Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Town of Erie
North Water Treatment Facility P-1202
Construction Manager at Risk Contract

This Agreement is by and between the Town of Erie, herein after called "Owner", and hereinafter called "Contractor". Owner and Contractor hereby agree as follows:

Article 1 – Work

1.01 Contractor shall complete all Work as specified in the Request for Proposal for the **North Water Treatment Facility Construction Manager At Risk (CMAR)** including all Attachments.

Article 2 – The Project

2.01 Burns & McDonnell Engineering Company, Inc. is the design engineer (Engineer) for the North Water Treatment Facility project for the Town of Erie, Colorado (Owner).

A. The part of the Project that pertains to the Work has been designed by Engineer:

1. Raw water pump station
2. Treatment facility
3. Solids handling facility
4. Associated site improvements, yard piping, electrical and controls upgrades

2.02 The Owner has retained Burns & McDonnell Engineering Company, Inc., ("Engineer") to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

Article 3 – Contract Times

3.01 *Contract Time:*

A. A Notice to Proceed for the preconstruction phase services is expected to be delivered with fourteen (14) calendar days of execution of this agreement.

B. The Contract Time for pre-construction phase services shall be negotiated based on information provided in the proposal. Completion of the pre-construction phase services is anticipated to be March 31, 2026**.**

C. The Contract Time and the date by which Substantial Completion should be achieved for construction phase services will be established when and if Owner accepts the

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Contractor's GMP. The Contractor's GMP will be established following the completion of 100% design drawings and specifications.

D. Work will be substantially completed as provided in Paragraph 4.01 of the General Conditions and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions.

3.02 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence and that Owner will suffer financial and other losses if the Work is not completed within the times established with the Contractor's GMP, 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 Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):

1. Substantial Completion: Contractor shall pay Owner $1,500.00 for each calendar day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion until the Work is substantially complete, based on a mutually agreeable Substantial Completion date established pursuant to Paragraph 3.01(C).

2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner $750 for each calendar day that expires after such time until the Work is completed and ready for final payment.

3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

4. Owner shall have the right to deduct liquidated damages from any money in its hands, otherwise due, or to become due, to Contractor, or to initiate applicable dispute resolution procedures and to recover liquidated damages for nonperformance of this Contract within the time stipulated.

Article 4 – Contract Price

4.01 For pre-construction phase services:

A. In full consideration of Contractor's Services during the Pre-Construction Phase of this Contract, Owner will pay to Contractor the Pre-Construction Phase Fee, based on proposed lump sum, which is Seven Hundred and Seventy Five Thousand Dollars $775,000) inclusive of all expenses and disbursements payable proportionately on a monthly basis based on the amount of effort expended by Contractor. The Pre-Construction Phase Fee is not included in the GMP and is payable in addition to the GMP.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

4.02 For construction phase services, the contract will be amended at a later date, following 100% design document completion and development of a mutually agreed upon GMP.

Article 5 – Payment Procedures

5.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

5.02 *Construction Phase Services Progress Payments; Retainage*

A. For construction phase services, the contract will be amended at a later date, following 100% design document completion and development of a mutually agreed upon GMP. The amendment will include provisions for progress payment and retainage.

Article 6 – Reserved

Article 7 – Contractor's Representations

7.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents and any data and reference items identified in the Contract Documents.

B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the RFP, if any, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, if any, especially with respect to Technical Data in such reports and drawings.

1. Contractor accepts the determination set forth in the General Conditions and Supplementary Conditions, if any, of the extent of the Technical Data contained in such reports and drawings upon which Contractor is entitled to rely as provided in Article 5 of the General Conditions.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

2. Contractor acknowledges that such reports and drawings are not Contract Documents and may not be complete for Contractor's purposes.
3. Contractor acknowledges that Owner and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Contract Documents with respect to Underground Facilities at or adjacent to the Site. Cost and time adjustments resulting from inaccuracies or completeness shall be made pursuant to Section 5.05 of the General Conditions.

E. Contractor has considered the information known to Contractor itself; information commonly known to Contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.

F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer through issued addendum or addenda which is acceptable to Contractor, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work. When said conflicts, etc., have not been resolved through interpretation or clarification by Engineer, because of insufficient time or otherwise, Contractor has included in the GMP the greater quantity or better quality of Work, or compliance with the more stringent requirement resulting in a greater cost; and said greater cost is included in the Contract Price.

I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Article 8 – Contract Documents

8.01 *Contents*

A. The Contract Documents consist of the following:

1. This Agreement (pages 1 to 7, inclusive).
2. Performance bond (pages 1 to 4, inclusive).
3. Payment bond (pages 1 to 5, inclusive).
4. General Conditions (pages 1 to 93, inclusive).
5. Supplemental Conditions to CMAR Contract (pages 1 to 2, inclusive).
6. **Attachments not included with Draft Agreement and shall be included with Final Agreement:**
   a. Request for Proposal Summary Form, which is not attached hereto
   b. Proposal Form, which is not attached hereto
   c. CMAR Proposal, which is not attached hereto
7. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
   a. Notice to Proceed, Work Change Directives, Change Orders, and Field Orders.

B. The documents listed in Paragraph 8.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 8.

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

Article 9 – Miscellaneous

9.01 *Terms*

A. Terms used in this Agreement will have the meanings stated in the General Conditions.

9.02 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto 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 Documents.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

9.03 *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.

9.04 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall 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.

9.05 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 9.05:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the selection process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the selection process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the selection process or affect the execution of the Contract.

9.06 *Access to Work*

A. Owner, its officers, employees, agents and representatives, at all times shall have access to the Work whenever it is in preparation or progress, and Contractor shall provide proper facilities for such access and inspection by them.

9.07 *Indemnification*

A. Contractor shall defend, indemnify and save harmless Owner, its officers and employees consistent with the terms of the indemnity related provisions set forth in

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

the General Conditions of the Contract including, without limitation, Articles 5.02.A.2, 5.06.J, 7.10.B, 7.18.A and 8.03.D.

9.08 *Unemployment Compensation Fund Payment*

A. Contractor shall pay to the Unemployment Compensation Fund of the State of Colorado, unemployment contributions and interest due under the laws of the State of Colorado on wages paid to individuals employed in the performance of this Contract, and shall submit to Owner a written clearance from the Commissioner of Labor of the State of Colorado certifying that all payment due of contributions and interest which may have arisen under this Contract have been paid by Contractor, or its Subcontractor, to the State of Colorado Unemployment Compensation Fund.

B. Contractor shall submit, when requested, evidence satisfactory to Owner that all payrolls, material bills, and other indebtedness pertaining to the aforesaid work have been paid.

9.09 *Payment of Workman's Compensation*

A. Contractor shall procure a policy, or policies, or insurance which shall guarantee payment of compensation according to the Workmen's Compensation Laws of Colorado for all workmen injured in the scope of employment; and further agrees to keep said policy, or policies, in full force and effect throughout the terms of this Contract. In addition, all other insurance in any way required of Contractor shall be procured by Contractor and kept in force by Contractor throughout the term of this Contract. Certificate or certificates of insurance, or copies of policies, if required by any Department of the Owner, shall be filed by Contractor with the Owner.

9.10 *Payment of Employee and Mechanics Claims*

A. Contractor shall pay all just claims due for the payment of all employees and mechanics for labor that shall be performed, for the payment of all material and equipment furnished, and for the payment of material and equipment rental which is actually used or rented in the performance of the Contract.

In Witness Whereof, Owner and Contractor have signed this Agreement in triplicate. One counterpart each has been delivered to Owner, Contractor, and Engineer. All portions of the Contract Documents have been signed, initialed or identified by Owner and Contractor or identified by Engineer on their behalf.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

This Agreement will be effective on _____, 20_____ (which is the Effective Date of the Contract).

Owner:	Contractor:
Town of Erie	Archer Western
By: _____	By: DocuSigned by: Jeff Polak 0ABBCCADCC33416...
Title: _____	Title: Vice President/Business Group Leader *(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*
Attest: _____	Attest: _____
Title: _____	Title: _____
Address for giving notices:	Address for giving notices:
645 Holbrook Street	8703 Yates Drive #105
PO Box 750	Westminster, CO
Erie Colorado, 80516	80031
	License No.: AEC00144 *(where applicable)*

End of Section

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Performance Bond

Contractor *(name and address)*:

Surety *(name and address of principal place of business)*:

Owner *(name and address)*:
Town of Erie
645 Holbrook Street
Erie, CO 80516

Construction Contract
Effective Date of the Agreement:
Amount:
Description: CMAR Services for North Water Treatment Facility

Bond
Bond Number:
Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:

Amount:
Modifications to this Bond Form: ☐ None ☐ See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

Contractor As Principal

_____ (Seal)
Contractor's Name and Corporate Seal
By: _____
Signature
_____
Print Name
_____
Title
Attest: _____
Signature
_____
Title

Surety

_____ (Seal)
Surety's Name and Corporate Seal
By: _____
Signature (Attach Power of Attorney)
_____
Print Name
_____
Title
Attest: _____
Signature
_____
Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a Contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent Contractors;

5.3 Obtain bids or negotiated proposals from qualified Contractors acceptable to the

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a Contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new Contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven (7) days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

15. If this Bond is issued for an agreement between a Contractor and Subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Payment Bond

Contractor *(name and address)*:

Surety *(name and address of principal place of business)*:

Owner *(name and address)*:
Town of Erie
645 Holbrook Street
Erie, CO 80516

Construction Contract
Effective Date of the Agreement:
Amount:
Description: CMAR Services for North Water Treatment Facility

Bond
Bond Number:
Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:

Amount:
Modifications to this Bond Form: ☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

Contractor As Principal	**Surety**
_____ (Seal)	_____ (Seal)
Contractor's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	Signature
_____	_____
Title	Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Contract, which is incorporated herein by reference, subject to the following terms.

2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:

   5.1 Claimants who do not have a direct contract with the Contractor,

   5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and

   5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).

   5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

   7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

   7.2 Pay or arrange for payment of any undisputed amounts.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

16. **Definitions**

16.1 **Claim:** A written statement by the Claimant including at a minimum:

1. The name of the Claimant;
2. The name of the person for whom the labor was done, or materials or equipment furnished;
3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
4. A brief description of the labor, materials, or equipment furnished;
5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
7. The total amount of previous payments received by the Claimant; and
8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a Subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's Subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4 **Owner Default**: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a Contractor and Subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

General Conditions of the CMAR Contract

Table of Contents

Page

Article 1 – Definitions and Terminology 23

1.1 Defined Terms.....23

1.2 Terminology.....36

Article 2 – Preliminary Matters 37

2.1 Delivery of Bonds and Evidence of Insurance.....37

2.2 Copies of Documents.....38

2.3 Before Starting Construction.....38

2.4 Preconstruction Conference; Designation of Authorized Representatives.....38

2.5 Initial Acceptance of Schedules.....39

2.6 Electronic Transmittals.....39

Article 3 – Documents: Intent, Requirements, Reuse 39

3.1 Intent.....39

3.2 Reference Standards.....40

3.3 Reporting and Resolving Discrepancies.....41

3.4 Requirements of the Contract Documents.....41

3.5 Reuse of Documents.....42

Article 4 – Commencement and Progress of the Work 43

4.1 Commencement of Contract Times; Notice to Proceed.....43

4.2 Starting the Work.....43

4.3 Reference Points and Line and Grade Stakes.....43

4.4 Progress Schedule.....43

4.5 Delays in Contractor's Progress.....46

Article 5 – Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions 48

5.1 Availability of Lands.....48

5.2 Use of Site and Other Areas.....48

5.3 Subsurface and Physical Conditions.....49

5.4 Differing Subsurface or Physical Conditions.....50

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

5.5 Underground Facilities and Utilities....52
5.6 Hazardous Environmental Conditions at Site....55
Article 6 – Bonds and Insurance.... 58
6.1 Performance, Payment, and Other Bonds....58
6.2 Insurance—General Provisions....59
6.3 Contractor's Insurance....61
6.4 Owner's Liability Insurance....65
6.5 Property Insurance....65
6.6 Waiver of Rights....68
6.7 Receipt and Application of Property Insurance Proceeds....70
6.8 Costs for Bonds and Insurance....70
Article 7 – Contractor's Responsibilities 70
7.1 Supervision and Superintendence....70
7.2 Labor; Working Hours....71
7.3 Services, Materials, and Equipment....71
7.4 "Or Equals"....74
7.5 Substitutes....76
7.6 Concerning Subcontractors, Suppliers, and Others....78
7.7 Patent Fees and Royalties....80
7.8 Permits....81
7.9 Taxes....81
7.10 Laws and Regulations....81
7.11 Record Documents....83
7.12 Safety and Protection....83
7.13 Safety Representative....85
7.14 Hazard Communication Programs....85
7.15 Emergencies....85
7.16 Shop Drawings, Samples, and Other Submittals....85
7.17 Contractor's General Warranty and Guarantee....92
7.18 Indemnification....93
7.19 Delegation of Professional Design Services....94
7.20 Value Engineering Change Proposal (VECP)....95
7.21 Request for Information....98
7.22 Equal Employment Opportunity Clause....98
Article 8 – Other Work at the Site 100

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

8.1 Other Work.....100
8.2 Coordination.....101
8.3 Legal Relationships.....101
Article 9 – Owner's Responsibilities 103
9.1 Communications to Contractor.....103
9.2 Replacement of Engineer.....103
9.3 Furnish Data.....103
9.4 Pay When Due.....103
9.5 Lands and Easements; Reports, Tests, and Drawings.....103
9.6 Insurance.....103
9.7 Change Orders.....103
9.8 Inspections, Tests, and Approvals.....103
9.9 Limitations on Owner's Responsibilities.....104
9.10 Undisclosed Hazardous Environmental Condition.....104
9.11 Evidence of Financial Arrangements.....104
9.12 Safety Programs.....104
Article 10 – Engineer's Status During Construction 104
10.1 Owner's Representative.....104
10.2 Visits to Site.....104
10.3 Construction Manager.....**Error! Bookmark**

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

not defined.

10.4 Rejecting Defective Work.....109

10.5 Shop Drawings, Change Orders and Payments.....109

10.6 Determinations for Unit Price Work.....110

10.7 Decisions on Requirements of Contract Documents and Acceptability of Work...110

10.8 Limitations on Engineer's Authority and Responsibilities.....110

10.9 Compliance with Safety Program.....111

Article 11 – Amending the Contract Documents; Changes in the Work 111

11.1 Amending and Supplementing Contract Documents.....111

11.2 Owner-Authorized Changes in the Work.....112

11.3 Unauthorized Changes in the Work.....112

11.4 Change of Contract Price.....113

11.5 Change of Contract Times.....114

11.6 Change Proposals.....114

11.7 Execution of Change Orders.....115

11.8 Notification to Surety.....116

Article 12 – Claims 116

12.1 Claims.....116

Article 13 – Cost of the Work; Allowances; Unit Price Work..... 118

13.1 Cost of the Work.....118

13.2 Allowances.....122

13.3 Unit Price Work.....122

Article 14 – Tests and Inspections; Correction, Removal or Acceptance of

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Defective Work 123
14.1 Access to Work.....123
14.2 Tests, Inspections, and Approvals.....124
14.3 Defective Work.....125
14.4 Acceptance of Defective Work.....126
14.5 Uncovering Work.....126
14.6 Owner May Stop the Work.....127
14.7 Owner May Correct Defective Work.....127
Article 15 – Payments to Contractor; Set-Offs; Completion; Correction Period 128
15.1 Progress Payments.....128
15.2 Contractor's Warranty of Title.....134
15.3 Substantial Completion.....134
15.4 Partial Use or Occupancy.....135
15.5 Final Inspection.....136
15.6 Final Payment.....136
15.7 Waiver of Claims.....138
15.8 Correction Period.....139
Article 16 – Suspension of Work and Termination 140
16.1 Owner May Suspend Work.....140
16.2 Owner May Terminate for Cause.....140
16.3 Owner May Terminate For Convenience.....142
16.4 Contractor May Stop Work or Terminate.....143
Article 17 – Final Resolution of Disputes 143
17.1 Methods and Procedures.....143
Article 18 – Miscellaneous 144
18.1 Giving Notice.....144
18.2 Computation of Times.....144
18.3 Cumulative Remedies.....144
18.4 Limitation of Damages.....145
18.5 No Waiver.....145
18.6 Survival of Obligations.....145
18.7 Controlling Law.....145
18.8 Headings.....145

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Article 1 – Definitions and Terminology

1.1 *Defined Terms*

A. Wherever used in the RFP 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. *Act of God*—Earthquake, lightning strike, tornado, or any other cataclysmic phenomenon of nature beyond Contractor's control causing loss, damage, or injury to the Work.
2. *Addenda*—Written or graphic instruments issued prior to the opening of Proposals which clarify, correct, or change the RFP Requirements or the proposed Contract Documents.
3. *Admixture*—Material other than water, aggregates, hydraulic cement, and fiber reinforcement used as an ingredient of concrete or mortar and added to the batch immediately before or during mixing.
4. *Advertisement*—Public announcement requesting services or bids for work or furnishing materials.
5. *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.
6. *Alley*—Established pedestrian and vehicle access between or behind buildings abutting a street.
7. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
8. *Arterial Street*—Main road, street, or avenue, primarily for through traffic, with collector roads, streets, or avenues joining it.
9. *Auxiliary Lane*—Portion of roadway adjoining the through traveled way for parking, speed changes, or other purposes supplementary to through traffic movement.
10. *Avenue*—See Street.
11. *Award*—Acceptance of a proposal.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

12. *Award Date*—Date Owner notifies the successful Proposer of the award or Date of Issuance of the Notice of Award.
13. *Award Letter*—Letter notifying the successful Proposer of the award.
14. *Backfill*—Operation involving the placement and compaction of materials in a trench or excavation, or surrounding constructed improvements. Also, material(s) used in such an operation.
15. *Base, Base Course*—Layer(s) of designed material constructed on a subbase or subgrade to support the surface material.
16. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
17. *Bid Date*—Date indicated in the Contract Documents on or before which Owner must receive all proposals.
18. *Bid Opening*—Act of publicly declaring a portion or all of Bidder's proposal.
19. *Bid Time*—Time indicated in the Contract Documents on or before which Owner must receive all proposals.
20. *Bidder*—An individual or entity that submits a Bid to Owner.
21. *Bidding Documents*—The RFP, the proposed Contract Documents, and all Addenda.
22. *Blended Hydraulic Cement*—See ASTM C595, Standard Specification for Blended Hydraulic Cements.
23. *Bond*—A promissory note provided by a Surety.
24. *Borrow Material*—Material taken from the borrow pit.
25. *Borrow Pit*—Excavation site that provides material for use in another location.
26. *Borrow Site*—The source or approved material required for the construction of earthwork requirements, from locations shown in the plans or proposed by Contractor.
27. *Brick Pavement*—Existing brick streets.
28. *Calendar Day*—Every day, beginning and ending at midnight, shown on the calendar, including Sundays and holidays.
29. *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.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

30. *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, or both; 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.

31. *Channel*—A natural or artificial waterway.

32. *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, or both; contesting an initial decision by Engineer concerning the 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; or (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. A demand for money or services by a third party is not a Claim.

33. *Coarse Aggregate*—Mineral aggregate or portion of a mineral aggregate that retains on a #4 sieve.

34. *Collector Street*—Street providing access to abutting property that collects local street traffic and feeds an arterial street.

35. *Combined Sewers*—Sewer pipes conveying both sanitary and storm water flows. Combined sewers shall be treated as sanitary sewers.

36. *Completion Date*—Specific calendar date by which either on or before Contractor must complete all Work.

37. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601 et seq. ("CERCLA"); (b) the Hazardous Materials Transportation Act, 49 U.S.C. § 5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq. ("RCRA"); (d) the Toxic Substances

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Control Act, 15 U.S.C. § 2601 et seq.; (e) the Clean Water Act, 33 U.S.C. § 1251 et seq.; (f) the Clean Air Act, 42 U.S.C. § 7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

38. *Continuous Pavement*—Portion of pavement constructed during a single paving operation.
39. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
40. *Contract Bond*—Security executed by Contractor or its Surety, or sureties, guaranteeing completion of the specified Work and payment of all legal debts pertaining to the Work.
41. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
42. *Contract Item*—Specific work unit for which the Contract provides a price.
43. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
44. *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.
45. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
46. *Cost of the Work*—See Paragraph 13.1 for definition.
47. *County*—Administrative subdivision of the State used to designate or identify the location of the proposed Work.
48. *Culvert*—Structure providing an opening under any roadway excluding bridges, transverse drainage tile, or other intakes designed to aid subsurface drainage. Culverts generally are opened ended on both sides.
49. *Department of Roads*—Department of the State of Colorado authorized by law to improve and maintain the State Road System.
50. *Detour*—A temporary official route using existing roads to divert traffic around a roadway project.
51. *Drainage Ditch*—Artificial open depression, excluding a roadway ditch, constructed for surface water movement.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

52. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
53. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
54. *Embankment*—Area of fill the top of which is constructed to be higher than the surrounding surface or the original surface.
55. *Engineer*—The individual or entity named as such in the Agreement.
56. *Engineer's Estimate*—Estimate compiled by Engineer of predicted cost based upon past experience and available information.
57. *Equipment*—Machinery, tools, apparatus, and supplies necessary to preserve, maintain, construct, and complete the Work.
58. *Excavation*—Operation involving the removal of earth or rock.
59. *Excavation Limits*—Vertical and horizontal boundaries established to control the excavation process.
60. *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.
61. *Final Completion*—The date the Project is fully completed as confirmed by resolution of all Work, including but not limited to punch list work, which completion shall be no more than ninety (90) days from Substantial Completion.
62. *Fine Aggregate*—Mineral aggregate or portion of a mineral aggregate that passes through a #4 sieve and retains on a #200 sieve.
63. *Foundation Rock*—Trench stabilization material consisting of three (3) inch maximum crushed rock meeting the gradation requirements of Size 2 of ASTM C33, Standard Specification for Concrete Aggregates.
64. *Furnished Materials*—Materials provided or made available to Contractor by Owner or other designated source at no cost to Contractor.
65. *Haul Road*—Traveled way designated for hauling equipment, materials, or machinery.
66. *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. The presence at the Site of materials that are necessary for the

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.

67. *Incentive/Disincentive*—A Contract provision that compensates or deducts payment to Contractor for critical Work intended to minimize interference and inconvenience to the traveling public and/or reduce construction time.

68. *Incidental*—Minor expense or occurrence that accompanies an item of work.

69. *Incidental Work*—Work performed by Contractor that is not directly paid. The cost for providing the work is included in one or more other Contract Price(s).

70. *Inspector*—Engineer's authorized representative assigned to make detailed inspections of the Work performed and materials furnished by Contractor.

71. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

72. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

73. *Liquidated Damages*—A reduction in payment intended to compensate for expenses incurred by Owner due to Contractor's failure to complete the Work on or before the Contract date or within the authorized number of calendar days. Such amounts are not to be considered penalties.

74. *Lump Sum*—Bid amount for all work necessary to satisfactorily complete a Contract Item that is not directly measured.

75. *Major Work Item*—Work item that Contractor must complete in order to occupy or use the Project for its intended purpose.

76. *Materials*—Substance specified for use in the completion of the Work contained in the Contract.

77. *Materials Testing Manual*—Manual developed by the Owner that indicates the testing or inspection guidelines for the Work.

78. *Median*—Planted or paved section between two (2) or more lanes in or near the center of the street and not intended for vehicular travel.

79. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

completion date or by a time prior to Substantial Completion of all the Work.

80. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
81. *Notice to Bidders*—Public announcement requesting services or bids for work or furnishing materials.
82. *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.
83. *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.
84. *Partial Payment*—See Progress Payment.
85. *Pavement Repair*—Individual pavement panels or single lane widths or existing streets designated for reconstruction.
86. *Pavement Structure*—Pavement layer(s) constructed atop a subgrade supporting and distributing the traffic load to the roadbed.
87. *Paving Lane*—Full width and length of a layer of pavement constructed at a single time.
88. *Payment Bond*—Form of security furnished by Contractor and Surety as a guaranty that all bills and accounts for materials and labor used in the Work will be paid in full.
89. *Performance Bond*—Form of security furnished by Contractor and Surety as a guaranty that the Work will be completed in accordance with the terms of the Contract.
90. *Permanent Easement*—Strip of land within a larger area to which the property Owner grants permanent right-of-access by an individual or legal entity.
91. *Plans*—Contract drawings or electronic digital images showing the location, character, and dimensions of the prescribed Work, including layouts, profiles, cross sections, and details.
92. *Pre-Approved Source*—A source that is deemed acceptable prior to the submittal of any information.
93. *Precast Concrete*—Conventionally reinforced (not pre-stressed) concrete products formed, cast, and cured in a casting yard and later incorporated into the Work.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

94. *Precast Concrete Pavers*—Concrete bricks that are used in the construction of pavement surfaces (brick streets, crosswalks, etc.).
95. *Profile Grade*—Trace of a vertical plane intersecting the top surface of the proposed wearing surface of a road.
96. *Progress Payment*—Payment issued for completed portions of the Work or for materials required for the Work that are in inventory and stored on the Project or at a designated location on a specific date.
97. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
98. *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.
99. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
100. *Proposal*—Written offer to perform the Work contained in the Contract.
101. *Proposal Form*—Form on which formal proposals are prepared and submitted.
102. *Proposal Guaranty*—Security furnished with a proposal guaranteeing the Bidder will enter into the Contract upon acceptance of the proposal.
103. *Punchlist*— List compiled near the completion of Work indicating the Work remaining and items Contractor must furnish to complete the Work contained in the Contract.
104. *Quality Control*—All Contractor/supplier operational techniques and activities that are performed or conducted to fulfill the Contract requirements.
105. *Ramp*—Connecting pavement between intersecting surfaces at a grade-separated intersection.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

106. *Random Crack*—A single crack within a single panel of pavement less than one-eighth (⅛) inch wide.

107. *Rejected Proposal*—Proposal rendered invalid by Owner.

108. *Resident Project Representative*—The authorized representative(s) of Engineer assigned to assist Engineer with daily observations at the Site.

109. *Resources*—Labor, equipment, and materials necessary to perform the Work contained in a Contract Bid Item or other element of Work.

110. *Responsive Bid*—Bid meeting all requirements in the Notice to Bidders.

111. *Right-of-Way*—Land, property, or interest acquired for or devoted to drainage, sewer, or transportation purposes.

112. *Road*—See Street.

113. *Roadbed*—Graded portion of a street or alley prepared as the subgrade for construction of a pavement structure and shoulders.

114. *Roadside*—Area adjoining the outer edge of a street.

115. *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.

116. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals and the performance of related construction activities.

117. *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.

118. *Setback Line*—A line outside of the right-of-way, established by public authority, on the road side of which the erection of building or other permanent improvements is controlled.

119. *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.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

120. *Shoulder*—Portion of the roadway adjacent to the traveled way that can accommodate stopped vehicles for emergency use and for lateral support of base and surface courses.

121. *Sidewalk*—Portion of the right-of-way constructed exclusively for pedestrian use.

122. *Sieve*—USA Standard Sieve, as defined in AASHTO M92, Standard Specification for Wire-Cloth Sieves for Testing Purposes.

123. *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 furnished by Owner which are designated for the use of Contractor.

124. *Slope*—Inclination of a line or surface.

125. *Special Provisions*—Additions, addendums, and revisions to the Standard and Supplemental Specifications applicable to an individual project.

126. *Specialty Items*—Contract Items requiring equipment, skills, or crafts not ordinarily associated with the types of Work in the Contract.

127. *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.

128. *Specified Starting Date*—Date upon which Work must begin.

129. *Sprinklers –Distribution Line*—Irrigation piping from the valve box to the sprinkler head.

130. *Sprinklers – Trunk Line*—Irrigation piping from the water source to the valve box, typically pressurized.

131. *Stabilizing or Stabilization*—Incorporation of materials into soils or aggregates to increase load-bearing capacity, firmness, and resistance to weathering or displacement.

132. *Standard Plan*—A Colorado Department of Roads detailed drawing approved for repetitive use.

133. *State*—State of Colorado acting through its authorized representatives.

134. *Street*—General term denoting a public way for purposes of vehicular travel, including the entire area within the public right-of-way.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

135. *Structure*—Building, bridge, pipe, culvert, fence, or other item not considered part of the roadway.

136. *Subbase Course*—Layer(s) of specified material placed upon a subgrade to support a base or surface course.

137. *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.

138. *Subgrade*—Top layer of a roadbed upon which the pavement structure, shoulders, and curbs are constructed.

139. *Submittal*—Shop drawings, samples, and miscellaneous items or documents submitted by Contractor to Engineer for review. Typical submittals include, but are not limited to, product data and samples, construction schedules, material testing reports, certification letters, warranties, construction photographs, survey data, cost breakdown, permits, plans, and manufacturer installation recommendations.

140. *Subsidiary*—See Incidental.

141. *Substantial Completion*—The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof. Unless otherwise indicated in the Contract Documents, "Substantial Completion" shall mean all items of Work have been completed and any acceptance testing requirements have been fulfilled.

142. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner (on the basis of Owner's evaluation) makes an award of contract, subject to stated conditions.

143. *Superintendent*—Representative of Contractor charged with responsibility for the Work.

144. *Supplemental Specification*—Approved addition or revision to the Standard Specifications.

145. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions. Contract Documents may or may not include Supplementary Conditions.

146. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, 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.

147. *Surety*—Individual or legal entity, other than Contractor, executing a bond furnished by Contractor.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

148. *Surface Course*—Pavement structure layer(s) constructed atop all other pavement layers and designated to accommodate the traffic load.

149. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.3, 5.4, and 5.6.

150. *Temporary Easement*—Strip of land within a larger area over which the property Owner grants a temporary right-of-access to an individual or legal entity.

151. *Temporary Pavement*—Pavement layer(s) constructed to provide a temporary service to vehicular traffic.

152. *Temporary Structure*—Structure required for maintaining traffic or access during the Work and dismantled upon completion of the Work.

153. *Testing Laboratory*—Firm designated to perform testing on any or all Work contained in the Contract.

154. *Traffic Control Device*—Sign, signal, marking, or device placed on, over, or adjacent to a street or highway by an authority of the public or official having jurisdiction to regulate, warn, or guide traffic.

155. *Traffic Control Zone*—Distance from the first advance warning sign to the point after the work area where traffic is no longer affected.

156. *Traffic Lane*—Portion of the traveled way designated for the movement of a single line of vehicles.

157. *Traveled Way*—Portion of the right-of-way designated for vehicle use, excluding shoulders and auxiliary lanes.

158. *Tunneling*—A general term for all methods of trenchless sewer construction.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

159. *Unauthorized Work*—Work not contemplated by the Contract Documents and not authorized by Engineer or performed contrary to the instructions of Engineer.

160. *Unbalanced Proposal*—Proposal containing lump sum or unit priced items that do not reflect reasonable actual costs plus a reasonable proportionate share of Bidder's anticipated profit, overhead costs, and other indirect costs.

161. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems not otherwise included in the definition of Utility.

162. *Unit*—A calculated partition of new pavement construction for the purposes of obtaining cores to determine constructed thicknesses of the new pavement and assessment of applicable pay factors. A unit is a driving lane with a length of four-hundred forty (440) feet. A driving lane is typically twelve (12) to thirteen (13) feet in width.

163. *Unit Price Work*—Work to be paid for on the basis of unit prices.

164. *Unsuitable Materials*—All materials that contain debris, roots, organic, or frozen materials, stones having a maximum dimension larger than three (3) inches for the upper twelve (12) inches of fill, stones having a maximum dimension larger than six (6) inches for the remainder of the fill, or any other materials determined by Engineer to be unsuitable for providing a stable slope, embankment, backfill, or subgrade.

165. *Utility*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, or other such facilities or attachments, and any encasements containing such utilities, owned by a company or Owner notified by the State of Colorado's "One Call" notification system.

166. *Waterway*—A channel for the escape or passage of water.

167. *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

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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.

168. *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.

169. *Working Drawing*—Drawing furnished by Contractor showing sufficient detailed information to build the object shown and described.

1.2 *Terminology*

A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*:

1. 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*:

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight, including Saturdays, Sundays and Holidays.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

D. *Defective*:

1. 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; or

   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 15.3 or 15.4).

E. *Furnish, Install, Perform, Provide, Supply*:

1. The word "furnish" or the word "install" or the word "perform" or the word "provide" or the word "supply", or any combination or similar directive or usage thereof, shall mean furnishing and incorporating in the Work including all necessary labor, materials, equipment, and incidentals necessary to perform the Work indicated, unless specifically limited in the context used.

F. 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

2.1 *Delivery of Bonds and Evidence of Insurance*

A. *Bonds*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Contractor's Insurance*: When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions, if any, or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.

C. *Evidence of Owner's Insurance*: After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Supplementary Conditions, if any, or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.2 *Copies of Documents*

A. Owner will furnish to Contractor four printed copies of the Contract Documents (including one fully executed counterpart of the Agreement). Contractor shall have one copy of the Contract Documents available on the Site at all times. 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.

2.3 *Before Starting Construction*

A. *Preliminary Schedules*:

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 following the format and submittal procedure described in Paragraph 4.4;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work on Lump Sum projects 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.

2.4 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, except for Work as allowed in Paragraph 4.2, a preconstruction conference attended by Owner, Contractor, major Subcontractors, 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 2.3.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 preconstruction conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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.

2.5 *Initial Acceptance of Schedules*

A. Engineer shall review the preliminary Schedule. If the schedule is not acceptable to Engineer, Contractor shall have an additional 14 days after receiving comments from Engineer to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
2. 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.

2.6 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.

B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items 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 items, or from those established in applicable transmittal protocols.

Article 3 – Documents: Intent, Requirements, Reuse

3.1 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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 or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall 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. *Third Party Beneficiary Clause:* The parties executing this Contract specifically agree that the intent of the Contract is not to create any individual or legal entity as a third-party beneficiary. Furthermore, the Contract does not authorize any individual or legal entity not party to the Contract to maintain an action for damages under said Contract provisions.

3.2 *Reference Standards*

A. Standards Specifications, Codes, Laws and Regulations

1. Reference in the Contract Documents to standard specifications, manuals, standard plates, standard plans, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, standard plate, standard plan, 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, standard plate, standard plan, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their Subcontractors, consultants, agents, or employees, 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, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or Subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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

3.3 *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. Contractor shall also compare the Contract Documents with all applicable field measurements. Contractor shall report in writing to Engineer within 24 hours 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 Documents issued pursuant to Paragraph 11.1.

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, standard plate, standard plan, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall report it to Engineer in writing within 24 hours of discovery. 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 Documents issued pursuant to Paragraph 11.1.

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. Engineer shall make a determination in writing upon notification of a discrepancy. Any adjustment by Contractor without such a determination shall be at Contractor's own risk and expense.

3.4 *Requirements of the Contract Documents*

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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 thereunder.

B. Engineer will 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 give written notice to Owner and Contractor 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.

3.5 *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 editions, 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 3.5 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Article 4 – Commencement and Progress of the Work

4.1 *Commencement of Construction Phase Services Contract Times; Construction Phase Services Notice to Proceed*

A. The Contract Times will commence to run on the day indicated in the Notice to Proceed. A Notice to Proceed for the pre-construction phase services is expected to be provided within fourteen (14) calendar days of execution of the agreement.

B. The Contract Times will commence to run on the day indicated in the Notice to Proceed. A Notice to Proceed for the construction phase services may be given at any time within thirty (30) calendar days after the Effective Date of the GMP.

4.2 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to such date, except as allowed in this Article.

4.3 *Reference Points and Line and Grade Stakes*

A. Owner shall provide engineering surveys to establish reference points for construction and to establish lines and grades. Contractor shall provide Owner 48 regular working hours' notice for construction reference points and line and grade stakes. Contractor is responsible for the Work conforming to such points and stakes. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points, line and grade stakes 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.

B. Should Contractor, during the course of construction, damage or destroy any established property corners or reference points, such monuments shall be replaced by Owner at Contractor's sole and exclusive expense. The Owner's cost for replacement shall be deducted from the Contractor's final payment.

4.4 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.5 as it may be adjusted monthly, or as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.5) proposed adjustments in the Progress

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Schedule that will not result in changing the Contract Times. Failure to submit acceptable Progress Schedule updates monthly, or as agreed to by Engineer, may result in Owner withholding all or part of progress payments.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.

B. Progress Schedule Submittal Requirements:

1. For all contracts:

    1. Contractor shall use a commercially available scheduling software package, including Primavera, ProLog, SureTrak, Microsoft Project, or other software programs approved by Engineer.
    2. Provide Progress Schedule electronic file in software format being used to create the schedule, if requested by the Engineer.
    3. Submit two 11" X 17" color copies of the schedule along with a PDF file of the Progress Schedule.
    4. The submitted schedules shall be legible using no smaller than a 10 pt font for the text on the printed page.
    5. Title Block: Show name of Project and Owner, OPW Number, date submitted, revision or update number, and name of scheduler. Updated Progress Schedules shall indicate data date.
    6. No activity duration, exclusive of those for Submittals review and product fabrication/delivery, shall be less than 1 day or more than 14 days, unless otherwise approved by the Engineer.
    7. Progress Schedule shall begin with the date of Notice to Proceed and conclude with the date of Final Completion showing all Milestone dates.
    8. Progress Schedule Float shall comply with the following:

        1) Float is a project resource available to both parties to meet contract Milestones and Contract Times.
        2) Use of float suppression techniques such as preferential sequencing or logic, special lead/lag logic restraints, and extended activity times are prohibited and use of float time disclosed or implied by use of alternate float-suppression techniques shall be shared to proportionate benefit of Owner and Contractor.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

3) Pursuant to above float-sharing requirement, no time extensions will be granted nor delay damages paid until a delay occurs which (i) impacts Project's critical path, (ii) consumes available float or contingency time, and (iii) extends Work beyond contract completion date.

9. Show progress of Work to within 5 working days prior to submission.

2. For contracts greater than $3,000,000.00, Contractor shall provide a Progress Schedule utilizing the Critical Path Method (CPM). The CPM shall define the sequential path of activities through a network diagram from beginning to end of project which provides for the completion of the project in the least amount of time within the Contract Times. The requirements of a CPM are as follows:

1. Sequence and interdependence of all construction tasks.
2. Sequence and interdependence of all concurrent utility work (if any).
3. Activity descriptions for each construction task.
4. Activity duration by number of calendar days for each construction task.
5. Early Start, Early Finish, Late Start, Late Finish dates for each construction task.
6. Highlight critical path in red.
7. Amount of float for each construction task.

C. Progress of the Work

1. If Contractor falls behind Baseline Schedule the following shall apply to the extent Contractor is attributable:

1. Owner reserves the right to:

1) Order Contractor to take steps deemed necessary to expedite the completion of the Work.

2) Direct Contractor to submit, for approval, a recovery Schedule identifying the order of Work remaining to be completed, what concurrent operations will be taking place and the starting and completion times for each task necessary to expedite the Work. The recovery Schedule shall show the Work being completed within the current Contract Times.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

3) Order Contractor to submit a detailed written statement as to how Contractor intends to correct the nonperformance and return to the most current Schedule.

4) To the extent Contractor is not attributable, Contractor has the right to recover associated Cost & Time.

2. Contractor shall submit a recovery Schedule, for approval, whenever Contractor's progress falls behind the approved Baseline Schedule, does not meet the above-mentioned criteria, and/or when requested by Engineer. The revised Schedule shall be submitted within seven (7) days of falling behind schedule or within seven (7) days of Engineer's request. Contractor agrees that failure to submit the revised Schedule within seven (7) days shall be cause for the suspension of Progress Payments until the revised Schedule is submitted.

3. Actions by Contractor to expedite and complete the Work within the allowable Contract Times shall not be justification for additional compensation.

4. Failure to make satisfactory arrangements to adjust the Work schedule and/or make the necessary changes to expedite the progress of the Project may result in disqualification of Contractor from submitting proposals for future work until Contractor's performance and schedule demonstrate that Contractor can complete the Contract within the Contract Times.

D. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.4, or as Owner and Contractor may otherwise agree in writing.

4.5 *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 the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the 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

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Requests for adjustment in Contract Times shall be submitted with documentation detailing actual delays in completion of the Work within the Contract Times. Such an adjustment shall 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 utility Owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
4. acts of war or terrorism.

D. 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.

E. Paragraph 8.3 governs 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.

F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times 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.

G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Article 5 – Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions

5.1 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor 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.

5.2 *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; 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. Contractor shall not enter upon nor use property adjacent to the Site of the Work, not under Owner control, until appropriate easements have been executed and a copy is on file at the Site. Contractor shall minimize interfering with traffic during performance of the Work. Contractor shall start the Work as required by the Contract Documents unless otherwise approved in writing by Engineer.

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

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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 7.12, 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 at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify, defend 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 the negligent acts or omissions related to 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 shall 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.

5.3 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions, if any, identify:

1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); 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, if any, 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 Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. 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; or
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.

5.4 *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 either:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.3 is materially inaccurate; or
2. is of such a nature as to require a change in the Drawings or Specifications; or
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;

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

then Contractor shall, within seven (7) days, 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 review the subsurface or physical condition in question; determine the necessity of Owner's obtaining 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 5.4.A above; 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. *Possible Price and Times Adjustments*:

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, 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:

    1. such condition must fall within any one or more of the categories described in Paragraph 5.4.A;

    2. 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 13.3; and

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

3. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

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:

   1. 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; or

   2. 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

   3. Contractor failed to give the written notice as required by Paragraph 5.4.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, or both, then any such adjustment shall 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, or both, 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.

5.5 *Underground Facilities and Utilities*

A. *Contractor's Responsibilities*: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities and Utilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the Owners of such Underground Facilities and Utilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
    1. reviewing and checking all information and data regarding existing Underground Facilities and Utilities at the Site;
    2. locating all Underground Facilities and Utilities shown or indicated in the Contract Documents as being at the Site;
    3. coordination of the Work with the Owners (including Owner) of such Underground Facilities and Utilities, during construction; and
    4. the safety and protection of all existing Underground Facilities and Utilities at the Site, and repairing any damage thereto resulting from the Work.

B. *Notice by Contractor*: If Contractor believes that an Underground Facility or Utility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated within 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), identify the Owner of such Underground Facility or Utility and give written notice to that Owner and to Owner and Engineer.

C. *Engineer's Review*: Engineer will promptly review the Underground Facility or Utility and conclude whether such Underground Facility or Utility was not shown or indicated in the Contract Documents, obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility or Utility in question; 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 or Utility; and 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 or Utility.

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 or Utility in question, addressing the resumption of Work in connection with such Underground Facility or Utility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Possible Price and Times Adjustments*:

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility or Utility at the Site that was not shown or indicated in the Contract Documents or 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:

    1. Contractor did not know of and should not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility or Utility in question;

    2. 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 13.3;

    3. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and

    4. Contractor gave the notice required in Paragraph 5.5.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, or both, then any such adjustment shall be set forth in a Change Order.

3. An equitable adjustment in the Contract Price or the Contract Time, if any, shall be defined as, and limited to, the time, equipment and labor necessary to affect the change required to address the Underground Facility or Utility. No adjustment will be made for idle equipment or labor while addressing the Underground Facility or Utility.

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, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility or Utility in question.

F. *Utilities*

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

1. Contractor is responsible for notifying all utility companies, pipeline Owners, or other parties affected by the work. Contractor shall contact the State of Colorado "One-Call" system for assistance in locating all utilities, pipelines, and other installations in the project. Contractor shall be responsible for coordinating the Work with all utility Owners to remove and rearrange underground or overhead utilities to avoid service interruption or duplicate work by the utility Owner. Contractor shall use work procedures that protect utilities or appurtenances that remain in place during construction.
2. Contractor agrees that Owner will not provide any additional compensation due to delays, inconvenience, or damages sustained by interference from said utilities or appurtenances or the operation of relocating said utilities.
3. Contractor shall notify the appropriate utility of any service interruption resulting from breakage, within the construction limits or otherwise, by Contractor's operations, and cooperate during service restoration. Contractor is responsible for correcting and/or paying for repairs for damage to utilities resulting from Contractor's operations. Contractor shall restore damaged facilities to the pre-existing condition.
4. Engineer will decide whether to adjust or relocate utility facilities or appurtenances found but not shown or indicated in Contract Documents or not shown or indicated with reasonable accuracy. Engineer shall make any necessary arrangements with the utility Owner or Contractor to perform any necessary unidentified work not indicated in the Contract Documents. Engineer will use the provisions of the Contract Documents to make compensable or non-compensable adjustments to the Contract because of revised or added work.

5.6 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions, if any, identify:

1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
2. 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, if any, 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 Article 1)

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. 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; or
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); (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing); and (4) continue working in other areas of the Project unless otherwise directed. 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 5.6.F. If

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, 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.

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, defend 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 or 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 5.6.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 5.6.I shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify, defend 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) to the extent 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 5.6.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

K. Owner shall not consider Contractor the "Generator, Owner, or Responsible Party" for any hazardous waste or hazardous material discovered in the normal performance of Work associated with this Contract, nor during the performance of any "Extra Work" unless such material has been brought to the site by Contractor.

L. Contractor shall maintain sole responsibility for workers' health and safety including, but not necessarily limited to, interpreting monitoring or sampling results provided by Owner or any another governmental agency, or performing Contractor's own monitoring or sampling to ensure worker health and safety.

M. The provisions of Paragraphs 5.3, 5.4, and 5.5 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

6.1 *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 all of Contractor's obligations under the Contract. These bonds shall remain in effect until two years after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.8, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, if any, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions, if any, or other specific provisions of the Contract.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, 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 shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.

D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 28 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.

E. 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.

F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.2 *Insurance—General Provisions*

A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions, if any.

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, if any, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, if any, or elsewhere in the Contract), certificates of

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

insurance establishing that Contractor has obtained and is maintaining the policies, coverages, and endorsements 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 and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, if any, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements 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 and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

E. 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, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.

F. If either party does not purchase or maintain all of 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.

G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.

H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect 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 shall be adjusted accordingly.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.

J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.3 *Contractor's Insurance*

A. *Workers' Compensation*: Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).
4. Foreign voluntary worker compensation (if applicable).
5. The limits of liability for the insurance required by Paragraph 6.3.A shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:
    1. State: Statutory.
    2. Applicable Federal (e.g., Longshoreman's): Statutory.
    3. Employer's Liability:
        1) $500,000 each Person.
        2) $500,000 each Accident.
        3) $500,000 each Disease.

B. *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:

1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
2. claims for damages insured by reasonably available personal injury liability coverage.
3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

C. *Commercial General Liability—Form and Content*: Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:

1. Products and completed operations coverage:
    1. Such insurance shall be maintained for three years after final payment.
    2. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions, if any, or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
    1. The limits of liability for the insurance required by Paragraph 6.3.C.2 shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:
        1) Bodily Injury:
            1) Each Accident: $1,000,000.
            2) Annual Aggregate: $2,000,000.
        2) Property Damage:
            1) Each Accident: $1,000,000.
            2) Annual Aggregate: $2,000,000.
3. Broad form property damage coverage.
4. Severability of interest.
5. Underground, explosion, and collapse coverage.
6. Personal injury coverage.
7. 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); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
8. 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.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

9. Contractor's general liability insurance shall include a per project or per location endorsement, which shall be identified in the certificate of insurance provided to Owner.

10. The limits of liability for the insurance required by Paragraph 6.3.C shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

    1. General Aggregate: $2,000,000.
    2. Products—Completed Operations Aggregate: $2,000,000.
    3. Personal and Advertising Injury (per Person/Organization): $1,000,000.
    4. Each Occurrence (Bodily Injury and Property Damage): $1,000,000.
    5. Property Damage liability insurance will provide Explosion, Collapse, and Underground coverages where applicable.

