

Request for Proposal RFP-4525-18-DH

WATER TREATMENT PLANT, COLLECTION AND DISTRIBUTION SUPERVISORY CONTROL AND DATA ACQUISITION AUTOMATION SYSTEM (SCADA)

RESPONSES DUE:

June 28, 2018 prior to 3:30 PM MST

Accepting Electronic Responses Only

Responses Only Submitted Through the Rocky Mountain E-Purchasing System (RMEPS)

https://www.rockymountainbidsystem.com/default.asp

(Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor <u>MUST</u> contact RMEPS to resolve issue prior to the response deadline. 800-835-4603)

PURCHASING REPRESENTATIVE:

Duane Hoff Jr., Senior Buyer <u>duaneh@gicity.org</u> (970) 244-1545

This solicitation has been developed specifically for a Request for Proposal intended to solicit competitive responses for this solicitation, and may not be the same as previous City of Grand Junction/Mesa County solicitations. All offerors are urged to thoroughly review this solicitation prior to submitting. Submittal by **FAX, EMAIL or HARD COPY IS NOT ACCEPTABLE** for this solicitation.

REQUEST FOR PROPOSAL

TABLE OF CONTENTS

<u>Section</u>	
1.0	Administrative Information and Conditions for Submittal
2.0	General Contract Terms and Conditions
3.0	Insurance Requirements
4.0	Specifications/Scope of Services
5.0	Preparation and Submittal of Proposals
6.0	Evaluation Criteria and Factors
7.0	Solicitation Response Form

REQUEST FOR PROPOSAL

SECTION 1.0: ADMINISTRATIVE INFORMATION & CONDITIONS FOR SUBMITTAL

1.1 Issuing Office: This Request for Proposal (RFP) is issued by the City of Grand Junction. All contact regarding this RFP is directed to:

RFP QUESTIONS:

Name, Title Email

- **1.2 Purpose:** The purpose of this RFP is to obtain proposals from qualified professional firms to provide a SUPERVISORY CONTROL AND DATA ACQUISITION SYSTEM (SCADA).
- **1.3 The Owner:** The Owner is the City of Grand Junction, Colorado and is referred to throughout this Solicitation. The term Owner means the Owner or his authorized representative.
- 1.4 Site Visit/Briefing: A <u>mandatory</u> site visit is required by all contractors intending to submit a response to this RFP. Any contractor that does not attend the <u>mandatory</u> site visit shall not be eligible to submit a response to this RFP. <u>The site visit shall be held at the City of Grand Junction Water Treatment Plant located at 244 26 ¼ Road, Grand Junction, CO on June 6, 2018 at 10:30am.</u>
- 1.5 Compliance: All participating Offerors, by their signature hereunder, shall agree to comply with all conditions, requirements, and instructions of this RFP as stated or implied herein. Should the Owner omit anything from this packet which is necessary to the clear understanding of the requirements, or should it appear that various instructions are in conflict, the Offeror(s) shall secure instructions from the Purchasing Division prior to the date and time of the submittal deadline shown in this RFP.
- 1.6 Submission: Please refer to section 5.0 for what is to be included. Each proposal shall be submitted in electronic format only, and only through the Rocky Mountain E-Purchasing website (https://www.rockymountainbidsystem.com/default.asp). This site offers both "free" and "paying" registration options that allow for full access of the Owner's documents and for electronic submission of proposals. (Note: "free" registration may take up to 24 hours to process. Please Plan accordingly.) Please view our "Electronic Registration Guide" http://www.gicity.org/business-and-economic-Vendor at development/bids/ for details. For proper comparison and evaluation, the City requests that proposals be formatted as directed in Section 5.0 "Preparation and Submittal of Proposals." Submittals received that fail to follow this format may be ruled non-responsive. (Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor **MUST** contact RMEPS to resolve issue prior to the response deadline. 800-835-4603).
- **1.7 Altering Proposals:** Any alterations made prior to opening date and time must be initialed by the signer of the proposal, guaranteeing authenticity. Proposals cannot be altered or amended after submission deadline.

- **1.8 Withdrawal of Proposal:** A proposal must be firm and valid for award and may not be withdrawn or canceled by the Offeror for sixty (60) days following the submittal deadline date, and only prior to award. The Offeror so agrees upon submittal of their proposal. After award this statement is not applicable.
- **1.9** Acceptance of Proposal Content: The contents of the proposal of the successful Offeror shall become contractual obligations if acquisition action ensues. Failure of the successful Offeror to accept these obligations in a contract shall result in cancellation of the award and such vendor shall be removed from future solicitations.
- 1.10 Addenda: All questions shall be submitted in writing to the appropriate person as shown in Section 1.1. Any interpretations, corrections and changes to this RFP or extensions to the opening/receipt date shall be made by a written Addendum to the RFP by the City Purchasing Division. Sole authority to authorize addenda shall be vested in the City of Grand Junction Purchasing Representative. Addenda will be issued electronically through the Rocky Mountain E-Purchasing website at www.rockymountainbidsystem.com. Offerors shall acknowledge receipt of all addenda in their proposal.
- 1.11 Exceptions and Substitutions: All proposals meeting the intent of this RFP shall be considered for award. Offerors taking exception to the specifications shall do so at their own risk. The Owner reserves the right to accept or reject any or all substitutions or alternatives. When offering substitutions and/or alternatives, Offeror must state these exceptions in the section pertaining to that area. Exception/substitution, if accepted, must meet or exceed the stated intent and/or specifications. The absence of such a list shall indicate that the Offeror has not taken exceptions, and if awarded a contract, shall hold the Offeror responsible to perform in strict accordance with the specifications or scope of work contained herein.
- 1.12 Confidential Material: All materials submitted in response to this RFP shall ultimately become public record and shall be subject to inspection after contract award. "Proprietary or Confidential Information" is defined as any information that is not generally known to competitors and which provides a competitive advantage. Unrestricted disclosure of proprietary information places it in the public domain. Only submittal information clearly identified with the words "Confidential Disclosure" and uploaded as a separate document shall establish a confidential, proprietary relationship. Any material to be treated as confidential or proprietary in nature must include a justification for the request. The request shall be reviewed and either approved or denied by the Owner. If denied, the proposer shall have the opportunity to withdraw its entire proposal, or to remove the confidential or proprietary restrictions. Neither cost nor pricing information nor the total proposal shall be considered confidential or proprietary.
- 1.13 Response Material Ownership: All proposals become the property of the Owner upon receipt and shall only be returned to the proposer at the Owner's option. Selection or rejection of the proposal shall not affect this right. The Owner shall have the right to use all ideas or adaptations of the ideas contained in any proposal received in response to this RFP, subject to limitations outlined in the entitled "Confidential Material". Disqualification of a proposal does not eliminate this right.

- **1.14 Minimal Standards for Responsible Prospective Offerors:** A prospective Offeror must affirmably demonstrate their responsibility. A prospective Offeror must meet the following requirements.
 - Have adequate financial resources, or the ability to obtain such resources as required.
 - Be able to comply with the required or proposed completion schedule.
 - Have a satisfactory record of performance.
 - Have a satisfactory record of integrity and ethics.
 - Be otherwise qualified and eligible to receive an award and enter into a contract with the Owner.
- 1.15 Open Records: Proposals shall be received and publicly acknowledged at the location, date, and time stated herein. Offerors, their representatives and interested persons may be present. Proposals shall be received and acknowledged only so as to avoid disclosure of process. However, all proposals shall be open for public inspection after the contract is awarded. Trade secrets and confidential information contained in the proposal so identified by offer as such shall be treated as confidential by the Owner to the extent allowable in the Open Records Act.
- **1.16 Sales Tax:** The Owner is, by statute, exempt from the State Sales Tax and Federal Excise Tax; therefore, all fees shall not include taxes.
- **1.17 Public Opening:** Proposals shall be opened in the City Hall Auditorium, 250 North 5th Street, Grand Junction, CO, 81501, immediately following the proposal deadline. Offerors, their representatives and interested persons may be present. Only the names and locations on the proposing firms will be disclosed.

SECTION 2.0: GENERAL CONTRACT TERMS AND CONDITIONS

- 2.1. Acceptance of RFP Terms: A proposal submitted in response to this RFP shall constitute a binding offer. Acknowledgment of this condition shall be indicated on the Letter of Interest or Cover Letter by the autographic signature of the Offeror or an officer of the Offeror legally authorized to execute contractual obligations. A submission in response to the RFP acknowledges acceptance by the Offeror of all terms and conditions including compensation, as set forth herein. An Offeror shall identify clearly and thoroughly any variations between its proposal and the Owner's RFP requirements. Failure to do so shall be deemed a waiver of any rights to subsequently modify the terms of performance, except as outlined or specified in the RFP.
- 2.2. Execution, Correlation, Intent, and Interpretations: The Contract Documents shall be signed by the Owner and Contractor. By executing the contract, the Contractor represents that they have familiarized themselves with the local conditions under which the Work is to be performed, and correlated their observations with the requirements of the Contract Documents. The Contract Documents are complementary, and what is required by any one, shall be as binding as if required by all. The intention of the documents is to include all labor, materials, equipment, services and other items necessary for the proper execution and completion of the scope of work as defined in the technical specifications and drawings contained herein. All drawings, specifications and copies furnished by the Owner are, and shall remain, Owner property. They are not to be used on any other project.

- 2.3. Permits, Fees, & Notices: The Contractor shall secure and pay for all permits, governmental fees and licenses necessary for the proper execution and completion of the work. The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations and orders of any public authority bearing on the performance of the work. If the Contractor observes that any of the Contract Documents are at variance in any respect, he shall promptly notify the Owner in writing, and any necessary changes shall be adjusted by approximate modification. If the Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Owner, he shall assume full responsibility and shall bear all costs attributable.
- **2.4.** Responsibility for those Performing the Work: The Contractor shall be responsible to the Owner for the acts and omissions of all his employees and all other persons performing any of the work under a contract with the Contractor.
- 2.5. Payment & Completion: The Contract Sum is stated in the Contract and is the total amount payable by the Owner to the Contractor for the performance of the work under the Contract Documents. Upon receipt of written notice that the work is ready for final inspection and acceptance and upon receipt of application for payment, the Owner's Project Manager will promptly make such inspection and, when they find the work acceptable under the Contract Documents and the Contract fully performed, the Owner shall make payment in the manner provided in the Contract Documents. Partial payments will be based upon estimates, prepared by the Contractor, of the value of Work performed and materials placed in accordance with the Contract Documents. The work performed by Contractor shall be in accordance with generally accepted professional practices and the level of competency presently maintained by other practicing professional firms in the same or similar type of work in the applicable community. The work and services to be performed by Contractor hereunder shall be done in compliance with applicable laws, ordinances, rules and regulations.
- 2.6. Protection of Persons & Property: The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. Contractor shall erect and maintain, as required by existing safeguards for safety and protection, and all reasonable precautions, including posting danger signs or other warnings against hazards promulgating safety regulations and notifying owners and users of adjacent utilities. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct by the Contractor in the execution of the work, or in consequence of the non-execution thereof by the Contractor, they shall restore, at their own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or it shall make good such damage or injury in an acceptable manner.
- 2.7. Changes in the Work: The Owner, without invalidating the contract, may order changes in the work within the general scope of the contract consisting of additions, deletions or other revisions. All such changes in the work shall be authorized by Change Order/Amendment and shall be executed under the applicable conditions of the contract documents. A Change Order/Amendment is a written order to the Contractor signed by

- the Owner issued after the execution of the contract, authorizing a change in the work or an adjustment in the contract sum or the contract time.
- **2.8. Minor Changes in the Work:** The Owner shall have authority to order minor changes in the work not involving an adjustment in the contract sum or an extension of the contract time and not inconsistent with the intent of the contract documents.
- 2.9. Uncovering & Correction of Work: The Contractor shall promptly correct all work found by the Owner as defective or as failing to conform to the contract documents. The Contractor shall bear all costs of correcting such rejected work, including the cost of the Owner's additional services thereby made necessary. The Owner shall give such notice promptly after discover of condition. All such defective or non-conforming work under the above paragraphs shall be removed from the site where necessary and the work shall be corrected to comply with the contract documents without cost to the Owner.
- 2.10. Acceptance Not Waiver: The Owner's acceptance or approval of any work furnished hereunder shall not in any way relieve the proposer of their present responsibility to maintain the high quality, integrity and timeliness of his work. The Owner's approval or acceptance of, or payment for, any services shall not be construed as a future waiver of any rights under this Contract, or of any cause of action arising out of performance under this Contract.
- **2.11. Change Order/Amendment:** No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All amendments to the contract shall be made in writing by the Owner.
- **2.12. Assignment:** The Offeror shall not sell, assign, transfer or convey any contract resulting from this RFP, in whole or in part, without the prior written approval from the Owner.
- 2.13. Compliance with Laws: Proposals must comply with all Federal, State, County and local laws governing or covering this type of service and the fulfillment of all ADA (Americans with Disabilities Act) requirements. Contractor hereby warrants that it is qualified to assume the responsibilities and render the services described herein and has all requisite corporate authority and professional licenses in good standing, required by law.
- **2.14. Debarment/Suspension:** The Contractor herby certifies that the Contractor is not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Governmental department or agency.
- **2.15. Confidentiality:** All information disclosed by the Owner to the Offeror for the purpose of the work to be done or information that comes to the attention of the Offeror during the course of performing such work is to be kept strictly confidential.
- **2.16. Conflict of Interest:** No public official and/or Owner employee shall have interest in any contract resulting from this RFP.
- **2.17. Contract:** This Request for Proposal, submitted documents, and any negotiations, when properly accepted by the Owner, shall constitute a contract equally binding between the Owner and Offeror. The contract represents the entire and integrated agreement between

the parties hereto and supersedes all prior negotiations, representations, or agreements, either written or oral, including the Proposal documents. The contract may be amended or modified with Change Orders, Field Orders, or Amendment.

- **2.18. Project Manager/Administrator:** The Project Manager, on behalf of the Owner, shall render decisions in a timely manner pertaining to the work proposed or performed by the Offeror. The Project Manager shall be responsible for approval and/or acceptance of any related performance of the Scope of Services.
- 2.19. Contract Termination: This contract shall remain in effect until any of the following occurs: (1) contract expires; (2) completion of services; (3) acceptance of services or, (4) for convenience terminated by either party with a written Notice of Cancellation stating therein the reasons for such cancellation and the effective date of cancellation at least thirty days past notification.
- **2.20. Employment Discrimination:** During the performance of any services per agreement with the Owner, the Offeror, by submitting a Proposal, agrees to the following conditions:
 - 2.20.1. The Offeror shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, disability, citizenship status, marital status, veteran status, sexual orientation, national origin, or any legally protected status except when such condition is a legitimate occupational qualification reasonably necessary for the normal operations of the Offeror. The Offeror agrees to post in conspicuous places, visible to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
 - 2.20.2. The Offeror, in all solicitations or advertisements for employees placed by or on behalf of the Offeror, shall state that such Offeror is an Equal Opportunity Employer.
 - 2.20.3. Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
- **2.21.** Immigration Reform and Control Act of 1986 and Immigration Compliance: The Offeror certifies that it does not and will not during the performance of the contract employ illegal alien workers or otherwise violate the provisions of the Federal Immigration Reform and Control Act of 1986 and/or the immigration compliance requirements of State of Colorado C.R.S. § 8-17.5-101, et.seq. (House Bill 06-1343).
- **2.22. Ethics:** The Offeror shall not accept or offer gifts or anything of value nor enter into any business arrangement with any employee, official, or agent of the Owner.
- **2.23.** Failure to Deliver: In the event of failure of the Offeror to deliver services in accordance with the contract terms and conditions, the Owner, after due oral or written notice, may procure the services from other sources and hold the Offeror responsible for any costs resulting in additional purchase and administrative services. This remedy shall be in addition to any other remedies that the Owner may have.

- **2.24. Failure to Enforce:** Failure by the Owner at any time to enforce the provisions of the contract shall not be construed as a waiver of any such provisions. Such failure to enforce shall not affect the validity of the contract or any part thereof or the right of the Owner to enforce any provision at any time in accordance with its terms.
- **2.25. Force Majeure:** The Offeror shall not be held responsible for failure to perform the duties and responsibilities imposed by the contract due to legal strikes, fires, riots, rebellions, and acts of God beyond the control of the Offeror, unless otherwise specified in the contract.
- 2.26. Indemnification: Offeror shall defend, indemnify and save harmless the Owner and all its officers, employees, insurers, and self-insurance pool, from and against all liability, suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the Offeror, or of any Offeror's agent, employee, subcontractor or supplier in the execution of, or performance under, any contract which may result from proposal award. Offeror shall pay any judgment with cost which may be obtained against the Owner growing out of such injury or damages.
- 2.27. Independent Firm: The Offeror shall be legally considered an Independent Firm and neither the Firm nor its employees shall, under any circumstances, be considered servants or agents of the Owner. The Owner shall be at no time legally responsible for any negligence or other wrongdoing by the Firm, its servants, or agents. The Owner shall not withhold from the contract payments to the Firm any federal or state unemployment taxes, federal or state income taxes, Social Security Tax or any other amounts for benefits to the Firm. Further, the Owner shall not provide to the Firm any insurance coverage or other benefits, including Workers' Compensation, normally provided by the Owner for its employees.
- **2.28. Nonconforming Terms and Conditions:** A proposal that includes terms and conditions that do not conform to the terms and conditions of this Request for Proposal is subject to rejection as non-responsive. The Owner reserves the right to permit the Offeror to withdraw nonconforming terms and conditions from its proposal prior to a determination by the Owner of non-responsiveness based on the submission of nonconforming terms and conditions.
- **2.29.** Ownership: All plans, prints, designs, concepts, etc., shall become the property of the Owner.
- **2.30. Oral Statements:** No oral statement of any person shall modify or otherwise affect the terms, conditions, or specifications stated in this document and/or resulting agreement. All modifications to this request and any agreement must be made in writing by the Owner.
- **2.31.** Patents/Copyrights: The Offeror agrees to protect the Owner from any claims involving infringements of patents and/or copyrights. In no event shall the Owner be liable to the Offeror for any/all suits arising on the grounds of patent(s)/copyright(s) infringement. Patent/copyright infringement shall null and void any agreement resulting from response to this RFP.

- **2.32. Venue**: Any agreement as a result of responding to this RFP shall be deemed to have been made in, and shall be construed and interpreted in accordance with, the laws of the City of Grand Junction, Mesa County, Colorado.
- **2.33.** Expenses: Expenses incurred in preparation, submission and presentation of this RFP are the responsibility of the company and cannot be charged to the Owner.
- **2.34. Sovereign Immunity:** The Owner specifically reserves its right to sovereign immunity pursuant to Colorado State Law as a defense to any action arising in conjunction to this agreement.
- 2.35. Public Funds/Non-Appropriation of Funds: Funds for payment have been provided through the Owner's budget approved by the City Council/Board of County Commissioners for the stated fiscal year only. State of Colorado statutes prohibit the obligation and expenditure of public funds beyond the fiscal year for which a budget has been approved. Therefore, anticipated orders or other obligations that may arise past the end of the stated Owner's fiscal year shall be subject to budget approval. Any contract will be subject to and must contain a governmental non-appropriation of funds clause.
- 2.36. Collusion Clause: Each Offeror by submitting a proposal certifies that it is not party to any collusive action or any action that may be in violation of the Sherman Antitrust Act. Any and all proposals shall be rejected if there is evidence or reason for believing that collusion exists among the proposers. The Owner may or may not, at the discretion of the Owner Purchasing Representative, accept future proposals for the same service or commodities for participants in such collusion.
- **2.37. Gratuities:** The Contractor certifies and agrees that no gratuities or kickbacks were paid in connection with this contract, nor were any fees, commissions, gifts or other considerations made contingent upon the award of this contract. If the Contractor breaches or violates this warranty, the Owner may, at their discretion, terminate this contract without liability to the Owner.
- **2.38. Performance of the Contract:** The Owner reserves the right to enforce the performance of the contract in any manner prescribed by law or deemed to be in the best interest of the Owner in the event of breach or default of resulting contract award.
- **2.39. Benefit Claims:** The Owner shall not provide to the Offeror any insurance coverage or other benefits, including Worker's Compensation, normally provided by the Owner for its employees.
- **2.40. Default:** The Owner reserves the right to terminate the contract in the event the Contractor fails to meet delivery or completion schedules, or otherwise perform in accordance with the accepted proposal. Breach of contract or default authorizes the Owner to purchase like services elsewhere and charge the full increase in cost to the defaulting Offeror.
- **2.41. Multiple Offers:** If said proposer chooses to submit more than one offer, THE ALTERNATE OFFER must be clearly marked "Alternate Proposal". The Owner reserves the right to make award in the best interest of the Owner.

2.42. Cooperative Purchasing: Purchases as a result of this solicitation are primarily for the Owner. Other governmental entities may be extended the opportunity to utilize the resultant contract award with the agreement of the successful provider and the participating agencies. All participating entities will be required to abide by the specifications, terms, conditions and pricings established in this Proposal. The quantities furnished in this proposal document are for only the Owner. It does not include quantities for any other jurisdiction. The Owner will be responsible only for the award for our jurisdiction. Other participating entities will place their own awards on their respective Purchase Orders through their purchasing office or use their purchasing card for purchase/payment as authorized or agreed upon between the provider and the individual entity. The Owner accepts no liability for payment of orders placed by other participating jurisdictions that choose to piggy-back on our solicitation. Orders placed by participating jurisdictions under the terms of this solicitation will indicate their specific delivery and invoicing instructions.

2.43. Definitions:

- 2.43.1. "Offeror" and/or "Proposer" refers to the person or persons legally authorized by the Consultant to make an offer and/or submit a response (fee) proposal in response to the Owner's RFP.
- 2.43.2. The term "Work" includes all labor, materials, equipment, and/or services necessary to produce the requirements of the Contract Documents.
- 2.43.3. "Contractor" is the person, organization, firm or consultant identified as such in the Agreement and is referred to throughout the Contract Documents. The term Contractor means the Contractor or his authorized representative. The Contractor shall carefully study and compare the General Contract Conditions of the Contract, Specification and Drawings, Scope of Work, Addenda and Modifications and shall at once report to the Owner any error, inconsistency or omission he may discover. Contractor shall not be liable to the Owner for any damage resulting from such errors, inconsistencies or omissions. The Contractor shall not commence work without clarifying Drawings, Specifications, or Interpretations.
- 2.43.4. "Sub-Contractor is a person or organization who has a direct contract with the Contractor to perform any of the work at the site. The term sub-contractor is referred to throughout the contract documents and means a sub-contractor or his authorized representative.
- **2.44. Public Disclosure Record:** If the Proposer has knowledge of their employee(s) or subproposers having an immediate family relationship with an Owner employee or elected official, the proposer must provide the Purchasing Representative with the name(s) of these individuals. These individuals are required to file an acceptable "Public Disclosure Record", a statement of financial interest, before conducting business with the Owner.

SECTION 3.0: INSURANCE REQUIREMENTS

3.1 Insurance Requirements: The selected Firm agrees to procure and maintain, at its own cost, policy(s) of insurance sufficient to insure against all liability, claims, demands, and other obligations assumed by the Firm pursuant to this Section. Such insurance shall be in addition to any other insurance requirements imposed by this Contract or by law. The Firm shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant

to this Section by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types.

Firm shall procure and maintain and, if applicable, shall cause any Subcontractor of the Firm to procure and maintain insurance coverage listed below. Such coverage shall be procured and maintained with forms and insurers acceptable to The Owner. All coverage shall be continuously maintained to cover all liability, claims, demands, and other obligations assumed by the Firm pursuant to this Section. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage. Minimum coverage limits shall be as indicated below unless specified otherwise in the Special Conditions:

(a) Worker Compensation insurance to cover obligations imposed by applicable laws for any employee engaged in the performance of work under this Contract, and Employers' Liability insurance with minimum limits of:

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ONE MILLION DOLLARS ($1,000,000) each accident, ONE MILLION DOLLARS ($1,000,000) disease - policy limit, and ONE MILLION DOLLARS ($1,000,000) disease - each employee
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(b) General Liability insurance with minimum combined single limits of:

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ONE MILLION DOLLARS ($1,000,000) each occurrence and ONE MILLION DOLLARS ($1,000,000) per job aggregate.
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The policy shall be applicable to all premises, products and completed operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, products, and completed operations. The policy shall include coverage for explosion, collapse, and underground (XCU) hazards. The policy shall contain a severability of interests provision.

(c) Comprehensive Automobile Liability insurance with minimum combined single limits for bodily injury and property damage of not less than:

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ONE MILLION DOLLARS ($1,000,000) each occurrence and ONE MILLION DOLLARS ($1,000,000) aggregate
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(d) Professional Liability & Errors and Omissions Insurance policy with a minimum of:

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ONE MILLION DOLLARS ($1,000,000) per claim
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This policy shall provide coverage to protect the contractor against liability incurred as a result of the professional services performed as a result of responding to this Solicitation.

With respect to each of Consultant's owned, hired, or non-owned vehicles assigned to be used in performance of the Work. The policy shall contain a severability of interests provision.

3.2 Additional Insured Endorsement: The policies required by paragraphs (b), and (c) above shall be endorsed to include the Owner and the Owner's officers and employees as additional insureds. Every policy required above shall be primary insurance, and any insurance carried by the Owner, its officers, or its employees, or carried by or provided through any insurance pool of the Owner, shall be excess and not contributory insurance to that provided by Contractor. The Contractor shall be solely responsible for any deductible losses under any policy required above.

SECTION 4.0: SPECIFICATIONS/SCOPE OF SERVICES

4.1. General/Background:

The City of Grand Junction is in Mesa County, Colorado on the western slope of the Rocky Mountains, midway between Denver, Colorado and Salt Lake City, Utah. Grand Junction is a full-service City operating under a Council-City Manager structure. It is the County Seat and is the largest city on the western slope of Colorado with a population of approximately 60,000 within City Limits and approximately 145,000 county-wide.

The City has 9,700 of taps serving approximately 28,000 customers. The water department is responsible for maintaining 353 miles of distribution pipe, two water treatment plants, 19 reservoirs and associated raw water transmission pipes. Many of these facilities are in remote locations. The main water treatment plant (WTP), located in Orchard Mesa, was commissioned in 1969.

The Water Treatment Plant (WTP) is a direct filtration plant rated to 16 MGD. Currently the WTP unit processes are controlled by a Redlion Touchscreen Graphic Operator Interface (GCI). The GCI and associated PLC were installed during upgrade of the filters in 2017. The upgrade also included the blowers for air scour during backwash cycles. Raw water is brought into the plant where ACH and a cationic polymer are added, the water runs through an in-line flash mixer and then to an outdoor "contact basin" (floc basin). Water is then brought directly back into the plant for filtration. Up to 4 filters are utilized, depending on flow rates. The filters are dual media filters with IMS caps installed during the 2017 upgrade. Filtered water then gets dosed with sodium hypochlorite, which is produced in a separate building on site, then moves through a clearwell and finally into two 4-million gallon storage tanks before entering the distribution system.

The Kannah Creek Water Plant (KCWTP) is rated to 0.2 MGD and serves approximately 150 taps for a small rural community southeast of Grand Junction. The KCWTP has a 10-year-old stand-alone SCADA system used for controlling unit processes. KCWTP is also a direct filtration plant. Coagulants are injected and the raw water is directed through a large diameter pipe which serves as a floc basin by providing adequate detention time. Coagulated water flows through a filter consisting of anthracite, sand, and garnet sand. Filtered water flows into a 40,000 gallon clearwell and is pumped into storage tanks about 3/4 of a mile away.

The City of Grand Junction is seeking proposals from qualified vendors to assist with development and implementation of a comprehensive, fully featured System Control and Data Acquisition system for the water treatment plant, collection and distribution systems. It is the intent of the water department to implement SCADA improvements to the system in phases over the next several years.

<u>Full implementation of the SCADA improvements for the water treatment plant, distribution</u> and supply systems will be completed in multiple phases.

This solicitation relates to the first phase of this project and requires the selected vendor to provide the following deliverables:

- Design Technical Memorandum including but not limited to identifying the scope and probable cost for each phase to be implemented with each annual budget cycle, the number of phases needed for full implementation, security, training, remote capabilities
- Identify, procure and implement hardware, software, licencing, etc. such that the Water Treatment Plan is operable from the new SCADA system, including as much of the existing process equipment (i.e. filters, blowers, chorine production, etc) as can be included withing the 2018 Plant Improvement Bugdet.
- Training for Plant operators and other pertinent personnel on SCADA system operation.
- Maintenance and support following Final Acceptance of each project phase.

4.2. Special Conditions/Provisions:

4.2.1. Project Objectives:

4.2.1.1. Identify options for SCADA system types of hardware, software and implementation strategies. Develop an overall plan for implementing SCADA at the WTP that creates a roadmap for expanding the system as the City can make upgrades and tie in additional components as budget allows. It is intended that the Water Supply, Treatment and Distribution Systems will be tied into the SCADA system centralized at the WTP at Orchard Mesa. Server storage and backup will be located at the main IT facility at City of Grand Junction City Hall. Full integration will be a multi-phase endeavor over several years. Phase 1 includes design, procurement and implementation of the backbone of the SCADA system and integrate existing equipment at the WTP that is capable of being directly connected to this system and communication to the servers at City Hall by December 31, 2018. Phase 1 also includes a design report and preliminary (30%) design identifying number and scope of future phases to complete full buildout and implementation of the SCADA system over the next several years.

Design report must identify existing and possible future physical locations for SCADA equipment, servers, workstations, routers, and switches. Discuss equipment placement as it relates to reliability, operational efficiency, operational functionality, physical security, environmental effects, expandability, network connection options, back-up electrical power sources, server failover and recovery options.

- 4.2.1.2. Study existing process control strategies and adequacy of existing monitoring and control functions. Consider ways to improve or optimize the level of monitoring and control. Consider existing features that should be retained and shortcomings that should be addressed.
- 4.2.1.3. Develop an understanding of the existing telemetric backbone methodology including physical locations and issues. Discuss remote access options including alarm features, as well "read only" access, and full control levels of access. Describe

the pros and cons of each as well as the required equipment and software necessary for implementation.

- 4.2.1.4. Identify potential operational, maintenance, IT, training, business, and strategic needs.
- 4.2.1.5. The Water Treatment Plant is considered critical infrastructure for the City of Grand Junction. As such security is of paramount importance. During plant modifications and implementation of the SCADA system, plant shutdown time must be kept to a minimum.
- 4.2.1.6. Attachment A is an inventory of functions the Water Department manages that it believes could be implemented into a SCADA system. The inventory includes local and remote equipment and processes. It also tries to identify future needs. This list is not exhaustive, but is meant to be a starting point for responders to understand the system and make more complete recommendations.

Attachment B is a selection of one-line diagrams and as-builts to assist in understanding the current system at the WTP.

4.2.2. Site Access

Proposers must pay particular attention to site access requirements. City of Grand Junction Water Treatment Plants, supply facilities and distribution systems are considered part of the City's critical infrastructure. As such, access is limited to authorized personnel Access to each site must be schedule and coordinated with the City. Obtaining appropriate site access permission is the responsibility of the Proposer.

4.2.3. Locations

The Proposer should address where the SCADA Monitoring/Control System, and associated hardware should be located. Options include installing new equipment at the WTP, or utilizing the City's network servers at City Hall. In either case, backup data should be stored, at a minimum, at the servers at City Hall.

4.2.4. Materials and Services

Information provided as a response to this RFP should discuss the design, software licensing, programming, installation, testing, startup and commissioning of a complete SCADA system for up to 10 users.

The Proposer should address the City's desire to have the system implemented in phases. Recommendations for said phasing are encouraged in response.

The proposed SCADA system should be based on a packaged software product. The Responder will provide information on software licensing, security, and programming required to implement such a system.

- 4.2.5. The Proposer should outline a training program including, but not limited to the following personnel:
 - Operators, including the use of HMI, trending, alarms/notifications, data logging, communication, and analysis/reporting features.
 - SCADA System Administrators and SCADA technicians, including configuring interface and troubleshooting

• IT System Administrators responsible for ongoing operation of computer hardware and software components.

4.2.6. Maintenance and Support

Responders should outline options for maintenance and support of SCADA system, service agreement options, warranty information if available, etc.

- 4.2.7. Consider current security practices with respect to National Institute of Standards and Technology (NIST) and Department of Homeland Security (DHS) guidelines. Explain your security practices on the following topics and any additional topics:
 - 4.2.7.1. Password/Authentication Management and Complexity Requirements

Weak passwords introduce vulnerabilities to the control systems network. In addition, sometimes passwords are hard-coded into software to facilitate control system internal communications allowing anyone with access to the code/configuration files knowledge of the password(s).

The Vendor shall provide a configurable account password management system that allows for selection of password length, frequency of change, setting of required password complexity, number of login attempts, inactive session logout, screen lock by application, and denial of repeated or recycled use of the same password.

The Vendor shall not store passwords electronically or in Vendor-supplied hardcopy documentation in clear text unless the media is physically protected.

The Vendor shall control configuration interface access to the account management system

4.2.7.2. Removal of Unnecessary Services and Programs

Unused services in a host operating system that are left enabled are possible entry points for exploits on the network and are generally not monitored because these services are not used. Only the services used for control systems operation and maintenance shall be enabled to limit possible entry points.

The Vendor shall provide a list of services required for any computer system running the control system applications or required to interface with the control system applications. The list shall include all ports and services required for normal operation as well as any other ports and services required for emergency operation. The list shall also include an explanation or cross reference to justify why each service is necessary for operation.

The Vendor shall verify and provide documentation that all services are patched to status.

The Vendor shall provide, within a pre-negotiated period, appropriate software and service updates and/or workarounds to mitigate all vulnerabilities associated with the product and to maintain the established level of system security.

4.2.7.3. Disabling, Removal or Modifying of Default/Backdoor, Well-Known or Guest Accounts

Default accounts and passwords are available on many control systems and are often publicly available in published materials allowing unauthorized system access.

The Vendor shall recommend which accounts need to be active and those that can be disabled, removed, or modified.

The Vendor shall disable, remove, or modify all the accounts pursuant to the approved recommendation. Once changed, accounts will not be published except that new account information and passwords will be provided by the Vendor via protected media.

4.2.7.4. Account Auditing and Logging

Logging and auditing of both active and disabled accounts are useful for anomaly and unauthorized access detection. However, cyber attackers commonly modify audit logs to cover activities.

The Vendor shall provide a system whereby account activity is logged and is auditable both from a management (policy) and operational (account use activity) perspective.

The Vendor shall time stamp, encrypt, and control access to audit trails and log files.

The Vendor shall ensure audit logging does not adversely impact the system performance requirements.

4.2.7.5. File System Auditing and Logging

The Vendor shall configure hosts with least-privilege file and account access and provide documentation of the configuration.

The Vendor shall configure the necessary system services to execute at the least user privilege level possible for that service and provide documentation of the configuration.

The Vendor shall document that changing or disabling access to such files and functions has been completed.

4.2.7.6. Separation of Employment Notifications to Customer

Integrators and companies that support control systems are very dynamic and competitive, resulting in frequent turnover of key support personnel potentially exposing sensitive information.

Prior to contract award, the Vendor shall provide a separation agreement to delineate how Vendor employees who have sensitive knowledge of the City's control systems and who leave their positions or have responsibilities changed will be prohibited from disclosing that knowledge, where disclosure could lead to a reduction in security.

The Vendor shall notify the City within a pre-negotiated period when key personnel leave or change positions, should it possibly impact control system security.

The Vendor shall provide detailed documentation on how the control system security can be maintained and supported in the event the Vendor leaves the business (e.g., security-related procedures and products placed in escrow).

The Vendor shall return to the City any sensitive data in the Vendor's possession when the Vendor is no longer able to maintain control of the City's products.

4.2.7.7. Firmware and Software Vaulting practices

Software flaws are a primary avenue for gaining system access. Many control system security vulnerabilities are the direct result of writing software with inadequate attention to defense against deliberate and persistent malicious attack. These vulnerabilities are particularly threatening because the control system can be compromised by bypassing normal access control checks, such as firewalls. In such attacks, control system traffic will appear normal as far as the network is concerned. A common method of attach to infect

many customers it replaces Firmware and software code available for download by customer base.

Vaulting is a method in which software which is known to be uncorrupted is stored in an off-line location or as a read-only version to be used/restored when active code has been compromised.

Vendor shall provide documentation how they protect firmware and software in case of corruption or infection of available version. Documentation shall include methods for testing public available versions and verification against known vaulted versions.

4.2.7.8. End Device Security:

IED – Intelligent Electronic Devices can be used as access points to other systems that perform command and control functions. The devices are used to provide system control at the lowest level of a process and are vulnerable to communication interception and modification. Hardware and software (e.g., portable configuration computers) are needed to program IED's. IED's and configuration computers need to be secured by physical and cyber means.

RTU – Remote Terminal Units can be used as access points to other systems that perform command and control functions. The devices are used to provide system control at the lowest level of a process and are vulnerable to communication interception and modification. Hardware and software (e.g., portable configuration computers) are needed to program RTU's. RTU's and configuration computers need to be secured by physical and cyber means.

PLC – Programmable Logic Controllers can be used as access points to other systems that perform command and control functions. PLCs communicate over open networks that are vulnerable to communication interception and modification. Hardware and software (e.g., portable configuration computers) are needed to program PLCs. PLCs and configuration computers need to be secured by physical and cyber means.

Misc. Sensor, Actuators, Meters and other devices can be used as access points to other systems (e.g., PLCs and IED's) that perform command and control functions. These devices communicate over networks that are vulnerable to communication interception and modification. Hardware and software (e.g., portable configuration computers) are needed to program smart devices. Smart devices and configuration computers need to be secured by physical and cyber means.

The Vendor shall provide physical and cyber security features including, but not limited to, authentication, encryption, access control, event and communication logging, monitoring, and alarming to protect the device and configuration computer from unauthorized modification or use.

The Vendor shall clearly identify the physical and cyber security features and provide the methodologies for maintaining the features, including the methods to change settings from the Vendor-configured or manufacturer default conditions.

The Vendor shall verify that the addition of security features does not adversely affect connectivity, latency, bandwidth, response time, and throughput, when connected to existing equipment.

The Vendor shall remove or disable all software components that are not required for the operation and maintenance of the device. The Vendor shall provide documentation on what is removed and/or disabled.

The Vendor shall provide, within a pre-negotiated period, appropriate software and service updates and/or workarounds to mitigate all vulnerabilities associated with the product and to maintain the established level of system security.

4.2.7.9. Firewall and Intrusion Detection System/Intrusion Prevention System (IDS/IPS) Rules

Firewalls are used to stop unauthorized connections, or to allow limited communications between two networks or from a network to a networked device. Firewalls fall into four broad categories: packet filters, circuit level gateways, application level gateways, and stateful multilayer inspection firewalls. Firewalls can be implemented in software, hardware, or a combination of both. While IDS/IPS is used to identify unauthorized or abnormal network traffic.

The Vendor shall provide firewall/IDS rule sets between network zones.

The Vendor shall provide firewall/IDS rule sets and/or other equivalent documentation. The basis of the rule set shall be "deny all," with exceptions explicitly identified by the Vendor. This information is deemed business sensitive and shall be protected as such.

Following contract award, the Vendor shall provide detailed information on all communications (including protocols) required through a firewall/IDS, whether inbound or outbound, and identify each network device initiating a communication in accordance with the corresponding rule sets.

4.2.7.10. Patching (Operating System, Application and required Third-Party Software)

Patches and software updates, including those for anti-virus scanners, are required to reduce attack surface. Most successful cyber attacks occur in non-patched systems or applications.

The Vendor shall have a patch management and update process to include support of operating system patch support, vendor application patching, all required third party software, and the support for city's antivirus/antimalware (Endpoint Protection) product.

Prior to contract award, the Vendor shall provide details on their patch management and update process. Responsibility for installation and update of patches shall be identified.

Following contract award, the Vendor shall provide notification of known vulnerabilities affecting Vendor-supplied or required OS, application, and third-party software within a prenegotiated period after public disclosure. Vendor will assist mitigating issues with City's support EndPoint Protection Product.

Following contract award, the Vendor shall provide notification of patches affecting security within a pre-negotiated period as identified in the patch management process. The Vendor shall apply, test, and validate the appropriate updates and/or workarounds on a baseline reference system before distribution. Mitigation of these vulnerabilities shall occur within a pre-negotiated period.

4.2.7.11. Malware Detection and Protection

Malicious code, worms, viruses, and Trojans can propagate through a control system and potentially impact or curtail operations.

The Vendor shall disclose the existence and reasons for any known or identified backdoor codes that Malware could be used to compromise a system.

Vendor will assist mitigating issues with City's support Endpoint Protection Product.

The Vendor shall disclose any attacks against the vendor's system that involved a malware incident that could potential compromise the City's Systems. Vendor will provide documentation of the remediation of the incident.

4.2.7.12. Wireless Technologies

Wireless technologies refer to any technology, such as radio, microwave, or infrared waves, which allows analog and digital communication without the use of wires. Wireless Technologies may include well known methods such as: Bluetooth, 802.11 (WiFi), ZigBee, Zwave, WirelessHart, Cellular, WiMAX, Radio/Microwave, and Satellite.

Following contract award, the Vendor shall provide specific protocols and other detailed information required for the wireless device to communicate with the control network, including other wireless equipment that can communicate with the Vendor-supplied device.

The Vendor shall provide documentation on the range of the wireless device and power requirements.

The wireless system shall provide encryption of radio signals. The Vendor shall clearly identify these security devices and methods to change them from the Vendor-configured or manufacture default conditions.

4.2.8. Maintenance and Support

The Vendor should outline options for maintenance and support of SCADA system, service agreement options, warranty information if available. At a minimum the selected Vendor will provide maintenance service for a minimum of 3 years and a warranty for 1 year all materials and workmanship from the date of Final Acceptance of the SCADA system.

4.2.9. Pricing

The Proposer pricing shall be all inclusive for all recommended hardware options, software packages, service agreements, training, startup, labor, travel, etc. to fulfill the project requirements successfully.

Proposer are required to provide accurate and complete pricing for use in the evaluation, including any licensing and pricing options.

4.2.10. Other Services

Proposers may include any other services that are considered necessary to complete this project, or which would, in the judgement of the Proposer, improve the capability or increase the value of the proposed system.

4.3. Specifications/Scope of Services: The project is to be completed with the following tasks:

- 1) Project Management and Coordination
- 2) SCADA System Design
- 3) SCADA System Software, Equipment Procurement, Configuration, and Installation
- 4) Training, Instructions and Documentation
- 5) System Maintenance and services

Task 1: Project Management and Coordination

Project Initiation: Selected proposer shall develop a project schedule for creating design plans and report specifically to complete Phase 1 to meet integration deadline of December 31, 2018. The schedule should also outline future phases as they correlate with the plans described in Task 2 below. The Schedule shall show individual tasks described in the scope of work for the project and identify key milestone dates. The Proposer Project Manager (PM) shall maintain and update the project schedule as work proceeds. The PM will be assigned to this project for the duration of the work.

Work Task Coordination: The Consultant PM shall assign and coordinate all work tasks being accomplished, including those to be performed by sub-consultants, to ensure project work is completed on schedule.

