

GENERAL STRUCTURAL NOTES:

DESIGN CRITERIA

APPLICABLE BUILDING CODES
2015 INTERNATIONAL BUILDING CODE, WASHINGTON STATE AMENDMENTS.

LOADS
ROOF LIVE OR SNOW LOAD 25 psf
WALKWAYS & FLOORS 100 psf
WHEEL LOADS: H20 OR 150L,000# WHEEL LOAD FROM CONTAINER
HANDLING EQUIPMENT

WIND LOADS
WIND SPEED (3 SECOND GUST) = 110 MPH, EXPOSURE = D

SEISMIC LOADS
PORT OF TACOMA, WA
SITE CLASS E, Ie = 1.00
Sds = 0.778
Sd1 = 0.806

FOUNDATIONS

BASED ON "GEOTECHNICAL REPORT WEST SITCUM STORMWATER
TREATMENT PORT OF TACOMA, WA" BY HWA GEOSCIENCES,
MARCH 16, 2018.

SOIL BEARING PRESSURE2000 PSF
LATERAL PASSIVE BEARING PRESSURE.....150 PCF
SOIL ACTIVE PRESSURE, NON YIELDING WALLS.....92 PCF

INSPECTIONS

CONTRACTOR SHALL BE RESPONSIBLE FOR REQUESTING AND COORDINATING
REQUIRED BUILDING DEPARTMENT INSPECTIONS. IN ADDITION, SPECIAL
INSPECTIONS SHALL BE PERFORMED IN ACCORDANCE WITH THE TABLE ON
THIS SHEET. THESE INSPECTIONS SHALL BE PERFORMED BY A CURRENTLY
WABO CERTIFIED INSPECTOR UNDER THE SUPERVISION OF A REGISTERED
PROFESSIONAL ENGINEER.

THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR
CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.

THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE
BUILDING OFFICIAL, THE ENGINEER OF RECORD, AND OTHER DESIGNATED
PERSONS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE
ATTENTION OF THE GENERAL CONTRACTOR FOR CORRECTION. THEN IF THEY
ARE NOT CORRECTED, THE DISCREPANCIES SHALL BE REPORTED TO THE
DESIGN PROFESSIONAL AND TO THE BUILDING OFFICIAL.

THE SPECIAL INSPECTOR SHALL SUBMIT A SEALED FINAL REPORT BY A
REGISTERED PROFESSIONAL ENGINEER STATING WHETHER THE WORK
REQUIRING SPECIAL INSPECTION WAS IN CONFORMANCE WITH THE APPROVED
PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS
OF THE IBC.

MISCELLANEOUS

REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION
OF RECESSES, DUCT OPENINGS, PIPING, CONDUITS, EQUIPMENT LOCATION AND
ANCHORAGES, ETC., NOT SHOWN.

SUBMIT ALL REQUIRED SHOP DRAWINGS AND RECEIVE THEIR SATISFACTORY
REVIEW FROM THE OWNER'S REPRESENTATIVE, PRIOR TO FABRICATION.

COORDINATE AND VERIFY ALL DIMENSIONS WITH ARCHITECTURAL, MECHANICAL
OR ELECTRICAL DRAWINGS AND VERIFY ALL DIMENSIONS AND CONDITIONS AT
THE PROJECT SITE PRIOR TO STARTING WORK AND NOTIFY THE OWNER'S
REPRESENTATIVE IMMEDIATELY OF ANY DISCREPANCIES.

REFER TO SPECIFICATIONS FOR INFORMATION NOT CONTAINED IN THESE
GENERAL NOTES.

CONCRETE

ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING BARS, SHALL BE IN
ACCORDANCE WITH MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED
CONCRETE STRUCTURES ACI 315, LATEST EDITION.

CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318 BUILDING CODE, LATEST
EDITION.

DESIGN STRENGTH
CAST-IN-PLACE CONCRETE, UNLESS OTHERWISE NOTED:
f'c = 4000psi AT 28 DAYS
REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615,
GRADE 60. LAP SPLICES SHALL BE PER TABLE SHOWN ON THIS SHEET.

CONCRETE COVER
CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS, BUT
NOT LESS THAN ONE BAR DIAMETER:

FOOTINGS AND MATS FORMED AGAINST SOIL 3"
CONCRETE IN CONTACT WITH SOIL, WEATHER OR WATER 2"
CONCRETE NOT EXPOSED TO SOIL, WEATHER OR WATER 1½"
BEAMS AND COLUMNS (TO STIRRUPS) 1½"
SLAB ON GRADE
UNDER 6" THICK AT SLAB CENTER
6" AND OVER AS SHOWN

ANCHOR BOLTS

ANCHOR BOLTS FOR BUILDING STRUCTURE SHALL CONFORM TO ASTM A307
HOT DIPPED GALVANIZED. SET ALL BOLTS BY TEMPLATE

DRILLED-IN EXPANSION BOLTS

EXPANSION BOLTS SHALL BE STAINLESS STEEL "KWIK BOLTS" BY HILTI CORP., OR
APPROVED EQUAL. ICBO CERTIFICATION AND SPECIAL INSPECTION IS REQUIRED.
MINIMUM SPACING SHALL BE 12 BOLT DIAMETERS AND MINIMUM EDGE DISTANCE
6 BOLT DIAMETERS UNLESS NOTED OTHERWISE.

BOLT DIAMETER (IN.)	½	⅝	¾	⅞	1
MIN. EMBEDMENT IN STRUCTURAL CONCRETE (IN.)	4	4	5	6	7

ADHESIVE/EPOXY ANCHORING SYSTEM

ANCHORS SHALL BE STAINLESS STEEL RODS COMPLYING TO AISI 304.
REINFORCING BARS AND RODS ANCHORED INTO EXISTING CONCRETE SHALL BE
IN DRILLED HOLE WITH THREADED, CODE APPROVED, ADHESIVE ANCHORING
MATERIALS. ICC-ES REPORTS ARE REQUIRED FOR USE IN CRACKED CONCRETE
FOR WIND OR SEISMIC LOADING. MINIMUM EMBEDMENT IN STRUCTURAL
CONCRETE SHALL BE 8 BAR DIAMETERS. MINIMUM EDGE DISTANCE 6 BAR
DIAMETERS.

STEEL

MATERIAL
SHAPES AND PLATES SHALL CONFORM TOASTM A992 (A572/50),
TUBES (HSS) SHALL CONFORM TOASTM A500, GRADE B OR C,
PIPES SHALL CONFORM TOASTM A53, GRADE B.
BOLTS SHALL CONFORM TOASTM A325, BEARING TYPE N
UNLESS NOTED.
TENSION LIMITED SLIP BOLTS BY DIRECT TENSION INDICATOR METHOD USING
LOAD INDICATOR WASHERS INSTALLED PER MANUFACTURER'S INSTRUCTIONS
OR BY TURN-OF-THE NUT METHOD.

MACHINE BOLTS SHALL BE ASTM A307 AND SHALL BE PROVIDED WITH LOCK
NUT WASHERS UNDER NUTS OR SELF LOCKING NUTS.

WELDING
ALL WELDING SHALL CONFORM TO AWS D1.1 WELDING CODE. MINIMUM SIZE
WELDS ⅜" CONTINUOUS FILLET.

ALL STEEL SHALL BE HOT DIP GALVANIZED AFTER FABRICATION UNLESS
NOTED OTHERWISE. PAINT ALL EXPOSED GALVANIZED SURFACES PER
SPECIFICATIONS.

SPECIAL INSPECTION SCHEDULE			
ITEM	CI	PI	REMARKS/REFERENCES
GENERAL:			
PREFABRICATED ITEMS		X	
SITE PREPARATION, FILL PLACEMENT, SOIL COMPACTION		NA	BY GEOTECHNICAL ENGINEER OR AN APPROVED TESTING AGENCY
CONCRETE:			
REINFORCING MATERIALS		X	ASTM AS NOTED, ACI 318 7.1–7.4
REINFORCING PLACEMENT		X	ACI 318 7.5–7.8
WELDING – REINFORCING		X	AWS D1.4
ANCHOR RODS, EMBEDDED BOLTS & INSERTS	X		PRIOR TO AND DURING CONCRETE PLACEMENT
USE OF REQUIRED MIX DESIGN		X	
CONCRETE SLUMP, AIR CONTENT, TEMPERATURE & TEST SPECIMENS	X		WHILE MAKING SPECIMENS FOR STRENGTH TESTS, ACI 318 5.6
CONCRETE PLACEMENT	X		ACI 318 5.9, 5.10
CONCRETE CURING		X	ACI 318 5.11, 5.13
POST-INSTALLED ANCHORS			
GROUTED ANCHORS	X		
ADHESIVE ANCHORS	X		
MECHANICAL ANCHORS	X		

INSPECTION SCHEDULE NOTES

- ITEMS MARKED WITH AN "X" REQUIRE INSPECTION BY A SPECIAL INSPECTOR
APPROVED BY THE BUILDING OFFICIAL.
- ITEMS MARKED "NA" ARE NOT APPLICABLE TO THIS PROJECT.
- CI = CONTINUOUS INSPECTION DURING PROGRESS OF WORK BY SPECIAL INSPECTOR.
- PI = PERIODIC INSPECTION BY SPECIAL INSPECTOR AS REQUIRED TO
CONFIRM CONFORMANCE OF WORK.
- TESTING AND INSPECTION REPORTS SHALL BE SUBMITTED TO THE ENGINEER, BUILDING
OFFICIAL AND CONTRACTOR.

LAP SPLICE TABLE	
BAR SIZE	CONCRETE f' c = 4,000 OR 5,000 PSI
#3	19"
#4	25"
#5	31"
#6	37"
#7	48"
#8	55"
#9	62"
#10	69"

MINIMUM LAP SPLICES UNLESS
OTHERWISE DETAILED ON DRAWINGS

STRUCTURAL ABBREVIATIONS

AB	ANCHOR BOLT
C	CHANNEL
EW	EACH WAY
GALV	GALVANIZED STEEL
HSS	HOLLOW STRUCTURAL SHAPE
L	ANGLE
MB	MACHINE BOLT
P	PLATE
S	S SHAPE
SCH	SCHEDULE
SST	STAINLESS STEEL
T&B	TOP & BOTTOM
W	WIDE FLANGE

6583

S00

SH 17 OF 47

CON/CONS: 070664
M. ID: 201024.01
PHASE: BID SET

WEST SITCUM
STORMWATER TREATMENT

STRUCTURAL NOTES

APPROVED: *Jane Van Derkuyt*

BS APR 2018

CHECKED BY: DATE

SAW APR 2018

DIRECTOR ENG. DATE

PROJ. ENGR DATE

PRINTED BY: peterden

PORT ADDRESS: ONE SITCUM PLAZA

RANGE: 3E

SECTIONS: 33 & 34

TOWNSHIP: 21N

DAT-HRZ: WA83-S

VERT: MLLW

DRAWING SCALE: AS NOTED

PARCEL: SEE G02

APRIL 25, 2018

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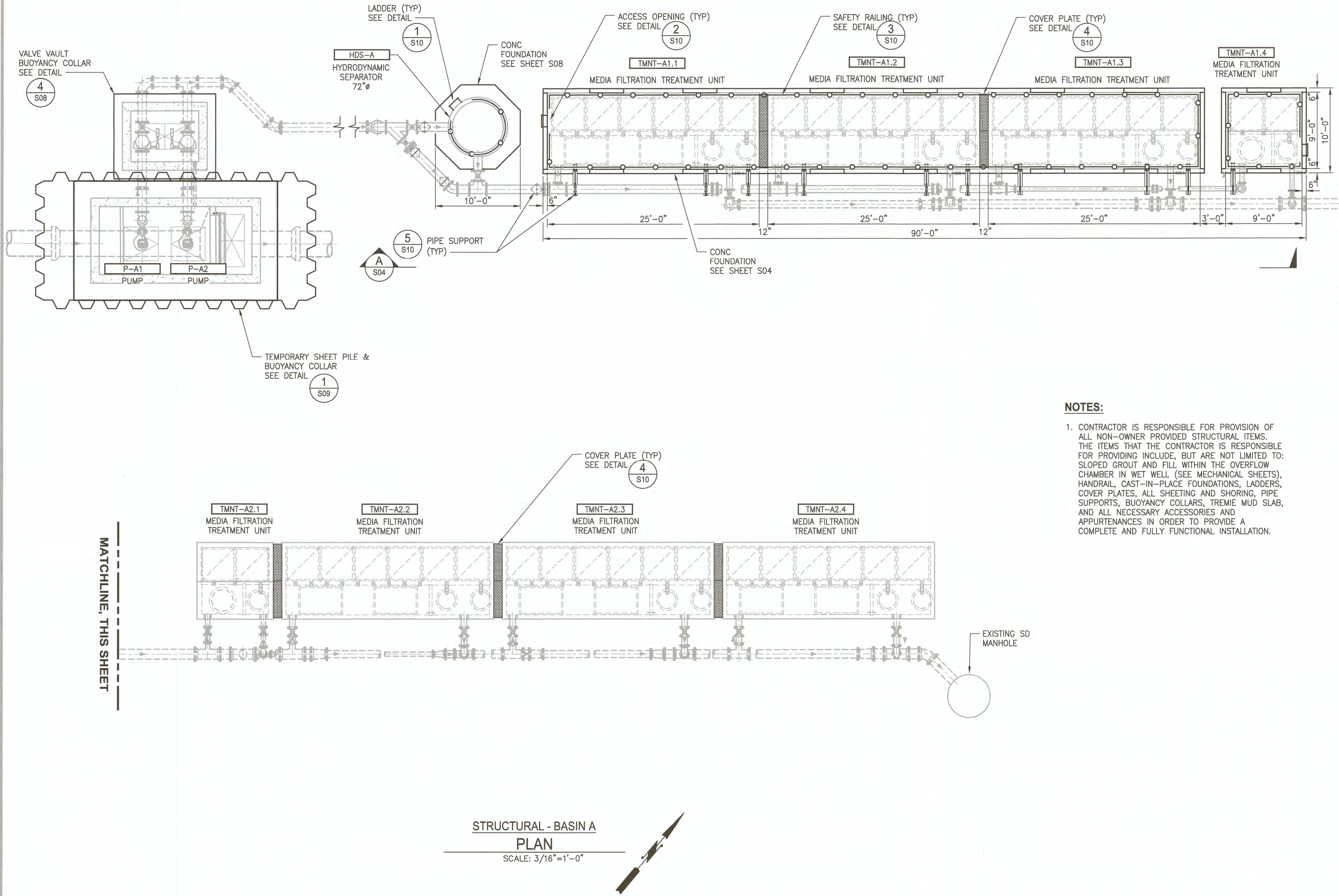
Port of Tacoma

P.O. BOX 1827 TACOMA, WA 98401 (206)836-8461

SEATTLE
A. W. C. G. E. R.
WASHINGTON
18711
PROFESSIONAL ENGINEER

BINDING EDGE

PORT OF TACOMA FILE: U:\PSOI\Projects\Clients\8001-NW Seaport Alliance\553-8001-001 West Sitcum\99Svcs\CADD\DWG\PS8001001-S-01

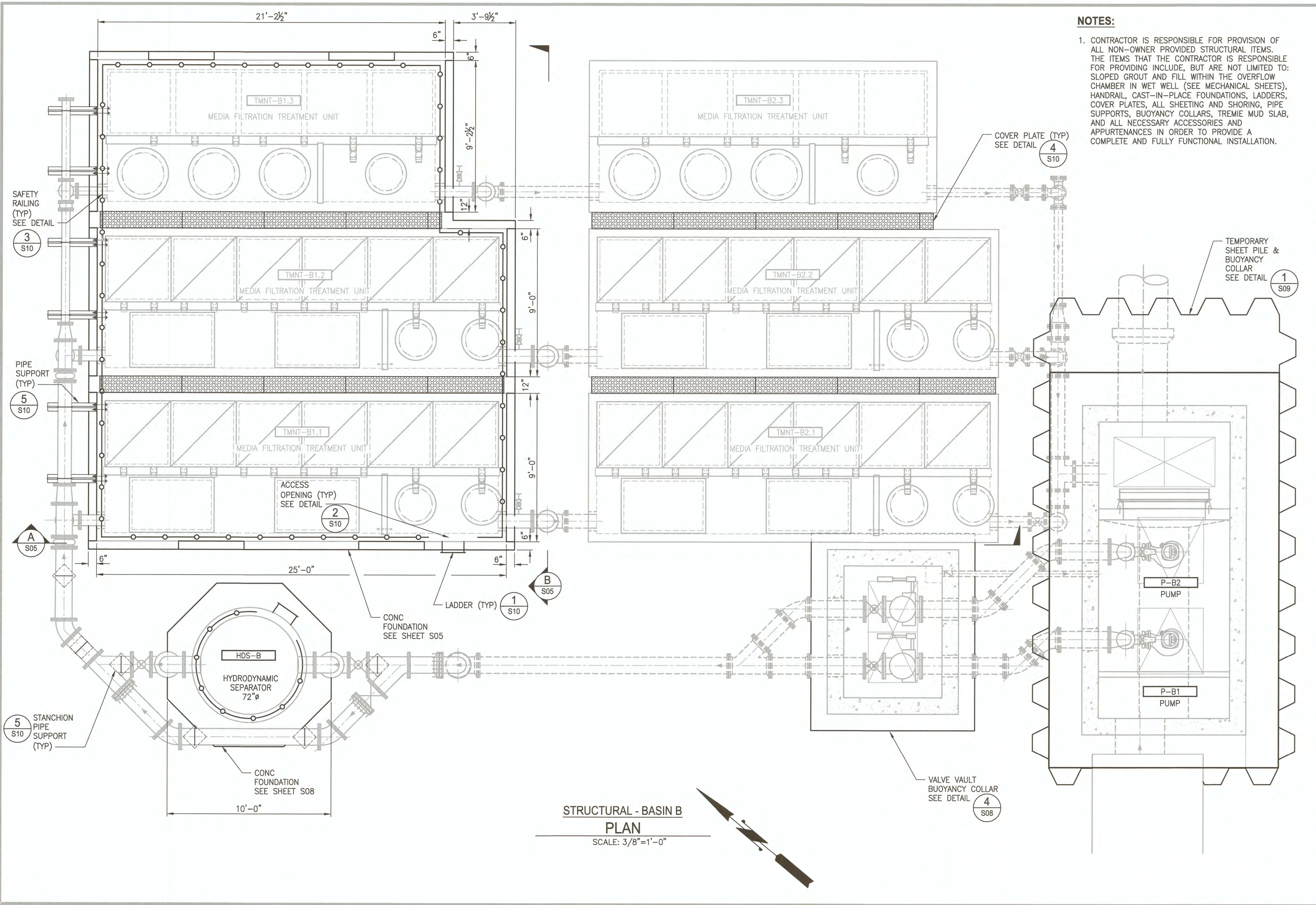


NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR PROVISION OF ALL NON-OWNER PROVIDED STRUCTURAL ITEMS. THE ITEMS THAT THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING INCLUDE, BUT ARE NOT LIMITED TO: SLOPED GROUT AND FILL WITHIN THE OVERFLOW CHAMBER IN WET WELL (SEE MECHANICAL SHEETS), HANDRAIL, CAST-IN-PLACE FOUNDATIONS, LADDERS, COVER PLATES, ALL SHEETING AND SHORING, PIPE SUPPORTS, BUOYANCY COLLARS, TREMIE MUD SLAB, AND ALL NECESSARY ACCESSORIES AND APPURTENANCES IN ORDER TO PROVIDE A COMPLETE AND FULLY FUNCTIONAL INSTALLATION.

