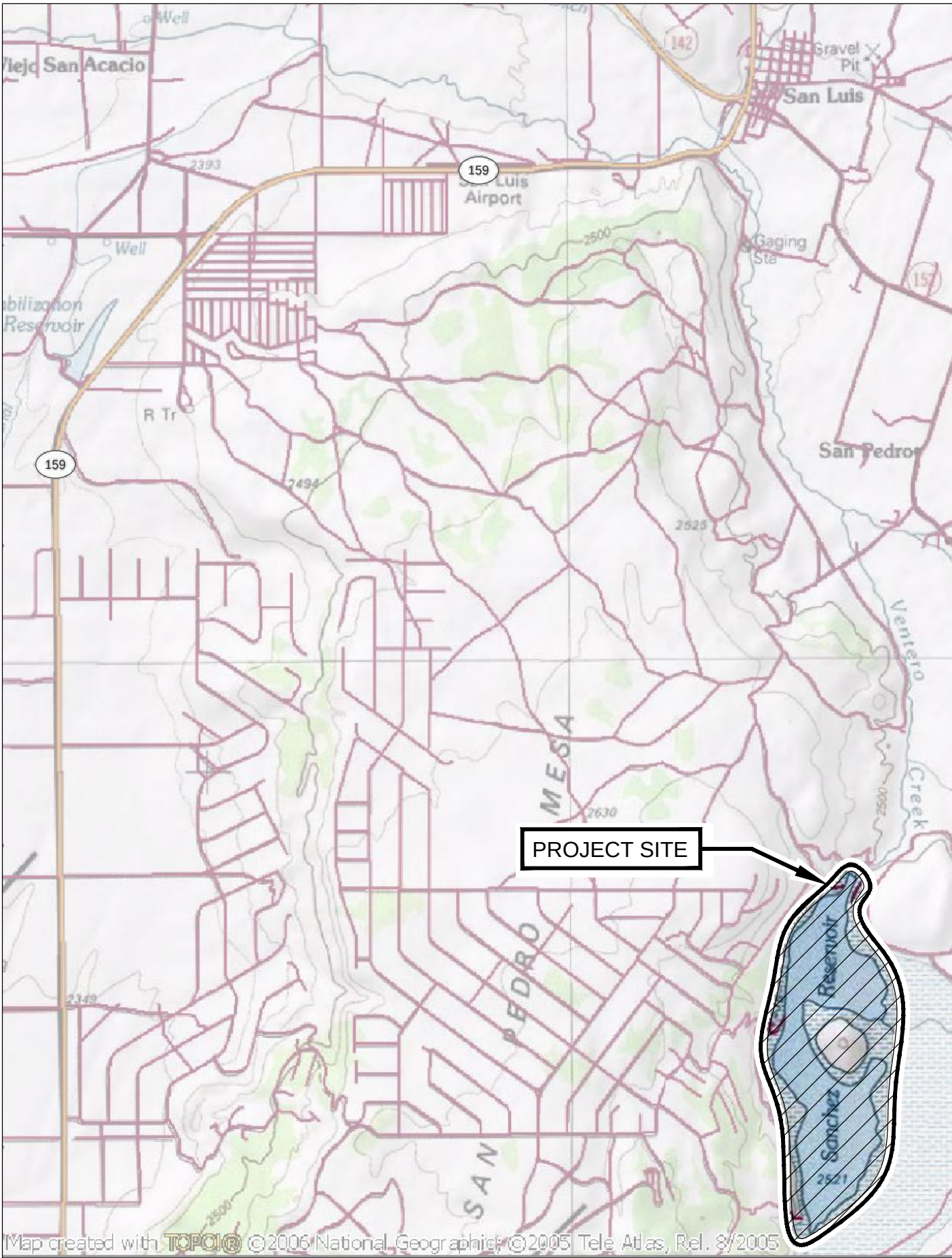


SANCHEZ RESERVOIR OUTLET REHABILITATION

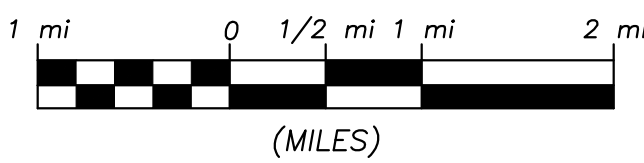
WATER DIVISION NO. 3, WATER DISTRICT NO. 24, COSTILLA COUNTY, COLORADO
DAM I.D. 240106

VICINITY MAP

LOCATED IN:
SECTION 24, T20N, R72W
OF THE 6TH P.M.
COSTILLA COUNTY, COLORADO
37.119780° N, 105.410587° W



Map created with TIGER/Line® ©2009 National Geographic ©2009 Tele Atlas, Rel. 8/2009



OWNER

SANCHEZ DITCH & RESERVOIR COMPANY
RR #1, P.O. BOX 215
SAN ACACIO, CO 81151

COMPANY OFFICERS

MR. JERRY LORENZ	PRESIDENT
MR. ROBERT QUINTANA	VICE PRESIDENT
MR. TOM CALDON	SECRETARY / TREASURER
MR. DELBERT LORENZ	BOARD MEMBER
MR. KEITH CALDON	BOARD MEMBER
MR. WILLIAM A. PADDOCK	ATTORNEY FOR THE COMPANY

ENGINEER



1225 RED CEDAR CIRCLE, SUITE H
FORT COLLINS, COLORADO 80524
(970) 490-2620

LEGEND

—98—	NEW GRADE INDEX CONTOUR
—	NEW GRADE INTERMEDIATE CONTOUR
—95—	EXISTING GRADE INDEX CONTOUR
—	EXISTING GRADE INTERMEDIATE CONTOUR
- - - -	EXISTING GRADE, CROSS SECTION OR OBJECT
0+00	STATION LABEL

KEY TO ABBREVIATIONS

APPROX	APPROXIMATE	O.C.	ON CENTER
BOIT	BOTTOM	O.D.	OUTSIDE DIAMETER
CY	CUBIC YARD	OPNG	OPENING
CJ	CONSTRUCTION JOINT	PL	PLATE (STEEL)
CMP	CORRUGATED METAL PIPE	PVI	POINT OF VERTICAL
CTD	CENTERED	PZ	PIEZOMETER
DEMO	DEMOLISH	RCP	REINFORCED CONCRETE PIPE
DET	DETAIL	REIN	REINFORCEMENT
DIA	DIAMETER	REQD	REQUIRED
DIM	DIMENSION	REV	REVISION
DIP	DUCTILE IRON PIPE	ROW	RIGHT-OF-WAY
D.S.	DOWNSTREAM	SCH	SCHEDULE
EA	EACH	SHT	SHEET
EF	EACH FACE	SQ	SQUARE
EJ	EXPANSION JOINT	SS	STAINLESS STEEL
EL	ELEVATION	STA	STATION
ELEV	ELEVATION	STD	STANDARD
EQUIP	EQUIPMENT	TBD	TO BE DETERMINED
EW	EACH WAY	TOF	TOP OF FOOTING ELEVATION
EXP	EXPANSION	TOW	TOP OF WALL ELEVATION
FT	FEET	TSE	TOP OF SLAB ELEVATION
HORIZ	HORIZONTAL	TSE	TOP OF STEEL ELEVATION
HS	HEADED STUD	TYP	TYPICAL
I.D.	INSIDE DIAMETER	UNO	UNLESS NOTED OTHERWISE
IN	INCHES	U.S.	UPSTREAM
JT	JOINT	VERT	VERTICAL
LF	LINEAR FEET	W.S.	WATERSTOP
MH	MANHOLE	VPI	VERTICAL POINT OF INFLECTION
NO	NUMBER		
NTS	NOT TO SCALE		

CERTIFICATES

I HEREBY CERTIFY THAT THESE PLANS FOR THE SANCHEZ RESERVOIR OUTLET REHABILITATION WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION FOR THE OWNER THEREOF.

DUANE H. SMITH, PE 17370

I, JERRY LORENZ, PRESIDENT OF SANCHEZ DITCH & RESERVOIR COMPANY, HEREBY ACCEPT THESE PLANS FOR THE SANCHEZ RESERVOIR OUTLET REHABILITATION.

JERRY LORENZ PRESIDENT

APPROVED ON THE _____ DAY OF _____ 2014

STATE ENGINEER

BY: _____
WILLIAM T. McCORMICK, III
CHIEF, DAM SAFETY BRANCH, CO PE 29127

THESE PLANS REPRESENT THE AS-CONSTRUCTED CONDITIONS OF THE SANCHEZ RESERVOIR OUTLET REHABILITATION TO THE BEST OF OUR KNOWLEDGE AND JUDGMENT, BASED IN PART ON INFORMATION FURNISHED BY OTHERS AS OF THE

DAY OF _____

DUANE H. SMITH, PE 17370

INDEX

Sheet Title	Sheet Number
COVER	1
SITE PLAN	2
OUTLET HYDRAULICS	3
EXISTING OUTLET CONDUIT	4
EXISTING DAM SECTIONS	5
OUTLET CONDUIT PROFILE	6
CONDUIT REPAIR DETAILS	7
GATE TOWER DEMOLITION	8
GATE TOWER DEMO DETAILS	9
OUTLET PLAN AND PROFILE	10
GATE TOWER PLAN & PROFILE	11
GATE TOWER SECTIONS	12
GRADE BEAM SECTIONS	13
TRASH RACK DETAILS	14
CONTROL HOUSE DETAILS	15
EXISTING OUTLET STRUCTURE	16
STRUCTURAL NOTES & DETAILS	17
GENERAL DETAILS	18
6-INCH GATE TRASHRACK	19
TOWER VENT PIPE	20
TOWER VENT PENETRATION	21
HYDRAULIC GATE OPERATION INSTRUMENTATION DIAGRAM	M-1
HYDRAULIC PIPING PLAN AND BILL OF MATERIALS	M-2
GENERAL DETAILS	M-3



VERTICAL DATUM:
BENCHMARK: NATIONAL GEODETIC "OPUS" SOLUTION: 100TR6021355470070 FOR CONTROL POINT "DAM." ELEVATION=8342.07 FEET, NAVD 1988.

HORIZONTAL DATUM:
COLORADO STATE PLANE COORDINATES NAD 83(2007) DATUM. HORIZONTAL CONTROL BASED UPON NATIONAL GEODETIC "OPUS" SOLUTION: 100TR6021355470070 FOR CONTROL POINT "DAM."

NORTHING: 1163591.0860
EASTING: 3026823.5470

NOTE:

1. THIS DRAWING IS AT MODIFIED STATE PLANE. TO REDUCE TO STATE PLANE COORDINATES, SCALE AT 0.99962738 (1.000372759) ABOUT THE ORIGIN 0,0.
2. ALL PROPERTY PINS, INTERSECTION MONUMENTS, AND SECTION CORNERS DISTURBED DURING CONSTRUCTION MUST BE REFERENCED AND REPLACED UNDER THE SUPERVISION OF A LICENSED SURVEYOR.
3. THIS AUTOCAD DRAWING CONTAINS INFORMATION THAT IS NOT VISIBLE ON THE PLOTTED COPY. TO OBTAIN ALL THE INFORMATION THAT IS AVAILABLE IN THIS DRAWING, ALL THE AUTOCAD LAYERS MUST BE TURNED ON AND THAWED.
4. THE SIZE, TYPE AND LOCATION OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THESE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE OF ALL UNDERGROUND UTILITIES IN THE AREA OF THE WORK BEFORE COMMENCING NEW CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR ALL UNKNOWN UNDERGROUND UTILITIES.
5. ALL PROJECT CONTROL LISTED HEREON IS PROVIDED AS A COURTESY. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO VERIFY THE ACCURACY OF THE COORDINATES AND ELEVATIONS SHOWN PRIOR TO USING THEM FOR ANY PURPOSES.

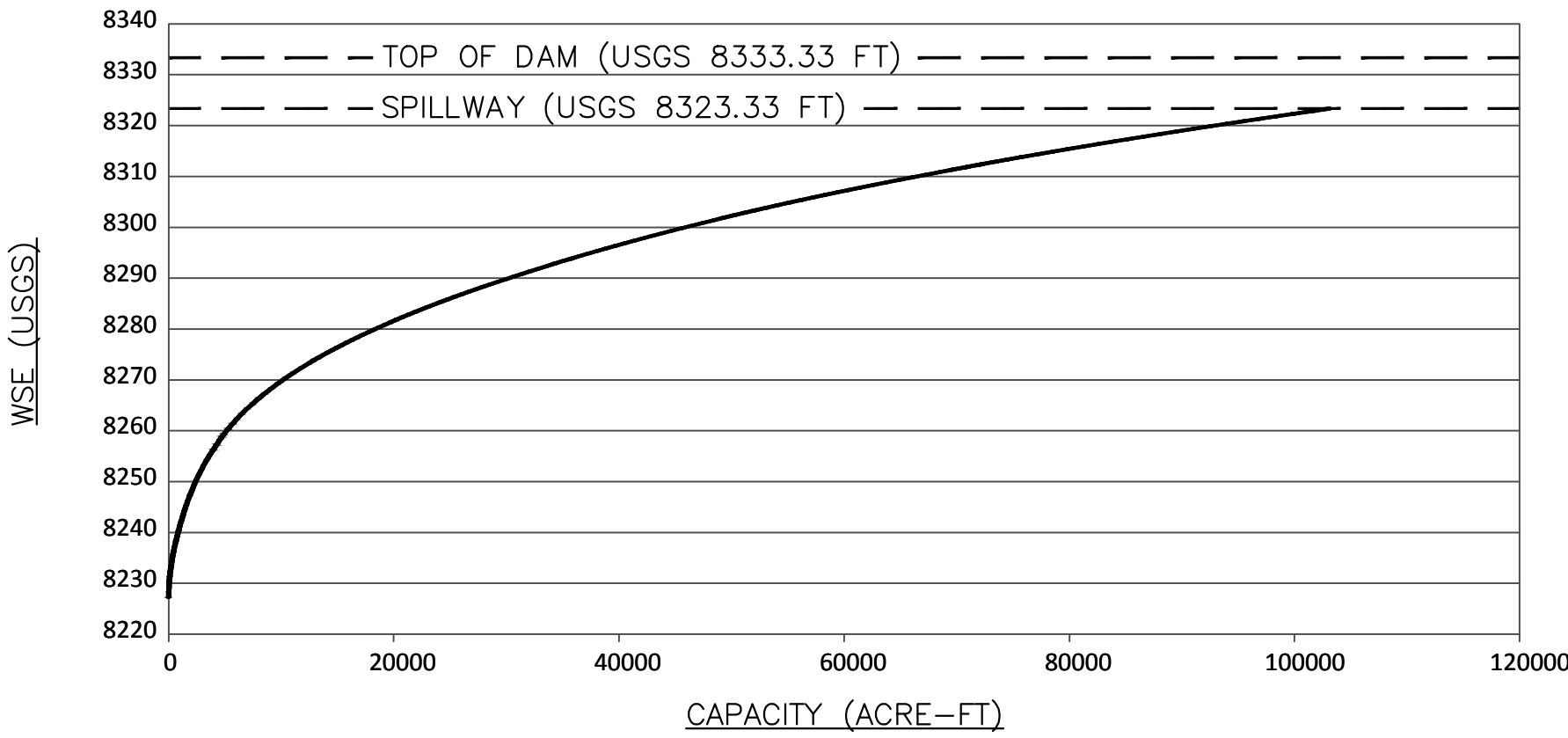
THE FOLLOWING CONTOURS WERE GENERATED FROM CROSS SECTIONAL SURVEY POINTS BASED UPON NAVD 88 AND NOT FROM A FULL TOPOGRAPHIC SURVEY. USER SHALL ASSUME RESPONSIBILITY FOR USE AS ELECTRONIC FORMAT MAY VARY WITH END USER'S PROGRAM. ACCURACY SHOULD BE VERIFIED WITH PRINTED DOCUMENTS

LEGEND	
	GATE VALVE
	DECIDUOUS TREE
	SECTION CORNER
	CONTROL POINT
	NGS CONTROL
	PIEZOMETER
	ELECTRICAL LINE
	EDGE OF GRAVEL ROAD
	2 FOOT CONTOUR
	10 FOOT CONTOUR

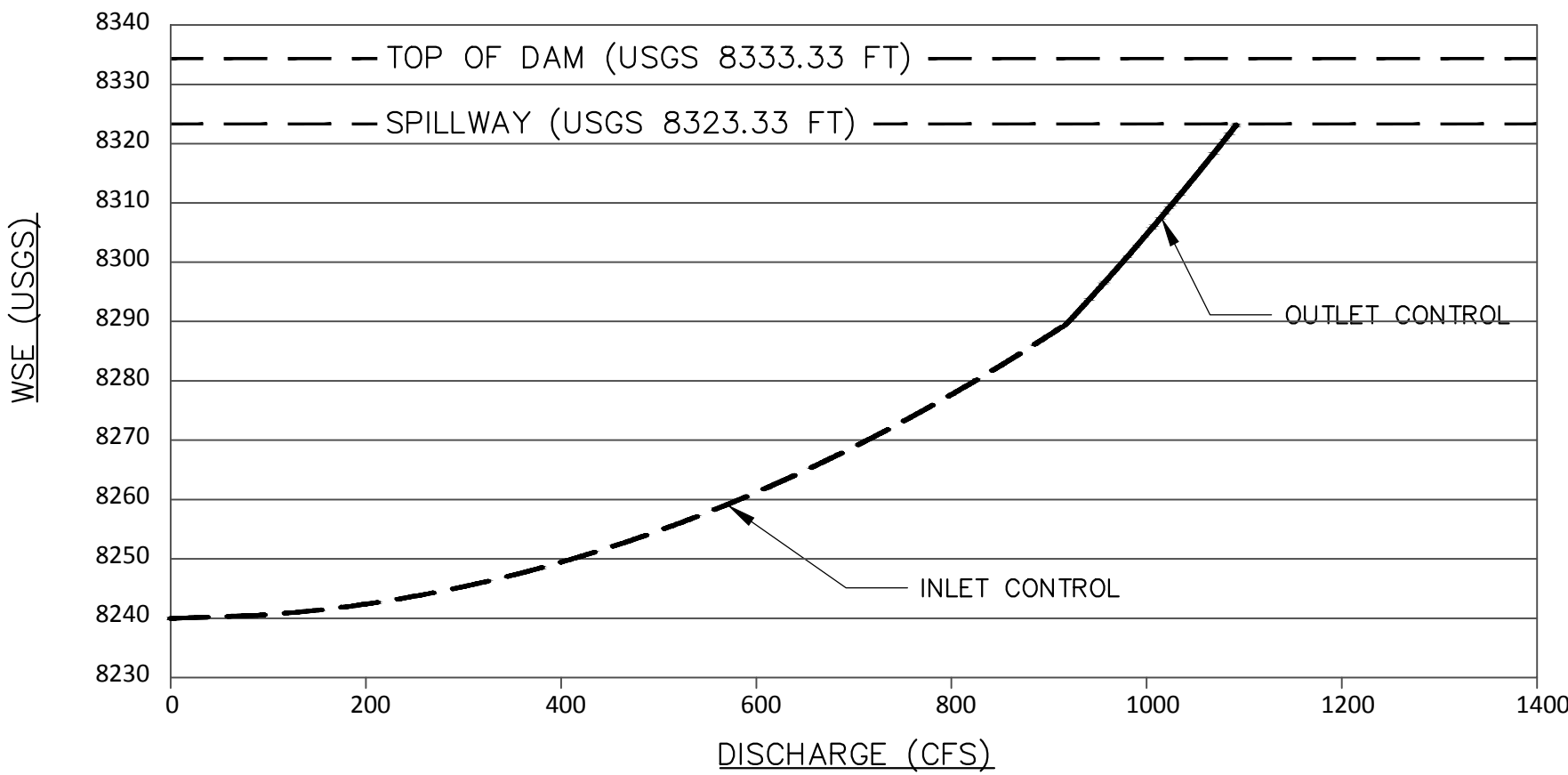
RESERVOIR STORAGE TABLE

USGS (FT)	STORAGE (ACRE-FT)	USGS (FT)	STORAGE (ACRE-FT)
8228.33	14.2	8276.33	14949.0
8229.33	32.5	8277.33	15830.0
8230.33	61.8	8278.33	16746.0
8231.33	102.0	8279.33	17697.0
8232.33	153.0	8280.33	18685.0
8233.33	216.0	8281.33	19711.0
8234.33	287.0	8282.33	20774.0
8235.33	367.0	8283.33	21874.0
8236.33	455.0	8284.33	23013.0
8237.33	551.0	8285.33	24190.0
8238.33	655.0	8286.33	25407.0
8239.33	766.0	8287.33	26663.0
8240.33	884.0	8288.33	27959.0
8241.33	1007.0	8289.33	29292.0
8242.33	1137.0	8290.33	30662.0
8243.33	1274.0	8291.33	32070.0
8244.33	1417.0	8292.33	33515.0
8245.33	1570.0	8293.33	34996.0
8246.33	1730.0	8294.33	36517.0
8247.33	1900.0	8295.33	38077.0
8248.33	2078.0	8296.33	39676.0
8249.33	2267.0	8297.33	41315.0
8250.33	2469.0	8298.33	42994.0
8251.33	2686.0	8299.33	44718.0
8252.33	2916.0	8300.33	46492.0
8253.33	3160.0	8301.33	48317.0
8254.33	3417.0	8302.33	50192.0
8255.33	3689.0	8303.33	52117.0
8256.33	3974.0	8304.33	54097.0
8257.33	4274.0	8305.33	56137.0
8258.33	4587.0	8306.33	58238.0
8259.33	4920.0	8307.33	60398.0
8260.33	5280.0	8308.33	62618.0
8261.33	5665.0	8309.33	64898.0
8262.33	6077.0	8310.33	67237.0
8263.33	6514.0	8311.33	69635.0
8264.33	6979.0	8312.33	72093.0
8265.33	7472.0	8313.33	74610.0
8266.33	7993.0	8314.33	77188.0
8267.33	8542.0	8315.33	79826.0
8268.33	9119.0	8316.33	82525.0
8269.33	9727.0	8317.33	85286.0
8270.33	10370.0	8318.33	88107.0
8271.33	11047.0	8319.33	90989.0
8272.33	11759.0	8320.33	93930.0
8273.33	12506.0	8321.33	96932.0
8274.33	13286.0	8322.33	99993.0
8275.33	14101.0	8323.33	103114.0

RESERVIOR STORAGE CURVE



OUTLET DISCHARGE CURVE



OUTLET DISCHARGE
RATING TABLE

USGS (FT)	DISCHARGE (CFS)	CONTROL	USGS (FT)	DISCHARGE (CFS)	CONTROL
8240.00	12.6	INLET	8282.33	848.1	INLET
8240.33	66.4	INLET	8283.33	858.1	INLET
8241.33	150.3	INLET	8284.33	867.9	INLET
8242.33	199.0	INLET	8285.33	877.6	INLET
8243.33	237.9	INLET	8286.33	887.3	INLET
8244.33	271.2	INLET	8287.33	896.8	INLET
8245.33	300.9	INLET	8288.33	906.2	INLET
8246.33	328.0	INLET	8289.33	915.5	INLET
8247.33	352.9	INLET	8290.33	922.3	INLET
8248.33	376.2	INLET	8291.33	927.9	INLET
8249.33	398.2	INLET	8292.33	933.5	INLET
8250.33	419.0	INLET	8293.33	939.1	INLET
8251.33	438.8	INLET	8294.33	944.6	INLET
8252.33	457.7	INLET	8295.33	950.1	OUTLET
8253.33	475.9	INLET	8296.33	955.6	OUTLET
8254.33	493.4	INLET	8297.33	961.1	OUTLET
8255.33	510.4	INLET	8298.33	966.6	OUTLET
8256.33	526.8	INLET	8299.33	971.8	OUTLET
8257.33	542.6	INLET	8300.33	977.2	OUTLET
8258.33	558.1	INLET	8301.33	982.5	OUTLET
8259.33	573.1	INLET	8302.33	987.8	OUTLET
8260.33	587.7	INLET	8303.33	993.1	OUTLET
8261.33	602.0	INLET	8304.33	998.3	OUTLET
8262.33	616.0	INLET	8305.33	1003.5	OUTLET
8263.33	629.6	INLET	8306.33	1008.7	OUTLET
8264.33	643.0	INLET	8307.33	1013.9	OUTLET
8265.33	656.1	INLET	8308.33	1019.0	OUTLET
8266.33	668.9	INLET	8309.33	1024.1	OUTLET
8267.33	681.5	INLET	8310.33	1029.2	OUTLET
8268.33	693.8	INLET	8311.33	1034.2	OUTLET
8269.33	706.0	INLET	8312.33	1039.3	OUTLET
8270.33	717.9	INLET	8313.33	1044.3	OUTLET
8271.33	729.6	INLET	8314.33	1049.2	OUTLET
8272.33	741.2	INLET	8315.33	1054.2	OUTLET
8273.33	752.6	INLET	8316.33	1059.1	OUTLET
8274.33	763.8	INLET	8317.33	1064.0	OUTLET
8275.33	774.8	INLET	8318.33	1068.9	OUTLET
8276.33	785.7	INLET	8319.33	1073.8	OUTLET
8277.33	796.4	INLET	8320.33	1078.7	OUTLET
8278.33	807.0	INLET	8321.33	1083.5	OUTLET
8279.33	817.5	INLET	8322.33	1088.3	OUTLET
8280.33	827.8	INLET	8323.33	1093.1	OUTLET
8281.33	838.0	INLET			

NOTES:

- USGS ELEVATIONS REFERENCE THE NAVD 1988 CONTROL AND ARE THE CONTROL FOR THIS PROJECT AS SHOWN ON THE DRAWINGS.
- ELEVATIONS USED BY THE COLORADO STATE ENGINEER FOR WATER STORAGE ELEVATIONS ARE BASED ON CONTROL POINT "NW-BM" AS SHOWN ON SHEET 2.
- FOR REFERENCE, HISTORICAL GAUGE HEIGHT ELEVATION 8330.00 FT = USGS 8228.33 FT = STATE WATER STORAGE DATUM 8222.00 FT.
- TOP OF DAM IS LOCATED AT USGS EL 8333.33 FT.
- DISCHARGE EQUATION IS NOT SHOWN. FOR DETAILS ON DISCHARGE CALCULATIONS, REFER TO DESIGN REPORT.

C-0019B

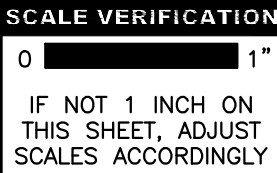
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1	07-11-14	REVISED SCOPE	DHS							
2	08-04-14	SEO REVIEW ISSUE	DHS							
3	03-20-15	AS-CONSTRUCTED	DHS							

SCALE	24x36	NTS	PROJ. NO.	11.028
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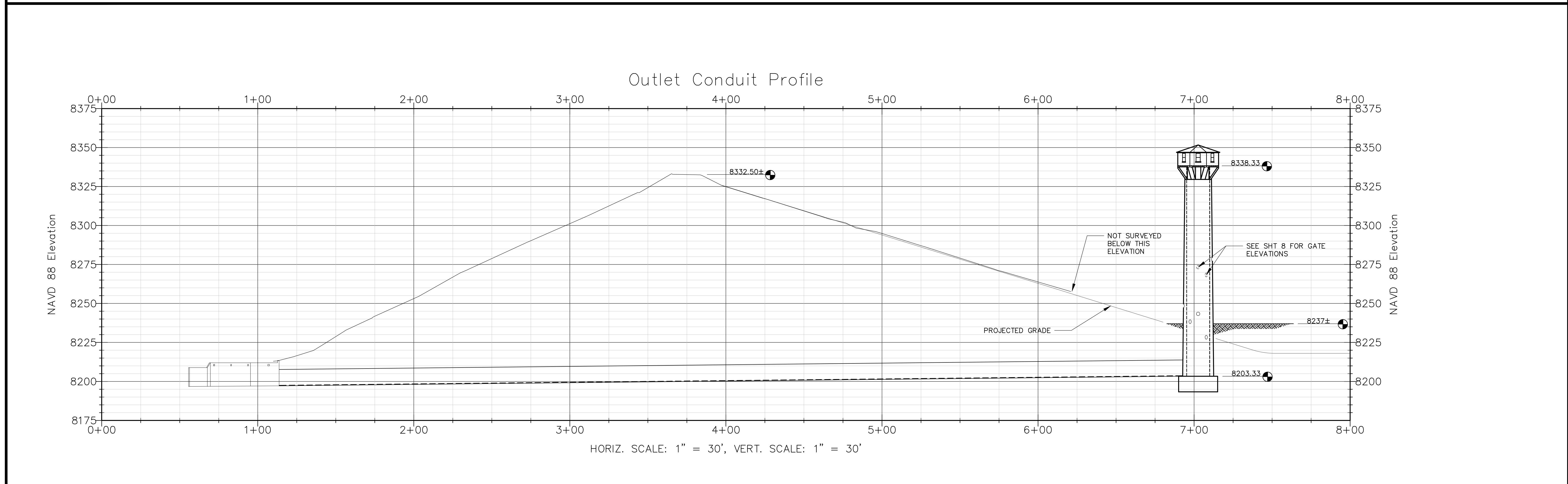
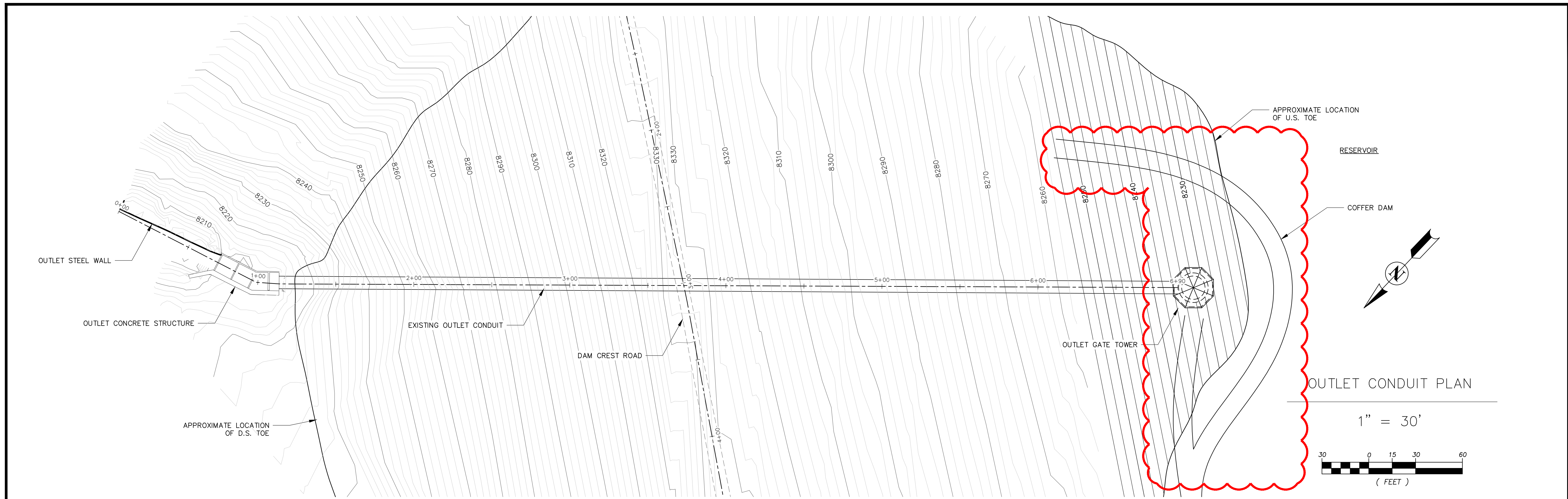