Project Team Coordination: The City PM and the Consultant PM shall maintain ongoing communication about the project on a frequent and regular basis. Each PM shall provide the other with

- Written synopsis of their respective contracts (both telephone or in person) with others
- Copies of pertinent written communications, including electronic (email) correspondence
- Early identification of potential problems

Progress Meetings: The City and Consultant shall meet, either in person or by telephone conference calls, at regularly scheduled Project Working Group Meetings held at approximate two-week intervals throughout the project. Meetings shall include consultant PM, City PM, and Water Resources Manager. The Project Working Group Meetings shall be used to coordinate the work effort and resolve any outstanding issues or problems. The meetings shall focus on the following topics:

- Activities completed since last meeting
- Problems encountered or anticipated
- Late activities/activities slipping behind schedule
- Solutions for unresolved or newly identified problems
- Schedule of upcoming activities
- Information on items required, or comments from Federal agencies.

The Consultant PM shall prepare a written summary report of the general discussions held including all action items assigned. This scope assumes six (6) Project Working Group Meetings via conference call.

Reporting Requirements: The Consultant PM shall provide the following on a routine basis:

Monthly status reports (percent of design components complete) and monthly billings.

Task 2: SCADA System Design

Proposers should expect to develop a fully documented design for all SCADA components, including the WTP and remote sites (KCWTP, remote monitoring locations, pumps, valves, intakes, etc.) prior to the actual performance of any installation, configuration, or

development work in each phase. Plans of improvements shall include physical modifications to WTP, hardware installation, one-line diagrams, component details, etc.

Design documentation shall include a technical memorandum outlining all phases of the SCADA system implementation. The memorandum shall provide basis for design, design plans, schematics and details that will be used for installation, details of hardware components, software. The memorandum shall include recommendations for improving processes, data recording, analysis, reporting, alarms/alerts, security (both physical and cyber security) and troubleshooting and recovery. Memorandum will outline recommended phasing of additional component integration that may be used for future expansion of the SCADA system. The memorandum shall outline initial installation/integration schedule, the proposed training program and system maintenance and service programs.

Cost estimation is a critical part of the design phase of this project. The design must include costs of all hardware, software licensing, installation and operations costs of for the first three (3) years of operation. This is a key factor when considering budget and determining phasing of SCADA system integration.

Three (3) design submittals are required. 30% design and 90% design submittals shall have comments and responses. The third submittal will be final design prior to installation of the SCADA system.

Task 3: SCADA System Software, Equipment Procurement, Configuration, and Installation

Software Implementation: The SCADA system shall be based on a packaged software product. The successful proposer will provide all required software licensing and programming required to implement the SCADA system according to the approved design. A total of 10 users are expected to require access to the SCADA system.

The successful proposer will be required to integrate or migrate existing configurations or create new configurations for all required screens, scripts, functions, reports, trends, logic blocks, communications and other system elements to ensure complete and equivalent capability in the new system as compared to the City's existing operations.

System Startup and Acceptance Testing: Proposals shall include the start-up, integration and testing elements of the SCADA system, including acceptance testing. The existing operation system must be maintained to run in parallel until the new system has been accepted. Acceptance Testing shall be proposed for each phase of work.

Task 4: Training, Instructions and Documentation

The City of Grand Junction believes that thorough, effective training will be critical to attaining its objectives. Training should be proposed for:

- Operators, including use of HMI, Trending, Alarms, alarm notifications, data logging, communications, analysis and reporting features.
- SCADA System Administrators and SCADA Technicians, including configuration interface and troubleshooting the SCADA system.

• IT System Administrators, responsible for ongoing operation of the computer hardware and software components.

The City of Grand Junction also requires both system and user documentation (hardcopy and electronic formats that can be updated by the City). The technical system documentation will describe the system architecture, system logic, and operating requirements in sufficient detail for City staff to understand and take over technical support of the system. The user documentation will include and easy-to-use "cheat sheet" for reference by users.

Task 5: System Maintenance and services

Proposers shall include maintenance services for all components of the SCADA system including hardware, software and communications (except for computer, networking and communication elements provided by the City) for a period of 3 years following Final Acceptance of the system. It is expected that the vendor will provide warranty on materials delivered for a period of 1 year from the date of Final Acceptance.

Other Services:

Proposals may include any other services that are considered necessary to complete this project in a turnkey fashion, or which would, in the judgement of the Proposer, improve the capability or increase the value of the delivered system.

4.4. Site Visit/Briefing: A <u>mandatory</u> site visit is required by all contractors intending to submit a response to this RFP. Any contractor that does not attend the <u>mandatory</u> site visit shall not be eligible to submit a response to this RFP. <u>The site visit shall be held at the City of Grand Junction Water Treatment Plant located at 244 26 ¼ Road, Grand Junction, CO on June 6, 2018 at 10:30am.</u>

4.5. RFP Tentative Time Schedule:

•	Request for Proposal available	May 29, 2018
•	Mandatory Site Visit	June 6, 2018
•	Inquiry deadline, no questions after this date	June 19, 2018
•	Addendum Posted	June 23, 2018
•	Submittal deadline for proposals	June 28, 2018
•	Owner evaluation of proposals	June 29-July 6, 2018
•	Final selection (unless City Council approval is required)	July 11, 2018
•	Contract execution	July 13, 2018
•	Work begins no later than	July 18, 2018

4.6. Questions Regarding Scope of Services:

Duane Hoff Jr., Senior Buyer duaneh@gjcity.org

SECTION 5.0: PREPARATION AND SUBMITTAL OF PROPOSALS

Submission: Each proposal shall be submitted in electronic format only, and only through Rocky Mountain E-Purchasing website the (https://www.rockymountainbidsystem.com/default.asp). This site offers both "free" and "paving" registration options that allow for full access of the Owner's documents and for electronic submission of proposals. (Note: "free" registration may take up to 24 hours to process. Please Please view our "Electronic Vendor Registration Guide" Plan accordingly.) http://www.gicity.org/BidOpenings.aspx for details. (Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor MUST contact RMEPS to resolve issue prior to the response deadline 800-835-4603). For proper comparison and evaluation, the City requests that proposals be formatted as directed in Section 5.0 "Preparation and Submittal of Proposals." Offerors are required to indicate their interest in this Project, show their specific experience and address their capability to perform the Scope of Services in the Time Schedule as set forth herein. For proper comparison and evaluation, the Owner requires that proposals be formatted **A** to **F**:

- A. Cover Letter: Cover letter shall be provided which explains the Firm's interest in the project. The letter shall contain the name/address/phone number/email of the person who will serve as the firm's principal contact person with Owner's Contract Administrator and shall identify individual(s) who will be authorized to make presentations on behalf of the firm. The statement shall bear the signature of the person having proper authority to make formal commitments on behalf of the firm. By submitting a response to this solicitation the Contractor agrees to all requirements herein.
- **B.** Qualifications/Experience/Credentials: Proposers shall provide their qualifications for consideration as a contract provider to the City of Grand Junction/Mesa County and include prior experience in similar projects.
- C. Strategy and Implementation Plan: Describe your (the firm's) interpretation of the Owner's objectives with regard to this RFP. Describe the proposed strategy and/or plan for achieving the objectives of this RFP. The Firm may utilize a written narrative or any other printed technique to demonstrate their ability to satisfy the Scope of Services. The narrative should describe a logical progression of tasks and efforts starting with the initial steps or tasks to be accomplished and continuing until all proposed tasks are fully described and the RFP objectives are accomplished. Include a time schedule for completion of your firm's implementation plan and an estimate of time commitments from Owner staff.
- **D. References:** A minimum of three (3) **references** with name, address, telephone number, and email address that can attest to your experience in projects of similar scope and size.
- **E. Fee Proposal:** In addition to providing all-inclusive pricing for this project using the Solicitation Response form Found in Section 7, also provide a complete breakdown list of pricing.
- **F.** Additional Data (optional): Provide any additional information that will aid in evaluation of your qualifications with respect to this project.

SECTION 6.0: EVALUATION CRITERIA AND FACTORS

- **6.1 Evaluation:** An evaluation team shall review all responses and select the proposal or proposals that best demonstrate the capability in all aspects to perform the scope of services and possess the integrity and reliability that will ensure good faith performance.
- **6.2 Intent:** Only respondents who meet the qualification criteria will be considered. Therefore, it is imperative that the submitted proposal clearly indicate the firm's ability to provide the services described herein.

Submittal evaluations will be done in accordance with the criteria and procedure defined herein. The Owner reserves the right to reject any and all portions of proposals and take into consideration past performance. The following parameters will be used to evaluate the submittals (in no particular order of priority):

- Responsiveness of submittal to the RFP
- Understanding of the project and the objectives
- Experience/Required Skills
- Necessary resources
- Strategy & Implementation Plan
- References
- Fees

Owner also reserves the right to take into consideration past performance of previous awards/contracts with the Owner of any vendor, contractor, supplier, or service provider in determining final award(s).

The Owner will undertake negotiations with the top rated firm and will not negotiate with lower rated firms unless negotiations with higher rated firms have been unsuccessful and terminated.

- **6.3 Oral Interviews:** The Owner may invite the most qualified rated proposers to participate in oral interviews.
- **6.4 Award:** Firms shall be ranked or disqualified based on the criteria listed in Section 6.2. The Owner reserves the right to consider all of the information submitted and/or oral presentations, if required, in selecting the project Contractor.

SECTION 7.0: SOLICITATION RESPONSE FORM RFP-4525-8-DH WATER TREATMENT PLANT, COLLECTION AND DISTRIBUTION SUPERVISORY CONTROL AND DATA ACQUISITION AUTOMATION SYSTEM (SCADA)

Offeror must submit entire Form completed, dated and signed.

Total all inclusive pricing to provide all labor, parts, supplies, equipment, installation, etc. necessary for the Water Treatment Plant, Collection and Distribution Supervisory Control and Data Acquisition Automation System (SCADA) per specifications: TOTAL COST \$____ WRITTEN: dollars. The Owner reserves the right to accept any portion of the work to be performed at its discretion The undersigned has thoroughly examined the entire Request for Proposals and therefore submits the proposal and schedule of fees and services attached hereto. This offer is firm and irrevocable for sixty (60) days after the time and date set for receipt of proposals. The undersigned Offeror agrees to provide services and products in accordance with the terms and conditions contained in this Request for Proposal and as described in the Offeror's proposal attached hereto; as accepted by the Owner. Prices in the proposal have not knowingly been disclosed with another provider and will not be prior to award. Prices in this proposal have been arrived at independently, without consultation, communication or agreement for the purpose of restricting competition. No attempt has been made nor will be to induce any other person or firm to submit a proposal for the purpose of restricting competition. The individual signing this proposal certifies they are a legal agent of the offeror, authorized to represent the offeror and is legally responsible for the offer with regard to supporting documentation and prices provided. Direct purchases by the City of Grand Junction are tax exempt from Colorado Sales or Use Tax. Tax exempt No. 98-903544. The undersigned certifies that no Federal, State, County or Municipal tax will be added to the above quoted prices. City of Grand Junction payment terms shall be Net 30 days. Prompt payment discount of _____ percent of the net dollar will be offered to the Owner if the invoice is paid within days after the receipt of the invoice. RECEIPT OF ADDENDA: the undersigned Contractor acknowledges receipt of Addenda to the Solicitation, Specifications, and other Contract Documents. State number of Addenda received: It is the responsibility of the Proposer to ensure all Addenda have been received and acknowledged. Company Name – (Typed or Printed) Authorized Agent – (Typed or Printed) Authorized Agent Signature Phone Number

Date

E-mail Address of Agent

Address of Offeror

City, State, and Zip Code

Attachment A

Function List

Telemetry of:

Purdy Mesa Flow meter

Purdy Mesa Turbidimeter

Purdy Mesa pH analyzer

Purdy Mesa Flowline Pressure

Purdy Mesa Remote Valve Flowmeter

Kannah Creek Flow Electromagnetic Flow Meter

Kannah Creek Raw Turbidimeter

Kannah Creek pH Analyzer

Kannah Creek Remote Valve Flowmeter

Reservoir Pump Electromagnetic Flow Meter

Influent Flow Electromagnetic Flow Meter

Influent Flow Turbidimeter

Influent pH Analyzer

Effluent Flow

Effluent Turbidimeter

Effluent pH analyzer

Clearwell Chlorine Analyzer

EPTDS Chlorine analyzer

Effluent Fluoride analyzer

Water Tank Level

City 24" Electromagnetic Flow Meter

OM 24" Electromagnetic Flow Meter

Clearwell Level sensor

Service Waterline Pressure

Ultrasonic Level sensor - Contact Basin

Raw Water Vault Flood sensor

4 - individual filter Electromagnetic Flow Meters

4- individual filter turbidimeters

4- individual filter particle counters

Backwash System HMI

Plant Security System

OSG Building HMI

Solar Power System

Pre and Post chlorine flowmeters

Spyglass Raw Water Flow

Cemetery Raw Water Flowmeter

Reservoir #4 Level Sensor

CL17 Permanganate Analyzer

Online DO analyzer

Natural Gas Generator

Control of:

Purdy Mesa Influent Control Valve

Purdy Mesa Remote Valve

Kannah Creek Influent Control Valve

Kannah Creek Bypass Valve

Kannah Creek Remote Control Valve

Reservoir Pump 40 hp On/Off

Reservoir Pump Valve%

Reservoir 75 hp Pump On/Off

Service Water Pump 1 Control

Service Water Pump 2 Control

PLC Maintaining constant water level in Contact Basin

Flow-Paced Chemical feed system

ACH pump

Polymer pump

Filter aid pump

Sodium Fluorosilicate Feed System

Surface Wash Pump On/Off

Flash Mixer On/Off

Backwash System PLC

4 valves on 4 filters open/close (16 total)

4 modulating effluent valves

8 ultrasonic filter level sensors

2 Blowers

8 isolation Valves - on air scour system

1 air compressor blow off valve open/close

air flow meter

2 backwash pumps

backwash flow Electromagnetic Flow Meter

Plant Alarm Panel

Auto-dialer system

PID loop for chlorine dosing (4 chlorination pumps 2-pre/ 2 post)

8 -Sample Pumps

Gunnison River Pump station

Include for Future Addition of:

Several Distribution System Chlorine Analyzers

Remote Monitoring of Mantey Heights

Flowmeter

? Gate Security system

Interface with Kannah Creek SCADA system

Interface with Ridges Irrigation Pump station

Chemical Feed Flowmeters

Coagulant Charge Analyzer / Zeta Potential

Meter

Reservoir #3 & 4 Bypass Valve Control Raw Water Intake Structure telemetry Watershed Reservoir Telemetry & Valve control Monitoring of PRV stations on Flowline Asset Management System

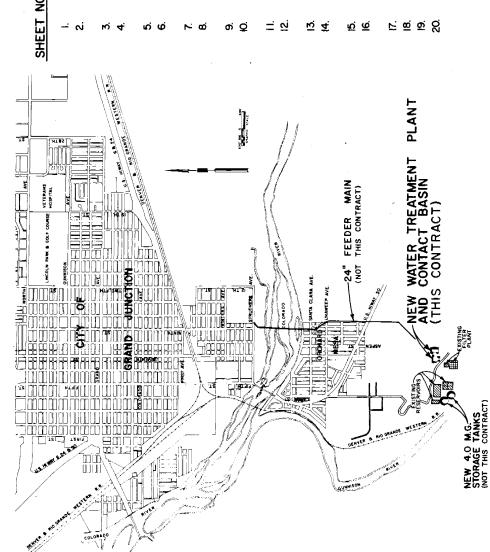
Data Processing / Storage

calculate backwash gpm/sf

Capture 4-hour turbidity/chlorine readings for compliance
Flow totalizers
high/low events (turb, chlorine, flow, etc.)
Calculate real-time CT
Headloss calculation
Accept Operator inputs for daily labs & chemical usage
Track chemical inventory
Track Filter run times
Track filter loading rate

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		MISCELLANEOUS	
اس	PLAN	CONTROL,	
O. TITLE	AND SITE	GRADING 8	
	GENERAL - LAYOUT AND SITE PLAN	GENERAL - PLANT GRADING & CONTROL, MISCELLANEOUS	C TAFFE
	9	٠	

JCTURAL - MECHANICAL - SECTION 7/22 AND DETAILS

JCTURAL - MECHANICAL - SECTION 6/21 AND DETAILS

METERING & CONTROLS - HYDRAULIC PROFILE, PLANT FLOW AND CONTROL SCHEMATICS GENERAL - PLANT YARD PIPING - PLAN

ARCHITECTURAL - LANDSCAPING PLAN

ARCHITECTURAL - GROUND FLOOR PLAN AND WALL

ARCHITECTURAL - OPERATING FLOOR PLAN

ARCHITECTURAL - STORAGE FLOOR PLAN AND STAIR

ARCHITECTURAL - BUILDING ELEVATIONS AND DETAILS ARCHITECTURAL - BUILDING ELEVATIONS AND WINDOW

ARCHITECTURAL - BUILDING SECTIONS AND DETAILS ARCHITECTURAL - ROOM FINISH, DOOR AND OPENING STRUCTURAL - MECHANICAL - FOUNDATION PLAN <u>∹</u> ≃

STRUCTURAL - MECHANICAL - GROUND FLOOR AND PIPE GALLERY, PLANS AND DETAILS STRUCTURAL - MECHANICAL - OPERATING FLOOR PLAN STRUCTURAL - MECHANICAL - STORAGE FLOOR PLAN, <u>₹</u>

STRUCTURAL - MECHANICAL - SECTION 1/17 AND DETAILS STRUCTURAL - MECHANICAL - SECTION 2/18 AND DETAILS STRUCTURAL - MECHANICAL - SECTION 3/19 AND DETAILS STRUCTURAL - MECHANICAL - SECTION 5/20 AND DETAILS MISCELLANEOUS DETAILS F. 80 € Ø.

MECHANICAL - HEATING AND VENTILATING - GROUND AND OPERATING FLOOR PLANS ELECTRICAL - LIGHTING AND POWER PLAN - STORAGE FLOOR, MOTOR CONTROL CENTER, ELECTRICAL ONE LINE DIAGRAM STRUCTURAL - BEAM FRAMING DETAILS & SCHEDULES STRUCTURAL - MECHANICAL - MISCELLANEOUS DETAILS STRUCTURAL - COLUMN SCHEDULE AND STRUCTURAL ELECTRICAL - LIGHTING AND POWER - GROUND AND OPERATING FLOOR PLANS
MECHANICAL - PLUMBING - GROUND AND OPERATING STRUCTURAL - ROOF FRAMING PLANS AND DETAILS METERING & CONTROLS - MAIN CONTROL PANEL ELEVATIONS, SECTIONS AND SCHEDULES MECHANICAL - EQUIPMENT PIPING SCHEMATICS MECHANICAL - EQUIPMENT PIPING SCHEMATICS BASINS - PLAN AND DETAILS FLOOR PLANS CONTACT 33. ¥ 改 25 改 8 2 8 8 8 32. ᄧ

FLASH MIXING BASINS - PLANS, SECTIONS & DETAILS RAW WATER CONTROL VAULT - PLANS, SECTIONS AND DETAILS MECHANICAL - PLUMBING, HEATING AND VENTILATING -STORAGE FLOOR PLAN RAW WATER PUMPING STATION - RAW WATER FLOW METER VAULT - PLANS, SECTIONS AND DETAILS BASINS - SECTIONS AND DETAILS CONTACT 35. 36. 37.

