



**SAN ANTONIO WATER SYSTEM  
DOS RIOS WRC RE-RATING  
HEADWORKS IMPROVEMENTS AND  
PROCESS ENHANCEMENTS PHASE I  
SAWS Job No. 08-6502  
SAWS Solicitation No. B-10-057-DD**

**ADDENDUM No. 1  
November 24, 2010**

**To Bidder of Record:**

This addendum, applicable to work referenced above, is an amendment to the bidding documents and as such will be made a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the addendum number and issue date in the space provided in submitted copies of the proposal.

**QUESTIONS AND CLARIFICATIONS**

- Q1. The Contract Documents require that the Contractor has successfully completed a minimum of 3 similar projects within the last 5 years with a minimum of \$10 million in construction cost. If a Contractor does not meet the three \$10 million project requirement, can they submit a bid on the project?
- A1. SAWS cannot dictate who can or cannot bid on a particular project. However, the Contractor must have the experience and ability to comply with and perform the necessary work detailed in the Contract Documents (plans and specifications). Experience shall be documented in the Bidder's Experience form of the Bid Proposal (Attachment A).
- Q2. At the Influent Screening Structure, Section 4 on Sheet SB-3, the epoxy coating system is shown and called out to be applied to "All Walls and Slabs". Does that note apply to all walls and slabs throughout the entire structure? The epoxy is only called out at this section; however it appears to be drawn at some sections, yet not at others. If we are to coat all walls and slabs throughout the structure, does this include all existing concrete?
- A2. This will be made more clear (on the drawings) with the next addendum. Protective coating is being considered for all new interior surfaces and all existing which are becoming interior surfaces. The existing surfaces that already have a liner will need to be evaluated at construction time.

Q3. Has SAWS issued a soils report?

A3. The Geotechnical Engineering Report has been posted as supplementary information. From [www.saws.org](http://www.saws.org), go to Business Center, Contract Solicitations, click on [MORE] under Details next to the project name, and click on Supplemental Information under Download.

## **REVISIONS TO CONTRACT DOCUMENTS AND TECHNICAL SPECIFICATIONS**

### **BID PROPOSAL**

a) Page BP-7, delete “by May 2012, work on this facility must be complete by the end of April 2012” and replace with:

“by April 24, 2012, work on this facility must be complete by March 24, 2012”

b) Page BP-9, Schedule of Manufacturers and Suppliers, add the following to the schedule:

“

14910	Winches	a. Columbia Winch & Hoist
		b. Thern, Inc.

“

### **TABLE OF CONTENTS**

a) Page ii, Division 1 – General Requirements, add the following (in numerical order):

“01465                      Equipment Testing and Startup”

### **SECTION 01465 – EQUIPMENT TESTING AND STARTUP**

a) Add the attached Section 01465 to the Contract Documents.

### **SECTION 02640 – VALVES, HYDRANTS AND APPURTENANCES**

a) Page 02640-5, Paragraph 2.02.A.4., in the second sentence, delete “color-grey” and replace with “color-brown”.

### **SECTION 11203 – SLIDE GATES**

a) Page 11203-3, Paragraph 1.08., remove this paragraph in its entirety and renumber subsequent paragraphs.

## SECTION 11320 – VORTEX GRIT COLLECTION EQUIPMENT

- a) Page 11320-6, Paragraph 1.07.F.2., delete “10” and replace with “15”.
- b) Page 11320-6, Paragraph 1.07.F.7., delete “4” and replace with “3”.
- c) Page 11320-6, Paragraph 1.07.F.8., delete “42” and replace with “40”.
- d) Page 11320-11, Paragraph 2.05.K., in the last sentence, delete “10” and replace with “20”.
- e) Page 11320-13, Paragraph 2.07.A.11., delete “Ductile Iron No. 60-40-18” and replace with “ADI Ductile Iron (min. Brinell hardness 400)”.
- f) Page 11320-13, Paragraph 2.07.A.12., delete “Type 316 stainless steel” and replace with “Alloy Steel No. 4150”.
- g) Page 11320-15, Paragraph 2.07.D.12., delete sentence in its entirety and replace with:  
  
“The pump shaft will be Alloy Steel No. 4150 and will have an Alloy Steel No. 4130 shaft sleeve.”
- h) Page 11320-15, Paragraph 2.07.E.1., delete “10” and replace with “15”.

## SECTION 11321 – GRIT WASHING AND CLASSIFICATION EQUIPMENT

- a) Page 11321-2, Paragraph 1.03.D., delete “collection” and replace with “washing”.
- b) Page 11321-7, Paragraph 1.08.A., add “shall be” before “constructed of Type 316 stainless steel”.
- c) Page 11321-7, Paragraph 1.08.F., delete “and grit conveying screw”.
- d) Page 13121-7, Paragraph 1.08.I., add the following:  
  
“The equipment, after its fabrication, shall undergo a passivation (pickling) process to ensure maximum resistance to corrosion. All stainless steel components and structures shall be submersed in a chemical bath of nitric acid and hydrofluoric acid to remove any residues that may be present on the material as a result of forming, manufacture, or handling. After removal from the pickling bath, the equipment must be washed with a high-pressure wash of cold water to remove any remaining surface debris and promote the formation of an oxidized passive layer which is critical to the long life of the stainless steel. Submergence insures complete coverage. Spray on chemical treatments and glass bead blasting are specifically not acceptable due to their inability to provide complete and uniform corrosion protection.”
- e) Page 11321-9, Paragraph 2.02.A.3., delete “7 3/4” and replace with “3 3/4”.

SECTION 14910 – WINCHES

- a) Page 14910-2, Paragraph 1.05.A.1., delete sentence in its entirety and replace with:  
“The 5 ton electric floor winches shall be Model No. WG11000 by Columbia Winch & Hoist; Model 4HS by Thern, Inc.; or Engineer-approved equal.”
- b) Page 14910-2, Paragraph 1.05.B.2., delete this paragraph and table in its entirety.
- c) Page 14910-3, Paragraph 1.06.A.1., delete winch schedule in its entirety and replace with the following:

“1. Tag Number:	DRHGSWI01, DRHGSWI02
2. Capacity:	5.5 ton
3. Horsepower:	3 hp
4. Volts/Phase:	460V/3 phase
5. Speed:	1725 rpm
6. Wire Rope Diameter(min):	7/16-inch
7. Wire Rope Length:	100 ft”

- d) Page 14910-4, Paragraph 2.04., add the following paragraph:

“2.04 CONTROL PANELS

A. General

- 1. The winch shall be provided with a NEMA 4X Type 316 stainless steel control panel.
- 2. The control panel shall be suitable for use on a 480 Volt, 3 Phase, 60 Hz power supply.
- 3. The winch shall be manually controlled at the control panel.
- 4. The control panel shall house all devices required for control of the winch and shall be in conformance with all applicable portions of Section 01179.

B. Control Description

- 1. The 25 cubic yard roll-off containers will be delivered to the site and deposited in the area adjacent to the Grit Removal Facility. Plant personnel will engage the winch's free spool feature and will unspool sufficient wire rope and attach the cable-end termination loop to the hook furnished on the roll-off container. Prior to beginning operation, plant personnel will use the winch manual run mode feature to operate the winch as required,

to pull the empty roll-off container parallel to the Grit Removal Facility, into a position with the front of the roll-off container below the Grit Washer/Classifier unit discharge. Plant personnel will use the winch manual run mode feature to pull the roll-off container so as to reposition it under the Grit Washer/Classifier units as the roll-off container is filled.

2. The winch shall be controlled by “FORWARD/REVERSE” push buttons.
- C. Local Control Panel - winch manufacturer shall furnish a local control panel for installation adjacent to the roll-off container winch. The local control panel shall include the following features:
1. NEMA 4X outdoor enclosure.
  2. Forward-Reverse push button.
  3. Forward and Reverse Indicator Lights.
  4. Pushbutton, normally off, spring-loaded switch for operation in Hand mode.
  5. Motor starter in accordance with Division 16.
  6. All required relays, contacts and terminal blocks in accordance with Divisions 13 and 16.
  7. Stop Lockout push button.”
- e) Page 14910-4, Paragraph 3.02.A., delete paragraph in its entirety and replace with the following:
- “Contractor shall require the manufacturer to furnish the services of a factory certified technician for one day who has complete knowledge of proper operation and maintenance to inspect the final installation and supervise a test run of the equipment.”
- f) Page 14910-4, Paragraph 3.02.B.2., delete “and portable manual hoist”.

## **REVISIONS TO DRAWINGS**

### **SHEET CP-4 – PROPOSED PROJECT YARD PIPING PLAN I**

- a) Replace sheet in its entirety with attached sheet.

### **SHEET CP-6 – MEDINA RIVER SEWER OUTFALL CONNECTION PLAN & PROFILE 10+00 TO END**

- a) Replace sheet in its entirety with attached sheet.

SHEET CP-7 – MEDINA RIVER SEWER OUTFALL CONNECTION PLAN & PROFILE  
0+00 TO END

a) Replace sheet in its entirety with attached sheet.

SHEET CP-8 – 54” FORCE MAIN BYPASS TO GRIT REMOVAL CHANNEL PLAN &  
PROFILE 0+00 TO 4+00

a) Replace sheet in its entirety with attached sheet.

SHEET CP-9 – 54” FORCE MAIN BYPASS TO GRIT REMOVAL CHANNEL PLAN &  
PROFILE 4+00 TO END

a) Replace sheet in its entirety with attached sheet.

SHEET CZ-2 – CIVIL DETAILS II

a) Revise sheet as shown in Exhibit CZ2-A.

SHEET CZ-3 – CIVIL DETAILS III

a) Revise sheet as shown in Exhibit CZ3-A.

SHEET CZ-4 – CIVIL DETAILS IV

a) Revise sheet as shown in Exhibit CZ4-A.

SHEET DB-2 – INFLUENT SCREENING / AERATED GRIT TANK DEMOLITION  
SECTIONS AND PHOTOGRAPHS

a) Replace sheet in its entirety with attached sheet.

SHEET DC-2 – PRE-AERATION TANK DEMOLITION SECTIONS

a) Revise sheet as shown in Exhibit DC2-A.

SHEET DC-3 – ODOR CONTROL SYSTEM PARTIAL PLAN, SECTION AND  
PHOTOGRAPHS

a) Replace sheet in its entirety with attached sheet.

SHEET SB-4 – INFLUENT SCREENING FACILITY – MODIFICATIONS – SECTIONS III

a) Replace sheet in its entirety with attached sheet.

SHEET SC-1 – GRIT REMOVAL FACILITY – PLANS

- a) Replace sheet in its entirety with attached sheet.

SHEET SC-2 – GRIT REMOVAL FACILITY – SECTIONS I

- a) Replace sheet in its entirety with attached sheet.

SHEET SC-3 – GRIT REMOVAL FACILITY – SECTIONS II

- a) Replace sheet in its entirety with attached sheet.

SHEET P-1 – PROCESS AND MECHANICAL DIAGRAM I

- a) Revise sheet as shown in Exhibit P1-A.

SHEET MA-1 – INFLUENT FLOW METERING FACILITY - PLANS

- a) Replace sheet in its entirety with attached sheet.

SHEET MA-2 – INFLUENT FLOW METERING FACILITY- SECTIONS

- a) Replace sheet in its entirety with attached sheet.

SHEET MB-1 – INFLUENT SCREENING FACILITY TOP PLAN AT EL. 493.00

- a) Replace sheet in its entirety with attached sheet.


SHEET MD-1 – TANK DRAIN PUMP STATION PLAN AND SECTION

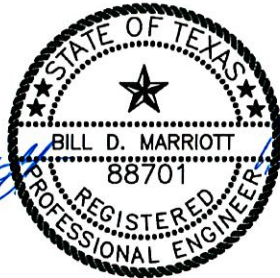
- a) Revise sheet as shown in Exhibit MD1-A.

SHEET MZ-3 – MECHANICAL DETAILS III

- a) Revise sheet as shown in Exhibit MZ3-A.

The remainder of the bid documents remains unchanged.

  
\_\_\_\_\_  
**Bill D. Marriott, P.E.**  
Camp Dresser & McKee, Inc.



*1/24/2010*

**ACKNOWLEDGEMENT BY BIDDER**

Each bidder is requested to acknowledge receipt of this Addendum No. 1 on the Bid Proposal and by his/her signature affixed hereto and to file same as an attachment to his/her bid.

The undersigned acknowledges receipt of this Addendum No. 1 and the bid submitted herewith is in accordance with the information and stipulation set forth.

\_\_\_\_\_  
**Signature of Bidder**

\_\_\_\_\_  
**Date**

END OF ADDENDUM No. 1



SECTION 01465

EQUIPMENT TESTING AND STARTUP

PART 1: GENERAL

1.01 SCOPE OF WORK

- A. Provide a competent field service technician of the manufacturers of all equipment furnished under Divisions 11, 13, 14, 15 and 16 to supervise installation, adjustment, initial operation and testing, performance testing, final acceptance testing and startup of the equipment.
- B. Perform specified equipment field performance tests, final acceptance tests and startup services.

1.02 RELATED WORK

- A. Operation and Maintenance Data is included in Section 01730.
- B. Performance and acceptance testing and startup requirements are included in the respective sections of Divisions 11, 13, 14, 15 and 16.

1.03 SUBMITTALS

- A. Submit name, address and resume of proposed field service technicians at least 30 days in advance of the need for such services.
- B. Submit, in accordance with Section 01300, detailed testing procedures for shop tests, field performance tests and final acceptance tests as specified in the various equipment sections. Submittals shall include the following:
  - 1. Test procedures shall be submitted at least 30 days in advance of the proposed test dates and shall include at least the following information:
    - a. Name of equipment to be tested (including reference to specification section number and title).
    - b. Testing schedule of proposed dates and times for testing.
    - c. Summary of power, lighting, chemical, water, sludge, gas, etc, needs and identification of who will provide them.
    - d. Outline specific assignment of the responsibilities of the Contractor, manufacturers' factory representatives or field service personnel.
    - e. Detailed description of step-by-step testing requirements, with reference to appropriate standardized testing procedures and laboratory analyses by established technical organizations (e.g., ASTM, WPCF Standard Methods, etc).

- f. Samples of forms to be used to collect and record test data and to present tabulated test results.
2. Copies of test reports upon completion of specified shop, performance and acceptance tests. Test reports shall incorporate the information provided in the test procedures submittals and modified to reflect actual conduct of the tests and the following additional information:
  - a. Copy of all test data sheets and results of lab analyses.
  - b. Summary comparison of specified test and performance requirements vs actual test results.
  - c. Should actual test results fail to meet specified test and performance requirements, describe action to be taken prior to re-testing the equipment.
3. Copies of the manufacturer's field service technician's report summarizing the results of the initial inspection, operation, adjustment and pre-tests. The report shall include detailed descriptions and tabulations of the points inspected, tests and adjustments made, quantitative results obtained, suggestions for precautions to be taken to ensure proper maintenance, and the equipment supplier's Certificate of Installation in the format specified herein.

#### 1.04 REFERENCE STANDARDS

- A. American Water Works Association (AWWA)
  1. AWWA C653 - Disinfection for Water Treatment Plants.
- B. American Society for Testing and Materials (ASTM)
- C. Water Pollution Control Federation (WPCF)
- D. Where reference is made to one of the above standards, the revision in effect at the time of bid opening shall apply.

#### 1.05 QUALITY ASSURANCE

- A. Field service technicians shall be competent and experienced in the proper installation, adjustment, operation, testing and startup of the equipment and systems being installed.
- B. Manufacturers' sales and marketing personnel will not be accepted as field service technicians.

#### PART 2 PRODUCTS (NOT USED)

#### PART 3 EXECUTION

#### 3.01 PRELIMINARY REQUIREMENTS

- A. After installation of the equipment has been completed and equipment is presumably ready for operation, before it is operated by others, manufacturer's field service technician shall inspect, operate, test and adjust the equipment. The inspection shall include at least the following points (where applicable):
  - 1. Soundness (without crack or otherwise damaged parts).
  - 2. Completeness in all details, as specified and required.
  - 3. Correctness of setting, alignment and relative arrangement of various parts.
  - 4. Adequacy and correctness of packing, sealing and lubricants.
- B. The operation, testing and adjustment shall be as required to prove that the equipment has been left in proper condition for satisfactory operation under the conditions specified.
- C. Upon completion of this work, the manufacturer's field service technician shall submit a signed report of the results of inspection, operation, adjustments and tests.

### 3.02 WITNESS REQUIREMENTS

- A. Shop tests or factory tests may be witnessed by the Owner and/or Owner's representatives as required by the various equipment specifications.
- B. Field performance and acceptance tests shall be performed in the presence of the Owner, Owner's designed personnel and/or Owner's representatives.

### 3.03 STARTUP AND ACCEPTANCE OF TREATMENT FACILITIES AND RELATED SYSTEMS

- A. General Requirements
  - 1. Successfully execute the step-by-step procedure of startup and performance demonstration specified herein.
  - 2. The startup and performance demonstration shall be successfully executed prior to Substantial Completion and acceptance by the Owner of the treatment facilities and its related systems.
  - 3. All performance tests and inspections shall be scheduled at least seven (7) working days in advance or as otherwise specified with the Owner and the Engineer. All performance tests and inspections shall be conducted during the work week between Monday and Friday, unless otherwise specified.
- B. Preparation for Startup
  - 1. Upon completion of the treatment facilities and all its related systems, all channels, basins and tanks shall be hydraulically checked for leaks, cracks, and defects in accordance with Section 01680.

2. All mechanical and electrical equipment shall be checked to ensure that it is in good working order and properly connected. Preliminary run-ins of the various pumps, compressors, and other remaining equipment shall be made. All systems shall be cleaned and purged as required. All sumps, tanks, basins, chambers, pump wells and pipelines which are hydraulically checked shall be drained and returned to their original condition once the water testing is complete.
3. All instruments and controls shall be calibrated through their full range. All other adjustments required for proper operation of all instrumentation and control equipment shall be made.
4. Perform all other tasks needed for preparing and conditioning the treatment facilities for proper operation.
5. No testing or equipment operation shall take place until it has been verified by the Engineer that all specified safety equipment has been installed and is in good working order.
6. No testing or equipment operation shall take place until it has been verified by the Engineer that all lubricants, tools, maintenance equipment, spare parts and approved equipment operation and maintenance manuals have been furnished as specified.

C. Facilities Startup

1. Startup period shall not begin until all treatment facilities and equipment have been tested as specified and are ready for operation. Owner shall receive spare parts, safety equipment, tools and maintenance equipment, lubricants, approved operation and maintenance data and the specified operation and maintenance instructions prior to the startup. All valve tagging shall also be complete prior to this startup.
2. Demonstrate a seven (7) consecutive 24 hour day period of successful operation of the facility as a prerequisite to the Substantial Completion and Acceptance.
3. In the event of failure to demonstrate satisfactory performance of the facility on the first or any subsequent attempt, all necessary alterations, adjustments, repairs and replacements shall be made. When the facility is again ready for operation, it shall be brought on line and a new test shall be started. This procedure shall be repeated as often as necessary until the facility has operated continuously to the satisfaction of the Owner and Engineer for the specified duration.
4. Owner will furnish all operating personnel (other than vendor's or subcontractor's service personnel) needed to operate equipment during the final test period. However, said personnel will perform their duties under Contractor's direct supervision. Until performance tests are completed and units and systems are accepted by the Owner as substantially complete, Contractor shall be fully responsible for the operation and maintenance of all facilities.
5. Owner will provide all necessary chemicals and electricity. Contractor shall provide all necessary personnel of the various construction trades (i.e., electricians, plumbers, etc), and

field service personnel of the major equipment suppliers on an 8 hour per day basis at the facilities and on a 24 hour per day basis locally during the startup period. Major equipment suppliers shall include, but not be limited to, the following:

- a. Instrumentation and control equipment.
  - b. All pumping equipment.
  - c. Screening and conveying equipment.
  - d. Grit removal equipment.
  - e. Slide gates and sluice gates.
6. Do not, at any time, during startup allow the facility to be operated in a manner which subjects equipment to conditions that are more severe than the maximum allowable operating conditions for which the equipment was designed.

EQUIPMENT SUPPLIER'S CERTIFICATE OF INSTALLATION

Owner \_\_\_\_\_

Project \_\_\_\_\_

Contract No. \_\_\_\_\_

EQUIPMENT SPECIFICATION SECTION \_\_\_\_\_

EQUIPMENT DESCRIPTION \_\_\_\_\_

I \_\_\_\_\_, Authorized representative of  
(Print Name)

\_\_\_\_\_  
(Print Manufacturer's Name)

hereby CERTIFY that \_\_\_\_\_  
(Print equipment name and model with serial no.)

\_\_\_\_\_  
installed for the subject project has (have) been installed in a satisfactory manner, has (have) been tested and adjusted, and is (are) ready for final acceptance testing and operation on:

Date \_\_\_\_\_

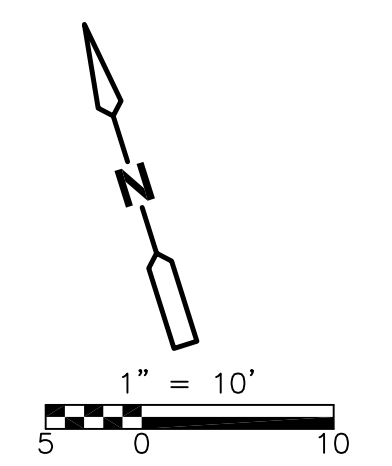
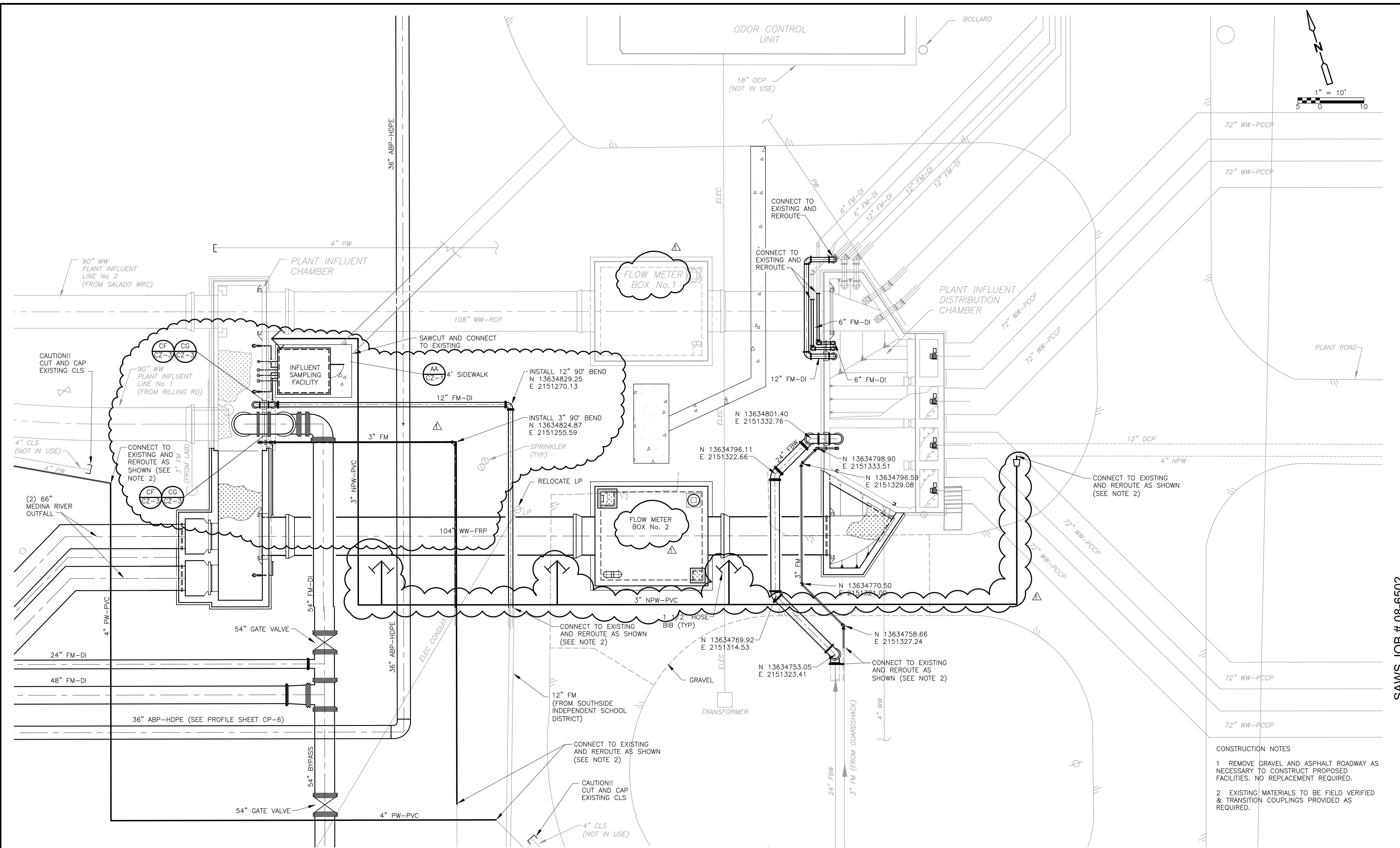
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CERTIFIED BY: \_\_\_\_\_  
(Signature of Manufacturer's Representative)

Date: \_\_\_\_\_

END OF SECTION

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**CONSTRUCTION NOTES**

- 1 REMOVE GRAVEL AND ASPHALT ROADWAY AS NECESSARY TO CONSTRUCT PROPOSED FACILITIES. NO REPLACEMENT REQUIRED.
- 2 EXISTING MATERIALS TO BE FIELD VERIFIED & TRANSITION COUPLINGS PROVIDED AS REQUIRED.