STRUCTURAL - BASIN A
PLAN
SCALE: 3/16"=1'-0"

6583 S01 SH 18 OF 47 CONT/CONS: 070664 M. ID: 201024.01 PHASE: BID SET	WEST SITCUM STORMWATER TREATMENT STRUCTURAL PLAN - BASIN A				APPROVED: <i>[Signature]</i> 4/26/18 DIRECTOR	BS APR 2018 CHECKED BY SAW APR 2018	DATE										
	TOWNSHIP: 21N	RANGE: 3E	SECTIONS: 33 & 34	DATE	PROJ. ENGR	DATE											
	DAT-HRZ: WA83-S	VERT: MLLW	PRINTED BY: peterden	APR 25, 2018													
	PARCEL: SEE G02	DRAWING SCALE: AS NOTED	PORT ADDRESS: ONE SITCUM PLAZA	TACOMA, WA 98401-1837													
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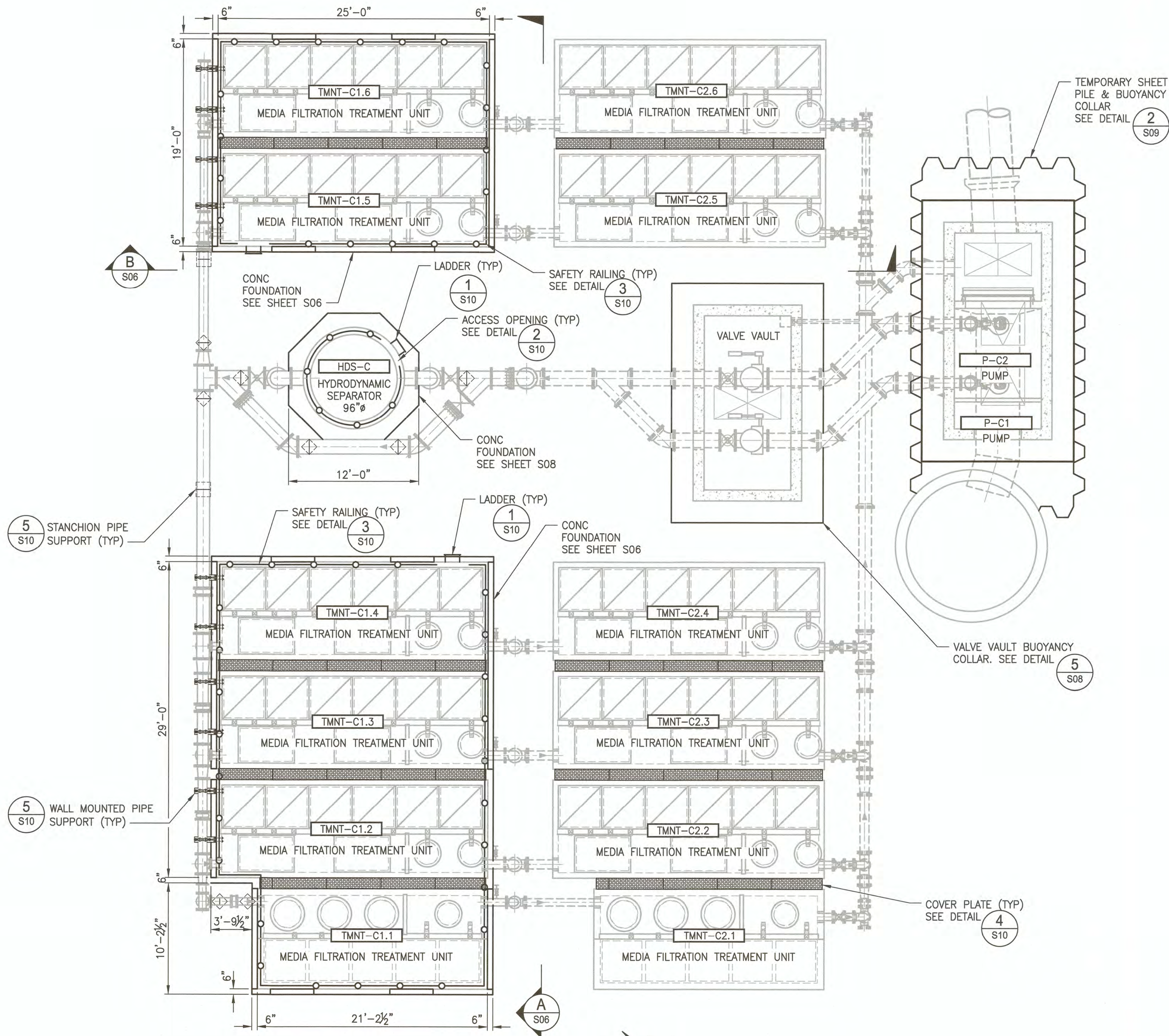
6583 S02 SH 19 OF 47	WEST SITCUM STORMWATER TREATMENT STRUCTURAL PLAN - BASIN B		APPROVED: <i>[Signature]</i> 4/26/18	BS APR 2018	6583	
	TOWNSHIP: 21N RANGE: 3E SECTION: 33 & 34 DATE-HRZ: WA83-S PARCEL: SEE G02		DIRECTOR ENG. DATE: 4/26/18 PRINTED BY: peterden PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837	SAW APR 2018 PROJ. ENGR DATE: Apr 25, 2018	6583	
CONT/CONS: 070664 M. ID: 201024.01 PHASE: BID SET		THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION				6583

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STATE OF WASHINGTON
SEAL OF THE PORT OF TACOMA
APRIL 25, 2018

MARK:	REVISION:	BY:	APPR:	DATE:



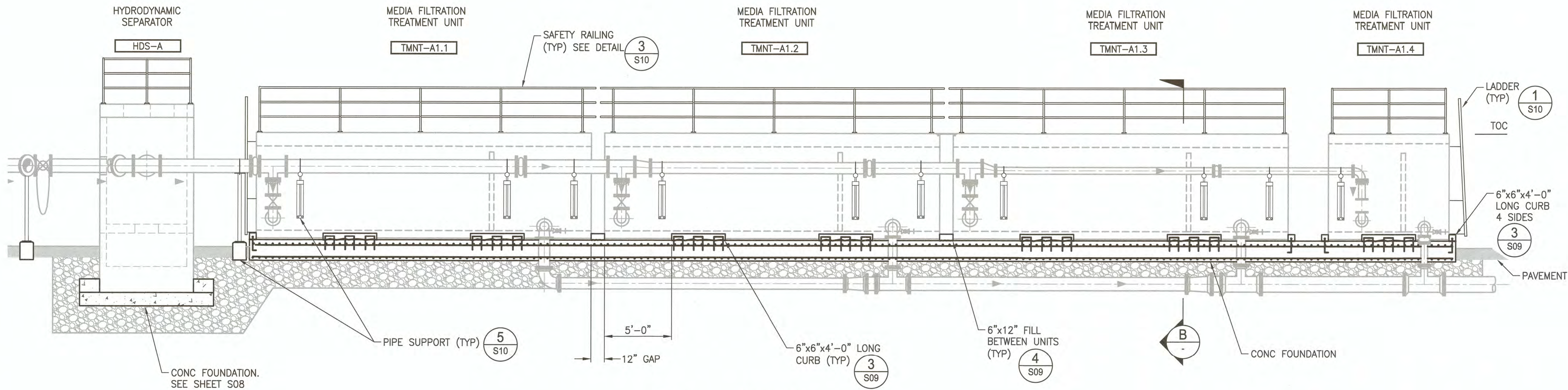
STRUCTURAL - BASIN C
PLAN
SCALE: 3/16"=1'-0"

NOTES:

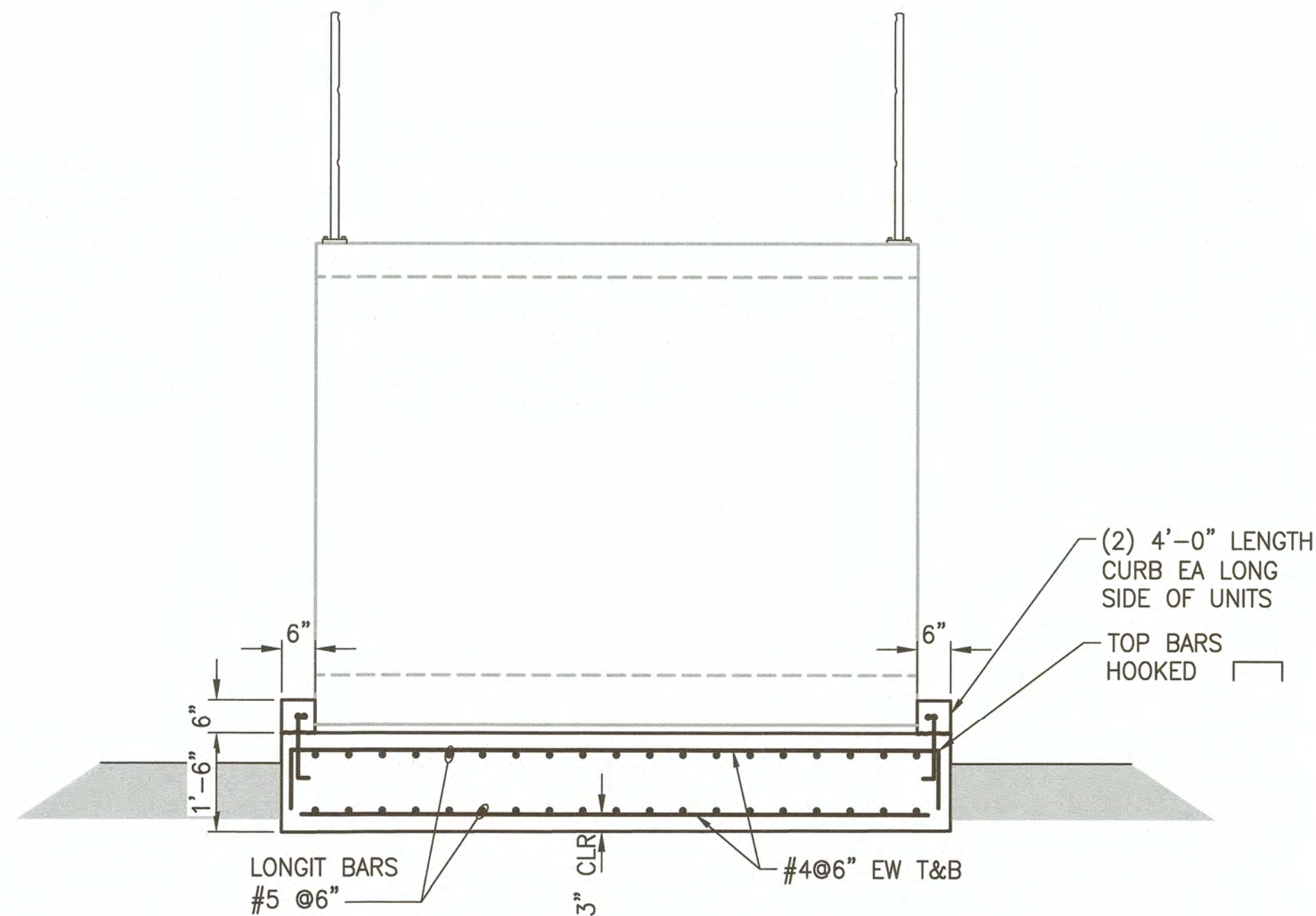
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6583 S03 SH 20 OF 47	WEST SITCUM STORMWATER TREATMENT STRUCTURAL PLAN - BASIN C				APPROVED: <i>[Signature]</i> DIRECTOR ENG. DATE: 4/26/18	BS APR 2018 CHECKED BY: SAW SAW APR 2018	 PETERDEN APR 25, 2018 TACOMA, WA 98401-1837	 Parametrix ENGINEERING · PLANNING · ENVIRONMENTAL SCIENCES 60 WASHINGTON AVENUE, SUITE 390 BREMERTON, WA 98337 P: 360.737.0001 F: 360.737.0002 WWW.PARAMETRIX.COM	 Port of Tacoma P.O. BOX 1837 TACOMA, WA 98401-1837
	CONTRACT/CONS: 070664 M. ID: 201024.01 PHASE: BID SET	TOWNSHIP: 21N RANGE: 3E SECTION: 33 & 34 DATE-HRZ: WAB3-S PARCEL: SEE G02	PRINTED BY: peterden PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837	DATE: APR 25, 2018 BY: [] REVISION: [] APPR: [] MARK: []					