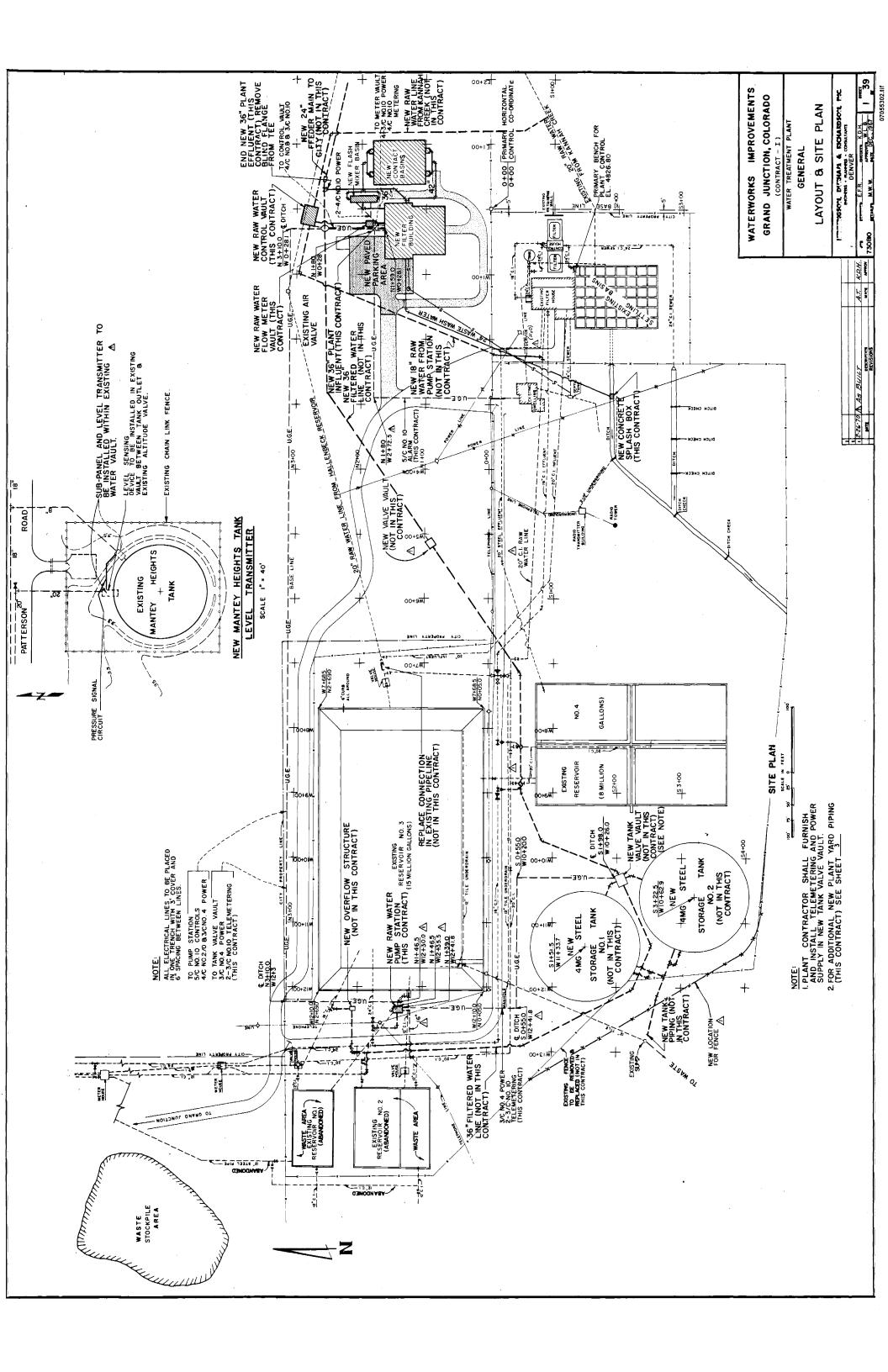
FILED WITH CITY OF GRAND JUNCTION, COLORADO - DECEMBER 20, 1967

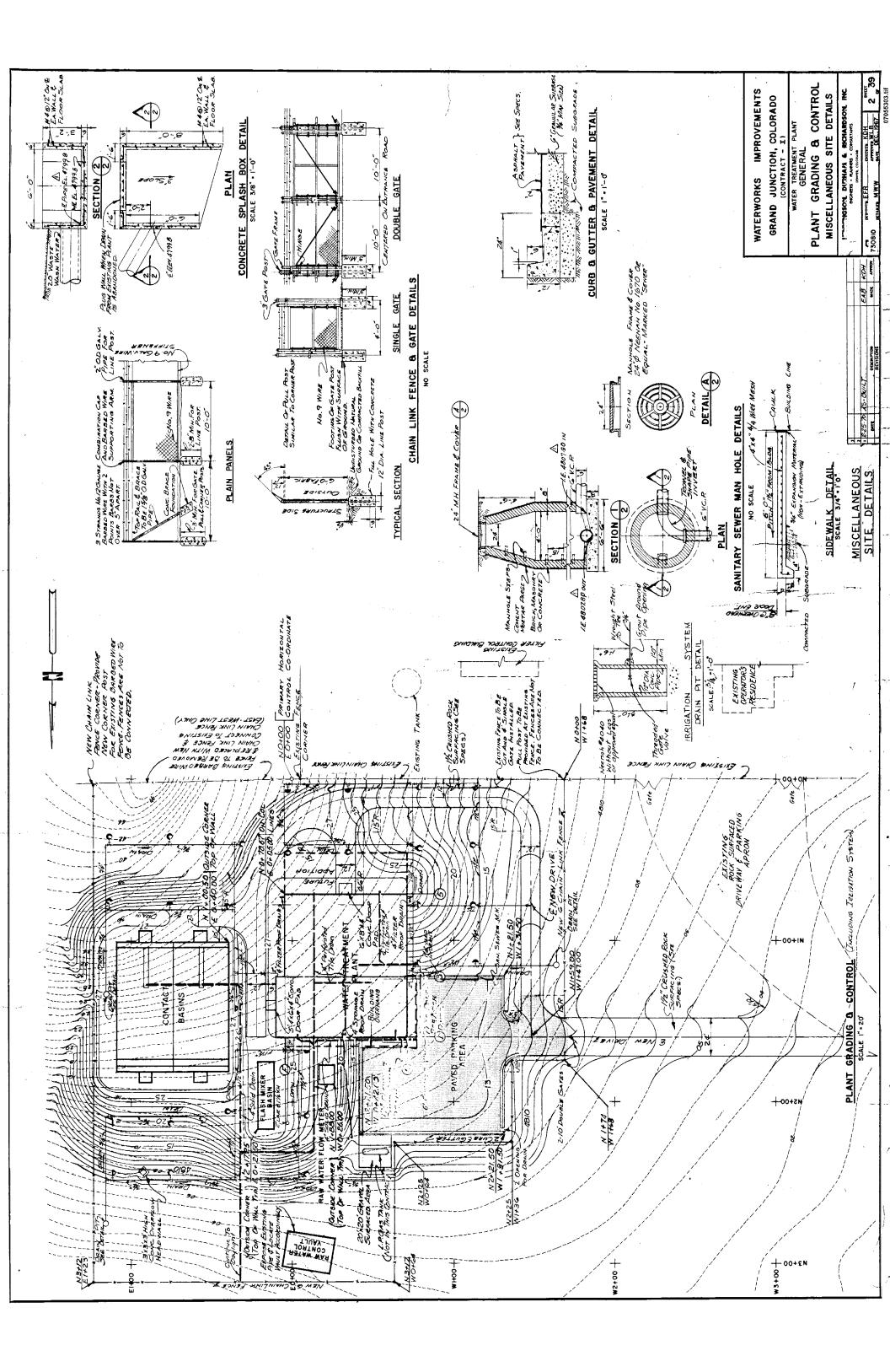
ININGSON, DURHAM & RICHARDSON ENGINEERS • PLANNERS • CONSULTANTS

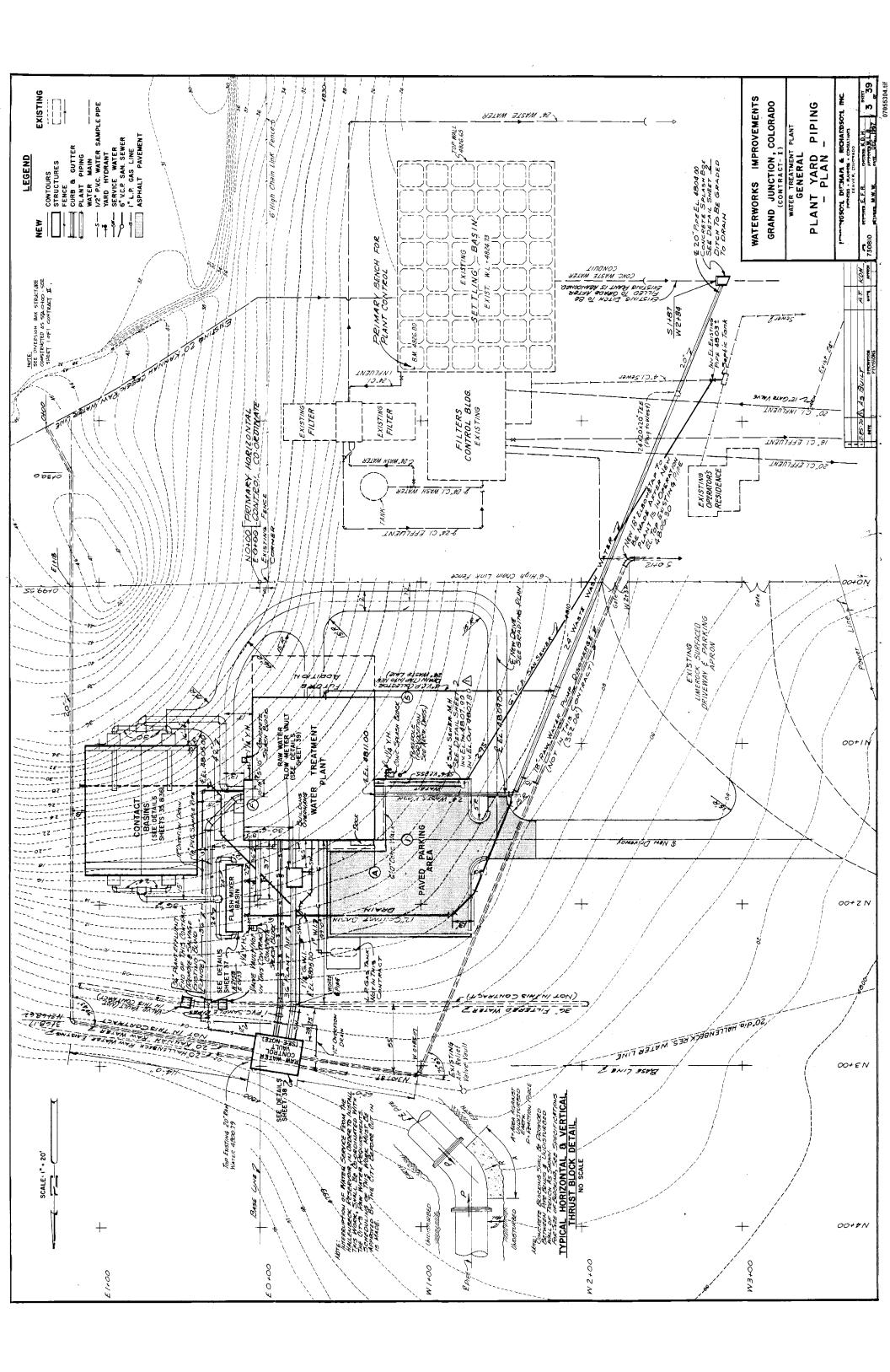
VICINITY MAP

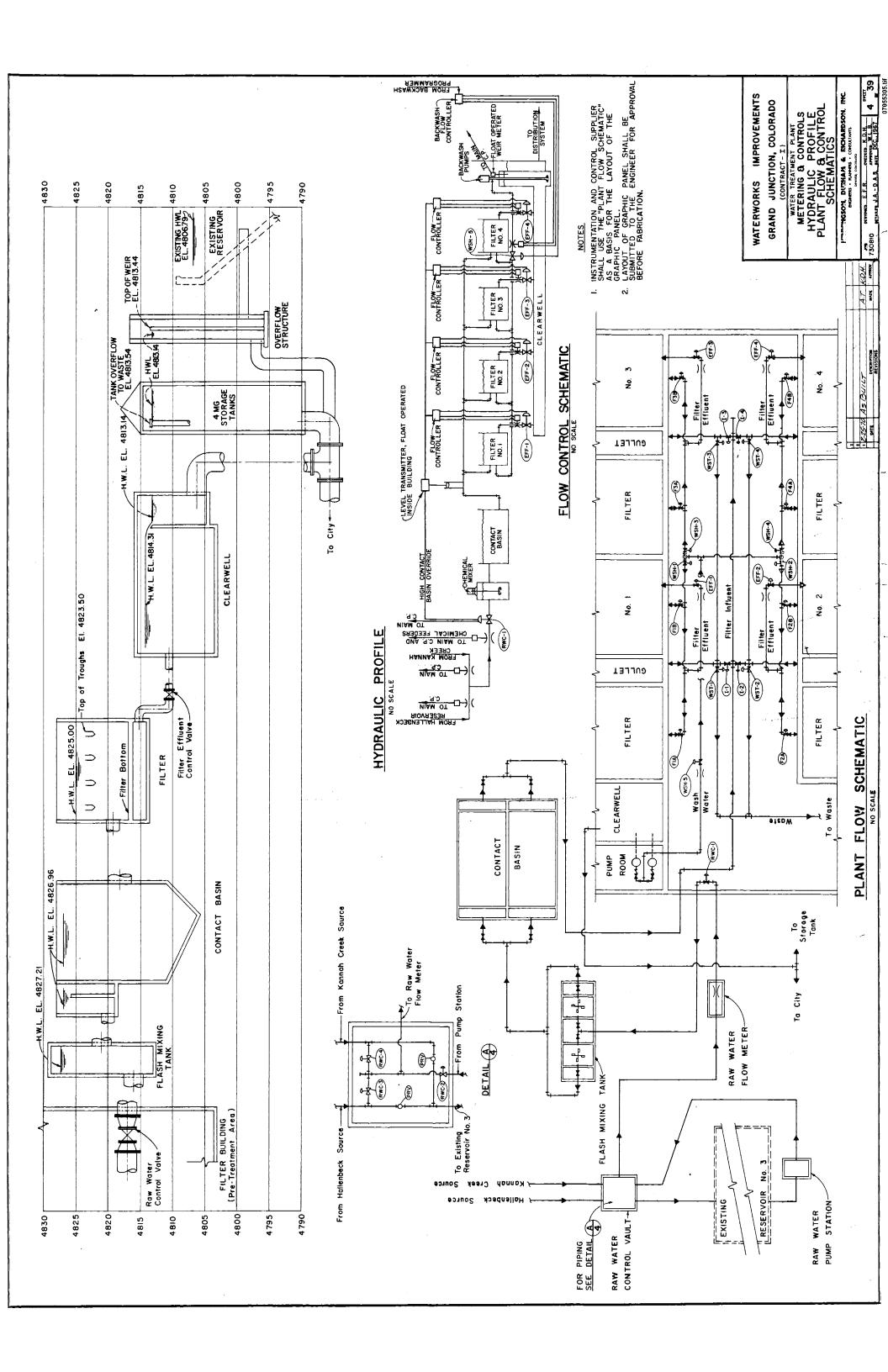
DENVER

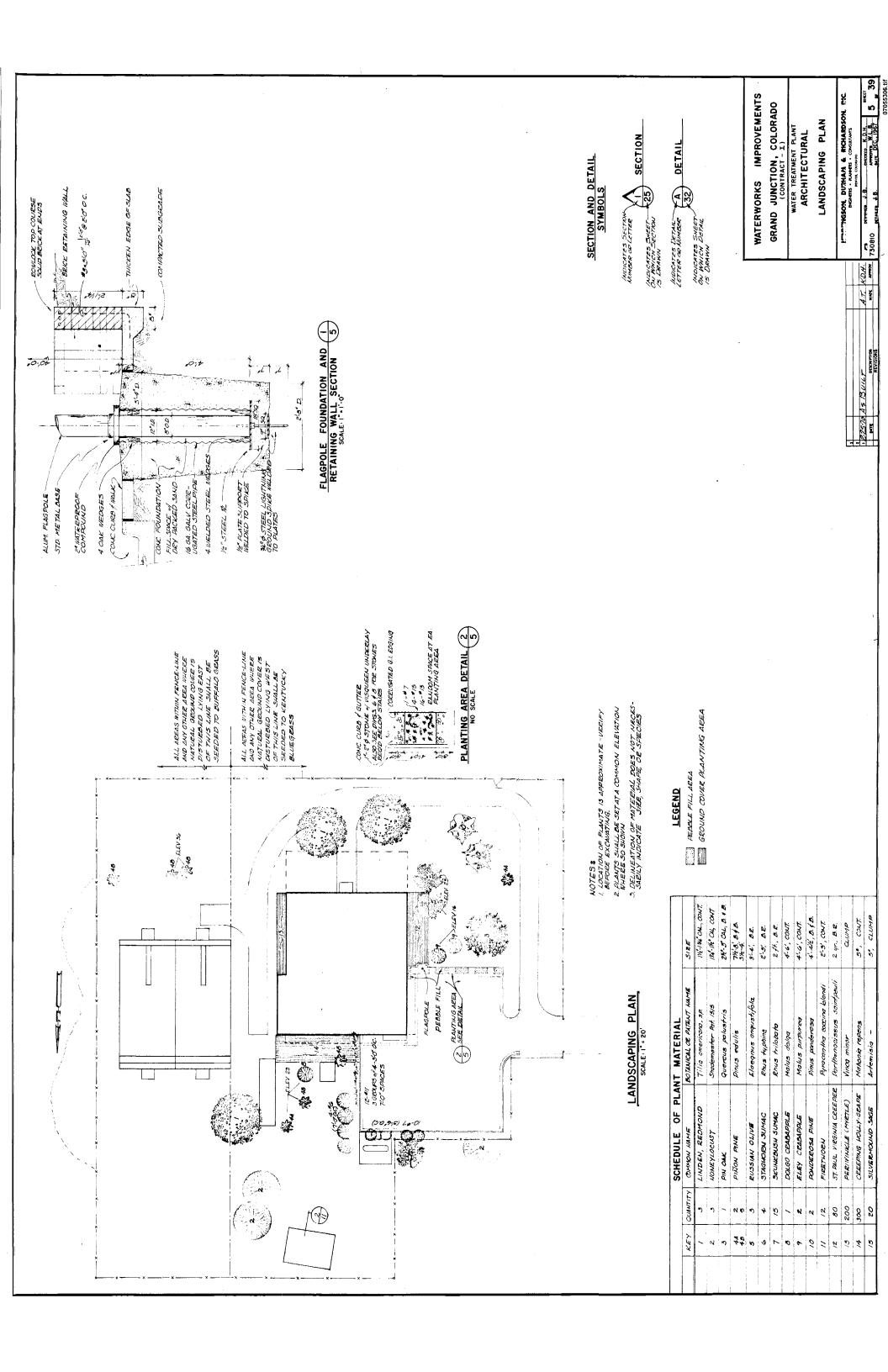


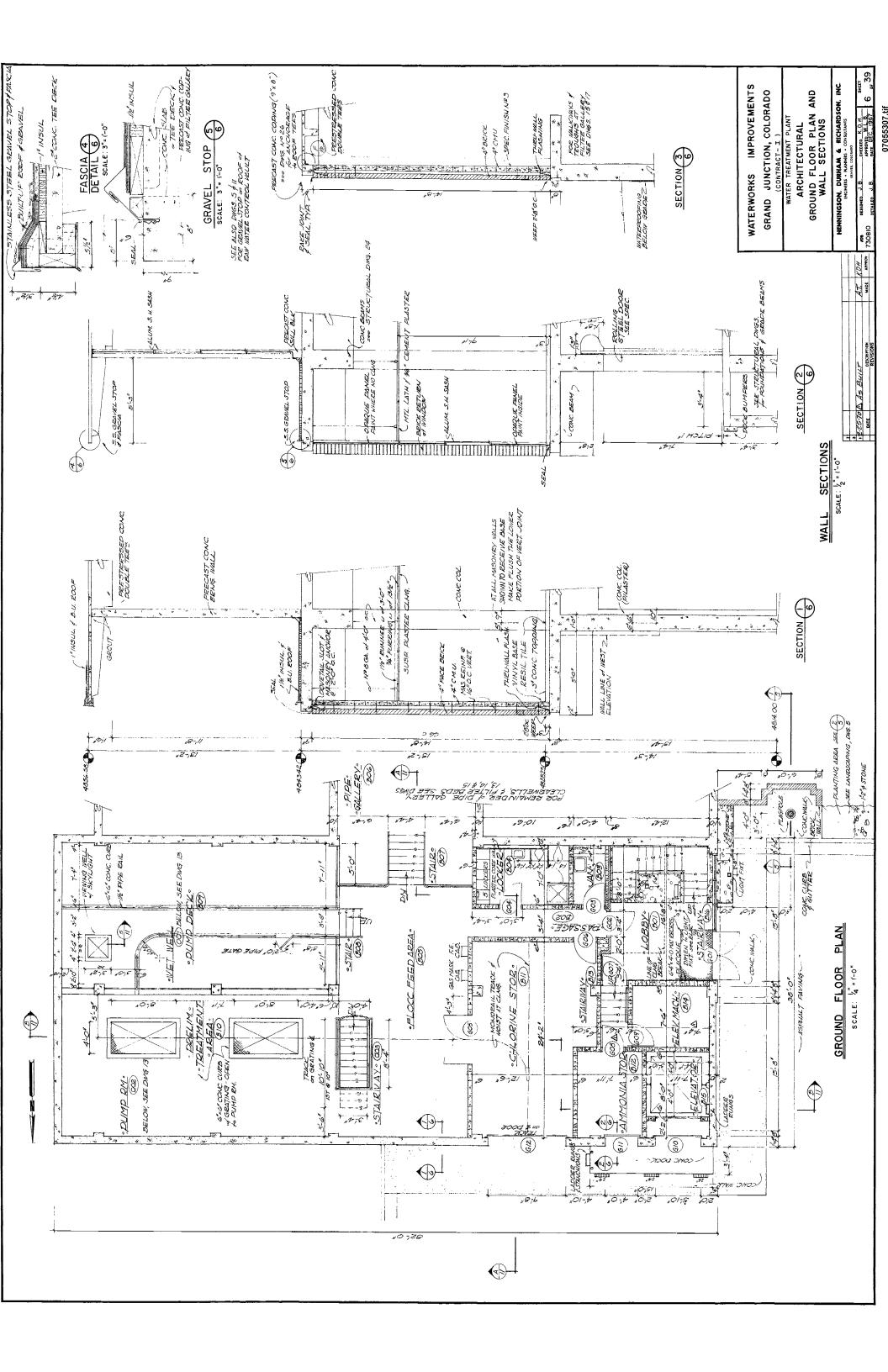


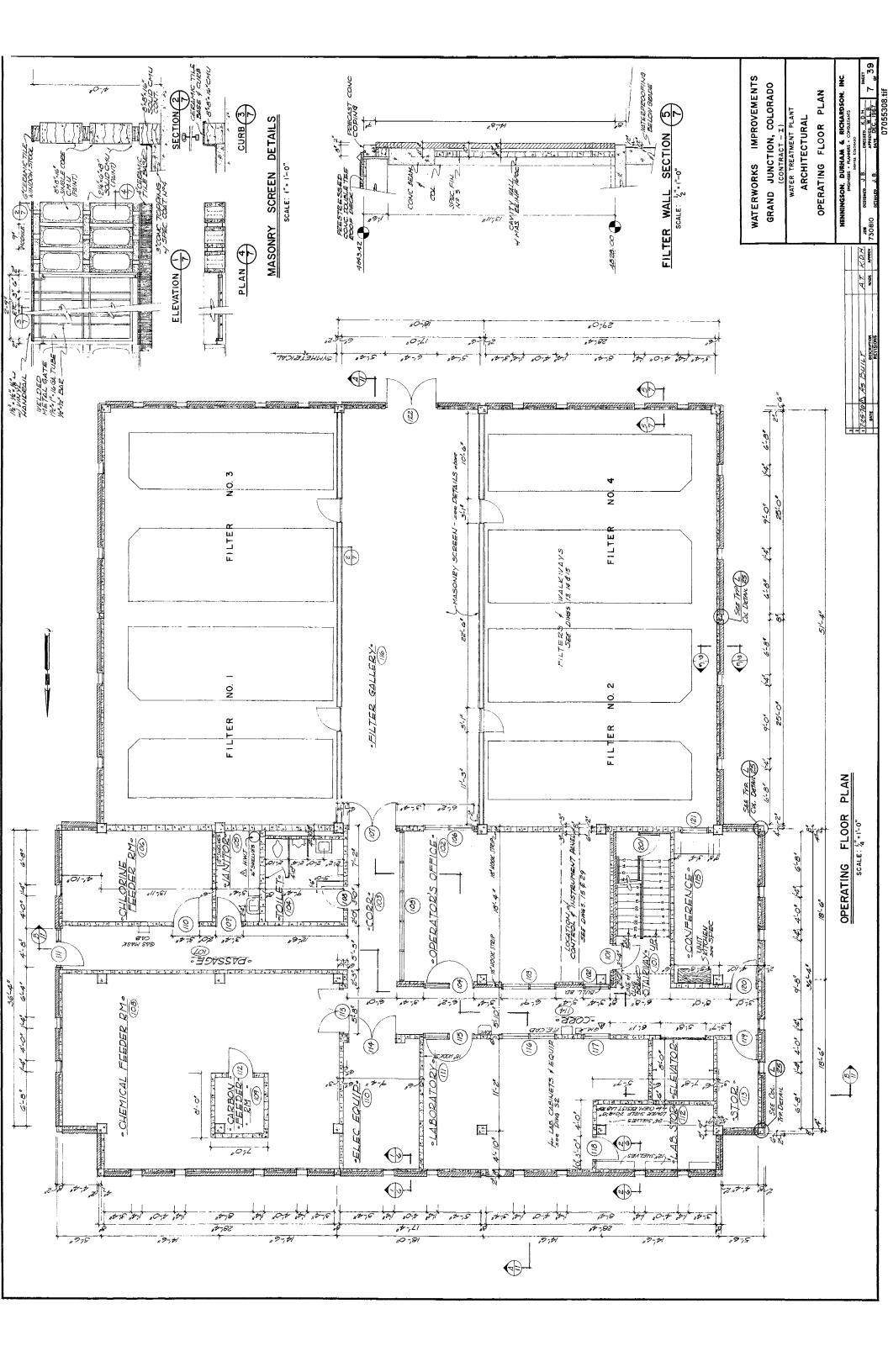


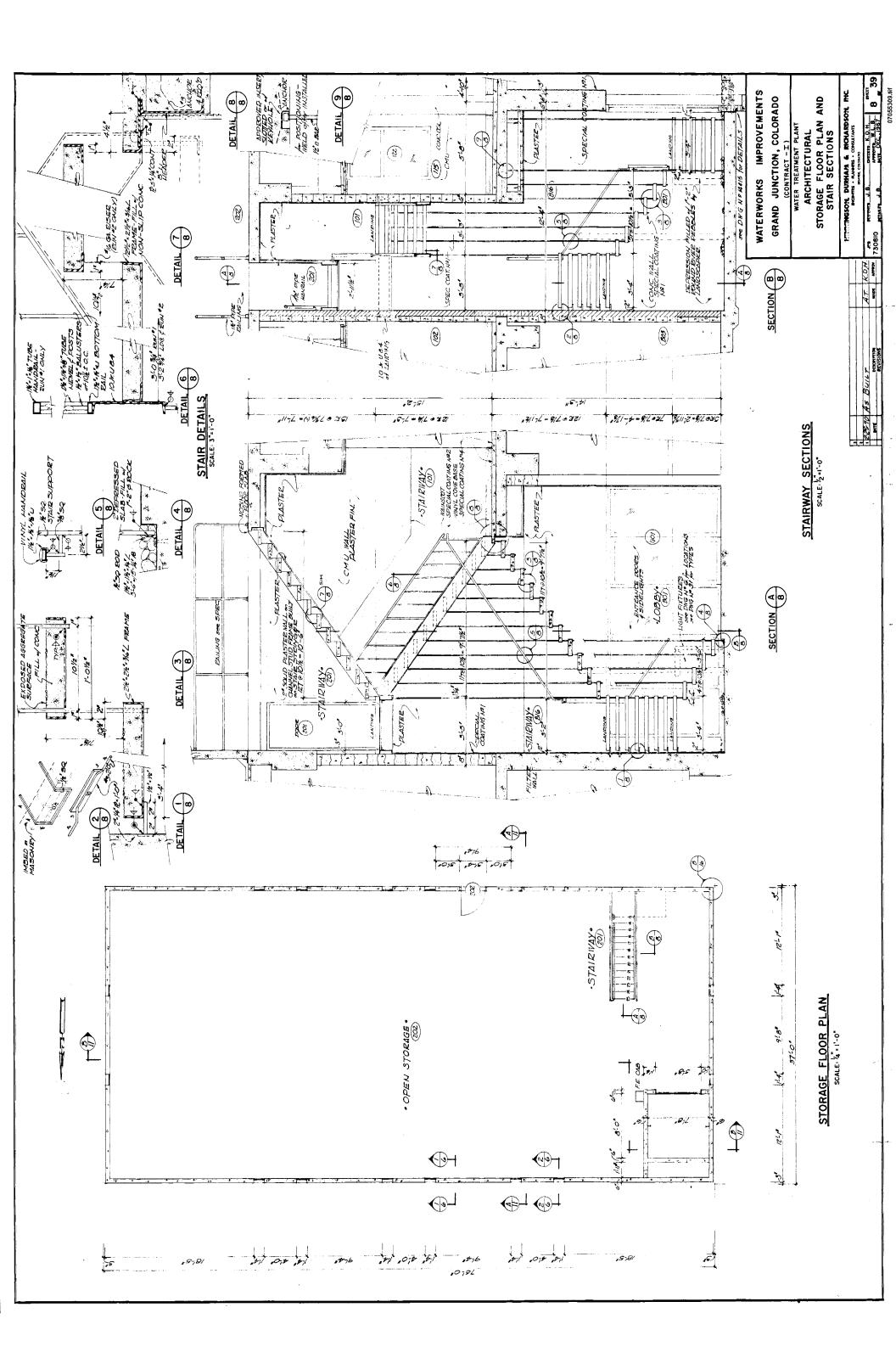


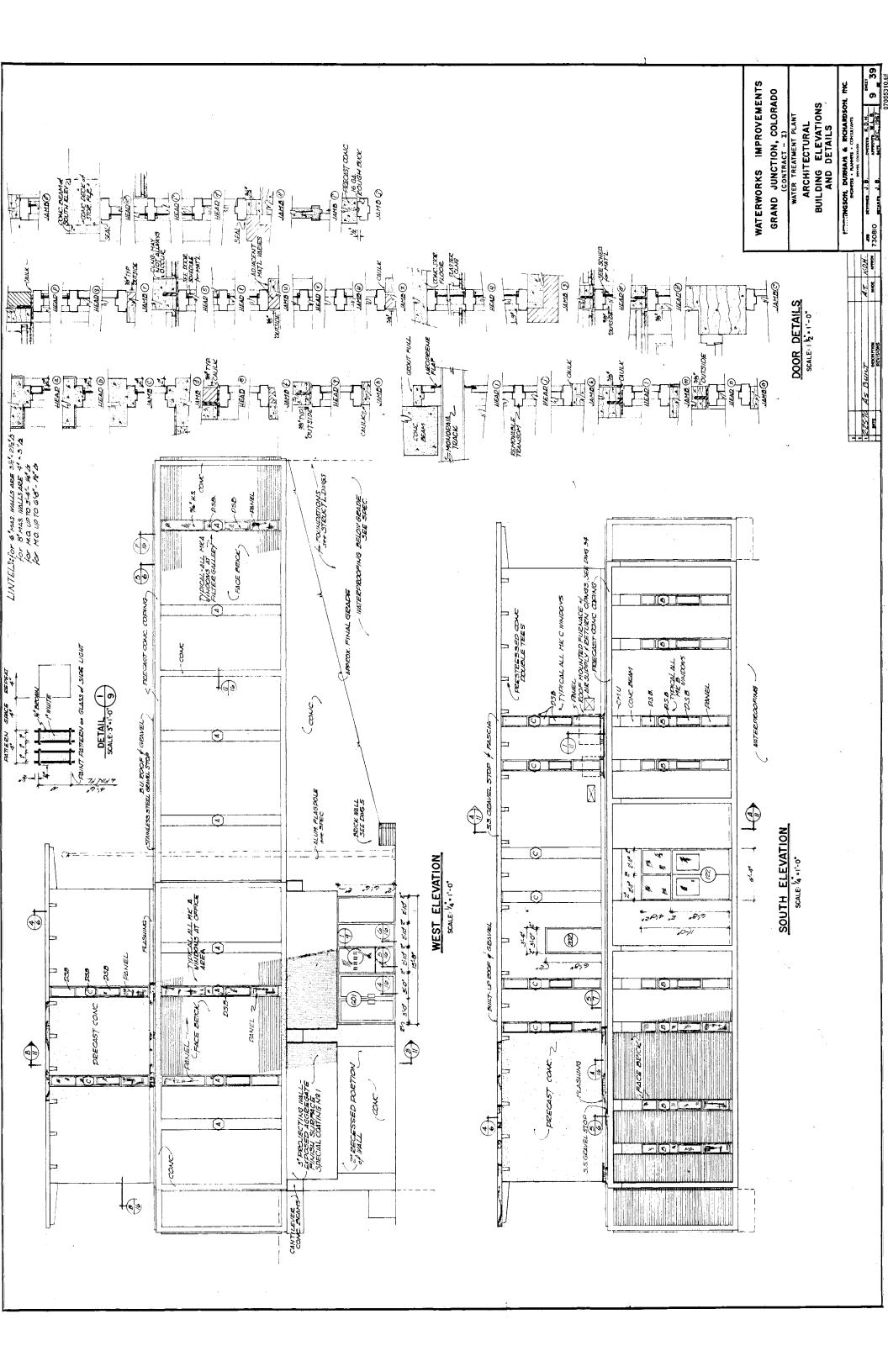


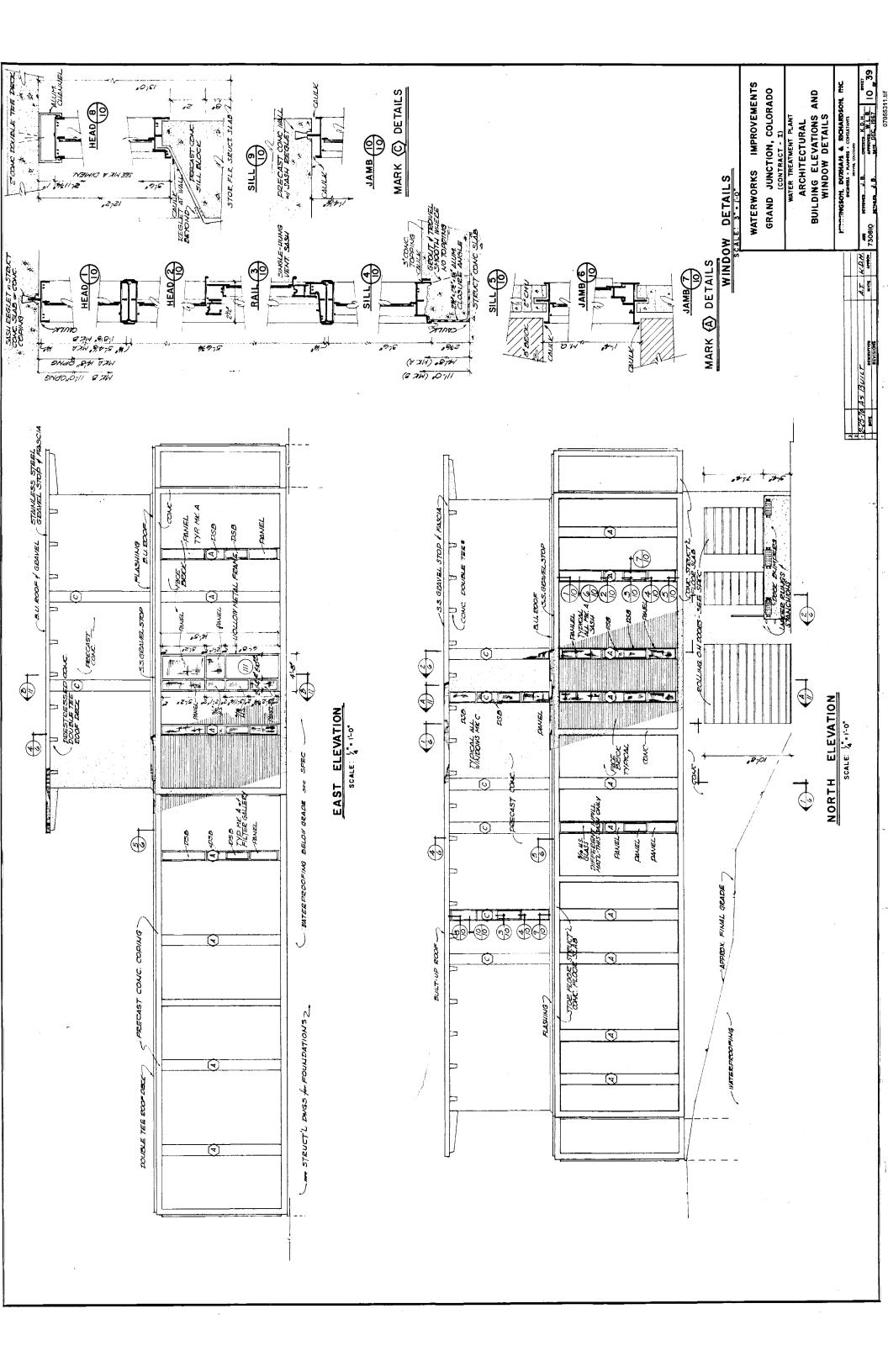


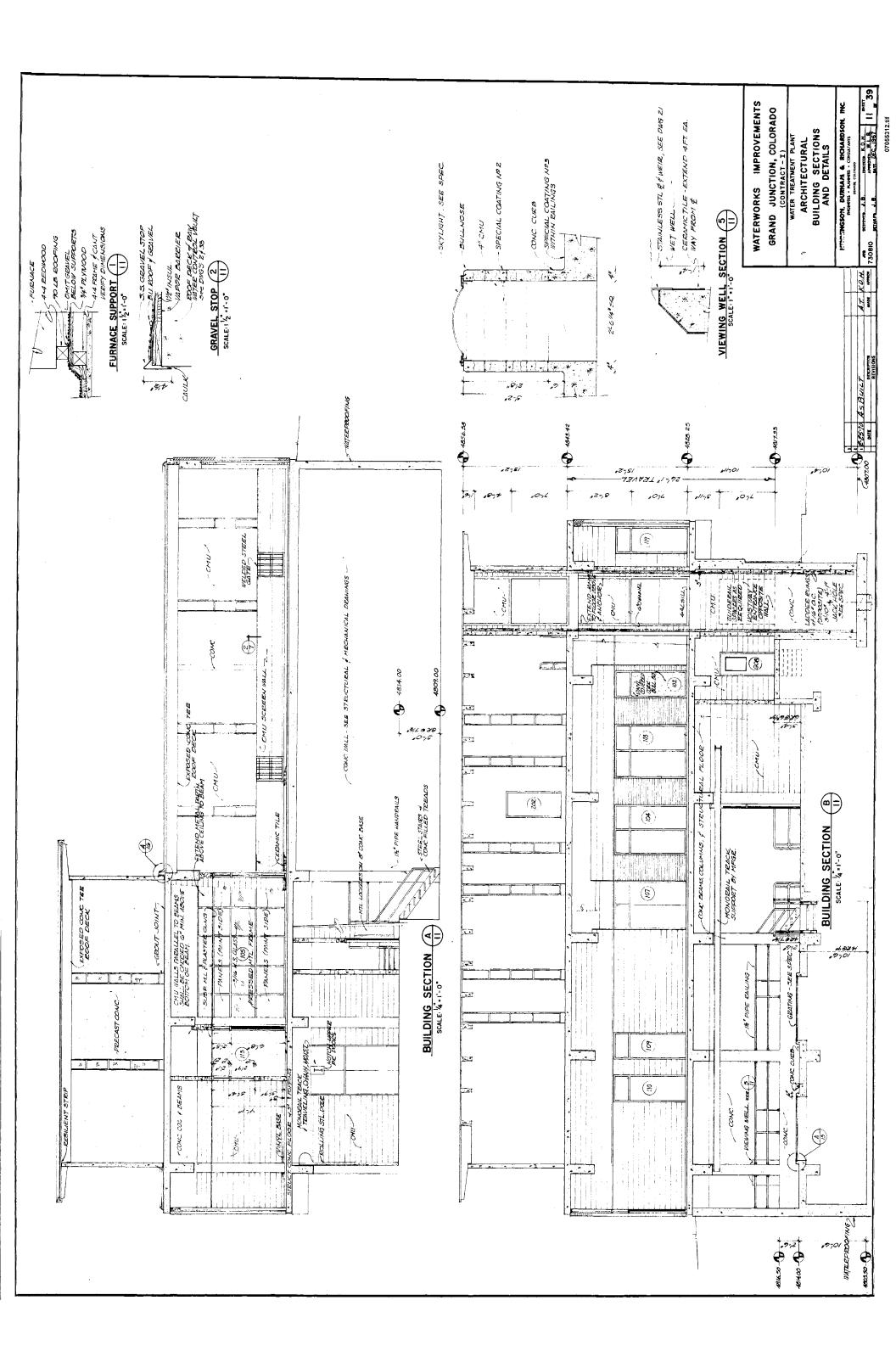


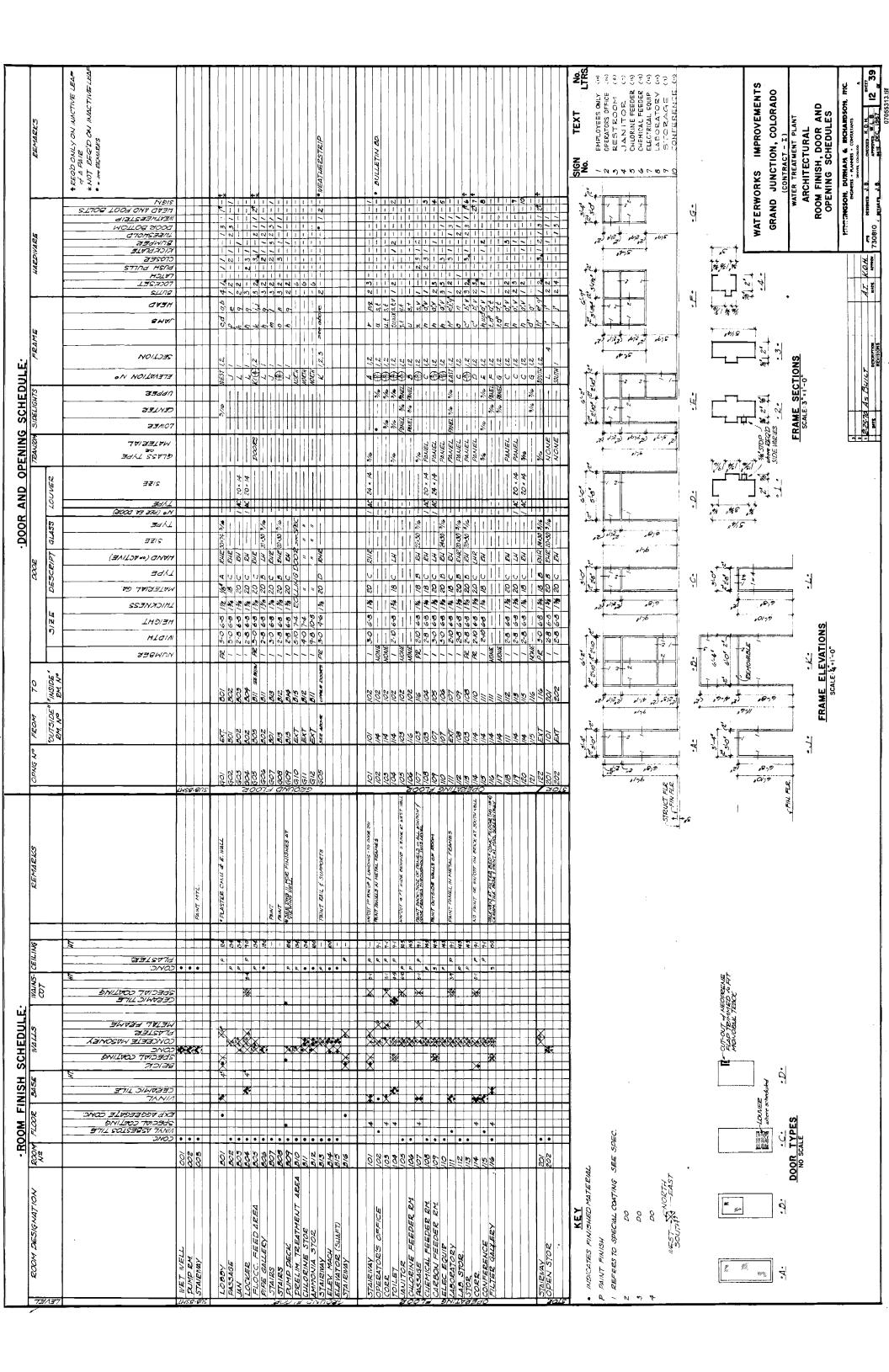


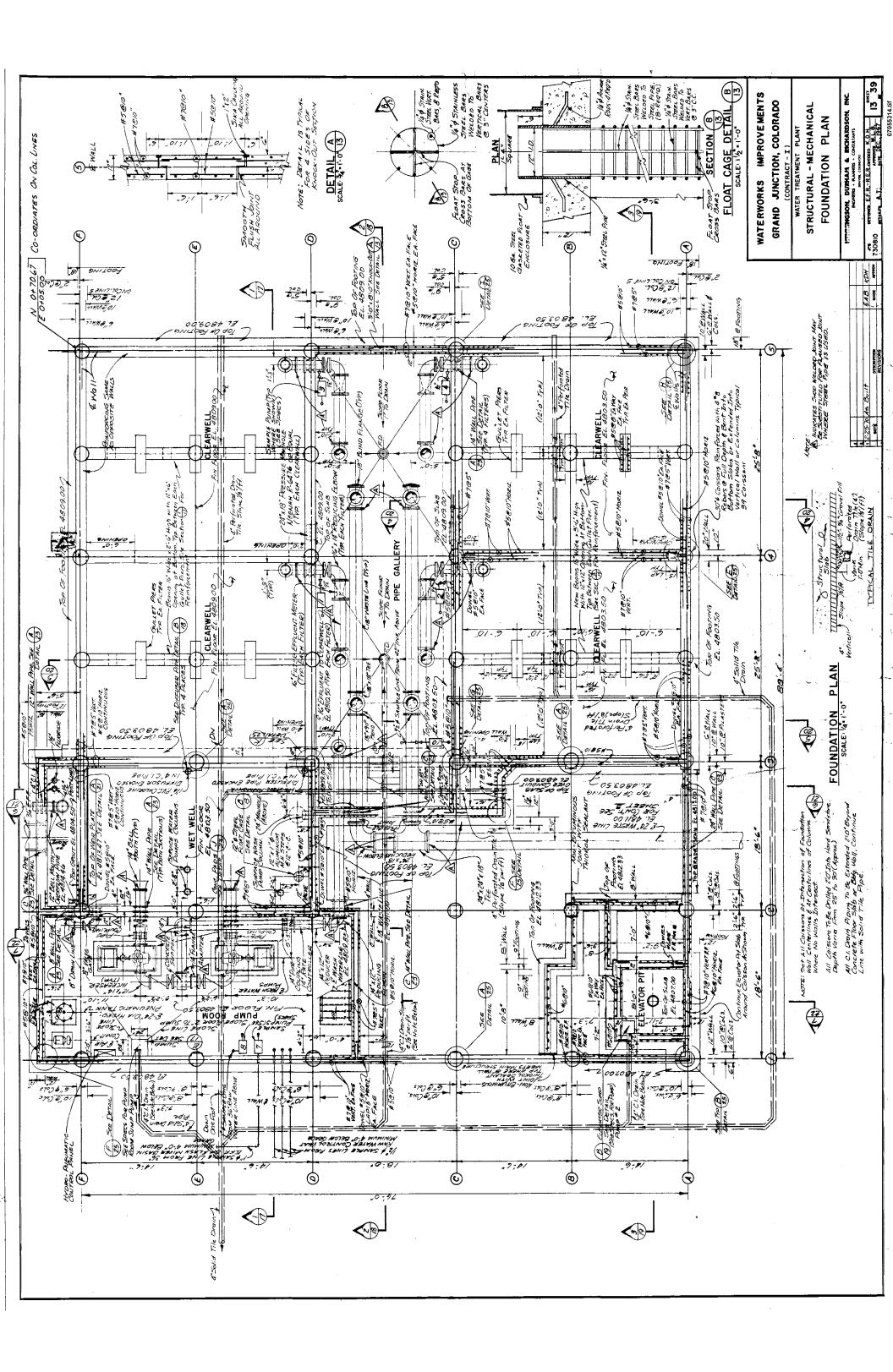


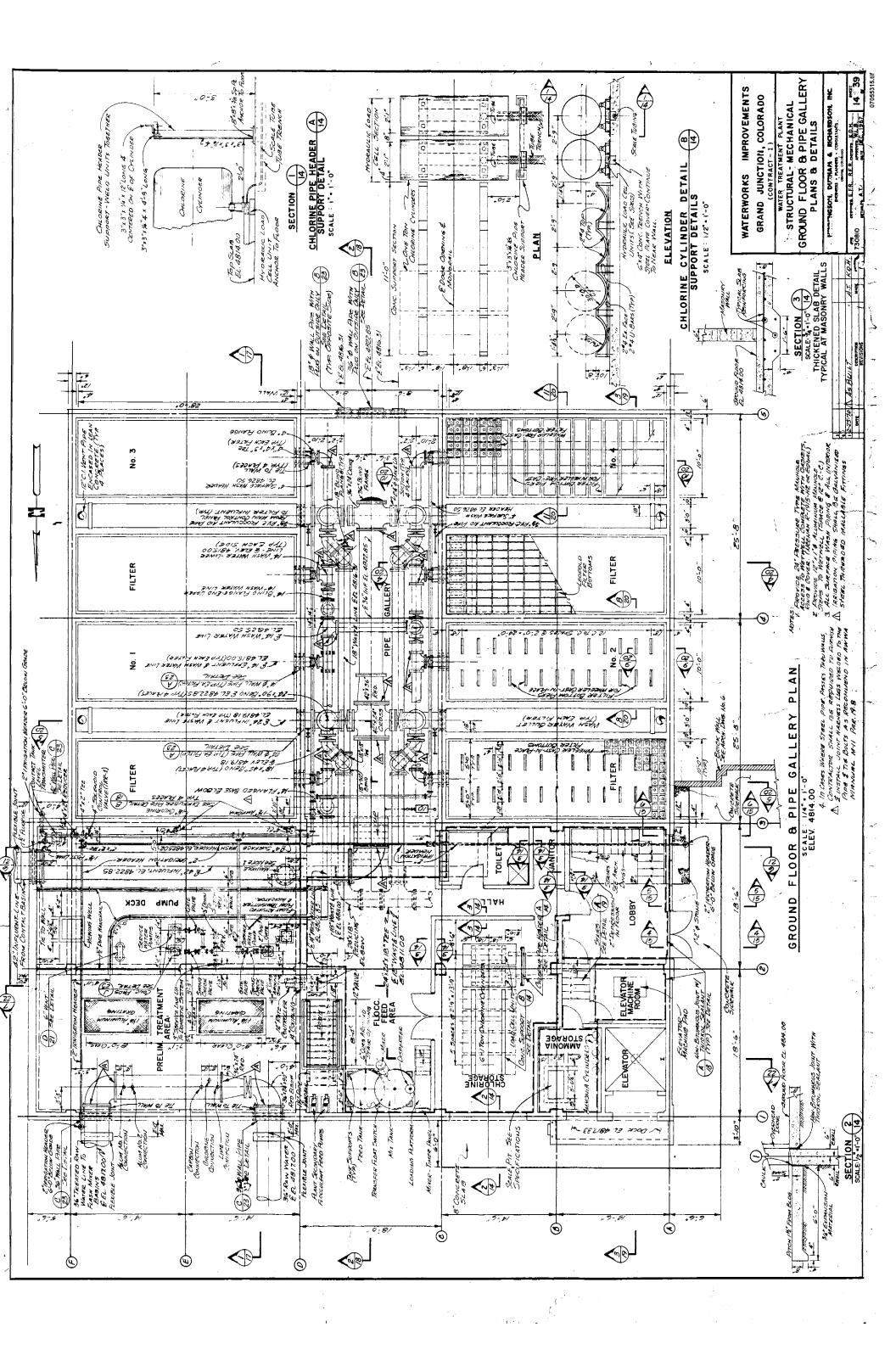


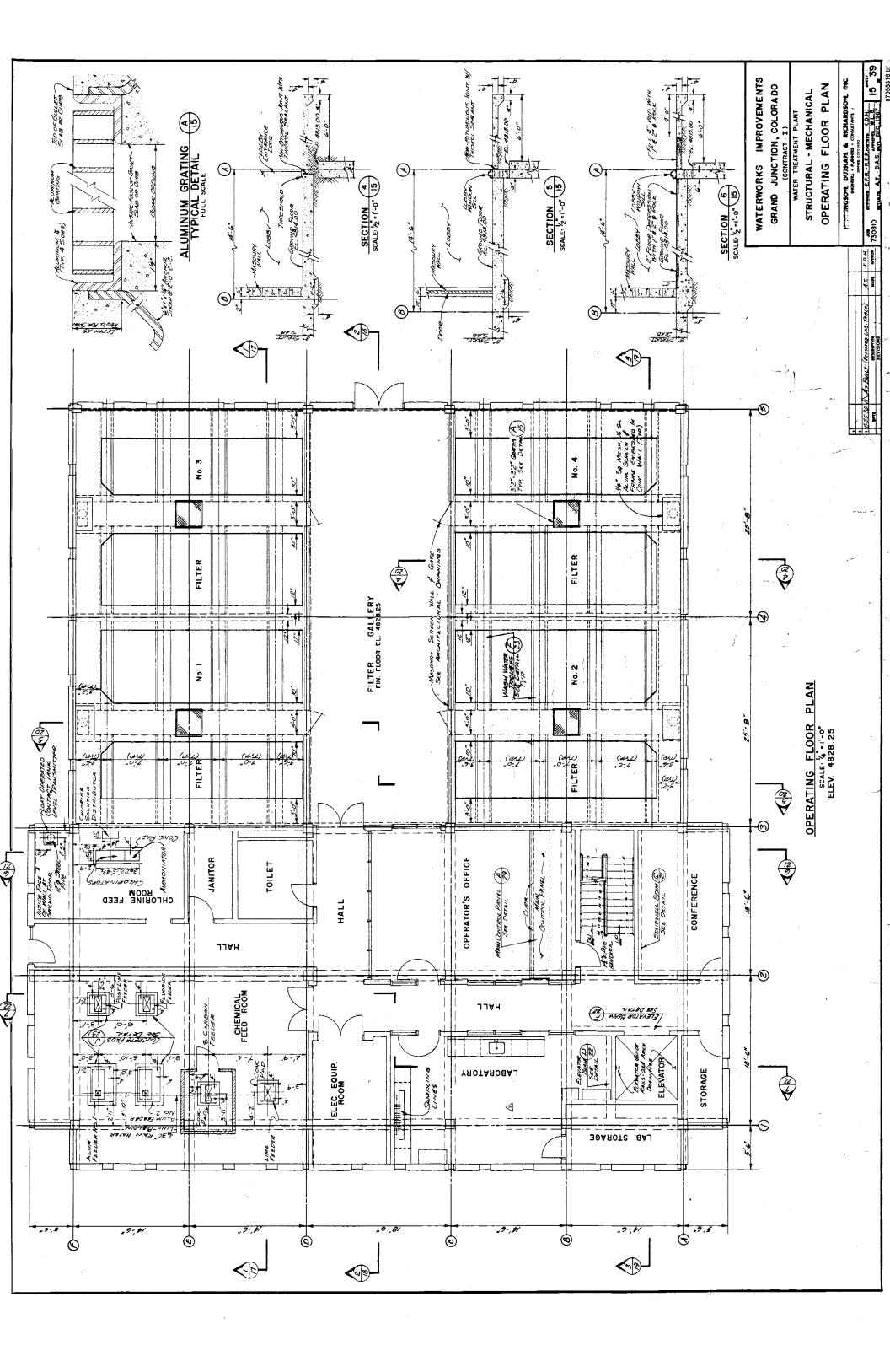


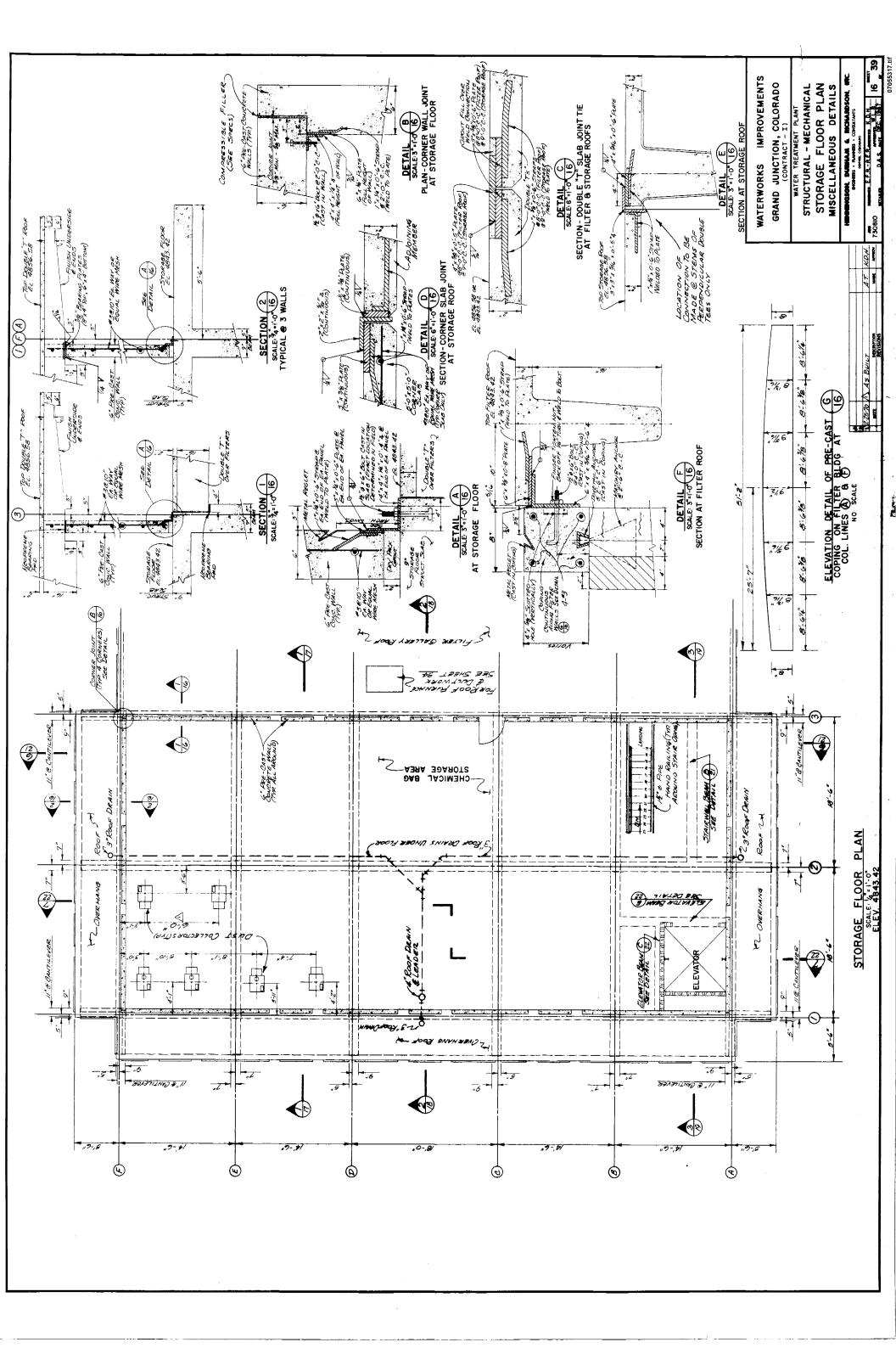


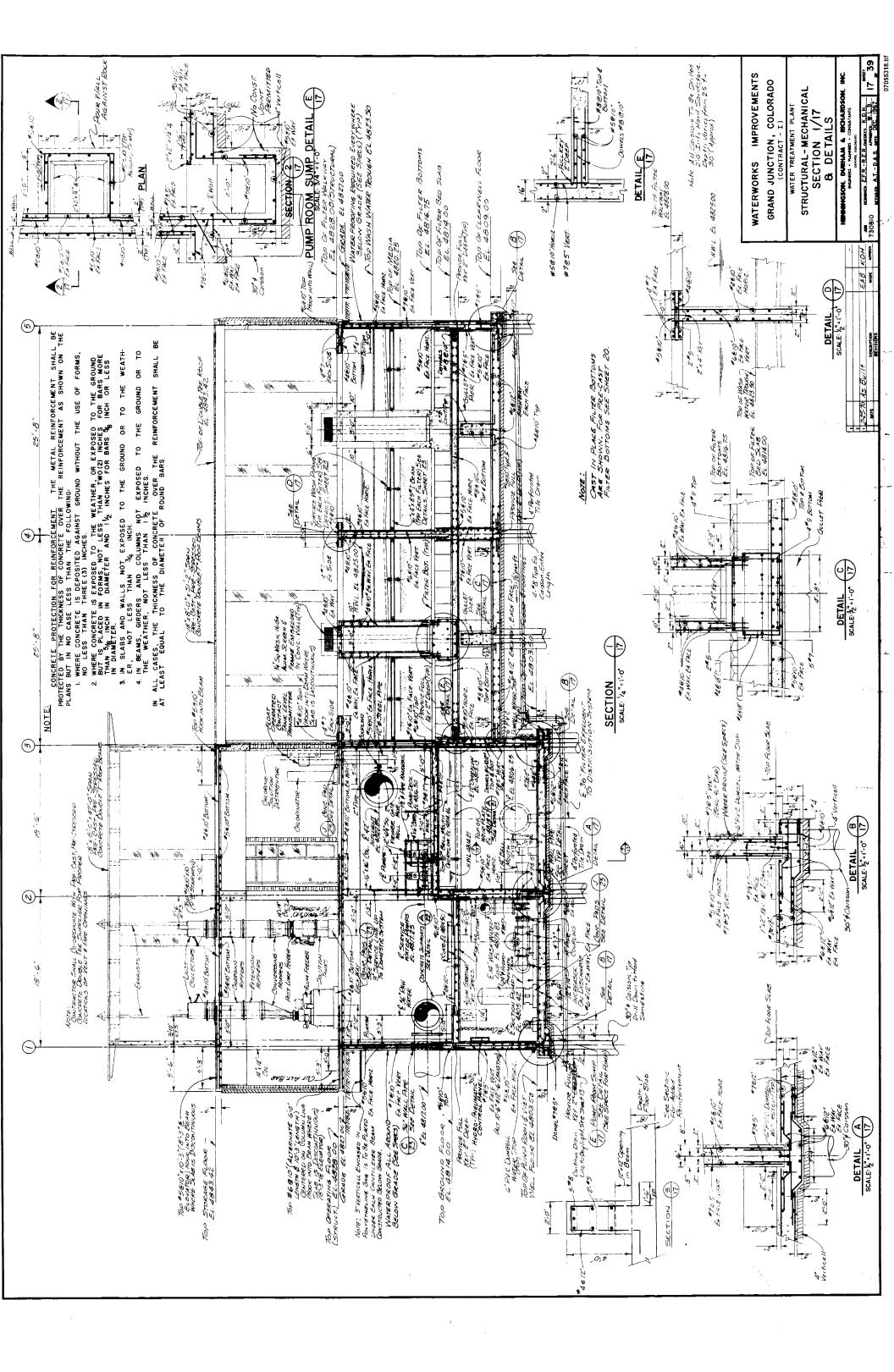


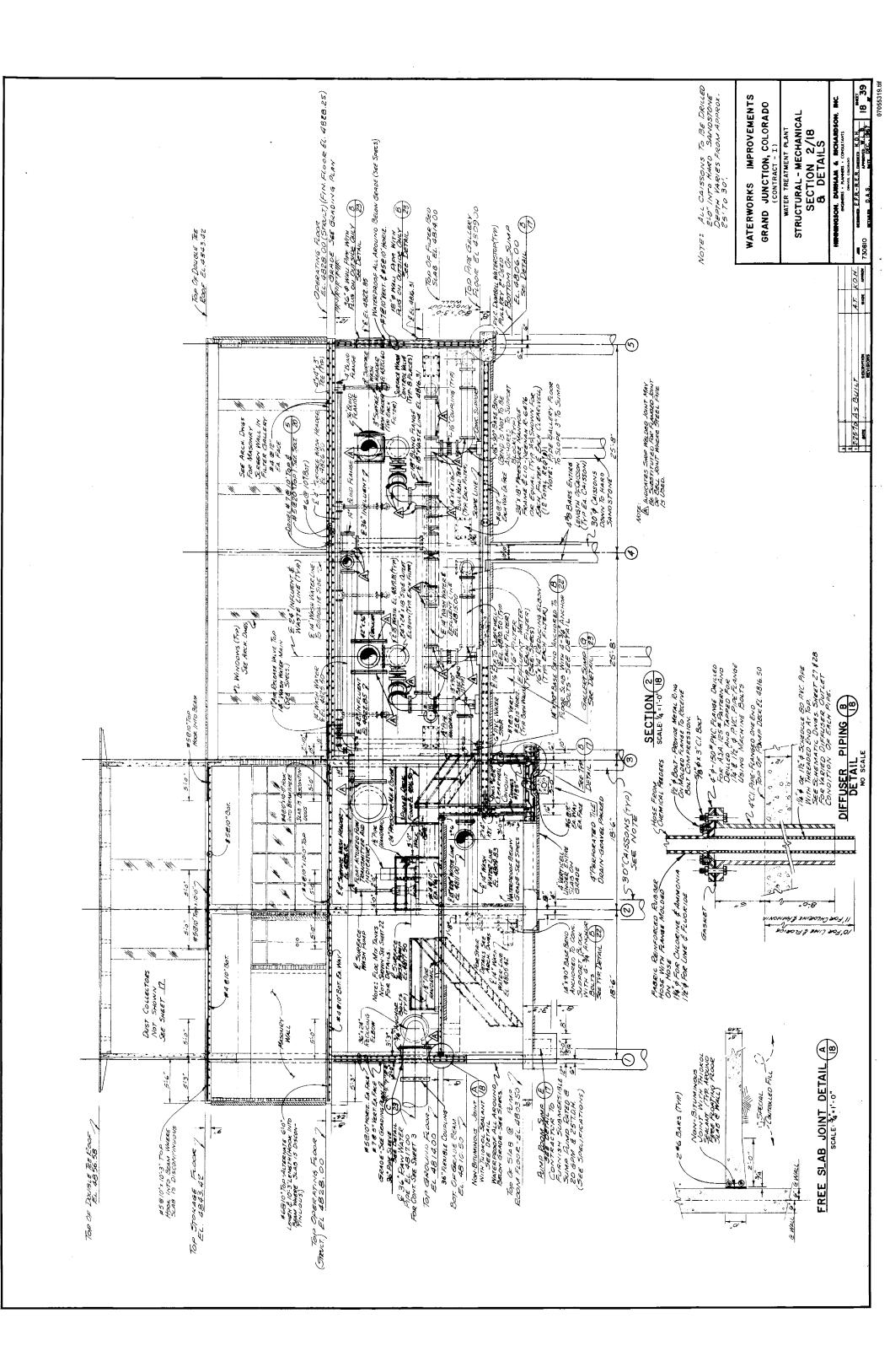


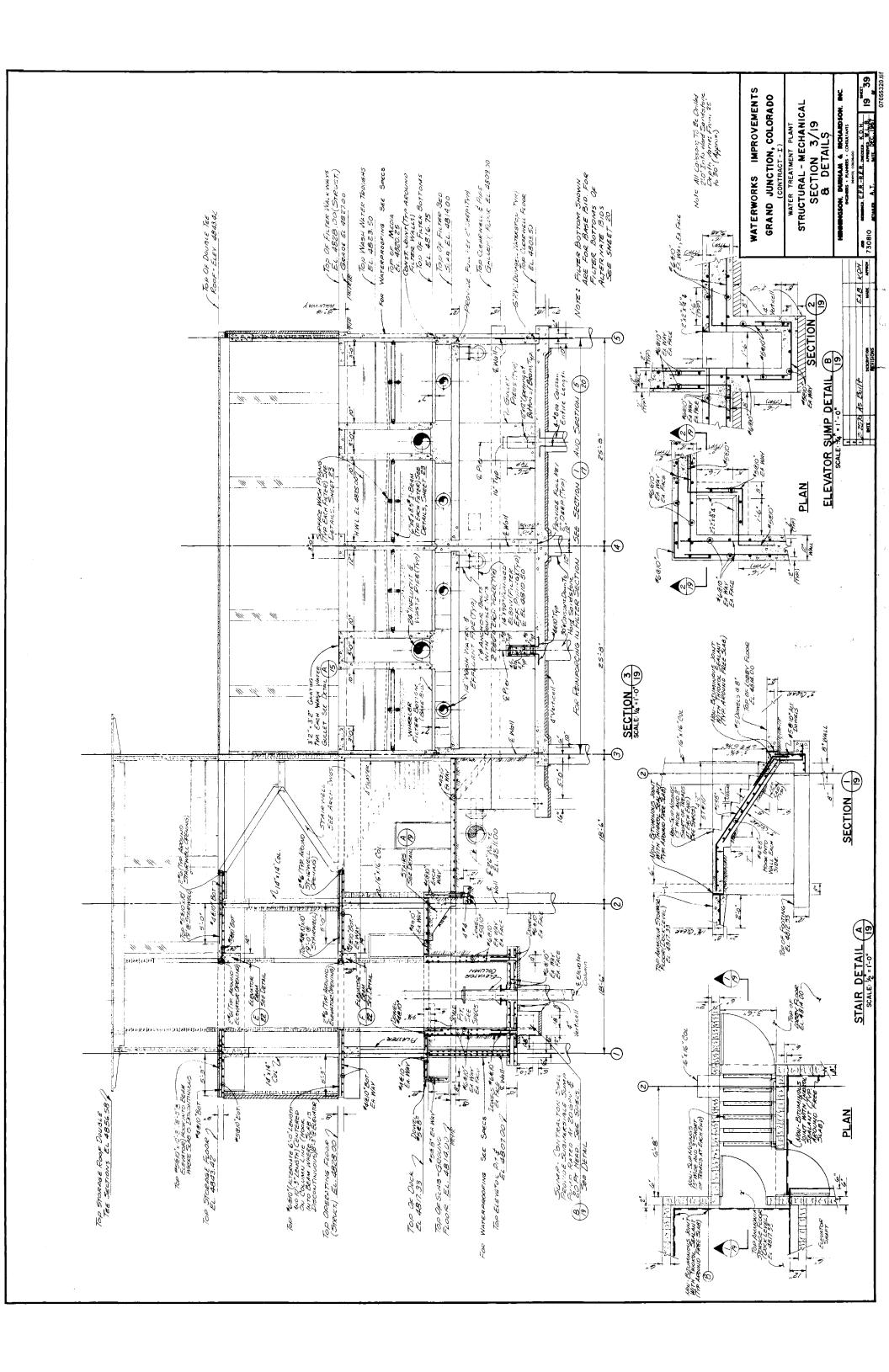


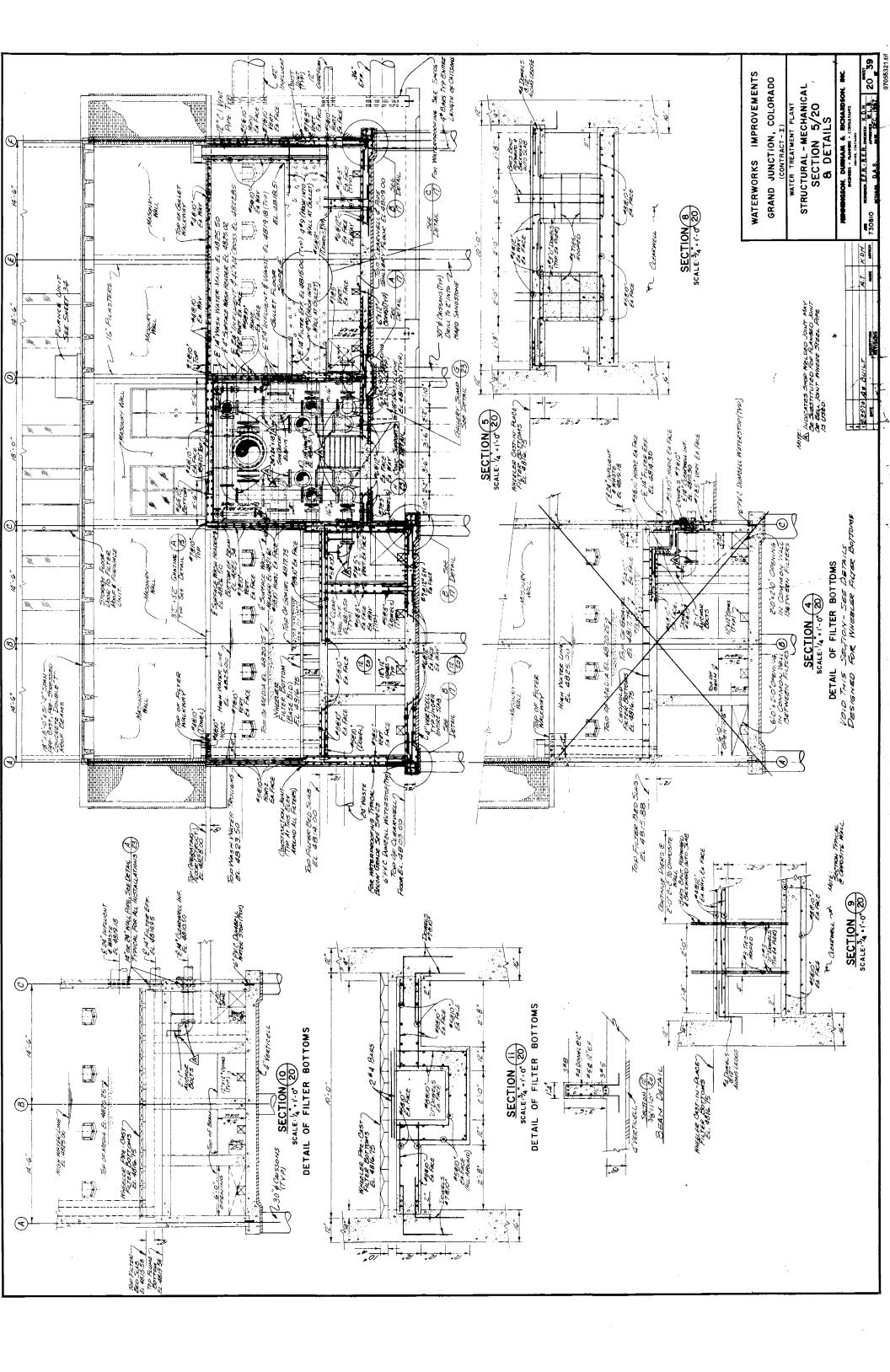


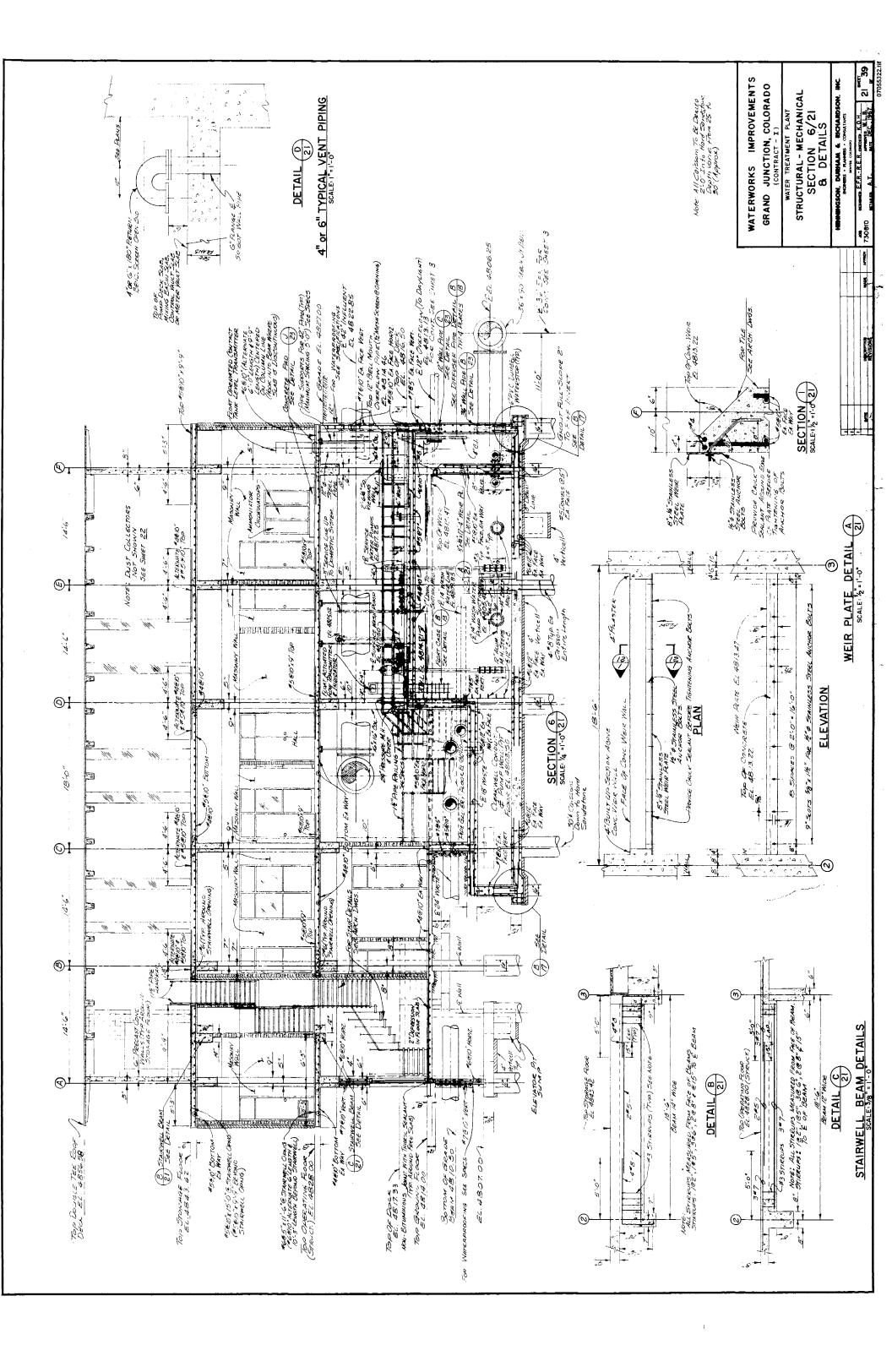


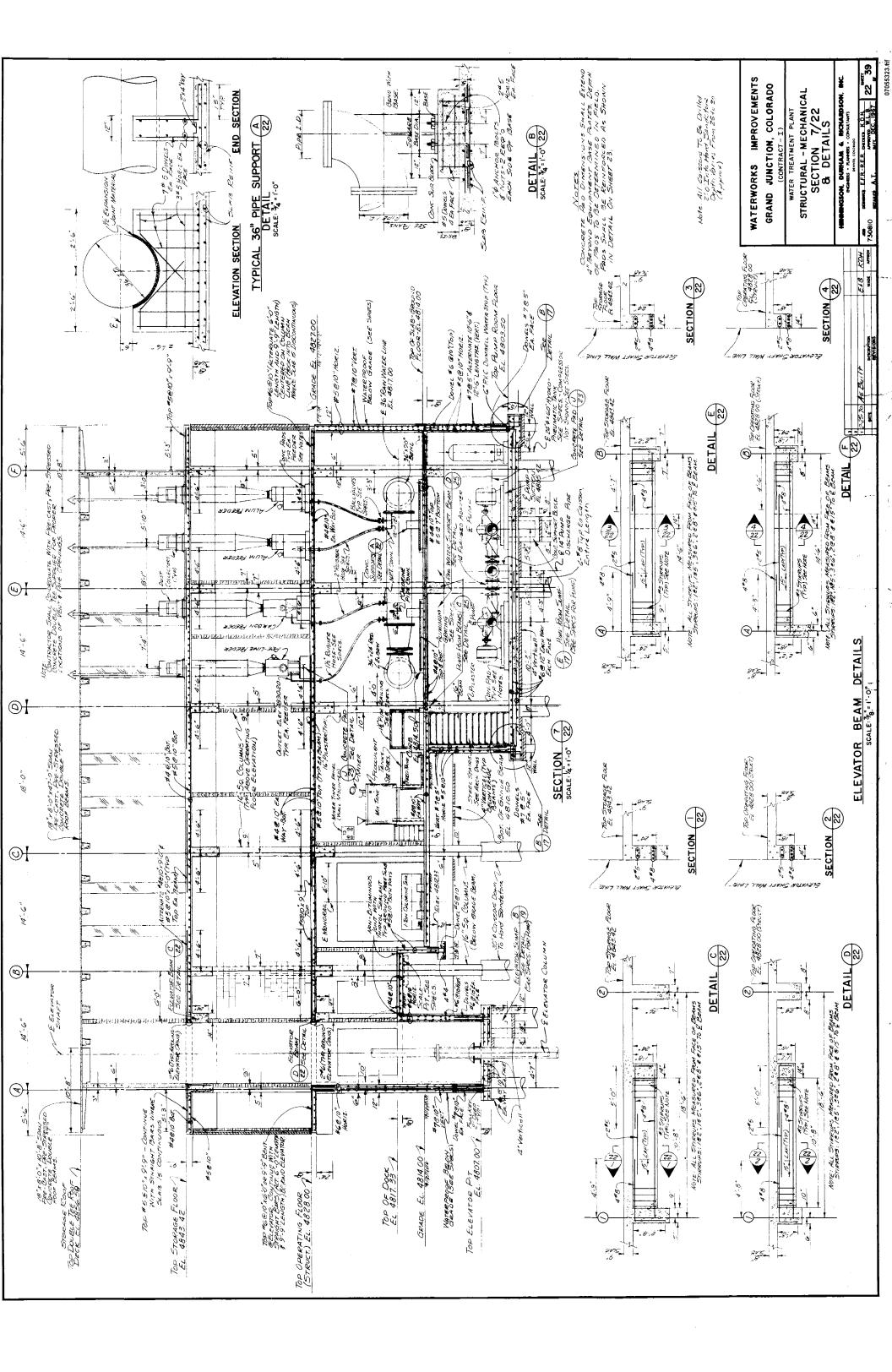


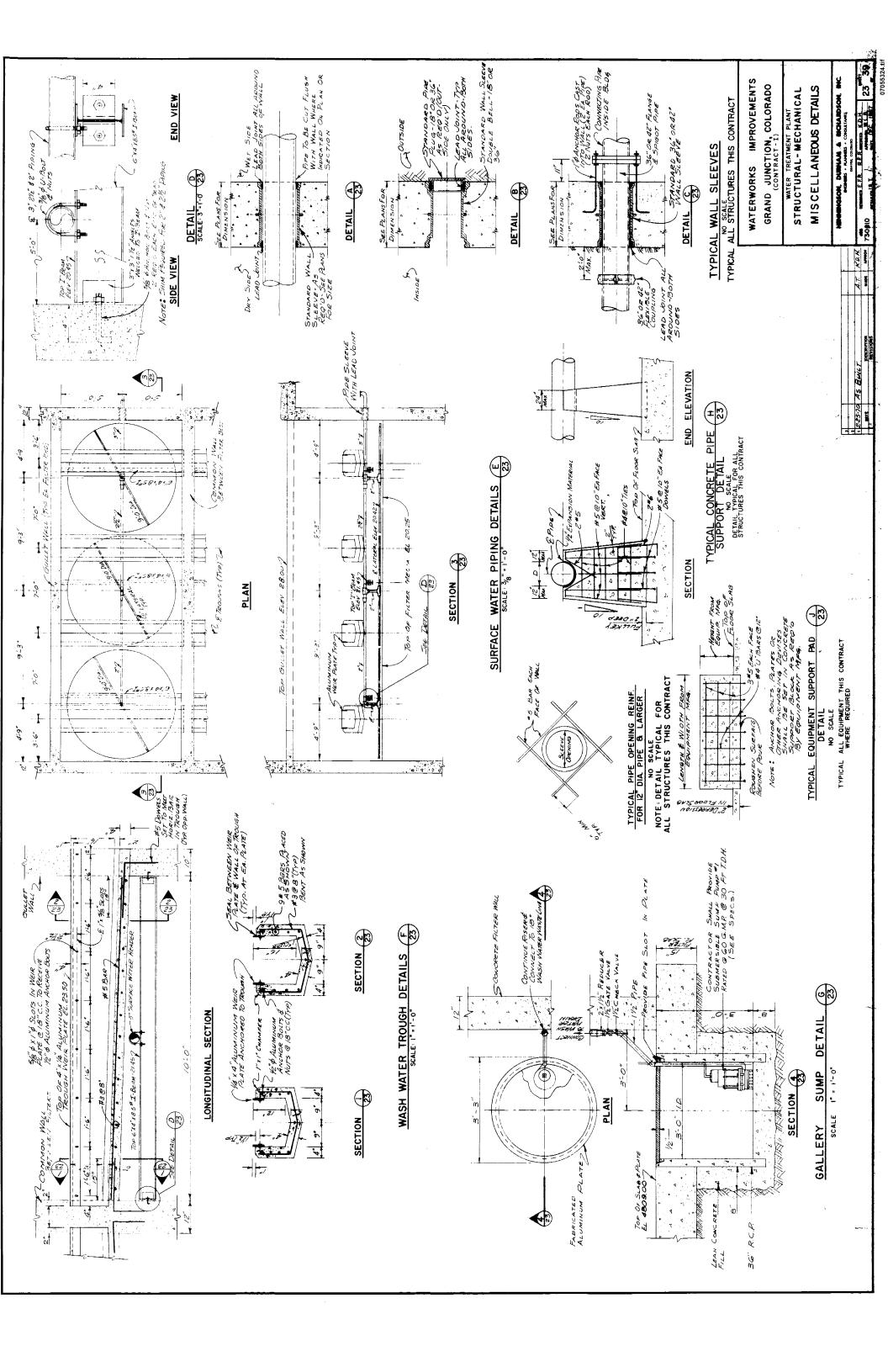


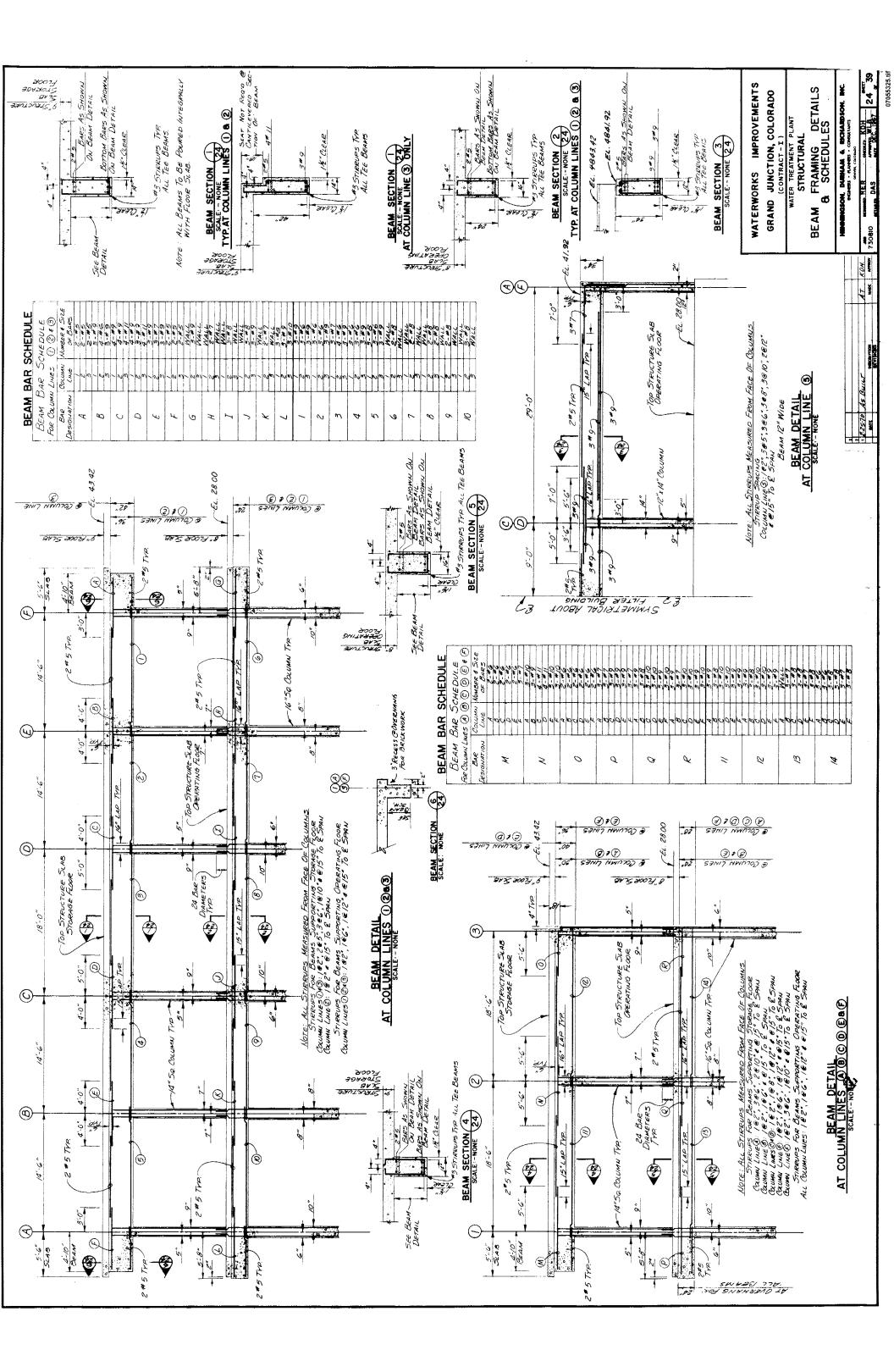


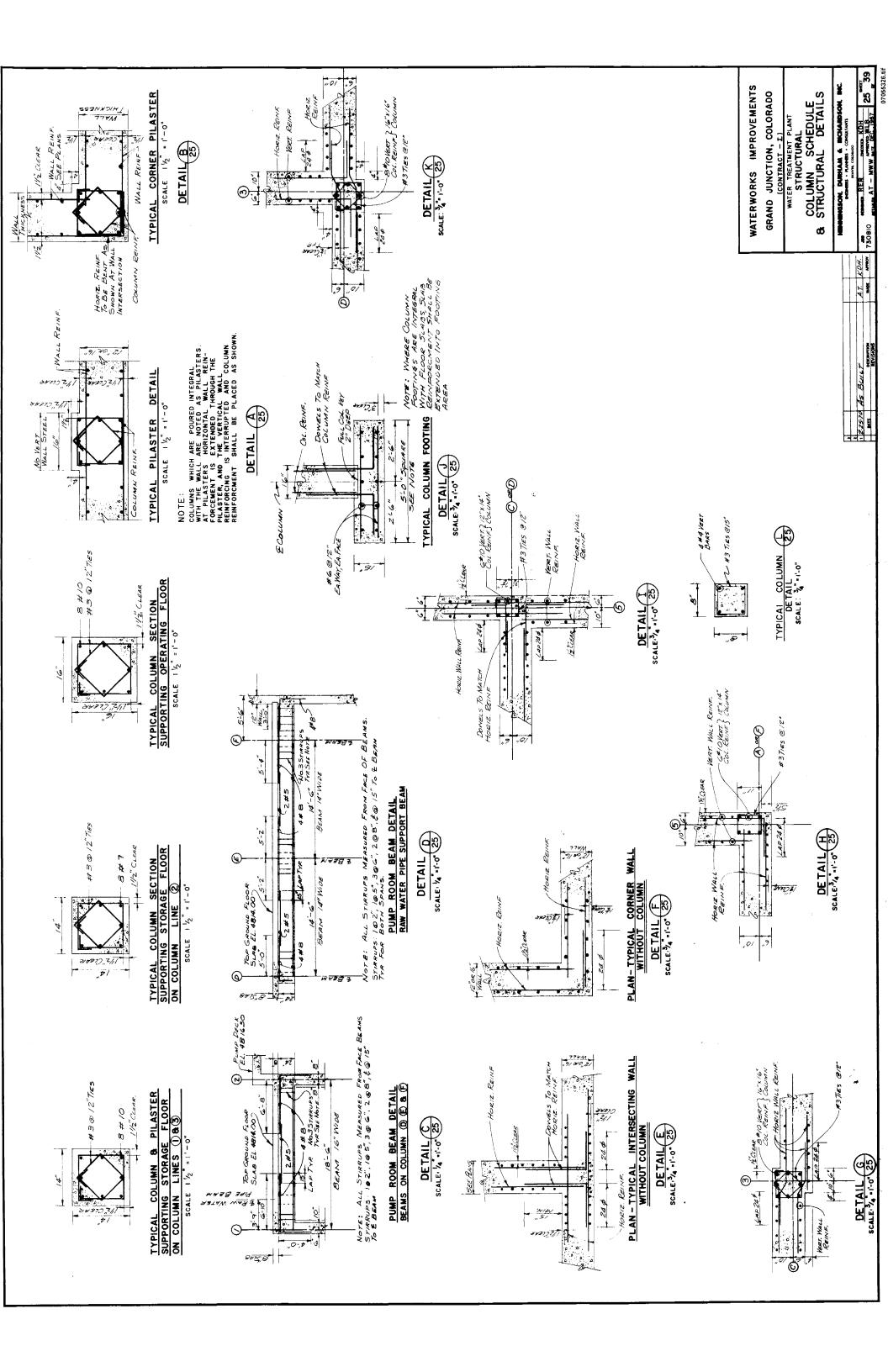