D. *Automobile liability*: Contractor shall purchase and maintain automobile liability insurance against claims 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 shall be written on an occurrence basis.

1. The limits of liability for the insurance required by Paragraph 6.3.D shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

    1. Bodily Injury:
        1) Each Person: $1,000,000.
        2) Each Accident: $1,000,000.
    2. Property Damage:
        1) Each Accident: $1,000,000.
    3. Combined Single Limit of $1,000,000.

E. *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. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.

1. The limits of liability for the insurance required by Paragraph 6.3.E shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

1. General Aggregate: $2,000,000 for Contract Values $200,000 or under; $5,000,000 for Contract Values over $200,000.
2. Each Occurrence: $2,000,000 for Contract Values $200,000 or under; $5,000,000 for Contract Values over $200,000.

F. *Contractor's pollution liability insurance*: Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.

G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions, if any; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and Subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.

H. *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 shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.

I. *General provisions*: The policies of insurance required by this Paragraph 6.3 shall:

1. include at least the specific coverages provided in this Article.
2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, if any, or required by Laws or Regulations, whichever is greater.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 14 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
4. remain in effect at least until final payment (and longer if expressly required in this Article) 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 Documents.
5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed 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.

J. 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.

K. With respect to all insurance required by this Paragraph 6.3, Contractor agrees to waive all rights of subrogation against Owner, Engineer, and each additional insured identified in the Supplementary Conditions, if any.

6.4 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 6.3, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

B. 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.

6.5 *Property Insurance*

A. *Builder's Risk*: Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof including the value of Owner-furnished equipment and materials, if applicable and as provided in the Supplementary Conditions, if any, (subject to such

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

deductible amounts as may be provided in the Supplementary Conditions, if any, or required by Laws and Regulations). This insurance shall:

1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions, if any, to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.5, Paragraphs 6.6 and 6.7, and any corresponding Supplementary Conditions, if any, the parties required to be insured shall collectively be referred to as "insureds."
2. 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; 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; underground exposure; 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, if any. 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 may be provided through other insurance policies acceptable to Owner and Contractor.
3. 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.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
5. 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).
6. extend to cover damage or loss to insured property while in transit.
7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
8. allow for the waiver of the insurer's subrogation rights, as set forth below.
9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
10. not include a co-insurance clause.
11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
12. include performance/hot testing and start-up.
13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.

B. *Notice of Cancellation or Change*: All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained by Contractor in accordance with this Paragraph 6.5 shall contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 14 days prior written notice has been given from insurance agency, agent or broker 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.

C. *Deductibles*: The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.

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 15.4, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance. The insurance shall contain no partial occupancy restriction for partial utilization of the Project by Owner for the purpose intended.

1. All insurance required by the Contract Documents, or by laws or regulations, shall remain in full force and effect on all phases of the Work, whether or not the Work is occupied or utilized by Owner, until all Work included in the agreement has been completed and final payment has been made.

2. Nothing contained in the insurance requirements shall be construed as limiting the extent of Contractor's responsibility for payment of damages resulting from Contractor's, Subcontractor's or supplier's operations under the Contract. Contractor agrees that Contractor alone shall be completely responsible for procuring and maintaining full insurance coverage as provided herein or as may be otherwise required by the Contract Documents. Any approval by Owner or Engineer shall not operate to the contrary.

E. *Additional Insurance*: 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 6.5, it may do so at Contractor's expense.

F. *Insurance of Other Property*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.6 *Waiver of Rights*

A. All policies purchased in accordance with Paragraph 6.5, 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. 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

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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, if any, 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. 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:

1. loss 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 perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.4, after Substantial Completion pursuant to Paragraph 15.3, or after final payment pursuant to Paragraph 15.6.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.6.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or Subcontractors of each and any of them.

D. 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, if any, 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.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

6.7 *Receipt and Application of Property Insurance Proceeds*

A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.5 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 21 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 6.5 shall 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, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

6.8 *Costs for Bonds and Insurance*

A. The cost of providing bonds and insurance is incidental to the Work unless otherwise indicated in the Contract Documents.

Article 7 – CONTRACTOR'S RESPONSIBILITIES

7.1 *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. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. Contractor shall cooperate with Engineer, any Project Representatives, Owner, and other Contractors at all times. Contractor shall designate one competent Superintendent, employed by Contractor, to coordinate and communicate with Engineer. Superintendent shall remain on the project site at all times during the Work, regardless of the individuals or legal entities performing the Work. Superintendent shall be experienced, capable of understanding the plans and specifications, and have the authority to execute any order or direction given by Engineer.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Superintendent is responsible for supplying any materials, equipment, labor, or other incidentals necessary to complete the Work. Owner reserves the right to halt the work if Superintendent is not present during the Work.

7.2 *Labor; Working Hours*

A. Contractor shall provide a sufficient amount of competent, suitably qualified personnel to perform the construction in an efficient manner, stay on schedule and complete all work as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site. Incompetent, incorrigible or otherwise unsuitable employees shall be dismissed from the Project by Contractor or their representatives when requested by Owner, and such persons shall not again be permitted to return to the Work without written consent from Engineer or Owner.

B. 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 shall be performed during regular working hours (7:00 am to 7:00 pm), Monday through Friday. Contractor will not perform Work on a Weekend or any legal holiday. Contractor may perform Work outside regular working hours or on Weekends or legal holidays only with Owner’s written consent. Contractor shall request in writing a minimum of 14 days prior to performing any Work outside of the regular working hours.

C. Contractor shall reimburse Owner for Owner's or Engineer's Construction Management and construction observation personnel costs for onsite personnel overtime work resulting from Contractor's overtime operations necessary to prevent delay to overall completion schedule due to Contractor's failure to maintain progress in accordance with approved Progress Schedule.

7.3 *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.

1. Unless otherwise indicated in the Contract Documents, Contractor shall remove any existing structures that are not to remain in place.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Existing structures are to remain in place until the replacement structures are complete unless such existing structures interfere with the Work. As directed by Engineer, any materials deemed fit for use elsewhere shall remain the property of Owner. Contractor shall remove such materials without damage in readily transportable sections.

2. Contractor shall mow all areas of the Project where vegetation growth exceeds 18 inches in height at no additional cost to Owner. Contractor shall cut such vegetation as close to the ground as possible. Contractor shall rake and remove the cuttings from the premise immediately.

B. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall 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.

1. Owner reserves the right to retain Ownership of all surplus materials. As directed by Engineer, Contractor shall deliver any retained surplus materials to a designated Owner facility. Contractor shall remove and dispose of any obstructions or surplus materials encountered and not retained by Owner at no additional expense to Owner. Contractor shall thoroughly clean any pavement, walks, gutter lines, or other constructed items to remove soil or other foreign materials throughout the course of the Project as directed by Engineer.

2. Contractor shall remove and dispose of all discarded materials, rubbish, or debris at no additional expense to Owner, and in accordance with all Local, State, and Federal laws and regulations.

3. All excess materials removed from the Project Site(s) shall be disposed of at locations acceptable to Owner. Contractor shall identify in writing the location of his disposal site and provide this to Engineer at the pre-construction meeting. During the Project, Contractor shall keep Engineer informed of all disposal dates, locations, and approximate material quantity.

4. Contractor shall handle and store materials to preserve their quality and avoid segregation or contamination. Engineer may allow Contractor to store materials on Owner property as directed by the Contract Documents. Contractor shall restrict operations on Owner property to the areas authorized by the Engineer. Contractor shall hold and save Owner, Engineer and its personnel free and harmless

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

from any liability because of unauthorized use, trespassing, or damage to equipment or materials stored on Owner property.

5. Contractor may store materials or equipment within the right-of-way at locations determined by Engineer. Contractor shall restore or repair any damage to such storage areas upon completion of the Work. Contractor shall obtain any additional storage space necessary at no additional cost to Owner.

6. Contractor shall protect all materials, regardless of the manner of protection, at no additional cost to Owner. Contractor shall store materials covered on a hard, clean surface when directed by Engineer. Contractor may construct a temporary storage building on the Project only with written permission from Engineer. Any temporary storage installations are the property of Contractor. Contractor shall remove such installations at the completion of the Work.

7. Engineer reserves the right to reject any materials not conforming to the requirements of the Contract Documents. Contractor shall remove any unacceptable materials from the Project. Engineer shall cause removal of any unacceptable materials not removed by Contractor. Engineer shall deduct the cost of such removal from monies due to Contractor.

8. Contractor shall furnish all materials necessary to complete the Work except those materials furnished by Owner as indicated in the Contract Documents. Owner shall deliver or make available such materials as directed in the Contract Documents. Contractor shall include the cost of obtaining, handling, and placing furnished materials in the Contract Price for the related items. Contractor is responsible for all furnished materials given to Contractor by Owner. Contractor shall bear the replacement cost of furnished materials due to loss or damage not the fault of Owner.

C. All materials and equipment shall 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.

1. Where the Work requires equipment be furnished, due to the lack of standardization of equipment as produced by the various manufacturers, it may become necessary to make minor modifications in the structures, buildings, piping, mechanical work, electrical work, accessories, controls, or other work, to accommodate the particular equipment offered. Contractor's Bid Price for any equipment offered shall include the cost of making any necessary changes subject to the approval of Engineer.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

2. All trucks and other equipment using pavement or structures must comply with the laws governing the operation of such equipment on the streets of the Owner. Contractor is responsible for any damage resulting from the operations of such equipment. Special permits do not relieve Contractor of such responsibility.
3. Contractor must keep any vehicle transporting material clean and in proper working condition. Such vehicles must transport materials in a manner to prevent the loss of materials.
4. Contractor may operate pneumatic tire earth moving equipment on PCC, BST, or ACC surface or base provided the tire pressures and load on any single axle are less than or equal to 40 psi and 20,000 pounds, respectively. Contractor shall not operate any machines with metal lugs or other projections on the treads on ACC, PCC, or BST surface or base.
5. Engineer must approve any equipment operation on new pavement. All equipment shall maintain a horizontal distance of two (2) feet or greater from the edge of such pavement. Approval by Engineer does not relieve Contractor of liability for any damage incurred due to operation of such equipment. All equipment operating on new pavement shall move on and off the pavement using a ramp comprised of materials intended to prevent damage. The ramp shall support the equipment in a manner to prevent any impact loading on the edge of the pavement or curb.
6. Contractor shall obtain all necessary oversized and/or overweight permits for all equipment used on the project at no additional cost to Owner. All track-mounted equipment shall cross bridges only at a speed and location relative to centerline acceptable to Engineer.
7. Contractor shall position any material transfer vehicles to prevent excessive pressures on a single wheel or support. Contractor shall not operate or position any dragline, power shovel, or crane on any surface or base pavement layer.

7.4 *"Or Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, 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 material or equipment, or

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

items from other proposed suppliers under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
    1. in the exercise of reasonable judgment Engineer determines that:
        1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
        2) it 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) it has a proven record of performance and availability of responsive service; and
        4) it is not objectionable to Owner.
    2. Contractor certifies that, if approved and incorporated into the Work:
        1) there will be no increase in cost to the Owner or increase in Contract Times; and
        2) it 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 a reviewed Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. *Effect of Engineer's Determination*: Neither review nor denial of an "or-equal" request shall result in any change in Contract Price. The

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.

E. *Treatment as a Substitution Request*: If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the proposed item as a substitute pursuant to Paragraph 7.5.

7.5 *Substitutes*

A. Unless the specification or description of an item of material or equipment 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 material or equipment under the circumstances described below. To the extent possible such requests shall 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 material or equipment from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.5.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 material or equipment that Contractor seeks to furnish or use. The application:

   1. shall 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 that specified, and

      3) be suited to the same use as that specified.

   2. 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

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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.

3. will identify:

1) all variations of the proposed substitute item from that specified, and

2) available engineering, sales, maintenance, repair, and replacement services.

4. shall 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. No payment shall be made for substitute items incorporated into the Work prior to being submitted to Engineer for review and acceptance.

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.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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 shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.5.D, by timely submittal of a Change Proposal.

7.6 *Concerning Subcontractors, Suppliers, and Others*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. Contractor shall identify all major Subcontractors and Suppliers in the Proposal.

B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities 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 Proposal, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity 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 7 days.

E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. 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, Suppliers, or other individuals or entities 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, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

replacement for the rejected Subcontractor, Supplier, or other individual or entity.

F. If Owner revokes acceptance of any Subcontractor, Supplier or other individual or entity, Contractor shall submit an acceptable substitute without an increase in Contract Price or Contract Time.

G. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall 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 fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.

J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.

K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.

L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.

N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.

O. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor

2. shall create 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.

7.7 *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 a particular 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 shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify, defend 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, defend 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.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

7.8 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. 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. Unless otherwise provided in the Contract Documents, Owner shall pay all charges of utility Owners for connections for providing permanent service to the Work.

7.9 *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.

B. Owner may be 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.

7.10 *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. Except where otherwise expressly required by applicable Laws and Regulations, 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, defend 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) to the extent arising out of or relating to such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.3.

C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid 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 notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

1. To the extent allowed by law, the Contractor shall take all appropriate measures to prevent the nesting of migratory birds in the construction area. This will include, but not be limited to, taking proactive measures to discourage migratory bird nesting activity, performing daily inspections of the site, equipment, machinery and other possible migratory bird nesting areas to ensure that migratory bird nesting activity is not occurring, and where necessary take proactive measures. Should new or previously unknown active migratory bird, raptor, eagle, or otherwise protected bird nests or wildlife be discovered within the limits of construction after start of construction, the Owner will, in consultation with the NGPC and USFWS, attempt to mitigate such discovered protected bird nests or wildlife, to continue to allow the Contractor access to construction areas in accordance with the Contractor's approved critical path schedule. If the discovered protected bird nest or wildlife activity is considered outside the Contractor's control and should delays or limitations of Contractor's work caused by the presence of a previously unknown protected bird nest or wildlife species result in changes to the approved critical path schedule, such days of delay may be considered for inclusion into a Change Order. No additional cost for the delay will be considered. For discovery of active nests prior to Contract Times commencement, the Contractor shall comply with Paragraph 4.2.A.

D. While not intended to be inclusive of all Laws or Regulations for which Contractor may be responsible under Paragraph 7.10, the following Laws or Regulations are included as mandated by statute or for the convenience of Contractor:

1. Contractor and its Subcontractors shall not discriminate against any employee or applicant for employment, to be employed in the performance of the Work under these Contract Documents, with

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

respect to its hire, tenure, terms, conditions, or privileges of employment, because of its race, color, creed, religion, sex, marital status, sexual orientation, gender identity, national origin, age, or disability.

2. Pursuant to the Keep Jobs in Colorado Act, C.R.S. § 8-17-101, *et seq.* (the "Act"), and the rules adopted by the Division of Labor of the Colorado Department of Labor and Employment implementing the Act (the "Rules"), Contractor shall employ Colorado labor to perform at least 80% of the work under this Contract and shall obtain and maintain the records required by the Act and the Rules. For purposes of this Section, "Colorado labor" means a person who is a resident of the state of Colorado at the time of this Contract, 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* qualification. A resident of the state of Colorado is a person with a valid Colorado driver's license, a valid Colorado state-issued photo identification, or documentation that they have resided in Colorado for the last 30 days. Contractor represents that it is familiar with the requirements of the Act and the Rules and will fully comply with same. This Section shall not apply to any project for which appropriation or expenditure of moneys may be reasonably expected not to exceed $500,000 in the aggregate for any fiscal year.

7.11 *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 reviewed 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.

7.12 *Safety and Protection*

A. Contractor shall be 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. Contractor shall take all necessary precautions for the

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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 and Utilities not designated for removal, relocation, or replacement in the course of construction.

B. 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. Contractor shall notify Owner; the Owners of adjacent property, Underground Facilities, and other utilities; and other Contractors and utility Owners performing work at or adjacent to the Site, when 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.

C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions, if any, identify any Owner's safety programs that are applicable to the Work.

D. 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.

E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.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).

F. Contractor's duties and responsibilities for safety and protection shall continue until Engineer has issued a notice to Owner and Contractor in

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

accordance with Paragraph 15.6.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

G. Contractor's duties and responsibilities for safety and protection shall 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.

H. Contractor shall provide for the orderly safe movement of traffic through or around the Work at all times.

7.13 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of 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 threatened 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 thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements*:

1. Before submitting a Shop Drawing or Sample, Contractor shall have:

    1. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

    2. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria,

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

installation requirements, materials, catalog numbers, and similar information with respect thereto;

3. determined and verified 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

4. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and checking of that submittal, and that Contractor approves the submittal. Contractor's stamp or certification shall include project name, Contractor's reviewer name, and date of Contractor's approval.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review of each such variation, unless approved, Contractor will execute the Work in accordance with the Contract Documents.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall submit required Shop Drawings and Samples to Engineer for review in accordance with the accepted Schedule of Submittals. Each submittal will be submitted with a Transmittal of Contractor's Submittal form provided by the Engineer.

1. *Preparation of Shop Drawings and Submittals:*

1. Scope of any shop drawing, submittal, and letter of transmittal shall be:

1) Limited to one (1) Specification Section.

2) Within one Specification Section, Contractor shall provide complete systems in one submittal package.

3) Contractor shall provide all of the submittal information to the Engineer from one specification section in one submittal package, unless approved by Engineer.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

2. *Numbering of transmittals:*
    1. Include as prefix the Specification Section number followed by a series number, "-xx", beginning with "01" and increasing sequentially with each additional transmittal.
    2. If more than one (1) submittal under any Specification Section is approved by Engineer, assign consecutive series numbers to subsequent transmittal letters.
3. *Describing transmittal contents:*
    1. Provide listing of each component or item in submittal capable of receiving an independent review action.
    2. Identify for each item:
        1) Manufacturer and Manufacturer's Drawing or data number.
        2) Contract Document tag number(s).
        3) Unique page numbers for each page of each separate item listed in the transmittal.
    3. When submitting "or-equal" items that are not the products of named manufacturers, include the words "or-equal" in the item description.
4. *Contractor shall not use red color for marks on transmittals.*
5. *Shop Drawings*:
    1. Contractor shall submit the electronic file or the number of copies required as identified below.
        1) Unless specifically prohibited elsewhere in the Contract Documents, each submittal may be made in an electronic format. Electronic submittals shall consist of a single electronic file and include the transmittal cover sheet.
        2) Electronic submittals shall be in the Adobe Acrobat Portable Document Format (PDF). Use the latest version available at the time of execution of the Agreement. PDF files shall meet the following requirements:
            1) Electronic files which contain more than 10 pages shall contain internal book-marking from an index page to major sections of the document.
            2) Shall be unsecured, unencrypted and not password protected.
            3) Allow the following actions:
                (1) Printing.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

(2) Assembling.

(3) Content copying or extraction.

(4) Extraction for Access.

(5) Commenting.

(6) Fitting of form fields.

(7) Signing.

(8) Creation of duplicate information.

3) Hard copy submittals shall consist of a minimum of four (4) copies for Engineer and up to a maximum of five (5) for the Contractor (9 total) of the entire submittal package including separate transmittal cover sheets.

2. Data shown on the Shop Drawings will 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.D.

3. When Shop Drawings are submitted for the purpose of showing the installation in greater detail, their review shall not excuse Contractor from requirements shown in the Contract Documents.

4. For-Information-Only submittals upon which Engineer is not expected to conduct review or take responsive action may be so identified in the Contract Documents.

5. When the Contract Documents require an engineered system to be provided by the Contractor such as an anchoring system or retaining wall, a Professional Engineer certified in the State of Colorado must design and stamp the Shop Drawings

6. *Samples*:

1. Contractor shall submit the required number of Samples required in the Contract Documents.

2. 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.D.

7. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Other Submittals*: Contractor shall submit other required submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Contract Documents and as identified below.

1. Submit number of required submittals specified in the Contract Documents or as identified below.

    1. Electronic submittals shall consist of a single electronic file. Electronic submittals shall be in the Adobe Acrobat Portable Document Format (PDF) meeting the requirements of Paragraph 7.16.B.5.1.2.

    2. Hard copy submittals shall consist of a minimum of four (4) copies for Engineer and up to a maximum of five (5) for the Contractor (9 total) of the entire submittal package including separate transmittal cover sheets.

2. When other submittals are submitted for the purpose of showing the installation in greater detail, their review shall not excuse Contractor from requirements shown in the Contract Documents.

3. Miscellaneous other submittals upon which Engineer is not expected to conduct review or take responsive action may be so identified in the Contract Documents.

D. *Engineer's Review*:

1. Engineer will provide timely review of required submittals in accordance with the approved Schedule of Submittals. Engineer's review will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Contractor is responsible to field verify all dimensions, mating surfaces, and component connections to provide a proper fit.

2. Engineer's review will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.

3. Engineer's review of a separate item as such will not indicate full review of the assembly in which the item functions.

4. Engineer's review of a required submittal shall not relieve Contractor from responsibility for any variation from the requirements of the

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written acknowledgement of each such variation by specific written notation thereof incorporated in or accompanying the submittal. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.

5. Engineer's review of required submittal shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
6. Engineer's review of a required submittals, or of a variation from the requirements of the Contract Documents, shall 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 or review, of required submittals shall result in such item(s) becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in reviewed Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.
9. Review Action:
    1. Shop Drawings and Samples.
        1) Items within transmittals will be reviewed for overall design intent and will receive one of the following actions:
            1) A - FURNISH AS SUBMITTED.
            2) B - FURNISH AS NOTED.
            3) C - REVISE AND RESUBMIT.
            4) D - REJECTED.
            5) E - REVIEW NOT REQUIRED.
    2. Submittals received will be initially reviewed to ascertain inclusion of Contractor's approval stamp or written certification. Submittals without a written certification, not stamped by the Contractor, or stamped with a stamp containing language other than that specified herein will not be reviewed for technical content and will be returned without any action.
    3. Submittals returned with Action "A" or "B" are considered ready for fabrication and installation.
    4. If for any reason a submittal that has an "A" or "B" Action is resubmitted, it must be accompanied by a letter defining the

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

changes that have been made and the reason for the resubmittal.

5. Destroy or conspicuously mark "SUPERSEDED" all documents having previously received "A" or "B" Action that are superseded by a resubmittal.
6. Failure to include any specific information specified under the submittal paragraphs of the Specifications section will result in the submittal being returned to the Contractor with "C" or "D" Action.
7. Calculations required in individual Specification Sections will be received for information purposes only, as evidence calculations have been performed by individuals meeting specified qualifications, and will be returned stamped "E. Review Not Required" to acknowledge receipt.
8. Transmittals of submittals which the Engineer considers as "Not Required" submittal information, which is supplemental to but not essential to prior submitted information, or items of information in a transmittal which have been reviewed and received "A" or "B" Action in a prior submittal, will be returned with Action "E. Review Not Required."
9. Samples may be retained for comparison purposes.
10. Remove samples when directed.
11. Approved samples submitted or constructed, constitute criteria for judging completed work.
12. Finished work or items not equal to samples will be rejected.

E. *Resubmittal Procedures*:

1. Resubmittal Preparation:
    1. Number with original root number and a suffix letter starting with "A" on a (new) duplicate transmittal form.
    2. Do not increase the scope of any prior transmittal.
    3. Account for all components of prior transmittal.
    4. If items in prior transmittal received "A" or "B" Action code, list them and indicate "A" or "B" as appropriate.
    5. Do not include submittal information for items listed with prior "A" or "B" Action in resubmittal.
    6. Provide all information in one resubmittal unless approved by Engineer and indicate "Outstanding-To Be Resubmitted at a

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Later Date" for any prior "C" or "D" Action item not included in resubmittal.

2. Contractor shall make corrections identified by Engineer and shall return the required number of corrected copies of resubmittals for review. Contractor shall direct specific attention in writing to revisions other than the corrections identified by Engineer on previous submittals.

3. Contractor shall furnish required resubmittals with sufficient information and accuracy to receive an "A" or "B" Action code for the resubmittal (second submittal). Engineer will record Engineer's time for reviewing a third or subsequent resubmittal required to achieve an "A" or "B" Action code, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.

4. If Contractor requests a change of a previously reviewed submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

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 and its officers, directors, members, partners, employees, agents, consultants, and Subcontractors shall be entitled to rely on Contractor's warranty and guarantee.

B. Contractor is responsible for protecting the Work from damage due to weather or other causes until Engineer accepts the Work in writing, including any time that the Work is suspended. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible;

2. normal wear and tear under normal usage; or

3. Anything else not attributable to Contractor other than that which could have been prevented by reasonably protecting the Work.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

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 of a Shop Drawing or Sample submittal;
6. the issuance of a notice of acceptability by Engineer;
7. any inspection, test, or approval by others; or
8. any correction of defective Work by Owner.

D. 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 shall 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, defend and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees 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 performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury 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

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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 shall 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.

C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and Subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.

B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional in the State of Colorado, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

D. Pursuant to this paragraph, Engineer's review of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

7.20 *Value Engineering Change Proposal (VECP)*

1. Prior to Guaranteed Maximum Price (GMP) development, the Contractor shall support design completion with development of value engineering suggestions which if accepted will be included in the development of the GMP without including incentive sharing as indicated below. Following the development and mutual agreement of the GMP and during construction, the Contractor is encouraged to develop, prepare, and submit Value Engineering Change Proposals (VECPs) voluntarily for consideration by the Owner and Engineer. The Contractor shall share in any net savings realized from accepted VECPs post-GMP development, in accordance with the incentive sharing provision below.

2. These requirements apply to all proposals initiated, developed, and identified as VECPs by Contractor. To be qualified as a VECP, a proposal must be identified as a VECP at the time of its submission to Engineer.

3. Change Proposal Requests initiated by Owner or Engineer will not be considered as VECPs.

4. Contractor shall submit VECPs in writing to the Engineer with the understanding that Engineer is not required to approve them. If a VECP is accepted by Owner, an amount of 25 percent of the resultant net savings will be paid to Contractor.

5. Each VECP must result in a net cost savings without impairing essential functions and characteristics of the item(s) or of any other part of the project, including but not limited to service life, reliability, operation and maintenance costs, desired aesthetics, and safety. Net savings is calculated by subtracting Owner VECP implementation costs from the Contractor's proposed cost reduction. Owner implementation costs may include Engineering review and redesign and Owner review costs.

6. As a minimum, the following information shall be submitted with each VECP:

    1. A statement that the proposal is submitted as a VECP.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

2. A statement concerning the basis for the VECP and benefits to Owner. Basis and benefits statement shall include a description of the difference between the existing contract requirement and the proposed requirement, the comparative advantages and disadvantages of each, a justification when an item's function or characteristics are being altered, the effect of the change on the end item's performance, potential impact on environmental and other permits, and any pertinent objective test data.
3. An itemized list and analysis of the Contract items and requirements that must be changed if the VECP is accepted.
4. A separate, detailed comparison of the estimated costs under (i) the affected portions of the existing Contract requirements and (ii) the Contract modified by the VECP. The cost reduction associated with the VECP shall take into account the Contractor's allowable VECP implementation costs, including any amount attributable to subcontracts. Contractor shall use the mark ups for overhead and profit allowed by the conditions of the Contract.
5. Proposed specifications, specification revisions, and recommendations as to how such VECP changes are to be accomplished.
6. A description of additional potential costs the Owner may incur in implementing the VECP, such as test and evaluation, operating and maintenance costs, and permit requirements.
7. A statement indicating the time and date by which a Change Order adopting the VECP must be issued so as to obtain the maximum cost effectiveness, noting any effect on the contract completion time or delivery schedule. This statement shall include confirmation from suppliers of availability and proposed delivery dates of materials and equipment.
8. Designs shall be signed and sealed by a registered Professional Engineer licensed in the State of Colorado.
9. Construction costs shall include as a minimum the following:
    1. Detailed listing of quantities of materials and equipment.
    2. Unit prices of materials and equipment.
    3. Labor hours and hourly rates for installation labor.
    4. Detailed listing of equipment and equipment rates used in the installation.
    5. Subcontract and Contractor mark ups.
    6. Permit fees and license costs.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

10. Identification of any previous submissions of the VECP, including the dates submitted and previous Owner actions, if known.

7. Engineer's Action.

    1. Engineer shall track the costs for VECP review on a time and materials cost basis. As part of the review, Engineer will estimate Owner costs associated with implementation of the proposed changes.
    2. Engineer will provide the Owner with comments on the VECP and an estimate of Owner costs.
    3. Engineer and Owner shall review the VECP and Engineer comments to allow the Owner to make a decision to accept or reject the VECP.
    4. The Engineer will process VECPs expeditiously; however, it shall not be liable for any delay in acting upon a VECP.
    5. If the VECP is not accepted, the Engineer shall notify the Contractor in writing, explaining the reasons for rejection. The Contractor may withdraw any VECP, in whole or in part, at any time before it is accepted by Owner. The Contractor shall not be reimbursed for expenditures for VECP preparation and submission, other than implementation costs, if the VECP is accepted. The Owner will pay for Owner's and Engineer's costs to review the first rejected VECP. For additional VECPs submitted and rejected, the Engineer and Owner will record all costs for review on a time and material basis and the Contractor will be back charged for the review costs.

8. Accepted VECPs will be processed in the same manner prescribed for any other proposal which would necessitate issuance of a Change Order. Owner may accept in whole or in part any VECP by issuing a Change Order which identifies the VECP on which it is based and made before contract performance is completed. The Owner's decision to accept or reject all or part of any VECP and the decision as to which of the sharing rates applies shall be final and not subject to the Disputes clause or otherwise subject to litigation or appeal. Owner will not be liable to Contractor for failure to accept or act upon any VECP submitted pursuant to these requirements or for any delays to the work attributable to any such proposal. The preparation, submission or consideration of a VECP does not entitle the Contractor to a schedule extension.

    1. Until Owner approves a VECP by a Change Order, Contractor shall be obligated to the terms and conditions of the existing Contract. If an executed Change Order or a Work Order has not been issued by the date specified in Contractor's VECP, or another date

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Contractor may subsequently have specified in writing, the VECP shall be deemed rejected.

9. The Change Order effecting the necessary Contract modification will establish the net savings agreed upon, will provide for adjustment in the Contract prices, and will indicate the net savings to be equally divided between Contractor and Owner.

    1. Contractor shall prepare and submit the VECP at no additional cost to Owner. Owner reserves the right to include in the VECP any conditions it deems appropriate for consideration, approval, and implementation of the VECP. Contractor's share of the net savings constitutes full compensation for designing and developing the VECP and effecting all changes pursuant to the agreement.

10. Acceptance of the VECP by Owner and performance of the Work by Contractor will not change the Contract time limit unless specifically addressed in the Change Order authorizing the VECP.

11. Owner expressly reserves the right to adopt a VECP for general use in its contracts. VECPs identical or similar to previously accepted VECPs will be eligible for consideration and compensation provided they were not previously adopted for general application by Owner. When a VECP is adopted for general use, compensation for it will be applied only to those contracts awarded and for which the subject VECP has been submitted before the date of its general adoption.

12. The following will not normally be considered acceptable VECPs:

    1. Changes to basic bridge design.
    2. Changes to basic pavement designs.
    3. Changes requiring different right-of-way limits.
    4. Requirements set by permit conditions.

13. VECPs based on prior changes to Owner contracts and/or procedures are not acceptable.

7.21 *Request for Information*

A. Contractor may, after exercising due diligence to locate required information, request from Engineer clarification or interpretation of the requirements of the Contract Documents. Engineer shall respond to such Contractors' requests for clarification or interpretation.

7.22 *Equal Employment Opportunity Clause*

A. During the performance of this Contract, Contractor agrees as follows:

1. Contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, creed, sex, marital

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

status, sexual orientation, gender identity, age, disability or national origin. Contractor shall take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, religion, color, sex or national origin. As used herein, the word "treated" shall mean and include, without limitation, the following: recruited, whether by advertising or by other means; compensated; selected for training, including apprenticeship; promoted; upgraded; demoted; downgraded; transferred; laid off; and terminated. Contractor agrees to and shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officers setting forth the provisions of this nondiscrimination clause.

2. Contractor shall, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, creed, sex, marital status, sexual orientation, gender identity, national origin, age, or disability.

3. Contractor shall send to each representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice advising the labor union or workers' representative of Contractor's commitments under the equal employment opportunity clause of the Owner and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

4. Contractor shall furnish to the Human Rights and Relations Director all federal forms containing the information and reports required by the federal government for federal contracts under federal rules and regulations, including the information required by Sections 10-192 to 10-194, inclusive, and shall permit reasonable access to its records. Records accessible to the Human Rights and Relations Director shall be those which are related to Paragraphs 7.22.B.1 through 7.22.B.7 of this subsection and only after reasonable notice is given Contractor. The purpose of this provision is to provide for investigation to ascertain compliance with the program provided for herein.

5. Contractor shall take such actions with respect to any Subcontractor as Owner may direct as a means of enforcing the provisions of Paragraphs 7.22.A.1 through 7.22.A.7 herein, including penalties and sanctions for noncompliance; however, in the event Contractor becomes involved in or is threatened with litigation as the result of such directions by Owner, Owner will enter into such litigation as is necessary to protect the interests of Owner and to effectuate the

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

provisions of this division; and, in the case of contracts receiving federal assistance, Contractor or Owner may request the United States to enter into such litigation to protect the interests of the United States.

6. Contractor shall file and shall cause their Subcontractors, if any, to file compliance reports with Contractor in the same form and to the same extent as required by the federal government for federal contracts under federal rules and regulations. Such compliance reports shall be filed with the Human Rights and Relations Director. Compliance reports filed at such times as directed shall contain information as to the employment practices, policies, programs and statistics of Contractor and their Subcontractors.

7. Contractor shall include the provisions of Paragraphs 7.22.A.1 through 7.22.A.7 of this section, "Equal Employment Opportunity Clause," and section 10-193 in every subcontract or purchase order so that such provisions will be binding upon each Subcontractor or Supplier.

Article 8 – OTHER WORK AT THE SITE

8.1 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, 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 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 utility work at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford each other Contractor that performs such other work, each utility Owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. 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,

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work of which Contractor discovers 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.

8.2 *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, if any, 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, if any, Owner shall have sole authority and responsibility for such coordination.

8.3 *Legal Relationships*

A. If, in the course of performing other work at or adjacent to the Site for Owner, Owner's employees, any other Contractor working for Owner, or any utility Owner for whom the Owner is responsible 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 may be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. 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 shall 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. When applicable,

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

any such equitable adjustment in Contract Price shall 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 is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

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. 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 to 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.

C. 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 to Contractor.

D. 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, defend 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) to the extent arising out of or relating to such damage, delay, disruption, or interference.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Article 9 – OWNER'S RESPONSIBILITIES

9.1 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.2 *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 shall be that of the former Engineer.

9.3 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.4 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.5 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.1.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.3.

C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at or adjacent to the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been utilized by Engineer in preparing the Contract Documents.

9.6 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.7 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.8 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.2.B.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

9.9 *Limitations on Owner's Responsibilities*

A. 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.

B. Owner or Owner's authorized representatives shall not be liable, either personally or as employees of Owner, for any action taken in performance of their authorized duties.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.6.

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 Documents (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

10.1 *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.

10.2 *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

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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 10.8. 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.

10.3 *Resident Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative (RPR) , as needed 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 RPR will be as provided in the Supplementary Conditions, if any, and limitations on the responsibilities thereof will be as provided in Paragraph 10.8. RPR is Engineer's agent at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions. RPR's dealings in matters pertaining to Contractor's work in progress shall in general be with Engineer and Contractor, keeping Owner advised as necessary. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner with the knowledge of and under the direction of Engineer. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions, if any.

1. Duties and responsibilities of RPR include:

   1. *Schedules:* Review the progress schedule, schedule of Shop Drawing, Sample, and Other Submittals, and schedule of values prepared by Contractor and consult with Engineer concerning acceptability.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

2. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.
3. *Liaison:*
    1. Serve as Engineer's liaison with Contractor, working principally through Contractor's Superintendent, assist in providing information regarding the intent of the Contract Documents.
    2. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-site operations.
    3. Assist in obtaining from Owner additional details or information when required for proper execution of the Work.
4. *Interpretation of Contract Documents:* Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
5. *Shop Drawings, Samples, and Other Submittals:*
    1. Record date of receipt of Samples, Shop Drawings, and other Submittals.
    2. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
    3. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been reviewed by Engineer.
6. *Modifications:* Consider and evaluate Contractor's suggestions for modifications in the Contract Documents and report such suggestions, together with RPR's recommendations, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
7. *Review of Work and Rejection of Defective Work:*
    1. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
    2. Report to Engineer whenever RPR believes that any part of Contractor's work in progress will not produce a completed Project that conforms generally to the Contract Documents or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Documents, or has been damaged, or does not meet the requirements of any inspection, test or review required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or review.

8. *Inspections, Tests, and System Startups:*

    1. Consult with Engineer in advance of scheduled major inspections, tests, and systems startups of important phases of the Work.

    2. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.

    3. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems startups.

    4. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections, and report to Engineer.

9. *Records:*

    1. Maintain at the Site orderly files for correspondence, reports of job conferences, reproductions of original Contract Documents including all Change Orders, Field Orders, Change Proposal Requests, Work Change Directives, Addenda, additional Drawings issued subsequent to the execution of the Contract, Engineer's clarifications and interpretations of the Contract Documents, progress reports, Shop Drawing, Sample and Other Submittals received from and delivered to Contractor, and other Project-related documents.

    2. Prepare a daily report, recording Contractor's and Subcontractor's hours on the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Change Proposal Requests, Work Change Directives, or changed conditions, Site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.

    3. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

10. *Reports:*
    1. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and Schedule of Shop Drawing, Sample, and Other Submittals.
    2. Draft, and recommend to Engineer, proposed Change Orders, Change Proposal Requests, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
    3. Furnish to Engineer and Owner copies of all inspection, test, and system startup reports.
    4. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, damage to property by fire or other causes, or the discovery of any Constituent of Concern.
11. *Payment Requests:* Review Applications for Payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the schedule of values, for Lump Sum Work completed, materials and equipment delivered at the Site but not incorporated in the Work, and submission of updated Progress Schedule.
12. *Certificates, Operation and Maintenance Manuals:* During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these submittals delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.
13. *Completion:*
    1. Participate in a Substantial Completion inspection, assist in the determination of Substantial Completion, preparation of a punch list of items to be completed or corrected, and issuance of the Certificate of Substantial Completion.
    2. Participate in a final inspection in the company of Engineer, Owner and Contractor and prepare a final punch list of items to be completed and deficiencies to be remedied.
    3. Observe whether all items on the final punch list have been completed or corrected and make recommendations to Engineer concerning acceptance of the Work.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

2. *Limitations of Authority of RPR: CM* shall 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 Agreement or the Contract Documents.
   3. Undertake any of the responsibilities of Contractor, Subcontractors, Suppliers, or Contractor's Superintendent.
   4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work unless such advice or directions are specifically required by the Contract Documents.
   5. Advise on, issue directions regarding, or assume control over 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. Accept Shop Drawing, Sample or Other submittals from anyone other than Contractor.
   8. Authorize Owner to occupy the Project in whole or in part.

10.4 *Rejecting Defective Work*

A. Engineer has the authority to reject Work in accordance with Article 14.

B. The acceptance of materials or equipment by or on behalf of Owner at any time shall not preclude future rejection if they are subsequently found to be defective, inferior in quality, not equal to the material or equipment specified, or are not as otherwise represented to Engineer or Owner.

10.5 *Shop Drawings, Change Orders and Payments*

A. Engineer's authority and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.

B. Engineer's authority and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.

C. Engineer's authority as to Change Orders is set forth in Article 11.

D. Engineer's authority as to Applications for Payment is set forth in Article 15.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

10.6 *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 13.3. Contractor acknowledges that the quantities contained in the Bid Form, unless otherwise indicated in the Contract Documents, are estimates that may vary.

10.7 *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.

10.8 *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, shall 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 Paragraph 15.6.A will only be to determine generally that their content complies with the requirements of, and in the case of

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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 10.8 shall also apply to the RPR , if any.

10.9 *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 (if any) of which Engineer has been informed.

Article 11 – Amending The Contract Documents; Changes in the Work

11.1 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

1. *Change Orders*:

1. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.

2. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not 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, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.

2. *Work Change Directives*: 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 11.4 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

3. *Field Orders*: Engineer may authorize changes in the Work if the changes are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. The changes may include, but are not limited to, Contract item quantities; construction details; roadway, sewer, structure or facility grade or alignment; construction sequencing or phasing; or roadway restrictions and detours. Alterations will not waive or invalidate any Contract provisions. 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. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.2 *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. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes 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 shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate 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.

11.3 *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 14.5.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

11.4 *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 shall comply with the provisions of Paragraph 11.6. Any Claim for an adjustment of Contract Price shall 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 13.3); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed unit price and estimated quantity (subject to the provisions of Paragraph 13.3); or

3. 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 11.4.C.2); or

4. 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 13.1) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.4.C).

C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit shall 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:

   1. for costs incurred under Paragraphs 13.1.B.1 the Contractor's fee shall be 15 percent;

   2. for costs incurred under Paragraphs 13.1.B.2 and 13.1.B.3, the Contractor's fee shall be five percent;

   3. 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 11.4.C.2.a and 11.4.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.1.A.1 and 13.1.B.1 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five 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 shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;

4. no fee shall be payable on the basis of costs itemized under Paragraphs 13.1.B.4, 13.1.B.5, and 13.1.C;

5. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

6. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.4.C.2.1 through 11.4.C.2.5, inclusive.

11.5 *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 shall comply with the provisions of Paragraph 11.6. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.

B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.5, concerning delays in Contractor's progress.

11.6 *Change Proposals*

A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures*: Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to Engineer and

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Owner within 15 days after the submittal of the Change Proposal. The supporting data shall 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. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.

2. *Engineer's Action*: Engineer will review each Change Proposal 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 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.

3. *Binding Decision*: Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

B. *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 that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.7 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders covering:

1. changes in the 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 11.2, (b) required because of Owner's acceptance of defective Work under Paragraph 14.4 or Owner's correction of defective Work under Paragraph 14.7, or (c) agreed to by the

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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 in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.6, or Article 12.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.7, it shall be deemed to be of full force and effect, as if fully executed.

11.8 *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

12.1 *Claims*

A. *Claims Process*: The following disputes between Owner and Contractor shall be submitted 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; and
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.

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 shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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. Supporting data shall include, but is not limited to, references to the Progress Schedule, detailed accounting of costs, and other information as required by the Contract Documents.

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 shall 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 shall 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 shall 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 shall 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 shall 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 shall 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

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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 shall be incorporated in a Change Order 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

13.1 *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 13.1 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. 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 shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.1.C, and shall 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. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, 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, shall be included in the above to the extent authorized by Owner.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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 shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall 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, who 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 shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.1.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
    1. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
    2. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, 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.
    3. Construction Equipment and Machinery:
        1) Rentals of all construction equipment and machinery, and the parts thereof in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

cease when the use thereof is no longer necessary for the Work.

2) Costs for equipment and machinery owned by Contractor will be paid at a rate shown for such equipment in the current edition of RS Means Construction Cost Data. An hourly rate will be computed by dividing the monthly rates by 176.

3) These computed rates will include all operating costs. Costs will include 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, shall cease to accrue when the use thereof is no longer necessary for the changed Work. Equipment or machinery with a value of less than $1,000 will be considered small tools, and as such will be excluded from the cost of Work.

4. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

5. 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.

6. 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 property insurance established in accordance with Paragraph 6.5), 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 shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

7. The cost of utilities, fuel, and sanitary facilities at the Site.

8. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

9. 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 shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, 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 13.1.B.1 or specifically covered by Paragraph 13.1.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. 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.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.1.B.

D. *Contractor's Fee*: When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the agreed upon Proposal. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.4.C.

E. *Documentation*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

itemized cost breakdown together with supporting data, AKA Open Book.

13.2 *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 on account of any of the foregoing will be valid.

C. *Contingency Allowance*: The Owner intends for a collaborative approach with the Contractor to be applied with regards to how the contingency allowance, if any, is developed, managed and utilized, and that the contingency allowance approach will be finalized prior to development and mutual agreement of the Guaranteed Maximum Price (GMP).

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

13.3 *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. Contractor shall accept payment for Work quantities that vary from Contract quantities at the original Contract Prices. Owner shall not make any allowances or adjustments due to increased expense, loss of expected reimbursement, or loss of

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

anticipated profits resulting from alteration of the Work or unbalanced bidding. Engineer reserves the right to eliminate Contract items. Contractor may request reimbursement for all tangible costs incurred before notification of elimination. Engineer shall decide the validity of any such request.

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. Work described in the Contract Documents or reasonably inferred as required for a functionally complete installation, but not identified in the listing of unit price items, shall be considered incidental to Unit Price Work listed and the cost of incidental work included as a part of the unit price.

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, subject to the provisions of the following paragraph.

E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:

1. The total amount earned differs from the original Contract Price by more than 25 percent; and
2. the final quantity of a particular item of Unit Price Work performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and
3. there is no corresponding adjustment with respect to any other item of Work; and
4. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price.

Article 14 – Tests and Inspections; Correction, Removal or Acceptance of Defective Work

14.1 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction will have access to the Site and the Work, including

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

all material fabrication facilities, at all 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 therewith as applicable.

14.2 *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 shall be governed by the provisions of Paragraph 14.5. Referenced test standards shall be the most current version available on Bid Day unless otherwise indicated in the Contract Documents. The costs of all inspections, tests, and approvals not meeting the specification requirements will be paid for by Owner but will be deducted from Contractor's Final Payment.

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

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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 shall 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 shall 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.

14.3 *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 notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Within 30 days of 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 and stipulated penalties 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

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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.

G. If Contractor fails to comply within 30 days of receipt of written notice of defective Work, Owner may correct such defective work in accordance with Paragraph 14.7.

14.4 *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 shall 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.

14.5 *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 other than that identified in Paragraph 14.5.B 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

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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); or Owner shall be entitled to accept defective Work in accordance with Paragraph 14.4 in which case Contractor shall still be responsible for all costs associated with exposing, observing, and testing the defective Work.

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, or both, 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.

14.6 *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 shall 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.

14.7 *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 rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor and opportunity to cure or to commence to cure, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.7, 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

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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 14.7 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 14.7.

Article 15 – Payments To Contractor; Set-Offs; Completion; Correction Period

15.1 *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 on account of Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.3. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period. Contractor acknowledges that the quantities contained in the bid form for Unit Price Work, unless otherwise indicated in the Contract Documents, are estimates that may vary.

B. *Applications for Payments-Schedule of Values*:

1. At least 28 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. 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 shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications-Schedule of Values*:

1. Engineer will, within 14 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:

    1. the Work has progressed to the point indicated;

    2. 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 13.3, and any other qualifications stated in the recommendation); and

    3. 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:

    1. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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

2. 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:
   1. to supervise, direct, or control the Work, or
   2. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
   3. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
   4. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
   5. 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 15.1.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
   1. the Work is defective, requiring correction or replacement;
   2. the Contract Price has been reduced by Change Orders;
   3. Owner has been required to correct defective Work in accordance with Paragraph 14.7, or has accepted defective Work pursuant to Paragraph 14.4;
   4. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
   5. 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.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

D. *Progress Estimates for Payment-Unit Price Work:*

1. Contractor may receive monthly Progress Estimates based on the quantities of Work completed during the preceding month. Engineer shall measure the quantities of Work completed and provide to Contractor for review a Progress Estimate covering the Work completed to date.
2. Engineer may include stored materials in the Progress Estimate designated for incorporation into the Work that:
    1. meet Contract Document and submittal requirements; and
    2. are unique items purchased expressly to be incorporated into the Work; and
    3. are delivered and stockpiled at the project Site or other approved location; and
    4. will not be incorporated into the project for more than 90 days; and
    5. the value of such materials amounts to more than $2,000; and
    6. are supported by copies of paid invoices or receipts of delivery; and
    7. are not living or perishable.
3. Owner shall reimburse Contractor for stored materials received and verified. The reimbursement value shall be 100 percent of the material cost less the retainage amount as defined in the Agreement. The reimbursement value may not exceed the appropriate portion of the value of the Contract item(s) in which incorporate such materials. The quantity of stored materials eligible for reimbursement shall not exceed the total estimated quantity required to complete the Work. Owner shall deduct any Progress Payments for eligible materials from Progress Payments for completion of the Contract item(s) in which incorporate such materials.
4. Payment for eligible materials shall not constitute acceptance of the materials. Contractor is responsible for any damages to or loss of stored materials until such materials are incorporated into the Work and accepted. Owner shall reimburse Contractor for all other items upon completion and acceptance of the Work.
5. The amount of retainage with respect to Progress Payments will be as defined in the Agreement.

