During the development of the Construction Documents, the Architect shall assist the Owner in the development and preparation of (1) procurement information that describes the time, place, and conditions of bidding, including bidding or proposal forms; (2) the form of agreement between the Owner and Contractor; and (3) the Conditions of the Contract for Construction (General, Supplementary and other Conditions). The Architect shall also compile a project manual that includes the Conditions of the Contract for Construction and Specifications, and may include bidding requirements and sample forms.

§ 3.4.4 The Architect shall update the estimate for the Cost of the Work prepared in accordance with Section 6.3.

§ 3.4.5 The Architect shall submit the Construction Documents to the Owner, advise the Owner of any adjustments to the estimate of the Cost of the Work, take any action required under Section 6.5, and request the Owner's approval.

§ 3.4.6 Construction drawings and specifications, or other construction documents or construction contract documents submitted by Architect to Owner for approval or to any contractors for bidding or negotiation shall be complete and unambiguous as is consistent with the applicable Colorado professional standard of care. Contractor or Owner shall seek clarification from Architect regarding any questions or concerns they may have regarding the construction documents. Architect agrees that Architect will inform Owner of any tests, studies, analyses or reports which Architect believes are necessary or advisable to be performed by or for Owner when appropriate.

§ 3.4.7 Owner's approval of Construction Documents shall be limited to approval as to general layout of the Project. In the event of design failure constituting a breach of the applicable Colorado professional standard of care or this Agreement, Owner's approval of Construction Documents shall not be used as a defense against Architect's breach of this Agreement.

§ 3.5 Procurement Phase Services

§ 3.5.1 General

The Architect shall assist the Owner in establishing a list of prospective contractors. Following the Owner's approval of the Construction Documents, the Architect shall assist the Owner in (1) obtaining either competitive bids or negotiated proposals; (2) confirming responsiveness of bids or proposals; (3) determining the successful bid or proposal, if any; and, (4) awarding and preparing contracts for construction.

§ 3.5.2 Competitive Bidding

§ 3.5.2.1 Bidding Documents shall consist of bidding requirements and proposed Contract Documents.

§ 3.5.2.2 The Architect shall assist the Owner in bidding the Project by:

- .1 facilitating the distribution of Bidding Documents to prospective bidders;
- .2 organizing and conducting a pre-bid conference for prospective bidders;
- .3 preparing responses to questions from prospective bidders and providing clarifications and interpretations of the Bidding Documents to the prospective bidders in the form of addenda; and,
- .4 organizing and conducting the opening of the bids, and subsequently documenting and distributing the bidding results, as directed by the Owner.

§ 3.5.2.3 If the Bidding Documents permit substitutions, upon the Owner's written authorization, the Architect shall, as an Additional Service, consider requests for substitutions and prepare and distribute addenda identifying approved substitutions to all prospective bidders.

§ 3.5.3 Negotiated Proposals

§ 3.5.3.1 Proposal Documents shall consist of proposal requirements and proposed Contract Documents.

§ 3.5.3.2 The Architect shall assist the Owner in obtaining proposals by:

- .1 facilitating the distribution of Proposal Documents for distribution to prospective contractors and requesting their return upon completion of the negotiation process;
- .2 organizing and participating in selection interviews with prospective contractors;
- .3 preparing responses to questions from prospective contractors and providing clarifications and interpretations of the Proposal Documents to the prospective contractors in the form of addenda; and,
- .4 participating in negotiations with prospective contractors, and subsequently preparing a summary report of the negotiation results, as directed by the Owner.

§ 3.5.3.3 If the Proposal Documents permit substitutions, upon the Owner's written authorization, the Architect shall, as an Additional Service, consider requests for substitutions and prepare and distribute addenda identifying approved substitutions to all prospective contractors.

§ 3.6 Construction Phase Services

§ 3.6.1 General

§ 3.6.1.1 The Architect shall provide administration of the Contract between the Owner and the Contractor as set forth below and in AIA Document A201™-2017, General Conditions of the Contract for Construction. If the Owner and Contractor modify AIA Document A201-2017, those modifications shall not affect the Architect's services under this Agreement unless the Owner and the Architect amend this Agreement.

§ 3.6.1.2 The Architect shall advise and consult with the Owner during the Construction Phase Services. The Architect shall have authority to act on behalf of the Owner only to the extent provided in this Agreement. The Architect shall not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, nor shall the Architect be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect shall be responsible for the Architect's negligent acts or omissions, but shall not have control over or charge of, and shall not be responsible for, acts or omissions of the Contractor or of any other persons or entities performing portions of the Work.

§ 3.6.1.3 Subject to Section 4.2 and except as provided in Section 3.6.6.5, the Architect's responsibility to provide Construction Phase Services commences with the award of the Contract for Construction and terminates on the date the Architect issues the final Certificate for Payment.

§ 3.6.2 Evaluations of the Work

§ 3.6.2.1 The Architect shall visit the site at intervals appropriate to the stage of construction, or as otherwise required in Section 4.2.3, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine, in general, if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect shall not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of the site visits, the Architect shall keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work.

§ 3.6.2.2 The Architect has the authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect shall have the authority to require inspection or testing of the Work in accordance with the provisions of the Contract Documents, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 3.6.2.3 The Architect shall interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests shall be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 3.6.2.4 Interpretations and decisions of the Architect shall be consistent with the intent of, and reasonably inferable from, the Contract Documents and shall be in writing or in the form of drawings. When making such interpretations and decisions, the Architect shall endeavor to secure faithful performance by both Owner and Contractor, shall not show partiality to either, and shall not be liable for results of interpretations or decisions rendered in good faith. The Architect's decisions on matters relating to aesthetic effect shall be final if consistent with the intent expressed in the Contract Documents.

§ 3.6.2.5 Unless the Owner and Contractor designate another person to serve as an Initial Decision Maker, as that term is defined in AIA Document A201–2017, the Architect shall render initial decisions on Claims between the Owner and Contractor as provided in the Contract Documents.

§ 3.6.3 Certificates for Payment to Contractor

§ 3.6.3.1 The Architect shall review and certify the amounts due the Contractor and shall issue certificates in such amounts. The Architect's certification for payment shall constitute a representation to the Owner, based on the Architect's evaluation of the Work as provided in Section 3.6.2 and on the data comprising the Contractor's Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to (1) an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, (2) results of subsequent tests and inspections, (3) correction of minor deviations from the Contract Documents prior to completion, and (4) specific qualifications expressed by the Architect.

§ 3.6.3.2 The issuance of a Certificate for Payment shall not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work, (2) reviewed construction means, methods, techniques, sequences or procedures, (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, or (4) ascertained how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 3.6.3.3 The Architect shall maintain a record of the Applications and Certificates for Payment.

§ 3.6.4 Submittals

§ 3.6.4.1 The Architect shall review the Contractor's submittal schedule and shall not unreasonably delay or withhold approval of the schedule. The Architect's action in reviewing submittals shall be taken in accordance with the approved submittal schedule or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time, in the Architect's professional judgment, to permit adequate review.

§ 3.6.4.2 The Architect shall review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Review of such submittals is not for the purpose of determining the accuracy and completeness of other information such as dimensions, quantities, and installation or performance of equipment or systems, which are the Contractor's responsibility. The Architect's review shall not constitute approval of safety precautions or construction means, methods, techniques, sequences or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 3.6.4.3 If the Contract Documents specifically require the Contractor to provide professional design services or certifications by a design professional related to systems, materials, or equipment, the Architect shall specify the appropriate performance and design criteria that such services must satisfy. The Architect shall review and take appropriate action on Shop Drawings and other submittals related to the Work designed or certified by the Contractor's design professional, provided the submittals bear such professional's seal and signature when submitted to the Architect. The Architect's review shall be for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect shall be entitled to rely upon, and shall not be responsible for, the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals.

§ 3.6.4.4 Subject to Section 4.2, the Architect shall review and respond to requests for information about the Contract Documents. The Architect shall set forth, in the Contract Documents, the requirements for requests for information. Requests for information shall include, at a minimum, a detailed written statement that indicates the specific Drawings or Specifications in need of clarification and the nature of the clarification requested. The Architect's response to such requests shall be made in writing within any time limits agreed upon, or otherwise with reasonable promptness. If appropriate, the Architect shall prepare and issue supplemental Drawings and Specifications in response to the requests for information.

§ 3.6.4.5 The Architect shall maintain a record of submittals and copies of submittals supplied by the Contractor in accordance with the requirements of the Contract Documents.

§ 3.6.5 Changes in the Work

§ 3.6.5.1 The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. Subject to Section 4.2, the Architect shall prepare Change Orders and Construction Change Directives for the Owner's approval and execution in accordance with the Contract Documents.

§ 3.6.5.2 The Architect shall maintain records relative to changes in the Work.

§ 3.6.6 Project Completion

§ 3.6.6.1 The Architect shall:

- .1 conduct site observation to determine the date or dates of Substantial Completion and the date of final completion;
- .2 issue Certificates of Substantial Completion;

- .3 forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract Documents and received from the Contractor; and,
- .4 issue a final Certificate for Payment based upon a final site observation indicating that, to the best of the Architect's knowledge, information, and belief, the Work complies with the requirements of the Contract Documents.

§ 3.6.6.2 The Architect's site observation shall be conducted with the Owner to check conformance of the Work with the requirements of the Contract Documents and to verify the accuracy and completeness of the list submitted by the Contractor of Work to be completed or corrected.

§ 3.6.6.3 When Substantial Completion has been achieved, the Architect shall inform the Owner about the balance of the Contract Sum remaining to be paid the Contractor, including the amount to be retained from the Contract Sum, if any, for final completion or correction of the Work.

§ 3.6.6.4 The Architect shall forward to the Owner the following information received from the Contractor: (1) consent of surety or sureties, if any, to reduction in or partial release of retainage or the making of final payment; (2) affidavits, receipts, releases and waivers of liens, or bonds indemnifying the Owner against liens; and (3) any other documentation required of the Contractor under the Contract Documents.

§ 3.6.6.5 Prior to the expiration of one year from the date of Substantial Completion, the Architect shall, without additional compensation, conduct a meeting with the Owner to review the facility operations and performance, and prepare a warranty punch list for items of work to be completed by the Contractor. The Architect shall conduct observations related to each warranty punch list item.

ARTICLE 4 SUPPLEMENTAL AND ADDITIONAL SERVICES

§ 4.1 Supplemental Services

§ 4.1.1 The services listed below are not included in Basic Services but may be required for the Project. The Architect shall provide the listed Supplemental Services only if specifically designated in the table below as the Architect's responsibility, and the Owner shall compensate the Architect as mutually agreed between the Owner and the Architect in writing. Unless otherwise specifically addressed in this Agreement, if neither the Owner nor the Architect is designated, the parties agree that the listed Supplemental Service is not being provided for the Project. The Architect will provide Owner with a written request to perform Supplemental Services, proposing a lump sum, a not-to-exceed amount or other price, for Owner's written approval prior to commencing performance of the Supplemental Services under this section.

(Designate the Architect's Supplemental Services and the Owner's Supplemental Services required for the Project by indicating whether the Architect or Owner shall be responsible for providing the identified Supplemental Service. Insert a description of the Supplemental Services in Section 4.1.2 below or attach the description of services as an exhibit to this Agreement.)

Supplemental Services	Responsibility (Architect, Owner, or not provided)
§ 4.1.1.1 Programming	Architect
§ 4.1.1.2 Multiple preliminary designs	Architect
§ 4.1.1.3 Measured drawings	Not Provided
§ 4.1.1.4 Existing facilities surveys	Owner
§ 4.1.1.5 Site evaluation and planning	Not Provided
§ 4.1.1.6 Building Information Model management responsibilities	Architect during design phase only
§ 4.1.1.7 Development of Building Information Models for post construction use	Not Provided
§ 4.1.1.8 Civil engineering	Architect
§ 4.1.1.9 Landscape design	Architect
§ 4.1.1.10 Architectural interior design	Architect
§ 4.1.1.11 Value analysis	Not Provided

Supplemental Services	Responsibility (Architect, Owner, or not provided)
§ 4.1.1.12 Detailed cost estimating beyond that required in Section 6.3	Owner / Not Provided by Architect
§ 4.1.1.13 On-site project representation	Owner
§ 4.1.1.14 Conformed documents for construction	Not Provided
§ 4.1.1.15 As-designed record drawings	Not Provided
§ 4.1.1.16 As-constructed record drawings	Not Provided
§ 4.1.1.17 Post-occupancy evaluation	Not Provided
§ 4.1.1.18 Facility support services	Not Provided
§ 4.1.1.19 Tenant-related services	Not Provided
§ 4.1.1.20 Architect's coordination of the Owner's consultants	Included
§ 4.1.1.21 Telecommunications/data design	Not Provided
§ 4.1.1.22 Security evaluation and planning	Not Provided
§ 4.1.1.23 Commissioning	Not Provided
§ 4.1.1.24 Sustainable Project Services pursuant to Section 4.1.3	Not Provided
§ 4.1.1.25 Fast-track design services	Not Provided
§ 4.1.1.26 Multiple bid packages	Not Provided
§ 4.1.1.27 Historic preservation	Not Provided
§ 4.1.1.28 Furniture, furnishings, and equipment design	Furniture Concepts / Test Fits Only
§ 4.1.1.29 Other services provided by specialty Consultants	Not Provided
§ 4.1.1.30 Other Supplemental Services	Construction Observation Support Services will be negotiated and amended into the contract at a later date

§ 4.1.2 Description of Supplemental Services

§ 4.1.2.1 A description of each Supplemental Service identified in Section 4.1.1 as the Architect's responsibility is provided below.

(Describe in detail the Architect's Supplemental Services identified in Section 4.1.1 or, if set forth in an exhibit, identify the exhibit. The AIA publishes a number of Standard Form of Architect's Services documents that can be included as an exhibit to describe the Architect's Supplemental Services.)

None

§ 4.1.2.2 A description of each Supplemental Service identified in Section 4.1.1 as the Owner's responsibility is provided below.

(Describe in detail the Owner's Supplemental Services identified in Section 4.1.1 or, if set forth in an exhibit, identify the exhibit.)

None

§ 4.1.3 If the Owner identified a Sustainable Objective in Article 1, the Architect shall provide, as a Supplemental Service, the Sustainability Services required in AIA Document E204™–2017, Sustainable Projects Exhibit, attached to this Agreement. The Owner shall compensate the Architect as provided in Section 11.2.

§ 4.2 Architect's Additional Services

The Architect may provide Additional Services after execution of this Agreement without invalidating the Agreement upon written agreement of Owner and Architect. Except for services required due to the fault of the Architect, any Additional Services provided in accordance with this Section 4.2 shall entitle the Architect to compensation pursuant to Section 11.3 and an appropriate adjustment in the Architect's schedule.

§ 4.2.1 Upon recognizing the need to perform the following Additional Services, the Architect shall notify the Owner in writing with reasonable promptness and explain the facts and circumstances giving rise to the need. The Architect shall not proceed to provide the following Additional Services until the Architect receives the Owner's written authorization:

- .1 Services necessitated by a change in the Initial Information, previous instructions or approvals given by the Owner, or a material change in the Project including size, quality, complexity, the Owner's schedule or budget for Cost of the Work, or procurement or delivery method;
- .2 Services necessitated by the enactment or revision of codes, laws, or regulations, including changing or editing previously prepared Instruments of Service;
- .3 Changing or editing previously prepared Instruments of Service necessitated by official interpretations of applicable codes, laws or regulations that are either (a) contrary to specific interpretations by the applicable authorities having jurisdiction made prior to the issuance of the building permit, or (b) contrary to requirements of the Instruments of Service when those Instruments of Service were prepared in accordance with the applicable standard of care;
- .4 Services necessitated by decisions of the Owner not rendered in a timely manner or any other failure of performance on the part of the Owner or the Owner's consultants or contractors;
- .5 Preparing digital models or other design documentation for transmission to the Owner's consultants and contractors, or to other Owner-authorized recipients;
- .6 Preparation of design and documentation for alternate bid or proposal requests proposed by the Owner;
- .7 Preparation for, and attendance at, a public presentation, meeting or hearing;
- .8 Preparation for, and attendance at, a dispute resolution proceeding or legal proceeding, except where the Architect is party thereto;
- .9 Evaluation of the qualifications of entities providing bids or proposals;
- .10 Consultation concerning replacement of Work resulting from fire or other cause during construction; or,
- .11 Assistance to the Initial Decision Maker, if other than the Architect.

§ 4.2.2 To avoid delay in the Construction Phase, the Architect shall provide the following Additional Services, notify the Owner in writing with reasonable promptness, and explain the facts and circumstances giving rise to the need. If, upon receipt of the Architect's notice, the Owner determines that all or parts of the services are not required, the Owner shall give prompt written notice to the Architect of the Owner's determination. The Owner shall compensate the Architect for the services provided prior to the Architect's receipt of the Owner's notice.

- .1 Reviewing a Contractor's submittal out of sequence from the submittal schedule approved by the Architect;
- .2 Responding to the Contractor's requests for information that are not prepared in accordance with the Contract Documents or where such information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation;
- .3 Preparing Change Orders and Construction Change Directives that require evaluation of Contractor's proposals and supporting data, or the preparation or revision of Instruments of Service;
- .4 Evaluating an extensive number of Claims as the Initial Decision Maker; or,
- .5 Evaluating substitutions proposed by the Owner or Contractor and making subsequent revisions to Instruments of Service resulting therefrom.

§ 4.2.3 The Architect shall provide Construction Phase Services exceeding the limits set forth below as Additional Services. When the limits below are reached, the Architect shall notify the Owner:

- .1 Two (2) reviews of each Shop Drawing, Product Data item, sample and similar submittals of the Contractor
- .2 TBD (« ») visits to the site by the Architect during construction
- .3 TBD (« ») observations for any portion of the Work to determine whether such portion of the Work is substantially complete in accordance with the requirements of the Contract Documents
- .4 TBD (« ») observations for any portion of the Work to determine final completion.

§ 4.2.4 Except for services required under Section 3.6.6.5 and those services that do not exceed the limits set forth in Section 4.2.3, Construction Phase Services provided more than 60 days after (1) the date of Substantial Completion of the Work or (2) the initial date of Substantial Completion identified in the agreement between the Owner and

Contractor, whichever is earlier, shall be compensated as Additional Services to the extent the Architect incurs additional cost in providing those Construction Phase Services.

§ 4.2.5 If the services covered by this Agreement have not been completed within Eighteen (18) months of the date of this Agreement, through no fault of the Architect, extension of the Architect's services beyond that time may be compensated as Additional Services or Architect may elect to terminate the Agreement and decline to provide any additional services.

ARTICLE 5 OWNER'S RESPONSIBILITIES

§ 5.1 Unless otherwise provided for under this Agreement, the Owner shall provide information in a timely manner regarding requirements for and limitations on the Project, including a written program, which shall set forth the Owner's objectives; schedule; constraints and criteria, including space requirements and relationships; flexibility; expandability; special equipment; systems; and site requirements.

§ 5.2 The Owner shall establish the Owner's budget for the Project, including (1) the budget for the Cost of the Work as defined in Section 6.1; (2) the Owner's other costs; and, (3) reasonable contingencies related to all of these costs. The Owner shall update the Owner's budget for the Project as necessary throughout the duration of the Project until final completion. If the Owner significantly increases or decreases the Owner's budget for the Cost of the Work, the Owner shall notify the Architect. The Owner and the Architect shall thereafter agree to a corresponding change in the Project's scope and quality.

§ 5.3 The Owner shall identify a representative authorized to act on the Owner's behalf with respect to the Project. The Owner shall render decisions and approve the Architect's submittals in a timely manner in order to avoid unreasonable delay in the orderly and sequential progress of the Architect's services.

§ 5.4 The Owner shall furnish surveys to describe physical characteristics, legal limitations and utility locations for the site of the Project, and a written legal description of the site. The surveys and legal information shall include, as applicable, grades and lines of streets, alleys, pavements and adjoining property and structures; designated wetlands; adjacent drainage; rights-of-way, restrictions, easements, encroachments, zoning, deed restrictions, boundaries and contours of the site; locations, dimensions, and other necessary data with respect to existing buildings, other improvements and trees; and information concerning available utility services and lines, both public and private, above and below grade, including inverts and depths. All the information on the survey shall be referenced to a Project benchmark.

§ 5.5 The Owner shall furnish services of geotechnical engineers, which may include test borings, test pits, determinations of soil bearing values, percolation tests, evaluations of hazardous materials, seismic evaluation, ground corrosion tests and resistivity tests, including necessary operations for anticipating subsoil conditions, with written reports and appropriate recommendations.

§ 5.6 The Owner shall provide the Supplemental Services designated as the Owner's responsibility in Section 4.1.1.

§ 5.7 If the Owner identified a Sustainable Objective in Article 1, the Owner shall fulfill its responsibilities as required in AIA Document E204™-2017, Sustainable Projects Exhibit, attached to this Agreement.

§ 5.8 The Owner shall coordinate the services of its own consultants with those services provided by the Architect. Upon the Architect's request, the Owner shall furnish copies of the scope of services in the contracts between the Owner and the Owner's consultants. The Owner shall furnish the services of consultants other than those designated as the responsibility of the Architect in this Agreement, or authorize the Architect to furnish them as an Additional Service, when the Architect requests such services and demonstrates that they are reasonably required by the scope of the Project. The Owner shall require that its consultants and contractors maintain insurance, including professional liability insurance, as appropriate to the services or work provided.

§ 5.9 The Owner shall furnish tests, inspections and reports required by law or the Contract Documents, such as structural, mechanical, and chemical tests, tests for air and water pollution, and tests for hazardous materials.

§ 5.10 The Owner shall furnish all legal, insurance and accounting services, including auditing services, that may be reasonably necessary at any time for the Project to meet the Owner's needs and interests.

§ 5.11 The Owner shall provide prompt written notice to the Architect if the Owner becomes aware of any fault or defect in the Project, including errors, omissions or inconsistencies in the Architect's Instruments of Service. The Architect shall similarly provide prompt written notice to Owner if Architect becomes aware of any defect in the Project or non-conformance under the Contract Documents. The Architect shall have the right to cure any errors, omissions or inconsistencies ("EOI") in the Architect's Instruments of Service within ten (days) after receiving notice of such EOI, unless a different cure time is agreed to by Owner and the Architect.

§ 5.12 The Owner shall include the Architect in all communications with the Contractor that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect.

§ 5.13 Before executing the Contract for Construction, the Owner shall coordinate the Architect's duties and responsibilities set forth in the Contract for Construction with the Architect's services set forth in this Agreement. The Owner shall provide the Architect a copy of the executed agreement between the Owner and Contractor, including the General Conditions of the Contract for Construction.

§ 5.14 The Owner shall provide the Architect access to the Project site prior to commencement of the Work and shall obligate the Contractor to provide the Architect access to the Work wherever it is in preparation or progress.

§ 5.15 Within 15 days after receipt of a written request from the Architect, the Owner shall furnish the requested information as necessary and relevant for the Architect to evaluate, give notice of, or enforce lien rights.

ARTICLE 6 COST OF THE WORK

§ 6.1 For purposes of this Agreement, the Cost of the Work shall be the total cost to the Owner to construct all elements of the Project designed or specified by the Architect and shall include contractors' general conditions costs, overhead and profit. The Cost of the Work also includes the reasonable value of labor, materials, and equipment, donated to, or otherwise furnished by, the Owner. The Cost of the Work does not include the compensation of the Architect; the costs of the land, rights-of-way, financing, or contingencies for changes in the Work; or other costs that are the responsibility of the Owner.

§ 6.2 The Owner's budget for the Cost of the Work is provided in Initial Information, and shall be adjusted throughout the Project as required under Sections 5.2, 6.4 and 6.5. Evaluations of the Owner's budget for the Cost of the Work, and the preliminary estimate of the Cost of the Work and updated estimates of the Cost of the Work, prepared by the Architect, represent the Architect's judgment as a design professional. It is recognized, however, that neither the Architect nor the Owner has control over the cost of labor, materials, or equipment; the Contractor's methods of determining bid prices; or competitive bidding, market, or negotiating conditions. Accordingly, the Architect cannot and does not warrant or represent that bids or negotiated prices will not vary from the Owner's budget for the Cost of the Work, or from any estimate of the Cost of the Work, or evaluation, prepared or agreed to by the Architect.

§ 6.3 In preparing estimates of the Cost of Work, the Architect shall be permitted to include contingencies for design, bidding, and price escalation; to determine what materials, equipment, component systems, and types of construction are to be included in the Contract Documents; to recommend reasonable adjustments in the program and scope of the Project; and to include design alternates as may be necessary to adjust the estimated Cost of the Work to meet the Owner's budget. The Architect's estimate of the Cost of the Work shall be based on current area, volume or similar conceptual estimating techniques. If the Owner requires a detailed estimate of the Cost of the Work, the Architect shall provide such an estimate, if identified as the Architect's responsibility in Section 4.1.1, as a Supplemental Service.

§ 6.4 If, through no fault of the Architect, the Procurement Phase has not commenced within 90 days after the Architect submits the Construction Documents to the Owner, the Owner's budget for the Cost of the Work shall be adjusted to reflect changes in the general level of prices in the applicable construction market.

§ 6.5 If at any time the Architect's estimate of the Cost of the Work exceeds the Owner's budget for the Cost of the Work, the Architect shall make appropriate recommendations to the Owner to adjust the Project's size, quality, or budget for the Cost of the Work, and the Owner shall cooperate with the Architect in making such adjustments.

§ 6.6 If the Owner's budget for the Cost of the Work at the conclusion of the Construction Documents Phase Services is exceeded by the lowest bona fide bid or negotiated proposal, the Owner shall

- .1 give written approval of an increase in the budget for the Cost of the Work;
- .2 authorize rebidding or renegotiating of the Project within a reasonable time;
- .3 terminate in accordance with Section 9.5;
- .4 in consultation with the Architect, revise the Project program, scope, or quality as required to reduce the Cost of the Work; or,
- .5 implement any other mutually acceptable alternative.

§ 6.7 If the Owner chooses to proceed under Section 6.6.4, the Architect shall modify the Construction Documents as necessary to comply with the Owner's budget for the Cost of the Work at the conclusion of the Construction Documents Phase Services, or the budget as adjusted under Section 6.6.1. If the Owner requires the Architect to modify the Construction Documents because the lowest bona fide bid or negotiated proposal exceeds the Owner's budget for the Cost of the Work due to market conditions the Architect could not reasonably anticipate, the Owner shall compensate the Architect for the modifications as an Additional Service pursuant to Section 11.3; otherwise the Architect's services for modifying the Construction Documents shall be without additional compensation. In any event, the Architect's modification of the Construction Documents shall be the limit of the Architect's responsibility under this Article 6.

ARTICLE 7 COPYRIGHTS AND LICENSES

§ 7.1 The Architect and the Owner warrant that in transmitting Instruments of Service, or any other information, the transmitting party is the copyright owner of such information or has permission from the copyright owner to transmit such information for its use on the Project.

§ 7.2 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and shall retain all common law, statutory and other reserved rights, including copyrights. Submission or distribution of Instruments of Service to meet official regulatory requirements or for similar purposes in connection with the Project is not to be construed as publication in derogation of the reserved rights of the Architect and the Architect's consultants.

§ 7.3 The Architect grants to the Owner a nonexclusive license to use the Architect's Instruments of Service solely and exclusively for purposes of constructing, using, maintaining, altering and adding to the Project, provided that the Owner substantially performs its obligations under this Agreement, including prompt payment of all sums due pursuant to Article 9 and Article 11, excepting those sums disputed by Owner in good faith. The Architect shall obtain similar nonexclusive licenses from the Architect's consultants consistent with this Agreement. The license granted under this section permits the Owner to authorize the Contractor, Subcontractors, Sub-subcontractors, and suppliers, as well as the Owner's consultants and separate contractors, to reproduce applicable portions of the Instruments of Service, subject to any protocols established pursuant to Section 1.3, solely and exclusively for use in performing services or construction for the Project. If the Architect terminates this Agreement based on Owner's failure to pay undisputed sums due hereunder, the license granted in this Section 7.3 shall terminate.

§ 7.3.1 In the event the Owner uses the Instruments of Service in a manner inconsistent with this Agreement, the Owner shall, remove and/or redact any reference to the Architect and the Architect's consultant(s) from the Instruments of Service and release the Architect and Architect's consultant(s) from all claims and causes of action arising from such uses. The terms of this Section 7.3.1 shall not apply if the Owner rightfully terminates this Agreement for cause under Section 9.4.

§ 7.4 Except for the licenses granted in this Article 7, no other license or right shall be deemed granted or implied under this Agreement. The Owner shall not assign, delegate, sublicense, pledge or otherwise transfer any license granted herein to another party without the prior written agreement of the Architect. Any unauthorized use of the Instruments of Service shall be at the Owner's sole risk and without liability to the Architect and the Architect's consultants.

§ 7.5 Except as otherwise stated in Section 7.3, the provisions of this Article 7 shall survive the termination of this Agreement.

§ 7.6 Notwithstanding the foregoing provisions of Article 7, the Owner may disclose Instruments of Service, or any other information, if required by law.

ARTICLE 8 CLAIMS AND DISPUTES

§ 8.1 General

§ 8.1.1 The Owner and Architect shall commence all claims and causes of action against the other and arising out of or related to this Agreement, whether in contract, tort, or otherwise, in accordance with the requirements of the binding dispute resolution method selected in this Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Architect waive all claims and causes of action not commenced in accordance with this Section 8.1.1.

§ 8.1.2 To the extent damages are covered by property insurance, the Owner and Architect waive all rights against each other and against the contractors, consultants, agents, and employees of the other for damages, except such rights as they may have to the proceeds of such insurance. The Owner or the Architect, as appropriate, shall require of the contractors, consultants, agents, and employees of any of them, similar waivers in favor of the other parties enumerated herein.

§ 8.1.3 The Architect shall indemnify, save and hold harmless Owner, Owner's officials, employees and agents, or any of them, from and against damages, judgments, losses, costs and expenses, including but not limited to reasonable attorneys' fees, to the extent and for an amount caused by the percentage negligence or fault attributable to Architect or Architect's Consultants, sub-consultants or assignees, as determined by adjudication or by mutual agreement of the parties.

§ 8.1.4 The Architect and Owner mutually waive any claim for consequential damages, but reserve their respective rights to pursue all claims for direct damages.

§ 8.1.5 Except in instances of fraud or intentional misconduct, the Architect and Owner mutually waive all claims arising from this Agreement against each other's individual employees, officers, owners, managers, or directors, reserving instead the right to bring claims against the municipal or corporate entity of Owner or Architect.

§ 8.2 Mediation

§ 8.2.1 Any claim, dispute or other matter in question arising out of or related to this Agreement shall be subject to mediation as a condition precedent to binding dispute resolution. If such matter relates to or is the subject of a lien arising out of the Architect's services, the Architect may proceed in accordance with applicable law to comply with the lien notice or filing deadlines prior to resolution of the matter by mediation or by binding dispute resolution.

§ 8.2.2 The Owner and Architect shall endeavor to resolve claims, disputes and other matters in question between them by mediation, which, unless the parties mutually agree otherwise, shall be administered by the Judicial Arbitrator Group or JAMS in Denver, Colorado or another mutually agreeable mediator or mediation group. A request for mediation shall be made in writing, delivered to the other party to this Agreement, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of a complaint or other appropriate demand for binding dispute resolution but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order.

§ 8.2.3 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 8.2.4 If the parties do not resolve a dispute through mediation pursuant to this Section 8.2, the method of binding dispute resolution shall be the following:

(Check the appropriate box.)

☐ Arbitration pursuant to Section 8.3 of this Agreement

☒ Litigation in a court of competent jurisdiction

☐ Other: *(Specify)*

<< >>

If the Owner and Architect do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, the dispute will be resolved in a court of competent jurisdiction.

§ 8.3 [Intentionally omitted]

ARTICLE 9 TERMINATION OR SUSPENSION

§ 9.1 If the Owner fails to make payments to the Architect in accordance with this Agreement, such failure shall be considered substantial nonperformance and cause for termination or, at the Architect's option, cause for suspension of performance of services under this Agreement. If the Architect elects to suspend services, the Architect shall give seven days' written notice to the Owner before suspending services. In the event of a suspension of services, the Architect shall have no liability to the Owner for delay or damage caused the Owner because of such suspension of services. Before resuming services, the Owner shall pay the Architect all sums due prior to suspension and any expenses incurred in the interruption and resumption of the Architect's services. The Architect's fees for the remaining services and the time schedules shall be equitably adjusted.

§ 9.2 If the Owner suspends the Project, the Architect shall be compensated for services performed prior to notice of such suspension. When the Project is resumed, the Architect shall be compensated for reasonable expenses incurred in the interruption and resumption of the Architect's services. The time schedules for the Architect's remaining services will be equitably adjusted as agreed to by the Owner and the Architect and, if warranted by circumstances arising from the Owner's suspension of the Project, the Architect's fees for the remaining services will be equitably adjusted as agreed to by the Owner and the Architect.

§ 9.3 If the Owner suspends the Project for more than 90 cumulative days for reasons other than the fault of the Architect, the Architect may terminate this Agreement by giving not less than seven days' written notice.

§ 9.4 Either party may terminate this Agreement upon not less than seven days' written notice should the other party fail substantially to perform in accordance with the terms of this Agreement through no fault of the party initiating the termination.

§ 9.5 The Owner may terminate this Agreement upon not less than seven days' written notice to the Architect for the Owner's convenience and without cause.

§ 9.6 If the Owner terminates this Agreement for its convenience pursuant to Section 9.5, or the Architect terminates this Agreement pursuant to Section 9.3, the Owner shall compensate the Architect for services performed prior to termination, Reimbursable Expenses incurred, and costs attributable to termination, including the costs attributable to the Architect's termination of consultant agreements.

§ 9.7 In addition to any amounts paid under Section 9.6, if the Owner terminates this Agreement for its convenience pursuant to Section 9.5, or the Architect terminates this Agreement pursuant to Section 9.3, the Owner shall pay to the Architect the following fees:

(Set forth below the amount of any termination or licensing fee, or the method for determining any termination or licensing fee.)

.1 Termination Fee:

None

.2 Licensing Fee if the Owner intends to continue using the Architect's Instruments of Service:

Not Applicable as Architect does not issue a release of use of Architect's Instruments of Service, except as use of the Instruments of Service are permitted herein.

§ 9.8 Except as otherwise expressly provided herein, this Agreement shall terminate one year from the date of Substantial Completion.

§ 9.9 The Owner's rights to use the Architect's Instruments of Service in the event of a termination of this Agreement are set forth in Article 7 and Section 9.7.

ARTICLE 10 MISCELLANEOUS PROVISIONS

§ 10.1 This Agreement shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 8.3.

§ 10.2 Terms in this Agreement shall have the same meaning as those in AIA Document A201-2017, General Conditions of the Contract for Construction.

§ 10.3 The Owner and Architect, respectively, bind themselves, their agents, successors, assigns, and legal representatives to this Agreement. Neither the Owner nor the Architect shall assign this Agreement without the written consent of the other, except that the Owner may assign this Agreement to a lender providing financing for the Project if the lender agrees to assume the Owner's rights and obligations under this Agreement, including any payments due to the Architect by the Owner prior to the assignment, none of Architect's rights or obligations are materially changed, and notice is provided to Architect prior to such lender assignment.

§ 10.4 If the Owner requests the Architect to execute certificates, the proposed language of such certificates shall be submitted to the Architect for review at least 14 days prior to the requested dates of execution. If the Owner requests the Architect to execute consents reasonably required to facilitate assignment to a lender, the Architect shall execute all such consents that are consistent with this Agreement, provided the proposed consent is submitted to the Architect for review at least 14 days prior to execution. The Architect shall not be required to execute certificates or consents that would require knowledge, services, or responsibilities beyond the scope of this Agreement.

§ 10.5 Nothing contained in this Agreement shall create a contractual relationship with, or a cause of action in favor of, a third party against either the Owner or Architect.

§ 10.6 Unless otherwise required in this Agreement, the Architect shall have no responsibility for the discovery, presence, handling, removal or disposal of, or exposure of persons to, hazardous materials or toxic substances in any form at the Project site.

§ 10.7 The Architect shall have the right to include photographic or artistic representations of the design of the Project among the Architect's promotional and professional materials. The Architect shall be given reasonable access to the completed Project to make such representations. However, the Architect's materials shall not include the Owner's confidential or proprietary information if the Owner has previously advised the Architect in writing of the specific information considered by the Owner to be confidential or proprietary. The Owner shall provide professional credit for the Architect in the Owner's promotional materials for the Project. This Section 10.7 shall survive the termination of this Agreement unless the Owner terminates this Agreement for cause pursuant to Section 9.4.

§ 10.8 If the Architect or Owner receives information specifically designated as "confidential" or "business proprietary," the receiving party shall keep such information strictly confidential and shall not disclose it to any other person except as set forth in Section 10.8.1. This Section 10.8 shall survive the termination of this Agreement.

§ 10.8.1 The receiving party may disclose "confidential" or "business proprietary" information after three (3) business days' notice to the other party when required by law, arbitrator's order, or court order, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or to the extent such information is reasonably necessary for the receiving party to defend itself in any dispute including disclosure to legal, financial, tax or insurance professionals of the receiving party. The receiving party may also disclose such information to its employees, consultants, or contractors in order to perform services or work solely and exclusively for the Project, provided those employees, consultants and contractors are subject to the restrictions on the disclosure and use of such information as set forth in this Section 10.8.

§ 10.9 The invalidity of any provision of the Agreement shall not invalidate the Agreement or its remaining provisions. If it is determined that any provision of the Agreement violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and

enforceable. In such case the Agreement shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Agreement.

ARTICLE 11 COMPENSATION

§ 11.1 For the Architect's Basic Services described under Article 3, the Owner shall compensate the Architect as follows:

- .1 Stipulated Sum
(Insert amount)

« »

- .2 Percentage Basis
(Insert percentage value)

« » (« ») % of the Owner's budget for the Cost of the Work, as calculated in accordance with Section 11.6.

- .3 Other
(Describe the method of compensation)

Lump Sum in the amount of \$393,809.00

§ 11.2 For the Architect's Supplemental Services designated in Section 4.1.1 and for any Sustainability Services required pursuant to Section 4.1.3, the Owner shall compensate the Architect as follows:
(Insert amount of, or basis for, compensation. If necessary, list specific services to which particular methods of compensation apply.)

As mutually agreed upon by Owner and Architect in writing prior to commencement of Supplemental Services

§ 11.3 For Additional Services that may arise during the course of the Project, including those under Section 4.2, the Owner shall compensate the Architect as follows:
(Insert amount of, or basis for, compensation.)

As mutually agreed upon by Owner and Architect in writing prior to commencement of Additional Services

§ 11.4 Intentionally omitted.

§ 11.5 When compensation for Basic Services is based on a stipulated sum or a percentage basis, the proportion of compensation for each phase of services shall be as follows:

Schematic Design Phase	« »	percent (	« »	%)
Design Development Phase	« »	percent (	« »	%)
Construction Documents Phase	« »	percent (	« »	%)
Procurement Phase	« »	percent (	« »	%)
Construction Phase	« »	percent (	« »	%)
Total Basic Compensation	one hundred	percent (	100	%)

§ 11.6 When compensation identified in Section 11.1 is on a percentage basis, progress payments for each phase of Basic Services shall be calculated by multiplying the percentages identified in this Article by the Owner's most recent budget for the Cost of the Work. Compensation paid in previous progress payments shall not be adjusted based on subsequent updates to the Owner's budget for the Cost of the Work.

§ 11.6.1 When compensation is on a percentage basis and any portions of the Project are deleted or otherwise not constructed, compensation for those portions of the Project shall be payable to the extent services are performed on

those portions. The Architect shall be entitled to compensation in accordance with this Agreement for all services performed whether or not the Construction Phase is commenced.

§ 11.7 The hourly billing rates for services of the Architect and the Architect's consultants are set forth below. The rates shall be adjusted in accordance with the Architect's and Architect's consultants' normal review practices. *(If applicable, attach an exhibit of hourly billing rates or insert them below.)*

Based on then currently hourly rates or as negotiated

Employee or Category	Rate (\$0.00)

§ 11.8 Compensation for Reimbursable Expenses

§ 11.8.1 Reimbursable Expenses are in addition to compensation for Basic, Supplemental, and Additional Services and include expenses incurred by the Architect and the Architect's consultants directly related to the Project, as follows:

- .1 Transportation and authorized out-of-town travel and subsistence;
- .2 Long distance services, dedicated data and communication services, teleconferences, Project web sites, and extranets;
- .3 Permitting and other fees required by authorities having jurisdiction over the Project;
- .4 Printing, reproductions, plots, and standard form documents;
- .5 Postage, handling, and delivery;
- .6 Expense of overtime work requiring higher than regular rates, if authorized in advance by the Owner;
- .7 Renderings, physical models, mock-ups, professional photography, and presentation materials requested by the Owner or required for the Project;
- .8 If required by the Owner, and with the Owner's prior written approval, the Architect's consultants' expenses of professional liability insurance dedicated exclusively to this Project, or the expense of additional insurance coverage or limits in excess of that normally maintained by the Architect's consultants;
- .9 All taxes levied on professional services and on reimbursable expenses;
- .10 Site office expenses;
- .11 Registration fees and any other fees charged by the Certifying Authority or by other entities as necessary to achieve the Sustainable Objective; and,
- .12 Other similar Project-related expenditures.

§ 11.8.2 For Reimbursable Expenses the compensation shall be the expenses incurred by the Architect and the Architect's consultants plus **Fifteen** percent (**15** %) of the expenses incurred.

§ 11.10 Payments to the Architect

§ 11.10.1 Initial Payments

§ 11.10.1.1 An initial payment of **Zero** (\$ **0.00**) shall be made upon execution of this Agreement and is the minimum payment under this Agreement. It shall be credited to the Owner's account in the final invoice.

§ 11.10.2 Progress Payments

§ 11.10.2.1 Unless otherwise agreed, payments for services shall be made monthly in proportion to services performed. Payments are due and payable upon presentation of the Architect's invoice. Undisputed amounts unpaid **Thirty (30)** days after the invoice date shall bear interest at the rate entered below, or in the absence thereof at the legal rate prevailing from time to time at the principal place of business of the Architect.

(Insert rate of monthly or annual interest agreed upon.)

18 % **Annually**

§ 11.10.2.2 The Owner shall not withhold amounts from the Architect's compensation to impose a penalty or liquidated damages on the Architect, or to offset sums requested by or paid to contractors for the cost of changes in the Work, unless the Architect agrees or has been found liable for the amounts in a binding dispute resolution proceeding.

§ 11.10.2.3 Records of Reimbursable Expenses, expenses pertaining to Supplemental and Additional Services, and services performed on the basis of hourly rates shall be available to the Owner at mutually convenient times.

ARTICLE 12 SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Agreement are as follows:

(Include other terms and conditions applicable to this Agreement.)

Appropriation of Funds:

Pursuant to Section 29-1-110, C.R.S., as amended, financial obligations of Owner payable as set forth herein, after the current fiscal year, are contingent upon funds for that purpose being budgeted, appropriated and otherwise made available. This Agreement shall be terminated effective January 1 of the first fiscal year for which funds are not budgeted and appropriated.

Pursuant to C.R.S. § 24-91-103.6, as may be amended from time to time, Owner has appropriated the money necessary to fund this Project and compensate the Architect as set forth herein. No change order or other form of directive shall be issued by Owner requiring additional compensable work to be performed by Architect, which causes the aggregate amount payable under this Agreement to exceed the amount appropriated for the original contract amount, unless the Architect is given written assurance by Owner that lawful appropriations have been made by Owner to cover the cost of the additional work or unless such work is covered under the remedy-granting provisions of this Agreement.

Governmental Immunity: Nothing herein shall be construed as a waiver of the limitations on damages or any of the privileges, immunities or defenses provided to, or enjoyed by, Owner under common law or pursuant to statute, including but not limited to the Colorado Governmental Immunity Act, §§ 24-10-101 *et seq.*, C.R.S., as from time to time amended.

ARTICLE 13 SCOPE OF THE AGREEMENT

§ 13.1 This Agreement represents the entire and integrated agreement between the Owner and the Architect related to the subject matter contained herein and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both the Owner and Architect.

§ 13.2 This Agreement is comprised of the following documents identified below:

.1 AIA Document B101™–2017, Standard Form Agreement Between Owner and Architect

.2 [Intentionally omitted.]

.3 Exhibits:

(Check the appropriate box for any exhibits incorporated into this Agreement.)

[☐] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this agreement.)

☐ ☐

[☐] Other Exhibits incorporated into this Agreement:
(Clearly identify any other exhibits incorporated into this Agreement, including any exhibits and scopes of services identified as exhibits in Section 4.1.2.)

☐ ☐

.4 Other documents:

(List other documents, if any, forming part of the Agreement.)

Exhibit A – Owners Program and Associated Graphic Exhibits

Exhibit B – Architects Proposal

§ 13.3 Notwithstanding any other provision contained herein, this Agreement relates to the scope of services contained in Exhibits A and B. Upon a written amendment to the Agreement executed by Owner and Architect, the scope of this Agreement may be expanded to include additional services, including, but not limited to, construction observation and post-construction services.

This Agreement entered into as of the day and year first written above.



OWNER (Signature)

Gary Lebsack, Mayor

(Printed name and title)

ARCHITECT (Signature)

Eric Combs, Vice President

(Printed name, title, and license number, if required)

ATTEST:

Hannah Hill, Town Clerk

Architect Notary Block:

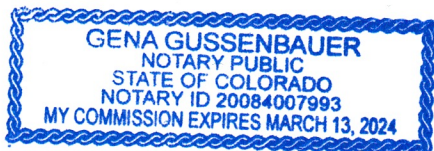
STATE OF COLORADO)
) ss
COUNTY OF Adams)

SUBSCRIBED AND SWORN to before me this 24th day of February, 2023, by Eric Combs as the vice president of D2C Architects, Inc.

WITNESS my hand and official seal.

My commission expires: March 13, 2024

Notary Public





Town of Johnstown

TOWN COUNCIL AGENDA COMMUNICATIONS

AGENDA DATE:	March 20, 2023
SUBJECT:	Central Wastewater Treatment Plant
ACTION PROPOSED:	Award Contractor for the Construction of the Central Wastewater Treatment Plant Expansion
ATTACHMENTS:	1. GMP 2. Construction Contract
PRESENTED BY:	Ellen Hilbig, Utilities Director

AGENDA ITEM DESCRIPTION:

Enclosed for your review and consideration is a request to award the Construction Contract on the Central Wastewater Treatment Plant (CWWTP) project to Moltz Construction, Inc. for a Guaranteed Maximum Price (GMP) of \$52,804,817.00.

The original GMP for construction costs came in at little under \$60M for the final design of the Central Wastewater Treatment Plant. Moltz worked closely with the Design Engineer and Town Staff to perform value engineering through construction experience and feasibility assessments of the proposed plans and specifications. By working together, Moltz was able to bring the GMP for construction down approximately \$7M. The GMP for the construction of the Central Wastewater Treatment Plant project was finalized at \$52,804,817.00 and includes a 7.5% construction management fee which Moltz committed to during the CMaR selection process as well as 7% contingency for unforeseen challenges of \$3,454,521.00. Town Staff, the Design Engineer and the Moltz Construction team will continue to evaluate potential cost savings opportunities during construction to further reduce the final project cost.

The construction schedule Moltz identified for project completion with the GMP is end of year 2025. The construction of the Central Wastewater Treatment Plant project is part of the Town's Cease and Desist Order with the CDPHE. Town Staff will have to work with CDPHE to adjust the critical milestones identified in the compliance order to match the construction schedule identified by Moltz Construction.

Total Project Expenses to Date:

Aqua Engineering Design (5-3-21)	\$1,063,057.00
Town Equipment Pre-procurement (5-16-22)	\$360,763.00
Moltz CMaR Services (10-14-22)	\$76,704.00
Moltz Construction GMP	\$52,804,817.00
Aqua (SKM) SCADA Integration	\$357,241.00
<u>Aqua Construction Engineering Services</u>	<u>\$1,446,239.00</u>
Total	\$56,108,821.00

The total project cost for the Central Wastewater Treatment Plant project based on the current and future expenditures to date is \$56,108,821.00. The Town budgeted \$45 million in 2023 for the project and will be required to address project funding through fund roll overs and additional allocations to cover the total cost in the 2024 and 2025 budgets. An additional allocation is in the FY 2023 budget in the amount of \$50M

The Community That Cares

www.TownofJohnstown.com

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141

from the general fund in the form of either a loan or grant. This allocation will likely need to be increased to cover the construction costs, ensure financial operations and sustainability of the fund, and to pay existing debt services.

LEGAL ADVICE:

The Contract has been reviewed by the Town's Attorney

FINANCIAL ADVICE:

The Town budgeted \$45 million in 2023 for the project and will be required to address project funding through fund roll overs and additional allocations to cover the total cost in the 2024 and 2025 budgets.

RECOMMENDED ACTION:

Town Staff recommends the award of the Construction Contract for the Central Wastewater Treatment Plant to Moltz Construction, Inc. for a Guaranteed Maximum Price (GMP) of \$52,804,817.00.

SUGGESTED MOTIONS:

For Approval

I move to award the Construction Contract for the Central Wastewater Treatment Plant to Moltz Construction, Inc. for a Guaranteed Maximum Price (GMP) of \$52,804,817.00.

For Denial

I move to deny the award of Construction Contract for the Central Wastewater Treatment Plant project and direct Staff to formally bid out the project.

Reviewed and Approved for Presentation,



Town Manager



**TOWN OF JOHNSTOWN
CENTRAL WASTEWATER TREATMENT PLANT**
Guaranteed Maximum Price

TABLE OF CONTENTS

Totals Summary	Tab 1
Estimate Assumptions, Clarifications & Exceptions	Tab 2
Value Engineering	Tab 3
90% Estimate Comparison Notes	Tab 4
Vendor and Subcontractor Quotes	Tab 5
Estimate	Tab 6
Schedule	Tab 7



CORPORATE OFFICE:
 8807 County Road 175
 P.O. Box 729
 SALIDA, CO 81201
 PHONE: (719) 539-7319
 FAX: (719) 539-7695

BRANCH OFFICE:
 975 Merchant Court
 WINDSOR, CO 80550
 PHONE: (970) 330-3248
 FAX: (970) 330-5623

General Contractor/Construction Manager

tzconstruction.com

**TOWN OF JOHNSTOWN
 CENTRAL WASTEWATER TREATMENT PLANT
 GMP - Totals Summary
 March 8, 2023**

Construction Costs		
01 General Requirements	\$	3,739,303
02 Existing Conditions	\$	2,115,722
03 Concrete	\$	9,324,981
04 Masonry	\$	383,633
05 Metals	\$	1,487,297
06 Woods, Plastics, & Composites	\$	233,800
07 Thermal & Moisture Protection	\$	377,601
08 Openings	\$	329,395
09 Finishes	\$	1,275,001
10 Specialties	\$	44,951
13 Special Construction	\$	1,353,096
15 Owner Selected Equipment	\$	4,759,653
22 Plumbing	\$	784,093
23 HVAC	\$	1,215,384
26 Electrical	\$	7,548,166
31 Earthwork	\$	4,080,083
32 Exterior Improvements	\$	502,540
33 Utilities	\$	206,080
40 Process Integration	\$	9,155,680
41 Material Processing and Handling Equipment	\$	113,469
43 Process Gas and Liquid Handling	\$	1,176,574
44 Pollution Control Equipment	\$	178,854
46 Wastewater Equipment	\$	459,010
Total Construction Costs*	\$	50,844,366
VE Savings (Included in Total Construction Costs)	\$	5,682,288
Subtotal	\$	45,162,078
Construction Manager Fee	7.50% \$	3,387,156
Subtotal	\$	48,549,234
Bonds & Insurance	1.65% \$	801,062
TOTAL	\$	49,350,296
Contingency	7.00% \$	3,454,521
TOTAL INCLUDING Contingency	\$	52,804,817



MOLTZ CONSTRUCTION INC.

General Contractor/Construction Manager

CORPORATE OFFICE:

8807 County Road 175

P.O. Box 729

SALIDA, CO 81201

PHONE: (719) 539-7319

FAX: (719) 539-7695

BRANCH OFFICE:

975 Merchant Court

WINDSOR, CO 80550

PHONE: (970) 330-3248

FAX: (970) 330-5623

Item #10.

www.moltzconstruction.com

**TOWN OF JOHNSTOWN
CENTRAL WASTEWATER TREATMENT PLANT PROJECT**

GMP - Assumptions, Clarifications, & Exceptions

March 8, 2023

1. Moltz Construction's bid is based on Drawings dated December 2022, Specifications dated December 2022, Addendum #1 dated February 3, 2023, and additional information sent by Craig with Aqua on February 9, 2023.
2. Moltz did not include any building permit fees or right of way fees. Moltz did include the stormwater permit fee and dewatering permit fee. Moltz will put together plans, get any necessary licenses, and help procure the permits but we did not carry any fees for these permits.
3. Moltz included \$165,170 for the Fire Department Review Fee, Permit Fees and Impact Fees.
4. Moltz Construction's Bid is based on a substantial completion date of 9/2/25 and final completion of 12/31/25.
5. Moltz assumed complete haul off for lagoon decommissioning. We are carrying \$1,510,000. Ponds were frozen and we were unable to verify sludge depth.
6. Moltz has included (4) Fire Hydrants, not shown on the documents, in our base bid.
7. Moltz has included Access Control at Exterior Doors not shown on the documents, \$106,100.
8. IPS Pumps have an estimated lead time of 54 weeks. We have included 7 months of temporary bypass pumping from October 31, 2023 to May 31, 2024 for bypassing the Influent Pump Station.
9. The Owner Selected Equipment is outside of the contract window for holding price. Following the contract procedure for increase in price, Moltz is carrying an additional \$260,773.00. Final Pricing for Owner Selected Equipment calculated by removing the submittal costs from quote and adding 6.7% (to account for forecasted CPI-U increase in Q1 2023 and adding 1% per terms in quotes.)
10. Suez has provided a cost for upgraded Permeate Pumps (Boerger Pumps - \$44,000) based on the 90% Design Documents and elevations to meet pump performance.
11. 400559 Gates – in with Golden Harvest Gates per Gate Schedule
12. 400559 Gates – Quoted as Aluminum per Gate Schedule
13. 400572 Flap Gates – in with Golden Harvest Gates per Gate Schedule
14. Auto Sampler – In with ISCO 5800 per Equipment Schedule. No Spec Section for Auto Sampler
15. 432256 Submersible Mixers – In with Sulzer
16. 432256 Submersible Mixers – Motor quoted Permanent Magnet Motor per Specifications. Johnstown Low Point Project used standard efficiency Squirrel Cage Motors.
17. 432358 Rotary Lobe Pumps – In with Vogelsang
18. 432358 Rotary Lobe Pumps – Vogelsang Model VX136-210 is called out in the Pump Schedule. Due to the speed limit of 300rpm, pump has to be upsized to meet desired flow. Model VX186-184 has been provided which can achieve the rated duty condition at 192rpm with a tip speed of 8fps.
19. 432421 Multi-Stage Centrifugal Pumps – NPW – In with Grundfos
20. 432513 Submersible Wet Well Pumps – EQ – In with Sulzer
21. 432513 Submersible Wet Well Pumps – Site Drain Lift Station – In with Sulzer

22. 432513 Submersible Wet Well Pumps – RAS Pumps – In with KSB per Pump Schedule
23. 432513 Submersible Wet Well Pumps – WAS Pumps – In with KSB per Pump Schedule
24. 432513 Submersible Wet Well Pumps – WAS Pumps – KSB doesn't offer a SS wear ring for this type of pump
25. 432513.33 Submersible Screw Impeller Pumps – IPS Pumps – In with Trillium
26. 432514 Submersible Horizontal Axial Flow Pumps – IMLR Pumps – In with Landia
27. 432514 Submersible Horizontal Axial Flow Pumps – IMLR Pumps – The specified low-flow duty point falls below the recommended minimum pump speed. Hence, it is not possible to cover the full range from 500 to 2,500 gpm with a single pump. The specified and recommended IR pump, model AXP-I, is sized for the high-flow duty point with turn-down.
28. 432514 Submersible Horizontal Axial Flow Pumps – IMLR Pumps – The motors Landia is providing are not NEMA MG1 but rather IEC Class N, the European equivalent with UL certification.
29. 432514 Submersible Horizontal Axial Flow Pumps – IMLR Pumps – The pumps must be operated with a water level of at least 51" above its centerline.
30. 433269 Chemical Feed Systems – In with Seepex
31. 434143 HDXLP Tanks – In with Poly Processing Tanks
32. 434144 Double Wall HDXLP Tanks – In with Poly Processing Tanks
33. 434143/434144 – HDXLP Tanks - The manufacturer provided restraint systems is metal clips and cable. They no longer use edge softeners and tension rings. All (4) four tanks are quoted with Stainless Steel Indoor seismic clips on concrete grade. The PE stamped calc's will be 2018 IBC however the newest version 2021 IBC codes are effective as of January 1, 2023.
34. 434143/434144 – HDXLP Tanks - U-vents are noted in the specification however the plan drawings do not show venting fittings or U-vents. All (4) four tanks are quoted with flanged fittings.
35. 434143/434144 – HDXLP Tanks - tanks are quoted with PTFE expansion joints.
36. 443119 Odor Control – In with Anua
37. 464123 Eductor Tube Mixer – In with JDV
38. 465131 Fine Bubble Diffusers – Process Basin – In with SSI per Equipment Schedule
39. 465131 Fine Bubble Diffusers – Process Basin – SSI recommends 8ea – 4" Drops in lieu of 6ea – 6" Drops, Moltz included the recommendation.
40. 465131 Fine Bubble Diffusers – Sludge Holding Tank – In with SSI for continuity across project.
41. Insulation for the exterior piping is figured to be 2" ASJ faced fiberglass insulation covered with 0.24 mil aluminum jacketing. Interior piping is covered with ASJ faced fiberglass insulation .02 mil pvc jacketing. Where noted on the drawings piping insulated 3' below grade is 2" celleulur glass insulation with pit wrap jacketing.
42. Per the Valmatic rep CV-10312 and HV-10312C is externaly glass coated only, they do not glass coat the inside of the valves.
43. Buried ductile iron pipe and fittings will be coated with standard asphaltic seal coat.
44. All buried pipes are restrained mechanically, no thrust blocks.
45. The buried PW line is quoted as DR14 and not the listed DR11.
46. All buried ductile iron pipe and fittings are cement lined.
47. There is no cathodic protection provided in the estimate.
48. Pipe bedding is squeegee.
49. Manholes are not coated, inside or out.
50. Buried air lines are unlined sch40 carbon steel to the first flange above grade.
51. The buried steel airline is coated with 20mil of S.W. Poly Coat 115.
52. All yard pipe cleanouts reduce to 4".
53. All C900 is quoted as DR18. Our vendors are concerned that DR25 may not be available when needed. Savings of \$350,000 is possible if all sizes of DR25 is available when project requires.
54. Proposed alignment of the buried PW pipe conflicts with existing 16" line to the DAF building. PW line will not be online until after the new facility is online.
55. Length of SES Feeders from Utility Transformers PSEA are limited to 25'.

56. PUTI conduit and 13.2kV feeders are by utility.
57. Conduit and wire for future MBR Building are not included.
58. Assume there is no asbestos or lead paint in any of the items to be demoed.
59. The Town will flush out all process equipment in the Dewatering Building with NPW before decommissioning the units.
60. Assume Varco Pruden meets specification requirements for all building design components.
61. Moltz only put vapor barrier under the main headworks and MBR operating level slabs. Not all slabs per spec.
62. Moltz is assuming we can use recent break history for submitted concrete mix design instead of doing a trial batch.
63. Moltz did not water test site drain lift station.
64. Moltz assuming only exterior walls of Process/EQ basin will need to be crack injected and did not plan on injecting dividing walls to be dry to touch.
65. Moltz assumed temporary power can be utilized out of the existing blower building East of lagoons. Town to pay for power usage.
66. Moltz utilized form savers for influent and effluent boxes at process building slab and wall connection.
67. Moltz only planned on a volumetric water test after concrete is complete at headworks due to the different levels of construction.
68. Moltz has only includes a 7 day Reliance Acceptance Test (RAT) per spec 11000 summary of work. Moltz did not include the 30 day RAT in table 2 of 017500 Commissioning.
69. Moltz construction does not have a Waste Water License to run plant during the RAT. Moltz will be present along with equipment vendors that are needed to assist in commissioning during this time but we have not made any provisions to bring in a licensed operator.
70. After discussions with the town Moltz is planning on decommissioning the small lagoon that is not in service early in the project and using to for on site spoils.
71. Moltz is assuming any leftover spoils can be placed on site in lagoons after they are decommissioned.
72. In GMP estimate Moltz is using (XYPEX C500) at a rate of 12lbs per cy. (No amount was specified)
73. Moltz will strip existing topsoil and replace only, we did not import any extra topsoil.
74. Moltz did not include any PRVs to account for groundwater and potential of floating structures.
75. Moltz included \$345,000 for the Admin alternate budget.
76. Moltz included \$250,000 for third party on-site testing.
77. Moltz included \$36,000 for an Engineer's field office.



MOLTZ CONSTRUCTION INC.

General Contractor/Construction Manager

CORPORATE OFFICE:

8807 County Road 175
P.O. Box 729
SALIDA, CO 81201
PHONE: (719) 539-7319
FAX: (719) 539-7695

BRANCH OFFICE:

975 Merchant Court
WINDSOR, CO 80550
PHONE: (970) 330-3248
FAX: (970) 330-5623

www.moltzconstruction.com

TOWN OF JOHNSTOWN

CENTRAL WASTEWATER TREATMENT PLANT

GMP - Value Engineering

March 8, 2023

					Accepted By:			
	Description	Estimated	Final	Action	Johnstown	Aqua	Moltz	Notes
1	Use Sulzer IMLR Pumps (In with Landia currently)	\$ (5,000.00)	\$ (5,000.00)	Accept				Follow Up With Wayne
2	Permeate Tank Manufacturer only requires fittings in the lower 1/3rd of the sidewall to have an expansion fitting. Removing the 18" expansion fitting would result in a \$24,600 savings	\$ (24,600.00)	\$ (24,600.00)	Accept				Follow Up Later, Add Back In if Budget Aloows
3	Provide IBC Spill Containment Pallets with no Scales	\$ (45,000.00)	\$ (45,000.00)	Accept				
4	Use Wilo NPW Skid in lieu of Groundfos	\$ (30,000.00)	\$ (30,000.00)	Accept				
5	Use IDEC PLC/HMI for Odor Control Control Panel in lieu of Allen Bradley. IDEC was provided on the Johnstown Lowpoint Project	\$ (25,000.00)	\$ (25,000.00)	Accept				Aqua is following Up
6	Use EcoVerde for Odor Control in lieu of Anua.	\$ (50,000.00)	\$ -	Decline				Aqua is following Up
7	Allow plain accessories for buried MJ fittings in lieu of 316 SS	\$ (30,000.00)	\$ (30,000.00)	Accept				
8	Allow plain accessories for bell restraints	\$ (370,000.00)	\$ (370,000.00)	Accept				Wrap Bell Restraints
9	Eliminate joint restraints on Pipes 1, 3, 4, 5, 9, 11, 15, 16, 17, 18, 20 per schedule on 01C504	\$ (240,000.00)	\$ (205,000.00)	Accept				If #9 is accepted. If #9 is not accepted, \$510,000 savings, Keep Line 11
10	Use DR 25 PVC pipe in place of DR 18	\$ (295,000.00)	\$ (295,000.00)	Accept				
11	Delete Coating 312 epoxy floor coating (MBR and Headworks Floor)	\$ (125,000.00)	\$ (125,000.00)	Accept				Follow Up Later, Add Back In if Budget Aloows
12	Use 3/8" pea gravel 4000 psi grout fill concrete in place of non-shrink grout at all grout fillet locations	\$ (63,520.00)	\$ (63,520.00)	Accept				
13	Use Shake on red dye at duct banks vs integral red dye (only on top)	\$ (21,680.00)	\$ (21,680.00)	Accept				
14	Do not put XYPEX admixture in water retaining structures	\$ (469,720.00)	\$ (469,720.00)	Accept				Keep in Influent Pump Station and Headworks channels, Delete coatings
15	Use Adeka waterstop in place of Greenstreak 609 waterstop	\$ (28,701.00)	\$ (28,701.00)	Accept				
16	Eliminate full immersion passivation, passivation of welds only on SS pipe	\$ -	\$ -	Decline				
17	Pour Sludge tank in one placement	\$ (6,948.00)	\$ -	Decline				Continue Discussion
18	Delete radio requirement for Bridge Crane controllers	\$ (40,000.00)	\$ (40,000.00)	Accept				
19	Alternate monorail crane at Process Basin. See qutoes	\$ (30,000.00)	\$ (30,000.00)	Accept				
20	Delete Admin Alternative Items	\$ (345,000.00)	\$ (345,000.00)	Accept				
21	Minimize Access Control per email sent by Craig/Aqua on 3/7/23	\$ (106,100.00)	\$ (42,000.00)	Accept				
22	Delete Third Party Testing from Moltz Scope	\$ (250,000.00)	\$ (250,000.00)	Accept				Still overall Project Cost
23	Delete Fire Department Fees from Moltz Scope	\$ (165,170.00)	\$ (165,170.00)	Accept				
24	Run NPW at Process Basins as copper in lieu of SST (already jacketed and heat traced)	\$ -	\$ -	Decline				

Total Adjustment to Costs Subject to Contractor's Fee \$ (2,610,391.00)

 MOLTZ CONSTRUCTION INC. General Contractor/Construction Manager					CORPORATE OFFICE: 8807 County Road 175 P.O. Box 729 SALIDA, CO 81201 PHONE: (719) 539-7319 FAX: (719) 539-7695 BRANCH OFFICE: 975 Merchant Court WINDSOR, CO 80550 PHONE: (970) 330-3248 FAX: (970) 330-5623			www.moltzconstruction.com	
TOWN OF JOHNSTOWN CENTRAL WASTEWATER TREATMENT PLANT GMP - Value Engineering March 8, 2023									
					Accepted By:				
Description		Estimated	Final	Action	Johnstown	Aqua	Moltz	Notes	
25	Exhaust Fans H-10921 THRU H-10825 Provide backdraft dampers only, not requiring explosion proof actuators.	\$ (17,500.00)	\$ (17,500.00)	Accept					
26	Use Good Alternative Panel in lieu of Centria panel(added in spec 07413)	\$ (30,000.00)	\$ (30,000.00)	Accept					
27	Replace stainless steel compressed air piping to copper piping.	\$ -	\$ -	Decline					
28	Delete glass lining on glass lined Ductile iron piping	\$ -	\$ -	Decline					
29	Tie Central Interceptor into existing second MH before existing influent flume.	\$ -	\$ -	Decline					
30	Re-rout the ductbank feeding the 2 motor control centers in the MRB building. Since the distribution panel DP-EM is now in the admin electrical room per addendum #5 the ductbank can be cut in half by going out straight to PB-2 instead of going around the admin building like its shown on E201. Those are both 1000A feeders.	\$ (80,000.00)	\$ (40,000.00)	Accept				Will work with electrical engineer to reduce furhter throughout project, this is what we feel comfortable getting an approval on at this point.	
31	Delete coating 307 at IPS and headworks	\$ (86,000.00)	\$ (86,000.00)	Accept					
32	Relocating Switchgear from Admin. Bldg.			Hold					
33	Decrease size from 8" to 6" on Potable Water Line	\$ (18,200.00)		Hold					
34	Eliminate Bypass Pumping at IPS	\$ (92,600.00)	\$ (92,600.00)	Accept					
35	Truck excess soils to CO Sweet Gold	\$ (96,900.00)	\$ (96,900.00)	Accept					
36	Delete Engineer On-Site Trailer (if not needed)	\$ (36,000.00)	\$ (36,000.00)	Accept					
37	Alternative lighting fixture package. Most of the savings is going to a Lumax fixture in the Headworks instead of the spec Holophane.	\$ (52,500.00)		Hold				Send data sheets on Lumax to SKM	
38	Reduce processors all (3) PLC's from 3MB memory to 0.6MB	\$ (14,700.00)		Hold				Review with SKM	
39	5 year to 3 year VFD Warranty	\$ (30,000.00)		Hold				Check with Town, SKM is okay with 3 year.	
40	Generator: Ratings (cooling) ambient tempertures up to 122 degrees F, 104 Degrees F is usually provided in CO, reduce requirement to 104 Degree F	\$ (20,000.00)	\$ (20,000.00)	Accept				Platville and Broomfield have 104; Wellington and Low Point have 122	
41	Moltz Discussion with Electricians & Moving forward with Sturgeon	\$ (500,000.00)	\$ (500,000.00)	Accept					
42	Change PVC Coated 90 to Fiberglass where concrete encased	\$ (15,448.00)	\$ (15,448.00)	Accept					
43	Generator Transfer Switch			Hold					
44	4160V Electrical System			Hold					
45	Change Main Feed from Copper to Aluminum	\$ (20,000.00)	\$ -	Decline					

Total Adjustment to Costs Subject to Contractor's Fee \$ (3,544,839.00)

 MOLTZ CONSTRUCTION INC. General Contractor/Construction Manager					CORPORATE OFFICE: 8807 County Road 175 P.O. Box 729 SALIDA, CO 81201 PHONE: (719) 539-7319 FAX: (719) 539-7695 BRANCH OFFICE: 975 Merchant Court WINDSOR, CO 80550 PHONE: (970) 330-3248 FAX: (970) 330-5623			www.moltzconstruction.com	
TOWN OF JOHNSTOWN CENTRAL WASTEWATER TREATMENT PLANT GMP - Value Engineering March 8, 2023									
					Accepted By:				
Description		Estimated	Final	Action	Johnstown	Aqua	Moltz	Notes	
	Scope Reduction Items								
46	Reduce size of Effluent Pipe to 18", Keep Existing	\$ (120,000.00)	\$ (120,000.00)	Accept				\$200,000 Savings to go to 12" Pipe.	
47	Minimize Asphalt, Leave Roadbase per email sent by Craig/Aqua on 3/3/23	\$ (397,000.00)	\$ (169,000.00)	Accept				Repriced drawings sent by Craig on 3/3/23	
48	Delete Security Fence	\$ (105,000.00)	\$ -	Decline					
49	Delete Decommissioning of Lagoon 1 and 2, including reduction in GCs	\$ 1,200,000.00	\$ (1,265,800.00)	Accept				Additional Follow up needed on timing but Town will carry	
50	Delete Demo of Equipment at Lagoons 1&2, Including MBR, Aerators, Blowers, Flume and Screen	\$ (190,000.00)	\$ (156,000.00)	Accept					
51	Delete Process Basin Spray Nozzels	\$ (141,366.00)	\$ (135,000.00)	Accept				Look at PVC system that can be drained when not in use	
52	Delete Lanscape Rock per email sent by Craig/Aqua on 3/3/23	\$ (47,000.00)	\$ (17,300.00)	Accept				Change to Roadbase	
53	Eliminate 12" Parallel Pipe from IPS	\$ (127,949.00)	\$ (127,949.00)	Accept					
54	Delete NPW Line East of IPS to tie point	\$ (60,000.00)	\$ (32,000.00)	Accept				Keep line west of basins to hydrant, delete rest	
55	Eliminate cleanouts per drawings sent byCraig/Aqua on 3/7/23	\$ (114,400.00)	\$ (114,400.00)	Accept					
56	Reduce size of Incoming Electrical Feed from 5,000 AMP to 4,000 AMP			Hold					
57	Delete Dewatering Building Demo and Base Admin. Build out	\$ (225,000.00)	\$ -	Decline				Look at better plumbing route, any other cost savings ideas	
58	Delete Solids Holding Tank	\$ (500,000.00)	\$ -	Decline					
59									
60									
61									
62									
63									
64									
65									
66									

Total Adjustment to Costs Subject to Contractor's Fee \$ (5,682,288.00)



MOLTZ CONSTRUCTION INC.

General Contractor/Construction Manager

CORPORATE OFFICE:
8807 County Road 175
P.O. Box 729
SALIDA, CO 81201
PHONE: (719) 539-7319
FAX: (719) 539-7695

BRANCH OFFICE:
975 Merchant Court
WINDSOR, CO 80550
PHONE: (970) 330-3248
FAX: (970) 330-5623

www.moltzconstruction.com

TOWN OF JOHNSTOWN CENTRAL WASTEWATER TREATMENT PLANT 90% Cost Comparison Notes February 20, 2023		
Description	90%	Notes
01 General Requirements	\$ 3,739,303	\$250,000 Material Testing Sub, \$165,170 Fire Dept. Fees, \$36,000 Engineering Trailer
02 Existing Conditions	\$ 2,115,722	Carrying \$1,510,000 for lagoon decommissioning (carried \$800,000 at 60%)
03 Concrete	\$ 9,324,981	\$498,720 added for Xypex, high price per ton of steel rebar, price increased 10% at beginning of 2023 for concrete
04 Masonry	\$ 383,633	
05 Metals	\$ 1,487,297	Prices of steel are high, bid scope out
06 Woods, Plastics, & Composites	\$ 233,800	FRP composite material price
07 Thermal & Moisture Protection	\$ 377,601	
08 Openings	\$ 329,395	
09 Finishes	\$ 1,275,001	High Solids Influent Pump Station and Headwork Channels coatings
10 Specialties	\$ 44,951	
13 Special Construction	\$ 1,353,096.00	60% did not show load out area, MBR Building Hight increased, Exterior Metal Panels, includes Bridge Crane
15 Owner Selected Equipment	\$ 4,759,653	Increase of \$260,773 on Owner Selected Equipment
22 Plumbing	\$ 784,093	NPW Basin Spray System was added
23 HVAC	\$ 1,215,384	Added Detail, replacing existing MAU
26 Electrical	\$ 7,548,166	Increased Detail
31 Earthwork	\$ 4,080,083	
32 Exterior Improvements	\$ 502,540	
33 Utilities	\$ 206,080	
40 Process Integration	\$ 9,155,680	High pipe prices, see Value Engineering ideas
41 Material Process & Handling Equip	\$ 113,469	
43 Process Gas and Liquid Handling Equip	\$ 1,176,574	Bid out all pumps
44 Pollution Control Equip	\$ 178,854	
46 Wastewater Equipment	\$ 459,010	



MOLTZ CONSTRUCTION INC.

General Contractor/Construction Manager

CORPORATE OFFICE:

8807 County Road 175

P.O. Box 729

SALIDA, CO 81201

PHONE: (719) 539-7319

FAX: (719) 539-7695

BRANCH OFFICE Item #10.

975 Merchant Court

WINDSOR, CO 80550

PHONE: (970) 330-3248

FAX: (970) 330-5623

www.moltzconstruction.com

**TOWN OF JOHNSTOWN
CENTRAL WASTEWATER TREATMENT FACILITY**

GMP - Quotes

February 20, 2023

Provided in Separate File

Project name	Central WWTP GMP - Jon Johnstown CO
Labor rate table	Labor - Raw (MCI)
Equipment rate table	Equipment - MCI
Report format	Sorted by 'Spec #/Area/System/Assembly' 'Detail' summary

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
010000 General Requirements														
00 GEN General														
General Conditions General														
01 -100 General Conditions (mci)														
	Construction Manager	1006.100	30.00 wk	/ wk		/ wk			/ wk		5,400.00 / wk	162,000	162,000	162,000
	Project Manager	1006.100	130.00 wk	-	-	/wk			50.00 /ea	6,500	3,472.00 /wk	451,360	457,860	457,860
	Project Engineer	1006.100	130.00 wk	-	-	/wk			75.00 /ea	9,750	2,870.00 /wk	373,100	382,850	382,850
	Superintendent	1022.100	130.00 wk	2,480.00 /wk	322,400	/wk			/ea		/wk		322,400	464,256
	Assistant Superintendent	1022.100	65.00 wk	2,080.00 /wk	135,200	/wk			/ea		/wk		135,200	194,688
	Field Engineer	1630.100	130.00 wk	2,080.00 /wk	270,400	/wk			/wk		/wk		270,400	389,376
	Rodman	1630.100	50.00 wk	1,280.00 /wk	64,000	/wk			/ea		/wk		64,000	92,160
	Yard Man	1000.100	50.00 wk	1,280.00 /wk	64,000	/wk			/wk		/wk		64,000	92,160
	Pickup	1900.210	144.00 Mnth	/Mnth		/Mnth			1,000.00 /Mnth	144,000	514.00 /Mnth	74,016	218,016	218,016
	Project Signs 4x8	1614.100	1.00 ea	33.00 /mh	528	2,000.00 /ea	2,000		/ea		/ea		2,528	2,760
	Fuel Stipend for crew leads	1642.100	130.00 wks	/wks		/wks			/wks		600.00 /wks	78,000	78,000	78,000
	Safety	1116.100	1.00 ls	/ls		35,000.00 /ls	35,000		/ls		64,000.00 /ls	64,000	99,000	99,000
	Safety Plank	1116.200	500.00 lf	/lf		5.00 /lf	2,500		/lf		/lf		2,500	2,500
	Safety Rail	1116.200	500.00 lf	33.00 /mh		5.00 /lf	2,500		/lf		/lf		2,500	2,500
	Temporary Fences	1116.200	1.00 ls	/ls		/ls		15,000	/ls		/ls		15,000	15,000
	Site Security/Alarm System	1644.100	30.00 Mnth	33.00 /mh	9,900	750.00 /Mnth	22,500		/Mnth		/Mnth		32,400	36,756
	Internet Charges	1162.100	30.00 Mnth	/Mnth		350.00 /Mnth	10,500		/Mnth		/Mnth		10,500	10,500
	Temporary Toilets	1162.100	150.00 Mnth	/Mnth		250.00 /Mnth	37,500		/Mnth		/Mnth		37,500	37,500
	Cell Phone	1162.100	150.00 Mnth	/Mnth		/Mnth			100.00 /Mnth	15,000	/Mnth		15,000	15,000
	Radios	1162.100	30.00 Mnth	/Mnth		100.00 /Mnth	3,000		/Mnth		/Mnth		3,000	3,000
	Project Management Software	1672.200	30.00 Mnth	/Mnth		/Mnth			/Mnth		1,500.00 /Mnth	45,000	45,000	45,000
	Drinking Water	1162.100	1.00 ls	/ls		8,000.00 /ls	8,000		/ls		/ls		8,000	8,000
	Documents - Freight and Postage	1060.100	1.00 ls	/ls		5,000.00 /ls	5,000		/ls		/ls		5,000	5,000
	Photos - Project by GC	1104.100	30.00 mnth	33.00 /mh	7,920	250.00 /mnth	7,500		/mnth		/mnth		15,420	18,905
	Survey Equipment	1630.100	30.00 Mnth	33.00 /mh		1,500.00 /Mnth	45,000		3,000.00 /Mnth	90,000	/Mnth		135,000	135,000
	40' Storage Trailer	1900.142	60.00 Mnth	/Mnth		/Mnth			200.00 /Mnth	12,000	50.00 /Mnth	3,000	15,000	15,000
	Temp Office and Storage Construction	1900.142	1.00 ls	33.00 /mh	5,280	120,000.00 /ls	120,000		/ls		/ls		125,280	127,603
	Staging Area Rock	2305.250	100.00 cy	33.00 /mh	1,650	36.00 /ton	5,760		/cy		/cy		7,410	8,136
	(3rd Party) Semi Tractor	1900.210	80.00 Hrs	/Hrs		/Hrs		12,000	/Hrs		/Hrs		12,000	12,000
	Mob & Demob Labor	1900.210	360.00 hr	33.00 /mh	11,880	/hr			/hr		/hr		11,880	17,107
	Final Cleaning	1714.100	1.00 ls	33.00 /mh	7,920	3,500.00 /ls	3,500		/ls		/ls		11,420	14,905
	Dumpster Pick up and return	1714.100	130.00 ea	/ea		750.00 /ea	97,500		/ea		/ea		97,500	97,500
	Drug Testing	1116.100	1.00 ls	/ls		/ls			/ls		5,000.00 /ls	5,000	5,000	5,000
	Advertising	1642.100	1.00 ls	/ls		/ls			/ls		4,000.00 /ls	4,000	4,000	4,000
	Inspector's Trailer	1672.100	30.00 Mnth	/Mnth		1,200.00 /Mnth	36,000		/Mnth		/Mnth		36,000	36,000
	Survey & Layouts build depart layback and Final Survey by LS	1630.100	1.00 ls	33.00 /mh		0.00 /ls	0	15,000	/ls		/ls		15,000	15,000
01 -100 General Items and budgets														
	Permit - Stormwater	1222.100	1.00 ls	/ls		/ls			0.00 /ls	0	1,225.00 /ls	1,225	1,225	1,225
	Permit - Dewatering	1222.100	1.00 ls	/ls		/ls			0.00 /ls	0	2,870.00 /ls	2,870	2,870	2,870
	Permit - Fire Department Fee	1222.100	1.00 ls	/ls		/ls			/ls		165,170.00 /ls	165,170	165,170	165,170
	Materials Testing Sub	2631.360	1.00 ls	/ls		/ls		250,000	/ls		/ls		250,000	250,000
020960 Temp Bypass Pumping														
01 CIV Civil														
Bypass Pumping Bypass Pumping														
150-55 83 Bypass Pumping														
	Bypass Pumping #1 Influent Tie in at MH-1 (pump 3 week 1500 lf discharge)	2240.150	1.00 ls	33.00 /mh	3,960	/ls		36,000	/ls		1,500.00 /ls	1,500	41,460	43,202
	Bypass Pumping #2 Effluent Tie into river (pump 1 week 2000 lf discharge)	2240.150	1.00 ls	33.00 /mh	1,320	/ls		37,800	/ls		1,500.00 /ls	1,500	40,620	41,201
	Bypass Pumping #3 Lower Lagoon water levels (2 months) 6" pump with rubber discharge	2240.150	1.00 ls	33.00 /mh	2,640	/ls		16,000	/ls		1,500.00 /ls	1,500	20,140	21,302
	Bypass Pumping #4 Influent Pump Station to tie in headworks 1 week discharge hose 1 pump smaller flow	2240.150	1.00 ls	33.00 /mh	1,320	0.00 /ls	0	12,500	/ls		1,500.00 /ls	1,500	15,320	15,901
	Bypass Pumping #5 fill plant with effluent for start up 1 month smaller flow, pump and hose	2240.150	1.00 ls	33.00 /mh	1,320	/ls		9,500	/ls		1,500.00 /ls	1,500	12,320	12,901
	Pumping Effluent for water truck	2240.150	24.00 mo	33.00 /mh	3,168	0.00 /mo	0		500.00 /mo	12,000	100.00 /mo	2,400	17,568	18,962
024100 Demo														
01 CIV Civil														
Demo														
020- CIV Site Demo at Ex MBR														
	Demo Equipment - Exisitng MBR System	2220.140	1.00 ls	33.00 /mh	264	/ls			/ls		/ls		264	380
	Komatsu PC200 Excavator w/ Breaker (141 HP) (L)	1900.136	0.50 Mnth	/Mnth		/Mnth			10,400.00 /Mnth	5,200	2,500.00 /Mnth	1,250	6,450	6,450
	Vac Truck	1900.142	30.00 hrs	/hrs		/hrs		9,000	0.00 /hrs	0	0.00 /hrs	0	9,000	9,000
	Demo Conc Walls Heavy Rebar 14" walls 2'-0	2220.083	360.00 LF	33.00 /mh	3,564	/LF			/LF		/LF		3,564	5,132
	Demo Metal Railings	2220.490	240.00 lf	33.00 /mh	396	/lf			/lf		/lf		396	570
	Demo Metal Light Poles	2220.490	6.00 ea	33.00 /mh	396	/ea			/ch		/ea		396	570
	Dumpster Pickups	2220.980	5.00 ea	/ea		750.00 /ea	3,750		/ea		/ea		3,750	3,750
	Demo Gates	2220.840	8.00 ea	33.00 /mh	2,112	/ea			/ea		/ea		2,112	3,041
	Demo SS Pipe 6"	2220.625	240.00 lf	33.00 /mh	143	/lf			/lf		/lf		143	205
	Backfill - MBR Mass BF	2319.302	1,800.00 cy	33.00 /mh	9,504	/cy			/cy		/cy		9,504	13,686
	John Deere 624 Loader (172 HP) (M)	1900.132	1.00 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	6,000	3,000.00 /Mnth	3,000	9,000	9,000
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.00 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	9,200	3,500.00 /Mnth	3,500	12,700	12,700
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	1.00 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	2,500	500.00 /Mnth	500	3,000	3,000
	Demo CS Pipe 2" Conduits and Panels	2220.620	650.00 lf	33.00 /mh	1,532	0.00 /lf	0		/lf		/lf		1,532	2,206
020- CIV Demo Surface Aerators														
	Demo Equipment for Salvage Surface Aerators	2220.140	4.00 ea	33.00 /mh	1,056	0.00 /ea	0		/ea		/ea		1,056	1,521
	John Deere 624 Loader (172 HP) (M)	1900.132	0.08 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	480	3,000.00 /Mnth	240	720	720
	Dumpster	1714.100	1.00 ea	/ea		750.00 /ea	750		/ea		/ea		750	750
020- CIV Demo Blowers at Ponds														
	Demo Equipment - Blower Equipment and Controls	2220.140	5.00 ea	33.00 /mh	2,640	/ea			/ea		/ea		2,640	3,408
	Sidewall Sheath 5/8" Fire Seal Bldg Opening	6160.100	256.00 sf	33.00 /mh	2,112	4.00 /sf	1,096		/sf		/sf		3,208	4,604

85

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	020- CIV Demo Blowers at Ponds													
	Demo SS Pipe 12" At Ponds	2220.625	550.00 lf	33.00 /mh	3,630	/lf			/lf		/lf		3,630	5,227
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.50 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,900	2,000.00 /Mnth	1,000	2,900	2,900
	Demo Equipment - HVAC Equipment	2220.140	5.00 ea	33.00 /mh	1,320	/ea			/ea		/ea		1,320	1,901
	Demo CS Pipe 2" Conduits and Panels	2220.620	200.00 lf	33.00 /mh	660	0.00 /lf	0		/lf		/lf		660	950
	Demo CS Pipe 2"	2220.620	300.00 lf	33.00 /mh	990	0.00 /lf	0		/lf		/lf		990	1,426
	Dumpster	1714.100	1.00 ea	/ea		750.00 /ea	750		/ea		/ea		750	750
	020- CIV Demo Flume and Div Str													
	PVC C-900 Caps 24 g	2336.330	7.00 ea	33.00 /mh	3,696	1,950.00 /ea	13,650		/ea		/ea		17,346	18,972
	Pot Hole Existing Inf Tie and Demo	2333.010	6.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
	Demo Buried PVC Pipe C900 24	2230.100	200.00 lf	33.00 /mh	1,980	0.00 /lf	0		/lf		/lf		1,980	2,851
	Dumpster Pickups	2220.980	5.00 ea	/ea		750.00 /ea	3,750		/ea		/ea		3,750	3,750
	Backfill - Dental Flume and Diversion Str	2319.302	150.00 cy	33.00 /mh	792	0.00 /cy	0		/cy		/cy		792	1,140
	Mikasa Jumping Jack Compactor (L)	1900.138	0.13 Mnth	/Mnth		/Mnth			200.00 /Mnth	26	100.00 /Mnth	13	39	39
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.13 Mnth	/Mnth		/Mnth			3,900.00 /Mnth	507	1,650.00 /Mnth	215	722	722
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.13 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	494	2,000.00 /Mnth	260	754	754
	Dumpster	1714.100	1.00 ea	/ea		750.00 /ea	750		/ea		/ea		750	750
	PVC C-160 Caps 12	2336.230	1.00 ea	33.00 /mh	30	750.00 /ea	750		/ea		/ea		780	793
	PVC C-160 Caps 16	2336.230	1.00 ea	33.00 /mh	30	1,500.00 /ea	1,500		/ea		/ea		1,530	1,543
	020- CIV Screening Unit, Pumps and Controls													
	Demo Equipment for Salvage Screening Unit and Pumps	2220.140	1.00 ls	33.00 /mh	3,696	/ls			/ls		/ls		3,696	5,322
	Backfill - Dental	2319.302	150.00 cy	33.00 /mh	990	/cy			/cy		/cy		990	1,426
	Demo Conc Walls Light Rebar	2220.083	15.00 cy	33.00 /mh	5,940	/cy			/cy		/cy		5,940	8,554
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.08 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	304	2,000.00 /Mnth	160	464	464
	Dumpster	1714.100	2.00 ea	/ea		750.00 /ea	1,500		/ea		/ea		1,500	1,500
	Bobcat E85 Mini-Excavator with breaker	1900.136	1.00 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	4,500	1,800.00 /Mnth	1,800	6,300	6,300
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,800	2,000.00 /Mnth	2,000	5,800	5,800
	020- CIV Relocate Trees													
	Demo Tree	2220.040	12.00 ea	33.00 /mh	2,376	/ea			/ea		/ea		2,376	3,421
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	Trees - Standard Species	2322.090	6.00 ea	/ea		/ea		12,000	/ea		/ea		12,000	12,000
	Dumpster	1714.100	3.00 ea	/ea		750.00 /ea	2,250		/ea		/ea		2,250	2,250
	020- CIV - Demo Lift Station Near DWT													
	Demo Manholes includes one by mbr	2220.730	2.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	Dump Fees	2220.980	30.00 tn	/tn		58.00 /tn	1,740		/tn		/tn		1,740	1,740
	(3rd Party) Dump Truck, 10 wheel	1900.210	18.00 Hrs	/Hrs		/Hrs		2,160	/Hrs		/Hrs		2,160	2,160
	Demo Buried PVC Pipe C900 8"	2230.100	60.00 lf	33.00 /mh	495	/lf			/lf		/lf		495	713
	Backfill - Dental	2319.302	30.00 cy	33.00 /mh	158	/cy			/cy		/cy		158	228
	Mikasa Jumping Jack Compactor (L)	1900.138	0.08 Mnth	/Mnth		/Mnth			200.00 /Mnth	16	100.00 /Mnth	8	24	24
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.08 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	200	500.00 /Mnth	40	240	240
	Demo CS Pipe 2" Conduits and Panel	2220.620	100.00 lf	33.00 /mh	330	0.00 /lf	0		/lf		/lf		330	475
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.15 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	570	1,800.00 /Mnth	270	840	840
	020- CIV - Demo Tanks and Pumps Under Pole Barn													
	Demo Equipment for Salvage Chem Feed Tank and Equipment	2220.140	1.00 ls	33.00 /mh	3,960	/ls			/ls		/ls		3,960	5,702
	Bobcat E85 Mini-Excavator with breaker	1900.136	0.50 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,900	1,800.00 /Mnth	900	2,800	2,800
	(3rd Party) Dump Truck, 10 wheel	1900.210	32.00 Hrs	/Hrs		/Hrs		3,840	/Hrs		/Hrs		3,840	3,840
	Dump Fees	2220.980	70.00 tn	/tn		58.00 /tn	4,060		/tn		/tn		4,060	4,060
	Dumpster Pickups	2220.980	2.00 ea	/ea		750.00 /ea	1,500		/ea		/ea		1,500	1,500
	Demo CS Pipe 2" Conduits and Panels	2220.620	400.00 lf	33.00 /mh	1,320	0.00 /lf	0		/lf		/lf		1,320	1,901
	Demo Conc Housekeeping Pads	2220.083	35.00 cy	33.00 /mh	6,930	0.00 /cy	0		/cy		/cy		6,930	9,979
	Grind/Patch Concrete	3350.130	1,800.00 sf	33.00 /mh	885	1.00 /sf	1,800		/sf		/sf		2,685	3,074
	90 lb Jack Hammer	1900.138	0.50 Mnth	/Mnth		/Mnth			500.00 /Mnth	250	100.00 /Mnth	50	300	300
	Cut N Break Saw (Add Blade Pricing)	1900.138	0.50 Mnth	/Mnth		/Mnth			500.00 /Mnth	250	150.00 /Mnth	75	325	325
	Air Compressor 185 cfm (66 HP) (L)	1900.010	0.50 Mnth	/Mnth		/Mnth			850.00 /Mnth	425	705.00 /Mnth	353	778	778
	John Deere 624 Loader (172 HP) (M)	1900.132	0.50 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	3,000	3,000.00 /Mnth	1,500	4,500	4,500
	41 ADM Administration Bldg													
	Demo													
	020- DWT Demo PEMB for Door near Lockers													
	Demo Brick Wall 12"	2220.480	20.00 sf	33.00 /mh	660	/sf			/ch		/sf		660	950
	Buy Studs 8" 14 Ga.	9270.800	24.00 lf	/lf		4.00 /lf	103		/lf		/lf		103	103
	Patch/Tooth Door 12" Block	4220.190	1.00 ea	33.00 /mh	528	250.00 /ea	263		/ea		/ea		791	1,023
	41 DWT Dewatering Building													
	Demo													
	020- DWT HVAC Room													
	Demo HVAC Equip	2220.040	2.00 ea	33.00 /mh	3,168	/ea			/ea		/ea		3,168	4,562
	Dumpster	1714.100	2.00 ea	/ea		750.00 /ea	1,500		/ea		/ea		1,500	1,500
	020- DWT Chem Feed Pump Room													
	Demo Equipment - Chem Feed Skids and Tanks	2220.140	1.00 ls	33.00 /mh	3,960	/ls			/ls		/ls		3,960	5,702
	Concrete Curb Remove/Dispose	2220.090	30.00 lf	33.00 /mh	990	0.00 /lf	0		/ch		/lf		990	1,426
	Demo Conc Housekeeping Pads	2220.083	16.00 cy	33.00 /mh	4,224	/cy			/cy		/cy		4,224	6,083
	Non Shrink Grout Sump	3601.100	40.00 cf	10.00 /cf	400	60.00 /cf	2,400		/cf		/cf		2,800	2,976
	Patch Walls from Conduit demo	3350.130	3,000.00 sf	33.00 /mh	1,768	1.00 /sf	3,000		/sf		/sf		4,768	5,546
	Bush Hammer Slab	2220.205	420.00 sf	33.00 /mh	1,733	/sf			/ch		/sf		1,733	2,495
	Dumpster	2220.980	4.00 ea	/ea		750.00 /ea	3,000		/ea		/ea		3,000	3,000
	Demo CS Pipe 2" Conduits and Panels	2220.620	200.00 lf	33.00 /mh	660	0.00 /lf	0		/lf		/lf		660	950
	90 lb Jack Hammer	1900.138	0.50 Mnth	/Mnth		/Mnth			500.00 /Mnth	250	100.00 /Mnth	50	300	300
	Air Compressor 185 cfm (66 HP) (L)	1900.010	0.50 Mnth	/Mnth		/Mnth			850.00 /Mnth	425	705.00 /Mnth	353	778	778
	020- DWT Demo NPW Tank/ Skid and Pads													
	Bush Hammer Slab	2220.205	65.00 sf	33.00 /mh	429	/sf			/ch		/sf		429	4,562
	Demo Equipment - NPW Skid	2220.140	1.00 ls	33.00 /mh	3,168	/ls			/ls		/ls		3,168	4,562
	Demo Equipment - NPW Tank 12'x12' HDPE?	2220.140	1.00 ls	33.00 /mh	3,168	/ls			/ls		/ls		3,168	4,562

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	020- DWT Demo NPW Tank/ Skid and Pads													
	Dumpster	2220.980	3.00 ea	/ea		750.00 /ea	2,250		/ea		/ea		2,250	2,250
	Demo Conc Housekeeping Pads	2220.083	5.00 cy	33.00 /mh	1,980	/cy			/cy		/cy		1,980	2,851
	Grind/Patch Slab	3350.130	65.00 sf	33.00 /mh	429	1.00 /sf	65		/sf		/sf		494	683
	Cut N Break Saw (Add Blade Pricing)	1900.138	0.50 Mnth	/Mnth		0.00 /Mnth	0		500.00 /Mnth	250	150.00 /Mnth	75	325	325
	90 lb Jack Hammer	1900.138	0.50 Mnth	/Mnth		/Mnth			500.00 /Mnth	250	100.00 /Mnth	50	300	300
	Air Compressor 185 cfm (66 HP) (L)	1900.010	0.50 Mnth	/Mnth		/Mnth			850.00 /Mnth	425	705.00 /Mnth	353	778	778
	Demo CS Pipe 2"	2220.620	250.00 lf	33.00 /mh	825	0.00 /lf	0		/lf		/lf		825	1,188
	020- DWT DAF Recycle Skid													
	Demo Equipment - DAF Recycle Skid	2220.140	1.00 ls	33.00 /mh	2,112	/ls			/ls		/ls		2,112	3,041
	Bush Hammer Slab	2220.205	240.00 sf	33.00 /mh	317	/sf			/ch		/sf		317	456
	Dumpster	2220.980	2.00 ea	/ea		750.00 /ea	1,500		/ea		/ea		1,500	1,500
	Demo Conc Housekeeping Pads	2220.083	5.00 cy	33.00 /mh	1,980	/cy			/cy		/cy		1,980	2,851
	Grind/Patch Slab	3350.130	240.00 sf	33.00 /mh	1,584	1.00 /sf	240		/sf		/sf		1,824	2,521
	60 lb Jack Hammer	1900.138	0.20 Mnth	/Mnth		/Mnth			500.00 /Mnth	100	100.00 /Mnth	20	120	120
	Cut N Break Saw (Add Blade Pricing)	1900.138	0.20 Mnth	/Mnth		/Mnth			500.00 /Mnth	100	150.00 /Mnth	30	130	130
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.20 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	760	2,000.00 /Mnth	400	1,160	1,160
	Air Compressor 185 cfm (66 HP) (L)	1900.010	0.20 Mnth	/Mnth		/Mnth			850.00 /Mnth	170	705.00 /Mnth	141	311	311
	020- DWF Ex DAF Unit #1 and Pipe													
	Demo Equipment - DAF Unit #1 (10' W x 50' Long x 8' Tall)	2220.140	1.00 ls	33.00 /mh	5,280	/ls			/ls		/ls		5,280	7,603
	Demo SS Pipe 12"	2220.625	70.00 lf	33.00 /mh	1,155	/lf			/lf		/lf		1,155	1,663
	Demo Pipe Valves 12"	2220.840	4.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Demo Equipment - Ass. Chem Feed Pumps	2220.140	2.00 Ea	33.00 /mh	792	/Ea			/Ea		/Ea		792	1,140
	Demo Metal Stairs/Platforms	2220.490	300.00 sf	33.00 /mh	1,061	/sf			/sf		/sf		1,061	1,527
	Demo Metal Stairs	2220.490	10.00 lf	33.00 /mh	330	/lf			/lf		/lf		330	475
	Demo Metal Railings	2220.490	80.00 lf	33.00 /mh	66	/lf			/lf		/lf		66	95
	Torch Set and Ocy/Acet.	1900.300	1.00 ls	/ls		2,500.00 /ls	2,500		1,500.00 /ls	1,500	/ls		4,000	4,000
	Dump Fees Pick up	2220.980	160.00 tn	/tn		58.00 /tn	9,280		/tn		/tn		9,280	9,280
	Dump Truck, End Dump	1900.210	48.00 Hrs	/Hrs		/Hrs		6,240	0.00 /Hrs	0	/Hrs		6,240	6,240
	Grout Pipe in Floor 12"	2327.090	5.00 ea	33.00 /mh	1,320	/ea	250		/ea		/ea		1,570	2,151
	Demo CS Pipe 2" Conduits and Panels	2220.620	1,200.00 lf	33.00 /mh	1,980	0.00 /lf	0		/lf		/lf		1,980	2,851
	Air Compressor 185 cfm (66 HP) (L)	1900.010	0.75 Mnth	/Mnth		/Mnth			850.00 /Mnth	638	705.00 /Mnth	529	1,166	1,166
	Cut N Break Saw (Add Blade Pricing)	1900.138	0.75 Mnth	/Mnth		/Mnth			500.00 /Mnth	375	150.00 /Mnth	113	488	488
	Bobcat E85 Mini-Excavator with Breaker	1900.136	0.75 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	2,850	1,800.00 /Mnth	1,350	4,200	4,200
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.75 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	2,850	2,000.00 /Mnth	1,500	4,350	4,350
	Grind/Patch Slab	3350.130	750.00 sf	33.00 /mh	2,475	1.00 /sf	750		/sf		/sf		3,225	4,314
	Demo Conc Footings Light Rebar	2220.083	18.00 cy	33.00 /mh	4,752	/cy			/cy		/cy		4,752	6,843
	020- DWT Exisitng Floc													
	Demo Equipment - Ex Floc	2220.140	1.00 ls	33.00 /mh	2,376	/ls			/ls		/ls		2,376	3,421
	Demo PVC Pipe 12"	2220.615	30.00 lf	33.00 /mh	495	/lf			/lf		/lf		495	713
	Demo Pipe Valves 12"	2220.840	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Dumpster	1714.100	1.00 ea	/ea		750.00 /ea	750		/ea		/ea		750	750
	020- DWT Ex DAF Unit #2													
	Demo Equipment - Ex DAF Unit #2	2220.140	1.00 ls	33.00 /mh	1,980	0.00 /ls	0		/ls		/ls		1,980	2,851
	Dump Truck, End Dump	1900.210	16.00 Hrs	/Hrs		/Hrs		2,080	0.00 /Hrs	0	/Hrs		2,080	2,080
	Dump Fees Pick up	2220.980	50.00 tn	/tn		58.00 /tn	2,900		/tn		/tn		2,900	2,900
	Demo PVC Pipe 12"	2220.615	60.00 lf	33.00 /mh	495	/lf			/lf		/lf		495	713
	Demo Pipe Valves 12"	2220.840	6.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Demo CS Pipe 2" Conduit and Panels	2220.620	750.00 lf	33.00 /mh	1,238	0.00 /lf	0		/lf		/lf		1,238	1,782
	Demo Conc Housekeeping Pads	2220.083	25.00 cy	33.00 /mh	6,600	/cy			/cy		/cy		6,600	9,504
	Air Compressor 185 cfm (66 HP) (L)	1900.010	0.20 Mnth	/Mnth		/Mnth			850.00 /Mnth	170	705.00 /Mnth	141	311	311
	90 lb Jack Hammer	1900.138	0.20 Mnth	/Mnth		/Mnth			500.00 /Mnth	100	100.00 /Mnth	20	120	120
	Cut N Break Saw (Add Blade Pricing)	1900.138	0.20 Mnth	/Mnth		/Mnth			500.00 /Mnth	100	150.00 /Mnth	30	130	130
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.20 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	760	2,000.00 /Mnth	400	1,160	1,160
	Grind/Patch Slab	3350.130	500.00 sf	33.00 /mh	1,650	1.00 /sf	500		/sf		/sf		2,150	2,876
	025430 Lagoon Decommissioning													
	01 CIV Civil													
	Lagoon Lagoon													
	0238-2 Lagoon Decommission Allowance													
	Lagoon Decommission Allowance	2240.050	1.00 ls	/ls		/ls		1,510,000	/ls		/ls		1,510,000	1,510,000
	Mechanical Foreman	1000.100	8.00 wk	1,600.00 /wk	12,800	/wk			/wk		/wk		12,800	18,432
	Pickup	1900.210	2.00 Mnth	/Mnth		/Mnth			1,000.00 /Mnth	2,000	1,065.00 /Mnth	2,130	4,130	4,130
	Site Excavation ramps into lagoons	2303.100	1,000.00 cy	33.00 /mh	1,650	/cy			/cy		/cy		1,650	2,376
	Maintian roads during haul off	2300.600	1.00 ls	33.00 /mh	1,320	/ls	2,500		/ls		/ls		3,820	4,401
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	2.00 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	18,400	3,500.00 /Mnth	7,000	25,400	25,400
	John Deere 624 Loader (172 HP) (M)	1900.132	2.00 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	12,000	3,000.00 /Mnth	6,000	18,000	18,000
	033000 Cast In Place Concrete													
	00 GEN General													
	Concrete Concrete													
	01 -100 Concrete General													
	Concrete Foreman	1000.100	35.00 wk	1,600.00 /wk	56,000	/wk			/wk		/wk		56,000	80,640
	Pickup	1900.210	8.00 Mnth	/Mnth		/Mnth			1,000.00 /Mnth	8,000	650.00 /Mnth	5,200	13,200	13,200
	Formwork Freight hand set and shoring	3150.200	24.00 ld	/ld		/ld					650.00 /load	15,600	15,600	15,600
	Concrete Formwork Design Fees	1500.100	1.00 ls	/ls		/ls		19,600	/ls		/ls		19,600	19,600
	Formwork Freight Gang Form	3150.200	16.00 ld	/ld		/ld			/ld		3,200.00 /load	51,200	51,200	51,200
	014- Winter Conditions for Concrete													
	Winter Conditions	1572.100	8.00 Mnth	/Mnth		5,000.00 /Mnth	40,000		/Mnth		/Mnth		40,000	40,000
	Labor Winter Conditions	1572.100	8.00 Mnth	33.00 /mh	105,600	0.00 /Mnth	0		/Mnth		/Mnth		105,600	152,160
	2012 Allmand Self Cont. 1M BTU Heater(In @ 4.0 gal/hr w/ 2 burners+1 gal/hr Gen running *3 24/7) (L)	1900.400	10.00 Mnth	/Mnth		350.00 /Mnth	3,500		3,800.00 /Mnth	38,000	6,000.00 /Mnth	60,000	101,500	101,500
	Ground Heater E2200 (In @ 1.1 gal/hr *3 24/7) (L) ((OWNED ONLY-50% DISCOUNTED RATE)	1900.400	4.00 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	28,000	3,800.00 /Mnth	15,200	43,200	43,200

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0380- Concrete Equipment for Project													
	Razorback Screed	3995.100	1.00 mo	/mo		/mo			1,200.00 /mo	1,200	/mo		1,200	1,200
	Concrete Bucket	3995.100	27.00 mo	/mo		/mo			250.00 /mo	6,750	/mo		6,750	6,750
	Generators	3995.100	72.00 mo	/mo		/mo			400.00 /mo	28,800	/mo		28,800	28,800
	Vibrators	3995.100	72.00 mo	/mo		/mo			400.00 /mo	28,800	/mo		28,800	28,800
	Grove RT750, 50 ton (190 HP) (L)	1900.100	12.00 mnth	7,800.00 /mnth	93,600	450.00 /mnth	5,400		9,500.00 /mnth	114,000	2,250.00 /mnth	27,000	240,000	281,184
	Crane Mob by Sub	1900.100	1.00 ea	/ea		/ea		2,500	/ea		/ea		2,500	2,500
	Kobelco CK1100G-2 - 110 Ton (332 HP) (L)	1900.100	18.00 mnth	5,629.00 /mnth	101,322	550.00 /mnth	9,900		14,000.00 /mnth	252,000	2,500.00 /mnth	45,000	408,222	452,804
	Crane Mob by Sub	1900.100	1.00 ea	/ea		/ea		10,000	/ea		/ea		10,000	10,000
	Air Compressor 185 cfm (66 HP) (L)	1900.010	24.00 Mnth	/Mnth		/Mnth			850.00 /Mnth	20,400	705.00 /Mnth	16,920	37,320	37,320
	Welding Machine 300 amp (33 HP) (L)	1900.012	4.00 Mnth	/Mnth		/Mnth			350.00 /Mnth	1,400	550.00 /Mnth	2,200	3,600	3,600
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	36.00 Mnth	/Mnth		/Mnth			950.00 /Mnth	34,200	100.00 /Mnth	3,600	37,800	37,800
	RT Telescopic Forklift (12,000 lb) (130 HP) (L)	1900.300	11.00 Mnth	/Mnth		/Mnth			4,200.00 /Mnth	46,200	1,500.00 /Mnth	16,500	62,700	62,700
	Stair Tower and Stair Access	3995.100	18.00 mnth	33.00 /mh	2,376	1,500.00 /mnth	27,000		/mnth		/mnth		29,376	30,421
	0385- Reinforcement													
	Rebar Supply	3200.980	1.00 ls	/ls		1,566,172.00 /ls	1,566,172		/ls		/ls		1,566,172	1,566,172
	Rebar Install (sub)	3200.980	1.00 ls	/ls		/ls		0	/ls		/ls			
	Rebar Chairs	3200.980	11,000.00 ea	/ea		0.45 /ea	4,950		/ea		/ea		4,950	4,950
	Rebar Bricks	3200.980	8,000.00 ea	/ea		0.65 /ea	5,200		/ea		/ea		5,200	5,200
	Rebar Acc: wire and acc	3200.980	1.00 ls	/ls		5,000.00 /ls	5,000		/ls		/ls		5,000	5,000
	Deck and Walk Bolster	3200.980	400.00 lf	/lf		0.45 /lf	180		/lf		/lf		180	180
	Rebar Contingency	3200.980	1.00 ls	/ls		0.00 /ton	0		/ls		/ls			
	01 CIV Civil													
	Concrete Concrete													
	0300- Curb and Gutter at admin sidewalk													
	Concrete Curb and Gutter Formwork - Straight	3100.120	128.00 lf	33.00 /mh	2,112	5.00 /lf	640		/lf		/lf		2,752	3,681
	Concrete Curb and Gutter Formwork - Radius	3100.120	8.00 lf	33.00 /mh	132	5.00 /lf	40		/lf		/lf		172	230
	4500 psi Concrete	3310.100	15.11 cy	/cy		198.00 /cy	3,201		/cy		/cy		3,201	3,201
	Truck Place Curbs	3310.290	15.11 cy	33.00 /mh	1,334	/cy			/cy		/cy		1,334	1,921
	Concrete Curb and Gutter - Finish	3350.125	408.00 sf	33.00 /mh	673	/sf			/sf		/sf		673	969
	Place Road Base Under Curb	2305.300	30.22 cy	33.00 /mh	997	0.00 /cy	0		/cy		/cy		997	1,436
	Import Gravel Base	2305.250	30.22 cy	/cy		25.00 /ton	1,398		/cy		/cy		1,398	1,398
	Oil Curb and Gutter Forms	3100.310	544.00 sf	33.00 /mh	18	0.03 /sf	16		/sf		/sf		34	42
	Curb and Gutter Excavation and Backfill	2303.100	136.00 lf	33.00 /mh	449	0.00 /lf	0		/lf		/lf		449	646
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.15 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	375	500.00 /Mnth	75	450	450
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.50 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,900	2,000.00 /Mnth	1,000	2,900	2,900
	0302- Transformer Pad Site Civil													
	4500 psi Concrete	3310.100	3.70 cy	/cy		198.00 /cy	785		/cy		/cy		785	785
	Truck Place Slab on Grade	3310.230	3.70 cy	33.00 /mh	196	/cy			/cy		/cy		196	282
	Formwork S.O.G. Edge Form < 1'	3100.120	40.00 sf	33.00 /mh	462	2.00 /sf	84		/sf		/sf		546	749
	Finegrade Below Concrete	3150.650	100.00 sf	33.00 /mh	46	/sf			/sf		/sf		46	67
	Finish- Hard Trowel	3350.110	100.00 sf	33.00 /mh	46	/sf			/sf		/sf		46	67
	Liquid Curing Compounds	3390.170	100.00 sf	33.00 /mh	7	0.06 /sf	6		/sf		/sf		13	16
	Blockouts in Concrete	3150.194	16.00 sf	33.00 /mh	185	2.00 /sf	32		/sf		/sf		217	298
	Road Base Below Concrete	2305.300	3.70 cy	33.00 /mh	122	25.00 /ton	183		/cy		/cy		306	359
	Oil SOG Form	3100.310	40.00 sf	/sf		0.02 /sf	1		/sf		/sf		1	1
	Nails and Hardware	3150.200	40.00 sf	/sf		0.04 /sf	2		/sf		/sf		2	2
	Dimension Lumber	3150.200	40.00 sf	/sf		0.50 /sf	20		/sf		/sf		20	20
	SOG Rebar	3210.104	0.46 tn	33.00 /mh	458	1,600.00 /tn	778		/tn		/tn		1,236	1,438
	0302- Generator Slab Sit Civil													
	4500 psi Concrete	3310.100	58.33 cy	/cy		198.00 /cy	12,358		/cy		/cy		12,358	12,358
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	58.33 cy	33.00 /mh	1,751	/cy			/cy		35.00 /cy	2,185	3,935	4,706
	Formwork S.O.G. Edge Form > 1'	3100.120	201.00 sf	33.00 /mh	2,322	2.00 /sf	422		/sf		/sf		2,744	3,765
	Finegrade Below Concrete	3150.650	1,050.00 sf	33.00 /mh	485	/sf			/sf		/sf		485	699
	Finish- Hard Trowel	3350.110	1,050.00 sf	33.00 /mh	485	/sf			/sf		/sf		485	699
	Liquid Curing Compounds	3390.170	1,050.00 sf	33.00 /mh	69	0.06 /sf	63		/sf		/sf		132	163
	Blockouts in Concrete	3150.194	48.00 sf	33.00 /mh	554	2.00 /sf	96		/sf		/sf		650	894
	Road Base Below Concrete	2305.300	38.89 cy	33.00 /mh	1,283	25.00 /ton	1,925		/cy		/cy		3,208	3,773
	Oil SOG Form	3100.310	201.00 sf	/sf		0.02 /sf	4		/sf		/sf		4	4
	Nails and Hardware	3150.200	201.00 sf	/sf		0.04 /sf	8		/sf		/sf		8	8
	Dimension Lumber	3150.200	201.00 sf	/sf		0.50 /sf	101		/sf		/sf		101	101
	SOG Rebar	3210.104	5.83 tn	33.00 /mh	5,772	1,600.00 /tn	9,795		/tn		/tn		15,567	18,106
	0302- MCC Pad Site Civil													
	4500 psi Concrete	3310.100	11.56 cy	/cy		198.00 /cy	2,448		/cy		/cy		2,448	2,448
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	11.56 cy	33.00 /mh	490	/cy			/cy		35.00 /cy	433	922	1,138
	Formwork S.O.G. Edge Form < 1'	3100.120	76.00 sf	33.00 /mh	878	2.00 /sf	160		/sf		/sf		1,037	1,424
	Finegrade Below Concrete	3150.650	312.00 sf	33.00 /mh	144	/sf			/sf		/sf		144	208
	Finish- Hard Trowel	3350.110	312.00 sf	33.00 /mh	144	/sf			/sf		/sf		144	208
	Liquid Curing Compounds	3390.170	312.00 sf	33.00 /mh	21	0.06 /sf	19		/sf		/sf		39	48
	Blockouts in Concrete	3150.194	24.00 sf	33.00 /mh	277	2.00 /sf	48		/sf		/sf		325	447
	Road Base Below Concrete	2305.300	11.56 cy	33.00 /mh	381	25.00 /ton	572		/cy		/cy		953	1,121
	Oil SOG Form	3100.310	76.00 sf	/sf		0.02 /sf	2		/sf		/sf		2	2
	Nails and Hardware	3150.200	76.00 sf	/sf		0.04 /sf	3		/sf		/sf		3	3
	Dimension Lumber	3150.200	76.00 sf	/sf		0.50 /sf	38		/sf		/sf		38	38
	SOG Rebar	3210.104	1.44 tn	33.00 /mh	1,430	1,600.00 /tn	2,426		/tn		/tn		3,855	4,484
	0302- Sidewalks Secondary Process Basins													
	4500 psi Concrete	3310.100	30.77 cy	/cy		198.00 /cy	6,519		/cy		/cy		6,519	6,519
	Slab Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	30.77 cy	33.00 /mh	1,304	/cy			/cy		35.00 /cy	1,152	2,456	3,110
	Formwork S.O.G. Edge Form < 1'	3100.120	391.28 sf	33.00 /mh	4,519	2.00 /sf	822		/sf		/sf		5,341	7,329

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0302- Sidewalks Secondary Process Basins													
	Formwork S.O.G. Const Joints < 1'	3100.120	10.72 sf	33.00 /mh	163	2.00 /sf	23		/sf		/sf		185	257
	CJ Prep Slab	3350.170	10.72 sf	33.00 /mh	9	0.15 /sf	2		/sf		/sf		10	14
	Finegrade Below Concrete	3150.650	1,240.00 sf	33.00 /mh	573	/sf			/sf		/sf		573	825
	Finish- Hard Trowel	3350.110	1,240.00 sf	33.00 /mh	573	/sf			/sf		/sf		573	825
	Liquid Curing Compounds	3390.170	1,240.00 sf	33.00 /mh	82	0.06 /sf	74		/sf		/sf		156	192
	Road Base Below Concrete	2305.300	45.93 cy	33.00 /mh	1,516	25.00 /ton	2,273		/cy		/cy		3,789	4,456
	Expansion Joint	3150.720	187.60 sf	33.00 /mh	619	12.00 /sf	2,364		/sf		/sf		2,983	3,255
	Expansion Joint Sealant	3150.720	280.00 lf	33.00 /mh	924	2.00 /lf	588		/lf		/lf		1,512	1,919
	Oil SOG Form	3100.310	402.00 sf	/sf		0.02 /sf	8		/sf		/sf		8	8
	Nails and Hardware	3150.200	391.28 sf	/sf		0.04 /sf	16		/sf		/sf		16	16
	Dimension Lumber	3150.200	391.28 sf	/sf		0.50 /sf	196		/sf		/sf		196	196
	Saw Cut S-O-G	3350.160	346.00 lf	33.00 /mh	571	0.50 /lf	173		0.50 /lf	173	/lf		917	1,168
	SOG Rebar	3210.104	3.08 tn	33.00 /mh	3,046	1,600.00 /tn	5,170		/tn		/tn		8,216	9,556
	0302- Outfall Pipe Concrete slab at 90 bend													
	4500 psi Concrete	3310.100	14.22 cy	/cy		198.00 /cy	3,013		/cy		/cy		3,013	3,013
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	14.22 cy	33.00 /mh	502	/cy			/cy		35.00 /cy	533	1,035	1,256
	Formwork S.O.G. Edge Form > 1'	3100.120	192.00 sf	33.00 /mh	2,218	2.00 /sf	403		/sf		/sf		2,621	3,597
	Finegrade Below Concrete	3150.650	64.00 sf	33.00 /mh	30	/sf			/sf		/sf		30	43
	Finish- Hard Trowel	3350.110	64.00 sf	33.00 /mh	30	/sf			/sf		/sf		30	43
	Liquid Curing Compounds	3390.170	64.00 sf	33.00 /mh	4	0.06 /sf	4		/sf		/sf		8	10
	Road Base Below Concrete	2305.300	2.37 cy	33.00 /mh	78	25.00 /ton	117		/cy		/cy		196	230
	Oil SOG Form	3100.310	192.00 sf	/sf		0.02 /sf	4		/sf		/sf		4	4
	Nails and Hardware	3150.200	192.00 sf	/sf		0.04 /sf	8		/sf		/sf		8	8
	Dimension Lumber	3150.200	192.00 sf	/sf		0.50 /sf	96		/sf		/sf		96	96
	SOG Rebar	3210.104	1.78 tn	33.00 /mh	1,760	1,600.00 /tn	2,987		/tn		/tn		4,747	5,522
	0302- Sidewalks Between Slabs at headworks													
	4500 psi Concrete	3310.100	9.93 cy	/cy		198.00 /cy	2,103		/cy		/cy		2,103	2,103
	Truck Place Slab on Grade	3310.230	9.93 cy	33.00 /mh	421	/cy			/cy		/cy		421	606
	Formwork S.O.G. Edge Form < 1'	3100.120	139.36 sf	33.00 /mh	1,610	2.00 /sf	293		/sf		/sf		1,902	2,611
	Finegrade Below Concrete	3150.650	400.00 sf	33.00 /mh	185	/sf			/sf		/sf		185	266
	Finish- Hard Trowel	3350.110	400.00 sf	33.00 /mh	185	/sf			/sf		/sf		185	266
	Liquid Curing Compounds	3390.170	400.00 sf	33.00 /mh	26	0.06 /sf	24		/sf		/sf		50	62
	Road Base Below Concrete	2305.300	14.82 cy	33.00 /mh	489	25.00 /ton	733		/cy		/cy		1,222	1,437
	Expansion Joint	3150.720	87.10 sf	33.00 /mh	287	12.00 /sf	1,097		/sf		/sf		1,385	1,511
	Expansion Joint Sealant	3150.720	130.00 lf	33.00 /mh	429	2.00 /lf	273		/lf		/lf		702	891
	Oil SOG Form	3100.310	139.36 sf	/sf		0.02 /sf	3		/sf		/sf		3	3
	Nails and Hardware	3150.200	139.36 sf	/sf		0.04 /sf	6		/sf		/sf		6	6
	Dimension Lumber	3150.200	139.36 sf	/sf		0.50 /sf	70		/sf		/sf		70	70
	Saw Cut S-O-G	3350.160	60.00 lf	33.00 /mh	99	0.50 /lf	30		0.50 /lf	30	/lf		159	203
	SOG Rebar	3210.104	0.99 tn	33.00 /mh	983	1,600.00 /tn	1,669		/tn		/tn		2,652	3,084
	0302- Slab under partial Flume FRP manhole													
	4500 psi Concrete	3310.100	3.00 cy	/cy		198.00 /cy	636		/cy		/cy		636	636
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Crane Place Slab on Grade	3310.230	3.00 cy	33.00 /mh	212	/cy			/cy		/cy		212	305
	Formwork S.O.G. Edge Form < 1'	3100.120	32.00 sf	33.00 /mh	211	2.00 /sf	67		/sf		/sf		278	371
	Finegrade Below Concrete	3150.650	64.00 sf	33.00 /mh	30	/sf			/sf		/sf		30	43
	Finish- Hard Trowel	3350.110	64.00 sf	33.00 /mh	30	/sf			/sf		/sf		30	43
	Crushed Rock Below Concrete	2305.300	2.37 cy	33.00 /mh	31	36.00 /ton	160		/cy		/cy		190	203
	Oil SOG Form	3100.310	32.00 sf	/sf		0.02 /sf	1		/sf		/sf		1	1
	Nails and Hardware	3150.200	32.00 sf	/sf		0.04 /sf	1		/sf		/sf		1	1
	Dimension Lumber	3150.200	32.00 sf	/sf		0.50 /sf	16		/sf		/sf		16	16
	SOG Rebar	3210.104	0.24 tn	33.00 /mh	235	1,600.00 /tn	398		/tn		/tn		633	736
	0302-A Admin Building Parking Sidewalk													
	4500 psi Concrete	3310.100	8.89 cy	/cy		198.00 /cy	1,883		/cy		/cy		1,883	1,883
	Truck Place Slab on Grade	3310.230	8.89 cy	33.00 /mh	471	/cy			/cy		/cy		471	678
	Formwork S.O.G. Edge Form < 1'	3100.120	124.00 sf	33.00 /mh	1,432	2.00 /sf	260		/sf		/sf		1,693	2,323
	Formwork S.O.G. Const Joints < 1'	3100.120	6.00 sf	33.00 /mh	91	2.00 /sf	13		/sf		/sf		104	144
	CJ Prep Slab	3350.170	6.00 sf	33.00 /mh	5	0.15 /sf	1		/sf		/sf		6	8
	Finegrade Below Concrete	3150.650	480.00 sf	33.00 /mh	222	/sf			/sf		/sf		222	319
	Finish- Hard Trowel	3350.110	480.00 sf	33.00 /mh	222	/sf			/sf		/sf		222	319
	Liquid Curing Compounds	3390.170	480.00 sf	33.00 /mh	32	0.06 /sf	29		/sf		/sf		60	74
	Road Base Below Concrete	2305.300	17.78 cy	33.00 /mh	587	25.00 /ton	880		/cy		/cy		1,467	1,725
	Expansion Joint	3150.720	60.00 sf	33.00 /mh	198	12.00 /sf	756		/sf		/sf		954	1,041
	Expansion Joint Sealant	3150.720	120.00 lf	33.00 /mh	396	2.00 /lf	252		/lf		/lf		648	822
	Oil SOG Form	3100.310	130.00 sf	/sf		0.02 /sf	3		/sf		/sf		3	3
	Nails and Hardware	3150.200	124.00 sf	/sf		0.04 /sf	5		/sf		/sf		5	5
	Saw Cut S-O-G	3350.160	120.00 lf	33.00 /mh	198	0.50 /lf	60		0.50 /lf	60	/lf		318	405
	SOG Rebar	3210.104	0.89 tn	33.00 /mh	880	1,600.00 /tn	1,493		/tn		/tn		2,373	2,760
	0302-B Manhole FIII Concrete													
	4500 psi Concrete	3310.100	5.00 cy	/cy		198.00 /cy	1,059		/cy		/cy		1,059	1,059
	Truck Place Slab on Grade	3310.230	5.00 cy	33.00 /mh	706	/cy			/cy		/cy		706	1,017
	Formwork S.O.G. Edge Form < 1'	3100.120	100.00 sf	33.00 /mh	1,155	2.00 /sf	210		/sf		/sf		1,365	1,873
	Finish- Hard Trowel	3350.110	125.00 sf	33.00 /mh	58	/sf			/sf		/sf		58	83
	Liquid Curing Compounds	3390.170	125.00 sf	33.00 /mh	8	0.06 /sf	8		/sf		/sf		16	19
	Oil SOG Form	3100.310	100.00 sf	/sf		0.02 /sf	2		/sf		/sf		2	2
	Nails and Hardware	3150.200	100.00 sf	/sf		0.04 /sf	4		/sf		/sf		4	4
	Dimension Lumber	3150.200	100.00 sf	/sf		0.50 /sf	50		/sf		/sf		50	50
	CJ Prep Slab	3350.170	125.00 sf	33.00 /mh	103	0.15 /sf	19		/sf		/sf		122	
	09 IPS Influent Pump Station													
	Concrete Concrete													

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	019-100 Water Test Basin													
	Water Test Basins	3995.200	1.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	Test Water	3995.200	1.00 /ls	/ls		/ls			/ls		/ls			
	Pumps and hoses	3995.200	1.00 ls	/ls		1,000.00 /ls	1,000		/ls		/ls		1,000	1,000
	Temporary Bulkheads	3995.200	1.00 ls	33.00 /mh	132	250.00 /ls	250		/ls		/ls		382	440
	Urethane Injection System	3995.200	1.00 ls	33.00 /mh	2,640	3,500.00 /ls	3,500		750.00 /ls	750	/ls		6,890	8,052
	0302- Influent Pump Station Base Slab (09S201)													
	4500 psi Concrete	3310.100	20.00 cy	/cy		198.00 /cy	4,237		/cy		/cy		4,237	4,237
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	20.00 cy	33.00 /mh	1,059	/cy			/cy		35.00 /cy	749	1,808	2,274
	Formwork S.O.G. Edge Form > 1'	3100.120	125.86 sf	33.00 /mh	1,744	2.00 /sf	264		/sf		/sf		2,009	2,776
	Finegrade Below Concrete	3150.650	341.63 sf	33.00 /mh	158	/sf			/sf		/sf		158	227
	Finish- Hard Trowel	3350.110	341.63 sf	33.00 /mh	158	/sf			/sf		/sf		158	227
	Blockouts in Concrete	3150.194	21.00 sf	33.00 /mh	243	2.00 /sf	42		/sf		/sf		285	391
	Waterstop 6" Flat	3510.610	72.00 lf	33.00 /mh	238	6.00 /lf	454		/lf		/lf		691	796
	Oil SOG Form	3100.310	125.86 sf	/sf		0.02 /sf	3		/sf		/sf		3	3
	Nails and Hardware	3150.200	125.86 sf	/sf		0.04 /sf	5		/sf		/sf		5	5
	Dimension Lumber	3150.200	125.86 sf	/sf		0.50 /sf	63		/sf		/sf		63	63
	Waterstop Fitting - Vertical Tee	3510.610	2.00 ea	33.00 /mh	66	71.00 /ea	142		/ea		/ea		208	237
	Waterstop Fitting - Flat L	3510.610	4.00 ea	33.00 /mh	132	49.00 /ea	196		/ea		/ea		328	386
	4500 psi Concrete Mud mat below sump	3310.100	1.00 cy	/cy		198.00 /cy	212		/cy		/cy		212	212
	Pipe Tie Downs at sump	3150.200	2.00 ea	33.00 /mh	330	100.00 /ea	200		/ea		/ea		530	675
	XYPEX Admix	3310.100	20.00 cy	/cy		90.00 /cy	1,926		/cy		/cy		1,926	1,926
	0302- Influent Pump Station Equipment Pump Pads (09S202)													
	4500 psi Concrete	3310.100	2.00 cy	/cy		198.00 /cy	424		/cy		/cy		424	424
	Crane Place Slab on Grade	3310.230	2.00 cy	33.00 /mh	141	/cy			/cy		/cy		141	203
	Formwork S.O.G. Edge Form < 1'	3100.120	58.68 sf	33.00 /mh	678	2.00 /sf	123		/sf		/sf		801	1,099
	Finish- Hard Trowel	3350.110	43.42 sf	33.00 /mh	20	/sf			/sf		/sf		20	29
	Blockouts in Concrete	3150.194	24.00 sf	33.00 /mh	277	2.00 /sf	48		/sf		/sf		325	447
	Oil SOG Form	3100.310	58.68 sf	/sf		0.02 /sf	1		/sf		/sf		1	1
	Nails and Hardware	3150.200	58.68 sf	/sf		0.04 /sf	2		/sf		/sf		2	2
	Dimension Lumber	3150.200	58.68 sf	/sf		0.50 /sf	29		/sf		/sf		29	29
	Drill and Epoxy #4	3210.101	52.00 ea	33.00 /mh	429	5.00 /ea	273		/ea		/ea		702	891
	XYPEX Admix	3310.100	2.00 cy	/cy		90.00 /cy	193		/cy		/cy		193	193
	0302- Influent Pump Station Sidewalk 5' Around PS (09S401)													
	4500 psi Concrete	3310.100	8.40 cy	/cy		198.00 /cy	1,780		/cy		/cy		1,780	1,780
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Crane Place Slab on Grade	3310.230	8.40 cy	33.00 /mh	445	/cy			/cy		/cy		445	641
	Formwork S.O.G. Edge Form < 1'	3100.120	96.12 sf	33.00 /mh	1,110	2.00 /sf	202		/sf		/sf		1,312	1,801
	Finegrade Below Concrete	3150.650	420.00 sf	33.00 /mh	194	/sf			/sf		/sf		194	279
	Finish- Hard Trowel	3350.110	420.00 sf	33.00 /mh	194	/sf			/sf		/sf		194	279
	Liquid Curing Compounds	3390.170	420.00 sf	33.00 /mh	28	0.06 /sf	25		/sf		/sf		53	65
	Road Base Below Concrete	2305.300	15.56 cy	33.00 /mh	513	25.00 /ton	770		/cy		/cy		1,283	1,509
	Expansion Joint	3150.720	45.36 sf	33.00 /mh	150	12.00 /sf	572		/sf		/sf		721	787
	Expansion Joint Sealant	3150.720	84.00 lf	33.00 /mh	277	2.00 /lf	176		/lf		/lf		454	576
	Oil SOG Form	3100.310	96.12 sf	/sf		0.02 /sf	2		/sf		/sf		2	2
	Nails and Hardware	3150.200	96.12 sf	/sf		0.04 /sf	4		/sf		/sf		4	4
	Dimension Lumber	3150.200	96.12 sf	/sf		0.50 /sf	48		/sf		/sf		48	48
	Saw Cut S-O-G	3350.160	84.00 lf	33.00 /mh	139	0.50 /lf	42		0.50 /lf	42	/lf		223	284
	SOG Rebar	3210.104	0.84 tn	33.00 /mh	1,109	1,600.00 /tn	1,411		/tn		/tn		2,520	3,008
	0302-B Influent Grout Topping (09S401)													
	CJ Prep Slab	3350.170	252.00 sf	33.00 /mh	582	0.15 /sf	38		/sf		/sf		620	876
	Acrylic Bonding Agent	3150.200	252.00 sf	33.00 /mh	416	1.00 /sf	252		/sf		/sf		668	851
	Grout topping (Non Shrink)	3150.200	126.00 cf	33.00 /mh	1,040	0.00 /cf	0		/cf		/cf		1,040	1,497
	Non Shrink Grout	3601.100	126.00 cf	/cf		60.00 /cf	7,560		/cf		/cf		7,560	7,560
	Form Special Platform over grout topping	3150.200	1.00 ls	33.00 /mh	792	250.00 /sf	250		/ls		/ls		1,042	1,390
	0303- Influent Pump Station Walls (09S401)													
	Pump Place Walls	3310.260	54.00 cy	33.00 /mh	2,097	/cy			/cy		35.00 /cy	2,022	4,120	5,043
	4500 psi Concrete	3310.100	54.00 cy	/cy		198.00 /cy	11,440		/cy		/cy		11,440	11,440
	Wall Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Gang Form System 12-16'	3100.180	1,924.56 sf	33.00 /mh	9,527	2.75 /sf	5,557		/sf		/sf		15,084	19,275
	Wall Bulkhead Forms	3150.192	43.74 sf	33.00 /mh	664	2.00 /sf	92		/sf		/sf		756	1,048
	CJ Prep Walls	3350.170	142.74 sf	33.00 /mh	118	0.15 /sf	21		/sf		/sf		139	191
	Finish- Top of Wall	3350.110	99.00 sf	33.00 /mh	46	/sf			/sf		/sf		46	66
	Liquid Curing Walls	3390.170	2,023.56 sf	33.00 /mh	67	0.06 /sf	121		/sf		/sf		188	218
	Grind/Patch Walls	3350.130	1,924.56 sf	33.00 /mh	762	0.07 /sf	135		/sf		/sf		897	1,232
	Blockouts in Concrete	3150.194	16.00 sf	33.00 /mh	185	2.00 /sf	32		/sf		/sf		217	298
	Waterstop 6" Flat	3510.610	29.16 lf	33.00 /mh	96	6.00 /lf	184		/lf		/lf		280	322
	Chamfer 3/4"	3150.625	80.00 lf	33.00 /mh	132	0.25 /lf	21		/lf		/lf		153	211
	Rub Walls	3350.140	1,056.00 sf	33.00 /mh	1,742	0.25 /sf	264		/sf		/sf		2,006	2,773
	Oil Wall Forms	3100.310	1,924.56 sf	/sf		0.02 /sf	38		/sf		/sf		38	38
	Nails and Hardware	3150.200	1,924.56 sf	/sf		0.04 /sf	77		/sf		/sf		77	77
	Form Ties 18"	3150.632	481.14 ea	/ea		2.90 /ea	1,395		/ea		/ea		1,395	1,395
	Dimension Lumber	3150.200	1,924.56 sf	/sf		0.50 /sf	962		/sf		/sf		962	962
	Rebar Templates	3200.980	66.00 lf	33.00 /mh	109	0.50 /lf	33		/lf		/lf		142	190
	XYPEX Admix	3310.100	54.00 cy	/cy		90.00 /cy	5,200		/cy		/cy		5,200	5,200
	0303- Influent Pump Station One Sided wall 8' tall (09S402)													
	Pump Place Walls	3310.260	8.00 cy	33.00 /mh	353	/cy			/cy		35.00 /cy	300	653	808
	4500 psi Concrete	3310.100	8.00 cy	/cy		198.00 /cy	1,695		/cy		/cy		1,695	1,695
	Wall Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	One Sided Wall Forms	3100.184	64.00 sf	33.00 /mh	1,056	2.00 /sf	134		/sf		/sf		1,190	1,494
	Wall Bulkhead Forms	3150.192	24.00 sf	33.00 /mh	364	2.00 /sf	50		/sf		/sf		415	549

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0303- Influent Pump Station One Sided wall 8' tall (09S402)													
	CJ Prep Walls (roughen slab)	3350.170	88.00 sf	33.00 /mh	73	0.15 /sf	13		/sf		/sf		86	118
	Finish- Top of Wall	3350.110	24.00 sf	33.00 /mh	11	/sf			/sf		/sf		11	16
	Liquid Curing Walls	3390.170	152.00 sf	33.00 /mh	5	0.06 /sf	9		/sf		/sf		14	16
	Grind/Patch Walls	3350.130	128.00 sf	33.00 /mh	51	0.07 /sf	9		/sf		/sf		60	82
	Rub Walls	3350.140	40.00 sf	33.00 /mh	66	0.25 /sf	10		/sf		/sf		76	105
	Oil Wall Forms	3100.310	128.00 sf	/sf		0.02 /sf	3		/sf		/sf		3	3
	Nails and Hardware	3150.200	128.00 sf	/sf		0.04 /sf	5		/sf		/sf		5	5
	Form Ties 36"	3150.632	32.00 ea	/ea		3.50 /ea	112		/ea		/ea		112	112
	Dimension Lumber	3150.200	128.00 sf	/sf		0.50 /sf	64		/sf		/sf		64	64
	Rebar Templates	3200.980	8.00 lf	33.00 /mh	13	0.50 /lf	4		/lf		/lf		17	23
	Drill and Epoxy ties	3210.101	32.00 ea	33.00 /mh	264	5.00 /ea	168		/ea		/ea		432	548
	Drill and Epoxy #4	3210.101	35.00 ea	33.00 /mh	289	5.00 /ea	184		/ea		/ea		473	600
	XYPEX Admix	3310.100	8.00 cy	/cy		90.00 /cy	770		/cy		/cy		770	770
	0303- One Sided Step Walls below influent pipe (09S401)													
	Crane Place Walls	3310.260	2.00 cy	33.00 /mh	88	/cy			/cy		/cy		88	127
	4500 psi Concrete	3310.100	2.00 cy	/cy		198.00 /cy	424		/cy		/cy		424	424
	Wall Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Job Built with Plyform 4-8'	3100.180	24.00 sf	33.00 /mh	396	2.00 /sf	50		/sf		/sf		446	621
	Wall Bulkhead Forms	3150.192	12.00 sf	33.00 /mh	182	2.00 /sf	25		/sf		/sf		207	288
	CJ Prep Walls	3350.170	24.00 sf	33.00 /mh	20	0.15 /sf	4		/sf		/sf		23	32
	Finish- Top of Wall	3350.110	9.00 sf	33.00 /mh	4	/sf			/sf		/sf		4	6
	Liquid Curing Walls	3390.170	33.48 sf	33.00 /mh	1	0.06 /sf	2		/sf		/sf		3	4
	Grind/Patch Walls	3350.130	24.48 sf	33.00 /mh	10	0.07 /sf	2		/sf		/sf		11	16
	Blockouts in Concrete	3150.194	12.00 sf	33.00 /mh	139	2.00 /sf	24		/sf		/sf		163	224
	Oil Wall Forms	3100.310	24.48 sf	/sf		0.02 /sf	0		/sf		/sf		0	0
	Nails and Hardware	3150.200	24.48 sf	/sf		0.04 /sf	1		/sf		/sf		1	1
	Form Ties 36"	3150.632	6.12 ea	/ea		3.50 /ea	21		/ea		/ea		21	21
	Dimension Lumber	3150.200	24.48 sf	/sf		0.50 /sf	12		/sf		/sf		12	12
	Rebar Templates	3200.980	3.00 lf	33.00 /mh	5	0.50 /lf	2		/lf		/lf		6	9
	Drill and Epoxy ties	3210.101	12.00 ea	33.00 /mh	99	5.00 /ea	63		/ea		/ea		162	206
	Drill and Epoxy #4	3210.101	12.00 ea	33.00 /mh	99	5.00 /ea	63		/ea		/ea		162	206
	XYPEX Admix	3310.100	2.00 cy	/cy		90.00 /cy	193		/cy		/cy		193	193
	10 HWK Headworks Building													
	Concrete Concrete													
	019-100 Water Test Headworks													
	Water Test Basins	3995.200	1.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	Pumps	3995.200	1.00 ls	/ls		1,500.00 /ls	1,500		/ls		/ls		1,500	1,500
	Temporary Bulkheads	3995.200	3.00 ea	33.00 /mh	396	250.00 /ea	750		/ea		/ea		1,146	1,320
	Urethane Injection System	3995.200	1.00 ls	33.00 /mh	1,320	1,500.00 /ls	1,500		500.00 /ls	500	/ls		3,320	3,901
	0302- Headwork Grit Effluent Channel Base Slab (10S201)													
	4500 psi Concrete	3310.100	18.00 cy	/cy		198.00 /cy	3,813		/cy		/cy		3,813	3,813
	Slab Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	18.00 cy	33.00 /mh	763	/cy			/cy		35.00 /cy	674	1,437	1,772
	Formwork S.O.G. Edge Form > 1'	3100.120	133.92 sf	33.00 /mh	1,547	2.00 /sf	281		/sf		/sf		1,828	2,509
	Formwork S.O.G. Const Joints > 1'	3100.120	8.64 sf	33.00 /mh	131	2.00 /sf	18		/sf		/sf		149	207
	CJ Prep Slab	3350.170	8.64 sf	33.00 /mh	7	0.15 /sf	1		/sf		/sf		8	12
	Finegrade Below Concrete	3150.650	432.00 sf	33.00 /mh	200	/sf			/sf		/sf		200	287
	Finish- Hard Trowel	3350.110	432.00 sf	33.00 /mh	200	/sf			/sf		/sf		200	287
	Liquid Curing Compounds	3390.170	432.00 sf	33.00 /mh	29	0.06 /sf	26		/sf		/sf		54	67
	Blockouts in Concrete	3150.194	36.00 sf	33.00 /mh	416	2.00 /sf	72		/sf		/sf		488	671
	Waterstop 6" Flat	3510.610	125.00 lf	33.00 /mh	413	6.00 /lf	788		/lf		/lf		1,200	1,382
	Oil SOG Form	3100.310	142.56 sf	/sf		0.02 /sf	3		/sf		/sf		3	3
	Nails and Hardware	3150.200	133.92 sf	/sf		0.04 /sf	5		/sf		/sf		5	5
	Dimension Lumber	3150.200	133.92 sf	/sf		0.50 /sf	67		/sf		/sf		67	67
	Waterstop PVC greenstreak 609	3510.610	16.00 lf	33.00 /mh	106	83.00 /lf	1,394		/lf		/lf		1,500	1,546
	Drill and Epoxy #5	3210.101	32.00 ea	33.00 /mh	317	5.00 /ea	168		/ea		/ea		485	624
	Waterstop Fitting - Vertical Tee	3510.610	8.00 ea	33.00 /mh	264	71.00 /ea	568		/ea		/ea		832	948
	Waterstop Fitting - Flat L	3510.610	6.00 ea	33.00 /mh	198	49.00 /ea	294		/ea		/ea		492	579
	Xypex Admixture	3310.100	18.00 cy	/cy		90.00 /cy	1,733		/cy		/cy		1,733	1,733
	0302- Headworks Footer F-2 Lower level (10S202)													
	4500 psi Concrete	3310.100	20.00 cy	/cy		198.00 /cy	4,237		/cy		/cy		4,237	4,237
	Slab Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	20.00 cy	33.00 /mh	847	/cy			/cy		35.00 /cy	749	1,596	1,969
	Formwork S.O.G. Edge Form > 1'	3100.120	260.40 sf	33.00 /mh	3,008	2.00 /sf	547		/sf		/sf		3,554	4,878
	Formwork S.O.G. Const Joints > 1'	3100.120	16.80 sf	33.00 /mh	255	2.00 /sf	35		/sf		/sf		290	403
	CJ Prep Slab	3350.170	16.80 sf	33.00 /mh	14	0.15 /sf	3		/sf		/sf		16	22
	Finegrade Below Concrete	3150.650	480.00 sf	33.00 /mh	222	/sf			/sf		/sf		222	319
	Finish- Hard Trowel	3350.110	480.00 sf	33.00 /mh	222	/sf			/sf		/sf		222	319
	Liquid Curing Compounds	3390.170	480.00 sf	33.00 /mh	32	0.06 /sf	29		/sf		/sf		60	74
	Oil SOG Form	3100.310	277.20 sf	/sf		0.02 /sf	6		/sf		/sf		6	6
	Nails and Hardware	3150.200	260.40 sf	/sf		0.04 /sf	10		/sf		/sf		10	10
	Dimension Lumber	3150.200	260.40 sf	/sf		0.50 /sf	130		/sf		/sf		130	130
	0302- Headworks Dumpster Area Slab elev 4757.75 (10S202)													
	4500 psi Concrete	3310.100	63.00 cy	/cy		198.00 /cy	13,347		/cy		/cy		13,347	13,347
	Slab Placement Count	3310.360	3.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	63.00 cy	33.00 /mh	2,225	/cy			/cy		35.00 /cy	2,359	4,584	5,563
	Formwork S.O.G. Edge Form < 1'	3100.120	204.00 sf	33.00 /mh	2,356	2.00 /sf	428		/sf		/sf		2,785	3,821
	Formwork S.O.G. Const Joints < 1'	3100.120	42.00 sf	33.00 /mh	638	2.00 /sf	88		/sf		/sf		726	1,006
	CJ Prep Slab	3350.170	42.00 sf	33.00 /mh	35	0.15 /sf	6		/sf		/sf		41	91
	Finegrade Below Concrete	3150.650	1,701.00 sf	33.00 /mh	786	/sf			/sf		/sf		786	1,786
	Finish- Hard Trowel	3350.110	1,701.00 sf	33.00 /mh	786	/sf			/sf		/sf		786	1,786

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0302- Headworks Dumpster Area Slab elev 4757.75 (10S202)													
	Liquid Curing Compounds	3390.170	1,701.00 sf	33.00 /mh	112	0.06 /sf	102		/sf		/sf		214	264
	Blockouts in Concrete	3150.194	24.00 sf	33.00 /mh	277	2.00 /sf	48		/sf		/sf		325	447
	Waterstop 6" Flat	3510.610	92.00 lf	33.00 /mh	304	6.00 /lf	580		/lf		/lf		883	1,017
	Expansion Joint	3150.720	120.00 sf	33.00 /mh	396	12.00 /sf	1,512		/sf		/sf		1,908	2,082
	Expansion Joint Sealant	3150.720	120.00 lf	33.00 /mh	396	2.00 /lf	252		/lf		/lf		648	822
	Oil SOG Form	3100.310	246.00 sf	/sf		0.02 /sf	5		/sf		/sf		5	5
	Nails and Hardware	3150.200	204.00 sf	/sf		0.04 /sf	8		/sf		/sf		8	8
	Dimension Lumber	3150.200	204.00 sf	/sf		0.50 /sf	102		/sf		/sf		102	102
	Level and touch up floor drains	3150.194	12.00 ea	33.00 /mh	792	0.00 /ea	0		/ea		/ea		792	1,140
	15 Mil. Vapor Barrier	3150.630	1,701.00 sf	33.00 /mh	1,123	0.30 /sf	561		/sf		/sf		1,684	2,178
	0302- Headworks Upper Level Footings F-1, F-7, F-6 and F-9(10S202)													
	4500 psi Concrete	3310.100	34.00 cy	/cy		198.00 /cy	7,203		/cy		/cy		7,203	7,203
	Slab Placement Count	3310.360	8.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	34.00 cy	33.00 /mh	2,401	/cy			/cy		35.00 /cy	1,273	3,674	4,731
	Formwork S.O.G. Edge Form < 1'	3100.120	565.00 sf	33.00 /mh	7,831	2.00 /sf	1,187		/sf		/sf		9,017	12,463
	Formwork S.O.G. Const Joints < 1'	3100.120	84.00 sf	33.00 /mh	1,275	2.00 /sf	176		/sf		/sf		1,452	2,013
	CJ Prep Slab	3350.170	30.00 sf	33.00 /mh	25	0.15 /sf	5		/sf		/sf		29	40
	Finegrade Below Concrete	3150.650	624.00 sf	33.00 /mh	1,647	/sf			/sf		/sf		1,647	2,372
	Finish- Hard Trowel	3350.110	624.00 sf	33.00 /mh	288	/sf			/sf		/sf		288	415
	Liquid Curing Compounds	3390.170	624.00 sf	33.00 /mh	41	0.06 /sf	37		/sf		/sf		79	97
	Oil SOG Form	3100.310	452.00 sf	/sf		0.02 /sf	9		/sf		/sf		9	9
	Nails and Hardware	3150.200	422.00 sf	/sf		0.04 /sf	17		/sf		/sf		17	17
	Dimension Lumber	3150.200	422.00 sf	/sf		0.50 /sf	211		/sf		/sf		211	211
	Flow Fill at steps	3310.105	8.00 cy	33.00 /mh	792	152.00 /cy	1,277		/cy		/cy		2,069	2,417
	0302- Headworks Grit Influent Channel lower level slab S-3 (10S202)													
	4500 psi Concrete	3310.100	41.00 cy	/cy		198.00 /cy	8,686		/cy		/cy		8,686	8,686
	Slab Placement Count	3310.360	4.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	41.00 cy	33.00 /mh	2,172	/cy			/cy		35.00 /cy	1,535	3,707	4,663
	Formwork S.O.G. Edge Form > 1'	3100.120	290.16 sf	33.00 /mh	3,351	2.00 /sf	609		/sf		/sf		3,961	5,435
	Formwork S.O.G. Const Joints > 1'	3100.120	31.20 sf	33.00 /mh	474	2.00 /sf	66		/sf		/sf		539	748
	CJ Prep Slab	3350.170	31.20 sf	33.00 /mh	26	0.15 /sf	5		/sf		/sf		30	42
	Finegrade Below Concrete	3150.650	1,050.00 sf	33.00 /mh	485	/sf			/sf		/sf		485	699
	Finish- Hard Trowel	3350.110	1,050.00 sf	33.00 /mh	485	/sf			/sf		/sf		485	699
	Liquid Curing Compounds	3390.170	1,050.00 sf	33.00 /mh	69	0.06 /sf	63		/sf		/sf		132	163
	Blockouts in Concrete	3150.194	40.00 sf	33.00 /mh	462	2.00 /sf	80		/sf		/sf		542	745
	Waterstop 6" Flat	3510.610	270.00 lf	33.00 /mh	891	6.00 /lf	1,701		/lf		/lf		2,592	2,984
	Oil SOG Form	3100.310	321.36 sf	/sf		0.02 /sf	6		/sf		/sf		6	6
	Nails and Hardware	3150.200	290.16 sf	/sf		0.04 /sf	12		/sf		/sf		12	12
	Dimension Lumber	3150.200	290.16 sf	/sf		0.50 /sf	145		/sf		/sf		145	145
	Waterstop Greenstreak 609	3510.610	50.00 lf	33.00 /mh	330	83.00 /lf	4,358		/lf		/lf		4,688	4,833
	Drill and Epoxy #5	3210.101	88.00 ea	33.00 /mh	871	5.00 /ea	462		/ea		/ea		1,333	1,717
	Waterstop Fitting - Vertical Tee	3510.610	6.00 ea	33.00 /mh	198	71.00 /ea	426		/ea		/ea		624	711
	Waterstop Fitting - Flat L	3510.610	12.00 ea	33.00 /mh	396	49.00 /ea	588		/ea		/ea		984	1,158
	XYPEX Admix	3310.100	41.00 cy	/cy		90.00 /cy	3,948		/cy		/cy		3,948	3,948
	0302- Headworks Screening channel Base Slab (10S202)													
	4500 psi Concrete	3310.100	54.00 cy	/cy		198.00 /cy	11,440		/cy		/cy		11,440	11,440
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	54.00 cy	33.00 /mh	2,860	/cy			/cy		35.00 /cy	2,022	4,882	6,141
	Formwork S.O.G. Edge Form > 1'	3100.120	195.00 sf	33.00 /mh	2,574	2.00 /sf	410		/sf		/sf		2,984	4,116
	Finegrade Below Concrete	3150.650	828.00 sf	33.00 /mh	383	/sf			/sf		/sf		383	551
	Finish- Hard Trowel	3350.110	828.00 sf	33.00 /mh	383	/sf			/sf		/sf		383	551
	Liquid Curing Compounds	3390.170	828.00 sf	33.00 /mh	55	0.06 /sf	50		/sf		/sf		104	128
	Blockouts in Concrete	3150.194	24.00 sf	33.00 /mh	277	2.00 /sf	48		/sf		/sf		325	447
	Waterstop 6" Flat	3510.610	250.00 lf	33.00 /mh	825	6.00 /lf	1,575		/lf		/lf		2,400	2,763
	Oil SOG Form	3100.310	177.00 sf	/sf		0.02 /sf	4		/sf		/sf		4	4
	Nails and Hardware	3150.200	177.00 sf	/sf		0.04 /sf	7		/sf		/sf		7	7
	Dimension Lumber	3150.200	177.00 sf	/sf		0.50 /sf	89		/sf		/sf		89	89
	Waterstop Fitting - Vertical Tee	3510.610	12.00 ea	33.00 /mh	396	71.00 /ea	852		/ea		/ea		1,248	1,422
	Waterstop Fitting - Vertical Cross	3510.610	4.00 ea	33.00 /mh	132	102.00 /ea	408		/ea		/ea		540	598
	Waterstop Fitting - Flat L	3510.610	16.00 ea	33.00 /mh	528	49.00 /ea	784		/ea		/ea		1,312	1,544
	XYPEX Admix	3310.100	46.00 cy	/cy		90.00 /cy	4,430		/cy		/cy		4,430	4,430
	Flow Fill under slab at thick	3310.105	5.00 cy	33.00 /mh	165	152.00 /cy	798		/cy		/cy		963	1,036
	0302- Headworks operating level Slab (10S202)													
	4500 psi Concrete	3310.100	113.00 cy	/cy		198.00 /cy	23,940		/cy		/cy		23,940	23,940
	Slab Placement Count	3310.360	3.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	113.00 cy	33.00 /mh	4,988	/cy			/cy		35.00 /cy	4,232	9,219	11,414
	Formwork S.O.G. Edge Form < 1'	3100.120	310.88 sf	33.00 /mh	3,591	2.00 /sf	653		/sf		/sf		4,244	5,823
	Formwork S.O.G. Const Joints < 1'	3100.120	87.10 sf	33.00 /mh	1,322	2.00 /sf	183		/sf		/sf		1,505	2,087
	CJ Prep Slab	3350.170	87.10 sf	33.00 /mh	72	0.15 /sf	13		/sf		/sf		85	117
	Finegrade Below Concrete	3150.650	4,542.00 sf	33.00 /mh	2,098	/sf			/sf		/sf		2,098	3,022
	Finish- Hard Trowel	3350.110	4,542.00 sf	33.00 /mh	2,098	/sf			/sf		/sf		2,098	3,022
	Liquid Curing Compounds	3390.170	4,542.00 sf	33.00 /mh	300	0.06 /sf	273		/sf		/sf		572	704
	Blockouts in Concrete	3150.194	48.00 sf	33.00 /mh	554	2.00 /sf	96		/sf		/sf		650	894
	Expansion Joint	3150.720	168.17 sf	33.00 /mh	555	12.00 /sf	2,119		/sf		/sf		2,674	2,918
	Expansion Joint Sealant	3150.720	251.00 lf	33.00 /mh	828	2.00 /lf	527		/lf		/lf		1,355	1,720
	Oil SOG Form	3100.310	397.98 sf	/sf		0.02 /sf	8		/sf		/sf		8	8
	Nails and Hardware	3150.200	310.88 sf	/sf		0.04 /sf	12		/sf		/sf		12	12
	Dimension Lumber	3150.200	310.88 sf	/sf		0.50 /sf	155		/sf		/sf		155	155
	Saw Cut S-O-G	3350.160	395.00 lf	33.00 /mh	652	0.50 /lf	198		0.50 /lf	198	/lf		1,047	1,344
	Channel Edge Forms	3100.124	330.00 sf	33.00 /mh	5,445	2.00 /sf	693		/sf		/sf		6,138	8,141
	15 Mil. Vapor Barrier	3150.630	4,542.00 sf	33.00 /mh	749	0.30 /sf	1,499		/sf		/sf		2,248	2,997
	XYPEX Admix	3310.100	113.00 cy	/cy		90.00 /cy	10,882		/cy		/cy		10,882	10,882

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0302- Stoop, HVAC and Door Pads at Headworks													
	4500 psi Concrete	3310.100	24.82 cy	/cy		198.00 /cy	5,257		/cy		/cy		5,257	5,257
	Slab Placement Count	3310.360	8.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Truck Place Slab on Grade	3310.230	24.82 cy	33.00 /mh	1,314	/cy			/cy		/cy		1,314	1,893
	Formwork S.O.G. Edge Form < 1'	3100.120	225.12 sf	33.00 /mh	2,972	/sf	473		/sf		/sf		3,444	4,752
	Finegrade Below Concrete	3150.650	1,000.00 sf	33.00 /mh	462	/sf			/sf		/sf		462	665
	Finish- Hard Trowel	3350.110	1,000.00 sf	33.00 /mh	462	/sf			/sf		/sf		462	665
	Liquid Curing Compounds	3390.170	1,000.00 sf	33.00 /mh	66	/sf	60		/sf		/sf		126	155
	Road Base Below Concrete	2305.300	37.04 cy	33.00 /mh	1,222	/cy	1,833		/cy		/cy		3,056	3,593
	Expansion Joint	3150.720	67.00 sf	33.00 /mh	221	/sf	844		/sf		/sf		1,065	1,163
	Expansion Joint Sealant	3150.720	100.00 lf	33.00 /mh	330	/lf	210		/lf		/lf		540	685
	Oil SOG Form	3100.310	225.12 sf	/sf		0.02 /sf	5		/sf		/sf		5	5
	Nails and Hardware	3150.200	225.12 sf	/sf		0.04 /sf	9		/sf		/sf		9	9
	Dimension Lumber	3150.200	225.12 sf	/sf		0.50 /sf	113		/sf		/sf		113	113
	Saw Cut S-O-G	3350.160	130.00 lf	33.00 /mh	215	/lf	65	0.50 /lf		65	/lf		345	439
	SOG Rebar	3210.104	2.48 tn	33.00 /mh	3,275	/tn	4,168		/tn		/tn		7,443	8,884
	0302-B Headworks Chanel fillets and floor slope													
	4500 psi Concrete	3310.100	23.00 cy	/cy		198.00 /cy	4,873		/cy		/cy		4,873	4,873
	Truck Place Slab on Grade	3310.230	23.00 cy	33.00 /mh	3,249	/cy			/cy		/cy		3,249	4,678
	Formwork S.O.G. Edge Form < 1'	3100.120	106.00 sf	33.00 /mh	1,224	/sf	223		/sf		/sf		1,447	1,986
	Finish- Hard Trowel	3350.110	250.00 sf	33.00 /mh	116	/sf			/sf		/sf		116	166
	Blockouts in Concrete	3150.194	48.00 sf	33.00 /mh	554	/sf	96		/sf		/sf		650	894
	Oil SOG Form	3100.310	106.00 sf	/sf		0.02 /sf	2		/sf		/sf		2	2
	Nails and Hardware	3150.200	106.00 sf	/sf		0.04 /sf	4		/sf		/sf		4	4
	Dimension Lumber	3150.200	106.00 sf	/sf		0.50 /sf	53		/sf		/sf		53	53
	CJ Prep Slab	3350.170	450.00 sf	33.00 /mh	743	/sf	68		/sf		/sf		810	1,137
	Acrylic Bonding Agent	3150.200	450.00 sf	33.00 /mh	743	/sf	450		/sf		/sf		1,193	1,519
	XYPEX Admix	3310.100	12.00 cy	/cy		90.00 /cy	1,156		/cy		/cy		1,156	1,156
	Form Special platform above grout at effluent	3150.200	1.00 ls	33.00 /mh	3,168	/sf	250		/ls		/ls		3,418	4,812
	0303- Headworks Grit Effluent Walls (10S201)													
	Pump Place Walls	3310.260	36.00 cy	33.00 /mh	1,907	/cy			/cy		35.00 /cy	1,348	3,255	4,094
	4500 psi Concrete	3310.100	36.00 cy	/cy		198.00 /cy	7,627		/cy		/cy		7,627	7,627
	Wall Placement Count	3310.360	3.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Rented Form System 4-8'	3100.180	1,917.50 sf	33.00 /mh	13,921	/sf	3,523		/sf		/sf		17,444	23,570
	Wall Bulkhead Forms	3150.192	46.02 sf	33.00 /mh	699	/sf	97		/sf		/sf		795	1,103
	CJ Prep Walls	3350.170	171.02 sf	33.00 /mh	141	/sf	26		/sf		/sf		167	229
	Finish- Top of Wall	3350.110	125.00 sf	33.00 /mh	58	/sf			/sf		/sf		58	83
	Liquid Curing Walls	3390.170	2,042.50 sf	33.00 /mh	67	/sf	123		/sf		/sf		190	220
	Grind/Patch Walls	3350.130	1,917.50 sf	33.00 /mh	759	/sf	134		/sf		/sf		894	1,228
	Blockouts in Concrete	3150.194	96.00 sf	33.00 /mh	1,109	/sf	192		/sf		/sf		1,301	1,789
	Waterstop 6" Flat	3510.610	171.02 lf	33.00 /mh	564	/lf	1,077		/lf		/lf		1,642	1,890
	Rub Walls	3350.140	958.75 sf	33.00 /mh	1,582	/sf	240		/sf		/sf		1,822	2,518
	Oil Wall Forms	3100.310	1,917.50 sf	/sf		0.02 /sf	38		/sf		/sf		38	38
	Nails and Hardware	3150.200	1,917.50 sf	/sf		0.04 /sf	77		/sf		/sf		77	77
	Form Ties 12"	3150.632	479.38 ea	/ea		2.60 /ea	1,246		/ea		/ea		1,246	1,246
	Dimension Lumber	3150.200	1,917.50 sf	/sf		0.50 /sf	959		/sf		/sf		959	959
	Rebar Templates	3200.980	125.00 lf	33.00 /mh	206	/lf	63		/lf		/lf		269	360
	Waterstop Greenstreak 609	3510.610	32.00 lf	33.00 /mh	211	/lf	2,789		/lf		/lf		3,000	3,093
	Drill and Epoxy #5	3210.101	64.00 ea	33.00 /mh	634	/ea	336		/ea		/ea		970	1,248
	Waterstop Fitting - Vertical Tee	3510.610	8.00 ea	33.00 /mh	264	/ea	568		/ea		/ea		832	948
	Waterstop Fitting - Flat L	3510.610	6.00 ea	33.00 /mh	198	/ea	294		/ea		/ea		492	579
	XYPEX Admix	3310.100	36.00 cy	/cy		90.00 /cy	3,467		/cy		/cy		3,467	3,467
	0303- Headworks Wall-2 at dumpster area (10S401)													
	Pump Place Walls	3310.260	16.67 cy	33.00 /mh	883	/cy			/cy		35.00 /cy	624	1,507	1,895
	4500 psi Concrete	3310.100	16.67 cy	/cy		198.00 /cy	3,531		/cy		/cy		3,531	3,531
	Wall Placement Count	3310.360	3.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Rented Form System 0-4'	3100.180	600.00 sf	33.00 /mh	4,356	/sf	1,103		/sf		/sf		5,459	7,375
	Wall Bulkhead Forms	3150.192	18.75 sf	33.00 /mh	285	/sf	39		/sf		/sf		324	449
	CJ Prep Walls	3350.170	198.75 sf	33.00 /mh	164	/sf	30		/sf		/sf		194	266
	Finish- Top of Wall	3350.110	180.00 sf	33.00 /mh	83	/sf			/sf		/sf		83	120
	Liquid Curing Walls	3390.170	780.00 sf	33.00 /mh	26	/sf	47		/sf		/sf		73	84
	Grind/Patch Walls	3350.130	600.00 sf	33.00 /mh	238	/sf	42		/sf		/sf		280	384
	Blockouts in Concrete	3150.194	28.00 sf	33.00 /mh	323	/sf	56		/sf		/sf		379	522
	Rub Walls	3350.140	240.00 sf	33.00 /mh	396	/sf	60		/sf		/sf		456	630
	Oil Wall Forms	3100.310	600.00 sf	/sf		0.02 /sf	12		/sf		/sf		12	12
	Nails and Hardware	3150.200	600.00 sf	/sf		0.04 /sf	24		/sf		/sf		24	24
	Form Ties 18"	3150.632	150.00 ea	/ea		2.90 /ea	435		/ea		/ea		435	435
	Dimension Lumber	3150.200	600.00 sf	/sf		0.50 /sf	300		/sf		/sf		300	300
	Rebar Templates	3200.980	120.00 lf	33.00 /mh	198	/lf	60		/lf		/lf		258	345
	0303- Headworks Wall between dumpster room and upper level W-2 (10S401)													
	Pump Place Walls	3310.260	55.56 cy	33.00 /mh	2,943	/cy			/cy		35.00 /cy	2,081	5,023	6,318
	4500 psi Concrete	3310.100	55.56 cy	/cy		198.00 /cy	11,770		/cy		/cy		11,770	11,770
	Wall Placement Count	3310.360	3.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Rented Form System 8-12'	3100.180	2,000.00 sf	33.00 /mh	11,880	/sf	3,675		/sf		/sf		15,555	20,782
	Wall Bulkhead Forms	3150.192	60.00 sf	33.00 /mh	911	/sf	126		/sf		/sf		1,037	1,438
	CJ Prep Walls	3350.170	210.00 sf	33.00 /mh	173	/sf	32		/sf		/sf		205	281
	Finish- Top of Wall	3350.110	150.00 sf	33.00 /mh	69	/sf			/sf		/sf		69	100
	Liquid Curing Walls	3390.170	2,150.00 sf	33.00 /mh	71	/sf	129		/sf		/sf		200	231
	Grind/Patch Walls	3350.130	2,000.00 sf	33.00 /mh	792	/sf	140		/sf		/sf		932	1,280
	Chamfer 3/4"	3150.625	100.00 lf	33.00 /mh	165	/lf	26		/lf		/lf		191	244
	Rub Walls	3350.140	1,200.00 sf	33.00 /mh	1,980	/sf	300		/sf		/sf		2,280	3,144
	Oil Wall Forms	3100.310	2,000.00 sf	/sf		0.02 /sf	40		/sf		/sf		40	80
	Nails and Hardware	3150.200	2,000.00 sf	/sf		0.04 /sf	80		/sf		/sf		80	80

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0303- Headworks Wall between dumpster room and upper level W-2 (10S401)													
	Form Ties 18"	3150.632	500.00 ea	/ea		2.90 /ea	1,450		/ea		/ea		1,450	1,450
	Dimension Lumber	3150.200	2,000.00 sf	/sf		0.50 /sf	1,000		/sf		/sf		1,000	1,000
	Rebar Templates	3200.980	100.00 lf	33.00 /mh	165	0.50 /lf	50		/lf		/lf		215	288
	Rebar Formsavers # 5	3210.108	104.00 ea	33.00 /mh	1,133	28.00 /ea	2,912		/ea		/ea		4,045	4,543
	0303- Headworks Exterior Walls Upper Level W-1, W-7,W-8,W-9 (10S201)													
	Pump Place Walls	3310.260	58.50 cy	33.00 /mh	3,098	/cy			/cy		35.00 /cy	2,191	5,289	6,652
	4500 psi Concrete	3310.100	58.50 cy	/cy		198.00 /cy	12,393		/cy		/cy		12,393	12,393
	Wall Placement Count	3310.360	4.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Rented Form System 0-4'	3100.180	672.00 sf	33.00 /mh	4,435	1.75 /sf	1,235		/sf		/sf		5,670	7,621
	Rented Form System 4-8'	3100.180	352.00 sf	33.00 /mh	2,323	1.75 /sf	647		/sf		/sf		2,970	3,992
	Rented Form System 8-12'	3100.180	1,351.00 sf	33.00 /mh	8,917	1.75 /sf	2,482		/sf		/sf		11,399	15,322
	Wall Bulkhead Forms	3150.192	162.26 sf	33.00 /mh	2,463	2.00 /sf	341		/sf		/sf		2,804	3,888
	CJ Prep Walls	3350.170	442.89 sf	33.00 /mh	365	0.15 /sf	66		/sf		/sf		432	593
	Finish- Top of Wall	3350.110	280.63 sf	33.00 /mh	130	/sf			/sf		/sf		130	187
	Liquid Curing Walls	3390.170	2,655.63 sf	33.00 /mh	88	0.06 /sf	159		/sf		/sf		247	286
	Grind/Patch Walls	3350.130	2,375.00 sf	33.00 /mh	941	0.07 /sf	166		/sf		/sf		1,107	1,521
	Chamfer 3/4"	3150.625	422.00 lf	33.00 /mh	696	0.25 /lf	111		/lf		/lf		807	1,113
	Rub Walls	3350.140	1,776.00 sf	33.00 /mh	2,930	0.25 /sf	444		/sf		/sf		3,374	4,664
	Oil Wall Forms	3100.310	2,375.00 sf	/sf		0.02 /sf	48		/sf		/sf		48	48
	Nails and Hardware	3150.200	2,375.00 sf	/sf		0.04 /sf	95		/sf		/sf		95	95
	Form Ties 16"	3150.632	593.75 ea	/ea		2.80 /ea	1,663		/ea		/ea		1,663	1,663
	Dimension Lumber	3150.200	2,375.00 sf	/sf		0.50 /sf	1,188		/sf		/sf		1,188	1,188
	Rebar Templates	3200.980	211.00 lf	33.00 /mh	348	0.50 /lf	106		/lf		/lf		454	607
	0303- Headworks Screening Channel Walls All (10S202)													
	Pump Place Walls	3310.260	46.00 cy	33.00 /mh	2,436	/cy			/cy		35.00 /cy	1,723	4,159	5,231
	4500 psi Concrete	3310.100	46.00 cy	/cy		198.00 /cy	9,746		/cy		/cy		9,746	9,746
	Wall Placement Count	3310.360	7.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Rented Form System 0-4'	3100.180	1,880.00 sf	33.00 /mh	13,649	1.75 /sf	3,455		/sf		/sf		17,103	23,109
	Rented Form System 4-8'	3100.180	977.50 sf	33.00 /mh	7,097	1.75 /sf	1,796		/sf		/sf		8,893	12,015
	Wall Bulkhead Forms	3150.192	39.00 sf	33.00 /mh	592	2.00 /sf	82		/sf		/sf		674	934
	CJ Prep Walls	3350.170	310.70 sf	33.00 /mh	256	0.15 /sf	47		/sf		/sf		303	416
	Finish- Top of Wall	3350.110	271.70 sf	33.00 /mh	126	/sf			/sf		/sf		126	181
	Liquid Curing Walls	3390.170	3,129.20 sf	33.00 /mh	103	0.06 /sf	188		/sf		/sf		291	336
	Grind/Patch Walls	3350.130	2,857.50 sf	33.00 /mh	1,132	0.07 /sf	200		/sf		/sf		1,332	1,829
	Blockouts in Concrete	3150.194	80.00 sf	33.00 /mh	924	2.00 /sf	160		/sf		/sf		1,084	1,491
	Waterstop 6" Flat	3510.610	359.00 lf	33.00 /mh	1,185	6.00 /lf	2,262		/lf		/lf		3,446	3,968
	Rub Walls	3350.140	1,428.75 sf	33.00 /mh	2,357	0.25 /sf	357		/sf		/sf		2,715	3,752
	Oil Wall Forms	3100.310	2,857.50 sf	/sf		0.02 /sf	57		/sf		/sf		57	57
	Nails and Hardware	3150.200	2,857.50 sf	/sf		0.04 /sf	114		/sf		/sf		114	114
	Form Ties 10"	3150.632	300.00 ea	/ea		2.50 /ea	750		/ea		/ea		750	750
	Form Ties 12"	3150.632	414.38 ea	/ea		2.60 /ea	1,077		/ea		/ea		1,077	1,077
	Dimension Lumber	3150.200	2,857.50 sf	/sf		0.50 /sf	1,429		/sf		/sf		1,429	1,429
	Rebar Templates	3200.980	320.00 lf	33.00 /mh	528	0.50 /lf	160		/lf		/lf		688	920
	Waterstop Greenstreak 609	3510.610	20.00 lf	33.00 /mh	132	83.00 /lf	1,743		/lf		/lf		1,875	1,933
	Waterstop Fitting - Vertical Tee	3510.610	8.00 ea	33.00 /mh	264	71.00 /ea	568		/ea		/ea		832	948
	Waterstop Fitting - Flat L	3510.610	12.00 ea	33.00 /mh	396	49.00 /ea	588		/ea		/ea		984	1,158
	Drill and Epoxy #5	3210.101	46.00 ea	33.00 /mh	455	5.00 /ea	242		/ea		/ea		697	897
	XYPEX Admix	3310.100	46.00 cy	/cy		90.00 /cy	4,430		/cy		/cy		4,430	4,430
	0303- Future Cut Off Walls Headworks													
	Buggy Place Walls	3310.260	3.00 cy	33.00 /mh	424	/cy			/cy		/cy		424	610
	4500 psi Concrete	3310.100	3.00 cy	/cy		198.00 /cy	636		/cy		/cy		636	636
	Wall Placement Count	3310.360	3.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Rented Form System 4-8'	3100.180	144.00 sf	33.00 /mh	1,426	1.75 /sf	265		/sf		/sf	1,690	2,317	
	Wall Bulkhead Forms	3150.192	48.00 sf	33.00 /mh	729	2.00 /sf	101		/sf		/sf		829	1,150
	CJ Prep Walls	3350.170	48.00 sf	33.00 /mh	40	0.15 /sf	7		/sf		/sf		47	64
	Finish- Top of Wall	3350.110	8.00 sf	33.00 /mh	4	/sf			/sf		/sf		4	5
	Liquid Curing Walls	3390.170	150.00 sf	33.00 /mh	5	0.06 /sf	9		/sf		/sf		14	16
	Grind/Patch Walls	3350.130	144.00 sf	33.00 /mh	57	0.07 /sf	10		/sf		/sf		67	92
	Chamfer 3/4"	3150.625	144.00 lf	33.00 /mh	238	0.25 /lf	38		/lf		/lf		275	380
	Rub Walls	3350.140	72.00 sf	33.00 /mh	119	0.25 /sf	18		/sf		/sf		137	189
	Oil Wall Forms	3100.310	144.00 sf	/sf		0.02 /sf	3		/sf		/sf		3	3
	Nails and Hardware	3150.200	144.00 sf	/sf		0.04 /sf	6		/sf		/sf		6	6
	Form Ties 8"	3150.632	36.00 ea	/ea		2.50 /ea	90		/ea		/ea		90	90
	Dimension Lumber	3150.200	144.00 sf	/sf		0.50 /sf	72		/sf		/sf		72	72
	Rebar Templates	3200.980	12.00 lf	33.00 /mh	20	0.50 /lf	6		/lf		/lf		26	35
	Waterstop Greenstreak 609	3510.610	60.00 lf	33.00 /mh	396	83.00 /lf	5,229		/lf		/lf		5,625	5,799
	Rebar Formsavers # 6	3210.108	57.00 ea	33.00 /mh	941	39.00 /ea	2,223		/ea		/ea		3,164	3,577
	0304- Headworks Screening Island Decks (10S202)													
	4500 psi Concrete	3310.100	9.00 cy	/cy		198.00 /cy	1,907		/cy		/cy		1,907	1,907
	Slab Placement Count	3310.360	3.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Crane Place Suspended Slab	3310.240	9.00 cy	33.00 /mh	794	/cy			/cy		/cy		794	1,144
	Slab Edge Form < 1'	3100.124	92.46 sf	33.00 /mh	1,526	2.00 /sf	194		/sf		/sf		1,720	2,391
	Finish- Hard Trowel	3350.110	336.00 sf	33.00 /mh	155	/sf			/sf		/sf		155	224
	Liquid Curing Compounds	3390.170	336.00 sf	33.00 /mh	22	0.06 /sf	20		/sf		/sf		42	52
	Grind and Patch Deck Bottom	3350.130	336.00 sf	33.00 /mh	133	0.07 /sf	24		/sf		/sf		157	215
	Blockouts in Concrete	3150.194	24.00 sf	33.00 /mh	277	2.00 /sf	48		/sf		/sf		325	447
	Oil Suspended Slab Frm	3100.310	336.00 sf	/sf		0.02 /sf	7		/sf		/sf		7	7
	Nails and Hardware	3150.200	336.00 sf	/sf		0.04 /sf	13		/sf		/sf		13	13
	Geo Void Foam under slab	3100.320	1,152.00 cf	33.00 /mh	2,471	6.00 /cf	7,603		/cf		/cf		10,074	11,100
	XYPEX Admix	3310.100	9.00 cy	/cy		90.00 /cy	867		/cy		/cy		867	867
	0308- Headworks Grit Chamber Base Slabs 2ea (10S401)													
	4500 psi Concrete	3310.100	36.00 cy	/cy		198.00 /cy	7,627		/cy		/cy		7,627	7,627

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0308- Headworks Grit Chamber Base Slabs 2ea (10S401)													
	Slab Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	36.00 cy	33.00 /mh	1,907	/cy			/cy		35.00 /cy	1,348	3,255	4,094
	Formwork S.O.G. Edge Form > 1' Circular Slab	3100.120	172.79 sf	33.00 /mh	2,281	2.00 /sf	363		/sf		/sf		2,644	3,647
	Finegrade Below Concrete	3150.650	760.27 sf	33.00 /mh	351	/sf			/sf		/sf		351	506
	Finish- Hard Trowel	3350.110	760.27 sf	33.00 /mh	351	/sf			/sf		/sf		351	506
	Liquid Curing Compounds	3390.170	760.27 sf	33.00 /mh	50	0.06 /sf	46		/sf		/sf		96	118
	Waterstop 6" Flat	3510.610	114.00 lf	33.00 /mh	376	6.00 /lf	718		/lf		/lf		1,094	1,260
	Oil SOG Form	3100.310	172.79 sf	/sf		0.02 /sf	3		/sf		/sf		3	3
	Nails and Hardware	3150.200	172.79 sf	/sf		0.04 /sf	7		/sf		/sf		7	7
	Dimension Lumber	3150.200	172.79 sf	/sf		0.50 /sf	86		/sf		/sf		86	86
	XYPEX Admix	3310.100	36.00 cy	/cy		90.00 /cy	3,467		/cy		/cy		3,467	3,467
	0308- Grit Chamber Grout													
	4500 psi Concrete (non shrink Grout)	3310.100	38.00 cy	/cy		1,620.00 /cy	65,869		/cy		/cy		65,869	65,869
	Pump Place Slab on Grade	3310.230	38.00 cy	33.00 /mh	1,342	/cy			/cy		35.00 /cy	1,423	2,765	3,355
	Formwork S.O.G. Edge Form > 1' Circular Slab	3100.120	109.00 sf	33.00 /mh	1,799	2.00 /sf	229		/sf		/sf		2,027	2,819
	Blockouts in Concrete	3150.194	12.00 sf	33.00 /mh	139	2.00 /sf	24		/sf		/sf		163	224
	CJ Prep Walls	3350.170	300.00 sf	33.00 /mh	990	0.15 /sf	45		/sf		/sf		1,035	1,471
	XYPEX Admix	3310.100	38.00 cy	/cy		90.00 /cy	3,659		/cy		/cy		3,659	3,659
	0309- Grit Chamber Walls 2 ea (10S401)													
	Pump Place Walls	3310.260	108.00 cy	33.00 /mh	3,241	/cy			/cy		35.00 /cy	4,045	7,286	8,712
	4500 psi Concrete	3310.100	108.00 cy	/cy		198.00 /cy	22,881		/cy		/cy		22,881	22,881
	Wall Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Radius Gang Forms 16- >	3100.182	4,976.28 sf	33.00 /mh	27,917	6.00 /sf	31,351		/sf		/sf		59,268	71,551
	CJ Prep Walls	3350.170	132.32 sf	33.00 /mh	109	0.15 /sf	20		/sf		/sf		129	177
	Finish- Top of Wall	3350.110	132.32 sf	33.00 /mh	61	/sf			/sf		/sf		61	88
	Liquid Curing Walls	3390.170	5,108.61 sf	33.00 /mh	169	0.06 /sf	307		/sf		/sf		475	549
	Grind/Patch Walls	3350.130	4,976.28 sf	33.00 /mh	1,971	0.07 /sf	348		/sf		/sf		2,319	3,186
	Blockouts in Concrete	3150.194	64.00 sf	33.00 /mh	739	2.00 /sf	128		/sf		/sf		867	1,192
	Waterstop 6" Flat	3510.610	112.00 lf	33.00 /mh	370	6.00 /lf	706		/lf		/lf		1,075	1,238
	Rub Walls	3350.140	1,792.00 sf	33.00 /mh	2,957	0.25 /sf	448		/sf		/sf		3,405	4,706
	Oil Wall Forms	3100.310	4,976.28 sf	/sf		0.02 /sf	100		/sf		/sf		100	100
	Nails and Hardware	3150.200	4,976.28 sf	/sf		0.04 /sf	199		/sf		/sf		199	199
	Form Ties 14"	3150.632	1,244.07 ea	/ea		2.70 /ea	3,359		/ea		/ea		3,359	3,359
	Dimension Lumber	3150.200	4,976.28 sf	/sf		0.50 /sf	2,488		/sf		/sf		2,488	2,488
	Rebar Formsavers # 5	3210.108	76.00 ea	33.00 /mh	828	28.00 /ea	2,128		/ea		/ea		2,956	3,320
	XYPEX Admix	3310.100	108.00 cy	/cy		90.00 /cy	10,400		/cy		/cy		10,400	10,400
	0310- Headworks Equipment and Electrical Pads													
	Equipment Pad Form 6"	3100.164	84.00 sf	33.00 /mh	970	2.00 /sf	176		/sf		/sf		1,147	1,573
	Equipment Pad Form > 8"	3100.164	152.00 sf	33.00 /mh	1,756	2.00 /sf	319		/sf		/sf		2,075	2,847
	Oil Equipment Pad Form	3100.310	236.00 sf	/sf		0.02 /sf	5		/sf		/sf		5	5
	4500 psi Concrete	3310.100	10.48 cy	/cy		198.00 /cy	2,221		/cy		/cy		2,221	2,221
	Other Placement Count	3310.360	14.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Buggy Place Equipment Pads	3310.300	10.48 cy	33.00 /mh	740	/cy			/cy		/cy		740	1,066
	Liquid Curing Compounds	3390.170	406.00 sf	33.00 /mh	27	0.06 /sf	24		/sf		/sf		51	63
	Finish- Hard Trowel	3350.110	406.00 sf	33.00 /mh	188	/sf			/sf		/sf		188	270
	Chamfer	3150.625	296.00 lf	33.00 /mh	488	0.25 /lf	78		/lf		/lf		566	781
	Misc. Pad Rebar	3210.104	1.05 tn	33.00 /mh	1,385	1,600.00 /tn	1,762		/tn		/tn		3,146	3,756
	Nails and Hardware	3150.200	236.00 sf	/sf		0.04 /sf	9		/sf		/sf		9	9
	Drill and Epoxy #4	3210.101	348.00 ea	33.00 /mh	2,871	5.00 /ea	1,827		/ea		/ea		4,698	5,961
	0330 4- Pipe Encasement Grit Bypass													
	Other Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Formwork Pipe Encasement	3100.108	176.00 sf	33.00 /mh	1,452	2.00 /sf	370		/sf		/sf		1,822	2,460
	Place Pipe Encasement	3310.195	9.00 cy	33.00 /mh	318	175.00 /cy	1,685		/cy		/cy		2,003	2,143
	Nails and Hardware	3150.200	176.00 sf	/sf		0.04 /sf	7		/sf		/sf		7	7
	Form Ties Specialty	3150.632	11.00 ea	33.00 /mh	73	5.00 /ea	55		/ea		/ea		128	160
	Dimension Lumber	3150.200	176.00 sf	/sf		0.50 /sf	88		/sf		/sf		88	88
	Oil SOG Form	3100.310	176.00 sf	/sf		0.02 /sf	4		/sf		/sf		4	4
	Finish- Rough	3350.110	72.00 sf	33.00 /mh	21	0.01 /sf	0		/sf		/sf		22	31
	Liquid Curing Compounds	3390.170	72.00 sf	33.00 /mh	5	0.06 /sf	4		/sf		/sf		9	11
	Pipe Tie Downs (Large)	3150.200	4.00 ea	33.00 /mh	660	200.00 /ea	800		/ea		/ea		1,460	1,750
	Rebar Supply	3200.980	1.13 tn	/tn		1,600.00 /tn	1,800		/tn		/tn		1,800	1,800
	Rebar Install Self	3200.980	1.13 tn	33.00 /mh	1,114	/tn			/tn		/tn		1,114	1,604
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	0330 4- Pipe Encasement Grit Influent 2ea													
	Formwork Pipe Encasement	3100.108	231.00 sf	33.00 /mh	1,906	2.00 /sf	485		/sf		/sf		2,391	3,229
	Place Pipe Encasement	3310.195	16.00 cy	33.00 /mh	565	175.00 /cy	2,996		/cy		/cy		3,561	3,810
	Nails and Hardware	3150.200	231.00 sf	/sf		0.04 /sf	9		/sf		/sf		9	9
	Form Ties Specialty	3150.632	18.00 ea	33.00 /mh	119	5.00 /ea	90		/ea		/ea		209	261
	Pipe Tie Downs (Medium)	3150.200	6.00 ea	33.00 /mh	990	150.00 /ea	900		/ea		/ea		1,890	2,326
	Dimension Lumber	3150.200	231.00 sf	/sf		0.50 /sf	116		/sf		/sf		116	116
	Oil SOG Form	3100.310	231.00 sf	/sf		0.02 /sf	5		/sf		/sf		5	5
	Finish- Rough	3350.110	91.00 sf	33.00 /mh	27	0.01 /sf	1		/sf		/sf		28	39
	Liquid Curing Compounds	3390.170	91.00 sf	33.00 /mh	6	0.06 /sf	5		/sf		/sf		11	14
	Rebar Install Self	3200.980	1.60 tn	33.00 /mh	1,584	/tn			/tn		/tn		1,584	2,281
	Rebar Supply	3200.980	1.60 tn	/tn		1,600.00 /tn	2,560		/tn		/tn		2,560	2,560
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	Form Rectangle Columns	3100.110	120.00 sf	33.00 /mh	1,386	2.00 /sf	252		/sf		/sf		1,638	2,248
	0330 4- Headworks Effluent Pipe into Channel 2 ea													
	Formwork Pipe Encasement	3100.108	300.00 sf	33.00 /mh	2,475	2.00 /sf	630		/sf		/sf		3,105	4,110
	Place Pipe Encasement	3310.195	14.88 cy	33.00 /mh	525	175.00 /cy	2,787		/cy		/cy		3,312	3,810
	Nails and Hardware	3150.200	300.00 sf	/sf		0.04 /sf	12		/sf		/sf		12	12