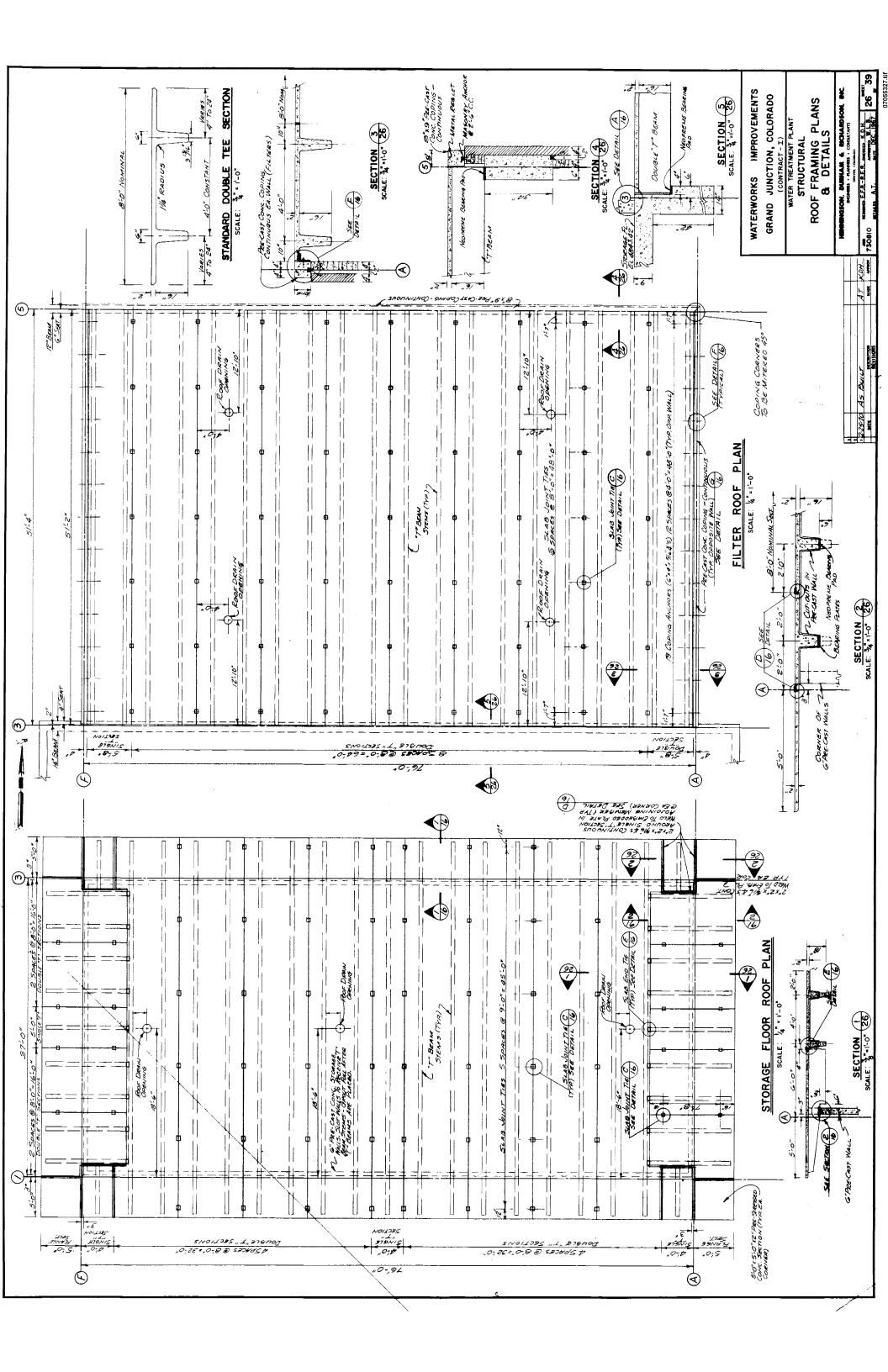


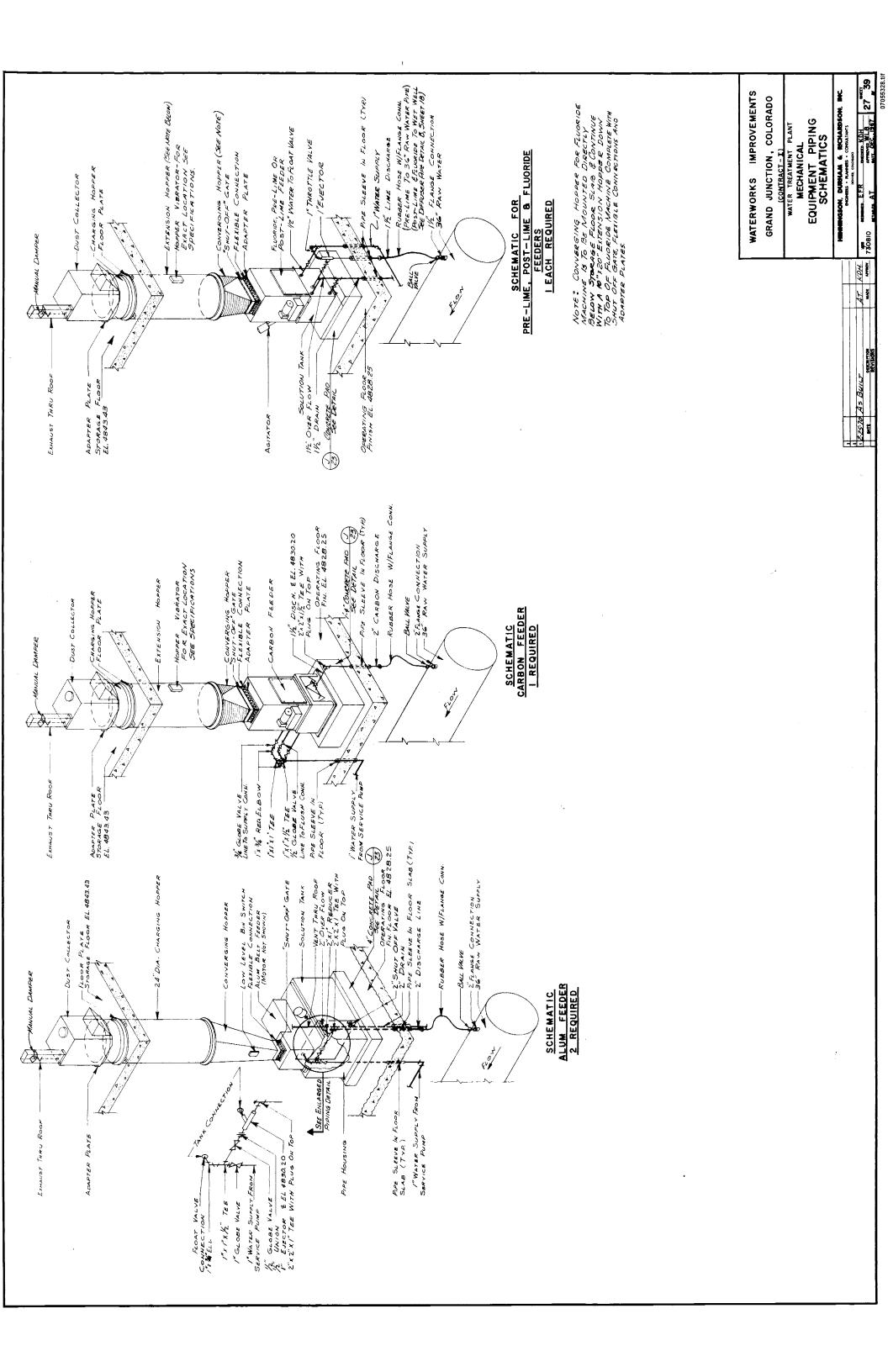


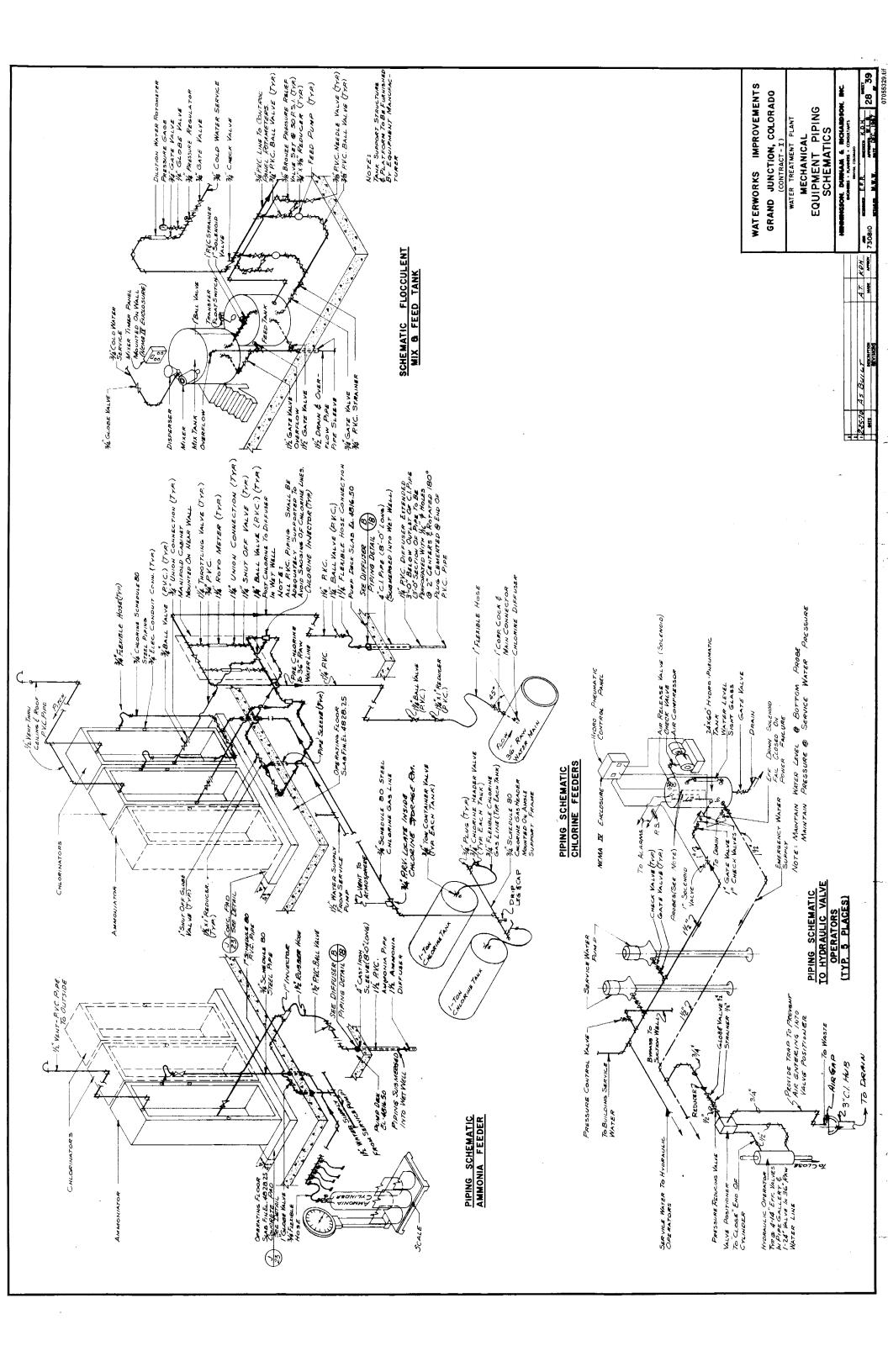


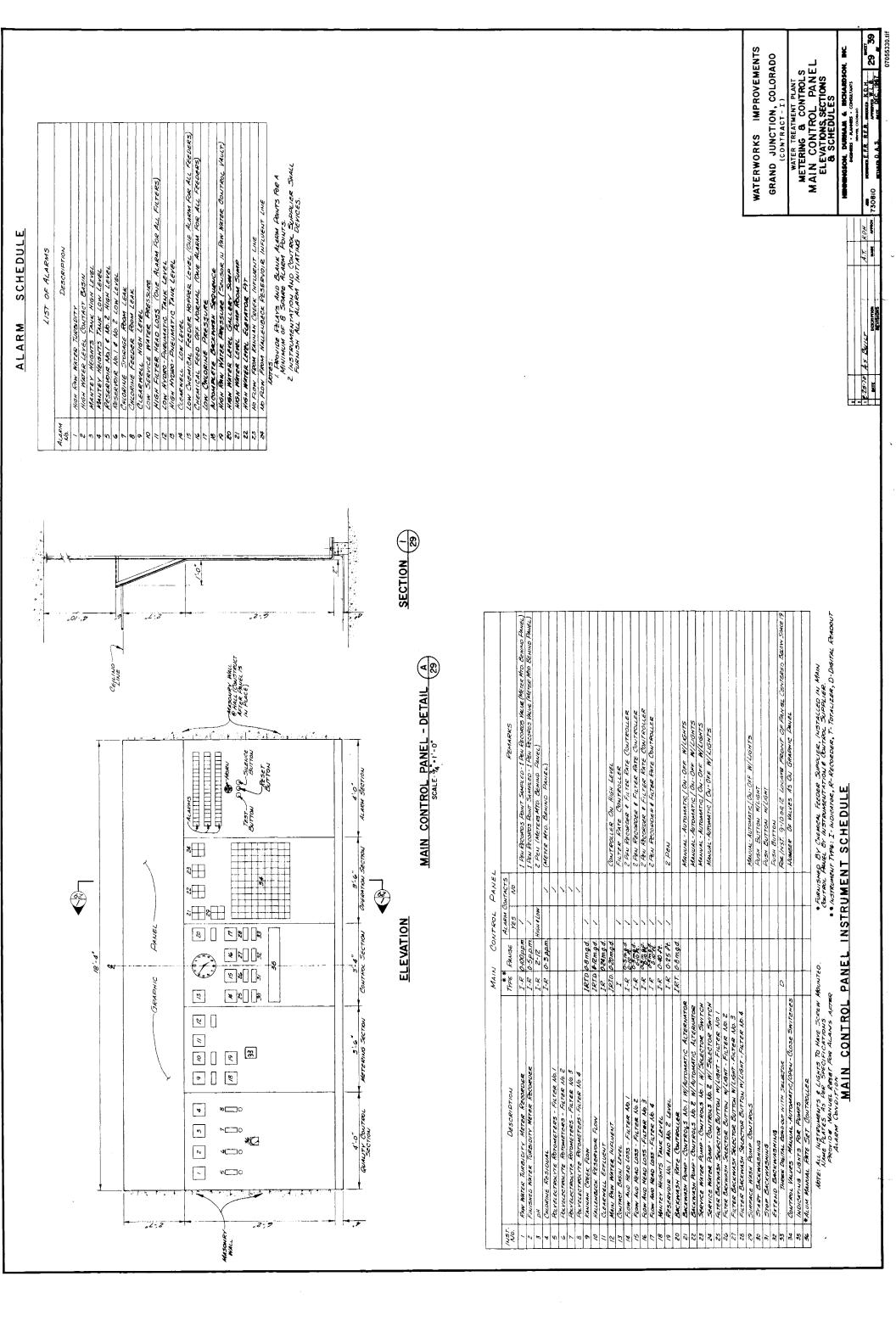


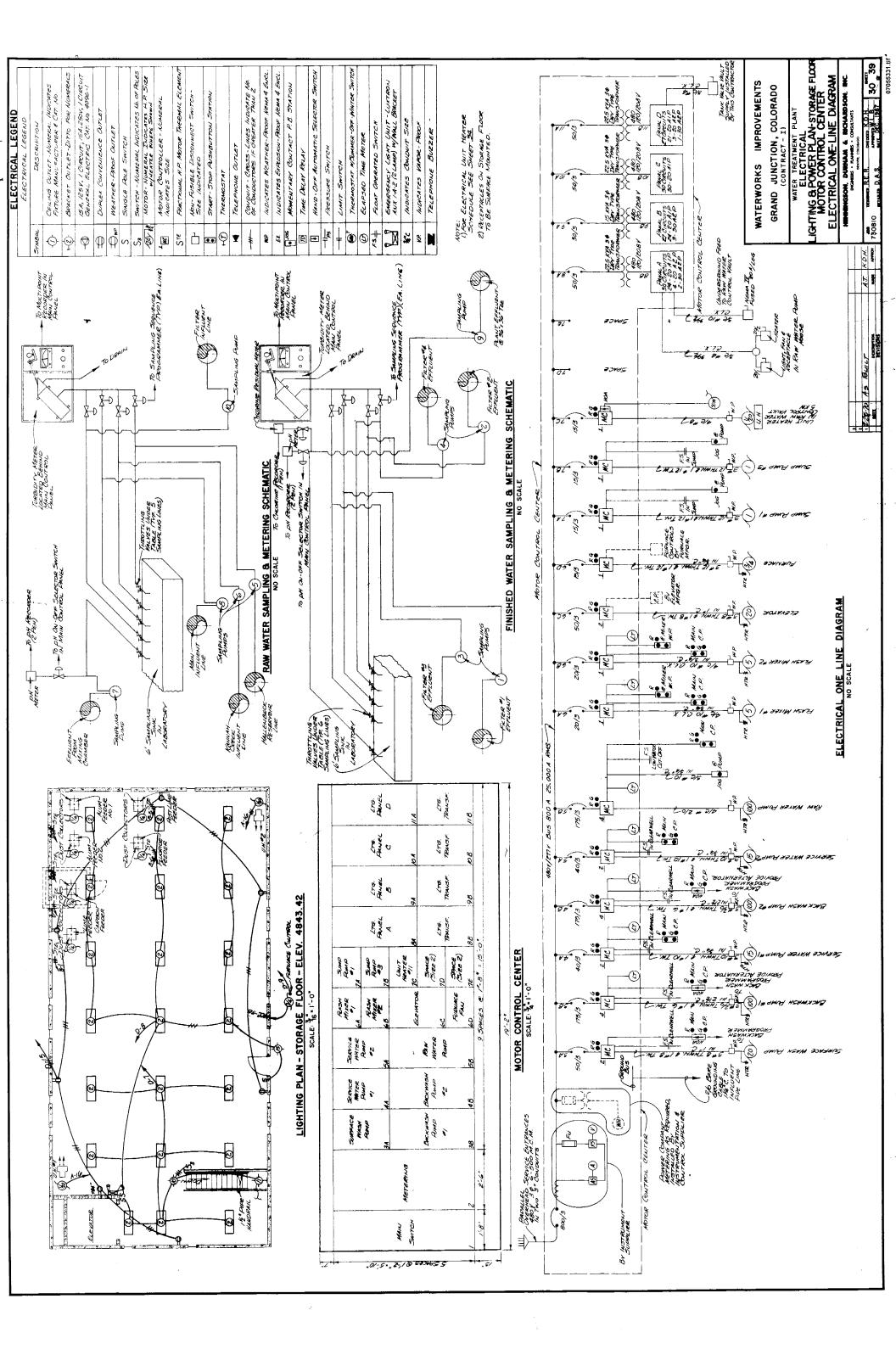


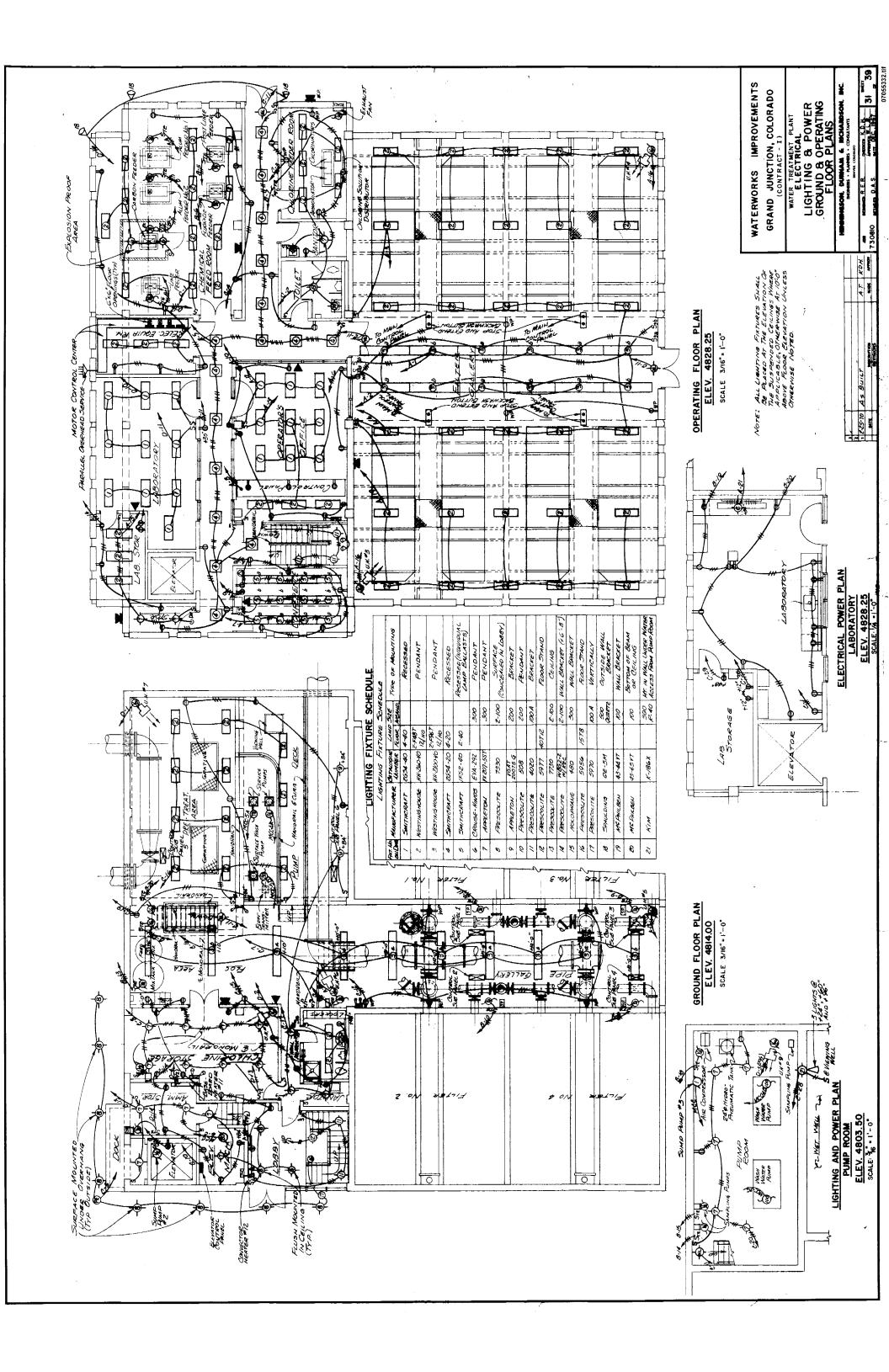


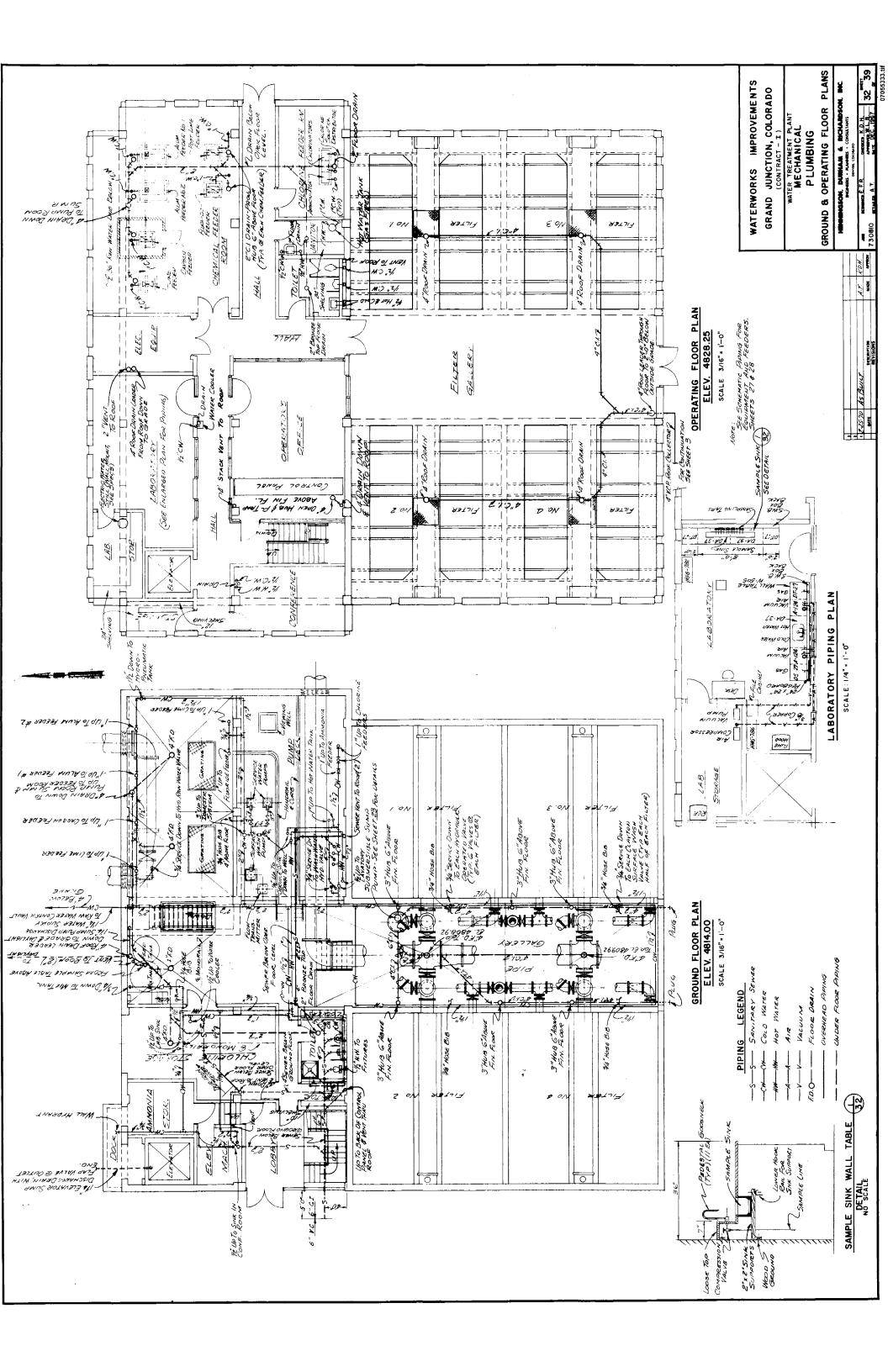


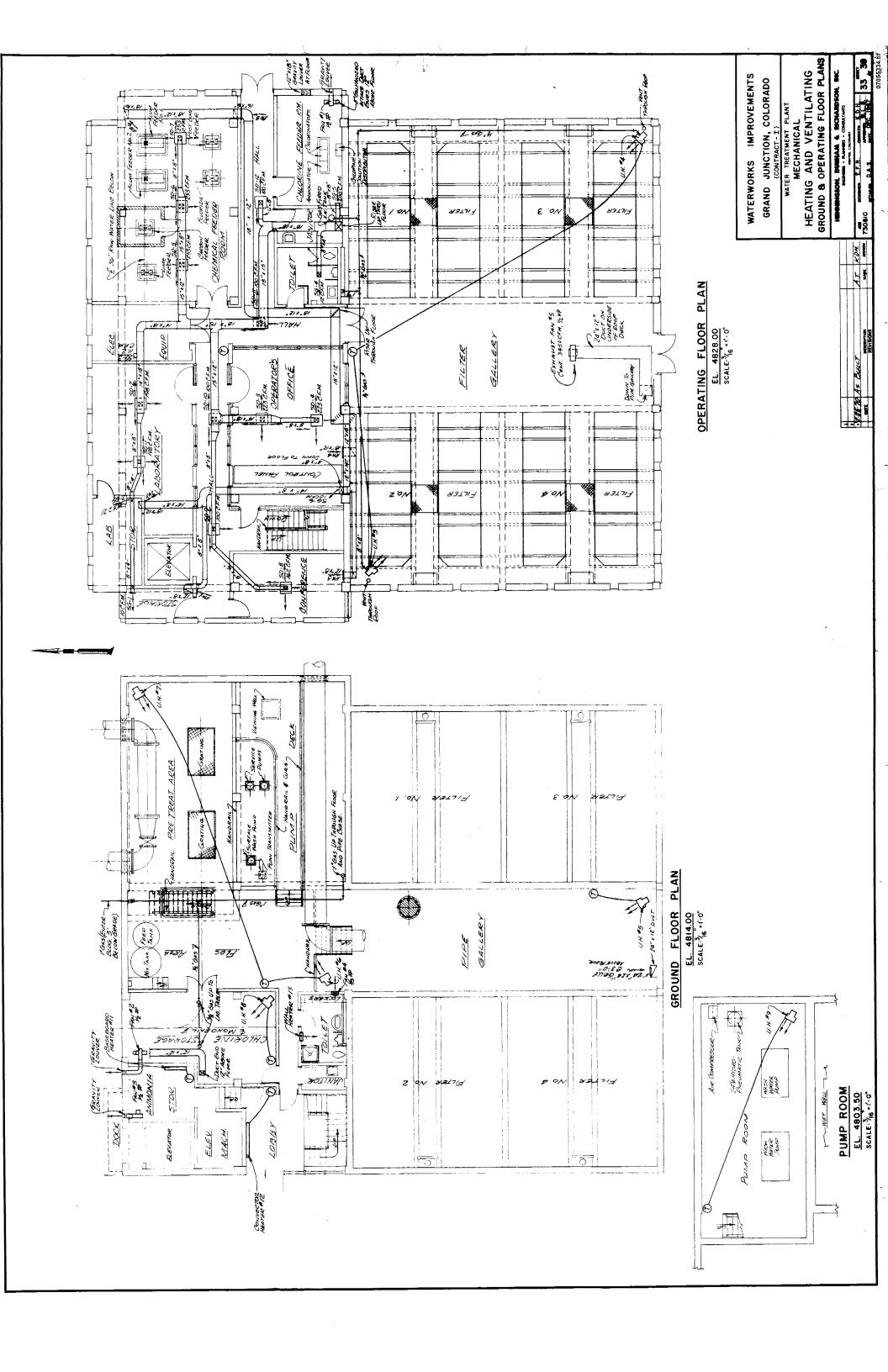


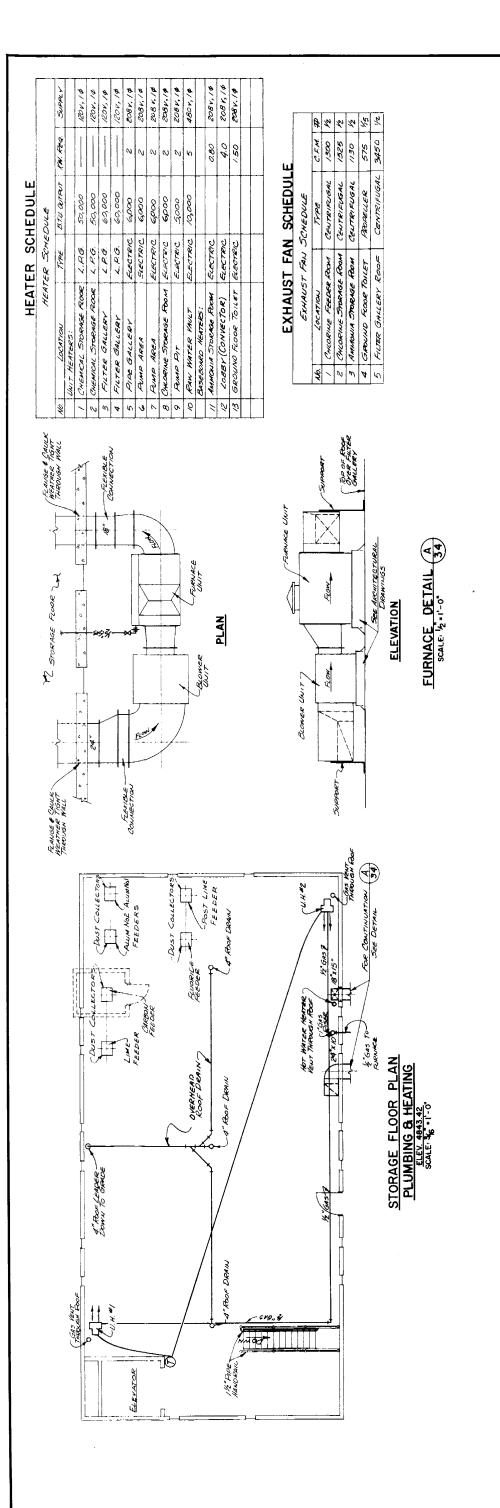








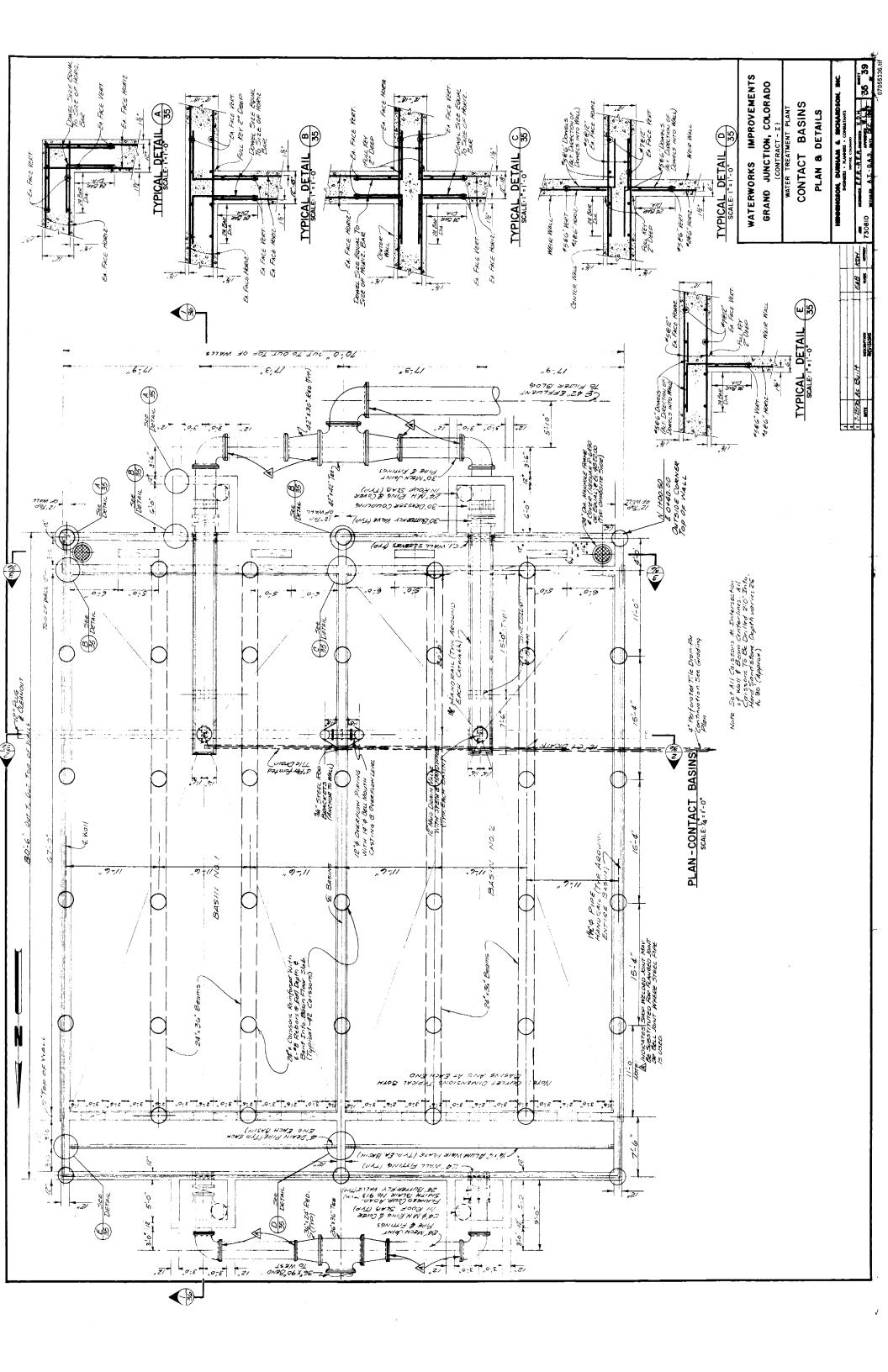


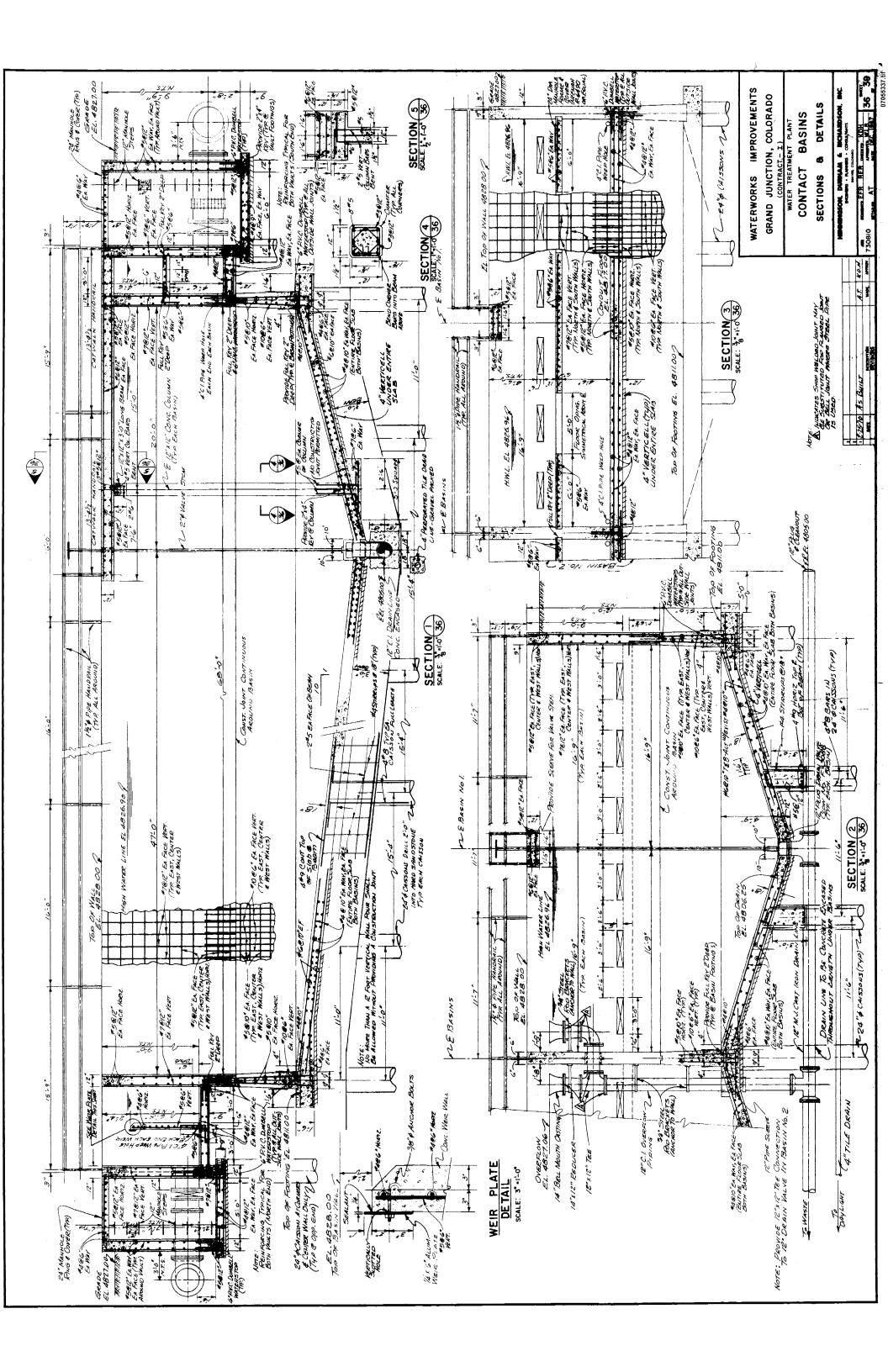


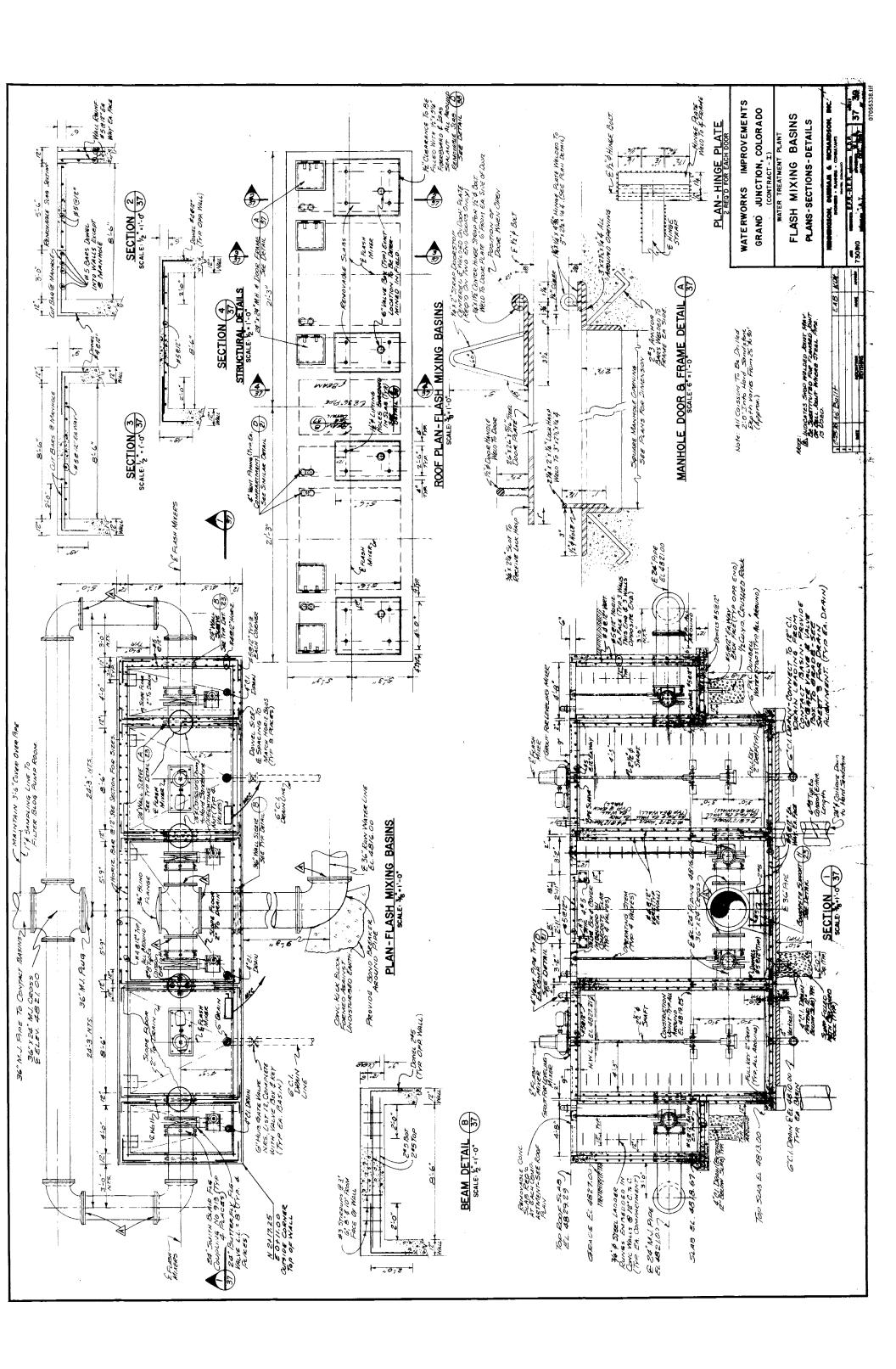
WATERWORKS IMPROVEMENTS GRAND JUNCTION, COLORADO (CONTRACT - I)
WATER TREATMENT PLANT

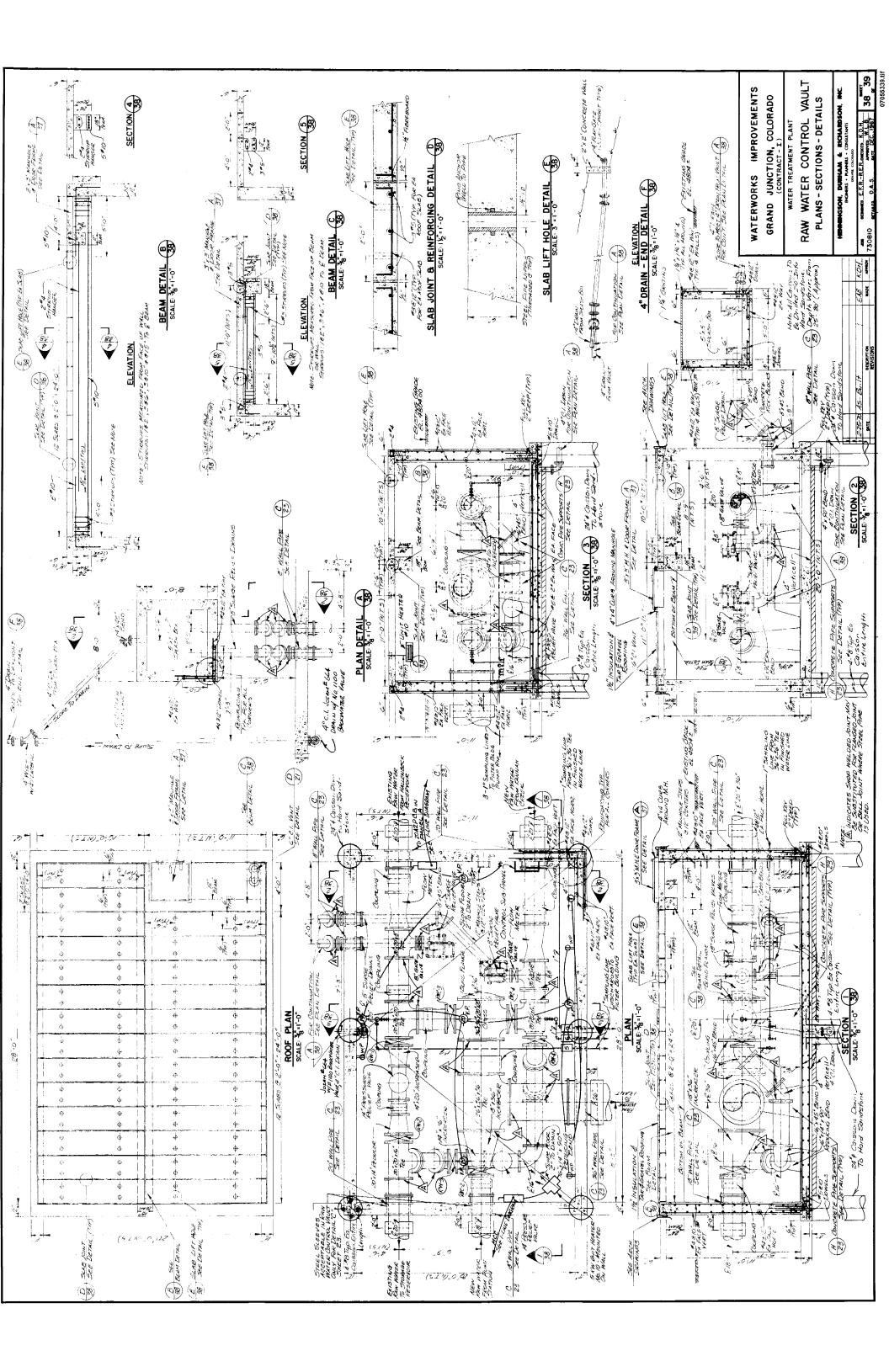
MECHANICAL PLUMBING-HEATING-VENTILATING STORAGE FLOOR PLAN

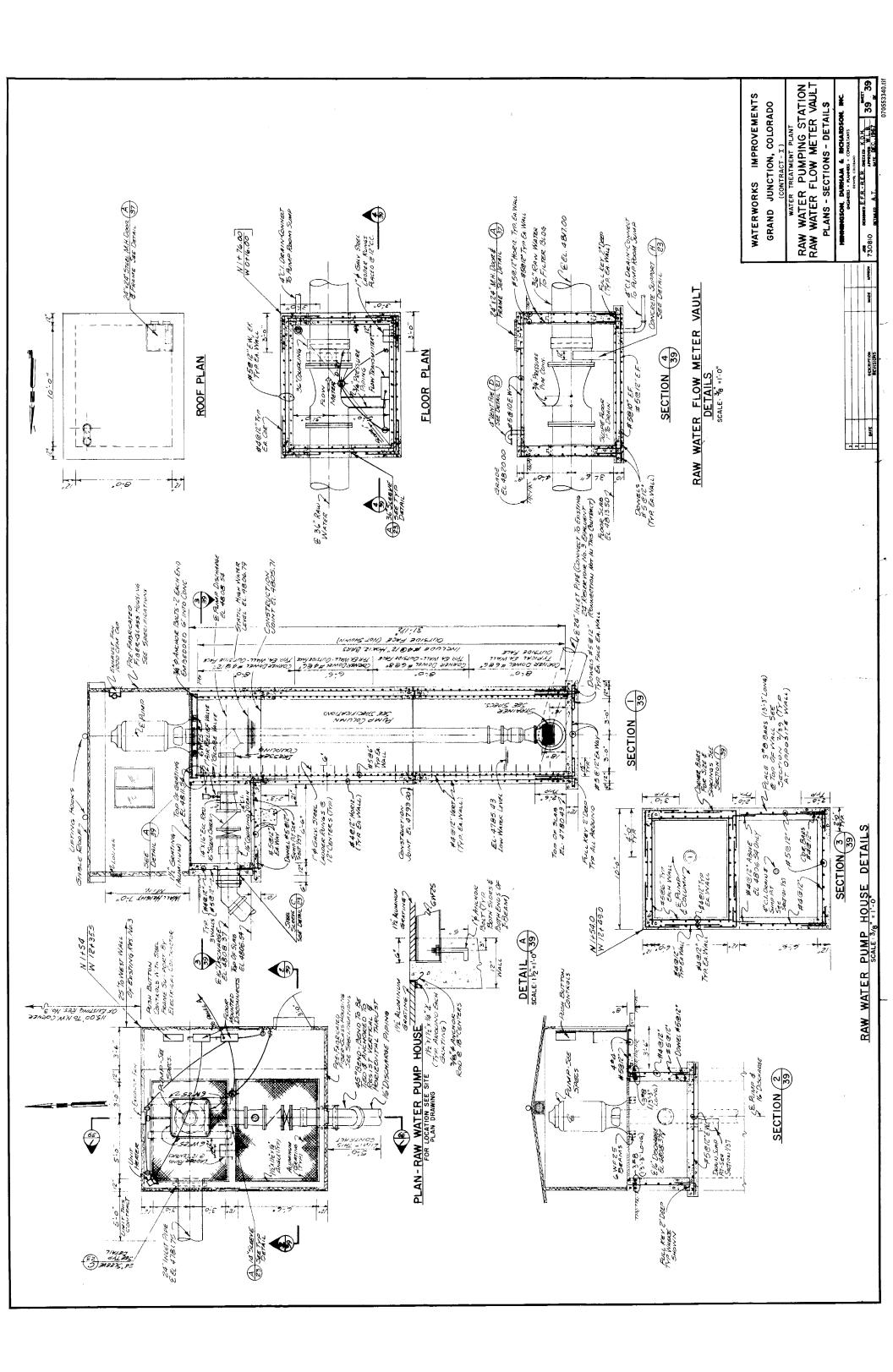
HENERYGEON, DURHAM & INCHARDSON, INC. PROMINES - CHOURANTS scores E.F.R.

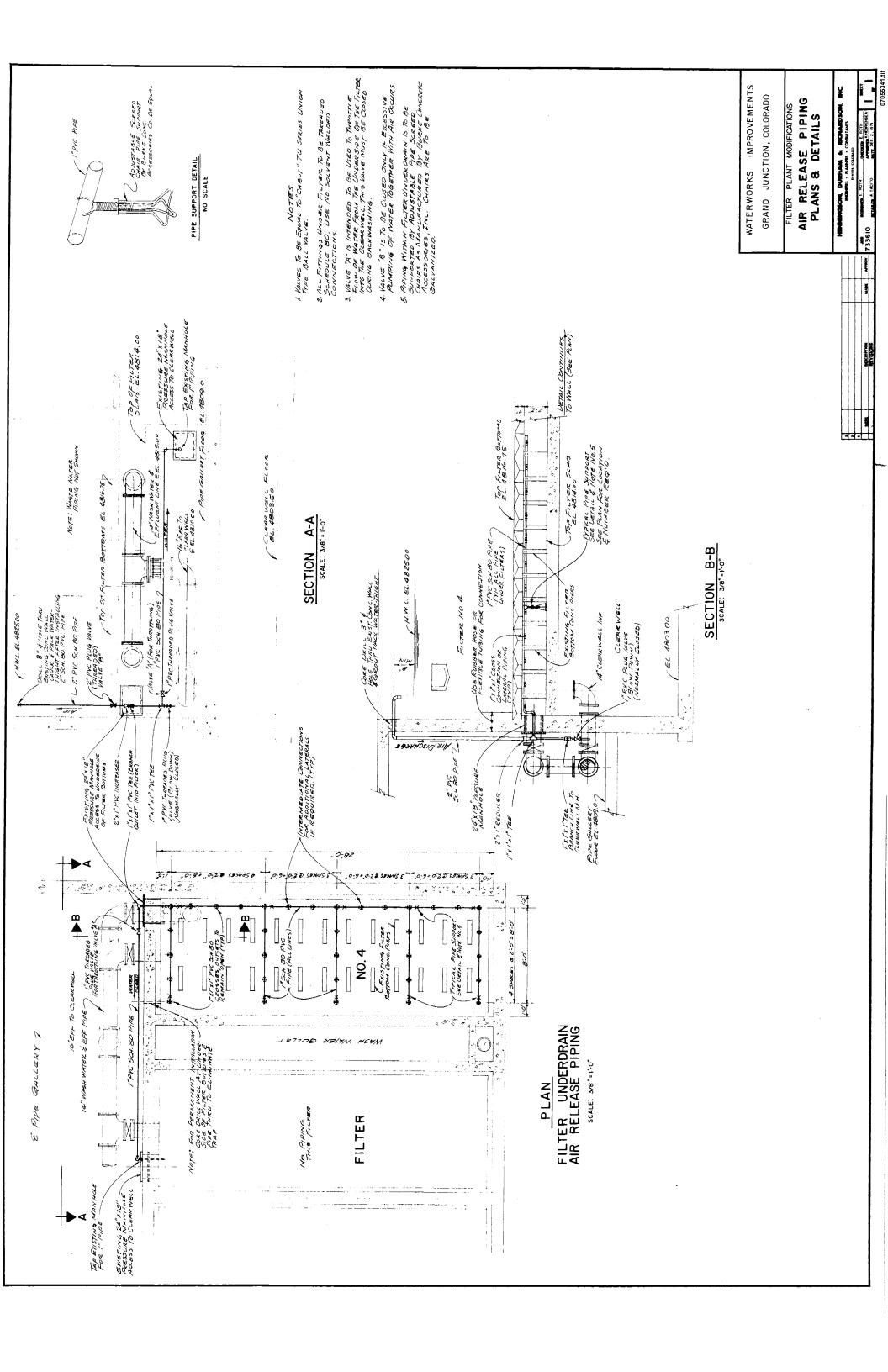












CITY OF GRAND JUNCTION WATER TREATMENT PLANT

FILTER UPGRADE PROJECT GRAND JUNCTION, COLORADO CONSTRUCTION SET

CONTACTS

(470) 244–1590	(970) 404–3100	(720) 344–7771	(303) 907–4285
CITY OF GRAND JUNCTION 250 NORTH 5TH STREET GRAND JUNCTION, CO 81501 BRET GUILLORY, P.E.	JVA, INC 214 8TH STREET, SUITE 210 GLENWOOD SPRINGS, CO 81601 COOPER BEST, P.E.	Browns hill engineering 8119 Shaffer Parkway Littleton, co 80127 Ted Wille, P.E.	MEC, INC. 4191 W. 98TH WAY WESTMINSTER, CO 80031 BRYAN MOEN, P.E.