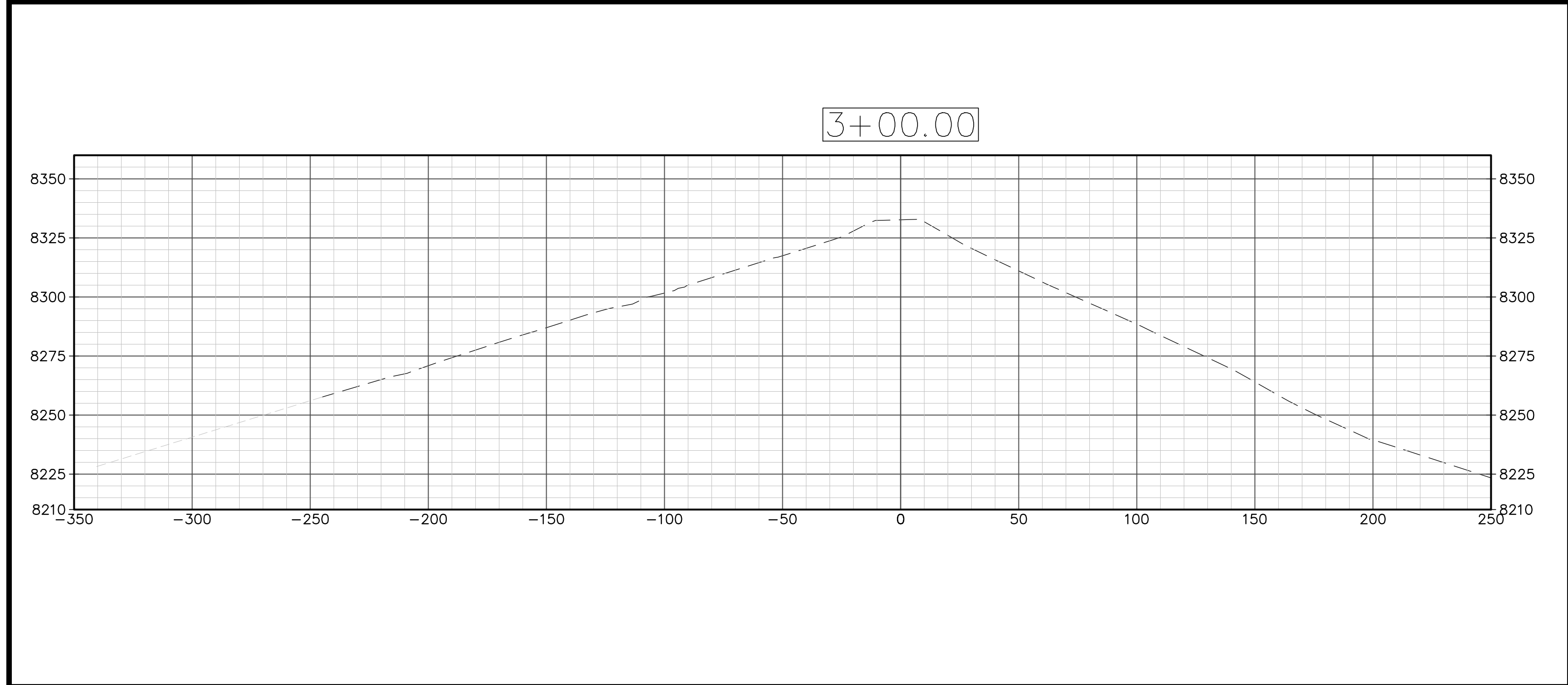
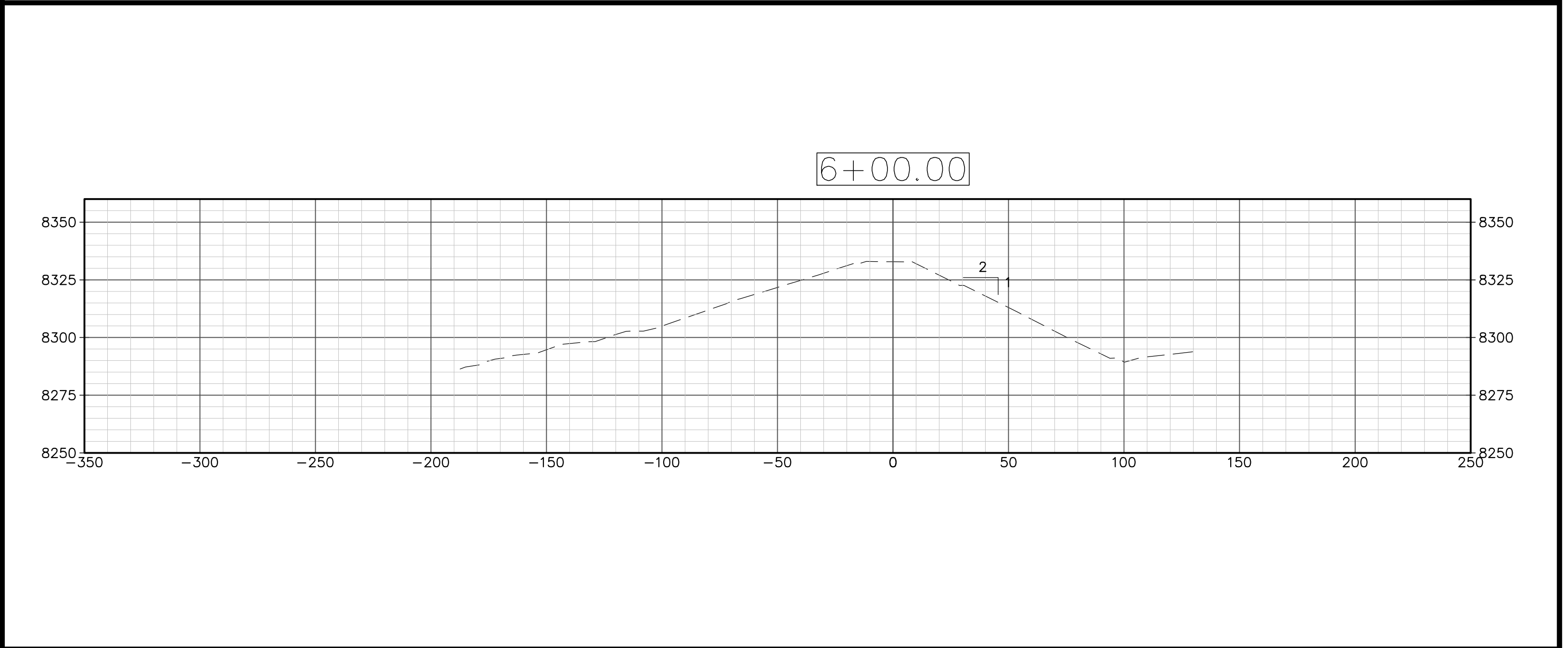
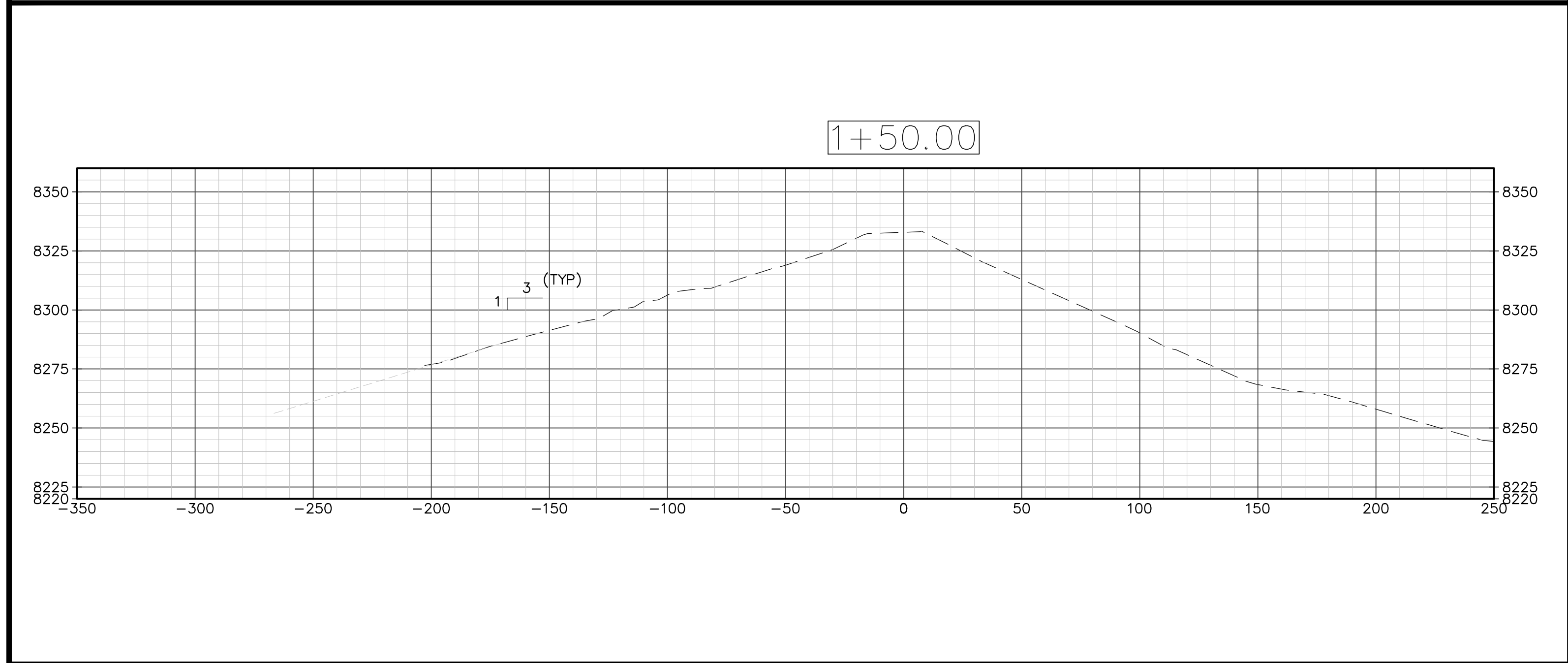
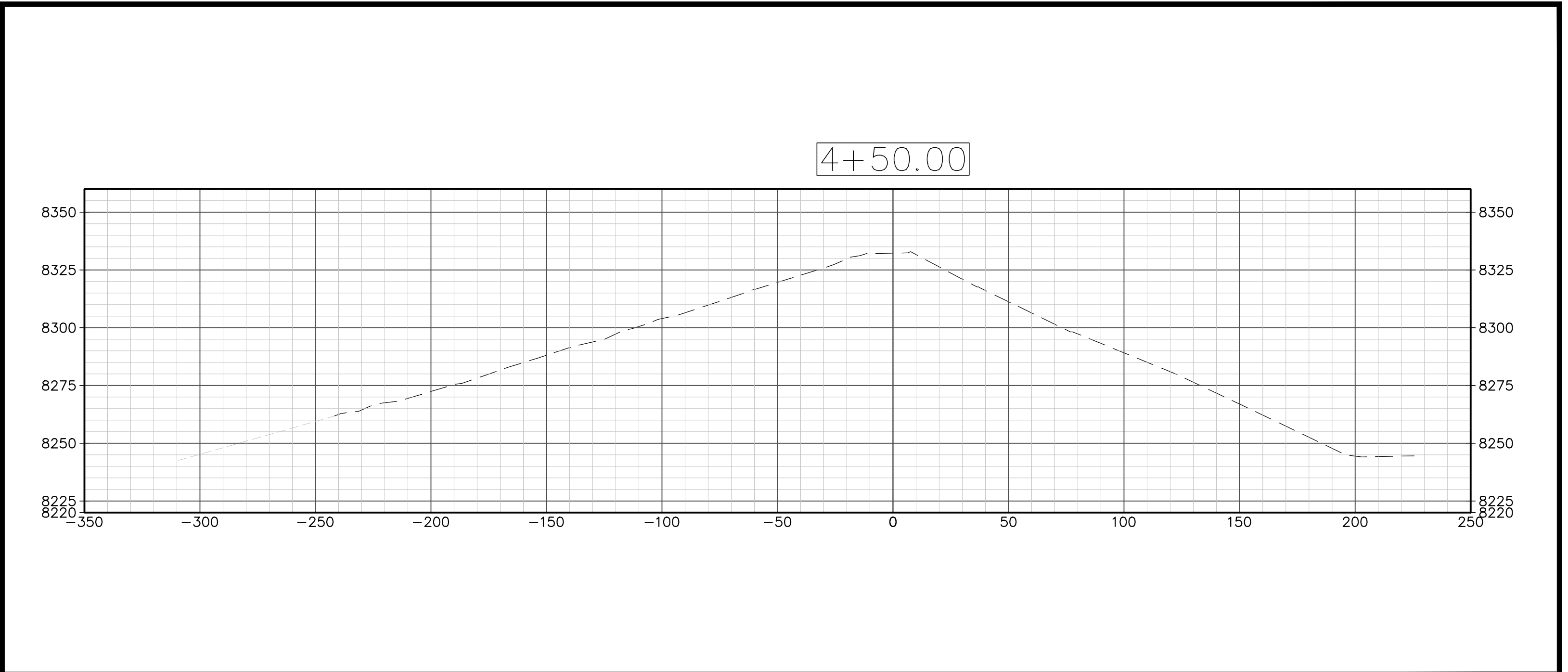
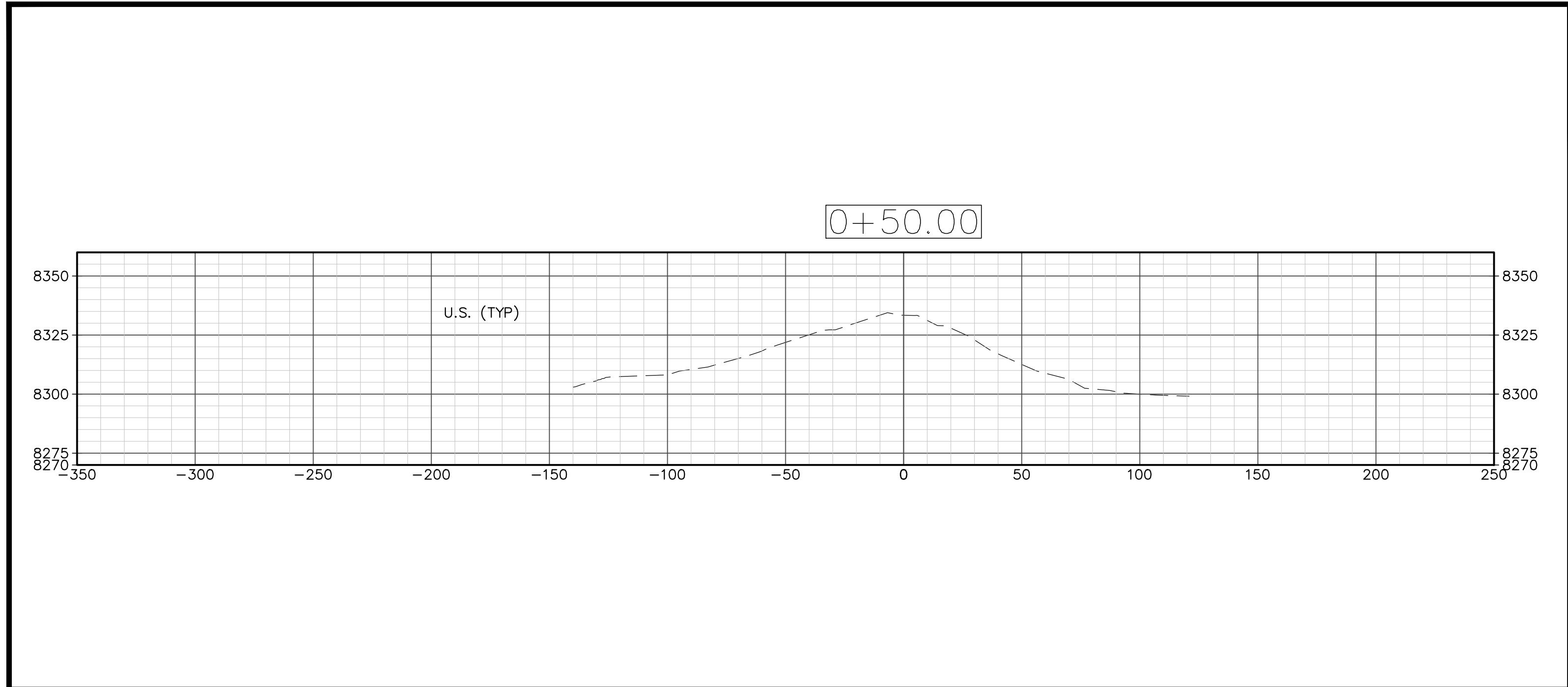
SANCHEZ RESERVOIR
SANCHEZ DITCH AND RESERVOIR CO.

OUTLET HYDRAULICS



SHEETS	SHEET
21	3





THE FOLLOWING SECTION VIEWS WERE GENERATED FROM CROSS SECTIONAL SURVEY POINTS BASED UPON NAVD 88 AND NOT FROM A FULL TOPOGRAPHIC SURVEY. USER SHALL ASSUME RESPONSIBILITY FOR USE AS ELECTRONIC FORMAT MAY VARY WITH END USER'S PROGRAM. ACCURACY SHOULD BE VERIFIED WITH PRINTED DOCUMENTS

EXISTING PATCHES



REBAR EXPOSED



SPALLED PATCHES



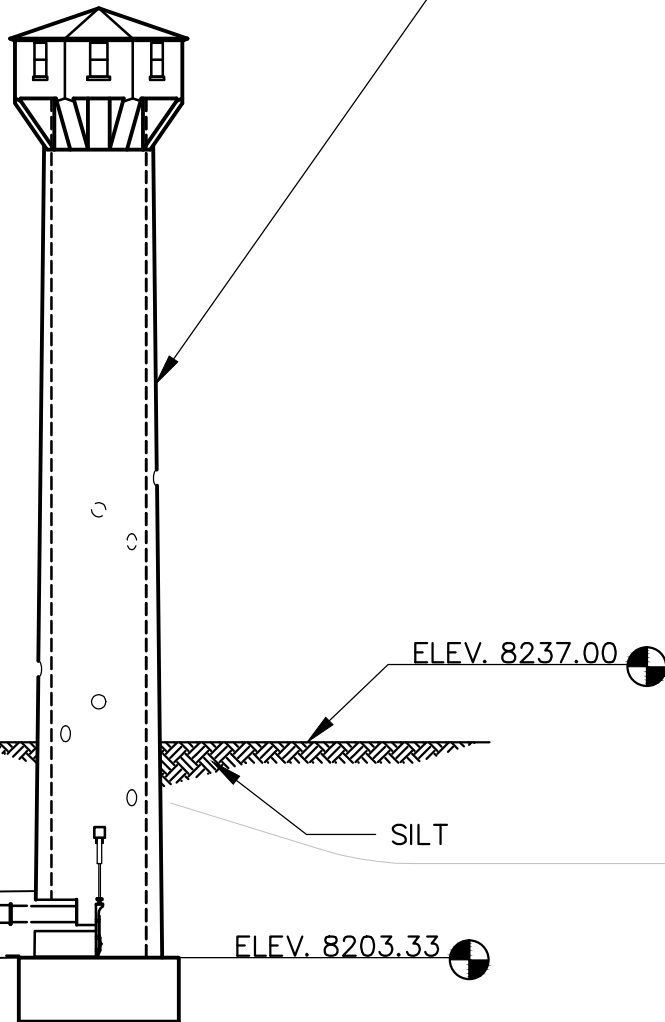
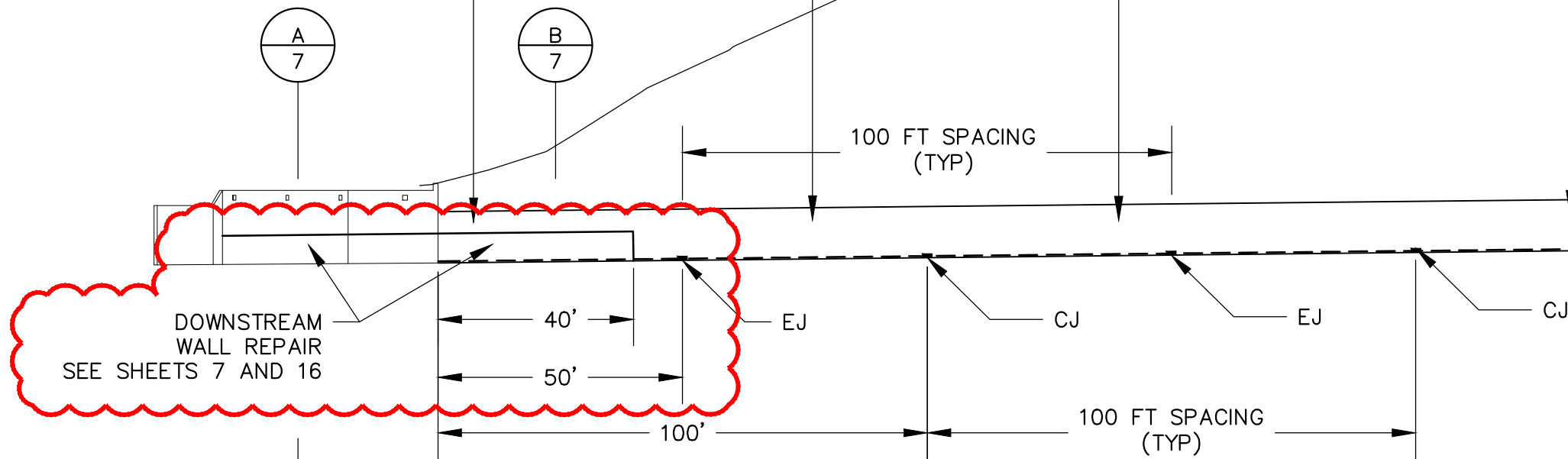
REBAR EXPOSED



LEAKS TO BE SEALED



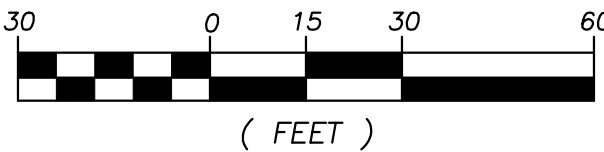
GATE TOWER



- NOTES:
- 1. CONDUIT FLOOR TO BE LINED PER DETAILS ON SHEET 7.
 - 2. CONDUIT LINING SHALL HAVE CONSTRUCTION AND EXPANSION JOINTS AT 100 FT SPACING.
 - 3. CONSTRUCTION JOINTS IN CONCRETE SHALL HAVE 4" W.S., GREENSTREAK #781.
 - 4. EXPANSION JOINTS SHALL BE CONTINUOUS THROUGH CONCRETE WITH DETAILS PER SHEET 18.
 - 5. SEE SHEET 17 FOR JOINT DETAIL AND REINFORCING STEEL REQUIREMENTS.
 - 6. CONDUIT FLOOR SHALL BE SAND OR WATER BLASTED PER SPECIFICATIONS.
 - 7. ALL EXISTING JOINTS THAT LEAK SHALL BE SEALED BY INJECTION METHODS PER SPECIFICATION SECTION 03600-GROUT.
 - 8. ALL SPALLS, EXISTING PATCHES THAT ARE LOOSE, AND EXPOSED REBAR SHALL BE CHIPPED AND EXPOSED TO SOUND CONCRETE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 03300 OF THE CONTRACT SPECIFICATIONS. (WORK ON WALLS AND CEILING NOT PART OF THIS CONTRACT)

OUTLET TOWER AND CONDUIT – PROFILE

1" = 30'



HOLE/LEAK IN FLOOR SLAB

NO.	DATE	REVISION	BY
1	07-11-14	REVISED SCOPE	DHS
2	08-04-14	SEO REVIEW ISSUE	DHS
3	03-20-15	AS-CONSTRUCTED	DHS

DRAWN	TSC	DESIGNED	DHS	DATE	07-11-14
CHECKED		APPROVED		PROJ. NO.	11.028

SCALE	1" = 30'
24x36	



Smith Geotechnical/Engineering Consultants
1225 Red Cedar Circle
Fort Collins, Colorado 80524
(970) 490-2620

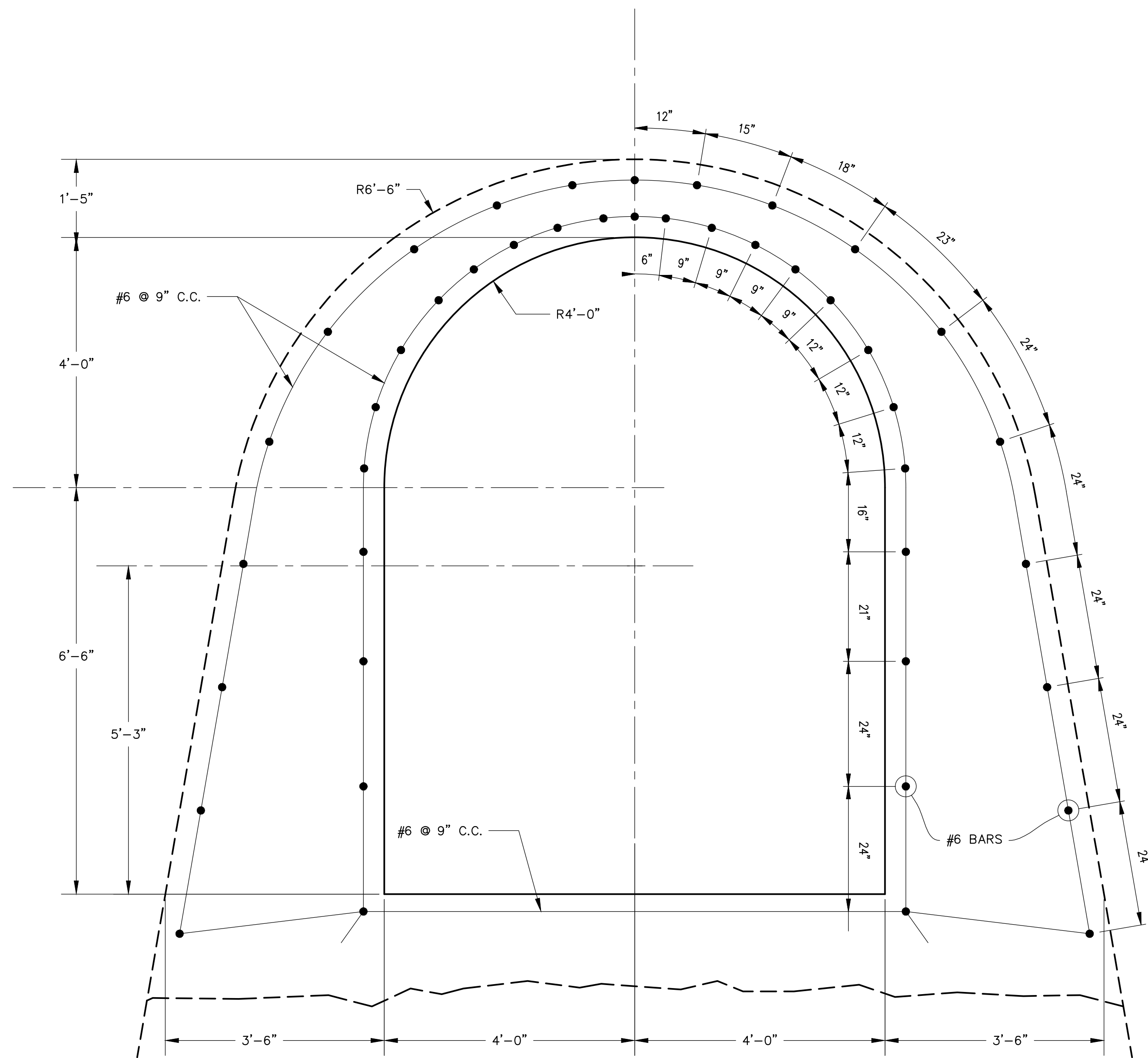
SANCHEZ RESERVOIR
SANCHEZ DITCH AND RESERVOIR CO.

OUTLET CONDUIT PROFILE

SCALE VERIFICATION
0 1"
IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

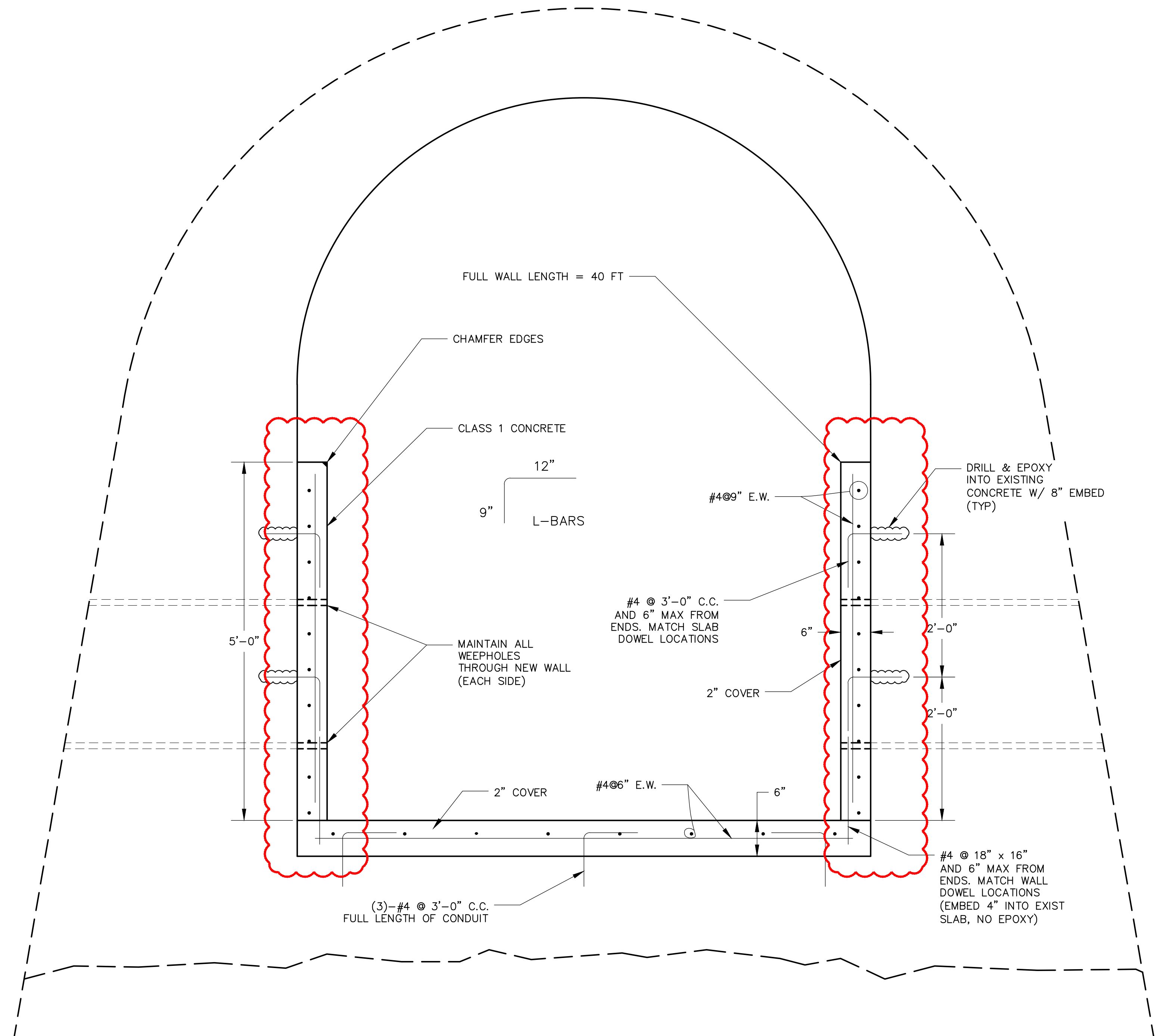
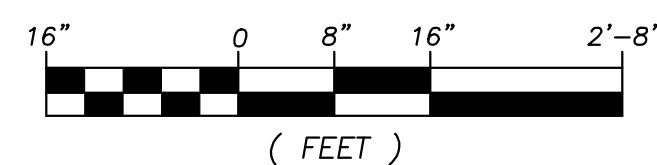
SHEETS	SHEET
21	6