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0330 4- Headworks Effluent Pipe into Channel 2 ea													
	Form Ties Specialty	3150.632	14.00 ea	33.00 /mh	92	5.00 /ea	70		/ea		/ea		162	203
	Pipe Tie Downs (Large)	3150.200	8.00 ea	33.00 /mh	1,320	200.00 /ea	1,600		/ea		/ea		2,920	3,501
	Dimension Lumber	3150.200	300.00 sf	/sf		0.50 /sf	150		/sf		/sf		150	150
	Oil SOG Form	3100.310	300.00 sf	/sf		0.02 /sf	6		/sf		/sf		6	6
	Finish- Rough	3350.110	100.00 sf	33.00 /mh	30	0.01 /sf	1		/sf		/sf		30	43
	Liquid Curing Compounds	3390.170	100.00 sf	33.00 /mh	7	0.06 /sf	6		/sf		/sf		13	16
	Rebar Supply	3200.980	1.48 tn	/tn		1,600.00 /tn	2,368		/tn		/tn		2,368	2,368
	Rebar Install Self	3200.980	1.48 tn	33.00 /mh	1,465	/tn			/tn		/tn		1,465	2,110
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	0330 4- Pipe Encasement Grit Pump Influent Line Chamber 1													
	Formwork Pipe Encasement	3100.108	212.50 sf	33.00 /mh	1,753	2.00 /sf	446		/sf		/sf		2,199	2,971
	Place Pipe Encasement	3310.195	14.00 cy	33.00 /mh	494	175.00 /cy	2,622		/cy		/cy		3,116	3,333
	Nails and Hardware	3150.200	212.50 sf	/sf		0.04 /sf	9		/sf		/sf		9	9
	Form Ties Specialty	3150.632	22.00 ea	33.00 /mh	145	5.00 /ea	110		/ea		/ea		255	319
	Pipe Tie Downs (Small)	3150.200	11.00 ea	33.00 /mh	1,452	100.00 /ea	1,100		/ea		/ea		2,552	3,191
	Dimension Lumber	3150.200	212.50 sf	/sf		0.50 /sf	106		/sf		/sf		106	106
	Oil SOG Form	3100.310	212.50 sf	/sf		0.02 /sf	4		/sf		/sf		4	4
	Finish- Rough	3350.110	100.00 sf	33.00 /mh	30	0.01 /sf	1		/sf		/sf		30	43
	Liquid Curing Compounds	3390.170	100.00 sf	33.00 /mh	7	0.06 /sf	6		/sf		/sf		13	16
	Rebar Install Self	3200.980	1.40 tn	33.00 /mh	1,386	/tn			/tn		/tn		1,386	1,996
	Rebar Supply	3200.980	1.40 tn	/tn		1,600.00 /tn	2,240		/tn		/tn		2,240	2,240
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	Form Rectangle Columns	3100.110	120.00 sf	33.00 /mh	1,386	2.00 /sf	252		/sf		/sf		1,638	2,248
	0330 4- Pipe Encasement Grit Pump Influent Future Chamber													
	Formwork Pipe Encasement	3100.108	262.50 sf	33.00 /mh	2,166	2.00 /sf	551		/sf		/sf		2,717	3,670
	Place Pipe Encasement	3310.195	16.00 cy	33.00 /mh	565	175.00 /cy	2,996		/cy		/cy		3,561	3,810
	Nails and Hardware	3150.200	262.50 sf	/sf		0.04 /sf	11		/sf		/sf		11	11
	Form Ties Specialty	3150.632	27.00 ea	33.00 /mh	178	5.00 /ea	135		/ea		/ea		313	392
	Pipe Tie Downs (Small)	3150.200	14.00 ea	33.00 /mh	1,848	100.00 /ea	1,400		/ea		/ea		3,248	4,061
	Dimension Lumber	3150.200	262.50 sf	/sf		0.50 /sf	131		/sf		/sf		131	131
	Oil SOG Form	3100.310	262.50 sf	/sf		0.02 /sf	5		/sf		/sf		5	5
	Finish- Rough	3350.110	125.00 sf	33.00 /mh	37	0.01 /sf	1		/sf		/sf		38	54
	Liquid Curing Compounds	3390.170	125.00 sf	33.00 /mh	8	0.06 /sf	8		/sf		/sf		16	19
	Rebar Supply	3200.980	1.60 tn	/tn		1,600.00 /tn	2,560		/tn		/tn		2,560	2,560
	Rebar Install Self	3200.980	1.60 tn	33.00 /mh	1,584	/tn			/tn		/tn		1,584	2,281
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	Form Rectangle Columns	3100.110	120.00 sf	33.00 /mh	1,386	2.00 /sf	252		/sf		/sf		1,638	2,248
	0330 4- Grit Clasifier Drain Pipe Encasement													
	Formwork Pipe Encasement	3100.108	246.00 sf	33.00 /mh	2,030	2.00 /sf	517		/sf		/sf		2,546	3,439
	Place Pipe Encasement	3310.195	11.56 cy	33.00 /mh	408	175.00 /cy	2,165		/cy		/cy		2,573	2,753
	Nails and Hardware	3150.200	246.00 sf	/sf		0.04 /sf	10		/sf		/sf		10	10
	Form Ties Specialty	3150.632	21.00 ea	33.00 /mh	139	5.00 /ea	105		/ea		/ea		244	305
	Pipe Tie Downs (Small)	3150.200	11.00 ea	33.00 /mh	1,452	100.00 /ea	1,100		/ea		/ea		2,552	3,191
	Dimension Lumber	3150.200	246.00 sf	/sf		0.50 /sf	123		/sf		/sf		123	123
	Oil SOG Form	3100.310	246.00 sf	/sf		0.02 /sf	5		/sf		/sf		5	5
	Finish- Rough	3350.110	114.00 sf	33.00 /mh	34	0.01 /sf	1		/sf		/sf		35	49
	Liquid Curing Compounds	3390.170	114.00 sf	33.00 /mh	8	0.06 /sf	7		/sf		/sf		14	18
	Rebar Supply	3200.980	1.20 tn	/tn		1,600.00 /tn	1,920		/tn		/tn		1,920	1,920
	Rebar Install Self	3200.980	1.20 tn	33.00 /mh	1,188	/tn			/tn		/tn		1,188	1,711
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	0330 4- Headworks Channel Influent Pipe Encase													
	Formwork Pipe Encasement	3100.108	490.50 sf	33.00 /mh	4,047	2.00 /sf	1,030		/sf		/sf		5,077	6,857
	Place Pipe Encasement	3310.195	28.41 cy	33.00 /mh	1,003	175.00 /cy	5,320		/cy		/cy		6,323	6,764
	Nails and Hardware	3150.200	490.50 sf	/sf		0.04 /sf	20		/sf		/sf		20	20
	Form Ties Specialty	3150.632	27.00 ea	33.00 /mh	178	5.00 /ea	135		/ea		/ea		313	392
	Pipe Tie Downs (Large)	3150.200	10.00 ea	33.00 /mh	1,650	200.00 /ea	2,000		/ea		/ea		3,650	4,376
	Dimension Lumber	3150.200	490.50 sf	/sf		0.50 /sf	245		/sf		/sf		245	245
	Oil SOG Form	3100.310	490.50 sf	/sf		0.02 /sf	10		/sf		/sf		10	10
	Finish- Rough	3350.110	225.00 sf	33.00 /mh	67	0.01 /sf	1		/sf		/sf		68	98
	Liquid Curing Compounds	3390.170	225.00 sf	33.00 /mh	15	0.06 /sf	14		/sf		/sf		28	35
	Rebar Supply	3200.980	2.80 tn	/tn		1,600.00 /tn	4,480		/tn		/tn		4,480	4,480
	Rebar Install Self	3200.980	2.80 tn	33.00 /mh	2,772	/tn			/tn		/tn		2,772	3,992
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.50 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,900	1,800.00 /Mnth	900	2,800	2,800
	0330 4- Water line, NPW line and PE intake tube Encasement (10M403)													
	Formwork Pipe Encasement	3100.108	250.00 sf	33.00 /mh	2,063	2.00 /sf	525		/sf		/sf		2,588	3,495
	Place Pipe Encasement	3310.195	9.19 cy	33.00 /mh	324	175.00 /cy	1,720		/cy		/cy		2,045	2,187
	Nails and Hardware	3150.200	250.00 sf	/sf		0.04 /sf	10		/sf		/sf		10	10
	Form Ties Specialty	3150.632	28.00 ea	33.00 /mh	185	5.00 /ea	140		/ea		/ea		325	406
	Pipe Tie Downs (Small)	3150.200	16.00 ea	33.00 /mh	2,112	100.00 /ea	1,600		/ea		/ea		3,712	4,641
	Dimension Lumber	3150.200	250.00 sf	/sf		0.50 /sf	125		/sf		/sf		125	125
	Oil SOG Form	3100.310	250.00 sf	/sf		0.02 /sf	5		/sf		/sf		5	5
	Finish- Rough	3350.110	100.00 sf	33.00 /mh	30	0.01 /sf	1		/sf		/sf		30	43
	Liquid Curing Compounds	3390.170	100.00 sf	33.00 /mh	7	0.06 /sf	6		/sf		/sf		13	15
	Rebar Supply	3200.980	0.90 tn	/tn		1,600.00 /tn	1,440		/tn		/tn		1,440	1,440
	Rebar Install Self	3200.980	0.90 tn	33.00 /mh	891	/tn			/tn		/tn		891	1,283
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.20 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	760	1,800.00 /Mnth	360	1,120	1,120
	Form Rectangle Columns	3100.110	150.00 sf	33.00 /mh	1,733	2.00 /sf	315		/sf		/sf		2,048	2,810
	0330 4- In Plant Lift Station Pipe Encasement Under Headworks (10M401)													
	Formwork Pipe Encasement	3100.108	108.00 sf	33.00 /mh	891	2.00 /sf	227		/sf		/sf		1,118	1,440
	Place Pipe Encasement	3310.195	9.00 cy	33.00 /mh	318	175.00 /cy	1,685		/cy		/cy		2,003	2,440
	Nails and Hardware	3150.200	108.00 sf	/sf		0.04 /sf	4		/sf		/sf		4	4

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0330 4- In Plant Lift Station Pipe Encasement Under Headworks (10M401)													
	Form Ties Specialty	3150.632	10.00 ea	33.00 /mh	66	5.00 /ea	50		/ea		/ea		116	145
	Pipe Tie Downs (Small)	3150.200	5.00 ea	33.00 /mh	660	100.00 /ea	500		/ea		/ea		1,160	1,450
	Dimension Lumber	3150.200	108.00 sf	/sf		0.50 /sf	54		/sf		/sf		54	54
	Oil SOG Form	3100.310	108.00 sf	/sf		0.02 /sf	2		/sf		/sf		2	2
	Finish- Rough	3350.110	45.00 sf	33.00 /mh	13	0.01 /sf	0		/sf		/sf		14	20
	Liquid Curing Compounds	3390.170	45.00 sf	33.00 /mh	3	0.06 /sf	3		/sf		/sf		6	7
	Rebar Supply	3200.980	0.90 tn	/tn		1,600.00 /tn	1,440		/tn		/tn		1,440	1,440
	Rebar Install Self	3200.980	0.90 tn	33.00 /mh	891	/tn			/tn		/tn		891	1,283
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	Form Rectangle Columns	3100.110	120.00 sf	33.00 /mh	1,386	2.00 /sf	252		/sf		/sf		1,638	2,248
	11 EQB EQ Basin													
	Concrete Concrete													
	019-100 Water Test EQ Basin													
	Water Test Basins	3995.200	1.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	Pumps and Hoses	3995.200	1.00 ls	/ls		1,500.00 /ls	1,500		/ls		/ls		1,500	1,500
	Temporary Bulkheads	3995.200	3.00 ls	33.00 /mh	396	250.00 /ls	750		/ls		/ls		1,146	1,320
	Urethane Injection System	3995.200	1.00 ls	33.00 /mh	7,920	3,500.00 /ls	3,500		1,000.00 /ls	1,000	/ls		12,420	15,905
	0302- EQ Basin Slab (7 ea Pours)													
	4500 psi Concrete	3310.100	365.00 cy	/cy		198.00 /cy	77,329		/cy		/cy		77,329	77,329
	Slab Placement Count	3310.360	7.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	365.00 cy	33.00 /mh	10,955	/cy			/cy		35.00 /cy	13,669	24,624	29,444
	Formwork S.O.G. Edge Form > 1'	3100.120	446.00 sf	33.00 /mh	5,151	2.00 /sf	937		/sf		/sf		6,088	8,354
	Formwork S.O.G. Const Joints > 1'	3100.120	908.00 sf	33.00 /mh	13,783	2.00 /sf	1,907		/sf		/sf		15,690	21,755
	CJ Prep Slab	3350.170	908.00 sf	33.00 /mh	749	0.15 /sf	136		/sf		/sf		885	1,215
	Finegrade Below Concrete	3150.650	6,018.74 sf	33.00 /mh	3,972	/sf			/sf		/sf		3,972	5,720
	Finish- Hard Trowel	3350.110	6,018.74 sf	33.00 /mh	2,781	/sf			/sf		/sf		2,781	4,004
	Blockouts in Concrete	3150.194	96.00 sf	33.00 /mh	1,109	2.00 /sf	192		/sf		/sf		1,301	1,789
	Waterstop 6" Flat	3510.610	774.00 lf	33.00 /mh	2,554	6.00 /lf	4,876		/lf		/lf		7,430	8,554
	Keyway 4"	3150.620	427.00 lf	33.00 /mh	2,818	1.00 /lf	448		/lf		/lf		3,267	4,507
	Oil SOG Form	3100.310	1,496.98 sf	/sf		0.02 /sf	30		/sf		/sf		30	30
	Nails and Hardware	3150.200	801.32 sf	/sf		0.04 /sf	32		/sf		/sf		32	32
	Dimension Lumber	3150.200	801.32 sf	/sf		0.50 /sf	401		/sf		/sf		401	401
	Waterstop Fitting - Flat Cross	3510.610	8.00 ea	33.00 /mh	264	102.00 /ea	816		/ea		/ea		1,080	1,196
	Waterstop Fitting - Vertical Tee	3510.610	24.00 ea	33.00 /mh	792	71.00 /ea	1,704		/ea		/ea		2,496	2,844
	Waterstop Fitting - Flat L	3510.610	4.00 ea	33.00 /mh	132	49.00 /ea	196		/ea		/ea		328	386
	Xypex Admixture	3310.100	391.00 cy	/cy		90.00 /cy	37,653		/cy		/cy		37,653	37,653
	0302- Middle Slab Under EQ Basin Trench													
	4500 psi Concrete	3310.100	14.26 cy	/cy		198.00 /cy	3,021		/cy		/cy		3,021	3,021
	Pump Place Slab on Grade	3310.230	14.26 cy	33.00 /mh	503	/cy			/cy		35.00 /cy	534	1,037	1,259
	Formwork S.O.G. Edge Form < 1'	3100.120	124.00 sf	33.00 /mh	1,432	2.00 /sf	260		/sf		/sf		1,693	2,323
	Formwork S.O.G. Const Joints < 1'	3100.120	7.00 sf	33.00 /mh	106	2.00 /sf	15		/sf		/sf		121	168
	CJ Prep Slab	3350.170	7.00 sf	33.00 /mh	6	0.15 /sf	1		/sf		/sf		7	9
	Finegrade Below Concrete	3150.650	385.00 sf	33.00 /mh	254	/sf			/sf		/sf		254	366
	Finish- Hard Trowel	3350.110	385.00 sf	33.00 /mh	178	/sf			/sf		/sf		178	256
	Liquid Curing Compounds	3390.170	385.00 sf	33.00 /mh	25	0.06 /sf	23		/sf		/sf		49	60
	Waterstop 6" Flat	3510.610	131.00 lf	33.00 /mh	432	6.00 /lf	825		/lf		/lf		1,258	1,448
	Oil SOG Form	3100.310	131.00 sf	/sf		0.02 /sf	3		/sf		/sf		3	3
	Nails and Hardware	3150.200	124.00 sf	/sf		0.04 /sf	5		/sf		/sf		5	5
	Dimension Lumber	3150.200	124.00 sf	/sf		0.50 /sf	62		/sf		/sf		62	62
	Xypex Admix	3310.100	14.26 cy	/cy		90.00 /cy	1,373		/cy		/cy		1,373	1,373
	0302- EQ Basin Stair Foundation Beams (3ea stairs)													
	4500 psi Concrete	3310.100	10.00 cy	/cy		198.00 /cy	2,119		/cy		/cy		2,119	2,119
	Pump Place Slab on Grade	3310.230	10.00 cy	33.00 /mh	1,059	/cy			/cy		35.00 /cy	375	1,434	1,900
	Formwork S.O.G. Edge Form > 1'	3100.120	378.00 sf	33.00 /mh	6,237	2.00 /sf	794		/sf		/sf		7,031	9,775
	Finegrade Below Concrete	3150.650	90.00 sf	33.00 /mh	42	/sf			/sf		/sf		42	60
	Finish- Hard Trowel	3350.110	90.00 sf	33.00 /mh	42	/sf			/sf		/sf		42	60
	Liquid Curing Compounds	3390.170	90.00 sf	33.00 /mh	6	0.06 /sf	5		/sf		/sf		11	14
	Oil SOG Form	3100.310	378.00 sf	/sf		0.02 /sf	8		/sf		/sf		8	8
	Nails and Hardware	3150.200	378.00 sf	/sf		0.04 /sf	15		/sf		/sf		15	15
	Dimension Lumber	3150.200	378.00 sf	/sf		0.50 /sf	189		/sf		/sf		189	189
	0302- EQ Basin Stair Sidewalks (3ea 6'X6')													
	4500 psi Concrete	3310.100	2.68 cy	/cy		198.00 /cy	568		/cy		/cy		568	568
	Truck Place Slab on Grade	3310.230	2.68 cy	33.00 /mh	189	/cy			/cy		/cy		189	273
	Formwork S.O.G. Edge Form < 1'	3100.120	48.24 sf	33.00 /mh	557	2.00 /sf	101		/sf		/sf		658	904
	Finegrade Below Concrete	3150.650	108.00 sf	33.00 /mh	50	/sf			/sf		/sf		50	72
	Finish- Hard Trowel	3350.110	108.00 sf	33.00 /mh	50	/sf			/sf		/sf		50	72
	Liquid Curing Compounds	3390.170	108.00 sf	33.00 /mh	7	0.06 /sf	6		/sf		/sf		14	17
	Expansion Joint	3150.720	12.06 sf	33.00 /mh	40	12.00 /sf	152		/sf		/sf		192	209
	Expansion Joint Sealant	3150.720	18.00 lf	33.00 /mh	59	2.00 /lf	38		/lf		/lf		97	123
	Oil SOG Form	3100.310	48.24 sf	/sf		0.02 /sf	1		/sf		/sf		1	1
	Nails and Hardware	3150.200	48.24 sf	/sf		0.04 /sf	2		/sf		/sf		2	2
	Dimension Lumber	3150.200	48.24 sf	/sf		0.50 /sf	24		/sf		/sf		24	24
	SOG Rebar	3210.104	0.27 tn	33.00 /mh	354	1,600.00 /tn	450		/tn		/tn		803	959
	0302-B Grout Topping EQ Basin													
	Grout Topping 3/8" Mix	3310.100	44.72 cy	/cy		198.00 /cy	9,475		/cy		/cy		9,475	9,475
	Pump Place Slab on Grade	3310.230	44.72 cy	33.00 /mh	3,158	/cy			/cy		35.00 /cy	1,675	4,833	6,223
	Formwork S.O.G. Edge Form < 1'	3100.120	263.00 sf	33.00 /mh	3,038	2.00 /sf	552		/sf		/sf		3,590	4,927
	Finish- Hard Trowel	3350.110	2,355.00 sf	33.00 /mh	1,088	/sf			/sf		/sf		1,088	1,567
	Water Cure	3390.170	2,355.00 sf	33.00 /mh	155	0.10 /sf	236		/sf		/sf		391	497
	Oil SOG Form	3100.310	263.00 sf	/sf		0.02 /sf	5		/sf		/sf		5	5
	Nails and Hardware	3150.200	263.00 sf	/sf		0.04 /sf	11		/sf		/sf		11	11

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0302-B Grout Topping EQ Basin													
	Dimension Lumber	3150.200	263.00 sf	/sf		0.50 /sf	132		/sf		/sf		132	132
	CJ Prep Slab	3350.170	2,355.00 sf	33.00 /mh	1,943	0.15 /sf	353		/sf		/sf		2,296	3,151
	Xypex Admix	3310.100	44.72 cy	/cy		90.00 /cy	4,307		/cy		/cy		4,307	4,307
	0303- EQ Basin Walls													
	Pump Place Walls	3310.260	490.67 cy	33.00 /mh	14,727	/cy			/cy		35.00 /cy	18,375	33,102	39,582
	4500 psi Concrete	3310.100	490.67 cy	/cy		198.00 /cy	103,953		/cy		/cy		103,953	103,953
	Wall Placement Count	3310.360	8.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Gang Form System 16'->	3100.180	13,248.00 sf	33.00 /mh	56,834	2.75 /sf	38,254		/sf		/sf		95,088	120,094
	Wall Bulkhead Forms	3150.192	528.00 sf	33.00 /mh	8,015	2.00 /sf	1,109		/sf		/sf		9,124	12,650
	CJ Prep Walls	3350.170	1,080.00 sf	33.00 /mh	891	0.15 /sf	162		/sf		/sf		1,053	1,445
	Finish- Top of Wall	3350.110	552.00 sf	33.00 /mh	255	/sf			/sf		/sf		255	367
	Liquid Curing Walls	3390.170	13,800.00 sf	33.00 /mh	455	0.06 /sf	828		/sf		/sf		1,283	1,484
	Grind/Patch Walls	3350.130	13,248.00 sf	33.00 /mh	5,246	0.07 /sf	927		/sf		/sf		6,174	8,482
	Blockouts in Concrete	3150.194	192.00 sf	33.00 /mh	2,218	2.00 /sf	384		/sf		/sf		2,602	3,577
	Waterstop 6" Flat	3510.610	264.00 lf	33.00 /mh	871	6.00 /lf	1,663		/lf		/lf		2,534	2,918
	Chamfer 3/4"	3150.625	552.00 lf	33.00 /mh	911	0.25 /lf	145		/lf		/lf		1,056	1,456
	Rub Walls	3350.140	5,520.00 sf	33.00 /mh	9,108	0.25 /sf	1,380		/sf		/sf		10,488	14,496
	Oil Wall Forms	3100.310	13,248.00 sf	/sf		0.02 /sf	265		/sf		/sf		265	265
	Nails and Hardware	3150.200	13,248.00 sf	/sf		0.04 /sf	530		/sf		/sf		530	530
	Form Ties 24"	3150.632	3,312.00 ea	/ea		3.10 /ea	10,267		/ea		/ea		10,267	10,267
	Dimension Lumber	3150.200	13,248.00 sf	/sf		0.50 /sf	6,624		/sf		/sf		6,624	6,624
	Rebar Templates	3200.980	276.00 lf	33.00 /mh	455	0.50 /lf	138		/lf		/lf		593	794
	Wall Forms bottom of wall slope for gangs	3100.181	542.00 sf	33.00 /mh	8,943	2.00 /sf	1,138		/sf		/sf		10,081	14,016
	XYPEX Amix	3310.100	490.67 cy	/cy		90.00 /cy	47,251		/cy		/cy		47,251	47,251
	20 PBS Process Basin													
	Concrete Concrete													
	019-100 Water Process Basin													
	Water Test Basins	3995.200	3.00 ea	33.00 /mh	3,168	/ea			/ea		/ea		3,168	4,562
	Pumps	3995.200	3.00 ea	/ea		1,000.00 /ea	3,000		/ea		/ea		3,000	3,000
	Temporary Bulkheads	3995.200	12.00 ls	33.00 /mh	1,584	250.00 /ls	3,000		/ls		/ls		4,584	5,281
	Urethane Injection System	3995.200	3.00 ea	33.00 /mh	24,750	3,500.00 /ea	10,500		1,000.00 /ea	3,000	/ea		38,250	49,140
	0302- Process Basin Base Slab													
	4500 psi Concrete	3310.100	1,319.00 cy	/cy		198.00 /cy	279,443		/cy		/cy		279,443	279,443
	Slab Placement Count	3310.360	12.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	1,319.00 cy	33.00 /mh	37,259	/cy			/cy		35.00 /cy	49,397	86,656	103,050
	Formwork S.O.G. Edge Form > 1'	3100.120	1,020.00 sf	33.00 /mh	11,781	2.00 /sf	2,142		/sf		/sf		13,923	19,107
	Formwork S.O.G. Const Joints > 1'	3100.120	1,574.00 sf	33.00 /mh	23,893	2.00 /sf	3,305		/sf		/sf		27,199	37,712
	CJ Prep Slab	3350.170	1,574.00 sf	33.00 /mh	1,299	0.15 /sf	236		/sf		/sf		1,535	2,106
	Finegrade Below Concrete	3150.650	19,541.72 sf	33.00 /mh	12,898	/sf			/sf		/sf		12,898	18,572
	Finish- Hard Trowel	3350.110	19,541.72 sf	33.00 /mh	9,028	/sf			/sf		/sf		9,028	13,001
	Liquid Curing Compounds	3390.170	19,541.72 sf	33.00 /mh	1,290	0.06 /sf	1,173		/sf		/sf		2,462	3,030
	Waterstop 6" Flat	3510.610	1,847.00 lf	33.00 /mh	6,095	6.00 /lf	11,636		/lf		/lf		17,731	20,413
	Keyway 4"	3150.620	1,160.00 lf	33.00 /mh	7,656	1.00 /lf	1,218		/lf		/lf		8,874	12,243
	Oil SOG Form	3100.310	2,514.68 sf	/sf		0.02 /sf	50		/sf		/sf		50	50
	Nails and Hardware	3150.200	1,140.68 sf	/sf		0.04 /sf	46		/sf		/sf		46	46
	Dimension Lumber	3150.200	1,140.68 sf	/sf		0.50 /sf	570		/sf		/sf		570	570
	Waterstop Fitting - Flat Tee	3510.610	58.00 ea	33.00 /mh	1,914	71.00 /ea	4,118		/ea		/ea		6,032	6,874
	Waterstop Fitting - Vertical Tee	3510.610	8.00 ea	33.00 /mh	264	71.00 /ea	568		/ea		/ea		832	948
	Waterstop Fitting - Flat Cross	3510.610	8.00 ea	33.00 /mh	264	102.00 /ea	816		/ea		/ea		1,080	1,196
	Waterstop Fitting - Vertical Cross	3510.610	6.00 ea	33.00 /mh	198	102.00 /ea	612		/ea		/ea		810	897
	Waterstop Fitting - Flat L	3510.610	4.00 ea	33.00 /mh	132	49.00 /ea	196		/ea		/ea		328	386
	XYPEX Admix	3310.100	1,293.00 cy	/cy		90.00 /cy	124,516		/cy		/cy		124,516	124,516
	0302- Process Basin Influent Box Base Slab													
	4500 psi Concrete	3310.100	34.44 cy	/cy		198.00 /cy	7,297		/cy		/cy		7,297	7,297
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	34.44 cy	33.00 /mh	1,459	/cy			/cy		35.00 /cy	1,290	2,749	3,392
	Formwork S.O.G. Edge Form > 1'	3100.120	151.90 sf	33.00 /mh	1,754	2.00 /sf	319		/sf		/sf		2,073	2,845
	Finegrade Below Concrete	3150.650	600.00 sf	33.00 /mh	277	/sf			/sf		/sf		277	399
	Finish- Hard Trowel	3350.110	600.00 sf	33.00 /mh	277	/sf			/sf		/sf		277	399
	Liquid Curing Compounds	3390.170	600.00 sf	33.00 /mh	40	0.06 /sf	36		/sf		/sf		76	93
	Waterstop 6" Flat	3510.610	175.00 lf	33.00 /mh	578	6.00 /lf	1,103		/lf		/lf		1,680	1,934
	Oil SOG Form	3100.310	151.90 sf	/sf		0.02 /sf	3		/sf		/sf		3	3
	Nails and Hardware	3150.200	151.90 sf	/sf		0.04 /sf	6		/sf		/sf		6	6
	Dimension Lumber	3150.200	151.90 sf	/sf		0.50 /sf	76		/sf		/sf		76	76
	Waterstop Fitting - Vertical Cross	3510.610	4.00 ea	33.00 /mh	132	102.00 /ea	408		/ea		/ea		540	598
	Waterstop Fitting - Flat Tee	3510.610	6.00 ea	33.00 /mh	198	71.00 /ea	426		/ea		/ea		624	711
	Waterstop Fitting - Vertical Tee	3510.610	6.00 ea	33.00 /mh	198	71.00 /ea	426		/ea		/ea		624	711
	Waterstop Fitting - Flat L	3510.610	4.00 ea	33.00 /mh	132	49.00 /ea	196		/ea		/ea		328	386
	XYPEX Admix	3310.100	34.44 cy	/cy		90.00 /cy	3,317		/cy		/cy		3,317	3,317
	0302- Process Building Effluent Box Slab													
	4500 psi Concrete	3310.100	29.04 cy	/cy		198.00 /cy	6,152		/cy		/cy		6,152	6,152
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	29.04 cy	33.00 /mh	1,230	/cy			/cy		35.00 /cy	1,087	2,318	2,859
	Formwork S.O.G. Edge Form > 1'	3100.120	248.50 sf	33.00 /mh	2,870	2.00 /sf	522		/sf		/sf		3,392	4,655
	Formwork S.O.G. Const Joints > 1'	3100.120	12.25 sf	33.00 /mh	186	2.00 /sf	26		/sf		/sf		212	294
	CJ Prep Slab	3350.170	12.25 sf	33.00 /mh	10	0.15 /sf	2		/sf		/sf		12	16
	Finegrade Below Concrete	3150.650	448.00 sf	33.00 /mh	207	/sf			/sf		/sf		207	298
	Finish- Hard Trowel	3350.110	448.00 sf	33.00 /mh	207	/sf			/sf		/sf		207	298
	Liquid Curing Compounds	3390.170	448.00 sf	33.00 /mh	30	0.06 /sf	27		/sf		/sf		56	73
	Blockouts in Concrete	3150.194	16.00 sf	33.00 /mh	185	2.00 /sf	32		/sf		/sf		217	249
	Waterstop 6" Flat	3510.610	87.00 lf	33.00 /mh	287	6.00 /lf	548		/lf		/lf		835	983

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0302- Process Building Effluent Box Slab													
	Keyway 4"	3150.620	7.00 lf	33.00 /mh	46	1.00 /lf	7		/lf		/lf		54	74
	Oil SOG Form	3100.310	260.75 sf	/sf		0.02 /sf	5		/sf		/sf		5	5
	Nails and Hardware	3150.200	248.50 sf	/sf		0.04 /sf	10		/sf		/sf		10	10
	Dimension Lumber	3150.200	248.50 sf	/sf		0.50 /sf	124		/sf		/sf		124	124
	Waterstop Fitting - Vertical Tee	3510.610	2.00 ea	33.00 /mh	66	71.00 /ea	142		/ea		/ea		208	237
	Waterstop Fitting - Flat L	3510.610	2.00 ea	33.00 /mh	66	49.00 /ea	98		/ea		/ea		164	193
	XYPEX Admix	3310.100	29.04 cy	/cy		90.00 /cy	2,796		/cy		/cy		2,796	2,796
	0302- Process Basin Stair Foundations 6ea stairs (20S206)													
	4500 psi Concrete	3310.100	14.44 cy	/cy		198.00 /cy	3,060		/cy		/cy		3,060	3,060
	Slab Placement Count	3310.360	13.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	14.44 cy	33.00 /mh	1,530	/cy			/cy		35.00 /cy	541	2,071	2,744
	Formwork S.O.G. Edge Form > 1'	3100.120	546.00 sf	33.00 /mh	9,009	2.00 /sf	1,147		/sf		/sf		10,156	14,120
	Finegrade Below Concrete	3150.650	130.00 sf	33.00 /mh	60	/sf			/sf		/sf		60	86
	Finish- Hard Trowel	3350.110	130.00 sf	33.00 /mh	60	/sf			/sf		/sf		60	87
	Liquid Curing Compounds	3390.170	130.00 sf	33.00 /mh	9	0.06 /sf	8		/sf		/sf		16	20
	Chamfer 3/4"	3150.625	182.00 lf	33.00 /mh	300	0.25 /lf	48		/lf		/lf		348	480
	Road Base Below Concrete	2305.300	4.82 cy	33.00 /mh	318	25.00 /ton	238		/cy		/cy		556	696
	Oil SOG Form	3100.310	546.00 sf	/sf		0.02 /sf	11		/sf		/sf		11	11
	Nails and Hardware	3150.200	546.00 sf	/sf		0.04 /sf	22		/sf		/sf		22	22
	Dimension Lumber	3150.200	546.00 sf	/sf		0.50 /sf	273		/sf		/sf		273	273
	0302- Process Basin Concrete landing below stairs 6ea 6'X6' pads													
	4500 psi Concrete	3310.100	6.00 cy	/cy		198.00 /cy	1,271		/cy		/cy		1,271	1,271
	Slab Placement Count	3310.360	6.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Truck Place Slab on Grade	3310.230	6.00 cy	33.00 /mh	424	/cy			/cy		/cy		424	610
	Formwork S.O.G. Edge Form < 1'	3100.120	96.48 sf	33.00 /mh	1,114	2.00 /sf	203		/sf		/sf		1,317	1,807
	Finegrade Below Concrete	3150.650	216.00 sf	33.00 /mh	100	/sf			/sf		/sf		100	144
	Finish- Hard Trowel	3350.110	216.00 sf	33.00 /mh	100	/sf			/sf		/sf		100	144
	Liquid Curing Compounds	3390.170	216.00 sf	33.00 /mh	14	0.06 /sf	13		/sf		/sf		27	33
	Road Base Below Concrete	2305.300	8.00 cy	33.00 /mh	264	25.00 /ton	396		/cy		/cy		660	776
	Oil SOG Form	3100.310	96.48 sf	/sf		0.02 /sf	2		/sf		/sf		2	2
	Nails and Hardware	3150.200	96.48 sf	/sf		0.04 /sf	4		/sf		/sf		4	4
	Dimension Lumber	3150.200	96.48 sf	/sf		0.50 /sf	48		/sf		/sf		48	48
	Rebar Supply	3200.980	0.60 tn	/tn		1,600.00 /tn	960		/tn		/tn		960	960
	Rebar Install Self	3200.980	0.60 tn	33.00 /mh	594	/tn			/tn		/tn		594	855
	0303- Process Basin Walls													
	Pump Place Walls	3310.260	1,581.72 cy	33.00 /mh	47,473	/cy			/cy		35.00 /cy	59,235	106,708	127,596
	4500 psi Concrete	3310.100	1,581.72 cy	/cy		198.00 /cy	335,103		/cy		/cy		335,103	335,103
	Wall Placement Count	3310.360	30.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Gang Form System 16'->	3100.180	51,040.00 sf	33.00 /mh	202,118	2.75 /sf	147,378		/sf		/sf		349,496	438,429
	Wall Bulkhead Forms	3150.192	1,565.08 sf	33.00 /mh	23,758	2.00 /sf	3,287		/sf		/sf		27,045	37,498
	CJ Prep Walls	3350.170	3,506.28 sf	33.00 /mh	2,893	0.15 /sf	526		/sf		/sf		3,419	4,691
	Finish- Top of Wall	3350.110	1,941.20 sf	33.00 /mh	897	/sf			/sf		/sf		897	1,291
	Liquid Curing Walls	3390.170	52,981.20 sf	33.00 /mh	1,748	0.06 /sf	3,179		/sf		/sf		4,927	5,697
	Grind/Patch Walls	3350.130	51,040.00 sf	33.00 /mh	20,212	0.07 /sf	3,573		/sf		/sf		23,785	32,678
	Blockouts in Concrete	3150.194	320.00 sf	33.00 /mh	3,696	2.00 /sf	640		/sf		/sf		4,336	5,962
	Waterstop 6" Flat	3510.610	924.00 lf	33.00 /mh	3,049	6.00 /lf	5,821		/lf		/lf		8,870	10,212
	Keyway 4"	3150.620	924.00 lf	33.00 /mh	6,098	1.00 /lf	970		/lf		/lf		7,069	9,752
	Chamfer 3/4"	3150.625	1,790.00 lf	33.00 /mh	2,954	0.25 /lf	470		/lf		/lf		3,423	4,723
	Rub Walls	3350.140	23,200.00 sf	33.00 /mh	38,280	0.25 /sf	5,800		/sf		/sf		44,080	60,923
	Oil Wall Forms	3100.310	51,040.00 sf	/sf		0.02 /sf	1,021		/sf		/sf		1,021	1,021
	Nails and Hardware	3150.200	51,040.00 sf	/sf		0.04 /sf	2,042		/sf		/sf		2,042	2,042
	Form Ties 14"	3150.632	3,432.00 ea	/ea		2.70 /ea	9,266		/ea		/ea		9,266	9,266
	Form Ties 20"	3150.632	2,288.00 ea	/ea		2.90 /ea	6,635		/ea		/ea		6,635	6,635
	Form Ties 24"	3150.632	7,040.00 ea	/ea		3.10 /ea	21,824		/ea		/ea		21,824	21,824
	Dimension Lumber	3150.200	51,040.00 sf	/sf		0.50 /sf	25,520		/sf		/sf		25,520	25,520
	Rebar Templates	3200.980	1,160.00 lf	33.00 /mh	1,914	0.50 /lf	580		/lf		/lf		2,494	3,336
	Greenstreak 609 waterstop	3510.610	164.00 lf	33.00 /mh	1,082	83.00 /lf	14,293		/lf		/lf		15,375	15,851
	Rebar Formsavers # 6	3210.108	390.00 ea	33.00 /mh	6,435	39.00 /ea	15,210		/ea		/ea		21,645	24,476
	Keyway 2x10"	3150.620	164.00 lf	33.00 /mh	1,082	3.00 /lf	517		/lf		/lf		1,599	2,075
	Chamfer 2' under blockouts	3150.625	16.00 lf	33.00 /mh	528	3.00 /lf	50		/lf		/lf		578	811
	XYPEX Admix	3310.100	1,581.72 cy	/cy		90.00 /cy	152,319		/cy		/cy		152,319	152,319
	0303- Process Basin Influent Box Walls													
	Pump Place Walls	3310.260	62.22 cy	33.00 /mh	2,636	/cy			/cy		35.00 /cy	2,330	4,967	6,127
	4500 psi Concrete	3310.100	62.22 cy	/cy		198.00 /cy	13,182		/cy		/cy		13,182	13,182
	Wall Placement Count	3310.360	5.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Gang Form System 8-12'	3100.180	3,360.00 sf	33.00 /mh	19,958	2.75 /sf	9,702		/sf		/sf		29,660	38,442
	Wall Bulkhead Forms	3150.192	96.00 sf	33.00 /mh	1,457	2.00 /sf	202		/sf		/sf		1,659	2,300
	CJ Prep Walls	3350.170	236.00 sf	33.00 /mh	195	0.15 /sf	35		/sf		/sf		230	316
	Finish- Top of Wall	3350.110	140.00 sf	33.00 /mh	65	/sf			/sf		/sf		65	93
	Liquid Curing Walls	3390.170	3,500.00 sf	33.00 /mh	116	0.06 /sf	210		/sf		/sf		326	376
	Grind/Patch Walls	3350.130	3,360.00 sf	33.00 /mh	1,331	0.07 /sf	235		/sf		/sf		1,566	2,151
	Blockouts in Concrete	3150.194	96.00 sf	33.00 /mh	1,109	2.00 /sf	192		/sf		/sf		1,301	1,789
	Waterstop 6" Flat	3510.610	96.00 lf	33.00 /mh	317	6.00 /lf	605		/lf		/lf		922	1,061
	Keyway 4"	3150.620	96.00 lf	33.00 /mh	634	1.00 /lf	101		/lf		/lf		734	1,013
	Chamfer 3/4"	3150.625	80.00 lf	33.00 /mh	132	0.25 /lf	21		/lf		/lf		153	211
	Rub Walls	3350.140	2,800.00 sf	33.00 /mh	4,620	0.25 /sf	700		/sf		/sf		5,320	7,353
	Oil Wall Forms	3100.310	3,360.00 sf	/sf		0.02 /sf	67		/sf		/sf		67	67
	Nails and Hardware	3150.200	3,360.00 sf	/sf		0.04 /sf	134		/sf		/sf		134	134
	Form Ties 12"	3150.632	840.00 ea	/ea		2.60 /ea	2,184		/ea		/ea		2,184	2,184
	Dimension Lumber	3150.200	3,360.00 sf	/sf		0.50 /sf	1,680		/sf		/sf		1,680	1,680
	Rebar Templates	3200.980	140.00 lf	33.00 /mh	231	0.50 /lf	70		/lf		/lf		301	301
	XYPEX Admix	3310.100	62.22 cy	/cy		90.00 /cy	5,992		/cy		/cy		5,992	5,992

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0303- Process Basin Effluent Box Walls													
	Pump Place Walls	3310.260	50.00 cy	33.00 /mh	212	/cy			/cy		35.00 /cy	1,873	2,084	2,178
	4500 psi Concrete	3310.100	50.00 cy	/cy		198.00 /cy	10,593		/cy		/cy		10,593	10,593
	Wall Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Gang Form System 8-12'	3100.180	1,800.00 sf	33.00 /mh	9,504	2.75 /sf	5,198		/sf		/sf		14,702	18,883
	Wall Bulkhead Forms	3150.192	72.00 sf	33.00 /mh	1,093	2.00 /sf	151		/sf		/sf		1,244	1,725
	CJ Prep Walls	3350.170	184.50 sf	33.00 /mh	152	0.15 /sf	28		/sf		/sf		180	247
	Finish- Top of Wall	3350.110	112.50 sf	33.00 /mh	52	/sf			/sf		/sf		52	75
	Liquid Curing Walls	3390.170	1,912.50 sf	33.00 /mh	63	0.06 /sf	115		/sf		/sf		178	206
	Grind/Patch Walls	3350.130	1,800.00 sf	33.00 /mh	713	0.07 /sf	126		/sf		/sf		839	1,152
	Waterstop 6" Flat	3510.610	48.00 lf	33.00 /mh	158	6.00 /lf	302		/lf		/lf		461	531
	Keyway 4"	3150.620	48.00 lf	33.00 /mh	317	1.00 /lf	50		/lf		/lf		367	507
	Chamfer 3/4"	3150.625	150.00 lf	33.00 /mh	248	0.25 /lf	39		/lf		/lf		287	396
	Rub Walls	3350.140	1,500.00 sf	33.00 /mh	2,475	0.25 /sf	375		/sf		/sf		2,850	3,939
	Oil Wall Forms	3100.310	1,800.00 sf	/sf		0.02 /sf	36		/sf		/sf		36	36
	Nails and Hardware	3150.200	1,800.00 sf	/sf		0.04 /sf	72		/sf		/sf		72	72
	Form Ties 18"	3150.632	450.00 ea	/ea		2.90 /ea	1,305		/ea		/ea		1,305	1,305
	Dimension Lumber	3150.200	1,800.00 sf	/sf		0.50 /sf	900		/sf		/sf		900	900
	Rebar Templates	3200.980	75.00 lf	33.00 /mh	124	0.50 /lf	38		/lf		/lf		161	216
	XYPEX Admix	3310.100	50.00 cy	/cy		90.00 /cy	4,815		/cy		/cy		4,815	4,815
	0304- Process Basin Elevated Decks													
	4500 psi Concrete	3310.100	60.00 cy	/cy		198.00 /cy	12,712		/cy		/cy		12,712	12,712
	Crane Place Suspended Slab	3310.240	60.00 cy	33.00 /mh	3,178	/cy			/cy		/cy		3,178	4,576
	Shore Suspended Slab 15-up	3100.124	3,840.00 sf	33.00 /mh	38,016	6.00 /sf	24,192		/sf		/sf		62,208	78,935
	Slab Edge Form < 1'	3100.124	640.00 sf	33.00 /mh	8,870	2.00 /sf	1,344		/sf		/sf		10,214	14,117
	Suspended Slab Const Joint	3100.124	50.00 sf	33.00 /mh	578	2.00 /sf	100		/sf		/sf		678	932
	CJ Prep Elevated Slab CJ	3350.170	50.00 sf	33.00 /mh	41	0.20 /sf	10		/sf		/sf		51	69
	Finish- Hard Trowel	3350.110	3,840.00 sf	33.00 /mh	1,774	/sf			/sf		/sf		1,774	2,555
	Liquid Curing Compounds	3390.170	3,840.00 sf	33.00 /mh	253	0.06 /sf	230		/sf		/sf		484	595
	Grind and Patch Deck Bottom	3350.130	3,840.00 sf	33.00 /mh	1,521	0.07 /sf	269		/sf		/sf		1,789	2,459
	Blockouts in Concrete	3150.194	36.00 sf	33.00 /mh	416	2.00 /sf	72		/sf		/sf		488	671
	Chamfer 3/4"	3150.625	1,280.00 lf	33.00 /mh	2,112	0.25 /lf	336		/lf		/lf		2,448	3,377
	Oil Suspended Slab Frm	3100.310	3,840.00 sf	/sf		0.02 /sf	77		/sf		/sf		77	77
	Nails and Hardware	3150.200	3,840.00 sf	/sf		0.04 /sf	154		/sf		/sf		154	154
	XYPEX Admix	3310.100	60.00 cy	/cy		90.00 /cy	5,778		/cy		/cy		5,778	5,778
	0330 4- Process Basin Pipe Encase 12" EQ Basin Discharge (20S203)													
	Other Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Formwork Pipe Encasement	3100.108	114.00 sf	33.00 /mh	941	2.00 /sf	239		/sf		/sf		1,180	1,594
	Place Pipe Encasement	3310.195	11.00 cy	33.00 /mh	388	175.00 /cy	2,060		/cy		/cy		2,448	2,619
	Nails and Hardware	3150.200	114.00 sf	/sf		0.04 /sf	5		/sf		/sf		5	5
	Form Ties Specialty	3150.632	10.00 ea	33.00 /mh	66	5.00 /ea	50		/ea		/ea		116	145
	Pipe Tie Downs (Small)	3150.200	6.00 ea	33.00 /mh	792	100.00 /ea	600		/ea		/ea		1,392	1,740
	Dimension Lumber	3150.200	114.00 sf	/sf		0.50 /sf	57		/sf		/sf		57	57
	Oil SOG Form	3100.310	114.00 sf	/sf		0.02 /sf	2		/sf		/sf		2	2
	Finish- Rough	3350.110	48.00 sf	33.00 /mh	14	0.01 /sf	0		/sf		/sf		15	21
	Liquid Curing Compounds	3390.170	48.00 sf	33.00 /mh	3	0.06 /sf	3		/sf		/sf		6	7
	Rebar Supply	3200.980	1.10 tn	/tn		1,600.00 /tn	1,760		/tn		/tn		1,760	1,760
	Rebar Install Self	3200.980	1.10 tn	33.00 /mh	1,089	/tn			/tn		/tn		1,089	1,568
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	Form Rectangle Columns	3100.110	108.00 sf	33.00 /mh	1,247	2.00 /sf	227		/sf		/sf		1,474	2,023
	0330 4- Process Basin 24" RAS Pipe Encase 2 ea (20S203)													
	Other Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Formwork Pipe Encasement	3100.108	392.00 sf	33.00 /mh	3,234	2.00 /sf	823		/sf		/sf		4,057	5,480
	Place Pipe Encasement	3310.195	31.00 cy	33.00 /mh	1,095	175.00 /cy	5,805		/cy		/cy		6,899	7,381
	Nails and Hardware	3150.200	392.00 sf	/sf		0.04 /sf	16		/sf		/sf		16	16
	Form Ties Specialty	3150.632	25.00 ea	33.00 /mh	165	5.00 /ea	125		/ea		/ea		290	363
	Pipe Tie Downs (Medium)	3150.200	9.00 ea	33.00 /mh	1,485	150.00 /ea	1,350		/ea		/ea		2,835	3,488
	Dimension Lumber	3150.200	392.00 sf	/sf		0.50 /sf	196		/sf		/sf		196	196
	Oil SOG Form	3100.310	392.00 sf	/sf		0.02 /sf	8		/sf		/sf		8	8
	Finish- Rough	3350.110	180.00 sf	33.00 /mh	53	0.01 /sf	1		/sf		/sf		55	78
	Liquid Curing Compounds	3390.170	180.00 sf	33.00 /mh	12	0.06 /sf	11		/sf		/sf		23	28
	Rebar Supply	3200.980	3.10 tn	/tn		1,600.00 /tn	4,960		/tn		/tn		4,960	4,960
	Rebar Install Self	3200.980	3.10 tn	33.00 /mh	3,069	/tn			/tn		/tn		3,069	4,419
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.50 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,900	1,800.00 /Mnth	900	2,800	2,800
	Form Rectangle Columns	3100.110	160.00 sf	33.00 /mh	1,848	2.00 /sf	336		/sf		/sf		2,184	2,997
	0330 4- Process Basin Aeration Basin Drains 3 ea (20M205)													
	Formwork Pipe Encasement	3100.108	312.50 sf	33.00 /mh	2,578	2.00 /sf	656		/sf		/sf		3,234	4,369
	Place Pipe Encasement	3310.195	22.00 cy	33.00 /mh	777	175.00 /cy	4,120		/cy		/cy		4,896	5,238
	Nails and Hardware	3150.200	312.50 sf	/sf		0.04 /sf	13		/sf		/sf		13	13
	Form Ties Specialty	3150.632	32.00 ea	33.00 /mh	211	5.00 /ea	160		/ea		/ea		371	464
	Pipe Tie Downs (Small)	3150.200	16.00 ea	33.00 /mh	2,112	100.00 /ea	1,600		/ea		/ea		3,712	4,641
	Dimension Lumber	3150.200	312.50 sf	/sf		0.50 /sf	156		/sf		/sf		156	156
	Oil SOG Form	3100.310	312.50 sf	/sf		0.02 /sf	6		/sf		/sf		6	6
	Finish- Rough	3350.110	150.00 sf	33.00 /mh	45	0.01 /sf	1		/sf		/sf		45	65
	Liquid Curing Compounds	3390.170	150.00 sf	33.00 /mh	10	0.06 /sf	9		/sf		/sf		19	23
	Rebar Supply	3200.980	2.20 tn	/tn		1,600.00 /tn	3,520		/tn		/tn		3,520	3,520
	Rebar Install Self	3200.980	2.20 tn	33.00 /mh	2,178	/tn			/tn		/tn		2,178	3,136
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.35 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,330	1,800.00 /Mnth	630	1,960	1,960
	Form Rectangle Columns	3100.110	90.00 sf	33.00 /mh	1,040	2.00 /sf	189		/sf		/sf		1,229	1,686
	0330 4- Process Basin 24" Overflow Pipe Encase (20M201)													
	Formwork Pipe Encasement	3100.108	272.00 sf	33.00 /mh	2,244	2.00 /sf	571		/sf		/sf		2,815	3,436
	Place Pipe Encasement	3310.195	21.00 cy	33.00 /mh	742	175.00 /cy	3,932		/cy		/cy		4,674	5,416
	Nails and Hardware	3150.200	272.00 sf	/sf		0.04 /sf	11		/sf		/sf		11	11

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0330 4- Process Basin 24" Overflow Pipe Encase (20M201)													
	Form Ties Specialty	3150.632	17.00 ea	33.00 /mh	112	5.00 /ea	85		/ea		/ea		197	247
	Pipe Tie Downs (Medium)	3150.200	6.00 ea	33.00 /mh	990	150.00 /ea	900		/ea		/ea		1,890	2,326
	Dimension Lumber	3150.200	272.00 sf	/sf		0.50 /sf	136		/sf		/sf		136	136
	Oil SOG Form	3100.310	272.00 sf	/sf		0.02 /sf	5		/sf		/sf		5	5
	Finish- Rough	3350.110	120.00 sf	33.00 /mh	36	0.01 /sf	1		/sf		/sf		36	52
	Liquid Curing Compounds	3390.170	120.00 sf	33.00 /mh	8	0.06 /sf	7		/sf		/sf		15	19
	Rebar Supply	3200.980	2.10 tn	/tn		1,600.00 /tn	3,360		/tn		/tn		3,360	3,360
	Rebar Install Self	3200.980	2.10 tn	33.00 /mh	2,079	/tn			/tn		/tn		2,079	2,994
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	Form Rectangle Columns	3100.110	64.00 sf	33.00 /mh	739	2.00 /sf	134		/sf		/sf		874	1,199
	23 MBR MBR Building													
	Concrete Concrete													
	019-100 Water Test MBR Basins													
	Water Test Basins	3995.200	1.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	Pumps and hoses	3995.200	1.00 ls	/ls		1,500.00 /ls	1,500		/ls		/ls		1,500	1,500
	Temporary Bulkheads	3995.200	1.00 ls	33.00 /mh	132	250.00 /ls	250		/ls		/ls		382	440
	Urethane Injection System	3995.200	1.00 ls	33.00 /mh	5,280	3,000.00 /ls	3,000		750.00 /ls	750	/ls		9,030	11,353
	0302- MBR Basin Lower level base slab (23S402) elev 43													
	4500 psi Concrete	3310.100	65.61 cy	/cy		198.00 /cy	13,901		/cy		/cy		13,901	13,901
	Slab Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	65.61 cy	33.00 /mh	2,317	/cy			/cy		35.00 /cy	2,457	4,774	5,793
	Formwork S.O.G. Edge Form > 1'	3100.120	311.22 sf	33.00 /mh	3,595	2.00 /sf	654		/sf		/sf		4,248	5,830
	Formwork S.O.G. Const Joints > 1'	3100.120	42.56 sf	33.00 /mh	646	2.00 /sf	89		/sf		/sf		735	1,020
	CJ Prep Slab	3350.170	42.56 sf	33.00 /mh	35	0.15 /sf	6		/sf		/sf		41	57
	Finegrade Below Concrete	3150.650	1,332.00 sf	33.00 /mh	615	/sf			/sf		/sf		615	886
	Finish- Hard Trowel	3350.110	1,332.00 sf	33.00 /mh	615	/sf			/sf		/sf		615	886
	Liquid Curing Compounds	3390.170	1,332.00 sf	33.00 /mh	88	0.06 /sf	80		/sf		/sf		168	207
	Waterstop 6" Flat	3510.610	266.00 lf	33.00 /mh	878	6.00 /lf	1,676		/lf		/lf		2,554	2,940
	Keyway 4"	3150.620	32.00 lf	33.00 /mh	211	1.00 /lf	34		/lf		/lf		245	338
	Oil SOG Form	3100.310	353.78 sf	/sf		0.02 /sf	7		/sf		/sf		7	7
	Nails and Hardware	3150.200	311.22 sf	/sf		0.04 /sf	12		/sf		/sf		12	12
	Dimension Lumber	3150.200	311.22 sf	/sf		0.50 /sf	156		/sf		/sf		156	156
	Waterstop Fitting - Flat Tee	3510.610	6.00 ea	33.00 /mh	198	71.00 /ea	426		/ea		/ea		624	711
	Waterstop Fitting - Flat L	3510.610	4.00 ea	33.00 /mh	132	49.00 /ea	196		/ea		/ea		328	386
	XYPEX Admix	3310.100	65.61 cy	/cy		90.00 /cy	6,319		/cy		/cy		6,319	6,319
	0302- MBR Basin Lower level slab elev 47.5 (23S206)													
	4500 psi Concrete	3310.100	162.00 cy	/cy		198.00 /cy	34,321		/cy		/cy		34,321	34,321
	Pump Place Slab on Grade	3310.230	162.00 cy	33.00 /mh	4,576	/cy			/cy		35.00 /cy	6,067	10,643	12,657
	Formwork S.O.G. Edge Form > 1'	3100.120	608.00 sf	33.00 /mh	7,022	2.00 /sf	1,277		/sf		/sf		8,299	11,389
	Formwork S.O.G. Const Joints > 1'	3100.120	168.00 sf	33.00 /mh	2,550	2.00 /sf	353		/sf		/sf		2,903	4,025
	CJ Prep Slab	3350.170	168.00 sf	33.00 /mh	139	0.15 /sf	25		/sf		/sf		164	225
	Finegrade Below Concrete	3150.650	1,974.00 sf	33.00 /mh	912	/sf			/sf		/sf		912	1,313
	Finish- Hard Trowel	3350.110	1,974.00 sf	33.00 /mh	912	/sf			/sf		/sf		912	1,313
	Liquid Curing Compounds	3390.170	1,974.00 sf	33.00 /mh	130	0.06 /sf	118		/sf		/sf		249	306
	Blockouts in Concrete	3150.194	16.00 sf	33.00 /mh	185	2.00 /sf	32		/sf		/sf		217	298
	Waterstop 6" Flat	3510.610	440.00 lf	33.00 /mh	1,452	6.00 /lf	2,772		/lf		/lf		4,224	4,863
	Keyway 4"	3150.620	89.00 lf	33.00 /mh	587	1.00 /lf	93		/lf		/lf		681	939
	Oil SOG Form	3100.310	355.11 sf	/sf		0.02 /sf	7		/sf		/sf		7	7
	Nails and Hardware	3150.200	236.74 sf	/sf		0.04 /sf	9		/sf		/sf		9	9
	Dimension Lumber	3150.200	236.74 sf	/sf		0.50 /sf	118		/sf		/sf		118	118
	Waterstop Fitting - Vertical Tee	3510.610	8.00 ea	33.00 /mh	264	71.00 /ea	568		/ea		/ea		832	948
	Waterstop Fitting - Flat Tee	3510.610	10.00 ea	33.00 /mh	99	71.00 /ea	710		/ea		/ea		809	853
	Waterstop Fitting - Flat L	3510.610	2.00 ea	33.00 /mh	66	49.00 /ea	98		/ea		/ea		164	193
	XYPEX Admix	3310.100	162.00 cy	/cy		90.00 /cy	15,601		/cy		/cy		15,601	15,601
	Flow Fill below Thickened slab	3310.105	30.00 cy	33.00 /mh	990	152.00 /cy	4,788		/cy		/cy		5,778	6,214
	0302- MBR Building Column Footer Pads 23 ea (23S202)													
	4500 psi Concrete	3310.100	101.12 cy	/cy		198.00 /cy	21,424		/cy		/cy		21,424	21,424
	Slab Placement Count	3310.360	23.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	101.12 cy	33.00 /mh	5,356	/cy			/cy		35.00 /cy	3,787	9,143	11,500
	Formwork S.O.G. Edge Form > 1'	3100.120	1,188.24 sf	33.00 /mh	13,724	2.00 /sf	2,495		/sf		/sf		16,219	22,258
	Finegrade Below Concrete	3150.650	1,844.00 sf	33.00 /mh	1,217	/sf			/sf		/sf		1,217	1,753
	Finish- Hard Trowel	3350.110	1,844.00 sf	33.00 /mh	852	/sf			/sf		/sf		852	1,227
	Liquid Curing Compounds	3390.170	1,844.00 sf	33.00 /mh	122	0.06 /sf	111		/sf		/sf		232	286
	Oil SOG Form	3100.310	1,188.24 sf	/sf		0.02 /sf	24		/sf		/sf		24	24
	Nails and Hardware	3150.200	1,188.24 sf	/sf		0.04 /sf	48		/sf		/sf		48	48
	Dimension Lumber	3150.200	1,188.24 sf	/sf		0.50 /sf	594		/sf		/sf		594	594
	0302- MBR Building Concrete Bond Beams Under MBR Build Slab (23S202)													
	4500 psi Concrete	3310.100	10.00 cy	/cy		198.00 /cy	2,119		/cy		/cy		2,119	2,119
	Slab Placement Count	3310.360	3.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	10.00 cy	33.00 /mh	1,059	/cy			/cy		35.00 /cy	375	1,434	1,900
	Formwork S.O.G. Edge Form < 1'	3100.120	502.00 sf	33.00 /mh	5,798	2.00 /sf	1,054		/sf		/sf		6,852	9,403
	Formwork S.O.G. Const Joints < 1'	3100.120	8.00 sf	33.00 /mh	121	2.00 /sf	17		/sf		/sf		138	192
	CJ Prep Slab	3350.170	8.00 sf	33.00 /mh	7	0.15 /sf	1		/sf		/sf		8	11
	Finegrade Below Concrete	3150.650	250.00 sf	33.00 /mh	116	/sf			/sf		/sf		116	166
	Finish- Hard Trowel	3350.110	250.00 sf	33.00 /mh	116	/sf			/sf		/sf		116	166
	Liquid Curing Compounds	3390.170	250.00 sf	33.00 /mh	17	0.06 /sf	15		/sf		/sf		32	39
	Oil SOG Form	3100.310	510.00 sf	/sf		0.02 /sf	10		/sf		/sf		10	10
	Nails and Hardware	3150.200	502.00 sf	/sf		0.04 /sf	20		/sf		/sf		20	20
	Dimension Lumber	3150.200	502.00 sf	/sf		0.50 /sf	251		/sf		/sf		251	
	Rebar Formsavers # 5	3210.108	40.00 ea	33.00 /mh	436	28.00 /ea	1,120		/ea		/ea		1,556	
	0302- MBR Base operation level Slab													

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0302- MBR Base operation level Slab													
	4500 psi Concrete	3310.100	288.00 cy	/cy		198.00 /cy	61,016		/cy		/cy		61,016	61,016
	Pump Place Slab on Grade	3310.230	288.00 cy	33.00 /mh	12,203	/cy			/cy		35.00 /cy	10,786	22,989	28,358
	Formwork S.O.G. Edge Form < 1'	3100.120	48.00 sf	33.00 /mh	554	2.00 /sf	101		/sf		/sf		655	899
	Formwork S.O.G. Const Joints < 1'	3100.120	414.00 sf	33.00 /mh	6,285	2.00 /sf	869		/sf		/sf		7,154	9,919
	CJ Prep Slab	3350.170	414.00 sf	33.00 /mh	342	0.15 /sf	62		/sf		/sf		404	554
	Finegrade Below Concrete	3150.650	11,760.00 sf	33.00 /mh	5,433	/sf			/sf		/sf		5,433	7,824
	Finish- Hard Trowel	3350.110	11,760.00 sf	33.00 /mh	5,433	/sf			/sf		/sf		5,433	7,824
	Liquid Curing Compounds	3390.170	11,760.00 sf	33.00 /mh	776	0.06 /sf	706		/sf		/sf		1,482	1,823
	Blockouts in Concrete	3150.194	164.00 sf	33.00 /mh	1,894	2.00 /sf	328		/sf		/sf		2,222	3,056
	Expansion Joint	3150.720	554.00 sf	33.00 /mh	1,828	12.00 /sf	6,980		/sf		/sf		8,809	9,613
	Expansion Joint Sealant	3150.720	662.00 lf	33.00 /mh	2,185	2.00 /lf	1,390		/lf		/lf		3,575	4,536
	Oil SOG Form	3100.310	739.50 sf	/sf		0.02 /sf	15		/sf		/sf		15	15
	Nails and Hardware	3150.200	325.50 sf	/sf		0.04 /sf	13		/sf		/sf		13	13
	Dimension Lumber	3150.200	325.50 sf	/sf		0.50 /sf	163		/sf		/sf		163	163
	Saw Cut S-O-G	3350.160	1,104.00 lf	33.00 /mh	1,822	0.50 /lf	552		0.50 /lf	552	/lf		2,926	3,727
	Caulking Saw cuts	7920.300	1,104.00 lf	33.00 /mh	1,822	8.00 /tube	378		/lf		/lf		2,200	3,001
	Trench Drain moltz tie down and level	15403.160	55.00 lf	33.00 /mh	908	/lf			/lf		/lf		908	1,307
	15 Mil. Vapor Barrier	3150.630	11,760.00 sf	33.00 /mh	3,881	0.30 /sf	3,881		/sf		/sf		7,762	9,469
	Touch Up and level floor drains	3150.194	23.00 ea	33.00 /mh	759	0.00 /ea	0		/ea		/ea		759	1,093
	0302- Concrete Curb at MBR Metal Building													
	4500 psi Concrete	3310.100	10.72 cy	/cy		198.00 /cy	2,271		/cy		/cy		2,271	2,271
	Slab Placement Count	3310.360	8.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Buggy Place Slab on Grade	3310.230	10.72 cy	33.00 /mh	1,514	/cy			/cy		/cy		1,514	2,180
	Formwork S.O.G. Edge Form < 1'	3100.120	865.34 sf	33.00 /mh	14,278	2.00 /sf	1,817		/sf		/sf		16,095	22,378
	Formwork S.O.G. Const Joints < 1'	3100.120	10.00 sf	33.00 /mh	152	2.00 /sf	21		/sf		/sf		173	240
	CJ Prep Slab	3350.170	10.00 sf	33.00 /mh	8	0.15 /sf	2		/sf		/sf		10	13
	Finegrade Below Concrete	3150.650	289.44 sf	33.00 /mh	134	/sf			/sf		/sf		134	193
	Finish- Hard Trowel	3350.110	289.44 sf	33.00 /mh	134	/sf			/sf		/sf		134	193
	Liquid Curing Compounds	3390.170	289.44 sf	33.00 /mh	19	0.06 /sf	17		/sf		/sf		36	45
	Chamfer 3/4"	3150.625	864.00 lf	33.00 /mh	1,426	0.25 /lf	227		/lf		/lf		1,652	2,280
	Oil SOG Form	3100.310	875.34 sf	/sf		0.02 /sf	18		/sf		/sf		18	18
	Nails and Hardware	3150.200	865.34 sf	/sf		0.04 /sf	35		/sf		/sf		35	35
	Dimension Lumber	3150.200	865.34 sf	/sf		0.50 /sf	433		/sf		/sf		433	433
	Drill and Epoxy #4	3210.101	412.00 ea	33.00 /mh	3,399	5.00 /ea	2,163		/ea		/ea		5,562	7,058
	0302- Dumpster Loadout bay base slab and concrete paving for dumpster													
	4500 psi Concrete	3310.100	92.00 cy	/cy		198.00 /cy	19,491		/cy		/cy		19,491	19,491
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	92.00 cy	33.00 /mh	3,898	/cy			/cy		35.00 /cy	3,445	7,344	9,059
	Formwork S.O.G. Edge Form < 1'	3100.120	208.50 sf	33.00 /mh	2,408	2.00 /sf	438		/sf		/sf		2,846	3,906
	Formwork S.O.G. Const Joints < 1'	3100.120	162.00 sf	33.00 /mh	2,459	2.00 /sf	340		/sf		/sf		2,799	3,881
	CJ Prep Slab	3350.170	60.75 sf	33.00 /mh	50	0.15 /sf	9		/sf		/sf		59	81
	Finegrade Below Concrete	3150.650	3,024.00 sf	33.00 /mh	1,397	/sf			/sf		/sf		1,397	2,012
	Finish- Hard Trowel	3350.110	3,024.00 sf	33.00 /mh	1,397	/sf			/sf		/sf		1,397	2,012
	Liquid Curing Compounds	3390.170	3,024.00 sf	33.00 /mh	200	0.06 /sf	181		/sf		/sf		381	469
	Road Base Below Concrete	2305.300	112.00 cy	33.00 /mh	3,696	25.00 /ton	5,544		/cy		/cy		9,240	10,866
	Expansion Joint	3150.720	104.25 sf	33.00 /mh	344	12.00 /sf	1,314		/sf		/sf		1,658	1,809
	Expansion Joint Sealant	3150.720	139.00 lf	33.00 /mh	459	2.00 /lf	292		/lf		/lf		751	952
	Oil SOG Form	3100.310	269.25 sf	/sf		0.02 /sf	5		/sf		/sf		5	5
	Nails and Hardware	3150.200	208.50 sf	/sf		0.04 /sf	8		/sf		/sf		8	8
	Dimension Lumber	3150.200	208.50 sf	/sf		0.50 /sf	104		/sf		/sf		104	104
	Saw Cut S-O-G	3350.160	448.00 lf	33.00 /mh	739	0.50 /lf	224		0.50 /lf	224	/lf		1,187	1,512
	SOG Rebar	3210.104	6.30 tn	33.00 /mh	8,316	1,600.00 /tn	10,584		/tn		/tn		18,900	22,559
	Trench Drain (Moltz tie down and level	15403.160	6.00 lf	33.00 /mh	297	/lf			/lf		/lf		297	428
	15 Mil. Vapor Barrier	3150.630	3,024.00 sf	33.00 /mh	998	0.30 /sf	998		/sf		/sf		1,996	2,435
	Pipe Tie Downs (Medium)	3150.200	30.00 ea	33.00 /mh	3,960	150.00 /ea	4,500		/ea		/ea		8,460	10,202
	0302- Chemical Loadout Slab (23S203)													
	4500 psi Concrete	3310.100	2.67 cy	/cy		198.00 /cy	565		/cy		/cy		565	565
	Truck Place Slab on Grade	3310.230	2.67 cy	33.00 /mh	188	/cy			/cy		/cy		188	271
	Formwork S.O.G. Edge Form < 1'	3100.120	36.00 sf	33.00 /mh	416	2.00 /sf	76		/sf		/sf		491	674
	Finegrade Below Concrete	3150.650	72.00 sf	33.00 /mh	33	/sf			/sf		/sf		33	48
	Finish- Hard Trowel	3350.110	72.00 sf	33.00 /mh	33	/sf			/sf		/sf		33	48
	Liquid Curing Compounds	3390.170	72.00 sf	33.00 /mh	5	0.06 /sf	4		/sf		/sf		9	11
	Road Base Below Concrete	2305.300	2.67 cy	33.00 /mh	88	25.00 /ton	132		/cy		/cy		220	259
	Expansion Joint	3150.720	12.00 sf	33.00 /mh	40	12.00 /sf	151		/sf		/sf		191	208
	Expansion Joint Sealant	3150.720	12.00 lf	33.00 /mh	40	2.00 /lf	25		/lf		/lf		65	82
	Oil SOG Form	3100.310	36.00 sf	/sf		0.02 /sf	1		/sf		/sf		1	1
	Nails and Hardware	3150.200	36.00 sf	/sf		0.04 /sf	1		/sf		/sf		1	1
	Dimension Lumber	3150.200	36.00 sf	/sf		0.50 /sf	18		/sf		/sf		18	18
	SOG Rebar	3210.104	0.20 tn	33.00 /mh	264	1,600.00 /tn	336		/tn		/tn		600	716
	0302- Concrete Curb at Chem loadout													
	4500 psi Concrete	3310.100	1.00 cy	/cy		198.00 /cy	212		/cy		/cy		212	212
	Truck Place Slab on Grade	3310.230	1.00 cy	33.00 /mh	141	/cy			/cy		/cy		141	203
	Formwork S.O.G. Edge Form < 1'	3100.120	49.34 sf	33.00 /mh	814	2.00 /sf	104		/sf		/sf		918	1,276
	Finegrade Below Concrete	3150.650	16.08 sf	33.00 /mh	7	/sf			/sf		/sf		7	11
	Finish- Hard Trowel	3350.110	16.08 sf	33.00 /mh	7	/sf			/sf		/sf		7	11
	Liquid Curing Compounds	3390.170	16.08 sf	33.00 /mh	1	0.06 /sf	1		/sf		/sf		2	2
	Oil SOG Form	3100.310	49.34 sf	/sf		0.02 /sf	1		/sf		/sf		1	1
	Nails and Hardware	3150.200	49.34 sf	/sf		0.04 /sf	2		/sf		/sf		2	2
	Dimension Lumber	3150.200	49.34 sf	/sf		0.50 /sf	25		/sf		/sf		25	25
	SOG Rebar	3210.104	0.08 tn	33.00 /mh	99	1,600.00 /tn	126		/tn		/tn		225	255
	Drill and Epoxy #4	3210.101	24.00 ea	33.00 /mh	198	5.00 /ea	126		/ea		/ea		324	324
	0302- MBR Footings at exterior Walls													

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0302- MBR Footings at exterior Walls													
	4500 psi Concrete	3310.100	32.00 cy	/cy		198.00 /cy	6,780		/cy		/cy		6,780	6,780
	Pump Place Slab on Grade	3310.230	32.00 cy	33.00 /mh	1,695	/cy			/cy		35.00 /cy	1,198	2,893	3,639
	Formwork S.O.G. Edge Form < 1'	3100.120	868.00 sf	33.00 /mh	10,025	2.00 /sf	1,823		/sf		/sf		11,848	16,259
	Formwork S.O.G. Const Joints < 1'	3100.120	20.00 sf	33.00 /mh	304	2.00 /sf	42		/sf		/sf		346	479
	CJ Prep Slab	3350.170	20.00 sf	33.00 /mh	17	0.15 /sf	3		/sf		/sf		20	27
	Finegrade Below Concrete	3150.650	864.00 sf	33.00 /mh	399	/sf			/sf		/sf		399	575
	Finish- Hard Trowel	3350.110	864.00 sf	33.00 /mh	399	/sf			/sf		/sf		399	575
	Liquid Curing Compounds	3390.170	864.00 sf	33.00 /mh	57	0.06 /sf	52		/sf		/sf		109	134
	Oil SOG Form	3100.310	888.00 sf	/sf		0.02 /sf	18		/sf		/sf		18	18
	Nails and Hardware	3150.200	868.00 sf	/sf		0.04 /sf	35		/sf		/sf		35	35
	Dimension Lumber	3150.200	868.00 sf	/sf		0.50 /sf	434		/sf		/sf		434	434
	Rebar Formsavers # 5	3210.108	210.00 ea	33.00 /mh	2,287	28.00 /ea	5,880		/ea		/ea		8,167	9,173
	0302- MBR HVAC Pad													
	4500 psi Concrete	3310.100	4.76 cy	/cy		198.00 /cy	1,009		/cy		/cy		1,009	1,009
	Truck Place Slab on Grade	3310.230	4.76 cy	33.00 /mh	421	/cy			/cy		/cy		421	606
	Formwork S.O.G. Edge Form < 1'	3100.120	37.52 sf	33.00 /mh	433	2.00 /sf	79		/sf		/sf		512	703
	Finegrade Below Concrete	3150.650	192.00 sf	33.00 /mh	89	/sf			/sf		/sf		89	128
	Finish- Hard Trowel	3350.110	192.00 sf	33.00 /mh	89	/sf			/sf		/sf		89	128
	Liquid Curing Compounds	3390.170	192.00 sf	33.00 /mh	13	0.06 /sf	12		/sf		/sf		24	30
	Road Base Below Concrete	2305.300	7.11 cy	33.00 /mh	235	25.00 /ton	352		/cy		/cy		587	690
	Expansion Joint	3150.720	8.04 sf	33.00 /mh	27	12.00 /sf	101		/sf		/sf		128	140
	Expansion Joint Sealant	3150.720	12.00 lf	33.00 /mh	40	2.00 /lf	25		/lf		/lf		65	82
	Oil SOG Form	3100.310	37.52 sf	/sf		0.02 /sf	1		/sf		/sf		1	1
	Nails and Hardware	3150.200	37.52 sf	/sf		0.04 /sf	2		/sf		/sf		2	2
	Dimension Lumber	3150.200	37.52 sf	/sf		0.50 /sf	19		/sf		/sf		19	19
	SOG Rebar	3210.104	0.48 tn	33.00 /mh	628	1,600.00 /tn	800		/tn		/tn		1,428	1,705
	0302- Concrete Pads at Doorways and garage doors MBR													
	4500 psi Concrete	3310.100	12.61 cy	/cy		198.00 /cy	2,671		/cy		/cy		2,671	2,671
	Truck Place Slab on Grade	3310.230	12.61 cy	33.00 /mh	668	/cy			/cy		/cy		668	961
	Formwork S.O.G. Edge Form < 1'	3100.120	128.64 sf	33.00 /mh	1,486	2.00 /sf	270		/sf		/sf		1,756	2,410
	Finegrade Below Concrete	3150.650	508.00 sf	33.00 /mh	235	/sf			/sf		/sf		235	338
	Finish- Hard Trowel	3350.110	508.00 sf	33.00 /mh	235	/sf			/sf		/sf		235	338
	Liquid Curing Compounds	3390.170	508.00 sf	33.00 /mh	34	0.06 /sf	30		/sf		/sf		64	79
	Road Base Below Concrete	2305.300	18.82 cy	33.00 /mh	621	25.00 /ton	931		/cy		/cy		1,552	1,825
	Expansion Joint	3150.720	38.86 sf	33.00 /mh	128	12.00 /sf	490		/sf		/sf		618	674
	Expansion Joint Sealant	3150.720	58.00 lf	33.00 /mh	191	2.00 /lf	122		/lf		/lf		313	397
	Oil SOG Form	3100.310	128.64 sf	/sf		0.02 /sf	3		/sf		/sf		3	3
	Nails and Hardware	3150.200	128.64 sf	/sf		0.04 /sf	5		/sf		/sf		5	5
	Dimension Lumber	3150.200	128.64 sf	/sf		0.50 /sf	64		/sf		/sf		64	64
	SOG Rebar	3210.104	1.26 tn	33.00 /mh	1,665	1,600.00 /tn	2,118		/tn		/tn		3,783	4,515
	0302-B Grout Topping MBR Pump Area													
	Formwork S.O.G. Edge Form < 1'	3100.120	21.00 sf	33.00 /mh	243	2.00 /sf	44		/sf		/sf		287	393
	Finish- Hard Trowel	3350.110	80.00 sf	33.00 /mh	37	/sf			/sf		/sf		37	53
	Liquid Curing Compounds	3390.170	80.00 sf	33.00 /mh	5	0.06 /sf	5		/sf		/sf		10	12
	Oil SOG Form	3100.310	21.00 sf	/sf		0.02 /sf	0		/sf		/sf		0	0
	Nails and Hardware	3150.200	21.00 sf	/sf		0.04 /sf	1		/sf		/sf		1	1
	Dimension Lumber	3150.200	21.00 sf	/sf		0.50 /sf	11		/sf		/sf		11	11
	CJ Prep Slab	3350.170	80.00 sf	33.00 /mh	66	0.15 /sf	12		/sf		/sf		78	107
	Acrylic Bonding Agent	3150.200	80.00 sf	33.00 /mh	5	1.00 /sf	80		/sf		/sf		85	88
	Non Shrink Grout	3601.100	40.00 cf	/cf		60.00 /cf	2,400		/cf		/cf		2,400	2,400
	Place Grout	11000.005	40.00 cf	33.00 /mh	3,960	75.00 /cf	3,000		/cf		/cf		6,960	8,702
	0303- MBR Basin Walls all													
	Pump Place Walls	3310.260	311.14 cy	33.00 /mh	12,085	/cy			/cy		35.00 /cy	11,652	23,737	29,054
	4500 psi Concrete	3310.100	311.14 cy	/cy		198.00 /cy	65,917		/cy		/cy		65,917	65,917
	Wall Placement Count	3310.360	7.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Gang Form System 8-12'	3100.180	7,368.00 sf	33.00 /mh	36,472	2.75 /sf	21,275		/sf		/sf		57,747	73,794
	Gang Form System 16'->	3100.180	3,729.00 sf	33.00 /mh	18,459	2.75 /sf	10,767		/sf		/sf		29,226	37,348
	Wall Bulkhead Forms	3150.192	328.20 sf	33.00 /mh	4,982	2.00 /sf	689		/sf		/sf		5,671	7,863
	CJ Prep Walls	3350.170	973.38 sf	33.00 /mh	803	0.15 /sf	146		/sf		/sf		949	1,302
	Finish- Top of Wall	3350.110	645.18 sf	33.00 /mh	298	/sf			/sf		/sf		298	429
	Liquid Curing Walls	3390.170	11,742.18 sf	33.00 /mh	387	0.06 /sf	705		/sf		/sf		1,092	1,263
	Grind/Patch Walls	3350.130	11,097.00 sf	33.00 /mh	4,394	0.07 /sf	777		/sf		/sf		5,171	7,105
	Blockouts in Concrete	3150.194	168.00 sf	33.00 /mh	1,940	2.00 /sf	336		/sf		/sf		2,276	3,130
	Waterstop 6" Flat	3510.610	226.50 lf	33.00 /mh	747	6.00 /lf	1,427		/lf		/lf		2,174	2,503
	Keyway 4"	3150.620	247.00 lf	33.00 /mh	1,630	1.00 /lf	259		/lf		/lf		1,890	2,607
	Chamfer 6"	3150.625	28.00 lf	33.00 /mh	462	6.00 /lf	176		/lf		/lf		638	842
	Rub Walls	3350.140	8,184.00 sf	33.00 /mh	13,504	0.25 /sf	2,046		/sf		/sf		15,550	21,491
	Oil Wall Forms	3100.310	11,097.00 sf	/sf		0.02 /sf	222		/sf		/sf		222	222
	Nails and Hardware	3150.200	11,097.00 sf	/sf		0.04 /sf	444		/sf		/sf		444	444
	Form Ties 12"	3150.632	609.00 ea	/ea		2.60 /ea	1,583		/ea		/ea		1,583	1,583
	Form Ties 16"	3150.632	1,103.25 ea	/ea		2.80 /ea	3,089		/ea		/ea		3,089	3,089
	Form Ties 24"	3150.632	1,062.00 ea	/ea		3.10 /ea	3,292		/ea		/ea		3,292	3,292
	Dimension Lumber	3150.200	11,097.00 sf	/sf		0.50 /sf	5,549		/sf		/sf		5,549	5,549
	Rebar Templates	3200.980	420.00 lf	33.00 /mh	693	0.50 /lf	210		/lf		/lf		903	1,208
	Waterstop Greenstreak 609	3510.610	30.00 lf	33.00 /mh	198	83.00 /lf	2,615		/lf		/lf		2,813	2,900
	Rebar Formsavers # 7	3210.108	48.00 ea	33.00 /mh	792	47.00 /ea	2,256		/ea		/ea		3,048	3,396
	Rebar Formsavers # 6	3210.108	24.00 ea	33.00 /mh	396	39.00 /ea	936		/ea		/ea		1,332	1,506
	XYPEX Admix	3310.100	311.14 cy	/cy		90.00 /cy	29,962		/cy		/cy		29,962	29,962
	0303- MBR Wall Exterior Wall at footings													
	Pump Place Walls	3310.260	37.52 cy	33.00 /mh	2,650	/cy			/cy		35.00 /cy	1,405	4,055	4,055
	4500 psi Concrete	3310.100	37.52 cy	/cy		198.00 /cy	7,949		/cy		/cy		7,949	7,949
	Rented Form System 0-4'	3100.180	3,024.00 sf	33.00 /mh	19,958	1.75 /sf	5,557		/sf		/sf		25,515	34,297

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0303- MBR Wall Exterior Wall at footings													
	Wall Bulkhead Forms	3150.192	23.45 sf	33.00 /mh	356	2.00 /sf	49		/sf		/sf		405	562
	CJ Prep Walls	3350.170	312.89 sf	33.00 /mh	258	0.15 /sf	47		/sf		/sf		305	419
	Finish- Top of Wall	3350.110	289.44 sf	33.00 /mh	134	/sf			/sf		/sf		134	193
	Liquid Curing Walls	3390.170	3,313.44 sf	33.00 /mh	109	0.06 /sf	199		/sf		/sf		308	356
	Grind/Patch Walls	3350.130	3,024.00 sf	33.00 /mh	1,198	0.07 /sf	212		/sf		/sf		1,409	1,936
	Blockouts in Concrete	3150.194	32.00 sf	33.00 /mh	370	2.00 /sf	64		/sf		/sf		434	596
	Chamfer 3/4"	3150.625	864.00 lf	33.00 /mh	1,426	0.25 /lf	227		/lf		/lf		1,652	2,280
	Rub Walls	3350.140	1,728.00 sf	33.00 /mh	2,851	0.25 /sf	432		/sf		/sf		3,283	4,538
	Oil Wall Forms	3100.310	3,024.00 sf	/sf		0.02 /sf	60		/sf		/sf		60	60
	Nails and Hardware	3150.200	3,024.00 sf	/sf		0.04 /sf	121		/sf		/sf		121	121
	Form Ties 8"	3150.632	756.00 ea	/ea		2.50 /ea	1,890		/ea		/ea		1,890	1,890
	Dimension Lumber	3150.200	3,024.00 sf	/sf		0.50 /sf	1,512		/sf		/sf		1,512	1,512
	Rebar Templates	3200.980	432.00 lf	33.00 /mh	713	0.50 /lf	216		/lf		/lf		929	1,242
	0307- MBR Metal Building Columns 23 ea (23S202)													
	4500 psi Concrete	3310.100	14.89 cy	/cy		198.00 /cy	3,154		/cy		/cy		3,154	3,154
	Other Placement Count	3310.360	23.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Piers & Columns	3310.270	14.89 cy	33.00 /mh	1,051	/cy			/cy		35.00 /cy	557	1,609	2,071
	Formwork Rectangle Columns 0 - 8'	3100.110	612.95 sf	33.00 /mh	7,080	2.00 /sf	1,287		/sf		/sf		8,367	11,482
	Liquid Curing Compounds	3390.170	612.95 sf	33.00 /mh	40	0.06 /sf	37		/sf		/sf		77	95
	Grind/Patch Columns	3350.130	612.95 sf	33.00 /mh	301	0.07 /sf	43		/sf		/sf		344	477
	Chamfer 3/4"	3150.625	230.00 lf	33.00 /mh	380	0.25 /lf	60		/lf		/lf		440	607
	Oil Column Forms	3100.310	612.95 sf	/sf		0.02 /sf	12		/sf		/sf		12	12
	Rub Columns	3350.140	245.18 sf	33.00 /mh	243	0.25 /sf	61		/sf		/sf		304	411
	Dimension Lumber	3150.200	612.95 sf	/sf		0.50 /sf	306		/sf		/sf		306	306
	Nails and Hardware	3150.200	612.95 sf	/sf		0.04 /sf	25		/sf		/sf		25	25
	0310- MBR Equipmnet pads													
	Equipment Pad Form > 8"	3100.164	826.82 sf	33.00 /mh	9,550	2.00 /sf	1,736		/sf		/sf		11,286	15,488
	Oil Equipment Pad Form	3100.310	826.82 sf	/sf		0.02 /sf	17		/sf		/sf		17	17
	4500 psi Concrete	3310.100	56.41 cy	/cy		198.00 /cy	11,951		/cy		/cy		11,951	11,951
	Other Placement Count	3310.360	32.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Buggy Place Equipment Pads	3310.300	56.41 cy	33.00 /mh	3,984	/cy			/cy		/cy		3,984	5,737
	Liquid Curing Compounds	3390.170	1,523.05 sf	33.00 /mh	101	0.06 /sf	91		/sf		/sf		192	236
	Finish- Hard Trowel	3350.110	1,523.05 sf	33.00 /mh	704	/sf			/sf		/sf		704	1,013
	Chamfer	3150.625	956.00 lf	33.00 /mh	1,577	0.25 /lf	251		/lf		/lf		1,828	2,522
	Misc. Pad Rebar	3210.104	4.23 tn	33.00 /mh	4,189	1,600.00 /tn	7,109		/tn		/tn		11,297	13,141
	Nails and Hardware	3150.200	826.82 sf	/sf		0.04 /sf	33		/sf		/sf		33	33
	Drill and Epoxy #4	3210.101	956.00 ea	33.00 /mh	7,887	5.00 /ea	5,019		/ea		/ea		12,906	16,376
	Blockouts in Concrete	3150.194	72.00 sf	33.00 /mh	832	2.00 /sf	144		/sf		/sf		976	1,342
	0330 4- Pipe Encasement MBR Drains													
	Formwork Pipe Encasement	3100.108	512.50 sf	33.00 /mh	4,228	2.00 /sf	1,076		/sf		/sf		5,304	7,165
	Place Pipe Encasement	3310.195	27.00 cy	33.00 /mh	1,144	175.00 /cy	5,056		/cy		/cy		6,200	6,703
	Nails and Hardware	3150.200	512.50 sf	/sf		0.04 /sf	21		/sf		/sf		21	21
	Form Ties Specialty	3150.632	52.00 ea	33.00 /mh	343	5.00 /ea	260		/ea		/ea		603	754
	Pipe Tie Downs (Small)	3150.200	26.00 ea	33.00 /mh	3,432	100.00 /ea	2,600		/ea		/ea		6,032	7,542
	Dimension Lumber	3150.200	512.50 sf	/sf		0.50 /sf	256		/sf		/sf		256	256
	Oil SOG Form	3100.310	512.50 sf	/sf		0.02 /sf	10		/sf		/sf		10	10
	Finish- Rough	3350.110	250.00 sf	33.00 /mh	74	0.01 /sf	2		/sf		/sf		76	108
	Liquid Curing Compounds	3390.170	250.00 sf	33.00 /mh	17	0.06 /sf	15		/sf		/sf		32	39
	Rebar Supply	3200.980	2.70 tn	/tn		1,600.00 /tn	4,320		/tn		/tn		4,320	4,320
	Rebar Install Self	3200.980	2.70 tn	33.00 /mh	2,673	/tn			/tn		/tn		2,673	3,849
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	0330 4- 14" UV disinfect to permiate Storage MBR Encase													
	Formwork Pipe Encasement	3100.108	411.13 sf	33.00 /mh	3,392	2.00 /sf	863		/sf		/sf		4,255	5,748
	Place Pipe Encasement	3310.195	33.00 cy	33.00 /mh	1,398	175.00 /cy	6,179		/cy		/cy		7,578	8,193
	Nails and Hardware	3150.200	411.13 sf	/sf		0.04 /sf	16		/sf		/sf		16	16
	Form Ties Specialty	3150.632	32.00 ea	33.00 /mh	211	5.00 /ea	160		/ea		/ea		371	464
	Pipe Tie Downs (Medium)	3150.200	11.00 ea	33.00 /mh	1,815	150.00 /ea	1,650		/ea		/ea		3,465	4,264
	Dimension Lumber	3150.200	411.13 sf	/sf		0.50 /sf	206		/sf		/sf		206	206
	Oil SOG Form	3100.310	411.13 sf	/sf		0.02 /sf	8		/sf		/sf		8	8
	Finish- Rough	3350.110	195.00 sf	33.00 /mh	58	0.01 /sf	1		/sf		/sf		59	85
	Liquid Curing Compounds	3390.170	195.00 sf	33.00 /mh	13	0.06 /sf	12		/sf		/sf		25	30
	Rebar Supply	3200.980	3.30 tn	/tn		1,600.00 /tn	5,280		/tn		/tn		5,280	5,280
	Rebar Install Self	3200.980	3.30 tn	33.00 /mh	3,267	/tn			/tn		/tn		3,267	4,704
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	Form Rectangle Columns	3100.110	224.00 sf	33.00 /mh	2,587	2.00 /sf	470		/sf		/sf		3,058	4,196
	0330 4- 3" Carbon Supplement under MBR slab Chem tanks to MBR Basin													
	Formwork Pipe Encasement	3100.108	312.50 sf	33.00 /mh	2,578	2.00 /sf	656		/sf		/sf		3,234	4,369
	Place Pipe Encasement	3310.195	17.00 cy	33.00 /mh	720	175.00 /cy	3,183		/cy		/cy		3,904	4,221
	Nails and Hardware	3150.200	312.50 sf	/sf		0.04 /sf	13		/sf		/sf		13	13
	Form Ties Specialty	3150.632	32.00 ea	33.00 /mh	211	5.00 /ea	160		/ea		/ea		371	464
	Pipe Tie Downs (Small)	3150.200	16.00 ea	33.00 /mh	2,112	100.00 /ea	1,600		/ea		/ea		3,712	4,641
	Dimension Lumber	3150.200	312.50 sf	/sf		0.50 /sf	156		/sf		/sf		156	156
	Oil SOG Form	3100.310	312.50 sf	/sf		0.02 /sf	6		/sf		/sf		6	6
	Finish- Rough	3350.110	150.00 sf	33.00 /mh	45	0.01 /sf	1		/sf		/sf		45	65
	Liquid Curing Compounds	3390.170	150.00 sf	33.00 /mh	10	0.06 /sf	9		/sf		/sf		19	23
	Rebar Supply	3200.980	1.70 tn	/tn		1,600.00 /tn	2,720		/tn		/tn		2,720	2,720
	Rebar Install Self	3200.980	1.70 tn	33.00 /mh	1,683	/tn			/tn		/tn		1,683	2,424
	Form Rectangle Columns	3100.110	80.00 sf	33.00 /mh	924	2.00 /sf	168		/sf		/sf		1,092	1,499
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	
	0330 4- MBR Non Pot water pump to exterior													
	Formwork Pipe Encasement	3100.108	62.50 sf	33.00 /mh	516	2.00 /sf	131		/sf		/sf		647	

Spreadsheet Level		Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0330 4- MBR Non Pot water pump to exterior														
	Place Pipe Encasement	3310.195	5.00 cy	33.00 /mh	212	175.00 /cy	936		/cy		/cy		1,148	1,241
	Nails and Hardware	3150.200	62.50 sf	/sf		0.04 /sf	3		/sf		/sf		3	3
	Form Ties Specialty	3150.632	7.00 ea	33.00 /mh	46	5.00 /ea	35		/ea		/ea		81	102
	Pipe Tie Downs (Small)	3150.200	4.00 ea	33.00 /mh	528	100.00 /ea	400		/ea		/ea		928	1,160
	Dimension Lumber	3150.200	62.50 sf	/sf		0.50 /sf	31		/sf		/sf		31	31
	Oil SOG Form	3100.310	62.50 sf	/sf		0.02 /sf	1		/sf		/sf		1	1
	Finish- Rough	3350.110	25.00 sf	33.00 /mh	7	0.01 /sf	0		/sf		/sf		8	11
	Liquid Curing Compounds	3390.170	25.00 sf	33.00 /mh	2	0.06 /sf	2		/sf		/sf		3	4
	Form Rectangle Columns	3100.110	50.00 sf	33.00 /mh	578	2.00 /sf	105		/sf		/sf		683	937
	Rebar Supply	3200.980	0.50 tn	/tn		1,600.00 /tn	800		/tn		/tn		800	800
	Rebar Install Self	3200.980	0.50 tn	33.00 /mh	495	/tn			/tn		/tn		495	713
0330 4- Permiate Effluent Pipe MBR Encase														
	Formwork Pipe Encasement	3100.108	192.00 sf	33.00 /mh	1,584	2.00 /sf	403		/sf		/sf		1,987	2,684
	Place Pipe Encasement	3310.195	13.00 cy	33.00 /mh	551	175.00 /cy	2,434		/cy		/cy		2,985	3,227
	Nails and Hardware	3150.200	192.00 sf	/sf		0.04 /sf	8		/sf		/sf		8	8
	Form Ties Specialty	3150.632	12.00 ea	33.00 /mh	79	5.00 /ea	60		/ea		/ea		139	174
	Pipe Tie Downs (Medium)	3150.200	4.00 ea	33.00 /mh	660	150.00 /ea	600		/ea		/ea		1,260	1,550
	Dimension Lumber	3150.200	192.00 sf	/sf		0.50 /sf	96		/sf		/sf		96	96
	Oil SOG Form	3100.310	192.00 sf	/sf		0.02 /sf	4		/sf		/sf		4	4
	Finish- Rough	3350.110	80.00 sf	33.00 /mh	24	0.01 /sf	0		/sf		/sf		24	35
	Liquid Curing Compounds	3390.170	80.00 sf	33.00 /mh	5	0.06 /sf	5		/sf		/sf		10	12
	Rebar Supply	3200.980	1.30 tn	/tn		1,600.00 /tn	2,080		/tn		/tn		2,080	2,080
	Rebar Install Self	3200.980	1.30 tn	33.00 /mh	1,287	/tn			/tn		/tn		1,287	1,853
	Form Rectangle Columns	3100.110	96.00 sf	33.00 /mh	1,109	2.00 /sf	202		/sf		/sf		1,310	1,798
0330 4- Dewatering Area Under Slab Encasement, sludge and polymer														
	Formwork Pipe Encasement	3100.108	612.50 sf	33.00 /mh	5,053	2.00 /sf	1,286		/sf		/sf		6,339	8,563
	Place Pipe Encasement	3310.195	34.00 cy	33.00 /mh	1,441	175.00 /cy	6,367		/cy		/cy		7,807	8,441
	Nails and Hardware	3150.200	612.50 sf	/sf		0.04 /sf	25		/sf		/sf		25	25
	Form Ties Specialty	3150.632	62.00 ea	33.00 /mh	409	5.00 /ea	310		/ea		/ea		719	899
	Pipe Tie Downs (Small)	3150.200	31.00 ea	33.00 /mh	4,092	100.00 /ea	3,100		/ea		/ea		7,192	8,992
	Dimension Lumber	3150.200	612.50 sf	/sf		0.50 /sf	306		/sf		/sf		306	306
	Oil SOG Form	3100.310	612.50 sf	/sf		0.02 /sf	12		/sf		/sf		12	12
	Finish- Rough	3350.110	300.00 sf	33.00 /mh	89	0.01 /sf	2		/sf		/sf		91	130
	Liquid Curing Compounds	3390.170	300.00 sf	33.00 /mh	20	0.06 /sf	18		/sf		/sf		38	47
	Rebar Supply	3200.980	3.40 tn	/tn		1,600.00 /tn	5,440		/tn		/tn		5,440	5,440
	Rebar Install Self	3200.980	3.40 tn	33.00 /mh	3,366	/tn			/tn		/tn		3,366	4,847
	Form Rectangle Columns	3100.110	240.00 sf	33.00 /mh	2,772	2.00 /sf	504		/sf		/sf		3,276	4,496
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.50 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,900	1,800.00 /Mnth	900	2,800	2,800
0330 4- Citric Acid to MBR Pipe Encase														
	Formwork Pipe Encasement	3100.108	225.00 sf	33.00 /mh	1,856	2.00 /sf	473		/sf		/sf		2,329	3,146
	Place Pipe Encasement	3310.195	12.00 cy	33.00 /mh	508	175.00 /cy	2,247		/cy		/cy		2,755	2,979
	Nails and Hardware	3150.200	225.00 sf	/sf		0.04 /sf	9		/sf		/sf		9	9
	Form Ties Specialty	3150.632	24.00 ea	33.00 /mh	158	5.00 /ea	120		/ea		/ea		278	348
	Pipe Tie Downs (Small)	3150.200	12.00 ea	33.00 /mh	1,584	100.00 /ea	1,200		/ea		/ea		2,784	3,481
	Dimension Lumber	3150.200	225.00 sf	/sf		0.50 /sf	113		/sf		/sf		113	113
	Oil SOG Form	3100.310	225.00 sf	/sf		0.02 /sf	5		/sf		/sf		5	5
	Finish- Rough	3350.110	100.00 sf	33.00 /mh	30	0.01 /sf	1		/sf		/sf		30	43
	Liquid Curing Compounds	3390.170	100.00 sf	33.00 /mh	7	0.06 /sf	6		/sf		/sf		13	16
	Rebar Supply	3200.980	1.20 tn	/tn		1,600.00 /tn	1,920		/tn		/tn		1,920	1,920
	Rebar Install Self	3200.980	1.20 tn	33.00 /mh	1,188	/tn			/tn		/tn		1,188	1,711
	Form Rectangle Columns	3100.110	120.00 sf	33.00 /mh	1,386	2.00 /sf	252		/sf		/sf		1,638	2,248
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.15 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	570	1,800.00 /Mnth	270	840	840
0330 4- MBR WAS Encasement														
	Formwork Pipe Encasement	3100.108	108.00 sf	33.00 /mh	891	2.00 /sf	227		/sf		/sf		1,118	1,510
	Place Pipe Encasement	3310.195	9.00 cy	33.00 /mh	381	175.00 /cy	1,685		/cy		/cy		2,067	2,234
	Nails and Hardware	3150.200	108.00 sf	/sf		0.04 /sf	4		/sf		/sf		4	4
	Form Ties Specialty	3150.632	10.00 ea	33.00 /mh	66	5.00 /ea	50		/ea		/ea		116	145
	Pipe Tie Downs (Small)	3150.200	5.00 ea	33.00 /mh	660	100.00 /ea	500		/ea		/ea		1,160	1,450
	Dimension Lumber	3150.200	108.00 sf	/sf		0.50 /sf	54		/sf		/sf		54	54
	Oil SOG Form	3100.310	108.00 sf	/sf		0.02 /sf	2		/sf		/sf		2	2
	Finish- Rough	3350.110	45.00 sf	33.00 /mh	13	0.01 /sf	0		/sf		/sf		14	20
	Liquid Curing Compounds	3390.170	45.00 sf	33.00 /mh	3	0.06 /sf	3		/sf		/sf		6	7
	Rebar Supply	3200.980	0.90 tn	/tn		1,600.00 /tn	1,440		/tn		/tn		1,440	1,440
	Rebar Install Self	3200.980	0.90 tn	33.00 /mh	891	/tn			/tn		/tn		891	1,283
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.15 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	570	1,800.00 /Mnth	270	840	840
	Form Rectangle Columns	3100.110	90.00 sf	33.00 /mh	1,040	2.00 /sf	189		/sf		/sf		1,229	1,686
0330 4- RAS Pipe Encasement MBR Under Slab														
	Formwork Pipe Encasement	3100.108	152.00 sf	33.00 /mh	1,254	2.00 /sf	319		/sf		/sf		1,573	2,125
	Place Pipe Encasement	3310.195	12.00 cy	33.00 /mh	508	175.00 /cy	2,247		/cy		/cy		2,755	2,979
	Nails and Hardware	3150.200	152.00 sf	/sf		0.04 /sf	6		/sf		/sf		6	6
	Form Ties Specialty	3150.632	10.00 ea	33.00 /mh	66	5.00 /ea	50		/ea		/ea		116	145
	Pipe Tie Downs (Medium)	3150.200	4.00 ea	33.00 /mh	660	150.00 /ea	600		/ea		/ea		1,260	1,550
	Dimension Lumber	3150.200	152.00 sf	/sf		0.50 /sf	76		/sf		/sf		76	76
	Oil SOG Form	3100.310	152.00 sf	/sf		0.02 /sf	3		/sf		/sf		3	3
	Finish- Rough	3350.110	60.00 sf	33.00 /mh	18	0.01 /sf	0		/sf		/sf		18	26
	Liquid Curing Compounds	3390.170	60.00 sf	33.00 /mh	4	0.06 /sf	4		/sf		/sf		8	9
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	Rebar Supply	3200.980	1.20 tn	/tn		1,600.00 /tn	1,920		/tn		/tn		1,920	1,920
	Rebar Install Self	3200.980	1.20 tn	33.00 /mh	1,188	/tn			/tn		/tn		1,188	
	Form Rectangle Columns	3100.110	96.00 sf	33.00 /mh	1,109	2.00 /sf	202		/sf		/sf		1,310	
0330 4- MBR Alum encase under slab														

105

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0330 4- MBR Alum encase under slab													
	Formwork Pipe Encasement	3100.108	137.50 sf	33.00 /mh	1,134	2.00 /sf	289		/sf		/sf		1,423	1,922
	Place Pipe Encasement	3310.195	8.00 cy	33.00 /mh	339	175.00 /cy	1,498		/cy		/cy		1,837	1,986
	Nails and Hardware	3150.200	137.50 sf	/sf		0.04 /sf	6		/sf		/sf		6	6
	Form Ties Specialty	3150.632	15.00 ea	33.00 /mh	99	5.00 /ea	75		/ea		/ea		174	218
	Pipe Tie Downs (Small)	3150.200	7.00 ea	33.00 /mh	924	100.00 /ea	700		/ea		/ea		1,624	2,031
	Dimension Lumber	3150.200	137.50 sf	/sf		0.50 /sf	69		/sf		/sf		69	69
	Oil SOG Form	3100.310	137.50 sf	/sf		0.02 /sf	3		/sf		/sf		3	3
	Finish- Rough	3350.110	62.50 sf	33.00 /mh	19	0.01 /sf	0		/sf		/sf		19	27
	Liquid Curing Compounds	3390.170	62.50 sf	33.00 /mh	4	0.06 /sf	4		/sf		/sf		8	10
	Form Rectangle Columns	3100.110	40.00 sf	33.00 /mh	462	2.00 /sf	84		/sf		/sf		546	749
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.20 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	760	1,800.00 /Mnth	360	1,120	1,120
	Rebar Supply	3200.980	0.80 tn	/tn		1,600.00 /tn	1,280		/tn		/tn		1,280	1,280
	Rebar Install Self	3200.980	0.80 tn	33.00 /mh	792	/tn			/tn		/tn		792	1,140
	40 SLD Aerated Sludge Holding Tank													
	Concrete Concrete													
	019-100 Water Test Basin													
	Water Test Basins	3995.200	1.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	Pumps and hoses	3995.200	1.00 ls	/ls		1,500.00 /ls	1,500		/ls		/ls		1,500	1,500
	Temporary Bulkheads	3995.200	1.00 ls	33.00 /mh	132	250.00 /ls	250		/ls		/ls		382	440
	Urethane Injection System	3995.200	1.00 ls	33.00 /mh	6,336	3,500.00 /ls	3,500		750.00 /ls	750	/ls		10,586	13,374
	0302- Solids Tank Stair foundation and 6' X6' Pad at bottom													
	4500 psi Concrete	3310.100	3.00 cy	/cy		198.00 /cy	636		/cy		/cy		636	636
	Slab Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	3.00 cy	33.00 /mh	159	/cy			/cy		35.00 /cy	112	271	341
	Formwork S.O.G. Edge Form > 1'	3100.120	42.00 sf	33.00 /mh	693	2.00 /sf	88		/sf		/sf		781	1,086
	Formwork S.O.G. Edge Form < 1'	3100.120	16.08 sf	33.00 /mh	265	2.00 /sf	34		/sf		/sf		299	416
	Finegrade Below Concrete	3150.650	46.00 sf	33.00 /mh	21	/sf			/sf		/sf		21	31
	Finish- Hard Trowel	3350.110	46.00 sf	33.00 /mh	21	/sf			/sf		/sf		21	31
	Liquid Curing Compounds	3390.170	46.00 sf	33.00 /mh	3	0.06 /sf	3		/sf		/sf		6	7
	Chamfer 3/4"	3150.625	14.00 lf	33.00 /mh	23	0.25 /lf	4		/lf		/lf		27	37
	Road Base Below Concrete	2305.300	1.70 cy	33.00 /mh	56	25.00 /ton	84		/cy		/cy		140	165
	Expansion Joint	3150.720	4.02 sf	33.00 /mh	13	12.00 /sf	51		/sf		/sf		64	70
	Expansion Joint Sealant	3150.720	6.00 lf	33.00 /mh	20	2.00 /lf	13		/lf		/lf		32	41
	Oil SOG Form	3100.310	58.08 sf	/sf		0.02 /sf	1		/sf		/sf		1	1
	Nails and Hardware	3150.200	58.08 sf	/sf		0.04 /sf	2		/sf		/sf		2	2
	Dimension Lumber	3150.200	58.08 sf	/sf		0.50 /sf	29		/sf		/sf		29	29
	SOG Rebar	3210.104	0.20 tn	33.00 /mh	264	1,600.00 /tn	336		/tn		/tn		600	716
	0308- Solids Tank Base Slab													
	4500 psi Concrete	3310.100	202.00 cy	/cy		198.00 /cy	42,796		/cy		/cy		42,796	42,796
	Slab Placement Count	3310.360	4.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	202.00 cy	33.00 /mh	5,706	/cy			/cy		35.00 /cy	7,565	13,271	15,782
	Formwork S O G. Edge Form > 1' Circular Slab	3100.120	417.00 sf	33.00 /mh	6,881	2.00 /sf	876		/sf		/sf		7,756	10,784
	Formwork S.O.G. Const Joints > 1'	3100.120	290.00 sf	33.00 /mh	4,402	2.00 /sf	609		/sf		/sf		5,011	6,948
	CJ Prep Slab	3350.170	232.00 sf	33.00 /mh	191	0.15 /sf	35		/sf		/sf		226	310
	Finegrade Below Concrete	3150.650	2,642.08 sf	33.00 /mh	1,221	/sf			/sf		/sf		1,221	1,758
	Finish- Hard Trowel	3350.110	2,642.08 sf	33.00 /mh	1,221	/sf			/sf		/sf		1,221	1,758
	Water Cure	3390.170	2,642.08 sf	33.00 /mh	174	0.10 /sf	264		/sf		/sf		439	515
	Blockouts in Concrete	3150.194	16.00 sf	33.00 /mh	185	2.00 /sf	32		/sf		/sf		217	298
	Waterstop 6" Flat	3510.610	320.00 lf	33.00 /mh	1,056	6.00 /lf	2,016		/lf		/lf		3,072	3,537
	Keyway 4"	3150.620	116.00 lf	33.00 /mh	766	1.00 /lf	122		/lf		/lf		887	1,224
	Oil SOG Form	3100.310	417.00 sf	/sf		0.02 /sf	8		/sf		/sf		8	8
	Nails and Hardware	3150.200	417.00 sf	/sf		0.04 /sf	17		/sf		/sf		17	17
	Dimension Lumber	3150.200	417.00 sf	/sf		0.50 /sf	209		/sf		/sf		209	209
	Waterstop Fitting - Vertical Tee	3510.610	8.00 ea	33.00 /mh	264	71.00 /ea	568		/ea		/ea		832	948
	Waterstop Fitting - Flat Cross	3510.610	1.00 ea	33.00 /mh	33	102.00 /ea	102		/ea		/ea		135	150
	Flow Fill under slab at thickened	3310.105	25.00 cy	33.00 /mh	1,238	152.00 /cy	3,990		/cy		/cy		5,228	5,772
	0309- Sludge Tank Walls													
	Pump Place Walls	3310.260	190.66 cy	33.00 /mh	8,415	/cy			/cy		35.00 /cy	7,140	15,555	19,258
	4500 psi Concrete	3310.100	190.66 cy	/cy		198.00 /cy	40,392		/cy		/cy		40,392	40,392
	Wall Placement Count	3310.360	4.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Radius Gang Forms 16- >	3100.182	7,740.88 sf	33.00 /mh	38,317	6.00 /sf	48,768		/sf		/sf		87,085	103,945
	Wall Bulkhead Forms	3150.192	117.04 sf	33.00 /mh	1,777	2.00 /sf	246		/sf		/sf		2,022	2,804
	CJ Prep Walls	3350.170	351.03 sf	33.00 /mh	290	0.15 /sf	53		/sf		/sf		342	470
	Finish- Top of Wall	3350.110	233.99 sf	33.00 /mh	108	/sf			/sf		/sf		108	156
	Liquid Curing Walls	3390.170	7,974.87 sf	33.00 /mh	263	0.06 /sf	478		/sf		/sf		742	857
	Grind/Patch Walls	3350.130	7,740.88 sf	33.00 /mh	3,065	0.07 /sf	542		/sf		/sf		3,607	4,956
	Blockouts in Concrete	3150.194	24.00 sf	33.00 /mh	277	2.00 /sf	48		/sf		/sf		325	447
	Waterstop 6" Flat	3510.610	268.00 lf	33.00 /mh	884	6.00 /lf	1,688		/lf		/lf		2,573	2,962
	Keyway 4"	3150.620	88.00 lf	33.00 /mh	581	1.00 /lf	92		/lf		/lf		673	929
	Chamfer 3/4"	3150.625	352.00 lf	33.00 /mh	581	0.25 /lf	92		/lf		/lf		673	929
	Rub Walls	3350.140	6,160.00 sf	33.00 /mh	10,164	0.25 /sf	1,540		/sf		/sf		11,704	16,176
	Oil Wall Forms	3100.310	7,740.88 sf	/sf		0.02 /sf	155		/sf		/sf		155	155
	Nails and Hardware	3150.200	7,740.88 sf	/sf		0.04 /sf	310		/sf		/sf		310	310
	Form Ties 16"	3150.632	1,935.22 ea	/ea		2.80 /ea	5,419		/ea		/ea		5,419	5,419
	Dimension Lumber	3150.200	7,740.88 sf	/sf		0.50 /sf	3,870		/sf		/sf		3,870	3,870
	0330 4- Solids Tank to Dewatering 6" Encasement under slab													
	Formwork Pipe Encasement	3100.108	197.50 sf	33.00 /mh	1,629	2.00 /sf	415		/sf		/sf		2,044	2,761
	Place Pipe Encasement	3310.195	14.00 cy	33.00 /mh	593	175.00 /cy	2,622		/cy		/cy		3,215	3,476
	Nails and Hardware	3150.200	197.50 sf	/sf		0.04 /sf	8		/sf		/sf		8	
	Form Ties Specialty	3150.632	21.00 ea	33.00 /mh	139	5.00 /ea	105		/ea		/ea		244	
	Pipe Tie Downs (Small)	3150.200	10.00 ea	33.00 /mh	1,320	100.00 /ea	1,000		/ea		/ea		2,320	

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0330 4- Solids Tank to Dewatering 6" Encasement under slab													
	Dimension Lumber	3150.200	197.50 sf	/sf		0.50 /sf	99		/sf		/sf		99	99
	Oil SOG Form	3100.310	197.50 sf	/sf		0.02 /sf	4		/sf		/sf		4	4
	Finish- Rough	3350.110	92.50 sf	33.00 /mh	27	0.01 /sf	1		/sf		/sf		28	40
	Liquid Curing Compounds	3390.170	92.50 sf	33.00 /mh	6	0.06 /sf	6		/sf		/sf		12	14
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	Rebar Supply	3200.980	1.40 tn	/tn		1,600.00 /tn	2,240		/tn		/tn		2,240	2,240
	Rebar Install Self	3200.980	14.00 tn	33.00 /mh	13,860	/tn			/tn		/tn		13,860	19,958
	Form Rectangle Columns	3100.110	70.00 sf	33.00 /mh	809	2.00 /sf	147		/sf		/sf		956	1,311
	42 SDL Site Drain Lift Station													
	Concrete Concrete													
	0302- In Plant Lift Station Top pipe support slab													
	4500 psi Concrete	3310.100	2.00 cy	/cy		198.00 /cy	424		/cy		/cy		424	424
	Slab Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Truck Place Slab on Grade	3310.230	2.00 cy	33.00 /mh	141	/cy			/cy		/cy		141	203
	Formwork S.O.G. Edge Form < 1'	3100.120	32.16 sf	33.00 /mh	371	2.00 /sf	68		/sf		/sf		439	602
	Finegrade Below Concrete	3150.650	76.00 sf	33.00 /mh	35	/sf			/sf		/sf		35	51
	Finish- Hard Trowel	3350.110	76.00 sf	33.00 /mh	35	/sf			/sf		/sf		35	51
	Liquid Curing Compounds	3390.170	76.00 sf	33.00 /mh	5	0.06 /sf	5		/sf		/sf		10	12
	Road Base Below Concrete	2305.300	2.82 cy	33.00 /mh	93	25.00 /ton	139		/cy		/cy		232	273
	Expansion Joint	3150.720	6.70 sf	33.00 /mh	22	12.00 /sf	84		/sf		/sf		107	116
	Expansion Joint Sealant	3150.720	10.00 lf	33.00 /mh	33	2.00 /lf	21		/lf		/lf		54	69
	Oil SOG Form	3100.310	32.16 sf	/sf		0.02 /sf	1		/sf		/sf		1	1
	Nails and Hardware	3150.200	32.16 sf	/sf		0.04 /sf	1		/sf		/sf		1	1
	Dimension Lumber	3150.200	32.16 sf	/sf		0.50 /sf	16		/sf		/sf		16	16
	SOG Rebar	3210.104	0.24 tn	33.00 /mh	312	1,600.00 /tn	397		/tn		/tn		708	845
	0302-B Concrete Fill at In Plant Lift Station													
	4500 psi Concrete	3310.100	2.00 cy	/cy		198.00 /cy	424		/cy		/cy		424	424
	Truck Place Slab on Grade	3310.230	2.00 cy	33.00 /mh	282	/cy			/cy		/cy		282	407
	Formwork S.O.G. Edge Form < 1'	3100.120	74.00 sf	33.00 /mh	855	2.00 /sf	155		/sf		/sf		1,010	1,386
	Finish- Hard Trowel	3350.110	36.00 sf	33.00 /mh	17	/sf			/sf		/sf		17	24
	Liquid Curing Compounds	3390.170	36.00 sf	33.00 /mh	2	0.06 /sf	2		/sf		/sf		5	6
	Oil SOG Form	3100.310	74.00 sf	/sf		0.02 /sf	1		/sf		/sf		1	1
	Nails and Hardware	3150.200	74.00 sf	/sf		0.04 /sf	3		/sf		/sf		3	3
	Dimension Lumber	3150.200	74.00 sf	/sf		0.50 /sf	37		/sf		/sf		37	37
	CJ Prep Slab	3350.170	36.00 sf	33.00 /mh	30	0.15 /sf	5		/sf		/sf		35	48
	50 ODC Odor Control													
	Concrete Concrete													
	0302- Headworks Odor Control Slab													
	4500 psi Concrete	3310.100	17.78 cy	/cy		198.00 /cy	3,766		/cy		/cy		3,766	3,766
	Truck Place Slab on Grade	3310.230	17.78 cy	33.00 /mh	753	/cy			/cy		/cy		753	1,085
	Formwork S.O.G. Edge Form < 1'	3100.120	92.00 sf	33.00 /mh	1,063	2.00 /sf	193		/sf		/sf		1,256	1,723
	Finegrade Below Concrete	3150.650	480.00 sf	33.00 /mh	222	/sf			/sf		/sf		222	319
	Finish- Hard Trowel	3350.110	480.00 sf	33.00 /mh	222	/sf			/sf		/sf		222	319
	Liquid Curing Compounds	3390.170	480.00 sf	33.00 /mh	32	0.06 /sf	29		/sf		/sf		60	74
	Blockouts in Concrete	3150.194	24.00 sf	33.00 /mh	277	2.00 /sf	48		/sf		/sf		325	447
	Road Base Below Concrete	2305.300	17.78 cy	33.00 /mh	587	25.00 /ton	880		/cy		/cy		1,467	1,725
	Oil SOG Form	3100.310	92.00 sf	/sf		0.02 /sf	2		/sf		/sf		2	2
	Nails and Hardware	3150.200	92.00 sf	/sf		0.04 /sf	4		/sf		/sf		4	4
	Dimension Lumber	3150.200	92.00 sf	/sf		0.50 /sf	46		/sf		/sf		46	46
	SOG Rebar	3210.104	2.22 tn	33.00 /mh	2,933	1,600.00 /tn	3,733		/tn		/tn		6,666	7,956
	60 ELE Electrical Bldg													
	Concrete Concrete													
	0302- Electric Building Footing													
	4500 psi Concrete	3310.100	5.33 cy	/cy		198.00 /cy	1,130		/cy		/cy		1,130	1,130
	Slab Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	5.33 cy	33.00 /mh	565	/cy			/cy		/cy	35.00	765	1,013
	Formwork S.O.G. Edge Form < 1'	3100.120	80.00 sf	33.00 /mh	924	2.00 /sf	168		/sf		/sf		1,092	1,499
	Formwork S.O.G. Const Joints < 1'	3100.120	8.00 sf	33.00 /mh	121	2.00 /sf	17		/sf		/sf		138	192
	CJ Prep Slab	3350.170	8.00 sf	33.00 /mh	7	0.15 /sf	1		/sf		/sf		8	11
	Finegrade Below Concrete	3150.650	144.00 sf	33.00 /mh	950	/sf			/sf		/sf		950	1,369
	Finish- Hard Trowel	3350.110	144.00 sf	33.00 /mh	67	/sf			/sf		/sf		67	96
	Liquid Curing Compounds	3390.170	144.00 sf	33.00 /mh	10	0.06 /sf	9		/sf		/sf		18	22
	Oil SOG Form	3100.310	88.00 sf	/sf		0.02 /sf	2		/sf		/sf		2	2
	Nails and Hardware	3150.200	80.00 sf	/sf		0.04 /sf	3		/sf		/sf		3	3
	Dimension Lumber	3150.200	80.00 sf	/sf		0.50 /sf	40		/sf		/sf		40	40
	0302- Electric Building Floor Slab													
	4500 psi Concrete	3310.100	7.94 cy	/cy		198.00 /cy	1,683		/cy		/cy		1,683	1,683
	Slab Placement Count	3310.360	3.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Pump Place Slab on Grade	3310.230	7.94 cy	33.00 /mh	841	/cy			/cy		/cy	35.00	297	1,139
	Formwork S.O.G. Edge Form < 1'	3100.120	54.50 sf	33.00 /mh	629	2.00 /sf	114		/sf		/sf		744	1,021
	Formwork S.O.G. Const Joints < 1'	3100.120	20.00 sf	33.00 /mh	304	2.00 /sf	42		/sf		/sf		346	479
	CJ Prep Slab	3350.170	20.00 sf	33.00 /mh	17	0.15 /sf	3		/sf		/sf		20	27
	Finegrade Below Concrete	3150.650	320.10 sf	33.00 /mh	148	/sf			/sf		/sf		148	213
	Finish- Hard Trowel	3350.110	320.10 sf	33.00 /mh	148	/sf			/sf		/sf		148	213
	Liquid Curing Compounds	3390.170	320.10 sf	33.00 /mh	21	0.06 /sf	19		/sf		/sf		40	50
	Blockouts in Concrete	3150.194	48.00 sf	33.00 /mh	554	2.00 /sf	96		/sf		/sf		650	894
	Expansion Joint	3150.720	92.00 sf	33.00 /mh	304	12.00 /sf	1,159		/sf		/sf		1,463	1,596
	Expansion Joint Sealant	3150.720	92.00 lf	33.00 /mh	304	2.00 /lf	193		/lf		/lf		497	
	Oil SOG Form	3100.310	61.65 sf	/sf		0.02 /sf	1		/sf		/sf		1	
	Nails and Hardware	3150.200	54.50 sf	/sf		0.04 /sf	2		/sf		/sf		2	

Spreadsheet Level		Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
0302- Electric Building Floor Slab														
	Dimension Lumber	3150.200	54.50 sf	/sf		0.50 /sf	27		/sf		/sf		27	27
0302- Electric Building Stoop at front Door														
	4500 psi Concrete	3310.100	1.00 cy	/cy		198.00 /cy	212		/cy		/cy		212	212
	Slab Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Truck Place Slab on Grade	3310.230	1.00 cy	33.00 /mh	141	/cy			/cy		/cy		141	203
	Formwork S.O.G. Edge Form < 1'	3100.120	16.08 sf	33.00 /mh	186	2.00 /sf	34		/sf		/sf		219	301
	Finegrade Below Concrete	3150.650	36.00 sf	33.00 /mh	17	/sf			/sf		/sf		17	24
	Finish- Hard Trowel	3350.110	36.00 sf	33.00 /mh	17	/sf			/sf		/sf		17	24
	Liquid Curing Compounds	3390.170	36.00 sf	33.00 /mh	2	0.06 /sf	2		/sf		/sf		5	6
	Blockouts in Concrete	3150.194	48.00 sf	33.00 /mh	554	2.00 /sf	96		/sf		/sf		650	894
	Road Base Below Concrete	2305.300	1.33 cy	33.00 /mh	44	25.00 /ton	66		/cy		/cy		110	129
	Expansion Joint	3150.720	4.02 sf	33.00 /mh	13	12.00 /sf	51		/sf		/sf		64	70
	Expansion Joint Sealant	3150.720	6.00 lf	33.00 /mh	20	2.00 /lf	13		/lf		/lf		32	41
	Oil SOG Form	3100.310	16.08 sf	/sf		0.02 /sf	0		/sf		/sf		0	0
	Nails and Hardware	3150.200	16.08 sf	/sf		0.04 /sf	1		/sf		/sf		1	1
	Dimension Lumber	3150.200	16.08 sf	/sf		0.50 /sf	8		/sf		/sf		8	8
	SOG Rebar	3210.104	0.11 tn	33.00 /mh	148	1,600.00 /tn	189		/tn		/tn		337	402
0302- Electric Room HVAC Slab														
	4500 psi Concrete	3310.100	6.26 cy	/cy		198.00 /cy	1,326		/cy		/cy		1,326	1,326
	Truck Place Slab on Grade	3310.230	6.26 cy	33.00 /mh	442	/cy			/cy		/cy		442	636
	Formwork S.O.G. Edge Form < 1'	3100.120	52.00 sf	33.00 /mh	601	2.00 /sf	109		/sf		/sf		710	974
	Finegrade Below Concrete	3150.650	169.00 sf	33.00 /mh	78	/sf			/sf		/sf		78	112
	Finish- Hard Trowel	3350.110	169.00 sf	33.00 /mh	78	/sf			/sf		/sf		78	112
	Liquid Curing Compounds	3390.170	169.00 sf	33.00 /mh	11	0.06 /sf	10		/sf		/sf		21	26
	Blockouts in Concrete	3150.194	8.00 sf	33.00 /mh	92	2.00 /sf	16		/sf		/sf		108	149
	Road Base Below Concrete	2305.300	6.26 cy	33.00 /mh	207	25.00 /ton	310		/cy		/cy		516	607
	Expansion Joint	3150.720	13.00 sf	33.00 /mh	43	12.00 /sf	164		/sf		/sf		207	226
	Expansion Joint Sealant	3150.720	13.00 lf	33.00 /mh	43	2.00 /lf	27		/lf		/lf		70	89
	Oil SOG Form	3100.310	52.00 sf	/sf		0.02 /sf	1		/sf		/sf		1	1
	Nails and Hardware	3150.200	52.00 sf	/sf		0.04 /sf	2		/sf		/sf		2	2
	Dimension Lumber	3150.200	52.00 sf	/sf		0.50 /sf	26		/sf		/sf		26	26
	SOG Rebar	3210.104	0.78 tn	33.00 /mh	1,032	1,600.00 /tn	1,314		/tn		/tn		2,346	2,800
0303- Electric Room Stem Walls														
	Pump Place Walls	3310.260	14.14 cy	33.00 /mh	998	/cy			/cy		35.00 /cy	529	1,528	1,967
	4500 psi Concrete	3310.100	14.14 cy	/cy		198.00 /cy	2,995		/cy		/cy		2,995	2,995
	Wall Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Rented Form System 0-4'	3100.180	574.00 sf	33.00 /mh	3,788	1.75 /sf	1,055		/sf		/sf		4,843	6,510
	Wall Bulkhead Forms	3150.192	9.31 sf	33.00 /mh	141	2.00 /sf	20		/sf		/sf		161	223
	CJ Prep Walls	3350.170	118.37 sf	33.00 /mh	98	0.15 /sf	18		/sf		/sf		115	158
	Finish- Top of Wall	3350.110	109.06 sf	33.00 /mh	50	/sf			/sf		/sf		50	73
	Liquid Curing Walls	3390.170	683.06 sf	33.00 /mh	23	0.06 /sf	41		/sf		/sf		64	73
	Grind/Patch Walls	3350.130	574.00 sf	33.00 /mh	227	0.07 /sf	40		/sf		/sf		267	368
	Blockouts in Concrete	3150.194	96.00 sf	33.00 /mh	1,109	2.00 /sf	192		/sf		/sf		1,301	1,789
	Rub Walls	3350.140	164.00 sf	33.00 /mh	271	0.25 /sf	41		/sf		/sf		312	431
	Oil Wall Forms	3100.310	574.00 sf	/sf		0.02 /sf	11		/sf		/sf		11	11
	Nails and Hardware	3150.200	574.00 sf	/sf		0.04 /sf	23		/sf		/sf		23	23
	Form Ties 16"	3150.632	143.50 ea	/ea		2.80 /ea	402		/ea		/ea		402	402
	Dimension Lumber	3150.200	574.00 sf	/sf		0.50 /sf	287		/sf		/sf		287	287
	Rebar Templates	3200.980	82.00 lf	33.00 /mh	135	0.50 /lf	41		/lf		/lf		176	236
0310- Electric Room Equip Pads														
	Equipment Pad Form 6"	3100.164	53.00 sf	33.00 /mh	612	2.00 /sf	111		/sf		/sf		723	993
	Oil Equipment Pad Form	3100.310	53.00 sf	/sf		0.02 /sf	1		/sf		/sf		1	1
	4500 psi Concrete	3310.100	4.00 cy	/cy		198.00 /cy	847		/cy		/cy		847	847
	Other Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Buggy Place Equipment Pads	3310.300	4.00 cy	33.00 /mh	424	/cy			/cy		/cy		424	610
	Liquid Curing Compounds	3390.170	150.00 sf	33.00 /mh	10	0.06 /sf	9		/sf		/sf		19	23
	Finish- Hard Trowel	3350.110	150.00 sf	33.00 /mh	69	/sf			/sf		/sf		69	100
	Chamfer	3150.625	56.00 lf	33.00 /mh	28	0.25 /lf	15		/lf		/lf		42	54
	Misc. Pad Rebar	3210.104	0.35 tn	33.00 /mh	458	1,600.00 /tn	582		/tn		/tn		1,040	1,242
	Nails and Hardware	3150.200	53.00 sf	/sf		0.04 /sf	2		/sf		/sf		2	2
	Drill and Epoxy #4	3210.101	106.00 ea	33.00 /mh	875	5.00 /ea	557		/ea		/ea		1,431	1,816
034100 Precast Structural Concrete														
01 CIV Civil														
Sitework Sitework														
026-1- Precast Concrete All														
	Supply Precast Package (include Pressure clean out)	2327.005	1.00 ls	/ls		50,220.00 /ls	50,220		/ls		/ls		50,220	50,220
	In plant lift station (may be cast in place)	2327.020	1.00 ls	33.00 /mh		65,000.00 /ls	65,000		/ls		/ls		65,000	65,000
	MH-1 (4' dia 6' tall)	2327.010	1.00 ea	33.00 /mh		0.01 /ea	0		/ea		/ea		0	0
	MH-2 (4' dia 6' tall)	2327.010	1.00 ea	33.00 /mh		0.01 /ea	0		/ea		/ea		0	0
	MH-3 (4' dia 6' tall)	2327.010	1.00 ea	33.00 /mh		0.01 /ea	0		/ea		/ea		0	0
	MH-4 (5' dia 5' tall)	2327.010	1.00 ea	33.00 /mh		0.01 /ea	0		/ea		/ea		0	0
	MH-5 (5' dia 10 tall)	2327.010	1.00 ea	33.00 /mh		0.01 /ea	0		/ea		/ea		0	0
	MH-6 Chem Vault Manhole	2327.010	1.00 ea	33.00 /mh		0.01 /ea	0		/ea		/ea		0	0
	In Plant Pump Station (5' X 8' Box X 23' deep)	2327.010	1.00 ea	33.00 /mh		0.01 /ea	0		/ea		/ea		0	0
	Specialty Lifting Equipment	2327.010	1.00 ls	33.00 /mh	396	5,000.00 /ls	5,000		/ls		/ls		5,396	5,570
	Manhole Meter Vault for Potable Water	2327.010	1.00 ls	33.00 /mh	1,056	12,000.00 /ls	12,000		/ls		/ls		13,056	13,521
	Instrument - Flow - Magnetic Flow Meter -6" incomming water	17200.000	1.00 ea	33.00 /mh	132	0.00 /ea	0	8,000	/ea		/ea		8,132	8,190
	3rd Party Crane w Operator (set In Plant Lift Station)	1900.100	1.00 ls	/ls		/ls		6,000	/ls		/ls		6,000	6,000
	Splash Blocks	3450.110	12.00 ea	33.00 /mh	99	75.00 /ea	900		/mh		/ea		999	999
040000 Masonry														

108

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
00 GEN	General													
	Masonry Masonry													
04000	- Masonry for Headworks and Electric Buiding													
	Sub - Masonry Subcontr	4000.980	1.00 ls	/ls		/ls		350,000	/ls		/ls		350,000	350,000
	Sub - Masonry Bond	4000.980	1.00 ls	/ls		/ls			/ls		/ls			
	Temp Shore Opening Medium (2-4' wide)	4000.210	20.00 ea	33.00 /mh	2,640	50.00 /ea	1,000		/ea		/ea		3,640	4,802
	Temp Shore Opening Large (double door sna garage doors)	4000.210	4.00 ea	33.00 /mh	2,112	50.00 /ea	200		/ea		/ea		2,312	3,241
	Masonry Rebar Supply	3200.980	1.00 ls	/ls		21,600.00 /ls	21,600		/ls		/ls		21,600	21,600
	Masonry Rebar Dray	4080.210	1.00 mnhr	33.00 /mh	792	/mnhr			/mnhr		/mnhr		792	1,140
	RT Telescopic Forklift (12,000 lb) (130 HP) (L)	1900.300	0.50 Mnth	/Mnth		/Mnth			4,200.00 /Mnth	2,100	1,500.00 /Mnth	750	2,850	2,850
051200	Structural Steel Framing													
10 HWK	Headworks Building													
	Metals Metals													
05 50-	Trusses & Metal Deck													
	Trusses	5001.130	19.00 ea	33.00 /mh	7,524	/ea			/ea		/ea		7,524	10,835
	Embed Plate (2) 3/8"x6"x9" connected w/ (2) 5/8" x 8" A Bolt	5001.145	38.00 ea	33.00 /mh	1,254	0.01 /ea	0		/ea		/ea		1,254	1,806
	Field Welding	5000.985	40.00 hrs	33.00 /mh	1,320	/hrs		5,000	/hrs		/hrs		6,320	6,901
	Grove RT750, 50 ton (190 HP) (L)	1900.100	1.00 mnth	4,600.00 /mnth	4,600	450.00 /mnth	450		9,500.00 /mnth	9,500	2,250.00 /mnth	2,250	16,800	18,824
	Steel Roof Decking	5050.200	7,131.00 sf	/sf		0.00 /sf	0		/sf		/sf			
	Hilti X-EDN 19 THQ12 Powder Activiated Fasteners	5001.061	2,964.00 ea	33.00 /mh	4,891	1.00 /ea	2,964		/ea		/ea		7,855	10,006
	Punchlok (Decking Overlap, every 12") or 1/2" Dia Seam Weld	5001.061	2,106.00 ea	33.00 /mh	3,475	1.00 /ea	2,106		/ea		/ea		5,581	7,110
	Metal Truss Bracing	6170.500	1,332.00 ea	33.00 /mh	8,791	2.00 /ea	2,850		/ea		/ea		11,642	15,510
	Metal Truss Bracing outlooker studs	6170.500	44.00 ea	33.00 /mh	4,356	10.00 /ea	471		/ea		/ea		4,827	6,743
	Outlooker plates embed	3410.120	40.00 ea	33.00 /mh	1,320	/ea			/ea		/ea		1,320	1,901
	Truss Package Supply	6170.300	1.00 ls	/ls		81,732.00 /ls	81,732		/ls		/ls		81,732	81,732
	Boom Lift (L)	1900.300	3.00 Mnth	/Mnth		/Mnth			3,200.00 /Mnth	9,600	1,250.00 /Mnth	3,750	13,350	13,350
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	2.00 Mnth	/Mnth		/Mnth			950.00 /Mnth	1,900	100.00 /Mnth	200	2,100	2,100
055000	Misc. Metals													
00 GEN	General													
	Metals Metals													
05 50-	Purchase Misc. Metals													
	Purchase Misc Metals	5001.130	1.00 ls	33.00 /mh		873,713.00 /ls	873,713		/ls		/ls		873,713	873,713
	Kobelco CK1100G-2 - 110 Ton (332 HP) (L)	1900.100	0.50 mnth	5,629.00 /mnth	2,815	550.00 /mnth	275		14,000.00 /mnth	7,000	2,500.00 /mnth	1,250	11,340	12,578
	RT Telescopic Forklift (12,000 lb) (130 HP) (L)	1900.300	2.00 Mnth	/Mnth		/Mnth			4,200.00 /Mnth	8,400	1,500.00 /Mnth	3,000	11,400	11,400
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	2.00 Mnth	/Mnth		/Mnth			950.00 /Mnth	1,900	100.00 /Mnth	200	2,100	2,100
	Additional Grating Supports at MBR	5120.004	1.00 ls	/ls		75,000.00 /ls	75,000		/ls		/ls		75,000	75,000
	Grove RT750, 50 ton (190 HP) (L)	1900.100	0.50 mnth	4,600.00 /mnth	2,300	450.00 /mnth	225		9,500.00 /mnth	4,750	2,250.00 /mnth	1,125	8,400	9,412
01 CIV	Civil													
	Metals Metals													
05 55-	Bollards													
	Bollards - 8" x 7"	5001.125	45.00 ea	33.00 /mh	29,700	0.01 /ea	0		/ea		/ea		29,700	42,768
	Excavation - Dental	2317.105	45.00 cy	33.00 /mh		/cy			/cy		/cy			
	Backfill - Dental	2319.302	14.00 cy	33.00 /mh		/cy			/cy		/cy			
	4500 psi Concrete	3310.100	29.00 cy	/cy		198.00 /cy	6,144		/cy		/cy		6,144	6,144
	Finish- Broom	3350.110	20.00 sf	33.00 /mh	9	0.01 /sf	0		/sf		/sf		9	13
	Liquid Curing Compounds	3390.170	20.00 sf	33.00 /mh	1	0.06 /sf	1		/sf		/sf		3	3
	Bobcat Skid Steer (85hp)- track (L) with auger	1900.131	1.00 Mnth	/Mnth		/Mnth			4,300.00 /Mnth	4,300	2,000.00 /Mnth	2,000	6,300	6,300
	Formwork Sonotube 24"	3100.112	180.00 lf	33.00 /mh		16.00 /lf	3,024		/lf		/lf		3,024	3,024
09 IPS	Influent Pump Station													
	Metals Metals													
05 50-	Manhole Steps													
	Install Manhole Steps	5001.130	7.00 ea	33.00 /mh	578	/ea			/ea		/ea		578	832
	Epoxy	5001.051	1.00 ls	33.00 /mh	2	150.00 /ls	150		/ls		/ls		152	152
10 HWK	Headworks Building													
	Metals Metals													
05 50-	Metal Frame - 10x12 Doors 10A902													
	3/16" Bent Steel Plate w/1/2" Dia x 6" Lng AB @32" OC GALV	5001.130	6.00 ea	33.00 /mh	2,376	/ea			/ea		/ea		2,376	3,421
05 50-	Metal Floor Angle													
	Metal Floor Angle - Imbedded 12' wide	5001.130	3.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
05 50-	Cast Stone Sill Angle w/Bolt 10A903													
	Angle 3x3 w/Bolt includes electric building	5001.130	390.00 lf	33.00 /mh	2,574	/lf			/lf		/lf		2,574	3,707
	Epoxy Anchor 3/8 x 5in SS 304	5001.053	390.00 ea	33.00 /mh	1,287	8.00 /ea	3,120		/ea		/ea		4,407	4,973
11 EQB	EQ Basin													
	Metals Metals													
05 02-	Crane Assembly													
	Erect Steel W 10x26 Beam (22'-9" Long)	5120.010	1.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	5/8" Dia Square Bend U Bolts w/2" SS Washers & Nuts	5120.010	4.00 ea	/ea		0.01 /lbs	1		/ea		/ea		1	1
	Erect Steel W 10x12 Columns (6'-10" Tall)	5120.010	2.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	3/4" SS Fasteners & Hardware	5001.063	8.00 ea	33.00 /mh		0.01 /ea	0		/ea		/ea		0	0
	4x4x1/4 HSS w/8x4x1/4" Plate	5120.004	4.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	3/4" SS Fasteners	5001.063	16.00 ea	33.00 /mh		0.01 /ea	0		/ea		/ea		0	0
	Base Plate	5124.005	4.00 ea	/ea		0.00 /lbs	0		/ea		/ea			
	3/4" SS Anchor Bolts 10" Long	5001.063	16.00 ea	33.00 /mh	132	25.00 /ea	400		/ea		/ea		532	590
	Grout Bearing Plates	3150.700	4.00 ea	33.00 /mh	132	10.00 /ea	40		/ea		/ea		172	230
23 MBR	MBR Building													
	Metals Metals													
05 50-	Baffle Wall Assembly													
	Baffle Wall Assembly	5001.130	4.00 ea	33.00 /mh	3,168	/ea			/ea		/ea		3,168	4,562

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
05	50- Baffle Wall Assembly													
	1/2" Dia Anchor Bolts 316 SS 7.5" Long	3150.700	32.00 ea	33.00 /mh	211	20.00 /ea	640		/ea		/ea		851	944
05	50- Bridge Crane Runway Beams													
	Runway Beams W16x67 - 108' Long	5001.130	2.00 ea	33.00 /mh	3,168	/ea			/ea		/ea		3,168	4,562
	Anchor Bolt 3/4x8 HDG	5001.061	48.00 ea	33.00 /mh	396	25.00 /ea	1,200		/ea		/ea		1,596	1,770
05	50- Wall Flashing around Pipe Penetration													
	2'-6" x 2'-6" 20 GA Gal. Sheet Metal	5001.130	3.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
	Caulking (10 LF Ea)	7920.200	30.00 lf	33.00 /mh	198	2.00 /lf	64		/lf		/lf		262	349
	1/4" x 1" SS Anchors (16 EA)	5590.100	48.00 ea	/ea		/ea			/ea		/ea			
05	50- Wall Flashing around Screw Conveyors and Dumpster Plate/ Angles													
	2'-6" x 2'-6" 20 GA Gal. Sheet Metal	5001.130	2.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	Caulking (10 LF Ea)	7920.200	20.00 lf	33.00 /mh	132	2.00 /lf	43		/lf		/lf		175	233
	1/4" x 1" SS Anchors (16 EA)	5590.100	32.00 ea	/ea		/ea			/ea		/ea			
	Dumpster Plates 8' with studs	5001.130	8.00 ea	33.00 /mh	4,224	/ea			/ea		/ea		4,224	6,083
	Dumpster Angles	5001.130	8.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	Field Welding - Carbon Steel	5000.985	8.00 hrs	33.00 /mh	264	/hrs		1,000	/hrs		/hrs		1,264	1,380
055100	Metal Stairs													
10	HWK Headworks Building													
	Metals Metals													
05	50- Stair 10S502 Stair 1													
	10' Tall Stair	5001.130	1.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
	Stairway Handrail	5001.115	32.00 lf	33.00 /mh	1,584	0.00 /lf	0		/lf		/lf		1,584	2,281
	Anchor Bolt 5/8x6 SS 304 (Stringer to Wall)	5001.063	8.00 ea	33.00 /mh	66	15.00 /ea	120		/ea		/ea		186	215
	Anchor Bolt 5/8x6 SS 304 (Stringer to Floor)	5001.063	8.00 ea	33.00 /mh	66	15.00 /ea	120		/ea		/ea		186	215
	Grout Bearing Plates	3150.700	4.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
05	50- Stair 10S502 Stair 2													
	10' Tall Stair	5001.130	1.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
	Stairway Handrail	5001.115	32.00 lf	33.00 /mh	1,584	0.00 /lf	0		/lf		/lf		1,584	2,281
	Anchor Bolt 5/8x6 SS 304 (Stringer to Wall)	5001.063	8.00 ea	33.00 /mh	66	15.00 /ea	120		/ea		/ea		186	215
	Anchor Bolt 5/8x6 SS 304 (Stringer to Floor)	5001.063	8.00 ea	33.00 /mh	66	15.00 /ea	120		/ea		/ea		186	215
	Grout Bearing Plates	3150.700	4.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
11	EQB EQ Basin													
	Metals Metals													
05	50- Stair 11S902 Stair 1													
	4' Tall Stair	5001.130	1.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Stairway Handrail	5001.115	14.00 lf	33.00 /mh	693	0.00 /lf	0		/lf		/lf		693	998
	Anchor Bolt 5/8x6 SS 304 (Stringer to Wall/Floor)	5001.063	16.00 ea	33.00 /mh	132	15.00 /ea	240		/ea		/ea		372	430
	Anchor Bolt 5/8x8 SS 304 (Walkway Support)	5001.063	8.00 ea	33.00 /mh	66	15.00 /ea	120		/ea		/ea		186	215
	Grout Bearing Plates	3150.700	6.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Landing Handrail	10260.200	8.00 lf	33.00 /mh	264	0.01 /lf	0		/lf		/lf		264	380
	Landing Grating	5001.120	16.00 sf	33.00 /mh	132	0.00 /sf	0		/sf		/sf		132	190
05	50- Stair 11S902 Stair 2													
	4' Tall Stair	5001.130	1.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Stairway Handrail	5001.115	14.00 lf	33.00 /mh	693	0.00 /lf	0		/lf		/lf		693	998
	Anchor Bolt 5/8x6 SS 304 (Stringer to Wall/Floor)	5001.063	16.00 ea	33.00 /mh	132	15.00 /ea	240		/ea		/ea		372	430
	Anchor Bolt 5/8x8 SS 304 (Walkway Support)	5001.063	4.00 ea	33.00 /mh	33	15.00 /ea	60		/ea		/ea		93	108
	Grout Bearing Plates	3150.700	5.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Landing Handrail	10260.200	12.00 lf	33.00 /mh	396	0.01 /lf	0		/lf		/lf		396	570
	Landing Grating	5001.120	32.00 sf	33.00 /mh	264	/sf			/sf		/sf		264	380
05	50- Stair 11S903 Stair 3													
	4' Tall Stair	5001.130	1.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Stairway Handrail	5001.115	14.00 lf	33.00 /mh	693	0.00 /lf	0		/lf		/lf		693	998
	Anchor Bolt 5/8x6 SS 304 (Stringer to Wall/Floor)	5001.063	16.00 ea	33.00 /mh	132	15.00 /ea	240		/ea		/ea		372	430
	Anchor Bolt 5/8x8 SS 304 (Walkway Support)	5001.063	8.00 ea	33.00 /mh	66	15.00 /ea	120		/ea		/ea		186	215
	Grout Bearing Plates	3150.700	6.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Landing Handrail	10260.200	12.00 lf	33.00 /mh	396	0.01 /lf	0		/lf		/lf		396	570
	Landing Grating	5001.120	32.00 sf	33.00 /mh	264	/sf			/sf		/sf		264	380
20	PBS Process Basin													
	Metals Metals													
05	50- Stair 20S206 Stair 1													
	4' Tall Stair	5001.130	1.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Stairway Handrail	5001.115	14.00 lf	33.00 /mh	693	0.00 /lf	0		/lf		/lf		693	998
	Anchor Bolt 5/8x6 SS 304 (Stringer to Wall/Floor)	5001.063	16.00 ea	33.00 /mh	132	15.00 /ea	240		/ea		/ea		372	430
	Anchor Bolt 5/8x8 SS 304 (Walkway Support)	5001.063	8.00 ea	33.00 /mh	66	15.00 /ea	120		/ea		/ea		186	215
	Grout Bearing Plates	3150.700	6.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Landing Handrail	10260.200	15.00 lf	33.00 /mh	495	0.01 /lf	0		/lf		/lf		495	713
	Landing Grating	5001.120	71.00 sf	33.00 /mh	586	/sf			/sf		/sf		586	843
05	50- Stair 20S207 Stair 2													
	4' Tall Stair	5001.130	1.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Stairway Handrail	5001.115	15.00 lf	33.00 /mh	743	0.00 /lf	0		/lf		/lf		743	1,069
	Anchor Bolt 5/8x6 SS 304 (Stringer to Wall/Floor)	5001.063	16.00 ea	33.00 /mh	132	15.00 /ea	240		/ea		/ea		372	430
	Anchor Bolt 5/8x8 SS 304 (Walkway Support)	5001.063	4.00 ea	33.00 /mh	33	15.00 /ea	60		/ea		/ea		93	108
	Grout Bearing Plates	3150.700	5.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Landing Handrail	10260.200	5.00 lf	33.00 /mh	165	0.01 /lf	0		/lf		/lf		165	238
	Landing Grating	5001.120	25.00 sf	33.00 /mh	206	/sf			/sf		/sf		206	297
05	50- Stair 20S208 Stair 3													
	4' Tall Stair	5001.130	1.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Stairway Handrail	5001.115	14.00 lf	33.00 /mh	693	0.00 /lf	0		/lf		/lf		693	998
	Anchor Bolt 5/8x6 SS 304 (Stringer to Wall/Floor)	5001.063	16.00 ea	33.00 /mh	132	15.00 /ea	240		/ea		/ea		372	430
	Grout Bearing Plates	3150.700	4.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
05	50- Stair 20S208 Stair 4													
	4' Tall Stair	5001.130	1.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Stairway Handrail	5001.115	14.00 lf	33.00 /mh	693	0.00 /lf	0		/lf		/lf		693	998
	Anchor Bolt 5/8x6 SS 304 (Stringer to Wall/Floor	5001.063	16.00 ea	33.00 /mh	132	15.00 /ea	240		/ea		/ea		372	430
	Grout Bearing Plates	3150.700	4.00 ea	33.00 /mh	132	10.00 /ea	40		/ea		/ea		172	230
05	50- Stair 20S209 Stair 5													
	4' Tall Stair	5001.130	1.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Stairway Handrail	5001.115	14.00 lf	33.00 /mh	693	0.00 /lf	0		/lf		/lf		693	998
	Anchor Bolt 5/8x6 SS 304 (Stringer to Wall/Floor	5001.063	16.00 ea	33.00 /mh	132	15.00 /ea	240		/ea		/ea		372	430
	Anchor Bolt 5/8x8 SS 304 (Walkway Support)	5001.063	8.00 ea	33.00 /mh	66	15.00 /ea	120		/ea		/ea		186	215
	Grout Bearing Plates	3150.700	6.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Landing Handrail	10260.200	13.00 lf	33.00 /mh	429	0.01 /lf	0		/lf		/lf		429	618
	Landing Grating	5001.120	32.00 sf	33.00 /mh	264	/sf			/sf		/sf		264	380
05	50- Stair 20S209 Stair 6													
	4' Tall Stair	5001.130	1.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Stairway Handrail	5001.115	14.00 lf	33.00 /mh	693	0.00 /lf	0		/lf		/lf		693	998
	Anchor Bolt 5/8x6 SS 304 (Stringer to Wall/Floor	5001.063	8.00 ea	33.00 /mh	66	15.00 /ea	120		/ea		/ea		186	215
	Anchor Bolt 5/8x8 SS 304 (Walkway Support)	5001.063	8.00 ea	33.00 /mh	66	15.00 /ea	120		/ea		/ea		186	215
	Grout Bearing Plates	3150.700	6.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Landing Handrail	10260.200	13.00 lf	33.00 /mh	429	0.01 /lf	0		/lf		/lf		429	618
	Landing Grating	5001.120	32.00 sf	33.00 /mh	264	/sf			/sf		/sf		264	380
23	MBR MBR Building													
Metals	Metals													
05	50- Stair 23S902 Stair 1													
	3'-6" Tall Stair	5001.130	1.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Stairway Handrail	5001.115	12.00 lf	33.00 /mh	594	0.00 /lf	0		/lf		/lf		594	855
	Anchor Bolt 5/8x6 SS 304 (Stringer to Wall/Floor	5001.063	8.00 ea	33.00 /mh	66	15.00 /ea	120		/ea		/ea		186	215
	Grout Bearing Plates	3150.700	4.00 ea	33.00 /mh	132	10.00 /ea	40		/ea		/ea		172	230
05	50- Stair 23S902 Stair 2													
	3'-6" Tall Stair	5001.130	1.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Stairway Handrail	5001.115	12.00 lf	33.00 /mh	594	0.00 /lf	0		/lf		/lf		594	855
	Anchor Bolt 5/8x6 SS 304 (Stringer to Wall/Floor	5001.063	8.00 ea	33.00 /mh	66	15.00 /ea	120		/ea		/ea		186	215
	Grout Bearing Plates	3150.700	4.00 ea	33.00 /mh	132	10.00 /ea	40		/ea		/ea		172	230
05	50- Stair 23S902 Stair 3													
	3'-6" Tall Stair	5001.130	1.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Stairway Handrail	5001.115	12.00 lf	33.00 /mh	594	0.00 /lf	0		/lf		/lf		594	855
	Anchor Bolt 5/8x6 SS 304 (Stringer to Wall/Floor	5001.063	8.00 ea	33.00 /mh	66	15.00 /ea	120		/ea		/ea		186	215
	Grout Bearing Plates	3150.700	4.00 ea	33.00 /mh	132	10.00 /ea	40		/ea		/ea		172	230
40	SLD Aerated Sludge Holding Tank													
Metals	Metals													
05	50- Stair 40S402 Stair													
	22' Tall Curved Stair w/ Middle Landing	5001.130	1.00 ea	33.00 /mh	5,280	/ea			/ea		/ea		5,280	7,603
	Stairway Handrail	5001.115	44.00 lf	33.00 /mh	2,178	0.00 /lf	0		/lf		/lf		2,178	3,136
	Anchor Bolt 5/8x6 SS 304 (Stringer to Wall/Floor	5001.063	40.00 ea	33.00 /mh	330	15.00 /ea	600		/ea		/ea		930	1,075
	Grout Bearing Plates	3150.700	10.00 ea	33.00 /mh	330	10.00 /ea	100		/ea		/ea		430	575
	Landing Handrail	10260.200	18.00 lf	33.00 /mh	594	0.01 /lf	0		/lf		/lf		594	856
	Landing Grating	5001.120	22.00 sf	33.00 /mh	182	/sf			/sf		/sf		182	261
055213	Railings													
10	HWK Headworks Building													
Metals	Metals													
05	32- Aluminum Guardrail 10S203													
	Aluminum 3 Line Rail	5001.115	74.00 lf	33.00 /mh	3,663	0.00 /lf	0		/lf		/lf		3,663	5,275
	Kickplate	5001.115	74.00 lf	33.00 /mh		0.00 /lf	0		/lf		/lf			
	Anchor Bolt 3/8x4 for Handrail	5001.061	74.00 ea	33.00 /mh	611	8.00 /ea	592		/ea		/ea		1,203	1,471
11	EQB EQ Basin													
Metals	Metals													
05	32- Aluminum Guardrail 11S204													
	Aluminum 3 Line Rail	5001.115	59.00 lf	33.00 /mh	2,921	0.00 /lf	0		/lf		/lf		2,921	4,206
	Kickplate	5001.115	59.00 lf	33.00 /mh		0.00 /lf	0		/lf		/lf			
	Anchor Bolt 3/8x4 for Kickplate to Post (every 4')	5001.061	60.00 ea	33.00 /mh	495	8.00 /ea	480		/ea		/ea		975	1,193
20	PBS Process Basin													
Metals	Metals													
05	32- Aluminum Guardrail 20S204													
	Aluminum 3 Line Rail	5001.115	852.00 lf	33.00 /mh	28,116	0.00 /lf	0		/lf		/lf		28,116	40,487
	Kickplate	5001.115	852.00 lf	33.00 /mh		0.00 /lf	0		/lf		/lf			
	Anchor Bolt 3/8x4 for handrail	5001.061	852.00 ea	33.00 /mh	7,029	8.00 /ea	6,816		/ea		/ea		13,845	16,938
23	MBR MBR Building													
Metals	Metals													
05	32- Aluminum Guardrail 23S207													
	Aluminum 3 Line Rail	5001.115	142.00 lf	33.00 /mh	4,686	0.00 /lf	0		/lf		/lf		4,686	6,748
	Kickplate	5001.115	142.00 lf	33.00 /mh		0.00 /lf	0		/lf		/lf			
	Anchor Bolt 3/8x4 for handrail	5001.061	142.00 ea	33.00 /mh	1,172	8.00 /ea	1,136		/ea		/ea		2,308	2,823
055300	Metal Gratings													
09	IPS Influent Pump Station													
Metals	Metals													
05	43- Grating - Aluminum 09S201													
	Alum Floor Grating 1.50"	5001.120	127.00 sf	33.00 /mh	3,143	/sf			/sf		/sf		3,143	4,283
	Grating Angle - Bolt on 2.5x1.5x1/4	5001.120	54.00 lf	33.00 /mh	891	0.00 /lf	0		/lf		/lf		891	1,283

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
05	43- Grating - Aluminum 09S201													
	Anchor Bolt 5/8x6 SS 316	5001.064	36.00 ea	33.00 /mh	297	15.00 /ea	540		/ea		/ea		837	968
	Angle 4 x 4 x 3/8 - 6' Long	5123.804	5.00 ea	/ea		0.00 /lbs	0		/ea		/ea			
	Angle 4 x 4 x 3/8 - 13' Long	5123.804	1.00 ea	/ea		0.00 /lbs	0		/ea		/ea			
	Angle 4 x 4 x 3/8 - 2'-3" Long	5123.804	8.00 ea	/ea		0.00 /lbs	0		/ea		/ea			
	Anchor Bolts 5/8"x6 SS	6090.500	104.00 ea	33.00 /mh	858	15.00 /ea	1,560		/ea		/ea		2,418	2,796
11	EQE EQ Basin													
	Metals Metals													
05	43- Grating - Aluminum 11S205													
	Alum Floor Grating 1.50"	5001.120	124.00 sf	33.00 /mh	1,023	/sf			/sf		/sf		1,023	1,473
	Grating Angle - Bolt on 2.5x1.5x1/4	5001.120	46.00 lf	33.00 /mh	380	0.00 /lf	0		/lf		/lf		380	546
	Anchor Bolt 5/8x6 SS 316 - 18" OC	5001.064	30.00 ea	33.00 /mh	248	15.00 /ea	450		/ea		/ea		698	806
	C10x15.3 HDG 8'-10" Long	5123.804	2.00 ea	/ea		0.00 /lbs	0		/ea		/ea			
	C10x15.3 HDG 14' Long	5123.804	1.00 ea	/ea		0.00 /lbs	0		/ea		/ea			
	Beam to Plate Conn (2) 5/8" A325 w Nut & Washer	6090.500	12.00 ea	33.00 /mh	40	15.00 /ea	180		/ea		/ea		220	237
	Epoxy Anchor 3/4 x 7in SS	5001.053	24.00 ea	33.00 /mh	198	15.00 /ea	360		/ea		/ea		558	645
	Epoxy for Anchors	5001.054	24.00 ea	33.00 /mh		5.00 /ea	120		/ea		/ea		120	120
20	PBS Process Basin													
	Metals Metals													
05	43- Grating - Aluminum 20S205													
	Alum Floor Grating 1.50"	5001.120	261.00 sf	33.00 /mh	3,015	/sf			/sf		/sf		3,015	4,341
	Grating Angle - Bolt on 2.5x1.5x1/4	5001.120	122.00 lf	33.00 /mh	1,007	0.00 /lf	0		/lf		/lf		1,007	1,449
	Anchor Bolt 5/8x6 SS 316 - 18" OC	5001.064	82.00 ea	33.00 /mh	677	15.00 /ea	1,230		/ea		/ea		1,907	2,204
	C10x15.3 HDG 5' Long	5123.804	3.00 ea	/ea		0.00 /lbs	0		/ea		/ea			
	Beam to Plate Conn (2) 5/8" A325 w Nut & Washer	6090.500	12.00 ea	33.00 /mh		0.01 /ea	0		/ea		/ea		0	0
	Epoxy Anchor 3/4 x 7in SS	5001.053	24.00 ea	33.00 /mh	198	15.00 /ea	360		/ea		/ea		558	645
	Epoxy for Anchors	5001.054	24.00 ea	33.00 /mh		5.00 /ea	120		/ea		/ea		120	120
05	43- Grating - Aluminum 20S205													
	Alum Floor Grating 1.50"	5001.120	294.00 sf	33.00 /mh	3,396	/sf			/sf		/sf		3,396	4,890
	Grating Angle - Bolt on 2.5x1.5x1/4	5001.120	191.00 lf	33.00 /mh	1,576	0.00 /lf	0		/lf		/lf		1,576	2,269
	Anchor Bolt 5/8x6 SS 316 - 18" OC	5001.064	128.00 ea	33.00 /mh	1,056	15.00 /ea	1,920		/ea		/ea		2,976	3,441
	C10x15.3 HDG 7' Long	5123.804	3.00 ea	/ea		0.00 /lbs	0		/ea		/ea			
	C10x15.3 HDG 7'-3" Long	5123.804	2.00 ea	/ea		0.00 /lbs	0		/ea		/ea			
	C10x15.3 HDG 8' Long	5123.804	2.00 ea	/ea		0.00 /lbs	0		/ea		/ea			
	Beam to Plate Conn (2) 5/8" A325 w/Nut & Wahser	5001.053	16.00 ea	33.00 /mh		25.00 /ea	400		/ea		/ea		400	400
	Epoxy Anchor 3/4 x 7in SS	5001.054	32.00 ea	33.00 /mh	264	25.00 /ea	800		/ea		/ea		1,064	1,180
	Epoxy for Anchors	5001.054	32.00 ea	33.00 /mh		5.00 /ea	160		/ea		/ea		160	160
23	MBR MBR Building													
	Metals Metals													
05	43- Grating - Aluminum 23S207													
	Alum Floor Grating 1.50"	5001.120	1,646.00 sf	33.00 /mh	15,209	/sf			/sf		/sf		15,209	21,901
	Grating Angle - Bolt on 2.5x1.5x1/4	5001.120	527.00 lf	33.00 /mh	4,348	0.00 /lf	0		/lf		/lf		4,348	6,261
	Anchor Bolt 5/8x6 SS 316 - 18" OC	5001.064	352.00 ea	33.00 /mh	2,904	15.00 /ea	5,280		/ea		/ea		8,184	9,462
	W8x8 HDG 6'-11" Long	5123.804	4.00 ea	/ea		0.00 /lbs	0		/ea		/ea			
	C10x15.3 HDG 5'-11" Long	5123.804	2.00 ea	/ea		0.00 /lbs	0		/ea		/ea			
	C10x15.3 HDG 10'-11" Long	5123.804	5.00 ea	/ea		0.00 /lbs	0		/ea		/ea			
	Beam to Plate Conn (2) 5/8" A325 w/Nut & Wahser	5001.053	44.00 ea	33.00 /mh		0.01 /ea	0		/ea		/ea		0	0
	Epoxy Anchor 3/4 x 7in SS	5001.054	88.00 ea	33.00 /mh	726	25.00 /ea	2,200		/ea		/ea		2,926	3,245
	Epoxy for Anchors	5001.054	88.00 ea	33.00 /mh		5.00 /ea	440		/ea		/ea		440	440
42	SDL Site Drain Lift Station													
	Metals Metals													
05	43- Grating - Aluminum 42M201													
	Alum Floor Grating 1.50"	5001.120	37.00 sf	33.00 /mh	733	/sf			/sf		/sf		733	1,055
	Grating Angle - Bolt on 2.5x1.5x1/4	5001.120	26.00 lf	33.00 /mh	215	0.00 /lf	0		/lf		/lf		215	309
	Anchor Bolt 5/8x6 SS 316	5001.064	18.00 ea	33.00 /mh	149	15.00 /ea	270		/ea		/ea		419	484
	Angle 4 x 4 x 3/8 - 8'-4" Long	5123.804	1.00 ea	/ea		0.00 /lbs	0		/ea		/ea			
	Angle 4 x 4 x 3/8 - 1'-4" Long	5123.804	6.00 ea	/ea		0.00 /lbs	0		/ea		/ea			
	Anchor Bolts 5/8"x6 SS	6090.500	56.00 ea	33.00 /mh	462	15.00 /ea	840		/ea		/ea		1,302	1,505
50	ODC Odor Control													
	Metals Metals													
05	43- Grating - Aluminum 50H201													
	Alum Floor Grating 1.50"	5001.120	25.00 sf	33.00 /mh	206	/sf			/sf		/sf		206	297
	Grating Angle - Bolt on 2.5x1.5x1/4	5001.120	22.00 lf	33.00 /mh	182	0.00 /lf	0		/lf		/lf		182	261
	Anchor Bolt 5/8x6 SS 316	5001.064	15.00 ea	33.00 /mh	124	15.00 /ea	225		/ea		/ea		349	403
060000	Wood & Plastic													
10	HWK Headworks Building													
	Woods Woods													
0600	4- Roof Blocking/Fascia/Soffit													
	2x6 Treated Wood Blocking	6160.400	331.00 lf	33.00 /mh	2,731	2.00 /lf	708		/lf		/lf		3,439	4,641
	2x12 Eave Board for Metal Fascia	6114.600	331.00 lf	33.00 /mh	2,731	4.00 /lf	1,417		/lf		/lf		4,147	5,349
	Soffit Nailer 2x2	6114.600	331.00 lf	33.00 /mh	2,731	1.00 /lf	354		/lf		/lf		3,085	4,286
	Soffit Trim 2x6	6160.400	331.00 lf	33.00 /mh	2,731	4.00 /lf	1,417		/lf		/lf		4,147	5,349
	2x4 Treated Wood Blocking	6114.100	662.00 lf	33.00 /mh	2,185	2.00 /lf	1,417		/lf		/lf		3,601	4,563
	Nails	6090.500	60.00 lb	/lb		2.50 /lbs	150		/lb				150	150
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	1.00 Mnth	/Mnth		/Mnth			950.00 /Mnth	950	100.00 /Mnth	100	1,050	1,050
	Boom Lift (L)	1900.300	3.00 Mnth	/Mnth		/Mnth			3,200.00 /Mnth	9,600	1,250.00 /Mnth	3,750	13,350	13,350
41	ADM Administration Bldg													
	Woods Woods													

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0600 1- Blocking													
	Blocking 2x4 to Wood	6116.120	120.00 lf	33.00 /mh	990	1.00 /lf	128		/lf		/lf		1,118	1,554
	Fasteners	6090.700	120.00 ea	/ea		1.00 /ea	120		/ea		/ea		120	120
	60 ELE Electrical Bldg													
	Woods Woods													
	0600 4- Roof Structure (Wood)													
	3x8 Top Plate	6116.180	75.00 lf	33.00 /mh	495	5.00 /lf	401		/lf		/lf		896	1,114
	4x8 Sub Fascia	6160.400	91.00 lf	33.00 /mh	601	6.00 /lf	584		/lf		/lf		1,185	1,449
	2x14 Fascia	6114.600	91.00 lf	33.00 /mh	601	4.00 /lf	389		/lf		/lf		990	1,254
	Soffit Nailer 2x4	6114.600	75.00 lf	33.00 /mh	495	1.00 /lf	80		/lf		/lf		575	793
	Soffit Board ~2' wide	6160.400	81.00 lf	33.00 /mh	535	4.00 /lf	347		/lf		/lf		881	1,117
	Microllam LVL 2x12 (20 EA)	6114.100	267.00 lf	33.00 /mh	2,203	12.00 /lf	3,428		/lf		/lf		5,631	6,600
	Roof Sheathing 3/4" CDX	6160.050	427.00 sf	33.00 /mh	564	1.50 /sf	685		/sf		/sf		1,249	1,497
	5/8" x 8" J Bolt w 2"x2" Flat Washer	6090.500	26.00 ea	33.00 /mh	215	15.00 /ea	390		/ea		/ea		605	699
	H2.5 Hurricane Ties	6114.500	88.00 ea	33.00 /mh	581	8.00 /ea	753		/ea		/ea		1,334	1,590
	Solid Wood Bridging 2x6c2' Long (12 EA)	6116.100	24.00 lf	33.00 /mh	158	2.00 /lf	51		/lf		/lf		210	279
	Nails	6090.500	60.00 lb	/lb		2.50 /lbs	150		/lb		/lb		150	150
	065100 FRP Weirs													
	23 MBR MBR Building													
	FRP FRP													
	0600 2- FRP Plate/Weir													
	Supply FRP Weir	11000.460	1.00 ls	/ls		/ls			/ls		/ls			
	Weir - 1/4" FRP Plate - 8 LF	5001.135	4.00 ea	33.00 /mh	792	0.01 /ea	0		/ea		/ea		792	1,141
	5/8" SS Expansion Joint w/Nuts & Washers - 9 EA Plate	5001.135	36.00 ea	33.00 /mh	297	25.00 /ea	900		/ea		/ea		1,197	1,328
	Sika Flex 2C NS w Primer for Edges	7920.300	1.00 ls	/ls		50.00 /ls	55		/ls		/ls		55	55
	Caulking 10.3 oz tube 3/8d x 1/2"w	7920.300	32.00 lf	33.00 /mh	106	18.00 /tube	74		/lf		/lf		179	226
	066010 FRP Plastic Covers													
	10 HWK Headworks Building													
	FRP FRP													
	0600 2- FRP Plank													
	Supply FRP Grating Package	5001.155	1.00 ls	33.00 /mh		133,570.00 /ls	133,570		/ls		/ls		133,570	133,570
	FRP Grating Angle	5001.155	481.00 lf	33.00 /mh	3,968	/lf			/lf		/lf		3,968	5,714
	FRP Support Beams	5001.155	26.00 ea	33.00 /mh	3,432	/ea			/ea		/ea		3,432	4,942
	Fiberglass Grating 2"	5001.155	1,225.00 sf	33.00 /mh	4,043	0.01 /sf	12		/sf		/sf		4,055	5,833
	5/8" Hilti SS Threaded Rod with Hilti - 5" Long	5001.050	1,066.00 ea	33.00 /mh	8,795	8.00 /ea	8,528		0.00 /ea	0	/ea		17,323	21,192
	Skia Flex 2C NS w Primer	7920.300	1.00 ls	/ls		400.00 /ls	440		/ls		/ls		440	440
	Gasket and Hardware	5001.155	481.00 lf	33.00 /mh		5.00 /lf	2,405		/lf		/lf		2,405	2,405
	071400 Waterproofing													
	10 HWK Headworks Building													
	Damp Proofing Damp Proofing													
	07 3- Headworks Damproofing and insulation													
	Brush on Bituminous	7110.100	1,250.00 sf	33.00 /mh	825	0.65 /sf	869		/sf		/sf		1,694	2,057
	Insulation Rigid Foundation 2in thick	3150.635	1,700.00 sf	33.00 /mh	1,122	2.00 /sf	3,570		/sf		/sf		4,692	5,186
	07 3- MBR Damproofing and insulation													
	Brush on Bituminous	7110.100	1,000.00 sf	33.00 /mh	660	0.65 /sf	696		/sf		/sf		1,356	1,646
	Insulation Rigid Foundation 2in thick	3150.635	1,250.00 sf	33.00 /mh	825	2.00 /sf	2,625		/sf		/sf		3,450	3,813
	60 ELE Electrical Bldg													
	Damp Proofing Damp Proofing													
	07 3- Electrical Building Damproof and Insulation													
	Brush on Bituminous	7110.100	250.00 sf	33.00 /mh	165	0.65 /sf	174		/sf		/sf		339	411
	Insulation Rigid Foundation 2in thick	3150.635	200.00 sf	33.00 /mh	132	2.00 /sf	420		/sf		/sf		552	610
	074600 Siding													
	23 MBR MBR Building													
	Metals Metals													
	0710- Metal Panel													
	RT Telescopic Forklift (12,000 lb) (130 HP) (L)	1900.300	0.25 Mnth	/Mnth		/Mnth			4,200.00 /Mnth	1,050	1,500.00 /Mnth	375	1,425	1,425
	* unassigned *													
	0710- Metal Panel													
	Metl Panel	7460.100	6,500.00 sf	33.00 /mh	8,580	3.00 /sf	20,865		/sf		/sf		29,445	33,220
	Screw Fastners	7460.100	6,500.00 ea	/ea		0.05 /ea	348		/ea		/ea		348	348
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	1.00 Mnth	/Mnth		/Mnth			950.00 /Mnth	950	100.00 /Mnth	100	1,050	1,050
	076200 Sheet Metal Flashing & Trim													
	00 GEN General													
	Roofing Roofing													
	0732- Concrete tile roofing (Headworks, Electrical)													
	Sub - Roofing (including Insul, tiles, gutter, downspouts, snow guards)	7510.100	1.00 ls	/ls		/ls		281,275	/ls		/ls		281,275	281,275
	Sub - Roofing Bond	7510.100	1.00 ls	/ls		/ls			/ls		/ls			
	079200 Joint Sealants													
	10 HWK Headworks Building													
	Caulking Caulking													
	0760- Headworks Caulking (includes Electric Building)													
	Caulking 20 oz tube 1/2d x 1/2w	7920.300	1,050.00 lf	33.00 /mh	3,465	18.00 /tube	1,624		/lf		/lf		5,089	6,614
	Caulking 20 oz tube 7/8d x 7/8w	7920.300	650.00 lf	33.00 /mh	2,145	18.00 /tube	3,064		/lf		/lf		5,209	6,614
	Backer Rod 5/8"	7920.300	850.00 lf	33.00 /mh	561	0.20 /lf	187		/lf		/lf		748	748
	Backer Rod 1"	7920.300	650.00 lf	33.00 /mh	429	0.50 /lf	358		/lf		/lf		787	787

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0760- Headworks Caulking (includes Electric Building)													
	Misc Materials	7920.300	1.00 ls	/ls		200.00 /ls	220		/ls		/ls		220	220
	Boom Lift (L)	1900.300	2.00 Mnth	/Mnth		/Mnth			3,200.00 /Mnth	6,400	1,250.00 /Mnth	2,500	8,900	8,900
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	1.00 Mnth	/Mnth		/Mnth			950.00 /Mnth	950	100.00 /Mnth	100	1,050	1,050
	23 MBR MBR Building													
	Caulking Caulking													
	0760- MBR Builing Caulking													
	Caulking 20 oz tube 1/2d x 1/2w	7920.300	2,040.00 lf	33.00 /mh	6,732	18.00 /tube	3,156		/lf		/lf		9,888	12,850
	Backer Rod 5/8"	7920.300	2,040.00 lf	33.00 /mh	1,346	0.20 /lf	449		/lf		/lf		1,795	2,388
	Misc Materials	7920.300	1.00 ls	/ls		200.00 /ls	220		/ls		/ls		220	220
	41 ADM Administration Bldg													
	Caulking Caulking													
	0760- Admin Caulking													
	Caulking 20 oz tube 1/2d x 1/2w	7920.300	800.00 lf	33.00 /mh	2,640	18.00 /tube	1,238		/lf		/lf		3,878	5,039
	Backer Rod 5/8"	7920.300	800.00 lf	33.00 /mh	528	0.20 /lf	176		/lf		/lf		704	936
	Misc Materials	7920.300	1.00 ls	/ls		200.00 /ls	220		/ls		/ls		220	220
	081113 Hollow Metal Doors & Frames													
	00 GEN General													
	* unassigned *													
	0800-1 Purchase HM Doors, Frames, and Hardware													
	Purchase HM Doors, Frames & Hardware	8110.110	1.00 ls	/ls		85,449.00 /ls	85,449		/ls		/ls		85,449	85,449
	Sub - Access Hardware/ security	10610.100	1.00 ls	/ls		73,385.00 /ls	73,385		/ls		/ls		73,385	73,385
	10 HWK Headworks Building													
	* unassigned *													
	0800-1 Hollow Metal Doors													
	Install HM Single Frames	8110.100	3.00 ea	33.00 /mh	792	250.00 /ea	750		/ea		/ea		1,542	1,890
	Install HM Double Frames	8110.100	1.00 ea	33.00 /mh	396	350.00 /ea	350		/ea		/ea		746	920
	HM Door Leafs	8110.105	5.00 ea	33.00 /mh	1,320	0.00 /ea	0		/ea		/ea		1,320	1,901
	Install Hardware by Leaf	8115.100	5.00 ea	33.00 /mh	2,640	/ea			/ea		/ea		2,640	3,802
	23 MBR MBR Building													
	* unassigned *													
	0800-1 Hollow Metal Doors													
	Install HM Single Frames	8110.100	8.00 ea	33.00 /mh	2,112	250.00 /ea	2,000		/ea		/ea		4,112	5,041
	Install HM Double Frames	8110.100	1.00 ea	33.00 /mh	396	350.00 /ea	350		/ea		/ea		746	920
	HM Door Leafs	8110.105	10.00 ea	33.00 /mh	2,640	0.00 /ea	0		/ea		/ea		2,640	3,802
	Install Hardware by Leaf	8115.100	10.00 ea	33.00 /mh	5,280	/ea			/ea		/ea		5,280	7,603
	41 ADM Administration Bldg													
	* unassigned *													
	0800-1 Hollow Metal Doors													
	Install HM Single Frames	8110.100	4.00 ea	33.00 /mh	1,056	250.00 /ea	1,000		/ea		/ea		2,056	2,521
	HM Door Leafs	8110.105	4.00 ea	33.00 /mh	1,056	0.00 /ea	0		/ea		/ea		1,056	1,521
	Install Hardware by Leaf	8115.100	4.00 ea	33.00 /mh	2,112	/ea			/ea		/ea		2,112	3,041
	41A ADM ALT Administration Bldg Alternative													
	* unassigned *													
	0800-1 Hollow Metal Doors ADMIN ALTERN.													
	Install HM Single Frames	8110.100	3.00 ea	33.00 /mh	792	250.00 /ea	750		/ea		/ea		1,542	1,890
	HM Door Leafs	8110.105	3.00 ea	33.00 /mh	792	0.00 /ea	0		/ea		/ea		792	1,140
	Install Hardware by Leaf	8115.100	3.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
	60 ELE Electrical Bldg													
	* unassigned *													
	0800-1 Hollow Metal Doors													
	Install HM Single Frames	8110.100	1.00 ea	33.00 /mh	264	250.00 /ea	250		/ea		/ea		514	630
	HM Door Leafs	8110.105	1.00 ea	33.00 /mh	264	0.00 /ea	0		/ea		/ea		264	380
	Install Hardware by Leaf	8115.100	1.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	083323 Overhead Coiling Doors													
	10 HWK Headworks Building													
	* unassigned *													
	0830- Overhead Doors													
	Coiling Doors - 10 x 12 - Manual (3 ea) Price for all 6 doors	8360.200	1.00 ls	/ls		75,238.00 /ls	75,238		/ls		/ls		75,238	75,238
	23 MBR MBR Building													
	* unassigned *													
	0830- Overhead Doors													
	Coiling Doors - 12 x 14 - Manual	8360.200	1.00 ea	33.00 /mh	195	0.01 /ea	0		/ea		/ea		195	280
	Coiling Doors - 12 x 10 - Manual	8360.200	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Coiling Doors - 10 x 10 - Manual	8360.200	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	085113 Aluminum Windows													
	00 GEN General													
	* unassigned *													
	0823- Glazing Subcontractor													
	Glazing Subcontractor	8510.300	1.00 LS	33.00 /mh		55,000.00 /LS	55,000		/LS		/LS		55,000	55,000
	10 HWK Headworks Building													
	* unassigned *													
	0823- Windows - Aluminum - 6x4													
	Aluminum Windows Fixed - 6x4	8510.300	6.00 ea	33.00 /mh		0.00 /ea	0		/ea		/ea			
	0823- Windows - Aluminum - 6x2													

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0823- Windows - Aluminum - 6x2													
	Aluminum Windows Fixed - 6x2	8510.300	4.00 ea	33.00 /mh		0.00 /ea	0		/ea		/ea			
	0823- Door Glazing													
	Door Glazing - 2'-6" x 2'	8510.300	5.00 ea	33.00 /mh		0.00 /ea	0		/ea		/ea			
	23 MBR MBR Building													
	* unassigned *													
	0823- Windows - Aluminum - 6x4													
	Aluminum Windows Fixed - 6x4	8510.300	8.00 ea	33.00 /mh		0.00 /ea	0		/ea		/ea			
	0823- Windows - Aluminum - 6x2													
	Aluminum Windows Fixed - 6x2	8510.300	8.00 ea	33.00 /mh		0.00 /ea	0		/ea		/ea			
	0823- Door Glazing													
	Door Glazing - 2'-6" x 2'	8510.300	9.00 ea	33.00 /mh		0.00 /ea	0		/ea		/ea			
	41 ADM Administration Bldg													
	* unassigned *													
	0823- Door Glazing													
	Door Glazing - 2'-6" x 2'	8510.300	2.00 ea	33.00 /mh		0.00 /ea	0		/ea		/ea			
	41A ADM ALT Administration Bldg Alternative													
	* unassigned *													
	0823- Door Glazing													
	Door Glazing - 2'-6" x 2'	8510.300	3.00 ea	33.00 /mh		0.00 /ea	0		/ea		/ea			
	60 ELE Electrical Bldg													
	* unassigned *													
	0823- Door Glazing													
	Door Glazing - 2'-6" x 2'	8510.300	1.00 ea	33.00 /mh		0.00 /ea	0		/ea		/ea			
	092900 Gypsum Board													
	00 GEN General													
	Finishes Finishes													
	099 0- Project Finishes													
	Sub - Drywall	9250.980	1.00 ls	/ls		/ls		131,850	/ls		/ls		131,850	131,850
	Sub - All Tile and Flooring	9680.220	1.00 sf	/sf		/sf		15,000	/sf		/sf		15,000	15,000
	Sub - Work Benches	9500.980	1.00 ls	/ls		/ls		20,000	/ls		/ls		20,000	20,000
	41A ADM ALT Administration Bldg Alternative													
	General Conditions General													
	092 1- Admin Alterate Finishes													
	Sub - Casework For Offices (alternate)	9680.220	1.00 ls	/ls		/ls		25,000	/ls		/ls		25,000	25,000
	Sub - Furnishings For Offices (alternate)	9680.230	1.00 ls	/ls		/ls		55,000	/ls		/ls		55,000	55,000
	Sub - Flooring Admin (alternate)	9680.240	1.00 ls	/ls		/ls		35,000	/ls		/ls		35,000	35,000
	Sub - Drop Cieling Admin (alternate) in offices	9680.250	1.00 ls	/ls		/ls		8,000	/ls		/ls		8,000	8,000
	Sub - Coatings Admin (alternate)	9680.260	1.00 ls	/ls		/ls		35,000	/ls		/ls		35,000	35,000
	Sub - Drywall and Framing	9250.980	1.00 ls	/ls		/ls		35,000	/ls		/ls		35,000	35,000
	Sub - Labwork Upgrades	6200.982	1.00 ls	/ls		/ls		82,000	/ls		/ls		82,000	82,000
	Electrical Sub	16000.001	1.00 ls	/ls		/ls		70,000	/ls		/ls		70,000	70,000
	098000 Coatings													
	00 GEN General													
	Coatings Coatings													
	099-2 Coatings Sub													
	Sub - Special Coatings	9960.100	1.00 ls	/ls		/ls		750,000	/ls		/ls		750,000	750,000
	Sub - Special Coatings Bond	9960.100	1.00 ls	/ls		/ls		10,500	/ls		/ls		10,500	10,500
	Miscellaneous Fans, plastic partitions	1116.100	1.00 ls	33.00 /mh	1,320	750.00 /ls	750		/ls		/ls		2,070	2,651
	104416 Fire Extinguishers													
	00 GEN General													
	Finishes Finishes													
	10-100 Div 10 Specialties													
	Sub - Bath & laundry Access- (Includ washer/Dryer)	10810.100	1.00 ls	/ls		8,500.00 /ls	8,500	0	/ls		/ls		8,500	8,500
	Fire Extinguishers entire job	1116.300	15.00 ea	33.00 /mh	990	250.00 /ea	3,750		/ea		/ea		4,740	5,176
	Div 10 Signage	10430.100	1.00 ls	33.00 /mh	5,280	7,500.00 /ls	7,500		/ls		/ls		12,780	15,103
	Knox Box	8115.200	5.00 ea	33.00 /mh	660	950.00 /ea	4,750		/ea		/ea		5,410	5,700
	Toilet Partitions	10185.100	1.00 ea	33.00 /mh	3,960	3,600.00 /ea	3,600		/ea		/ea		7,560	9,302
	Hearing protection Cabinet	10520.100	1.00 ea	33.00 /mh	132	200.00 /ea	200		/ea		/ea		332	390
	Eye Protection Cabinet	10520.100	2.00 ea	33.00 /mh	264	200.00 /ea	400		/ea		/ea		664	780
	133400 Metal Building Systems													
	00 GEN General													
	PEMB													
	13-02 Pre-Engineered Metal Building (PEMB) with Bond													
	Metal Building Subcontractor with Bond including 5 ton bridge crane	13122.100	1.00 ls	/ls		/ls		1,336,000	/ls		/ls		1,336,000	1,336,000
	23 MBR MBR Building													
	PEMB													
	13-02 Pre-Engineered Metal Building (PEMB) with Bond													
	Metal Building Anchor Bolts (4 ea with template)	13122.100	25.00 ea	33.00 /mh	6,600	100.00 /ea	2,500		/ea		/ea		9,100	12,004
	Non Shrink Grout	3150.700	12.00 cf	33.00 /mh		60.00 /cf	720		/cf		/cf		720	720
	Grout Bearing Plates	3150.700	23.00 ea	33.00 /mh	3,036	/ea			/ea		/ea		3,036	4,372
	151100 Owner Selected Equipment													
	00 GEN General													
	General Conditions General													