OMNER:	ENGINEER:	ELECTRICAL ENGINEER:	MECHANICAL ENGINEER:



DECEMBER 2016

DRAWING INDEX IIIE COVER SHEET

<u> </u>	COVER SHEET	LEGEND, NOTES AND ABBREVIATIONS	OPERATING FLOOR — DEMO PLAN	LOWER LEVEL AND PIPE GALLERY - DEMO PLAN - PHASE I	LOWER LEVEL AND PIPE GALLERY - DEMO PLAN - PHASE II	FILTER BOTTOM / CLEARWELL - DEMO PLAN - PHASE I	FILTER BOTTOM / CLEARWELL - DEMO PLAN - PHASE II	SECTIONS - DEMO PLAN - PHASE I & II	OPERATING FLOOR - UPGRADE PLAN	LOWER LEVEL AND PIPE GALLERY - UPGRADE PLAN	FILTER BOTTOM / CLEARWELL - UPGRADE PLAN	SECTIONS A & B - UPGRADE PLAN
SHEET NO.	0.09	60.1	P1.0	P1.1	P1.2	P1.3	P1.4	P1.5	P2.0	P2.1	P2.2	P2.3

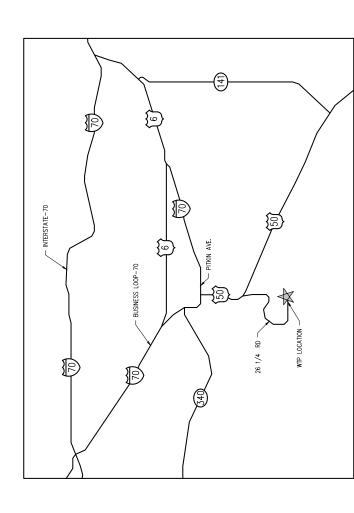
LOWER LEVEL AND PIPE GALLERY — UPGRADE PLAN	FILTER BOTTOM / CLEARWELL - UPGRADE PLAN	SECTIONS A & B - UPGRADE PLAN	SECTION C - UPGRADE PLAN	BLOWER ROOM PLAN AND SECTION - UPGRADE PLAN PLAN	PROCESS DETAILS
P.Z.1	P2.2	P2.3	P2.4	P2.5	PD1.0

|--|

MECHANICAL PLAN -BLOWER ROOM
ELECTRICAL LEGEND
ELECTRICAL BUILDING PLAN
ELECTRICAL ONE-LINE DIAGRAM
ELECTRICAL DETAILS MZ.3 E0.0 E1.0 E2.0 ED1.0

JVA, Inc.