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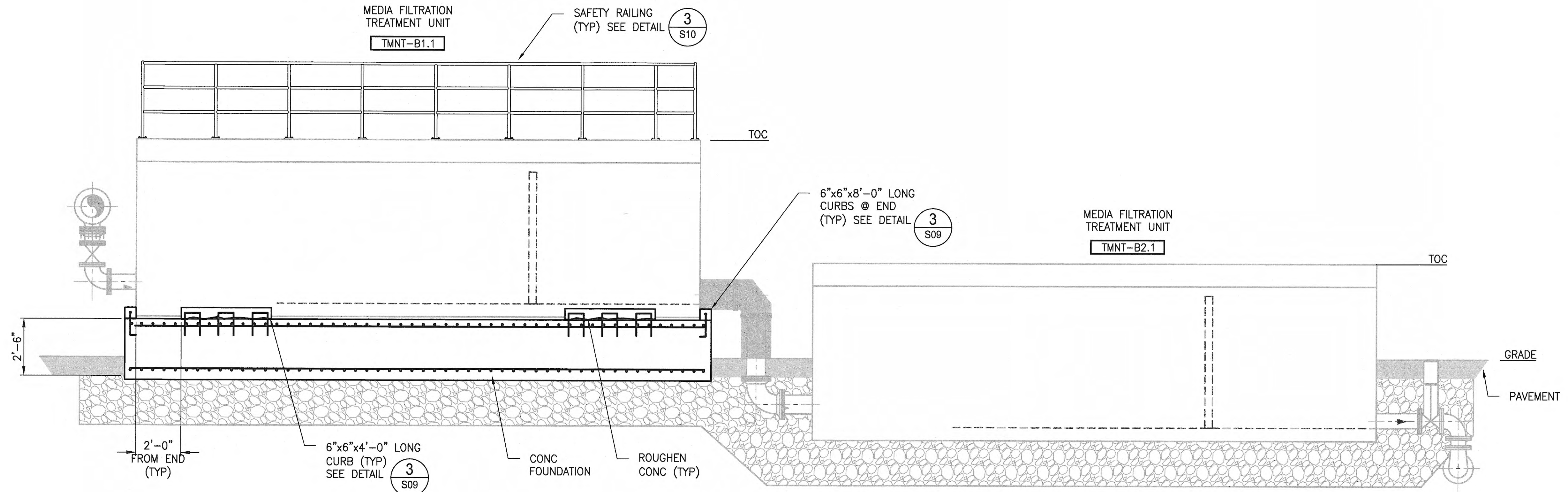
A
SECTION
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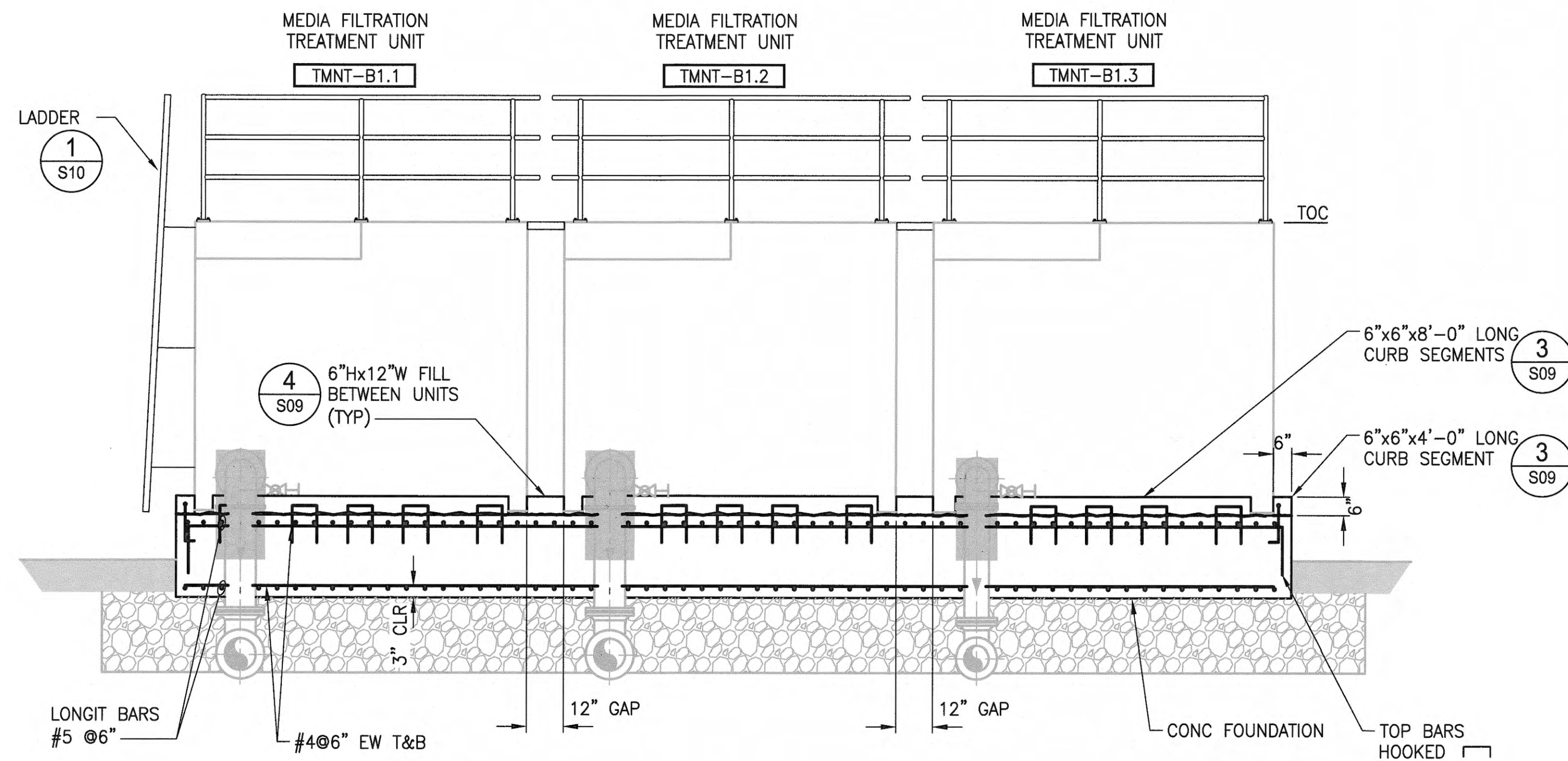
B
SECTION
SCALE: 1/2"=1'-0"

- NOTES:**
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6583 S04 SH 21 OF 47	WEST SITCUM STORMWATER TREATMENT STRUCTURAL SECTION - BASIN A				APPROVED: <i>Gene L. [Signature]</i> 4/26/18 DIRECTOR DATE: 4/26/18		BS APR 2018 CHECKED BY: [Signature] SAW APR 2018 PROJ. ENGR. DATE: 4/26/18		Parametrix ENGINEERING - PLANNING - ENVIRONMENTAL SCIENCES 60 WASHINGTON AVENUE, SUITE 390 BREMERTON, WA 98337 P: 360.377.0011 F: 360.377.0012 WWW.PARAMETRIX.COM		Port of Tacoma P.O. BOX 1837 TACOMA, WA 98401-1837
	CONTRACT/CONS: 070664 M. ID: 201024.01 PHASE: BID SET	TOWNSHIP: 21N DAT-HRZ: WAB3-S PARCEL: SEE G02	RANGE: 3E VERT: MLLW	SECTIONS: 33 & 34	PRINTED BY: peterden DATE: Apr 25, 2018 PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837	MARK: [Signature] REVISION: [Signature] BY: [Signature] DATE: [Signature]	APRIL 25, 2018		THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION		



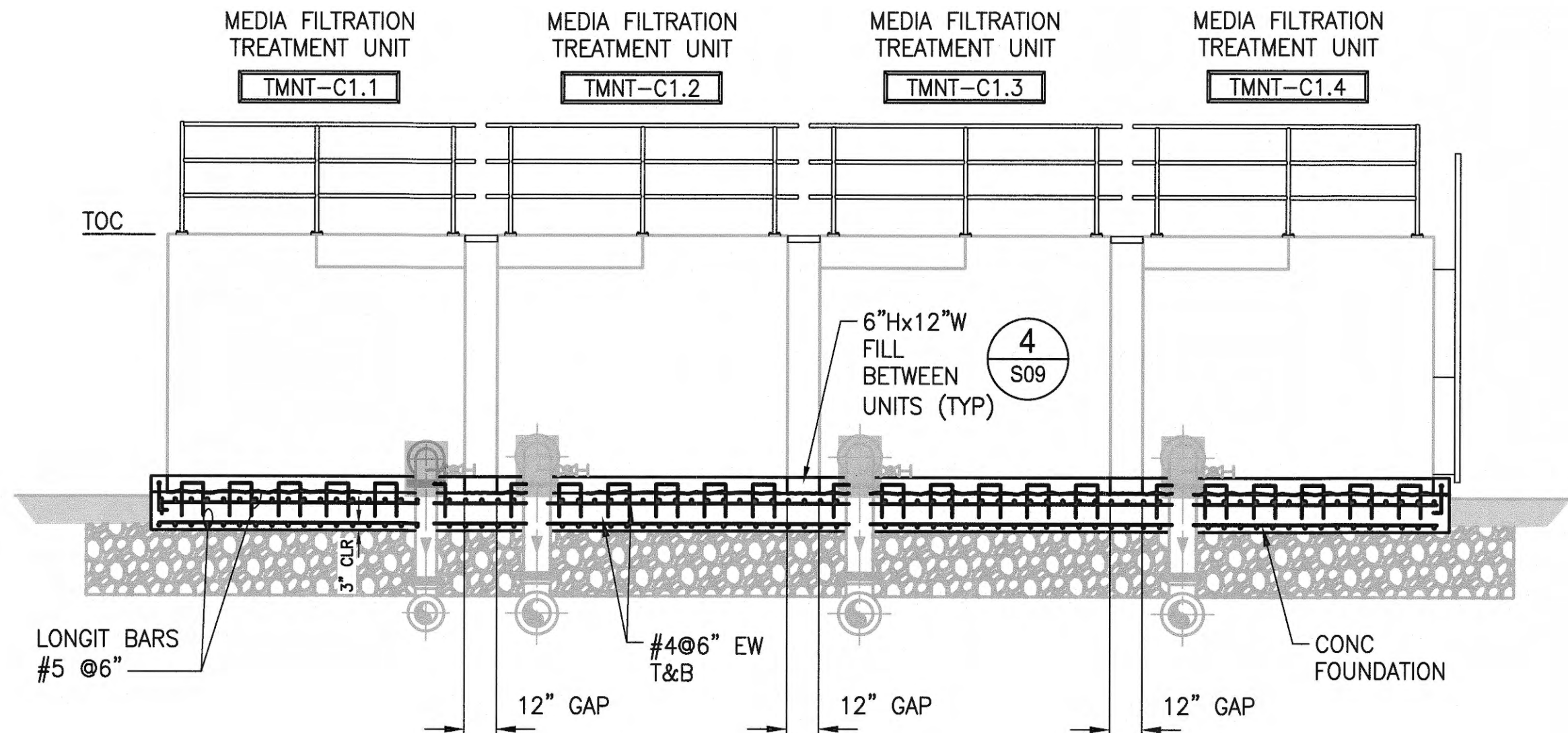
A
S02
DETAIL/SECTION
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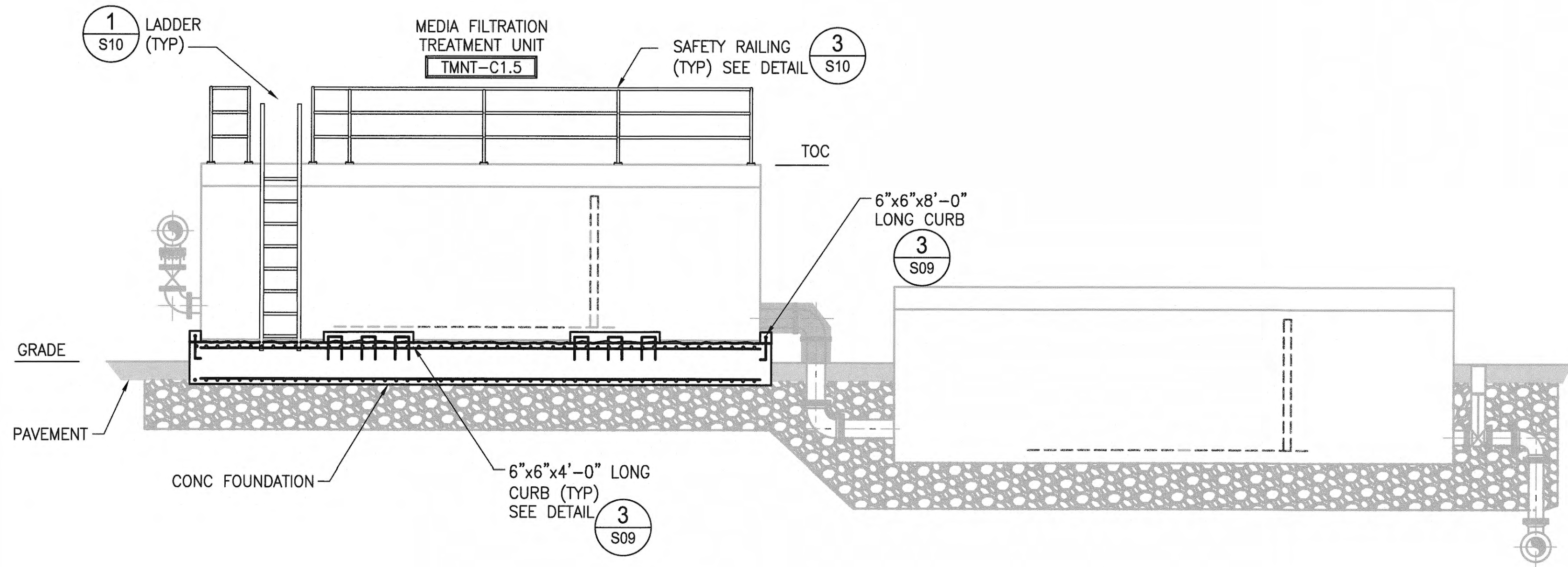
B
S02
DETAIL/SECTION
SCALE: 3/8"=1'-0"

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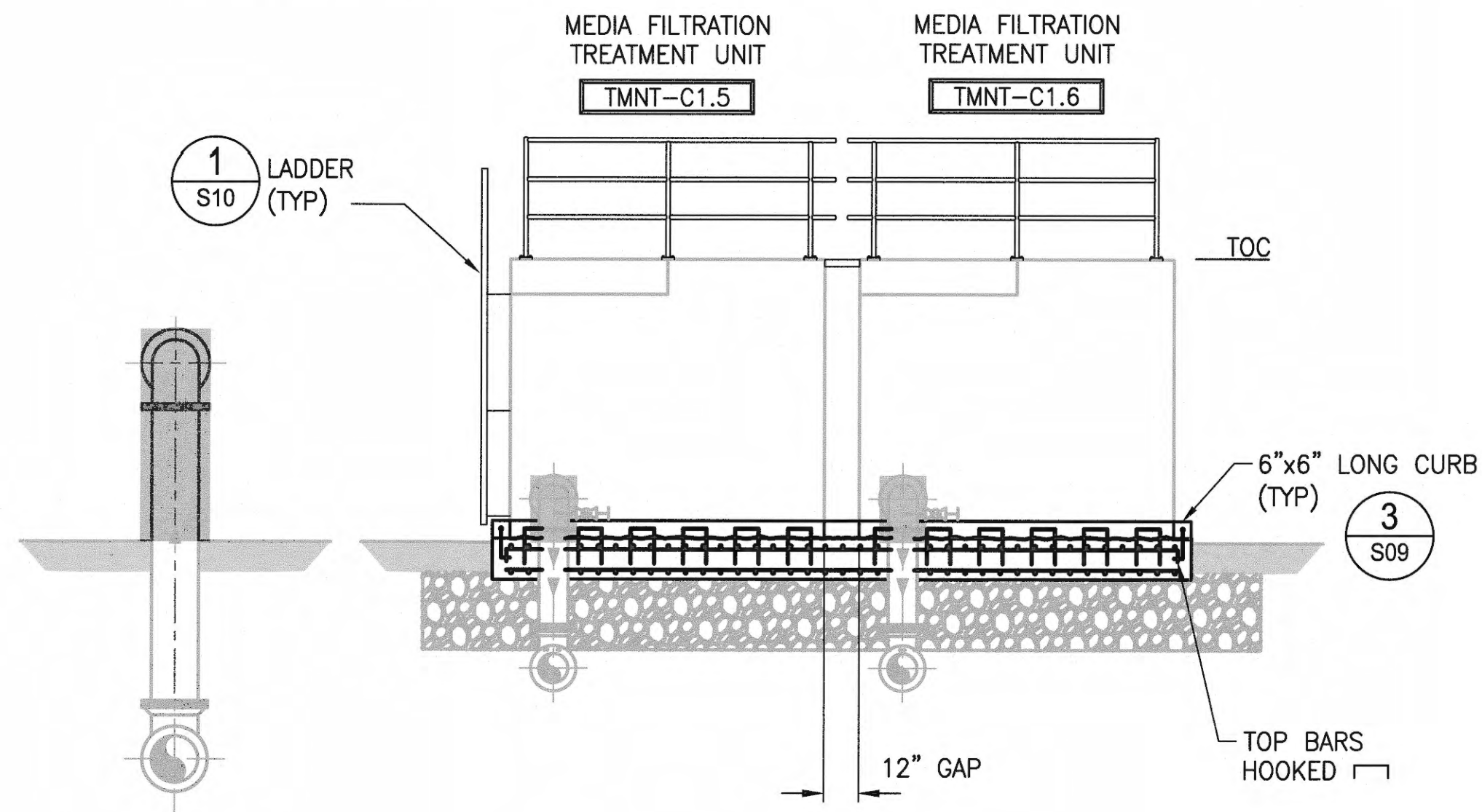
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S03 SCALE: 1/4"=1'-0"