DESIGNED BY: REYNOLDS	CDM
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CROSS CHK'D BY: MARRIOTT	Tel: (210) 826-3200 Fax: (210) 826-8876
APPROVED BY: _____	Texas Registration Number F-3043
DATE: NOVEMBER 2010	consulting • engineering • construction • operations

WILLIAM T. REYNOLDS  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF TEXAS  
 No. 34654

SAN ANTONIO WATER SYSTEM  
**DOS RIOS WRC RE-RATING  
 HEADWORKS IMPROVEMENTS AND  
 PROCESS ENHANCEMENTS PHASE I**

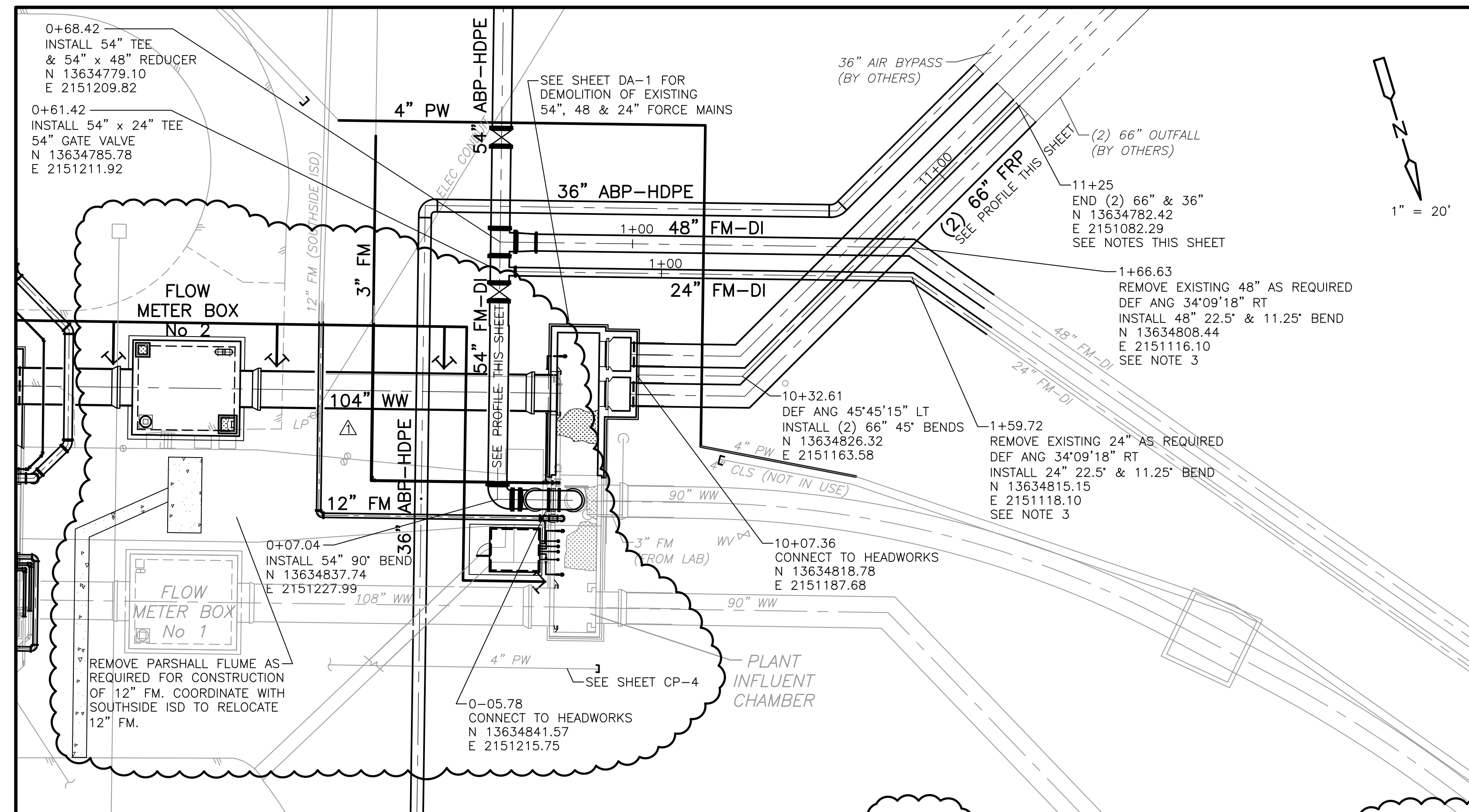
**PROPOSED PROJECT  
 YARD PIPING PLAN I**

PROJECT No	65767
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SHEET No	<b>CP-4</b>
OF	_____

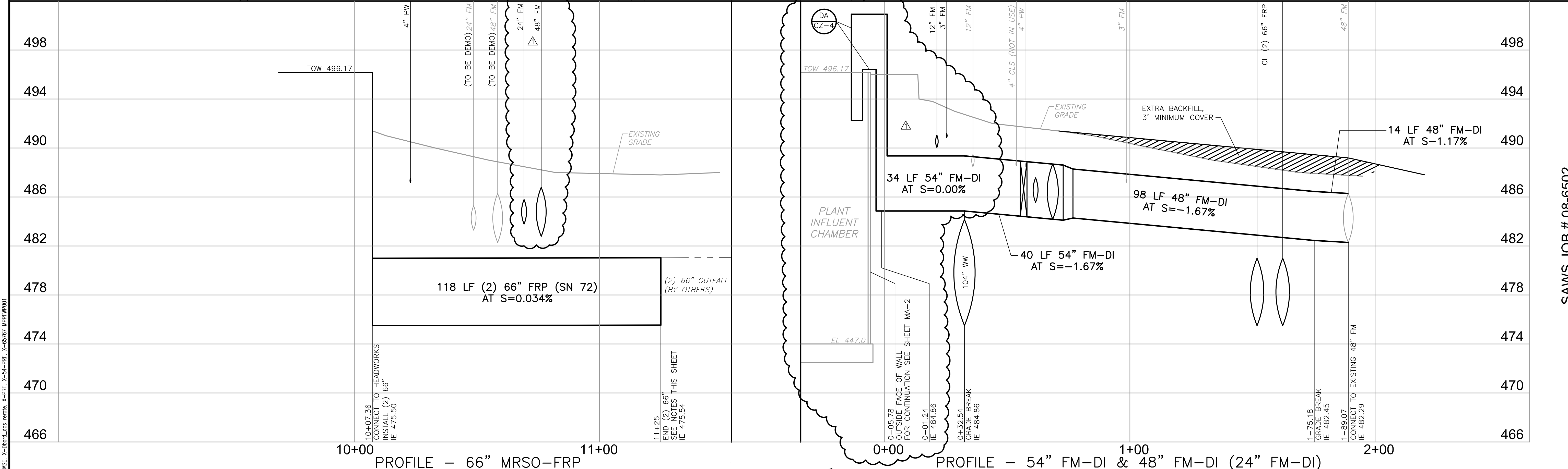
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- NOTES:
- CONDITION - A  
DOS RIOS WRC RE-RATE COMPLETED PRIOR TO INSTALLATION OF  
MEDINA RIVER SEWER OUTFALL:
    - CONTRACTOR TO USE CONNECTION CONTROL POINT DATA AND  
COORDINATE WITH THE ENGINEER TO CONFIRM ALIGNMENT  
LOCATION AND ELEVATION PRIOR TO INSTALLATION OF  
PROPOSED 2-66" AND 36" PIPES DEAD ENDS.
    - CONTRACTOR TO INSTALL 2-66" AND 36" END CAPS PER  
MANUFACTURER'S SPECIFICATIONS AND MARK ENDS OF PIPES.
  - CONDITION - B  
DOS RIOS WRC RE-RATE NOT COMPLETED PRIOR TO INSTALLATION  
OF MEDINA RIVER SEWER OUTFALL
    - CONTRACTOR TO EXPOSE ENDS OF EXISTING 2-66" AND 36"  
PIPES, VERIFY CROWN ELEVATION AND HORIZONTAL POSITION  
USING GUARD POST AND CONNECTION CONTROL DATA FROM  
MEDINA RIVER SEWER OUTFALL PRIOR TO REMOVAL OF END  
CAPS. CONTRACTOR TO IMMEDIATELY REPORT ANY DEVIATIONS  
FROM PLAN LOCATION OR ELEVATION.
    - CONTRACTOR TO REMOVE END CAPS AND PERFORM  
CONNECTION IN ACCORDANCE WITH PIPE MANUFACTURER'S  
RECOMMENDATIONS.
    - CONTRACTOR TO PROVIDE PIPE MATERIAL TRANSITION AND  
INSULATION GASKETS IF EXISTING PIPE MATERIAL IS NOT DUCTILE  
IRON.



DESIGNED BY: REYNOLDS	11/23/10	BR	REVISED BY ADDENDUM No 1
DRAWN BY: GIESEKE			
SHEET CHK'D BY: REYNOLDS			
CROSS CHK'D BY: REYNOLDS			
APPROVED BY:			
DATE: NOVEMBER 2010			

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11/23/10  
 WILLIAM T. REYNOLDS  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF TEXAS

SAN ANTONIO WATER SYSTEM  
**DOS RIOS WRC RE-RATING  
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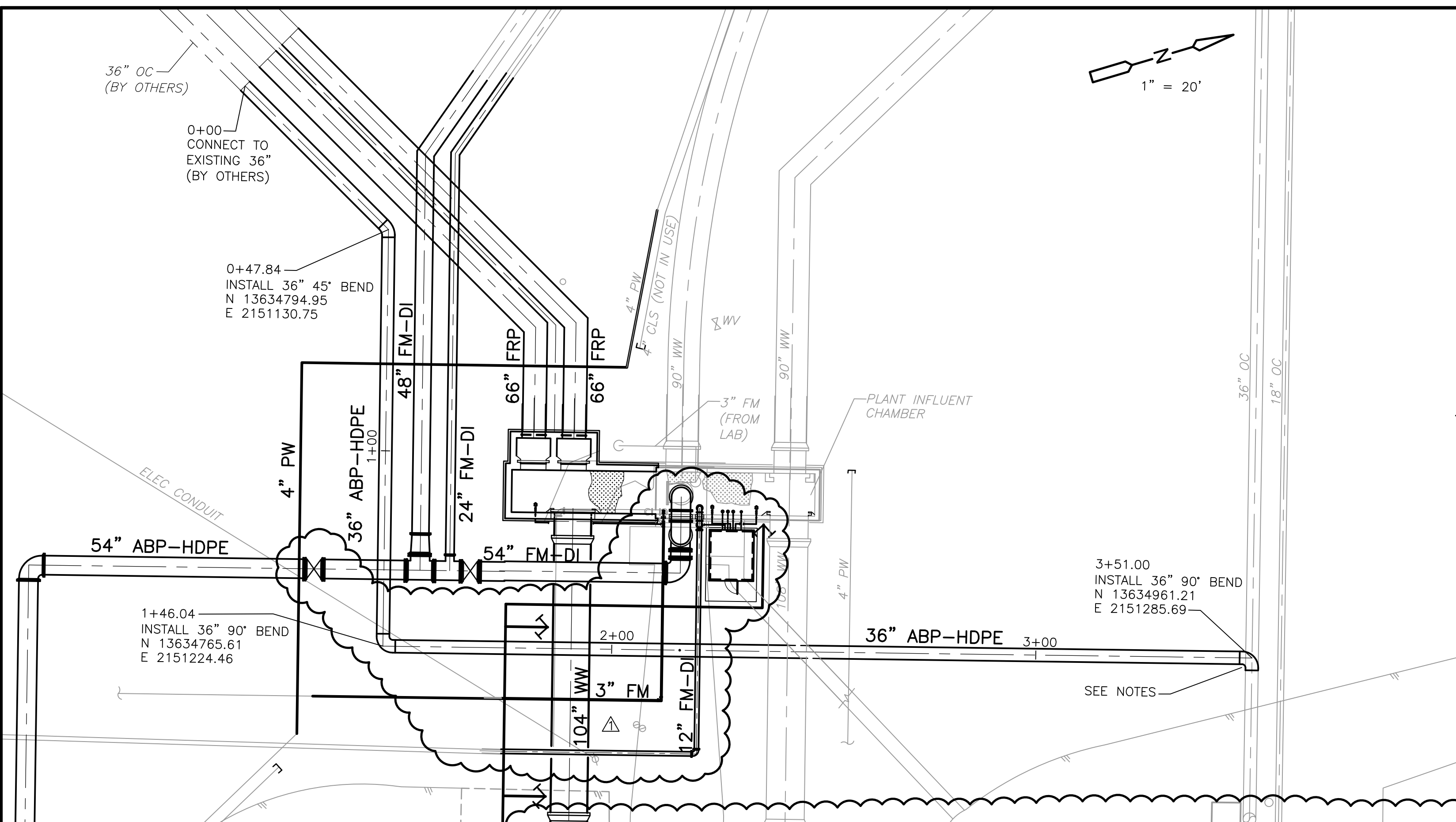
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SHEET No	CP-6
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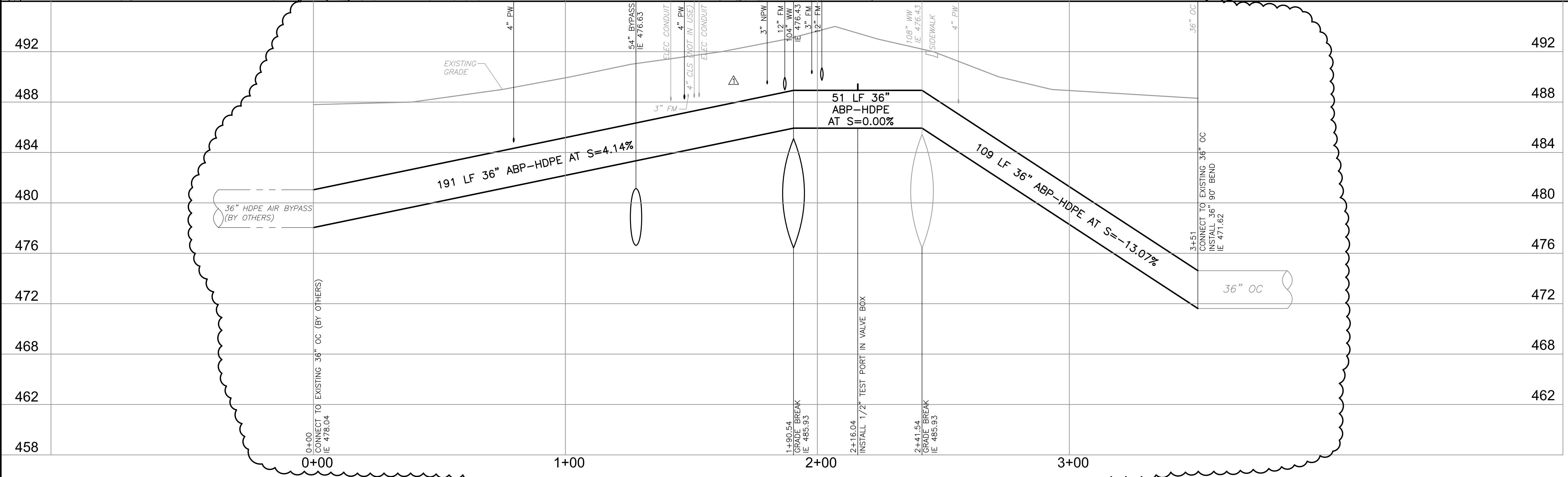
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- NOTES
1. CONTRACTOR TO PERFORM CONNECTION IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDATIONS.
  2. CONTRACTOR TO PROVIDE PIPE MATERIAL TRANSITION AND INSULATION GASKETS IF EXISTING PIPE MATERIAL IS NOT DUCTILE IRON.



SAWS JOB # 08-6502

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SHEET CHK'D BY: REYNOLDS			
CROSS CHK'D BY: REYNOLDS			
APPROVED BY: REYNOLDS			
DATE: NOVEMBER 2010			

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 Texas Registration Number F-3043  
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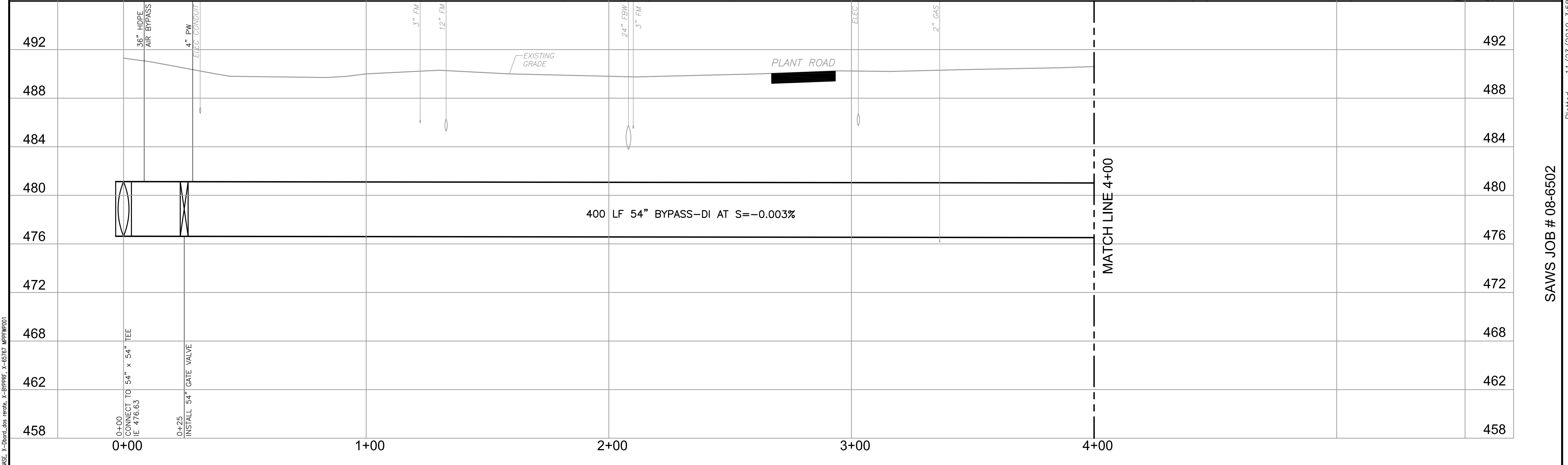
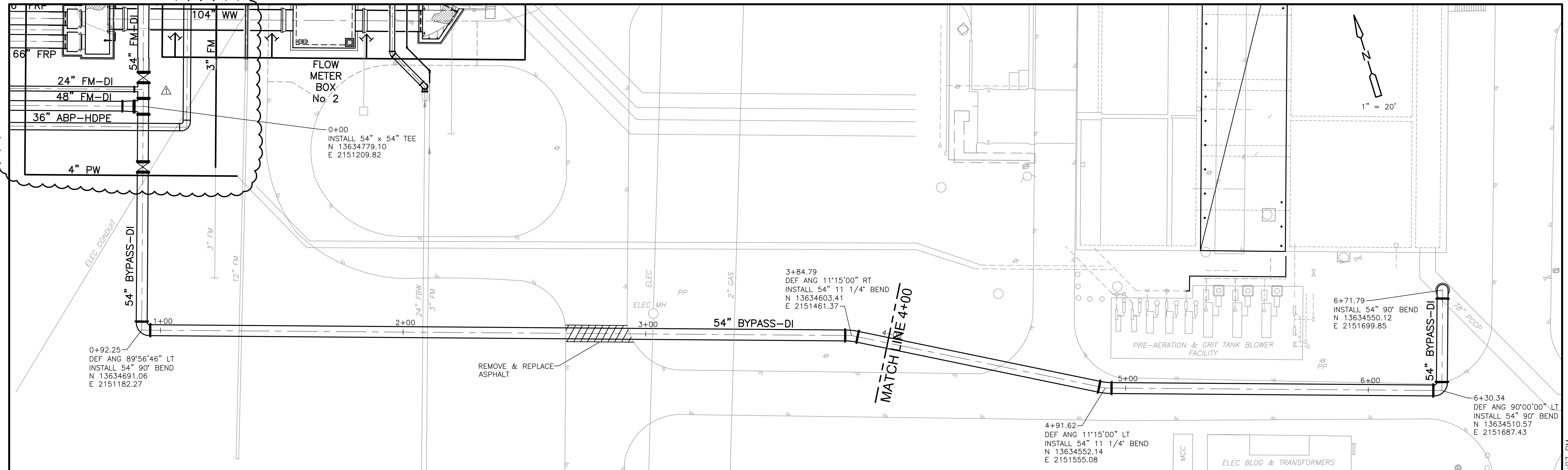
10/29/10  
 WILLIAM T. REYNOLDS  
 34684  
 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF TEXAS

SAN ANTONIO WATER SYSTEM  
**DOS RIOS WRC RE-RATING  
 HEADWORKS IMPROVEMENTS AND  
 PROCESS ENHANCEMENTS PHASE I**

**MEDINA RIVER  
 SEWER OUTFALL CONNECTION  
 PLAN & PROFILE 0+00 TO END**

PROJECT No	65767
FILE NAME:	CP-7
SHEET No	<b>CP-7</b>
OF	

P:\SAN ANTONIO WATER SYSTEM\65767\_HEADWORKS IMPROVEMENTS AND PROCESS ENHANCEMENTS PHASE I\CADD\65767-DOS RIOS RE-RATE\02-CIVIL\CP-8 By: cezeaux, jana Saved: 11/23/2010 3:55:02 PM Plotted: 11/23/2010 3:58:07 PM  
 XREFS: X-65767-DOS RIOS RE-RATE, X-Dbord.dwg, X-65767-02-CIVIL\CP-8.dwg, X-65767-02-CIVIL\CP-8.dwg



ISSUE No	DATE	CHKD	REMARKS
1	11/23/10	BR	REVISED BY ADDENDUM No 1

DESIGNED BY: REYNOLDS  
 DRAWN BY: GIESEKE  
 SHEET CHK'D BY: REYNOLDS  
 CROSS CHK'D BY: REYNOLDS  
 APPROVED BY: \_\_\_\_\_  
 DATE: NOVEMBER 2010

**CDM**  
 1777 NE Loop 410, Suite 500  
 San Antonio, Texas 78217  
 Tel: (210) 826-3200 Fax: (210) 826-8876  
 Texas Registration Number F-3043  
*consulting • engineering • construction • operations*