C-0019B



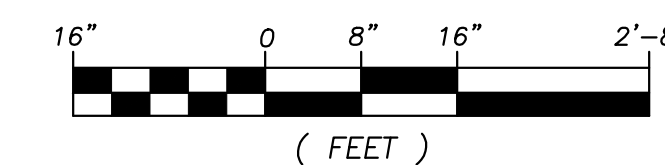
SECTION - EXISTING OUTLET CONDUIT

$$\frac{3}{4}'' = 1'-0''$$



DETAIL - OUTLET CONDUIT REPAIR

$$\frac{1}{2}'' = 1'-0''$$



NO.	DATE	REVISION	BY
1	07-11-14	REVISED SCOPE	DHS
1	08-04-14	SEO REVIEW ISSUE	DHS
2	03-20-15	AS-CONSTRUCTED	DHS

DRAWN	TSC	DESIGNED	DHS	DATE	12-19-14
CHECKED		APPROVED		PROJ. NO.	11.028



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CONDUIT REPAIR DETAILS

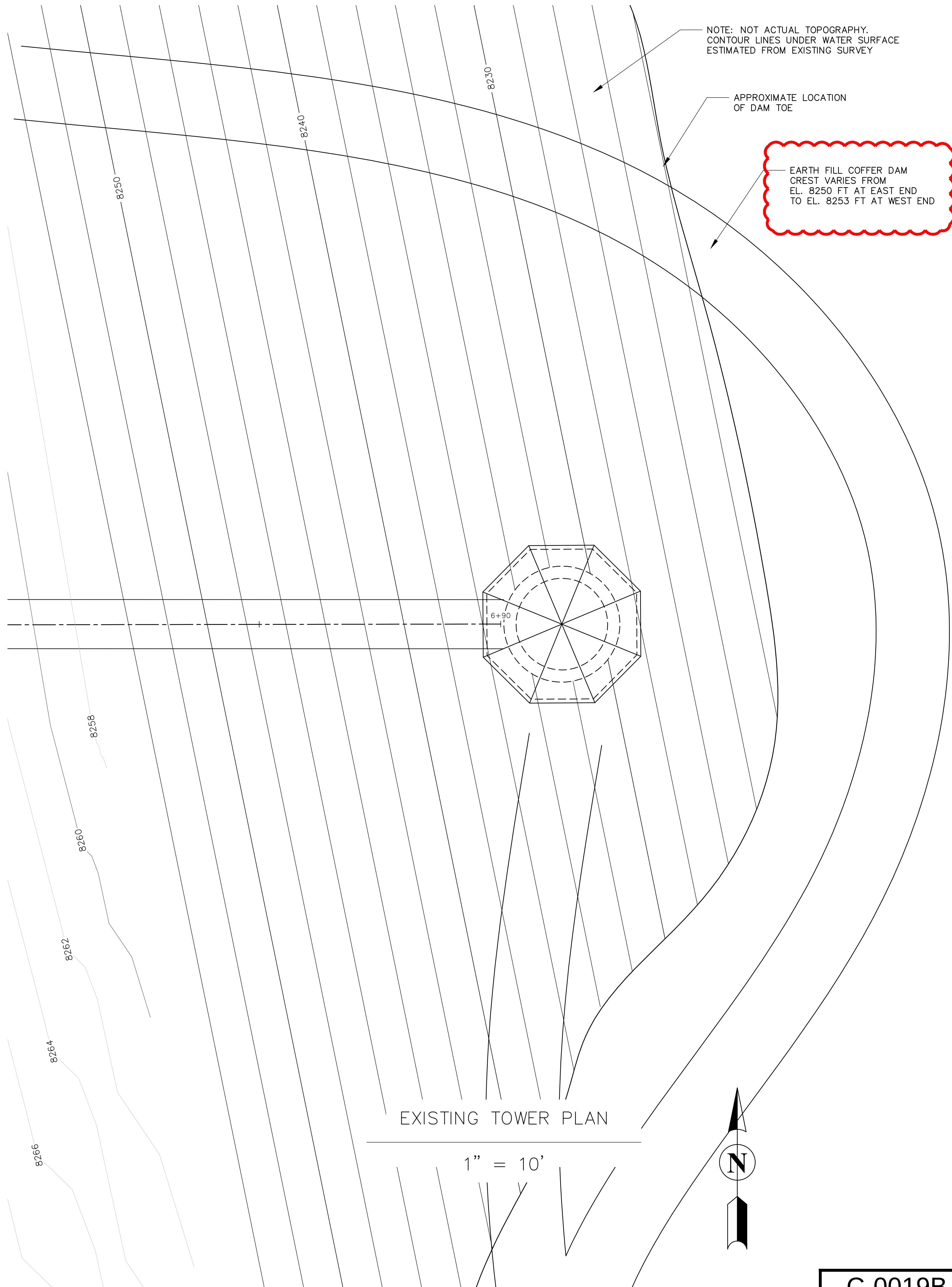
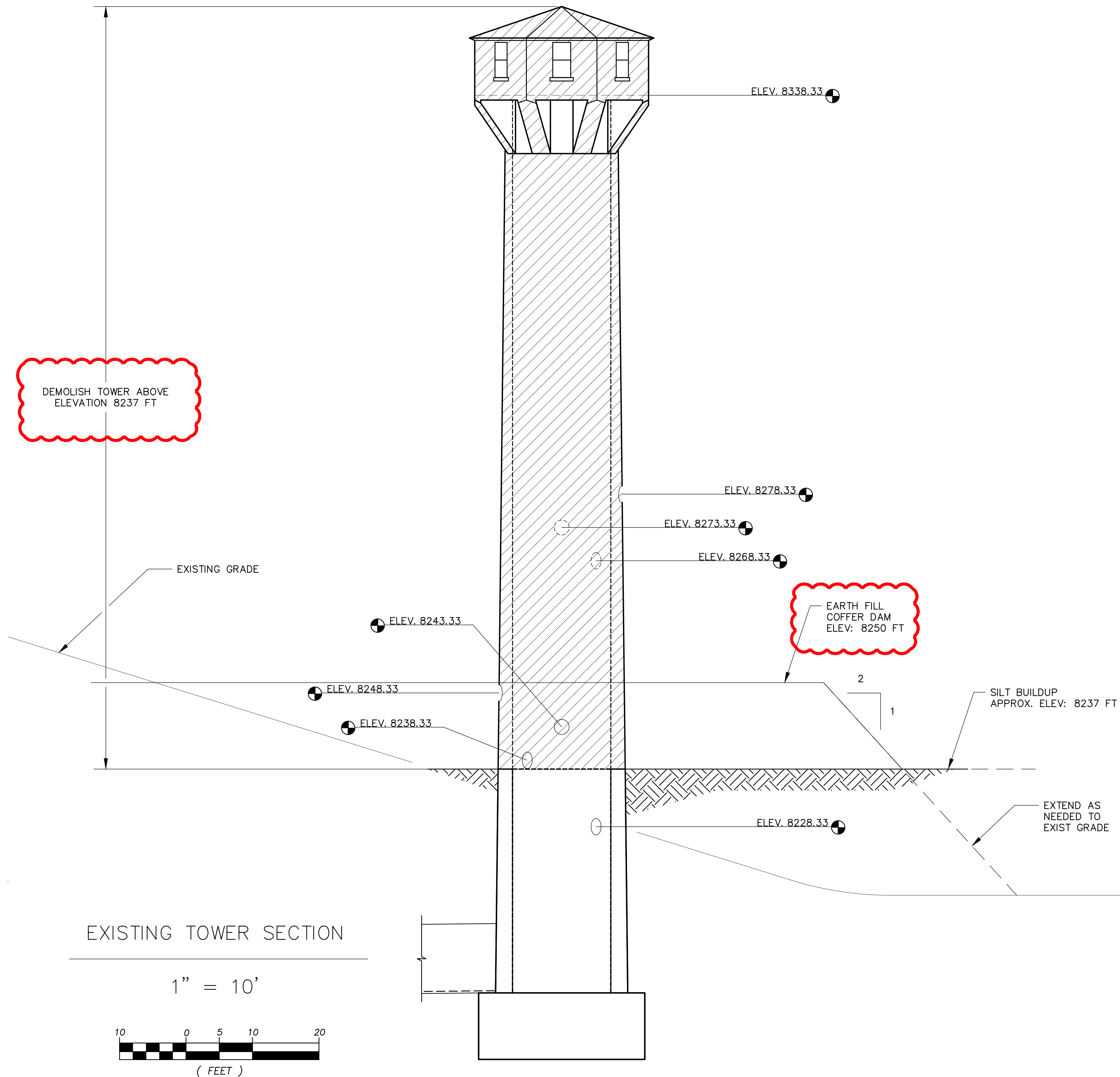
SCALE VERIFICATION	SHEETS	SHEET
0 1" IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	21	7

C-0019B

NOTES:

- DEMOLITION SHALL FOLLOW THE REQUIREMENTS OF SPECIFICATIONS SECTIONS 02220 AND 02090.
- DEMOLITION MAY BE BY BLASTING OR BY MECHANICAL METHODS OR A MIX THEREOF.
- DEMOLITION SHALL BE CONDUCTED IN A MANNER TO SPOIL DEBRIS IN THE RESERVOIR UPSTREAM OF DAM
- DEMOLITION SHALL BE CONDUCTED IN A MANNER THAT THE REMAINING PORTION OF THE TOWER STRUCTURE IS NOT CRACKED OR DAMAGED AS THIS PORTION REMAINING MUST BE WATERTIGHT.
- THE EXISTING GATES AND PIPING ABOVE THE DEMOLITION ELEVATION MAY BE REMOVED AND SALVAGED BY THE CONTRACTOR.
- THE THREE GATES LOCATED AT THE BOTTOM OF THE TOWER AT THE ENTRANCE TO THE OUTLET CONDUIT SHALL BE PROTECTED FROM ALL DEMOLITION OPERATIONS. THEIR HYDRAULIC OPERATORS AND SUPPORT BEAM SHALL ALSO BE PROTECTED DURING THE DEMOLITION. THE 1/2" HYDRAULIC LINES TO THESE HYDRAULIC CYLINDERS MAY BE SALVAGED AND REUSED AS SHOWN ON THE DRAWINGS.
- THE SUPPORT BEAMS AND HYDRAULIC CYLINDERS MAY BE REMOVED DURING THE DEMOLITION FOR THEIR

- PROTECTION. THEY SHALL BE REINSTALLED AFTER THE DEMOLITION AND CLEANUP IS COMPLETE.
- THE OUTLET CONDUIT SHALL BE PROTECTED AND ANY BLASTING SHALL BE CONTROLLED AS OUTLINED SPECIFICATIONS SECTIONS 02090 TO PROHIBIT STRUCTURAL DAMAGE TO THE OUTLET.
 - ANY CRACKS IN THE REMAINING PORTION OF THE TOWER OR THE OUTLET CONDUIT THAT ARE CAUSED BY THE DEMOLITION SHALL BE REPAIRED BY THE CONTRACTOR FOLLOWING THE METHODS SHOWN IN SPECIFICATION SECTION 03600 USING INJECTED CHEMICAL GROUTS.
 - FINAL ELEVATION FOR SLAB BEARING AT ELEV. 8237 SHALL BE CUT AND SHALL BE SAND BLASTED TO EXPOSE AGGREGATE.
 - THE DEMOLITION PLAN SHALL PROVIDE FOR A BUFFER ZONE ABOVE ELEV. 8237 TO ENSURE TOWER WALLS ARE SOUND BELOW SLAB LEVEL. REMOVAL OF TOWER IN BUFFER ZONE SHALL BE BY METHODS THAT DO NOT FRACTURE THE CONCRETE BELOW 8237.
 - INTERIOR OF TOWER SHALL BE PATCHED WHERE EROSION OF CONCRETE IS GREATER THAN 1-1/2".
 - CONSTRUCTION JOINTS AND CRACKS THAT ARE LEAKING SHALL BE GROUT INJECTED



NO.	DATE	REVISION	BY
1	07-11-14	REVISED SCOPE	DHS
1	08-04-14	SEO REVIEW ISSUE	DHS
2	03-20-15	AS-CONSTRUCTED	DHS

DRAWN TSC
DESIGNED DHS
CHECKED
APPROVED
DATE 07-11-14
PROJ. NO. 11.028
SCALE 24x36
1" = 10'



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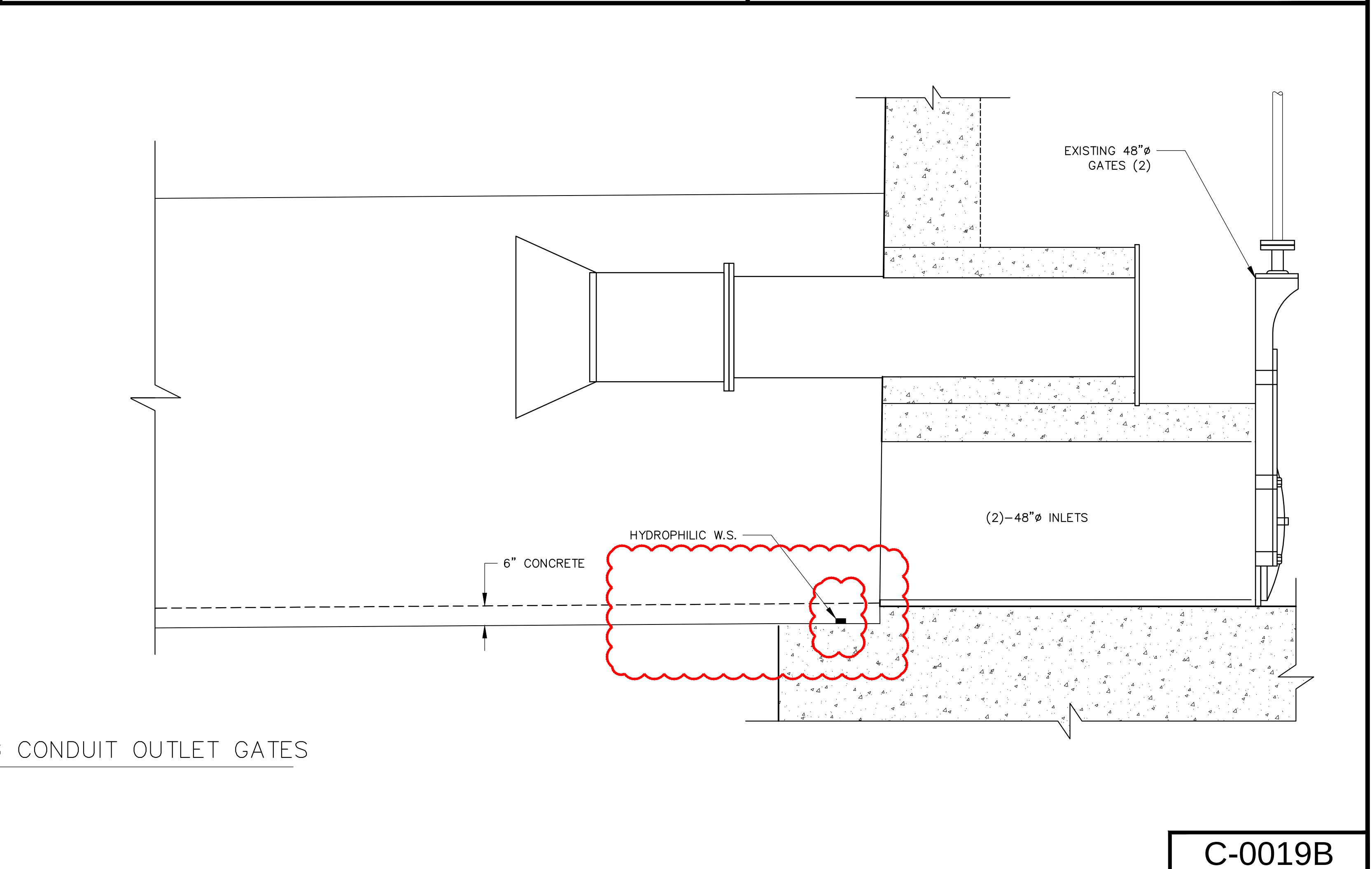
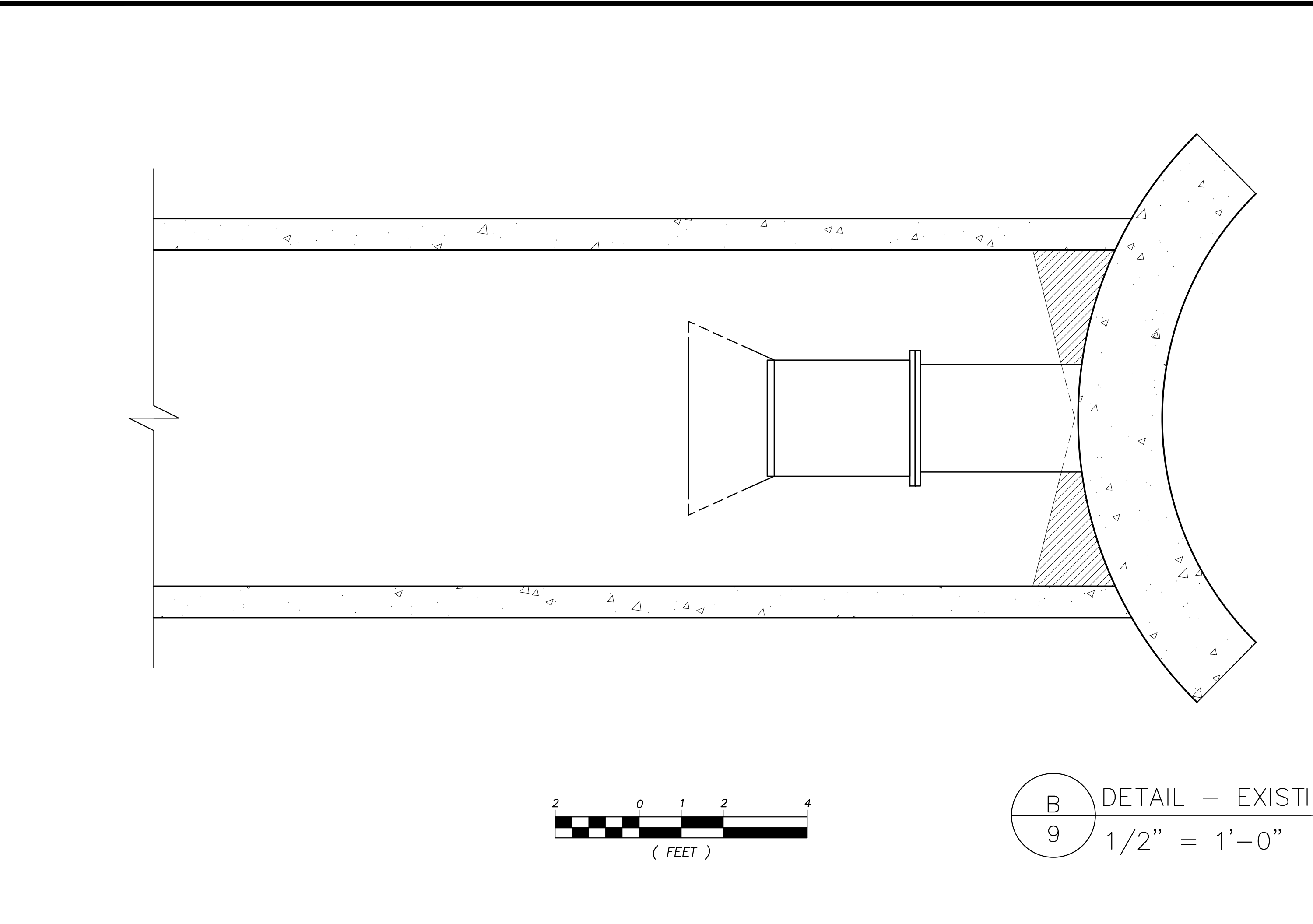
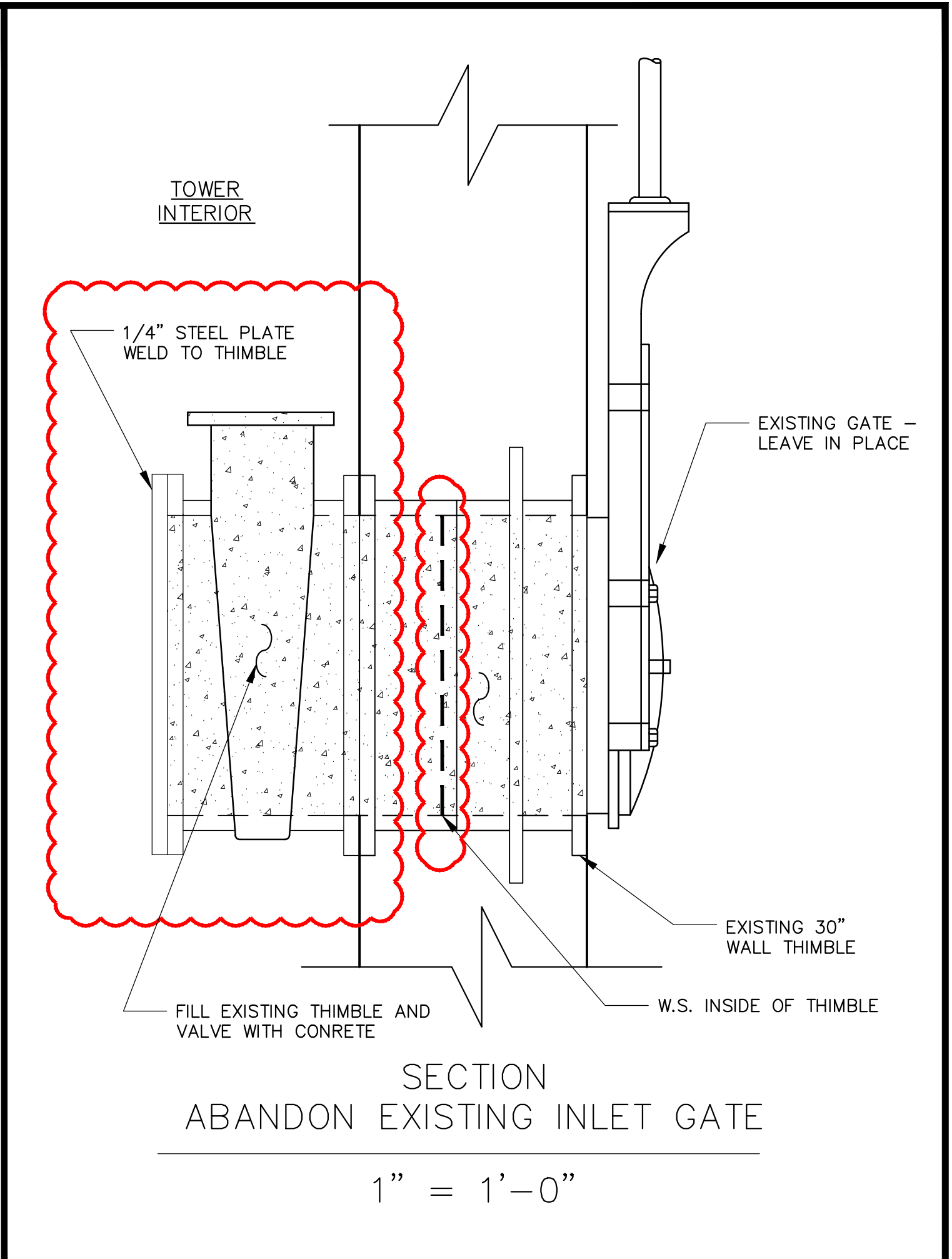
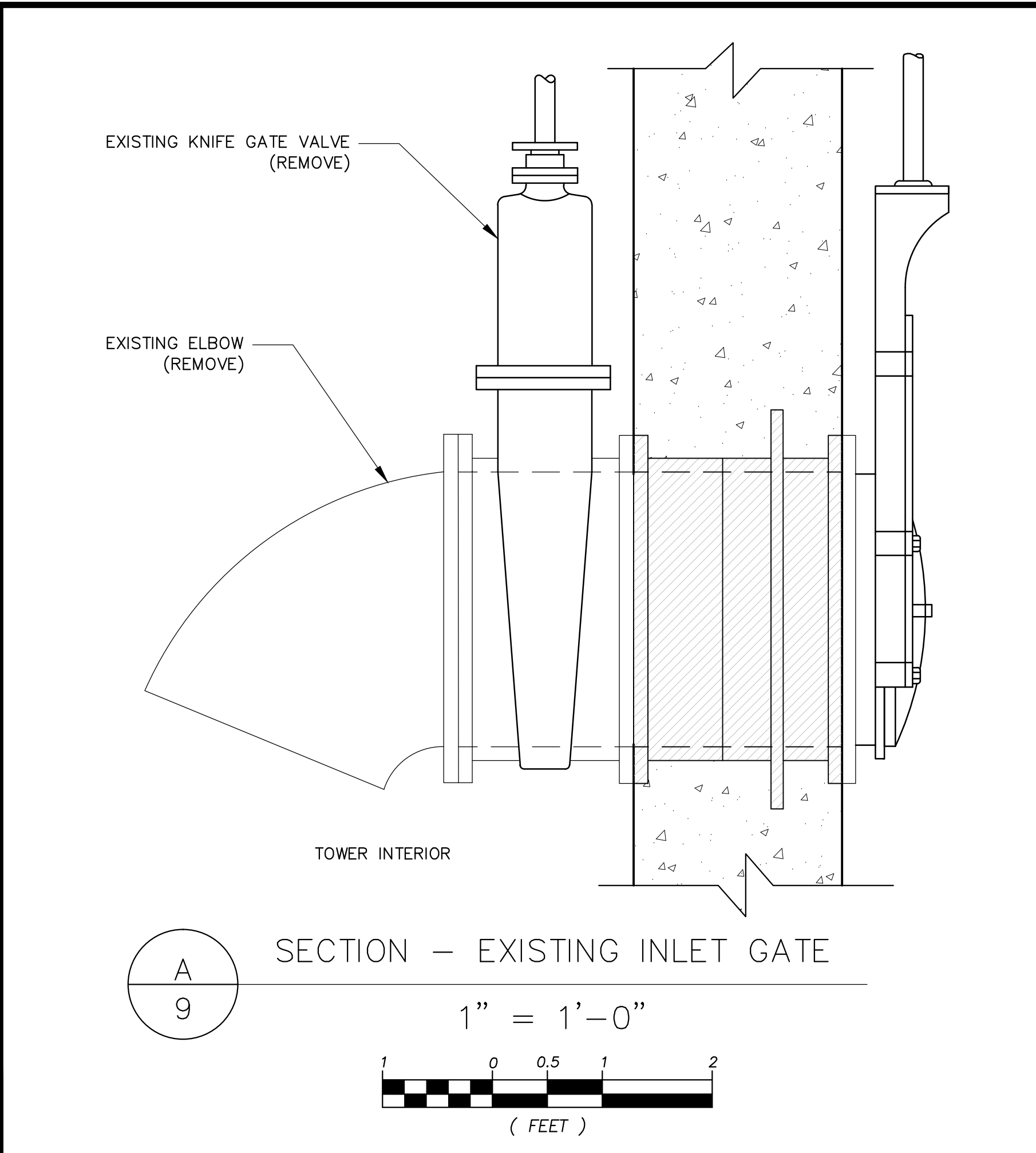
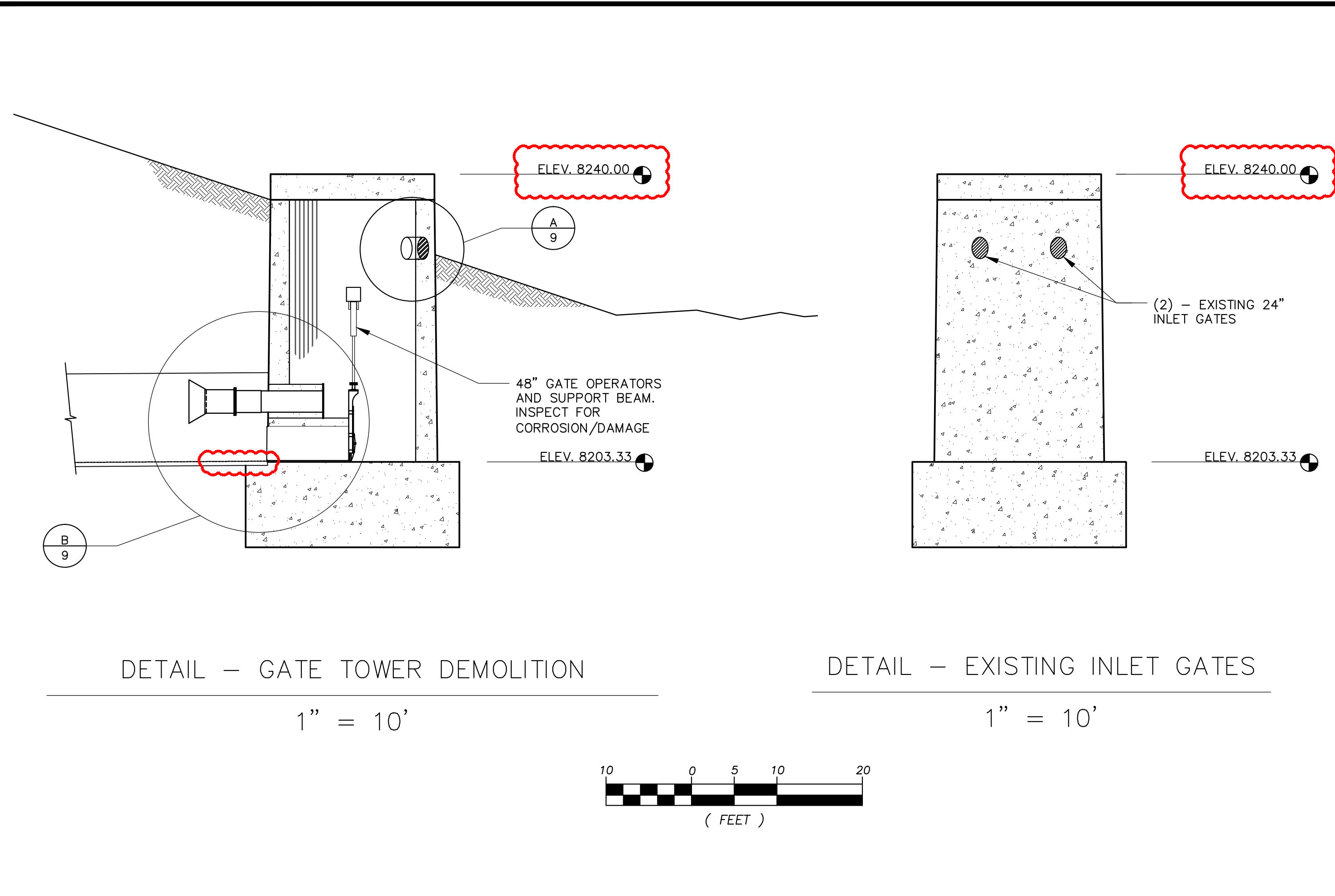
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GATE TOWER DEMOLITION

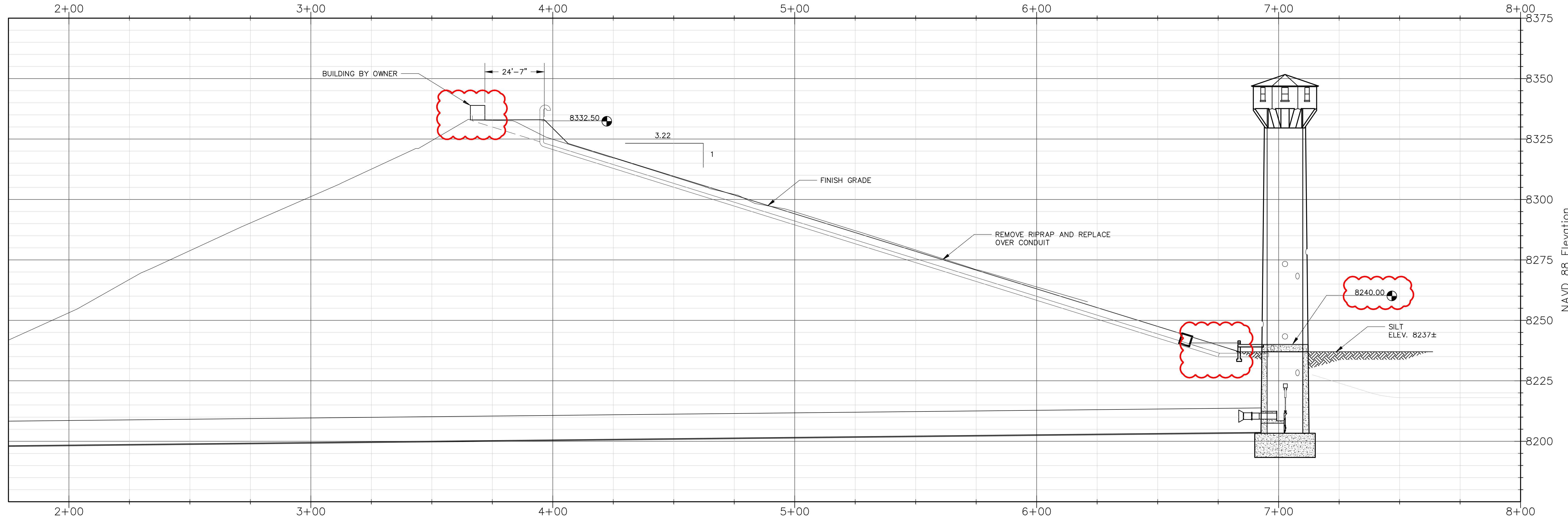
SCALE VERIFICATION
0 1"
IF NOT 1 INCH ON
THIS SHEET, ADJUST
SCALES ACCORDINGLY

SHEETS	SHEET
21	8

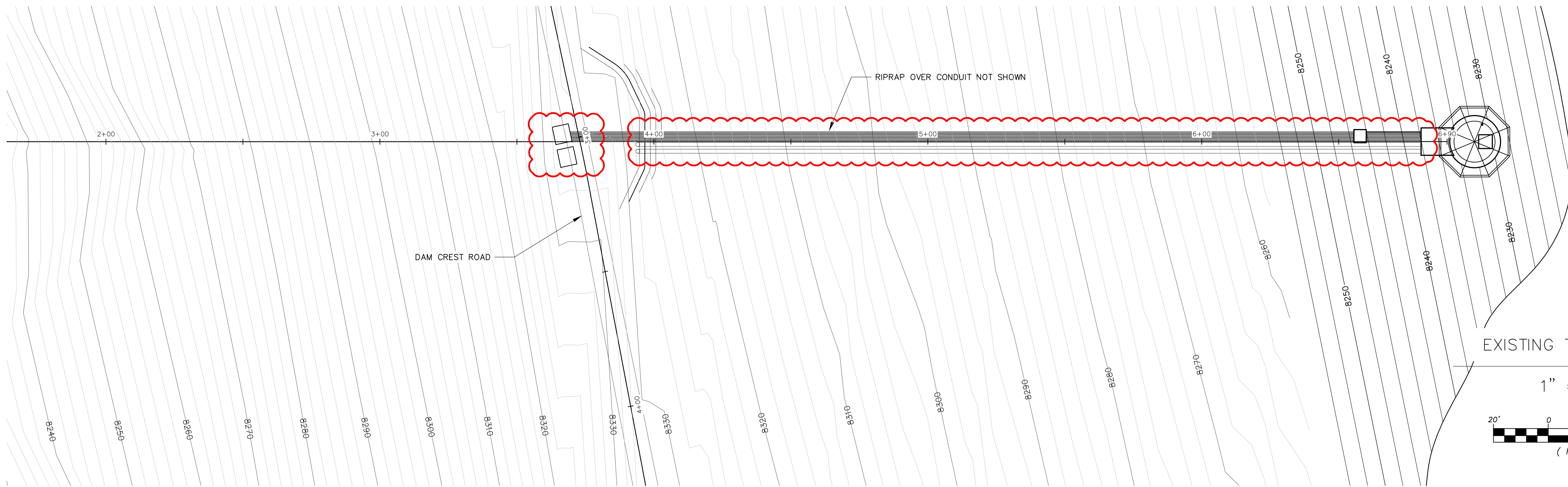
C-0019B



Outlet Conduit Profile

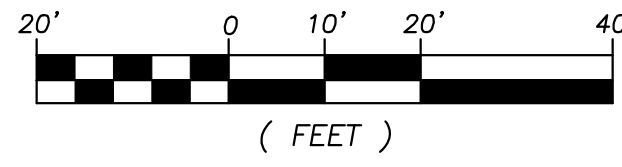


HORIZ. SCALE: 1" = 20', VERT' SCALE: 1" = 20'

