

**RANCHO MURIETA COMMUNITY
SERVICES DISTRICT**

**WASTEWATER TREATMENT FACILITY
SODIUM HYPOCHLORITE
IMPROVEMENTS/CHLORINE CONTACT
BASIN EXPANSION – PHASE 1**



ADDENDUM NO. 1

September 24, 2024

**RANCHO MURIETA COMMUNITY SERVICES DISTRICT
WASTEWATER TREATMENT FACILITY
SODIUM HYPOCHLORITE IMPROVEMENTS/
CHLORINE CONTACT BASIN EXPANSION – PHASE 1
ADDENDUM NO. 1**

DATED: September 24, 2024

This addendum forms part of the Contract Documents and modifies the original Plans and Specifications. **Bidders shall acknowledge receipt of this Addendum by signing the attached acknowledgement, including the acknowledgement in their bid proposal, and acknowledging in the appropriate area of Section 00300, BID FORM.** Failure to include the acknowledgement with their bid may subject the bidder to disqualification.

Bidders are urged to review the plan sets carefully to ensure all plans and specifications are included in the contract documents. If specific plan drawings or specification sections are missing, contact:

Dave Richard, PE
Principal Engineer
Dewberry Engineers Inc.
11060 White Rock Road, Suite 200
Rancho Cordova, CA 95670
Email: drichard@dewberry.com

Future bid-related questions may require clarification via an addendum while other questions may not. The District will provide bid-related questions and answers on the Public Purchase website.

GENERAL:

The following changes, deletions, and additions shall be made to the following documents, as noted, and shall take precedence over the original Contract Documents. All other requirements remain the same. For drawings replaced in their entirety, see revision clouds and details on the replacement drawing for revisions made from the superseded drawing.

| Item | Specification/ Drawing | Description |
|------|---------------------------|---|
| 1-1 | Section 00500 | <p>CONTRACT</p> <p>Add the following paragraph:</p> <p>“Article VII.</p> <p>District and Contractor recognize that time is of the essence of this Agreement and that District will suffer financial loss if the Work is not completed within the times specified in the Specifications, plus any extensions thereof. They also recognize the delays, expense and difficulties involved in proving the actual loss suffered by District if the Work is not completed on time. Accordingly, instead of requiring any such proof, District and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay District \$1,000 for each day that expires after the time specified for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse or fail to complete the remaining Work within the time specified for completion and readiness for final payment or any proper extension thereof granted by District, Contractor shall pay District \$1,000 for each day that expires after the time specified for completion and readiness for final payment.”</p> |
| 1-2 | Section 11190 | <p>SODIUM HYPOCHLORITE METERING PUMPS SKID</p> <p>Add the attached Section 11190, SODIUM HYPOCHLORITE METERING PUMPS SKID, in its entirety.</p> |
| 1-3 | Drawing D1.02 | <p>CONTROL BUILDING CHEMICAL ROOM DEMOLITION PLAN</p> <p>Delete this drawing in its entirety and replace with the attached Drawing D1.02, CONTROL BUILDING CHEMICAL ROOM DEMOLITION PLAN.</p> |
| 1-4 | Drawing C0.02 | <p>OVERALL SITE PIPING PLAN</p> <p>Delete this drawing in its entirety and replace with the attached Drawing C0.02, OVERALL SITE PIPING PLAN.</p> |
| 1-5 | Drawing C1.01 | <p>PROPOSED CHEMICAL STORAGE TANKS SITE PIPING PLAN</p> <p>Delete this drawing in its entirety and replace with the attached Drawing C1.01, PROPOSED CHEMICAL STORAGE TANKS SITE PIPING PLAN</p> |

| Item | Specification/ Drawing | Description |
|------|---------------------------|--|
| 1-6 | Drawing M1.09 | <p>CONTROL BUILDING CHEMICAL ROOM MODIFICATION</p> <p>Delete this drawing in its entirety and replace with the attached Drawing M1.09, CONTROL BUILDING CHEMICAL ROOM MODIFICATION.</p> |
| 1-7 | Drawing M1.10 | <p>CONTROL BUILDING CHLORINATION ROOM MODIFICATION</p> <p>Delete this drawing in its entirety and replace with the attached Drawing M1.10, CONTROL BUILDING CHLORINATION ROOM MODIFICATION.</p> |

**RANCHO MURIETA COMMUNITY SERVICES DISTRICT
WASTEWATER TREATMENT FACILITY
SODIUM HYPOCHLORITE IMPROVEMENTS/
CHLORINE CONTACT BASIN EXPANSION – PHASE 1
ADDENDUM NO. 1**

I acknowledge receipt of Addendum No. 1.

Company: _____

By: _____

Title: _____

Address: _____

Date: _____

SECTION 11190

SODIUM HYPOCHLORITE METERING PUMPS SKID

PART 1 - GENERAL

1.01 SCOPE OF WORK

Contractor shall furnish, install, and place into successful operation a metering pump skid including two diaphragm metering pumps to match the two existing skids including all accessories as shown on the plans and specified herein. Metering pumps shall be used to deliver 12.5% sodium hypochlorite solution from the Control Building to the tertiary effluent pump station wet well and the chlorine contact basin. The proposed metering pump skid shall be connected to supply and discharge piping and serve as a backup unit to either existing metering pump skid. Work includes replacement of PVC piping as specified in Section 15070, PLASTIC PIPE. Like items of equipment specified herein shall be the end products of one manufacturer to achieve standardization of appearance, maintenance, spare parts, and manufacturer's services.

1.02 QUALITY ASSURANCE

A. References

The publications referred to hereinafter form a part of these specifications to the extent referenced. The publications are referred to in the text by the basic designation only. The latest edition of referenced publications in effect at the time of the bid shall govern. In case of conflict between the requirements of this section and the listed standards, the requirements of this section shall prevail.

American Society for Testing and Materials (ASTM) Publications

| | |
|------------|---|
| ASTM A436 | <i>Standard Specification of Austenitic Gray Iron Castings</i> |
| ASTM D1784 | <i>Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds</i> |
| ASTM D1785 | <i>Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120</i> |
| ASTM D2467 | <i>Standard Specifications for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Fittings, Schedule 80</i> |
| ASTM D2855 | <i>Standard Practice for Making Solvent-Cemented Joints with Poly(Vinyl Chloride) (PVC) Pipe and Fittings</i> |

Hydraulic Institute (HI) Publications

Standard Centrifugal, Rotary, and Reciprocating Pumps

National Electric Code (NEC)

B. Experience

All equipment furnished under this section shall be of a supplier who has been regularly engaged in the design and manufacture of the equipment for a minimum period of five years. The supplier shall submit evidence of his experience and the successful operation of equipment of similar size, rating, and application at a minimum of three water or wastewater treatment plants.

The equipment manufacturer shall warrant the units being supplied to the District against defects in workmanship and material for a period of one year from the date of equipment startup. In the event that the equipment fails to perform as specified, the equipment manufacturer shall promptly repair or replace the defective equipment at no cost to the District.

1.03 SUBMITTALS

The data required by Section 01300, SUBMITTALS, shall be submitted for review in one complete package for the metering pumps and piping and appurtenances. In addition, the following information shall be included in the submittal:

- A. Certified copies of metering pump performance curves obtained from factory testing specified in Part 3.02, Tests, of this section.
- B. Detailed manufacturer's installation procedures.
- C. A copy of this specification section, with addenda update, and all referenced sections, with addenda updates, with each paragraph check marked to show specification compliance or marked to show deviation.
- D. Control panel submittals including panel layouts, bill of materials, internal wiring schematics, and connection diagrams for field wiring.
- E. O&M manuals shall be furnished for the equipment herein specified in accordance with Section 01730, OPERATING AND MAINTENANCE INFORMATION.

1.04 OPERATION AND MAINTENANCE INSTRUCTIONS

Submit operation and maintenance instructions in accordance with Section 01730, OPERATION AND MAINTENANCE DATA with a copy of Section 01730, OPERATION AND MAINTENANCE DATA, with each paragraph check marked to show compliance shall be submitted. O&M instructions shall be submitted after the

submittals specified in Section 01300, SUBMITTALS, have been returned “NO EXCEPTIONS TAKEN” or “MAKE CORRECTIONS NOTED”. O&M instructions shall reflect the approved materials and equipment.