11/23/10

*William T. Reynolds*

WILLIAM T. REYNOLDS  
 REGISTERED PROFESSIONAL ENGINEER  
 34884

SAN ANTONIO WATER SYSTEM

**DOS RIOS WRC RE-RATING  
 HEADWORKS IMPROVEMENTS AND  
 PROCESS ENHANCEMENTS PHASE I**

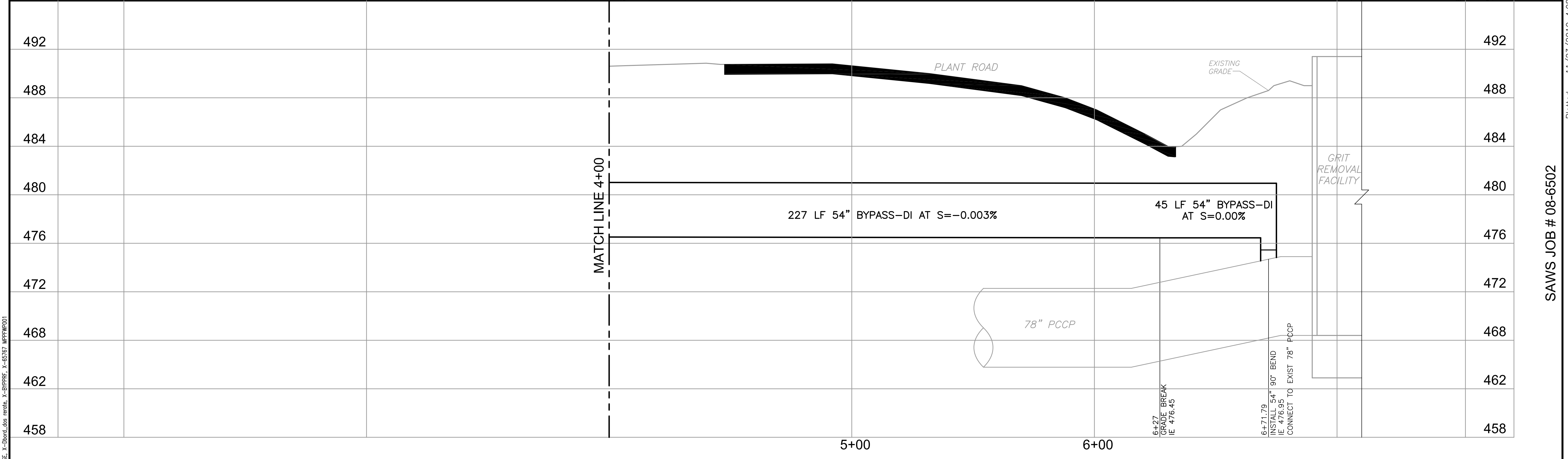
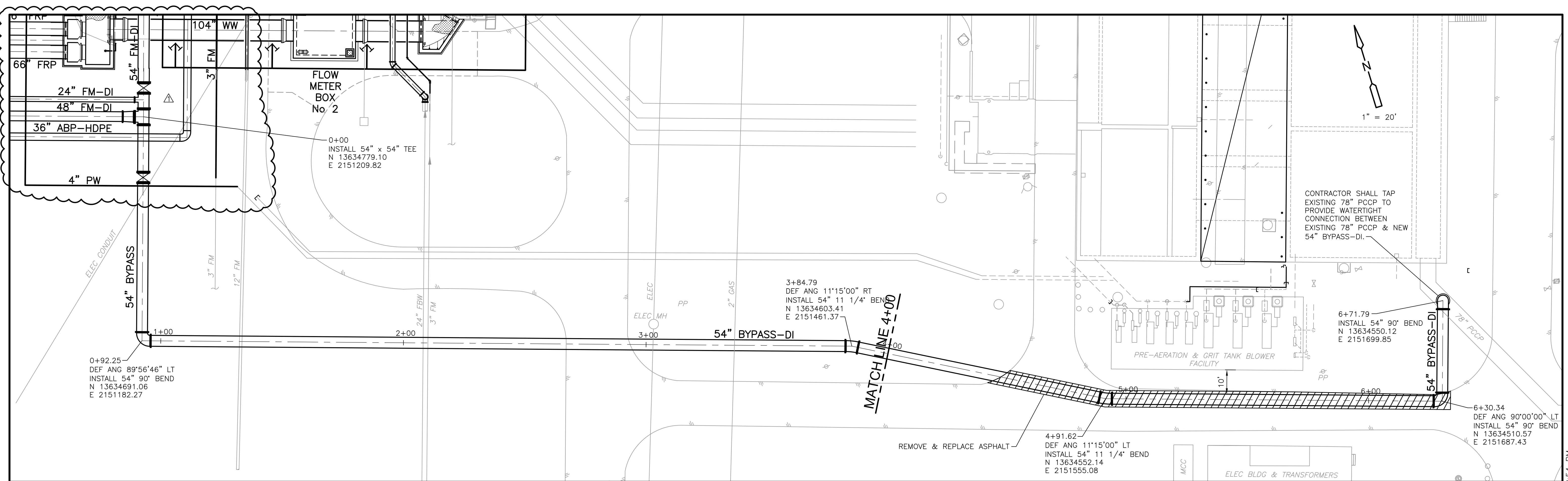
**54" FORCE MAIN BYPASS  
 TO GRIT REMOVAL CHANNEL  
 PLAN & PROFILE 0+00 TO 4+00**

PROJECT No	65767
FILE NAME:	CP-8
SHEET No	<b>CP-8</b>
OF	—

Plotted - 11/23/2010 3:58:07 PM

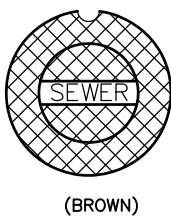
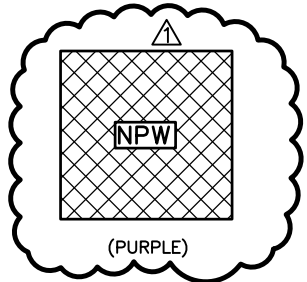
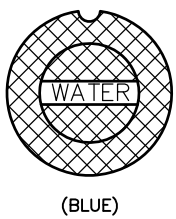
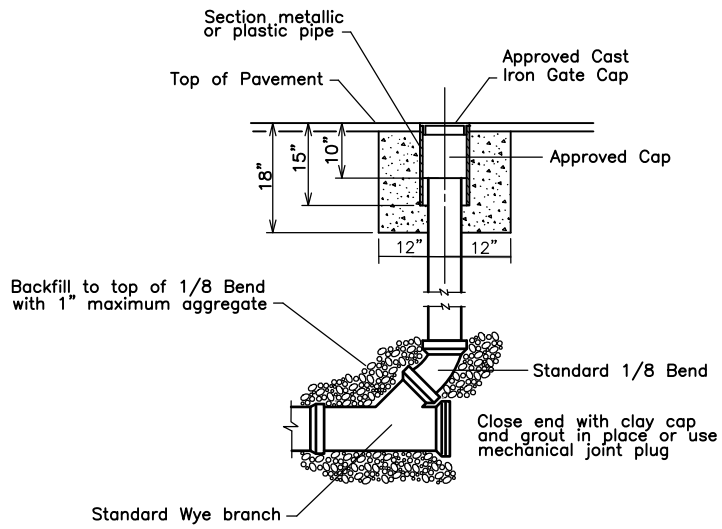
SAWS JOB # 08-6502

P:\SAN ANTONIO WATER SYSTEM\65767\_HEADWORKS IMPROVEMENTS AND PROCESS ENHANCEMENTS PHASE I\CADD\65767-DOS RIOS RE-RATE\02-CVL\CP-9 By: cezeux, jana Saved: 11/23/2010 4:08:17 PM Plotted: 11/23/2010 4:08:54 PM  
 XREFS: X-65767-DOS RIOS BASE, X-Dbord.dwg reate, X-PPRFR, X-65767-WPFR001



DESIGNED BY: REYNOLDS DRAWN BY: GIESEKE SHEET CHK'D BY: REYNOLDS CROSS CHK'D BY: REYNOLDS APPROVED BY: _____ DATE: NOVEMBER 2010	<b>CDM</b> 1777 NE Loop 410, Suite 500 San Antonio, Texas 78217 Tel: (210) 826-3200 Fax: (210) 826-8876 Texas Registration Number F-3043 <i>consulting • engineering • construction • operations</i>		<p>SAN ANTONIO WATER SYSTEM          DOS RIOS WRC RE-RATING          HEADWORKS IMPROVEMENTS AND          PROCESS ENHANCEMENTS PHASE I</p>	<p><b>54" FORCE MAIN BYPASS          TO GRIT REMOVAL CHANNEL          PLAN &amp; PROFILE 4+00 TO END</b></p>	PROJECT No: 65767 FILE NAME: CP-9 SHEET No: <b>CP-9</b> OF _____
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Plotted - 11/23/2010 4:08:54 PM SAWS JOB # 08-6502



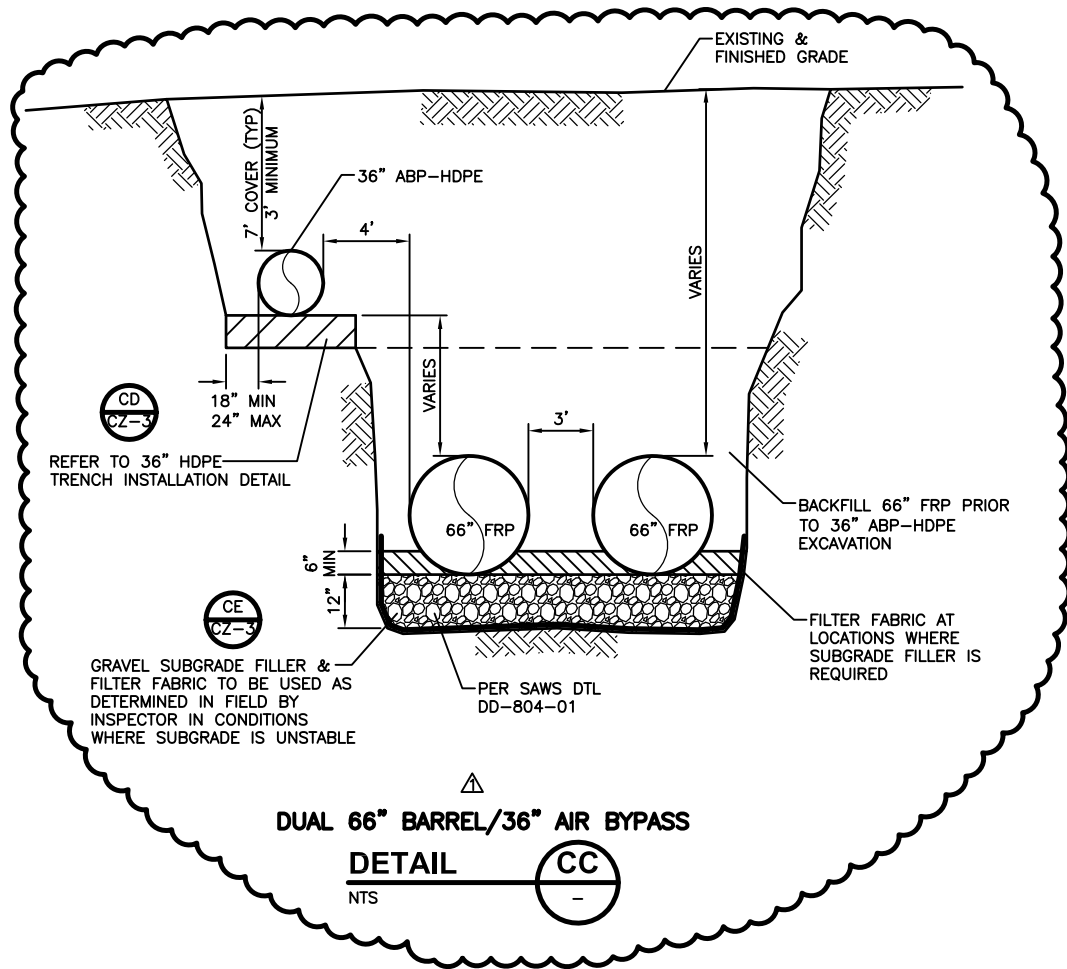
Approved Gate Cap  
(Heavy Duty)


**CLEANOUT**  
**(SAWS DTL DD-854-02)**  
**DETAIL**

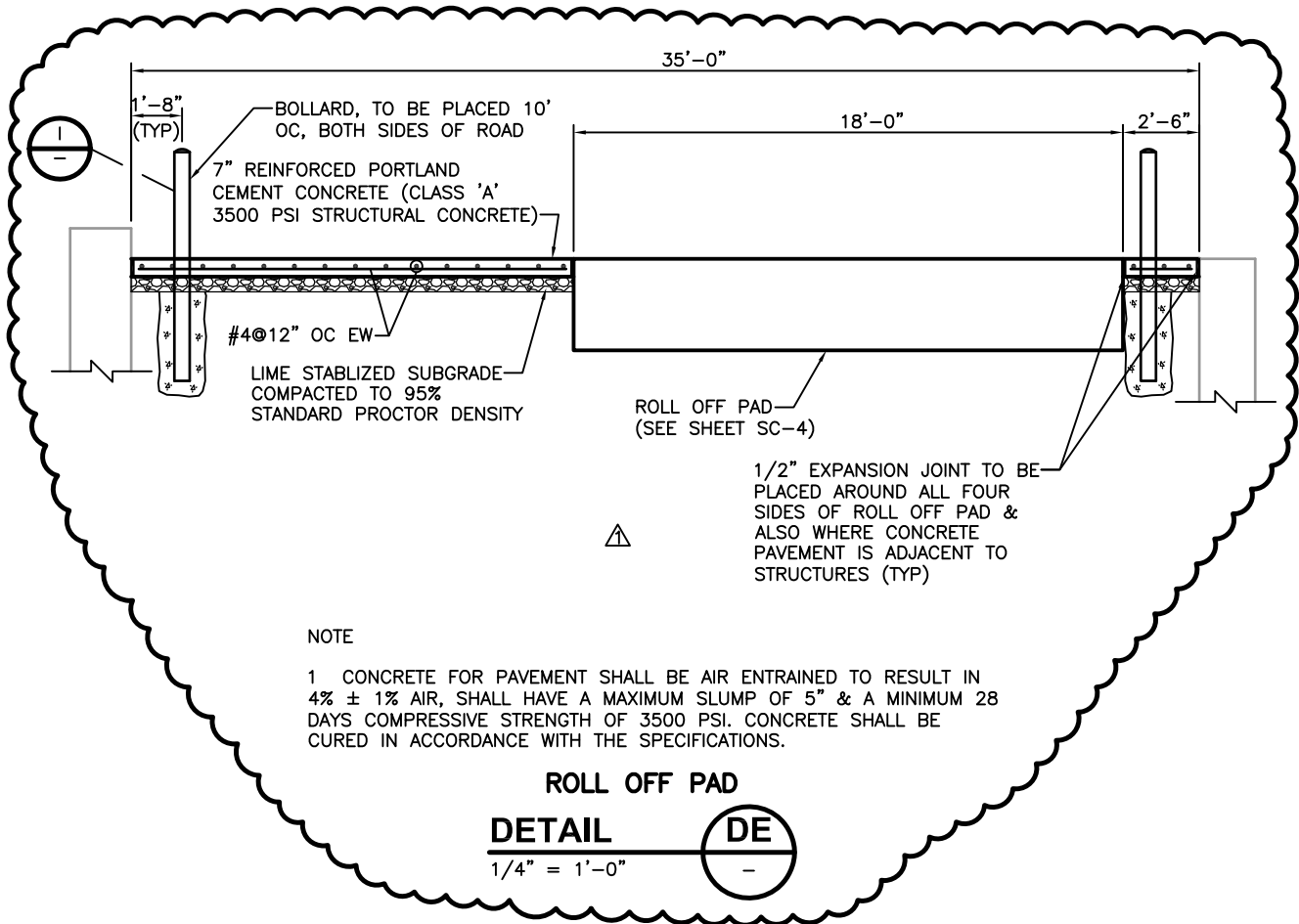
NTS


BC  
-

 Texas Registration Number F-3043	DATE 11-23-10	SAN ANTONIO WATER SYSTEM DOS RIOS WRC RE-RATING HEADWORKS IMPROVEMENTS AND PROCESS ENHANCEMENTS PHASE I		ADDENDUM No 1	EXHIBIT No CZ-2-A
		REF SHEET No	LOCATION		
		CZ-2			

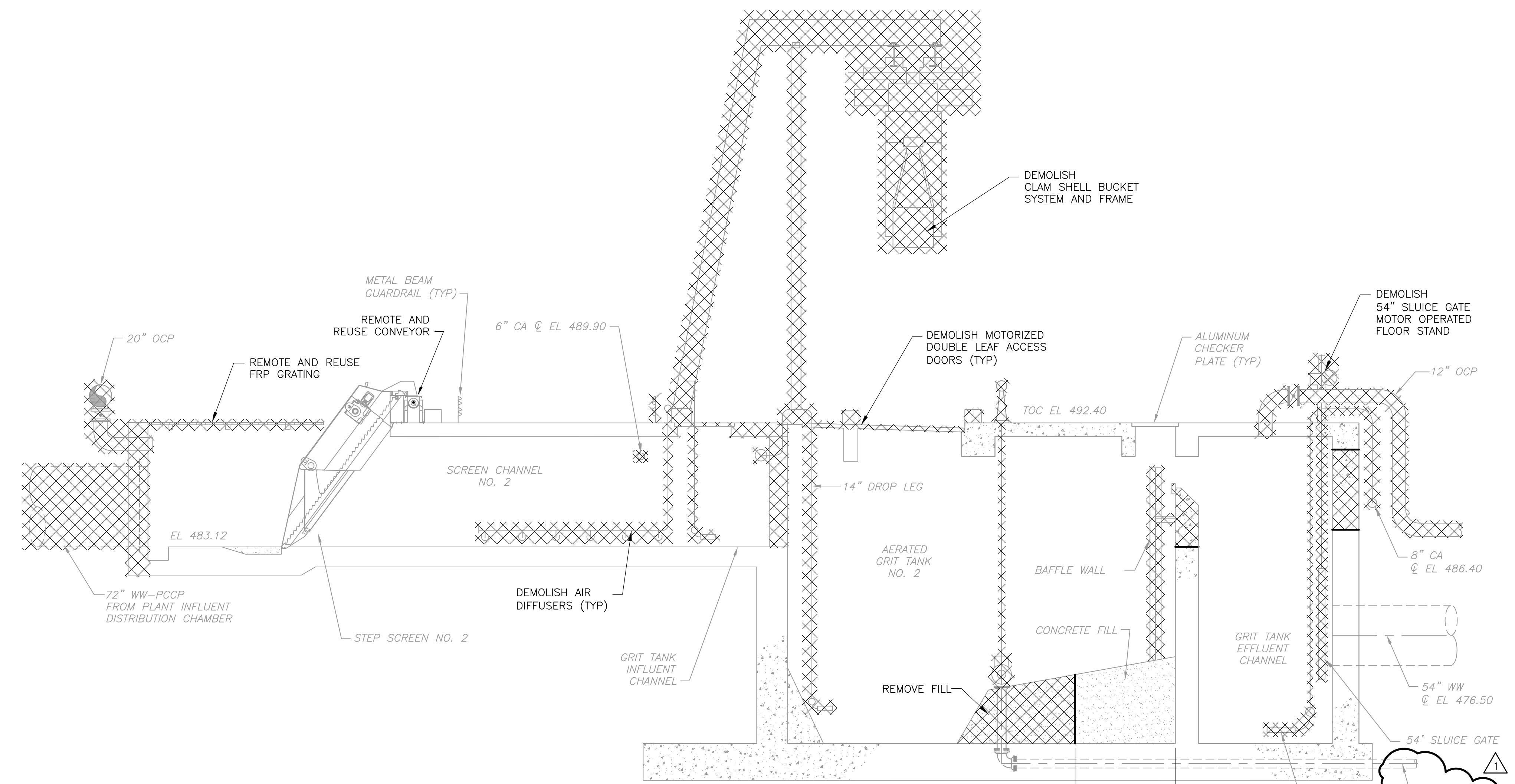


 Texas Registration Number F-3043	DATE <u>11-23-10</u>	SAN ANTONIO WATER SYSTEM DOS RIOS WRC RE-RATING HEADWORKS IMPROVEMENTS AND PROCESS ENHANCEMENTS PHASE I		ADDENDUM No 1	EXHIBIT No CZ-3-A
		REF SHEET No	LOCATION		
		CZ-3			

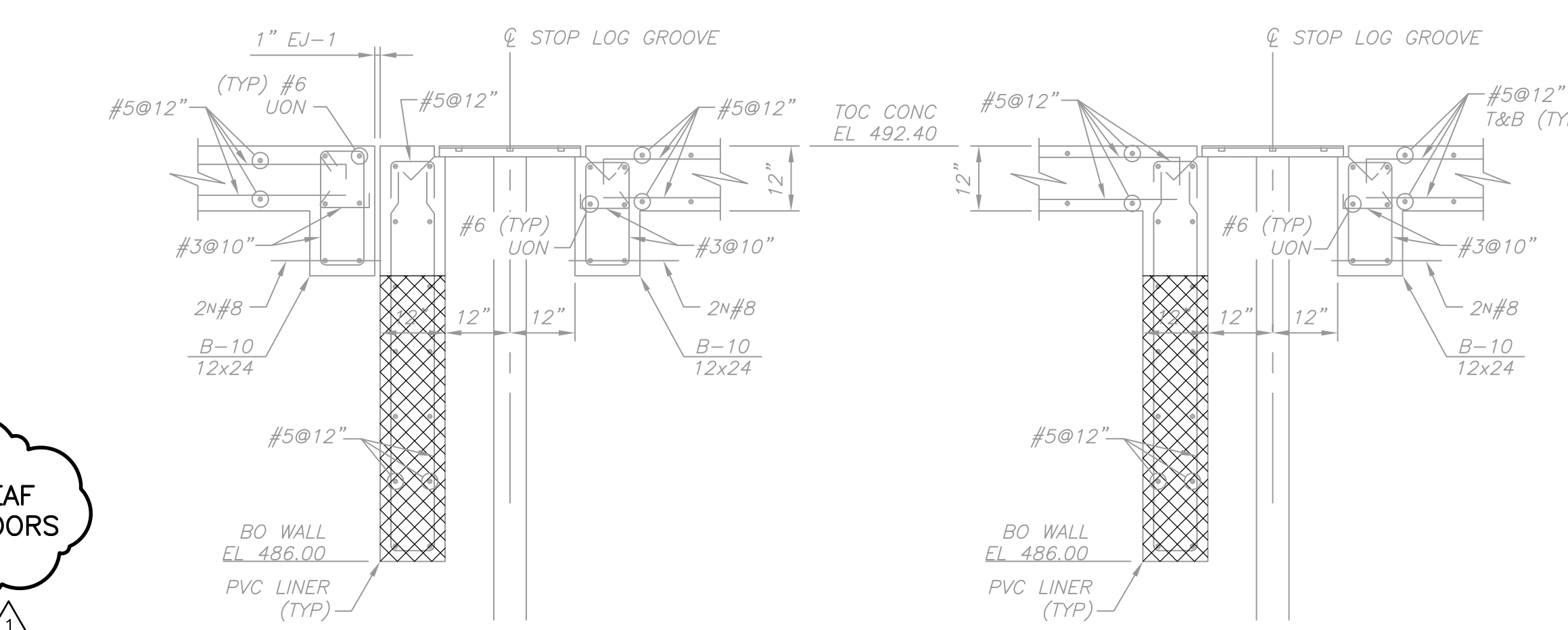


 Texas Registration Number F-3043	DATE 11-23-10	SAN ANTONIO WATER SYSTEM DOS RIOS WRC RE-RATING HEADWORKS IMPROVEMENTS AND PROCESS ENHANCEMENTS PHASE I		ADDENDUM No 1	EXHIBIT No CZ-4-A
		REF SHEET No	LOCATION		
		CZ-4			

P:\SAN ANTONIO WATER SYSTEM\65767\_HEADWORKS IMPROVEMENTS AND PROCESS ENHANCEMENTS PHASE I\CADD\65767-DOS RIOS RE-RATE\11-DEMOLITION\DB-2 By: cezeaux, jana Saved: 11/22/2010 11:33:30 AM Plotted: 11/23/2010 7:37:58 AM



**SECTION 1**  
3/16" = 1'-0"  
DB-1



**SECTION 1**  
1/2" = 1'-0"  
DB-1

**SECTION 2**  
1/2" = 1'-0"  
DB-1



**PHOTOGRAPH 2**

PHOTO KEY:

- 1 CLAM SHELL BUCKET SYSTEM, MONORAIL AND ACCESS STAIRS
- 2 54" SLUICE GATE MOTOR OPERATED FLOOR STAND (TYP)
- 3 MOTORIZED DOUBLE LEAF ACCESS DOORS (TYP)
- 4 12" ODOR CONTROL PIPING (TYP)
- 5 24" ODOR CONTROL PIPING (TYP)

NOTES:

1. SEE SPECIFICATION SECTION 01015 FOR SEQUENCE OF CONSTRUCTION. DEMOLITION OF AIR PIPING SHALL BE COORDINATED WITH PLANT OPERATIONS STAFF.
2. PIPE SUPPORT STRUCTURE SHALL REMAIN INTACT TO PROVIDE SUPPORT TO THE JUNCTION BOX.
3. DEMOLISH ODOR CONTROL PIPING TO PIPE FLANGE AND PROVIDE 60" AND 18" BLIND FLANGE.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL MATERIALS AND EQUIPMENT REMOVED BY DEMOLITION.