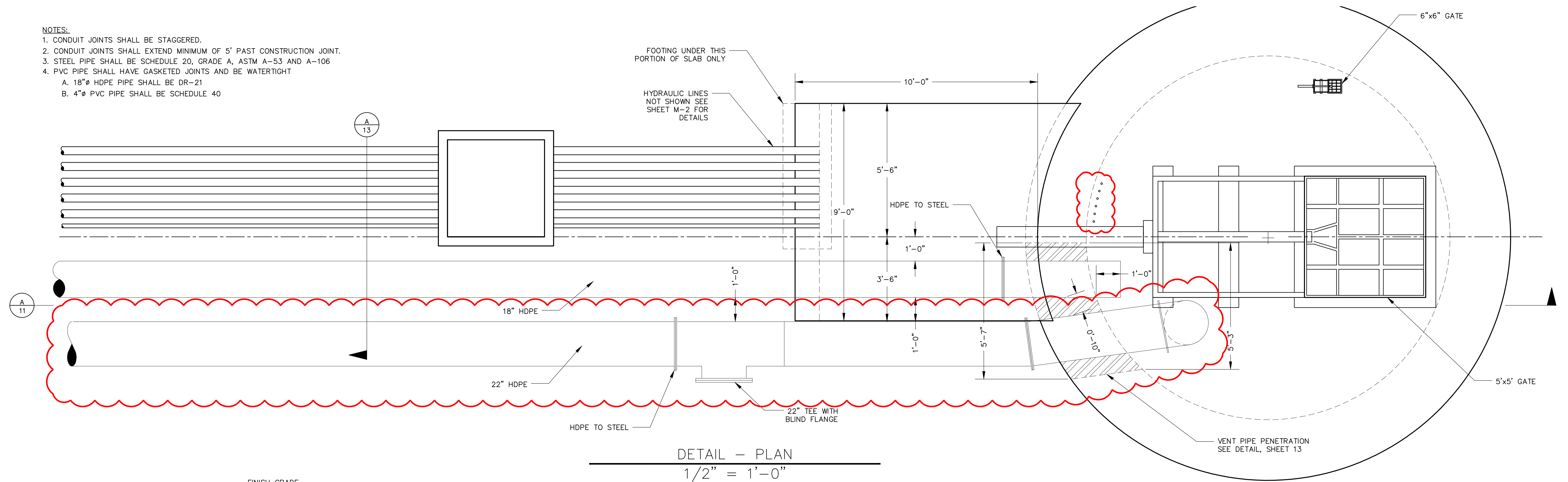


EXISTING TOWER PLAN

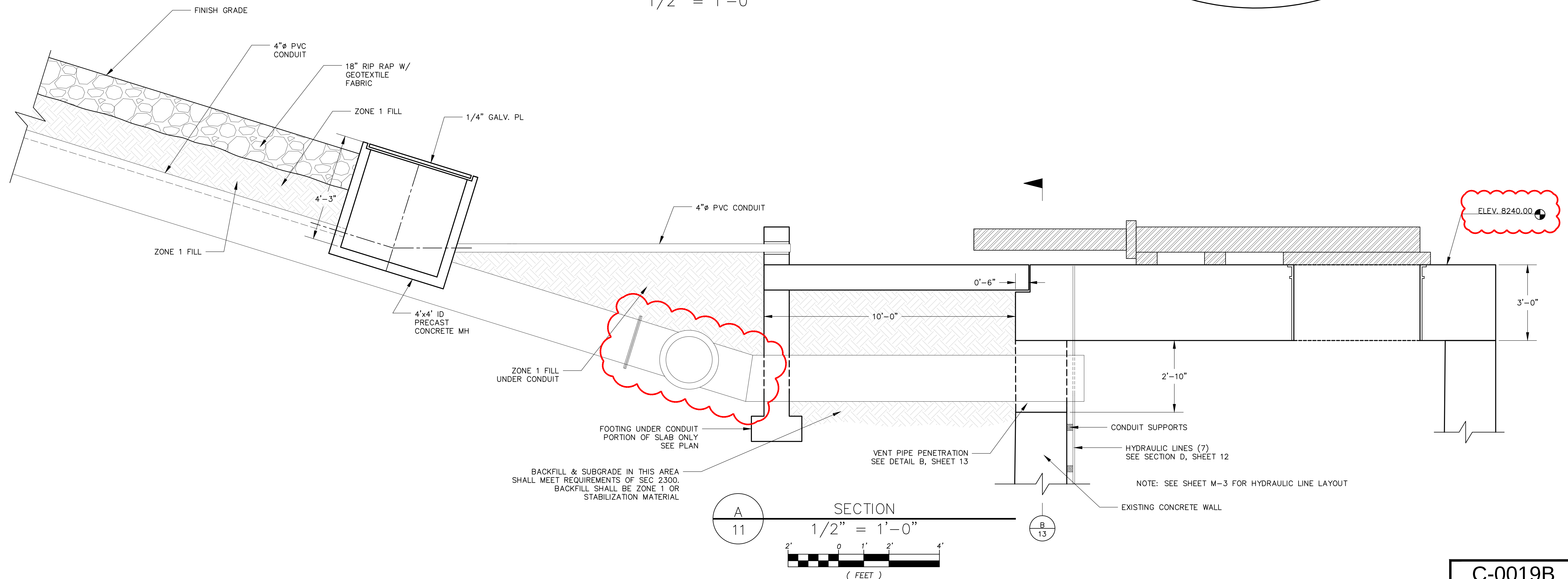
1" = 10'



- NOTES:
1. CONDUIT JOINTS SHALL BE STAGGERED.
 2. CONDUIT JOINTS SHALL EXTEND MINIMUM OF 5' PAST CONSTRUCTION JOINT.
 3. STEEL PIPE SHALL BE SCHEDULE 20, GRADE A, ASTM A-53 AND A-106
 4. PVC PIPE SHALL HAVE GASKETED JOINTS AND BE WATERTIGHT
 - A. 18"Ø HDPE PIPE SHALL BE DR-21
 - B. 4"Ø PVC PIPE SHALL BE SCHEDULE 40

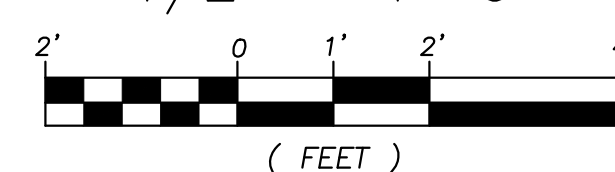


DETAIL - PLAN
1/2" = 1'-0"



SECTION

1/2" = 1'-0"



NO.	DATE	REVISION	BY
1	07-11-14	REVISED SCOPE	DHS
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2	11-21-14	SEO REVISIONS	DHS
3	03-20-15	AS-CONSTRUCTED	DHS

DRAWN	TSC	DESIGNED	DHS	DATE	07-11-14
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SCALE 24x36 1/2"=1'-0"



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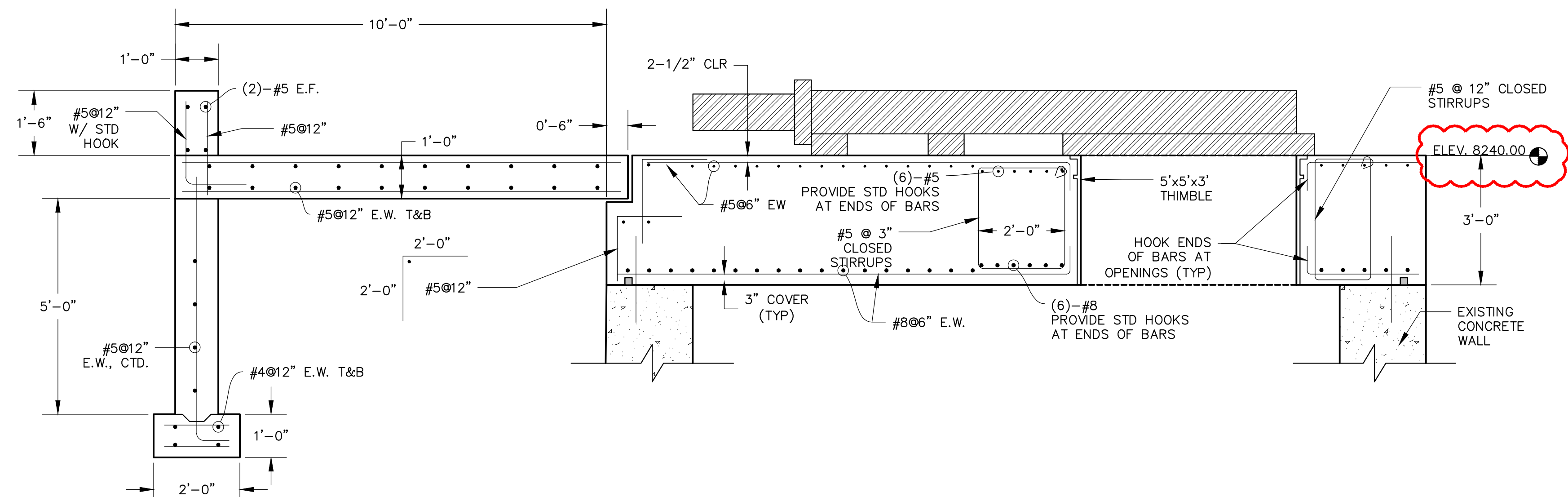
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GATE TOWER PLAN & PROFILE

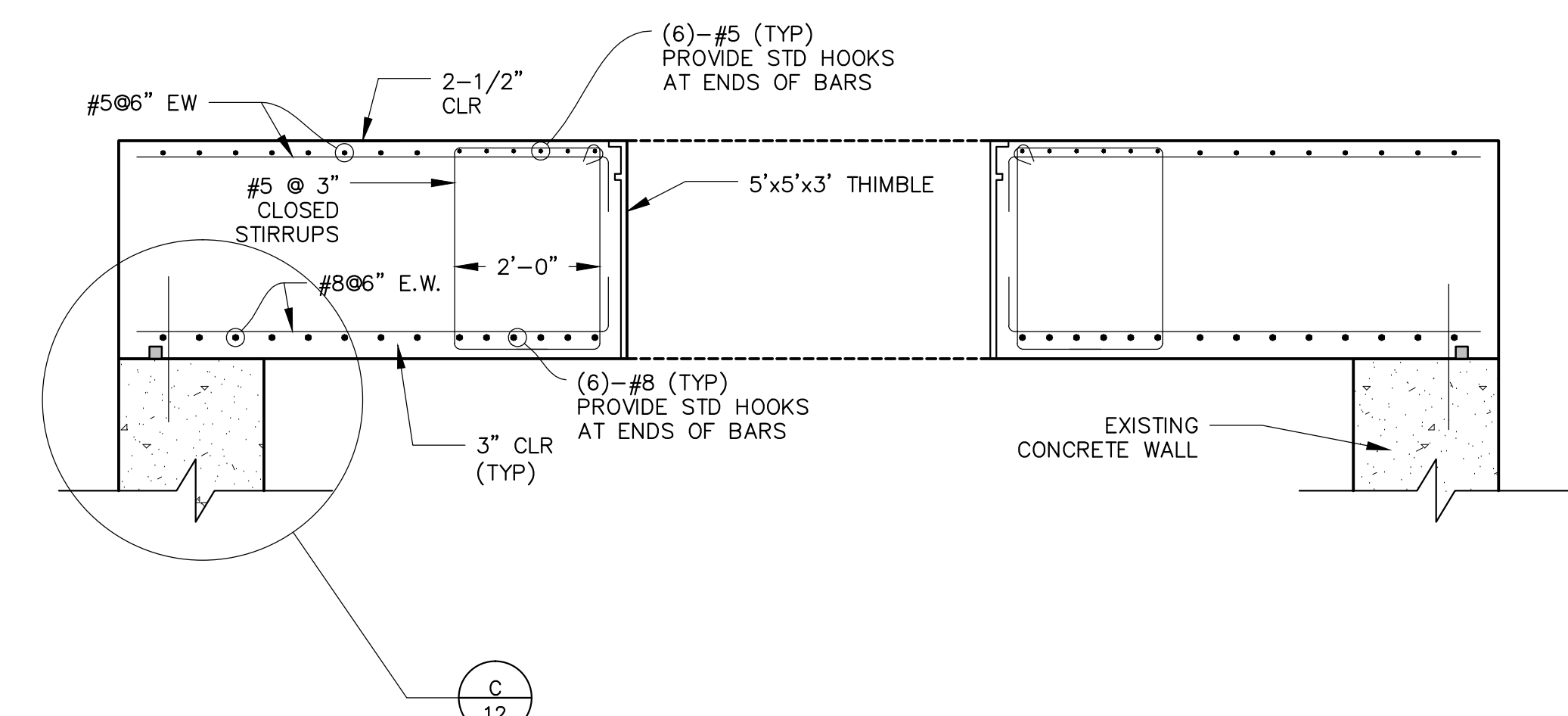
SCALE VERIFICATION
0 1"
IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SHEETS	SHEET
21	11

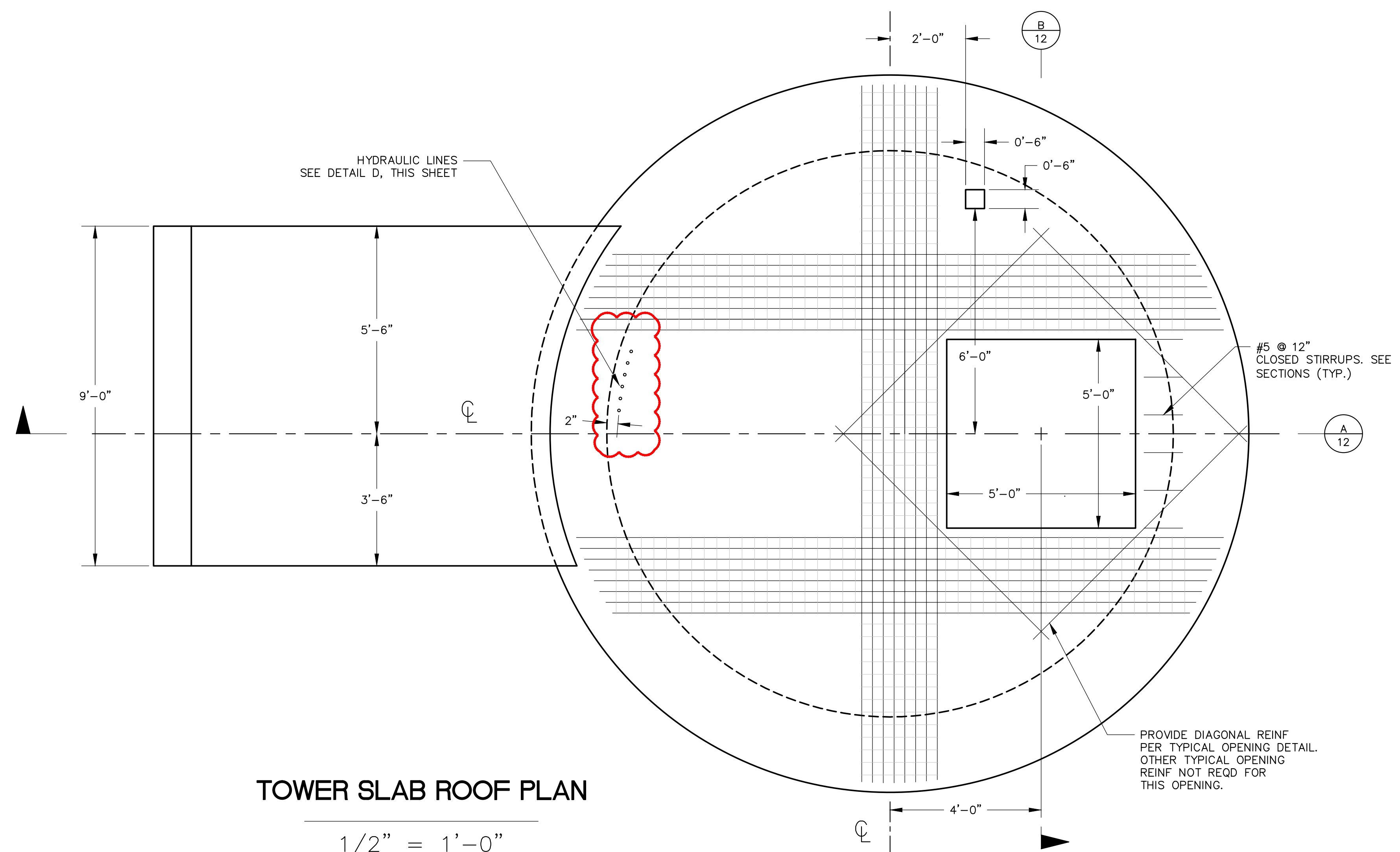
C-0019B



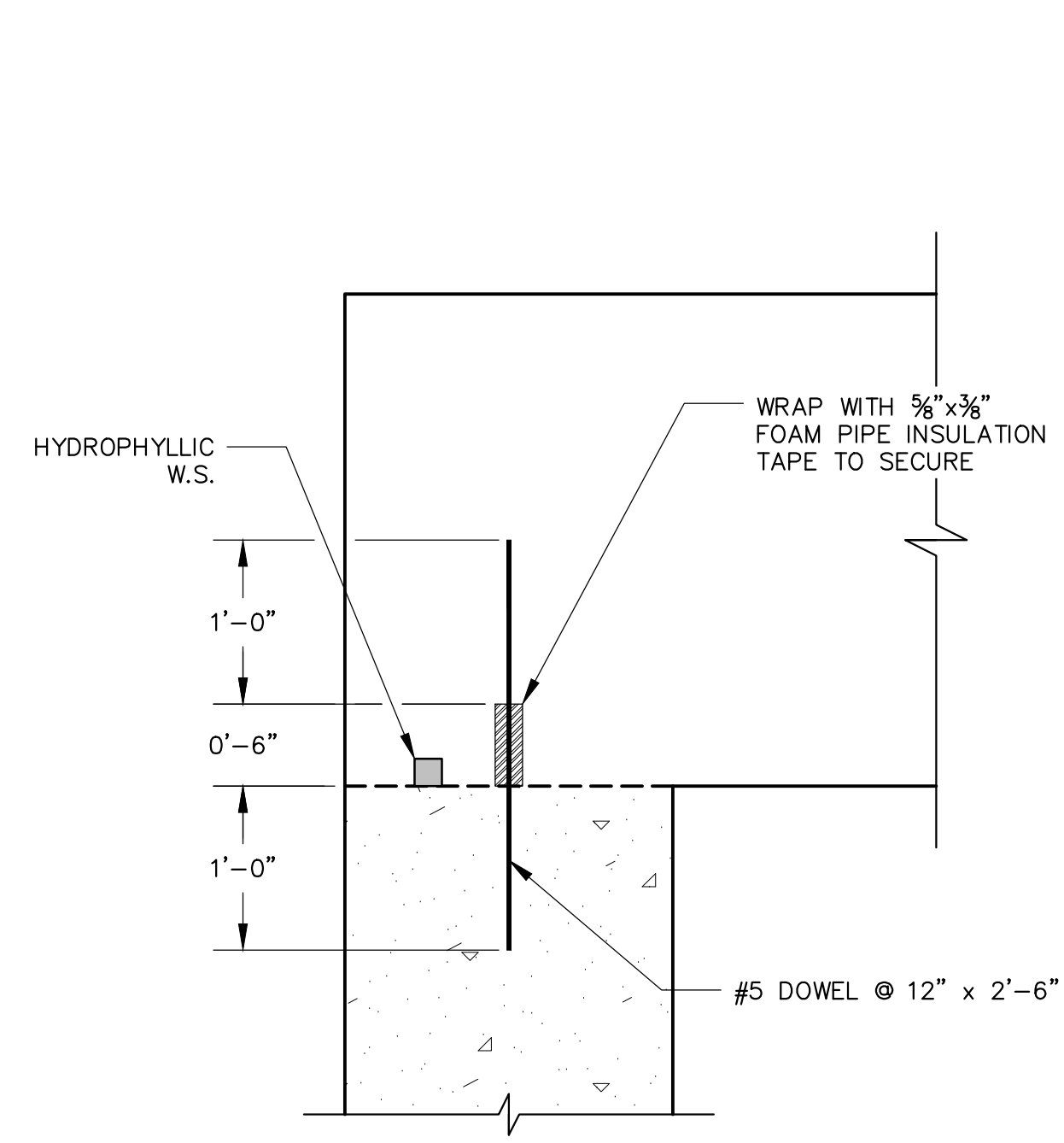
SECTION A
1/2" = 1'-0"



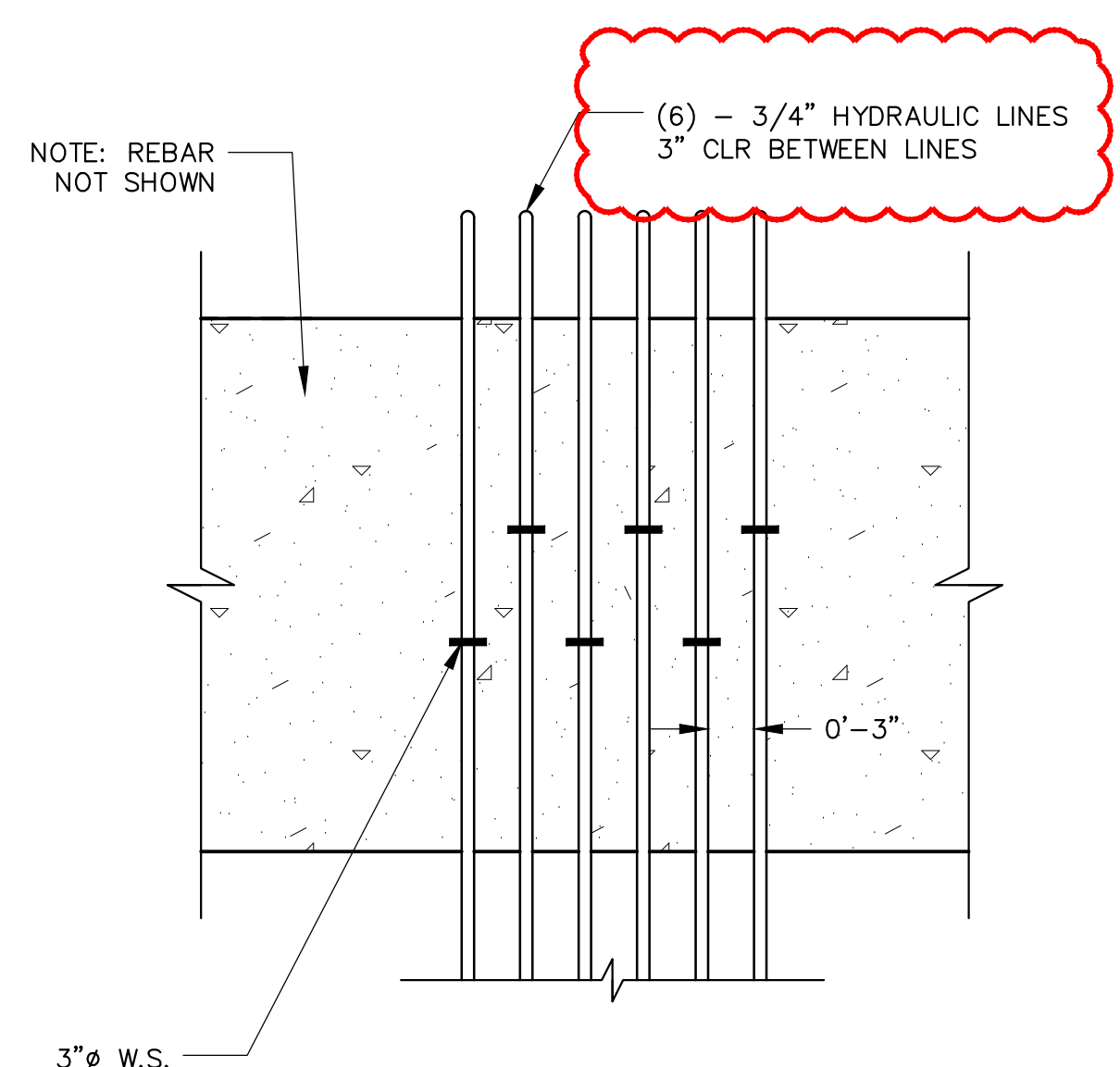
SECTION B
1/2" = 1'-0"



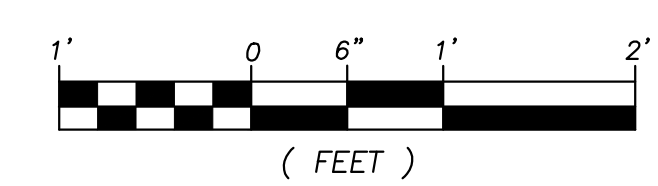
TOWER SLAB ROOF PLAN
1/2" = 1'-0"
(FEET)



DETAIL C
1" = 1'-0"



DETAIL D
1" = 1'-0"



NO.	DATE	REVISION	BY
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DRAWN	TSC	DESIGNED	DHS	DATE	07-11-14
CHECKED		APPROVED		PROJ. NO.	11.028



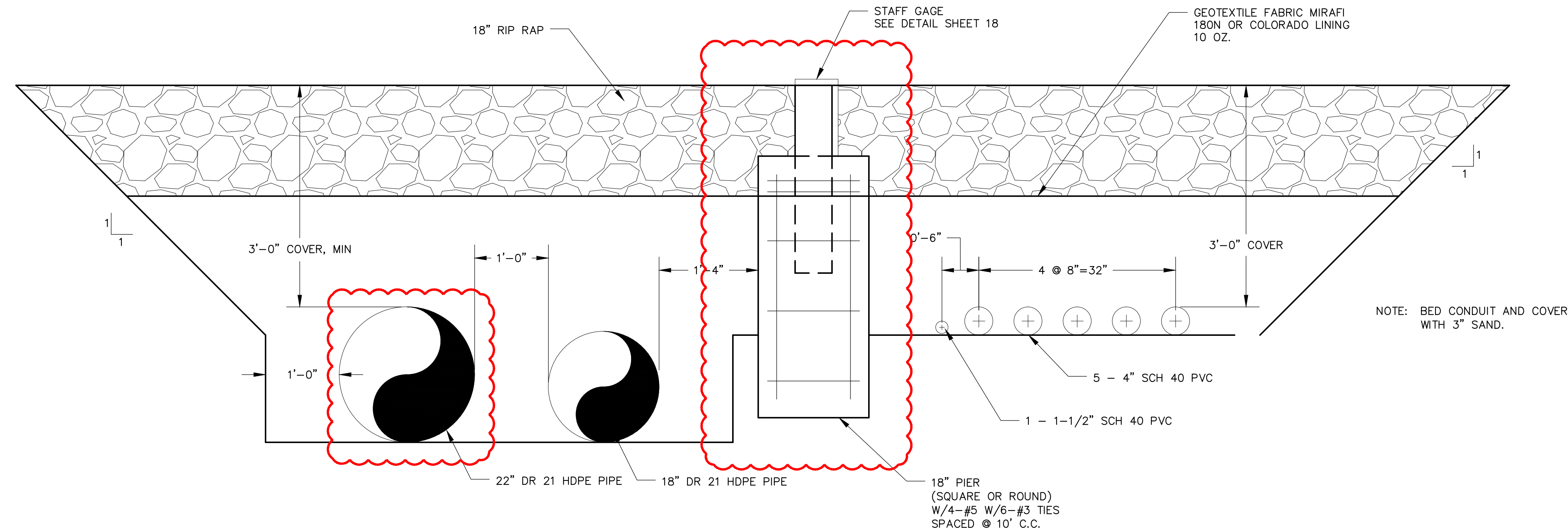
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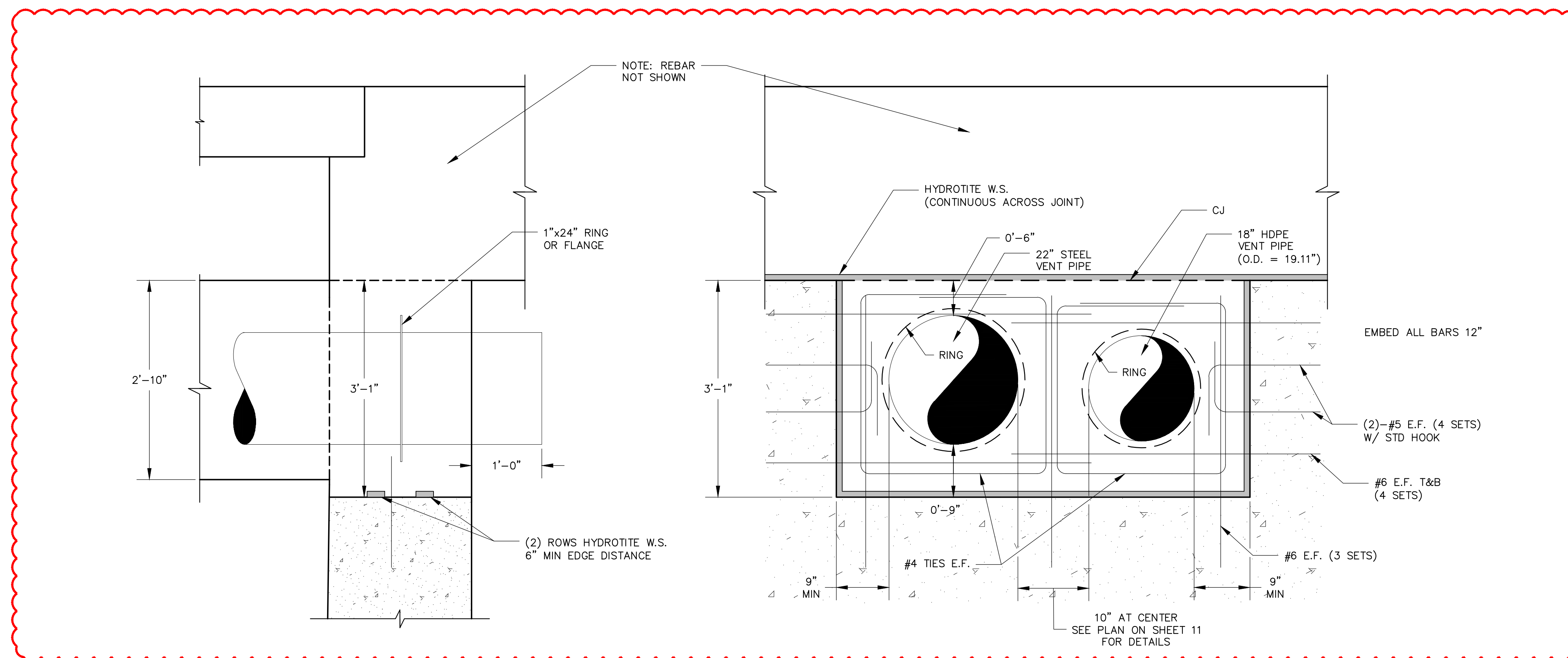
GATE TOWER SECTIONS