1.05 SUPPLIER’S AND/OR MANUFACTURER’S SERVICES

The Contractor shall provide the following services of technical representatives at the jobsite relating to the item(s) specified in this section. The number of days and scope of services indicated are minimum requirements, not including travel time. Time for travel and all associated expenses of the technical representative shall also be included at no additional cost to the District.

- 1 labor day Installation assistance, inspection, functional testing
- ½ labor day Plant startup services and performance testing
- ½ labor day Training of District personnel

Startup services and training of District personnel shall be at such times as requested by the District. See Sections 01640, SUPPLIERS/MANUFACTURER’S SERVICES DURING CONSTRUCTION, COMMISSIONING, AND TRAINING OF DISTRICT’S PERSONNEL, and Section 01660, INSTALLATION, TESTING, AND COMMISSIONING.

PART 2 - PRODUCTS

2.01 METERING PUMPS SKID

A. General

Pumps shall be positive displacement, diaphragm metering pumps furnished by ProMinent to match the existing chemical pump skids. The Sigma/1 motor-driven diaphragm metering pumps shall feature a high strength inner housing for the mechanically loaded parts and an additional plastic housing for corrosion protection. The pump capacity shall be adjusted via the stroke length (4 mm), in 0.5% increments, with a self-locking rotary dial.

B. Design Requirements and Operating Conditions

Sodium hypochlorite metering pumps shall meet the following design requirements and operating conditions:

| <u>Parameter</u> | <u>Units</u> | <u>Value</u> |
|-------------------|--------------------------|--------------|
| Pumping fluids | % sodium hypochlorite | 12.5 |
| Fluid temperature | °F | 80 to 110 |

| <u>Parameter</u> | <u>Units</u> | <u>Value</u> |
|----------------------------|--------------|--------------|
| Fluid specific gravity | unitless | 1.20 |
| Minimum flow rate | gph | 0.50 |
| Maximum flow rate | gph | 14.0 |
| Maximum discharge pressure | psi | 145 |
| Tubing material | material | Hypalon |

C Metering Pump/Skid Features

Metering pumps/skid features shall include the following:

1. Liquid End Materials: PVDF with PTFE seal
2. Seal: Standard diaphragm / PTFE seal
3. Diaphragm type: Safety diaphragm with visual indicator
4. Liquid End Options: without valve springs
5. Hydraulic Connection: PVDF clamping nut and insert
6. Voltage Supply: 100 - 240 V
7. Cable and Plug: North American plug, 115 V
8. Relay: 4-20mA out+fault/pacing relay
9. Control Variants: Option 0 + analog control
10. Operating Unit (HMI): HMI + 6 ft cable
11. Language: English
12. Universal control cable, 5-pin round plug; 5-wire 6 ft
13. Spare Parts Kit: diaphragm, suction valve, discharge valve, balls and seals.
 - a. 1/2-inch PVC/Viton® Primary Backup System
 - b. Primary/Backup arrangement
 - c. PP/PE skid for motor driven pumps
 - d. 1/2-inch PVC/Viton socket weld pipe and fittings
 - e. Wye strainer
 - f. 500 mL PVC calibration column
 - g. Pressure gauge with isolator
 - h. Two pressure relief valves
 - i. Two 164 mL PVC/Viton pulsation dampener
 - j. Two PVDF/Viton flow monitors
 - k. Back pressure valve
 - l. Terminal box kit, 2 pump, non-GFI receptacle
14. Skids: 48.75-inch W x 30-inch D x 60-inch H

PART 3 - EXECUTION

3.01 PAINTING

All ferrous metal except stainless steel) shall be factory primed and field finish painted as specified in Section 09800, PAINTING AND SPECIAL COATING SYSTEMS.

3.02 PREPARATION FOR SHIPMENT

Insofar as is practical, the equipment specified herein shall be factory assembled. The metering system components that are of necessity shipped unassembled shall be packaged and tagged in a manner that will protect the equipment from damage and facilitate the final assembly in the field. Generally, machined and unpainted parts shall be protected from damage to the elements with the application of strippable protective coatings. Provide all lubricant required to initial lubrication.

3.03 INSTALLATION

All components of the chemical handling systems shall be installed in strict accordance with the manufacturer's recommendations and as shown on the plans.

All strain from attached piping shall be eliminated from the pumps and any evidence of misalignment, noisy operations, or other signs of improper setting shall be corrected by the Contractor.

3.04 TESTS

A. Contractor's Responsibilities

The Contractor shall be fully responsible for all costs associated with testing. If test results are not satisfactory, the Contractor shall make such modifications, repairs, or replacement of equipment as are necessary to ensure satisfactory performance. Tests shall then be repeated in full until proper operation and performance is verified. The Contractor shall keep a written record of all tests and submit same to the District upon completion of testing.

B. Performance Testing

Performance testing shall be conducted individually on each of the metering pumps with onsite water. Testing shall be conducted at the following operating points:

1. Pump operating at maximum rated rotor speed.
2. Pump operating at half the maximum rated rotor speed.
3. Pump operating at minimum rated rotor speed.

The metering pump's discharge pressure shall be maintained at the rated level (60 psi) for all the specified test points. The pump's discharge pressure shall be maintained through the adjustment of the back pressure valve on the metering pumps' discharge header. Simulated electronic signals to the pump controller shall be used during testing for adjustment of the rotor speed.

The performance test shall begin after the metering pump has been continuously operated for a minimum of one hour at the rated rotor speed and at the rated discharge pressure. The calibration chamber shall be filled with water. The flow from the chemical storage tank to the metering pump shall then be shut off to permit the pumping of the water out of the calibration chamber. The time taken to draw down the calibration chamber shall be recorded and the pumping rate shall be computed. The flow from the tank to the pump shall then be resumed and the pump's rotor speed shall be adjusted for the next test point. After 15 minutes of operation stabilization, the calibration chamber shall be filled and the flow from the storage tank shall be shut off for measurement of the pumping rate as specified above. The testing procedure shall be repeated for all the testing points.

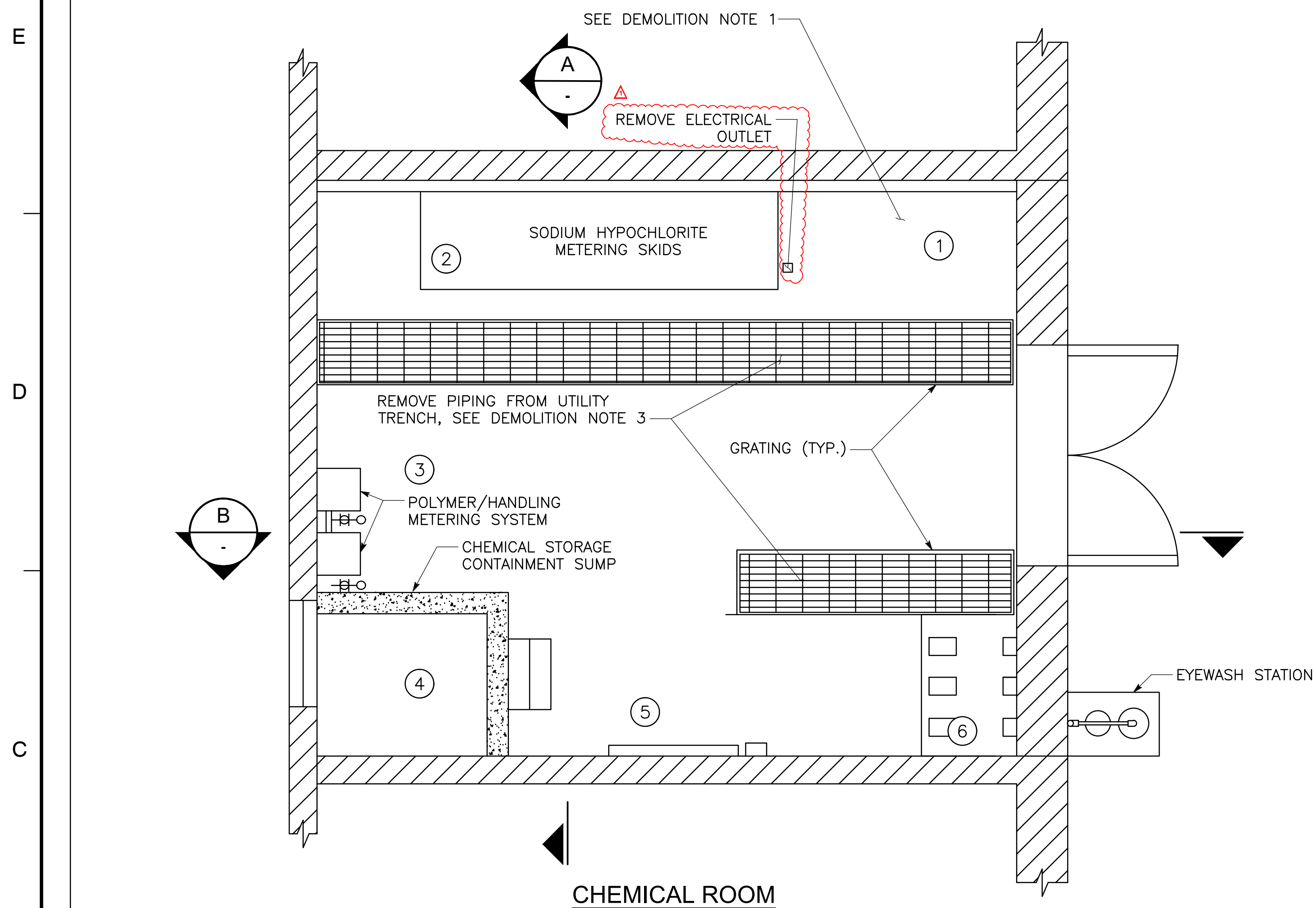
The performance testing shall be considered as satisfactorily completed if the pumping rate with the maximum, half maximum, and minimum rotor speed is within 5 percent below and 10 percent above the submitted manufacturer's rated capacity.