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
01	-100 RAT Testing and Start Up													
	Field Engineer RAT Test	1630.100	3.00 wk	1,925.00 /wk	5,775	/wk			/wk		/wk		5,775	8,316
	General Superintendent RAT Test	1022.100	3.00 wk	3,365.00 /wk	10,095	/wk			/ea		/wk		10,095	14,537
	Pickup	1900.210	2.00 Mnth	/Mnth		/Mnth			1,000.00 /Mnth	2,000	1,065.00 /Mnth	2,130	4,130	4,130
	Lab testing Bac T testing, Lab testing	1166.100	1.00 ls	/ls		/ls			/ls		1,000.00 /ls	1,000	1,000	1,000
	Bypass Pumping Effluent to Lagoon during comissioning	2240.150	1.00 ls	33.00 /mh	1,320	/ls		15,000	/ls		/ls		16,320	16,901
	Field Engineer (loop check, start up and COPI checkout)	1630.100	4.00 wk	1,925.00 /wk	7,700	/wk			/wk		/wk		7,700	11,088
	* unassigned *													
	11-00 Construction Equipment for Process Equipment Div 15, 43, and 46													
	Grove RT750, 50 ton (190 HP) (L)	1900.100	1.00 mnth	8,660.00 /mnth	8,660	400.00 /mnth	400		9,500.00 /mnth	9,500	2,250.00 /mnth	2,250	20,810	24,620
	RT Telescopic Forklift (12,000 lb) (130 HP) (L)	1900.300	4.00 Mnth	/Mnth		/Mnth			4,200.00 /Mnth	16,800	1,500.00 /Mnth	6,000	22,800	22,800
	Hoisting System Interior Misc	1485.100	1.00 ls	33.00 /mh		5,000.00 /ls	5,000		/ls		/ls		5,000	5,000
	Kobelco CK1100G-2 - 110 Ton (332 HP) (L)	1900.100	2.00 mnth	5,629.00 /mnth	11,258	550.00 /mnth	1,100		14,000.00 /mnth	28,000	2,500.00 /mnth	5,000	45,358	50,312
	Toyota Forklift (5,000 lb) Conventional (L)	1900.300	4.00 Mnth	/Mnth		/Mnth			1,500.00 /Mnth	6,000	500.00 /Mnth	2,000	8,000	8,000
	(3rd Party) Semi Tractor	1900.210	48.00 Hrs	/Hrs		/Hrs		6,000	/Hrs		/Hrs		6,000	6,000
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	2.00 Mnth	/Mnth		/Mnth			950.00 /Mnth	1,900	100.00 /Mnth	200	2,100	2,100
	11-500 Owner Selected Equipment - Supply													
	Supply Mechanical Screens - Ovivo	11600.010	1.00 ls	/ls		374,517.00 /ls	374,517		/ls		/ls		374,517	374,517
	Supply Grit System - Hydro International	11600.030	1.00 ls	/ls		522,365.00 /ls	522,365		/ls		/ls		522,365	522,365
	Supply MBBR Equipment - Suez	11000.250	1.00 ls	/ls		1,679,990.00 /ls	1,679,990		/ls		/ls		1,679,990	1,679,990
	Supply MBR Boerger Pump Upgrade - Suez	11000.250	1.00 ls	/ls		44,000.00 /ls	44,000		/ls		/ls		44,000	44,000
	Supply Solids Dewatering - Fournier	11000.390	1.00 ls	/ls		788,727.00 /ls	788,727		/ls		/ls		788,727	788,727
	Supply Blower Package - Aerzen	11100.030	1.00 ls	/ls		565,510.00 /ls	565,510		/ls		/ls		565,510	565,510
	UV Disinfection Equipment Supply - Trojan	11000.410	1.00 ls	/ls		221,805.00 /ls	221,805		/ls		/ls		221,805	221,805
	10 HWK Headworks Building													
	* unassigned *													
	11-01 Grit Pump - Hydro													
	Horz Self Prime Non Clog Pump - 5 HP	11700.080	1.00 ea	33.00 /mh	1,056	0.01 /ls	0		/ea		/ea		1,056	1,521
	Anchors for Equipment	11000.005	6.00 ea	33.00 /mh	50	30.00 /ea	180		/ea		/ea		230	251
	Grout Equipment	11000.005	4.00 cf	33.00 /mh	528	60.00 /cf	240		/cf		/cf		768	1,000
	Misc Materials	11000.005	1.00 ea	33.00 /mh		250.00 /ea	250		/ea		/ea		250	250
	Pressure Gauge Assembly	11000.005	2.00 ea	33.00 /mh	264	750.00 /ea	1,500		/ea		/ea		1,764	1,880
	Start up and Training	11000.005	8.00 mnhr	33.00 /mh	264	/mnhr			/mnhr		/mnhr		264	380
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	11-10 Drumscreen - Ovivo													
	Drumscreen System 4'	11600.010	2.00 ea	33.00 /mh	13,200	0.01 /ea	0		/ea		/ea		13,200	19,008
	Control Panel	11600.010	2.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Control Panel - local control station	11600.010	2.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Controls - Differential Level	11600.010	2.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Anchors for Equipment	11000.005	24.00 ea	33.00 /mh	198	30.00 /ea	720		/ea		/ea		918	1,005
	Grout Equipment	11000.005	4.00 cf	33.00 /mh	528	60.00 /cf	240		/cf		/cf		768	1,000
	Misc Materials	11000.005	2.00 ea	33.00 /mh		500.00 /ea	1,000		/ea		/ea		1,000	1,000
	Start up and Training	11000.005	32.00 mnhr	33.00 /mh	1,056	/mnhr			/mnhr		/mnhr		1,056	1,521
	Spare Parts	11000.005	2.00 ls	/ls		4,685.00 /ls	9,370		/ls		/ls		9,370	9,370
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Chutes Stainless	14560.100	35.00 lf	33.00 /mh		/lf			/mh		/lf			
	PS Pipe Stand for 12in DIP 4ft 0in floor to CL SS	15060.408	8.00 ea	33.00 /mh	1,056	750.00 /ea	6,000		/ea		/ea		7,056	7,521
	PS Expansion Anchor 1/2 x 7in SS	15060.127	32.00 ea	33.00 /mh	264	30.00 /ea	960		/ea		/ea		1,224	1,340
	11-11 Screenings Compactor - Ovivo													
	Screenings Compactor	11000.320	2.00 ea	33.00 /mh	4,224	0.01 /ea	0		/ea		/ea		4,224	6,083
	Compactor Discharge Pipe and Supports	11000.320	2.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	Screening Control Panel	11000.320	2.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Anchors for Equipment	11000.005	6.00 ea	33.00 /mh	50	30.00 /ea	180		/ea		/ea		230	251
	Grout Equipment	11000.005	2.00 cf	33.00 /mh	264	60.00 /cf	120		/cf		/cf		384	500
	Misc Materials	11000.005	2.00 ea	33.00 /mh	66	250.00 /ea	500		/ea		/ea		566	595
	Start up and Training	11000.005	16.00 mnhr	33.00 /mh	528	/mnhr			/mnhr		/mnhr		528	760
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	11-500 Grit King - Hydro													
	Vortex Grit Equipment	11600.020	1.00 ea	33.00 /mh	5,280	0.01 /ea	0		/ea		/ea		5,280	7,603
	Anchors for Equipment	11000.005	16.00 ea	33.00 /mh	132	30.00 /ea	480		/ea		/ea		612	670
	Misc Materials	11000.005	1.00 ea	33.00 /mh		250.00 /ea	250		/ea		/ea		250	250
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	Start up and Training	11000.005	24.00 mnhr	33.00 /mh	792	/mnhr			/mnhr		/mnhr		792	1,140
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Control Panel	11000.005	1.00 ea	33.00 /mh	132	250.00 /ea	250		/ea		/ea		382	440
	Controls	11000.005	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Influent Pipe	11000.005	1.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Deflector Plate	11000.005	1.00 ea	33.00 /mh	1,056	250.00 /ea	250		/ea		/ea		1,306	1,771
	Fluidizing Ring	11000.005	1.00 ea	33.00 /mh	264	250.00 /ea	250		/ea		/ea		514	630
	11-500 GritCleanse Grit Washer - Hydro													
	Grit Washer	11600.030	1.00 ea	33.00 /mh	3,960	0.01 /ea	0		/ea		/ea		3,960	5,702
	Anchors for Equipment	11000.005	16.00 ea	33.00 /mh	132	30.00 /ea	480		/ea		/ea		612	670
	Grout Equipment	11000.005	1.00 cf	33.00 /mh	132	60.00 /cf	60		/cf		/cf		192	250
	Misc Materials	11000.005	1.00 ea	33.00 /mh		250.00 /ea	250		/ea		/ea		250	250
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	Start up and Training	11000.005	16.00 mnhr	33.00 /mh	528	/mnhr			/mnhr		/mnhr		528	760
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Controls	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	23 MBR MBR Building													
	* unassigned *													

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	11-01 Permeate Pumps - Suez													
	Rotary Lobe - 20 HP -	11700.050	4.00 ea	33.00 /mh	4,224	0.01 /ls	0		/ea		/ea		4,224	6,083
	Anchors for Equipment	11000.005	32.00 ea	33.00 /mh	264	30.00 /ea	960		/ea		/ea		1,224	1,340
	Grout Equipment	11000.005	8.00 cf	33.00 /mh	1,056	60.00 /cf	480		/cf		/cf		1,536	2,001
	Misc Materials	11000.005	4.00 ea	33.00 /mh		250.00 /ea	1,000		/ea		/ea		1,000	1,000
	Pressure Gauge Assembly	11000.005	8.00 ea	33.00 /mh	1,056	0.01 /ea	0		/ea		/ea		1,056	1,521
	Start up and Training	11000.005	32.00 mnhr	33.00 /mh	1,056	/mnhr			/mnhr		/mnhr		1,056	1,521
	Spare Parts all Suez	11000.005	1.00 ls	/ls		36,130.00 /ls	36,130		/ls		/ls		36,130	36,130
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	11-03 Chemical Feed - NaOCL - Suez													
	Chem Feed System - Skid	11200.020	1.00 ea	33.00 /mh	2,112	0.01 /ea	0		/ea		/ea		2,112	3,041
	Start up and Training	11000.005	16.00 mnhr	33.00 /mh	528	/mnhr			/mnhr		/mnhr		528	760
	Misc Materials	11000.005	1.00 ea	33.00 /mh		250.00 /ea	250		/ea		/ea		250	250
	Anchors for Equipment	11000.005	8.00 ea	33.00 /mh	66	30.00 /ea	240		/ea		/ea		306	335
	Grout Equipment	11000.005	1.33 cf	33.00 /mh	176	60.00 /cf	80		/cf		/cf		256	333
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Startup Chemicals - NaOCL Tote	11000.005	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Spill Containment Pallet (pallets and scales all chem)	11000.005	1.00 ea	33.00 /mh	264	61,939.00 /ea	61,939		/ea		/ea		62,203	62,319
	11-03 Polymer System - Fournier													
	Polymer Feed System	11200.020	2.00 ea	33.00 /mh	4,224	/ea			/ea		/ea		4,224	6,083
	Quick Fill Connectors -	11200.020	2.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Start up and Training	11000.005	16.00 mnhr	33.00 /mh	528	/mnhr			/mnhr		/mnhr		528	760
	Misc Materials	11000.005	1.00 ea	33.00 /mh		500.00 /ea	500		/ea		/ea		500	500
	Anchors for Equipment	11000.005	8.00 ea	33.00 /mh	66	30.00 /ea	240		/ea		/ea		306	335
	Grout Equipment	11000.005	2.00 cf	33.00 /mh	264	60.00 /cf	120		/cf		/cf		384	500
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Startup Chemicals - Polymer Tote	11000.005	2.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Spill Containment Pallet	11000.005	2.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	11-03 Chemical Feed - Citric Acid - Suez													
	Chem Feed System - Skid	11200.020	1.00 ea	33.00 /mh	2,112	/ea			/ea		/ea		2,112	3,041
	Start up and Training	11000.005	16.00 mnhr	33.00 /mh	528	/mnhr			/mnhr		/mnhr		528	760
	Misc Materials	11000.005	1.00 ea	33.00 /mh		250.00 /ea	250		/ea		/ea		250	250
	Anchors for Equipment	11000.005	8.00 ea	33.00 /mh	66	30.00 /ea	240		/ea		/ea		306	335
	Grout Equipment	11000.005	2.00 cf	33.00 /mh	264	60.00 /cf	120		/cf		/cf		384	500
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Startup Chemicals - NaOCL Tote	11000.005	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Spill Containment Pallet	11000.005	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	11-09 Blowers - Aerzen													
	Pos. Displacement Blower 125hp	11100.030	6.00 ea	33.00 /mh	7,920	0.01 /hp	0		/ea		/ea		7,920	11,405
	VFD	11100.020	6.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
	Blower Sound Enclosure	11100.020	6.00 ea	33.00 /mh	2,376	/ea			/ea		/ea		2,376	3,421
	Blower Inlet Filter 12"	11100.010	2.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Blwr Inlt Disch Silncr 12"	11100.050	6.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Anchors for Equipment	11000.005	48.00 ea	33.00 /mh	396	30.00 /ea	1,440		/ea		/ea		1,836	2,010
	Spare Parts	11000.005	1.00 ls	/ls		6,000.00 /ls	6,000		/ls		/ls		6,000	6,000
	Misc Materials	11000.005	6.00 ea	33.00 /mh		250.00 /ea	1,500		/ea		/ea		1,500	1,500
	Start up and Training	11000.005	40.00 mnhr	33.00 /mh	1,320	/mnhr			/mnhr		/mnhr		1,320	1,901
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	11-22 UV Disinfection Equipment - Trojan													
	UV Disinfection Install	11000.410	2.00 ea	33.00 /mh	3,168	/ea			/ea		/ea		3,168	4,562
	UV Disinfection Install System Control Center	11000.410	1.00 ea	33.00 /mh	132	34,300.00 /ea	34,300		/ea		/ea		34,432	34,490
	UV Disinfection Install PDC	11000.410	2.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Misc Materials	11000.005	1.00 ea	33.00 /mh		250.00 /ea	250		/ea		/ea		250	250
	Anchors for Equipment	11000.005	32.00 ea	33.00 /mh	264	30.00 /ea	960		/ea		/ea		1,224	1,340
	Grout Equipment	11000.005	2.00 cf	33.00 /mh	264	75.00 /cf	150		/cf		/cf		414	530
	Start up and Training	11000.005	32.00 mnhr	33.00 /mh	1,056	/mnhr			/mnhr		/mnhr		1,056	1,521
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Hydro unit and hose	11000.005	1.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Spare Parts	11000.005	1.00 ls	/ls		3,990.00 /ls	3,990		/ls		/ls		3,990	3,990
	11-500 MBR - Suez													
	Cassette Frames and Modules	11000.250	16.00 ea	33.00 /mh	14,784	0.01 /ea	0		/ea		/ea		14,784	21,289
	Anchors for Equipment	11000.005	150.00 ea	33.00 /mh	1,238	30.00 /ea	4,500		/ea		/ea		5,738	6,282
	Grout Equipment	11000.005	2.00 cf	33.00 /mh	264	75.00 /cf	150		/cf		/cf		414	530
	Misc Materials	11000.005	4.00 ea	33.00 /mh	132	250.00 /ea	1,000		/ea		/ea		1,132	1,190
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	Start up and Training	11000.005	48.00 mnhr	33.00 /mh	1,584	/mnhr			/mnhr		/mnhr		1,584	2,281
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Control Panel	11000.005	1.00 ea	33.00 /mh	396	250.00 /ea	250		/ea		/ea		646	820
	Controls	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Special -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Air Header SS Pipe - 8" - 20' (Inc)	15233.505	4.00 ea	33.00 /mh	2,112	/ea			/ea		/ea		2,112	3,041
	Air Header Connection Assembly (Inc)	15233.505	16.00 ea	33.00 /mh	2,112	/ea			/ea		/ea		2,112	3,041
	Permeate Header SS Pipe - 8" - 20' (Inc)	15233.505	4.00 ea	33.00 /mh	2,112	/ea			/ea		/ea		2,112	3,041
	Permeate Header Connection Assembly (Inc)	15233.505	16.00 ea	33.00 /mh	2,112	/ea			/ea		/ea		2,112	3,041
	MBR Tank Deflector Plate	11000.005	4.00 ea	33.00 /mh	528	250.00 /ea	1,000		/ea		/ea		1,528	1,760
	Ejector Assembly (Inc)	11000.005	4.00 ea	33.00 /mh	528	250.00 /ea	1,000		/ea		/ea		1,528	1,760
	Instrument - Level - Float Switch (Inc)	17300.000	8.00 ea	33.00 /mh	528	0.00 /ea	0		/ea		/ea		528	528
	Instrument - Level Transmitter (Inc)	17300.000	4.00 ea	33.00 /mh	264	0.00 /ea	0		/ea		/ea		264	264
	Instrument - Pressure - Transducer (Inc)	17400.000	4.00 ea	33.00 /mh	264	0.00 /ea	0		/ea		/ea		264	264

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	11-500 MBR - Suez													
	Air Header Cassette Isolation Valves (Inc)	15110.034	16.00 ea	33.00 /mh	1,056	0.00 /ea	0		/ea		/ea		1,056	1,521
	11-500 Air Compressor System - Suez													
	Package Air Compressor Units	11300.010	1.00 ea	33.00 /mh	1,056	0.01 /ea	0		/ea		/ea		1,056	1,521
	Anchors for Equipment	11000.005	12.00 ea	33.00 /mh	99	30.00 /ea	360		/ea		/ea		459	503
	Grout Equipment	11000.005	2.00 cf	33.00 /mh	264	60.00 /cf	120		/cf		/cf		384	500
	Air Dryers	11300.010	1.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	Start up and Training	11000.005	8.00 mnhr	33.00 /mh	264	/mnhr			/mnhr		/mnhr		264	380
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Pressure Gauge Assembly	11000.005	2.00 ea	33.00 /mh	264	750.00 /ea	1,500		/ea		/ea		1,764	1,880
	11-500 Dewatering Equipment - Fournier													
	Install Rotary Press	11000.390	2.00 ea	33.00 /mh	6,336	0.01 /ea	0		/ea		/ea		6,336	9,124
	Anchors for Equipment	11000.005	44.00 ea	33.00 /mh	363	30.00 /ea	1,320		/ea		/ea		1,683	1,843
	Grout Equipment	11000.005	2.00 cf	33.00 /mh	264	60.00 /cf	120		/cf		/cf		384	500
	Wash Water Pieces	11000.005	2.00 ea	33.00 /mh	264	500.00 /ea	1,000		/ea		/ea		1,264	1,380
	Spare Parts	11000.005	1.00 ls	/ls		8,430.00 /ls	8,430		/ls		/ls		8,430	8,430
	Start up and Training	11000.005	40.00 mnhr	33.00 /mh	1,320	/mnhr			/mnhr		/mnhr		1,320	1,901
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Control Panel	11000.005	1.00 ea	33.00 /mh	132	250.00 /ea	250		/ea		/ea		382	440
	Controls	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Special -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Install Flocculators	11000.230	2.00 ea	33.00 /mh	2,112	0.00 /ea	0		/ea		/ea		2,112	3,041
	Fab Stainless Steel Pipe - 3" - 6'	15233.505	4.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Instrument - Flow - Sludge - 3in	17200.000	2.00 ea	33.00 /mh	264	0.00 /ea	0		/ea		/ea		264	380
	Instrument - Flow - Polymer - 1in	17200.000	2.00 ea	33.00 /mh	132	0.00 /ea	0		/ea		/ea		132	190
	Screw Conveyors 9" with supports	14558.110	1.00 ls	33.00 /mh	5,280	/ls			/ls		/ls		5,280	7,603
	PS Pipe Stand for Chute 6ft 0in floor to CL SS	15060.408	2.00 ea	33.00 /mh	1,056	1,500.00 /ea	3,000		/ea		/ea		4,056	4,521
	11-500 Air Compressor - Fournier													
	Package Air Compressor Units	11300.010	1.00 ea	33.00 /mh	1,056	0.01 /ea	0		/ea		/ea		1,056	1,521
	Anchors for Equipment	11000.005	4.00 ea	33.00 /mh	33	30.00 /ea	120		/ea		/ea		153	168
	Grout Equipment	11000.005	0.33 cf	33.00 /mh	33	60.00 /cf	20		/cf		/cf		53	67
	Misc Materials	11000.005	1.00 ea	33.00 /mh	33	250.00 /ea	250		/ea		/ea		283	298
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Special -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	220000 Plumbing													
	00 GEN General													
	Plumbing													
	15 - 2 Plumbing - Sub with Bond													
	Plumbing Subcontractor with Bond	15403.100	1.00 ls	/ls		/ls		695,000	/ls		/ls		695,000	695,000
	10 HWK Headworks Building													
	Plumbing													
	02605- Plumbing Excavation and Backfil													
	Trench Excavtion 0- 4'	2333.010	300.00 lf	33.00 /mh	1,980	/lf			/lf		/lf		1,980	2,851
	Trench Backfill 0- 4'	2333.020	300.00 lf	33.00 /mh	2,970	/lf			/lf		/lf		2,970	4,277
	Utility Bedding Peastone	2305.200	100.00 cy	/cy		25.00 /ton	4,000		/cy		/cy		4,000	4,000
	Spoils to Waste	2333.060	100.00 cy	33.00 /mh	330	/cy			/cy		/cy		330	475
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.50 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,900	1,800.00 /Mnth	900	2,800	2,800
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.50 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,900	2,000.00 /Mnth	1,000	2,900	2,900
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.50 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	1,250	500.00 /Mnth	250	1,500	1,500
	23 MBR MBR Building													
	Plumbing													
	02605- Plumbing Excavation and Backfill MBR													
	Trench Excavtion 0- 4'	2333.010	700.00 lf	33.00 /mh	3,465	/lf			/lf		/lf		3,465	4,990
	Trench Backfill 0- 4'	2333.020	700.00 lf	33.00 /mh	4,620	/lf			/lf		/lf		4,620	6,653
	Utility Bedding Peastone	2305.200	233.33 cy	/cy		25.00 /ton	9,333		/cy		/cy		9,333	9,333
	Spoils to Waste	2333.060	233.33 cy	33.00 /mh	770	/cy			/cy		/cy		770	1,109
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	1.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,800	1,800.00 /Mnth	1,800	5,600	5,600
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,800	2,000.00 /Mnth	2,000	5,800	5,800
	41 ADM Administration Bldg													
	Demo													
	0204- DWT Demo Slab for Locker Room Drain Tie In													
	Demo Conc Slab Light Rebar	2220.083	12.00 cy	33.00 /mh	3,168	0.00 /cy	0		/cy		/cy		3,168	4,562
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,800	2,000.00 /Mnth	2,000	5,800	5,800
	Air Compressor 185 cfm (66 HP) (L)	1900.010	1.00 Mnth	/Mnth		/Mnth			850.00 /Mnth	850	705.00 /Mnth	705	1,555	1,555
	Saw Cut full depth 6" slab	2220.083	100.00 lf	33.00 /mh	1,320	/lf			/lf		/lf		1,320	1,901
	(3rd Party) Dump Truck, 10 wheel	1900.210	8.00 Hrs	/Hrs		/Hrs		960	/Hrs		/Hrs		960	960
	Dump Fees by ton	1714.100	20.00 tn	/tn		58.00 /tn	1,160		/tn		/tn		1,160	1,160
	Excavation - By Hand	2317.105	40.00 cy	33.00 /mh	6,600	/cy			/cy		/cy		6,600	9,504
	Buggy Place Suspended Slab	3310.240	12.00 cy	33.00 /mh	847	0.00 /cy	0		/cy		/cy		847	1,220
	Drill and Epoxy #5	3210.101	40.00 ea	33.00 /mh	396	5.00 /ea	210		/ea		/ea		606	780
	SOG Rebar	3210.104	0.20 tn	33.00 /mh	198	1,600.00 /tn	336		/tn		/tn		534	621
	60 lb Jack Hammer	1900.138	1.00 Mnth	/Mnth		/Mnth			500.00 /Mnth	500	100.00 /Mnth	100	600	600
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	1.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,800	1,800.00 /Mnth	1,800	5,600	5,600
	4500 psi Concrete	3310.100	12.00 cy	/cy		198.00 /cy	2,542		/cy		/cy		2,542	2,542
	230000 HVAC													
	00 GEN General													
	HVAC													

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
15	- 1 HVAC - Sub with Bond													
	HVAC Subcontractor with Bond	15402.010	1.00 ls	/ls		/ls		1,215,384	/ls		/ls		1,215,384	1,215,384
260000	Electrical													
00 GEN	General													
	* unassigned *													
16	-1 Electrical - Sub													
	Electrical Sub	16000.001	1.00 ls	/ls		/ls		7,100,000	/ls		/ls		7,100,000	7,100,000
	Electrical Bond	16000.001	1.00 ls	/ls		/ls			/ls		/ls			
	Temporary Dewatering Power	16000.001	1.00 ls	/ls		/ls		0	/ls		/ls		0	0
	Temporary Construction Power	16000.001	1.00 ls	/ls		/ls		0	/ls		/ls		0	0
	Temporary IPS	16000.001	1.00 ls	/ls		/ls			/ls		/ls			
	Elec. Security Allowance	16000.001	1.00 ls	/ls		/ls			/ls		/ls			
	Unload Elect Equip	1000.100	6.00 wk	1,400.00 /wk	8,400	/wk			/wk		/wk		8,400	12,096
	RT Telescopic Forklift (12,000 lb) (130 HP) (L)	1900.300	3.00 Mnth	/Mnth		/Mnth			4,200.00 /Mnth	12,600	1,500.00 /Mnth	4,500	17,100	17,100
	Temporary Lighting	16000.001	1.00 ls	/ls		/ls		0	/ls		/ls			
	Sub - Security Allowance Electrician	10610.100	1.00 ls	/ls		/ls		91,000	/ls		/ls		91,000	91,000
01 CIV	Civil													
	* unassigned *													
16-01	Electrical Ductbank													
	Duct Bank Excavation/Backfill	16000.002	1,805.00 lf	33.00 /mh	11,913	/lf			0.00 /lf	0	/lf		11,913	17,155
	Duct Bank Formwork	16000.002	7,220.00 sf	33.00 /mh	23,826	1.50 /sf	10,830		/sf		/sf		34,656	45,139
	Duct Bank Concrete	3310.100	400.00 cy	33.00 /mh	13,200	175.00 /cy	70,000		/cy		/cy		83,200	89,008
	Duct Bank Rebar	3210.230	21.50 tn	33.00 /mh	21,285	1,600.00 /ton	34,400		/tn		/tn		55,685	65,050
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	3.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	11,400	1,800.00 /Mnth	5,400	16,800	16,800
	Bobcat Skid Steer (85hp)- track (L)	1900.131	2.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	7,600	2,000.00 /Mnth	4,000	11,600	11,600
	Color Dye	3310.110	400.00 cy	/cy		60.00 /cy	25,680		/cy		/cy		25,680	25,680
10 HWK	Headworks Building													
	* unassigned *													
16-01	Underslab Conduit													
	Duct Bank Excavation/Backfill	16000.002	250.00 lf	33.00 /mh	4,125	/lf			0.00 /lf	0	/lf		4,125	5,940
	Flowfill	3310.100	37.04 cy	33.00 /mh	3,667	152.00 /cy	5,630		/cy		/cy		9,296	10,910
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.50 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,900	1,800.00 /Mnth	900	2,800	2,800
23 MBR	MBR Building													
	* unassigned *													
16-01	Underslab Conduit													
	Duct Bank Excavation/Backfill	16000.002	400.00 lf	33.00 /mh	6,600	/lf			0.00 /lf	0	/lf		6,600	9,504
	Flowfill	3310.100	59.26 cy	33.00 /mh	5,084	152.00 /cy	9,007		/cy		/cy		14,092	16,329
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	1.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,800	1,800.00 /Mnth	1,800	5,600	5,600
60 ELE	Electrical Bldg													
	* unassigned *													
16-01	Underslab Conduit													
	Duct Bank Excavation/Backfill	16000.002	75.00 lf	33.00 /mh	1,238	/lf			0.00 /lf	0	/lf		1,238	1,782
	Flowfill	3310.100	11.11 cy	33.00 /mh	1,100	152.00 /cy	1,689		/cy		/cy		2,789	3,273
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
311000	Site Clearing													
01 CIV	Civil													
	Sitework Sitework													
0212-	Clear and Grub Site													
	Clear and Grub Site -Light	2314.100	9.83 ac	33.00 /mh	3,243	/ac			/ac		/ac		3,243	4,669
	Strip Topsoil to Stockpile	2314.200	5,200.00 cy	33.00 /mh	7,722	/cy			/cy		/cy		7,722	11,120
	John Deere 644 Loader (232 HP) (M)	1900.132	0.43 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	2,838	3,700.00 /Mnth	1,591	4,429	4,429
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.43 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	3,010	3,000.00 /Mnth	1,290	4,300	4,300
	Water Truck, 4,000 Gallon (L)	1900.210	0.43 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	2,064	1,200.00 /Mnth	516	2,580	2,580
	10 Wheel Dump Truck (Haul off trash)	1900.210	20.00 Hrs	/Hrs		/Hrs		2,400	/Hrs		/Hrs		2,400	2,400
	Dump Fees by ton	1714.100	150.00 tn	/tn		45.00 /tn	6,750		/tn		/tn		6,750	6,750
	John Deere 644 Loader (232 HP) (M)	1900.132	0.43 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	2,838	3,700.00 /Mnth	1,591	4,429	4,429
0213-	Temp Erosion Control													
	Silt Fence	2370.150	7,300.00 sf	33.00 /mh	12,045	1.00 /sf	8,030		/sf		/sf		20,075	25,375
	Stone @ Entrance (3ea tracking mat)	2305.350	180.00 cy	33.00 /mh	1,782	45.00 /ton	13,365		/cy		/cy		15,147	15,931
	Labor Clean sweep clean roads	2305.350	6.00 mo	33.00 /mh	4,554	0.00 /mo	0		/mo		/mo		4,554	6,558
	Bobcat Skid Steer (85hp)- track (L) with Broom	1900.131	8.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	30,400	2,000.00 /Mnth	16,000	46,400	46,400
	Erosion Control (BMP) Maintenance	2370.050	1.00 mnhr	33.00 /mh	23,760	/mnhr			/mnhr		/mnhr		23,760	34,214
	Bobcat Skid Steer (85hp)- track (L) with trencher	1900.131	1.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,800	2,000.00 /Mnth	2,000	5,800	5,800
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.12 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,104	3,500.00 /Mnth	420	1,524	1,524
	John Deere 624 Loader (172 HP) (M)	1900.132	0.12 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	720	3,000.00 /Mnth	360	1,080	1,080
0230-	Final Grade Site													
	Rough Grade Site	2300.600	48,000.00 sy	33.00 /mh	47,520	/sy			/sy		/sy		47,520	68,429
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	2.00 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	18,400	3,500.00 /Mnth	7,000	25,400	25,400
	John Deere 644 Loader (232 HP) (M)	1900.132	2.00 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	13,200	3,700.00 /Mnth	7,400	20,600	20,600
	Water Truck, 4,000 Gallon (L)	1900.210	2.00 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	9,600	1,200.00 /Mnth	2,400	12,000	12,000
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	2.00 Mnth	/Mnth		/Mnth			3,900.00 /Mnth	7,800	1,650.00 /Mnth	3,300	11,100	11,100
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	2.00 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	5,000	500.00 /Mnth	1,000	6,000	6,000
	Bobcat Skid Steer (85hp)- track (L)	1900.131	2.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	7,600	2,000.00 /Mnth	4,000	11,600	11,600
311100	Finish Grading & Landscaping													
01 CIV	Civil													
	Sitework Sitework													
0236-	Sitework Improvements													
	Demo Wire Fence existing	2220.735	1.00 ls	33.00 /mh	2,376	/ls			/ls		/ls		2,376	3,421

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0236- Sitework Improvements													
	Hydreseeding subcontractor (9 acre)	2322.060	1.00 ls	/ls		/ls		45,000	/ls		/ls		45,000	45,000
	Temp Irrigation for Landscape	2322.040	1.00 ls	33.00 /mh	10,560	25,000.00 /ls	25,000		/ls		/ls		35,560	40,206
	Erosion Control Mats at slope of pond	2322.040	2,666.00 sy	/sy		2.00 /sy	5,332	0	/sy		/sy		5,332	5,332
	Asphalt Striping Parking lot	2740.840	1.00 ls	/ls		/ls		6,000	/ls		/ls		6,000	6,000
	Dumpster	1714.100	1.00 ea	/ea		750.00 /ea	750		/ea		/ea		750	750
	Labor Erosion Conrol mat	2322.040	1.00 ls	33.00 /mh	3,960	/ls			/ls		/ls		3,960	5,702
	0237-0 Rip Rap at Effluent Outfall													
	Rip Rap Machine Place	2305.450	10.00 cy	33.00 /mh	1,650	/cy			/cy		/cy		1,650	2,376
	Import Rip Rap - Type L (D50 = 9")	2305.450	10.00 cy	/cy		45.00 /ton	743		/cy		/cy		743	743
	Import Fill - Structural Fill	2305.100	8.00 cy	/cy		17.00 /ton	204		/cy		/cy		204	204
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	920	3,500.00 /Mnth	350	1,270	1,270
	John Deere 644 Loader (232 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	660	3,700.00 /Mnth	370	1,030	1,030
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	250	500.00 /Mnth	50	300	300
	Geotextile Fabric (Insert MFR name/#)	2360.100	20.00 sy	33.00 /mh	20	1.50 /sy	30		/sy		/sy		50	59
	Dekorra Mock Rock Model 104	2305.450	1.00 ea	33.00 /mh	264	1,600.00 /ea	1,600		/ea		/ea		1,864	1,980
	PS Threaded Rod 5/8in SS (3' with 2 nuts and washers)	15060.502	8.00 ea	33.00 /mh	26	75.00 /ea	600		/ea		/ea		626	638
	0250- Road Base Roads at Influent and Effluent Pipe 4"													
	Sub-Grade/Compact Roads	2300.600	5,300.00 sy	33.00 /mh	3,498	/sy			/sy		/sy		3,498	5,037
	Fine Grade/Compact Roads	2301.100	5,300.00 sy	33.00 /mh	3,498	/sy			/sy		/sy		3,498	5,037
	Base - Roads	2339.510	586.00 cy	33.00 /mh	5,801	/cy			/cy		/cy		5,801	8,354
	Import Gravel Base	2305.250	586.00 cy	/cy		25.00 /ton	27,103		/cy		/cy		27,103	27,103
	John Deere 644 Loader (232 HP) (M)	1900.132	1.00 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	6,600	3,700.00 /Mnth	3,700	10,300	10,300
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.00 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	9,200	3,500.00 /Mnth	3,500	12,700	12,700
	Water Truck, 4,000 Gallon (L)	1900.210	1.00 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	4,800	1,200.00 /Mnth	1,200	6,000	6,000
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	1.00 Mnth	/Mnth		/Mnth			3,900.00 /Mnth	3,900	1,650.00 /Mnth	1,650	5,550	5,550
	John Deere 750 Dozer (168 HP) (L)	1900.120	1.00 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	7,000	3,000.00 /Mnth	3,000	10,000	10,000
	0250- Road Base Under Asphalt													
	Sub-Grade/Compact Roads	2300.600	11,496.00 sy	33.00 /mh	5,691	/sy			/sy		/sy		5,691	8,194
	Fine Grade/Compact Roads	2301.100	11,496.00 sy	33.00 /mh	5,691	/sy			/sy		/sy		5,691	8,194
	Base - Roads	2339.510	2,880.00 cy	33.00 /mh	9,504	/cy			/cy		/cy		9,504	13,686
	Import Gravel Base	2305.250	2,880.00 cy	/cy		25.00 /ton	133,200		/cy		/cy		133,200	133,200
	John Deere 644 Loader (232 HP) (M)	1900.132	1.00 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	6,600	3,700.00 /Mnth	3,700	10,300	10,300
	Water Truck, 4,000 Gallon (L)	1900.210	1.00 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	4,800	1,200.00 /Mnth	1,200	6,000	6,000
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	1.00 Mnth	/Mnth		/Mnth			3,900.00 /Mnth	3,900	1,650.00 /Mnth	1,650	5,550	5,550
	John Deere 750 Dozer (168 HP) (L)	1900.120	1.00 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	7,000	3,000.00 /Mnth	3,000	10,000	10,000
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	1.00 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	2,500	500.00 /Mnth	500	3,000	3,000
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,800	2,000.00 /Mnth	2,000	5,800	5,800
	0250- Landscape Rock													
	Sub-Grade/Compact Roads	2300.600	1,766.00 sy	33.00 /mh	1,748	/sy			/sy		/sy		1,748	2,518
	Fine Grade/Compact Roads	2301.100	1,766.00 sy	33.00 /mh	1,748	/sy			/sy		/sy		1,748	2,518
	Gravel Landscape	2339.510	200.00 cy	33.00 /mh	2,178	/cy			/cy		/cy		2,178	3,136
	Landscape Rock	2305.250	200.00 cy	/cy		43.00 /ton	15,910		/cy		/cy		15,910	15,910
	John Deere 644 Loader (232 HP) (M)	1900.132	0.49 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	3,241	3,700.00 /Mnth	1,817	5,057	5,057
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.49 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	3,437	3,000.00 /Mnth	1,473	4,910	4,910
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.49 Mnth	/Mnth		/Mnth			3,900.00 /Mnth	1,915	1,650.00 /Mnth	810	2,725	2,725
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.49 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	1,228	500.00 /Mnth	246	1,473	1,473
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.49 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,866	2,000.00 /Mnth	982	2,848	2,848
	Landscape Fabric	2322.050	1,766.00 sy	33.00 /mh	2,914	1.50 /sy	2,649		/sy		/sy		5,563	6,845
	0250- Recycled Asphalt Road Base													
	Sub-Grade/Compact Roads	2300.600	610.00 sy	33.00 /mh	403	/sy			/sy		/sy		403	580
	Fine Grade/Compact Roads	2301.100	610.00 sy	33.00 /mh	403	/sy			/sy		/sy		403	580
	Base - Gravel	2339.510	140.00 cy	33.00 /mh	924	/cy			/cy		/cy		924	1,331
	Import Recycled Asphalt	2305.250	140.00 cy	/cy		35.00 /ton	9,310		/cy		/cy		9,310	9,310
	John Deere 644 Loader (232 HP) (M)	1900.132	0.09 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	561	3,700.00 /Mnth	315	876	876
	Water Truck, 4,000 Gallon (L)	1900.210	0.09 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	408	1,200.00 /Mnth	102	510	510
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.09 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	595	3,000.00 /Mnth	255	850	850
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.09 Mnth	/Mnth		/Mnth			3,900.00 /Mnth	332	1,650.00 /Mnth	140	472	472
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.09 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	213	500.00 /Mnth	43	255	255
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.09 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	323	2,000.00 /Mnth	170	493	493
	312000 Earth Moving													
	01 CIV Civil													
	Backfill Backfill													
	0235- Site Backfill													
	Backfill - Mass	2319.302	3,101.00 cy	33.00 /mh	15,350	/cy			/cy		/cy		15,350	22,104
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.59 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	5,400	3,500.00 /Mnth	2,055	7,455	7,455
	John Deere 644 Loader (232 HP) (M)	1900.132	0.59 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	3,874	3,700.00 /Mnth	2,172	6,046	6,046
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.59 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	4,109	3,000.00 /Mnth	1,761	5,870	5,870
	Water Truck, 4,000 Gallon (L)	1900.210	0.59 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	2,818	1,200.00 /Mnth	704	3,522	3,522
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.59 Mnth	/Mnth		/Mnth			3,900.00 /Mnth	2,289	1,650.00 /Mnth	969	3,258	3,258
	0235- Backfill Site Drain Lift Station													
	Backfill - Mass	2319.302	2,452.00 cy	33.00 /mh	13,756	/cy			/cy		/cy		13,756	19,808
	Import Fill - Structural Fill	2305.100	60.00 cy	/cy		17.00 /ton	1,530		/cy		/cy		1,530	1,530
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.47 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	4,324	3,500.00 /Mnth	1,645	5,969	5,969
	John Deere 644 Loader (232 HP) (M)	1900.132	0.47 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	3,102	3,700.00 /Mnth	1,739	4,841	4,841
	Water Truck, 4,000 Gallon (L)	1900.210	0.47 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	2,256	1,200.00 /Mnth	564	2,820	2,820
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.20 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	1,400	3,000.00 /Mnth	600	2,000	2,000
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.47 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	1,175	500.00 /Mnth	235	1,410	1,410
	Mikasa Jumping Jack Compactor (L)	1900.138	0.47 Mnth	/Mnth		/Mnth			200.00 /Mnth	94	100.00 /Mnth	47	141	141
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.47 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,786	2,000.00 /Mnth	940	2,726	2,726
	0235- Electrical Equipment/ Generator Backfill													

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0235- Electrical Equipment/ Generator Backfill													
	Backfill - Mass	2319.302	336.00 cy	33.00 /mh	1,996	/cy			/cy		/cy		1,996	2,874
	Import Fill - Structural Fill	2305.100	183.00 cy	/cy		17.00 /ton	4,667		/cy		/cy		4,667	4,667
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	497	3,500.00 /Mnth	189	686	686
	John Deere 644 Loader (232 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	356	3,700.00 /Mnth	200	556	556
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	259	1,200.00 /Mnth	65	324	324
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	135	500.00 /Mnth	27	162	162
	Mikasa Jumping Jack Compactor (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			200.00 /Mnth	11	100.00 /Mnth	5	16	16
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	205	1,800.00 /Mnth	97	302	302
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.05 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	205	2,000.00 /Mnth	108	313	313
	0235- Electrical Building Backfill													
	Backfill - Mass	2319.302	346.00 cy	33.00 /mh	2,284	/cy			/cy		/cy		2,284	3,288
	Import Fill - Structural Fill	2305.100	75.00 cy	/cy		17.00 /ton	1,913		/cy		/cy		1,913	1,913
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.14 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,288	3,500.00 /Mnth	490	1,778	1,778
	John Deere 644 Loader (232 HP) (M)	1900.132	0.14 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	924	3,700.00 /Mnth	518	1,442	1,442
	Water Truck, 4,000 Gallon (L)	1900.210	0.14 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	672	1,200.00 /Mnth	168	840	840
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.14 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	350	500.00 /Mnth	70	420	420
	Mikasa Jumping Jack Compactor (L)	1900.138	0.14 Mnth	/Mnth		/Mnth			200.00 /Mnth	28	100.00 /Mnth	14	42	42
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.14 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	532	2,000.00 /Mnth	280	812	812
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.14 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	532	1,800.00 /Mnth	252	784	784
	0235- Headworks Building Backfill													
	Backfill - Mass	2319.302	5,124.00 cy	33.00 /mh	30,437	/cy			/cy		/cy		30,437	43,829
	Import Fill - Structural Fill	2305.100	4,343.00 cy	/cy		17.00 /ton	110,747		/cy		/cy		110,747	110,747
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.00 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	9,200	3,500.00 /Mnth	3,500	12,700	12,700
	John Deere 644 Loader (232 HP) (M)	1900.132	1.00 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	6,600	3,700.00 /Mnth	3,700	10,300	10,300
	Water Truck, 4,000 Gallon (L)	1900.210	1.00 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	4,800	1,200.00 /Mnth	1,200	6,000	6,000
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	1.00 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	2,500	500.00 /Mnth	500	3,000	3,000
	Mikasa Jumping Jack Compactor (L)	1900.138	1.00 Mnth	/Mnth		/Mnth			200.00 /Mnth	200	100.00 /Mnth	100	300	300
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,800	2,000.00 /Mnth	2,000	5,800	5,800
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	1.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,800	1,800.00 /Mnth	1,800	5,600	5,600
	0235- Influent Pump Station Backfill													
	Backfill - Mass	2319.302	1,750.00 cy	33.00 /mh	8,663	/cy			/cy		/cy		8,663	12,474
	Import Fill - Strucutral Fill	2305.100	87.00 cy	/cy		17.00 /ton	2,219		/cy		/cy		2,219	2,219
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.32 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,944	3,500.00 /Mnth	1,120	4,064	4,064
	John Deere 644 Loader (232 HP) (M)	1900.132	0.32 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	2,112	3,700.00 /Mnth	1,184	3,296	3,296
	Water Truck, 4,000 Gallon (L)	1900.210	0.32 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	1,536	1,200.00 /Mnth	384	1,920	1,920
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.32 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	2,240	3,000.00 /Mnth	960	3,200	3,200
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.32 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	800	500.00 /Mnth	160	960	960
	Mikasa Jumping Jack Compactor (L)	1900.138	0.32 Mnth	/Mnth		/Mnth			200.00 /Mnth	64	100.00 /Mnth	32	96	96
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.32 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,216	2,000.00 /Mnth	640	1,856	1,856
	0235- MBR Building Backfill													
	Backfill - Mass	2319.302	4,814.00 cy	33.00 /mh	23,829	/cy			/cy		/cy		23,829	34,314
	Import Fill - STructural Fill	2305.100	3,015.00 cy	/cy		17.00 /ton	76,883		/cy		/cy		76,883	76,883
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.78 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	7,176	3,500.00 /Mnth	2,730	9,906	9,906
	John Deere 644 Loader (232 HP) (M)	1900.132	0.78 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	5,148	3,700.00 /Mnth	2,886	8,034	8,034
	Water Truck, 4,000 Gallon (L)	1900.210	0.78 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	3,744	1,200.00 /Mnth	936	4,680	4,680
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.78 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	5,460	3,000.00 /Mnth	2,340	7,800	7,800
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.78 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	1,950	500.00 /Mnth	390	2,340	2,340
	Mikasa Jumping Jack Compactor (L)	1900.138	0.78 Mnth	/Mnth		/Mnth			200.00 /Mnth	156	100.00 /Mnth	78	234	234
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.78 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	2,964	1,800.00 /Mnth	1,404	4,368	4,368
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.78 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	2,964	2,000.00 /Mnth	1,560	4,524	4,524
	0235- Process Basin Backfill													
	Backfill - Mass	2319.302	17,798.00 cy	33.00 /mh	58,733	/cy			/cy		/cy		58,733	84,576
	Import Fill - Structural Fill	2305.100	2,409.00 cy	/cy		17.00 /ton	61,430		/cy		/cy		61,430	61,430
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.95 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	17,940	3,500.00 /Mnth	6,825	24,765	24,765
	John Deere 644 Loader (232 HP) (M)	1900.132	1.95 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	12,870	3,700.00 /Mnth	7,215	20,085	20,085
	Water Truck, 4,000 Gallon (L)	1900.210	1.95 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	9,360	1,200.00 /Mnth	2,340	11,700	11,700
	John Deere 750 Dozer (168 HP) (L)	1900.120	1.95 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	13,650	3,000.00 /Mnth	5,850	19,500	19,500
	Haul Truck - 35 Ton (393 HP) (L)	1900.210	1.95 Mnth	/Mnth		/Mnth			13,500.00 /Mnth	26,325	4,500.00 /Mnth	8,775	35,100	35,100
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	1.95 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	4,875	500.00 /Mnth	975	5,850	5,850
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.50 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	5,700	2,000.00 /Mnth	3,000	8,700	8,700
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	1.50 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	5,700	1,800.00 /Mnth	2,700	8,400	8,400
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	1.95 Mnth	/Mnth		/Mnth			3,900.00 /Mnth	7,605	1,650.00 /Mnth	3,218	10,823	10,823
	0235- Solids Holding Tanks													
	Backfill - Mass	2319.302	447.00 cy	33.00 /mh	2,213	/cy			/cy		/cy		2,213	3,186
	Import Fill - Structural Fill	2305.100	291.00 cy	/cy		17.00 /ton	7,421		/cy		/cy		7,421	7,421
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.13 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,168	3,500.00 /Mnth	445	1,613	1,613
	John Deere 644 Loader (232 HP) (M)	1900.132	0.13 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	838	3,700.00 /Mnth	470	1,308	1,308
	Water Truck, 4,000 Gallon (L)	1900.210	0.13 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	610	1,200.00 /Mnth	152	762	762
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.13 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	889	3,000.00 /Mnth	381	1,270	1,270
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.13 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	318	500.00 /Mnth	64	381	381
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.13 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	483	2,000.00 /Mnth	254	737	737
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.13 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	483	1,800.00 /Mnth	229	711	711
	Dirtwork Dirtwork													
	0234- Site Ballance Haul Off Dirt													
	Load Dirt Haul off	2317.105	46,829.00 cy	33.00 /mh	50,997	/cy			/cy		/cy		50,997	73,435
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	2.83 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	26,036	3,500.00 /Mnth	9,905	35,941	35,941
	Water Truck, 4,000 Gallon (L)	1900.210	2.83 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	13,584	1,200.00 /Mnth	3,396	16,980	16,980
	Dump Truck, End Dump (haul off 25,000 cy, 21,829 to pond 3)	1900.210	3,121.00 Hrs	/Hrs		/Hrs		507,162	0.00 /Hrs	0	/Hrs		507,162	507,162
	Haul Truck - 35 Ton (393 HP) (L)	1900.210	2.83 Mnth	/Mnth		/Mnth			13,500.00 /Mnth	38,205	4,500.00 /Mnth	12,735	50,940	50,940
	0235- Underslab Rock at headworks under grit chambers													
	Backfill - Mass	2319.302	45.00 cy	33.00 /mh	1,188	/cy			/cy		/cy		1,188	1,711

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0235- Underslab Rock at headworks under grit chambers													
	Import Fill Stone 3/4"	2305.100	45.00 cy	/cy		36.00 /ton	2,592		/cy		/cy		2,592	2,592
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	469	3,500.00 /Mnth	179	648	648
	John Deere 644 Loader (232 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	337	3,700.00 /Mnth	189	525	525
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.05 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	194	2,000.00 /Mnth	102	296	296
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	128	500.00 /Mnth	26	153	153
	0235- Underslab Rock at Influent Pump Station													
	Backfill - Mass	2319.302	40.00 cy	33.00 /mh	1,056	/cy			/cy		/cy		1,056	1,521
	Import Fill Stone 3/4"	2305.100	40.00 cy	/cy		36.00 /ton	2,304		/cy		/cy		2,304	2,304
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	414	3,500.00 /Mnth	158	572	572
	John Deere 644 Loader (232 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	297	3,700.00 /Mnth	167	464	464
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	113	500.00 /Mnth	23	135	135
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.05 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	171	2,000.00 /Mnth	90	261	261
	0235- Underslab Rock at Equilization Basin													
	Backfill - Mass	2319.302	260.00 cy	33.00 /mh	2,145	/cy			/cy		/cy		2,145	3,089
	Import Fill Stone 3/4"	2305.100	260.00 cy	/cy		36.00 /ton	14,976		/cy		/cy		14,976	14,976
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.15 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,362	3,500.00 /Mnth	518	1,880	1,880
	John Deere 644 Loader (232 HP) (M)	1900.132	0.15 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	977	3,700.00 /Mnth	548	1,524	1,524
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.15 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	370	500.00 /Mnth	74	444	444
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.15 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	562	2,000.00 /Mnth	296	858	858
	0235- Underslab Rock At Process basins 1-3													
	Backfill - Mass	2319.302	860.00 cy	33.00 /mh	7,095	/cy			/cy		/cy		7,095	10,217
	Import Fill Stone 3/4"	2305.100	860.00 cy	/cy		36.00 /ton	49,536		/cy		/cy		49,536	49,536
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.33 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,999	3,500.00 /Mnth	1,141	4,140	4,140
	John Deere 644 Loader (232 HP) (M)	1900.132	0.33 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	2,152	3,700.00 /Mnth	1,206	3,358	3,358
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.33 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	815	500.00 /Mnth	163	978	978
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.33 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,239	2,000.00 /Mnth	652	1,891	1,891
	0235- Underslab Rock at MBR													
	Backfill - Mass	2319.302	160.00 cy	33.00 /mh	3,168	/cy			/cy		/cy		3,168	4,562
	Import Fill Stone 3/4"	2305.100	160.00 cy	/cy		36.00 /ton	9,216		/cy		/cy		9,216	9,216
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.13 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,196	3,500.00 /Mnth	455	1,651	1,651
	John Deere 644 Loader (232 HP) (M)	1900.132	0.13 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	858	3,700.00 /Mnth	481	1,339	1,339
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.13 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	325	500.00 /Mnth	65	390	390
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.13 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	494	2,000.00 /Mnth	260	754	754
	Excavation Excavation													
	0234- Excavation Site Drain Lift Station													
	Excavation - Mass	2317.105	4,360.00 cy	33.00 /mh	13,669	/cy			/cy		/cy		13,669	19,683
	Komatsu PC400 Excavator (330 HP) (L)	1900.136	0.56 Mnth	/Mnth		/Mnth			11,500.00 /Mnth	6,440	4,000.00 /Mnth	2,240	8,680	8,680
	John Deere 644 Loader (232 HP) (M)	1900.132	0.56 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	3,696	3,700.00 /Mnth	2,072	5,768	5,768
	Water Truck, 4,000 Gallon (L)	1900.210	0.56 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	2,688	1,200.00 /Mnth	672	3,360	3,360
	Haul Truck - 35 Ton (393 HP) (L)	1900.210	0.56 Mnth	/Mnth		/Mnth			13,500.00 /Mnth	7,560	4,500.00 /Mnth	2,520	10,080	10,080
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.56 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	3,920	3,000.00 /Mnth	1,680	5,600	5,600
	Precompact Subgrade Below Foundations	2300.600	50.00 sy	33.00 /mh	248	/sy			/sy		/sy		248	356
	Machine Grade Below Structure	2301.100	50.00 sy	33.00 /mh	248	/sy			/sy		/sy		248	356
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	377	3,500.00 /Mnth	144	521	521
	John Deere 644 Loader (232 HP) (M)	1900.132	0.04 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	271	3,700.00 /Mnth	152	422	422
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	103	500.00 /Mnth	21	123	123
	Engineered/Stamped Design for Excavation	2317.105	1.00 ls	/ls		/ls		3,500	/ls		/ls		3,500	3,500
	Shoring System for existing lift station	2250.040	1.00 ls	33.00 /mh	33	/ls	25,000.00	25,000	/ls		/ls		25,033	25,048
	0234- Excavate Electric Building													
	Excavation - Mass	2317.105	480.00 cy	33.00 /mh	1,901	/cy			/cy		/cy		1,901	2,737
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.12 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,104	3,500.00 /Mnth	420	1,524	1,524
	John Deere 644 Loader (232 HP) (M)	1900.132	0.12 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	792	3,700.00 /Mnth	444	1,236	1,236
	Water Truck, 4,000 Gallon (L)	1900.210	0.12 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	576	1,200.00 /Mnth	144	720	720
	Precompact Subgrade Below Foundations	2300.600	50.00 sy	33.00 /mh	248	/sy			/sy		/sy		248	356
	Machine Grade Below Structure	2301.100	50.00 sy	33.00 /mh	248	/sy			/sy		/sy		248	356
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.04 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	156	1,800.00 /Mnth	74	230	230
	John Deere 644 Loader (232 HP) (M)	1900.132	0.04 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	271	3,700.00 /Mnth	152	422	422
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	103	500.00 /Mnth	21	123	123
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.04 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	156	2,000.00 /Mnth	82	238	238
	0234- Excavate Generator and MCC Pad													
	Excavation - Mass	2317.105	140.00 cy	33.00 /mh	554	/cy			/cy		/cy		554	798
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	488	3,500.00 /Mnth	186	673	673
	John Deere 644 Loader (232 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	350	3,700.00 /Mnth	196	546	546
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	254	1,200.00 /Mnth	64	318	318
	Precompact Subgrade Below Foundations	2300.600	50.00 sy	33.00 /mh	248	/sy			/sy		/sy		248	356
	Machine Grade Below Structure	2301.100	50.00 sy	33.00 /mh	248	/sy			/sy		/sy		248	356
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.04 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	156	1,800.00 /Mnth	74	230	230
	John Deere 644 Loader (232 HP) (M)	1900.132	0.04 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	271	3,700.00 /Mnth	152	422	422
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	103	500.00 /Mnth	21	123	123
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.04 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	156	2,000.00 /Mnth	82	238	238
	0234- Excavate Headworks Building													
	Excavation - Mass	2317.105	5,915.00 cy	33.00 /mh	15,616	/cy			/cy		/cy		15,616	22,486
	Komatsu PC400 Excavator (330 HP) (L)	1900.136	0.67 Mnth	/Mnth		/Mnth			11,500.00 /Mnth	7,705	4,000.00 /Mnth	2,680	10,385	10,385
	John Deere 644 Loader (232 HP) (M)	1900.132	0.67 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	4,422	3,700.00 /Mnth	2,479	6,901	6,901
	Water Truck, 4,000 Gallon (L)	1900.210	0.67 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	3,216	1,200.00 /Mnth	804	4,020	4,020
	Haul Truck - 35 Ton (393 HP) (L)	1900.210	0.67 Mnth	/Mnth		/Mnth			13,500.00 /Mnth	9,045	4,500.00 /Mnth	3,015	12,060	12,060
	Precompact Subgrade Below Foundations	2300.600	900.00 sy	33.00 /mh	594	/sy			/sy		/sy		594	855
	Machine Grade Below Structure	2301.100	900.00 sy	33.00 /mh	594	/sy			/sy		/sy		594	855
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	460	3,500.00 /Mnth	175	635	635
	John Deere 644 Loader (232 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	330	3,700.00 /Mnth	185	515	515
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	240	1,200.00 /Mnth	60	300	300

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0234- Excavate Headworks Building													
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	125	500.00 /Mnth	25	150	150
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.67 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	4,690	3,000.00 /Mnth	2,010	6,700	6,700
	Engineered/Stamped Design for Excavation	2317.105	1.00 ls	/ls		/ls		3,500	/ls		/ls		3,500	3,500
	0234- Excavate Influent Pump Station													
	Excavation - Mass	2317.105	3,670.00 cy	33.00 /mh	8,478	/cy			/cy		/cy		8,478	12,208
	Komatsu PC400 Excavator (330 HP) (L)	1900.136	0.35 Mnth	/Mnth		/Mnth			11,500.00 /Mnth	4,025	4,000.00 /Mnth	1,400	5,425	5,425
	John Deere 644 Loader (232 HP) (M)	1900.132	0.35 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	2,310	3,700.00 /Mnth	1,295	3,605	3,605
	Haul Truck - 35 Ton (393 HP) (L)	1900.210	0.35 Mnth	/Mnth		/Mnth			13,500.00 /Mnth	4,725	4,500.00 /Mnth	1,575	6,300	6,300
	Water Truck, 4,000 Gallon (L)	1900.210	0.35 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	1,680	1,200.00 /Mnth	420	2,100	2,100
	Precompact Subgrade Below Foundations	2300.600	50.00 sy	33.00 /mh	495	/sy			/sy		/sy		495	713
	Machine Grade Below Structure	2301.100	50.00 sy	33.00 /mh	495	/sy			/sy		/sy		495	713
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	377	3,500.00 /Mnth	144	521	521
	John Deere 644 Loader (232 HP) (M)	1900.132	0.04 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	271	3,700.00 /Mnth	152	422	422
	Water Truck, 4,000 Gallon (L)	1900.210	0.04 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	197	1,200.00 /Mnth	49	246	246
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	103	500.00 /Mnth	21	123	123
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.04 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	156	1,800.00 /Mnth	74	230	230
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.04 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	156	2,000.00 /Mnth	82	238	238
	John Deere 750 Dozer (168 HP) (L)	1900.120	0.35 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	2,450	3,000.00 /Mnth	1,050	3,500	3,500
	0234- Excavate MBR Building													
	Excavation - Mass	2317.105	13,227.00 cy	33.00 /mh	28,372	/cy			/cy		/cy		28,372	40,856
	Komatsu PC400 Excavator (330 HP) (L)	1900.136	1.04 Mnth	/Mnth		/Mnth			11,500.00 /Mnth	11,960	4,000.00 /Mnth	4,160	16,120	16,120
	John Deere 644 Loader (232 HP) (M)	1900.132	1.04 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	6,864	3,700.00 /Mnth	3,848	10,712	10,712
	Water Truck, 4,000 Gallon (L)	1900.210	1.04 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	4,992	1,200.00 /Mnth	1,248	6,240	6,240
	Haul Truck - 35 Ton (393 HP) (L)	1900.210	1.04 Mnth	/Mnth		/Mnth			13,500.00 /Mnth	14,040	4,500.00 /Mnth	4,680	18,720	18,720
	Precompact Subgrade Below Foundations	2300.600	1,600.00 sy	33.00 /mh	1,584	/sy			/sy		/sy		1,584	2,281
	Machine Grade Below Structure	2301.100	1,600.00 sy	33.00 /mh	1,584	/sy			/sy		/sy		1,584	2,281
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.23 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,088	3,500.00 /Mnth	795	2,883	2,883
	John Deere 644 Loader (232 HP) (M)	1900.132	0.23 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	1,498	3,700.00 /Mnth	840	2,338	2,338
	Water Truck, 4,000 Gallon (L)	1900.210	0.23 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	1,090	1,200.00 /Mnth	272	1,362	1,362
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.23 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	568	500.00 /Mnth	114	681	681
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.23 Mnth	/Mnth		/Mnth			3,900.00 /Mnth	885	1,650.00 /Mnth	375	1,260	1,260
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.50 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,900	2,000.00 /Mnth	1,000	2,900	2,900
	John Deere 750 Dozer (168 HP) (L)	1900.120	1.04 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	7,280	3,000.00 /Mnth	3,120	10,400	10,400
	0234- Excavate Process and EQ tanks													
	Excavation - Mass	2317.105	46,631.00 cy	33.00 /mh	92,329	/cy			/cy		/cy		92,329	132,954
	Komatsu PC400 Excavator (330 HP) (L)	1900.136	3.20 Mnth	/Mnth		/Mnth			11,500.00 /Mnth	36,800	4,000.00 /Mnth	12,800	49,600	49,600
	John Deere 644 Loader (232 HP) (M)	1900.132	3.20 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	21,120	3,700.00 /Mnth	11,840	32,960	32,960
	John Deere 624 Loader (172 HP) (M)	1900.132	3.20 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	19,200	3,000.00 /Mnth	9,600	28,800	28,800
	Water Truck, 4,000 Gallon (L)	1900.210	1.60 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	7,680	1,200.00 /Mnth	1,920	9,600	9,600
	John Deere 750 Dozer (168 HP) (L)	1900.120	3.20 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	22,400	3,000.00 /Mnth	9,600	32,000	32,000
	Haul Truck - 35 Ton (393 HP) (L)	1900.210	3.20 Mnth	/Mnth		/Mnth			13,500.00 /Mnth	43,200	4,500.00 /Mnth	14,400	57,600	57,600
	Precompact Subgrade Below Foundations	2300.600	3,200.00 sy	33.00 /mh	5,280	/sy			/sy		/sy		5,280	7,603
	Machine Grade Below Structure	2301.100	3,200.00 sy	33.00 /mh	5,280	/sy			/sy		/sy		5,280	7,603
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.43 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	3,956	3,500.00 /Mnth	1,505	5,461	5,461
	John Deere 644 Loader (232 HP) (M)	1900.132	0.43 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	2,838	3,700.00 /Mnth	1,591	4,429	4,429
	Water Truck, 4,000 Gallon (L)	1900.210	0.43 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	2,064	1,200.00 /Mnth	516	2,580	2,580
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.43 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	1,075	500.00 /Mnth	215	1,290	1,290
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.43 Mnth	/Mnth		/Mnth			3,900.00 /Mnth	1,677	1,650.00 /Mnth	710	2,387	2,387
	Engineered/Stamped Design for Excavation	2317.105	1.00 ls	/ls		/ls		3,500	/ls		/ls		3,500	3,500
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.43 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,634	2,000.00 /Mnth	860	2,494	2,494
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.43 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,634	1,800.00 /Mnth	774	2,408	2,408
	0234- Excavation Solids Holding Tank													
	Excavation - Mass	2317.105	975.00 cy	33.00 /mh	2,896	/cy			/cy		/cy		2,896	4,170
	Komatsu PC400 Excavator (330 HP) (L)	1900.136	0.13 Mnth	/Mnth		/Mnth			11,500.00 /Mnth	1,495	4,000.00 /Mnth	520	2,015	2,015
	John Deere 644 Loader (232 HP) (M)	1900.132	0.13 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	858	3,700.00 /Mnth	481	1,339	1,339
	Water Truck, 4,000 Gallon (L)	1900.210	0.13 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	624	1,200.00 /Mnth	156	780	780
	Precompact Subgrade Below Foundations	2300.600	250.00 sy	33.00 /mh	413	/sy			/sy		/sy		413	594
	Machine Grade Below Structure	2301.100	250.00 sy	33.00 /mh	413	/sy			/sy		/sy		413	594
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	432	3,500.00 /Mnth	165	597	597
	John Deere 644 Loader (232 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	310	3,700.00 /Mnth	174	484	484
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	226	1,200.00 /Mnth	56	282	282
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	118	500.00 /Mnth	24	141	141
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			3,900.00 /Mnth	183	1,650.00 /Mnth	78	261	261
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.05 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	179	2,000.00 /Mnth	94	273	273
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	179	1,800.00 /Mnth	85	263	263
	0234- Excavation Site													
	Excavation - Mass	2317.105	7,980.00 cy	33.00 /mh	14,484	/cy			/cy		/cy		14,484	20,857
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.60 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	5,520	3,500.00 /Mnth	2,100	7,620	7,620
	John Deere 644 Loader (232 HP) (M)	1900.132	0.60 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	3,960	3,700.00 /Mnth	2,220	6,180	6,180
	John Deere 624 Loader (172 HP) (M)	1900.132	0.60 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	3,600	3,000.00 /Mnth	1,800	5,400	5,400
	Water Truck, 4,000 Gallon (L)	1900.210	0.60 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	2,880	1,200.00 /Mnth	720	3,600	3,600
	General General													
	01 -100 Dirtwork General Items													
	(3rd Party) Semi Tractor Mob Dirtwork Equipment Heavy Haul with permits	1900.210	140.00 Hrs	/Hrs		/Hrs		21,000	/Hrs		/Hrs		21,000	21,000
	014- Sitework Winter Conditions													
	Winter Conditions Blanket Ground Cover	1572.100	1.00 ls	/ls		3,000.00 /ls	3,000		/ls		/ls		3,000	3,000
	Labor Winter Conditions Sitework	1572.100	8.00 mnth	33.00 /mh	12,144	0.00 /mnth	0		/mnth		/mnth		12,144	17,487
	Ground Heater E2200 (In @ 1.1 gal/hr *3 24/7) (L) ((OWNED ONLY-50% DISCOUNTED RATE)	1900.400	3.00 Mnth	/Mnth		/Mnth			7,000.00 /Mnth	21,000	3,800.00 /Mnth	11,400	32,400	32,400
	John Deere 644 Loader (232 HP) (M)	1900.132	0.50 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	3,300	3,700.00 /Mnth	1,850	5,150	5,150
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.50 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	1,900	2,000.00 /Mnth	1,000	2,900	2,900

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
312319	Dewatering													
01 CIV	Civil													
	Dewatering Dewatering													
	0238-1 Dewatering ditch for minor water at headworks grit basins													
	Trench Excavtion 0- 4'	2333.010	220.00 lf	33.00 /mh	581	/lf			/lf		/lf		581	836
	Trench Backfill 0- 4'	2333.020	220.00 lf	33.00 /mh	726	/lf			/lf		/lf		726	1,045
	Utility Bedding Stone 3/4"	2305.200	85.00 cy	/cy		36.00 /ton	4,896		/cy		/cy		4,896	4,896
	Spoils to Waste	2333.060	85.00 cy	33.00 /mh	281	/cy			/cy		/cy		281	404
	Trench Wrap	2333.040	295.00 sy	33.00 /mh	195	1.50 /sy	487		/sy		/sy		681	767
	HDPE Coiled Pipe Perforated 4	2631.201	220.00 lf	33.00 /mh	581	4.00 /lf	924		/lf		/lf		1,505	1,760
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	1,500	3,000.00 /Mnth	750	2,250	2,250
	Excavate Sump 5' Deep	2240.200	4.00 ea	33.00 /mh	528	/ea			250.00 /ea	1,000	/ea		1,528	1,760
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	2,000.00 /Mnth	500	1,450	1,450
	3" Pump & Hoses	2240.120	6.00 mnth	33.00 /mh		250.00 /mnth	1,500		400.00 /mnth	2,400	/mnth		3,900	3,900
	0238-1 Minor Dewatering Ditch at In Plant Lift Station													
	Trench Excavtion 0- 4'	2333.010	100.00 lf	33.00 /mh	264	/lf			/lf		/lf		264	380
	Trench Backfill 0- 4'	2333.020	100.00 lf	33.00 /mh	330	/lf			/lf		/lf		330	475
	Utility Bedding Stone 3/4"	2305.200	40.00 cy	/cy		36.00 /ton	2,304		/cy		/cy		2,304	2,304
	Spoils to Waste	2333.060	40.00 cy	33.00 /mh	132	/cy			/cy		/cy		132	190
	Trench Wrap	2333.040	135.00 sy	33.00 /mh	89	1.50 /sy	223		/sy		/sy		312	351
	HDPE Coiled Pipe Perforated 4	2631.201	100.00 lf	33.00 /mh	264	4.00 /lf	420		/lf		/lf		684	800
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	1,500	3,000.00 /Mnth	750	2,250	2,250
	Excavate Sump 5' Deep	2240.200	4.00 ea	33.00 /mh	528	/ea			250.00 /ea	1,000	/ea		1,528	1,760
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	2,000.00 /Mnth	500	1,450	1,450
	3" Pump & Hoses	2240.120	3.00 Mnth	33.00 /mh		250.00 /Mnth	750		400.00 /Mnth	1,200	/Mnth		1,950	1,950
	0238-1 Process Basins Minor Dewatering													
	Trench Excavtion 0- 4'	2333.010	1,200.00 lf	33.00 /mh	3,168	/lf			/lf		/lf		3,168	4,562
	Trench Backfill 0- 4'	2333.020	1,200.00 lf	33.00 /mh	3,960	/lf			/lf		/lf		3,960	5,702
	Utility Bedding Stone 3/4"	2305.200	390.00 cy	/cy		36.00 /ton	22,464		/cy		/cy		22,464	22,464
	Spoils to Waste	2333.060	390.00 cy	33.00 /mh	1,287	/cy			/cy		/cy		1,287	1,853
	Trench Wrap	2333.040	1,600.00 sy	33.00 /mh	1,056	1.50 /sy	2,640		/sy		/sy		3,696	4,161
	HDPE Coiled Pipe Perforated 4	2631.201	1,200.00 lf	33.00 /mh	3,168	4.00 /lf	5,040		/lf		/lf		8,208	9,602
	John Deere 624 Loader (172 HP) (M)	1900.132	1.00 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	6,000	3,000.00 /Mnth	3,000	9,000	9,000
	Excavate Sump 5' Deep	2240.200	12.00 ea	33.00 /mh	1,584	/ea			250.00 /ea	3,000	/ea		4,584	5,281
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	1.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,800	1,800.00 /Mnth	1,800	5,600	5,600
	Bobcat Skid Steer (85hp)- track (L)	1900.131	1.00 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	3,800	2,000.00 /Mnth	2,000	5,800	5,800
	3" Pump & Hoses	2240.120	12.00 Mnth	33.00 /mh		250.00 /Mnth	3,000		400.00 /Mnth	4,800	/Mnth		7,800	7,800
	0238-1 Minor Dewatering Trench at MBR Basins													
	Trench Excavtion 0- 4'	2333.010	230.00 lf	33.00 /mh	607	/lf			/lf		/lf		607	874
	Trench Backfill 0- 4'	2333.020	230.00 lf	33.00 /mh	759	/lf			/lf		/lf		759	1,093
	Utility Bedding Stone 3/4"	2305.200	75.00 cy	/cy		36.00 /ton	4,320		/cy		/cy		4,320	4,320
	Spoils to Waste	2333.060	75.00 cy	33.00 /mh	248	/cy			/cy		/cy		248	356
	Trench Wrap	2333.040	305.00 sy	33.00 /mh	201	1.50 /sy	503		/sy		/sy		705	793
	HDPE Coiled Pipe Perforated 4	2631.201	230.00 lf	33.00 /mh	607	4.00 /lf	966		/lf		/lf		1,573	1,840
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	1,500	3,000.00 /Mnth	750	2,250	2,250
	Excavate Sump 5' Deep	2240.200	4.00 ea	33.00 /mh	528	/ea			250.00 /ea	1,000	/ea		1,528	1,760
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	2,000.00 /Mnth	500	1,450	1,450
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	3" Pump & Hoses	2240.120	6.00 Mnth	33.00 /mh		250.00 /Mnth	1,500		400.00 /Mnth	2,400	/Mnth		3,900	3,900
	0238-1 Influent Pump Station Minor Dewatering													
	Trench Excavtion 0- 4'	2333.010	160.00 lf	33.00 /mh	422	/lf			/lf		/lf		422	608
	Trench Backfill 0- 4'	2333.020	160.00 lf	33.00 /mh	528	/lf			/lf		/lf		528	760
	Utility Bedding Stone 3/4"	2305.200	55.00 cy	/cy		36.00 /ton	3,168		/cy		/cy		3,168	3,168
	Spoils to Waste	2333.060	55.00 cy	33.00 /mh	182	/cy			/cy		/cy		182	261
	Trench Wrap	2333.040	215.00 sy	33.00 /mh	142	1.50 /sy	355		/sy		/sy		497	559
	HDPE Coiled Pipe Perforated 4	2631.201	160.00 lf	33.00 /mh	422	4.00 /lf	672		/lf		/lf		1,094	1,280
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	1,500	3,000.00 /Mnth	750	2,250	2,250
	Excavate Sump 5' Deep	2240.200	4.00 ea	33.00 /mh	528	/ea			250.00 /ea	1,000	/ea		1,528	1,760
	3" Pump & Hoses	2240.120	6.00 Mnth	33.00 /mh		250.00 /Mnth	1,500		400.00 /Mnth	2,400	/Mnth		3,900	3,900
	Bobcat E85 Mini-Excavator (60 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	1,800.00 /Mnth	450	1,400	1,400
	Bobcat Skid Steer (85hp)- track (L)	1900.131	0.25 Mnth	/Mnth		/Mnth			3,800.00 /Mnth	950	2,000.00 /Mnth	500	1,450	1,450
	0238-1 Effluent Line Dewatering													
	Excavate Sump 10' Deep	2240.200	12.00 ea	33.00 /mh	5,148	/ea			450.00 /ea	5,400	/ea		10,548	12,813
	3" Pump & Hoses (High head to push 2000 lf of pipe)	2240.120	4.00 Mnth	33.00 /mh		2,500.00 /Mnth	10,000		400.00 /Mnth	1,600	/Mnth		11,600	11,600
	Generators 50 kw, Perkins (24 hours per day)	1900.020	4.00 Mnth	/Mnth		/Mnth			4,500.00 /Mnth	18,000	1,500.00 /Mnth	6,000	24,000	24,000
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	368	3,500.00 /Mnth	140	508	508
	John Deere 644 Loader (232 HP) (M)	1900.132	0.04 Mnth	/Mnth		/Mnth			6,600.00 /Mnth	264	3,700.00 /Mnth	148	412	412
	Clean Rock	2305.050	200.00 cy	/cy		36.00 /ton	11,664		/cy		/cy		11,664	11,664
	0238-3 Dewatering Wells at structures and deep pipe													
	Subcont Well Drilling 18"	2240.300	1,280.00 lf	/lf		/lf		343,900	/lf		/lf		343,900	343,900
	Casing Gravel Pack	2305.050	280.00 cy	/cy		36.00 /ton	18,900		/cy		/cy		18,900	18,900
	PVC Sch 80 PIPE 3" PE	15211.203	1,600.00 lf	33.00 /mh	11,088	6.50 /lf	10,400		/lf		/lf		21,488	26,367
	PVC Sch 80 90 EL 3" S	15211.207	32.00 ea	33.00 /mh	222	16.00 /ea	512		/ea		/ea		734	831
	PVC Sch 80 Straight CPLG 3" S	15211.204	80.00 ea	33.00 /mh	554	22.00 /ea	1,760		/ea		/ea		2,314	2,558
	PVC Valve Ball True Union Viton 3" S	15211.310	32.00 ea	33.00 /mh	222	175.00 /ea	5,600		/ea		/ea		5,822	5,919
	PVC Valve Swing Check 3"	15211.350	32.00 ea	33.00 /mh	264	75.00 /ea	2,400		/ea		/ea		2,664	2,780
	HD PE Pipe 10 DR 17	2631.301	3,000.00 lf	33.00 /mh	11,880	18.00 /lf	56,700		/lf		/lf		68,580	73,460
	HD PE 90 bend 10 DR 17	2631.314	6.00 ea	33.00 /mh	178	250.00 /ea	1,500		/ea		/ea		1,678	1,678
	HD PE 45 bend 10 DR 17	2631.314	12.00 ea	33.00 /mh	317	250.00 /ea	3,000		/ea		/ea		3,317	3,317

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0238-3 Dewatering Wells at structures and deep pipe													
	HD PE Tee 10 X 3	2631.320	32.00 ea	33.00 /mh	950	275.00 /ea	8,800		/ea		/ea		9,750	10,169
	Dewatering Discharge Testing	2240.050	104.00 ea	/ea		0.00 /ea	0		/ea		100.00 /ea	10,400	10,400	10,400
	Temporary Power Hookup for dewatering	1162.100	1.00 ls	/ls		/ls		25,000	/ls		/ls		25,000	25,000
	Generators 100 kw, Kohler (140 HP) (L)	1900.020	20.00 Mnth	/Mnth		/Mnth			2,200.00 /Mnth	44,000	500.00 /Mnth	10,000	54,000	54,000
	Dewatering Maintenance	2240.050	75.00 wk	33.00 /mh	14,850	/wk			/wk		/wk		14,850	21,384
	John Deere 624 Loader (172 HP) (M)	1900.132	0.50 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	3,000	3,000.00 /Mnth	1,500	4,500	4,500
	Dewatering Set Up Labor	2240.050	1.00 ls	33.00 /mh	5,280	/ls			/ls		/ls		5,280	7,603
	321216 Asphalt Paving													
	01 CIV Civil													
	Asphalt Asphalt													
	0256- Asphalt paving													
	Sub-Grade/Compact Parking Lots Fine grade with Blade	2300.600	1.00 ls	33.00 /mh		/ls			/ls		/ls			
	Asphalt Subcont. Bond	2740.840	1.00 ls	/ls		/ls		389,240	/ls		/ls		389,240	389,240
	Asphalt Subcont. Mobilization	2740.840	1.00 ls	/ls		/ls		1,800	/ls		/ls		1,800	1,800
	Asphalt Subcont.	2740.840	1.00 ls	/ls		/ls			/ls		/ls			
	Asphalt Striping	2740.840	1.00 ls	/ls		/ls		6,500	/ls		/ls		6,500	6,500
	323113 Chain Link Fence & Gate													
	01 CIV Civil													
	Fencing Fencing													
	0291- Fencing subcontractor													
	Sub - Fencing 6' tall with 3 strand 2400 lf plus gates	2820.980	1.00 ls	/ls		/ls		105,000	/ls		/ls		105,000	105,000
	Sub - Fencing	2820.980	1.00 ls	/ls		/ls			/ls		/ls			
	330000 Utilities													
	01 CIV Civil													
	General General													
	01 -100 Yard Pipe General													
	Yard Pipe Foreman	1000.100	16.00 wk	1,600.00 /wk	25,600	/wk			/wk		/wk		25,600	36,864
	Pickup	1900.210	4.00 Mnth	/Mnth		/Mnth			1,000.00 /Mnth	4,000	1,065.00 /Mnth	4,260	8,260	8,260
	Cell Phone	1162.100	4.00 Mnth	/Mnth		/Mnth			100.00 /Mnth	400	/Mnth		400	400
	Bedding Box	1900.300	18.00 Mnth	/Mnth		/Mnth			450.00 /Mnth	8,100	50.00 /Mnth	900	9,000	9,000
	RT Telescopic Forklift (12,000 lb) (130 HP) (L)	1900.300	4.00 Mnth	/Mnth		/Mnth			4,200.00 /Mnth	16,800	1,500.00 /Mnth	6,000	22,800	22,800
	Unload Pipe	11000.250	1.00 ls	33.00 /mh	3,960	/ls			/ls		/ls		3,960	5,702
	Support, Reroute, Repair Unforseen Electrical Conflicts	16000.001	1.00 ls	/ls		/ls			/ls		/ls			
	Support, Reroute, Repair Unforseen Piping Conflicts	2333.010	1.00 ls	33.00 /mh		5,000.00 /ls	5,000		/ls		/ls		5,000	5,000
	Yard Pipe Drawings	1060.100	1.00 ls	/ls		5,000.00 /ls	5,000		/ls		/ls		5,000	5,000
	Storm Drainage Structures and Piping Contingency	2327.005	1.00 ls	/ls		/ls			/ls		/ls			
	Cathodic Protection Contingency (answered in addendum no need)	2333.100	1.00 ls	33.00 /mh		0.00 /ls	0		/ls		/ls			
	335100 Gas Distribution													
	01 CIV Civil													
	Yard Pipe Yard Pipe													
	02614- Site Gas Piping													
	Trench Excavtion 0- 4'	2333.010	650.00 lf	33.00 /mh	1,716	/lf			/lf		/lf		1,716	2,471
	Trench Backfill 0- 4'	2333.020	650.00 lf	33.00 /mh	2,145	/lf			/lf		/lf		2,145	3,089
	Utility Bedding Peastone	2305.200	96.30 cy	/cy		25.00 /ton	3,852		/cy		/cy		3,852	3,852
	Spoils to Waste	2333.060	96.30 cy	33.00 /mh	318	/cy			/cy		/cy		318	458
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.30 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,714	3,500.00 /Mnth	1,033	3,747	3,747
	John Deere 624 Loader (172 HP) (M)	1900.132	0.30 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	1,770	3,000.00 /Mnth	885	2,655	2,655
	Water Truck, 4,000 Gallon (L)	1900.210	0.15 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	710	1,200.00 /Mnth	178	888	888
	Mikasa Jumping Jack Compactor (L)	1900.138	0.15 Mnth	/Mnth		/Mnth			200.00 /Mnth	30	100.00 /Mnth	15	44	44
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.15 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	370	500.00 /Mnth	74	444	444
	Pot Hole Existing	2333.010	13.00 ea	33.00 /mh	1,716	/ea			/ea		/ea		1,716	2,471
	Gas Pipe Sub (exterior)	15402.010	1.00 ls	/ls		/ls		30,000	/ls		/ls		30,000	30,000
	338000 Precast Concrete MH & Vaults													
	01 CIV Civil													
	Precast Precast													
	026-1- MH INF-2													
	Supply Precast Package	2327.005	1.00 ls	/ls		0.00 /ls	0		/ls		/ls			
	Test Manhole	2327.020	1.00 ea	33.00 /mh	264	500.00 /ea	500		/ea		/ea		764	880
	Manhole 4' Base	2327.010	1.00 ea	33.00 /mh	462	0.01 /ea	0		/ea		/ea		462	665
	Manhole 4' Riser	2327.010	5.00 vf	33.00 /mh	248	0.01 /vf	0		/vf		/vf		248	356
	Manhole 4' Riser Coating	2327.010	5.00 vf	33.00 /mh	165	0.01 /vf	0		/vf		/vf		165	238
	Manhole 4' Brick Extensions	2327.010	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Manhole 4' Formed Invert (Delete If By Supplier)	2327.010	1.00 ea	33.00 /mh	528	350.00 /ea	350		/ea		/ea		878	1,110
	Frame & Grate - Single	2327.120	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Manhole 4' Flat Cover	2327.010	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ch		/ea		33	48
	Manhole Boots 24"	2327.090	2.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Import Road Base Class 6	2305.100	2.00 cy	/cy		25.00 /ton	90		/cy		/cy		90	90
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	920	3,500.00 /Mnth	350	1,270	1,270
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	600	3,000.00 /Mnth	300	900	900
	Water Truck, 4,000 Gallon (L)	1900.210	0.10 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	480	1,200.00 /Mnth	120	600	600
	Mikasa Jumping Jack Compactor (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			200.00 /Mnth	20	100.00 /Mnth	10	30	30
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	250	500.00 /Mnth	50	300	300
	026-1- MH INF-3													
	Test Manhole	2327.020	1.00 ea	33.00 /mh	264	500.00 /ea	500		/ea		/ea		764	880
	Manhole 4' Base	2327.010	1.00 ea	33.00 /mh	396	0.01 /ea	0		/ea		/ea		396	
	Manhole 4' Riser	2327.010	5.00 vf	33.00 /mh	248	0.01 /vf	0		/vf		/vf		248	
	Manhole 4' Riser Coating	2327.010	5.00 vf	33.00 /mh	165	0.01 /vf	0		/vf		/vf		165	

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	026-1- MH INF-3													
	Manhole 4' Brick Extensions	2327.010	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Manhole 4' Formed Invert (Delete If By Supplier)	2327.010	1.00 ea	33.00 /mh	528	350.00 /ea	350		/ea		/ea		878	1,110
	Frame & Grate - Single	2327.120	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Manhole 4' Flat Cover	2327.010	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ch		/ea		33	48
	Manhole Boots 24"	2327.090	2.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Import Road Base Class 6	2305.100	2.00 cy	/cy		25.00 /ton	90		/cy		/cy		90	90
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	920	3,500.00 /Mnth	350	1,270	1,270
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	600	3,000.00 /Mnth	300	900	900
	Water Truck, 4,000 Gallon (L)	1900.210	0.10 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	480	1,200.00 /Mnth	120	600	600
	Mikasa Jumping Jack Compactor (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			200.00 /Mnth	20	100.00 /Mnth	10	30	30
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	250	500.00 /Mnth	50	300	300
	026-1- MH INF-4													
	Test Manhole	2327.020	1.00 ea	33.00 /mh	264	500.00 /ea	500		/ea		/ea		764	880
	Manhole 5' Base	2327.020	1.00 ea	33.00 /mh	396	0.01 /ea	0		/ch		/ea		396	570
	Manhole 5' Riser	2327.020	6.00 vf	33.00 /mh	297	0.01 /vf	0		/vf		/vf		297	428
	Manhole 5' Riser Coating	2327.020	6.00 vf	33.00 /mh	198	0.01 /vf	0		/vf		/vf		198	285
	Manhole 5' Brick Extensions	2327.020	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Manhole 5' Formed Invert (Delete If By Supplier)	2327.020	1.00 ea	33.00 /mh	792	350.00 /ea	350		/ea		/ea		1,142	1,490
	Frame & Grate - Single	2327.120	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Manhole 5' Flat Cover	2327.020	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Manhole Boots 8"	2327.090	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Manhole Boots 12"	2327.090	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Manhole Boots 24"	2327.090	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Manhole Boots 30"	2327.090	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	920	3,500.00 /Mnth	350	1,270	1,270
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	600	3,000.00 /Mnth	300	900	900
	Water Truck, 4,000 Gallon (L)	1900.210	0.10 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	480	1,200.00 /Mnth	120	600	600
	Mikasa Jumping Jack Compactor (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			200.00 /Mnth	20	100.00 /Mnth	10	30	30
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	250	500.00 /Mnth	50	300	300
	Import Road Base Class 6	2305.100	2.00 cy	/cy		25.00 /ton	90		/cy		/cy		90	90
	026-1- MH INF-5													
	Test Manhole	2327.020	1.00 ea	33.00 /mh	264	500.00 /ea	500		/ea		/ea		764	880
	Manhole 5' Base	2327.020	1.00 ea	33.00 /mh	396	0.01 /ea	0		/ch		/ea		396	570
	Manhole 5' Riser	2327.020	4.00 vf	33.00 /mh	198	0.01 /vf	0		/vf		/vf		198	285
	Manhole 5' Riser Coating	2327.020	4.00 vf	33.00 /mh	132	0.01 /vf	0		/vf		/vf		132	190
	Manhole 5' Brick Extensions	2327.020	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Manhole 5' Formed Invert (Delete If By Supplier)	2327.020	1.00 ea	33.00 /mh	528	350.00 /ea	350		/ea		/ea		878	1,110
	Frame & Grate - Single	2327.120	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Manhole 5' Flat Cover	2327.020	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Manhole Boots 30"	2327.090	2.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	920	3,500.00 /Mnth	350	1,270	1,270
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	600	3,000.00 /Mnth	300	900	900
	Water Truck, 4,000 Gallon (L)	1900.210	0.10 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	480	1,200.00 /Mnth	120	600	600
	Mikasa Jumping Jack Compactor (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			200.00 /Mnth	20	100.00 /Mnth	10	30	30
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	250	500.00 /Mnth	50	300	300
	Import Road Base Class 6	2305.100	2.00 cy	/cy		25.00 /ton	90		/cy		/cy		90	90
	026-1- MH PD-1													
	Test Manhole	2327.020	1.00 ea	33.00 /mh	264	500.00 /ea	500		/ea		/ea		764	880
	Manhole 4' Base	2327.010	1.00 ea	33.00 /mh	396	0.01 /ea	0		/ea		/ea		396	570
	Manhole 4' Riser	2327.010	9.00 vf	33.00 /mh	446	0.01 /vf	0		/vf		/vf		446	642
	Manhole 4' Riser Coating	2327.010	9.00 vf	33.00 /mh	297	0.01 /vf	0		/vf		/vf		297	428
	Manhole 4' Brick Extensions	2327.010	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Manhole 4' Formed Invert (Delete If By Supplier)	2327.010	1.00 ea	33.00 /mh	528	350.00 /ea	350		/ea		/ea		878	1,110
	Frame & Grate - Single	2327.120	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Manhole Boots 4"	2327.090	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Manhole Boots 12"	2327.090	2.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Import Road Base Class 6	2305.100	2.00 cy	/cy		25.00 /ton	90		/cy		/cy		90	90
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.10 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	920	3,500.00 /Mnth	350	1,270	1,270
	John Deere 624 Loader (172 HP) (M)	1900.132	0.10 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	600	3,000.00 /Mnth	300	900	900
	Water Truck, 4,000 Gallon (L)	1900.210	0.10 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	480	1,200.00 /Mnth	120	600	600
	Mikasa Jumping Jack Compactor (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			200.00 /Mnth	20	100.00 /Mnth	10	30	30
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.10 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	250	500.00 /Mnth	50	300	300
	Stabilization Rock	2305.050	2.00 cy	/cy		36.00 /ton	135		/cy		/cy		135	135
	026-1- WAS Cleanout MH (40M401)													
	Manhole 4' Base	2327.010	1.00 ea	33.00 /mh	396	0.01 /ea	0		/ea		/ea		396	570
	Manhole 4' Riser	2327.010	4.00 vf	33.00 /mh	198	0.01 /vf	0		/vf		/vf		198	285
	Manhole 4' Riser Coating	2327.010	4.00 vf	33.00 /mh	132	5.00 /vf	20		/vf		/vf		152	210
	Manhole 4' Brick Extensions	2327.010	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Frame & Grate - Single	2327.120	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Manhole 4' Flat Cover	2327.010	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ch		/ea		33	48
	Import Road Base Class 6	2305.100	2.00 cy	/cy		25.00 /ton	90		/cy		/cy		90	90
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	460	3,500.00 /Mnth	175	635	635
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	300	3,000.00 /Mnth	150	450	450
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	240	1,200.00 /Mnth	60	300	300
	Mikasa Jumping Jack Compactor (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			200.00 /Mnth	10	100.00 /Mnth	5	15	15
	026-2- Precast Site Drain Lift Station													
	5' x 8' x 23' Precast Vault	2630.006	1.00 ea	33.00 /mh	3,696	0.01 /ea	0		/ea		/ea		3,696	5,322
	Removable Grating (In Misc Metal Scope?)	2327.120	1.00 ea	33.00 /mh		275.00 /ea	275		/ea		/ea		275	275
	Stabilization Rock	2305.050	4.00 cy	/cy		36.00 /ton	270		/cy		/cy		270	
	Import Road Base Class 6	2305.100	3.00 cy	/cy		25.00 /ton	135		/cy		/cy		135	
	Kobelco CK1100G-2 - 110 Ton (332 HP) (L)	1900.100	0.25 mnth	5,629.00 /mnth	1,407	550.00 /mnth	138		14,000.00 /mnth	3,500	2,500.00 /mnth	625	5,670	6,041
	ReRoute Existing Utilities at Existing	2333.010	1.00 ls	33.00 /mh	2,112	5,000.00 /ls	5,000		/ls		/ls		7,112	8,041

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	026-2- Chemical Piping Vault													
	4'x4'x5' Precast Vault	2630.004	1.00 ea	33.00 /mh	528	0.01 /ea	0		/ea		/ea		528	760
	H20 Hatch (Supplied by Div 5)	2327.120	1.00 ea	33.00 /mh	132	2,500.00 /ea	2,500		/ea		/ea		2,632	2,690
	PVC Sch 80 Cement	15211.201	1.00 qt	/qt		50.00 /qt	55		/qt		/qt		55	55
	PVC Sch 80 Primer	15211.201	1.00 qt	/qt		45.00 /qt	50		/qt		/qt		50	50
	PVC Sch 80 PIPE 1" PE	15211.203	20.00 lf	33.00 /mh	165	1.75 /lf	35		/lf		/lf		200	273
	PVC Sch 80 90 EL 1" S	15211.207	3.00 ea	33.00 /mh	25	3.50 /ea	11		/ea		/ea		35	46
	PVC Sch 80 Straight CPLG 1" S	15211.204	1.00 ea	33.00 /mh	8	5.00 /ea	5		/ea		/ea		13	17
	Import Road Base Class 6	2305.100	2.00 cy	/cy		25.00 /ton	90		/cy		/cy		90	90
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	460	3,500.00 /Mnth	175	635	635
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	300	3,000.00 /Mnth	150	450	450
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	240	1,200.00 /Mnth	60	300	300
	Mikasa Jumping Jack Compactor (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			200.00 /Mnth	10	100.00 /Mnth	5	15	15
400519	Ductile Iron Pipe													
00 GEN	General													
Div 40	General Div 40 General													
150-01 1c 12042002	Division 40 Genral items													
	Pipe Shop drawings Interior DIP	2250.210	1.00 ls	/ls		/ls			/ls		7,500.00 /ls	7,500	7,500	7,500
	Kobelco CK1100G-2 - 110 Ton (332 HP) (L)	1900.100	2.00 mnth	5,629.00 /mnth	11,258	550.00 /mnth	1,100		14,000.00 /mnth	28,000	2,500.00 /mnth	5,000	45,358	50,312
	Genie 32' Scissor Lift (Requires Power Source)	1900.300	6.00 Mnth	/Mnth		/Mnth			950.00 /Mnth	5,700	100.00 /Mnth	600	6,300	6,300
	RT Telescopic Forklift (12,000 lb) (130 HP) (L)	1900.300	3.00 Mnth	/Mnth		/Mnth			4,200.00 /Mnth	12,600	1,500.00 /Mnth	4,500	17,100	17,100
	Mechanical Foreman	1000.100	12.00 wk	1,600.00 /wk	19,200	/wk			/wk		/wk		19,200	27,648
	Pipe Insulation Sub	7210.110	1.00 ls	/ls		/ls		95,000	/ls		/ls		95,000	95,000
	Heat Trace entire job	16000.001	1.00 ls	/ls		/ls		141,000	/ls		/ls		141,000	141,000
	Cell Phone	1162.100	3.00 Mnth	/Mnth		/Mnth			100.00 /Mnth	300	/Mnth		300	300
	Pickup	1900.210	3.00 Mnth	/Mnth		/Mnth			1,000.00 /Mnth	3,000	1,065.00 /Mnth	3,195	6,195	6,195
	Field Welding - Stainless	5000.985	40.00 hrs	33.00 /mh	1,320	/hrs		5,000	/hrs		/hrs		6,320	6,901
	Stamped Pipe Support Drawings	2317.105	1.00 ls	/ls		/ls		7,500	/ls		/ls		7,500	7,500
	Scaffolding for Piping	1900.300	1.00 ls	/ls		2,000.00 /ls	2,000		/ls		/ls		2,000	2,000
	Valve Supply Package	15110.001	1.00 ls	/ls		275,000.00 /ls	275,000		/ls		/ls		275,000	275,000
	Addendum #4 Div 40 adders Interior pipe	15233.405	1.00 ls	/ls		88,627.00 /ls	88,627		/ls		/ls		88,627	88,627
01 CIV	Civil													
Yard	Pipe Yard Pipe													
02605-2 30"	North Interceptor Raw Influent (Exst MH to IPS)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 10-12'	2333.010	30.00 lf	33.00 /mh	248	/lf			/lf		/lf		248	356
	Trench Backfill 10-12'	2333.020	30.00 lf	33.00 /mh	248	/lf			/lf		/lf		248	356
	Utility Bedding Peastone	2305.200	22.50 cy	/cy		25.00 /ton	900		/cy		/cy		900	900
	Spoils to Waste	2333.060	22.50 cy	33.00 /mh	74	/cy			/cy		/cy		74	107
	PVC C-900 Pipe 30 DR-25	2336.310	40.00 lf	33.00 /mh	370	350.00 /lf	14,700		/lf		/lf		15,070	15,232
	DI RJ Compact Solid Sleeve 30	2511.522	4.00 ea	33.00 /mh	1,584	7,200.00 /ea	28,800		/ea		/ea		30,384	31,081
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.01 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	129	3,500.00 /Mnth	49	178	178
	John Deere 624 Loader (172 HP) (M)	1900.132	0.01 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	84	3,000.00 /Mnth	42	126	126
	Water Truck, 4,000 Gallon (L)	1900.210	0.01 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	34	1,200.00 /Mnth	8	42	42
	Mikasa Jumping Jack Compactor (L)	1900.138	0.01 Mnth	/Mnth		/Mnth			200.00 /Mnth	1	100.00 /Mnth	1	2	2
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.01 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	18	500.00 /Mnth	4	21	21
	Tracer Wire	2333.080	50.00 lf	33.00 /mh	33	0.40 /lf	22		/lf		/lf		55	70
	Warning Tape Detectable	2333.080	30.00 lf	33.00 /mh	20	0.08 /lf	2		/lf		/lf		22	31
	Polybag 30" and smaller	2333.090	8.00 lf	33.00 /mh	3	2.50 /lf	22		/lf		/lf		25	26
	Tie to Existing	2333.010	1.00 ea	33.00 /mh	264	50.00 /ea	50		/ea		/ea		314	430
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	30 Bell Restrainer F/C900	2336.380	1.00 ea	33.00 /mh	198	4,200.00 /ea	4,200		/ea		/ea		4,398	4,485
	Remodel Invert	2327.510	1.00 ea	33.00 /mh	528	250.00 /ea	250		/ch		/ea		778	1,010
	Core Drilled Hole - 36" x 8"	15122.100	1.00 ea	33.00 /mh	198	0.01 /ea	0	4,500	/ea		/ea		4,698	4,785
	Grout Pipe in Manhole 30"	2327.090	1.00 ea	33.00 /mh	198	100.00 /ea	100		/ea		/ea		298	385
	Link Seal Size LS-575-S	15123.100	34.00 ea	33.00 /mh	168	45.00 /ea	1,530		/ea		/ea		1,698	1,772
	Testing - Mandrel	1166.100	1.00 ls	/ls		/ls			/ls		850.00 /ls	850	850	850
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			
	Trench Stabilization Rock	2305.050	10.00 cy	/cy		36.00 /ton	675		/cy		/cy		675	675
	Poly Tape	2333.090	1.00 roll	/roll		7.50 /roll	8		/roll		/roll		8	8
	Quart of Gasket Lubricant	15150.035	1.00 ea	33.00 /mh		8.00 /ea	8		/ea		/ea		8	8
	DI Wall Pipe MJ x PE w/ Weep Ring & Tapped Holes 30in x 1ft 6in long	15221.388	1.00 ea	33.00 /mh	528	7,900.00 /ea	7,900		/ea		/ea		8,428	8,660
09 IPS	Influent Pump Station													
forced main														
02642-	Influent Pump Station Burried pipe to YP connect 09M201													
	Trench Excavtion 8-10'	2333.010	10.00 lf	33.00 /mh	83	/lf			/lf		/lf		83	119
	Trench Excavtion 4- 6'	2333.010	5.00 lf	33.00 /mh	17	/lf			/lf		/lf		17	24
	Trench Backfill 8-10'	2333.020	10.00 lf	33.00 /mh	69	/lf			/lf		/lf		69	100
	Trench Backfill 4- 6'	2333.020	5.00 lf	33.00 /mh	25	/lf			/lf		/lf		25	36
	Utility Bedding Gravel-Crushed	2305.200	7.89 cy	/cy		25.00 /ton	316		/cy		/cy		316	316
	Spoils to Waste	2333.060	7.96 cy	33.00 /mh	26	/cy			/cy		/cy		26	38
	DI Pipe MJ - Class 52 8	2511.201	8.00 lf	33.00 /mh	29	40.00 /lf	323		/lf		/lf		352	365
	DI MJ Std Wgt 90 8	2511.214	1.00 ea	33.00 /mh	66	490.00 /ea	490		/ea		/ea		556	585
	DI Pipe MJ - Class 52 12	2511.201	8.00 lf	33.00 /mh	32	58.00 /lf	469		/lf		/lf		500	514
	Polybag 12" and Smaller	2333.090	30.00 lf	33.00 /mh	10	1.00 /lf	33		/lf		/lf		43	47
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	368	3,500.00 /Mnth	140	508	508
	John Deere 624 Loader (172 HP) (M)	1900.132	0.04 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	240	3,000.00 /Mnth	120	360	360
	Water Truck, 4,000 Gallon (L)	1900.210	0.04 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	192	1,200.00 /Mnth	48	240	240
	Polybag 30" and smaller	2333.090	5.00 lf	33.00 /mh	2	2.50 /lf	14		/lf		/lf		15	
	Mikasa Jumping Jack Compactor (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			200.00 /Mnth	8	100.00 /Mnth	4	12	
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	100	500.00 /Mnth	20	120	

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02642- Influent Pump Station Burried pipe to YP connect 09M201													
	DI Pipe 8in. dia FxPE - 8ft. 0in.	15221.030	2.00 ea	33.00 /mh	132	1,100.00 /ea	2,200		/ea		/ea		2,332	2,390
	DI MJ Compact Solid Sleeve Long 8"	2511.322	1.00 ea	33.00 /mh	33	495.00 /ea	495		/ea		/ea		528	543
	DI MJ Compact Solid Sleeve Long 12"	2511.322	1.00 ea	33.00 /mh	66	850.00 /ea	850		/ea		/ea		916	945
	DI Pipe 12in. dia FxPE - 7ft. 0in.	15221.030	1.00 ea	33.00 /mh	99	1,730.00 /ea	1,730		/ea		/ea		1,829	1,873
	DI MJ Std Wgt 90 12	2511.214	1.00 ea	33.00 /mh	66	920.00 /ea	920		/ea		/ea		986	1,015
	AIR VAC VENT													
	150-55 80 INFLUENT PUMP STATION COMBINATION AIR VAC VALVE RELEIF PIPING 09M201													
	PVC Sch 80 PIPE 2" PE	15211.203	20.00 lf	33.00 /mh	231	3.25 /lf	65		/lf		/lf		296	398
	PVC Sch 80 90 EL 2" S	15211.207	5.00 ea	33.00 /mh	58	3.60 /ea	18		/ea		/ea		76	101
	PVC Sch 80 45 EL 2" SOCxSOC	15211.208	1.00 ea	33.00 /mh	12	15.00 /ea	15		/ea		/ea		27	32
	PVC Sch 80 Straight CPLG 2" S	15211.204	1.00 ea	33.00 /mh	12	14.00 /ea	14		/ea		/ea		26	31
	PVC Sch 80 MALE ADPT 2" SXMT	15211.217	1.00 ea	33.00 /mh	12	17.00 /ea	17		/ea		/ea		29	34
	PVC Sch 80 Cement	15211.201	1.00 qt	/qt		50.00 /qt	55		/qt		/qt		55	55
	PVC Sch 80 Primer	15211.201	1.00 qt	/qt		45.00 /qt	50		/qt		/qt		50	50
	PVC Sch 80/VIT UNION 2" S	15211.219	1.00 ea	33.00 /mh	12	27.00 /ea	27		/ea		/ea		39	44
	Heat Trace	16000.001	1.00 ls	/ls		0.01 /ls	0		/ls		/ls		0	0
	Core Drilled Hole - 2-"	15122.100	1.00 ea	33.00 /mh	132	0.01 /ea	0	150	/ea		/ea		282	340
	screen for air vac valve per detail M106	2240.300	1.00 lf	/lf		50.00 /lf	53		/lf		/lf		53	53
	Set Mech. Pipe Sleeves 1'6" at air vac piping to tank	3150.710	1.00 ea	33.00 /mh	132	250.00 /ea	250		/ea		/ea		382	440
	Link Seal Size LS-200-C 4 links	15123.050	8.00 ea	33.00 /mh	40	6.00 /ea	48		/ea		/ea		88	105
	PS Strut SS 1-5/8 x 1-5/8	15060.476	8.00 lf	33.00 /mh	79	20.00 /lf	160		/lf		/lf		239	274
	PS Strut Post Base SS	15060.478	2.00 ea	33.00 /mh	33	52.00 /ea	104		/ea		/ea		137	152
	PS Pipe Strut Clamp EG 2in	15060.486	1.00 ea	33.00 /mh	17	10.00 /ea	10		/ea		/ea		27	34
	Ductile Iron Ductile Iron													
	150-01 1c 12042002 DIP Influent Pump Station header Pipe to site 09M201													
	DI Pipe 6in. dia FxF - 14ft. 0in.	15221.010	2.00 ea	33.00 /mh	198	1,500.00 /ea	3,000		/ea		/ea		3,198	3,285
	DI Pipe 8in. dia FxF - 2 ft. 0in.	15221.010	5.00 ea	33.00 /mh	330	750.00 /ea	3,750		/ea		/ea		4,080	4,225
	DI Pipe 8in. dia FxF - 3ft. 0in. 2- W/ 1/2 TAPS	15221.010	2.00 ea	33.00 /mh	132	1,200.00 /ea	2,400		/ea		/ea		2,532	2,590
	DI Pipe 8in. dia FxF - 13ft. 0in.	15221.010	2.00 ea	33.00 /mh	264	1,950.00 /ea	3,900		/ea		/ea		4,164	4,280
	DI Pipe 6in. dia FxF - 4ft. 0in. 2 W/ 1/2 TAPS	15221.030	2.00 ea	33.00 /mh	132	900.00 /ea	1,800		/ea		/ea		1,932	1,990
	PS Pipe Stand for 6in DIP 3ft 0in floor to CL HDG	15060.406	2.00 ea	33.00 /mh	198	1,300.00 /ea	2,600		/ea		/ea		2,798	2,885
	PS Pipe Stand for 8in DIP 3ft 0in floor to CL HDG	15060.406	5.00 ea	33.00 /mh	495	1,300.00 /ea	6,500		/ea		/ea		6,995	7,213
	NBG Kit 125# SS 6in	15125.012	10.00 ea	33.00 /mh	330	75.00 /ea	750		/ea		/ea		1,080	1,225
	NBG Kit 125# SS 8in	15125.012	28.00 ea	33.00 /mh	924	140.00 /ea	3,920		/ea		/ea		4,844	5,251
	NBG Kit 125# SS 12in	15125.012	3.00 ea	33.00 /mh	99	180.00 /ea	540		/ea		/ea		639	683
	PS Pipe Stand grout	15060.404	7.00 ea	33.00 /mh	231	10.00 /ea	70		/ea		/ea		301	403
	Tap Saddle 6 x 1/2" gauge	2519.424	2.00 ea	33.00 /mh	66	105.00 /ea	210		/ea		/ea		276	305
	valve ball valve threaded ss 1/2 gauge	15212.010	2.00 ea	33.00 /mh	17	50.00 /ea	100		/ea		/ea		117	124
	Valve Ball Threaded SS 1/2in gauge	15110.014	4.00 ea	33.00 /mh	71	0.01 /ea	0		/ea		/ea		71	103
	Stainless Steel Bushing mpt x fpt 1/2in x 3/8in gauge	15212.015	4.00 ea	33.00 /mh	26	3.00 /ea	12		/ea		/ea		38	50
	Instrument - Pressure - Gauge	17400.000	4.00 ea	33.00 /mh	264	500.00 /ea	2,000		/ea		/ea		2,264	2,380
	Stainless Steel Tee threaded 1/2" PI-09121	15212.055	4.00 ea	33.00 /mh	26	6.00 /ea	24		/ea		/ea		50	62
	Stainless Steel Nipple 1/2" X 2"	15212.010	8.00 ea	33.00 /mh	66	7.00 /ea	56		/ea		/ea		122	151
	Valve Check Flange 125# 6in	15110.040	2.00 ea	33.00 /mh	132	1,600.00 /ea	3,200		/ea		/ea		3,332	3,390
	Valve Plug Flange 125# 6in	15110.650	2.00 ea	33.00 /mh	132	1,900.00 /ea	3,800		/ea		/ea		3,932	3,990
	DI Flanged 90 ell 6"	15221.430	2.00 ea	33.00 /mh	66	280.00 /ea	560		/ea		/ea		626	655
	DI Flanged 90 ell 8"x6" Reducing	15221.430	1.00 ea	33.00 /mh	66	350.00 /ea	350		/ea		/ea		416	445
	DI Flanged Tee 8x6"	15221.455	1.00 ea	33.00 /mh	66	575.00 /ea	575		/ea		/ea		641	670
	DI Flanged Tee 8"	15221.455	2.00 ea	33.00 /mh	132	650.00 /ea	1,300		/ea		/ea		1,432	1,490
	Tap Saddle 8 x 1/2"	2519.424	2.00 ea	33.00 /mh	66	180.00 /ea	360		/ea		/ea		426	455
	Stainless Steel Coupling 1/2"	15212.025	4.00 ea	33.00 /mh	26	4.00 /ea	16		/ea		/ea		42	54
	Valve Check Flange 125# 8in	15110.040	2.00 ea	33.00 /mh	132	2,300.00 /ea	4,600		/ea		/ea		4,732	4,790
	Valve Plug Flange 125# 8in	15110.650	2.00 ea	33.00 /mh	132	2,200.00 /ea	4,400		/ea		/ea		4,532	4,590
	DI Flanged 90 ell 8"	15221.430	2.00 ea	33.00 /mh	99	450.00 /ea	900		/ea		/ea		999	1,043
	Instrument - Pressure - INDICATOR	17400.000	4.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Instrument - Flow - Magnetic Flow Meter - 8in	17200.000	1.00 ea	33.00 /mh	132	500.00 /ea	500		/ea		/ea		632	690
	DI Flanged 45 ell 8"	15221.425	2.00 ea	33.00 /mh	132	375.00 /ea	750		/ea		/ea		882	940
	DI Flanged Tee 8"	15221.455	1.00 ea	33.00 /mh	66	650.00 /ea	650		/ea		/ea		716	745
	DI Flanged Tee 12x8"	15221.455	1.00 ea	33.00 /mh	99	1,250.00 /ea	1,250		/ea		/ea		1,349	1,393
	DI Blind Flange 12" W/ 2" TAP	15221.405	1.00 ea	33.00 /mh	66	475.00 /ea	475		/ea		/ea		541	570
	Stainless Steel Nipple 2" X 4"	15212.010	2.00 ea	33.00 /mh	22	30.00 /ea	60		/ea		/ea		82	91
	Valve Ball Threaded SS 2in	15110.014	1.00 ea	33.00 /mh	47	0.01 /ea	0		/ea		/ea		47	67
	Valve Air/Vac Combo 2in	15110.007	1.00 ea	33.00 /mh	47	900.00 /ea	900		/ea		/ea		947	967
	Valve Plug Flange 125# 8in	15110.650	1.00 ea	33.00 /mh	66	2,200.00 /ea	2,200		/ea		/ea		2,266	2,295
	Valve Plug Flange 125# 12in	15110.650	1.00 ea	33.00 /mh	99	3,200.00 /ea	3,200		/ea		/ea		3,299	3,343
	DI Flanged Con Red 6x5"	15221.445	2.00 ea	33.00 /mh	66	250.00 /ea	500		/ea		/ea		566	595
	DI Flanged Con Red 8x5"	15221.445	2.00 ea	33.00 /mh	99	350.00 /ea	700		/ea		/ea		799	843
	PS Epoxy for Anchors	15060.112	28.00 ea	33.00 /mh	92	5.00 /ea	140		/ea		/ea		232	273
	PS Epoxy Anchor 5/8 x 5in SS	15060.112	28.00 ea	33.00 /mh	92	25.00 /ea	700		/ea		/ea		792	833
	PS Pipe Stand grout 1"	15060.404	7.00 ea	33.00 /mh	116	10.00 /ea	70		/ea		/ea		186	236
	PS Special Support for 8in DI PIPE DETAIL M-133	15060.475	4.00 ea	33.00 /mh	396	900.00 /ea	3,600		/ea		/ea		3,996	4,170
	PS Special Support for 6in DI PIPE DETAIL M-133	15060.475	4.00 ea	33.00 /mh	396	850.00 /ea	3,400		/ea		/ea		3,796	3,970
	Epoxy Anchor 3/4 x 5-1/2in SS 316	5001.054	24.00 ea	33.00 /mh	79	20.00 /ea	480		/ea		/ea		559	594
	Heat Trace	16000.001	1.00 ls	/ls		/ls			/ls		/ls			
	Insulation Subcontractor	15403.100	1.00 ls	/ls		/ls			/ls		/ls			
	DI MEGAFLANGE w/ SS Bolts for DIP 6" added for cut joints	15112.230	4.00 ea	33.00 /mh	264	350.00 /ea	1,400		/ea		/ea		1,664	1,780
	DI MEGAFLANGE w/ SS Bolts for DIP 8" added for cut joints	15112.230	4.00 ea	33.00 /mh	396	450.00 /ea	1,800		/ea		/ea		2,196	2,370
	DI MEGAFLANGE w/ SS Bolts for DIP 12" added for cut joints	15112.230	1.00 ea	33.00 /mh	132	900.00 /ea	900		/ea		/ea		1,032	1,090
	NBG Kit 125# SS 5in	15125.012	4.00 ea	33.00 /mh	132	67.00 /ea	268		/ea		/ea		400	
	10 HWK Headworks Building													
	GRIT PIPE TO TRENCH													

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 connection from grit inlet to tench piping 10M201													
	DI Pipe 18in. dia PEXPE - 5' with weep ring 6" from end	15221.070	2.00 ea	33.00 /mh	264	2,200.00 /ea	4,400		/ea		/ea		4,664	4,780
	DI Pipe 18in. dia PEXPE - 7'	15221.070	2.00 ea	33.00 /mh	264	2,200.00 /ea	4,400		/ea		/ea		4,664	4,780
	DI MJ Std Wgt 90 18"	2511.214	2.00 ea	33.00 /mh	198	2,250.00 /ea	4,500		/ea		/ea		4,698	4,785
	DI MJ Compact Solid Sleeve Long 18	2511.322	2.00 ea	33.00 /mh	264	1,850.00 /ea	3,700		/ea		/ea		3,964	4,080
	PVC Sch 40 Pipe 4 Bell End sleeves for sampling tubes	2336.010	40.00 lf	33.00 /mh	277	10.00 /lf	420		/lf		/lf		697	819
	PVC Sch 40 Long Sweep 90 Ell Socket x Socket 4	15211.175	4.00 ea	33.00 /mh	28	135.00 /ea	540		/ea		/ea		568	580
	intake sample piping 2-3/8 FEP lined PE intake sample tubes	15231.005	40.00 lf	33.00 /mh	198	4.00 /lf	176		/lf		/lf		374	461
	intake sampling fittings misc	2517.114	8.00 ea	33.00 /mh	53	100.00 /ea	800		/ea		/ea		853	876
	pipirg to grit wash													
	150-01 1c 12042002 DIP PUMP DISCHARGE TO WASH 10M201 & 10M202													
	DI Pipe 4in. dia FxF - 1ft. 0in. glass lined 10M403 sec E	15221.030	1.00 ea	33.00 /mh	66	300.00 /ea	300		/ea		/ea		366	395
	DI Pipe 4in. dia FxF - 2ft. 0in. glass lined 10M403 sec E	15221.030	1.00 ea	33.00 /mh	66	450.00 /ea	450		/ea		/ea		516	545
	DI Pipe 4in. dia FxF - 3ft. 0in. glass lined 10M043 sec E	15221.030	1.00 ea	33.00 /mh	66	660.00 /ea	660		/ea		/ea		726	755
	DI Pipe 4in. dia FxF - 6ft. 0in. glass lined 10M403 sec E	15221.030	2.00 ea	33.00 /mh	264	1,200.00 /ea	2,400		/ea		/ea		2,664	2,780
	DI Pipe 4in. dia FxF - 12ft. 0in. glass lined 10M403 sec E	15221.030	1.00 ea	33.00 /mh	132	2,400.00 /ea	2,400		/ea		/ea		2,532	2,590
	PS Flange Stand grout	15060.152	8.00 ea	33.00 /mh	264	10.00 /ea	80		/ea		/ea		344	460
	DI Flanged 90 ell 4" glass lined	15221.430	5.00 ea	33.00 /mh	165	650.00 /ea	3,250		/ea		/ea		3,415	3,488
	DI Flanged Con Red 6x4" glass lined	15221.445	1.00 ea	33.00 /mh	33	875.00 /ea	875		/ea		/ea		908	923
	NBG Kit 125# galv 4in	15125.010	23.00 ea	33.00 /mh	759	20.00 /ea	460		/ea		/ea		1,219	1,553
	NBG Kit 125# galv 6in	15125.010	1.00 ea	33.00 /mh	33	30.00 /ea	30		/ea		/ea		63	78
	DI Flanged Tee 4"	15221.455	2.00 ea	33.00 /mh	132	337.00 /ea	674		/ea		/ea		806	864
	PS Special floor Support for 4in DIP - HD GALV	15060.475	7.00 ea	33.00 /mh	924	750.00 /ea	5,250		/ea		/ea		6,174	6,581
	PS Special wall Support for 4in DIP - HD GALV	15060.475	3.00 ea	33.00 /mh	396	750.00 /ea	2,250		/ea		/ea		2,646	2,820
	Valve Plug Flange 125# 4in at p-10311	15110.650	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Valve Check Swing Flange 4" at p-10311	15110.058	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	DI Blind Flange 4"	15221.405	2.00 ea	33.00 /mh	66	100.00 /ea	200		/ea		/ea		266	295
	Epoxy Anchor 5/8 x 5in SS 316	5001.054	32.00 ea	33.00 /mh	106	15.00 /ea	480		/ea		/ea		586	632
	Epoxy Anchor 5/8 x 5in SS 316	5001.054	9.00 ea	33.00 /mh	30	15.00 /ea	135		/ea		/ea		165	178
	PS Flange Stand for 4in DIP 1ft 0in floor to centerline painted	15060.152	1.00 ea	33.00 /mh	132	850.00 /ea	850		/ea		/ea		982	1,040
	PS Pipe Stand grout	15060.404	8.00 ea	33.00 /mh	264	10.00 /ea	80		/ea		/ea		344	460
	DI MEGAFLANGE w/ SS Bolts for DIP 4"	15112.230	5.00 ea	33.00 /mh	248	250.00 /ea	1,250		/ea		/ea		1,498	1,606
	PS Strut SS 1-5/8 x 1-5/8	15060.476	10.00 lf	33.00 /mh	99	20.00 /lf	200		/lf		/lf		299	343
	to grit classifier													
	150-01 1c 12042002 DIP suction line from grit to pump 10M201&10M402 sec D													
	DI Pipe 4in. dia FxF - 10ft. 0in. glass lined	15221.010	2.00 ea	33.00 /mh	264	2,200.00 /ea	4,400		/ea		/ea		4,664	4,780
	DI Pipe 4in. dia FxF - 6ft. 0in. glass lined	15221.010	2.00 ea	33.00 /mh	198	1,390.00 /ea	2,780		/ea		/ea		2,978	3,065
	DI Pipe 4in. dia FxF - 12ft. 0in. glass lined	15221.010	6.00 ea	33.00 /mh	792	2,400.00 /ea	14,400		/ea		/ea		15,192	15,540
	DI Pipe 4in. dia FxF - 10ft. 0in. glass lined	15221.010	2.00 ea	33.00 /mh	264	2,100.00 /ea	4,200		/ea		/ea		4,464	4,580
	DI Pipe 4in. dia FxF - 12ft. 0in. glass lined	15221.030	1.00 ea	33.00 /mh	132	2,400.00 /ea	2,400		/ea		/ea		2,532	2,590
	DI Pipe 4in. dia FxF - 14ft. 0in. glass lined	15221.030	1.00 ea	33.00 /mh	132	2,600.00 /ea	2,600		/ea		/ea		2,732	2,790
	DI Pipe 4in. dia FxPE - 12ft. 0in. glass lined	15221.030	2.00 ea	33.00 /mh	264	2,400.00 /ea	4,800		/ea		/ea		5,064	5,180
	DI Flanged 90 ell 4" glass lined	15221.430	6.00 ea	33.00 /mh	198	650.00 /ea	3,900		/ea		/ea		4,098	4,185
	DI Flanged 45 ell 4" glass lined	15221.425	3.00 ea	33.00 /mh	99	650.00 /ea	1,950		/ea		/ea		2,049	2,093
	NBG Kit 125# HDG 4in	15125.014	18.00 ea	33.00 /mh	594	18.00 /ea	324		/ea		/ea		918	1,179
	DI Blind Flange 4"	15221.405	1.00 ea	33.00 /mh	33	100.00 /ea	100		/ea		/ea		133	148
	NBG Kit 125# HDG 6in	15125.014	1.00 ea	33.00 /mh	33	25.00 /ea	25		/ea		/ea		58	73
	DI Flanged Con Red 6x4"	15221.445	1.00 ea	33.00 /mh	33	250.00 /ea	250		/ea		/ea		283	298
	PS Pipe Stand for 5in DIP 4ft 0in floor to CL ss	15060.406	2.00 ea	33.00 /mh	264	1,300.00 /ea	2,600		/ea		/ea		2,864	2,980
	PS Pipe Stand for 5in DIP 4ft 0in floor to CL ss	15060.406	2.00 ea	33.00 /mh	264	1,300.00 /ea	2,600		/ea		/ea		2,864	2,980
	PS Epoxy for Anchors	15060.112	2.00 ea	33.00 /mh	7	5.00 /ea	10		/ea		/ea		17	20
	PS Epoxy for Anchors	15060.112	2.00 ea	33.00 /mh	7	5.00 /ea	10		/ea		/ea		17	20
	PS Pipe Stand grout	15060.404	4.00 ea	33.00 /mh	132	10.00 /ea	40		/ea		/ea		172	230
	DI MEGAFLANGE w/ SS Bolts for DIP 4"	15112.230	4.00 ea	33.00 /mh	198	250.00 /ea	1,000		/ea		/ea		1,198	1,285
	DI Wall Pipe MJ x MJ 4in x 1ft 0in long	15221.316	4.00 ea	33.00 /mh	198	550.00 /ea	2,200		/ea		/ea		2,398	2,485
	DI MEGAFLANGE w/ SS Bolts for DIP 4"	15112.230	2.00 ea	33.00 /mh	99	250.00 /ea	500		/ea		/ea		599	643
	DI Flanged 90 ell 4"	15221.430	1.00 ea	33.00 /mh	33	180.00 /ea	180		/ea		/ea		213	228
	Trench Excavtion 12-14'	2333.010	50.00 lf	33.00 /mh	297	/lf			/lf		/lf		297	428
	Trench Backfill 12-14'	2333.020	50.00 lf	33.00 /mh	380	/lf			/lf		/lf		380	546
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			8,000.00 /Mnth	2,000	3,500.00 /Mnth	875	2,875	2,875
	trench D to exterior													
	150-01 1c 12042002 Trench Drain to Exterior 10M201													
	DI Pipe 6in. dia FxPE - 5ft. 0in.	15221.030	1.00 ea	33.00 /mh	99	650.00 /ea	650		/ea		/ea		749	793
	DI Pipe 8in. dia FxPE - 5ft. 0in.	15221.030	1.00 ea	33.00 /mh	99	850.00 /ea	850		/ea		/ea		949	993
	DI Pipe 8in. dia FxPE - 7ft. 0in.	15221.030	1.00 ea	33.00 /mh	198	1,100.00 /ea	1,100		/ea		/ea		1,298	1,385
	DI Pipe 8in. dia FxPE - 9ft. 0in.	15221.030	1.00 ea	33.00 /mh	198	1,140.00 /ea	1,140		/ea		/ea		1,338	1,425
	DI Pipe 8in. dia FxPE - 13ft. 0in.	15221.030	1.00 ea	33.00 /mh	264	1,680.00 /ea	1,680		/ea		/ea		1,944	2,060
	DI Flanged 90 ell 8"	15221.430	2.00 ea	33.00 /mh	132	450.00 /ea	900		/ea		/ea		1,032	1,090
	DI Flanged Con Red 8x6"	15221.445	1.00 ea	33.00 /mh	66	350.00 /ea	350		/ea		/ea		416	445
	NBG Kit 125# HDG 8in	15125.014	1.00 ea	33.00 /mh	33	30.00 /ea	30		/ea		/ea		63	78
	FCA for DIP 8"	15112.090	1.00 ea	33.00 /mh	66	450.00 /ea	450		/ea		/ea		516	545
	DI MEGAFLANGE w/ SS Bolts for DIP 8"	15112.230	3.00 ea	33.00 /mh	198	450.00 /ea	1,350		/ea		/ea		1,548	1,635
	DI Wall Pipe FLG x FLG w/ Collar 8in x 1ft 6in long	15221.328	2.00 ea	33.00 /mh	528	900.00 /ea	1,800		/ea		/ea		2,328	2,560
	DI MJ Compact Solid Sleeve Long 6"	2511.322	1.00 ea	33.00 /mh	66	395.00 /ea	395		/ea		/ea		461	490
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	trench bypass													
	02642- Trench Bypass pipe between grit 10M201													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 4- 6'	2333.010	18.00 lf	33.00 /mh	59	/lf			/lf		/lf		59	86
	Trench Backfill 4- 6'	2333.020	18.00 lf	33.00 /mh	89	/lf			/lf		/lf		89	
	Utility Bedding Gravel-Crushed	2305.200	1.03 cy	/cy		25.00 /ton	41		/cy		/cy		41	129
	Spoils to Waste	2333.060	2.67 cy	33.00 /mh	9	/cy			/cy		/cy		9	19

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02642- Trench Bypass pipe between grit 10M201													
	DI Pipe MJ - PEX PE Class 52 30	2511.201	18.00 lf	33.00 /mh	475	230.00 /lf	4,181		/lf		/lf		4,657	4,866
	Polybag 12" and Smaller	2333.090	18.00 lf	33.00 /mh	6	1.00 /lf	20		/lf		/lf		26	28
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.01 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	74	3,500.00 /Mnth	28	102	102
	John Deere 624 Loader (172 HP) (M)	1900.132	0.01 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	48	3,000.00 /Mnth	24	72	72
	Mikasa Jumping Jack Compactor (L)	1900.138	0.00 Mnth	/Mnth		/Mnth			200.00 /Mnth	1	100.00 /Mnth	0	1	1
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.00 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	10	500.00 /Mnth	2	12	12
	Sleeve SS 36" x 12	15121.200	2.00 ea	33.00 /mh	1,056	4,700.00 /ea	9,400		/ea		/ea		10,456	10,921
	DI MJ Compact Solid Sleeve Long 30	2511.322	1.00 ea	33.00 /mh	396	3,600.00 /ea	3,600		/ea		/ea		3,996	4,170
	Link Seal Size LS-575-C	15123.050	80.00 ea	33.00 /mh	396	45.00 /ea	3,600		/ea		/ea		3,996	4,170
	Grout Pipe in Manhole 30"	2327.090	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	11 EQB EQ Basin													
	Ductile Iron Ductile Iron													
	150-01 1c 12042002 DIP process basin pump and basin piping 11M201 thru 11M403													
	DI Pipe 8in. dia FxF - 6ft. 0in.	15221.010	3.00 ea	33.00 /mh	396	1,180.00 /ea	3,540		/ea		/ea		3,936	4,110
	DI Pipe 12in. dia FxF - 2ft. 0in.	15221.030	4.00 ea	33.00 /mh	264	790.00 /ea	3,160		/ea		/ea		3,424	3,540
	DI Pipe 12in. dia FxF - 4ft. 0in.	15221.030	1.00 ea	33.00 /mh	66	1,150.00 /ea	1,150		/ea		/ea		1,216	1,245
	DI Pipe 8in. dia FxF - 18ft. 0in.	15221.030	3.00 ea	33.00 /mh	594	2,200.00 /ea	6,600		/ea		/ea		7,194	7,455
	DI Pipe 12in. dia FxF - 5ft. 0in.	15221.030	1.00 ea	33.00 /mh	66	1,600.00 /ea	1,600		/ea		/ea		1,666	1,695
	DI Pipe 12in. dia FxF- 7ft. 0in.	15221.030	1.00 ea	33.00 /mh	99	1,730.00 /ea	1,730		/ea		/ea		1,829	1,873
	DI Pipe 12in. dia FxV - 2ft. 0in. w/ 2" tap	15221.040	1.00 ea	33.00 /mh	66	1,950.00 /ea	1,950		/ea		/ea		2,016	2,045
	DI Pipe 12in. dia FxV - 4ft. 6in.	15221.040	1.00 ea	33.00 /mh	66	1,450.00 /ea	1,450		/ea		/ea		1,516	1,545
	DI Flanged 90 ell 12"	15221.430	4.00 ea	33.00 /mh	264	900.00 /ea	3,600		/ea		/ea		3,864	3,980
	DI Flanged 90 ell 8" 3 w/ taps 1/2 for pressure gauge	15221.430	6.00 ea	33.00 /mh	297	1,700.00 /ea	10,200		/ea		/ea		10,497	10,628
	DI Flanged Tee 12x8"	15221.455	1.00 ea	33.00 /mh	99	1,250.00 /ea	1,254		/ea		/ea		1,353	1,397
	DI Blind Flange 12"	15221.405	1.00 ea	33.00 /mh	66	475.00 /ea	475		/ea		/ea		541	570
	PS Flange Stand grout	15060.152	5.00 ea	33.00 /mh	83	10.00 /ea	50		/ea		/ea		133	169
	DI MEGAFLANGE w/ SS Bolts for DIP 8"	15112.230	3.00 ea	33.00 /mh	297	450.00 /ea	1,350		/ea		/ea		1,647	1,778
	Instrument - Flow - Magnetic Flow Meter - 12in	17200.000	1.00 ea	33.00 /mh	264	500.00 /ea	500		/ea		/ea		764	880
	DI VIC Coupling 12"	15221.680	2.00 ea	33.00 /mh	132	500.00 /ea	1,000		/ea		/ea		1,132	1,190
	NBG Kit 125# Steel 12in SS	15125.010	9.00 ea	33.00 /mh	149	150.00 /ea	1,350		/ea		/ea		1,499	1,564
	PS Special floor Support for 12in Steel Pipe - HD galv 1' 7"	15060.475	5.00 ea	33.00 /mh	660	950.00 /ea	4,750		/ea		/ea		5,410	5,700
	PS Epoxy for Anchors	15060.112	28.00 ea	33.00 /mh	46	5.00 /ea	140		/ea		/ea		186	207
	PS Anchor Bolt 3/4x5 SS	15060.020	28.00 ea	33.00 /mh	46	25.00 /ea	700		/ea		/ea		746	767
	PS Pipe unistrut stand for releif valve 2 legs 4' tall	15060.404	1.00 ea	33.00 /mh	99	750.00 /ea	750		/ea		/ea		849	893
	PS Epoxy Anchor 5/8 x 5in SS	15060.112	24.00 ea	33.00 /mh	40	25.00 /ea	600		/ea		/ea		640	657
	PS Anchor Bolt 5/8x6 SS	15060.020	24.00 ea	33.00 /mh	40	16.00 /ea	384		/ea		/ea		424	441
	DI Wall Pipe MJ x PE 24in x 2ft 6in long	15221.320	1.00 ea	33.00 /mh	528	4,000.00 /ea	4,000		/ea		/ea		4,528	4,760
	FCA for DIP 12"	15112.090	1.00 ea	33.00 /mh	198	900.00 /ea	900		/ea		/ea		1,098	1,185
	DI MJ Compact Solid Sleeve Long 12	2511.322	1.00 ea	33.00 /mh	132	850.00 /ea	850		/ea		/ea		982	1,040
	Tap Saddle 12 x 2	2519.424	1.00 ea	33.00 /mh	66	325.00 /ea	325		/ea		/ea		391	420
	Valve sewage air releif valve	15110.007	4.00 ea	33.00 /mh	528	1,500.00 /ea	6,000		/ea		/ea		6,528	6,760
	Stainless Steel Nipple 2" X 4"	15212.010	2.00 ea	33.00 /mh	22	30.00 /ea	60		/ea		/ea		82	91
	Valve Ball Threaded SS 2in	15110.014	4.00 ea	33.00 /mh	186	0.01 /ea	0		/ea		/ea		186	268
	PS wall Support for 8in DIP - galv M-133	15060.475	12.00 ea	33.00 /mh	1,584	850.00 /ea	10,200		/ea		/ea		11,784	12,481
	PS Pipe Strut Clamp SS 8in	15060.486	9.00 ea	33.00 /mh	149	30.00 /ea	270		/ea		/ea		419	484
	Valve Check Flange 125# 8in	15110.040	3.00 ea	33.00 /mh	198	2,300.00 /ea	6,900		/ea		/ea		7,098	7,185
	Valve Plug Flange 125# 8in	15110.650	3.00 ea	33.00 /mh	198	2,200.00 /ea	6,600		/ea		/ea		6,798	6,885
	PS Pipe Stand for 12in DIP 6ft 0in floor to CL painted	15060.404	1.00 ea	33.00 /mh	132	1,600.00 /ea	1,600		/ea		/ea		1,732	1,790
	NBG Kit 125# SS 8in	15125.012	18.00 ea	33.00 /mh	178	140.00 /ea	2,520		/ea		/ea		2,698	2,777
	Stainless Steel Nipple 1/2" X 4"	15212.010	3.00 ea	33.00 /mh	25	7.00 /ea	21		/ea		/ea		46	57
	Valve Ball Threaded SS 1/2in	15110.014	3.00 ea	33.00 /mh	53	0.01 /ea	0		/ea		/ea		53	77
	Stainless Steel Bushing mpt x fpt 1/2in x 3/8in	15212.015	3.00 ea	33.00 /mh	20	3.00 /ea	9		/ea		/ea		29	38
	Pressure Gauge gauges on P-11211 P-11211 P-11201	11000.005	3.00 ea	33.00 /mh	396	750.00 /ea	2,250		/ea		/ea		2,646	2,820
	150-553 ss piping in process basin overflows and fill lines 11M201													
	Stainless Steel Pipe 1" releif valve 11M401	15212.005	20.00 lf	33.00 /mh	132	125.00 /lf	2,500		/lf		/lf		2,632	2,690
	Stainless Steel Union 1" releif valve 11M401	15212.060	1.00 ea	33.00 /mh	17	25.00 /ea	25		/ea		/ea		42	49
	Stainless Steel 90 Elbow 1" releif valve 11M401	15212.040	6.00 ea	33.00 /mh	99	8.00 /ea	48		/ea		/ea		147	191
	Stainless Steel Nipple 1" x 3" releif valve 11M401	15212.010	6.00 ea	33.00 /mh	99	20.00 /ea	120		/ea		/ea		219	263
	Stainless Steel Bushing mpt x fpt 2in x 1" in releif valve 11M401	15212.015	1.00 ea	33.00 /mh	17	20.00 /ea	20		/ea		/ea		37	44
	Valve Ball Threaded SS 1in releif valve 11M401	15110.014	1.00 ea	33.00 /mh	29	0.01 /ea	0		/ea		/ea		29	41
	PS Strut Post Base SS releif valve 11M401	15060.478	4.00 ea	33.00 /mh	40	52.00 /ea	208		/ea		/ea		248	265
	PS Pipe Strut Clamp SS 1in	15060.486	6.00 ea	33.00 /mh	59	11.00 /ea	66		/ea		/ea		125	152
	Epoxy Anchor 1/2 x 5-in ss 11M401	5001.050	16.00 ea	33.00 /mh	53	15.00 /ea	240		0.00 /ea	0	/ea		293	316
	PS Flange Stand grout 1" 11M401	15060.152	4.00 ea	33.00 /mh	132	10.00 /ea	40		/ea		/ea		172	230
	FAB Stainless Steel Pipe 316 - 20" FXF 14' 11M201 overflow	15233.505	1.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel 90 316 11M201 overflow	15233.505	1.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe 316 - 20" - 3' F X PE 11M201 overflow	15233.505	1.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe 316- 20" - 1' F X F 11M201 overflow	15233.505	1.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe 316- 20" X24 RED 11M201 overflow	15233.505	1.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Link Seal Size LS-475-C 11M201 overflow	15123.050	52.00 ea	33.00 /mh	257	23.00 /ea	1,196		/ea		/ea		1,453	1,567
	seal penetration around link seal 11M201 overflow	15123.050	1.00 ea	33.00 /mh	99	250.00 /ea	250		/ea		/ea		349	393
	cast in place sleeve for 20" pipe 11M201 overflow	3150.710	1.00 ea	33.00 /mh	7	2,800.00 /ea	2,800		/ea		/ea		2,807	2,810
	wall Support for 20in SS Pipe - plain M133 overflow	15060.475	2.00 ea	33.00 /mh	264	1,100.00 /ea	2,200		/ea		/ea		2,464	2,580
	Anchors for wall supports overflow	15060.112	12.00 ea	33.00 /mh	20	5.00 /ea	60		/ea		/ea		80	89
	PS Epoxy for Anchors overflow	15060.112	12.00 ea	33.00 /mh	20	25.00 /ea	300		/ea		/ea		320	329
	DI Wall Pipe MJ x PE 8in x 2ft 0in long overflow	15221.320	1.00 ea	33.00 /mh	528	850.00 /ea	850		/ea		/ea		1,378	1,610
	DI Pipe 8in. dia PEXPE - 5ft. 0in. overflow	15221.070	1.00 ea	33.00 /mh	99	610.00 /ea	610		/ea		/ea		709	753
	Valve Check Flange 125# 8in rubber flapper CV-11401 overflow	15110.040	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	DI MJ Compact Solid Sleeve Long 8 overflow	2511.322	1.00 ea	33.00 /mh	66	495.00 /ea	495		/ea		/ea		561	588
	Fab Stainless Steel Pipe 316 - 20" - 1' FT 6" IN PE X PE 11M403 SEC E	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe 316 - 20" - 90 PE X PE 11M403 SEC E	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe 316 - 20" - 9' PE X FL	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-553 ss piping in process basin overflows and fill lines 11M201													
	Fab Stainless Steel Pipe 316 - 20" -90 FLXFL	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	DI Wall Pipe FLG x MJ 20in x 2ft 0in long	15221.308	1.00 ea	33.00 /mh	528	3,900.00 /ea	3,900		/ea		/ea		4,428	4,660
	NBG Kit 125# Steel 20in	15125.010	12.00 ea	33.00 /mh	792	350.00 /ea	4,200		/ea		/ea		4,992	5,340
	PS Special WALL Support for 20in DIP - SS	15060.475	2.00 ea	33.00 /mh	264	1,200.00 /ea	2,400		/ea		/ea		2,664	2,780
	PS Epoxy for Anchors	15060.112	6.00 ea	33.00 /mh	10	5.00 /ea	30		/ea		/ea		40	44
	PS Epoxy for Anchors	15060.112	6.00 ea	33.00 /mh	10	5.00 /ea	30		/ea		/ea		40	44
	DI Pipe 20in. dia FxPE - 5ft. 0in.	15221.030	1.00 ea	33.00 /mh	198	2,950.00 /ea	2,950		/ea		/ea		3,148	3,235
	DI MJ Compact Solid Sleeve Long 20	2511.322	1.00 ea	33.00 /mh	198	2,350.00 /ea	2,350		/ea		/ea		2,548	2,635
	DI MEGAFLANGE w/ SS Bolts for DIP 20"	15112.230	4.00 ea	33.00 /mh	792	3,900.00 /ea	15,600		/ea		/ea		16,392	16,740
	20 PBS Process Basin													
	24" line from basin													
	150-01 1c 12042002 DIP 24" Effluent form Process to MBR 20M205													
	DI Pipe 24in. dia FxF - 6ft. 6in.	15221.010	1.00 ea	33.00 /mh	132	5,560.00 /ea	5,560		/ea		/ea		5,692	5,750
	DI Pipe 24in. dia FxPE - 2ft. 6in.	15221.070	1.00 ea	33.00 /mh	132	1,300.00 /ea	1,300		/ea		/ea		1,432	1,490
	DI Pipe 24in. dia MJxMJ - 18ft. 0in.	15221.050	1.00 ea	33.00 /mh	132	8,180.00 /ea	8,180		/ea		/ea		8,312	8,370
	DI Flanged 90 ell 24"	15221.430	1.00 ea	33.00 /mh	132	4,250.00 /ea	4,250		/ea		/ea		4,382	4,440
	DI Wall Pipe FLG x PE w/ Collar 24in x 1ft 6in long	15221.336	1.00 ea	33.00 /mh	528	2,800.00 /ea	2,800		/ea		/ea		3,328	3,560
	NBG Kit 125# Steel 24in	15125.010	2.00 ea	33.00 /mh	198	550.00 /ea	1,100		/ea		/ea		1,298	1,385
	PS Special wall Support for 24in DIP detail -M133	15060.475	3.00 ea	33.00 /mh	594	1,350.00 /ea	4,050		/ea		/ea		4,644	4,905
	PS Epoxy Anchor 5/8 x 5in SS	15060.112	12.00 ea	33.00 /mh	20	25.00 /ea	300		/ea		/ea		320	329
	PS Epoxy for 5/8" anchor	15060.112	12.00 ea	33.00 /mh	20	5.00 /ea	60		/ea		/ea		80	89
	DI MJ Compact Solid Sleeve Long 24	2511.322	1.00 ea	33.00 /mh	198	2,950.00 /ea	2,950		/ea		/ea		3,148	3,235
	DI Flanged x Flare 24"	15221.437	1.00 ea	33.00 /mh	132	6,272.00 /ea	6,272		/ea		/ea		6,404	6,462
	RAS line RAS line													
	02642- Ras line and influent and tank piping 20M203													
	Testing Pressure & Leak - Piping	1166.100	3.00 ea	33.00 /mh	792	50.00 /ea	150		50.00 /ea	150	/ea		1,092	1,440
	Trench Excavtion 6- 8'	2333.010	60.00 lf	33.00 /mh	297	/lf			/lf		/lf		297	428
	Trench Backfill 6- 8'	2333.020	60.00 lf	33.00 /mh	396	/lf			/lf		/lf		396	570
	Utility Bedding Gravel-Crushed	2305.200	45.00 cy	/cy		25.00 /ton	1,800		/cy		/cy		1,800	1,800
	Spoils to Waste	2333.060	45.00 cy	33.00 /mh	149	/cy			/cy		/cy		149	214
	DI Pipe MJ - Class 52 18	2511.201	16.00 lf	33.00 /mh	95	95.00 /lf	1,535		/lf		/lf		1,630	1,672
	DI Pipe MJ - Class 52 24 J	2511.201	50.00 lf	33.00 /mh	413	135.00 /lf	6,818		/lf		/lf		7,230	7,412
	DI MJ Std Wgt 90 24 J	2511.214	2.00 ea	33.00 /mh	396	4,100.00 /ea	8,200		/ea		/ea		8,596	8,770
	DI MJ Compact Solid Sleeve Long 18" pipe	2511.322	1.00 ea	33.00 /mh	165	1,850.00 /ea	1,850		/ea		/ea		2,015	2,088
	Polybag 12" and Smaller	2333.090	10.00 lf	33.00 /mh	3	1.00 /lf	11		/lf		/lf		14	16
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.03 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	248	3,500.00 /Mnth	95	343	343
	John Deere 624 Loader (172 HP) (M)	1900.132	0.03 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	162	3,000.00 /Mnth	81	243	243
	Water Truck, 4,000 Gallon (L)	1900.210	0.01 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	67	1,200.00 /Mnth	17	84	84
	Mikasa Jumping Jack Compactor (L)	1900.138	0.01 Mnth	/Mnth		/Mnth			200.00 /Mnth	3	100.00 /Mnth	1	4	4
	DI MJ Compact Solid Sleeve Long 24 J	2511.322	2.00 ea	33.00 /mh	396	2,950.00 /ea	5,900		/ea		/ea		6,296	6,470
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.01 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	35	500.00 /Mnth	7	42	42
	Polybag 24" and smaller	2333.090	50.00 lf	33.00 /mh	17	2.00 /lf	110		/lf		/lf		127	134
	DI Wall Pipe FLG x MJ w/ Collar 18in x 2ft 0in long	15221.332	1.00 ea	33.00 /mh	528	3,750.00 /ea	3,750		/ea		/ea		4,278	4,510
	DI Pipe MJ - 18"- 5' PE-PE	2511.201	2.00 ea	33.00 /mh	12	2,400.00 / ea	4,848		/ ea		/ ea		4,860	4,865
	Fab Stainless Steel Pipe - 18"15' long - Fx F sch 10- 316 ss	15233.505	2.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	NBG Kit 125# SS 18in w/ isolation kit	15125.012	14.00 ea	33.00 /mh	462	650.00 /ea	9,100		/ea		/ea		9,562	9,765
	PS Special wall Support for 18in SS Pipe - 316 copper b line b3067	15060.475	12.00 ea	33.00 /mh	1,584	1,100.00 /ea	13,200		/ea		/ea		14,784	15,481
	PS 5/8 X6 concrete anchors	15060.112	36.00 ea	33.00 /mh	59	25.00 /ea	900		/ea		/ea		959	986
	PS Epoxy for Anchors	15060.112	36.00 ea	33.00 /mh	59	5.00 /ea	180		/ea		/ea		239	266
	DI Floor Pipe MJ x PE w/ Collar 24in x 1ft 6in long J	15221.244	1.00 ea	33.00 /mh	264	3,500.00 /ea	3,500		/ea		/ea		3,764	3,880
	DI Floor Pipe MJ x PE w/ Collar 24in x 1ft 6in long J	15221.236	1.00 ea	33.00 /mh	264	2,750.00 /ea	2,750		/ea		/ea		3,014	3,130
	Fab Stainless Steel Pipe - 18" - F x PE 6' long	15233.505	2.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Sleeve Stainless with weep ring 24" dia X 12" long	15121.200	3.00 ea	33.00 /mh	792	2,900.00 /ea	8,700		/ea		/ea		9,492	9,840
	Link Seal Size LS-410-S	15123.100	150.00 ea	33.00 /mh	743	23.00 /ea	3,450		/ea		/ea		4,193	4,519
	DI MJ Compact Solid Sleeve Long 18	2511.322	1.00 ea	33.00 /mh	165	1,850.00 /ea	1,850		/ea		/ea		2,015	2,088
	DI Wall Pipe MJ x PE 18in x 1ft 8in long	15221.320	2.00 ea	33.00 /mh	1,056	2,800.00 /ea	5,600		/ea		/ea		6,656	7,121
	DI MJ Compact Solid Sleeve Long 18	2511.322	4.00 ea	33.00 /mh	660	1,850.00 /ea	7,400		/ea		/ea		8,060	8,350
	DI Wall Pipe MJ x PE 18in x 1ft 8in long	15221.320	2.00 ea	33.00 /mh	1,056	2,800.00 /ea	5,600		/ea		/ea		6,656	7,121
	DI Wall Pipe FLG x MJ 18in x 1ft 8in long	15221.308	2.00 ea	33.00 /mh	1,056	3,800.00 /ea	7,600		/ea		/ea		8,656	9,121
	DI Pipe 18in. dia PExPE - 5ft. 0in.	15221.070	3.00 ea	33.00 /mh	297	1,600.00 /ea	4,800		/ea		/ea		5,097	5,228
	Fab Stainless Steel Pipe - 18" - 15' F x F sch 10 316 ss	15233.505	2.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe - 18" -4' *F x PE sch 10 316 ss	15233.505	2.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	DI Wall Pipe MJ x PE 18in x 1ft 8in long	15221.320	5.00 ea	33.00 /mh	2,640	2,800.00 /ea	14,000		/ea		/ea		16,640	17,802
	Fab Stainless Steel Pipe - 18" - 15' FxF SCH 10 316 ss	15233.505	2.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe - 18" - 4' FxPE SCH 10 316 ss	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe - 18" - 15' F x PE sch 10 316 ss	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	DI Pipe 24in. dia PExPE - 2ft. 0in.	15221.070	1.00 ea	33.00 /mh	132	1,050.00 /ea	1,050		/ea		/ea		1,182	1,240
	DI Wall Pipe FLG x PE w/ Collar 24in x 1ft 6in long	15221.336	2.00 ea	33.00 /mh	1,056	2,800.00 /ea	5,600		/ea		/ea		6,656	7,121
	DI Wall Pipe MJ x PE 24in x 2ft 0in long	15221.304	1.00 ea	33.00 /mh	528	3,800.00 /ea	3,800		/ea		/ea		4,328	4,560
	DI Pipe 24in. dia PExPE - 5ft. 0in.	15221.070	1.00 ea	33.00 /mh	132	2,300.00 /ea	2,300		/ea		/ea		2,432	2,490
	DI MEGAFLANGE w/ SS Bolts for DIP 24"	15112.230	2.00 ea	33.00 /mh	264	4,800.00 /ea	9,600		/ea		/ea		9,864	9,980
	DI MJ Compact Solid Sleeve Long 24 J	2511.322	1.00 ea	33.00 /mh	198	2,950.00 /ea	2,950		/ea		/ea		3,148	3,235
	150-01 1c 12042002 dIP from anaerobic and anoxic basin 20M203													
	DI Pipe 18in. dia FxPE - 5ft. 0in.	15221.030	2.00 ea	33.00 /mh	198	2,950.00 /ea	5,900		/ea		/ea		6,098	6,185
	DI Pipe 18in. dia FxMJ - 2ft. 0in.	15221.020	2.00 ea	33.00 /mh	198	2,800.00 /ea	5,600		/ea		/ea		5,798	5,885
	DI Pipe 18in. dia PExPE - 8ft. 0in.	15221.070	1.00 ea	33.00 /mh	99	2,500.00 /ea	2,500		/ea		/ea		2,599	2,643
	DI Pipe 18in. dia PExPE - 5ft. 0in.	15221.070	1.00 ea	33.00 /mh	99	1,600.00 /ea	1,600		/ea		/ea		1,699	1,743
	DI Pipe 18in. dia PExPE - 8ft. 0in.	15221.070	1.00 ea	33.00 /mh	99	2,500.00 /ea	2,500		/ea		/ea		2,599	2,643
	DI Pipe 18in. dia PExPE - 14ft. 0in.	15221.070	1.00 ea	33.00 /mh	99	4,300.00 /ea	4,300		/ea		/ea		4,399	4,498
	DI Flanged 90 ell 18"	15221.430	2.00 ea	33.00 /mh	198	2,000.00 /ea	4,000		/ea		/ea		4,198	4,396
	DI MJ Compact Solid Sleeve Long 18	2511.322	4.00 ea	33.00 /mh	726	1,850.00 /ea	7,400		/ea		/ea		8,126	8,424

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 dIP from anaerobic and anoxic basin 20M203													
	DI MJ Compact Solid Sleeve Long 18	2511.322	4.00 ea	33.00 /mh	726	1,850.00 /ea	7,400		/ea		/ea		8,126	8,445
	DI Wall Pipe FLG x MJ 18in x 1ft 8in long	15221.308	8.00 ea	33.00 /mh	1,320	3,800.00 /ea	30,400		/ea		/ea		31,720	32,301
	drain from basin													
	02642- DIP underslab mud valve basin drains 20M205													
	Testing Pressure & Leak - Piping	1166.100	3.00 ea	33.00 /mh	792	50.00 /ea	150		50.00 /ea	150	/ea		1,092	1,440
	Trench Excavtion 4- 6'	2333.010	60.00 lf	33.00 /mh	198	/lf			/lf		/lf		198	285
	Trench Backfill 4- 6'	2333.020	60.00 lf	33.00 /mh	297	/lf			/lf		/lf		297	428
	Utility Bedding Gravel-Crushed	2305.200	28.00 cy	/cy		25.00 /ton	1,120		/cy		/cy		1,120	1,120
	Spoils to Waste	2333.060	28.00 cy	33.00 /mh	92	/cy			/cy		/cy		92	133
	DI Pipe MJ - Class 52 6	2511.201	70.00 lf	33.00 /mh	231	30.00 /lf	2,121		/lf		/lf		2,352	2,454
	DI MJ Std Wgt 90 6	2511.214	3.00 ea	33.00 /mh	198	395.00 /ea	1,185		/ea		/ea		1,383	1,470
	DI MJ Compact Solid Sleeve Long 6	2511.322	3.00 ea	33.00 /mh	198	395.00 /ea	1,185		/ea		/ea		1,383	1,470
	Polybag 12" and Smaller	2333.090	60.00 lf	33.00 /mh	20	1.00 /lf	66		/lf		/lf		86	95
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.03 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	248	3,500.00 /Mnth	95	343	343
	John Deere 624 Loader (172 HP) (M)	1900.132	0.03 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	162	3,000.00 /Mnth	81	243	243
	Water Truck, 4,000 Gallon (L)	1900.210	0.02 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	72	1,200.00 /Mnth	18	90	90
	Mikasa Jumping Jack Compactor (L)	1900.138	0.02 Mnth	/Mnth		/Mnth			200.00 /Mnth	3	100.00 /Mnth	2	5	5
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.02 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	38	500.00 /Mnth	8	45	45
	DI Floor Pipe FLG x PE w/ Collar 6in x 1ft 6in long	15221.236	3.00 ea	33.00 /mh	198	500.00 /ea	1,500		/ea		/ea		1,698	1,785
	DI Pipe 6in. dia FxPE - 2ft. 0in. with tap holes	15221.010	3.00 ea	33.00 /mh	198	600.00 /ea	1,800		/ea		/ea		1,998	2,085
	Valve Mud 6" HV20366 - HV20364 - HV20362	15110.555	3.00 ea	33.00 /mh	1,584	0.01 /ea	0		/ea		/ea		1,584	2,281
	effluent box piping													
	02642- DIP piping to MBR building from basin 20M205													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 8-10'	2333.010	5.00 lf	33.00 /mh	26	/lf			/lf		/lf		26	38
	Trench Backfill 8-10'	2333.020	5.00 lf	33.00 /mh	35	/lf			/lf		/lf		35	50
	Utility Bedding Gravel-Crushed	2305.200	3.98 cy	/cy		25.00 /ton	159		/cy		/cy		159	159
	Spoils to Waste	2333.060	4.63 cy	33.00 /mh	15	/cy			/cy		/cy		15	22
	DI Pipe MJ - Class 52 36	2511.201	5.00 lf	33.00 /mh	46	295.00 /lf	1,490		/lf		/lf		1,536	1,556
	DI MJ Std Wgt Solid Sleeve Long 36	2511.222	1.00 ea	33.00 /mh	528	8,750.00 /ea	8,750		/ea		/ea		9,278	9,510
	Polybag 36" and smaller	2333.090	5.00 lf	33.00 /mh	2	3.50 /lf	19		/lf		/lf		21	22
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	368	3,500.00 /Mnth	140	508	508
	John Deere 624 Loader (172 HP) (M)	1900.132	0.04 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	240	3,000.00 /Mnth	120	360	360
	Water Truck, 4,000 Gallon (L)	1900.210	0.04 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	192	1,200.00 /Mnth	48	240	240
	Mikasa Jumping Jack Compactor (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			200.00 /Mnth	8	100.00 /Mnth	4	12	12
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	100	500.00 /Mnth	20	120	120
	DI Wall Pipe MJ x PE w/ Tapped Holes 36in x 1ft 6in long	15221.360	1.00 ea	33.00 /mh	792	7,400.00 /ea	7,400		/ea		/ea		8,192	8,540
	23 MBR MBR Building													
	chemical pipe basin													
	150-553 stainless steel Scour air piping 23M204													
	Fab Stainless Steel Pipe sch 10 304 ss - 16"-2' PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 16"x 8" Tee PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 8' PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 16" x 8" Tee PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 8' PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 8' Tee PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 8' PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- x 8" Tee PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- cap PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe - 8"- 90 ell PE x PE	15233.505	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe - 8" - 4' PE x PE	15233.505	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe - 8" - 2' V x PE	15233.505	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe - 8" - vic couplings	15233.505	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	PS Flange Stand grout	15060.152	14.00 ea	33.00 /mh	231	10.00 /ea	140		/ea		/ea		371	473
	PS Pipe Stand for 16in ss 8ft 6in floor to CL	15060.404	10.00 ea	33.00 /mh	1,320	2,000.00 /ea	20,000		/ea		/ea		21,320	21,901
	Epoxy Anchor 5/8 x 5in ss	5001.050	56.00 ea	33.00 /mh	92	15.00 /ea	840		0.00 /ea	0	/ea		932	973
	PS Pipe Stand for 8in ss 2ft 11in floor to CL	15060.404	4.00 ea	33.00 /mh	528	1,300.00 /ea	5,200		/ea		/ea		5,728	5,960
	NBG Kit 125# SS 16in	15125.012	6.00 ea	33.00 /mh	396	450.00 /ea	2,700		/ea		/ea		3,096	3,270
	NBG Kit 125# SS 8in	15125.012	4.00 ea	33.00 /mh	132	140.00 /ea	560		/ea		/ea		692	750
	dewatering feed pump													
	02642- dewatering feed pump underslab 23M211, 23M210													
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	33.00 /mh	528	50.00 /ea	100		50.00 /ea	100	/ea		728	960
	Trench Excavtion 0- 4'	2333.010	39.00 lf	33.00 /mh	193	/lf			/lf		/lf		193	278
	Trench Backfill 0- 4'	2333.020	39.00 lf	33.00 /mh	322	/lf			/lf		/lf		322	463
	Utility Bedding Gravel-Crushed	2305.200	5.69 cy	/cy		25.00 /ton	227		/cy		/cy		227	227
	Spoils to Waste	2333.060	5.78 cy	33.00 /mh	19	/cy			/cy		/cy		19	27
	DI Pipe MJ - Class 52 4	2511.201	28.00 lf	33.00 /mh	185	42.00 /lf	1,188		/lf		/lf	1,373	1,454	
	DI Pipe MJ - Class 52 6	2511.201	18.00 lf	33.00 /mh	119	30.00 /lf	545		/lf		/lf		664	716
	DI MJ Std Wgt 90 4	2511.214	4.00 ea	33.00 /mh	264	265.00 /ea	1,060		/ea		/ea		1,324	1,440
	DI MJ Std Wgt 90 6	2511.214	1.00 ea	33.00 /mh	66	395.00 /ea	395		/ea		/ea		461	490
	DI MJ Std Wgt Tee 4	2511.224	1.00 ea	33.00 /mh	66	305.00 /ea	305		/ea		/ea		371	400
	DI MJ Compact Solid Sleeve Long 4	2511.322	2.00 ea	33.00 /mh	132	250.00 /ea	500		/ea		/ea		632	690
	DI MJ Compact Solid Sleeve Long 6	2511.322	1.00 ea	33.00 /mh	66	395.00 /ea	395		/ea		/ea		461	490
	Polybag 12" and Smaller	2333.090	39.00 lf	33.00 /mh	13	1.00 /lf	43		/lf		/lf		56	61
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.06 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	552	3,500.00 /Mnth	210	762	762
	John Deere 624 Loader (172 HP) (M)	1900.132	0.06 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	360	3,000.00 /Mnth	180	540	540
	Water Truck, 4,000 Gallon (L)	1900.210	0.06 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	288	1,200.00 /Mnth	72	360	360
	Mikasa Jumping Jack Compactor (L)	1900.138	0.06 Mnth	/Mnth		/Mnth			200.00 /Mnth	12	100.00 /Mnth	6	18	18
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.06 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	150	500.00 /Mnth	30	180	180
	DI Pipe 6in. dia PExPE - 5ft. 0in.	15221.070	4.00 ea	33.00 /mh	264	450.00 /ea	1,800		/ea		/ea		2,064	2,144
	FCA for DIP 6"	15112.090	1.00 ea	33.00 /mh	66	350.00 /ea	350		/ea		/ea		416	445

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02642- dewatering feed pump underslab 23M211, 23M210													
	DI Pipe 6in. dia FxPE - 1ft. 0in.	15221.030	1.00 ea	33.00 /mh	33	240.00 /ea	240		/ea		/ea		273	288
	DI Pipe 4in. dia PEXPE - 1ft. 0in.	15221.070	1.00 ea	33.00 /mh	33	95.00 /ea	95		/ea		/ea		128	143
	DI Pipe 4in. dia PEXPE - 4ft. 0in.	15221.070	2.00 ea	33.00 /mh	132	330.00 /ea	660		/ea		/ea		792	850
	DI Pipe 4in. dia PEXPE - 5ft. 0in.	15221.070	2.00 ea	33.00 /mh	132	450.00 /ea	900		/ea		/ea		1,032	1,090
	FCA for DIP 4"	15112.090	2.00 ea	33.00 /mh	132	250.00 /ea	500		/ea		/ea		632	690
	DI Pipe 4in. dia FxPE - 1ft. 0in.	15221.030	2.00 ea	33.00 /mh	66	210.00 /ea	420		/ea		/ea		486	515
	NBG Kit 125# SS 6in	15125.012	2.00 ea	33.00 /mh	33	75.00 /ea	150		/ea		/ea		183	198
	NBG Kit 125# SS 4in	15125.012	4.00 ea	33.00 /mh	66	58.00 /ea	232		/ea		/ea		298	327
	150-01 1c 12042002 DIP dewatering feed pumps 23M414 EE													
	DI Pipe 4in. dia FxF - 1ft. 0in.	15221.010	2.00 ea	33.00 /mh	66	325.00 /ea	650		/ea		/ea		716	745
	DI Pipe 4in. dia FxF - 6ft. 6in.	15221.010	1.00 ea	33.00 /mh	99	690.00 /ea	690		/ea		/ea		789	833
	DI Pipe 4in. dia FxF - 9ft. 0in.	15221.010	1.00 ea	33.00 /mh	99	875.00 /ea	875		/ea		/ea		974	1,018
	DI Pipe 4in. dia FxV - 1ft. 0in.	15221.040	4.00 ea	33.00 /mh	132	260.00 /ea	1,040		/ea		/ea		1,172	1,230
	DI Flanged 90 ell 4"	15221.430	1.00 ea	33.00 /mh	33	180.00 /ea	180		/ea		/ea		213	228
	DI Flanged Tee 4"	15221.455	2.00 ea	33.00 /mh	99	337.00 /ea	674		/ea		/ea		773	817
	DI Flanged Tee 6"	15221.455	1.00 ea	33.00 /mh	66	400.00 /ea	400		/ea		/ea		466	495
	DI Flanged Tee 6x3"	15221.455	2.00 ea	33.00 /mh	132	420.00 /ea	840		/ea		/ea		972	1,030
	DI Flanged Ecentric Red 6x4"	15221.445	2.00 ea	33.00 /mh	132	250.00 /ea	500		/ea		/ea		632	690
	Valve Plug Flange 125# 4 in HV-4111A HV-41101A	15110.650	2.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Expansion Joint Flanged Rubber 4" at pump	15112.050	4.00 ea	33.00 /mh	528	1,250.00 /ea	5,000		/ea		/ea		5,528	5,760
	Valve Check Flange 125# 4in CV-41101 CV-41111	15110.040	2.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Valve Plug Flange 125# 4in HV-41101C HV-41111	15110.650	2.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Instrument - Flow - Magnetic Flow Meter - 4in	17200.000	2.00 ea	33.00 /mh	198	500.00 /ea	1,000		/ea		/ea		1,198	1,285
	DI VIC Coupling 4"	15221.680	4.00 ea	33.00 /mh	66	125.00 /ea	500		/ea		/ea		566	595
	DI Blind Flange 4" w 1" tap	15221.405	1.00 ea	33.00 /mh	33	250.00 /ea	250		/ea		/ea		283	298
	Stainless Steel Nipple 1" x 3"	15212.010	2.00 ea	33.00 /mh	17	20.00 /ea	40		/ea		/ea		57	64
	Valve Ball Threaded SS 1in HV-41201	15110.014	1.00 ea	33.00 /mh	29	0.01 /ea	0		/ea		/ea		29	41
	Valve Air Release 1in MFV-41201	15110.005	1.00 ea	33.00 /mh	29	0.01 /ea	0		/ea		/ea		29	41
	PVC Sch-80 Pipe 2 Bell End	2336.010	30.00 lf	33.00 /mh	158	6.00 /lf	180		/lf		/lf		338	408
	PVC Sch 80 90 ell 2 SOC	2336.020	8.00 ea	33.00 /mh	32	8.00 /ea	64		/ea		/ea		96	110
	PVC Sch 80/VIT UNION 2" S	15211.122	1.00 ea	33.00 /mh	7	8.00 /ea	8		/ea		/ea		15	18
	PS Strut SS 1-5/8 x 1-5/8	15060.476	6.00 lf	33.00 /mh	59	20.00 /lf	120		/lf		/lf		179	206
	PS Pipe Strut Clamp SS 1in	15060.486	6.00 ea	33.00 /mh	59	11.00 /ea	66		/ea		/ea		125	152
	Epoxy Anchor 3/8 x 5in SS 316	5001.054	12.00 ea	33.00 /mh	20	8.00 /ea	96		/ea		/ea		116	125
	PS Special Support for 6in Steel Pipe - painted	15060.475	2.00 ea	33.00 /mh	396	850.00 /ea	1,700		/ea		/ea		2,096	2,270
	PS Expansion Anchor 5/8 x 6in SS	15060.127	8.00 ea	33.00 /mh	13	25.00 /ea	200		/ea		/ea		213	219
	PS Flange Stand groud	15060.152	2.00 ea	33.00 /mh	33	10.00 /ea	20		/ea		/ea		53	68
	Sleeve w/Ring SS 4" x 12"	15121.250	1.00 ea	33.00 /mh	66	550.00 /ea	550		/ea		/ea		616	645
	Sleeve w/Ring SS 6" x 12"	15121.250	1.00 ea	33.00 /mh	66	550.00 /ea	550		/ea		/ea		616	645
	Instrument - Pressure - Gauge	17400.000	2.00 ea	33.00 /mh	264	500.00 /ea	1,000		/ea		/ea		1,264	1,380
	Instrument - Pressure - Gauge preessur sensor 360 wafer 94M903 M127	17400.000	2.00 ea	33.00 /mh	264	500.00 /ea	1,000		/ea		/ea		1,264	1,380
	Valve Ball Threaded SS 1/2in	15110.014	2.00 ea	33.00 /mh	36	0.01 /ea	0		/ea		/ea		36	51
	Stainless Steel Nipple 1/2" X 2"	15212.010	4.00 ea	33.00 /mh	33	7.00 /ea	28		/ea		/ea		61	76
	Stainless Steel Bushing mpt x fpt 1/2in x 3/8in	15212.015	2.00 ea	33.00 /mh	13	3.00 /ea	6		/ea		/ea		19	25
	DI MEGAFLANGE w/ SS Bolts for DIP 4"	15112.230	8.00 ea	33.00 /mh	528	250.00 /ea	2,000		/ea		/ea		2,528	2,760
	DI VIC Coupling 4"	15221.680	4.00 ea	33.00 /mh	66	125.00 /ea	500		/ea		/ea		566	595
	mbr basin ras/was													
	150-01 1c 12042002 DIP mbr basin RAS/WAS lines at manifolds and pumps 23M205													
	DI Pipe 24in. dia FxF - 1ft. 0in.	15221.010	1.00 ea	33.00 /mh	99	2,800.00 /ea	2,800		/ea		/ea		2,899	2,943
	DI Pipe 14in. dia FxF - 15ft. 0in.	15221.010	3.00 ea	33.00 /mh	792	4,800.00 /ea	14,400		/ea		/ea		15,192	15,540
	DI Pipe 6in. dia FxF - 2ft. 0in.	15221.010	2.00 ea	33.00 /mh	132	480.00 /ea	960		/ea		/ea		1,092	1,150
	DI Pipe 24in. dia FxF - 2ft. 0in.	15221.010	1.00 ea	33.00 /mh	132	3,350.00 /ea	3,350		/ea		/ea		3,482	3,540
	DI Pipe 6in. dia FxF - 15ft. 0in.	15221.010	2.00 ea	33.00 /mh	264	1,525.00 /ea	3,050		/ea		/ea		3,314	3,430
	DI Pipe 24in. dia FxF - 2ft. 6in.	15221.010	2.00 ea	33.00 /mh	264	3,430.00 /ea	6,860		/ea		/ea		7,124	7,240
	DI Pipe 24in. dia FxF - 3ft. 6in.	15221.010	1.00 ea	33.00 /mh	132	4,200.00 /ea	4,200		/ea		/ea		4,332	4,390
	DI Pipe 24in. dia FxV - 2ft. 0in.	15221.040	1.00 ea	33.00 /mh	132	2,750.00 /ea	2,750		/ea		/ea		2,882	2,940
	DI Pipe 14in. dia FxV - 1ft. 0in. w/ 1/2 tap	15221.040	3.00 ea	33.00 /mh	248	1,450.00 /ea	4,350		/ea		/ea		4,598	4,706
	DI Pipe 6in. dia FxPE - 1ft. 0in.	15221.030	1.00 ea	33.00 /mh	66	240.00 /ea	240		/ea		/ea		306	335
	DI Pipe 24in. dia PEXPE - 5ft. 0in.	15221.070	1.00 ea	33.00 /mh	132	2,300.00 /ea	2,300		/ea		/ea		2,432	2,490
	DI Pipe 24in. dia PEXPE - 10ft. 0in.	15221.070	1.00 ea	33.00 /mh	198	4,500.00 /ea	4,500		/ea		/ea		4,698	4,785
	DI Pipe 6in. dia FxV - 1ft. 0in.	15221.040	3.00 ea	33.00 /mh	99	310.00 /ea	930		/ea		/ea		1,029	1,073
	DI Pipe 6in. dia FxV - 2ft. 0in.	15221.040	1.00 ea	33.00 /mh	33	400.00 /ea	400		/ea		/ea		433	448
	DI Pipe 6in. dia PEXPE - 8ft. 0in.	15221.070	1.00 ea	33.00 /mh	33	685.00 /ea	685		/ea		/ea		718	733
	DI Flanged 90 ell 24"	15221.430	3.00 ea	33.00 /mh	396	4,250.00 /ea	12,750		/ea		/ea		13,146	13,320
	DI Pipe 6in. dia PEXPE - 16ft. 0in.	15221.070	1.00 ea	33.00 /mh	132	1,350.00 /ea	1,350		/ea		/ea		1,482	1,540
	DI Flanged Tee 24"	15221.455	1.00 ea	33.00 /mh	198	5,700.00 /ea	5,700		/ea		/ea		5,898	5,985
	DI Flanged Tee 24x14"	15221.455	3.00 ea	33.00 /mh	594	4,800.00 /ea	14,400		/ea		/ea		14,994	15,255
	DI Flanged 90 ell 6"	15221.430	1.00 ea	33.00 /mh	33	280.00 /ea	280		/ea		/ea		313	328
	DI Flanged Tee 6"	15221.455	3.00 ea	33.00 /mh	149	400.00 /ea	1,200		/ea		/ea		1,349	1,414
	Valve Check Flange 125# 6in CV-21311 & CV-21321	15110.040	2.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	FCA for DIP 24'	15112.090	1.00 ea	33.00 /mh	264	4,750.00 /ea	4,750		/ea		/ea		5,014	5,130
	DI MEGAFLANGE w/ SS Bolts for DIP 24"	15112.230	6.00 ea	33.00 /mh	1,188	4,800.00 /ea	28,800		/ea		/ea		29,988	30,511
	DI Wall Pipe FLG x PE w/ Tapped Holes 24in x 3ft 0in long	15221.360	1.00 ea	33.00 /mh	528	4,000.00 /ea	4,000		/ea		/ea		4,528	4,760
	NBG Kit 125# Steel 24in	15125.010	13.00 ea	33.00 /mh	858	550.00 /ea	7,150		/ea		/ea		8,008	8,386
	DI Blind Flange 24" w/ tap 4" tap for MFV-21241	15221.405	1.00 ea	33.00 /mh	132	2,250.00 /ea	2,250		/ea		/ea		2,382	2,440
	Instrument - Flow - Magnetic Flow Meter - 24in grooved	17200.000	1.00 ea	33.00 /mh	264	500.00 /ea	500		/ea		/ea		764	880
	DI VIC Coupling 24"	15221.680	4.00 ea	33.00 /mh	528	1,080.00 /ea	4,320		/ea		/ea		4,848	5,080
	DI Blind Flange 24" w 3/4 tap to injection	15221.405	1.00 ea	33.00 /mh	132	2,250.00 /ea	2,250		/ea		/ea		2,382	2,440
	DI MJ Compact Solid Sleeve Long 24	2511.322	1.00 ea	33.00 /mh	198	2,950.00 /ea	2,950		/ea		/ea		3,148	3,235
	DI MEGAFLANGE w/ SS Bolts for DIP 6"	15112.230	6.00 ea	33.00 /mh	446	350.00 /ea	2,100		/ea		/ea		2,546	2,644
	sewage air valve 4in MFV-21241	15110.007	1.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	144
	Stainless Steel Nipple 4" X 5" for air valve	15212.010	1.00 ea	33.00 /mh	17	90.00 /ea	90		/ea		/ea		107	114

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 DIP mbr basin RAS/WAS lines at manifolds and pumps 23M205													
	pipe support 2' HDG 24"	15060.475	6.00 ea	33.00 /mh	792	1,350.00 /ea	8,100		/ea		/ea		8,892	9,240
	pipe support 2'6" HDG 14" offset	15060.475	9.00 ea	33.00 /mh	1,188	1,750.00 /ea	15,750		/ea		/ea		16,938	17,461
	Valve Plug Flange 125# 14in HV-21211A	15110.650	1.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Valve Check Flange 125# 14in CV-21221	15110.040	1.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Valve Check Flange 125# 14in CV-21231	15110.040	1.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Valve Plug Flange 125# 4in HV-21221A	15110.650	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Valve Plug Flange 125# 4in HV-21231A	15110.650	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Instrument - Pressure - Transmitter 23M205	17400.000	5.00 ea	33.00 /mh	330	500.00 /ea	2,500		/ea		/ea		2,830	2,975
	Stainless Steel Nipple 1/2" X 2"	15212.010	6.00 ea	33.00 /mh	50	7.00 /ea	42		/ea		/ea		92	113
	Valve Ball Threaded SS 1/2in	15110.014	3.00 ea	33.00 /mh	53	0.01 /ea	0		/ea		/ea		53	77
	NBG Kit 125# Steel 14in	15125.010	27.00 ea	33.00 /mh	1,337	150.00 /ea	4,050		/ea		/ea		5,387	5,975
	DI VIC Flange Adapter 14"	15221.685	3.00 ea	33.00 /mh	198	1,400.00 /ea	4,200		/ea		/ea		4,398	4,485
	DI Flanged 90 ell 14"	15221.430	3.00 ea	33.00 /mh	248	1,300.00 /ea	3,900		/ea		/ea		4,148	4,256
	DI MJ Compact Solid Sleeve Long 6	2511.322	1.00 ea	33.00 /mh	33	395.00 /ea	395		/ea		/ea		428	443
	DI MJ Std Wgt 90 6	2511.214	1.00 ea	33.00 /mh	33	395.00 /ea	395		/ea		/ea		428	443
	NBG Kit 125# Steel 6in	15125.010	25.00 ea	33.00 /mh	413	30.00 /ea	750		/ea		/ea		1,163	1,344
	DI Flanged 90 ell 6"	15221.430	3.00 ea	33.00 /mh	99	280.00 /ea	840		/ea		/ea		939	983
	DI VIC Coupling 14"	15221.680	6.00 ea	33.00 /mh	297	550.00 /ea	3,300		/ea		/ea		3,597	3,728
	Instrument - Flow - Magnetic Flow Meter - 6in	17200.000	1.00 ea	33.00 /mh	66	500.00 /ea	500		/ea		/ea		566	595
	Valve Plug Flange 125# 6in HV-21321	15110.650	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Valve Plug Flange 125# 6in HV-21311	15110.650	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	DI VIC Coupling 6"	15221.680	2.00 ea	33.00 /mh	33	180.00 /ea	360		/ea		/ea		393	408
	DI Blind Flange 6" w/ 2" tap	15221.405	2.00 ea	33.00 /mh	66	250.00 /ea	500		/ea		/ea		566	595
	Stainless Steel Nipple 2" X 4"	15212.010	4.00 ea	33.00 /mh	44	30.00 /ea	120		/ea		/ea		164	183
	Valve Ball Threaded SS 2in	15110.014	2.00 ea	33.00 /mh	93	0.01 /ea	0		/ea		/ea		93	134
	Valve Air/Vac Combo 2in MFV-21311	15110.007	1.00 ea	33.00 /mh	47	0.01 /ea	0		/ea		/ea		47	67
	Valve Air/Vac Combo 2in mfv 21321	15110.007	1.00 ea	33.00 /mh	47	0.01 /ea	0		/ea		/ea		47	67
	DI Flanged Ecc Red 6x3"	15221.450	2.00 ea	33.00 /mh	66	210.00 /ea	420		/ea		/ea		486	515
	DI Flanged 90 ell 3"	15221.430	2.00 ea	33.00 /mh	66	125.00 /ea	250		/ea		/ea		316	345
	NBG Kit 125# Steel 3in	15125.010	4.00 ea	33.00 /mh	40	20.00 /ea	80		/ea		/ea		120	137
	PS Special wall Support for 6in DIP - offset Pipe	15060.475	4.00 ea	33.00 /mh	528	850.00 /ea	3,400		/ea		/ea		3,928	4,160
	PS Epoxy Anchor 5/8 x 5in SS	15060.112	12.00 ea	33.00 /mh	20	25.00 /ea	300		/ea		/ea		320	329
	PS Epoxy Anchor 5/8 x 5in SS	15060.112	20.00 ea	33.00 /mh	33	25.00 /ea	500		/ea		/ea		533	548
	PS Flange Stand for 3in DIP 3ft 6in floor to centerline painted	15060.152	4.00 ea	33.00 /mh	132	1,350.00 /ea	5,400		/ea		/ea		5,532	5,590
	PS Epoxy Anchor 5/8 x 5in SS	15060.112	20.00 ea	33.00 /mh	33	25.00 /ea	500		/ea		/ea		533	548
	Stainless Steel Nipple 2" X 3"	15212.010	9.00 ea	33.00 /mh	98	30.00 /ea	270		/ea		/ea		368	411
	Stainless Steel Union 2"	15212.060	3.00 ea	33.00 /mh	20	250.00 /ea	750		/ea		/ea		770	779
	Stainless Steel 90 Elbow 2"	15212.040	12.00 ea	33.00 /mh	79	23.00 /ea	276		/ea		/ea		355	390
	PS Pipe Strut Clamp SS 2in	15060.486	9.00 ea	33.00 /mh	89	13.00 /ea	117		/ea		/ea		206	245
	Set Mech. Pipe Sleeves 6" DI pipe	3150.710	1.00 ea	33.00 /mh	33	450.00 /ea	450		/ea		/ea		483	498
	Set Mech. Pipe Sleeves 24" DI pipe	3150.710	1.00 ea	33.00 /mh	132	2,900.00 /ea	2,900		/ea		/ea		3,032	3,090
	Valve Ball Flange SS 4in	15110.010	1.00 ea	33.00 /mh	50	0.01 /ea	0		/ea		/ea		50	71
	PVC Sch 80 PIPE 3/4" PE	15211.203	40.00 lf	33.00 /mh	277	1.20 /lf	48		/lf		/lf		325	447
	PVC Sch 80 90 EL 3/4" S	15211.207	12.00 ea	33.00 /mh	83	2.50 /ea	30		/ea		/ea		113	150
	PVC Sch 80 flex connection to injection quill	2336.120	1.00 ea	33.00 /mh	9	350.00 /ea	350		/ea		/ea		359	363
	PVC Sch 80 MALE ADPT 3/4" SXMT	15211.217	2.00 ea	33.00 /mh	14	4.00 /ea	8		/ea		/ea		22	28
	Valve Ball Threaded SS 3/4in HV-533111	15110.014	1.00 ea	33.00 /mh	24	0.01 /ea	0		/ea		/ea		24	34
	PS Special floor Support for 3/4 in Sch 80 PVC - ss stand	15060.475	1.00 ea	33.00 /mh	33	600.00 /ea	600		/ea		/ea		633	648
	PS Strut FRP 1-5/8 x 1-5/8 for chem line from alkalinity	15060.476	8.00 ea	33.00 /mh	132	8.00 /ea	64		/ea		/ea		196	254
	HDPE pipe fusion 4" double wall containment for alkalinity line	2631.201	20.00 lf	33.00 /mh	198	20.00 /lf	420		/lf		/lf		618	705
	HDPE pipe fusion 4" long turn ell double wall for alkalinty line	2631.201	1.00 ea	33.00 /mh	132	225.00 /ea	236		/ea		/ea		368	426
	chemical tubing for Alkalinity line	2336.010	20.00 lf	33.00 /mh	165	14.00 /lf	280		/lf		/lf		445	518
	Stainless Steel Pipe 2" off air vac	15212.005	20.00 lf	33.00 /mh	132	25.00 /lf	500		/lf		/lf		632	690
	Stainless Steel 90 Elbow 2" off air vac	15212.040	4.00 ea	33.00 /mh	26	23.00 /ea	92		/ea		/ea		118	130
	Stainless Steel Union 2" off air vac	15212.060	1.00 ea	33.00 /mh	7	250.00 /ea	250		/ea		/ea		257	260
	Stainless Steel Nipple 2" X 3" off air vac	15212.010	2.00 ea	33.00 /mh	22	30.00 /ea	60		/ea		/ea		82	91
	DI Wall Pipe FLG x FLG 6in x 2ft 0in long	15221.304	1.00 ea	33.00 /mh	132	650.00 /ea	650		/ea		/ea		782	840
	DI VIC Coupling 14"	15221.680	3.00 ea	33.00 /mh	149	550.00 /ea	1,650		/ea		/ea		1,799	1,864
	DI VIC Coupling 24"	15221.680	2.00 ea	33.00 /mh	264	1,080.00 /ea	2,160		/ea		/ea		2,424	2,540
	DI VIC Coupling 6"	15221.680	6.00 ea	33.00 /mh	99	180.00 /ea	1,080		/ea		/ea		1,179	1,223
	Valve Air Release 2in MFV-21231, MFV-21221, MFV21211	15110.005	3.00 ea	33.00 /mh	396	0.01 /ea	0		/ea		/ea		396	570
	Stainless Steel Nipple 2" X 3"	15212.010	6.00 ea	33.00 /mh	65	30.00 /ea	180		/ea		/ea		245	274
	Valve Ball SW SS 2in	15110.012	3.00 ea	33.00 /mh	99	450.00 /ea	1,350		/ea		/ea		1,449	1,493
	PVC Sch 40 Pipe 2" PE	15211.103	60.00 lf	33.00 /mh	416	2.10 /lf	139		/lf		/lf		554	737
	PVC Sch 80 90 EL 2" S	15211.207	12.00 ea	33.00 /mh	83	6.00 /ea	72		/ea		/ea		155	192
	PVC Sch 80/VIT UNION 2" S	15211.219	3.00 ea	33.00 /mh	21	27.00 /ea	81		/ea		/ea		102	111
	PS Strut SS 1-5/8 x 1-5/8	15060.476	15.00 lf	33.00 /mh	149	20.00 /lf	300		/lf		/lf		449	514
	PS Anchor Bolt 3/8x6 SS	15060.020	30.00 ea	33.00 /mh	50	9.00 /ea	270		/ea		/ea		320	341
	PS Pipe Strut Clamp SS 2in	15060.486	15.00 ea	33.00 /mh	149	13.00 /ea	195		/ea		/ea		344	409
	DI MJ Compact Tee 14	2511.324	3.00 ea	33.00 /mh	297	1,944.00 /ea	5,832		/ea		/ea		6,129	6,260
	DI Blind Flange 14" with tap	15221.405	3.00 ea	33.00 /mh	198	820.00 /ea	2,460		/ea		/ea		2,658	2,745
	DI MJ Std Wgt Red 14x6	2511.220	3.00 ea	33.00 /mh	198	2,100.00 /ea	6,300		/ea		/ea		6,498	6,585
	PS Pipe Support 6" Pipe Stand 2'6"	15060.475	3.00 ea	33.00 /mh	396	850.00 /ea	2,550		/ea		/ea		2,946	3,120
	permeate tank dis													
	02642- DIP for chem tank and NPW skid 23M207													
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	33.00 /mh	528	50.00 /ea	100		50.00 /ea	100	/ea		728	960
	Trench Excavtion 6- 8'	2333.010	10.00 lf	33.00 /mh	66	/lf			/lf		/lf		66	95
	Trench Excavtion 8-10'	2333.010	20.00 lf	33.00 /mh	132	/lf			/lf		/lf		132	190
	Trench Backfill 6- 8'	2333.020	10.00 lf	33.00 /mh	83	/lf			/lf		/lf		83	119
	Trench Backfill 8-10'	2333.020	20.00 lf	33.00 /mh	165	/lf			/lf		/lf		165	
	Utility Bedding Gravel-Crushed	2305.200	27.09 cy	/cy		25.00 /ton	1,083		/cy		/cy		1,083	
	Spoils to Waste	2333.060	27.78 cy	33.00 /mh	92	/cy			/cy		/cy		92	