**PHOTOGRAPH 1**

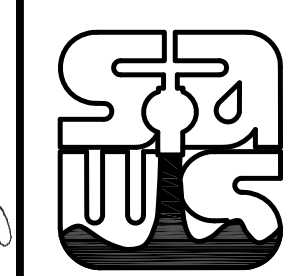
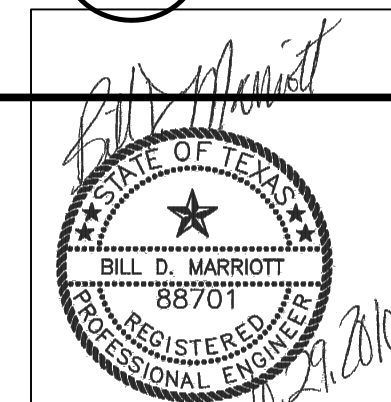
MOTORIZED DOUBLE-LEAF ACCESS DOORS (TYP)



**PHOTOGRAPH 3**

DESIGNED BY: KODURI	11/23/10	BM	REVISED BY ADDENDUM No 1
DRAWN BY: CEZEUX			
SHEET CHK'D BY: KODURI			
CROSS CHK'D BY: MARRIOTT			
APPROVED BY:			
DATE: OCTOBER 2010			
ISSUE No	DATE	CHKD	REMARKS

**CDM**  
1777 NE Loop 410, Suite 500  
San Antonio, Texas 78217  
Tel: (210) 826-3200 Fax: (210) 826-8876  
Texas Registration Number F-3043  
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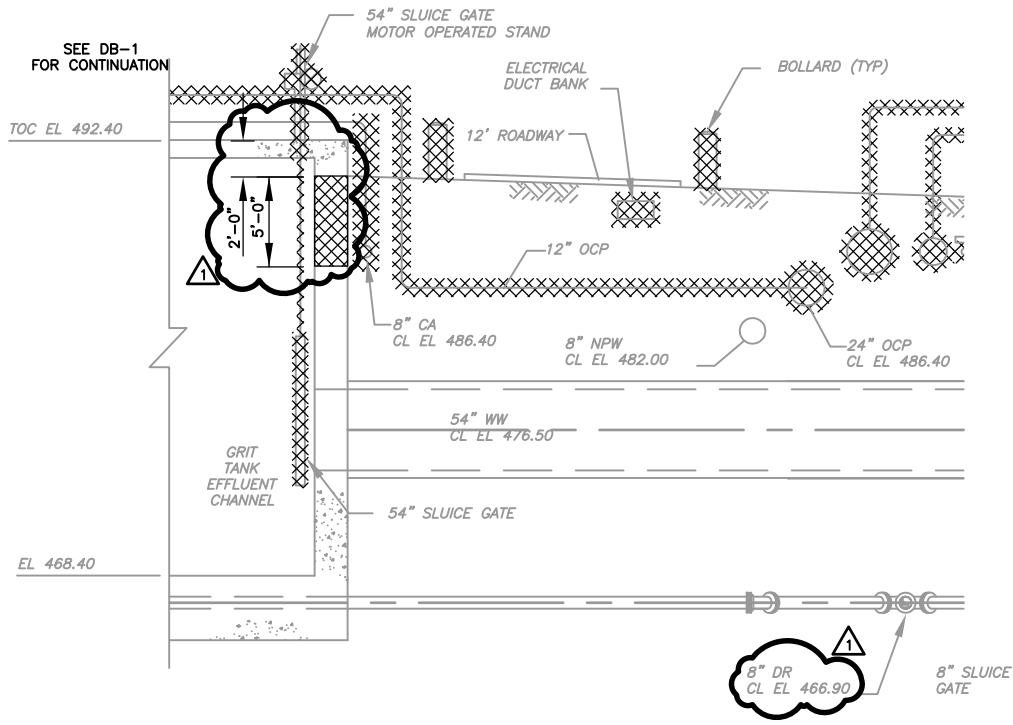
SAN ANTONIO WATER SYSTEM  
DOS RIOS WRC RE-RATING  
HEADWORKS IMPROVEMENTS AND  
PROCESS ENHANCEMENTS PHASE I

**INFLUENT SCREENING /  
AERATED GRIT TANK DEMOLITION  
SECTIONS AND PHOTOGRAPHS**

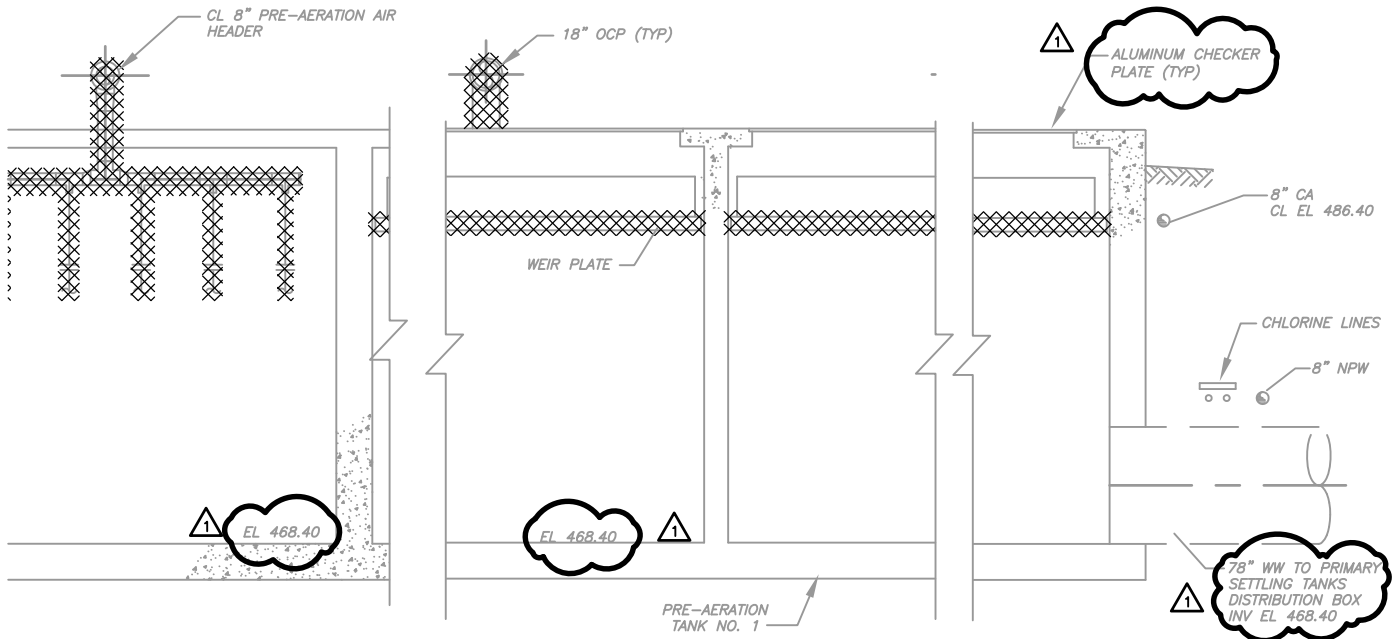
PROJECT No	65767
FILE NAME:	DB-2
SHEET No	<b>DB-2</b>
OF	

Plotted - 11/23/2010 7:37:58 AM

SAWS JOB # 08-6502



**SECTION 1**  
DC-1



**SECTION 2**  
DC-1

**SECTION 3**  
DC-1

SAN ANTONIO WATER SYSTEM  
DOS RIOS WRC RE-RATING HEADWORKS  
IMPROVEMENTS AND PROCESS ENHANCEMENTS PHASE I

ADDENDUM  
No

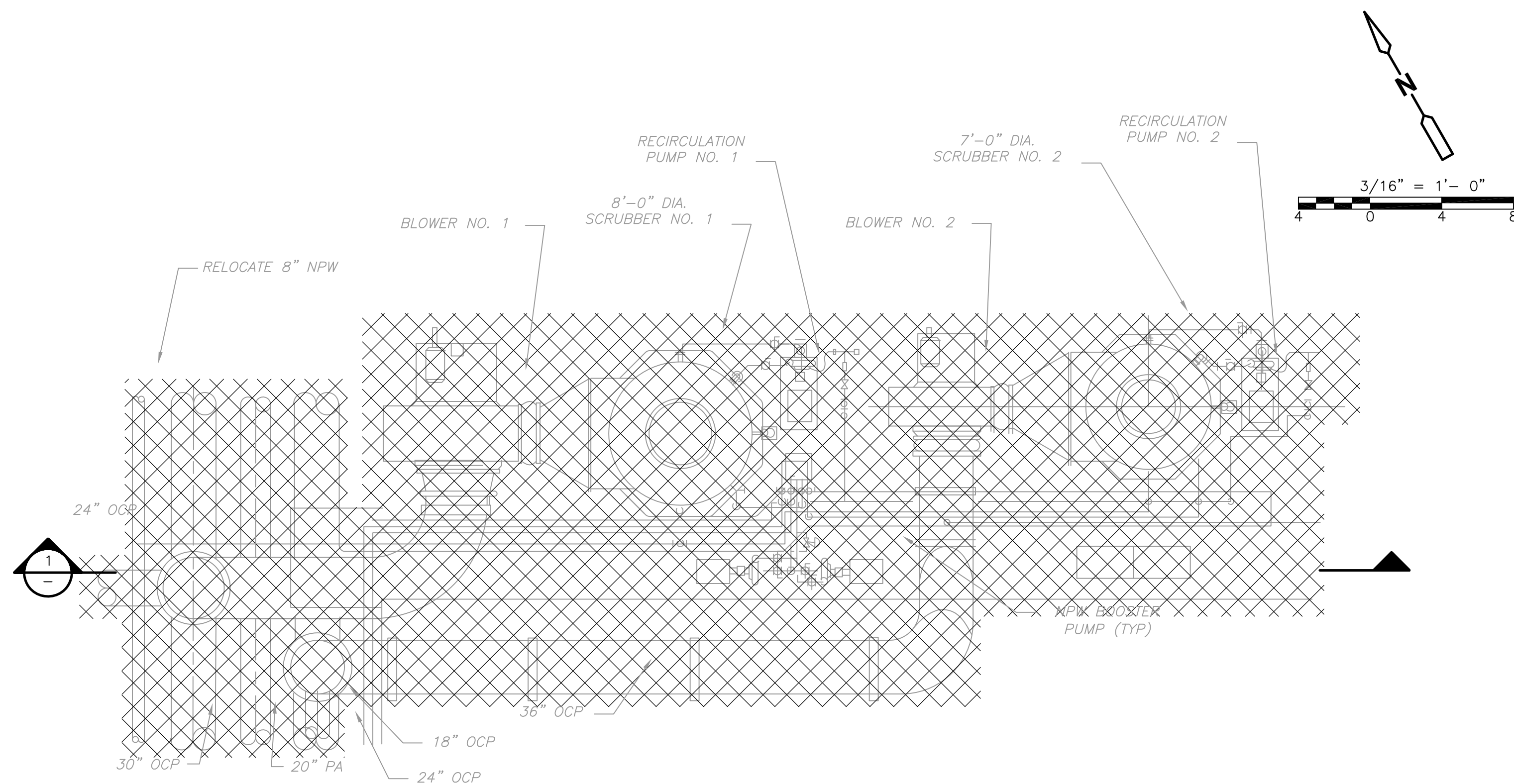
EXHIBIT  
No

REF SHEET No

LOCATION

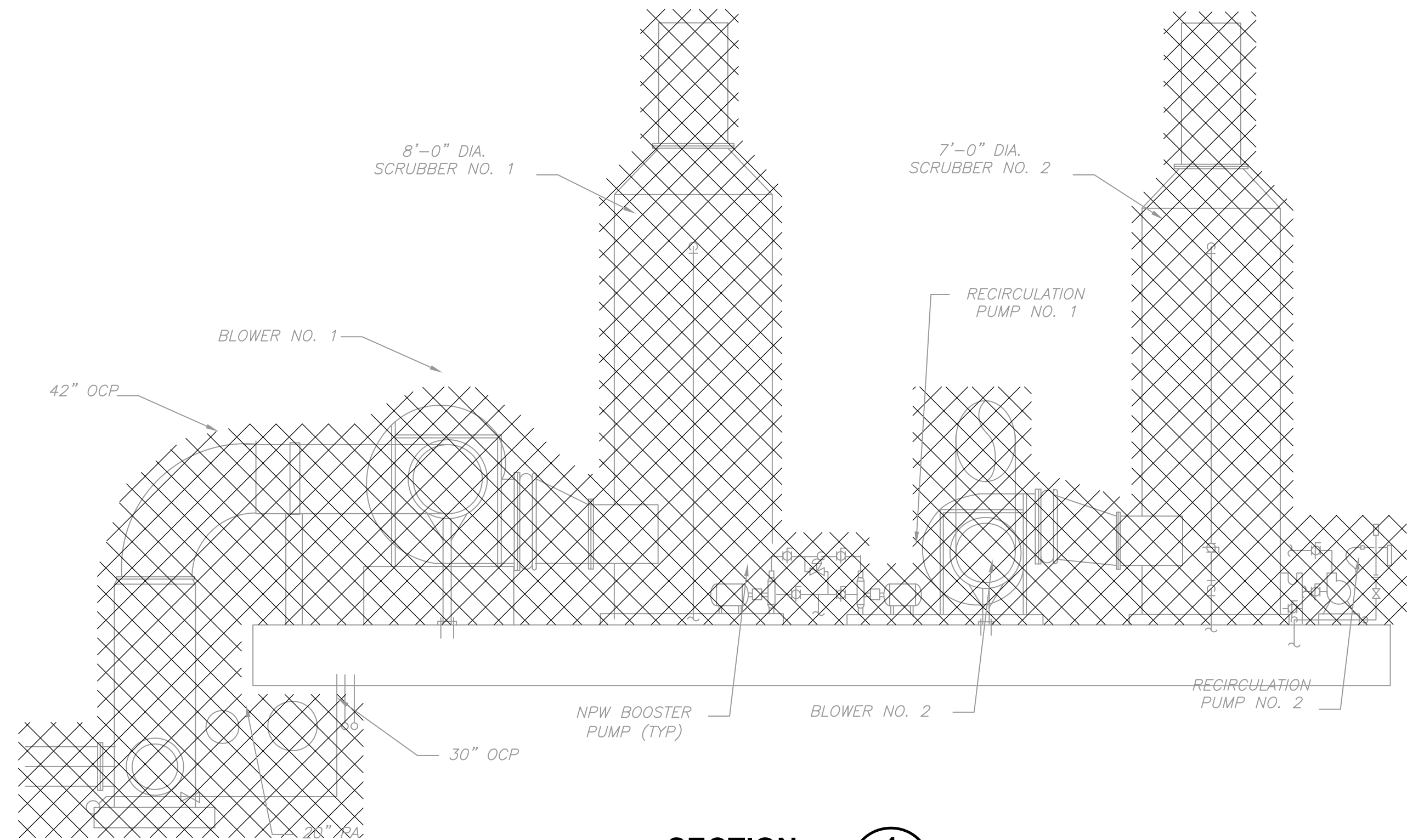


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**PARTIAL PLAN**

3/16" = 1'-0"



**SECTION**

1

3/16" = 1'-0"



PHOTOGRAPH 1



PHOTOGRAPH 2

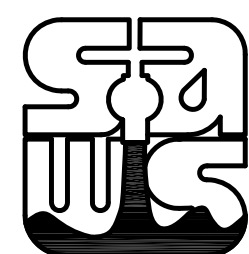
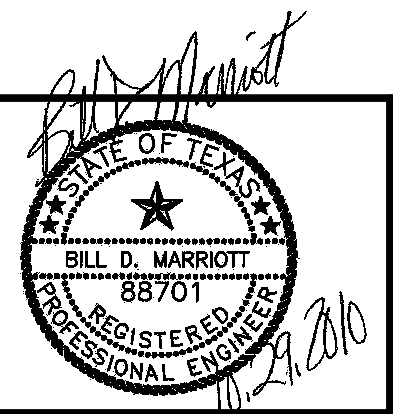
NOTES:

- SEE SPECIFICATION 01015 FOR WORK SEQUENCE.
- ODOR CONTROL, PRE-AERATION AIR PIPING AND PIPE SUPPORTS WILL BE CUT, CAPPED AND DEMOLISHED.
- NON-POTABLE WATER, CHANNEL AIR PIPING AND CHLORINE GAS PIPING WILL BE REMOVED AND RELOCATED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL MATERIALS AND EQUIPMENT REMOVED BY DEMOLITION.

ISSUE No	DATE	CHKD	REMARKS
1	11/23/10	BM	REVISED BY ADDENDUM No 1

DESIGNED BY: STEPHENS  
 DRAWN BY: ISLAS  
 SHEET CHK'D BY: MARRIOTT  
 CROSS CHK'D BY: CUTLER  
 APPROVED BY: \_\_\_\_\_  
 DATE: NOVEMBER 2010

**CDM**  
 1777 NE Loop 410, Suite 500  
 San Antonio, Texas 78217  
 Tel: (210) 826-3200 Fax: (210) 826-8876  
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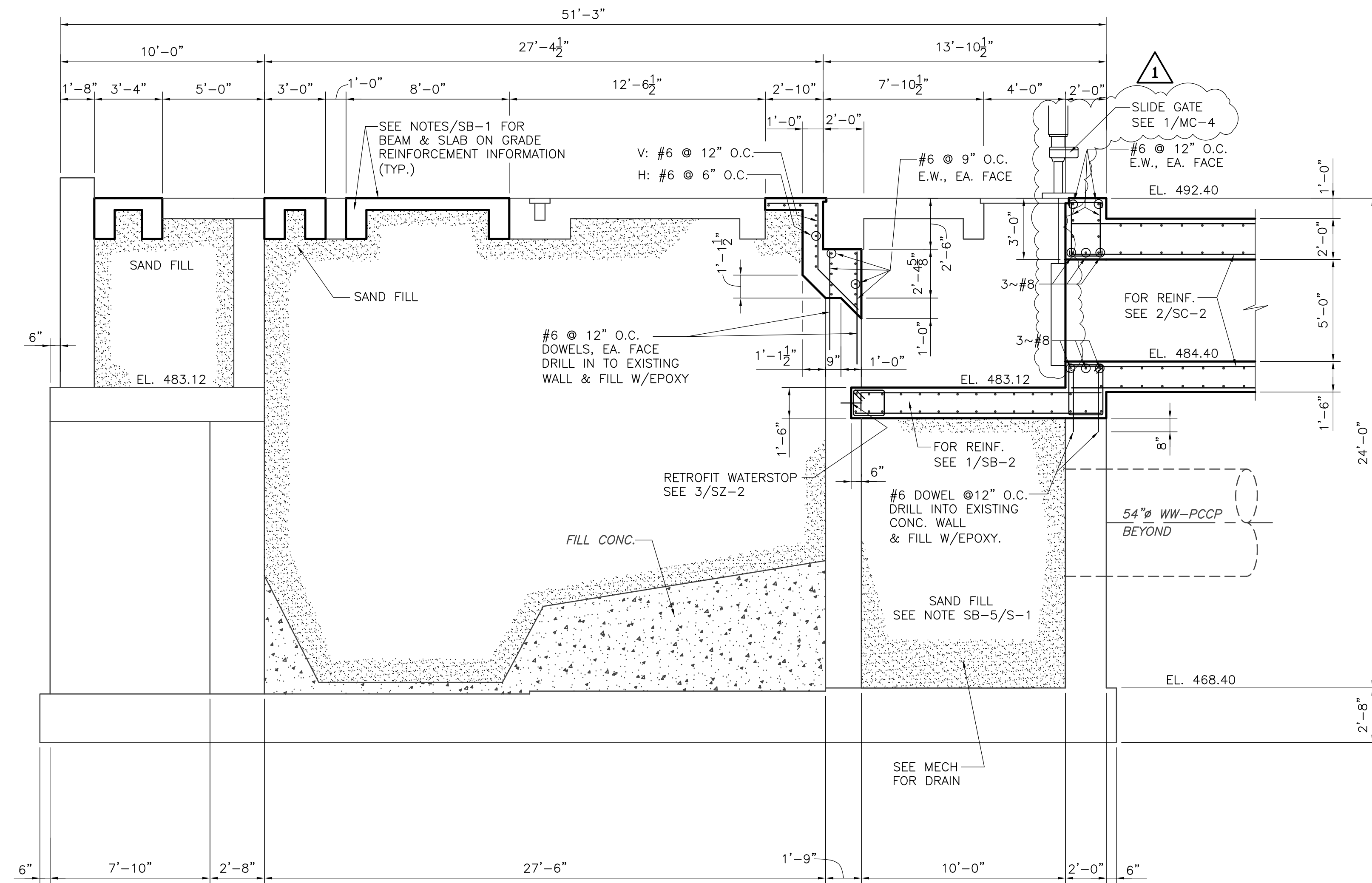
SAN ANTONIO WATER SYSTEM  
 DOS RIOS WRC RE-RATING  
 HEADWORKS IMPROVEMENTS AND  
 PROCESS ENHANCEMENTS PHASE I

**ODOR CONTROL SYSTEM  
 PARTIAL PLAN,  
 SECTION AND PHOTOGRAPHS**

PROJECT No	65767
FILE NAME:	DC-3
SHEET No	DC-3
OF	

SAWS JOB # 08-6502

Plotted - 11/23/2010 12:01:33 PM



SECTION 10  
1/4" = 1'-0"  
SB-1

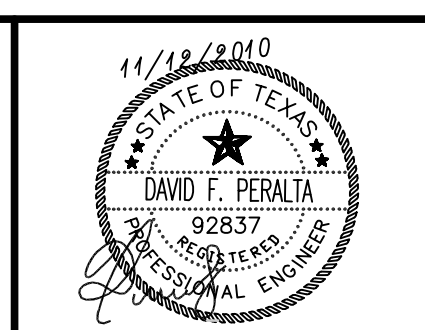
SAWS JOB # 08-6502

ISSUE No	DATE	CHKD	REMARKS
1	11/23/10	PERALTA	ADDM #1 GRIT W/C SUPPORT, BEAM B-9, SLIDE GATE

DESIGNED BY: PERALTA  
DRAWN BY: CAI  
SHEET CHK'D BY: PERALTA  
CROSS CHK'D BY: FISHER  
APPROVED BY: \_\_\_\_\_  
DATE: OCTOBER 2010

**CDM**  
1777 NE Loop 410, Suite 500  
San Antonio, Texas 78217  
Tel: (210) 826-3200 Fax: (210) 826-8876  
Texas Registration Number F-3043  
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**UNINTECH CONSULTING ENGINEERS, INC.**  
TBPE Reg. No. F-5499  
WWW.UNINTECH.COM  
2431 E. EVANS ROAD  
SAN ANTONIO, TEXAS 78229  
(210) 841-6803 FAX: (210) 641-8279  
OFFICE LOCATION: SAN ANTONIO • AUSTIN