If the equipment does not meet all the specified performance requirements, the Contractor shall adjust and retest the equipment. Failure to meet the performance test requirements in three attempts shall be grounds for rejection of the equipment.

3.04 **MANUFACTURER'S REPRESENTATIVE SERVICES**

The manufacturer or his representative shall inspect the installation of the equipment prior to startup and shall make the necessary adjustments to the equipment for satisfactory operation. The manufacturer shall also be responsible for instructing the District's personnel in the operation and maintenance of the equipment. The manufacturer or his representative shall certify the correctness of the installation.

****END OF SECTION****



CHEMICAL ROOM
SCALE: 6" = 1'-0"

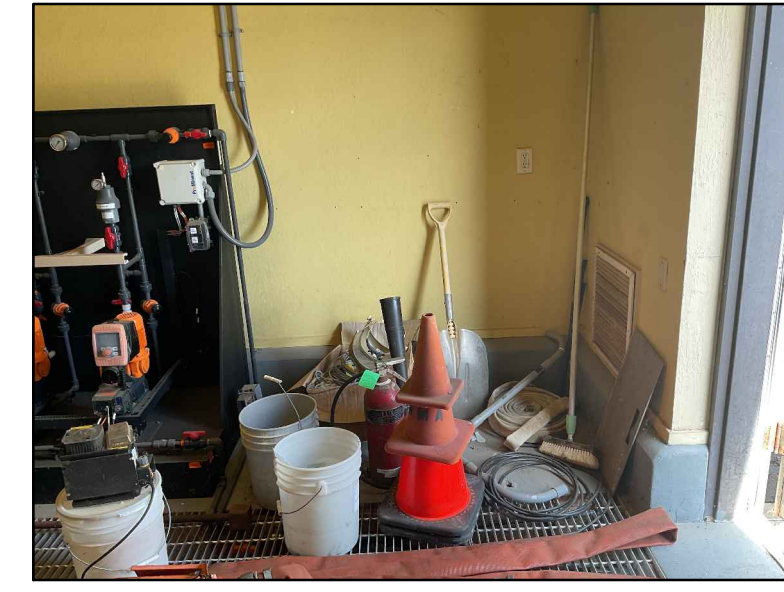


IMAGE NO. 1



IMAGE NO. 2



IMAGE NO. 3

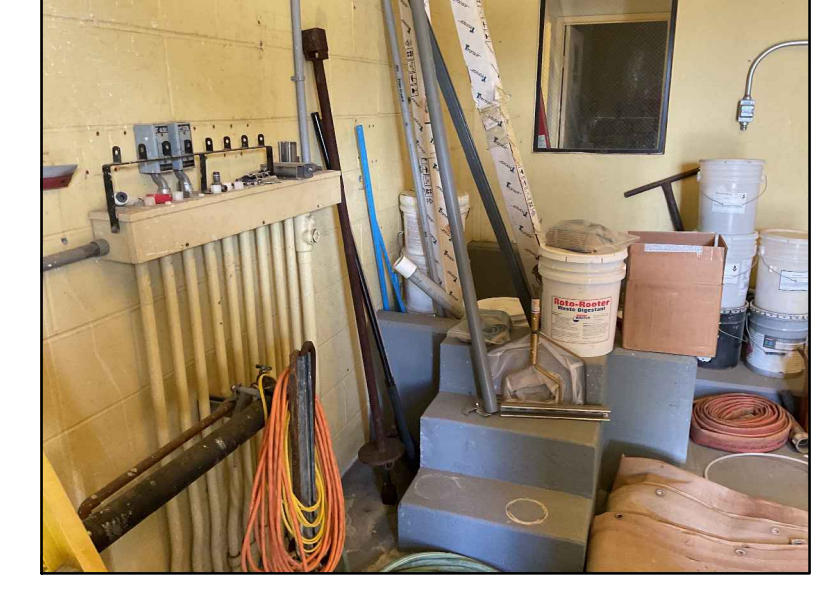