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02642- DIP for chem tank and NPW skid 23M207													
	DI Pipe MJ - Class 52 6	2511.201	10.00 lf	33.00 /mh	66	30.00 /lf	303		/lf		/lf		369	398
	DI Pipe MJ - Class 52 18	2511.201	20.00 lf	33.00 /mh	330	95.00 /lf	1,919		/lf		/lf		2,249	2,394
	DI MJ Std Wgt 90 6	2511.214	1.00 ea	33.00 /mh	33	395.00 /ea	395		/ea		/ea		428	443
	DI MJ Std Wgt 90 18	2511.214	1.00 ea	33.00 /mh	132	2,250.00 /ea	2,250		/ea		/ea		2,382	2,440
	DI MJ Compact Solid Sleeve Long 6	2511.322	1.00 ea	33.00 /mh	33	395.00 /ea	395		/ea		/ea		428	443
	DI MJ Compact Solid Sleeve Long 18	2511.322	1.00 ea	33.00 /mh	132	1,850.00 /ea	1,850		/ea		/ea		1,982	2,040
	Polybag 12" and Smaller	2333.090	30.00 lf	33.00 /mh	10	1.00 /lf	33		/lf		/lf		43	47
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.04 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	368	3,500.00 /Mnth	140	508	508
	John Deere 624 Loader (172 HP) (M)	1900.132	0.04 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	240	3,000.00 /Mnth	120	360	360
	Water Truck, 4,000 Gallon (L)	1900.210	0.04 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	192	1,200.00 /Mnth	48	240	240
	Mikasa Jumping Jack Compactor (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			200.00 /Mnth	8	100.00 /Mnth	4	12	12
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.04 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	100	500.00 /Mnth	20	120	120
	FCA for DIP 18"	15112.090	1.00 ea	33.00 /mh	198	3,450.00 /ea	3,450		/ea		/ea		3,648	3,735
	FCA for DIP 6"	15112.090	1.00 ea	33.00 /mh	99	350.00 /ea	350		/ea		/ea		449	493
	DI Pipe 6in. dia MJxPE - 1ft. 0in. to npw skid	15221.060	1.00 ea	33.00 /mh	66	650.00 /ea	650		/ea		/ea		716	745
	DI Pipe 6in. dia PExPE - 3ft. 6in. to npw skid	15221.070	1.00 ea	33.00 /mh	66	375.00 /ea	375		/ea		/ea		441	470
	DI Pipe 18in. dia PExPE - 5ft. 0in. to npw skid	15221.070	1.00 ea	33.00 /mh	132	1,600.00 /ea	1,600		/ea		/ea		1,732	1,790
	uv disinfection													
	150-01 1c 12042002 Dip manifolds and headers at UV Disinfection 23M207, 23M208													
	DI Pipe 6in. dia FxF - 2ft. 0in.	15221.010	1.00 ea	33.00 /mh	33	480.00 /ea	480		/ea		/ea		513	528
	DI Pipe 8in. dia FxF - 4ft. 0in.	15221.010	2.00 ea	33.00 /mh	132	910.00 /ea	1,820		/ea		/ea		1,952	2,010
	DI Pipe 12in. dia FxF - 1ft. 0in.	15221.010	6.00 ea	33.00 /mh	396	980.00 /ea	5,880		/ea		/ea		6,276	6,450
	DI Pipe 12in. dia FxF - 1ft. 6in.	15221.010	2.00 ea	33.00 /mh	132	1,100.00 /ea	2,200		/ea		/ea		2,332	2,390
	DI Pipe 12in. dia FxF - 2ft. 0in.	15221.010	2.00 ea	33.00 /mh	132	1,200.00 /ea	2,400		/ea		/ea		2,532	2,590
	DI Pipe 14in. dia FxF - 1ft. 0in.	15221.010	1.00 ea	33.00 /mh	83	1,480.00 /ea	1,480		/ea		/ea		1,563	1,599
	DI Pipe 14in. dia FxF - 15ft. 0in.	15221.010	1.00 ea	33.00 /mh	165	4,800.00 /ea	4,800		/ea		/ea		4,965	5,038
	DI Pipe 6in. dia FxPE - 1ft. 0in.	15221.030	1.00 ea	33.00 /mh	33	240.00 /ea	240		/ea		/ea		273	288
	DI Pipe 6in. dia FxV - 1ft. 0in.	15221.040	1.00 ea	33.00 /mh	33	310.00 /ea	310		/ea		/ea		343	358
	DI Flanged 90 ell 8"	15221.430	2.00 ea	33.00 /mh	132	450.00 /ea	900		/ea		/ea		1,032	1,090
	DI Flanged 90 ell 12"	15221.430	4.00 ea	33.00 /mh	264	900.00 /ea	3,600		/ea		/ea		3,864	3,980
	DI Flanged Tee 6"	15221.455	1.00 ea	33.00 /mh	50	400.00 /ea	400		/ea		/ea		450	471
	DI Flanged Tee 14"	15221.455	2.00 ea	33.00 /mh	198	2,200.00 /ea	4,400		/ea		/ea		4,598	4,685
	DI Flanged Con Red 8x6"	15221.445	1.00 ea	33.00 /mh	66	350.00 /ea	350		/ea		/ea		416	445
	DI Flanged Con Red 14x6"	15221.445	2.00 ea	33.00 /mh	165	800.00 /ea	1,600		/ea		/ea		1,765	1,838
	DI Flanged Con Red 14x12"	15221.445	2.00 ea	33.00 /mh	165	900.00 /ea	1,800		/ea		/ea		1,965	2,038
	Valve Butterfly Lugged 125# 8in Hv-23381B	15110.026	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Valve Butterfly Lugged 125# 12in HV-30111B, HV-3012B	15110.026	2.00 ea	33.00 /mh	198	0.01 /ea	0		/ea		/ea		198	285
	Valve Butterfly Wafer 125# 12in HV-30111A, HV-3012A	15110.034	2.00 ea	33.00 /mh	198	0.01 /ea	0		/ea		/ea		198	285
	NBG Kit 125# HDG 12in	15125.014	14.00 ea	33.00 /mh	693	60.00 /ea	840		/ea		/ea		1,533	1,838
	NBG Kit 125# HDG 14in	15125.014	8.00 ea	33.00 /mh	528	75.00 /ea	600		/ea		/ea		1,128	1,360
	FCA for DIP 6"	15112.090	1.00 ea	33.00 /mh	99	350.00 /ea	350		/ea		/ea		449	493
	DI MEGAFLANGE w/ SS Bolts for DIP 12"	15112.230	6.00 ea	33.00 /mh	396	900.00 /ea	5,400		/ea		/ea		5,796	5,970
	DI MEGAFLANGE w/ SS Bolts for DIP 14"	15112.230	6.00 ea	33.00 /mh	594	1,400.00 /ea	8,400		/ea		/ea		8,994	9,255
	DI MEGAFLANGE w/ SS Bolts for DIP 6"	15112.230	4.00 ea	33.00 /mh	264	350.00 /ea	1,400		/ea		/ea		1,664	1,780
	DI Blind Flange 6" w/ 3" tap	15221.405	1.00 ea	33.00 /mh	33	250.00 /ea	250		/ea		/ea		283	298
	PS Pipe Stand grout	15060.404	12.00 ea	33.00 /mh	198	10.00 /ea	120		/ea		/ea		318	405
	Instrument - Flow - Magnetic Flow Meter - 12in	17200.000	2.00 ea	33.00 /mh	264	500.00 /ea	1,000		/ea		/ea		1,264	1,380
	NBG Kit 125# HDG 12in	15125.010	14.00 ea	33.00 /mh	693	150.00 /ea	2,100		/ea		/ea		2,793	3,098
	NBG Kit 125# HDG 14in	15125.010	4.00 ea	33.00 /mh	264	150.00 /ea	600		/ea		/ea		864	980
	Expansion Joint Restrained rubber by vender 14" 23M408 sec o	15112.080	1.00 ea	33.00 /mh	198	3,880.00 /ea	3,880		/ea		/ea		4,078	4,165
	PVCSched 80 18" PE permeate tank 23M408	15211.203	20.00 lf	33.00 /mh	660	160.00 /lf	3,200		/lf		/lf		3,860	4,150
	PVC Sch 80 90 EL 18" socket permeate tank 23M408	15211.207	1.00 ea	33.00 /mh	132	2,500.00 /ea	2,500		/ea		/ea		2,632	2,690
	PVC Sch 80 Flange 18" permeate tank 23M408	15211.222	2.00 ea	33.00 /mh	264	1,500.00 /ea	3,000		/ea		/ea		3,264	3,380
	NBG Kit 125# Steel 18in permeate tank 23M408	15125.010	2.00 ea	33.00 /mh	132	250.00 /ea	500		/ea		/ea		632	690
	Expansion Joint Flanged Rubber 14" by vender permeate tank 23M408	15112.050	1.00 ea	33.00 /mh	198	0.01 /ea	0		/ea		/ea		198	285
	PS Special Support for 14in Steel Pipe - plain	15060.475	6.00 ea	33.00 /mh	792	950.00 /ea	5,700		/ea		/ea		6,492	6,840
	PS Pipe Stand for 14in DIP 5ft 6in floor to CL HDG	15060.406	5.00 ea	33.00 /mh	660	1,800.00 /ea	9,000		/ea		/ea		9,660	9,950
	PS Pipe Stand for 14in DIP 11ft 0in floor to CL HDG	15060.406	1.00 ea	33.00 /mh	132	2,250.00 /ea	2,250		/ea		/ea		2,382	2,440
	PS Anchor Bolt 3/4x6 SS	15060.020	66.00 ea	33.00 /mh	109	30.00 /ea	1,980		/ea		/ea		2,089	2,137
	4" FPTxFemale Quick Disconnect ss w/ cap	15112.280	5.00 ea	33.00 /mh	83	375.00 /ea	1,875		/ea		/ea		1,958	1,994
	Stainless Steel Nipple 4" X 5"	15212.010	1.00 ea	33.00 /mh	17	90.00 /ea	90		/ea		/ea		107	114
	Valve Butterfly Lugged 125# 4in	15110.026	1.00 ea	33.00 /mh	33	450.00 /ea	450		/ea		/ea		483	498
	NBG Kit 125# SS 4in	15125.012	2.00 ea	33.00 /mh	33	58.00 /ea	116		/ea		/ea		149	164
	Expansion Joint Flanged Rubber 8" by vender permeate tank outlet	15112.050	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Expansion Joint Flanged Rubber 8" by vender permeate tank outlet	15112.050	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Instrument - Flow - Magnetic Flow Meter - 6in	17200.000	1.00 ea	33.00 /mh	132	500.00 /ea	500		/ea		/ea		632	690
	40 SLD Aerated Sludge Holding Tank													
	arated sludge drain													
	02642- WAS to dewatering drain from tank 40M401													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	DI Pipe MJ - Class 52 6	2511.201	40.00 lf	33.00 /mh	132	30.00 /lf	1,212		/lf		/lf		1,344	1,402
	DI MJ Std Wgt 90 6	2511.214	1.00 ea	33.00 /mh	33	395.00 /ea	395		/ea		/ea		428	443
	DI MJ Std Wgt Tee 6	2511.224	1.00 ea	33.00 /mh	33	520.00 /ea	520		/ea		/ea		553	568
	DI MJ Compact Solid Sleeve Long 6	2511.322	1.00 ea	33.00 /mh	33	395.00 /ea	395		/ea		/ea		428	443
	Polybag 12" and Smaller	2333.090	40.00 lf	33.00 /mh	13	1.00 /lf	44		/lf		/lf		57	63
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.02 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	166	3,500.00 /Mnth	63	229	229
	John Deere 624 Loader (172 HP) (M)	1900.132	0.02 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	108	3,000.00 /Mnth	54	162	162
	Water Truck, 4,000 Gallon (L)	1900.210	0.01 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	43	1,200.00 /Mnth	11	54	54
	Mikasa Jumping Jack Compactor (L)	1900.138	0.01 Mnth	/Mnth		/Mnth			200.00 /Mnth	2	100.00 /Mnth	1	3	
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.01 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	23	500.00 /Mnth	5	27	
	Valve - Plug MJ 6"	2519.160	1.00 ea	33.00 /mh	66	2,000.00 /ea	2,000		/ea		/ea		2,066	2,100
	Valve Box Assembly 6' Bury	2519.130	1.00 ea	33.00 /mh	99	320.00 /ea	320		/ea		/ea		419	463

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02642- WAS to dewatering drain from tank 40M401													
	Valve Box 2' Extension	2519.130	2.00 ea	33.00 /mh	33	90.00 /ea	180		/ea		/ea		213	228
	Conc Block for Valve	2519.100	1.00 ea	33.00 /mh	17	50.00 /ea	50		/ea		/ea		67	74
	Conc Pad for Valve Box	2519.100	1.00 ea	33.00 /mh	66	75.00 /ea	75		/ea		/ea		141	170
	Valve Stem Extension	2519.100	1.00 ea	33.00 /mh	33	150.00 /ea	150		/ea		/ea		183	198
	Valve Position Indicator	2519.100	1.00 ea	33.00 /mh	33	450.00 /ea	450		/ea		/ea		483	498
	Valve - Marker Post	2519.100	1.00 ea	33.00 /mh	33	45.00 /ea	45		/ea		/ea		78	93
	Valve - Tee Wrench	2519.100	1.00 ea	33.00 /mh	17	125.00 /ea	125		/ea		/ea		142	149
	DI Pipe 6in. dia PEXPE - 7ft. 0in.	15221.010	1.00 ea	33.00 /mh	66	620.00 /ea	620		/ea		/ea		686	715
	DI Pipe 4in. dia PEXPE - 5ft. 0in.	15221.010	1.00 ea	33.00 /mh	66	610.00 /ea	610		/ea		/ea		676	705
	FCA for DIP 4"	15112.090	1.00 ea	33.00 /mh	66	250.00 /ea	250		/ea		/ea		316	345
	DI Pipe 4in. dia FxPE - 1ft. 0in.	15221.030	1.00 ea	33.00 /mh	33	210.00 /ea	210		/ea		/ea		243	258
	Valve Plug Flange 125# 4in	15110.650	1.00 ea	33.00 /mh	33	1,700.00 /ea	1,700		/ea		/ea		1,733	1,748
	Camlock Adapter SS Flanged 4" W/cap	15220.600	1.00 ea	33.00 /mh	33	550.00 /ea	550		/ea		/ea		583	598
	DI MJ Compact Solid Sleeve Long 6	2511.322	1.00 ea	33.00 /mh	33	395.00 /ea	395		/ea		/ea		428	443
	* unassigned *													
	02642- Trench & Pipe DI MJ was and dewatering 40M201													
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	33.00 /mh	528	50.00 /ea	100		50.00 /ea	100	/ea		728	960
	DI Pipe MJ - Class 52 4	2511.201	8.00 lf	33.00 /mh	53	42.00 /lf	339		/lf		/lf		392	415
	DI Pipe MJ - Class 52 6	2511.201	8.00 lf	33.00 /mh	53	30.00 /lf	242		/lf		/lf		295	318
	DI MJ Std Wgt 90 4	2511.214	2.00 ea	33.00 /mh	66	265.00 /ea	530		/ea		/ea		596	625
	DI MJ Std Wgt 90 6	2511.214	2.00 ea	33.00 /mh	66	395.00 /ea	790		/ea		/ea		856	885
	DI MJ Compact Solid Sleeve Long 4	2511.322	1.00 ea	33.00 /mh	33	250.00 /ea	250		/ea		/ea		283	298
	DI MJ Compact Solid Sleeve Long 6	2511.322	1.00 ea	33.00 /mh	33	395.00 /ea	395		/ea		/ea		428	443
	Polybag 12" and Smaller	2333.090	16.00 lf	33.00 /mh	5	1.00 /lf	18		/lf		/lf		23	25
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.01 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	74	3,500.00 /Mnth	28	102	102
	John Deere 624 Loader (172 HP) (M)	1900.132	0.01 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	48	3,000.00 /Mnth	24	72	72
	Mikasa Jumping Jack Compactor (L)	1900.138	0.00 Mnth	/Mnth		/Mnth			200.00 /Mnth	1	100.00 /Mnth	0	1	1
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.00 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	10	500.00 /Mnth	2	12	12
	DI Pipe 4in. dia FxE - 8ft. 0in.	15221.010	1.00 ea	33.00 /mh	33	875.00 /ea	875		/ea		/ea		908	923
	DI Pipe 6in. dia FxE - 8ft. 0in.	15221.010	1.00 ea	33.00 /mh	66	950.00 /ea	950		/ea		/ea		1,016	1,045
	FCA for DIP 4"	15112.090	1.00 ea	33.00 /mh	33	250.00 /ea	250		/ea		/ea		283	298
	FCA for DIP 6"	15112.090	1.00 ea	33.00 /mh	33	350.00 /ea	350		/ea		/ea		383	398
	DI Pipe 4in. dia FxPE - 1ft. 0in.	15221.030	1.00 ea	33.00 /mh	33	210.00 /ea	210		/ea		/ea		243	258
	DI Pipe 6in. dia FxPE - 1ft. 0in.	15221.030	1.00 ea	33.00 /mh	33	240.00 /ea	240		/ea		/ea		273	288
	150-01 1c 12042002 Dip aerated sludge holing tank above ground 40M402													
	DI Pipe 4in. dia FxF - 0ft. 6in.	15221.010	1.00 ea	33.00 /mh	33	325.00 /ea	325		/ea		/ea		358	373
	DI Pipe 4in. dia FxF - 1ft. 0in.	15221.010	1.00 ea	33.00 /mh	33	325.00 /ea	325		/ea		/ea		358	373
	DI Pipe 4in. dia FxF - 2ft. 0in.	15221.010	1.00 ea	33.00 /mh	33	380.00 /ea	380		/ea		/ea		413	428
	DI Pipe 4in. dia FxF - 12ft. 0in.	15221.010	1.00 ea	33.00 /mh	99	1,050.00 /ea	1,050		/ea		/ea		1,149	1,193
	DI Pipe 6in. dia FxF - 1ft 1 in	15221.010	1.00 ea	33.00 /mh	33	210.00 /ea	210		/ea		/ea		243	258
	DI Pipe 6in. dia FxF - 1ft. 0in.	15221.010	1.00 ea	33.00 /mh	33	210.00 /ea	210		/ea		/ea		243	258
	DI Pipe 6in. dia FxF - 2ft. 0in.	15221.010	1.00 ea	33.00 /mh	66	480.00 /ea	480		/ea		/ea		546	575
	DI Flanged 90 ell 4"	15221.430	2.00 ea	33.00 /mh	66	180.00 /ea	360		/ea		/ea		426	455
	DI Flanged 90 ell 6"	15221.430	1.00 ea	33.00 /mh	66	280.00 /ea	280		/ea		/ea		346	375
	Valve Plug Flange 125# 6in HV-40101	15110.650	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	NBG Kit 125# SS 4in	15125.012	8.00 ea	33.00 /mh	132	58.00 /ea	464		/ea		/ea		596	654
	NBG Kit 125# SS 6in	15125.012	5.00 ea	33.00 /mh	83	75.00 /ea	375		/ea		/ea		458	494
	DI Wall Pipe FLG x FLG w/ Collar 4in x 1ft 6in long	15221.328	1.00 ea	33.00 /mh	132	550.00 /ea	550		/ea		/ea		682	740
	DI Wall Pipe FLG x FLG w/ Collar 6in x 1ft 6in long	15221.328	1.00 ea	33.00 /mh	132	650.00 /ea	650		/ea		/ea		782	840
	Valve Telescoping 4" 40M402 HV-40215	15110.750	1.00 ea	33.00 /mh	792	0.01 /ea	0		/ea		/ea		792	1,140
	PS Special Support for 4in DIP	15060.475	4.00 ea	33.00 /mh	528	1,350.00 /ea	5,400		/ea		/ea		5,928	6,160
	PS Special Support for 4in teesoping valve stem	15060.475	1.00 ea	33.00 /mh	132	800.00 /ea	800		/ea		/ea		932	990
	PS Anchor Bolt 5/8x6 SS	15060.020	16.00 ea	33.00 /mh	26	16.00 /ea	256		/ea		/ea		282	294
	DI MEGAFLANGE w/ SS Bolts for DIP 4"	15112.230	1.00 ea	33.00 /mh	33	250.00 /ea	250		/ea		/ea		283	298
	DI MEGAFLANGE w/ SS Bolts for DIP 6"	15112.230	1.00 ea	33.00 /mh	66	350.00 /ea	350		/ea		/ea		416	445
	DI MJ Compact Solid Sleeve Long 6	2511.322	1.00 ea	33.00 /mh	33	395.00 /ea	395		/ea		/ea		428	443
	DI MJ Compact Solid Sleeve Long 4	2511.322	1.00 ea	33.00 /mh	33	250.00 /ea	250		/ea		/ea		283	298
	42 SDL Site Drain Lift Station													
	sitpump lift station													
	02642- Trench & Pipe to site drain lift station 42M201													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 4- 6'	2333.010	5.00 lf	33.00 /mh	17	/lf			/lf		/lf		17	24
	Trench Backfill 4- 6'	2333.020	5.00 lf	33.00 /mh	25	/lf			/lf		/lf		25	36
	Utility Bedding Gravel-Crushed	2305.200	0.72 cy	/cy		25.00 /ton	29		/cy		/cy		29	29
	Spoils to Waste	2333.060	0.74 cy	33.00 /mh	2	/cy			/cy		/cy		2	4
	DI Pipe MJ - Class 52 6	2511.201	5.00 lf	33.00 /mh	17	30.00 /lf	152		/lf		/lf		168	175
	DI MJ Std Wgt 90 6	2511.214	1.00 ea	33.00 /mh	17	395.00 /ea	395		/ea		/ea		412	419
	DI MJ Compact Solid Sleeve Long 6	2511.322	1.00 ea	33.00 /mh	20	395.00 /ea	395		/ea		/ea		415	424
	Polybag 12" and Smaller	2333.090	5.00 lf	33.00 /mh	2	1.00 /lf	6		/lf		/lf		7	8
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.00 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	18	3,500.00 /Mnth	7	25	25
	John Deere 624 Loader (172 HP) (M)	1900.132	0.00 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	12	3,000.00 /Mnth	6	18	18
	Mikasa Jumping Jack Compactor (L)	1900.138	0.00 Mnth	/Mnth		/Mnth			200.00 /Mnth	0	100.00 /Mnth	0	0	0
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.00 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	3	500.00 /Mnth	1	3	3
	150-01 1c 12042002 DIP for site drain lift station 42M201													
	DI Pipe 4in. dia FxF - 0ft. 6in.	15221.010	1.00 ea	33.00 /mh	33	325.00 /ea	325		/ea		/ea		358	373
	DI Pipe 4in. dia FxF - 1ft. 0in.	15221.010	2.00 ea	33.00 /mh	66	325.00 /ea	650		/ea		/ea		716	745
	DI Pipe 4in. dia FxF - 4ft. 0in.	15221.010	3.00 ea	33.00 /mh	99	525.00 /ea	1,575		/ea		/ea		1,674	1,718
	DI Pipe 4in. dia FxF - 18ft. 0in.	15221.010	3.00 ea	33.00 /mh	99	1,800.00 /ea	5,400		/ea		/ea		5,499	5,543
	DI Pipe 6in. dia FxF - 1ft. 0in.	15221.010	2.00 ea	33.00 /mh	66	210.00 /ea	420		/ea		/ea		486	
	DI Pipe 6in. dia FxF - 2ft. 0in.	15221.010	1.00 ea	33.00 /mh	33	480.00 /ea	480		/ea		/ea		513	
	DI Pipe 6in. dia FxF - 3ft. 6in.	15221.010	1.00 ea	33.00 /mh	33	600.00 /ea	600		/ea		/ea		633	

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-01 1c 12042002 DIP for site drain lift station 42M201													
	DI Flanged 90 ell 4" w tapped ell 3-1/2 taps for PI	15221.430	4.00 ea	33.00 /mh	132	1,350.00 /ea	5,400		/ea		/ea		5,532	5,590
	DI Flanged Tee 6"	15221.455	2.00 ea	33.00 /mh	99	400.00 /ea	800		/ea		/ea		899	943
	DI Flanged Tee 6x4"	15221.455	1.00 ea	33.00 /mh	66	450.00 /ea	450		/ea		/ea		516	545
	DI Flanged Con Red 6x4"	15221.445	2.00 ea	33.00 /mh	66	250.00 /ea	500		/ea		/ea		566	595
	Valve Check Flange 125# 4in cv-42131, cv42121, cv-42111	15110.040	3.00 ea	33.00 /mh	50	0.01 /ea	0		/ea		/ea		50	71
	Valve Plug Flange 125# 4in hv-42131B, hv-4212B, hv-42111B	15110.650	3.00 ea	33.00 /mh	99	0.01 /ea	0		/ea		/ea		99	143
	Valve Plug Flange 125# 6in hv-42141	15110.650	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	PS Pipe Stand grout	15060.404	5.00 ea	33.00 /mh	83	10.00 /ea	50		/ea		/ea		133	169
	Instrument - Flow - Magnetic Flow Meter - 6in	17200.000	1.00 ea	33.00 /mh	132	500.00 /ea	500		/ea		/ea		632	690
	DI Blind Flange 6" w/ 2" tap	15221.405	1.00 ea	33.00 /mh	33	250.00 /ea	250		/ea		/ea		283	298
	NBG Kit 125# SS 6in	15125.012	14.00 ea	33.00 /mh	139	140.00 /ea	1,960		/ea		/ea		2,099	2,160
	NBG Kit 125# SS 4in	15125.012	22.00 ea	33.00 /mh	218	58.00 /ea	1,276		/ea		/ea		1,494	1,590
	PS Special Support for 4in SS Pipe - plain	15060.475	3.00 ea	33.00 /mh	99	750.00 /ea	2,250		/ea		/ea		2,349	2,393
	PS Special Support for 6in SS Pipe - plain	15060.475	2.00 ea	33.00 /mh	132	800.00 /ea	1,600		/ea		/ea		1,732	1,790
	Epoxy Anchor 5/8 x 6in SS 316	5001.054	20.00 ea	33.00 /mh	33	15.00 /ea	300		/ea		/ea		333	348
	PS Epoxy Anchor 5/8 x 6in SS	15060.112	20.00 ea	33.00 /mh	33	25.00 /ea	500		/ea		/ea		533	548
	Valve Air/Vac Combo 2in	15110.007	1.00 ea	33.00 /mh	47	1,500.00 /ea	1,500		/ea		/ea		1,547	1,567
	Stainless Steel Nipple 2" X 3"	15212.010	2.00 ea	33.00 /mh	22	30.00 /ea	60		/ea		/ea		82	91
	Valve Ball Threaded SS 2in	15110.014	1.00 ea	33.00 /mh	47	0.01 /ea	0		/ea		/ea		47	67
	Pressure Gauge Assembly hv-42131A, hv42121A, hv42111A	11200.020	3.00 ea	33.00 /mh	50	750.00 /ea	2,250		/ea		/ea		2,300	2,321
	Instrument - Pressure - Gauge pump 1,2,3 site lift station	17400.000	3.00 ea	33.00 /mh	99	500.00 /ea	1,500		/ea		/ea		1,599	1,643
	PS Special wall Support for 4in DIP - ss M133	15060.475	12.00 ea	33.00 /mh	396	750.00 /ea	9,000		/ea		/ea		9,396	9,570
	PS Anchor Clamp SS 4in	15060.527	12.00 ea	33.00 /mh	119	10.00 /ea	120		/ea		/ea		239	291
	Epoxy Anchor 5/8 x 6in SS 316	5001.054	36.00 ea	33.00 /mh	59	15.00 /ea	540		/ea		/ea		599	626
	Stainless Steel Nipple 1/2" X 2"	15212.010	6.00 ea	33.00 /mh	50	7.00 /ea	42		/ea		/ea		92	113
	Valve Ball Threaded SS 1/2in	15110.014	3.00 ea	33.00 /mh	53	0.01 /ea	0		/ea		/ea		53	77
	Instrument - Pressure - indicator	17400.000	3.00 ea	33.00 /mh	99	500.00 /ea	1,500		/ea		/ea		1,599	1,643
	Insulation Subcontractor	15403.100	1.00 ls	/ls		/ls			/ls		/ls			
	Heat Trace	16000.001	1.00 ls	/ls		/ls			/ls		/ls			
	Link Seal Size LS-315-S	15123.050	20.00 ea	33.00 /mh	99	9.00 /ea	180		/ea		/ea		279	323
	Link Seal Size LS-475-S	15123.050	24.00 ea	33.00 /mh	119	23.00 /ea	552		/ea		/ea		671	723
	400523 Stainless Steel Piping & Tubing													
	00 GEN General													
	fab steel package													
	150-553 Steel Pipe Takeoff													
	Supply Steel Pipe Package	15233.405	1.00 ls	/ls		1,180,300.00 /ls	1,180,300		/ls		/ls		1,180,300	1,180,300
	Restrained Dismantling Joints	15112.085	1.00 ls	33.00 /mh	66	25,000.00 /ls	25,000		/ls		/ls		25,066	25,095
	Restrained Extra Flanges	15112.085	1.00 ls	33.00 /mh	66	25,000.00 /ls	25,000		/ls		/ls		25,066	25,095
	01 CIV Civil													
	Yard Pipe Yard Pipe													
	02641- 18" PA (From MBR to Process)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 8-10'	2333.010	120.00 lf	33.00 /mh	990	/lf			/lf		/lf		990	1,426
	Trench Backfill 8-10'	2333.020	120.00 lf	33.00 /mh	1,188	/lf			/lf		/lf		1,188	1,711
	Utility Bedding Peastone	2305.200	71.11 cy	/cy		25.00 /ton	2,844		/cy		/cy		2,844	2,844
	Spoils to Waste	2333.060	71.11 cy	33.00 /mh	235	/cy			/cy		/cy		235	338
	sch40 316 Stainless Steel Pipe 18"	15233.505	120.00 lf	33.00 /mh	1,980	/lf			/lf		/lf		1,980	2,851
	Polybag 12" and Smaller	2333.090	120.00 lf	33.00 /mh	40	1.00 /lf	132		/lf		/lf		172	189
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.30 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,760	3,500.00 /Mnth	1,050	3,810	3,810
	John Deere 624 Loader (172 HP) (M)	1900.132	0.30 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	1,800	3,000.00 /Mnth	900	2,700	2,700
	Water Truck, 4,000 Gallon (L)	1900.210	0.30 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	1,440	1,200.00 /Mnth	360	1,800	1,800
	Mikasa Jumping Jack Compactor (L)	1900.138	0.30 Mnth	/Mnth		/Mnth			200.00 /Mnth	60	100.00 /Mnth	30	90	90
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.30 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	750	500.00 /Mnth	150	900	900
	Warning Tape Detectable	2333.080	120.00 lf	33.00 /mh	79	0.08 /lf	10		/lf		/lf		89	124
	Tracer Wire	2333.080	140.00 lf	33.00 /mh	92	0.40 /lf	62		/lf		/lf		154	195
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	Weld Burried Pipe	15221.680	6.00 ea	33.00 /mh	792	400.00 /ea	2,400		/ea		/ea		3,192	3,540
	Trench Stabilization Rock	2305.050	18.00 cy	/cy		36.00 /ton	1,215		/cy		/cy		1,215	1,215
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			
	DI Blind Flange 18" w/ 1" Tap for Testing	15221.405	2.00 ea	33.00 /mh	198	1,100.00 /ea	2,200		/ea		/ea		2,398	2,485
	Sleeve w/Ring SS 22" x 18"	15121.250	2.00 ea	33.00 /mh	528	3,800.00 /ea	7,600		/ea		/ea		8,128	8,360
	Link Seal Size LS-575-S	15123.100	40.00 ea	33.00 /mh	198	45.00 /ea	1,800		/ea		/ea		1,998	2,085
	Repair Weld	2333.100	6.00 ea	33.00 /mh	198	0.01 /ea	0		/ea		/ea		198	285
	Field Welding - Stainless	5000.985	48.00 hrs	33.00 /mh		/hrs		6,000	/hrs		/hrs		6,000	6,000
	02641- 12" PA (From MBR to Sludge Tank)													
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	33.00 /mh	528	50.00 /ea	100		50.00 /ea	100	/ea		728	960
	Trench Excavtion 6- 8'	2333.010	330.00 lf	33.00 /mh	2,178	/lf			/lf		/lf		2,178	3,136
	Trench Backfill 6- 8'	2333.020	330.00 lf	33.00 /mh	2,723	/lf			/lf		/lf		2,723	3,920
	Utility Bedding Peastone	2305.200	106.30 cy	/cy		25.00 /ton	4,252		/cy		/cy		4,252	4,252
	Spoils to Waste	2333.060	106.30 cy	33.00 /mh	351	/cy			/cy		/cy		351	505
	sch40 316 Stainless Steel Pipe 8"	15233.505	20.00 lf	33.00 /mh	330	/lf			/lf		/lf		330	475
	Stainless Steel Pipe 1" 316ss	15212.005	40.00 lf	33.00 /mh	264	20.00 /lf	800		/lf		/lf		1,064	1,180
	sch40 316 Stainless Steel Pipe 12"	15233.505	290.00 lf	33.00 /mh	2,393	/lf			/lf		/lf		2,393	3,445
	Polybag 12" and Smaller	2333.090	330.00 lf	33.00 /mh	1,089	1.00 /lf	363		/lf		/lf		1,452	1,931
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.50 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	4,600	3,500.00 /Mnth	1,750	6,350	6,350
	John Deere 624 Loader (172 HP) (M)	1900.132	0.50 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	3,000	3,000.00 /Mnth	1,500	4,500	4,500
	Water Truck, 4,000 Gallon (L)	1900.210	0.50 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	2,400	1,200.00 /Mnth	600	3,000	3,000
	Mikasa Jumping Jack Compactor (L)	1900.138	0.50 Mnth	/Mnth		/Mnth			200.00 /Mnth	100	100.00 /Mnth	50	150	
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.50 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	1,250	500.00 /Mnth	250	1,500	
	Warning Tape Detectable	2333.080	330.00 lf	33.00 /mh	218	0.08 /lf	26		/lf		/lf		244	
	Tracer Wire	2333.080	330.00 lf	33.00 /mh	218	0.40 /lf	145		/lf		/lf		363	459

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02641- 12" PA (From MBR to Sludge Tank)													
	Tracer Wire Test Box	2333.080	3.00 ea	33.00 /mh	594	100.00 /ea	300		/ea		/ea		894	1,155
	DI Blind Flange 12" w/ 1" Tap for Testing	15221.405	1.00 ea	33.00 /mh	66	475.00 /ea	475		/ea		/ea		541	570
	DI Blind Flange 8" w/ 1" Tap for Testing	15221.405	1.00 ea	33.00 /mh	66	260.00 /ea	260		/ea		/ea		326	355
	Sleeve w/Ring SS 16" x 18"	15121.250	1.00 ea	33.00 /mh	198	2,700.00 /ea	2,700		/ea		/ea		2,898	2,985
	Link Seal Size LS-475-S	15123.100	18.00 ea	33.00 /mh	89	23.00 /ea	414		/ea		/ea		503	542
	316 Stainless Steel 90 Elbow 1"	15212.040	10.00 ea	33.00 /mh	66	45.00 /ea	450		/ea		/ea		516	545
	Valve Ball Threaded SS 1in	15110.014	2.00 ea	33.00 /mh	66	150.00 /ea	300		/ea		/ea		366	395
	PS Expansion Anchor 3/8 x 5in SS	15060.127	8.00 ea	33.00 /mh	26	8.00 /ea	64		/ea		/ea		90	102
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	33.00 /mh	198	20.00 /lf	400		/lf		/lf		598	685
	PS 2 Piece Clamp SS 1in	15060.518	4.00 ea	33.00 /mh	40	11.00 /ea	44		/ea		/ea		84	101
	Pipe Threader, Die, Cutting Oil	1900.300	1.00 ls	/ls		1,500.00 /ls	1,500		/ls		/ls		1,500	1,500
	Weld Burried Pipe	15221.680	15.00 ea	33.00 /mh	990	400.00 /ea	6,000		/ea		/ea		6,990	7,426
	Weld Burried Pipe	15221.680	3.00 ea	33.00 /mh	198	200.00 /ea	600		/ea		/ea		798	885
	Repair Weld	2333.100	18.00 ea	33.00 /mh	594	0.01 /ea	0		/ea		/ea		594	856
	Field Welding - Stainless	5000.985	72.00 hrs	33.00 /mh		/hrs		1,080	/hrs		/hrs		1,080	1,080
	20 PBS Process Basin													
	air piping to diff													
	150-553 stainless steel piping to diffusers in basin 20M204 & 20M205													
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 2' F x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss- 12" - 90 deg ell PE x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 1' F x PE	15233.505	3.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 6' PE x PE	15233.505	3.00 ea	33.00 /mh	297	/ea			/ea		/ea		297	428
	Fab Stainless Steel Pipe sch 10 304 ss- 12" x 4" red Tee PE x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 5' PE x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 1- 304 ss - 12" x 4" red Tee PE x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 6' PE x PE	15233.505	3.00 ea	33.00 /mh	297	/ea			/ea		/ea		297	428
	Fab Stainless Steel Pipe sch 10 304 ss - 12" x 4" red Tee PE x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 1' F x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss- 12" - expansion joint	15233.505	36.00 ea	33.00 /mh	3,564	/ea			/ea		/ea		3,564	5,132
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 3' F x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 12" x 4" red tee PE x PE	15233.505	3.00 ea	33.00 /mh	297	/ea			/ea		/ea		297	428
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 11' PE x PE	15233.505	3.00 ea	33.00 /mh	297	/ea			/ea		/ea		297	428
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 4" red tee PE x PE	15233.505	3.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 8' PE x PE	15233.505	3.00 ea	33.00 /mh	297	/ea			/ea		/ea		297	428
	Fab Stainless Steel Pipe sch 10 304 ss - 12" x 8" ecentric red PE x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 8" - 7' F x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 8" - expansion joint	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 8" - 8' F x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss- 8" x 4" red Tee PE x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 8" - 12' PE x PE	15233.505	3.00 ea	33.00 /mh	297	/ea			/ea		/ea		297	428
	Fab Stainless Steel Pipe sch 10 304 ss - 8" x 4" red Tee PE x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 8" - 8' F x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 8" - *2' F x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 8" - expansion joint	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 8" x 4" red Tee PE x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 8" - 1' PE x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 8" x 3" ecentric red PE x PE	15233.505	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 3" - 1' PE x PE	15233.505	3.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 3" - 45 deg ell	15233.505	3.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 3" - 45 deg ell	15233.505	3.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 3" - 14' PE x PE	15233.505	3.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss- 3" - Tee PE x PE	15233.505	3.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 3" - 18' PE x PE	15233.505	3.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 3" - 3" Tee	15233.505	3.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe - 3" - 18' PE x PE	15233.505	3.00 ea	33.00 /mh	297	/ea			/ea		/ea		297	428
	Fab Stainless Steel Pipe sch 10 304 ss - 3" x 1" ecentric red	15233.505	3.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	PS Strut SS 1-5/8 x 1-5/8 12 wall supports 3"	15060.476	72.00 lf	33.00 /mh	713	20.00 /lf	1,440		/lf		/lf		2,153	2,466
	PS Expansion Anchor 3/4 x 5-1/2in SS	15060.127	72.00 ea	33.00 /mh	119	25.00 /ea	1,800		/ea		/ea		1,919	1,971
	PS Staineless 4X4 angle with base plate and u bolt	15060.476	24.00 ea	33.00 /mh	3,168	650.00 /ea	15,600		/ea		/ea		18,768	20,162
	Epoxy Anchor 3/4 x 5-1/2in SS 316	5001.054	48.00 ea	33.00 /mh	79	20.00 /ea	960		/ea		/ea		1,039	1,074
	PS Pipe Strut Clamp SS 3in	15060.486	36.00 ea	33.00 /mh	356	15.00 /ea	540		/ea		/ea		896	1,053
	PS Strut SS 1-5/8 x 1-5/8	15060.476	24.00 lf	33.00 /mh	238	20.00 /lf	480		/lf		/lf		718	822
	Epoxy Anchor 5/8 x 5in SS 316	5001.054	48.00 ea	33.00 /mh	79	15.00 /ea	720		/ea		/ea		799	834
	Fab Stainless Steel Pipe sch 10 304 ss - 4" - 1' PE x PE	15233.505	24.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Fab Stainless Steel Pipe sch 10 304 ss - 4" - 90 ell Fx PE	15233.505	48.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
	Fab Stainless Steel Pipe sch 10 304 ss - 4" - 3' PE x PE	15233.505	24.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Fab Stainless Steel Pipe sch 10 304 ss - 4" - 1' PE x PE	15233.505	3.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 4" - 45 deg ell	15233.505	48.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
	Fab Stainless Steel Pipe sch 10 304 ss - 4" - 1' F x PE	15233.505	24.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	NBG Kit 125# SS 4in	15125.012	60.00 ea	33.00 /mh	990	58.00 /ea	3,480		/ea		/ea		4,470	4,906
	NBG Kit 125# SS 3in	15125.012	18.00 ea	33.00 /mh	297	50.00 /ea	900		/ea		/ea		1,197	1,328
	NBG Kit 125# SS 8in	15125.012	18.00 ea	33.00 /mh	594	140.00 /ea	2,520		/ea		/ea		3,114	3,375
	NBG Kit 125# SS 12in	15125.012	18.00 ea	33.00 /mh	594	180.00 /ea	3,240		/ea		/ea		3,834	4,095
	Fab Stainless Steel Pipe sch 10 304 ss - 3" x 1" concentric red PE x PE	15233.505	9.00 ea	33.00 /mh	74	/ea			/ea		/ea		74	107
	Stainless Steel Pipe 316 1" unductor tube mixer pipe	15212.005	540.00 lf	33.00 /mh	8,910	12.00 /lf	6,480		/lf		/lf		15,390	19,310
	Stainless Steel 31645 Elbow 1"	15212.035	18.00 ea	33.00 /mh	178	8.00 /ea	144		/ea		/ea		322	401
	Stainless Steel 316 90 Elbow 1"	15212.040	24.00 ea	33.00 /mh	238	8.00 /ea	192		/ea		/ea		430	534
	Valve Ball Threaded SS 1in enducter tube mixer	15110.014	9.00 ea	33.00 /mh	258	0.01 /ea	0		/ea		/ea		258	372
	Stainless Steel 316 Nipple 1" x 4"	15212.010	36.00 ea	33.00 /mh	297	20.00 /ea	720		/ea		/ea		1,017	1,148
	Stainless Steel 316Union 1"	15212.060	18.00 ea	33.00 /mh	119	25.00 /ea	450		/ea		/ea		569	688
	Valve - Butterfly 4" isolations for the diffusers	2519.150	24.00 ea	33.00 /mh	1,584	0.01 /ea	0		/ea		/ea		1,584	2,168
	PS Strut SS 1-5/8 x 1-5/8 for enducter tube mixer	15060.476	108.00 lf	33.00 /mh	1,069	20.00 /lf	2,160		/lf		/lf		3,229	3,669

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-553 stainless steel piping to diffusers in basin 20M204 & 20M205													
	PS Pipe Strut Clamp SS 1in	15060.486	108.00 ea	33.00 /mh	1,069	11.00 /ea	1,188		/ea		/ea		2,257	2,728
	PS Expansion Anchor 5/8 x 5in SS enductor tube mixer	15060.127	324.00 ea	33.00 /mh	535	25.00 /ea	8,100		/ea		/ea		8,635	8,870
	Valve Butterfly Flanged 125# 12in FV-20411 FV-20421 FV-20431	15110.020	3.00 ea	33.00 /mh	297	0.01 /ea	0		/ea		/ea		297	428
	Stainless Steel Tee 1" 316ww	15212.055	9.00 ea	33.00 /mh	59	15.00 /ea	135		/ea		/ea		194	221
	grit NPW flush line													
	150-553 Stainless steel rec line anaerobic and anoxic basin 20M203													
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 1' F x PE basin #3	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 45 deg ell basin # 3	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 45 deg ell basin # 3	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 29' V x PE basin # 3	15233.505	1.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 16' V x F basin # 3	15233.505	1.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- vic coupling basin # 3	15233.505	1.00 ea	33.00 /mh	33	/ea			/ea		/ea		33	48
	NBG Kit 125# SS 16in basin # 3	15125.012	4.00 ea	33.00 /mh	264	450.00 /ea	1,800		/ea		/ea		2,064	2,180
	PS Special wall Support for 16in SS Pipe - cooper b-line 53067 ss basin # 3	15060.475	5.00 ea	33.00 /mh	990	1,150.00 /ea	5,750		/ea		/ea		6,740	7,176
	PS U-bolt 4 with Nuts 16 SS basin # 3	15060.526	5.00 ea	33.00 /mh	145	75.00 /ea	375		/ea		/ea		520	584
	PS Expansion Anchor 3/4 x 5-1/2in SS basin # 3	15060.127	20.00 ea	33.00 /mh	33	25.00 /ea	500		/ea		/ea		533	548
	Link Seal Size LS-410-S	15123.050	42.00 ea	33.00 /mh	208	23.00 /ea	966		/ea		/ea		1,174	1,265
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 1' F x PE basin #2	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 45 deg ell basin # 2	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 45 deg elll basin # 2	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 29' V x PE basin # 2	15233.505	1.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 16' V x F basin # 2	15233.505	1.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- vic coupling basin # 2	15233.505	1.00 ea	33.00 /mh	33	/ea			/ea		/ea		33	48
	NBG Kit 125# SS 16in basin # 2	15125.012	4.00 ea	33.00 /mh	264	450.00 /ea	1,800		/ea		/ea		2,064	2,180
	PS Special wall Support for 16in SS Pipe - copper b-line 53067 ss basin # 2	15060.475	5.00 ea	33.00 /mh	990	1,150.00 /ea	5,750		/ea		/ea		6,740	7,176
	PS U-bolt 4 with Nuts 16 SS basin # 2	15060.526	5.00 ea	33.00 /mh	145	75.00 /ea	375		/ea		/ea		520	584
	PS Expansion Anchor 3/4 x 5-1/2in SS basin # 2	15060.127	20.00 ea	33.00 /mh	33	25.00 /ea	500		/ea		/ea		533	548
	Link Seal Size LS-410-S basin # 2	15123.050	42.00 ea	33.00 /mh	208	23.00 /ea	966		/ea		/ea		1,174	1,265
	Fab Stainless Steel Pipe - 16"- 1' F x PE basin # 1	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe - 16"- 45 deg ell basin # 1	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe - 16"- 45 deg ell basin # 1	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe - 16"- 29' V x PE basin # 1	15233.505	1.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Fab Stainless Steel Pipe - 16"- 16' V x F basin # 1	15233.505	1.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe - 16"- vic coupling basin # 1	15233.505	1.00 ea	33.00 /mh	33	/ea			/ea		/ea		33	48
	NBG Kit 125# SS 16in basin # 1	15125.012	4.00 ea	33.00 /mh	264	450.00 /ea	1,800		/ea		/ea		2,064	2,180
	PS Special wall Support for 16in SS Pipe - copper b-line 53067 ss basin # 1	15060.475	5.00 ea	33.00 /mh	990	1,150.00 /ea	5,750		/ea		/ea		6,740	7,176
	PS U-bolt 4 with Nuts 16 SS basin # 1	15060.526	5.00 ea	33.00 /mh	145	75.00 /ea	375		/ea		/ea		520	584
	PS Expansion Anchor 3/4 x 5-1/2in SS basin # 1	15060.127	20.00 ea	33.00 /mh	33	25.00 /ea	500		/ea		/ea		533	548
	Link Seal Size LS-410-s basin # 1	15123.050	42.00 ea	33.00 /mh	208	23.00 /ea	966		/ea		/ea		1,174	1,265
	Sleeve SS 20" Stainless sleeve 12" Long	15121.200	3.00 ea	33.00 /mh	2,376	2,800.00 /ea	8,400		/ea		/ea		10,776	11,821
	process air from mpr													
	150-553 fab ss piping for process air from mbr in to basin 20M205													
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 5' F x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 90 ell PE x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 4' 6" F x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss- 18" - 9' F x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 90 ell F x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" Tee PE x PE x PE	15233.505	4.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	NBG Kit 125# SS 18in	15125.012	12.00 ea	33.00 /mh	792	650.00 /ea	7,800		/ea		/ea		8,592	8,940
	PS Special floor Support for 18in SS Steel Pipe - ss 20M405 sec 2	15060.475	8.00 ea	33.00 /mh	1,056	1,150.00 /ea	9,200		/ea		/ea		10,256	10,721
	PS Pipe Support SS U Bolt 18"	15060.486	8.00 ea	33.00 /mh	198	350.00 /ea	2,800		/ea		/ea		2,998	3,085
	Fab Stainless Steel Pipe sch 10 304 ss - 18" x 12" ecentric re PE x PE	15233.505	3.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Fab Stainless Steel Pipe - 18"sch 10 304 ss - 3' 6" PE x PE	15233.505	3.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Fab Stainless Steel Pipe - 18" - sch 10 304 ss 90 ell PE x PE	15233.505	3.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Fab Stainless Steel Pipe - 18" - sch 10 304 ss 1' F x PE	15233.505	3.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	PS Epoxy for Anchors	15060.112	64.00 ea	33.00 /mh	106	5.00 /ea	320		/ea		/ea		426	472
	PS Anchors for supports 5/8 x5" SS	15060.112	64.00 ea	33.00 /mh	106	25.00 /ea	1,600		/ea		/ea		1,706	1,752
	PS Flange Stand grout 1" grout stand	15060.152	8.00 ea	33.00 /mh	132	10.00 /ea	80		/ea		/ea		212	270
	Fab Stainless Steel Pipe - 18" - sch 10 304 ss cap/ blind fange	15233.505	2.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe - 18" - sch 10 304 ss 6' PE x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe - 18" - sch 10 304 ss 13' 6" PE x PE	15233.505	2.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe - 18" - sch 10 304 ss 1' F x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	NBG Kit 125# SS 18in	15125.012	24.00 ea	33.00 /mh	1,584	650.00 /ea	15,600		/ea		/ea		17,184	17,881
	23 MBR MBR Building													
	blower piping													
	150-553 fab stainless pipe blower room 23M206, 23M406													
	Fab Stainless Steel Pipe sch 10 304 ss- 16"- 5' 6" PE x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss- 16"- 90 ell PE x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss- 16"-23' PE x PE	15233.505	1.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Fab Stainless Steel Pipe sch 10 304 ss- 16"-45 ell PEx PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss- 16"90 ell PE x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 16"-6' 6" PE x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 90 ell PE x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 8' PE x PE	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- Tee PE x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 16 x 12" red PE x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 16"-1' PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 16 x 8" red tee PE x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 4' 6" PE x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- 16" x 8" tee PE x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- flange flat faced	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-553 fab stainless pipe blower room 23M206, 23M406													
	Fab Stainless Steel Pipe sch 10 304 ss - 16"- blind flange	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 12" V x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 12 x 8 tee PE x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 3' V x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Valve butterfly wafer SS 12in FV-23406D	15110.010	1.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss 6' PE x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 2' V x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 3' V x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Valve butterfly wafer ss 12" FV-23406C	15110.010	1.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss- 12" - 90 ell PE x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 25' PE x PE	15233.505	1.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Fab Stainless Steel Pipe sch 10 304 ss - 12" - 12 x 18" red PE x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe sch 10 304 ss- 18" - tee PE x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 90 ell PE x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 4' 6" F x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 2' 6" PE x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 18" x 8" tee PE x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 4' 6" Pe x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 18" x 8" PE x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 3' PE x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss- 18" - tee 18" x 8"	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 1' PE x PE	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 1' F x PE Raised face	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - blind flange	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 6' 6" PE x PE	15233.505	1.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	NBG Kit 125# SS 18in	15125.012	6.00 ea	33.00 /mh	396	650.00 /ea	3,900		/ea		/ea		4,296	4,470
	Fab Stainless Steel Pipe - 8" - 1' PE x V	15233.505	6.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Valve Butterfly Flanged 8in HV-23408B	15110.020	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Valve Butterfly Flanged 8in HV-23405B	15110.020	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Valve Butterfly Flanged 8in HV-23407B	15110.020	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Valve Butterfly Flanged 8in HV-23404B	15110.020	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Valve Butterfly Flanged 8in HV-23403B	15110.020	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Valve Butterfly Flanged 8in HV-23406B	15110.020	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss 8" 1' F x V	15110.020	1.00 ea	33.00 /mh	264	0.01 /ea	0		/ea		/ea		264	380
	Valve Butterfly Flanged 8in FV-40511	15110.020	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 8" - 3' V x PE	15233.505	1.00 ea	33.00 /mh	83	/ea			/ea		/ea		83	119
	Fab Stainless Steel Pipe sch 10 304 ss - 8" - 90 ell PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 8" - 5' PE x F flat face	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 8" - 90 ell F x F	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	NBG Kit 125# SS 8in	15125.012	6.00 ea	33.00 /mh	198	140.00 /ea	840		/ea		/ea		1,038	1,125
	Fab Stainless Steel Pipe sch 10 304 ss - 8" - 5' 6" F x F	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 90 ell F x F	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss- 18" - 5' F x F w/ 1/2 tap for instrumentation	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	PS Clevis Hanger SS 16in w/ horizontal sway bracing M146	15060.096	12.00 ea	33.00 /mh	1,980	600.00 /ea	7,200		/ea		/ea		9,180	10,051
	PS Beam Clamp Adj 1" misc horizontal sway bracing M146	15060.053	24.00 ea	33.00 /mh	1,584	1,350.00 /ea	32,400		/ea		/ea		33,984	34,681
	PS Threaded Rod 1" SS M146	15060.502	120.00 lf	33.00 /mh	396	25.00 /lf	3,000		/lf		/lf		3,396	3,570
	PS Hex Nut SS 1" M146	15060.354	72.00 ea	33.00 /mh	238	3.00 /ea	216		/ea		/ea		454	558
	PS Flange Stand for 16in SS 1ft 6in floor to centerline SS M132	15060.156	12.00 ea	33.00 /mh	1,584	1,350.00 /ea	16,200		/ea		/ea		17,784	18,481
	Fab Stainless Steel Pipe sch 10 304 ss - 20" - blind flange	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe sch 10 304 ss - 20" - 1' F X PE flat faced	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe sch 10 304 ss - 20" - Tee 20" x 10"	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe sch 10 304 ss - 20" - 4' PE x PE	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe sch 10 304 ss - 20" - Tee 20" x 10"	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe sch 10 304 ss - 20" - 4" PE x PE	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe sch 10 304 ss - 20" - Tee 20 x 10"	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe sch 10 304 ss - 20" - 9' 6" F x PE flat face	15233.505	1.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	NBG Kit 125# SS 20in	15125.012	2.00 ea	33.00 /mh	132	725.00 /ea	1,450		/ea		/ea		1,582	1,640
	Fab Stainless Steel Pipe sch 10 304 ss - 20" - blind flange	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe sch 10 304 ss - 20" - 1' F x PE flat faced	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe sch 10 304 ss- 20" - Tee 20 x 10" PE x PE	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe sch 10 304 ss - 20" - 4' PE x PE	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe sch 10 304 ss - 20" - Tee 20" x 10" PE x PE	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe sch 10 304 ss - 20" - 4' PE x PE	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe sch 10 304 ss - 20" - Tee 20" x 10"	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	Fab Stainless Steel Pipe sch 10 304 ss - 20" - 7' F x PE	15233.505	1.00 ea	33.00 /mh	165	/ea			/ea		/ea		165	238
	NBG Kit 125# SS 20in	15125.012	1.00 ea	33.00 /mh	99	725.00 /ea	725		/ea		/ea		824	868
	Fab Stainless Steel Pipe sch 10 304 ss- 10" - 1' F x PE	15233.505	6.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Fab Stainless Steel Pipe sch 10 304 ss- 10" - expansion joint EPDM	15233.505	6.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Fab Stainless Steel Pipe sch 10 304 ss - 10" - 1' F x F	15233.505	6.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Fab Stainless Steel Pipe sch 10 304 ss - 10" - 1' F x PE	15233.505	6.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Fab Stainless Steel Pipe sch 10 304 ss - 10" - 90 ell F x PE	15233.505	6.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	NBG Kit 125# SS 10in	15125.012	18.00 ea	33.00 /mh	594	170.00 /ea	3,060		/ea		/ea		3,654	3,915
	Valve Butterfly Flanged 10in HV-23405A	15110.020	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Valve Butterfly Flanged 10in HV-23408A	15110.020	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Valve Butterfly Flanged 10in HV-20343A	15110.020	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Valve Butterfly Flanged 10in HV-20344A	15110.020	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Valve Butterfly Flanged 10in HV-23406A	15110.020	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Valve Butterfly Flanged 10in HV-23407A	15110.020	1.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	PS Special Support for 10in SS Pipe - exterior 23M901	15060.475	2.00 ea	33.00 /mh	264	850.00 /ea	1,700		/ea		/ea		1,964	2,080
	PS Expansion Anchor 3/4 x 5-1/2in SS exterior stands	15060.127	16.00 ea	33.00 /mh	26	25.00 /ea	400		/ea		/ea		426	
	Stainless Steel Nipple 1/2" X 2" for instrumentation	15212.010	2.00 ea	33.00 /mh	17	7.00 /ea	14		/ea		/ea		31	
	Valve Ball Threaded SS 1/2in for instrumentation	15110.014	1.00 ea	33.00 /mh	18	0.01 /ea	0		/ea		/ea		18	

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-553 fab stainless pipe blower room 23M206, 23M406													
	Insulation Subcontractor	15403.100	1.00 ls	/ls		/ls			/ls		/ls			
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - 1' FL x MJ to process basin	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe sch 10 304 ss - 18" - FCA to process basin	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe - 18" - 90 ell PE x PE to process basin	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Fab Stainless Steel Pipe - 18" - 5' PE x F	15233.505	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	NBG Kit 125# SS 18in	15125.012	1.00 ea	33.00 /mh	66	650.00 /ea	650		/ea		/ea		716	745
	Fab Stainless Steel Pipe - 8" - 1' F x MJ	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe - 8" - FCA conn	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe - 8" - 3' PE x MJ	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe - 8" - 90 ell PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe - 8" - 5' PE x F	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Sleeve Steel floor 1' 6"	15121.800	1.00 ea	33.00 /mh	66	475.00 /ea	475		/ea		/ea		541	570
	Sleeve Steel floor 1' 6"	15121.800	1.00 ea	33.00 /mh	66	475.00 /ea	475		/ea		/ea		541	570
	PS Pipe Stand grout	15060.404	2.00 ea	33.00 /mh	33	10.00 /ea	20		/ea		/ea		53	68
	NBG Kit 125# SS 20in add flanges for fab peices to install	15125.012	16.00 ea	33.00 /mh	1,584	725.00 /ea	11,600		/ea		/ea		13,184	13,881
	NBG Kit 125# Steel 10in add flanges for fab pieces to install	15125.010	8.00 ea	33.00 /mh	264	60.00 /ea	480		/ea		/ea		744	860
	NBG Kit 125# Steel 8in add flanges for fab pieces to install	15125.010	4.00 ea	33.00 /mh	132	50.00 /ea	200		/ea		/ea		332	390
	DI VIC Coupling 12"	15221.680	8.00 ea	33.00 /mh	396	500.00 /ea	4,000		/ea		/ea		4,396	4,570
	DI VIC Coupling 8"	15221.680	8.00 ea	33.00 /mh	264	200.00 /ea	1,600		/ea		/ea		1,864	1,980
	NBG Kit 125# SS 20in	15125.012	16.00 ea	33.00 /mh	1,584	725.00 /ea	11,600		/ea		/ea		13,184	13,881
	NBG Kit 125# SS 18in	15125.012	12.00 ea	33.00 /mh	1,188	650.00 /ea	7,800		/ea		/ea		8,988	9,511
	NBG Kit 125# SS 16in	15125.012	12.00 ea	33.00 /mh	792	450.00 /ea	5,400		/ea		/ea		6,192	6,540
	NBG Kit 125# SS 10in	15125.012	6.00 ea	33.00 /mh	198	170.00 /ea	1,020		/ea		/ea		1,218	1,305
	NBG Kit 125# SS 8in	15125.012	6.00 ea	33.00 /mh	198	140.00 /ea	840		/ea		/ea		1,038	1,125
	Escutcheon 20"	15124.200	2.00 ea	33.00 /mh	264	450.00 /ea	900		/ea		/ea		1,164	1,280
	Escutcheon 8"	15124.200	1.00 ea	33.00 /mh	132	250.00 /ea	250		/ea		/ea		382	440
	Escutcheon 18"	15124.200	1.00 ea	33.00 /mh	132	450.00 /ea	450		/ea		/ea		582	640
	Valve Butterfly Wafer 125# 12in FV-23406A, FV-23406B	15110.034	2.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	compressed air pipe													
	150-553 ss compressed air piping 23M203, 23M204, 23M209, 23M404													
	Stainless Steel Pipe 1"	15212.005	50.00 lf	33.00 /mh	825	12.00 /lf	600		/lf		/lf		1,425	1,788
	Stainless Steel Pipe 1"x 1/2 TEE	15212.005	11.00 ea	33.00 /mh	182	25.00 /ea	275		/ea		/ea		457	536
	Stainless Steel Pipe 1"	15212.005	72.00 lf	33.00 /mh	1,188	12.00 /lf	864		/lf		/lf		2,052	2,575
	Stainless Steel 90 Elbow 1"	15212.040	8.00 ea	33.00 /mh	132	8.00 /ea	64		/ea		/ea		196	254
	Stainless Steel Pipe 1/2" 90 ell	15212.005	16.00 ea	33.00 /mh	264	8.00 /ea	128		/ea		/ea		392	508
	Stainless Steel Pipe 1/2"	15212.005	32.00 lf	33.00 /mh	528	6.00 /lf	192		/lf		/lf		720	952
	Stainless Steel Pipe 1x 1/2 red	15212.005	12.00 ea	33.00 /mh	198	25.00 /ea	300		/ea		/ea		498	585
	Stainless Steel Pipe 1/2"3/4 x 1/2 red	15212.005	4.00 ea	33.00 /mh	66	15.00 /ea	60		/ea		/ea		126	155
	Stainless Steel Pipe 1/2" x 1/4 bushing	15212.005	12.00 ea	33.00 /mh	198	10.00 /ea	120		/ea		/ea		318	405
	1/4 numatic tubing to injection system and numatic control valves	15212.005	48.00 lf	33.00 /mh	792	8.00 /lf	384		/lf		/lf		1,176	1,524
	1/4 compression couplings	15212.005	12.00 ea	33.00 /mh	198	8.00 /ea	96		/ea		/ea		294	381
	Valve Ball Threaded SS 3/4in compressed air at chemical injection and numatic valves	15110.014	12.00 ea	33.00 /mh	792	0.01 /ea	0		/ea		/ea		792	1,141
	Valve PRV ss threaded 150# 3/4" MFV-23612	15110.715	1.00 ea	33.00 /mh	99	0.01 /ea	0		/ea		/ea		99	143
	Valve Ball Threaded alum 3/4in HV-23611B, HV-23611A	15110.014	2.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Valve Ball Threaded alum 3/4in HV-23621B, HV-23621A, HV-23621C	15110.014	3.00 ea	33.00 /mh	99	0.01 /ea	0		/ea		/ea		99	143
	PS Strut Post Base SS at compressor	15060.478	8.00 ea	33.00 /mh	264	52.00 /ea	416		/ea		/ea		680	796
	PS Strut SS 1-5/8 x 1-5/8	15060.476	80.00 lf	33.00 /mh	1,320	20.00 /lf	1,600		/lf		/lf		2,920	3,501
	PS Pipe Strut Clamp SS 3/4in	15060.486	16.00 ea	33.00 /mh	264	5.00 /ea	80		/ea		/ea		344	460
	PS Pipe Strut Clamp SS 1in	15060.486	30.00 ea	33.00 /mh	495	11.00 /ea	330		/ea		/ea		825	1,043
	Stainless Steel Nipple 3/4" X 4"	15212.010	24.00 ea	33.00 /mh	396	7.00 /ea	168		/ea		/ea		564	738
	Stainless Steel Union 3/4"	15212.060	12.00 ea	33.00 /mh	198	15.00 /ea	180		/ea		/ea		378	465
	Stainless Steel Tee 3/4"	15212.055	12.00 ea	33.00 /mh	198	9.00 /ea	108		/ea		/ea		306	393
	Stainless Steel Pipe 3/4"	15212.005	60.00 lf	33.00 /mh	990	8.00 /lf	480		/lf		/lf		1,470	1,906
	Stainless Steel 90 Elbow 3/4"	15212.040	16.00 ea	33.00 /mh	264	7.00 /ea	112		/ea		/ea		376	492
	Instrument - Pressure - Gauge	17400.000	2.00 ea	33.00 /mh	264	500.00 /ea	1,000		/ea		/ea		1,264	1,380
	Valve Ball Threaded SS 1/2in	15110.014	2.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	Stainless Steel Nipple 1/2" X 2"	15212.010	8.00 ea	33.00 /mh	132	7.00 /ea	56		/ea		/ea		188	246
	Valve Ball Threaded SS 3/4in at compressor HV-23604A HV-23604A	15110.014	2.00 ea	33.00 /mh	66	0.01 /ea	0		/ea		/ea		66	95
	PS Flange Stand grout	15060.152	2.00 ea	33.00 /mh	66	10.00 /ea	20		/ea		/ea		86	115
	PS Epoxy Anchor 5/8 x 5in SS	15060.112	8.00 ea	33.00 /mh	26	25.00 /ea	200		/ea		/ea		226	238
	PS Epoxy for Anchors	15060.112	8.00 ea	33.00 /mh	13	5.00 /ea	40		/ea		/ea		53	59
	PS Epoxy Anchor 5/8 x 5in SS for unistrut wall supports	15060.112	90.00 ea	33.00 /mh	297	25.00 /ea	2,250		/ea		/ea		2,547	2,678
	Stainless Steel Pipe 1/4"	15212.005	40.00 lf	33.00 /mh	660	6.00 /lf	240		/lf		/lf		900	1,190
	Stainless Steel 90 Elbow 1/4"	15212.040	12.00 ea	33.00 /mh	198	13.00 /ea	156		/ea		/ea		354	441
	Stainless Steel 90 Elbow 3/4" to mbr chemical clean system	15212.040	12.00 ea	33.00 /mh	198	7.00 /ea	84		/ea		/ea		282	369
	Stainless Steel Pipe 3/4" to mbr chemical clean system	15212.005	30.00 lf	33.00 /mh	495	8.00 /lf	240		/lf		/lf		735	953
	Stainless Steel Pipe 1/2" compressed air to valves	15212.005	60.00 lf	33.00 /mh	990	6.00 /lf	360		/lf		/lf		1,350	1,786
	Stainless Steel Bushing mpt x fpt 1/2in x 1/4in to valves	15212.015	4.00 ea	33.00 /mh	66	3.00 /ea	12		/ea		/ea		78	107
	Stainless Steel 90 Elbow 1/2"	15212.040	16.00 ea	33.00 /mh	264	7.00 /ea	112		/ea		/ea		376	492
	Stainless Steel Union 1/2"	15212.060	4.00 ea	33.00 /mh	66	12.00 /ea	48		/ea		/ea		114	143
	Stainless Steel Tee 1" x 1/2 tee	15212.055	4.00 ea	33.00 /mh	66	15.00 /ea	60		/ea		/ea		126	155
	Stainless Steel Pipe 1/4" connection to valves	15212.005	20.00 ea	33.00 /mh	330	25.00 /ea	500		/ea		/ea		830	975
	Epoxy for Anchors 5/8 x5	5001.052	90.00 ea	33.00 /mh	297	5.00 /ea	450		/ea		/ea		747	878
	Valve Ball Threaded Bronze 1in condensate isolation	15110.014	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Valve PRV Flange SS 150# .5"	15110.735	1.00 ea	33.00 /mh	132	750.00 /ea	750		/ea		/ea		882	940
	dewatering comp air													
	150-553 compressed air piping 23M210													
	Stainless Steel Pipe 3/4"	15212.005	80.00 lf	33.00 /mh	1,320	8.00 /lf	640		/lf		/lf		1,960	2,541
	Stainless Steel Nipple 3/4" X 3"	15212.010	12.00 ea	33.00 /mh	198	7.00 /ea	84		/ea		/ea		282	369
	Stainless Steel 90 Elbow 3/4"	15212.040	12.00 ea	33.00 /mh	198	7.00 /ea	84		/ea		/ea		282	369
	Stainless Steel Bushing mpt x fpt 3/4in x 1/4in	15212.015	2.00 ea	33.00 /mh	33	4.00 /ea	8		/ea		/ea		41	53
	Stainless Steel Tee 3/4"	15212.055	1.00 ea	33.00 /mh	17	9.00 /ea	9		/ea		/ea		26	33

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-553 compressed air piping 23M210													
	Stainless Steel Union 3/4"	15212.060	2.00 ea	33.00 /mh	33	15.00 /ea	30		/ea		/ea		63	78
	PS Strut SS 1-5/8 x 1-5/8	15060.476	60.00 lf	33.00 /mh	990	20.00 /lf	1,200		/lf		/lf		2,190	2,626
	PS Strut Post Base SS	15060.478	8.00 ea	33.00 /mh	132	52.00 / ea	416		/ ea		/ ea		548	606
	Epoxy Anchor 3/8 x 5in SS 316	5001.054	32.00 ea	33.00 /mh	528	8.00 /ea	256		/ea		/ea		784	1,016
	PS Flange Stand grout	15060.152	8.00 ea	33.00 /mh	132	10.00 /ea	80		/ea		/ea		212	270
	1/4 flex hose	15212.005	20.00 lf	33.00 /mh	330	3.00 /lf	60		/lf		/lf		390	535
	1/4 ball valve drain	15212.005	2.00 ea	33.00 /mh	33	15.00 / ea	30		/ ea		/ ea		63	78
	Valve Stainless steel 3/4in -	15110.003	3.00 ea	33.00 /mh	99	75.00 /ea	225		/ea		/ea		324	368
	Valve Ball Threaded SS 1in	15110.014	1.00 ea	33.00 /mh	33	0.01 /ea	0		/ea		/ea		33	48
	Stainless Steel Pipe 1"	15212.005	10.00 lf	33.00 /mh	165	12.00 /lf	120		/lf		/lf		285	358
	Stainless Steel Reducer mpt x fpt 1in x 3/4in	15212.050	1.00 ea	33.00 /mh	17	24.00 /ea	24		/ea		/ea		41	48
	pre fab SS permeate													
	150-553 Fabricated SS piping for Permeater piping 23M203 & 23M405													
	Fab Stainless Steel Pipe 304 ss sch 10 - 14" x 8" tee PE x PE	15233.505	4.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Fab Stainless Steel Pipe 304 ss sch 10 - 8" x 1' F x PE	15233.505	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe 304 ss sch 10 - 8" 90 F x F	15233.505	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe 304 ss sch 10 - 8" 2' 6" F x Gooved	15233.505	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe 304 ss sch 10 - 8" x 3' V x F raised face w/ 1/2 tap top and bottom	15233.505	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe 304 ss sch 10- 8" EPDM expansion joint	15233.505	8.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Instrument - Flow - Magnetic Flow Meter - 8in	17200.000	4.00 ea	33.00 /mh	528	500.00 /ea	2,000		/ea		/ea		2,528	2,760
	Fab Stainless Steel Pipe 304 ss sch 10- 8" vic coupling for flow meter	15233.505	8.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Fab Stainless Steel Pipe 304 ss sch 10- 8" 1' F x PE	15233.505	8.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Fab Stainless Steel Pipe 304 ss sch 10 - 8" 90 ell PE x PE	15233.505	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe 304 ss sch 10 - 8" wafer butterfly FV-23311,HV-23336,HV-23326,HV-23346	15233.505	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe 304 ss sch 10 - 8" - 1' 6" F x PE	15233.505	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe 304 ss sch 10 - 8" 90 ell PE x PE w/ 1/2 tap for instrumentation	15233.505	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe 304 ss sch 10 - 8" 12' 6" F x PE	15233.505	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe 304 ss sch 10 - 8" 7' F x F w/ 2 - 1" tap for chemical injection	15233.505	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Fab Stainless Steel Pipe 304 ss sch 10 - 8" wafer butterfly FV-23316,FV-23331,FV-23321,FV-23341	15233.505	4.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Stainless Steel Nipple 1/2" X 4" for instamentation	15212.010	8.00 ea	33.00 /mh	66	7.00 /ea	56		/ea		/ea		122	151
	Valve Ball Threaded SS 1/2in	15110.014	4.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Instrument - pressure switch	17400.000	4.00 ea	33.00 /mh	264	500.00 /ea	2,000		/ea		/ea		2,264	2,380
	PS special stacked floor Support for 8in SS Pipe - 1' 6" and 5' 23 M901 - 6	15060.475	4.00 ea	33.00 /mh	528	1,100.00 /ea	4,400		/ea		/ea		4,928	5,160
	floor Support for 8in SS Pipe - 1' 6"	15060.475	8.00 ea	33.00 /mh	1,056	850.00 /ea	6,800		/ea		/ea		7,856	8,321
	PS Epoxy Anchor 5/8 x 5in SS	15060.112	96.00 ea	33.00 /mh	158	25.00 /ea	2,400		/ea		/ea		2,558	2,628
	PS Epoxy for Anchors	15060.112	96.00 ea	33.00 /mh	158	5.00 /ea	480		/ea		/ea		638	708
	PS U-bolt 4 with Nuts 8 SS	15060.526	24.00 ea	33.00 /mh	111	120.00 /ea	2,880		/ea		/ea		2,991	3,040
	NBG Kit 125# SS 8in	15125.012	44.00 ea	33.00 /mh	726	140.00 /ea	6,160		/ea		/ea		6,886	7,205
	Valve Ball Threaded SS 1/2in HV-22312 HV-23337 HV-233327,HV-233347	15110.014	4.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Stainless Steel Nipple sch 40 1/2" X 4" at pumps	15212.010	48.00 ea	33.00 /mh	396	7.00 /ea	336		/ea		/ea		732	906
	Stainless Steel 90 Elbow sch 40 1/2" at pumps	15212.040	8.00 ea	33.00 /mh	53	7.00 /ea	56		/ea		/ea		109	132
	Stainless Steel 90 Elbow sch 40 1/2"	15212.040	4.00 ea	33.00 /mh	26	7.00 /ea	28		/ea		/ea		54	66
	Stainless Steel Nipple sch 40 1/2" X 6"	15212.010	12.00 ea	33.00 /mh	99	9.00 /ea	108		/ea		/ea		207	251
	Valve Ball Threaded SS 1/2in HV-22314, HV-23333,HV23323,HV-23343	15110.014	4.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Valve Ball Threaded SS 1/2in HV-23332, HV-23322, HV-23342, HV-23313	15110.014	4.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Fab Stainless Steel Pipe 304 ss sch 10 - 14" PE cap	15233.505	2.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe 304 ss sch 10 - 14" - 8' PE x PE	15233.505	2.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe 304 ss sch 10 - 14" - 3' PE x PE	15233.505	2.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe 304 ss sch 10 - 14" Tee PE x PE w/ 4" tap w/ flange	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe 304 ss sch 10 - 14" - blind flange w/2" tap	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe 304 ss sch 10 - 14" - 3' PE x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe 304 ss sch 10 - 14" FCA connection	15233.505	2.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Valve Air/Vac Combo 2in MFV-23317	15110.007	1.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	NBG Kit 125# SS 4in	15125.012	1.00 ea	33.00 /mh	17	58.00 /ea	58		/ea		/ea		75	82
	Fab Stainless Steel Pipe - 14" 8' PE x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe - 14" - 90 ell long sweep	15233.505	2.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Fab Stainless Steel Pipe - 14" - 33' to UV disinfectent PE x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Fab Stainless Steel Pipe - 14" 8' F x PE	15233.505	1.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
	Stainless Steel Pipe 1"	15212.005	40.00 lf	33.00 /mh	660	12.00 /lf	480		/lf		/lf		1,140	1,430
	Stainless Steel 90 Elbow 1"	15212.040	16.00 ea	33.00 /mh	264	8.00 /ea	128		/ea		/ea		392	508
	Stainless Steel Nipple 1" x 3"	15212.010	32.00 ea	33.00 /mh	528	20.00 /ea	640		/ea		/ea		1,168	1,400
	Stainless Steel Nipple 1/2" X 2"	15212.010	32.00 ea	33.00 /mh	528	7.00 /ea	224		/ea		/ea		752	984
	Stainless Steel Reducer mpt x fpt 1in x 1/2in	15212.050	8.00 ea	33.00 /mh	132	24.00 /ea	192		/ea		/ea		324	382
	Stainless Steel Union 1"	15212.060	24.00 ea	33.00 /mh	396	25.00 /ea	600		/ea		/ea		996	1,170
	Stainless Steel Reducer mpt x fpt 1/2in x 1/4in	15212.050	4.00 ea	33.00 /mh	66	24.00 /ea	96		/ea		/ea		162	191
	Stainless Steel Pipe 1/4"	15212.005	80.00 lf	33.00 /mh	1,320	6.00 /lf	480		/lf		/lf		1,800	2,381
	Stainless Steel Pipe 1/2"	15212.005	88.00 lf	33.00 /mh	1,452	6.00 /lf	528		/lf		/lf		1,980	2,619
	Stainless Steel 90 Elbow 1/2"	15212.040	8.00 ea	33.00 /mh	132	7.00 /ea	56		/ea		/ea		188	246
	Stainless Steel Bushing mpt x fpt 1/2in x 1/4in	15212.015	4.00 ea	33.00 /mh	66	3.00 /ea	12		/ea		/ea		78	107
	Stainless Steel Pipe sch 40 304 ss 3/4" drain line from	15212.005	24.00 lf	33.00 /mh	396	8.00 /lf	192		/lf		/lf		588	762
	Stainless Steel Nipple 3/4" X 3" drain line	15212.010	4.00 ea	33.00 /mh	66	7.00 /ea	28		/ea		/ea		94	123
	Stainless Steel 90 Elbow 3/4"drain line	15212.040	16.00 ea	33.00 /mh	264	7.00 /ea	112		/ea		/ea		376	492
	Valve Ball Threaded SS 3/4in drain line	15110.014	4.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Fab Stainless Steel Pipe - 2" - for air vac releif	15233.505	15.00 lf	33.00 /mh	495	/lf			/lf		/lf		495	713
	Stainless Steel 90 Elbow 2"	15212.040	6.00 ea	33.00 /mh	99	23.00 /ea	138		/ea		/ea		237	281
	Stainless Steel Union 2"	15212.060	1.00 ea	33.00 /mh	17	250.00 /ea	250		/ea		/ea		267	274
	Stainless Steel Nipple 2" X 3"	15212.010	4.00 ea	33.00 /mh	66	30.00 /ea	120		/ea		/ea		186	215
	Valve Ball Threaded Bronze 1in	15110.014	4.00 ea	33.00 /mh	132	0.01 /ea	0		/ea		/ea		132	190
	Stainless Steel Pipe 1" pipe to basin from blow down	15212.005	40.00 lf	33.00 /mh	660	12.00 /lf	480		/lf		/lf		1,140	1,430
	Stainless Steel 90 Elbow 1" pipe to basin 23M203 key note 3	15212.040	16.00 ea	33.00 /mh	264	8.00 /ea	128		/ea		/ea		392	
	PS Strut SS 1-5/8 x 1-5/8 pipe to basin for drain	15060.476	16.00 lf	33.00 /mh	158	20.00 /lf	320		/lf		/lf		478	
	PS Pipe Strut Clamp SS 1in for drain	15060.486	16.00 ea	33.00 /mh	158	11.00 /ea	176		/ea		/ea		334	

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-553 Fabricated SS piping for Permeater piping 23M203 & 23M405													
	Epoxy Anchor 3/8 x 5in SS 316 for drain	5001.054	32.00 ea	33.00 /mh	53	8.00 /ea	256		/ea		/ea		309	332
	Epoxy for Anchors for drain	5001.050	32.00 ea	33.00 /mh	53	5.00 /ea	160		0.00 /ea	0	/ea		213	236
	40 SLD Aerated Sludge Holding Tank													
	arated sludge hold													
	150-553 stainless steel piping to Aerated sluge holing tankblower line 40M201													
	Fab Stainless Steel Pipe sch 10 316 ss - 8" - 2' F x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 316 ss - 8" - 45 deg ell PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 316 ss - 8" - 5' 6" PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe - 8" - 45 deg ell PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe sch 10 316 ss- 8" - 1' PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Expansion Joint Flanged Rubber 8"	15112.050	1.00 ea	33.00 /mh	132	2,400.00 /ea	2,400		/ea		/ea	2,532	2,590	
	Fab Stainless Steel Pipe sch 10 316 ss - 8" - 19' F x PE	15233.505	1.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Fab Stainless Steel Pipe sch 10 316 ss - 8" - 90 PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe - 8" - 1' PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe - 8" - 90 ell PE x PE	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Fab Stainless Steel Pipe - 8" x 6" ecentric red PE x F	15233.505	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	8" SS romec Coupling	2511.322	1.00 ea	33.00 /mh	66	495.00 /ea	495		/ea		/ea		561	590
	PS Special wall Support for 8in SS Pipe -M133	15060.475	4.00 ea	33.00 /mh	528	850.00 /ea	3,400		/ea		/ea	3,928	4,160	
	PS Expansion Anchor 5/8 x 5in SS	15060.127	15.00 ea	33.00 /mh	50	25.00 /ea	375		/ea		/ea		425	446
	PS Special floor Support for 8in SS Pipe - M132	15060.475	1.00 ea	33.00 /mh	132	850.00 /ea	850		/ea		/ea		982	1,040
	Insulation Subcontractor 40M201	15403.100	1.00 ls	/ls		/ls			/ls		/ls			
	Heat Trace 40M201	16000.001	1.00 ls	/ls		/ls			/ls		/ls			
	NBG Kit 125# SS 8in	15125.012	4.00 ea	33.00 /mh	132	140.00 /ea	560		/ea		/ea		692	750
	400531 Plastic Process Pipe													
	01 CIV Civil													
	Yard Pipe Yard Pipe													
	02605- Addendum 4 Yard Pipe Cleanouts													
	DI MJ Compact Wye 4	2511.328	1.00 ea	33.00 /mh	33	326.00 /ea	326		/ea		/ea		359	374
	DI MJ Std Wgt 45 4	2511.214	34.00 ea	33.00 /mh	1,122	265.00 /ea	9,010		/ea		/ea	10,132	10,626	
	PVC C-900 Pipe 4 DR 25	2336.310	240.00 lf	33.00 /mh	792	8.00 /lf	2,016		/lf		/lf	2,808	3,156	
	DI Pipe 4in. dia FxPE - 6ft. 0in.	15221.030	12.00 ea	33.00 /mh	792	540.00 /ea	6,480		/ea		/ea	7,272	7,620	
	DI Blind Flange 4" with 1" tap	15221.405	12.00 ea	33.00 /mh	396	250.00 /ea	3,000		/ea		/ea	3,396	3,570	
	Stainless Steel Nipple 1" x 4"	15212.010	24.00 ea	33.00 /mh	396	20.00 /ea	480		/ea		/ea	876	1,050	
	Valve - Plug Threaded 1"	2519.160	12.00 ea	33.00 /mh	198	150.00 /ea	1,800		/ea		/ea	1,998	2,085	
	Hose Adapter SS 3/4 FIP X female Swivel	15220.110	12.00 ea	33.00 /mh	99	64.00 /ea	768		/ea		/ea	867	911	
	PVC Sch 80 Pipe 4	2336.110	48.00 lf	33.00 /mh	333	10.00 /lf	504		/lf		/lf	837	983	
	Pressurized Clean out cover (ask abe on Vault)	2327.040	12.00 ea	33.00 /mh	2,376	0.01 /ea	0		/ea		/ea	2,376	3,422	
	NBG Kit 125# SS 4in with full face gasket	15125.012	12.00 ea	33.00 /mh	198	58.00 /ea	696		/ea		/ea	894	981	
	3000 psi Thrust Block Concrete	3310.105	14.00 cy	33.00 /mh	924	278.00 /cy	4,087		/cy		/cy	5,011	5,417	
	Clean Rock 3/4"	2305.050	6.00 cy	/cy		36.00 /ton	350		/cy		/cy	350	350	
	DI MJ Std Wgt Wye 12x4 restrained	2511.228	3.00 ea	33.00 /mh	198	1,500.00 /ea	4,500		/ea		/ea	4,698	4,785	
	DI MJ Std Wgt Wye 8x4 restrained	2511.228	3.00 ea	33.00 /mh	149	800.00 /ea	2,400		/ea		/ea	2,549	2,614	
	DI MJ Std Wgt Wye 6x4 restrained	2511.228	5.00 ea	33.00 /mh	165	550.00 /ea	2,750		/ea		/ea	2,915	2,988	
	DI MJ Compact Tee 24 restrained	2511.324	2.00 ea	33.00 /mh	330	6,697.00 /ea	13,394		/ea		/ea	13,724	13,869	
	DI MJ Compact Red 24x12 restrained	2511.320	2.00 ea	33.00 /mh	198	2,200.00 /ea	4,400		/ea		/ea	4,598	4,685	
	DI MJ Compact Red 12x4 restrained	2511.320	4.00 ea	33.00 /mh	396	520.00 /ea	2,080		/ea		/ea	2,476	2,650	
	DI MJ Std Wgt Wye 24x12 restrained (dan confirm kepner better)	2511.228	2.00 ea	33.00 /mh	330	18,500.00 /ea	37,000		/ea		/ea	37,330	37,475	
	Tracer Wire Riser Box	2333.080	17.00 ea	33.00 /mh	561	100.00 /ea	1,700		/ea		/ea	2,261	2,508	
	Cast Iron Valve Box top	2519.130	7.00 ea	33.00 /mh	58	350.00 /ea	2,450		/ea		/ea	2,508	2,533	
	Concrete Pad at Valve Box	2333.100	7.00 ea	33.00 /mh	462	50.00 /ea	350		/ea		/ea	812	1,015	
	02605- Addendum 4 Chem Vault Changes													
	Gooseneck Vent at chem vault 4" Galv	15212.005	1.00 ea	33.00 /mh	132	350.00 /ea	350		/ea		/ea	482	540	
	SS Pipe Support in Chem Vault	15060.475	1.00 ea	33.00 /mh	132	125.00 /ea	125		/ea		/ea	257	315	
	Piping for Leak detection	15211.203	1.00 ea	33.00 /mh	66	250.00 /ea	250		/ea		/ea	316	345	
	02605- Addendum #4 IPS Emergency Connection													
	DI MJ Std Wgt Tee 6 restrained	2511.224	1.00 ea	33.00 /mh	33	520.00 /ea	520		/ea		/ea	553	568	
	Valve - Plug MJ 6"	2519.160	1.00 ea	33.00 /mh	66	2,000.00 /ea	2,000		/ea		/ea	2,066	2,095	
	Valve Stem Extension 6'	2519.100	1.00 ea	33.00 /mh	33	150.00 /ea	150		/ea		/ea	183	198	
	Valve Box Assembly 6' Bury	2519.130	1.00 ea	33.00 /mh	99	320.00 /ea	320		/ea		/ea	419	463	
	Concrete Pad at Valve Box	2333.100	1.00 ea	33.00 /mh	66	50.00 /ea	50		/ea		/ea	116	145	
	Concrete Block for valve	2333.100	1.00 ea	33.00 /mh	66	50.00 /ea	50		/ea		/ea	116	145	
	DI MJ Std Wgt 45 6 restrained	2511.214	2.00 ea	33.00 /mh	66	471.00 /ea	942		/ea		/ea	1,008	1,037	
	PVC C-900 Pipe 6 DR 25	2336.310	20.00 lf	33.00 /mh	66	16.50 /lf	347		/lf		/lf	413	442	
	DI Pipe 6in. dia FxPE - 9ft. 0in.	15221.030	1.00 ea	33.00 /mh	99	900.00 /ea	900		/ea		/ea	999	1,043	
	DI Flanged Con Red 6x4" restrained	15221.445	1.00 ea	33.00 /mh	33	250.00 /ea	250		/ea		/ea	283	298	
	Camlock Adapter SS Male x Flange	15220.600	1.00 ea	33.00 /mh	17	550.00 /ea	550		/ea		/ea	567	574	
	Camlock Adapter SS Female Cap	15220.600	1.00 ea	33.00 /mh	17	550.00 /ea	550		/ea		/ea	567	574	
	NBG Kit 125# Steel 6in	15125.010	2.00 ea	33.00 /mh	33	16.00 /ea	32		/ea		/ea	65	80	
	NBG Kit 125# Steel 4in	15125.010	1.00 ea	33.00 /mh	17	20.00 /ea	20		/ea		/ea	37	44	
	02605-2 24" Central Interceptor Raw Influent Line (MH A to MH 4)													
	Trench Excavtion 6- 8'	2333.010	800.00 lf	33.00 /mh	5,280	/lf			/lf		/lf	5,280	7,603	
	Trench Backfill 6- 8'	2333.020	800.00 lf	33.00 /mh	7,920	/lf			/lf		/lf	7,920	11,405	
	Trench Box 8' Deep	2333.030	800.00 lf	/lf		/lf			/lf		9.00 /lf	7,200	7,200	
	Utility Bedding Peastone	2305.200	474.07 cy	/cy		25.00 /ton	18,963		/cy		/cy	18,963	18,963	
	Spoils to Waste	2333.060	474.07 cy	33.00 /mh	1,564	/cy			/cy		/cy	1,564	2,253	
	PVC C-900 Pipe 24 DR-25	2336.310	800.00 lf	33.00 /mh	6,600	225.00 /lf	189,000		/lf		/lf	195,600	198,504	
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.39 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	12,788	3,500.00 /Mnth	4,865	17,653	17,653
	John Deere 624 Loader (172 HP) (M)	1900.132	1.39 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	8,340	3,000.00 /Mnth	4,170	12,510	12,510
	Water Truck, 4,000 Gallon (L)	1900.210	1.39 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	6,672	1,200.00 /Mnth	1,668	8,340	8,340
	Mikasa Jumping Jack Compactor (L)	1900.138	1.39 Mnth	/Mnth		/Mnth			200.00 /Mnth	278	100.00 /Mnth	139	417	417

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02605-2 24" Central Interceptor Raw Influent Line (MH A to MH 4)													
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	1.39 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	3,475	500.00 /Mnth	695	4,170	4,170
	Tracer Wire	2333.080	850.00 lf	33.00 /mh	561	0.40 /lf	374		/lf				935	1,182
	Warning Tape Detectable	2333.080	800.00 lf	33.00 /mh	528	0.08 /lf	64		/lf		/lf		592	824
	Polybag 24" and smaller	2333.090	296.00 lf	33.00 /mh	195	2.00 /lf	651		/lf		/lf		847	933
	Pot Hole Existing	2333.010	2.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Cross Existing	2333.010	1.00 ea	33.00 /mh	132	100.00 /ea	100		/ea		/ea		232	290
	Cut Existing	2333.010	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Tie to Existing	2333.010	1.00 ea	33.00 /mh	264	50.00 /ea	50		/ea		/ea		314	430
	Plug Existing	2333.010	1.00 ea	33.00 /mh	132	50.00 /ea	50		/ea		/ea		182	240
	Support Existing	2333.010	1.00 ea	33.00 /mh	132	1,500.00 /ea	1,500		/ea		/ea		1,632	1,690
	Warning Tape Detectable	2333.080	1,600.00 lf	33.00 /mh	1,056	0.08 /lf	128		/lf		/lf		1,184	1,649
	Tracer Wire	2333.080	1,600.00 lf	33.00 /mh	1,056	0.40 /lf	704		/lf		/lf		1,760	2,225
	Tracer Wire Test Box	2333.080	6.00 ea	33.00 /mh	1,188	100.00 /ea	600		/ea		/ea		1,788	2,311
	24 Bell Restrainer F/C900	2336.380	37.00 ea	33.00 /mh	3,663	2,700.00 /ea	99,900		/ea		/ea		103,563	105,175
	Demo Existing Pipe at Tie In	2220.605	1.00 ls	33.00 /mh	792	/ls			/ls		/ls		792	1,140
	Remodel Invert of Existing MH A	2327.510	1.00 ea	33.00 /mh	792	250.00 /ea	250		/ch		/ea		1,042	1,390
	Core Drilled Hole - 28 x 8"	15122.100	1.00 ea	33.00 /mh	66	0.01 /ea	0	2,800	/ea		/ea		2,866	2,895
	Grout Pipe in Manhole 24"	2327.090	1.00 ea	33.00 /mh	132	75.00 /ea	75		/ea		/ea		207	265
	Link Seal Size LS-425-S	15123.100	23.00 ea	33.00 /mh	114	23.00 /ea	529		/ea		/ea		643	693
	Work In Railroad Easment	5650.100	1.00 ls	/ls		/ls			/ls		/ls			
	Overhead Power Line	5650.100	1.00 ls	/ls		/ls			/ls		0.00 /ls	0		
	Testing - Mandrel	1166.100	1.00 ls	/ls		/ls			/ls		850.00 /ls	850	850	850
	Testing Pressure & Leak - Piping	1166.100	3.00 ea	33.00 /mh	792	50.00 /ea	150		50.00 /ea	150	/ea		1,092	1,440
	24" Blow up Plugs for Testing	2240.150	2.00 ea	33.00 /mh	66	0.00 /ea	0		1,500.00 /ea	3,000	/ea		3,066	3,095
	Protect Existing MH at Tie In	2250.040	1.00 ls	33.00 /mh	33	/ls			/mh		/ls		33	48
	Poly Tape	2333.090	10.00 roll	/roll		7.50 /roll	83		/roll		/roll		83	83
	Quart of Gasket Lubricant	15150.035	10.00 ea	33.00 /mh		8.00 /ea	80		/ea		/ea		80	80
	Grout Pipe in Manhole 24"	2327.090	3.00 ea	33.00 /mh	297	75.00 /ea	225		/ea		/ea		522	653
	John Deere 624 Loader (172 HP) (M)	1900.132	1.39 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	8,340	3,000.00 /Mnth	4,170	12,510	12,510
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	1.39 Mnth	/Mnth		/Mnth			3,900.00 /Mnth	5,421	1,650.00 /Mnth	2,294	7,715	7,715
	02605-2 30" Combined Influent to Headworks (MH4 - Headworks)													
	Testing Pressure & Leak - Piping	1166.100	4.00 ea	33.00 /mh	1,056	50.00 /ea	200		50.00 /ea	200	/ea		1,456	1,921
	Trench Excavtion 6- 8'	2333.010	120.00 lf	33.00 /mh	792	/lf			/lf		/lf		792	1,140
	Trench Backfill 6- 8'	2333.020	120.00 lf	33.00 /mh	1,188	/lf			/lf		/lf		1,188	1,711
	Utility Bedding Peastone	2305.200	90.00 cy	/cy		25.00 /ton	3,600		/cy		/cy		3,600	3,600
	Spoils to Waste	2333.060	90.00 cy	33.00 /mh	297	/cy			/cy		/cy		297	428
	PVC C-900 Pipe 30 DR-25	2336.310	120.00 lf	33.00 /mh	1,109	350.00 /lf	44,100		/lf		/lf		45,209	45,697
	DI RJ Compact Solid Sleeve 30	2511.522	2.00 ea	33.00 /mh	792	7,200.00 /ea	14,400		/ea		/ea		15,192	15,540
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.34 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	3,128	3,500.00 /Mnth	1,190	4,318	4,318
	John Deere 624 Loader (172 HP) (M)	1900.132	0.34 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	2,040	3,000.00 /Mnth	1,020	3,060	3,060
	Water Truck, 4,000 Gallon (L)	1900.210	0.34 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	1,632	1,200.00 /Mnth	408	2,040	2,040
	Mikasa Jumping Jack Compactor (L)	1900.138	0.34 Mnth	/Mnth		/Mnth			200.00 /Mnth	68	100.00 /Mnth	34	102	102
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.34 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	850	500.00 /Mnth	170	1,020	1,020
	Tracer Wire	2333.080	160.00 lf	33.00 /mh	106	0.40 /lf	70		/lf		/lf		176	222
	Warning Tape Detectable	2333.080	120.00 lf	33.00 /mh	79	0.08 /lf	10		/lf		/lf		89	124
	Polybag 30" and smaller	2333.090	50.00 lf	33.00 /mh	33	2.50 /lf	138		/lf		/lf		171	185
	Pot Hole Existing	2333.010	2.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Cross Existing	2333.010	2.00 ea	33.00 /mh	264	100.00 /ea	200		/ea		/ea		464	580
	Support Existing	2333.010	2.00 ea	33.00 /mh	264	50.00 /ea	100		/ea		/ea		364	480
	Tracer Wire Test Box	2333.080	6.00 ea	33.00 /mh	1,188	100.00 /ea	600		/ea		/ea		1,788	2,311
	ReRoute Existing Electrical??	2333.010	1.00 ls	33.00 /mh	528	1,500.00 /ls	1,500		/ls		/ls		2,028	2,260
	ReRoute Existing 2" Forcemain??	2333.010	1.00 ls	33.00 /mh	528	500.00 /ls	500		/ls		/ls		1,028	1,260
	30 Bell Restrainer F/C900	2336.380	4.00 ea	33.00 /mh	528	4,200.00 /ea	16,800		/ea		/ea		17,328	17,560
	Testing - Mandrel	1166.100	1.00 ls	/ls		/ls			/ls		850.00 /ls	850	850	850
	30" Blow Up Plugs For Testing	2240.150	2.00 ea	33.00 /mh	66	0.00 /ea	0		1,500.00 /ea	3,000	/ea		3,066	3,095
	Poly Tape	2333.090	2.00 roll	/roll		7.50 /roll	17		/roll		/roll		17	17
	Quart of Gasket Lubricant	15150.035	2.00 ea	33.00 /mh		8.00 /ea	16		/ea		/ea		16	16
	DI Pipe Push - Class 150 30	2511.101	40.00 lf	33.00 /mh	370	230.00 /lf	9,292		/lf		/lf		9,662	9,824
	DI RJ Compact 45 30	2511.514	2.00 ea	33.00 /mh	792	7,800.00 /ea	15,600		/ea		/ea		16,392	16,740
	DI Wall Pipe FLG x PE w/ Weep Ring & Tapped Holes 30in x 1ft 0in long	15221.380	1.00 ea	33.00 /mh	528	5,000.00 /ea	5,000		/ea		/ea		5,528	5,760
	NBG Kit 125# 316SS 30in w/ FF EPDM Gasket	15125.012	1.00 ea	33.00 /mh	132	1,950.00 /ea	1,950		/ea		/ea		2,082	2,140
	Grout Pipe in Manhole 30"	2327.090	5.00 ea	33.00 /mh	990	100.00 /ea	500		/ea		/ea		1,490	1,926
	02605-2 12" North Interceptor (IPS to MH4)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 6- 8'	2333.010	660.00 lf	33.00 /mh	3,267	/lf			/lf		/lf		3,267	4,704
	Trench Backfill 6- 8'	2333.020	660.00 lf	33.00 /mh	4,356	/lf			/lf		/lf		4,356	6,273
	Trench Box 8' Deep	2333.030	660.00 lf	/lf		/lf			/lf		9.00 /lf	5,940	5,940	5,940
	Utility Bedding Peastone	2305.200	220.00 cy	/cy		25.00 /ton	8,800		/cy		/cy		8,800	8,800
	Spoils to Waste	2333.060	220.00 cy	33.00 /mh	726	/cy			/cy		/cy		726	1,045
	PVC C-900 Pipe 12 DR-25	2336.310	660.00 lf	33.00 /mh	2,614	57.00 /lf	39,501		/lf		/lf		42,115	43,265
	DI RJ Compact 90 12	2511.514	2.00 ea	33.00 /mh	198	930.00 /ea	1,860		/ea		/ea		2,058	2,145
	DI RJ Compact 45 12	2511.514	4.00 ea	33.00 /mh	396	850.00 /ea	3,400		/ea		/ea		3,796	3,970
	DI RJ Compact 22-½ 12	2511.514	4.00 ea	33.00 /mh	396	800.00 /ea	3,200		/ea		/ea		3,596	3,770
	DI RJ Compact Solid Sleeve Short 12	2511.523	3.00 ea	33.00 /mh	297	800.00 /ea	2,400		/ea		/ea		2,697	2,828
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.70 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	6,440	3,500.00 /Mnth	2,450	8,890	8,890
	John Deere 624 Loader (172 HP) (M)	1900.132	0.70 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	4,200	3,000.00 /Mnth	2,100	6,300	6,300
	Water Truck, 4,000 Gallon (L)	1900.210	0.70 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	3,360	1,200.00 /Mnth	840	4,200	4,200
	Mikasa Jumping Jack Compactor (L)	1900.138	0.70 Mnth	/Mnth		/Mnth			200.00 /Mnth	140	100.00 /Mnth	70	210	210
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.70 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	1,750	500.00 /Mnth	350	2,100	2,100
	Tracer Wire	2333.080	680.00 lf	33.00 /mh	449	0.40 /lf	299		/lf		/lf		748	
	Warning Tape Detectable	2333.080	660.00 lf	33.00 /mh	436	0.08 /lf	53		/lf		/lf		488	
	Polybag 12" and Smaller	2333.090	200.00 lf	33.00 /mh	66	1.00 /lf	220		/lf		/lf		286	

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02605-2 12" North Interceptor (IPS to MH4)													
	Pot Hole Existing	2333.010	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Cross Existing	2333.010	1.00 ea	33.00 /mh	132	100.00 /ea	100		/ea		/ea		232	290
	Support Existing	2333.010	1.00 ea	33.00 /mh	132	50.00 /ea	50		/ea		/ea		182	240
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	12 Bell Restrainer F/C900	2336.380	33.00 ea	33.00 /mh	2,178	500.00 /ea	16,500		/ea		/ea	18,678	19,636	
	DI Pipe 12in. dia FxPE - 6ft. 8in.	15221.030	1.00 ea	33.00 /mh	99	1,730.00 /ea	1,730		/ea		/ea		1,829	1,873
	DI Pipe 12in. dia FxPE - 4ft. 0in.	15221.030	1.00 ea	33.00 /mh	66	1,150.00 /ea	1,150		/ea		/ea		1,216	1,245
	DI Flanged Tee 12"	15221.455	1.00 ea	33.00 /mh	99	2,000.00 /ea	2,000		/ea		/ea		2,099	2,143
	Link Seal Size LS-360-S	15123.100	21.00 ea	33.00 /mh	104	23.00 /ea	483		/ea		/ea		587	633
	DI Blind Flange 12" w/ 2" Tap for Testing	15221.405	2.00 ea	33.00 /mh	132	475.00 /ea	950		/ea		/ea	1,082	1,140	
	Grout Pipe in Manhole 12"	2327.090	1.00 ea	33.00 /mh	99	50.00 /ea	50		/ea		/ea		149	193
	Poly Tape	2333.090	6.00 roll	/roll		7.50 /roll	50		/roll		/roll		50	50
	Quart of Gasket Lubricant	15150.035	6.00 ea	33.00 /mh		8.00 /ea	48		/ea		/ea		48	48
	02605-2 8" North Interceptor (IPS to MH4)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 6- 8'	2333.010	660.00 lf	33.00 /mh	3,267	/lf			/lf		/lf		3,267	4,704
	Trench Backfill 6- 8'	2333.020	660.00 lf	33.00 /mh	4,356	/lf			/lf		/lf		4,356	6,273
	Trench Box 8' Deep	2333.030	660.00 lf	/lf		/lf			/lf		9.00 /lf	5,940	5,940	5,940
	Utility Bedding Peastone	2305.200	220.00 cy	/cy		25.00 /ton	8,800		/cy		/cy		8,800	8,800
	Spoils to Waste	2333.060	220.00 cy	33.00 /mh	726	/cy			/cy		/cy		726	1,045
	PVC C-900 Pipe 8 DR-25	2336.310	660.00 lf	33.00 /mh	2,396	27.50 /lf	19,058		/lf		/lf		21,453	22,507
	DI RJ Compact 90 8	2511.514	1.00 ea	33.00 /mh	66	520.00 /ea	520		/ea		/ea		586	615
	DI RJ Compact 45 8	2511.514	4.00 ea	33.00 /mh	264	480.00 /ea	1,920		/ea		/ea		2,184	2,300
	DI RJ Compact 22-½ 8	2511.514	4.00 ea	33.00 /mh	264	480.00 /ea	1,920		/ea		/ea		2,184	2,300
	DI RJ Compact Tee 8	2511.524	1.00 ea	33.00 /mh	66	780.00 /ea	780		/ea		/ea		846	875
	DI RJ Compact Solid Sleeve Short 8	2511.523	3.00 ea	33.00 /mh	198	500.00 /ea	1,500		/ea		/ea		1,698	1,785
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.52 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	4,784	3,500.00 /Mnth	1,820	6,604	6,604
	John Deere 624 Loader (172 HP) (M)	1900.132	0.52 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	3,120	3,000.00 /Mnth	1,560	4,680	4,680
	Water Truck, 4,000 Gallon (L)	1900.210	0.52 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	2,496	1,200.00 /Mnth	624	3,120	3,120
	Mikasa Jumping Jack Compactor (L)	1900.138	0.52 Mnth	/Mnth		/Mnth			200.00 /Mnth	104	100.00 /Mnth	52	156	156
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.52 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	1,300	500.00 /Mnth	260	1,560	1,560
	Tracer Wire	2333.080	680.00 lf	33.00 /mh	449	0.40 /lf	299		/lf		/lf		748	945
	Warning Tape Detectable	2333.080	660.00 lf	33.00 /mh	436	0.08 /lf	53		/lf		/lf		488	680
	Polybag 12" and Smaller	2333.090	200.00 lf	33.00 /mh	66	1.00 /lf	220		/lf		/lf		286	315
	Pot Hole Existing	2333.010	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Cross Existing	2333.010	1.00 ea	33.00 /mh	132	100.00 /ea	100		/ea		/ea		232	290
	Support Existing	2333.010	1.00 ea	33.00 /mh	66	50.00 /ea	50		/ea		/ea		116	145
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	Valve - Plug MJ 8"	2519.160	1.00 ea	33.00 /mh	66	2,900.00 /ea	2,900		/ea		/ea		2,966	2,995
	Valve Box Assembly 6' Bury	2519.130	1.00 ea	33.00 /mh	99	320.00 /ea	320		/ea		/ea		419	463
	Conc Block for Valve	2519.100	1.00 ea	33.00 /mh	33	50.00 /ea	50		/ea		/ea		83	98
	Conc Pad for Valve Box	2519.100	1.00 ea	33.00 /mh	66	75.00 /ea	75		/ea		/ea		141	170
	Valve Stem Extension	2519.100	1.00 ea	33.00 /mh	33	150.00 /ea	150		/ea		/ea		183	198
	8 Bell Restrainer F/C900	2336.380	33.00 ea	33.00 /mh	1,089	260.00 /ea	8,580		/ea		/ea	9,669	10,148	
	DI Pipe 8in. dia FxPE - 6ft. 8in.	15221.030	1.00 ea	33.00 /mh	99	1,000.00 /ea	1,000		/ea		/ea		1,099	1,143
	DI Pipe 8in. dia FxPE - 4ft. 0in.	15221.030	1.00 ea	33.00 /mh	66	800.00 /ea	800		/ea		/ea		866	895
	DI Flanged Tee 8"	15221.455	1.00 ea	33.00 /mh	66	650.00 /ea	650		/ea		/ea		716	745
	Link Seal Size LS-400-S	15123.100	9.00 ea	33.00 /mh	45	23.00 /ea	207		/ea		/ea		252	271
	DI Blind Flange 8" w/ 2" Tap for Testing	15221.405	2.00 ea	33.00 /mh	99	260.00 /ea	520		/ea		/ea		619	663
	Grout Pipe in Manhole 8"	2327.090	1.00 ea	33.00 /mh	33	25.00 /ea	25		/ea		/ea		58	73
	Poly Tape	2333.090	6.00 roll	/roll		7.50 /roll	50		/roll		/roll		50	50
	Quart of Gasket Lubricant	15150.035	6.00 ea	33.00 /mh		8.00 /ea	48		/ea		/ea		48	48
	02605-2 4" Temp North Interceptor Line													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 6- 8'	2333.010	800.00 lf	33.00 /mh	3,960	/lf			/lf		/lf		3,960	5,702
	Trench Backfill 6- 8'	2333.020	800.00 lf	33.00 /mh	5,280	/lf			/lf		/lf		5,280	7,603
	Utility Bedding Peastone	2305.200	133.33 cy	/cy		25.00 /ton	5,333		/cy		/cy		5,333	5,333
	Spoils to Waste	2333.060	133.33 cy	33.00 /mh	440	/cy			/cy		/cy		440	634
	PVC C-900 Pipe 4 DR-25	2336.310	420.00 lf	33.00 /mh	1,247	8.00 /lf	3,528		/lf		/lf	4,775	5,324	
	DI RJ Compact 45 4	2511.514	4.00 ea	33.00 /mh	264	250.00 /ea	1,000		/ea		/ea		1,264	1,380
	DI RJ Compact 11-¼ 4	2511.514	2.00 ea	33.00 /mh	132	235.00 /ea	470		/ea		/ea		602	660
	DI RJ Compact Red 8x4	2511.520	1.00 ea	33.00 /mh	66	350.00 /ea	350		/ea		/ea		416	445
	DI RJ Compact Cap 4	2511.510	1.00 ea	33.00 /mh	33	115.00 /ea	115		/ea		/ea		148	163
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.47 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	4,324	3,500.00 /Mnth	1,645	5,969	5,969
	John Deere 624 Loader (172 HP) (M)	1900.132	0.47 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	2,820	3,000.00 /Mnth	1,410	4,230	4,230
	Water Truck, 4,000 Gallon (L)	1900.210	0.47 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	2,256	1,200.00 /Mnth	564	2,820	2,820
	Mikasa Jumping Jack Compactor (L)	1900.138	0.47 Mnth	/Mnth		/Mnth			200.00 /Mnth	94	100.00 /Mnth	47	141	141
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.47 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	1,175	500.00 /Mnth	235	1,410	1,410
	Tracer Wire	2333.080	412.00 lf	33.00 /mh	272	0.40 /lf	181		/lf		/lf		453	573
	Warning Tape Detectable	2333.080	400.00 lf	33.00 /mh	264	0.08 /lf	32		/lf		/lf		296	412
	Polybag 12" and Smaller	2333.090	20.00 lf	33.00 /mh	7	1.00 /lf	22		/lf		/lf		29	32
	Pot Hole Existing	2333.010	2.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Cross Existing	2333.010	2.00 ea	33.00 /mh	132	100.00 /ea	200		/ea		/ea		332	390
	Tie to Existing Lagoon	2333.010	1.00 ea	33.00 /mh	264	50.00 /ea	50		/ea		/ea		314	430
	Valve - Plug MJ 4"	2519.160	1.00 ea	33.00 /mh	66	2,000.00 /ea	2,000		/ea		/ea	2,066	2,095	
	Valve Box Assembly 6' Bury	2519.130	1.00 ea	33.00 /mh	99	320.00 /ea	320		/ea		/ea		419	463
	Conc Block for Valve	2519.100	1.00 ea	33.00 /mh	33	50.00 /ea	50		/ea		/ea		83	98
	Conc Pad for Valve Box	2519.100	1.00 ea	33.00 /mh	66	75.00 /ea	75		/ea		/ea		141	170
	Valve Stem Extension	2519.100	1.00 ea	33.00 /mh	33	150.00 /ea	150		/ea		/ea		183	198
	4 Bell Restrainer F/C900	2336.380	21.00 ea	33.00 /mh	693	150.00 /ea	3,150		/ea		/ea		3,843	4,000
	Demo Pipe 4" and Fittings	2220.605	420.00 lf	33.00 /mh	693	/lf			/lf		/lf		693	
	Poly Tape	2333.090	4.00 roll	/roll		7.50 /roll	33		/roll		/roll		33	

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02605-2 4" Temp North Interceptor Line													
	Quart of Gasket Lubricant	15150.035	4.00 ea	33.00 /mh		8.00 /ea	32		/ea		/ea		32	32
	02605-2 24" SCN (Headworks to Secondary Splitter)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 16-18'	2333.010	240.00 lf	33.00 /mh	2,059	/lf			/lf		/lf		2,059	2,965
	Trench Backfill 16-18'	2333.020	240.00 lf	33.00 /mh	2,772	/lf			/lf		/lf		2,772	3,992
	Utility Bedding Peastone	2305.200	142.22 cy	/cy		25.00 /ton	5,689		/cy		/cy		5,689	5,689
	Spoils to Waste	2333.060	142.22 cy	33.00 /mh	469	/cy			/cy		/cy		469	676
	PVC C-900 Pipe 24 DR-25	2336.310	240.00 lf	33.00 /mh	1,980	225.00 /lf	56,700		/lf		/lf		58,680	59,551
	DI RJ Compact 90 24	2511.514	1.00 ea	33.00 /mh	264	4,000.00 /ea	4,000		/ea		/ea		4,264	4,380
	DI RJ Compact 45 24	2511.514	3.00 ea	33.00 /mh	792	3,100.00 /ea	9,300		/ea		/ea		10,092	10,440
	DI RJ Compact 11-¼ 24	2511.514	2.00 ea	33.00 /mh	528	2,900.00 /ea	5,800		/ea		/ea		6,328	6,560
	DI RJ Compact Eccentric Red 30x24	2511.520	1.00 ea	33.00 /mh	264	5,000.00 /ea	5,000		/ea		/ea		5,264	5,380
	DI RJ Compact Solid Sleeve 24	2511.522	4.00 ea	33.00 /mh	1,056	2,850.00 /ea	11,400		/ea		/ea		12,456	12,921
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.56 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	5,152	3,500.00 /Mnth	1,960	7,112	7,112
	John Deere 624 Loader (172 HP) (M)	1900.132	0.56 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	3,360	3,000.00 /Mnth	1,680	5,040	5,040
	Water Truck, 4,000 Gallon (L)	1900.210	0.56 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	2,688	1,200.00 /Mnth	672	3,360	3,360
	Mikasa Jumping Jack Compactor (L)	1900.138	0.56 Mnth	/Mnth		/Mnth			200.00 /Mnth	112	100.00 /Mnth	56	168	168
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.56 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	1,400	500.00 /Mnth	280	1,680	1,680
	Tracer Wire	2333.080	260.00 lf	33.00 /mh	172	0.40 /lf	114		/lf		/lf		286	362
	Warning Tape Detectable	2333.080	240.00 lf	33.00 /mh	158	0.08 /lf	19		/lf		/lf		178	247
	Polybag 24" and smaller	2333.090	150.00 lf	33.00 /mh	99	2.00 /lf	330		/lf		/lf		429	473
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	24 Bell Restrainer F/C900	2336.380	12.00 ea	33.00 /mh	1,188	2,700.00 /ea	32,400		/ea		/ea		33,588	34,111
	DI Wall Pipe FLG x PE w/ Weep Ring & Tapped Holes 30in x 1ft 0in long	15221.380	1.00 ea	33.00 /mh	528	5,000.00 /ea	5,000		/ea		/ea		5,528	5,760
	DI Pipe 30in. dia FxPE - 8ft. 0in.	15221.030	1.00 ea	33.00 /mh	264	7,000.00 /ea	7,000		/ea		/ea		7,264	7,380
	NBG Kit 125# 316SS 30in w/ FF EPDM Gasket	15125.012	1.00 ea	33.00 /mh	132	1,950.00 /ea	1,950		/ea		/ea		2,082	2,140
	DI Pipe Push - Class 200 24	2511.101	20.00 lf	33.00 /mh	165	135.00 /lf	2,727		/lf		/lf		2,892	2,965
	DI Wall Pipe PE x PE w/ Weep Ring 24in x 6ft 0in long	15221.348	1.00 ea	33.00 /mh	528	3,600.00 /ea	3,600		/ea		/ea		4,128	4,360
	Poly Tape	2333.090	3.00 roll	/roll		7.50 /roll	25		/roll		/roll		25	25
	Quart of Gasket Lubricant	15150.035	3.00 ea	33.00 /mh		8.00 /ea	24		/ea		/ea		24	24
	DI MJ Compact Cap 24 w/ 2" Tap for Testing	2511.310	1.00 ea	33.00 /mh	198	1,714.00 /ea	1,714		/ea		/ea		1,912	1,999
	DI MJ Plug 30 w/ 2" Tap for Testing	2511.218	1.00 ea	33.00 /mh	264	3,500.00 /ea	3,500		/ea		/ea		3,764	3,880
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			
	Trench Stabilization Rock	2305.050	36.00 cy	/cy		36.00 /ton	2,430		/cy		/cy		2,430	2,430
	02605-2 20" SCN (Headworks to EQ Basin)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 8-10'	2333.010	160.00 lf	33.00 /mh	845	/lf			/lf		/lf		845	1,217
	Trench Backfill 8-10'	2333.020	160.00 lf	33.00 /mh	1,109	/lf			/lf		/lf		1,109	1,597
	Utility Bedding Peastone	2305.200	94.82 cy	/cy		25.00 /ton	3,793		/cy		/cy		3,793	3,793
	Spoils to Waste	2333.060	94.82 cy	33.00 /mh	313	/cy			/cy		/cy		313	451
	PVC C-900 Pipe 20 DR-25	2336.310	160.00 lf	33.00 /mh	1,162	155.00 /lf	26,040		/lf		/lf		27,202	27,713
	DI RJ Compact 90 20	2511.514	1.00 ea	33.00 /mh	165	3,000.00 /ea	3,000		/ea		/ea		3,165	3,238
	DI RJ Compact 45 20	2511.514	2.00 ea	33.00 /mh	330	2,300.00 /ea	4,600		/ea		/ea		4,930	5,075
	DI RJ Compact 11-¼ 20	2511.514	2.00 ea	33.00 /mh	330	2,300.00 /ea	4,600		/ea		/ea		4,930	5,075
	DI RJ Compact Eccentric Red 30x20	2511.520	1.00 ea	33.00 /mh	165	5,500.00 /ea	5,500		/ea		/ea		5,665	5,738
	DI RJ Compact Solid Sleeve 20	2511.522	4.00 ea	33.00 /mh	660	2,300.00 /ea	9,200		/ea		/ea		9,860	10,150
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.30 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,760	3,500.00 /Mnth	1,050	3,810	3,810
	John Deere 624 Loader (172 HP) (M)	1900.132	0.30 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	1,800	3,000.00 /Mnth	900	2,700	2,700
	Water Truck, 4,000 Gallon (L)	1900.210	0.30 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	1,440	1,200.00 /Mnth	360	1,800	1,800
	Mikasa Jumping Jack Compactor (L)	1900.138	0.30 Mnth	/Mnth		/Mnth			200.00 /Mnth	60	100.00 /Mnth	30	90	90
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.30 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	750	500.00 /Mnth	150	900	900
	Tracer Wire	2333.080	180.00 lf	33.00 /mh	119	0.40 /lf	79		/lf		/lf		198	250
	Warning Tape Detectable	2333.080	160.00 lf	33.00 /mh	106	0.08 /lf	13		/lf		/lf		118	165
	Polybag 24" and smaller	2333.090	100.00 lf	33.00 /mh	33	2.00 /lf	220		/lf		/lf		253	268
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	20 Bell Restrainer F/C900	2336.380	8.00 ea	33.00 /mh	528	1,700.00 /ea	13,600		/ea		/ea		14,128	14,360
	DI Wall Pipe FLG x PE w/ Weep Ring & Tapped Holes 30in x 1ft 0in long	15221.380	1.00 ea	33.00 /mh	528	5,000.00 /ea	5,000		/ea		/ea		5,528	5,760
	DI Pipe 30in. dia FxPE - 8ft. 0in.	15221.030	1.00 ea	33.00 /mh	198	7,000.00 /ea	7,000		/ea		/ea		7,198	7,285
	NBG Kit 125# 316SS 30in w/ FF EPDM Gasket	15125.012	1.00 ea	33.00 /mh	132	1,950.00 /ea	1,950		/ea		/ea		2,082	2,140
	Poly Tape	2333.090	2.00 roll	/roll		7.50 /roll	17		/roll		/roll		17	17
	Quart of Gasket Lubricant	15150.035	2.00 ea	33.00 /mh		8.00 /ea	16		/ea		/ea		16	16
	Flow Fill at RAS Crossing	3310.105	2.00 cy	33.00 /mh	66	205.00 /cy	431		/cy		/cy		497	526
	DI MJ Cap 30 w/ 2" Tap for Testing	2511.210	1.00 ea	33.00 /mh	132	4,000.00 /ea	4,000		/ea		/ea		4,132	4,190
	DI Wall Pipe FLG x FLG w/ Weep Ring & Tapped Holes 20in x 2ft 0in long	15221.372	1.00 ea	33.00 /mh	528	4,400.00 /ea	4,400		/ea		/ea		4,928	5,160
	DI Pipe 20in. dia FxPE - 5ft. 0in.	15221.030	1.00 ea	33.00 /mh	132	2,950.00 /ea	2,950		/ea		/ea		3,082	3,140
	NBG Kit 125# 316SS 20in w/ FF EPDM Gasket	15125.012	1.00 ea	33.00 /mh	66	725.00 /ea	725		/ea		/ea		791	820
	DI Blind Flange 20" w/ 2" Tap for Testing	15221.405	1.00 ea	33.00 /mh	132	1,500.00 /ea	1,500		/ea		/ea		1,632	1,690
	Trench Stabilization Rock	2305.050	24.00 cy	/cy		36.00 /ton	1,620		/cy		/cy		1,620	1,620
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			
	02605-2 12" SCN (EQ Basin to Secondary Splitter)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 16-18'	2333.010	60.00 lf	33.00 /mh	515	/lf			/lf		/lf		515	741
	Trench Backfill 16-18'	2333.020	60.00 lf	33.00 /mh	693	/lf			/lf		/lf		693	998
	Utility Bedding Peastone	2305.200	20.00 cy	/cy		25.00 /ton	800		/cy		/cy		800	800
	Spoils to Waste	2333.060	20.00 cy	33.00 /mh	66	/cy			/cy		/cy		66	95
	PVC C-900 Pipe 12 DR-25	2336.310	60.00 lf	33.00 /mh	238	57.00 /lf	3,591		/lf		/lf		3,829	3,933
	DI RJ Compact 90 12	2511.514	2.00 ea	33.00 /mh	132	930.00 /ea	1,860		/ea		/ea		1,992	2,050
	DI RJ Compact Cap 12 w/ 2" Tap for pressure testing	2511.510	2.00 ea	33.00 /mh	132	415.00 /ea	830		/ea		/ea		962	1,020
	DI RJ Compact Solid Sleeve Short 12	2511.523	3.00 ea	33.00 /mh	198	800.00 /ea	2,400		/ea		/ea		2,598	2,685
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.12 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,104	3,500.00 /Mnth	420	1,524	1,524
	John Deere 624 Loader (172 HP) (M)	1900.132	0.12 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	720	3,000.00 /Mnth	360	1,080	1,080
	Water Truck, 4,000 Gallon (L)	1900.210	0.12 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	576	1,200.00 /Mnth	144	720	720

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02605-2 12" SCN (EQ Basin to Secondary Splitter)													
	Mikasa Jumping Jack Compactor (L)	1900.138	0.12 Mnth	/Mnth		/Mnth			200.00 /Mnth	24	100.00 /Mnth	12	36	36
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.12 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	300	500.00 /Mnth	60	360	360
	Tracer Wire	2333.080	100.00 lf	33.00 /mh	66	0.40 /lf	44		/lf		/lf		110	139
	Warning Tape Detectable	2333.080	60.00 lf	33.00 /mh	40	0.08 /lf	5		/lf		/lf		44	62
	Polybag 12" and Smaller	2333.090	60.00 lf	33.00 /mh	20	1.00 /lf	66		/lf		/lf		86	95
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	12 Bell Restrainer F/C900	2336.380	3.00 ea	33.00 /mh	99	500.00 /ea	1,500		/ea		/ea		1,599	1,643
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			
	DI Pipe Push - Class 350 12	2511.101	20.00 lf	33.00 /mh	79	58.00 /lf	1,172		/lf		/lf		1,251	1,286
	DI Wall Pipe PE x PE w/ Weep Ring 12in x 4ft 0in long	15221.348	1.00 ea	33.00 /mh	264	1,200.00 /ea	1,200		/ea		/ea		1,464	1,580
	DI Pipe 12in. dia FxPE - 13ft. 0in.	15221.030	1.00 ea	33.00 /mh	132	2,740.00 /ea	2,740		/ea		/ea		2,872	2,930
	Poly Tape	2333.090	1.00 roll	/roll		7.50 /roll	8		/roll		/roll		8	8
	Quart of Gasket Lubricant	15150.035	1.00 ea	33.00 /mh		8.00 /ea	8		/ea		/ea		8	8
	Trench Stabilization Rock	2305.050	10.00 cy	/cy		36.00 /ton	675		/cy		/cy		675	675
	02605-2 36" ML (Process Basin to MBR)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 10-12'	2333.010	100.00 lf	33.00 /mh	561	/lf			/lf		/lf		561	808
	Trench Backfill 10-12'	2333.020	100.00 lf	33.00 /mh	726	/lf			/lf		/lf		726	1,045
	Utility Bedding Peastone	2305.200	92.59 cy	/cy		25.00 /ton	3,704		/cy		/cy		3,704	3,704
	Spoils to Waste	2333.060	92.59 cy	33.00 /mh	306	/cy			/cy		/cy		306	440
	PVC C-900 Pipe 36 DR-25	2336.310	100.00 lf	33.00 /mh	924	500.00 /lf	52,500		/lf		/lf		53,424	53,831
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.26 Mnth	/Mnth		/Mnth		9,200.00 /Mnth	2,392	3,500.00 /Mnth	910	3,302	3,302	
	DI RJ Compact Solid Sleeve 30	2511.522	4.00 ea	33.00 /mh	1,584	7,200.00 /ea	28,800		/ea		/ea		30,384	31,081
	John Deere 624 Loader (172 HP) (M)	1900.132	0.26 Mnth	/Mnth		/Mnth		6,000.00 /Mnth	1,560	3,000.00 /Mnth	780	2,340	2,340	
	Water Truck, 4,000 Gallon (L)	1900.210	0.26 Mnth	/Mnth		/Mnth		4,800.00 /Mnth	1,248	1,200.00 /Mnth	312	1,560	1,560	
	Mikasa Jumping Jack Compactor (L)	1900.138	0.26 Mnth	/Mnth		/Mnth		200.00 /Mnth	52	100.00 /Mnth	26	78	78	
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.26 Mnth	/Mnth		/Mnth		2,500.00 /Mnth	650	500.00 /Mnth	130	780	780	
	Tracer Wire	2333.080	130.00 lf	33.00 /mh	86	0.40 /lf	57		/lf		/lf		143	181
	Warning Tape Detectable	2333.080	100.00 lf	33.00 /mh	66	0.08 /lf	8		/lf		/lf		74	103
	Polybag 36" and smaller	2333.090	40.00 lf	33.00 /mh	13	3.50 /lf	154		/lf		/lf		167	173
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	36 Bell Restrainer F/C900	2336.380	5.00 ea	33.00 /mh	990	5,200.00 /ea	26,000		/ea		/ea		26,990	27,426
	DI Wall Pipe MJ x PE w/ Weep Ring & Tapped Holes 36in x 1ft 6in long	15221.388	1.00 ea	33.00 /mh	792	10,000.00 /ea	10,000		/ea		/ea		10,792	11,140
	DI Wall Pipe MJ x PE w/ Weep Ring & Tapped Holes 30in x 2ft 0in long	15221.388	1.00 ea	33.00 /mh	660	7,900.00 /ea	7,900		/ea		/ea		8,560	8,850
	36" Blow Up Plugs for Testing	2240.150	2.00 ea	33.00 /mh	66	0.00 /ea	0	1,500.00 /ea	3,000	/ea	/ea		3,066	3,095
	Trench Stabilization Rock	2305.050	20.00 cy	/cy		36.00 /ton	1,350		/cy		/cy		1,350	1,350
	Poly Tape	2333.090	2.00 roll	/roll		7.50 /roll	17		/roll		/roll		17	17
	Quart of Gasket Lubricant	15150.035	4.00 ea	33.00 /mh		8.00 /ea	32		/ea		/ea		32	32
	02605-2 24" TE (MBR to Outfall)													
	Testing Pressure & Leak - Piping	1166.100	3.00 ea	33.00 /mh	792	50.00 /ea	150		50.00 /ea	150	/ea		1,092	1,440
	Trench Excavtion 6- 8'	2333.010	2,200.00 lf	33.00 /mh	18,150	/lf			/lf		/lf		18,150	26,136
	Trench Backfill 6- 8'	2333.020	2,200.00 lf	33.00 /mh	25,410	/lf			/lf		/lf		25,410	36,590
	Trench Box 8' Deep	2333.030	2,200.00 lf	/lf		/lf			/lf		9.00 /lf	19,800	19,800	19,800
	Utility Bedding Peastone	2305.200	1,303.70 cy	/cy		25.00 /ton	52,148		/cy		/cy		52,148	52,148
	Spoils to Waste	2333.060	1,303.70 cy	33.00 /mh	4,302	/cy			/cy		/cy		4,302	6,195
	PVC C-900 Pipe 24 DR-25	2336.310	2,200.00 lf	33.00 /mh	14,520	225.00 /lf	519,750		/lf		/lf		534,270	540,659
	DI RJ Compact 90 24	2511.514	2.00 ea	33.00 /mh	396	4,000.00 /ea	8,000		/ea		/ea		8,396	8,570
	DI RJ Compact 45 4	2511.514	8.00 ea	33.00 /mh	264	250.00 /ea	2,000		/ea		/ea		2,264	2,380
	DI RJ Compact 45 24	2511.514	2.00 ea	33.00 /mh	396	3,100.00 /ea	6,200		/ea		/ea		6,596	6,770
	DI RJ Compact 11-¼ 24	2511.514	3.00 ea	33.00 /mh	594	2,900.00 /ea	8,700		/ea		/ea		9,294	9,555
	DI RJ Compact Wye 24x12	2511.528	6.00 ea	33.00 /mh	1,188	18,500.00 /ea	111,000		/ea		/ea		112,188	112,711
	DI RJ Compact Red 12x4	2511.520	6.00 ea	33.00 /mh	594	550.00 /ea	3,300		/ea		/ea		3,894	4,155
	DI RJ Compact Solid Sleeve 24	2511.522	4.00 ea	33.00 /mh	792	2,850.00 /ea	11,400		/ea		/ea		12,192	12,540
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	3.00 Mnth	/Mnth		/Mnth		9,200.00 /Mnth	27,600	3,500.00 /Mnth	10,500	38,100	38,100	
	John Deere 624 Loader (172 HP) (M)	1900.132	3.00 Mnth	/Mnth		/Mnth		6,000.00 /Mnth	18,000	3,000.00 /Mnth	9,000	27,000	27,000	
	Water Truck, 4,000 Gallon (L)	1900.210	1.50 Mnth	/Mnth		/Mnth		4,800.00 /Mnth	7,200	1,200.00 /Mnth	1,800	9,000	9,000	
	Mikasa Jumping Jack Compactor (L)	1900.138	3.00 Mnth	/Mnth		/Mnth		200.00 /Mnth	600	100.00 /Mnth	300	900	900	
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	3.00 Mnth	/Mnth		/Mnth		2,500.00 /Mnth	7,500	500.00 /Mnth	1,500	9,000	9,000	
	Tracer Wire	2333.080	2,220.00 lf	33.00 /mh	1,465	0.40 /lf	977		/lf		/lf		2,442	3,087
	Warning Tape Detectable	2333.080	2,200.00 lf	33.00 /mh	1,452	0.08 /lf	176		/lf		/lf		1,628	2,267
	3500 psi Thrust Block Concrete	3310.105	6.00 cy	33.00 /mh	594	278.00 /cy	1,751		/cy		/cy		2,345	2,607
	Polybag 24" and smaller	2333.090	600.00 lf	33.00 /mh	198	2.00 /lf	1,320		/lf		/lf		1,518	1,605
	Pot Hole Existing	2333.010	5.00 ea	33.00 /mh	1,320	/ea			/ea		/ea		1,320	1,901
	Cross Existing	2333.010	5.00 ea	33.00 /mh	660	100.00 /ea	500		/ea		/ea		1,160	1,450
	Support Existing	2333.010	5.00 ea	33.00 /mh	660	50.00 /ea	250		/ea		/ea		910	1,200
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	24 Bell Restrainer F/C900	2336.380	110.00 ea	33.00 /mh	10,890	2,700.00 /ea	297,000		/ea		/ea		307,890	312,682
	DI Pipe Push - Class 200 24	2511.101	40.00 lf	33.00 /mh	330	135.00 /lf	5,454		/lf		/lf		5,784	5,929
	Sleeve w/Ring SS 28" x 18"	15121.250	1.00 ea	33.00 /mh	528	4,400.00 /ea	4,400		/ea		/ea		4,928	5,160
	Link Seal Size LS-425-S	15123.100	23.00 ea	33.00 /mh	114	23.00 /ea	529		/ea		/ea		643	693
	DI Pipe 24in. dia FxPE - 6ft. 0in.	15221.030	2.00 ea	33.00 /mh	264	3,800.00 /ea	7,600		/ea		/ea		7,864	7,980
	DI Pipe 4in. dia FxPE - 4ft. 0in.	15221.030	6.00 ea	33.00 /mh	396	450.00 /ea	2,700		/ea		/ea		3,096	3,270
	DI Blind Flange 4" w/ 1" Tap	15221.405	6.00 ea	33.00 /mh	198	200.00 /ea	1,200		/ea		/ea		1,398	1,485
	NBG Kit 125# 316SS 4in w/ FF EPDM Gasket	15125.012	6.00 ea	33.00 /mh	198	80.00 /ea	480		/ea		/ea		678	765
	Stainless Steel Nipple 1" x 4"	15212.010	12.00 ea	33.00 /mh	99	20.00 /ea	240		/ea		/ea		339	383
	Valve Plug Threaded 150# 1"	15110.416	6.00 ea	33.00 /mh	59	150.00 /ea	900		/ea		/ea		959	986
	Hose Adapter SS 3/4" FIP x Female GH Swivel	15220.110	6.00 ea	33.00 /mh	42	64.00 /ea	384		/ea		/ea		426	444
	PVC Sch 80 PIPE 4" PE	15211.203	20.00 lf	33.00 /mh	139	9.00 /lf	180		/lf		/lf		319	380
	Trench Stabilization Rock	2305.050	100.00 cy	/cy		36.00 /ton	6,750		/cy		/cy		6,750	6,750
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			
	Flow Fill at crossings	3310.105	4.00 cy	33.00 /mh	264	205.00 /cy	861		/cy		/cy		1,125	1,125
	Overhead Power Line sleeve and hold pole	5650.100	1.00 ls	/ls		/ls		75,000	/ls		0.00 /ls	0	75,000	75,000

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02605-2 24" TE (MBR to Outfall)													
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.00 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	9,200	3,500.00 /Mnth	3,500	12,700	12,700
	Poly Tape	2333.090	28.00 roll	/roll		7.50 /roll	231						231	231
	Quart of Gasket Lubricant	15150.035	28.00 ea	33.00 /mh		8.00 /ea	224		/ea		/ea		224	224
	DI MJ Compact Cap 24 w/ 2" Tap for Pressure Testing	2511.310	2.00 ea	33.00 /mh	264	1,714.00 /ea	3,428		/ea		/ea		3,692	3,808
	Abandon or Demo Existing Effluent Line???	2327.510	1.00 ls	33.00 /mh	792	250.00 /ls	250		/ch		/ls		1,042	1,390
	Temp Security/Safety Fence	2370.150	1,800.00 lf	33.00 /mh	1,188	1.00 /lf	1,980		/lf		/lf		3,168	3,691
	Safety Fence Steel Tee Post 5'	2370.150	360.00 ea	33.00 /mh	2,376	7.00 /ea	2,772		/ea		/ea		5,148	6,193
	Pressurized Cleanout Cover (Det C132)	2327.120	6.00 ea	33.00 /mh	792	0.01 /ea	0		/ea		/ea		792	1,141
	Import Fill Stone 3/4"	2305.100	3.00 cy	/cy		36.00 /ton	173		/cy		/cy		173	173
	Sakai SV540 Compactor Single Drum 84" (160 HP) (L)	1900.138	3.00 Mnth	/Mnth		/Mnth			3,900.00 /Mnth	11,700	1,650.00 /Mnth	4,950	16,650	16,650
	02605-2 24" RAS (MBR To Secondary Splitter)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 12-14'	2333.010	620.00 lf	33.00 /mh	4,092	/lf			/lf		/lf		4,092	5,892
	Trench Backfill 12-14'	2333.020	620.00 lf	33.00 /mh	5,115	/lf			/lf		/lf		5,115	7,366
	Utility Bedding Peastone	2305.200	367.41 cy	/cy		25.00 /ton	14,696		/cy		/cy		14,696	14,696
	Spoils to Waste	2333.060	367.41 cy	33.00 /mh	1,212	/cy			/cy		/cy		1,212	1,746
	PVC C-900 Pipe 24 DR-25	2336.310	620.00 lf	33.00 /mh	5,115	225.00 /lf	146,475		/lf		/lf		151,590	153,841
	DI RJ Compact 90 24	2511.514	5.00 ea	33.00 /mh	1,320	4,000.00 /ea	20,000		/ea		/ea		21,320	21,901
	DI RJ Compact 45 24	2511.514	1.00 ea	33.00 /mh	264	3,100.00 /ea	3,100		/ea		/ea		3,364	3,480
	DI RJ Compact Solid Sleeve 24	2511.522	4.00 ea	33.00 /mh	1,056	2,850.00 /ea	11,400		/ea		/ea		12,456	12,921
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.75 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	6,900	3,500.00 /Mnth	2,625	9,525	9,525
	John Deere 624 Loader (172 HP) (M)	1900.132	0.75 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	4,500	3,000.00 /Mnth	2,250	6,750	6,750
	Water Truck, 4,000 Gallon (L)	1900.210	0.75 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	3,600	1,200.00 /Mnth	900	4,500	4,500
	Mikasa Jumping Jack Compactor (L)	1900.138	0.75 Mnth	/Mnth		/Mnth			200.00 /Mnth	150	100.00 /Mnth	75	225	225
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.75 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	1,875	500.00 /Mnth	375	2,250	2,250
	Tracer Wire	2333.080	680.00 lf	33.00 /mh	449	0.40 /lf	299		/lf		/lf		748	945
	Warning Tape Detectable	2333.080	620.00 lf	33.00 /mh	409	0.08 /lf	50		/lf		/lf		459	639
	Polybag 24" and smaller	2333.090	100.00 lf	33.00 /mh	33	2.00 /lf	220		/lf		/lf		253	268
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	24 Bell Restrainer F/C900	2336.380	31.00 ea	33.00 /mh	2,046	2,700.00 /ea	83,700		/ea		/ea		85,746	86,646
	DI Pipe Push - Class 200 24	2511.101	60.00 lf	33.00 /mh	495	135.00 /lf	8,181		/lf		/lf		8,676	8,894
	DI Wall Pipe PE x PE w/ Weep Ring 24in x 6ft 0in long	15221.348	1.00 ea	33.00 /mh	528	3,600.00 /ea	3,600		/ea		/ea		4,128	4,360
	DI Wall Pipe FLG x PE w/ Weep Ring 24in x 6ft 0in long	15221.336	1.00 ea	33.00 /mh	528	4,650.00 /ea	4,650		/ea		/ea		5,178	5,410
	Sleeve w/Ring SS 28" x 18"	15121.250	1.00 ea	33.00 /mh	396	4,400.00 /ea	4,400		/ea		/ea		4,796	4,970
	Link Seal Size LS-425-S	15123.100	23.00 ea	33.00 /mh	114	23.00 /ea	529		/ea		/ea		643	693
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			
	Trench Stabilization Rock	2305.050	100.00 cy	/cy		36.00 /ton	6,750		/cy		/cy		6,750	6,750
	Poly Tape	2333.090	8.00 roll	/roll		7.50 /roll	66		/roll		/roll		66	66
	Quart of Gasket Lubricant	15150.035	8.00 ea	33.00 /mh		8.00 /ea	64		/ea		/ea		64	64
	Flow Fill at Pipe Crossings	3310.105	6.00 cy	33.00 /mh	198	205.00 /cy	1,292		/cy		/cy		1,490	1,577
	02605-2 18" RAS (Secondary Splitter to Anoxic 3)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 8-10'	2333.010	70.00 lf	33.00 /mh	370	/lf			/lf		/lf		370	532
	Trench Backfill 8-10'	2333.020	70.00 lf	33.00 /mh	485	/lf			/lf		/lf		485	699
	Utility Bedding Peastone	2305.200	23.33 cy	/cy		25.00 /ton	933		/cy		/cy		933	933
	Spoils to Waste	2333.060	23.33 cy	33.00 /mh	77	/cy			/cy		/cy		77	111
	PVC C-900 Pipe 18 DR-25	2336.310	60.00 lf	33.00 /mh	356	130.00 /lf	8,190		/lf		/lf		8,546	8,703
	DI RJ Compact 90 18	2511.514	1.00 ea	33.00 /mh	132	2,200.00 /ea	2,200		/ea		/ea		2,332	2,390
	DI RJ Compact Solid Sleeve 18	2511.522	4.00 ea	33.00 /mh	528	1,900.00 /ea	7,600		/ea		/ea		8,128	8,360
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.13 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,196	3,500.00 /Mnth	455	1,651	1,651
	John Deere 624 Loader (172 HP) (M)	1900.132	0.13 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	780	3,000.00 /Mnth	390	1,170	1,170
	Water Truck, 4,000 Gallon (L)	1900.210	0.13 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	624	1,200.00 /Mnth	156	780	780
	Mikasa Jumping Jack Compactor (L)	1900.138	0.13 Mnth	/Mnth		/Mnth			200.00 /Mnth	26	100.00 /Mnth	13	39	39
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.13 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	325	500.00 /Mnth	65	390	390
	Tracer Wire	2333.080	90.00 lf	33.00 /mh	59	0.40 /lf	40		/lf		/lf		99	125
	Warning Tape Detectable	2333.080	70.00 lf	33.00 /mh	46	0.08 /lf	6		/lf		/lf		52	72
	Polybag 18" and smaller	2333.090	70.00 lf	33.00 /mh	23	2.00 /lf	154		/lf		/lf		177	187
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	18 Bell Restrainer F/C900	2336.380	3.00 ea	33.00 /mh	149	1,220.00 /ea	3,660		/ea		/ea		3,809	3,874
	DI Pipe Push - Class 250 18	2511.101	20.00 lf	33.00 /mh	119	95.00 /lf	1,919		/lf		/lf		2,038	2,090
	DI Wall Pipe MJ x PE w/ Weep Ring & Tapped Holes 18in x 1ft 0in long	15221.388	1.00 ea	33.00 /mh	396	2,900.00 /ea	2,900		/ea		/ea		3,296	3,470
	DI Wall Pipe FLG x MJ w/ Weep Ring & Tapped Holes 18in x 1ft 8in long	15221.376	1.00 ea	33.00 /mh	396	4,400.00 /ea	4,400		/ea		/ea		4,796	4,970
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			
	Trench Stabilization Rock	2305.050	10.00 cy	/cy		36.00 /ton	675		/cy		/cy		675	675
	Poly Tape	2333.090	1.00 roll	/roll		7.50 /roll	8		/roll		/roll		8	8
	Quart of Gasket Lubricant	15150.035	1.00 ea	33.00 /mh		8.00 /ea	8		/ea		/ea		8	8
	02605-2 18" RAS (Secondary Splitter to Anoxic 2)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 8-10'	2333.010	20.00 lf	33.00 /mh	106	/lf			/lf		/lf		106	152
	Trench Backfill 8-10'	2333.020	20.00 lf	33.00 /mh	139	/lf			/lf		/lf		139	200
	Utility Bedding Peastone	2305.200	6.67 cy	/cy		25.00 /ton	267		/cy		/cy		267	267
	Spoils to Waste	2333.060	6.67 cy	33.00 /mh	22	/cy			/cy		/cy		22	32
	PVC C-900 Pipe 18 DR-25	2336.310	20.00 lf	33.00 /mh	119	130.00 /lf	2,730		/lf		/lf		2,849	2,901
	DI RJ Compact 90 18	2511.514	1.00 ea	33.00 /mh	132	2,200.00 /ea	2,200		/ea		/ea		2,332	2,390
	DI RJ Compact Solid Sleeve 18	2511.522	4.00 ea	33.00 /mh	528	1,900.00 /ea	7,600		/ea		/ea		8,128	8,360
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.08 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	736	3,500.00 /Mnth	280	1,016	1,016
	John Deere 624 Loader (172 HP) (M)	1900.132	0.08 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	480	3,000.00 /Mnth	240	720	720
	Water Truck, 4,000 Gallon (L)	1900.210	0.08 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	384	1,200.00 /Mnth	96	480	480
	Mikasa Jumping Jack Compactor (L)	1900.138	0.08 Mnth	/Mnth		/Mnth			200.00 /Mnth	16	100.00 /Mnth	8	24	24
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.08 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	200	500.00 /Mnth	40	240	240
	Tracer Wire	2333.080	40.00 lf	33.00 /mh	26	0.40 /lf	18		/lf		/lf		44	44
	Warning Tape Detectable	2333.080	20.00 lf	33.00 /mh	13	0.08 /lf	2		/lf		/lf		15	15

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02605-2 18" RAS (Secondary Splitter to Anoxic 2)													
	Polybag 18" and smaller	2333.090	40.00 lf	33.00 /mh	13	2.00 /lf	88		/lf		/lf		101	107
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	DI Pipe Push - Class 250 18	2511.101	20.00 lf	33.00 /mh	119	95.00 /lf	1,919		/lf		/lf		2,038	2,090
	DI Wall Pipe MJ x PE w/ Weep Ring & Tapped Holes 18in x 1ft 0in long	15221.388	1.00 ea	33.00 /mh	396	2,900.00 /ea	2,900		/ea		/ea		3,296	3,470
	DI Wall Pipe FLG x MJ w/ Weep Ring & Tapped Holes 18in x 1ft 8in long	15221.376	1.00 ea	33.00 /mh	396	4,400.00 /ea	4,400		/ea		/ea		4,796	4,970
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			
	Trench Stabilization Rock	2305.050	5.00 cy	/cy		36.00 /ton	338		/cy		/cy		338	338
	Poly Tape	2333.090	1.00 roll	/roll		7.50 /roll	8		/roll		/roll		8	8
	Quart of Gasket Lubricant	15150.035	1.00 ea	33.00 /mh		8.00 /ea	8		/ea		/ea		8	8
	02605-2 18" RAS (Secondary Splitter to Anoxic 1)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 8-10'	2333.010	50.00 lf	33.00 /mh	264	/lf			/lf		/lf		264	380
	Trench Backfill 8-10'	2333.020	50.00 lf	33.00 /mh	347	/lf			/lf		/lf		347	499
	Utility Bedding Peastone	2305.200	16.67 cy	/cy		25.00 /ton	667		/cy		/cy		667	667
	Spoils to Waste	2333.060	16.67 cy	33.00 /mh	55	/cy			/cy		/cy		55	79
	PVC C-900 Pipe 18 DR-25	2336.310	40.00 lf	33.00 /mh	238	130.00 /lf	5,460		/lf		/lf		5,698	5,802
	DI RJ Compact 90 18	2511.514	1.00 ea	33.00 /mh	132	2,200.00 /ea	2,200		/ea		/ea		2,332	2,390
	DI RJ Compact Solid Sleeve 18	2511.522	4.00 ea	33.00 /mh	528	1,900.00 /ea	7,600		/ea		/ea		8,128	8,360
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.12 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,104	3,500.00 /Mnth	420	1,524	1,524
	John Deere 624 Loader (172 HP) (M)	1900.132	0.12 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	720	3,000.00 /Mnth	360	1,080	1,080
	Water Truck, 4,000 Gallon (L)	1900.210	0.12 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	576	1,200.00 /Mnth	144	720	720
	Mikasa Jumping Jack Compactor (L)	1900.138	0.12 Mnth	/Mnth		/Mnth			200.00 /Mnth	24	100.00 /Mnth	12	36	36
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.12 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	300	500.00 /Mnth	60	360	360
	Tracer Wire	2333.080	70.00 lf	33.00 /mh	46	0.40 /lf	31		/lf		/lf		77	97
	Warning Tape Detectable	2333.080	50.00 lf	33.00 /mh	33	0.08 /lf	4		/lf		/lf		37	52
	Polybag 18" and smaller	2333.090	20.00 lf	33.00 /mh	7	2.00 /lf	44		/lf		/lf		51	54
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	18 Bell Restrainer F/C900	2336.380	1.00 ea	33.00 /mh	50	1,220.00 /ea	1,220		/ea		/ea		1,270	1,291
	DI Pipe Push - Class 250 18	2511.101	20.00 lf	33.00 /mh	119	95.00 /lf	1,919		/lf		/lf		2,038	2,090
	DI Wall Pipe MJ x PE w/ Weep Ring & Tapped Holes 18in x 1ft 0in long	15221.388	1.00 ea	33.00 /mh	396	2,900.00 /ea	2,900		/ea		/ea		3,296	3,470
	DI Wall Pipe FLG x MJ w/ Weep Ring & Tapped Holes 18in x 1ft 8in long	15221.376	1.00 ea	33.00 /mh	396	4,400.00 /ea	4,400		/ea		/ea		4,796	4,970
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			
	Trench Stabilization Rock	2305.050	10.00 cy	/cy		36.00 /ton	675		/cy		/cy		675	675
	Poly Tape	2333.090	1.00 roll	/roll		7.50 /roll	8		/roll		/roll		8	8
	Quart of Gasket Lubricant	15150.035	1.00 ea	33.00 /mh		8.00 /ea	8		/ea		/ea		8	8
	02605-2 16" SCN (Secondary Splitter to Anaerobic 3)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 6- 8'	2333.010	20.00 lf	33.00 /mh	99	/lf			/lf		/lf		99	143
	Trench Backfill 6- 8'	2333.020	20.00 lf	33.00 /mh	132	/lf			/lf		/lf		132	190
	Utility Bedding Peastone	2305.200	6.67 cy	/cy		25.00 /ton	267		/cy		/cy		267	267
	Spoils to Waste	2333.060	6.67 cy	33.00 /mh	22	/cy			/cy		/cy		22	32
	PVC C-900 Pipe 16 DR-25	2336.310	20.00 lf	33.00 /mh	106	98.00 /lf	2,058		/lf		/lf		2,164	2,210
	DI RJ Compact 90 16	2511.514	1.00 ea	33.00 /mh	132	1,900.00 /ea	1,900		/ea		/ea		2,032	2,090
	DI RJ Compact Solid Sleeve Short 16	2511.523	4.00 ea	33.00 /mh	528	1,550.00 /ea	6,200		/ea		/ea		6,728	6,960
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.08 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	736	3,500.00 /Mnth	280	1,016	1,016
	John Deere 624 Loader (172 HP) (M)	1900.132	0.08 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	480	3,000.00 /Mnth	240	720	720
	Water Truck, 4,000 Gallon (L)	1900.210	0.08 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	384	1,200.00 /Mnth	96	480	480
	Mikasa Jumping Jack Compactor (L)	1900.138	0.08 Mnth	/Mnth		/Mnth			200.00 /Mnth	16	100.00 /Mnth	8	24	24
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.08 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	200	500.00 /Mnth	40	240	240
	Tracer Wire	2333.080	40.00 lf	33.00 /mh	26	0.40 /lf	18		/lf		/lf		44	56
	Warning Tape Detectable	2333.080	20.00 lf	33.00 /mh	13	0.08 /lf	2		/lf		/lf		15	21
	Polybag 18" and smaller	2333.090	20.00 lf	33.00 /mh	7	2.00 /lf	44		/lf		/lf		51	54
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	DI Pipe Push - Class 250 16	2511.101	20.00 lf	33.00 /mh	106	85.00 /lf	1,717		/lf		/lf		1,823	1,869
	DI Wall Pipe MJ x PE w/ Weep Ring & Tapped Holes 16in x 1ft 0in long	15221.388	1.00 ea	33.00 /mh	396	2,500.00 /ea	2,500		/ea		/ea		2,896	3,070
	DI Wall Pipe MJ x PE w/ Weep Ring & Tapped Holes 16in x 1ft 8in long	15221.388	1.00 ea	33.00 /mh	396	2,800.00 /ea	2,800		/ea		/ea		3,196	3,370
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			
	Trench Stabilization Rock	2305.050	5.00 cy	/cy		36.00 /ton	338		/cy		/cy		338	338
	Poly Tape	2333.090	1.00 roll	/roll		7.50 /roll	8		/roll		/roll		8	8
	Quart of Gasket Lubricant	15150.035	1.00 ea	33.00 /mh		8.00 /ea	8		/ea		/ea		8	8
	02605-2 16" SCN (Secondary Splitter to Anaerobic 1)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 6- 8'	2333.010	12.00 lf	33.00 /mh	59	/lf			/lf		/lf		59	86
	Trench Backfill 6- 8'	2333.020	12.00 lf	33.00 /mh	79	/lf			/lf		/lf		79	114
	Utility Bedding Peastone	2305.200	4.00 cy	/cy		25.00 /ton	160		/cy		/cy		160	160
	Spoils to Waste	2333.060	4.00 cy	33.00 /mh	13	/cy			/cy		/cy		13	19
	PVC C-900 Pipe 16 DR-25	2336.310	20.00 lf	33.00 /mh	106	98.00 /lf	2,058		/lf		/lf		2,164	2,210
	DI RJ Compact 90 16	2511.514	1.00 ea	33.00 /mh	132	1,900.00 /ea	1,900		/ea		/ea		2,032	2,090
	DI RJ Compact Solid Sleeve Short 16	2511.523	2.00 ea	33.00 /mh	264	1,550.00 /ea	3,100		/ea		/ea		3,364	3,480
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.06 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	552	3,500.00 /Mnth	210	762	762
	John Deere 624 Loader (172 HP) (M)	1900.132	0.06 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	360	3,000.00 /Mnth	180	540	540
	Water Truck, 4,000 Gallon (L)	1900.210	0.06 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	288	1,200.00 /Mnth	72	360	360
	Mikasa Jumping Jack Compactor (L)	1900.138	0.06 Mnth	/Mnth		/Mnth			200.00 /Mnth	12	100.00 /Mnth	6	18	18
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.06 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	150	500.00 /Mnth	30	180	180
	Tracer Wire	2333.080	30.00 lf	33.00 /mh	20	0.40 /lf	13		/lf		/lf		33	42
	Warning Tape Detectable	2333.080	12.00 lf	33.00 /mh	8	0.08 /lf	1		/lf		/lf		9	12
	Polybag 18" and smaller	2333.090	24.00 lf	33.00 /mh	8	2.00 /lf	53		/lf		/lf		61	64
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	DI Pipe Push - Class 250 16	2511.101	20.00 lf	33.00 /mh	106	85.00 /lf	1,717		/lf		/lf		1,823	1,869
	DI Wall Pipe MJ x PE w/ Weep Ring & Tapped Holes 16in x 1ft 0in long	15221.388	1.00 ea	33.00 /mh	396	2,500.00 /ea	2,500		/ea		/ea		2,896	3,070
	DI Wall Pipe MJ x PE w/ Weep Ring & Tapped Holes 16in x 1ft 8in long	15221.388	1.00 ea	33.00 /mh	396	2,800.00 /ea	2,800		/ea		/ea		3,196	3,370
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02605-2 16" SCN (Secondary Splitter to Anaerobic 1)													
	Trench Stabilization Rock	2305.050	1.50 cy	/cy		36.00 /ton	101		/cy		/cy		101	101
	Poly Tape	2333.090	1.00 roll	/roll		7.50 /roll	8		/roll		/roll		8	8
	Quart of Gasket Lubricant	15150.035	1.00 ea	33.00 /mh		8.00 /ea	8		/ea		/ea		8	8
	02605-2 24" OF (Process Basin to EQ)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 14-16'	2333.010	120.00 lf	33.00 /mh	792	/lf			/lf		/lf		792	1,140
	Trench Backfill 14-16'	2333.020	120.00 lf	33.00 /mh	1,188	/lf			/lf		/lf		1,188	1,711
	Utility Bedding Peastone	2305.200	71.11 cy	/cy		25.00 /ton	2,844		/cy		/cy		2,844	2,844
	Spoils to Waste	2333.060	71.11 cy	33.00 /mh	235	/cy			/cy		/cy		235	338
	PVC C-900 Pipe 24 DR-25	2336.310	120.00 lf	33.00 /mh	990	225.00 /lf	28,350		/lf		/lf		29,340	29,776
	DI RJ Compact 90 24	2511.514	2.00 ea	33.00 /mh	396	4,000.00 /ea	8,000		/ea		/ea		8,396	8,570
	DI RJ Compact Solid Sleeve 24	2511.522	4.00 ea	33.00 /mh	792	2,850.00 /ea	11,400		/ea		/ea		12,192	12,540
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.26 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,392	3,500.00 /Mnth	910	3,302	3,302
	John Deere 624 Loader (172 HP) (M)	1900.132	0.26 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	1,560	3,000.00 /Mnth	780	2,340	2,340
	Water Truck, 4,000 Gallon (L)	1900.210	0.26 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	1,248	1,200.00 /Mnth	312	1,560	1,560
	Mikasa Jumping Jack Compactor (L)	1900.138	0.26 Mnth	/Mnth		/Mnth			200.00 /Mnth	52	100.00 /Mnth	26	78	78
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.26 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	650	500.00 /Mnth	130	780	780
	Tracer Wire	2333.080	160.00 lf	33.00 /mh	106	0.40 /lf	70		/lf		/lf		176	222
	Warning Tape Detectable	2333.080	120.00 lf	33.00 /mh	79	0.08 /lf	10		/lf		/lf		89	124
	Polybag 24" and smaller	2333.090	60.00 lf	33.00 /mh	20	2.00 /lf	132		/lf		/lf		152	161
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	24 Bell Restrainer F/C900	2336.380	6.00 ea	33.00 /mh	396	2,700.00 /ea	16,200		/ea		/ea		16,596	16,770
	DI Wall Pipe MJ x PE w/ Weep Ring & Tapped Holes 24in x 2ft 0in long	15221.388	1.00 ea	33.00 /mh	528	4,600.00 /ea	4,600		/ea		/ea		5,128	5,360
	DI Wall Pipe FLG x PE w/ Weep Ring 24in x 6ft 0in long	15221.336	1.00 ea	33.00 /mh	528	4,650.00 /ea	4,650		/ea		/ea		5,178	5,410
	DI Pipe Push - Class 200 24	2511.101	20.00 lf	33.00 /mh	165	135.00 /lf	2,727		/lf		/lf		2,892	2,965
	02605-2 12" PD (MBR to Site Lift Sation)													
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	33.00 /mh	528	50.00 /ea	100		50.00 /ea	100	/ea		728	960
	Trench Excavtion 10-12'	2333.010	420.00 lf	33.00 /mh	2,772	/lf			/lf		/lf		2,772	3,992
	Trench Backfill 10-12'	2333.020	420.00 lf	33.00 /mh	3,465	/lf			/lf		/lf		3,465	4,990
	Utility Bedding Peastone	2305.200	140.00 cy	/cy		25.00 /ton	5,600		/cy		/cy		5,600	5,600
	Spoils to Waste	2333.060	140.00 cy	33.00 /mh	462	/cy			/cy		/cy		462	665
	PVC C-900 Pipe 12 DR-25	2336.310	420.00 lf	33.00 /mh	1,663	57.00 /lf	25,137		/lf		/lf		26,800	27,532
	DI RJ Compact 45 4	2511.514	3.00 ea	33.00 /mh	99	250.00 /ea	750		/ea		/ea		849	893
	DI RJ Compact 45 12	2511.514	3.00 ea	33.00 /mh	297	850.00 /ea	2,550		/ea		/ea		2,847	2,978
	DI RJ Compact Wye 12x4	2511.528	3.00 ea	33.00 /mh	297	1,550.00 /ea	4,650		/ea		/ea		4,947	5,078
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.50 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	4,600	3,500.00 /Mnth	1,750	6,350	6,350
	DI RJ Compact Solid Sleeve Short 12	2511.523	2.00 ea	33.00 /mh	198	800.00 /ea	1,600		/ea		/ea		1,798	1,885
	John Deere 624 Loader (172 HP) (M)	1900.132	0.50 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	3,000	3,000.00 /Mnth	1,500	4,500	4,500
	Water Truck, 4,000 Gallon (L)	1900.210	0.50 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	2,400	1,200.00 /Mnth	600	3,000	3,000
	Mikasa Jumping Jack Compactor (L)	1900.138	0.50 Mnth	/Mnth		/Mnth			200.00 /Mnth	100	100.00 /Mnth	50	150	150
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.50 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	1,250	500.00 /Mnth	250	1,500	1,500
	Tracer Wire	2333.080	480.00 lf	33.00 /mh	317	0.40 /lf	211		/lf		/lf		528	667
	Warning Tape Detectable	2333.080	420.00 lf	33.00 /mh	277	0.08 /lf	34		/lf		/lf		311	433
	3500 psi Thrust Block Concrete	3310.105	3.00 cy	33.00 /mh	594	278.00 /cy	876		/cy		/cy		1,470	1,731
	Polybag 12" and Smaller	2333.090	160.00 lf	33.00 /mh	53	1.00 /lf	176		/lf		/lf		229	252
	Tracer Wire Test Box	2333.080	4.00 ea	33.00 /mh	792	100.00 /ea	400		/ea		/ea		1,192	1,540
	12 Bell Restrainer F/C900	2336.380	22.00 ea	33.00 /mh	1,452	500.00 /ea	11,000		/ea		/ea		12,452	13,091
	DI Pipe 4in. dia FxPE - 11ft. 0in.	15221.030	3.00 ea	33.00 /mh	297	870.00 /ea	2,610		/ea		/ea		2,907	3,038
	DI Blind Flange 4" w/ 1" Tap	15221.405	3.00 ea	33.00 /mh	99	200.00 /ea	600		/ea		/ea		699	743
	Stainless Steel Nipple 1" x 3"	15212.010	6.00 ea	33.00 /mh	50	20.00 /ea	120		/ea		/ea		170	191
	Valve Plug Threaded 150# 1"	15110.416	3.00 ea	33.00 /mh	198	150.00 /ea	450		/ea		/ea		648	735
	Pressurized Cleanout Cover (Det C132)	2327.120	3.00 ea	33.00 /mh	396	0.01 /ea	0		/ea		/ea		396	570
	Dewatering Pumps & Hoses	2240.050	2.00 ls	/ls		/ls			/ls		/ls			
	Trench Stabilization Rock	2305.050	47.00 cy	/cy		36.00 /ton	3,173		/cy		/cy		3,173	3,173
	Grout Pipe in Manhole 12"	2327.090	3.00 ea	33.00 /mh	396	50.00 /ea	150		/ea		/ea		546	720
	Link Seal Size LS-360-S	15123.100	43.00 ea	33.00 /mh	213	23.00 /ea	989		/ea		/ea		1,202	1,296
	DI Pipe 12in. dia FxPE - 4ft. 0in.	15221.030	1.00 ea	33.00 /mh	66	1,150.00 /ea	1,150		/ea		/ea		1,216	1,245
	12" Romac Style 501 IPS x DI	2519.310	1.00 ea	33.00 /mh	66	1,500.00 /ea	1,500		/ea		/ea		1,566	1,595
	Poly Tape	2333.090	5.00 roll	/roll		7.50 /roll	41		/roll		/roll		41	41
	Quart of Gasket Lubricant	15150.035	5.00 ea	33.00 /mh		8.00 /ea	40		/ea		/ea		40	40
	02605-2 6" WAS (MBR to Holding Tank)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 12-14'	2333.010	240.00 lf	33.00 /mh	1,584	/lf			/lf		/lf		1,584	2,281
	Trench Backfill 12-14'	2333.020	240.00 lf	33.00 /mh	2,376	/lf			/lf		/lf		2,376	3,421
	Utility Bedding Peastone	2305.200	80.00 cy	/cy		25.00 /ton	3,200		/cy		/cy		3,200	3,200
	Spoils to Waste	2333.060	80.00 cy	33.00 /mh	264	/cy			/cy		/cy		264	380
	PVC C-900 Pipe 6 DR-25	2336.310	240.00 lf	33.00 /mh	792	16.50 /lf	4,158		/lf		/lf		4,950	5,298
	DI RJ Compact 90 6	2511.514	3.00 ea	33.00 /mh	149	400.00 /ea	1,200		/ea		/ea		1,349	1,414
	DI RJ Compact 45 6	2511.514	3.00 ea	33.00 /mh	149	380.00 /ea	1,140		/ea		/ea		1,289	1,354
	DI RJ Compact 22-½ 6	2511.514	1.00 ea	33.00 /mh	50	370.00 /ea	370		/ea		/ea		420	441
	DI RJ Compact Wye 6	2511.528	1.00 ea	33.00 /mh	50	675.00 /ea	675		/ea		/ea		725	746
	DI RJ Compact Cap 6	2511.510	1.00 ea	33.00 /mh	50	190.00 /ea	190		/ea		/ea		240	261
	DI RJ Compact Solid Sleeve Short 6	2511.523	4.00 ea	33.00 /mh	198	350.00 /ea	1,400		/ea		/ea		1,598	1,685
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.30 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,760	3,500.00 /Mnth	1,050	3,810	3,810
	John Deere 624 Loader (172 HP) (M)	1900.132	0.30 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	1,800	3,000.00 /Mnth	900	2,700	2,700
	Water Truck, 4,000 Gallon (L)	1900.210	0.30 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	1,440	1,200.00 /Mnth	360	1,800	1,800
	Mikasa Jumping Jack Compactor (L)	1900.138	0.30 Mnth	/Mnth		/Mnth			200.00 /Mnth	60	100.00 /Mnth	30	90	90
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.30 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	750	500.00 /Mnth	150	900	900
	Tracer Wire	2333.080	270.00 lf	33.00 /mh	178	0.40 /lf	119		/lf		/lf		297	275
	Warning Tape Detectable	2333.080	240.00 lf	33.00 /mh	158	0.08 /lf	19		/lf		/lf		178	178
	Polybag 12" and Smaller	2333.090	160.00 lf	33.00 /mh	53	1.00 /lf	176		/lf		/lf		229	170
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02605-2 6" WAS (MBR to Holding Tank)													
	Valve - Plug MJ 6"	2519.160	1.00 ea	33.00 /mh	33	2,000.00 /ea	2,000		/ea		/ea		2,033	2,048
	Valve Box Assembly 6' Bury	2519.130	1.00 ea	33.00 /mh	99	320.00 /ea	320		/ea		/ea		419	463
	Valve Box 2' Extension	2519.130	4.00 ea	33.00 /mh	66	90.00 /ea	360		/ea		/ea		426	455
	Conc Block for Valve	2519.100	1.00 ea	33.00 /mh	33	50.00 /ea	50		/ea		/ea		83	98
	Conc Pad for Valve Box	2519.100	1.00 ea	33.00 /mh	66	75.00 /ea	75		/ea		/ea		141	170
	Valve Stem Extension	2519.100	1.00 ea	33.00 /mh	33	150.00 /ea	150		/ea		/ea		183	198
	6 Bell Restrainer F/C900	2336.380	12.00 ea	33.00 /mh	396	190.00 /ea	2,280		/ea		/ea		2,676	2,850
	DI Pipe 6in. dia FxPE - 6ft. 0in.	15221.030	1.00 ea	33.00 /mh	66	650.00 /ea	650		/ea		/ea		716	745
	DI Pipe 6in. dia FxPE - 13ft. 0in.	15221.030	1.00 ea	33.00 /mh	132	1,350.00 /ea	1,350		/ea		/ea		1,482	1,540
	DI Blind Flange 6" w/ 1" Tap for Testing	15221.405	2.00 ea	33.00 /mh	66	250.00 /ea	500		/ea		/ea		566	595
	Sleeve w/Ring SS 10" x 18"	15121.250	1.00 ea	33.00 /mh	396	1,500.00 /ea	1,500		/ea		/ea		1,896	2,070
	Link Seal Size LS-410-S	15123.100	10.00 ea	33.00 /mh	50	23.00 /ea	230		/ea		/ea		280	301
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			
	Trench Stabilization Rock	2305.050	26.00 cy	/cy		36.00 /ton	1,755		/cy		/cy		1,755	1,755
	DI Pipe Push - Class 350 6	2511.101	20.00 lf	33.00 /mh	66	30.00 /lf	606		/lf		/lf		672	701
	02605-2 6" WAS (Holding Tank to Dewatering)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 10-12'	2333.010	180.00 lf	33.00 /mh	1,188	/lf			/lf		/lf		1,188	1,711
	Trench Backfill 10-12'	2333.020	180.00 lf	33.00 /mh	1,782	/lf			/lf		/lf		1,782	2,566
	Utility Bedding Peastone	2305.200	60.00 cy	/cy		25.00 /ton	2,400		/cy		/cy		2,400	2,400
	Spoils to Waste	2333.060	60.00 cy	33.00 /mh	198	/cy			/cy		/cy		198	285
	PVC C-900 Pipe 6 DR-25	2336.310	180.00 lf	33.00 /mh	594	16.50 /lf	3,119		/lf		/lf		3,713	3,974
	DI RJ Compact 90 6	2511.514	2.00 ea	33.00 /mh	99	400.00 /ea	800		/ea		/ea		899	943
	DI RJ Compact 45 6	2511.514	1.00 ea	33.00 /mh	50	380.00 /ea	380		/ea		/ea		430	451
	DI RJ Compact Tee 6	2511.524	1.00 ea	33.00 /mh	50	600.00 /ea	600		/ea		/ea		650	671
	DI RJ Compact Tee 6x4	2511.524	1.00 ea	33.00 /mh	50	550.00 /ea	550		/ea		/ea		600	621
	DI RJ Compact Wye 6	2511.528	1.00 ea	33.00 /mh	50	675.00 /ea	675		/ea		/ea		725	746
	DI RJ Compact Cap 6	2511.510	1.00 ea	33.00 /mh	50	190.00 /ea	190		/ea		/ea		240	261
	DI RJ Compact Solid Sleeve Short 6	2511.523	4.00 ea	33.00 /mh	198	350.00 /ea	1,400		/ea		/ea		1,598	1,685
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.26 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,392	3,500.00 /Mnth	910	3,302	3,302
	John Deere 624 Loader (172 HP) (M)	1900.132	0.26 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	1,560	3,000.00 /Mnth	780	2,340	2,340
	Water Truck, 4,000 Gallon (L)	1900.210	0.26 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	1,248	1,200.00 /Mnth	312	1,560	1,560
	Mikasa Jumping Jack Compactor (L)	1900.138	0.26 Mnth	/Mnth		/Mnth			200.00 /Mnth	52	100.00 /Mnth	26	78	78
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.26 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	650	500.00 /Mnth	130	780	780
	Tracer Wire	2333.080	210.00 lf	33.00 /mh	139	0.40 /lf	92		/lf		/lf		231	292
	Warning Tape Detectable	2333.080	180.00 lf	33.00 /mh	119	0.08 /lf	14		/lf		/lf		133	185
	Polybag 12" and Smaller	2333.090	100.00 lf	33.00 /mh	33	1.00 /lf	110		/lf		/lf		143	158
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	Valve - Plug MJ 6"	2519.160	2.00 ea	33.00 /mh	132	2,000.00 /ea	4,000		/ea		/ea		4,132	4,190
	Valve Box Assembly 6' Bury	2519.130	2.00 ea	33.00 /mh	198	320.00 /ea	640		/ea		/ea		838	925
	Valve Box 2' Extension	2519.130	6.00 ea	33.00 /mh	99	90.00 /ea	540		/ea		/ea		639	683
	Conc Block for Valve	2519.100	2.00 ea	33.00 /mh	66	50.00 /ea	100		/ea		/ea		166	195
	Conc Pad for Valve Box	2519.100	2.00 ea	33.00 /mh	132	75.00 /ea	150		/ea		/ea		282	340
	Valve Stem Extension	2519.100	2.00 ea	33.00 /mh	66	150.00 /ea	300		/ea		/ea		366	395
	6 Bell Restrainer F/C900	2336.380	9.00 ea	33.00 /mh	297	190.00 /ea	1,710		/ea		/ea		2,007	2,138
	DI Pipe Push - Class 350 6	2511.101	80.00 lf	33.00 /mh	264	30.00 /lf	2,424		/lf		/lf		2,688	2,804
	Sleeve w/Ring SS 10" x 18"	15121.250	1.00 ea	33.00 /mh	264	1,500.00 /ea	1,500		/ea		/ea		1,764	1,880
	DI Pipe 6in. dia FxPE - 9ft. 0in.	15221.030	1.00 ea	33.00 /mh	99	900.00 /ea	900		/ea		/ea		999	1,043
	DI Pipe 4in. dia FxPE - 7ft. 0in.	15221.030	1.00 ea	33.00 /mh	99	580.00 /ea	580		/ea		/ea		679	723
	Restrained Dismantling Joint 6" SS Bolts (SB975 or Equal)	15112.085	1.00 ea	33.00 /mh	99	850.00 /ea	850		/ea		/ea		949	993
	Valve Plug Flange 125# 4in	15110.650	1.00 ea	33.00 /mh	33	1,700.00 /ea	1,700		/ea		/ea		1,733	1,748
	NBG Kit 125# 316SS 4in w/ FF EPDM Gasket	15125.012	2.00 ea	33.00 /mh	66	80.00 /ea	160		/ea		/ea		226	255
	Camlock Adapter SS Male x MPT 4"	15220.600	1.00 ea	33.00 /mh	33	230.00 /ea	230		/ea		/ea		263	278
	Camlock Cap SS 4"	15220.600	1.00 ea	33.00 /mh	33	150.00 /ea	150		/ea		/ea		183	198
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			
	Trench Stabilization Rock	2305.050	20.00 cy	/cy		36.00 /ton	1,350		/cy		/cy		1,350	1,350
	Poly Tape	2333.090	3.00 roll	/roll		7.50 /roll	25		/roll		/roll		25	25
	Quart of Gasket Lubricant	15150.035	3.00 ea	33.00 /mh		8.00 /ea	24		/ea		/ea		24	24
	Link Seal Size LS-410-S	15123.100	10.00 ea	33.00 /mh	50	23.00 /ea	230		/ea		/ea		280	301
	02605-2 4" PD (Solids Holding Tank to MH PD-1)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 8-10'	2333.010	80.00 lf	33.00 /mh	422	/lf			/lf		/lf		422	608
	Trench Backfill 8-10'	2333.020	80.00 lf	33.00 /mh	554	/lf			/lf		/lf		554	798
	Utility Bedding Peastone	2305.200	26.67 cy	/cy		25.00 /ton	1,067		/cy		/cy		1,067	1,067
	Spoils to Waste	2333.060	26.67 cy	33.00 /mh	88	/cy			/cy		/cy		88	127
	PVC C-900 Pipe 4 DR-25	2336.310	80.00 lf	33.00 /mh	238	8.00 /lf	672		/lf		/lf		910	1,014
	DI RJ Compact 90 4	2511.514	1.00 ea	33.00 /mh	33	260.00 /ea	260		/ea		/ea		293	308
	DI RJ Compact Cap 4 w/ 1" Tap For Testing	2511.510	2.00 ea	33.00 /mh	66	230.00 /ea	460		/ea		/ea		526	555
	DI RJ Compact Solid Sleeve Short 4	2511.523	2.00 ea	33.00 /mh	66	250.00 /ea	500		/ea		/ea		566	595
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.06 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	552	3,500.00 /Mnth	210	762	762
	John Deere 624 Loader (172 HP) (M)	1900.132	0.06 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	360	3,000.00 /Mnth	180	540	540
	Water Truck, 4,000 Gallon (L)	1900.210	0.06 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	288	1,200.00 /Mnth	72	360	360
	Mikasa Jumping Jack Compactor (L)	1900.138	0.06 Mnth	/Mnth		/Mnth			200.00 /Mnth	12	100.00 /Mnth	6	18	18
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.06 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	150	500.00 /Mnth	30	180	180
	Tracer Wire	2333.080	100.00 lf	33.00 /mh	66	0.40 /lf	44		/lf		/lf		110	139
	Warning Tape Detectable	2333.080	80.00 lf	33.00 /mh	53	0.08 /lf	6		/lf		/lf		59	82
	Polybag 12" and Smaller	2333.090	20.00 lf	33.00 /mh	7	1.00 /lf	22		/lf		/lf		29	32
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	4 Bell Restrainer F/C900	2336.380	4.00 ea	33.00 /mh	132	150.00 /ea	600		/ea		/ea		732	790
	DI Pipe 4in. dia FxPE - 9ft. 0in.	15221.030	1.00 ea	33.00 /mh	99	670.00 /ea	670		/ea		/ea		769	829
	Link Seal Size LS-410-S	15123.100	8.00 ea	33.00 /mh	40	23.00 /ea	184		/ea		/ea		224	244
	Grout Pipe in Manhole 4"	2327.090	2.00 ea	33.00 /mh	66	15.00 /ea	30		/ea		/ea		96	126

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02605-2 4" PD (Solids Holding Tank to MH PD-1)													
	Poly Tape	2333.090	1.00 roll	/roll		7.50 /roll	8		/roll		/roll		8	8
	Quart of Gasket Lubricant	15150.035	1.00 ea	33.00 /mh		8.00 /ea	8		/ea		/ea		8	8
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			
	Trench Stabilization Rock	2305.050	10.00 cy	/cy		36.00 /ton	675		/cy		/cy		675	675
	02605-2 6" PD (Site Lift Station to Headworks)													
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	33.00 /mh	528	50.00 /ea	100		50.00 /ea	100	/ea		728	960
	Trench Excavtion 4- 6'	2333.010	140.00 lf	33.00 /mh	693	/lf			/lf		/lf		693	998
	Trench Backfill 4- 6'	2333.020	140.00 lf	33.00 /mh	924	/lf			/lf		/lf		924	1,331
	Utility Bedding Peastone	2305.200	46.67 cy	/cy		25.00 /ton	1,867		/cy		/cy		1,867	1,867
	Spoils to Waste	2333.060	46.67 cy	33.00 /mh	154	/cy			/cy		/cy		154	222
	PVC C-900 Pipe 6 DR-25	2336.310	140.00 lf	33.00 /mh	462	16.50 /lf	2,426		/lf		/lf		2,888	3,091
	DI RJ Compact 90 6	2511.514	2.00 ea	33.00 /mh	99	400.00 /ea	800		/ea		/ea		899	943
	DI RJ Compact 90 8	2511.514	2.00 ea	33.00 /mh	132	520.00 /ea	1,040		/ea		/ea		1,172	1,230
	DI RJ Compact 45 6	2511.514	2.00 ea	33.00 /mh	99	380.00 /ea	760		/ea		/ea		859	903
	DI RJ Compact 22-½ 6	2511.514	4.00 ea	33.00 /mh	198	370.00 /ea	1,480		/ea		/ea		1,678	1,765
	DI RJ Compact Red 8x6	2511.520	1.00 ea	33.00 /mh	66	400.00 /ea	400		/ea		/ea		466	495
	DI RJ Compact Cap 8 w/ 2" Tap for Testing	2511.510	2.00 ea	33.00 /mh	132	275.00 /ea	550		/ea		/ea		682	740
	DI RJ Compact Solid Sleeve Short 6	2511.523	2.00 ea	33.00 /mh	132	350.00 /ea	700		/ea		/ea		832	890
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,300	3,500.00 /Mnth	875	3,175	3,175
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	1,500	3,000.00 /Mnth	750	2,250	2,250
	Water Truck, 4,000 Gallon (L)	1900.210	0.25 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	1,200	1,200.00 /Mnth	300	1,500	1,500
	Mikasa Jumping Jack Compactor (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			200.00 /Mnth	50	100.00 /Mnth	25	75	75
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	625	500.00 /Mnth	125	750	750
	Tracer Wire	2333.080	160.00 lf	33.00 /mh	106	0.40 /lf	70		/lf		/lf		176	222
	Warning Tape Detectable	2333.080	140.00 lf	33.00 /mh	92	0.08 /lf	11		/lf		/lf		104	144
	Polybag 12" and Smaller	2333.090	40.00 lf	33.00 /mh	13	1.00 /lf	44		/lf		/lf		57	63
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	6 Bell Restrainer F/C900	2336.380	8.00 ea	33.00 /mh	264	190.00 /ea	1,520		/ea		/ea		1,784	1,900
	DI Pipe 6in. dia FxPE - 6ft. 0in.	15221.030	1.00 ea	33.00 /mh	66	650.00 /ea	650		/ea		/ea		716	745
	DI Pipe 8in. dia FxPE - 6ft. 0in.	15221.030	1.00 ea	33.00 /mh	66	950.00 /ea	950		/ea		/ea		1,016	1,045
	DI Wall Pipe FLG x FLG w/ Weep Ring & Tapped Holes 8in x 1ft 0in long	15221.372	1.00 ea	33.00 /mh	264	1,100.00 /ea	1,100		/ea		/ea		1,364	1,480
	NBG Kit 125# 316SS 8in w/ FF EPDM Gasket	15125.012	1.00 ea	33.00 /mh	33	140.00 /ea	140		/ea		/ea		173	188
	DI Pipe Push - Class 350 8	2511.101	20.00 lf	33.00 /mh	73	40.00 /lf	808		/lf		/lf		881	913
	Poly Tape	2333.090	2.00 roll	/roll		7.50 /roll	17		/roll		/roll		17	17
	Quart of Gasket Lubricant	15150.035	2.00 ea	33.00 /mh		8.00 /ea	16		/ea		/ea		16	16
	02605-2 6" PD (Process Basin to Site Lift Station)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 22-24	2333.010	420.00 lf	33.00 /mh	5,544	/lf			/lf		/lf		5,544	7,983
	Trench Backfill 22-24	2333.020	420.00 lf	33.00 /mh	6,930	/lf			/lf		/lf		6,930	9,979
	Trench Box 24' Deep	2333.030	420.00 lf	/lf		/lf			/lf		9.00 /lf	3,780	3,780	3,780
	Utility Bedding Peastone	2305.200	248.89 cy	/cy		25.00 /ton	9,956		/cy		/cy		9,956	9,956
	Spoils to Waste	2333.060	248.89 cy	33.00 /mh	821	/cy			/cy		/cy		821	1,183
	PVC C-900 Pipe 6 DR-25	2336.310	420.00 lf	33.00 /mh	1,386	16.50 /lf	7,277		/lf		/lf		8,663	9,272
	DI RJ Compact 90 6	2511.514	3.00 ea	33.00 /mh	149	400.00 /ea	1,200		/ea		/ea		1,349	1,414
	DI RJ Compact 45 6	2511.514	5.00 ea	33.00 /mh	248	380.00 /ea	1,900		/ea		/ea		2,148	2,256
	DI RJ Compact Wye 6	2511.528	2.00 ea	33.00 /mh	132	675.00 /ea	1,350		/ea		/ea		1,482	1,540
	DI RJ Compact Solid Sleeve Short 6	2511.523	8.00 ea	33.00 /mh	528	350.00 /ea	2,800		/ea		/ea		3,328	3,560
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.60 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	5,520	3,500.00 /Mnth	2,100	7,620	7,620
	John Deere 624 Loader (172 HP) (M)	1900.132	0.60 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	3,600	3,000.00 /Mnth	1,800	5,400	5,400
	Water Truck, 4,000 Gallon (L)	1900.210	0.60 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	2,880	1,200.00 /Mnth	720	3,600	3,600
	Mikasa Jumping Jack Compactor (L)	1900.138	0.60 Mnth	/Mnth		/Mnth			200.00 /Mnth	120	100.00 /Mnth	60	180	180
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.60 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	1,500	500.00 /Mnth	300	1,800	1,800
	Tracer Wire	2333.080	470.00 lf	33.00 /mh	310	0.40 /lf	207		/lf		/lf		517	653
	Warning Tape Detectable	2333.080	420.00 lf	33.00 /mh	277	0.08 /lf	34		/lf		/lf		311	433
	Polybag 12" and Smaller	2333.090	160.00 lf	33.00 /mh	53	1.00 /lf	176		/lf		/lf		229	252
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	6 Bell Restrainer F/C900	2336.380	21.00 ea	33.00 /mh	693	190.00 /ea	3,990		/ea		/ea		4,683	4,988
	DI Pipe Push - Class 350 8	2511.101	60.00 lf	33.00 /mh	218	40.00 /lf	2,424		/lf		/lf		2,642	2,738
	DI Wall Pipe FLG x PE w/ Weep Ring & Tapped Holes 6in x 4ft 0in long	15221.380	3.00 ea	33.00 /mh	792	800.00 /ea	2,400		/ea		/ea		3,192	3,540
	Link Seal Size LS-410-S	15123.100	10.00 ea	33.00 /mh	50	23.00 /ea	230		/ea		/ea		280	301
	Grout Pipe in Manhole 6"	2327.090	1.00 ea	33.00 /mh	66	25.00 /ea	25		/ea		/ea		91	120
	Engineered/Stamped Design for Excavation	2317.105	1.00 ls	/ls		/ls		3,500	/ls		/ls		3,500	3,500
	Dewatering Pumps & Hoses	2240.050	1.00 ls	/ls		/ls			/ls		/ls			
	Trench Stabilization Rock	2305.050	65.00 cy	/cy		36.00 /ton	4,388		/cy		/cy		4,388	4,388
	Poly Tape	2333.090	6.00 roll	/roll		7.50 /roll	50		/roll		/roll		50	50
	Quart of Gasket Lubricant	15150.035	6.00 ea	33.00 /mh		8.00 /ea	48		/ea		/ea		48	48
	02605-2 6" PD (Admin to Site Lift Station)													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 8-10'	2333.010	40.00 lf	33.00 /mh	211	/lf			/lf		/lf		211	304
	Trench Backfill 8-10'	2333.020	40.00 lf	33.00 /mh	277	/lf			/lf		/lf		277	399
	Trench Box 10' Deep	2333.030	40.00 lf	/lf		/lf			/lf		9.00 /lf	360	360	360
	Utility Bedding Peastone	2305.200	13.33 cy	/cy		25.00 /ton	533		/cy		/cy		533	533
	Spoils to Waste	2333.060	13.33 cy	33.00 /mh	44	/cy			/cy		/cy		44	63
	PVC C-900 Pipe 6 DR-25	2336.310	40.00 lf	33.00 /mh	132	16.50 /lf	693		/lf		/lf		825	883
	DI RJ Compact 45 6	2511.514	2.00 ea	33.00 /mh	66	380.00 /ea	760		/ea		/ea		826	855
	DI RJ Compact Solid Sleeve Short 6	2511.523	3.00 ea	33.00 /mh	99	350.00 /ea	1,050		/ea		/ea		1,149	1,193
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.06 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	552	3,500.00 /Mnth	210	762	762
	John Deere 624 Loader (172 HP) (M)	1900.132	0.06 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	360	3,000.00 /Mnth	180	540	540
	Water Truck, 4,000 Gallon (L)	1900.210	0.06 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	288	1,200.00 /Mnth	72	360	360
	Mikasa Jumping Jack Compactor (L)	1900.138	0.06 Mnth	/Mnth		/Mnth			200.00 /Mnth	12	100.00 /Mnth	6	18	18
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.06 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	150	500.00 /Mnth	30	180	180
	Tracer Wire	2333.080	60.00 lf	33.00 /mh	40	0.40 /lf	26		/lf		/lf		66	66