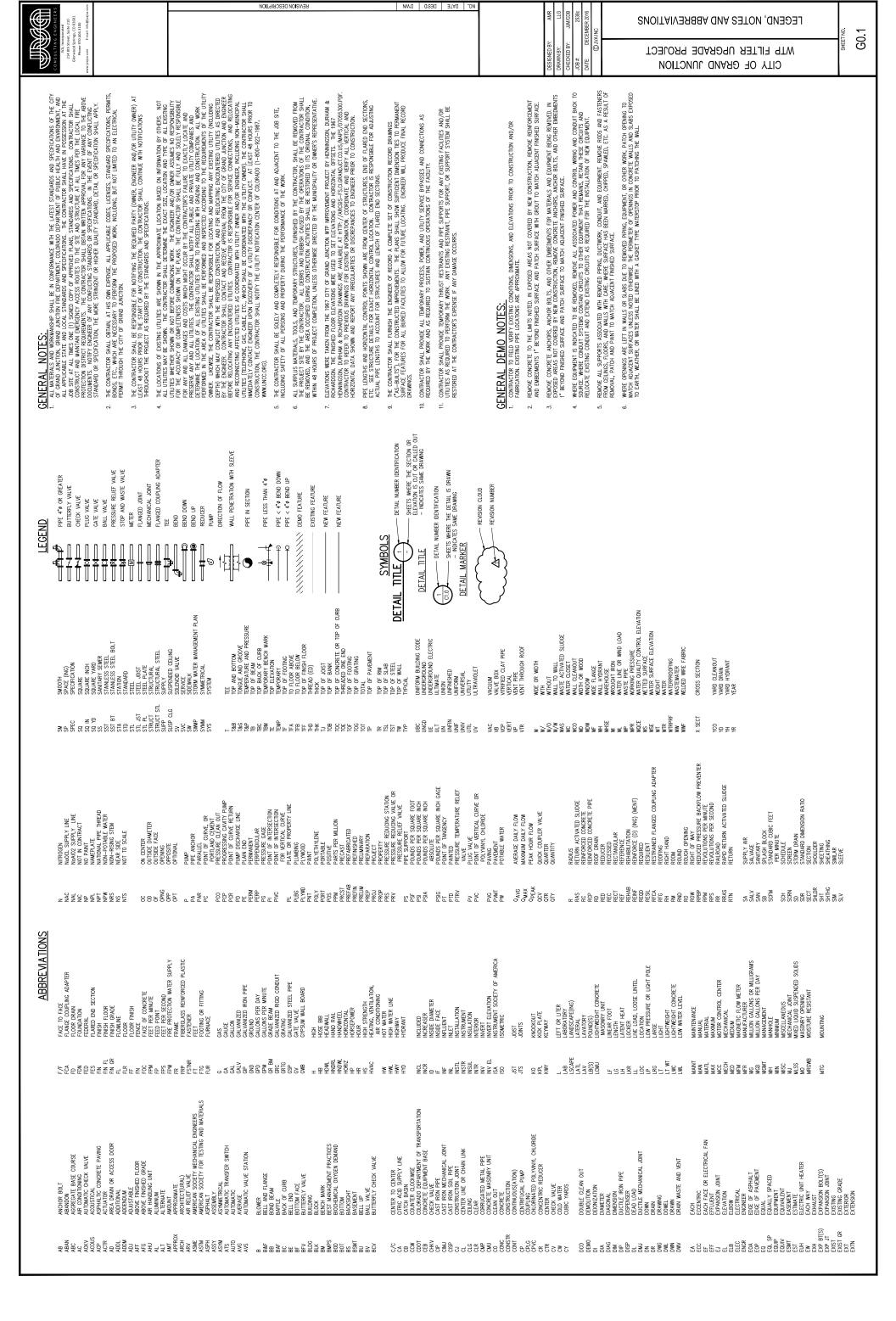
PREPARED UNDER THE SUPERVISION OF

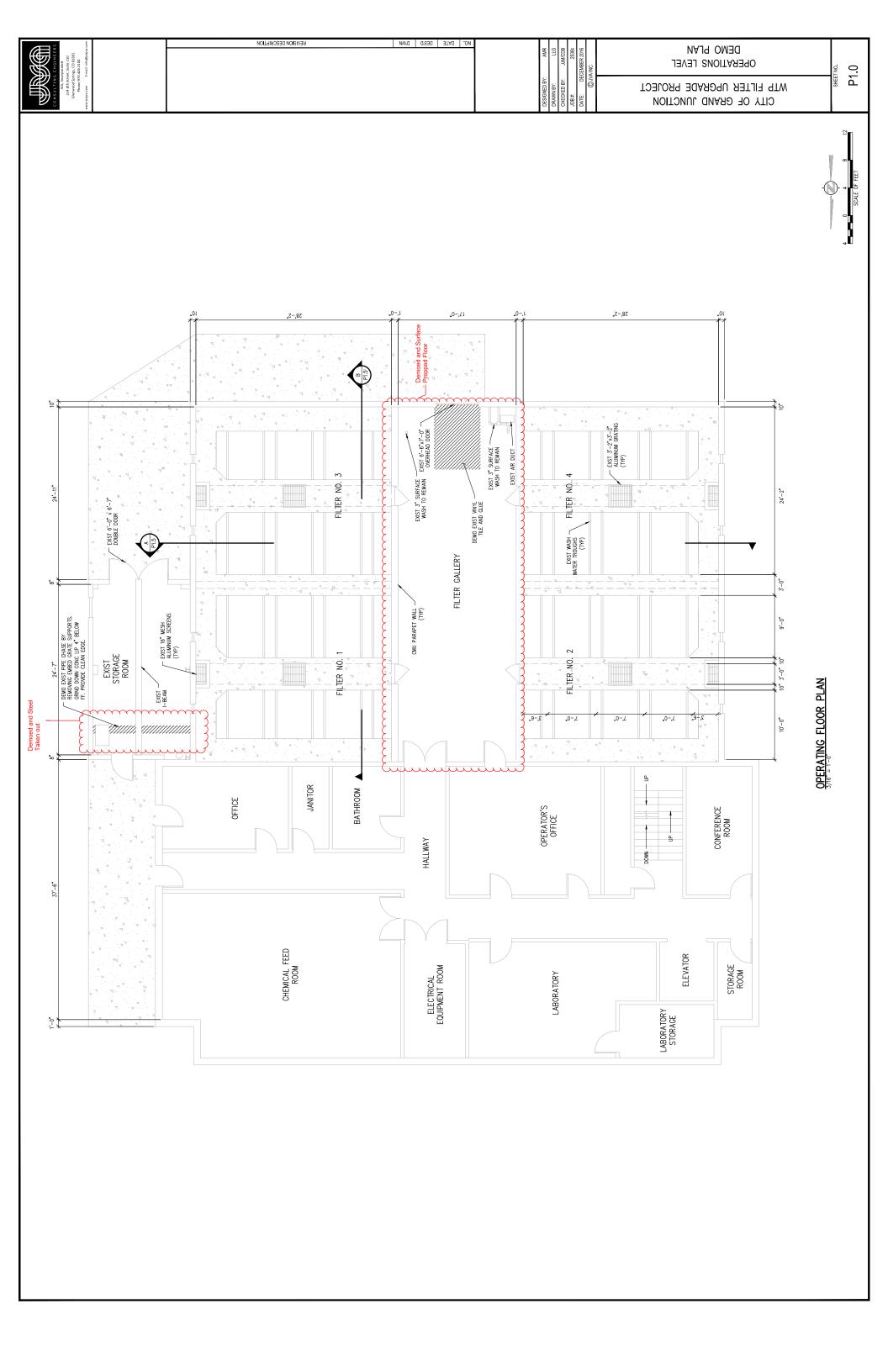


COLORADO

PROJECT LOCATION MAP

VICINITY MAP





CITY OF GRAND DINCTION

SHET IN.

SH



PHASE I DEMO NOTES.

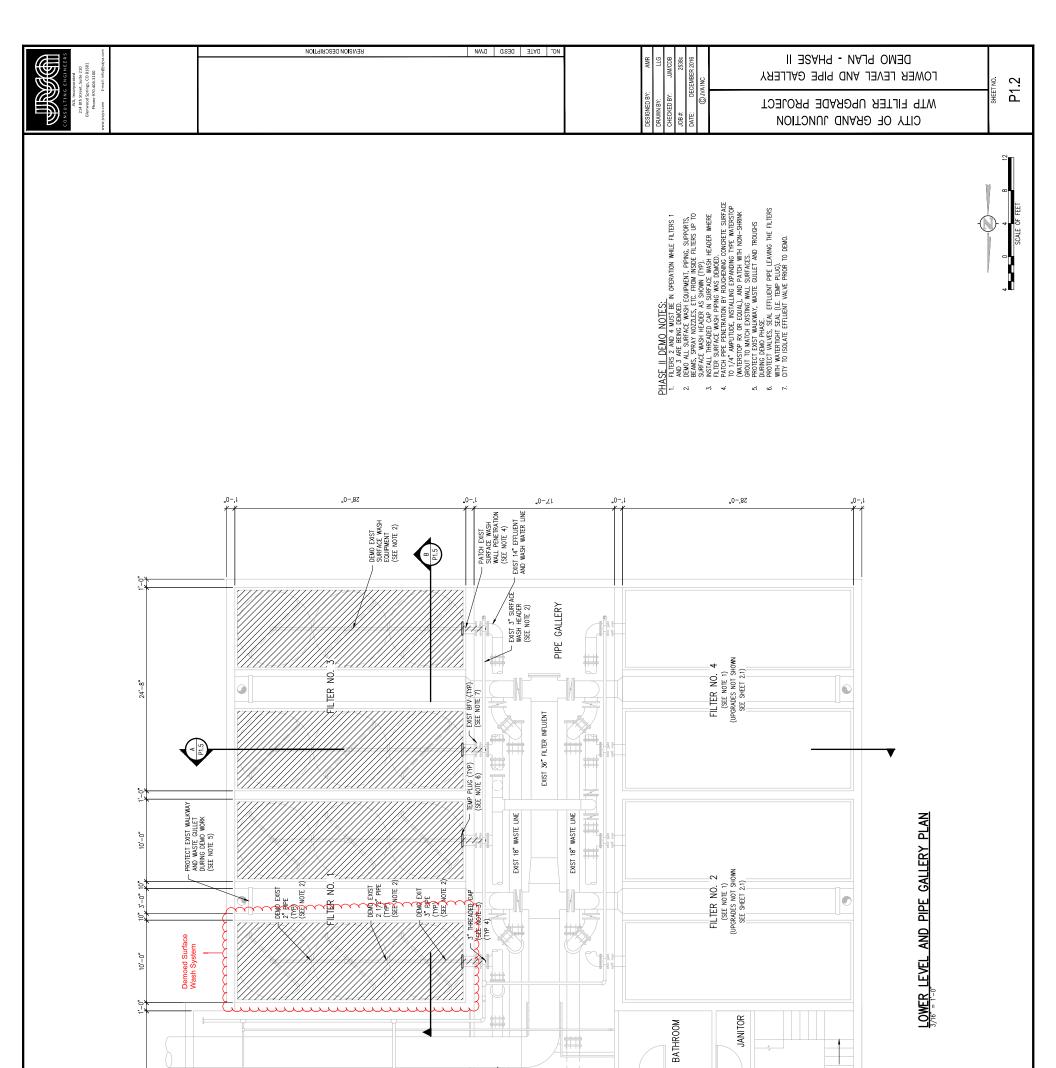
1. FILERS 1 AND 3 MIST REMAIN POERATION WHILE

1. FILERS 2 AND 4 ARE BENG DEACED. ONCE FILERS 2 AND
4 ARE FULLY TOWNTONAL AND OFFERATIONAL, CONTRACTOR
CAN BEGIN DEMO WORK ON FLIERS 1 AND 3, AFTER

2. DEMO ALL SURFACE WASH EQUIPMENT, PIPING, SUPPORTS,
BEAMS, SPRAY NOZILES, ETC, FROM INSDE FILERS UP
SUFFACE MASH ECHERS AS SHOWN (FP).
3. INSTALL THERADED CAP IN SURFACE WISH ELADRE WHERE
FILER SURFACE WASH PHON WAS DEDICED.
4. PATCH PIPE PERTEATION BY ROLUGERING CONCRETE
SURFACE TO 1/4" AMPLITUDE. INSTALLING EXPANDING TYPE
WITESTOP (WARESTOPS RO ARE COACULS AND PATCH WITH
NON-SHRINK GOUT TO MATCH ENSING WALL SURFACES.
5. PROTECT EXIST WARKAY, WASTE GALLET AND TROUGHS
DURING DEMO PHASE.
6. PROTECT CAN'EL SALE FILEMENT PER LEAWING THE
FILERS WITH WATERTIGHT SEAL (IE: TEMP PLUG).
7. CITY TO ISOLATE EFFLUENT VALVE PRIOR TO DEMO.

"0-**"**8S **"**0-**'**82 - PATCH EXIST SURFACE WASH WALL PENETRATION (SEE NOTE 4) EXIST 14" EFFLUENT AND WASH WATER LINE (SEE NOTE 3)
(TYP 4)

EXIST BFV (TYP)
(SEE NOTE 7) - DEMO EXIST SURFACE WASH EQUIPMENT (SEE NOTE 2) PIPE GALLERY FILTER NO. (SEE NOTE 1) FILTER NO. EXIST 36" FILTER INFLUENT LOWER LEVEL AND PIPE GALLERY PLAN EXIST 18" WASTE LINE EXIST 18" WASTE LINE - EXIST WALKWAY
AND WASTE GULLET
(SEE NOTE 5) 2 1/2"-PIPE (TYP) (SEE NQTE 2) FILTER NO. (SEE NOTE 1) ILTERANO. EXIST 3" SURFACE WASH HEADER (SEE NOTE 2) JANITOR BATHROOM HALL LOBBY EXIST 3" SURFACE WASH FEED EXIST 42" —
FLOCC. FILTER INFLUENT
FEED AREA PUMP DECK ELEVATOR MACHINE ROOM PRELIM. TREATMENT AREA EXIST SUBMERSIBLE — SURFACE WASH FEED PUMP LABORATORY EXIST 2" -IRRIGATION LINE AMMONIA STORAGE ELEVATOR