SCALE VERIFICATION	SHEETS	SHEET
0 1' IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	21	12

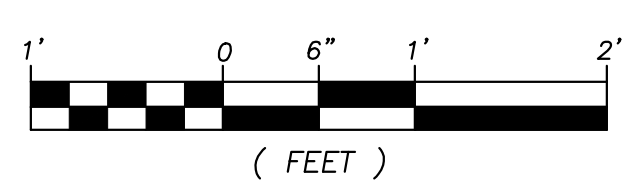
C-0019B



SECTION
A
11
1" = 1'-0"



DETAIL
B
11
1" = 1'-0"



NO.	DATE	REVISION	BY
1	07-11-14	REVISED SCOPE	DHS
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2	11-21-14	SEO REVISIONS	DHS
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DRAWN	TSC	DESIGNED	DHS	DATE	07-11-14
CHECKED		APPROVED		PROJ. NO.	11.028



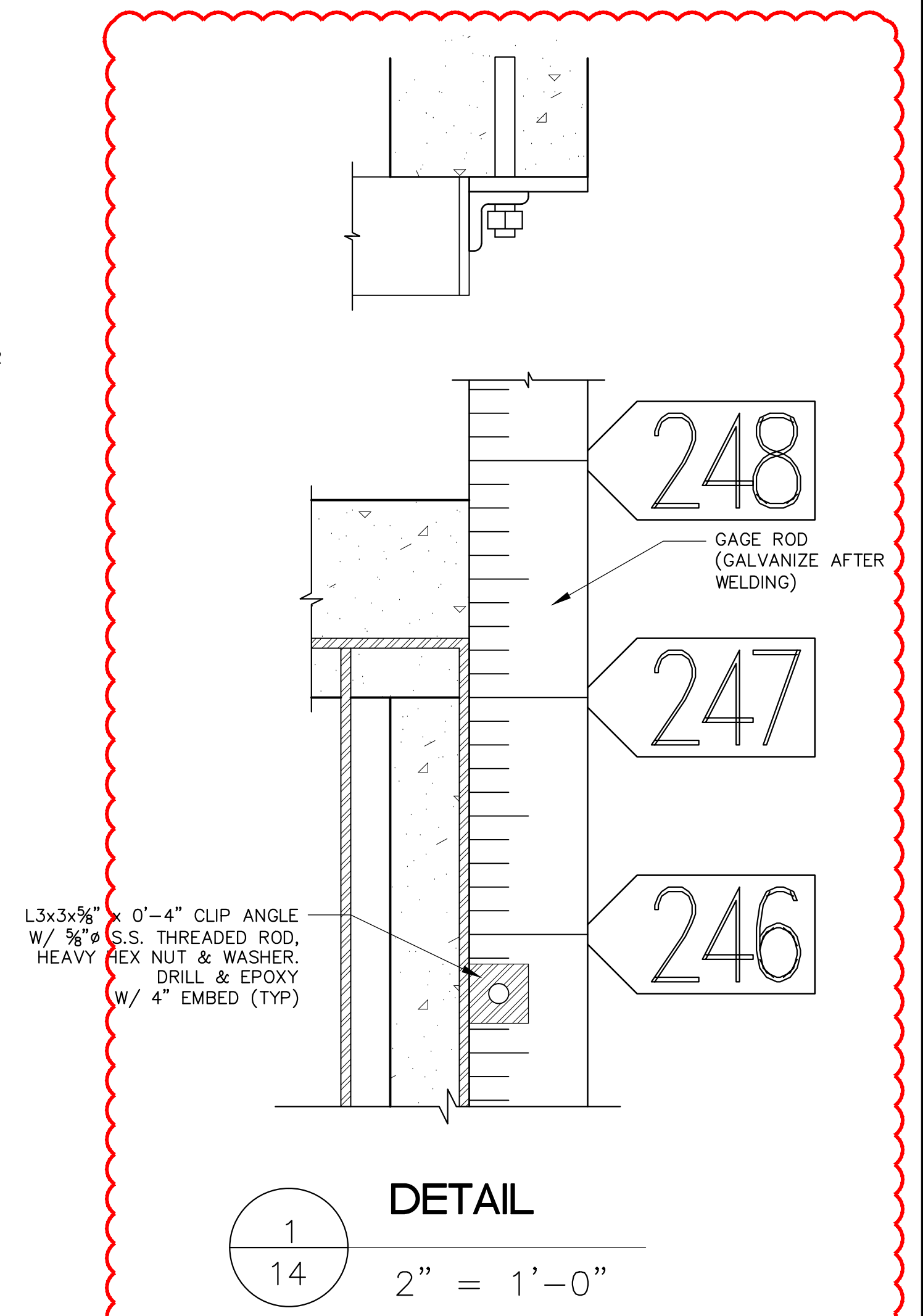
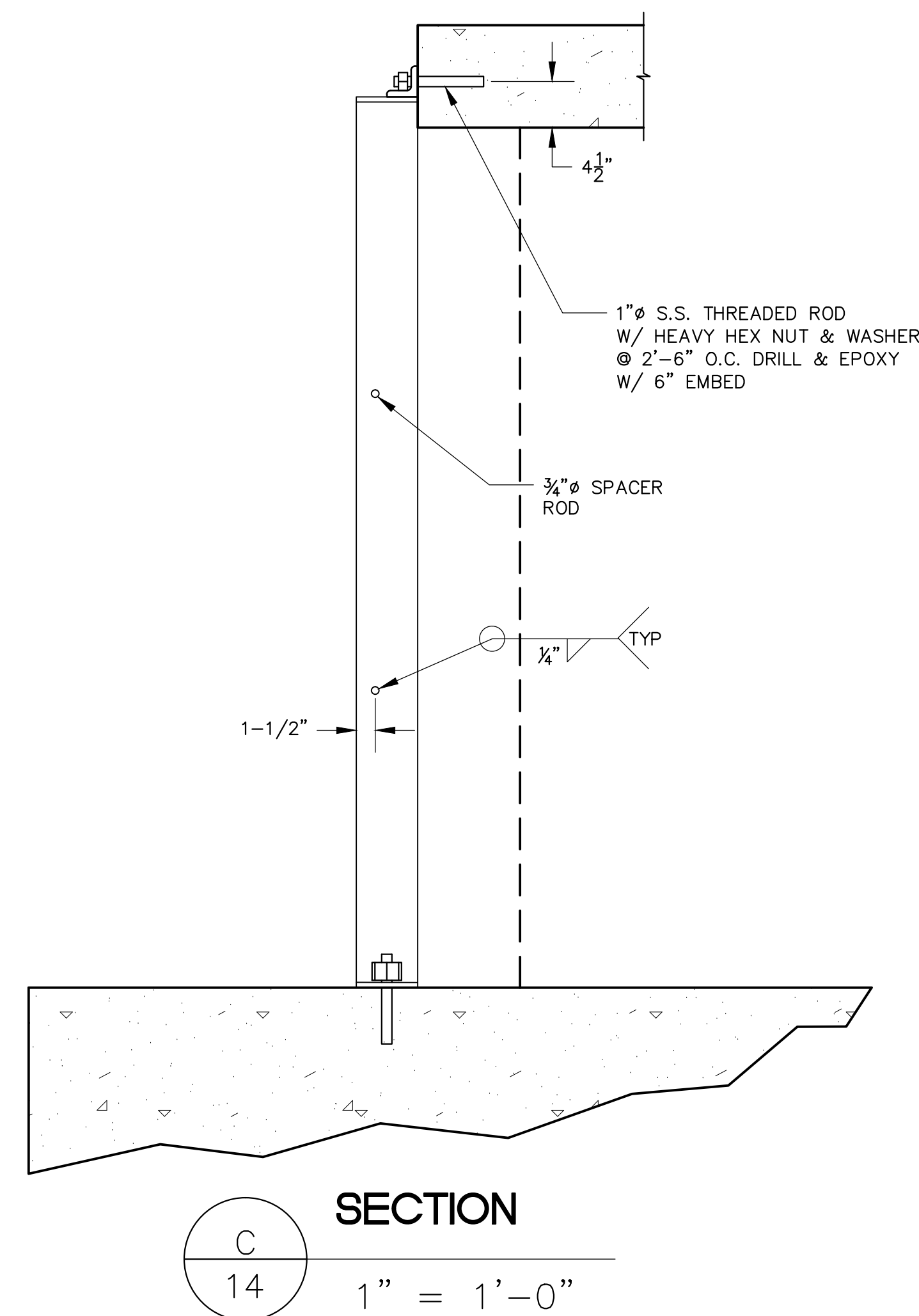
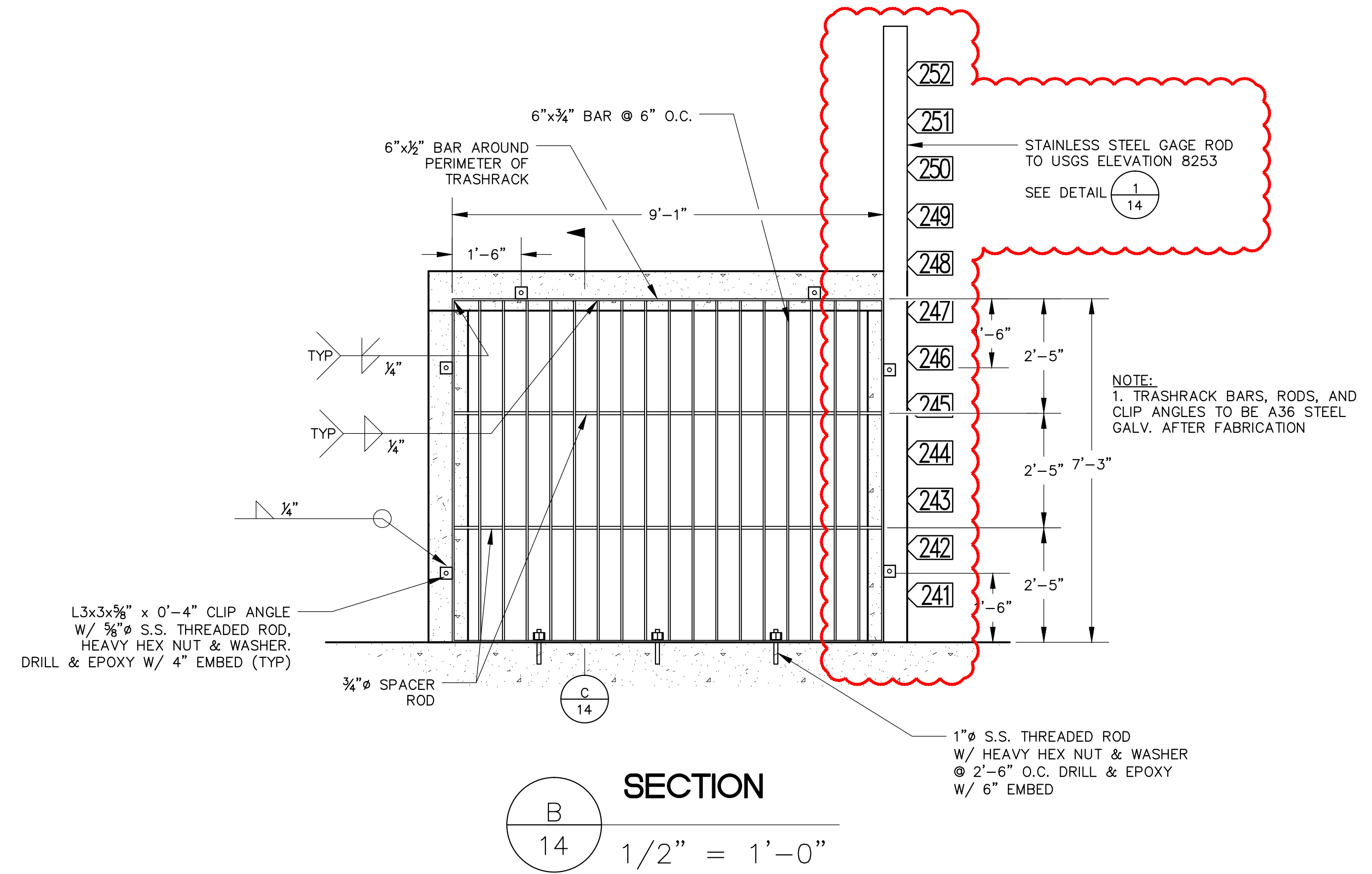
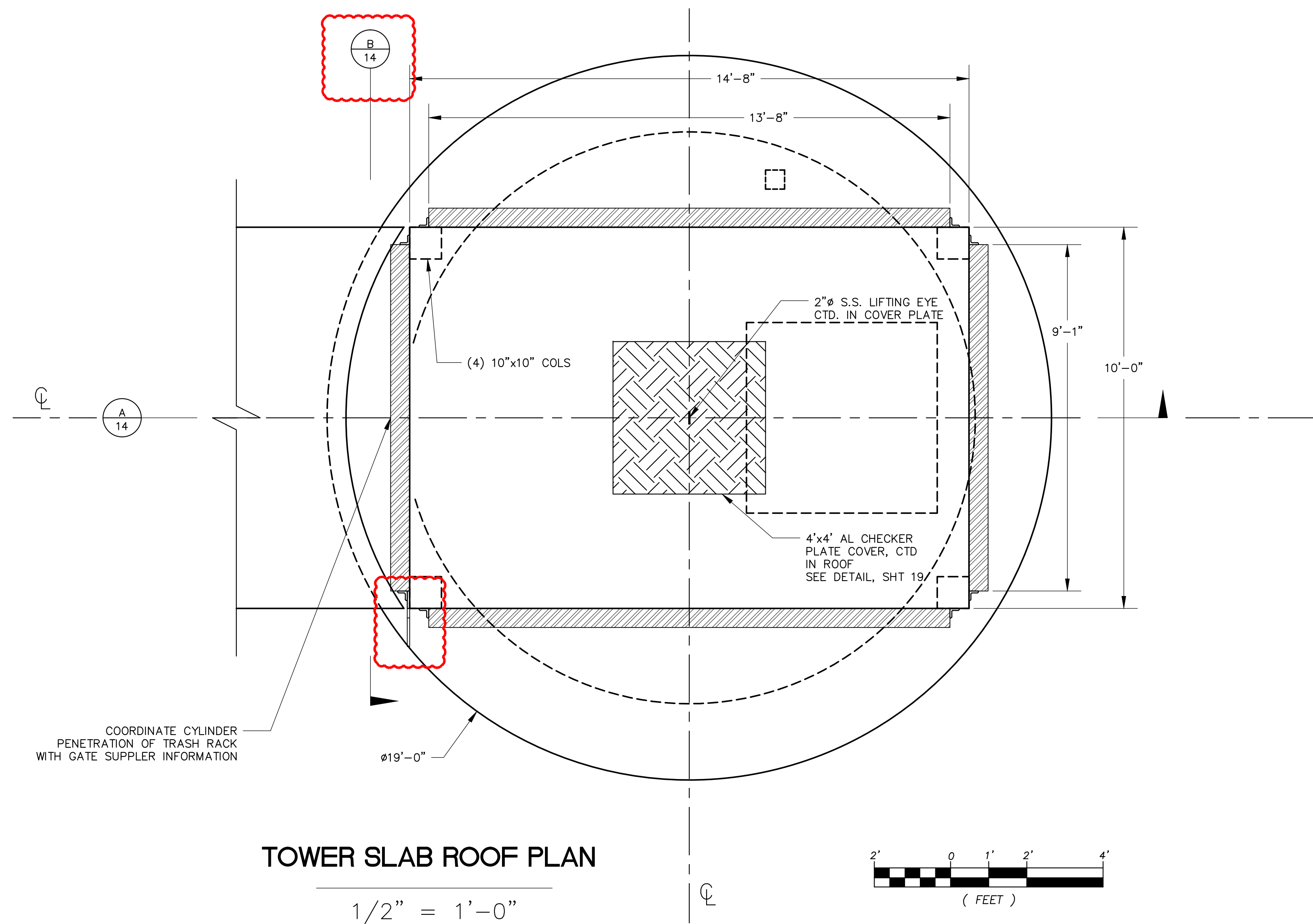
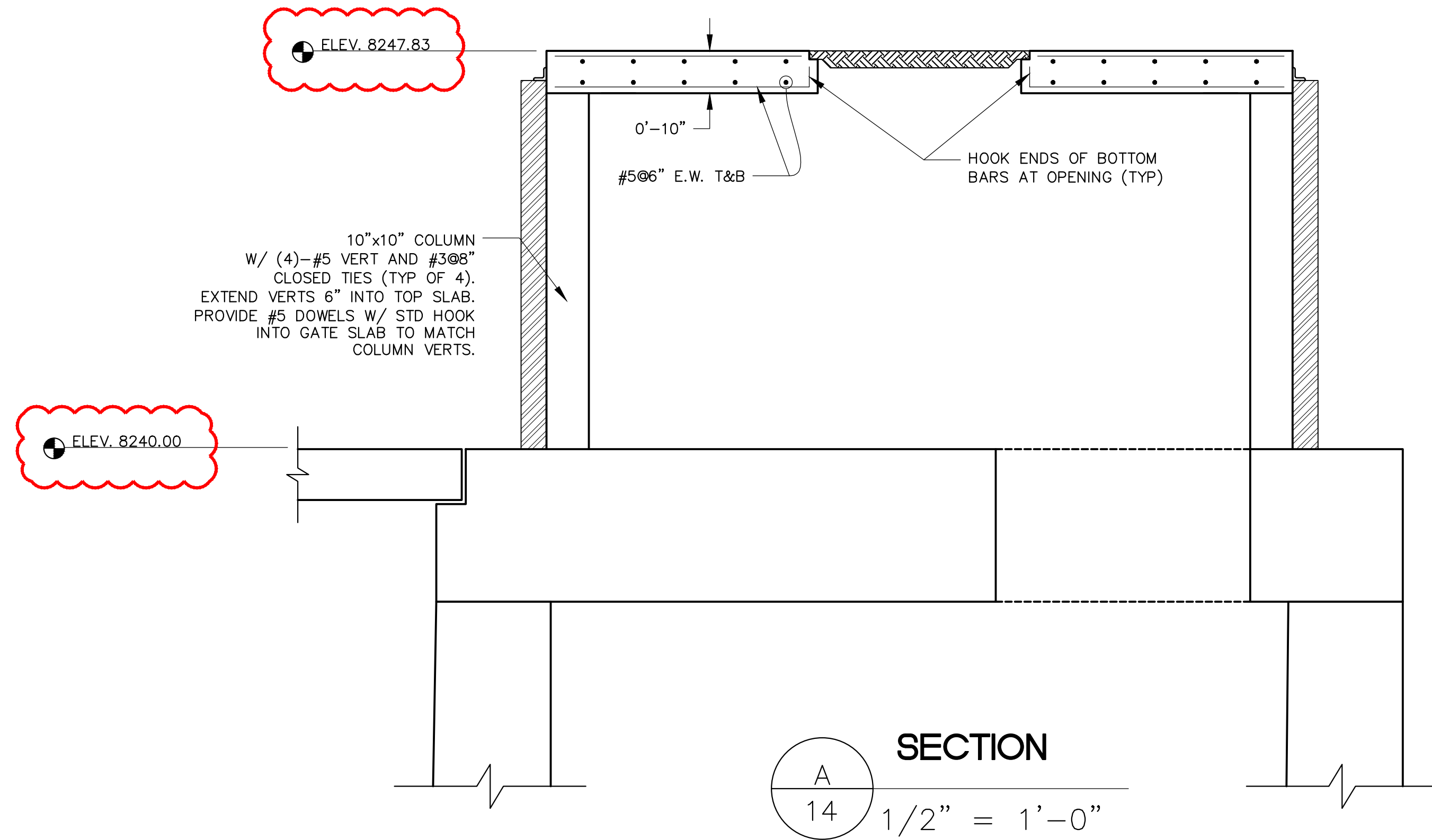
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GRADE BEAM SECTIONS

SCALE VERIFICATION	SHEETS	SHEET
0 1" IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	21	13

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NO.	DATE	REVISION	BY
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2	08-04-14	SEO REVIEW ISSUE	DHS
3	03-20-15	AS-CONSTRUCTED	DHS

DRAWN	TSC	DESIGNED	DHS	DATE	07-11-14
CHECKED		APPROVED		PROJ. NO.	11.028



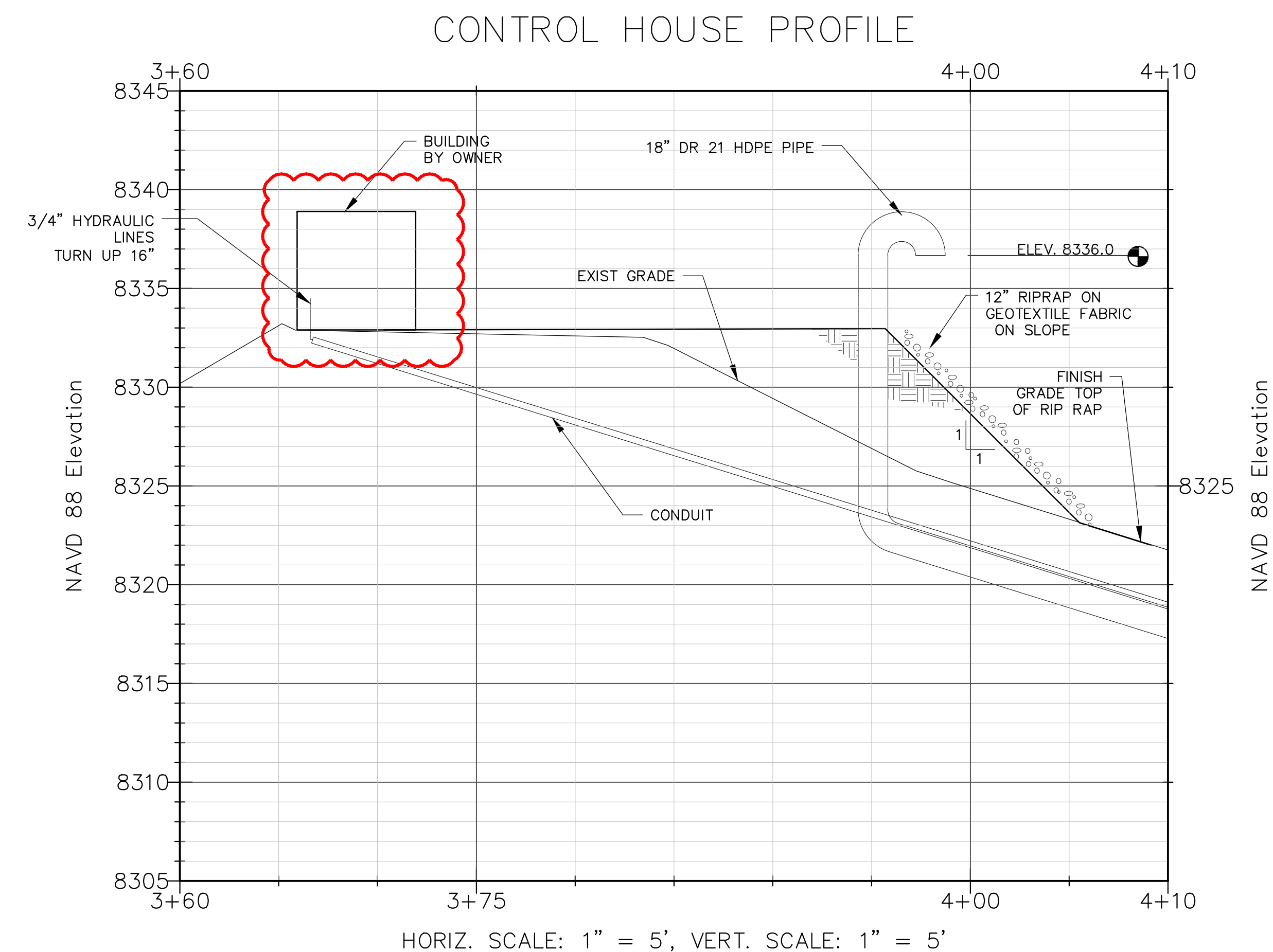
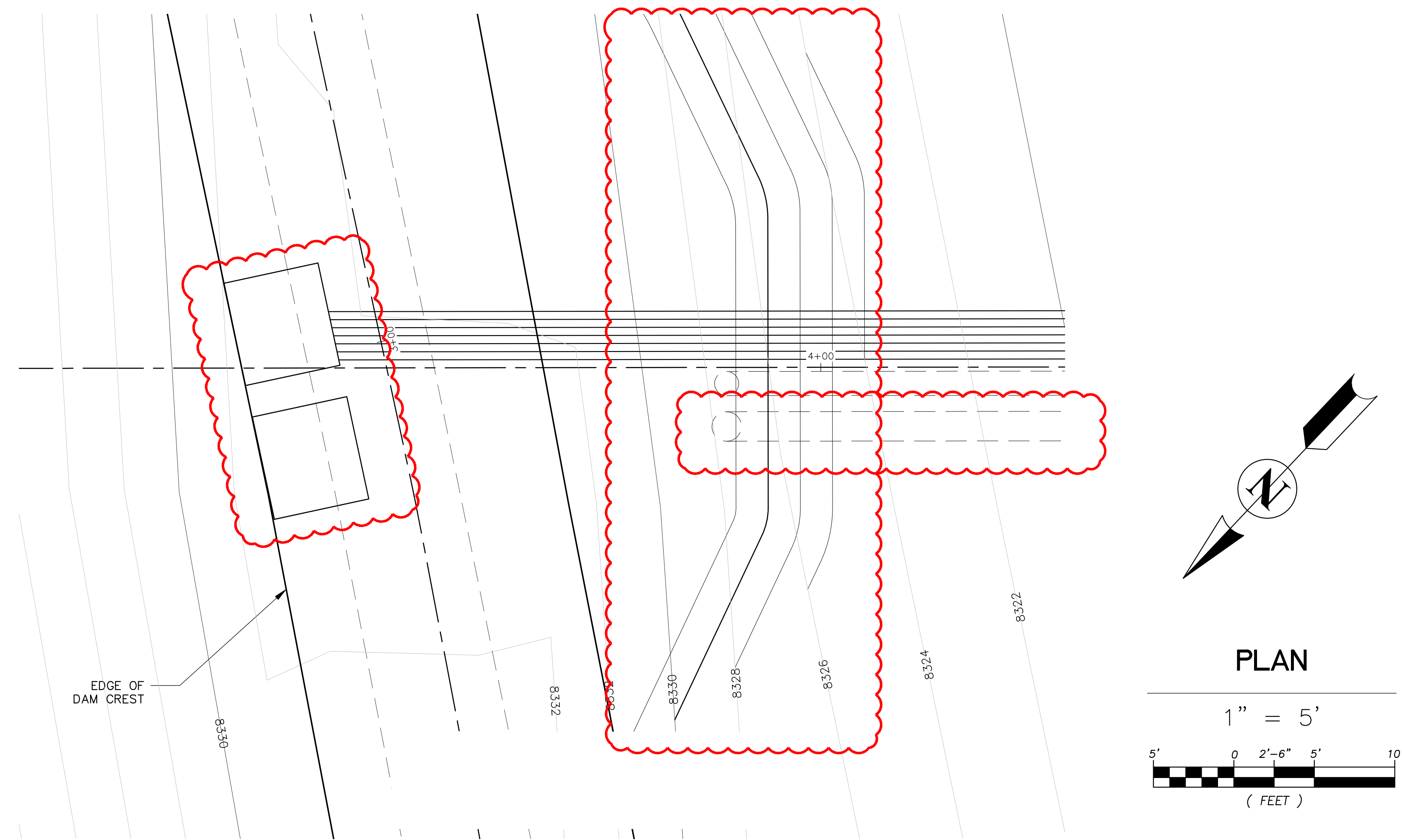
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TRASH RACK DETAILS

SCALE VERIFICATION	SHEETS	SHEET
0 1" IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	21	14

C-0019B



NO.	DATE	REVISION	BY
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DRAWN	TSC	DESIGNED	DHS	DATE	07-11-14
CHECKED		APPROVED		PROJ. NO.	11.028