IMAGE NO. 4

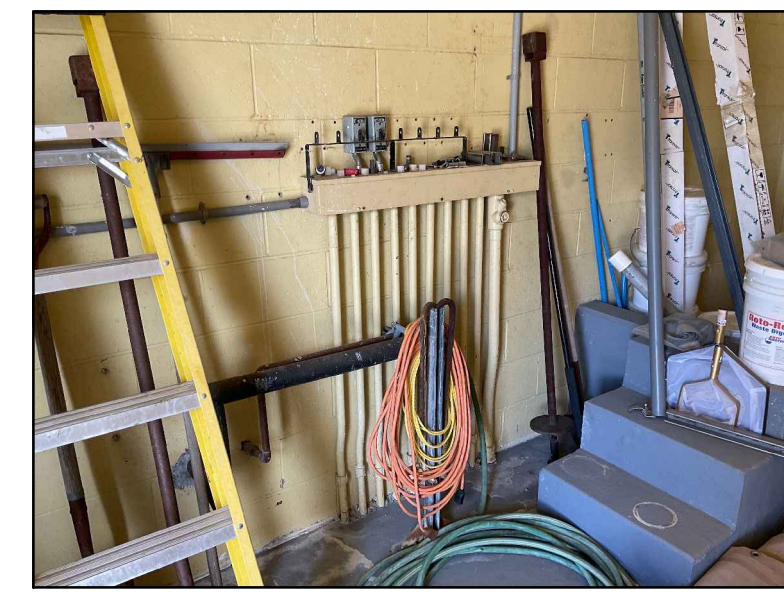


IMAGE NO. 5

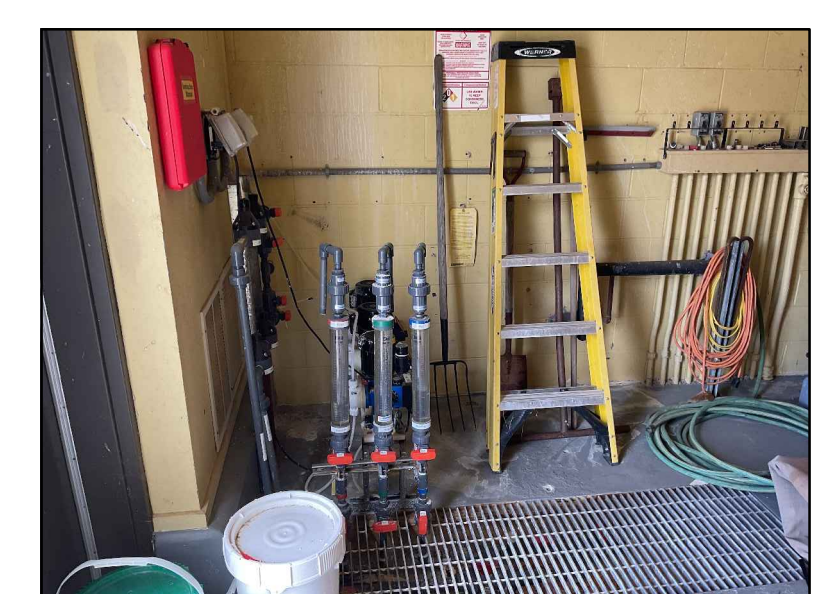
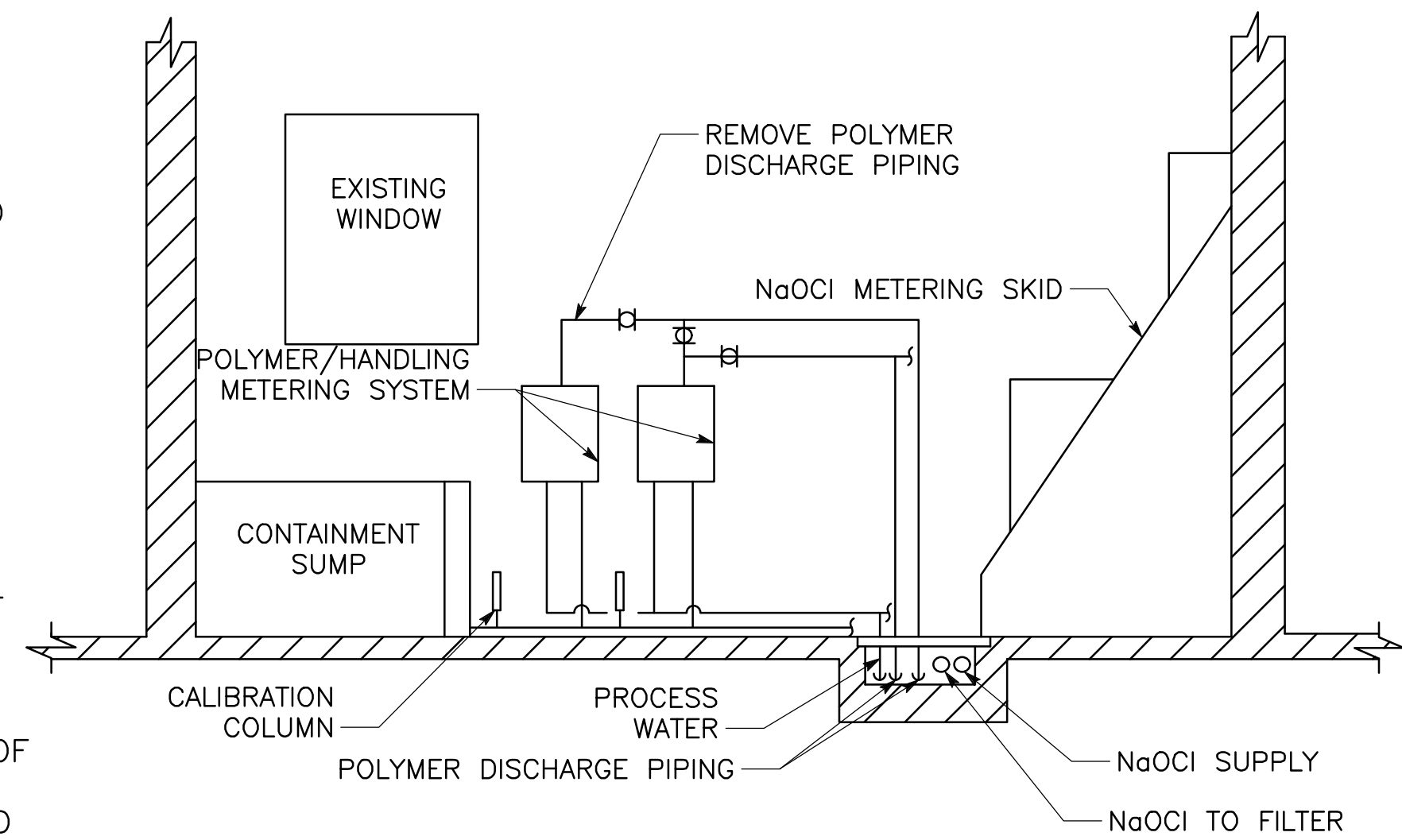
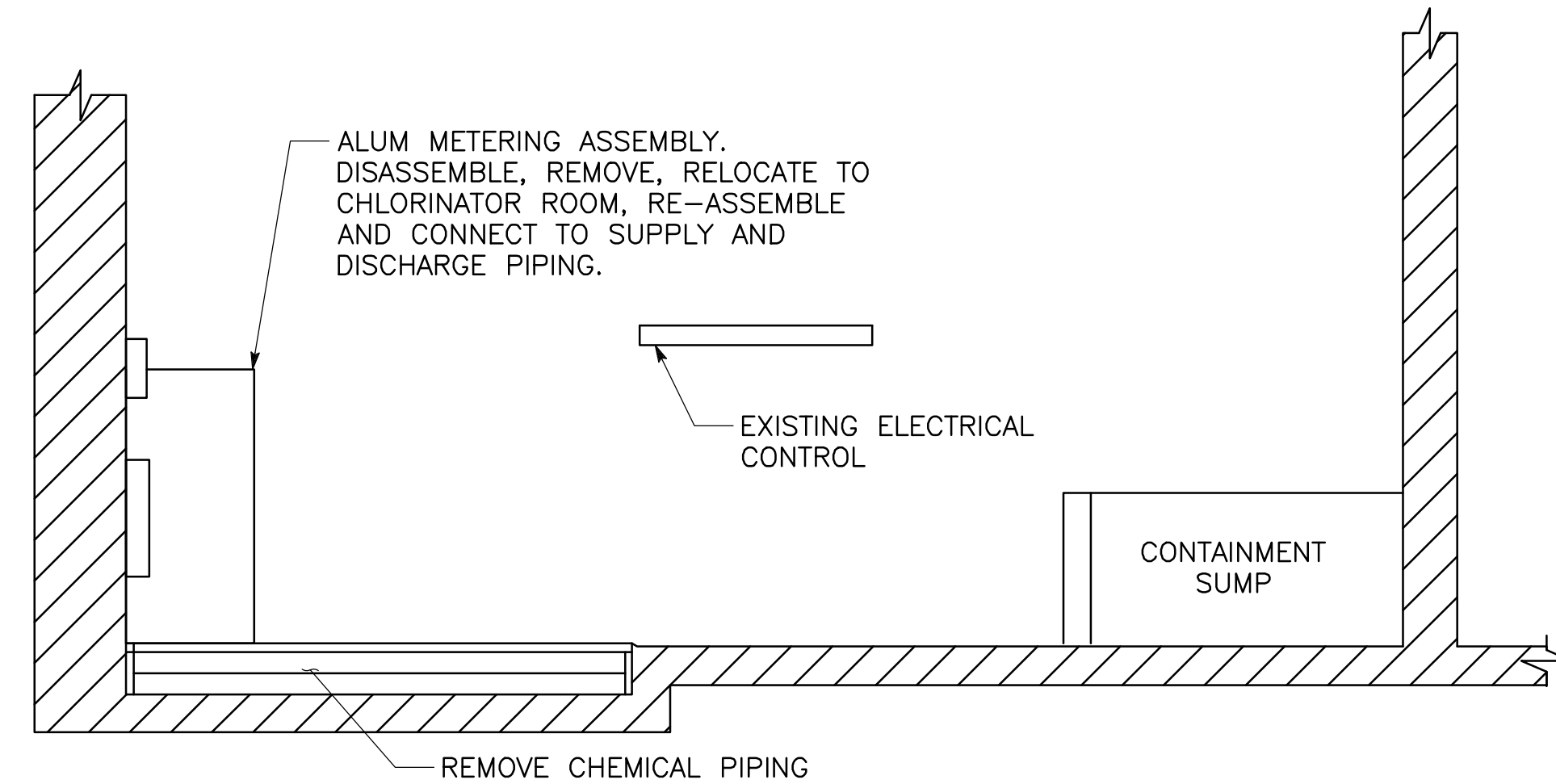


IMAGE NO. 6

- LEGEND:**
- (XX) IMAGE NUMBER, SEE UPPER RIGHT
- DEMOLITION NOTES:**
1. REMOVE AND DISPOSE OF MATERIALS AND PREPARE SPACE FOR INSTALLATION OF THIRD SODIUM HYPOCHLORITE METERING SKID.
 2. REMOVE POLYMER HANDLING/METERING SYSTEM AND SALVAGE FOR DISTRICT.
 3. DEMOLITION OF PIPING WITHIN UTILITY TRENCHES
 - 3.a. CONTRACTOR SHALL ASSUME SOME RESIDUAL CHEMICAL MAY BE PRESENT IN CHEMICAL PIPING AND SHALL REMOVE AND DISPOSE OF OFFSITE.
 - 3.b. CONTRACTOR SHALL NOT DAMAGE UTILITY TRENCHES DURING REMOVAL OF CHEMICAL PIPING.
 - 3.c. PIPE SUPPORTS SHALL BE PROTECTED IN PLACE DURING PIPING DEMOLITION. SUPPORTS DAMAGED DURING PIPING DEMOLITION SHALL BE REPLACED AS DIRECTED BY THE DISTRICT.