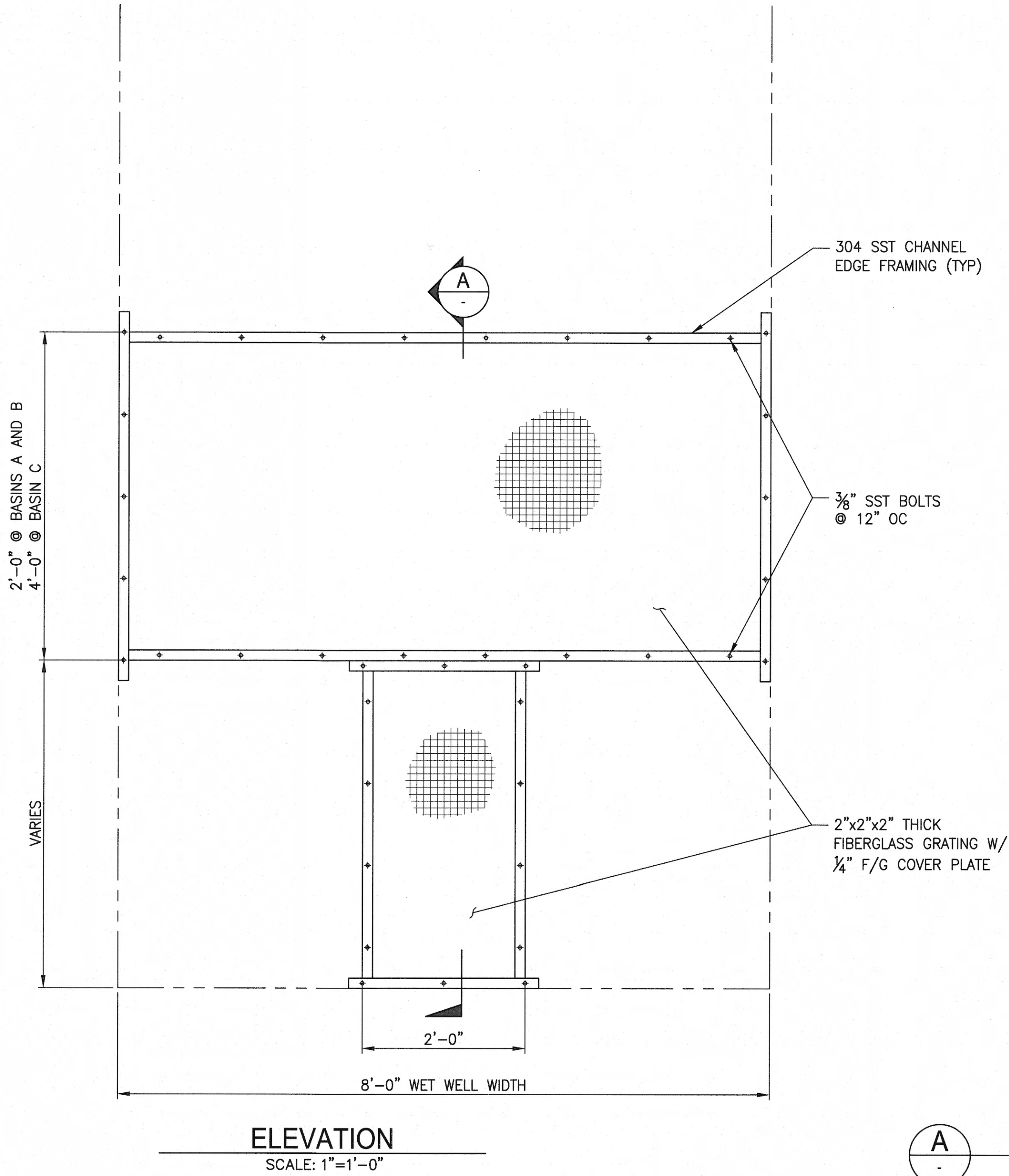
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NOTES:

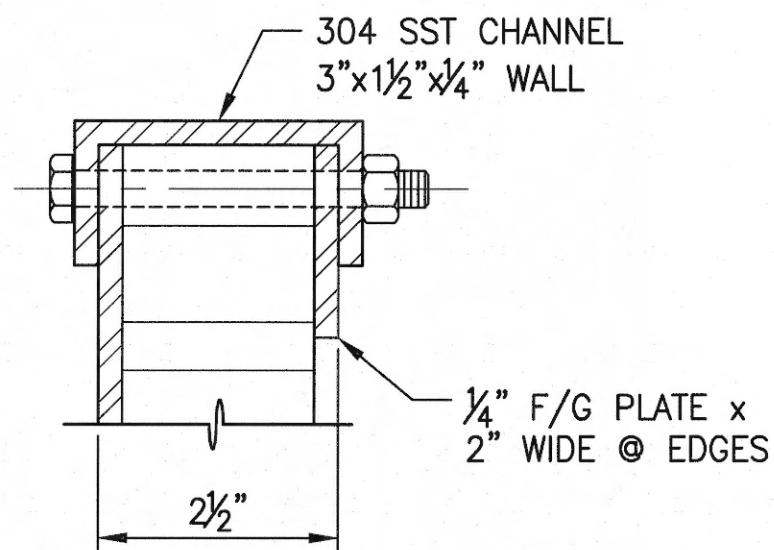
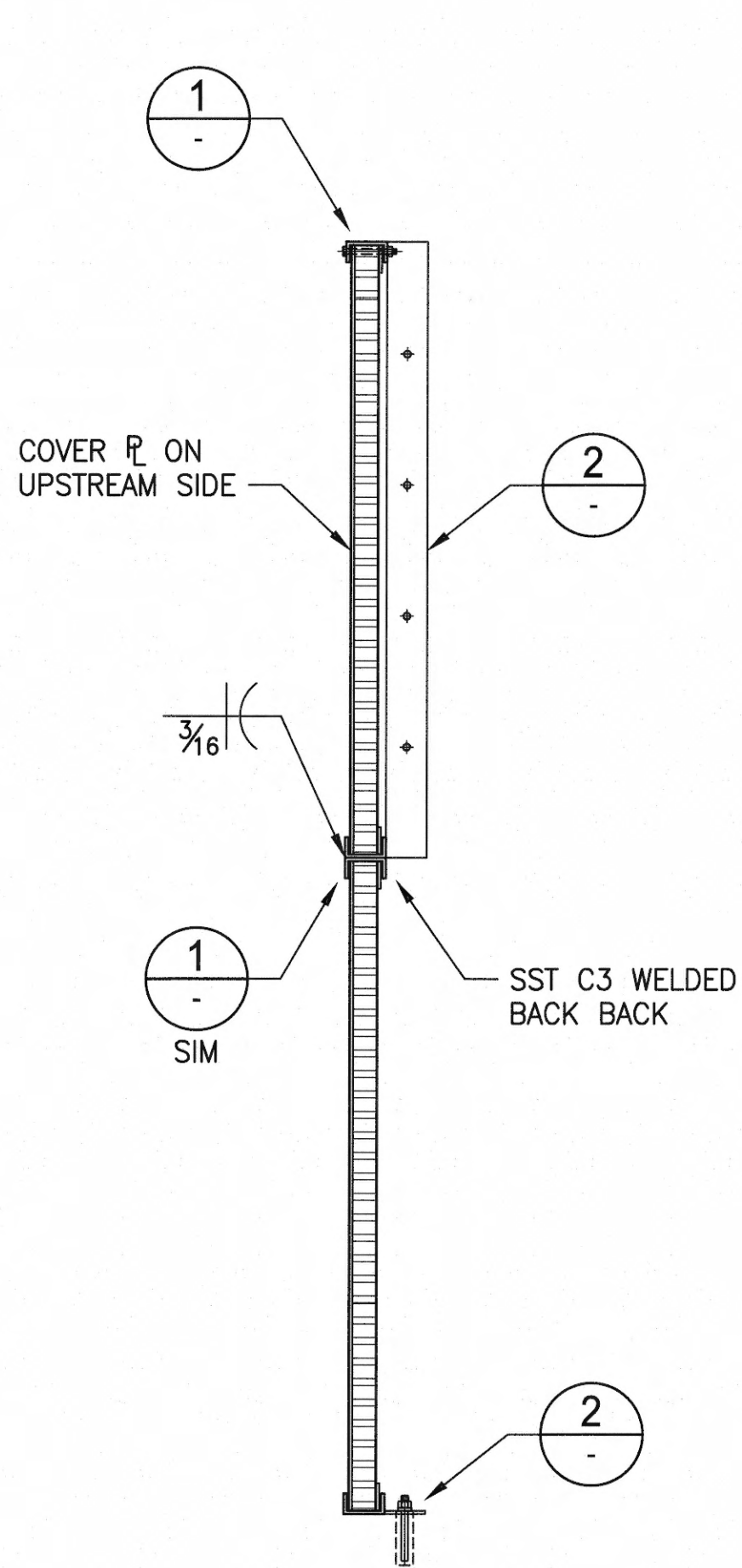
- CONTRACTOR SHALL VERIFY DIMENSIONS, ELEVATIONS AND LOCATIONS PRIOR TO CONSTRUCTION.
- PIPE SUPPORTS NOT SHOWN. PROVIDE PIPE SUPPORTS ON ALL PIPING WHERE NECESSARY.
- ALL JOINTS AND COUPLINGS SHALL BE RESTRAINED.
- ALL PIPE PENETRATIONS THROUGH WALLS AND SLABS REQUIRE MODULAR MECHANICAL SEALS WITH TIGHTENING BOLTS INSIDE STRUCTURE.
- CSBC, SEE SPECIFICATIONS FOR MATERIAL AND INSTALLATION REQUIREMENTS.
- SCARIFY 2' OF EXISTING MATERIAL AND RECOMPACT TO 95% MAX DRY DENSITY.
- CAST-IN-PLACE CONCRETE PAD TO 1' BELOW GRADE. SEE STRUCTURAL FOR PAD DETAILS.
- CONTRACTOR IS RESPONSIBLE FOR PROVISION OF ALL NON-OWNER PROVIDED STRUCTURAL ITEMS. THE ITEMS THAT THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING INCLUDE, BUT ARE NOT LIMITED TO: SLOPED GROUT AND FILL WITHIN THE OVERFLOW CHAMBER IN WET WELL (SEE MECHANICAL SHEETS), HANDRAIL, CAST-IN-PLACE FOUNDATIONS, LADDERS, COVER PLATES, ALL SHEETING AND SHORING, PIPE SUPPORTS, BUOYANCY COLLARS, TREMIE MUD SLAB, AND ALL NECESSARY ACCESSORIES AND APPURTENANCES IN ORDER TO PROVIDE A COMPLETE AND FULLY FUNCTIONAL INSTALLATION.



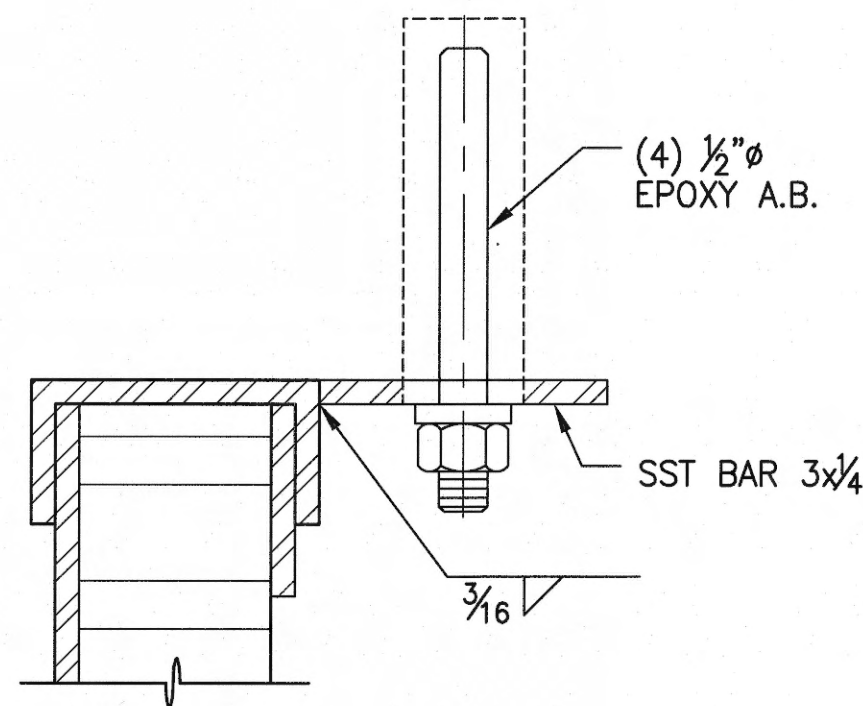
6583 S06 SH 23 OF 47 CONT/CONS: 070664 M. ID: 201024.01 PHASE: BID SET	WEST SITCUM STORMWATER TREATMENT STRUCTURAL SECTION - BASIN C				APPROVED: <i>Jenna Underberg</i> DIRECTOR ENG. DATE: 4/26/18 PRINTED BY: peterden Apr 25, 2018 PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837	BS APR 2018 CHECKED BY: DATE SAW APR 2018 PROJ. ENGR DATE peterden Apr 25, 2018 PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837	APRIL 25, 2018 APRIL 25, 2018	PARAMETRIX ENGINEERING - PLANNING - ENVIRONMENTAL SCIENCES 600 WASHINGTON AVENUE, SUITE 350 BREMERLEY, WA 98337 P 360.377.0014 WWW.PARAMETRIX.COM	Port of Tacoma P.O. BOX 1837 TACOMA, WA 98401 (203)365-9641
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A
SECTION
SCALE: 1"=1'-0"



1
DETAIL
SCALE: 6"=1'-0"



2
DETAIL
SCALE: 6"=1'-0"

NOTES:

1. FIBERGLASS GRATING AND COVER PLATE SHALL BE FIBERGLASS REINFORCED POLYESTER RESIN MOLDED PRODUCTS.
2. STAINLESS STEEL MATERIALS SHALL BE 304 GRADE.

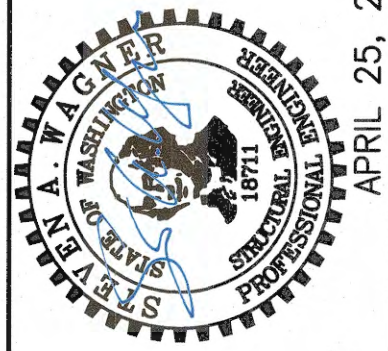
6583
S07
SH 24 OF 47
CONT/CONS: 070664
M. ID: 201024.01
PHASE: BID SET