EXIST 42" — FLOCC. FILTER INFLUENT FEED AREA

- DOWN

EXIST SUBMERSIBLE — SURFACE WASH FEED PUMP

EXIST 3" SURFACE WASH FEED

PRELIM. TREATMENT AREA

PUMP DECK

EXIST 2" -IRRIGATION LINE HALL

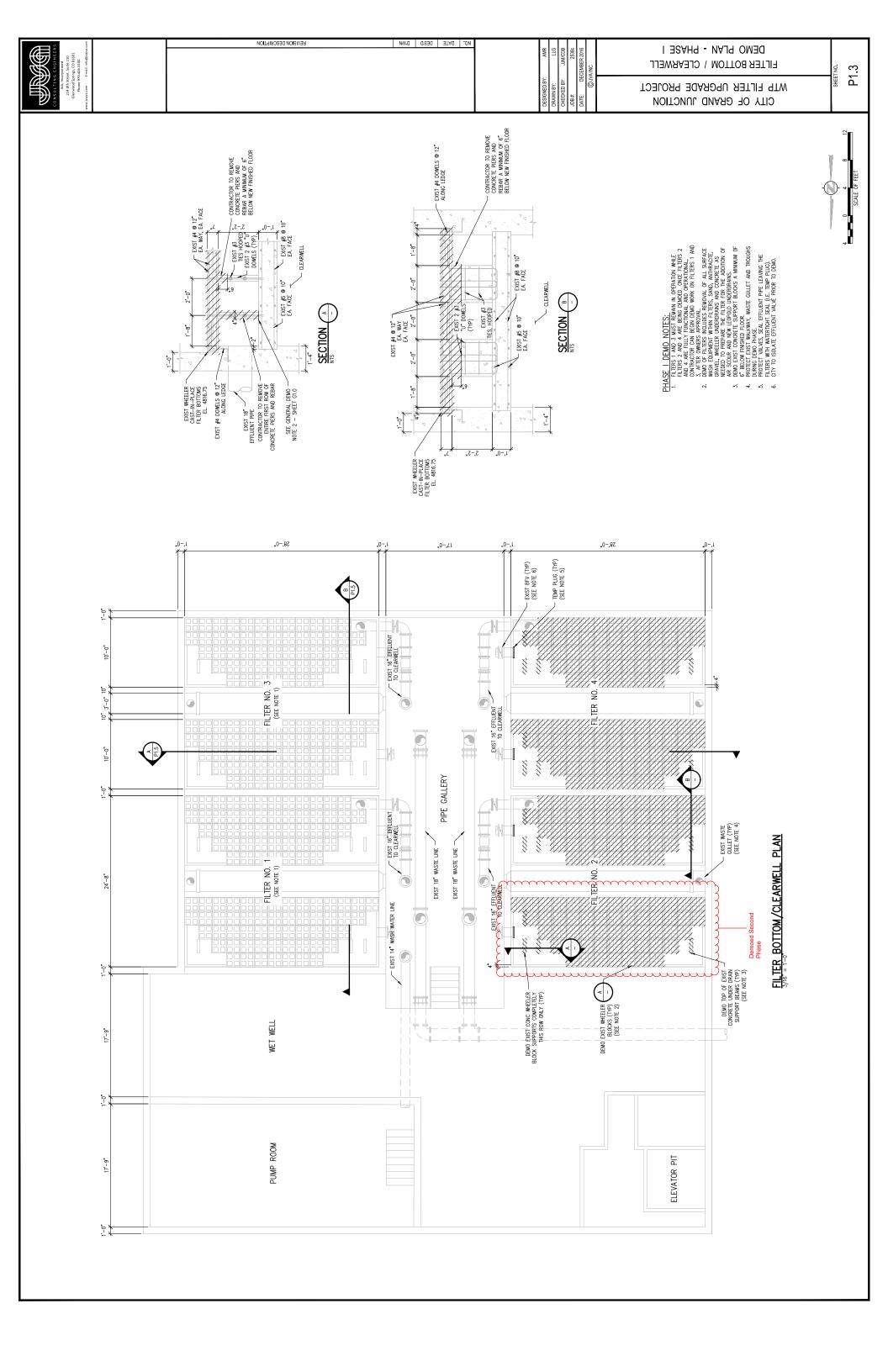
LABORATORY

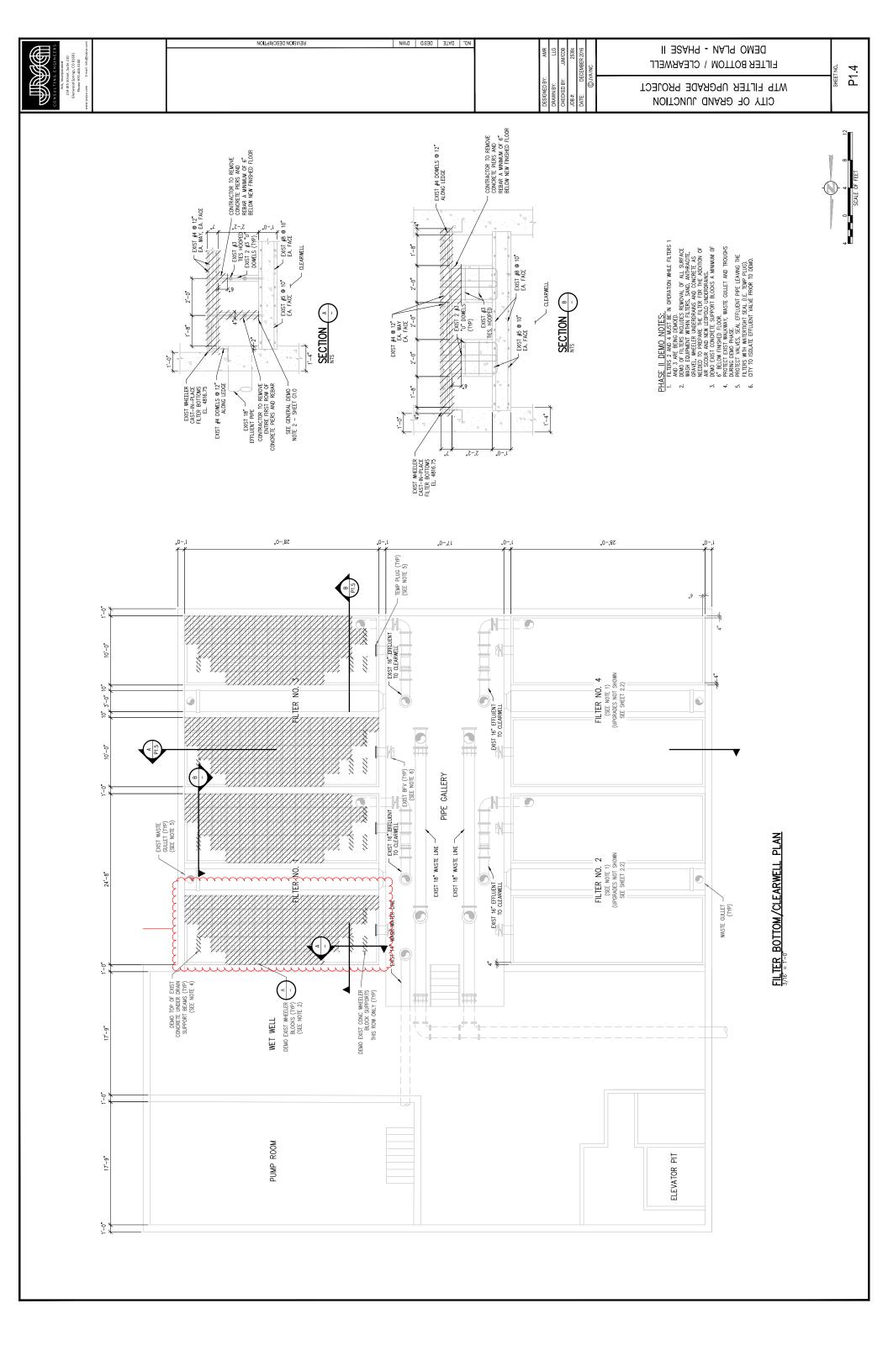
LOBBY

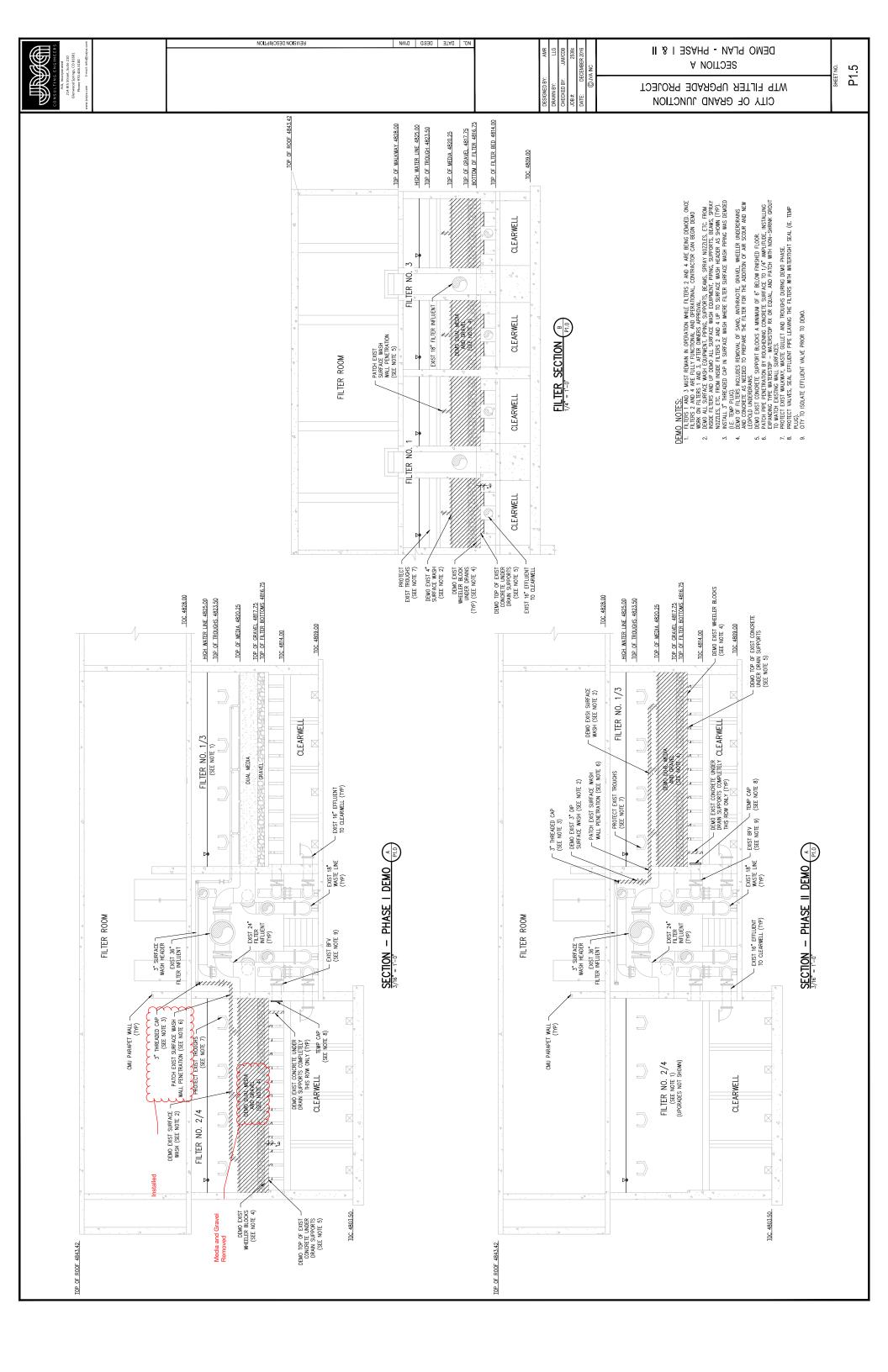
ELEVATOR MACHINE ROOM

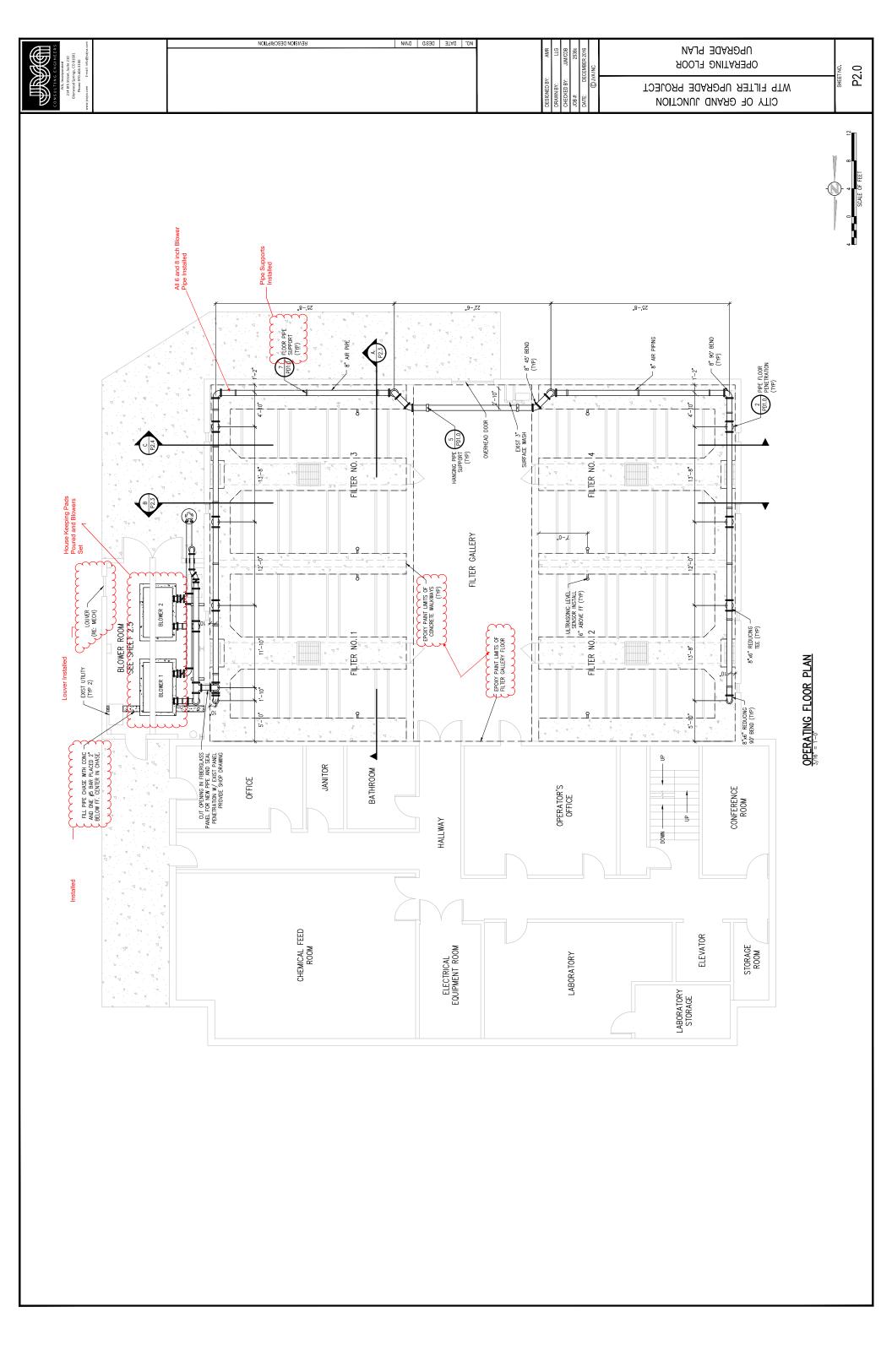
ELEVATOR

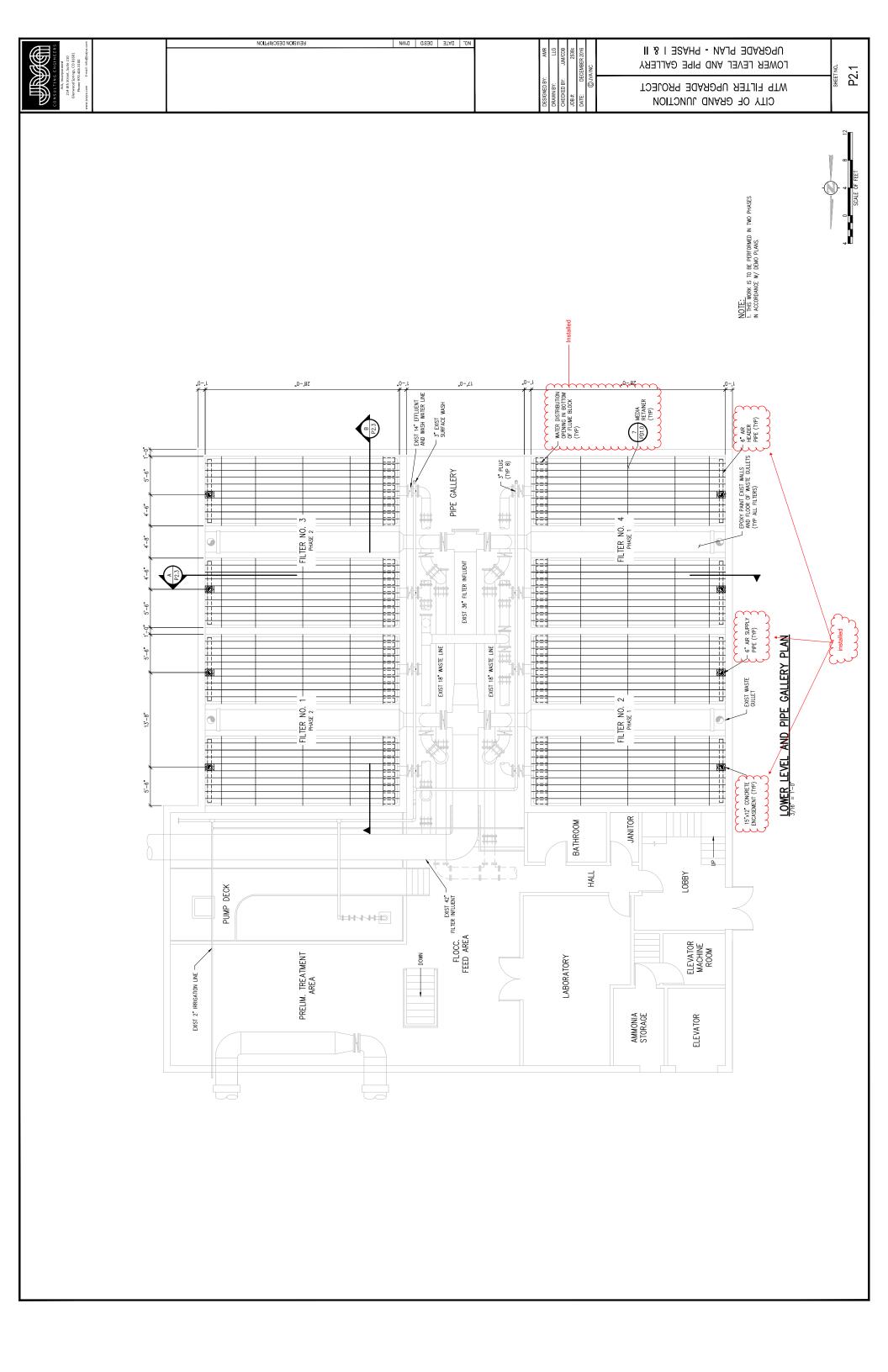
AMMONIA STORAGE

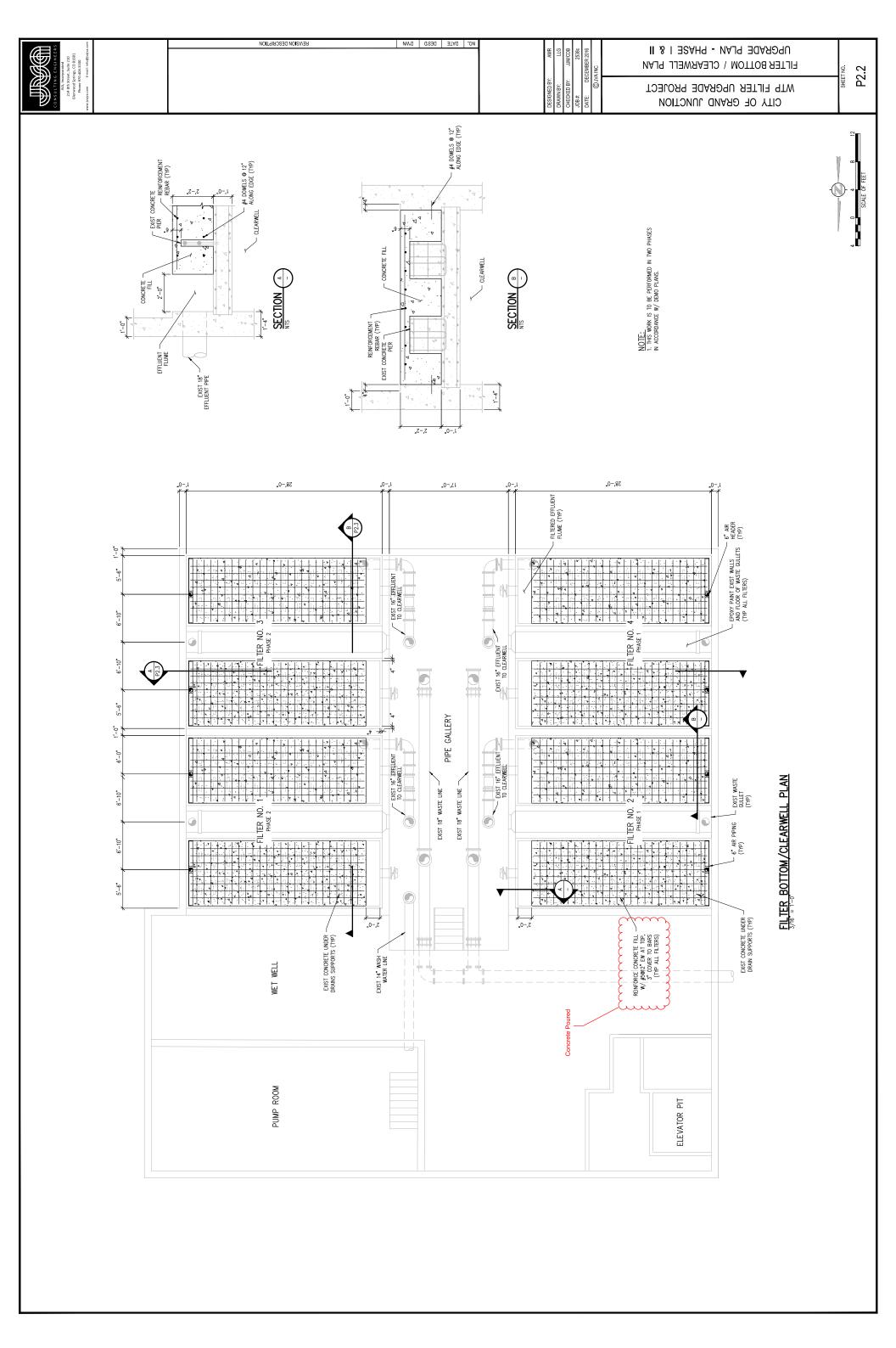


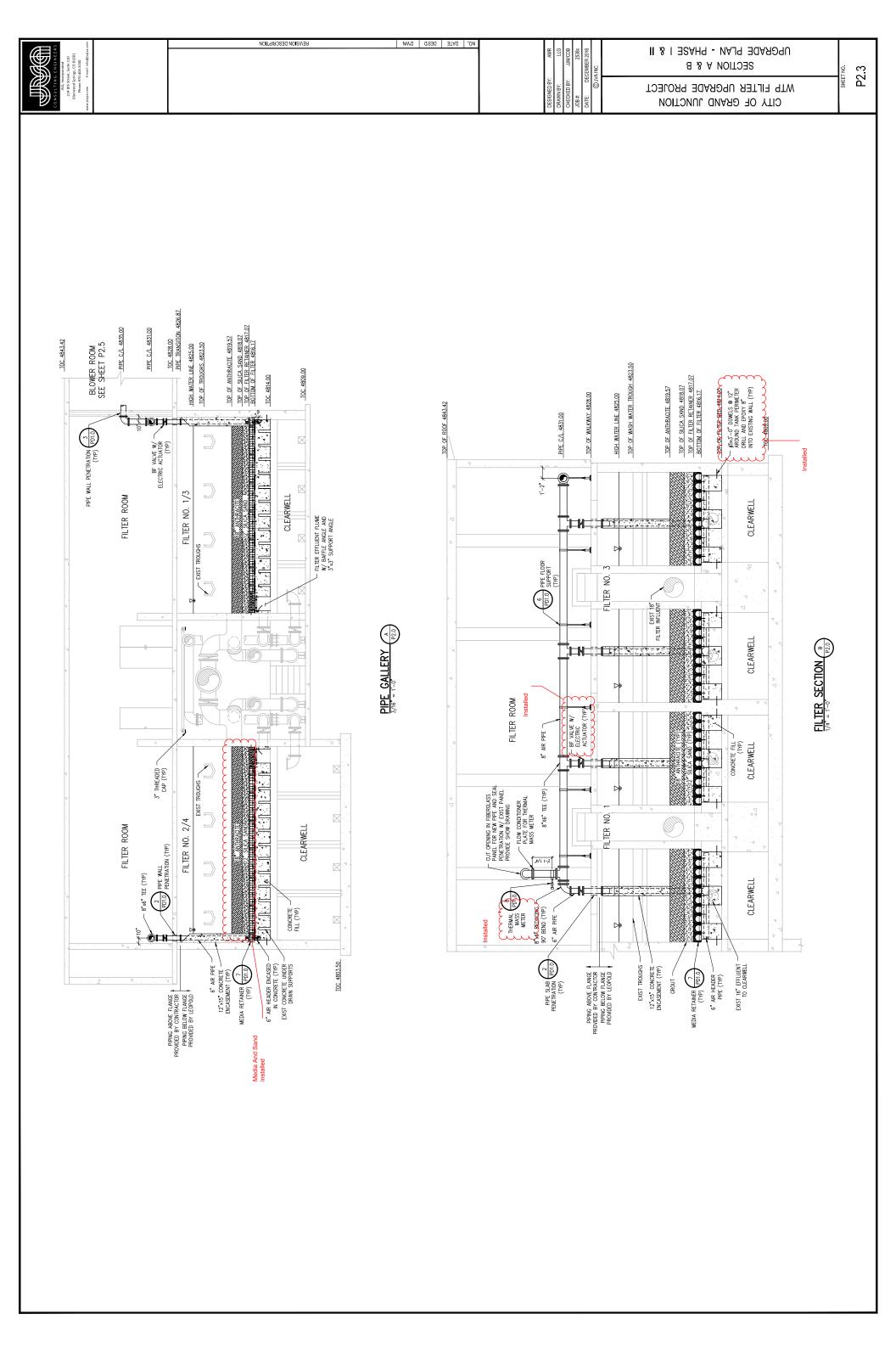


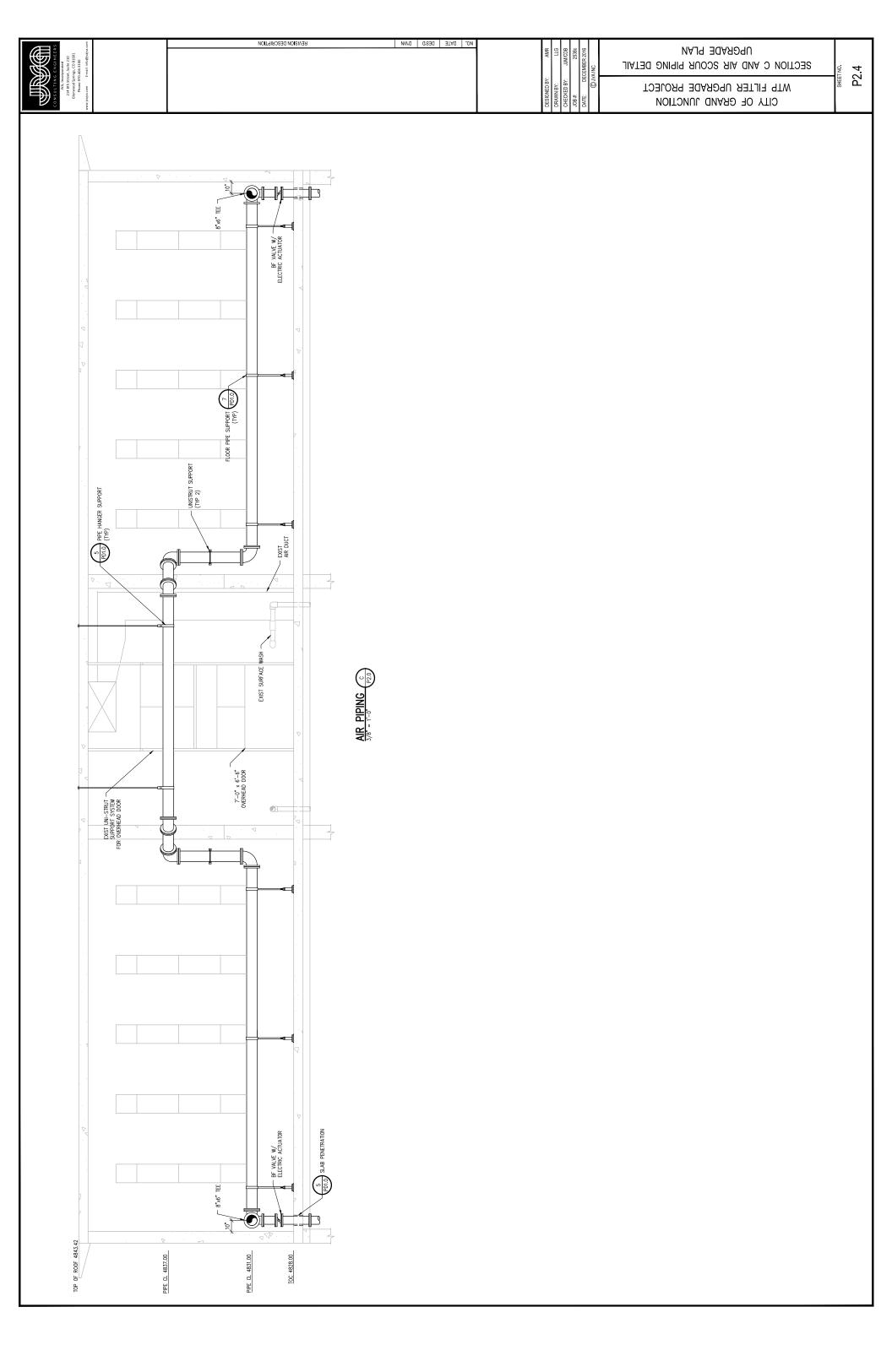


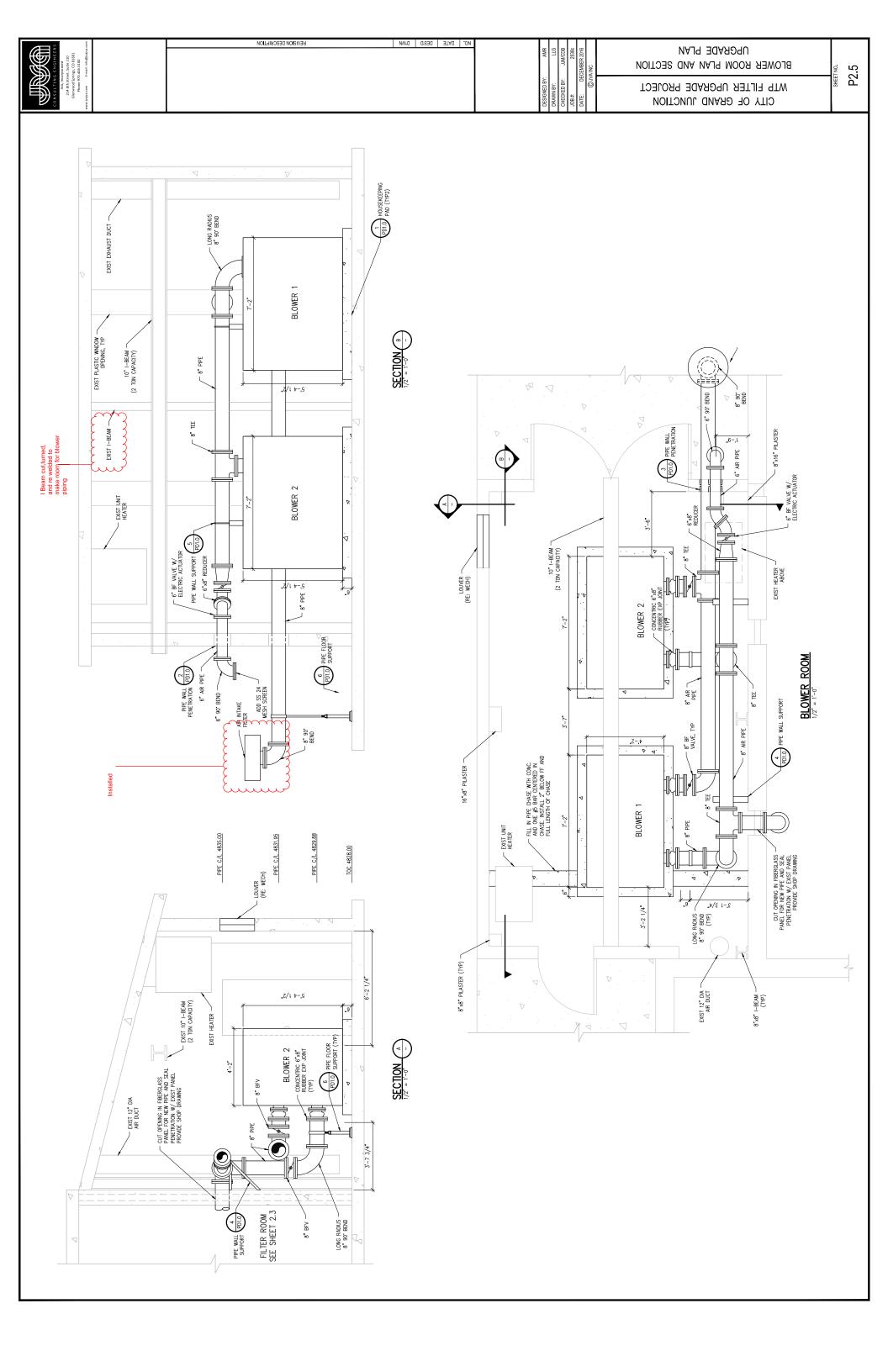


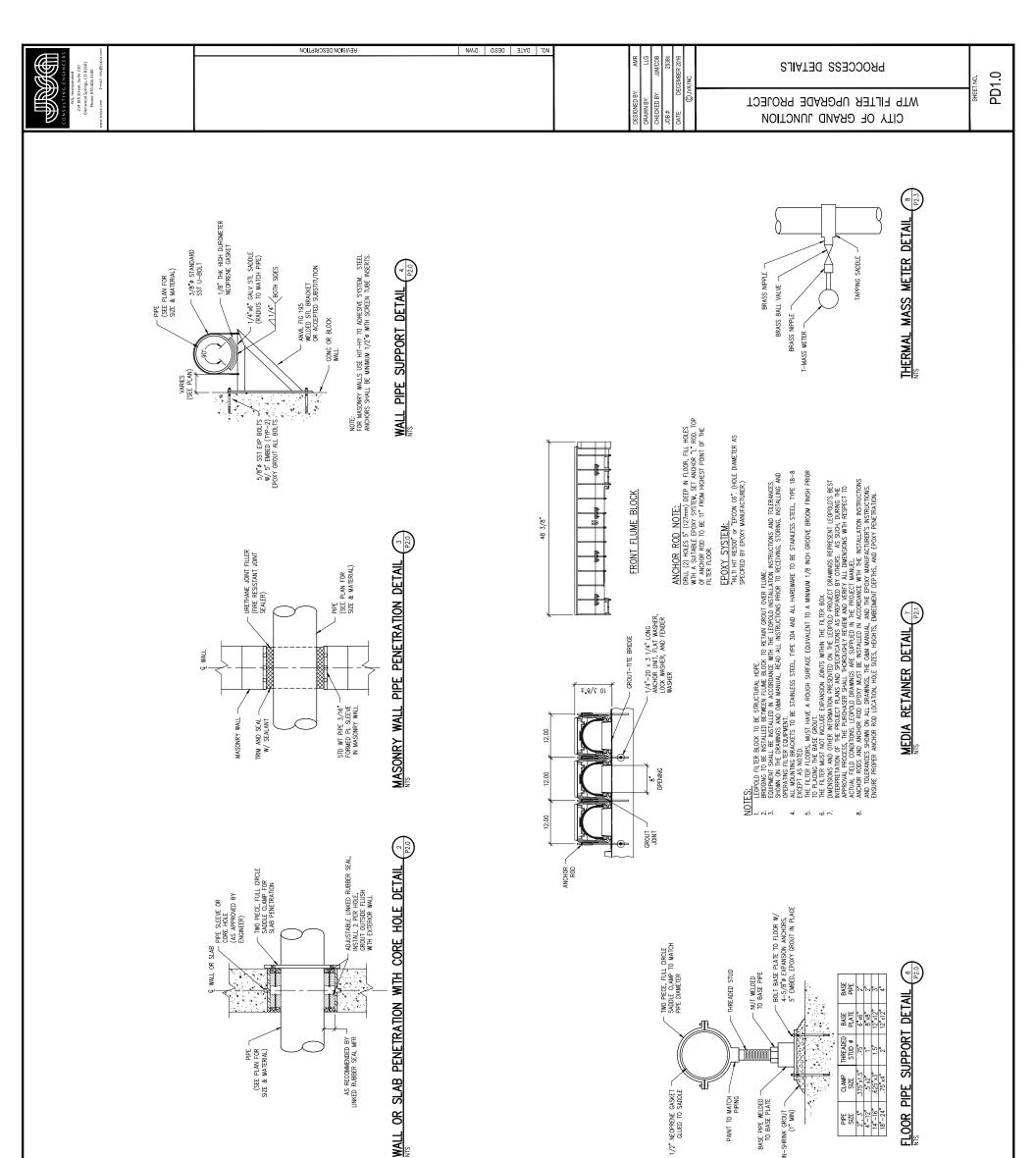












1/2" NEOPRENE GASKET -GLUED TO SADDLE

— PROVIDE WATER TIGHT SEAL BETWEEN PLATE AND ROOF PLATE 3/8"x8"x8" (GALV.)
TACK WELD NUT TO PLATE
AND PIPE HANGER

PATCH EXISTING ROOF -AS REQUIRED

PAINT TO MATCH — PIPING

- PAINT TO MATCH PIPING

CONNECT TO BAR JOIST W/ —
TOP BEAM C-CLAMP OR
UNISTRUT P 3253 COUC ANCHOR
WHERE APPLICABLE OR
CANTRUSS SYSTEM
WHERE APPLICABLE

EXISTING PRECAST CONCRETE -DOUBLE TEE ROOF

HANGER ROD

BASE PIPE WELDED TO BASE PLATE

— CLEVIS HANGER FED SPEC WW-H-1710 TYPE 43 OR ACCEPTED SUBSTITUTION

PIPE — (SEE PLAN FOR SIZE & MATERIAL)

NOTE: TOTAL LOADING ON EACH CONCRETE INSERT SHALL NOT EXCEED MANUFACTURE'S RECOMMENDED LOADINGS.

HANGER ROD ø

PIPE SIZE

3" & 4" 6" THRU 12"

PIPE HANGER DETAIL (5)

NON-SHRINK GROUT -(1" MIN)

AS RECOMMENDED BY . LINKED RUBBER SEAL MFR

CONCRETE HOUSEKEEPING PAD DETAIL (1)

NOTE:

BULL CONCRETE FLOOR 7/8° A6" A 112" OC,
BLOW HOLE CLEAN OF DUST AND DRT WITH OUT
HER COMPRESSED ARE. EPON'S RROLL REBAR
IN HOLE. ALLOW FOR REPORTE SET THAE PROR
TO POURING CONCRETE EQUIPMENT BASE.

PIPE -(SEE PLAN FOR SIZE & MATERIAL)

3/4" 1/5

"9

SEE NOTE

SIZE TO SUIT EQUIPMENT INSTALL ANCHOR BOLTS
TO SUIT EQUIPMENT

#4 @ 12" -

AN INDEPENDENT TEST AND BALANCE FRAM WHICH IS AABC OR NEBB CERTIFIED SHALL BE RETAINED FOR CHECKYEST-START-THE TESTING AND BALANCING OF AIR AND WATER SYSTEMS. THE TEST REPORT SHALL BE IN A FORMAT APPROVED BY AABC FOR SYSTEMS OF THIS TYPE AND COMPLEXITY. QUALIFOCATIONS OF INDEPENDENT TEST AND BALANCE FIRM SHALL BE SUBBILIED FOR REVIEW.

W \triangle

 ∇

BLOWER 2

BLOWER 1

4

abla

REVERSE ACTING THERMOSTAT AT 60"AFF

GENERAL NOTES	1. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE STATE CODES, LOCAL CODES, AND OWNER'S STANDARDS	INDICATED BY THE CONSTRUCTION DOCUMENTS.	MECHANICAL DRAWNIGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. REAMINGS ARE NOT TO BE SCALED FOR DIAGNSIGNAS, TARK ALL UNDISTONS FROM CERTIFEED EQUIPMENT DEARNISS AND FROM THE STRIPMENT FOR FERENCE FLABRICATION, ANY WARRA, VISPICY AND ISOLACE PERHIDIAGNATIVES COMPONATIVE, WITH OTHER PEARLY.	AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.	 CONTRACTOR SHALL COORDINATE WORK INDICATED WITH OTHER TRADES. VERIFY FIT OF WEDHANICAL SYSTEMS PRIOR TO FABRICATION. COORDINATE ALL WALL AND ROOF OPENING REQUIREMENTS BEFORE CONSTRUCTION. 	PROVIDE ALL EQUIPMENT SCHEDULED OR INDICATED ON THE DRAWINGS BUT NOT INCLUDED WITHIN THE SPECIFICATIONS INCLUDING	REQUIRED BUT NOT LISTED MISS ITENS NEEDED TO PROVIDE COMPLETELY OPERATIONAL SYSTEMS AS INDICATED WHETHER SPECKALLY CALLED FOR AN UNIT OF SHALL GONG FOR TO BANNENDATIONS AND APPLICABLE CODES. PROVIDE SUBMITIALS FOR ALL PROPOSED EQUIPMENT AND MATERIALS TO BE UTILIZED. PROVIDE OPERATION AND MANTENANCE MANUAL FOR ALL SYSTEMS AND EQUIPMENT AT END OF PROJECT.
	-		.2		К	4	
		NOTES	NOIES				
			OVERALL DIMENSIONS	1 1 1 1 2 × 40"DIA × 32" TALL	32.00		
				14.70	:		
OULE	MAX			000			AND
SCHEDULE	MAX						'ED BIRDSCREEN AND
AN SCHEDULE	ELEC. DATA MAX		WEIGHT (LBS)				MPER, GALVANIZED BIRDSCREEN AND

ELECTRICAL CHARACIENSTICS OF MECHANICAL EQUIPMENT SHALL BE VERIFED WITH ELECTRICAL DRAWNGS AND ELECTRICAL TOUR SCIONARCINE PROM EQUIPMENT SUBSTITUTION IS THE KESPONSBLITY OF THE CONTRACTOR FOR THE CONTRACTOR.

Ġ

RODF MOINTED FAN WITH 14" TALL ROOF CURB, ROTARY BELT TENSIONR, GRAVITY BACKDRAFT DAMPER, GALVANIZED BIRDSCREEN AND NEMA 1 PRE-WIRED DISCONNECT.

NOTES:

1/2 HP SIZE

8.0

596

.25

3,500

EXHAUS⁻

MAX FAN SONES

FAN

ESP

CFM

LOCATION/ SERVICE

MANUFACTURER/ MODEL

TEM

ERMOSTAT SET TO TURN FAN ON WHEN SPACE TEMPERATURE EXCEEDS 85 DEG. F.

AIR INTAKE LOUVER WHEN FAN OPERATES.

INTERLOCK EXHAUST FAN TO OPEN ALL L-1 OUTSIDE

PROVIDE MOTOR STARTER AND REVERSE ACTING THE

0 6

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AT THE COMPLETION OF WORK, PROVIDE TESTING AND BALANICING SERVICES FOR MECHANICAL SYSTEM. SUBMIT WRITTEN REDORT TO ENGREERE LISTING SYSTEMA MERILONS, ELECTRICA CHAIL, FURDERATURES, AND PRESSURE DROPS. ARE BALANCE REPORT REQUIRED PROPE TO SYSTEDURING FINAL MECHANICAL INSPECTION.

ALL EQUIPMENT, MATERALS, AND INSTALLATION IS TO BE WARRANTEED FOR ONE YEAR TO BE FREE FROM DEFECT. PROVIDE WRITTEN WARRANTY TO OWNER. THE OWNER AND ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM HIS WORK. THIS CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND SIZES OF ALL EXISTING EQUIPAENT, DUCTWORK, PIPING, ELECTRICAL CONDITY, STRUCTURAL MEMBERS, ETC., PROR TO STARTING OF CONSTRUCTION. COORDINATE CONFLICTS WITH THE GENERAL CONTRACTOR.

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AT THE COMPLETION OF THE WORK AND PRIOR TO FINAL ACCEPTANCE, ALL PARTS OF THE WORK INSTALLED UNDER THIS SPECIFICATION SHALL BE THOROUGHLY CLEANED.

PATCH AND REPAIR TO MATCH EXISTING, ANY WALL/CELLINGS/ROOF TO BE ACCESSED TO ROUTE PIPING, DUCTWORK, LOUVERS AND EXHAUST FAN.

MECHANICAL SPECIFICATIONS

THIS CONTRACTOR SHALL COORDINATE ALL REQUIRED EXISTING BUILDING SERVICE SYSTEM OUTAGES WITH BUILDING OWNER.

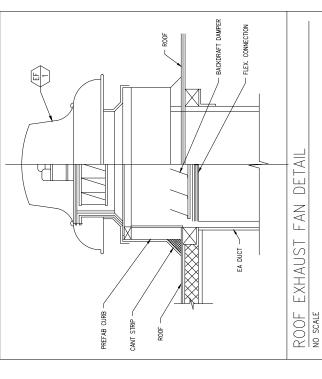
	NOTES	000		
	HEIGHT (IN)	42		
	MDTH (NI)	34		
HEDULE	% FREE AREA	1		
LOUVER SCHEDULE	MAX. PD (IN)	1		SCREEN
	CFM	1		ABLE BLADES, AND BIRD
	LOCATION/ SERVICE	WALL/ INTAKE		M GALVANIZED STEEL DRAIN
	MANUFACTURER/ MODEL	RUSKIN/ LC6375D	NOTES:	FURNISH WITH 18 GUAGE MINIMUM GALVANIZED STEEL DRAINABLE BLADES, AND BIRDSCREEN
	ITEM			0

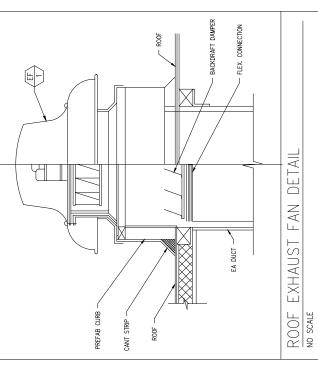
SIDE OF LOUVER.

PROVIDE BAROMETRIC BACKDRAFT DAMPER ON ROOM

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ROP CURB ASSEMBLES SHALL CONSST OF HEAVY GAUGE GALVANZED STEEL CONSTRUCTION, WITH INTEGRAL BASE PLATE, 3# DENSITY INSULATION AND 2 X 2 NAILER. DUCT HANGERS SHALL BE CONSTRUCTED OF ALUMINUM OR GALVANIZED STEEL TO MATCH DUCT MATERIAL, DUCTS SHALL BE SUPPORTED AND CONNECTED TO THE STRUCTURE PER IMC AND SMACNA DUCT CONSTRUCTION STANDARDS. EXHAUST AIR DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED STEEL PER SMACNA DUCT CONSTRUCTION STANDARDS. EXHAUST AIR DUCTWORK SHALL BE CONSTRUCTED FOR 1" W.C. STATIC PRESSURE. MECHANICAL EQUIPMENT SHALL BE SECURED AND INSTALED PER MANUFACTURERS RECOMMENDATIONS AND APPLICABLE SECTIONS OF THE JURISDICTIONAL BUILDING AND MECHANICAL CODES. REPLACE EXISTING 34" X 22" STORM LOUVER - WITH NEW 34" X 42" LOUVER. HOLD HEAD LOCATION AND REMOVE CALU BELOW EXISTING LOUVER TO MAKE ROOM FOR LARGER LOUVER





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GENERAL CONTRACTOR TO VERIFY
THE ROOF STRUCTURE CAN
SUPPORT THE NEW EXAMAZIS FAN
AND REINFORCE IF REQUIRED.
SUBBIN TEMPORONE PLAN TO
ENDAME ROR APPROVAL AT
LEAST TO DAYS PRIOR TO WORK

NEW EXHAUST FAN ON ROOF

EXTEND FULL SIZE DUCT THROUGH

25 Y.ZS "OPENING IN ROOF AND

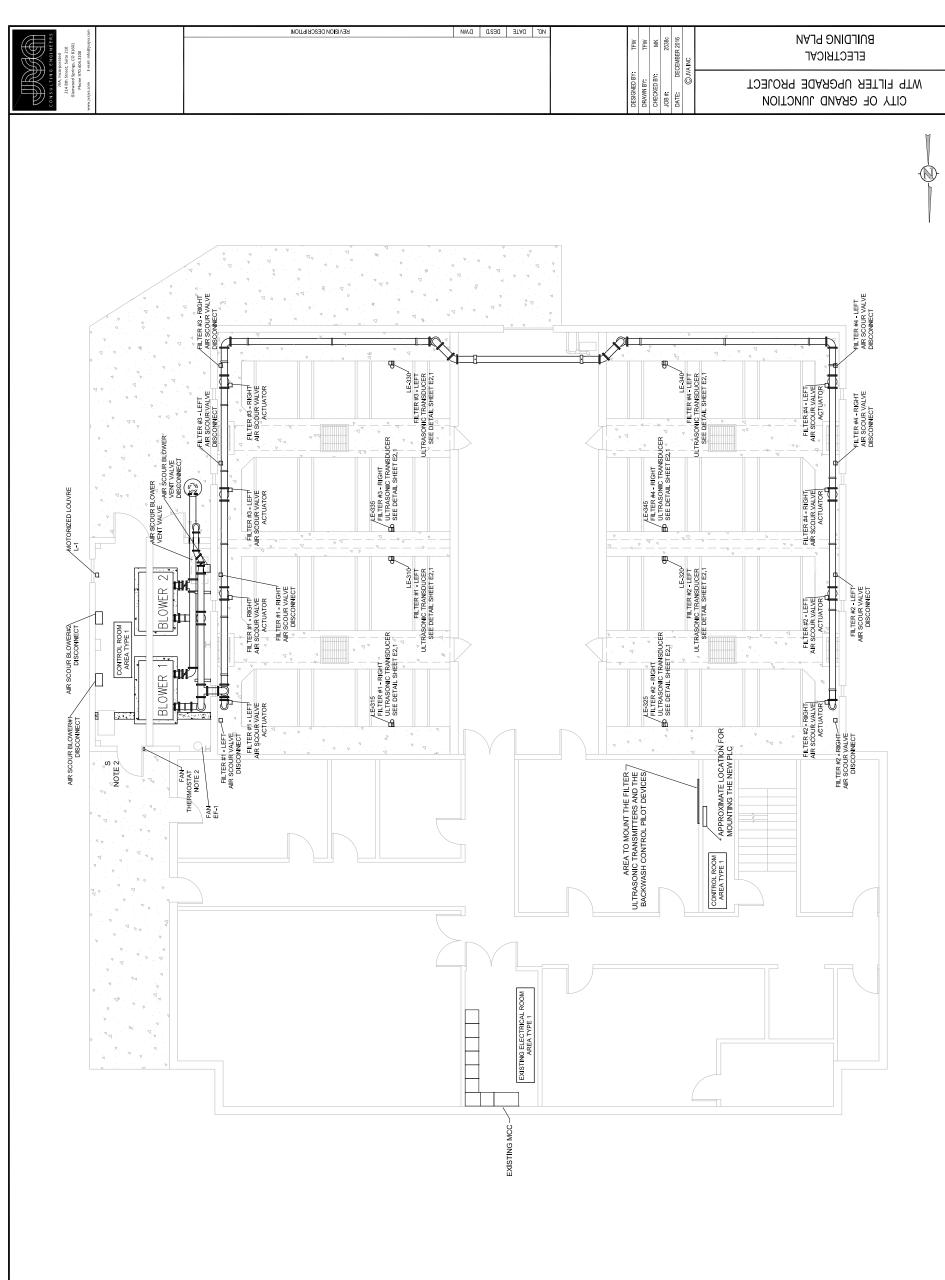
TERMINATE WITH GALVANIZE BIRD

SOREEN AT INLET

BLOWER ROOM MECHANICAL PLAN 1/2" = 1'-0"

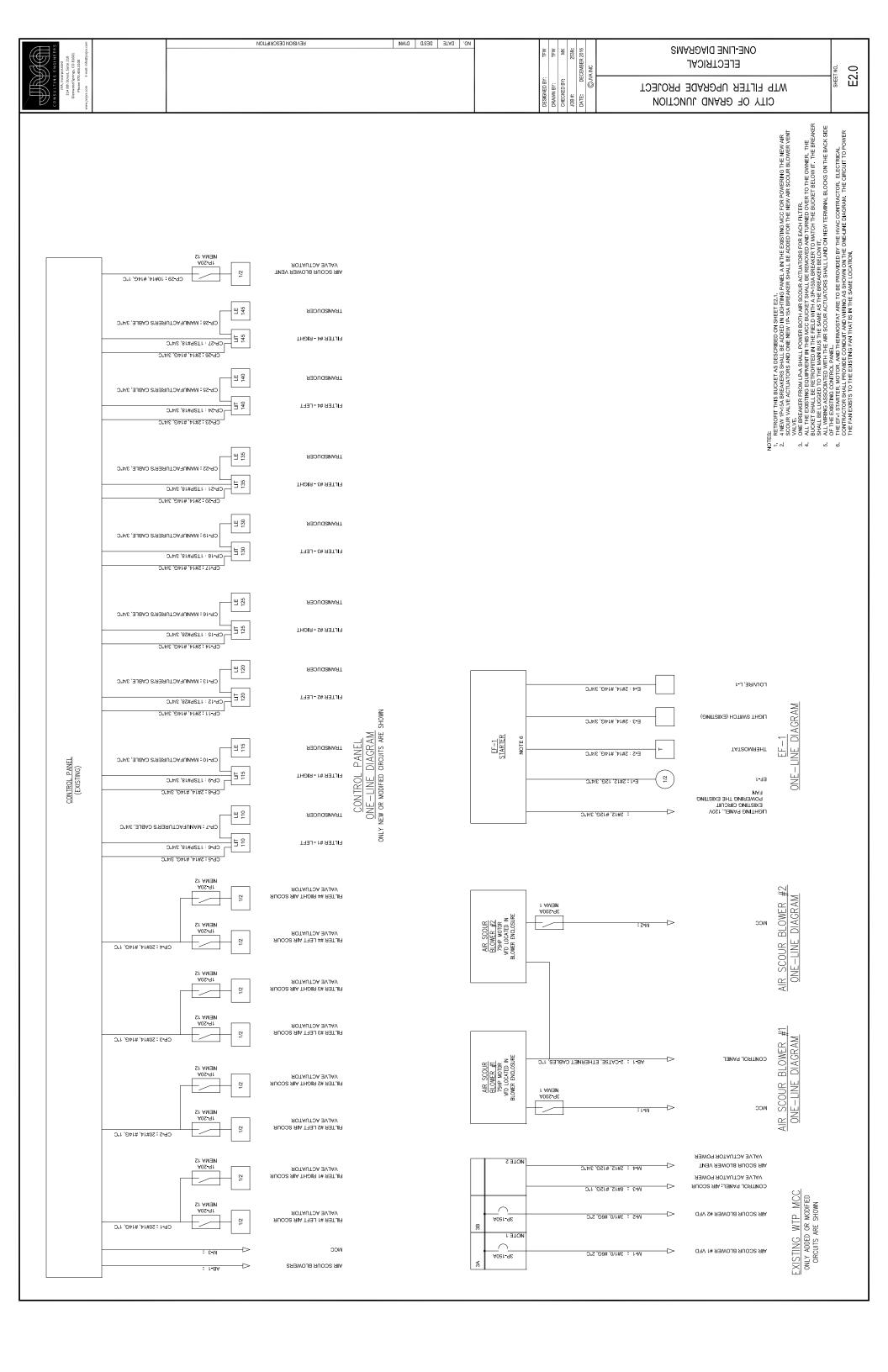
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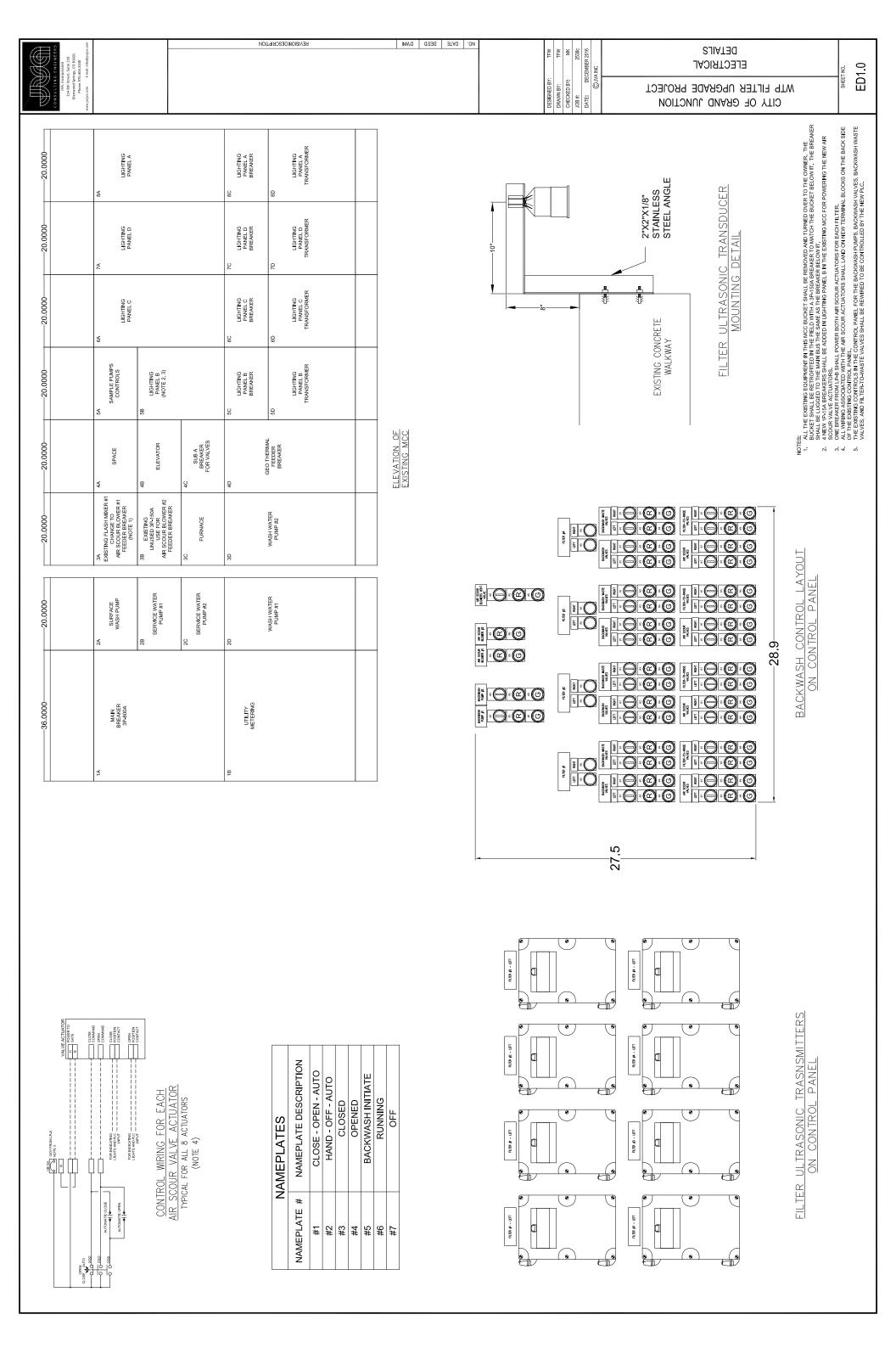
oorated 5, Sulte 210 85, CO 81601 104.3100 mail: into@jvajva.com	S HILL	NOIL	DE&D D.MN BENIZION DESCHIE	NO. DATE	TFW TFW MK 2538c EMBER 2016 NC	ELECTRICAL LEGEND	0 _N
JVA, Incorporat 214 8th Street, Sul Glenwood Springs, C Phone 970,4043; www.jvajva.com E-mall:	BROWNS HI Exemezence & Costr LITTETON, CO 80127 (720) 344-7771				DESIGNED BY: DRAWN BY: CHECKED BY: JOB #: DATE: DEC	CITY OF GRAND JUNCTION WTP FILTER UPGRADE PROJECT	SHEET NO.
AREA DESIGNATIONS	THE SPECIAL AREA DESIGNATION BOXES, AS DEFINED BELOW, ARE LOCATED ON THE PLAN DRAWNOS TO DEFINITION BOXES, AS DEFINED BELOW, SO BEINGEN BELOCATED ON THE PLAN DRAWNOS TO DEFINITION ROOM OF BELOW ROOM NUMBER. ALL INDOOR AREAS NOT INDICATED OTHERWISE ARE AREA TYPE 1 AND MINIMUM NEMA TYPE 1 ENCLOSURES. AREA TYPE 1 AND MINIMUM NEMA TYPE 1 ENCLOSURES. CONDUIT SYSTEM SHALL BE EXPOSED FOR RIGID NON-METALLIC CONDUIT WITH PVC FITTINGS, BOXES, AND ACCESSORIES. AND CONDUIT WITH AND TYPE 4 ENCLOSURE FOR EQUIPMENT AND GASKETED FITTINGS IN A CONTINUE OF THE PLANT OF	CONDUIT SYSTEMS CONDUIT CONDUIT SYSTEMS SHALL BE RATED FOR USE IN THIS AREA. SYSTEMS SHALL BE RATED FOR USE IN THIS AREA. AREA TYPE TO LACKS 1. DIVISION 2. GROUP C AND D (WETHANE, GASQLINE) AS DEFINED BY NEC. AREA TYPE TO LOURS 1. DIVISION 2. GROUP C AND D (WETHANE, GASQLINE) AS DEFINED BY NEC. AREA TYPE TO LOURS 1. DIVISION 3. GROUP C AND D (WETHANE, GASQLINE) AS DEFINED BY NEC. AREA TYPE TO CONSULT SYSTEMS. AREA TYPE TO GASGLINES FOR ALL EQUIPMENT AND GASKETED FITTINGS IN CONDUIT SYSTEMS. SHOULD BE PVC COATED RIGID GALVANIZED STEEL WITH PVC COATED FITTINGS, BOXES, AND STAINLESS STEEL HARDWARE.	GENERAL REQUIREMENTS THE CONTRACTOR SHALL BE RESPONSIBLE FOR POOTUNG ALL CONDUITS NOT SHOWN ON THE PLANS. THIS SHALL INCLUDE ALL CONDUITS SHOWN ON THE OPE-LINES AND HONE-RUNS SHOWN ON THE PLAN DRAWINGS. CONDUITS SHALL BE ROUTED AS DEFINED IN THE PLEND NOT THE PLAN DRAWINGS. CONDUITS SHALL BE ROUTED AS DEFINED BY WANUFACTIVERS HAS A LARGER LOAD THAN VALUE SHOWN. THE CABLE CONDUIT AND ELECTRICAL EQUIPMENT SHALL BE ENLARGED. AS REQUIRED. TO ACCOMODATE THE HIGHER VALUE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING PROPERLY SIZED STATTER OVERLOADS FOR EQUIPMENT FURNISHING.	SHOWN ON THE ONGLINES. CONDUCTORS FOR LIGHTING, RECEPTACLES, AND MINESTELLANDOUR PLANS ARE NOT SHOWN ON THE ONGLINES. CONDUCTORS FOR LIGHTING, RECEPTACLES, AND MINESTELLANDOUR TOWN CONTING SHALL BE MINIMUM NO. 12 AWG. CONDUIT FOR LIGHTING, RECEPTACLES, AND MINESTELLANDOUR TROUGH TOWN CONTING SHALL BE MINIMUM X; 6. IN AREAS WHERE THERE ARE OVERHEAD BRIDGE CRANES, HOISTS, ETC., NO CONDUITS SHALL BE RINN OVERHEAD THAT WILL INTERFERE WITH THE OPERATION OF THE EQUIPMENT.	SOLID LINES —— 1	4. THIS IS A GENERAL LEGEND SHEET. SOME SYMBOLS AND ABBREVIATIONS MAY NOT BE 1. THIS IS A GENERAL LEGEND SHEET. SOME SYMBOLS AND ABBREVIATIONS MAY NOT BE 1. UTILIZED ON THIS SPECIFIC PROJECT. 5. INFORMATION RELATED TO CIRCUIT DENTIFICATION, WIRE & CONDUIT SIZES, AND BOUTHING DRAWING DRAWING TYPES. A ONE-LINE DAGRAMS SHOW CIBCULT IDENTIFICATION, WIRE QUANTITY AND SIZES, AND CONDUIT SIZE WITHIN STRUCTURES. ONE-LINE DIAGSAMS ALSO INDICATE ORIGIN AND DESTINATION OF CIRCUITS. AND DENTIFY CIRCUITS ROUTED UNDERGROUND. B. FOR CIRCUITS WITHIN THOUSERSOUND POSTHORS, BULLDING FLOOR PLANS SHOW CIRCUITS AND UDGATIONS. AND DESTINATION OF CIRCUITS AND DESTINATION OF CIRCUITS AND DETERMINAC CIRCUIT SPAN SHOW STRUCTURE PART STRUCTURE FOR CINCUITS ARE SHOWN ON STRUCTURE PLANS FOR DETERMINACING HELE LEAKTH OF INDERGROUND CONDUITS ARE SHOWN OF CIRCUITS. C. SITE PLANS INDICATE THE GENERAL ROUTING OF UNDERGROUND CONDUITS AND DUCT BANKS CIRCUITS ROUTED IN UNDERGROUND CONDUITS ON DUCT BANKS ARE INDICATED IN DUCT BANKS CIRCUITS ROUTED IN UNDERGROUND CONDUITS ON DUCT BANKS ARE INDICATED IN UNDERGROUND CONDUITS. ARE STAND ARE SAND ARE STAND ARE STAND ARE STAND ARE STAND ARE STAND ARE SAND ARE STAND ARE STAND ARE SAND AND ARE SAND ARE SAND ARE SAND AND AND ARE SAND AND AND AND AND ARE SAND AND AND AND AND ARE SAND AND AND AND AND AND AND AND AND AND)
ATIONS	A AMBER, AMPRE, ALARM RECP RECEPTACLE AC ALTERNATING CURRENT RS3 RIGID GALVANIZED STEEL ADD ADJUSTABLE FREQUENCY RTD RESISTANCE TYPE TEMP DRIVE AFF ABOVE FINISHED FLOOR RTU REMOTE TERMINAL UNIT AM AMMETER RYSS REDUCEOVOLTAGE SOLID ATO AUTOMATIC THROWOVER S2 SIZE 2 STARTER C CLOSE, COUNTER, SCADA SUPERVISORY CONTROL AND CONTACTOR SPD SINISHE OLIG	COUTROL DAMPER SPET CROUNTSOL PANEL SS CONTROL PANEL SWB CONTROL POWER SWB CONTROL POWER SWB CONTROL POWER SWB CONTROL POWER THANSPORMER TRANSPORMER TRANSPORMER TRANSPORMER TRANSPORMER TRANSPORMER TRANSPORMER TRANSPORMER TRANSPORMER TOD 2 CONDUCTOR TEMP DIRECT CURRENT TEMP DIRECT CURRENT TOD 3 CONDUCTOR TEMP DIRECT CURRENT TOD CONDUCTOR TOD METTER MOTOR, DEMAND UPS COUGUE FOR EDOUBLE FIRE VOICE TOD COUGUE FOR EDOUBLE FIRE VOICE	DIPERENTIAL PRESSURE VIS BUSCONNECT SWITCH VIS BUSCONNECT SWITCH VIS BUSCONNECT SWITCH VIS CONTROL DAMPER OR VALVE WH ELAPSED TIME METER XFMR ELAPSED TIME WETER Y FLOW SWITCH GRANDLIN SWITCH HIGH HUMDISTAT HAND-OFF-AUTO HAND-OFF-REMOTE HIGH MOTOR TEMPERATURE HIGH WOTOR TEMPERATURE HIGH WOT	KILCO KILCO		PLC PROGRAMMABLE LOGIC PP CONTROLLER PS PRESSURE SWITCH PT POTESTURE ROGRAM THANSFORMER, PROGRAM THANSFORMER, PROGRAM THEN THANSFORMER, PROGRAM REVERSE RED RAISE, RELAY, REVERSE	
	WHEE CONNECTION POINT NORMALLY OPEN CONTACT STARTER, CONTACTOR OR RELAY COIL NORMALLY OPEN PUSH BUTTON MODANALLY CHOREN BIRKED BIRKED NORMALLY OPEN PUSH BUTTON AND	F % & % \$ * *	SWITCH WISTANDER SWITCH (NORMALLY OPEN) OVERLOAD OVERLOAD PLOAT SWITCH (CLOSING ON RISING CLOSED) LEVEL) PRESSURE SWITCH (OPENING ON RISING PRESSURE SWITCH (OPENING ON RISING PRESSURE SWITCH OFFICE PROPERSOR (NORMALLY OPEN, CLOSED, HELD OFFICE PROPERSOR (NORMALLY OPEN, CLOSED) OFFICE PROPERSOR (NORMALY OPEN, CLOSED) OFFICE PROPERSOR (NOR	SWITCH & OUTLET SYMBOLS \$\(^{2}\) SINGLE POLE SWITCH, A=SWITCH DESIGNATION \$\(^{2}\) TWO POLE SWITCH, A=SWITCH DESIGNATION \$\(^{2}\) THREE-WAY SWITCH, A=SWITCH DESIGNATION \$\(^{2}\) WEATHERPROOF SWITCH, A=SWITCH DESIGNATION \$\(^{2}\) WEATHERPROOF SWITCH, A=SWITCH DESIGNATION \$\(^{2}\) KEY OPERATED SWITCH, A=SWITCH DESIGNATION \$\(^{2}\) KEY OPERATED SWITCH, A=SWITCH DESIGNATION	S [™] EXPLOSION PROOF SWITCH, A=SWITCH DESIGNATION ⊕ DUPLEX RECEPTAGLE 120 VOLT ② AMPERE RATING NOTED 480V. 3 PHASE WELDING RECEPTAGLE. ↑ TYPICAL AMPERE RATING NOTED	MISCELLANEOUS SYMBOLS ↑ THERMOSTAT JUNCTION BOX LOMBINATION STARTER COMBINATION STARTER LIGHTING PANEL MISCELLANEOUS PANEL	
ONE LINE DIAGRAM LEGEND		MAY NOT FEE MAY NOT ALL SHOWN MAY NOT ALL OF MAY NOT MAY NOT FEE MAY NOT MAY N	SIZE 4 COMBINATION MAGNETIC MOTOR STARTER. (HTD->	CONDUIT & WIRING INSTALLATION LEGEND CONDUIT CONDUIT EXPOSED.	CONDUIT TURNING UP, CONDUIT TURNING DOWN. CONDUIT PLUGGED FLUSH, CONDUIT CAPPED. TYPICAL FOR HOME RUN TO BE ROUTED TO L25, LIGHTING PANEL L2 AND CONNECTED TO CIRCUIT ## [MINIMUM NO. 12 AWG CONDUCTORS & 3/7] CONDUIT.) M LIGHTING FIXTURE. REFER TO NUMBER OR LETTER IN FIXTURE SCHEDULE.	THOMBER OR	