SECTION A
SCALE: 6" = 1'-0"



SECTION B
SCALE: 6" = 1'-0"

**RANCHO MURIETA
COMMUNITY SERVICES DISTRICT
WWTF**
**SODIUM HYPOCHLORITE IMPROVEMENTS /
CHLORINE CONTACT BASIN EXPANSION - PHASE 1**
 RANCHO MURIETA
SACRAMENTO COUNTY, CALIFORNIA



KEY PLAN

| No. | DATE | BY | DESCRIPTION |
|-----|----------|----|----------------|
| 1 | 09/23/24 | KT | ADDENDUM NO. 1 |

DRAWN BY: K. TRAN
 APPROVED BY: D. RICHARD
 CHECKED BY: D. RICHARD
 DATE: 9/22/2024

**CONTROL BUILDING
CHEMICAL ROOM
DEMOLITION PLAN**

PROJECT NO. 50158288

D1.02

RANCHO MURIETA
COMMUNITY SERVICES DISTRICT
WWTF
SODIUM HYPOCHLORITE IMPROVEMENTS /
CHLORINE CONTACT BASIN EXPANSION - PHASE 1
 RANCHO MURIETA
 SACRAMENTO COUNTY, CALIFORNIA

SEAL



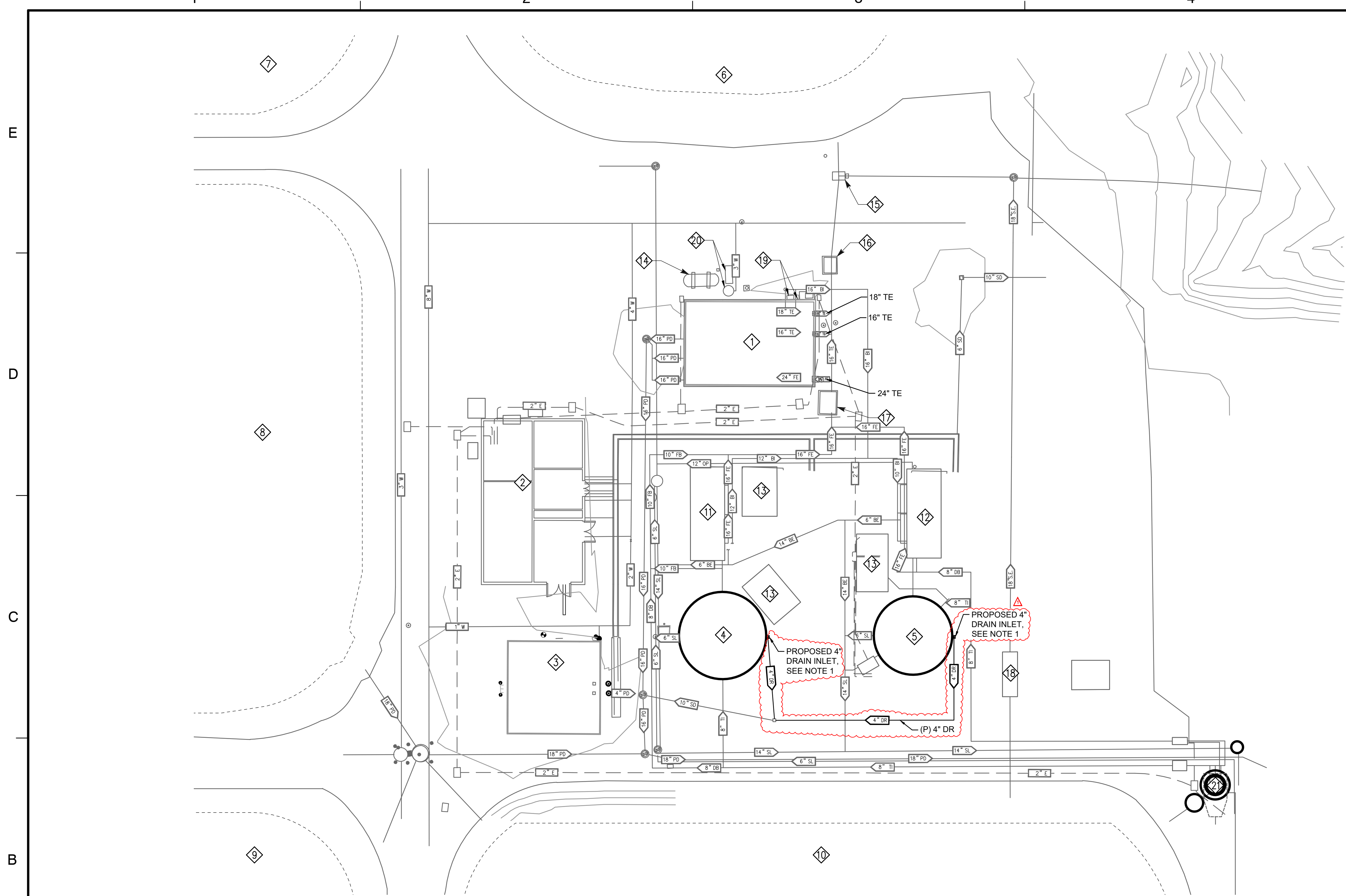
KEY PLAN

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REVISIONS

| NO. | DATE | BY | DESCRIPTION |
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| DRAWN BY | K. TRAN |
| APPROVED BY | D. RICHARD |
| CHECKED BY | D. RICHARD |
| DATE | 9/22/2024 |
| TITLE | |
| OVERALL SITE PIPING PLAN | |
| PROJECT NO. | 50158288 |



LEGEND:

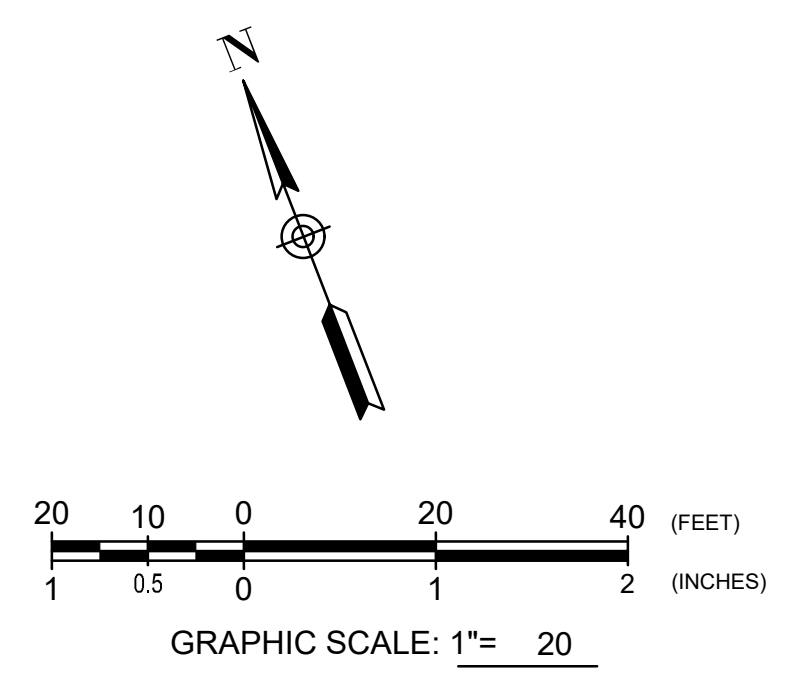
- | | |
|---|----------------------------------|
| ① CHLORINE CONTACT BASIN | ⑪ FILTER NO. 1 |
| ② CONTROL BUILDING | ⑫ FILTER NO. 2 |
| ③ CHEMICAL STORAGE TANKS (ALUM & NaOCl) | ⑬ DAF EQUIPMENT PAD |
| ④ DAF NO.1 | ⑭ PLANT WATER HYROPNEUMATIC TANK |
| ⑤ DAF NO.2 | ⑮ FLOW DIVERSION VAULT |
| ⑥ EQUALIZATION BASIN | ⑯ METER VAULT |
| ⑦ AERATION POND NO. 1 | ⑰ STATIC MIXER |
| ⑧ AERATION POND NO. 2 | ⑱ PARSHALL FLUME |
| ⑨ AERATION POND NO. 3 | ⑲ BACKWASH PUMPS |
| ⑩ AERATION POND NO. 5 | ⑳ PLANT WATER PUMPS |
| | ㉑ TERTIARY LIFT STATION |