WEST SITCUM
STORMWATER TREATMENT
WET WELL INLET BAFFLE

TOWNSHIP: 21N
DAT-HRZ: WA83-S
PARCEL: SEE G02
RANGE: 3E
VERT: MLLW
SECTIONS: 33 & 34
DRAWING SCALE: AS NOTED

APPROVED:
DIRECTOR ENG. DATE
PRINTED BY: peterden Apr 25, 2018
PORT ADDRESS: ONE SITCUM PLAZA
TACOMA, WA 98401-1837

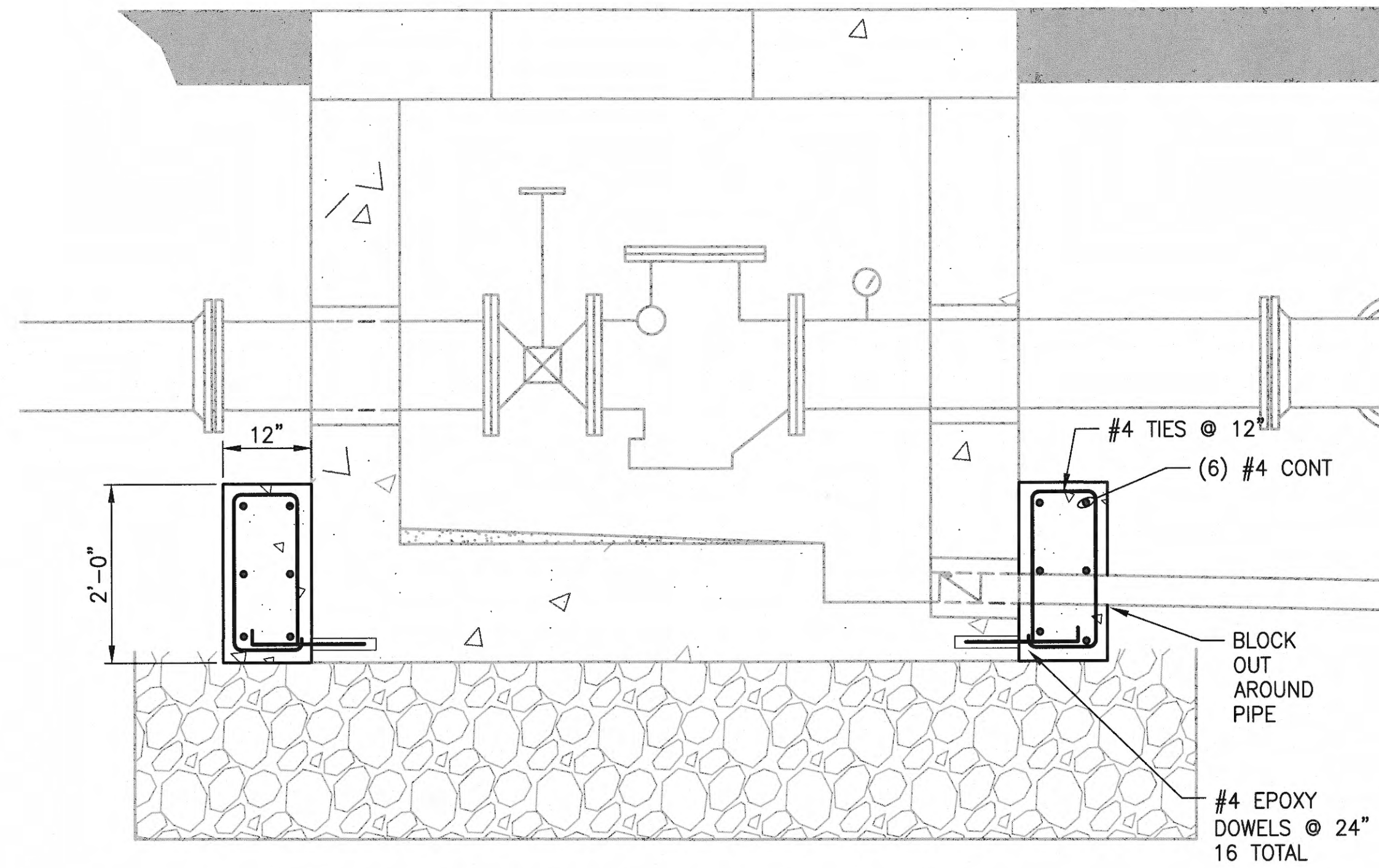
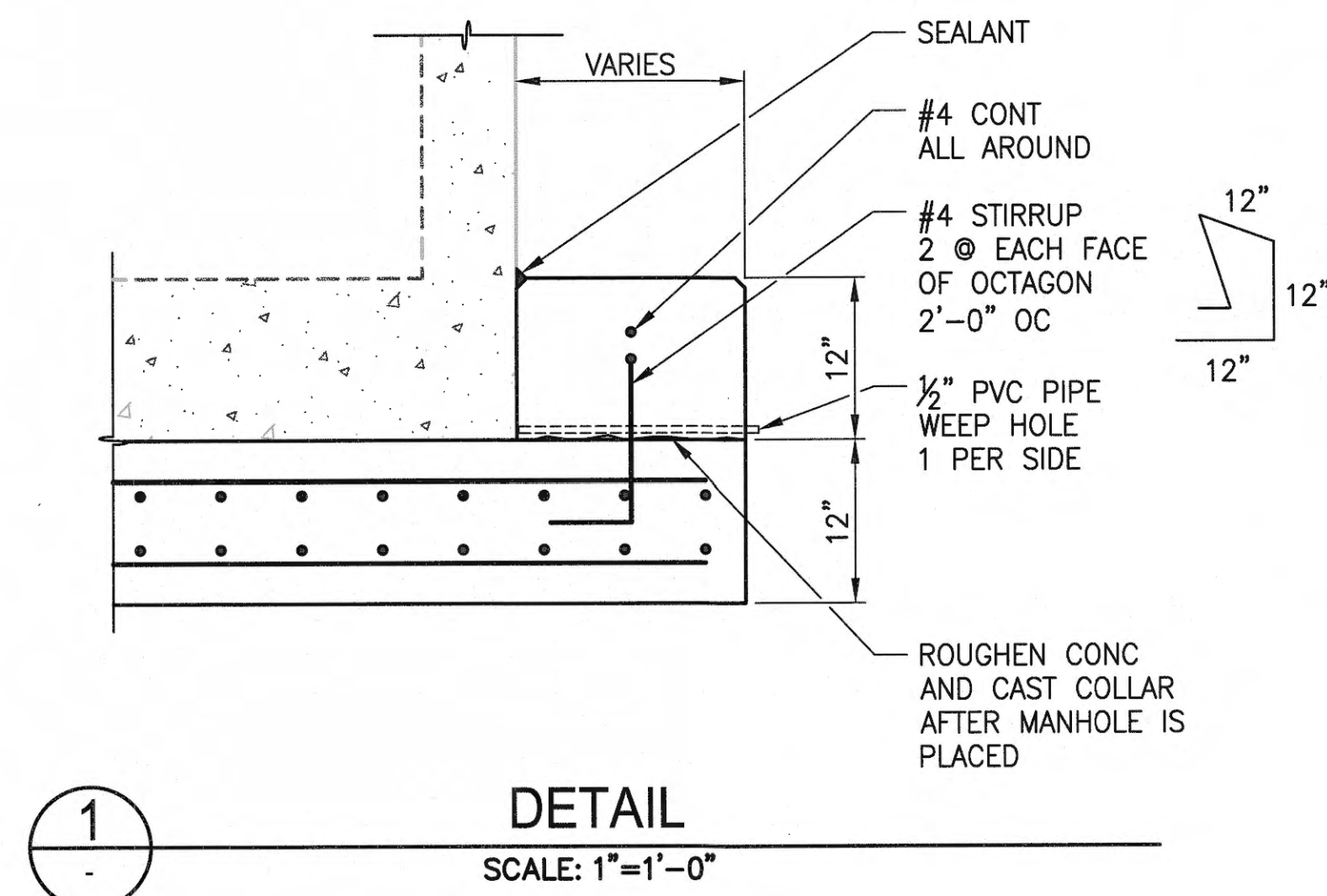
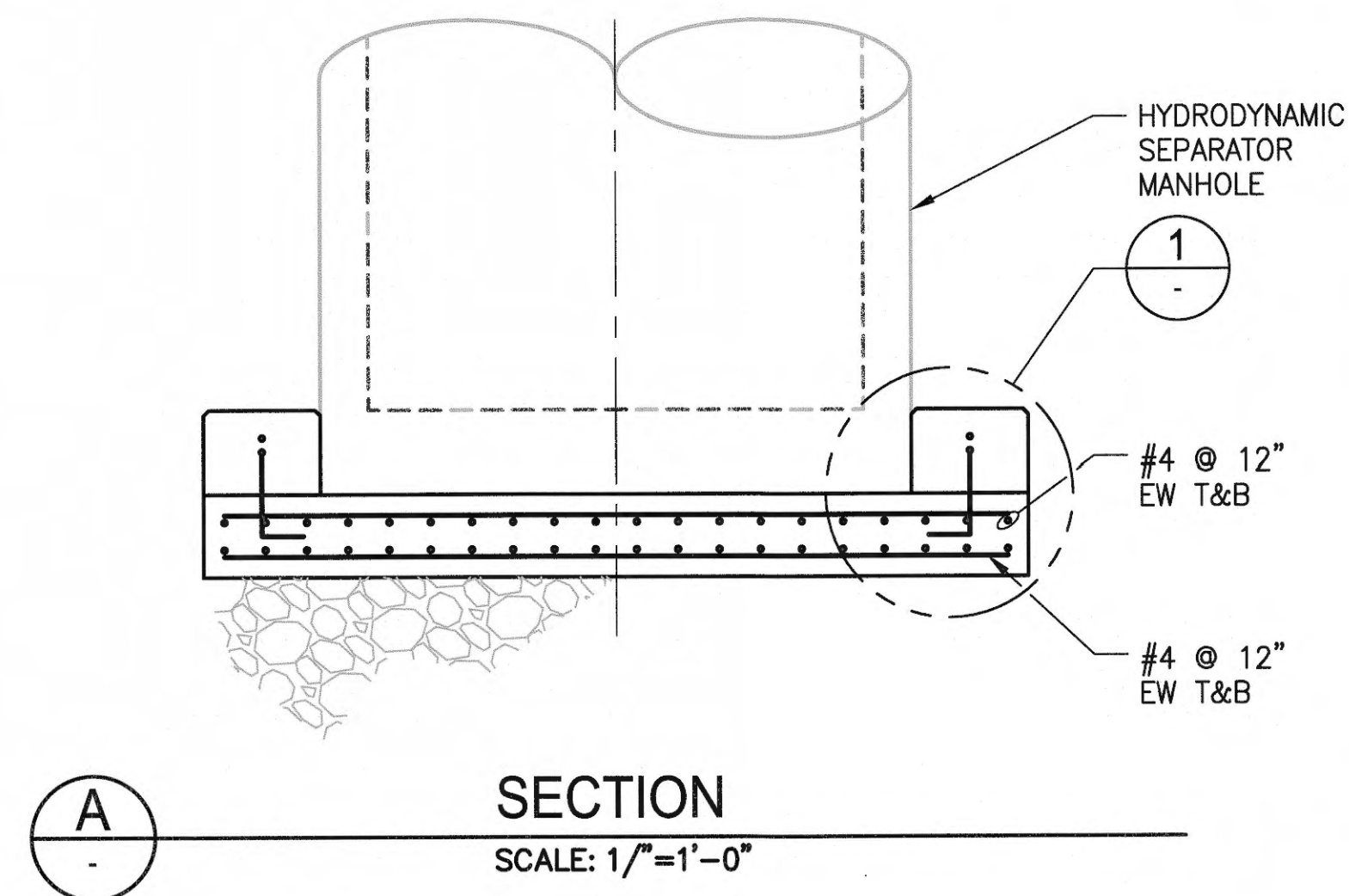
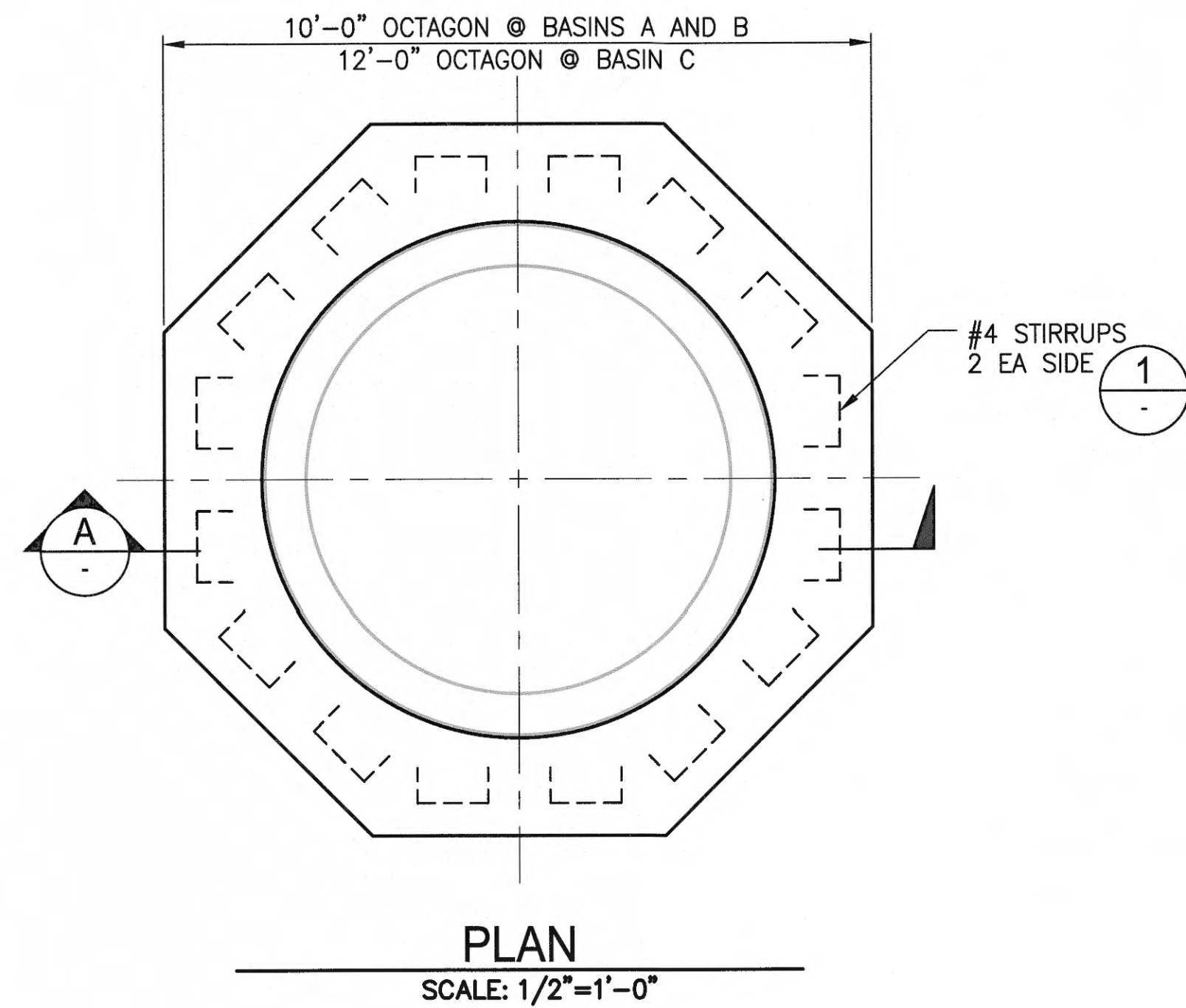
BS APR 2018
CHECKED BY DATE
SAW APR 2018
PROJ. ENGR DATE



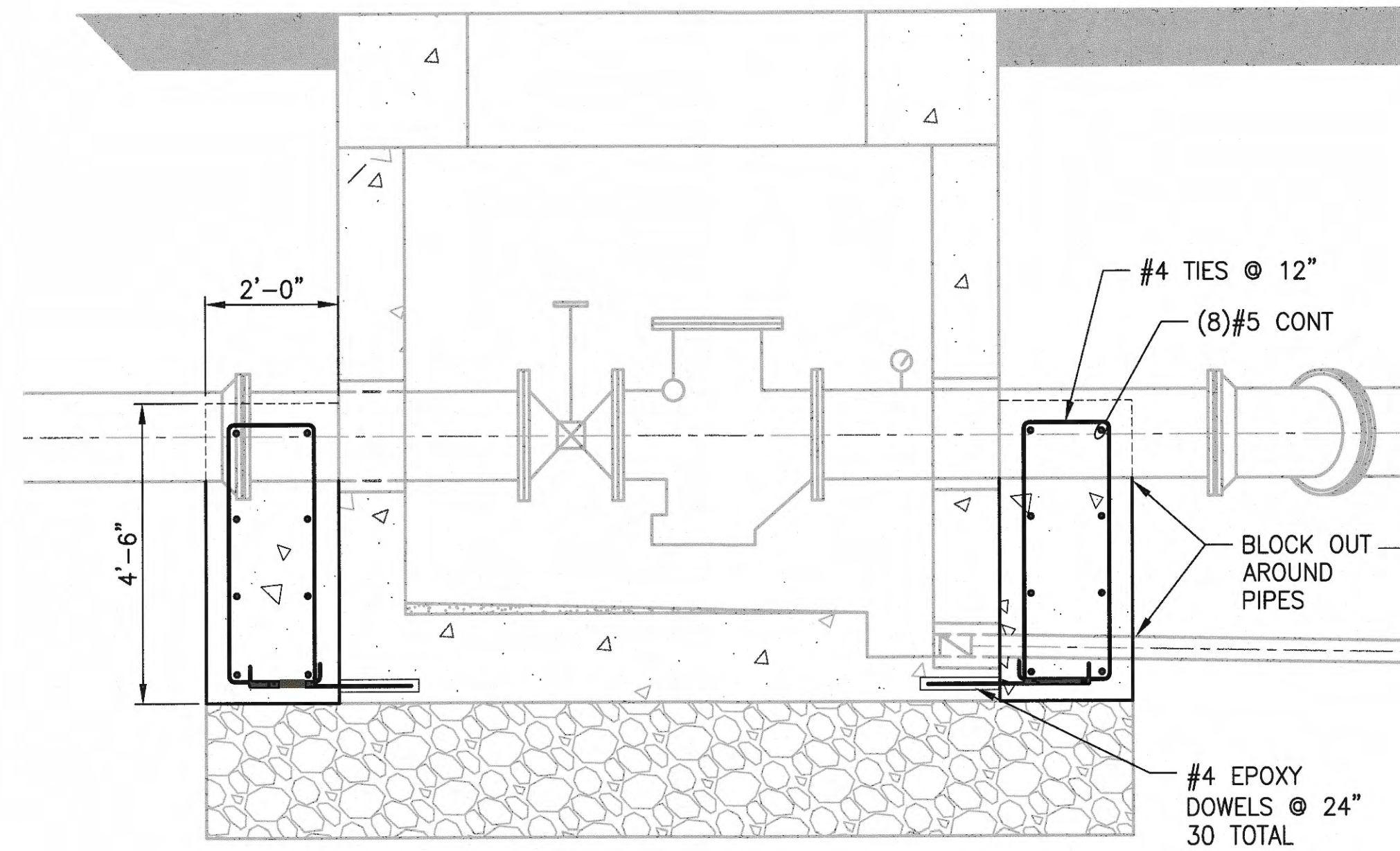
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ENGINEERING PLANNING ENVIRONMENTAL SCIENCES
60 WASHINGTON AVENUE, SUITE 390
BREMERTON WA 98337
P 360.377.0014
WWW.PARAMETRIX.COM

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P.O. BOX 1837 TACOMA, WA 98401 (203)83-3441

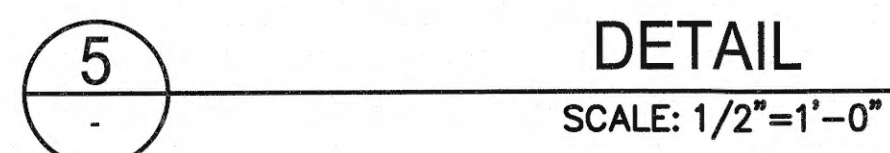
MARK: REVISION:
BY:
APPR:
DATE:



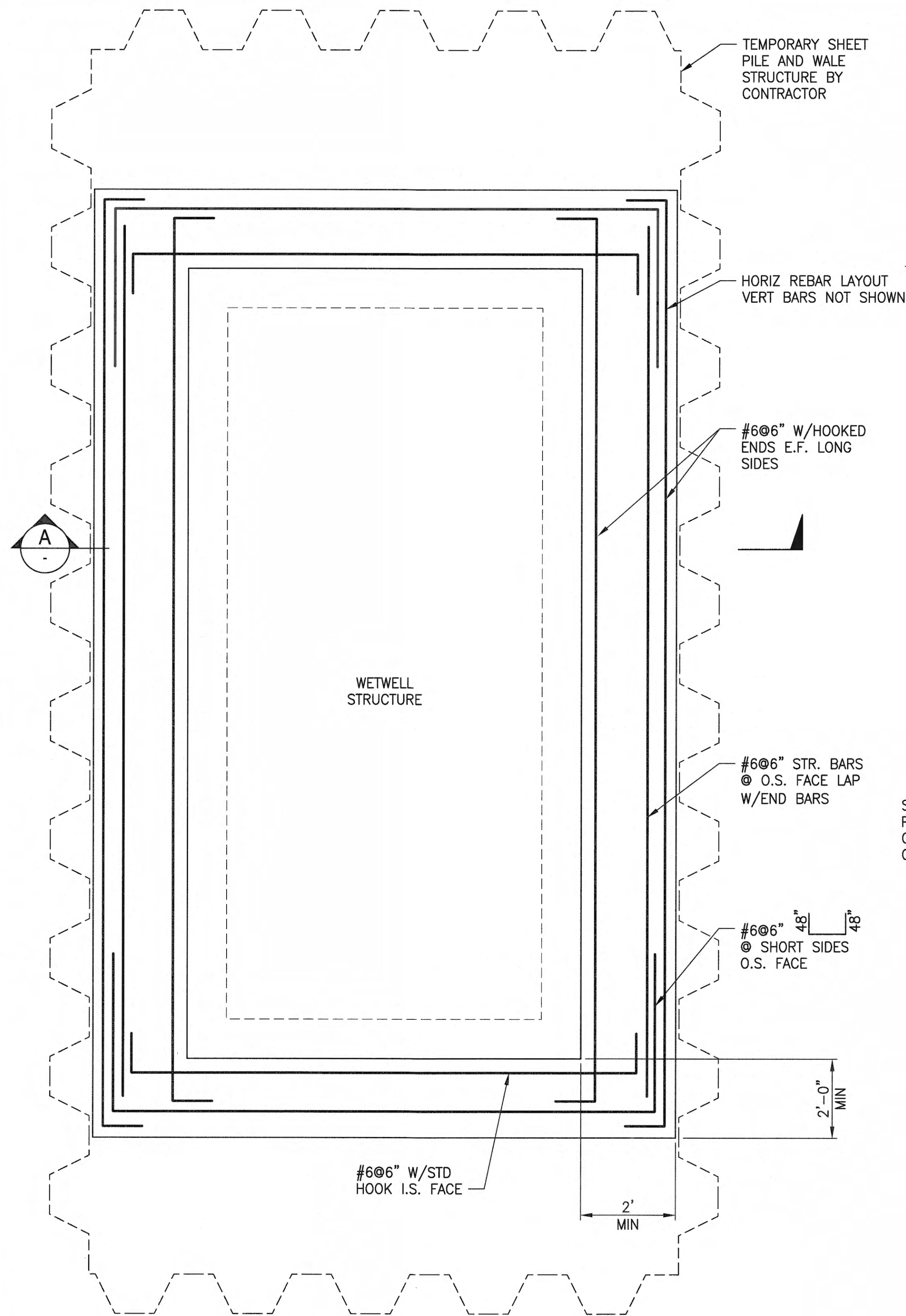
VALVE VAULT BUOYANCY COLLAR- BASIN A & B (SIMILAR)



VALVE VAULT BUOYANCY COLLAR- BASIN C



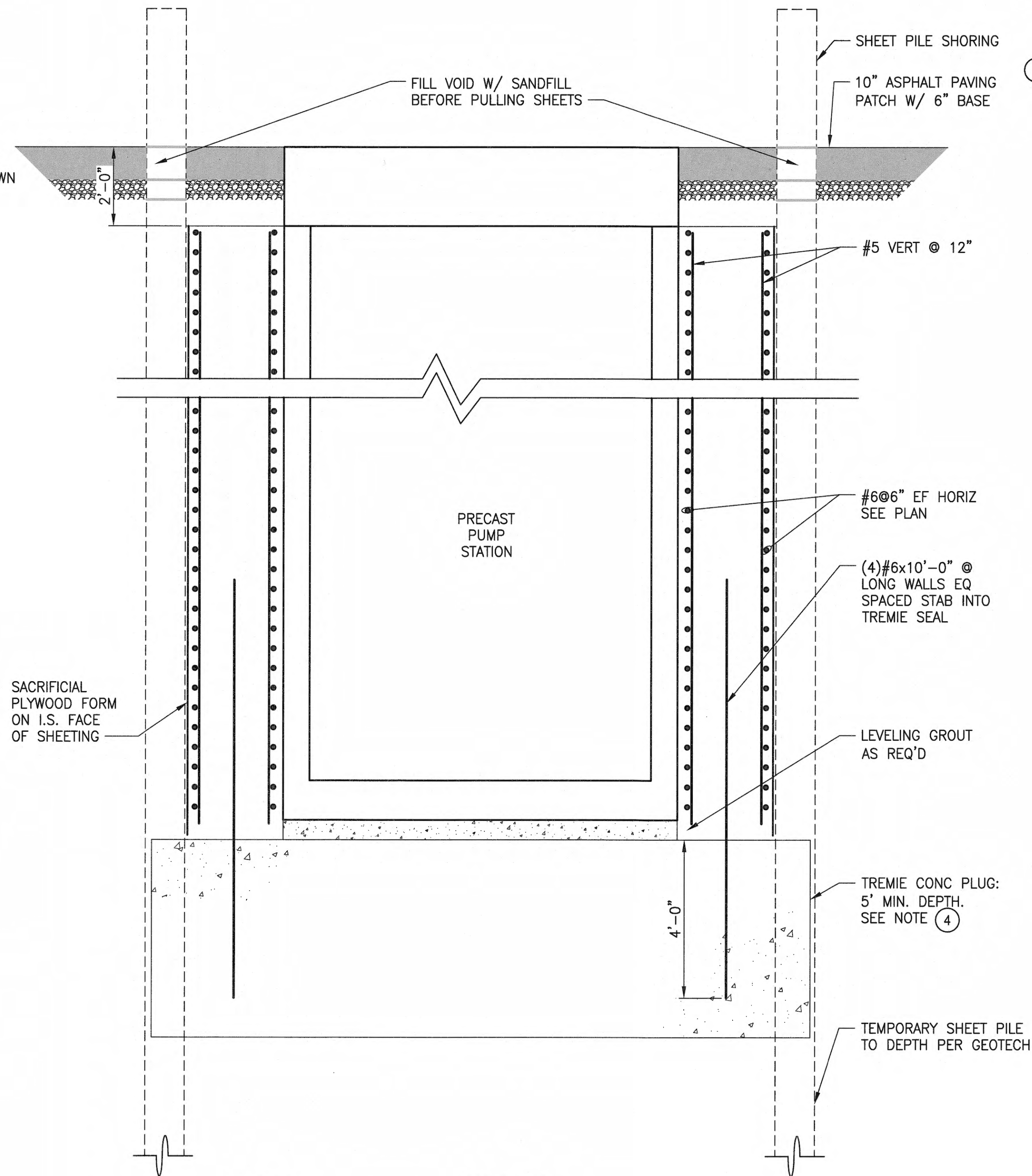
6583 S08 SH 25 OF 47	WEST SITCUM STORMWATER TREATMENT HYDRODYNAMIC SEPARATOR FOUNDATION & DETAILS	APPROVED: <i>Jane Vandenberg</i> <i>4/26/18</i> DIRECTOR ENG. DATE PRINTED BY: peterden PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837	BS APR 2018 CHECKED BY DATE SAW APR 2018 PROJ. ENGR DATE APR 25, 2018	APRIL 25, 2018	Parametrix ENGINEERING PLANNING ENVIRONMENTAL SCIENCES 50 WASHINGTON AVENUE, SUITE 390 BREWERTON, WA 98337 P 360.377.0014 WWW.PARAMETRIX.COM	MARK: REVISION: BY: APPR: DATE:	Port of Tacoma P.O. BOX 187 TACOMA WA 98401 (206)385-5841
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PLAN

1

DETAIL
SCALE: 1\2"=1'-0"



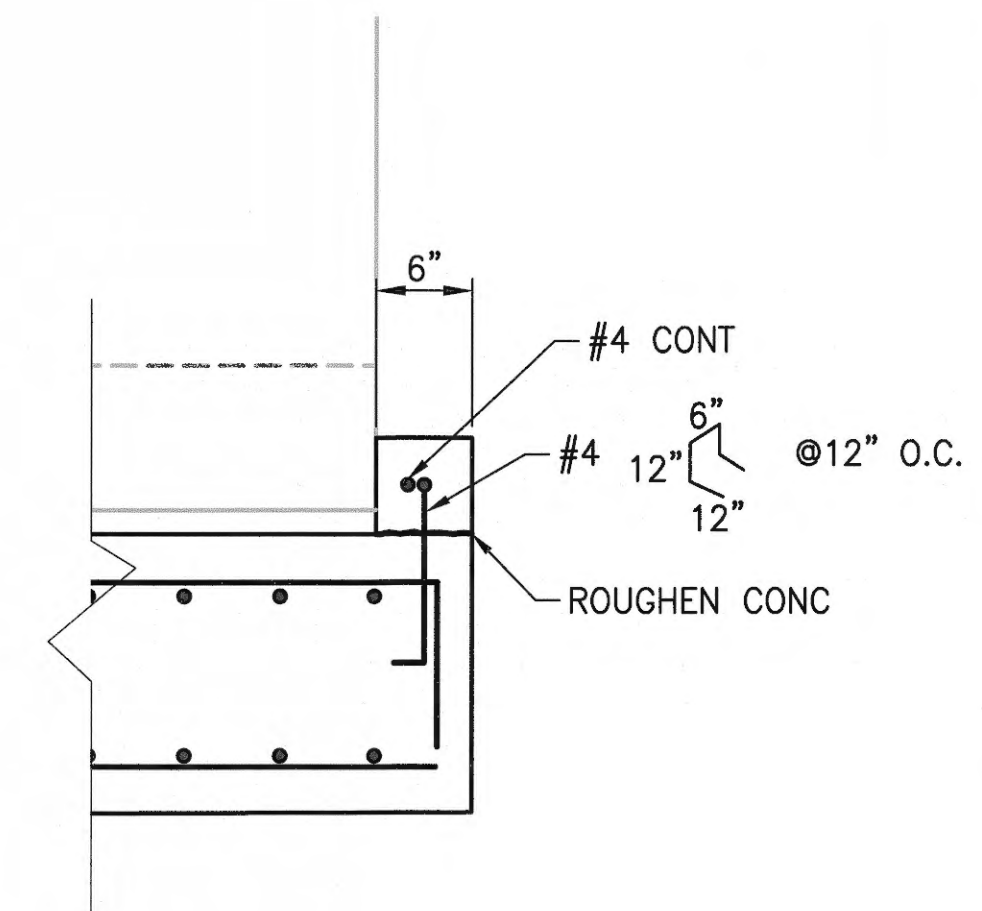
SECTION

SCALE: 1\2"=1'-0"

A

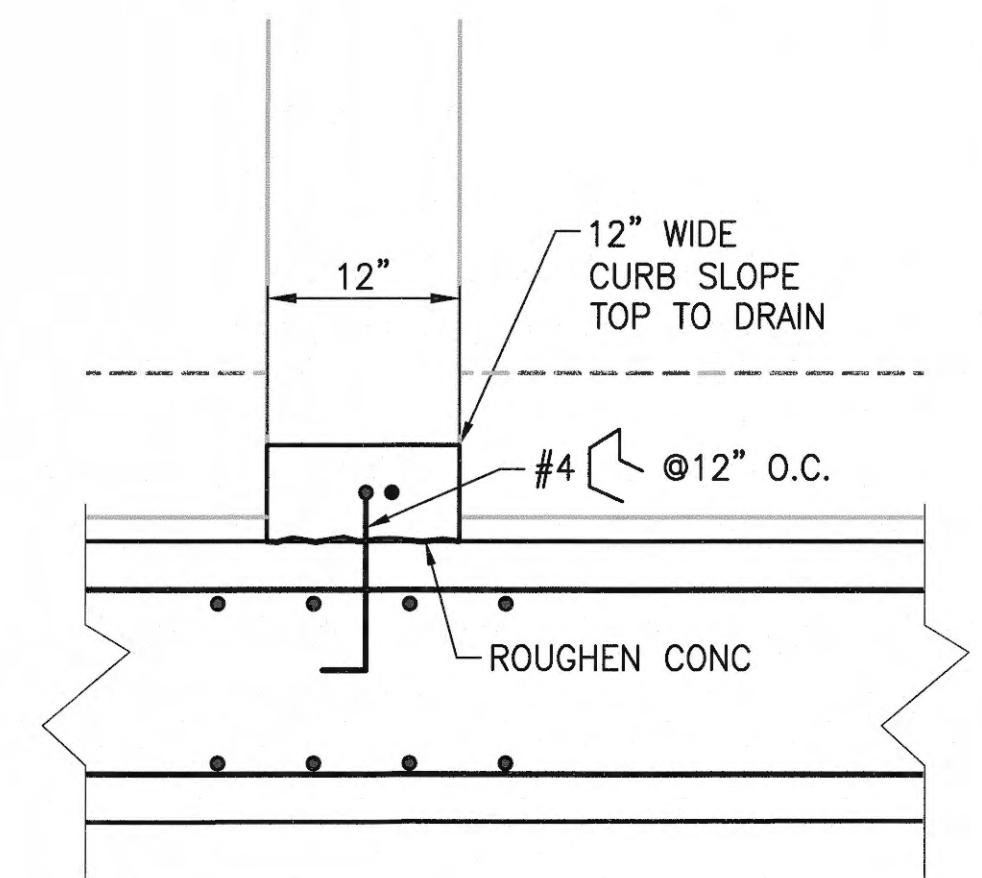
NOTES:

1. CONTRACTOR SHALL VERIFY DIMENSIONS, ELEVATIONS AND LOCATIONS PRIOR TO CONSTRUCTION.
2. SEE SPECIFICATION PRIOR TO CONSTRUCTION.
3. SUBMIT ALL REQUIRED SHOP DRAWINGS AND RECEIVE THEIR SATISFACTORY REVIEW FROM THE OWNER'S REPRESENTATIVE, PRIOR TO FABRICATION.
- 4 5'-0" THICK TREMIE SEAL @ BASIN B. 5'-0" MIN MAY BE USED @ BASIN A & C ONLY IF DE-WATERING USED UNDER SEAL. WITHOUT DE-WATERING 8'-0" TREMIE SEAL WILL BE REQUIRED TO RESIST HYDRO UPLIFT.