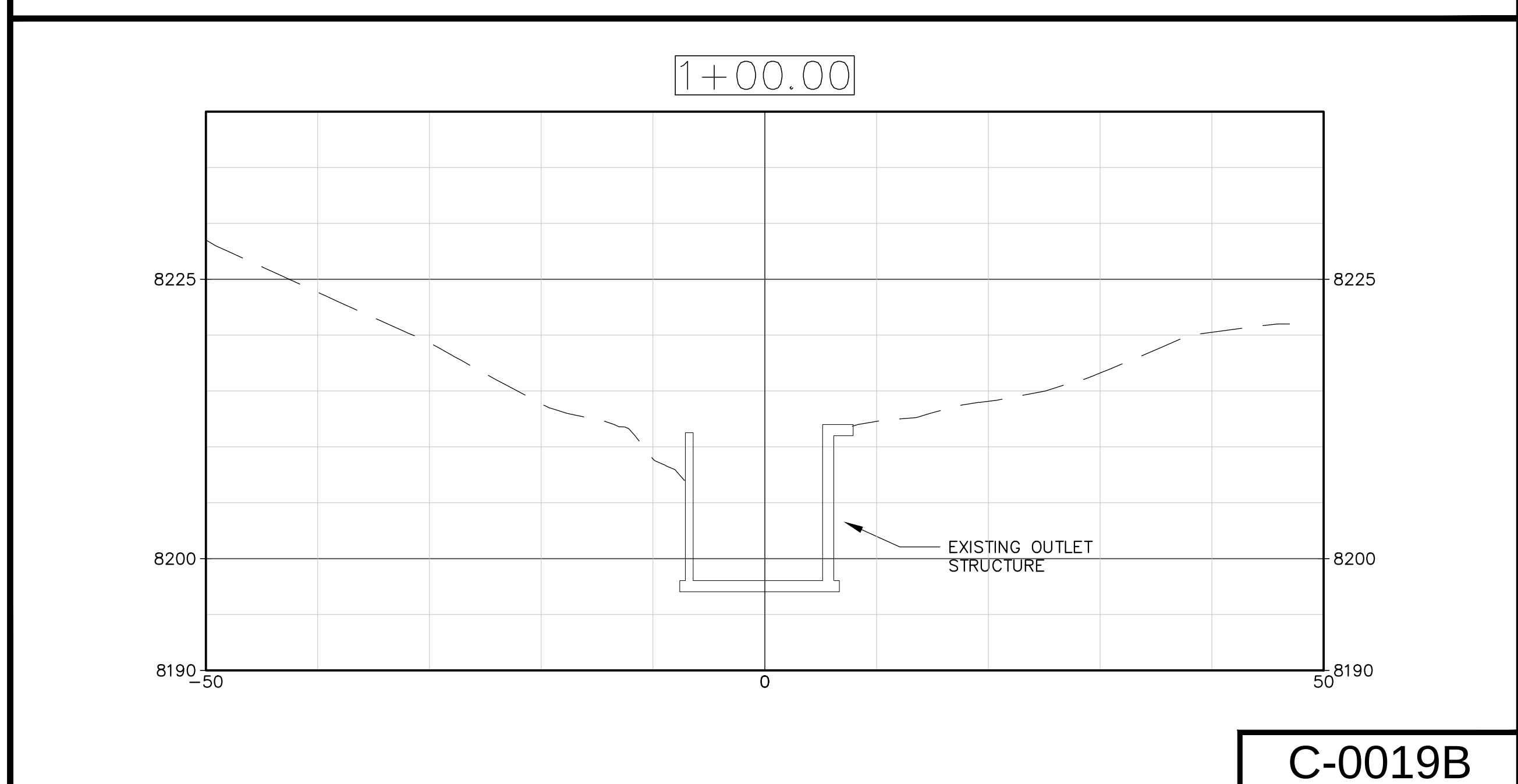
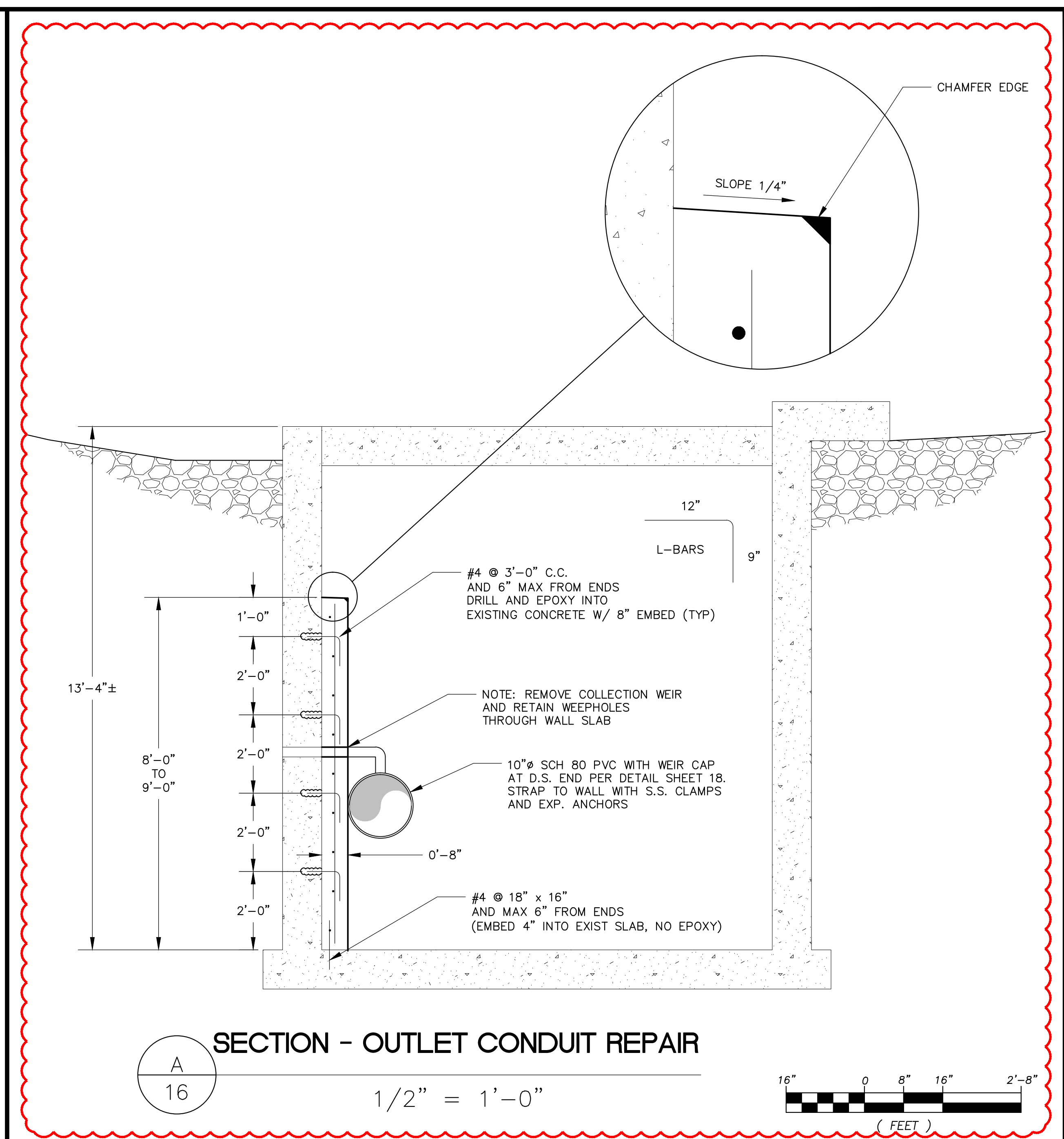
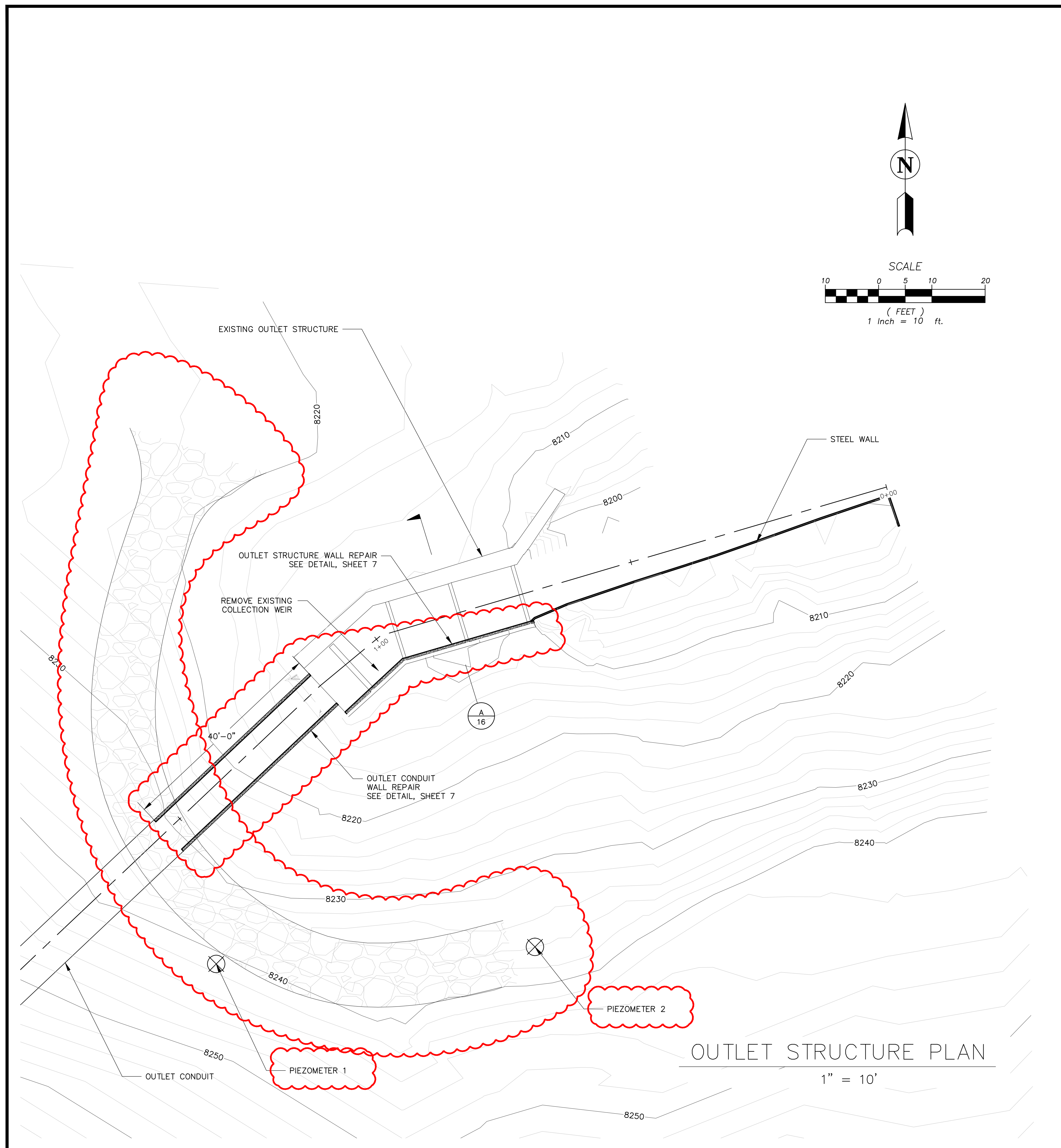
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CONTROL HOUSE DETAILS

SCALE VERIFICATION	SHEETS	SHEET
0 1" IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	21	15

C-0019B



NO.	DATE	REVISION	BY	DRAWN	DESIGNED	CHECKED	DATE	PROJECT
1	07-11-14	REVISED SCOPE	DHS	TSC	DHS		07-11-14	Smith Geotechnical/Engineering Consultants
2	08-04-14	SEO REVIEW ISSUE	DHS					1225 Red Cedar Circle
3	03-20-15	AS-CONSTRUCTED	DHS					Fort Collins, Colorado 80524
SCALE 24x36				1" = 10'	APPROVED		PROJ. NO. 11.028	(970) 490-2620



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EXISTING OUTLET STRUCTURE

SCALE VERIFICATION	SHEETS	SHEET
0 1" IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	21	16

C-0019B

GENERAL STRUCTURAL NOTES:

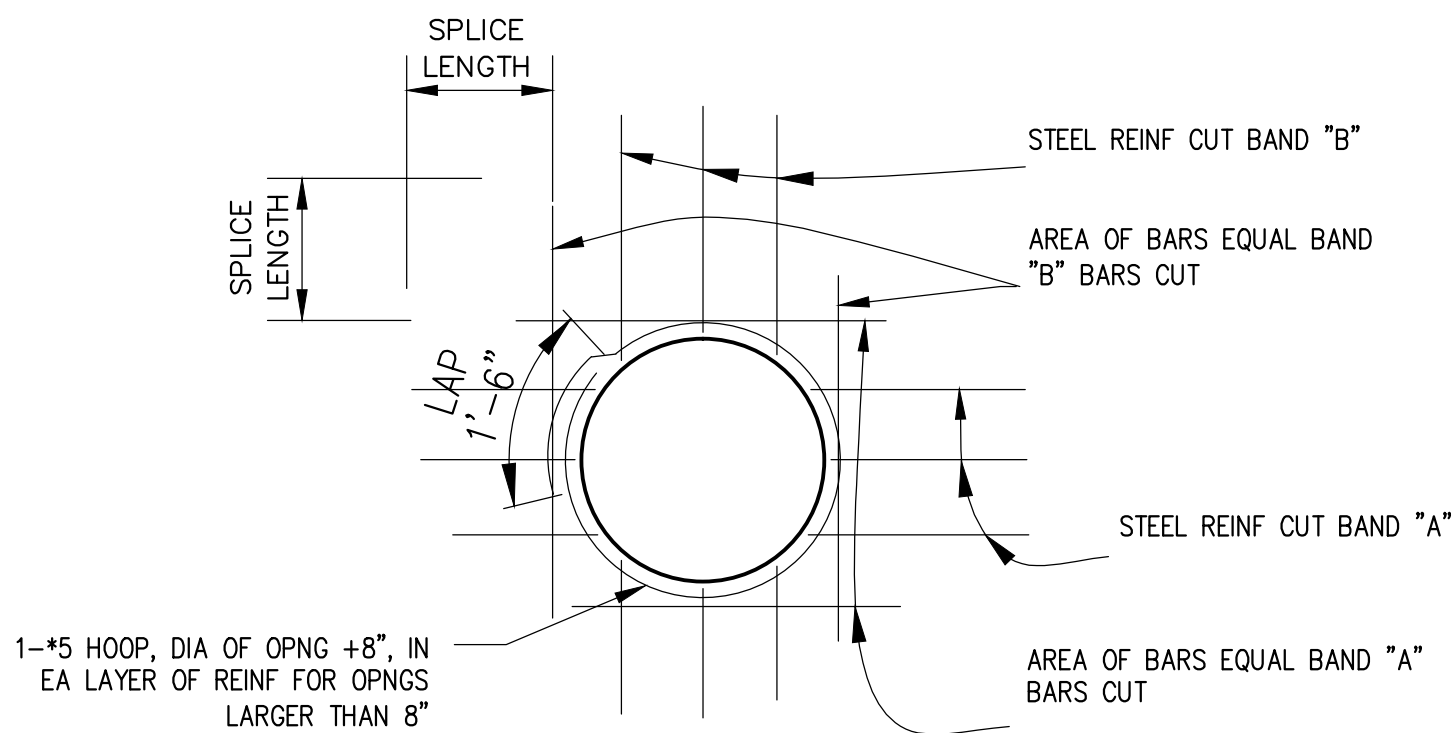
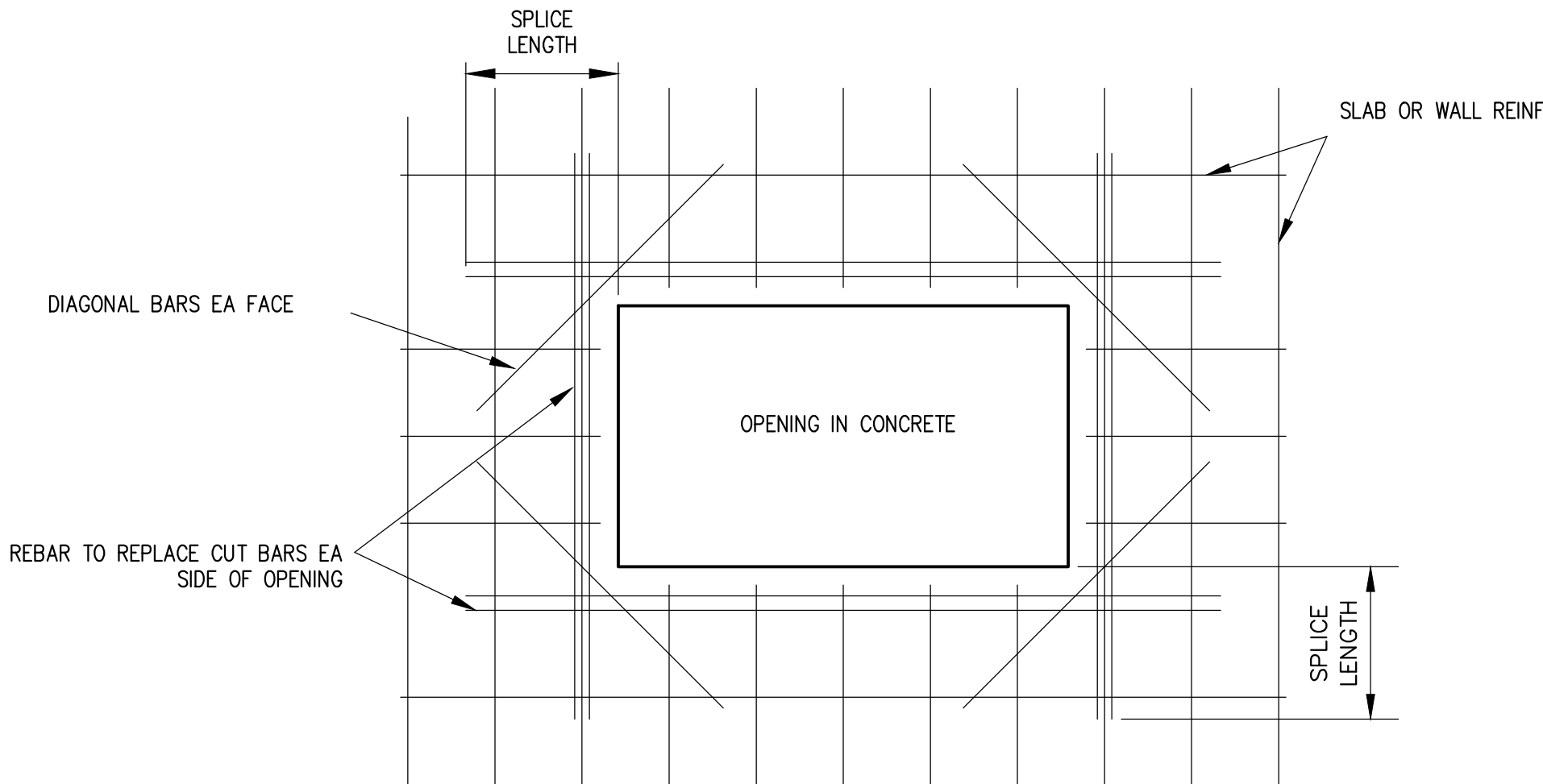
- CLEARANCE FOR REINFORCEMENT BARS, UNLESS SHOWN OTHERWISE, SHALL BE:
 - WHEN PLACED ON GROUND: 3"
 - EXPOSED TO WATER, WEATHER, BACK FILL OR CONDENSATION: 2"
- ALL BENDS, UNLESS OTHERWISE SHOWN, SHALL BE 90° STANDARD HOOK AS DEFINED IN LATEST EDITION OF ACI 318.
- ALL WALL CORNER AND INTERSECTION REINFORCING BARS SHALL BE CONTINUOUS AROUND CORNERS AND THROUGH COLUMNS OR PILASTERS. REINFORCEMENT SHALL BE EXTENDED INTO CONNECTING WALLS AND HOOKED/LAPPED ON THE OPPOSITE FACE OF THE CONNECTING WALL. IN GENERAL, TYPICAL HORIZONTAL WALL REINFORCING IS SHOWN ON EACH FACILITY DWG. WALL CORNER AND INTERSECTION REINFORCING SHALL BE AS ON THE STRUCTURAL DETAILS.
- UNLESS INDICATED OTHERWISE, CONTRACTOR MAY SPLICE SLAB OR WALL BARS AT LOCATIONS OF HIS CHOOSING WITH THE ENGINEER'S APPROVAL, EXCEPT THAT FOR SUSPENDED SLABS, TOP BARS SHALL BE SPLICED AT MID SPAN AND BOTTOM BARS SHALL BE SPLICED AT THIRD POINTS. SPLICE LOCATIONS SHALL BE ALTERNATED OR STAGGERED. ALL REINFORCEMENT, UNLESS OTHERWISE NOTED, SHALL SATISFY THE FOLLOWING REQUIREMENTS:

DETAIL OF WALL AND SLAB REINFORCEMENT – LAP LENGTHS							
BAR SIZE		#5 OR SMALLER	#6	#7	#8	#9	#10
CONCRETE DESIGN STRENGTH		4000 PSI					
GRADE	TOP BAR	24"	29"	42"	48"	60"	74"
	OTHER BAR	19"	22"	33"	37"	46"	57"

- TOP BARS ARE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.
 - TABLE APPLIES TO WALLS AND SLABS WITH 6 INCH MINIMUM CENTER TO CENTER SPACING BETWEEN BARS AND 2 INCH MINIMUM COVER.
 - TABLE DOES NOT APPLY TO BEAMS OR COLUMNS.
- ALL OPENINGS IN CONCRETE WALLS AND SLABS GREATER THAN OR EQUAL TO 8" SHALL BE PROVIDED WITH OPENING REINFORCEMENT PER STANDARD DETAIL.
 - CONCRETE CONSTRUCTION JOINTS SHALL BE CLEAN AND ROUGHENED TO A MINIMUM AMPLITUDE OF 1/4".
 - REFER TO SPECIFICATIONS FOR COMPLETE REQUIREMENTS.

GENERAL STRUCTURAL NOTES

NTS

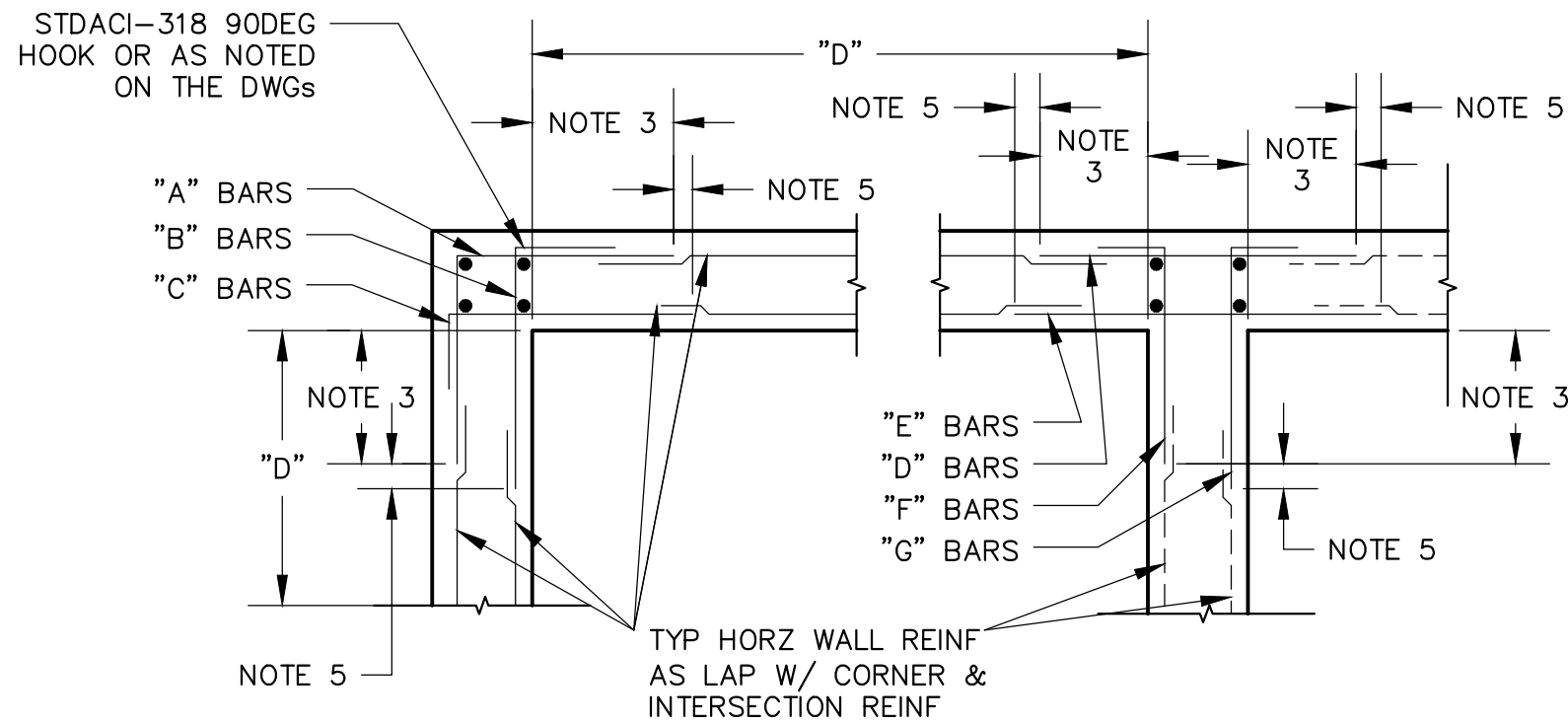


NOTES:

- ALL REBAR CUT BY AN OPENING SHALL BE REPLACED AT ALL SIDES TO PROVIDE THE SAME QUANTITY OF REBAR AS A WALL OR SLAB WITHOUT AN OPENING.
- PLACE 'DIAGONAL' BARS AROUND THE OPENING AT EACH CORNER USING THE LARGEST SIZE REBAR CUT. LENGTH IS TWICE SPLICE LENGTH.

TYPICAL SLAB OPENING DETAILS

NTS

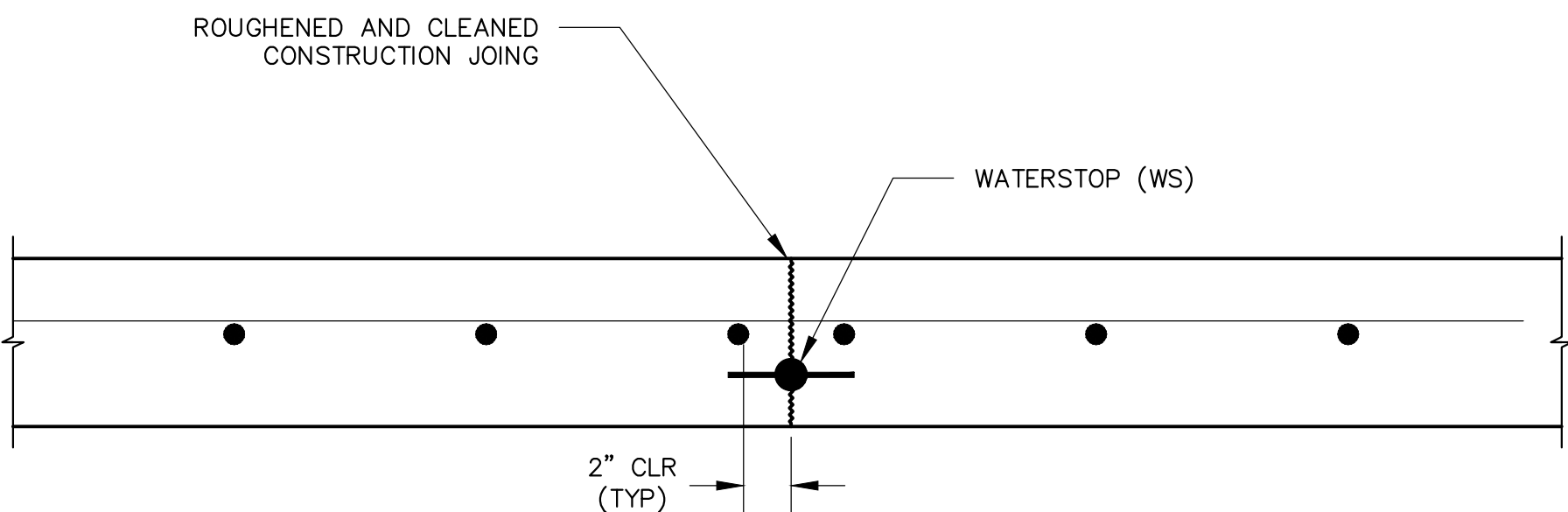


NOTES:

- TYP HORZ WALL CORNER & INTERSECTION REINF LAYOUT IS SHOWN TO AVOID CONGESTION & PERMIT PROPER PLACEMENT. FOR SIZE & SPACING SEE PLANS. ALL HORZ REINF AT CORNERS & INTERSECTIONS SHALL BE FABRICATED & INSTALLED W/ SPLICES LOCATED WHERE SHOWN REGARDLESS OF BAR SIZE AND SPACING.
- WHERE THE CORNER OR INTERSECTION REINF SIZE & SPACING IS NOT SHOWN, NOTED OR TABULATED ON THE PLANS, THE SIZE AND SPACING SHALL BE THE SAME AS THE WALL AS NOTED FOR THE REINF SHOWN ON THE WALL SECTIONS OR AS NOTED FOR THE REINF BETWEEN THE CORNERS OR INTERSECTIONS.
- EXCEPT WHERE OTHERWISE SHOWN ON THE DRAWING THE LENGTH INDICATED AS "NOTE 3" SHALL BE THE LESSER OF D/4, 10", OR 1.0 TIMES THE HEIGHT OF THE WALL, EXCEPT THAT IN NO CASE SHALL IT BE LESS THAN MINIMUM LAP LENGTH.
- D = LENGTH OF WALL PARALLEL TO THE BAR LENGTH IN QUESTION.
- EXCEPT WHERE OTHERWISE SHOWN ON THE DRAWINGS THE LENGTH INDICATED AS "NOTE 5" SHALL BE EQUAL TO ONE "LAP LENGTH". USE THE LAP LENGTH AS REQUIRED FOR THE SMALLER OF THE TWO REINFORCING BARS BEING SPLICED.
- UNLESS OTHERWISE NOTED, "B" & "C" BARS ARE THE SAME SIZE & SPACING &, "F" & "G" BARS THE SAME SIZE & SPACING.

TYPICAL CORNER/INTERSECTION REINFORCEMENT

NTS

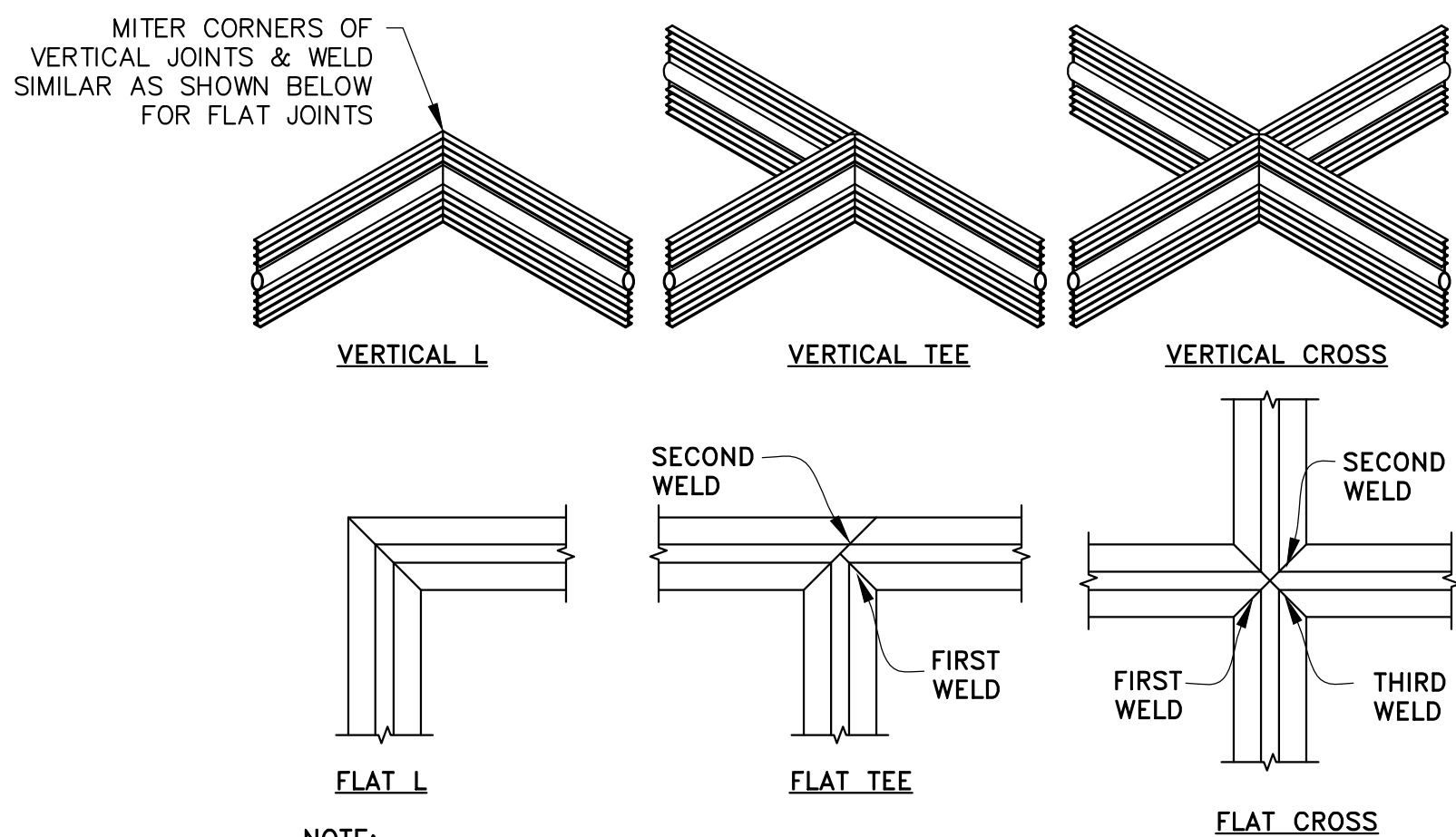


NOTE:

- ALL REINFORCING CONTINUOUS ACROSS JOINT.