E. *Review of Progress Estimates-Unit Price Work:*

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

1. Contractor will review and confirm the quantities of Work within 7 days after receipt of each Progress Estimate. Contractor will sign and return the Progress Estimate to Engineer, or request in writing any corrections. Engineer may make necessary corrections and resubmit the Progress Estimate.
2. Engineer will sign and submit to Owner and recommend, in accordance with Paragraph 15.1.C, the Progress Estimate for payment. The Progress Estimate does not constitute acceptance of the Work.
3. Beginning with the second Progress Estimate, Contractor's signed estimate shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Progress Estimates.

F. *Payment Becomes Due*:

1. Thirty 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.

G. *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:
    1. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of 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;
    2. 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;
    3. Contractor has failed to provide and maintain required bonds or insurance;
    4. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
    5. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

and inspections, or return visits to manufacturing or assembly facilities, solely due to Contractor's acts or omissions;

6. the Work is defective, requiring correction or replacement;
7. Owner has been required to correct defective Work in accordance with Paragraph 14.7, or has accepted defective Work pursuant to Paragraph 14.4;
8. the Contract Price has been reduced by Change Orders;
9. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
10. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work. The calculation to determine the cost for Liquidated Damages shall include, but is not limited to, the cost for Owner to administer and manage the project after the final day of the Contract including any additional days allowed and/or agreed upon by Owner and Contractor. Owner's administration and management of the project includes, but is not limited to, time and expenses of Engineer, RPR(s), survey crew, materials testing services, administrative personnel, and all overhead and profit;
11. 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;
12. Contractor fails to complete the Work in accordance with the Contract provisions, or the Work is not acceptable to Engineer, for Incentive/Disincentive work;
13. there are other items entitling 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 written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall 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 shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.1.F.1.

15.2 *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 seven days after the time of payment by Owner.

15.3 *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. Within 14 days 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 shall 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 seven 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.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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.

15.4 *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, 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 permits 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 15.3.A through 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

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.3 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 6.5 regarding builder's risk or other property insurance.

15.5 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will make a final inspection with Owner and Contractor within 14 days 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.

15.6 *Final Payment*

A. *Application for Payment-Schedule of Values*:

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 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

   1. all documentation called for in the Contract Documents;

   2. consent of the surety, if any, to final payment;

   3. 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.

   4. a list of all disputes that Contractor believes are unsettled; and

   5. 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.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

6. certified statement regarding payment to Workmen's Compensation and Unemployment.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.6.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, Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers, or Owner may withhold the amount of any lien and/or the amount Contractor has a basis to withhold from final payment.

B. *Engineer's Review of Application and Acceptance-Schedule of Values*:

1. 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 14 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall 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. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.7. 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. *Final Progress Estimate for Payment-Unit Price Work:*

1. Engineer shall measure the final quantities of Work completed and provide to Contractor for review a Final Progress Estimate.

D. *Review of Final Progress Estimate-Unit Price Work:*

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

1. Contractor will review and confirm the final quantities of Work within 14 days after receipt of the Final Progress Estimate. Contractor will sign and return the Final Progress Estimate to Engineer, or request in writing any corrections. Engineer may make necessary corrections and resubmit the Final Progress Estimate. Contractor shall include documentation required in Paragraph 15.6.A.2.
2. Engineer will sign and submit to Owner and recommend the Final Progress Estimate for payment.

E. *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.

F. *Payment Becomes Due*: Following compliance with §38-26-107, C.R.S., at least thirty days after the presentation to Owner of the final Application for Payment or the Final Progress Estimate, and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.7 *Waiver of Claims*

A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.5, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.

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 or appealed under the provisions of Article 17.

C. Final payment does not preclude Owner from correcting any measure, estimate, or certificate made before or after Contract completion. Owner may recover from Contractor or Surety, or both, overpayments upheld for failure to fulfill Contract obligations. A waiver on the part of Owner of any breach of any part of the Contract is not a waiver of any other or subsequent breach. Contractor shall assume liability for latent defects, fraud, or such gross mistakes as may amount to fraud, or as

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

regards the right of Owner under any warranty or guaranty without prejudice to the terms of the Contract.

15.8 *Correction Period*

A. As long as Contractor timely achieves Final Completion, within two years after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall, within 30 days after receiving notice, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such other adjacent areas;
2. correct such defective Work;
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, 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 therefrom.

B. If Contractor does not comply with the terms of Owner's written instructions within 30 days after receiving notice, 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 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 correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).

C. In special circumstances where a particular item of equipment is placed in continuous service before Final Completion, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

D. 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 two (2) years after such correction or removal and replacement has been satisfactorily completed.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

F. Correction Period shall be increased from two (2) years specified above to five (5) years for Detectible Warning Panels and Curb Inlet Tops.

Article 16 – Suspension of Work and Termination

16.1 *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 and no more than 180 days in aggregate 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 may be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

16.2 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events may 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 16.2.A occurs, then after giving Contractor (and any surety) written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to arrange a conference with Contractor and any surety to address Contractor's failure to perform the Work. The conference shall be held no later than 21 days after receipt of notice.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

1. If Owner, Contractor, and Surety do not agree to allow Contractor to proceed to perform the Contract, Owner may, to the extent permitted by Laws and Regulations, declare a Contractor Default and formally terminate Contractor's right to complete the Contract. Written notification of Contractor Default shall not be declared earlier than 28 days after Contractor and Surety have received notice of conference and opportunity to cure or to commence to cure, to address Contractor's failure to perform the Work.
2. If Contractor's services are terminated, Surety shall be obligated to take over and perform the Work. If Surety does not commence performance thereof within 21 days after date of additional written notice demanding Surety's performance of its obligations, then Owner, without process or action at law, may take over any portion of the Work and complete it as described in Paragraph 16.2.C.
3. Neither Owner, Engineer, nor any of their respective consultants, agents, officers, directors, or employees shall be in any way liable or accountable to Contractor or Surety for the method by which the completion of the Work, or any portion thereof, may be accomplished or for the price paid therefor.
4. Owner, notwithstanding the method used in completing the Contract, shall not forfeit the right to recover damages from Contractor or Surety for Contractor's failure to timely complete the entire Contract. Contractor shall not be entitled to any claim for damages on account of the method used by Owner in completing the Contract.
5. Maintenance of the Work shall continue to be Contractor's and Surety's responsibilities as provided for in the bond requirements of the Contract Documents or any special guarantees provided for under the Contract Documents or any other obligations otherwise prescribed by law.

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 16.2.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

E. If Owner or Surety proceeds as provided in Paragraph 16.2.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 6.1.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.2.B and 16.2.D.

16.3 *Owner May Terminate For Convenience*

A. Upon seven 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

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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 on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

16.4 *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 or 180 days in aggregate 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 seven 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 16.3.

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, seven 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 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

17.1 *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; and

2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

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, if any; or
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, if any, or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

C. Notwithstanding any applicable statute of limitations, a party giving notice under Paragraph 17.1 shall commence an action within one year of giving such notice. Failure to do so shall result in the Claim being time-barred and Owner's or Engineer's action or denial shall become final and binding.

Article 18 – Miscellaneous

18.1 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

18.2 *Computation of Times*

A. When any period of time is referred to in the Contract by days, it will be computed to include the first and include the last day of such period. If the last day of any such period falls on a Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.3 *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

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.4 *Mutual 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, Contractor nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or Subcontractors, shall be liable to each other for any claims, costs, losses, or damages sustained on or in connection with any other project or anticipated project.

18.5 *No Waiver*

A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision for the remainder of this Contract.

18.6 *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 or completion of the Contract or termination of the services of Contractor.

18.7 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

18.8 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

18.9 *Mutual Waiver of Consequential Damages*

A. Owner, Engineer and Contractor mutually waive all consequential, incidental or special damages that each may have against the other whether sounding in contract, tort, equity or otherwise.

Attachment B: Proposal Form

Project	North Water Treatment Facility
Location	645 Holbrook Street, Erie, CO 80516
Attachment	Attachment B – Proposal Form
Respondent	
Date Updated	{Date}

Scope of Work	**Definition**	**Price**
Phase 1 – Pre-Construction Services	Includes all pre-construction services as described in RFP. Price submitted on this line shall be supported by a separate table showing a coordinated work breakdown structure inclusive of all personnel, hours, rates, expenses, subcontractor tasks and costs, and travel fees required to perform the Phase 1 work. Presented as hourly, not to exceed.	$775,000
Phase 2 – Construction Services	Markup to be applied to actual cost of work (subcontractors, materials, and actual cost of work performed) for Work Package services as a percentage markup. Refer to Article 13 of the CMAR Contract reimbursable and non-reimbursable costs.	%7.5

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Attachment C: 15% Conceptual Design Drawings

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

Town of Erie, Colorado

North Water Treatment Plant

501 State Highway 52
Erie, Colorado

VICINITY MAP
NOT TO SCALE

TOWN OF ERIE
1874

15% REVIEW

MAY 2024

BURNS & MCDONNELL PROJECT NO. 160267

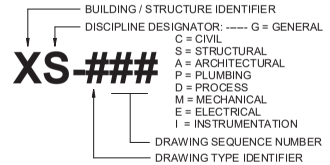
no.	date	by	ckd	description
A	12/10/23	JHD	BDP	10% REVIEW
B	05/15/24	JLL	BDP	15% REVIEW

BURNS McDONNELL

Cover

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

DRAWING IDENTIFICATION SYSTEM:

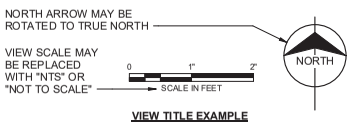


BUILDING / STRUCTURE IDENTIFIERS:

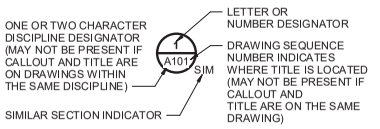
0 - GENERAL DRAWINGS
1 - RAW WATER PUMP STATION
2 - TREATMENT BUILDING
3 - DISINFECTION CONTACT BASIN
4 - SOLIDS HANDLING FACILITY

DRAWING TYPE IDENTIFIERS:

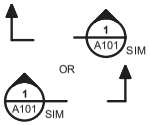
0 - GENERAL (NOTES,SYMBOLS, ETC)
1 - PLANS
2 - ELEVATIONS
3 - SECTIONS
4 - ENLARGED PLANS
5 - DETAILS
6 - SCHEDULES
7 - DISCIPLINE SPECIFIC
8 - DISCIPLINE SPECIFIC
9 - ISOMETRICS



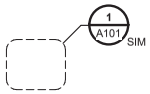
VIEW TITLE EXAMPLE



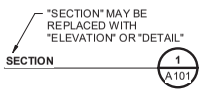
SECTION, DETAIL, AND ELEVATION SYMBOL IDENTIFIERS



SECTION CALLOUT EXAMPLE



DETAIL CALLOUT EXAMPLE



SECTION, DETAIL, OR ELEVATION TITLE EXAMPLE

ELEVATION CALLOUT EXAMPLE

TOWN OF ERIE, CO

Contract Drawings

SHEET NUMBER	SHEET NAME
GENERAL	
0G-000	COVER SHEET
0G-001	INDEX OF DRAWINGS
CIVIL	
0C-001	CIVIL NOTES, ABBREVIATIONS, & LEGEND
0CX-101	OVERALL EXISTING CONDITIONS
0CS-101	OVERALL SITE PLAN
0CS-102	SITE ACCESS PLAN
0CS-103	GENERAL DRAINAGE PLAN
0CS-201	ENLARGED SITE PLAN - NORTH
0CS-202	ENLARGED SITE PLAN - SOUTH
0CU-101	OVERALL UTILITY PLAN
0CU-201	ENLARGED UTILITY PLAN - NORTH
0CU-202	ENLARGED UTILITY PLAN - SOUTH
STRUCTURAL	
0S-001	STRUCTURAL ABBREVIATIONS, SYMBOLS, & SPECIAL INSPECTION REQUIREMENTS
0S-002	STRUCTURAL GENERAL NOTES
ARCHITECTURAL	
0A-001	LEGEND & ABBREVIATIONS
1A-101	RAW WATER PUMP STATION CODE REVIEW AND OVERALL FLOOR PLAN
1A-103	RAW WATER PUMP STATION ROOF PLAN
1A-901	RAW WATER PUMP STATION ISOMETRIC VIEWS
2A-101	TREATMENT BUILDING OVERALL FLOOR PLAN
2A-901	TREATMENT BUILDING ISOMETRIC
3A-101	DISINFECTION CONTACT BASIN FLOOR PLAN
3A-901	DISINFECTION CONTACT BASIN ISOMETRIC VIEWS
4A-101	SOLIDS HANDLING FACILITY BELOW GRADE FLOOR PLAN
4A-102	SOLIDS HANDLING FACILITY FIRST LEVEL FLOOR PLAN
4A-103	SOLIDS HANDLING FACILITY SECOND LEVEL FLOOR PLAN
4A-901	SOLIDS HANDLING FACILITY ISOMETRIC VIEWS
PROCESS	
0D-001	GENERAL NOTES, LEGEND, AND ABBREVIATIONS
0D-002	RAW WATER PROCESS FLOW DIAGRAM
0D-003	PROCESS FLOW DIAGRAM
0D-004	DESIGN CRITERIA
0D-005	CHEMICAL FEED DESIGN CRITERIA
0D-006	RAW WATER HYDRAULIC PROFILE
0D-007	NWTP HYDRAULIC PROFILE
1D-100	RAW WATER PUMP STATION PLAN
1D-300	RAW WATER PUMP STATION SECTIONS
1D-900	RAW WATER PUMP STATION ISOMETRIC
2D-100	TREATMENT BUILDING FLOOR PLAN
2D-300	TREATMENT BUILDING SECTIONS
2D-900	TREATMENT BUILDING ISOMETRIC
3D-100	DISINFECTION CONTACT BASIN LOWER LEVEL PLAN
3D-101	DISINFECTION CONTACT BASIN UPPER LEVEL PLAN
3D-300	DISINFECTION CONTACT BASIN SECTION
3D-900	DISINFECTION CONTACT BASIN ISOMETRIC
4D-100	SOLIDS HANDLING FACILITY FLOOR PLANS
4D-300	SOLIDS HANDLING FACILITY SECTION
4D-900	SOLIDS HANDLING FACILITY ISOMETRIC
ELECTRICAL	
0E-001	ELECTRICAL GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS
0ES-100	ENLARGED SITE PLAN
0E-610	MV DIAGRAM I
0E-611	MV DIAGRAM II
0E-620	ELECTRICAL ONE LINE -RAW WATER
0E-621	ELECTRICAL ONE-LINE -TREATMENT BUILDING
0E-625	ELECTRICAL ONE-LINE -DCB
0E-630	ELECTRICAL ONE-LINE -SOLIDS HANDLING
0E-632	ELECTRICAL ONE-LINE -DEEP WELL INJECTION
0E-650	NETWORK ARCHITECTURE I
0E-651	NETWORK ARCHITECTURE II

no.	date	by	chk	description
A	12/20/23	JHD	BDP	10% REVIEW
B	05/15/24	JHD	BDP	15% REVIEW

BURNS McDONNELL

TOWN OF ERIE, COLORADO
NORTH WATER TREATMENT PLANT
PROJECT 160267

Index

6/2/2023 8:48:34 AM

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

GENERAL NOTES:

1. ALL DIMENSIONS, ELEVATIONS, AND STATIONS ARE IN FEET, UNLESS INDICATED OTHERWISE.
2. CALLOUTS, COORDINATES, AND DIMENSIONS ARE POINTED TO OR MEASURED TO EDGE OF PAVEMENT, BACK OF CURB, OR OUTSIDE FACE OF FOUNDATION WALL, UNLESS INDICATED OTHERWISE.
3. THE CONTRACTOR SHALL CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO AT LEAST TWO BUSINESS DAYS PRIOR TO CONSTRUCTION, NOT INCLUDING DAY OF NOTIFICATION. CALL 811 OR 1-(800) 922-1987.
4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS PRIOR TO THE COMMENCEMENT OF ANY WORK ON THE PROJECT, OR AS APPROVED BY THE OWNER. CONTRACTOR SHALL COORDINATE ALL REQUIRED INSPECTIONS WITH THE APPROPRIATE ADMINISTRATIVE AUTHORITY. COST OF ANY PERMITS AND FEES ASSOCIATED SHALL BE PAID BY CONTRACTOR.
5. ALL WORK SHALL BE SUBJECT TO INSPECTION BY AUTHORIZED PERSONNEL OF LOCAL AND GOVERNMENT REGULATORY AGENCIES AND THE CONTRACTOR.
6. THE CONTRACTOR SHALL CONFINE GRADING AND CONSTRUCTION ACTIVITIES TO WITHIN THE OWNER'S PROPERTY. DISTURBANCES TO THE PROPERTY SHALL BE RESTORED TO THE ORIGINAL CONDITION AS INDICATED.
7. CONTRACTOR SHALL PROVIDE ADEQUATE ACCESS TO EXISTING SITE FACILITIES ON THE PROJECT SITE DURING CONSTRUCTION AT ALL TIMES. ACCESS AND PARKING FACILITIES SHALL BE SUBJECT TO THE OWNER'S APPROVAL.
8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF ANY PROBLEM IN CONFORMING TO THE APPROVED GRADES AS INDICATED FOR ANY ELEMENT OF THE PROPOSED IMPROVEMENTS PRIOR TO CONSTRUCTION.
9. THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL NECESSARY TO COMPLETE THE WORK, INCLUDING ANY MOBILIZATION OF EQUIPMENT ON PUBLIC ROADWAYS. ALL TRAFFIC CONTROL DEVICES AND METHODS OF CONTROLLING TRAFFIC THROUGH CONSTRUCTION ZONES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (M.U.T.C.D.), FEDERAL HIGHWAY ADMINISTRATION, AND ALL REVISIONS THERETO (INCLUDING STATE SUPPLEMENTS).
10. UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS; AND, THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH ARE PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. CONTRACTOR SHALL PROVIDE THE COST OF ANY POTHOLING OR UNDERGROUND INVESTIGATIONS DEEMED NECESSARY TO IDENTIFY AND LOCATE EXISTING FACILITIES AND/OR UTILITIES.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE PREVENTION OF DAMAGE TO ADJACENT PROPERTY. NO PERSON SHALL EXCAVATE ON LAND SO CLOSE TO THE PROPERTY LINE AS TO ENDANGER ANY ADJOINING IMPROVEMENTS, SIDEWALK, ALLEY OR UTILITY WITHOUT SUPPORTING AND PROTECTING SUCH PROPERTY FROM SETTLING, OR OTHER DAMAGE THAT MIGHT RESULT FROM THE WORK PRESCRIBED ON THIS PLAN. THE LOCAL AGENCY WILL HOLD THE CONTRACTOR RESPONSIBLE FOR CORRECTION OF DAMAGE TO ADJACENT PROPERTY, PUBLIC OR PRIVATE.
12. WHEN CONSTRUCTION WORK RESTRICTED TO BEING PERFORMED WITHIN EASEMENTS, CONTRACTOR SHALL CONFINE WORK WITHIN THE PERMANENT AND TEMPORARY EASEMENTS.
13. THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE FOR PROPERTIES ADJACENT TO THE PROJECT DURING CONSTRUCTION.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY MONUMENTATION, AND WILL BE REQUIRED TO RE-ESTABLISH, AT HIS/HER EXPENSE, ANY MONUMENTATION WHICH IS DAMAGED OR DESTROYED DURING CONSTRUCTION OPERATIONS. SUCH MONUMENTATION SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
15. CONTRACTOR IS RESPONSIBLE FOR THE SAFE AND SECURE STORING OF GOODS, MATERIALS, AND EQUIPMENT ONSITE. CONTRACTOR SHALL COORDINATE THE FINAL LOCATION OF STORAGE AND LAYDOWN AREAS WITH THE OWNER PRIOR TO CONSTRUCTION.
16. ALL WORK SHALL BE CONDUCTED IN A PROFESSIONAL WORKMANSHIP MANNER USING QUALITY MATERIALS.
17. CONTRACTOR SHALL RESTORE ALL EARTH AREAS OUTSIDE OF THE PROPOSED PAVEMENT AND/OR CRUSHED ROCK SURFACING LIMITS AND WITHIN THE PROJECT LIMITS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
18. TREES AND SHRUBS WITHIN THE CONSTRUCTION LIMITS WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE TRIMMED AND/OR REMOVED AND DISPOSED OF BY THE DESIGN/BUILDER. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT SHALL BE SAVED AND PROTECTED FROM DAMAGE.
19. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY POWER, PROCESS, AND UTILITY SERVICE BYPASSES AND CONNECTIONS REQUIRED BY THE WORK AND TO SUSTAIN CONTINUOUS OPERATIONS OF THE FACILITY.
20. THE CONTRACTOR SHALL DEVELOP A DEWATERING AND EROSION CONTROL PLAN WITHIN THE GUIDELINES AND CONSTRAINTS OUTLINED IN THE DRAWINGS. ALL EROSION AND SEDIMENT CONTROL MATERIALS AND PROCEDURES SHALL BE IN ACCORDANCE WITH LOCAL PRINCIPLES AND THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) SPECIFICATIONS. IF NECESSARY, DESIGN/BUILDER SHALL OBTAIN ALL PERMITS TO COMPLY WITH NPDES AND STATE REQUIREMENTS.
21. ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AND LOCAL AND GOVERNMENT CODES, ORDINANCES, AND REGULATIONS. IN CASE OF CONTRADICTION OR DISCREPANCY BETWEEN REQUIREMENTS, CONTRACTOR SHALL INCORPORATE WHICHEVER IS MOST STRINGENT. WHERE A QUESTION REMAINS ON WHICH REQUIREMENT IS MOST STRINGENT, CONTRACTOR SHALL SUBMIT ISSUE TO THE ENGINEER IN WRITING. THE DECISION OF THE ENGINEER SHALL BE CONSIDERED FINAL.
22. NO ACTIVITY MAY USE UNSUITABLE MATERIAL (E.G. TRASH, DEBRIS, CAR BODIES, ASPHALT, ETC.). MATERIAL USED FOR CONSTRUCTION OR DISCHARGED MUST BE FREE FROM TOXIC POLLUTANTS IN TOXIC AMOUNTS (SEE SECTION 307 OF THE CLEAN WATER ACT).
23. TEMPORARY FILLS MUST BE REMOVED IN THEIR ENTIRETY AND THE AFFECTED AREAS RETURNED TO PRE-CONSTRUCTION ELEVATIONS. ALL TEMPORARILY DISTURBED AREAS SHALL BE RESTORED TO THE PRE-CONSTRUCTION CONDITIONS.

CIVIL LEGEND AND SYMBOLOGY

SCREENED OR GRAYSCALE ITEMS REPRESENT EXISTING FEATURES

LINE SYMBOLOGY

PROPERTY LINE		5600	EXISTING CONTOUR
E	ELECTRIC LINE (OVERHEAD)	5600	PROPOSED CONTOUR
E	ELECTRIC LINE (BURIED)	XXX	FENCE (WOOD OR METAL)
FO	FIBER OPTIC		BUILDING OUTLINE
G	NATURAL GAS LINE		EDGE OF POND
SS	SANITARY SEWER	W	WATER LINE
ST	STORM SEWER	PW	POTABLE WATER
		RW	RAW WATER

SYMBOLS (UTILITIES)

- SANITARY SEWER MH

PATTERNS

- GRAVEL/AGGREGATE
- CONCRETE
- ASPHALT
- BUILDING
- DEMOLITION

SYMBOLS (MISC)

- DECIDUOUS TREE
- CONIFEROUS TREE
- CONTROL POINT
- SIGN
- BOLLARD

ABBREVIATIONS:

@	AT
Ø	DIAMETER
'	FOOT OR FEET
"	INCH OR INCHES
#	NUMBER
%	PERCENT
APPROX	APPROXIMATE
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY FOR TESTING & MATERIALS
ATG	ADJUST TO GRADE
BC	BACK OF CURB
BLDG	BUILDING
BMP	BEST MANAGEMENT PRACTICES
BO	BY OTHERS
BOP	BOTTOM OF PIPE
BSC	BOLTED SLEEVE COUPLING
BWR	BACKWASH RECYCLE
BWS	BACKWASH SUPPLY
BWW	BACKWASH WASTE
C&G	CURB AND GUTTER
CATV	CABLE TELEVISION
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION
CL	CENTERLINE
CIS	CENTER IN SLAB
CIW	CENTERED IN WALL
CMP	CORRUGATED METAL PIPE
CNTR	CENTER
CO	CLEAN-OUT
CONC	CONCRETE
CONSTR	CONSTRUCTION
CP	CONTROL POINT
DAF	DISSOLVED AIR FLOATATION
DCB	DISINFECTION CONTACT BASIN
DESC	DESCRIPTION
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DND	DO NOT DISTURB
DPS	DISTRIBUTION PUMP STATION
DRPS	DRAIN PUMP STATION
DWG	DRAWING
E	EAST OR EASTING
EBOX	ELECTRIC BOX
EFF	EFFLUENT
ELEC	ELECTRIC
EL OR ELEV	ELEVATION
EOA	EDGE OF ASPHALT
ESMT	EASEMENT
ETC	ETCETERA
EXIST	EXISTING
EXP	EXPANSION
FC	FACE OF CURB
FE	FILTER EFFLUENT
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
FT	FOOT OR FEET
GAC	GRANULAR ACTIVATED CARBON
GAL	GALLON
GM	GAS METER
GS	GALVANIZED STEEL
HDPE	HIGH DENSITY POLYETHYLENE
HMA	HOT MIX ASPHALT
HP	HIGHPOINT
ICV	IRRIGATION CONTROL VALVE
INV	INVERT
LF	LINEAR FEET
LP	LIGHT POLE
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
N	NORTH OR NORTHING
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NISP	NORTH INTEGRATED SUPPLY PROJECT
NWRF	NORTH WATER RECLAMATION FACILITY
OC	ON CENTER
OVHD	OVERHEAD
PAC	POWDER ACTIVATED CARBON
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PCC	PORTLAND CEMENT CONCRETE
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PROP	PROPOSED
PRV	PRESSURE REDUCING VALVE
PT	POINT OF TANGENCY
PVMT	PAVEMENT
R	RADIUS
R&R	REMOVE AND REPLACE
R/W OR ROW	RIGHT-OF-WAY
RCP	REINFORCED CONCRETE PIPE
RO	REVERSE OSMOSIS
RW	RAW WATER
S	SOUTH
SAN	SANITARY
SCH	SCHEDULE
SDWK	SIDEWALK
SLDG	SLUDGE
SPEC	SPECIFICATION
SS	SANITARY SEWER
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STRUC	STRUCTURAL
TBA	TO BE ABANDONED
TBD	TO BE DETERMINED
TBR	TO BE REMOVED
TBR&R	TO BE REMOVED AND REPLACED
TBRBO	TO BE REMOVED BY OTHERS
TBR&RBO	TO BE REMOVED AND REPLACED BY OTHERS
TC	TOP OF CURB
TE	THREADED END
TH	THICKNESS
TOW	TOP OF WALL
TP	TOP OF PAVEMENT
TPED	TELEPHONE PEDESTAL
TRANSF	TRANSFORMER
TYP	TYPICAL
UIP	USE IN PLACE
W	WEST
W/	WITH
WM	WATER METER
WMH	WATER MANHOLE
WSE	WATER SURFACE ELEVATION
WTR	WATER
WV	WATER VALVE

no.	date	by	ckd	description
A	05/15/24	HCH	NT	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date	detailed
MAY 2024	H HARRIS
designed	**checked**
J LEE	N TESSITORE

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

CIVIL NOTES, ABBREVIATIONS, & LEGEND

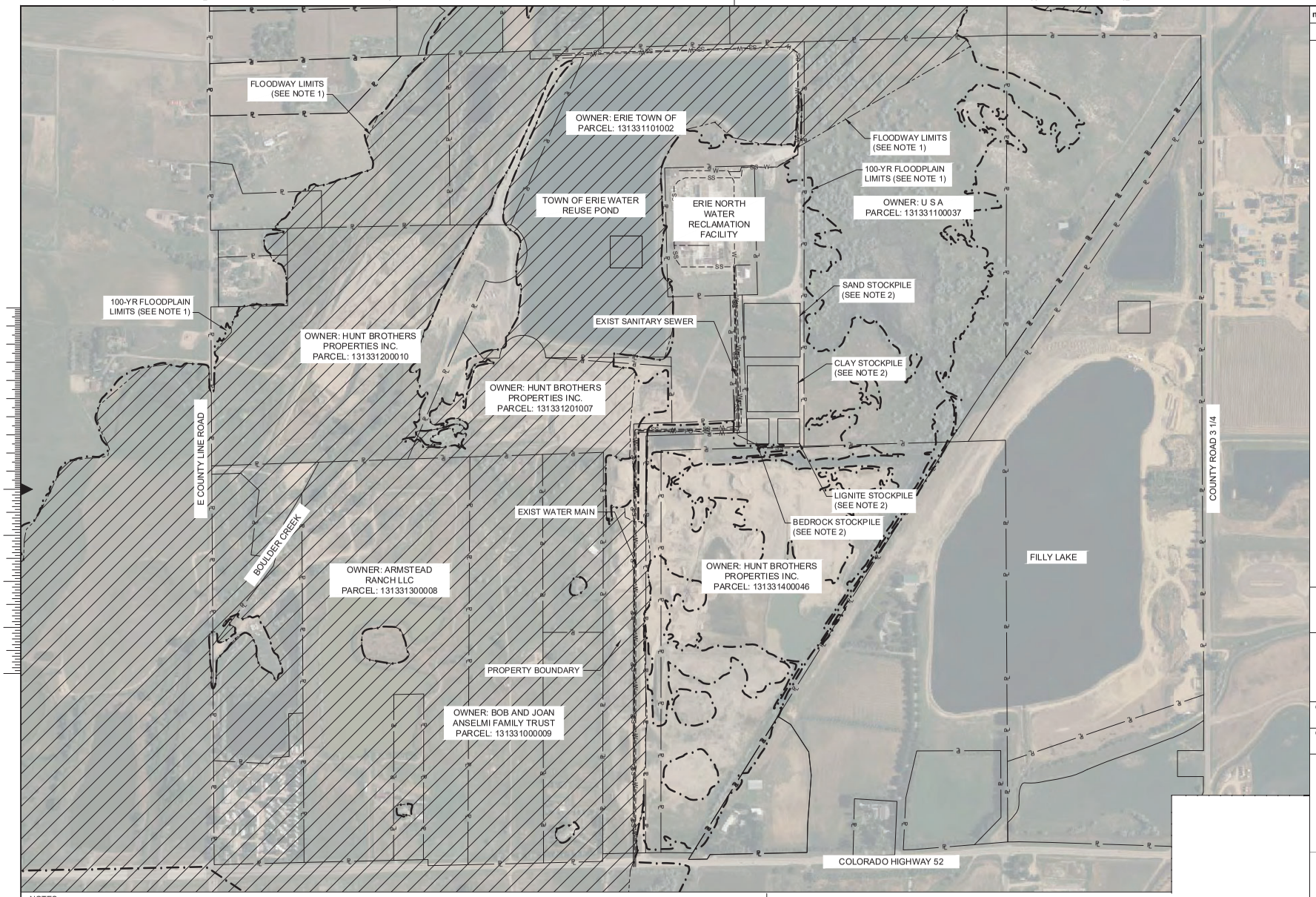
project	contract
160267	

drawing **0C-001** — rev. **A**

sheet of sheets

160267_0C-001.DWG

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



NOTES

1. FLOODPLAIN AND FLOODWAY LIMITS FROM TOWN OF ERIE FUTURE NORTH WATER TREATMENT PLANT CONDITIONAL LETTER OF MAP REVISION (CLOMR) REPORT BY JACOBS DATED FEBRUARY 23, 2022.
2. STOCKPILES FOR MATERIAL EXCAVATED AS PART OF COAL CREEK PROJECT. LIMITS OF STOCKPILES ARE APPROXIMATE.

OVERALL EXISTING CONDITIONS

0 300' 600'
SCALE IN FEET

NORTH

no.	date	by	ckd	description
A	05/15/24	HCH	NT	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date	detailed
MAY 2024	H HARRIS
designed	**checked**
J LEE	N TESSITORE

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

OVERALL EXISTING CONDITIONS

project	contract
160267	

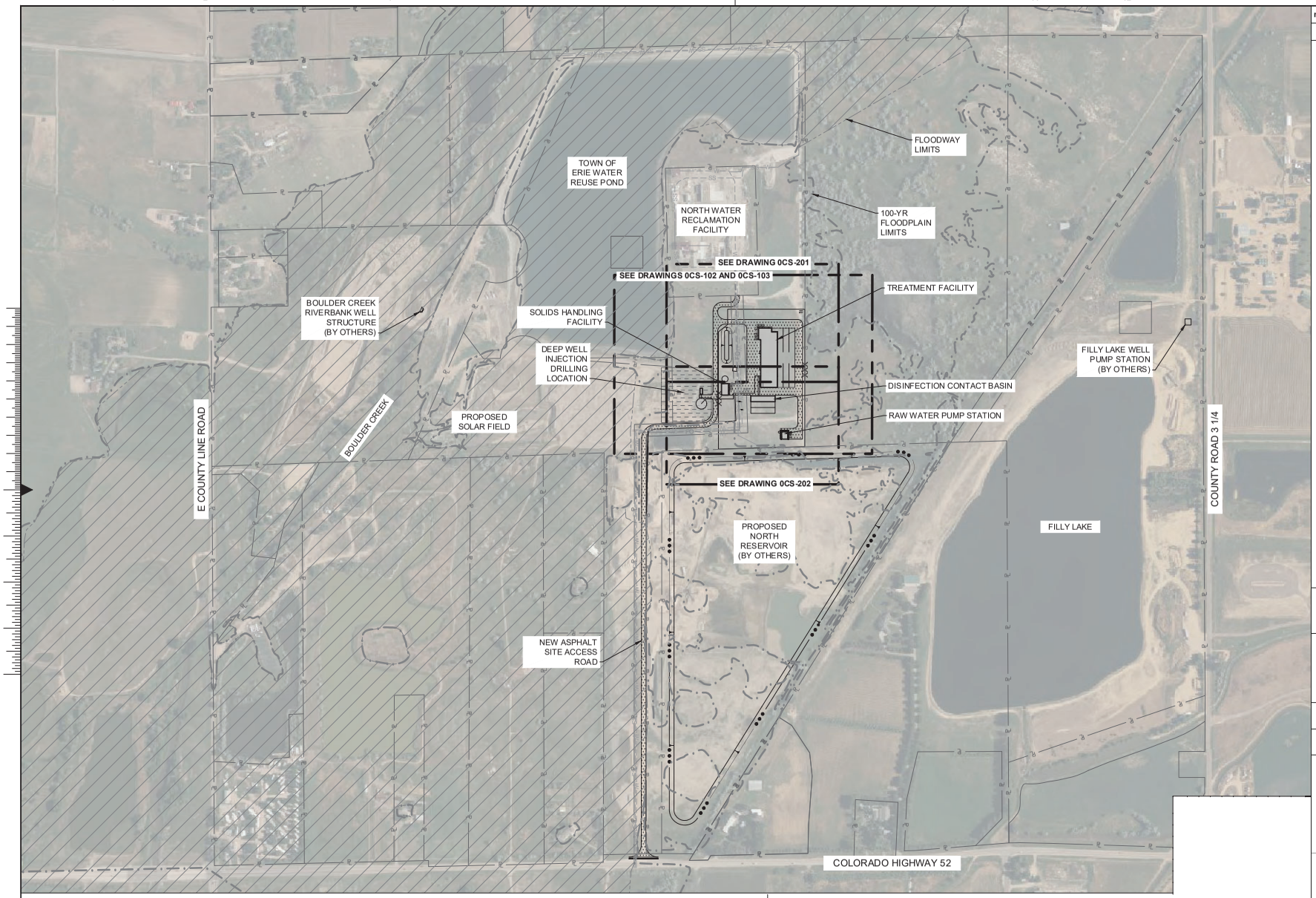
drawing **0CX-101** — rev. **A**

sheet of sheets

160267_0CX-101.DWG

Z:\CLIENTS\WTR\ERIECO\160267_NORTHWTP\DESIGN\CADD\CIVIL\PROD_DWGS\160267_0CX-101.DWG 5/14/2024 3:35 PM HHARRIS3

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



no.	date	by	ckd	description
A	05/15/24	HCH	NT	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date	detailed
MAY 2024	H HARRIS
designed	**checked**
J LEE	N TESSITORE

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

OVERALL SITE PLAN

project	contract
160267	

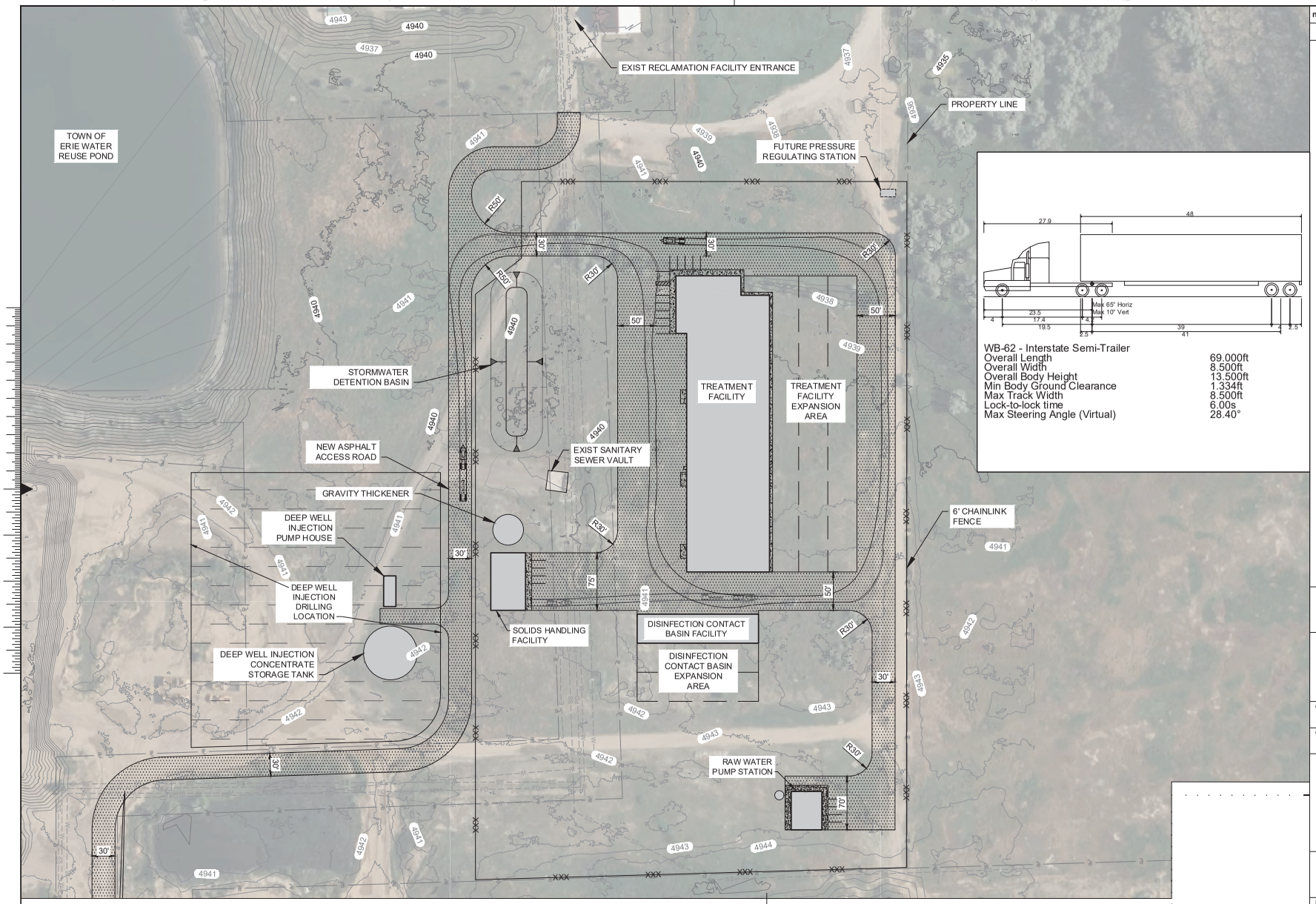
drawing **0CS-101** — rev. **A**

sheet of sheets

160267_0CS-101.DWG

Z:\CLIENTS\WTR\ERIECO\160267_NORTHWTP\DESIGN\CADD\CIVIL\PROD_DWGS\160267_0CS-101.DWG 5/15/2024 1:52 PM HHARRIS3

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



no.	date	by	ckd	description
A	05/15/24	HCH	NT	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date MAY 2024	detailed H HARRIS
designed J LEE	checked N TESSITORE

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

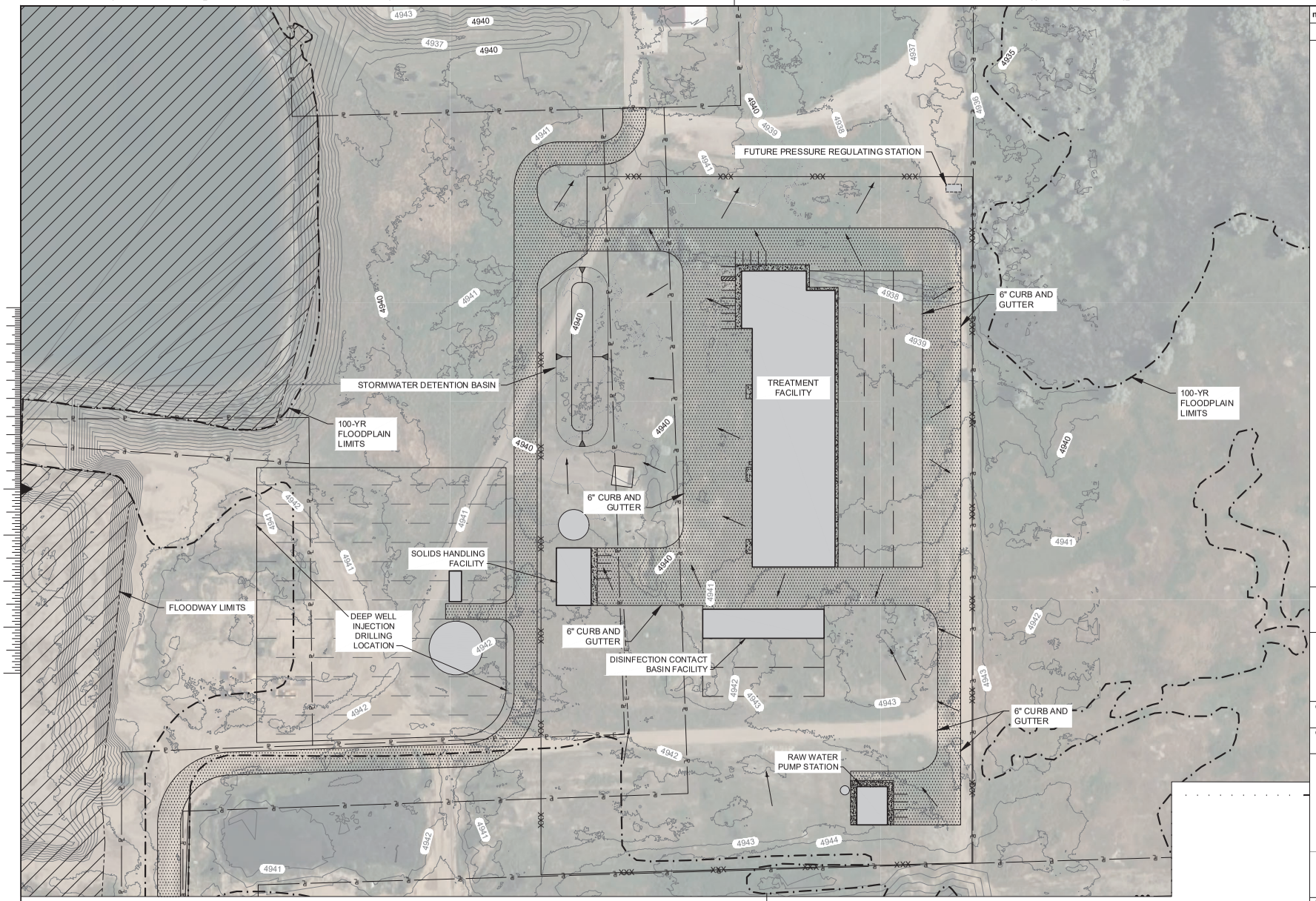
SITE ACCESS PLAN

project 160267	contract
drawing **0CS-102**	rev. **A**
sheet	of sheets

160267_0CS-102.DWG

Z:\CLIENTS\WTR\ERIECO\160267_NORTHWTP\DESIGN\CADD\CIVIL\PROD_DWGS\160267_0CS-102.DWG 5/15/2024 1:59 PM HHARRIS3

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



LEGEND
PROPOSED FLOW ARROW

NOTES:

1. FLOWS FROM BUILDINGS AND PAVED AREAS WILL BE CAPTURED AND ROUTED TO THE STORMWATER DETENTION BASIN VIA CURB AND GUTTER, SWALES, AND STORM DRAIN.