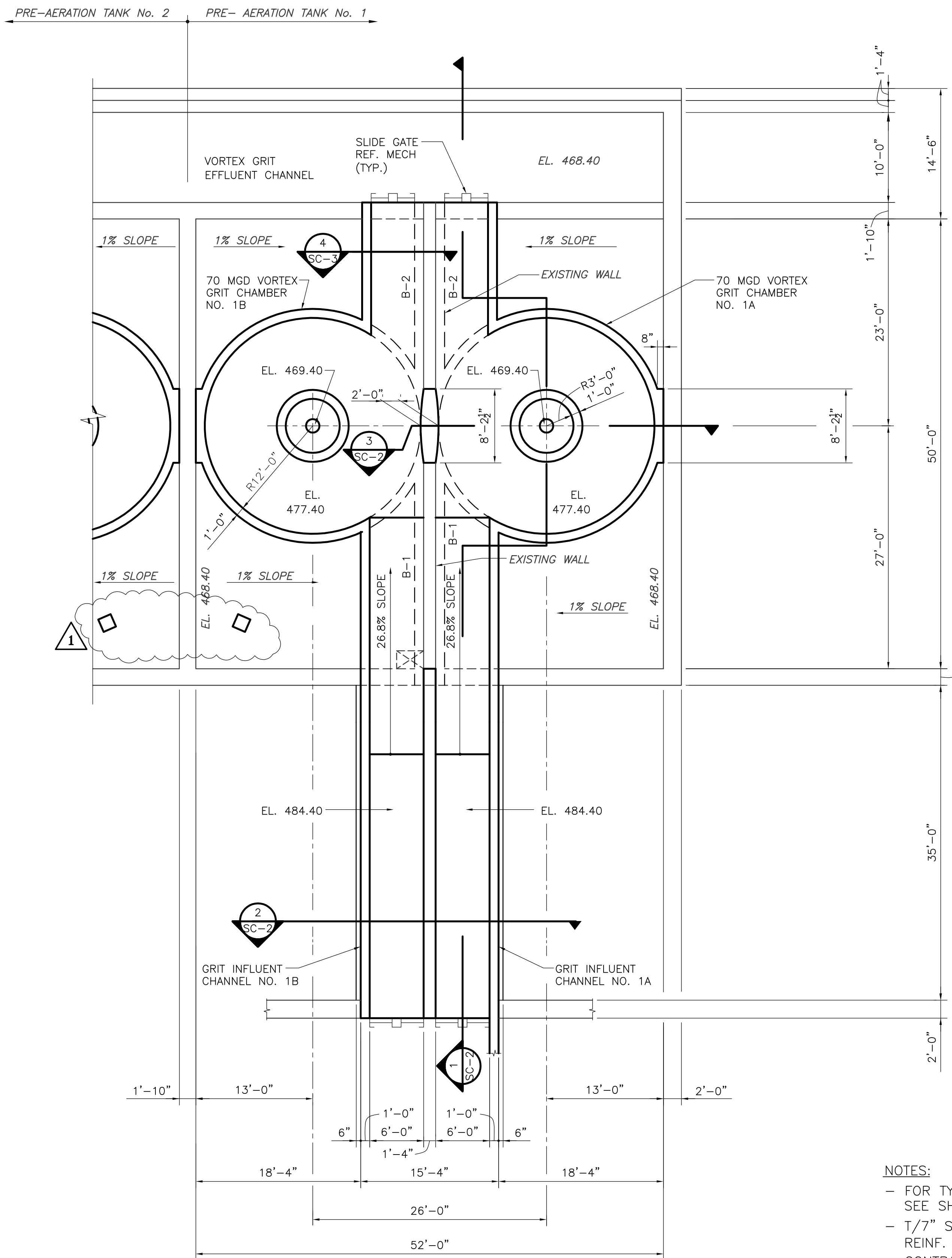


SAN ANTONIO WATER SYSTEM  
DOS RIOS WRC RE-RATING  
HEADWORKS IMPROVEMENTS AND  
PROCESS ENHANCEMENTS PHASE I

INFLUENT SCREENING  
FACILITY - MODIFICATIONS  
- SECTIONS III

PROJECT No	65767
FILE NAME:	SB-4
SHEET No	SB-4
OF	—

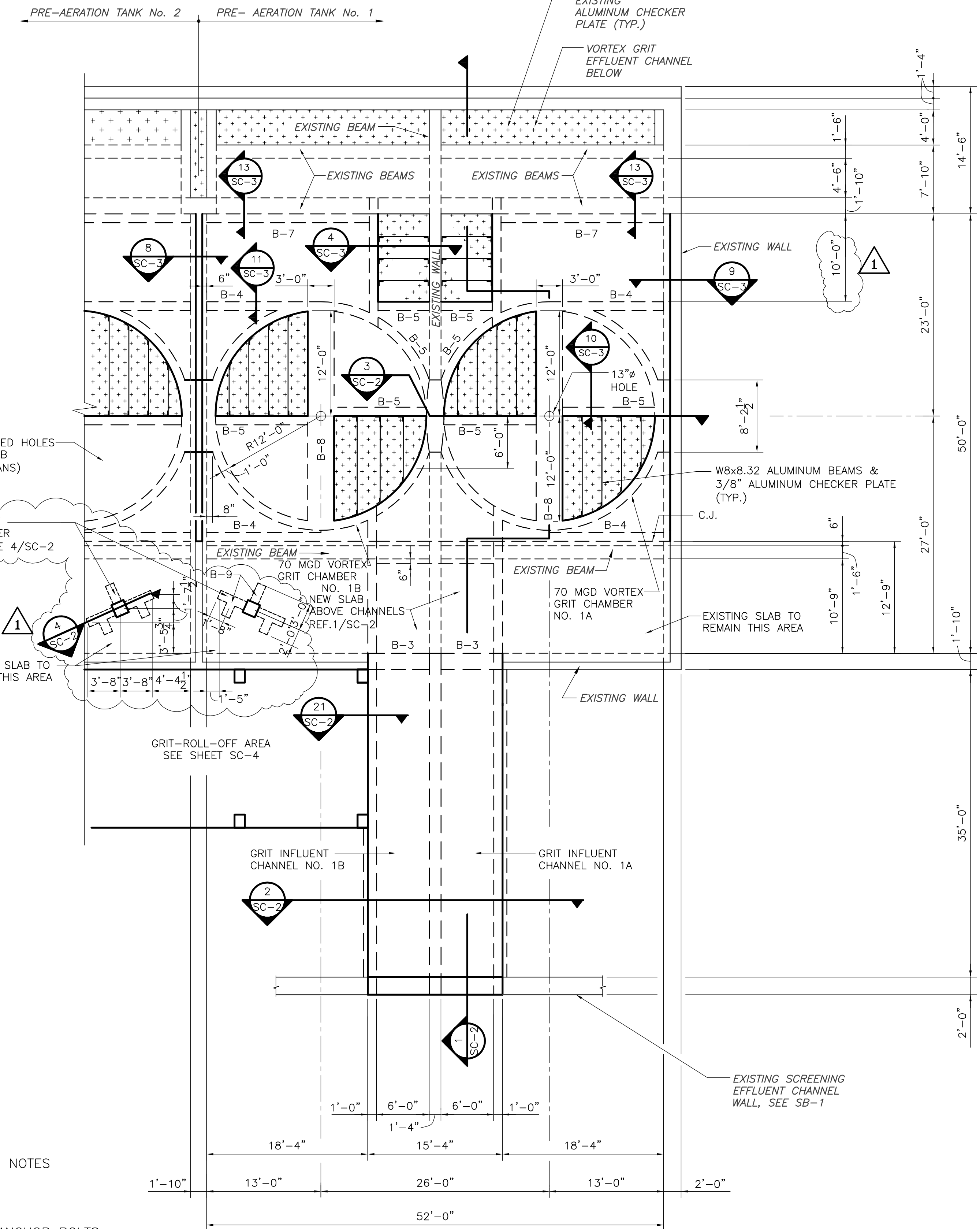
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**PLAN AT FOUNDATION**  
1/8" = 1'-0"

- NOTES:**
- FOR TYPICAL DETAILS & GEN. NOTES SEE SHEETS S-1 & SZ-1.
  - T/7" SLAB ON GRADE REINF. #6 @ 12" O.C. E.W.
  - CONTRACTOR SHALL INSTALL ANCHOR BOLTS AS REQUIRED BY EQUIPMENT MFR.

**NOTE:**  
SYMMETRICAL FOR GRIT TANK NO. 2 & SAME FOR GRIT TANKS NOS. 3 & 4



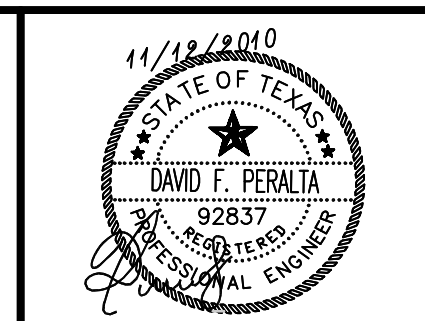
**PLAN AT GRADE**  
1/8" = 1'-0"

ISSUE No	DATE	CHKD	REMARKS
1	11/23/10	PERALTA	ADD #1 GRIT W/C SUPPORT, BEAM B-9

DESIGNED BY: PERALTA  
 DRAWN BY: CAI  
 SHEET CHK'D BY: PERALTA  
 CROSS CHK'D BY: FISHER  
 APPROVED BY: PERALTA  
 DATE: OCTOBER 2010

**CDM**  
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 WWW.UNINTECH.COM  
 2431 E. EVANS ROAD  
 SAN ANTONIO, TEXAS 78259  
 (210) 641-6003 FAX: (210) 641-8279  
 OFFICE LOCATION: SAN ANTONIO • AUSTIN



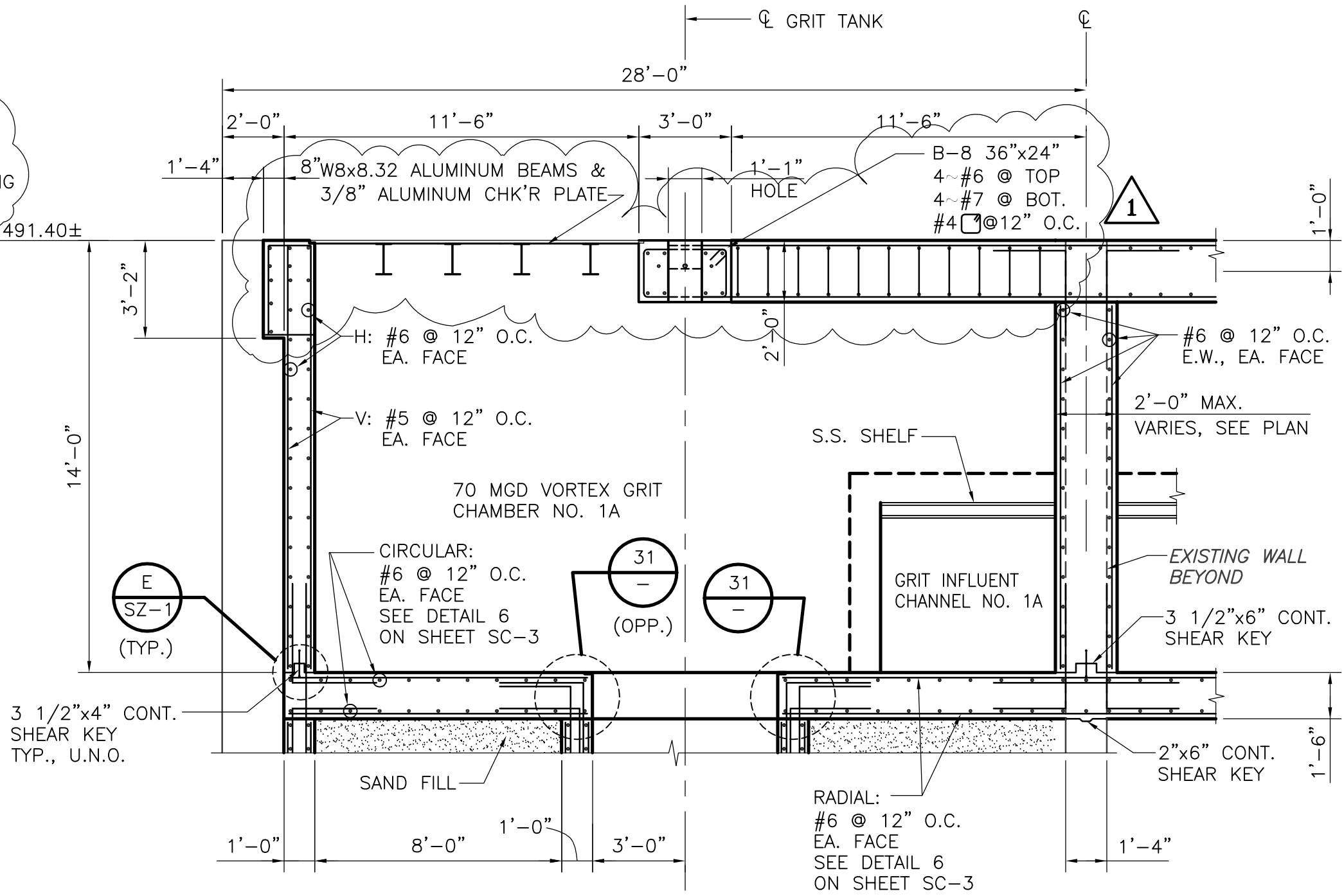
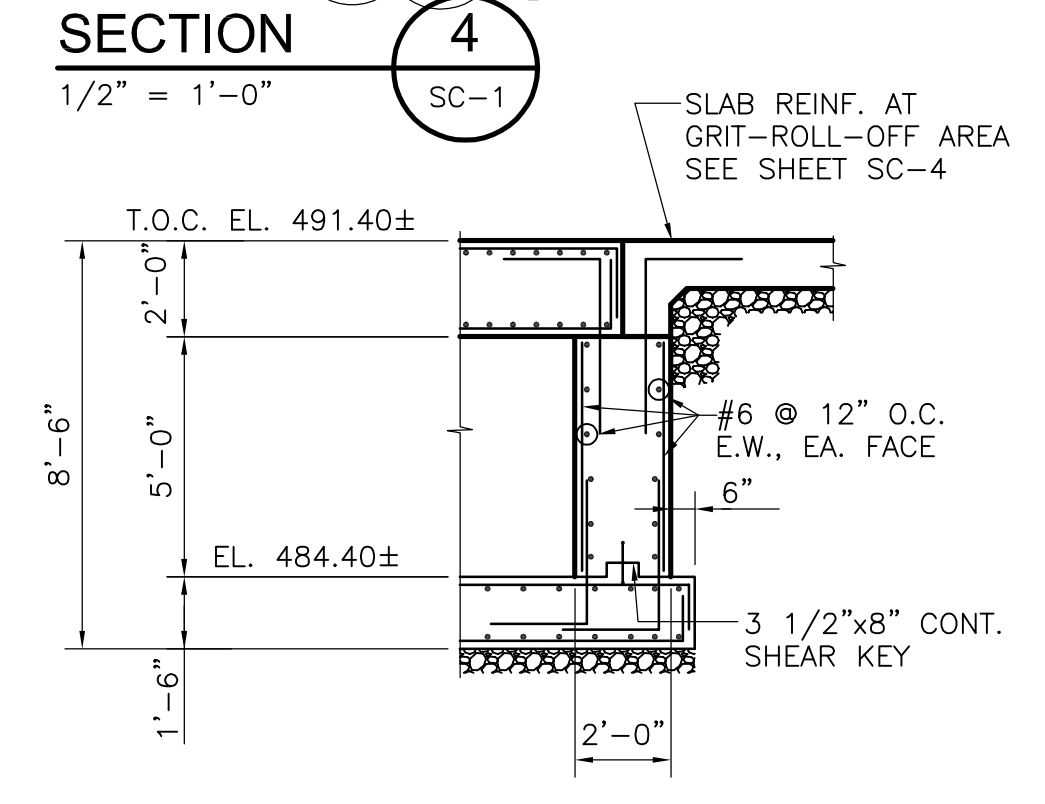
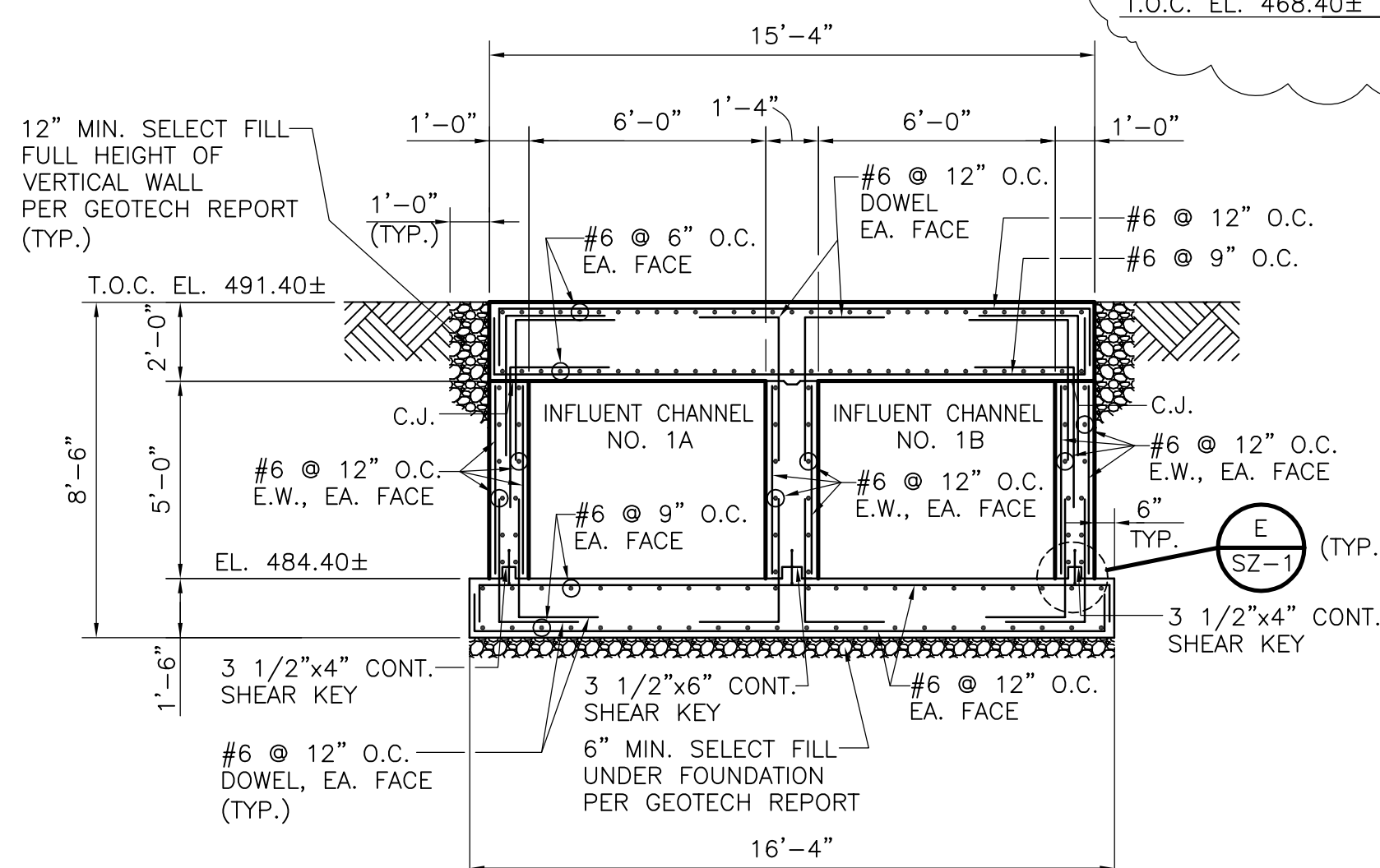
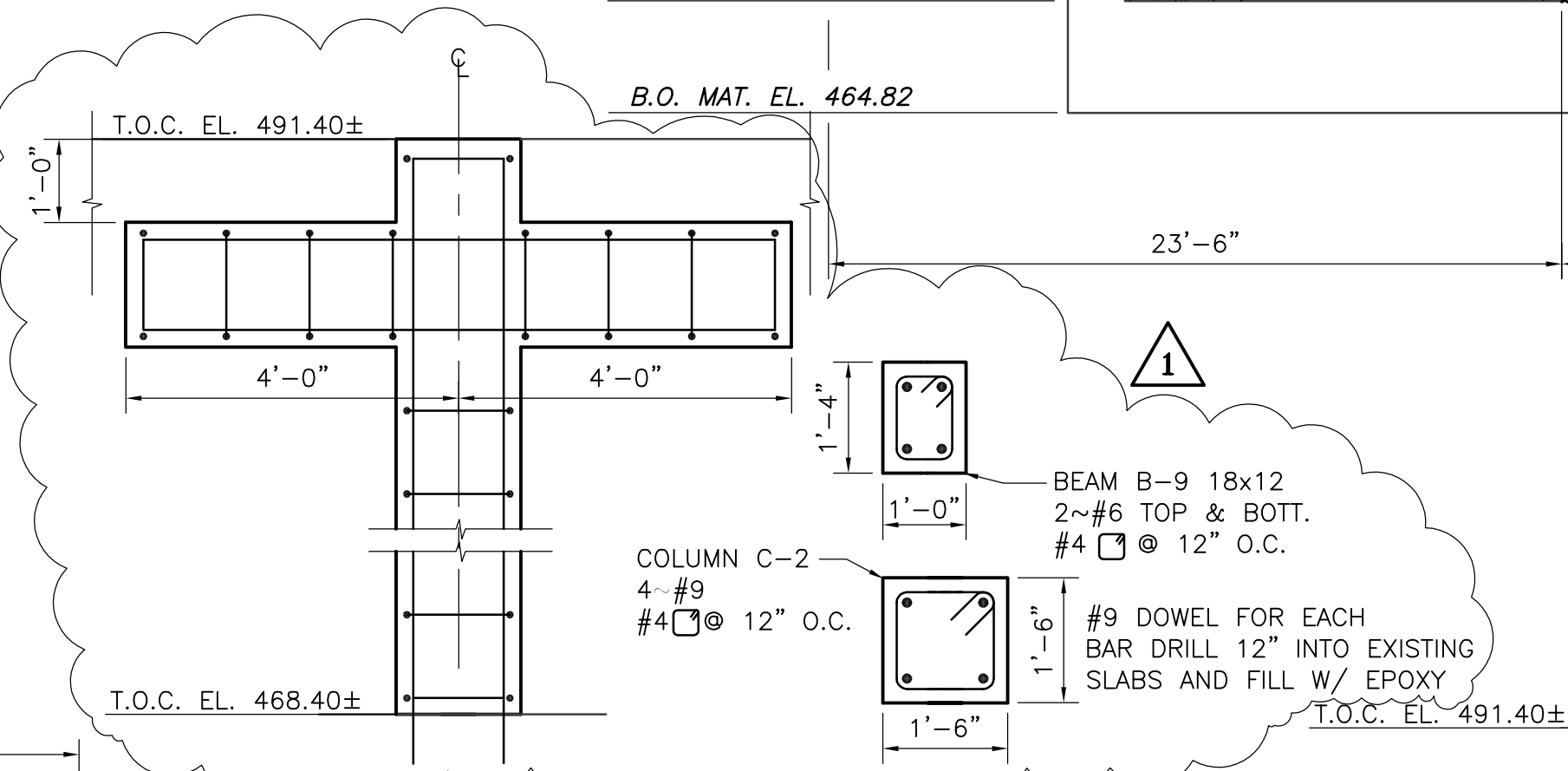
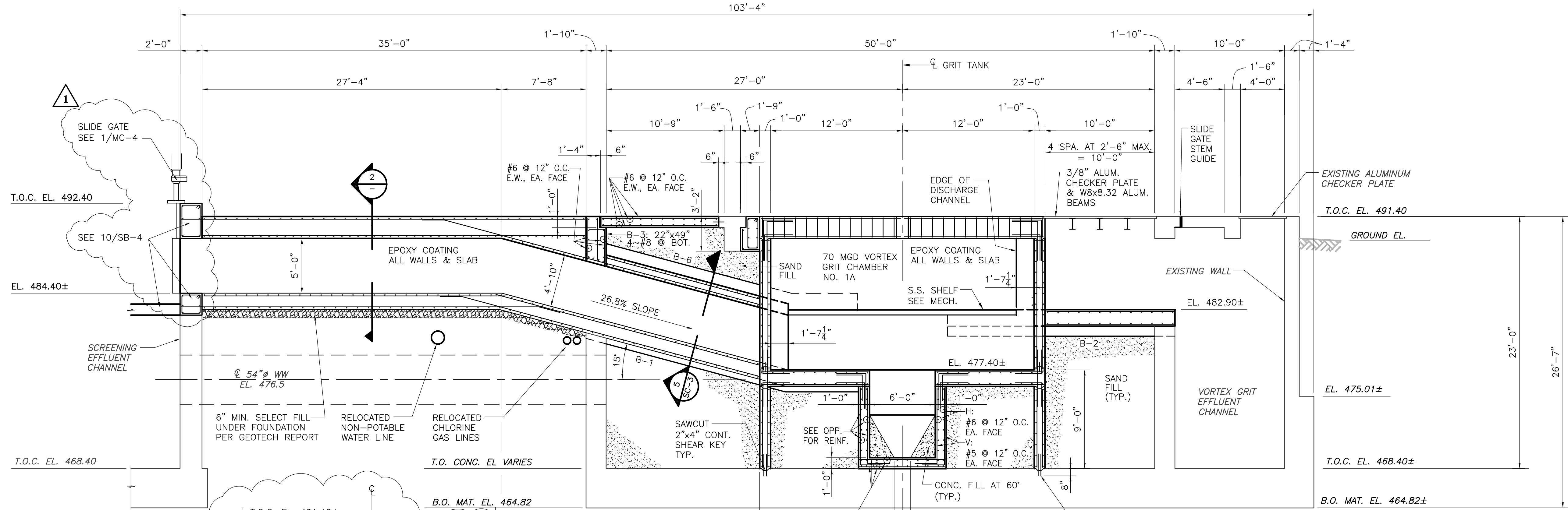
**SAN ANTONIO WATER SYSTEM**  
**DOS RIOS WRC RE-RATING HEADWORKS IMPROVEMENTS AND PROCESS ENHANCEMENTS PHASE I**

**GRIT REMOVAL FACILITY - PLANS**

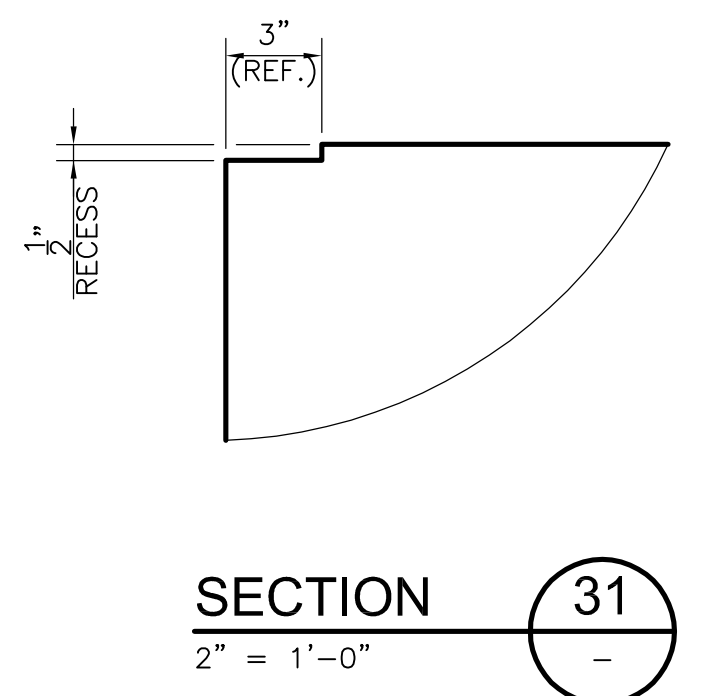
PROJECT No	65767
FILE NAME:	SC-1
SHEET No	SC-1
OF	

SAWS JOB # 08-6502

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SECTION 1  
3/16" = 1'-0"

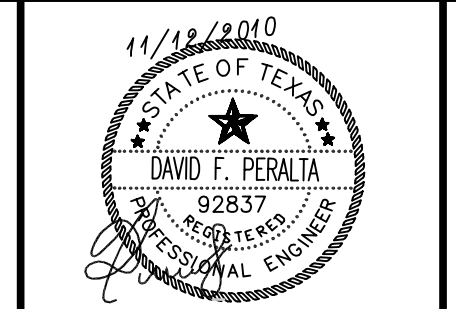


ISSUE No	DATE	CHKD	REMARKS
1	11/23/10	PERALTA	ADD #1 GRIT W/C SUPPORT, BEAM B-9, SLIDE GATE

DESIGNED BY: PERALTA  
 DRAWN BY: CAI  
 SHEET CHK'D BY: PERALTA  
 CROSS CHK'D BY: FISHER  
 APPROVED BY: PERALTA  
 DATE: OCTOBER 2010