3

DETAIL
SCALE: 1"=1'-0"



4

DETAIL
SCALE: 1"=1'-0"



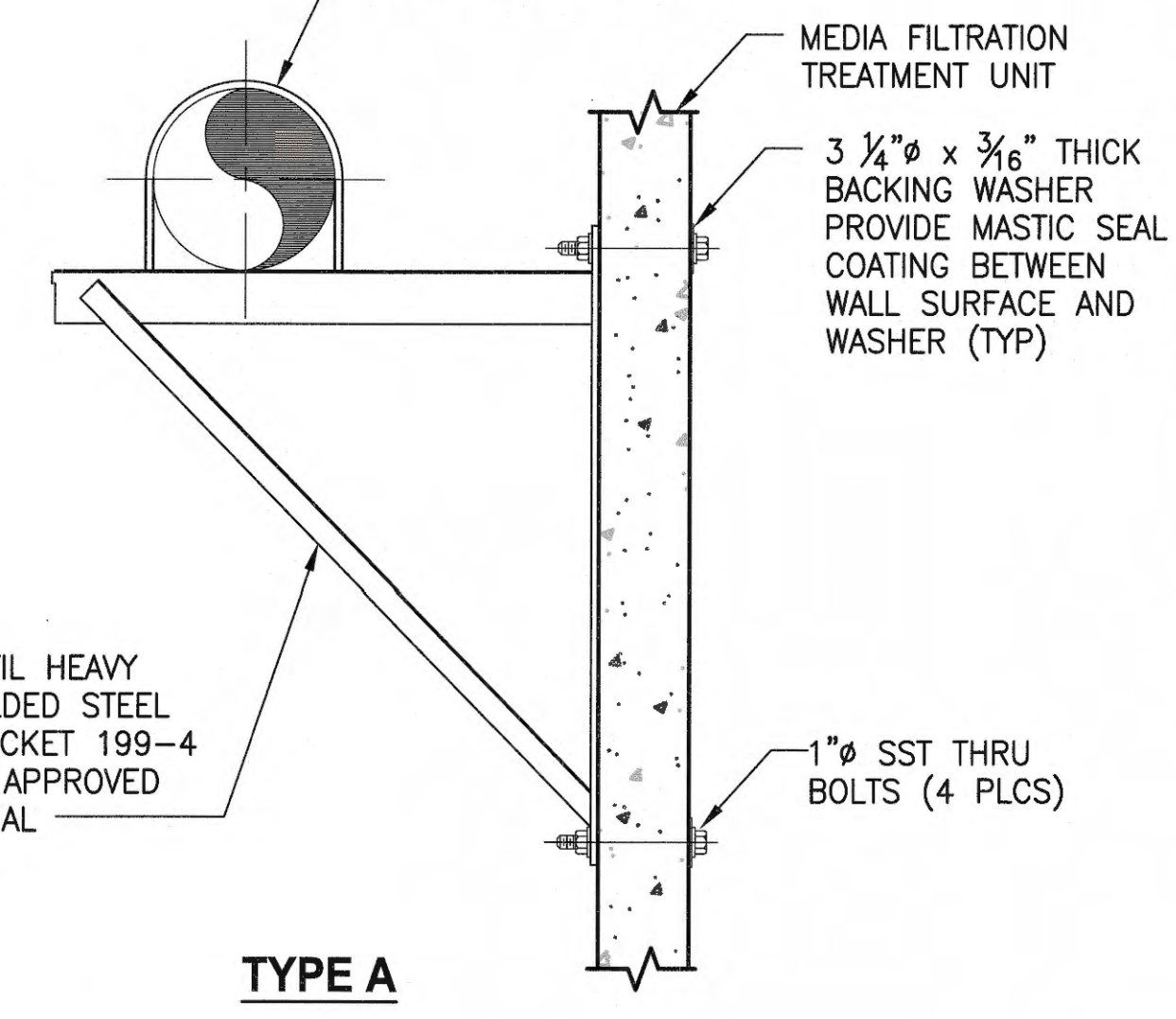
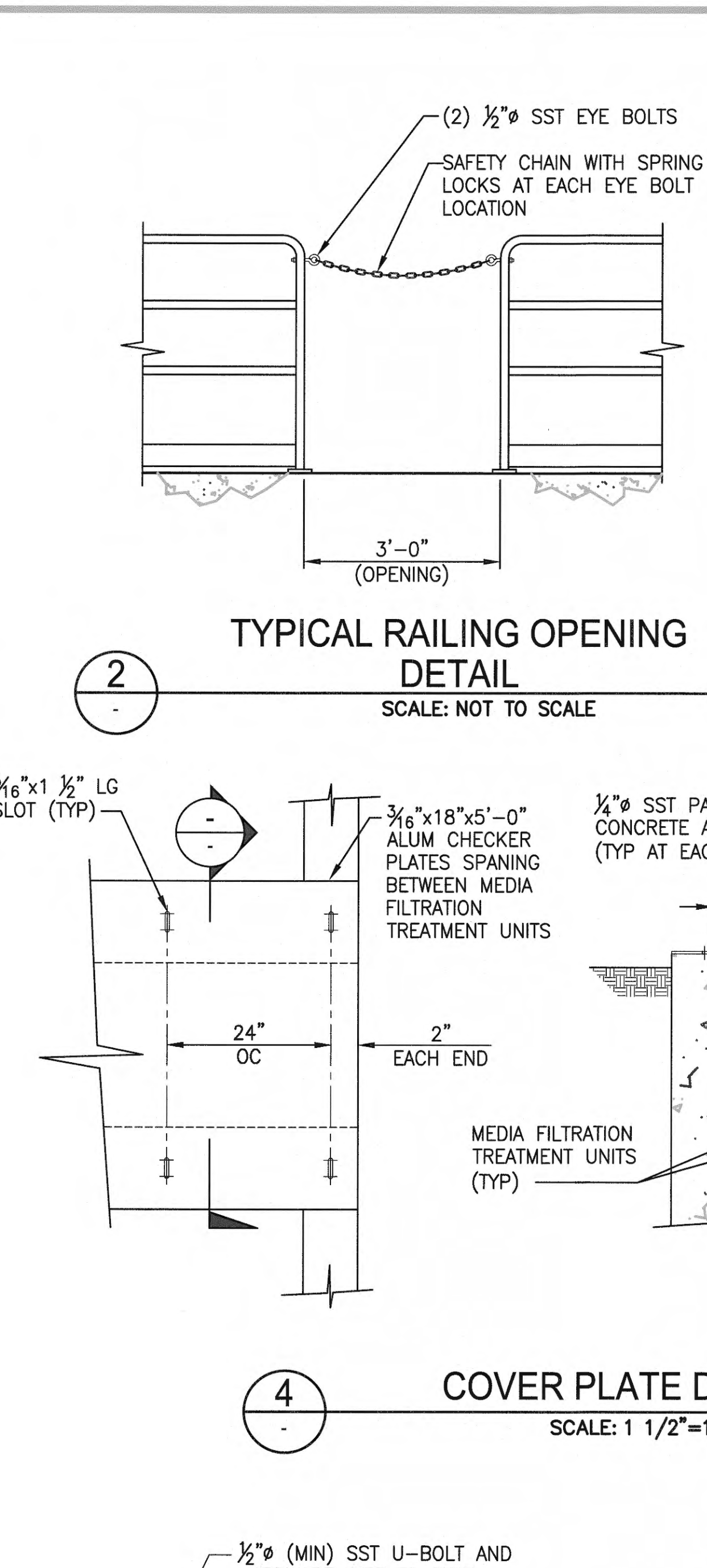
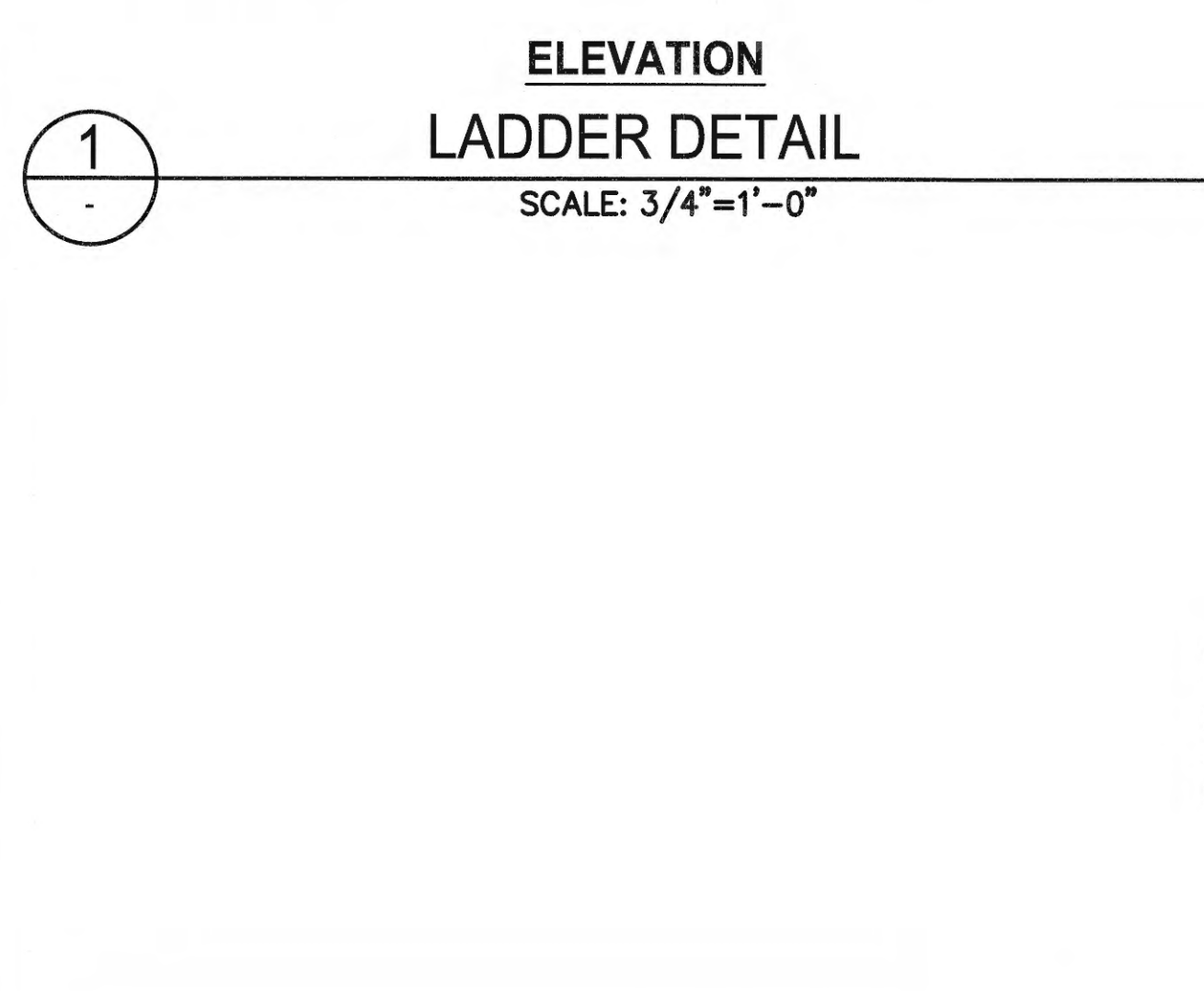
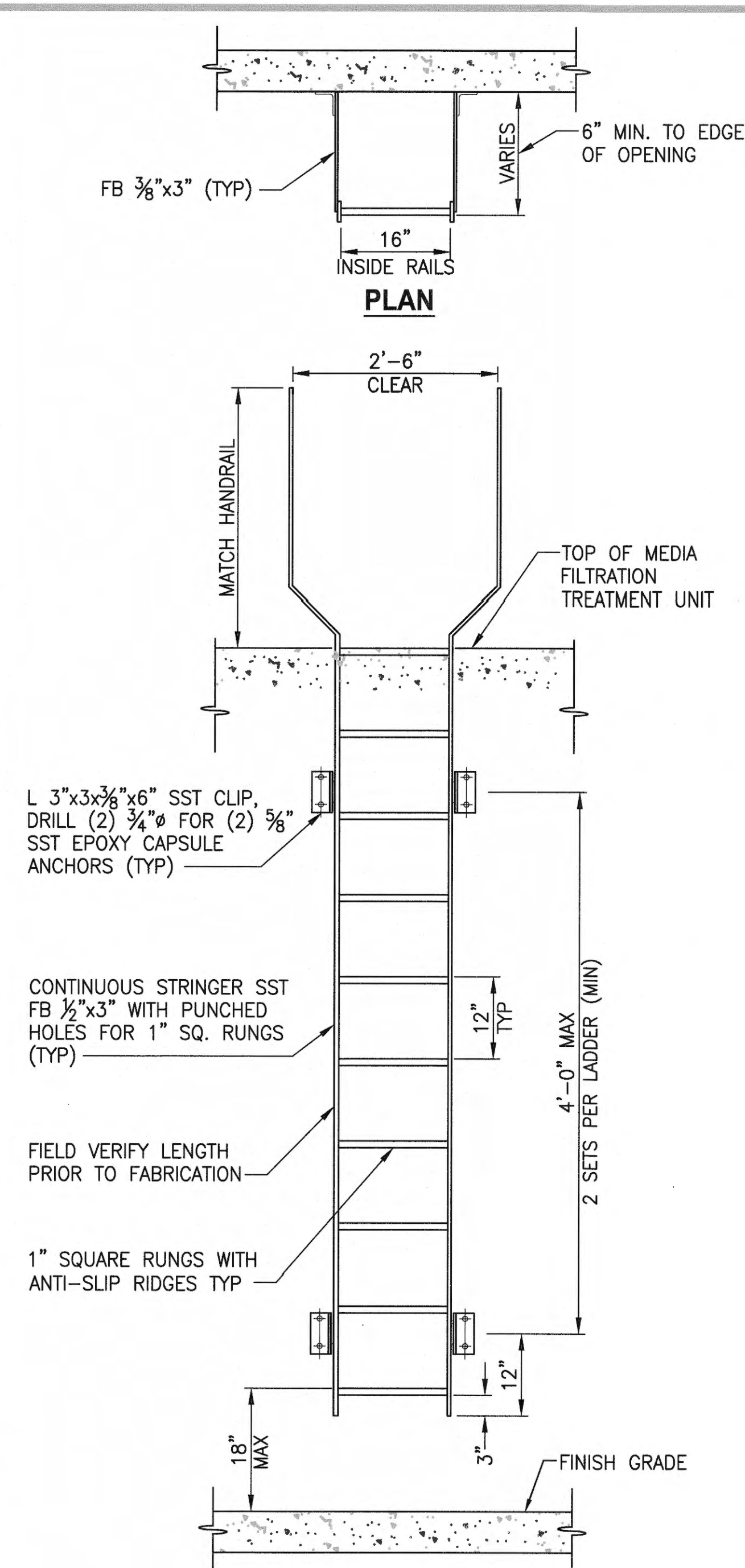
BS	APR 2018
CHECKED BY	DATE
SAW	APR 2018
PROJ. ENGR	DATE
DIRECTOR	ENG. DATE
PRINTED BY:	peterden Apr 25, 2018
PORT ADDRESS:	ONE SITCUM PLAZA
TACOMA, WA	98401-1837