GENERAL DRAINAGE PLAN

0 60' 120'
SCALE IN FEET

NORTH

no.	date	by	ckd	description
A	05/15/24	HCH	NT	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date MAY 2024	detailed H HARRIS
designed J LEE	checked N TESSITORE

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

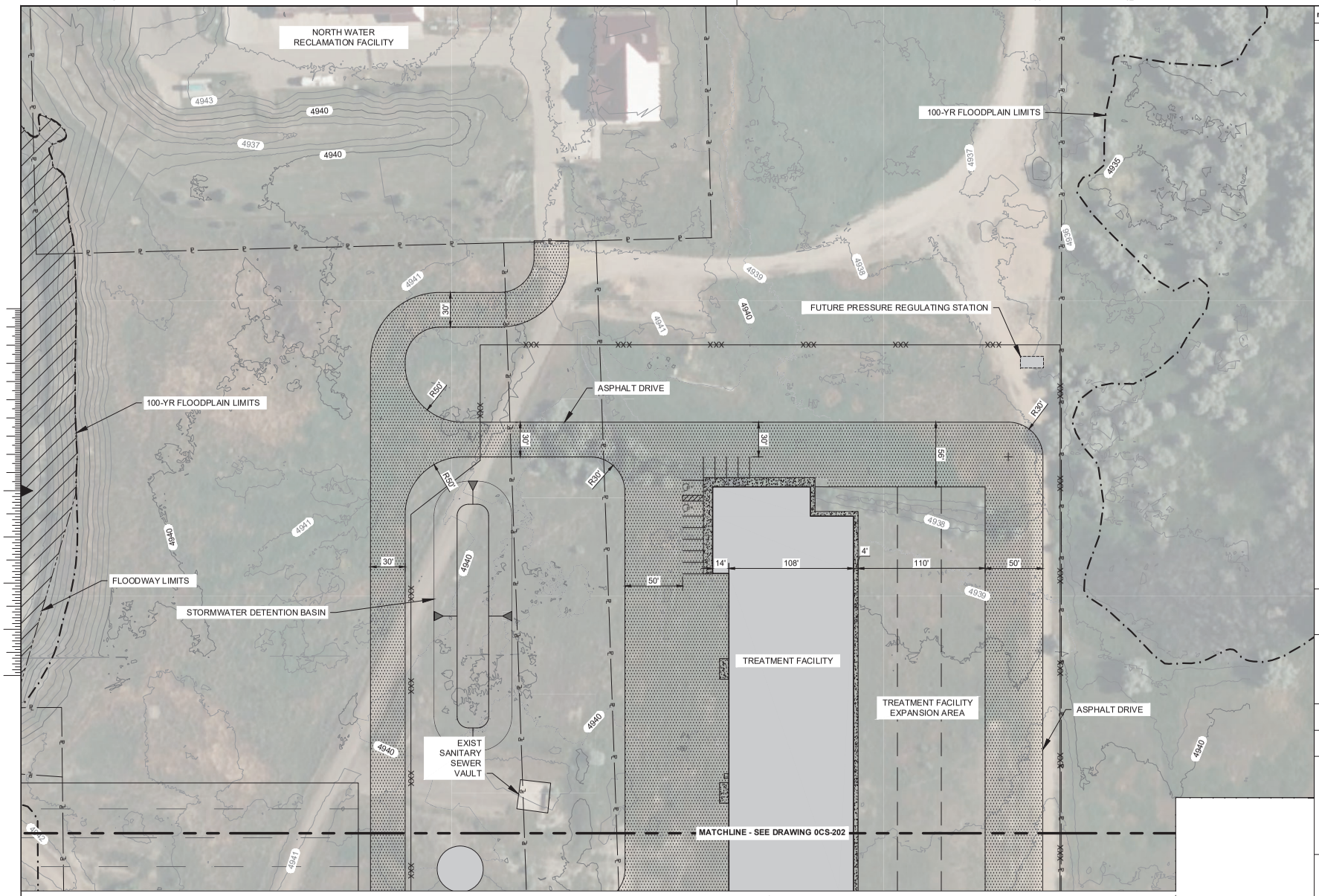
GENERAL DRAINAGE PLAN

project 160267	contract
drawing 0CS-103	rev. A
sheet	of sheets

160267_0CS-103.DWG

Z:\CLIENTS\WTR\ERIECO\160267_NORTHWTP\DESIGN\CADD\CIVIL\PROD_DWGS\160267_0CS-103.DWG 5/14/2024 3:37 PM HHARRIS3

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



ENLARGED SITE PLAN - NORTH

0 20' 40' 80'
SCALE IN FEET

NORTH

no.	date	by	ckd	description
A	05/15/24	HCH	NT	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date MAY 2024	detailed H HARRIS
designed J LEE	checked N TESSITORE

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

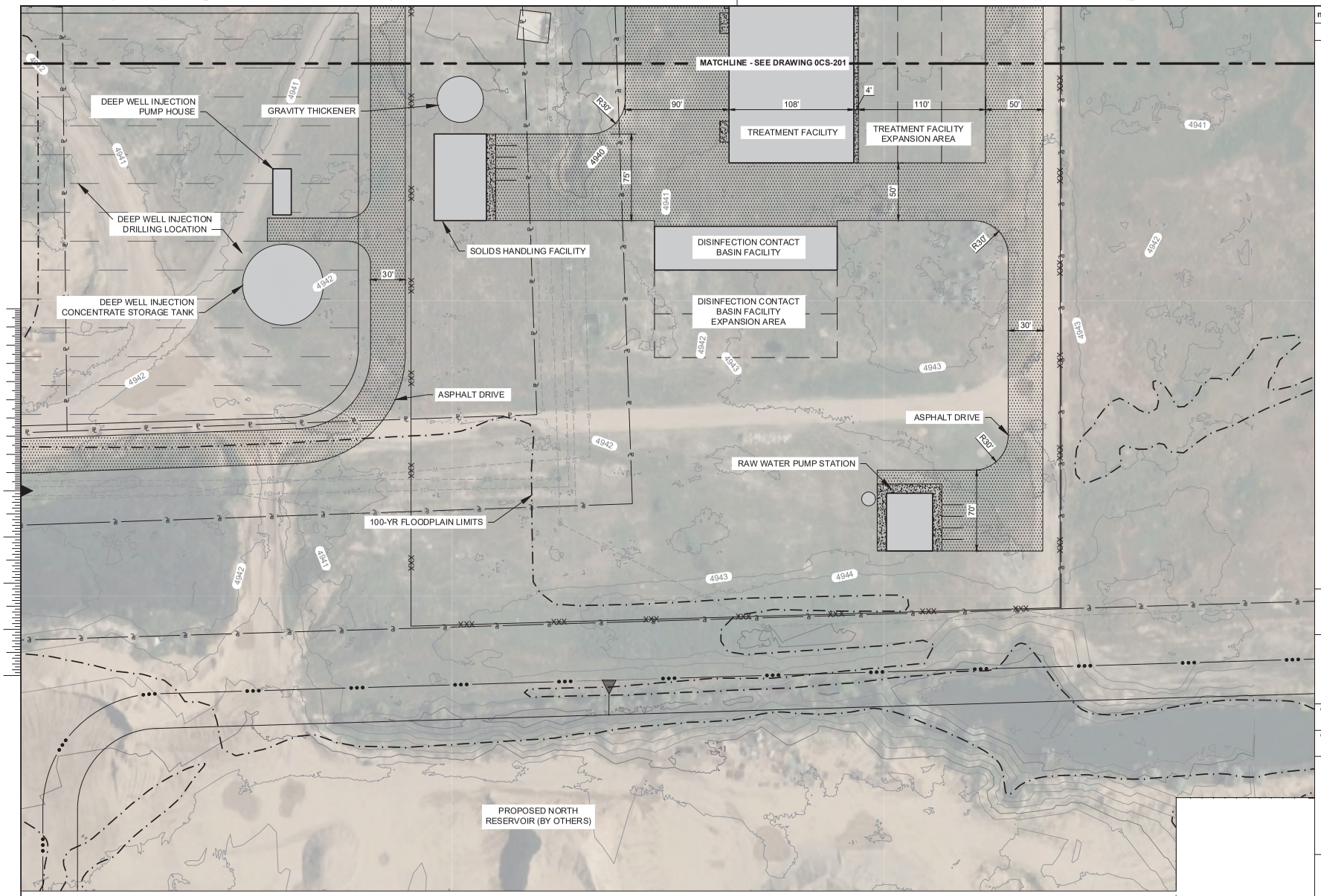
ENLARGED SITE PLAN - NORTH

project 160267	contract
drawing 0CS-201	rev. A
sheet	of sheets

160267_0CS-201.DWG

Z:\CLIENTS\WTR\ERIECO\160267_NORTHWTP\DESIGN\CADD\CIVIL\PROD_DWGS\160267_0CS-201.DWG 5/15/2024 2:16 PM HHARRIS3

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



ENLARGED SITE PLAN - SOUTH

0 20' 40' 80'
SCALE IN FEET

NORTH

no.	date	by	ckd	description
A	05/15/24	HCH	NT	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date	detailed
MAY 2024	H HARRIS
designed	**checked**
J LEE	N TESSITORE

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

ENLARGED SITE PLAN - SOUTH

project	contract
160267	

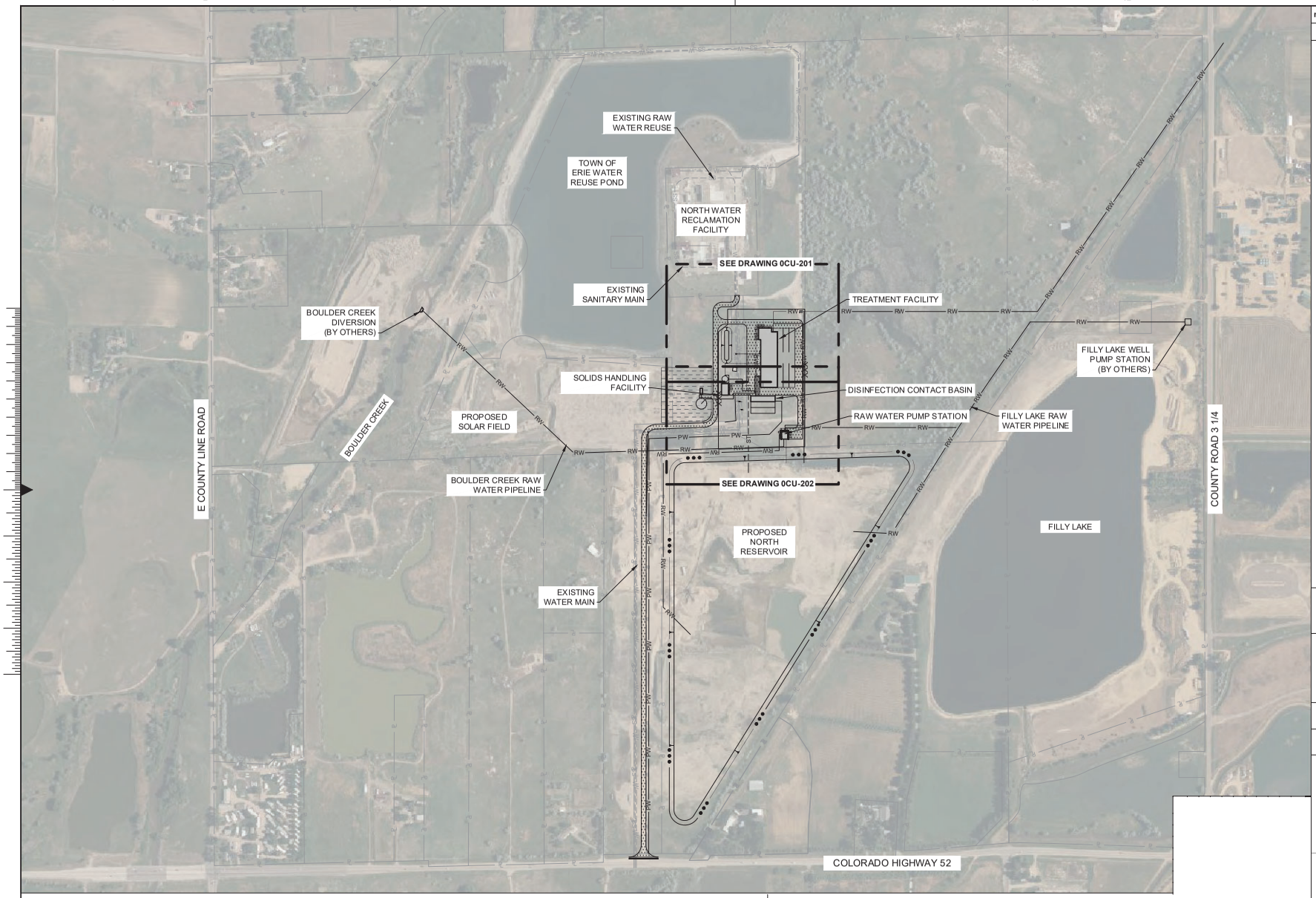
drawing **0CS-202** — rev. **A**

sheet of sheets

160267_0CS-202.DWG

Z:\CLIENTS\WTR\ERIECO\160267_NORTHWTP\DESIGN\CADD\CIVIL\PROD_DWGS\160267_0CS-202.DWG 5/15/2024 2:19 PM HHARRIS3

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



OVERALL UTILITY PLAN

0 300' 600'
SCALE IN FEET

NORTH

no.	date	by	ckd	description
A	05/15/24	HCH	NT	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date	detailed
MAY 2024	H HARRIS
designed	**checked**
J LEE	N TESSITORE

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

OVERALL UTILITY PLAN

project	contract
160267	

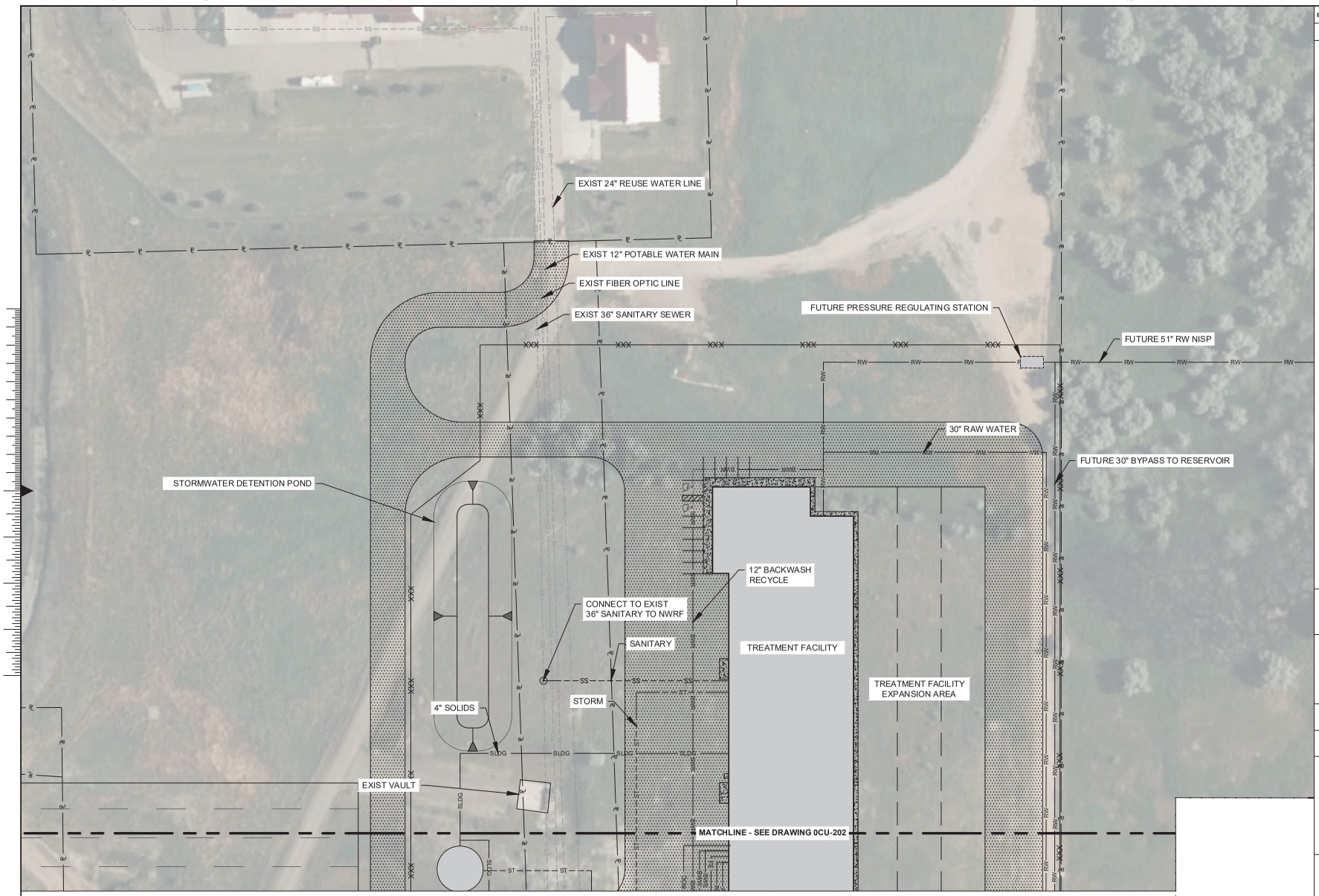
drawing **0CU-101** rev. **A**

sheet of sheets

160267_0CU-101.DWG

Z:\CLIENTS\WTR\ERIECO\160267_NORTHWTP\DESIGN\CADD\CIVIL\PROD_DWGS\160267_0CU-101.DWG 5/14/2024 3:41 PM HHARRIS3

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



ENLARGED UTILITY PLAN - NORTH

0 20' 40' 80'
SCALE IN FEET

NORTH

no.	date	by	ckd	description
A	05/15/24	HCH	NT	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date MAY 2024	detailed H HARRIS
designed J LEE	checked N TESSITORE

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

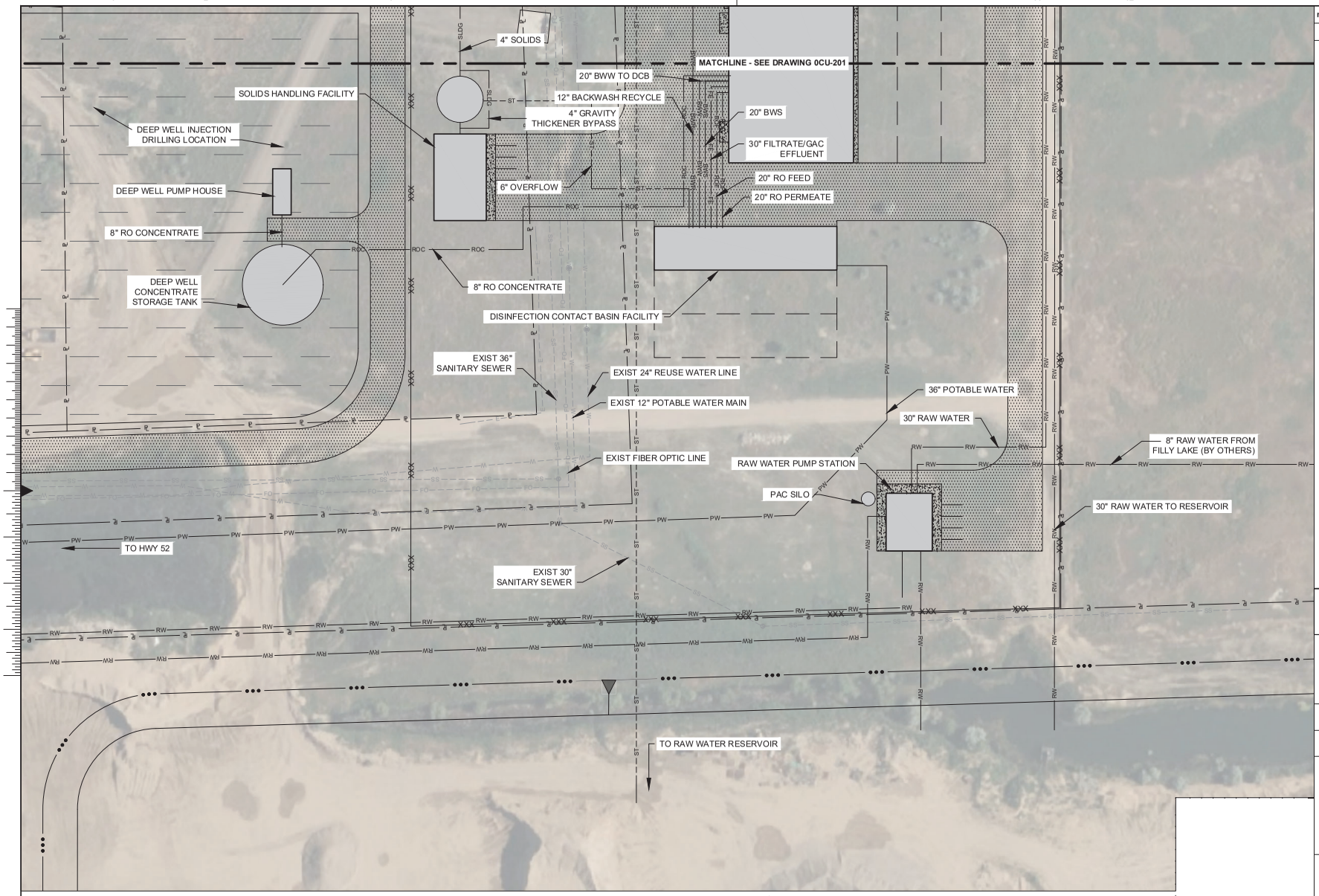
ENLARGED UTILITY PLAN - NORTH

project 160267	contract
drawing 0CU-201	rev. A
sheet	of sheets

160267_0CU-201.DWG

Z:\CLIENTS\WTR\ERIECO\160267_NORTHWTP\DESIGN\CADD\CIVIL\PROD_DWGS\160267_0CU-201.DWG 5/15/2024 10:37 AM HHARRIS3

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



ENLARGED UTILITY PLAN - SOUTH

0 20' 40' 80'
SCALE IN FEET

NORTH

no.	date	by	ckd	description
A	05/15/24	HCH	NT	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date MAY 2024	detailed H HARRIS
designed J LEE	checked N TESSITORE

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

ENLARGED UTILITY PLAN - SOUTH

project 160267	contract
drawing 0CU-202 —	rev. A
sheet of sheets	

160267_0CU-202.DWG

Z:\CLIENTS\WTR\ERIECO\160267_NORTHWTP\DESIGN\CADD\CIVIL\PROD_DWGS\160267_0CU-202.DWG 5/15/2024 2:32 PM HHARRIS3

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

STANDARD ABBREVIATIONS

AA	- ALUMINUM ASSOCIATION
AB	- ANCHOR BOLT
ABT	- ABOUT
ACI	- AMERICAN CONCRETE INSTITUTE
ADH	- ADHESIVE
AGGR	- AGGREGATE
AHR	- ANCHOR
AISI	- AMERICAN IRON AND STEEL INSTITUTE
AISC	- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AL, ALUM	- ALUMINUM
ALTN	- ALTERNATE
ANSI	- AMERICAN NATIONAL STANDARDS INSTITUTE
ARCH	- ARCHITECT
ASTM	- AMERICAN SOCIETY FOR TESTING OF MATERIALS
AWS	- AMERICAN WELDING SOCIETY
(B)	- BOTTOM
BC	- BOLT CIRCLE
BETW	- BETWEEN
BLDG	- BUILDING
BM	- BEAM
BO	- BOTTOM OF
BOC	- BOTTOM OF CONCRETE
BOS	- BOTTOM OF STEEL
BOT	- BOTTOM
B/P	- BASE OF PIER
BRG	- BEARING
BRKT	- BRACKET
C/C	- CENTER TO CENTER
CL	- CENTER LINE
CF	- CUBIC FEET
CHKR	- CHECKER
CIR	- CIRCLE
CJ	- CONSTRUCTION JOINT
CLR	- CLEAR
CLJ	- CONTROL JOINT
CMU	- CONCRETE MASONRY UNIT
CO	- CONCRETE OPENING
CONC	- CONCRETE
CONT	- CONTINUOUS
COL	- COLUMN
COTR	- CONTRACTING OFFICER
COR	- CORNER
COORD	- COORDINATE
CRSI	- CONCRETE REINFORCING STEEL INSTITUTE
CTR	- CENTER
CTRD	- CENTERED
CY	- CUBIC YARD
DBL	- DOUBLE
DET	- DETAIL
DIAG	- DIAGONAL
DIA	- DIAMETER
DIM	- DIMENSION
DK	- DECKING
DL	- DEAD LOAD
DN	- DOWN
DWL	- DOWEL
DWG	- DRAWING
E	- EAST
EA	- EACH
EF	- EACH FACE
EJ	- EXPANSION JOINT
EL	- ELEVATION
ELEC	- ELECTRICAL
EMBED	- EMBEDMENT
EQ	- EQUAL
EQUIV	- EQUIVALENT
EQ SP	- EQUALLY SPACED
EQUIP	- EQUIPMENT
EXIST	- EXISTING
EW	- EACH WAY
FD	- FLOOR DRAIN
FDN	- FOUNDATION
FTG	- FOOTING
FF	- FAR FACE
FL	- FLOOR
FNSH	- FINISH
FS	- FAR SIDE
FT	- FEET
GA	- GAGE
GALV	- GALVANIZE
GB	- GRADE BEAM
GND	- GROUND
GR	- GRADE
GRTG	- GRATING
HG	- HIGH
HR	- HANDRAIL
HPT	- HIGH POINT
HORIZ	- HORIZONTAL
HS	- HIGH STRENGTH
IBC	- INTERNATIONAL BUILDING CODE
ID	- INSIDE DIAMETER
IF	- INSIDE FACE
IJ	- ISOLATION JOINT
IN	- INCHES
JT	- JOINT
KSI	- KIPS PER SQUARE INCH
L	- ANGLE
LB	- POUND
LD	- DEVELOPMENT LENGTH
LG	- LONG
LL	- LIVE LOAD
LLH	- LONG LEG HORIZONTAL
LLO	- LONG LEG OUTSTANDING
LLV	- LONG LEG VERTICAL
LONG	- LONGITUDINAL
LPT	- LOW POINT
LS	- LAP SPLICE
MATL	- MATERIAL
MAX	- MAXIMUM
MC	- MOMENT CONNECTION
MECH	- MECHANICAL
MFR	- MANUFACTURER
MH	- MANHOLE
MIN	- MINIMUM
MISC	- MISCELLANEOUS
MK	- MARK
NA	- NOT APPLICABLE
NF	- NEAR FACE
NOM	- NOMINAL
NIC	- NOT IN CONTRACT
NTS	- NOT TO SCALE
NO	- NUMBER
NS	- NEAR SIDE
OC	- ON CENTER
OD	- OUTSIDE DIAMETER
OF	- OUTSIDE FACE
OPNG	- OPENING
OPP	- OPPOSITE
OSHA	- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
OZ	- OUNCE
PCF	- POUNDS PER CUBIC FOOT
PERP	- PERPENDICULAR
PL	- PLATE
PLC	- PLACES
PLF	-POUNDS PER LINEAR FOOT
PREFAB	- PREFABRICATED
PS	- PIPE SUPPORT
PSF	- POUNDS PER SQUARE FOOT
PSI	- POUNDS PER SQUARE INCH
PVC	- POLYVINYL CHLORIDE
RAD	- RADIUS
RD	- ROOF DRAIN
REF	- REFERENCE
REINF	- REINFORCE
REQD	- REQUIRED
REV	- REVISION
RM	- ROOM
S	- SOUTH
SB	- SHEAR BAR
SCHED	- SCHEDULE
SH	- SHEET
SIM	- SIMILAR
SLP	- SLOPE
SP	- SPACE
SPEC	- SPECIFICATION
SQ	- SQUARE
SST	- STAINLESS STEEL
STD	- STANDARD
STL	- STEEL
STIF	- STIFFENER
STR	- STRAIGHT
STRL	- STRUCTURAL
STRUC	- STRUCTURE
SYMM	- SYMMETRICAL
T	- TON
TEMP	- TEMPORARY
THK	- THICK
THRU	- THROUGH
(T)	- TOP
T/	- TOP OF
TOA	- TOP OF ALUMINUM
TOB	- TOP OF BOLT
TOC	- TOP OF CONCRETE
TOG	- TOP OF GRATING
TOM	- TOP OF MASONRY
TOS	- TOP OF STEEL
T/P	- TOP OF PIER
T&B	- TOP AND BOTTOM
TYP	- TYPICAL
UNO	- UNLESS NOTED OTHERWISE
VAR	- VARIES
VERT	- VERTICAL
VEF	- VERTICAL EACH FACE
WD	- WIDE
W/	- WITH
W/O	- WITHOUT
WP	- WORK POINT
WS	- WATERSTOP
WT	- WEIGHT
WWF	- WELDED WIRE FABRIC
@	- AT
&	- AND
#	- POUNDS OR NUMBER
%	- PERCENT

MATERIAL LEGEND

UNDISTURBED EARTH OR NATIVE SOIL

COMPACTED FILL

ROCK

GRANULAR FILL

SAND

CONCRETE

GROUT

CONCRETE MASONRY UNITS (PLAN/SECTION)

CONCRETE MASONRY UNIT (ELEVATION)

BRICK (COMMON/FACE)

WATER

STEEL (LARGE SCALE)

GRATING

ALUMINUM

CHECKERED PLATE

EXPANDED POLYSTRENE OR GEOFOAM

STRUCTURAL STEEL (SMALL SCALE)

CONCRETE W/ REINFORCING BAR

ADHESIVE/EPOXY ANCHOR

EXPANSION ANCHOR

WATERSTOPS:

4" OR 6" PVC

ASPHALTIC/MASTIC

PLASTIC, EXPANSIVE

SPLIT FLANGE

STATEMENT OF SPECIAL INSPECTIONS:

1. SPECIAL INSPECTIONS
   A. THIS "STATEMENT OF SPECIAL INSPECTIONS" HAS BEEN PREPARED IN ACCORDANCE WITH IBC 2021, SECTION 1704.
   B. CONTRACTOR SHALL RETAIN PRE-COORDINATED AND GOVERNMENT-APPROVED THIRD-PARTY QUALITY ASSURANCE AGENCIES TO PROVIDE SPECIAL INSPECTIONS DURING CONSTRUCTION IN ACCORDANCE WITH IBC CHAPTER 17.
   C. SPECIAL INSPECTION AGENCY SHALL SUBMIT INSPECTION REPORTS DURING CONSTRUCTION FOR VERIFICATION, INCLUDING FINAL REPORTS IN ACCORDANCE WITH IBC SECTION 1704.2.4.
   D. SPECIAL INSPECTOR SHALL USE THE LATEST ISSUE OF THE STRUCTURAL DRAWINGS FOR ALL INSPECTIONS. SHOP FABRICATION DRAWINGS SHALL NOT BE USED FOR SUCH PURPOSES.
   E. THE FOLLOWING TABLE IDENTIFIES THE MATERIALS, SYSTEMS, AND COMPONENTS FOR WHICH SPECIAL INSPECTION IS REQUIRED.
2. TESTING REQUIREMENTS
   A. CONTRACTOR SHALL RETAIN PRE-COORDINATED AND GOVERNMENT-APPROVED THIRD-PARTY TESTING AGENCIES TO PROVIDE STRUCTURAL TESTING DURING CONSTRUCTION IN ACCORDANCE WITH IBC CHAPTER 17.
   B. TESTING AGENCY SHALL SUBMIT TEST RESULTS DURING CONSTRUCTION FOR VERIFICATION INCLUDING A FINAL REPORT IN ACCORDANCE WITH IBC SECTION 1704.2.4.
   C. THE TABLE ON THIS SHEET IDENTIFIES THE TESTING REQUIRED FOR THIS PROJECT.
3. STRUCTURAL OBSERVATIONS
   A. OWNER SHALL EMPLOY A REGISTERED DESIGN PROFESSIONAL TO PROVIDE STRUCTURAL OBSERVATIONS DURING CONSTRUCTION FOR WIND REQUIREMENTS, IN ACCORDANCE WITH IBC SECTION 1704.5.2.
      a. STRUCTURAL OBSERVATIONS ARE FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AND DO NOT INCLUDE OR WAIVE THE SPECIAL INSPECTION REQUIREMENTS DEFINED BELOW.
   B. EACH STRUCTURAL OBSERVER SHALL SUBMIT WRITTEN STATEMENTS IDENTIFYING FREQUENCY AND EXTENT OF STRUCTURAL OBSERVATIONS AND ANY REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

SPECIAL INSPECTION REQUIREMENTS

MATERIAL/SYSTEM	TYPE & EXTENT OF SPECIAL INSPECTION	CONT/PERIODIC INSPECTION	TYPE & EXTENT OF TESTING	CODE REFERENCE
SUBGRADE PREPERATION	VERIFY DEPTH, MATERIALS AND COMPACTION	P	DENSITY TEST ON COMPACTED FILL, PROOFROLL UNDISTRUBED NATIVE MATERIAL	
MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS	IDENTIFICATION OF ASTM MARKINGS MFR'S CERTIFICATE OF COMPLIANCE			ASTM A325, AISC 360 -SECTION A3.3
HIGH-STRENGTH BOLTING	VISUAL INSPECTION, PRE-TENSIONING	P		AISC 360, SECTION M2.5
MATERIAL VERIFICATION OF STRUCTURAL STEEL	IDENTIFICATION OF ASTM MARKINGS, MILL TEST REPORTS			ASTM A6 OR ASTM A568
MATERIAL VERIFICATION OF WELD FILLER MAT'LS	IDENTIFICATION OF AWS MARKINGS, MFR'S CERTIFICATE OF COMPLIANCE			AISC 360, SECTION A3.5
CJP AND PARTIAL PEN GROOVE WELDS	VISUAL INSPECTION	C		AWS D1.1
MULIT-PASS FILLET WELDS	VISUAL INSPECTION	C		AWS D1.1
SINGLE PASS FILLET WELDS> 5/16"	VISUAL INSPECTION	C		AWS D1.1
SINGLE PASS FILLET WELDS<= 5/16"	VISUAL INSPECTION	P		AWS D1.1
STEEL FRAME JOINT DETAILS	DETAILS OF BRACING, STIFFENING, ETC. MEMBER LOCATIONS, APPLICATION OF STD JOINT DETAILS	P		
MATERAIL VERIFICATION OF COLD-FORMED STEEL DECK	IDENTIFICATION OF ASTM MARKINGS, MFR'S CERTIFICATE OF COMPLIANCE			ASTM
COLD-FORMED ROOF DECK WELDS	VISUAL INSPECTION	P		AWS D1.3
SEISMIC-FORCE-REISTING SYSTEM	VISUAL INSPECTION OF SINGLE PASS FILLET WELDS OVER 5/16"	C		AISC 341
CONCRETE FORM WORK	SHAPE, LOCATION, AND DIMENSIONS OF CONCRETE MEMBER	P		
REINFORCEMENT	SIZE AND PLACEMENT	P		ACI 318
CONCRETE MIX DESIGN	VERIFICATON OF PROPERTIES	P		ACI 318
CAST-IN-PLACE CONCRETE	PLACEMENT OF CONCRETE	C	TEMPERATURE, STRENGTH, SLUMP, AIR ENTRAINMENT	ACI 318
CONCRETE CURING	MAINTENANCE OF CURING TEMPURATURE AND TECHNIQUES	P		ACI 318
ANCHORS CAST IN CONCRETE	SIZE AND PLACEMENT	P		ACI 318
ANCHORS POST INSTALLED IN HARDENED CONCRETE	SIZE, PLACEMENT, AND CONFORMANCE TO MFR'S INSTALLATION PROCEDURES	C		ACI 318
MASONRY CONSTRUCTION	COMPLIANCE WITH CONSTRUCTION DOCUMENTS AND APPROVED SUBMITTALS	P	MORTAR JOINTS, HOT AND COLD WEATHER PLACEMENT	ACI 530
MASONRY STRENGTH	VERIFICATION OF f'm	P	PRIOR TO CONSTRUCTION AND EVERY 5000 SQ FT	ACI 530
PREMIXED MORTAR AND GROUT	VERIFICATION OF PROPERTIES	P		ACI 530
SITE PREPARED MORTAR AND GROUT	VERIFICATION OF PROPERTIES	P		ACI 530
MASONRY CONSTRUCTION	SIZE, PLACEMENT AND CONDITIONS	P	MORTAR JOINTS, HOT AND COLD WEATHER PLACEMENT	ACI 530
GROUT	GROUT SPACE PRIOR TO GROUT, PLACEMENT OF GROUT	C		ACI 530
OPEN WEB STEEL JOISTS	END CONNECTIONS & BRIDGING INSTALLATION	P		SJI 100

no.	date	by	ckd	description
A	5/15/24	JJK	JJZ	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

creation date	detailed by
MAY 2024	B. MIMIAGA
designed by	**checked by**
J. KIENHOLZ	J. ZEMLICKA

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

STRUCTURAL ABBREVIATIONS, SYMBOLS, & SPECIAL INSPECTION REQUIREMENTS

project	contract
160267	

drawing **0S-001** — rev. **A**

sheet of sheets

5/15/2024 12:32:36 PM
Autodesk Docs://160267_ERIE NORTH WTP/160267_00_GENERAL_S_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

STRUCTURAL GENERAL NOTES

1. THESE NOTES, AND OTHER DRAWING NOTES CONTAINED WITHIN, ARE PROVIDED TO MEET SPECIFIC REQUIREMENTS AND TO SUPPLEMENT THE CONTRACT SPECIFICATIONS. THESE NOTES NEITHER REPLACE NOR OVERRIDE THE PROVISIONS AND REQUIREMENTS OF THE CONTRACT SPECIFICATIONS.
2. COORDINATE ALL STRUCTURAL WORK WITH WORK SHOWN ON ALL OTHER DRAWINGS.
3. VERIFY ALL DIMENSIONS OF EXISTING CONSTRUCTION AND REPORT ANY DISCREPANCIES FROM THE CONTRACT OR REFERENCE DRAWINGS TO THE (ENGINEER PRIOR TO COMMENCING WITH WORK. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM THE STRUCTURAL DRAWINGS.
4. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. CONTRACTOR SHALL BE RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, SHORING AND TEMPORARY BRACING TO PROVIDE STRUCTURAL STABILITY DURING CONSTRUCTION.
5. IF CERTAIN FEATURES ARE NOT FULLY SHOWN OR CALLED FOR ON THE CONTRACT DRAWINGS OR SPECIFICATIONS, THEIR CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN OR CALLED FOR, WITH THE APPROVAL OF THE ENGINEER. WHERE SECTIONS VARY, CONTRACTOR SHALL PROVIDE FOR SMOOTH TRANSITIONS BETWEEN THEM, UNLESS NOTED OTHERWISE.
6. ALL PRODUCTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS AND RECOMMENDATIONS, UNLESS NOTED OTHERWISE.

BUILDING CODES AND DESIGN STANDARDS

1. STRUCTURAL DESIGN WAS PREPARED USING THE FOLLOWING CODES AND DATA:
   A. INTERNATIONAL BUILDING CODE, 2021 EDITION AMENDED BY THE TOWN OF ERIE
   B. ASCE 7 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, 2016 EDITION
   C. ACI 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
   D. ACI 350 BUILDING CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES
   E. AISC MANUAL FOR STEEL CONSTRUCTION
   F. AA ALUMINUM DESIGN MANUAL PART 1
   G. TMS 402, BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.

STRUCTURAL DESIGN LOADING/CRITERIA

1. RISK CATEGORY: III
2. DEAD LOADS
   A. SELF WEIGHT OF MATERIALS OF CONSTRUCTION
   B. WEIGHT OF FIXED SERVICE EQUIPMENT
      a. AS INDICATED ON THE STRUCTURAL DRAWINGS FOR EQUIPMENT WEIGHING IN EXCESS OF 300 LBS. FRAMING AND FOUNDATIONS ARE DESIGNED FOR EQUIPMENT WHICH SATISFIES THE CONTRACT SPECIFICATIONS.
      b. IF EQUIPMENT FURNISHED IS HEAVIER THAN THE WEIGHTS INDICATED, OR REQUIRES STRUCTURAL CHANGES FOR ANY OTHER REASON, PROVIDE ENGINEERING DESIGN CALCULATIONS AND ADDITIONAL STRUCTURAL WORK NECESSARY TO SUPPORT ALL LOADS IN ACCORDANCE WITH THE DESIGN STANDARDS SPECIFIED ABOVE, AT NO ADDITIONAL COST TO THE OWNER AND WITH NO INCREASE IN CONTRACT TIME.
3. LIVE LOADS:
   A. STAIRS, WALKWAYS, PLATFORMS.....100 PSF, UNIFORM
      300 LB, CONCENTRATED
   B. TREATMENT AREAS.....150 PSF
   C. ELECTRICAL ROOMS.....250 PSF
4. SNOW LOADS:
   A. SNOW LOAD IMPORTANCE FACTOR (I_s)..... 1.2
   B. GROUND SNOW LOAD (P_g)..... 35 PSF
   C. FLAT-ROOF SNOW LOAD.....TBD
   D. SNOW EXPOSURE FACTOR (C_e)..... 1.0
   E. THERMAL FACTOR (C_t)..... 1.0
   F. SLOPE FACTOR (C_s).....TBD
   G. MINIMUM ROOF SNOW LOAD.....30 PSF
5. WIND DESIGN DATA:
   A. ULTIMATE DESIGN WIND SPEED (V_{ult}).....149 MPH
   B. NOMINAL DESIGN WIND SPEED (V_{asd}).....115 MPH
   C. EXPOSURE CATEGORY.....C
   D. INTERNAL PRESSURE COEFFICIENT.....TBD
   E. COMPONENTS AND CLADDING LOADS.....TBD
6. SEISMIC DESIGN DATA:
   A. SEISMIC IMPORTANCE FACTOR (I_e)..... 1.25
   B. MAPPED SPECTRAL RESPONSE PARAMETERS:
      a. S_S.....0.198
      b. S_1.....0.057
   C. SOIL SITE CLASS.....D (DEFAULT)
   D. DESIGN SPECTRAL RESPONSE PARAMETERS:
      a. S_{DS}.....0.211
      b. S_{D1}..... 0.091
   E. SEISMIC DESIGN CATEGORY..... B
   F. BASIC SEISMIC FORCE RESISTING SYSTEM(S):
      VARIES DEPENDING ON STRUCTURES
   A. DESIGN BASE SHEARS(S)..... VARIES
   B. SEISMIC RESPONSE COEFFICIENT(S) (C_s).....VARIES
   C. RESPONSE MODIFICATION COEFFICIENT(S) (R).... VARIES
   D. ANALYSIS PROCEDURE USED.....EQUIVALENT LATERAL FORCE
1. ROOF RAIN LOAD DATA
   A. INTENSITY, 15-MIN DURATION .....7.75 IN/HR
   B. INTENSITY, 60-MIN DURATION.....3.24 IN/HR
2. GEOTECHNICAL DATA
   A. DESIGN LOAD BEARING VALUE.....TBD PSF

REINFORCED CAST-IN-PLACE CONCRETE (SECTION 03 30 00)

1. ALL CONCRETE SHALL BE PREPARED AND PLACED IN ACCORDANCE WITH ACI MANUAL OF CONCRETE PRACTICE, ACI 301 & ACI 350.5, AND AS MODIFIED BY CONTRACT DOCUMENTS.
2. ALL CONCRETE SHALL MEET THE FOLLOWING REQUIREMENTS (UNO):
   - MINIMUM 28-DAY COMPRESSIVE STRENGTH (f'_c): 4,500 PSI
   - NORMALWEIGHT CONCRETE SHALL BE USED, UNO
3. DO NOT AIR-ENTRAIN CONCRETE USED FOR INTERIOR SLABS WITH A TROWEL FINISH.
4. BEFORE CONCRETE WORK BEGINS, THE PROPOSED CONCRETE MIX DESIGN, ALONG WITH COLLABORATING DATA SHOWING COMPLIANCE WITH PROJECT REQUIREMENTS, SHALL BE SUBMITTED FOR APPROVAL.

CONCRETE FORMWORK (SECTION 03 10 00)

1. CONTRACTOR IS RESPONSIBLE FOR DESIGN, ENGINEERING, STRUCTURAL ADEQUACY AND CONSTRUCTION OF CONCRETE FORMWORK IN ACCORDANCE WITH CONTRACT SPECIFICATIONS.
2. COORDINATE CONCRETE WORK WITH PLACEMENT OF PIPING, INSERTS, FLOOR DRAINS AND OTHER EMBEDDED ITEMS INDICATED ON CONTRACT DRAWINGS OR IN CONTRACT SPECIFICATIONS.
3. SLEEVE NEW OR EXISTING PIPING OR UTILITIES PASSING THROUGH NEW CONCRETE, UNLESS NOTED OTHERWISE. SEE OTHER DISCIPLINE DRAWINGS FOR SLEEVE DETAILS. ENSURE SLEEVES REMAIN FREE OF DEBRIS AND WATER DURING CONSTRUCTION.
4. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3/4", UNO.

CONCRETE JOINTS (SECTION 03 30 00)

1. LOCATE JOINTS AS INDICATED IN STANDARD DETAILS, AS SPECIFIED ON THE DRAWINGS OR AS APPROVED BY THE ENGINEER PRIOR TO PLACEMENT OF CONCRETE.
2. PRIOR TO PLACING NEW CONCRETE CLEAN CONSTRUCTION JOINT SURFACES OF LAITANCE. IMMEDIATELY BEFORE PLACING NEW CONCRETE WET SURFACE AND REMOVE ANY STANDING WATER.
3. INTENTIONALLY ROUGHEN SURFACE OF JOINTS AS SPECIFIED ON THE CONTRACT DOCUMENTS.
4. PROVIDE WATERSTOPS AT CONCRETE JOINTS WHERE INDICATED.