**CDM**  
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 2431 E. EVANS ROAD  
 SAN ANTONIO, TEXAS 78259  
 (210) 641-5003 FAX: (210) 641-8279  
 OFFICE LOCATION: SAN ANTONIO • AUSTIN



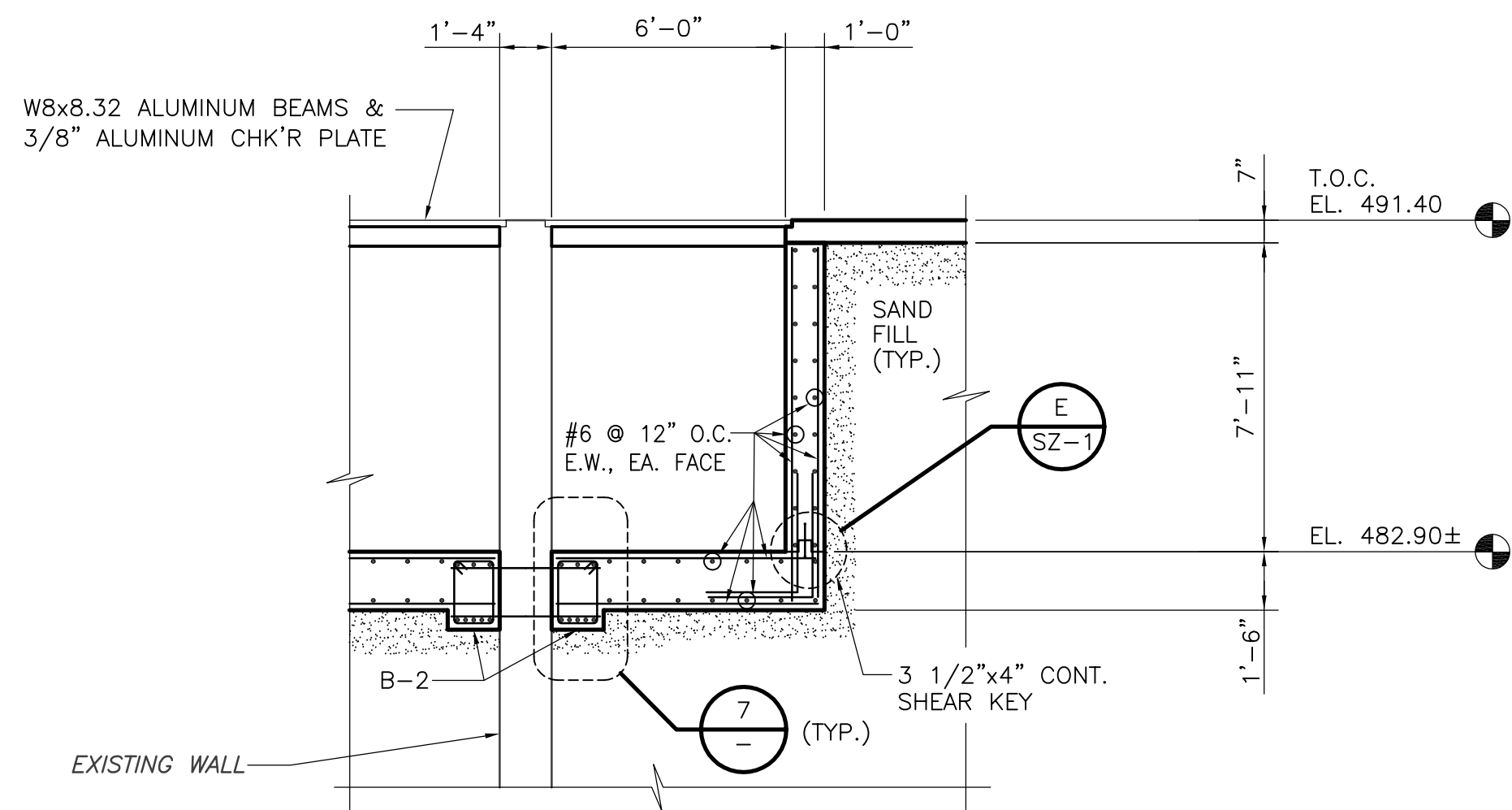
SAN ANTONIO WATER SYSTEM  
**DOS RIOS WRC RE-RATING HEADWORKS IMPROVEMENTS AND PROCESS ENHANCEMENTS PHASE I**

**GRIT REMOVAL FACILITY - SECTIONS I**

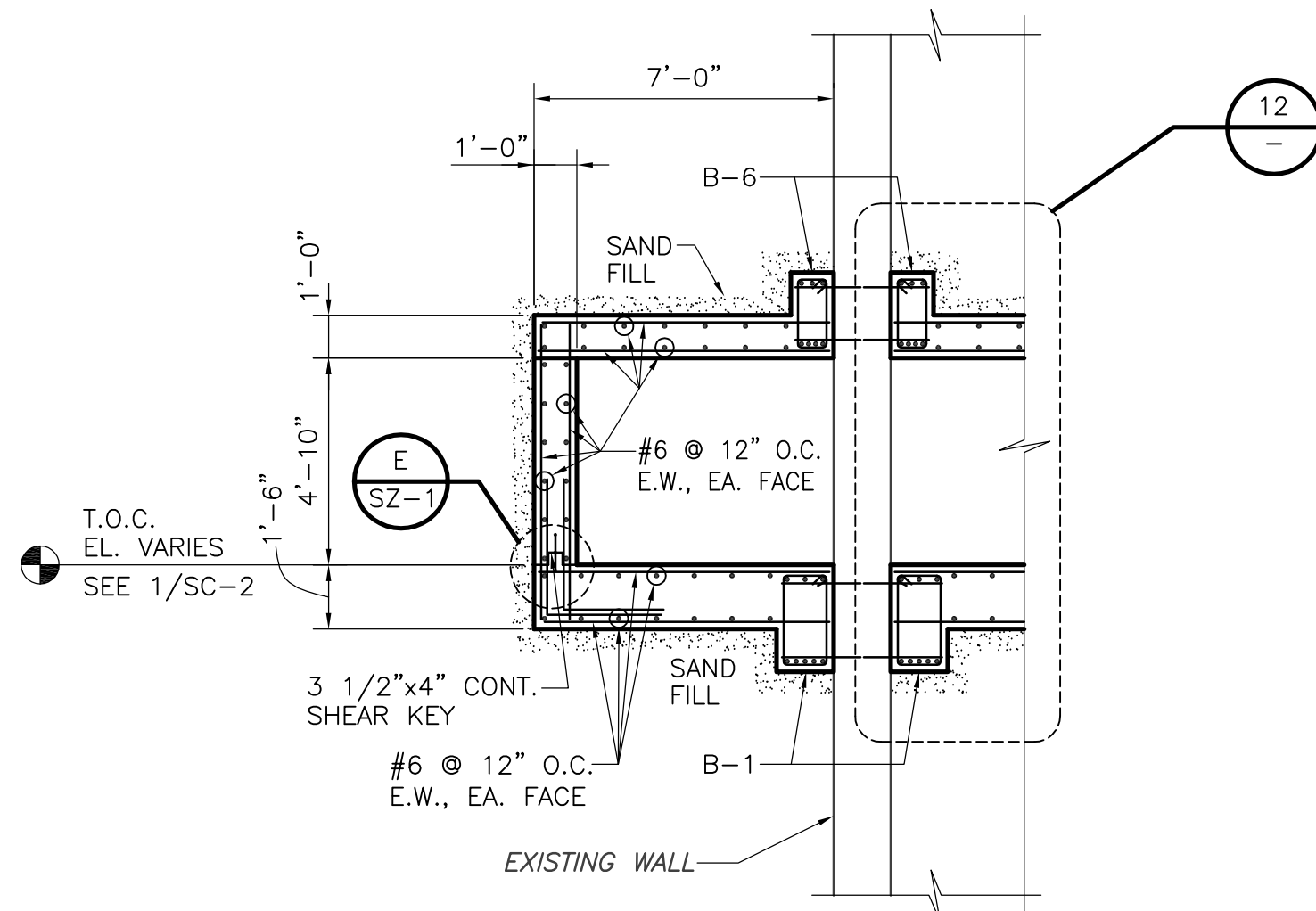
PROJECT No	65767
FILE NAME:	SC-2
SHEET No	SC-2
OF	

SAWS JOB # 08-6502

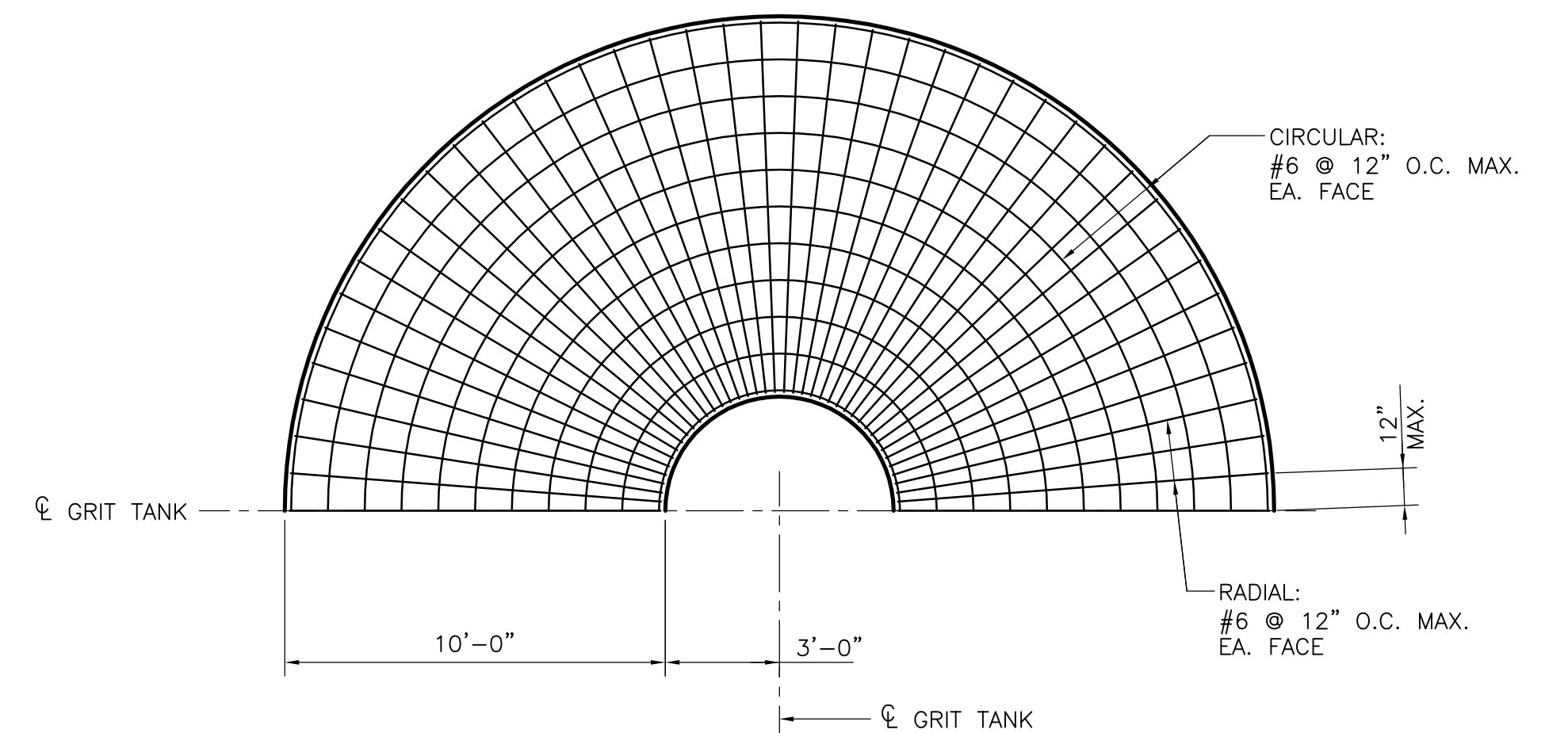
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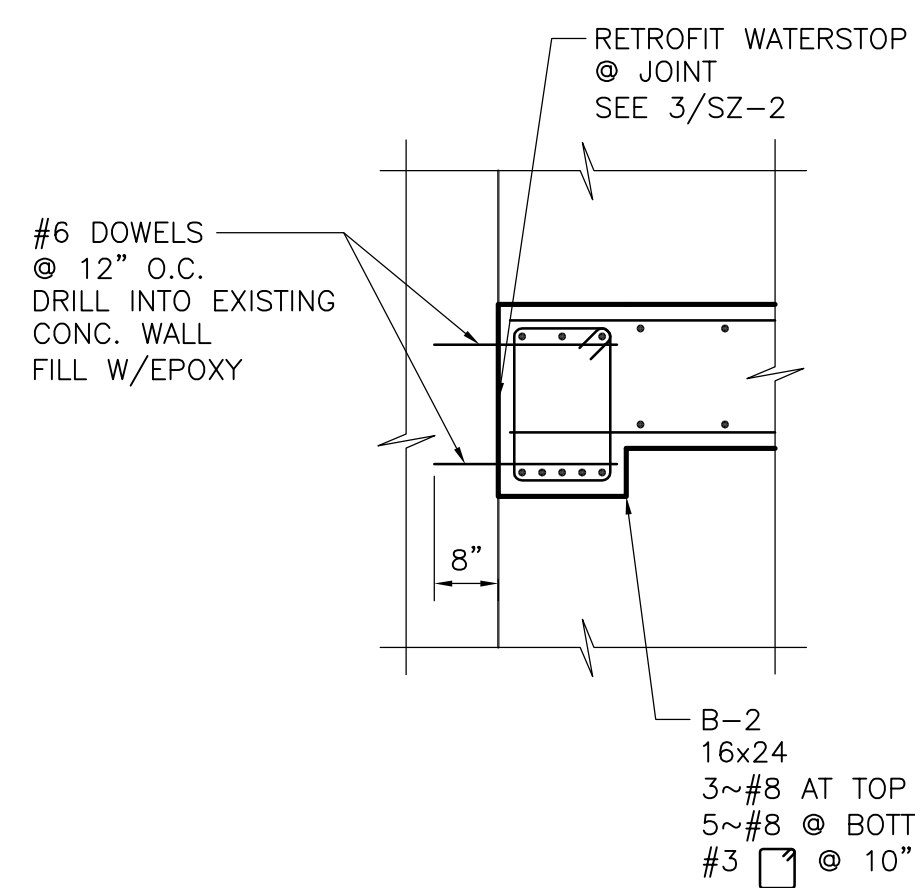
**SECTION 4**  
1/4" = 1'-0"  
SC-1