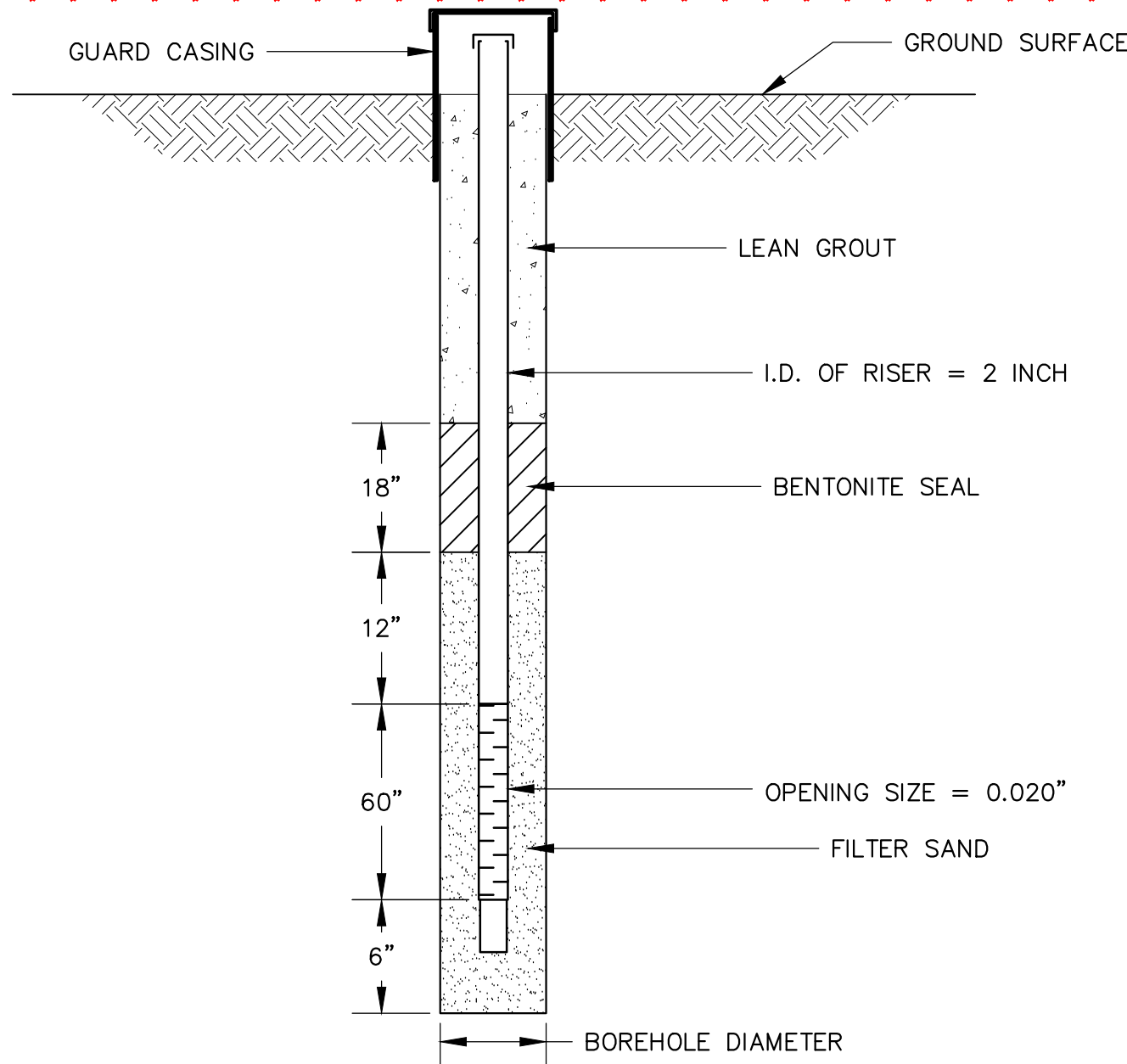
TYPICAL CONSTRUCTION JOINT (CJ)

NTS



TYPICAL WATERSTOP DETAILS

NTS



PIEZOMETER DETAIL

NTS

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DRAWN	TSC	DESIGNED	DHS	DATE	07-11-14
SCALE	24x36	NTS	APPROVED	PROJ. NO.	11.028



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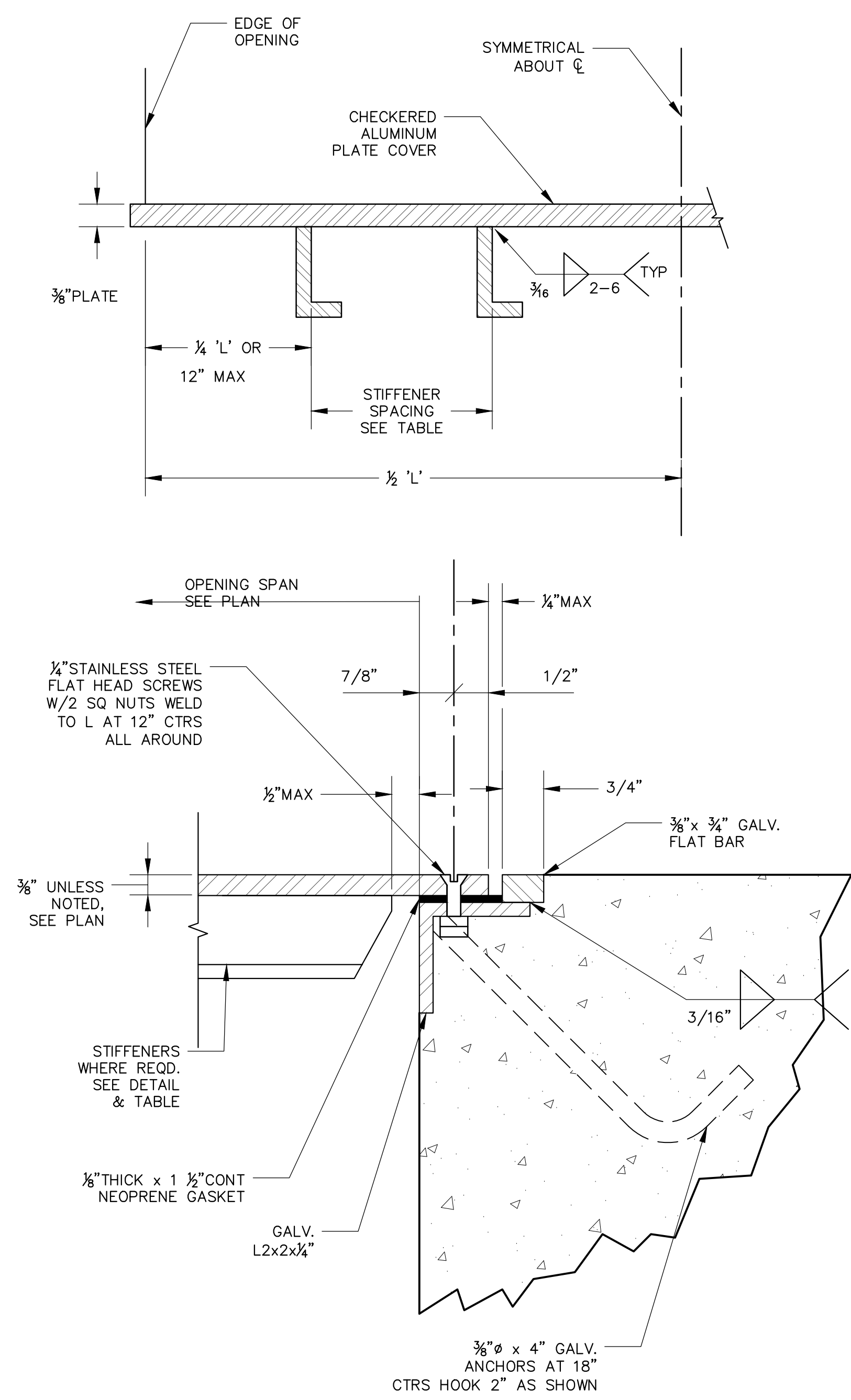
SANCHEZ RESERVOIR
SANCHEZ DITCH AND RESERVOIR CO.

STRUCTURAL NOTES & DETAILS

SCALE VERIFICATION
0 1"
IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SHEETS	SHEET
21	17

C-0019B

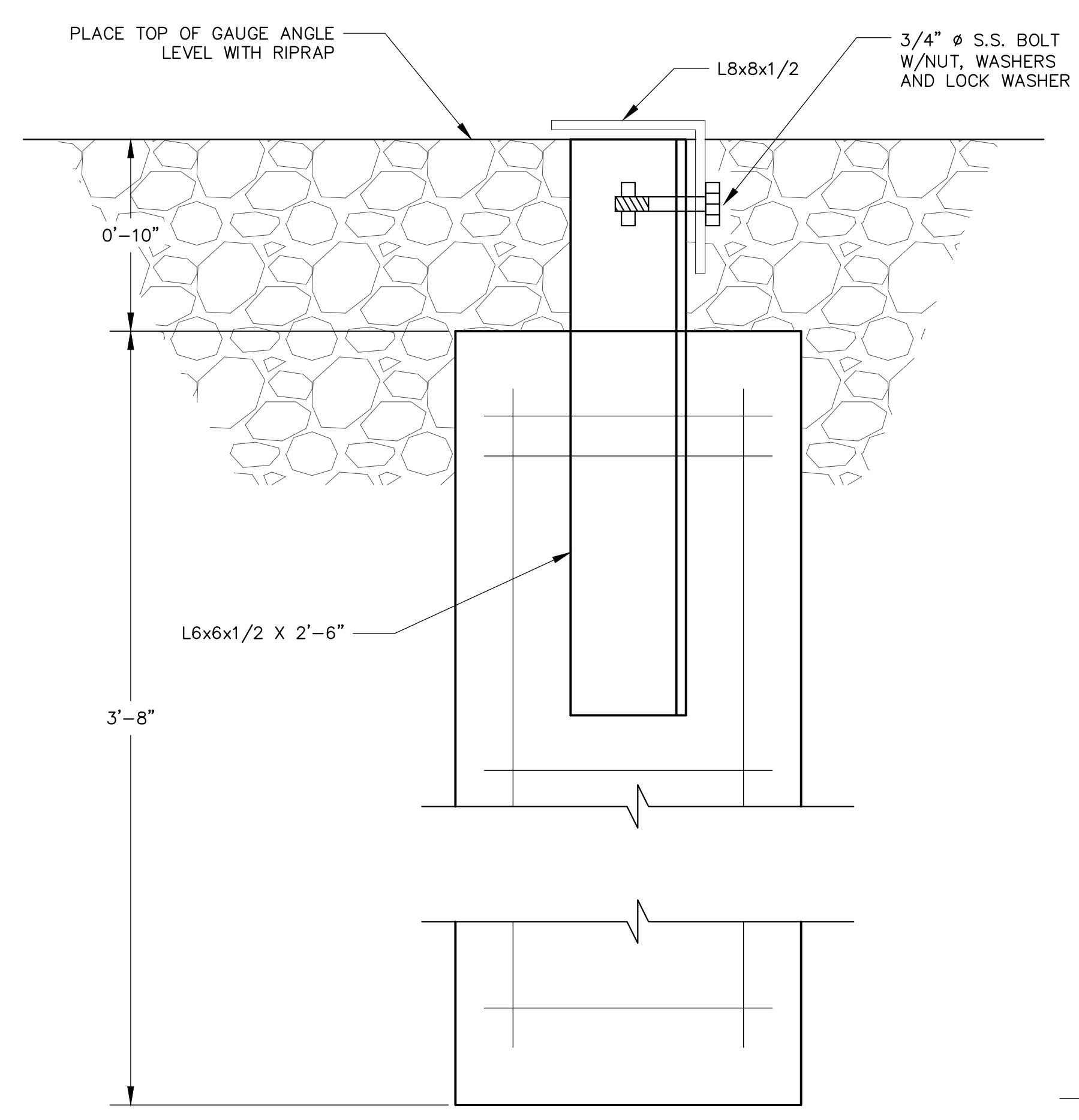


- NOTES:
1. STIFFENERS TO BE PLACED LONG LEG VERTICAL.
 2. STIFFENER TO BE PARALLEL TO THE SHORT EDGE OF OPENING.
 3. MAXIMUM ALLOWABLE UNIFORM DESIGN LOAD = 300psf

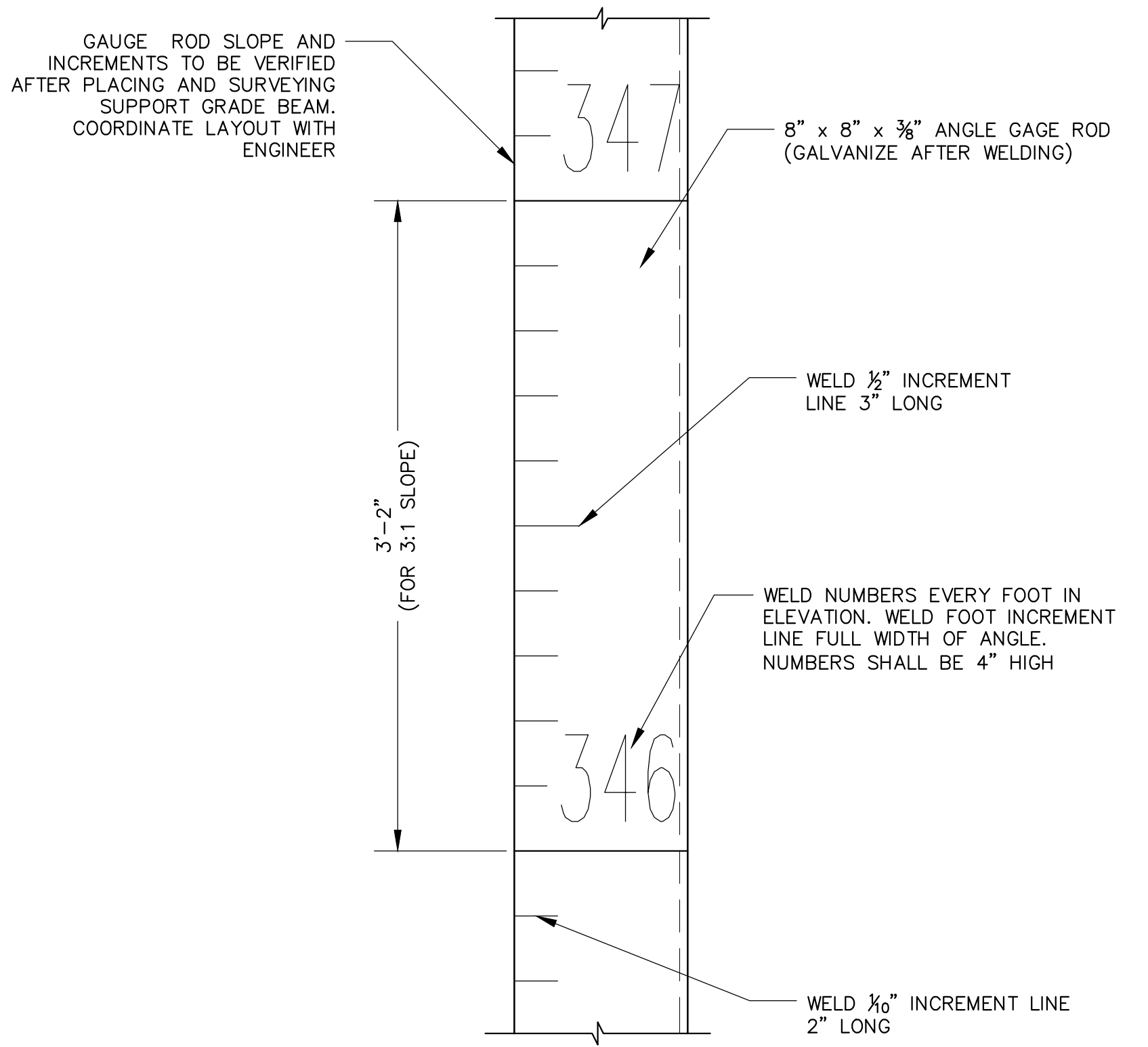
TABLE		
SHORT SPANS	STIFFENER SIZES	MAX SPACING
3'-0"	L2x1½x¼	1'-6"
3'-6"	L2x1½x¼	1'-6"
4'-0"	L2x1½x¼	1'-3"
4'-6"	L2½x1½x¼	1'-6"
5'-0"	L2½x1½x¼	1'-3"

- NOTES:
1. COVER PLATES AND STIFFENERS ARE ALUMINUM PLATES AND ANGLES.
 2. COVER PLATES WILL HAVE 4 LIFTING EYES AT CORNERS.
 3. GALVANIZE FRAME ASSEMBLY AFTER FABRICATION

CHECKERED PLATE DETAIL
NTS



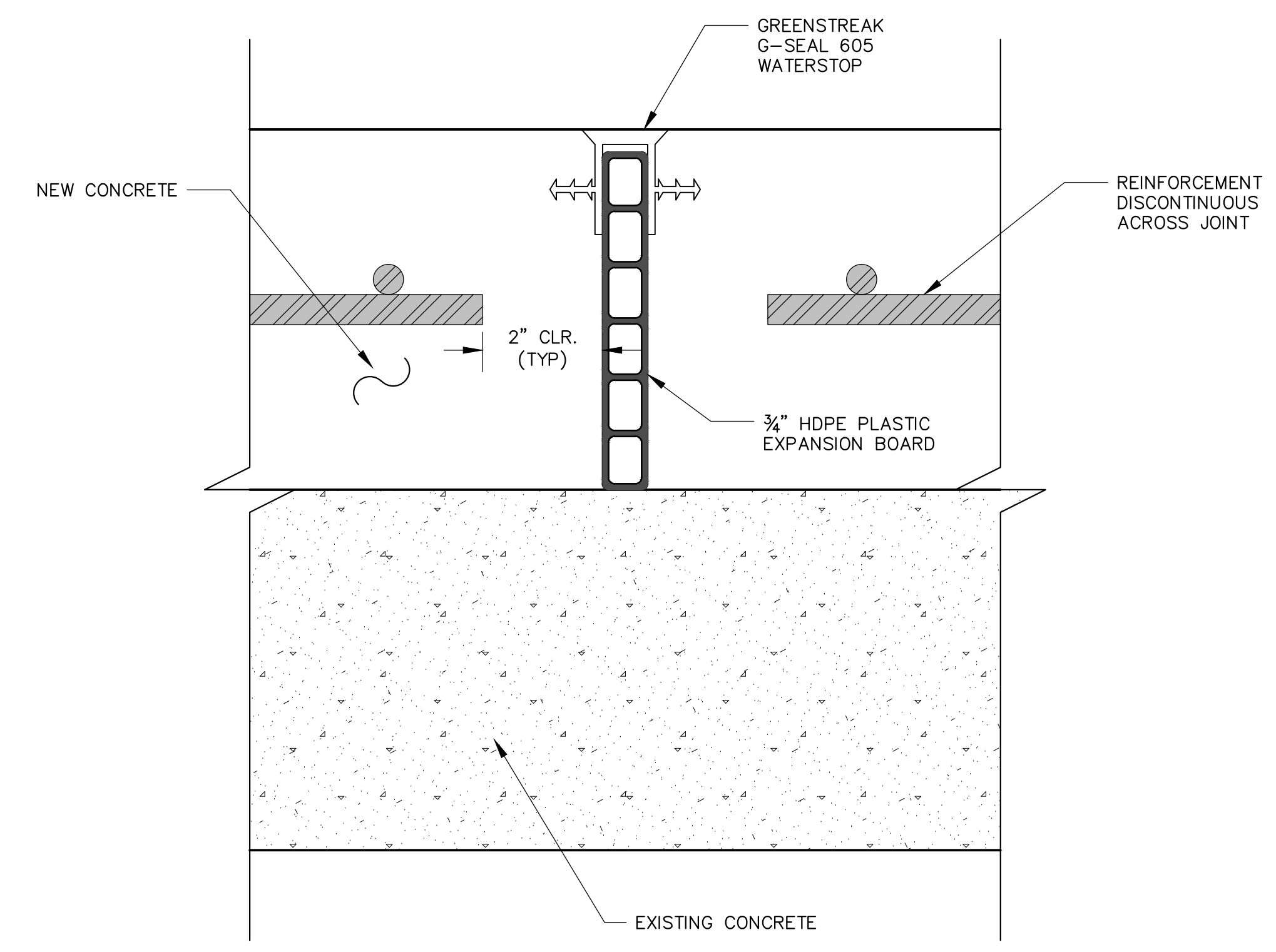
STAFF GAUGE DETAIL
NTS



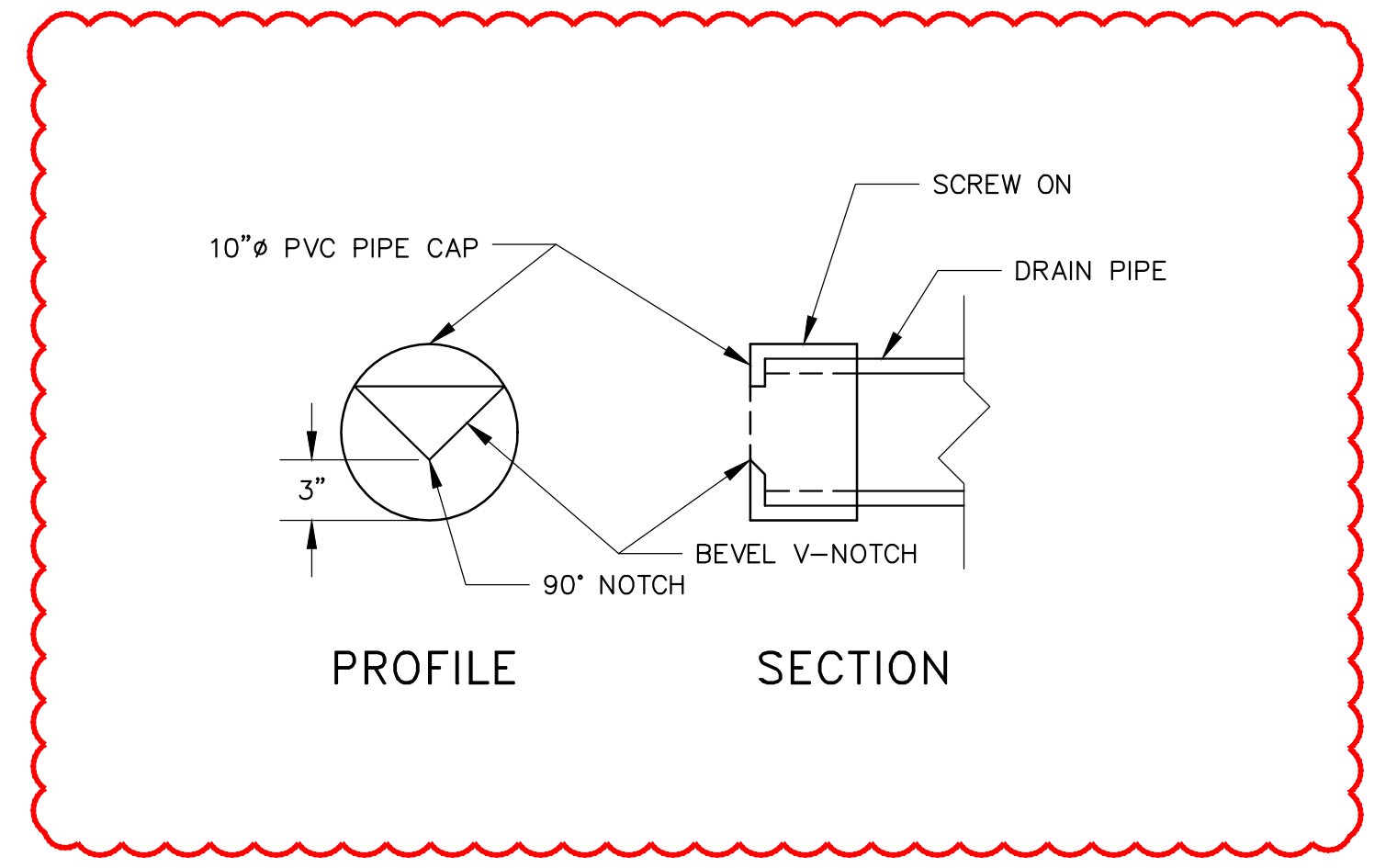
- NOTES:
1. NUMBERING ON GAGE ROD SHOULD CORRELATE TO GAGE HEIGHT
 2. GAGE ROD FROM GH 45.0 TO GH 115.0
 3. GALVANIZE ALL COMPONENTS AFTER FABRICATION.

PROFILE SECTION

V-NOTCH WEIR CAP DETAIL
NTS



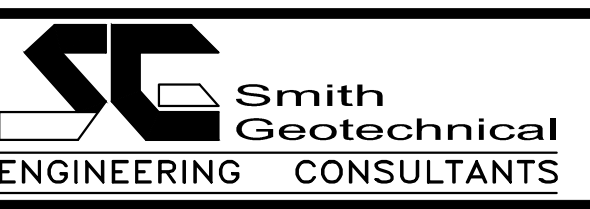
CONDUIT EXPANSION JOINT (EJ)
NTS



V-NOTCH WEIR CAP DETAIL
NTS

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2	11-13-14	SEO REVISIONS	DHS
3	03-20-15	AS-CONSTRUCTED	DHS

DRAWN	TSC	DESIGNED	DHS	DATE	07-11-14
SCALE	24x36	APPROVED		PROJ. NO.	11.028



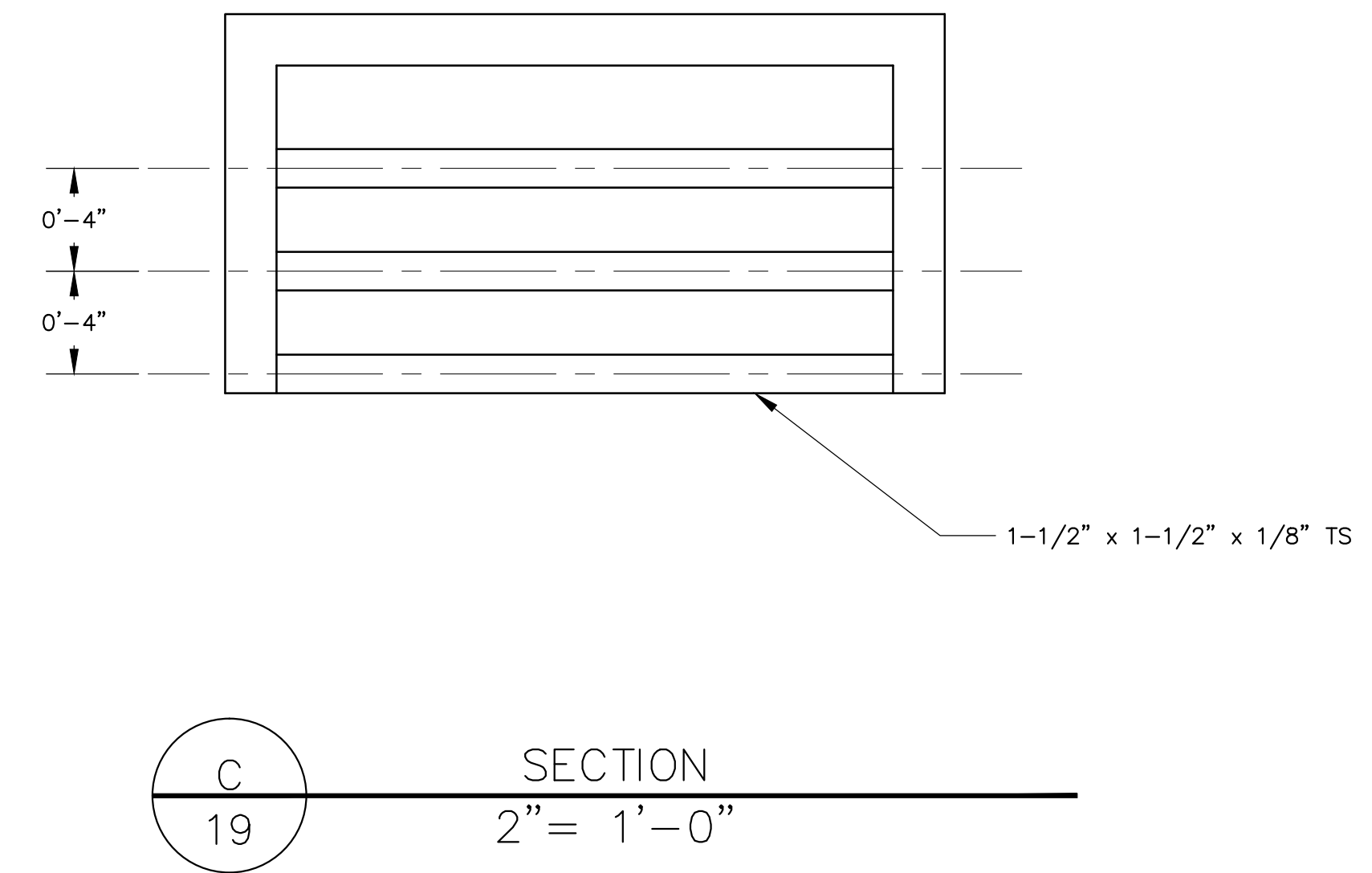
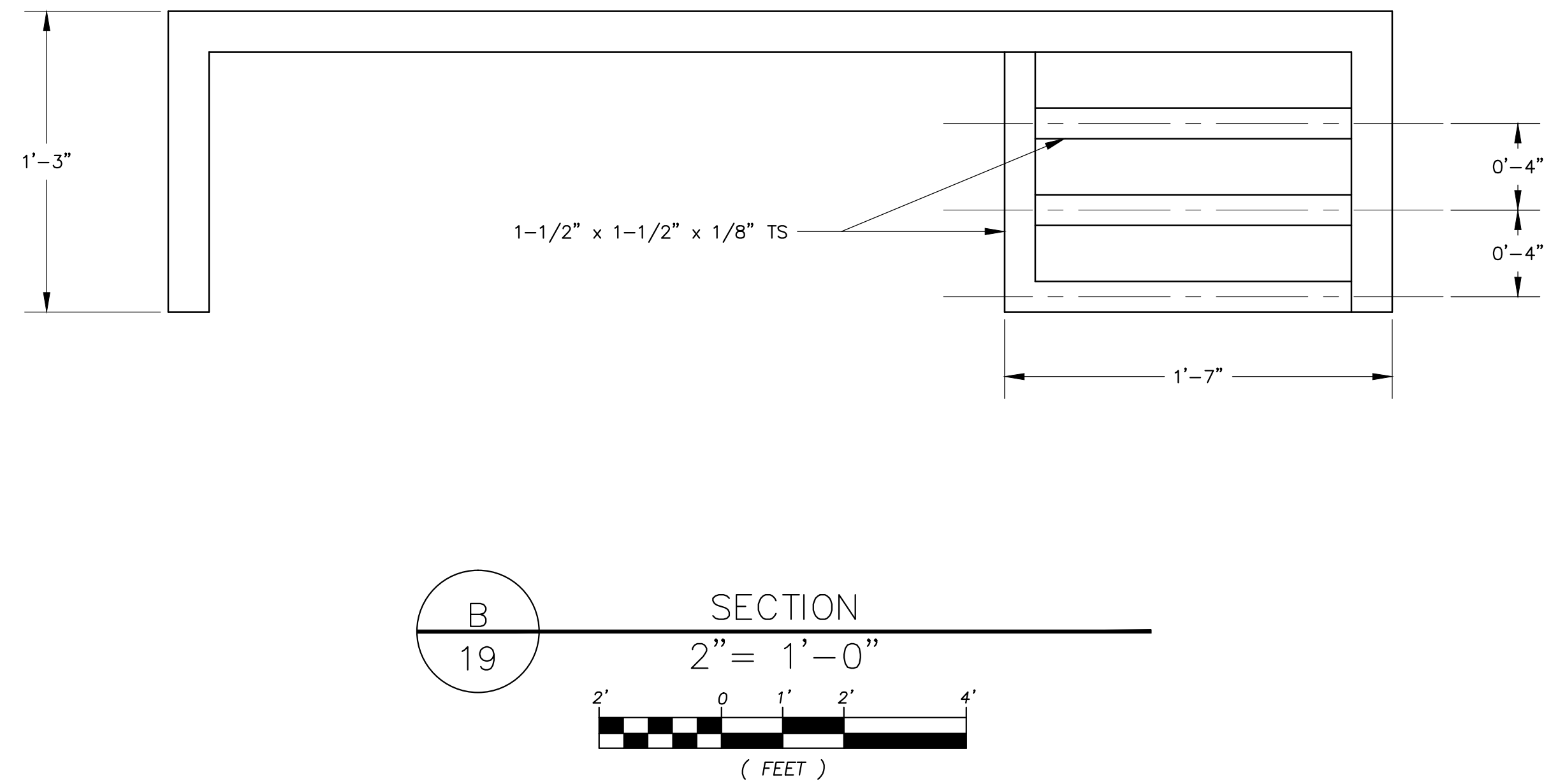
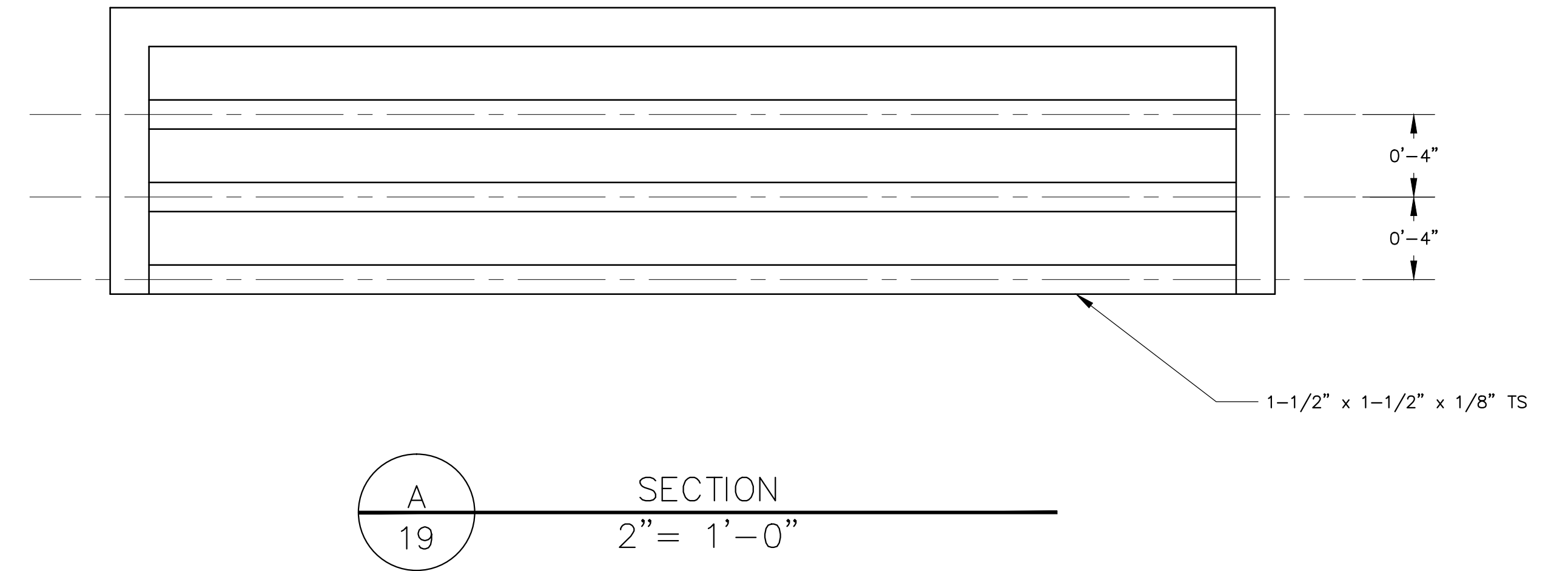
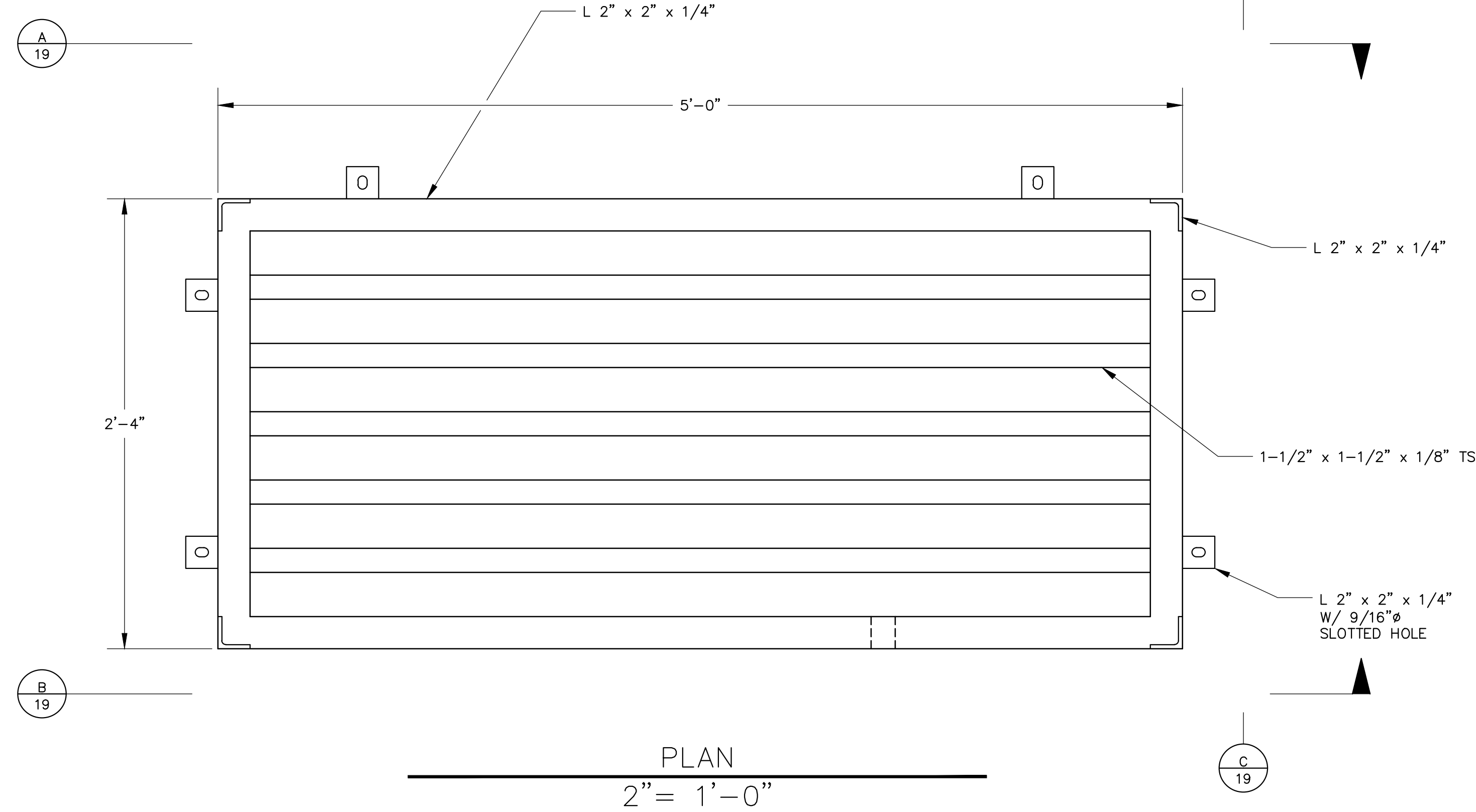
Smith Geotechnical/Engineering Consultants
1225 Red Cedar Circle
Fort Collins, Colorado 80524
(970) 490-2620

SANCHEZ RESERVOIR
SANCHEZ DITCH AND RESERVOIR CO.