Spreadsheet Level		Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
02605-2 6" PD (Admin to Site Lift Station)														
Warning Tape Detectable		2333.080	40.00 lf	33.00 /mh	26	0.08 /lf	3		/lf		/lf		30	41
Polybag 12" and Smaller		2333.090	20.00 lf	33.00 /mh	7	1.00 /lf	22		/lf		/lf		29	32
Pot Hole Existing		2333.010	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
Cut Existing		2333.010	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
Tie to Existing		2333.010	1.00 ea	33.00 /mh	132	50.00 /ea	50		/ea		/ea		182	240
Tracer Wire Test Box		2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
6 Bell Restrainer F/C900		2336.380	1.00 ea	33.00 /mh	33	190.00 /ea	190		/ea		/ea		223	238
Dewatering Pumps & Hoses		2240.050	1.00 ls	/ls		/ls			/ls		/ls			
Trench Stabilization Rock		2305.050	5.00 cy	/cy		36.00 /ton	338		/cy		/cy		338	338
Poly Tape		2333.090	1.00 roll	/roll		7.50 /roll	8		/roll		/roll		8	8
Quart of Gasket Lubricant		15150.035	1.00 ea	33.00 /mh		8.00 /ea	8		/ea		/ea		8	8
Link Seal Size LS-410-S		15123.100	10.00 ea	33.00 /mh	50	23.00 /ea	230		/ea		/ea		280	301
Grout Pipe in Manhole 6"		2327.090	1.00 ea	33.00 /mh	33	25.00 /ea	25		/ea		/ea		58	73
02605-2 6" PD (Headworks to Site Lift Station)														
Testing Pressure & Leak - Piping		1166.100	2.00 ea	33.00 /mh	528	50.00 /ea	100		50.00 /ea	100	/ea		728	960
Trench Excavtion 4- 6'		2333.010	180.00 lf	33.00 /mh	594	/lf			/lf		/lf		594	855
Trench Backfill 4- 6'		2333.020	180.00 lf	33.00 /mh	891	/lf			/lf		/lf		891	1,283
Utility Bedding Peastone		2305.200	60.00 cy	/cy		25.00 /ton	2,400		/cy		/cy		2,400	2,400
Spoils to Waste		2333.060	60.00 cy	33.00 /mh	198	/cy			/cy		/cy		198	285
PVC C-900 Pipe 6 DR-25		2336.310	100.00 lf	33.00 /mh	330	16.50 /lf	1,733		/lf		/lf		2,063	2,208
DI RJ Compact 45 4		2511.514	4.00 ea	33.00 /mh	132	250.00 /ea	1,000		/ea		/ea		1,132	1,190
DI RJ Compact 45 6		2511.514	1.00 ea	33.00 /mh	50	380.00 /ea	380		/ea		/ea		430	451
DI RJ Compact Wye 6		2511.528	2.00 ea	33.00 /mh	132	675.00 /ea	1,350		/ea		/ea		1,482	1,540
DI RJ Compact Wye 6x4		2511.528	1.00 ea	33.00 /mh	50	550.00 /ea	550		/ea		/ea		600	621
DI RJ Compact Solid Sleeve Short 6		2511.523	2.00 ea	33.00 /mh	99	350.00 /ea	700		/ea		/ea		799	843
Komatsu PC300 Excavator (232 HP) (L)		1900.136	0.20 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,840	3,500.00 /Mnth	700	2,540	2,540
John Deere 624 Loader (172 HP) (M)		1900.132	0.20 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	1,200	3,000.00 /Mnth	600	1,800	1,800
Water Truck, 4,000 Gallon (L)		1900.210	0.20 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	960	1,200.00 /Mnth	240	1,200	1,200
Mikasa Jumping Jack Compactor (L)		1900.138	0.20 Mnth	/Mnth		/Mnth			200.00 /Mnth	40	100.00 /Mnth	20	60	60
Wacker/Rammer Pad Foot Trench Roller (L)		1900.138	0.20 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	500	500.00 /Mnth	100	600	600
Tracer Wire		2333.080	200.00 lf	33.00 /mh	132	0.40 /lf	88		/lf		/lf		220	278
Warning Tape Detectable		2333.080	180.00 lf	33.00 /mh	119	0.08 /lf	14		/lf		/lf		133	185
Polybag 12" and Smaller		2333.090	40.00 lf	33.00 /mh	13	1.00 /lf	44		/lf		/lf		57	63
Pot Hole Existing		2333.010	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
Cut Existing		2333.010	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
Tie to Existing		2333.010	1.00 ea	33.00 /mh	132	50.00 /ea	50		/ea		/ea		182	240
Tracer Wire Test Box		2333.080	3.00 ea	33.00 /mh	594	100.00 /ea	300		/ea		/ea		894	1,155
PVC C-900 Pipe 4 DR-25		2336.310	80.00 lf	33.00 /mh	238	8.00 /lf	672		/lf		/lf		910	1,014
4 Bell Restrainer F/C900		2336.380	4.00 ea	33.00 /mh	132	150.00 /ea	600		/ea		/ea		732	790
6 Bell Restrainer F/C900		2336.380	5.00 ea	33.00 /mh	165	190.00 /ea	950		/ea		/ea		1,115	1,188
6" Romac Style 501 IPS x DI		2519.310	1.00 ea	33.00 /mh	33	850.00 /ea	850		/ea		/ea		883	898
4" Romac Style 501 IPS x DI		2519.310	1.00 ea	33.00 /mh	33	650.00 /ea	650		/ea		/ea		683	698
DI Pipe 4in. dia FxPE - 4ft. 0in.		15221.030	1.00 ea	33.00 /mh	66	450.00 /ea	450		/ea		/ea		516	545
DI Blind Flange 4"		15221.405	1.00 ea	33.00 /mh	33	100.00 /ea	100		/ea		/ea		133	148
NBG Kit 125# 316SS 4in w/ FF EPDM Gasket		15125.012	1.00 ea	33.00 /mh	33	80.00 /ea	80		/ea		/ea		113	128
Poly Tape		2333.090	2.00 roll	/roll		7.50 /roll	17		/roll		/roll		17	17
Quart of Gasket Lubricant		15150.035	2.00 ea	33.00 /mh		8.00 /ea	16		/ea		/ea		16	16
Link Seal Size LS-410-S		15123.100	10.00 ea	33.00 /mh	50	23.00 /ea	230		/ea		/ea		280	301
Grout Pipe in Manhole 6"		2327.090	1.00 ea	33.00 /mh	33	25.00 /ea	25		/ea		/ea		58	73
02605-2 8" OF (Site Lift Station to EQ Basin)														
Testing Pressure & Leak - Piping		1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
Trench Excavtion 8-10'		2333.010	220.00 lf	33.00 /mh	1,815	/lf			/lf		/lf		1,815	2,614
Trench Backfill 8-10'		2333.020	220.00 lf	33.00 /mh	2,178	/lf			/lf		/lf		2,178	3,136
Utility Bedding Peastone		2305.200	73.33 cy	/cy		25.00 /ton	2,933		/cy		/cy		2,933	2,933
Spoils to Waste		2333.060	73.33 cy	33.00 /mh	242	/cy			/cy		/cy		242	348
PVC C-900 Pipe 8 DR-25		2336.310	220.00 lf	33.00 /mh	799	27.50 /lf	6,353		/lf		/lf		7,151	7,502
DI RJ Compact 90 8		2511.514	1.00 ea	33.00 /mh	66	520.00 /ea	520		/ea		/ea		586	615
DI RJ Compact Cap 8		2511.510	1.00 ea	33.00 /mh	66	240.00 /ea	240		/ea		/ea		306	335
DI RJ Compact Solid Sleeve Short 8		2511.523	4.00 ea	33.00 /mh	264	500.00 /ea	2,000		/ea		/ea		2,264	2,380
Komatsu PC300 Excavator (232 HP) (L)		1900.136	0.30 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,760	3,500.00 /Mnth	1,050	3,810	3,810
John Deere 624 Loader (172 HP) (M)		1900.132	0.30 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	1,800	3,000.00 /Mnth	900	2,700	2,700
Water Truck, 4,000 Gallon (L)		1900.210	0.30 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	1,440	1,200.00 /Mnth	360	1,800	1,800
Mikasa Jumping Jack Compactor (L)		1900.138	0.30 Mnth	/Mnth		/Mnth			200.00 /Mnth	60	100.00 /Mnth	30	90	90
Wacker/Rammer Pad Foot Trench Roller (L)		1900.138	0.30 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	750	500.00 /Mnth	150	900	900
Tracer Wire		2333.080	240.00 lf	33.00 /mh	158	0.40 /lf	106		/lf		/lf		264	334
Warning Tape Detectable		2333.080	220.00 lf	33.00 /mh	145	0.08 /lf	18		/lf		/lf		163	227
Polybag 12" and Smaller		2333.090	60.00 lf	33.00 /mh	20	1.00 /lf	66		/lf		/lf		86	95
Tracer Wire Test Box		2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
8 Bell Restrainer F/C900		2336.380	11.00 ea	33.00 /mh	545	260.00 /ea	2,860		/ea		/ea		3,405	3,644
DI Pipe 8in. dia PExPE - 5ft. 0in.		15221.070	1.00 ea	33.00 /mh	99	610.00 /ea	610		/ea		/ea		709	753
DI Wall Pipe FLG x MJ w/ Weep Ring & Tapped Holes 8in x 2ft 0in long		15221.376	1.00 ea	33.00 /mh	264	1,400.00 /ea	1,400		/ea		/ea		1,664	1,780
NBG Kit 125# 316SS 8in w/ FF EPDM Gasket		15125.012	1.00 ea	33.00 /mh	33	140.00 /ea	140		/ea		/ea		173	188
Valve Check Flange 125# 8in		15110.040	1.00 ea	33.00 /mh	66	2,300.00 /ea	2,300		/ea		/ea		2,366	2,395
DI Blind Flange 8" w/ 2" Tap for Testing		15221.405	1.00 ea	33.00 /mh	50	260.00 /ea	260		/ea		/ea		310	331
Link Seal Size LS-400-S		15123.100	9.00 ea	33.00 /mh	45	23.00 /ea	207		/ea		/ea		252	271
Grout Pipe in Manhole 8"		2327.090	1.00 ea	33.00 /mh	66	25.00 /ea	25		/ea		/ea		91	120
Dewatering Pumps & Hoses		2240.050	1.00 ls	/ls		/ls			/ls		/ls			
Trench Stabilization Rock		2305.050	25.00 cy	/cy		36.00 /ton	1,688		/cy		/cy		1,688	1,688
Poly Tape		2333.090	3.00 roll	/roll		7.50 /roll	25		/roll		/roll		25	25
Quart of Gasket Lubricant		15150.035	3.00 ea	33.00 /mh		8.00 /ea	24		/ea		/ea		24	24
Flow Fill at Pipe Crossings		3310.105	3.00 cy	33.00 /mh	396	205.00 /cy	646		/cy		/cy		1,042	1,042
02605-2 PW Line														

153

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02605-2 PW Line													
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	33.00 /mh	528	50.00 /ea	100		50.00 /ea	100	/ea		728	960
	Trench Excavtion 6- 8'	2333.010	1,640.00 lf	33.00 /mh	10,824	/lf			/lf		/lf		10,824	15,587
	Trench Backfill 6- 8'	2333.020	1,640.00 lf	33.00 /mh	13,530	/lf			/lf		/lf		13,530	19,483
	Trench Box 8' Deep	2333.030	900.00 lf	/lf		/lf			/lf		9.00 /lf	8,100	8,100	8,100
	Utility Bedding Peastone	2305.200	546.67 cy	/cy		25.00 /ton	21,867		/cy		/cy		21,867	21,867
	Spoils to Waste	2333.060	546.67 cy	33.00 /mh	1,804	/cy			/cy		/cy		1,804	2,598
	PVC C-900 Pipe 4 DR-11	2336.310	260.00 lf	33.00 /mh	772	9.50 /lf	2,594		/lf		/lf		3,366	3,705
	PVC C-900 Pipe 6 DR-11	2336.310	80.00 lf	33.00 /mh	264	19.00 /lf	1,596		/lf		/lf		1,860	1,976
	PVC C-900 Pipe 8 DR-11	2336.310	1,300.00 lf	33.00 /mh	4,719	33.50 /lf	45,728		/lf		/lf		50,447	52,523
	DI RJ Compact 45 4	2511.514	4.00 ea	33.00 /mh	132	250.00 /ea	1,000		/ea		/ea		1,132	1,190
	DI RJ Compact 45 8	2511.514	8.00 ea	33.00 /mh	528	480.00 /ea	3,840		/ea		/ea		4,368	4,600
	DI RJ Compact 22-½ 8	2511.514	4.00 ea	33.00 /mh	264	480.00 /ea	1,920		/ea		/ea		2,184	2,300
	DI RJ Compact Tee 8x4	2511.524	2.00 ea	33.00 /mh	132	600.00 /ea	1,200		/ea		/ea		1,332	1,390
	DI RJ Compact Tee 8x6	2511.524	1.00 ea	33.00 /mh	66	700.00 /ea	700		/ea		/ea		766	795
	DI RJ Compact Red 8x4	2511.520	1.00 ea	33.00 /mh	66	350.00 /ea	350		/ea		/ea		416	445
	DI RJ Compact Cap 4	2511.510	1.00 ea	33.00 /mh	33	115.00 /ea	115		/ea		/ea		148	163
	DI RJ Compact Cap 8 w/ 2" Tap for Testing	2511.510	4.00 ea	33.00 /mh	132	275.00 /ea	1,100		/ea		/ea		1,232	1,290
	DI RJ Compact Solid Sleeve Long 8	2511.522	2.00 ea	33.00 /mh	132	500.00 /ea	1,000		/ea		/ea		1,132	1,190
	DI RJ Compact Solid Sleeve Short 4	2511.523	4.00 ea	33.00 /mh	132	250.00 /ea	1,000		/ea		/ea		1,132	1,190
	DI RJ Compact Solid Sleeve Short 6	2511.523	2.00 ea	33.00 /mh	99	350.00 /ea	700		/ea		/ea		799	843
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	1.73 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	15,916	3,500.00 /Mnth	6,055	21,971	21,971
	John Deere 624 Loader (172 HP) (M)	1900.132	1.73 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	10,380	3,000.00 /Mnth	5,190	15,570	15,570
	Water Truck, 4,000 Gallon (L)	1900.210	1.73 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	8,304	1,200.00 /Mnth	2,076	10,380	10,380
	Mikasa Jumping Jack Compactor (L)	1900.138	1.73 Mnth	/Mnth		/Mnth			200.00 /Mnth	346	100.00 /Mnth	173	519	519
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	1.73 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	4,325	500.00 /Mnth	865	5,190	5,190
	Tracer Wire	2333.080	1,700.00 lf	33.00 /mh	1,122	0.40 /lf	748		/lf		/lf		1,870	2,364
	Warning Tape Detectable	2333.080	1,640.00 lf	33.00 /mh	1,082	0.08 /lf	131		/lf		/lf		1,214	1,690
	3500 psi Thrust Block Concrete	3310.105	4.74 cy	33.00 /mh	626	278.00 /cy	1,384		/cy		/cy		2,010	2,285
	Polybag 12" and Smaller	2333.090	900.00 lf	33.00 /mh	297	1.00 /lf	990		/lf		/lf		1,287	1,418
	Pot Hole Existing	2333.010	4.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	Cross Existing	2333.010	4.00 ea	33.00 /mh	264	100.00 /ea	400		/ea		/ea		664	780
	Cut Existing	2333.010	1.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Tie to Existing	2333.010	1.00 ea	33.00 /mh	264	50.00 /ea	50		/ea		/ea		314	430
	Support Existing	2333.010	4.00 ea	33.00 /mh	528	50.00 /ea	200		/ea		/ea		728	960
	Tracer Wire Test Box	2333.080	8.00 ea	33.00 /mh	1,584	100.00 /ea	800		/ea		/ea		2,384	3,081
	Disinfection/Chlorination of PW (Enter Line Size)	1166.100	1.00 ea	33.00 /mh	528	50.00 /ea	50		/ea		/ea		578	810
	Valve - Gate 4"	2519.110	4.00 ea	33.00 /mh	132	1,200.00 /ea	4,800		/ea		/ea		4,932	4,990
	Valve - Gate 6"	2519.110	5.00 ea	33.00 /mh	330	1,550.00 /ea	7,750		/ea		/ea		8,080	8,225
	Valve - Gate 8"	2519.110	4.00 ea	33.00 /mh	264	2,350.00 /ea	9,400		/ea		/ea		9,664	9,780
	Valve Box Assembly 6' Bury	2519.130	13.00 ea	33.00 /mh	1,287	320.00 /ea	4,160		/ea		/ea		5,447	6,013
	Valve Box 2' Extension	2519.130	13.00 ea	33.00 /mh	215	90.00 /ea	1,170		/ea		/ea		1,385	1,479
	Conc Block for Valve	2519.100	13.00 ea	33.00 /mh	429	50.00 /ea	650		/ea		/ea		1,079	1,268
	Conc Pad for Valve Box	2519.100	13.00 ea	33.00 /mh	858	75.00 /ea	975		/ea		/ea		1,833	2,211
	Valve Stem Extension	2519.100	13.00 ea	33.00 /mh	429	150.00 /ea	1,950		/ea		/ea		2,379	2,568
	4 Bell Restrainer F/C900	2336.380	13.00 ea	33.00 /mh	429	150.00 /ea	1,950		/ea		/ea		2,379	2,568
	6 Bell Restrainer F/C900	2336.380	4.00 ea	33.00 /mh	132	190.00 /ea	760		/ea		/ea		892	950
	8 Bell Restrainer F/C900	2336.380	65.00 ea	33.00 /mh	3,218	260.00 /ea	16,900		/ea		/ea		20,118	21,533
	Hydrant Tee 8x6	2510.200	4.00 ea	33.00 /mh	264	740.00 /ea	2,960		/ea		/ea		3,224	3,340
	Fire Hydrant	2510.200	4.00 ea	33.00 /mh	3,168	4,600.00 /ea	18,400		/ea		/ea		21,568	22,962
	DI Pipe Push - Class 350 6	2511.101	80.00 lf	33.00 /mh	264	30.00 /lf	2,424		/lf		/lf		2,688	2,804
	Utility Bedding Stone 3/4"	2305.200	8.00 cy	/cy		36.00 /ton	461		/cy		/cy		461	461
	Testing Bac T	1166.100	3.00 ea	33.00 /mh	792	/ea		225.00 /ea	/ea	675	/ea		1,467	1,815
	Overhead Power Line	5650.100	1.00 ls	/ls		/ls			/ls		0.00 /ls	0		
	Poly Tape	2333.090	20.00 roll	/roll		7.50 /roll	165		/roll		/roll		165	165
	Quart of Gasket Lubricant	15150.035	20.00 ea	33.00 /mh		8.00 /ea	160		/ea		/ea		160	160
	02610- 1" Alum from MBR to Process Basin													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 4- 6'	2333.010	220.00 lf	33.00 /mh	871	/lf			/lf		/lf		871	1,255
	Trench Backfill 4- 6'	2333.020	220.00 lf	33.00 /mh	1,307	/lf			/lf		/lf		1,307	1,882
	Utility Bedding Peastone	2305.200	48.89 cy	/cy		25.00 /ton	1,956		/cy		/cy		1,956	1,956
	Spoils to Waste	2333.060	48.89 cy	33.00 /mh	161	/cy			/cy		/cy		161	232
	Sch80 1.5" x 1" Asahi Pro-Lock or Equal	2336.110	220.00 lf	33.00 /mh	1,162	25.00 /lf	5,500		/lf		/lf		6,662	7,173
	Sch 80 90 1.5" x 1" Asahi Pro-Lock or Equal	2336.120	4.00 ea	33.00 /mh	66	140.00 /ea	560		/ea		/ea		626	655
	Sch-80 45 Bend 1.5" x 1" Asahi Pro-Lock or Equal	2336.120	6.00 ea	33.00 /mh	99	167.00 /ea	1,002		/ea		/ea		1,101	1,145
	Sch 80 Coupling 1.5" x 1" Asahi Pro-Lock or Equal	2336.180	11.00 ea	33.00 /mh	182	26.00 /ea	286		/ea		/ea		468	547
	Sch 80 Termination 1.5" x 1" Asahi Pro-Lock or Equal	2336.130	4.00 ea	33.00 /mh	66	170.00 /ea	680		/ea		/ea		746	775
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.25 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	2,300	3,500.00 /Mnth	875	3,175	3,175
	John Deere 624 Loader (172 HP) (M)	1900.132	0.25 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	1,500	3,000.00 /Mnth	750	2,250	2,250
	Water Truck, 4,000 Gallon (L)	1900.210	0.25 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	1,200	1,200.00 /Mnth	300	1,500	1,500
	Mikasa Jumping Jack Compactor (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			200.00 /Mnth	50	100.00 /Mnth	25	75	75
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.25 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	625	500.00 /Mnth	125	750	750
	Warning Tape Detectable	2333.080	220.00 lf	33.00 /mh	145	0.08 /lf	18		/lf		/lf		163	227
	Tracer Wire	2333.080	240.00 lf	33.00 /mh	158	0.40 /lf	106		/lf		/lf		264	334
	Tracer Wire Test Box	2333.080	4.00 ea	33.00 /mh	792	100.00 /ea	400		/ea		/ea		1,192	1,540
	PVC Sch 80 Primer	15211.201	2.00 qt	/qt		45.00 /qt	99		/qt		/qt		99	99
	PVC Sch 80 Cement	15211.201	2.00 qt	/qt		50.00 /qt	110		/qt		/qt		110	110
	Sch 80 Flange Van Stone 1.5" x 1" Asahi Pro-Lock or equal	15211.223	1.00 ea	33.00 /mh	33	170.00 /ea	170		/ea		/ea		203	218
	NBG Kit 125# 316SS 1-½in w/ FF EPDM Gasket	15125.012	1.00 ea	33.00 /mh	33	30.00 /ea	30		/ea		/ea		63	78
	02610- Influent Sample Line													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	
	Trench Excavtion 4- 6'	2333.010	30.00 lf	33.00 /mh	99	/lf			/lf		/lf		99	
	Trench Backfill 4- 6'	2333.020	30.00 lf	33.00 /mh	149	/lf			/lf		/lf		149	

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02610- Influent Sample Line													
	Utility Bedding Peastone	2305.200	6.67 cy	/cy		25.00 /ton	267		/cy		/cy		267	267
	Spoils to Waste	2333.060	6.67 cy	33.00 /mh	22	/cy			/cy		/cy		22	32
	PVC Sch 80 PIPE 4" PE	15211.203	30.00 lf	33.00 /mh	208	9.00 /lf	270		/lf		/lf		478	569
	PVC Sch 80 22 bend 4 SOC	2336.120	4.00 ea	33.00 /mh	16	45.80 /ea	183		/ea		/ea		199	206
	PVC Sch 80 Coupling 4" SOC	2336.180	2.00 ea	33.00 /mh	8	20.00 /ea	40		/ea		/ea		48	51
	PVC Sch 80 Caps 4 SOC	2336.130	2.00 ea	33.00 /mh	8	32.00 /ea	64		/ea		/ea		72	75
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	460	3,500.00 /Mnth	175	635	635
	John Deere 624 Loader (172 HP) (M)	1900.132	0.05 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	300	3,000.00 /Mnth	150	450	450
	Water Truck, 4,000 Gallon (L)	1900.210	0.05 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	240	1,200.00 /Mnth	60	300	300
	Mikasa Jumping Jack Compactor (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			200.00 /Mnth	10	100.00 /Mnth	5	15	15
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.05 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	125	500.00 /Mnth	25	150	150
	Warning Tape Detectable	2333.080	30.00 lf	33.00 /mh	20	0.08 /lf	2		/lf		/lf		22	31
	Tracer Wire	2333.080	40.00 lf	33.00 /mh	26	0.40 /lf	18		/lf		/lf		44	56
	Tracer Wire Test Box	2333.080	2.00 ea	33.00 /mh	396	100.00 /ea	200		/ea		/ea		596	770
	PVC Sch 80 Cement	15211.201	1.00 qt	/qt		50.00 /qt	55		/qt		/qt		55	55
	PVC Sch 80 Primer	15211.201	1.00 qt	/qt		45.00 /qt	50		/qt		/qt		50	50
	PE Tubing 3/8" ID x 1/2" OD	15219.100	80.00 lf	33.00 /mh	132	1.00 /lf	92		/lf		/lf		224	282
	Connect to Equipment and MH	15211.202	2.00 ea	33.00 /mh	20	250.00 /ea	500		/ea		/ea		520	529
	PS Expansion Anchor 3/8 x 5in SS	15060.127	20.00 ea	33.00 /mh	33	8.00 /ea	160		/ea		/ea		193	208
	PS Strut SS 1-5/8 x 1-5/8	15060.476	10.00 lf	33.00 /mh	99	20.00 /lf	200		/lf		/lf		299	343
	PS 2 Piece Clamp SS 4in	15060.518	4.00 ea	33.00 /mh	40	20.00 /ea	80		/ea		/ea		120	137
	PS Misc Hardware for Tubing	15060.290	1.00 ls	33.00 /mh	8	200.00 /ls	200		/ls		/ls		208	212
	Core Drilled Hole - 4 - 8"	15122.100	1.00 ea	33.00 /mh	33	0.01 /ea	0	450	/ea		/ea		483	498
	Link Seal Size LS-300-S	15123.100	10.00 ea	33.00 /mh	50	9.00 /ea	90		/ea		/ea		140	161
	Grout Pipe in Manhole 4"	2327.090	1.00 ea	33.00 /mh	33	15.00 /ea	15		/ea		/ea		48	63
	0330 4- Encase 24" Central Interceptor Line at PW Crossing													
	Other Placement Count	3310.360	1.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Formwork Pipe Encasement	3100.108	199.50 sf	33.00 /mh	1,646	2.00 /sf	419		/sf		/sf		2,065	2,789
	Place Pipe Encasement	3310.195	8.43 cy	33.00 /mh	298	175.00 /cy	1,579		/cy		/cy		1,877	2,008
	Nails and Hardware	3150.200	199.50 sf	/sf		0.04 /sf	8		/sf		/sf		8	8
	Form Ties Specialty	3150.632	15.00 ea	33.00 /mh	99	5.00 /ea	75		/ea		/ea		174	218
	Pipe Tie Downs (Medium)	3150.200	5.00 ea	33.00 /mh	825	150.00 /ea	750		/ea		/ea		1,575	1,938
	Dimension Lumber	3150.200	199.50 sf	/sf		0.50 /sf	100		/sf		/sf		100	100
	Oil SOG Form	3100.310	199.50 sf	/sf		0.02 /sf	4		/sf		/sf		4	4
	Finish- Rough	3350.110	87.50 sf	33.00 /mh	26	0.01 /sf	1		/sf		/sf		27	38
	Liquid Curing Compounds	3390.170	87.50 sf	33.00 /mh	6	0.06 /sf	5		/sf		/sf		11	14
	Rebar Install Self	3200.980	0.60 tn	33.00 /mh	594	/tn			/tn		/tn		594	855
	0330 4- Encase 6" WAS at PW Crossing													
	Other Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Formwork Pipe Encasement	3100.108	176.00 sf	33.00 /mh	1,452	2.00 /sf	370		/sf		/sf		1,822	2,460
	Place Pipe Encasement	3310.195	5.64 cy	33.00 /mh	199	175.00 /cy	1,055		/cy		/cy		1,254	1,342
	Nails and Hardware	3150.200	176.00 sf	/sf		0.04 /sf	7		/sf		/sf		7	7
	Form Ties Specialty	3150.632	24.00 ea	33.00 /mh	158	5.00 /ea	120		/ea		/ea		278	348
	Pipe Tie Downs (Small)	3150.200	12.00 ea	33.00 /mh	1,584	100.00 /ea	1,200		/ea		/ea		2,784	3,481
	Dimension Lumber	3150.200	176.00 sf	/sf		0.50 /sf	88		/sf		/sf		88	88
	Oil SOG Form	3100.310	176.00 sf	/sf		0.02 /sf	4		/sf		/sf		4	4
	Finish- Rough	3350.110	80.00 sf	33.00 /mh	24	0.01 /sf	0		/sf		/sf		24	35
	Liquid Curing Compounds	3390.170	80.00 sf	33.00 /mh	5	0.06 /sf	5		/sf		/sf		10	12
	Pipe Encasement Rebar	3200.980	0.45 tn	33.00 /mh	475	1,600.00 /tn	720		/tn		/tn		1,195	1,404
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	460	3,500.00 /Mnth	175	635	635
	0330 4- Encase Sewer at PW Crossing													
	Other Placement Count	3310.360	4.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Formwork Pipe Encasement	3100.108	450.00 sf	33.00 /mh	3,713	2.00 /sf	945		/sf		/sf		4,658	6,291
	Place Pipe Encasement	3310.195	17.48 cy	33.00 /mh	617	175.00 /cy	3,274		/cy		/cy		3,891	4,163
	Nails and Hardware	3150.200	450.00 sf	/sf		0.04 /sf	18		/sf		/sf		18	18
	Form Ties Specialty	3150.632	48.00 ea	33.00 /mh	317	5.00 /ea	240		/ea		/ea		557	696
	Pipe Tie Downs (Small)	3150.200	24.00 ea	33.00 /mh	3,168	100.00 /ea	2,400		/ea		/ea		5,568	6,962
	Dimension Lumber	3150.200	450.00 sf	/sf		0.50 /sf	225		/sf		/sf		225	225
	Oil SOG Form	3100.310	450.00 sf	/sf		0.02 /sf	9		/sf		/sf		9	9
	Finish- Rough	3350.110	200.00 sf	33.00 /mh	59	0.01 /sf	1		/sf		/sf		61	87
	Liquid Curing Compounds	3390.170	200.00 sf	33.00 /mh	13	0.06 /sf	12		/sf		/sf		25	31
	Pipe Encasement Rebar	3200.980	1.50 tn	33.00 /mh	1,584	1,600.00 /tn	2,400		/tn		/tn		3,984	4,681
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.20 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,840	3,500.00 /Mnth	700	2,540	2,540
	0330 4- Encase 1" Alum Below MBR													
	Other Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Formwork Pipe Encasement	3100.108	79.50 sf	33.00 /mh	656	2.00 /sf	167		/sf		/sf		823	1,111
	Place Pipe Encasement	3310.195	2.08 cy	33.00 /mh	74	175.00 /cy	390		/cy		/cy		464	496
	Nails and Hardware	3150.200	79.50 sf	/sf		0.04 /sf	3		/sf		/sf		3	3
	Form Ties Specialty	3150.632	15.00 ea	33.00 /mh	99	5.00 /ea	75		/ea		/ea		174	218
	Pipe Tie Downs (Small)	3150.200	7.00 ea	33.00 /mh	924	100.00 /ea	700		/ea		/ea		1,624	2,031
	Dimension Lumber	3150.200	79.50 sf	/sf		0.50 /sf	40		/sf		/sf		40	40
	Oil SOG Form	3100.310	79.50 sf	/sf		0.02 /sf	2		/sf		/sf		2	2
	Finish- Rough	3350.110	37.50 sf	33.00 /mh	11	0.01 /sf	0		/sf		/sf		11	16
	Liquid Curing Compounds	3390.170	37.50 sf	33.00 /mh	2	0.06 /sf	2		/sf		/sf		5	6
	Pipe Encasement Rebar	3200.980	0.15 tn	33.00 /mh	158	1,600.00 /tn	240		/tn		/tn		398	468
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.05 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	460	3,500.00 /Mnth	175	635	635
	0330 4- Encase Sample Line Below Headorks													
	Other Placement Count	3310.360	2.00 ea	/ea		0.01 /ea	0		/ea		/ea		0	0
	Formwork Pipe Encasement	3100.108	56.00 sf	33.00 /mh	462	2.00 /sf	118		/sf		/sf		580	
	Place Pipe Encasement	3310.195	1.74 cy	33.00 /mh	61	175.00 /cy	326		/cy		/cy		387	
	Nails and Hardware	3150.200	56.00 sf	/sf		0.04 /sf	2		/sf		/sf		2	
	Form Ties Specialty	3150.632	8.00 ea	33.00 /mh	53	5.00 /ea	40		/ea		/ea		93	

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	0330 4- Encase Sample Line Below Headorks													
	Pipe Tie Downs (Small)	3150.200	4.00 ea	33.00 /mh	528	100.00 /ea	400		/ea		/ea		928	1,160
	Dimension Lumber	3150.200	56.00 sf	/sf		0.50 /sf	28		/sf		/sf		28	28
	Oil SOG Form	3100.310	56.00 sf	/sf		0.02 /sf	1		/sf		/sf		1	1
	Finish- Rough	3350.110	24.00 sf	33.00 /mh	7	0.01 /sf	0		/sf		/sf		7	10
	Liquid Curing Compounds	3390.170	24.00 sf	33.00 /mh	2	0.06 /sf	1		/sf		/sf		3	4
	Pipe Encasement Rebar	3200.980	0.13 tn	33.00 /mh	137	1,600.00 /tn	208		/tn		/tn		345	406
	10 HWK Headworks Building													
	drain for git washer													
	02610- drain from new & future grit washer to trench drain 10M201													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 4- 6'	2333.010	34.00 lf	33.00 /mh	224	/lf			/lf		/lf		224	323
	Trench Backfill 4- 6'	2333.020	34.00 lf	33.00 /mh	281	/lf			/lf		/lf		281	404
	Utility Bedding Gravel-Crushed	2305.200	4.54 cy	/cy		25.00 /ton	182		/cy		/cy		182	182
	Spoils to Waste	2333.060	5.04 cy	33.00 /mh	17	/cy			/cy		/cy		17	24
	PVC Sch-80 Pipe 12	2336.110	34.00 lf	33.00 /mh	842	50.00 /lf	1,700		/lf		/lf		2,542	2,912
	PVC Sch 80 45 Bend 12 SOC	2336.120	3.00 ea	33.00 /mh	198	1,750.00 /ea	5,250		/ea		/ea		5,448	5,535
	PVC Sch 80 Reducing Wye 12 x 6 SOC	2336.170	3.00 ea	33.00 /mh	396	1,900.00 /ea	5,700		/ea		/ea		6,096	6,270
	PVC Sch 80 Coupling Reducer 8 x 3 SOC x SOC	2336.190	2.00 ea	33.00 /mh	66	375.00 /ea	750		/ea		/ea		816	845
	PVC Sch-80 Pipe 3 PE	2336.110	12.00 lf	33.00 /mh	139	7.00 /lf	84		/lf		/lf		223	284
	PVC Sch 40 90 ell 3 SOC	2336.020	2.00 ea	33.00 /mh	33	16.00 /ea	32		/ea		/ea		65	80
	DI MJ Compact Solid Sleeve Long 6	2511.322	1.00 ea	33.00 /mh	66	395.00 /ea	395		/ea		/ea		461	490
	DI MEGAFLANGE w/ SS Bolts for DIP 12"	15112.230	2.00 ea	33.00 /mh	264	900.00 /ea	1,800		/ea		/ea		2,064	2,180
	DI Wall Pipe MJ x PE 12in x 1ft 6in long into trench drain	15221.320	1.00 ea	33.00 /mh	528	1,350.00 /ea	1,350		/ea		/ea		1,878	2,110
	grit NPW flush line													
	150-553 stainless steel NPW from grit chamber pump suction 10M402													
	Stainless Steel Pipe 3"	15212.005	24.00 lf	33.00 /mh	634	50.00 /lf	1,200		/lf		/lf		1,834	2,112
	Stainless Steel Pipe 3" 90 ell	15212.005	2.00 lf	33.00 /mh	66	180.00 /lf	360		/lf		/lf		426	455
	Stainless Steel Pipe 3" flange	15212.005	2.00 lf	33.00 /mh	66	150.00 /lf	300		/lf		/lf		366	395
	NBG Kit 125# SS 3in	15125.012	2.00 ea	33.00 /mh	33	50.00 /ea	100		/ea		/ea		133	148
	grit compact piping													
	150-55 80 piping from trough to grit compactor 10M201													
	PVC Sch 80 PIPE 4" PE	15211.203	20.00 lf	33.00 /mh	330	9.00 /lf	180		/lf		/lf		510	655
	PVC Sch 80 PIPE 10" PE	15211.203	60.00 lf	33.00 /mh	1,584	38.00 /lf	2,280		/lf		/lf		3,864	4,561
	PVC Sch 80 90 EL 10" S	15211.207	4.00 ea	33.00 /mh	264	1,900.00 /ea	7,600		/ea		/ea		7,864	7,980
	PVC Sch 80 45 EL 10" SOCxSOC	15211.208	2.00 ea	33.00 /mh	132	1,350.00 /ea	2,700		/ea		/ea		2,832	2,890
	PVC Sch 80 TEE 10" S	15211.211	1.00 ea	33.00 /mh	66	2,100.00 /ea	2,100		/ea		/ea		2,166	2,195
	PVC Sch 80 Straight CPLG 10" S	15211.204	4.00 ea	33.00 /mh	264	250.00 /ea	1,000		/ea		/ea		1,264	1,380
	PVC Sch 80 FEM ADPT 10" SXT for clean out	15211.218	2.00 ea	33.00 /mh	132	350.00 /ea	700		/ea		/ea		832	890
	PVC Sch 80 Flange Van Stone 4" Soc	15211.223	4.00 ea	33.00 /mh	66	34.00 /ea	136		/ea		/ea		202	231
	PVC Sch 80 Flange Van Stone 10" Soc	15211.223	10.00 ea	33.00 /mh	660	260.00 /ea	2,600		/ea		/ea		3,260	3,550
	PVC Sch 80 Cement	15211.201	2.00 qt	/qt		50.00 /qt	110		/qt		/qt		110	110
	PVC Sch 80 Primer	15211.201	2.00 qt	/qt		45.00 /qt	99		/qt		/qt		99	99
	PVC Sch 80 PLUG 10" SPG for cleanout	15211.234	1.00 ea	33.00 /mh	66	600.00 /ea	600		/ea		/ea		666	695
	PVC Sch 80 TEE 10X10X4" S	15211.212	1.00 ea	33.00 /mh	99	950.00 /ea	950		/ea		/ea		1,049	1,093
	NBG Kit 125# SS 10in	15125.012	4.00 ea	33.00 /mh	198	170.00 /ea	680		/ea		/ea		878	965
	PS Strut SS 1-5/8 x 1-5/8	15060.476	30.00 lf	33.00 /mh	297	20.00 /lf	600		/lf		/lf		897	1,028
	PS Strut Post Base SS	15060.478	2.00 ea	33.00 /mh	20	52.00 /ea	104		/ea		/ea		124	133
	PS 2 Piece Clamp SS 10in	15060.518	8.00 ea	33.00 /mh	132	100.00 /ea	800		/ea		/ea		932	990
	PS Expansion Anchor 5/8 x 3-1/2in SS	15060.127	32.00 ea	33.00 /mh	53	20.00 /ea	640		/ea		/ea		693	716
	influent supply													
	02605- influent Pipe entering building to trench 10M201													
	Testing Pressure & Leak - Piping	1166.100	1.00 ea	33.00 /mh	264	50.00 /ea	50		50.00 /ea	50	/ea		364	480
	Trench Excavtion 0- 4'	2333.010	42.00 lf	33.00 /mh	208	/lf			/lf		/lf		208	299
	Trench Backfill 0- 4'	2333.020	42.00 lf	33.00 /mh	347	/lf			/lf		/lf		347	499
	Utility Bedding Gravel-Crushed	2305.200	22.52 cy	/cy		25.00 /ton	901		/cy		/cy		901	901
	Spoils to Waste	2333.060	22.52 cy	33.00 /mh	74	/cy			/cy		/cy		74	107
	PVC C-900 Pipe 30 DR 25 g	2336.310	42.00 lf	33.00 /mh	693	350.00 /lf	15,435		/lf		/lf		16,128	16,433
	30" PVC 45 Deg Bend	2336.320	2.00 ea	33.00 /mh	396	3,500.00 /ea	7,000		/ea		/ea		7,396	7,570
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.03 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	276	3,500.00 /Mnth	105	381	381
	John Deere 624 Loader (172 HP) (M)	1900.132	0.03 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	180	3,000.00 /Mnth	90	270	270
	Water Truck, 4,000 Gallon (L)	1900.210	0.03 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	144	1,200.00 /Mnth	36	180	180
	Mikasa Jumping Jack Compactor (L)	1900.138	0.03 Mnth	/Mnth		/Mnth			200.00 /Mnth	6	100.00 /Mnth	3	9	9
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.03 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	75	500.00 /Mnth	15	90	90
	DI Wall Pipe MJ X PE 30in x 1ft 0in long W/ WATER STOP COLLER	15221.304	1.00 ea	33.00 /mh	792	5,400.00 /ea	5,400		/ea		/ea		6,192	6,540
	DI MJ Compact Solid Sleeve Long 30	2511.322	1.00 ea	33.00 /mh	396	6,300.00 /ea	6,300		/ea		/ea		6,696	6,870
	piping from grit to													
	150-55 80 PVC Cement Weld Sch 80 conections from drain to grit 10M403													
	PVC Sch 80 PIPE 3" PE	15211.203	20.00 lf	33.00 /mh	264	6.50 /lf	130		/lf		/lf		394	510
	PVC Sch 80 PIPE 4" PE	15211.203	20.00 lf	33.00 /mh	264	9.00 /lf	180		/lf		/lf		444	560
	PVC Sch 80 PIPE 8" PE	15211.203	20.00 lf	33.00 /mh	660	26.00 /lf	520		/lf		/lf		1,180	1,470
	PVC Sch 80 90 EL 3" S	15211.207	2.00 ea	33.00 /mh	26	16.00 /ea	32		/ea		/ea		58	70
	PVC Sch 80 90 EL 4" S	15211.207	2.00 ea	33.00 /mh	26	25.00 /ea	50		/ea		/ea		76	88
	PVC Sch 80 45 EL 4" SOCxSOC	15211.208	2.00 ea	33.00 /mh	33	65.00 /ea	130		/ea		/ea		163	178
	PVC Sch 80 MALE ADPT 3" SXMT	15211.217	1.00 ea	33.00 /mh	17	21.00 /ea	21		/ea		/ea		38	45
	PVC Sch 80 Cement	15211.201	2.00 qt	/qt		50.00 /qt	110		/qt		/qt		110	110
	PVC Sch 80 Primer	15211.201	2.00 qt	/qt		45.00 /qt	99		/qt		/qt		99	99
	PVC Sch 80 Concentric Reducer Coupling 12X8 S	15211.205	1.00 ea	33.00 /mh	33	500.00 /ea	500		/ea		/ea		533	548
	PVC Sch 80 WYE 8X8X4" S	15211.214	1.00 ea	33.00 /mh	66	950.00 /ea	950		/ea		/ea		1,016	
	PVC Sch 80 VIT UNION 3" S	15211.219	1.00 ea	33.00 /mh	17	52.00 /ea	52		/ea		/ea		69	
	PVC Sch 80 Flange Vanstone 4" S (NNA)	15211.226	3.00 ea	33.00 /mh	40	90.00 /ea	270		/ea		/ea		310	

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-55 80 PVC Cement Weld Sch 80 conections from drain to grit 10M403													
	PVC Sch 80 Flange Vanstone 8" S (NNA)	15211.226	3.00 ea	33.00 /mh	99	140.00 /ea	420		/ea		/ea		519	563
	20 PBS Process Basin													
	chemical injection chemical injection													
	150-55 80 chemical injection 20M901 detail 6													
	PVC Sch 80 PIPE 1" PE	15211.203	15.00 lf	33.00 /mh	248	1.75 /lf	26		/lf		/lf		274	383
	PVC Sch 80 PIPE 1" x 1 1/2 double wall containment pipe	15211.203	20.00 lf	33.00 /mh	330	18.00 /lf	360		/lf		/lf		690	835
	PVC Sch 80 90 EL 1" 1 1/2 double wall containment pipe	15211.207	2.00 ea	33.00 /mh	33	75.00 /ea	150		/ea		/ea		183	198
	PVC Sch 80 45 EL 1" SOCxSOC double wall	15211.208	2.00 ea	33.00 /mh	33	25.00 /ea	50		/ea		/ea		83	98
	PVC Sch 80 45 EL 1" x 1 1/2 double wall containment pipe SOCxSOC	15211.208	2.00 ea	33.00 /mh	33	25.00 /ea	50		/ea		/ea		83	98
	PVC Sch 80 Straight CPLG 1" S double wall	15211.204	1.00 ea	33.00 /mh	17	25.00 /ea	25		/ea		/ea		42	49
	PVC Sch 80 Straight CPLG 1"x 1 1/2 double wall containment pipe S	15211.204	1.00 ea	33.00 /mh	17	75.00 /ea	75		/ea		/ea		92	99
	PVC Sch 80 Flange Van Stone 1" Soc	15211.223	2.00 ea	33.00 /mh	33	12.00 /ea	24		/ea		/ea		57	72
	PVC Sch 80 Flange Van Stone 1"x 11/2 double wall containment pipe Soc	15211.223	2.00 ea	33.00 /mh	33	170.00 /ea	340		/ea		/ea		373	388
	PVC Sch 80 Cement	15211.201	2.00 qt	/qt		50.00 /qt	110		/qt		/qt		110	110
	PVC Sch 80 Primer	15211.201	2.00 qt	/qt		45.00 /qt	99		/qt		/qt		99	99
	NBG Kit 125# SS 1in	15125.012	2.00 ea	33.00 /mh	33	18.00 /ea	36		/ea		/ea		69	84
	NBG Kit 125# SS 1" 1 11/2 double wall containment pipe in	15125.012	2.00 ea	33.00 /mh	33	20.00 /ea	40		/ea		/ea		73	88
	PS Strut SS 1-5/8 x 1-5/8	15060.476	16.00 lf	33.00 /mh	158	20.00 /lf	320		/lf		/lf		478	548
	PS 2 Piece Clamp SS 1in	15060.518	4.00 ea	33.00 /mh	40	11.00 /ea	44		/ea		/ea		84	101
	PS 2 Piece Clamp SS 1" in	15060.518	4.00 ea	33.00 /mh	40	11.00 /ea	44		/ea		/ea		84	101
	PS Expansion Anchor 1/2 x 2-3/4in SS	15060.127	24.00 ea	33.00 /mh	40	15.00 /ea	360		/ea		/ea		400	417
	23 MBR MBR Building													
	chemical clean syste chemical clean system													
	150-55 80 PVC Cement Weld Sch 80 MBR chem clean system 23M209													
	PVC Sch 80 PIPE 1/2" PE	15211.203	120.00 lf	33.00 /mh	832	0.80 /lf	96		/lf		/lf		928	1,294
	PVC Sch 80 PIPE 1.5" PE	15211.203	120.00 lf	33.00 /mh	1,188	2.30 /lf	276		/lf		/lf		1,464	1,987
	PVC Sch 80 90 EL 1/2" S	15211.207	16.00 ea	33.00 /mh	111	2.00 /ea	32		/ea		/ea		143	192
	PVC Sch 80 90 EL 1.5" S	15211.207	16.00 ea	33.00 /mh	158	5.00 /ea	80		/ea		/ea		238	308
	PVC Sch 80 Straight CPLG 1/2" S	15211.204	8.00 ea	33.00 /mh	55	3.00 /ea	24		/ea		/ea		79	104
	PVC Sch 80 Straight CPLG 1.5" S	15211.204	8.00 ea	33.00 /mh	79	8.00 /ea	64		/ea		/ea		143	178
	PVC Sch 80 MALE ADPT 1/2" SXMT	15211.217	4.00 ea	33.00 /mh	28	4.00 /ea	16		/ea		/ea		44	56
	PVC Sch 80 MALE ADPT 1.5" SXMT	15211.217	4.00 ea	33.00 /mh	40	11.00 /ea	44		/ea		/ea		84	101
	PVC Sch 80 Flange Van Stone 1.5" Soc	15211.223	4.00 ea	33.00 /mh	40	12.00 /ea	48		/ea		/ea		88	105
	PVC Sch 80 Cement	15211.201	3.00 qt	/qt		50.00 /qt	165		/qt		/qt		165	165
	PVC Sch 80 Primer	15211.201	3.00 qt	/qt		45.00 /qt	149		/qt		/qt		149	149
	PVC Sch 80/VIT UNION 1/2" S	15211.219	4.00 ea	33.00 /mh	28	6.00 /ea	24		/ea		/ea		52	64
	PVC Sch 80 Tank Adapter 1/2"	15211.283	2.00 ea	33.00 /mh	14	75.00 /ea	150		/ea		/ea		164	170
	PVC Sch 80 Tank Adapter 1-1/2"	15211.283	3.00 ea	33.00 /mh	21	115.00 /ea	345		/ea		/ea		366	375
	NBG Kit 125# SS 1-1/2in	15125.012	4.00 ea	33.00 /mh	40	25.00 /ea	100		/ea		/ea		140	157
	PS Strut FRP 1-5/8 x 1-5/8	15060.476	120.00 lf	33.00 /mh	1,188	13.00 /lf	1,560		/lf		/lf		2,748	3,271
	PS Strut Post Base FRP	15060.478	24.00 ea	33.00 /mh	238	25.00 /ea	600		/ea		/ea		838	942
	PS 2 Piece coushin Clamp SS 1/2 in	15060.518	12.00 ea	33.00 /mh	119	5.00 /ea	60		/ea		/ea		179	231
	PS 2 Piece coushin Clamp SS 1-1/2in	15060.518	12.00 ea	33.00 /mh	119	13.00 /ea	156		/ea		/ea		275	327
	PS Expansion Anchor 5/8 x 3-1/2in SS	15060.127	96.00 ea	33.00 /mh	158	20.00 /ea	1,920		/ea		/ea		2,078	2,148
	PVC Valve Ball True Union Viton 1.5" S & T HV-23511A	15211.310	1.00 ea	33.00 /mh	17	0.01 /ea	0		/ea		/ea		17	24
	PVC Valve Ball True Union Viton 1.5" S & T HV-23551A	15211.310	1.00 ea	33.00 /mh	17	0.01 /ea	0		/ea		/ea		17	24
	Hose for NaOCL 1.5" x 10'	15220.130	10.00 lf	/lf		6.00 /lf	60		/lf		/lf		60	60
	Hose for NaOCL 1.5" x 10'	15220.130	10.00 lf	/lf		6.00 /lf	60		/lf		/lf		60	60
	braided pvc hose for return line 1/2 x 4'	15220.130	4.00 lf	/lf		3.00 /lf	12		/lf		/lf		12	12
	braided pvc hose for return line 1/2 x 4'	15220.130	4.00 lf	/lf		3.00 /lf	12		/lf		/lf		12	12
	chemical pipe basin													
	02642- Dip MBR Membrain basin 23M202													
	Testing Pressure & Leak - Piping	1166.100	2.00 ea	33.00 /mh	528	50.00 /ea	100		50.00 /ea	100	/ea		728	960
	DI Pipe MJ - Class 52 36	2511.201	10.00 lf	33.00 /mh	165	295.00 /lf	2,980		/lf		/lf		3,145	3,217
	DI MJ Std Wgt Solid Sleeve Long 36	2511.222	1.00 ea	33.00 /mh	528	8,750.00 /ea	8,750		/ea		/ea		9,278	9,510
	Polybag 36"	2333.090	20.00 lf	33.00 /mh	7	3.50 /lf	77		/lf		/lf		84	87
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.02 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	184	3,500.00 /Mnth	70	254	254
	John Deere 624 Loader (172 HP) (M)	1900.132	0.02 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	120	3,000.00 /Mnth	60	180	180
	Water Truck, 4,000 Gallon (L)	1900.210	0.02 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	77	1,200.00 /Mnth	19	96	96
	Mikasa Jumping Jack Compactor (L)	1900.138	0.02 Mnth	/Mnth		/Mnth			200.00 /Mnth	3	100.00 /Mnth	2	5	5
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.02 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	40	500.00 /Mnth	8	48	48
	DI Wall Pipe MJ x PE w/ Collar 36in x 2ft 0in long	15221.344	1.00 ea	33.00 /mh	792	7,900.00 /ea	7,900		/ea		/ea		8,692	9,040
	DI MJ Compact Solid Sleeve Long 36	2511.322	1.00 ea	33.00 /mh	528	8,750.00 /ea	8,750		/ea		/ea		9,278	9,510
	02642- Trench & Pipe DI basin drains 23M202													
	Trench Excavtion 12-14'	2333.010	102.00 lf	33.00 /mh	606	/lf			/lf		/lf		606	872
	Trench Backfill 12-14'	2333.020	102.00 lf	33.00 /mh	774	/lf			/lf		/lf		774	1,115
	DI Pipe MJ - Class 52 6	2511.201	102.00 lf	33.00 /mh	337	30.00 /lf	3,091		/lf		/lf		3,427	3,575
	Polybag 12" and Smaller	2333.090	102.00 lf	33.00 /mh	34	1.00 /lf	112		/lf		/lf		146	161
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.08 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	736	3,500.00 /Mnth	280	1,016	1,016
	John Deere 624 Loader (172 HP) (M)	1900.132	0.08 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	480	3,000.00 /Mnth	240	720	720
	Water Truck, 4,000 Gallon (L)	1900.210	0.08 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	384	1,200.00 /Mnth	96	480	480
	Mikasa Jumping Jack Compactor (L)	1900.138	0.08 Mnth	/Mnth		/Mnth			200.00 /Mnth	16	100.00 /Mnth	8	24	24
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.08 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	200	500.00 /Mnth	40	240	240
	DI Wall Pipe FLG x MJ 8in x 2ft 0in long	15221.308	1.00 ea	33.00 /mh	528	1,200.00 /ea	1,200		/ea		/ea		1,728	1,960
	Valve Mud 6" HV-23218	15110.555	1.00 ea	33.00 /mh	528	0.01 /ea	0		/ea		/ea		528	760
	Valve Mud 6" HV-23228	15110.555	1.00 ea	33.00 /mh	528	0.01 /ea	0		/ea		/ea		528	760
	Valve Mud 6" HV-23238	15110.555	1.00 ea	33.00 /mh	528	0.01 /ea	0		/ea		/ea		528	760
	Valve Mud 6" HV-23248	15110.555	1.00 ea	33.00 /mh	528	0.01 /ea	0		/ea		/ea		528	760
	DI MJ Wye 6"	15221.460	3.00 ea	33.00 /mh	198	350.00 /ea	1,050		/ea		/ea		1,248	1,446
	DI MJ Std Wgt 90 6	2511.214	4.00 ea	33.00 /mh	132	395.00 /ea	1,580		/ea		/ea		1,712	1,844
	DI MJ Compact Ell 45 6	2511.314	2.00 ea	33.00 /mh	66	370.00 /ea	740		/ea		/ea		806	839

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02642- Trench & Pipe DI basin drains 23M202													
	DI MJ Compact Solid Sleeve Long 6	2511.322	1.00 ea	33.00 /mh	33	395.00 /ea	395		/ea		/ea		428	443
	150-55 80 pvc sch chem pipe at basin naoci and citric acid 23M404													
	PVC Sch 80 PIPE 1" PE	15211.203	164.00 lf	33.00 /mh	1,894	1.75 /lf	287		/lf		/lf		2,181	3,015
	PVC Sch 80 90 EL 1" S	15211.207	32.00 ea	33.00 /mh	370	3.50 /ea	112		/ea		/ea		482	644
	PVC Sch 80 TEE 1" S	15211.211	6.00 ea	33.00 /mh	69	7.00 /ea	42		/ea		/ea		111	142
	PVC Sch 80 Straight CPLG 1" S	15211.204	10.00 ea	33.00 /mh	116	75.00 /ea	750		/ea		/ea		866	916
	PVC Sch 80 MALE ADPT 1" SXMT	15211.217	8.00 ea	33.00 /mh	92	7.00 /ea	56		/ea		/ea		148	189
	PVC Sch 80 Cement	15211.201	2.00 qt	/qt		50.00 /qt	110		/qt		/qt		110	110
	PVC Sch 80 Primer	15211.201	2.00 qt	/qt		45.00 /qt	99		/qt		/qt		99	99
	PVC Valve Ball True Union Viton 1" S & T	15211.310	8.00 ea	33.00 /mh	55	50.00 /ea	400		/ea		/ea		455	480
	PS Strut FRP 1-5/8 x 1-5/8	15060.476	240.00 lf	33.00 /mh	3,960	13.00 /lf	3,120		/lf		/lf		7,080	8,822
	PS 2 Piece Clamp SS 1in	15060.518	68.00 ea	33.00 /mh	673	11.00 /ea	748		/ea		/ea		1,421	1,717
	PS Expansion Anchor 5/8 x 5 in SS floor and wall supports	15060.127	204.00 ea	33.00 /mh	673	25.00 /ea	5,100		/ea		/ea		5,773	6,069
	PVC Sch 80 Reducer Bushing 1 x 1/2 Spigot x SOC	2336.050	8.00 ea	33.00 /mh	132	8.00 /ea	64		/ea		/ea		196	254
	PVC injection valve valves	15211.320	8.00 ea	33.00 /mh	132	50.00 /ea	400		/ea		/ea		532	590
	versilon 3400 tubing 1" x 50' for connection to injection	15220.120	50.00 lf	33.00 /mh	495	14.00 /lf	700		/lf		/lf		1,195	1,413
	tygon 2375C tubing 1" x 50' for connection to injection	15220.120	50.00 lf	33.00 /mh	495	14.00 /lf	700		/lf		/lf		1,195	1,413
	1/4 poly tubing to acuators 24'	15220.120	24.00 lf	33.00 /mh	396	50.00 /lf	1,200		/lf		/lf		1,596	1,770
	PVC Sch-80 Pipe 1 Bell End	2336.110	20.00 lf	33.00 /mh	106	2.00 /lf	40		/lf		/lf		146	192
	PVC Sch 80 90 ell 1 SOC	2336.120	8.00 ea	33.00 /mh	32	2.00 /ea	16		/ea		/ea		48	62
	PVC Sch 80/VIT UNION 1" S	15211.219	2.00 ea	33.00 /mh	14	9.00 /ea	18		/ea		/ea		32	38
	PVC Valve Ball True Union EPDM 1" S & T	15211.320	2.00 ea	33.00 /mh	14	125.00 /ea	250		/ea		/ea		264	270
	chemical storage													
	02610- PVC chem sleeve lines and connections 23M210													
	Testing Pressure & Leak - Piping	1166.100	7.00 ea	33.00 /mh	1,848	50.00 /ea	350		50.00 /ea	350	/ea		2,548	3,361
	Trench Excavtion 4- 6'	2333.010	88.00 lf	33.00 /mh	290	/lf			/lf		/lf		290	418
	Trench Excavtion 0- 4'	2333.010	118.00 lf	33.00 /mh	312	/lf			/lf		/lf		312	449
	Trench Backfill 4- 6'	2333.020	88.00 lf	33.00 /mh	436	/lf			/lf		/lf		436	627
	Trench Backfill 0- 4'	2333.020	118.00 lf	33.00 /mh	389	/lf			/lf		/lf		389	561
	Utility Bedding Gravel-Crushed	2305.200	121.79 cy	/cy		25.00 /ton	4,872		/cy		/cy		4,872	4,872
	Spoils to Waste	2333.060	122.07 cy	33.00 /mh	403	/cy			/cy		/cy		403	580
	1 1/2 x 1" double wall containment pipe	2336.110	24.00 lf	33.00 /mh	277	25.00 /lf	600		/lf		/lf		877	999
	PVC Sch 80 Pipe 4 Bell End conduit for carbon and Alkalinity	2336.110	162.00 lf	33.00 /mh	1,871	10.00 /lf	1,701		/lf		/lf		3,572	4,395
	1 1/2 90 ell double wall containment pipe	2336.120	2.00 ea	33.00 /mh	23	100.00 /ea	200		/ea		/ea		223	233
	PVC Sch-80 Pipe 3 Bell End	2336.110	20.00 lf	33.00 /mh	231	7.00 /lf	140		/lf		/lf		371	473
	PVC Sch 80 90 ell 4 SOC conduit for carbon and Alkalinity	2336.120	6.00 ea	33.00 /mh	69	25.00 /ea	150		/ea		/ea		219	250
	PVC Sch 80 90 ell 3 SOCconduit for naocl and citric acid	2336.120	2.00 ea	33.00 /mh	23	16.00 /ea	32		/ea		/ea		55	65
	1 1/2 double wall containment pipe coupling	2336.180	2.00 ea	33.00 /mh	23	20.00 /ea	40		/ea		/ea		63	73
	PVC Sch 80 Coupling 4" SOC for conduit for carbon and Alkinity	2336.180	4.00 ea	33.00 /mh	46	20.00 /ea	80		/ea		/ea		126	147
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.15 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,380	3,500.00 /Mnth	525	1,905	1,905
	John Deere 624 Loader (172 HP) (M)	1900.132	0.15 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	900	3,000.00 /Mnth	450	1,350	1,350
	PVC Sch 80 Coupling 3" SOC	2336.180	2.00 ea	33.00 /mh	23	15.00 /ea	30		/ea		/ea		53	63
	Water Truck, 4,000 Gallon (L)	1900.210	0.15 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	720	1,200.00 /Mnth	180	900	900
	Mikasa Jumping Jack Compactor (L)	1900.138	0.15 Mnth	/Mnth		/Mnth			200.00 /Mnth	30	100.00 /Mnth	15	45	45
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	0.15 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	375	500.00 /Mnth	75	450	450
	pvc braided hose 3/4" x 34' for Alkainity and carbon	15220.110	1.00 ea	33.00 /mh	8	75.00 /ea	75		/ea		/ea		83	87
	Fernco Cplng w/ 2 ea SS Pipe Clamps 4" x 3/4 red for chem sleeves	15112.550	4.00 ea	33.00 /mh	66	35.00 /ea	140		/ea		/ea		206	235
	Sleeve w/Ring SS 4" x 18	15121.250	2.00 ea	33.00 /mh	264	550.00 /ea	1,100		/ea		/ea		1,364	1,480
	PVC Sch 40 Reducer Bushing 1-1/2 x 3/4 Spigot x SOC	2336.050	2.00 ea	33.00 /mh	23	2.00 /ea	4		/ea		/ea		27	37
	PVC Valve Ball True Union Viton 3/4" S & T HV-53310B	15211.310	1.00 ea	33.00 /mh	12	0.01 /ea	0		/ea		/ea		12	17
	PVC Valve Ball True Union Viton 3/4" S & T HV-53210B	15211.310	1.00 ea	33.00 /mh	12	0.01 /ea	0		/ea		/ea		12	17
	wall Flashing 2" for chemlock penetrations	15403.250	1.00 ea	33.00 /mh	74	150.00 /ea	150		/ea		/ea		224	257
	Fernco Cplng w/ 2 ea SS Pipe Clamps 3" x 1" for chem lines	15112.550	6.00 ea	33.00 /mh	198	35.00 /ea	210		/ea		/ea		408	495
	Tygon tubing 2375C 1" under slab	2336.010	16.00 lf	33.00 /mh	185	14.00 /lf	224		/lf		/lf		409	490
	versalon 3400 tubing 1" under slab	2336.010	16.00 lf	33.00 /mh	185	14.00 /lf	224		/lf		/lf		409	490
	pvc braided hose 3/4 to RAS/WAS	15220.110	72.00 lf	33.00 /mh	594	2.00 /lf	144		/lf		/lf		738	999
	pvc braided hose 3/4 to basin	15220.110	56.00 lf	33.00 /mh	462	2.00 /lf	112		/lf		/lf		574	777
	150-55 80 PVC Cement Weld Sch 80 chemical storage area 23M411													
	PVC Sch 80 PIPE 1" PE	15211.203	30.00 lf	33.00 /mh	347	1.75 /lf	53		/lf		/lf		399	551
	PVC Sch 80 PIPE 1/2" PE vent piping for chemical manifolds	15211.203	90.00 lf	33.00 /mh	1,040	0.80 /lf	72		/lf		/lf		1,112	1,569
	PVC Sch 80 PIPE 2" PE	15211.203	105.00 lf	33.00 /mh	1,213	3.25 /lf	341		/lf		/lf		1,554	2,088
	PVC Sch 80 PIPE 3/4" PE	15211.203	10.00 lf	33.00 /mh	116	1.20 /lf	12		/lf		/lf		128	178
	PVC Sch 80 PIPE 3" PE	15211.203	80.00 lf	33.00 /mh	924	6.50 /lf	520		/lf		/lf		1,444	1,851
	PVC Sch 80 90 EL 1" S	15211.207	2.00 ea	33.00 /mh	23	3.50 /ea	7		/ea		/ea		30	40
	PVC Sch 80 90 EL 2" S	15211.207	34.00 ea	33.00 /mh	393	6.00 /ea	204		/ea		/ea		597	769
	PVC Sch 80 90 EL 3" S	15211.207	12.00 ea	33.00 /mh	139	16.00 /ea	192		/ea		/ea		331	392
	PVC Sch 80 90 EL 1/2" S chemical vent piping for chemical manifolds	15211.207	36.00 ea	33.00 /mh	416	2.00 /ea	72		/ea		/ea		488	671
	PVC Sch 80 45 EL 2" SOCxSOC	15211.208	2.00 ea	33.00 /mh	23	15.00 /ea	30		/ea		/ea		53	63
	PVC Sch 80 45 EL 3" SOCxSOC	15211.208	3.00 ea	33.00 /mh	35	35.00 /ea	105		/ea		/ea		140	155
	PVC Sch 80 TEE 2" S	15211.211	1.00 ea	33.00 /mh	12	22.00 /ea	22		/ea		/ea		34	39
	PVC Sch 80 TEE 1/2" S chemical vent piping for chemical manifolds	15211.211	3.00 ea	33.00 /mh	35	5.00 /ea	15		/ea		/ea		50	65
	PVC Sch 80 Straight CPLG 2" S	15211.204	3.00 ea	33.00 /mh	35	14.00 /ea	42		/ea		/ea		77	92
	PVC Sch 80 TEE 3/4" S	15211.211	1.00 ea	33.00 /mh	12	5.00 /ea	5		/ea		/ea		17	22
	PVC Sch 80 Straight CPLG 3" S	15211.204	5.00 ea	33.00 /mh	58	22.00 /ea	110		/ea		/ea		168	193
	PVC Sch 80 MALE ADPT 2" SXMT	15211.217	2.00 ea	33.00 /mh	23	17.00 /ea	34		/ea		/ea		57	67
	PVC Sch 80 Straight CPLG 1/2" S chemical vent piping for manifolds	15211.204	6.00 ea	33.00 /mh	69	3.00 /ea	18		/ea		/ea		87	118
	PVC Sch 80 Cement	15211.201	10.00 qt	/qt		50.00 /qt	550		/qt		/qt		550	550
	PVC Sch 80 Primer	15211.201	10.00 qt	/qt		45.00 /qt	495		/qt		/qt		495	495
	PVC Sch 80 Concentric Reducer Coupling 2X1 S	15211.205	3.00 ea	33.00 /mh	35	14.00 /ea	42		/ea		/ea		77	88
	PVC Sch 80 TEE 2X2X1" S	15211.212	1.00 ea	33.00 /mh	12	16.00 /ea	16		/ea		/ea		28	34
	PVC Sch 80/VIT UNION 2" S	15211.219	7.00 ea	33.00 /mh	81	27.00 /ea	189		/ea		/ea		270	321
	PVC Sch 80 EPDM UNION 3" S	15211.219	3.00 ea	33.00 /mh	35	52.00 /ea	156		/ea		/ea		191	206

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-55 80 PVC Cement Weld Sch 80 chemical storage area 23M411													
	PVC Sch 80/VIT UNION 1/2" S	15211.219	3.00 ea	33.00 /mh	35	6.00 /ea	18		/ea		/ea		53	68
	PVC Sch 80 Tank Adapter 2"	15211.283	3.00 ea	33.00 /mh	35	185.00 /ea	555		/ea		/ea		590	605
	PVC Sch 80 Tank Adapter 3"	15211.283	3.00 ea	33.00 /mh	35	330.00 /ea	990		/ea		/ea		1,025	1,040
	PVC Valve Ball True Union Viton 1" S & T HV-53113	15211.310	1.00 ea	33.00 /mh	12	0.01 /ea	0		/ea		/ea		12	17
	PVC Valve Ball True Union Viton 2" S & T HV-53201B, HV-53301B, HV53101B HV-53113	15211.310	4.00 ea	33.00 /mh	46	0.01 /ea	0		/ea		/ea		46	67
	PS Strut SS 1-5/8 x 1-5/8	15060.476	54.00 lf	33.00 /mh	891	20.00 /lf	1,080		/lf		/lf		1,971	2,363
	PS Strut FRP 1-5/8 x 1-5/8	15060.476	5.00 lf	33.00 /mh	83	13.00 /lf	65		/lf		/lf		148	184
	PS Strut Post Base SS	15060.478	8.00 ea	33.00 /mh	79	52.00 /ea	416		/ea		/ea		495	530
	PS Strut Post Base FRP	15060.478	5.00 ea	33.00 /mh	83	25.00 /ea	125		/ea		/ea		208	244
	PVC Valve Ball True Union Viton 3/4" S & T HV-53114, HV-53110B	15211.310	2.00 ea	33.00 /mh	23	0.01 /ea	0		/ea		/ea		23	33
	PS 2 Piece Clamp SS 2in	15060.518	18.00 ea	33.00 /mh	178	15.00 /ea	270		/ea		/ea		448	527
	PS 2 Piece Clamp SS 3in	15060.518	8.00 ea	33.00 /mh	79	15.00 /ea	120		/ea		/ea		199	234
	PS Expansion Anchor 5/8 x 3-1/2in SS	15060.127	76.00 ea	33.00 /mh	125	20.00 /ea	1,520		/ea		/ea		1,645	1,701
	PS Clevis Hanger SS 2in	15060.096	2.00 ea	33.00 /mh	20	18.00 /ea	36		/ea		/ea		56	65
	PS Threaded Rod 3/8in SS	15060.502	75.00 lf	33.00 /mh	248	4.00 /lf	300		/lf		/lf		548	656
	PS Hex Nut SS 1	15060.354	45.00 ea	33.00 /mh	149	3.00 /ea	135		/ea		/ea		284	349
	PS Washer Flat 1 SS	15060.576	45.00 ea	33.00 /mh	74	1.00 /ea	45		/ea		/ea		119	152
	PS Beam/C Clamp W/lk Nut 1	15060.082	15.00 ea	33.00 /mh	50	50.00 /ea	750		/ea		/ea		800	821
	PS Clevis Hanger SS 1/2in	15060.096	13.00 ea	33.00 /mh	129	13.00 /ea	169		/ea		/ea		298	354
	PVC Valve Ball True Union Viton 2" S & T HV-53101A, HV-53301A, 53201A	15211.310	3.00 ea	33.00 /mh	35	0.01 /ea	0		/ea		/ea		35	50
	Camlock Adapter SS Male x MPT 2" w/cap	15220.600	3.00 ea	33.00 /mh	50	550.00 /ea	1,650		/ea		/ea		1,700	1,721
	PS Pipe Stand grout	15060.404	14.00 ea	33.00 /mh	231	10.00 /ea	140		/ea		/ea		371	473
	Camlock Adapter SS Female x Shank 2" w/ cap at chem tank	15220.600	1.00 ea	33.00 /mh	17	550.00 /ea	550		/ea		/ea		567	574
	Flex Conn 2" chem resistant connection at tank	15112.150	3.00 ea	33.00 /mh	396	250.00 /ea	750		/ea		/ea		1,146	1,320
	PS Clevis Hanger SS 1/2in chemical vent	15060.096	12.00 ea	33.00 /mh	198	13.00 /ea	156		/ea		/ea		354	441
	PS Threaded Rod 3/8in SS chemical vent	15060.502	96.00 lf	33.00 /mh	317	4.00 /lf	384		/lf		/lf		701	840
	PS Washer Flat 3/8 SS chemical vent	15060.576	24.00 ea	33.00 /mh	20	0.20 /ea	5		/ea		/ea		25	33
	PS Hex Nut SS 3/8 chemical vent	15060.354	36.00 ea	33.00 /mh	59	0.25 /ea	9		/ea		/ea		68	95
	PS C Clamp I-Beam Mal 3/8 chemical vent	15060.084	12.00 ea	33.00 /mh	198	25.00 /ea	300		/ea		/ea		498	585
	dewatering drain													
	150-55 40 drain from dewatering 23M210, 23M413													
	PVC Sch 40 Pipe 6" PE	15211.103	20.00 lf	33.00 /mh	330	11.70 /lf	257		/lf		/lf		587	733
	PVC Sch 40 90 Ell Socket x Socket 6	15211.107	1.00 ea	33.00 /mh	17	45.00 /ea	45		/ea		/ea		62	69
	PVC Sch 40 Tee SxSxS 6	15211.111	1.00 ea	33.00 /mh	17	54.80 /ea	55		/ea		/ea		71	79
	PVC Sch 40 Coupling SOC x SOC 6	15211.104	1.00 ea	33.00 /mh	17	27.20 /ea	27		/ea		/ea		44	51
	PVC Sch 80 Flange Van Stone 6" Soc	15211.223	4.00 ea	33.00 /mh	66	53.00 /ea	212		/ea		/ea		278	307
	PVC Sch 40 Cement	15211.101	1.00 qt	/qt		35.00 /qt	39		/qt		/qt		39	39
	PVC Sch 40 Primer	15211.101	1.00 qt	/qt		45.00 /qt	50		/qt		/qt		50	50
	NBG Kit 125# SS 6in	15125.012	4.00 ea	33.00 /mh	132	75.00 /ea	300		/ea		/ea		432	490
	PS 2 Piece Clamp SS 6in	15060.518	8.00 ea	33.00 /mh	79	25.00 /ea	200		/ea		/ea		279	314
	PS Expansion Anchor 5/8 x 5in SS	15060.127	16.00 ea	33.00 /mh	53	25.00 /ea	400		/ea		/ea		453	476
	Fernco Cplng w/ 2 ea SS Pipe Clamps 4"	15112.550	2.00 ea	33.00 /mh	7	35.00 /ea	70		/ea		/ea		77	80
	PS Strut Post Base SS	15060.478	4.00 ea	33.00 /mh	66	52.00 /ea	208		/ea		/ea		274	303
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	33.00 /mh	198	20.00 /lf	400		/lf		/lf		598	685
	dewatering feed pump													
	150-55 80 NON pot line for dewatering rotary press equipment 23M210													
	PVC Sch 80 PIPE 1.5" PE	15211.203	40.00 lf	33.00 /mh	462	2.30 /lf	92		/lf		/lf		554	757
	PVC Sch 80 90 EL 1.5" S	15211.207	12.00 ea	33.00 /mh	139	5.00 /ea	60		/ea		/ea		199	260
	PVC Sch 80 Straight CPLG 1.5" S	15211.204	2.00 ea	33.00 /mh	23	8.00 /ea	16		/ea		/ea		39	49
	PVC Sch 80 MALE ADPT 1.5" SXMT	15211.217	4.00 ea	33.00 /mh	46	11.00 /ea	44		/ea		/ea		90	111
	PVC Sch 80 Flange Van Stone 1.5" Soc	15211.223	4.00 ea	33.00 /mh	46	12.00 /ea	48		/ea		/ea		94	115
	PVC Sch 80 Cement	15211.201	1.00 qt	/qt		50.00 /qt	55		/qt		/qt		55	55
	PVC Sch 80 Primer	15211.201	1.00 qt	/qt		45.00 /qt	50		/qt		/qt		50	50
	PVC Sch 80/VIT UNION 1.5" S	15211.219	4.00 ea	33.00 /mh	46	21.00 /ea	84		/ea		/ea		130	151
	NBG Kit 125# SS 1-1/2in	15125.012	4.00 ea	33.00 /mh	66	25.00 /ea	100		/ea		/ea		166	195
	PVC Valve Ball True Union Viton 1.5" S & T	15211.310	4.00 ea	33.00 /mh	46	80.00 /ea	320		/ea		/ea		366	387
	PS Strut SS 1-5/8 x 1-5/8	15060.476	20.00 lf	33.00 /mh	198	20.00 /lf	400		/lf		/lf		598	685
	PS Strut Post Base SS	15060.478	4.00 ea	33.00 /mh	40	52.00 /ea	208		/ea		/ea		248	265
	PS 2 Piece Clamp SS 1-1/2in	15060.518	8.00 ea	33.00 /mh	79	13.00 /ea	104		/ea		/ea		183	218
	PS Expansion Anchor 1/2 x 2-3/4in SS	15060.127	16.00 ea	33.00 /mh	26	15.00 /ea	240		/ea		/ea		266	278
	polymer chem area													
	150-55 80 PVC Cement Weld Sch 80 at chem tanks 23M414													
	PVC Sch 80 PIPE 1" PE	15211.203	80.00 lf	33.00 /mh	924	1.75 /lf	140		/lf		/lf		1,064	1,471
	PVC Sch 80 PIPE 2" PE	15211.203	80.00 lf	33.00 /mh	924	3.25 /lf	260		/lf		/lf		1,184	1,591
	PVC Sch 80 90 EL 1" S	15211.207	12.00 ea	33.00 /mh	139	3.50 /ea	42		/ea		/ea		181	242
	PVC Sch 80 90 EL 2" S	15211.207	12.00 ea	33.00 /mh	139	6.00 /ea	72		/ea		/ea		211	272
	PVC Sch 80 TEE 1" S	15211.211	4.00 ea	33.00 /mh	46	7.00 /ea	28		/ea		/ea		74	95
	PVC Sch 80 TEE 2" S	15211.211	4.00 ea	33.00 /mh	46	22.00 /ea	88		/ea		/ea		134	155
	PVC Sch 80 Straight CPLG 1" S	15211.204	5.00 ea	33.00 /mh	58	5.00 /ea	25		/ea		/ea		83	108
	PVC Sch 80 Straight CPLG 2" S	15211.204	5.00 ea	33.00 /mh	58	14.00 /ea	70		/ea		/ea		128	153
	PVC Sch 80 MALE ADPT 1" SXMT	15211.217	4.00 ea	33.00 /mh	46	7.00 /ea	28		/ea		/ea		74	95
	PVC Sch 80 MALE ADPT 2" SXMT	15211.217	4.00 ea	33.00 /mh	46	17.00 /ea	68		/ea		/ea		114	135
	PVC Sch 80 Flange Van Stone 1" Soc	15211.223	4.00 ea	33.00 /mh	46	12.00 /ea	48		/ea		/ea		94	115
	PVC Sch 80 Flange Van Stone 2" Soc	15211.223	4.00 ea	33.00 /mh	46	17.00 /ea	68		/ea		/ea		114	135
	PVC Sch 80 Cement	15211.201	2.00 qt	/qt		50.00 /qt	110		/qt		/qt		110	110
	PVC Sch 80 Primer	15211.201	2.00 qt	/qt		45.00 /qt	99		/qt		/qt		99	99
	PVC Sch 80/VIT UNION 2" S	15211.219	4.00 ea	33.00 /mh	46	27.00 /ea	108		/ea		/ea		154	175
	PVC Sch 80/VIT UNION 2" S	15211.219	4.00 ea	33.00 /mh	46	27.00 /ea	108		/ea		/ea		154	175
	NBG Kit 125# SS 1in	15125.012	4.00 ea	33.00 /mh	46	18.00 /ea	72		/ea		/ea		118	
	NBG Kit 125# SS 2in	15125.012	4.00 ea	33.00 /mh	46	35.00 /ea	140		/ea		/ea		186	
	PVC Valve Ball True Union Viton 1" S & T polmer skid and tanks	15211.310	6.00 ea	33.00 /mh	69	50.00 /ea	300		/ea		/ea		369	

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	150-55 80 PVC Cement Weld Sch 80 at chem tanks 23M414													
	Valve Ball Threaded SS 2in	15110.014	6.00 ea	33.00 /mh	396	0.01 /ea	0		/ea		/ea		396	570
	PS Strut SS 1-5/8 x 1-5/8	15060.476	30.00 lf	33.00 /mh	297	20.00 /lf	600		/lf		/lf		897	1,028
	PS Strut Post Base SS	15060.478	6.00 ea	33.00 /mh	59	52.00 /ea	312		/ea		/ea		371	398
	PS 2 Piece Clamp SS 2in	15060.518	12.00 ea	33.00 /mh	119	15.00 /ea	180		/ea		/ea		299	351
	PS Expansion Anchor 1/2 x 2-3/4in SS	15060.127	4.00 ea	33.00 /mh	7	15.00 /ea	60		/ea		/ea		67	70
	Flex Connection 1" to polymer tote	15112.150	2.00 ea	33.00 /mh	88	150.00 /ea	300		/ea		/ea		388	427
	Valve Ball Threaded SS 1/2in	15110.014	1.00 ea	33.00 /mh	18	0.01 /ea	0		/ea		/ea		18	26
	PS Pipe Strut Clamp SS 1in	15060.486	12.00 ea	33.00 /mh	119	11.00 /ea	132		/ea		/ea		251	303
	42 SDL Site Drain Lift Station													
	situmpump lift station													
	150-55 80 pvc Weld Sch 80 lift station drains from site 42M201													
	PVC Sch 80 PIPE 6" PE	15211.203	10.00 lf	33.00 /mh	69	17.00 /lf	170		/lf		/lf		239	270
	PVC Sch 80 PIPE 12" PE	15211.203	15.00 lf	33.00 /mh	198	80.00 /lf	1,200		/lf		/lf		1,398	1,485
	PVC Sch 80 TEE 6" S	15211.211	1.00 ea	33.00 /mh	7	120.00 /ea	120		/ea		/ea		127	130
	PVC Sch 80 TEE 12" S	15211.211	1.00 ea	33.00 /mh	33	1,750.00 /ea	1,750		/ea		/ea		1,783	1,798
	PVC Sch 80 Cement	15211.201	2.00 qt	/qt		50.00 /qt	110		/qt		/qt		110	110
	PVC Sch 80 Primer	15211.201	2.00 qt	/qt		45.00 /qt	99		/qt		/qt		99	99
	PS Special Support for 6in Sch 80 PVC - ss M-133	15060.475	2.00 ea	33.00 /mh	132	800.00 /ea	1,600		/ea		/ea		1,732	1,790
	PS Special Support for 12in Sch 80 PVC - ss M-133	15060.475	3.00 ea	33.00 /mh	198	950.00 /ea	2,850		/ea		/ea		3,048	3,135
	Epoxy Anchor 5/8 x 6in Plain	5001.052	15.00 ea	33.00 /mh	25	15.00 /ea	225		/ea		/ea		250	261
	150-55 80 pVC sch 80 from air vac 42M201													
	PVC Sch 80 PIPE 1" PE	15211.203	30.00 lf	33.00 /mh	248	1.75 /lf	53		/lf		/lf		300	409
	PVC Sch 80 90 EL 1" S	15211.207	8.00 ea	33.00 /mh	66	3.50 /ea	28		/ea		/ea		94	123
	PVC Sch 80 Straight CPLG 1" S	15211.204	2.00 ea	33.00 /mh	17	5.00 /ea	10		/ea		/ea		27	34
	PVC Sch 80 MALE ADPT 1" SXMT	15211.217	1.00 ea	33.00 /mh	7	7.00 /ea	7		/ea		/ea		14	17
	PVC Sch 80/VIT UNION 1" S	15211.219	1.00 ea	33.00 /mh	7	9.00 /ea	9		/ea		/ea		16	19
	PS Strut SS 1-5/8 x 1-5/8	15060.476	4.00 lf	33.00 /mh	40	20.00 /lf	80		/lf		/lf		120	137
	PS Expansion Anchor 3/8 x 5in SS	15060.127	12.00 ea	33.00 /mh	20	8.00 /ea	96		/ea		/ea		116	125
	PS Pipe Strut Clamp SS 1in	15060.486	4.00 ea	33.00 /mh	40	11.00 /ea	44		/ea		/ea		84	101
	Heat Trace	16000.001	1.00 ls	/ls		/ls			/ls		/ls			
	Insulation Subcontractor	15403.100	1.00 ls	/ls		/ls			/ls		/ls			
	400533 HDPE Pipe & Fittings													
	01 CIV Civil													
	Yard Pipe Yard Pipe													
	02616- NPW Line													
	Testing Pressure & Leak - Piping	1166.100	4.00 ea	33.00 /mh	1,056	50.00 /ea	200		50.00 /ea	200	/ea		1,456	1,921
	Trench Excavation 6'- 8'	2333.010	2,450.00 lf	33.00 /mh	12,128	/lf			/lf		/lf		12,128	17,464
	Trench Backfill 6'- 8'	2333.020	2,450.00 lf	33.00 /mh	16,170	/lf			/lf		/lf		16,170	23,285
	Utility Bedding Peastone	2305.200	816.67 cy	/cy		25.00 /ton	32,667		/cy		/cy		32,667	32,667
	Spoils to Waste	2333.060	816.67 cy	33.00 /mh	2,695	/cy			/cy		/cy		2,695	3,881
	HD PE Pipe 3 DR 11	2631.301	480.00 lf	33.00 /mh	1,584	4.30 /lf	2,167		/lf		/lf		3,751	4,448
	HD PE Pipe 1 DR 11	2631.301	380.00 lf	33.00 /mh	1,254	1.00 /lf	399		/lf		/lf		1,653	2,205
	HD PE Pipe 4 DR 11	2631.301	400.00 lf	33.00 /mh	1,980	7.00 /lf	2,940		/lf		/lf		4,920	5,791
	HD PE Pipe 2 DR 11	2631.301	60.00 lf	33.00 /mh	198	2.25 /lf	142		/lf		/lf		340	427
	HD PE Pipe 6 DR 11	2631.301	880.00 lf	33.00 /mh	5,808	15.50 /lf	14,322		/lf		/lf		20,130	22,686
	HD PE Pipe 1.5" DR 11	2631.301	250.00 lf	33.00 /mh	825	1.75 /lf	459		/lf		/lf		1,284	1,647
	HD PE 90 bend 1 DR 11	2631.314	20.00 ea	33.00 /mh	660	8.00 /ea	160		/ea		/ea		820	1,110
	HD PE 90 bend 1 1/2 DR 11	2631.314	20.00 ea	33.00 /mh	660	9.00 /ea	180		/ea		/ea		840	1,130
	HD PE 90 bend 2 DR 11	2631.314	20.00 ea	33.00 /mh	660	10.00 /ea	200		/ea		/ea		860	1,150
	HD PE 90 bend 6 DR 11	2631.314	10.00 ea	33.00 /mh	660	55.00 /ea	550		/ea		/ea		1,210	1,500
	HD PE 45 bend 6 DR 11	2631.314	24.00 ea	33.00 /mh	1,584	55.00 /ea	1,320		/ea		/ea		2,904	3,601
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	2.20 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	20,240	3,500.00 /Mnth	7,700	27,940	27,940
	John Deere 624 Loader (172 HP) (M)	1900.132	2.20 Mnth	/Mnth		/Mnth			6,000.00 /Mnth	13,200	3,000.00 /Mnth	6,600	19,800	19,800
	HD PE Tee 6 DR 11	2631.320	14.00 ea	33.00 /mh	1,386	80.00 /ea	1,120		/ea		/ea		2,506	3,116
	Water Truck, 4,000 Gallon (L)	1900.210	1.10 Mnth	/Mnth		/Mnth			4,800.00 /Mnth	5,280	1,200.00 /Mnth	1,320	6,600	6,600
	Mikasa Jumping Jack Compactor (L)	1900.138	2.20 Mnth	/Mnth		/Mnth			200.00 /Mnth	440	100.00 /Mnth	220	660	660
	Wacker/Rammer Pad Foot Trench Roller (L)	1900.138	2.20 Mnth	/Mnth		/Mnth			2,500.00 /Mnth	5,500	500.00 /Mnth	1,100	6,600	6,600
	HD PE Reducer 06 x 04 DR 11	2631.330	10.00 ea	33.00 /mh	660	40.00 /ea	400		/ea		/ea		1,060	1,350
	HD PE Reducer 04 x 02 DR 11	2631.330	10.00 ea	33.00 /mh	660	18.00 /ea	180		/ea		/ea		840	1,130
	HD PE Reducer 02 x 01 DR 11	2631.330	6.00 ea	33.00 /mh	198	10.00 /ea	60		/ea		/ea		258	345
	Warning Tape Detectable	2333.080	2,450.00 lf	33.00 /mh	1,617	0.08 /lf	196		/lf		/lf		1,813	2,524
	Tracer Wire	2333.080	2,500.00 lf	33.00 /mh	1,650	0.40 /lf	1,100		/lf		/lf		2,750	3,476
	Valve - Gate 4"	2519.110	7.00 ea	33.00 /mh	462	1,200.00 /ea	8,400		/ea		/ea		8,862	9,065
	Valve - Gate 6"	2519.110	7.00 ea	33.00 /mh	462	1,550.00 /ea	10,850		/ea		/ea		11,312	11,515
	Valve Box Assembly 6" Bury	2519.130	25.00 ea	33.00 /mh	2,475	320.00 /ea	8,000		/ea		/ea		10,475	11,564
	Valve Box 2' Extension	2519.130	25.00 ea	33.00 /mh	413	90.00 /ea	2,250		/ea		/ea		2,663	2,844
	Conc Block for Valve	2519.100	36.00 ea	33.00 /mh	594	50.00 /ea	1,800		/ea		/ea		2,394	2,655
	Conc Pad for Valve Box	2519.100	25.00 ea	33.00 /mh	1,650	75.00 /ea	1,875		/ea		/ea		3,525	4,251
	Valve Stem Extension	2519.100	25.00 ea	33.00 /mh	825	150.00 /ea	3,750		/ea		/ea		4,575	4,938
	Yard Hydrant 1" Watts HY-800	2510.200	6.00 ea	33.00 /mh	1,584	750.00 /ea	4,500		/ea		/ea		6,084	6,781
	Yard Hydrant 1.5" Watts HY-800	2510.200	3.00 ea	33.00 /mh	792	1,800.00 /ea	5,400		/ea		/ea		6,192	6,540
	Yard Hydrant 2" Watts HY-800	2510.200	2.00 ea	33.00 /mh	528	2,200.00 /ea	4,400		/ea		/ea		4,928	5,160
	Corporation Valve 1"	2519.422	6.00 ea	33.00 /mh	198	150.00 /ea	900		/ea		/ea		1,098	1,185
	Corporation Valve 1.50"	2519.422	3.00 ea	33.00 /mh	99	300.00 /ea	900		/ea		/ea		999	1,043
	Corporation Valve 2"	2519.422	2.00 ea	33.00 /mh	132	500.00 /ea	1,000		/ea		/ea		1,132	1,190
	McElroy Fusion Machine Pitbull 14 (1"- 4")	1900.500	3.00 Mnth	/Mnth		/Mnth			500.00 /Mnth	1,500	/Mnth		1,500	1,500
	6" DR-11 Butt Fuse x MJ	2631.353	22.00 ea	33.00 /mh	1,452	320.00 /ea	7,040		/ea		/ea		8,492	9,131
	4" DR-11 Butt Fuse x MJ	2631.353	14.00 ea	33.00 /mh	462	270.00 /ea	3,780		/ea		/ea		4,242	
	DI MJ Compact Solid Sleeve Short 6	2511.323	4.00 ea	33.00 /mh	264	360.00 /ea	1,440		/ea		/ea		1,704	
	Sleeve Plastic CS-4-12	15121.600	11.00 ea	33.00 /mh	363	100.00 /ea	1,100		/ea		/ea		1,463	
	Utility Bedding Stone 3/4"	2305.200	11.00 cy	/cy		36.00 /ton	634		/cy		/cy		634	

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	02616- NPW Line													
	HDPE Male Adpt BF 1"	15215.140	18.00 ea	33.00 /mh	594	33.00 /ea	594		/ea		/ea		1,188	1,449
	HDPE Male Adpt BF 1.5"	15215.140	6.00 ea	33.00 /mh	198	39.00 /ea	234		/ea		/ea		432	519
	HDPE Male Adpt BF 2"	15215.140	9.00 ea	33.00 /mh	297	50.00 /ea	450		/ea		/ea		747	878
	Steel Pipe Galv 1"	15213.204	20.00 lf	33.00 /mh	132	8.00 /lf	165		/lf		/lf		297	355
	Steel Pipe Galv 1-1/2"	15213.204	20.00 lf	33.00 /mh	132	12.00 /lf	247		/lf		/lf		379	437
	Steel Pipe Galv 2"	15213.204	20.00 lf	33.00 /mh	132	18.00 /lf	371		/lf		/lf		503	561
	400559 Slide & Weir Gates													
	10 HWK Headworks Building													
	* unassigned *													
	11-15 Headworks Gates													
	Supply Slide Gate Package	11500.050	1.00 ls	/ls		199,300.00 /ls	199,300		/ls		/ls		199,300	199,300
	Slide Gate 36" x 48" Self Contained, Embedded	11500.050	5.00 ea	33.00 /mh	5,280	/ea			/ea		/ea		5,280	7,603
	Slide Gate 36" x 48" Self Contained, Surface	11500.050	2.00 ea	33.00 /mh	2,112	/ea			/ea		/ea		2,112	3,041
	Slide Gate 48" x 48" Self Contained, Embedded	11500.050	2.00 ea	33.00 /mh	2,112	/ea			/ea		/ea		2,112	3,041
	Stop Plate and Frame 36" x 36"	11500.070	2.00 ea	33.00 /mh	2,112	/ea			/ea		/ea		2,112	3,041
	Grout Equipment	11000.005	26.75 cf	33.00 /mh	3,531	60.00 /cf	1,605		/cf		/cf		5,136	6,690
	Anchors for Gates	11500.050	42.00 ea	33.00 /mh	347	30.00 /ea	1,260		/ea		/ea		1,607	1,759
	Blockouts in Concrete	3150.194	200.00 sf	33.00 /mh	2,310	2.00 /sf	400		/sf		/sf		2,710	3,726
	11 EQB EQ Basin													
	* unassigned *													
	11-16 EQ Gates													
	Supply Gate Package	11500.050	1.00 ls	/ls		/ls			/ls		/ls			
	Sluice Gate 36" x 24"	11500.060	1.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
	Sluice Gates Thimble 24"	11500.060	1.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Flap Gates	11500.020	1.00 ea	33.00 /mh	528	18,175.00 /ea	18,175		/ea		/ea		18,703	18,935
	Flap Gates Thimble 24"	11500.060	1.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Grout Equipment	11000.005	1.00 cf	33.00 /mh	132	60.00 /cf	60		/cf		/cf		192	250
	Anchors for Gates	11500.060	8.00 ea	33.00 /mh	66	30.00 /ea	240		/ea		/ea		306	335
	20 PBS Process Basin													
	* unassigned *													
	11-15 Process Basin Gates													
	Supply Gate Package	11500.050	1.00 ls	/ls		/ls			/ls		/ls			
	Weir Gate 48" x 48" Downward Opening, Surface Mounted	11500.050	3.00 ea	33.00 /mh	4,752	/ea			/ea		/ea		4,752	6,843
	Weir Gate 48" x 60" Downward Opening, Surface Mounted	11500.050	3.00 ea	33.00 /mh	4,752	/ea			/ea		/ea		4,752	6,843
	Weir Gate 60" x 60" Downward Opening, Surface Mounted	11500.050	3.00 ea	33.00 /mh	4,752	/ea			/ea		/ea		4,752	6,843
	Flap Gates 16" - Flange connection	11500.020	3.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
	Grout Equipment	11000.005	18.00 cf	33.00 /mh	2,376	60.00 /cf	1,080		/cf		/cf		3,456	4,501
	Anchors for Gates	11500.050	144.00 ea	33.00 /mh	1,188	30.00 /ea	4,320		/ea		/ea		5,508	6,031
	23 MBR MBR Building													
	* unassigned *													
	11-15 MBR Gates													
	Supply Slide Gate Package	11500.050	1.00 ls	/ls		/ls			/ls		/ls			
	Slide Gate 48" x 48" Downward Opening, Surface Mounted	11500.050	5.00 ea	33.00 /mh	7,920	/ea			/ea		/ea		7,920	11,405
	Grout Equipment	11000.005	10.00 cf	33.00 /mh	1,320	75.00 /cf	750		/cf		/cf		2,070	2,651
	Anchors for Gates	11500.050	80.00 ea	33.00 /mh	660	30.00 /ea	2,400		/ea		/ea		3,060	3,350
	407169 Parshall Flume Metering Manhole													
	01 CIV Civil													
	* unassigned *													
	11-500 Parshall Flume Manhole													
	Parshall Flumes Manhole	11000.295	1.00 ea	33.00 /mh	1,584	42,185.00 /ea	42,185		/ea		/ea		43,769	44,466
	Anchors for Equipment	11000.005	8.00 ea	33.00 /mh	66	30.00 /ea	240		/ea		/ea		306	335
	Grout Equipment	11000.005	4.00 cf	33.00 /mh	528	60.00 /cf	240		/cf		/cf		768	1,000
	Misc Materials	11000.005	1.00 ea	33.00 /mh		750.00 /ea	750		/ea		/ea		750	750
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	Start up and Training	11000.005	8.00 mnhr	33.00 /mh	264	/mnhr			/mnhr		/mnhr		264	380
	Geotextile Fabric	2360.100	3.00 sy	33.00 /mh	99	1.50 /sy	5		/sy		/sy		104	147
	Komatsu PC300 Excavator (232 HP) (L)	1900.136	0.16 Mnth	/Mnth		/Mnth			9,200.00 /Mnth	1,472	3,500.00 /Mnth	560	2,032	2,032
	409000 Instrumentation & Control for Process Sytems													
	10 HWK Headworks Building													
	* unassigned *													
	11-500 Auto Sampler													
	Auto Composite Sampler	11000.335	1.00 ea	33.00 /mh	792	11,500.00 /ea	11,500		/ea		/ea		12,292	12,640
	Misc Materials	11000.005	1.00 ea	33.00 /mh	264	350.00 /ea	350		/ea		/ea		614	730
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	Start up and Training	11000.005	8.00 mnhr	33.00 /mh	264	/mnhr			/mnhr		/mnhr		264	380
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	412213 Bridge Crane System													
	23 MBR MBR Building													
	Bridge Crane													
	14-01 Bridge Crane													
	Sub - Hoists & Cranes (in with metal Buiding Sub)	14600.100	1.00 ls	/ls		/ls		0	/ls		/ls			
	Hoist Acc -	14600.100	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Hoist Electrification	14600.100	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Hoist Remote Controls	14600.100	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Kobelco CK1100G-2 - 110 Ton (332 HP) (L)	1900.100	0.25 mnth	5,629.00 /mnth	1,407	550.00 /mnth	138		14,000.00 /mnth	3,500	2,500.00 /mnth	625	5,670	6,077
	RT Telescopic Forklift (12,000 lb) (130 HP) (L)	1900.300	0.25 Mnth	/Mnth		/Mnth			4,200.00 /Mnth	1,050	1,500.00 /Mnth	375	1,425	1,600

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
412223	Monorail Crane System													
09 IPS	Influent Pump Station													
Davit														
14-01	IPS Davit Cranes and Bases													
	All davit and bases supply for project	14600.100	1.00 ls	33.00 /mh		13,000.00 /ls	13,000		/ls		/ls		13,000	13,000
	Davit Base	14600.100	4.00 ea	33.00 /mh	528	0.01 /ea	0		/ea		/ea		528	760
	Davit Crane	14600.100	2.00 ea	33.00 /mh	528	0.01 /ea	0		/ea		/ea		528	760
	PS Anchor Bolt 1/2x8 SS	15060.020	16.00 ea	33.00 /mh	132	25.00 /ea	400		/ea		/ea		532	590
11 EQB	EQ Basin													
Monorail														
14-01	EQ Tank Monrail System													
	Monorail Beam - W	5001.150	1.00 ea	33.00 /mh		0.00 /ea	0		/ea		/ea			
	Hoist and Trolley 1 Ton	14600.100	1.00 ea	33.00 /mh	1,056	0.00 /ea	0	87,731	/ea		/ea		88,787	89,252
	Load Test Crane	14600.100	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
42 SDL	Site Drain Lift Station													
Davit														
14-01	SDL Davirt Bases													
	Davit Base	14600.100	3.00 ea	33.00 /mh	396	0.01 /ea	0		/ea		/ea		396	570
	Expansion Anchor 1/2 x 7in SS 304	5001.073	12.00 ea	33.00 /mh	99	25.00 /ea	300		/ea		/ea		399	443
432256	Submersible Mixers													
11 EQB	EQ Basin													
* unassigned *														
11-24	EQ - Submersible Mixers													
	Submersible Mixers Supply	11000.230	1.00 ls	/ls		72,150.00 /ls	72,150		/ls		/ls		72,150	72,150
	Submersible Mixers Install	11000.230	2.00 ea	33.00 /mh	3,168	/ea			/ea		/ea		3,168	4,562
	Mixer Control Panel	11000.230	1.00 ls	33.00 /mh	132	250.00 /ls	250		/ls		/ls		382	440
	Grout Equipment	11000.005	0.17 cf	33.00 /mh	22	75.00 /cf	13		/cf		/cf		35	44
	Anchors for Equipment	11000.005	8.00 ea	33.00 /mh	66	30.00 /ea	240		/ea		/ea		306	335
	Misc Materials	11000.005	2.00 ea	33.00 /mh		250.00 /ea	500		/ea		/ea		500	500
	Start up and Training	11000.005	8.00 mnhr	33.00 /mh	264	/mnhr			/mnhr		/mnhr		264	380
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Davit Crane Thern 5PT10-M2	14600.100	1.00 ea	33.00 /mh	528	2,750.00 /ea	2,750		/ea		/ea		3,278	3,510
	Davit Base	14600.100	2.00 ea	33.00 /mh	264	500.00 /ea	1,000		/ea		/ea		1,264	1,380
432358	Rotary Lobe Pumps													
23 MBR	MBR Building													
* unassigned *														
11-01	Dewatering Feed Pumps													
	Supply Pump Package	11700.020	1.00 ls	/ls		36,500.00 /ls	36,500		/ls		/ls		36,500	36,500
	Self Priming Suction Lift Rotary - 7.5 HP	11700.080	2.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
	Anchors for Equipment	11000.005	8.00 ea	33.00 /mh	66	30.00 /ea	240		/ea		/ea		306	335
	Grout Equipment	11000.005	4.00 cf	33.00 /mh	528	60.00 /cf	240		/cf		/cf		768	1,000
	Misc Materials	11000.005	2.00 ea	33.00 /mh		250.00 /ea	500		/ea		/ea		500	500
	Start up and Training	11000.005	8.00 mnhr	33.00 /mh	264	/mnhr			/mnhr		/mnhr		264	380
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	2yr Warranty -	11000.005	2.00 ea	33.00 /mh		/ea			/ea		/ea			
432421	Multi-Stage Centrifugal Pump System													
23 MBR	MBR Building													
* unassigned *														
11-01	NPW Pumps													
	Supply Pump Package	11700.020	1.00 ls	/ls		82,185.00 /ls	82,185		/ls		/ls		82,185	82,185
	Pump Skid (3ea 20hp)	11700.050	1.00 ea	33.00 /mh	2,112	/ls			/ea		/ea		2,112	3,041
	Control Panel	11000.005	1.00 ea	33.00 /mh	132	250.00 /ea	250		/ea		/ea		382	440
	Anchors for Equipment	11000.005	8.00 ea	33.00 /mh	66	30.00 /ea	240		/ea		/ea		306	335
	Grout Equipment	11000.005	3.00 cf	33.00 /mh	396	60.00 /cf	180		/cf		/cf		576	750
	Misc Materials	11000.005	1.00 ea	33.00 /mh		250.00 /ea	250		/ea		/ea		250	250
	Pressure Gauge Assembly	11000.005	2.00 ea	33.00 /mh	264	750.00 /ea	1,500		/ea		/ea		1,764	1,880
	Start up and Training	11000.005	16.00 mnhr	33.00 /mh	528	/mnhr			/mnhr		/mnhr		528	760
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
432513	Submersible Wet Well Pumps													
09 IPS	Influent Pump Station													
* unassigned *														
11-02	Influent Pumps 6.2hp													
	Supply Submersible Pumps (includes 6.2 hp and 15.4 hp pumps)	11700.110	1.00 ls	/ls		145,505.00 /ls	145,505		/ls		/ls		145,505	145,505
	Submersible Pump - 6.2 HP	11700.110	2.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
	Temp Control Panel	11700.110	1.00 ls	33.00 /mh	132	250.00 /ls	250		/ls		/ls		382	440
	Instrument - Level - Float Switch	17300.000	5.00 ea	33.00 /mh	330	500.00 /ea	2,500		/ea		/ea		2,830	2,975
	Guide Rails - Stainless Steel 2"	11700.110	30.00 lf	33.00 /mh	495	25.00 /lf	750		/lf		/lf		1,245	1,463
	Mounting Brackets	11700.110	4.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Lifting Chain	11700.110	20.00 lf	33.00 /mh	66	/lf			/lf		/lf		66	95
	Misc Materials	11000.005	2.00 ea	33.00 /mh		250.00 /ea	500		/ea		/ea		500	500
	Anchors for Equipment	11000.005	16.00 ea	33.00 /mh	132	30.00 /ea	480		/ea		/ea		612	670
	Grout Equipment	11000.005	1.00 cf	33.00 /mh	132	60.00 /cf	60		/cf		/cf		192	250
	Start up and Training	11000.005	16.00 mnhr	33.00 /mh		/mnhr			/mnhr		/mnhr			
	7yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
11-02	Influent Pumps 15.4hp													

Spreadsheet Level		Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
11-02 Influent Pumps 15.4hp														
Supply Submersible Pumps		11700.110	2.00 ls	/ls		/ls			/ls		/ls			
Submersible Pump - 15.4 HP		11700.110	2.00 ea	33.00 /mh	1,584	/ls			/ea		/ea		1,584	2,281
Level Controls		11700.110	1.00 ls	33.00 /mh		/ls			/ls		/ls			
Guide Rails - Stainless Steel 2"		11700.110	30.00 lf	33.00 /mh	495	25.00 /lf	750		/lf		/lf		1,245	1,463
Mounting Brackets		11700.110	4.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
Lifting Chain		11700.110	20.00 lf	33.00 /mh	66	/lf			/lf		/lf		66	95
Misc Materials		11000.005	2.00 ea	33.00 /mh		250.00 /ea	500		/ea		/ea		500	500
Anchors for Equipment		11000.005	16.00 ea	33.00 /mh	132	30.00 /ea	480		/ea		/ea		612	670
Grout Equipment		11000.005	0.17 cf	33.00 /mh	22	60.00 /cf	10		/cf		/cf		32	42
Start up and Training		11000.005	16.00 mnhr	33.00 /mh	528	/mnhr			/mnhr		/mnhr		528	760
7yr Warranty -		11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
11-02 IPS Temporary Pumping														
IPS Temporary Pumping 6 month		1950.160	1.00 ls	/ls		85,043.00 /ls	85,043		/ls		/ls		85,043	85,043
Control Panel nd Moltz set up		11700.110	1.00 ls	33.00 /mh	5,280	/ls			/ls		/ls		5,280	7,603
Level Controls		11700.110	1.00 ls	33.00 /mh		/ls			/ls		/ls			
11 EQB EQ Basin														
* unassigned *														
11-01 EQ Basin Pumps														
Supply Pump Package		11700.020	1.00 ls	/ls		57,134.00 /ls	57,134		/ls		/ls		57,134	57,134
Vert Non Clog Centr Pump - 15 HP		11700.140	3.00 ea	33.00 /mh	2,376	/ea			/ea		/ea		2,376	3,421
Anchors for Equipment		11000.005	12.00 ea	33.00 /mh	99	30.00 /ea	360		/ea		/ea		459	503
Grout Equipment		11000.005	0.25 cf	33.00 /mh	33	60.00 /cf	15		/cf		/cf		48	63
Misc Materials		11000.005	3.00 ea	33.00 /mh		250.00 /ea	750		/ea		/ea		750	750
Start up and Training		11000.005	16.00 mnhr	33.00 /mh	528	/mnhr			/mnhr		/mnhr		528	760
Spare Parts		11000.005	1.00 ls	/ls		/ls			/ls		/ls			
7yr Warranty -		11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
Guide rail		11000.005	132.00 ea	33.00 /mh	2,178	25.00 /ea	3,300		/ea		/ea		5,478	6,436
23 MBR MBR Building														
* unassigned *														
11-01 RAS Pumps														
Supply Pump Package		11700.020	1.00 ls	/ls		133,281.00 /ls	133,281		/ls		/ls		133,281	133,281
Vert Non Clog Centr Pump - 20 HP		11700.140	3.00 ea	33.00 /mh	3,168	/ls			/ea		/ea		3,168	4,562
Anchors for Equipment		11000.005	12.00 ea	33.00 /mh	99	30.00 /ea	360		/ea		/ea		459	503
Grout Equipment		11000.005	1.00 cf	33.00 /mh	132	60.00 /cf	60		/cf		/cf		192	250
Misc Materials		11000.005	1.00 ea	33.00 /mh		250.00 /ea	250		/ea		/ea		250	250
Start up and Training		11000.005	16.00 mnhr	33.00 /mh	528	/mnhr			/mnhr		/mnhr		528	760
Spare Parts		11000.005	1.00 ls	/ls		/ls			/ls		/ls			
7yr Warranty -		11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
Guide Rails		11000.005	102.00 lf	33.00 /mh	1,683	25.00 /lf	2,550		/lf		/lf		4,233	4,974
11-01 WAS Pumps														
Supply Pump Package		11700.020	1.00 ls	/ls		29,979.00 /ls	29,979		/ls		/ls		29,979	29,979
Vert Non Clog Centr Pump - 7.5 HP		11700.140	2.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
Anchors for Equipment		11000.005	8.00 ea	33.00 /mh	66	30.00 /ea	240		/ea		/ea		306	335
Grout Equipment		11000.005	0.67 cf	33.00 /mh	88	60.00 /cf	40		/cf		/cf		128	167
Misc Materials		11000.005	1.00 ea	33.00 /mh		250.00 /ea	250		/ea		/ea		250	250
Start up and Training		11000.005	8.00 mnhr	33.00 /mh	264	/mnhr			/mnhr		/mnhr		264	380
Spare Parts		11000.005	1.00 ls	/ls		/ls			/ls		/ls			
7yr Warranty -		11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
Guide Rails		11000.005	68.00 lf	33.00 /mh	1,122	25.00 /lf	1,700		/lf		/lf		2,822	3,316
42 SDL Site Drain Lift Station														
* unassigned *														
11-02 Site Drain Pumps - P-42111, 42121, 42131														
Supply Submersible Pumps		11700.110	1.00 ls	/ls		31,410.00 /ls	31,410		/ls		/ls		31,410	31,410
Submersible Pump - 7.5 HP		11700.110	3.00 ea	33.00 /mh	2,376	/ea			/ea		/ea		2,376	3,421
Guide Rails - Stainless Steel 2" with splice support		11700.110	69.00 lf	33.00 /mh	2,277	25.00 /lf	1,725		/lf		/lf		4,002	5,004
Mounting Brackets		11700.110	3.00 ea	33.00 /mh	99	/ea			/ea		/ea		99	143
Lifting Chain		11700.110	69.00 lf	33.00 /mh	228	/lf			/lf		/lf		228	328
Misc Materials		11000.005	1.00 ea	33.00 /mh		250.00 /ea	250		/ea		/ea		250	250
Anchors for Equipment		11000.005	12.00 ea	33.00 /mh	99	30.00 /ea	360		/ea		/ea		459	503
Grout Equipment		11000.005	0.25 cf	33.00 /mh	33	60.00 /cf	15		/cf		/cf		48	63
Start up and Training		11000.005	8.00 mnhr	33.00 /mh	264	/mnhr			/mnhr		/mnhr		264	380
7yr Warranty -		11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
432514 Submersible Horizontal Axial Flow Pumps														
20 PBS Process Basin														
* unassigned *														
11-01 IMLR Pumps														
Supply Pump Package		11700.020	1.00 ls	/ls		95,910.00 /ls	95,910		/ls		/ls		95,910	95,910
Horz Non Clog Centr Pump - 7.5 HP		11700.020	3.00 ea	33.00 /mh	3,168	/ea			/ea		/ea		3,168	4,562
Anchors for Equipment		11000.005	12.00 ea	33.00 /mh	99	30.00 /ea	360		/ea		/ea		459	503
Grout Equipment		11000.005	2.00 cf	33.00 /mh	264	60.00 /cf	120		/cf		/cf		384	500
Misc Materials		11000.005	1.00 ea	33.00 /mh		250.00 /ea	250		/ea		/ea		250	250
Start up and Training		11000.005	16.00 mnhr	33.00 /mh	528	/mnhr			/mnhr		/mnhr		528	760
Spare Parts		11000.005	1.00 ls	/ls		/ls			/ls		/ls			
2yr Warranty -		11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
Special -		11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
Davit Crane Thern 5PT10-M2		14600.100	1.00 ea	33.00 /mh	264	2,750.00 /ea	2,750		/ea		/ea		3,014	3,498
Davit Base		14600.100	2.00 ea	33.00 /mh	264	500.00 /ea	1,000		/ea		/ea		1,264	1,528
433269 Packaged Chemical Feed System														

163

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	23 MBR MBR Building													
	* unassigned *													
	11-03 Chemical Feed - Alkalinity													
	Chem Feed System - Skid (Includes all chem skids)	11200.020	1.00 ea	33.00 /mh	1,584	48,278.00 /ea	48,278		/ea		/ea		49,862	50,559
	Chem Meter Pump -	11200.030	2.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	Calibration Column	11200.020	2.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Pulsation Dampener	11200.020	2.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Back Pressure Valve	11200.020	2.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Pressure Relief Valve	11200.020	2.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Pressure Gauge Assembly	11200.020	4.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Pressure Switch	11200.020	2.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Flow Monitor	11200.020	2.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Start up and Training	11000.005	16.00 mnhr	33.00 /mh	528	/mnhr			/mnhr		/mnhr		528	760
	Misc Materials	11000.005	1.00 ea	33.00 /mh		500.00 /ea	500		/ea		/ea		500	500
	Anchors for Equipment	11000.005	8.00 ea	33.00 /mh	66	30.00 /ea	240		/ea		/ea		306	335
	Grout Equipment	11000.005	1.33 cf	33.00 /mh	176	60.00 /cf	80		/cf		/cf		256	333
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	3yr Warranty - Pumps	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Startup Chemicals -	11000.005	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Chemical Injectors	11200.060	1.00 ea	33.00 /mh	132	500.00 /ea	500		/ea		/ea		632	690
	11-03 Chemical Feed - Alum													
	Chem Feed System - Skid	11200.020	1.00 ea	33.00 /mh	1,584	0.01 /ea	0		/ea		/ea		1,584	2,281
	Chem Meter Pump -	11200.030	2.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	Calibration Column	11200.020	2.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Pulsation Dampener	11200.020	2.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Back Pressure Valve	11200.020	2.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Pressure Relief Valve	11200.020	2.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Pressure Gauge Assembly	11200.020	4.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Pressure Switch	11200.020	2.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Chemical Diffuser	11200.020	1.00 ea	33.00 /mh	132	1,100.00 /ea	1,100		/ea		/ea		1,232	1,290
	Flow Monitor	11200.020	2.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Start up and Training	11000.005	16.00 mnhr	33.00 /mh	528	/mnhr			/mnhr		/mnhr		528	760
	Misc Materials	11000.005	1.00 ea	33.00 /mh		500.00 /ea	500		/ea		/ea		500	500
	Anchors for Equipment	11000.005	8.00 ea	33.00 /mh	66	30.00 /ea	240		/ea		/ea		306	335
	Grout Equipment	11000.005	1.33 cf	33.00 /mh	176	60.00 /cf	80		/cf		/cf		256	333
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	3yr Warranty - Pumps	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Startup Chemicals -	11000.005	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	11-03 Chemical Feed - Carbon													
	Chem Feed System - Skid	11200.020	1.00 ea	33.00 /mh	1,584	0.01 /ea	0		/ea		/ea		1,584	2,281
	Chem Meter Pump -	11200.030	2.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	Calibration Column	11200.020	2.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Pulsation Dampener	11200.020	2.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Back Pressure Valve	11200.020	2.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Pressure Relief Valve	11200.020	2.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Pressure Gauge Assembly	11200.020	4.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Pressure Switch	11200.020	2.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Chemical Diffuser	11200.020	1.00 ea	33.00 /mh	33	1,100.00 /ea	1,100		/ea		/ea		1,133	1,148
	Flow Monitor	11200.020	2.00 ea	33.00 /mh	66	/ea			/ea		/ea		66	95
	Start up and Training	11000.005	16.00 mnhr	33.00 /mh	528	/mnhr			/mnhr		/mnhr		528	760
	Misc Materials	11000.005	1.00 ea	33.00 /mh		500.00 /ea	500		/ea		/ea		500	500
	Anchors for Equipment	11000.005	8.00 ea	33.00 /mh	66	30.00 /ea	240		/ea		/ea		306	335
	Grout Equipment	11000.005	1.33 cf	33.00 /mh	176	60.00 /cf	80		/cf		/cf		256	333
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	3yr Warranty - Pumps	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Startup Chemicals -	11000.005	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	434143 High Density Cross Linked Poly Storage Tanks													
	23 MBR MBR Building													
	* unassigned *													
	11-04 Permeate Tank													
	Supply HDXLP Tank Package	11000.395	1.00 ls	/ls		102,000.00 /ls	102,000		/ls		/ls		102,000	102,000
	HDXLP Tank - 10,300 gal	11000.395	1.00 ea	33.00 /mh	2,112	/ea			/ea		/ea		2,112	3,041
	Tank Anchors	11000.395	8.00 ea	33.00 /mh	132	30.00 /ea	240		/ea		/ea		372	430
	Tank Clean and Water Test	11000.395	1.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Tank Expansion Joint	11000.395	4.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Tank Ladder	11000.395	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Geotextile Fabric under Tank	2360.100	30.00 sy	33.00 /mh	248	5.00 /sy	150		/sy		/sy		398	506
	5yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	11-04 Alkalinity Tank													
	Supply HDXLP Tank Package	11000.395	1.00 ls	/ls		38,375.00 /ls	38,375		/ls		/ls		38,375	38,375
	HDXLP Tank - 1600 gal	11000.395	1.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	Tank Anchors	11000.395	8.00 ea	33.00 /mh	132	30.00 /ea	240		/ea		/ea		372	430
	Tank Clean and Water Test	11000.395	1.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Tank Expansion Joint	11000.395	4.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Tank Ladder	11000.395	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Tank Float Gauge	11000.395	1.00 ea	33.00 /mh	132	/ea			/ea		/ea		132	190
	Geotextile Fabric under Tank	2360.100	4.00 sy	33.00 /mh	33	5.00 /sy	20		/sy		/sy		53	68
	Tank Mixer Units	11200.020	1.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Tank Mixer Support Plattform	5001.130	1.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	
	Fill Strainers - Hayward YS 2" PVC	11200.020	1.00 ea	33.00 /mh	66	350.00 /ea	350		/ea		/ea		416	
	5yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
	11-04 Alum Tank													
	Supply HDXLP Tank Package	11000.395	1.00 ls	/ls		26,730.00 /ls	26,730		/ls		/ls		26,730	26,730
	HDXLP Tank - 2500 gal	11000.395	1.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
	Tank Anchors	11000.395	8.00 ea	33.00 /mh	132	30.00 /ea	240		/ea		/ea		372	430
	Tank Clean and Water Test	11000.395	1.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Tank Expansion Joint	11000.395	4.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Tank Ladder	11000.395	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Geotextile Fabric under Tank	2360.100	8.00 sy	33.00 /mh	66	5.00 /sy	40		/sy		/sy		106	135
	Fill Strainers - Hayward YS Series 2" PVC	11200.020	1.00 ea	33.00 /mh	66	350.00 /ea	350		/ea		/ea		416	445
	5yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	11-04 Carbon Storage Tank													
	Supply HDXLP Tank Package	11000.395	1.00 ls	/ls		46,965.00 /ls	46,965		/ls		/ls		46,965	46,965
	HDXLP Tank - 6650 gal	11000.395	1.00 ea	33.00 /mh	1,584	/ea			/ea		/ea		1,584	2,281
	Tank Anchors	11000.395	8.00 ea	33.00 /mh	132	30.00 /ea	240		/ea		/ea		372	430
	Tank Clean and Water Test	11000.395	1.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Tank Expansion Joint	11000.395	4.00 ea	33.00 /mh	528	/ea			/ea		/ea		528	760
	Tank Ladder	11000.395	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Geotextile Fabric under Tank	2360.100	12.00 sy	33.00 /mh	99	5.00 /sy	60		/sy		/sy		159	203
	Fill Strainers - Hayward YS Series 2" PVC	11200.020	1.00 ea	33.00 /mh	66	350.00 /ea	350		/ea		/ea		416	445
	5yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	443119 Packaged Odor Control													
	50 ODC Odor Control													
	* unassigned *													
	11-500 Odor Control - ME-50120, 50125													
	Odor Control -	11000.260	1.00 ls	33.00 /mh	5,280	151,150.00 /ls	151,150		/ls		/ls		156,430	158,753
	Anchors for Equipment	11000.005	16.00 ea	33.00 /mh	132	30.00 /ea	480		/ea		/ea		612	670
	Set Odor Control Fan	11000.260	1.00 ea	33.00 /mh	792	/ea			/ea		/ea		792	1,140
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	Start up and Training	11000.005	16.00 mnhr	33.00 /mh		/mnhr			/mnhr		/mnhr			
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Control Panel	11000.005	1.00 ea	33.00 /mh	264	250.00 /ea	250		/ea		/ea		514	630
	Controls	11000.005	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Special -heat trace	11000.005	1.00 ea	33.00 /mh	1,584	15,000.00 /ea	15,000		/ea		/ea		16,584	17,281
	464123 Eductor Tube Mixer													
	20 PBS Process Basin													
	* unassigned *													
	11-25 Eductor Tube Mixer													
	Eductor Mixer Supply	11000.230	1.00 ls	/ls		128,850.00 /ls	128,850		/ls		/ls		128,850	128,850
	Eductor Mixer Install	11000.230	9.00 ea	33.00 /mh	3,564	/ea			/ea		/ea		3,564	5,132
	Mixer Support Structure	11000.230	9.00 ls	33.00 /mh	3,564	/ls			/ls		/ls		3,564	5,132
	Grout Equipment	11000.005	3.00 cf	33.00 /mh	396	60.00 /cf	180		/cf		/cf		576	750
	Anchors for Equipment	11000.005	36.00 ea	33.00 /mh	297	30.00 /ea	1,080		/ea		/ea		1,377	1,508
	Misc Materials	11000.005	1.00 ea	33.00 /mh		500.00 /ea	500		/ea		/ea		500	500
	Start up and Training	11000.005	32.00 mnhr	33.00 /mh	1,056	/mnhr			/mnhr		/mnhr		1,056	1,521
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Special -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	465131 Fine Bubble Diffuser													
	20 PBS Process Basin													
	* unassigned *													
	11-23 Fine Bubble Diffusers - Process Basin													
	Aeration Equipment Supply	11000.010	1.00 ea	/ls		130,800.00 /ls	130,800		/ea		/ea		130,800	130,800
	Diffused Air Drop Pipe	11000.010	24.00 ea	33.00 /mh	6,336	/ea			/ea		/ea		6,336	9,124
	Diffused Air Drop Pipe Support	11000.010	96.00 ea	33.00 /mh	6,336	/ea			/ea		/ea		6,336	9,124
	Diffused Air Header	11000.010	24.00 ea	33.00 /mh	6,336	/ea			/ea		/ea		6,336	9,124
	Diffused Air Header Support	11000.010	120.00 ea	33.00 /mh	7,920	/ea			/ea		/ea		7,920	11,405
	Diffused Tube Diffusers	11000.010	864.00 ea	33.00 /mh	21,384	/ea			/ea		/ea		21,384	30,793
	Diffused Tube Diffuser Supports	11000.010	864.00 ea	33.00 /mh	21,384	/ea			/ea		/ea		21,384	30,793
	Diffused Air Drop Leg Purge System	11000.010	24.00 ea	33.00 /mh	6,336	/ea			/ea		/ea		6,336	9,124
	Anchors for Equipment	11000.005	3,900.00 ea	33.00 /mh	16,088	6.00 /ea	23,400		/ea		/ea		39,488	46,566
	Misc Materials	11000.005	1.00 ea	33.00 /mh		1,500.00 /ea	1,500		/ea		/ea		1,500	1,500
	System Test	11000.005	1.00 ea	33.00 /mh	3,168	500.00 /ea	500		/ea		/ea		3,668	5,062
	Start up and Training	11000.005	24.00 mnhr	33.00 /mh	792	/mnhr			/mnhr		/mnhr		792	1,140
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	Flow Conditioner - FCI Vortab Insertion Panel	11000.005	3.00 ea	33.00 /mh	396	2,600.00 /ea	7,800		/ea		/ea		8,196	8,370
	40 SLD Aerated Sludge Holding Tank													
	* unassigned *													
	11-23 Fine Bubble Diffusers - Sludge Tank													
	Aeration Equipment Supply	11000.010	1.00 ea	/ls		/ls			/ea		/ea			
	Diffused Air Drop Pipe	11000.010	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Diffused Air Drop Pipe Support	11000.010	3.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Diffused Air Header	11000.010	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Diffused Air Header Support	11000.010	6.00 ea	33.00 /mh	198	/ea			/ea		/ea		198	285
	Diffused Air Laterals	11000.010	4.00 ea	33.00 /mh	1,056	/ea			/ea		/ea		1,056	1,521
	Diffused Air Lateral Supports	11000.010	12.00 ea	33.00 /mh	396	/ea			/ea		/ea		396	570
	Diffused Air Diffusers	11000.010	28.00 ea	33.00 /mh	1,848	/ea			/ea		/ea		1,848	2,424
	Diffused Air Drop Leg Purge System	11000.010	1.00 ea	33.00 /mh	264	/ea			/ea		/ea		264	380
	Anchors for Equipment	11000.005	42.00 ea	33.00 /mh	347	30.00 /ea	1,260		/ea		/ea		1,607	165

	Spreadsheet Level	Phase	Takeoff Quantity	Labor Price	Labor Amount	Material Price	Material Amount	Sub Amount	Equip Price	Equip Amount	Other Price	Other Amount	Total Amount	Grand Total
11	-23 Fine Bubble Diffusers - Sludge Tank													
	Misc Materials	11000.005	1.00 ea	33.00 /mh		250.00 /ea	250		/ea		/ea		250	250
	System Test	11000.005	1.00 ea	33.00 /mh	1,056	250.00 /ea	250		/ea		/ea		1,306	1,771
	Start up and Training	11000.005	16.00 mnhr	33.00 /mh	528	/mnhr			/mnhr		/mnhr		528	760
	2yr Warranty -	11000.005	1.00 ea	33.00 /mh		/ea			/ea		/ea			
	Spare Parts	11000.005	1.00 ls	/ls		/ls			/ls		/ls			
	Flow Conditioner - FCI Vortab Insertion Panel	11000.005	1.00 ea	33.00 /mh	132	1,500.00 /ea	1,500		/ea		/ea		1,632	1,690



Johnstown Central WWTP Expansion

Item #10.

GMP Schedule with VE Selections

Line	Task ID	Name	Duration	Start	Finish	2022												2023												2024												2025												2026																															
						Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan																																								
						3	17	31	14	28	12	26	9	23	6	20	3	17	1	15	29	12	26	10	24	7	21	4	18	2	16	30	13	27	11	25	8	22	5	19	4	18	1	15	29	12	26	10	24	8	22	5	19	2	16	30	14	28	11	25	9	23	6	20	3	17	3	17	31	14	28	12	26	9	23	7	21	4	18	1	15	29	13	27	10
		MILESTONES	821d	10/3/2022	12/31/2025																																																																																
1	MS00100	CMAR Award		10/3/2022	10/3/2022	CMAR Award																																																																															
2	MS00200	Notice to Proceed		5/1/2023 *	5/1/2023	Notice to Proceed																																																																															
3	MS00300	Mobilize	3d	5/1/2023	5/3/2023	Mobilize																																																																															
4	MS00400	Startup Influent Pump Station	5d	10/31/2023 *	11/6/2023	Startup Influent Pump Station																																																																															
5	MS00500	Startup Plant	10d	8/18/2025	8/29/2025	Startup Plant																																																																															
6	MS00600	Substantial Completion		9/2/2025 *	9/2/2025	Substantial Completion																																																																															
7	MS00700	Punch List	20d	12/2/2025	12/31/2025	Punch List																																																																															
8	MS00800	Final Completion		12/31/2025	12/31/2025 *	Final Completion																																																																															
		COMMISSIONING	317d	5/16/2024	8/15/2025																																																																																
9	CM00100	IPS	10d	5/16/2024	5/30/2024	IPS																																																																															
10	CM00200	Electrical Building	10d	8/30/2024	9/13/2024	Electrical Building																																																																															
11	CM00300	Headworks Startup	15d	6/10/2025	6/30/2025	Headworks Startup																																																																															
12	CM00400	Site Drain Lift Station	5d	7/1/2025	7/8/2025	Site Drain Lift Station																																																																															
13	CM00500	MBR Startup	15d	7/11/2025	7/31/2025	MBR Startup																																																																															
14	CM00600	EQ/Process Basins	15d	7/28/2025	8/15/2025	EQ/Process Basins																																																																															
15	CM00700	Solids Holding Tank	5d	8/1/2025	8/7/2025	Solids Holding Tank																																																																															
		Design	125d	10/3/2022	3/30/2023																																																																																
16	DS00100	GMP Document Development	60d	10/3/2022	12/28/2022	GMP Document Development																																																																															
17	DS00200	GMP Estimate	35d	12/29/2022	2/16/2023	GMP Estimate																																																																															
18	DS00300	Contract Execution	30d	2/17/2023	3/30/2023	Contract Execution																																																																															
		PROCUREMENT	275d	5/1/2023	5/30/2024																																																																																
19	PR00100	Grit Equipment	220d	5/1/2023	3/13/2024	Grit Equipment																																																																															
20	PR00200	Screening Equipment	275d	5/1/2023	5/30/2024	Screening Equipment																																																																															
21	PR00300	Gates	220d	5/1/2023	3/13/2024	Gates																																																																															
22	PR00400	Pumps	220d	5/1/2023	3/13/2024	Pumps																																																																															
23	PR00500	Mixer	220d	5/1/2023	3/13/2024	Mixer																																																																															
24	PR00600	Blowers	275d	5/1/2023	5/30/2024	Blowers																																																																															
25	PR00700	Electrical Equipment	275d	5/1/2023	5/30/2024	Electrical Equipment																																																																															
26	PR00800	Influent Pumps	260d	5/1/2023	5/8/2024	Influent Pumps																																																																															
		CONSTRUCTION	651d	5/4/2023	11/26/2025																																																																																
		SITE	651d	5/4/2023	11/26/2025																																																																																
		SITE WORK	651d	5/4/2023	11/26/2025																																																																																
27	SW00100	Stormwater BMP's	13d	5/4/2023	5/22/2023	Stormwater BMP's																																																																															
28	SW00200	Dewatering	15d	5/4/2023	5/24/2023	Dewatering																																																																															
29	SW00300	Clear & Grub	10d	5/23/2023	6/6/2023	Clear & Grub																																																																															
30	SW00400	Generator/Electrical Gear Pads	25d	5/31/2024	7/8/2024	Generator/Electrical Gear Pads																																																																															
31	SW00500	Bollards	5d	8/18/2025	8/22/2025	Bollards																																																																															
32	SW00600	Fencing	7d	8/25/2025	9/3/2025	Fencing																																																																															
33	SW00700	Sidewalk, Curb & Gutter	40d	9/4/2025	10/29/2025	Sidewalk, Curb & Gutter																																																																															
34	SW00800	Site Fine Grade	10d	9/25/2025	10/8/2025	Site Fine Grade																																																																															
35	SW00900	Seeding	15d	10/9/2025	10/29/2025	Seeding																																																																															
36	SW01000	Road Base and Site Roads	5d	10/30/2025	11/5/2025	Road Base and Site Roads																																																																															
37	SW01100	Asphalt	15d	11/6/2025	11/26/2025	Asphalt																																																																															
		YARD PIPE	480d	8/2/2023	6/23/2025																																																																																
38	YP00100	1 - North Interceptor Raw Influent	5d	8/2/2023	8/8/2023	1 - North Interceptor Raw Influent																																																																															
39	YP00200	2C - Temp N. Interceptor Pumped to Lagoons	14d	8/9/2023	8/28/2023	2C - Temp N. Interceptor Pumped to Lagoons																																																																															
40	YP00300	21 - Potable	40d	5/15/2024	7/12/2024	21 - Potable																																																																															
41	YP00400	10B - Solids Holding Header	10d	6/13/2024	6/26/2024	10B - Solids Holding Header																																																																															
42	YP00500	10C - Solids Holding Air Header	1d	6/27/2024	6/27/2024	10C - Solids Holding Air Header																																																																															
43	YP00600	10A - Process Air Header	7d	6/28/2024	7/10/2024	10A - Process Air Header																																																																															
44	YP00700	25 - Alum Addition - MBR to Process Basin	5d	7/11/2024	7/17/2024	25 - Alum Addition - MBR to Process Basin																																																																															
45	YP00800	3 - Central Interceptor Raw Influent	32d	7/12/2024	8/26/2024	3 - Central Interceptor Raw Influent																																																																															
46	YP00900	22 - NPW	40d	7/15/2024	9/9/2024	22 - NPW																																																																															
47	YP01000	4 - Combined Influent Flow to Headworks	11d	8/27/2024	9/11/2024	4 - Combined Influent Flow to Headworks																																																																															
48	YP01100	23 - Natural Gas	30d	9/10/2024	10/21/2024	23 - Natural Gas																																																																															
49	YP01200	5 - HW to Secondary Splitter	14d	9/12/2024	10/1/2024	5 - HW to Secondary Splitter																																																																															
50	YP01300	6 - HW to EQ Basin	8d	10/2/2024	10/11/2024	6 - HW to EQ Basin																																																																															
51	YP01400	7 - EQ Basin Discharge	3d	10/14/2024	10/16/2024	7 - EQ Basin Discharge																																																																															
52	YP01500	8 - Secondary Process Basin to MBR	7d	10/17/2024	10/25/2024	8 - Secondary Process Basin to MBR																																																																															
53	YP01600	24 - Process Basin Overflow to EQ	5d	10/17/2024	10/23/2024	24 - Process Basin Overflow to EQ																																																																															



Johnstown Central WWTP Expansion

Item #10.

GMP Schedule with VE Selections

Line	Task ID	Name	Duration	Start	Finish	2022												2023												2024												2025												2026																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
						Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	F																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
						3	17	31	14	28	12	26	9	23	6	20	3	17	1	15	29	12	26	10	24	7	21	4	18	2	16	30	13	27	11	25	8	22	5	19	4	18	1	15	29	12	26	10	24	8	22	5	19	2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
54	YP01700	11 - RAS	23d	11/25/2024	12/30/2024																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											</



Johnstown Central WWTP Expansion

Item #10.

GMP Schedule with VE Selections

Line	Task ID	Name	Duration	Start	Finish	2022												2023												2024												2025												2026																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
						Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec



Johnstown Central WWTP Expansion

Item #10.

GMP Schedule with VE Selections

[illegible]

**Agreement Between
OWNER AND CONSTRUCTION MANAGER**
Construction Manager At-Risk

2004 EDITION

This document is to be used in conjunction with Standard General Conditions of the Construction Contract (EJCDC C-700-2018) and the Supplementary Conditions (EJCDC C-800).

CONSULTATION WITH AN ATTORNEY IS RECOMMENDED WHENEVER THIS DOCUMENT IS USED.

AGREEMENT

Made this _____ of _____ in the year of Two Thousand and Twenty-Three.

BETWEEN The Owner:

Town of Johnstown, a home rule municipality of the State of Colorado

And the Construction Manager (hereinafter referred to as the "CM"):

Moltz Construction Inc., a Colorado corporation

For services in connection with the Project known as:

Central Wastewater Treatment Plant Project

The Owner and CM, in consideration of their mutual covenants herein, agree as set forth below:

Copyright Construction Management Association of America, Inc., 2005. All rights reserved. Reproduction or translation of any part of this Document without the permission of the copyright owner is unlawful.

Construction Management Association of America, 7926 Jones Branch Drive, Suite 800 McLean, Virginia 22102

WARNING: Unlicensed photocopying violates U.S. copyright laws and is subject to legal prosecution

EJCDC® C-700, Standard General Conditions of the Construction Contract.
Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies,
and American Society of Civil Engineers. All rights reserved.

ARTICLE 1 RELATIONSHIP OF THE PARTIES

1.1 Owner and Construction Manager

The Construction Manager (CM) and the Owner shall perform as stated in this Agreement and each accepts the relationship between them that is established by this Agreement. The CM is the “Contractor” as that term is defined by the General Conditions of this Agreement (Standard General Conditions of the Construction Contract EJCDC C-700-2018) (“General Conditions”). Reference herein to the General Conditions includes the Supplementary Conditions of the Construction Contract (“Supplementary Conditions”) and modifications, if any, to the General Conditions set forth in the Supplementary Conditions.

1.1.1 Standard of Care

The CM covenants with the Owner to furnish its skill and judgment with due care in accordance with applicable federal, state, and local laws and regulations.

1.2 Owner and Engineer

The Owner has contracted separately with AQUA Engineering of Utah, a Utah limited liability company (“Engineer”), for architectural and engineering design services for the Project. Nothing in this Agreement shall affect the rights, duties and obligations that exist between the Owner and Engineer. Furthermore, the CM hereby acknowledges and agrees not to interfere with the relationship between the Owner and the Engineer. From time to time, the Owner may delegate to the Engineer specific authority and decision-making capacity with regard to this Agreement and the construction of the Project. The Project is defined in Article 2 of this Agreement.

1.3 CM and Subcontractors

The CM may contract directly with such Subcontractors as may be necessary for construction or supply of the Project. The CM may self-perform all or a part of the Work. Any contracts between the CM and Subcontractors shall be issued consistent with the applicable provisions of this Agreement.

1.4 Relationship of the CM to the Engineer and Other Project Participants

In providing construction management services described in this Agreement, the CM shall endeavor to maintain a working relationship with the Engineer. The Engineer is solely responsible for the Project design and shall perform in accordance with the Engineer agreement with the Owner and nothing in this Agreement shall be construed to mean that the CM is responsible for the design of the Project or that the CM assumes any of the contractual or customary duties of the Engineer or any other persons or parties not specified by this Agreement except as otherwise expressly agreed to by CM under separate agreement.

ARTICLE 2 PROJECT DEFINITION

The term “Project” when used in the Agreement shall mean the total construction of which the Work may be a whole or part of the Project. The term “Work” required for the “Project” used in this Agreement shall mean the various parts of total construction to be performed under this Agreement.

The Project name and locations are as follows:
Central Wastewater Treatment Plant Project

Town of Johnstown, County of Weld, State of
Colorado

The Project is intended for use as:
Wastewater Treatment Plant

The Work is for all services incidental to the construction management and administration of the Central Wastewater Treatment Plant Expansion (hereinafter referred to as "Project") in accordance with the Contract Documents.

ARTICLE 3 CONSTRUCTION MANAGER'S BASIC SERVICES

3.1 CM Basic Services

3.1.1 The CM shall perform the Basic Services described herein and as otherwise set forth in the Contract Documents. For the avoidance of doubt, the Basic Services include, but are not limited to, the services set forth in the Guaranteed Maximum Price, which includes the Drawings and Specifications, attached hereto and incorporated herein by reference as **Exhibit A**. It is not required that the Basic Services be performed in the sequence in which they are described unless sequence is specified.

3.1.2 Project and Accounting Records

Records for the CM's personnel expenses; Subcontractor's, independent engineer's, architect's and other consultant's fees; and direct expenses pertaining to the Project shall be maintained on the basis of generally accepted accounting practices. The CM shall maintain full and detailed accounts and exercise such controls as may be necessary for proper financial management under this Agreement. Records shall include, but not necessarily be limited to, financial books and ledgers, correspondence, instructions, drawings, receipts, subcontracts, purchase orders, vouchers, receipts, memoranda and other data pertaining to the Project. All such records shall be available for inspection by the Owner and the Engineer at mutually convenient times for a period of two years after the end of the warranty period.

3.2 Pre-Design Phase N/A

3.3 Pre-Procurement Phase N/A

3.4 Procurement Phase N/A

3.5 Construction Phase

3.5.1 Project Management

Except as provided herein, the CM's responsibilities set forth below do not supersede, abrogate or otherwise modify CM's responsibilities established by the General Conditions.

3.5.1.1 Pre-Construction Conference

Along with the Engineer and as set forth in the General Conditions, the CM shall conduct a pre-construction conference during which the CM shall review the reporting procedures, site operations and other contractual requirements.

3.5.1.2 Onsite Management and Construction Phase Communication Procedures

The CM shall provide and maintain a management team on the Project site to provide contract administration and the CM shall establish and implement coordination and communication procedures

EJCDC® C-700, Standard General Conditions of the Construction Contract.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies,
and American Society of Civil Engineers. All rights reserved.

among the CM, Owner, Engineer, and Subcontractors. A list identifying the CM management team including titles, name, and contact phone numbers shall be provided to Owner within ten (10) days upon commencement of the Contract.

3.5.1.3 Contract Administration Procedures

The CM shall establish and implement procedures for expediting and processing requests for information, Shop Drawings, material and equipment sample submittals, Subcontractor schedule adjustments, Change Orders, substitutes, payment requests and the maintenance of logs. The CM shall maintain daily job reports. The CM shall be the party to whom requests for information, submittals, Subcontractor schedule adjustments, substitutes, Change Order requests and payment requests shall be submitted.

3.5.1.3.1 Record Documents

The CM shall coordinate and expedite submittals of information from the Subcontractors for preparation of record drawings and specifications and shall coordinate and expedite the transmittal of such record documents to the Owner.

3.5.1.4 Project Site Meetings

The CM shall conduct weekly meetings at the Project site with each Subcontractor and the CM shall conduct coordination meetings with all Subcontractors, the Owner and Engineer for the duration of the Project. The CM shall record, transcribe and distribute minutes to all attendees, the Owner and Engineer.

3.5.1.5 Coordination of Other Independent Consultants

Technical inspection and testing provided by the Engineer or others shall be coordinated by the CM when appropriate at various stages of the construction or when requested by Owner or required by the Contract Documents. The CM shall be provided with a copy of all inspection and testing reports on the day of the inspection or test or when issued. The CM is not responsible for providing, nor does the CM control, the actual performance of technical inspection and testing. The CM is performing a coordination function and is not acting in a manner so as to assume responsibility, in part or in whole, for all or any part of such inspection and testing, unless otherwise provided in the Contract Documents.

3.5.1.6 Review of Requests for Changes to the Contract Time and Price

The Engineer shall review, and recommend approval or denial to the Owner, of changes in Contract Price, Contract Time and Work.

3.5.1.7 Quality Review

The CM shall establish and implement a program to monitor the quality of construction performed by Subcontractors. The purpose of the program shall be to guard the Owner against defects and deficiency in the work of Subcontractors. The CM shall transmit to the Subcontractor a notice of nonconforming work and may reject work when it is the opinion of the CM that the work does not conform to the requirements of the Contract Documents. The CM is not authorized as part of this service to change, evoke, enlarge, relax, alter, or to release any requirement of the Contract Documents or to approve or accept any portion of the Work not performed in accordance with the Contract Documents. The Engineer is responsible for monitoring the quality of the overall Project, including any work self-performed by the CM, in accordance with the General Conditions.

3.5.1.8 Operation and Maintenance Materials

3.5.1.8.1 The CM shall provide to the Town operation and maintenance manuals, warranties and guarantees for materials and equipment installed in the Project.

3.5.1.8.2 Prior to final completion of the Project, the CM shall compile manufacturers' operations and maintenance manuals, warranties and guarantees and bind such documents in an organized manner. This information shall then be provided to the Owner.

3.5.1.9 Best Management Practices

The CM shall install appropriate best management practices to minimize pollution from construction activities. Such practices shall be monitored and maintained for effectiveness during the construction phase.

3.5.1.10 Substantial Completion

Substantial Completion shall be determined by the Engineer in accordance with the General Conditions.

3.5.1.11 Final Completion and Final Payment

3.5.1.11.1. Final Completion shall be determined by the Engineer in accordance with the General Conditions. The timing of Application for Final Payment, the documentation required to accompany the same and the roles and responsibilities of the Owner, Engineer and CM in regard to the processing of the same are as set forth in the General Conditions.

3.5.1.11.2 Final payment shall be made by Owner to CM when 1) the Contract has been fully performed by the CM; 2) a final Application for Payment and a final accounting for the Cost of the Work have been submitted by the CM and reviewed and approved by Owner; 3) a final payment recommendation on the Application for Payment has been issued by the Engineer, and 4) the CM submits an affidavit that there are no outstanding claims against the Project. Such final payment shall be made by Owner only after the requirements set forth in accordance with the Colorado Public Works Act, Section 38-26-101, *et seq.*, C.R.S., as amended ("Public Works Act"), including, but not limited to the advertising requirements, have been satisfied.

3.5.1.11.3 Upon final acceptance of the Project, and/or any phase of the Project, by the Owner, the CM, with the assistance of the Engineer, shall prepare and publish a Notice of Final Payment, as required by the Public Works Act and any applicable Colorado statute. Following the expiration of the time provided in said Notice of Final Payment, and subject to the other requirements provided by law regarding final payment, the Owner shall make final payment for the Project, and/or a phase of the Project to the CM. The CM shall ensure that all Subcontractors are paid on the Project and upon payment of any part or parcel thereof, obtain the appropriate lien waivers from Subcontractors, suppliers, material men, laborers, or any other person who provided labor or supplies on the Project. Nothing in this Paragraph shall modify any retainage rights of the Owner, as provided for elsewhere in this Agreement.

3.5.1.11.4 The provisions of this section shall not lessen or diminish, but shall be in addition to, the duty of the CM to submit to the Owner a sworn statement setting forth that all claims for materials and labor performed under the Contract have been and are paid for the entire period of time for which the final payment is to be made and, with respect to disputed claims, to identify such and the amount claimed to be due. Final payment will be made only in conjunction with applicable Colorado laws.

3.5.1.11.5 The amount of the final payment shall be calculated as follows:

3.5.1.11.5.1 Take the sum of the Cost of the Work substantiated by CM's final accounting and CM's Fee; but not more than the Guaranteed Maximum Price. Any Contingency remaining at the time of final payment shall be retained by the Owner as set forth in Article 12.

3.5.1.11.5.2 Subtract amounts, if any, for which the Engineer withholds, in whole or in part, a final Certificate for Payment as provided in the Contract Documents.

3.5.1.11.5.3 Subtract the aggregate of previous payments made by Owner.

3.5.1.11.6 If the aggregate of previous payments made by Owner exceeds the amount due the CM, the CM shall reimburse the difference to Owner within thirty (30) days.

3.5.1.11.7 Owner may review and report in writing on CM's final accounting within thirty (30) days after approval of the final accounting by the Engineer. Based upon such Cost of the Work as Owner

EJCDC® C-700, Standard General Conditions of the Construction Contract.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

substantiates, and provided all other conditions of the Agreement have been met, the Engineer will, within seven days after receipt of the written report of Owner, either issue to Owner a final Certificate for Payment with a copy to CM, or notify CM and Owner in writing of the Engineer's reasons for withholding a certificate.

3.5.1.12. Means, Methods and Safety. The CM shall be responsible for the means, methods and safety of the Work in accordance with the General Conditions and the Contract Documents.

3.5.2 Time Management

3.5.2.1 Progress Schedule

The CM shall adjust and update the Progress Schedule and distribute copies to the Owner and Engineer, except that the CM may only adjust the Contract Time as provided in the General Conditions. All adjustments to the Progress Schedule shall be made for the benefit of the Project.

3.5.2.2 Subcontractor's Construction Schedules

The CM shall review each Subcontractor's construction schedule and shall verify that the schedule is prepared in accordance with the requirements of the Contract Documents and that it establishes completion dates that comply with the requirements of the Progress Schedule.

3.5.2.3 Construction Schedule Report

The CM shall review the progress of construction of each Subcontractor no less frequently than once per month, shall evaluate the percentage complete of each construction activity as indicated in the Subcontractor's construction schedule and shall review such percentages with the Subcontractor. This evaluation shall serve as data for input to the periodic construction schedule report that shall be prepared and distributed to the Subcontractor, the Owner and Engineer at least once a month. The report shall indicate the actual progress compared to scheduled progress and shall serve as the basis for progress payments. The CM shall determine and implement alternative courses of action that may be necessary to achieve contract compliance by the Subcontractor.

3.5.2.4 CM Review of Time Extension Requests

The CM shall coordinate with the Engineer, prior to the issuance of a Change Order, to determine the effect on the Progress Schedule of time extensions.

3.5.3 Cost Management

3.5.3.1 Schedule of Values (Each Contract)

A Schedule of Values shall be prepared in accordance with the General Conditions.

3.5.3.2 Field Work Order Control

Field Orders may be authorized by the Engineer pursuant to the General Conditions. If Owner approval is necessary, the Town Manager or the Town Manager's authorized designee may approve Field Work Order requests on behalf of the Owner. Any increase in the Cost of Work due to an approved Field Work Order shall be subtracted from the Contingency. Any decrease in the Cost of Work due to an approved Field Work Order shall be added to the Contingency.

3.5.3.3 Change Order Control

3.5.3.3.1 The Engineer is responsible for the Change Order system in accordance with the General Conditions.

3.5.3.3.2 All Change Orders will require the approval of the Engineer and Owner.

3.5.3.3.5. The maximum combined percentage of Overhead and Profit line items assessed pursuant to any Change Order (Subcontractors and CM inclusive) shall be seven and one-half percent (7.5%).

3.5.3.4 Cost Records

The CM shall provide cost records or other documentation as required to substantiate Change Order costs to the Engineer in accordance with the General Conditions.

3.5.3.5 Trade-Off Studies

The CM shall provide trade-off studies for various minor construction components. The results of the trade-off studies shall be in report form and distributed to the Owner and Engineer.

3.5.3.6 Progress Payments

3.5.3.6.1 Based upon Applications for Payment submitted by CM and Certificates for Payment, Owner shall make progress payments on account of the Contract Sum to CM as provided below. The timing of Applications for Payments, the documentation required to accompany such Applications and the roles and responsibilities of the Owner, Engineer and CM in regard to the processing of the same are as set forth in the General Conditions.

3.5.3.6.2 With each Application for Payment, CM shall submit a Cost of Work report which reflects costs covered by the pay application.

3.5.3.6.3 Each Application for Payment shall be based upon the most recent Schedule of Values submitted by the CM in the Guaranteed Maximum Price. The Schedule of Values shall allocate the entire Guaranteed Maximum Price among the various portions of the Work, except that CM's fee (which shall include overhead and profit) shall be shown as separate item. The Schedule of Values shall be prepared in such form and supported by such data to substantiate its accuracy as the Engineer or Owner may require. The Schedule of Values, unless objected to by the Engineer, shall be used as a basis for reviewing CM's Applications for Payment.

3.5.3.6.4 Applications for Payment shall show the percentage completion of each portion of the Work as of the end of the period covered by the Application for Payment. The percentage completion shall be the lesser of (1) the percentage of that portion of the Work which has actually been completed or (2) the percentage obtained by dividing (a) the expense which has actually been incurred by CM on account of that portion of the Work for which CM has made or intends to make actual payment prior to the next Application for Payment by (b) the share of the Guaranteed Maximum Price allocated to that portion of the Work in the Schedule of Values.

3.5.3.6.5 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

3.5.3.6.5.1 Take that portion of the Guaranteed Maximum Price properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Guaranteed Maximum Price allocated to that portion of the Work in the Schedule of Values;

3.5.3.6.5.2 Add CM's fee. CM's Fee shall be computed upon the Cost of the Work described in the Agreement at rates stated in this Agreement;

3.5.3.6.5.3 Subtract the aggregate of previous payments made by Owner;

3.5.3.6.5.4 Subtract the shortfall, if any, indicated by CM in the documentation of prior Applications for Payment, or resulting from errors subsequently discovered by Owner's accountants in such documentation;

3.5.3.6.5.5 Subtract amounts, if any, for which the Engineer has withheld or nullified a Certificate for Payment; and

3.5.3.6.5.6 Retain five percent (5%) of the total amount.

3.5.3.6.6 Except with Owner's prior approval, the CM shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the Site.

3.5.3.6.7 The CM shall keep the Project and the Site on which Work is performed free and clear of all liens and claims from, Subcontractors, suppliers, and other third parties.

3.5.4 Management Information System ("MIS")

3.5.4.1 Schedule Maintenance Reports

The CM shall prepare and distribute to the Owner and Engineer schedule maintenance reports once per month. The report shall summarize the progress of the Work in relation to the Progress Schedule. The report shall identify and provide opinion concerning the cause of any delays or Work that is behind schedule and identify methods by which the CM proposes to maintain the Progress Schedule despite any such delays.

3.5.4.2 Project Cost Reports

The CM shall prepare and distribute to the Owner and Engineer Project cost reports once per month. The report shall summarize the Project costs incurred to date in relation to the progress of the Project.

3.5.4.3 Project and Construction Budget Revisions

The CM shall prepare and distribute to the Owner and Engineer recommended Project construction budget revisions as necessary. Any such revision that proposes an increase in the Guaranteed Maximum Price may be approved only by written amendment to this Agreement signed by both parties.

3.5.4.4 Progress Payment Reports

The CM shall prepare and distribute to the Owner and Engineer progress payment reports. The reports shall state the total construction Contract Price, payments to date, current payment requested, retainage and actual amounts owed this period. A portion of this report shall be a certificate of payment that shall be signed by the CM and delivered to the Owner for use by the Owner in making payments to the CM.

3.5.4.5 Change Order and Field Work Order Reports

The CM shall periodically prepare and distribute Change Order and Field Work Order reports during the Construction Phase. The report shall list all approved Change Orders and Field Work Orders by number, a brief description of the Change Order work, the cost established in the Change Order and percent of completion of the Change Order work. The report shall also include similar information for potential Change Orders of which the CM may be aware.

3.5.4.6 Closeout Reports

At the conclusion of the Project, the CM shall prepare final project accounting and closeout reports in coordination with the Owner.

3.5.4.7 Subcontractor's Safety Program

The CM shall review the safety programs of each Subcontractor and confirm that each Subcontractor has established safety programs as required by the Contract Documents.

3.6 Additional Services

3.6.1 At the request of the Owner, the CM shall perform the following Additional Services and shall be compensated for same as provided in Article 7 of this Agreement. The CM shall perform Additional Services only after the Owner and CM have executed a written amendment to this Agreement providing for such services. Additional Services may include:

3.6.1.1 Services related to procurement, storage, maintenance and installation of Owner-furnished equipment, materials, supplies and furnishings;

3.6.1.2 Preparation of a Project financial feasibility study;

3.6.1.3 Preparation of financial, accounting or MIS reports not provided under Basic Services;

3.6.1.4 Performance of technical inspection or testing, unless required by the Contract Documents;

3.6.1.5 Preparation of an Operations and Maintenance Manual separate from the compilation of operation and maintenance materials addressed in 3.5.1.8 or otherwise required in the Contract Documents; and

3.6.1.6 Services related to recruiting and training of maintenance personnel.

ARTICLE 4 DURATION OF THE CONSTRUCTION MANAGER'S SERVICES

4.1 The duration of the CM's Basic Services under this Agreement shall be as follows and as otherwise set forth in the Contract Documents. The Basic Services shall be completed in two parts, defined as follows:

4.1.1 "Part 1" shall include all the Work associated with temporary operation of the Influent Pump Station; and

4.1.2 "Part 2" shall include all remaining Work outside of Part 1 above.

4.2 Substantial Completion.

4.2.1 The CM shall complete Part 1 of the Project to Substantial Completion and obtain a certificate of Substantial Completion no later than April 1, 2024.

4.2.2 The CM shall complete Part 2 of the Project to Substantial Completion and obtain a certificate of Substantial Completion no later than September 2, 2025.

4.3 Final Completion.

4.3.1 The CM shall complete Part 1 of the Project to final completion no later than May 1, 2024.

4.3.2 The CM shall complete Part 2 of the Project to final completion no later than December 31, 2025.

4.4 Liquidated Damages

It is mutually agreed to by the Owner and the CM that time is of the essence of this Agreement that the Owner will suffer financial and other losses if the Work is not completed within the times specified in Paragraphs 4.2 and 4.3 above, plus any extensions thereof allowed in accordance with the Contract. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by the Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, the Owner and the CM agree that as liquidated damages for delay (but not as

a penalty), the CM shall pay to the Owner as liquidated damages, and not as a penalty, the following amounts:

4.4.1. For failure to meet the Substantial Completion deadlines set forth in Paragraph 4.2 above, the amount of One Thousand Five Hundred Dollars (\$1,500.00) per day for each calendar day the CM fails to achieve Substantial Completion.

4.4.2. For failure to meet the final completion deadline set forth in Paragraph 4.3.1 above, the amount One Thousand Dollars (\$1,000.00) per day for each calendar day the CM fails to achieve final completion.

4.4.3 For failure to meet the final completion deadline set forth in Paragraph 4.3.2 above, the amount Five Hundred Dollars (\$500.00) per day for each calendar day the CM fails to achieve final completion.

4.4.4 The Owner shall have the right to deduct the liquidated damages then due from any monies due the CM, or to bring legal action against the CM to obtain the liquidated damages stipulated hereunder. This remedy shall not be the Owner's exclusive remedy under this Agreement; the Owner is also entitled to any of the other remedies provided elsewhere in this Agreement.

ARTICLE 5 OWNER-INITIATED CHANGES IN THE CONSTRUCTION MANAGER'S BASIC SERVICES AND ADDITIONAL COMPENSATION

[Intentionally omitted.]

ARTICLE 6 OWNER'S RESPONSIBILITIES

6.1 The Owner shall provide to the CM complete information regarding the Owner's requirements for the Project.

6.2 The Owner shall examine information submitted by the CM and shall render decisions thereto promptly. The CM may not seek an amendment to the Contract Time or claim a default by Owner based on the Owner's alleged failure to render timely decisions as contemplated herein unless the CM has provided written notice to the Owner containing a request for a decision and the Owner, within ten (10) days, has not provided a response.

6.3 The Owner shall furnish required information and approvals and perform its responsibilities and activities in a timely manner to facilitate orderly progress of the Work in cooperation with the CM, consistent with this Agreement, and in accordance with the planning and scheduling requirements and budgetary restraints of the Project as determined by the CM. The CM may not seek an amendment to the Contract Time or claim a default by Owner based on the Owner's alleged failure to act in a timely manner as contemplated herein unless the CM has provided written notice to the Owner containing a request for action and the Owner, within ten (10) days, has not provided a response.

6.4 The Owner shall retain an Engineer whose services, duties and responsibilities shall be described in a written agreement between the Owner and Engineer. The Owner shall, in its agreement with the Engineer, require that the Engineer perform its services in cooperation with the CM, consistent with this Agreement and in accordance with the planning, scheduling and budgetary requirements of the Project as determined by the Owner and documented by the CM

6.5 The Owner shall, in a timely manner secure, submit and pay for necessary easements, required for the construction, use or occupancy of permanent structures, or for permanent changes in existing facilities.

6.6 The Owner shall furnish evidence upon request of CM, satisfactory to the CM that sufficient funds are available and committed for the entire cost of the Project

6.7 The Owner, its representatives and consultants, including Engineers, shall communicate with the Subcontractors only through the CM.

6.8 The Owner shall designate, in writing, an officer, employee or other authorized representatives to act on the Owner's behalf with respect to the Project. This representative shall have the authority to approve changes in the scope of the Project and shall be available during working hours and as often as may be required to render decisions and furnish information in a timely manner. The designated representative shall not have the authority to approve or execute any Change Order or amendment to this Agreement that results in an amendment of the Guaranteed Maximum Price or compensation due to the CM.

ARTICLE 7 COMPENSATION FOR CM SERVICES AND PAYMENT

7.1 Guaranteed Maximum Price

7.1.1 The CM has submitted to Owner a Guaranteed Maximum Price for the Project, attached hereto together with all supplemental documentation as **Exhibit A**. The Guaranteed Maximum Price shall be documented by the CM as defined in Article 12 and is subject to modification only as set forth in the Contract Documents.

7.1.1.1 The CM shall be eligible to perform Work on the Project.

7.1.1.2 The Guaranteed Maximum Price is the total cost of the Project, as defined herein. The Guaranteed Maximum Price includes the total cost of all labor, equipment, supplies, materials, services and allowances to complete the Project, including the CM's Contingency. The cost data shall be directly correlated to the Drawings and Specifications in existence at the time the Guaranteed Maximum Price is prepared, subject to modification as provided in the Contract Documents. The assumptions used in the preparation of the Guaranteed Maximum Price shall be identified by the CM as part of the Guaranteed Maximum Price documentation, in accordance with Article 12 and **Exhibit A**.

7.1.1.3 The Guaranteed Maximum Price shall include those taxes applicable to the Project that are legally enacted at the time the Guaranteed Maximum Price is established. Any increase or decrease in taxes that affect the Guaranteed Maximum Price and that are enacted after the Guaranteed Maximum Price is submitted shall be incorporated into that price by written amendment per Paragraph 3.5.4.3, but only after accounting for the tax exemptions applicable to the Project as set forth in the General Conditions.

7.1.1.4 The Owner may change the scope of the Project or a part thereof and the Guaranteed Maximum Price shall then be adjusted, if at all, as provided in Paragraph 7.1.3 and the General Conditions.

7.1.2. N/A

7.1.3 Adjustments to the Guaranteed Maximum Price

The CM understands, confirms and agrees that its responsibility hereunder is to construct the Project in accordance with the Contract Documents. It is recognized that the Guaranteed Maximum Price set forth in this Agreement is based upon Drawings and Specifications that may, by agreement of the parties as set forth in the Contract Documents, be amended or modified. The Guaranteed Maximum Price shall not, however, be increased except as otherwise set forth herein and in the Contract Documents.

7.1.3.1 The amount of adjustment to increase or decrease the Guaranteed Maximum Price resulting from a change in the Project shall be determined in one or more of the following ways:

7.1.3.1.1 By mutual acceptance of a lump sum, properly itemized and supported by cost data; or

7.1.3.1.2 By unit prices defined and listed in **Exhibit A**; or

7.1.3.1.3 If neither of the methods set forth in 7.1.3.1.1 or 7.1.3.1.2 is agreed upon by the Owner, the CM, provided it receives a written order signed by the Owner, shall promptly proceed with the work involved. The cost of such work shall then be determined on the basis of the cost records for the changed work. Selection of this method shall not restrict the Owner or the CM from submitting the matter to mediation as to the justification or right of the CM to an increase in the Guaranteed Maximum Price due to such work. In such case, the CM shall keep and present in such form as may be agreeable to the Owner an itemized accounting together with appropriate supporting data of the actual cost of the Project.

7.1.3.2 If the unit prices are stated and if the quantities originally contemplated by the CM are so changed in a proposed Field Order or as a result of several Field Orders that application of the agreed unit prices to the quantities or work proposed cause substantial inequity to the Owner or the CM, the applicable unit prices and Guaranteed Maximum Price may be adjusted as provided in the Contract Documents.

7.2 Compensation for CM Services N/A

7.3 Lump Sum N/A

7.4. Compensation for Additional Services

The CM shall be compensated and payments shall be made for performing Additional Services in an amount and on terms mutually agreeable between the Owner and CM.

7.5 Adjustments to the CM's Compensation

The CM shall promptly notify the Owner when it believes that changes to the scope of the Project or a part thereof are necessitated or when delays are caused in whole or in part by the Owner or Engineer that increase or extend the scope or duration of the CM's Basic Services. The CM shall follow the Change Order process set forth in the General Conditions.

ARTICLE 8 BONDS, INSURANCE AND MUTUAL INDEMNITY

8.1 Payment and Performance Bonds

8.1.1. The CM shall furnish performance and payment bonds in accordance with the General Conditions.

8.2 Insurance

8.2.1. The CM shall procure and maintain insurance of the types and coverages required by the General Conditions and in the amounts specified by the Supplementary Conditions.

8.2.2. Deductibles and Self-Insured Retentions

8.2.2.1 Any deductible or self-insured retention must be declared to and approved by the Owner. If the deductibles or self-insured retentions are unsatisfactory to Owner, they shall be reduced or eliminated as respect to Owner or CM shall procure a bond guaranteeing payment of all losses and expenses to which the deductible is applicable. If a bond is procured, the penal sum shall be equal to a minimum of twice the amount of the total of the unacceptable deductibles. The bond term shall run with the Agreement plus two years following the completion of services under this Agreement.

8.2.3. Subcontractors' Insurance Requirements

8.2.3.1 The CM shall include all its Subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each Subcontractor. Coverage for Subcontractors shall be subject to all of the requirements stated herein.

8.2.4. Governmental Immunity

8.2.4.1. The Owner does not waive sovereign immunity by entering into this Agreement, and specifically retains immunity and all defenses available to it pursuant to Colorado law and any other applicable law.

ARTICLE 9 TERMINATION AND SUSPENSION

[Intentionally omitted.]

ARTICLE 10 DISPUTE RESOLUTION

[Intentionally omitted.]

ARTICLE 11 ADDITIONAL PROVISIONS

11.1 Confidentiality

11.1.1 The CM shall keep all information designated and marked by the Owner as "Confidential" and concerning the Project confidential, except for communications incident to completion of the Project between the CM, Engineer, and Subcontractors, and their independent professional engineers, architects and other consultants and subcontractors, and except for publicity approved by the Owner and communications in connection with filings with governmental bodies having jurisdiction over the design or construction of the Project.

11.1.2. To the extent permitted by law, including but not limited to the Colorado Open Records Act, C.R.S. § 24-72-200.1 *et seq.*, the Owner shall maintain as confidential all trade secrets, privileged information, and confidential commercial, financial, geological, or geophysical data provided by the CM.

11.2 [Intentionally omitted.]

EJCDC® C-700, Standard General Conditions of the Construction Contract.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies,
and American Society of Civil Engineers. All rights reserved.

11.3 Governing Law and Venue

11.3.1 Unless otherwise provided, this Agreement shall be governed by Colorado law. Venue for any legal action shall be in the County of Weld, State of Colorado.

11.4 Extent of Contract

11.4.1 The Contract represents the entire and integrated agreement between the Owner and the CM and supersedes all prior negotiations, representations or agreements, either written or oral. The Contract may be modified or amended only by written instrument signed by both the Owner and the CM. Nothing contained in the Contract is intended to benefit any third party. The Subcontractors and Engineer are not intended third party beneficiaries of this Agreement.

11.5 [Intentionally omitted.]

11.6 Meaning of Terms

11.6.1 References made in the singular shall include the plural and the masculine shall include the feminine or neuter.

11.6.2 The meaning of terms used herein shall be consistent with the definitions contained in the General Conditions.

11.7 Notices

11.7.1 Whenever any provision of the Contract Documents requires the giving of written notice, it shall be deemed to have been validly given if delivered in person or sent by registered or certified mail, postage prepaid, addressed as follows:

To the Owner:

Matt LeCerf, Town Manager
Town of Johnstown
450 S. Parish Ave. PO Box 609
Johnstown, Colorado 80534
Email: MLeCerf@JohnstownCO.gov

To the CM:

Jon Tucker, General Manager RMR
Moltz Construction, Inc
975 Merchant Court
Windsor, Colorado 80550
Email: Jon@moltzconstruction.com

Notwithstanding the foregoing, notice may be delivered by electronic mail to the persons designated above on the condition that the intended recipient of the electronic mail acknowledges receipt thereof.

11.8 TABOR

11.8.1 The parties understand and acknowledge that Owner is subject to Article X, § 20 of the Colorado Constitution ("TABOR"). The parties do not intend to violate the terms and requirements of TABOR by the execution of this Agreement.

11.9 Assumption of Risk.

11.9.1 Owner shall notify CM of any state or federal determination of noncompliance related to the Project.

11.10 Contract Documents

11.10.1 Contents

A. The Contract Documents consist of the following:

1. This Agreement.
2. General Conditions, EJCDC Doc. No. C-700.
3. Supplementary Conditions, EJCDC Doc. No. C-800
4. Exhibit A - Contractors Guaranteed Maximum Price (GMP) dated March 8, 2023, and all supporting documents including the Drawings and Specification issued by Engineer.
5. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 - a. Performance bond.
 - b. Payment bond.
 - c. Insurance Certificates/ Proof of Insurance
 - d. Notice to Proceed.
 - e. Work Change Directives.
 - f. Change Order(s).
 - g. Field Orders.
 - h. Warranties. Prior to Substantial Completion, CM will assemble and provide Owner with warranties reflecting the beginning and end dates of manufacturers' or other warranties for any equipment, parts or other separately-warranted elements of the Project. CM's failure to include a warranted item on this Schedule shall not nullify or otherwise alter the applicability or duration of independent warranties.

The documents listed in Paragraph 11.10.1.A are attached to this Agreement (except as expressly noted otherwise above).

There are no Contract Documents other than those listed above in this Paragraph 11.10.

The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

11.11 Owner Authority to Approve and Execute Change Orders

EJCDC® C-700, Standard General Conditions of the Construction Contract.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

11.11.1. The Owner authorizes the Town Manager or the Town Manager's authorized designee to approve and execute any documents contemplated by the Contract Documents. Any amendment increasing the Guaranteed Maximum Price shall require the approval of the Town Council and must be executed by the Mayor and attested by the Town Clerk.

ARTICLE 12 SPECIAL GUARANTEED MAXIMUM PRICE PROVISIONS

12.1 Guaranteed Maximum Price

12.1.1 The Guaranteed Maximum Price (GMP) for the Project is Fifty-Two Million Eight Hundred-Four Thousand and Eight Hundred Seventeen Dollars (\$52,804,817.00). The basis of the GMP, including its methodology and any reservations or qualifications thereof, are attached hereto as a part of **Exhibit A** and incorporated into this Agreement by reference.

12.1.2 In the event that the cost of the Project exceeds the Guaranteed Maximum Price and any adjustments that may approved pursuant to the Contract, the CM shall continue to perform at no additional cost to the Owner until the Project is complete. The CM shall be responsible for paying all costs that may be necessary to complete the Project, even if such amounts are in aggregate in excess of the Guaranteed Maximum Price.

12.2 The Contingency

12.2.1 The Contingency included as a part of the final GMP at seven percent (7%) will be a budgeted Project cost that is held by the Owner. The Contingency is intended to be used to fund changes in the Work that were not foreseen, and could not have reasonably been foreseen with due diligence, by the CM at the time the GMP was calculated. Therefore, the Contingency may be used to fund approved Change Orders necessitated by: defects or incomplete information in the Drawings and Specifications used to arrive at the GMP, unanticipated costs that arise during the Project and unanticipated material price escalation.

12.2.1.1 When the Engineer reviews any Change Order request, the Engineer shall also render a determination whether any requested increase in amounts due may be funded by the Contingency. Upon the Engineer's request, the CM shall provide any additional documentation concerning the increase in price or other justification for the use of the Contingency. Approval of any use of the Contingency shall require the approval of both Engineer and Owner. The Owner hereby authorizes the Town Manager to approve use of the Contingency that does not exceed the GMP.

12.2.2 Disposition of Contingency at Completion of Project and Final Payment. At the time of final completion of the Project and final payment as provided in the Contract, one hundred percent (100%) of the remaining Contingency shall be retained by the Owner.

This Agreement is executed the day and year first written above.

OWNER:
Town of Johnstown

Gary Lebsack, Mayor

ATTEST:

Hannah Hill, Town Clerk

Moltz Construction, Inc

Printed Name: Jon Tucker

Title: Northern Division Manager

STATE OF COLORADO)
)ss
COUNTY OF _____)

SUBSCRIBED AND SWORN to before me this _____ day of _____, 2023, by
_____ as the _____ of Moltz Construction, Inc

WITNESS my hand and official seal.

My commission expires: _____

Notary Public

Exhibits:

Exhibit A

The Guaranteed Maximum Price and supporting documents, including the Drawings and Specifications

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

	Page
ARTICLE 1—DEFINITIONS AND TERMINOLOGY	1
1.01 DEFINED TERMS	1
1.02 TERMINOLOGY	6
ARTICLE 2—PRELIMINARY MATTERS	7
2.01 DELIVERY OF PERFORMANCE AND PAYMENT BONDS; EVIDENCE OF INSURANCE	7
2.02 COPIES OF DOCUMENTS.....	7
2.03 BEFORE STARTING CONSTRUCTION	7
2.04 PRECONSTRUCTION CONFERENCE; DESIGNATION OF AUTHORIZED REPRESENTATIVES	8
2.05 ACCEPTANCE OF SCHEDULES	8
2.06 ELECTRONIC TRANSMITTALS.....	8
ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE.....	9
3.01 INTENT	9
3.02 REFERENCE STANDARDS.....	9
3.03 REPORTING AND RESOLVING DISCREPANCIES	10
3.04 REQUIREMENTS OF THE CONTRACT DOCUMENTS	10
3.05 REUSE OF DOCUMENTS.....	11
ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK.....	11
4.01 COMMENCEMENT OF CONTRACT TIMES; NOTICE TO PROCEED	11
4.02 STARTING THE WORK	11
4.03 REFERENCE POINTS	11
4.04 PROGRESS SCHEDULE	12
4.05 DELAYS IN CONTRACTOR’S PROGRESS.....	12
ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS	13
5.01 AVAILABILITY OF LANDS	13
5.02 USE OF SITE AND OTHER AREAS	14
5.03 SUBSURFACE AND PHYSICAL CONDITIONS	15
5.04 DIFFERING SUBSURFACE OR PHYSICAL CONDITIONS.....	16
5.05 UNDERGROUND FACILITIES	17
5.06 HAZARDOUS ENVIRONMENTAL CONDITIONS AT SITE.....	19
ARTICLE 6—BONDS AND INSURANCE.....	21
6.01 PERFORMANCE, PAYMENT, AND OTHER BONDS	21
6.02 INSURANCE—GENERAL PROVISIONS	22
6.03 CONTRACTOR’S INSURANCE	24
6.04 BUILDER’S RISK AND OTHER PROPERTY INSURANCE.....	25
6.05 PROPERTY LOSSES; SUBROGATION	25
6.06 RECEIPT AND APPLICATION OF PROPERTY INSURANCE PROCEEDS	27
ARTICLE 7—CONTRACTOR’S RESPONSIBILITIES.....	27

EJCDC® C-700, Standard General Conditions of the Construction Contract.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies,
and American Society of Civil Engineers. All rights reserved.

7.01	CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION.....	27
7.02	SUPERVISION AND SUPERINTENDENCE	27
7.03	LABOR; WORKING HOURS.....	27
7.04	SERVICES, MATERIALS, AND EQUIPMENT.....	28
7.05	"OR EQUALS"	28
7.06	SUBSTITUTES	29
7.07	CONCERNING SUBCONTRACTORS AND SUPPLIERS.....	31
7.08	PATENT FEES AND ROYALTIES.....	32
7.09	PERMITS	33
7.10	TAXES	33
7.11	LAWS AND REGULATIONS	33
7.12	RECORD DOCUMENTS	33
7.13	SAFETY AND PROTECTION.....	34
7.14	HAZARD COMMUNICATION PROGRAMS	35
7.15	EMERGENCIES.....	35
7.16	SUBMITTALS	35
7.17	CONTRACTOR'S GENERAL WARRANTY AND GUARANTEE	38
7.18	INDEMNIFICATION.....	39
7.19	DELEGATION OF PROFESSIONAL DESIGN SERVICES.....	39
ARTICLE 8—OTHER WORK AT THE SITE		40
8.01	OTHER WORK.....	40
8.02	COORDINATION.....	41
8.03	LEGAL RELATIONSHIPS	41
ARTICLE 9—OWNER'S RESPONSIBILITIES		42
9.01	COMMUNICATIONS TO CONTRACTOR	42
9.02	REPLACEMENT OF ENGINEER.....	42
9.03	FURNISH DATA.....	42
9.04	PAY WHEN DUE	43
9.05	LANDS AND EASEMENTS; REPORTS, TESTS, AND DRAWINGS.....	43
9.06	INSURANCE.....	43
9.07	CHANGE ORDERS.....	43
9.08	INSPECTIONS, TESTS, AND APPROVALS.....	43
9.09	LIMITATIONS ON OWNER'S RESPONSIBILITIES.....	43
9.10	UNDISCLOSED HAZARDOUS ENVIRONMENTAL CONDITION	43
9.11	EVIDENCE OF FINANCIAL ARRANGEMENTS	43
9.12	SAFETY PROGRAMS.....	43
ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION.....		44
10.01	OWNER'S REPRESENTATIVE	44
10.02	VISITS TO SITE.....	44
10.03	RESIDENT PROJECT REPRESENTATIVE	44
10.04	ENGINEER'S AUTHORITY	44
10.05	DETERMINATIONS FOR UNIT PRICE WORK.....	45
10.06	DECISIONS ON REQUIREMENTS OF CONTRACT DOCUMENTS AND ACCEPTABILITY OF WORK	45
10.07	LIMITATIONS ON ENGINEER'S AUTHORITY AND RESPONSIBILITIES	45
10.08	COMPLIANCE WITH SAFETY PROGRAM.....	45
ARTICLE 11—CHANGES TO THE CONTRACT		46
11.01	AMENDING AND SUPPLEMENTING THE CONTRACT	46
11.02	CHANGE ORDERS.....	46

EJCDC® C-700, Standard General Conditions of the Construction Contract.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies,
and American Society of Civil Engineers. All rights reserved.

11.03	WORK CHANGE DIRECTIVES.....	46
11.04	FIELD ORDERS.....	47
11.05	OWNER-AUTHORIZED CHANGES IN THE WORK.....	47
11.06	UNAUTHORIZED CHANGES IN THE WORK.....	47
11.07	CHANGE OF CONTRACT PRICE	47
11.08	CHANGE OF CONTRACT TIMES.....	49
11.09	CHANGE PROPOSALS	49
11.10	NOTIFICATION TO SURETY	50
ARTICLE 12—CLAIMS		50
12.01	CLAIMS.....	50
ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK		51
13.01	COST OF THE WORK	51
13.02	ALLOWANCES	55
13.03	UNIT PRICE WORK.....	55
ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK		56
14.01	ACCESS TO WORK.....	56
14.02	TESTS, INSPECTIONS, AND APPROVALS.....	56
14.03	DEFECTIVE WORK.....	57
14.04	ACCEPTANCE OF DEFECTIVE WORK	58
14.05	UNCOVERING WORK	58
14.06	OWNER MAY STOP THE WORK	58
14.07	OWNER MAY CORRECT DEFECTIVE WORK.....	59
ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD		59
15.01	PROGRESS PAYMENTS	59
15.02	CONTRACTOR’S WARRANTY OF TITLE	62
15.03	SUBSTANTIAL COMPLETION	62
15.04	PARTIAL USE OR OCCUPANCY	63
15.05	FINAL INSPECTION	64
15.06	FINAL PAYMENT	64
15.07	WAIVER OF CLAIMS	65
15.08	CORRECTION PERIOD.....	66
ARTICLE 16—SUSPENSION OF WORK AND TERMINATION		67
16.01	OWNER MAY SUSPEND WORK.....	67
16.02	OWNER MAY TERMINATE FOR CAUSE.....	67
16.03	OWNER MAY TERMINATE FOR CONVENIENCE	68
16.04	CONTRACTOR MAY STOP WORK OR TERMINATE	68
ARTICLE 17—FINAL RESOLUTION OF DISPUTES		69
17.01	METHODS AND PROCEDURES.....	69
ARTICLE 18—MISCELLANEOUS.....		69
18.01	GIVING NOTICE	69
18.02	COMPUTATION OF TIMES	69
18.03	CUMULATIVE REMEDIES.....	70
18.04	LIMITATION OF DAMAGES	70
18.05	NO WAIVER	70
18.06	SURVIVAL OF OBLIGATIONS	70

EJCDC® C-700, Standard General Conditions of the Construction Contract.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies,
and American Society of Civil Engineers. All rights reserved.

18.07	CONTROLLING LAW	70
18.08	ASSIGNMENT OF CONTRACT	70
18.09	SUCCESSORS AND ASSIGNS	70
18.10	HEADINGS.....	70

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*
 - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

EJCDC® C-700, Standard General Conditions of the Construction Contract.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies,
and American Society of Civil Engineers. All rights reserved.

requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. A demand for money or services by a third party is not a Claim.
11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
 17. *Cost of the Work*—See Paragraph 13.01 for definition.
 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
 19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - 1. does not conform to the Contract Documents;
 - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
 - 1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 - 2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 - 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
 - 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
 - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

- A. *Standards Specifications, Codes, Laws and Regulations*
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. Abnormal weather conditions;
 - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
 - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
 3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
 4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
 2. is of such a nature as to require a change in the Drawings or Specifications;
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

- of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

- Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.
- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
 - F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
 - G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
 - H. Contractor shall require:
 - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
 - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
 - I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
 - J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
 - K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 Contractor's Insurance

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
 - 1. include at least the specific coverages required;
 - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
 - 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
 - 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
 - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk:* Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur:* Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities:* Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
 - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) has a proven record of performance and availability of responsive service; and
 - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
- 1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; and
 - 3) be suited to the same use as the item specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the

Work of any invention, design, process, product, or device not specified in the Contract Documents.

7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available

to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:
 - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determine and verify:
 - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
 - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
 - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.
 3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.
1. *Shop Drawings*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.
 2. *Samples*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Engineer's Review of Shop Drawings and Samples*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.
5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. Resubmittal Procedures for Shop Drawings and Samples

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

- c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.
- d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
- 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 Contractor's General Warranty and Guarantee

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
 - 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 - 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
 - 1. Observations by Engineer;
 - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. Use or occupancy of the Work or any part thereof by Owner;
 - 5. Any review and approval of a Shop Drawing or Sample submittal;

- 6. The issuance of a notice of acceptability by Engineer;
 - 7. The end of the correction period established in Paragraph 15.08;
 - 8. Any inspection, test, or approval by others; or
 - 9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.
- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.
- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate

with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.
- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price

- will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.
 - 1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 - 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
 - C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

EJCDC® C-700, Standard General Conditions of the Construction Contract.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.
- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

- B. If Owner has issued a Work Change Directive and:
1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or
 3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.
- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.
- B. *Change Proposal Procedures*
 - 1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
 - 2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

- 3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
- 4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation*
 - 1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
 - 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
 - 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 - 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 5. Other costs consisting of the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
 - 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
 - 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.
- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded:* The term Cost of the Work does not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
- 2. The cost of purchasing, renting, or furnishing small tools and hand tools.
- 3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 6. Expenses incurred in preparing and advancing Claims.
- 7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

- 1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
- 2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:* Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance:* Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 3. by manufacturers of equipment furnished under the Contract Documents;
 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 Defective Work

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects:* Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement:* Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties:* When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages:* In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 Progress Payments

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
 - 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
 6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.
- D. *Payment Becomes Due***
1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.
- E. *Reductions in Payment by Owner***
1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
 - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
 - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

EJCDC® C-700, Standard General Conditions of the Construction Contract.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
 - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

Supplementary Conditions OF THE CONSTRUCTION CONTRACT

Table of Contents

	Page
ARTICLE 1— DEFINITIONS AND TERMINOLOGY.....	1
ARTICLE 2— PRELIMINARY MATTERS.....	1
ARTICLE 3— CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE	3
ARTICLE 4— COMMENCEMENT AND PROGRESS OF THE WORK.....	3
ARTICLE 5— SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS	3
ARTICLE 6— BONDS AND INSURANCE.....	5
ARTICLE 7— CONTRACTOR’S RESPONSIBILITIES	11
ARTICLE 8— OTHER WORK AT THE SITE	12
ARTICLE 9— OWNER’S RESPONSIBILITIES	12
ARTICLE 10— ENGINEER’S STATUS DURING CONSTRUCTION.....	12
ARTICLE 11— CHANGES TO THE CONTRACT	13
ARTICLE 12— CLAIMS	13
ARTICLE 13— COST OF WORK; ALLOWANCES, UNIT PRICE WORK.....	13
ARTICLE 14— TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK	14
ARTICLE 15— PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD	14
ARTICLE 16— SUSPENSION OF WORK AND TERMINATION	16
ARTICLE 17— FINAL RESOLUTIONS OF DISPUTES	16
ARTICLE 18— MISCELLANEOUS.....	16
EXHIBIT B— FORESEEABLE BAD WEATHER DAYS	1
EXHIBIT C— GEOTECHNICAL BASELINE REPORT SUPPLEMENT TO THE SUPPLEMENTARY CONDITIONS	2

Supplementary Conditions OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added—for example, "Paragraph SC-4.05."

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

SC-1.01.A.8 – Add the following at the end of the Paragraph:

The Change Order form to be used on this Project is EJCDC C-941 (2018).

SC-1.01.A.50 – Add the following at the end of the Paragraph:

The Work Change Directive form to be used on this Project is EJCDC C-940 (2018).

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

SC-2.01 Delete Paragraphs 2.01.B. and C. in their entirety and insert the following in their place:

- B. *Evidence of Contractor's Insurance:* When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner copies of the policies (including all endorsements, and identification of applicable self-insured retentions and deductibles) of insurance required to be provided by Contractor in this Contract. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- C. *Evidence of Owner's Insurance:* After receipt from Contractor of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor copies of the policies of insurance to be provided by Owner in this Contract (if any). Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

2.02 *Copies of Documents*

SC-2.02 Delete Paragraph 2.02.A in its entirety and insert the following in its place:

- A. Owner shall furnish to Contractor only electronic copies of conformed Contract Documents incorporating and integrating all Addenda and any amendments negotiated prior to the Effective Date of the Contract (including one fully executed counterpart of the Agreement).

Additional printed copies of the conformed Contract Documents will be furnished upon request at the cost of reproduction.

2.06 *Electronic Transmittals*

SC-2.06 Supplement Paragraph 2.06 of the General Conditions by adding the following paragraph:

D. *Requests by Contractor for Electronic Documents in Other Formats*

1. Release of any Electronic Document versions of the Project documents in formats other than those identified in the Electronic Documents Protocol (if any) or elsewhere in the Contract will be at the sole discretion of the Owner.
2. To extent determined by Owner, in its sole discretion, to be prudent and necessary, release of Electronic Documents versions of Project documents and other Project information requested by Contractor ("Request") in formats other than those identified in the Electronic Documents Protocol (if any) or elsewhere in the Contract will be subject to the provisions of the Owner's response to the Request, and to the following conditions to which Contractor agrees:
 - a. The content included in the Electronic Documents created by Engineer and covered by the Request was prepared by Engineer as an internal working document for Engineer's purposes solely, and is being provided to Contractor on an "AS IS" basis without any warranties of any kind, including, but not limited to any implied warranties of fitness for any purpose. As such, Contractor is advised and acknowledges that the content may not be suitable for Contractor's application, or may require substantial modification and independent verification by Contractor. The content may include limited resolution of models, not-to-scale schematic representations and symbols, use of notes to convey design concepts in lieu of accurate graphics, approximations, graphical simplifications, undocumented intermediate revisions, and other devices that may affect subsequent reuse.
 - b. Electronic Documents containing text, graphics, metadata, or other types of data that are provided by Engineer to Contractor under the request are only for convenience of Contractor. Any conclusion or information obtained or derived from such data will be at the Contractor's sole risk and the Contractor waives any claims against Engineer or Owner arising from use of data in Electronic Documents covered by the Request.
 - c. Contractor shall indemnify and hold harmless Owner and Engineer and their subconsultants from all claims, damages, losses, and expenses, including attorneys' fees and defense costs arising out of or resulting from Contractor's use, adaptation, or distribution of any Electronic Documents provided under the Request.
 - d. Contractor agrees not to sell, copy, transfer, forward, give away or otherwise distribute this information (in source or modified file format) to any third party without the direct written authorization of Engineer, unless such distribution is specifically identified in the Request and is limited to Contractor's subcontractors. Contractor warrants that subsequent use by Contractor's subcontractors complies with all terms of the Contract Documents and Owner's response to Request.

3. In the event that Owner elects to provide or directs the Engineer to provide to Contractor any Contractor-requested Electronic Document versions of Project information that is not explicitly identified in the Contract Documents as being available to Contractor, the Owner shall be reimbursed by Contractor on an hourly basis (at \$150.00 per hour) for any engineering costs necessary to create or otherwise prepare the data in a manner deemed appropriate by Engineer.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

No suggested Supplementary Conditions in this Article.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

SC-4.01.A – Delete the last sentence of paragraph.

4.05 *Delays in Contractor's Progress*

SC-4.05 Amend Paragraph 4.05.C by adding the following subparagraphs:

5. *Weather-Related Delays*

- a. If “abnormal weather conditions” as set forth in Paragraph 4.05.C.2 are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work as scheduled. Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered abnormal weather conditions. Requests for time extensions due to abnormal weather conditions will be submitted to the Engineer within five days of the end of the abnormal weather condition event.

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

5.02 *Use of Site and Other Areas*

SC-5.02 Add the following new paragraph immediately after 5.02.D:

- E. The responsibility for protection and safekeeping of equipment and materials on or near the Site is entirely that of Contractor, and no claim shall be made against Owner by reason of any act of an employee or trespasser. It shall be further understood that should any occasion arise necessitating access to the sites occupied by stored materials and equipment, Contractor shall immediately move the same. No materials or equipment may be placed upon Owner's property until Owner has agreed to the location contemplated by the Contractor to be used for storage.

5.03 Subsurface and Physical Conditions

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.D:

- E. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely:

Report Title	Date of Report	Technical Data
Geotechnical Engineering Study and Pavement Thickness Design	February 8, 2022	Entire Report (All 32 pages)

- F. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data, and specifically identifies the Technical Data upon which Contractor may rely:

Drawing Titles	Dates of Drawings	Technical Data
As-Built Drawings - "Central Wastewater Treatment Facility Upgrades"	February 2002	Provided for reference – Note that the elevations in the as-built drawings reflect a different datum than the current contract documents.

- G. Contractor has already been provided copies of reports and drawings identified in SC-5.03.E and SC-5.03.F. They are also available for review upon request to Owner and Engineer.

5.06 Hazardous Environmental Conditions

SC-5.06.A Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely: **[If there are no such reports, so indicate in the table]**

Report Title	Date of Report	Technical Data
There are no known reports or hazards	NA	NA

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely:

Drawings Title	Date of Drawings	Technical Data
There are no known drawings or hazards	NA	NA

SC-5.06.I Delete Paragraph 5.06.I in its entirety and renumber the subsequent paragraphs.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Delete 6.01.A in its entirety and insert the following in its place:

Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until two years after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form approved and accepted by Owner in writing, the Supplementary Conditions, or other provisions of the Contract.

Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2018 edition), as amended.
2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2018 edition), as amended.