REINFORCING STEEL (SECTION 03 20 00)

1. ALL REINFORCING BARS SHALL BE ASTM A615, GRADE 60.
2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A1064 AND SHALL BE FLAT SHEET. ROLLED FABRIC WILL NOT BE ALLOWED.
3. REINFORCE ALL CONCRETE UNLESS SPECIFICALLY MARKED "NOT REINFORCED" OR "UNREINFORCED".
4. DETAIL AND PLACE REINFORCEMENT IN ACCORDANCE WITH ACI SP-66, ACI 301, ACI 318 AND CRSI MANUAL OF STANDARD PRACTICE.
5. DO NOT INSERT REINFORCEMENT INTO FRESH OR PARTIALLY HARDENED CONCRETE.
6. THE FOLLOWING CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT (UNLESS OTHERWISE NOTED). SEE ACI 117 FOR CONSTRUCTION TOLERANCES:
   A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.....3"
   B. CONCRETE EXPOSED TO EARTH, LIQUID, WEATHER OR CAST AGAINST A CONCRETE WORK MAT:
      a. SLABS, WALLS & FOOTINGS.....2"
      b. BEAMS & COLUMNS:
         - STIRRUPS, SPIRALS & TIES..... 2"
         - PRIMARY REINFORCEMENT..... 2 1/2"
   C. CONDITIONS NOT COVERED IN "A" OR "B":
      a. SLABS AND WALLS..... 1 1/2"
      b. BEAMS AND COLUMNS:
         - STIRRUPS, SPIRALS & TIES..... 1 1/2"
         - PRIMARY REINFORCEMENT..... 2"
7. THE MINIMUM LENGTH OF LAP SPLICES AND EMBEDMENT SHALL BE AS NOTED IN THE TABLES AND DETAILS ON THE CONTRACT DRAWINGS.
8. HEATING OF REINFORCING BARS SHALL NOT BE ALLOWED.
9. PROVIDE ADDITIONAL REINFORCEMENT AT OPENINGS AND CORNER BARS AT WALLS GRADE BEAMS AND CURBS IN ACCORDANCE WITH DETAILS PROVIDED ON THE CONTRACT DOCUMENTS.
10. REPOSITIONING OF REINFORCING TO AVOID INTERFERENCE WITH EMBEDDED ITEMS SHALL BE APPROVED BY THE ENGINEER PRIOR TO WORK.

no.	date	by	ckd	description
A	5/15/24	JJK	JJZ	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

creation date	detailed by
MAY 2024	B. MIMIAGA
designed by	**checked by**
J. KIENHOLZ	J. ZEMLICKA

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

STRUCTURAL GENERAL NOTES

project	contract
160267	

drawing **0S-002** — rev. **A**

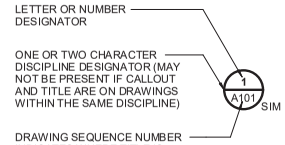
sheet of sheets

Millimeters Scale For Microfilming Inches
5/15/2024 12:32:42 PM
Autodesk Docs://160267_ERIE NORTH WTP/160267_00_GENERAL_S_R24.rvt

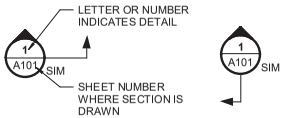
Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

CALL OUT IDENTIFICATION

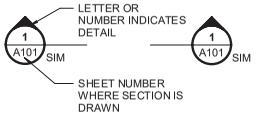
SECTION, DETAIL, AND ELEVATION SYMBOL IDENTIFIERS:



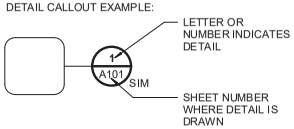
WALL SECTION CALLOUT EXAMPLE:



BUILDING SECTION CALLOUT EXAMPLE:

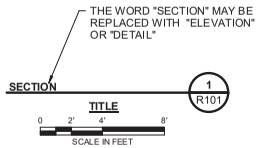


DETAIL CALLOUT EXAMPLE:

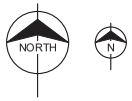


ELEVATION CALLOUT EXAMPLE:

SECTION, DETAIL, AND ELEVATION TITLE EXAMPLE:

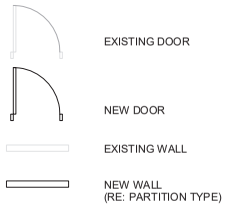


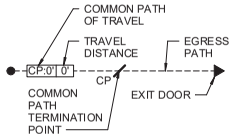
NORTH ARROW EXAMPLE:



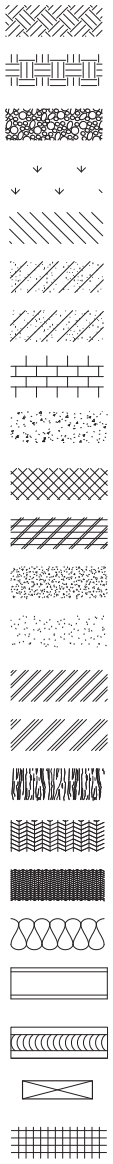
PLAN LEGEND

PLAN LEGEND:





MATERIAL SYMBOLS



ABBREVIATIONS

-A-
A/E ARCHITECT/ENGINEER
ACOUST ACOUSTICAL
ADJ ADJACENT, ADJUSTABLE
AFF ABOVE FINISH FLOOR
AHJ AUTHORITY HAVING JURISDICTION
ALT ALTERNATE
ALUM ALUMINUM
APPROX APPROXIMATE
ARCH ARCHITECTURE, ARCHITECT

-B-
BD BOARD
BITUM BITUMINOUS
BLDG BUILDING
BLKG BLOCKING
BO BOTTOM OF, AS IN "BO STEEL"
BTWN BETWEEN

-C-
CAB CABINET
CCTV CLOSED CIRCUIT TELEVISION
CID COMPREHENSIVE INTERIOR DESIGN
CJ CONTROL JOINT, CONSTRUCTION JOINT
CL CENTER LINE
CLG CEILING
CLR CLEAR
CMU CONCRETE MASONRY UNIT
CO CLEANOUT
COL COLUMN
COMM COMMUNICATION
CONC CONCRETE
CONSTR CONSTRUCTION
CONT CONTINUOUS
CONTR CONTRACT, CONTRACTOR
COORD COORDINATE
CORR CORRUGATED OR CORRIDOR
CU CUBIC
°C CELSIUS

-D-
DBL DOUBLE
DEMO DEMOLITION
DESCR DESCRIPTION
DET DETAIL
DIA DIAMETER
DIAG DIAGONAL
DIM DIMENSION
DN DOWN
DR DOOR
DS DOWNSPOUT
DWG DRAWING

-E-
E EAST
EA EACH
EEW EMERGENCY EYEWASH
EEWS EMERGENCY EYEWASH & SHOWER
EF EXHAUST FAN
EJ EXPANSION JOINT
EL ELEVATION, AS IN HEIGHT
ELAST ELASTOMERIC
ELEC ELECTRIC / ELECTRICAL
ELEV ELEVATOR, OR ELEVATION AS IN NORTH ELEV
EQ EQUAL
EQUIP EQUIPMENT
ETC AND SO FORTH (ETCETERA)
EW EACH WAY
EWC ELECTRIC WATER COOLER
EXH EXHAUST
EXIST EXISTING
EXP EXPANSION
EXT EXTERIOR

-F-
FD FLOOR DRAIN
FDN FOUNDATION
FE FIRE EXTINGUISHER WITH WALL BRACKET
FEC FIRE EXTINGUISHER CABINET
FF FINISH FLOOR
FF&E FURNITURE, FIXTURES & EQUIPMENT
FHC FIRE HOSE CABINET (WITH EXTINGUISHER & BRACKET)
FHR FIRE HOSE REEL (WITH EXTINGUISHER & BRACKET)
FIN FINISHED, FINISH
FLR FLOOR
FT FEET / FOOT
FV FIELD VERIFY
°F FAHRENHEIT

-G-
GA GAUGE
GALV GALVANIZED
GL GIRT LINE
GRTG GRATING
GYP GYPSUM
GYP BD GYPSUM BOARD

-H-
H HIGH
HD HAND
HDWR HARDWARE
HM HOLLOW METAL
HORIZ HORIZONTAL
HT HEIGHT
HVAC HEATING, VENTILATION & AIR CONDITIONING

-I-
ID INSIDE DIAMETER
IN INCH
INSUL INSULATION
INT INTERIOR

-J-
JAN JANITOR'S CLOSET

-L-
L LEFT, LONG, LENGTH
LAB LABORATORY
LAT LATITUDE
LAV LAVATORY
LB or # POUND
LH LEFT HAND
LONG LONGITUDE
LVR LOUVER

-M-
M METER
MACH MACHINE
MAINT MAINTENANCE
MAS MASONRY
MATL MATERIAL
MAX MAXIMUM
MECH MECHANICAL
MFR MANUFACTURER
MIN MINIMUM
MISC MISCELLANEOUS
MJ MOVEMENT JOINT
MM MILLIMETER
MO MASONRY OPENING
MTD MOUNTED
MTL METAL

-N-
N NORTH
N/A NOT APPLICABLE
NIC NOT IN CONTRACT
NO NUMBER
NOM NOMINAL
NTP NOTICE TO PROCEED
NTS NOT TO SCALE

-O-
OC ON CENTER
OD OUTSIDE DIAMETER
OFF OFFICE
OPNG OPENING
OPP OPPOSITE

-P-
PA PUBLIC ADDRESS
PEMB PRE-ENGINEERED METAL BUILDING
PERIM PERIMETER
PJ PRECAST JOINT
PKG PACKAGE
PL PLATE
PLMB PLUMBING
PLYWD PLYWOOD
PROJ PROJECT
PSF POUNDS PER SQUARE FOOT
PSI POUNDS PER SQUARE INCH
PVC POLYVINYL CHLORIDE

-R-
R RADIUS
R/A RETURN AIR
RCP REFLECTIVE CEILING PLAN
RD ROOF DRAIN
RECP RECEPTACLE
REFER REFERENCE
REINF REINFORCED
REQ'D REQUIRED
REV REVISION
RH RIGHT HAND
RO ROUGH OPENING

-S-
S SOUTH
SA SUPPLY AIR
SCHED SCHEDULE
SECT SECTION
SF SQUARE FOOT
SID STRUCTURAL INTERIOR DESIGN
SIM SIMILAR
SPEC SPECIFICATION
SQ SQUARE, AS IN "SQ FT"
SST STAINLESS STEEL
STC SOUND TRANSMISSION COEFFICIENT
STD STANDARD
STOR STORAGE
STRUCT STRUCTURAL
SUPP SUPPORT
SUSP SUSPENDED
SYS SYSTEM

-T-
TD TRENCH DRAIN
TECH TECHNICAL
THRU THROUGH
TLT TOILET
TO TOP OF, AS IN "TO STEEL"
TOR TOP OF ROOF
TYP TYPICAL

-U-
UL UNDERWRITERS LABORATORY
UNO UNLESS NOTED OTHERWISE
UTIL UTILITY

-V-
VENT VENTILATE, VENTILATOR
VERT VERTICAL
VJ VENEER JOINT
VOL VOLUME

-W-
W WEST, WIDTH
W/ WITH
W/O WITHOUT
WC WATER CLOSET
WD WOOD
WH WATER HEATER
WT WEIGHT

no.	date	by	ckd	description
A	05/15/24	JRD	RPL	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
ARCHITECTURE, P.C.

creation date	detailed by
MAY 2024	B. MADDOX
designed by	**checked by**
J. DEAR	R. LANG

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

LEGEND & ABBREVIATIONS

project	contract
160267	

drawing	rev.
0A-001 —	A

sheet of sheets

Millimeters
Scale For Microfilming
Inches
5/15/2024 2:07:24 PM
Autodesk Docs://160267_ERIE NORTH WTP/160267_OA_STANDARD SHEETS.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

APPLICABLE CODES:
(TOWN OF ERIE, COLORADO LOCATED IN WELD COUNTY CLIMATE ZONE 5B)
- INTERNATIONAL BUILDING CODE 2021
- INTERNATIONAL EXISTING BUILDING CODE 2021
- INTERNATIONAL MECHANICAL CODE 2021
- INTERNATIONAL PLUMBING CODE 2021
- NATIONAL ELECTRIC CODE 2023
- INTERNATIONAL FUAL GAS CODE CODE 2021
- INTERNATIONAL ENERGY CONSERVATION CODE 2021

OCCUPANCY TYPES (SECTION 302.1)
- F-1, LOW-HAZARD INDUSTRIAL

CONSTRUCTION TYPE (SECTION 602)
- CONSTRUCTION TYPE II-B

OCCUPANT LOADS (TABLE 1004.1.2 & SECTION 1005.3)
- F-1 OCCUPANCY 2459 SF/ 100 SF PER PERSON = 25

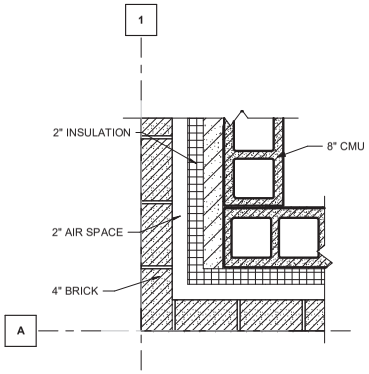
EGRESS WIDTH (SECTION 1005.3)
- 0.2 INCHES PER OCCUPANT (OTHER COMPONENTS):
  - F-1 - 2.6 INCHES
- 0.3 INCHES PER OCCUPANT (STAIRWAYS):
  - F-1 - 3.9 INCHES
- MINIMUM OF 32 INCHES PROVIDED

NUMBER OF EXITS (TABLE 1006.2.1)
- F-1 OCCUPANCY:
  - ONLY 1 EXIT REQUIRED, 2 PROVIDED

MAXIMUM EXIT ACCESS TRAVEL DISTANCE (TABLE 1016.2)
- F-1 OCCUPANCY: 200 FT CHEM ROOM TO BE SPRINKLERED

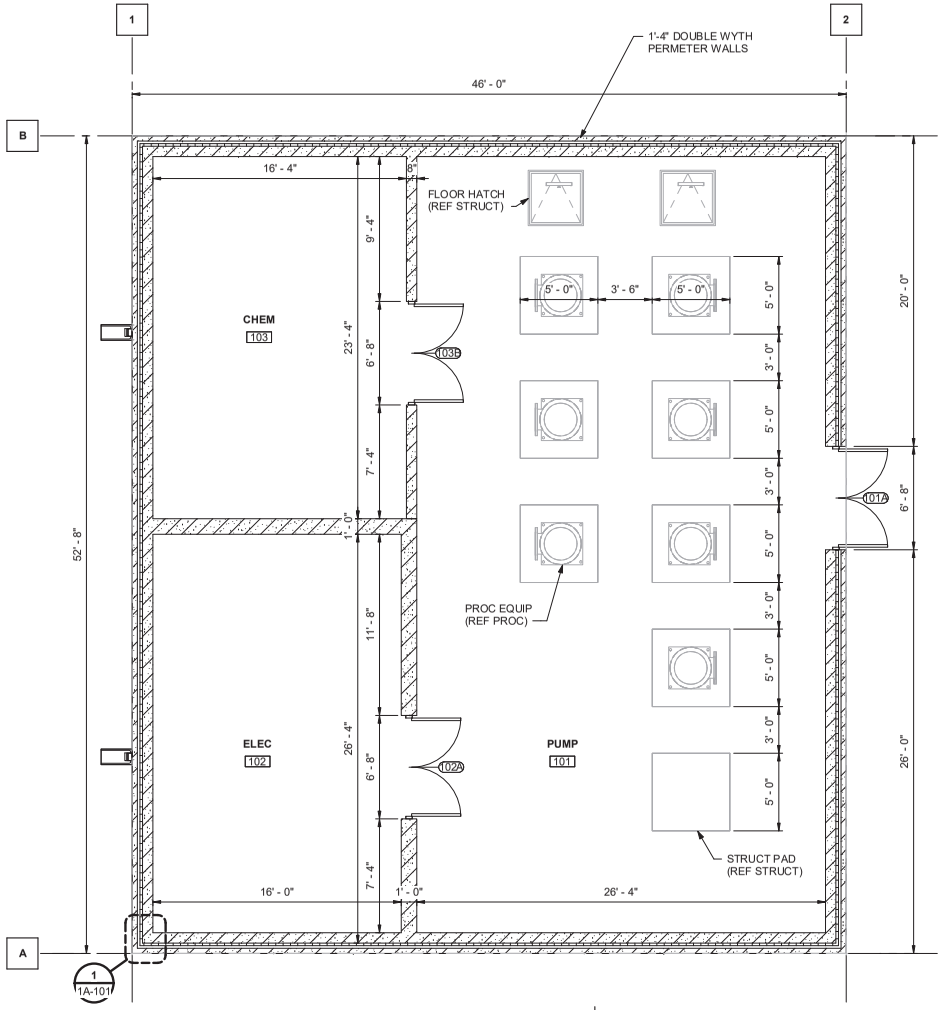
INSULATION PROVIDED (IECC C402) CLIMATE ZONE 5b

	MINIMUM REQ	TYPE PROVIDED
ROOF	R-30ci	INSULATION ABOVE DECK
ABOVE GRADE WALLS	R-11.4ci	RIGID INSULATION
BELOW GRADE WALLS	R-7.5	RIGID INSULATION
DOORS	R-3	RIGID INSULATION



CMU CORNER DETAIL 1 / 1A-101

0 1/2' 1' 1 1/2'
SCALE IN FEET



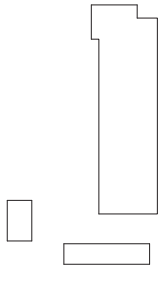
FLOOR PLAN

0 2' 4' 8'
SCALE IN FEET

NORTH

no.	date	by	ckd	description
A	05/15/24	JRD	RPJ	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
ARCHITECTURE, P.C.

creation date	detailed by
MAY 2024	B. MADDOX
designed by	**checked by**
J. DEAR	R. LANG

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT
RAW WATER PUMP STATION
CODE REVIEW AND OVERALL FLOOR PLAN

project	contract
160267	

drawing	rev.
1A-101	A

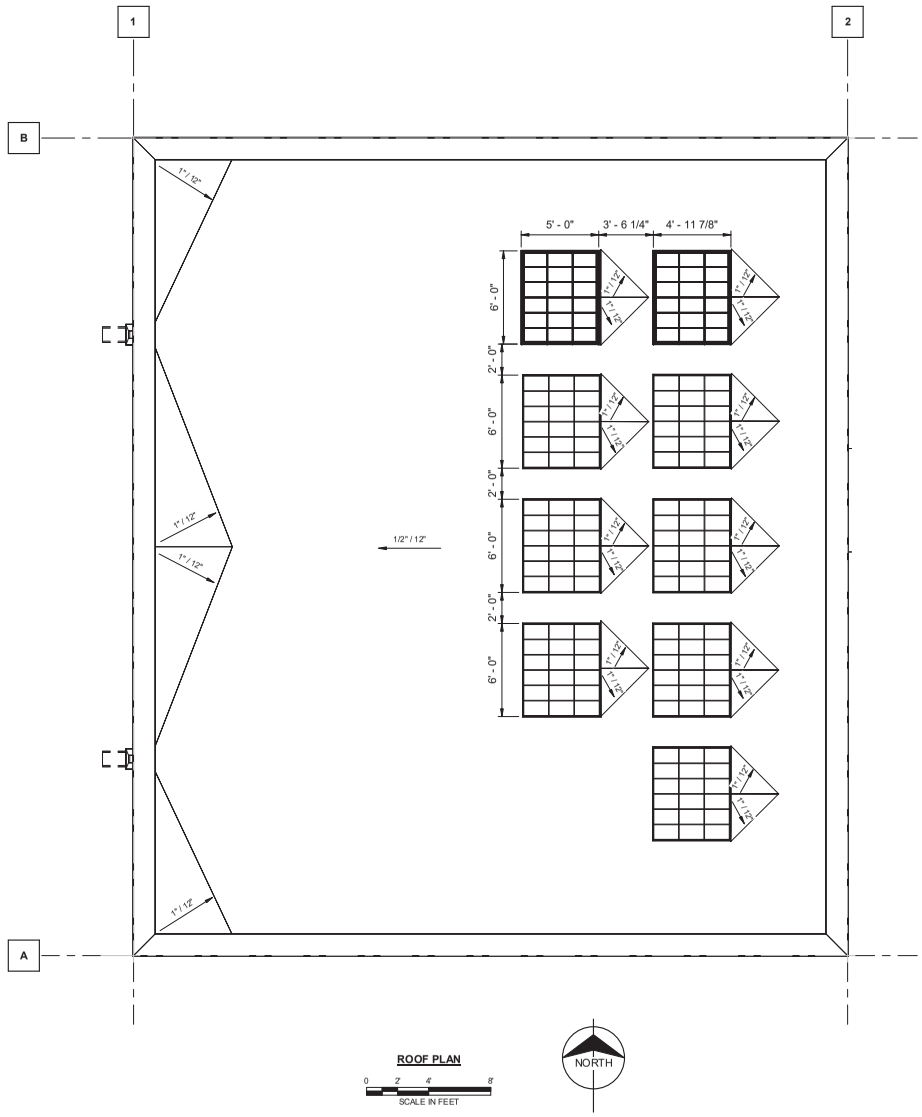
sheet of sheets

Millimeters
Scale For Microfilming
Inches

5/15/2024 2:49:39 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_01_RAW WATER PUMP STATION_A_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

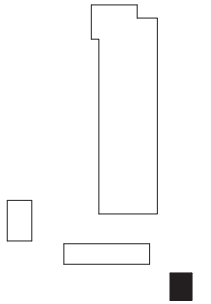


ROOF PLAN

0 2' 4' 8'
SCALE IN FEET

no.	date	by	ckd	description
A	05/15/24	JRD	RPJ	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
ARCHITECTURE, P.C.

creation date	detailed by
MAY 2024	B. MADDOX
designed by	**checked by**
J. DEAR	R. LANG

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT
RAW WATER PUMP STATION
ROOF PLAN

project	contract
160267	

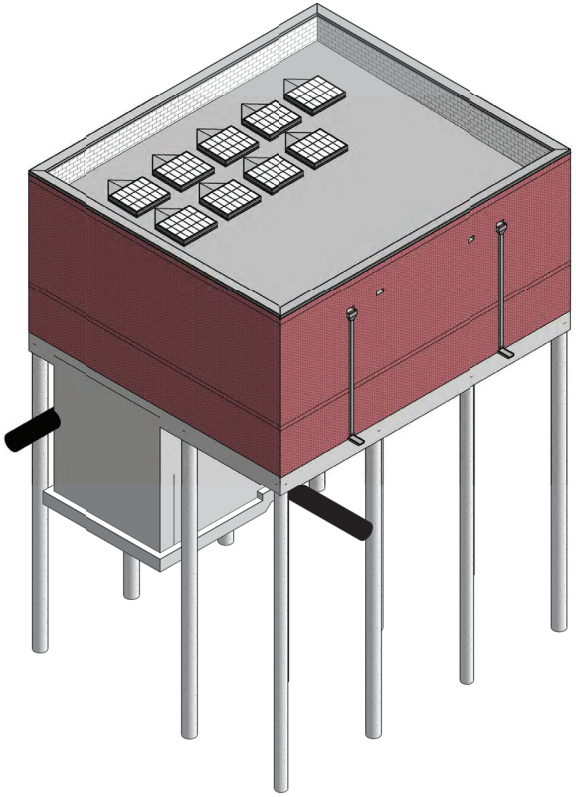
drawing	rev.
1A-103 —	A

sheet of sheets

5/15/2024 2:49:40 PM

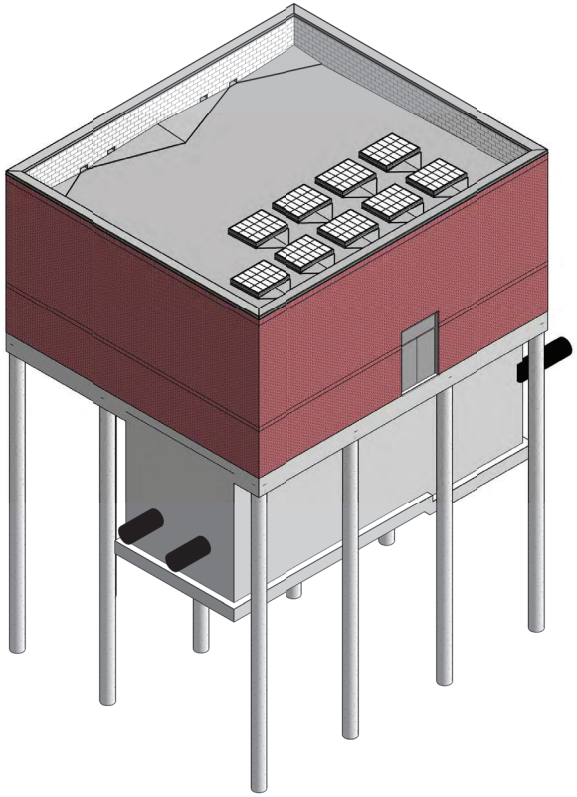
Autodesk Docs://160267_ERIE NORTH WTP/160267_01_RAW WATER PUMP STATION_A_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



NORTHWEST ISOMETRIC VIEW

0 4' 8' 16'
SCALE IN FEET

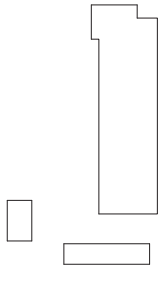


SOUTHEAST ISOMETRIC VIEW

0 4' 8' 16'
SCALE IN FEET

no.	date	by	ckd	description
A	05/15/24	JRD	RPJ	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
ARCHITECTURE, P.C.

creation date	detailed by
MAY 2024	B. MADDOX
designed by	**checked by**
J. DEAR	R. LANG

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT
RAW WATER PUMP STATION
ISOMETRIC VIEWS

project	contract
160267	

drawing	rev.
1A-901 —	A

sheet of sheets

5/15/2024 2:49:42 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_01_RAW WATER PUMP STATION_A_R24.rvt

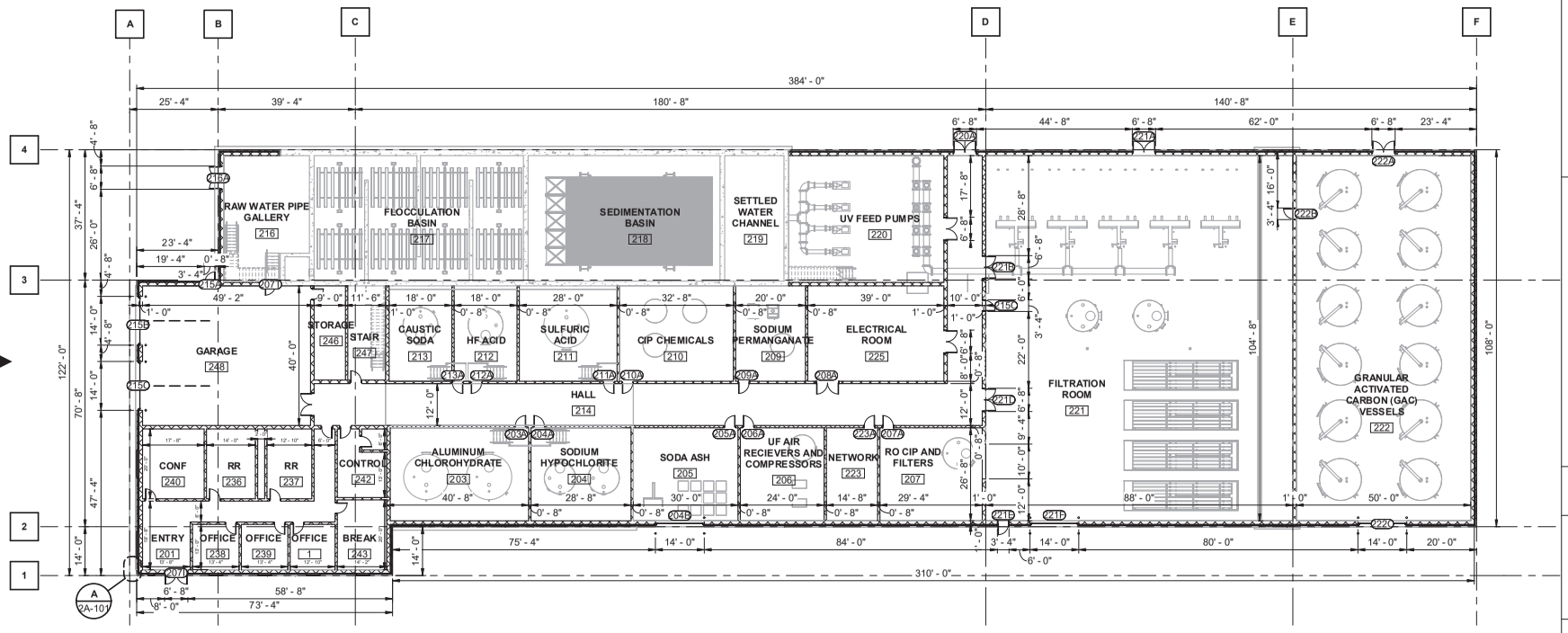
Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

APPLICABLE CODES:
(TOWN OF ERIE, COLORADO LOCATED IN WELD COUNTY CLIMATE ZONE 5B)

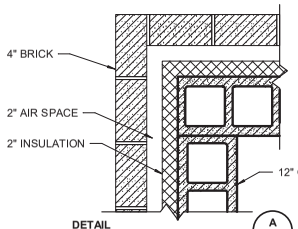
- INTERNATIONAL BUILDING CODE 2021
- INTERNATIONAL ENERGY CODE 2021
- INTERNATIONAL MECHANICAL CODE 2021
- INTERNATIONAL PLUMBING CODE 2021
- NATIONAL ELECTRIC CODE 2023
- INTERNATIONAL FIRE CODE 2021
- INTERNATIONAL FUEL GAS CODE 2021

FIRE SPRINKLERS
- REQUIRED THROUGHOUT TREATMENT BUILDING

	MINIMUM REQ	TYPE PROVIDED
ROOF	R-30ci	RIGID INSULATION
ABOVE GRADE WALLS	R-11.4ci	RIGID INSULATION
BELOW GRADE WALLS	R-7.5	RIGID INSULATION
DOORS	R-3	RIGID INSULATION



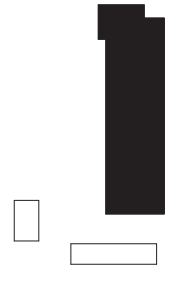
OVERALL FLOOR PLAN
0 8' 16' 32'
SCALE IN FEET
NORTH



DETAIL A 2A-101
CMU 12" CORNER
0 1/2' 1' 1 1/2'
SCALE IN FEET

no.	date	by	ckd	description
A	5/15/24	JRD	RPL	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
ARCHITECTURE, P.C.

creation date	detailed by
MAY 2024	B. MADDOX
designed by	**checked by**
J. DEAR	R. LANG

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT
TREATMENT BUILDING
OVERALL FLOOR PLAN

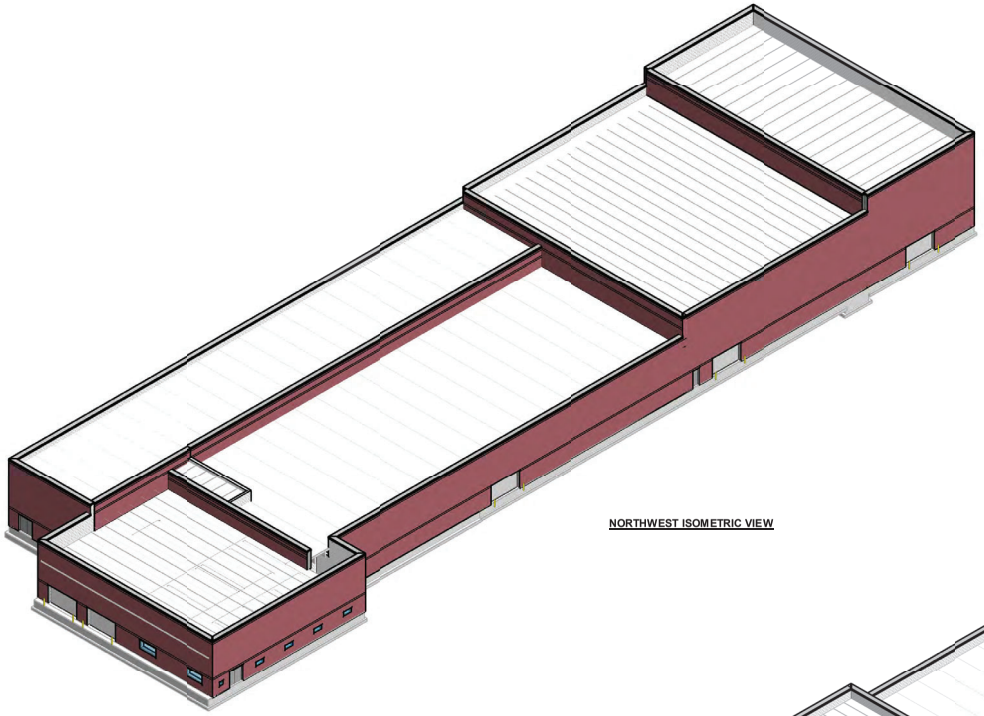
project	contract
160267	

drawing	rev.
2A-101	A

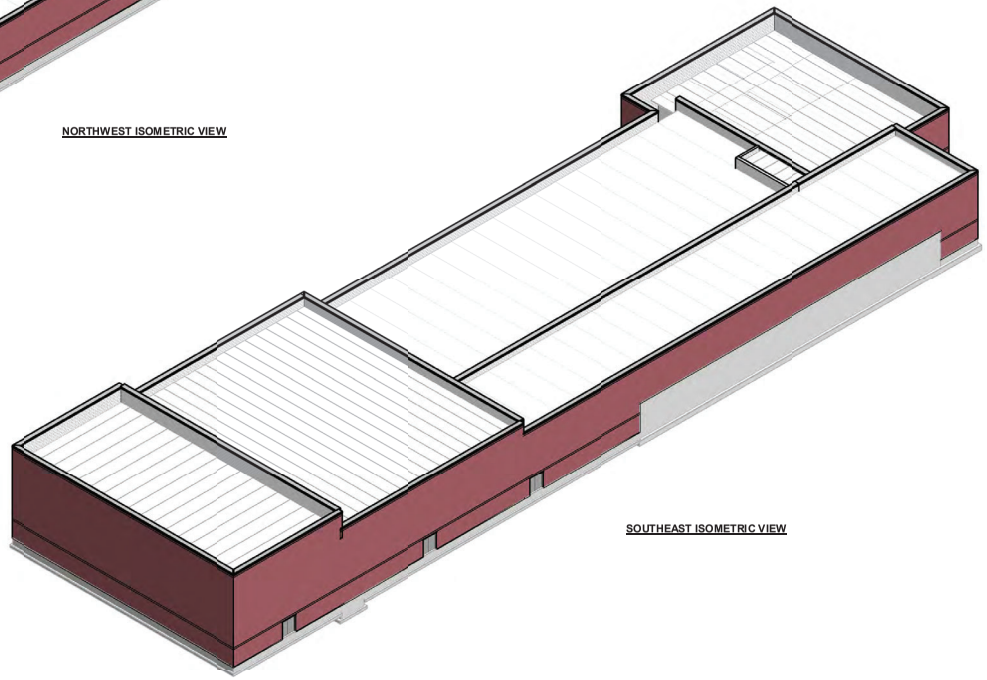
sheet of sheets

5/15/2024 2:59:10 PM
Autodesk Docs://160267_ERIE NORTH WTP/160267_02_TREATMENT BUILDING_A_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



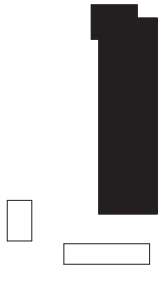
NORTHWEST ISOMETRIC VIEW



SOUTHEAST ISOMETRIC VIEW

no.	date	by	ckd	description
A	5/15/24	JRD	RPL	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

ARCHITECTURE, P.C.

creation date	detailed by
MAY 2024	B. MADDOX
designed by	**checked by**
J. DEAR	R. LANG

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

TREATMENT BUILDING

ISOMETRIC

project	contract
160267	

drawing	rev.
2A-901 —	A

sheet of sheets

Scale For Microfilming: Millimeters / Inches

5/15/2024 2:28:04 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_02_TREATMENT BUILDING_A_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

APPLICABLE CODES:
(TOWN OF ERIE, COLORADO LOCATED IN WELD COUNTY CLIMATE ZONE 5B)
- INTERNATIONAL BUILDING CODE 2021
- INTERNATIONAL EXISTING BUILDING CODE 2021
- INTERNATIONAL MECHANICAL CODE 2021
- INTERNATIONAL PLUMBING CODE 2021
- NATIONAL ELECTRIC CODE 2023
- INTERNATIONAL FUAL GAS CODE CODE 2021
- INTERNATIONAL ENERGY CONSERVATION CODE 2021

OCCUPANCY TYPES (SECTION 302.1)
- F-1, LOW-HAZARD INDUSTRIAL

CONSTRUCTION TYPE (SECTION 602)
- CONSTRUCTION TYPE II-B

OCCUPANT LOADS (TABLE 1004.1.2 & SECTION 1005.3)
- ELEC: F-1 OCCUPANCY SF/100SF PER PERSON=
- PUMP: F-1 OCCUPANCY SF/100SF PER PERSON=

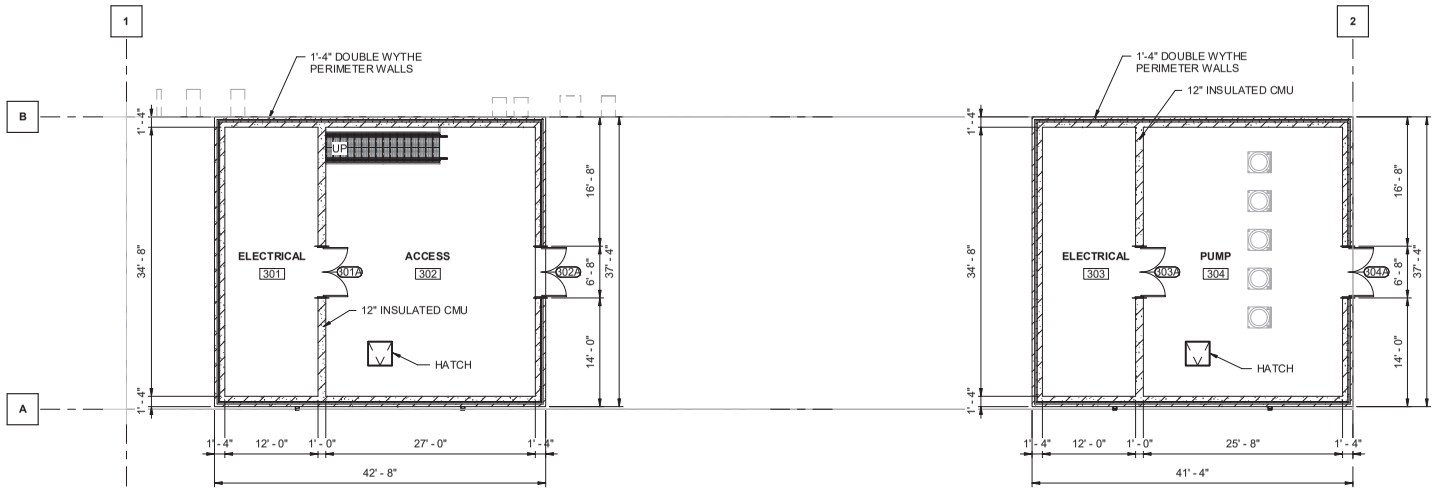
EGRESS WIDTH (SECTION 1005.3)
- 0.2 INCHES PER OCCUPANT (OTHER COMPONENTS):
  - F-1 - 2.6 INCHES
- 0.3 INCHES PER OCCUPANT (STAIRWAYS):
  - F-1 - 3.9 INCHES
- MINIMUM OF 32 INCHES PROVIDED

NUMBER OF EXITS (TABLE 1006.2.1)
- F-1 OCCUPANCY:
  - ONLY 1 EXIT REQUIRED, EACH STRUCTURE

MAXIMUM EXIT ACCESS TRAVEL DISTANCE (TABLE 1016.2)
- F-1 OCCUPANCY: 200 FT (NOT SPRINKLERED)

INSULATION PROVIDED (IECC C402) CLIMATE ZONE 5b

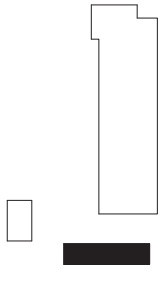
	MINIMUM REQ	TYPE PROVIDED
ROOF	R-30ci	INSULATION ABOVE DECK
ABOVE GRADE WALLS	R-11.4ci	RIGID INSULATION
BELOW GRADE WALLS	R-7.5	RIGID INSULATION
DOORS	R-3	RIGID INSULATION



FLOOR PLAN
0 4' 8' 16'
SCALE IN FEET

no.	date	by	ckd	description
A	05/15/24	JRD	RPL	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
ARCHITECTURE, P.C.

creation date	detailed by
MAY 2024	B. MADDOX
designed by	checked by
J. DEAR	R. LANG

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT
DISINFECTION CONTACT BASIN
FLOOR PLAN

project	contract
160267	

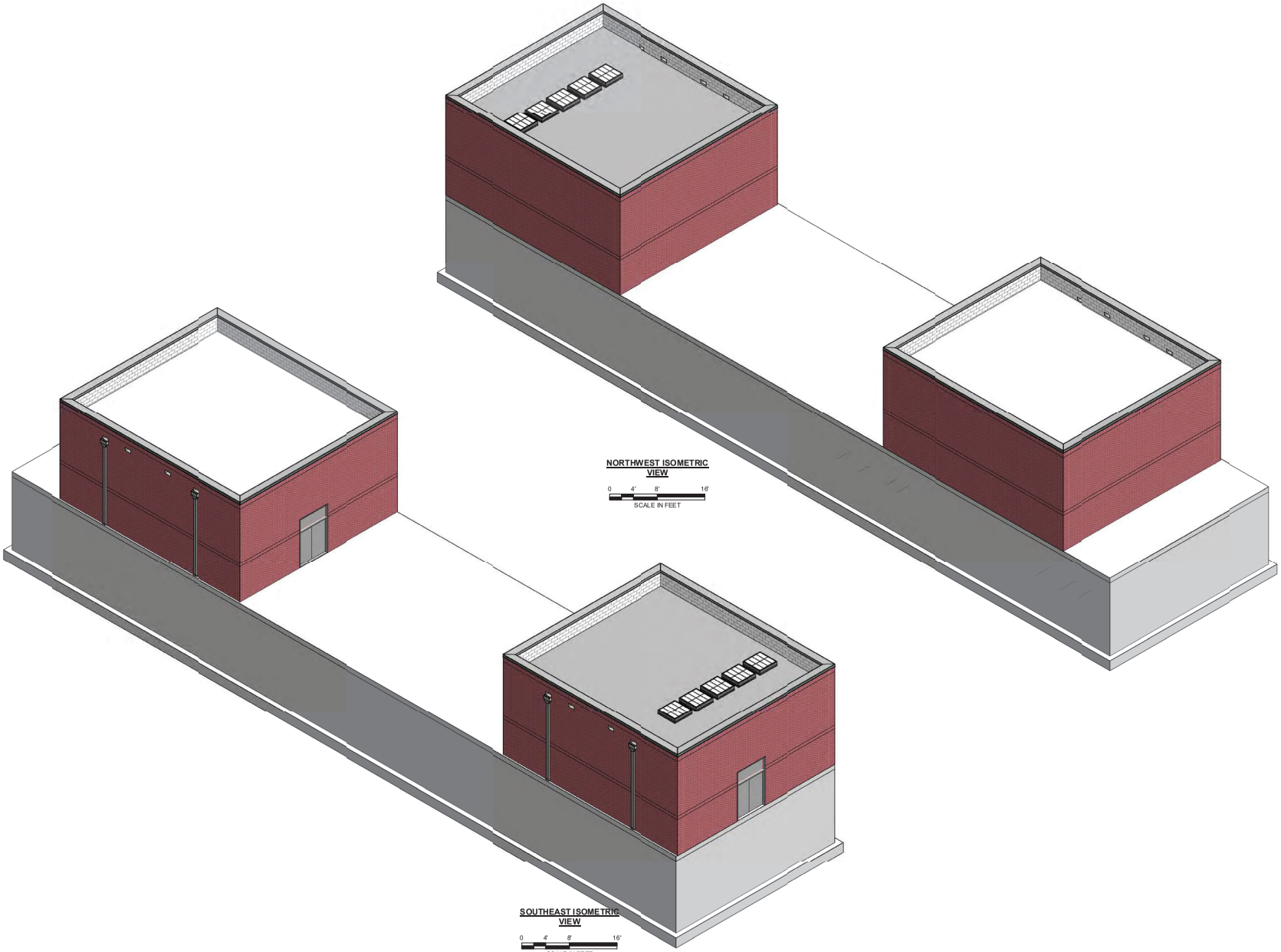
drawing **3A-101** — rev. **A**

sheet of sheets

5/15/2024 3:04:40 PM

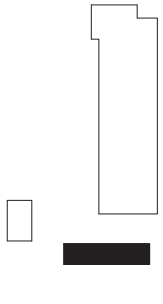
Autodesk Docs://160267_ERIE NORTH WTP/160267_03_DISINFECTION CONTACT BASIN_A_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



no.	date	by	ckd	description
A	05/15/24	JRD	RPL	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
ARCHITECTURE, P.C.

creation date	detailed by
MAY 2024	B. MADDOX
designed by	**checked by**
J. DEAR	R. LANG

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT
DISINFECTION CONTACT BASIN
ISOMETRIC VIEWS

project	contract
160267	

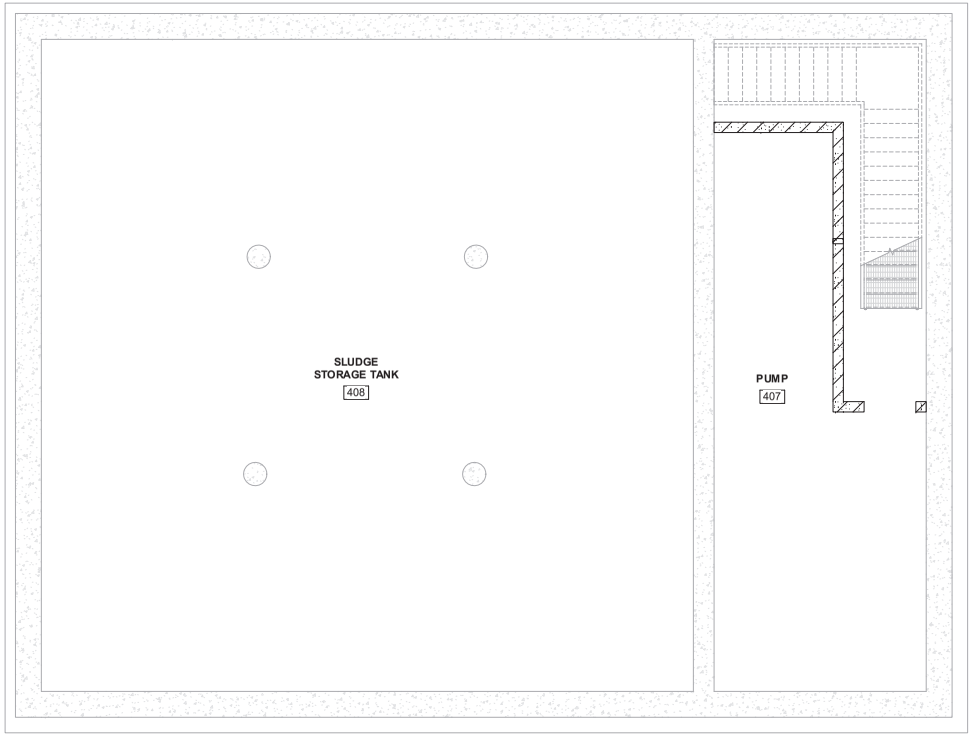
drawing **3A-901** — rev. **A**

sheet of sheets

5/15/2024 2:08:55 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_03_DISINFECTION CONTACT BASIN_A_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



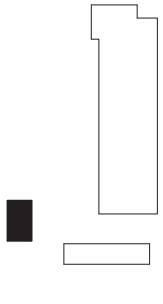
BELOW GRADE FLOOR PLAN

0 2' 4' 8'
SCALE IN FEET

NORTH

no.	date	by	ckd	description
A	05/15/24	JRD	RPL	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
ARCHITECTURE, P.C.

creation date	detailed by
MAY 2024	B. MADDOX
designed by	**checked by**
J. DEAR	R. LANG

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT
SOLIDS HANDLING FACILITY
BELOW GRADE FLOOR PLAN

project	contract
160267	

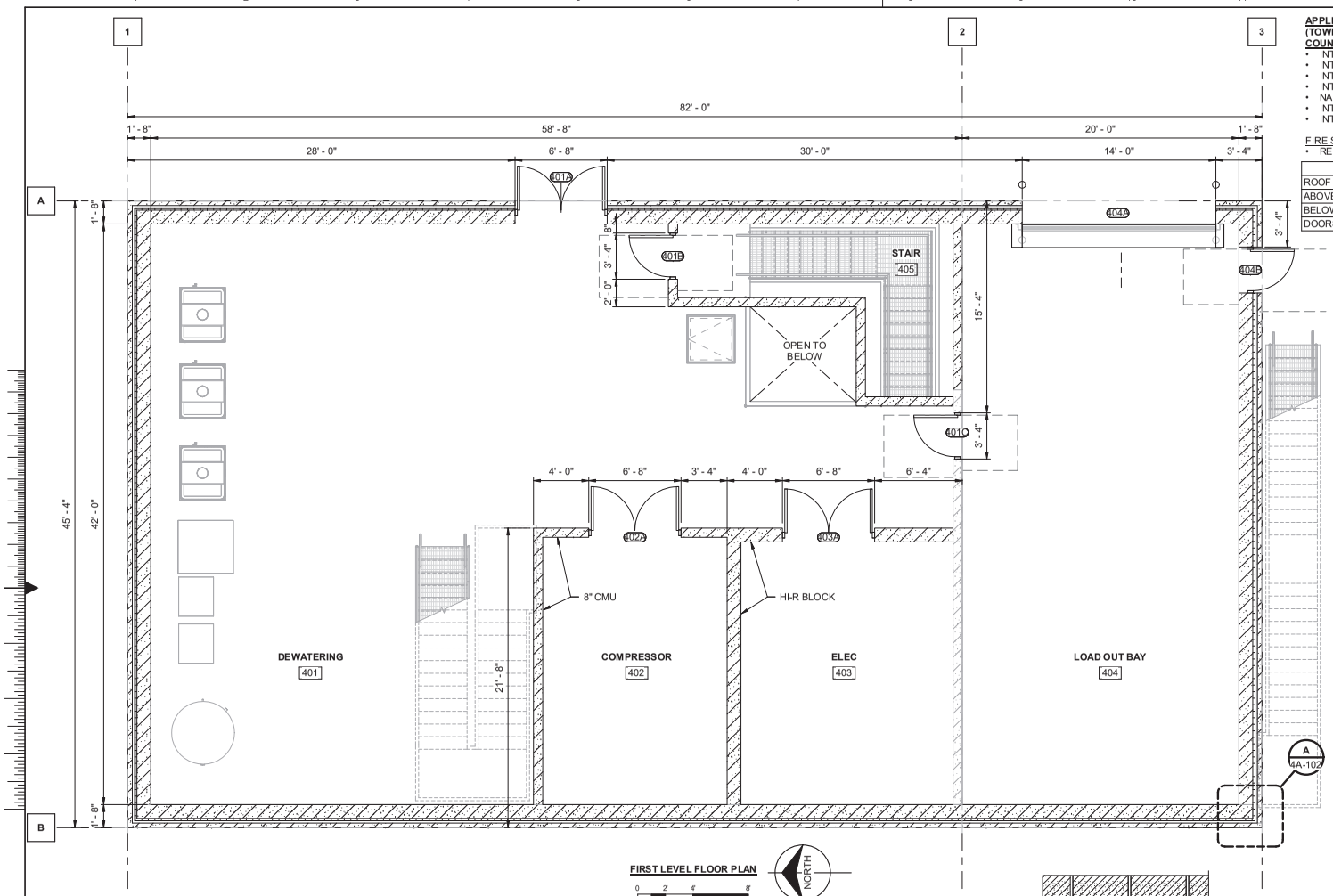
drawing	rev.
4A-101 —	A

sheet of sheets

5/15/2024 3:10:37 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_04_RESIDUALS BUILDING_A_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