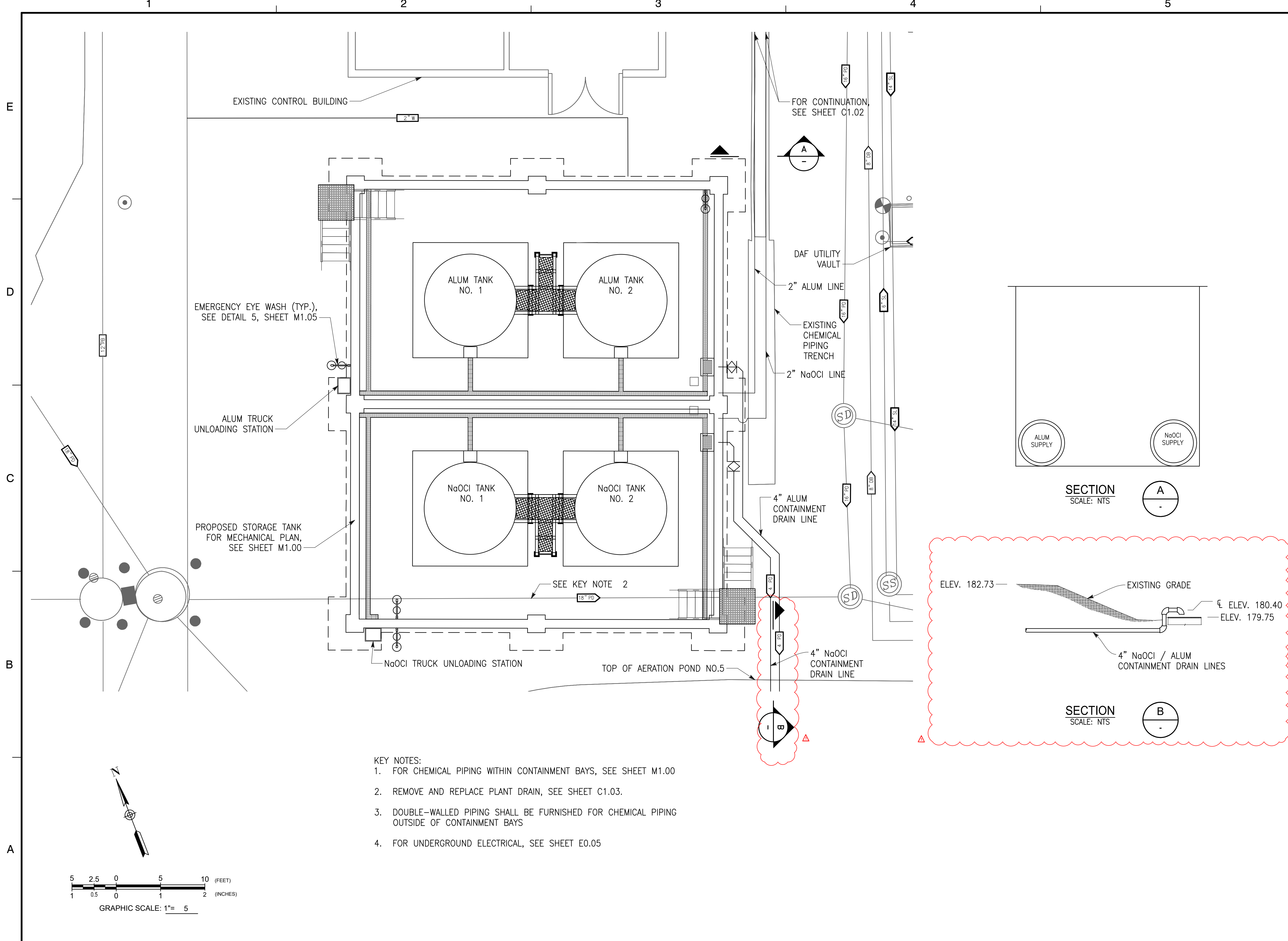
PIPING SYSTEM DESIGNATIONS

- BE BACKWASH EFFLUENT
- BI BACKWASH INFLUENT
- DR DRAIN
- E ELECTRIC
- FE FILTER EFFLUENT
- NaOCl SODIUM HYPOCHLORITE
- PD PLANT DRAIN
- RW RAW WATER
- TE TERTIARY EFFLUENT
- SD STORM DRAIN
- SDFM STORM DRAIN FORCE MAIN
- SE SECONDARY EFFLUENT
- SL SLUDGE
- SS SANITARY SEWER
- SSD SANITARY DRAIN
- SSFM SANITARY SEWER FORCE MAIN
- W PLANT WATER

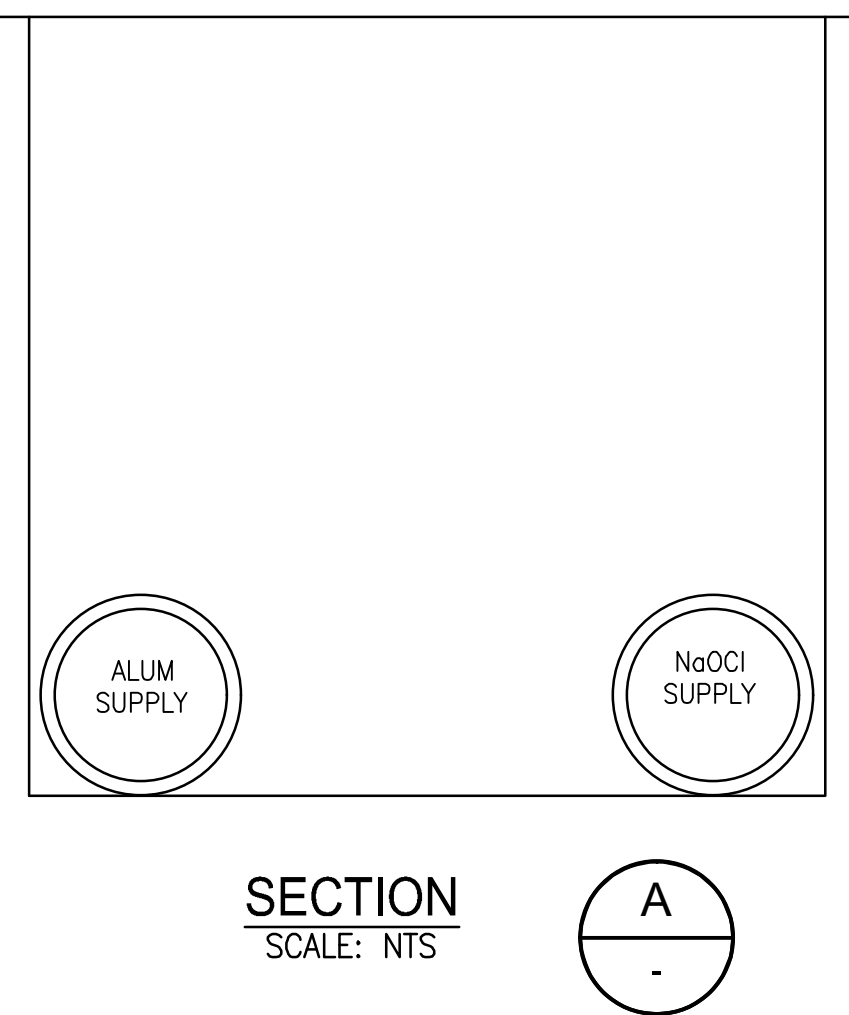
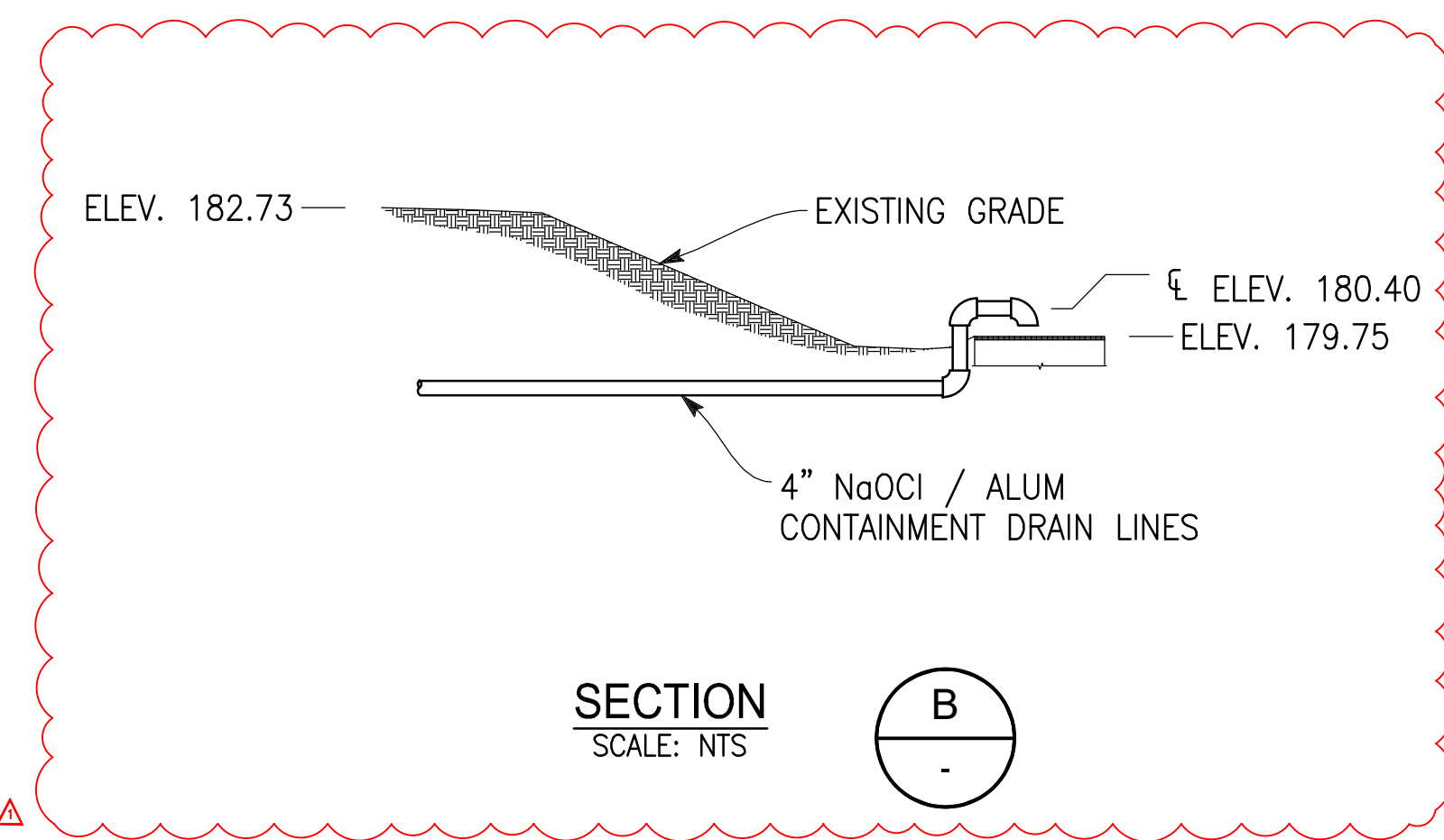
NOTES:

- LOCATE DRAIN INLET ADJACENT TO CHLORINE ANALYZER'S DRAIN LINE. ROUTE 4" DRAIN TO PLANT DRAIN SYSTEM. SLOPE DRAIN LINE 1% TO PLANT DRAIN MANHOLE/INLET AS SHOWN. MINIMUM COVER OF 4" DRAIN LINE SHALL BE 36-INCH.





- KEY NOTES:
1. FOR CHEMICAL PIPING WITHIN CONTAINMENT BAYS, SEE SHEET M1.00
 2. REMOVE AND REPLACE PLANT DRAIN, SEE SHEET C1.03.
 3. DOUBLE-WALLED PIPING SHALL BE FURNISHED FOR CHEMICAL PIPING OUTSIDE OF CONTAINMENT BAYS
 4. FOR UNDERGROUND ELECTRICAL, SEE SHEET E0.05



RANCHO MURIETA
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SACRAMENTO COUNTY, CALIFORNIA



SEAL

KEY PLAN

| No. | DATE | BY | DESCRIPTION |
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| Δ 09/23/24 | KT | | ADDENDUM NO. 1 |

REVISIONS

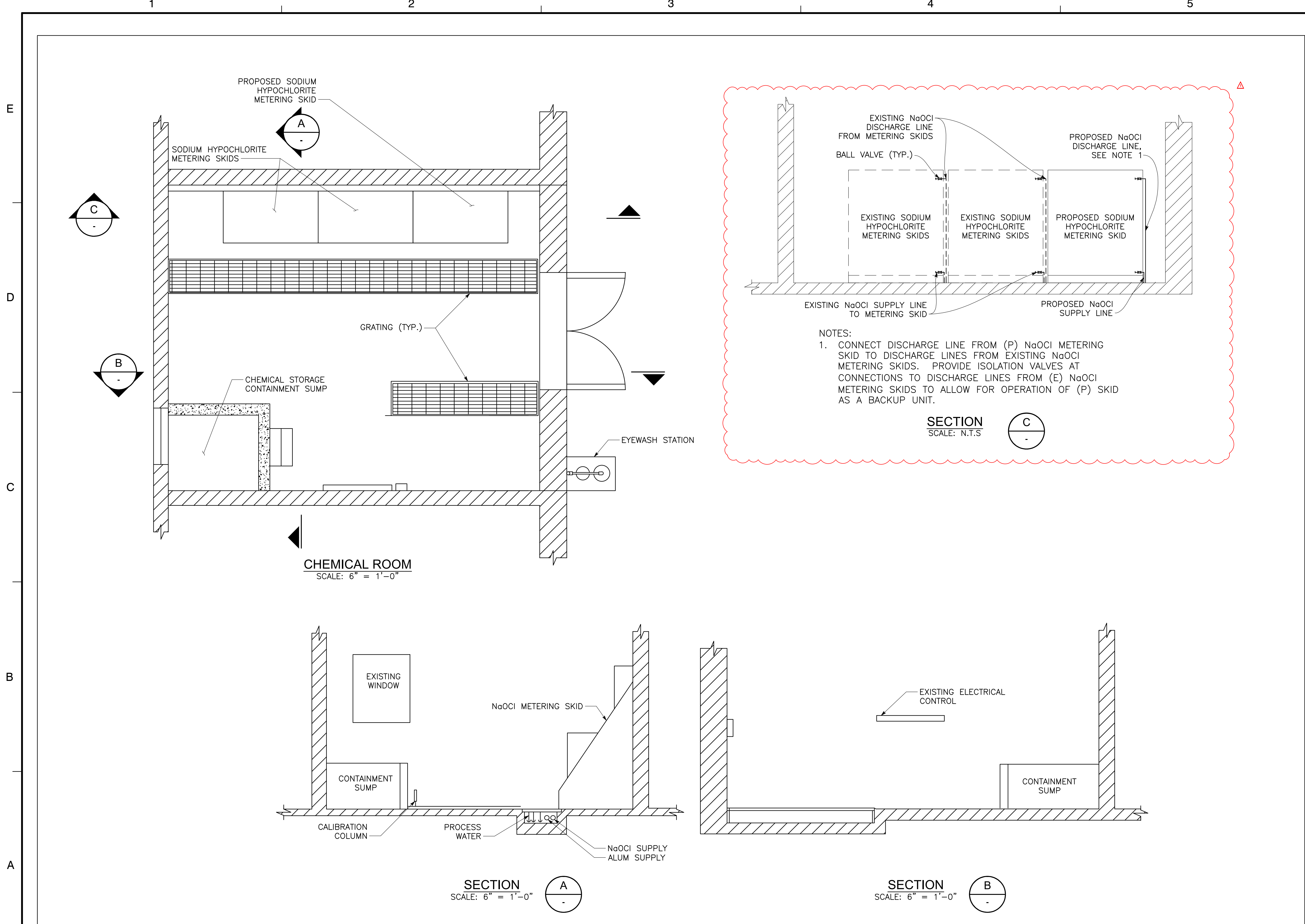
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| APPROVED BY | D. RICHARD |
| CHECKED BY | D. RICHARD |
| DATE | 9/22/2024 |