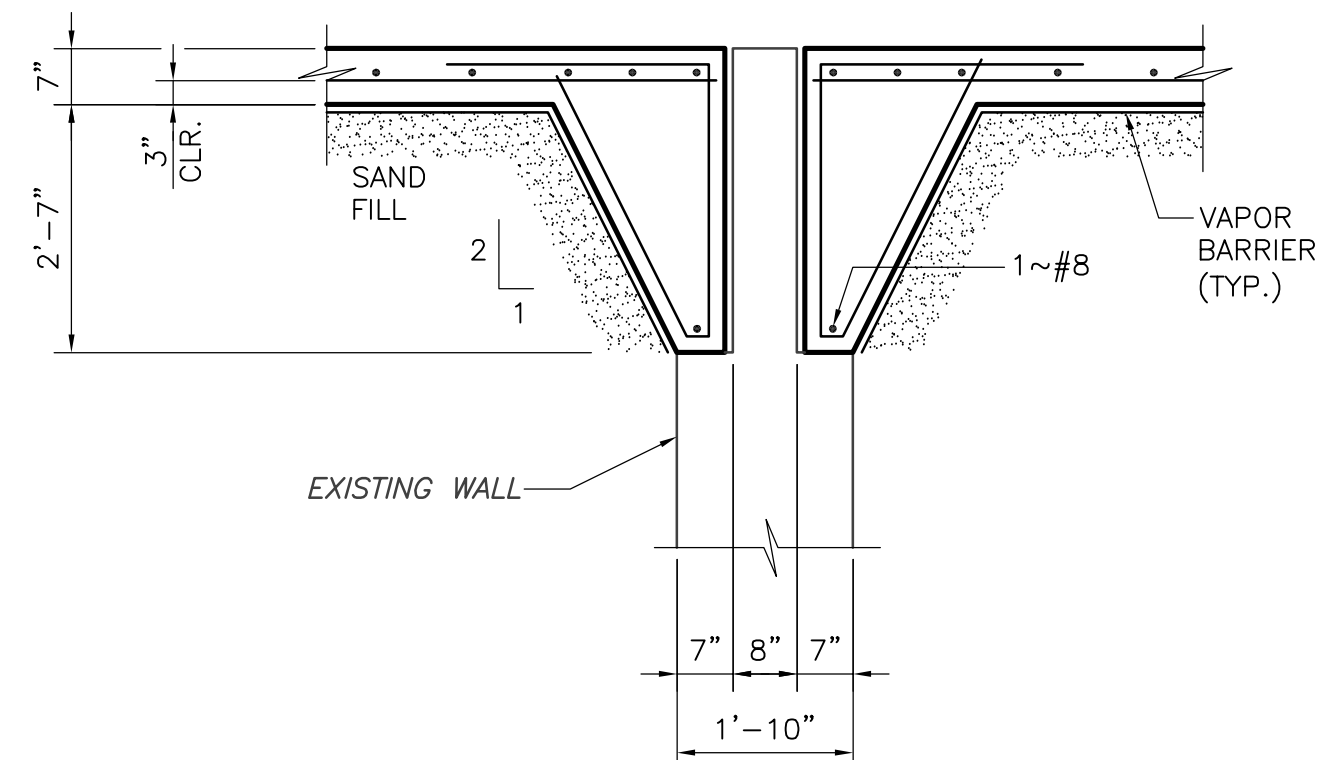
**SECTION 5**  
1/4" = 1'-0"  
SC-2



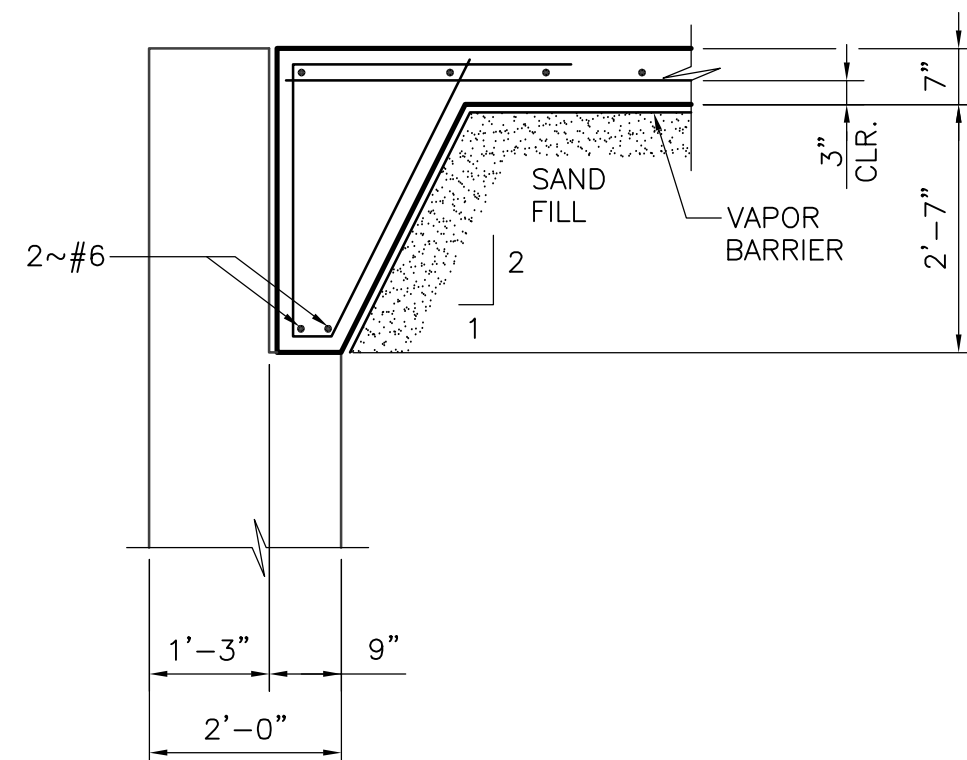
**DETAIL 6**  
1/4" = 1'-0"  
SC-2



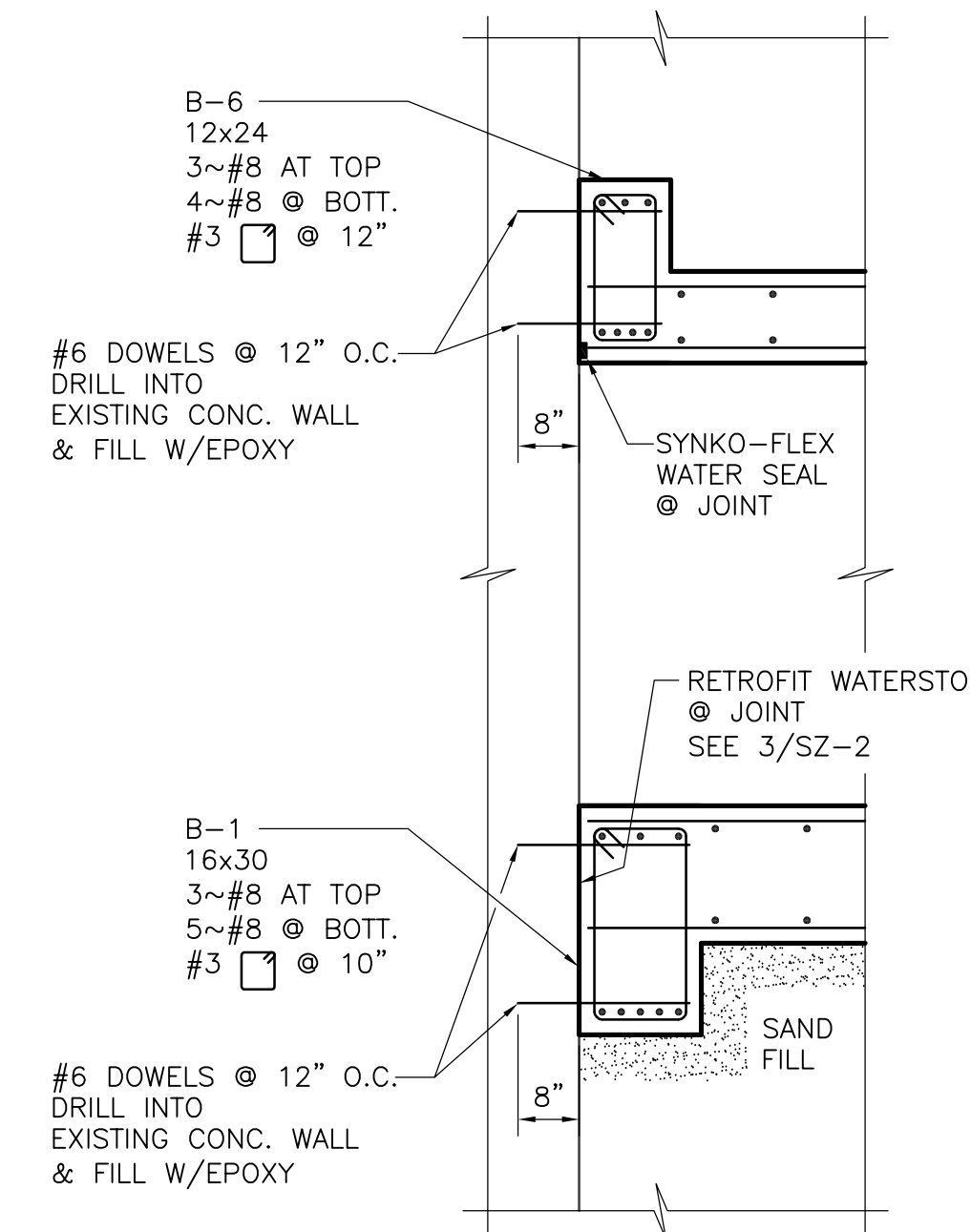
**DETAIL 7**  
1/2" = 1'-0"  
-



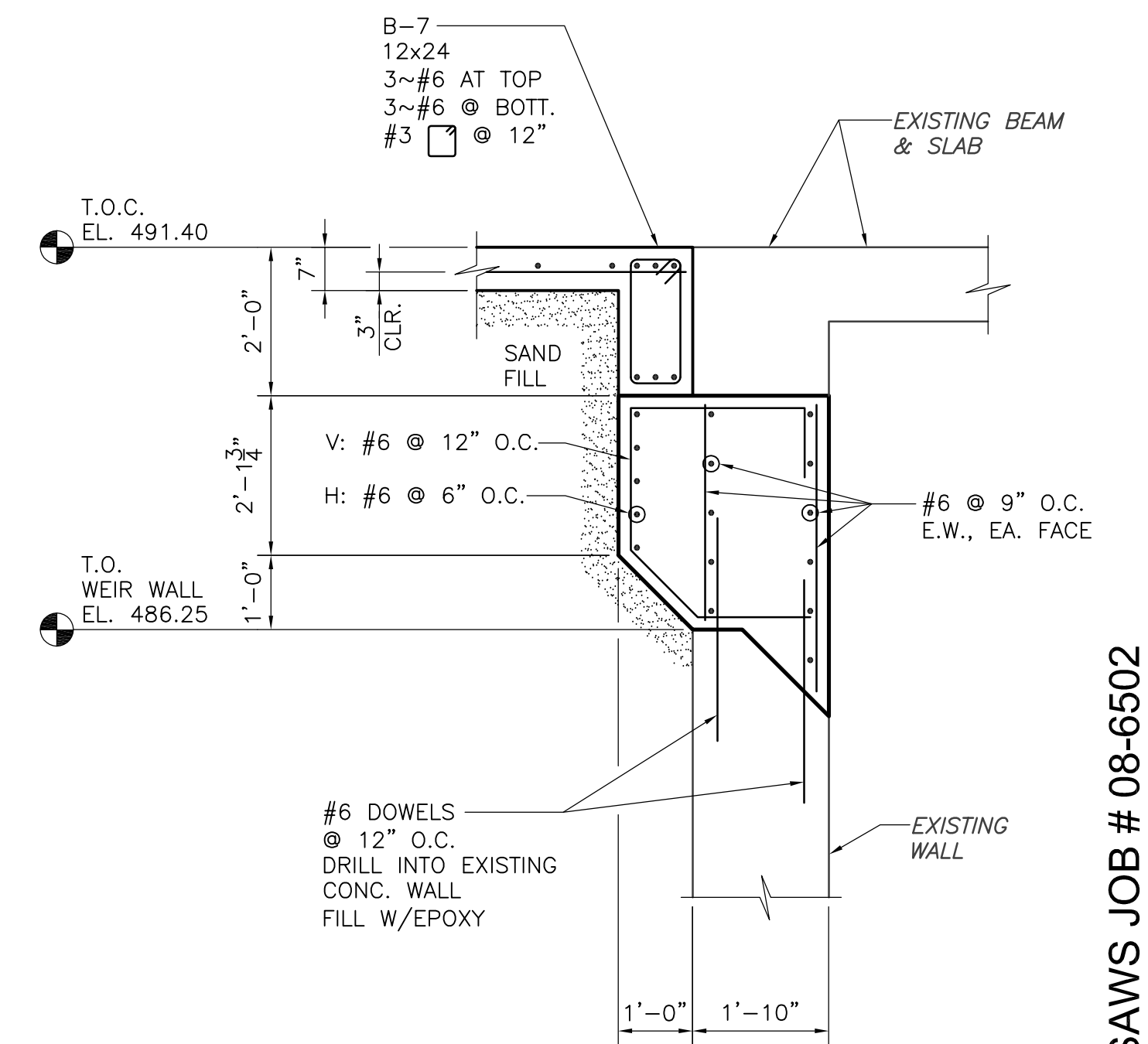
**SECTION 8**  
1/2" = 1'-0"  
SC-1



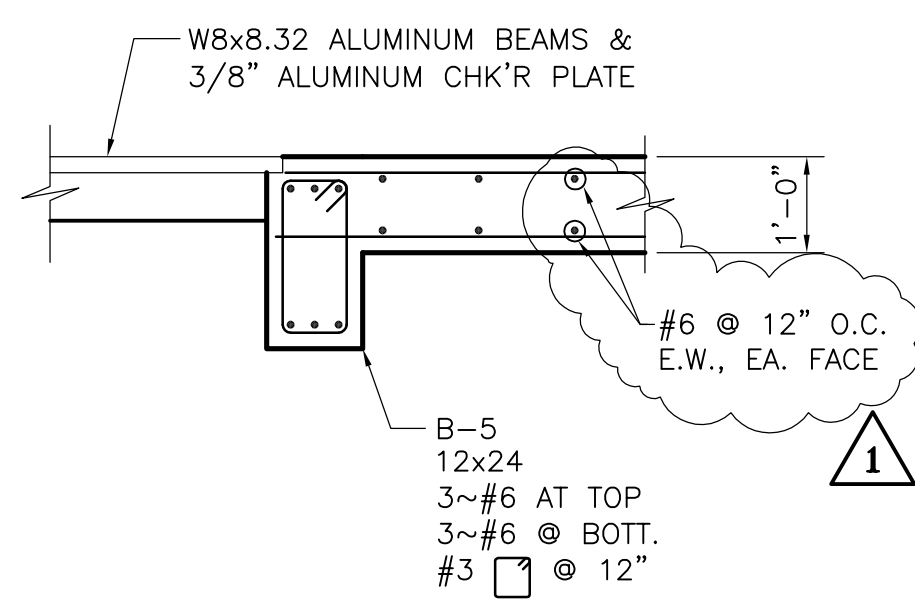
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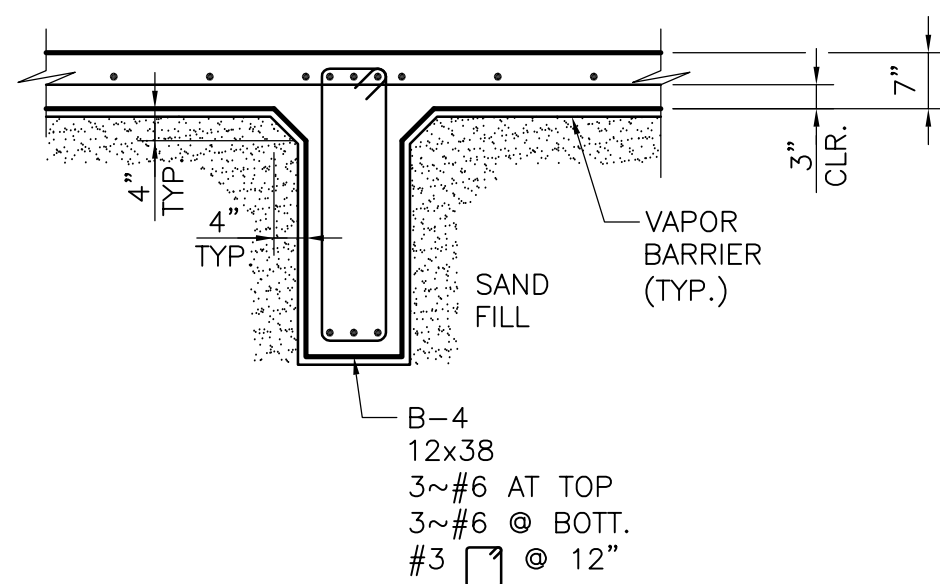
**DETAIL 12**  
1/2" = 1'-0"  
-



**SECTION 13**  
1/2" = 1'-0"  
SC-1



**SECTION 10**  
1/2" = 1'-0"  
SC-1



**SECTION 11**  
1/2" = 1'-0"  
SC-1

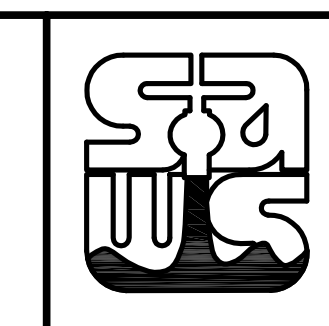
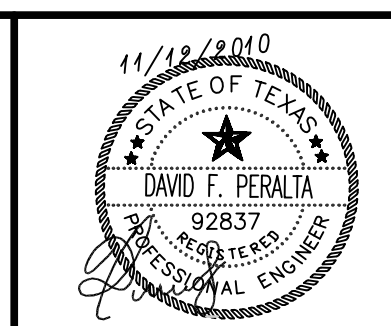
SAWS JOB # 08-6502

ISSUE No	DATE	CHKD	REMARKS
1	11/23/10	PERALTA	ADD #1 GRIT W/C SUPPORT, BEAM B-9

DESIGNED BY:	PERALTA
DRAWN BY:	CAI
SHEET CHK'D BY:	PERALTA
CROSS CHK'D BY:	FISHER
APPROVED BY:	
DATE:	OCTOBER 2010

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Texas Registration Number F-3043  
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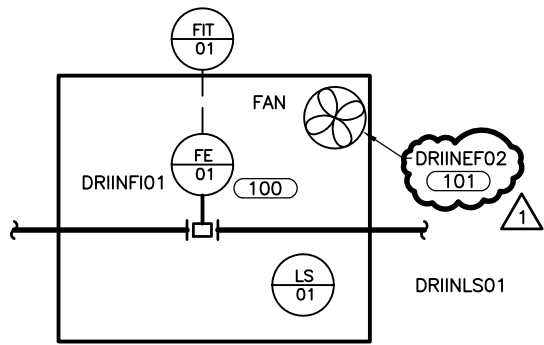
**UNINTECH CONSULTING ENGINEERS, INC.**  
TBPE Reg. No. F-5499  
WWW.UNINTECH.COM  
2431 E. EVANS ROAD  
SAN ANTONIO, TEXAS 78229  
(210) 841-6803 FAX: (210) 641-8279  
OFFICE LOCATION: SAN ANTONIO • AUSTIN



SAN ANTONIO WATER SYSTEM  
DOS RIOS WRC RE-RATING  
HEADWORKS IMPROVEMENTS AND  
PROCESS ENHANCEMENTS PHASE I

GRIT REMOVAL FACILITY  
- SECTIONS II  
SC-3

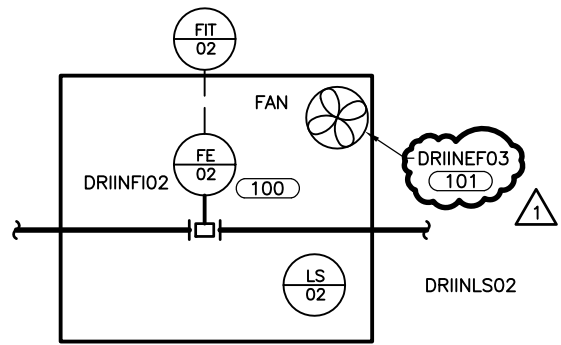
PROJECT No	65767
FILE NAME:	SC-3
SHEET No	SC-3
OF	



**FLOW METER BOX No 1**

**PLAN**

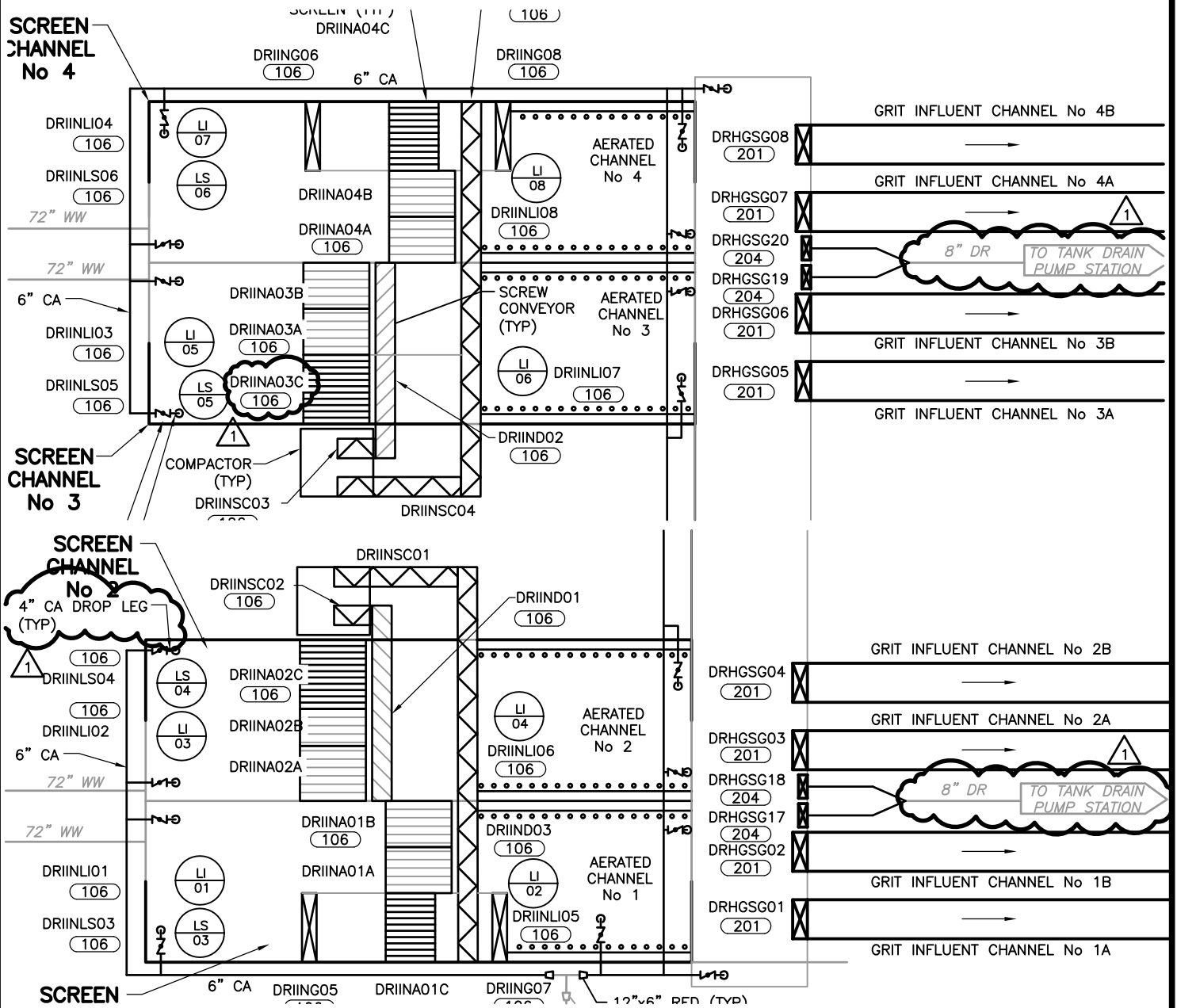
NTS



**FLOW METER BOX No 2**

**PLAN**

NTS



SAN ANTONIO WATER SYSTEM  
DOS RIOS WRC RE-RATING HEADWORKS  
IMPROVEMENTS AND PROCESS ENHANCEMENTS PHASE I

ADDENDUM  
No

EXHIBIT  
No

REF SHEET No

LOCATION

P-1

1

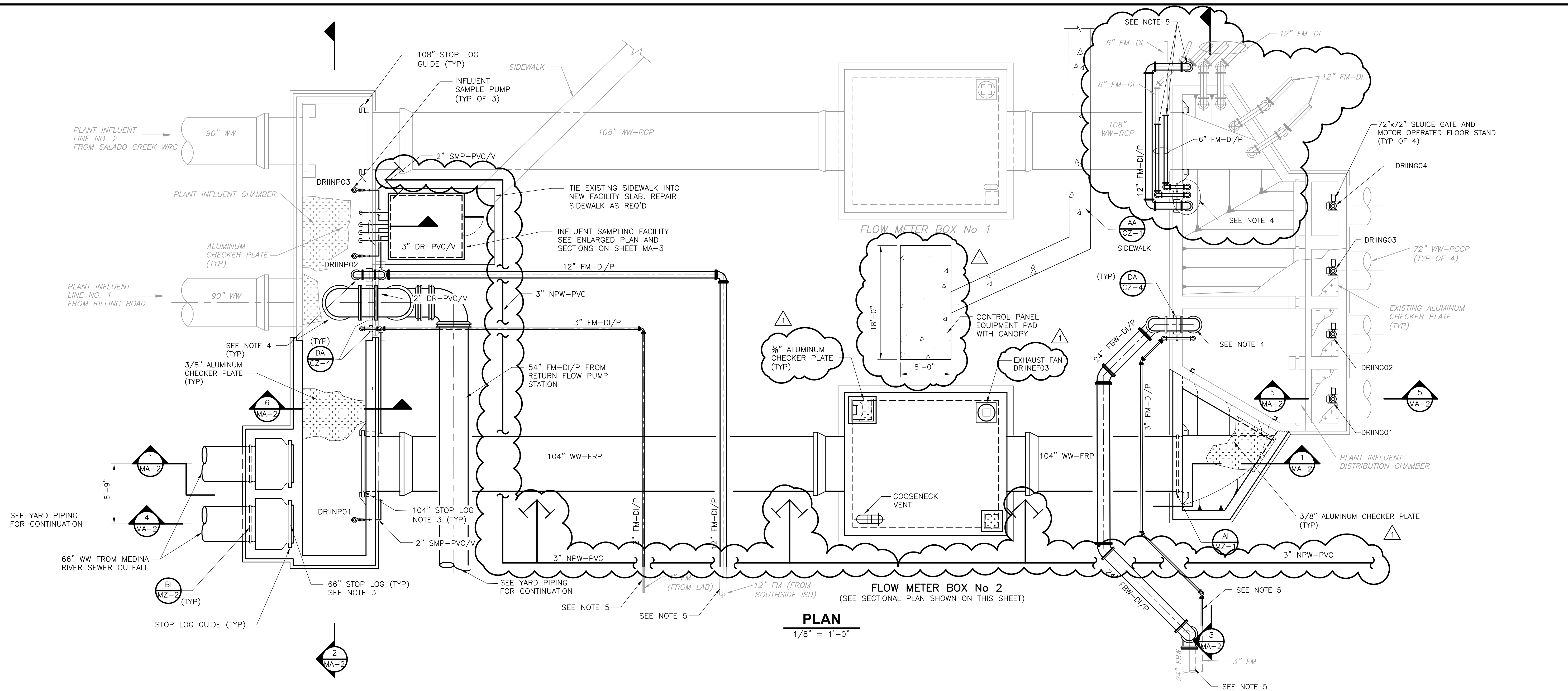
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**CDM**

Texas Registration Number F-3043

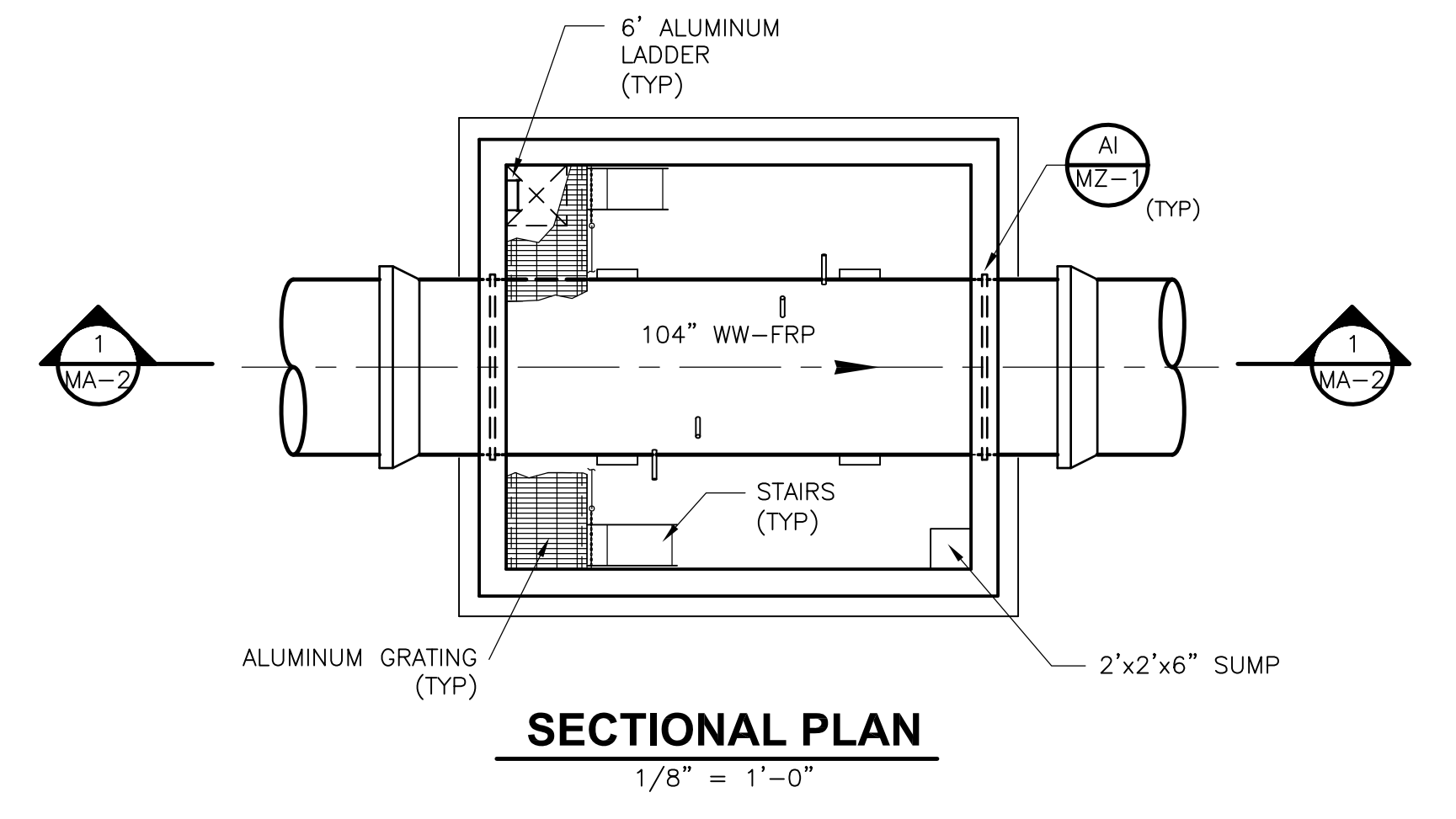
DATE 11-23-10

P:\SAN ANTONIO WATER SYSTEM\65767\_HEADWORKS IMPROVEMENTS AND PROCESS ENHANCEMENTS PHASE I\CADD\65767-DOS RIOS RE-RATE\05-MECH\MA-1 By: cezeaux, jana Saved: 11/23/2010 11:45:25 AM Plotted: 11/23/2010 11:45:45 AM



**PLAN**  
1/8" = 1'-0"

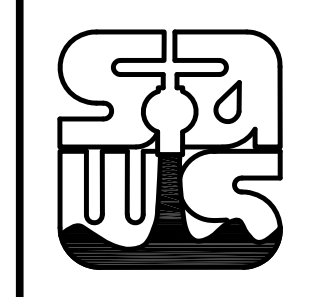
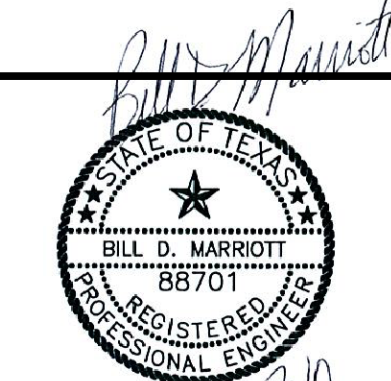
- NOTES:**
1. SEE SPECIFICATION SECTION 01015 FOR SEQUENCE OF CONSTRUCTION.
  2. INSTALL PERMITTED CONFINED SPACE ENTRY SIGN ON FLOW METER BOX NO.1 AND FLOW METER BOX NO. 2 AS SHOW IN DETAIL EF/MZ-5.
  3. STOP LOGS
    - A. STOP LOGS SHALL BE FABRICATED OF 6061-T6 ALUMINUM ALLOY FOR A MAXIMUM HEAD OF WATER EQUAL TO THE HEIGHT OF THE GUIDES. STOP LOGS SHALL BE 24-INCH IN HEIGHT EXCEPT THAT 12-INCH HIGH STOP LOGS SHALL BE PROVIDED TO MAKE UP THE EXACT OVERALL HEIGHT REQUIRED. FURNISH SUFFICIENT UNITS FOR THE TOTAL HEIGHT AS SHOWN ALL STOP LOGS, INCLUDING THOSE TO SEAT AT THE CHANNEL INVERT, SHALL BE OF IDENTICAL CONSTRUCTION. EACH STOP LOG SHALL HAVE A BULB TYPE NEOPRENE SEAL OR OTHER MEANS OF SEALING, ON EACH END TO SEL AGAINST THE GUIDE, WITH HEAD ON EITHER SIDE OF THE STOP LOG. EACH STOP LOG SHALL ALSO HAVE A NEOPRENE SEALING SURFACE ATTACHED TO THE BOTTOM OF THE SEAL AGAINST EITHER THE GUIDE INVERT OR THE STOP LOG BELOW. THE SHAPE OF THE BOTTOM SEAL SHALL PRODUCE A SEALING SURFACE HAVING A MINIMUM WIDTH OF 3/4-INCH. STOP WEIGHT SHALL BE A MAXIMUM OF 40 POUNDS PER LINEAR FOOT.
    - B. FURNISH ALUMINUM GUIDE AND SUPPORT SHOES ON THE ENDS AND BOTTOM OF EACH STOP LOG TO HOLD THE UNIT SQUARELY IN PLACE. FURNISH A MINIMUM OF TWO ATTACHMENT POINTS IN THE TOP OF EACH STOP LOG. FURNISH ATTACHMENT DEVICES WITH LANYARD RELEASE TO LIFT THE STOP LOG WITH A HOIST LIFT. ATTACHING HARDWARE FOR SEALS SHALL BE OF TYPE 316 STAINLESS STEEL. EACH STOP LOG SHALL BE HEAVILY CONSTRUCTED AND REINFORCED TO RESIST DEFLECTION UNDER MAXIMUM HEAD CONDITIONS. PLATES SHALL BE REINFORCED WITH ALUMINUM EXTRUSION MEMBERS WELDED TO THE PLATE, SPACED NOT GREATER THAN 16-INCH APART. REINFORCING ON AT LEAST ONE SIDE OF THE PLATE SHALL EXTEND INTO THE GUIDES. MINIMUM PLATE THICKNESS SHALL BE 1/4-INCH. MAXIMUM DEFLECTION OF THE STOP LOG SHALL NOT EXCEED 3/60 OF SPAN UNDER MAXIMUM HEAD, WITH NO ALLOWANCE FOR INTERLOCKING OF ADJACENT STOP LOGS.
    - C. ONE STOP LOG LIFTING DEVISE ASSEMBLY SHALL BE PROVIDED FOR EACH STOP LOG SET OF DIFFERENT WIDTHS. THIS LIFTING HOOK ASSEMBLY SHALL BE CONSTRUCTED OF TYPE 316 STAINLESS STEEL.
    - D. STOP LOG GUIDES SHALL BE TYPE 316 STAINLESS STEEL WITH WELDED OR BOLTED CORNERS. GUIDES BUILT UP FROM PLATE SHALL BE COMPLETELY WELDED IN THE SHOP EXCEPT FOR CORNER JOINTS. GUIDES SHALL BE FACE MOUNTED USING TYPE 316 STAINLESS STEEL ANCHOR BOLTS. GUIDE INVERT SHALL BE FLUSH WITH THE CHANNEL INVERT AND SHALL FORM A SEATING SURFACE FOR RESILIENT SEAL MOUNTED ON THE STOP LOGS. GUIDE SEATING SURFACES (ON BOTH SIDES AS SEATING MAY BE IN EITHER DIRECTION) SHALL BE FACED WITH BEARING STRIPS OF POLYETHYLENE OR OTHER MATERIAL MOLECULARLY INCOMPATIBLE WITH THE STOP LOG SEAL TO PROVIDE LOW FRICTION OPERATION AND PREVENT BONDING, STRIKING, OR SEIZURE.
    - E. STOP LOGS SHALL HAVE A LEAKAGE RATE NOT EXCEEDING 0.3 GALLONS PER MINUTE PER FOOT OF SEATING LENGTH.
  4. PROVIDE OPENING IN CHECKER PLATE FOR REROUTED PIPELINE.
  5. CONNECT TO EXISTING PIPELINE AND REROUTE FOR TIE-IN AT PLANT INFLUENT CHAMBER.