FIRST LEVEL FLOOR PLAN

0 2' 4' 8'
SCALE IN FEET

NORTH

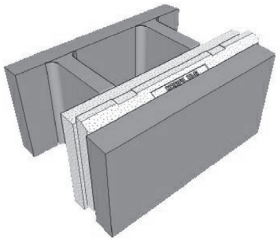
APPLICABLE CODES:
(TOWN OF ERIE, COLORADO LOCATED IN WELD COUNTY CLIMATE ZONE 5B)

- INTERNATIONAL BUILDING CODE 2021
- INTERNATIONAL ENERGY CODE 2021
- INTERNATIONAL MECHANICAL CODE 2021
- INTERNATIONAL PLUMBING CODE 2021
- NATIONAL ELECTRIC CODE 2023
- INTERNATIONAL FIRE CODE 2021
- INTERNATIONAL FUEL GAS CODE 2021

FIRE SPRINKLERS

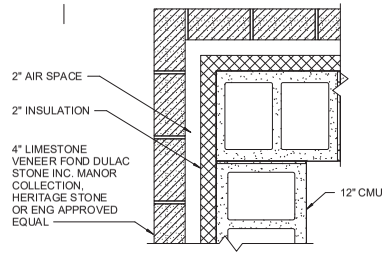
- REQUIRED IN TREATMENT AND CHEMICAL ROOMS

	MINIMUM REQ	TYPE PROVIDED
ROOF	R-30ci	RIGID INSULATION
ABOVE GRADE WALLS	R-11.4ci	RIGID INSULATION
BELOW GRADE WALLS	R-7.5	RIGID INSULATION
DOORS	R-3	RIGID INSULATION



HI-R BLOCK

0 1' 2' 4'
SCALE IN FEET



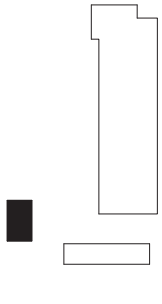
DETAIL A 4A-102

CMU 12" CORNER

0 1/2' 1' 1 1/2'
SCALE IN FEET

no.	date	by	ckd	description
A	05/15/24	JRD	RPL	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
ARCHITECTURE, P.C.

creation date	detailed by
MAY 2024	B. MADDOX
designed by	**checked by**
J. DEAR	R. LANG

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT
SOLIDS HANDLING FACILITY
FIRST LEVEL FLOOR PLAN

project	contract
160267	

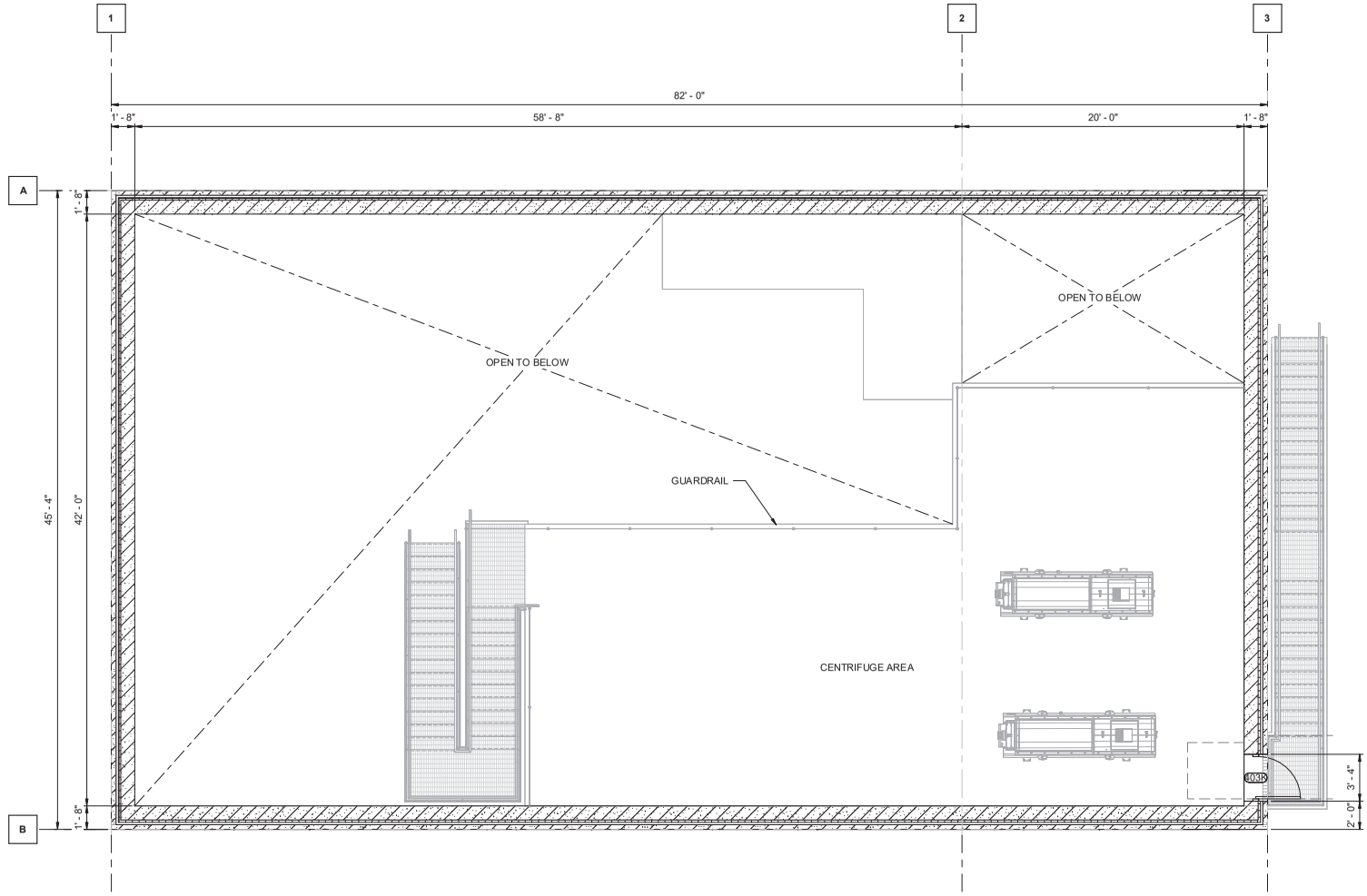
drawing **4A-102** — rev. **A**

sheet of sheets

5/15/2024 3:10:38 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_04_RESIDUALS BUILDING_A_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



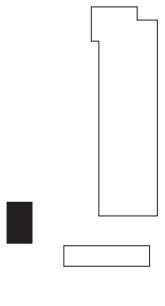
SECOND LEVEL FLOOR PLAN

0 2' 4' 8'
SCALE IN FEET

NORTH

no.	date	by	ckd	description
A	05/15/24	JRD	RPL	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
ARCHITECTURE, P.C.

creation date	detailed by
MAY 2024	B. MADDOX
designed by	checked by
R. LANG	R. LANG

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT
SOLIDS HANDLING FACILITY
SECOND LEVEL FLOOR PLAN

project	contract
160267	

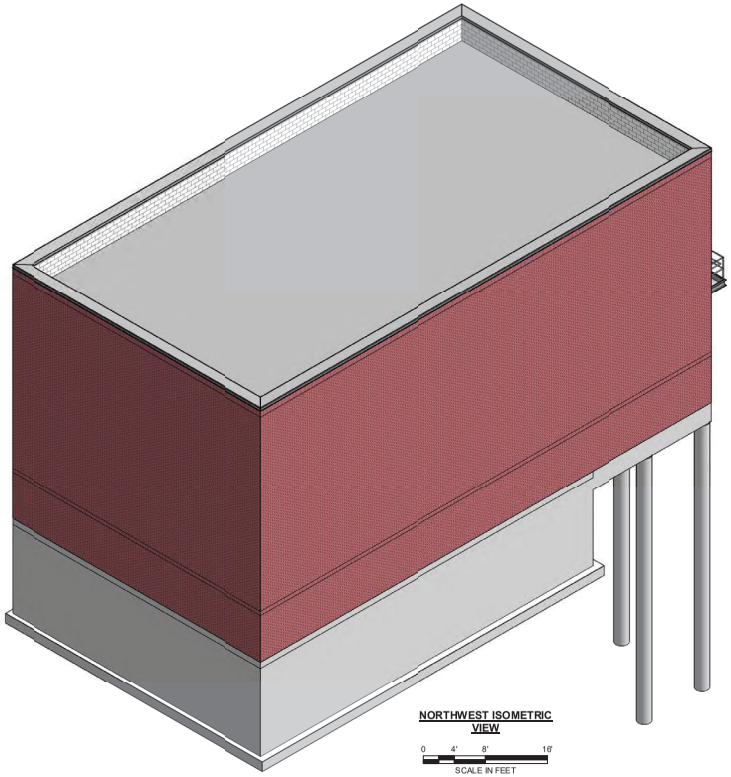
drawing **4A-103** — rev. **A**

sheet of sheets

5/15/2024 3:13:54 PM

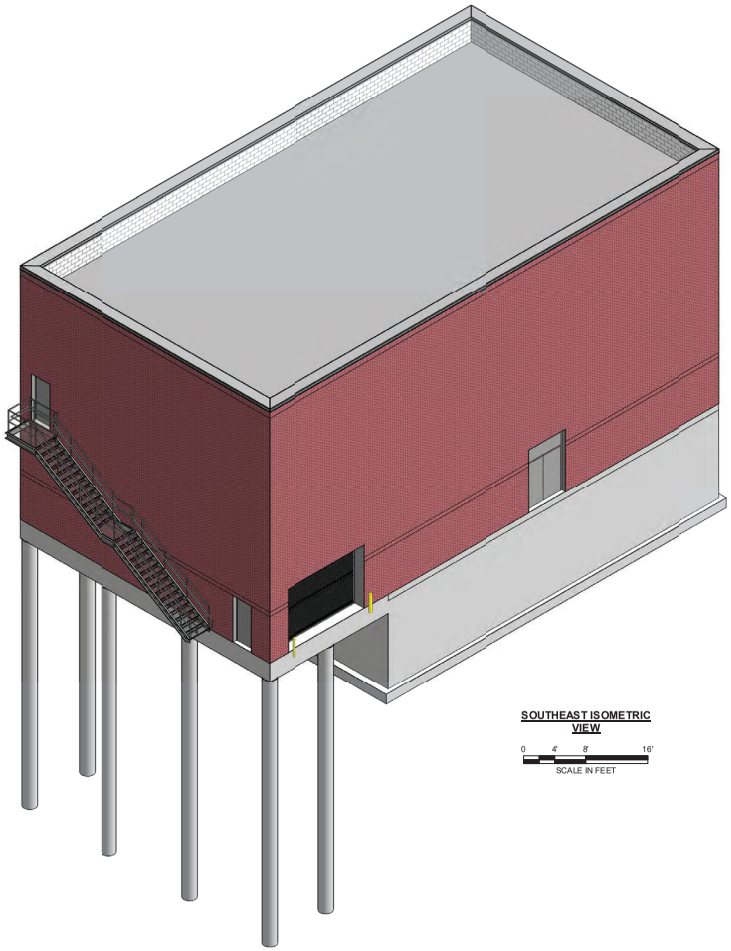
Autodesk Docs://160267_ERIE NORTH WTP/160267_04_RESIDUALS BUILDING_A_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



NORTHWEST ISOMETRIC VIEW

0 4' 8' 16'
SCALE IN FEET

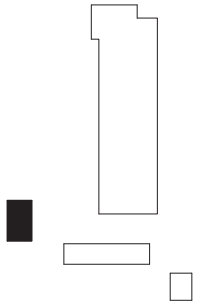


SOUTHEAST ISOMETRIC VIEW

0 4' 8' 16'
SCALE IN FEET

no.	date	by	ckd	description
A	05/15/24	JRD	RPL	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL
ARCHITECTURE, P.C.

creation date	detailed by
MAY 2024	B. MADDOX
designed by	checked by
J. DEAR	R. LANG

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT
SOLIDS HANDLING FACILITY
ISOMETRIC VIEWS

project	contract
160267	

drawing **4A-901** — rev. **A**

sheet of sheets

5/15/2024 2:13:54 PM
Autodesk Docs://160267_ERIE NORTH WTP/160267_04_RESIDUALS BUILDING_A_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

SINGLE LINE PIPING

- 18" — PIPE SIZE AND DIRECTION OF FLOW
- GENERIC VALVE
- GLOBE VALVE
- BUTTERFLY VALVE (BFV)
- CHECK VALVE (CV)
- STOP CHECK VALVE
- PLUG VALVE (PV)
- 3-WAY VALVE
- ANGLE VALVE
- RELIEF OR BACKPRESSURE VALVE
- HOSE GATE DRAIN VALVE
- PINCH VALVE
- NEEDLE VALVE
- DIAPHRAGM VALVE
- BALL VALVE (BV)
- P — SELF-CONTAINED PRESSURE REDUCING (REGULATING VALVE)
- S — SOLENOID VALVE
- BACKFLOW PREVENTER
- VB — VACUUM BREAKER
- MS — MOISTURE SEPARATOR
- T — IN-LINE TOTALIZING FLOW METER
- LOCKED OPEN
- LOCKED CLOSED
- NO — NORMALLY OPEN
- NC — NORMALLY CLOSED
- FLEXIBLE HOSE
- EXPANSION ELEMENT (JOINT)
- FLEXIBLE BALL JOINT
- BASKET TYPE STRAINER
- TEE TYPE STRAINER
- Y-TYPE STRAINER
- FLANGED COUPLING ADAPTER (FCA)
- RETAINER FLANGE
- DRAINER ASSEMBLY
- INSULATING FLANGE (I.F.)
- RESTRICTING ORIFICE
- SIGHT FLOW INDICATOR
- ELBOW TURNING DOWN
- ELBOW TURNING UP
- TYPICAL PIPE BREAK
- PIPES IN SECTION
- TEE TURNING DOWN
- TEE TURNING UP
- ABOVE / PIPES CROSSING / BELOW
- ABOVE / PIPES CROSSING WITH BREAK-OUT TO SHOW PIPES OR EQUIPMENT BELOW
- M — IN-LINE FLOW METER
- CLEANOUT (CO)
- DISCHARGE ELBOW ASSEMBLY
- STRAIGHTENING VANE
- REMOVABLE PLUG
- REMOVABLE CAP
- WELDED CAP
- BF — BLIND FLANGE
- DRIP POCKET ASSEMBLY
- STEAM TRAP ASSEMBLY
- AC — AIR COCK
- HB — HOSE BIBB
- WH — WALL HYDRANT
- PIPE ANCHOR
- PIPE GUIDE
- REDUCER
- UNION
- C — QUICK DISCONNECT COUPLING
- VENT THROUGH ROOF
- INJECTOR
- CENTRIFUGAL PUMP
- DIAPHRAGM METERING PUMP
- A — AIR RELEASE VALVE
- VACUUM VALVE
- AV — AIR AND VACUUM VALVE
- V — VACUUM TRAP
- WATER SURFACE (WS)
- PULSATION DAMPENER W/ ISOLATION BALL VALVE
- CALIBRATION COLUMN
- ROTAMETER
- STATIC MIXER
- GAUGE SEAL
- DIAPHRAM PROTECTED PRESSURE SWITCH
- PC — CHEMICAL APPLICATION POINT
- PIPE SUPPORT LOCATION
- PRESSURE REDUCING VALVE
- BLOWER
- SLIDE GATE

DOUBLE LINE PIPING

- GATE VALVE
- BUTTERFLY VALVE
- FLANGED COUPLING ADAPTOR
- REDUCER
- FLANGED PIPING
- DOUBLE BOLTED SLEEVE COUPLING
- BACKFLOW PREVENTER
- MECHANICAL JOINT PIPING
- HARNESSED SLEEVE COUPLING
- CHECK VALVE
- BALL VALVE
- EXPANSION JOINT
- PLUG VALVE
- INLINE STRAINER
- DISMANTLING JOINT
- ELBOW TURNING DOWN
- ELBOW TURNING UP
- ABOVE / PIPES CROSSING / BELOW
- TYPICAL PIPE BREAK
- ABOVE / PIPES CROSSING WITH BREAK-OUT TO SHOW PIPES OR EQUIPMENT BELOW / BELOW
- PIPES IN SECTION
- AIR VAC
- GLOBE VALVE
- STRAINER
- MAG METER
- DEWATERING PUMP

ABBREVIATIONS

AAG	ABOVE AT GRADE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
BD	BLOWDOWN
BFV	BUTTERFLY VALVE
BOC	BOTTOM OF CONCRETE
BV	BALL VALVE
BW	BACKWASH
BWR	BACKWASH RECYCLE
BWS	BACKWASH SUPPLY
BWW	BACKWASH WASTE
CA	COMPRESSED AIR
CAP	COAGULANT AID
CAS	CAUSTIC SODA
CFE	COMBINED FILTER EFFLUENT
CI	CAST IRON
CIP	CLEAN IN PLACE
CL	CENTERLINE
CP	COAGULANT PUMP
CO	CLEANOUT
CV	CHECK VALVE
DCB	DISINFECTION CONTACT BASIN
DEG	DEGREE
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DND	DO NOT DISTURB
DR	DRAIN
DV	DRAIN VALVE
DWG	DRAWING
EL	ELEVATION
FCA	FLANGED COUPLING ADAPTER
FDN	FOUNDATION DRAIN
FF	FINISHED FLOOR
FLT	FILTRATION
FM	FORCE MAIN
FP	FIRE PROTECTION
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FEET
FW	FINISHED WATER
GAC	GANULAR ACTIVATED CARBON
GAL	GALLONS
GPM	GALLONS PER MINUTE
HF	HYDROFLUOROSILIC
HGL	HYDRAULIC GRADE LINE
HP	HORSEPOWER
HWL	HIGH WATER LEVEL
ID	INNER DIAMETER
IE	INVERT ELEVATION
INV	INVERT
KW	KILOWATT
LT	LEFT
LWL	LOWER WATER LEVEL
MAX	MAXIMUM
MB	MACHINE BOLT
MG	MILLION GALLONS, MILLIGRAMS
MGD	MILLION GALLONS PER DAY
MIN	MINIMUM, MINUTE
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NISP	NORTHERN INTEGRATED SUPPLY PROJECT
NPW	NON POTABLE WATER
NWTP	NORTH WATER TREATMENT PLANT
OC	ON CENTER
OF	OVERFLOW
OVE	OVERHEAD ELECTRIC
OVF	OVERFLOW
PAC	POWDER ACTIVATED CARBON
PCV	PUMP CONTROL VALVE
PCW	POTABLE COLD WATER
PD	PROCESS DRAIN
PE	PLAIN END
PL	PLATE
PPM	PARTS PER MILLION
PRE	PRETREATMENT
PRV	PRESSURE REDUCING VALVE
PS	PIPE SUPPORT
PSI	POUNDS PER SQUARE INCH
PVI	POINT OF VERTICAL INFLECTION
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
PW	POTABLE WATER
RED	REDUCER
REQD	REQUIRED
RO	REVERSE OSMOSIS
RT	RIGHT
RW	RAW WATER LINE
RWS	RAW WATER SUPPLY
SAN	SANITARY SEWER
SAV	SURGE ANTICIPATION VALVE
SCH	SCHEDULE
SCFM	STANDARD CUBIC FOOT PER MINUTE
SEC	SECONDS
SG	SLUICE/SLIDE GATE
SH	SODIUM HYPOCHLORITE
SQ	SQUARE
SST	STAINLESS STEEL
SS	SANITARY SEWER
ST	STORM DRAIN
STA	STATION
TBD	TO BE DETERMINED
TBR	TO BE REMOVED
TDH	TOTAL DESIGN HEAD
TEMP	TEMPORARY
THRU	THROUGH
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UF	ULTRAFILTRATION
UGE	UNDERGROUND ELECTRIC
UGT	UNDERGROUND TELEPHONE
UNO	UNLESS NOTED OTHERWISE
VT	VERTICAL TURBINE
W	WATER SUPPLY LINE
WL	WATERLINE
WS	WATER SURFACE
WSE	WATER SURFACE ELEVATION

LINETYPES

- NEW CONSTRUCTION
- FUTURE CONSTRUCTION
- NOT IN CONTRACT

VALVE OPERATORS

- S — SOLENOID
- D — DIAPHRAGM
- M — MOTOR

TAGS

- XX — EQUIPMENT TAG
- XX — VALVE TAG

NOTES:

1. THIS IS A STANDARD PROCESS LEGEND AND NOT ALL ITEMS OR EQUIPMENT AS DESIGNATED HEREON ARE USED ON THIS PROJECT.
2. THIS SHEET APPLIES TO PROCESS DRAWINGS LABELED DXXX AND PROCESS AND INSTRUMENTATION DRAWINGS LABLED IXXX.

no.	date	by	ckd	description
A	05/15/24	EJW	BDP	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

date: MAY 2024	detailed: J. DAVIS
designed: J. DAVIS	checked: B. PUGH

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

GENERAL NOTES, LEGEND, AND ABBREVIATIONS

project: 160267	contract:
drawing: 0D-001	rev.: A
sheet	of sheets

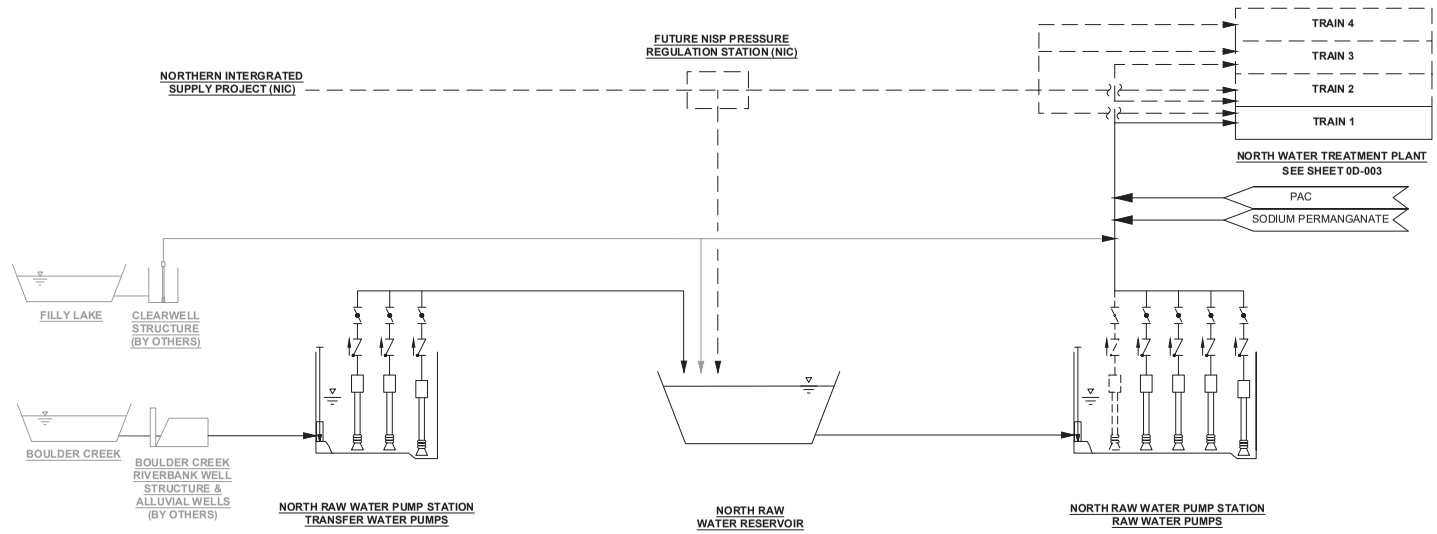
5/15/2024 12:04:39 PM
Autodesk Docs://160267_ERIE NORTH WTP/160267_01_RAW WATER PUMP STATION_PROCESS_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

no.	date	by	ckd	description
A	05/15/24	EJW	BDP	15% REVIEW

LEGEND:

- EXISTING / BY OTHERS
- NEW CONSTRUCTION
- FUTURE CONSTRUCTION



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date	detailed
MAY 2024	E. WOODWARD
designed	**checked**
E. WOODWARD	B. PUGH

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

RAW WATER PROCESS FLOW DIAGRAM

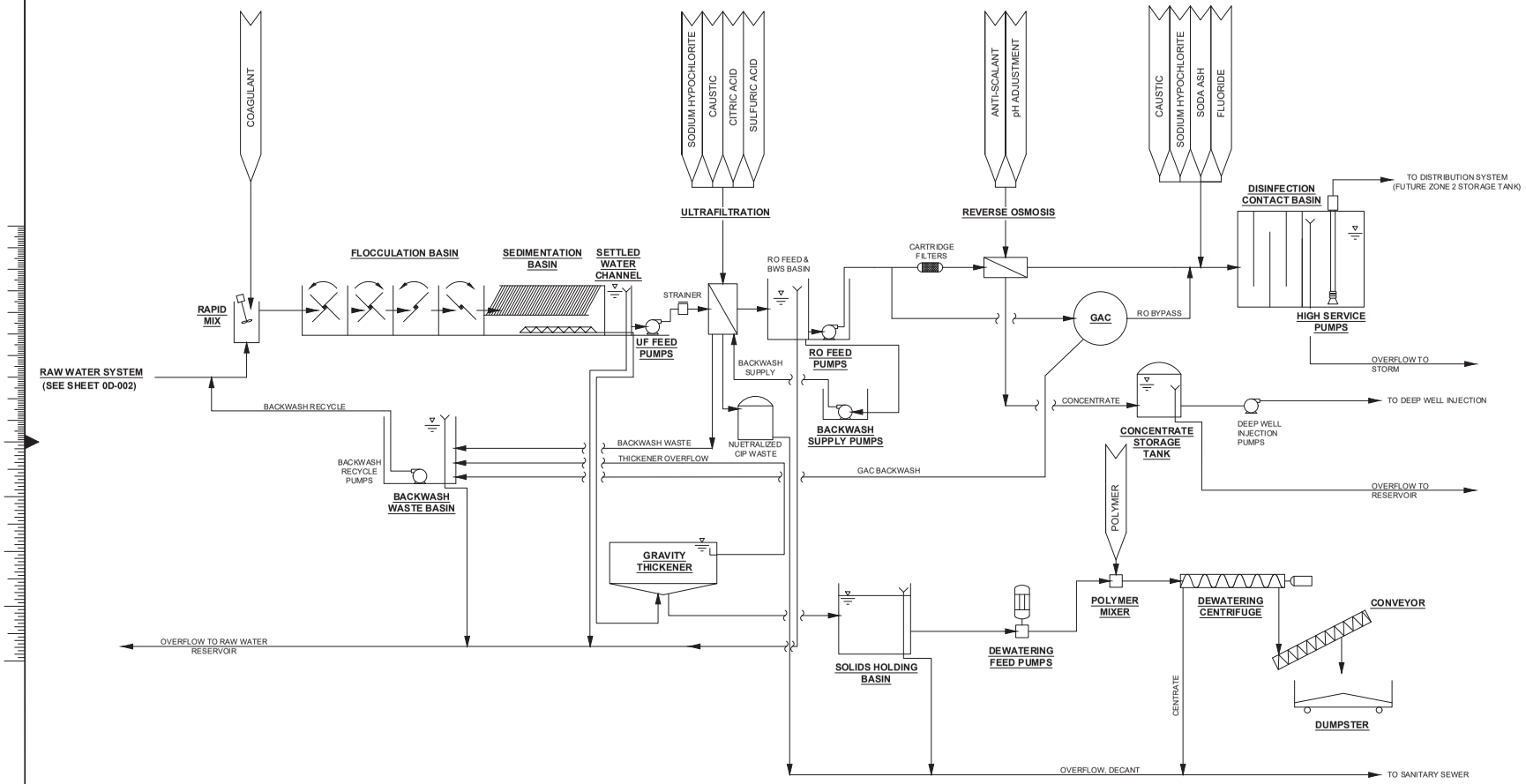
project	contract
160267	

drawing **0D-002** — rev. **A**

sheet of sheets

0D-002 - RW PFD.DWG

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



no.	date	by	ckd	description
A	05/15/24	EJW	BDP	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date	detailed
MAY 2024	E. WOODWARD
designed	**checked**
E. WOODWARD	B. PUGH

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

PROCESS FLOW DIAGRAM

project	contract
160267	

drawing **0D-003** — rev. **A**

sheet of sheets

0D-003 - PROCESS FLOW DIAGRAM.DWG

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

ERIE NORTH WATER TREATMENT PLANT DESIGN CRITERIA

PLANT CAPACITY	
MINIMUM PLANT FLOW (MGD)	2.0
AVERAGE DAY FLOW (MGD)	2.5
MAXIMUM DAY DEMAND (MGD)	6.6
PEAK HOUR FLOW (MGD)	13.2
RAW WATER SUPPLY	
PROPOSED RAW WATER RESERVOIR (AF)	700
BOULDER CREEK (AF)	2,700
FILLY LAKE (AF)	565
FUTURE NISP (AF)	3,000 - 6,500
NORTH RAW WATER PUMP STATION	
TYPE OF PUMP, TRANSFER PUMPS	VERTICAL TURBINE
NUMBER	2 DUTY + 1 STANDBY
CAPACITY (MGD/PUMP)	4.8
TOTAL DESIGN HEAD (FT)	35
MOTOR SIZE (HP)	40
TYPE OF PUMP, RAW WATER PUMPS	VERTICAL TURBINE
NUMBER	3 DUTY + 1 STANDBY
CAPACITY (MGD/PUMP)	4.0
TOTAL DESIGN HEAD (FT)	35
MOTOR SIZE (HP)	40
PRETREATMENT	
DESIGN CAPACITY (MGD)	8.4
RAPID MIX	
MIXER TYPE	VERTICAL MIXER
NUMBER	1
G-VALUE (S^{-1})	750-1000
DETENTION TIME AT MINIMUM FLOW (S)	222
DETENTION TIME AT MAXIMUM FLOW (S)	26
MOTOR HORSEPOWER (HP)	25
FLOCCULATION	
TYPE	HORIZONTAL PADDLE
NUMBER OF TRAINS	1
STAGES	4
DETENTION TIME (MIN)	40
VELOCITY GRADIENT	
STAGE 1 (S^{-1})	60
STAGE 2 (S^{-1})	45
STAGE 3 (S^{-1})	30
STAGE 4 (S^{-1})	30
SEDIMENTATION	
TYPE	INCLINED PLATES
NUMBER OF TRAINS	1
DESIGN FLOW PER TRAIN (MGD)	8.4
LOADING RATE (GPM/FT^2)	0.3
EFFICIENCY FACTOR (%)	90
HYDRAULIC DETENTION TIME, TOTAL (MIN)	40
PLATE AREA PER TRAIN (FT^2)	19,444

ULTRAFILTRATION MEMBRANE SYSTEM	
MEMBRANE FEED PUMPS	
TYPE OF PUMP	HORIZONTAL END SUCTION
NUMBER	3 DUTY + 1 STANDBY
CAPACITY (MGD/PUMP)	2.8
MOTOR SIZE (HP)	75
FIRM CAPACITY (MGD)	8.4
INSTALLED CAPACITY (MGD)	11.2
TOTAL DESIGN HEAD (FT)	80
MEMBRANE FEED STRAINERS	
TYPE	AUTOMATIC BACKWASHING
NUMBER	3 DUTY + 1 STANDBY
OPENING SIZE (MICRON)	250
ULTRAFILTRATION MEMBRANE MODULES	
FIRM PRODUCTION CAPACITY (MGD)	7.7
NUMBER OF TRAINS	3 DUTY + 1 STANDBY
TRAIN CAPACITY (MGD/TRAIN)	2.57
TYPE	PRESSURE
MAX INSTANTANEOUS FLUX RATE (GFD)	26.7
MAX TRANSMEMBRANE PRESSURE (PSI)	22
SYSTEM RECOVERY AT PEAK CAPACITY (%)	95
BACKWASH INTERVAL, MINUTES	30
MAINTENANCE CLEAN INTERVAL, DAYS	7
CLEAN IN PLACE (CIP) INTERVAL, DAYS	30
REMOVAL CREDITS (VIRUS)	0
REMOVAL CREDITS (CRYPTOSPORIDIUM)	2
REMOVAL CREDITS (GIARDIA)	3
BACKWASH SUPPLY (MANUFACTURER DEPENDENT)	
TYPE	FORWARD SWEEP FLOW
SOURCE	FILTRATE
SWEEP FLOW RATE (MGD)	11.9
AERATION AIR FLOW (SCFM/MODULE)	TBD
WASTE VOLUME PER BACKWASH (GAL)	3,000 - 6,000
MINIMUM BASIN VOLUME (GAL)	12,000
BACKWASH FREQUENCY (MIN)	30
BACKWASH SUPPLY PUMPS	
TYPE	HORIZONTAL END SUCTION
NUMBER OF PUMPS	1 DUTY + 1 STANDBY
CAPACITY, EACH (MGD)	0.73
TOTAL DESIGN HEAD (FT)	25
PUMP MOTOR (HP)	10

REVERSE OSMOSIS SYSTEM	
RO FEED PUMPS	
NUMBER	3 DUTY + 1 STANDBY
PUMP TYPE	HORIZONTAL END SUCTION
CAPACITY, EACH (MGD)	2.60
TDH AT MAXIMUM CAPACITY (FT)	210
HORSEPOWER (EACH)	40
RO FEED STRAINERS	
TYPE	AUTOMATIC SCREEN FILTERS
NUMBER	3 DUTY + 1 STANDBY
SCREEN SIZE (MICRON)	5
HIGH PRESSURE FEED PUMPS	
NUMBER	3 DUTY + 1 STANDBY
PUMP TYPE	MULTI-STAGE INCLINE CENTRIFUGAL
MAXIMUM CAPACITY, EACH (MGD)	2.6
TDH AT MAXIMUM CAPACITY (FT)	692
HORSEPOWER (EACH)	400
RO MEMBRANES	
FIRM PRODUCTION CAPACITY (MGD)	6.6
NUMBER OF TRAINS	3 DUTY + 1 STANDBY
TRAIN CAPACITY (MGD/TRAIN)	2.59
MINIMUM RECOVERY (%)	85
AVERAGE FLUX (GFD)	14.3
GRANULAR ACTIVATED CARBON	
SYSTEM CAPACITY (MGD)	6.6
NO. VESSELS	10
MODE OF OPERATION	PARALLEL
MAXIMUM FILTER LOADING RATE (GPM/SF)	7
MINIMUM FILTER LOADING RATE (GPM/SF)	2
MINIMUM EMPTY BED CONTACT TIME (MINUTES)	10
DISINFECTION CONTACT BASIN	
DESIGN CAPACITY (MGD)	6.6
VIRUS INACTIVATION	4-LOG
CDPHE BAFFLING FACTOR	0.7
MINIMUM CHLORINE RESIDUAL (MG/L)	0.7
CT REQUIRED	12
CT ACTUAL	12
VOLUME (GAL)	115,000
HIGH SERVICE PUMP STATION	
TYPE OF PUMP	VERTICAL TURBINE PUMP
NUMBER	5
CAPACITY (MGD/PUMP)	1 DUTY @ 1.5 MGD 3 DUTY + 1 STANDBY @ 4.4 MGD
TOTAL DESIGN HEAD (FT)	300
MOTOR SIZE (HP)	100 (@ 1.1 MGD) 300 (@ 4.4 MGD)
WETWELL VOLUME (GAL)	138,000

REVERSE OSMOSIS CONCENTRATE	
CONCENTRATE STORAGE TANK	
NUMBER OF TANKS	1
DAYS OF STORAGE	1
CAPACITY (MG/EACH)	1
DIAMETER (FT)	60
MATERIAL	CONCRETE
DEEP WELL INJECTION	
NUMBER OF WELLS	2
CAPACITY	TBD
NUMBER OF PUMPS	4
PUMP TYPE	TBD
PUMP CAPACITY, EACH (MGD)	TBD
TDH AT MAXIMUM CAPACITY (FT)	TBD
SOLIDS HANDLING SYSTEM	
GRAVITY THICKENER	
VOLUME (GAL)	79,000
DIAMETER (FT)	40
DEPTH (FT)	8
MAX SOLIDS LOADING (LBS/SF)	4.8
SOLIDS PRODUCED CONCENTRATION (%)	3
SOLIDS HOLDING BASIN	
MINIMUM DAYS OF STORAGE	7
BASIN VOLUME (GAL)	184,726
NUMBER OF TANKS	1
MATERIAL	CONCRETE
DEWATERING FEED PUMPS	
TYPE	POSITIVE DISPLACEMENT
NUMBER	2 DUTY + 1 STANDBY
CAPACITY, EACH (GPM)	200
TOTAL DESIGN HEAD (FT)	40
MOTOR SIZE (HP)	15
CENTRIFUGE	
TYPE	SHAFTLESS SCREW
NUMBER	1 DUTY + 1 STANDBY
CAPACITY (LB/HR)	550
MOTOR SIZE (HP)	50
SOLIDS PRODUCTION (LBS/DAY)	3,103
STORED SOLIDS CONCENTRATION	18 - 20%

no.	date	by	ckd	description
A	05/15/24	EJW	BDP	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date	detailed
MAY 2024	E. WOODWARD
designed	**checked**
E. WOODWARD	B. PUGH

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

DESIGN CRITERIA

project	contract
160267	

drawing **0D-004** — rev. **A**

sheet of sheets

0D-004 - DESIGN CRITERIA.DWG

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

no.	date	by	ckd	description
A	05/15/24	JHD	BDP	15% REVIEW

ERIE NORTH WATER TREATMENT PLANT CHEMICAL FEED SYSTEMS DESIGN CRITERIA

SODIUM PERMANGANATE	
DOSING LOCATION	NRWPS
SOLUTION CONCENTRATION (%)	20
TOTE STORAGE VOLUME, EACH (GAL)	275
NUMBER OF TOTES	1
DAYS OF STORAGE (@ 8.4 MGD)	75
NUMBER OF FEED PUMPS	1 DUTY + 1 STANDBY
MAXIMUM DOSE (MG/L)	0.2
AVERAGE FLOW, AVERAGE DOSE (GAL/DAY)	1

POWDER ACTIVATED CARBON (PAC)	
DOSING LOCATION	NRWPS
PURITY (%)	100
SILO STORAGE VOLUME, EACH (GAL)	60,000
NUMBER OF SILOS	1
DAYS OF STORAGE (@ 8.4 MGD)	170
NUMBER OF FEEDERS	1
MAXIMUM DOSE (MG/L)	10
AVERAGE FLOW, AVERAGE DOSE (GAL/DAY)	158

ALUMINUM SULFATE	
DOSING LOCATION	RAPID MIX
SOLUTION CONCENTRATION (%)	48.5
TANK STORAGE VOLUME, EACH (GAL)	15,200
NUMBER OF STORAGE TANKS	1
DAYS OF STORAGE (@ 8.4 MGD)	30
NUMBER OF FEED PUMPS	1 DUTY + 1 STANDBY
MAXIMUM DOSE (MG/L)	50
AVERAGE FLOW, AVERAGE DOSE (GAL/DAY)	235

HYDROFLUOROSILIC ACID (FLUORIDE)	
DOSING LOCATION	RO PERMEATE HEADER
SOLUTION CONCENTRATION (%)	25
TANK STORAGE VOLUME, EACH (GAL)	4,400
NUMBER OF STORAGE TANKS	1
DAYS OF STORAGE	40
NUMBER OF FEED PUMPS	1 DUTY + 1 STANDBY
MAXIMUM DOSE (MG/L)	1.2
AVERAGE FLOW, AVERAGE DOSE (GAL/DAY)	12

SODIUM CARBONATE (SODA ASH)	
DOSING LOCATION	RO PERMEATE HEADER
PURITY (%)	100
BAG WEIGHT (LBS)	2,000
NUMBER OF BAGS	29
DAYS OF STORAGE	30
NUMBER OF FEEDERS	1
MAXIMUM DOSAGE (MG/L)	50
AVERAGE FLOW, AVERAGE DOSE (GAL/DAY)	11,550

SULFURIC ACID	
DOSING LOCATION	UPSTREAM OF RO, UF CIP, RO CIP
SOLUTION CONCENTRATION (%)	93
TANK STORAGE VOLUME, EACH (GAL)	12,000
NUMBER OF TANKS	1
DAYS OF STORAGE	30
MAXIMUM DOSE (MG/L)	105.2
AVERAGE FLOW, AVERAGE DOSE (GAL/DAY)	185

CITRIC ACID	
DOSING LOCATION	UF CIP
SOLUTION CONCENTRATION (%)	50
RECOVERY CLEAN FREQUENCY (PER YEAR)	12
RC USAGE (GAL/RC/TRAIN)	60
MAINTENANCE CLEAN FREQ. (PER MONTH)	0
AVERAGE MONTHLY USAGE (GAL/MONTH)	240
TANK STORAGE VOLUME, EACH (GAL)	500
NUMBER OF TANKS	1
DAYS OF STORAGE	62.5

ANTISCALANT	
DOSING LOCATION	RO ANTISCALANT
SOLUTION CONCENTRATION (%)	PER RO MANUFACTURER
AVERAGE MONTHLY USAGE (GAL/MONTH)	PER RO MANUFACTURER

SODIUM HYDROXIDE (CAUSTIC SODA)	
DOSING LOCATION	RO PERMEATE HEADER, UF CIP, RO CIP
SOLUTION CONCENTRATION (%)	50
TANK STORAGE VOLUME, EACH (GAL)	5,000
NUMBER OF STORAGE TANKS	1
DAYS OF STORAGE (@ 6.6 MGD)	52
RO PERMEATE HEADER DOSAGE POINT	
NUMBER OF FEED PUMPS	1 DUTY + 1 STANDBY
MAXIMUM DOSAGE (MG/L)	20
AVERAGE FLOW, AVERAGE DOSE (GAL/DAY)	39

SODIUM HYPOCHLORITE	
DOSING LOCATION	RO PERMEATE HEADER, UF CIP, RO CIP
SOLUTION CONCENTRATION (%)	10
TANK STORAGE VOLUME, EACH (GAL)	5,000
NUMBER OF STORAGE TANKS	1
DAYS OF STORAGE (@ 6.6 MGD)	32
RO PERMEATE HEADER DOSAGE POINT	
NUMBER OF FEED PUMPS	1 DUTY + 1 STANDBY
MAXIMUM DOSAGE (MG/L)	4
AVERAGE FLOW, AVERAGE DOSE (GAL/DAY)	72

SODIUM BISULFITE	
DOSING LOCATION	UF NEUTRALIZATION, RO CIP
SOLUTION CONCENTRATION (%)	39
RECOVERY CLEAN FREQUENCY (PER YEAR)	12
MAINTENANCE CLEAN FREQUENCY (PER MONTH)	15
AVERAGE MONTHLY USAGE (GAL/MONTH)	100
TANK STORAGE VOLUME, EACH (GAL)	500
NUMBER OF TANKS	1
DAYS OF STORAGE	150

RESIDUALS POLYMER	
DOSING LOCATION	SOLIDS HANDLING FACILITY
SOLUTION CONCENTRATION (%)	35
TOTE STORAGE VOLUME, EACH (GAL)	275
NUMBER OF TOTES	1
DAYS OF STORAGE	28
NUMBER OF FEED PUMPS	1 DUTY + 1 STANDBY
MAXIMUM DOSAGE (lb/DT)	18
AVERAGE FLOW, AVERAGE DOSE (GAL/DAY)	9

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date	detailed
MAY 2024	J. DAVIS
designed	**checked**
J. DAVIS	B. PUGH

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

CHEMICAL FEED DESIGN CRITERIA

project	contract
160267	

drawing **0D-005** — rev. **A**

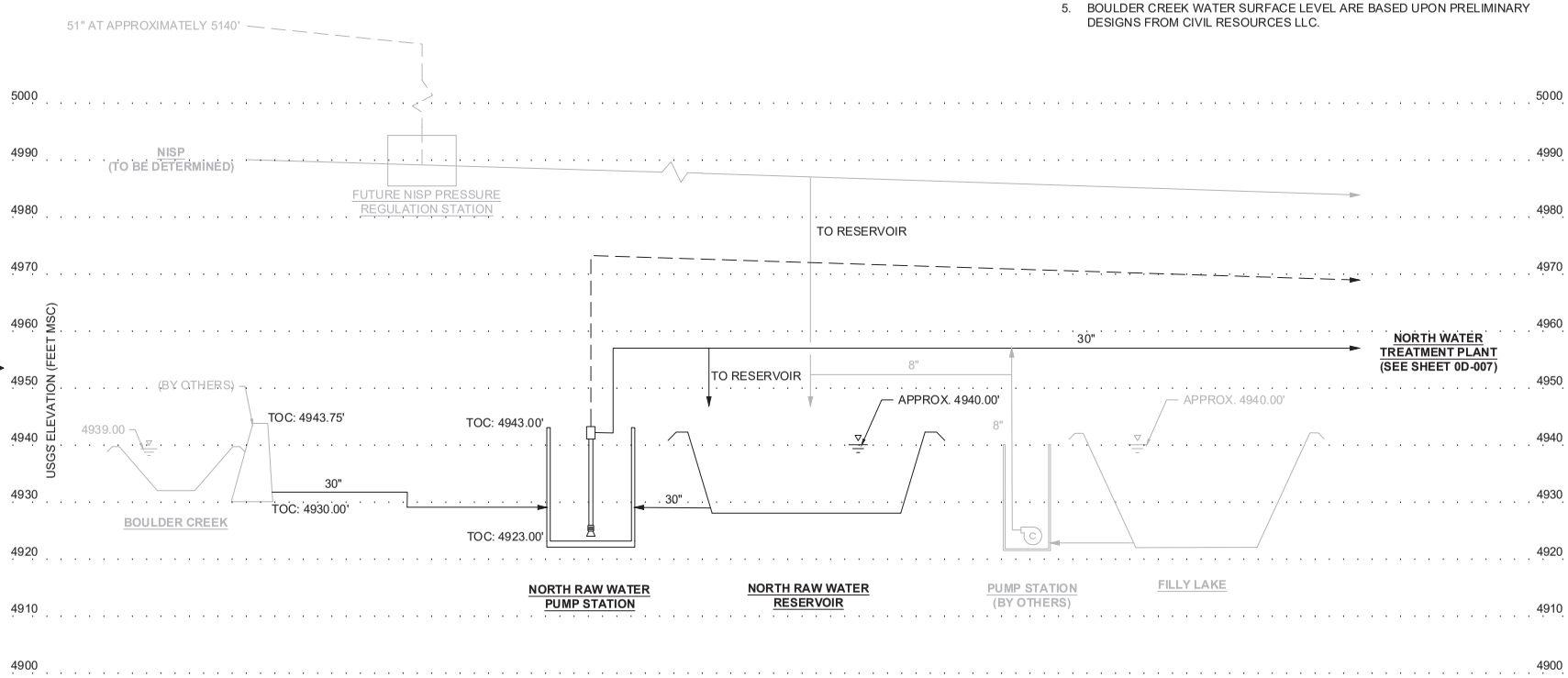
sheet of sheets

0D-005 - CHEM DESIGN CRITERIA.DWG

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

NOTES:

1. HYDRAULIC GRADE FOR THE FUTURE NISP PIPELINE IS BASED UPON PRELIMINARY PIPELINE DESIGN FROM HDR, INC
2. HYDRAULIC GRADE FOR THE NORTH RAW WATER PUMP STATION IS SHOWN FOR PHASE I RAW WATER CAPACITY OF 8.4 MGD AND ASSUMES A 95% AND 85% RECOVERY FROM THE UF AND RO SYSTEMS, RESPECTIVELY.
3. FILLY LAKE PUMP STATION DEPTH AND HYDRAULIC GRADE ARE BASED UPON PRELIMINARY DESIGNS FROM KENNEDY JENKS CONSULTANTS.
4. DEPTH OF THE NORTH WATER RESERVOIR IS BASED UPON THE APPROXIMATE BEDROCK ELEVATION OF 4928'.
5. BOULDER CREEK WATER SURFACE LEVEL ARE BASED UPON PRELIMINARY DESIGNS FROM CIVIL RESOURCES LLC.