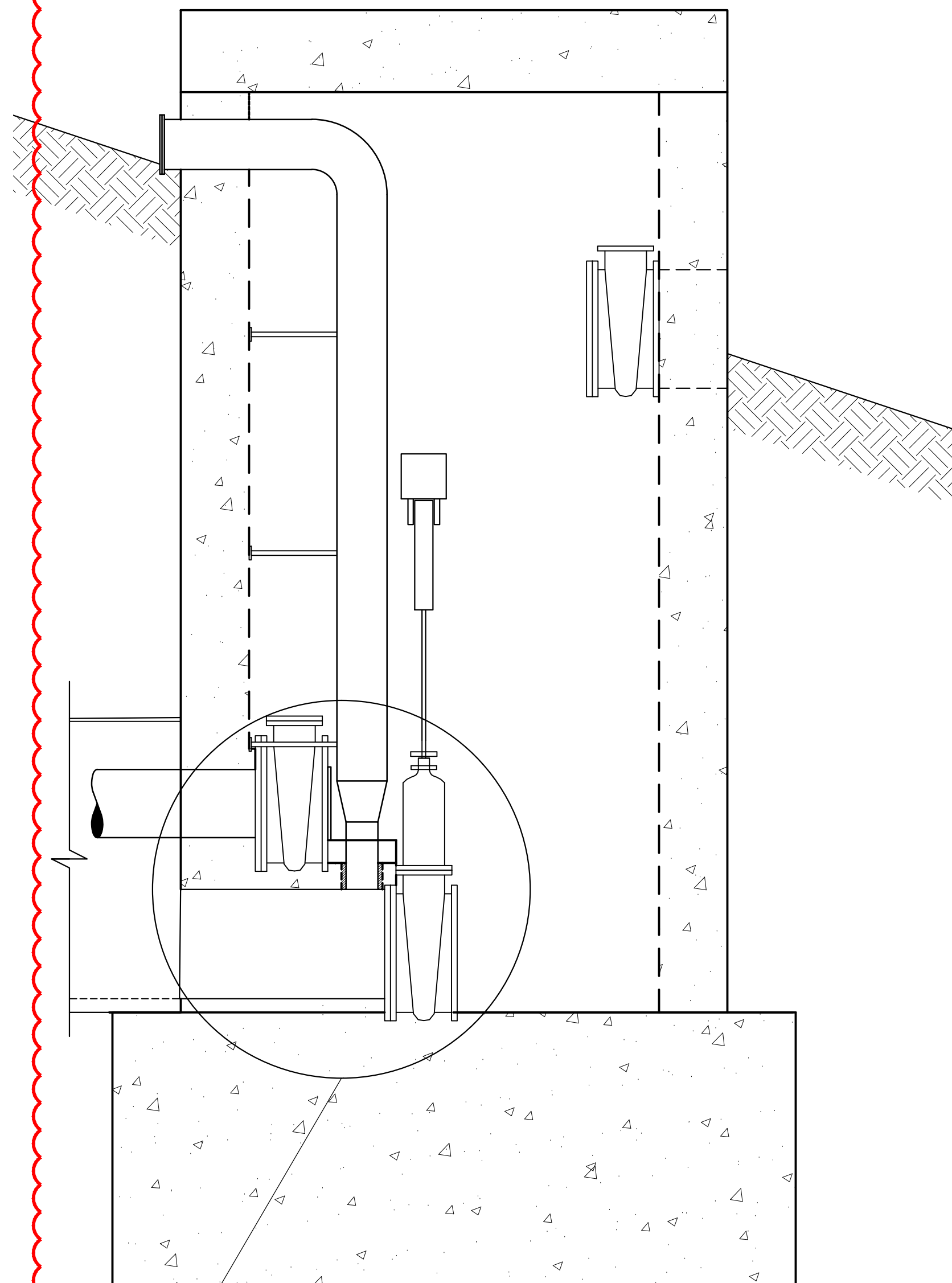
GENERAL DETAILS

SCALE VERIFICATION	SHEETS	SHEET
0 1" IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	21	18

C-0019B



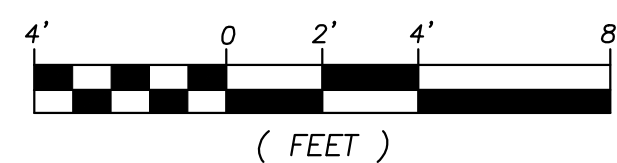
A
20



C
20

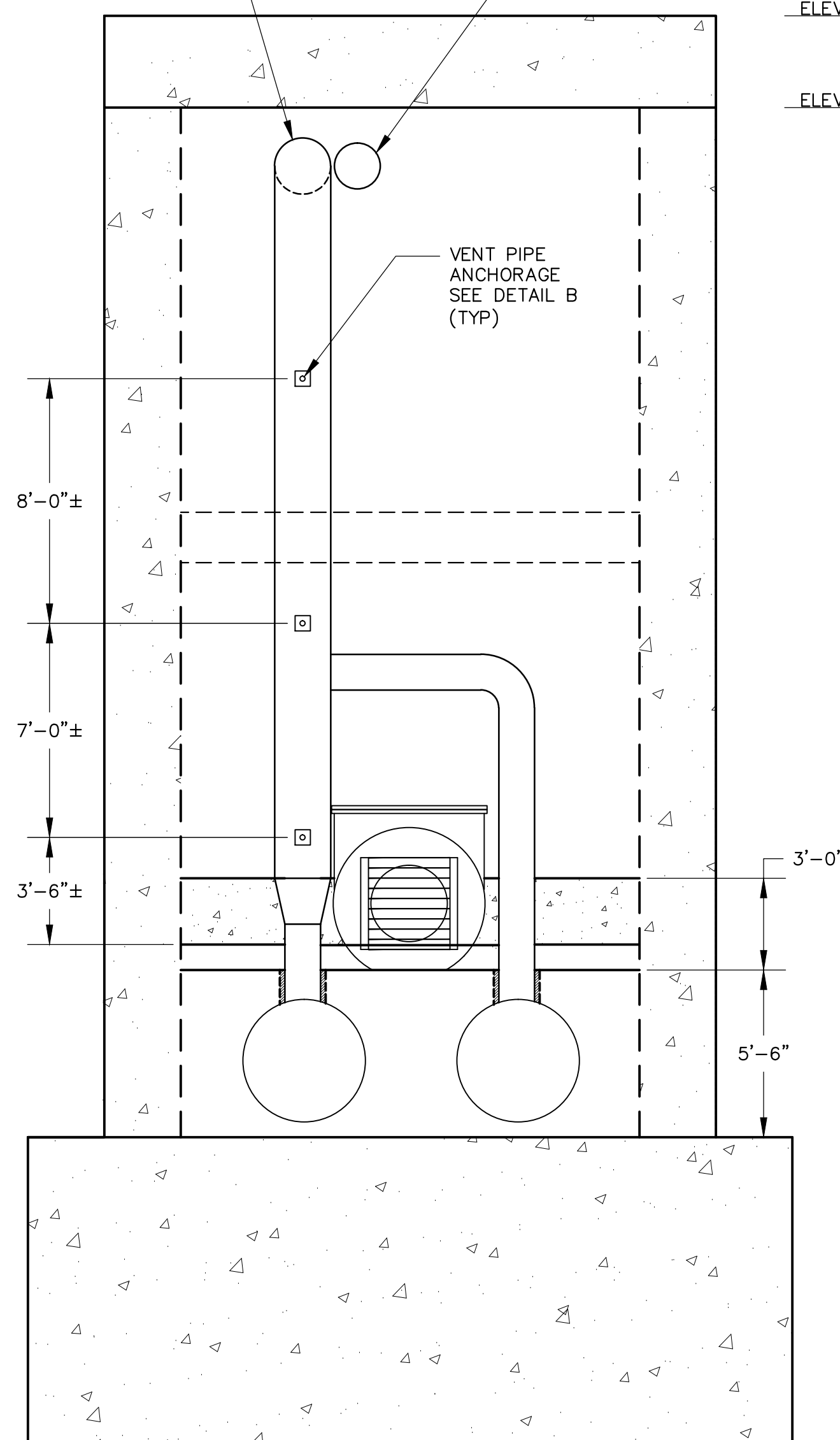
DETAIL — VENT PIPE

1/4" = 1'



(FEET)

22" STEEL VENT PIPE
18" HDPE VENT PIPE



ELEV. 8240.0

ELEV. 8237.0

VENT PIPE ANCHORAGE
SEE DETAIL B
(TYP)

8'-0"±
7'-0"±
3'-6"±

3'-0"

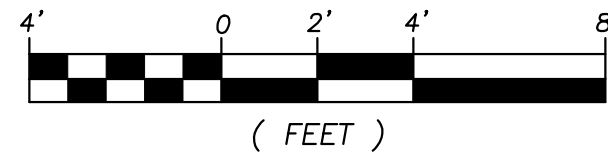
5'-6"

ELEV. 8203.33

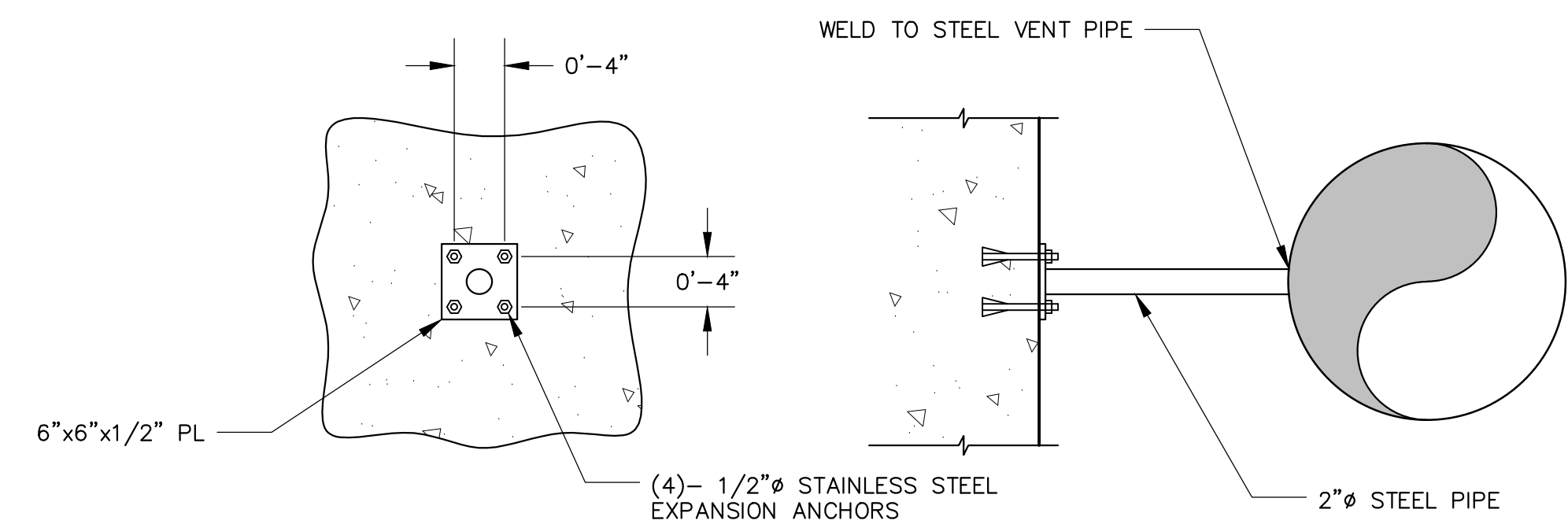
A
20

DETAIL — VENT PIPE

1/4" = 1'



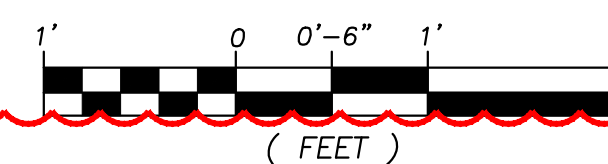
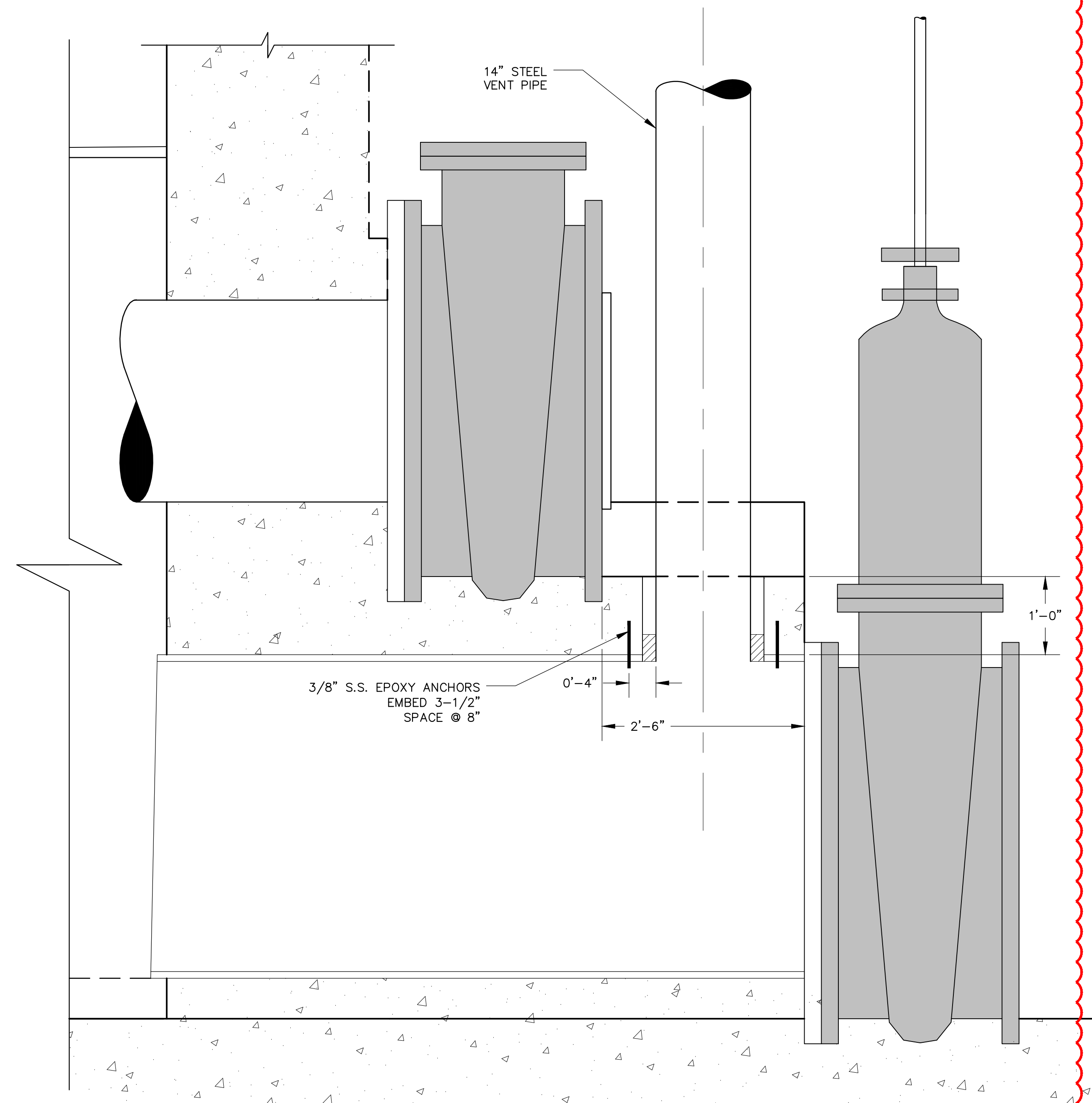
(FEET)



B
20

DETAIL — VENT PIPE ANCHORAGE

NTS



(FEET)

C
20

DETAIL — VENT PIPE PENETRATION

NO.	DATE	REVISION	BY
1	11-21-14	SEO REVISIONS	DHS
2	03-20-15	AS-CONSTRUCTED	DHS

DRAWN TSC
SCALE 24x36

DESIGNED DHS
CHECKED
APPROVED

DATE 07-21-14
PROJ. NO. 11.028

SC Smith Geotechnical
ENGINEERING CONSULTANTS

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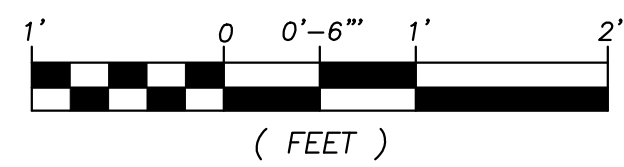
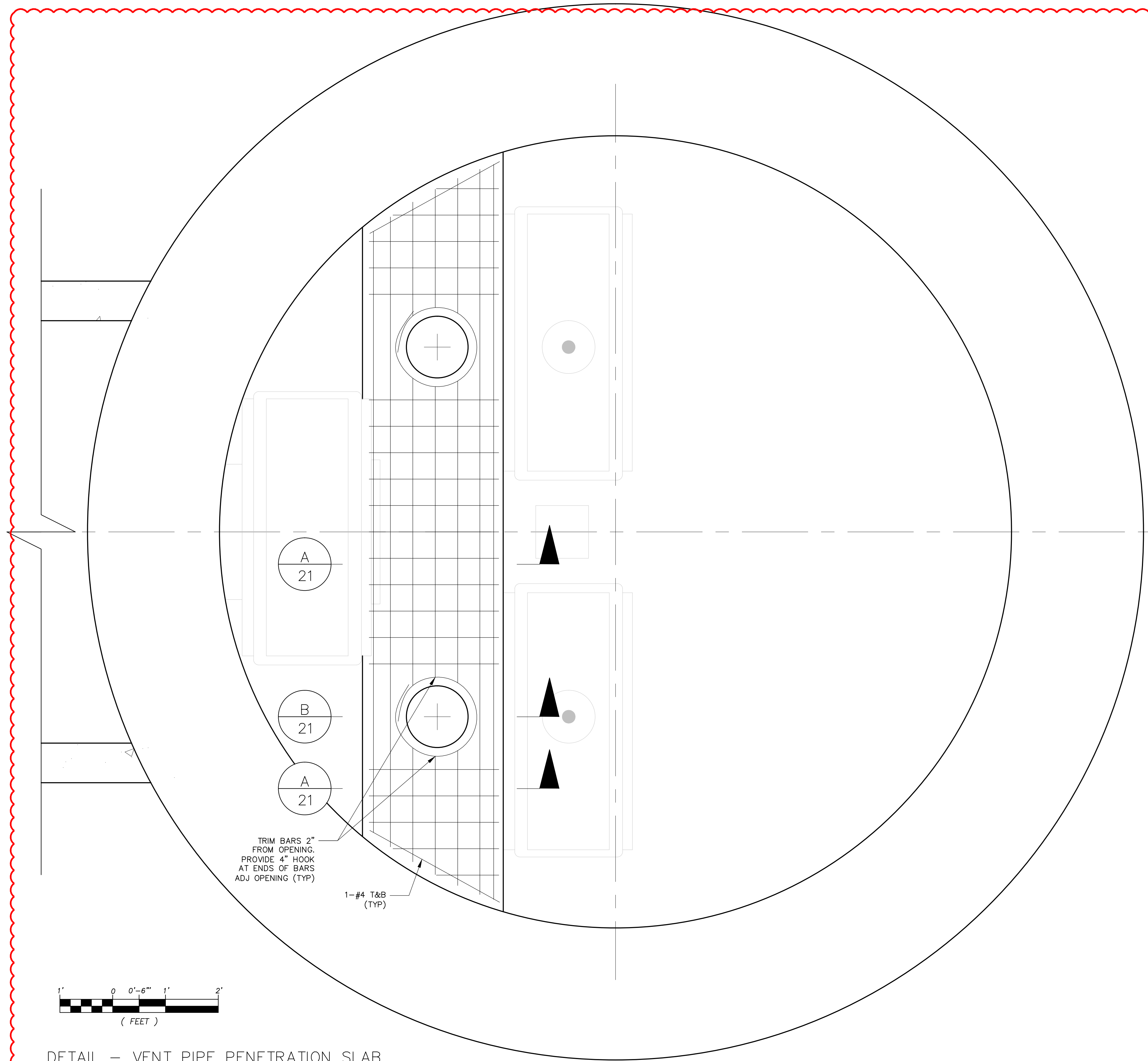
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TOWER VENT PIPE

SCALE VERIFICATION
0 1"
IF NOT 1 INCH ON
THIS SHEET, ADJUST
SCALES ACCORDINGLY

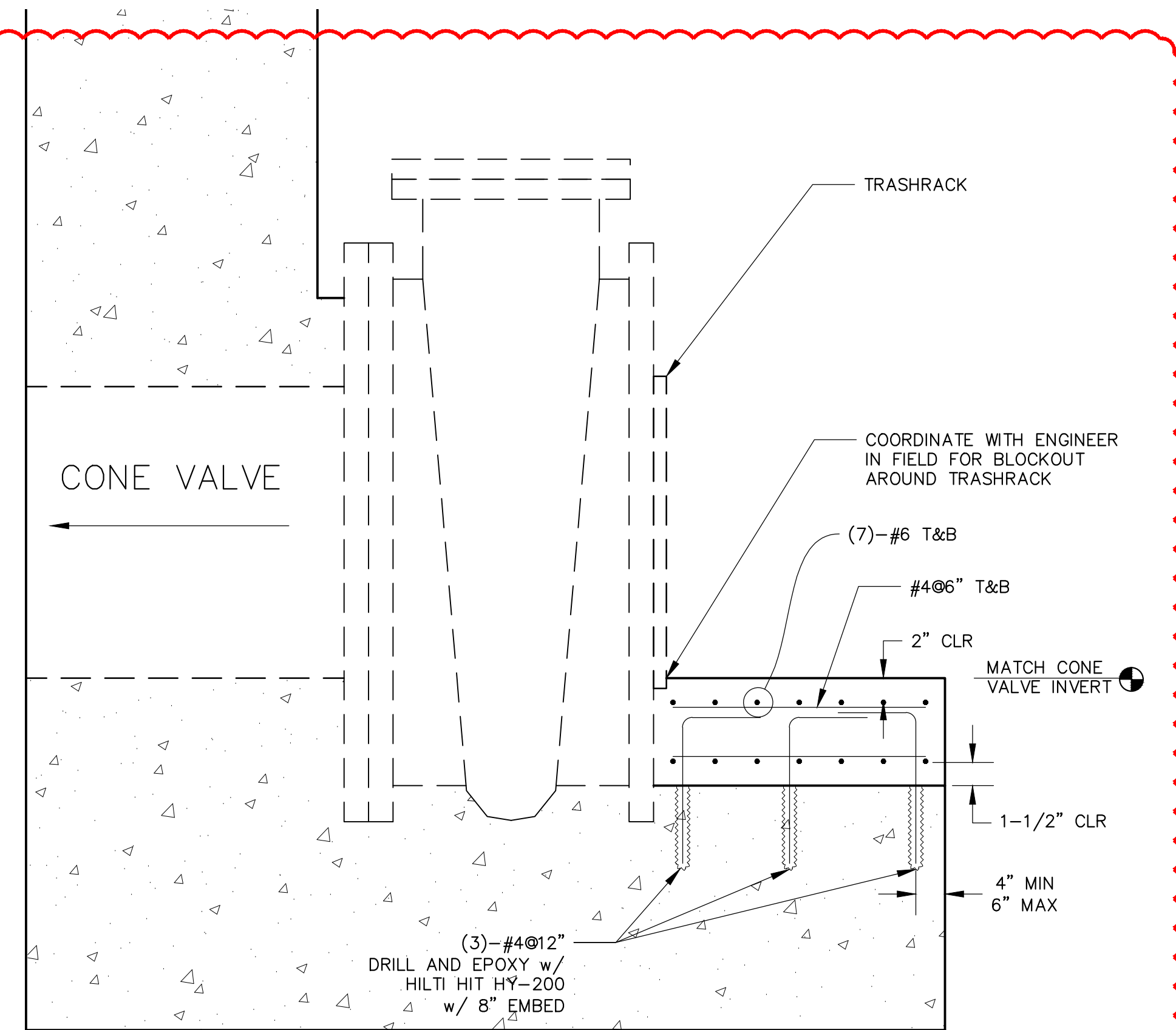
SHEETS	SHEET
21	20

C-0019B

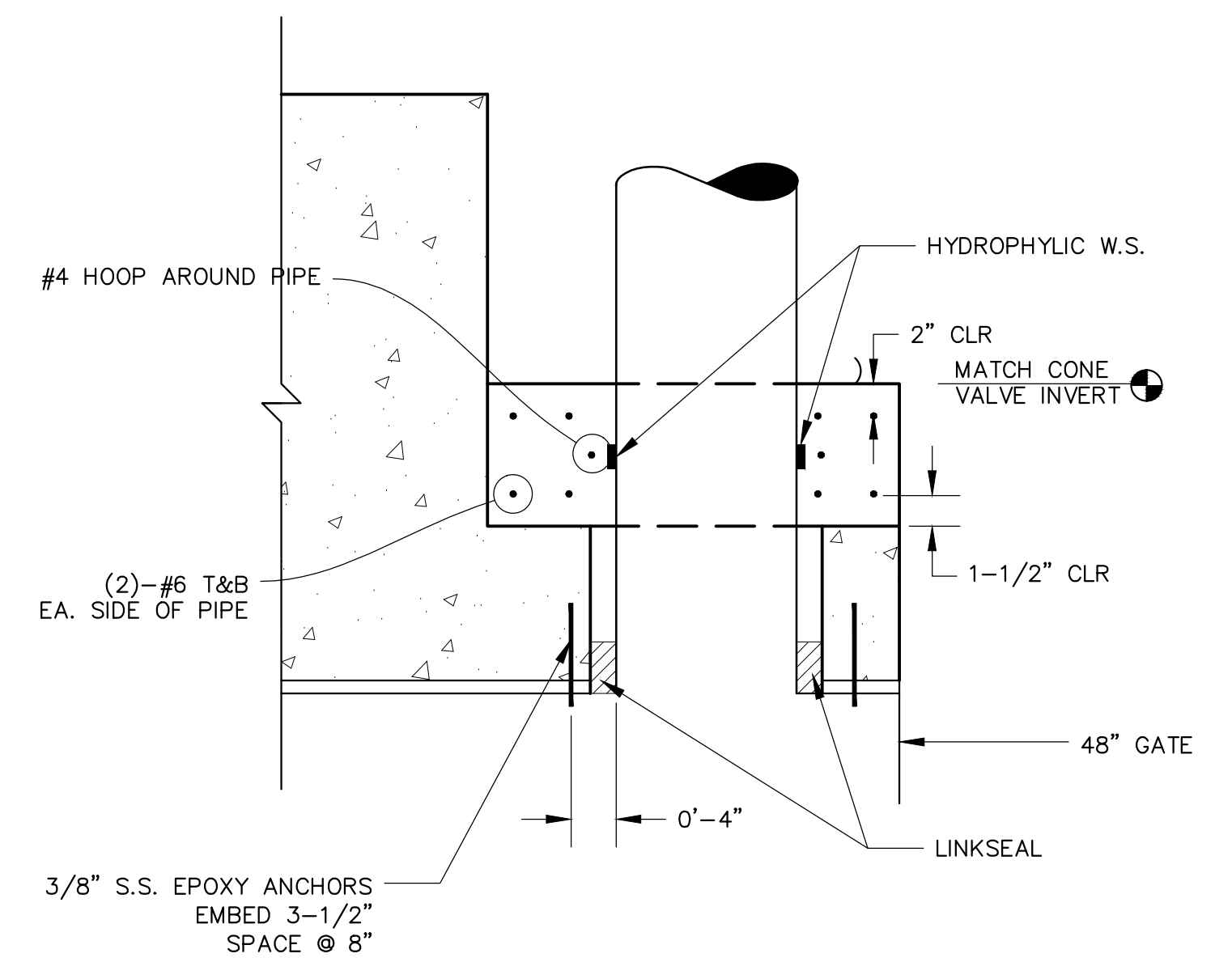


DETAIL - VENT PIPE PENETRATION SLAB

1" = 1'



A
21 SECTION
1" = 1'



B
21 SECTION
1" = 1'

NO.	DATE	REVISION	BY
1	11-21-14	SEO REVISIONS	DHS
2	03-20-15	AS-CONSTRUCTED	DHS

DRAWN	TSC	DESIGNED	DHS	DATE	07-21-14
CHECKED		APPROVED		PROJ. NO.	11.028

SCALE	24x36	VARIES
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TOWER VENT PENETRATION

SCALE VERIFICATION
0 1"
IF NOT 1 INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

SHEETS	SHEET
21	21

C-0019B