**SECTIONAL PLAN**  
1/8" = 1'-0"

DESIGNED BY: KODURI	TAL PLACIDO
DRAWN BY: TAL PLACIDO	MARRIOTT
SHEET CHK'D BY: MARRIOTT	CUTLER
CROSS CHK'D BY: CUTLER	
APPROVED BY:	
DATE: NOVEMBER 2010	

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SAN ANTONIO WATER SYSTEM  
DOS RIOS WRC RE-RATING  
HEADWORKS IMPROVEMENTS AND  
PROCESS ENHANCEMENTS PHASE I

**INFLUENT FLOW METERING  
FACILITY - PLANS**

PROJECT No	65767
FILE NAME:	MA-1
SHEET No	<b>MA-1</b>
OF	

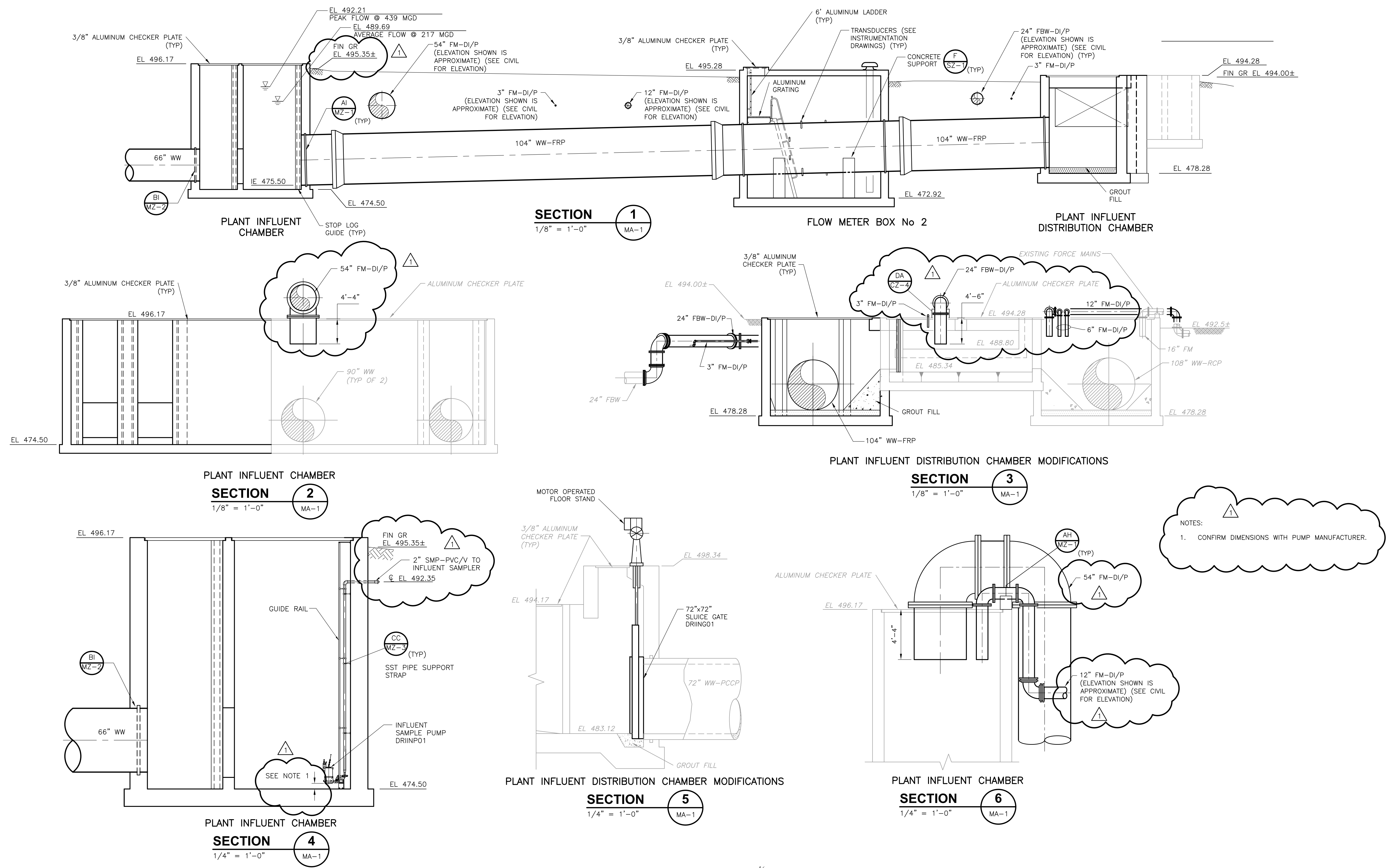
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SAWS JOB # 08-6502

P:\SAN ANTONIO WATER SYSTEM\65767\_HEADWORKS IMPROVEMENTS AND PROCESS ENHANCEMENTS PHASE I\CADD\65767-DOS RIOS RE-RATE\05-MECH\MA-2 By: cezeaux, jana Saved: 11/23/2010 9:41:02 AM Plotted: 11/23/2010 9:41:37 AM  
 XREFS: x:\dwd\des\reads\65767\mfr001.x=65767\mfr001

Plotted - 11/23/2010 9:41:37 AM

SAWS JOB # 08-6502



NOTES:  
 1. CONFIRM DIMENSIONS WITH PUMP MANUFACTURER.

ISSUE No	DATE	CHKD	REMARKS
1	11-23-10	BM	REVISED BY ADDENDUM NO. 1

DESIGNED BY: KODURL  
 DRAWN BY: TAL PLACIDO  
 SHEET CHK'D BY: MARRIOTT  
 CROSS CHK'D BY: CUTLER  
 APPROVED BY: \_\_\_\_\_  
 DATE: OCTOBER 2010

**CDM**  
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 San Antonio, Texas 78217  
 Tel: (210) 826-3200 Fax: (210) 826-8876  
 Texas Registration Number F-3043  
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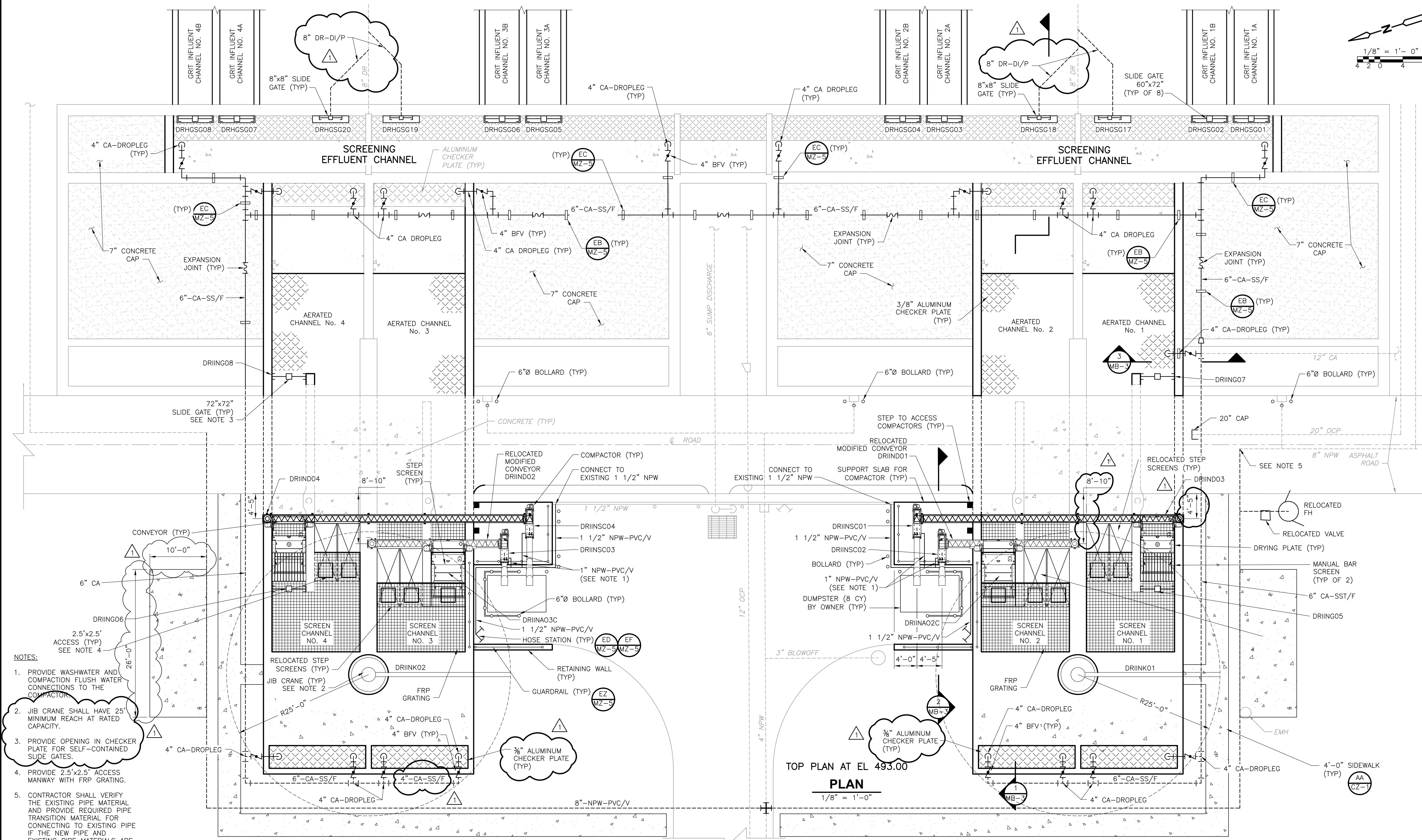
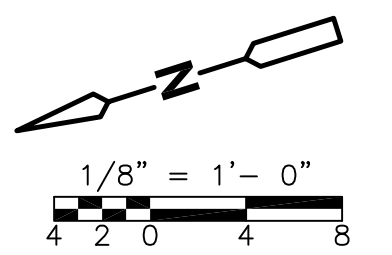
SAN ANTONIO WATER SYSTEM  
 DOS RIOS WRC RE-RATING  
 HEADWORKS IMPROVEMENTS AND  
 PROCESS ENHANCEMENTS PHASE I

**INFLUENT FLOW METERING  
 FACILITY - SECTIONS**

PROJECT No	65767
FILE NAME:	MA-2
SHEET No	<b>MA-2</b>
OF	



P:\SAN ANTONIO WATER SYSTEM\65767\_HEADWORKS IMPROVEMENTS AND PROCESS ENHANCEMENTS PHASE I\CADD\65767-DOS RIOS RE-RATE\05-MECH\MB-1 By: cezeaux, jana Saved: 11/23/2010 11:32:32 AM Plotted: 11/23/2010 11:35:02 AM



- NOTES:**
1. PROVIDE WASHWATER AND COMPACTION FLUSH WATER CONNECTIONS TO THE COMPACTOR.
  2. JIB CRANE SHALL HAVE 25' MINIMUM REACH AT RATED CAPACITY.
  3. PROVIDE OPENING IN CHECKER PLATE FOR SELF-CONTAINED SLIDE GATES.
  4. PROVIDE 2.5'x2.5' ACCESS MANWAY WITH FRP GRATING.
  5. CONTRACTOR SHALL VERIFY THE EXISTING PIPE MATERIAL AND PROVIDE REQUIRED PIPE TRANSITION MATERIAL FOR CONNECTING TO EXISTING PIPE IF THE NEW PIPE AND EXISTING PIPE MATERIALS ARE DIFFERENT.

TOP PLAN AT EL 493.00  
**PLAN**  
1/8" = 1'-0"

SAWS JOB # 08-6502

Plotted - 11/23/2010 11:35:02 AM

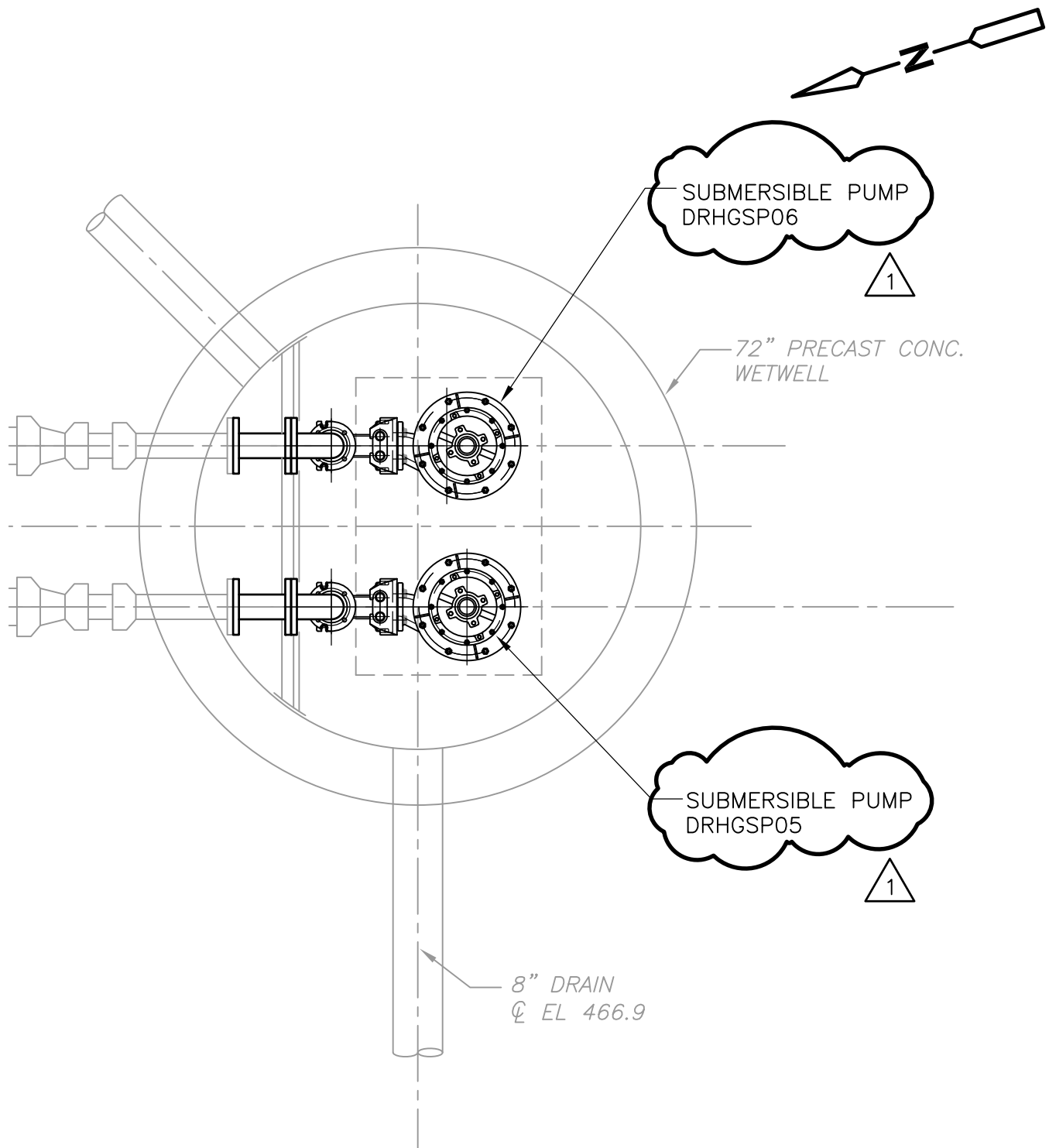
DESIGNED BY: KODURI	CDM
DRAWN BY: CEZEAUX	1777 NE Loop 410, Suite 500
SHEET CHK'D BY: KODURI	San Antonio, Texas 78217
CROSS CHK'D BY: MARRIOTT	Tel: (210) 826-3200 Fax: (210) 826-8876
APPROVED BY: _____	Texas Registration Number F-3043
DATE: NOVEMBER 2010	consulting • engineering • construction • operations

STATE OF TEXAS  
BILL D. MARRIOTT  
REGISTERED PROFESSIONAL ENGINEER  
887701

SAN ANTONIO WATER SYSTEM  
**DOS RIOS WRC RE-RATING  
HEADWORKS IMPROVEMENTS AND  
PROCESS ENHANCEMENTS PHASE I**


**INFLUENT SCREENING FACILITY  
TOP PLAN AT EL. 493.00**

PROJECT No: 65767  
FILE NAME: MB-1  
SHEET No: **MB-1**  
OF



# PLAN

1/2" = 1'-0"

 Texas Registration Number F-3043	DATE <u>11-23-10</u>	SAN ANTONIO WATER SYSTEM DOS RIOS WRC RE-RATING HEADWORKS IMPROVEMENTS AND PROCESS ENHANCEMENTS PHASE I		ADDENDUM No  1	EXHIBIT No  MD-1-A
		REF SHEET No	LOCATION		
		MD-1			

1

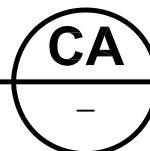
LOCATION	MATERIAL	TAG	OPERATOR	TYPE	W	H	F	C	FRAME TYPE	NOTES
SCREEN CHANNEL No. 1 INFLUENT	316 SS	DRIING05	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	72"	3.0'	1.0'	SELF-CONTAINED/ EMBEDDED CHANNEL	
SCREEN CHANNEL No. 4 INFLUENT	316 SS	DRIING06	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	72"	3.0'	1.0'	SELF-CONTAINED/ EMBEDDED CHANNEL	
SCREEN CHANNEL No. 1 EFFLUENT	316 SS	DRIING07	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	72"	3.0'	1.0'	SELF-CONTAINED/ EMBEDDED CHANNEL	
SCREEN CHANNEL No. 4 EFFLUENT	316 SS	DRIING08	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	72"	3.0'	1.0'	SELF-CONTAINED/ EMBEDDED CHANNEL	
GRIT INFLUENT CHANNEL No. 1A	316 SS	DRHSG01	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	60"	3.0'	1.0'	SELF-CONTAINED/FACE-MOUNTED	
GRIT INFLUENT CHANNEL No. 1B	316 SS	DRHSG02	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	60"	3.0'	1.0'	SELF-CONTAINED/FACE-MOUNTED	
GRIT INFLUENT CHANNEL No. 2A	316 SS	DRHSG03	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	60"	3.0'	1.0'	SELF-CONTAINED/FACE-MOUNTED	
GRIT INFLUENT CHANNEL No. 2B	316 SS	DRHSG04	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	60"	3.0'	1.0'	SELF-CONTAINED/FACE-MOUNTED	
GRIT INFLUENT CHANNEL No. 3A	316 SS	DRHSG05	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	60"	3.0'	1.0'	SELF-CONTAINED/FACE-MOUNTED	
GRIT INFLUENT CHANNEL No. 3B	316 SS	DRHSG06	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	60"	3.0'	1.0'	SELF-CONTAINED/FACE-MOUNTED	
GRIT INFLUENT CHANNEL No. 4A	316 SS	DRHSG07	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	60"	3.0'	1.0'	SELF-CONTAINED/FACE-MOUNTED	
GRIT INFLUENT CHANNEL No. 4B	316 SS	DRHSG08	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	60"	3.0'	1.0'	SELF-CONTAINED/FACE-MOUNTED	
VORTEX GRIT No. 1A EFFLUENT CHANNEL	316 SS	DRHSG09	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	78"	N/A	N/A	NON SELF-CONTAINED/ FACE-MOUNTED	DOWNWARD OPENING
VORTEX GRIT No. 1B EFFLUENT CHANNEL	316 SS	DRHSG10	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	78"	N/A	N/A	NON SELF-CONTAINED/ FACE-MOUNTED	DOWNWARD OPENING
VORTEX GRIT No. 2A EFFLUENT CHANNEL	316 SS	DRHSG11	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	78"	N/A	N/A	NON SELF-CONTAINED/ FACE-MOUNTED	DOWNWARD OPENING
VORTEX GRIT No. 2B EFFLUENT CHANNEL	316 SS	DRHSG12	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	78"	N/A	N/A	NON SELF-CONTAINED/ FACE-MOUNTED	DOWNWARD OPENING
VORTEX GRIT No. 3A EFFLUENT CHANNEL	316 SS	DRHSG13	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	78"	N/A	N/A	NON SELF-CONTAINED/ FACE-MOUNTED	DOWNWARD OPENING
VORTEX GRIT No. 3B EFFLUENT CHANNEL	316 SS	DRHSG14	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	78"	N/A	N/A	NON SELF-CONTAINED/ FACE-MOUNTED	DOWNWARD OPENING
VORTEX GRIT No. 4A EFFLUENT CHANNEL	316 SS	DRHSG15	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	78"	N/A	N/A	NON SELF-CONTAINED/ FACE-MOUNTED	DOWNWARD OPENING
VORTEX GRIT No. 4B EFFLUENT CHANNEL	316 SS	DRHSG16	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	72"	78"	N/A	N/A	NON SELF-CONTAINED/ FACE-MOUNTED	DOWNWARD OPENING
SCREENING EFFLUENT CHANNEL	316 SS	DRHSG17	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	8"	8"	N/A	N/A	NON SELF-CONTAINED/ FACE-MOUNTED	
SCREENING EFFLUENT CHANNEL	316 SS	DRHSG18	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	8"	8"	N/A	N/A	NON SELF-CONTAINED/ FACE-MOUNTED	
SCREENING EFFLUENT CHANNEL	316 SS	DRHSG19	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	8"	8"	N/A	N/A	NON SELF-CONTAINED/ FACE-MOUNTED	
SCREENING EFFLUENT CHANNEL	316 SS	DRHSG20	MOTOR OPERATOR/ HAND CRANK WITH NUT	FABRICATED	8"	8"	N/A	N/A	NON SELF-CONTAINED/ FACE-MOUNTED	

1

## SLIDE GATE TABLE

### DETAIL

NTS



SAN ANTONIO WATER SYSTEM  
DOS RIOS WRC RE-RATING HEADWORKS  
IMPROVEMENTS AND PROCESS ENHANCEMENTS PHASE I

ADDENDUM  
No

EXHIBIT  
No

REF SHEET No

LOCATION

MZ-3

1

MZ-3-A



Texas Registration Number F-3043

DATE 11-23-10