...	date	by	ckd	description
A	05/15/24	EJW	BDP	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date	detailed
MAY 2024	E. WOODWARD
designed	**checked**
E. WOODWARD	B. PUGH

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT

RAW WATER HYDRAULIC PROFILE

project	contract
160267	

drawing **0D-006** — rev. **A**

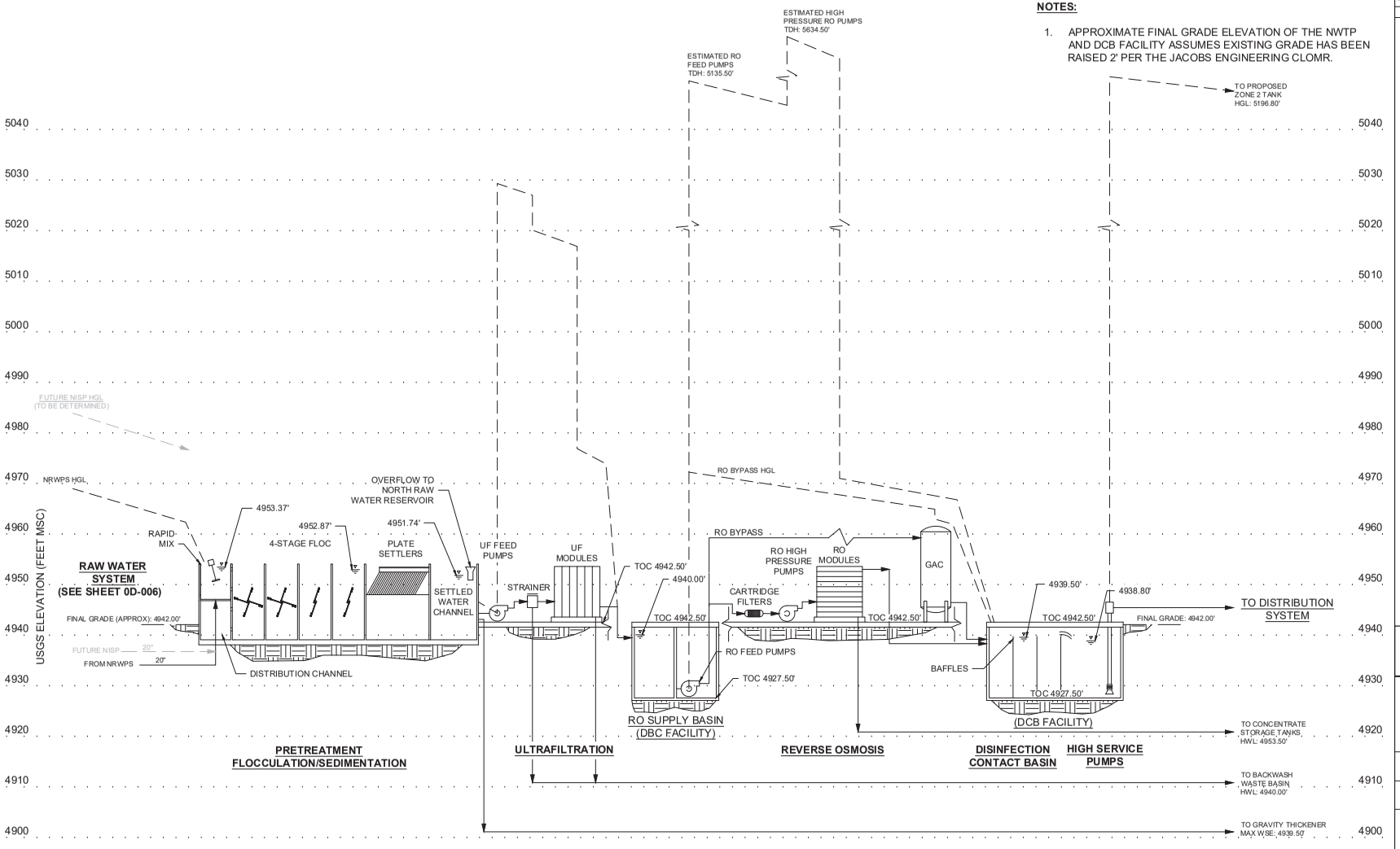
sheet # of sheets

0D-006_7 - HYDRAULIC PROFILE.DWG

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

NOTES:

1. APPROXIMATE FINAL GRADE ELEVATION OF THE NWTP AND DCB FACILITY ASSUMES EXISTING GRADE HAS BEEN RAISED 2' PER THE JACOBS ENGINEERING CLOMR.



...	date	by	ckd	description
A	05/15/24	EJW	BDP	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date	detailed
MAY 2024	E. WOODWARD
designed	**checked**
E. WOODWARD	B. PUGH

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

NWTP HYDRAULIC PROFILE

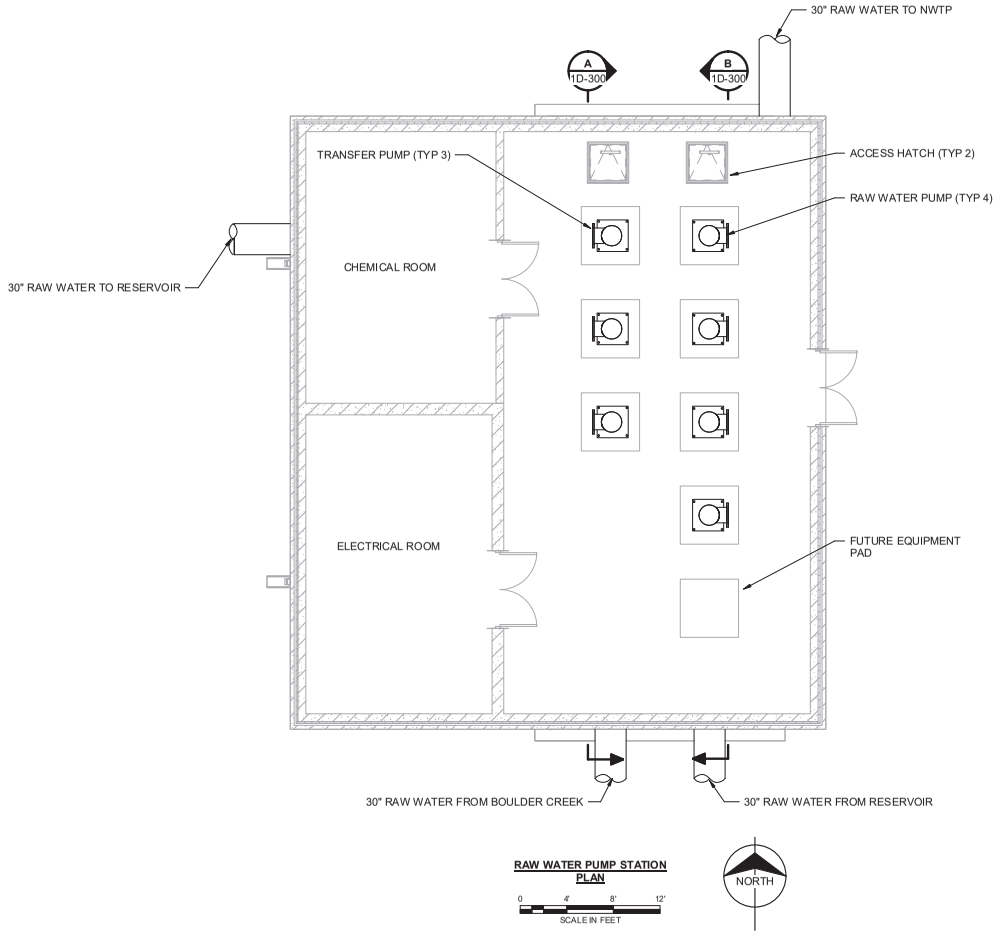
project	contract
160267	

drawing **0D-007** — rev. **A**

sheet # of sheets

0D-006_7 - HYDRAULIC PROFILE.DWG

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



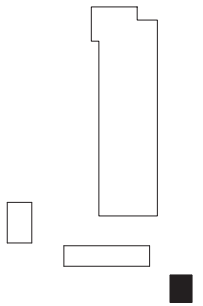
RAW WATER PUMP STATION PLAN

0 4' 8' 12'
SCALE IN FEET

NORTH

no.	date	by	ckd	description
A	05/15/24	EJW	BDP	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

date	detailed
MAY 2024	J. DAVIS
designed	**checked**
E. WOODWARD	B. PUGH

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT
RAW WATER PUMP STATION
PLAN

project	contract
160267	

drawing	rev.
1D-100 —	A

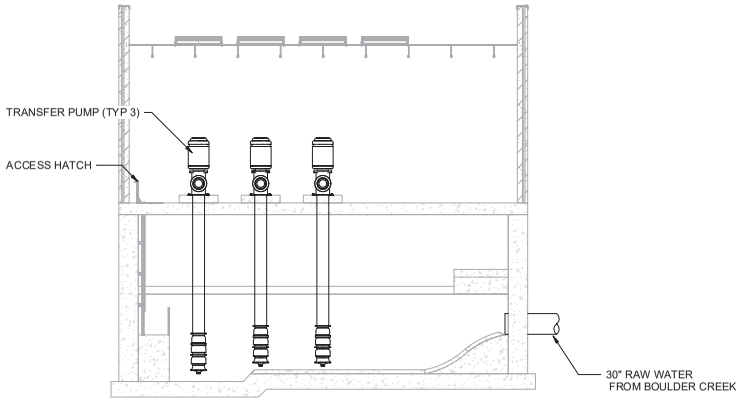
sheet of sheets

Scale For Microfilming: Millimeters / Inches

5/15/2024 12:06:11 PM

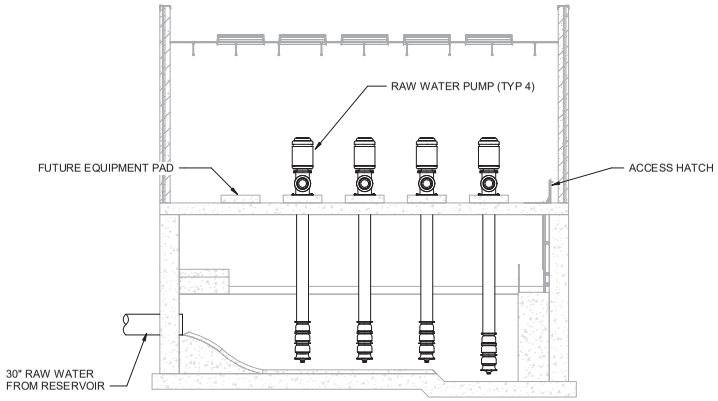
Autodesk Docs://160267_ERIE NORTH WTP/160267_01_RAW WATER PUMP STATION_PROCESS_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



SECTION A 1D-100

0 4' 8' 16'
SCALE IN FEET

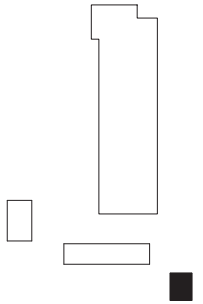


SECTION B 1D-100

0 4' 8' 16'
SCALE IN FEET

no.	date	by	ckd	description
A	05/15/24	EJW	BDP	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

date: MAY 2024	detailed: J. DAVIS
designed: E. WOODWARD	checked: B. PUGH

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT
RAW WATER PUMP STATION
SECTIONS

project: 160267	contract:

drawing: **1D-300** — rev. **A**

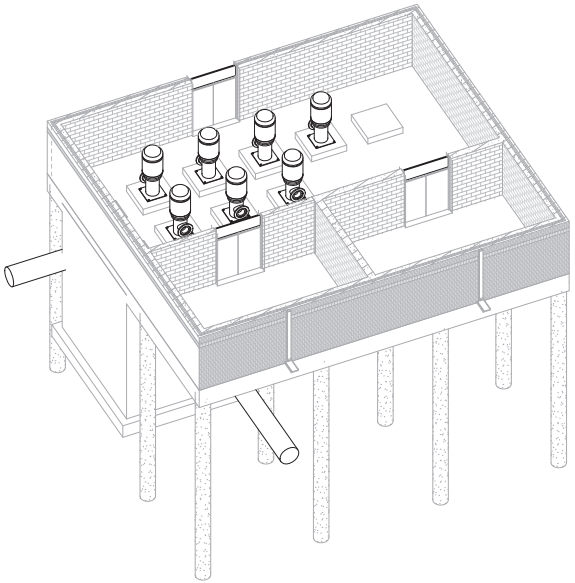
sheet of sheets

Millimeters
Scale For Microfilming
Inches

5/15/2024 12:06:41 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_01_RAW WATER PUMP STATION_PROCESS_R24.rvt

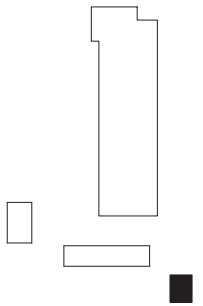
Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



RAW WATER PUMP STATION ISOMETRIC
NOT TO SCALE

no.	date	by	ckd	description
A	05/15/24	EJW	BDP	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

date: MAY 2024	detailed: J. DAVIS
designed: E. WOODWARD	checked: B. PUGH

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT
RAW WATER PUMP STATION
ISOMETRIC

project: 160267	contract:

drawing: **1D-900** — rev. **A**

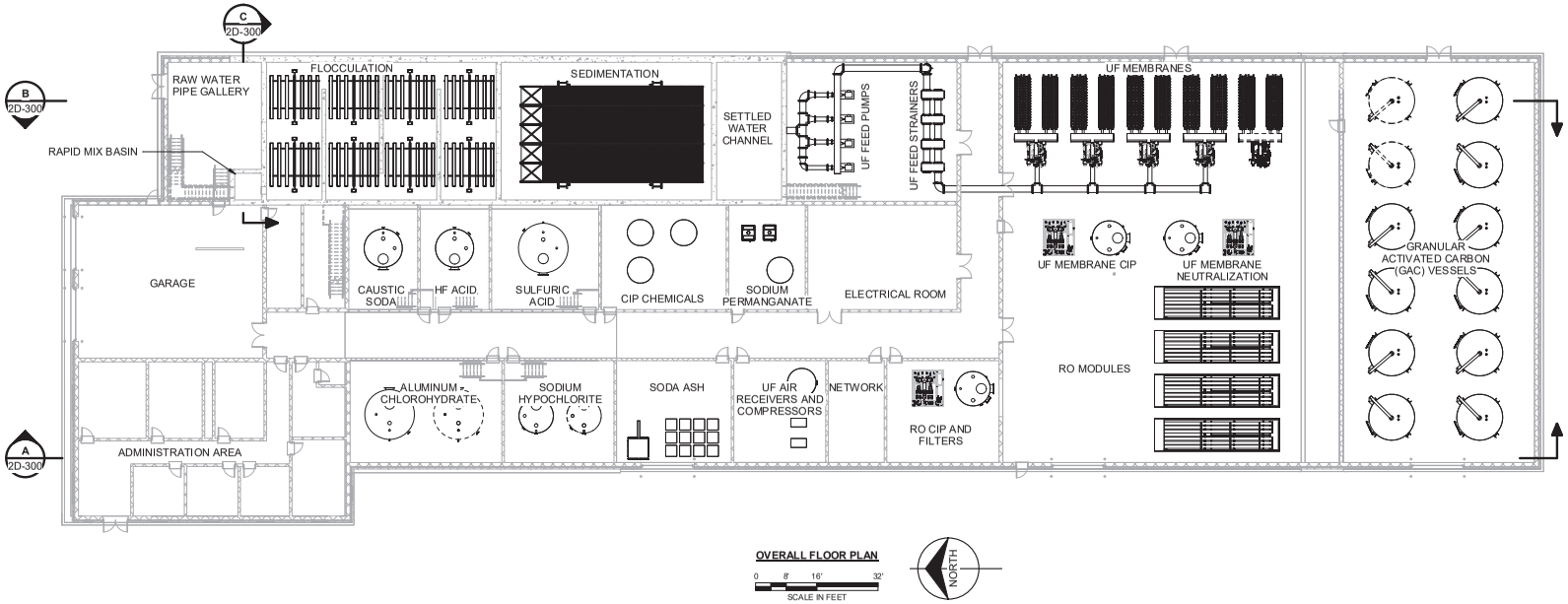
sheet of sheets

Scale For Microfilming: Millimeters / Inches

5/15/2024 12:07:08 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_01_RAW WATER PUMP STATION_PROCESS_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

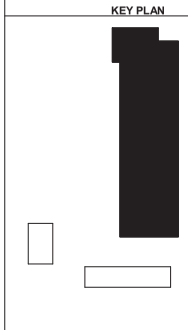


OVERALL FLOOR PLAN

0 8' 16' 32'
SCALE IN FEET

no.	date	by	ckd	description
A	05/15/24	JHD	BDP	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

date	detailed
MAY 2024	J. DAVIS
designed	**checked**
J. DAVIS	B. PUGH

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT
TREATMENT BUILDING
FLOOR PLAN

project	contract
160267	

drawing	rev.
2D-100 —	A

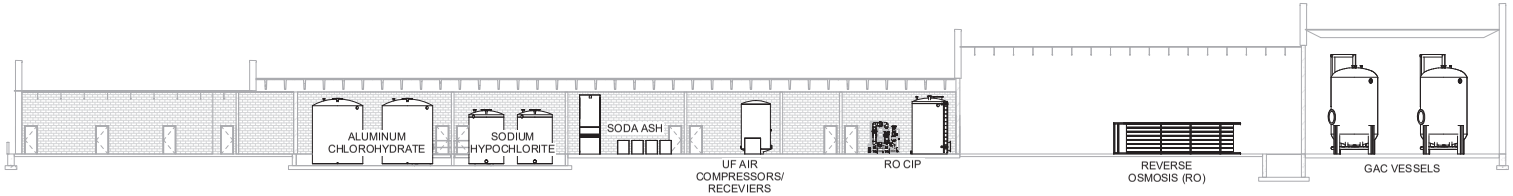
sheet of sheets

Millimeters
Scale For Microfilming
Inches

5/15/2024 12:15:03 PM

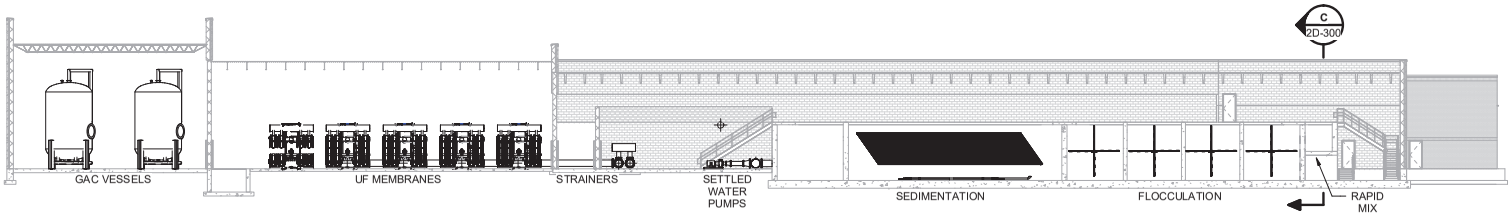
Autodesk Docs://160267_ERIE NORTH WTP/160267_02_TREATMENT BUILDING_PROCESS_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



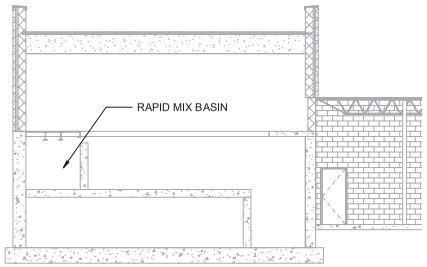
SECTION A 2D-100

0 1/2' 1' 2'
SCALE IN FEET



SECTION B 2D-100

0 1/2' 1' 2'
SCALE IN FEET

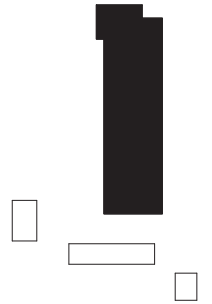


SECTION C 2D-100

0 4' 8' 16'
SCALE IN FEET

no.	date	by	ckd	description
A	05/15/24	JHD	BDP	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

date	detailed
MAY 2024	J. DAVIS
designed	**checked**
J. DAVIS	B. PUGH

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT
TREATMENT BUILDING
SECTIONS

project	contract
160267	

drawing **2D-300** — rev. **A**

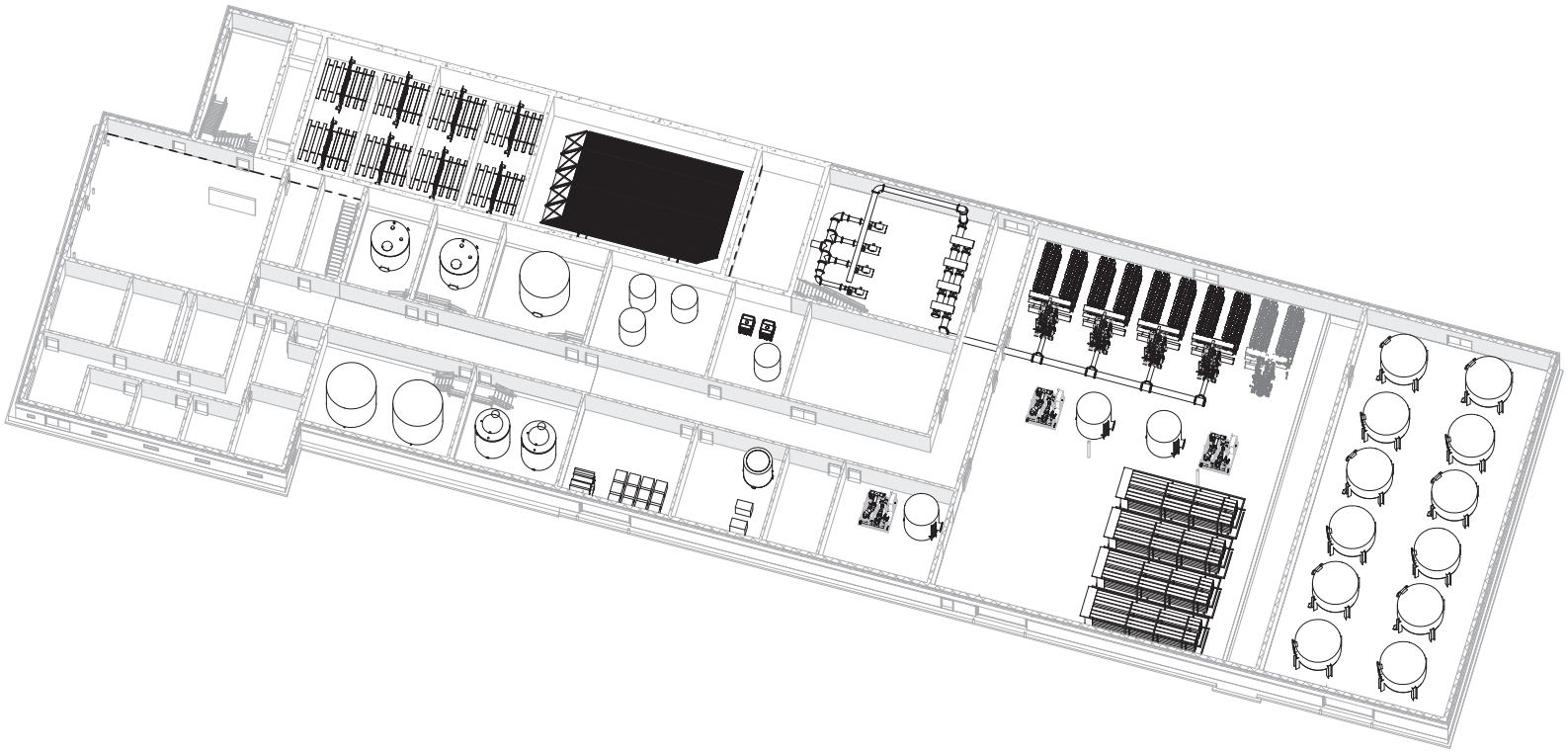
sheet of sheets

Millimeters
Scale For Microfilming
Inches

5/15/2024 12:17:13 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_02_TREATMENT BUILDING_PROCESS_R24.rvt

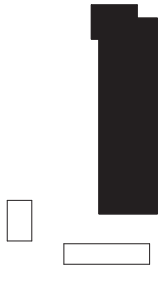
Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



ISOMETRIC
NOT TO SCALE

no.	date	by	ckd	description
A	05/15/24	JHD	BDP	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

date	detailed
MAY 2024	J. DAVIS
designed	**checked**
J. DAVIS	B. PUGH

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT
TREATMENT BUILDING
ISOMETRIC

project	contract
160267	

drawing	rev.
2D-900 —	A

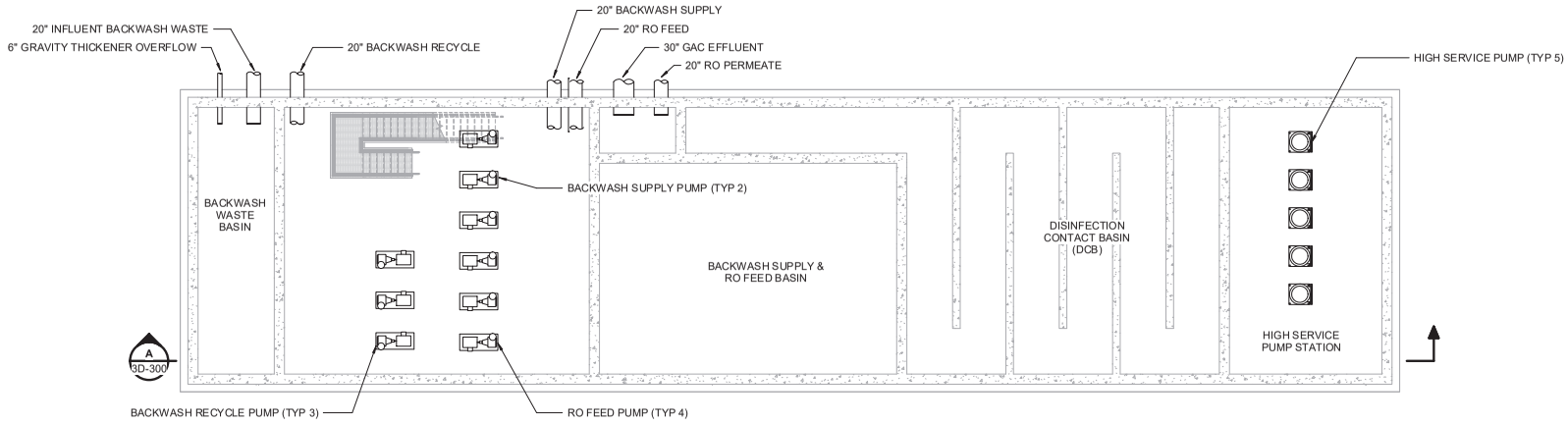
sheet of sheets

Millimeters
Scale For Microfilming
Inches

5/15/2024 12:19:17 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_02_TREATMENT BUILDING_PROCESS_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



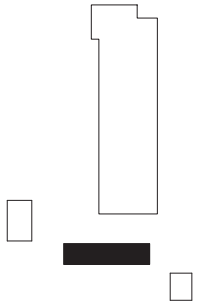
LOWER LEVEL PLAN

0 4' 8' 16'
SCALE IN FEET

NORTH

no.	date	by	ckd	description
A	05/15/24	JHD	BDP	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

date	detailed
MAY 2024	J. DAVIS
designed	**checked**
J. DAVIS	B. PUGH

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT
DISINFECTION CONTACT BASIN
LOWER LEVEL PLAN

project	contract
160267	

drawing	rev.
3D-100 —	A

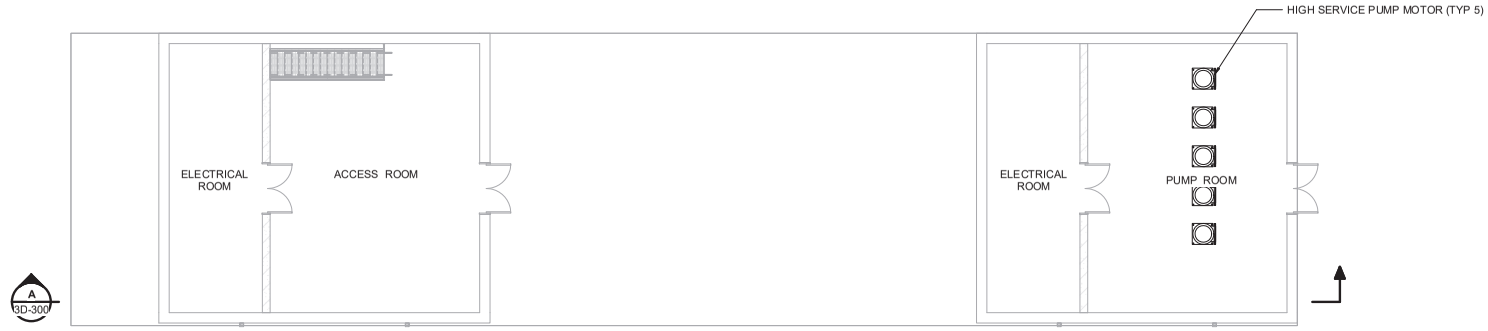
sheet of sheets

Millimeters
Scale For Microfilming
Inches

5/15/2024 12:24:43 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_03_DISINFECTION CONTACT BASIN_PROCESS_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



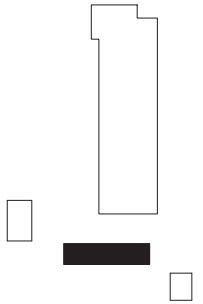
UPPER LEVEL PLAN

0 4' 8' 16'
SCALE IN FEET

NORTH

no.	date	by	ckd	description
A	05/15/24	JHD	BDP	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

date	detailed
MAY 2024	J. DAVIS
designed	**checked**
J. DAVIS	B. PUGH

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT
DISINFECTION CONTACT BASIN
UPPER LEVEL PLAN

project	contract
160267	

drawing	rev.
3D-101 —	A

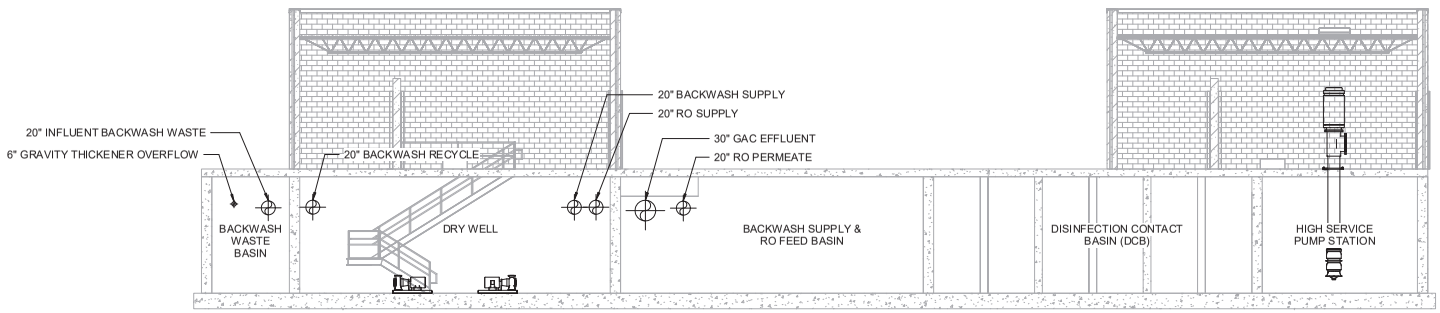
sheet of sheets

Millimeters
Scale For Microfilming
Inches

5/15/2024 12:30:43 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_03_DISINFECTION CONTACT BASIN_PROCESS_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

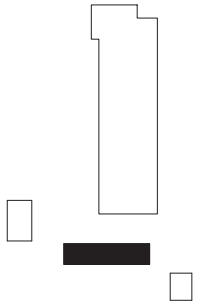


SECTION A 3D-100

0 4' 8' 16'
SCALE IN FEET

no.	date	by	ckd	description
A	05/15/24	JHD	BDP	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

date MAY 2024	**detailed** J. DAVIS
designed J. DAVIS	**checked** B. PUGH

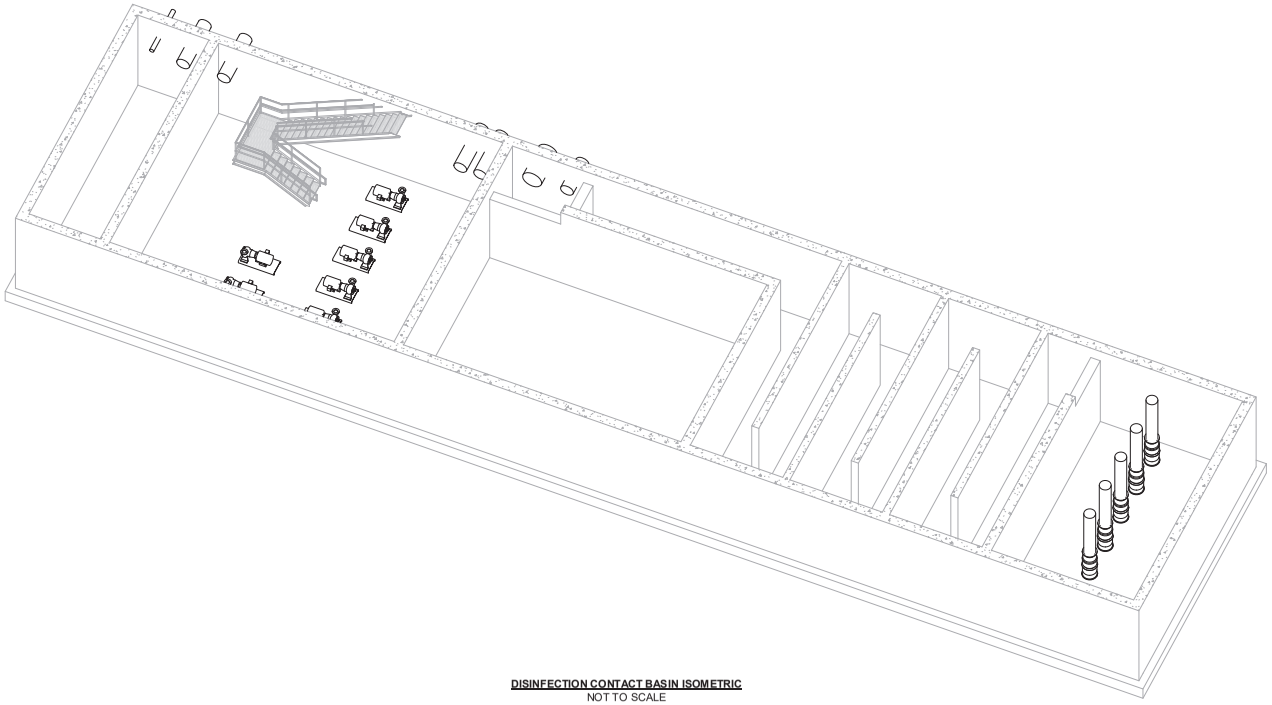
TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT
DISINFECTION CONTACT BASIN
SECTION

project 160267	**contract**
drawing 3D-300	**rev.** A
sheet	**of** **sheets**

Millimeters
Scale For Microfilming
Inches
5/15/2024 12:31:11 PM
Autodesk Docs://160267_ERIE NORTH WTP/160267_03_DISINFECTION CONTACT BASIN_PROCESS_R24.rvt

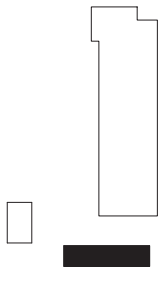
Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



DISINFECTION CONTACT BASIN ISOMETRIC
NOT TO SCALE

no.	date	by	ckd	description
A	05/15/24	JHD	BDP	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

date	detailed
MAY 2024	J. DAVIS
designed	**checked**
J. DAVIS	B. PUGH

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT
DISINFECTION CONTACT BASIN
ISOMETRIC

project	contract
160267	

drawing	rev.
3D-900 —	A

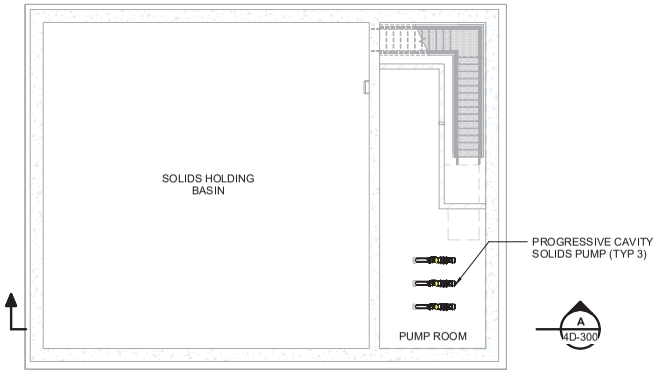
sheet of sheets

Scale For Microfilming: Millimeters / Inches

5/15/2024 12:31:38 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_03_DISINFECTION CONTACT BASIN_PROCESS_R24.rvt

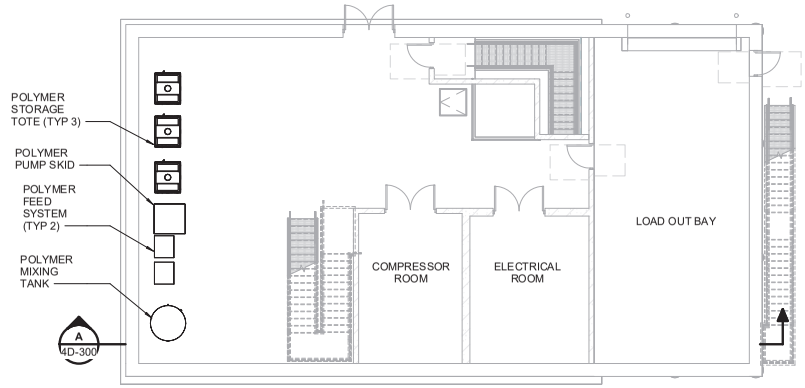
Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



LOWER LEVEL PLAN

0 4' 8' 16'
SCALE IN FEET

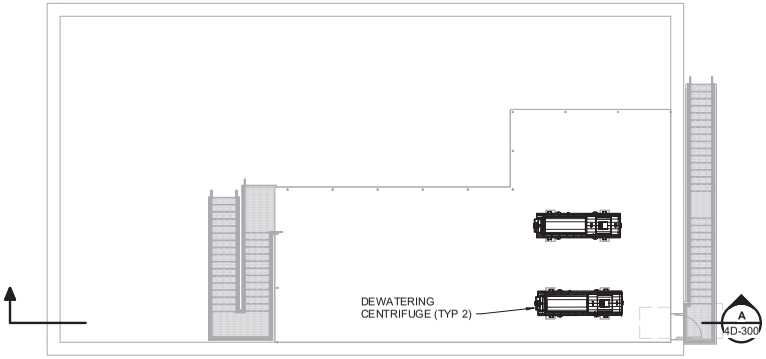
NORTH



MIDDLE LEVEL PLAN

0 4' 8' 16'
SCALE IN FEET

NORTH



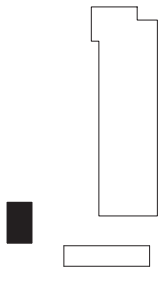
UPPER LEVEL PLAN

0 4' 8' 16'
SCALE IN FEET

NORTH

no.	date	by	ckd	description
A	05/15/24	EJW	BDP	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

date: MAY 2024	detailed: J. DAVIS
designed: E. WOODWARD	checked: B. PUGH

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT
SOLIDS HANDLING FACILITY
FLOOR PLANS

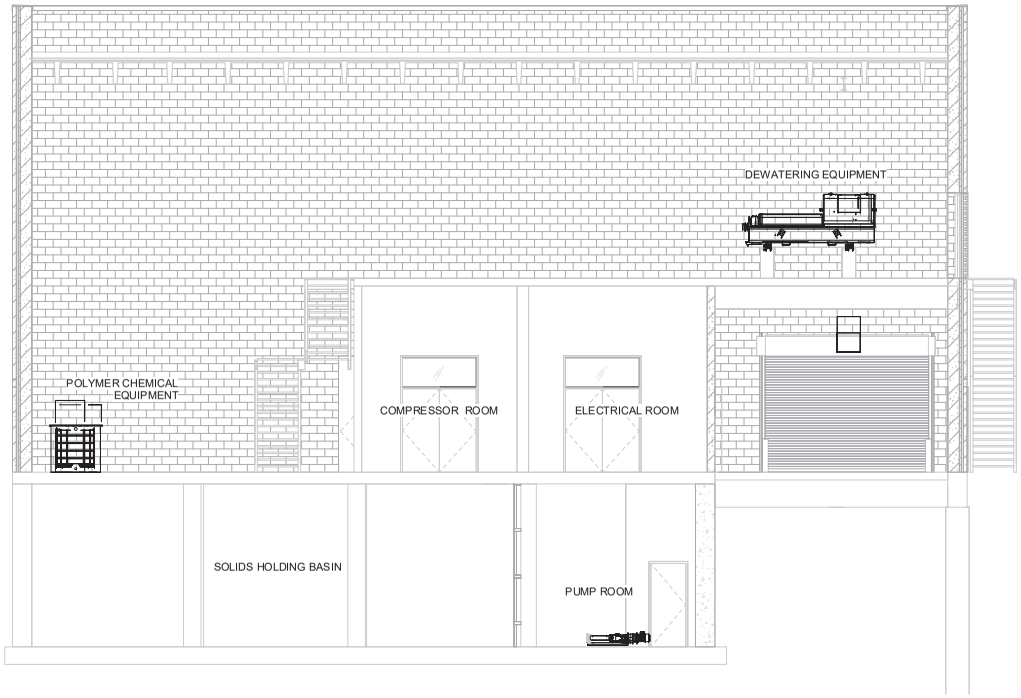
project: 160267	contract:

drawing: **4D-100** — rev. **A**

sheet of sheets

Millimeters
Scale For Microfilming
Inches
5/15/2024 12:32:42 PM
Autodesk Docs://160267_ERIE NORTH WTP/160267_04_RESIDUALS BUILDING_PROCESS_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

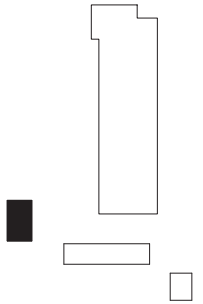


SECTION A / 4D-100

0 4' 8' 12'
SCALE IN FEET

no.	date	by	ckd	description
A	05/15/24	EJW	BDP	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

date: MAY 2024	detailed: J. DAVIS
designed: E. WOODWARD	checked: B. PUGH

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT
SOLIDS HANDLING FACILITY
SECTION

project: 160267	contract:

drawing: **4D-300** — rev. **A**

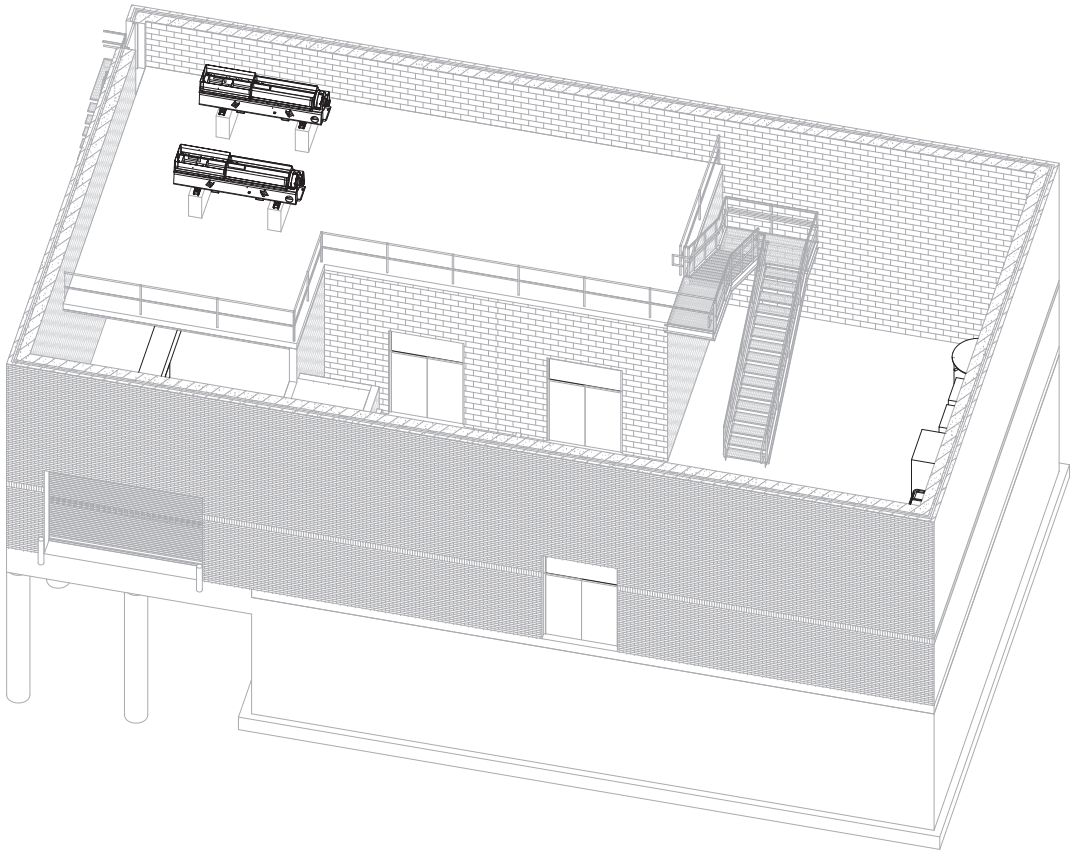
sheet of sheets

Millimeters
Scale For Microfilming
Inches

5/15/2024 12:33:19 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_04_RESIDUALS BUILDING_PROCESS_R24.rvt

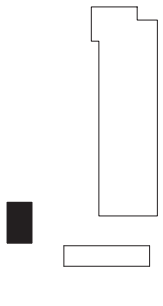
Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