TITLE

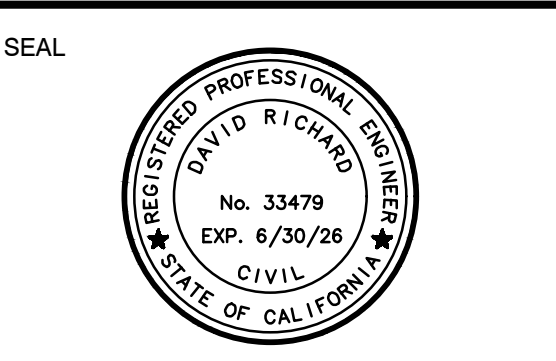
**PROPOSED
CHEMICAL
STORAGE TANKS
SITE PIPING PLAN**

PROJECT NO. 50158288

C1.01



**RANCHO MURIETA
 COMMUNITY SERVICES DISTRICT
 WWTF**
**SODIUM HYPOCHLORITE IMPROVEMENTS /
 CHLORINE CONTACT BASIN EXPANSION - PHASE 1**
 RANCHO MURIETA
 SACRAMENTO COUNTY, CALIFORNIA



KEY PLAN

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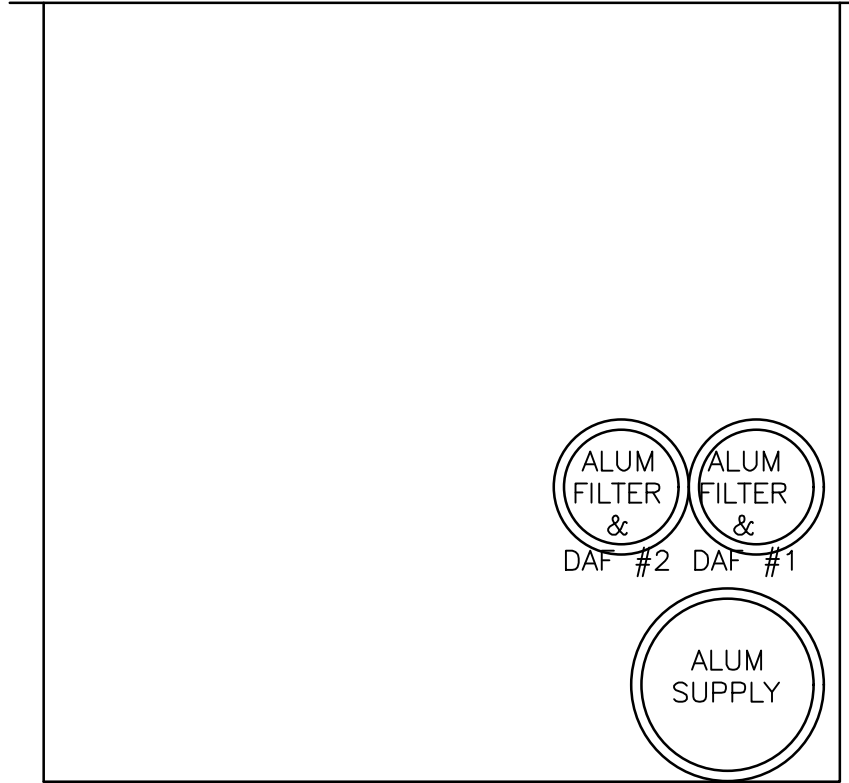
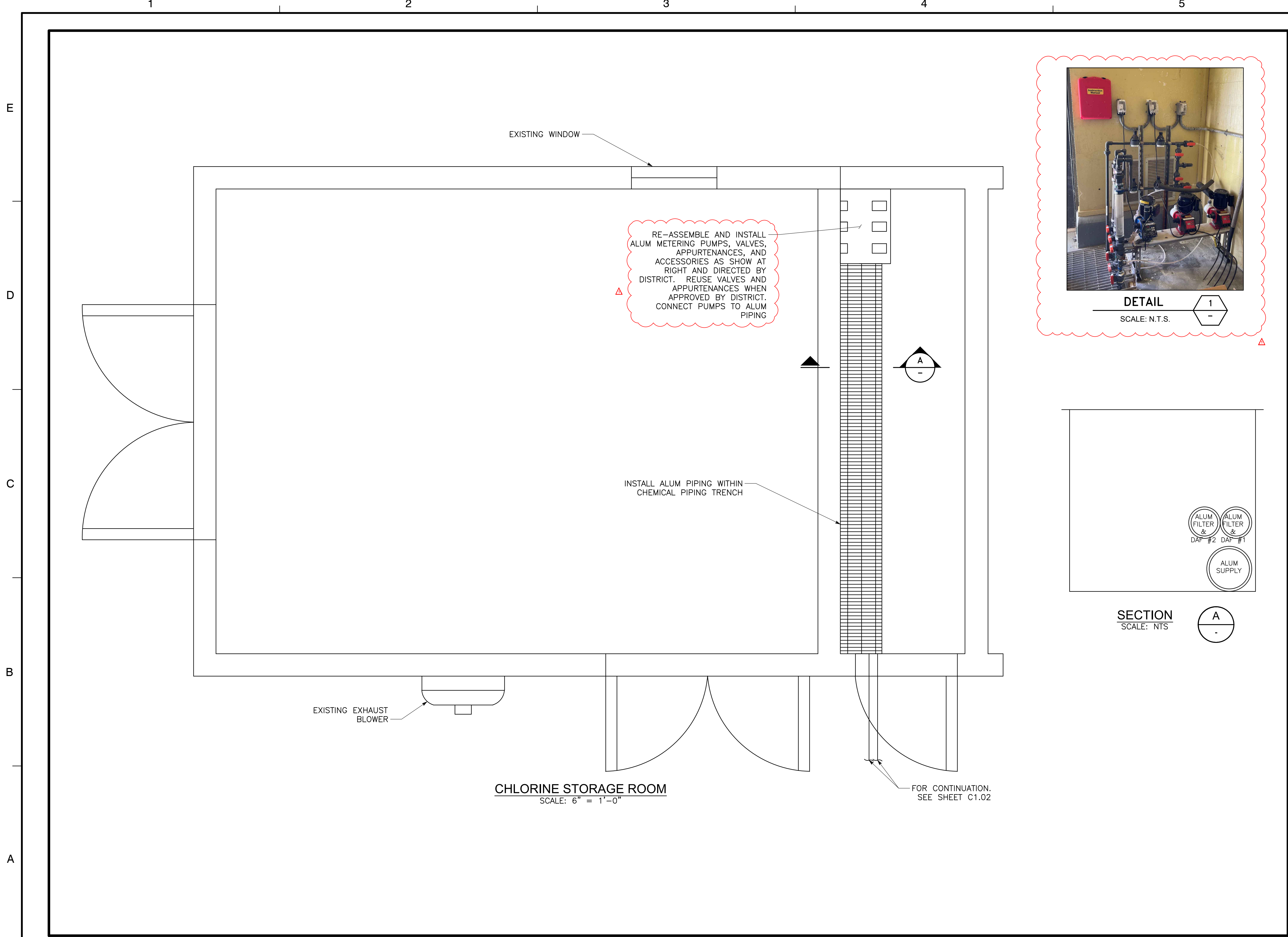
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DRAWN BY: K. TRAN
 APPROVED BY: D. RICHARD
 CHECKED BY: D. RICHARD
 DATE: 9/22/2024

TITLE:
**CONTROL BUILDING
 CHEMICAL ROOM
 MODIFICATION**

PROJECT NO. 50158288

M1.09



SECTION A
SCALE: NTS

CHLORINE STORAGE ROOM
SCALE: 6" = 1'-0"

**RANCHO MURIETA
COMMUNITY SERVICES DISTRICT
WWTF**

**SODIUM HYPOCHLORITE IMPROVEMENTS /
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M1.10