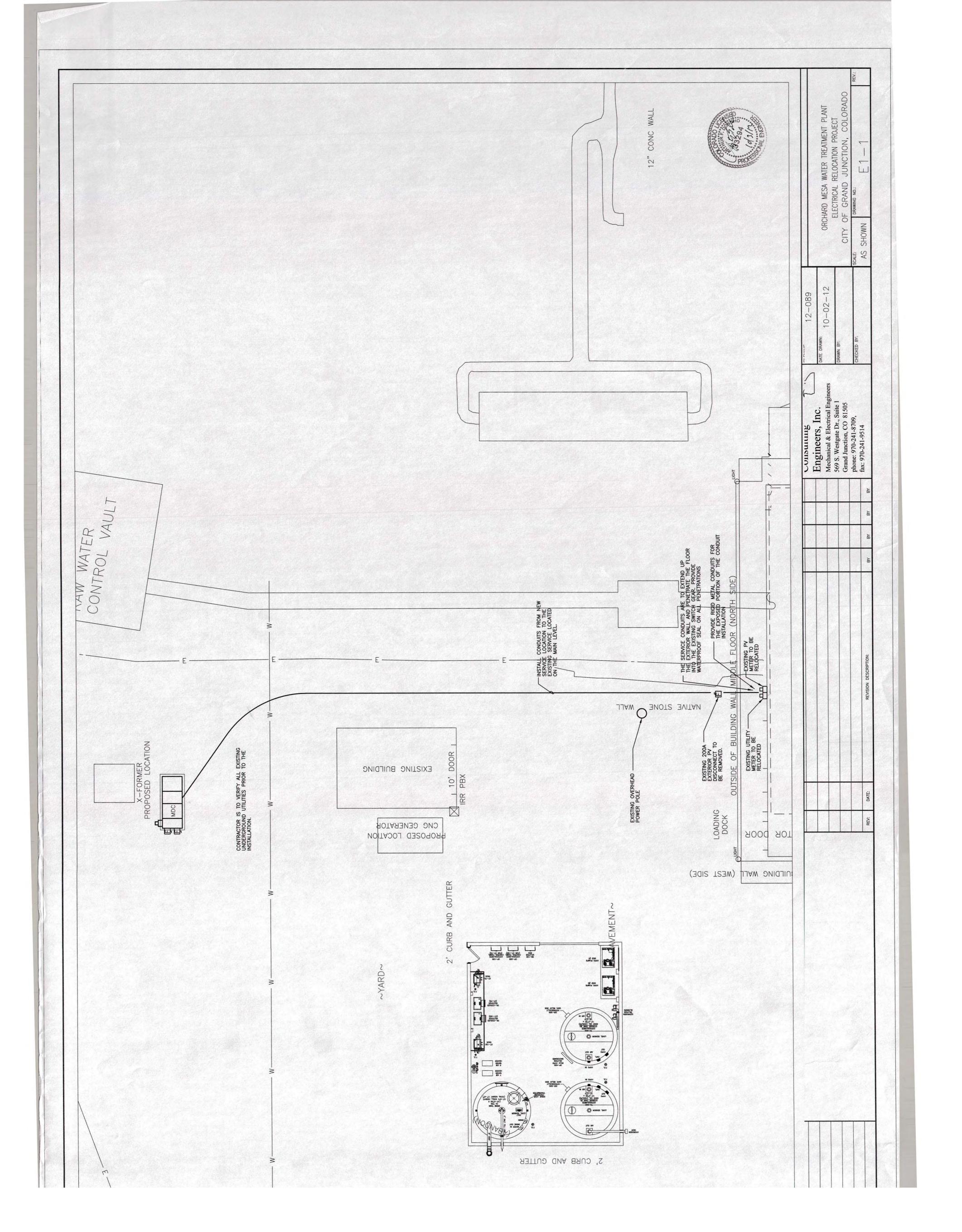


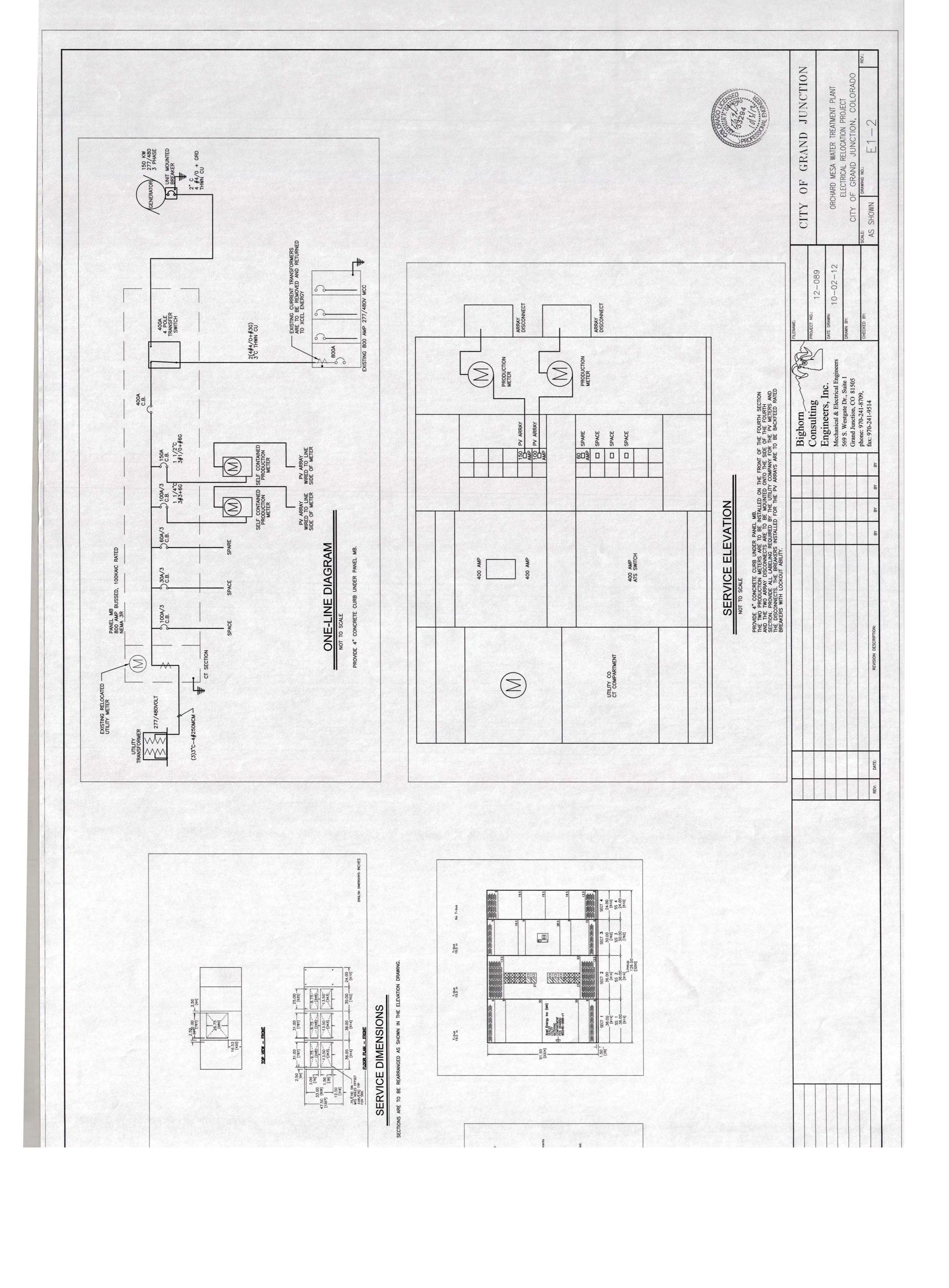
PROCESS PLAN 3/16" = 1'-0"

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GRAND JUNCTION WTP

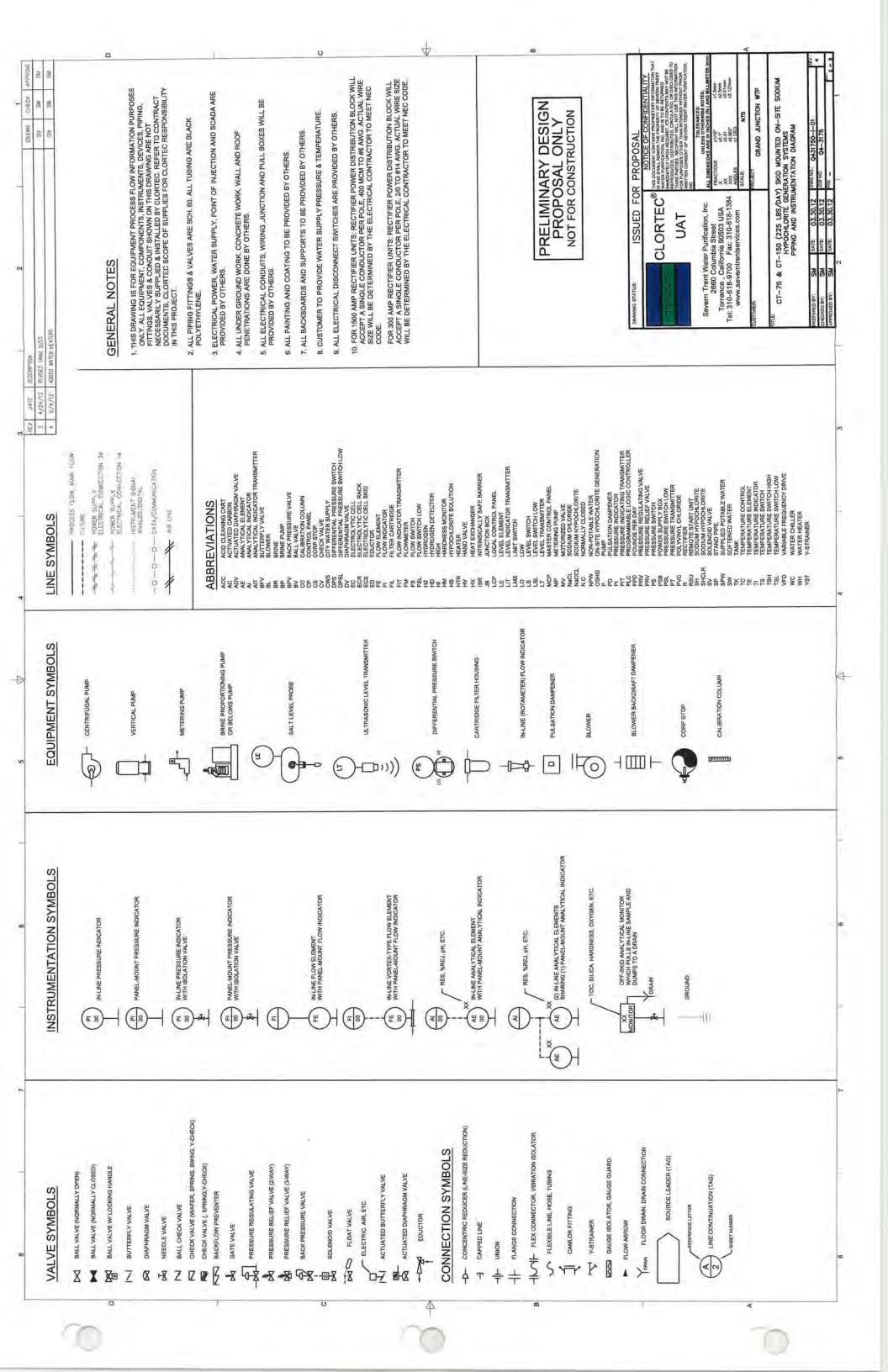
CT-75 & CT-150 SKID MOUNTED

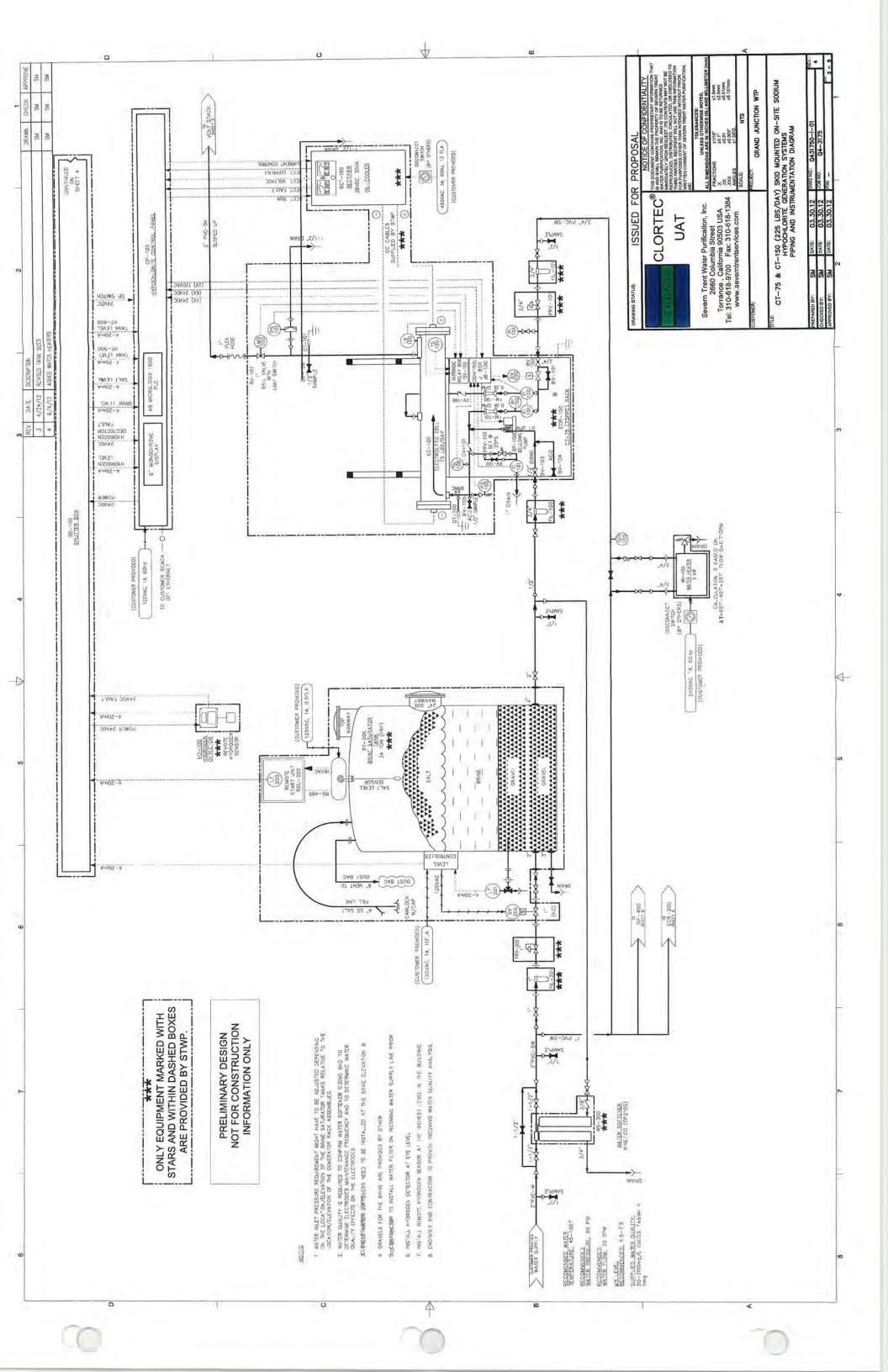
ON-SITE SODIUM HYPOCHLORITE GENERATION SYSTEMS

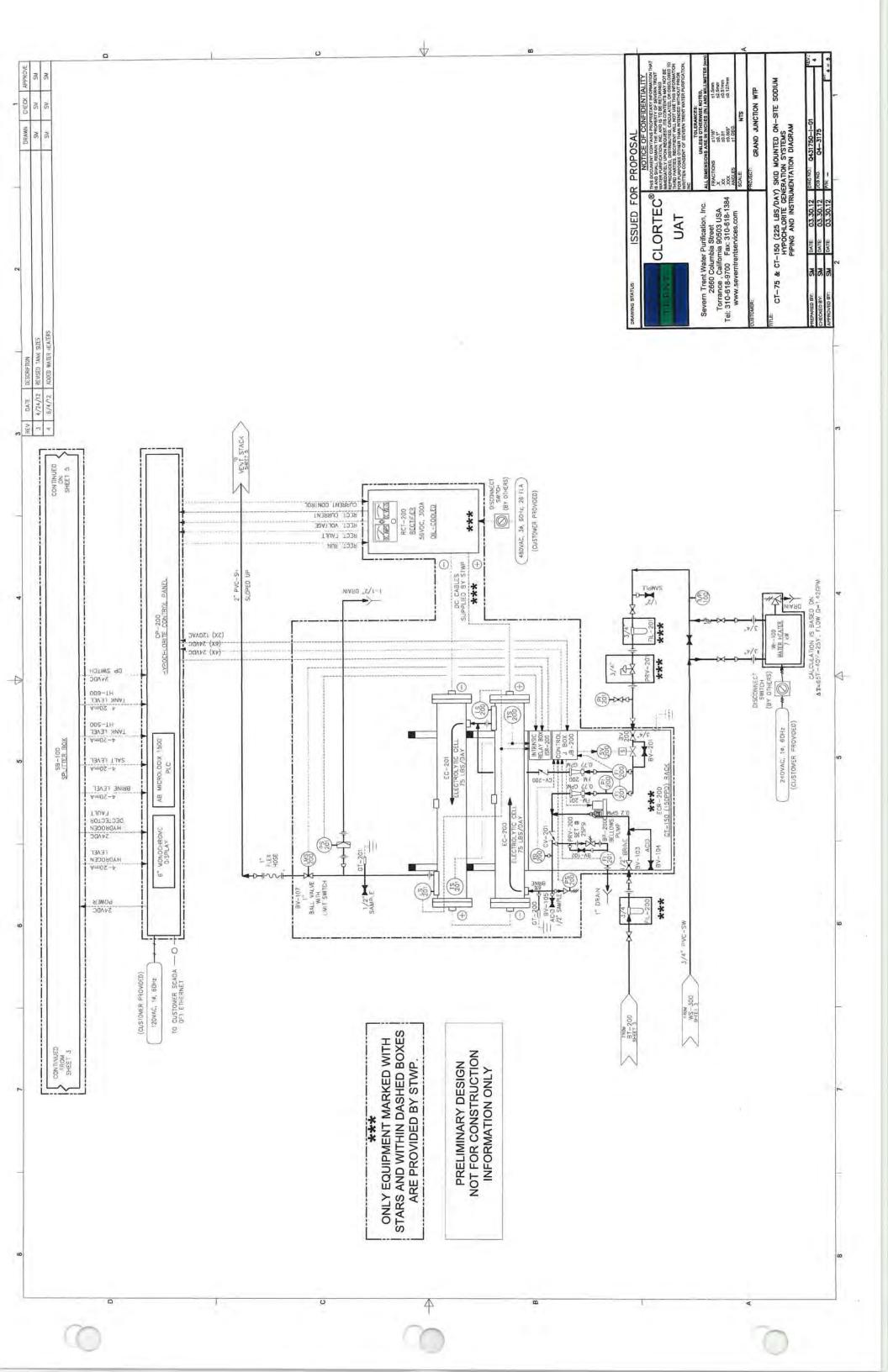
ING AND INSTRUMENTATION DIAGRAM

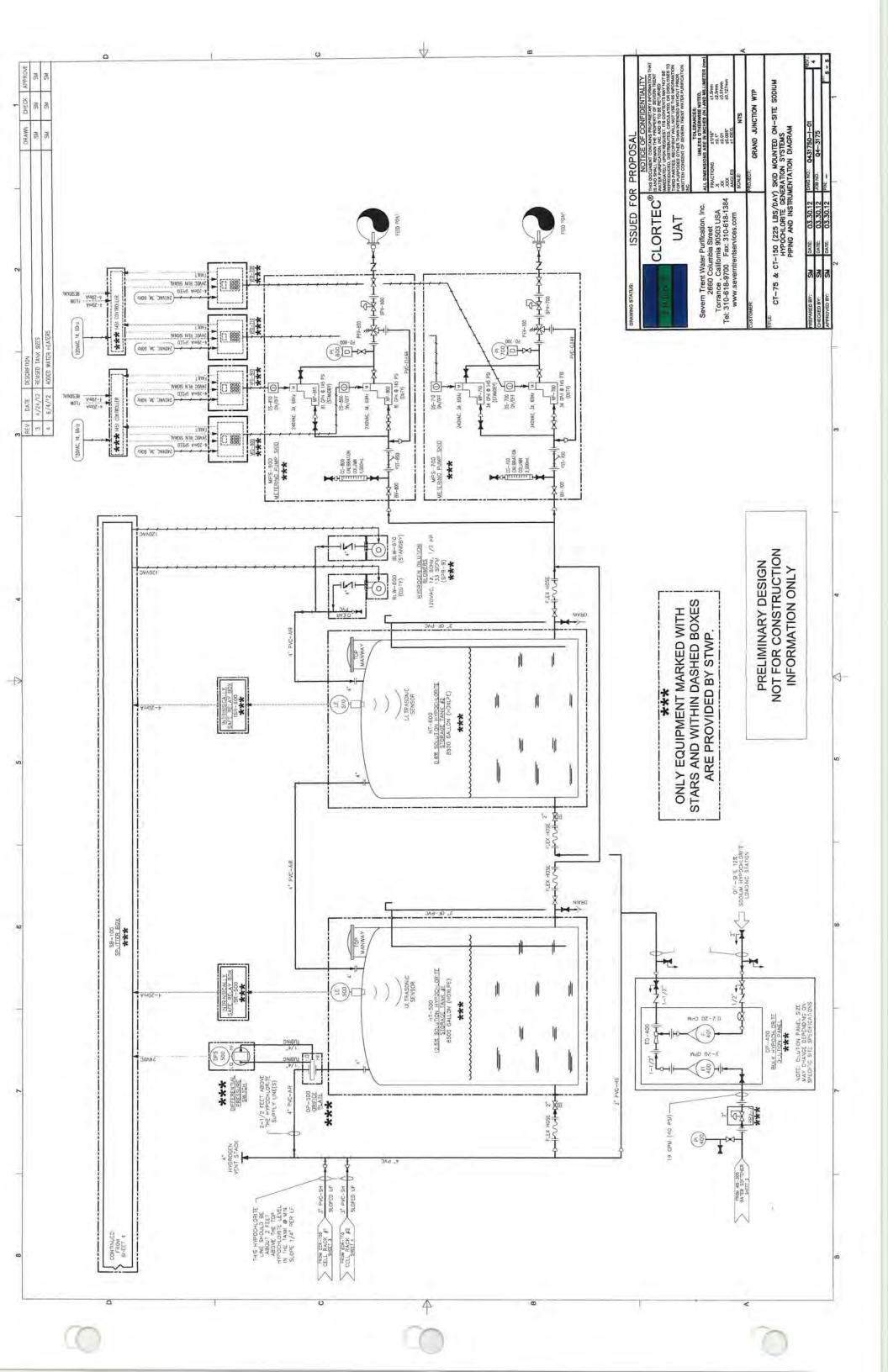
PRELIMINARY DESIGN PROPOSAL ONLY NOT FOR CONSTRUCTION

CLORTEC By The Deciment of The Market Purification Inc. Severn Trent Water Purification Inc. 2660 Columbia Street Torrance, California 90503 USA www.severntrentservices.com Tel: 310-618-3700 Www.severntrentservices.com Title: CT-75 & CT-150 (225 LBS/DAY) SKID MOUNTED ON-SITE SODIUM HYPOCHCRITE GENERATION SYSTEMS PROJECT: READ MOUNTED ON-SITE SODIUM HYPOCHCRITE GENERATION SYSTEMS READ MOUNTED ON-SITE SODIUM HYPOCHCRITE SYSTEMS READ MOUNTED ON-SITE SODIUM HYPOCHCRITE GENERATION SYSTEMS READ MOUNTED ON-SITE SODIUM READ MOUNTED ON-SITE SODIUM READ MOUNTED ON-SITEMS READ MOUNTED ON-SITEMS READ MOUNTED O	DRAWING STATUS:	iš.	S	ISSUED FOR PROPOSAL	R PROP	OSAL	
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Trent Water Purification, Inc. 1660 Columbia Street 1660 Columbia Street 168-9700 Fax: 310-618-1384 18-9700 Fax: 310-618-1			ر	JAT	REPRODUCED, DI THIRD PARTIES, P FOR PURPOSES WRITTEN CONSEN	STRIBUTED, CIRCUL, ECPRENT WILL NOT DITHER THAN INTEND NT OF SEVERN TREN	ATED, OR DISCLOSED TO USE THIS INFORMATION ED WITHOUT PRIOR OF WATER PURIFICATION,
1860 Columbia Street 10e, California 90503 USA 118-8700 Eax: 310-618-1384 118-8700 Eax: 313-312 118-8700 Eax: 31	Severn T	rent Wat	er Purific	cation, Inc.	ALL DIMENSION	TOLERANCI UNLESS OTHERWIS S ARE IN INCHES (ES: SE NOTED, IN.) AND MILLIMETER (m
SCALE NTS	Ze Torrand Tel: 310-61	360 Colur ce , Calife 18-9700	mbia Str ornia 905 Fax: 31	eet 503 USA 10-618-1384	FRACTIONS X XX XXX XXX ANGLES	±1/16 ±0.17 ±0.01 ±0.005 ±1.0EG	±1.5mm ±2.5mm ±0.51mm ±0.127mm
75 & CT-150 (225 LBS/DaY) SKID MOUNTED ON-SITE SODIUM HYPOCHLORITE GENERATION SYSTEMS PIPING AND INSTRUMENTATION DIAGRAM SM DATE 03.30.12 DWG NG: Q4.31750-1-01 SM DATE 03.30.12 PPR -	www	Severing	al lisei vic	as coll	SCALE	NTS	
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	APPROVED BY:	NS	DATE	03.30.12	- :Nid		- I -









Appendix C

Equipment layout

2 05-23-12 CHANGED ROOM DIM, RELOCATED SALT FILL LINE &ROOL-UP DOOR, ADDED SIDE DOOR JPM JPM 3 06-03-12 RELOCATED DOUBLE DOORS & DILUTION PANEL, ADDED PANELS/DISC. SW./AFDs JPM JPM JPM

GRAND JUNCTION WTP

CT-150 (225 LBS/DAY) RACK MOUNTED CT-75

SODIUM HYPOCHLORITE GENERATION SYSTEM ON-SITE

EQUIPMENT LAYOUT

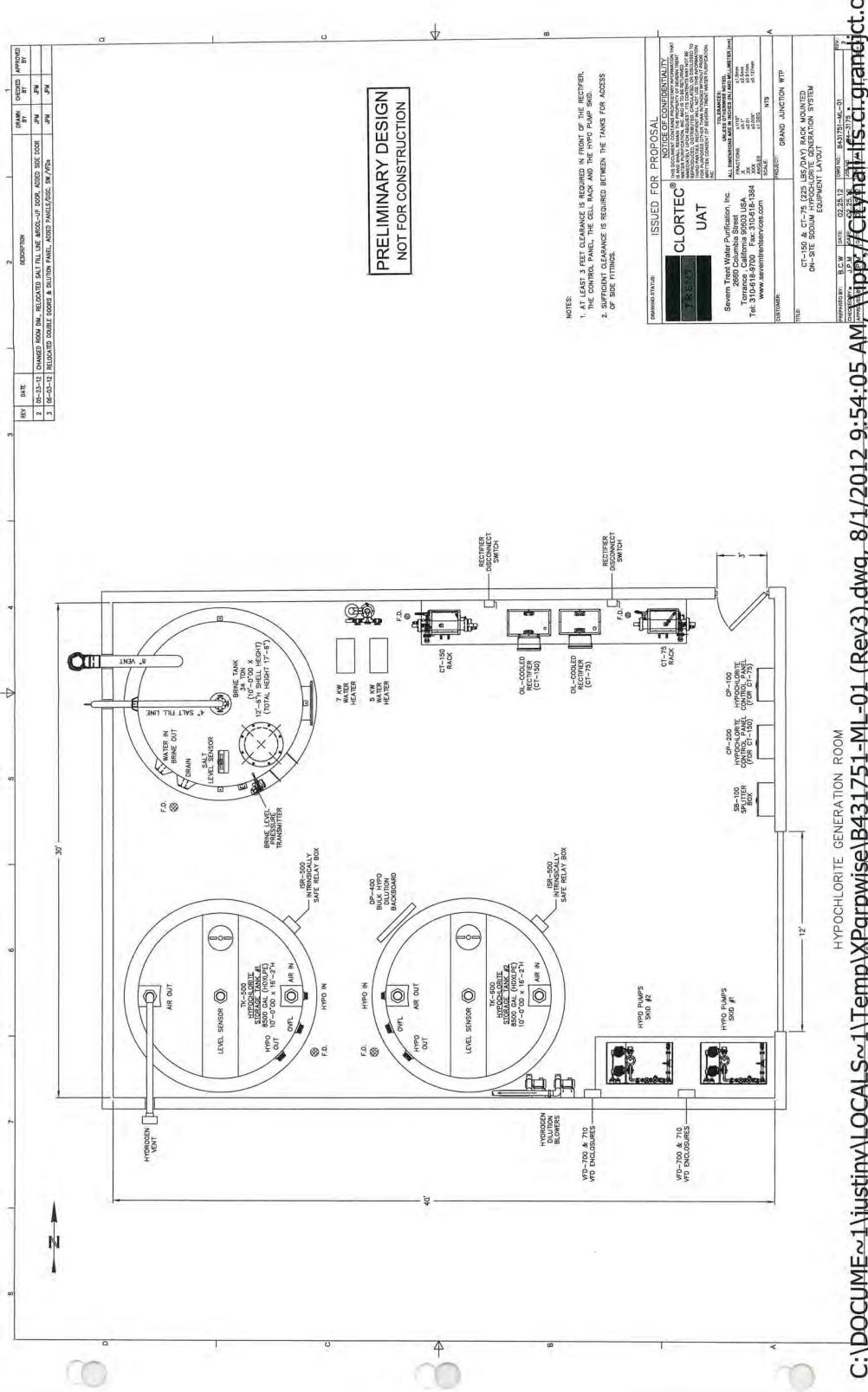
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DRAWING STATUS: ISSUED FOR PROPOSAL

NOTICE OF CONFIDENTIALITY

NOTICE OF C

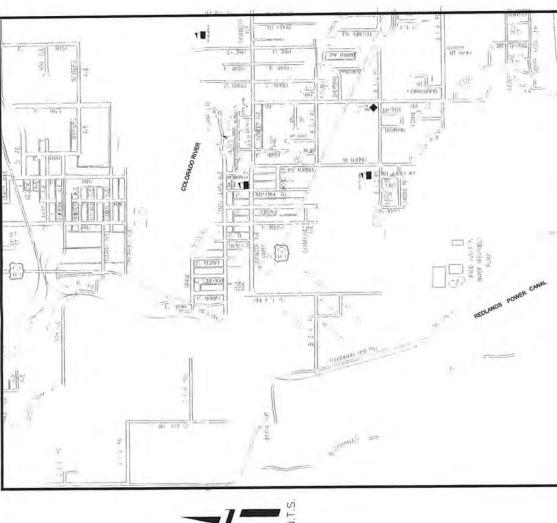
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VICINITY MAP T PLANT ITE SYSTEM ON-SITE HYPO CHLORI

Project Control MapARCHITECTURALSTRUCTURAL PIPING SCHEMATIC Cover Sheet ELECTRICAL
MECHANICAL





DRAWING STATUS



GRAND JUNCTION, CITY OF REET GUILLORY UTILITY ENGINEER SANITARY SEWER 250 N, 5th STREET 250 N. 5th STREET CASO GRAND JUNCTION, CITY OF GRAND JUNCTION, CO 81504 (970) 244-1590 (970) 245 U.S. WEST/OWEST CHRIS JOHNSON ENGINEER UNIT MANAGER CAS, ELECTRIC 2538 BLICHMANN AVE GRAND JUNCTION, CO 81505 (970) 244-2656 (970) 244 CELL DARYL MODRE JUNCTION, CITY OF GRAND JUNCTION, CO 81506 (970) 244-2656 (970) 244 GRAND JUNCTION, CITY OF GRAND JUNCTION, CO 81506 (970) 244-2656 (970) 244 GRAND JUNCTION, CO 81506 (970) 244-2656 (970) 244 GRAND JUNCTION, CO 81506 (970) 244-2656 (970) 244 GRAND JUNCTION, CO 81506 (970) 244-2656 (970) 244-2656 (970) 244 GRAND JUNCTION, CO 81506 (970) 244-2656 (970) 244-2656 (970) 244 GRAND JUNCTION, CO 81506 (970) 244-2656 (970) 244-2656 (970) 244 GRAND JUNCTION, CO 81506 (970) 244-2656 (970) 244-2656 (970) 244-2656 (970) 244 GRAND JUNCTION, CO 81506 (970) 244-2656 (970) 244-2656 (970)	D JUNCTION, CITY OF REET CUILLORY UTILITY ENGINEER PROJECT ENCINEER 250 N. 5th STREET 250 N. 5th STREE
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NAN CHUCK WEIDMAN, MANAGER CABLE TV 2502 FORESIGHT CIRCLE 2502 FORESIGHT CIRCLE GRAND JUT., CO 81504 WEST/OWEST CHRIS JOHNSON ENGINEER TELEPHONE 2524 BLICHMANN AVE 2524 BLICHMANN AVE GRAND JUT., CO 81504 WATER DARYL MODRE SUPERVISOR WATER CAS, ELECTRIC 2538 BLICHMANN AVE GRAND JUT., CO 81506	D VALLEY IRRIGATION CO. PHIL BERTRAND IRRIGATION IRRIGATION 688 26 ROAD 688 26 ROAD GRAND JCT., CO 81508 NAN CHUCK WEIDMAN MANAGER CABLE TV 2502 FORESIGHT CIRCLE 2502 FORESIGHT CIRCLE CRAND JCT., CO 81504 WEST/OWEST CHRIS JOHNSON ENGINEER TELEPHONE 2524 BLICHMANN AVE GRAND JCT., CO 81504 WATER DO BORY LAGO BOR ASO GRAND JCT., CO 81502
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Grand Junction	DAN STENKIRCHWER UNIT MANAGER GAS, ELECTRIC 2538 BLICHMANN AVE 2538 BLICHMANN AVE

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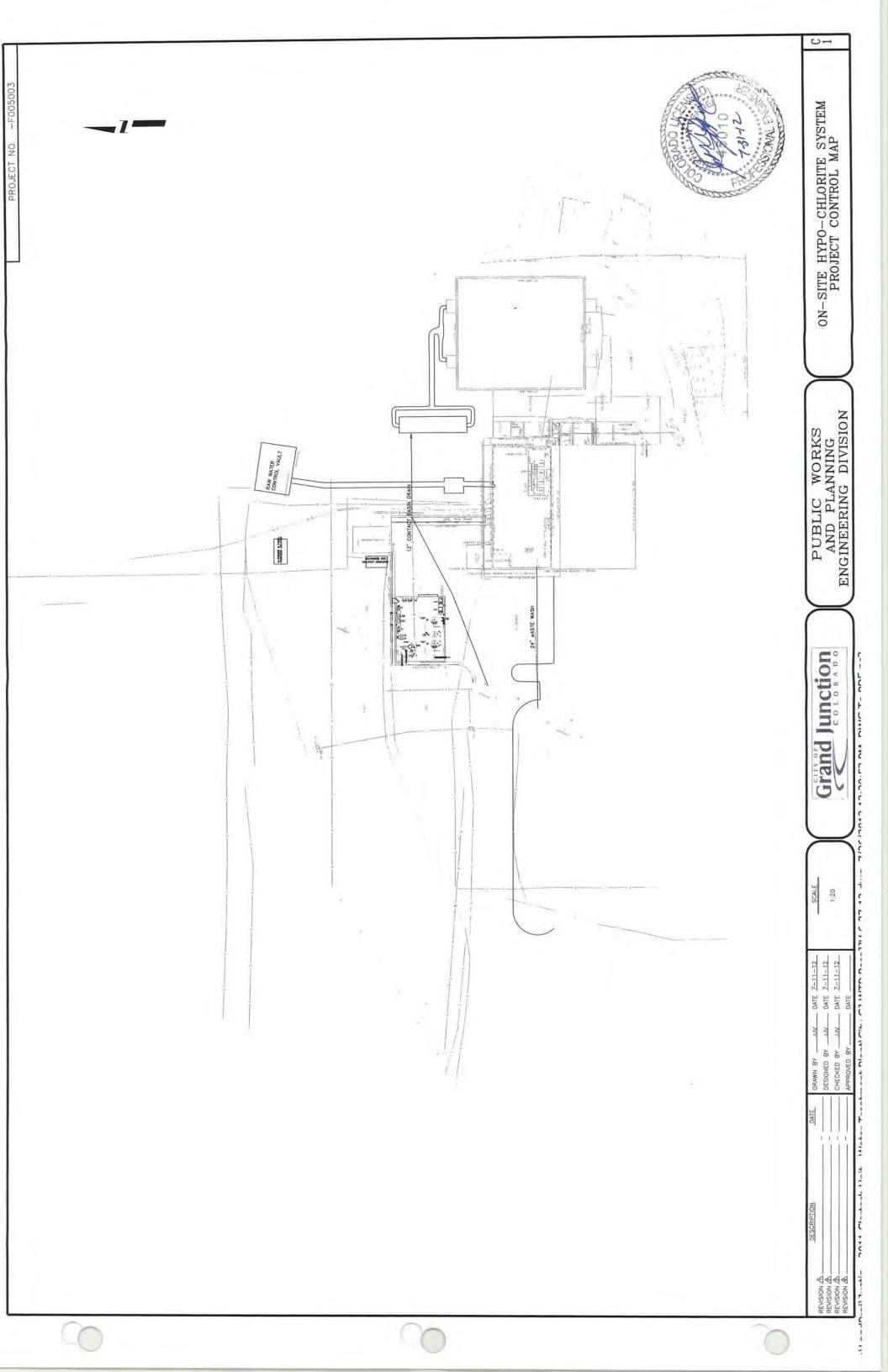
UTILITIES AND AGENCIES

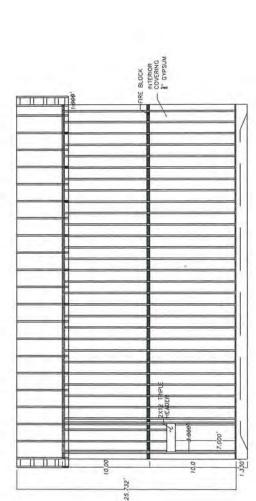


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Engineering Division

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BUILDING PROFILE VIEW LOOKING SOUTH SCALE 1:5

SCALE N.T.S. DATE DATE DESIGNED BY CHECKED BY APPROVED BY DRAWN BY

Grand Junction

PUBLIC WORKS AND PLANNING ENGINEERING DIVISION

ON-SITE HYPO-CHLORITE SYSTEM ARCHITECTURAL

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PROJECT NO. F005003

CENERAL NOTES

LIVE LOADS USED IN DESIGN
A ROOF (SHOW)
B. MAND
C. EVPOSURE
BUILDING CATEGORY
V. 35
V. MT.

CONCRETE SHALL DEVELOPE 4,000 PSI COMPRESSIVE STRENGTH IN 28 DAYS.

9. ALL REPROFICEMENT SHALL CONFOSAT DS STAN ASSIS, DEMANGE 50.

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5. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

SLOPE TO FLOOR DRAIN

- TYPICAL

2" X 6" VERSALAM STUDS 16" O.C. #4 @ 18" O.C. EACH WAY 2' X 6' SEALPLATE 8" X 2" J-BOLT FINISH FLOOR ELEVATION 4816.25 STD. 90 HOOK STRUCTURAL CONCRETE 4000 PSI MINIMUM

Grand Junction SCALE N.T.S. DATE 7-11-12

DATE 7-11-12

DATE 7-11-12

PUBLIC WORKS AND PLANNING ENGINEERING DIVISION

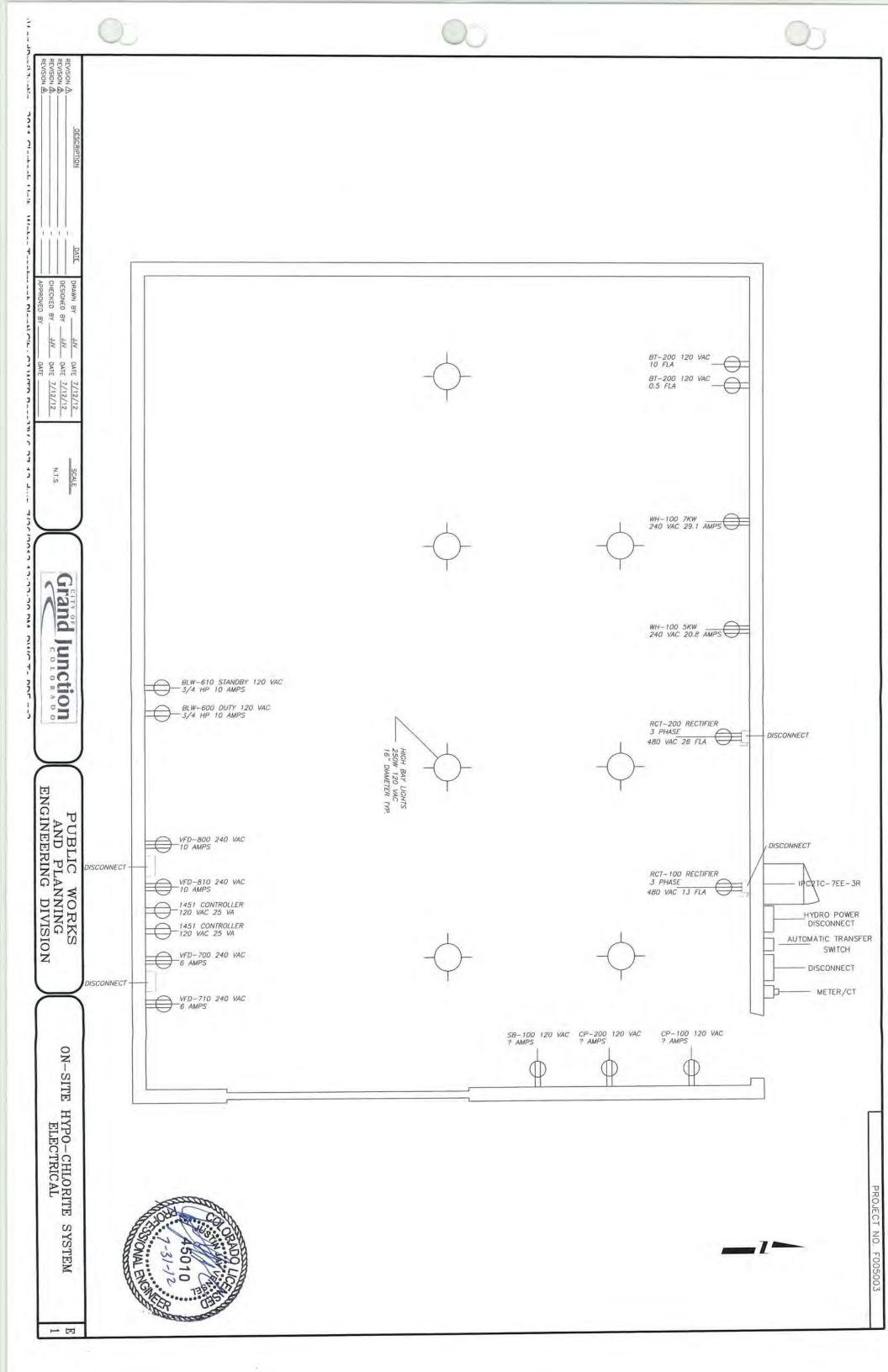
ON-SITE HYPO-CHLORITE SYSTEM STRUCTURAL

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Grand Junction THERMOSTATS (LOW VOLTAGE)

AND PLANNING ENGINEERING DIVISION

ON-SITE HYPO-CHLORITE SYSTEM ELECTRICAL

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