SOLIDS HANDLING FACILITY PROCESS
ISOMETRIC
NOT TO SCALE

no.	date	by	ckd	description
A	05/15/24	EJW	BDP	15% REVIEW

KEY PLAN



PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

date	detailed
MAY 2024	J. DAVIS
designed	**checked**
E. WOODWARD	B. PUGH

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT
SOLIDS HANDLING FACILITY
ISOMETRIC

project	contract
160267	

drawing	rev.
4D-900 —	A

sheet of sheets

Millimeters
Scale For Microfilming
Inches

5/15/2024 12:34:43 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_04_RESIDUALS BUILDING_PROCESS_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

ITEMS USED ON PLANS

LINES

- NEW CONSTRUCTION
- EXISTING CONSTRUCTION
- CONDUIT EXPOSED
- CONDUIT CONCEALED IN WALL, CEILING OR HIDDEN FROM VIEW
- CONDUIT CONCEALED IN FLOOR OR UNDERGROUND
- HOMERUN TO PANEL
- FLEXIBLE CONDUIT
- FO — FIBER-OPTIC CABLE
- UGE — UNDGERGROUND ELECTRICAL
- OHE — OVERHEAD ELECTRICAL
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- CONDUIT TERMINATED AND CAPPED
- CONDUIT WITH BUSHING
- CONDUIT PASSING THRU ELEVATION

GROUNDING/LIGHTNING PROTECTION

- GROUND CABLE
- BOLTED CONNECTION
- WELDED CONNECTION
- BI-METALIC CONNECTION
- GROUND ROD
- GROUND TEST WELL
- AIR TERMINAL
- GROUND BUS BAR

EQUIPMENT

- NEW EQUIPMENT
- EXISTING EQUIPMENT
- FUTURE EQUIPMENT
- LIGHTING PANEL
- POWER PANEL
- DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- COMBINATION DISCONNECT/ MAGNETIC MOTOR STARTER
- REDUCED VOLTAGE COMBINATION DISCONNECT/MAG MOTOR STARTER
- M — MOTOR
- E — MISC. ELECTRICAL LOAD
- J — JUNCTION BOX
- P — PULL BOX

LIGHTING

- RECTANGULAR LUMINAIRE
- RECTANGULAR LUMINAIRE WITH EMERGENCY BACK-UP
- CIRCULAR LUMINAIRE
- CIRCULAR LUMINAIRE WITH EMERGENCY BACK-UP
- EMERGENCY WALL PACK UNIT
- CEILING MOUNTED EXIT SIGN
- WALL MOUNTED EXIT SIGN
- POLE-MOUNTED AREA LIGHT
- S — SINGLE POLE SWITCH
- S_3 — THREE-WAY SWITCH
- S_4 — FOUR-WAY SWITCH
- S_{WP} — WEATHERPROOF SWITCH
- S_D — DIMMER SWITCH
- S_{EXP} — EXPLOSIONPROOF SWITCH
- OS — CEILING MOUNTED OCCUPANCY SENSOR
- OS — WALL MOUNTED OCCUPANCY SENSOR
- PC — CEILING/ROOF MOUNTED PHOTOCELL
- PC — WALL MOUNTED PHOTOCELL

RECEPTACLES

- 208/240V RECEPTACLE
- 480V RECEPTACLE
- SURFACE, SIMPLEX RECEPTACLE
- SURFACE, SIMPLEX, GFI RECEPTACLE
- FLUSH, SIMPLEX RECEPTACLE
- FLUSH, SIMPLEX, GFI RECEPTACLE
- SURFACE, DUPLEX RECEPTACLE
- SURFACE, DUPLEX, GFI RECEPTACLE
- FLUSH, DUPLEX RECEPTACLE
- FLUSH, DUPLEX, GFI RECEPTACLE
- SURFACE, QUADPLEX RECEPTACLE
- SURFACE, QUADPLEX, GFI RECEPTACLE
- FLUSH, QUADPLEX RECEPTACLE
- FLUSH, QUADPLEX, GFI RECEPTACLE

DATA JACKS

- RECESSED DATA JACK
- RECESSED MIXED DATA JACK
- RECESSED TELEPHONE JACK
- SURFACE DATA JACK
- SURFACE MIXED DATA JACK
- SURFACE TELEPHONE JACK

INSTRUMENTS

- ACTUATED VALVE
- CONTROL STATION
- INSTRUMENT
- H — HORN
- X — STROBE LIGHT, COLOR AS INDICATED
- H — STROBE LIGHT AND HORN COMBINATION

ITEMS USED ON ONE-LINES AND CONTROL DIAGRAMS

LINES AND TERMINALS

- POWER CIRCUIT AND EQUIPMENT INSTALLED BY THIS CONTRACT
- EXISTING CIRCUIT AND EQUIPMENT
- FUTURE POWER CIRCUIT AND EQUIPMENT
- EQUIPMENT ENCLOSURE
- CONTROL OR INTERLOCK CIRCUIT
- REMOTE WIRING
- TERMINALS
- + (A) - (B) — (A) POSITIVE TERMINAL (B) NEGATIVE TERMINAL
- A B — (A) CONDUCTOR CONNECTION (B) NO CONNECTION

PROTECTION/DISCONNECTS

- XX — PROTECTION DEVICE (ANSI C37.2 DEVICE NUMBER AS INDICATED)
- CIRCUIT BREAKER
- FUSE
- FUSED DISCONNECT SWITCH
- DISCONNECT SWITCH
- POLE MOUNTED FUSED DISCONNECT SWITCH
- PLUG-IN OR DRAWOUT CONNECTION
- CAPACITOR
- THERMAL OVERLOADS
- O.L. (3) — THERMAL OVERLOAD RELAY (SHOWN WITH QUANTITY)
- ARMS — ARC FLASH REDUCTION MAINTENANCE SWITCH
- TU — ELECTRONIC TRIP UNIT
- LSIG — LONG TIME, SHORT TIME, INSTANTANEOUS, AND GROUND TRIP SETTINGS

STARTERS

- SINGLE SPEED NON-REVERSING MANUAL MOTOR STARTER
- SINGLE SPEED NON-REVERSING MAGNETIC MOTOR STARTER
- SINGLE SPEED REVERSING MAGNETIC MOTOR STARTER
- TWO SPEED NON-REVERSING MAGNETIC MOTOR STARTER
- RVSS — REDUCED VOLTAGE SOLID-STATE STARTER
- RVAT — REDUCED VOLTAGE AUTOTRANSFORMER STARTER
- VFD — VARIABLE FREQUENCY DRIVE

TRANSFORMERS

- POWER TRANSFORMER (XFMR)
- (2) — POTENTIAL TRANSFORMER (SHOWN WITH QUANTITY)
- 200:5 (2) — CURRENT TRANSFORMER, SINGLE RATIO (SHOWN WITH QUANTITY)
- CONTROL POWER TRANSFORMER (ONE-LINE DIAGRAMS)
- CONTROL POWER TRANSFORMER (CONTROL SCHEMATIC DIAGRAMS)

LOADS/SOURCES

- GENERATOR
- X — ELECTRIC MOTOR - APPROX. HORSEPOWER AS INDICATED
- EQUIPMENT AS NOTED ON DIAGRAM

METERING/NETWORKING

- A — AMMETER
- V — VOLTMETER
- PQM — POWER QUALITY METER
- NSW — NETWORK SWITCH
- PSU — POWER SUPPLY UNIT

MISC ONE-LINE SYMBOLS

- (X) — "X" INDICATES NUMBER OF DEVICES WHEN MORE THAN ONE
- DELTA WINDING CONNECTION
- GROUNDING WYE WINDING CONNECTION
- GROUNDING CONNECTION
- LIGHTNING ARRESTOR

CONTROL DEVICES

- (A) LEVEL SWITCH - CLOSES WITH RISING LEVEL (B) LEVEL SWITCH - OPENS WITH RISING LEVEL
- (A) FLOW SWITCH - CLOSES WITH INCREASING FLOW (B) FLOW SWITCH - OPENS WITH INCREASING FLOW
- (A) MAINTAINED PUSH-BUTTON - N.O. (B) MAINTAINED PUSH-BUTTON - N.C.
- (A) LIMIT SWITCH - N.C. (B) LIMIT SWITCH - N.C. HELD OPEN
- (A) LIMIT SWITCH - N.O. (B) LIMIT SWITCH - N.O. HELD CLOSED
- (A) PRESSURE SWITCH - CLOSES WITH INCREASING PRESSURE (B) PRESSURE SWITCH - OPENS WITH INCREASING PRESSURE
- (A) MOMENTARY PUSH-BUTTON - N.O. (B) MOMENTARY PUSH-BUTTON - N.C.
- (A) TEMP. SWITCH - CLOSES WITH RISING TEMP. (B) TEMP. SWITCH - OPENS WITH RISING TEMP.
- (A) N.O. TIME DELAY CONTACT (B) N.C. TIME DELAY CONTACT
- XO — TWO POSITION SELECTOR SWITCH
- XOO — THREE POSITION SELECTOR SWITCH
- XOOO — FOUR POSITION SELECTOR SWITCH
- SOLENOID VALVE
- PHOTOCELL
- X — INDICATING LIGHT, COLOR AS INDICATED
- X — PUSH-TO-TEST INDICATING LIGHT, COLOR AS INDICATED

TAG DESIGNATION SCHEMES

LUMINAIRE TAG SCHEME

LXX	LUMINAIRE TYPE
XXX-PNL-XXX-XX	CIRCUIT
SXXX	SWITCHING DEVICE(S)
XX"-XX" AFF	ELEVATION TO BOTTOM OF FIXTURE

RECEPTACLE TAG SCHEME

XXX-PNL-XXX	POWER SOURCE TAG
XX	CIRCUIT NUMBER
XXX	MODIFIER (IF APPLICABLE)

INSTRUMENT TAG SCHEME

EQUIPMENT/INSTRUMENT IDENTIFIER
FACILITY AREA OR SYSTEM
LOOP NUMBER

XXX-XXX / XXX

NOTES	NOTES
XX"-XX" AFF	INSTRUMENT ELEVATION
XXX-PLC-XXX	ASSOCIATED CONTROL PANEL

CABLE TRAY TAG SCHEME

XXX-CT-XXX	CABLE TRAY TAG
XX" x XX"	HEIGHT x WIDTH
XX"-XX" AFF	ELEVATION TO BOTTOM OF TRAY

ABBREVIATIONS

A	AMPERES	INDUST	INSUSTRIAL
AFG	ABOVE FINISHED GRADE	LC	LIGHTING CONTACTOR
AFF	ABOVE FINISHED FLOOR	GND	GROUND
AIC	AMPS INTERRUPTING CURRENT	MCC	MOTOR CONTROL CENTER
AWG	AMERICAN WIRE GAUGE	MUN	MUNICIPAL
BC	BARE COPPER WIRE	N.O.	NORMALLY OPEN
BF	BELOW FLOOR	N.C.	NORMALLY CLOSED
BG	BELOW GRADE	P	POLE
BKR	BREAKER	PP	POWER PANEL
C	CONDUIT	PLC	PROGAMMABLE LOGIC CONTROLLER
CHL	CHLORINE		
COND	CONDUCTIVITY	REC	RECEPTACLE
CP	CONTROL PANEL	RW	RAW WATER
CPT	CONTROL POWER TRANSFORMER	SP	SPARE
EL	ELEVATION	SPD	SURGE PROTECTIVE DEVICE
EO	ELECTRICALLY OPERATED	SW	SWITCH
EX	EXPOSED	TYP.	TYPICAL
EXP	EXPLOSION-PROOF (CLASS 1, DIV 1, GROUP D)	UE	UNDERGROUND ELECTRICAL
		VFD	VARIABLE FREQUENCY DRIVE
EXT	EXTERIOR	WP	WEATHERPROOF
FACP	FIRE ALARM CONTROL PANEL	XFMR	TRANSFORMER

no.	date	by	ckd	description
A	05/15/24	AM	MH	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

creation date: MAY 2024	detailed by: A.BENSON
designed by: M.HOPKINS	checked by: A.MCDONALD

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

ELECTRICAL GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS

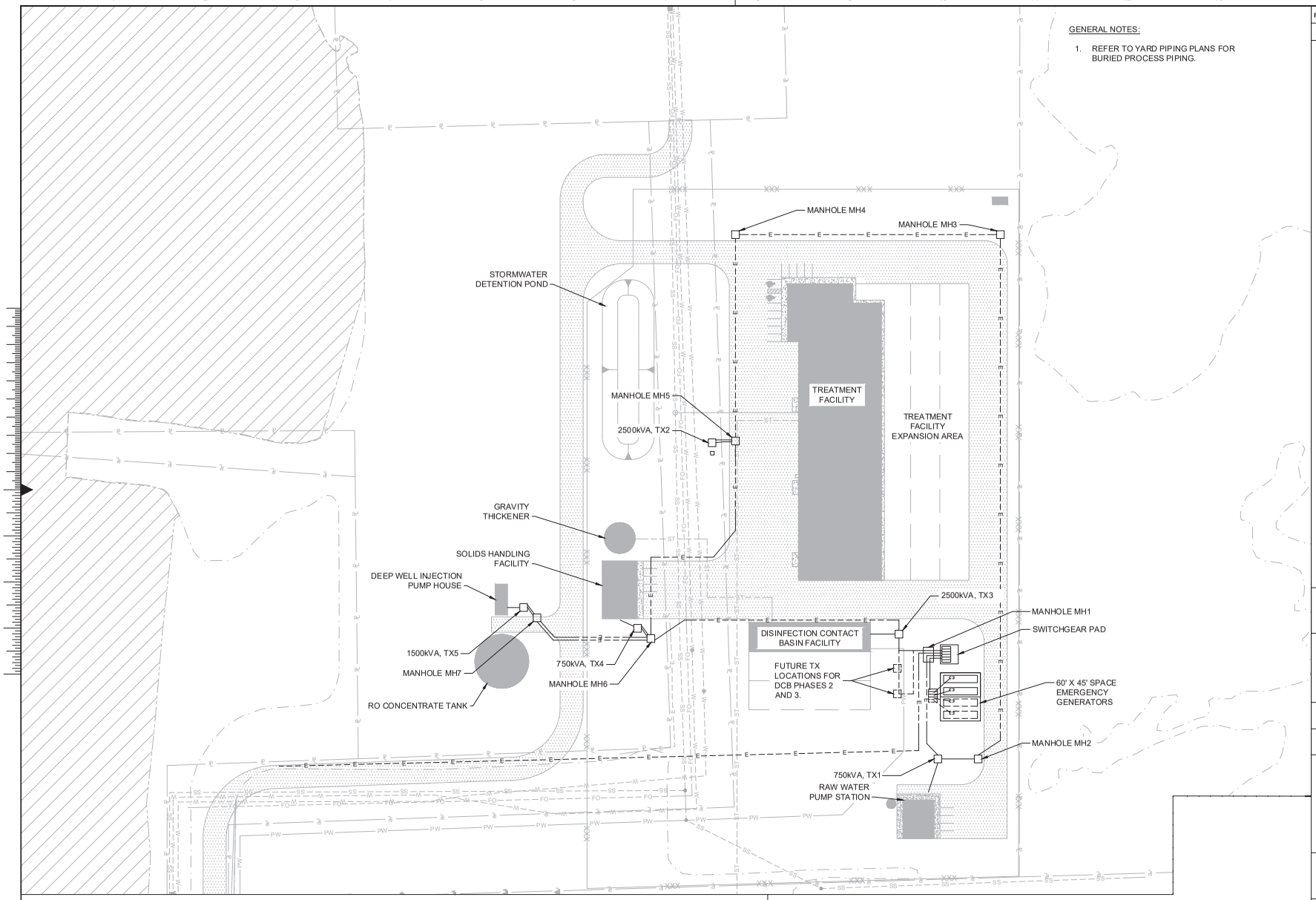
project: 160267	contract:
drawing: 0E-001	rev.: A
sheet	of sheets

5/15/2024 3:03:08 PM
Autodesk Docs://160267_ERIE NORTH WTP/160267_00_General_MEP_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908

GENERAL NOTES:

1. REFER TO YARD PIPING PLANS FOR BURIED PROCESS PIPING.



ENLARGED SITE PLAN

0 60' 120'
SCALE IN FEET

NORTH

no.	date	by	ckd	description
A	05/15/24	MAH	VKP	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

date MAY 2024	detailed A.BENSON
designed M.HOPKINS	checked V.PATWARI

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

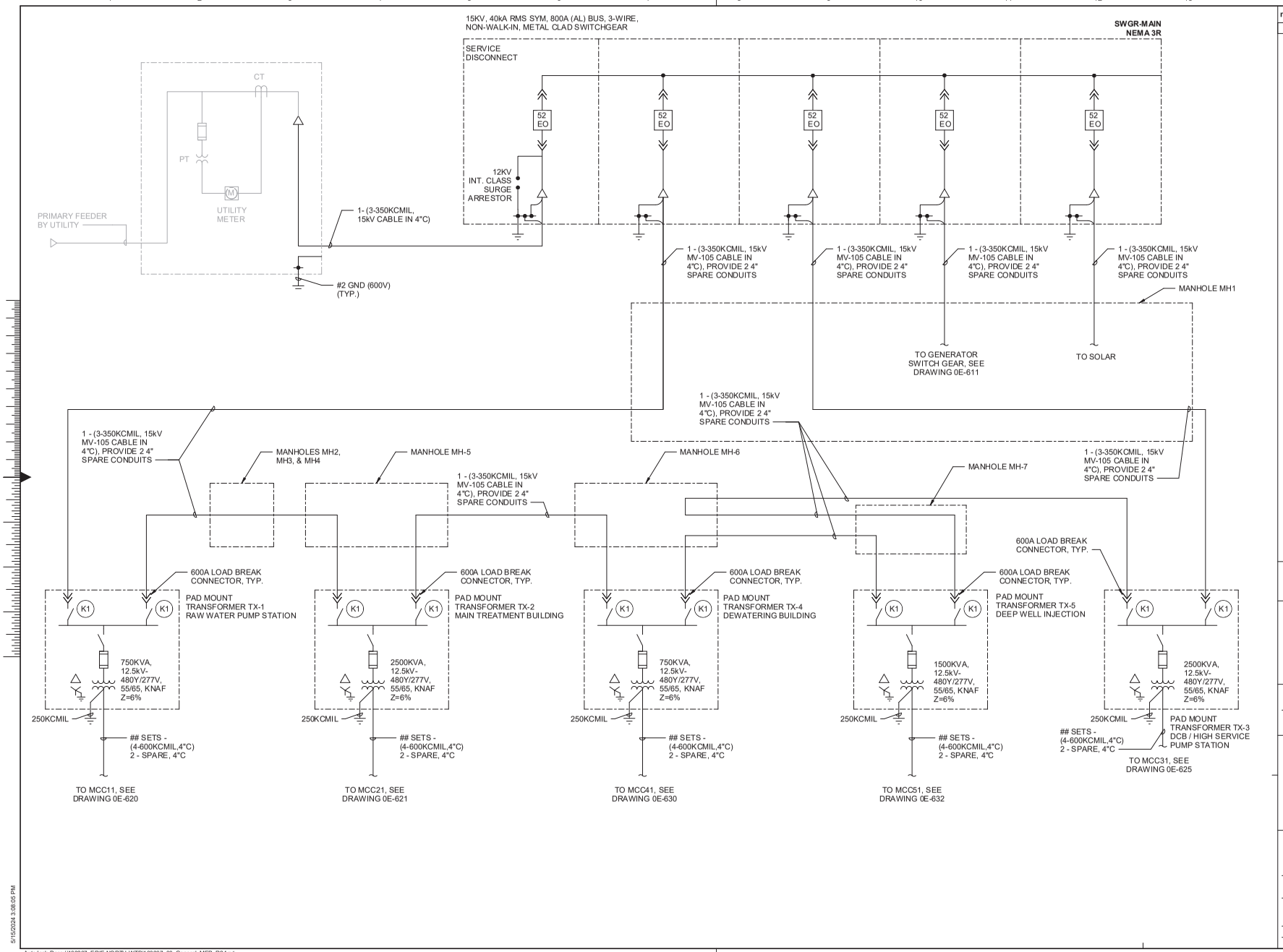
ENLARGED SITE PLAN

project 160267	contract
drawing 0ES-100	rev. A
sheet	of sheets

160267_0ES-100.DWG

Z:\CLIENTS\WTR\ERIECO\160267_NORTHWTP\DESIGN\CADD\ELEC\PROD_DWGS\160267_0ES-100.DWG 5/15/2024 2:51 PM MAHOPKINS

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



no.	date	by	ckd	description
A	05/15/24	AM	MH	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

creation date	detailed by
MAY 2024	A.BENSON
designed by	**checked by**
M.HOPKINS	A.MCDONALD

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

MV DIAGRAM I

project	contract
160267	

drawing	rev.
0E-610 —	A

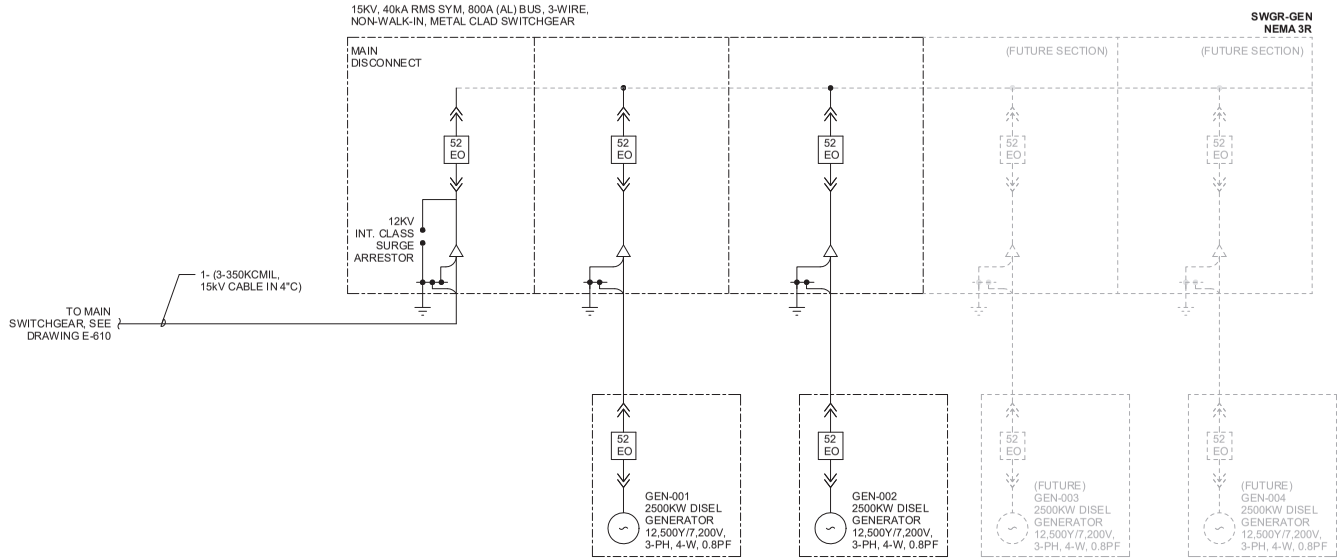
sheet	of	sheets

Millimeters
Scale For Microfilming
Inches

5/15/2024 3:08:05 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_00_General_MEP_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



no.	date	by	ckd	description
A	05/15/24	AM	MH	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

creation date	detailed by
MAY 2024	A.BENSON
designed by	**checked by**
M.HOPKINS	A.MCDONALD

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT

MV DIAGRAM II

project	contract
160267	

drawing	rev.
0E-611 —	A

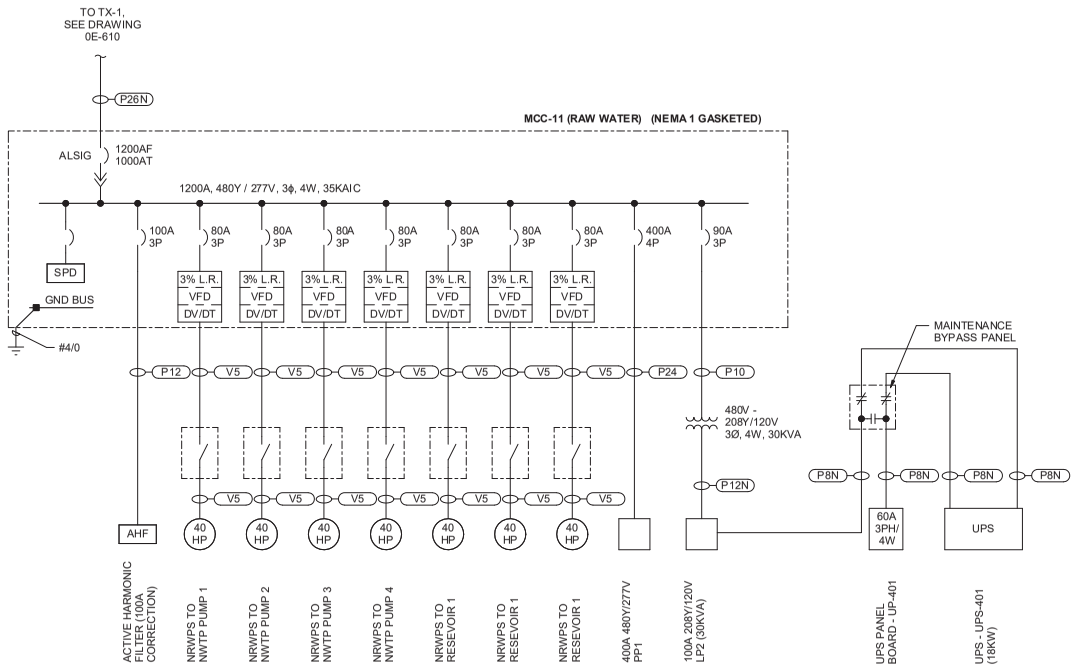
sheet	of	sheets

Millimeters
Scale For Microfilming
Inches

5/15/2024 3:08:38 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_00_General_MEP_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



no.	date	by	ckd	description
A	05/15/24	AM	MH	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

creation date	detailed by
MAY 2024	A.BENSON
designed by	**checked by**
M.HOPKINS	A.MCDONALD

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

ELECTRICAL ONE LINE - RAW WATER

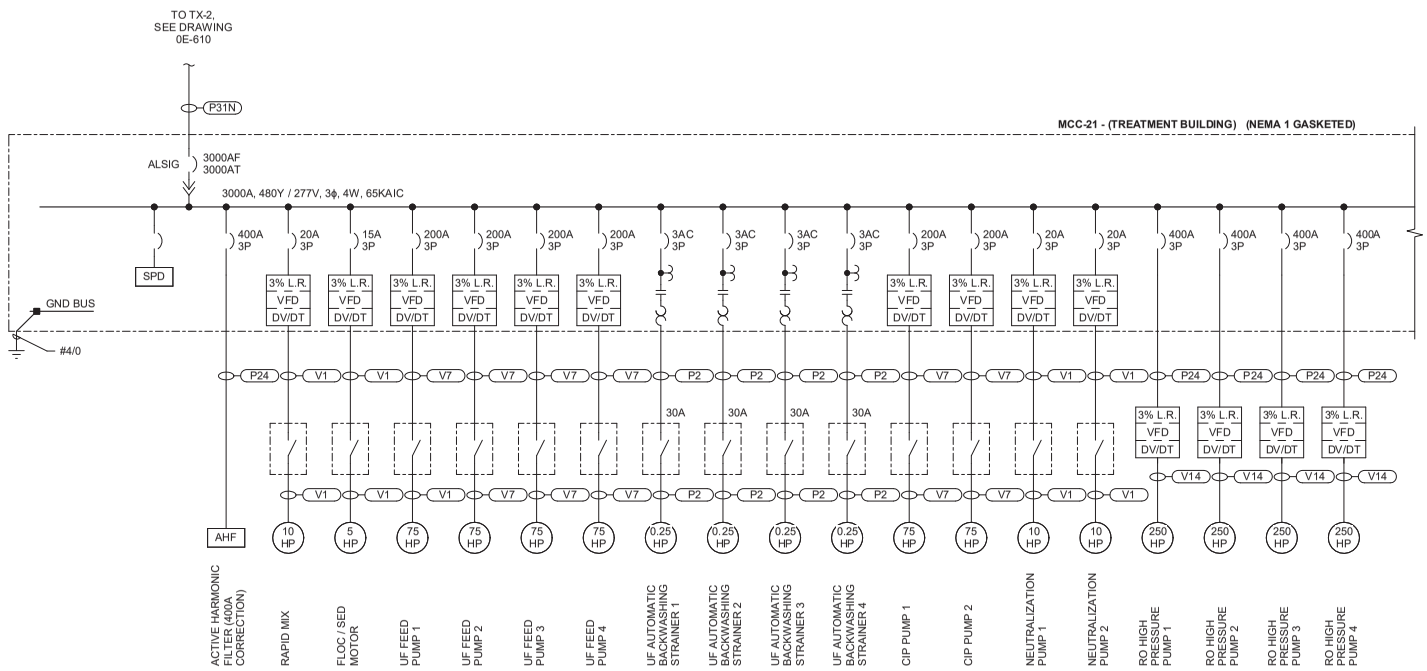
project	contract
160267	

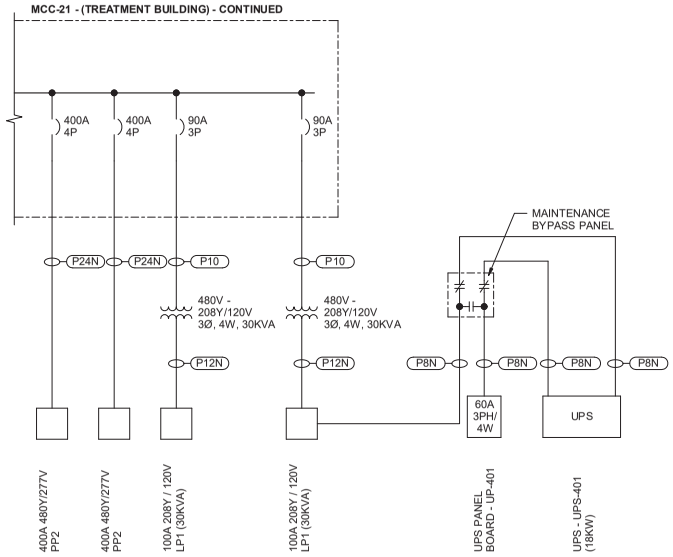
drawing	rev.
0E-620 —	A

sheet of sheets

Millimeters
Scale For Microfilming
Inches
5/15/2024 3:39:00 PM
Autodesk Docs://160267_ERIE NORTH WTP/160267_00_General_MEP_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908





no.	date	by	ckd	description
A	05/15/24	AM	MH	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

creation date	detailed by
MAY 2024	A.BENSON
designed by	checked by
M.HOPKINS	A.MCDONALD

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

ELECTRICAL ONE-LINE - TREATMENT BUILDING

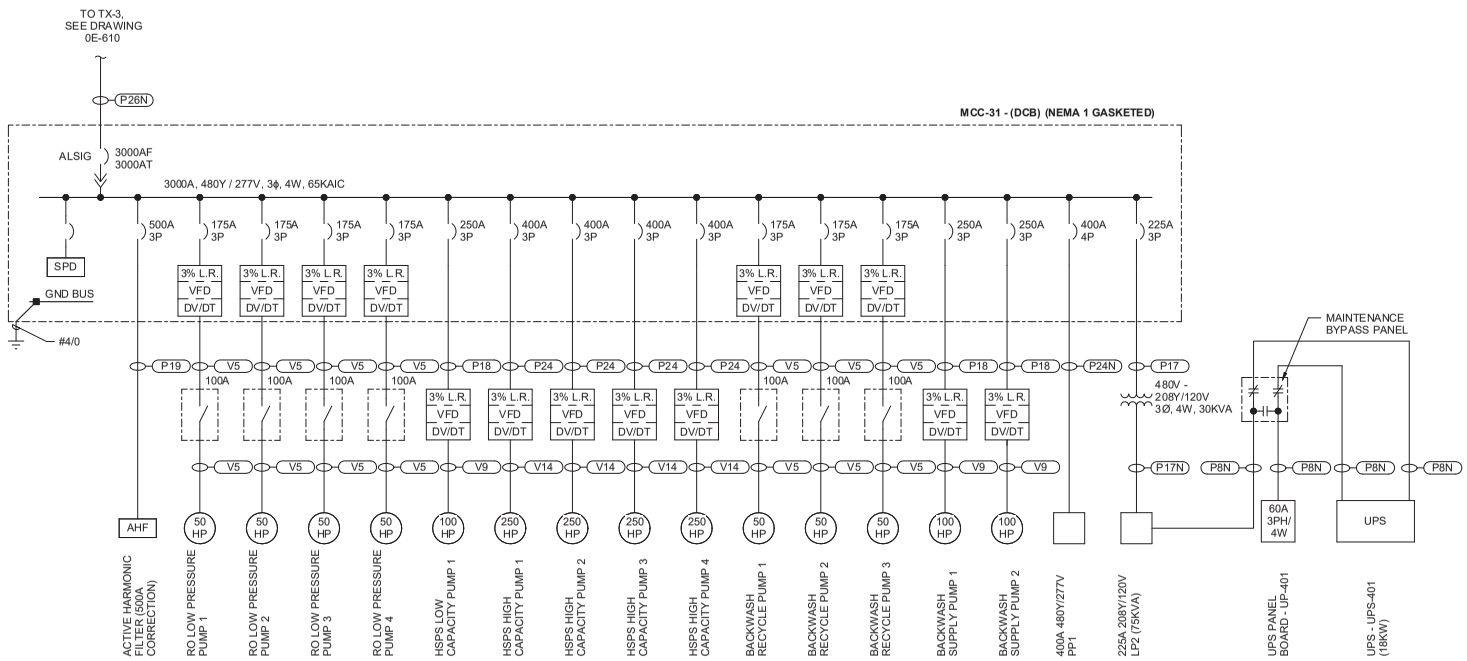
project	contract
160267	

drawing **0E-621** — rev. **A**

sheet of sheets

5/15/2024 3:39:25 PM
Autodesk Docs://160267_ERIE NORTH WTP/160267_00_General_MEP_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



no.	date	by	ckd	description
A	05/15/24	AM	MH	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

creation date	detailed by
MAY 2024	A.BENSON
designed by	**checked by**
M.HOPKINS	A.MCDONALD

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT

ELECTRICAL ONE-LINE - DCB

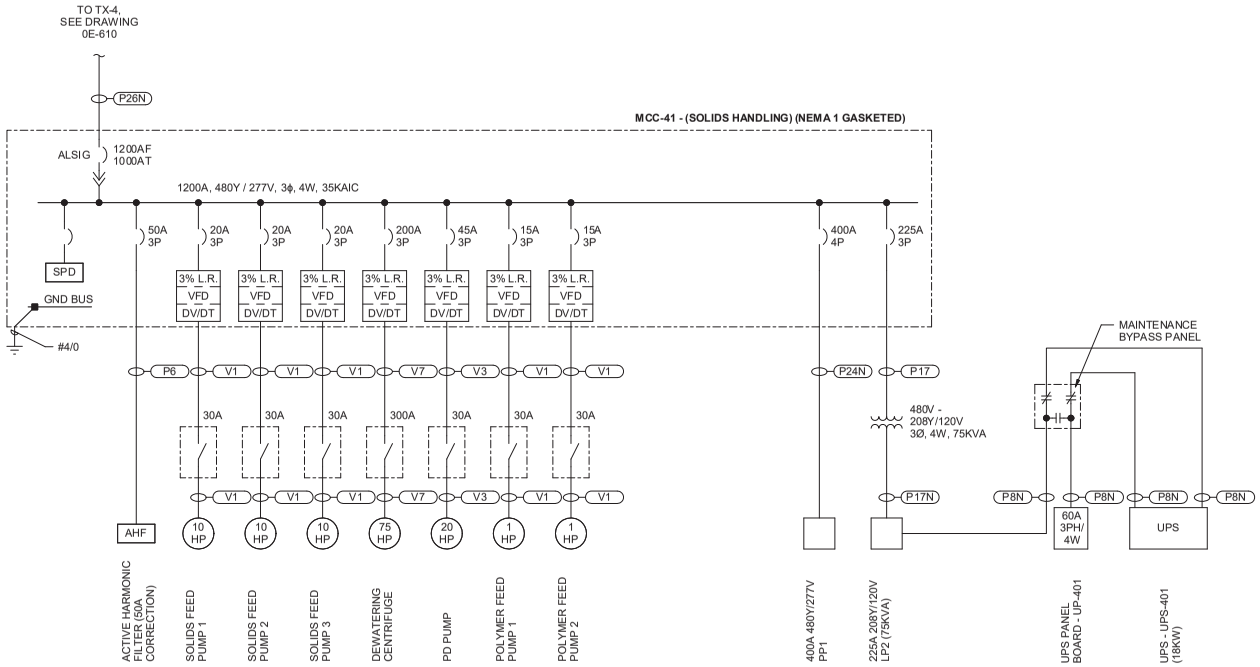
project	contract
160267	

drawing	rev.
0E-625 —	A

sheet of sheets

Autodesk Docs://160267_ERIE NORTH WTP/160267_00_General_MEP_R24.rvt
5/15/2024 3:39:51 PM
Scale For Microfilming
Millimeters
Inches

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



no.	date	by	ckd	description
A	05/15/24	AM	MH	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

creation date	detailed by
MAY 2024	A.BENSON
designed by	**checked by**
M.HOPKINS	A.MCDONALD

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT

ELECTRICAL ONE-LINE - SOLIDS HANDLING

project	contract
160267	

drawing	rev.
0E-630 —	A

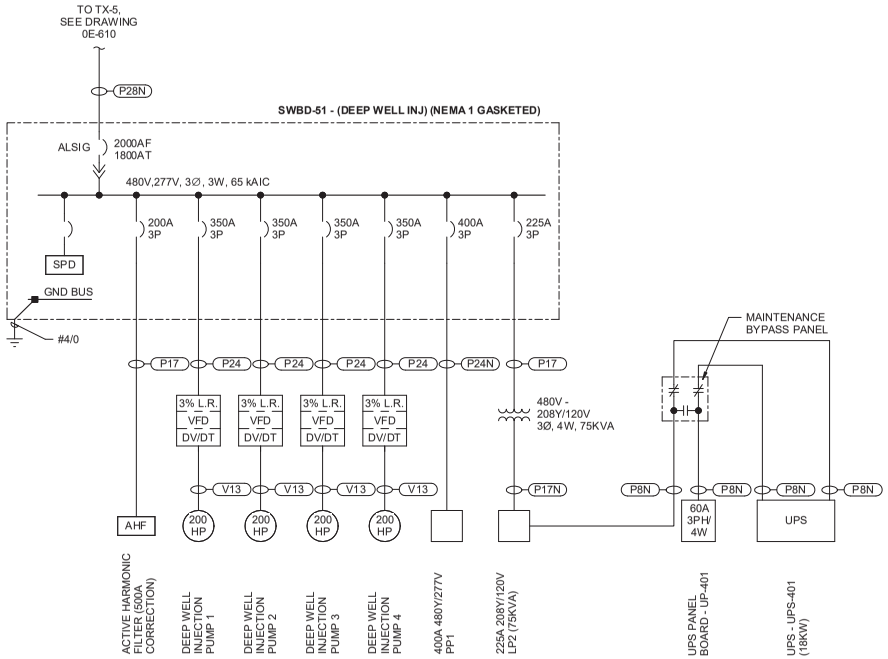
sheet of sheets

Scale For Microfilming: Millimeters / Inches

5/15/2024 3:10:32 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_00_General_MEP_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



no.	date	by	ckd	description
A	05/15/24	AM	MH	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

creation date	detailed by
MAY 2024	A.BENSON
designed by	**checked by**
M.HOPKINS	A.MCDONALD

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT

ELECTRICAL ONE-LINE - DEEP WELL INJECTION

project	contract
160267	

drawing	rev.
0E-632 —	A

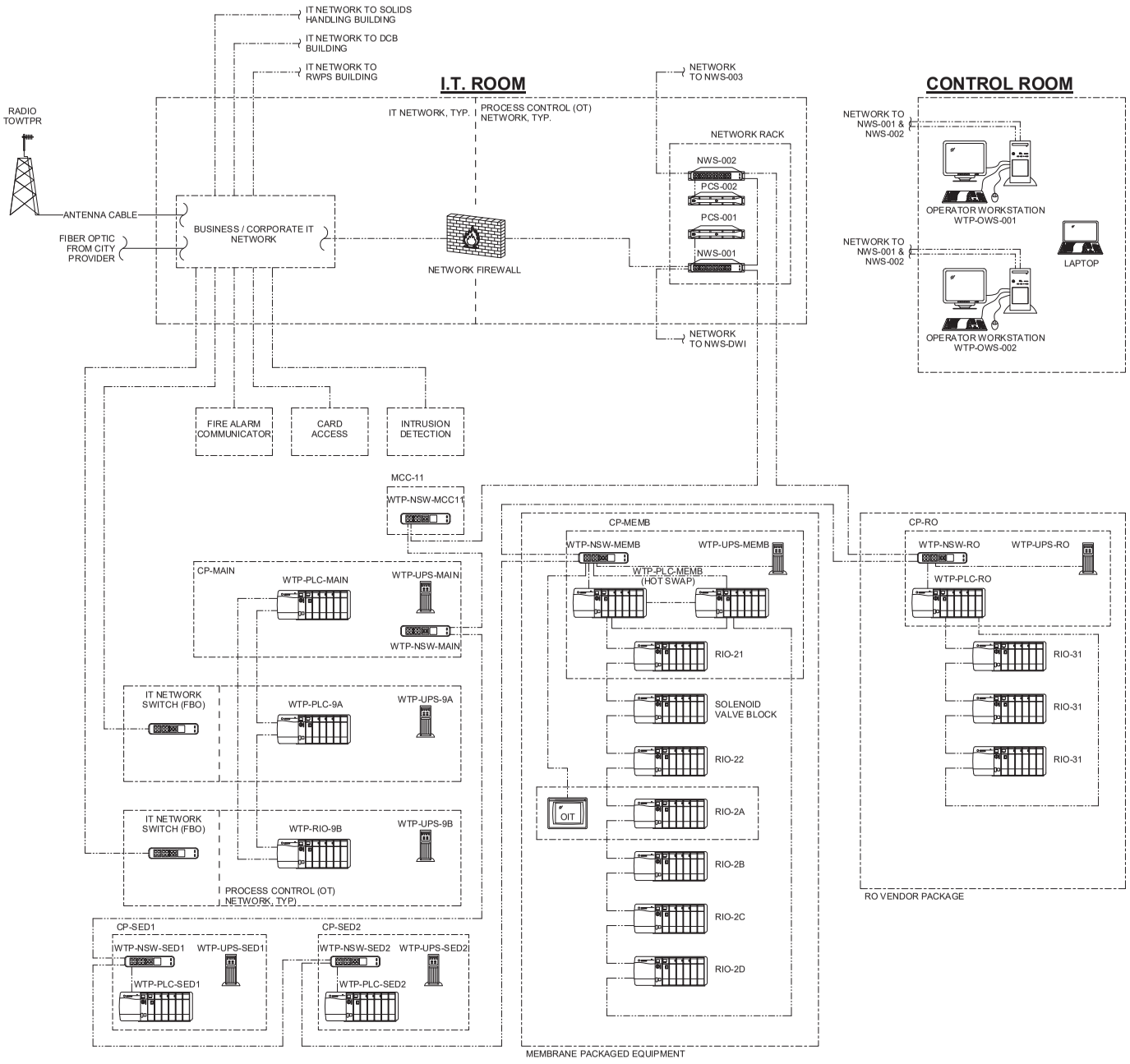
sheet of sheets

Millimeters
Scale For Microfilming
Inches

5/15/2024 3:10:45 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_00_General_MEP_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



no.	date	by	ckd	description
A	05/15/24	AM	MH	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

creation date	detailed by
MAY 2024	A.BENSON
designed by	**checked by**
M.HOPKINS	A.MCDONALD

TOWN OF ERIE 1874

NORTH WATER TREATMENT PLANT

NETWORK ARCHITECTURE I

project	contract
160267	

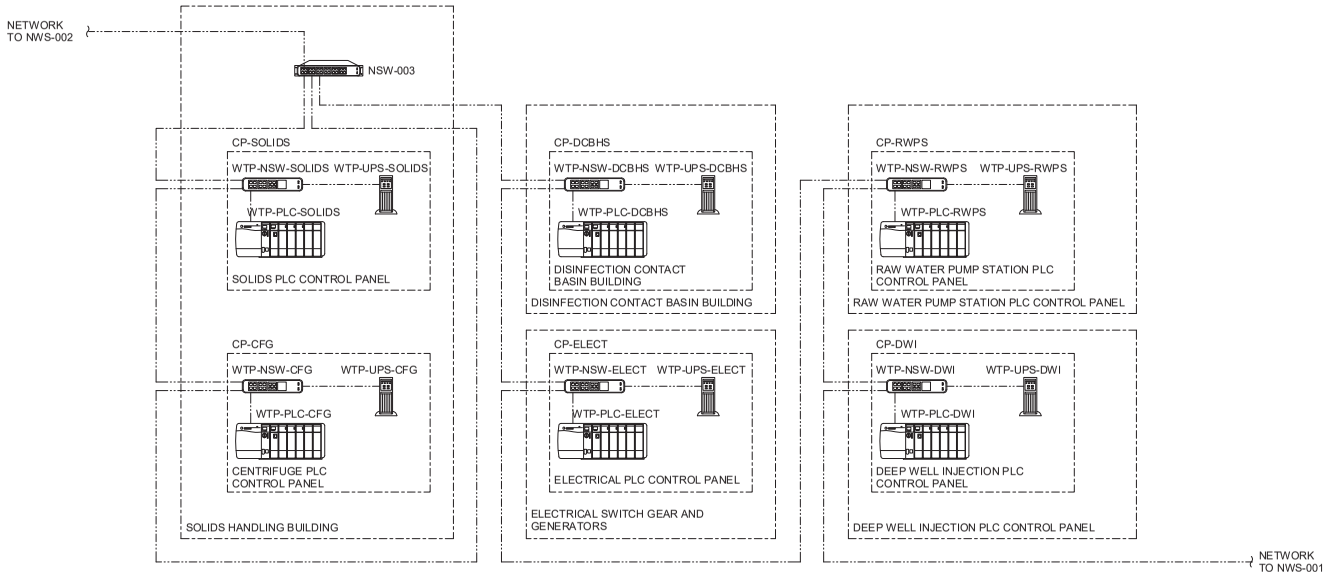
drawing	rev.
0E-650 —	A

sheet	of	sheets

Autodesk Docs://160267_ERIE NORTH WTP/160267_00_General_MEP_R24.rvt

5/15/2024 3:11:10 PM

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A6FBB3A91908



no.	date	by	ckd	description
A	05/15/24	AM	MH	15% REVIEW

PRELIMINARY - NOT FOR CONSTRUCTION

BURNS McDONNELL

Burns & McDonnell Engineering Co, Inc

creation date	detailed by
MAY 2024	A.BENSON
designed by	**checked by**
M.HOPKINS	A.MCDONALD

TOWN OF ERIE
1874

NORTH WATER TREATMENT PLANT

NETWORK ARCHITECTURE II

project	contract
160267	

drawing	rev.
0E-651 —	A

sheet	of	sheets

5/15/2024 3:11:24 PM

Autodesk Docs://160267_ERIE NORTH WTP/160267_00_General_MEP_R24.rvt

Docusign Envelope ID: 985877D2-682C-4ACB-A9F7-A9FBB3A91908

Attachment D: Vicinity Map

VICINITY MAP