6.02 *Insurance—General Provisions*

SC-6.02.B Delete 6.02.B in its entirety and insert the following in its place:

- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Excepting any Colorado public entity self-insurance pool, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better. Notwithstanding the foregoing, Contractor may obtain worker's compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the Project is located, (b) is certified or authorized as a worker's compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker's compensation insurance for similar projects by the state within the last 12 months.

SC-6.02.N. Add the following clause to the end of the paragraph after Engineer:

“, and to Owner if such notice respects any policy of insurance required to be purchased and maintained by Contractor under this Contract.”

6.03 Contractor's Insurance

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

- D. *Other Additional Insureds*: As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Engineer) the following: SKM Engineering, a Utah limited liability company, and Ramey Environmental Compliance, Inc., a Colorado corporation.
- E. *Workers' Compensation and Employer's Liability*: Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions) in the following minimum policy amounts:

Workers' Compensation and Related Policies	Policy limits of not less than:
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Employer's Liability	
Each accident	\$1,000,000
Each employee	\$1,000,000
Policy limit	\$1,000,000

- F. *Commercial General Liability—Claims Covered*: Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:
1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
 2. damages insured by reasonably available personal injury liability coverage, and
 3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- G. *Commercial General Liability—Form and Content*: Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage.
 - a. Such insurance must be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter, and to Owner and Engineer upon request of either, at any time during such three-year period.
 2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
 4. Underground, explosion, and collapse coverage.
 5. Personal injury coverage.
 6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
 7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
 2. Any exclusion for water intrusion or water damage.
 3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
 4. Any exclusion of coverage relating to earth subsidence or movement.
 5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).
 6. Any limitation or exclusion based on the nature of Contractor's work.
 7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.

I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	\$ 2,000,000
Products—Completed Operations Aggregate	\$ 2,000,000
Personal and Advertising Injury	\$ 1,000,000
Bodily Injury and Property Damage—Each Occurrence	\$ 1,000,000

- J. *Automobile Liability*: Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	Policy limits of not less than:
Bodily Injury	
Each Person	\$ 1,000,000
Each Accident	\$ 1,000,000
Property Damage	
Each Accident	\$ 1,000,000
[or]	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	\$ 1,000,000

- K. *Umbrella or Excess Liability*: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. Excepting only industry-standard exclusions that are acceptable to Owner, the coverage afforded shall follow form as to each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	\$5,000,000
General Aggregate	\$5,000,000

- L. *Coverage Limits*. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.
- M. [Intentionally omitted.]
- N. *Contractor's Professional Liability Insurance*: If Contractor will provide or furnish professional services under this *Contract*, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance must cover negligent acts, errors, or omissions

EJCDC® C-800, Supplementary Conditions of the Construction Contract.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Modified to include RD edits from RUS Bulletin 1780-26 (6/16/2020).

in the performance of professional design or related services by the insured or others for whom the insured is legally liable. The insurance must be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

Contractor's Professional Liability	Policy limits of not less than:
Each Claim	\$1,000,000
Annual Aggregate	\$1,000,000

6.04 Builder's Risk and Other Property Insurance

SC-6.04.A Amend Paragraph 6.04.A as follows:

Remove the following language from the paragraph: "Unless otherwise provided in the Supplementary Conditions."

SC-6.04.F Supplement Paragraph 6.04 of the General Conditions with the following provisions:

F. *Builder's Risk Requirements:* The builder's risk insurance must:

1. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; hail; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 - a. Such policy will include an exception that results in coverage for ensuing losses from physical damage or loss with respect to any defective workmanship, methods, design, or materials exclusions.
 - b. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake, volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance will be provided through other insurance policies acceptable to Owner and Contractor.
2. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for

the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.

3. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of contractors, engineers, and architects).
4. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
5. extend to cover damage or loss to insured property while in transit.
6. allow for the waiver of the insurer's subrogation rights, as set forth in this Contract.
7. allow for partial occupancy or use by Owner by endorsement, and without cancellation or lapse of coverage.
8. include performance/hot testing and start-up, if applicable.
9. be maintained in effect until the Work is complete, as set forth in Paragraph 15.06.D of the General Conditions, or until written confirmation of Owner's procurement of property insurance following Substantial Completion, whichever occurs first.
10. include as named insureds the Owner, Contractor, Subcontractors (of every tier), and any other individuals or entities required by this Contract to be insured under such builder's risk policy. For purposes of Paragraphs 6.04, 6.05, and 6.06 of the General Conditions, and this and all other corresponding Supplementary Conditions, the parties required to be insured will be referred to collectively as "insureds." In addition to Owner, Contractor, and Subcontractors of every tier, include as insureds the following: Engineer, SKM Engineering, LLC, a Utah limited liability company, and Ramey Environmental Compliance, a Colorado corporation.

6.05 *Property Losses; Subrogation*

SC-6.05 Delete Paragraph 6.05 in its entirety and insert the following in its place:

- A. All policies purchased in accordance with Paragraph 6.04, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Contractor waives all rights against Owner and its officers, employees and agents for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

- B. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.03 *Labor; Working Hours*

SC-7.03 Add the following new subparagraphs immediately after Paragraph 7.03.C:

1. Regular working hours will be *i) on Mondays through Fridays, between the hours of 7:00 a.m. and 8:00 p.m. or dusk, whichever is earlier and (ii) on Saturdays, Sundays and holidays, between the hours of 8:00 a.m. and 7:00 p.m. or dusk, whichever is earlier.*
2. Owner's legal holidays are New Years Day, Martin Luther King, Jr. Day, President's Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Christmas Day.

7.08 *Patent Fees and Royalties*

Delete Paragraph 7.08.B in its entirety and renumber the subsequent paragraph.

7.10 *Taxes*

SC-7.10 Add a new paragraph immediately after Paragraph 7.10.A:

- A. Owner is exempt from payment of sales and compensating use taxes of the State of Colorado and of cities and counties thereof on all materials to be incorporated into the Work.
1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.
 2. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.

7.12 *Record Documents*

SC-7.12.A Amend paragraph by adding the following after "written interpretations and clarifications,":
Manufacturers' Certifications,

7.18 *Indemnification*

SC-7.18.A Add the words "or willful or wanton" after the word "negligent."

ARTICLE 8—OTHER WORK AT THE SITE

No suggested Supplementary Conditions in this Article.

ARTICLE 9—OWNER'S RESPONSIBILITIES

No suggested Supplementary Conditions in this Article.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.03 *Resident Project Representative*

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

- C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:
 - 1. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of minutes thereof.
 - 2. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.
 - 3. *Liaison*
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for Contractor's proper execution of the Work.
 - 4. *Review of Work; Defective Work*
 - a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Observe whether any Work in place appears to be defective.
 - c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.
 - 5. *Inspections and Tests*

- a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.
 - b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.
- 6. *Payment Requests:* Review Applications for Payment with Contractor.
- 7. *Completion*
 - a. Participate in Engineer's visits regarding Substantial Completion.
 - b. Assist in the preparation of a punch list of items to be completed or corrected.
 - c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
 - d. Observe whether items on the final punch list have been completed or corrected.
- D. The RPR will not:
 - 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
 - 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
 - 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
 - 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
 - 5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
 - 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
 - 7. Authorize Owner to occupy the Project in whole or in part.

ARTICLE 11—CHANGES TO THE CONTRACT

No suggested Supplementary Conditions in this Article.

ARTICLE 12—CLAIMS

No suggested Supplementary Conditions in this Article.

ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK

13.01 *Cost of the Work*

SC-13.01 Delete Paragraph 13.01.C.2 in its entirety and insert “Deleted – A “small tools” allowance is permissible equal to the agreed upon amount per the Agreement.”

SC-13.02.C – Delete paragraph in its entirety and insert “Deleted”.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

No suggested Supplementary Conditions in this Article.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

15.01 Progress Payments

SC-15.01.B.4 – Add the following language at the end of paragraph:

No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage or invest the retainage for the benefit of the Contractor.

SC-15.01.B.5 – Add new paragraph immediately after Paragraph 15.01.B.4:

5. The Application for Payment form to be used on this Project is EJCDC® C-620.

SC-15.01.D.1 – Delete paragraph in its entirety and insert the following in its place:

The Application for Payment with Engineer’s recommendations will be presented to the Owner for consideration. If the Owner finds the Application for Payment acceptable, the recommended amount less any reduction under the provisions of Paragraph 15.01.E will become due thirty (30) days after the Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor.

SC-15.01.F. Add the following new Paragraph 15.01.F:

- F. For contracts in which the Contract Price is based on the Cost of Work, if Owner determines that progress payments made to date substantially exceed the actual progress of the Work (as measured by reference to the Schedule of Values), or present a potential conflict with the Guaranteed Maximum Price, then Owner may require that Contractor prepare and submit a plan for the remaining anticipated Applications for Payment that will bring payments and progress into closer alignment and take into account the Guaranteed Maximum Price, through reductions in billings, increases in retainage, or other equitable measures. Owner will review the plan, discuss any necessary modifications, and implement the plan as modified for all remaining Applications for Payment.

SC-15.02.A – Amend paragraph by striking out the following text: “7 days after”.

15.03 *Substantial Completion*

SC-15.03 Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

SC-15.06 *Final Payment*

SC-15.06 Modify the first sentence of 15.06.A.1 as follows:

After Contractor has, in the opinion of Engineer and *Owner*, satisfactorily....

SC-15.08 *Correction Period*

SC-15.08A Delete Paragraph 15.08A in its entirety and insert the following in its place:

- A. If within two years after the date of Substantial Completion, Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor’s repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner’s written instructions:
 1. correct the defective repairs to the Site or such adjacent areas;
 2. correct such defective Work;
 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

SC-15.08G Add Paragraph 15.08.G to read as follows:

G. In Owner’s discretion, a warranty inspection shall be held during the sixty (60) day period prior to the expiration of the two-year warranty period. Contractor shall provide an authorized representative at such inspection to represent Contractor’s interests.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No suggested Supplementary Conditions in this Article.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

No suggested Supplementary Conditions in this Article.

ARTICLE 18—MISCELLANEOUS

SC-18.01 Giving Notice

SC-18.01.A. Amend Paragraph 18.01.A.3 to read as follows:

3. upon confirmation of receipt by the intended recipient, by e-mail to the recipient, with the words “Formal Notice” or similar in the e-mail’s subject line.

SC-18.05 No Waiver

SC-18.05.B. Add Paragraph 18.05.B to read as follows:

- B. Contractor understands and agrees that any waiver granted by Engineer or Owner of any term or provision of the Contract shall not constitute a precedent. Neither the acceptance of the Work by Engineer or Owner nor the payment of all or part of the sum due Contractor hereunder shall constitute a waiver by Owner of any claim Owner may have against Contractor.

18.08 Assignment of Contract

SC-18.08 Add the following new paragraph immediately after Paragraph 18.08.A:

- B. Owner has pre-selected treatment equipment per the Division 15 Specifications in the Project Manual and assigns the procurement responsibilities to Contractor. Owner has not already entered into procurement agreements with the pre-selected equipment Sellers. Contracts, procurement and installation of the pre-selected equipment are the responsibility of the Contractor.
 1. This assignment will occur on the Effective Date of the Contract.
 2. Upon assignment, the “seller” will be a Subcontractor or Supplier of the Contractor, and Contractor will be responsible for seller’s performance, acts, and omissions, as set forth in Paragraph 7.07 of the General Conditions just as Contractor is responsible for all other Subcontractors and Suppliers.
 3. Notwithstanding this assignment, all performance guarantees and warranties required by the specifications must be satisfied.

SC-18.11 Venue

SC-11 Add Paragraph 18.11 to read as follows:

- A. Venue for any legal proceeding shall be in the County of Weld, State of Colorado.

SC-18.12 Appropriation.

SC-18.12 Add Paragraph 18.12 to read as follows:

- A. Pursuant to Section 24-91-103.6, C.R.S., as amended, Owner has appropriated the money necessary to fund the Project. No Change Order or other form of directive shall be issued by Owner requiring additional compensable work to be performed, which causes the aggregate amount payable under the Contract to exceed the amount appropriated for the original contract amount, unless Owner provides written assurance to the Contractor that lawful appropriations have been made to cover the cost of the additional work or unless such work is covered under the remedy-granting provisions of the Contract.
- B. Pursuant to Section 29-1-110, C.R.S., as amended, financial obligations of Owner payable as set forth herein, after the current fiscal year, are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available. This Contract shall be terminated effective January 1 of the first fiscal year for which funds are not appropriated.

SC-18.13 Independent Contractor

SC-18.13 Add Paragraph 18.13 to read as follows:

- A. Contractor understands and agrees that Contractor is an independent contractor and not an employee of Owner. Owner shall not provide benefits of any kind to Contractor. Owner shall not be responsible for withholding any portion of Contractor's compensation for the payment of Federal Insurance Contributions Act (FICA) tax, workers' compensation, or other taxes or benefits. CONTRACTOR IS NOT ENTITLED TO UNEMPLOYMENT COMPENSATION COVERAGE FROM OWNER. CONTRACTOR IS OBLIGATED TO PAY FEDERAL AND STATE INCOME TAX ON MONEYS PAID PURSUANT TO THIS AGREEMENT. As long as there is not a conflict of interest with Owner, Contractor may engage in any other lawful business activities during the term of this Contract.

SC-18.14 Governmental Immunity

SC-18.14 Add Paragraph 18.14 to read as follows:

- A. No term or condition of this Contract shall be construed or interpreted as a waiver, express or implied, of any of the notices, requirements, immunities, rights, benefits, protections, limitations of liability, and other provisions of the Colorado Governmental Immunity Act, C.R.S. § 24-10-101 et seq. and under any other applicable law.

SC-18.15 Arbitration

SC-18.15 Add Paragraph 18.15 to read as follows:

- A. Notwithstanding any provision in the Contract Documents to the contrary, the Owner shall have the sole right to determine whether to submit a dispute or other matters to arbitration. It shall be otherwise presumed that all disputes and matters shall be resolved by a court of competent jurisdiction.

SC-18.16 Colorado Public Works Act

SC-18.16 Add Paragraph 18.16 to read as follows:

- A. Notwithstanding any other provision of the Contract, Owner may withhold funds if required to do so pursuant to the Colorado Public Works Act, Section 38-26-101, *et seq.*, C.R.S.

SC- 18.17 Colorado Labor

SC-18.17 Add Paragraph 18.17 to read as follows:

- A. Pursuant to Title 8, Article 17, C.R.S., Contractor agrees, except as otherwise waived by Owner, to employ Colorado labor to perform the Work to the extent of not less than eighty percent of each type or class of labor in the several classifications of skilled and common labor employed under the Contract. "Colorado labor" means any person who is a resident of the state of Colorado, at the time of employment, without discrimination as to race, color, creed, sex, sexual orientation, marital status, national origin, ancestry, age, or religion except when sex or age is a bona fide occupational qualification.

SC-18.18 Costs and Attorney Fees

SC-18.18 Add Paragraph 18.18 to read as follows:

- A. In the event of litigation enforcing or interpreting the terms of the Contract, to the extent permitted by law, recognizing the constitutional and statutory limitations regarding Owner's authority and ability to pay unbudgeted and unappropriated funds, the prevailing party shall be entitled to an award of reasonable attorney fees and all costs of suit, including expert witness fees, court reporter fees and similar litigation expenses.

SC-18.19 No Presumption

SC-18.19 Add Paragraph 18.19 to read as follows:

Each party acknowledges that it has carefully read and reviewed the terms of this Agreement. Each party acknowledges that the entry into and execution of this Agreement is of its own free and voluntary act and deed, without compulsion. Each party acknowledges that it has obtained, or has had the opportunity to obtain, the advice of legal counsel of its own choosing in connection with the negotiation and execution of this Agreement and with respect to all matters set forth herein. The parties agree that this Agreement reflects the joint drafting efforts of all parties and in the event of any dispute, disagreement or controversy arising from this agreement, the parties shall be considered joint authors and no provision shall be interpreted against any party because of authorship.

EXHIBIT A— SOFTWARE REQUIREMENTS FOR ELECTRONIC DOCUMENT EXCHANGE

Not Used

EXHIBIT B— FORESEEABLE BAD WEATHER DAYS

Not Used

EXHIBIT C— GEOTECHNICAL BASELINE REPORT SUPPLEMENT TO THE SUPPLEMENTARY CONDITIONS

Not Used

This Page is Intentionally Left Blank



Town of Johnstown

TOWN COUNCIL AGENDA COMMUNICATIONS

AGENDA DATE: March 20, 2023

SUBJECT: Central Wastewater Treatment Plant

ACTION PROPOSED: Amend the Construction Engineering Services Contract for the Central Wastewater Treatment Plant

ATTACHMENTS: 1. Additional Services Scope Memo
2. Exhibit K Contract Amendment

PRESENTED BY: Ellen Hilbig, Utilities Director

AGENDA ITEM DESCRIPTION:

Enclosed for your review and consideration is a request to amend the Construction Engineering Services Contract with AQUA Engineering, Inc on the Central Wastewater Treatment Plant (CWWTP) project with an additional amount of \$1,016,537.00 to cover the extended construction schedule identified in the GMP as well as SCADA programming.

AQUA Engineering, Inc was awarded a Contract at the May 3, 2021, Council Meeting to provide Design and Construction Engineering Services based on an 18-month construction schedule. The construction schedule identified for project completion with the GMP is end of year 2025 which required an additional 15-months of Construction Engineering Services to be added to the existing Contract in the amount of \$659,296.00 to cover construction for a total of 33 months.

The last item included in the amendment is the SCADA programming for the Central WWTP project in the amount of \$357,241.00. SCADA is a control system that is designed to collect, analyze, and visualize data from the equipment and processes to assist in the day-to-day operations of the facility. This item is being captured through AQUA's Contract due to the business relationship with the project SCADA integrator, SKM, as well as the context of the services identified falling better into a professional services contract. The SCADA services at Low Point were managed in a similar fashion.

Total AQUA Engineering Project Expenses to Date:

Design (5-3-21)	\$1,063,057.00
Construction Engineering Services (5-3-21)	\$786,943.00
Construction Engineering Services Amendment	\$659,296.00
<u>SCADA Integration (SKM)</u>	<u>\$357,241.00</u>
Total	\$2,866,537.00

The total project cost for the Central Wastewater Treatment Plant project to date is \$56,108,821.00 with \$2,866,537.00 of that cost being Design and Construction Engineering Services. The Town budgeted \$45 million in 2023 for the project and will be required to address project funding through fund roll overs and additional allocations to cover the total project cost in the 2024 and 2025 budgets. An additional allocation is in the FY 2023 budget in the amount of \$50M from the general fund in the form of either a loan or grant. This allocation will likely need to be increased to cover the construction costs, ensure financial operations and sustainability of the fund, and to pay existing debt services.

The Community That Cares

www.TownofJohnstown.com

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141

LEGAL ADVICE:

The Contract Amendment, Exhibit K, has been reviewed by the Town's Attorney

FINANCIAL ADVICE:

The Town budgeted \$45 million in 2023 for the project and will be required to address project funding through fund roll overs and additional allocations to cover the total cost in the 2024 and 2025 budgets.

RECOMMENDED ACTION: Town Staff recommends amending the Construction Engineering Services Contract with AQUA Engineering, Inc. with an additional amount not to exceed \$1,016,537.00.

SUGGESTED MOTIONS:**For Approval**

I move to amend the Construction Engineering Services Contract with AQUA Engineering, Inc. with an additional amount not to exceed \$1,016,537.00.

For Denial

I move to deny the award of the additional Construction Engineering Services for the Central Wastewater Treatment Plant project and direct Staff to formally bid out the project.

Reviewed and Approved for Presentation,



Town Manager

Town of Johnstown
Attn: Matt LeCerf, Town Manager
Ellen Hilbig, Utilities Director
450 S Parish Avenue, PO Box 609
Johnstown, Colorado 80534

March 8, 2023

TRANSMITTED VIA EMAIL (NO HARD COPY WILL FOLLOW):

Matt LeCerf at MLeCerf@JohnstownCO.gov | Ellen Hilbig at EHilbig@JohnstownCO.gov

RE: Additional Services, Extended Construction Engineering Services, and SCADA Programming Services for Johnstown Central Wastewater Treatment Plant Expansion Project

Dear Matt and Ellen:

AQUA Engineering (AQUA) is providing our scope of services and fee for amendment to the existing Construction Engineering Services for the Johnstown Central Wastewater Treatment Plant. As noted in our current Agreement, these services will be incorporated by an Amendment to the existing *Agreement Between Owner and Engineer for Professional Services* (Agreement) with the Town dated June 30, 2021.

SCOPE OF WORK

CONSTRUCTION ENGINEERING SERVICES AMENDMENT

AQUA Engineering is already under contract in the Agreement for 18-months of Construction Phase Services (contract fee of \$786,943.00), excluding SCADA Programming. At the time of original Agreement, assumptions were made on the level of effort and duration of construction. This amendment incorporates the following changes to the current Construction Phases Services scope of services, which are calibrated based on the final design, Moltz' GMP and construction schedule, and the addition of SCADA Programming:

- Construction Engineering Services:
 - Extension of the Construction Engineering Services duration to 33 months (equal to Moltz' final GMP construction schedule starting with Notice-to-Proceed and ending with Final Completion), and;
 - Increase of Construction Engineering Services fee to \$1,446,239. The increased fee is the result of additional construction schedule and recalibration of level of effort based on the final design, estimated number of submittals and RFI's, Low Point WWTP Construction workflow, construction observations and site visits, etc.
- SCADA Programming:
 - Additional services for SCADA Programming and associated Start-Up Assistance for a fee of \$357,241.

The amended Construction Engineering Services fee is summarized below:

- Construction Engineering Services:
 - Current fee \$786,943.00
 - Increase Amount \$659,296.00 adder
 - **Amended Fee \$1,446,239.00**
- SCADA Programming:
 - **Amended fee \$357,241.00**

AQUA and SKM will provide the construction phase office and field engineering services as required to fulfill the duties and responsibilities noted in the Construction Phase Services Agreement between the Town and Moltz, and as described in the original Agreement. The following Construction Engineering Services tasks per the Agreement are summarized again below and are consistent with the services being provided for the Low Point WWTP project.

7.1. Project Management and Quality Assurance / Quality Control (QA/QC)

AQUA will coordinate and manage the engineering services scope, budget, and schedule throughout the duration of the Agreement. Periodic coordination calls will take place as needed. Monthly progress reports or calls will be provided that include schedule and budget updates. AQUA Principals will be heavily involved in the Project and are responsible for providing overall quality assurance / quality control and ensuring that deliverables meet the highest of standards to meet the goals of the project

7.2. Construction Administration of Construction Contract

Consult with Town and act as Town's representative as provided in the Construction Contract. Engineer will render decisions regarding the requirements of the Construction Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth in the Construction Contract for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Town or Contractor, and will not be liable to Town, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

The extent and limitations of the duties, responsibilities, and authority of Engineer shall be as assigned in the project Contract Documents, and specifically, EJCDC C-700, which are the Standard General Conditions of the Construction Contract (2018 Edition), prepared by the Engineers Joint Contract Documents Committee, or other construction general conditions specified in the Town's Agreement with Moltz. Engineer shall not be required to furnish or perform services contrary to Engineer's responsibilities as a licensed professional. All of Town's instructions to Contractor will be issued through Engineer, which shall have authority to act on behalf of Town in dealings with Contractor to the extent provided in this Agreement and the Construction Contract except as otherwise provided in writing.

7.2.1. Construction Contract Execution Assistance, Notice to Proceed, and Schedules Review

Assist the Town with CMAR Construction Contract execution, Issue the required Notice to Proceed (NTP) to Moltz (Contractor, or CMAR) and receive, review, and determine the acceptability of schedules that Contractor is required to submit to Engineer, including the Progress Schedule, Schedule of Submittals, and Schedule of Values. This task also includes conformance document development.

7.2.2. Construction Kick-Off and Progress Meetings

AQUA will facilitate a Construction Kick-off Meeting and attend weekly Construction Project Meetings with Moltz and the Town. Per the pending CMAR Construction Agreement, Moltz is responsible for administering the progress meeting and preparing and distributing meeting minutes.

7.2.3. Engineer Visits to Site and Observation of Construction:

In connection with observations of Contractor's Work while it is in progress:

- a. Make visits to the Site at intervals appropriate to the various stages of construction, as Engineer deems necessary, to observe as an experienced and qualified design professional the progress of Contractor's executed Work. Such visits and observations by Engineer, and the Resident Project Representative, are not intended to be exhaustive or to extend to every aspect of the Work or to involve detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in this Agreement and the Construction Contract Documents, but rather are to be limited to spot checking, selective sampling, and similar methods of general observation of the Work based on Engineer's exercise of professional judgment, as assisted by the Resident Project Representative (RPR). Based on information obtained during such visits and observations, Engineer will determine in general if the Work is proceeding in accordance with the Construction Contract Documents, and Engineer shall keep Town informed of the progress of the Work.
- b. The purpose of Engineer's visits to the Site, and representation by the Resident Project Representative at the Site, will be to enable Engineer to better carry out the duties and responsibilities assigned to and undertaken by Engineer during the Construction Phase, and, in addition, by the exercise of Engineer's efforts as an experienced and qualified design professional, to provide for Town a greater degree of confidence that the completed Work will conform in general to the Construction Contract Documents and that Contractor has implemented and maintained the integrity of the design concept of the completed Project as a functioning whole as indicated in the Construction Contract Documents. Engineer shall not, during such visits or as a result of such observations of the Work, supervise, direct, or have control over the Work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, for security or safety at the Site, for safety precautions and programs incident to any Constructor's work in progress, for the coordination of the Constructors' work or schedules, nor for any failure of any Constructor to comply with Laws and Regulations applicable to furnishing and performing of its work. Accordingly, Engineer neither guarantees the performance of any Constructor nor assumes responsibility for any Constructor's failure to furnish or perform the Work, or any portion of the Work, in accordance with the Construction Contract Documents.
- c. Defective Work. Reject Work if, on the basis of Engineer's observations, Engineer believes that such Work is defective under the terms and standards set forth in the Construction Contract Documents. Provide recommendations to Town regarding whether Contractor should correct such Work or remove and replace such Work, or whether Town should consider accepting such Work as provided in the Construction Contract Documents. If Engineer has knowledge that a specific part of the Work that is not defective under the terms and standards set forth in the Construction Contract Documents is nonetheless not compatible with the design concept of the completed

Project as a functioning whole, then inform Town of such incompatibility, and provide recommendations for addressing such Work.

7.2.4. Clarifications and Interpretations (RFI's)

Accept from Contractor and Town submittal of all matters in question concerning the requirements of the Construction Contract Documents (sometimes referred to as requests for information or interpretation (RFIs), or relating to the acceptability of the Work under the Construction Contract Documents. With reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Construction Contract Documents.

7.2.5. Field Orders

Subject to any limitations in the Construction Contract Documents, Engineer may prepare and issue Field Orders requiring minor changes in the Work.

7.2.6. Change Orders and Work Change Directives

Recommend Change Orders and Work Change Directives to Town, as appropriate, and prepare Change Orders and Work Change Directives as required.

Review and respond to Change Proposals. Review each duly submitted Change Proposal from Contractor and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Town and Contractor. Provide information or data to Town regarding engineering or technical matters pertaining to Claims.

Respond to any notice from Contractor of differing site conditions, including conditions relating to underground facilities such as utilities, and hazardous environmental conditions. Promptly conduct reviews and prepare findings, conclusions, and recommendations for Town's use.

7.2.7. Shop Drawings, Samples, and Other Submittals

Review and approve or take other appropriate action with respect to Shop Drawings, Samples, and other required Contractor submittals, but only for conformance with the information given in the Construction Contract Documents and compatibility with the design concept of the completed Project as a functioning whole as indicated by the Construction Contract Documents. Such reviews and approvals or other action will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto.

Substitutes and "Or-equal": Evaluate and determine the acceptability of substitute or "or-equal" materials and equipment proposed by Contractor.

Inspections and Tests: Receive and review all certificates of inspections, tests, and approvals required by Laws and Regulations or the Construction Contract Documents. Engineer's review of such certificates will be for the purpose of determining that the results certified indicate compliance with the Construction Contract Documents and will not constitute an independent evaluation that the content or procedures of such inspections, tests, or approvals comply with the requirements of the Construction Contract Documents. Engineer shall be entitled to rely on the results of such inspections and tests. As deemed reasonably necessary, request that Contractor uncover Work that is to be inspected, tested, or approved.

Contractor's Completion Documents: Receive from Contractor, review, and transmit to Town maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance required by the Construction Contract Documents, certificates of inspection, tests and approvals, and Shop Drawings, Samples, and other data. Receive from Contractor, review, and transmit to Town the annotated record documents which are to be assembled by Contractor in accordance with the Construction Contract Documents to obtain final payment

7.2.8. Applications for Payment

Based on Engineer's observations as a qualified design professional and on review of Applications for Payment and accompanying supporting documentation; Determine the amounts that Engineer recommends Contractor be paid. Recommend reductions in payment (set-offs) based on the provisions for set-offs stated in the Construction Contract. Such recommendations of payment will be in writing and will constitute Engineer's representation to Town, based on such observations and review, that, to the best of Engineer's knowledge, information and belief, Contractor's Work has progressed to the point indicated, the Work is generally in accordance with the Construction Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Construction Contract Documents, and to any other qualifications stated in there commendation), and the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work. In the case of unit price Work, Engineer's recommendations of payment will include final determinations of quantities and classifications of the Work (subject to any subsequent adjustments allowed by the Construction Contract Documents).

By recommending payment, Engineer shall not thereby be deemed to have represented that observations made by Engineer to check the quality or quantity of Contractor's Work as it is performed and furnished have been exhaustive, extended to every aspect of Contractor's Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in this Agreement. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment including final payment will impose on Engineer responsibility to supervise, direct, or control the Work, or for the means, methods, techniques, sequences, or procedures of construction or safety precautions or programs incident thereto, or Contractor's compliance with Laws and Regulations applicable to Contractor's furnishing and performing the Work. It will also not impose responsibility on Engineer to make any examination to ascertain how or for what purposes Contractor has used the money paid to Contractor by Town; to determine that title to any portion of the Work, including materials or equipment, has passed to Town free and clear of any liens, claims, security interests, or encumbrances; or that there may not be other matters at issue between Town and Contractor that might affect the amount that should be paid.

7.2.9. Substantial Completion Review and Recommendation

Promptly after notice from Contractor that Contractor considers the entire Work ready for its intended use, in company with Town and Contractor, visit the Site to review the Work and determine the status of completion. Follow the procedures in the Construction Contract regarding the preliminary certificate of Substantial Completion, punch list of items to be completed, Town's objections, notice to Contractor, and issuance of a final certificate of Substantial Completion. Assist Town regarding any remaining engineering or technical matters affecting Town's use or occupancy of the Work following Substantial Completion.

7.2.10. Start-up and Commissioning Assistance Services

AQUA will facilitate and assist the Town and Moltz with equipment and system start-up and commissioning. This supplemental assistance does not modify the responsibilities of Moltz Construction regarding system start-up, demonstration, training, or commissioning as required by the Construction Contract Documents.

7.2.11. Final Completion Status Review and Notice of Acceptability of the Work / CDPHE Certification

Conduct a final visit to the Project to determine if the Work is complete and acceptable so that Engineer may recommend, in writing, final payment to Contractor. Accompanying the recommendation for final payment, Engineer shall also provide a notice to Town and Contractor that the Work is acceptable to the best of Engineer's knowledge, information, and belief, and based on the extent of the services provided by Engineer under this Agreement.

7.2.12. As-Built Documentation

AQUA will update the construction documents with as-built (record) information reflecting construction change orders and other deviations from the construction documents.

7.2.13. Post-Construction Phase/Warranty Period Engineering Services:

AQUA has included an allowance of \$10,000 for engineering services following final-completion within the warranty period.

7.3. Resident Project Representative (RPR)

Provide the services of a part-time RPR at the Site to assist the Engineer and to provide more extensive observation of Contractor's work. Duties, responsibilities, and authority of the RPR are as described in the EJCDC 2018 General Conditions in the Construction Contract Documents. The furnishing of such RPR's services will not limit, extend, or modify Engineer's responsibilities or authority except as expressly set forth. RPR services will be provided for an average of 12 hours per week for the assumed 33-month construction schedule.

TASK 11 . SCADA PROGRAMMING SERVICES

7.1. SCADA & PLC Programming, Computer Hardware, & Software

Provide a SCADA Computer for the system to be located in the office area. The computer will be a Dell computer running Inductive automation Ignition software with graphical displays, historical trending, and dial out capabilities. This server will be located in a small wall mounted rack including a fiber tray, network switch, and UPS. We will also provide one computer to act as a SCADA Terminal to be located in the office area for general use.

PLC and SCADA Programming will be provided per the P&IDs and SKM standardized programming configuration. HMI Programming will be provided for all points connected to the listed PLC systems. Dialer programming will be provided for points that are alarmed, and the alarms may be adjusted and enabled/disabled by operation staff with proper credentials. Programming work will take approximately 16-20 weeks to complete from time of PO prior to on site testing. The following lists SCADA Package assumptions:

1. Installation of all provided control panels to be provided by project electrician

2. All terminations and labeling of field cables to be provided by project electrician
3. Conduit and Wiring to be performed by others to power the instruments, and interconnect the signals to the Control Panels
4. Network Cable Testing prior to connection to the network switches per the contract specifications
5. Internet connection for remote access to be provided by the Town
6. Telephone connection for dial out connection if required to be provided by the Town

7.2. Startup, Training and Record Drawings

SKM will test the I/O with the electrician that performed the installation and start up the control loops. Up to 5 man-days are included for I/O testing, and up to 5 man-weeks are included for startup and commissioning, including operator training. Remote support during startup and commissioning via VPN to the site is also provided. PLC Panel record drawings will be provided after commissioning.

CLARIFICATIONS, EXCLUSIONS, AND ADDITIONAL SERVICES

Additional or supplemental services beyond the above Scope of Work shall be performed only upon mutual agreement in writing between the Town and AQUA. These services include additional work resulting from changes in the extent of the Project or its design including, but not limited to, changes in Project size, complexity, schedule, or character, or construction approach. Specifically, we note the following assumptions, clarifications, and exclusions to our Scope of Services:

1. These services are based on an estimated 33-month (143-week) construction schedule from Notice to Proceed through Final Completion. Per GMP construction schedule, the following timeframes are assumed:
 - a. 28-months from NTP to Substantial Completion.
 - b. 5-weeks from Substantial Completion through Final Completion and Project Closeout.
2. The following assumptions were made in the development of this scope of services:
 - a. Engineer's site visits: 3-hours per trip, 2 trips per week dedicated to Central (coupled trips with Low Point Project to reduce costs, extended effort to 4-hours per trip after Low Point Project is complete).
 - b. Attend one weekly progress meeting at 1-hour per meeting.
 - c. RPR's site visits: 1-day on-site per week through substantial completion, 1-day on-site between substantial completion and final completion.
 - d. Up to 130 requests for information at 6-hour average response time.
 - e. Up to 240 submittal reviews at 4-hour average review and response time.
3. Engineering services fee was developed based on an assumed 3.5% rate increase over the three-year project.
4. Site visits more than those described above are additional services.
5. Development of a Facility O&M Manual is an additional service.
6. Provide witness of FAT test panels.

7. Special Inspections: Geotechnical engineering, surveying, materials testing services, and other special inspections by third-parties are excluded.

SCHEDULE

Per the Moltz GMP and construction schedule, substantial completion is estimated within 28-months from construction Notice-to-Proceed, and construction Final Completion is estimated with 33-months from Notice-to-Proceed. These construction phase engineering services are based on a 33-month construction schedule.

COMPENSATION

AQUA respectively requests the following amendments to the Agreements contract amount:

▪ Services through Design Approval (fee unchanged):	\$1,063,057.00
▪ Amended Construction Engineering Services fee (Time and Materials basis):	\$1,446,239.00
▪ Additional SCADA Programming fee (lump sum basis):	\$357,241.00
Amended Contract Amount	\$2,866,537.00

Refer to the attached Exhibit K for the total Amendment No. 2 amount and overall contract amount.

Additional services will be provided upon request and mutual agreement. AQUA will submit progress invoices based on actual labor hours expended and reimbursable expenses.

Please refer to the original Agreement for a copy of our standard Terms and Conditions and the attached Billing Rate Schedule. If this Professional Services Agreement is acceptable to you, please sign the Authorization section below and on the first page of the Terms and Conditions, keep one original copy for your records and return one complete original copy to AQUA.

If you have any questions, please contact Bob Frachetti or Craig Matsuda at 720-667-1250.

Sincerely,



Bob Frachetti, P.E.
Principal

Encl.: Standard Terms & Conditions
Billing Rate Schedule

AUTHORIZATION

Project: Johnstown Central WWTP Construction Phase Services
Client: Town of Johnstown

Scope of Services Accepted by:
Town of Johnstown

Authorized Signature

Date

AQUA Engineering/Client Standard Terms and Conditions

7935 East Prentice Avenue, Greenwood Village, CO 80111

Phone: 720-667-1250 / Corp. Fax: 801-299-0153



Item #11.

I. SCOPE

AQUA Engineering (AQUA) agrees to perform the services described in the proposal attached hereto which incorporates these terms and conditions. Unless modified in writing by the parties hereto, the duties of AQUA shall not be construed to exceed those services specifically set forth in the proposal. These terms and conditions and the proposal, when executed by Client, shall constitute a binding agreement on both parties (hereinafter the "Agreement").

II. COMPENSATION

Client agrees to pay for the services in Article I in accordance with the compensation provisions in the proposal. Payment to AQUA will be made within 30 days after the date of billing. Interest on the unpaid balance will accrue beginning on the 31st day at the maximum interest rate permitted by law.

Time-related charges will be made in accordance with the billing rate referenced in the proposal or Agreement. Direct expenses and Subcontractor services shall be billed in accordance with the proposal or compensation exhibit attached to this Agreement. Otherwise, AQUA's standard billing rates shall apply.

III. RESPONSIBILITY

AQUA is employed to render a professional service only, and any payments made by Client are compensation solely for such services rendered and recommendations made in carrying out the Work. AQUA shall perform the services in accordance with generally accepted engineering practices and standards in effect when the services are rendered. AQUA does not expressly or impliedly warrant or guarantee its services.

In performing construction management services, AQUA shall act as agent of Client. AQUA's review or supervision of work prepared or performed by other individuals or firms employed by Client shall not relieve those individuals or firms of complete responsibility for the adequacy of their work.

The presence of AQUA's personnel at a construction site, whether as on-site representative, resident engineer or construction manager, shall be for the sole purpose of determining that the work is generally proceeding in conformance with the intent of the project specifications and contract documents and does not constitute any form of guarantee or assurance with respect to contractor's performance. AQUA shall have no responsibility for the contractor's means, methods, techniques, sequences, for safety precautions and programs incident to the contractor's work, or for any failure of contractor to comply with laws and regulations applicable to performing its work.

IV. INDEMNIFICATION

AQUA agrees to indemnify, defend, and hold Client harmless from and against any liability to the extent arising out of the negligent acts, errors or omissions of AQUA, its agents, employees, or representatives, in the performance of duties under the Agreement. Regardless of any other term of this Agreement, in no event shall AQUA be responsible or liable to the other for any incidental, consequential, or other indirect damages. The Client agrees to limit AQUA's liability for the Client's damages to AQUA's fee.

V. ATTORNEYS' FEES

In the event of any litigation arising from or related to this Agreement or the services provided under this Agreement, the prevailing party shall be entitled to recover from the nonprevailing party all reasonable costs incurred, including staff time, court costs, attorneys' fees and all other related expenses in such litigation.

VI. INSURANCE

AQUA shall maintain during the life of the Agreement the following minimum insurance:

1. **Comprehensive general liability** insurance, including personal injury liability, blanket contractual liability, and broad form property damage liability. The combined single limit for bodily injury and property damage shall be not less than \$1,000,000.
2. **Automobile bodily injury and property damage liability** insurance covering owned, non-owned, rented, and hired cars. The combined single limit for bodily injury and property damage shall be not less than \$1,000,000.
3. **Statutory Worker's compensation and employers' liability** insurance as required by state law.
4. **Professional liability** insurance with limits of not less than \$1,000,000.

VII. SUBCONTRACTS

AQUA shall be entitled, to the extent determined to be appropriate by AQUA, to subcontract any portion of the Work to be performed under this Agreement.

VIII. ASSIGNMENT

This Agreement is binding on the heirs, successors, and assigns of the parties hereto. The Agreement is not to be assigned by either Client or AQUA without the prior written consent of the other.

IX. INTEGRATION

These terms and conditions and the proposal to which they are attached represent the entire understanding of Client and AQUA as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered herein. The Agreement may not be modified or altered except in writing signed by both parties, provided further that any terms and conditions in any Task Order or purchase order issued in connection or under the Agreement which are inconsistent with the Agreement are deemed null and void.

X. CHOICE OF LAW/JURISDICTION

This Agreement shall be administered and interpreted under the laws of the state in which the AQUA office responsible for the project is located. Jurisdiction of litigation arising from the Agreement shall be in that state.

XI. SEVERABILITY

If any part of the Agreement is found unenforceable under applicable laws, such part shall be inoperative, null and void insofar as it is in conflict with said laws, but the remainder of the Agreement shall be in full force and effect.

XII. NO BENEFIT FOR THIRD PARTIES

The services to be performed by AQUA hereunder are intended solely for the benefit of Client, and no right or benefit is conferred on, nor any contractual relationship intended or established with any person or entity not a party to this Agreement. No such person or entity shall be entitled to rely on AQUA's performance of its services hereunder.

XIII. WORK PRODUCT

AQUA and Client recognize that AQUA's work product submitted in performance of this Agreement is intended only for the Client's benefit and use. Change, alteration, or reuse on another project by Client shall be at Client's sole risk, and Client shall hold harmless and indemnify AQUA against all losses, damages, costs and expense, including attorneys' fees, arising out of or related to any such unauthorized change, alteration or reuse.

Any signed, stamped and dated Construction Documents prepared by the Consultant are the Work Product. CADD files are furnished for convenience only. The transfer of the CADD files for use by the Client shall not be deemed a sale and the Consultant makes no warranty, either express or implied, of merchantability or fitness for any particular purpose.

XIV. SUSPENSION OF WORK

Work under this Agreement may be suspended as follows:

1. **By Client.** By written notice to AQUA, Client may suspend all or a portion of the Work under this Agreement if unforeseen circumstances beyond Client's control make normal progress of the Work impracticable. AQUA shall be compensated for its reasonable expenses resulting from such suspension including mobilization and de-mobilization. If suspension is greater than 30 days, then AQUA shall have the right to terminate this Agreement in accordance with Article XIV, Termination of Work.
2. **By AQUA.** By written notice to Client, AQUA may suspend the Work if AQUA reasonably determines that working conditions at the Site (outside AQUA's control) are unsafe, or in violation of applicable laws, or for other circumstances not caused by AQUA that are interfering with the normal progress of the Work. AQUA's suspension of Work hereunder shall be without prejudice to any other remedy of AQUA at law or equity.

XV. TERMINATION OF WORK

This Agreement may be terminated as follows:

1. **Client** (a) for its convenience on 30 days' notice to AQUA, or (b) for materially breaches this Agreement through no fault of Client and AQUA neither cures such material breach nor makes reasonable progress toward cure within 15 days after Client has given written notice of the alleged breach to AQUA.
2. **By AQUA** (a) for cause, if Client materially breaches this Agreement through no fault of AQUA and Client neither cures such material breach nor makes reasonable progress toward cure within 15 days after AQUA has given written notice of the alleged breach to Client, or (b) upon five days' notice if Work under this Agreement has been suspended by either Client or AQUA in the aggregate for more than 30 days.
3. **Payment upon Termination.** In the event of termination, AQUA shall perform such additional work as is reasonably necessary for the orderly closing of the Work. AQUA shall be compensated for all work performed prior to the effective date of termination, plus work required for the orderly closing of the Work. Except for termination of AQUA by Client for cause, AQUA shall also receive a termination fee equal to 15 percent of the total compensation yet to be earned under existing authorizations at the time of termination.

XVI. NOTICES

All notices required under this Agreement shall be by personal delivery, facsimile or mail to the AQUA Project Manager and to the person signing the proposal on behalf of the Client and shall be effective upon delivery to the address stated in the proposal.

2023 BILLING RATE SCHEDULE

Civil Engineering Hourly Billing Rates

Senior Principal Engineer	\$215
Principal Engineer/Project Manager	\$210
Project Engineer III	\$195
Project Engineer II	\$175
Project Engineer I	\$155
Planner/Funding Specialist	\$135
CAD Designer/Manager	\$145
CAD Designer III	\$135
CAD Designer II	\$125
CAD Designer I	\$110
Administrative/Project Coordinator	\$95
Const. Management Specialist	\$160
On-Site Construction Inspection	\$135

Electrical & Controls Engineering (SKM) Hourly Billing Rates

Electrical Principal Engineer	\$215
Project Engineer III	\$195
Electrical Engineer II	\$175
Electrical EIT	\$155
CAD Designer III	\$135
CAD Designer II	\$125
CAD Designer I	\$110
Senior Controls Engineer	\$170
Controls Engineer	\$155
Junior Controls Engineer	\$140
Electrical Transmission Engineer	\$205
Administrative	\$95

Reimbursable Expenses Schedule

Additional expenses will be handled in the following manner:

Mileage: IRS per mile rate for vehicles not rented

Printing Costs: Pass through at cost for project documents

Sub-Consultants: Pass through at cost, no mark-up

This is **EXHIBIT K**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated **June 30, 2021**.

AMENDMENT TO OWNER-ENGINEER AGREEMENT
Amendment No. 2

The Effective Date of this Amendment is: , 2022

Background Data

Effective Date of Owner-Engineer Agreement: June 30, 2021

Owner: Town of Johnstown

Engineer: AQUA Engineering

Project: Central Wastewater Treatment Plant Project

Nature of Amendment: [Check those that are applicable and delete those that are inapplicable.]

- X Additional Services to be performed by Engineer
- Modifications to services of Engineer
- Modifications to responsibilities of Owner
- Modifications of payment to Engineer
- X Modifications to time(s) for rendering services
- Modifications to other terms and conditions of the Agreement

Description of Modifications:

See Attachment 1 to this Exhibit K which defines the scope of additional services in this Amendment No. 2.

Construction Phase Services: \$716,472.00 adder

SCADA Programming: \$357,241.00 adder

Agreement Summary:

Original agreement amount:	<u>\$ 1,800,000.00</u>
Net change for prior amendments:	<u>\$ 50,000.00</u>
This amendment amount:	<u>\$ 1,016,537.00</u>
Adjusted Agreement amount:	<u>\$ 2,866,537.00</u>

Change in time for services (days or date, as applicable): Services through Construction Final Completion (per current Moltz GMP, there are 28-months from Notice-to-Proceed to substantial completion and 5-months between substantial completion and final completion; 33-months total).

The foregoing Agreement Summary is for reference only and does not alter the terms of the Agreement, including those set forth in Exhibit C.

Owner and Engineer hereby agree to modify the above-referenced Agreement as set forth in this Amendment. All provisions of the Agreement not modified by this or previous Amendments remain in effect.

OWNER:

ENGINEER

By: _____

Print
name: _____

Title: _____

Date Signed: _____

By:  _____

Print
name: Bob Frachetti, P.E.

Title: Principal

Date Signed: March 8, 2023

Town of Johnstown, Central Treatment Facility Additional Services, Construction Engineering Services, SCADA Programming Services																	March 8, 2023			
 Innovative Engineering Solutions		LEVEL OF EFFORT (hours)													Total AQUA Labor \$	Direct Expenses	AQUA Expenses and Subs Markup	Total AQUA Fee		
		PIC	Sr. Process Eng / PM	Sr. Process Eng	Engineer II	Principal Electrical & Controls Eng.	Electrical/ Controls Engineer III	Controls Engineer I	Principal Structural Engineer	Sr. Designer	Designer	Senior RPR/ Construction Specialist	SKM Clerical	Project Admin/ Coordinator					Total AQUA Hours	
		Bob Frchetti Justin Logan	Craig Matsuda	Boris Petkovic	Mitchell Weldon Michael Maughan	Ryan Pack	Thomas VanHook	Bob Buckner	Darin Hawkes	Keith Rindt Kenneth Baetz	Derek Hyde	Mike Fallentine	SKM Clerical	Ernestine Trujillo						
TASKS AND SUBTASKS		\$227/hr	\$221/hr	\$206/hr	\$185/hr	\$227/hr	\$206/hr	\$148/hr	\$227/hr	\$142/hr	\$132/hr	\$169/hr	\$100/hr	\$100/hr				10%		
7	Construction Engineering - Assumes CMAR Delivery		265.5	1685	329	1979	300	796	39	209	200	1237	4	302	7345.5	\$1,402,003	\$40,215	\$4,021	\$1,446,239	
	Contract Duration (weeks) 143		\$60,185	\$373,085	\$67,642	\$365,151	\$68,006	\$163,658	\$8,841	\$29,749	\$26,359	\$208,679	\$401	\$30,250						
	Project Management and Quality Assurance /Quality Control		72	143	143									143	501	\$91,595	\$200	\$20	\$91,815	
	Construction Contract Administration																			
	Construction Contract Execution, NTP, Schedules Review, Conformance, Design Approval		4	40	10		10	40		40	80	4		2	230	\$39,422			\$39,422	
	Attend Construction Meetings (156 (weekly) meetings, 1 hr per meeting)			143		143	36								322	\$66,208			\$66,208	
	Engineer Visits to the Site (same day as meetings, plus one visit/ week by Eng II, assumes most travel already covered by Low Point Project while it is in construction)		80	540		540	96								1256	\$259,098	\$18,612	\$1,861	\$279,571	
	RFI's , Field Orders, Submittals, VE and Change Order/ Contingency Mgmnt		78	624	156	1248	78	624	39	49	80				2976	\$590,525			\$590,525	
	PLC Submittals and Testing						40	80					4		124	\$25,916	\$2,000	\$200	\$28,116	
	Pay Application Review and Recommendation			99								33			132	\$27,487			\$27,487	
	Substantial Completion/ Punchlist		8	20		20	8	8						2	66	\$13,591	\$330	\$33	\$13,954	
	Start-up Assistance (in addition to regular office time/ site visits)		8	36	8	20	16	16						2	106	\$22,236			\$22,236	
	Final Completion/ Punch List		8	8		8	4	8						2	38	\$7,813	\$330	\$33	\$8,176	
	As-Built Documentation			12	12		4	20		120	40	40		4	252	\$39,644			\$39,644	
	Post Construction/Warranty Phase Services		8	20			8					16		4	56	\$11,155	\$330	\$33	\$11,518	
	RPR Services (assumed 8 hrs/wk, leverages Low Point)											1144		143	1287	\$207,313	\$18,412	\$1,841	\$227,566	
9	SCADA PROGRAMMING SERVICES						115	28	1630				49	24	1846	\$279,743	\$77,498		\$357,241	
							\$26,069	\$5,757	\$240,605				\$4,908	\$2,404						
	SCADA & PLC Programming, Computer Hardware & Software																			
	PLC Programming and Software						27		532				14		573	\$86,052	\$5,725		\$91,777	
	SCADA Computor and Software						1		12				1		14	\$2,098	\$57,150		\$59,248	
	SCADA Programming						27		532				14		573	\$86,052			\$86,052	
	Alarm System/Autodialer Programming						3		52				2		57	\$8,556			\$8,556	
	Fat Test																			
	Submittal reviews By Controls Group						10	20	40				2		72	\$12,484			\$12,484	
	FAT Plan Review						4	8					1	2	15	\$2,852			\$2,852	
	FAT test						42						2		44	\$9,721	\$1,570		\$11,291	
	Start-up/ Training and Record Drawings																			
	I/O Testing								114				3		117	\$17,128	\$3,553		\$20,681	
	Commisioning								324				9	2	335	\$48,928	\$9,500		\$58,428	
	Training								12						12	\$1,771			\$1,771	
	Record Drawings						1		12				1	20	34	\$4,101			\$4,101	
Fee Summary			Task Hours													9,192	1,681,746	117,713	4,021	\$1,803,480
			265.5	1685	329	1979	415	824	1630	39	209	200	1237	53	326					
			Task Fees																	
			\$60,185	\$373,085	\$67,642	\$365,151	\$94,075	\$169,414	\$240,605	\$8,841	\$29,749	\$26,359	\$208,679	\$5,309	\$32,653					



Town of Johnstown

TOWN COUNCIL AGENDA COMMUNICATIONS

AGENDA DATE: March 20, 2023

SUBJECT: WTP North Ground Storage Tank Emergency Repair

ACTION PROPOSED: Consider Awarding the Contract for an emergency repair of the North Ground Storage Tank at the Water Treatment Plant to Tanco Engineering, Inc.

ATTACHMENTS:

1. Tanco Engineering Quote
2. Maguire Iron Quote & Schedule Commitment
3. Pittsburg Tank & Tower – No Bid Email
4. Advance Tank – No Bid Email
5. Tank Inspection

PRESENTED BY: Ellen Hilbig, Utilities Director

AGENDA ITEM DESCRIPTION:

Enclosed for your review and consideration is a request to award the Contract for an emergency repair of the North Ground Storage Tank at the Water Treatment Plant to Tanco Engineering, Inc. in the amount of \$355,000.

In the winter season of 2020/2021, the Town had turbidity (coloration) issues with the Ground Storage Tanks at the Water Treatment Plant (WTP). Both the North and South Tank were inspected at that time and based on the evaluation, the South Tank was determined to be causing the majority of the issues due to its deteriorated condition. An emergency repair was taken to Council for a full roof replacement and recoating. The Town budgeted funds in 2022 to repair the North Ground Storage Tank however at that stage in the design of the Water Treatment Plant it was not clear if the Ground Storage Tanks would remain as part of the treatment process. Staff forewent costly repairs until a final decision was made and was hopeful if it was necessary, the repairs could be done at the same time as the WTP improvements.

In January of this year, the Town received calls from residents on turbidity (coloration) issues occurring out in the water distribution system. Staff identified the cause of the turbidity by isolating the North Ground Storage Tank from the treatment process at the Water Treatment Plant and seeing the levels immediately drop. Bringing the North Storage Tank back online is critical for plant operations as it functions as the chlorine contact time treatment step and the volume in the tank is required to treat summertime flows. The Water Treatment Plant design has also identified the Ground Storage Tanks as critical infrastructure to the design and repairs would have been required as part of the new plant.

The Community That Cares

www.TownofJohnstown.com

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141

The Town had visual inspections and an in depth condition assessment performed on the north tank including x-rays of the unit to understand the viability of making the necessary repairs. Overall, the North Tank is in decent condition considering it was built in 1966 with only a few roof welds requiring replacement, spot welding of the interior metal and a complete recoating to protect against coloration issues. With this information Staff solicited three bids from the following Contractors capable of performing the repair work necessary.

Contractor	Cost	Start Date
Tanco Engineering	\$355,000	March 27 th , 2023
Maguire Iron, Inv	\$370,250	Fall 2023
Pittsburg Tank & Tower	Unable to Bid	90 days: Fall 2023 due to Operations
Advanced Tank	Unable to Bid	

Tanco Engineering, Inc provided the lowest bid at \$355,000 which includes \$11,000 for lead paint mitigation if required and the best construction start schedule that allows for the tank work to be completed ahead of the high use summer season. Staff is requesting Council award the emergency repair Contract to Tanco Engineering, Inc and is recommending the authorization of the Town Manager to approve the use of an additional contingency fund of up to \$40K for unforeseen construction expenses encountered based on the experiences of the South Ground Storage Tank repair.

This project was not budgeted for in 2023 and is planned to be paid for by utilizing the \$550K budgeted for the 24" Raw Water Trunk Line Repair. Funding is currently available when evaluating the Water CIP Fund however there may be a need for a budget amendment based on the progression of the 2023 fiscal year.

LEGAL ADVICE:

The Town's Standard Small Vendor Agreement was used for this Project.

FINANCIAL ADVICE:

This project was not budgeted for in 2023 and is planned to be paid for by utilizing the \$550K budgeted for the 24" Raw Water Trunk Line Repair. Funding is currently available when evaluating the Water CIP Fund however there may be a need for a budget amendment based on the progression of the 2023 fiscal year.

RECOMMENDED ACTION: Town Staff recommends awarding the Contract for the emergency repair of the North Ground Storage Tank at the Water Treatment Plant to Tanco

Engineering, Inc in the amount of \$355,000 and authorize the Town Manager to approve the use of an additional contingency fund not to exceed \$40K for unforeseen construction expenses.

SUGGESTED MOTIONS:

For Approval

I move to award the Contract for the emergency repair of the North Ground Storage Tank at the Water Treatment Plant to Tanco Engineering, Inc in the amount of \$355,000 and authorize the Town Manager to approve the use of an additional contingency fund not to exceed \$40K for unforeseen construction expenses.

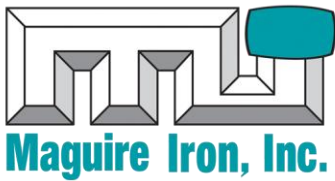
For Denial

I move to deny the award of the Contract and solicit more bids for the project.

Reviewed and Approved for Presentation,



Town Manager



February 6, 2023

Town of Johnstown Colorado
450 S. Parish Avenue
PO BOX 609
Johnstown, CO 80455

Ms. Ellen Hilbig – Utilities Director
Mr. Maurice Pribble – WWW Assistant Superintendent:

It is our pleasure to offer the below pricing for the tank renovations of the North 750MG ground storage water reservoir.

The below pricing includes the full renovation of the tank interior, exterior touch ups where modifications are made, full exterior roof as per notes below.

Interior epoxy coating will be NSF-600 compliant, and will be applied per the manufacturer's specifications. A sacrificial zinc primer will be applied to extend the lifecycle of the interior coating system.

Pricing: 750,000 Ground Storage Reservoir 50' D x 52' H

- To include Tank Interior & portion of the Exterior as noted.

\$335,750.00

- Interior & Exterior see notes to follow
- Maguire Iron will remove existing roof manway 24" and install new 30" manway
- Maguire Iron will install new 24" pressure manway with davit arm opposing existing
- Maguire Iron will fabricate and install 6' of handrail 42" high either side of the ladder
 - Bringing into OSHA compliance and allow for repositioning of current controls
 - ***Current controls mounted directly in the middle of the ladder, safety hazard**
- Maguire Iron will provide new roof supports to replace existing corroded
 - Roof to be blasted prior to installing new supports between old existing ones.
 - Old support material remaining will be cut away, surface area of old supports ground and prepped, blasted for proper profile of new interior coating application.
- Entire roof exterior shall be recoated and two feet down from top of sidewall once all repairs and modifications are made.

- **Wet Disinfection method**

Upon completion Maguire Iron will disinfect the interior of the tank as per AWWA Standard C652-02, Chlorine Method #3 prior to the owner filling the tank. • Water samples and testing is the responsibility of the owner.

INTERIOR

- Contractor will abrasive blast clean the complete interior (100%) to an SSPC - SP No. 10 "Near White Metal". After abrasive blast cleaning, all surfaces shall be cleaned of any dust residue or foreign debris. • Contractor will apply one (1) prime coat of NSF-61 approved zinc rich primer to the complete interior (100%) shall be applied to manufacturer's recommended film thickness (2.5 - 3.5 mils DFT). • Contractor will apply one (1) additional coat of NSF-61 approved epoxy to be applied by brush and roller to all edges, weld seams and sharp angles. • Contractor will apply one (1) finish coat of NSF-61 approved epoxy to the complete interior (100%) shall be applied to the manufacturer's recommendations (8.0 - 14.0 mils DFT).

EXTERIOR

- Contractor will pressure wash the exterior roof (100%) in accordance with SSPC SP No. 12 "Waterjetting." • Contractor will SSPC SP No. 2 / 3 Hand tool clean / Power tool clean all rusted areas. • Contractor will apply one (1) full prime coat of epoxy to the complete exterior (100%) shall be applied to manufacturer's recommended film thickness (2.0 - 4.0 mils DFT). • Contractor will apply one (1) finish coat of polyurethane to the complete exterior (100%) shall be applied to the manufacturer's recommendations (2.5 - 4.0 mils DFT). *** To include top two feet of tank sidewall.**

We can provide financing options for the town's review to help with budgeting the project.

Thank you for the opportunity, and please do not hesitate to contact me with questions or if we can assist with financing the project.

Best regards,



Chuck Graber
Colorado Field Representative, Maguire Iron, Inc.
970-744-9639 graberc@maguireiron.com

From: Chuck Graber <graberc@maguireiron.com>
Sent: Friday, March 3, 2023 10:50 AM
To: Ellen Hilbig
Cc: Maurice Pribble
Subject: Chuck - Maguire Iron update

Good morning Ellen,

After careful consideration the Operations Team would rather look at Fall of this year to do the renovations needed on the north tank if limping along through one more summer would be a consideration. From observations, pictures taken we can assume there wouldn't be any issues with the renovation. However, once abrasive blasting would start to take place there is always the possibility of exposing hidden issues resulting in unforeseen, unknown repairs and leading to completion delays. Not to mention delays that could result in critical water supply shortage to the Town, nothing either of us would want to end up happening.

With a Fall renovation schedule, should we run into unforeseen issues we would at least have declining demand and time to address and resolve any possible issues that might arise. Maurice had mentioned turbidity as a concern, perhaps with a good washing down of the interior prior to putting the tank on line would lessen this issue and allow for making it through this summer. If I recall, approximately 5,000,000 gallons a day passes through the tank, if this is the case the busted up mixer probably isn't necessary and could be left as is or removed.

We are still good with our initial thoughts on pricing which we could put into a formal proposal and below based on your preferences.

In addition to our price the following:

- Replace existing static mixing system - \$21,000.00 (would be reuse of existing duckbills and some hardware depending on its condition)
- Install new dynamic mixer in lieu - \$25,000.00 (furnish and install, run power and conduit within 4-5' of grade for hook up by others)
- Blastox – lead abatement additive - \$ 5,000.00 (if deemed needed – results pending)
- Pit welding / plating (floor) - \$ 4,500.00 (based on observations last site visit when all ice had been cleared from floor, *in addition to our price)

*I have communicated with Tyson at the State of Colorado regarding any necessary submissions or approvals for the renovation. Tyson has indicated he didn't think so, this is somewhat of a gray area and was going to run it by his team for a determination. From what I was able to glean from the State website I would have to think nothing is necessary.

I am available to meet again at your convenience to go over any of the above and any other question or clarifications you might have at this time.

Best regards, Chuck 970-744-9639



CHUCK GRABER
WATER TOWER EXPERT
2058 Vineyard Drive | Windsor, CO 80550
C: 970-744-9639
W: 605-334-9749
SINCE **1915**

   **MAGUIREIRON.COM**

TANCO

ENGINEERING, INC.

1400 TAURUS COURT, LOVELAND, CO 80537-3297

WWW.TANCOENG.COM

TEL (970) 776-4200

FAX (970) 776-4300

February 16th, 2023

Maurice Pribble
Town of Johnstown
Johnstown, CO

Dear Mr. Pribble,

In response to your request, TANCO is pleased to submit this LUMP SUM price to your existing north tank (50' diameter x 52.5' tall) at your Johnstown, CO facility. Please reference this proposal in any resulting contract or purchase order.

Price

TANCO's Lump Sum price to provide all materials, fabrication, engineering, field labor, supervision, tools, supplies and equipment required to execute the scope of work for **\$344,000** and is broken out below.

Mechanical Repairs	\$75,000
New 30" Shell MW	\$7,000
Floor Repairs(Weld Build Up of 50 1-2" Diameter Pits)	\$5,000
Full Interior Blast and Recoat	\$217,000
Exterior Paint Repairs	\$22,000
Heat for Coatings if Needed	\$18,000

Scope of Work

- Remove existing remaining angle iron from underside of self-supported cone roof(Since this is a self-supported cone roof and 1/4" thick plate there is no structural members that need to be added to the underside of the roof, just need to remove what was there and corroded out for the new coating).
- Weld repairs on 14" nozzle on the floor
- External weld repair on shell coupling
- Two 12"x12" floor patches
- Two pits that need to be puddle welded just above the shell to corner weld
- Replace the cone roof hatch
- Replace PVC overtop fill line with CS pipe
- Full interior blast and recoat of the floor, shell and underside of cone roof.
- Exterior coating is in great shape, only a couple of little spots that need to be touched up from something that hit the tank(10'x10' area, new roof hatch that is getting added, and at the doorsheet).

Schedule

We estimate that completion of your tank work will take 5 weeks with a 7 person crew working a 6-10 schedule with one combination firewatch/holewatch. This duration includes all scopes of work.

See below the Clarifying Notes, Assumptions, and Exclusions form, as it is an integral part of our proposal.

Please feel free to contact me at (970) 776-4211 if you have any questions or need more information.

Regards,

Keegan Maloney
Vice President

TANCO'S CLARIFYING NOTES, ASSUMPTIONS AND EXCLUSIONS

1. This proposal is firm for acceptance for 30 days. **Note: Material Costs Subject to Escalation Due to Import Tarrif Implementation by the Government. Material Costs are Price in Effect at Time of Shipment from Material Vendor.**
2. The schedule in this proposal is based on our current workload and is contingent upon receipt of materials as committed to us. Our labor forces and equipment are subject to prior sale.
3. This proposal is based on one move in; one move out for all contractors and subs. Any additional mobilization or shutdown time due to customer will be billed as an extra.
4. Any period of delay due to causes beyond the reasonable control of TANCO will be added to the time for completion of this work.
5. In the event that our work should be stopped periodically for reasons beyond our control, our average cost to shutdown a crew is \$ 1,000 per hour. If we could work part of the day and/or could make up some hours by working late or on Saturday, these costs could be reduced or eliminated.
6. Local building permits or special licenses required for the construction of this tank shall be obtained by others. Costs to provide any extra information (beyond standard submittals) for permitting purposes would be added to our contract price. If "hot work" or other special site permits are required, they must be issued prior to the beginning of a day's work period to avoid delays.

Clarifications

1. We assume that access to the tank site and a suitable work area around the tank will be provided. We also assume that the site is in a well-drained area and that soil conditions will allow our trucks and equipment to move around the area under their own power. If required, the work and storage areas will be kept free of excessive dust, ice, mud, and/or water by others.
2. Purchaser shall provide clear and open space adjacent to the construction site adequate for receiving and storing materials and construction equipment. As a safety precaution, our field construction forces do not operate hoisting equipment or install rigging within 15 feet of live 220 volt electric power lines (larger clear distances are required for lines of higher voltage). If such are present at the time of construction, the cost of moving them or otherwise making them safe will be for the Purchaser's account.

3. The tank is to be cleaned, isolated, and gas freed by others. TANCO is to be notified of any conditions that may present a danger to our crew.
4. We have assumed that once the tank has been cleaned, gas-freed and isolated, any special confined/enclosed spaced requirements will be unnecessary. We would continue to monitor the air both inside and outside of the tank and provide a firewatch per the following clarifying note. Entry/hot work permits also will be obtained as needed and fire extinguishers will be on hand. However, our pricing does not include such items as fresh air gear, air educators, lifelines, special clothing or PPE, warning horns, explosion-proof lights or standby rescue crews.
5. Our proposal does not include a non-working safety watch, fire watch, hole watch, or confined space rescue.
6. Our proposal does not include seal welding of any underside laps of the umbrella roof, cone roof, or existing roof. We have not included any seal welding of roof rafters to roof plate.
7. Our proposal is based on using A36 steel from API Group II.
8. Our proposal is based on using 1/4" thick roof plate.
9. Pricing is based on reusing existing roof appurtenances.
10. Our price does not include post weld heat treatment or stress relieving procedures.
11. Coating pricing is based on disinfecting only areas where new coating has been applied for each repair option.
12. Our proposal is based on us being able to safely walk on the existing cone roof to perform our scope of work.
13. Our price does not include piping or valves beyond the exterior flanges on the tank nozzles. New gaskets and bolts have not been included.
14. We plan to use our current weld procedures and welder qualifications. TANCO's standard welding procedures call for all down flat welds to be single pass with E7024 rod. All welds on the tank shell will be made with E6010.
15. We have assumed that there are no special or toxic coatings or linings on the tank interior. We have not included any costs to deal with lead base paint.
16. We have assumed that the existing tank materials are weldable. Any cost to assure weldability would be added to our price.
17. Our proposal includes all required AWWA D100 required NDE.
18. TANCO's bid does not include a hydrotest.
19. We have relied on the drawings and specifications provided in developing our price. Any revisions or corrections to the information provided will be evaluated for impact to our quoted price and schedule.
20. Our price is based on receiving the entire project.
21. Taxes have not been included in our price. TANCO will collect taxes at the end of the job, if appropriate.
22. If coating is done in cold weather months heaters will need to be supplied for a cost of **\$21,000**.

23. Below are the clarifications, exclusions, and assumptions for the coating contractor:

NOTES:

Note 1: One (1) mobilization is included.

Note 2: Heat and dehumidification equipment is excluded.

Note 3: Spent abrasive disposal by CMCR, Inc.

Note 4: All external coatings to be brushed and rolled.

Note 5: Third-party inspection by others.

Thank you for the opportunity to submit this proposal. The above clarifications and comments are intended to communicate the basis of our proposal. TANCO will gladly negotiate changes to best suit your requirements. If there are any questions, or if we can be of further service, please contact us at your earliest convenience. We look forward to working with you in the near future.

Ellen Hilbig

From: John Clark <Johnc@advancetank.com>
Sent: Wednesday, March 8, 2023 10:12 AM
To: Ellen Hilbig
Subject: RE: Johnstown Colorado - Ground Storage Tank Repair

Hello Ellen,

I apologize for not responding earlier.

We will not be able to submit a proposal for your project.

Our work backlog for our crews is out several months.

We also do not normally deal with lead paint removal.

Thank you for your consideration,

John Clark
Advance Tank and Construction LLC
970 449-2543 Cell
205 227-7802 Office
jclark@advancetank.com



From: Ellen Hilbig <EHilbig@JohnstownCO.gov>
Sent: Monday, March 6, 2023 7:06 PM
To: John Clark <Johnc@advancetank.com>
Subject: Johnstown Colorado - Ground Storage Tank Repair

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Good evening,

I am looking to obtain a quote to perform work on the Town's north ground storage tank which is located at the Towns Water Treatment Facility. It is currently being bypassed due to turbidity levels coming out of the unit that occurred during the fluctuating tank level winter operation. The Town had an in-depth inspection performed (attached) to understand the viability and identify necessary repairs. I have more pictures that I can share as well.

In addition to the work identified in the inspection the Town wants to consider the following information:

1. Frozen standpipe replacement: Replace in kind or remove and replace with floating mixers.

2. A contingency for lead paint removal due to the Tanks age and adjacent tanks history.
3. Identify how quickly this work can be scheduled.

Please contact me with any questions. Ideally I need a quote by end of day Thursday.

Thanks,



Ellen Hilbig | Utilities Director
Town of Johnstown
p. 970.578.9619
ehilbig@[JohnstownCO.gov](mailto:ehilbig@JohnstownCO.gov)
[Facebook](#) | [Twitter](#) | TownofJohnstown.com
450 S Parish Ave. PO Box 609 Johnstown, CO 80534

This electronic mail message and any attached files contain information intended for the exclusive use of the individual or entity to which it is addressed and may contain information that is proprietary, privileged, confidential, and/or exempt from disclosure under applicable law. If you are not the intended recipient, you are hereby notified that any viewing, copying, disclosure or distribution of this information is strictly prohibited. If you have received this message in error, please notify the sender, by electronic mail or otherwise and delete the original message from your computer.

From: Patrick Hocking <phocking@pttg.com>
Sent: Tuesday, March 14, 2023 7:18 AM
To: Ellen Hilbig
Subject: RE: Water Tank Inspection Report - 2nd Quote Scope of Work

Unfortunately we have had some software issue with an update our IT department installed over the weekend so we are delayed.

My apologies but I can't guarantee to have you anything today. Possibly Wednesday. Again my apologies on the delay.

Thanks,
 Patrick



Patrick Hocking
National Accounts Manager
 Pittsburg Tank & Tower Group
 Maintenance Division
 PO Box 1849, Henderson, KY 42419

P: 270-826-9000 Ext: 4625 | F: 270-854-1565

www.PTTG.com [Facebook](#) [LinkedIn](#) [Twitter](#) [Instagram](#) [YouTube](#)

From: Ellen Hilbig <EHilbig@JohnstownCO.gov>
Sent: Monday, March 13, 2023 6:12 PM
To: Patrick Hocking <phocking@pttg.com>
Subject: RE: Water Tank Inspection Report - 2nd Quote Scope of Work

Patrick –

I am following up on the status of the quote? What is your time frame?



Ellen Hilbig | Utilities Director
 Town of Johnstown
 p. 970.578.9619

From: Ellen Hilbig
Sent: Friday, March 10, 2023 7:33 AM
To: 'Patrick Hocking' <phocking@pttg.com>
Subject: RE: Water Tank Inspection Report - 2nd Quote Scope of Work

Patrick,

I spoke to my Town Manager and we would like to receive a quote from Pittsburg Pipe even if it brings the proposal date to Monday.

Thank you for working with me on this.



Ellen Hilbig | Utilities Director
Town of Johnstown
p. 970.578.9619

From: Patrick Hocking <phocking@pttg.com>
Sent: Thursday, March 9, 2023 9:58 AM
To: Ellen Hilbig <EHilbig@JohnstownCO.gov>
Subject: RE: Water Tank Inspection Report - 2nd Quote Scope of Work

Ellen,

Unfortunately, I won't be able to get a quote to you until Monday.

I'm going to sort out the inspection report and both Scope of Works the other vendors supplied (as they are not the same) and come up with my own recommendations based on the inspection report.

Also, our backlog in production is not great at this point and I would imagine 90 days + before we could mobilize for this work.

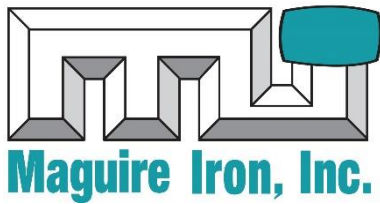
My apologies but we started the year with a huge backlog of work that couldn't get completed last fall/winter due to temperatures/weather and combined with work we received in this year it has pushed our maintenance projects out.

Thanks,
Patrick



Patrick Hocking
National Accounts Manager
Pittsburg Tank & Tower Group
Maintenance Division
PO Box 1849, Henderson, KY 42419

P: 270-826-9000 Ext: 4625 | F: 270-854-1565
www.PTTG.com [Facebook](#) [LinkedIn](#) [Twitter](#) [Instagram](#) [YouTube](#)



WATER TANK INSPECTION REPORT

Item #12.

Town of Johnstown, CO

01-24-2023



TANK NAME:	Johnstown North Tank	Location:	Johnstown, CO
CAPACITY:	750 MG	STYLE:	GST
CONSTRUCTION STYLE:	Welded	CONSTRUCTION DATE:	Unknown
BUILDER:	N/A	HEIGHT/DIMENSION:	50' D x 52' H



COATINGS



SAFETY



SANITARY



STRUCTURAL



SECURITY

EXTERIOR COATING



Exterior Coating / Roof

Roof exterior in good condition, no sponginess noticed when walking on roof sections.



Exterior Coating / Roof

Roof exterior in good condition, some areas showing coatings failure on overlap weld seams. More than likely due to misses from previous overcoat.



Exterior Coating / Roof

Overall good condition, this shot near the roof hatch, coating chips could have been result of tools and or equipment being staged in the area for maintenance.



Exterior Coating / Roof

North section of roof in good condition, again no sponginess noted when walking on surface.

INTERIOR CONDITION



Interior Coating / Floor

Fair condition, with considerable number of tubercles over entire floor.



Interior Coating / Floor

Tubercles once removed and cleaned little to no discernable pitting present.



Interior Coating / Floor

Tubercle removed from floor seam weld, no deterioration present.



Interior Coating / Floor

Representative of more tubercles removed little to no discernable pitting present.

INTERIOR CONDITION



Floor / Shell Connection

In good condition overall, shell paint mils averaged 15 and floor averaged 14 mils



Floor / Shell Connection

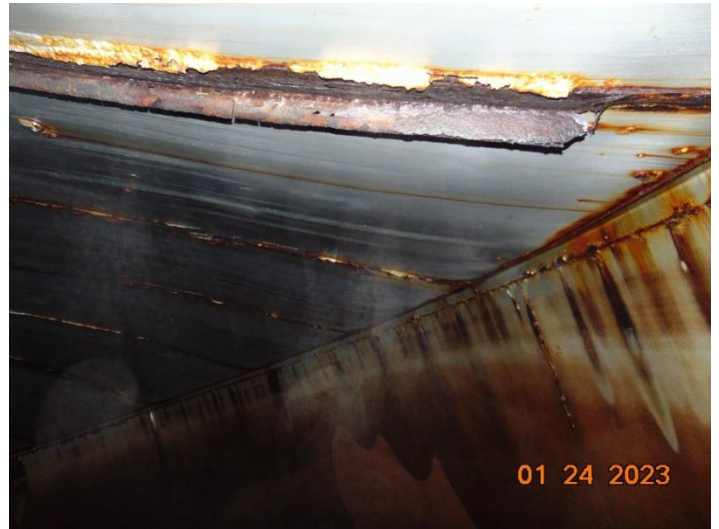
Good condition overall, no visual concerns.

ROOF INTERIOR CONDITION



Roof Interior

Previous support members are all but gone and corroded away.



Roof Interior

Some old support members still present, what is left of them. Roof sheets/panels look to be in fair to good condition with some coating failures.

ROOF INTERIOR CONDITION



Roof Interior from Floor

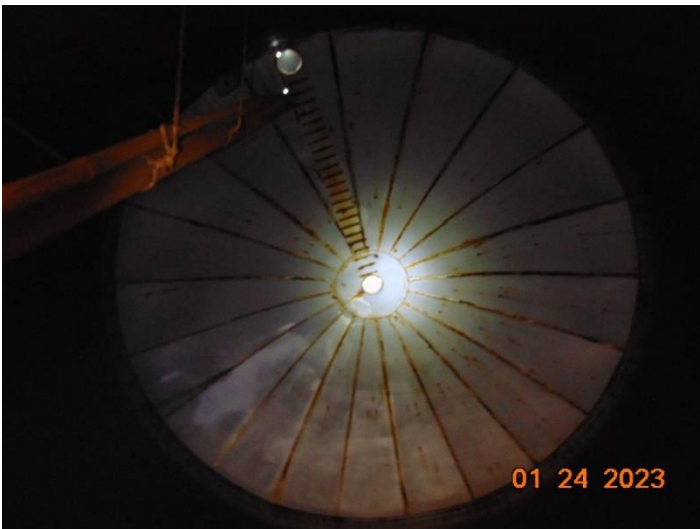
Hard defined rust/corrosion lines from old supports. Roof panels/sheets appear to be in fair condition. See next photo close up.



Roof Interior

Note old support structure all but gone, roof sheets/panels look to be in good and salvageable condition.

ROOF INTERIOR CONDITION



Floor to Roof Shot

As in above photo, vent to roof hatch corrosion due to lugs welded to roof for footing to access vent.



Roof Hatch

Roof hatch rusted out requires replacement with repositioning of hatch hinge to be operator friendly and safer when needing to access vent for inspection / maintenance.

SUMMARY

Exterior:

Good condition overall.

Interior Wet Area:

Fair to poor condition. Now is the time to address the interior renovation. At this time our professional opinion is the roof is salvageable. Interior of roof to be blasted, new support members to be installed between the old existing (what is left of them) old remains cut out once new supports are in place, surface area of old supports ground and prepped, blasted for proper profile.

Safety:

Railing to be added either side of the ladder to be OSHA Compliant and Controls removed from ladder and repositioned onto the north section of new railing. Install new 24" Shell Manway opposing existing for confined space compliance. Cable safety climb to be consideration with renovation.

Sanitary:

Sanitation items; vent is screened, roof hatch to be replaced with 30" round manway and gasketed for CDPHE compliance.

Structural:

Tank and tower appear structurally sound.

Security:

Tank and tower were secure upon arrival and departure. Locking ladder gate to be a consideration with renovation.

Recommendations:

Move forward with tank renovation as mentioned in the Interior Wet Area, Sanitary and Safety sections above.



CHUCK GRABER
WATER TOWER EXPERT

c: (970) 744-9639

w: (605) 334-9749

graberc@maguireiron.com

HMT JOB NUMBER:	26281659		
INSPECTION DATES:	FROM (MM / DD / YYYY)	TO (MM / DD / YYYY)	
	2/14/2023	2/15/2023	
RESPONSIBLE API INSPECTOR:	Aaron Crum	CERT. NO.:	88537

INTERNAL / EXTERNAL INSPECTION:	☒	w/SHELL UT	Yes ☒ No ☐	TANK FILES AVAILABLE FOR REVIEW:	Yes ☐ No ☒
EXTERNAL ONLY INSPECTION:	☐	w/SHELL UT	Yes ☐ No ☐	APPROPRIATE PAPERWORK LEFT ON SITE:	Yes ☒ No ☐
INTERNAL ONLY INSPECTION:	☐	w/SHELL UT	Yes ☐ No ☐	NUMBER OF SHELL COURSES:	7

GENERAL:	TANK NUMBER / IDENTIFICATION:	North Water Tank
	OWNER:	City of Johnstown Municipality
	CLIENT (IF DIFFERENT THAN OWNER):	Tanco Engineering
	TANK LOCATION:	Johnstown, CO
	TYPE OF FACILITY (Terminal, Refinery, Etc.):	Water Treatment Plant
	MANUFACTURER:	No Data Available
	DESIGN STANDARD:	Unknown
	PRODUCT PRIOR TO INSPECTION:	Potable Drinking Water
	DESIGN SPECIFIC GRAVITY:	1.0
	PRODUCT SPECIFIC GRAVITY:	1.0
	DESIGN PRESSURE:	Atmospheric
	OPERATING TEMPERATURE:	Ambient
	CATHODIC PROTECTION & TYPE:	None
	NAMEPLATE PRESENT (& Location):	Yes (Nameplate has been painted over and is not legible)
	DOT REGULATED:	No
	LATITUDE:	40.3383693
LONGITUDE:	-104.9455472	
DIMENSIONS:	DIAMETER:	50.0
	HEIGHT:	52.0
	CAPACITY GROSS:	18,185.10 bbls.
	OPERATING HEIGHT:	52.00
	CAPACITY NOMINAL:	18,185.10 bbls.

GEOMETRY:	FOUNDATION:	Concrete Ringwall
	BOTTOM:	Lap Welded
	SHELL:	Butt Welded
	MATERIAL OF CONSTRUCTION:	Carbon Steel (Grade Not Known)
	COURSE 1 AVERAGE THICKNESS:	0.559
	FIXED ROOF:	Lap Welded Self-Supporting Dome
	FLOATING ROOF:	N/A
	PRIMARY SEAL:	N/A
	SECONDARY SEAL:	N/A
DATES:	YEAR OF CONSTRUCTION:	1966
	SECOND BOTTOM & DATE INSTALLED:	N/A
	LAST COATED:	No Data Available
	LAST INSPECTION:	No Data Available
ACCESS:	STAIRWAY / ROOF ACCESS:	Vertical Ladder
	FLOATING ROOF ACCESS:	N/A
COATINGS / LININGS:	BOTTOM & DATE APPLIED:	External Shell and Dome Roof 2019
	SHELL:	External - White Paint
		Internal - Thin-Film Epoxy
	FIXED ROOF:	External - White Paint
		Internal - Thin-Film Epoxy
	FLOATING ROOF:	Top Side - N/A Product Side - N/A

Tank Records / History Comments	
	The tank owner has limited data available on the tank. The age of the tank was determined by a blueprint drawing of the water treatment facility being constructed and the tank is visible on the drawing tying into the facility piping.

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Foundation

Item No.	Acceptable	Ref 2.0	N/A	
F1	☐	☒	☐	Condition of foundation support (ref. API 653, Para. 4.5.1).
F2	☐	☒	☐	Perform bottom settlement survey (ref. API 653, Para. B.2.1). (ref. API 653, Para. 12.5.2 - Survey During Hydrostatic Testing & ref. API 650, Para. 7.3.6 – Hydrostatic Testing Requirements) Note: Ref. Para. B.2.2.5, If a well-defined rigid tilt plane cannot be determined or the maximum out-of-plane settlement determined in accordance with B.3.2.1 is exceeded, the procedures given in this section may be used in lieu of more rigorous analysis or repair.
				5.47 Planar Tilt / Out-of-Level (inches)
				0.56 Out-of-Plane Settlement / Deflection (inches)
				0.51 Max. Permissible Out-of-Plane Settlement / Deflection (inches)
F3	☒	☐	☐	Identify and measure dimensions of all areas of tank bottom bulges, depressions & settlement (ref. API 653, Paras. B.2.5 & B.3.3).
F4	☒	☐	☐	Identify and measure all areas of internal bottom edge settlement (ref. API 653, Paras. B.2.3 & B.3.4 Figs. B.11 / B.12).
F5	☐	☒	☐	Concrete ringwall free of debris (ref. API 653, Para. 6.3.1).
F6	☒	☐	☐	Concrete ringwall beveled away from tank.
F7	☒	☐	☐	Concrete ringwall free of cracks, breaks, spalling, exposed rebar, etc. (ref. API 653, Para. 4.5.1).
F8	☒	☐	☐	Earth eroded due to water running off the tank (ref. API 653, Paras. 4.4.2 & 6.3.1).
F9	☐	☒	☐	Check for proper drainage and water runoff away from the tank (ref. API 653, Para. C.1.1.5).
F10	☐	☒	☐	Check around the tank and within the dike for build-up of trash and vegetation (ref. API 653, Para. C.1.1.6).
F11	☐	☒	☐	Moisture barrier condition at bottom edge projection to concrete ringwall (ref. API 653, Para. 6.3.1).
F12	☒	☐	☐	Indications of bottom leakage (ref. API 653, Para. 6.3.1).
F13	☒	☐	☐	Cavities or holes around / under tank perimeter (ref. API 653, Paras. 6.3.1 & C.1.1.1).
F14	☐	☐	☒	Check for anchorage. Record sizes, spacing between anchors and condition (ref. API 653, Paras. 4.5.3 & 8.8).
				Anchor Bolt Size (inches)
				Chair / Saddle or Strap Type
				Number of Anchors
				Spacing measured between Centerlines

Foundation Limitations

F15	☒	☐	☐	List any limitations to the foundation inspection. Note: Client must be informed of any limitations to inspection while at the job site. All limitations must be properly documented and addressed accordingly in the Preliminary Report.
-----	-------------------------------------	--------------------------	--------------------------	---

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	<i>Item #12.</i>
	Tank No.	North Water Tank	

[illegible]

HMT Inspection API 653 Inspection Checklist	HMT Job No. Tank No.	26281659 North Water Tank	Item #12.
--	-------------------------	------------------------------	-----------

Tank Size	50.00'	Design Slope: Unknown	Actual Slope:
Bottom Type:	☒ Cone Up ☐ Cone Down ☐ Flat ☐ Shovel Type		
	(ft.) Profile Measurement Data Form. Distance between Measurements after Breakover Point toward Tank Center.		

Station (ft)	Shell	Breakover R (ft.)	R Reading	B (inches)	Allowable	Type (Be/Bew/Ba)	In / Out	1'	2'	3'	4'	5'	6'
1	5.65							5.68	5.71	5.73	5.72	5.70	5.66
1.5	5.65							--	--	--	--	--	--
2	5.63							5.62	5.62	5.54	5.50	5.46	5.45
2.5	5.58							--	--	--	--	--	--
3	5.50							5.51	5.49	5.48	5.45	5.43	5.41
3.5	5.41							--	--	--	--	--	--
4	5.33							5.35	5.39	5.43	5.44	5.42	5.41
4.5	5.28							--	--	--	--	--	--
5	5.23							5.28	5.32	5.35	5.38	5.40	5.36
5.5	5.20							--	--	--	--	--	--
6	5.22							5.24	5.25	5.28	5.31	5.30	5.25
6.5	5.27							--	--	--	--	--	--
7	5.31							5.37	5.38	5.41	5.45	5.48	5.51
7.5	5.43							--	--	--	--	--	--
8	5.54							5.58	5.65	5.67	5.64	5.63	5.64
8.5	5.61							--	--	--	--	--	--

Station (Survey Location): Station should be identified on the drawing and is measured CCW from Manway A.

R: Radius measured from Shell.

B: Difference between Shell and R Reading.

Allowable: Maximum allowable settlement from Annex B.

Type (Be / Bew / Ba): Category for Maximum Allowable Edge Settlement (ref. API 653, Para B.3.4).

In / Out / 75%: Recommendation for comparing actual to allowable readings.

☐ Yes ☐ No ☒ N/A	NDT examination on welds in tanks with edge settlement greater than or equal to 75% of Bew and larger than 2 inches performed.
☐ Yes ☐ No ☒ N/A	Data for rigorous stress analysis collected?

Type of NDT Performed:

☐ Magnetic Particle (MT)
 ☐ Liquid Penetrant (PT)
 ☐ Alternating Current Field Measurement (ACFM)

☐ Other (describe):

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Survey was conducted

☒ Internally CCW from Manway "A" located at Station 0.0.

☐ The survey was performed from the horizontal weld between Courses 1 and 2.

☐ Shovel Type Bottom Detail

Rod readings taken in ☒ Feet ☐ Inches

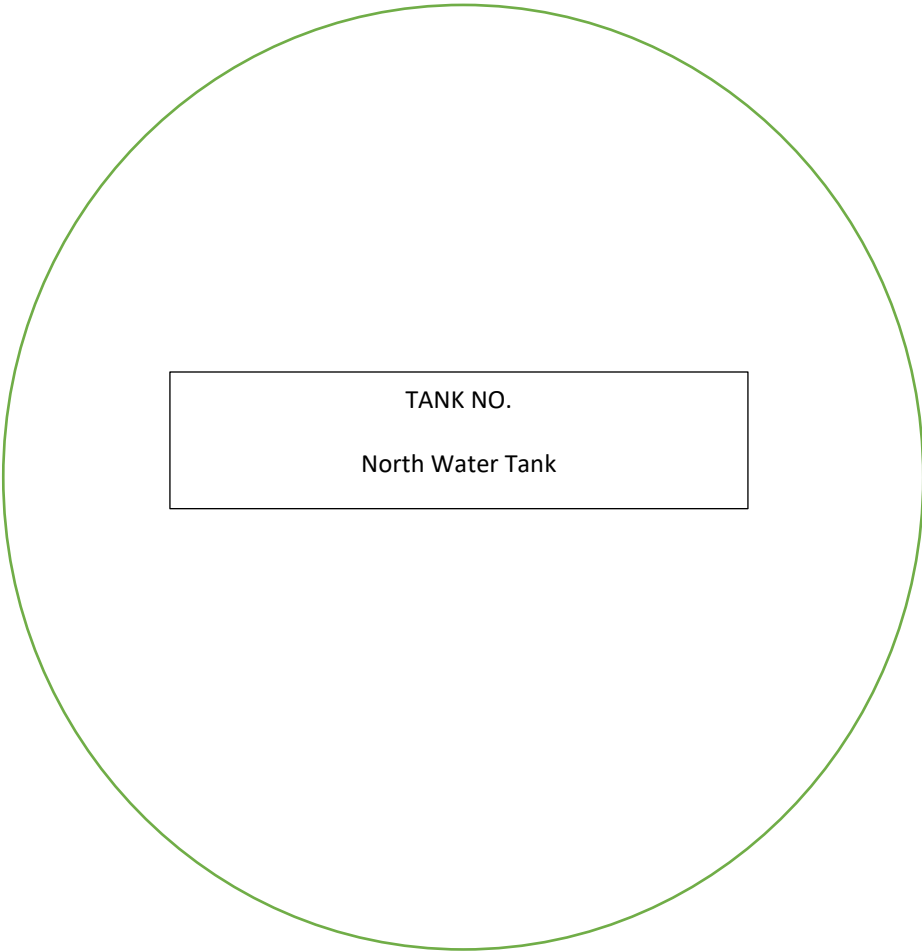
Circumferential distance between readings (ft.):	19.635
Permanent Benchmark Reference Elevation	
Tank Height	52.00
Product Height	0.00

Station	Shell	10'	20'	30'	40'	50'	60'	70'	80'	90'	100'	110'	120'	130'	140'	150'	Center
1	5.65	5.57	5.58														5.43
2	5.63	5.40	5.38														5.43
3	5.50	5.35	5.34														5.43
4	5.33	5.40	5.37														5.43
5	5.23	5.40	5.36														5.43
6	5.22	5.30	5.43														5.43
7	5.31	5.58	5.58														5.43
8	5.54	5.78	5.73														5.43

Note: If a well-defined rigid tilt plane cannot be determined or the maximum out-of-plane settlement determined in accordance with B.3.2.1 is exceeded, the procedures given in this section may be used in lieu of more rigorous analysis or repair (ref. API 653, Para. B.2.2.5).

PROVIDE SKETCH OF DIKE AREA WITH BENCHMARK LOCATION IDENTIFIED:


N



TANK NO.
North Water Tank

1. ☐ Tank Elevation Performed from Course 1 to Course 2 Horizontal:

R1 + R2 = Elevation Difference

2. ☒ Tank Elevation Performed from Bottom Edge Projection:

R1 – R2 = Elevation Difference

Survey Point Used	1
Survey Point Reading (ft.)	4.35
Benchmark Reading (ft.)	2.17

2wsx 4

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Bottom

Item No.	Acceptable	Ref 2.0	N/A																												
B1	☐	☒	☐	Bottom edge projection condition (corroded or pitted, thinning, deformed, obstructed) (ref. API 653, Paras. 4.4.5.7 & 6.3.1.3). Area(s) of Bottom Edge Projection with Thickness Less than 0.100 inch? ☐ Yes (Document all locations and projection thickness measurement in Section 2.0) ☒ No (Document lowest remaining thickness based on UT collected) Area(s) of Bottom Edge Projection with Projection Less than 3/8 inch? ☐ Yes (Document all locations in Section 2.0) ☒ No (Document location and current minimum bottom edge projection)																											
B2	☐	☒	☐	Record minimum bottom plate thickness requirements (ref. API 653, Para. 4.4.5). Note: Minimum bottom plate thickness requirements for the critical zone could vary from the thickness requirements for other areas of the bottom and should be calculated according to API 653, Para. 4.4.5.4. Note: Minimum bottom plate thickness requirements for the annular ring should be calculated according to API 653, Para. 4.4.6.2 as applicable. <table border="1"> <thead> <tr> <th></th><th>Soil Side</th><th>Product Side</th></tr> </thead> <tbody> <tr> <td>Bottom Plate Recording Criteria</td><td>0.165</td><td>0.085</td></tr> <tr> <td>Sketch Plate Recording Criteria</td><td>0.165</td><td>0.085</td></tr> <tr> <td>Critical Zone Recording Criteria</td><td>0.180</td><td>0.070</td></tr> <tr> <td>Annular Ring Plate Recording Criteria</td><td>N/A</td><td>N/A</td></tr> <tr> <td>Nominal Bottom Plate Thickness</td><td colspan="2">0.250 inch</td></tr> <tr> <td>Nominal Sketch Plate Thickness</td><td colspan="2">0.250 inch</td></tr> <tr> <td>Nominal Annular Plate Thickness</td><td colspan="2">N/A</td></tr> <tr> <td>Annular Plate Width</td><td colspan="2">N/A</td></tr> </tbody> </table>		Soil Side	Product Side	Bottom Plate Recording Criteria	0.165	0.085	Sketch Plate Recording Criteria	0.165	0.085	Critical Zone Recording Criteria	0.180	0.070	Annular Ring Plate Recording Criteria	N/A	N/A	Nominal Bottom Plate Thickness	0.250 inch		Nominal Sketch Plate Thickness	0.250 inch		Nominal Annular Plate Thickness	N/A		Annular Plate Width	N/A	
	Soil Side	Product Side																													
Bottom Plate Recording Criteria	0.165	0.085																													
Sketch Plate Recording Criteria	0.165	0.085																													
Critical Zone Recording Criteria	0.180	0.070																													
Annular Ring Plate Recording Criteria	N/A	N/A																													
Nominal Bottom Plate Thickness	0.250 inch																														
Nominal Sketch Plate Thickness	0.250 inch																														
Nominal Annular Plate Thickness	N/A																														
Annular Plate Width	N/A																														
B3	☐	☒	☐	MFL scan of accessible bottom plates. Quantify all findings (ref. API 653, Paras. 4.4.4 & 4.4.5). <table border="1"> <tr> <td>Lowest Remaining Thickness</td><td>0.200</td></tr> </table>	Lowest Remaining Thickness	0.200																									
Lowest Remaining Thickness	0.200																														
B4	☐	☒	☐	Visual inspection of bottom plate surface condition (ref. API 653, Para. 4.4.1).																											
B5	☒	☐	☐	Conduct Ultrasonic thickness readings of bottom plates. Record all data (ref. API 653, Para. 4.4.4). <table border="1"> <tr> <td>Number of Readings per Plate</td><td>1</td></tr> </table>	Number of Readings per Plate	1																									
Number of Readings per Plate	1																														
B6	☒	☐	☐	Locate unacceptable voids beneath bottom. Record the locations (ref. API 653, Para. 4.4.2.h & j & API 653, Para. 9.10.2.1.3).																											
B7	☒	☐	☐	Visual inspection of bottom plate lap welds (for reportable indications or other anomalies) (ref. API 653, Para. 4.4.2, / Fig. 9.1).																											
B8	☐	☐	☒	Perform Vacuum Box testing of bottom lap welds.																											
B9	☒	☐	☐	Internal shell-to-bottom weld condition (ref. API 653, Para. 4.4.2).																											
B10	☐	☐	☒	Perform Magnetic Particle testing of internal shell-to-bottom weld.																											
B11	☐	☐	☒	Perform Vacuum Box testing of internal shell-to-bottom weld.																											
B12	☒	☐	☐	Identify all signs of product leakage.																											
B13	☐	☐	☒	Floating roof leg striker plate condition (pitting, cutting, and dimpling).																											
B14	☐	☐	☒	Fixed roof column bearing / base plate condition (corrosion, weld failure).																											
B15	☐	☐	☒	Fixed roof column lateral clips (align tank columns) (ref. API 650, Para. 5.10.4.7).																											

HMT Inspection API 653 Inspection Checklist		HMT Job No.	26281659	Item #12.
		Tank No.	North Water Tank	

Item No.	Acceptable	Ref 2.0	N/A	
B16	☐	☐	☒	Conduct Visual inspection of reinforcing, bearing, base, striker plates and existing lap patches (ref. API 650, Paras. 5.10.4.7, H.4.6.7 & API 653, Paras. 9.10.2.2 & 9.10.3 & Fig. 9.13).

Bottom Limitations

B17	☒	☐	☐	List any limitations to the bottom inspection. Note: Client must be informed of any limitations to inspection while at the job site. All limitations must be properly documented and addressed accordingly in the Preliminary Report.
-----	-------------------------------------	--------------------------	--------------------------	---

Sump

Item No.	Acceptable	Ref 2.0	N/A	
BS1	☐	☐	☒	Describe sump type / condition. Details include physical dimensions (ref. API 653, Paras. 4.4.2, 9.10.1.5 & C.2.3 and API 650, Table 5.16b & Fig. 5.21). ☐ Dished ☐ Cylindrical w/flat bottom ☐ large (bathtub) ☐ Special (describe): Additional form used for Sump UT, VT & dimensions? ☐ Yes ☐ No ☐ N/A
BS2	☐	☐	☒	Perform Visual inspection of the sump (including all sump welds).
BS3	☐	☐	☒	Perform Magnetic Particle testing examination on all sump welds (including sump-to-bottom weld).
BS4	☐	☐	☒	Perform Sump UT. Record lowest UT reading per grid in sump UT form. Note: Nominal thickness, defect type and location.

Sump Limitations

BS5	☐	☐	☒	List any limitations to the sump inspection. Note: Client must be informed of any limitations to inspection while at the job site. All limitations must be properly documented and addressed accordingly in the Preliminary Report.
-----	--------------------------	--------------------------	-------------------------------------	---

Item No(s)	Additional Inspection Comments
B1	The bottom edge projection is buried under a heavy amount of vegetation from 100.50 feet through 138.20 feet counterclockwise of shell Manway A. <i>This area should be re-worked to remove the vegetation away from the tank and to allow for Visual (VT) inspection of the bottom edge projection at all times (ref. API 653, Para. 6.3.1).</i>
B2	The tank bottom was MFL scanned to a 20 year bare steel threshold of 0.165 soilside and 0.085 product side pitting on the inner and sketch plates. The critical zone was inspected to a threshold of 0.180 soilside and 0.070 product side pitting. The MFL inspection found the lowest soilside indication to be an 0.200 inch remaining wall thickness on floor plate 4, this indication will not require repair. On floor plate 11 there were 2 product side pits that were below threshold and will require repair, the pits were 0.135 and 0.155-inches deep. <i>The pits on plate 11 should be repaired by puddle welding then grounding smooth or by installing a 12"x12" lap welded patch plate over the top of the pits before returning the tank to service.</i>
B3	The lowest soilside indication found was 0.200 inch remaining wall thickness on floor plate. This indication does not require repair. This is noted for information only.
B4	The tank bottom has multiple areas of coating failure on the older coating and on the coating repairs that were made several years ago. Per the client a new tank bottom liner is to be installed after tank repairs are completed.

***NOTE: THIS IS FOR REFERENCE ONLY AND WELD SPACING OF PATCH PLATES SHOULD BE VERIFIED BY REPAIR CONTRACTOR.**

Rev 12 (JUL 2021)

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

PLATE NO. /	READINGS (in inches)					Station NO. /	Critical Zone UT Scrubs (in inches)				
	1						Min	Mx			
1	0.272					1	0.255	0.260			
2	0.274					2	0.250	0.272			
3	0.256					3	0.250	0.260			
4	0.257					4	0.249	0.272			
5	0.270					5	0.256	0.270			
6	0.252					6	0.258	0.272			
7	0.240					7	0.251	0.275			
8	0.255					8	0.256	0.268			
9	0.251										
10	0.258										
11	0.257										
12	0.248										
13	0.256										
14	0.258										
15	0.264										

BOTTOM EDGE PROJECTION READINGS (in inches)

STATION NO.	Reading
1	0.267
2	0.270
3	0.253
4	0.249
5	0.251
6	
7	
8	0.251
Avg.:	0.257
Min.:	0.249

Bottom Edge Projection UT readings could not be recorded at stations 6 and 7 due to heavy vegetation build up.

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

No sump in tank

API Standard Sump Detail	YES ☐ NO ☒
Dish Style Sump Detail	YES ☐ NO ☒
Sump No. / ID. (if applicable)	
Sump Diameter (in inches):	
Sump Depth (in inches):	
Penetrating Nozzle Size:	
Penetrating Nozzle Letter:	
Bottom Plate Number:	

API STANDARD SUMP UT			
SIDE WALL (NORTH, SOUTH, EAST, WEST)			
N	READING	S	READING
1		1	
2		2	
3		3	
4		4	
E	READING	W	READING
1		1	
2		2	
3		3	
4		4	
STANDARD SUMP BOTTOM (X-PATTERN)			
North to South	READING	East to West	READING
1		1	
2		2	
3		3	
4		4	
5		5	

Y	N/A					
☐	☒	Additional UT of suspect areas.				
☐	☒	Additional UT per scope of work (document accordingly)				
☐	☒	Photographs taken				
☐	☒	Sump(s) included on Bottom Layout				
☐	☒	Product side corrosion present	Max. depth:		Avg. depth:	
☐	☒	Comments / Limitations:				

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

SIGNIFICANT BOTTOM FINDINGS

HOLES	Interior Plates	Critical Zone	Sketch Plates	Annular Ring
Number of holes located and measured.	0	0	0	--
Number of holes resulted from product side corrosion.	0	0	0	--
Number of holes resulted from soil side corrosion.	0	0	0	--
PRODUCT SIDE METAL LOSS				
Number of areas of PRODUCT SIDE metal loss located and measured.	2	0	0	--
Lowest remaining thickness.	0.095	0.248	0.248	--
(Estimated / Collected) Average depth of product side metal loss.	0.145	0.002	0.002	--
Maximum depth of product side metal loss.	0.155	0.002	0.002	--
Non recordable lowest remaining thickness if no corrosion found at recording criteria (information only).	--	--	--	--
SOIL SIDE METAL LOSS				
Number of areas of SOIL SIDE metal loss located and measured.	4	0	0	--
Lowest remaining thickness.	0.240	0.248	0.200	--
(Estimated / Collected) Average depth of soil side metal loss.	0.010	0.002	0.010	--
Maximum depth of soil side metal loss.	0.010	0.002	0.050	--
Non recordable lowest remaining thickness if no corrosion found at recording criteria (information only).	--	--	0.200	--
GENERAL CORROSION				
Average depth of general corrosion typically taken from UT readings with respect to the nominal thickness.	0.005	0.002	0.005	--

Tank Bottom Data:

Nominal Bottom / Interior Bottom Plate Thickness:	0.250
Nominal Bottom Sketch Plate Thickness:	0.250
Nominal Annular Ring Plate Thickness:	N/A
Annular Ring Plate Width:	N/A

Tank Bottom Data Per Client:

Minimum Allowable Bottom / Interior Bottom Plate Thickness:	0.100
Minimum Allowable Critical Zone Thickness:	0.125
Minimum Allowable Sketch Plate Thickness:	0.100
Minimum Allowable Annular Ring Plate Thickness:	N/A

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

External Shell

Item No.	Acceptable	Ref 2.0	N/A	
S1	☒	☐	☐	Shell weld / seam condition. Perform shell thickness calculations (ref. API 653, Paras. 4.3.3.1, 4.3.4, 4.3.8 & 4.3.10). ☒ Butt Welded ☐ Lap Welded ☐ Butt / Lap Riveted
S2	☐	☐	☒	Record number and pattern of rivets or bolts (ref. API 653, Table 4.3).
S3	☐	☒	☐	Check exterior shell-to-bottom weld condition (ref. API 653, Para. 6.3).
S4	☒	☐	☐	Identify all signs of product leakage (exterior) (ref. API 653, Para. 6.3).
S5	☐	☐	☒	Perform Magnetic Particle testing of exterior shell-to-bottom weld (ref. API 653, Para. 4.3.6).
S6	☐	☒	☐	Coating condition (ref. API 653, Para. 6.3). (Coating failure such as blistering, thinning, cracks, or discolored.)
S7	☒	☐	☐	Shell condition (deformations, corrosion, pitting) (ref. API 653, Para. 4.3).
S8	☐	☐	☒	Rivet condition (worn, corroded, loose rivet sealer, leaking).
S9	☒	☐	☐	Perform UT thickness readings on shell per job scope.
S10	☐	☐	☒	Inspect support welds to shell for corrosion or defects.
S11	☐	☐	☒	Wind girder / shell stiffeners condition (corrosion, weld failure) (ref. API 653, Para. 4.3.7).
S12	☐	☒	☐	Note whether supports have reinforcing pads welded to shell.
S13	☐	☐	☒	Shell-mounted vents / overflow slots present. Check for debris covering and condition of screens (ref. API 650, App. H, Para. H.5.3.3). ☐ Yes ☐ No Screens present Number of Vents Approx. Dimensions (inches) X Number of Overflow Slots Approx. Dimensions (inches) X
S14	☐	☐	☒	Conduct Visual inspection of shell insulation. Inspect for damage (ref. API 653, Para. 6.3.2.2).

Internal Shell

S15	☐	☒	☐	Visual inspection of the internal shell surface for corrosion and pitting (ref. API 653, Para. 4.3).
S16	☒	☐	☐	Visual inspection of interior shell welds / seams (ref. API 653, Para. 4.3.8).
S17	☐	☐	☒	Visual inspection of rivets (check for corrosion pitting, or looseness and riveted seams leaks).
S18	☒	☐	☐	Inspect support welds to shell for corrosion or defects.
S19	☐	☒	☐	Note whether supports have reinforcing pads weld to shell.

External & Internal Shell

S20	☒	☐	☐	List any limitations to the shell inspection. Note: Client must be informed of any limitations to inspection while at the job site. All limitations must be properly documented and addressed accordingly in the Preliminary Report.
-----	-------------------------------------	--------------------------	--------------------------	--

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

[illegible]

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Shell Thickness Calculations

The minimum acceptable shell plate thickness for tanks with a diameter equal to or less than 200 feet is calculated as follows (ref. API 653, Para. 4.3.3.1):

$$t_{min} = \frac{2.6 D(H - 1) G}{S E}$$

Where: H = Product Height (ft.)
 D = Nominal Diameter of Tank (ft.)
 S = Allowable Stress (psi) – **See below**

21,000	Riveted tanks
23,600	Courses 1 and 2 for Welded tanks
26,000	Upper Courses for Welded tanks

G = Specific Gravity of Contents
 E = Joint Efficiency – **See Tables**

Table 4-2 – Joint Efficiencies for Welded Joints					Table 4-3 – Joint Efficiencies for Riveted Joints		
Standard	Edition & Year	Type of Joint	Joint Efficiency E	Applicability or Limits	Type of Joint	Number of Rivet Rows	Joint Efficiency E
API 650	7 th & Later (1980-Present)	Butt	1.00	Basic Standard	Lap	1	0.45
		Butt	0.85	Appendix A – Spot RT	Lap	2	0.60
		Butt	0.70	Appendix A – No RT	Lap	3	0.70
	1 st – 6 th (1961-1978)	Butt	0.85	Basic Standard	Lap	4	0.75
		Butt	1.00	Appendices D & G	Butt ^a	2 ^b	0.75
					Butt	3 ^b	0.85
API 12C	14 th & 15 th (1957-1958)	Butt	0.85		Butt	4 ^b	0.90
					Butt	5 ^b	0.91
					Butt	6 ^b	0.92
	3 rd – 13 th (1940-1956)	Lap ^a	0.75	3/8 inch max t	^a All butt joints listed have butt straps both inside and outside. ^b Number of rows on each side of joint centerline.		
		Butt ^c	0.85				
		Lap ^a	0.70	7/16 inch max t			
Unknown	1 st & 2 nd (1936-1939)	Lap ^b	0.50 + $k/5$	1/4 inch max t			
		Butt ^c	0.85				
		Lap ^a	0.70	7/16 inch max t			
		Lap ^b	0.50 + $k/5$	1/4 inch max t			
		Butt ^c	0.70				
		Lap ^d	0.35				

^a Full double lap weld.

Full fillet weld with at least 25 percent intermittent full fillet

^b opposite side; k = percent of intermittent weld expressed in decimal form.

^c Single butt welded joints with a back-up bar were permitted from the years of 1936 to 1940 and 1948 to 1954.

^d Single lap weld only.

COMPLETE TABLE ON NEXT PAGE

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Course	Course Height (in.)	Material of Construction	Allowable Stress (psi)	No. of Rivet Rows (Butt or Lap)	Joint Efficiency	Average Thickness (in.)	Required Thickness (in.)
1	96	CS (Grade Not Known)	23,600		0.70	0.559	0.401
2	96	CS (Grade Not Known)	23,600		0.70	0.511	0.338
3	96	CS (Grade Not Known)	26,000		0.70	0.361	0.250
4	84	CS (Grade Not Known)	26,000		0.70	0.319	0.193
5	84	CS (Grade Not Known)	26,000		0.70	0.250	0.143
6	84	CS (Grade Not Known)	26,000		0.70	0.253	0.100
7	84	CS (Grade Not Known)	26,000		0.70	0.250	0.100
Top Angle			N/A	N/A	N/A		N/A

- ☐ Yes ☒ No Variable Point Method used?
- ☐ Yes ☒ No Elevated Temp. Tank (ref. API 650, Appendix M & API 653, Para. 4.3.10)
- ☐ Yes ☒ No Change of Service (ref. API 653, Para. 4.2.4 as applicable)

Shell Corrosion Rate Calculations

When the corrosion rate is not known, the maximum interval shall be 5 years (ref. API 653, Para. 6.3.3.2 a). When the corrosion rate is known, the maximum interval shall be the smaller of RCA / 2N years or fifteen (15) years (ref. API 653, Para. 6.3.3.2 b):

RCA = t_{act} - t_{min}

N = \frac{t_{prev} - t_{act}}{Y}

I_{UT} = \frac{t_{act} - t_{min}}{2N}

Where:		
RCA =	See Table	= Difference between the measured shell thickness and the minimum required thickness in inches.
N =	See Table	= Shell corrosion rate in inches per year
Y =	Years in service	=
I _{UT}	See Table	= Inspection interval for the next Ultrasonic (UT) testing, in years (not to exceed 15 years)

Course No.	Previous Measured Average Thickness (in.) (t _{prev})	Current Measured Average Thickness (in.) (t _{act})	Material Loss (in.)	Minimum Required Thickness (in.) (t _{min})	RCA (in.)	Corrosion Rate (in./yr.) (N)	Next Ultrasonic (UT) Thickness Inspection (years) (I _{UT})
1	0.563	0.559	0.004	0.401	0.158	0.000	15
2	0.500	0.511	0.000	0.338	0.173	0.000	15
3	0.375	0.361	0.014	0.250	0.111	0.001	15
4	0.312	0.319	0.000	0.193	0.126	0.000	15
5	0.250	0.250	0.000	0.143	0.107	0.000	15
6	0.250	0.253	0.000	0.100	0.153	0.000	15
7	0.250	0.250	0.000	0.100	0.150	0.000	15

☒ Yes ☐ No Original (Nominal) Shell UT Available for RCA Calculations?

☐ Yes ☒ No Previous Shell UT Available for RCA Calculations?

If previous readings were provided from a past inspection report, what year were the previous readings taken?

No Data Available

NOTE: Original data will establish a Long-Term Corrosion Rate (LTCR) while previous inspection data will provide a Short-Term Corrosion Rate (STCR).

NOTE: Without established Condition Monitoring Location (CML) points, data collection locations may vary between inspections.

☐ Yes ☒ No UT Inspection stickers were placed on tank by HMT?

☐ Yes ☒ No Existing Inspection stickers / CMLs were present?

☐ Yes ☒ No Copies made of the past UT data for the HMT file?

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

External Inspection Interval Calculations

The external inspection interval shall be the lesser of 5 years or RCA / 4N (API 653, Para. 6.3.2.1):

$$RCA = t_{act} - t_{min}$$

$$N = \frac{t_{prev} - t_{act}}{Y}$$

$$I_{VT} = \frac{t_{act} - t_{min}}{4N}$$

Where:			
RCA =	See Table	=	Difference between the measured shell thickness and the minimum required thickness in inches.
N =	See Table	=	Shell corrosion rate in inches per year
Y =	Years in service	=	
I _{VT}	See Table	=	Inspection interval for the next Visual Inspection in years (not to exceed 5 years)

Course No.	Previous Measured Average Thickness (in.) (t _{prev})	Current Measured Average Thickness (in.) (t _{act})	Material Loss (in.)	Minimum Required Thickness (in.) (t _{min})	RCA (in.)	Corrosion Rate (in./yr.) (N)	Next External Visual Inspection (years) (I _{vt})
1	0.563	0.559	0.004	0.401	0.158	0.000	5
2	0.500	0.511	0.000	0.338	0.173	0.000	5
3	0.375	0.361	0.014	0.250	0.111	0.001	5
4	0.312	0.319	0.000	0.193	0.126	0.000	5
5	0.250	0.250	0.000	0.143	0.107	0.000	5
6	0.250	0.253	0.000	0.100	0.153	0.000	5
7	0.250	0.250	0.000	0.100	0.150	0.000	5

Item No(s)	Additional Inspection Comments

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

ULTRASONIC (UT) SHELL DROPS		OWNER/CLIENT		Johnstown Mun. / Tanco Eng.			HMT JOB NO.		26281659	
		LOCATION		Johnstown, CO			DATE		2/14/2023	
Drop No.:				(ALL MEASUREMENTS ARE IN INCHES)						
READING	COURSE 1	COURSE 2	COURSE 3	COURSE 4	COURSE 5	COURSE 6	COURSE 7			
1	0.557	0.513	0.362	0.319	0.251	0.254	0.252			
2	0.560	0.512	0.361	0.319	0.250	0.253	0.250			
3	0.563	0.509	0.361	0.318	0.249	0.253	0.248			
Drop Avg.	0.560	0.511	0.361	0.319	0.250	0.253	0.250			
1	0.561									
2	0.560									
3	0.558									
Drop Avg.	0.560									
1	0.558									
2	0.561									
3	0.562									
Drop Avg.	0.560									
1	0.555									
2	0.556									
3	0.554									
Drop Avg.	0.555									

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

External Nozzles and Appurtenances

Item No.	Acceptable	Ref 2.0	N/A	
N1	☒	☐	☐	Document nozzle / manway information on the Nozzle and Appurtenance Table (ref. API 653, Para. 4.3.9).
N2	☐	☒	☐	Evaluate nozzle(s) / manway(s) acceptability to current API 650 / 653 guidelines. Weld spacing, centerline, reinforcement size, nozzle neck thickness (inspect shell nozzles for thinning, pitting and coating failure) and telltale holes, etc. (ref. API 650, Paras. 5.7, 5.7.5.1 and 5.7.2.10 & API 650, Table 5.6B & Fig. 5.8).
N3	☐	☒	☐	Visual inspection of all external welds (ref. API 653, Para. 4.3.9.1).
N4	☒	☐	☐	Indications of leakage around manways, nozzles, flanges and appurtenances (including reinforcement, bolting, gaskets and seals).
N5	☒	☐	☐	Check piping and valves for leaks, thermal relief, or signs of damage (ref. API 653, Para. C.1.3.2).
N6	☐	☐	☒	Inspect mixer(s) for support, leakage and defects (ref. API 653, Para. C.1.3.6).
N7	☐	☐	☒	Roof drain leakage
N8	☐	☐	☒	Temperature indicators / probes (corrosion, mechanical damage).
N9	☒	☐	☐	Automatic gauge condition (corrosion, mechanical damage) (ref. API 653, Para. C.1.3.3 & API 653, Para. 6.9.3b).
				Mfg.: Mercoid S/N: N/A
				Model: SBLT2-25-60 Type (See Below):
				☐ Tape & Float ☐ Radar ☐ Target Board Indicator ☒ Other (describe): Submersible Level Transducer
N10	☐	☐	☒	Check welds on shell-mounted davit clips above large valves or equipment (ref. API 650, Para. 5.8.3.5 & API 653, Para. C.1.3.2h).
N11	☒	☐	☐	Welds on stairways / ladders, gauge platform / ladder, landing platform stringers (corrosion, broken, coating failure) (ref. API 650, Para. 5.8.1.2.a & API 653, Para. C.2.12.4).
N12	☐	☒	☐	Verify requirements for Platforms, Walkways & Stairways (ref. API 650, Table 5.17 & Table 5.18). Note: Retrofit of existing tanks is not required.

Item No(s)	Additional Inspection Comments
N2	Nozzle B has a reinforcing plate without a telltale hole. API 650, Paras. 5.7.5.1 and 5.7.2.10 indicate reinforcing plates should be installed with telltale holes. A Telltale holes should be drilled and the reinforcing plate air tested to API standards. The telltale holes should then be left open to the atmosphere.
N2	Nozzles A and B have a weld spacing between their reinforcing plates and the shell-to-bottom joint less than that required by API 650, Para. 5.7.3. Such practices results in areas of increased stress concentration and possible accelerated corrosion. Visual (VT) inspection of these nozzles did not identify any such corrosion at this time. These reinforcing plates and the adjacent shell-to-bottom weld should be inspected utilizing Magnetic Particle (MT) testing (ref. API 653, Para. 4.3.9.1) prior to returning the tank to service. Consideration should be given to modifying these penetration details in accordance with API 650 guidelines the next time this tank has major repairs to the shell or when hydrostatic testing is required for other reasons.
N2	Shell Coupling D is a 4 inch shell penetration that does not have a reinforcing plate as suggested by API 650, Para. 5.7.2.1 that states "Openings in tank shells larger than required to accommodate a NPS 2 flanged or threaded nozzle shall be reinforced". Reinforcing plates can be added around this penetration details the next time this tank has major repairs to the shell or calculations performed to verify that these openings are adequately reinforced as installed.
N2	Shell Coupling D has a weld spacing between the neck weld and the shell-to-bottom joint less than that required by API 650, Para. 5.7.3. Such practices results in areas of increased stress concentration and possible accelerated corrosion. Visual (VT) inspection of these nozzles did not identify any such corrosion at this time. These reinforcing plates and the adjacent shell-to-bottom weld should be inspected utilizing Magnetic Particle (MT) testing (ref. API 653, Para. 4.3.9.1) prior to returning the tank to

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

	service. Consideration should be given to modifying these penetration details in accordance with API 650 guidelines the next time this tank has major repairs to the shell or when hydrostatic testing is required for other reasons.
N3	On the underside of the shell to neck weld of Coupling D there is a moderate size area of poor weld quality, coating failure and corrosion present. The area should be properly cleaned, rewelded, and recoate before plcing the tank back into service.
N3	Shell Overflow Nozzle C has a galvanized shell support brace in course 1 that is only welded to the overflow pipe and not the shell. The brace should be properly welded to the external shell with a pad plate between the support brace and the external shell before placing the tank back into service.
N12	Vertical Ladder E is roughly a 45 foot tall ladder that does not have a safety cage around it and does not have a mid-platform for OHSA requirements. While the tank is out of service consideration should be given to installing a proper caged vertical ladder and mid-platform before returning the tank to service.

HMT Inspection		HMT Job No.	26281659	Item #12.
API 653 Inspection Checklist		Tank No.	North Water Tank	

Internal Nozzles and Appurtenances

Internal Appurtenances / Floating Suction Line

Internal Appurtenances / Floating Roof Drain

External & Internal Nozzle Limitations

[illegible]

HMT Inspection API 653 Inspection Checklist										HMT Job No.	26281659	Item #12.	
										Tank No.	North Water Tank		

					Reinforcing Plate											
Item	Description	Pipe Size (in.)	Station (ft.)	CL Elev. (in.)	Width (in.)	Height (in.)	Thick (in.)	Shape	1 or 2 Piece	Neck Thick (in.)	Fing Thick (in.)	Shell-to-Fing Face (in.)	Cover Thick (in.)	Tell-tale	Weld Space (in.)	Comments
A	Manway	24	0.00	30	64	53	0.252	A	1	0.320	0.626	6.5	0.763	Y-1	2	
B	Nozzle	16	54.60	25	42	42	0.512	B	1	0.343	1.544	17	--	No	2	
C	Nozzle	8	148.65	Ring 7	--	--	--	--	--	0.317	--	--	--	--	--	Overflow
D	Coupling	4	151.00	3	--	--	--	--	--	--	--	--	--	--	0.25	
E	Vertical Ladder	--	153.70	--	--	--	--	--	--	--	--	--	--	--	--	

Assign a letter (M-Z) to odd-shaped reinforcing plates, TAKE A PHOTO and sketch a representation on back.

Shape



Total Strapped Circumference = 157.38	Stairway: CW ☐ CCW ☐ OTHER ☒ (Describe): Vertical Ladder
(Include stairway bottom & top locations in above table)	

Vertical Rivet Seam / Weld locations

The stations are measured circumferentially counterclockwise from Manway A ☒ Other (Describe Below) ☐

COURSE 1 VERTICAL RIVET SEAM / WELD LOCATIONS:

1)	6.72	2)	32.95	3)	59.18	4)	85.41	5)	111.63	6)	137.86					
----	------	----	-------	----	-------	----	-------	----	--------	----	--------	--	--	--	--	--

COURSE 2 VERTICAL RIVET SEAM / WELD LOCATIONS:

1)	19.85	2)	46.10	3)	72.30	4)	98.55	5)	124.80	6)	151.00					
----	-------	----	-------	----	-------	----	-------	----	--------	----	--------	--	--	--	--	--

VERTICAL RIVET SEAM / WELD OFFSET FOR COURSES 3, 4, 5, etc.

3)	6.72	4)	19.85	5)	6.72	6)	19.85	7)	6.72							
----	------	----	-------	----	------	----	-------	----	------	--	--	--	--	--	--	--

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Supplemental Nozzle UT

Nozzle ID	Clock Position				
Item	12	3	6	9	Average
A	0.320	0.320	0.321	0.320	0.320
B	0.345	0.345	0.345	0.343	0.345
C	0.322	0.317	0.319	0.319	0.319

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Fixed Roof

Does the tank have a fixed roof? **Yes** ☒ **No** ☐ If no, the entire fixed roof section is N/A.

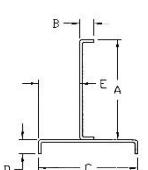
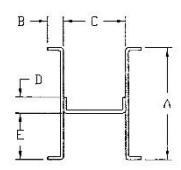
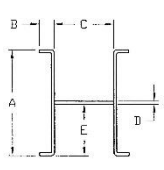
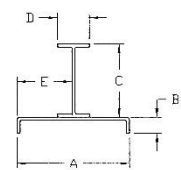
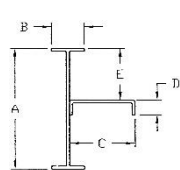
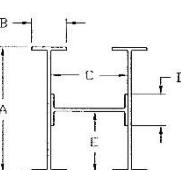
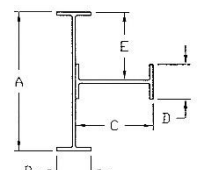
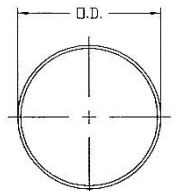
Item No.	Acceptable	Ref 2.0	N/A	
FR1	☒	☐	☐	Roof plate condition (corrosion, pitting, coating failure, standing water / low areas). Locate on layout (ref. API 653, Paras. 4.2.1.1 & 4.2.1.2).
FR2	☐	☒	☐	Perform UT thickness readings on roof per work scope.
FR3	☒	☐	☐	Conduct Visual inspection of roof-to-shell joint (ref. API 653, Para. 4.2.2).
FR4	☐	☐	☒	Conduct Visual inspection of roof insulation. Inspect for damage (ref. API 653, Paras. 6.3.1 & 6.3.2.2).
FR5	☒	☐	☐	Manway / nozzle / appurtenance condition (ref. API 653, Para. 4.2.4.5 & API 650, Para. H.5.2.2).
FR6	☒	☐	☐	Identify pressure / vacuum vents or vents (quantity and sizes) (ref. API 653, Para. 4.2.4.5 / API 650, Para. H.5.2.2 / API 650, Para. 5.8.5).
				Type: Center Circulation Vent Quantity: 1 Size:
				Type: Quantity: Size:
FR7	☐	☐	☒	Inspect pressure / vacuum vent pallet assembly seals and screens (weathering) (ref. API 653, Para. 4.2.4.5 & API 650, Para. H.5.2.2).
FR8	☐	☐	☒	Gauge hatch (clean, operates freely and seals properly).
FR9	☐	☐	☒	Scaffold cable support is present and is in good condition (ref. API 650, Para. 5.8.8 and Figure 5.22).
FR10	☐	☐	☒	Visual inspection of high-level and high-high-level alarms for damage (ref. API 653, C.2.10.10).

Aluminum Dome Roof

FR11	☐	☐	☒	Check perimeter flashing for damage.
FR12	☐	☐	☒	Evidence of leaking panels (presence of water on internal floating roof).
FR13	☐	☐	☒	Deterioration of skylights (crazing caused by UV light, cracking) (ref. API 650, Para. G.2.6).
FR14	☐	☐	☒	Panel caulking and seals (entire roof) (ref. API 650, Para. G.2.5.1).
FR15	☐	☐	☒	Rain gutters (damaged or broken).
FR16	☐	☐	☒	Dome overhang screens in place and in good condition.
FR17	☐	☐	☒	Check dome roof support details for signs of damage or malfunction.
FR18	☐	☐	☒	Check roof for pinholes, tears, or other damage to the aluminum sheeting.

Item No(s)	Additional Inspection Comments
FR2	The inspection of the dome roof was performed from the manlift basket limiting the roof visual inspection and UT inspection. The UT readings were recorded on plates that were accessible by manlift. The UT readings ranged from 0.215 to 0.222 inches. This is noted for information only.

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Item No.	Acceptable	Ref 2.0	N/A	
FR19	☐	☐	☒	Type of column, size and number (pipe, structural) (ref. API 653, Paras. 4.2.2.1 & 4.4.2i).
Type of Supports: ☐ Pipe Column ☐ Channel Column ☐ Other				
Number of Supports:				
Number of rafters (working from center)				
Bay 1 Bay 4 Bay 2 Bay 5 Bay 3 Bay 6				
Mark the Fixed Roof Column Type (draw the Fixed Roof Column Type if different from examples)				
☐ A  ☐ B  ☐ C  ☐ D 				
☐ E  ☐ F  ☐ G  ☐ H 				
☐ Other				
Fixed Roof Column Measurements				
A D B E C				
H Type Only:				
Pipe Diameter Thickness				
Center Column Reinforcement: ☐ Yes ☐ No				
Base Plate Thickness				
Bearing Plate Thickness				
Other Column Reinforcement: ☐ Yes ☐ No				
Base Plate Thickness				
Bearing Plate Thickness				
FR20	☐	☐	☒	Check columns for plumbness, bending or distortion (ref. API 653, Paras. 4.2.2.1 & 10.5.2.1).
FR21	☐	☐	☒	Condition of structural columns (check for corrosion, scale, breaking of tack welds) (ref. API 653, Para. 4.2.2.1 & API 650, Para. 5.10.3.2).
FR22	☐	☐	☐	Check rafter condition (ref. API 653, Para. 4.2.2.1).
FR23	☐	☐	☒	Check girder condition (ref. API 653, Para. 4.2.2.1).
FR24	☐	☐	☒	Visual inspection of all rafter clips (ref. API 653, Para. 4.2.2.1).
FR25	☐	☒	☐	Visual inspection of internal roof plates for holes, scale build-up and pitting.
FR26	☒	☐	☐	List any limitations to Fixed Roof inspection. Note: Client must be informed of any limitations to inspection while at the job site. All limitations must be properly documented and addressed accordingly in the Preliminary Report.
Item No(s)		Additional Inspection Comments		

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

[illegible]

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Fixed Roof Nozzle Table

Item	Description	Pipe Size (in.)	Location Plate No.	Neck Thickness (in.)	Comments
A	Nozzle		1		Center Open Vent
B	Coupling		13		
C	Manway		13		

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

FIXED ROOF

PLATE NO. / ID	READINGS (in inches)										
	1	2	3								
1	.	.	.								
2	0.218	0.218	0.218								
3	0.217	0.216	0.219								
4	.	.	.								
5	.	.	.								
6	.	.	.								
7	.	.	.								
8	.	.	.								
9	.	.	.								
10	.	.	.								
11	.	.	.								
12	.	.	.								
13	.	.	.								
14	0.218	0.219	0.218								
15	0.219	0.219	0.218								
16	0.218	0.220	0.219								
17	0.220	0.222	0.219								
18	0.218	0.217	0.215								
19	0.218	0.217	0.217								
20	0.219	0.221	0.219								
21	0.218	0.219	0.219								

The Inspection of the Dome Roof and UT readings were performed from the manlift limiting the inspection.

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Floating Roof

Does the tank have a floating roof? Yes ☐ No ☒ If no, the entire floating roof section is N/A.

Floating Roof Primary Mechanical Shoe Seal

Item No.	Acceptable	Ref 2.0	N/A	
FLR1	☐	☐	☒	Inspect seal condition, hangers, shoes (system vapor barrier, and attachment hardware) (ref. API 653, Paras. 4.2.3.3 & 6.2.3).

Floating Roof Primary Foam Log Seal

FLR2	☐	☐	☒	Inspect seal fabric, foam, hardware (ref. API 653, Para. 4.2.3.3).
------	--------------------------	--------------------------	-------------------------------------	--

Floating Roof Primary Seal (Other)

FLR3	☐	☐	☒	Type of primary seal (ref. API 653, Para. 4.2.3.3).
FLR4	☐	☐	☒	Check for mechanical damage and corrosion (wear on tip from contact with shell) (ref. API 653, Para. 4.2.3.3).
FLR5	☐	☐	☒	Measure seal gaps at regular intervals and record any visible seal damage (ref. API 653, Para. 4.2.3.3).
FLR6	☐	☐	☒	Conduct Visual inspection of bolts and fasteners, with special attention to product interface areas (ref. API 653, Para. 4.2.3.3).

Floating Roof Secondary Seal

FLR7	☐	☐	☒	Type of rim-mounted secondary seal (ref. API 653, Para. 4.2.3.3).
FLR8	☐	☐	☒	Check for mechanical damage and corrosion (wear on tip from contact with shell) (ref. API 653, Para. 4.2.3.3).
FLR9	☐	☐	☒	Measure seal gaps at regular intervals and record any visible seal damage (ref. API 653, Para. 4.2.3.3).
FLR10	☐	☐	☒	Conduct Visual inspection of bolts and fasteners, with special attention to product interface areas (ref. API 653, Para. 4.2.3.3).

Floating Roof Legs

FLR11	☐	☐	☒	Floating roof support legs. Record sizes and locate on layout. Count floating roof legs and match number on Layout(s) (ref. API 653, Paras. 4.2.3 & 9.10.2.1.5).			
	Number of Legs High Leg Setting Low Leg Setting				Leg Size	☐ Adjustable	☐ Fixed
FLR12	☐	☐	☒	Visual inspection of floating roof legs (bending, thinning or buckling) (ref. API 653, Para. 4.2.3 & API 650, Paras. C.3.3.3, C.3.10 & H.6.4).			
FLR13	☐	☐	☒	Condition of roof leg sleeves (cracking, thinning, buckling and presence of drain notch) (ref. API 653, Para. 4.2.3 & API 650, Paras. C.3.3.3 & C.3.10).			
FLR14	☐	☐	☒	Condition of roof leg reinforcing pads (cracking, buckling & inspect gussets) (ref. API 653, Para. 4.2.3).			
FLR15	☐	☐	☒	Roof leg pins (corrosion, sticking, missing) (ref. API 653, Para. 4.2.3).			
FLR16	☐	☐	☒	All roof legs at the same level (floating roof level) (ref. API 653, Paras. 4.2.3 & 9.10.2.1.5).			

Floating Roof Appurtenances

FLR17	☐	☐	☒	Binding of roof columns or supports (ref. API 653, Para. 4.2.3).
FLR18	☐	☐	☒	Damage to ladder or column wells and covers (ref. API 653, Para. 4.2.3).
FLR19	☐	☐	☒	Bonding static cable attached and in good condition (ref. API 653, Paras. 4.2.3 & 6.3.2.3 & API 650, Para. H.4.1.6).

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Item No.	Acceptable	Ref 2.0	N/A	
FLR20	☐	☐	☒	Roof drain sump condition (clean and free of debris) (ref. API 653, Para. 4.2.3 & API 650 Para. H.4.1.6).
FLR21	☐	☐	☒	Inspect rolling ladder or vertical ladder assembly (ref. API 653, Paras. 4.2.3 & 4.2.3.3 & API 650 Paras. C.3.7 & H.5.1).
FLR22	☐	☐	☒	Identify type, number and condition of anti-rotation details (ref. API 653, Para. 4.2.3 & API 650, Para. H.5.4).
				Type: _____ Quantity: _____
FLR23	☐	☐	☒	Inspect & report gauge pole diameter and type (ref. API 653, Para. 4.2.3 & API 650 Paras. C.3.3.6, C.3.14 & H.5.7). ☐ Slotted ☐ Solid Gauge Pole Diameter: _____
FLR24	☐	☐	☒	Inspect manway and appurtenances (ref. API 653, Para. 4.2.3 & API 650, Paras. C.3.3.6, C.3.11 & H.5.5).
FLR25	☐	☐	☒	Inspect Vacuum Breaker, rim vent, gauge hatch, gasket, etc. Record size and location on layout (ref. API 653, Para. 4.2.3 & API 650, Paras. C.3.3.6, C.3.9, C.3.15.3 & H.5.2.1).

Floating Roof - General

FLR26	☐	☐	☒	Levelness / condition of floating deck (ref. API 653, Paras. 4.2.3 & 9.10.2.1.5).
FLR27	☐	☐	☒	Signs of product on the floating roof (may indicate loss of flotation) (ref. API 653, Para. 4.2.3).

External Floating Roof

FLR28	☐	☐	☒	Condition of roof plates / welds (corrosion, coating failure, leaks, and debris on roof) (ref. API 653, Para. 4.2.3).
FLR29	☐	☐	☒	Inspect pontoons for water, product, residue and vapors. Check for presence of lock-down attachments on pontoon covers (ref. API 653, Paras. 4.2.3 & 9.12.3 & C.1.5.13 & API 650, Para. C.3.5).

Aluminum Pontoon Floating Roof

FLR30	☐	☐	☒	Check floating roof condition (rips, tears, buckled member, condition of hardware, broken or missing parts, product in panels) (ref. API 653, Para. 4.2.3).
FLR31	☐	☐	☒	If the floating roof has deck drains, check that all drains have working closures and bottom side tubes are below the product level.
FLR32	☐	☐	☒	Inspect aluminum pontoons for product inside.

Aluminum Full-Contact Floating Roof

FLR33	☐	☐	☒	Check floating roof condition (rips, tears, buckled members, condition of hardware, broken or missing parts, product in panels) (ref. API 653, Para. 4.2.3).
FLR34	☐	☐	☒	Check manway latches for workability and ensure that all opening manways are self-closing (should not be open while in-service).

Internal Steel Floating Roof

FLR35	☐	☐	☒	Visual inspection for signs of corrosion or pitting on top and product side surfaces (ref. API 653, Para. 4.2.3).
FLR36	☐	☐	☒	Visual inspection of all welds (ref. API 653, Para. 4.2.3).

Floating Roof Limitations

FLR37	☐	☐	☒	List any limitations to the floating roof inspection. Note: Client must be informed of any limitations to inspection while at the job site. All limitations must be properly documented and addressed accordingly in the Preliminary Report.
-------	--------------------------	--------------------------	-------------------------------------	--

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Y	N/A	Bottom Plate Examination - The bottom plates were examined utilizing the following inspection methods:					
☐	☒	HMT I1 MFL Bottom Scanner		Serial No.:			
☒	☐	MFE Enterprises 2412		Serial No.: 0020			
☐	☒	3D MFL Mapping Scanner		Serial No.:			
☐	☒	HMT Mini-I1 Scanner		Serial No.:			
☐	☒	RTD Mini-scanner		Serial No.:			
☐	☐	Other		Serial No.:			
DOCUMENT AS APPLICABLE →		Gain:		Threshold:			
Y	N/A						
☒	☐	Overall scanning condition of bottom plates:					
☒	☐	Ultrasonic (UT) testing of MFL indications					
☒	☐	Random Ultrasonic (UT) thickness point readings of bottom plates			Thickness readings per Plate:		1
☐	☒	100% UT of Critical Zone (CZ)					
☒	☐	UT scrubs in Critical Zone (CZ)		Spacing between UT scrubs (in feet):	19.6	Quantity of UT scrubs:	8
☐	☒	Random UT scrubs throughout Bottom		Quantity of UT scrubs:			
		☒ UT Scrub Size: 12-inch x 6-inch		☐ Other (Specify size):			
☒	☐	UT scrub locations documented on Bottom Layout with Minimum & Average for each location					
☒	☐	UT around & between existing patch plates					
☒	☐	Ultrasonic (UT) testing of Bottom Edge Projection		Spacing between UT measurements (in feet):	19.6	Quantity of UT measurements:	8
☐	☒	Other internal or external bottom UT (specify):					
☒	☐	Visual (VT) inspection of bottom plates					
☒	☐	Pit gauging performed					
Y	N/A	Areas restricted from MFL examination coverage due to physical limitations include:					
☒	☐	Near the Shell-to-Bottom and Plate-to-Plate Lap Welds					
☐	☐	At Roof Support Column(s)					
☐	☐	At Floating Roof Supports					
☐	☐	Near and Under the Automatic Gauge Base					
☐	☐	Under Internal Piping					
☐	☐	Near the Sump(s)					
☐	☐	Gauge Pole(s)					
☒	☐	Existing Patch Plates (Include patch plates on layout)					
☐	☐	Anti-Rotation Device(s)					
☐	☐	Coils Description -	Type:		Diameter:		
☒	☐	Other (describe): 14 inch diameter nozzle on plate 14					

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Y	N/A	Technical limitations associated with MFL scanning (Describe limitations in the space provided):
☒	☐	☐ Oil / ☐ Dirt / ☒ Debris / ☐ Rust / ☒ Scale / ☐ Product Residue / ☒ Other (Describe): Ice

☐	☒	Residual water (ponding):
--------------------------	-------------------------------------	---------------------------

☐	☒	Excessive and / or Variations in Coating Thickness:
--------------------------	-------------------------------------	---

☒	☐	Undulations (Waviness) in Bottom Plates: The bottom would sag when scanning floor plates causing the sensor bar to rub.
-------------------------------------	--------------------------	--

☐	☒	Edge Settlement:
--------------------------	-------------------------------------	------------------

☒	☐	Numerous Existing Lap Welded Patch Plates:
-------------------------------------	--------------------------	--

☐	☒	Severe Product Side Pitting:
--------------------------	-------------------------------------	------------------------------

☐	☒	Describe any other limitations not previously listed:
--------------------------	-------------------------------------	---

☐	☒	Were these limitations discussed with the Client prior to continuing the bottom scan?
--------------------------	-------------------------------------	---

Y	N/A	Bottom Plate Welds - The tank bottom plate lap welds were examined utilizing the following inspection methods:	
☐	☒	Vacuum Box (LT/BT) testing	Number of Product Leak Paths:
☐	☒	Magnetic Particle (MT) testing	Number of Recordable Indications:
☐	☒	Alternating Current Field Measurement (ACFM)	Number of Recordable Indications:
☒	☐	Visual (VT) inspection	Number of Recordable Indications: 0

☒	☐	Overall condition of lap welds:	Coated limiting the visual inspection.
-------------------------------------	--------------------------	---------------------------------	---

☐	☒	Other (describe):

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Y	N/A	Areas restricted from LT/BT examination coverage due to physical limitations include:
☐	☒	At roof support column(s)
☐	☒	At floating roof supports
☐	☒	Automatic gauge base
☐	☒	Under internal piping
☐	☒	Near the sump(s)
☐	☒	Near Bottom Edge Settlement
☐	☒	Other (describe):

Y	N/A	Shell-to-Bottom Weld Examination – The internal / external Shell-to-Bottom weld(s) were examined utilizing the following:			
☐	☒	Magnetic Particle (MT) testing	☐ Internal	☐ External	
☐	☒	Weld Preparation:	☐ Abrasive Blast	☐ Wire Wheel	☐ Hydro Blast ☐ Other
☐	☒	Number of Recordable Indications:			
☐	☒	Comments:			

☐	☒	ACFM testing	☐ Internal	☐ External	
☐	☒	Weld Preparation	☐ Abrasive Blast	☐ Wire Wheel	☐ Hydro-Blast ☐ Other
☐	☒	Coating Condition		Thickness	
☐	☒	Number of Recordable Indications:			
☐	☒	Comments:			

☐	☒	Vacuum Box (LT/BT) testing
--------------------------	-------------------------------------	----------------------------

☐	☒	Weld Preparation:	☐ Abrasive Blast	☐ Wire Wheel	☐ Hydro-Blast	☐ Other
--------------------------	-------------------------------------	-------------------	---	-------------------------------------	--------------------------------------	--------------------------------

☐	☒	Number of Product Leak Paths:	
--------------------------	-------------------------------------	-------------------------------	--

☒	☐	Visual (VT) inspection	☒ Internal	☒ External
☒	☐	Limitations:	Internal coating and External limited by vegetation, snow and ice.	

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Y	N/A	Sump Examination - The tank sump(s) were examined utilizing the following inspection methods:						
☐	☒	API Standard Sump:	Diameter:		Depth:		Nominal Thickness:	
☐	☒	Sixteen (16) Ultrasonic (UT) thickness readings were taken along the wall and ten (10) Ultrasonic (UT) readings were taken across the bottom in an "X" pattern.						
☐	☒	Dish-Style:	Diameter:		Depth:		Nominal Thickness:	
☐	☒	Twenty (20) Ultrasonic (UT) thickness readings were taken across the bottom in an X-pattern.						
☐	☒	100% UT of Sump						
☐	☒	Other UT of sump (Specify):						
Y	N/A	The following items refer to both style sumps:						
☐	☒	Random 6-inch x 6-inch Ultrasonic (UT) scrubs of the bottom and wall.						
☐	☒	Readings detected significantly lower than nominal. If so, detail findings:						
☐	☒	Visual (VT) inspection welds, bottom and wall condition. Note weld quality and surface condition.						
☐	☒	Quantity and range of product side pitting:		pits,		to		inch deep
☐	☒	Magnetic Particle (MT) testing of sump welds						
☐	☒	Quantity of Recordable MT Indications:						
☐	☒	Liquid Penetrant (PT) testing of sump welds						
☐	☒	Quantity of Recordable PT Indications:						
☐	☒	Describe limitations of Visual (VT) inspection or UT testing:						
☐	☒	Other Inspection methods performed (describe):						
Y	N/A	Shell Manway / Nozzle Examination –						
		The tank shell manways / nozzles were examined utilizing the following methods:						
☒	☐	4	Ultrasonic (UT) thickness readings per accessible manway / nozzle neck were taken.					
☒	☐	1	UT thickness readings per accessible manway / nozzle reinforcing plate, flange & cover (when present) were taken.					
☐	☒	MT of manway / nozzle neck(s)		☐ Internal		☐ External		
☐	☒	MT of manway / nozzle reinforcing plate(s)						
☐	☒	PT of manway / nozzle neck(s)		☐ Internal		☐ External		
☐	☒	PT of manway / nozzle reinforcing plate(s)						
☐	☒	ACFM of manway / nozzle neck(s)		☐ Internal		☐ External		
☐	☒	ACFM of manway / nozzle reinforcing plate(s)						
☒	☐	VT of manway / nozzle neck(s)		☒ Internal		☒ External		
☒	☐	VT of manway / nozzle reinforcing plate, flange, cover(s)						
☐	☒	Pressure test of manway / nozzle reinforcing plate(s)				Maximum PSIG:		
☐	☒	Pressure test type:		☐ Pneumatic	☐ Inert Gas	☐ Other (describe):		
☐	☒	Pressure test duration		Start time:			Stop time:	

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Y	N/A	Shell Plate Examination – The tank shell plates were examined utilizing the following methods:			
☒	☐	Random Ultrasonic (UT) readings were taken ☐ Internal ☒ External			
		Automated UT (ref. HMT NDT Procedure 1611.3)			
☐	☒	Automated UT (B-Scan)			
☐	☒	equally spaced drops were performed counterclockwise starting at Manway A			
☐	☒	Comments / Limitations for B-scan (wind girder, stiffening ring, etc.):			
		Telescopic pole:			
☐	☒	equally spaced pole drops were performed counterclockwise starting at Manway A			
☐	☒	Thickness readings per course were taken.			
		Ultrasonic (UT) readings were taken from the spiral stairway / vertical ladder:			
☒	☐	3	Readings per course were taken up ☐ spiral stairway ☐ vertical ladder		
		Random Ultrasonic (UT) of:			
☐	☒	Course 1 Shell Plates -		readings were taken per plate.	
☐	☒	Course 2 Shell Plates -		readings were taken per plate.	
☐	☒	CMLs Installed (Insulated Tank):	Quantity per course		Quantity overall:
☐	☒	CMLs Installed (Un-insulated Tank):	Quantity per course		Quantity overall:
☐	☒	CML locations documented on nozzle table			
☐	☒	CML type:		Other (describe):	
☒	☐	Describe any limitations experienced while performing shell UT: 3 shell UTs performed on course 1 at quadrants N, S, E, and W, and 3 per course performed on the west side of the tank from the manlift basket.			
☒	☐	Visual (VT) inspection of shell plates	☒ Internal	☒ External	
☐	☒	Comments / Limitations:			
Y	N/A	Fixed Roof Plate Examination – The fixed roof plates were examined utilizing the following methods:			
☒	☐	3	Ultrasonic (UT) thickness readings were taken per plate		
☐	☒		Ultrasonic (UT) thickness reading(s) was/were taken per plate / every _____ feet in an "X" pattern.		
☐	☒		Ultrasonic (UT) thickness readings were taken per fixed roof nozzle neck.		
☒	☐	Visual (VT) inspection of fixed roof	☒ Internal	☒ External	
☒	☐	Nominal Fixed Roof Plate Thickness:	0.188 inch		
☐	☒	CMLs Installed (Insulated Tank):	Quantity overall:		
☐	☒	CMLs Installed (Un-insulated Tank):	Quantity overall:		
☐	☒	CML locations documented on layout			
☐	☒	CML type:		Other (describe):	
☒	☐	Comments / Limitations: Dome roof UT readings recorded from the manlift basket.			

Y	N/A	Floating Roof Plate Examination – The floating roof plates were examined utilizing the following methods:			
☐	☒	Ultrasonic (UT) thickness readings were taken per plate			
☐	☒	Ultrasonic (UT) thickness reading(s) was/were taken per plate / every _____ feet in X pattern.			
☐	☒	Ultrasonic (UT) thickness readings were taken per floating roof nozzle neck.			
☐	☒	Nominal Floating Roof Plate Thickness:			

Y	N/A	Floating Roof Plate Examination – The floating roof plates were examined utilizing the following methods (Cont'd.):			
☐	☒	Visual (VT) inspection of floating roof performed.			
☐	☒	Comments / Limitations:			

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Y	N/A	Floating Roof Pontoon – The floating roof pontoon plates were examined utilizing the following methods:	
☐	☒		Ultrasonic (UT) readings were taken per pontoon plate
☐	☒		Ultrasonic (UT) readings were taken per pontoon outside rim plate
☐	☒		Ultrasonic (UT) readings were taken per pontoon inside rim plate
☐	☒	Visual (VT) inspection of floating roof pontoon welds performed.	
☐	☒	Comments / Limitations:	

Y	N/A	UT Documentation - Bottom, Sump(s), Shell, Roof(s), Nozzle(s)	
☐	☒	UT thickness measurements downloaded to an Excel spreadsheet.	
☐	☒	UT thickness measurements handwritten on separate forms.	
☐	☒	Bottom / Roof plate UT thickness measurements cross-referenced with number of plates on layout(s) for accuracy.	
☐	☒	Type (point readings / scrubs) and quantity of UT verified with scope of work / proposal.	

Inspection Data

List All Personnel On Site (full names for final report purposes):			
Y	N/A	Method	Performed By
☒	☐	MFL	Garrett Brown
☐	☒	AMMFL	
☐	☒	MFL (Mini-scanner)	
☐	☒	SLOFEC	
☒	☐	BOTTOM REDUCTION	Aaron Crum & Garrett Brown
☒	☐	UT	Aaron Crum
☐	☒	AUT (CDE)	
☐	☒	MT	
☒	☐	VT	Aaron crum
☐	☒	ACFM	
☐	☒	LT/BT	

Inspection Data (Cont'd.)

Y	N/A	Method	Performed By
☐	☒	LT/PO	
☐	☒	PT	
☐	☒	Holiday Testing	
☒	☐	Photos Taken	Aaron Crum
☒	☐	Nozzle Table Completed	Aaron Crum
☒	☐	Bottom Layout Drawn	Garrett Brown
☒	☐	Fixed Roof Layout Drawn	Garrett Brown
☐	☒	Floating Roof Layout Drawn	
☐	☒	Other Drawing(s)(Specify Type):	

Equipment

Y	N/A	Magnetic Flux Leakage (MFL)
☒	☐	Performed in accordance (HMT MFL Procedure No. 1611.04 / 1611.05 / 1611.06 / 1611.24 / 1611.25)
☐	☒	HMT I-1 Bottom Scanner (HMT Procedure No. 1611.06).
☐	☒	3D MFL Mapper Scanner (HMT Procedure No. 1611.24).

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

☒	☐	MFE Enterprises Floorscanner Type 2412 (HMT Procedure No. 1611.05).
☐	☒	HMT Mini I-1 Bottom Scanner (HMT Procedure No. 1611.25).
☐	☒	RTD mini-scanner (HMT Procedure No. 1611.04).
☐	☒	Other (describe):

Y	N/A	Ultrasonic (UT)			
☐	☒	Performed in accordance with HMT UT Procedure No. 1611.01			
☐	☒	GE / Krautkramer Branson Flaw Detector Model:		Serial No.:	
☐	☒	Panametrics Model:		Serial No.:	
☒	☐	Other (Describe Mfg. & Model):	USM GO	Serial No.:	20060134

☐	☐	Dual element Model:		Dia.		Freq.	
☐	☐	Single element Model:		Dia.		Freq.	
☐ BRITEK, 7.5 MHz, 0.375 in., dual element				☐ GE / KBA CA 215, 5.0 MHz, 0.250 in., single element			
☒ BRITEK, 7.5 MHz, 0.312 in., dual element				☐ GE / KBA FH2E-WR, 7.5 MHz, 0.375 in., dual element			
☐ NDT Systems, 5.0 MHz, 0.250 in., dual element				☐ Xactex, 5.0 MHz, 0.250 in., single element			
☐ Harisonic CM0504-S, 5.0 MHz, 0.250 in., single element				☐ Technisonic CF-0503-GP, 5.0 MHz, 0.250 in., single element			
☐ Other dual element (Describe):				☐ Other single element (Describe):			

☐	☒	Crawler Data Evaluation (CDE) B-Scan performed in accordance with HMT UT Procedure No. 1611.03			
☐	☒	ScanTech Instruments, Inc. – Model: ☐ X1B ☐ C2 ☐ Spider	Serial No.:		
☐	☒	Other B-scan equipment (describe):			

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Equipment (Cont'd.)

Y	N/A	Calibration Blocks
☒	☐	5-step, carbon steel test block (0.100 inch to 0.500 inch).
☐	☒	Tipsy Step Block, 1018 carbon steel (1-inch to 4.5-inches in 0.500 inch increments).
☐	☒	5-step, 304 stainless steel test block (0.100 inch to 0.500 inch).
☐	☒	5-step, aluminum test block (0.100 inch to 0.500 inch).
☐	☒	5-step, test block (0.100 inch to 0.500 inch). Describe alloy (Inconel, Monel, other):
☐	☐	Other (describe):

Y	N/A	Couplant
☒	☐	Echogel 20 as couplant
☐	☒	High-temperature couplant (describe):
☐	☒	Water
☒	☐	Other (describe): Windshield washer fluid for UT scrubs on tank bottom

Y	N/A	Pit Gauging
☒	☐	W.R. Thorpe Co. standard pipe pit gauge
☐	☒	Fillet gauge Make:
☐	☒	V-WAC gauge Make:
☐	☒	Other (describe):

Y	N/A	Vacuum Box (LT/BT)
☐	☒	Performed in accordance with HMT LT/BT Procedure No. 1611.10
☐	☒	American Seam Tester, Series A 100 (Flat) or equivalent
☐	☒	American Seam Tester, Series A 300 (Corner) or equivalent
☐	☒	Other (describe):

Y	N/A	Liquid Penetrant (PT)
☐	☒	Performed in accordance with HMT PT Procedure No. 1611.14 (Solvent Removable)
☐	☒	Performed in accordance with HMT PT Procedure No. 1611.15 (Water Washable)
		☐ Solvent ☐ Water Washable
		☐ Visible ☐ Florescent

		Manufacturer of PT Materials:	
		Brand Name of Liquid Penetrant Used:	
		Solvent / Cleaner Batch Number	
		Penetrant Batch Number	Color
		Developer Batch Number	Color

HMT Inspection API 653 Inspection Checklist	HMT Job No.	26281659	Item #12.
	Tank No.	North Water Tank	

Equipment (Cont'd.)

Y	N/A	Alternating Current Field Measurement (ACFM)	
☐	☒	Performed in accordance with HMT ACFM Procedure No. 1611.18	
☐	☒	AMIGO	
☐	☒	Other (describe):	Make & Model:
		Serial Number:	
		Probe Serial Number:	

Y	N/A	Magnetic Particle (MT)	
☐	☒	Performed in accordance with HMT MT Procedure No. 1611.08	
☐	☒	Parker Probe Model B-300 (AC)	Serial No.
☐	☒	Parker Probe Model DA-400 (AC/DC)	Serial No.
☐	☒	Other Model	Serial No.
☐	☒	Magnetizing Process	☐ Continuous ☐ Residual

☐	☒	Blacklight - Spectroline, Model BIB-150B
☐	☒	Other Blacklight (describe Make & Model)
☐	☒	Blacklight Intensity Meter – Spectroline, Model DM-365XA
☐	☒	Other Blacklight Intensity Meter (describe Make & Model)
☐	☒	Blacklight Intensity Meter

☐	☐	Ten (10) Pound Test Weight
--------------------------	--------------------------	----------------------------

☐	☒	Magnetic Dusting Powder
Manufacturer of MT Particles:		

	☐	Wet – Batch Number		Color	
	☐	Dry – Batch Number		Color	
	☐	Visible – Batch Number		Color	
	☐	Fluorescent – Batch Number		Color	
☐	☐	Particle Application Method:	☐ Bulb ☐ Spray ☐ Bath		
☐	☐	White Contrast			
☐	☐	Other (describe):			

Y	N/A	Laser Level / Total Station
☐	☒	Topcon Marksman RL-H3C self-leveling rotating laser.
☐	☒	Topcon Marksman RL-H4C self-leveling rotating laser.
☐	☒	Leica Rugby 100 self-leveling rotating laser.
☐	☒	Spectra Precision LL300 self-leveling rotating laser.
☐	☒	Other (describe Make & Model):
☐	☒	Serial No of Rotating Laser Level:
☒	☐	Topcon Total Station (Model & Serial No.): RL-HAS & 1A050055 (Calibrated 11/18/2022)
☐	☒	Leica Total Station (Model & Serial No.):

Y	N/A	Additional Work Performed
☐	☒	Helium Mass Spectrometer Leak (MSLT) testing, performed in accordance with HMT Procedure No. 1611.13 (Complete MSLT Checklist) .
☐	☒	Kontroll Technik Saturated Low Frequency Eddy Current (SLOFEC) scanning of the tank bottom for the detection of significant product side or soil side metal loss performed in accordance with HMT Procedure No. 1611.07 (Complete SLOFEC Checklist) .
☐	☒	Verticality inspection performed in accordance with HMT Procedure No. 1611.19 (Complete Verticality Checklist) .
☐	☒	Coating Inspection (Holiday Test), performed in accordance with HMT Procedure No. 1611.16
☐	☒	Leak Test Procedure Utilizing Penetrating Oil Technique (LT/PO), performed in accordance with HMT Procedure No. 1611.12
☐	☒	Other (describe):

[illegible]



Town of Johnstown

TOWN COUNCIL AGENDA COMMUNICATIONS

AGENDA DATE: March 20, 2023

SUBJECT: RFP Award for Aquatic Center Feasibility Study

ACTION PROPOSED: Consider Awarding the Aquatic Center Feasibility Study to OLC Architecture, Interiors & Aquatics

ATTACHMENTS:

1. RFP for Aquatic Center Feasibility Study
2. OLC Proposal
3. Professional Services Agreement

PRESENTED BY: Mitzi McCoy, Deputy Town Manager

AGENDA ITEM DESCRIPTION:

Enclosed for your review and consideration is a request to award the aquatic center feasibility study to OLC Architecture, Interiors & Aquatics.

The Town has recently acquired two properties, one that was formerly the location of Letford Elementary School and one that is located southeast of Town Hall that need to be master planned. As part of the consideration for those properties, in 2022, residents requested that the Town consider pursuing the construction of an aquatics center. On January 8, 2023, the Town issued a Request for Proposal (RFP) to complete a feasibility study for an outdoor aquatics center for Johnstown. The final plan will include a full site analysis with all estimated costs, including design, constructing, permitting, soft costs, parking requirements, long-term operation and maintenance costs and projected revenues for 20 years.

The Community That Cares

www.TownofJohnstown.com

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141

The Town received four bids on the project as summarized below:

Ranking	Consultant	Bid Price	Reimbursables	Total Price
1	OLC Architects, Interiors & Aquatics	\$74,980	\$4,000	\$78,980
2	Sports Facilities Companies	\$55,360	Not specifically stated	>\$55,360
3	Hotel & Leisure Advisors	\$75,000	\$11,000	\$86,000
4	Architect One	\$79,500	\$0	\$79,500

Town Staff reviewed the four bids using criteria outlined in the RFP. The criteria included the following:

- Previous experience in similar projects/references included
- Expertise of key personnel and/or team partners for identified roles
- Project understanding and proposed strategy for success
- Approach to project management and delivery
- Cost & Schedule

After careful deliberation and review, Staff recommends awarding the bid to OLC Architecture, Interiors & Aquatics based on their approach and extensive experience. The total cost of the project is \$78,980.

LEGAL ADVICE:

The Town Attorney has reviewed and accepted the language in the Town's Professional Services Agreement to be utilized for contract execution.

FINANCIAL ADVICE:

In Fiscal Year 2023, the Town budgeted \$250,000 for master planning in the Parks and Open Space Fund.

RECOMMENDED ACTION: Staff recommends awarding the Aquatic Center Feasibility Study to OLC Architecture, Interiors and Aquatics.

SUGGESTED MOTIONS:

The Community That Cares

johnstown.colorado.gov

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141

For Approval:

I move to approve awarding the Aquatic Center Feasibility Study to OLC Architecture, Interiors and Aquatics for a total amount not to exceed \$78,980.

For Denial:

I move that Council denies awarding the Aquatic Center Feasibility Study to OLC Architecture, Interiors and Aquatics.

Reviewed and Approved for Presentation,



Town Manager



Town of Johnstown, Colorado

Request for Proposal

Aquatics Centers Feasibility Study

Issue Date: Wednesday, January 18, 2023
Due Date: Friday February 17, 2023 – 12:00 p.m.
(Mountain Time)

REQUEST FOR PROPOSALS

Notice is hereby given that proposals will be received by the Town of Johnstown, Colorado, for:

Aquatics Centers Feasibility Study

Submittals are to the Town of Johnstown either via email mlecerf@johnstownco.gov or regular mail to 450 S. Parish Avenue / PO Box 609 / Johnstown, CO 80534

Proposals received later than **12:00 p.m. on Friday, February 17, 2023 will not** be considered.

A copy of this Request for Proposal (RFP) may be obtained from Town's web site at <http://www.johnstownco.gov/>. Click on the Bids & RFP's link found under "Doing Business".

The Town of Johnstown reserves the right to reject any and all proposals, and to waive irregularities and informalities in the submittal and evaluation process. This RFP does not obligate the Town to pay any costs incurred by respondents in the preparation and submission of a proposal. Furthermore, the RFP does not obligate the Town to accept or contract for any expressed or implied services.

A Service Provider response that indicates that any of the requested information in this RFP will only be provided if and when the Service Provider is selected as the apparently successful Service Provider is not acceptable, and, at the Town's sole discretion, may disqualify the proposal from consideration.

The Town requires that no person shall, on the grounds of race, religion, color, national origin, sex, age, marital status, political affiliation, sexual orientation, or the presence of any sensory, mental, or physical disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity. The Town further assures that every effort will be made to ensure non-discrimination in all of its programs and activities, whether those programs are federally funded or not.

In addition to nondiscrimination compliance requirements, the Service Provider(s) ultimately awarded a contract shall comply with federal, state and local laws, statutes and ordinances relative to the execution of the work. This requirement includes, but is not limited to, protection of public and employee safety and health; environmental protection; waste reduction and recycling; the protection of natural resources; permits; fees; taxes; and similar subjects.

Dated this 18th Day of January 2023.

Matt LeCerf
Town Manager
Town of Johnstown

Background Information

The Town of Johnstown is located in Northern Colorado along the Interstate 25 corridor. The community and the Northern Colorado region is among one of the fastest growth areas in the State and the Nation. Johnstown is incorporated in both Weld and Larimer Counties and is surrounded by other suburban cities and pockets of unincorporated areas as well. The Town is near several major transportation routes including Interstate 25, State Route 60, and State Route 34. These routes connect the Town economically and socially.

Johnstown was incorporated in 1907, having a current estimated population of 19,500. The community is growing at a rate of about 5% annually. Johnstown is the 8th largest Town in Weld County. Since its incorporation, Johnstown has grown in geographic size to fifteen square miles. This growth occurred primarily through the annexation of property over time by interested property owners.

Johnstown operates under a Council-Manager form of government. The Town Council is the policy-making branch of Johnstown's government and consists of seven members elected at large to staggered, four-year terms. The Mayor is elected by the voting public. The Town Council is supported by several advisory boards and commissions and the Town Manager. The Town Manager is appointed by the Town Council and serves as the professional administrator of the organization, coordinating its day-to-day activities.

Purpose and Background

The Town of Johnstown has developed several healthy partnerships and one of the most significant has been with the Weld RE-5J School District. As part of this partnership, in 2020 the Town agreed to exchange property with the District whereby the Town would provide the District with an approximately 10 acre parcel of land for the construction of a new elementary school. In exchange, Johnstown would receive the land which was the site of the old elementary school which is currently being demolished. After completion of demolition the Town would be provided with the land consisting of approximately 5.5 acres. The Town has also been the recipient of an approximate 60 acres of land, generally southeast of Town Hall.

Consequently, the Town has a unique opportunity to master plan these two properties. One of the proposals recently presented to Council was an idea from residents requesting that the Town consider pursuing the construction of an aquatics center. The Johnstown Town Council actively listens and considers requests from citizens about issues that benefit and enhance the quality of life in the Community.

To this extent, the Council desires to explore the option of an aquatics center that would meet the needs of the community by understanding the financial feasibility of the project from the planning, design, sizing, and construction and including the operations and maintenance of the facility into the future. This study will be the foundation and could possibly a decision point on if the Town will proceed with this project or not.

The Town is seeking a consultant to develop a robust aquatics facility financial feasibility study to identify and evaluate the two (2) potential locations and design concepts for a large aquatics facility. Right sizing of the aquatics facility should be based on the current and future

needs of the community, also considering the Town's growth trends and the outside area of influence this facility will bring visitors. Based on the location of the facility it is unclear if there are opportunities for other amenities on the site that would be additional recreational amenities. If additional space does exist, recommendations may be requested as part of this study.

The final plan should include a full site analysis with all estimated costs, including design, constructing, permitting, soft costs, parking requirements, long-term operation and maintenance costs and projected revenues for 20 years, etc. for the site.

Performance Schedule

Work for this contract will commence in March 2023 with substantial completion by August 2023. A final presentation to Town Council is expected by the Consulting Firm following approval of the draft study.

March 2023	Work begins
March – July 2023	Consulting Firm team works with Town Staff and Exploratory Committee (PFEC) to present and refine work
August 2023	Substantial completion
August 2023	Presentations to Town Council

Scope of Work

Project

Overview

- Develop a robust aquatics facility financial feasibility study to evaluate the locations identified and design concepts for one large aquatics and if appropriate ancillary recreation amenities. Components of the facilities are established in the "Facility Concept Plans" section below.
- The final plan should include a full site analysis with all estimated costs, including design, constructing, permitting, soft costs, parking requirements, long-term operation and maintenance costs and projected revenues for 20 years, etc. for the site.

Stakeholder Input/Engagement:

Community engagement will be sought through an Exploratory Committee scheduled to occur approximately March 2023 through July 2023. This committee will consider concept plans developed by the contractor, sites and corresponding costs and make a recommendation as necessary and appropriate.

Demographics and Market Analysis:

The consultants will need to conduct a market and trends analysis to help refine the building

program plans.

Site Selection and Analysis:

For the selected sites, a site analysis should include a preliminary geotechnical site evaluation, an environmental evaluation of the natural and built environment, and other due diligence processes that will inform the site's feasibility and associated costs specific to the site.

Site options for consideration include the following:

- Aquatics & Recreation Center (large facility)
 - Letford Elementary School Site
 - Town owned 60-acre parcel

Facility Concept Plans:

Based on community feedback and recommendations the consultant will work with the Exploratory Committee in pursuit of the optimal and most desired aquatics center facility. The consultant will be expected to work with the Exploratory Committee in identifying the desired amenities to be incorporated into the aquatics facility. The consultant is asked to create concept designs with corresponding costs for both capital and operating expenses. All facilities will require suitable administrative and storage spaces and will be built using universal design standards. As previously mentioned, right sizing** the aquatics facility should be based on the current and future needs of the community, also considering the Town's growth trends and the outside area of influence this facility will bring visitors.

Table 1: Draft Building Program Plans

Draft Building Program Plans
Aquatics Center (Large facility, approx. 80,000** sq. ft)
• Aquatics ○ Lap pool ○ Warm water leisure pool with recreation elements (splash pad, lazy river, water slide(s) etc.) ○ Splash pad ○ Shade structures ○ Warm water instructional pool ○ Therapy pool ○ Locker rooms

Capital and Operations Analysis:

Develop a cost analysis based on the building program for each of the concepts to include

capital and operating cost projections. Capital costs should include design, environmental review, permitting, construction, project management and other soft costs. Operating costs should include both revenue and expense.

Deliverables:

1. Site analysis and concept plan for the two sites with a large aquatics center.
2. Complete cost analysis for all selected concept plans.
3. Final written report including a digital PDF file.
4. Up to 4 presentations and discussions with the Exploratory Committee.
5. Presentations of findings/recommendations to Town Council.
6. Presentation file for Town use at additional community meetings.

Submission Criteria

Proposals should be prepared simply, providing straight forward, concise descriptions of the applicant's capabilities to satisfy the requirements of the request. Proposals should stay within the 25-page limit.

Proposals must include the following:

1. A description of qualifications, including:
 - Project specific experience related to aquatic center feasibility studies and plans.
 - Company information including time the company has been in business and business experience.
 - Key personnel, both internal and subcontracted, to be assigned to this Project; this should include their role(s), unique skills, experiences, and qualifications for this Project.
2. Implementation plan including:
 - A statement of your understanding of the various aspects of the Project.
 - A discussion of your firm's approach to this Project.
 - A complete description of method to complete the scope of work.
 - A summary work coordination plan and schedule(s) describing how the goals, tasks, and other elements of the Project can be expected to be completed during the Project duration.
 - Detailed information on the Contractor's proposed fee schedule for items and/or services, proposed and any variation for non-routine services.
3. Examples of relevant projects:
 - Provide information about similar projects or clients for whom you have completed projects or provided similar operations and services, with an emphasis on recent and related projects.
4. References:
 - A list of names and phone numbers of three client references that would be most knowledgeable of your firm's performance on these similar projects. Please verify both name and contact phone number in advance before including this information in the proposal. References involving past Town of Johnstown projects will not be accepted.

Minimum Qualifications

Demonstrated experience creating similar park, recreation, and aquatic center redevelopment and facility concept plans.

Proposal Submittal Instructions

Please note: The following general requirements are mandatory for all proposals. Proposals submitted after the deadline date and time or lacking one or more of the following requirements will not be accepted.

- 1. Proposals must be received no later than 12:00 p.m. on Friday, February 17, 2023 (Mountain Time).**
2. Emailed proposals should include, "Johnstown Aquatics Centers Feasibility Study" in the subject line and be addressed to mlecerf@johnstownco.gov.
3. All proposals sent electronically must be in the form of a PDF or MS Word document and cannot exceed 20MB.
4. Please make sure you stay within 25-page limit on your proposal. Front and back is considered 2 pages.
5. If paper proposals are being submitted, they must consist of one original and one copy. The Town must receive any paper submittal by 12:00 p.m. on Friday, February 17, 2023 (Mountain Time), and any delivery received after the deadline will be rejected. These can be mailed or delivered to:

Town of Johnstown
ATTN: Town Manager
450 S. Parish Avenue
PO Box 609
Johnstown, CO 80534

6. All proposals must include the legal name of the organization, firm, individual or partnership submitting the RFP. Include the address of the principal place of business, mailing address, phone numbers, emails, fax number (if one exists) and primary contact person.
7. To be evaluated, a proposal should address all requirements and instructions contained within.
8. Provide all references and materials required by the RFP instructions within.

Questions: Questions regarding the RFP process, scope of work, or evaluation process must be submitted in writing and should be addressed to Matt LeCerf, Town Manager, at mlecerf@johnstownco.gov. Questions must be submitted before 5:00 p.m. on Wednesday, February 8, 2023. A response to all questions will be provided not later than February 10, 2023. An addendum of all questions and answers will be made available on the Town's website on the Bids and RFP page: <https://johnstown.colorado.gov/bidsrfps>.

Submittal Deadlines

The Town's estimated* schedule for review of the RFP submittals and final selection of the Contractor in 2023 is as follows:

Wednesday, January 18	RFP posted
Wednesday, February 8	Deadline for questions: 5:00 p.m. Final
Friday, February 10*	Addendum Issued - Responses to questions posted: 5:00 p.m.
Friday, February 17	Request for Proposal Submittals Deadline: 12:00 p.m.
February 20 – February 24*	Evaluation Period – including interviews (if necessary)
March 6, 2023*	Contract Awarded

Selection Criteria

The Town will make a selection based on the evaluation of the written proposals. The Town may also conduct an interview process with scoring used to determine the selected Contractor. The Town may elect to interview some or all proposers who submitted proposals. The Town reserves the right to make a selection based only on the evaluation of the written proposals.

Written proposals will be evaluated based on the following criteria:

Criteria	Points
Previous experience in similar projects/references included	0-15
Expertise of key personnel and/or team partners for identified roles	0-20
Project understanding and proposed strategy for success	0-25
Approach to project management and delivery	0-25
Cost & Schedule	0-15
Maximum Points	100

Interviews may be conducted with two or more firms selected by Town staff from those who submit SOQs. The Town of Johnstown interview team will consist of members directly related to the Project's scope of work. The interviews will be conducted remotely, and the consultant team will be responsible for choosing, testing and running the interview platform.

If interviews are conducted, each interview shall not exceed one hour and will generally follow this format. Predetermined interview questions from Town will be provided to each firm selected for interview within 3 business days of being notified of their selection.

- Consultant presentation, format optional (approximately 20 minutes)
- Predetermined interview questions from Town Staff (approximately 20 minutes)
- Open question and answer session (approximately 20 minutes)

Contract

The Consultant and the Town will execute a Professional Services Agreement for Recreation and Aquatics Centers Feasibility Study (Attachment A).

Terms and Conditions

- A. The Town reserves the right to reject any and all proposals, and to waive minor irregularities in any proposal.
- B. Proposers responding to this RFP must follow the procedures and requirements stated in the RFP document. Adherence to the procedures and requirements of this RFP will ensure a fair and objective analysis of your proposal. Failure to comply with or complete any part of this RFP may result in rejection of your proposal.
- C. The Town reserves the right to request clarification of information submitted, and to request additional information on any proposal.
- D. The Town reserves the right to award any contract to the next most qualified agency, if the successful agency does not execute a contract within 30 days of being notified of selection.
- E. Any proposal may be withdrawn up until the date and time set above for opening of the proposals.
- F. The contract resulting from acceptance of a proposal by the Town shall be in a form supplied by the Town and shall reflect the specifications in this RFP. A copy of the Town's standard Professional Services Agreement is available for review (see attachment A). The Town reserves the right to reject any proposed agreement or contract that does not conform to the specifications contained in this RFP and which is not approved by the Town Attorney.
- G. The Town shall not be responsible for any costs incurred by the agency in preparing, submitting or presenting its response to the RFP.
- H. Any material submitted by a proposer shall become the property of the Town. Materials submitted after a contract is signed will be subject to the ownership provision of the executed contract.
- I. The Town reserves the right not to award any portion or all of the project if it finds that none of the proposals submitted meets the specific needs of the project. The Town reserves the right to modify the scope of work and award portions of this RFP to the selected vendor. The Town reserves the right to award this work to multiple vendors if the scope of work would be best completed by multiple vendors and their associated experience.

Public Disclosure

Once submitted to the Town, proposals shall become the property of the Town, and all proposals shall be deemed a public record as defined in "Colorado Open Records Act". Any proposal containing language which copyrights the proposal, declares the entire proposal to be confidential, declares that the document is the exclusive property of the proposer, or is any way contrary to state public disclosure laws or this RFP, could be removed from consideration. The Town will not accept the liability of determining what the proposer considers proprietary or not. Therefore, any information in the proposal that the proposer claims as proprietary and exempt from disclosure must be clearly designated. It must also include the exemption(s) from disclosure upon which the proposer is making the claim, and the page it is found on must be identified. With the exception of lists of prospective proposers, the Town will not disclose RFP proposals until a bid selection is made. At that time, all information about the competitive procurement will be available with the exception of: proprietary/confidential portion(s) of the proposal(s), until the proposer has an adequate opportunity to seek a court order preventing disclosure. The Town will consider a proposer's request for exemption from disclosure; however, the Town will make a decision predicated upon the "Colorado Open Records Act".

DBE Participation

The Town encourages DBE firms to submit qualifications and encourages all firms to team with DBE firms in their pursuit of this project.

Federal Debarment

The Bidder shall not currently be debarred or suspended by the Federal government. The Bidder shall not be listed as having an "active exclusion" on the U.S. government's "System for Award Management" database (www.sam.gov).

Attachment A

**TOWN OF JOHNSTOWN
PROFESSIONAL SERVICES AGREEMENT**

THIS PROFESSIONAL SERVICES AGREEMENT (the “Agreement”) is made and entered into this ____ day of _____ 20__ (the “Effective Date”) by and between the Town of Johnstown, Colorado, a Colorado home-rule municipal corporation (the “Town”) and _____, a _____ (“Contractor”) (collectively, the “Parties”).

RECITALS

WHEREAS, the Town desires to engage the services of Contractor and Contractor desires to provide those services more fully described on Exhibit A, attached hereto and incorporated herein by reference (“Services”), to the Town; and

WHEREAS, the Parties wish to memorialize their contractual relationship.

AGREEMENT

NOW, THEREFORE, incorporating the foregoing Recitals herein and in consideration of the mutual promises, agreements, undertakings and covenants set forth herein and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby mutually agree as follows:

SECTION 1: PARTIES

1.01 Town. The Town is a home-rule municipal corporation located in Johnstown, Colorado.

1.02 Contractor. Contractor is a private, independent business entity who will exercise discretion and judgment of an independent contractor in the performance and exercise of its rights and obligations under this Agreement.

SECTION 2: SERVICES, COMPENSATION AND TERM

2.01 Services. Contractor agrees to perform the Services for the Town.

2.02 Compensation. In consideration of Contractor’s performance of the Services contemplated herein, the Town agrees to pay Contractor the compensation set forth on Exhibit A. Contractor shall submit detailed invoices reflecting the portion of the Services completed to the date of the invoice. The Town shall provide payment for Services to Contractor within thirty (30) days of receipt of the invoice. In its discretion, the Town may withhold payment for disputed portions of invoices on the condition that the Town provides written notice to Contractor of the dispute. Upon delivery of notice, the Town and Contractor shall promptly

endeavor to resolve such dispute.

2.03 Expenses: Contractor shall not incur any expense or debt on behalf of the Town without the Town's prior written authorization.

2.04 Term. Unless otherwise terminated in accordance with Section 5, the term of this Agreement shall be from the Effective Date through August 31, 2023, and shall not extend beyond that date absent the written approval of the Town.

SECTION 3: OPERATIONS

3.01 Contractor Status. Contractor avers that it has the background, expertise and education to provide the Services. Contractor shall be responsible for the proper performance of the Services in accordance with the terms hereof. Contractor shall obtain the necessary permits, if any, and maintain all required licenses, including but not limited to a Town business license.

3.02 Schedule. Unless otherwise set forth in Exhibit A, Contractor shall provide the Services in accordance with the timeline requested by the Town

SECTION 4: INSURANCE AND INDEMNITY PROVISIONS

4.01 Insurance.

A. Contractor understands and agrees that Contractor shall have no right of coverage under any existing or future Town comprehensive or personal injury liability insurance policies. As a material term of this Agreement, Contractor agrees to maintain and keep in force during the term of this Agreement one or more policies of insurance written by one or more responsible insurance carrier(s) authorized to do business in the State of Colorado in the following amounts:

1. Workers' compensation insurance as required by law;
2. Commercial general or business liability insurance with minimum combined single limits of ONE MILLION DOLLARS (\$1,000,000.00) each occurrence and TWO MILLION DOLLARS (\$2,000,000.00) general aggregate;
3. Automobile liability insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS (\$1,000,000) for any one occurrence, with respect to each of Contractor's owned, hired or non-owned vehicles assigned to or used in performance of the Services. In the event that Contractor's insurance does not cover non-owned automobiles, the requirements of this paragraph shall be met by each employee of Contractor who utilizes an automobile in providing services to Town under this Agreement; and
4. Professional liability insurance with minimum limits of ONE MILLION DOLLARS (\$1,000,000.00) each claim and TWO MILLION

DOLLARS (\$2,000,000.00) general aggregate.

B. Contractor shall procure and maintain the minimum insurance coverages listed herein. All coverages shall be continuously maintained to cover all liability, claims, demands and other obligations assumed by Contractor pursuant to this Agreement. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage. The Town shall have the right to request and receive a certified copy of any policy and any endorsement thereto. Except for workers compensation insurance, the Town shall be listed as an additional insured party on Contractor's insurance policies.

C. A certificate of insurance shall be completed by Contractor's insurance agent(s) as evidence that policies providing the required coverages, conditions and minimum limits are in full force and effect, and, upon request by the Town, shall be subject to review and approval by the Town. The certificate shall identify this Agreement and shall provide that the coverages afforded under the policies shall not be canceled, terminated or materially changed until at least thirty (30) days prior written notice has been given to Town. If the words "endeavor to" appear in the portion of the certificate addressing cancellation, those words shall be stricken from the certificate by the agent(s) completing the certificate. The completed certificate of insurance shall be provided to the Town.

4.02 Damage and Indemnity. Contractor assumes full responsibility for any and all damages caused by Contractor's exercise of its activities, or failures to act, under this Agreement. Contractor agrees that it will at all times protect, defend, indemnify and hold harmless the Town, its elected officials, employees, agents, and their successors and assigns, from and against all liabilities, losses, claims, demands, actions and costs (including reasonable attorneys' fees), arising from or related to loss or damage to property or injury to or death to any persons arising from or resulting in any manner from the actions or failures to act of Contractor or any invitees, guests, agents, employees or subcontractors of Contractor, whether brought by any of such persons or any other person.

SECTION 5: TERMINATION

5.01 Termination. The Town or Contractor may terminate this Agreement, with or without cause, by providing thirty (30) days prior written notice to the other Party. Notwithstanding the foregoing, if the Town terminates this Agreement for cause and determines that a notice period is not in the best interests of the Town, the Town may terminate this Agreement by providing written notice to Contractor effective immediately.

SECTION 6: INDEPENDENT CONTRACTOR

6.01 Independent Contractor. Contractor understands and agrees that Contractor is an independent contractor and not an employee of the Town. The Town shall not provide benefits of any kind to Contractor. The Town shall not be responsible for withholding any portion of Contractor's compensation for the payment of Federal Insurance Contributions Act (FICA) tax, workers' compensation, or other taxes or benefits. **CONTRACTOR IS NOT ENTITLED TO UNEMPLOYMENT COMPENSATION COVERAGE FROM THE TOWN. CONTRACTOR**

IS OBLIGATED TO PAY FEDERAL AND STATE INCOME TAX ON MONEYS PAID PURSUANT TO THIS AGREEMENT. As long as there is not a conflict of interest with the Town, Contractor may engage in any other lawful business activities during the term of this Agreement.

SECTION 7: NOTICE

7.01 Notices. All notices required under this Agreement shall be in writing and shall be: 1) hand-delivered; 2) sent by registered or certified mail, return receipt requested, postage prepaid, to the addresses of the Parties herein set forth; or 3) sent by electronic mail (“email”) return receipt or written acknowledgment requested and received. All notices by hand-delivery shall be effective upon receipt. All notices by mail shall be considered effective seventy-two (72) hours after deposit in the United States mail with the proper address as set forth below. All notices by email shall be effective upon acknowledgment of receipt by the intended recipient. Either party, by notice to be given, may change the address to which future notices shall be sent.

TO THE TOWN:

Town of Johnstown

Attn: _____

450 S. Parish Avenue

P.O. Box 609

Johnstown, CO 80534

Email: _____

TO CONTRACTOR:

[]

Email: _____

SECTION 8: MISCELLANEOUS

8.01 Time. Time is of the essence of this Agreement and of each covenant hereof.

8.02 Non-Appropriation of Funds. Pursuant to Section 29-1-110, C.R.S., as amended, financial obligations of the Town payable as set forth herein, after the current fiscal year, are contingent upon funds for that purpose being budgeted, appropriated and otherwise made available. This Agreement shall be terminated effective January 1 of the first fiscal year for which funds are not budgeted and appropriated.

8.03 Laws and Regulations. In the conduct of the Services, Contractor shall comply with all applicable laws, rules and regulations, and the directives or instructions issued by the Town or its designated representatives.

8.04 Assignment; Third Party Rights. Contractor may not assign, delegate or subcontract any part of its rights, duties or obligations under this Agreement. The Parties do not intend to confer any benefit hereunder on any person or entity other than the Parties hereto.

8.05 Amendment. This Agreement may not be amended or modified except by a subsequent written instrument signed by the Parties. Course of performance, no matter how long, shall not constitute an amendment to this Agreement.

8.06 Severability. If any part, term or provision of this Agreement is declared unlawful or unenforceable, the remainder of this Agreement shall remain in full force and effect, except that, in the event any state or federal governmental agency or court determines that the relationship between the Town and Contractor is one of employment rather than independent contractor, this Agreement shall become null and void in its entirety.

8.07 Waiver. No consent or waiver, express or implied, by the Town to or of any breach or default by Contractor in the performance by Contractor of its obligations hereunder shall be deemed or construed to be a consent or waiver to or of any other breach or default by the Town. Failure on the part of the Town to complain of any act or failure to act or to declare Contractor in default, irrespective of how long such failure continues, shall not constitute a waiver by the Town of its rights hereunder.

8.08 Governmental Immunity. The Parties agree that the Town is relying on, and does not waive or intend to waive by any provision of the Agreement, the monetary limitations or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, §§ 24-10-101 *et seq.*, C.R.S., as amended from time to time, or otherwise available to the Town, its elected officials, employees or agents.

8.09 Applicable Law and Venue. This Agreement shall be construed according to the laws of the State of Colorado. Venue for any claim, proceeding or action arising out of this Agreement shall be in Weld County, State of Colorado.

8.10 Mediation. In the event of any dispute arising under this Agreement, except in the case of an action for injunctive relief, the Parties shall submit the matter to mediation prior to commencing legal action and shall share equally in the cost of the mediation.

8.11 Costs and Attorney's Fees. If any judicial proceedings may hereafter be brought to enforce any of the provisions of this Agreement, the Town, if the prevailing party, shall be entitled to recover the costs of such proceedings, including reasonable attorney's fees and reasonable expert witness fees.

8.12 Entire Agreement. The provisions of this Agreement represent the entire and integrated agreement between the Town and Contractor and supersede all prior negotiations, representations and agreements, whether written or oral.

8.13 Public Official Personal Liability. Nothing herein shall be construed as creating any personal liability on the part of any elected official, employee or agent of the Town.

8.14 No Presumption. Each Party acknowledges that it has carefully read and reviewed the terms of this Agreement. Each Party acknowledges that the entry into and execution of this Agreement is of its own free and voluntary act and deed, without compulsion. Each Party acknowledges that it has obtained, or has had the opportunity to obtain, the advice of legal counsel of its own choosing in connection with the negotiation and execution of this

Agreement and with respect to all matters set forth herein. The Parties agree that this Agreement reflects the joint drafting efforts of all Parties and in the event of any dispute, disagreement or controversy arising from this agreement, the Parties shall be considered joint authors and no provision shall be interpreted against any Party because of authorship.

8.15 Controlling Document. In the event of a conflict between the provisions in this Agreement and Exhibit A, the provisions in this Agreement shall control.

8.16 Headings. The headings in this Agreement are inserted only for the purpose of convenient reference and in no way define, limit or prescribe the scope or intent of this Agreement or any part thereof.

8.17 Counterparts. This Agreement may be executed in counterparts, each of which shall be an original, but all of which, together, shall constitute one and the same instrument.

8.18 Data Security. If Contractor has access to personal identifying information during the term of this Agreement, Contractor shall, pursuant to Section 24-73-101, *et seq.*, C.R.S., destroy all paper and electronic documents containing such personal identifying information within six months of termination of this Agreement, unless otherwise required by law. During the term of this Agreement, Contractor shall implement and maintain reasonable security procedures that are appropriate to the nature of the personal identifying information disclosed or maintained and that are reasonably designed to help protect the information from unauthorized access, use, modification, disclosure or destruction. If Contractor discovers or is informed of a security breach, Contractor shall give the Town notice in the most expedient time and without unreasonable delay, no later than ten (10) calendar days after it is determined a security breach occurred. Contractor shall cooperate with the Town in the event of a security breach that compromises computerized data, if misuse of personal information about a Colorado resident occurred or is likely to occur. Cooperation includes sharing with the Town information relevant to the security breach.

8.19 Right to Injunction. The Parties hereto acknowledge that the Services to be rendered by Contractor and the rights and privileges granted to the Town under the Agreement are of a special, unique, unusual and extraordinary character which gives them a peculiar value, the loss of which may not be reasonably or adequately compensated by damages in any action at law, and the breach by Contractor of any of the provisions of this Agreement may cause the Town irreparable injury and damage. Contractor agrees that the Town, in addition to other relief at law, shall be entitled to injunctive and other equitable relief in the event of, or to prevent, a breach of any provision of this Agreement by Contractor.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the parties have executed this Agreement on the date first written above.

TOWN OF JOHNSTOWN, COLORADO

ATTEST:

By: _____
Hannah Hill, Town Clerk

By: _____
 _____, Mayor or Town Manager

By:_____

Name:

Title:

STATE OF COLORADO)) ss
COUNTY OF _____)

SUBSCRIBED AND SWORN to before me this _____ day of _____, 20____, by _____ as the _____ of _____.

WITNESS my hand and official seal.

My commission expires:_____

Notary Public

EXHIBIT A
SERVICES

Prepared for



Johnstown
Colorado

February 17, 2023



OLC ARCHITECTURE, INTERIORS & AQUATICS

PROPOSAL FOR AQUATICS CENTERS FEASIBILITY STUDY

COVER LETTER

February 17, 2023

Matt LeCerf, Town Manager
Town of Johnstown
450 S. Parish Avenue; P.O. Box 609
Johnstown, CO 80534

RE: RFP – Town of Johnstown Aquatics Centers Feasibility Study



Dear Mr. LeCerf and Selection Committee Members:

It is with great pleasure that the **OLC + BK + CH** team submits this proposal for the Town of Johnstown's Aquatics Centers Feasibility Study. We understand that the service area surrounding Johnstown is one of the fastest growing parts of Colorado at a rate of about 5% annually. Most parts of the economy, including tourism, health care, retail, and service industries are on the rise. Federal belt tightening has eased, and over the course of the next 25 years, the Town will continue to grow. The demand for aquatic and recreation facilities has reached a tipping point, and it is critical to respond to current needs, and future projections.

Our team - **Ohlson Lavoie Corporation (OLC)** and **Ballard*King and Associates (B*K)**, along with **Councilman Hunsaker** - will work side-by-side with the Town to listen, educate, lead, and solve the planning puzzle to create the perfect custom-tailored aquatics facility for today and into the future. Our three firms represent the best-of-the-best in architecture, planning, feasibility, and site design in the State of Colorado. Each firm brings unparalleled strengths to benefit the project as it moves through each phase of completion.

Community Sentiment/Consensus Building. During the discovery phase, The OLC led team will gather data from the stake holders and service area in a variety of ways to test programming preferences and ability to spend. This will ensure the best outcome for all.

Site Matrix/Planning. We have led the site selection process for numerous communities. For the aquatics facility, and knowing there are only two sites under consideration, we will use a site influences matrix based on communities' needs to define which site is best suited to support the program, associated parking requirements, ease of access, and visibility.

Concept Plans. OLC revels in the opportunity to connect with the Town residents and staff as well as other stakeholders to understand all the overarching needs. We use these interactions to guide the design response that will far exceed your expectations. During this phase we will test the programming requirements against the budget with several creative planning solutions that will maximize flexibility for each space and offer the best value for each dollar invested in a future facility.

Budget & Cost Estimating. OLC and B*K have worked together on more than 23 community recreation and aquatic center feasibility studies. As the design progresses, we will test the conceptual solutions through an interactive program area summary that defines building components and corresponding budget. Similarly, we will be testing all the aquatic amenity costs with our vast network of pool contractors to assure they are both in alignment with programming capabilities as well as anticipated costs extended into the future.

The Aquatics facility project benefits from having our most senior people on board from day one to ensure those with the most knowledge is leading the way, because continuity of principal involvement is critical to every phase of your study. I will be the Principal-in-Charge and will work with as 'point man' in all phases.

It is our sincere desire to submit these qualifications as our intent to offer services requested in the RFP. OLC has engaged with 500+ clients worldwide to create community spaces with competition pools, and outdoor water parks with elements like slides, splash pads, and lazy rivers to encourage play. We love to create and renovate spaces that foster connections through aquatics, recreation, fitness, and wellness because we care about the health of each community we collaborate with in the design process.

We have read the entire RFP and understand its contents. We hope to have the opportunity to demonstrate for you, in person, how **our team** will ensure that the study answers your questions and allows you to move forward with this exciting project. Thank you for your consideration; we are very excited to work with the Town on this important study, and look forward to hearing from you soon.

Sincerely,

Robert McDonald, CEO, Senior Principal
OLC Primary Point-of-Contact
400 Santa Fe Drive, Denver, CO 80204
P: 303.294.9244 | E: rmcdonald@olcdesigns.com



Johnstown
Colorado

Request for Proposal Aquatics Centers Feasibility Study

1

TEAM QUALIFICATIONS

The professionals selected for the Aquatics Centers Feasibility Study team were specifically chosen based on their expertise, their **knowledge of the proposed Aquatic Center**, their **experience with OLC as a team**, and their **familiarity and understanding of the Town of Johnstown** and **aquatic and recreation facilities**. An organizational chart is presented below to illustrate the interaction between the Town staff and the project team members. **Resumes for OLC Team follow.**



Johnstown
Colorado

OLC DESIGN TEAM

OLC Architecture, Interiors, and Aquatics
Architect-of-Record

Robert McDonald, NCARB, LEED AP
Principal-in-Charge/Senior Principal
PRIMARY POINT-OF-CONTACT

David Sprague
Senior Design Principal

SUBCONSULTANTS

Counsilman Hunsaker

Aquatic Programming / Masterplanning

George Deines
Studio Director

Connor Riley, PE
Studio Director

Ballard King & Associates

Market Analysis / Operations Proforma

Darin Barr
Principal



OLC has been able to uncover a design solution that exceeds our expectations in ways that other firms frankly were not able to do. We now will have more amenities and components in our building than we could have ever imagined, due to their creativity and drive to deliver the very best.

Jack Huisingsh, Executive Director
Holland Community Aquatic Center



Johnstown
Colorado



Architecture | Interiors | Aquatics

OLC (Ohlson Lavoie Corporation) designs community spaces for health and play, often centered around aquatics. It's a passion our founders dove into in 1961, and a space we've been playing

in ever since. With offices in Denver, Orlando, Tokyo, and Cairo we've engaged with 500+ clients world-wide to create community spaces with competition pools, and outdoor water parks with elements like slides, splash pads, and lazy rivers to encourage play. The projects range from feasibility studies to new multi-million-dollar recreation and aquatic facilities. We love to create and renovate spaces that foster connection through aquatics, recreation, fitness, and wellness because we care about the health of each community we collaborate with in the design process.

With an inspiring resume of more than **500 AQUATIC FACILITIES**, it is no surprise that our team uses innovative design solutions and top notch technical skills to surpass client expectations. Whether the project is an exercise, therapy or recreation pool, municipal splash pad, commercial water park, fountain or resort amenity, our aquatics team works seamlessly to address all opportunities and challenges in each phase of design and construction. Our goal is to listen to your needs before thoughtfully programming and creatively planning the aquatic attraction to fully realize your ambitions.

Our design process is enriched by collaborative spirit, commitment and a client-centered attitude. We partner clients business goals and strategic insights with our aesthetic vision, deep experience, and problem solving skills to create superior outcomes and a successful design project. Everyone at OLC is committed to truly understanding each client's unique needs and is dedicated to adding value through design by delivering maximum impact for each dollar invested. Value-conscious, client-centered, custom-fitted design is a strategic investment for every owner. We apply principles of smart design to honor that investment and to produce measurable returns.

The secret to the design success experienced by our clients is easily explained. Treat each new assignment as a fresh challenge. Listen to our client's agenda. Respect their priorities. Focus on enrichment of the member experience. Stay abreast of thought leaders in the industry. Most of all, believe in the power of design to change lives for the better. We hope to work with the Town of Johnstown the Aquatic Feasibility Study. We currently have the availability and staffing for your project.

*The following list represents a few of the community recreation and aquatic projects for which OLC has provided feasibility and/or architectural design services. Project descriptions for relevant experience and references are included in **Section 3**.*

Laramie County School District No. 1 East High School Pool, Cheyenne, WY
Margaret Carpenter Recreation Center Renovation, Thornton, CO*
Aqua Crest Pool Complex Renovation, Delray Beach, FL*
Brighton Recreation Center Remodel, Brighton, CO*
City of Limon Pool Renovation, Limon, CO*
Buena Vista Recreation Feasibility Study, Buena Vista, CO*
Camp Swoneky Pool, XXX, CO*
Holland Community Aquatic Center, Holland, MI*
Cheyenne Community Recreation Center, Cheyenne, WY
Choice Health & Fitness Center, OH*
Burns Road Community Center, Palm Beach Gardens, FL
The Wave by EPIC, Fargo, ND
Williston Aquatics, Williston, ND
Brighton Street Crossing Leisure Pool, Brighton, CO
Campbell County Recreation Center, Gillette, WY*
Castle Rock Community Center Aquatics, Castle Rock, CO*
Cheyenne Community Recreation Center, Cheyenne, WY
City of Rifle Aquatic Facility Study and Pool Renovation, Rifle, CO
City of Spearfish Aquatics Center, Spearfish, SD
Colorado Golf Club Pool and Clubhouse, Parker, CO*
Delmar Park Pool and Bath House, Aurora, CO*
Estes Valley Community Center, Estes Park, CO*
Glennon Heights Pool, Lakewood, CO
Glenwood Springs Aquatics, Glenwood Springs, CO
Gilpin County Recreation Center Aquatics, Black Hawk, CO*
Green River Recreation Center Expansion, Green River, WY
Hancock Health Healthway Park, New Palestine, IN
H2O'Brien Park Aquatic Center, Parker, CO*
Infinity Park Recreation Center Remodel, Glendale, CO*

Jewish Community Center Addition, Denver, CO*
Hamilton Lowe Aquatic Center, Moscow, ID*
Ken Caryl Ranch Pool Renovation, Ken Caryl, CO
Lake Nona Performance Club, Lake Nona, FL
Laramie Community Recreation Center, Laramie, WY*
Mary Sue Rich Community Center, Ocala, FL*
Laramie County School District No. 1 East High Pool
Meadows Community Pool, Castle Rock, CO
Mike Sedar Pool Replacement Project, Casper, WY*
Newtown Athletic Club Aquatics, Newtown, PA*
Oviedo YMCA Renovation, Oviedo, FL
Paradise Island Water Park at Pioneer Park, Commerce City, CO*
Rifle Aquatic Center, Rifle, CO
Riverton Wyoming Splash Pad, Riverton, WY
Robert Taylor Community Center, Sarasota, FL*
Roosevelt Park Pool, Longmont, CO*
Sailfish Splash Community Water Park, Stuart, FL*
Silverthorne Recreation Center Pool Renovation
Silverthorne, CO*
South Park Community Center, Fairplay, CO*
Southern Recreation Center, Palm Coast, FL
South Dakota State Univ. Wellness Center, SD*
Spearfish Community Aquatic Center, Spearfish, SD
The Trails Recreation Center*
West River Community Center, Dickinson, ND*
Whitefish Wave Community Center*
The Meadows Community Pool, Castle Rock, CO*
The Trails Recreation Center, Centennial, CO
Wray Aquatic Center, Wray, CO

**Project included feasibility study.*

Item #13.



Johnstown
Colorado

Request for Proposal Aquatics Centers Feasibility Study



ROBERT MCDONALD, NCARB, LEED AP CEO/PRINCIPAL-IN-CHARGE

EDUCATION

University of Wyoming
B.S. Architectural Engineering
University of Utah
B.S. Architectural Studies
Master of Architecture

REGISTRATIONS/AFFILIATIONS

Licensed Architect - CO, WY, ND, NM, TX, MT, WA

LEED® AP

Bob is OLC's Chief Executive Officer and oversees OLC's Sports, Recreation and Medical Wellness Design efforts. His extraordinary work ethic and calm demeanor support the firm's strength and stability to operate like a well-oiled machine. Some of Bob's notable projects include his first design commission, a flagship recreation center in his hometown of Laramie, Wyoming; and the Estes Valley Community Center nestled at the base of Rocky Mountain National Park in Estes Park, Colorado. He is also an accomplished public speaker, both as a focus group facilitator and as an industry thought leader at national conferences for various Parks and Recreation Associations, the Athletic Business Magazine, and the Medical Fitness Association (MFA). Bob's expertise extends beyond design, detailing and project management to include facility impact studies, assessments, up front programming and aid in operations pro-forma development. As a LEED® Accredited Professional, Bob works with clients to develop and implement their desired sustainability plan for the project, utilizing LEED® checklists, state guidelines and individually developed project goals.



PROJECT EXPERIENCE

Campbell County Recreation Center, Gillette, WY*
Cañon City Community Center Feasibility Study, Cañon City, CO*
Celebration Health & Fitness, Celebration, FL
Chelsea Health & Wellness Center, Chelsea, MI
Cheyenne Ice Arena, Cheyenne, WY
Colorado Golf Club Outdoor Pool & Bath House, Parker, CO
Columbus County Wellness Center, Columbus, NC
Community Ctr. Remodel/Aquatic Expansion, Castle Rock, CO
Community Recreation Center, Glenwood Springs, CO
Community Ctr. Aquatic/Fitness Add., Glenwood Springs, CO*
Community Rec. Center, (original and expansion) Laramie, WY*
Community Center Master Plan and Feasibility, Hot Springs County, Thermopolis, WY*
Community Center and Park Master Plan Feasibility, Cheyenne WY*
Dexter Wellness Center, Dexter, MI*
Estes Valley Community Center, Estes Park, CO
Family Recreation Center Aquatic Expansion, Rock Springs, WY
Glenmoor Country Club Outdoor Pool Renovations, Cherry Hills Village, CO
Glenwood Springs Community and Ice Facility, Glenwood Springs, CO
Half-Acre Gym/Recreation Center Expansion, University of Wyoming, WY
Infinity Park Recreation Center Addition/Remodel, Glendale, CO
Institute for Healthy Living at Good Shepherd, Longview, TX*
Laramie Community Center Aquatics Renovation, Laramie, WY
Laramie Community Center Ice Rink Improvements, Laramie, WY
Loyola University Center for Health & Fitness, Maywood, IL
Margaret Carpenter Recreation Center Aquatics Renovations and Addition, Thornton, CO
MC Fitness & Health, Lewis Township, OH*
Mike Sedar Pool Replacement Project, Casper, WY
Recreation Center Locker Room Renovation, Green River, WY*
Regional Recreation Center Feasibility Study, Fountain, CO*
South Park Recreation Center, Fairplay, CO*
Sweetwater County Child Development Center, Green River, WY
West River Community Center and Ice Arena, Dickinson, North Dakota
Youth Activity & Community Center, Cheyenne, WY

*Project included Feasibility Study.



Johnstown
Colorado

Request for Proposal Aquatics Centers Feasibility Study



DAVID SPRAGUE

DESIGN PRINCIPAL

EDUCATION

Minnesota University
Bachelor of Arts - Design, Cum Laude

REGISTRATIONS/AFFILIATIONS

Licensed Architect - CO

Rotary International Club 31
Paul Harris Fellow

As a design architect, David has devoted his career to a quest to provide the optimal recreational experience for end users through great design. His influence on recreational design is evident in projects in 16 states, and 3 international locations. Many aspects of facility excellence are hidden beneath the skin of the structure. These less apparent elements such as open planning, capturing exterior views, evoking a sense of place, and imbuing the interior of the building with a welcoming atmosphere, are hard to pin down, but are there as a foundation secretly out of view. These factors, along with a hundred others, funneled together in a single approach, when applied with expertise; results in a superlative recreational experience. What is import is balance. The balance of program areas against budget; the balance of scale versus multi -functional spaces; and the balance of artistic expression versus functionality. The experience, intuition, understanding, and balance result in a flexible facility that allows maximum programming capability, fluid planning that allows for optimal operations, and a enduring facility that withstands the test of time.

David is responsible for the majority of OLC's feasibility study projects.

PROJECT EXPERIENCE

Aurora Recreation Centers Master Plan, Aurora, CO
Buena Vista Community Center Feasibility Study, Buena Vista, CO*
Campbell County Recreation Center, Gillette, WY*
Cañon City Area Recreation and Park District Community Center Feasibility Study, Canon City, CO*
Cape Girardeau Aquatic Feasibility Study, Cape Girardeau, MO*
Castle Rock Recreation Center Feasibility Study, and Master Plan CO*
Cheyenne Recreation Center Feasibility Study, and Master Plan Cheyenne, WY*
Del Mar Park Bathhouse Master Plan and Pool, Aurora, CO
Edwards Fieldhouse Feasibility Study, Edwards, CO
Esmeralda Sports Complex, King Abdullah Economic City, KSA
Estes Valley Community Center, Estes Park, CO
Manitou Springs Recreation Feasibility Study & Master Plan, Manitou Springs, CO
Mike Sedar Pool Replacement and Master Plan, Casper, WY
Palm Beach County Aqua Crest Pool Complex, Delray Beach, FL
RDV Sportsplex/ Orlando Magic Training Center, Orlando, FL
Sailfish Splash Water Park, Stuart, FL and Master Plan
Summit County Multi-purpose Fieldhouse Feasibility Study, Summit County, CO*
The Trails Recreation Center, Centennial, CO
Widefield/Fountain Recreation Center Feasibility Study, Fountain, CO*

*Project included Feasibility Study.





Counsilmann-Hunsaker
AQUATICS FOR LIFE

AQUATIC PROGRAMMING / MASTERPLANNING

Item #13.

What Sets Us Apart. For more than 50 years, Counsilman-Hunsaker has provided design and operational consulting for thousands of national and international aquatic projects of every size and complexity. Project types range from competition venues, leisure pools and waterparks to therapy pools and spas. In addition, we have completed hundreds of Facility Audits and Feasibility Studies for the development of new or existing facilities and, having studied a multitude of facilities, we will help you benchmark the creation of your new facility and complete your project efficiently.

Full Circle of Expertise. Counsilman-Hunsaker offers a full circle of aquatic services from existing facility evaluation to comprehensive concept development; from project visioning through design, engineering and construction administration to business management and aquatic operations.



Design. From project visioning and development through sealed engineering drawings, we do it all. Even when starting with just a sketch of your vision, we will work closely with you throughout the design process to create a facility that meets or exceeds your dreams, while staying within budget.

Study. Through this comprehensive approach, we will provide you with the information you need to make a knowledgeable decision about the future of aquatics for your community. Our study

process supplies you with the necessary tools to reveal valuable insights and information before funding your new aquatic center.

Operate. At Counsilman-Hunsaker, our goal is to optimize both our client's daily operations and the aquatic users' experiences. Our in-house swimming pool operators will assist with on-site facility operations. Our operations team is comprised of highly trained, experienced professionals who have obtained the highest ranking of Health and Safety Instructor certifications available. Our clients benefit from the experience and knowledge of our team, knowing that our recommendations and operational services are supported by all the leading aquatic safety providers.

Audit. Through our Facility Audit, many owners have discovered that replacing worn out equipment with short life cycles will allow them to serve a whole new generation of users. Other times, older pools can be economically reconstituted into modern swim centers. Counsilman-Hunsaker's evaluation of an existing pool will give you the information needed to make a knowledgeable decision regarding repair, renovation or replacement. With Counsilman-Hunsaker as your partner, your new or renovated facility will become more than a pool or center. It will become a destination known for developing skills, creating memories and building communities through superior service and innovation.

Web-Apps. Peace of mind comes through an efficient and safe facility but managing risk appropriately and effectively can be a challenge for operators. That's where HydroApps comes in, a full suite of web-based applications that takes aquatic facility management and professionalism to the next level. Developed in partnership with some of the most highly-regarded operational and educational leaders in the industry, our HydroApps provide you both the benefit of our combined aquatic knowledge and innovation along with the tools to streamline your compliance, documentation, and record keeping.

OLC and Councilman have collaborated successfully on projects across the country including the Laramie County School District No. 1 East High School Pool in Cheyenne, WY; the Margaret Carpenter Recreation Center Renovation in Thornton, CO; Town Park in Berthoud, CO; and EPIC Water Park in Fargo, ND. Counsilman has completed over 200 feasibility studies.

PROJECT EXPERIENCE

Apex Centre, McKinney, TX
Artesia Aquatic Center, Artesia, NM
Beardstown Sudbrink Waterpark, Beardstown, IL
Bisti Bay at Brookside Park, Farmington, NM
Boomtown Bay Family Aquatic Center, Burkburnett, TX
Canyon Aqua Park, Canyon, TX
Chisholm Pool and Central Pool, Hurst, TX
Dallas Aquatic Centers (6), Dallas, TX
Fircrest Community Center and Pool, Fircrest, WA

Ford Woods Pool, Dearborn, MI
Great Outdoors Waterpark, Lafayette, CO
McClure Pool, Tulsa, OK
North County Recreation Complex, St. Louis County, MO
Rock 'N River Family Aquatic Center, Round Rock, TX
Scott Carpenter Pool, Boulder, CO
South Suburban Park District, Centennial, CO
Sports Center Pool, Northbrook, IL
Wapelhorst Pool and Blanchette Pool, St. Charles, MO





CONNOR RILEY

PROJECT DIRECTOR, PROGRAMMING & MASTERPLANNING

Counsillman • Hunsaker
AQUATICS FOR LIFE

EDUCATION

Colorado School of Mines
B.S. Mechanical Engineering

REGISTRATIONS/AFFILIATIONS

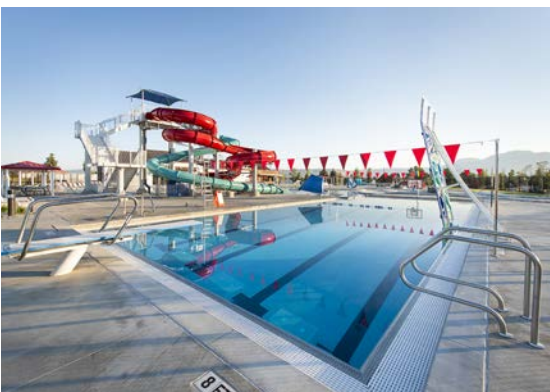
Professional Engineer - CO, NM, WY
Certified Pool/Spa Operator - PHTA

Connor Riley is an experienced aquatic designer who prides himself with practical, cost effective and efficient design solutions. He possesses a wealth of experience in designing aquatic facilities to serve a variety of user groups for municipalities, universities, YMCAs, school districts, and hospitality establishments. Connor's experience includes programming, conceptual development, design development, completion of construction documents, and construction administration. With specific emphasis on projects in the Rocky Mountain region of the United States, Connor has demonstrated an ability to lead diverse groups through all phases of design and construction.



PROJECT EXPERIENCE

Ames High School Natatorium, IA
Artesia Aquatic Center, NM
Brigham Young University Natatorium, Rexburg, ID
Clear Creek Metropolitan Recreation Center, Idaho Springs, CO
Colorado Mesa University Hotel Pool, Grand Junction, CO
Eagle Pointe Recreation Center, Commerce City, CO
Frasier Meadows Senior Center, Boulder, CO
Gordon Van Tine Lofts Condo Pool, Davenport, IA
Great Outdoors Waterpark, Lafayette, CO
Hempstead High School Natatorium, IA
Jicarilla Community Center, Dulce, NM
Kuehn Park Pool, Sioux Falls, SD
Mitchell Aquatic Center, SD
Montana State University, Student Recreation Center, Bozeman, MT
Ridge Waters Waterpark, Butte, MT
Roswell Aquatic Center, NM
Salt River Pima Maricopa Indian Community Center, Scottsdale, AZ
Scott Carpenter Pool, Boulder, CO
Sheridan YMCA Recreation Center, WY
Spellerberg Park Aquatic Center, Sioux Falls, SD
South Park Splashpad, Billings, MT
Valdez High School Natatorium, AK
Windsor High School Natatorium, CO
Wyoming Life Resources Center Pool, Lander, WY



Established in 1992, Ballard*King & Associates, (B*K) is a recreation program, planning and operations consulting firm that provides services and expertise to the recreation and leisure industry. Through our commitment and collaboration with community leaders, staff, stakeholders, elected officials and corporate partners, we have developed loyal and long-term relationships with a variety of both public sector and private agencies to inspire and engage their constituents. As a company, B*K has achieved over 30 years of success by listening and coaching our clients, and realizing that each client's needs are specific and unique.

Our vast practical experience in the recreation industry enables us to guide clients through the challenges of developing master plans, feasibility studies, and opening and operating recreation facilities/services. From pinpointing specifics to broad visions, B*K provides meaningful analysis, thoughtful consideration, and expertise to ensure the long-term sustainability and success of your project. We believe that through a collaborative approach to consensus building, B*K can successfully navigate with you to meet the unique challenges of your project, community and future. We specialize in developing strategic plans to integrate new business operations into existing business models. We have completed over 800 recreation facility projects in 50 states and we have working relationships with more than 100 architects from coast-to-coast. Our top concern is the client's best interests.

- Our vast planning, managerial and operational experience with aquatic and recreation facilities, from conception through operation.
- Our direct experience as aquatic facility operators and subsequent programs and services to the public.
- Our knowledge and understanding of aquatic and recreation trends and operation considerations from a National perspective.
- Our knowledge of the public participation process and experience in facilitating this process.
- Our experience working on similar projects.
- Our strong commitment to representing the client's best interests in all projects through proven, practical experience in providing independent third-party financial analysis.

800 Feasibility Studies
across the United States

150 recreation facilities up
and operating around
the country

45 studies for
Colorado communities

18 recreation facilities
open and operating

PROJECT EXPERIENCE

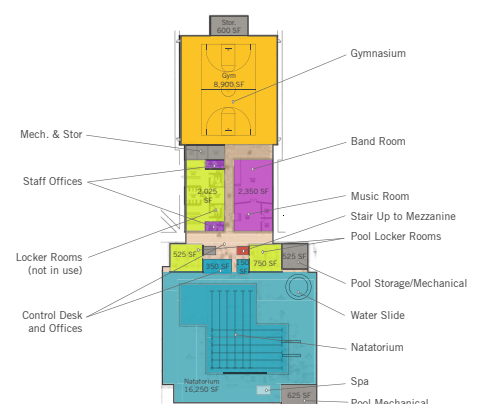
Apex Recreation Center 50 Meter Pool Operations Study, Avada, CO
Alamosa Aquatic Center, Alamosa, CO
Beach Cities Health District Aquatic Center Feasibility Center, Redondo Beach, CA
Bozeman Aquatic/Recreation Center Feasibility Study, Bozeman, MT
Southeast Community Center Feasibility Study, Fort Collins, CO
Garden City Aquatic Feasibility Study, Garden City, KS
Miami Beach Competitive Aquatic Center Study, Miami Beach, FL

Recreation Center Feasibility Study, Berthoud, CO
Open Space & Mountain Parks Master Plan, Boulder, CO
Del Mar Park Pool Study, Aurora, CO
Estes Valley Community Center Feasibility Study, Estes Park, CO
Shalom Park Recreation Center Study, Denver, CO
Issaquah Aquatic Center Feasibility Study, Issaquah, WA
Salvation Army Western Territory Aquatic Assessment, Long Beach, CA
University of Rhode Island Tootell Aquatic Center Feasibility Study, Kingston, RI
Recreation Center Study, Superior, CO



LEGEND

1. NEW BUILDING FOOTPRINT = 22,800
2. DROP-OFF LANE
3. BIKE PARKING
4. PARKING = 58 SPACES
5. TRASH ENCLOSURE
6. FUTURE EXPANSION
7. TRELLIS / OUTDOOR PATIO
8. SPLASHPAD
9. SHADE STRUCTURES / UMBRELLAS
10. EXISTING WAVE POOL
11. EXISTING MECH. FOR WAVE POOL
12. EXISTING TREES AND GREEN SPACE
13. FENCE LINE





DARIN BARR

PRINCIPAL - STAKEHOLDER, OPERATIONS, MARKET ANALYSIS

EDUCATION

State University of New York
Master of Arts in Public Administration

University of Missouri
B.S. in Parks, Recreation and Tourism

REGISTRATIONS/AFFILIATIONS

University of Missouri, Adjunct Faculty

National Intramural Recreational Sports
Association

Missouri Park and Recreation
Association

Darin's passion for the parks and recreation industry has allowed him to successfully serve agencies nationwide. Darin utilizes a multi-layer approach when working on projects and believes in the importance of listening to stake holders, agency administration and staff members. A key part of his process is helping clients utilize statistical data & public input to understand the difference between needs and wants. Prior to joining B*K, Darin worked in the municipal, private, and university sectors, all within the parks and recreation industry. This broad background of practical and operational experience, combined with his experience as a consultant, helps shape the approach Darin brings to each project. He understands that each community and their goals are unique, as is the process by which they attain their goals. The end result is success and diversity in delivering parks and recreation services and programs, with solutions that are tailored to each community and agency. Throughout his career, Darin has been involved with aquatic operations and programming. This included serving as Senior Associate Director for the University of Missouri-Columbia Student Recreation Complex, Aquatic Manager for the Mizzou Aquatic Center and Aquatic Coordinator for the City of St. Peters Rec-Plex in Missouri. He has held numerous aquatic certifications including, but not limited to: AFO, CPO and Lifeguard Instructor Trainer with both the Red Cross and Ellis & Associates.



Our team is a collaboration of design specialists who will deliver superior results for the **Johnstown Aquatic Center Feasibility Study**.

PROJECT UNDERSTANDING

The Town of Johnstown is one of the fastest growth areas in Colorado, growing at a rate of about 5% annually. The Town of Johnstown has a great relationship with the Weld RE-5J School District. In 2020 the Town agreed to exchange property with the District whereby the Town would provide the District with an approximately 10 acre parcel of land for the construction of a new elementary school. In exchange, Johnstown would receive the land which was the site of the old elementary school which is currently being demolished. After completion of demolition the Town would be provided with the land consisting of approximately 5.5 acres. The Town has also been the recipient of an approximate 60 acres of land, generally southeast of Town Hall.

One of the proposals recently presented to Council came from residents requesting that the Town consider an aquatics center. The Johnstown Town Council wants to explore the option of an aquatics center to meet the needs of the community by understanding the financial feasibility of the project from the planning, design, sizing, and construction and including the operations and maintenance of the facility into the future. This study will determine if the Town will proceed with this project. We understand that the majority facility will be outdoor aquatic amenities with support buildings and will total roughly 80,000 sf and potentially include:

- Lap Pool
- Warm water leisure pool with recreation elements (splash pad lazy river, water slide(s), etc.)
- Splash Pad
- Shade Structures
- Warm water instructional pool
- Therapy Pool
- Locker Rooms
- Pool Mechanical Building and Storage

PROJECT APPROACH AND METHODOLOGY

The **Johnstown Aquatics Master Plan and Feasibility Study** will be conducted in three distinct phases. This structure provides a great incremental approach to achieving a complete assessment for this important and unique project.

PHASE 1 PROJECT OVERVIEW, MARKET ANALYSIS, NEEDS ASSESSMENT, INITIAL PROGRAM DEVELOPMENT

Project Overview/Kick-Off/Needs Assessment

The OLC-led team believes strongly in the project workshop format, which allows us to spend quality time with the client face-to-face at all critical junctures. The process will commence with an interactive kick-off meeting and continue through the three

phases of work with written drafts of the scope areas being delivered for review as they develop. In the initial kick-off meeting we will:

- Identify key roles and responsibilities.
- Create a mission statement on which we can focus during all phases.
- Outline the step-by-step process to keep us on track.
- Introduce the site influences matrix.
- Evaluate budgetary constraints.
- But mostly listen to your dreams and generate a mission profile.

Market Analysis

In commencing the Market Analysis, we will establish parameters for the long-range plan. Initially, we will assess existing facilities, and aquatic offerings throughout the service area, develop the service area which will likely extend beyond the municipal boundaries, and conduct a study of anticipated growth, demand, and response for the future. In addition, a demographic profile of the service area will be developed and work as a foundation for revenue projections needed for the operations phase of the study. In this phase, we will:

- Develop the service area.
- Define the service area demographics.
- Visit, inventory, and assess the condition and efficacy of aquatics facilities in the service area.
- Assess the merits and deficiencies of programs within the service area.
- Document organizational structure and wage scale
- Evaluate Department policies and procedures.

Needs Assessment

One of the many things that are exciting about the discovery phase is unearthing a custom-tailored programming response to the needs of the population served. Each demographic is different, and the dynamic of every community is unique. Many user groups have different interests and desires, so a variety of information-gathering methods from public forums to surveys is required to get a clear picture of the need in the service area. We are experts in the public process. Determining the program elements is a fine balance of listening to your needs, and balancing them against costs associated with operations, capital construction costs, and revenue potential. During this phase we will host several meeting forums which will:

- Seek creative opportunities to involve the community in the project development.
- Targeted stakeholder and staff meetings scheduled in efficient back-to-back sessions.
- Define the most efficient types of aquatic offerings for the Town.
- Find answers to issues such as fee threshold, and construction funding often best determined by a statistically valid survey.
- Provide an analysis for the potential duplication of services

through other public and private aquatic providers.

- Provide recommendations for minimizing duplications and/or enhancing possibilities for collaborative partnerships.
- Determine deficiencies and opportunities for improvements for existing and new aquatic facilities.
- Initiate the Program Development for the facility.

PHASE 2 PROGRAMMING, MASTER PLANNING/ DESIGN, SITE ANALYSIS, AND COST ESTIMATES TO PROCEED AFTER PHASE I

Programming

Based on the steering committee's direction, we will develop a design program analysis report that lists brief descriptions of each of the swimming pool(s), facility support spaces, required areas or critical dimensions, and specialized needs for each concept. Once the final aquatics program has been established, pool concepts illustrating various arrangements and space relationships of the aquatic facility program will be developed. These layouts will elicit feedback from Town leadership and stakeholders to ensure a common understanding of project parameters and its overall functionality. Ultimately, the Conceptual Development will describe the size and shape of all pools, related structures, and associated amenities, as well as the populations and programs being served. Included will be:

- Consideration of which activities can be conducted in each body of water in a multi-purpose fashion.
- Documentation of your expectations and definitions of success for the facility.
- Right-sizing of each pool for existing and future use
- Balance of potential costs associated with construction against appetite for spending.
- Crafting an interactive program area summary spreadsheet that is flexible and adaptable.
- Consideration of phasing options.
- Developing adjacency requirements.
- Determination of appropriate overall facility size on each site, and associated parking requirements

Location Option /Site Determination

In order for master planning and concept design to proceed, an evaluation of site influences for both locations is needed. Alternatively, site selection can be a hotly contested item. In a service area that will likely extend beyond the Town boundaries where the population centers may not be centrally located, the site selection process can become emotional. Our team has a time-tested process using a custom-tailored/weighted matrix that considers both site influences and cost. Using this matrix, we will:

- Create a comprehensive comparative analysis of both sites being considered.
- Determine the size, and location best suited for all users.
- Analyze the comparative costs associated with procurement, development, the entitlement process, and development duration.
- Analyze whether or not each site will support the use both present and future from a facility footprint and parking standpoint.
- Consider access and visibility aspects of the sites being studied.

Master Planning/ Design

The OLC, B*K, CH team is committed to delivering the most operationally flexible and efficient facility for every dollar invested. One of the big advantages we have in this important facet of the project will be a deep understanding of the community's vision, and physical influences that will drive the many early decisions that must be made. Our open-plan design philosophy cuts down on circulation space, minimizes guarding, and is always a cut above similar facilities for planning efficiency. This approach provides for the most possible square footage for the attractions, in turn resulting in a more compact planning solution. Since square footage always translates into dollars, a smaller, well-planned layout delivers better programming capability, which can mean less capital investment and better cost recovery. We will provide an initial design of maximum potential by delivering:

- Image boards that serve as aesthetic inspiration for the Johnstown Community.
- Planning options each of which can be considered from a cost, programming, and operational standpoint.
- Multiple initial site use studies in quick sketch format on the preferred location (s)
- Multi-use exterior amenity potential within the site(s).
- Study of multi-use potential.
- Operational efficiency considerations.
- Building orientation for exposure to amenities, expansion/ phasing potential for future improvements.
- Exterior aesthetic considerations in context with the surrounding community.
- Translation of concept design into state-of-the-art computer modeling, for graphic visualization.

Project Capital Cost

Based on the appetite to spend, and the resulting design, we will provide an anticipated budgetary model based on current installed construction and systems costs. As a specialty consultant dedicated to aquatic design projects, Counsilman-Hunsaker maintains an intricate knowledge base of aquatic project costs nationally, regionally, and across various market sectors. Our continuous involvement with a multitude of aquatics projects ensures a real-time understanding of market conditions and cost data for the cost model. We utilize a detailed database to track actual project costs and to maintain our cost estimation spreadsheet which is utilized from the onset of each project to develop an opinion of construction cost at the program confirmation phase. CH's track record of accurately projecting aquatic scope construction costs is often relied on as a resource to third-party cost estimators who do not typically have a great deal of experience with this specialty project type. Realistic construction costs will be provided by:

- Anticipating costs on each of the preferred sites that are associated with grading challenges, soil conditions, utility extensions, legal considerations if any, vehicular connections, and stormwater challenges.
- Tapping into our unparalleled depth of experience and database for realistic real-time construction costs.
- Facility costs relative to chosen program elements, building aesthetics, desired amenities, and current construction costs escalated into the future.
- Startup cost from the operational analysis
- Cost for professional services, survey testing, and permitting, LEED certification if desired.
- Estimates of probable fixtures, furnishings, and equipment based on current trends.
- Costs of commissioning



PHASE 3 OPERATION ANALYSIS, FUNDING EVALUATION, AND FINAL REPORT TO PROCEED AFTER PHASE 2

Operation Analysis

With the program statement complete and the component, sizes verified we will then apply the B*K Operational Performance Indicator Analysis (OPIA) to the proposed Aquatics Center. The OPIA process is a time-tested process that B*K has used to develop realistic operating budgets for community facilities. In addition, we will use C/H Aquatic Research Tool which is specific to aquatics operations that use 62 development factors insuring an accurate projection of revenue and expenses specific to the pool operations. The end result of this process will be a line-item budget that will take into account staffing, contractual services, commodities, and capital improvement. Additionally, the budget will address revenue projections and provide a 5-year operation projection for the facility along with potential funding sources for project capital. The operational analysis will include:

- Operating Structures and parameters
- Attendance estimates including daily use, programs, rentals, and memberships.
- Fee Structure.
- Facility labor analysis.
- Utility costs.
- Anticipated Cost Recovery.

Funding Evaluation

While not specifically asked for in the proposal request, we will also consider and report on funding opportunities. With the pieces in place of public sentiment, site design, building design, cost, operations and a discussion can arise as to what the best mix is to fund the construction if beyond capital improvement, and ongoing operations of the facility. During this phase, we will consider:

- Cost recovery goals.
- Fee structure.
- Public Private Partnership (P3) Opportunities.
- Tourism/Sales Tax.
- Sponsorships
- Not-for-Profit opportunities
- Formation of operations endowments
- GOCO funds
- Property tax
- Donor/other opportunities

Final Report

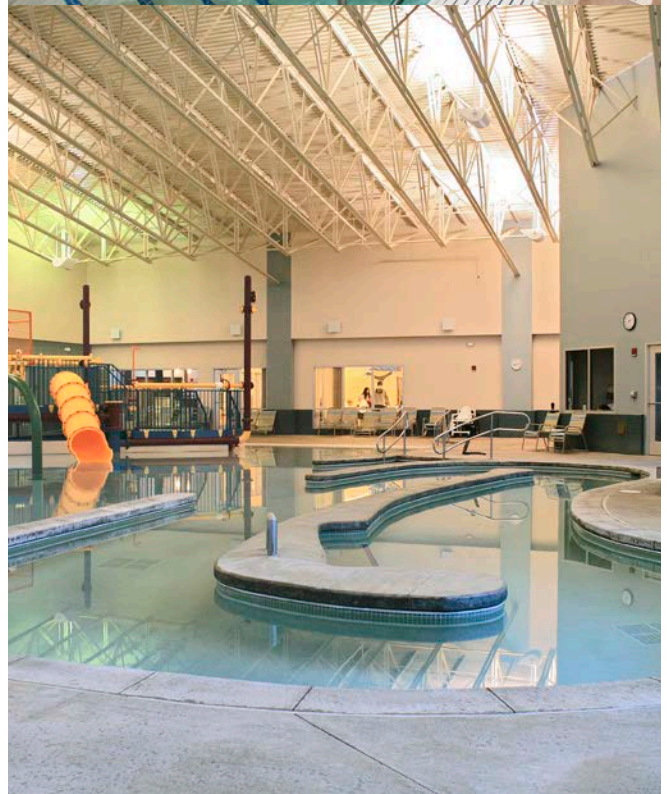
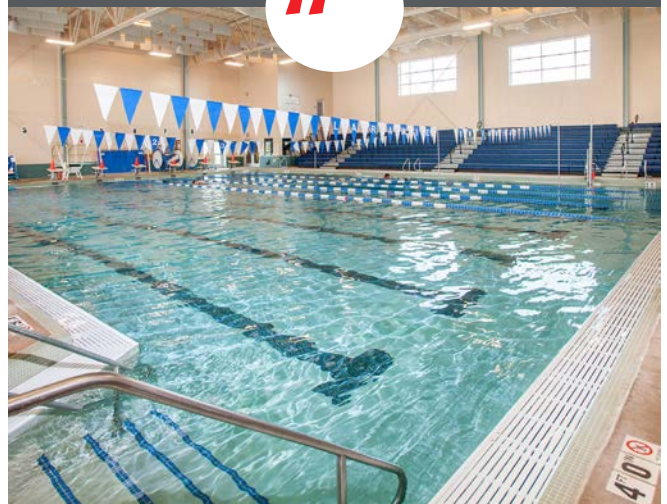
A final report must not just look good to create excitement in the community, but it must accurately reflect reality. The program must reflect the community's needs; the design must reflect the program; the cost must reflect the design and the ability to spend; and the operational analysis must reflect the ability of customers to pay for use, and the cost recovery goals of the communities it serves. The report will:

- Illuminate all the anticipated project realities.
- Illustrate a world-class design with stunning computer-aided graphics.
- Contain a market study, funding recommendations, and in-depth operational analysis that project leaders can take to the public with confidence.
- Include an oral report for community leaders.

Item #13.

Bob was our contact on the project and helped us as we listened to the community needs and desires and then helped us develop a path forward. His ability to respond quickly, help us make sound decisions, and stay on track have been remarkable. Which is honestly why we continue to work with him. I would recommend Bob and OLC to anyone who is looking for a high-quality architectural firm. They are a committed, trustworthy working partner and I just don't think you can go wrong.

Jodi Guerin, Recreation Manager
City of Laramie



SUGGESTED SCHEDULE – POOL MASTERPLAN FEASIBILITY STUDY

PHASE I PROJECT OVERVIEW	DURATION
INFORMATION GATHERING - Finalize Agreement - Gather/review existing documents/data/site constraints - Prepare for kick-off meeting	1 Week March 13 - 17, 2023
PROJECT KICK-OFF - Kick-off Meeting on-site - Identify Roles and Responsibilities - Review and confirm study scope and schedule. - Evaluate budgetary constraints. - Establish design goals/philosophy/parameters. - Team structure - Define the mission. - Solidify the schedule/approval protocol. - Define stakeholder groups. - Public process strategy - Verify potential availability to meet (ongoing) Goal: Ascertain mission and vision, strategy, programming information and design influences.	1 Day March 20, 2023
PHASE I – MARKET ANALYSIS NEEDS ASSESSMENT	DURATION
MARKET ANALYSIS - Identify/Develop Service Area - Determine Organizational structure and wage scale. - Review Department policies and procedures - Review demographic characteristics and community profile. - Review existing facilities, existing and desired offerings/ services - Assemble team schedules and usage data; analyze trends. - Document improvements priorities - Assess capital improvements budget. - Inventory other providers in Service Area Goal: Determine the current need for offerings in the community and identify programming priorities and alternative service providers.	5 Weeks March 20 – April 21, 2023
IMPLEMENT CITIZEN PARTICIPATION PLAN/ NEEDS ASSESMENT - Targeted back-to-back Staff Meetings - Targeted back-to-back Stakeholder Meetings - One open public meeting - Opportunities in Aquatics Slideshow Presentation - Documenting and reporting of information gathered Goal: Identify user groups and staff for public input and define meeting schedule	2 Days April 6-7, 2023
PHASE II –PROGRAM DEVELOPMENT, MASTER PLAN, CONCEPT DESIGN, PROJECT BUDGET DEVELOPMENT	DURATION
PROGRAM DEVELOPMENT / RESPONSE TO PHASE 1 - Develop Programming Priorities with staff. - Determine all user groups. - Develop Phasing Scenarios for implementation. - Study multi-use opportunities - Determine needed Support Structures - Determine required bodies of water and size - Develop interactive program area summary. Goal: Ascertain appropriate program offerings and required support structures and bodies of water to meet community need as well as priorities for phasing recommendations if needed	3 Weeks April 24 – May 12, 2023
MASTER PLANNING/ CONCEPT LAYOUT AND DESIGN - Design charrette with staff and advisory committee - Site zoning diagrams considering all users. - Study and respond to all Site Influences including access, size, visibility, neighbors. - Study 2 potential Phasing Options and how they relate to programming preferences. - Determine Support Building size function, inter-relationship with pools and users.	1 Day Charette/ 3 weeks planning response May 15 – June 2, 2023

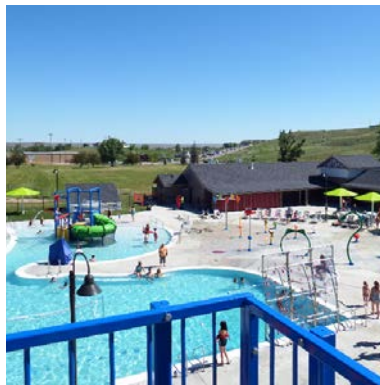


- Desired additional recreational site amenities to be included. - Create concept site utilization diagrams for each site and list pros and cons for each. - Overall Concept Master Plan Goal: Craft graphic planning options that represent a phased approach to previous program development priorities.	
DETERMINATION OF TOTAL PROJECT CAPITAL COST - Planning Approval - Start-up Cost - Cost for professional / services - Estimates of fixtures, furnishings, and equipment - Costs of commissioning - Aquatic systems and potential features - Capital Construction Costs, including infrastructure, sitework, support buildings, and aquatic amenities. Goal: Development of anticipated costs for all physical project costs reconciled with the budget and final master plan.	4 Weeks June 5 – June 30, 2023
PHASE III – LOCATION, OPERATIONS, AND FUNDING OPTIONS	DURATION
FINAL CONCEPT DESIGN GRAPHIC PRODUCTION - Determine final location on both sites for preferred programming elements. - Provide concept support building plans for preferred location within the two sites. - Identify parking locations and requirements within the sites that respond to potential facility and end user requirements. - Study theming options and aesthetics - Refine vehicular and pedestrian access points to the sites and provide best use studies for visibility, final site utilization and service access. - Determine spectator requirements if any, and control and access for teams if needed. Goal: Finalize land use requirement and functionality for both sites in response to access, all site influences, and constraints.	5 Weeks July 3 – Aug 4, 2023
OPERATIONAL ANALYSIS - Operating structures and parameters - Attendance estimates - Fee Structure - Sources of income - Operating cost projections - Revenue generating projections. - Revenue/expenditure comparisons - Project recommendations/profitability of components - Potential Funding scenarios for potential work outside capital improvements Goal: Ascertain the anticipated financial operating performance of a renovated facility	6 weeks June 26 – Aug 4, 2023 Concurrent with Capital Costs and Final Concept Design
PUBLIC MEETING - Present concept masterplan and operational analysis to the Community - Receive feedback. Goal: Informational presentation to the community regarding all study findings.	1 Day Aug 9, 2023
PREPARATION OF FINAL PRINTED REPORT/PRESENTATION OF FINDINGS - All anticipated project realities - Illustrate world-class design with cutting-edge graphics. - Suggested phasing options. - Contain a market study, funding recommendations, and in-depth operational analysis. - Presentation of findings to Park and Recreation Advisory Board - Presentation before Town Council	2 Weeks Aug 7 – Aug 18, 2023
TOTAL FEASIBILITY STUDY SCHEDULE	23 WEEKS



FEE SCHEDULE

TASK	OLC	BALLARD*KING	COUNSILMAN-HUNSAKER
Project Overview	\$ 1,000	\$ 1,000	\$ 1,000
Market Analysis and Needs Assessment		\$ 5,000	\$ 2,000
Citizen Participation	\$ 1,000	\$ 3,250	\$ 2,000
Alternate Site Evaluation	\$ 7,100		\$ 1,000
Concept Design/Phasing Option	\$10,300		\$ 6,480
Programming/Cost Analysis	\$ 1,750		\$ 8,000
Operations Analysis		\$ 8,500	
Existing Facility Lifecycle Survey / Analysis	\$ 3,500		\$ 3,000
Prepare Final Graphics	\$ 2,100		\$ 2,000
Compile Final Report	\$ 3,000	\$ 1,000	\$ 1,000
Subtotals	\$29,750	\$18,750	\$26,480
Cost Proposal	\$74,980		
Reimbursables	\$ 2,000	\$ 500	\$ 1,500



3

RELEVANT PROJECT EXPERIENCE



61 Years
In Business



61 Years
In Colorado



11 Countries
Worked In



47 States
Worked In



35
Employees



1000+
CO Projects



350+
Municipal
Projects



2500+
Recreation
Projects



5.5M SF
of Built Recreation
Facility Projects



\$150M/YEAR
in Value Built



LEED AP
BD+C
3



5
LEED Projects

We felt as if we were locked into our original feasibility concept as prepared by another Architect. Much to our delight, when the project became real, OLC took a bold approach that was a complete change over the design we had before. Their suggestions improved the overall floor plan, saved us millions through efficient layout, and improved operations. OLC are true professionals, and I strongly recommend them without reservation.

Tom Carosello, Estes Valley Parks & Rec District
(970) 586-8191 ext. 6, Tomc@evprdc.com

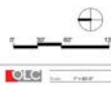


CRAIG AQUATIC FACILITY ASSESSMENT | Craig, CO



LEGEND

- NEW BUILDING FOOTPRINT = 22,800
- DROP-OFF LAKE
- BIKE PARKING
- PARKING = 58 SPACES
- TRASH ENCLOSURE
- FUTURE EXPANSION
- TRELLIS / OUTDOOR PATIO
- SPLASHPADS
- SHADE STRUCTURES / UMBRELLAS
- EXISTING WAVE POOL
- EXISTING MECH. FOR WAVE POOL
- EXISTING TREES AND GREEN SPACE
- FENCE LINE



OLC and Counsilman-Hunsaker recently completed a similar study for the Craig Swimming Facility Complex in Craig, Colorado. Along with a team of well-qualified engineering consultants, OLC+CH completed a comprehensive audit of the entire swimming complex, and conducted a full market analysis, programming assessment, conceptual design for a new swimming complex as well as an operational proforma. The study will be a baseline for immediate and future improvements and an implementation plan moving forward.

The recommendations include a new indoor zero-depth entry leisure pool with lazy river, indoor water slide, indoor 25-yard competition/lap pool, and new locker rooms/offices/concessions and party room. The existing wave pool will be maintained as a seasonal outdoor amenity that incorporates many of the elements of the existing park.

SIZE
63,000 sf

COST
\$20 M

COMPLETED
In Progress

FIRM'S ROLE
Architect of Record
Interior Design
Aquatic Design

CLIENT CONTACT
City of Craig
Ryan Dennison
Parks and Recreation Director
970.826.2004
rdennison@ci.craig.co.us



AREA SUMMARY

BASE 1ST FLOOR AREA	= 22,812	SF
BASE 2ND FLOOR AREA	= 433	SF
BASE TOTAL BUILDING AREA	= 23,245	SF
EXPANDED 1ST FLOOR AREA	= 1,848	SF
EXPANDED 2ND FLOOR AREA	= 2,824	SF
EXPANDED TOTAL BUILDING AREA	= 27,897 SF (+ 4,112 SF)	



Johnstown
Colorado

Request for Proposal Aquatics Centers Feasibility Study

PARADISE ISLAND AT PIONEER PARK | Commerce City, CO

Item #13.



Paradise Island is a themed municipal outdoor pool project which expands the recreational opportunities at Pioneer Park. Along with a new bathhouse and concession area, there is a zero-depth entry children's pool for toddlers; a larger zero-depth entry pool for families with an aquatic play structure; two sliders with a plunge pool that merges into a lazy river and lap/sport pool; a speed slide with runout; as well as plenty of shade umbrellas and grassy areas. With limited space within Pioneer Park, the design for this facility utilizes a variety of free-form shapes for the pools and deck space to maximize swimming programs, features, and the guest experience.

SIZE
N/A

FIRM'S ROLE
Architect of Record
Aquatic Design

COST
\$7.2 M

CLIENT CONTACT
City of Commerce City
Carolyn Keith, Director of
Parks and Recreation
303.289.3691
ckeith@c3gov.com

COMPLETED
2015



DEL MAR PARK POOL AND BATH HOUSE | Aurora, CO



Improvements to the pool area included a new bathhouse, and swimming pool complete with play structures and a waterslide. Additional park improvements included the construction of three separate restroom facilities, and drainage features to include a water quality basin, and rain gardens. The main parking lot was also totally reconstructed as part of the overall project.

SIZE
3,860 sf Bath House
7,230 sf Pool Area
4,300 sf Splash Pad

FIRM'S ROLE
Architect of Record
Aquatic Design

COST
\$4.5 M

CLIENT CONTACT
City of Aurora
Tracy Young, Project
Manager
303.739.7166
tyoung@auroragov.org

COMPLETED
2015





104,000 sf center built in Dickinson, a regional center for southwest North Dakota. The facility features modern amenities, but is designed with a “western edge” appearance to blend with the surrounding landscape and utilize local materials. The program areas have been designed to achieve a visual connection between spaces and openness to allow all users a sense of community. The facility maximizes the use of natural light by way of large windows. Designed with the philosophy that the community recreation center should entertain, educate and promote health and well being, amenities include both indoor competitive and leisure pools, two gyms, MAC court, racquetball, two studios, family locker rooms, indoor track, game room and cardio and fitness areas. In summer 2014, the District completed a major expansion of the facility which included fitness space, additional 4-court gymnasium, extended walk/jog track, outdoor water park and an additional ice sheet, lobby and spectator seating at the nearby ice facility.

SIZE
179,000 sf

FIRM'S ROLE
Architect of Record

COST
\$38 M

CLIENT CONTACT
Dickinson Parks & Recreation
James Kramer, Director
jkramer@dickinsonparks.org
701.456.2074

COMPLETED
2014

ARTESIA AQUATIC CENTER | Artesia, NM



Study concepts for a multi-generational, indoor and outdoor community aquatic center. The study addressed a needs assessment, program requirements, capital costs, and financial performance. Three options were developed to meet the aquatic needs of the community and included conceptual drawings, project costs, and pro forma. Pleased with the results of the study, this information was used to help the stakeholders choose a preferred concept for design and begin fundraising for the capital costs of the project to include both indoor and outdoor aquatics. The outdoor recreation pool is in the shape of Artesia's Bulldog logo and includes a lazy river and three tower slides. The adjacent 2,000 sq. ft. toddler pool features a zero-depth entry with a customized play structure. The 14,300 sq. ft. building houses an indoor eight lane, 25-yard competition pool as well as a three lane, 60 ft. training pool, bathrooms, changing rooms, a party room, and concession area.

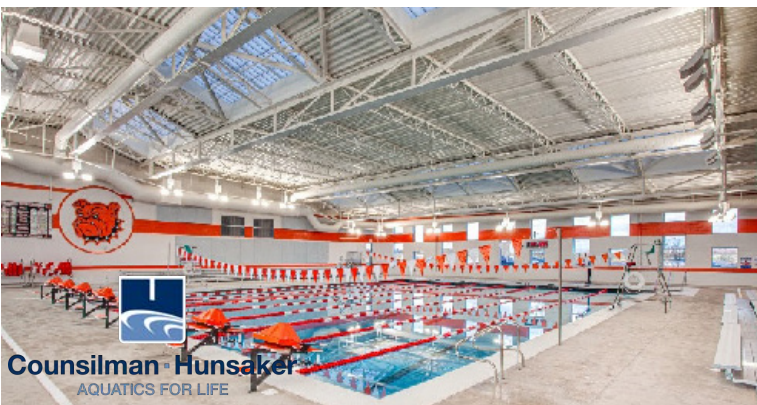
SIZE
22,300 sf

FIRM'S ROLE
Aquatic Design and Engineering

COST
\$19 M; Aquatics \$6.6 M

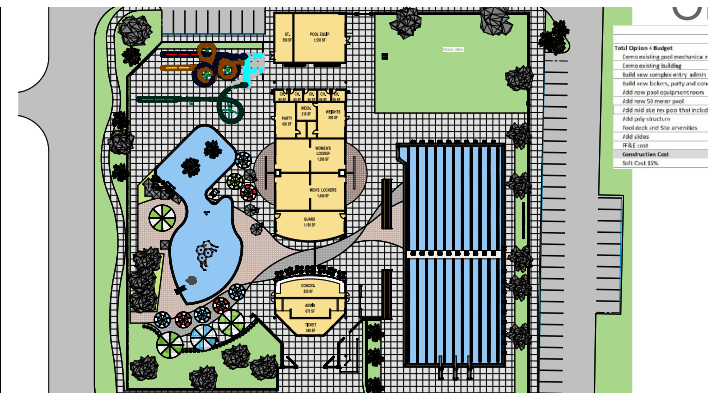
CLIENT CONTACT
PY Foundation
Sandra Borges
sborges@pyfoundation.com
575.736.3264

COMPLETED
2019





OLC worked with the client to propose the complete demolition of the existing pool site and amenities. The new design will include two zones, the first zone for competitive swimmers, that includes an all-new 52-meter, 25-yard-10-lane pool with a separate dive well, and moveable bulkhead with traditional diving. The family destination of the aquatic center will consist of an interactive zero to 2.5' depth play pool and features that feed into a teaching pool. It will also feature three flume slide. The addition of a new building structure will house administration offices, ticketing, guard room, first aid room, weights training, locker rooms and concessions.



SIZE
5000 sf + 52 meters x 25
yard Competition Pool
and Diving Well/2000 sf
Leisure Pool/2 Slides/Shade
Structures

COST
\$12 M

COMPLETED
2021

FIRM'S ROLE
Architect of Record
Interior Design

CLIENT CONTACT
Mr. Fernando DelDago
Director of Capital
Improvements
561.233.5276
fdeldago@pbcgov.org

An aerial view of a large, modern water park. The park features several interconnected swimming pools with blue water, surrounded by white lounge chairs and yellow umbrellas. A central circular pool area is prominent. The park is landscaped with palm trees and other tropical vegetation. In the background, there are more pool structures and a parking area with cars. The sky is blue with scattered white clouds.

The facility has two distinct areas: one area allocated to competitive swimming and the second area designated for a family oriented aquatic park. The competitive swim area serves as the swimming hub for the county and includes a 50-meter lap pool with 25-yard cross lap swimming and a diving well. The competitive swim area accommodates 900 spectators with room to add rentable bleachers. The family oriented aquatic park features a 6,000 sf zero depth entry pool with large play structure and interactive water spray features, benches and shade structures. Connected to the lazy river is a slide plunge with a 40 ft. high slide tower that serve 2 slides.



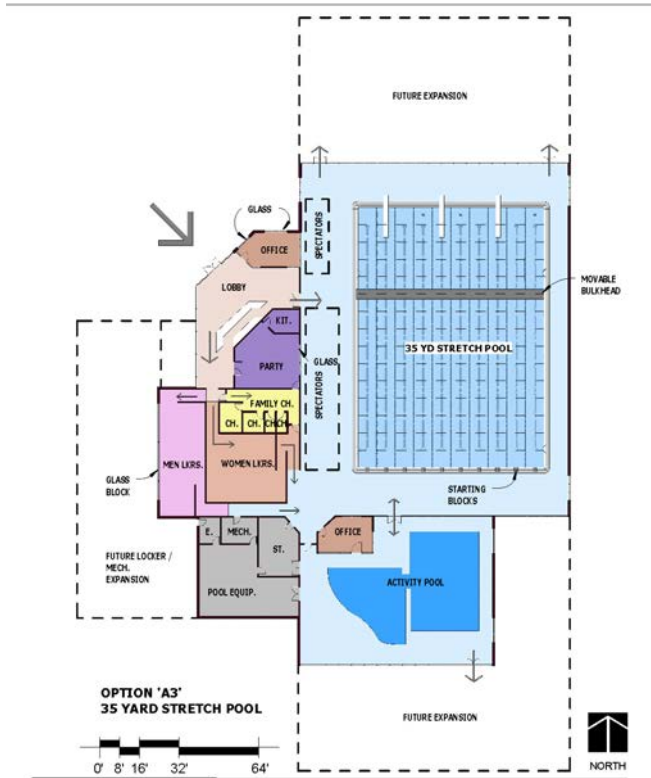
SIZE
N/A

COST
\$10 M

COMPLETED
2012

FIRM'S ROLE
Design Criteria Architect
Program/Operational
Consultant

CLIENT CONTACT
Martin County
Administrative Center
Kevin Landry, Facilities
Operations Administrator
772.320.3046
klandry@martin.fl.us



Inconsistent water temperature, failing systems, and poor air quality are among the many maladies that plagued the facility. The swim team is determined to maintain the long course ability of the 50 meter configuration with any new construction that might take place. At the same time, regional demographics suggest there is an immense part of the population that is under served when it comes to recreational swim, and that in fact this segment of the population far eclipses any other when it comes to swim visits per year. The OLC led feasibility study team answered this daunting challenge by suggesting a 35 yard stretch pool that accommodated 95% of the competitive need, had a raised floor in the center for aqua fitness, had leisure amenities, and a separate warm water leisure pool that could be expanded over time. This compromise solution was the overall best fit, and balanced the needs of all users within a diverse aquatics universe.

SIZE
28,000 sf

FIRM'S ROLE
Architect of Record
Feasibility

COST
\$12 M

CLIENT CONTACT
City of Cape Girardeau
Park and Recreation
Department
Julia Jones, Director
573.339.6340
jjones@cityofcape.org

COMPLETED
2019

MARGARET CARPENTER RECREATION CENTER | Thornton, CO



This \$14 M renovation to the Margaret Carpenter Recreation Center updated and improved the pool programming space and provide an accessible pipe galley for maintenance and repairs. The facility's pools, sauna, steam room, family locker room and associated equipment were replaced with state-of-the-art aquatic environments and amenities to capture the needs of this vibrant community. Improvements include a new 6-Lane Lap Pool with adjacent aqua-exercise pool, wave pool with lazy river and bubble pit, activity pool with zero-depth entry, play structure, geysers and sprays, two water slides and 20-person therapeutic hydro-jet spa.

Councilman-Hunsaker and OLC worked together on this project.

SIZE
20,000 sf Renovation
5,000 sf Addition

FIRM'S ROLE
Architect of Record
Interior Design

COST
\$14 M

CLIENT CONTACT
City of Thornton
Paul Spacese
303.538.7647
Paul.Spacese@cityofthornton.net

COMPLETED
2022





OLC and Counsilman-Hunsaker joined forces with Cheyenne firm, Tobin & Associates, to provide architectural design and construction services for the replacement of the existing swimming pool at East High School for Laramie County School District 1. The current pool was well over 50 years old, with only six swim lanes and numerous deficiencies in design and condition. The \$16 M facility is 32,700 sf, and the new pool includes a 75' x 120' stretch with 10 swim lanes and a movable bulkhead; restrooms, shower and locker rooms, mechanical equipment room, pool equipment storage room, spectator seating, and competitor seating areas, and an administrative office and custodial room.

SIZE
32,700 sf

FIRM'S ROLE
Associate Architect

COST
\$16.6 M

CLIENT CONTACT
Laramie County School Dist.
No. 1
David Bartlett
307.771.2663
david.bartlett@laramie1.org

COMPLETED
2021



GEORGE J. MEYER'S POOL | Arvada, CO



The Replacement facility is anticipated to include:

- 50-meter x 25-yard pool with on-deck seating for 300-400
- Separate warmer water and shallower pool for a variety of uses and programming
- Spectator seating for 800
- Locker rooms for men, women and officials, along with universal changing rooms
- Pool mechanical room
- Lobby and office space
- Support space, including added parking approximately 50% larger than existing

SIZE
TBD

FIRM'S ROLE
Architect of Record
Interior Design

COST
TBD

CLIENT CONTACT
City of Arvada
Kim Vagher
Manager of City Facilities
720.898.7681
kvagher@arvada.org

COMPLETED
In Progress



CAMPBELL COUNTY RECREATION CENTER | Gillette, WY

Item #13.



The Campbell County, Wyoming Parks and Recreation Department joined forces with the school district in asking an essential question: “Which scenario would be better in fulfilling the sports and recreational needs of the partners... to renovate an existing aging facility, or build new?” The diversity of the two partners’ needs led to a design solution that paired all the elements of a traditional recreation center with an indoor multi-sports complex and indoor competitive track. At times, the operations called for all amenities to be available to all the partners’ diverse user groups. In the final analysis, a new center prevailed as the preferred option due to cost efficiency, programming ability and constraints associated with the old center. Eventually, the county moved forward with the project’s design and construction resulting in the beautiful facility the community enjoys today. Even now, almost ten years later, the Campbell County Recreation Center serves as a model of everything recreation can be, and more.

SIZE
189,000 sf

Architect of Record
Feasibility
Aquatic Design

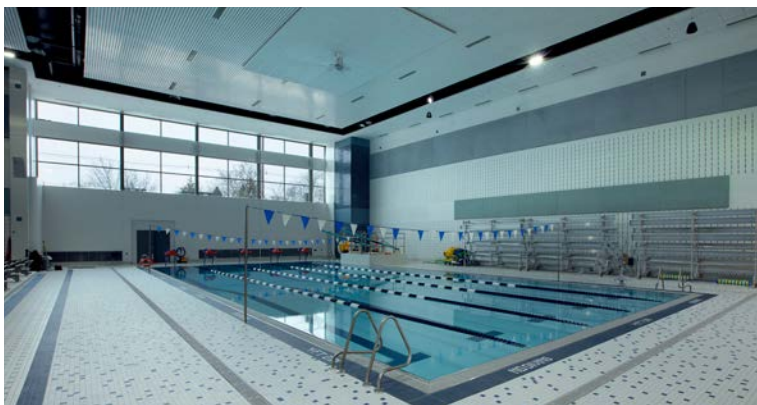
COST
\$51.9 M

CLIENT CONTACT
Campbell County Park Dist.
Rick Mansur, Executive
Director
307.682.7406
rwm77@ccgov.net

COMPLETED
2010

FIRM’S ROLE

HOLLAND COMMUNITY AQUATIC CENTER | Holland, MI



OLC and AMDG Architects Inc. were selected to design the \$26 M expansion and renovation of the Holland Community Aquatic Center. The new facility will include 37,000 sf of new community space and 14,000 sf of renovated space. The new amenities include swim and leisure pools, whirlpool spa, sauna and steam room. There will also be a new universal changing area, fitness room and expanded spectator seating and pool viewing areas. The current leisure pool will also be replaced with a four-lane warm-up pool. This project is multi-phased so that it can be open during construction to meet the goal of a 2022 completion date. The design improves both the experience of the competitive swimming community as well as the recreation and leisure aquatics users by providing unique spaces that cater to their needs while staying within the project budget.

SIZE
37,000 sf New
14,000 sf Renovation

FIRM’S ROLE
Associate Architect

COST
\$26 M

CLIENT CONTACT
Holland Community Aquatic
Center
Jack Huisingh, Exec. Director
616.393.7595
jack@hollandaquaticcenter.
org

COMPLETED
2022



Johnstown
Colorado

Request for Proposal Aquatics Centers Feasibility Study

ESTES VALLEY COMMUNITY CENTER | Estes Park, CO

Item #13.



In February 2016, OLC commenced work on a new and exciting design for Estes Valley that the community had attempted to build for 60 years. There had been a concept design in place for voter approval. When OLC took on the design assignment, we generated a plan that was almost 10% more efficient in its ability to accommodate program areas. This allowed the Parks District to enlarge activity areas such as the gymnasiums and fitness areas while reducing the overall square footage. What this means is more programming capacity for less money. The feature areas include extensive multi-purpose/ meeting rooms with a commercial kitchen, arts studio, group exercise rooms, gymnasium, computer/resource area, fitness spaces and locker rooms.

SIZE
63,000 sf

FIRM'S ROLE
Aquatic Design

COST
\$20 M

CLIENT CONTACT
Estes Valley Parks & Rec
District
Tom Carosello
970.586.8191 ext. 6
Tomc@evrpd.com

COMPLETED
2017



MARYLAND HEIGHTS COMMUNITY CENTER | St. Louis, MO



This new 90,000 sq. ft. facility replaced the old community center which was past its useful life. The City included a greater variety of spaces while maintaining the unique programs of the previous facility: multi-use event space, pre-school area, seniors area, meeting space, arts and crafts room, and a police substation. New components include an indoor family lifestyle pool, two multi-use courts, fitness center, three group exercise rooms, and an indoor walking/jogging track. Aquatic amenities include: a 4,700 sq. ft. Leisure Pool with three 25-yard lap lanes; tot area with spray features and tot slide; deep area with two climbing walls; drop slide and stair combined/swim out entry; current channel; underwater bench, stair entry, zero entry ramp, and zip line. The project's greatest challenge was incorporating all the desired program elements within the pool and keeping the overall footprint within the dedicated space for aquatics.

SIZE
6,000 sf

FIRM'S ROLE
Aquatic Design and
Engineering

COST
\$30 M; Aquatics \$1.2 M

CLIENT CONTACT
City of Maryland Heights
Ms. Tracey Anderson
314.738.2201
tanderson@
marylandheights.com

COMPLETED
2017



Counsilman Hunsaker
AQUATICS FOR LIFE



Johnstown
Colorado

Request for Proposal Aquatics Centers Feasibility Study

REFERENCES

Project Title & Location	Project Owner	Point of Contact	Phone Number	Email Address
Margaret Carpenter Community Center Aquatic Renovation Thornton, CO	City of Thornton	Renee Dodson	720.977.5917	renee.dodson@thorntonco.gov
Craig Aquatic Facility Assessment Craig, CO	City of Craig	Ryan Dennison Director	970.826.2004	rdennison@ci.craig.co.us
Holland Community Aquatic Center Holland, MI	Holland Community Aquatic Center	Jack Huisingh, Exec. Director	616.393.7595	jack@hollandaquaticcenter.org
Laramie Recreation Center Laramie, WY	City of Laramie, Wyoming	Jodi Geurin, Recreation Manager	307.721.5259	jguerin@cityoflaramie.org
Estes Valley Community Center Estes Park, CO	Estes Valley Parks and Recreation District	Tom Carosello, Director	970.586.8191 ext. 6	Tomc@evrpd.com
West River Community Center Dickinson, ND	Dickinson Parks & Recreation	James Kramer, Director	701.456.2074	jkramer@dickinsonparks.org

BALLARD*KING REFERENCES

Project & Description	Reference Contact
Estes Valley Recreation and Park District Ballard*King was contracted to complete a operation budget for a new recreation center. Specific tasks developing a staffing plan, estimating operational cost and identifying revenue sources and fee recommendations.	Tom Carosello, Director Estes Valley Recreation and Park District 970-586-8191 tomc@evrpd.com
Carbon Valley Parks and Recreation District Facility assessment including market analysis, program recommendations and feasibility. The study explored expansion opportunities and re-purposing of existing spaces.	Dean Rummel, Executive Director Carbon Valley Parks and Recreation District 720-728-8440 drummel@cvprd.com

COUNSILMAN-HUNSAKER REFERENCES

Project & Description	Reference Contact
City of Maryland Heights New 90,000 sq. ft. facility with an indoor family lifestyle pool, two multi-use activity courts, enhanced fitness center, three group exercise rooms, and an indoor walking/jogging track. Aquatic amenities include: 4,700 sq. ft. Leisure Pool ; Three 25-yard lap lanes; Tot area with spray features and tot slide; Deep area with two climbing walls; Drop slide and stair combined/swim out entry; Current channel; Underwater bench; Stair entry; Zero entry ramp; and Zip line.	Tracey Anderson, City Administrator 314.738.2201 tanderson@marylandheights.com



TOWN OF JOHNSTOWN PROFESSIONAL SERVICES AGREEMENT

THIS PROFESSIONAL SERVICES AGREEMENT (the “Agreement”) is made and entered into this ____ day of _____ 20__ (the “Effective Date”) by and between the Town of Johnstown, Colorado, a Colorado home-rule municipal corporation (the “Town”) and OLC Architects, Interiors and Aquatics, a Corporation (“Contractor”) (collectively, the “Parties”).

RECITALS

WHEREAS, the Town desires to engage the services of Contractor and Contractor desires to provide those services more fully described on Exhibit A, attached hereto and incorporated herein by reference (“Services”), to the Town; and

WHEREAS, the Parties wish to memorialize their contractual relationship.

AGREEMENT

NOW, THEREFORE, incorporating the foregoing Recitals herein and in consideration of the mutual promises, agreements, undertakings and covenants set forth herein and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties hereby mutually agree as follows:

SECTION 1: PARTIES

1.01 Town. The Town is a home-rule municipal corporation located in Johnstown, Colorado.

1.02 Contractor. Contractor is a private, independent business entity who will exercise discretion and judgment of an independent contractor in the performance and exercise of its rights and obligations under this Agreement.

SECTION 2: SERVICES, COMPENSATION AND TERM

2.01 Services. Contractor agrees to perform the Services for the Town.

2.02 Compensation. In consideration of Contractor’s performance of the Services contemplated herein, the Town agrees to pay Contractor the compensation set forth on Exhibit A. Contractor shall submit detailed invoices reflecting the portion of the Services completed to the date of the invoice. The Town shall provide payment for Services to Contractor within thirty (30) days of receipt of the invoice. In its discretion, the Town may withhold payment for disputed portions of invoices on the condition that the Town provides written notice to Contractor of the dispute. Upon delivery of notice, the Town and Contractor shall promptly endeavor to resolve such dispute.

2.03 Expenses: Contractor shall not incur any expense or debt on behalf of the Town without the Town's prior written authorization.

2.04 Term. Unless otherwise terminated in accordance with Section 5, the term of this Agreement shall be from the Effective Date through December 2023, and shall not extend beyond that date absent the written approval of the Town.

SECTION 3: OPERATIONS

3.01 Contractor Status. Contractor avers that it has the background, expertise and education to provide the Services. Contractor shall be responsible for the proper performance of the Services in accordance with the terms hereof. Contractor shall obtain the necessary permits, if any, and maintain all required licenses, including but not limited to a Town business license.

3.02 Schedule. Unless otherwise set forth in Exhibit A, Contractor shall provide the Services in accordance with the timeline requested by the Town

SECTION 4: INSURANCE AND INDEMNITY PROVISIONS

4.01 Insurance.

A. Contractor understands and agrees that Contractor shall have no right of coverage under any existing or future Town comprehensive or personal injury liability insurance policies. As a material term of this Agreement, Contractor agrees to maintain and keep in force during the term of this Agreement one or more policies of insurance written by one or more responsible insurance carrier(s) authorized to do business in the State of Colorado in the following amounts:

1. Workers' compensation insurance as required by law;
2. Commercial general or business liability insurance with minimum combined single limits of ONE MILLION DOLLARS (\$1,000,000.00) each occurrence and TWO MILLION DOLLARS (\$2,000,000.00) general aggregate;
3. Automobile liability insurance with minimum combined single limits for bodily injury and property damage of not less than ONE MILLION DOLLARS (\$1,000,000) for any one occurrence, with respect to each of Contractor's owned, hired or non-owned vehicles assigned to or used in performance of the Services. In the event that Contractor's insurance does not cover non-owned automobiles, the requirements of this paragraph shall be met by each employee of Contractor who utilizes an automobile in providing services to Town under this Agreement; and
4. Professional liability insurance with minimum limits of ONE MILLION DOLLARS (\$1,000,000.00) each claim and TWO MILLION DOLLARS (\$2,000,000.00) general aggregate.

B. Contractor shall procure and maintain the minimum insurance coverages listed herein. All coverages shall be continuously maintained to cover all liability, claims, demands and other obligations assumed by Contractor pursuant to this Agreement. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage. The Town shall have the right to request and receive a certified copy of any policy and any endorsement thereto. Except for workers compensation insurance, the Town shall be listed as an additional insured party on Contractor's insurance policies.

C. A certificate of insurance shall be completed by Contractor's insurance agent(s) as evidence that policies providing the required coverages, conditions and minimum limits are in full force and effect, and, upon request by the Town, shall be subject to review and approval by the Town. The certificate shall identify this Agreement and shall provide that the coverages afforded under the policies shall not be canceled, terminated or materially changed until at least thirty (30) days prior written notice has been given to Town. If the words "endeavor to" appear in the portion of the certificate addressing cancellation, those words shall be stricken from the certificate by the agent(s) completing the certificate. The completed certificate of insurance shall be provided to the Town.

4.02 Damage and Indemnity. Contractor assumes full responsibility for any and all damages caused by Contractor's exercise of its activities, or failures to act, under this Agreement. Contractor agrees that it will at all times protect, defend, indemnify and hold harmless the Town, its elected officials, employees, agents, and their successors and assigns, from and against all liabilities, losses, claims, demands, actions and costs (including reasonable attorneys' fees), arising from or related to loss or damage to property or injury to or death to any persons arising from or resulting in any manner from the actions or failures to act of Contractor or any invitees, guests, agents, employees or subcontractors of Contractor, whether brought by any of such persons or any other person.

SECTION 5: TERMINATION

5.01 Termination. The Town or Contractor may terminate this Agreement, with or without cause, by providing thirty (30) days prior written notice to the other Party. Notwithstanding the foregoing, if the Town terminates this Agreement for cause and determines that a notice period is not in the best interests of the Town, the Town may terminate this Agreement by providing written notice to Contractor effective immediately.

SECTION 6: INDEPENDENT CONTRACTOR

6.01 Independent Contractor. Contractor understands and agrees that Contractor is an independent contractor and not an employee of the Town. The Town shall not provide benefits of any kind to Contractor. The Town shall not be responsible for withholding any portion of Contractor's compensation for the payment of Federal Insurance Contributions Act (FICA) tax, workers' compensation, or other taxes or benefits. CONTRACTOR IS NOT ENTITLED TO UNEMPLOYMENT COMPENSATION COVERAGE FROM THE TOWN. CONTRACTOR IS OBLIGATED TO PAY FEDERAL AND STATE INCOME TAX ON MONEYS PAID

PURSUANT TO THIS AGREEMENT. As long as there is not a conflict of interest with the Town, Contractor may engage in any other lawful business activities during the term of this Agreement.

SECTION 7: NOTICE

7.01 Notices. All notices required under this Agreement shall be in writing and shall be: 1) hand-delivered; 2) sent by registered or certified mail, return receipt requested, postage prepaid, to the addresses of the Parties herein set forth; or 3) sent by electronic mail (“email”) return receipt or written acknowledgment requested and received. All notices by hand-delivery shall be effective upon receipt. All notices by mail shall be considered effective seventy-two (72) hours after deposit in the United States mail with the proper address as set forth below. All notices by email shall be effective upon acknowledgment of receipt by the intended recipient. Either party, by notice to be given, may change the address to which future notices shall be sent.

TO THE TOWN:

Town of Johnstown
Attn: Mitzi McCoy
450 S. Parish Avenue
P.O. Box 609
Johnstown, CO 80534
Email: mmccoy@johnstownco.gov

TO CONTRACTOR:

OLC Architecture, Interiors, Aquatics
400 Sante Fe Dr.
Denver, CO 80204

SECTION 8: MISCELLANEOUS

8.01 Time. Time is of the essence of this Agreement and of each covenant hereof.

8.02 Non-Appropriation of Funds. Pursuant to Section 29-1-110, C.R.S., as amended, financial obligations of the Town payable as set forth herein, after the current fiscal year, are contingent upon funds for that purpose being budgeted, appropriated and otherwise made available. This Agreement shall be terminated effective January 1 of the first fiscal year for which funds are not budgeted and appropriated.

8.03 Laws and Regulations. In the conduct of the Services, Contractor shall comply with all applicable laws, rules and regulations, and the directives or instructions issued by the Town or its designated representatives.

8.04 Assignment; Third Party Rights. Contractor may not assign, delegate or subcontract any part of its rights, duties or obligations under this Agreement. The Parties do not intend to confer any benefit hereunder on any person or entity other than the Parties hereto.

8.05 Amendment. This Agreement may not be amended or modified except by a subsequent written instrument signed by the Parties. Course of performance, no matter how long, shall not constitute an amendment to this Agreement.

8.06 Severability. If any part, term or provision of this Agreement is declared unlawful or unenforceable, the remainder of this Agreement shall remain in full force and effect, except that, in the event any state or federal governmental agency or court determines that the relationship between the Town and Contractor is one of employment rather than independent contractor, this Agreement shall become null and void in its entirety.

8.07 Waiver. No consent or waiver, express or implied, by the Town to or of any breach or default by Contractor in the performance by Contractor of its obligations hereunder shall be deemed or construed to be a consent or waiver to or of any other breach or default by the Town. Failure on the part of the Town to complain of any act or failure to act or to declare Contractor in default, irrespective of how long such failure continues, shall not constitute a waiver by the Town of its rights hereunder.

8.08 Governmental Immunity. The Parties agree that the Town is relying on, and does not waive or intend to waive by any provision of the Agreement, the monetary limitations or any other rights, immunities, and protections provided by the Colorado Governmental Immunity Act, §§ 24-10-101 *et seq.*, C.R.S., as amended from time, or otherwise available to the Town, its elected officials, employees or agents.

8.09 Applicable Law and Venue. This Agreement shall be construed according to the laws of the State of Colorado. Venue for any claim, proceeding or action arising out of this Agreement shall be in Weld County, State of Colorado.

8.10 Mediation. In the event of any dispute arising under this Agreement, except in the case of an action for injunctive relief, the Parties shall submit the matter to mediation prior to commencing legal action and shall share equally in the cost of the mediation.

8.11 Costs and Attorney's Fees. If any judicial proceedings may hereafter be brought to enforce any of the provisions of this Agreement, the Town, if the prevailing party, shall be entitled to recover the costs of such proceedings, including reasonable attorney's fees and reasonable expert witness fees.

8.12 Entire Agreement. The provisions of this Agreement represent the entire and integrated agreement between the Town and Contractor and supersede all prior negotiations, representations and agreements, whether written or oral.

8.13 Public Official Personal Liability. Nothing herein shall be construed as creating any personal liability on the part of any elected official, employee or agent of the Town.

8.14 No Presumption. Each Party acknowledges that it has carefully read and reviewed the terms of this Agreement. Each Party acknowledges that the entry into and execution of this Agreement is of its own free and voluntary act and deed, without compulsion. Each Party acknowledges that it has obtained, or has had the opportunity to obtain, the advice of legal counsel

of its own choosing in connection with the negotiation and execution of this Agreement and with respect to all matters set forth herein. The Parties agree that this Agreement reflects the joint drafting efforts of all Parties and in the event of any dispute, disagreement or controversy arising from this agreement, the Parties shall be considered joint authors and no provision shall be interpreted against any Party because of authorship.

8.15 Controlling Document. In the event of a conflict between the provisions in this Agreement and Exhibit A, the provisions in this Agreement shall control.

8.16 Headings. The headings in this Agreement are inserted only for the purpose of convenient reference and in no way define, limit or prescribe the scope or intent of this Agreement or any part thereof.

8.17 Counterparts. This Agreement may be executed in counterparts, each of which shall be an original, but all of which, together, shall constitute one and the same instrument.

8.18 Data Security. If Contractor has access to personal identifying information during the term of this Agreement, Contractor shall, pursuant to Section 24-73-101, *et seq.*, C.R.S., destroy all paper and electronic documents containing such personal identifying information within six months of termination of this Agreement, unless otherwise required by law. During the term of this Agreement, Contractor shall implement and maintain reasonable security procedures that are appropriate to the nature of the personal identifying information disclosed or maintained and that are reasonably designed to help protect the information from unauthorized access, use, modification, disclosure or destruction. If Contractor discovers or is informed of a security breach, Contractor shall give the Town notice in the most expedient time and without unreasonable delay, no later than ten (10) calendar days after it is determined a security breach occurred. Contractor shall cooperate with the Town in the event of a security breach that compromises computerized data, if misuse of personal information about a Colorado resident occurred or is likely to occur. Cooperation includes sharing with the Town information relevant to the security breach.

8.19 Right to Injunction. The Parties hereto acknowledge that the Services to be rendered by Contractor and the rights and privileges granted to the Town under the Agreement are of a special, unique, unusual and extraordinary character which gives them a peculiar value, the loss of which may not be reasonably or adequately compensated by damages in any action at law, and the breach by Contractor of any of the provisions of this Agreement may cause the Town irreparable injury and damage. Contractor agrees that the Town, in addition to other relief at law, shall be entitled to injunctive and other equitable relief in the event of, or to prevent, a breach of any provision of this Agreement by Contractor.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the parties have executed this Agreement on the date first written above.

TOWN OF JOHNSTOWN, COLORADO

ATTEST:

By: _____
Hannah Hill, Town Clerk

By: _____
Gary Lebsack, Mayor

By:_____

Name:

Title:

STATE OF COLORADO)) ss
COUNTY OF _____)

SUBSCRIBED AND SWORN to before me this _____ day of _____, 20____, by _____ as the _____ of _____.

WITNESS my hand and official seal.

My commission expires:_____

Notary Public

EXHIBIT A SERVICES

Complete an Aquatic Center Feasibility Study that will include the following:

Phase I

- Project overview
- Market analysis
- Needs assessment
- Initial program development

Phase II

- Programming
- Master planning/design
- Site analysis
- Cost estimates

Phase III

- Operation analysis
- Funding evaluation
- Final Report

Total Cost for the Study including reimbursables: \$78,980 as broken down in the fee schedule:

Task	OLC	Ballard*King	Counsilman-Hunsaker
Project Overview	\$1,000	\$1,000	\$1,000
Market Analysis and Needs Assessment		\$5,000	\$2,000
Citizen Participation	\$1,000	\$3,250	\$2,000
Alternate Site Evaluation	\$7,100		\$1,000
Concept design/phasing option	\$10,300		\$6,480
Programming/cost analysis	\$1,750		\$8,000
Operations analysis		\$8,500	
Existing facility lifecycle survey/analysis	\$3,500		\$3,000
Prepare final graphics	\$2,100		\$2,000
Complete final report	\$3,000	\$1,000	\$1,000
Subtotals:	\$29,750	\$18,750	\$26,480
Reimbursables	\$2,000	\$ 500	\$1,500



Town of Johnstown

TOWN COUNCIL AGENDA COMMUNICATIONS

AGENDA DATE: March 20, 2023

SUBJECT: Downtown Johnstown Branding & Wayfinding Project

ACTION PROPOSED: Consider Support of Downtown Johnstown Brand & Logo

ATTACHMENTS: 1. Downtown Johnstown Branding & Wayfinding: Final Downtown Brand Presentation
2. Building Logo Letter Executed

PRESENTED BY: Sarah Crosthwaite, Economic Development Manager

AGENDA ITEM DESCRIPTION:

Enclosed is the Downtown Johnstown Branding & Wayfinding Presentation that provides an overview of Staff's outreach and communication with the community during Design Brand Week and the final downtown brand/logo.

For reference, Staff met with the Town Council during a work session on January 23, 2023, to gather feedback on 3 preliminary brand design concepts. Per Town Council direction, Staff moved forward with 2 of the 3 brand design concepts to show to the community including residents, visitors, and businesses.

During the month of February, Staff held Brand Design Week and met at various locations throughout the community to get direct feedback and votes on which brand concept people preferred. We also provided an opportunity for people to vote online through survey monkey. The presentation attached provides an overview of the final vote count for Option A and B (page 2). It also provides a summary of comments and feedback we received to help illustrate how we determined the final brand design which was ultimately a combination of both Option A and B (page 4 and 5).

The remaining presentation provides a high overview of the brand colors, fonts, and its application through various mediums. The intent is to provide an understanding of how we can

The Community That Cares

johnstown.colorado.gov

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO 80534 | F: 970.587.0141

incorporate this brand to highlight the downtown to residents and visitors but also encourage continued investment by new and existing businesses.

The goal is to launch this brand in Spring/Summer of 2023 through a downtown event. We have also launched Phase 3 of this project which is beginning to design the wayfinding signage for downtown which will be a representation of this final downtown brand. The deliverables for Phase 3 include signage types, locations, and complete bid ready documents which will assist with fabrication and installation over the next several years. Town Staff will provide the Town Council in April with a full wayfinding signage packet for informational purposes.

LEGAL ADVICE:

The Town Attorney drafted a letter regarding the Town's use of the 'Eureka Blk' building within the logo for the current Property Owners to acknowledge and support. The letter was executed by the Town Manager and Property Owners on February 13, 2023.

FINANCIAL ADVICE:

N/A

RECOMMENDED ACTION: Staff is supportive of the Downtown Johnstown Brand & Logo.

SUGGESTED MOTIONS:

For Approval: I move to support the adoption of the Downtown Johnstown Brand & Logo to be utilized for marketing purposes and representation of the Downtown Corridor.

For Denial: I move to support the adoption of the Downtown Johnstown Brand & Logo to be utilized for marketing purposes and representation of the Downtown Corridor.

Reviewed and Approved for Presentation,



Town Manager

08

Final Preliminary Design Options & Community Feedback

The preliminary designs were illustrated on design banners used to present the options to the Johnstown community and gather feedback and voting

Downtown Johnstown
Branding & Wayfinding Plan
Preliminary Branding & Wayfinding Design Options

Branding & Wayfinding: Option A
Branding Option A utilizes the community icons and the "Downtown" and "Johnstown" as unified elements that are connected and grow from each other. The primary color idea also reflects a unified but blended gradient that shows the strength of the Johnstown community's history and interpersonal support and care. In the signage, the graphic elements are given dimension through layering them in physical space, while also anchoring them through the use of traditional Johnstown brick and masonry architectural elements.

Branding Design - Option A Logo Alternatives



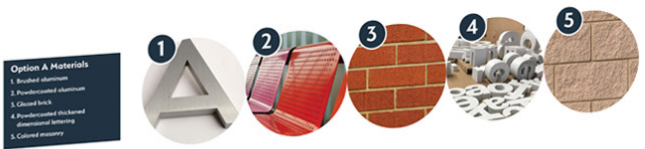
Branding Design - Option A Logo Alternatives

VOTE HERE
If **Option A**
is your
favorite!

I LIKE OPTION A!

Place Your Voting
Dots Here

Wayfinding Design - Option A Logo Alternative



Downtown Johnstown
Branding & Wayfinding Plan
Preliminary Branding & Wayfinding Design Options

Branding & Wayfinding: Option B
Branding Option B takes the branded Downtown Johnstown icons and blends them with a word mark that reflects the historic character of the town during its founding in 1902, with the addition of a pronounced "J" that creates a 4th icon form. The logo accent colors are given the same treatment as the blended colors of Option A, but here they are used to specifically accent the "Downtown" letterforms. In the signage, the traditional logo forms are given a contemporary twist through the use of the icons as dynamic, sculptural elements. The large sculptural "J" is especially dynamic, and functions as both an icon and as something that can be climbed/sat on for photos or fun.

Branding Design - Option B Logo Alternatives



Branding Design - Option B Logo Alternatives

VOTE HERE
If **Option B**
is your
favorite!

I LIKE OPTION B!

Place Your Voting
Dots Here

Wayfinding Design - Option B Logo Alternative



BRANDING OUTREACH WEEK - JANUARY 30 THROUGH FEBRUARY 4, 2023

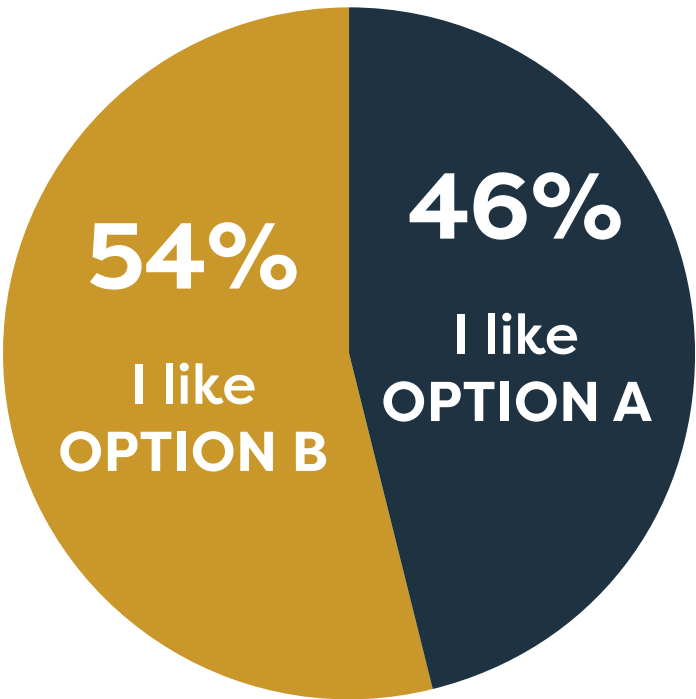
‘Brand Week’ Goals & Approach

During Brand Week, the preliminary branding and wayfinding options were presented at various public and private locations known to have high visitor traffic from a wide cross-section of the Johnstown community. At each event location the preliminary design options were displayed on public input banners, and Johnstown community members were asked to vote and comment on their preferred designs, encouraged to ask questions about the project, and to respond to initial call-to-action taglines for the new brand. In total, we heard from over 750 Johnstown residents in-person during Brand Week, and also reached over 140 residents through the on-line voting and comment survey.

OVERALL BRAND WEEK OUTREACH NUMBERS:



DESIGN PREFERENCE VOTING RESULTS:



Design Option A Votes

418

Design Option B Votes

484

It’s BRAND WEEK!!

AND WE WANT TO HEAR FROM YOU!!

We’ve created design options for the Downtown Johnstown Branding & Wayfinding, and now it’s time to hear from YOU!! Please meet us at the following locations to see the preliminary designs to vote and comment on your favorite ideas!

MONDAY, JANUARY 30	THURSDAY, FEBRUARY 2
7:00a - 9:00a YMCA	7:00a - 9:00a YMCA
10:30a - 12:30p The Urban Egg	11:30a - 1:30p Santiago’s
3:00p - 5:00p Hays Market	4:00p - 6:00p YMCA
WEDNESDAY, FEBRUARY 1	SATURDAY, FEBRUARY 4
10:00a - 12:00p Senior Center	11:00a - 1:00p Urban Egg
1:00p - 3:00p Library	2:00p - 4:00p Red Barn Liquor

Can’t make it in person? Go to the Branding & Wayfinding project page on MONDAY, JANUARY 30th to vote and comment on your favorite ideas online:

johnstown.colorado.gov/DowntownIdentity



Social media posts like the one shown above were used throughout brand week to let the Johnstown community know where-and-when they could provide input. Engagement with the posts included ‘likes’ and ‘shares’ and several people who provided in-person feedback mentioned they had seen the Brand Week Facebook posts and made sure to stop by during the scheduled input hours.

BRANDING OUTREACH WEEK - JANUARY 30 THROUGH FEBRUARY 4, 2023



By meeting people in locations throughout Johnstown, the design team was able to gather feedback and direction from a wide variety of Johnstown residents and visitors while they were doing regular activities like shopping, dining, working out, learning or taking their children to daycare.



'Brand Week' Feedback Overview

During these community conversations, the following key themes emerged regarding the two design options and the preliminary 'Call to Action' taglines:

I Like the Large 'J'

I Like the Use of Brick

I'd Like to Incorporate Temporary Banners in the Signage Palette

I Like Using an Icon on Top of the Auto Directional Signs

stated they strongly preferred the auto directional signage of Option A, stating that the unique rounded icon at the top of the signage would be a wonderful, artistic, and memorable signage feature that should be included in the final signage palette.

Make Sure 'Downtown' is Prominent

I Like the Prominent 'J' and the Icons

The Tagline Should Reflect Local Pride & Values

I Like the Gradient Color Option



Downtown Johnstown
Branding & Wayfinding Plan
Your Votes & Ideas for the Preliminary Branding

We are so grateful for the ideas, feedback and direction you've provided over the past few months, and eager to show you some options for the new Downtown Johnstown branding and wayfinding designs! Please look over the two design option banners, and use the provided sticker dots to vote on your overall favorite. You can also use sticky notes to tell us a little more about why you picked your favorite option, or if there's anything about the option you didn't pick that you'd like us to incorporate into the final branding and signage designs. Here's how to provide your feedback:

- 1 Step One: Review the 2 design option banners for the Downtown Johnstown branding & wayfinding
- 2 Step Two: Use the provided sticker dots to vote on your favorite design option for the branding & wayfinding
- 3 Step Three: Make note of any ideas or comments you have using the provided sticky notes

**Don't Have Time to
Vote! Scan the QR
Code to Provide
Input From Home!**



<https://www.surveymonkey.com/r/PreliminaryBrandingOptions>

EXTRA CREDIT HELP!!

Call to Action Ideas!

We've put a placeholder call to action in the branding and wayfinding of both "Colorado" and "The Community That Cares"; but we're looking for a **UNIQUE CALL TO ACTION** for JOHNSTOWN'S DOWNTOWN that we can use to market and promote downtown destinations, attractions, and redevelopment. We came up with the concepts below, but if you have other call to action phrases, we'd love to hear your ideas! **PLEASE WRITE YOUR CALL TO ACTION PHRASE IDEAS ON A STICKY NOTE & POST THEM BELOW!!** And if you have a favorite of the options below, place a sticker dot on it.

"BE A PART OF IT!"

"GENUINELY LOCAL"

"IT STARTS HERE"

**"WHERE EXPERIENCES
ARE CREATED"**

09

Final Downtown Johnstown Brand

A NEW BRAND FOR DOWNTOWN JOHNSTOWN

The New Downtown Johnstown Brand - “Local Grows Here”

The final Downtown Johnstown brand incorporates the feedback and direction we received from the community, the Johnstown Downtown Development Association, local businesses and staff members from the Town of Johnstown. The final brand also includes the new tagline “Local Grows Here,” with the option of adding different qualifiers like local **business, connections, history, creativity, family, community**, etc. to specifically identify the things the community would like to grow in the historic downtown district. The “Local Grows Here” tagline embraces the reality of community growth in a positive way, highlighting that encouraging growth that empowers and strengthens what is local and unique will set the historic downtown apart as a place that supports and encourages the growth of local businesses, entrepreneurs, and places where the community can come together.



JOHNSTOWN BRANDING EXPRESSIONS - ALTERNATE BRANDING APPLICATIONS

In order to ensure the brand is applicable to the variety of events and communication needs, several alternatives of the primary logo were designed that allow it to be used in different formats. The illustrations below show several examples of how the logo expression can be modified to accommodate a variety of applications while still being brand compliant.



JOHNSTOWN BRANDING EXPRESSIONS - FONTS, COLORS & LETTERHEAD EXAMPLE

MODESTO OPEN - DOWNTOWN

ABCDEFGHIJKLMNOPQRSTUVWXYZ

ABCDEFGHIJKLMNOPQRSTUVWXYZ

Niveau Grotesk - JOHNSTOWN & "Local Grows Here"

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

Marydale-Regular - "Business"

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

Downtown Dk. Grey

Pantone 454143

RGB: R69/G65/B67
CMYK: C65/M62/Y58/K45

Downtown Dk. Blue

Pantone 2B4D59

RGB: R43/G77/B90
CMYK: C85/M58/Y49/K32

Downtown Teal

Pantone 39998E

RGB: R57/G153/B142
CMYK: C76/M20/Y49/K2

Downtown Yellow

Pantone FFDC7C

RGB: R254/G221/B125
CMYK: C1/M11/Y61/K0

Downtown Orange

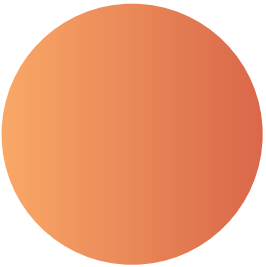
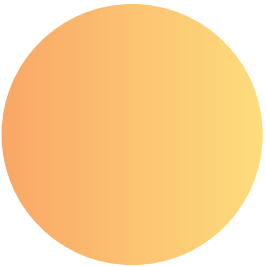
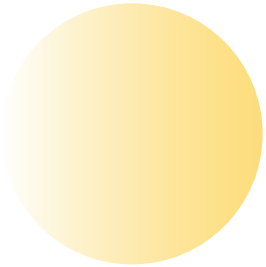
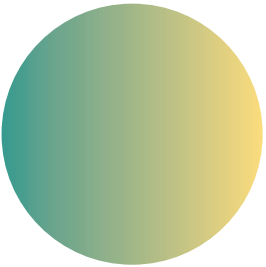
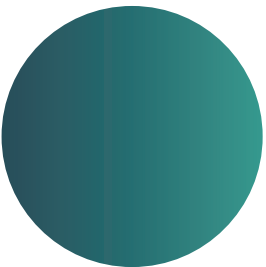
Pantone FFAA67

RGB: R250/G169/B105
CMYK: C0/M40/Y65/K0

Downtown Rust

Pantone DA674A

RGB: R218/G103/B74
CMYK: C11/M73/Y76/K1



JOHNSTOWN BRANDING EXPRESSIONS - PROMOTIONAL SWAG

Launching the New Downtown Brand

Creating and distributing useful and compelling materials that celebrate the new Downtown brand will be part of the official brand launch in Spring/ Summer 2023. Some examples of potential useful branded elements can include reusable grocery bags, water bottles, hats, shirts, pins, and stickers - just to name a few!



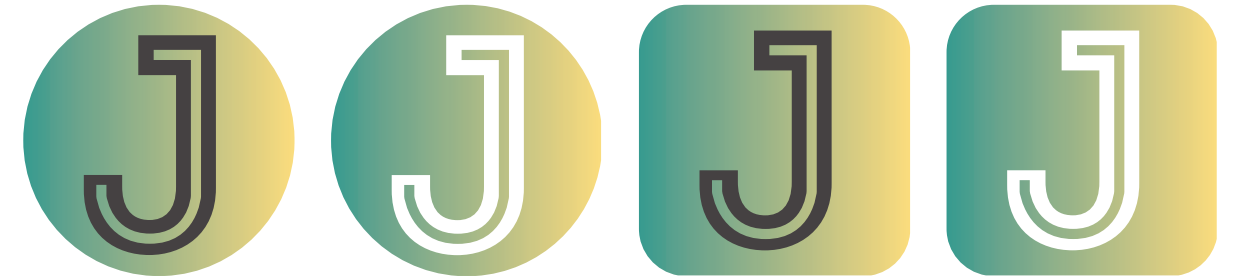
JOHNSTOWN BRANDING EXPRESSIONS - SOCIAL MEDIA MESSAGING & PROMOTIONS

Local “X” Grows Here Promotions

- Business
- Entrepreneurship
- Connections
- Fun
- Celebrations/festivals
- History
- Dining
- Shopping
- Caring
- Support
- Ideas
- Wellness
- Creativity
- Families
- Community

Social Media Presence

As the Downtown brand grows and expands in reach, potentially broadening stakeholder communication to include a unique social media presence on Facebook and perhaps expanding into Instagram would allow the Downtown Johnstown promotional messages to have a larger reach and keep all the downtown-related information on one page.



JOHNSTOWN BRANDING EXPRESSIONS - EXAMPLES OF LOCAL “X” GROWS HERE PROMOTIONS

Promoting the Local “X” Grows Here Downtown Brand

The new Downtown Brand and call to action of “Local Grows Here” reinforces the historic downtown area as the heart and soul of the Johnstown community, and an important place to grow community relationships, connections, ideas, creativity, and entrepreneurship! As the new brand is implemented, different messages promoting local growth and redevelopment in the Downtown will be used to target various audience members. The example to the right illustrates the type of photography and messaging used to encourage **local businesses** to invest and grow in the Downtown area. The photo takes a person-centered approach to highlighting the idea of opening a business, and has a small-town/local feel and the friendly demeanor characteristic of the Johnstown community.

Branding Target Audiences

The final Branding Implementation Plan will focus on the following target audiences, tailoring the messaging and marketing materials needed to attract these audiences to shopping, dining, recreating, working or investing in Downtown Johnstown:

- Families
- Teens
- New Residents
- Long-Time Residents
- Developers/Investors
- Entrepreneurs/New Businesses
- Visitors/Tourists
- At-Home Businesses
- Incubator Businesses/Food Trucks
- Existing Downtown Businesses (looking to grow and expand)

Downtown Johnstown is Open for Business!

As the heart of the Johnstown community, the Downtown is where we want to grow local businesses and entrepreneurship. Have a business idea you'd like to explore? Reach out to us for help and support!



Contact Sarah Crosthwaite, Economic Development Manager at scrosthwaite@johnstownco.gov

DOCUMENT PREPARED BY:

Michael Baker
INTERNATIONAL



Town of Johnstown

February 13, 2023

Jacob and Amy Bachman
19 S. Parish Avenue
Johnstown, CO 80534

Re: Building Logo

Dear Mr. and Mrs. Bachman:

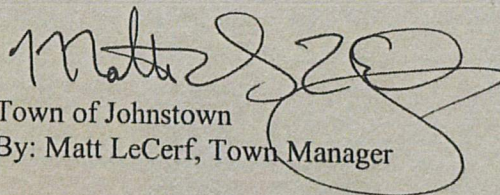
As you are aware, the Town of Johnstown ("Town") is engaged in an effort to create branding for the Town's downtown area. The Town has retained a consultant who recommends the Town utilize the logo on the building located at 19 S. Parish Avenue to represent the historic nature of the downtown. You are the owners of the building.

The logo is generally depicted below.

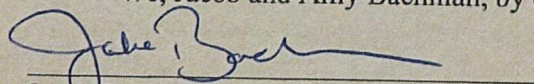


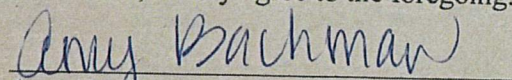
You have indicated that you agree to the Town's use of the logo in its branding and marketing materials in any form or manner that the Town deems best. The Town appreciates your agreement and is sending this letter merely to serve as confirmation.

Sincerely,


Town of Johnstown
By: Matt LeCerf, Town Manager

We, Jacob and Amy Bachman, by our signatures below, hereby agree to the foregoing.


Jacob Bachman


Amy Bachman

The Community That Cares

www.TownofJohnstown.com

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO | F: 970.587.0141



Town of Johnstown

TOWN COUNCIL AGENDA COMMUNICATIONS

AGENDA DATE: March 20, 2023

SUBJECT: Resolution 2023-16 Findings of Fact and Conclusions Regarding the Archdiocese Annexation No. 1 and Archdiocese Annexation No. 2

ACTION PROPOSED: Consider Resolution 2023-16 Findings of Fact and Conclusions based thereon with respect to the Archdiocese Annexation No. 1 and Archdiocese Annexation No. 2

ATTACHMENTS: 1. Resolution 2023-16
2. Vicinity Map

PRESENTED BY: Kim Meyer, Planning & Development Director

AGENDA ITEM DESCRIPTION:

An annexation petition and application materials were received by the Town in July 2022 to annex approximately 82.6 acres, located west of Weld County Road 19, and north of Weld County Road 44.

The submittal materials have been reviewed and found by Town Staff and the Town Attorney to be in compliance with C.R.S. §31-12-107(1). This resolution sets forth the findings of fact and conclusions that the area is eligible for annexation and may be annexed by ordinance.

LEGAL ADVICE:

Resolution was prepared by the Town Attorney.

FINANCIAL ADVICE:

NA

The Community That Cares

johnstown.colorado.gov

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO 80534 | F: 970.587.0141

RECOMMENDED ACTION:

Staff recommends the approval of Resolution 2023-16 Findings of Fact and Conclusions based thereon with respect to the Archdiocese Annexation No. 1 and Archdiocese Annexation No. 2.

SUGGESTED MOTIONS:**For Approval**

I move that the Town Council approve Resolution 2023-16 Findings of Fact and Conclusions based thereon with respect to the Archdiocese Annexation No 1 and Archdiocese Annexation No. 2.

For Denial

I move that the Town Council deny Resolution 2023-16.

Reviewed and Approved for Presentation,



Town Manager

**TOWN OF JOHNSTOWN, COLORADO
RESOLUTION NO. 2023-16**

**FINDINGS OF FACT AND CONCLUSIONS BASED THEREON
WITH RESPECT TO THE ARCHDIOCESE ANNEXATION NO. 1
AND ARCHDIOCESE ANNEXATION NO. 2**

WHEREAS, the Town of Johnstown, Colorado (“Town”) is a Colorado home rule municipality, duly organized and existing under the laws of the State of Colorado and the Town’s Home Rule Charter; and

WHEREAS, the Town Council is vested with authority to administer the affairs of the Town; and

WHEREAS, the Archdiocese of Denver, a Colorado corporation sole, submitted a Petition for Annexation for an annexation of real property situated in Northwest Quarter of the Northeast Quarter of Section 16, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado, consisting of approximately 41.06 acres, and in the Northeast Quarter of the Northeast Quarter of Section 16, and a Portion of the Northwest Quarter of the Northwest Quarter of Section 15, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado, consisting of approximately 41.53 acres, being more particularly described on Exhibit A, and known respectively as the “Archdiocese Annexation No. 1 and Archdiocese Annexation No. 2;” and

WHEREAS, on February 6, 2023, by Resolution No. 2023-06, the Town Council found the Petition for Annexation to be in substantial compliance with C.R.S. § 31-12-107(1); and

WHEREAS, on March 20, 2023, after due notice, the Town Council conducted a public hearing and, based on the evidence contained in the official file, the official records of the Town and the evidence produced at the hearing, desires to enter the following findings of fact and conclusions with the respect to the Archdiocese Annexation No. 1 and Archdiocese Annexation No. 2.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF JOHNSTOWN, COLORADO, THAT:

The Town Council hereby sets forth its findings of fact and conclusions with respect to the Archdiocese Annexation No. 1 and Archdiocese Annexation No. 2.

FINDINGS OF FACT

1. The requirements of the applicable parts of C.R.S. § 31-12-104 and C.R.S. § 31-12-105 have been met including the following:
 - A. Not less than one-sixth of the perimeter of the area proposed to be annexed is contiguous with the Town as shown on the annexation map.

- B. A community of interest exists between the area proposed to be annexed and the Town due to the proximity of the area to the Town, the desires of the owners to annex and the fact that it is within the planning area contemplated in the Johnstown Area Comprehensive Plan.
 - C. The area will be urbanized in the near future and the area is capable of being fully integrated with the Town.
 - D. Although less than fifty (50%) percent of the adult residents of the area proposed to be annexed make use of Town facilities, the landowners of the area proposed for annexation, while presently agricultural, plan to develop the land in less than five (5) years, and urban services, which are currently being provided to other citizens of the Town, may be provided to citizens of the proposed annexed area on the same terms and conditions as the services are made available to other citizens. The Town is able to provide water service and the Town's sewer system can be extended to the property annexed with the same standards as the current sewer system serving other citizens. Police and other municipal services can be provided as well.
 - E. No land held in identical ownership has been divided into separate parts. No land with a valuation of over \$200,000 has been included without written consent. No annexation proceedings concerning this area have been commenced by any other municipality.
 - F. This annexation will not result in any detachment of area from any school district.
 - G. No part of the area to be annexed extends any more than three (3) miles from the existing Town boundaries. The Town has in place a plan for that area as required by C.R.S. § 31-1-105.
 - H. The entire widths of any streets to be annexed are included within the annexation.
2. No petition for annexation election has been submitted and an election is not required pursuant to C.R.S. § 31-12-107(2). An annexation agreement has been submitted.
 3. The Town Council has determined that additional terms and conditions will not be imposed.
 4. The Petition was signed by the owners of 100% of the property to be annexed exclusive of streets and alleys.
 5. Notice of this hearing has been given as required by C.R.S. § 31-12-108.
 6. An Annexation Impact Report was submitted to the Weld County Board of County Commissioners and County Attorney pursuant to C.R.S. § 31-12-108.5.

CONCLUSIONS

1. The area proposed for annexation is eligible for annexation pursuant to applicable parts of C.R.S. § 31-12-104.

2. None of the limitations of C.R.S. § 31-12-105 apply to restrict annexation.
3. Said Archdiocese Annexation No. 1 and Archdiocese Annexation No. 2 may be annexed by Ordinance pursuant to C.R.S. § 31-12-111, without an election under C.R.S. § 31-12-107(2).

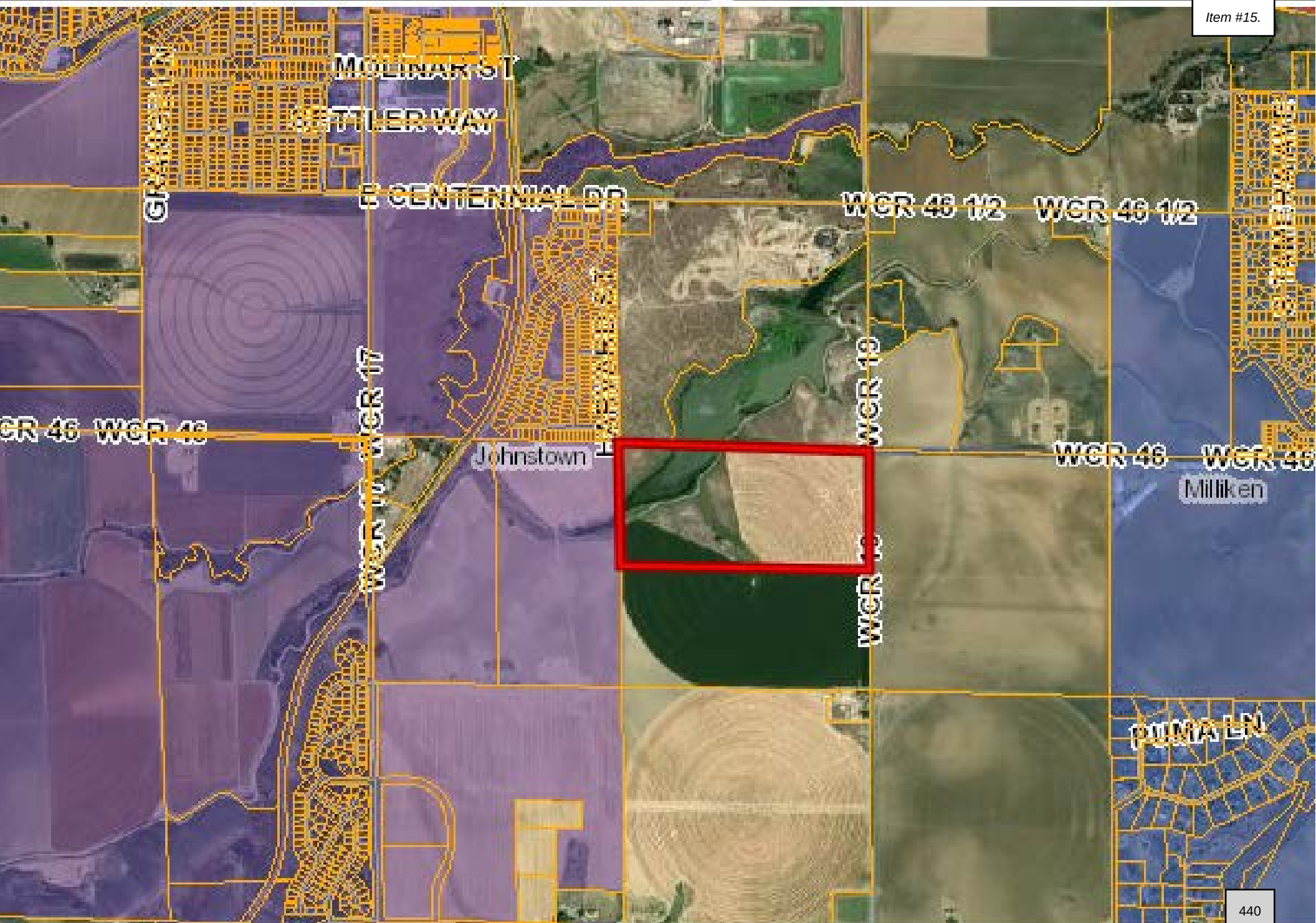
PASSED, SIGNED, APPROVED, AND ADOPTED THIS ____ day of _____, 2023.

ATTEST:

TOWN OF JOHNSTOWN, COLORADO

By: _____
Hannah Hill, Town Clerk

By: _____
Gary Lebsack, Mayor





Town of Johnstown

TOWN COUNCIL AGENDA COMMUNICATIONS

AGENDA DATE: March 20, 2023

SUBJECT: Ordinance 2023-244 regarding the Archdiocese Annexation No. 1 and Archdiocese Annexation No. 2

ACTION PROPOSED: Hold Public Hearing and Consider Ordinance 2023-244 Annexing certain unincorporated lands located in Weld County, known as the Archdiocese Annexation No. 1 and 2, containing approx. 82.6 acres

ATTACHMENTS:

1. Ordinance 2023-244
2. Vicinity Map
3. Petition
4. Annexation Maps – Nos. 1 and 2
5. PZC Agenda Memorandum for Annexation & Zoning
6. Staff Presentation

PRESENTED BY: Kim Meyer, Planning & Development Director

AGENDA ITEM DESCRIPTION:

The Town has received a petition for annexation from the owner, for the Archdiocese Annexation Nos. 1 and 2 (Attachment 3), located in Weld County. The property is west of Weld County Road 19, and north of Weld County Road 44, adjacent to and encompassing portions of the Little Thompson/Hillsborough reservoir (Attachment 2).

This proposed area of annexation meets the eligibility and contiguity requirements of CRS 31-104 and 105, and is bordered by Johnstown along the western boundary (Attachment 4). A Resolution to this effect was approved by Town Council on February 6, 2023.

The Planning & Zoning Commission (PZC) held a public hearing on February 15, 2023, to consider the Archdiocese Annexation Nos. 1 and 2 (Case ANX22-0003). The Planning & Zoning Commission Agenda Memorandum (Attachment 5) provides background and historical use of the property. The property has been undeveloped agricultural land within unincorporated Weld County, with some limited oil and gas facilities. Based upon the materials submitted, analysis, and findings, the PZC approved a motion recommending to Town Council approval of this annexation request.

The Community That Cares

johnstown.colorado.gov

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO 80534 | F: 970.587.0141

The Johnstown Review Committee reviewed this project and provided redlines and comments, which have been addressed by the Applicant. Full referral packets, required per C.R.S., were sent via registered mail to the Weld County Board of County Commissioners, the County Attorney, and all Special Districts.

This petition and application for annexation is accompanied by companion requests, on this Council agenda, for Establishment of Zoning to H-A (Holding Ag) and PUD-MU (Mixed Use), as well as an Outline Development Plan and Use by Special Review to permit development of a community scale solar facility on a portion of this annexation area. An annexation agreement will be presented concurrent with the second reading of the ordinance, which includes the provision for dedication of additional right of way along the County Road 19 frontage of this parcel to be executed and recorded on or after the effective date of this annexation.

LEGAL ADVICE:

Ordinance was prepared by the Town Attorney.

FINANCIAL ADVICE:

NA

RECOMMENDED ACTION: Planning & Zoning Commission recommended, and Town Staff supports, Approval of Ordinance 2023-244 Annexing approximately 82.6 acres, known as the Archdiocese Annexation No. 1 and Archdiocese Annexation No. 2, on First Reading.

SUGGESTED MOTIONS:

For Approval

I move that the Town Council approve Ordinance 2023-244, on First Reading.

For Denial

I move that the Town Council deny Ordinance 2023-244.

Reviewed and Approved for Presentation,



Town Manager

TOWN OF JOHNSTOWN, COLORADO
ORDINANCE NO. 2023-244

ANNEXING CERTAIN UNINCORPORATED LANDS LOCATED IN THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 16, TOWNSHIP 4 NORTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF WELD, STATE OF COLORADO, CONSISTING OF APPROXIMATELY 41.06 ACRES, AND IN THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 16, AND A PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 15, TOWNSHIP 4 NORTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF WELD, STATE OF COLORADO, CONSISTING OF APPROXIMATELY 41.53 ACRES, AND KNOWN RESPECTIVELY AS THE ARCHDIOCESE ANNEXATION NO. 1 AND ARCHDIOCESE ANNEXATION NO. 2

WHEREAS, the Town of Johnstown, Colorado (“Town”) is a Colorado home rule municipality, duly organized and existing under the laws of the State of Colorado and the Town’s Home Rule Charter; and

WHEREAS, the Town Council is vested with authority to administer the affairs of the Town; and

WHEREAS, by Resolution No. 2023-06, the Town Council found a petition for annexation of certain property situated in the Northwest Quarter of the Northeast Quarter of Section 16, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado, consisting of approximately 41.06 acres, and in the Northeast Quarter of the Northeast Quarter of Section 16, and a Portion of the Northwest Quarter of the Northwest Quarter of Section 15, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado, consisting of approximately 41.53 acres, being more particularly described on Exhibit A, attached hereto and incorporated herein by this reference, known respectively as the “Archdiocese Annexation No. 1 and Archdiocese Annexation No. 2,” to be in substantial compliance with C.R.S. § 31-12-107(1); and

WHEREAS, after notice pursuant to C.R.S. § 31-12-108, on March 20, 2023, the Town Council held a public hearing on the proposed annexation to determine if the annexation complies with C.R.S. §§ 31-12-104 and 105; and

WHEREAS, the Town Council has determined that the requirements of C.R.S. §§ 31-12-104 and 105 have been met, that an election is not required and that no additional terms or conditions are to be imposed on the annexed area.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF JOHNSTOWN, COLORADO, THAT:

Section 1. The annexation of certain unincorporated property situated in the Northwest Quarter of the Northeast Quarter of Section 16, Township 4 North, Range 67 West of the 6th

P.M., County of Weld, State of Colorado, consisting of approximately 41.06 acres, and in the Northeast Quarter of the Northeast Quarter of Section 16, and a Portion of the Northwest Quarter of the Northwest Quarter of Section 15, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado, consisting of approximately 41.53 acres, being more particularly described on Exhibit A, be and the same is hereby approved and said unincorporated area is hereby incorporated and made a part of the Town of Johnstown, Colorado.

Section 2. The annexation of such unincorporated area to the Town of Johnstown, Colorado shall be complete and effective on the effective date of this Ordinance, except for the purpose of general property taxes, and shall be effective as to general property taxes on and after the first day of January, 2024.

Section 3. Within thirty (30) days of the effective date of this Ordinance, the Town Clerk be and is hereby authorized and directed to:

- A. File one copy of the annexation map with the original of the annexation ordinance in the office of the Town Clerk; and
- B. File three certified copies of the annexation ordinance and map of the area annexed containing a legal description of such area with the Weld County Clerk and Recorder.

Section 4. This Ordinance shall take effect as provided by State law.

INTRODUCED AND APPROVED on first reading by the Town Council of the Town of Johnstown, Colorado, this ___ day of _____, 2023.

TOWN OF JOHNSTOWN, COLORADO

ATTEST:

By: _____
Hannah Hill, Town Clerk

By: _____
Gary Lebsack, Mayor

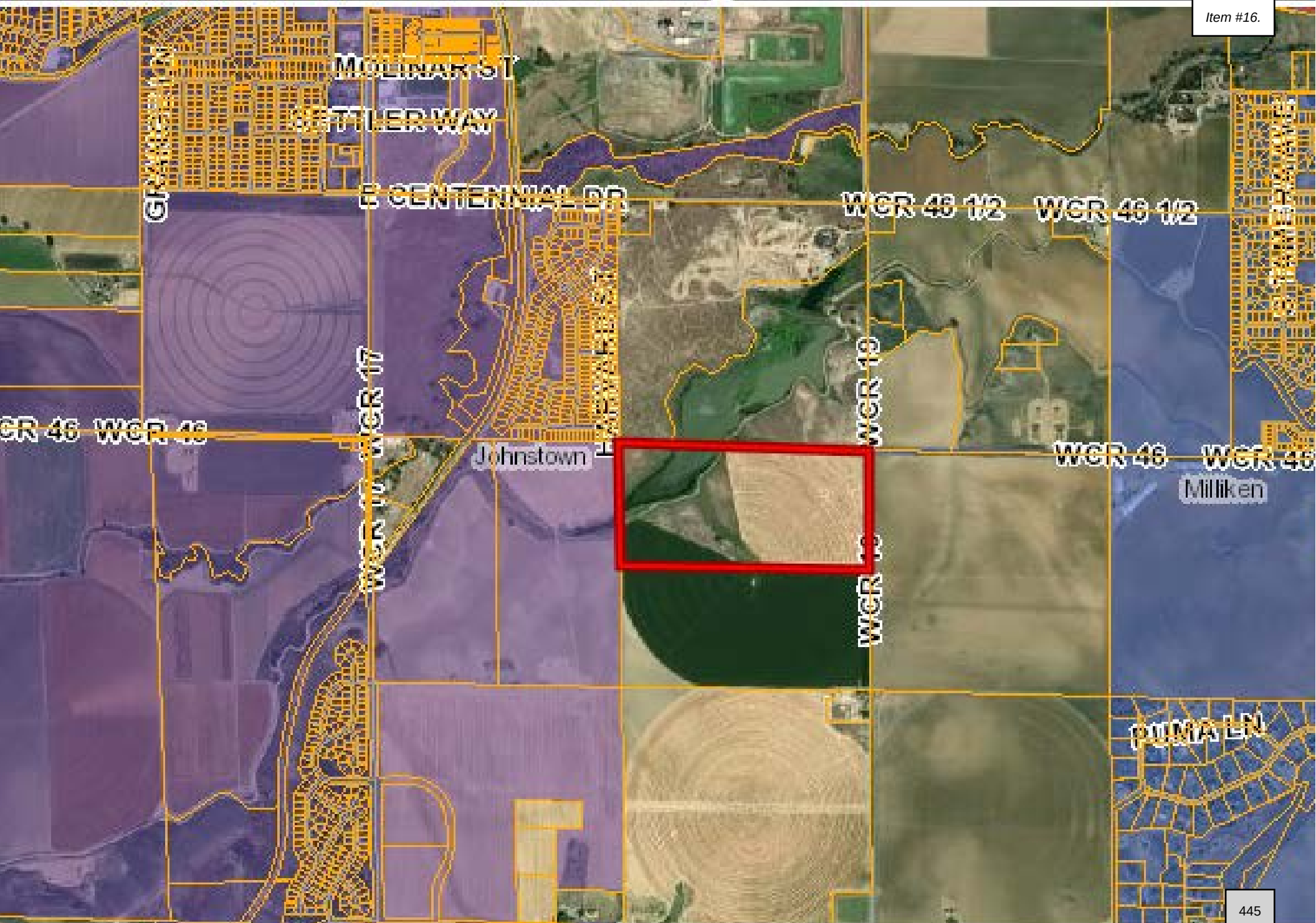
PASSED UPON FINAL APPROVAL AND ADOPTED on second reading by the Town Council of the Town of Johnstown, Colorado, this _____ day of _____, 2023.

TOWN OF JOHNSTOWN, COLORADO

ATTEST:

By: _____
Hannah Hill, Town Clerk

By: _____
Gary Lebsack, Mayor



PETITION FOR ANNEXATION
To the Town of Johnstown
(Weld County)

The undersigned, in accordance with Article 12, Chapter 31, CRS, as amended, hereby petition the Town Council of the Town of Johnstown, Colorado, for annexation to the Town of Johnstown the unincorporated territory more particularly described below, currently known as **WELD COUNTY PARCEL NO. 105916100039**, and in support of said Petition, your petitioners allege that:

- (1) It is desirable and necessary that the following described territory be annexed to the Town of Johnstown, Colorado:

See Exhibit A attached hereto and made a part hereof.

- (2) Not less than one-sixth (1/6) of the perimeter of that area proposed to be annexed is contiguous with the Town of Johnstown, Colorado.
- (3) A community of interest exists between the territory proposed to be annexed and the Town of Johnstown, Colorado.
- (4) The territory proposed to be annexed is urban or will be urbanized in the near future;
- (5) The territory proposed to be annexed is integrated or is capable of being integrated with the Town of Johnstown, Colorado;
- (6) The signatures of the Petition comprise one hundred percent (100%) of the landowners of the territory to be included in the area proposed to be annexed and said landowners attesting to the facts and agreeing to the conditions herein contained will negate the necessity of any annexation election;
- (7) No land held in identical ownership, whether consisting of one tract or parcel of real estate or two or more contiguous tracts or parcels of real estate:
- (a) Is divided into separate parts or parcels without the written consent of the landowner or landowners thereof, unless such tracts or parcels are separated by a dedicated street, road or other public way;
 - (b) Comprising twenty (20) acres or more and which, together with the building and improvements situated thereon has an assessed value in excess of Two Hundred Thousand Dollars (\$200,000.00) for ad valorem tax purposes to be annexed without the written consent of the landowner or landowners.

- (8) No part of the area proposed to be annexed is more than three miles from a point on the municipal boundary, as such was established more than one year before this annexation will take place;
- (9) The area proposed to be annexed comprises more than ten acres and an impact report as provided in Section 31-12-105.5, CRS, as amended, is required.
- (10) The area proposed to be annexed is located within Weld County, School District RE 5-J, Northern Colorado Water Conservancy District, Little Thompson Water District, Front Range Fire Rescue Fire Protection District, Aims Junior College District, and Weld County Library District, and no others;
- (11) The mailing address of each signer, the legal description of the land owned by each signer and the date of signing of each signature are all shown on this Petition;
- (12) Accompanying this Petition are five (5) prints of the area proposed to be following information:
 - (a) A written legal description of the boundaries of the area proposed to be annexed;
 - (b) A map showing the boundary of the area proposed to be annexed, such map prepared and containing the seal of a registered engineer or land surveyor;
 - (c) Within the annexation boundary map there is shown the location of each ownership tract in unplatted land, and if part or all of the area is to be platted at the time of the effectiveness of the annexation (as opposed to after such effectiveness), then the boundaries and the plat number of plots or of lots and blocks are shown;
 - (d) Next to the boundary of the area proposed to be annexed is drawn the contiguous boundary of the Town of Johnstown, and the contiguous boundary of any other municipality abutting the area proposed to be annexed;
 - (e) The dimensions of the contiguous boundaries are shown on the map.
 - (f) A proposed drainage plan and a proposed utilities plan.
- (13) The territory to be annexed is not presently a part of any incorporated city, city and county, or town;

- (14) The undersigned agree to the following conditions, which shall be covenants running with the land, and which shall, at the option of the Town, appear on the annexation map:
- (a) Water rights shall be provided as mutually agreed to by the Town and the undersigned; The undersigned specifically agree that they have not sold or transferred any water rights appurtenant to their property within the past year nor will they do so during the pendency of this annexation petition and once annexed to the Town of Johnstown, they will not sell or transfer any water rights appurtenant to the subject property without the prior written approval of the Johnstown Town Council.
 - (b) The owners shall participate in providing drainage plan and improvements and payment of a unit drainage fee as may be required by the Town the area;
 - (c) The undersigned hereby waive any and all "vested rights" previously created pursuant to Section 24-68-103, CRS, as amended.
 - (d) The undersigned and the Town may enter into an Annexation Agreement prior to the effective date of this annexation, which agreement shall be additional conditions as effectively as if set forth in this Petition.
- (15) Petitioner represents that: (Check one)
- X No part of the property to be annexed is included within any site specific development plan approved by Weld County, Colorado.
- A site specific development plan has been approved by Weld County, Colorado, which has created a vested right.
- (16) Submitted with this Petition is the required \$.00 for publication costs.

EXECUTED this 27th day of July, 2022.

By: 

Name: Keith Parsons

Title: COO, Attorney in fact for Samuel J. Aquila, Archbishop of Denver

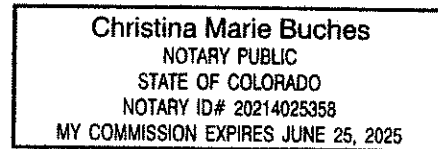
Name of Annexation: St. Isidore/ARCHDIOCESE

STATE OF COLORADO)
)ss
 COUNTY OF Denver)

Subscribed and sworn to before me this 27th day of July,
2022 by Keith Parsons as COO, Attorney in fact for of
Archbishop Samuel J. Aquila, Archbishop of Denver on behalf of
 _____.

WITNESS my hand and official seal.

My commission expires: June 25, 2025





 Notary Public

EXHIBIT A

Legal Description: PART OF THE NORTH HALF OF THE NORTHEAST QUARTER OF SECTION 16, TOWNSHIP 4 NORTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF WELD, STATE OF COLORADO

ARCHDIOCESE ANNEXATION No. 1

The Northwest Quarter of the Northeast Quarter of Section 16, Township 4 North, Range 67 West
of the 6th P.M., County of Weld, State of Colorado

PROPERTY DESCRIPTION (PER ALTA COMMITMENT ORDER No. N0034909-030-BSB-ES, Amendment No. 1):

The N1/2 of the NE1/4 of Section 16, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado

PROPERTY DESCRIPTION – ARCHDIOCESE ANNEXATION No. 1:

An area of land being the Northwest Quarter of the Northeast Quarter (NW1/4NE1/4) of Section Sixteen (16), Township Four North (T.4N.), Range Sixty-seven West (R.67W.) of the Sixth Principal Meridian (6th P.M.), County of Weld, State of Colorado, being more particularly described as follows:

COMMENCING at the Northeast corner of Section 16 and assuming the East line of the Northeast Quarter (NE1/4) of Section 16 as monumented by a 2.5" aluminum pipe with a 3.25" aluminum cap stamped LS 13155 at the North end and by a #6 rebar with a 2.0" aluminum cap stamped LS 22097 at the South end, as bearing South 00°44'50" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983, a distance of 2592.40 feet, with all other bearings contained herein being relative thereto.

The lineal dimensions as contained herein are based upon the "U.S. Survey Foot."

THENCE North 88°26'46" West along the North line of the NE1/4 of Section 16 a distance of 1361.50 feet to the calculated position of the East Sixteenth corner of said Section 16 and to the **POINT OF BEGINNING**;

THENCE South 00°54'49" East along the East line of the NW1/4NE1/4 of said Section 16 a distance of 1309.95 feet to the calculated position of the Northeast Sixteenth corner of said Section 16;

THENCE North 89°01'10" West along the South line of said NW1/4NE1/4 a distance of 1357.21 feet to the Center North Sixteenth corner of said Section 16;

THENCE North 01°04'34" West along the West line of said NW1/4NE1/4 a distance of 1323.71 feet to the North Quarter corner of said Section 16;

THENCE South 88°26'46" East along the North line of said NW1/4NE1/4 a distance of 1361.49 feet to the calculated position of the East Sixteenth corner of said Section 16 and to the **POINT OF BEGINNING**.

Said area of land contains **41.06 Acres** (+/-1,788,614 sq.ft.) and is subject to any rights-of-way or other easements of record as now existing on said described parcel of land.

OWNER'S APPROVAL

Know all men by these presents, that I/we, Archdiocese of Denver, being the sole owner(s) of the land described herein, have caused said land to be annexed under the name of **ARCHDIOCESE ANNEXATION No. 1**.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

By: _____ As: _____

NOTARIAL CERTIFICATE

STATE OF _____ }
COUNTY OF _____ }SS

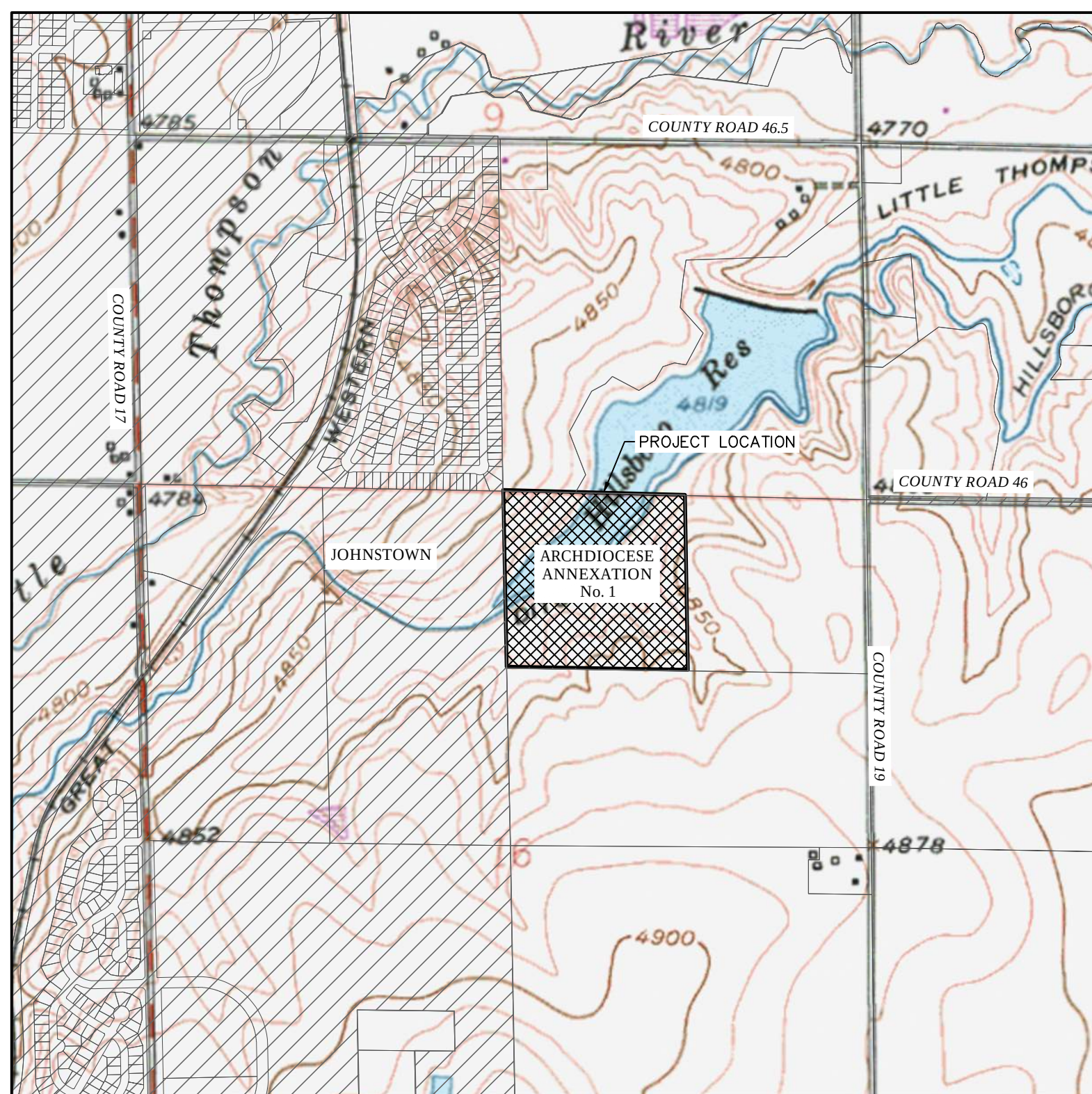
The foregoing instrument was acknowledged before me by _____
this _____ day of _____, 20____. Witness my hand and seal.

My commission expires _____ Notary Public

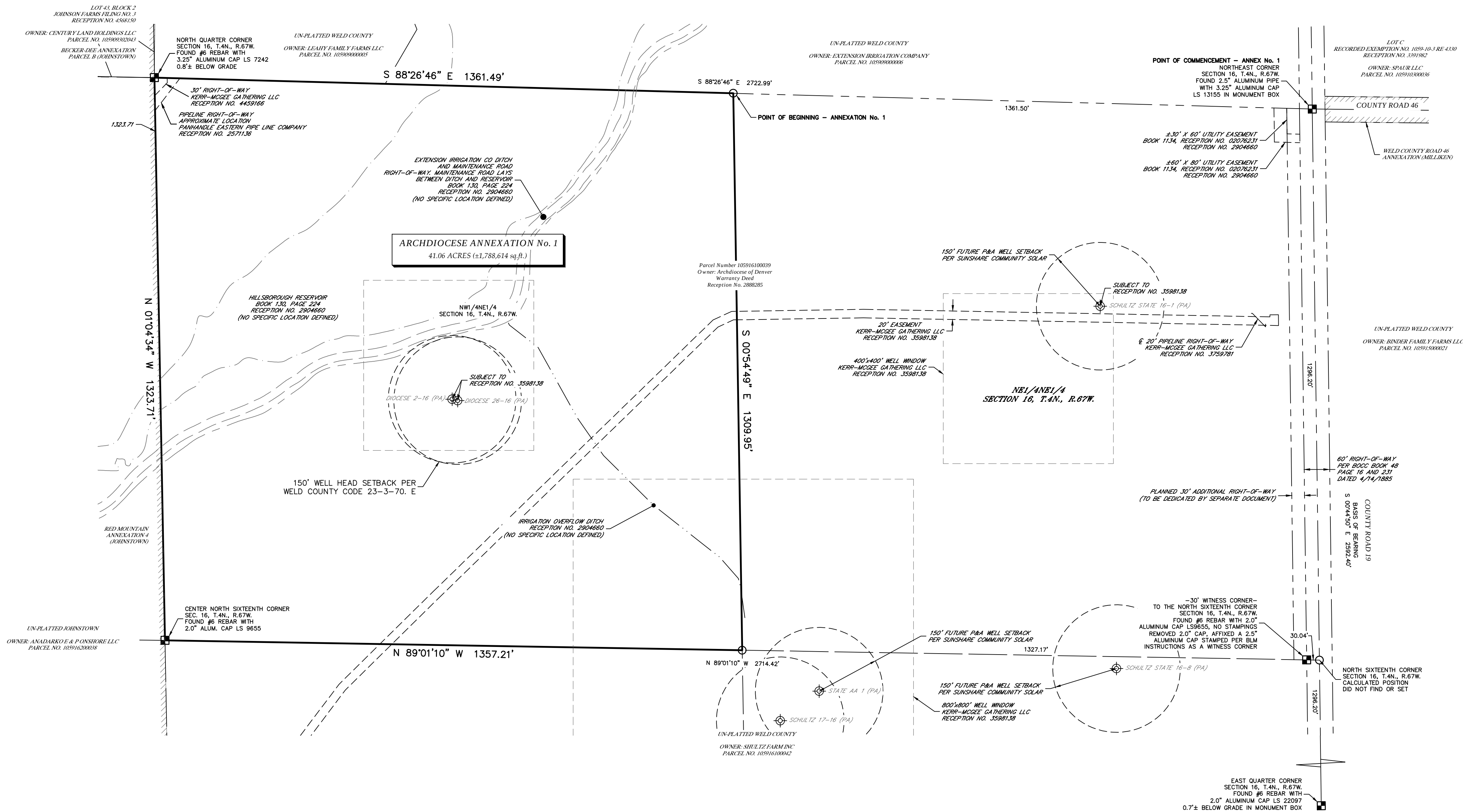
TOWN COUNCIL APPROVAL

This map to be known as **ARCHDIOCESE ANNEXATION No. 1** is approved and accepted to the Town of Johnstown, Colorado by ordinance number _____, passed and adopted on final reading at the regular meeting of the Town Council of the Town of Johnstown, Colorado, held on the _____ day of _____, 20____.

By: _____ Mayor Seal _____ Attest: _____ Town Clerk



VICINITY MAP
SCALE - 1"=1000'



TITLE COMMITMENT NOTE

This survey does not constitute a title search by Lat40, Inc. to determine ownership or easements of record. For all information regarding easements, rights-of-way and title of records, Lat40, Inc. relied upon Title Commitment File Number N0034909-030-BSB-ES, Amendment No. 1, having an effective date of June 23, 2022, as prepared by Fidelity National Title Insurance Company to delineate the aforesaid information.

NOTE

According to Colorado law, you must commence any legal action based upon any defect in this survey within three years after you discover such defect. In no event, may any action based upon any defect in this survey be commenced more than ten years after the date of the certificate shown hereon. (13-80-105 C.R.S.)

SURVEYOR'S STATEMENT

I, Jason S. Allee, a Colorado Licensed Professional Land Surveyor, do hereby state that this Annexation Plat was prepared from an actual survey under my personal supervision, that the monumentation as indicated hereon was found or set as shown, and that the foregoing plat is an accurate representation thereof, all this to the best of my knowledge, information and belief.

SHEET 1 OF 1

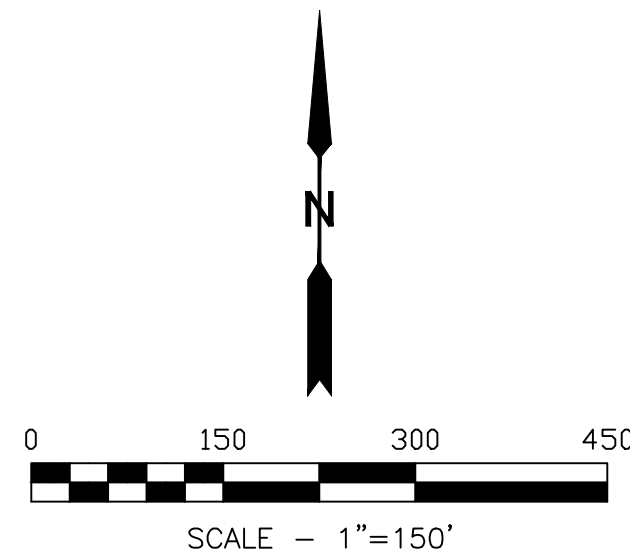
PRELIMINARY

Jason S. Allee-On behalf of Lat40°, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479

LEGEND

	ANNEXATION BOUNDARY
	SECTION LINE
	RIGHT-OF-WAY LINE
	EASEMENT LINE
	QUARTER SECTION LINE
	EXISTING TOWN LIMITS
	FOUND ALIQUOT CORNER AS DESCRIBED
	CALCULATED POSITION
	PLUGGED AND ABANDONED WELL

ANNEXATION TABLE	
CONTIGUOUS BOUNDARY (L.F.)	1323.71
TOTAL BOUNDARY PERIMETER (L.F.)	5352.36
1/6 OF PERIMETER (L.F.)	892.05
ANNEXATION RATIO (1 to X)	4.043
TOTAL LAND AREA (Acres)	41.06



	DATE: 7/20/2022	FILE NAME: 2021312.2ANNEX	DRAWN BY: KMR	CHECKED BY: JSA	SCALE: AS NOTED	PROJECT #: 2021312.2
	REVISIONS:	DATE:	ARCHDIOCESE ANNEXATION No. 1 FOR SUNSHARE COMMUNITY SOLAR 1724 GILPIN STREET DENVER CO, 80218			
	ADDRESS TOWN COMMENTS	9/15/2022				
1 SHEET 1 OF 1						

ARCHDIOCESE ANNEXATION No. 2

The Northeast Quarter of the Northeast Quarter of Section 16, and a Portion of the Northwest Quarter of the Northwest Quarter of Section 15, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado

PROPERTY DESCRIPTION (PER ALTA COMMITMENT ORDER No. N0034909-030-RSB-ES, Amendment No. 1):

The N1/2 of the NE1/4 of Section 16, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado

PROPERTY DESCRIPTION-ARCHDIOCESE ANNEXATION No. 2:

An area of land being Northeast Quarter of the Northeast Quarter (NE1/4NE1/4) of Section Sixteen (16), Township Four North (T.4N.), Range Sixty-seven West (R.67W.) of the Sixth Principal Meridian (6th P.M.), County of Weld, State of Colorado, being more particularly described as follows;

BEGINNING at the Northeast corner of Section 16 and assuming the East line of the Northeast Quarter (NE1/4) of Section 16 as monumented by a 2.5" aluminum pipe with a 3.25" aluminum cap stamped LS 13155 at the North end and by a #6 rebar with a 2.0" aluminum cap stamped LS 22097 at the South end, as bearing South 00°44'50" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983 (2011), a distance of 2592.40 feet, with all other bearings contained herein being relative thereto.

The lineal dimensions as contained herein are based upon the "U.S. Survey Foot."

THENCE South 88°26'46" East along the Easterly extension of the North line of said Section 16 a distance of 30.02 feet to the East right-of-way line of County Road 19;
THENCE South 00°44'50" East along said East right-of-way line a distance of 1295.90 feet to the Easterly extension of the South line of the NE1/4NE1/4 of said section 16;
THENCE North 89°01'10" West along said extension and said South line a distance of 1387.22 feet to the calculated position of the Northeast Sixteenth corner of said Section 16;
THENCE North 00°54'49" West along the West line of said NE1/4NE1/4 a distance of 1309.95 feet to the calculated position of the East Sixteenth corner of said section 16;
THENCE South 88°26'46" East along the North line of said NE1/4NE1/4 a distance of 1361.50 feet to the Northeast corner of said Section 16 and to the **POINT OF BEGINNING**.

Said area of land contains **41.53 Acres** (+/-1,809,007 sq.ft.) and is subject to any rights-of-way or other easements of record as now existing on said described parcel of land.

OWNER'S APPROVAL

Know all men by these presents, that I/we, Archdiocese of Denver, being the sole owner(s) of the land described herein, have caused said land to be annexed under the name of **ARCHDIOCESE ANNEXATION No. 2**

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

By: _____ As: _____

NOTARIAL CERTIFICATE

STATE OF _____ }
COUNTY OF _____ }SS

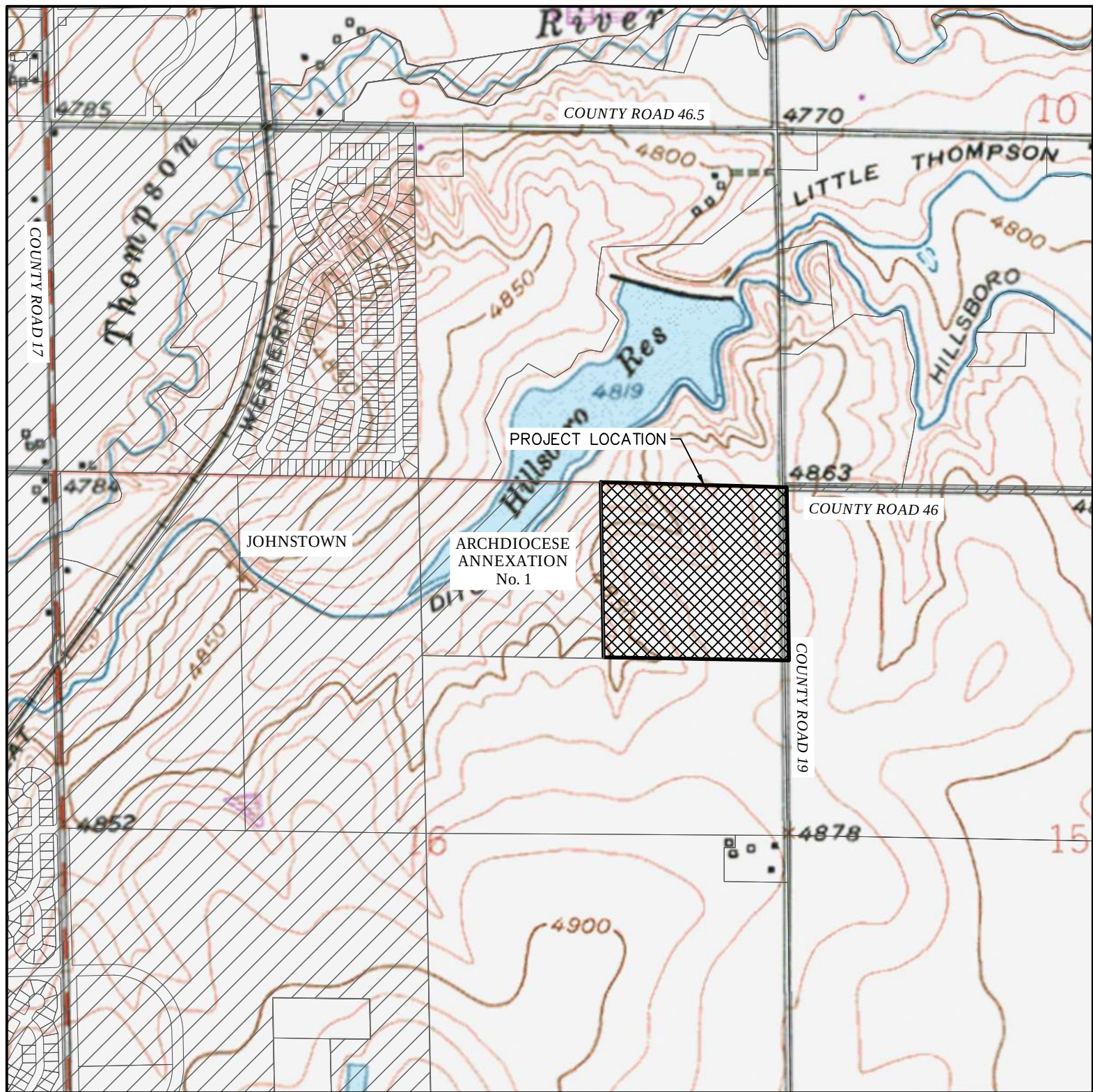
The foregoing instrument was acknowledged before me by _____
this _____ day of _____, 20____. Witness my hand and seal.

My commission expires _____
Notary Public

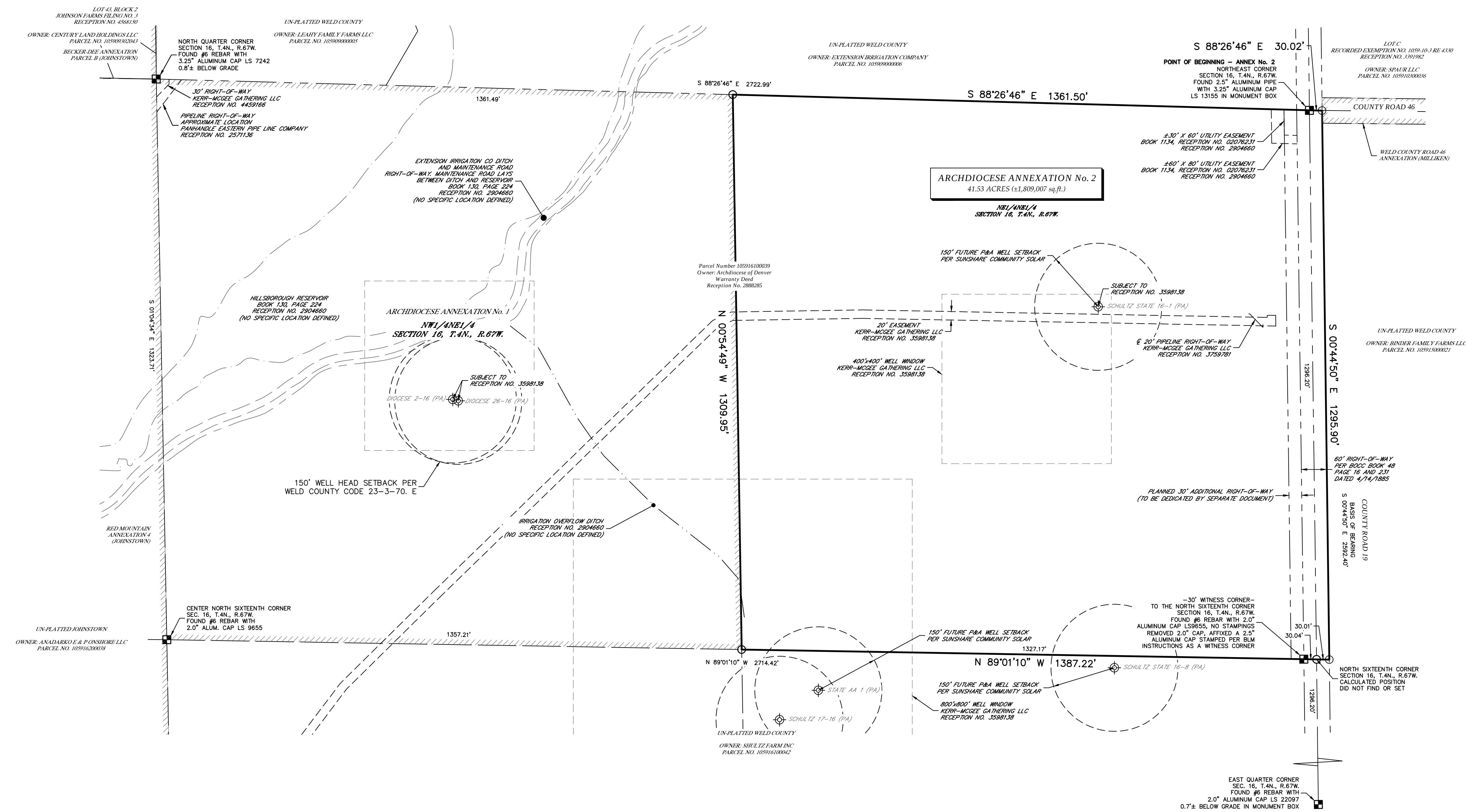
TOWN COUNCIL APPROVAL

This map to be known as **ARCHDIOCESE ANNEXATION No. 2** is approved and accepted to the Town of Johnstown, Colorado by ordinance number _____, passed and adopted on final reading at the regular meeting of the Town Council of the Town of Johnstown, Colorado, held on the _____ day of _____, 20____.

By: _____ Attest: _____
Mayor Seal Town Clerk



VICINITY MAP
SCALE - 1"=1000'



TITLE COMMITMENT NOTE

This survey does not constitute a title search by Lat40, Inc. to determine ownership or easements of record. For all information regarding easements, rights-of-way and title of records, Lat40, Inc. relied upon Title Commitment File Number N0034909-030-RSB-ES, Amendment No. 1, having an effective date of June 23, 2022, as prepared by Fidelity National Title Insurance Company to delineate the aforesaid information.

NOTE

According to Colorado law, you must commence any legal action based upon any defect in this survey within three years after you discover such defect. In no event, may any action based upon any defect in this survey be commenced more than ten years after the date of the certificate shown hereon. (13-80-105 C.R.S.)

SURVEYOR'S STATEMENT

I, Jason S. Allee, a Colorado Licensed Professional Land Surveyor, do hereby state that this Annexation Plat was prepared from an actual survey under my personal supervision, that the monumentation as indicated hereon was found or set as shown, and that the foregoing plat is an accurate representation thereof, all this to the best of my knowledge, information and belief.

SHEET 1 OF 1

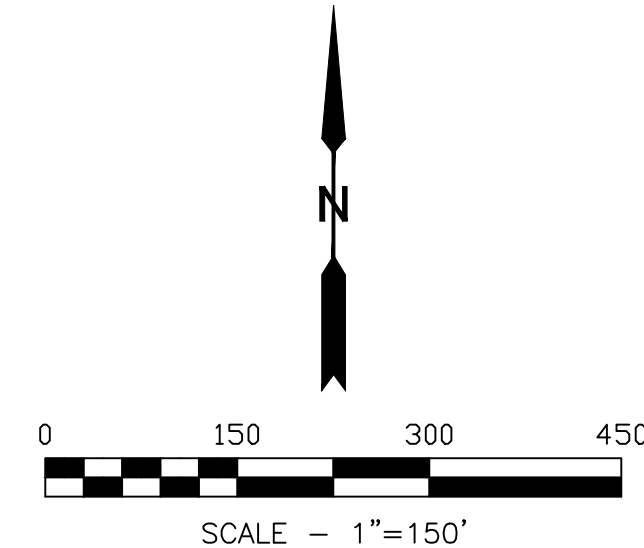
PRELIMINARY

Jason S. Allee--On behalf of Lat40°, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479

LEGEND

—	ANNEXATION BOUNDARY
---	SECTION LINE
- - - -	RIGHT-OF-WAY LINE
- . - . -	EASEMENT LINE
- - - - -	QUARTER SECTION LINE
	EXISTING TOWN LIMITS
■	FOUND ALIQUOT CORNER AS DESCRIBED
○	CALCULATED POSITION
⊙	PLUGGED AND ABANDONED WELL

ANNEXATION TABLE	
CONTIGUOUS BOUNDARY (L.F.)	1309.95
TOTAL BOUNDARY PERIMETER (L.F.)	5384.59
1/6 OF PERIMETER (L.F.)	897.43
ANNEXATION RATIO (1 to X)	4.11
TOTAL LAND AREA (Acres)	41.53



 Lat40°, Inc. Professional Land Surveyors 6250 W. 10th Street, Unit 2 Greeley, CO 80634 O: 970-515-5294	DATE: 7/20/2022	FILE NAME: 2021312.2ANNEX	DRAWN BY: KMR	CHECKED BY: JSA	SCALE: AS NOTED	PROJECT #: 2021312.2
	REVISIONS:	DATE:	ARCHDIOCESE ANNEXATION No. 2 FOR SUNSHARE COMMUNITY SOLAR 1724 GILPIN STREET DENVER, CO 80218			
	ADDRESS TOWN COMMENTS	9/15/2022				
						1 SHEET 1 OF 1



Town of Johnstown

PLANNING & ZONING COMMISSION AGENDA MEMORANDUM

DESCRIPTION:	Archdiocese Annexation Nos. 1 and 2 & Establishment of Zoning (HA-Holding Ag and PUD-MU)
PROJECT NO:	ANX22-0003
LOCATION:	South of WCR 46.5 and the Little Thompson Reservoir, west of WCR 19
APPLICANT:	Archbishop of Denver
STAFF:	Kim Meyer, Planning & Development Director
HEARING DATE:	February 15, 2023

ATTACHMENTS

- 1- Vicinity Map
- 2- Annexation Map
- 3- Zoning Map
- 4- COGCC Map

PROJECT SUMMARY

The Applicant requests Annexation for approximately 82.6 acres of land in Weld County, in two “serial” annexations of 41.06 acres and 41.53. Establishment of zoning is proposed in two parts, with the eastern portion of the property, proposed to support a solar facility with PUD-MU (Mixed Use) zoning; and the western portion proposed to remain in ag production, with an H-A (Holding Ag) zoning district.

An Outline Development Plan as well as an application for a Use by Special Review (USR) for a Solar Facility have also been received and reviewed for this property. These will also be heard concurrently by Planning & Zoning Commission and the Town Council.

PROPERTY BACKGROUND

The property is located south of Weld County Rd (WCR) 46.5 and west of WCR 19 (Attachment 1). The subject property is presently zoned A - Agricultural in unincorporated Weld County and is being used as farm land. It is bordered to the north by the Hillsborough/Little Thompson Reservoir, to the west by incorporated areas of Johnstown, with the rest being adjacent to unincorporated Weld County and adjacent to the Milliken Growth Management Boundary. The right of way for County Road 46 to the north and east, that just touches this parcel, is already annexed into Milliken.

The Community That Cares

johnstown.colorado.gov

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO 80534 | F: 970.587.0141

SURROUNDING ZONING & LAND USE

North: A – Agricultural (Weld County), Hillsborough/Little Thompson Reservoir
 South: A – Agricultural (Weld County)
 East: A – Agricultural (Weld County)
 West: PUD (Johnstown) with Oil & Gas Well Pads

LAND USE HISTORY

Historically, this property has been used for farming and continues as that use today.

OIL & GAS

COGCC (Oil & Gas) online maps show existing abandoned and plugged and abandoned wells on-site, Attachment 4. These sites are also shown on the Annexation and Zoning maps, as well as an easement for a Kerr-McGee pipeline that bisects the property.

IRRIGATION DITCHES

The Hillsborough/Little Thompson Reservoir, owned and managed by the Extension (Hillsborough) Ditch Company, is partially located on the northwest corner of this property. These are some emergent wetlands along the banks of that water body, identified by the Colorado Wetland Inventory as part of the Colorado Natural Heritage Program.

(<https://csurams.maps.arcgis.com/apps/webappviewer/index.html?id=a8e43760cb934a5084e89e46922580cc>)

FLOODPLAIN

The subject property is not located in any floodplain area.

PUBLIC NOTICE & AGENCY REFERRALS

Notice for the Planning & Zoning Commission hearing was published in the local paper of widest circulation, the Johnstown Breeze, on Thursday, January 26, 2023. This notice provided the date, time, and location of the Planning and Zoning Commission hearing, as well as a description of the project. Notices were mailed to all property owners within 500 feet of the property in question. This notice included a map of the project area. Full state-required annexation packets will be mailed to the county and all taxing districts in advance of the scheduled Council hearing on March 20, 2023.

This project was referred to the Johnstown Review Committee as well as Weld County, Milliken, the Weld RE-5J School District, Little Thompson Water, Xcel and TDS.

NEIGHBORHOOD MEETING

No neighborhood meeting was held for this annexation and zoning.

PROJECT DESCRIPTION & ANALYSIS

Annexation

This 82.6-acre Annexation (Attachment 2) encompasses the full ownership of the Archdiocese in this immediate area, as well as extending across the full existing ROW for Weld CR 19. A dedication of additional ROW, to accommodate future arterial build-out along the parcel frontage, is included with the proposed annexation agreement that the Council will review concurrently with this Annexation request.

The annexation is being considered by the Town for the following reasons:

1. At least 1/6 of the area to be annexed for each individual annexation is contiguous to the Town of Johnstown boundary.

2. The property is located within the Town of Johnstown Growth Management Area.
3. The Town is capable of providing water, sewer, and police service to the property.
4. The Town is authorized to annex the area without an election under Section 30(b) of Article II of the Colorado Constitution.

A Resolution finding Substantial Conformance with C.R.S. requirements and setting the public hearing was approved by Town Council on February 6, 2023.

Zoning & Development Standards

The current zoning for the property is Agricultural in unincorporated Weld County. There are no known existing conditional uses or uses by special review that apply to the property.

The applicant requests two separate zones – H-A- Holding Ag and PUD-MU – upon annexation. (Attachment 3) Zone H-A would permit the owner to continue using the property for agricultural uses. The PUD zoning has an associated Outline Development Plan being proposed, as well, that would permit a solar facility to be developed on the site. Additional future development will be required to create subdivision plats and development plans, to be reviewed and approved by the Town through public hearing processes. Detailed engineering and construction plans are part of that future technical review.

This area of the Johnstown Growth Management Area is indicated for Low or Very Low Intensity and Density types of development. The continuation of agricultural uses into the future, as well as the use of the area for very low intensity energy resource development are in alignment with this designation and intention. Staff has no outstanding concerns related to this Annexation and Establishment of Zoning.

RECOMMENDED PLANNING AND ZONING COMMISSION FINDINGS AND MOTIONS

Staff recommends that the Planning and Zoning Commission send a recommendation for Approval to Town Council for the Annexation and Establishment of H-A and PUD-MU Zoning based upon the following findings:

1. The area is contiguous to the Town of Johnstown along at least 1/6 of its boundaries.
2. The property is located within the Town of Johnstown Growth Management Area.
3. The Town can adequately and efficiently provide utility and police services.
4. The property is eligible for annexation without election pursuant to the Colorado Constitution Article II, Section 30(b).

Recommended Motion: Motion to Approve:

Based on the application materials received, analysis and presentations at this hearing, and findings noted in this staff memorandum, I move that the Planning & Zoning Commission recommend Approval to the Town Council for the Archdiocese Annexation and Establishment of H-A and PUD-MU Zoning Districts for this property.

Motion to Recommend Approval on Annexation, and modification of Zoning District:

I move that the Commission recommend to the Town Council Approval of the Archdiocese Annexation and to Establish Zoning on the property.

Motion to Recommend Denial:

I move that the Commission recommend to the Town Council Denial of the Archdiocese Annexation and Establishment of Zoning.



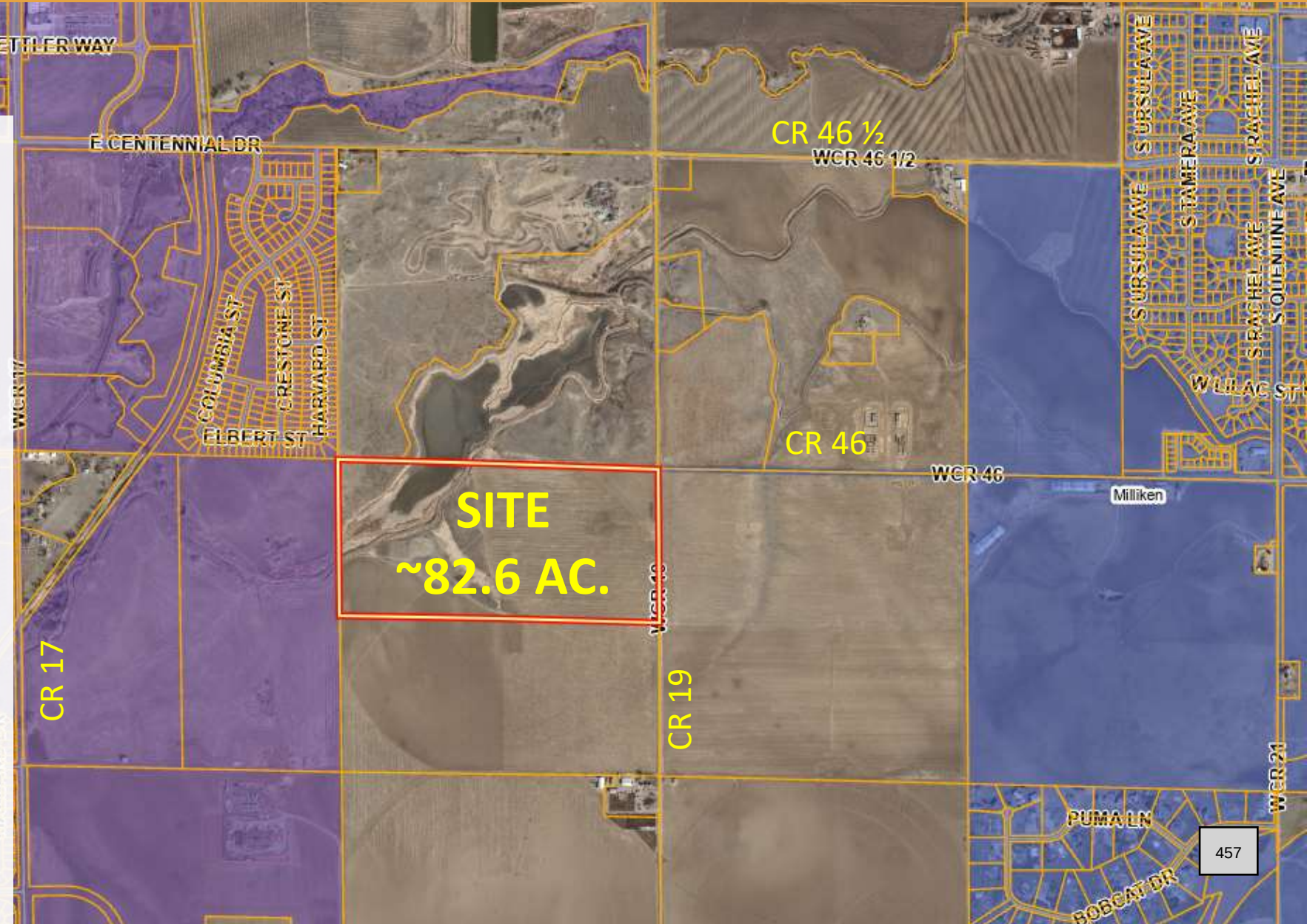
Town of Johnstown

ARCHDIOCESE ANNEXATION NOS. 1 & 2

Annexation
TOWN COUNCIL
March 20, 2023

Item #16.

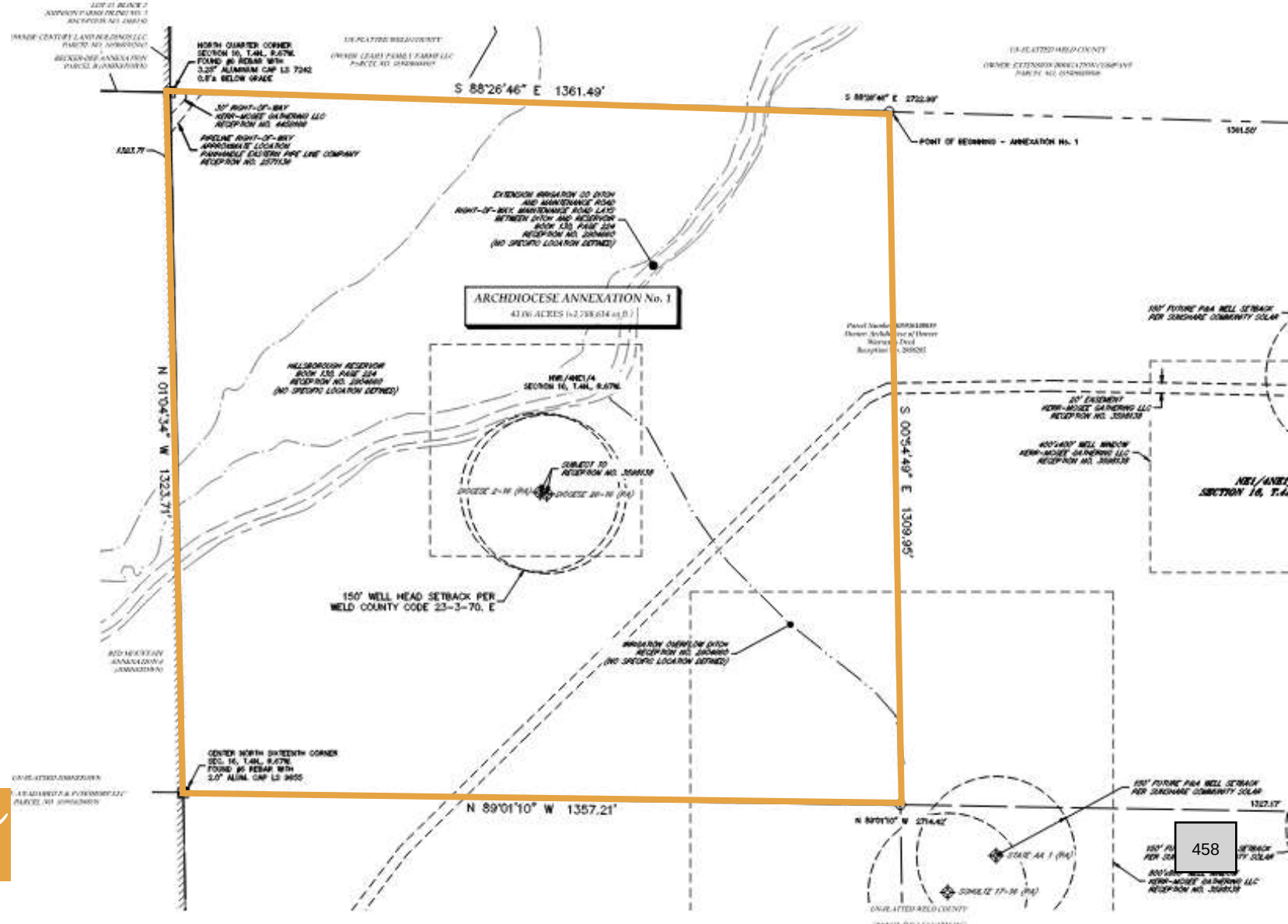
- 457



ANNEXATION MAP NO.1 (WEST)

Item #16.

- Owner-initiated
(Archdiocese of Denver)
- Within Johnstown
Growth Management Area
- Town Council approved
Resolution finding
Substantial Compliance for
initiating Annexation(s) on
February 6, 2023



Item #16.

- 459

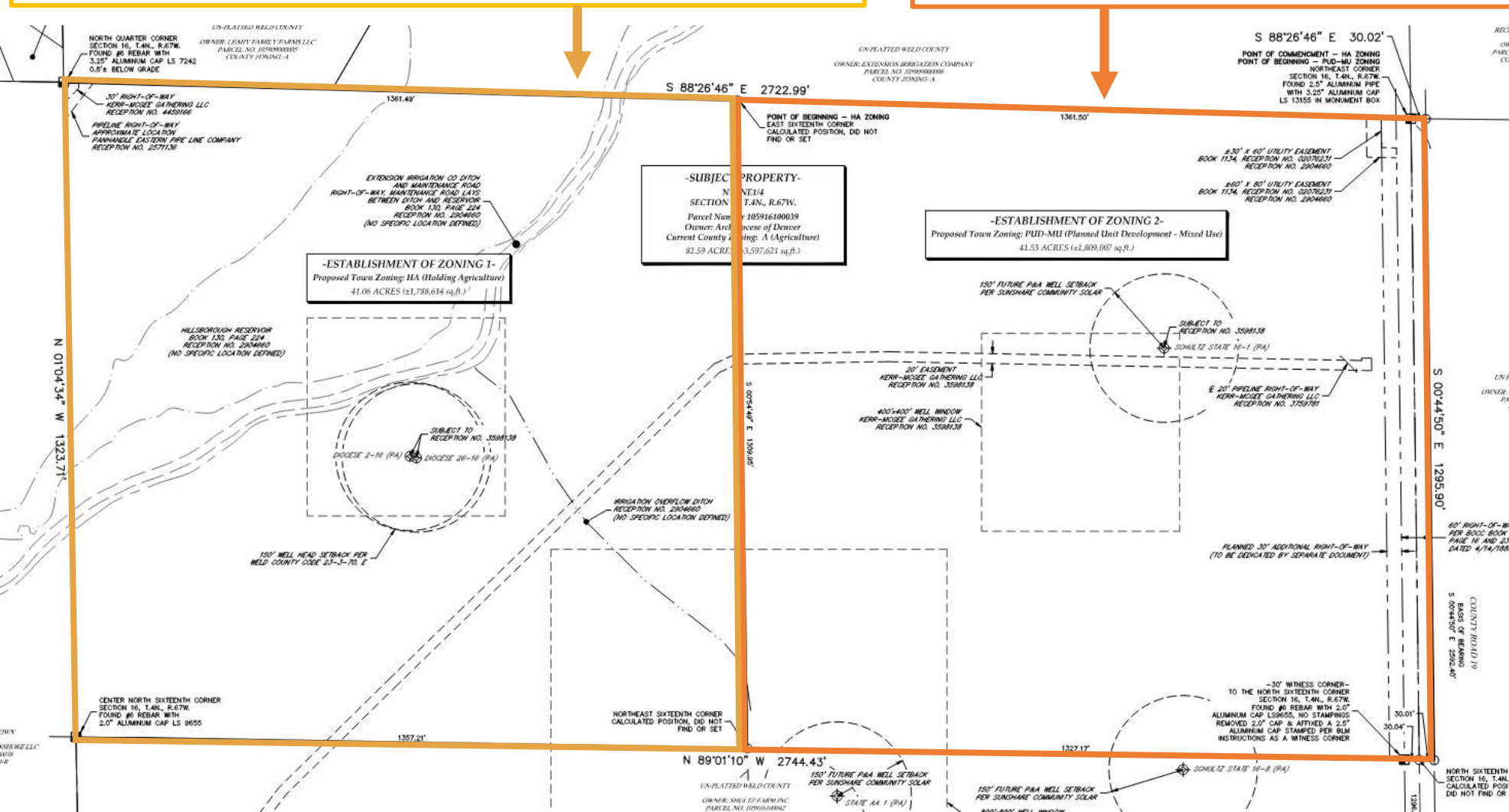


ASSOCIATED PROJECTS

Item #16.

•Requested EOZ Zoning area 1 (west half)
H-A (Holding Agriculture)

•Requested EOZ Zoning area 2 (east half)
PUD-MU (Planned Unit Development - Mixed Use)



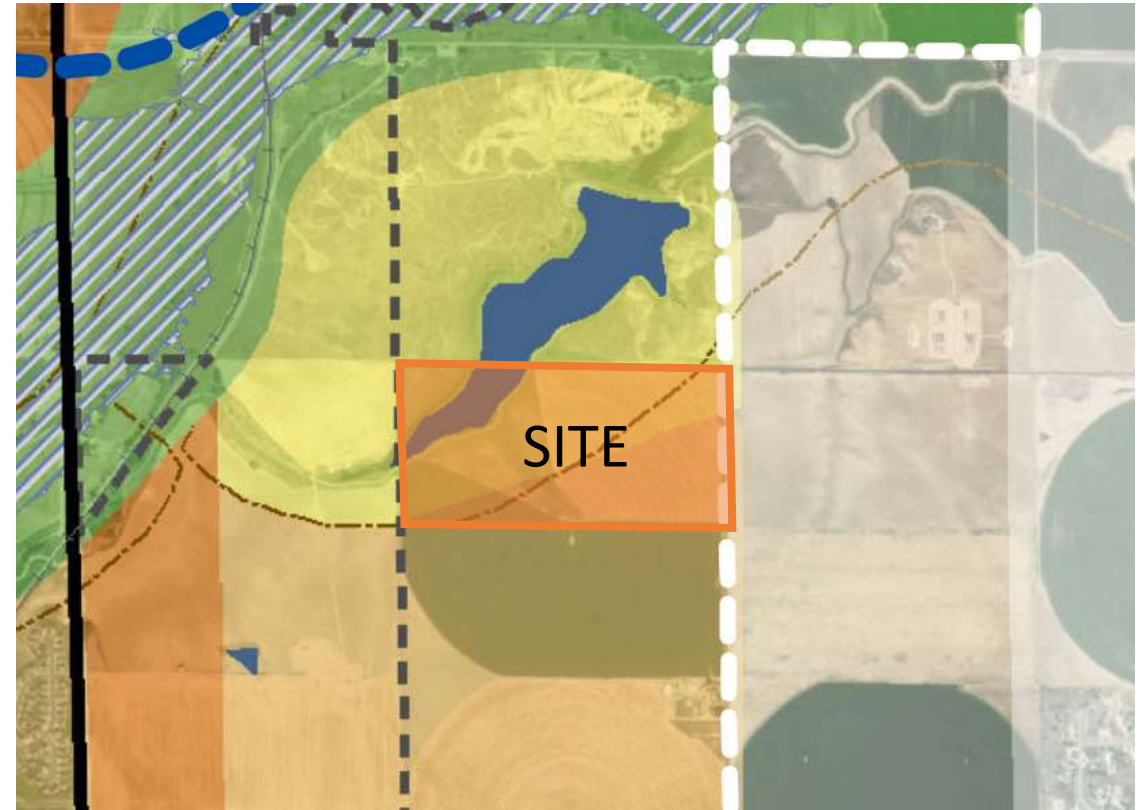
Accompanying:

- Zoning to PUD-MU & HA
- Outline Development Plan
- Use by Special Review
- Sporadic oil and gas

ANALYSIS & RECOMMENDATION

Item #16.

- Johnstown Review Committee (JRC) included Town staff, Weld County, Milliken, LTWD
- Annexation areas meet State statute requirements and falls within the Johnstown GMA.
- PZC recommends Approval



Low intensity uses (ag & solar) are in alignment with the Johnstown Area Comprehensive Plan



Town of Johnstown

TOWN COUNCIL AGENDA COMMUNICATIONS

AGENDA DATE: March 20, 2023

SUBJECT: Ordinance 2023-245 Approving H-A Zoning for the property known as Archdiocese Annexation No. 1 and PUD-MU Zoning for the property known as Archdiocese Annexation No. 2

ACTION PROPOSED: Hold Public Hearing and Consider Ordinance 2023-245 on First Reading Approving H-A Zoning for the property known as Archdiocese Archdiocese Annexation No. 1 and PUD-MU Zoning for the property known as Archdiocese Annexation No. 2

ATTACHMENTS:

1. Ordinance 2023-245
2. Vicinity Map
3. Zoning Map
4. PZC Agenda Memorandum (2-15-23)
5. Staff Presentation

PRESENTED BY: Kim Meyer, Planning & Development Director

AGENDA ITEM DESCRIPTION:

In conjunction with a Petition for Annexation for the Archdiocese Annexation Nos 1 and 2, the Town has received a request to establish zoning for the property. The property is west of Weld County Road 19, and north of Weld County Road 44, adjacent to and encompassing portions of the Little Thompson/Hillsborough reservoir (Attachment 2).

The western portion of this property is known as Archdiocese Annexation No. 1, and would establish H-A (Holding Ag) zoning; the eastern portion, known as Archdiocese Annexation No. 2 would establish the PUD-MU (Mixed-Use) zoning (Attachment 3). A separate Outline Development Plan is being proposed to further define the PUD zoning on this property.

The Planning & Zoning Commission (PZC) held a public hearing on February 15, 2023, to consider the zoning for Archdiocese Annexation Nos. 1 and 2 (Case ANX22-0003). The Planning & Zoning Commission Agenda Memorandum for the annexation and zoning (Attachment 5) provides background and historical use of the property. The property has been undeveloped agricultural land within unincorporated Weld County, with some limited oil and gas facilities.

The Community That Cares

johnstown.colorado.gov

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO 80534 | F: 970.587.0141

Based upon the materials submitted, analysis, and findings, the PZC approved a motion recommending to Town Council approval of this zoning request.

LEGAL ADVICE:

Ordinance was prepared by the Town Attorney.

FINANCIAL ADVICE:

NA

RECOMMENDED ACTION:

The Planning & Zoning Commission recommended, and Town Staff supports, Approval of Ordinance 2023-245 Approving H-A Zoning for the property known as Archdiocese Annexation No. 1 and PUD-MU Zoning for the property known as Archdiocese Annexation No. 2, on First Reading.

SUGGESTED MOTIONS:

For Approval

I move to approve Ordinance 2023-245 Approving H-A Zoning for the property known as Archdiocese Annexation No. 1 and PUD-MU Zoning for the property known as Archdiocese Annexation No. 2 on First Reading.

For Denial

I move that the Town Council deny Ordinance 2023-245.

Reviewed and Approved for Presentation,



Town Manager

TOWN OF JOHNSTOWN, COLORADO
ORDINANCE NO. 2023-245

APPROVAL OF H-A ZONING OF THE PROPERTY KNOWN AS THE ARCHDIOCESE ANNEXATION NO. 1, LOCATED IN THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 16, TOWNSHIP 4 NORTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF WELD, STATE OF COLORADO, CONSISTING OF APPROXIMATELY 41.06 ACRES, AND APPROVAL OF PUD-MU ZONING OF THE PROPERTY KNOWN AS THE ARCHDIOCESE ANNEXATION NO. 2, LOCATED IN THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 16, AND A PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 15, TOWNSHIP 4 NORTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF WELD, STATE OF COLORADO, CONSISTING OF APPROXIMATELY 41.53 ACRES

WHEREAS, the Town of Johnstown, Colorado (“Town”) is a Colorado home rule municipality, duly organized and existing under the laws of the State of Colorado and the Town’s Home Rule Charter; and

WHEREAS, the Town Council is vested with authority to administer the affairs of the Town; and

WHEREAS, the Town Council approved the annexation of certain property situated in the Northwest Quarter of the Northeast Quarter of Section 16, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado, consisting of approximately 41.06 acres, known as the Archdiocese Annexation No. 1, and of certain property situated in the Northeast Quarter of the Northeast Quarter of Section 16, and a Portion of the Northwest Quarter of the Northwest Quarter of Section 15, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado, consisting of approximately 41.53 acres, known as the Archdiocese Annexation No. 2, being more particularly described on Exhibit A; and

WHEREAS, in conjunction with annexation, the Archdiocese of Denver, a Colorado corporation sole, the property owner, applied for Holding Agricultural (“H-A”) zoning of the property known as the Archdiocese Annexation No. 1 and for Planned Unit Development (“PUD-MU”) zoning of the property known as the Archdiocese Annexation No. 2; and

WHEREAS, pursuant to state law, upon annexation, the Town Council must zone the property within ninety (90) days; and

WHEREAS, the Town’s Planning and Zoning Commission held a hearing and recommended approval of H-A zoning for the property known as the Archdiocese Annexation No. 1 and PUD-MU zoning for the property known as the Archdiocese Annexation No. 2; and

WHEREAS, on March 20, 2023, the Town Council held a public hearing to determine appropriate zoning for the property and, based upon the evidence received at the hearing, finds

that the requested zoning of the of the property known as the Archdiocese Annexation No. 1 to H-A and of the property known as the Archdiocese Annexation No. 2 to PUD-MU conforms to the Town's Comprehensive Plan.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF JOHNSTOWN, COLORADO, THAT:

1. Archdiocese Annexation No. 1 Zoning. Zoning of the property known as the Archdiocese Annexation No. 1 and more particularly described on the attached Exhibit A shall hereby be designated as Holding-Agricultural.
2. Archdiocese Annexation No. 2 Zoning. Zoning of the property known as the Archdiocese Annexation No. 2 and more particularly described on the attached Exhibit A shall hereby be designated as Planned Unit Development – Mixed Use.
3. Effective Date. This Ordinance, after its passage on final reading, shall be numbered, recorded, published and posted as required by the Home Rule Charter of the Town of Johnstown, Colorado ("Charter") and the adoption, posting and publication shall be authenticated by the signature of the Mayor and the Town Clerk. This Ordinance shall become effective upon the later of the following: (i) final passage as provided by the Charter or (ii) the effective date of the annexation of the property known as the Archdiocese Annexation No. 1 and Archdiocese Annexation No.2. At such time, the Town Clerk is directed to file this Ordinance with the real estate records of the Weld County Clerk and Recorder. Copies of the entire Ordinance are available at the office of the Town Clerk.

INTRODUCED AND APPROVED on first reading by the Town Council of the Town of Johnstown, Colorado, this ___ day of _____, 2023.

TOWN OF JOHNSTOWN, COLORADO

ATTEST:

By: _____
Hannah Hill, Town Clerk

By: _____
Gary Lebsack, Mayor

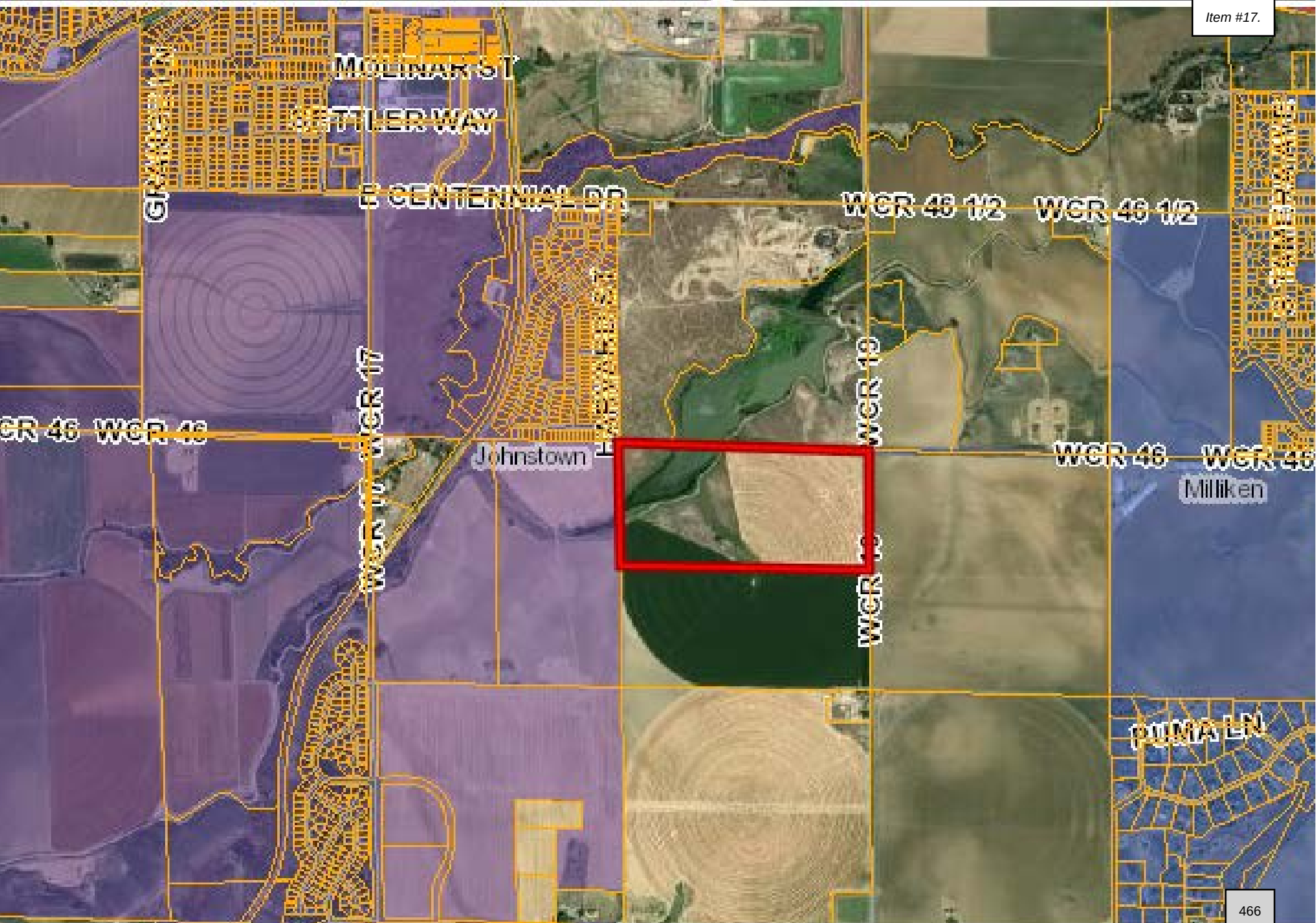
PASSED UPON FINAL APPROVAL AND ADOPTED on second reading by the Town Council of the Town of Johnstown, Colorado, this _____ day of _____, 2024.

TOWN OF JOHNSTOWN, COLORADO

ATTEST:

By: _____
Hannah Hill, Town Clerk

By: _____
Gary Lebsack, Mayor



ARCHDIOCESE ANNEXATION ZONING MAP

The North Half of the Northeast Quarter of Section 16, Township 4 North, Range 67 West
of the 6th P.M., Town of Johnstown, County of Weld, State of Colorado

PROPERTY DESCRIPTION – SUBJECT PROPERTY (PER ALTA COMMITMENT ORDER No. N0034909-030-85B-ES, Amendment No. 1):

The N1/2 of the NE1/4 of Section 16, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado

PROPERTY DESCRIPTION – HA ZONING:

An area of land being the Northwest Quarter of the Northeast Quarter (NW1/4NE1/4) of Section Sixteen (16), Township Four North (T.4N.), Range Sixty-seven West (R.67W.) of the Sixth Principal Meridian (6th P.M.), County of Weld, State of Colorado, being more particularly described as follows:

COMMENCING at the Northeast corner of Section 16 and assuming the East line of the Northeast Quarter (NE1/4) of Section 16 as monumented by a 2.5" aluminum pipe with a 3.25" aluminum cap stamped LS 13155 at the North end and by a #6 rebar with a 2.0" aluminum cap stamped LS 22097 at the South end, as bearing South 00°44'50" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983 (2011), a distance of 2592.40 feet, with all other bearings contained herein being relative thereto.

The lineal dimensions as contained herein are based upon the "U.S. Survey Foot."

THENCE North 88°26'46" West along the North line of the NE1/4 of Section 16 a distance of 1361.50 feet to the calculated position of the East Sixteenth corner of said Section 16 and to the POINT OF BEGINNING;

THENCE South 00°54'49" East along the East line of the NW1/4NE1/4 of said Section 16 a distance of 1309.95 feet to the calculated position of the Northeast Sixteenth corner of said Section 16;

THENCE North 89°01'10" West along the South line of said NW1/4NE1/4 a distance of 1357.21 feet to the Center North Sixteenth corner of said Section 16;

THENCE North 01°04'34" West along the West line of said NW1/4NE1/4 a distance of 1323.71 feet to the North Quarter corner of said Section 16;

THENCE South 88°26'46" East along the North line of said NW1/4NE1/4 a distance of 1361.49 feet to the calculated position of the East Sixteenth corner of said Section 16 and to the POINT OF BEGINNING.

Said area of land contains 41.06 Acres (+/-1,788,614 sq.ft.) and is subject to any rights-of-way or other easements of record as now existing on said described parcel of land.

PROPERTY DESCRIPTION – PUD-MU ZONING:

An area of land being Northeast Quarter of the Northeast Quarter (NE1/4NE1/4) of Section Sixteen (16) and a portion of the Northwest Quarter of the Northwest Quarter (NW1/4NW1/4) of Section Fifteen (15), Township Four North (T.4N.), Range Sixty-seven West (R.67W.) of the Sixth Principal Meridian (6th P.M.), County of Weld, State of Colorado, being more particularly described as follows:

BEGINNING at the Northeast corner of Section 16 and assuming the East line of the Northeast Quarter (NE1/4) of Section 16 as monumented by a 2.5" aluminum pipe with a 3.25" aluminum cap stamped LS 13155 at the North end and by a #6 rebar with a 2.0" aluminum cap stamped LS 22097 at the South end, as bearing South 00°44'50" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983 (2011), a distance of 2592.40 feet, with all other bearings contained herein being relative thereto.

The lineal dimensions as contained herein are based upon the "U.S. Survey Foot."

THENCE South 88°26'46" East along the Easterly extension of the North line of said Section 16 a distance of 30.02 feet to the East right-of-way line of County Road 19;

THENCE South 00°44'50" East along said East right-of-way line a distance of 1295.90 feet to the Easterly extension of the South line of the NE1/4NE1/4 of said section 16;

THENCE North 89°01'10" West along said East extension and said South line a distance of 1387.22 feet to the calculated position of the Northeast Sixteenth corner of said Section 16;

THENCE North 00°54'49" West along the West line of said NE1/4NE1/4 a distance of 1309.95 feet to the calculated position of the East Sixteenth corner of said section 16;

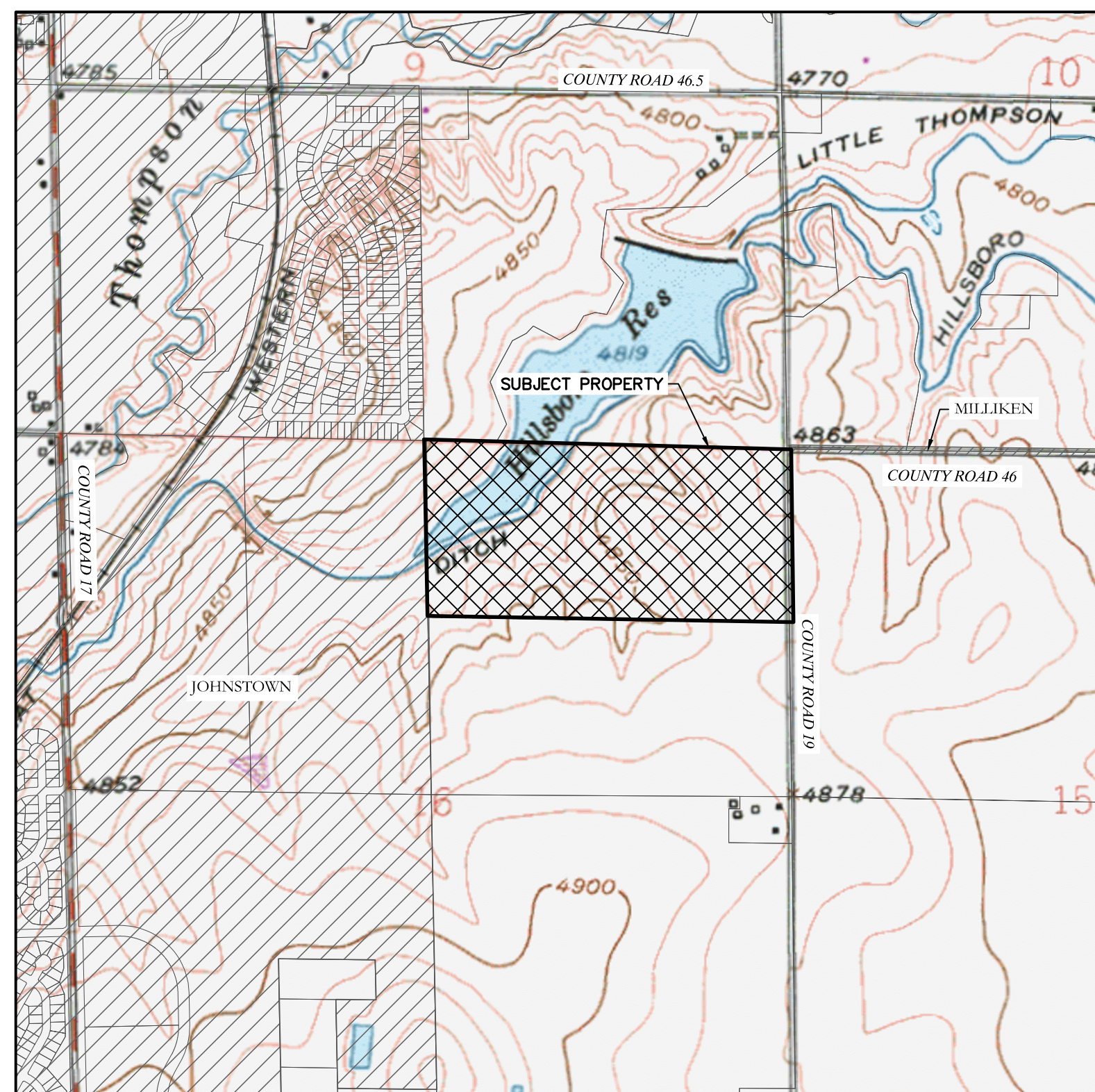
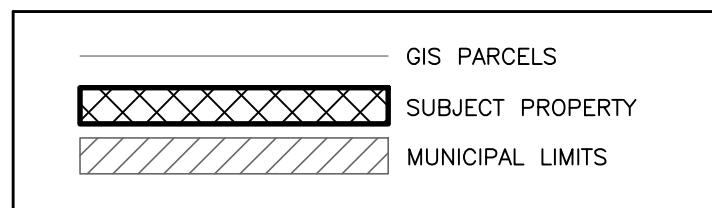
THENCE South 88°26'46" East along the North line of said NE1/4NE1/4 a distance of 1361.50 feet to the Northeast corner of said Section 16 and to the POINT OF BEGINNING.

Said area of land contains 41.53 Acres (+/-1,809,007 sq.ft.) and is subject to any rights-of-way or other easements of record as now existing on said described parcel of land.

TITLE COMMITMENT NOTE

This survey does not constitute a title search by Lat40, Inc. to determine ownership or easements of record. For all information regarding easements, rights-of-way and title of records, Lat40, Inc. relied upon Title Commitment File Number N0034909-030-85B-ES, Amendment No. 1, having an effective date of June 23, 2022, as prepared by Fidelity National Title Insurance Company to delineate the aforesaid information.

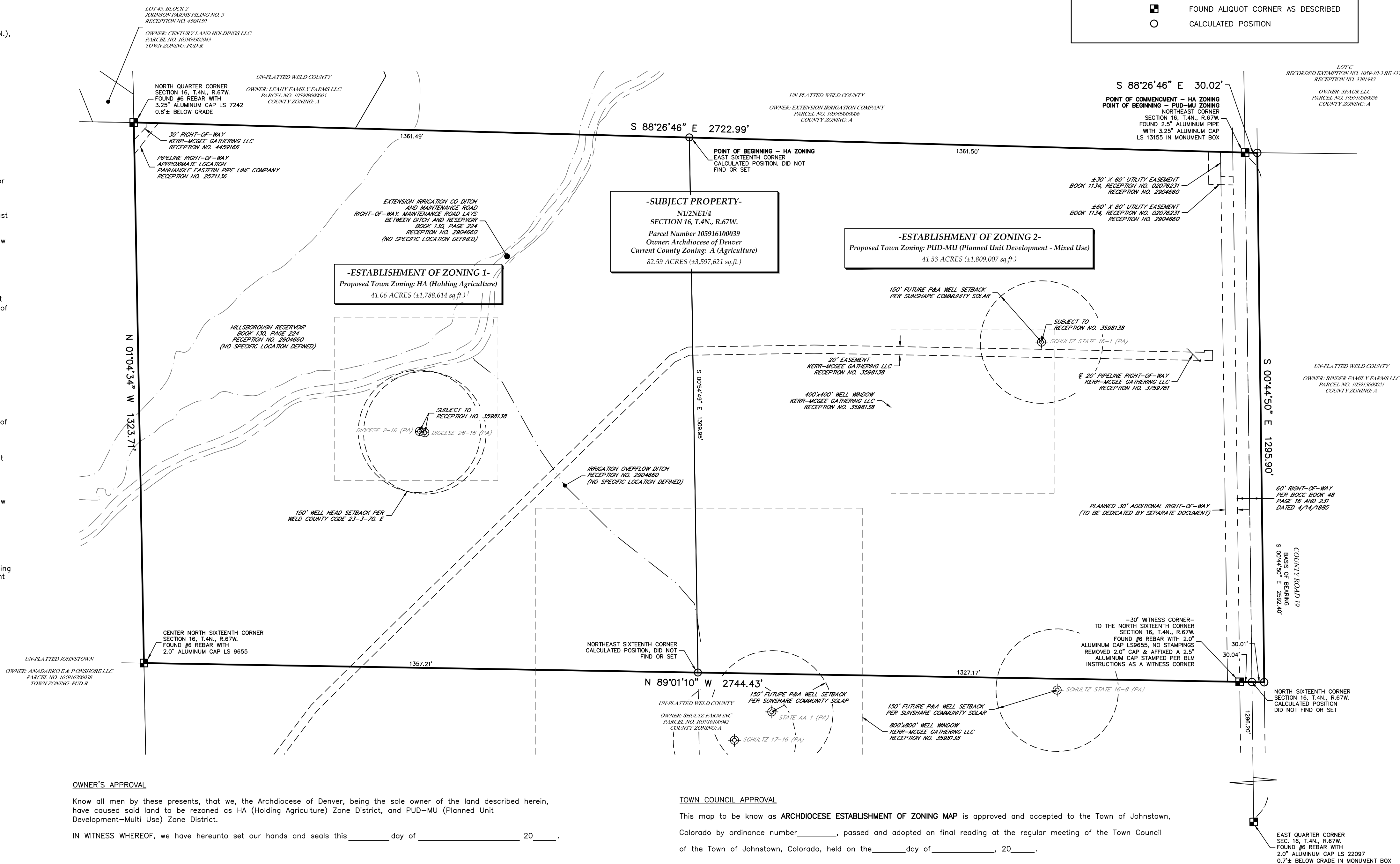
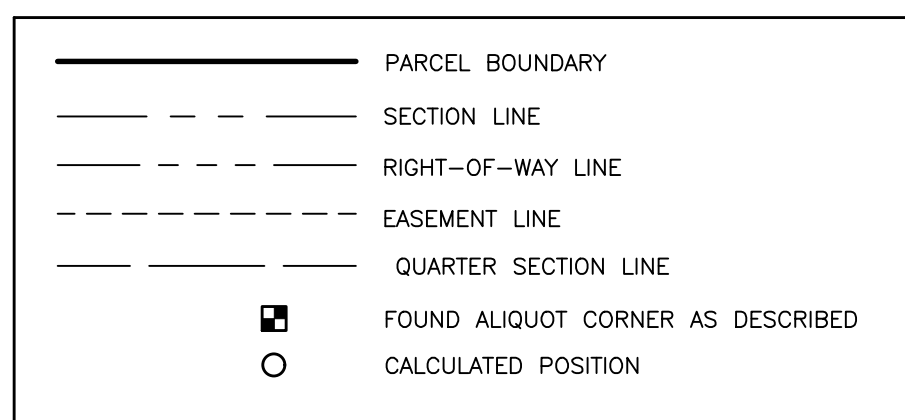
LEGEND



VICINITY MAP

SCALE – 1"=1000'

LEGEND



OWNER'S APPROVAL

Know all men by these presents, that we, the Archdiocese of Denver, being the sole owner of the land described herein, have caused said land to be rezoned as HA (Holding Agriculture) Zone District, and PUD-MU (Planned Unit Development-Multi Use) Zone District.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20____.

The Archdiocese of Denver, a Colorado Corporation sole by Keith Parsons, as COO, Attorney in Fact for Most Reverend Samuel J Aquila, S.T.L., Archbishop of Denver

NOTARIAL CERTIFICATE

COUNTY OF DENVER)

STATE OF COLORADO)

The foregoing instrument was acknowledged before me by The Archdiocese of Denver, a Colorado Corporation sole, by Keith Parsons, as COO, Attorney in Fact for Most Reverend Samuel J Aquila, S.T.L., Archbishop of Denver

this _____ day of _____, 20____.

Witness my hand and seal.

Notary Public
My commission expires _____

TOWN COUNCIL APPROVAL

This map to be known as ARCHDIOCESE ESTABLISHMENT OF ZONING MAP is approved and accepted to the Town of Johnstown, Colorado by ordinance number _____, passed and adopted on final reading at the regular meeting of the Town Council of the Town of Johnstown, Colorado, held on the _____ day of _____, 20____.

By: _____ Mayor Seal Attest: _____ Town Clerk

SURVEYOR'S STATEMENT

I, Jason S. Allee, a Colorado Licensed Professional Land Surveyor, do hereby state that this Zoning Plat was prepared from an actual survey under my personal supervision, that the monumentation as indicated hereon was found or set as shown, and that the foregoing plat is an accurate representation thereof, all this to the best of my knowledge, information and belief.

Sheet 1 of 1

PRELIMINARY

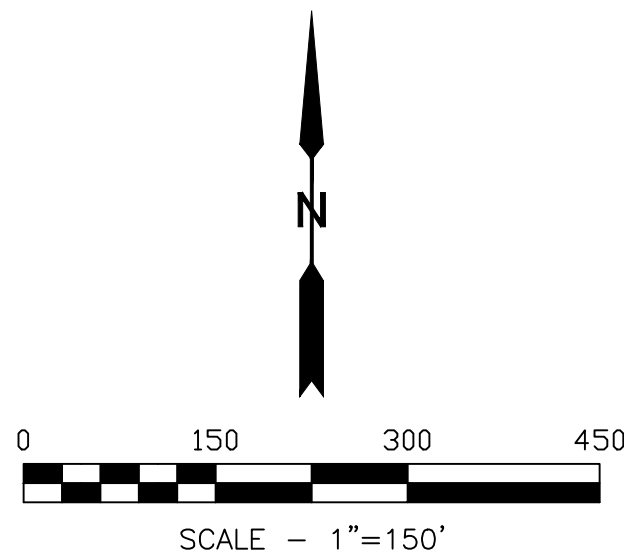
Jason S. Allee—On behalf of Lat40°, Inc.
Colorado Licensed Professional
Land Surveyor No. 38479

NOTICE: According to Colorado law, you must commence any legal action based upon any defect in this survey within three years after you discover such defect. In no event, may any action based upon any defect in this survey be commenced more than ten years after the date of the certificate shown hereon. (13-80-105 C.R.S.)

DATE: 8/2/2022	FILE NAME: 2021312.2ZONE	DRAWN BY: KMR	CHECKED BY: JSA	SCALE: AS NOTED	PROJECT #: 2021312.2
REVISIONS:	DATE:	ARCHDIOCESE ANNEX ZONING MAP FOR SUNSHARE COMMUNITY SOLAR 1724 GILPIN STREET DENVER, CO 80218			
ADDRESS TOWN COMMENTS	2/6/2023				
ADDRESS TOWN COMMENTS	9/15/2022				



Lat40°, Inc.
Professional Land Surveyors
6250 W. 10th Street, Unit 2
Greeley, CO 80634
O: 970-515-5294



1
SHEET 1 OF 1



Town of Johnstown

PLANNING & ZONING COMMISSION AGENDA MEMORANDUM

DESCRIPTION:	Archdiocese Annexation Nos. 1 and 2 & Establishment of Zoning (HA-Holding Ag and PUD-MU)
PROJECT NO:	ANX22-0003
LOCATION:	South of WCR 46.5 and the Little Thompson Reservoir, west of WCR 19
APPLICANT:	Archbishop of Denver
STAFF:	Kim Meyer, Planning & Development Director
HEARING DATE:	February 15, 2023

ATTACHMENTS

- 1- Vicinity Map
- 2- Annexation Map
- 3- Zoning Map
- 4- COGCC Map

PROJECT SUMMARY

The Applicant requests Annexation for approximately 82.6 acres of land in Weld County, in two “serial” annexations of 41.06 acres and 41.53. Establishment of zoning is proposed in two parts, with the eastern portion of the property, proposed to support a solar facility with PUD-MU (Mixed Use) zoning; and the western portion proposed to remain in ag production, with an H-A (Holding Ag) zoning district.

An Outline Development Plan as well as an application for a Use by Special Review (USR) for a Solar Facility have also been received and reviewed for this property. These will also be heard concurrently by Planning & Zoning Commission and the Town Council.

PROPERTY BACKGROUND

The property is located south of Weld County Rd (WCR) 46.5 and west of WCR 19 (Attachment 1). The subject property is presently zoned A - Agricultural in unincorporated Weld County and is being used as farm land. It is bordered to the north by the Hillsborough/Little Thompson Reservoir, to the west by incorporated areas of Johnstown, with the rest being adjacent to unincorporated Weld County and adjacent to the Milliken Growth Management Boundary. The right of way for County Road 46 to the north and east, that just touches this parcel, is already annexed into Milliken.

The Community That Cares

johnstown.colorado.gov

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO 80534 | F: 970.587.0141

SURROUNDING ZONING & LAND USE

North: A – Agricultural (Weld County), Hillsborough/Little Thompson Reservoir
 South: A – Agricultural (Weld County)
 East: A – Agricultural (Weld County)
 West: PUD (Johnstown) with Oil & Gas Well Pads

LAND USE HISTORY

Historically, this property has been used for farming and continues as that use today.

OIL & GAS

COGCC (Oil & Gas) online maps show existing abandoned and plugged and abandoned wells on-site, Attachment 4. These sites are also shown on the Annexation and Zoning maps, as well as an easement for a Kerr-McGee pipeline that bisects the property.

IRRIGATION DITCHES

The Hillsborough/Little Thompson Reservoir, owned and managed by the Extension (Hillsborough) Ditch Company, is partially located on the northwest corner of this property. These are some emergent wetlands along the banks of that water body, identified by the Colorado Wetland Inventory as part of the Colorado Natural Heritage Program.

(<https://csurams.maps.arcgis.com/apps/webappviewer/index.html?id=a8e43760cb934a5084e89e46922580cc>)

FLOODPLAIN

The subject property is not located in any floodplain area.

PUBLIC NOTICE & AGENCY REFERRALS

Notice for the Planning & Zoning Commission hearing was published in the local paper of widest circulation, the Johnstown Breeze, on Thursday, January 26, 2023. This notice provided the date, time, and location of the Planning and Zoning Commission hearing, as well as a description of the project. Notices were mailed to all property owners within 500 feet of the property in question. This notice included a map of the project area. Full state-required annexation packets will be mailed to the county and all taxing districts in advance of the scheduled Council hearing on March 20, 2023.

This project was referred to the Johnstown Review Committee as well as Weld County, Milliken, the Weld RE-5J School District, Little Thompson Water, Xcel and TDS.

NEIGHBORHOOD MEETING

No neighborhood meeting was held for this annexation and zoning.

PROJECT DESCRIPTION & ANALYSIS

Annexation

This 82.6-acre Annexation (Attachment 2) encompasses the full ownership of the Archdiocese in this immediate area, as well as extending across the full existing ROW for Weld CR 19. A dedication of additional ROW, to accommodate future arterial build-out along the parcel frontage, is included with the proposed annexation agreement that the Council will review concurrently with this Annexation request.

The annexation is being considered by the Town for the following reasons:

1. At least 1/6 of the area to be annexed for each individual annexation is contiguous to the Town of Johnstown boundary.

2. The property is located within the Town of Johnstown Growth Management Area.
3. The Town is capable of providing water, sewer, and police service to the property.
4. The Town is authorized to annex the area without an election under Section 30(b) of Article II of the Colorado Constitution.

A Resolution finding Substantial Conformance with C.R.S. requirements and setting the public hearing was approved by Town Council on February 6, 2023.

Zoning & Development Standards

The current zoning for the property is Agricultural in unincorporated Weld County. There are no known existing conditional uses or uses by special review that apply to the property.

The applicant requests two separate zones – H-A- Holding Ag and PUD-MU – upon annexation. (Attachment 3) Zone H-A would permit the owner to continue using the property for agricultural uses. The PUD zoning has an associated Outline Development Plan being proposed, as well, that would permit a solar facility to be developed on the site. Additional future development will be required to create subdivision plats and development plans, to be reviewed and approved by the Town through public hearing processes. Detailed engineering and construction plans are part of that future technical review.

This area of the Johnstown Growth Management Area is indicated for Low or Very Low Intensity and Density types of development. The continuation of agricultural uses into the future, as well as the use of the area for very low intensity energy resource development are in alignment with this designation and intention. Staff has no outstanding concerns related to this Annexation and Establishment of Zoning.

RECOMMENDED PLANNING AND ZONING COMMISSION FINDINGS AND MOTIONS

Staff recommends that the Planning and Zoning Commission send a recommendation for Approval to Town Council for the Annexation and Establishment of H-A and PUD-MU Zoning based upon the following findings:

1. The area is contiguous to the Town of Johnstown along at least 1/6 of its boundaries.
2. The property is located within the Town of Johnstown Growth Management Area.
3. The Town can adequately and efficiently provide utility and police services.
4. The property is eligible for annexation without election pursuant to the Colorado Constitution Article II, Section 30(b).

Recommended Motion: Motion to Approve:

Based on the application materials received, analysis and presentations at this hearing, and findings noted in this staff memorandum, I move that the Planning & Zoning Commission recommend Approval to the Town Council for the Archdiocese Annexation and Establishment of H-A and PUD-MU Zoning Districts for this property.

Motion to Recommend Approval on Annexation, and modification of Zoning District:

I move that the Commission recommend to the Town Council Approval of the Archdiocese Annexation and to Establish Zoning on the property.

Motion to Recommend Denial:

I move that the Commission recommend to the Town Council Denial of the Archdiocese Annexation and Establishment of Zoning.



Town of Johnstown

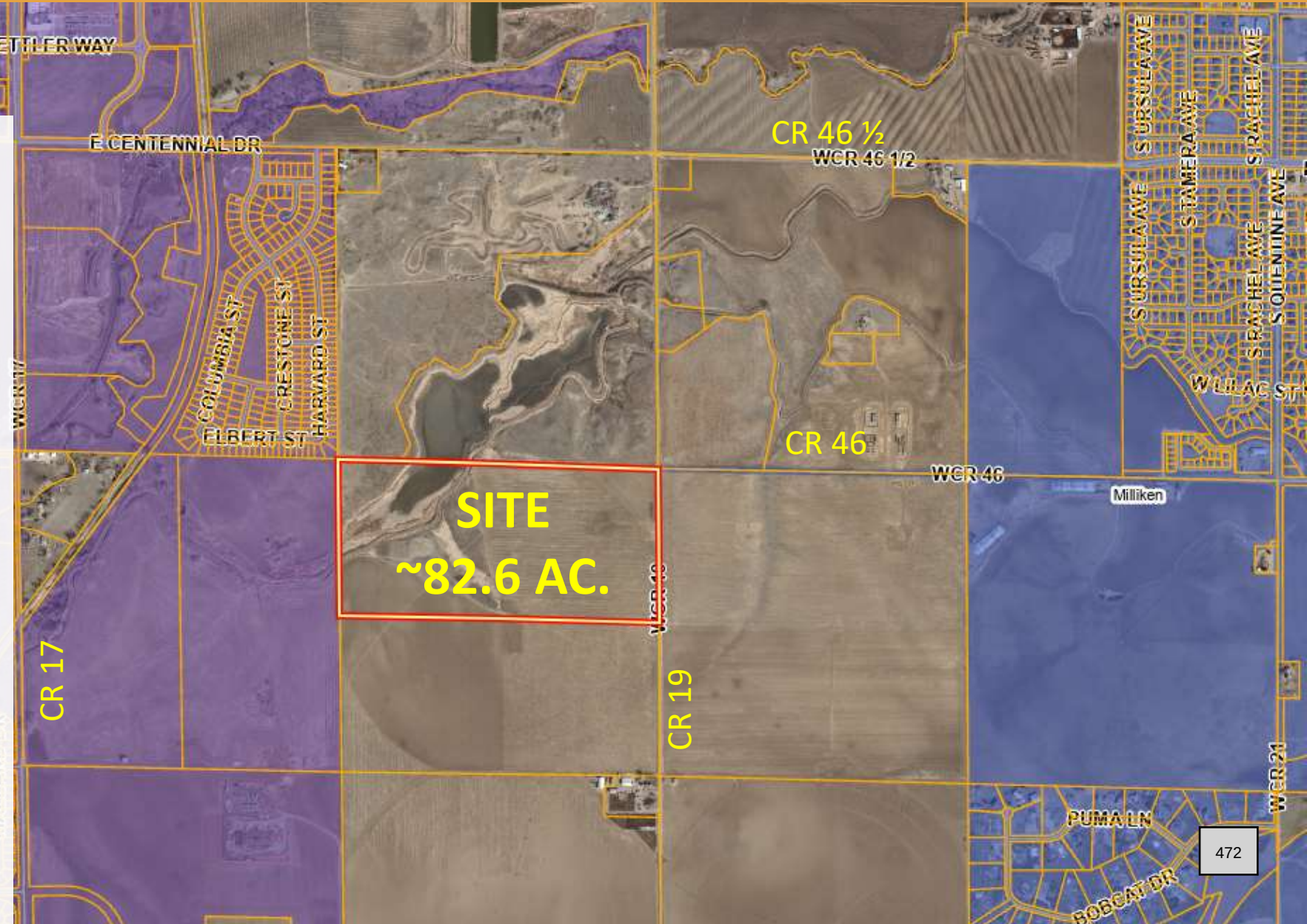
ARCHDIOCESE ANNEXATION NOS. 1 & 2

ESTABLISHMENT OF ZONING
TOWN COUNCIL
March 20, 2023

VICINITY MAP

Item #17.

- West of CR 19 – 0.5 mile south of CR 46 ½
- Approx. 82.6 Acres
(2 proposed halves E - W)
- Current in Weld County:
Zoned A (Agricultural)
- Hillsborough Ditch &
Little Thompson
Reservoir in NW

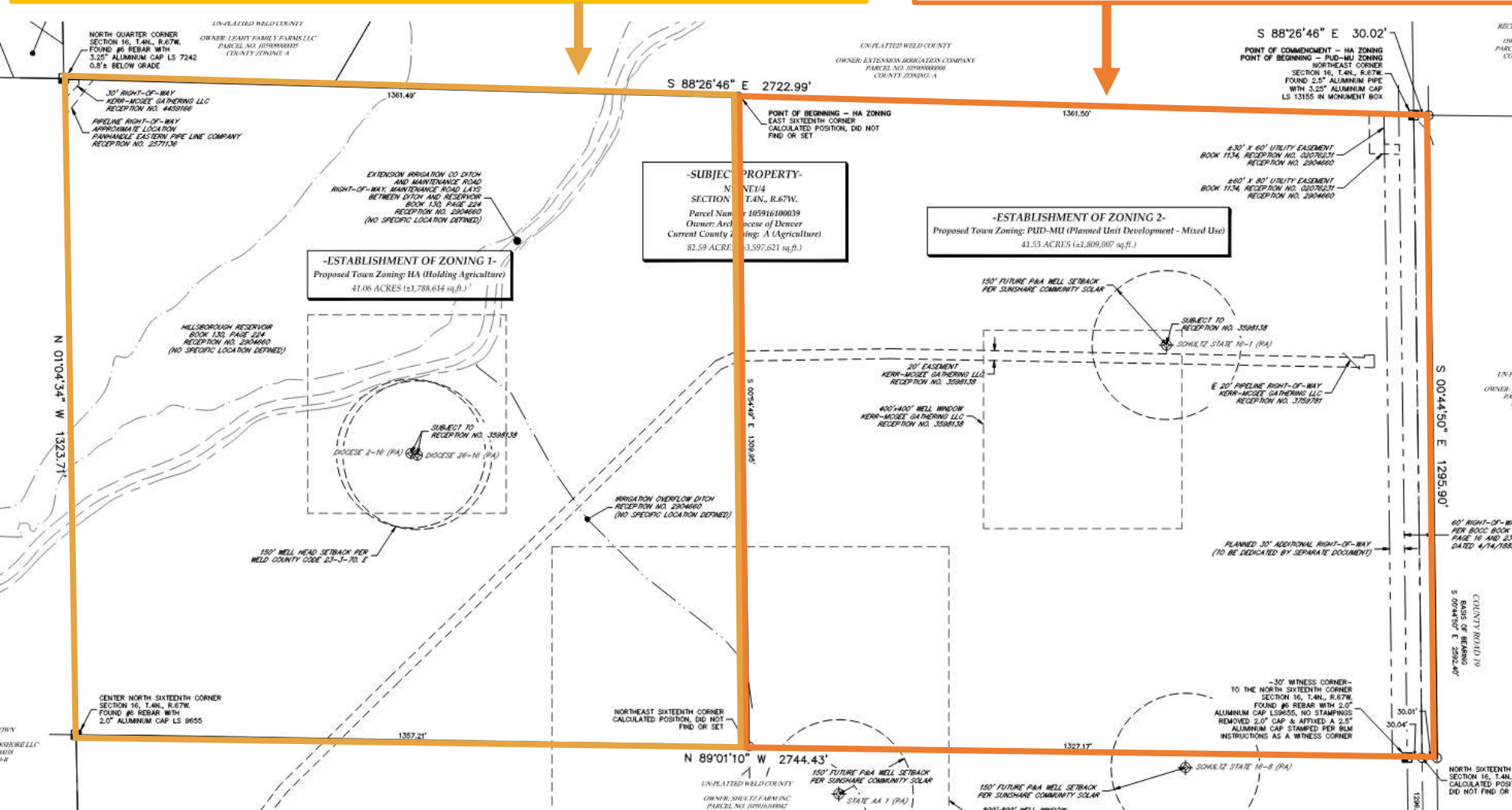


ZONING MAP

Item #17.

•Requested EOZ Zoning area 1 (west half)
H-A (Holding Agriculture)

•Requested EOZ Zoning area 2 (east half)
PUD-MU (Planned Unit Development - Mixed Use)

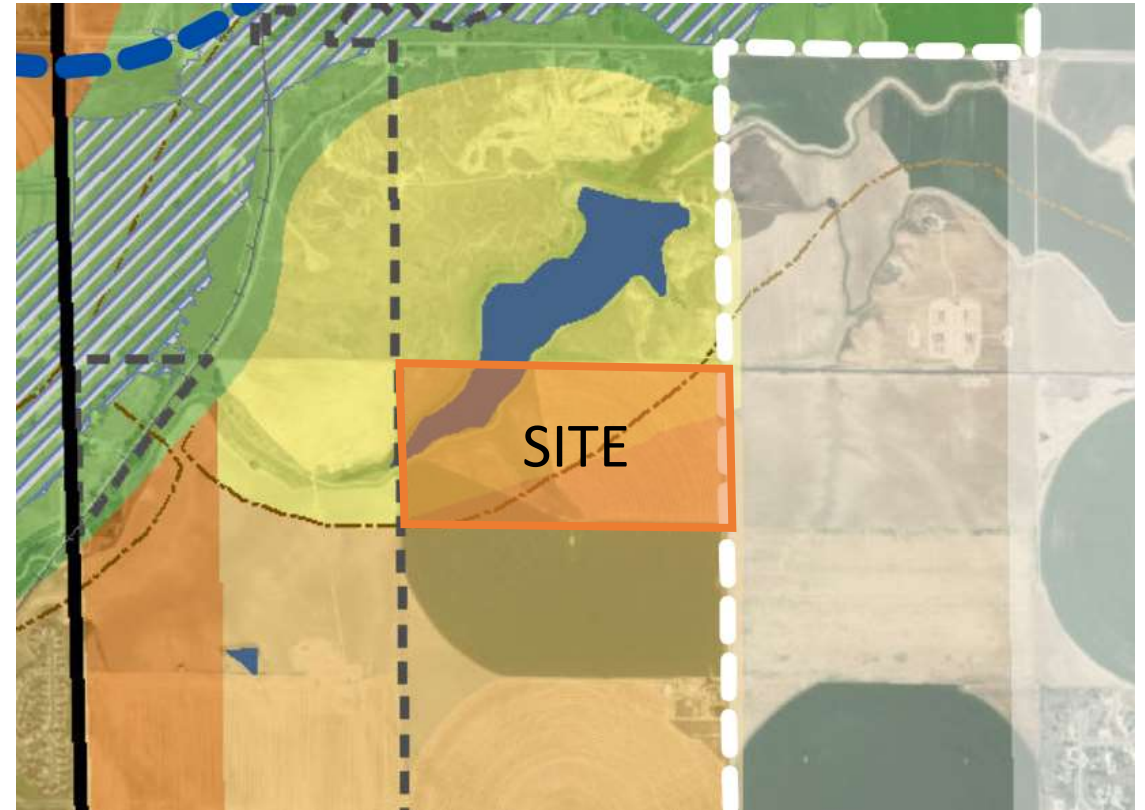


- Accompanying Outline Development Plan and Use by Special Review
- Sporadic oil & gas facilities - plugged and abandoned wells

ANALYSIS & RECOMMENDATION

Item #17.

- Johnstown Review Committee (JRC) included Town staff, Weld County, Milliken, LTWD
- Zoning will permit continued ag use as well as ODP for Solar as an interim use.
- PZC recommends Approval



Low intensity uses (ag & solar) are in alignment with the Johnstown Area Comprehensive Plan



Town of Johnstown
johnstown.colorado.gov | 970-587-4664



Town of Johnstown

TOWN COUNCIL AGENDA COMMUNICATIONS

AGENDA DATE: March 20, 2023

SUBJECT: Ordinance 2023-246 Approving the Outline Development Plan for Dove Solar

ACTION PROPOSED: Hold Public Hearing and Consider Ordinance 2023-246 Approving the Outline Development Plan for Dove Solar, on First Reading

ATTACHMENTS:

1. Ordinance 2023-246
2. Vicinity Map
3. Dove Solar Outline Development Plan (ODP)
4. PZC Agenda Memorandum
5. Staff Presentation

PRESENTED BY: Kim Meyer, Planning & Development Director

AGENDA ITEM DESCRIPTION:

The Town has received an application for consideration of the Dove Solar Outline Development Plan (ODP) encompassing approximately 82.6 acres of land known as the Archdiocese Annexation Nos. 1 and 2. The property is west of Weld County Road 19, and north of Weld County Road 44, adjacent to and encompassing portions of the Little Thompson/Hillsborough reservoir (Attachment 2).

The proposed Outline Development Plan shows the intent to develop an interim use for a community solar facility, proposed as a Use by Special Review, on about 30 acres of the eastern half of the site with farming and ag operations continuing on the remaining portions, in H-A zoning, until future development occurs. (Attachment 4)

The Planning & Zoning Commission (PZC) held a public hearing on February 15, 2023, to consider the annexation, zoning, ODP, and the USR. The Planning & Zoning Commission Agenda Memorandum (Attachment 4) provides background and historical use of the property.

Based upon the materials submitted, analysis, and findings, the PZC recommends approval of the Dove Solar Outline Development Plan to the Town Council.

The Community That Cares

johnstown.colorado.gov

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO 80534 | F: 970.587.0141

The Johnstown Review Committee reviewed this project and provided redlines and comments, which have been adequately addressed by the Applicant. Staff has no remaining outstanding concerns.

LEGAL ADVICE:

Ordinance was prepared by the Town Attorney

FINANCIAL ADVICE:

NA

RECOMMENDED ACTION:

Planning & Zoning Commission recommends, and Staff agrees with, approval of Ordinance 2023-246 Approving the Outline Development Plan for Dove Solar, on First Reading.

SUGGESTED MOTIONS:

For Approval

I move to approve Ordinance 2023-246 Approving the Outline Development Plan for Dove Solar, on First Reading.

For Denial

I move that the Town Council deny Ordinance 2023-246.

Reviewed and Approved for Presentation,



Town Manager

**TOWN OF JOHNSTOWN, COLORADO
ORDINANCE NO. 2023-246**

APPROVING DOVE SOLAR OUTLINE DEVELOPMENT PLAN FOR PROPERTY LOCATED IN NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 16, TOWNSHIP 4 NORTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF WELD, STATE OF COLORADO, AND THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 16, AND A PORTION OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 15, TOWNSHIP 4 NORTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF WELD, STATE OF COLORADO, CONSISTING OF APPROXIMATELY 82.59 ACRES

WHEREAS, the Town of Johnstown, Colorado (“Town”) is a Colorado home rule municipality, duly organized and existing under the laws of the State of Colorado and the Town’s Home Rule Charter; and

WHEREAS, the Town Council is vested with authority to administer the affairs of the Town; and

WHEREAS, Sun Solar, LLC, a Colorado limited liability company (“Applicant”), on behalf of the property owner, the Archdiocese of Denver, a Colorado corporation sole, submitted an application to the Town for approval of an Outline Development Plan for a development known as Dove Solar (“Dove Solar Outline Development Plan”), located in the Northwest Quarter of the Northeast Quarter of Section 16, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado, and the Northeast Quarter of the Northeast Quarter of Section 16, and a Portion of the Northwest Quarter of the Northwest Quarter of Section 15, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado, consisting of approximately 82.59 acres (“Property”); and

WHEREAS, by Ordinance No. 2023-244, the Town Council approved the annexation of the Property; and

WHEREAS, on February 15, 2023, the Planning and Zoning Commission held a public hearing and recommended approval of the Dove Solar Outline Development Plan; and

WHEREAS, on March 20, 2023, the Town Council held a public hearing concerning approval of the Dove Solar Outline Development Plan; and

WHEREAS, after considering the Planning and Zoning Commission’s recommendation for approval, reviewing the file and conducting such public hearing, Town Council found that the Dove Solar Outline Development Plan satisfies the factors set forth in the Johnstown Municipal Code and is consistent with the Johnstown Area Comprehensive Plan; and

WHEREAS, based on the foregoing, the Town Council desires to approve the Dove Solar Outline Development Plan.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF JOHNSTOWN, COLORADO, THAT:

Section 1. P.U.D. Outline Development Plan Approval. The Dove Solar Outline Development Plan, concerning property located in the Northwest Quarter of the Northeast Quarter of Section 16, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado, and the Northeast Quarter of the Northeast Quarter of Section 16, and a Portion of the Northwest Quarter of the Northwest Quarter of Section 15, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado, consisting of approximately 82.59 acres, attached hereto and incorporated herein by reference as Exhibit A, is hereby approved.

Section 2. Effective Date. This Ordinance, after its passage on final reading, shall be numbered, recorded, published and posted as required by the Home Rule Charter of the Town of Johnstown, Colorado (“Charter”) and the adoption, posting and publication shall be authenticated by the signature of the Mayor and the Town Clerk. This Ordinance shall become effective upon the later of: (i) final passage of the Ordinance as provided by the Charter or (ii) annexation of the Property. Copies of the entire Ordinance are available at the office of the Town Clerk.

INTRODUCED AND APPROVED on first reading by the Town Council of the Town of Johnstown, Colorado, this ____ day of _____, 2023.

TOWN OF JOHNSTOWN, COLORADO

ATTEST:

By: _____
Hannah Hill, Town Clerk

By: _____
Gary Lebsack, Mayor

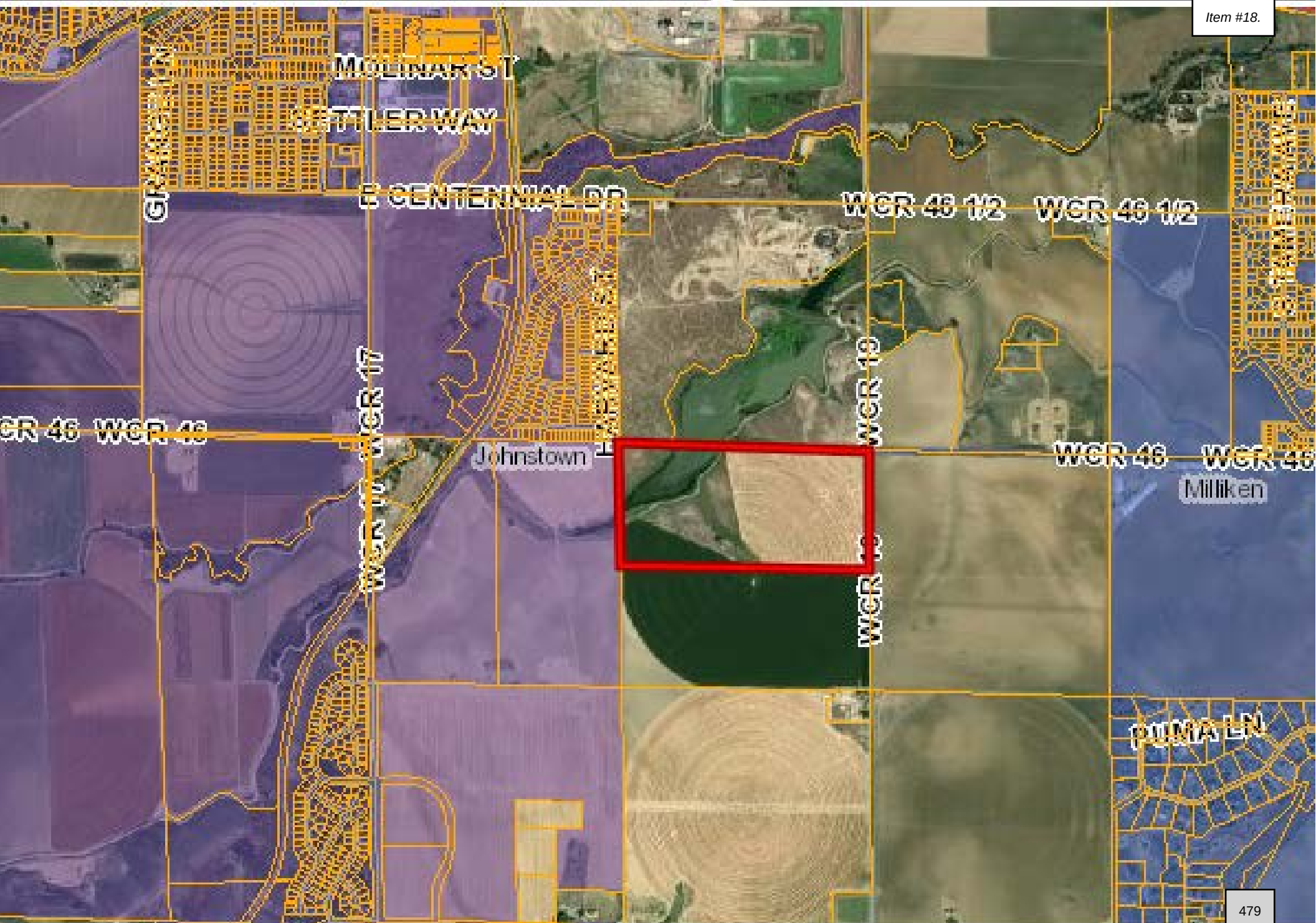
PASSED UPON FINAL APPROVAL AND ADOPTED on second reading by the Town Council of the Town of Johnstown, Colorado, this ____ day of _____, 2023.

TOWN OF JOHNSTOWN, COLORADO

ATTEST:

By: _____
Hannah Hill, Town Clerk

By: _____
Gary Lebsack, Mayor



OUTLINE DEVELOPMENT PLAN
DOVE SOLAR

Part of the North Half of the Northeast Quarter of Section 16,
Township 4 North, Range 67 West of the 6th P.M.,
Town of Johnstown, State of Colorado

PROPERTY DESCRIPTION – HA ZONING:

An area of land being the Northwest Quarter of the Northeast Quarter (NW1/4NE1/4) of Section Sixteen (16), Township Four North (T.4N.), Range Sixty-seven West (R.67W.) of the Sixth Principal Meridian (6th P.M.), County of Weld, State of Colorado, being more particularly described as follows;

COMMENCING at the Northeast corner of Section 16 and assuming the East line of the Northeast Quarter (NE1/4) of Section 16 as monumented by a 2.5" aluminum pipe with a 3.25" aluminum cap stamped LS 13155 at the North end and by a #6 rebar with a 2.0" aluminum cap stamped LS 22097 at the South end, as bearing South 00°44'50" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983 (2011), a distance of 2592.40 feet, with all other bearings contained herein being relative thereto.

The lineal dimensions as contained herein are based upon the "U.S. Survey Foot."

THENCE North 88°26'46" West along the North line of the NE1/4 of Section 16 a distance of 1361.50 feet to the calculated position of the East Sixteenth corner of said Section 16 and to the POINT OF BEGINNING;

THENCE South 00°54'49" East along the East line of the NW1/4NE1/4 of said Section 16 a distance of 1309.95 feet to the calculated position of the Northeast Sixteenth corner of said Section 16;
THENCE North 89°01'10" West along the South line of said NW1/4NE1/4 a distance of 1357.21 feet to the Center North Sixteenth corner of said Section 16;
THENCE North 01°04'34" West along the West line of said NW1/4NE1/4 a distance of 1323.71 feet to the North Quarter corner of said Section 16;
THENCE South 88°26'46" East along the North line of said NW1/4NE1/4 a distance of 1361.49 feet to the calculated position of the East Sixteenth corner of said Section 16 and to the POINT OF BEGINNING.

Said area of land contains 41.06 Acres (+/-1,788,614 sq.ft.) and is subject to any rights-of-way or other easements of record as now existing on said described parcel of land.

PROPERTY DESCRIPTION – MU ZONING:

An area of land being Northeast Quarter of the Northeast Quarter (NE1/4NE1/4) of Section Sixteen (16) and a portion of the Northwest Quarter of the Northwest Quarter (NW1/4NW1/4) of Section Fifteen (15), Township Four North (T.4N.), Range Sixty-seven West (R.67W.) of the Sixth Principal Meridian (6th P.M.), County of Weld, State of Colorado, being more particularly described as follows;

BEGINNING at the Northeast corner of Section 16 and assuming the East line of the Northeast Quarter (NE1/4) of Section 16 as monumented by a 2.5" aluminum pipe with a 3.25" aluminum cap stamped LS 13155 at the North end and by a #6 rebar with a 2.0" aluminum cap stamped LS 22097 at the South end, as bearing South 00°44'50" East, being a grid bearing of the Colorado State Plane Coordinate System, North Zone, North American Datum 1983 (2011), a distance of 2592.40 feet, with all other bearings contained herein being relative thereto.

The lineal dimensions as contained herein are based upon the "U.S. Survey Foot."

THENCE South 88°26'46" East along the Easterly extension of the North line of said Section 16 a distance of 30.02 feet to the East right-of-way line of County Road 19;
THENCE South 00°44'50" East along said East right-of-way line a distance of 1295.90 feet to the Easterly extension of the South line of the NE1/4NE1/4 of said section 16;
THENCE North 89°01'10" West along said extension and said South line a distance of 1387.22 feet to the calculated position of the Northeast Sixteenth corner of said Section 16;
THENCE North 00°54'49" West along the West line of said NE1/4NE1/4 a distance of 1309.95 feet to the calculated position of the East Sixteenth corner of said section 16;
THENCE South 88°26'46" East along the North line of said NE1/4NE1/4 a distance of 1361.50 feet to the Northeast corner of said Section 16 and to the POINT OF BEGINNING.

Said area of land contains 41.53 Acres (+/-1,809,007 sq.ft.) and is subject to any rights-of-way or other easements of record as now existing on said described parcel of land.

GENERAL NOTES

- A. ALL UNPLATTED PROPERTY SHALL REQUIRE A TOWN SUBDIVISION APPROVAL PROCESS PRIOR TO ANY ADDITIONAL USES AND BUILDING PERMITS, BEYOND THE PROPOSED AGRICULTURAL AND SOLAR USES.

PROJECT INTENT

THE INTENT OF THIS OUTLINE DEVELOPMENT PLAN (ODP) IS TO PROVIDE AN INTERIM DEVELOPMENT SCHEME TO THE 82.59 ACRE DOVE SOLAR PROJECT. DOVE SOLAR IS ENVISIONED AS 41.06 ACRES FOR HOLDING AGRICULTURE DEVELOPMENT AS WELL AS 41.53 ACRES OF MIXED USE DEVELOPMENT WITH AN INTERIM SOLAR FIELD. THIS DOCUMENT WILL GUIDE THE OVERALL CHARACTER OF DOVE SOLAR TO ENSURE THE QUALITY AND COHESIVENESS DESIRED IN THIS EMERGING PART OF NORTHERN COLORADO. THE INTERIM SOLAR FIELD WILL BE LOCATED ON THE EASTERN PORTION OF THE SITE.

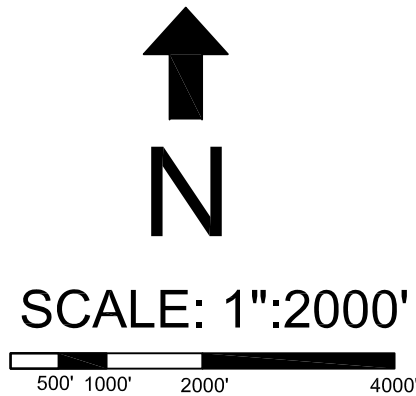
APPROVALS

TOWN COUNCIL

THIS OUTLINE DEVELOPMENT PLAN, TO BE KNOWN AS DOVE SOLAR ODP, IS APPROVED AND ACCEPTED BY THE TOWN OF JOHNSTOWN, BY ORDINANCE NUMBER _____. PASSED AND ADOPTED ON FINAL READING BY REGULAR MEETING OF THE TOWN COUNCIL OF THE TOWN OF JOHNSTOWN, COLORADO HELD ON THE _____ DAY OF _____, 20_____.

BY: _____ ATTEST: _____
MAYOR TOWN CLERK

VICINITY MAP



RELATIONSHIP TO TOWN CODE & DEVELOPMENT STANDARDS

THE PROVISIONS OF THIS PUD SHALL PREVAIL AND GOVERN DEVELOPMENT TO THE EXTENT PERMITTED BY THE TOWN OF JOHNSTOWN MUNICIPAL CODE. WHERE STANDARDS, DETAILS, AND GUIDELINES OF THE PUD - OUTLINE, PRELIMINARY, OR FINAL DEVELOPMENT PLANS - DO NOT CLEARLY ADDRESS A SPECIFIC SUBJECT OR ARE SILENT, THE JOHNSTOWN MUNICIPAL AND OTHER STANDARDS, REGULATIONS, AND GUIDELINES SHALL BE USED. ALL PROPOSED DEVELOPMENT IS SUBJECT TO TOWN OF JOHNSTOWN REVIEW PROCEDURES.

DATE
2/6/2023

SRC087084

PROJECT NAME
DOVE SOLAR LLC

PROJECT LOCATION
CR 46 & CR 19
JOHNSTOWN, CO 80534



SHEET NAME

COVER

SHEET NUMBER
ODP-1

SHEET SIZE
24"x36"

OUTLINE DEVELOPMENT PLAN
DOVE SOLAR

Part of the North Half of the Northeast Quarter of Section 16,
Township 4 North, Range 67 West of the 6th P.M.,
Town of Johnstown, State of Colorado

OUTLINE DEVELOPMENT PLAN (ODP) USES:

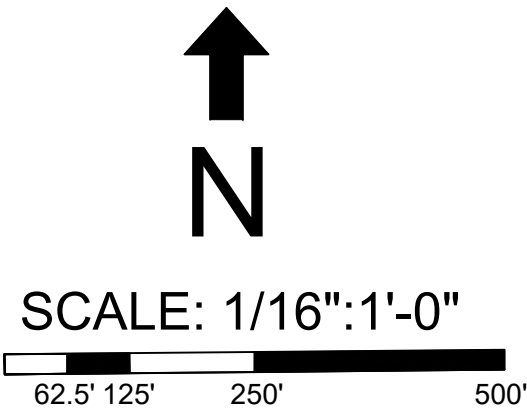
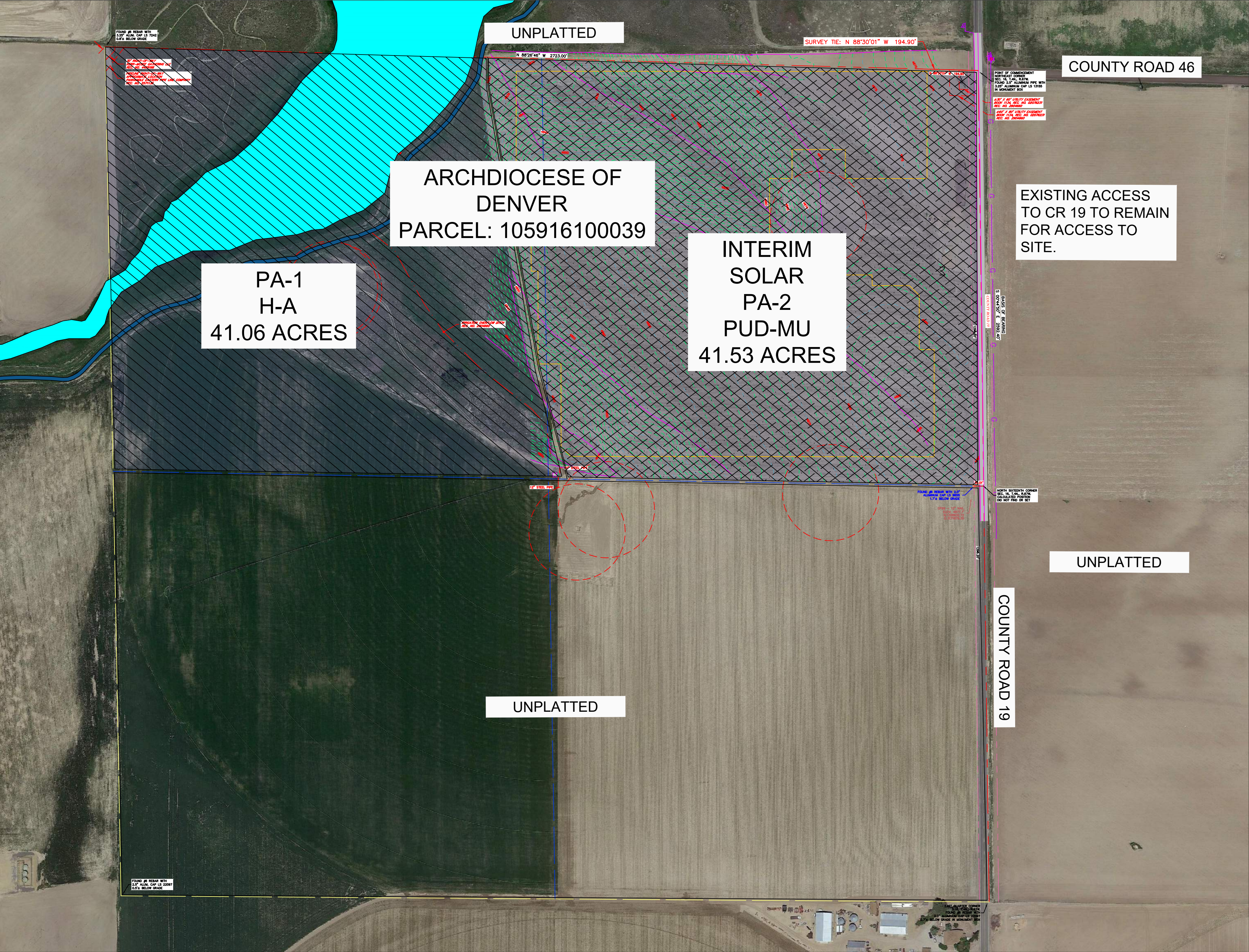
1. FUTURE DEVELOPMENT WILL REQUIRE AN AMENDMENT TO THIS ODP TO ESTABLISH USES, DENSITIES, AND INTENSITIES OF USE AS WELL AS MEET ALL TOWN DEVELOPMENT STANDARDS.

2. PA-1 AGRICULTURAL AREA
A. AG USES MAY CONTINUE UNTIL FUTURE ODP AMENDMENT AND DEVELOPMENT PROPOSALS

3. PA-2 SOLAR USE AREA
A. THE SOLAR USE AREA (PA-2) SHOWN ON THIS ODP IS AN INTERIM USE (20-40 YEARS, OR AS EXTENDED BY PRIVATE AGREEMENT) AND SHALL OBTAIN A SEPARATE SPECIAL USE (USR) APPROVAL FROM THE TOWN OF JOHNSTOWN. THE SPECIAL/CONDITIONAL USE APPLICATION SHALL SHOW ALL DETAIL RELATED TO THE THIS INTERIM USE, SUCH AS BUT NOT LIMITED TO LAYOUT, ACCESS, LANDSCAPING STANDARDS.

B. MINIMUM STANDARDS
i. 20-FOOT SETBACK OF SOLAR EQUIPMENT FROM PROPERTY LINES
ii. 8-FOOT DECORATIVE WILDLIFE FENCE AROUND PERIMETER OF SOLAR FIELD
iii. LOW-GRADE NATIVE SEED MIX WITHIN THE SOLAR FIELD AREA

C. A TOWN-APPROVED DECOMMISSIONING AND RECLAMATION PLAN AND DUST AND WEED MITIGATION PLAN IS REQUIRED WITH THE THE SOLAR USE BY SPECIAL REVIEW PROJECT.



DATE 2/6/2023	
LEGEND INTERIM SOLAR HOLDING- AG DESIGNATED HILLSBOROUGH DITCH CO RESERVOIR EXISTING PATHWAY ARCHDIOCESE OF DENVER PARCEL	
SRC087084	
PROJECT NAME DOVE SOLAR LLC	PROJECT LOCATION CR 46 & CR 19 JOHNSTOWN, CO 80534
SUNSHARE LLC 1724 GILPIN ST, DENVER, CO 80218 (800)793-0786	
SHEET NAME CONCEPT SITE PLAN	
SHEET NUMBER ODP-2	
SHEET SIZE 24"x36"	



Town of Johnstown

PLANNING & ZONING COMMISSION AGENDA MEMORANDUM

DESCRIPTION:	Dove Solar Outline Development Plan
PROJECT NO:	ANX22-0003
LOCATION:	South of WCR 46.5 and the Little Thompson Reservoir, west of WCR 19
APPLICANT:	SunSolar (Applicant) / Archbishop of Denver (Owner)
STAFF:	Kim Meyer, Planning & Development Director
HEARING DATE:	February 15, 2023

ATTACHMENTS

- 1- Vicinity Map
- 2- Outline Development Plan

PROJECT SUMMARY

The Applicant requests the approval of an Outline Development Plan (ODP) for approximately 82.6 acres of land being considered for annexation to the Town of Johnstown, as the Archdiocese Annexation Nos. 1 and 2. (Attachment 2) Zoning proposed for the site includes approximately half the acreage as H-A, Holding Agriculture, for ongoing agricultural uses; and the other half as PUD-MU, Planned Unit Development Mixed Use. This ODP would apply to the PUD zone district of that property and permit the development of a 30± acre solar field.

The ODP permits only an Agricultural Area, and the Solar Use Area as an interim (20-40 years) use prior to future development that may occur on-site. Rezoning and subdivision, as well as extensive engineering would be required in the future to accommodate additional uses and development.

PROPERTY BACKGROUND

The property is located south of Weld County Rd (WCR) 46.5 and west of WCR 19. The subject property is presently zoned A - Agricultural in unincorporated Weld County and is being used as farm land. It is bordered to the north by the Hillsborough/Little Thompson Reservoir, to the west by incorporated areas of Johnstown, with the rest being adjacent to unincorporated Weld County and adjacent to the Milliken Growth Management Boundary. (Attachment 1)

SURROUNDING ZONING & LAND USE

North:	A – Agricultural (Weld County), Hillsborough/Little Thompson Reservoir
South:	A – Agricultural (Weld County)
East:	A – Agricultural (Weld County)
West:	PUD (Johnstown) with Oil & Gas Well Pads

The Community That Cares

johnstown.colorado.gov

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO 80534 | F: 970.587.0141

LAND USE HISTORY

Historically, this property has been used for farming and continues as that use today.

OIL & GAS

COGCC (Oil & Gas) online maps show existing abandoned and plugged and abandoned wells on-site. These sites are also shown on the Annexation and Zoning maps.

IRRIGATION DITCHES

The Hillsborough/Little Thompson Reservoir, owned and managed by the Extension (Hillsborough) Ditch Company, is partially located on the northwest corner of this property. These are some emergent wetlands along the banks of that water body, identified by the Colorado Wetland Inventory as part of the Colorado Natural Heritage Program.

(<https://csurams.maps.arcgis.com/apps/webappviewer/index.html?id=a8e43760cb934a5084e89e46922580cc>)

The reservoir and surrounding areas of interest are located in the H-A zoning district area and will be undisturbed by the proposed solar use on the PUD-MU zoned area.

FLOODPLAIN

The subject property is not located in any floodplain area.

PUBLIC NOTICE & AGENCY REFERRALS

Notice for the Planning & Zoning Commission hearing was published in the local paper of widest circulation, the Johnstown Breeze, on Thursday, January 26, 2023. This notice provided the date, time, and location of the Planning and Zoning Commission hearing, as well as a description of the project. Notices were mailed to all property owners within 500 feet of the property in question. This notice included a map of the project area.

This project was referred to the Johnstown Review Committee as well as Weld County, Milliken, the Weld RE-5J School District, Little Thompson Water, Xcel and TDS.

NEIGHBORHOOD MEETING

No neighborhood meeting was held for this ODP project.

PROJECT DESCRIPTION & ANALYSIS

As noted in the summary above the proposed Dove Solar Outline Development Plan allows for continued ag use, as well as the development of an “interim” solar facility. Current solar contracts with Xcel have been offered as 20-year terms with potential to extend.

As proposed in the accompanying USR (Use by Special Review) for the solar facility, the facility would encompass about 30 acres of land, and be sited to accommodate the oil and gas facility that is in the process of being plugged and abandoned. The use would utilize the existing access to WCR 19 that has been used previously to access the oil and gas site.

No other uses are proposed with this ODP. The uses included within the ODP would not create the need for any utility, transportation, or other public services.

This area of the Johnstown Growth Management Area is indicated for Low or Very Low Intensity and Density types of development. The continuation of agricultural uses into the future, as well as the use of

the area for very low intensity energy resource development are in alignment with this designation and intention. Staff has no outstanding concerns related to this proposed Dove Solar ODP. Staff has no outstanding concerns related to this proposed Outline Development Plan.

RECOMMENDED PLANNING AND ZONING COMMISSION FINDINGS AND MOTIONS

Staff recommends that the Planning and Zoning Commission send a recommendation for Approval to Town Council for the Dove Solar Outline Development Plan based upon the following findings:

1. The proposed uses are in alignment with the Future Land Use Plan within the Area Johnstown Comprehensive Plan.
2. The proposed uses do not require significant public services to be provided by the Town or other public entities.
3. The proposed uses have the ability to be designed to meet all Town codes, regulations and requirements for that type of development.
4. The proposed uses provide an interim use to property that may prove suitable for a different type of development in the future.

Recommended Motion: Motion to Approve

Based on the application materials received, analysis and presentations at this hearing, and findings noted in this staff memorandum, I move that the Planning & Zoning Commission recommend Approval to the Town Council for the Dove Solar Outline Development Plan.

Motion to Recommend Denial

I move that the Commission recommend to the Town Council Denial of the Dove Solar Outline Development Plan.



Town of Johnstown

DOVE SOLAR

Outline Development Plan (ODP)

TOWN COUNCIL

March 20, 2023

Item #18.

-
- ETTLER WAY
- E CENTENNIAL DR
- COLUMBIA ST
- CRESTONE ST
- HARVARD ST
- ELBERT ST
- CR 17
- CR 19
- CR 46 1/2
- WCR 46 1/2
- CR 46
- WCR 46
- WILAC ST
- S CURSULA AVE
- S TAMERA AVE
- S RACHEL AVE
- S QUEENTINE AVE
- PUMA LN
- BOBCAT DR
- 486
- SITE
~82.6 AC.**

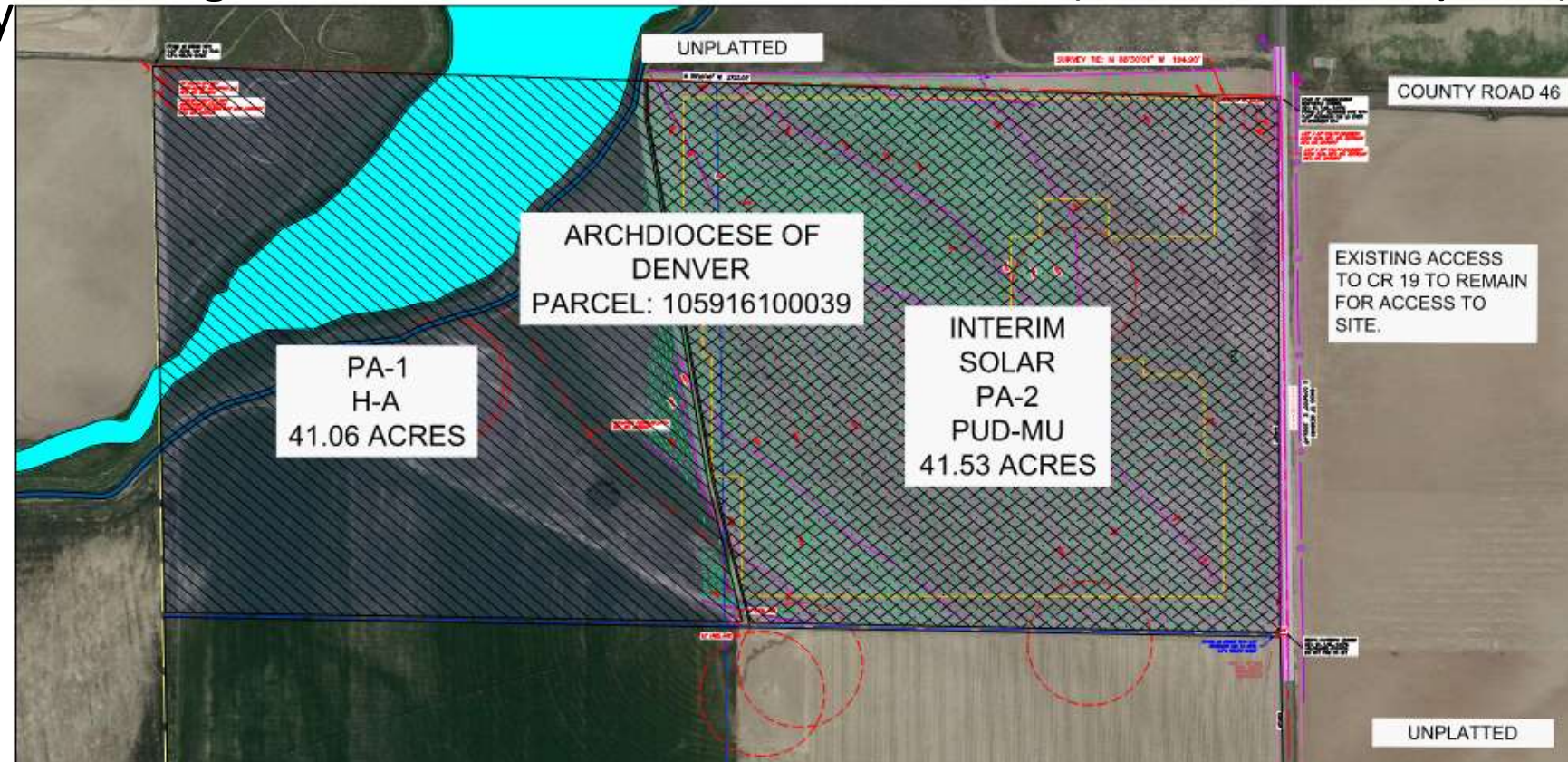
OUTLINE DEVELOPMENT PLAN

Item #18.

- ODP includes minimum standards for the solar facility (setbacks, fencing, seeding)
- Future rezoning and subdivision required for further site development
- The proposed uses in this ODP do not require any utility, transportation, or other public services.

- PA-1 ~41 AC
- Agricultural Area

- PA-2 ~41 AC
- Solar Use Area (Interim; 20-40 years)

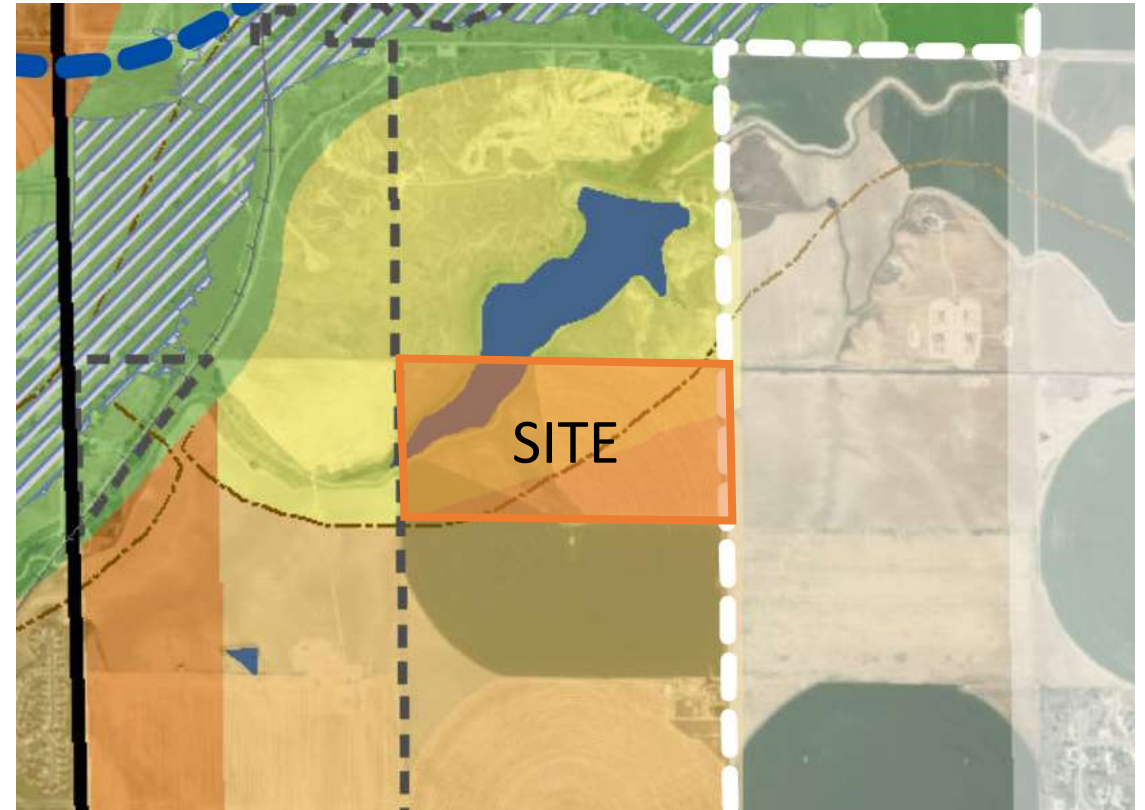


Town of Johnstown
johnstown.colorado.gov | 970-587-4664

STAFF ANALYSIS

Item #18.

- Johnstown Review Committee (JRC) included Town staff, Town traffic, civil, and water engineers, Weld County, Milliken, LTWD, Xcel, TDS, Weld School Dist RE-5J
- The Outline Development Plan is in conformance with Town codes, standards and regulations.
- PZC recommends Approval



Low intensity uses (ag & solar) are in alignment with the Johnstown Area Comprehensive Plan



Town of Johnstown
johnstown.colorado.gov | 970-587-4664



Town of Johnstown

TOWN COUNCIL AGENDA COMMUNICATIONS

AGENDA DATE: March 20, 2023

SUBJECT: Resolution 2023-17 Approving a Use by Special Review for the Dove Solar Array

ACTION PROPOSED: Hold Public Hearing and Consider Resolution 2023-17 Approving a Use by Special Review for the Dove Solar Array

ATTACHMENTS:

1. Resolution 2023-17
2. Vicinity Map
3. Site Plan
4. USR Narrative
5. Dust & Weed Management Plan
6. Decommissioning Plan
7. PZC Agenda Memorandum for Use by Special Review
8. Staff Presentation

PRESENTED BY: Kim Meyer, Planning & Development Director

AGENDA ITEM DESCRIPTION:

The applicant, SunSolar, LLC, requests approval of a Use by Special Review for an approximately 30-acre solar array facility, intended as a 20-40 year interim use which would be in conformance with the Dove Solar Outline Development Plan. The property is west of Weld County Road 19, and north of Weld County Road 44, adjacent to and encompassing portions of the Little Thompson/Hillsborough reservoir (Attachment 2).

The facility footprint is proposed to be constructed on the eastern half of the existing parcel, with farming operations continuing on the remaining portions until future development occurs. (Attachment 3-4). The site plan provides for fire district-approved access and turnaround, and underground collection line, and open wildlife fencing.

The Community That Cares

johnstown.colorado.gov

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO 80534 | F: 970.587.0141

The Johnstown Municipal Code does not mention a facility/use such as a solar farm within our zoning code, nor any development standards to apply thereto. Staff worked with the Applicant and Owner, through the process of annexation, zoning, outline development plan, and subdivision, to create the Dove Solar ODP that allows a solar facility as an “interim” use, with a USR (Use by Special Review) process. Based on review of a prior solar facility (SunCatcher), Staff required provision of a Dust and Weed mitigation plan, as well as a Decommissioning Plan that would remove the equipment and restore the property, minus some minor grading modifications, to its predevelopment state (Attachments 5 & 6).

The Planning & Zoning Commission held a public hearing on February 15, 2023, to consider this Use by Special Review project (USR22-0002). The Planning & Zoning Commission Agenda Memorandum (Attachment 7) provides additional background and analysis. The Commission approved a motion to recommend to Town Council approval of this Use by Special Review.

RECOMMENDED FINDINGS:

The Council finds this Use by Special Review for the Dove Solar Array to be consistent with the Town’s Comprehensive Plan and compatible with existing surrounding and probable future land uses, and that the special use will not cause an unreasonable demand on the Town’s services, unreasonably affect traffic flow and parking, or adversely affect the general public welfare.

LEGAL ADVICE:

Resolution was prepared by the Town Attorney.

FINANCIAL ADVICE:

NA

RECOMMENDED ACTION:

Approve Resolution 2023-17 Approving a Use by Special Review for the Dove Solar Array.

SUGGESTED MOTIONS:

For Approval

I move that the Town Council approve Resolution 2023-17.

For Denial

I move that the Town Council deny Resolution 2023-17.

Reviewed and Approved for Presentation,



Town Manager

**TOWN OF JOHNSTOWN, COLORADO
RESOLUTION NO. 2023-17**

APPROVING A USE BY SPECIAL REVIEW FOR SUN SOLAR, LLC FOR A SOLAR FACILITY TO BE KNOWN AS “DOVE SOLAR ARRAY” AND SITUATED IN PART OF THE NORTH HALF OF THE NORTHEAST QUARTER OF SECTION 16, TOWNSHIP 4 NORTH, RANGE 67 WEST OF THE 6TH P.M., COUNTY OF WELD, STATE OF COLORADO, CONSISTING OF APPROXIMATELY 31.28 ACRES

WHEREAS, the Town of Johnstown, Colorado (“Town”) is a Colorado home rule municipality, duly organized and existing under the laws of the State of Colorado and the Town’s Home Rule Charter; and

WHEREAS, the Town Council is the governing body of the Town and is vested with authority to administer the affairs of the Town; and

WHEREAS, Sun Solar, LLC, a Colorado limited liability company, submitted an application to the Town for a use by special review for a solar facility to be known as “Dove Solar” and situated in part of the North Half of the Northeast Quarter of Section 16, Township 4 North, Range 67 West of the 6th P.M., County of Weld, State of Colorado, consisting of approximately 31.28 acres, as more particularly described on Exhibit A attached hereto and incorporated herein by reference (“Property”); and

WHEREAS, by Ordinance No. 2023-244, the Town Council approved the annexation of the Property; by Ordinance No. 2023-245, the Town Council approved planned unit development – mixed use (PUD-MU) zoning of the Property; and, by Ordinance No. 2023-246, the Town Council approved the Dove Solar Outline Development Plan (“ODP”) for the Property; and

WHEREAS, on February 15, 2023, the Planning and Zoning Commission held a public hearing and voted to recommend approval of the use by special review; and

WHEREAS, on March 20, 2023, the Town Council held a public hearing and, after considering the Planning and Zoning Commission’s recommendation, reviewing the file, and conducting such public hearing, found that the special use is consistent with the Town’s Comprehensive Plan and compatible with existing surrounding and probable future land uses, and that the special use will not cause an unreasonable demand on the Town’s services, unreasonably affect traffic flow and parking or adversely affect the general public welfare; and

WHEREAS, based on the foregoing, the Town Council desires to approve the use by special review.

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF JOHNSTOWN, COLORADO, THAT:

Section 1: Sun Solar, LLC’s application for a use by special review for a solar facility to be known as “Dove Solar” on the Property is hereby approved.

Section 2: This Resolution shall be effective upon the effective date of the annexation of the Property.

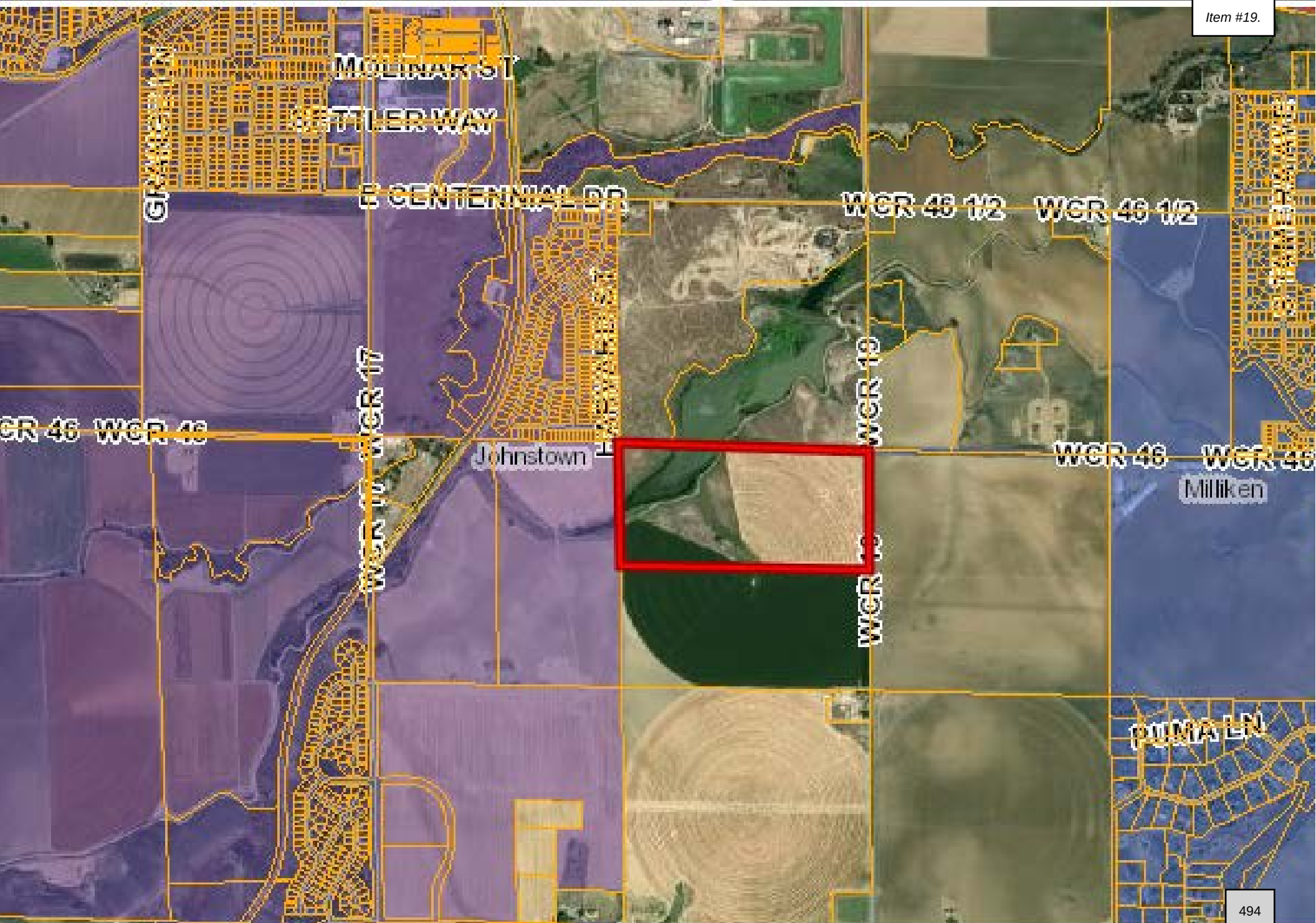
PASSED, SIGNED, APPROVED, AND ADOPTED this ____ day of _____, 2023.

ATTEST:

TOWN OF JOHNSTOWN, COLORADO

By: _____
Hannah Hill, Town Clerk

By: _____
Gary Lebsack, Mayor



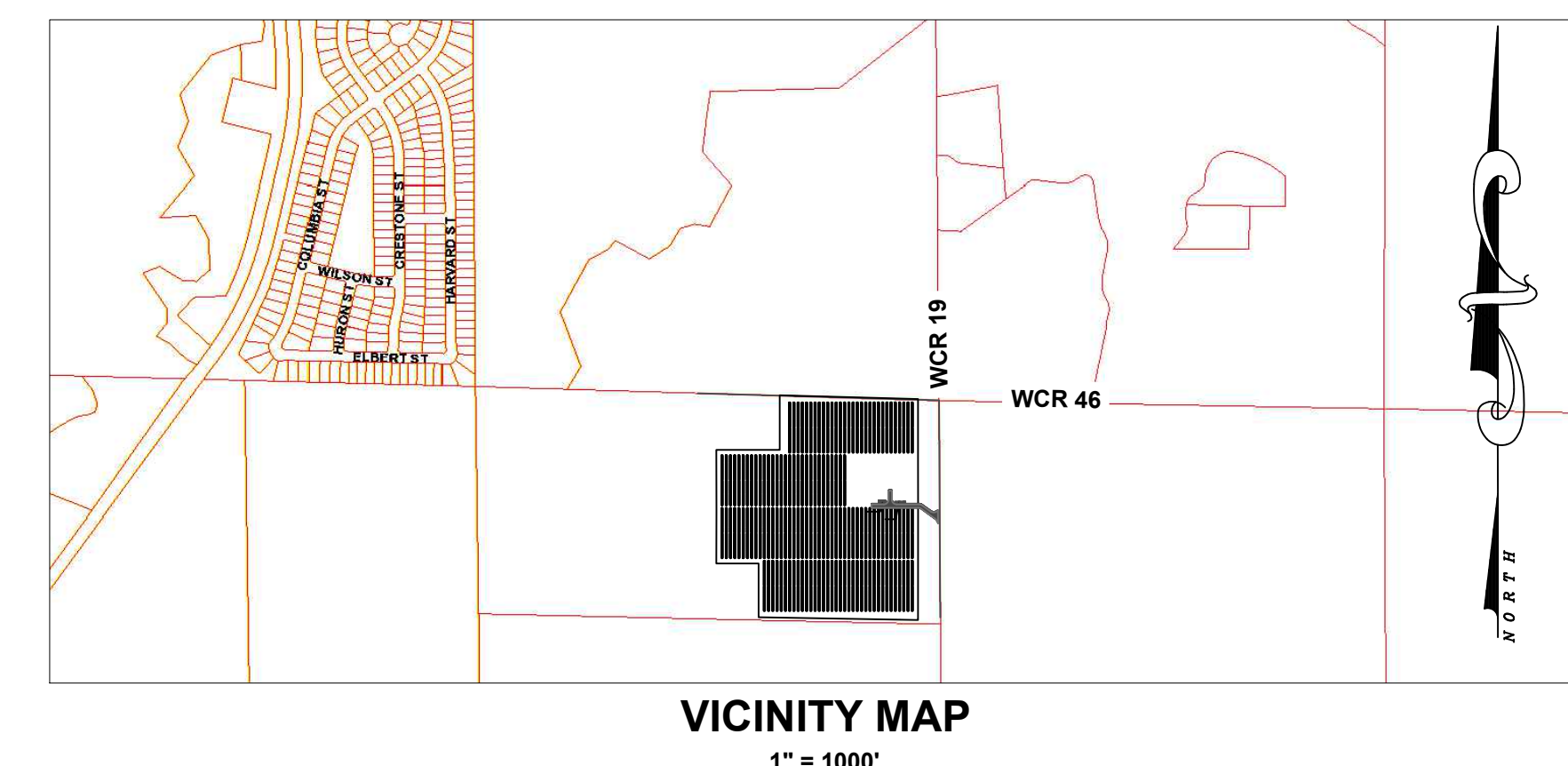
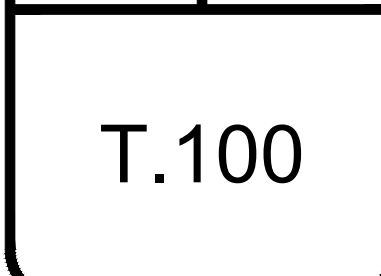
[illegible]

- 
- SunShare



JOB NO. 2021.136	SCALE AS SHOWN
---------------------	-------------------

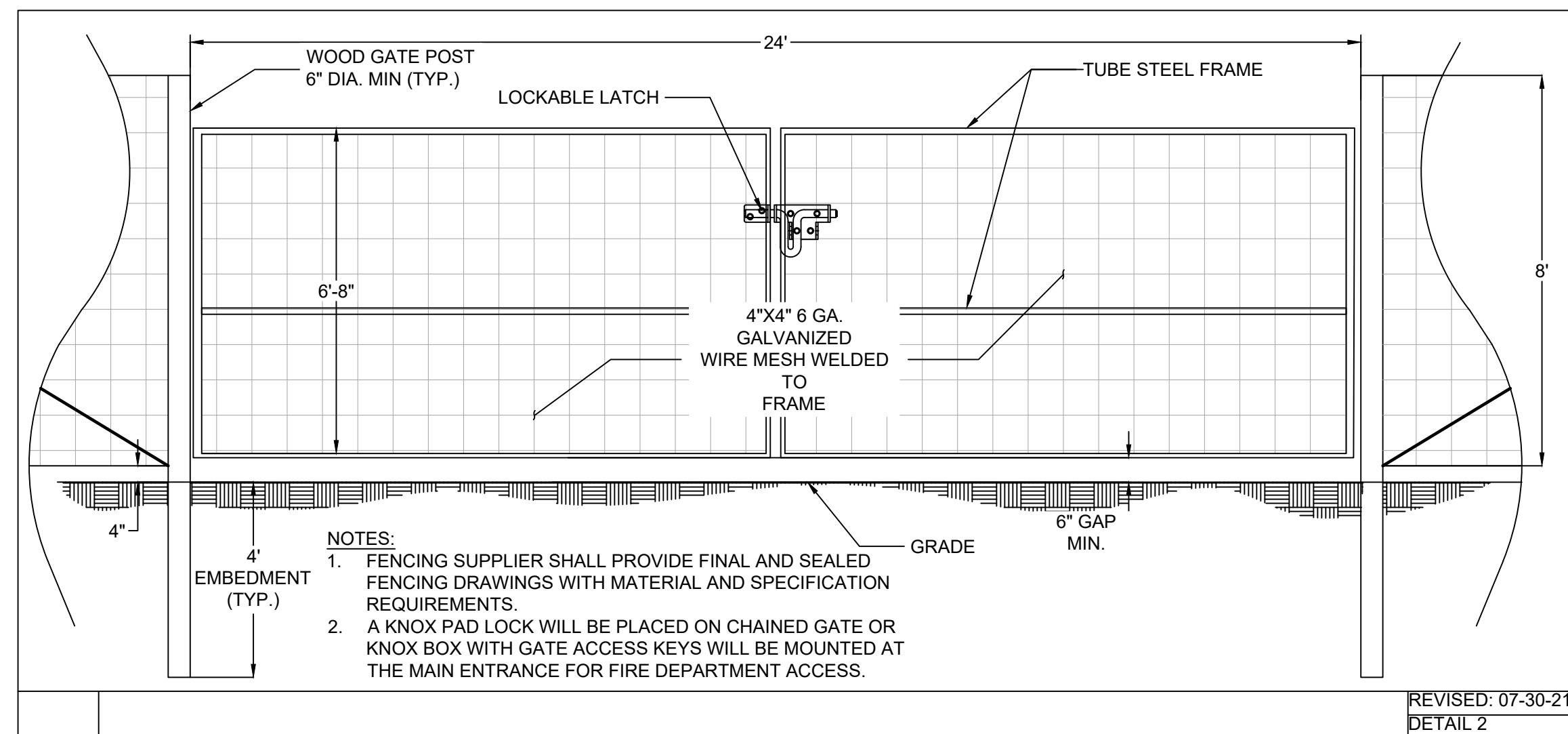
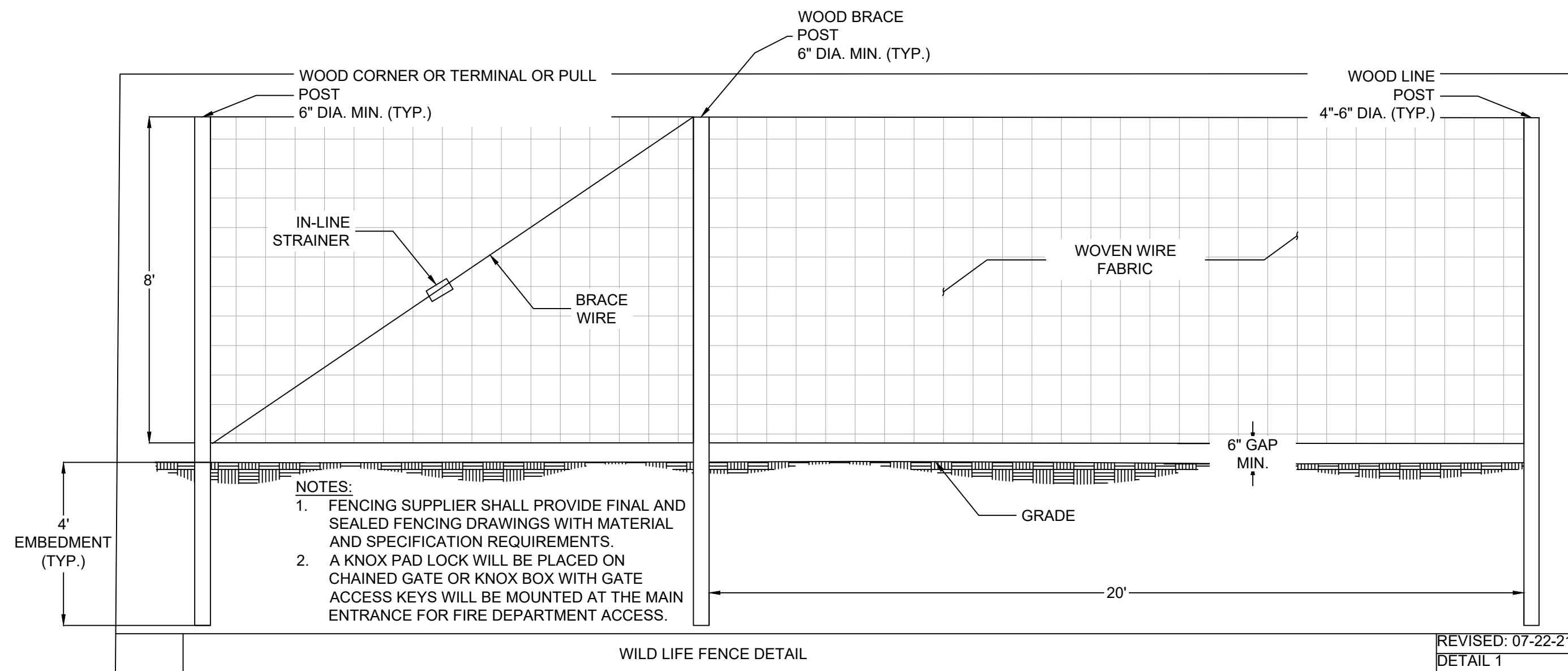
495



USE BY SPECIAL REVIEW - DOVE SOLAR LLC

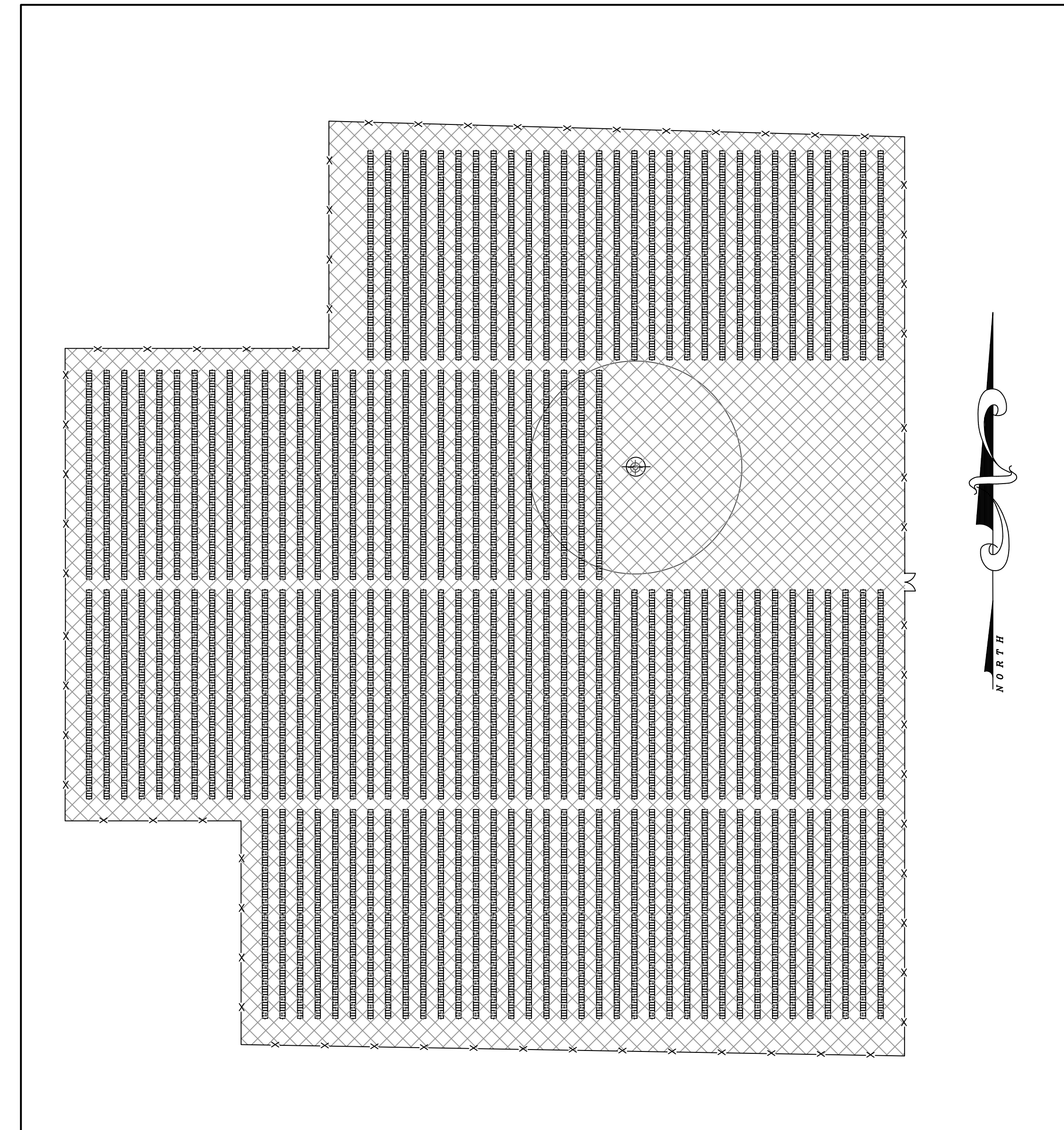
5000 kW-AC (5981.04 kW-DC) SOLAR ARRAY PROJECT

PART OF THE NORTH HALF OF THE NORTHEAST QUARTER OF SECTION 16, TOWNSHIP 4 NORTH,
RANGE 67 WEST OF THE 6TH P.M., TOWN OF JOHNSTOWN, STATE OF COLORADO



NOTES:

1. THIS DEVELOPMENT IS BEING CONSTRUCTED IN A RURAL PART OF WELD COUNTY NEAR JOHNSTOWN, COLORADO. THE SITE IS LOCATED WEST OF THE INTERSECTION OF CR 19 AND CR 46 AND SOUTHEAST OF HILLSBORO RESERVOIR. THE SURROUNDING LAND IS PRIMARY BEING USED FOR AGRICULTURAL, RESIDENTIAL, RANCHING, AND OIL/GAS PURPOSES, WITH THE FOLLOWING USES IN THE IMMEDIATE AREA OF THE SUBJECT PROPERTY: TO THE NORTH IS AGRICULTURAL AND COMMERCIAL; TO THE NORTHWEST IS RESIDENTIAL; TO THE NORTHEAST IS AGRICULTURE; TO THE EAST IS AGRICULTURE AND OIL AND GAS; TO THE SOUTH IS AGRICULTURE, AND TO THE WEST AND SOUTHWEST IS AGRICULTURE AND OIL AND GAS.
2. THIS DEVELOPMENT WILL BE CONSTRUCTED ON LEASED LAND.
3. FOLLOWING THE START OF CONSTRUCTION, DISTURBED AREAS WITHIN THE LIMITS OF CONSTRUCTION, SUCH AS ROAD CUTS, UTILITY TRENCHES, WASTEWATER DISPOSAL FIELDS, BUILDING SITES, AND OTHER AREAS WHERE VEGETATION HAS BEEN REMOVED, ALTERED, OR ELIMINATED, WILL BE REVEGETATED WITH NATIVE GRASS.
4. OTHER AREAS WHERE EXISTING VEGETATION HAS NOT REGROWN WILL BE RESEED.
5. NOXIOUS WEEDS WILL BE CONTROLLED ON THE SUBJECT PROPERTY.
6. FOR SECURITY AND PROTECTION OF THE PUBLIC AND WILDLIFE, THE PROPOSED SOLAR FACILITY WILL BE FENCED WITH A WILDLIFE FRIENDLY DECORATIVE FENCE. THE SELECTED FENCE WILL BLEND WITH THE NATURAL ENVIRONMENT AND WILL PREVENT WILDLIFE FROM ENTERING THE SITE CAUSING DAMAGE AND THEREFORE PROVIDING SECURITY OF THE IMPROVEMENTS.
7. FENCING SHALL BE MAINTAINED AS NEEDED TO PROVIDE THE INTENDED SCREENING AND SECURITY OF THE PROPOSED IMPROVEMENTS.
8. SCREENING DELINEATED WITH SECTION 23-4-1030C OF WELD COUNTY CODE.



LEGEND

- x — x — WILDLIFE FENCE
- XXXXXX AREA TO BE RESEED IF/WHEN DISTURBED



REV	DATE	DWN.	ENG.	CHK.	DESCRIPTION
0	02/22/22	WA	AFH	AFH	FOR PERMIT
1	05/16/22	MM	MM	AFH	FOR PERMIT
2	09/20/22	MM	MM	AFH	FOR PERMIT
3	10/31/22	AFH	AFH	AFH	FOR PERMIT

DOVE SOLAR LLC
40.318276, -104.889787, JOHNSTOWN CO 80543
SEEDING AND FENCING PLAN

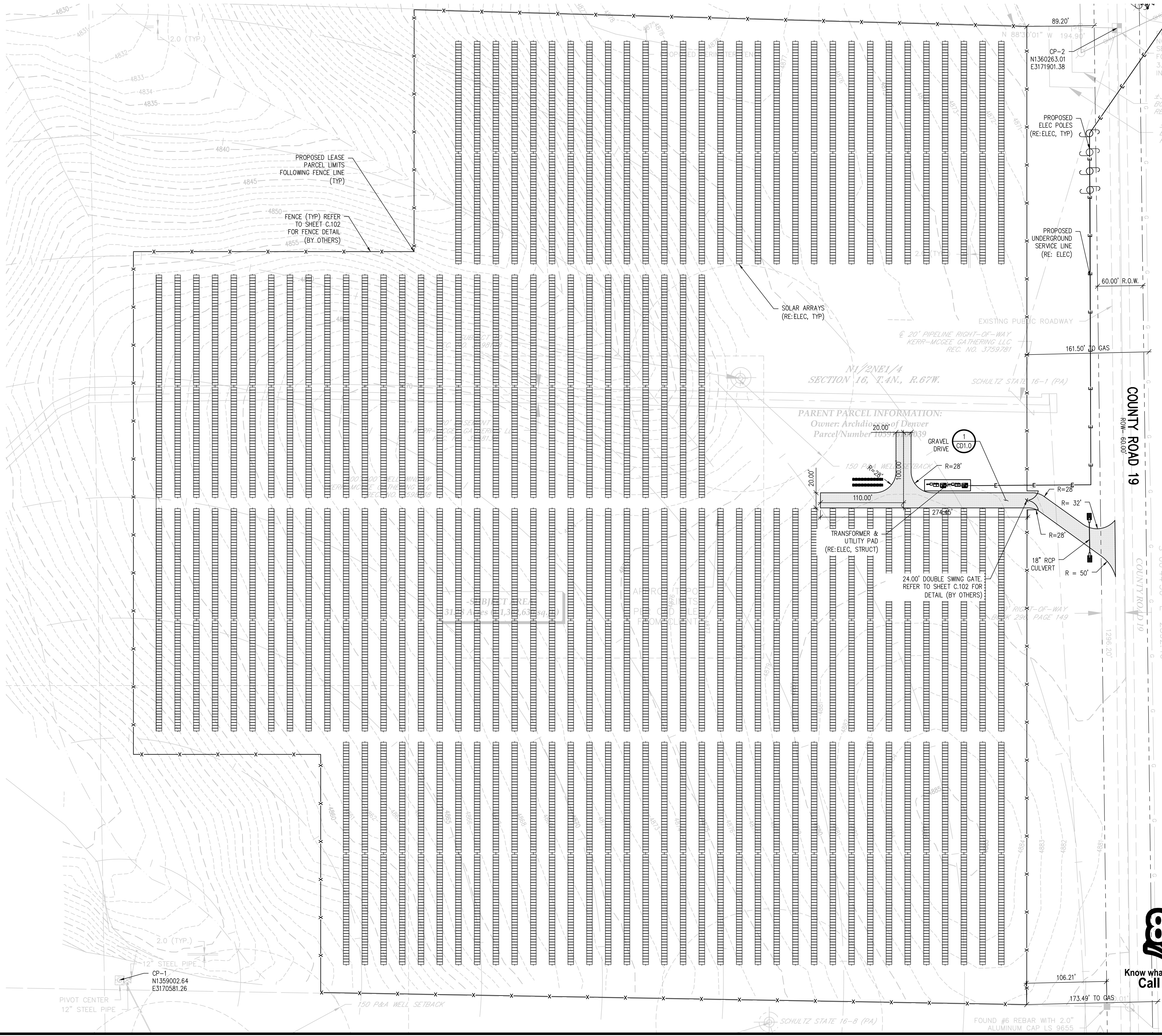


ANDREW HUMPHREY ENGINEERING
PO Box 18430 • Golden, CO 80402 • 303.590.9576
www.AndrewHumphreyEngineering.com

JOB NO.
2021.136

SCALE
AS SHOWN

C.101

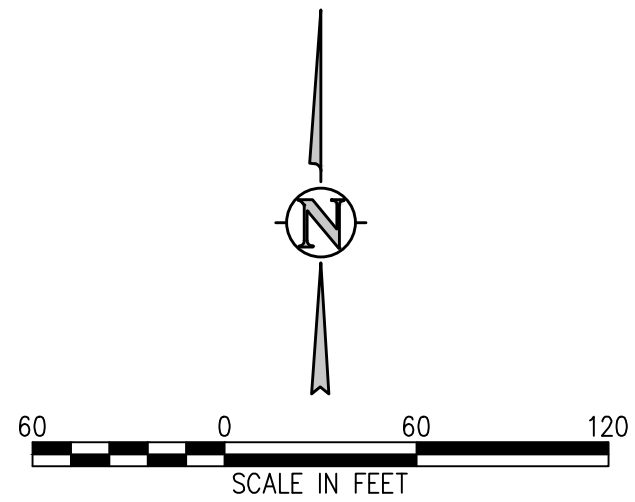


HORIZONTAL CONTROL NOTES:

1. ALL DIMENSIONS AND RADII ARE TO EDGE OF DRIVEWAY OR PROPOSED FENCE.
2. CONTRACTOR TO REPAIR/REPLACE ALL DAMAGE TO EXISTING FLATWORK OR SITE FEATURES NOT INTENDED FOR DEMOLITION.
3. REFER TO GRADING AND DRAINAGE PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.

HORIZONTAL CONTROL LEGEND

Gravel Drive



Know what's below.
Call before you dig.



JVA, Inc. 1319 Spruce Street
Boulder, CO 80302 303.444.1951
www.jva.com

Boulder • Fort Collins • Winter Park
Glenwood Springs • Denver

REV	DATE	DWN	ENG	CHK	DESCRIPTION
0	5/18/22	MGG	KMH	KJC	FIRST SUBMITTAL
1	9/22/22	KMH	KMH	KJC	VILLAGE COMMENTS
2	10/4/22	KMH	KMH	KJC	VILLAGE COMMENTS
3	11/21/22	KMH	KMH	KJC	FIRE DIST COMMENTS

DOVE SOLAR LLC

40.318252, -104.886743 WELD COUNTY, CO 80543

CIVIL SITE PLAN

SunShare

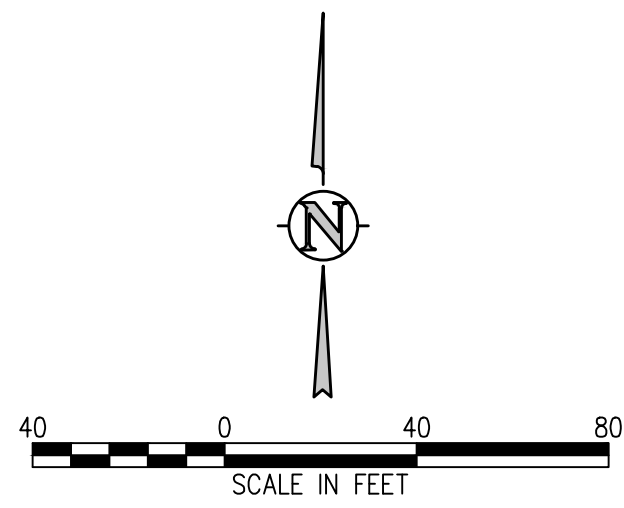
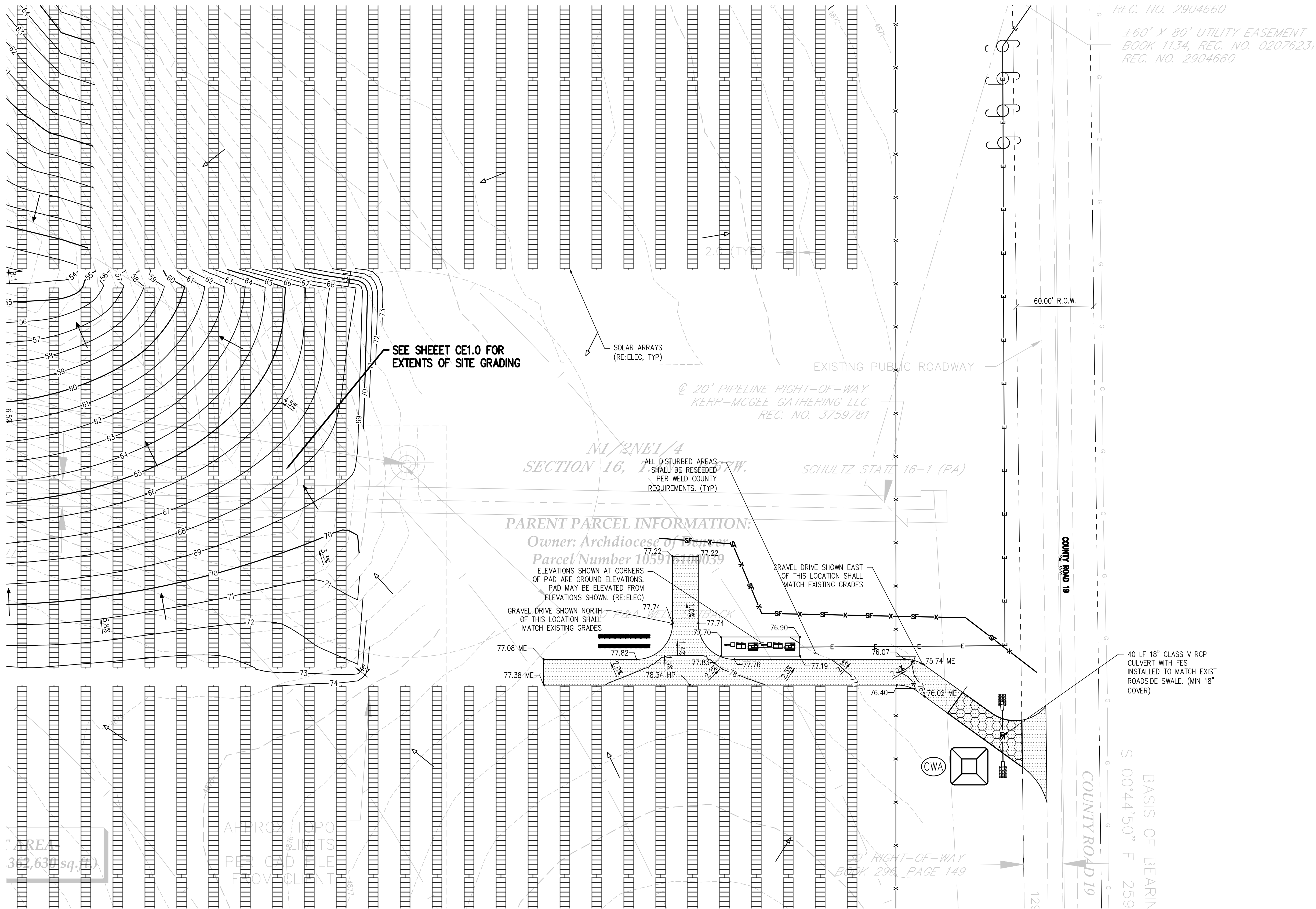
ANDREW HUMPHREY ENGINEERING
PO Box 18436 • Golden, CO 80602 • 303.590.5976
www.AndrewHumphreyEngineering.com

JOB NO. 2022.0XX

SCALE 1"= 80'

SRC083130

C1.0



GRADING AND DRAINAGE NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. REFER TO GENERAL NOTES FOR UTILITY LOCATION AND PROTECTION.
2. REFER TO HORIZONTAL CONTROL PLAN FOR FURTHER INFORMATION PERTAINING TO CURB & GUTTER, CHASES, AND DRAINAGE PANS.
3. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL DISTURBED AREAS TO THEIR ORIGINAL CONDITIONS.
4. ALL SPOT ELEVATIONS ARE TO FINISHED GRADE OR FLOWLINE UNLESS OTHERWISE SPECIFIED.
5. IF WALL IS SHOWN, TG DENOTES THE FINISHED GRADE ADJACENT TO THE HIGH SIDE OF THE WALL. BG DENOTES THE FINISHED GRADE ADJACENT TO THE LOW SIDE OF THE WALL. REFER TO ARCH PLANS/DETAILS FOR WALL ELEVATIONS BEYOND THE ADJACENT FINISHED GRADES (EXPOSED WALL, CAP/FOOTER, ETC.)

EROSION AND SEDIMENTATION NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING ALL CONTROLS DURING INITIAL, INTERIM, AND FINAL CONDITIONS.
2. ALL CONTROLS SHALL BE INSTALLED WITHIN THE PROPERTY LINES UNLESS OTHERWISE SPECIFIED. WHEN CONSTRUCTION ACTIVITIES DISTURB ADJACENT AND/OR RIGHT-OF-WAY PROPERTIES, COORDINATION WITH PROPERTY OWNERS IS REQUIRED PRIOR TO CONSTRUCTION.

EROSION CONTROL BMP SEQUENCING:

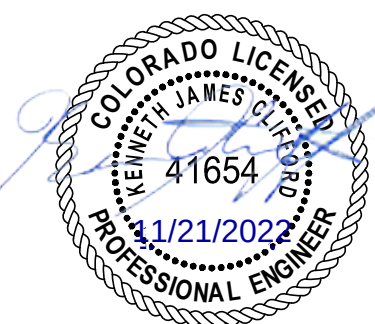
- INITIAL (PRIOR TO CONSTRUCTION)
- INSTALL SILT FENCE
 - INSTALL CWA
 - INSTALL VTC
- INTERIM (DURING CONSTRUCTION)
- MAINTAIN ALL BMP'S
- FINAL (AFTER CONSTRUCTION)
- REMOVE SILT FENCE
 - REMOVE CWA
 - REMOVE VTC
 - PERMANENT SEEDING FOR ALL DISTURBED AREAS

EROSION CONTROL LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- PROPOSED INDEX CONTOUR
- PROPOSED INTERMEDIATE CONTOUR
- VEHICLE TRACKING CONTROL
- SILT FENCE
- CONCRETE WASHOUT AREA
- DIRECTION OF FLOW
- PERMANENT SEEDING



Know what's below.
Call before you dig.



JVA, Inc.
1319 Spruce Street
Boulder, CO 80302
303.444.1951
www.jvajva.com
Boulder • Fort Collins • Winter Park
Glenwood Springs • Denver

REV	DATE	BY	CHK	DESCRIPTION
0	5/18/22	MGG	KJC	FIRST SUBMITTAL
1	9/22/22	KMH	KJC	VILLAGE COMMENTS
2	10/4/22	KMH	KJC	VILLAGE COMMENTS
3	11/21/22	KMH	KJC	FIRE DIST COMMENTS

DOVE SOLAR LLC

40.318252, -104.886743 WELD COUNTY, CO 80543

DETAILED GRADING PLAN

ANDREW HUMPHREY ENGINEERING

PO Box 18430 • Golden, CO 80402 • 303.590.5976
www.AndrewHumphreyEngineering.com

JOB NO. 2022.0XX	SCALE 1" = 40'
SRC083130	
CE1.1	



Use by Special Development Standards
for
Dove Solar Facility
Johnstown, Weld County, Colorado
June 2022

SunShare, LLC, a Colorado limited liability company, is pleased to present our application for a Zoning Permit for a Medium-Scale Solar Energy Facility (“SEF”) on property owned by the Archdiocese of Denver located on approximately 30 acres of Parcel ID No. 105916100039 in the northeast corner of Section 16, Township 4 N, Range 67 W in Weld County, CO.

The current zoning on the parcel is Agricultural (A), however the landowner does not possess any water rights for this parcel. SunShare has executed a lease agreement with the Archdiocese of Denver for a joint solar facility which will provide solar energy to the Archdiocese’s housing recipients.

This 5,000 kW-AC (5,976 kW-DC) project will use standard photovoltaic technologies that have been proven safe and effective through deployment across the United States in thousands of utility or commercial-scale solar developments. The solar panels are mounted to single-axis tracking arrays, which sit parallel to the ground and follow the path of the sun across the sky. The panels face east in the morning, lay flat at noon, and face west in the evening. The tracking arrays produce DC current, which is converted into AC current by inverters for synchronization and delivery of energy into the utility’s distribution grid at a utility transformer. The modules utilize a non-reflective glass which eliminates glare concerns and all electrical cables on the improved area will be buried, except for the direct current string wires that connect between solar collectors, direct current collection circuits between rows of solar arrays that are no more than four (4) feet above grade crossings, substations, switch yards, and circuits voltages greater than 34.5 kilovolts (where necessary.) There will be no permanent employees on site during operation, and maintenance visits are expected to occur quarterly on average.

The appearance of the solar arrays is uniform and symmetrical. Solar panels will not exceed ten (10) feet in height above the grade, at maximum tilt. The facility will be constructed in accordance with IBC 2021 and NEC 2020 and will be surrounded by an 8’ high game fence made of 4’ X 4” reinforced mesh.

This project is in discussions with the relevant oil and gas entities to build within the setbacks surrounding their infrastructure. All other setbacks are in accordance with the development standards and are identified on T.100 of the Sketch Plan. Fence details are on page C.102 of the Sketch Plan. All oil and gas facility and pipeline owners have been identified and contacted. All adjacent area landowners within 500





ft of the project area have been contacted with no known objections to date.

Access to the facility will be from the east off Weld County Road 19 via a 20' wide all-weather access driveway. The entrance to the site will include a 20' wide all-weather access driveway with an emergency hammerhead turnaround. SunShare will apply for any necessary access permit prior to construction.

This project site has areas where the slope exceeds the acceptable limit for solar panels. As a result, cut and fill work will take place once permitted to create a level space. This SEF will abide by all dust mitigation standards laid out by the County and/or Town.

Following the eventual decommissioning of this project, this land will be left more suitable for farming due to its improved topography. The project is not located within any FEMA designated Special Flood Hazard Areas. The Stormwater Management shall be addressed via the attached Surface Drainage Analysis. Conceptual design details can be found in the enclosed Sketch Plan, T.100.

This site currently houses a pivot irrigation system for agricultural purposes. The pivot will be easily adjusted to avoid the SEF and will still be fully capable of supplying water to any surrounding crops.

The operational life of an SEF is generally between 20-40 years. The SEF has an initial 20-year contract with Public Service Company of Colorado (Xcel) to sell power into the Xcel Electric grid, and the major equipment components have warranty options up to 30 years, with a useful life of 35-40 years. Upon decommissioning, SunShare will entirely remove all SEF components (fencing, steel racking, cabling, solar panels and associated interconnection equipment) and undertake measures to restore the land to its original state.

SunShare will obtain all required permits and approvals, including utility interconnection agreements, prior to commencing construction. The project's engineers and general contractor will be made up of local experienced individuals licensed in Colorado, who will ensure that all required codes and standards are followed throughout the design and construction. The project will comply with all applicable provisions by Johnstown. SunShare looks forward to working with Johnstown to successfully complete this proposed development and bring the benefits of community solar energy to the Town.





Use by Special Review - Medium Scale Solar Energy Facility Questionnaire for Dove Solar LLC, PID 105916100039

1. Explain the proposed use and business name.

SunShare LLC, d/b/a Dove Solar LLC proposes a Medium-Scale Solar Energy Facility (SEF) to be placed at Weld County PID 105916100039. The SEF will have a nameplate capacity of 5,000 kW AC and will cover approximately 30 acres on the east side of the total parcel.

This project has the explicit purpose of benefiting low-income and energy burdened families. 100% of the energy generated from this project will go to households that are qualified as low-income or nonprofit and religious organizations that provide essential services to these households. The recipients of the energy will receive savings on their monthly electricity bills. A secondary benefit of the project will be to provide job training for individuals looking to enter the solar and electrical trades.

2. Explain the need for the proposed use.

This project meets a multitude of needs in the community:

- Energy costs disproportionately impact low-income households and drain resources from low-income services organizations. This project is being developed to help solve this issue. In addition to being the landowner, the Archdiocese of Denver is helping to develop the project and will be directing a large portion of the electricity and savings to its large network of low-income service organizations that are operating in Weld County and who are eager to participate in the project. These organizations include schools that serve low-income students, homeless shelters, and food banks, among others.
- The Parcel Landowner (the Archdiocese of Denver) is interested in being annexed by the Town of Johnstown so long as this solar facility is also permitted with the annexation
- The Landowner (the Archdiocese of Denver) does not have water rights for the property and is therefore unable to secure any significant financial value from the land. The lease revenue paid the landowner will enable them to hold on to the land for the long term and have revenue that can be dedicated for the funding of services for low-income households.
- Households, Businesses, and Nonprofits in Colorado have not traditionally had a choice in who their utility provider is and where their energy comes from. Community solar solves this issue by providing ratepayers with an opportunity for choice, and an option to choose locally generated electricity.
- The Town of Johnstown, Weld County, and Colorado as a whole, are experiencing massive growth in electricity consumption. More electricity generation is needed to meet this need. Local solar projects like this help the state and county diversify its electricity sources and have local generation that result in a more stable and resilient grid. Weld County has long been the energy capital of Colorado and adding solar in the County will further diversify the County's energy mix and further its role as an energy leader in Colorado.



- Weld County's Comprehensive plan specifically calls out a goal of supporting *"responsible energy and mineral development."* This project meets the definition of responsible (see answer to question 21).
- The Town of Johnstown's comprehensive plan calls for energy projects, specially calling for *"flexible regulations that accommodate evolving economic trends and industries, and attract new business interests and investment (e.g., renewable energy...)"*.

3. Describe the current and previous use of the land.

The specific location of the project has historically been used for oil and natural gas extraction and agriculture. This land is not currently incorporated into the city limits of any city in Weld County.

Occidental Petroleum Corporation previously drilled on this land for oil and natural gas resources. They have since plugged and abandoned the 2 wells present which remain onsite, abandoned the pipeline which remains (underground) onsite, and fully removed the battery that was previously onsite. This site is no longer used for oil and gas activity.

The Landowner is currently leasing the land to a Tennent Farmer who traditionally farms barley crops. The Landowner does not have water rights for this parcel and is therefore unable to secure any significant value from its current agricultural use.

The western side of this parcel (where we do not intend to develop) houses additional agriculture, as well as an irrigation reservoir.

4. Describe the proximity of the proposed use to residences.

There are no residences within 500 feet of the proposed SEF. The area overall is rural with limited residential buildings and units. The closest homes are over eight tenths of a mile away and will experience no impacts from the SEF.

5. Describe the hours and days of operation (i.e., Monday thru Friday 8:00 a.m. to 5:00 p.m.).

Once construction is complete, the SEF will continuously operate 24/7, but will produce power only during daylight hours. The proposed SEF will use single-axis trackers, which will angle the solar modules accordingly as the sun shifts in the sky. These trackers allow for maximized energy production. While the array will be running all day, it will create no disturbances. Solar arrays are nearly silent and produce no smoke, smog, vapors, or dust. Construction will run during normal business hours for the duration of about 3 months.

6. Describe the number of employees including full-time, part-time and contractors. If shift work is proposed, detail number of employees, schedule and duration of shifts.

During construction: Construction during daytime hours will range from 7 to 14 during the early mobilization and site preparation stage with site construction workers peaking at 50 to 60 workers midway through the project and reducing back down to 7 and 14 workers during the final commissioning and testing stage.



Once operational: The SEF will have a maintenance crew visit once quarterly (or as needed if damage occurs due to weather), otherwise the SEF will be unmanned.

7. Describe the maximum number of users, patrons, members, buyers or other visitors that the site will accommodate at any one time.

N/A. This proposed use will be for energy production only and will not host patrons, etc.

8. List the types and maximum numbers of animals to be on the site at any one time (for dairies, livestock, confinement operations, kennels, etc.).

SunShare values the prominence of agriculture in Weld County, and we often make efforts to support the industry when constructing SEFs. One practice that we offer at our SEF is working with a local sheep rancher (with whom we have a pre-existing partnership), offering our site as grazing land for his sheep. This allows for the SEF site's vegetation to be maintained, while benefitting a local rancher (rather than employing mechanical mowers). We will have to complete a more thorough analysis of the current vegetation of the area to determine if there is enough growth for the sheep, and if it is all safe for the sheep.

Should we move forward with sheep grazing, there will be approximately 60 sheep present onsite. The site will be fully fenced in, containing the sheep, and the rancher will have access to the site whenever needed. The sheep will visit for a few weeks at a time, as frequently as needed onsite.

9. List the types and number of operating and processing equipment.

There will be a total of 11,076 540w monocrystalline modules, forty 125kVA inverters, and 142 rows of single-axis trackers. The system consists of string level DC to AC conversion inverters, two main equipment pads with AC Recombiners, switchgear and MV step up transformers that connect to Xcel's grid.

10. List the types, number and uses of the existing and proposed structures.

There are no existing structures onsite. There will be no structures associated with the proposed solar facility other than the solar array itself, which will be used for energy generation.

11. Describe the size of any stockpile, storage or waste areas.

During the construction phase, there will be a materials and equipment laydown yard located on the interior of the facility. This laydown area will be approximately 50' X 250' in size. When the construction is completed, there will be in place a metal connex container for storing spare modules and other spare parts.

12. If storage or warehousing is proposed, what type of items will be stored?

Response: A steel container (8' X 40') is being proposed to store equipment and spare parts for the solar facility. The container is proposed to be positioned in the interior of the solar



arrays, which should lessen its visual impact. The container will be painted a light tan to help blend the container with the natural environment.

13. Describe where and how storage and/or stockpile of wastes, chemicals, and/or petroleum will occur on this site.

Response: N/A - There will be no stockpiles of wastes, chemicals, or petroleum associated with this facility.

14. If there will be fuel storage on site, indicate the gallons and the secondary containment. State the number of tanks and gallons per tank.

Response: N/A – There will be no fuel storage associated with this facility.

15. Describe the method and time schedule of removal or disposal of debris, junk and other wastes associated with the proposed use.

During the construction phase, waste will be stored in refuse dumpsters, which will be emptied on a regular basis or as needed. Once the facility is operational, there will be no waste or refuse produced from the solar operation.

16. Include a timetable showing the periods of time required for the construction of the operation.

• Solar Facility Components First Deliver	Day 1
• Perimeter Fence Installation	Day 1 to Day 11
• Solar Panel Foundation Installation	Day 1 to Day 30
• Racking, Trenching, Wiring	Day 30 to Day 64
• Solar Panel Installation	Day 64 to Day 94
• Inspection & Set Meters	Day 94 to Day 99
• System Testing & Commissioning	Day 99 to Day 109

17. Describe the proposed and existing lot surface type and the square footage of each type (i.e., asphalt, gravel, landscaping, dirt, grass, buildings).

The west side of the parcel is currently a reservoir and farmed agriculture. This will not change as we are not impacting this area whatsoever.

The subject area (30 acres on the east side of the parcel) is currently agricultural land and will need to be re-seeded within the construction area. Following the completion of the construction for each phase, disturbed areas within the limits of construction, such as roadcuts, utility trenches, and other areas where vegetation has been removed, altered, or eliminated, will be reseeded with native seed mix. There will be approximately 9,339 square feet of gravel access including the hammerhead turnaround. In addition, there will be a gravel laydown area that is approximately 12,500 square feet, for a total of 21,839 square feet of gravel surface area. There will be two (2) concrete transformer pads, each measuring approximately 48 square feet, for a total of 96 square feet of concrete area.



18. How many parking spaces are proposed? How many handicap-accessible parking spaces are proposed?

There will be two (2) internal parking spaces for vehicles servicing the facility. There will be no ADA parking spaces, as this is not a facility for general public use.

19. Describe the existing and proposed fencing and screening for the site including all parking and outdoor storage areas.

To comply with the National Electric Code, there will be an 8' tall game fence installed around the entire perimeter of the site. The fence and gate will be constructed of 4" X 4" welded rod material. The two (2) internal parking spaces will be screened by the solar array. There will be no outdoor storage associated with this proposed solar facility.

20. Describe the existing and proposed landscaping for the site.

The entire affected area of the parcel has been used for agricultural purposes and has been covered by crops, by unplanted land, and oil and gas infrastructures such as wells and batteries. The remainder of the parcel has also been used for agriculture or houses a reservoir. The unaffected area's landscaping will not change. Once the construction phase is completed, the affected area within the solar facility fence will be seeded with a native seed mixture. As previously mentioned, there are no residences or commercial buildings nearby, so screening trees and shrubs will not be needed.

21. Describe reclamation procedures to be employed as stages of the operation are phased out or upon cessation of the Use by Special Review activity.

Once the site is no longer used for the proposed solar facility, the panels, racking, cabling, inverters, and all associated equipment will be removed from the site and recycled and/or disposed of in a responsible manner. The site will be returned to the condition it was in prior to the solar facility being constructed with the exception of certain site improvements desired by the landowner or system design such as re-grading and leveling. Solar leaves behind no ground contamination, so there will be no hazardous elements left behind on the land.

22. Describe the proposed fire protection measures.

The subject property is within the Front Range Fire Rescue Fire Protection District. Fire access within the facility will be via a 20'-wide gravel driveway, with a hammerhead turnaround at the end of the drive. Grasses within the solar facility will be mowed as needed, to help prevent the spread of range fires.

23. Explain how this proposal will be compatible with future development of the surrounding area or adopted master plans of affected municipalities.

The subject parcel falls within the Intergovernmental Agreement Boundary for the towns of Johnstown and Milliken, though it is just outside the town limits for either town. The



landowner is interested in allowing annexation of the parcel by the Town of Johnstown so long as it is inclusive of approval of this proposed SEF.

This proposal is compatible with the 2021 Comprehensive Plan (CP) for the Town of Johnstown. The Town's CP includes the following goal:

"W1.1. Collaborate interdepartmentally to create flexible regulations that accommodate evolving economic trends and industries, and attract new business interests and investment (e.g., renewable energy, business incubators, artists/makers spaces, synergistic businesses, etc.)." (Page 36). This goal shows the Town's great willingness and interest in supporting and fostering new energy sources, such as solar. Additionally, the CP sites that it received feedback from its residents requesting "Focus on sustainable industry[ies] and honor our agricultural heritage by being good stewards of the land" (Page 18). Our proposed SEF supports this request from residents as it will create no environmental contamination. Additionally, the land beneath the array will be planted with a native seed mix, supporting the native vegetation of Weld County.

Additionally, the proposed solar facility will be in place for approximately 20-40 years (depending on possible operation extensions). Following the decommissioning of the SEF, the land will be free and clear for any potential uses that the Town of Johnstown may want to pursue with the landowner, such as commercial or residential development. The freed land will allow for the Town to implement new and different goals, as well as expand its footprint.

24. Explain how this proposal impacts the protection of the health, safety and welfare of the inhabitants of the neighborhood and the County.

This development will positively impact the health, safety, and welfare of the inhabitants of the surrounding area, the Town, and County.

The SEF will create no airborne or ground contaminants, making it nonhazardous for residents near and far. The SEF is also nearly silent when operating, thus it will not contribute to any noise pollution. The SEF will produce local electricity without adding any pollution to the air.

Most importantly, however, this SEF will generate a source of revenue and energy savings that will help provide affordable housing, food, and resources to those who are struggling and are qualified as low-income. This project has the explicit purpose of benefiting low-income and energy burdened families. 100% of the energy generated from this project will go to households that are qualified as low-income or nonprofit and religious organizations that provide essential services to these households. The recipients of the energy will receive savings on their monthly electricity bills.

25. Explain how this proposal complies with Article V and Article XI of Chapter 23 if the proposal is located within any Overlay Zoning District (Airport, Geologic Hazard, or



Historic Townsites Overlay Districts) or a Special Flood Hazard Area identified by maps officially adopted by the County.

N/A – The subject property is not located within any Overlay Zoning District or Special Flood Hazard Area.

27. Detail known State or Federal permits required for your proposed use(s) and the status of each permit. Provide a copy of any application or permit.

SunShare will need to apply for the following permits to complete this SEF:

Local/County:

- Building permit
- Grading permit
- Access permit
- ROW Agreement or Road Maintenance Agreement, if deemed necessary

State:

- CDPHE SWPPP

Dust and Weed Mitigation Plan

For a Medium-Scale Solar Facility
Dove Solar, LLC

Case Number: USR Number – USR22-0003
Archdiocese of Denver (Parcel ID No. 105916100039)

Prepared for:
TOWN OF JOHNSTOWN
PO BOX 609
JOHNSTOWN CO 80534

Prepared by:
SunShare, LLC
Denver, Colorado



Date Prepared: November 2022

1.0 Overview

As a condition of approval for the Site-Specific Development Plan and Use by Special Review Permit, the Town of Johnstown required that SunShare prepare a *Dust and Weed Mitigation Plan* for the solar facility, that is to be reviewed and approved by the Johnstown Review Committee. The intent of this *Dust and Weed Mitigation Plan* is to provide a comprehensive plan for control of dust, noxious weeds, and any drainage issues that could cause erosion from the solar facility.

1.1 Dust Mitigation During the Construction Phase

Water tankers will be used to help control dust while the construction activities are occurring on the site. During the construction of the facility, SunShare will exercise BMPs to limit fugitive dust from being airborne and traveling beyond the property lines. Dust control efforts will be monitored by the site foreman on a regular basis to ensure fugitive dust is adequately controlled. Water spray will be applied, as needed, to unpaved areas during periods of dry weather. Care will be taken not to over-apply water and create mud. Vehicle tracking devices will be installed at truck exit drives. Vehicles operating on the site during the construction phase will limit their speed to 15 mph or less, to minimize dust emissions.

1.2 Noxious Weed Management

The Colorado Department of Agriculture (CDA) requires landowners to prevent the spread of State Listed Noxious Weeds. Construction activities on the site have the potential to introduce new noxious weed species to the site, or spread existing species on to or off of the site. This noxious weed management program was developed to prevent further spread of noxious weeds. SunShare will comply with CDA regulations through implementation of this plan. Periodic reviews and updates to this plan will be completed as necessary to keep it current with noxious weed control issues. This plan will be implemented throughout the life of the solar facility.

Appropriate management actions will be implemented whenever noxious weed species are observed growing within the project area. The goals of weed management are to:

- 1.) Identify and manage noxious weeds within and immediately adjacent to the project areas to be disturbed and after the area has been reclaimed;
- 2.) Conduct pre-treatment and post-treatment evaluations, and continue or modify treatment measures as necessary;
- 3.) Minimize the potential for transportation and importation of noxious weed species;

- 4.) Educate field personnel in order to encourage compliance with weed management program goals and assist with identification and control efforts.

To prevent or minimize the infestation and spread periodic inspections of the project area during the beginning, middle, and end of the growing season will evaluate presence or absence, degree of invasion, and the response of previous treatments. SunShare's operational staff will conduct regular site inspections and ensure implementation of this plan. Specific treatment methodologies and timetables will be developed based on species of concern, location and extent of the infestation(s), and other pertinent factors.

1.2 (a) Noxious Weed Prevention

Noxious weeds are spread through dispersal of seed and/or transport of plant propagules (i.e. spores, seeds, roots, etc.). The most effective way to control noxious weeds is to prevent their introduction into the site in the first place. A combination of methods and practices will be employed to prevent the introduction of weed species and their regeneration within the project area.

The following methods and practices may be employed, either singly or in combination, to prevent the introduction of weeds into the solar site:

- 1.) A thorough cleaning of equipment will be conducted before entering the project area to prevent the introduction of seed and plant propagules from other sites;
- 2.) Seed mixtures used for revegetation or temporary site stabilization will be free of noxious weeds;
- 3.) Hay, straw, and/or other materials used for mulch or other purposes will be certified weed free;
- 4.) A periodic inspection will be conducted to identify any new weed infestations that may have occurred. Any new infestations will be scheduled for management before they become well established and/or spread;
- 5.) Communication and coordination with adjacent land holders whose property is infested with noxious weeds that may threaten the site should occur. Establishing partnerships for weed management within the local area is essential for successful long-term weed management;
- 6.) Noxious and pest weed infestations that threaten natural and reclaimed areas will be treated with accepted Integrated Weed Management (IWM) methods. These methods are further discussed below.

1.2 (b) Integrated Weed Management (IWM)

An Integrated Weed Management approach will be implemented for treatment of noxious weeds within the project area. An IWM approach enables selection of one or more weed management methods based on site specific environmental conditions and control needs. The following weed management methods will be considered for the project area:

- 1.) Cultural – Planting native or desirable plant species for site colonization and promoting healthy vegetation communities in reclaimed areas. Prevent unnecessary disturbance through precise planning of construction projects and other activities. Prompt revegetation of disturbed areas.
- 2.) Mechanical – Mowing, pulling, disking, and plowing may be used on weedy species for which these treatments are effective.
- 3.) Biological – Introduction of insects or other biologic agents which are known to inhibit or prevent reproduction of noxious weed species. If biological agents are employed, control methods will be coordinated with the Colorado Department of Agricultural Insectary in Palisade, Colorado.
- 4.) Chemical – Application of appropriate herbicides by a licensed applicator. All herbicides will be applied in accordance with the manufacturer's label and in accordance with Colorado laws.

In some cases, only one control method may be warranted, while in other cases a combination of control methods may be appropriate. Control methods selected will be dependent upon species of concern, and the location and extent of the infestation.

The use of IWM methods will protect pollinators, reduce hazards to wildlife, reduce the possibility of herbicide resistance, and minimize persistence and mobility of herbicides in the soil. Weed control methods and practices will be applied in a manner that conforms to applicable federal, state, and local laws.

1.2 (b) 1 – Cultural Control

Germination and establishment of noxious weeds can be reduced by following accepted revegetation and vegetation management techniques that favor the growth of desirable plants. These include prompt seeding and revegetation of disturbed areas with appropriate seed mixes, maintaining optimum fertility and moisture levels, planting at optimum density of pure live seed, minimizing use of fertilizers, and selecting suitable species for revegetation. Minimizing areas of disturbance and exposed soil prevents opportunities for aggressive species to establish.

A revegetation plan has been developed for the site that utilizes native species that are well-adapted to the site. Seeding native species in conjunction with other management practices will provide some level of competition with noxious weeds, and minimize the opportunity for new infestations to become established.

1.2 (b) 2 – Mechanical Control

Mechanical Control of noxious weeds can be an effective tool to physically disrupt noxious weed growth and seed development. A combination of mechanical methods may be used including tilling or disking, mowing, hand-held weed trimmers, mulching, hand-pulling, hoeing, or livestock grazing. Mechanical weed control practices must be applied with correct timing to maximize their effectiveness in preventing vegetation development or seed production.

Annual weedy species may be readily controlled with mowing or physical removal. Perennial species such as Dalmatian toadflax have extensive root systems. For such weed species, mowing may only control seed production without seriously affecting the plant's survival. Mowing after seed production has occurred may spread the plants. Disking or tilling areas containing perennial noxious species may increase the area of infestation due to root sprouting. In most cases, mechanical control methods used alone are not effective against noxious weed species.

1.2 (b) 3 – Biological Control

Biological control of noxious weeds can be an effective tool to physically disrupt plant growth and seed development. A combination of biological methods may be used including introduction of insect weed predators and species-specific plant diseases. Biological weed control methods and practices will be applied with appropriate timing to maximize their effectiveness in preventing seed production. It must be noted that the use of biological controls normally does not eradicate an infestation of weeds; rather they are capable of reducing weed species vigor and reproduction. The Colorado Department of Agriculture's Biological Pest Control Program has on-going biological control programs for several noxious weed species. Note, the use of insect bio-controls typically require large populations of the target weed to sustain the population of bio-control agents. Biological controls should not be expected to eliminate the entire infestation of a noxious weed, but instead to bring the infestation down to a more manageable level.

1.2 (b) 4 – Chemical Control

Chemical control of noxious and pest weeds can be an effective tool to disrupt plant growth and seed development. Herbicides can kill targeted species, prevent development and/or germination of noxious weed seed, can be used with minimal disturbance to soils, and in some cases, can be selective to specific species or groups of plants. Herbicides must be applied at the

appropriate time to maximize their effectiveness in preventing seed production, for disrupting plant establishment and growth, or achieving kill of noxious species. To avoid development of resistance to a particular herbicide through repeated use over prolonged periods of time, herbicides with varying modes of action to be used. Also, herbicides will be applied according to manufacturer's label recommendations (i.e. application rate, method, and timing) to prevent development of plant resistance. Herbicide selection will be based on weed emergence, timing of application, past applications, and ground and weather conditions during the applications.

Successful IWM begins with an understanding of the target plant species and the environment within which it grows. Next, the physiologic effects of an herbicide on plant growth and development must be understood. Understanding a pesticide's chemical nature is also important in minimizing impacts to non-target species, the applicator, endangered species, and pollinators, as well as surface water runoff hazards and leaching into groundwater. Every herbicide label contains information regarding environmental hazards. This information will be evaluated for each herbicide considered for use at the site and herbicides will be selected which pose minimal to no environmental hazards.

All pesticides will be handled with care, and applied by qualified personnel. Properly identifying the weed problem and the most effective chemical control method for use during the plant growth cycle is critical to effective weed control. Equipment will be properly calibrated before herbicides are applied and appropriate Personal Protective Equipment (PPE) will be used. Empty containers will be disposed of promptly, safely and according with product labeling.

Herbicides vary in the amount of time after an application before it is safe to re-enter the treated area without protective clothing and equipment. The site re-entry time is affected by the rate of application, size of the area treated and the amount of time to be spent in the field. For the safety of employees and contractors, the Restricted Entry Interval (REI) listed on the herbicide's label will be followed. Appropriate herbicide application records will be maintained as specified by the CDA.

1.2 (c) – Monitoring and Follow-Up

Even with effective weed management strategies, it often takes several seasons to eradicate or bring weed populations to an acceptable level. With well-established infestations, it is likely that a seed bank has developed in the soil capable of producing new plants for many years. An infestation of weeds can easily re-invade treated areas in one growing season if control and treatment activities are prematurely curtailed. Weed management efforts should be carried out over an adequate number of growing seasons to realize effective weed management within the target area.

As with all weed management, this multi-season effort is best served by effective documentation of control efforts and continued vigilance in successive seasons of management.

Information can be used to modify treatment priorities and weed management strategies over time. Vigilance is required against new infestations that may be moving into the site. These new sources of infestation may be worked into prevention and management plans as necessary.

This weed management plan will be modified over time as site conditions change. Weed management strategies and priorities can be modified as weed infestations change in response to continued control efforts.

1.3 – Drainage and Erosion Control

Installation of the solar facility will not alter existing drainage patterns or flow rates on the site and runoff water quality will not be impacted by the solar facility components. Installation of water quality or detention facilities would require clearing, grubbing, grading and reseeding of a portion of the site and would likely increase the potential for erosion, sediment transport and concentrated flow. Accordingly, water quality and detention are not recommended for this project.

Appropriate temporary (construction-related) erosion and sedimentation control Best Management Practices (BMPs), will be applied during the construction phase of the project. The BMPs will be inspected on a regular basis to ensure proper functionality.

Prepared by: Richard L. Miller, AICP
Development Manager

Decommissioning/Reclamation Plan

For a USR Permit
Dove Solar LLC

Case Number: USR22-0003
Archdiocese of Denver (Parcel ID No. 105916100039)

Prepared for:
TOWN OF JOHNSTOWN
PO BOX 609
JOHNSTOWN CO 80534

Prepared by:
SunShare, LLC
Denver, Colorado



Date Prepared: November 2022

1.0 Overview

As a condition of approval for the Site-Specific Development Plan and Use by Special Review Permit, Johnstown required that SunShare prepare a *Decommissioning/Reclamation Plan* for the solar facility, that is to be reviewed and approved by the Johnstown Review Committee. The intent of this *Decommissioning/Reclamation Plan* is to provide a comprehensive plan for removal of the solar facility after its useful life and/or the termination of power generation operations; and to return the subject property to conditions that existed prior to the solar facility's construction.

The solar power generation facility has an estimated useful life of 30 years or more, with an opportunity for a life of 50 years or more with equipment replacement and repowering. At the end of the useful life of the facility, SunShare will cease power generation, decommission the facility, and remove the components of the facility from the subject property. The site will be reclaimed and returned to the agricultural use that existed prior to the facility being constructed.

This *Decommissioning/Reclamation Plan* is subject to refinement should future best practices or alternate methods be developed by the solar industry, during the life of this facility. SunShare will follow solar industry standards and best management practices (BMPs) that exist at the time of decommissioning and reclamation of the site.

1.1 Procedures for Decommissioning the Solar Facility After Useful Life & Termination of Power Generation

The solar facility consists of numerous recyclable materials, including glass, semiconductor material, steel, aluminum, copper, and plastics. When the facility reaches the end of its operational life, the component parts can be dismantled, and for the most part, salvaged or recycled at properly licensed facilities.

Some site features, such as internal roads, driveways, drainage features/improvements, and electrical interconnections may remain on the site, depending upon the anticipated future use of the property. All such improvements, that are scheduled to remain after the decommissioning of the site, will be approved by the JRC.

The following steps will be followed in the decommissioning of the solar facility:

- Approximately one year prior to the planned decommissioning of the facility, SunShare will schedule a pre-closure meeting with the JRC to discuss the process for the site decommissioning and restoration. The final decommissioning details will be developed through consultation with the JRC and other departments and agencies that have jurisdiction over activities in the decommissioning process. Any required permits will be obtained prior to implementation of the *Decommissioning/Reclamation Plan*.
- Appropriate temporary (construction-related) erosion and sedimentation control BMPs will be applied during the decommissioning phase of the project. The BMPs will be inspected on a regular basis to ensure proper functionality.
- Effectively, the decommissioning of the solar facility proceeds in reverse order of the installation:
 1. A site-specific health and safety plan shall be developed, prior to beginning decommissioning activities, which incorporates the specific sequence and procedures to be followed.
 2. Coordination with local departments and agencies to develop route plans and obtain necessary permits for the transportation of materials and equipment to and from the site.
 3. The solar facility shall be disconnected from the utility grid. This process will be coordinated with Xcel Energy.
 4. PV modules shall be disconnected, collected and transported to a properly licensed recycling facility.
 5. Above ground and underground electrical interconnection and distribution cabling shall be removed and salvaged or recycled off-site at an approved recycling facility.
 6. The aluminum racking that supports the PV modules shall be removed and salvaged or recycled off-site at an approved recycling facility.

7. PV module support steel and support posts shall be removed and salvaged or recycled off-site at an approved recycling facility.
8. Electrical and electronic devices, including transformers, semiconductors materials, inverters, and batteries, shall be removed and salvaged or recycled off-site at an approved recycling facility.
9. Concrete foundations shall be removed and will be recycled off-site at an approved concrete recycling facility.
10. Fencing shall be removed and will be recycled off-site at an approved recycling facility.
11. The site will be restored to its original condition, including any necessary sculpting of soils to match existing natural contours and the re-seeding of native grasses. Any soil that had been re-located for construction purposes will be redistributed on the site or used for landscaping purposes. Soils will be compacted for those areas where foundations or piers have been removed.

1.2 Equipment to be Used for the Decommissioning of the Solar Facility

The decommissioning of the solar facility will be undertaken using traditional heavy construction equipment, including front-end loaders, bull dozers, cranes, excavators (track-mounted and rubber-tired), water tankers, trucks, and pick-ups. Semi-trucks will be used to transport materials to off-site salvage or recycle centers.

1.3 Dust Mitigation During the Decommissioning Phase

Water tankers will be used to help control dust while the decommissioning activities are occurring on the site. During the decommissioning of the facility, SunShare will exercise BMPs to limit fugitive dust from being airborne and traveling beyond the property lines. Dust control efforts will be monitored by the site foreman on a regular basis to ensure fugitive dust is adequately controlled. Water spray will be applied, as needed, to unpaved areas during periods of dry weather. Care will be taken not to over-apply water and create mud. Vehicle tracking devices will be installed at truck exit drives, per the requirements of the Town. Vehicles

operating on the site during the decommissioning phase will limit their speed to 15 mph or less, to minimize dust emissions.

1.4 Decommissioning/Reclamation Cost Estimates

Decommissioning/reclamation cost estimates, which shall be updated every five (5) years from the establishment and submittal of the Security, shall include all costs associated with the dismantlement, recycling, and safe disposal of facility components and site reclamation activities, including the following elements:

Decommissioning:

Fencing	\$3000.00
Structures	\$60,000.00
Modules	\$30,000.00
Electrical	\$20,000.00
Site Restoration	\$25,000.00
Total	\$138,000.00

Clarifications – Inclusions and Exclusions

1. Based on project drawings provided.
2. Includes the specified appropriate project management and mobilization to adhere to the project schedule.
3. Breakouts provided for accounting purposes only.
4. All work is to be done in a single phase.
5. Includes recycling of steel, aluminum, modules and copper.
6. Includes restoration of the site back to like conditions before the solar array was installed.

Scope specifically includes:

1. Electrical permit fees included.
2. Removal and disposal of game fence.
3. Removal of racking support structure and foundations.
4. Module removal, package and recycle.
5. Removal of electrical distribution equipment, transformers and electrical equipment pads.
6. Removal of electrical DC string wiring and AC underground.
7. Site restoration.
8. Safety and protection as required.

9. Waste disposal fees and containers.
10. Temporary Restrooms and site facilities for workers.

Specifically excludes:

1. Payment and Performance Bond.
2. All utility specific tie in work to disconnect the site outside of property.
3. Engineering, fees, errors, omissions additional design intent not clearly delivered or identified on the referenced drawings.
4. Import or export of soils.



Town of Johnstown

PLANNING & ZONING COMMISSION AGENDA MEMORANDUM

DESCRIPTION: Dove Solar LLC – Solar Array Project Use by Special Review
PROJECT NO: USR22-0002
LOCATION: South of WCR 46.5 and the Little Thompson Reservoir, west of WCR 19
APPLICANT: SunSolar (Applicant) / Archbishop of Denver (Owner)
STAFF: Kim Meyer, Planning & Development Director
HEARING DATE: February 15, 2023

ATTACHMENTS

- 1- Vicinity Map
- 2- USR Site Plan
- 3- USR Narrative
- 4- Decommissioning & Reclamation Plan
- 5- Dust and Weed Mitigation Plan

PROJECT SUMMARY

The Applicant requests the approval of a Use by Special Review (Attachment 2) for approximately 30 acres of land that is also under concurrent consideration for annexation, zoning and an ODP with the Town of Johnstown - as the Archdiocese Annexation Nos. 1 and 2. The Dove Solar Outline Development Plan would allow for the use of a solar facility on the eastern half of that subject property.

PROPERTY BACKGROUND

The property is located south of Weld County Rd (WCR) 46.5 and west of WCR 19. The subject property is presently zoned A - Agricultural in unincorporated Weld County and is being used as farm land. It is bordered to the north by the Hillsborough/Little Thompson Reservoir, to the west by incorporated areas of Johnstown, with the rest being adjacent to unincorporated Weld County and adjacent to the Milliken Growth Management Boundary. (Attachment 1)

SURROUNDING ZONING & LAND USE

North: A – Agricultural (Weld County), Hillsborough/Little Thompson Reservoir
South: A – Agricultural (Weld County)
East: A – Agricultural (Weld County)
West: PUD (Johnstown) with Oil & Gas Well Pads

LAND USE HISTORY

Historically, this property has been used for farming and continues as that use today.

The Community That Cares

johnstown.colorado.gov

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO 80534 | F: 970.587.0141

OIL & GAS

COGCC (Oil & Gas) online maps show existing abandoned and plugged and abandoned wells on-site. These sites are also shown on the USR site plans.

IRRIGATION DITCHES

The Hillsborough/Little Thompson Reservoir, owned and managed by the Extension (Hillsborough) Ditch Company, is partially located on the northwest corner of this property. These are some emergent wetlands along the banks of that water body, identified by the Colorado Wetland Inventory as part of the Colorado Natural Heritage Program.

(<https://csurams.maps.arcgis.com/apps/webappviewer/index.html?id=a8e43760cb934a5084e89e46922580cc>)

The reservoir and surrounding areas of interest are located in the H-A zoning district area and will be undisturbed by the proposed solar use on the PUD-MU zoned area.

FLOODPLAIN

The subject property is not located in any floodplain area.

PUBLIC NOTICE & AGENCY REFERRALS

Notice for the Planning & Zoning Commission hearing was published in the local paper of widest circulation, the Johnstown Breeze, on Thursday, January 26, 2023. This notice provided the date, time, and location of the Planning and Zoning Commission hearing, as well as a description of the project. Notices were mailed to all property owners within 500 feet of the property in question. This notice included a map of the project area.

This project was referred to the Johnstown Review Committee as well as Weld County, Milliken, the Weld RE-5J School District, Little Thompson Water, Xcel, and TDS.

NEIGHBORHOOD MEETING

No neighborhood meeting was held for this USR project.

PROJECT DESCRIPTION & ANALYSIS

The proposed USR applies to the 5,000 kW-AC solar array project use that Dove Solar is anticipating installing on this property. This array will consist of approximately 142 rows of over 11,000 modules. This non-reflective array equipment will be installed in the typical rows of arrays, with a maximum height of 10 feet at full tilt. The fencing will be an 8-foot tall game fence of 4x4 inch reinforced mesh. Native seed mix will be cultivated and maintained onsite post construction, with

The total project site, inside the fence, is a little over 30 acres in size, with overall dimensions of approximately 1183 feet wide (east-to-west) and just under 1300 feet north-to-south. This comprises the full frontage of the property along CR 19. The front fencing along the roadway is anticipated to be setback approximately 45-70 feet from the ultimate right-of-way, with another 30 feet to the nearest equipment.

The use would utilize the existing access from CR 19 and creates the needed hammerhead turnaround for the Fire District on-site. No utilities or additional accesses are needed to serve this use. Electrical cables serving the site will be buried underground.

The Use by Special Review would permit this use to continue for up to 40 years from the time the facility is complete and in operation. Any proposed change to the use or additional development plans would initiate a new review by the Town and our reviewing agencies at that time. At the time of decommissioning, the user is required to remove all equipment and improvements and return the site to its current undeveloped state.

The Site Plan is also accompanied by grading and stormwater plans that have been reviewed and approved by the Town Engineer, as well as a Project Narrative, Decommissioning & Reclamation Plan, and Dust and Weed Mitigation Plan (Attachments 3, 4 & 5).

This area of the Johnstown Growth Management Area is indicated for Low or Very Low Intensity and Density types of development. The use of the area for low intensity energy resource development is in alignment with this designation and intention. Staff has no outstanding concerns related to this proposed Dove Solar LLC – Solar Array Project Use by Special Review.

RECOMMENDED PLANNING AND ZONING COMMISSION FINDINGS AND MOTIONS

Staff recommends that the Planning and Zoning Commission send a recommendation for Approval to Town Council for the Dove Solar LLC – Solar Array Project Use by Special Review based upon the following findings, per JMC Sec 17-200:

1. The Special Use is in alignment with the Future Land Use Plan within the Area Johnstown Comprehensive Plan.
2. The Special Use will be compatible with existing surrounding and probably future land uses in the area.
3. The Special Use will not cause any unreasonable demand on Town services.
4. The Special Use will not unreasonable or adversely affect traffic flow in the surrounding area.
5. The Special Use has been designed to meet all Town codes, regulations and requirements for that type of development.
6. The Special Use provides a meaningful interim use, to up 40 years, to the subject property; which may then develop in accordance with future land use compatibility, and town plans and codes in place at that time.

Recommended Motion: Motion to Approve

Based on the application materials received, analysis and presentations at this hearing, and findings noted in this staff memorandum, I move that the Planning & Zoning Commission recommend Approval to the Town Council for the Dove Solar LLC – Solar Array Project Use by Special Review.

Motion to Recommend Denial

I move that the Commission recommend to the Town Council Denial of the Dove Solar LLC – Solar Array Project Use by Special Review.



Town of Johnstown

DOVE SOLAR ARRAY PROJECT

Use by Special Review (USR)

TOWN COUNCIL

March 20, 2023

VICINITY MAP

Item #19.

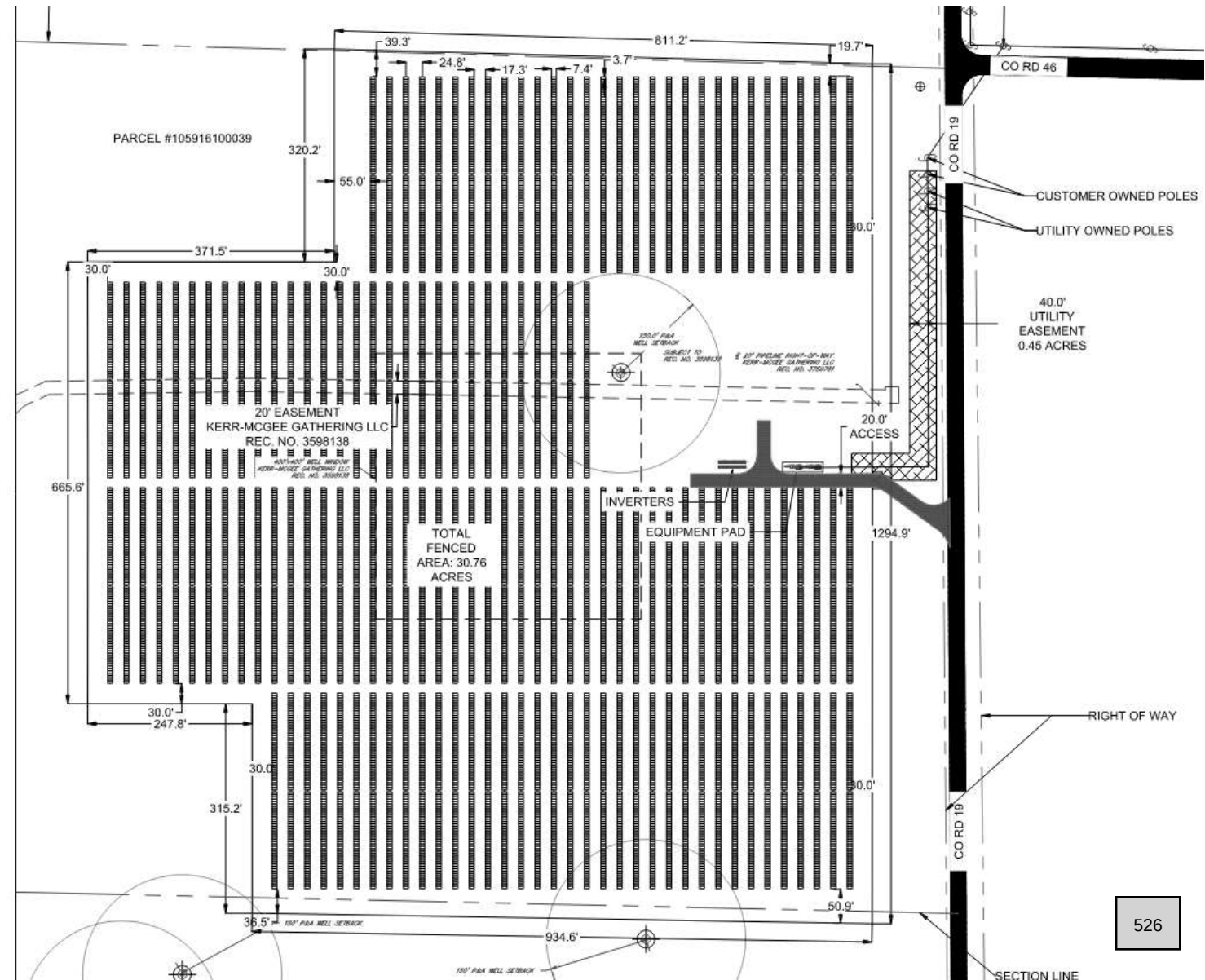
- West of CR 19
- ½ mile south of CR 46 ½
- Within the proposed Dove Solar ODP
- Approx. 41 Acre parcel to contain the proposed 30 Acre Solar Facility
- Ditch & Reservoir not affected by USR



SITE PLAN

Item #19.

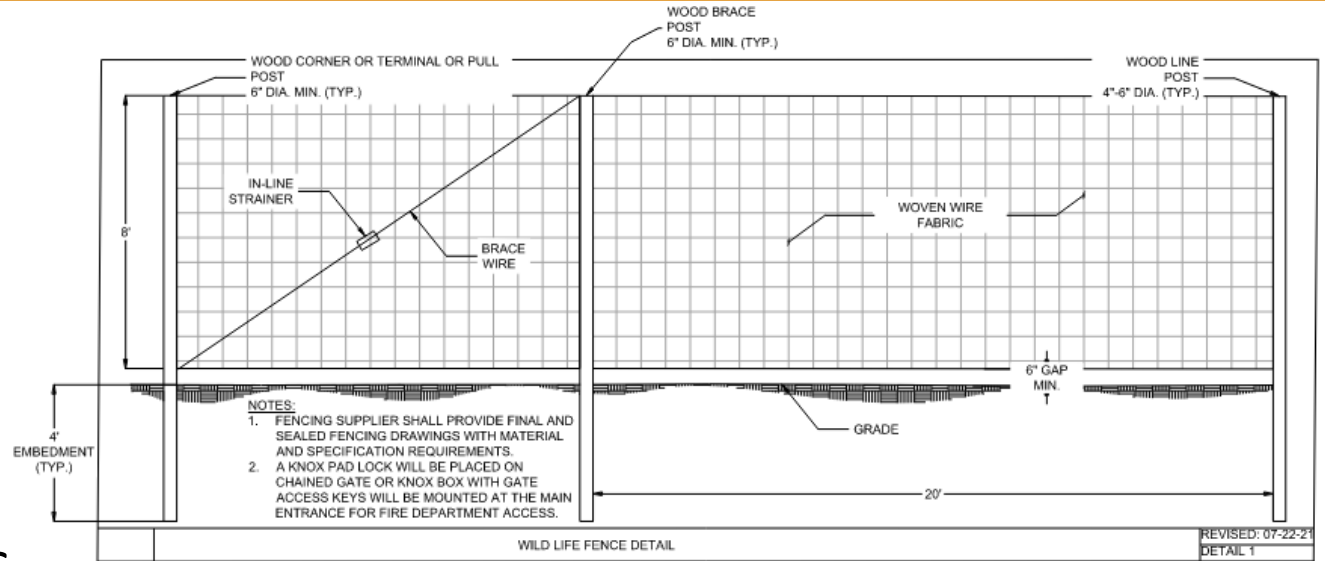
- 5 MW-AC Solar Facility
- 142 rows/11,000 modules
- 10' Max height of equipment
- 40-year term on USR permit
- 20 Year contract with Xcel, may be renewed.
- Access via private drive w/ Hammerhead per Fire Code
- Oil and gas facilities integrated
- 20' wide gravel access road w/ gate & vehicle tracking control



LANDSCAPE & SCREENING PLAN

Item #19.

- Existing Ag along nearby County Roads
- 1400' to nearest residence
- 8' Wildlife Fencing (4" mesh)
- Native seed under panels
- Dust/weed & Decomm/Reclam Plans
- Electric cabling to be buried
- Front fence to be setback 45-70' from ultimate ROW, Additional 30' to solar equipment.

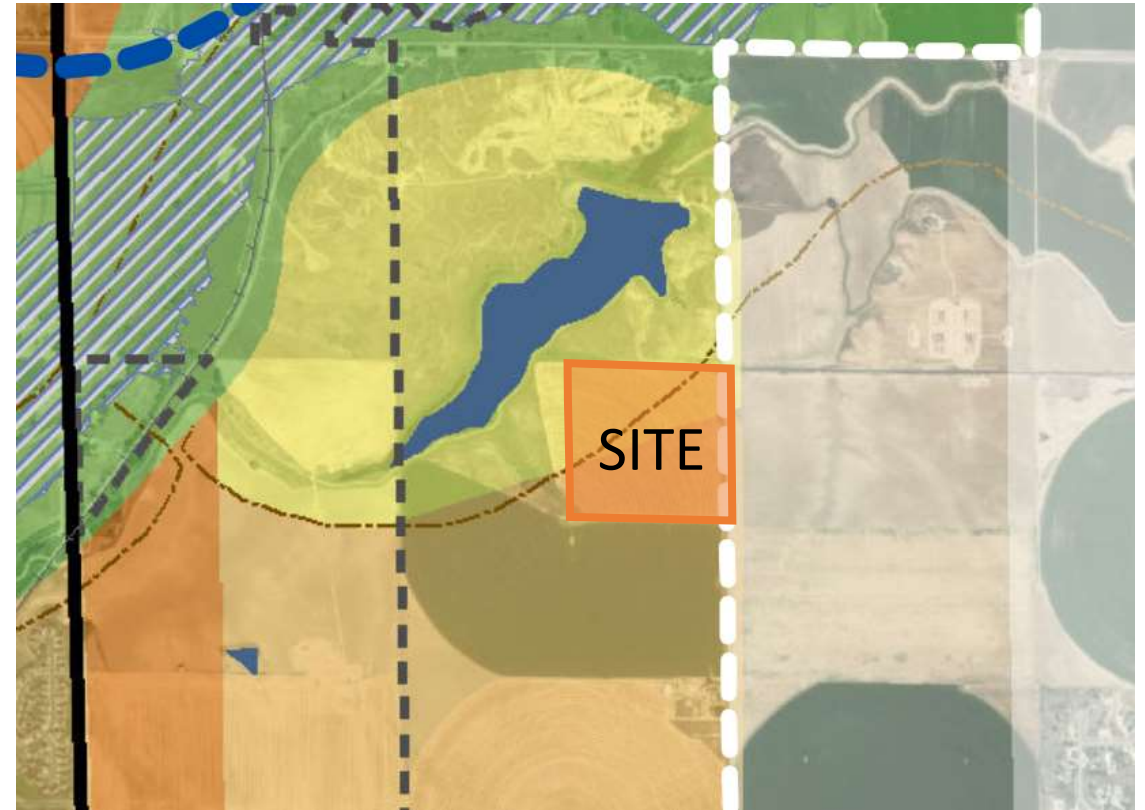


Town of Johnstown
johnstown.colorado.gov | 970-587-4664

STAFF ANALYSIS

Item #19.

- Johnstown Review Committee (JRC) included Town staff, Town traffic, civil, and water engineers, Weld County, Milliken, LTWD, Xcel, TDS, Weld School Dist RE-5J
- USR is in conformance with Town codes, standards and regulations.
- PZC Recommend Approval



Low intensity uses (ag & solar) are in alignment with the Johnstown Area Comprehensive Plan



Town of Johnstown
johnstown.colorado.gov | 970-587-4664



Town of Johnstown

MEMORANDUM

TO: Honorable Mayor Lebsack and Town Councilmembers

FROM: Matt LeCerf, Town Manager

DATE: March 9, 2023

SUBJECT: Dry Up Covenant Policy Clarification

This written policy is to clarify the position of the Town of Johnstown regarding dry up covenants and to what extent the Town supports and approves a dry up covenant for a specific share of Home Supply Water. The dry-up covenant provides for a share to be converted from a 6.4-acre foot (unadjudicated yield) to an 8-acre foot (adjudicated yield) through the dry up covenant, pursuant to Section 13-111 of the Town of Johnstown's Water Rights Dedication Ordinance.

To provide clarity, any dry up covenant that may be considered must currently be in a Town of Johnstown Water court change case to be eligible for consideration for the dry up covenant. Prior to authorization by the Town to acknowledge a dry-up covenant, a detailed analysis of the water, the farm, and the return flow obligations should be conducted to determine if the share is a reasonably qualified share candidate to be eligible for the dry up.

The final and exclusive decision regarding eligibility and applicability of a share to be accepted for dry-up is at the discretion of the Town. Any share approved for dry-up must be dedicated to the Town within thirty (30) days or the dry-up covenant authorized may be rescinded.

Reviewed and Approved for Presentation,

The Community That Cares

johnstown.colorado.gov

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO 80534 | F: 970.587.0141

Town Manager



Town of Johnstown

March 10, 2023

The Honorable Senator Michael Bennet
261 Russell Senate Building
Washington, DC 20510

The Honorable Senator John Hickenlooper
261 Russell Senate Building
Washington, DC 20510

Re: Weld County Congressional Direct Spending (CDS) request for High Plains Boulevard

Dear Senators Bennet and Hickenlooper,

The Town of Johnstown requests your support for the construction of High Plains Boulevard, which is a critical parallel arterial corridor to I-25. Weld County's Congressional Direct Spending (CDS) request for partnership on this very important regional project will support many of our northern Colorado communities including the Town of Mead, Town of Berthoud, Town of Johnstown and Weld and Larimer Counties.

The communities partnered together in 2020 in a robust stakeholder process to develop a collaborative design and access control plan for this parallel arterial corridor from CO 66 to US 34. CDS funding would help leverage the construction of this strategic corridor to ensure there is an effective detour route in place prior to I-25, segment 5 construction activities.

The Town supports this very important construction request and hopes you will partner with northern Colorado to construct this regional parallel arterial corridor. Thank you in advance for your support.

Sincerely,



Matt LeCerf
Town Manager

Cc: Mayor and Town Councilmembers

The Community That Cares

johnstown.colorado.gov

P: 970.587.4664 | 450 S. Parish Ave, Johnstown CO 80534 | F: 970.587.0141

PRESIDENT

Victoria Woodards
MAYOR
Tacoma, Washington

FIRST VICE PRESIDENT

David Sander, Ph.D.
COUNCILMEMBER
Rancho Cordova, California

SECOND VICE PRESIDENT

Sharon Weston Broome
MAYOR-PRESIDENT
Baton Rouge, Louisiana

IMMEDIATE PAST PRESIDENT

Vince Williams
MAYOR
Union City, Georgia

**CHIEF EXECUTIVE OFFICER/
EXECUTIVE DIRECTOR**

Clarence E. Anthony

March 2023

Members of the U.S. Senate and House of Representatives:

Railroads are part of America's communities, and that is why my city and the National League of Cities (NLC) supports action by Congress to improve rail safety in the U.S.

The unfortunate derailment and environmental contamination in East Palestine, Ohio is not unprecedented. There are more than 1,000 trains derailling each year in multiple states. With 140,000 miles of track in the U.S. crossing directly through thousands of cities, towns and villages, the severity of this derailment requires proactive reflection on rail safety actions that Congress can take now. [Here are NLC's detailed rail safety recommendations to Congress.](#)

We are encouraged by the introduction of the bipartisan [Railway Safety Act of 2023](#) in the Senate which would improve rail safety, and House members have provided additional proposals to expand the list of chemicals reported so that when – not if - a derailment happens first responders know what they are dealing with.

We ask for Congress to act now on rail safety on behalf of thousands of cities, towns and villages who want to see rail safely moving through their communities.

Thank you,

[CITY LEADER SIGNATURES]

[City Leaders Can Sign the Letter Here: https://forms.office.com/r/qQ3bkNBBVd](https://forms.office.com/r/qQ3bkNBBVd)



January 17, 2023

Item #20.

The regular meeting of the Glenn A. Jones, M.D. Memorial Library Board was called to order at 7:09 pm by Chad Young. Debi Sauer, Jenna Hall, Corina Strickland, Sheryl Ballard and Director Kristi Plumb were also in attendance.

The November 2022 minutes were approved. The financial reports for November and December were reviewed, ending with the approval of December as follows:

December beginning balance	\$ 62,339.16	Petty Cash beginning balance	\$ 607.84
Inflow	195,010.06 (100,000.00 from CO trust)		-0-
Outflow	232,064.50		122.83
Ending balance	\$ 25,284.72		\$ 485.01
CO Trust: \$ 6,339,966.63			

Director's Report:

Artist-in-Residence: In December 2022-Georgia Nichols displayed global Nativities. For January-Greeley Model Railroad Museum shared a village and Lionel Harry Potter Train set.

Art Rail Artist: Riley Lubich, graduate of Roosevelt High School.

Milliken: Kristi submitted 2022 library data to Milliken Town Administrator, along with a list of partnerships and a thank you for being recognized as Honored Organization at Beef n' Bean Day. Administrator Cheryl Powell will be sharing the information with the Town Board. Coffee Shop issues: dogs are allowed; library materials smell like food- Kristi will discuss concerns with Lynette and explore exhaust fan funding.

Building: Kristi is in contact with Fransen Pittman regarding warranty items and clean up.

Staff: Jackie Prado put in her two-week notice and Payton Eller has returned to school-Kristi will advertise for a Makerspace excited person. Staff is working tirelessly to optimize programming-both in and out of the building! Monica Johnson has accepted a seat on the School Board. Kristi refers to Staff as her 'dream team'!

2023 Goals: Increase circulation! Provide more programming that doesn't require registration! Solidify policies for Makerspace and Library of Things! Update Employee Handbook-Kristi will forward another section for February edits.

Final valuations from the Weld County Assessor for 2023 will be \$811,068.49.

A patron has been suspended from the building and several others in the District.

Meeting adjourned at 8:45 pm. Next meeting will be February 21, 2023.

November/December statistics: Johnstown—door count: 6603/7149	circulation—7285/6694
Milliken—door count: 345/255	circulation—378/304

Respectfully submitted, Sheryl Ballard, secretary

JONES MEMORIAL LIBRARY CASH FLOW REPORT - JAN 2023			Y-T-D	2023 BUDGET		Notes
BEGINNING CHECKING BALANCE		\$ 25,284.72	\$ -	\$ 20,000.00	To Date	Item #20.
INFLOWS	Donations/Grants	\$ -	\$ -	\$ 3,500.00		
	Interest	\$ 112.03	\$ 24,742.90	\$ 75,000.00		
	Misc Income	\$ 32.23	\$ 32.23	\$ 7,500.00		
	<i>Investments</i>	\$ -	\$ -	\$ -		
	Town of Johnstown	\$ 97,894.19	\$ 97,894.19	\$ 1,243,246.00		
	High Plains Library District	\$ -	\$ -	\$ 811,068.00		
INFLOWS TOTAL		\$ 98,038.45	\$ 122,669.32	\$ -		
TOTAL AVAILABLE FUNDS		\$ 123,323.17		\$ 2,160,314.00		
OUTFLOWS	Advertising	\$ 1,935.00	\$ 1,935.00	\$ 22,000.00		
	Books - 266	\$ 3,404.64	\$ 3,404.64	\$ 50,000.00	266	
	DVD/Audio - 14	\$ 352.36	\$ 352.36	\$ 15,000.00	14	
	Library of Things	\$ 57.71	\$ 57.71	\$ 5,000.00		
	Collection Fees/Bad Debts	\$ -	\$ -	\$ 2,000.00		
	Computer Expenses	\$ -	\$ -	\$ 5,000.00		
	Equipment & Furniture	\$ -	\$ -	\$ 40,000.00		
	Maker Space	\$ 1,626.92	\$ 1,626.92	\$ 20,000.00		
	Gifts Given	\$ 119.38	\$ 119.38	\$ 2,500.00		
	Insurance, Bldg. Contents	\$ -	\$ -	\$ 5,000.00		
	<i>Investments</i>	\$ -	\$ -	\$ 339,314.00		
	Legal Fees/Consulting Fees	\$ -	\$ -	\$ 10,000.00		
	Maintenance	\$ 2,768.32	\$ 2,768.32	\$ 60,000.00		
	Memberships/Licenses	\$ -	\$ -	\$ 2,500.00		
	Milliken Location	\$ -	\$ -	\$ 20,000.00		
	Outreach	\$ 129.72	\$ 129.72	\$ 10,000.00		
	Professional Enrichment	\$ -	\$ -	\$ 5,000.00		
	Programming	\$ 3,516.94	\$ 3,566.94	\$ 200,000.00		
	Salaries/Compensation/Perks	\$ -	\$ -	\$ 600,000.00		
	Health Ins./Retirement	\$ -	\$ -	\$ 72,000.00		
	Workers' Comp	\$ -	\$ -	\$ 5,000.00		
	Subscriptions, Periodicals	\$ 99.99	\$ 99.99	\$ 5,000.00		
	Supplies, Janitorial	\$ 234.32	\$ 234.32	\$ 3,000.00		
	Supplies/Expenses, Library	\$ 193.69	\$ 193.69	\$ 12,000.00		
	Telephone	\$ 523.20	\$ 523.20	\$ 10,000.00		
	Utilities	\$ 5,070.24	\$ 5,070.24	\$ 40,000.00		
	Capital Improvement	\$ -	\$ -	\$ 600,000.00		
OUTFLOWS TOTAL		\$ 20,032.43	\$ 20,082.43	\$ 2,160,314.00		
ENDING CHECKING BALANCE		\$ 103,290.74				

						Notes
BEGINNING PETTY CASH BALANCE		\$ 485.01				
	Programming	\$ 50.00				
ENDING PETTY CASH BALANCE		\$ 435.01				
	COLORADO TRUST INVESTMENT		Y-T-D			
BEGINNING BALANCE		\$ 6,339,966.63				
	Dividend - 4.5569%	\$ 24,630.87	\$ 24,630.87			
	Contribution	\$ -				
	Withdrawal	\$ -				
ENDING BALANCE		\$ 6,364,597.50				

Item #20.