WEST SITCUM
STORMWATER TREATMENT
STRUCTURAL DETAILS

6583
S09
SH 26 OF 47

CON/CONS: 070664
M. ID: 201024.01
PHASE: BID SET

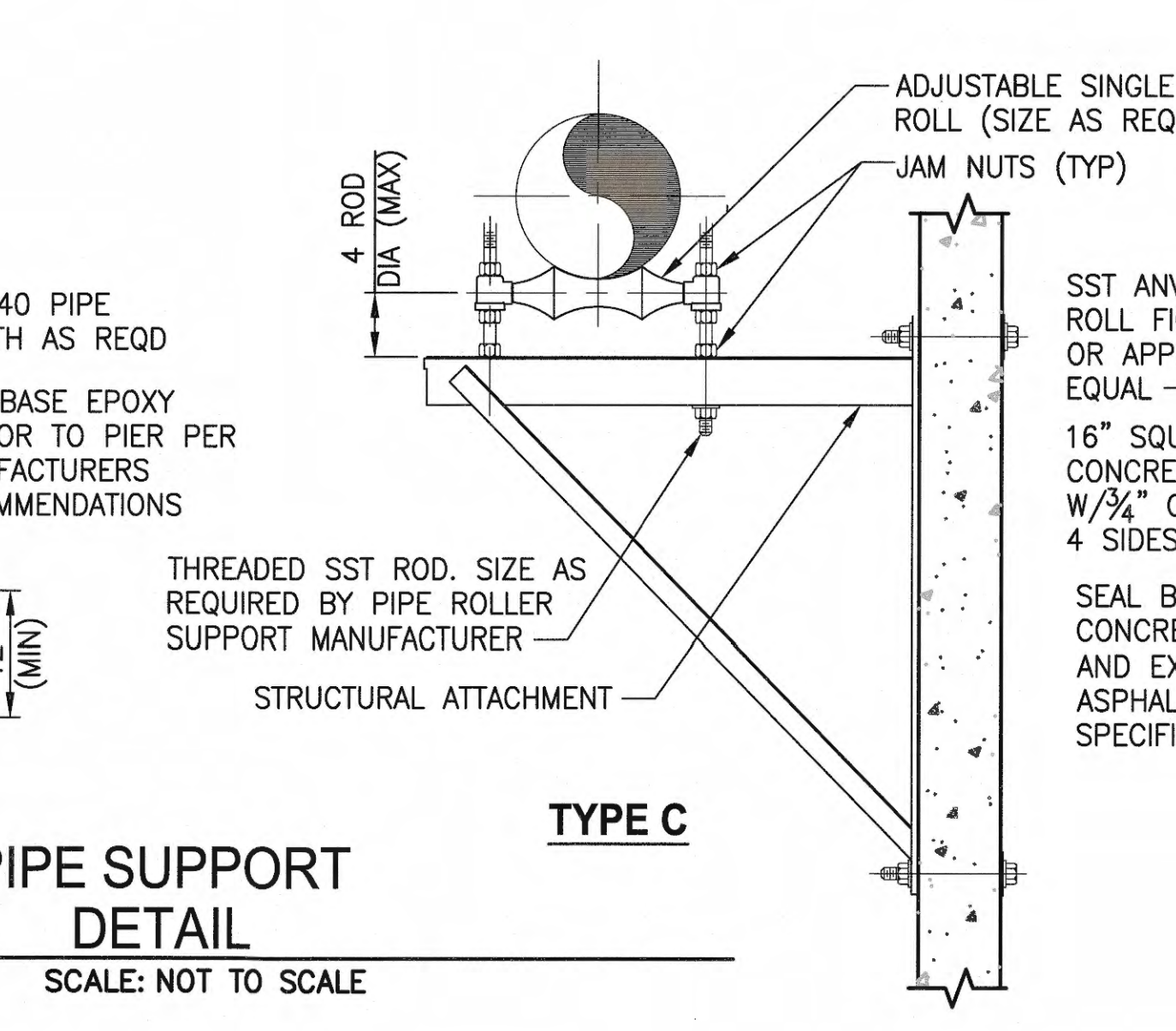
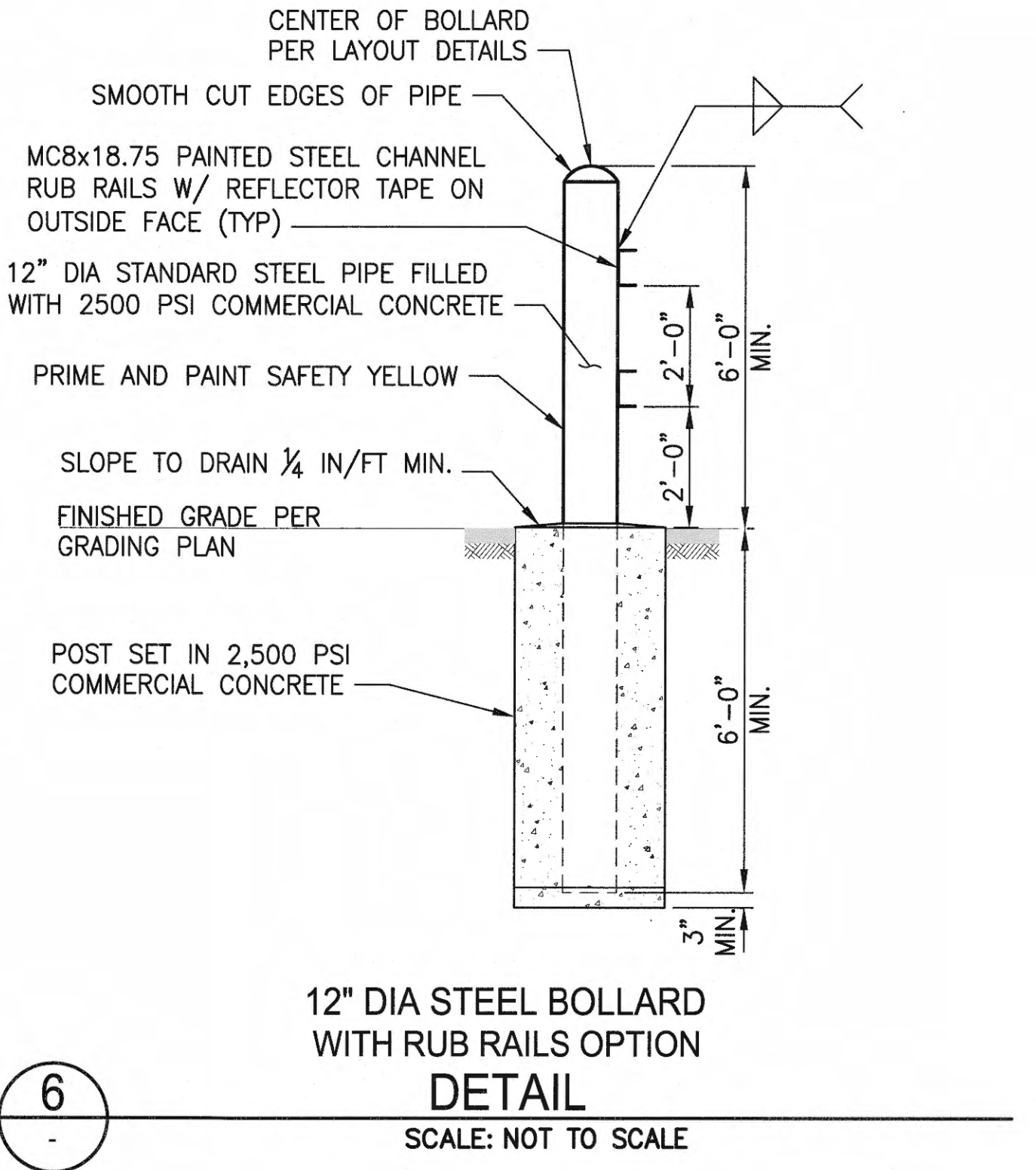
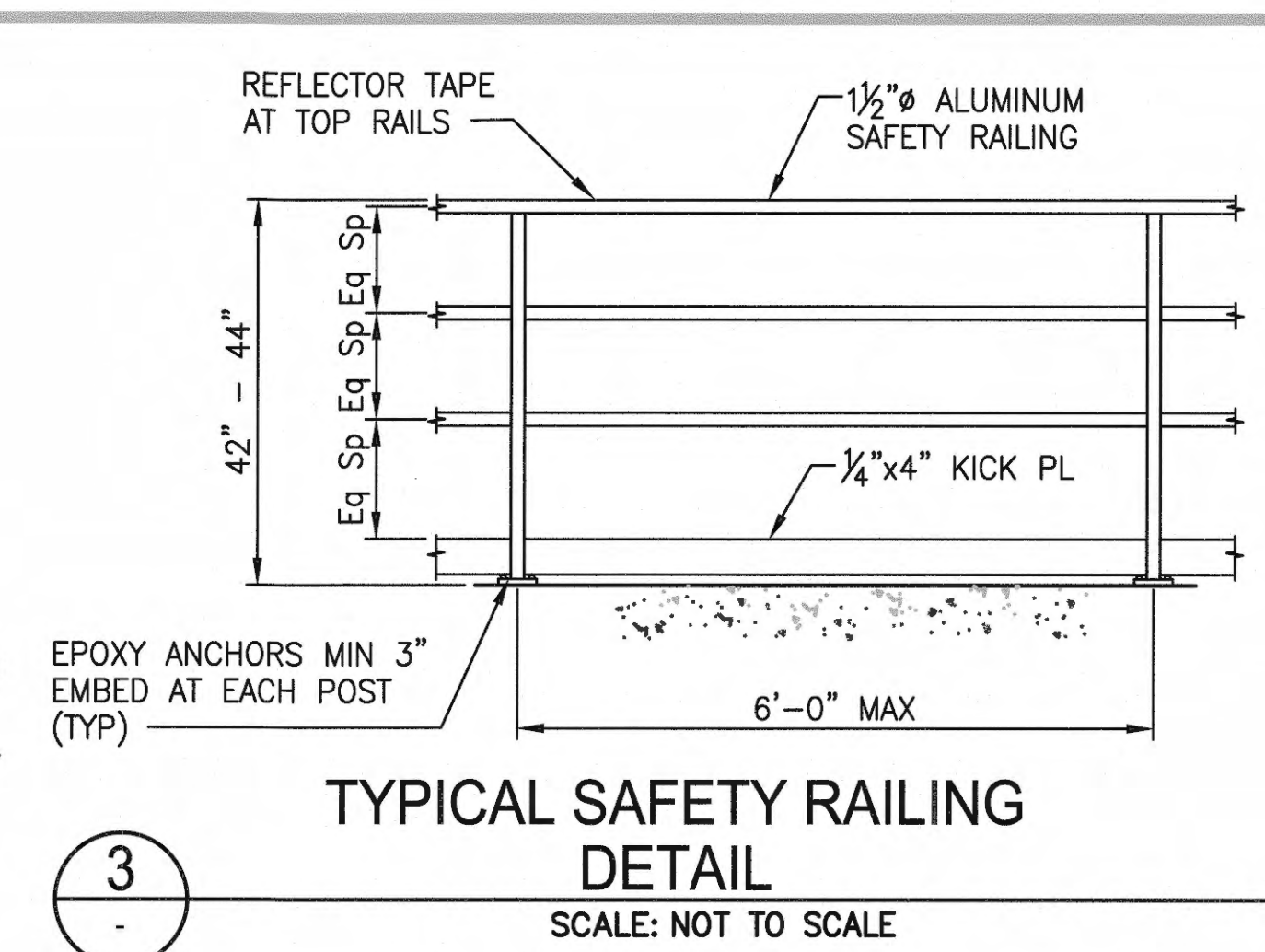
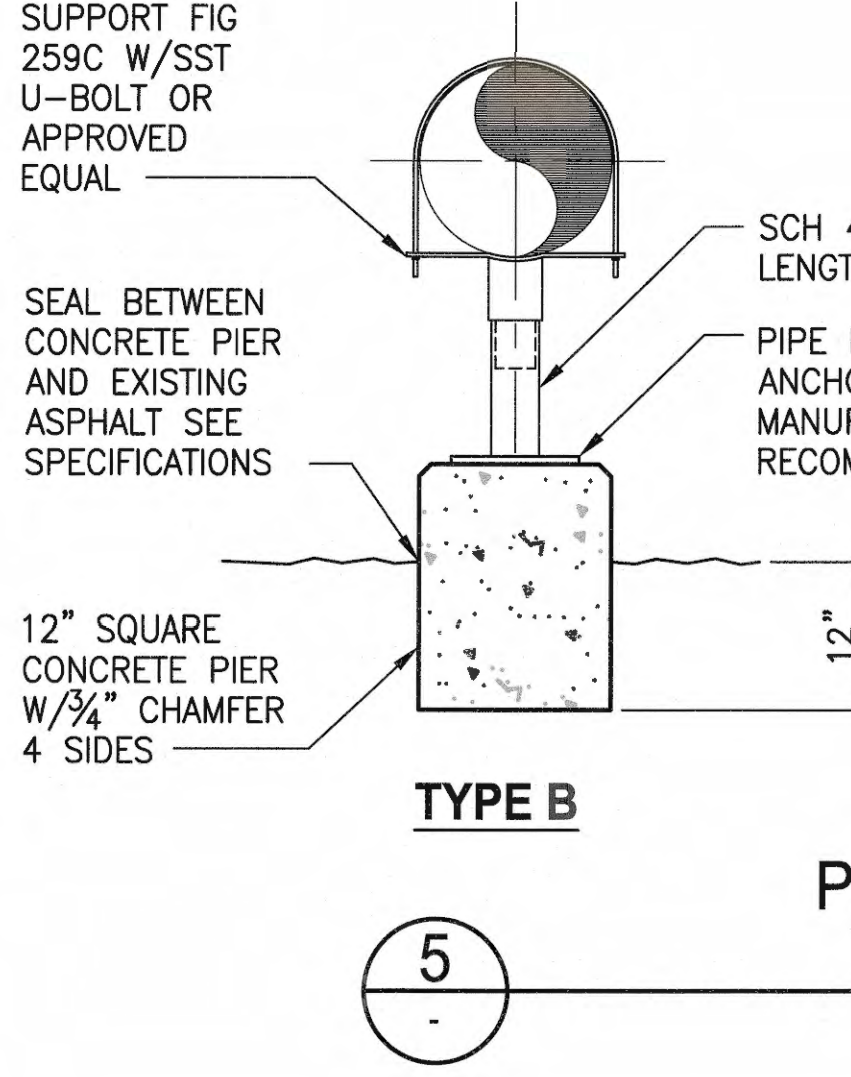
TOWNSHIP: 21N
RANGE: 3E
SECTION: 33 & 34
DAT-HRZ: WAB3-S
PARCEL: SEE G02
VERT: MLLW
DRAWING SCALE: AS NOTED



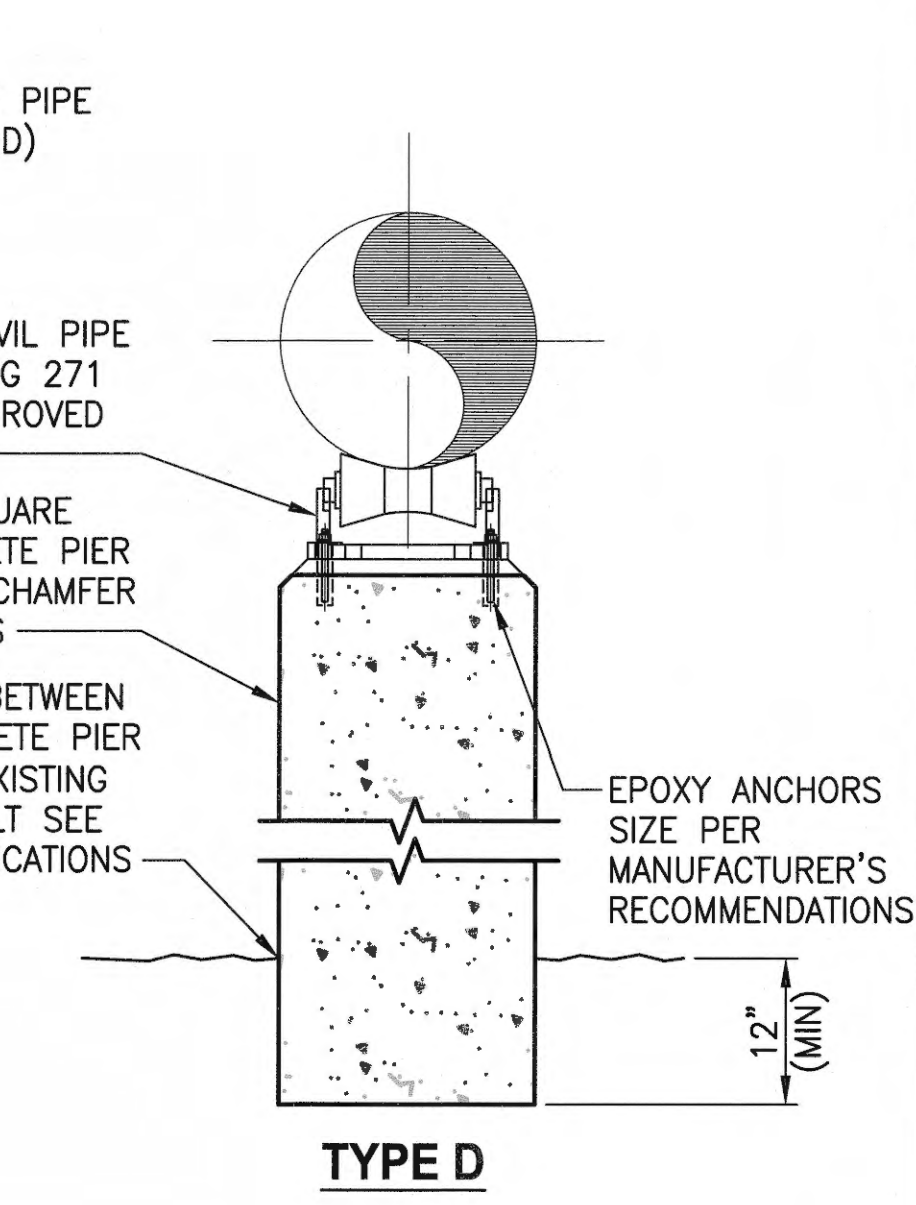
HANDRAILS:

LOADING
LOADS PER 2018 IBC. & ACI 7-10
LIVE LOAD: 60 PSF @ WALKING SURFACES

PIPE RAILING
PIPE RAILS SHALL BE ALUMINUM CONFORMING TO AA SAS-30.
AT OPENINGS, OSHA/WISHA APPROVED SAFETY CHAINS SHALL BE PROVIDED.



- NOTES:**
1. CONTRACTOR SHALL VERIFY DIMENSIONS, ELEVATIONS AND LOCATIONS PRIOR TO CONSTRUCTION.
 2. SEE SPECIFICATION PRIOR TO CONSTRUCTION.
 3. SUBMIT ALL REQUIRED SHOP DRAWINGS AND RECEIVE THEIR SATISFACTORY REVIEW FROM THE OWNER'S REPRESENTATIVE, PRIOR TO FABRICATION.
 4. THE HANDRAIL/GUARDRAIL CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE GOVERNING BUILDING CODE REQUIREMENT NOT TO SCALE (OSHA) FOR HANDRAIL/GUARDRAIL DESIGN AND DETAILS.
 5. TOE PLATES SHALL BE 1/4"x4" CONTINUOUS PLATE, EXCEPT AT STAIRS AND LANDINGS. SPLICES SHALL BE BOLTED.
 6. WHERE HANDRAIL/GUARDRAIL TURNS A CORNER OR TERMINATES PROVIDE A POST WITHIN 12" OF THE END OR CORNER.
 7. ALL FASTENERS AND HARDWARE SHALL BE STAINLESS STEEL UNLESS NOTED OTHERWISE.
 8. CONTRACTOR IS SOLELY RESPONSIBLE FOR PIPE SUPPORT SYSTEM. PROVIDED TYPES ARE GENERIC IN NATURE (IE ROLLER AND OR FIXED SUPPORT). CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE REQUIREMENTS FOR PIPE SUPPORT AND DETAILS.



6583 S10 SH 27 OF 47	WEST SITCUM STORMWATER TREATMENT STRUCTURAL DETAILS	APPROVED: <i>John J. [Signature]</i> 4/26/18 DIRECTOR ENG. DATE PRINTED BY: peterden PROJ. ENGR DATE PORT ADDRESS: ONE SITCUM PLAZA TACOMA, WA 98401-1837		BS APR 2018 CHECKED BY DATE SAW APR 2018 PROJ. ENGR DATE APR 25, 2018	
		CONTRACTOR: 070664 M. ID: 201024.01 PHASE: BID SET		SECTION: 3E RANGE: 21N TOWNSHIP: 21N DATE-HRZ: WAB3-S PARCEL: SEE G02 DRAWING SCALE: AS NOTED	
Port of Tacoma P.O. BOX 1837 TACOMA, WA 98401 (206) 388-9841		Parametrix ENGINEERING, PLANNING, ENVIRONMENTAL SCIENCES 60 WASHINGTON AVENUE, SUITE 390 SEASIDE, WA 98137 P: 206.377.1000 WWW.PARAMETRIX.COM		THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION	