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 Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Std\_Pen\_v0905.pen PlotScale: 2:1  
 LAST SAVED BY: jfevrev

- SEE DIVISION 03 SPECIFICATIONS FOR REQUIREMENTS FOR CONCRETE CONSTRUCTION.
- UNLESS OTHERWISE INDICATED ON THE DRAWINGS, MINIMUM REINFORCEMENT OF CONCRETE WALLS OR SLABS SHALL BE:  
 10" THICK OR LESS: #5 @ 12" EACH WAY.  
 MORE THAN 10" THICK: #5 @ 12" EACH WAY, EACH FACE.
- WALL REINFORCEMENT AT CORNERS OR JUNCTIONS OF WALLS SHALL BE CONTINUOUS, LAP SPICED, OR TERMINATED IN AN ACI STANDARD 90 DEGREE HOOK. SEE DETAIL S144/TYP.
- UNLESS OTHERWISE INDICATED ON THE DRAWINGS, BARS SHALL BE DOWELED. DOWELS SHALL BE THE SAME SIZE AND SPACING AS THE REINFORCEMENT WHICH IS SPICED TO THE DOWELS.
- SLAB, BEAM AND COLUMN REINFORCING BARS SHALL HAVE A MINIMUM EXTENSION OR ANCHORAGE INTO SUPPORTS IN ACCORDANCE WITH ACI 318 AND ACI 350.
- STIRRUP SUPPORT BARS SHALL BE PROVIDED TO SECURE TOP BARS AGAINST DISPLACEMENT AS REQUIRED.
- UNLESS OTHERWISE INDICATED ON THE DRAWINGS, CONCRETE COVER OVER #11 AND SMALLER REINFORCING BARS SHALL BE AS FOLLOWS:  
 A. SLABS AND JOISTS:  
 FORMED CONCRETE SURFACES AND UNFORMED TOP SURFACES FOR DRY CONDITIONS  
 #7 BARS AND SMALLER: 1"  
 #8 BARS AND LARGER: 1 1/2"  
 FORMED CONCRETE SURFACES AND UNFORMED TOP SURFACES EXPOSED TO WEATHER, IN CONTACT WITH SOIL OR FLUIDS, OR LOCATED OVER FLUIDS: 2"  
 B. BEAMS AND COLUMNS:  
 FORMED CONCRETE SURFACES FOR DRY CONDITIONS:  
 STIRRUPS, SPIRALS, AND TIES: 1 1/2"  
 PRINCIPAL REINFORCEMENT: 2"  
 FORMED CONCRETE SURFACES EXPOSED TO WEATHER, IN CONTACT WITH SOIL OR FLUIDS, OR IN BEAMS LOCATED OVER FLUIDS:  
 STIRRUPS AND TIES: 2"  
 PRINCIPAL REINFORCEMENT: 2 1/2"  
 C. WALLS:  
 FORMED CONCRETE SURFACES FOR DRY CONDITIONS:  
 #7 BARS AND SMALLER: 1"  
 #8 BARS AND LARGER: 1 1/2"  
 FORMED CONCRETE SURFACES EXPOSED TO WEATHER, OR IN CONTACT WITH SOIL OR FLUIDS: 2"

**S101** REINFORCED CONCRETE NOTES  
TYP

SHEET 1 OF 3 07/08/16

- FOOTINGS AND SLABS ON GRADE:  
 FORMED VERTICAL CONCRETE SURFACES: 2"  
 AT UNFORMED CONCRETE SURFACES CAST AGAINST SOIL, ROCK, OR CONCRETE WORK MATS: 3"  
 TOP SURFACE OF FOOTINGS AND SLABS: SAME AS SLABS
- WATERSTOPS:  
 A. PROVIDE WATERSTOPS AT JOINTS IN SLABS AND WALLS OF LIQUID-CONTAINING STRUCTURES, AND PORTIONS OF STRUCTURES BELOW THE DESIGN GROUNDWATER LEVEL. MAKE WATERSTOPS CONTINUOUS THROUGH STRUCTURE, SPICING WATERSTOPS IN SLABS WITH WATERSTOPS IN WALLS.  
 B. END WATERSTOPS 3" BELOW TOP OF WALLS, WHERE TOP OF WALL IS COVERED BY A SLAB WITHOUT WATERSTOPS. CONTINUE WATERSTOP TO WALL/SLAB JOINT, WHERE TOP OF WALL IS COVERED BY A SLAB WITH WATERSTOPS. MAKE WATERSTOPS CONTINUOUS, SPICING WATERSTOPS IN WALLS WITH WATERSTOPS IN SLAB.
- CURE CONCRETE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. WHERE WATER CURING IS SPECIFIED, MEMBRANE CURING IS NOT ALLOWED.  
 A. THE CONTRACTOR IS WARNED THAT WATER CURING IS DIFFICULT AT TIMES DUE TO WIND AND DRY CONDITIONS. STUDY SPECIFICATION REQUIREMENTS AND FURNISH ADEQUATE SYSTEMS TO PROVIDE WATER CURING WHERE REQUIRED.  
 B. KEEP WATER CURED SURFACES VISIBLY MOIST AT ALL TIMES. FLOOD TOPS OF WALLS NOT LESS THAN 3 TIMES DAILY.
- DO NOT PLACE BACKFILL AGAINST WALLS UNTIL:  
 A. WALLS HAVE BEEN CAST TO FULL HEIGHT OF STRUCTURE AND CONCRETE HAS REACHED THE MINIMUM SPECIFIED COMPRESSIVE STRENGTH ( $f_c$ ).  
 B. CONNECTING SLABS AND BEAMS HAVE BEEN CAST AND CONCRETE IN THOSE ELEMENTS HAS REACHED THE MINIMUM SPECIFIED COMPRESSIVE STRENGTH ( $f_c$ ).
- LAP SPLICES:  
 A. SEE TABLE 1 OF THIS DETAIL FOR LAP SPlice LENGTHS.  
 B. WHEN MULTIPLE BARS ARE SPICED AT THE SAME SECTION, THE "CLEAR BAR SPACING" IS DEFINED AS THE MINIMUM CLEAR DISTANCE BETWEEN THE BARS OUTSIDE THE SPICE LENGTH MINUS ONE BAR DIAMETER.  
 C. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, BARS AT A LAP SPICE SHALL BE IN CONTACT WITH EACH OTHER.  
 D. "TOP BARS" ARE HORIZONTAL REINFORCEMENT AT LOCATIONS WHERE MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR.
- FORM EXPOSED CONCRETE CORNERS AND EDGES WITH 3/4" CHAMFER UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

**S101** REINFORCED CONCRETE NOTES  
TYP

SHEET 2 OF 3 07/08/16

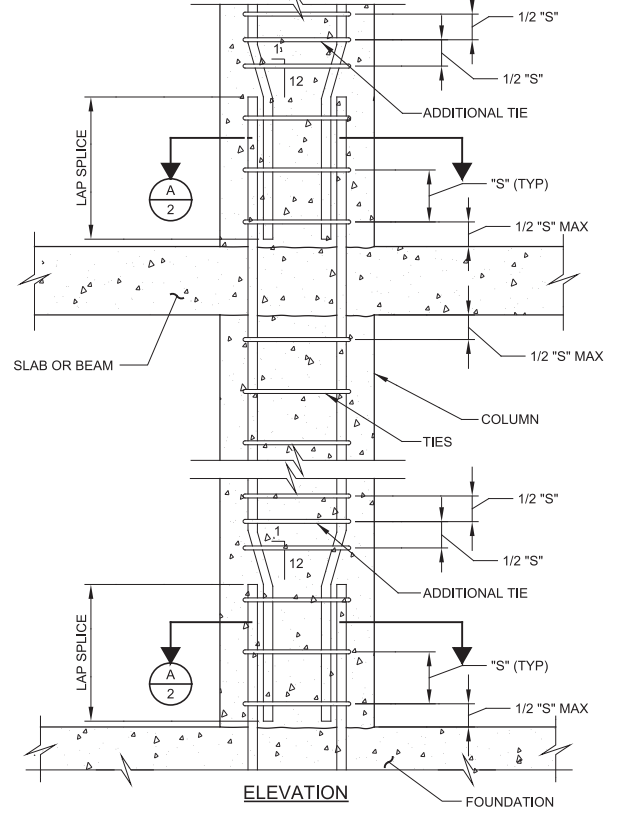
**TABLE 1: REINFORCING BAR LAP SPLICES:  $f_c = 4000$  PSI,  $F_y = 60,000$  PSI**

BAR SIZE	MINIMUM COVER (BAR DIA)	MINIMUM CLEAR BAR SPACING (BAR DIA)	LAP SPICE LENGTH (INCHES)	
			TOP BARS	OTHER BARS
#4	MORE THAN 1	MORE THAN 2	32*	25*
	MORE THAN 2	MORE THAN 4	20	16
#5	MORE THAN 1	MORE THAN 2	40*	31*
	MORE THAN 2	MORE THAN 4	26	20
#6	MORE THAN 1	MORE THAN 2	48*	37*
	MORE THAN 2	MORE THAN 4	30	24
#7	MORE THAN 1	MORE THAN 2	70*	54*
	MORE THAN 2	MORE THAN 4	43	33
#8	MORE THAN 1	MORE THAN 2	81*	62*
	MORE THAN 2	MORE THAN 4	50	38
#9	MORE THAN 1	MORE THAN 2	90*	70*
	MORE THAN 2	MORE THAN 4	56	42
#10	MORE THAN 1	MORE THAN 2	104*	81*
	MORE THAN 2	MORE THAN 4	62	48
#11	MORE THAN 1	MORE THAN 2	114*	88*
	MORE THAN 2	MORE THAN 4	69	54

- REINFORCING BAR LAP SPICE TABLE NOTES:**
- TABULATED SPICE LENGTHS ARE APPLICABLE ONLY WHEN BOTH REQUIREMENTS FOR MINIMUM COVER AND FOR MINIMUM CLEAR BAR SPACING ARE SATISFIED.
  - \*= IF THE CLEAR BAR SPACING IS LESS THAN OR EQUAL TO TWO BAR DIAMETERS, OR THE COVER IS LESS THAN OR EQUAL TO ONE BAR DIAMETER, THE LAP SPICE LENGTH SHALL BE INCREASED BY 50 PERCENT.

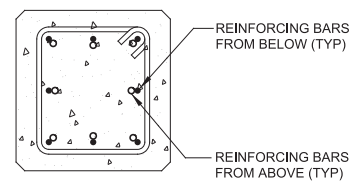
**S101** REINFORCED CONCRETE NOTES  
TYP

SHEET 3 OF 3 07/08/16



**S104** COLUMN LAP SPICE - BOTTOM  
TYP

SHEET 1 OF 2 08/01/05

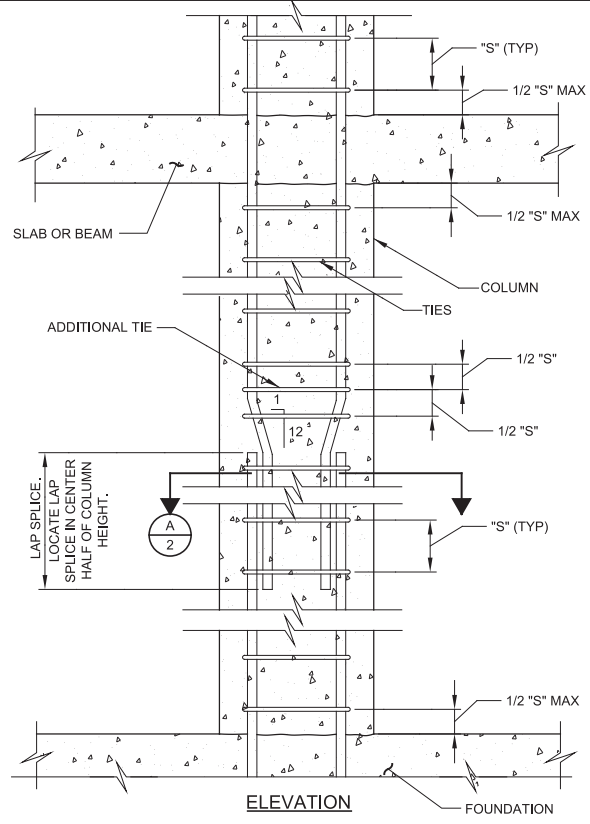


**A** SECTION  
1

- NOTES:**
- "S" = TIE SPACING INDICATED ON THE DRAWINGS.
  - SECTION IS DRAWN TO SHOW RELATIVE POSITION OF REINFORCING BARS FROM ABOVE TO REINFORCING BARS FROM BELOW AT LAP SPICE. SEE DRAWING FOR ACTUAL NUMBER OF REINFORCING BARS ON EACH FACE OF COLUMN.

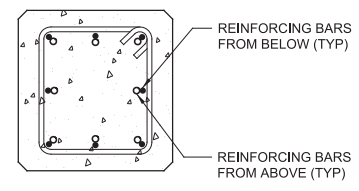
**S104** COLUMN LAP SPICE - BOTTOM  
TYP

SHEET 2 OF 2 08/01/05



**S105** COLUMN LAP SPICE - MID HEIGHT  
TYP

SHEET 1 OF 2 08/01/05

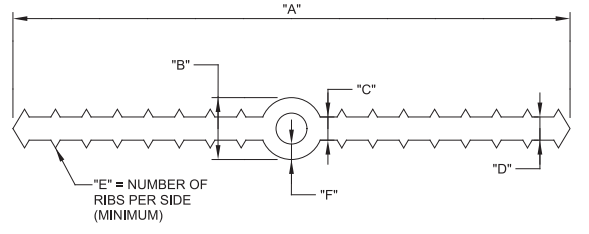


**A** SECTION  
1

- NOTES:**
- "S" = TIE SPACING INDICATED ON THE DRAWINGS.
  - SECTION IS DRAWN TO SHOW RELATIVE POSITION OF REINFORCING BARS FROM ABOVE TO REINFORCING BARS FROM BELOW AT LAP SPICE. SEE DRAWING FOR ACTUAL NUMBER OF REINFORCING BARS ON EACH FACE OF COLUMN.

**S105** COLUMN LAP SPICE - MID HEIGHT  
TYP

SHEET 2 OF 2 08/01/05

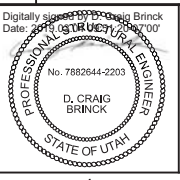


TYPE	"A"	"B"	"C"	"D"	"E"	"F"	APPLICATION
W/O CENTERBULB	6"	-	3/8"	3/8"	7	-	CONSTRUCTION AND CONTROL JOINTS
CENTERBULB	6"	7/8"	3/8"	3/8"	7	9/32"	FOR USE WITH DETAIL EM071/TYP ONLY
CENTERBULB	9"	1"	3/8"	3/8"	7	1/4"	EXPANSION JOINTS 1" AND NARROWER
CENTERBULB	9"	2"	3/8"	3/8"	7	1/4"	EXPANSION JOINTS WIDER THAN 1" AND TENSION/COMPRESSION RING BEAM AT DIGESTERS

- NOTES:**
- SEE SPECIFICATIONS FOR MATERIAL REQUIREMENTS.
  - DIMENSIONS ARE MINIMUM, UNLESS OTHERWISE NOTED.

**S106** PVC WATERSTOP SCHEDULE  
TYP

07/08/16



**SOUTH VALLEY WATER RECLAMATION FACILITY**  
**PROJECT 5**  
 TYPICAL DETAILS  
**STRUCTURAL TYPICAL DETAILS 1**

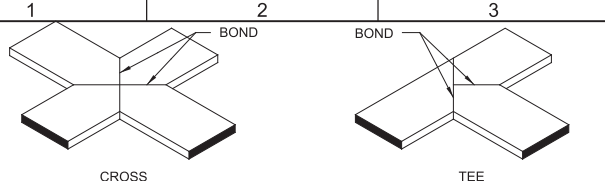
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 DRAWING NO. GS-02  
 SHEET NO. 66 OF 159

Plot Date: 28-FEB-2019 8:06:10 AM

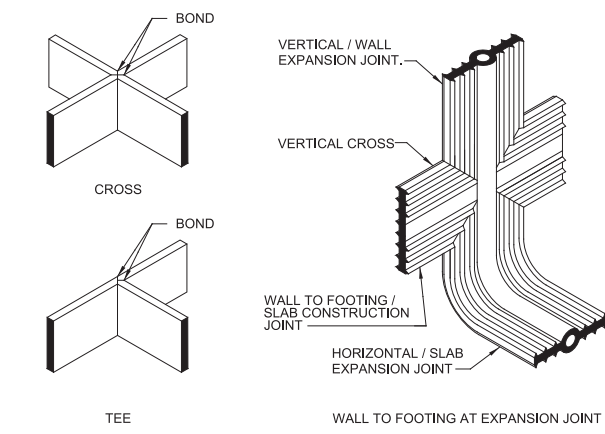
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**IN-PLANE JOINTS**

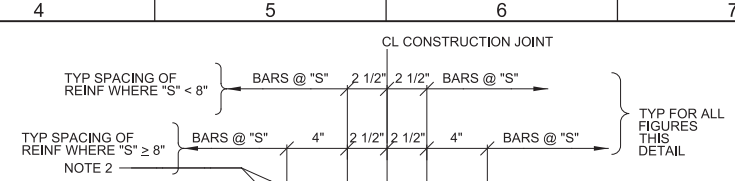


**OUT-OF-PLANE JOINTS**

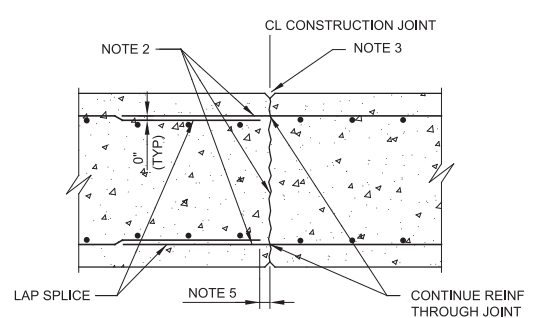
- NOTES:
1. MAKE WELDS AS SPECIFIED AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
  2. CROSSES AND TEES SHALL BE FACTORY PREFABRICATED BY THE MANUFACTURER. FIELD WELDS SHALL BE BUTT WELDS ONLY.

**S107** PREFABRICATED PVC WATERSTOP JOINTS  
TYP

07/08/16



**NON-WATER BEARING WALL OR SLAB SINGLE LAYER REINFORCEMENT**

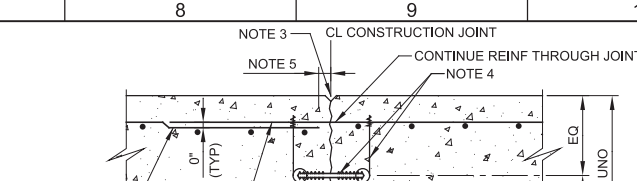


**NON-WATER BEARING WALL OR SLAB DOUBLE LAYER REINFORCEMENT**

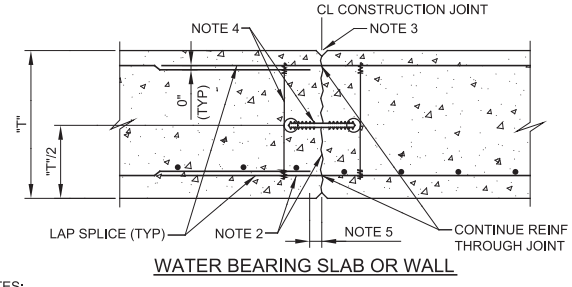
**S110** CONSTRUCTION JOINT  
TYP

SHEET 1 OF 2

07/11/16



**WATER BEARING SLAB LESS THAN 12" THICK**



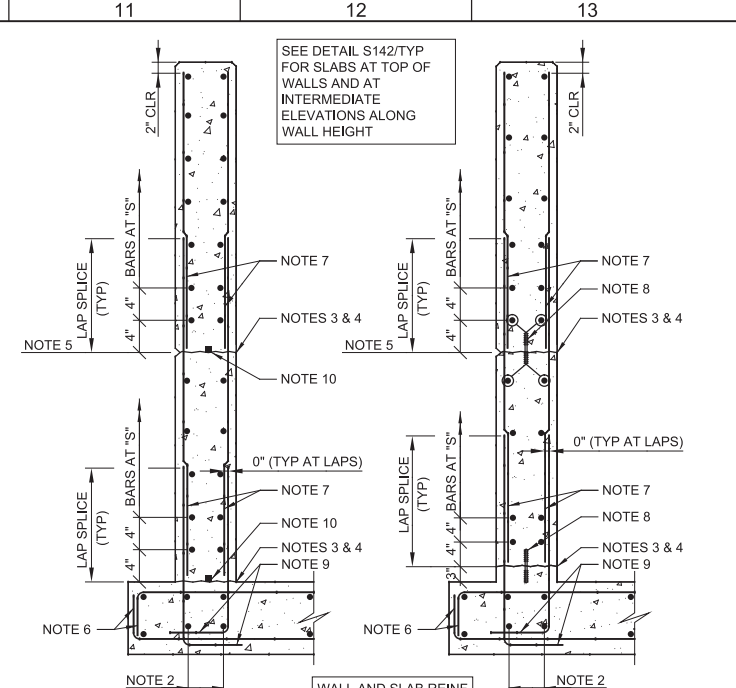
**WATER BEARING SLAB OR WALL**

- NOTES:
1. "S" EQUALS TYPICAL BAR SPACING INDICATED ON THE DRAWINGS. "T" EQUALS SLAB OR WALL THICKNESS.
  2. WATER-BLAST EXPOSED JOINT FACE AND PROJECTING REINFORCEMENT BEFORE PLACING CONCRETE.
  3. JOINT EDGES:  
A. FOR WALLS AND BOTTOM OF EXPOSED SLABS: FORM EDGES WITH 1/2" CHAMFER.  
B. FOR SLABS: EDGE TOP AND ENDS WITH 1/4" RADIUS.
  4. 6" WATERSTOP CENTERED ON JOINT - SEE DETAIL S106/TYP. PROVIDE WIRE TIES MAX 2'-0" OC. HOG RINGS MAY BE USED IN LIEU OF WIRE LOOPS. THOROUGHLY CLEAN WATERSTOP BEFORE PLACING CONCRETE IN SECOND POUR.
  5. STOP REINFORCING 2" CLEAR OF JOINT.

**S110** CONSTRUCTION JOINT  
TYP

SHEET 2 OF 2

07/11/16



**S140** CONSTRUCTION JOINT - WALLS  
TYP

SHEET 1 OF 2

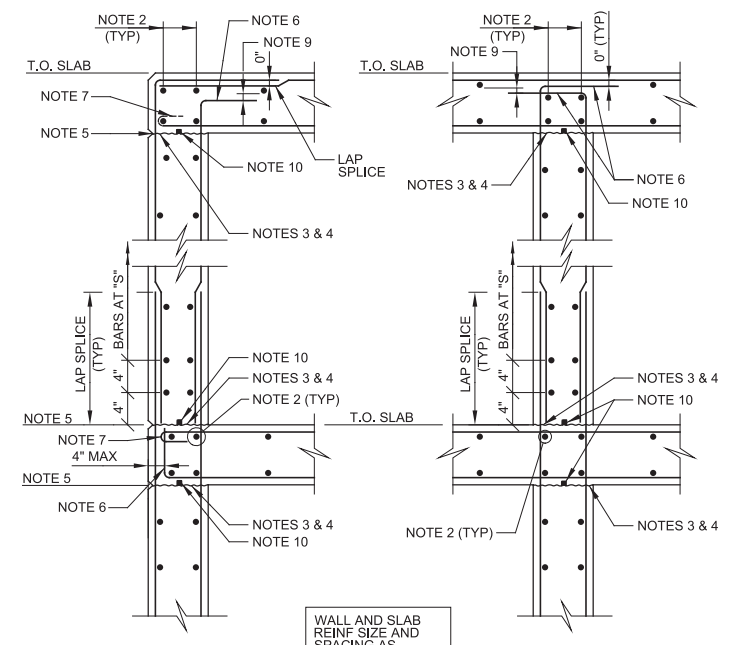
12/29/17

- NOTES:
1. "S" EQUALS TYPICAL BAR SPACING INDICATED ON THE DRAWINGS.
  2. PLACE AND ALIGN BARS BEFORE PLACING DOWELS. BAR SIZE TO MATCH SLAB BARS.
  3. WATER-BLAST JOINT FACE AND PROJECTING REINFORCEMENT BEFORE PLACING CONCRETE.
  4. PLACE CEMENT GROUT OVER JOINT FACE IMMEDIATELY BEFORE PLACING CONCRETE. (SEE SPECIFICATIONS.)
  5. CONSTRUCTION JOINT WHERE INDICATED ON THE DRAWINGS. WHERE WALL SURFACE IS EXPOSED TO VIEW IN THE FINISHED WORK, PROVIDE V-GROOVE PER DETAIL S162/TYP.
  6. STANDARD 90° HOOK WHERE INDICATED ON THE DRAWINGS. (ALTERNATE: PROVIDE 180° HOOK WHERE REQUIRED BY SLAB THICKNESS.)
  7. DOWELS: SAME SIZE AND SPACING AS VERTICAL WALL BARS, UNLESS OTHERWISE NOTED.
  8. 6" PVC WATERSTOP CENTERED VERTICALLY ON JOINT. PROVIDE WIRE TIES MAX 2'-0" OC. HOG RINGS MAY BE USED IN LIEU OF WIRE LOOPS. THOROUGHLY CLEAN WATERSTOP BEFORE PLACING CONCRETE.
  9. STANDARD 90° HOOK UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
  10. WHERE DRAWINGS INDICATE "W/ STRIP WSTP" PROVIDE LOW EXPANSION HYDROPHILIC WATERSTOP AT TOP SURFACE OF JOINT AND CENTERED BETWEEN VERTICAL BARS.

**S140** CONSTRUCTION JOINT - WALLS  
TYP

SHEET 2 OF 2

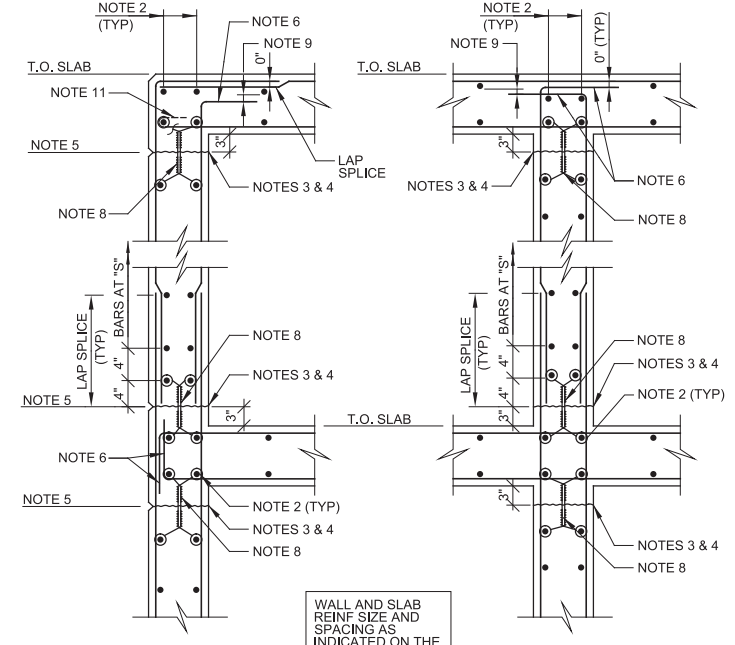
12/29/17



**S142** CONSTRUCTION JOINT - WALLS AT ELEVATED SLABS  
TYP

SHEET 1 OF 3

12/29/17



**S142** CONSTRUCTION JOINT - WALLS AT ELEVATED SLABS  
TYP

SHEET 2 OF 3

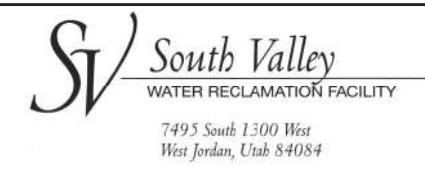
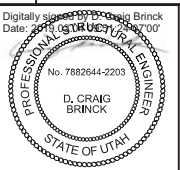
12/29/17

- NOTES:
1. "S" EQUALS TYPICAL BAR SPACING INDICATED ON THE DRAWINGS.
  2. AT INTERSECTION, MAKE BAR SIZE THE LARGER OF BAR SIZES IN ADJACENT SLAB OR WALL. PLACE BARS AT SAME LAYERS AS IN ADJACENT SLAB OR WALL.
  3. WATER-BLAST JOINT FACE AND PROJECTING REINFORCEMENT BEFORE PLACING CONCRETE.
  4. PLACE CEMENT GROUT OVER JOINT FACE IMMEDIATELY BEFORE PLACING CONCRETE. (SEE SPECIFICATIONS.)
  5. CONSTRUCTION JOINT WHERE INDICATED ON THE DRAWINGS. WHERE WALL SURFACE IS EXPOSED TO VIEW IN THE FINISHED WORK, PROVIDE V-GROOVE PER DETAIL S162/TYP.
  6. STANDARD 90° HOOK UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
  7. STANDARD 180° HOOK UNLESS OTHERWISE INDICATED ON THE DRAWINGS. (ALTERNATE: 90° HOOK ROTATED OUT OF VERTICAL PLANE, IF APPROVED BY ENGINEER.)
  8. 6" PVC WATERSTOP CENTERED VERTICALLY ON JOINT. PROVIDE WIRE TIES MAX 2'-0" OC. HOG RINGS MAY BE USED IN LIEU OF WIRE LOOPS. THOROUGHLY CLEAN WATERSTOP BEFORE PLACING CONCRETE.
  9. 1 BAR DIAMETER CLEAR.
  10. WHERE DRAWINGS INDICATE "W/ STRIP WSTP" PROVIDE LOW EXPANSION HYDROPHILIC WATERSTOP AT TOP SURFACE OF JOINT AND CENTERED BETWEEN VERTICAL BARS.
  11. STANDARD 180° HOOK WHERE INDICATED ON THE DRAWINGS. (ALTERNATE: 90° HOOK ROTATED OUT OF VERTICAL PLANE IF APPROVED BY ENGINEER.)

**S142** CONSTRUCTION JOINT - WALLS AT ELEVATED SLABS  
TYP

SHEET 3 OF 3

12/29/17



SOUTH VALLEY WATER RECLAMATION FACILITY  
PROJECT 5  
TYPICAL DETAILS  
**STRUCTURAL TYPICAL DETAILS 2**

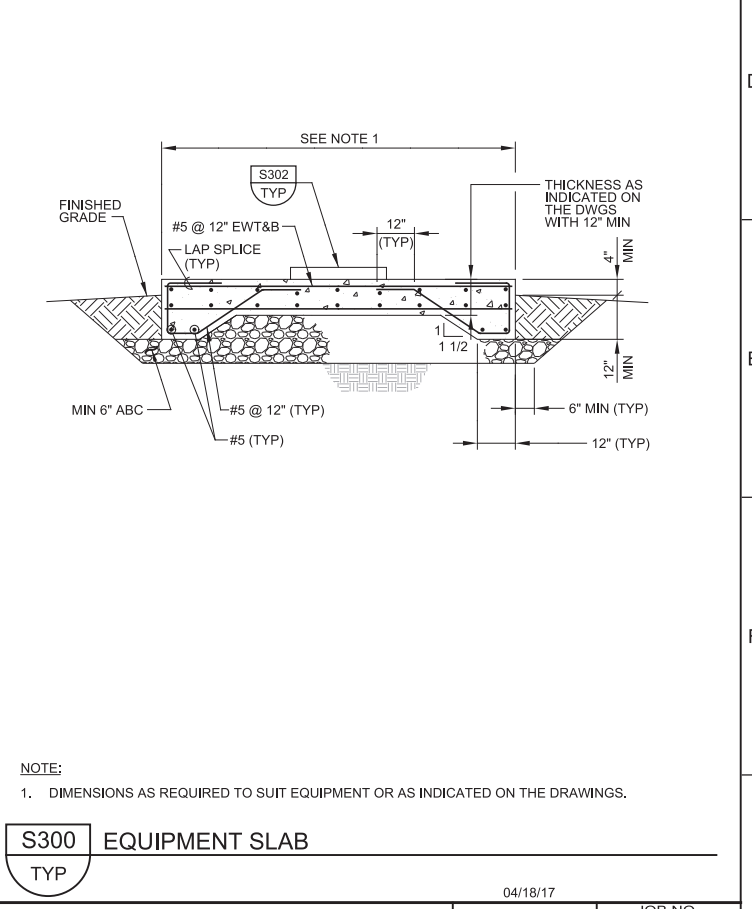
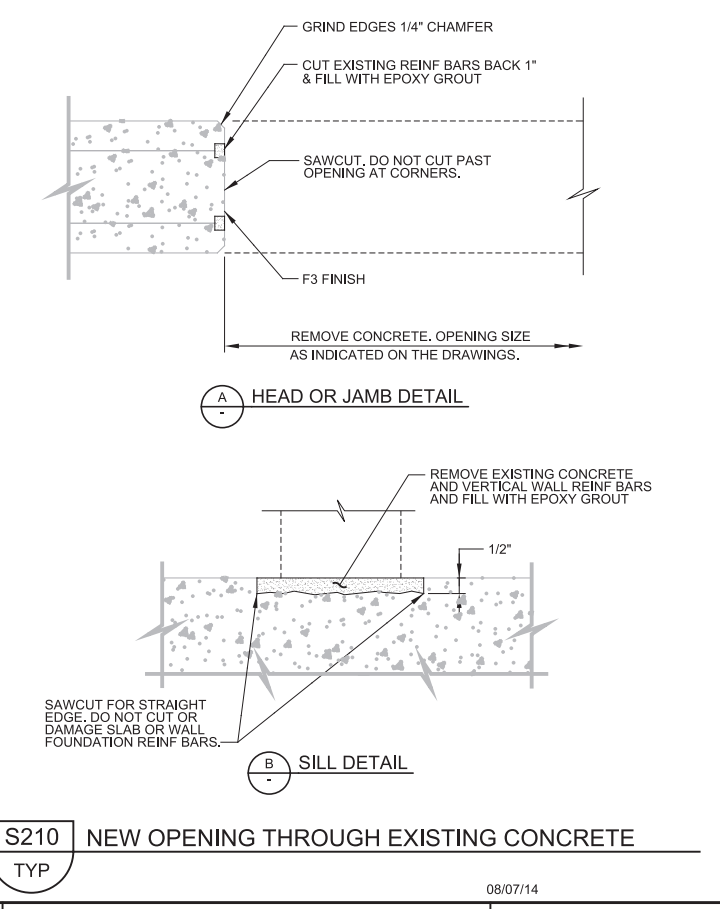
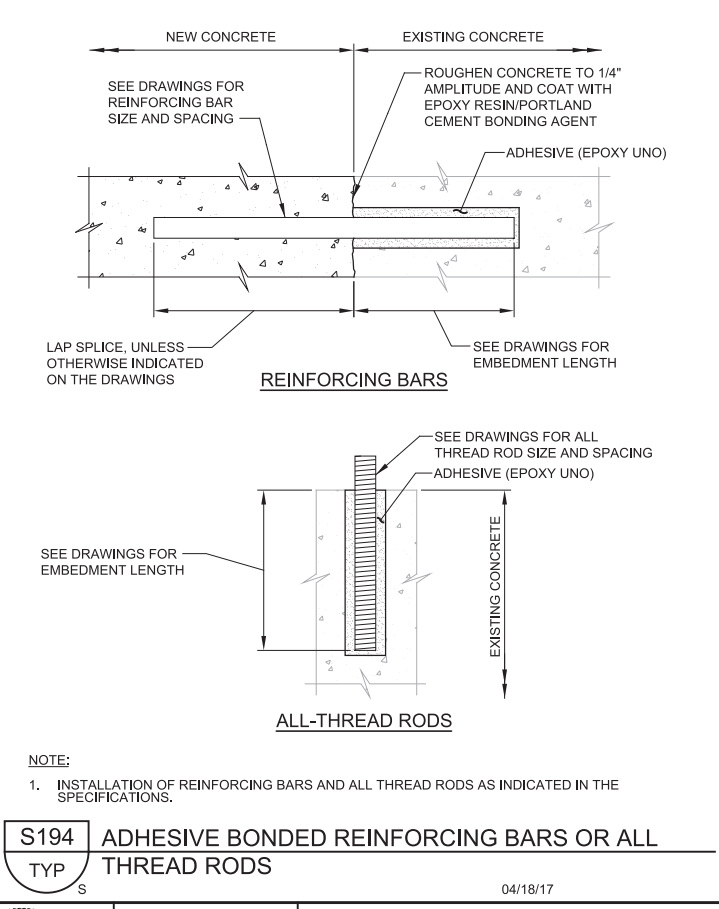
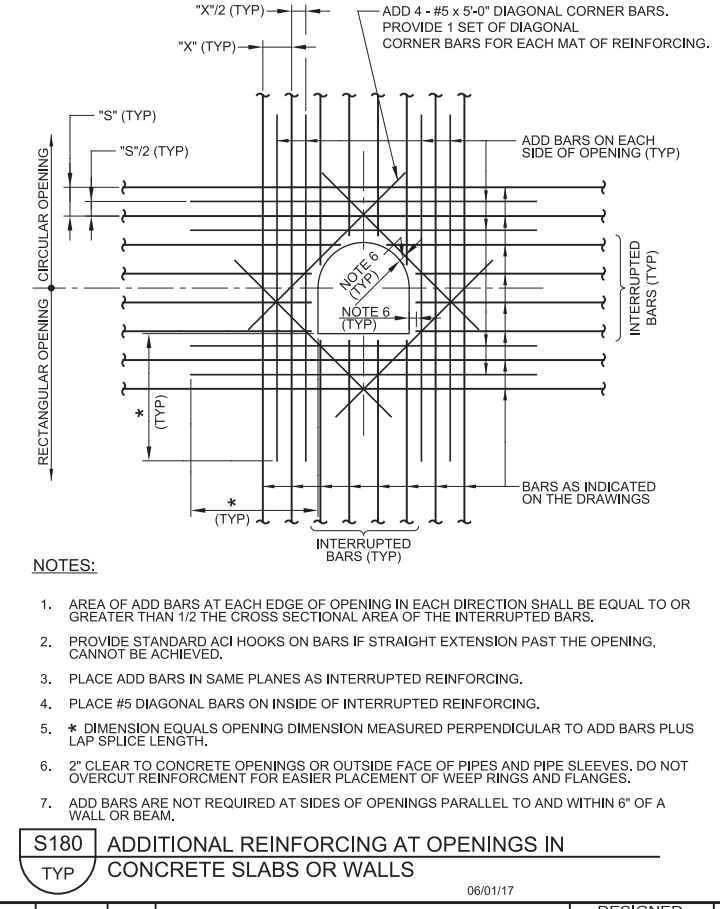
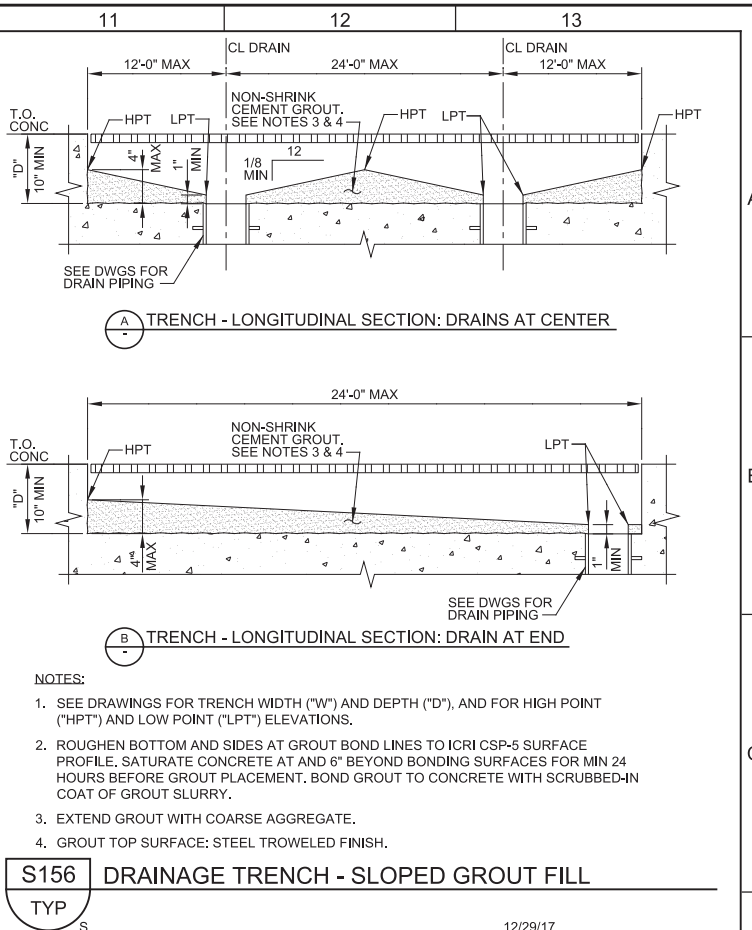
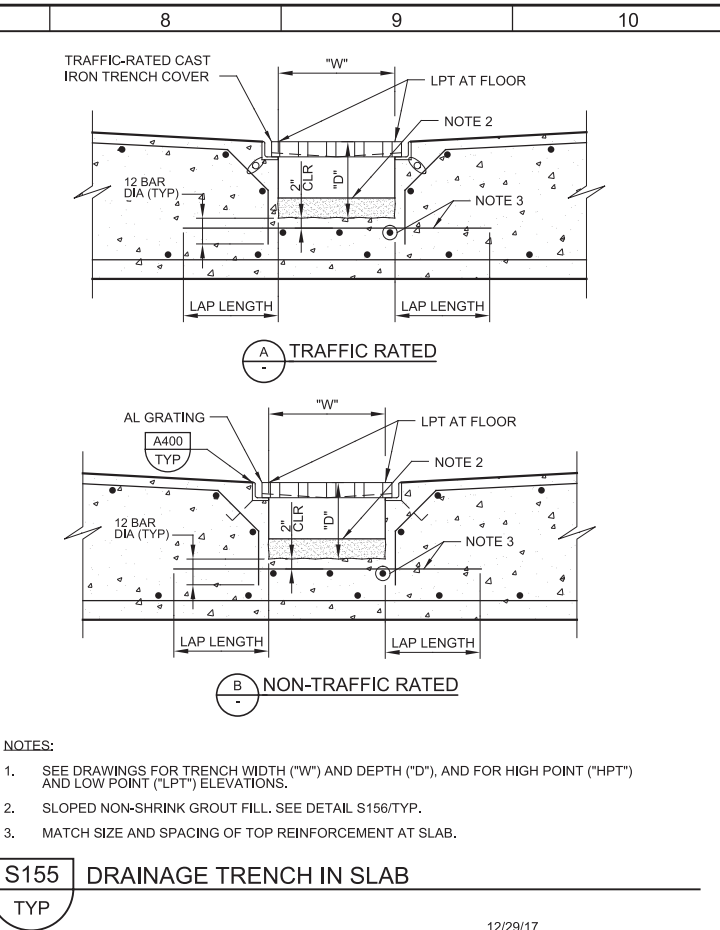
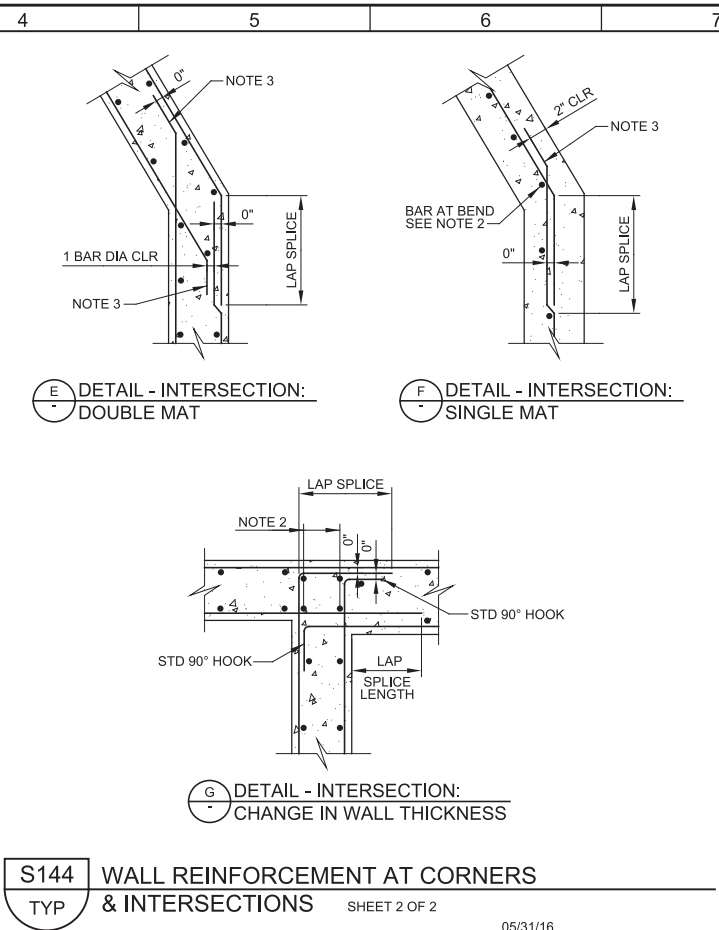
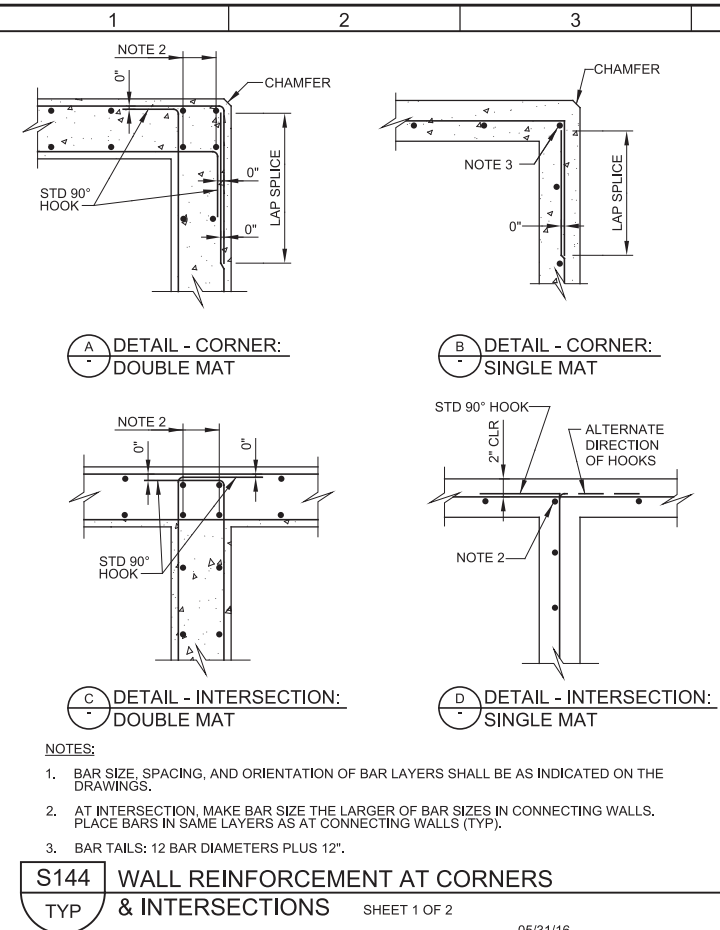
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

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User: svcbw

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Std\_Pen\_v0905.pen PlotScale: 2:1

LAST SAVED BY: jlefevre



DESIGNED	DCB
DRAWN	JRL
CHECKED	GLS
DATE	MARCH 2019

REV	DATE	BY	DESCRIPTION

Digitally signed by D. Craig Brinck  
Date: 2019.03.07 10:00:00 -0700  
No. 7882644-2203  
D. CRAIG BRINCK  
PROFESSIONAL ENGINEER  
STATE OF UTAH

**carollo**

**SV South Valley**  
WATER RECLAMATION FACILITY  
7495 South 1300 West  
West Jordan, Utah 84084

**SOUTH VALLEY WATER RECLAMATION FACILITY**  
**PROJECT 5**  
TYPICAL DETAILS  
**STRUCTURAL TYPICAL DETAILS 3**

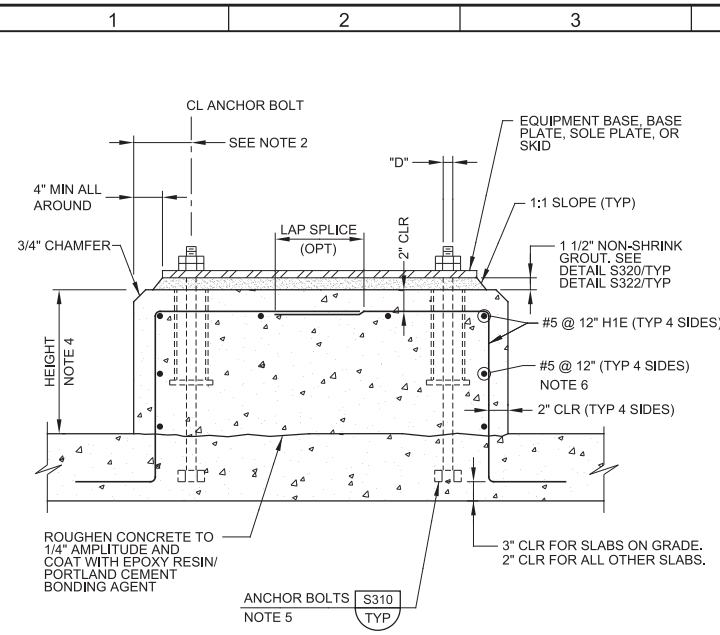
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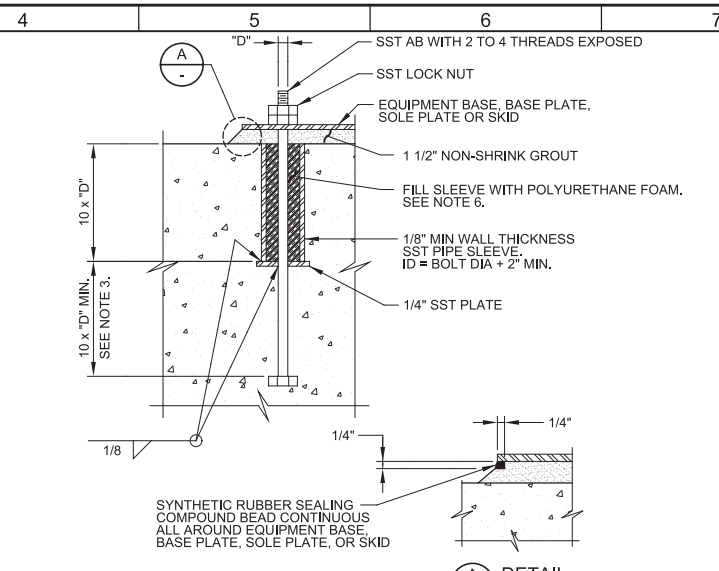
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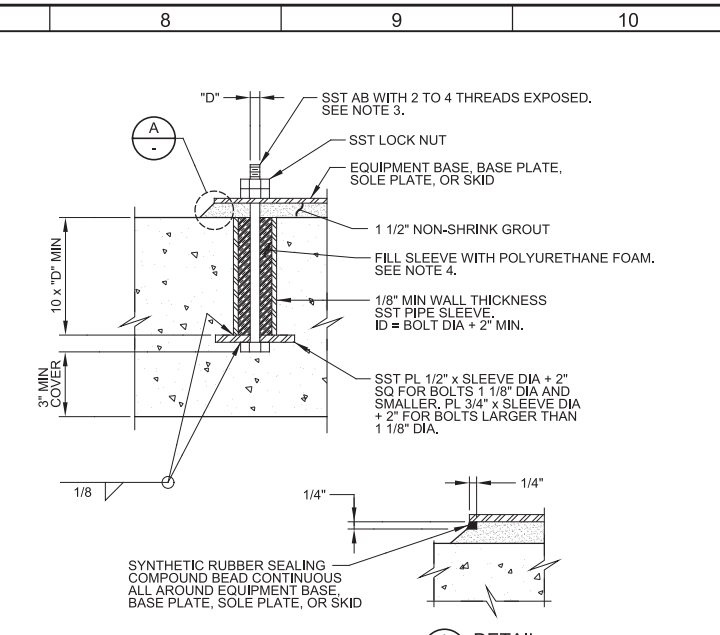
- NOTES:**
- "D" = DIAMETER OF ANCHOR BOLT.
  - THE EDGE DISTANCE ON THE ANCHOR BOLTS SHALL NOT BE LESS THAN 6" OR 8 x "D".
  - PAD DIMENSIONS AND ANCHOR BOLT SIZE SHALL CONFORM TO EQUIPMENT MANUFACTURER'S REQUIREMENTS.
  - HEIGHT TO SUIT EQUIPMENT FURNISHED OR AS INDICATED ON THE DRAWINGS.
  - WHERE CONCRETE SLAB OR BEAM THICKNESS WILL NOT ACCOMMODATE THE ANCHOR BOLT, PROVIDE EXTRA THICKNESS FOR SLAB OR BEAM.
  - PROVIDE HOOPS OR CORNERS PER DETAIL S144/TYP.

**S302 EQUIPMENT BASE**  
TYP  
12/29/2017



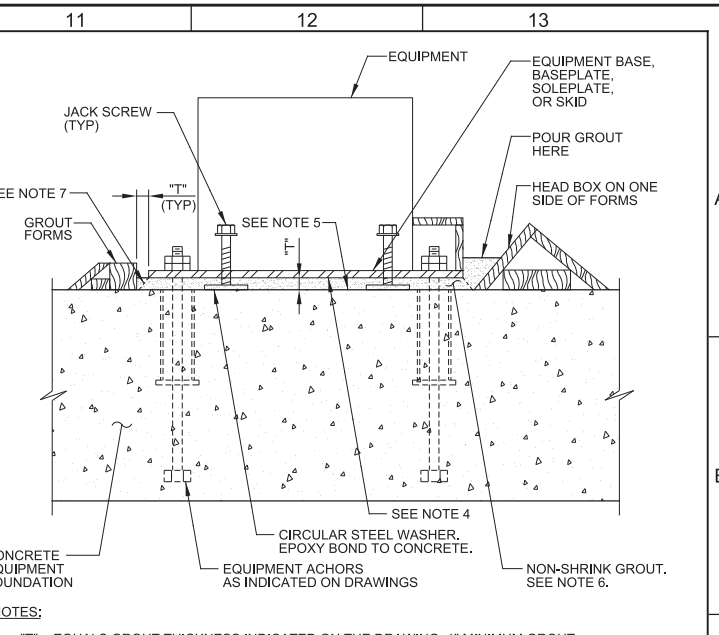
- NOTES:**
- "D" = DIAMETER OF ANCHOR BOLT.
  - ANCHOR BOLT DIAMETER AS INDICATED ON THE DRAWINGS. IF NOT INDICATED ON THE DRAWINGS, THE ANCHOR BOLT SIZE SHALL BE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
  - WHERE CONCRETE SLAB OR BEAM THICKNESS WILL NOT ACCOMMODATE THE ANCHOR BOLT, PROVIDE EXTRA THICKNESS OF SLAB OR BEAM.
  - PREFABRICATED PLASTIC ANCHOR BOLT SLEEVE OPTIONAL.
  - DO NOT USE ALL THREAD RODS AS A SUBSTITUTE FOR BOLTS WITH A BOLT HEAD. SMOOTH RODS THREADED AT THE ENDS MAY BE USED IF ACCEPTABLE TO THE ENGINEER. DO NOT WELD NUTS TO THE THREADED RODS.
  - COMPLETELY REMOVE ANY POLYURETHANE FOAM FROM CONCRETE, EQUIPMENT BASE, BASE PLATE, SOLE PLATE, OR SKID, AND ANCHOR BOLTS ABOVE TOP OF CONCRETE.
  - DO NOT USE LEVELING NUTS TO SUPPORT AND LEVEL EQUIPMENT BASE, BASE PLATE, SOLE PLATE, OR SKID.

**S310 ANCHOR BOLT - EMBED AND SLEEVE**  
TYP  
05/20/15



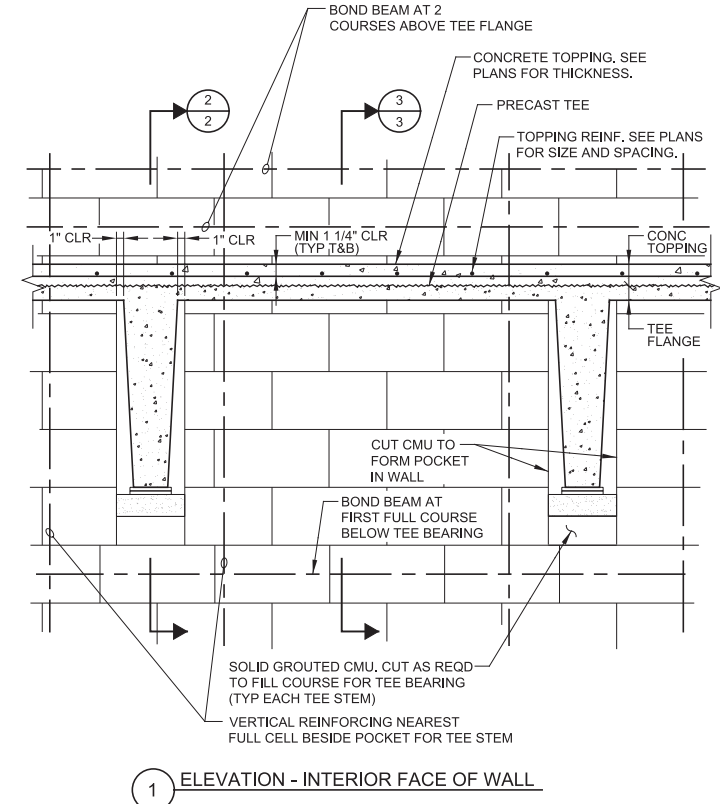
- NOTES:**
- "D" = DIAMETER OF ANCHOR BOLT.
  - ANCHOR BOLT DIAMETER AS INDICATED ON THE DRAWINGS. IF NOT INDICATED ON THE DRAWINGS, THE ANCHOR BOLT SIZE SHALL BE AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER.
  - DO NOT USE ALL THREAD RODS AS A SUBSTITUTE FOR BOLTS WITH A BOLT HEAD.
  - COMPLETELY REMOVE ANY POLYURETHANE FOAM FROM CONCRETE, EQUIPMENT BASE, BASE PLATE, SOLE PLATE, OR SKID, AND ANCHOR BOLTS ABOVE TOP OF CONCRETE.
  - DO NOT USE LEVELING NUTS TO SUPPORT AND LEVEL EQUIPMENT BASE, BASE PLATE, SOLE PLATE, OR SKID.

**S312 ANCHOR BOLT - IN SLEEVE**  
TYP  
05/20/15

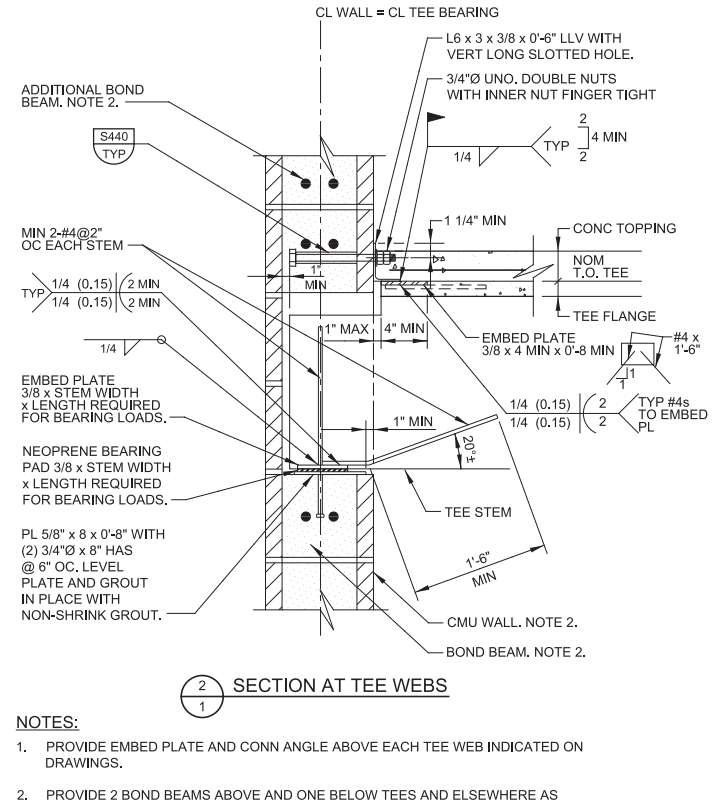


- NOTES:**
- "T" = EQUALS GROUT THICKNESS INDICATED ON THE DRAWING. 1" MINIMUM GROUT THICKNESS.
  - FILL ANCHOR SLEEVES WITH POLYURETHANE FOAM BEFORE GROUTING.
  - DO NOT USE LEVELING NUTS ON EQUIPMENT ANCHORS.
  - PREPARE SURFACE OF EQUIPMENT BASES, BASEPLATES, SOLEPLATES, AND SKIDS IN CONTACT WITH GROUT AS SPECIFIED IN SECTION 15050.
  - PREPARE SURFACES OF CONCRETE FOUNDATION IN CONTACT WITH GROUT AS SPECIFIED IN SECTION 15050.
  - PLACE NON-SHRINK GROUT AS SPECIFIED IN SECTION 15050.
  - AFTER GROUT SETS, TRIM GROUT TO 45 DEGREE CHAMFER.

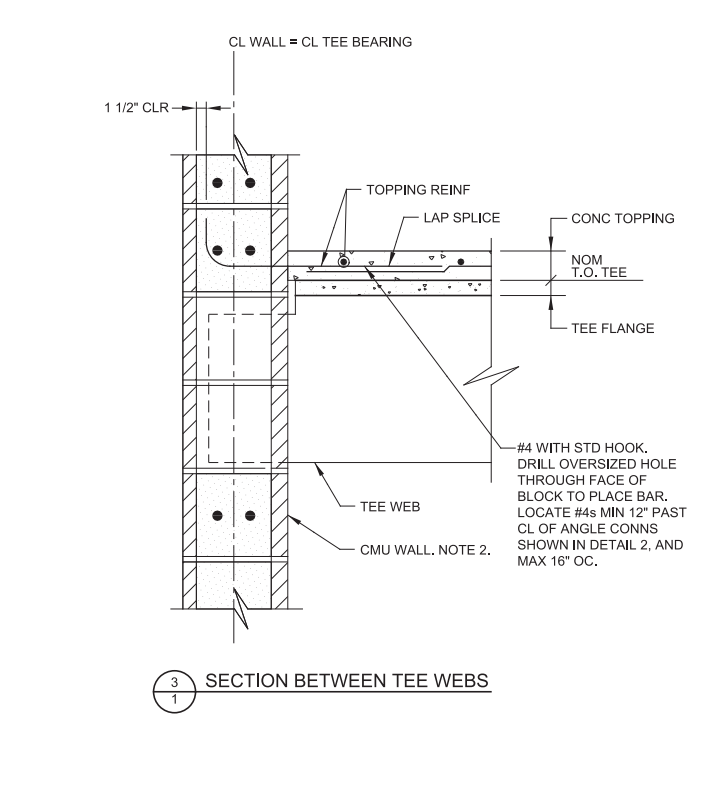
**S320 EQUIPMENT GROUTING WITH NON-SHRINK GROUT**  
TYP  
12/29/17



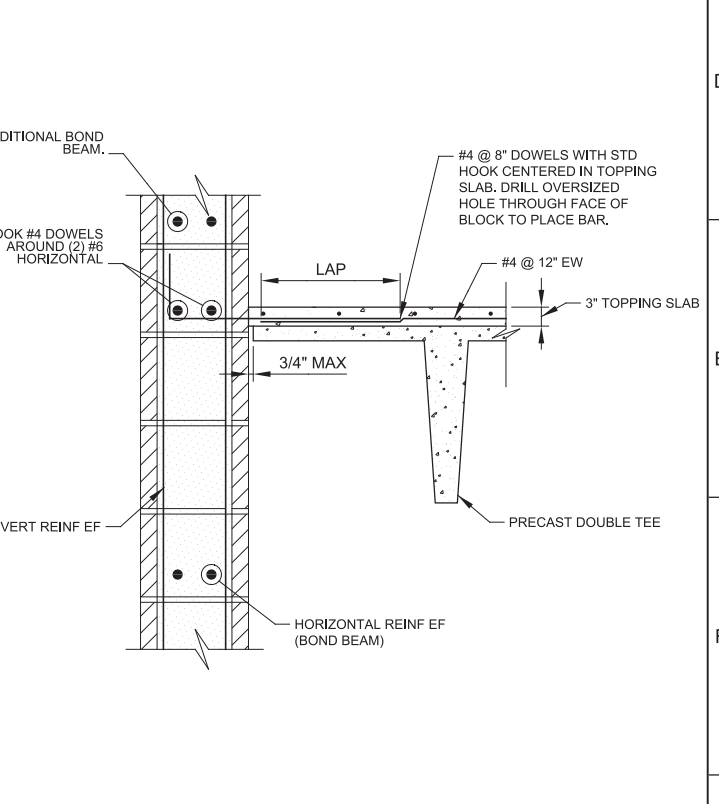
**S340 PRECAST CONCRETE TEE BEARING AT MASONRY WALL**  
TYP  
SHEET 1 OF 3  
12/29/17



**S340 PRECAST CONCRETE TEE BEARING AT MASONRY WALL**  
TYP  
SHEET 2 OF 3  
02/19/19



**S340 PRECAST CONCRETE TEE BEARING AT MASONRY WALL**  
TYP  
SHEET 3 OF 3  
02/19/19



**S342 PRECAST CONCRETE TEE SIDE CONNECTION TO MASONRY WALL**  
TYP  
02/19/19

REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED DCB  
DRAWN JRL  
CHECKED GLS  
DATE MARCH 2019

Digitally signed by D. CRAIG BRINCK  
Date: 2019.03.07 10:07:00  
No. 7882644-2203  
D. CRAIG BRINCK  
STATE OF UTAH

**carollo**

**SV South Valley**  
WATER RECLAMATION FACILITY  
7495 South 1300 West  
West Jordan, Utah 84084

**SOUTH VALLEY WATER RECLAMATION FACILITY**  
PROJECT 5  
TYPICAL DETAILS  
**STRUCTURAL TYPICAL DETAILS 4**

VERIFY SCALES  
BAR IS ONE INCH ON ORIGINAL DRAWING  
0 1"  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

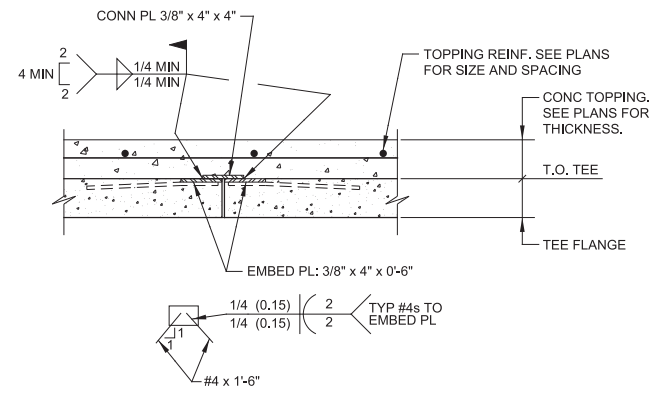
JOB NO. 10548A.10  
DRAWING NO. **GS-05**  
SHEET NO. 69 OF 159

Plot Date: 28-FEB-2019 8:06:16 AM

User: svcPW

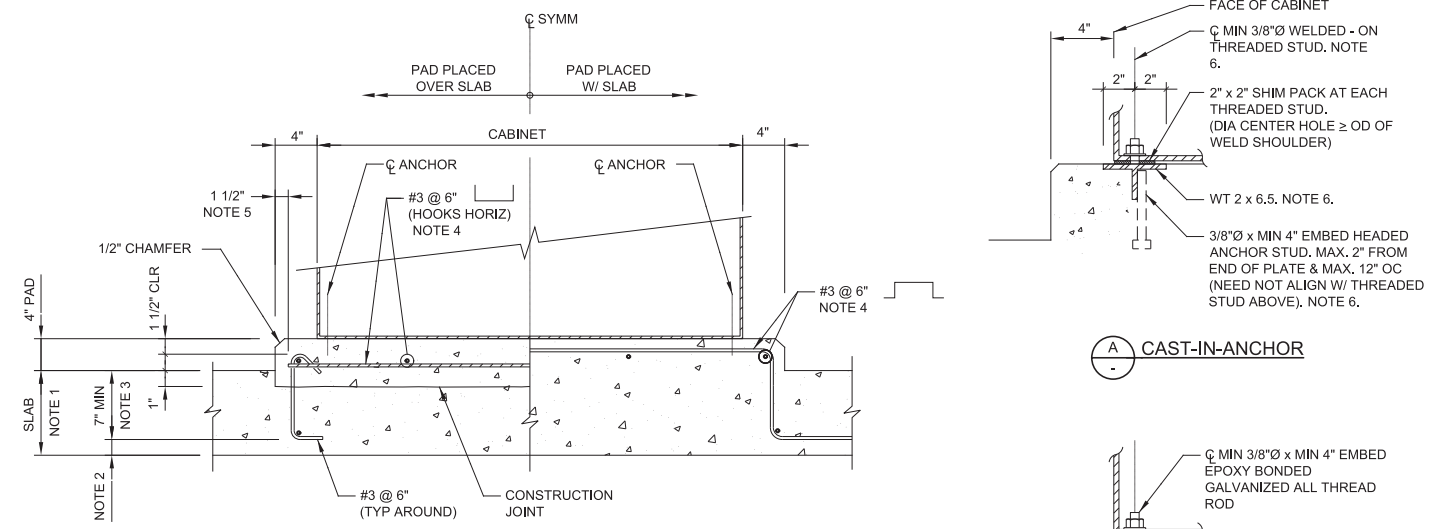
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen PlotScale: 2:1

LAST SAVED BY: jlefevre



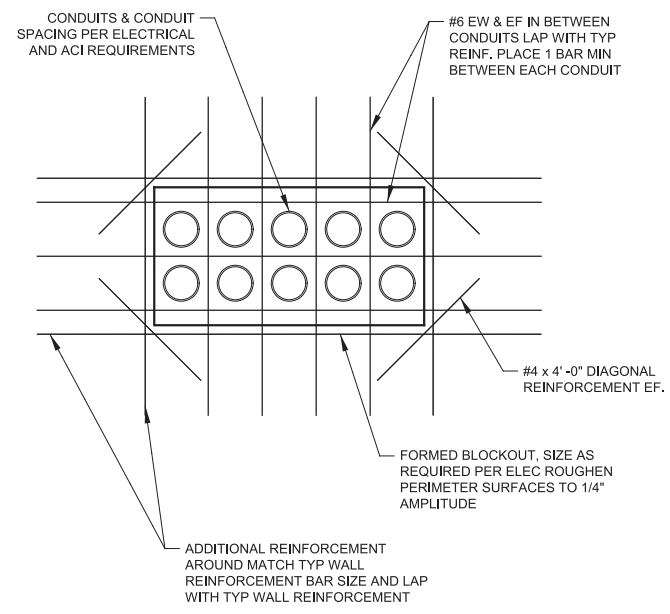
- NOTES:
1. SPACE CONNECTIONS AS REQUIRED TO RESIST LOADING SHOWN ON ROOF LOADING PLANS. START CONNECTIONS 2'-0" MAX FROM END OF PRECAST TEE.

**S344** PRECAST CONCRETE TEE SIDE FLANGE CONNECTION  
TYP 12/29/17

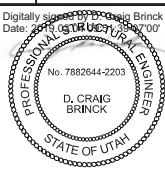


- NOTES:
1. SEE STRUCTURAL DRAWINGS FOR THICKNESS OF SLAB BELOW PAD. SLAB REINFORCEMENT NOT SHOWN.
  2. SEE S101/ TYP FOR MIN CONCRETE COVER REQUIREMENTS.
  3. CONTACT ENGINEER FOR INSTRUCTIONS WHERE HOOK EMBEDMENT IS LESS THAN DIMENSION SHOWN.
  4. FOR EQUIPMENT WITH CONDUIT WINDOWS BELOW, ADJUST BAR LOCATIONS TO FIT BETWEEN WINDOWS.
  5. LOCATE VERTICAL EDGE OF PAD AND VERTICAL FACE OF #3s USING VERTICAL 2x FORM DURING SLAB PLACEMENT.
  6. HOT DIP GALVANIZE WT AND HEADED ANCHOR STUD ASSEMBLY. TOUCH UP GALVANIZING AFTER FIELD WELDING THREADED STUDS.

**S350** ELECTRICAL EQUIPMENT HOUSEKEEPING PAD  
TYP 02/21/14



**S351** CONDUIT PENETRATION THROUGH WALL  
TYP 02/20/19



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West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY  
PROJECT 5  
TYPICAL DETAILS  
**STRUCTURAL TYPICAL DETAILS 5**

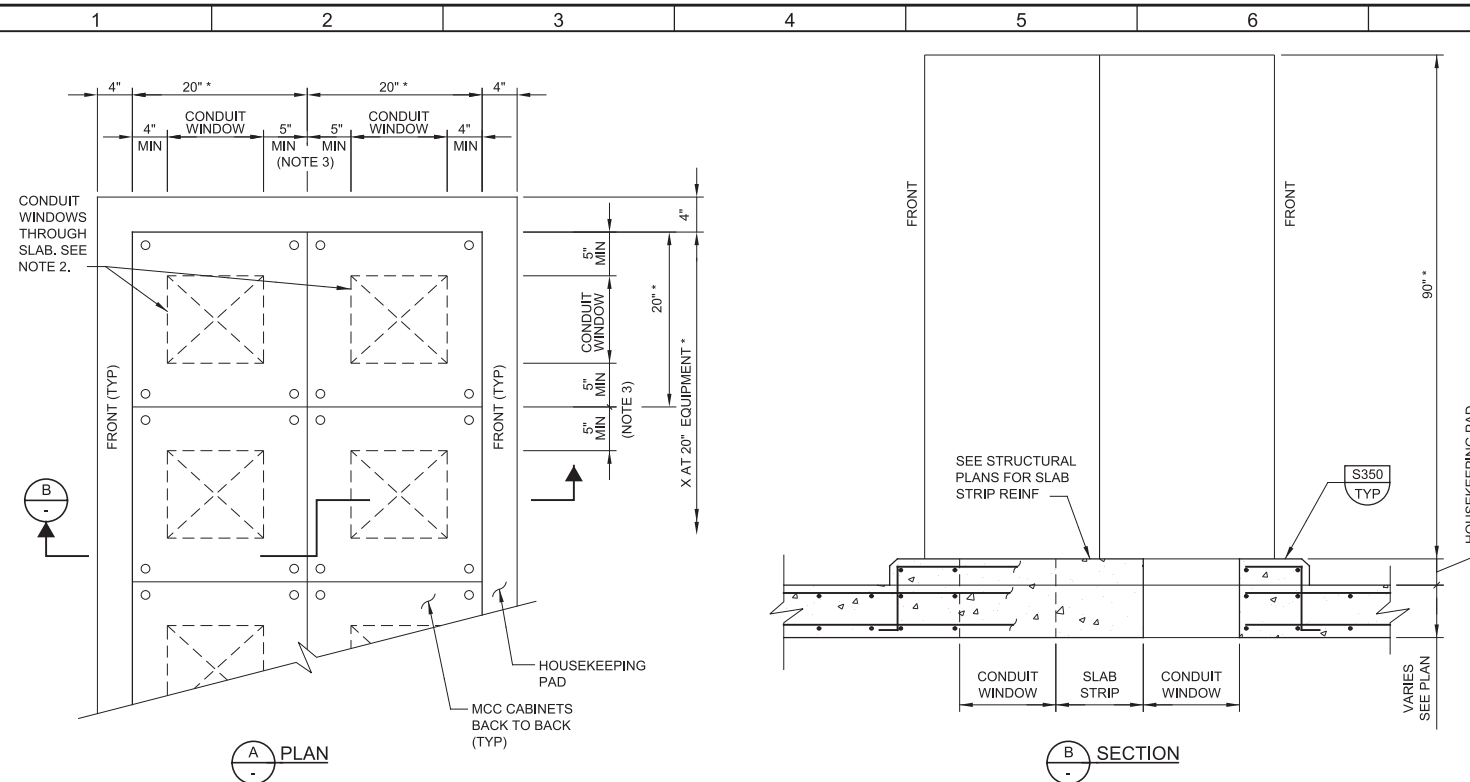
VERIFY SCALES	JOB NO. 10548A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. <b>GS-06</b>
0 1"	SHEET NO. 70 OF 159
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

Plot Date: 28-FEB-2019 8:06:22 AM

User: svcPW

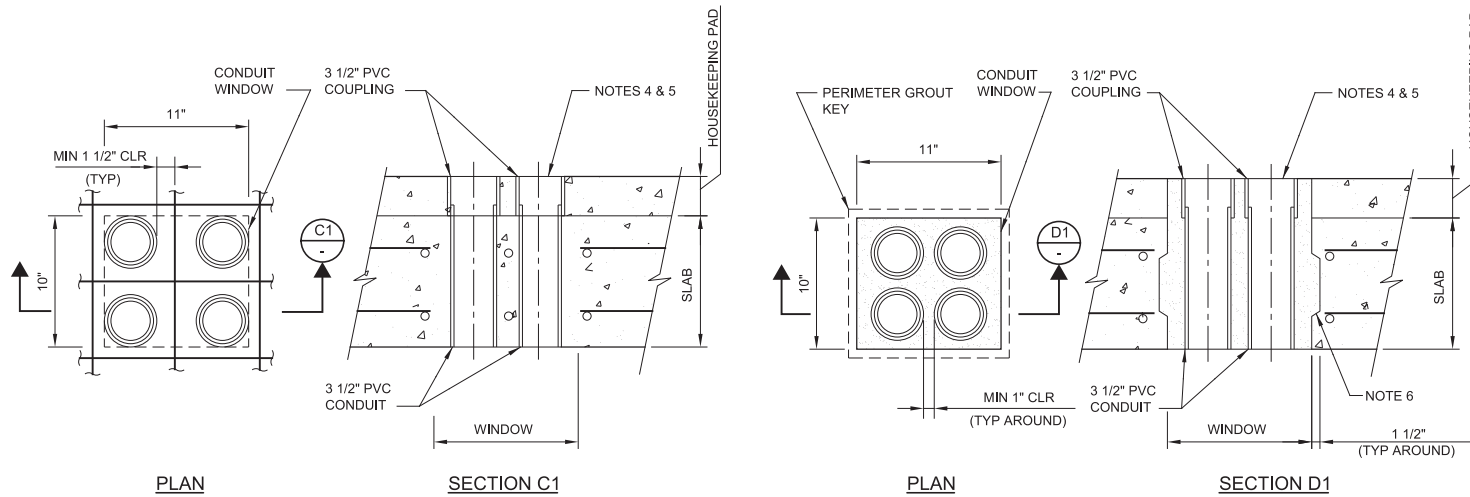
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Std\_Pen\_v0905.pen PlotScale: 2:1

LAST SAVED BY: jfeveve



PLAN

SECTION



DETAIL - SLEEVES CAST-IN-PLACE ALL SEISMIC DESIGN CATEGORIES

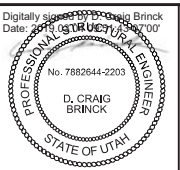
DETAIL - SLEEVES GROUTED-IN-PLACE OPTION FOR SEISMIC DESIGN CATEGORIES A & B

- NOTES:
- \* INDICATES TYPICAL DIMENSION. CONFIRM DIMENSIONS FOR EQUIPMENT SELECTED.
  - LIMITS OF WINDOW SHOWN BY DASHED LINES. WINDOW DEFINES AREA WHERE ELECTRICAL CONDUITS MAY PENETRATE STRUCTURE.
  - MINIMUM 10" WIDE CONCRETE SLAB STRIP BETWEEN CONDUIT WINDOWS.
  - FILL USED SLEEVES WITH DUXSEAL AFTER CABLE INSTALLATION.
  - PLUG OR CAP SPARE SLEEVES.
  - GROUT KEY HEIGHT = 1/3 X SLAB THICKNESS.

**S354** ELECTRICAL EQUIPMENT: HOUSEKEEPING PAD AND FLOOR PENETRATION AT MCC'S - LOW VOLTAGE ON ELEVATED SLAB

02/21/14

DESIGNED	DCB
DRAWN	JRL
CHECKED	GLS
DATE	MARCH 2019



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West Jordan, Utah 84084

**SOUTH VALLEY WATER RECLAMATION FACILITY**  
PROJECT 5  
TYPICAL DETAILS  
**STRUCTURAL TYPICAL DETAILS 6**

VERIFY SCALES	JOB NO. 10548A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. GS-07
0 1"	SHEET NO. 71 OF 159
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

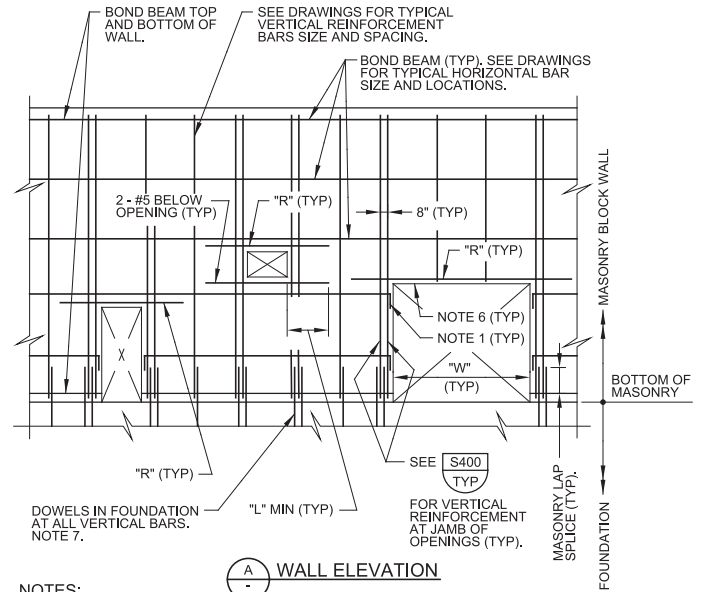
- UNLESS OTHERWISE INDICATED ON THE DRAWINGS, MINIMUM WALL REINFORCEMENT SHALL BE AS FOLLOWS:
  - VERTICAL REINFORCEMENT: #5 AT 2'-8" IN GROUTED CELLS, CENTERED IN 8" WALLS. EACH FACE IN 12" WALLS. ADDITIONAL REINFORCEMENT (SAME SIZE AS VERTICAL WALL BARS UNO); VERTICAL BARS AT CORNERS AND INTERSECTIONS: SEE DETAIL S412/TYP. VERTICAL BARS EACH SIDE AT MASONRY CONTROL JOINTS: SEE DETAIL S430/TYP. VERTICAL BARS IN FIRST 2 CELLS AT EACH JAMB OF WALL OPENINGS: SEE DETAIL S412/TYP.
  - HORIZONTAL REINFORCEMENT: HORIZONTAL BOND BEAMS AT LOCATIONS INDICATED IN DETAIL S410/TYP AND IN WALL SECTIONS FOR EACH STRUCTURE. BOND BEAM REINFORCEMENT: 1 - #5 IN 8" WALLS. 2 - #5 IN 12" WALLS.

- LAP SPLICES:
  - UNLESS OTHERWISE INDICATED ON THE DRAWINGS, THE BARS AT A LAP SPlice SHALL BE IN CONTACT WITH EACH OTHER.
  - BAR LAP SPLICES NOT SPECIFIED ON THE DRAWINGS OR IN THE FOLLOWING TABLE SHALL NOT BE LESS THAN 72 BAR DIAMETERS.
  - THE MASONRY SIDE COVER OVER THE REINFORCING BARS SHALL NOT BE LESS THAN 2 INCHES FROM FACE OF MASONRY TO THE EXTERIOR FACE OF THE BAR.

BAR SIZE	LAP SPlice LENGTH (INCHES)			
	8" CMU: BAR CENTERED IN WALL	8" CMU: BAR @ FACE OF WALL	12" CMU: BAR CENTERED IN WALL	12" CMU: BAR @ FACE OF WALL
#4	21"	26"	21"	26"
#5	26"	40"	26"	40"
#6	42"	54"	40"	54"
#7	58"	63"	46"	63"

**S400** MASONRY NOTES

04/10/17

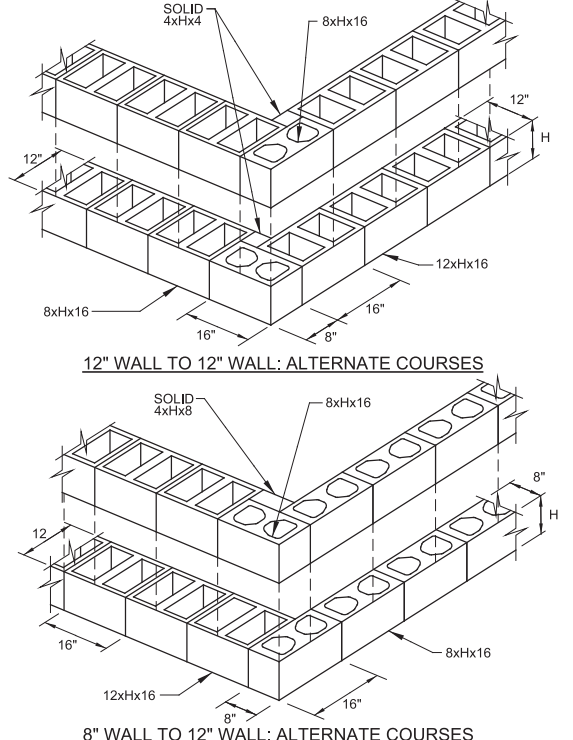


- NOTES:
- ACI STANDARD 90° HOOK ON HORIZONTAL BARS AT OPENINGS.
  - SEE DRAWINGS FOR VERTICAL AND HORIZONTAL REINFORCEMENT SIZE AND SPACING AT EACH STRUCTURE.
  - DO NOT PLACE VERTICAL CONDUITS IN CELLS WITH VERTICAL REINFORCING BARS.
  - SEE DETAIL S412/TYP FOR BOND BEAM REINFORCEMENT AT CORNERS AND INTERSECTIONS.
  - "R" BARS: EXTEND BAR TO "L" DIMENSION INDICATED ON SHEET 2. PROVIDE VERTICAL HOOK AT END IF "L" CANNOT BE ACHIEVED.
  - CHANNEL LINTEL MASONRY UNITS ACROSS OPENINGS. KNOCK-OUT BOND BEAM UNITS BEYOND OPENINGS TO "L".
  - EMBED DOWELS IN CONCRETE PER DETAIL S455/TYP.

**S410** REINFORCED MASONRY WALL

SHEET 1 OF 2

06/01/17



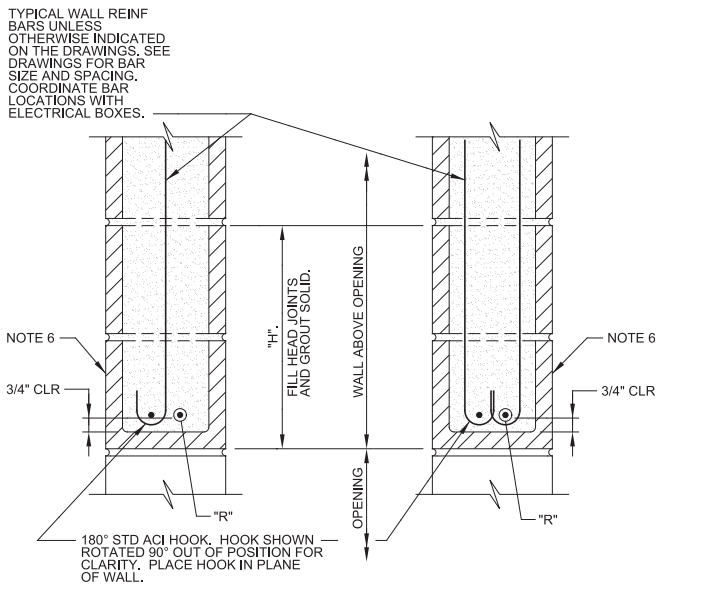
12" WALL TO 12" WALL: ALTERNATE COURSES

8" WALL TO 12" WALL: ALTERNATE COURSES

- NOTES:
- WALL THICKNESS AS INDICATED ON THE DRAWINGS.
  - BLOCK OR COURSE HEIGHT "H" EQUALS 8" OR 4" AS INDICATED ON THE DRAWINGS.

**S402** CMU CORNER DETAILS - 12" WALLS

07/21/16



LINTEL AT OPENING WITH VERTICAL REIN

LINTEL REINFORCEMENT SCHEDULE			
"W"	"R"	"L"	"H"
LESS THAN 5'-0"	2 - #5	2'-6"	16"
GREATER THAN 5'-0" TO 7'-0"	2 - #6	3'-0"	32"
GREATER THAN 7'-0" TO 12'-0"	2 - #7	3'-6"	40"

**S410** REINFORCED MASONRY WALL

SHEET 2 OF 2

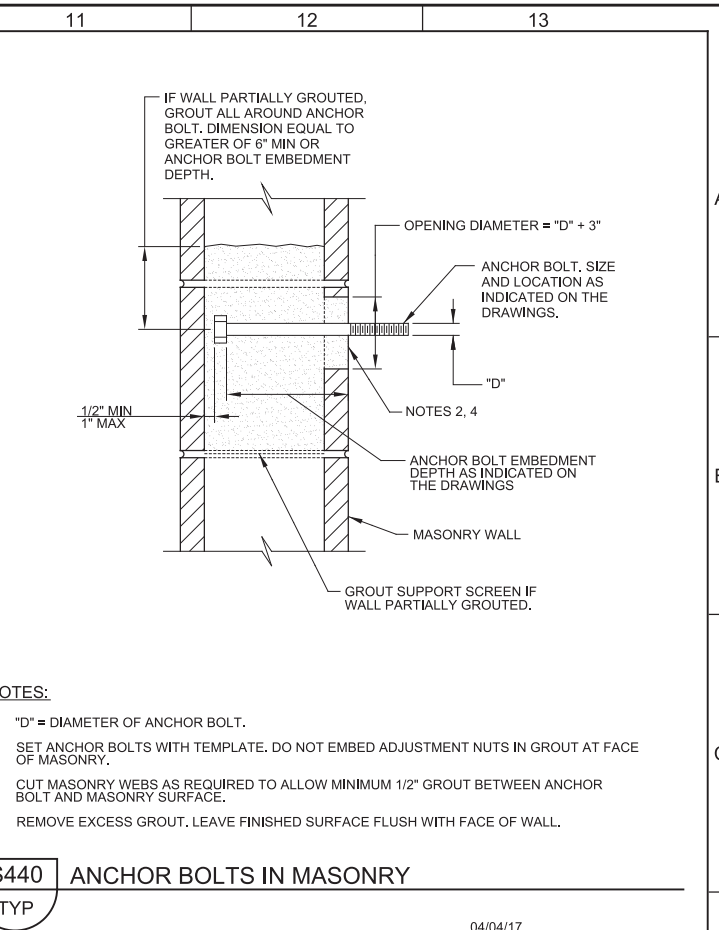
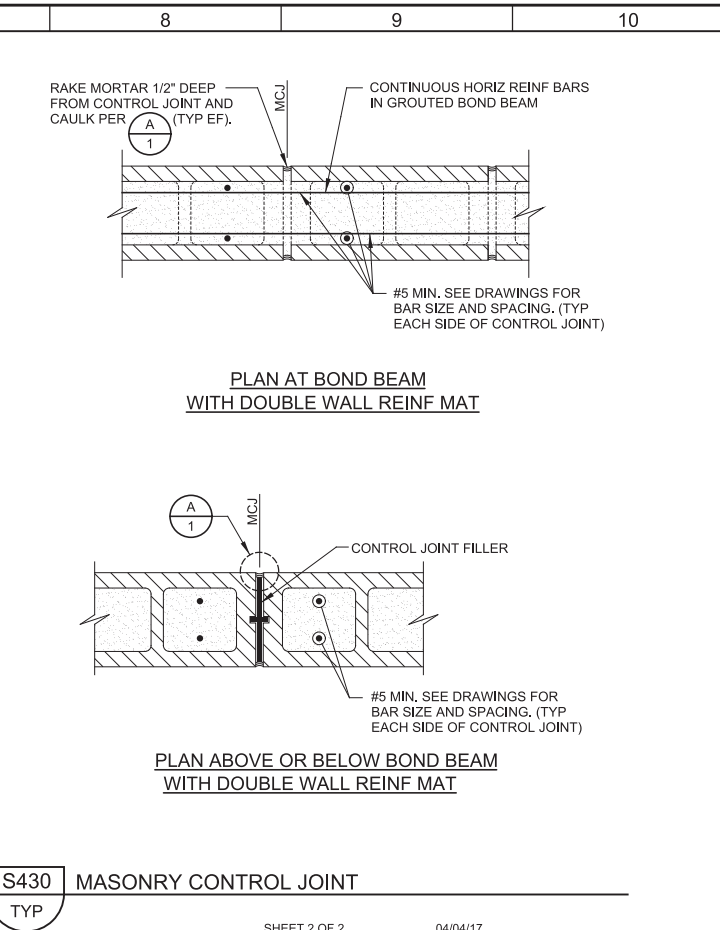
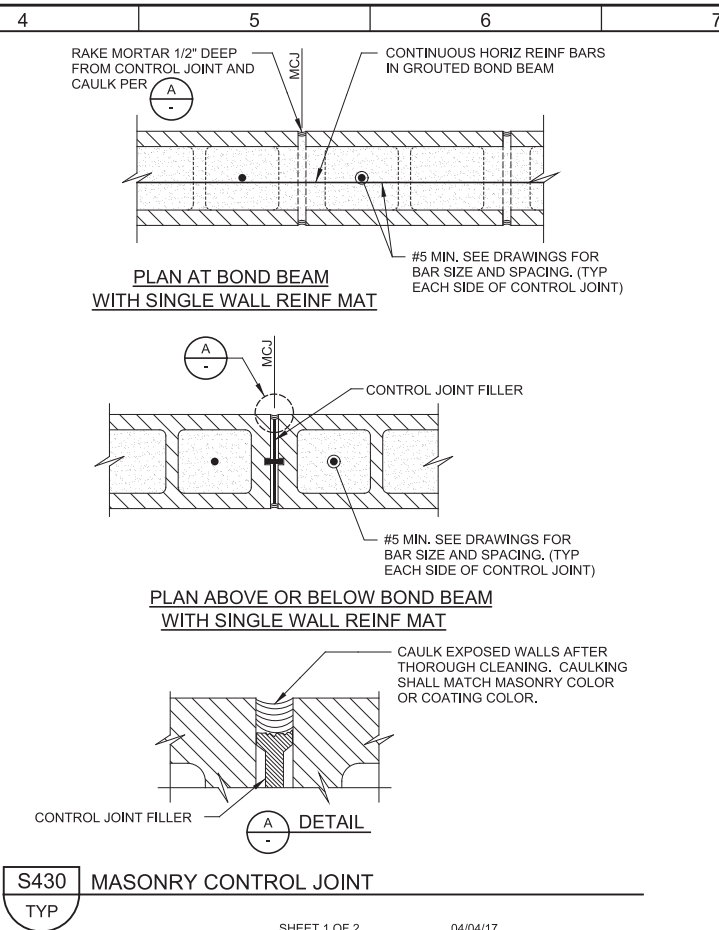
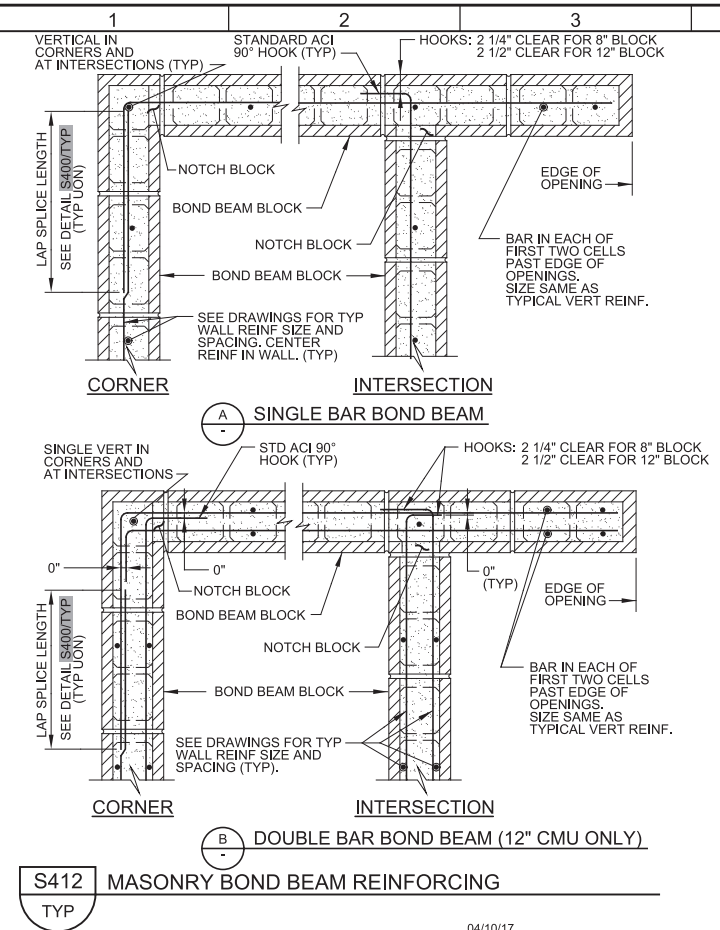
06/01/17

Plot Date: 28-FEB-2019 8:06:18 AM

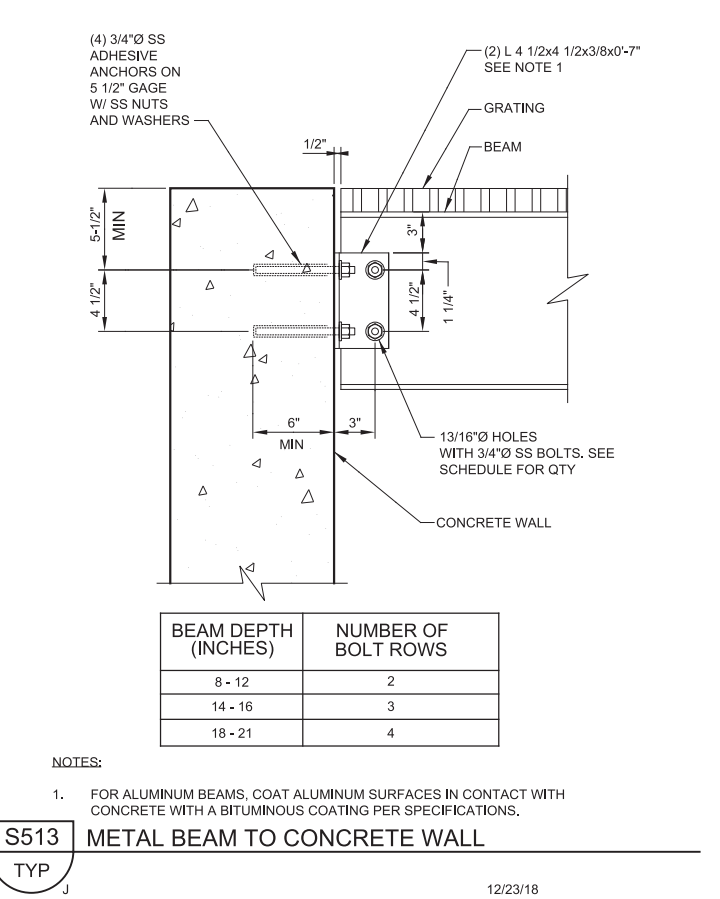
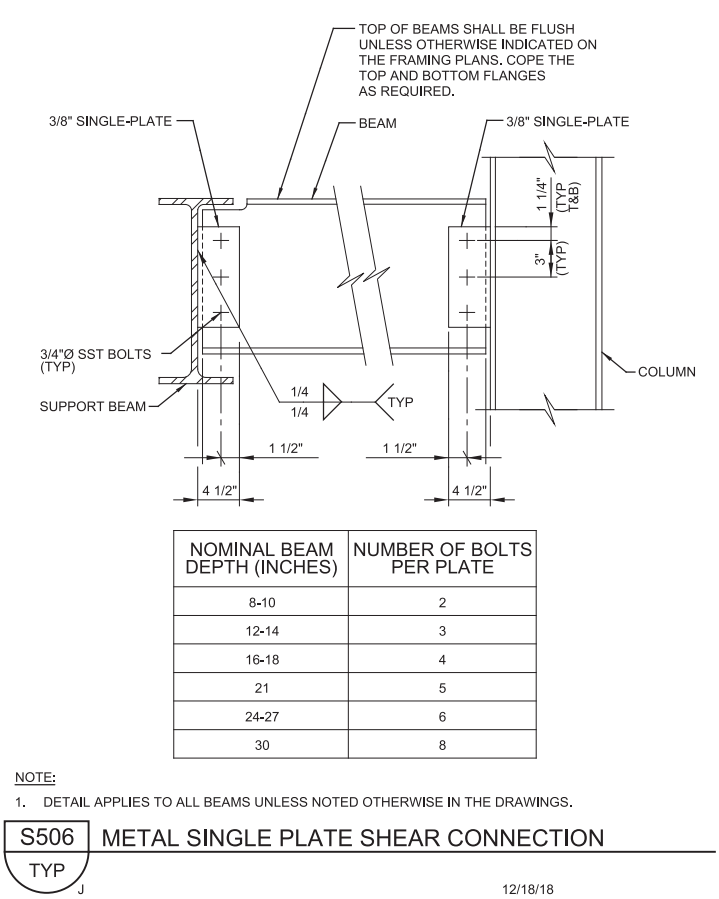
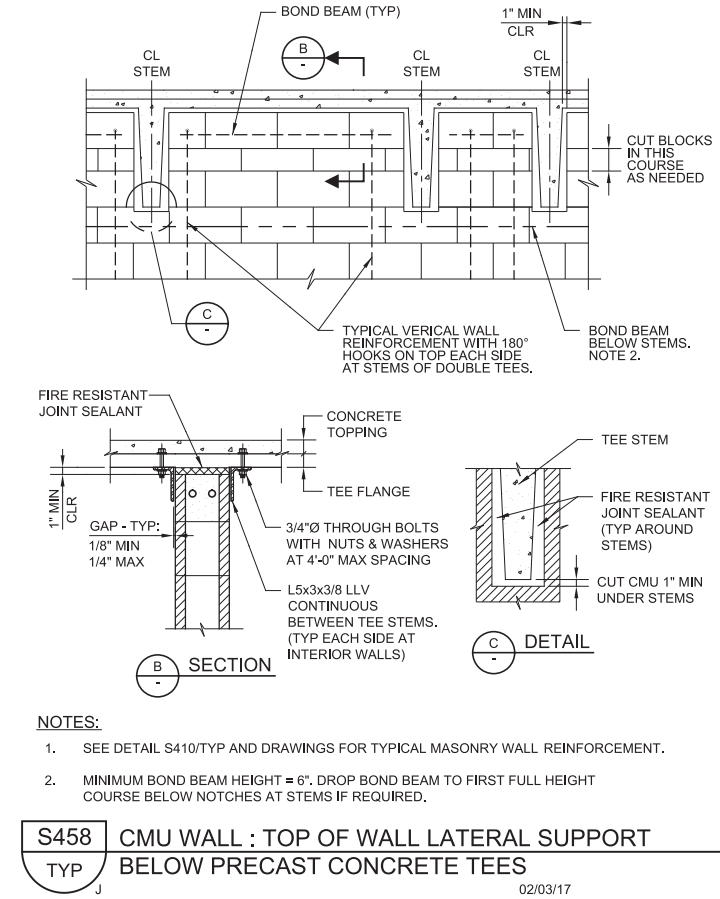
User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Std\_Pen\_v0905.pen PlotScale: 2:1

LAST SAVED BY: jlefevre



- NOTES:**
- "D" = DIAMETER OF ANCHOR BOLT.
  - SET ANCHOR BOLTS WITH TEMPLATE. DO NOT EMBED ADJUSTMENT NUTS IN GROUT AT FACE OF MASONRY.
  - CUT MASONRY WEBS AS REQUIRED TO ALLOW MINIMUM 1/2" GROUT BETWEEN ANCHOR BOLT AND MASONRY SURFACE.
  - REMOVE EXCESS GROUT. LEAVE FINISHED SURFACE FLUSH WITH FACE OF WALL.



REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED DCB  
DRAWN JRL  
CHECKED GLS  
DATE MARCH 2019

Digitally signed by D. Craig Brinck  
Date: 2019.03.07 15:47:00  
No. 7882644-2203  
D. CRAIG BRINCK  
STATE OF UTAH

**SV South Valley**  
WATER RECLAMATION FACILITY  
7495 South 1300 West  
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY  
PROJECT 5  
TYPICAL DETAILS  
**STRUCTURAL TYPICAL DETAILS 7**

VERIFY SCALES  
JOB NO. 10548A.10  
DRAWING NO. GS-08  
SHEET NO. 72 OF 159

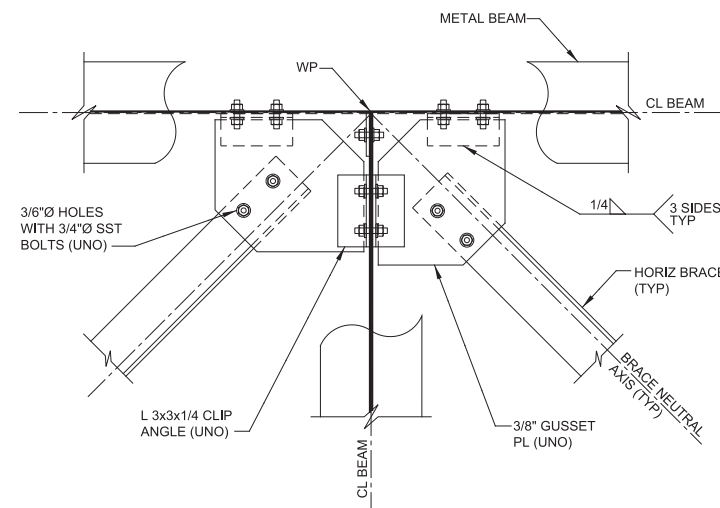


Plot Date: 28-FEB-2019 8:06:35 AM

User: svcPW

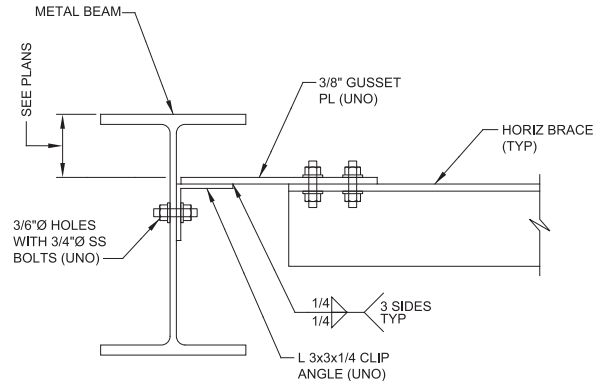
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen PlotScale: 2:1

LAST SAVED BY: jefevre



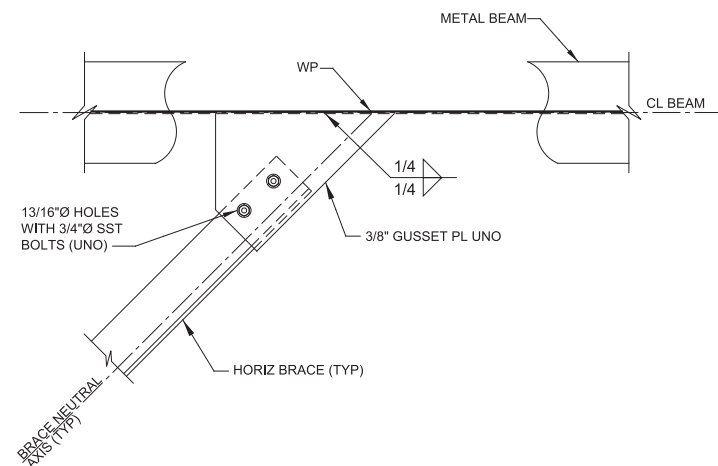
**S531** HORIZONTAL METAL BRACING CONNECTION  
W/ CLIP ANGLES  
TYP

SHEET 1 OF 3 12/18/18



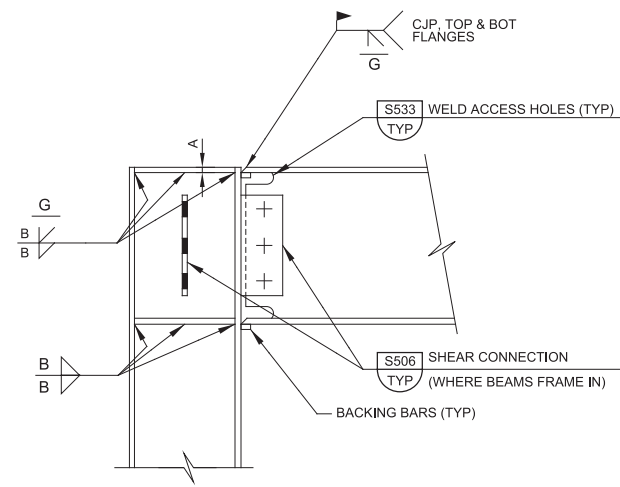
**S531** HORIZONTAL METAL BRACING CONNECTION  
W/ CLIP ANGLES  
TYP

SHEET 2 OF 3 12/18/18



**S531** HORIZONTAL METAL BRACING CONNECTION  
W/ CLIP ANGLES  
TYP

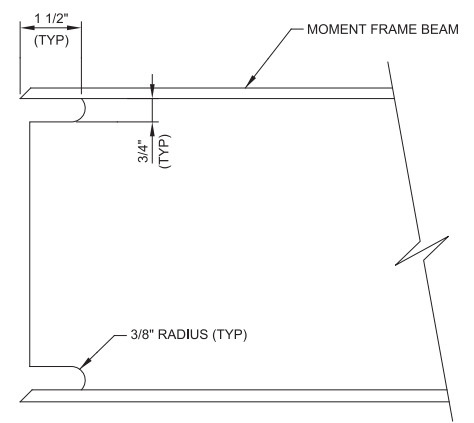
SHEET 3 OF 3 12/18/18



**S532** DIRECTLY WELDED MOMENT CONNECTION  
FLUSH TOP  
TYP

09/11/18

MARK NO.	PLATE THICKNESS A	WELD SIZE B
TYPICAL	3/8"	1/4"



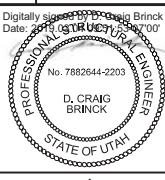
NOTE:  
1. WELD ACCESS HOLES SHALL BE FREE OF NOTCHES AND SHARP REENTRANT CORNERS.

**S533** WELD ACCESS HOLES FOR MOMENT FRAMES  
TYP

09/11/18

REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED  
DCB  
DRAWN  
JRL  
CHECKED  
GLS  
DATE  
MARCH 2019



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7495 South 1300 West  
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY  
PROJECT 5  
TYPICAL DETAILS  
**STRUCTURAL TYPICAL DETAILS 8**

VERIFY SCALES  
BAR IS ONE INCH ON ORIGINAL DRAWING  
0 1"  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.  
10548A.10  
DRAWING NO.  
**GS-09**  
SHEET NO.  
73 OF 159

Plot Date: 26-FEB-2019 11:42:15 AM

User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen PlotScale: 2:1

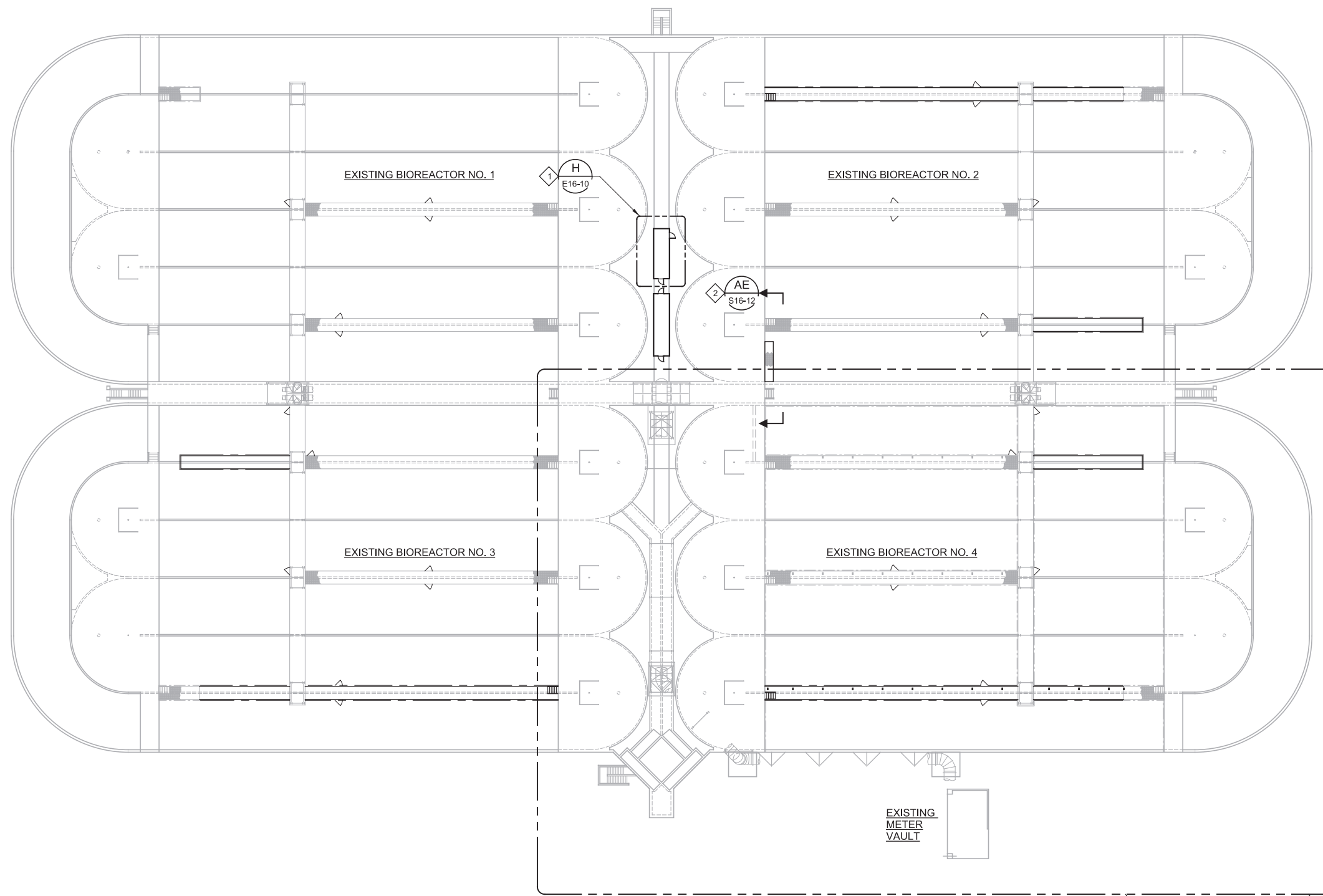
LAST SAVED BY: ascheale

**GENERAL NOTES:**

- 1. SEE GS -01 FOR GENERAL STRUCTURAL NOTES.
- 2. ALL IMPROVEMENTS NOTED HERE SHALL BE REQUIRED ON BIOREACTORS 2 THROUGH 4, UNLESS NOTED OTHERWISE.

**KEY NOTES:**

- 1 SEE SPECIFICATION SECTION 16920 FOR BIOREACTOR MCC POWER CENTER STRUCTURAL DESIGN CRITERIA.
- 2 NEW PLATFORM IN BIOREACTOR 2 ONLY.



**A OVERALL PLAN**  
 SCALE: 1/32" = 1'-0"  
 FILE: 10548A10\_16S102

**B LOWER PLAN**  
 S16-02

**C UPPER PLAN**  
 S16-03

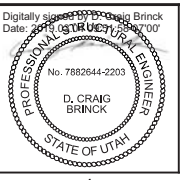
REV	DATE	BY	DESCRIPTION

DESIGNED  
DCB

DRAWN  
TLR

CHECKED  
DJ

DATE  
MARCH 2019



**SV South Valley**  
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7495 South 1300 West  
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**SOUTH VALLEY WATER RECLAMATION FACILITY**

**PROJECT 5**

STRUCTURAL

**BIOREACTORS 2-4**

**OVERALL PLAN**

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.  
10548A.10

DRAWING NO.  
**S16-01**

SHEET NO.  
74 OF 159

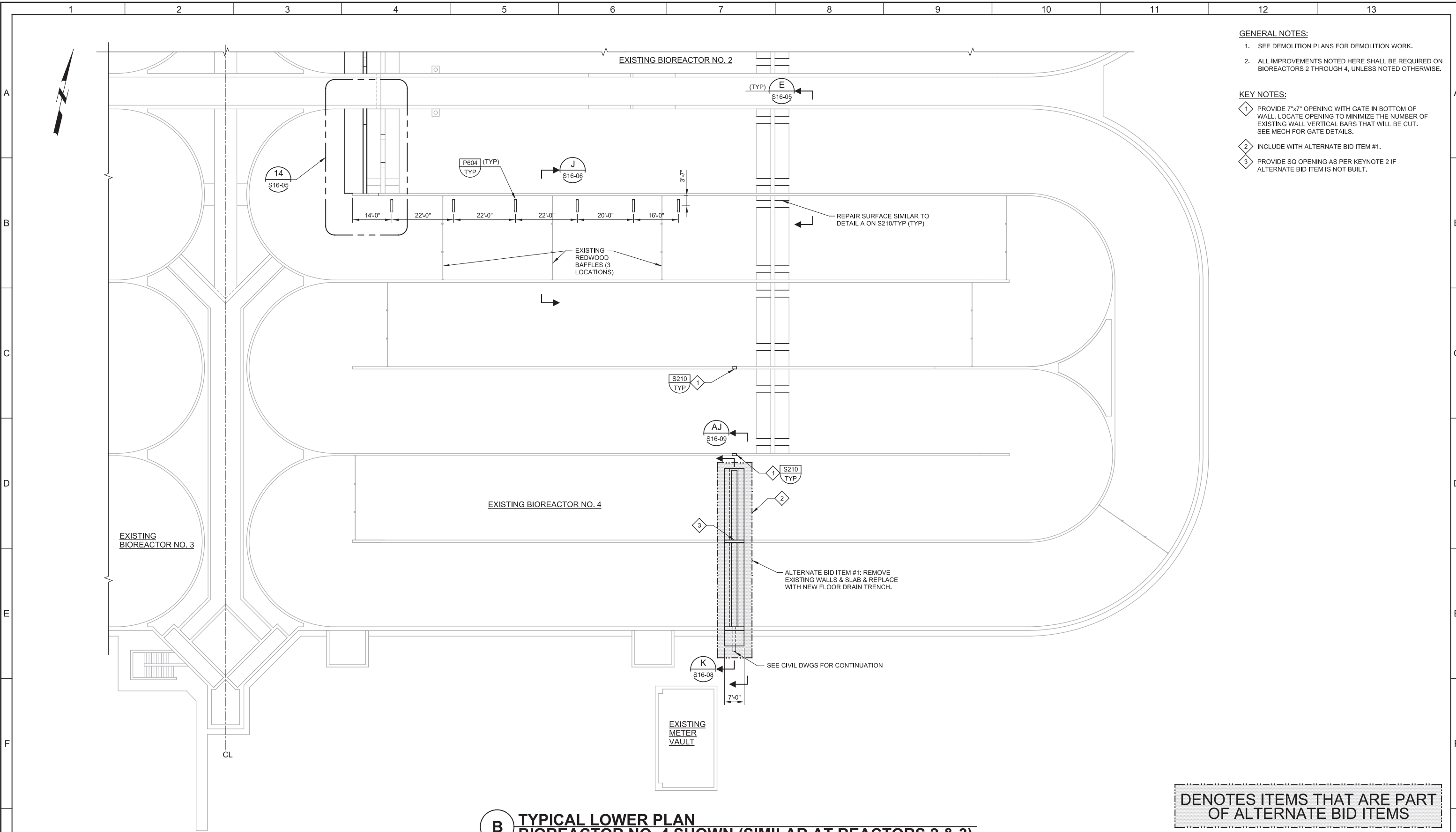
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User: svcPW

Plot Scale: 2:1

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen

LAST SAVED BY: ascheele



**GENERAL NOTES:**

- 1. SEE DEMOLITION PLANS FOR DEMOLITION WORK.
- 2. ALL IMPROVEMENTS NOTED HERE SHALL BE REQUIRED ON BIOREACTORS 2 THROUGH 4, UNLESS NOTED OTHERWISE.

**KEY NOTES:**

- 1. PROVIDE 7"x7" OPENING WITH GATE IN BOTTOM OF WALL. LOCATE OPENING TO MINIMIZE THE NUMBER OF EXISTING WALL VERTICAL BARS THAT WILL BE CUT. SEE MECH FOR GATE DETAILS.
- 2. INCLUDE WITH ALTERNATE BID ITEM #1.
- 3. PROVIDE SQ OPENING AS PER KEYNOTE 2 IF ALTERNATE BID ITEM IS NOT BUILT.

**B TYPICAL LOWER PLAN  
BIOREACTOR NO. 4 SHOWN (SIMILAR AT REACTORS 2 & 3)**  
SCALE: 1/16" = 1'-0"  
FILE: 10548A10\_16S-101

**DENOTES ITEMS THAT ARE PART OF ALTERNATE BID ITEMS**

REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED DCB	
DRAWN TLR	
CHECKED DJ	
DATE MARCH 2019	

**SOUTH VALLEY WATER RECLAMATION FACILITY**  
**PROJECT 5**  
STRUCTURAL  
**BIOREACTORS 2-4**  
**TYPICAL LOWER PLAN**

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	JOB NO. 10548A.10 DRAWING NO. <b>S16-02</b> SHEET NO. 75 OF 159
--------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------

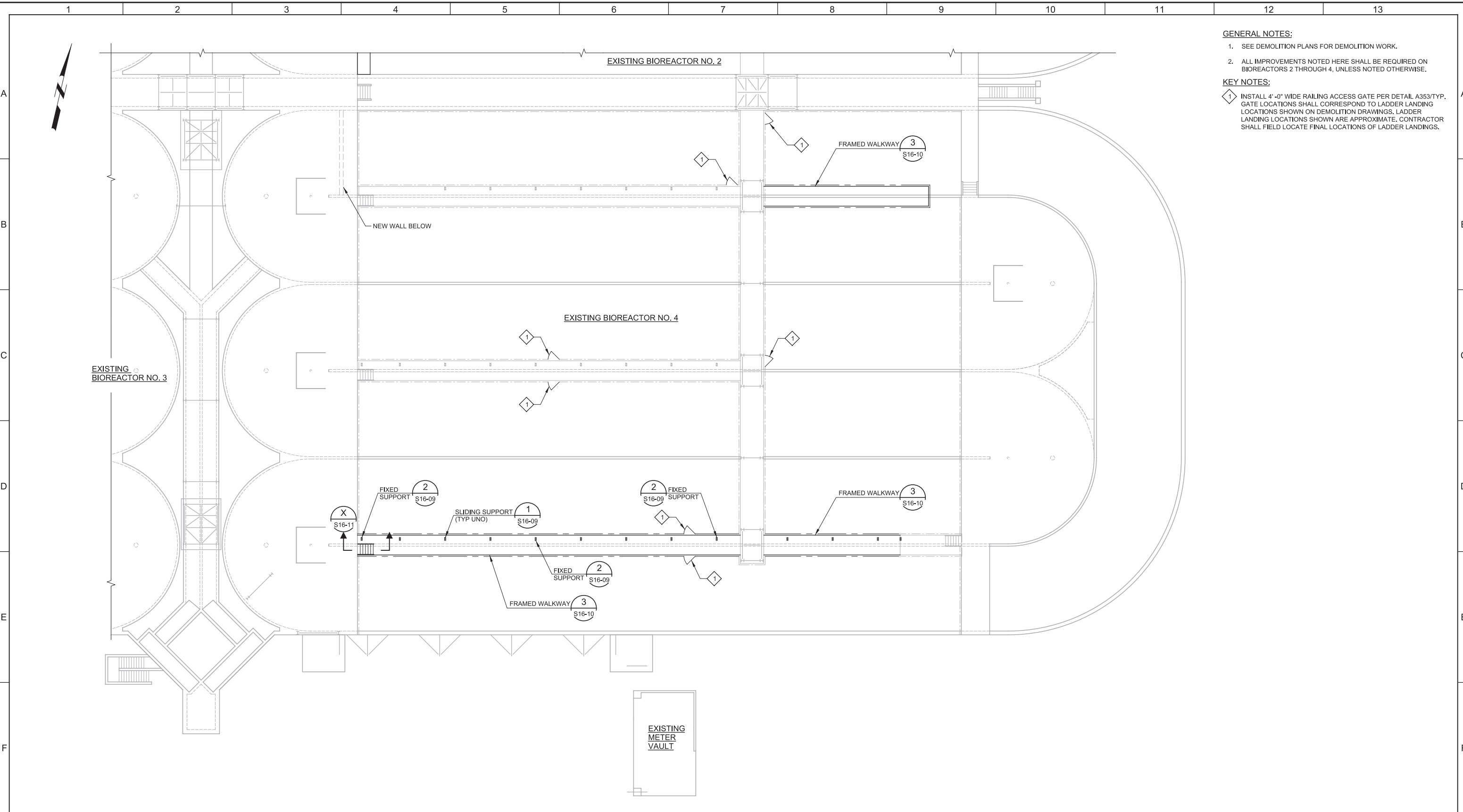
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User: svcPW

PlotScale: 2:1

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Std\_Pen\_v0905.pen

LAST SAVED BY: jscheele



**GENERAL NOTES:**

1. SEE DEMOLITION PLANS FOR DEMOLITION WORK.
2. ALL IMPROVEMENTS NOTED HERE SHALL BE REQUIRED ON BIOREACTORS 2 THROUGH 4, UNLESS NOTED OTHERWISE.

**KEY NOTES:**

1. INSTALL 4'-0" WIDE RAILING ACCESS GATE PER DETAIL A353/TYP. GATE LOCATIONS SHALL CORRESPOND TO LADDER LANDING LOCATIONS SHOWN ON DEMOLITION DRAWINGS. LADDER LANDING LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE FINAL LOCATIONS OF LADDER LANDINGS.

**C TYPICAL UPPER PLAN**  
 SCALE: 1/16" = 1'-0"  
 FILE: 10548A10\_16S102

REV	DATE	BY	DESCRIPTION

DESIGNED DCB	
DRAWN KHB	
CHECKED DJ	
DATE MARCH 2019	

SOUTH VALLEY WATER RECLAMATION FACILITY  
 PROJECT 5  
 STRUCTURAL  
 BIOREACTORS 2-4  
 TYPICAL UPPER PLAN

VERIFY SCALES	JOB NO. 10548A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. S16-03
0 1"	SHEET NO. 76 OF 159
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

Plot Date: 26-FEB-2019 11:42:19 AM

User: svcPW

Plot Scale: 2:1

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Std\_Pen\_v0905.pen

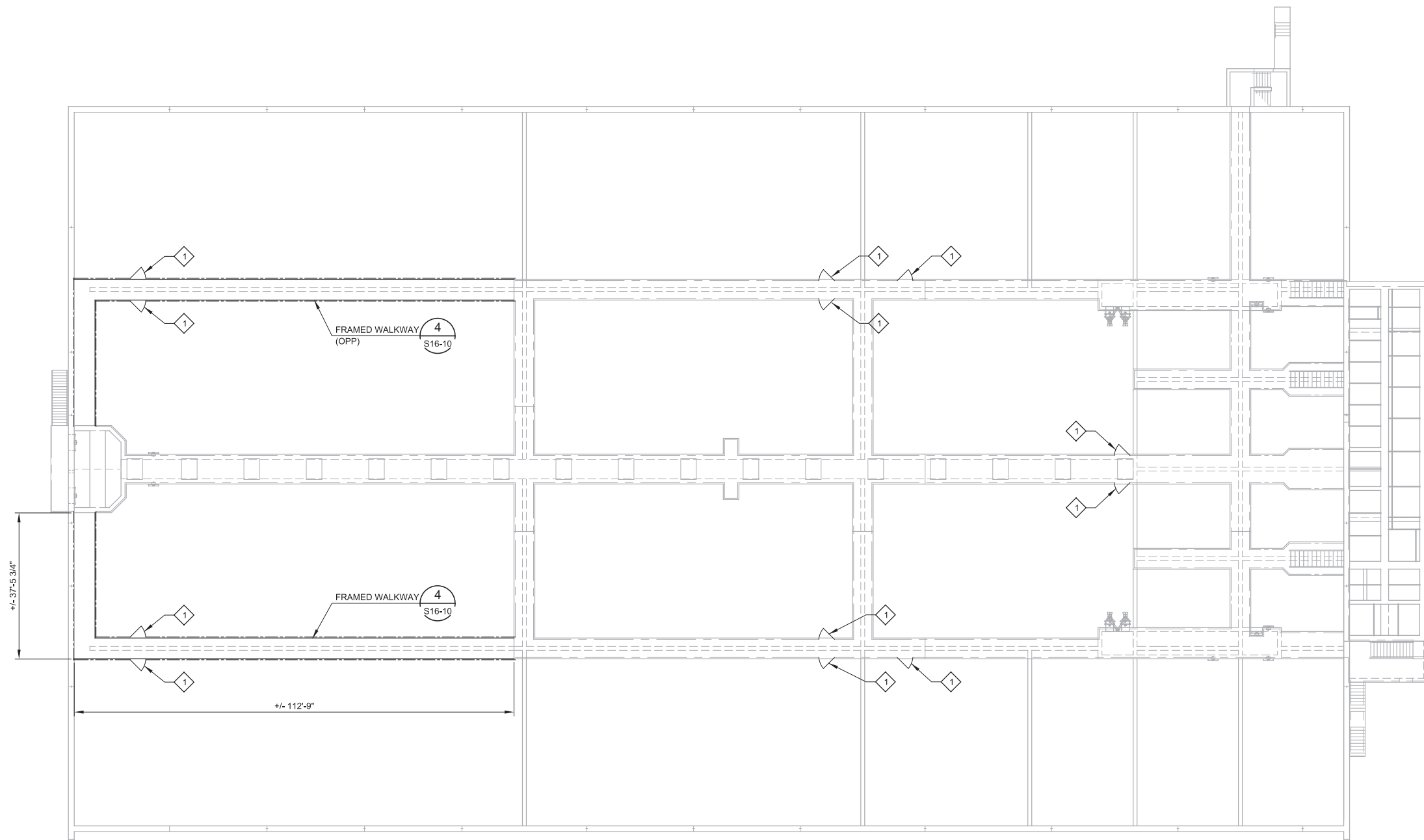
LAST SAVED BY: jscheele

**GENERAL NOTES:**

- 1. SEE DEMOLITION PLANS FOR DEMOLITION WORK.

**KEY NOTES:**

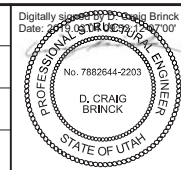
- 1. INSTALL 4'-0" WIDE RAILING ACCESS GATE PER DETAIL A353/TYP. GATE LOCATIONS SHALL CORRESPOND TO LADDER LANDING LOCATIONS SHOWN ON DEMOLITION DRAWINGS. LADDER LANDING LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL FIELD LOCATE FINAL LOCATIONS OF LADDER LANDINGS.



**D BIOREACTOR NO. 5 PLAN**  
 SCALE: 1/16" = 1'-0"  
 FILE: 10548A10\_16S105

REV	DATE	BY	DESCRIPTION

DESIGNED  
DCB  
 DRAWN  
KHB  
 CHECKED  
DJ  
 DATE  
MARCH 2019



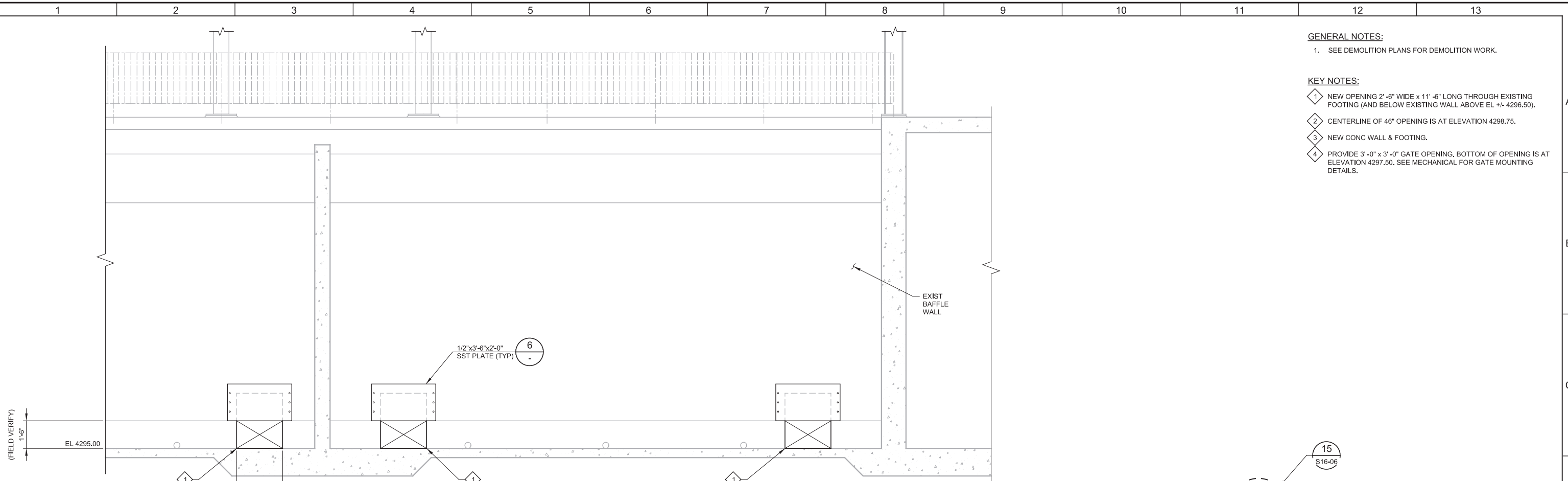
**SV South Valley**  
 WATER RECLAMATION FACILITY  
 7495 South 1300 West  
 West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY  
 PROJECT 5  
 STRUCTURAL  
**BIOREACTOR NO. 5**  
 UPPER PLAN

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 0 1"  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

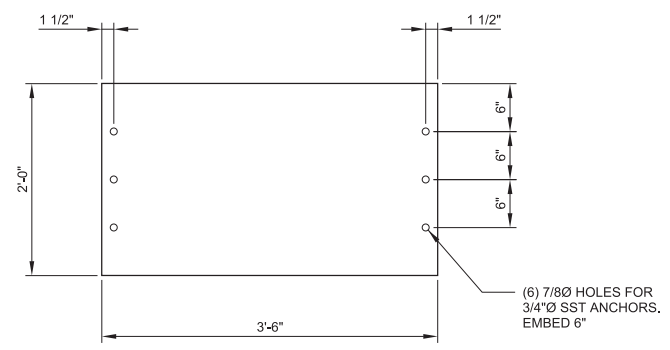
JOB NO.  
10548A.10  
 DRAWING NO.  
**S16-04**  
 SHEET NO.  
77 OF 159

Plot Date: 26-FEB-2019 11:42:18 AM  
 User: svcpw  
 Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_S16\_Pen\_v0905.pen PlotScale: 2:1  
 LAST SAVED BY: ascheele

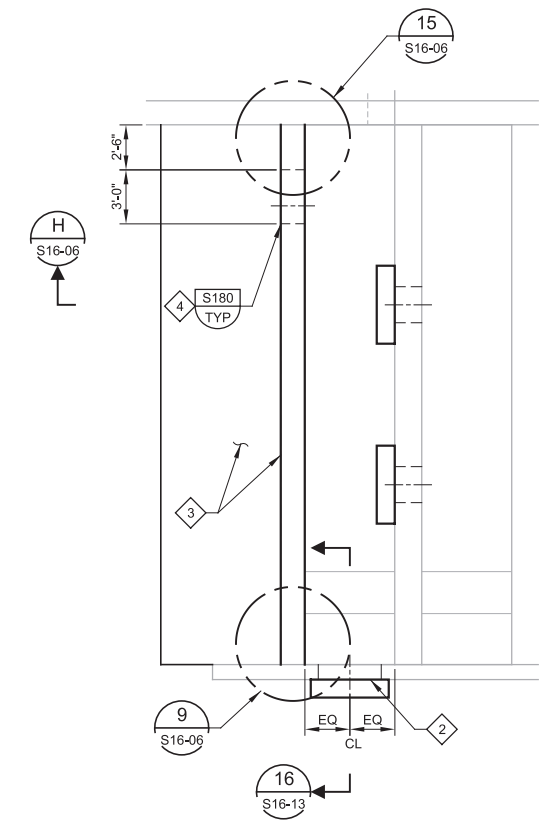


- GENERAL NOTES:**
- SEE DEMOLITION PLANS FOR DEMOLITION WORK.
- KEY NOTES:**
- NEW OPENING 2'-6" WIDE x 11'-6" LONG THROUGH EXISTING FOOTING (AND BELOW EXISTING WALL ABOVE EL +/- 4296.50).
  - CENTERLINE OF 46" OPENING IS AT ELEVATION 4298.75.
  - NEW CONC WALL & FOOTING.
  - PROVIDE 3'-0" x 3'-0" GATE OPENING. BOTTOM OF OPENING IS AT ELEVATION 4297.50. SEE MECHANICAL FOR GATE MOUNTING DETAILS.

**E SECTION**  
 S16-02 SCALE: 3/8" = 1'-0"  
 FILE: 10548A10\_16S-301



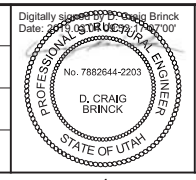
**6 DETAIL**  
 SCALE: 1" = 1'-0"  
 FILE: 10548A10\_16S-301



**14 DETAIL**  
 S16-02 SCALE: 1/4" = 1'-0"  
 FILE: 10548A10\_16S-101

REV	DATE	BY	DESCRIPTION

DESIGNED: DCB  
 DRAWN: KHB  
 CHECKED: DJ  
 DATE: MARCH 2019



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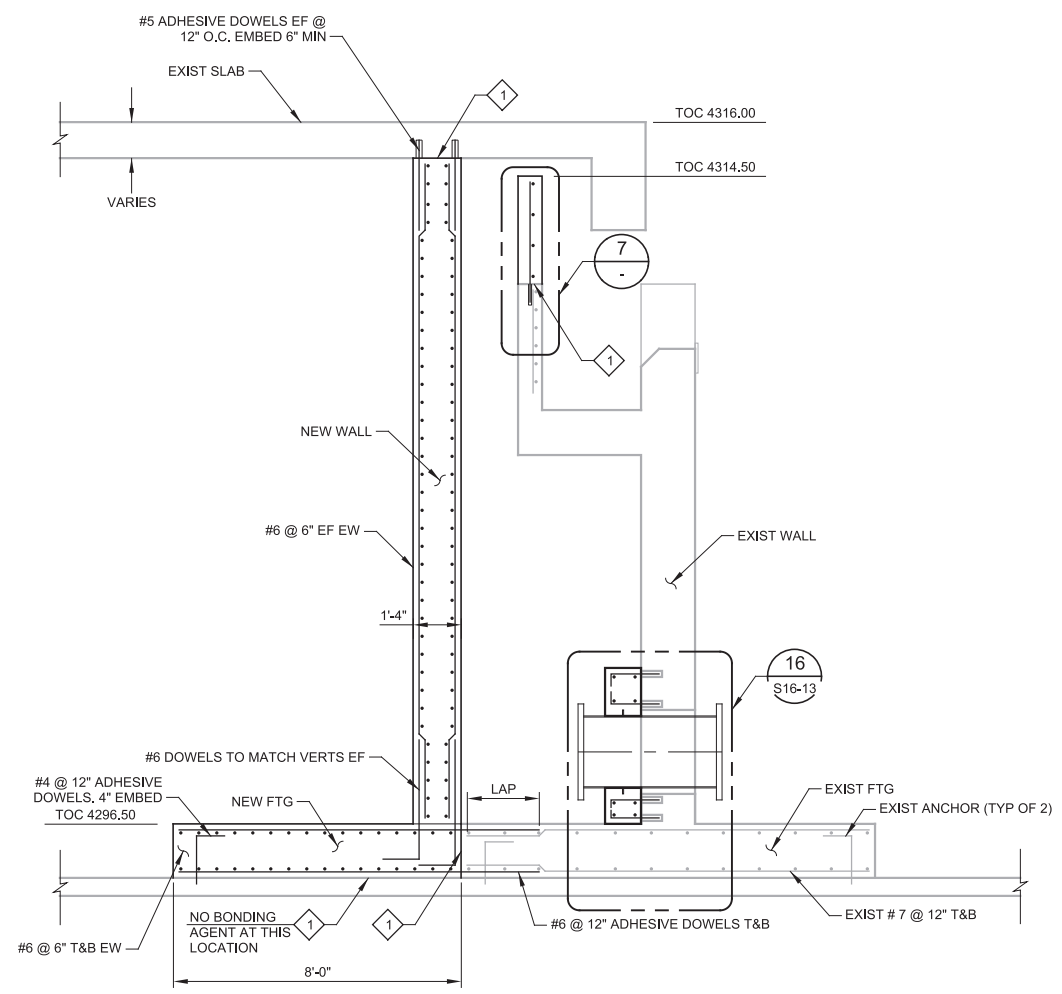
SOUTH VALLEY WATER RECLAMATION FACILITY  
 PROJECT 5  
 STRUCTURAL  
**BIOREACTORS**  
 SECTIONS AND DETAILS 1

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 0 1"

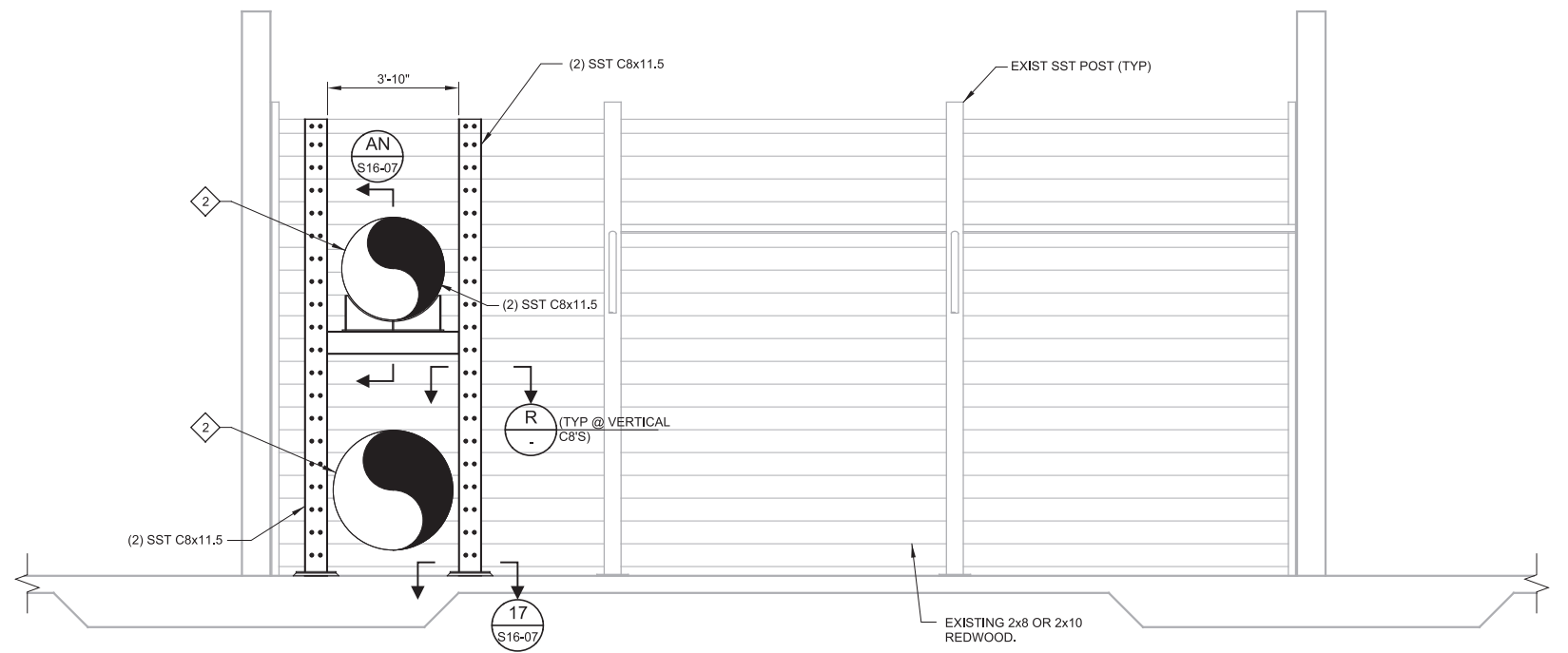
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10  
 DRAWING NO. **S16-05**  
 SHEET NO. 78 OF 159

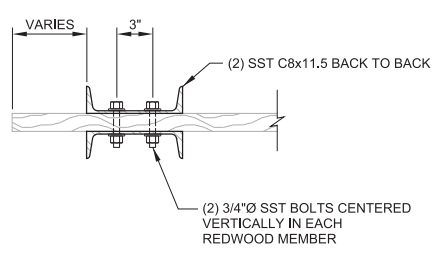
Plot Date: 26-FEB-2019 11:42:24 AM  
 User: svcPW  
 Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Std\_Pen\_v0905.pen PlotScale: 2:1  
 LAST SAVED BY: ascheale



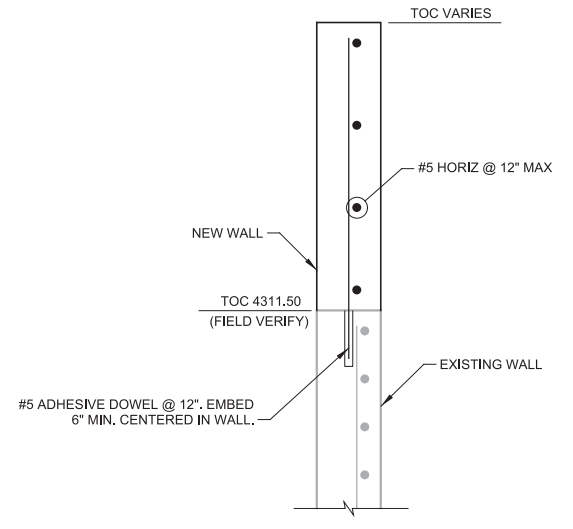
**H SECTION AT BIOREACTORS 1, 3, AND 4**  
 16S-05 SCALE: 3/8" = 1'-0"  
 FILE: 10548A10\_16S-305



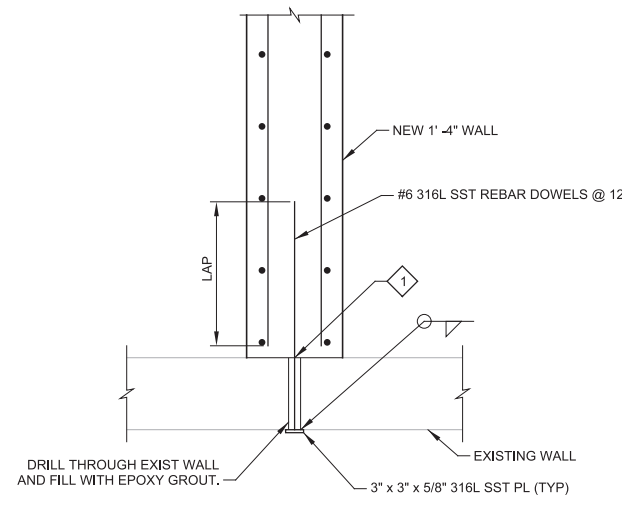
**J SECTION**  
 16S-02 SCALE: 3/8" = 1'-0"  
 FILE: 10548A10\_16S-306



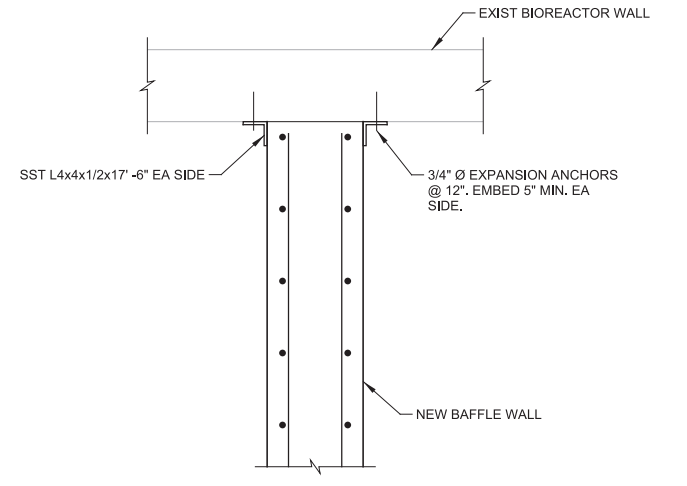
**R SECTION**  
 SCALE: 3" = 1'-0"  
 FILE: 10548A10\_16S-306



**7 DETAIL**  
 SCALE: 1" = 1'-0"  
 FILE: 10548A10\_16S-305



**9 DETAIL**  
 S16-05 SCALE: 3/4" = 1'-0"  
 FILE: 10548A10S16307



**15 DETAIL**  
 S16-05 SCALE: 3/4" = 1'-0"  
 FILE: 10548A10S16307

- GENERAL NOTES:**
- SEE DEMOLITION PLANS FOR DEMOLITION WORK.
  - COORDINATE PIPE LOCATIONS WITH MECHANICAL DRAWINGS.
- KEY NOTES:**
- ROUGHEN SURFACE TO 1/4" AMPLITUDE. WATERBLAST CLEAN AND APPLY BONDING AGENT.
  - MAX 1" GAP AROUND PIPES AND PIPE SUPPORTS

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CHECKED DJ	
DATE MARCH 2019	



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**SOUTH VALLEY WATER RECLAMATION FACILITY**  
**PROJECT 5**  
 STRUCTURAL  
**BIOREACTORS**  
**SECTIONS AND DETAILS 2**

VERIFY SCALES	JOB NO. 10548A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. <b>S16-06</b>
0  1"	SHEET NO. 79 OF 159
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

Plot Date: 26-FEB-2019 11:42:57 AM

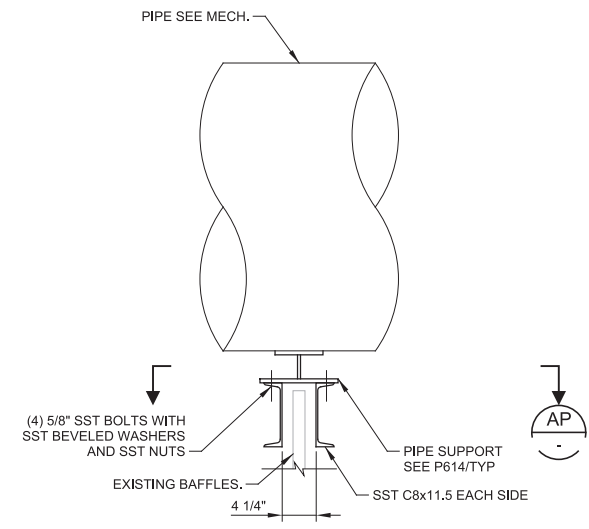
User: svcPW

Plot Scale: 2:1

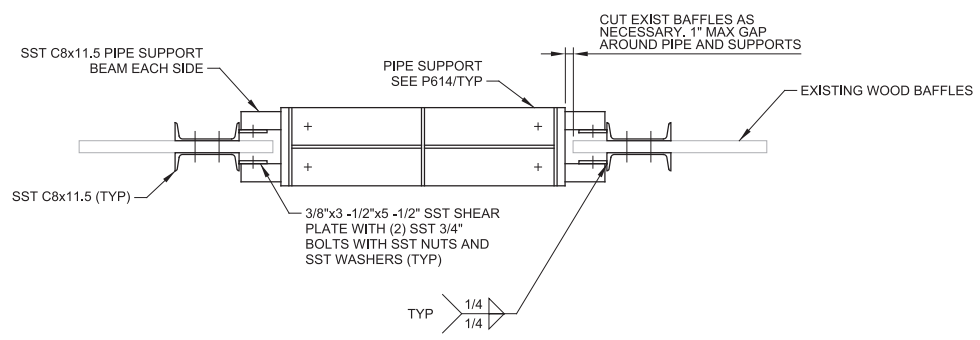
Design Script: Carollo\_Sld\_Pen\_v0905.pen

Color Table: gshade.ctb

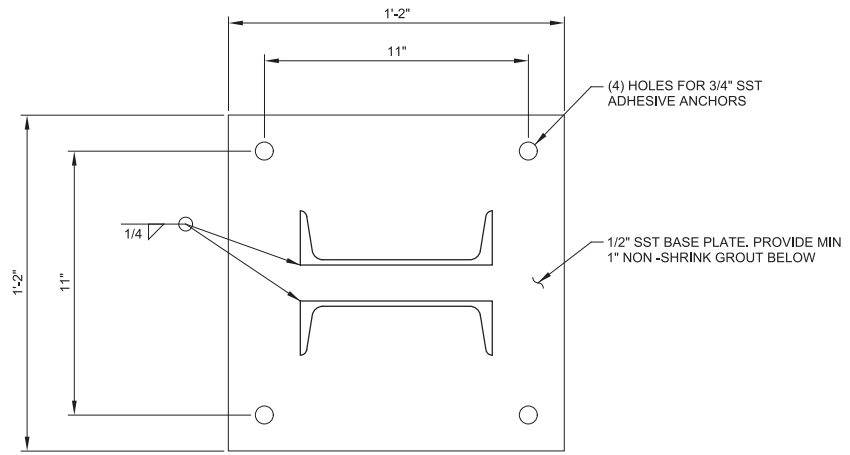
Model: Layout1 Color: Pen\_v0905.pen Plot Scale: 2:1



**AN SECTION**  
 16S-06 SCALE: 1" = 1'-0"  
 FILE: 10548A10\_16S-306



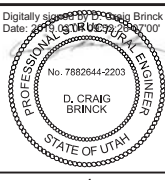
**AP SECTION**  
 16S-06 SCALE: 1" = 1'-0"  
 FILE: 10548A10\_16S-306



**17 DETAIL**  
 16S-06 SCALE: 3" = 1'-0"  
 FILE: 10548A10\_16S-306

REV	DATE	BY	DESCRIPTION

DESIGNED	DCB
DRAWN	DCS
CHECKED	DJ
DATE	MARCH 2019



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**SOUTH VALLEY WATER RECLAMATION FACILITY**  
**PROJECT 5**  
 STRUCTURAL  
**BIOREACTORS**  
**SECTIONS AND DETAILS 3**

VERIFY SCALES	JOB NO. 10548A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. <b>S16-07</b>
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO. 80 OF 159



Plot Date: 26-FEB-2019 11:42:28 AM

User: svcBW

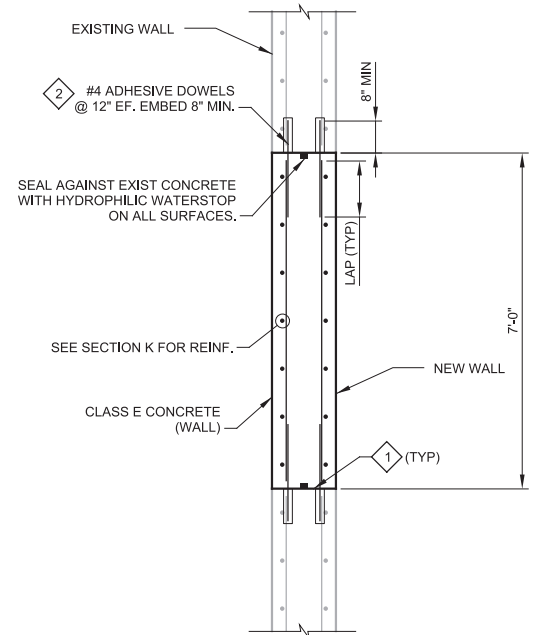
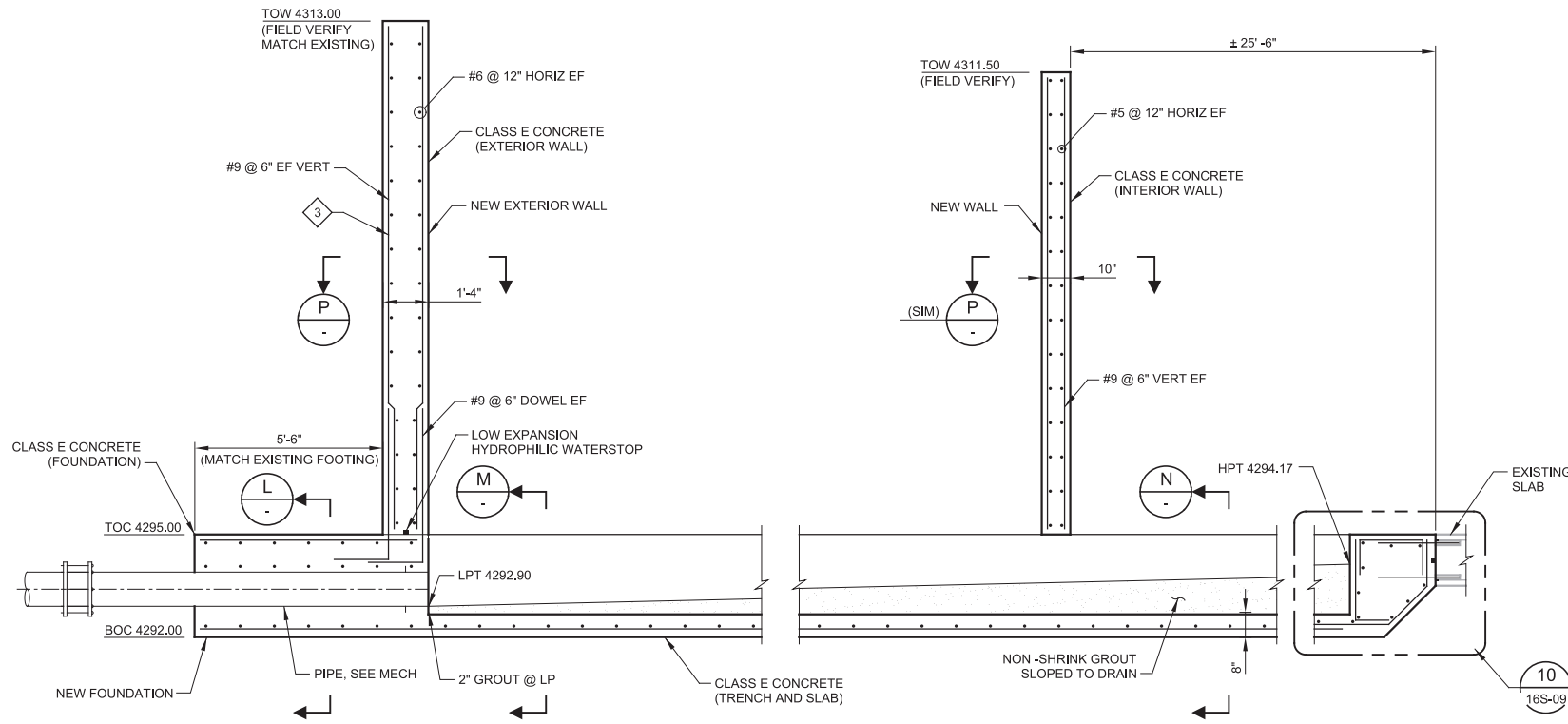
PlotScale: 2:1

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Std\_Pen\_v0905.dgn PlotScale: 2:1

ENTIRE DRAWING IS PART OF ALTERNATE BID ITEM

KEY NOTES:

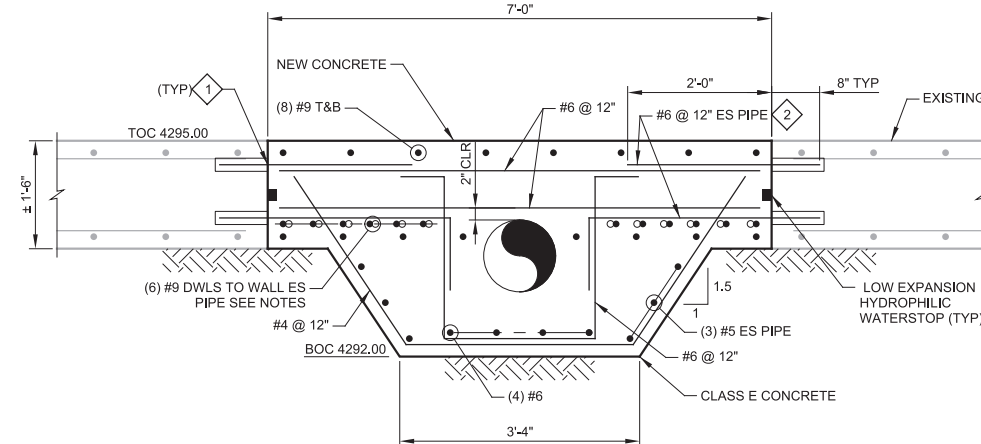
- 1 ROUGHEN SURFACE TO 1/4" AMPLITUDE. WATERBLAST CLEAN AND APPLY BONDING AGENT.
- 2 INSTALL DOWELS AT SAME DEPTH IN WALL OR SLAB AS DEPTH OF CUT REINFORCING. SET PER DETAIL S194/TYP.
- 3 MATCH EXISTING HORIZONTAL GROOVE, MAINTAIN 2" BAR CLEAR COVER.



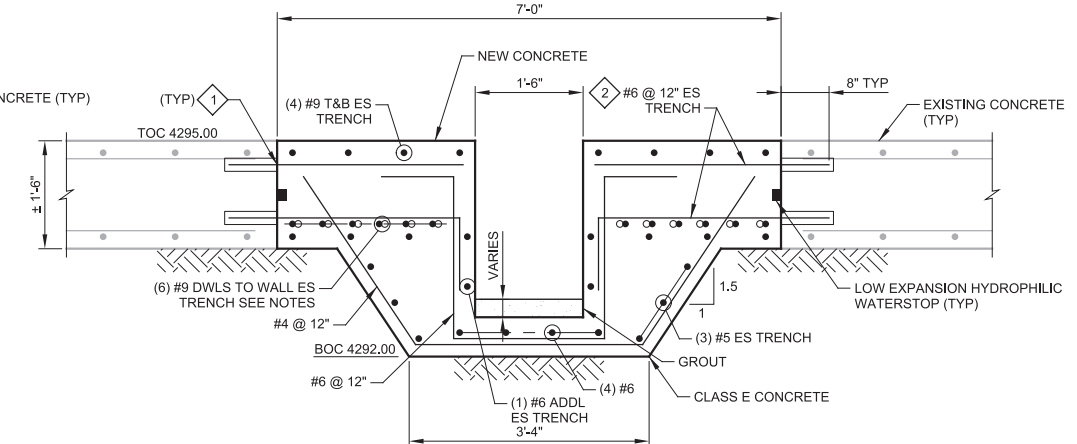
**P SECTION**  
SCALE: 1/2" = 1'-0"  
FILE: 10548A10\_16S324

**K SECTION**  
SCALE: 3/8" = 1'-0"  
FILE: 10548A10\_16S-320

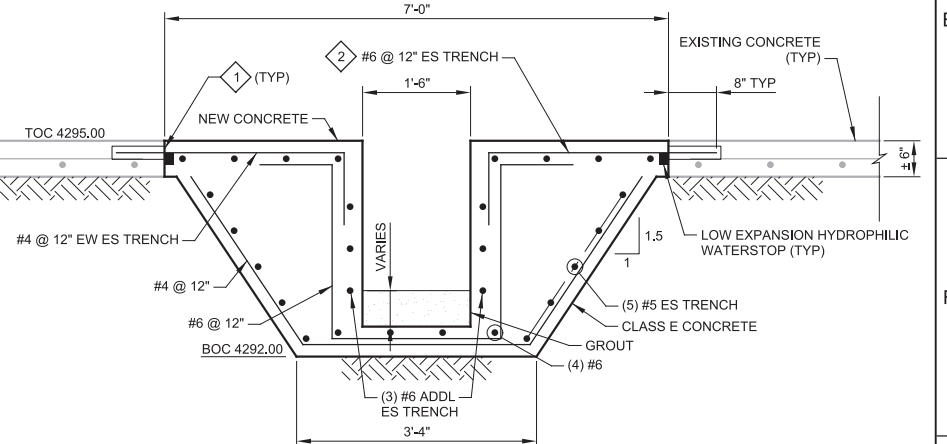
- NOTES:
- 1. • SOLID DOTS = DWLS 1 FACE
  - 2. ◦ HOLLOW DOTS = DWLS FOR OPP FACE



**L SECTION**  
SCALE: 3/4" = 1'-0"  
FILE: 10548A10\_16S-323



**M SECTION AT BASIN WALL FOOTINGS**  
SCALE: 3/4" = 1'-0"  
FILE: 10548A10\_16S-321



**N SECTION AT SLAB BETWEEN WALL FOOTINGS**  
SCALE: 3/4" = 1'-0"  
FILE: 10548A10\_16S-322

DESIGNED DCB  
DRAWN KHB  
CHECKED DJ  
DATE MARCH 2019

Digitally signed by D. CRAIG BRINCK  
Date: 2019.03.07 10:00:00 -0500  
No. 7882644-2203  
D. CRAIG BRINCK  
PROFESSIONAL ENGINEER  
STATE OF UTAH



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7495 South 1300 West  
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY  
PROJECT 5  
STRUCTURAL  
BIOREACTORS  
SECTION AND DETAILS 4

VERIFY SCALES  
BAR IS ONE INCH ON ORIGINAL DRAWING  
0 1"  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 10548A.10  
DRAWING NO. S16-08  
SHEET NO. 81 OF 159

Plot Date: 26-FEB-2019 11:42:42 AM

User: svcBW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Std\_Pen\_v0905.pen PlotScale: 2:1

LAST SAVED BY: dscheele

1 2 3 4 5 6 7 8 9 10 11 12 13

A

B

C

D

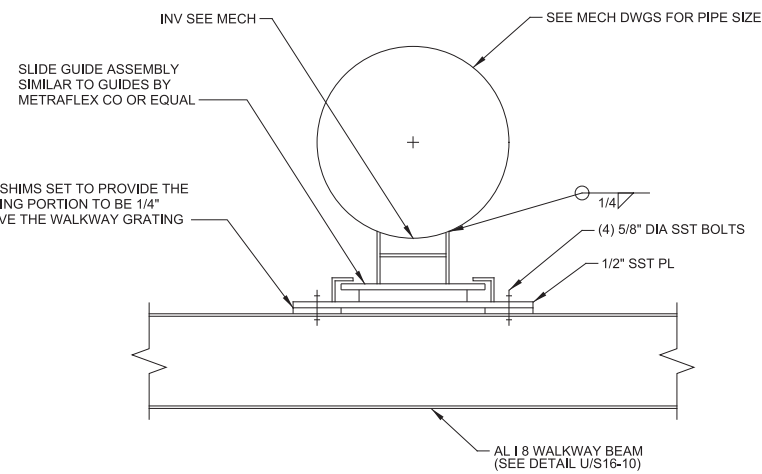
E

F

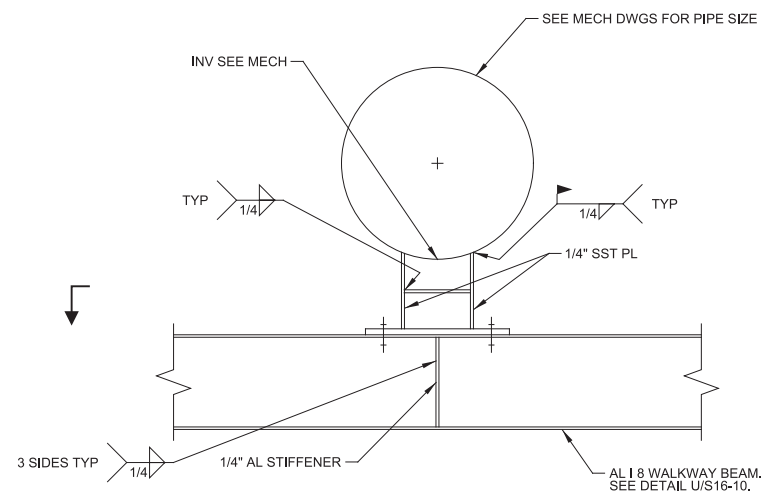
G

**KEY NOTES:**

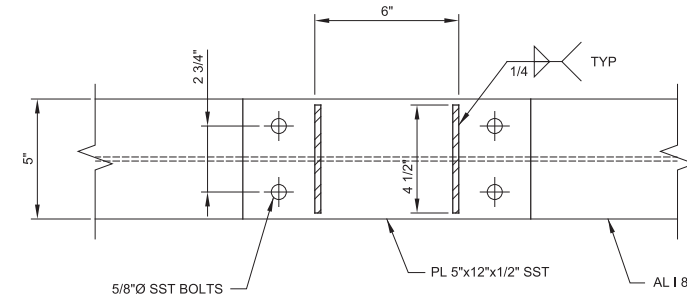
1 ROUGHEN SURFACE TO 1/4" AMPLITUDE. WATERBLAST CLEAN AND APPLY BONDING AGENT.



**1 SLIDING SUPPORT DETAIL**  
S16-03 SCALE: 1-1/2" = 1'-0"  
FILE: 10548A10\_16S-309



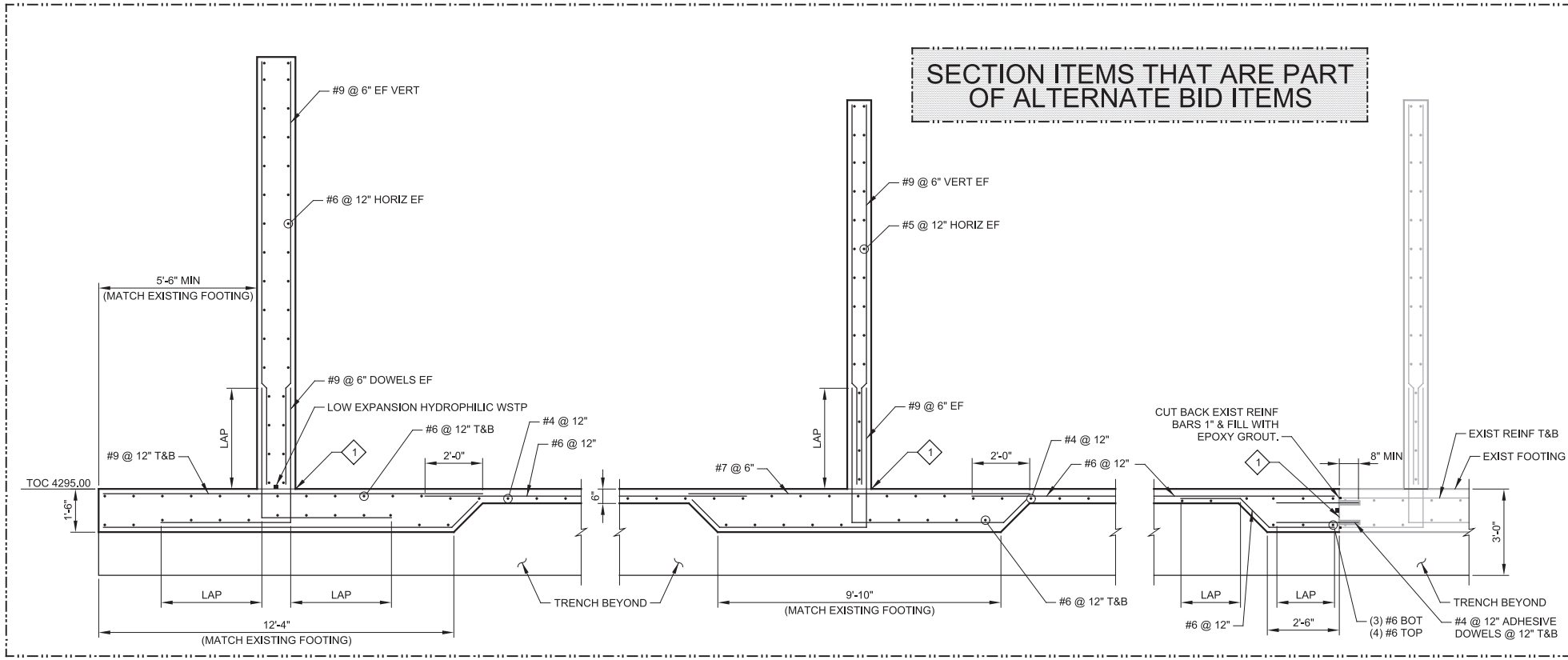
**2 FIXED SUPPORT DETAIL**  
S16-03 SCALE: 1-1/2" = 1'-0"  
FILE: 10548A10\_16S-309



**S SECTION**  
SCALE: 3\"/>

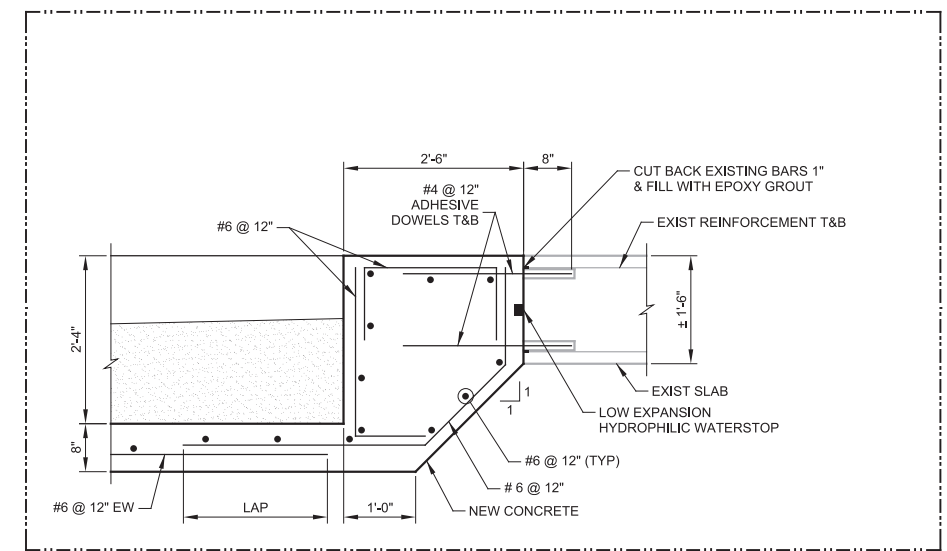
**NOTE:**  
PROVIDE GUIDES AT 16'-0\"/>

**SECTION ITEMS THAT ARE PART OF ALTERNATE BID ITEMS**



**AJ SECTION**  
S16-02 SCALE: 3/8\"/>

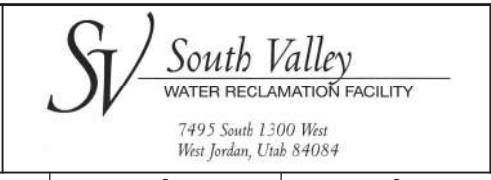
**DETAIL ITEMS THAT ARE PART OF ALTERNATE BID ITEMS**



**10 DETAIL**  
S16-08 SCALE: 3/4\"/>

REV	DATE	BY	DESCRIPTION

DESIGNED DCB	
DRAWN DCS	
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DATE MARCH 2019	



**SOUTH VALLEY WATER RECLAMATION FACILITY**  
PROJECT 5  
STRUCTURAL  
**BIOREACTORS**  
SECTIONS AND DETAILS 5

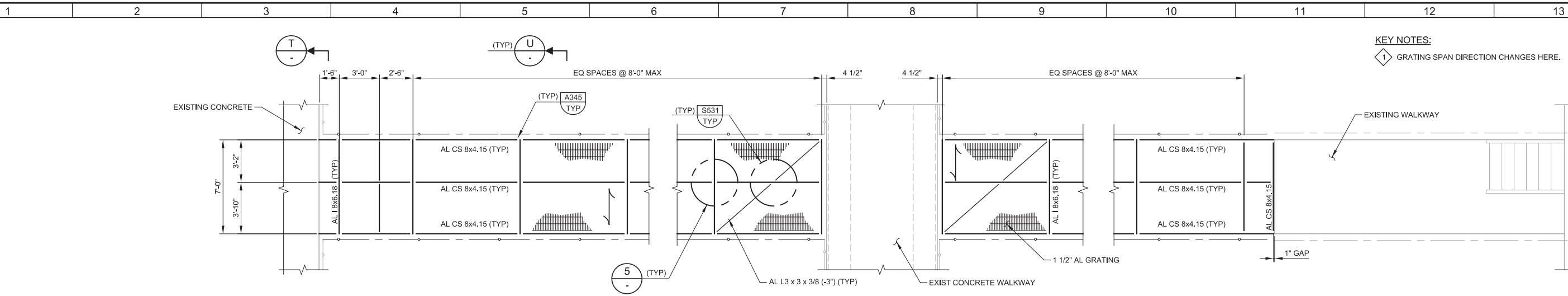
VERIFY SCALES	JOB NO. 10548A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. <b>S16-09</b>
0 1"	SHEET NO. 82 OF 159
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

Plot Date: 26-FEB-2019 11:42:36 AM

User: svcPW

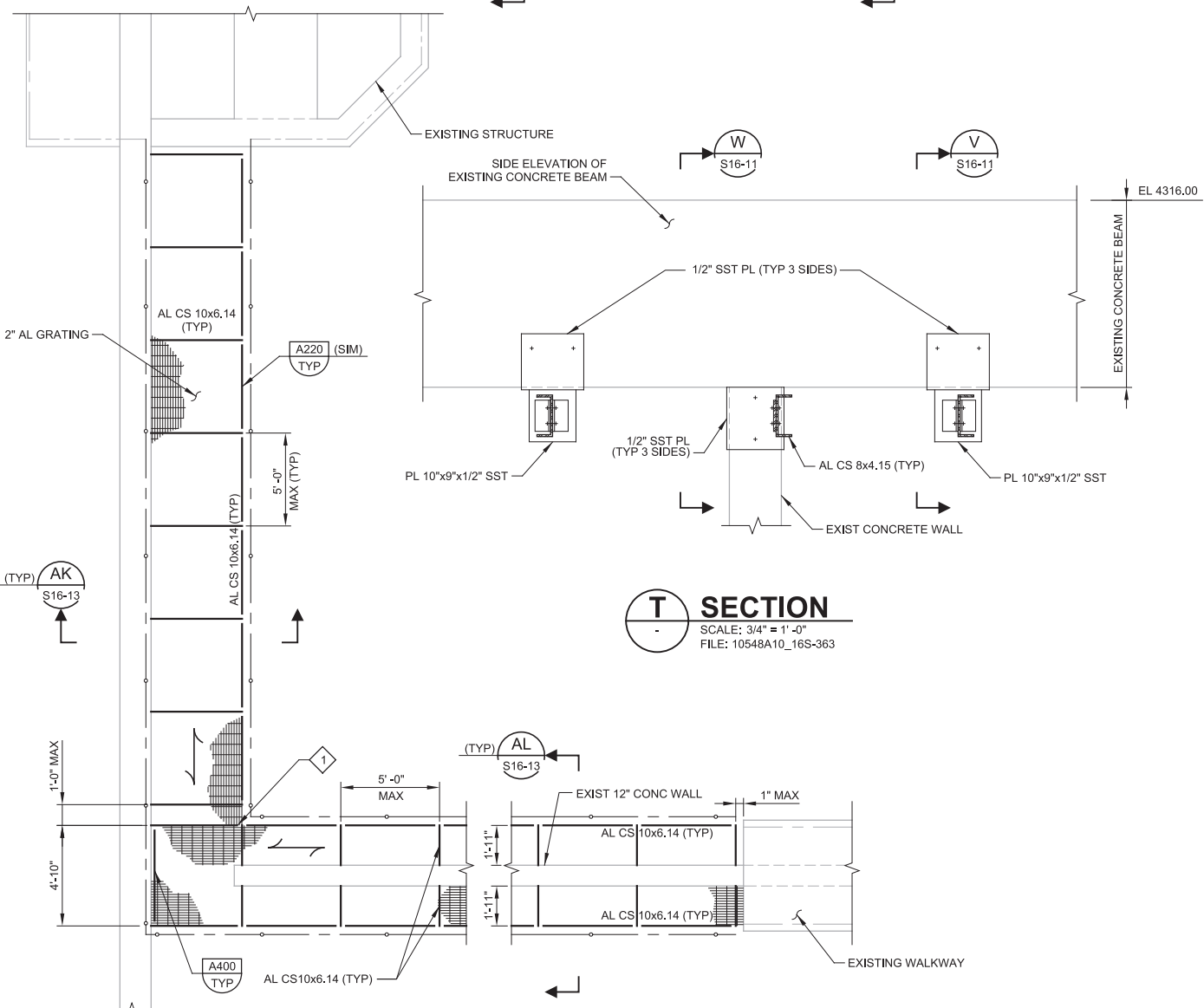
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Std\_Pen\_v0905.pen PlotScale: 2:1

LAST SAVED BY: ascheele



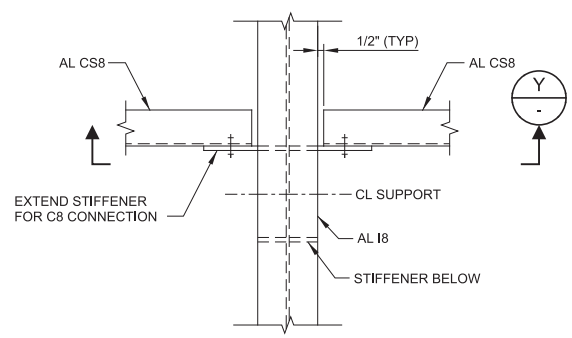
**KEY NOTES:**  
 1 GRATING SPAN DIRECTION CHANGES HERE.

**3 WALKWAY FRAMING PLAN**  
 S16-03 SCALE: 1/4" = 1'-0"  
 FILE: 10548A10\_16S-103



**T SECTION**  
 SCALE: 3/4" = 1'-0"  
 FILE: 10548A10\_16S-363

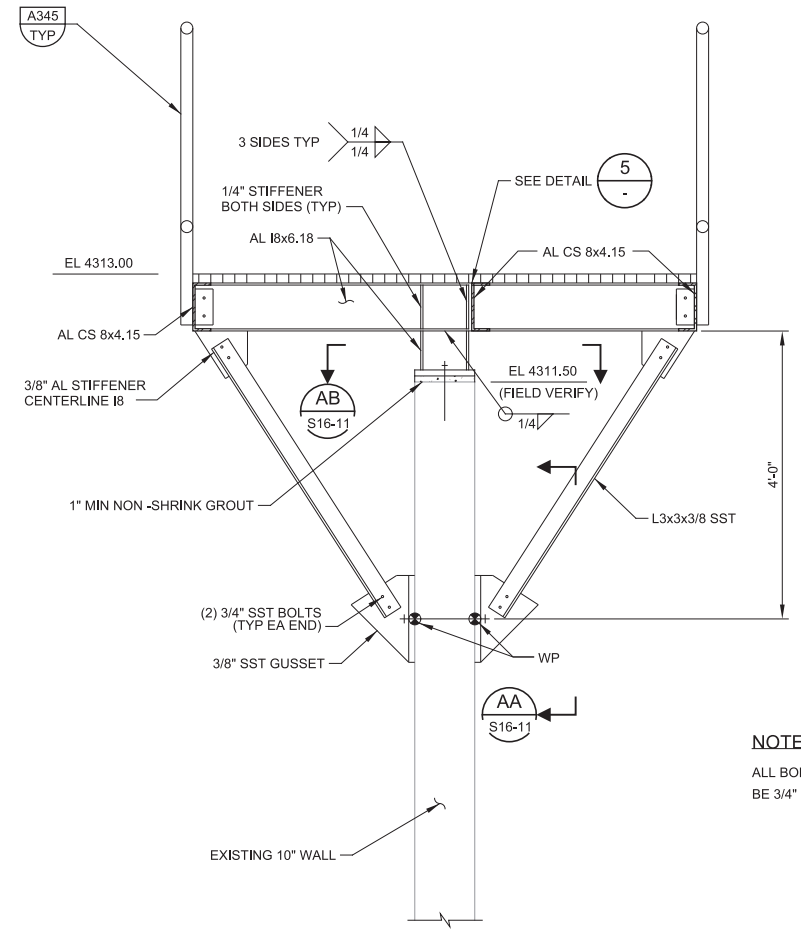
**4 WALKWAY FRAMING PLAN**  
 S16-04 SCALE: 1/4" = 1'-0"  
 FILE: 10548A10\_16S-105



**5 DETAIL**  
 SCALE: 1-1/2" = 1'-0"  
 FILE: 10548A10\_16S-309

NOTE:  
 C8 NOT SHOWN  
 FOR CLARITY

**Y SECTION**  
 SCALE: 3" = 1'-0"  
 FILE: 10548A10\_16S-309

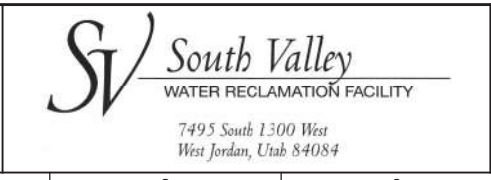


**U SECTION**  
 SCALE: 3/4" = 1'-0"  
 FILE: 10548A10\_16S-309

NOTE:  
 ALL BOLTING SHALL  
 BE 3/4" DIA

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SOUTH VALLEY WATER RECLAMATION FACILITY  
 PROJECT 5  
 STRUCTURAL  
 BIOREACTORS  
 SECTIONS AND DETAILS 6

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 10548A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. S16-10
	SHEET NO. 83 OF 159

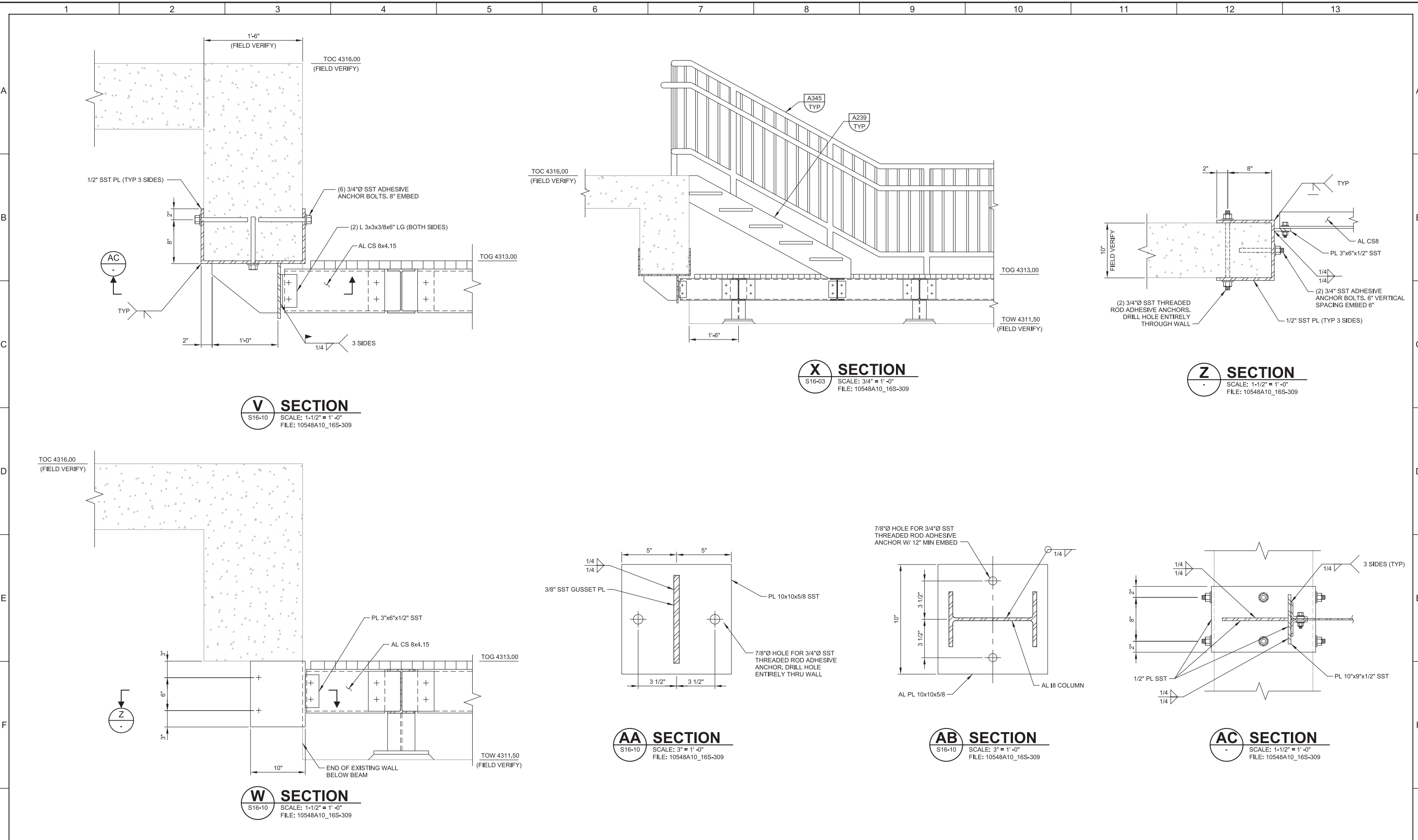
Plot Date: 26-FEB-2019 11:42:41 AM

User: svcBW

PlotScale: 2:1

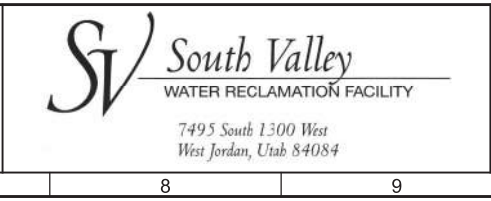
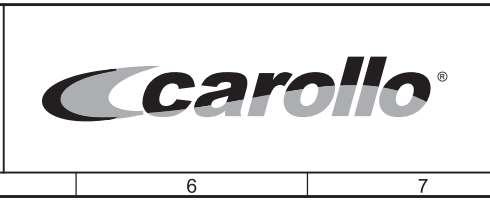
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen

LAST SAVED BY: ascheale



REV	DATE	BY	DESCRIPTION
1			
2			
3			

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CHECKED DJ	
DATE MARCH 2019	



SOUTH VALLEY WATER RECLAMATION FACILITY  
PROJECT 5  
STRUCTURAL  
BIOREACTORS  
SECTIONS AND DETAILS 7

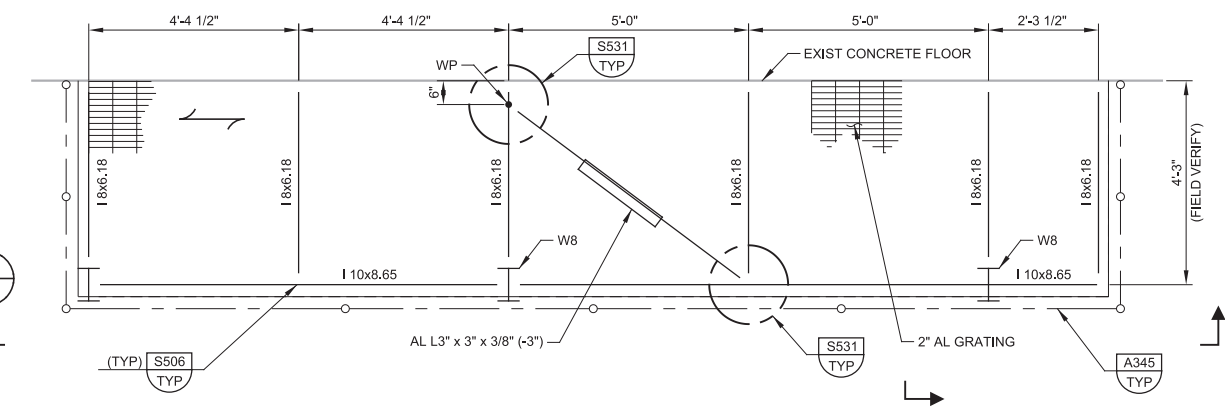
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 10548A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. S16-11
	SHEET NO. 84 OF 159

Plot Date: 26-FEB-2019 11:43:09 AM

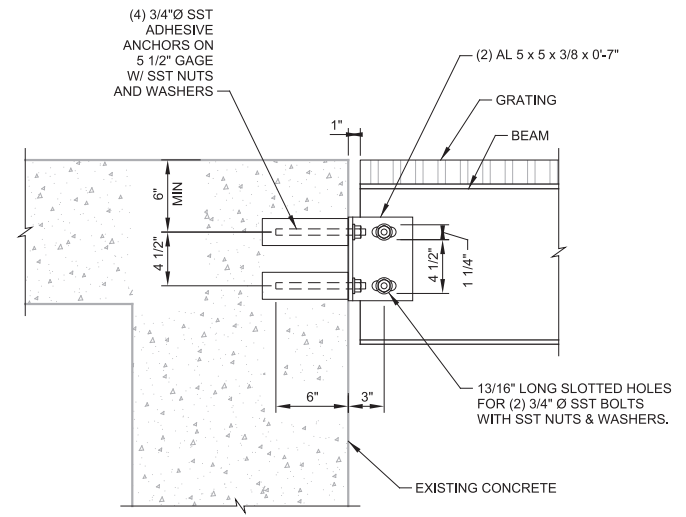
User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen PlotScale: 2:1

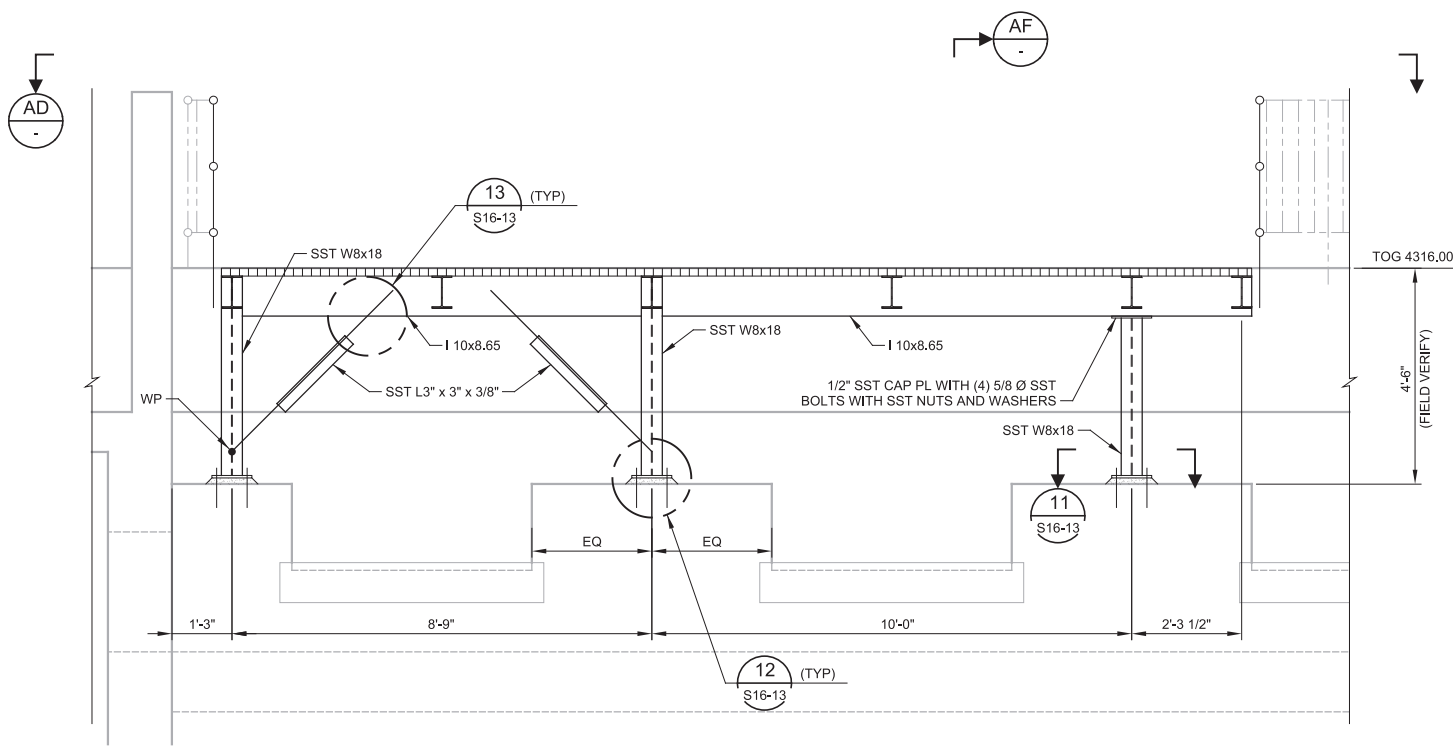
LAST SAVED BY: ascheale



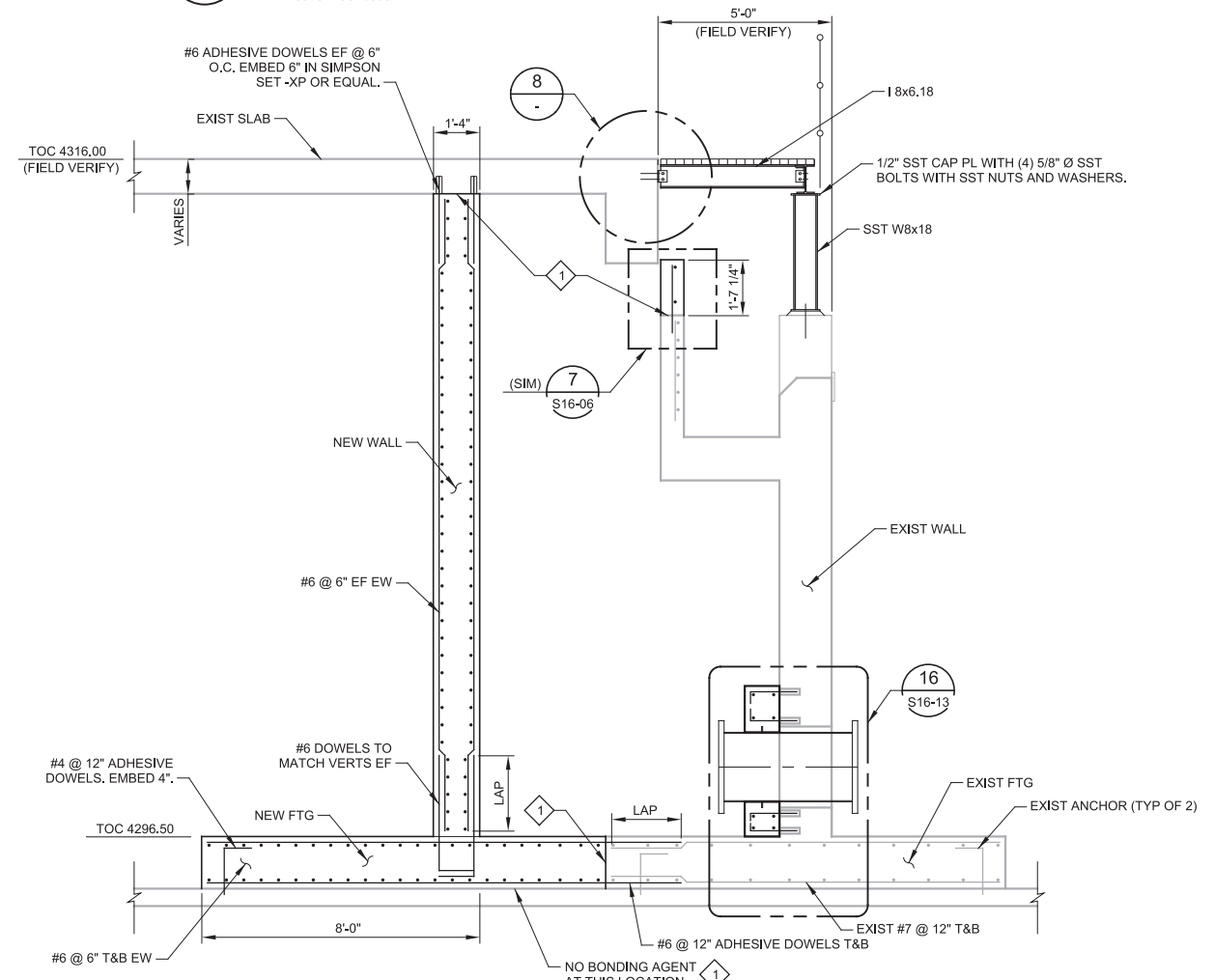
**AD NEW PLATFORM PLAN**  
 SCALE: 1/2" = 1'-0"  
 FILE: 10548A10S16304



**8 DETAIL**  
 SCALE: 1 1/2" = 1'-0"  
 FILE: 10548A10S16305



**AE SECTION**  
 S16-01 SCALE: 1/2" = 1'-0"  
 FILE: 10548A10S16304



**AF SECTION AT BIOREACTOR 2**  
 SCALE: 3/8" = 1'-0"  
 FILE: 10548A10S16305

**KEY NOTES:**  
 1 ROUGHEN SURFACE TO 1/4" AMPLITUDE. WATERBLAST CLEAN AND APPLY BONDING AGENT.

REV	DATE	BY	DESCRIPTION

DESIGNED DCB	
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 7495 South 1300 West  
 West Jordan, Utah 84084

**SOUTH VALLEY WATER RECLAMATION FACILITY**  
 PROJECT 5  
 STRUCTURAL  
**BIOREACTORS**  
 SECTIONS AND DETAILS 8

VERIFY SCALES	JOB NO. 10548A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. <b>S16-12</b>
0 1"	SHEET NO. 85 OF 159
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

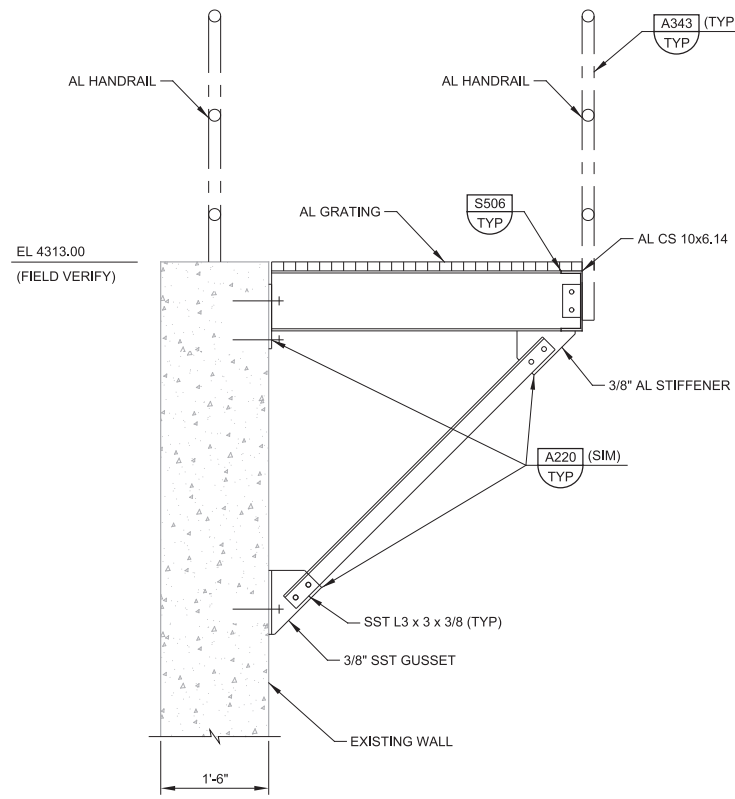
Plot Date: 26-FEB-2019 11:43:19 AM

User: svcpw

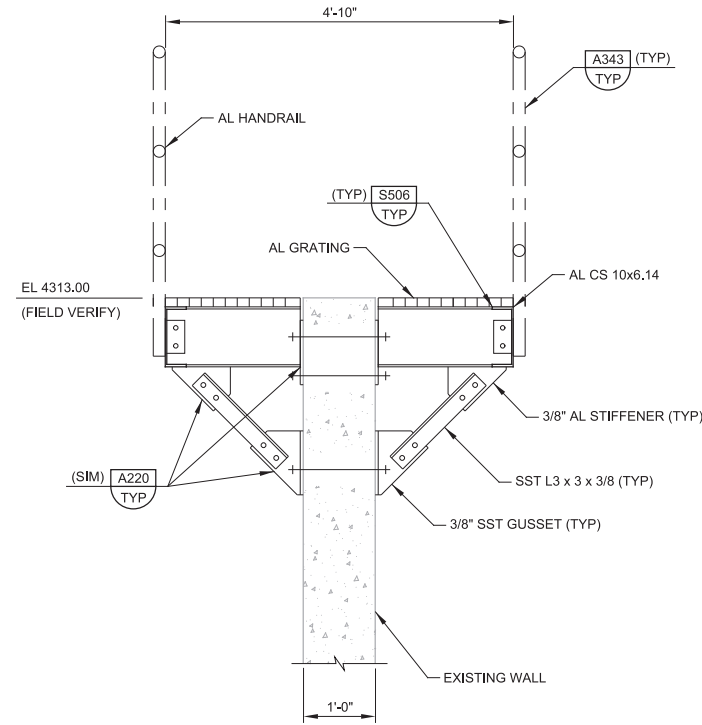
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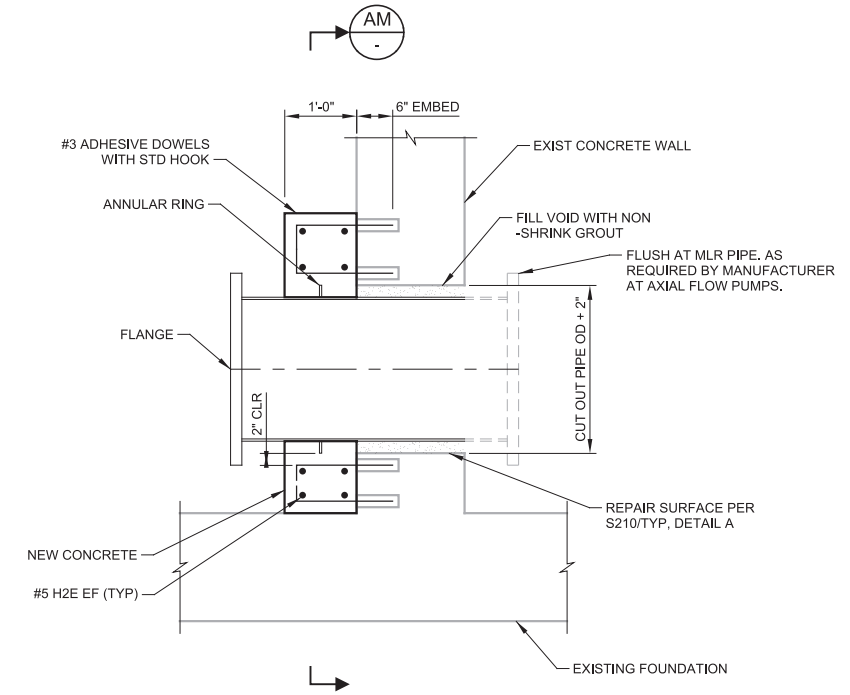
LAST SAVED BY: ascheale



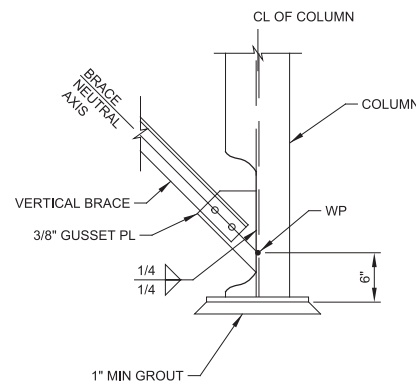
**AK SECTION**  
S16-10 SCALE: 3/4" = 1'-0"  
FILE: 10548A10S16308



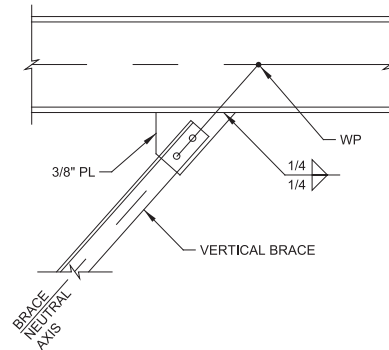
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FILE: 10548A10S16308



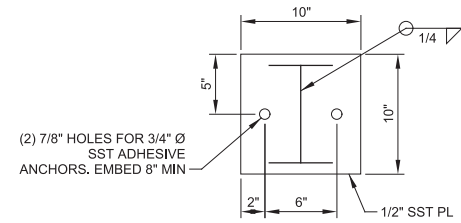
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FILE: 10548A10S16305



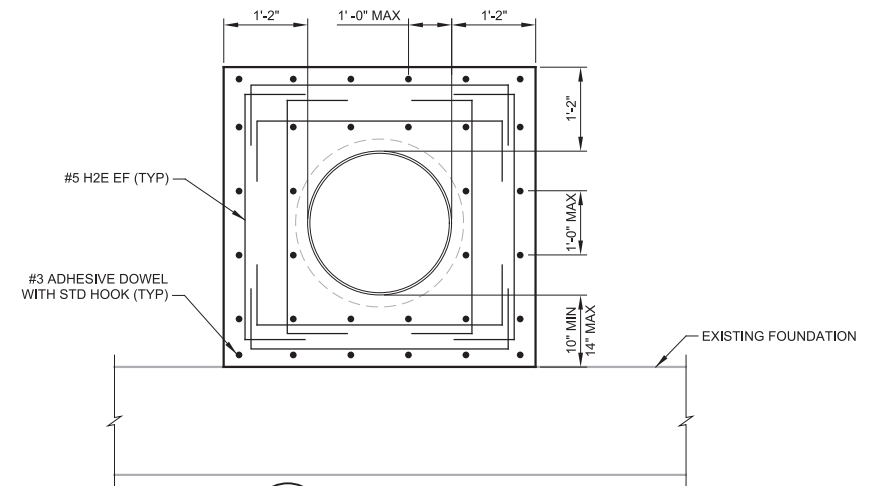
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S16-12 SCALE: 1" = 1'-0"  
FILE: 10548A10S16308



**13 DETAIL**  
S16-12 SCALE: 1" = 1'-0"  
FILE: 10548A10S16308



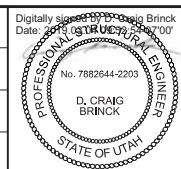
**11 DETAIL**  
S16-12 SCALE: 1-1/2" = 1'-0"  
FILE: 10548A10S16305



**AM SECTION**  
S16-06 SCALE: 3/4" = 1'-0"  
FILE: 10548A10S16305

REV	DATE	BY	DESCRIPTION

DESIGNED DCB
DRAWN DCS
CHECKED DJ
DATE MARCH 2019



SOUTH VALLEY WATER RECLAMATION FACILITY  
PROJECT 5  
STRUCTURAL  
BIOREACTORS  
SECTIONS AND DETAILS 9

VERIFY SCALES  
BAR IS ONE INCH ON ORIGINAL DRAWING  
0 1"  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

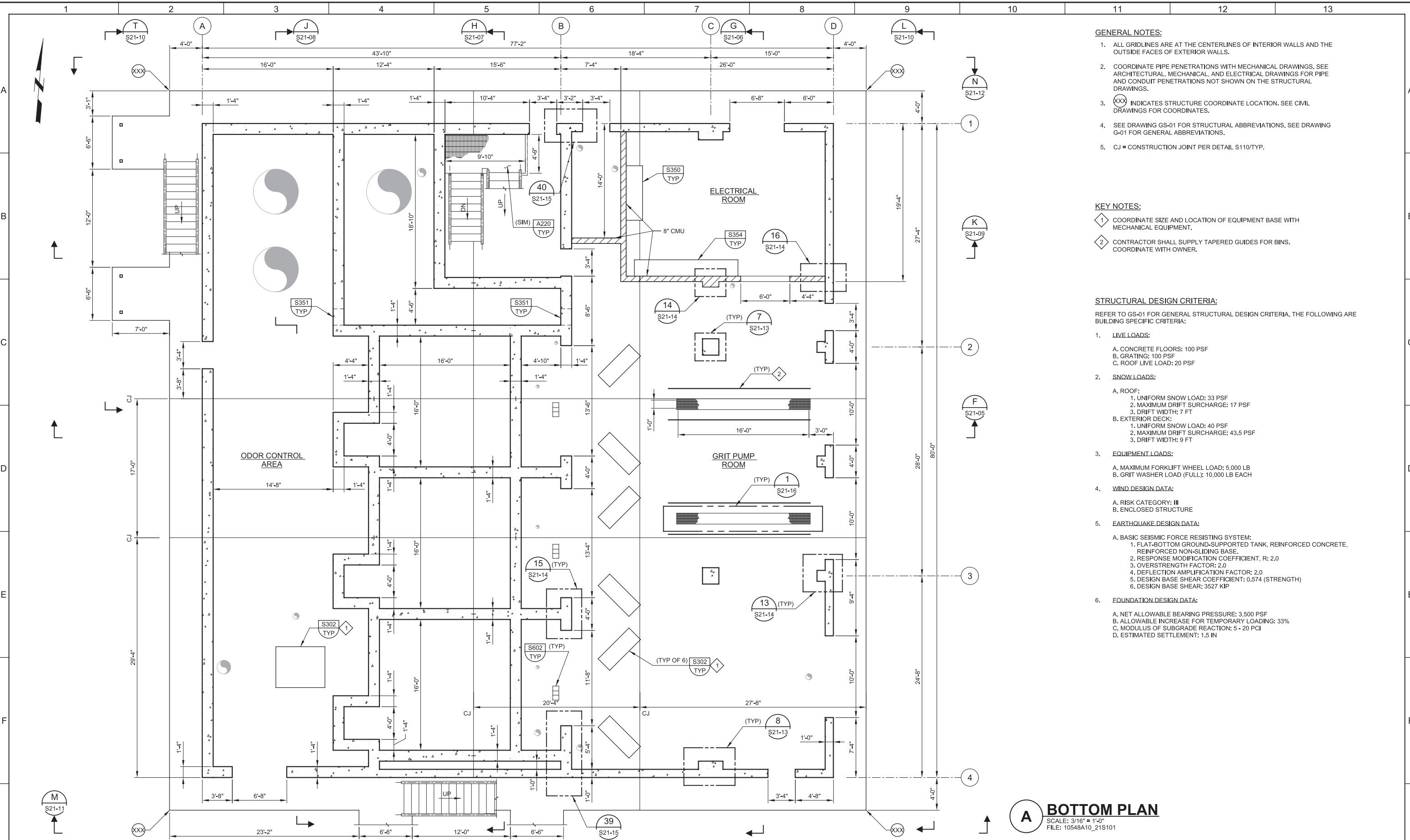
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10548A.10  
DRAWING NO.  
**S16-13**  
SHEET NO.  
86 OF 159

Plot Date: 28-FEB-2019 10:26:05 AM

User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Std\_Pen\_v0905.pen PlotScale: 2:1

LAST SAVED BY: ascheale



**GENERAL NOTES:**

1. ALL GRIDLINES ARE AT THE CENTERLINES OF INTERIOR WALLS AND THE OUTSIDE FACES OF EXTERIOR WALLS.
2. COORDINATE PIPE PENETRATIONS WITH MECHANICAL DRAWINGS. SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR PIPE AND CONDUIT PENETRATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
3. (XXX) INDICATES STRUCTURE COORDINATE LOCATION. SEE CIVIL DRAWINGS FOR COORDINATES.
4. SEE DRAWING GS-01 FOR STRUCTURAL ABBREVIATIONS. SEE DRAWING G-01 FOR GENERAL ABBREVIATIONS.
5. CJ = CONSTRUCTION JOINT PER DETAIL S110/TYP.

**KEY NOTES:**

- 1 COORDINATE SIZE AND LOCATION OF EQUIPMENT BASE WITH MECHANICAL EQUIPMENT.
- 2 CONTRACTOR SHALL SUPPLY TAPERED GUIDES FOR BINS. COORDINATE WITH OWNER.

**STRUCTURAL DESIGN CRITERIA:**

REFER TO GS-01 FOR GENERAL STRUCTURAL DESIGN CRITERIA. THE FOLLOWING ARE BUILDING SPECIFIC CRITERIA:

1. **LIVE LOADS:**
  - A. CONCRETE FLOORS: 100 PSF
  - B. GRATING: 100 PSF
  - C. ROOF LIVE LOAD: 20 PSF
2. **SNOW LOADS:**
  - A. ROOF:
    1. UNIFORM SNOW LOAD: 33 PSF
    2. MAXIMUM DRIFT SURCHARGE: 17 PSF
    3. DRIFT WIDTH: 7 FT
  - B. EXTERIOR DECK:
    1. UNIFORM SNOW LOAD: 40 PSF
    2. MAXIMUM DRIFT SURCHARGE: 43.5 PSF
    3. DRIFT WIDTH: 9 FT
3. **EQUIPMENT LOADS:**
  - A. MAXIMUM FORKLIFT WHEEL LOAD: 5,000 LB
  - B. GRIT WASHER LOAD (FULL): 10,000 LB EACH
4. **WIND DESIGN DATA:**
  - A. RISK CATEGORY: III
  - B. ENCLOSED STRUCTURE
5. **EARTHQUAKE DESIGN DATA:**
  - A. BASIC SEISMIC FORCE RESISTING SYSTEM:
    1. FLAT-BOTTOM GROUND-SUPPORTED TANK, REINFORCED CONCRETE, REINFORCED NON-SLIDING BASE.
    2. RESPONSE MODIFICATION COEFFICIENT, R: 2.0
    3. OVERSTRENGTH FACTOR: 2.0
    4. DEFLECTION AMPLIFICATION FACTOR: 2.0
    5. DESIGN BASE SHEAR COEFFICIENT: 0.574 (STRENGTH)
    6. DESIGN BASE SHEAR: 3527 KIP
6. **FOUNDATION DESIGN DATA:**
  - A. NET ALLOWABLE BEARING PRESSURE: 3,500 PSF
  - B. ALLOWABLE INCREASE FOR TEMPORARY LOADING: 33%
  - C. MODULUS OF SUBGRADE REACTION: 5 - 20 PCI
  - D. ESTIMATED SETTLEMENT: 1.5 IN

**A BOTTOM PLAN**  
 SCALE: 3/16" = 1'-0"  
 FILE: 10548A10\_21S101

REV	DATE	BY	DESCRIPTION

DESIGNED DCB  
 DRAWN JRL  
 CHECKED GLS  
 DATE MARCH 2019

Digitally signed by D. Craig Brinck  
 Date: 2019.03.07 10:00:00 -0700  
 PROFESSIONAL ENGINEER  
 No. 7882644-2203  
 D. CRAIG BRINCK  
 STATE OF UTAH

**carollo**

**SV South Valley**  
 WATER RECLAMATION FACILITY  
 7495 South 1300 West  
 West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY  
 PROJECT 5  
 STRUCTURAL  
 GRIT HANDLING FACILITY  
 BOTTOM PLAN

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 0 1"  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

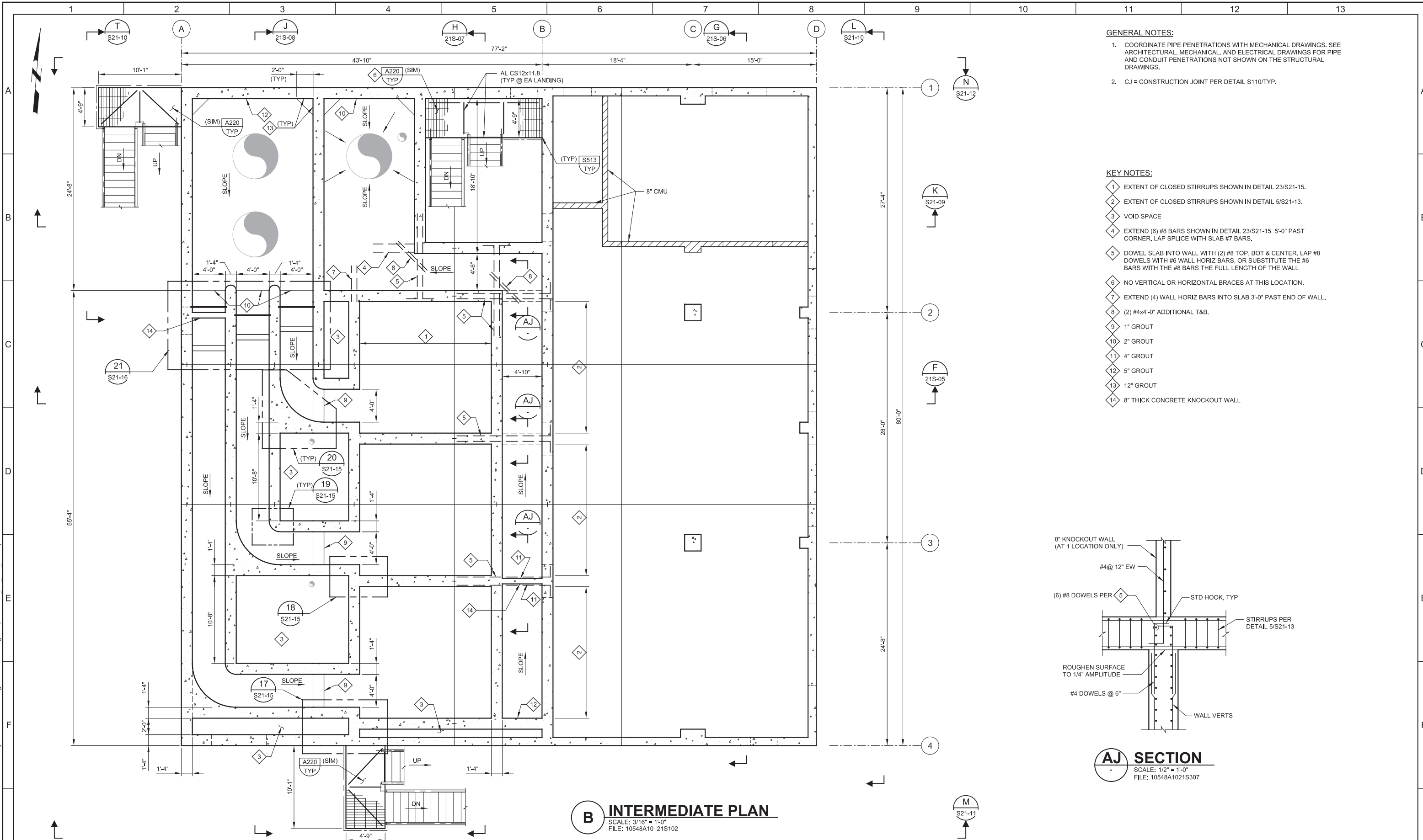
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 DRAWING NO. S21-01  
 SHEET NO. 87 OF 159

Plot Date: 26-FEB-2019 11:43:02 AM

User: svcPW

Plot Scale: 2:1

LAST SAVED BY: jscheele

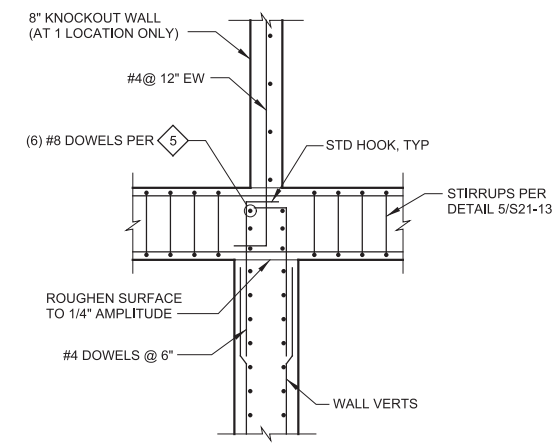


**GENERAL NOTES:**

- 1. COORDINATE PIPE PENETRATIONS WITH MECHANICAL DRAWINGS. SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR PIPE AND CONDUIT PENETRATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
- 2. CJ = CONSTRUCTION JOINT PER DETAIL S110/TYP.

**KEY NOTES:**

- 1 EXTENT OF CLOSED STIRRUPS SHOWN IN DETAIL 23/S21-15.
- 2 EXTENT OF CLOSED STIRRUPS SHOWN IN DETAIL 5/S21-13.
- 3 VOID SPACE
- 4 EXTEND (6) #8 BARS SHOWN IN DETAIL 23/S21-15 5'-0" PAST CORNER. LAP SPLICE WITH SLAB #7 BARS.
- 5 DOWEL SLAB INTO WALL WITH (2) #8 TOP, BOT & CENTER. LAP #8 DOWELS WITH #6 WALL HORIZ BARS, OR SUBSTITUTE THE #6 BARS WITH THE #8 BARS THE FULL LENGTH OF THE WALL
- 6 NO VERTICAL OR HORIZONTAL BRACES AT THIS LOCATION.
- 7 EXTEND (4) WALL HORIZ BARS INTO SLAB 3'-0" PAST END OF WALL.
- 8 (2) #4x4'-0" ADDITIONAL T&B.
- 9 1" GROUT
- 10 2" GROUT
- 11 4" GROUT
- 12 5" GROUT
- 13 12" GROUT
- 14 8" THICK CONCRETE KNOCKOUT WALL



**AJ SECTION**  
 SCALE: 1/2" = 1'-0"  
 FILE: 10548A1021S307

**B INTERMEDIATE PLAN**  
 SCALE: 3/16" = 1'-0"  
 FILE: 10548A10\_21S102

REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED DCB	
DRAWN JRL	
CHECKED GLS	
DATE MARCH 2019	

SOUTH VALLEY WATER RECLAMATION FACILITY  
 PROJECT 5  
 STRUCTURAL  
 GRIT HANDLING FACILITY  
 INTERMEDIATE PLAN

VERIFY SCALES	JOB NO. 10548A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. S21-02
0 1" (Scale bar)	SHEET NO. 88 OF 159
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

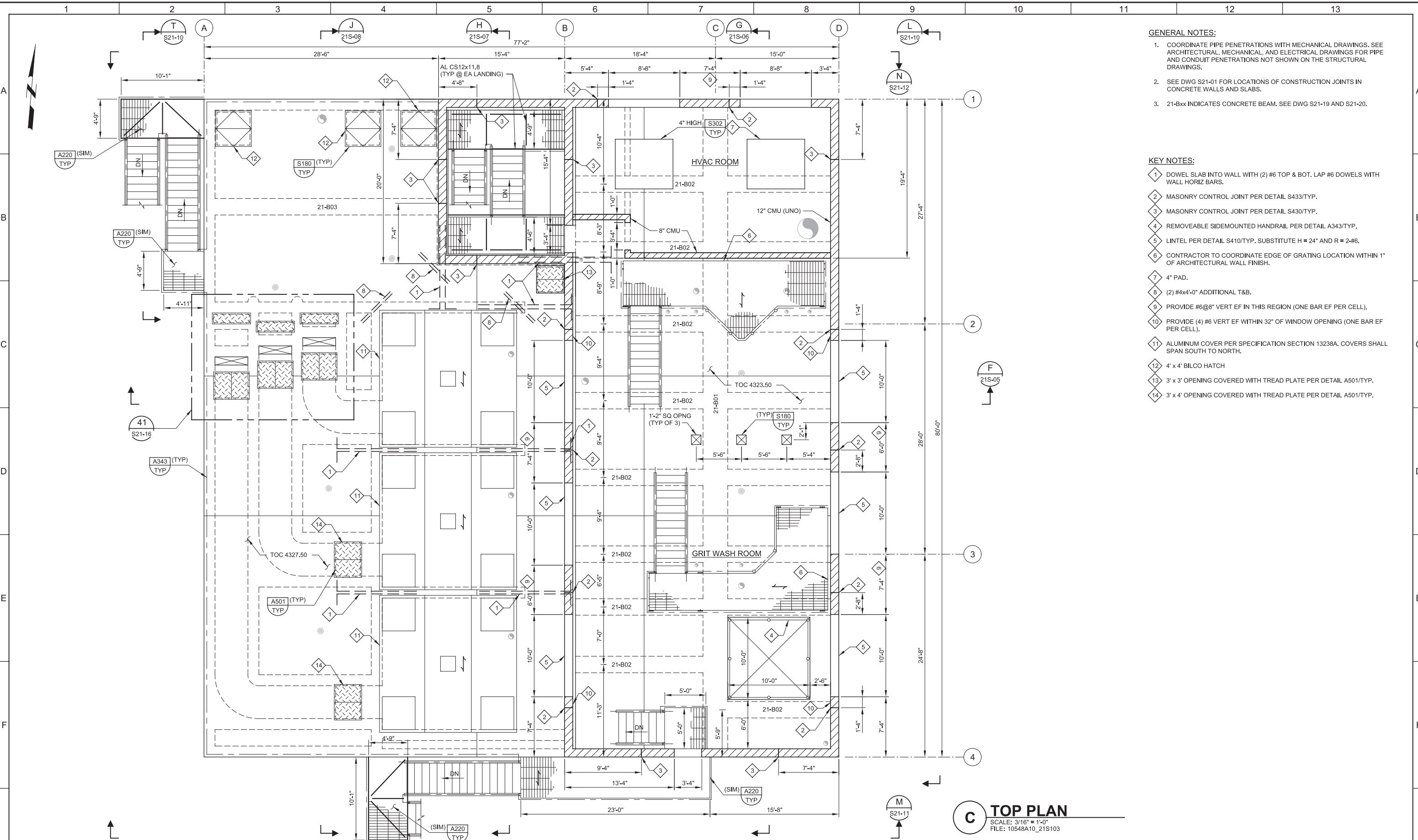


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User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen PlotScale: 2:1

LAST SAVED BY: jefevre



- GENERAL NOTES:**
- COORDINATE PIPE PENETRATIONS WITH MECHANICAL DRAWINGS. SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR PIPE AND CONDUIT PENETRATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
  - SEE DWG S21-01 FOR LOCATIONS OF CONSTRUCTION JOINTS IN CONCRETE WALLS AND SLABS.
  - 21-Bxx INDICATES CONCRETE BEAM. SEE DWG S21-19 AND S21-20.

- KEY NOTES:**
- DOWEL SLAB INTO WALL WITH (2) #6 TOP & BOT. LAP #6 DOWELS WITH WALL HORIZ BARS.
  - MASONRY CONTROL JOINT PER DETAIL S433/TYP.
  - MASONRY CONTROL JOINT PER DETAIL S430/TYP.
  - REMOVEABLE SIDEMOUNTED HANDRAIL PER DETAIL A343/TYP.
  - LINTEL PER DETAIL S410/TYP. SUBSTITUTE H = 24" AND R = 2-#6.
  - CONTRACTOR TO COORDINATE EDGE OF GRATING LOCATION WITHIN 1" OF ARCHITECTURAL WALL FINISH.
  - 4" PAD.
  - (2) #4x4'-0" ADDITIONAL T&B.
  - PROVIDE #6@8" VERT EF IN THIS REGION (ONE BAR EF PER CELL).
  - PROVIDE (4) #6 VERT EF WITHIN 32" OF WINDOW OPENING (ONE BAR EF PER CELL).
  - ALUMNUM COVER PER SPECIFICATION SECTION 13238A. COVERS SHALL SPAN SOUTH TO NORTH.
  - 4' x 4' BILCO HATCH
  - 3' x 3' OPENING COVERED WITH TREAD PLATE PER DETAIL A501/TYP.
  - 3' x 4' OPENING COVERED WITH TREAD PLATE PER DETAIL A501/TYP.

**C TOP PLAN**  
 SCALE: 3/16" = 1'-0"  
 FILE: 10548A10\_21S103

REV	DATE	BY	DESCRIPTION
1			
2			
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DESIGNED DCB  
 DRAWN JRL  
 CHECKED GLS  
 DATE MARCH 2019

Digitally signed by D. Craig Brinck  
 Date: 2019.03.07 10:00:00  
 No. 7882644-2203  
 D. CRAIG BRINCK  
 STATE OF UTAH



**SV South Valley**  
 WATER RECLAMATION FACILITY  
 7495 South 1300 West  
 West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY  
 PROJECT 5  
 STRUCTURAL  
**GRIT HANDLING FACILITY  
 UPPER PLAN**

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
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 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

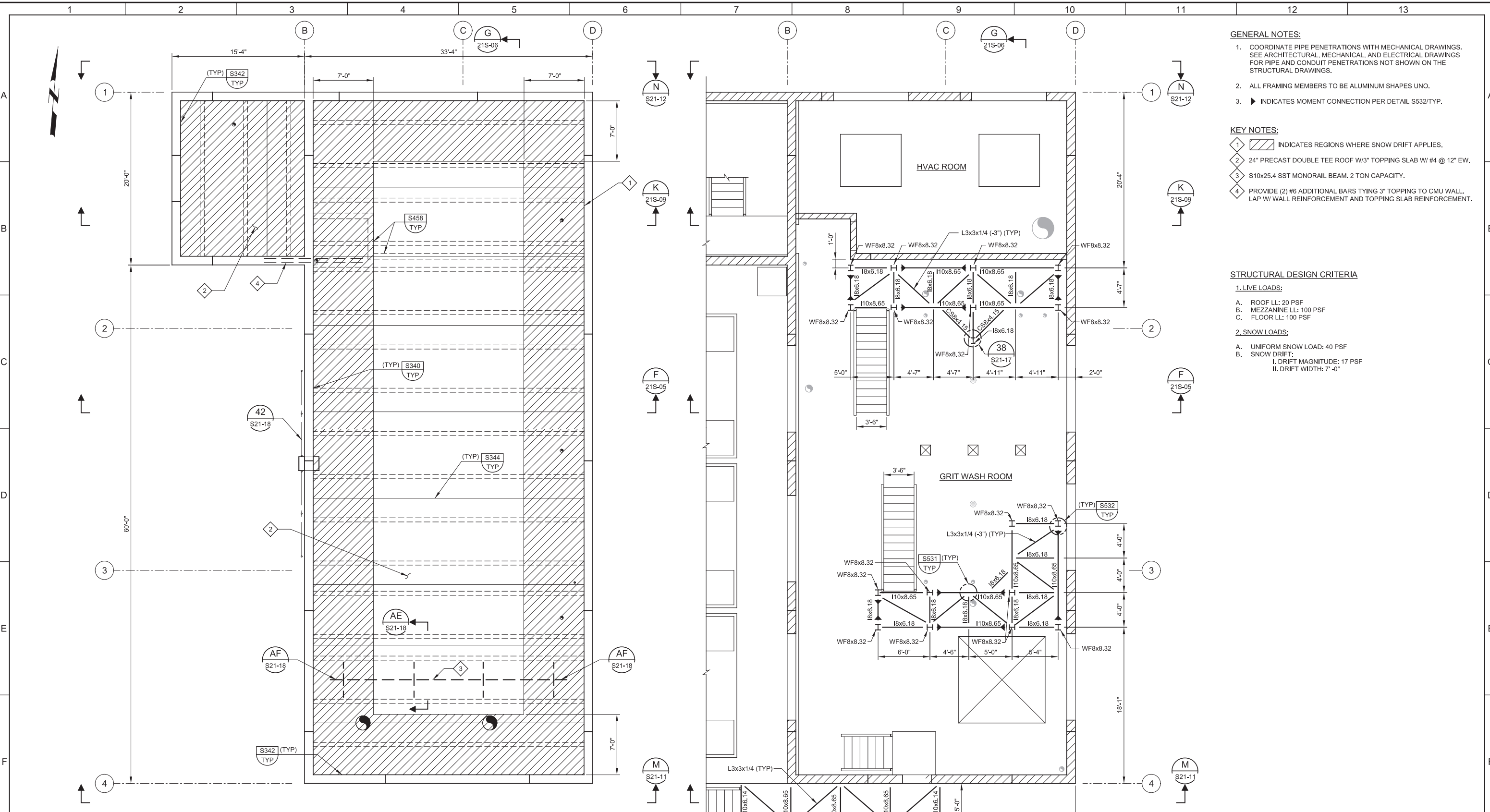
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 DRAWING NO. S21-03  
 SHEET NO. 89 OF 159

Plot Date: 26-FEB-2019 1:00:12 PM

User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen PlotScale: 2:1

LAST SAVED BY: jscheele



**D ROOF FRAMING PLAN**  
 SCALE: 3/16" = 1'-0"  
 FILE: 10548A10\_21S104

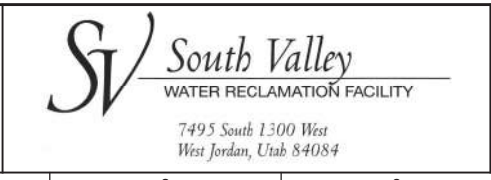
**E EQUIPMENT PLATFORM FRAMING PLAN**  
 SCALE: 3/16" = 1'-0"  
 FILE: 10548A10\_21S105

- GENERAL NOTES:**
- COORDINATE PIPE PENETRATIONS WITH MECHANICAL DRAWINGS. SEE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR PIPE AND CONDUIT PENETRATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
  - ALL FRAMING MEMBERS TO BE ALUMINUM SHAPES UNO.
  - ▶ INDICATES MOMENT CONNECTION PER DETAIL S532/TYP.
- KEY NOTES:**
- INDICATES REGIONS WHERE SNOW DRIFT APPLIES.
  - 24" PRECAST DOUBLE TEE ROOF W/3" TOPPING SLAB W/ #4 @ 12" EW.
  - S10x25.4 SST MONORAIL BEAM. 2 TON CAPACITY.
  - PROVIDE (2) #6 ADDITIONAL BARS TYING 3" TOPPING TO CMU WALL. LAP W/ WALL REINFORCEMENT AND TOPPING SLAB REINFORCEMENT.

- STRUCTURAL DESIGN CRITERIA**
- 1. LIVE LOADS:**
- ROOF LL: 20 PSF
  - MEZZANINE LL: 100 PSF
  - FLOOR LL: 100 PSF
- 2. SNOW LOADS:**
- UNIFORM SNOW LOAD: 40 PSF
  - SNOW DRIFT:
    - DRIFT MAGNITUDE: 17 PSF
    - DRIFT WIDTH: 7'-0"

REV	DATE	BY	DESCRIPTION
1			
2			
3			
4			

DESIGNED DCB	
DRAWN JRL	
CHECKED GLS	
DATE MARCH 2019	



SOUTH VALLEY WATER RECLAMATION FACILITY  
 PROJECT 5  
 STRUCTURAL  
 GRIT HANDLING FACILITY  
 FRAMING PLANS

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 10548A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. S21-04
	SHEET NO. 90 OF 159

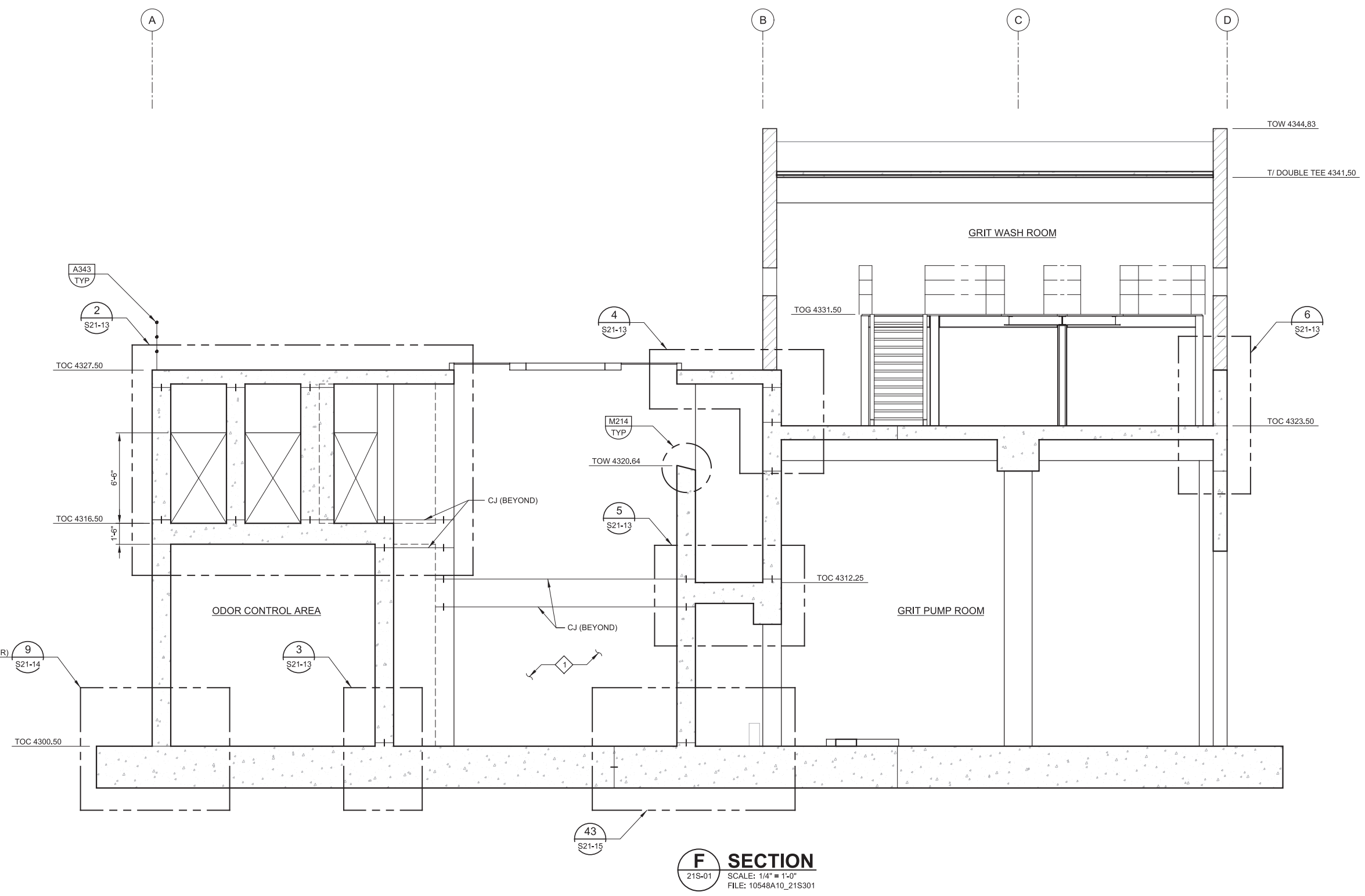
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LAST SAVED BY: jscheele

KEY NOTES:  
1 GROUT AROUND GRIT BASIN EQUIPMENT NOT SHOWN FOR CLARITY. GROUTING DETAILS SHALL BE PER EQUIPMENT MANUFACTURER.



**F SECTION**  
21S-01 SCALE: 1/4" = 1'-0"  
FILE: 10548A10\_21S301

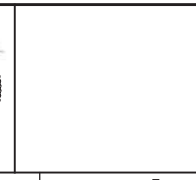
REV	DATE	BY	DESCRIPTION

DESIGNED  
DCB

DRAWN  
JRL

CHECKED  
GLS

DATE  
MARCH 2019



**SV South Valley**  
WATER RECLAMATION FACILITY

7495 South 1300 West  
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SOUTH VALLEY WATER RECLAMATION FACILITY

PROJECT 5  
STRUCTURAL

**GRIT HANDLING FACILITY  
SECTIONS AND DETAILS 1**

VERIFY SCALES  
BAR IS ONE INCH ON ORIGINAL DRAWING  
0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.  
10548A.10

DRAWING NO.  
**S21-05**

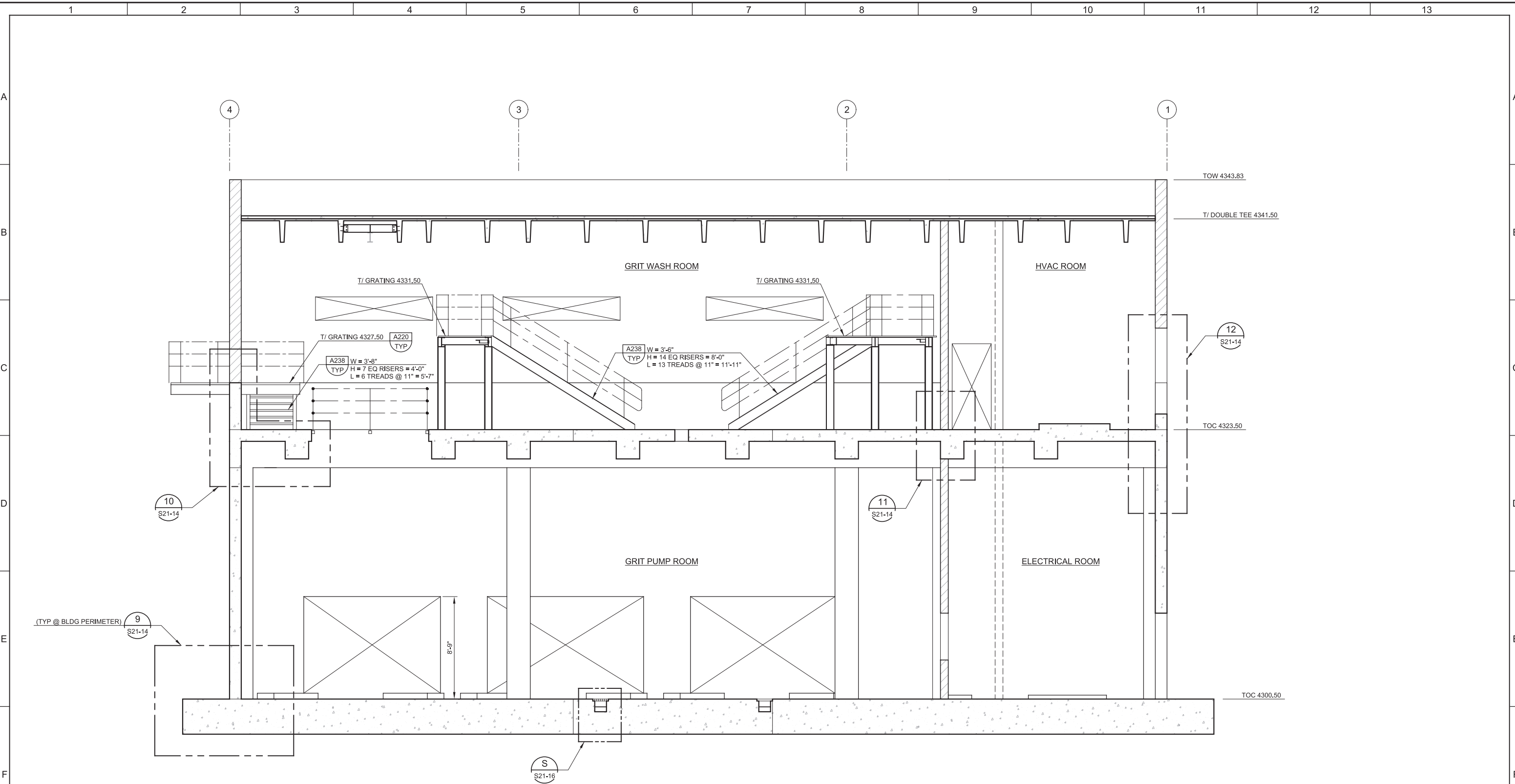
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Plot Date: 26-FEB-2019 10:42:24 PM

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LAST SAVED BY: ascheele



**G SECTION**  
 21S-01 SCALE: 1/4" = 1'-0"  
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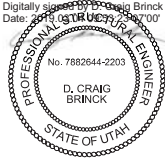
REV	DATE	BY	DESCRIPTION

DESIGNED  
DCB

DRAWN  
JRL

CHECKED  
GLS

DATE  
MARCH 2019

Digitally signed by D. Craig Brinck  
Date: 2019.03.07 10:00:00 -0700  





**SV South Valley**  
 WATER RECLAMATION FACILITY

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SOUTH VALLEY WATER RECLAMATION FACILITY

PROJECT 5  
 STRUCTURAL

**GRIT HANDLING FACILITY  
 SECTIONS AND DETAILS 2**

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.  
10548A.10

DRAWING NO.  
**S21-06**

SHEET NO.  
92 OF 159

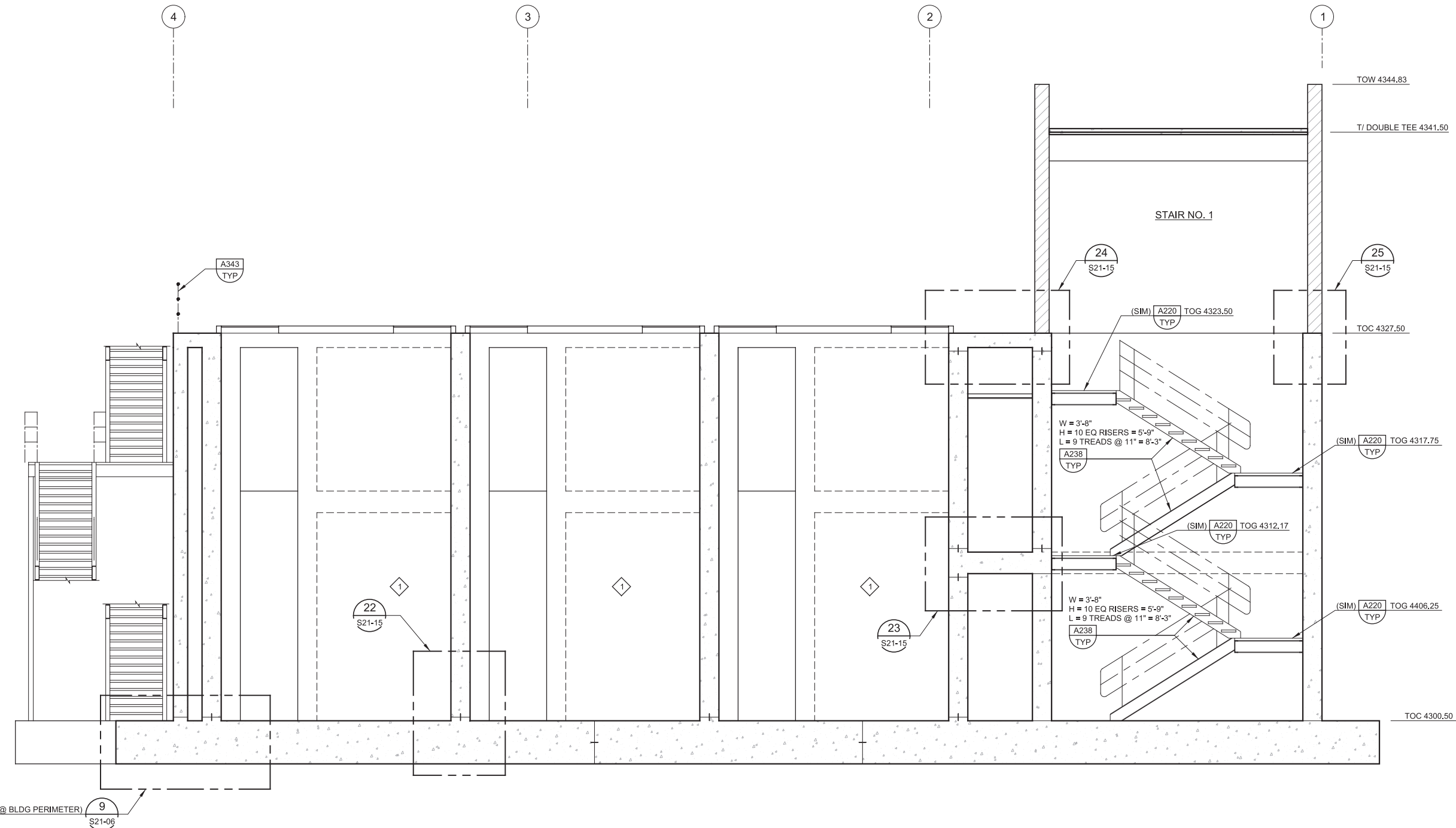
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Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen PlotScale: 2:1

LAST SAVED BY: ascheele

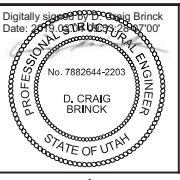
KEY NOTES:  
1 GROUT AROUND GRIT BASIN EQUIPMENT NOT SHOWN FOR CLARITY. GROUTING DETAILS SHALL BE PER EQUIPMENT MANUFACTURER.



**H SECTION**  
21S-01 SCALE: 1/4" = 1'-0"  
FILE: 10548A10\_21S303

REV	DATE	BY	DESCRIPTION

DESIGNED  
DCB  
DRAWN  
JRL  
CHECKED  
GLS  
DATE  
MARCH 2019



**SV South Valley**  
WATER RECLAMATION FACILITY  
7495 South 1300 West  
West Jordan, Utah 84084

**SOUTH VALLEY WATER RECLAMATION FACILITY**  
PROJECT 5  
STRUCTURAL  
**GRIT HANDLING FACILITY**  
SECTIONS AND DETAILS 3

VERIFY SCALES  
BAR IS ONE INCH ON ORIGINAL DRAWING  
0 1"  
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

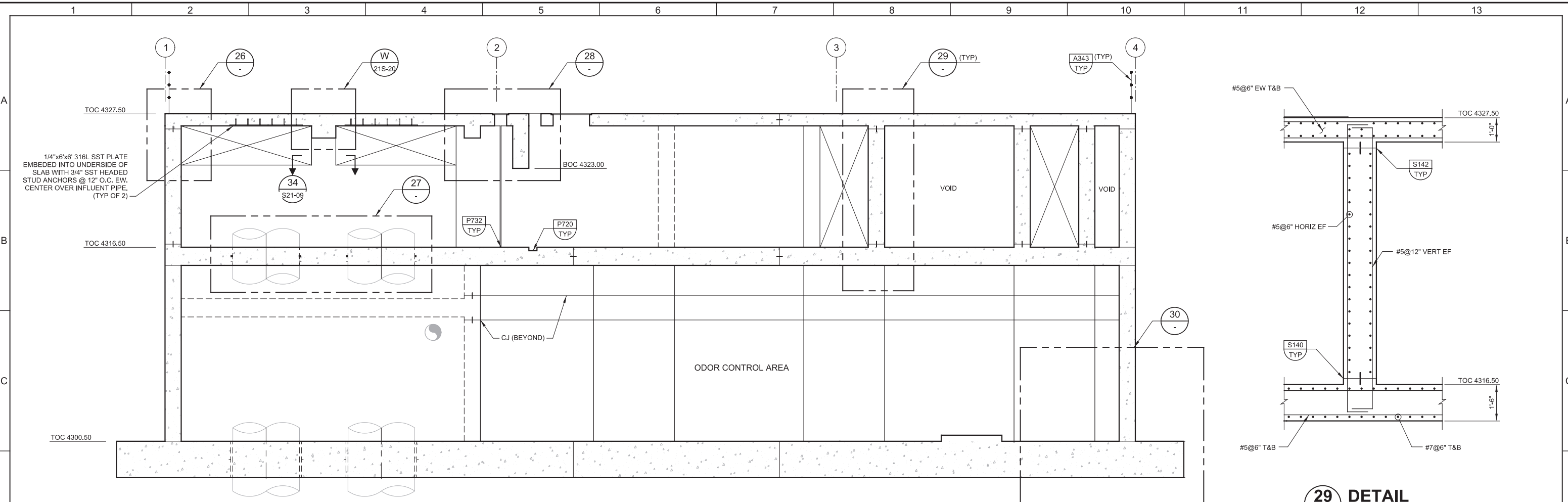
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**S21-07**  
SHEET NO.  
93 OF 159

Plot Date: 28-FEB-2019 2:38:40 PM

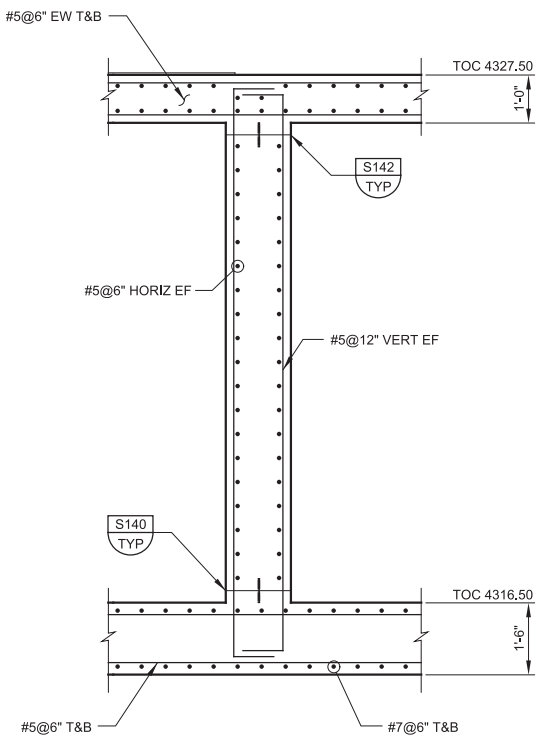
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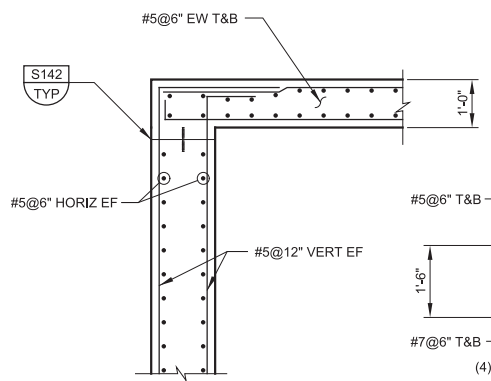
LAST SAVED BY: ascheele



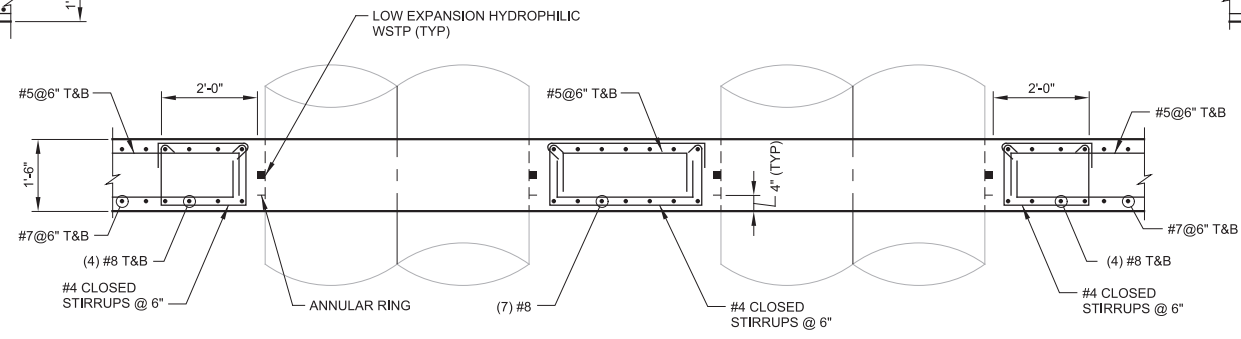
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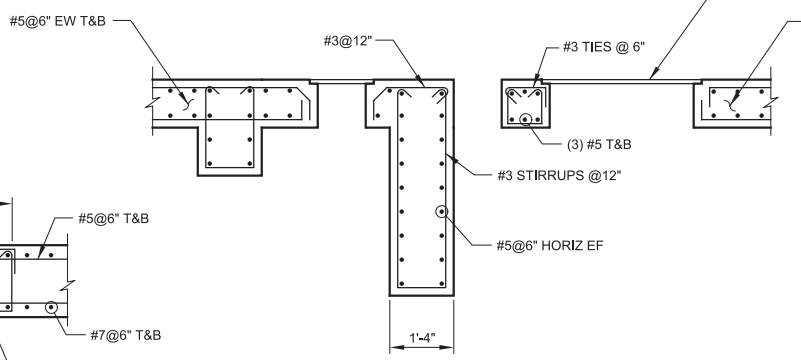
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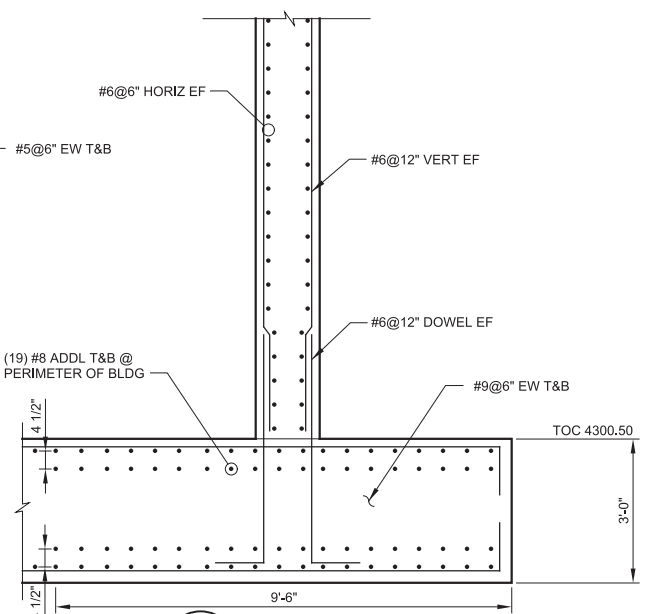
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**27 DETAIL**  
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 FILE: 10548A10S21304



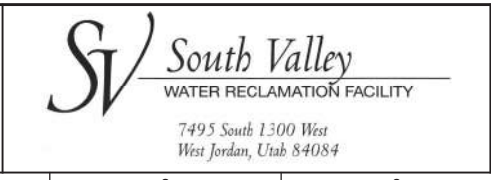
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 SCALE: 1/2" = 1'-0"  
 FILE: 10548A10S21304



**30 DETAIL**  
 SCALE: 1/2" = 1'-0"  
 FILE: 10548A10S21304

REV	DATE	BY	DESCRIPTION

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DATE MARCH 2019	



SOUTH VALLEY WATER RECLAMATION FACILITY  
 PROJECT 5  
 STRUCTURAL  
 GRIT HANDLING FACILITY  
 SECTIONS AND DETAILS 4

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 10548A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. S21-08
	SHEET NO. 94 OF 159

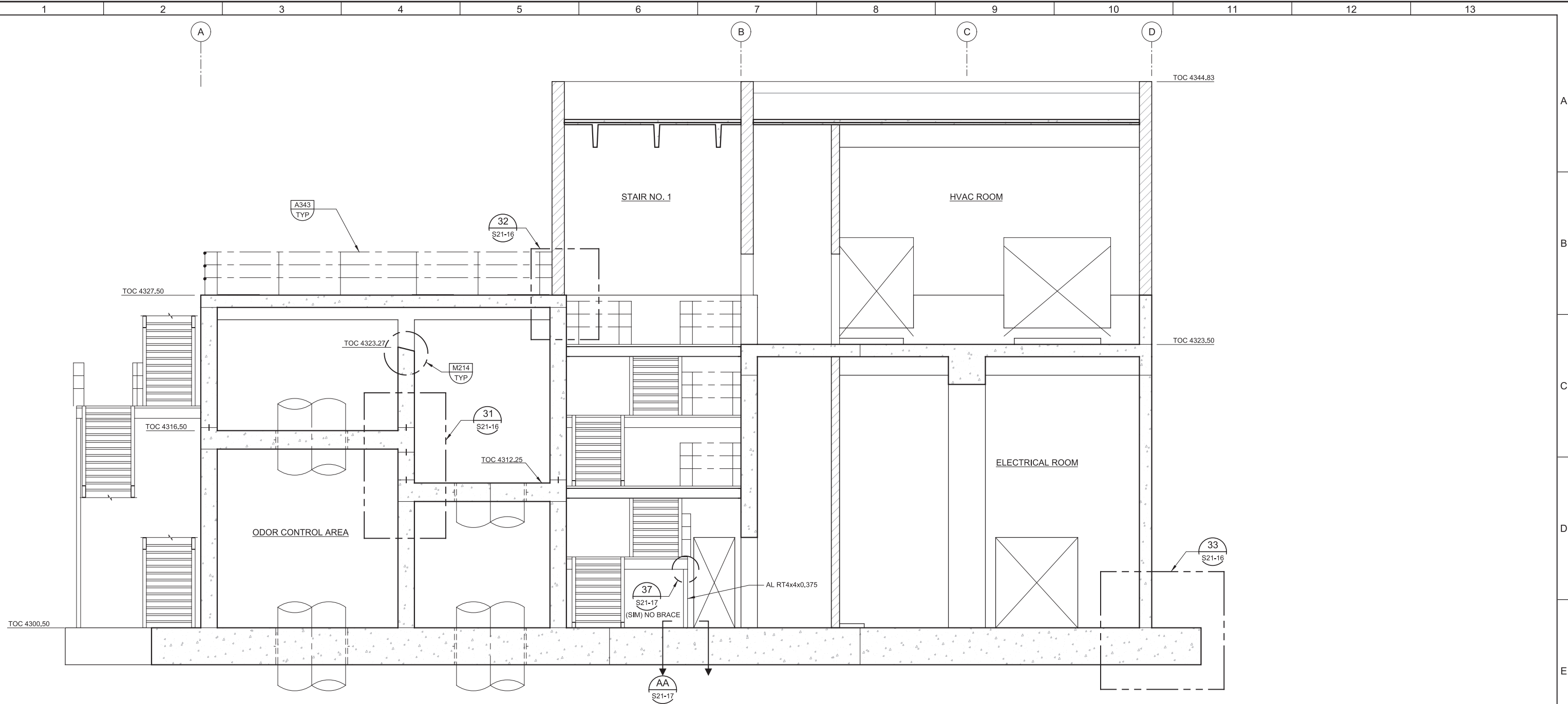
Plot Date: 26-FEB-2019 11:42:48 AM

User: svcPW

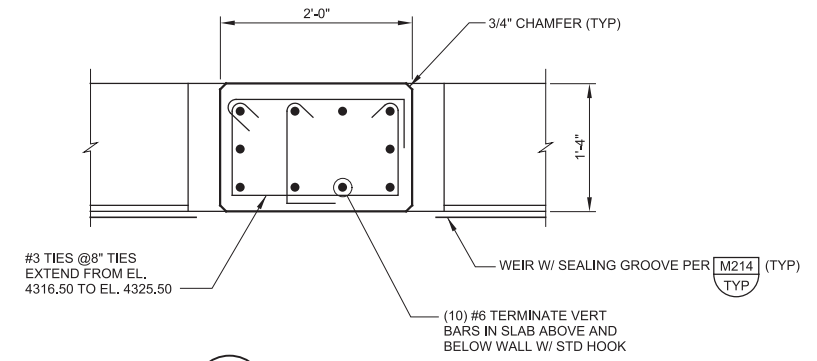
Plot Scale: 2:1

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen

LAST SAVED BY: ascheele



**K SECTION**  
 21S-01 SCALE: 1/4" = 1'-0"  
 FILE: 10548A10\_21S306



**34 DETAIL**  
 21S-08 SCALE: 1" = 1'-0"  
 FILE: 10548A1021S402

REV	DATE	BY	DESCRIPTION

DESIGNED DCB	
DRAWN JRL	
CHECKED GLS	
DATE MARCH 2019	

**SV South Valley**  
 WATER RECLAMATION FACILITY  
 7495 South 1300 West  
 West Jordan, Utah 84084

**SOUTH VALLEY WATER RECLAMATION FACILITY**  
**PROJECT 5**  
 STRUCTURAL  
**GRIT HANDLING FACILITY**  
 SECTIONS AND DETAILS 5

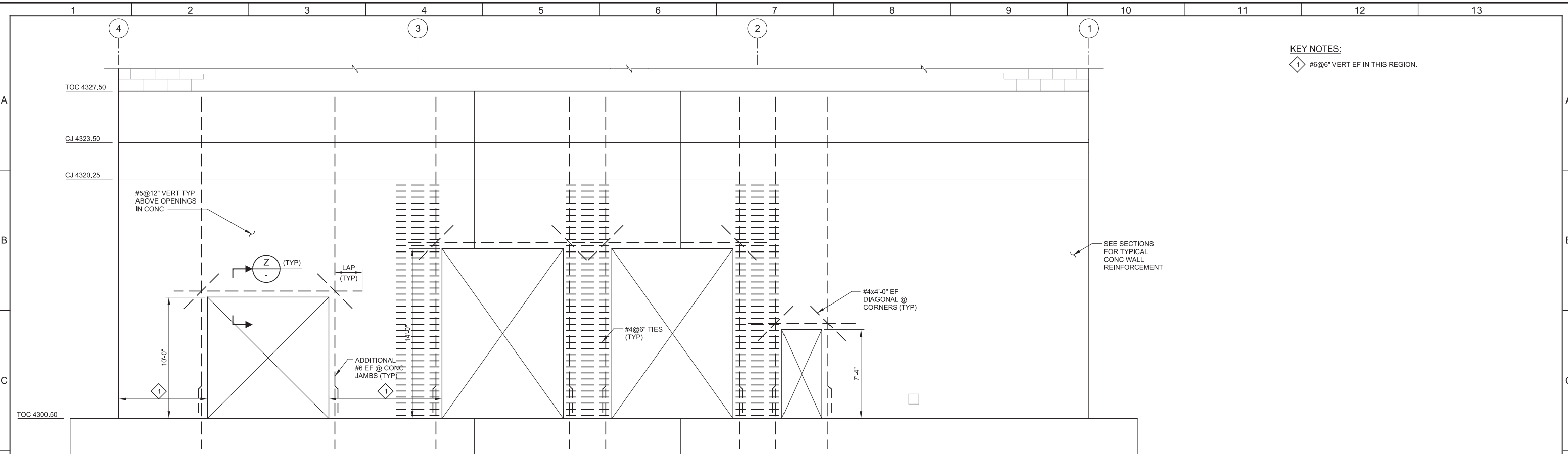
VERIFY SCALES	JOB NO. 10548A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. <b>S21-09</b>
0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO. 95 OF 159

Plot Date: 28-FEB-2019 2:39:55 PM

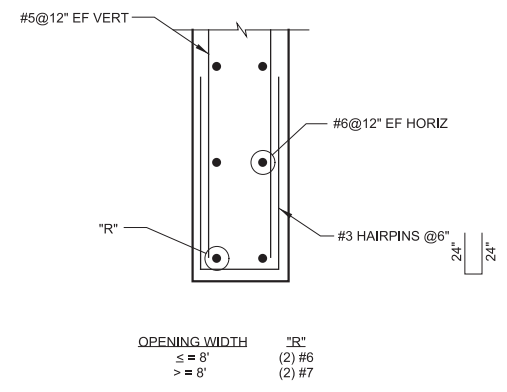
User: svcBW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Std\_Pen\_v0905.pen PlotScale: 2:1

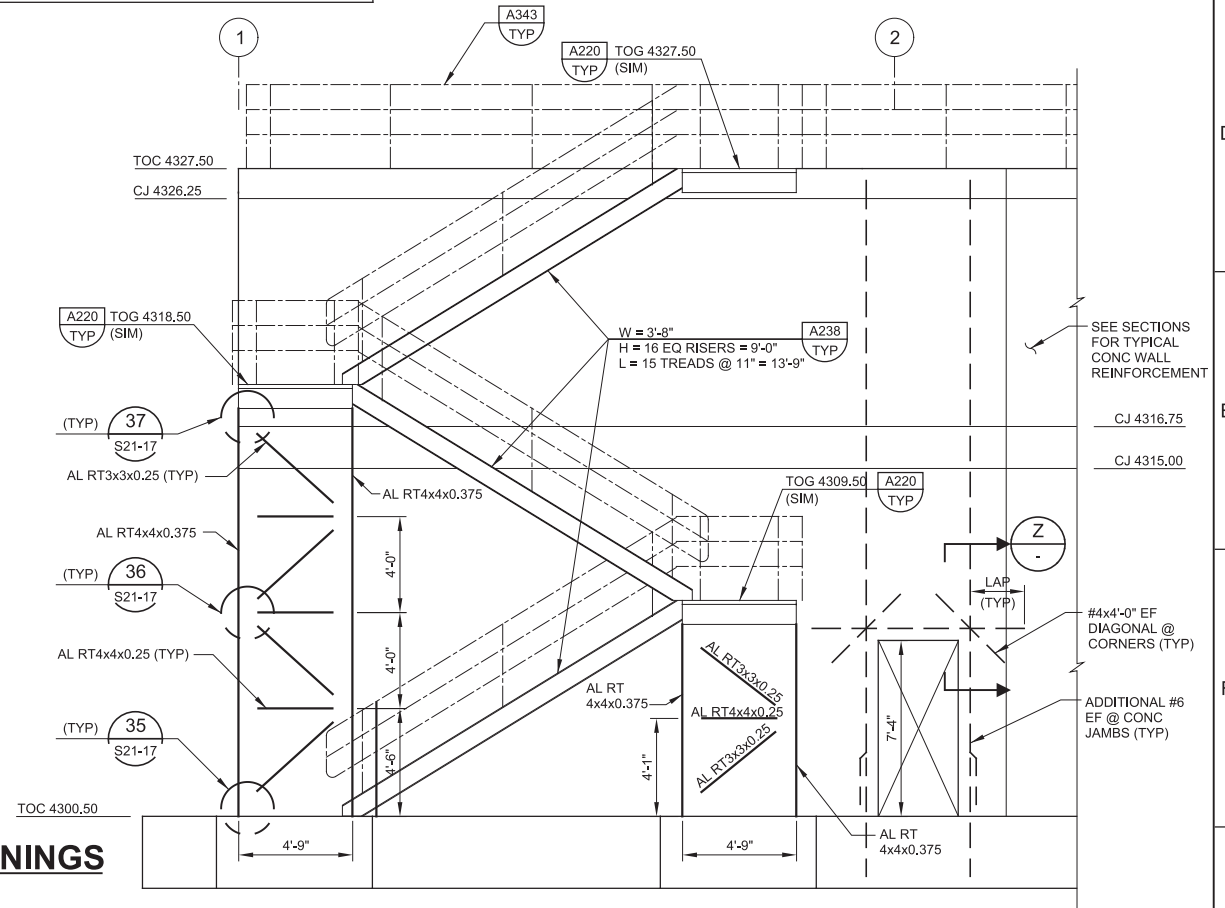
LAST SAVED BY: jefevre



**L EAST ELEVATION REINFORCEMENT @ OPENINGS**  
 S21-01 SCALE: 1/4" = 1'-0"  
 FILE: 10548A10S21501



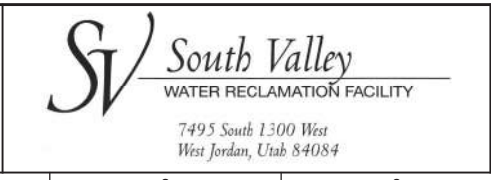
**Z SECTION**  
 SCALE: 1" = 1'-0"  
 FILE: 10548A10S21401



**T WEST ELEVATION STAIR SUPPORTS & REINFORCEMENT @ OPENINGS**  
 S21-01 SCALE: 1/4" = 1'-0"  
 FILE: 10548A10S21504

REV	DATE	BY	DESCRIPTION

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DRAWN JRL	
CHECKED GLS	
DATE MARCH 2019	



SOUTH VALLEY WATER RECLAMATION FACILITY  
 PROJECT 5  
 STRUCTURAL  
 GRIT HANDLING FACILITY  
 SECTIONS AND DETAILS 6

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 10548A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. S21-10
	SHEET NO. 96 OF 159



Plot Date: 28-FEB-2019 2:39:53 PM

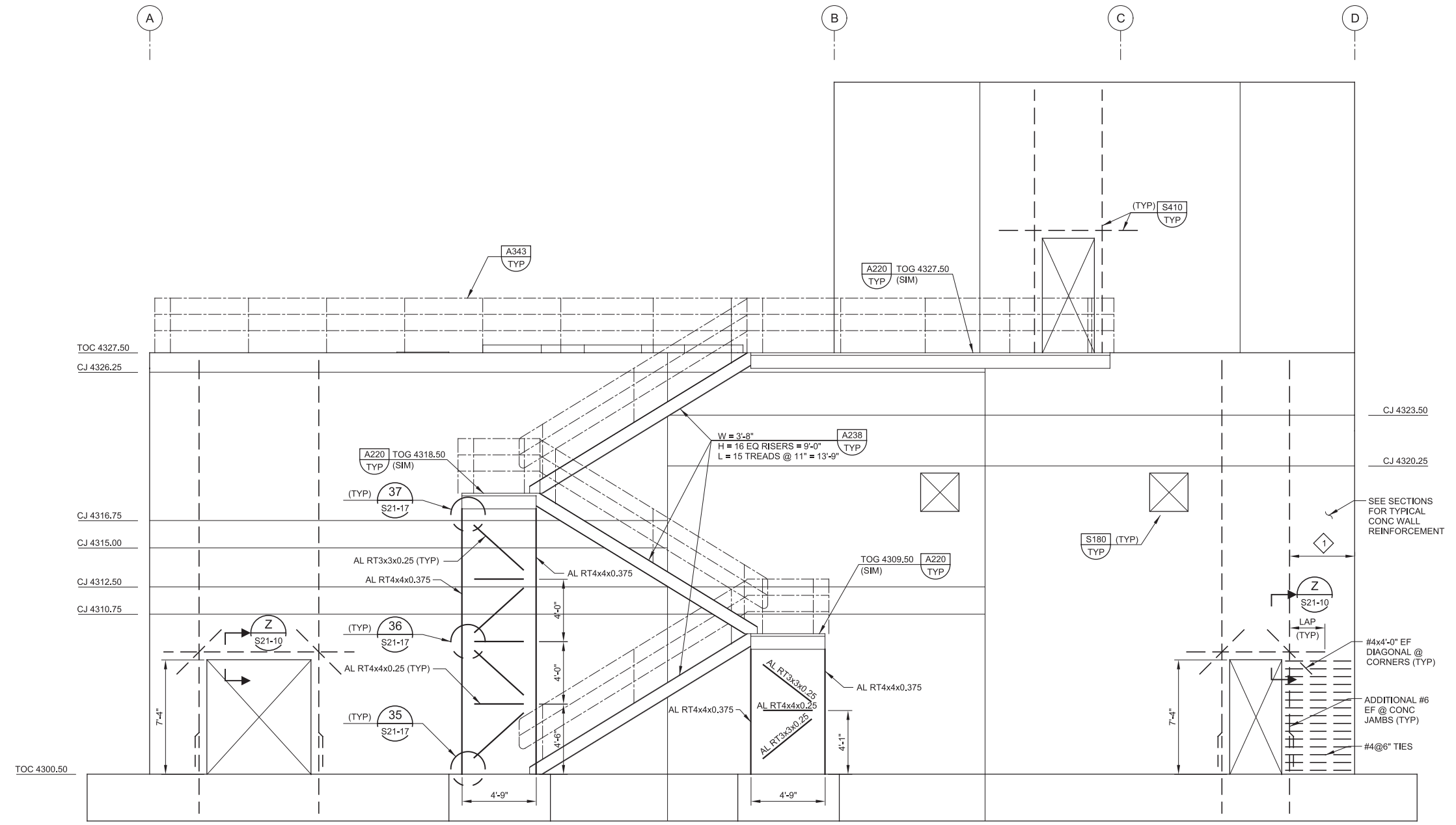
User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen PlotScale: 2:1

LAST SAVED BY: jefevre

KEY NOTES:

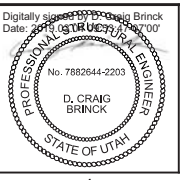
1 #6@6" VERT EF IN THIS REGION.



**M SOUTH ELEVATION STAIR SUPPORTS & REINFORCEMENT @ OPENINGS**  
 S21-01 SCALE: 1/4" = 1'-0"  
 FILE: 10548A10S21502

REV	DATE	BY	DESCRIPTION

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DCB  
DRAWN  
JRL  
CHECKED  
GLS  
DATE  
MARCH 2019



**SV South Valley**  
 WATER RECLAMATION FACILITY  
 7495 South 1300 West  
 West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY  
 PROJECT 5  
 STRUCTURAL  
**GRIT HANDLING FACILITY**  
 SECTIONS AND DETAILS 7

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 0 1"  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.  
10548A.10  
DRAWING NO.  
**S21-11**  
SHEET NO.  
97 OF 159

Plot Date: 28-FEB-2019 2:39:56 PM

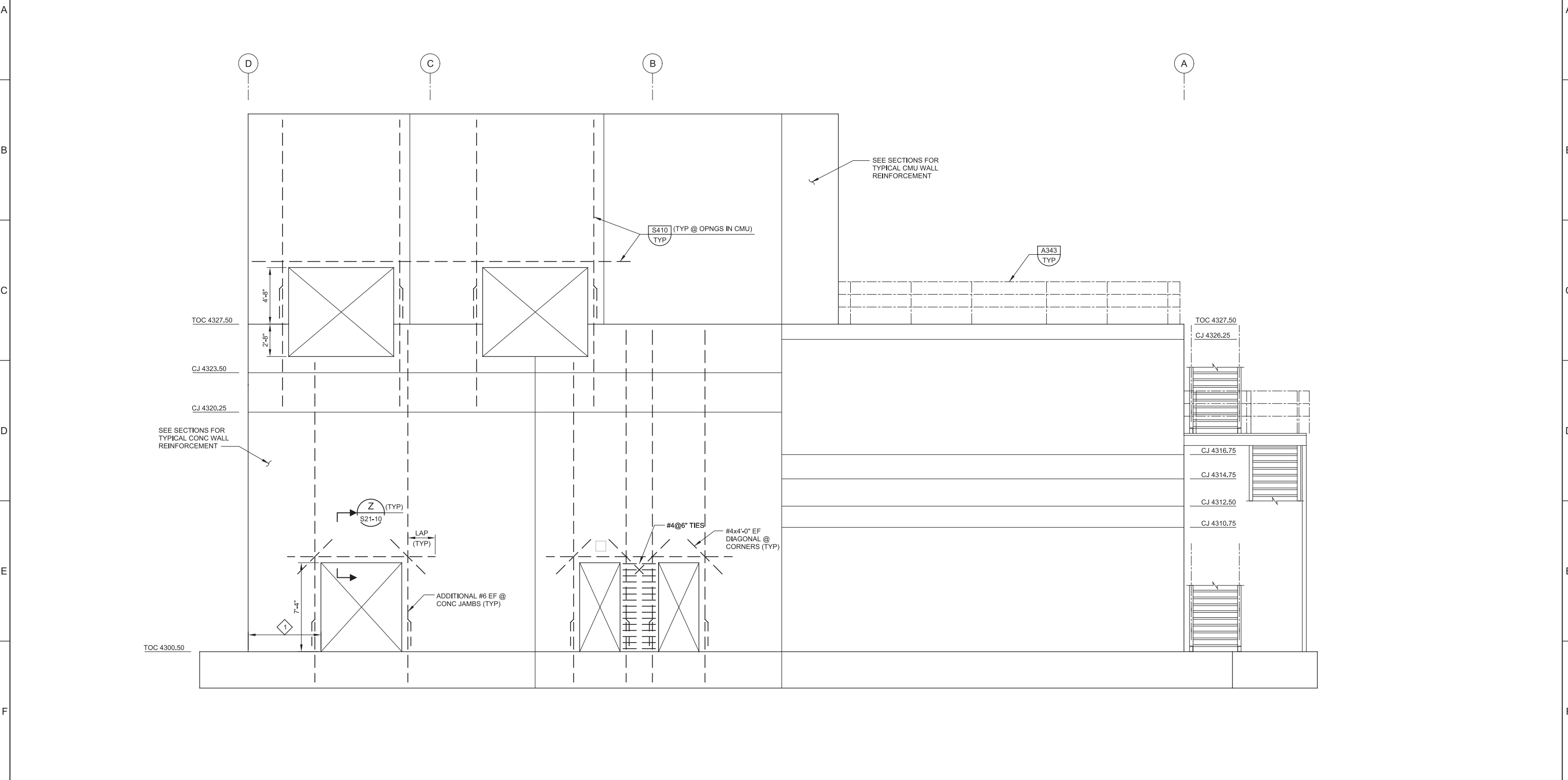
User: svcPW

PlotScale: 2:1

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen

LAST SAVED BY: jefevre

1 2 3 4 5 6 7 8 9 10 11 12 13

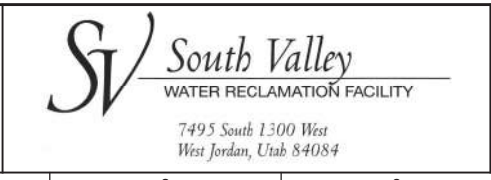


KEY NOTES:  
 1 #6@6" VERT EF IN THIS REGION.

**N NORTH ELEVATION REINFORCEMENT @ OPENINGS**  
 S21-01 SCALE: 1/4" = 1'-0"  
 FILE: 10548A10S21503

REV	DATE	BY	DESCRIPTION

DESIGNED DCB	
DRAWN JRL	
CHECKED GLS	
DATE MARCH 2019	



SOUTH VALLEY WATER RECLAMATION FACILITY  
 PROJECT 5  
 STRUCTURAL  
 GRIT HANDLING FACILITY  
 SECTIONS AND DETAILS 8

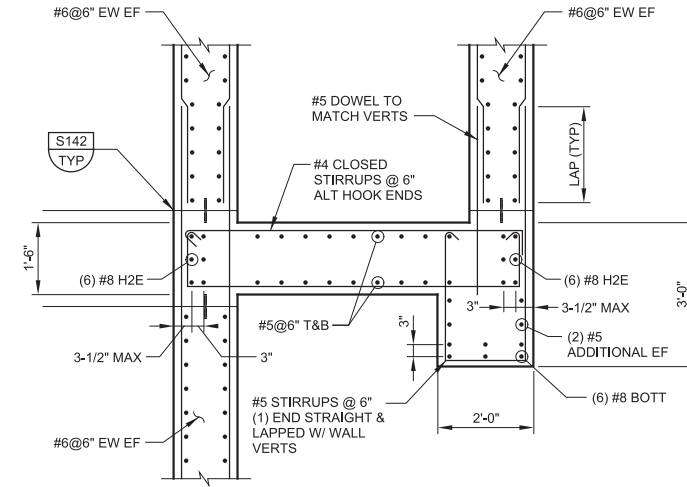
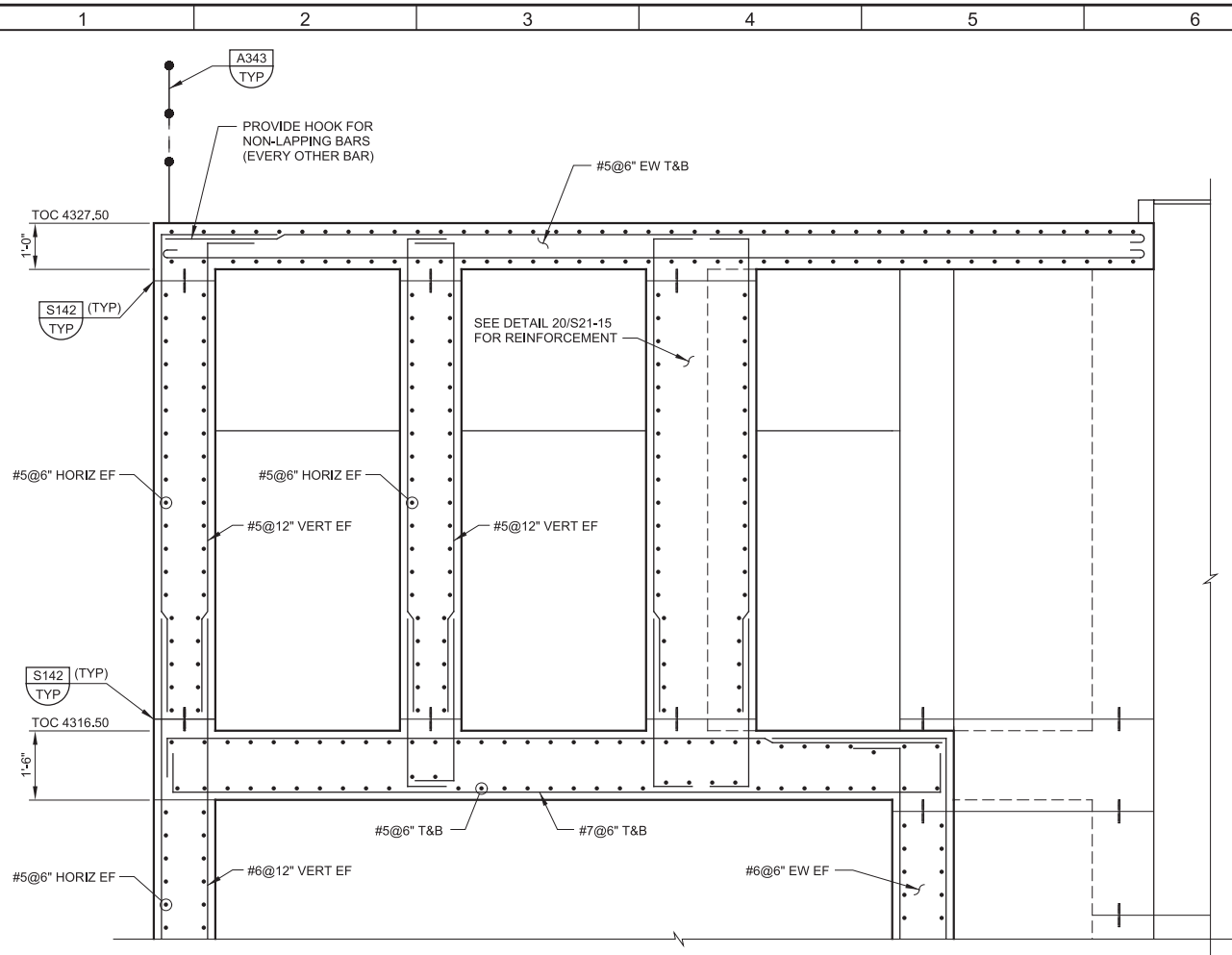
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	JOB NO. 10548A.10 DRAWING NO. <b>S21-12</b> SHEET NO. 98 OF 159
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Plot Date: 26-FEB-2019 11:42:55 AM

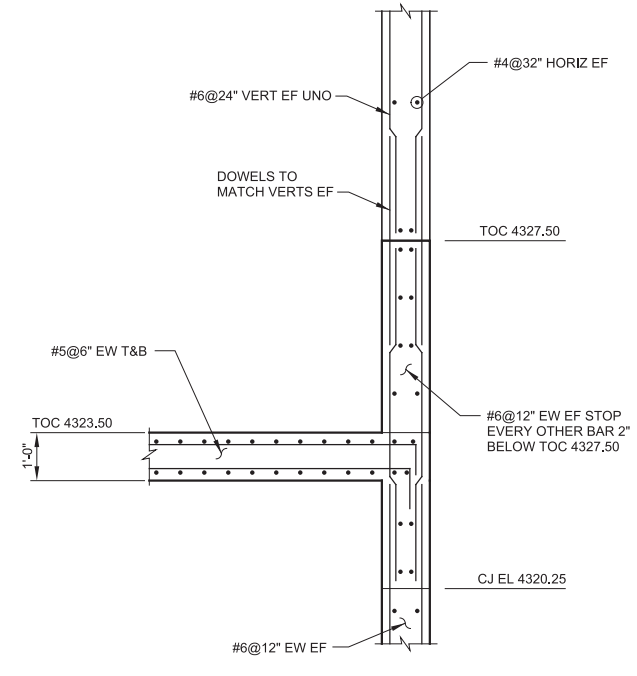
User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen PlotScale: 2:1

LAST SAVED BY: ascheale

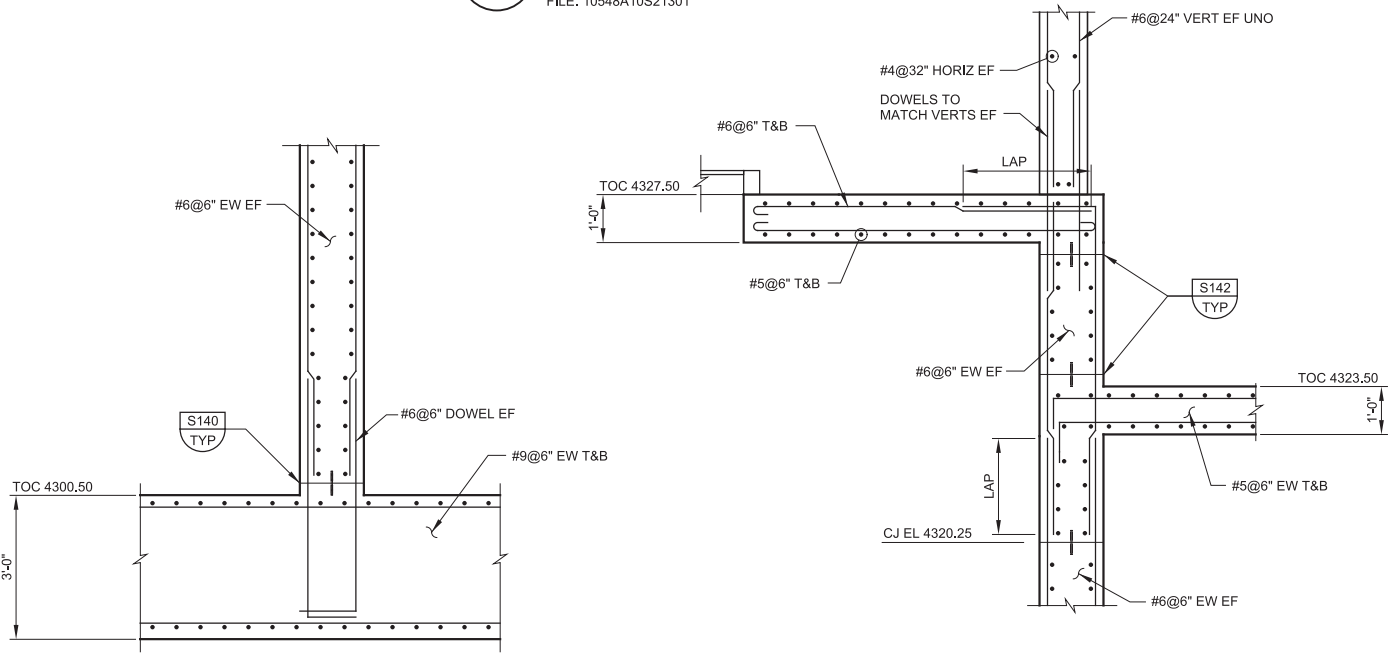


**5 DETAIL**  
S21-05 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21301



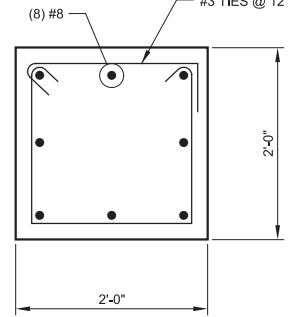
**6 DETAIL**  
S21-05 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21301

**2 DETAIL**  
S21-05 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21301

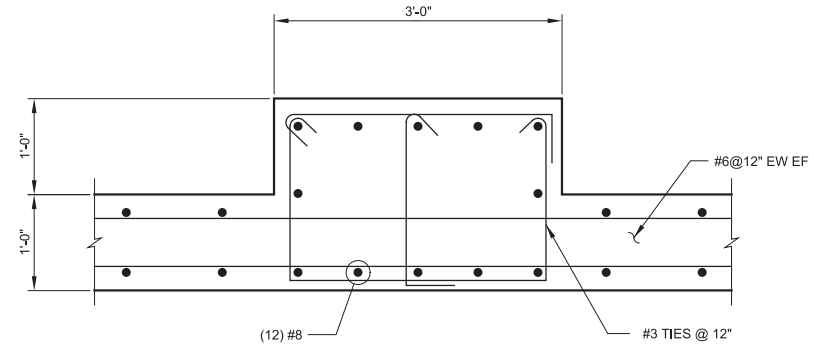


**3 DETAIL**  
S21-05 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21301

**4 DETAIL**  
S21-05 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21301



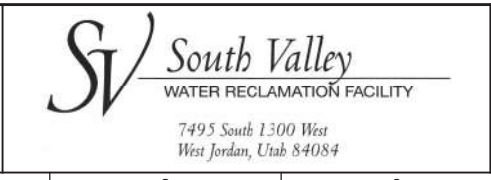
**7 DETAIL**  
S21-01 SCALE: 1" = 1'-0"  
FILE: 10548A10S21401



**8 DETAIL**  
S21-01 SCALE: 1" = 1'-0"  
FILE: 10548A10S21401

REV	DATE	BY	DESCRIPTION
1			
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3			

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DATE MARCH 2019	



SOUTH VALLEY WATER RECLAMATION FACILITY  
PROJECT 5  
STRUCTURAL  
GRIT HANDLING FACILITY  
SECTIONS AND DETAILS 9

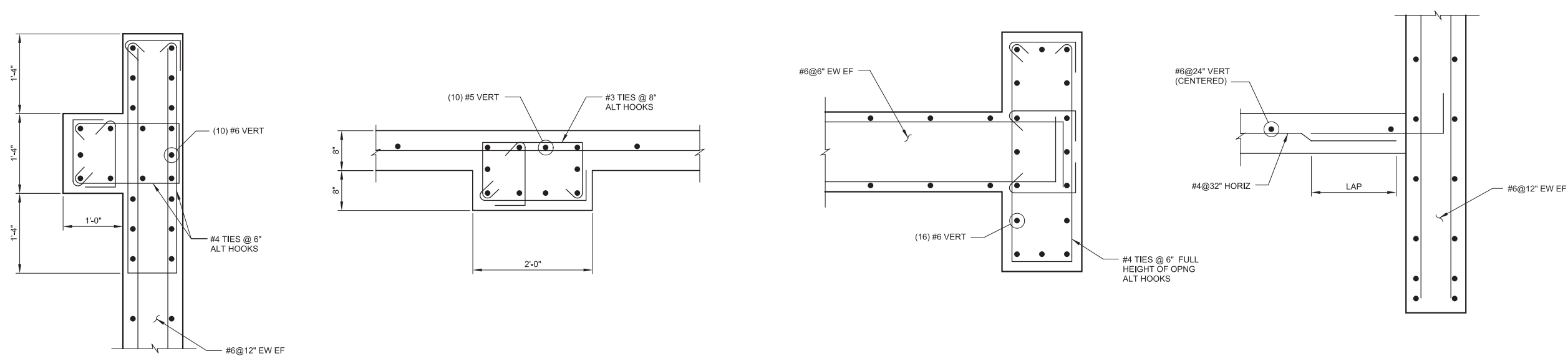
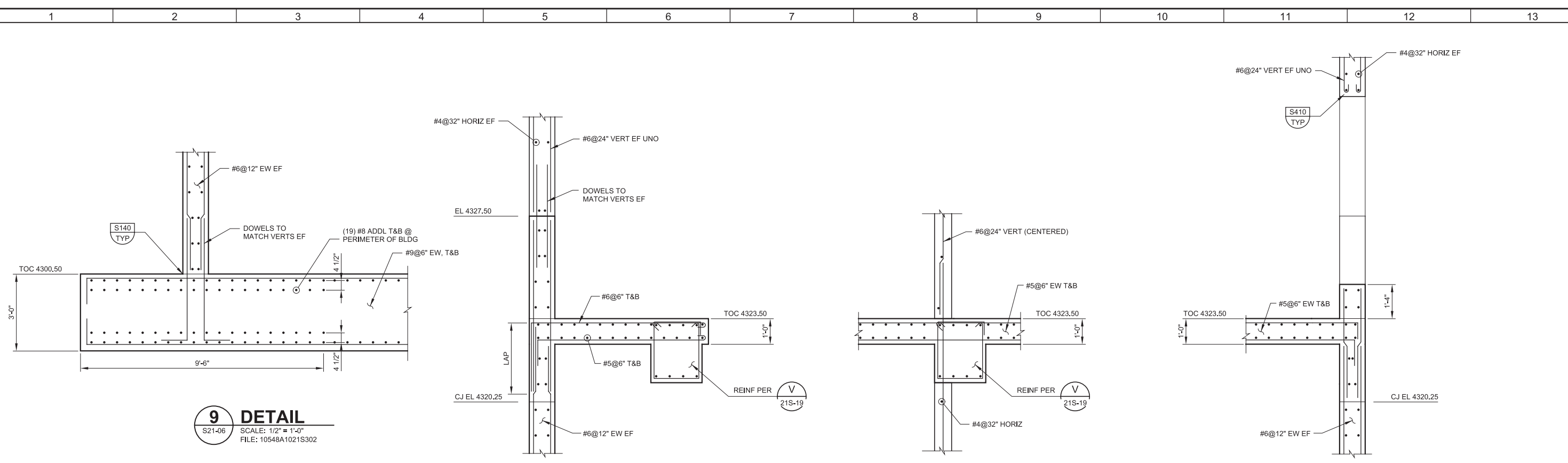
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	JOB NO. 10548A.10 DRAWING NO. <b>S21-13</b> SHEET NO. 99 OF 159
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Plot Date: 28-FEB-2019 2:30:43 PM

User: svcBW

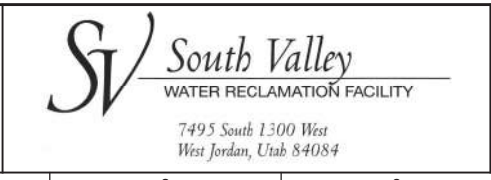
Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen PlotScale: 2:1

LAST SAVED BY: ascheale



REV	DATE	BY	DESCRIPTION

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DRAWN JRL	
CHECKED GLS	
DATE MARCH 2019	



SOUTH VALLEY WATER RECLAMATION FACILITY  
PROJECT 5  
STRUCTURAL  
GRIT HANDLING FACILITY  
SECTIONS AND DETAILS 10

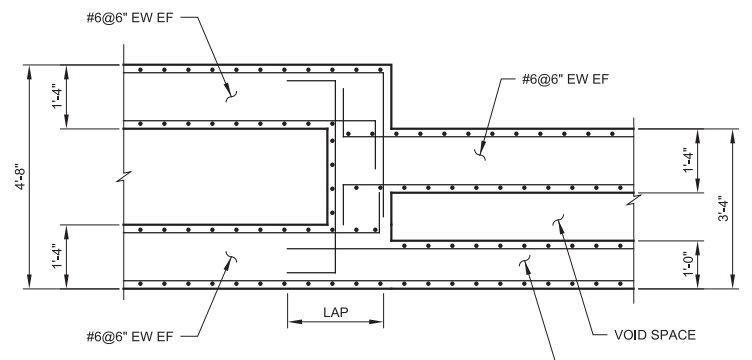
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	JOB NO. 10548A.10 DRAWING NO. <b>S21-14</b> SHEET NO. 100 OF 159
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Plot Date: 28-FEB-2019 2:30:45 PM

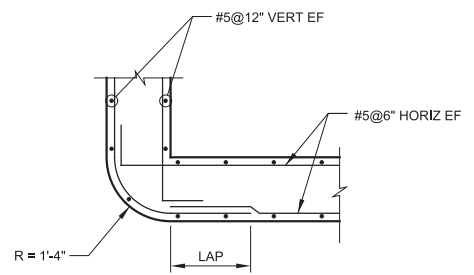
User: svcPW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Std\_Pen\_v0905.pen PlotScale: 2:1

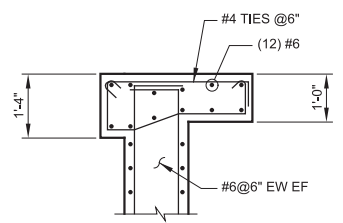
LAST SAVED BY: ascheale



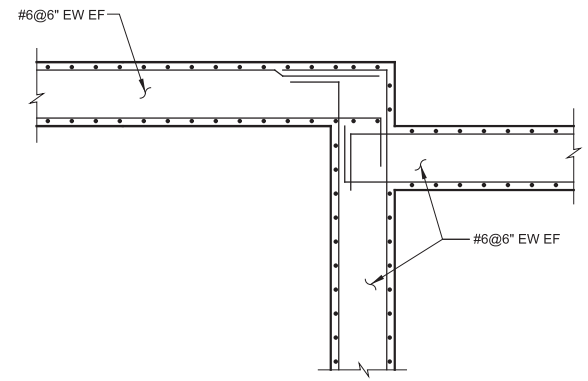
**17 DETAIL**  
S21-02 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21102



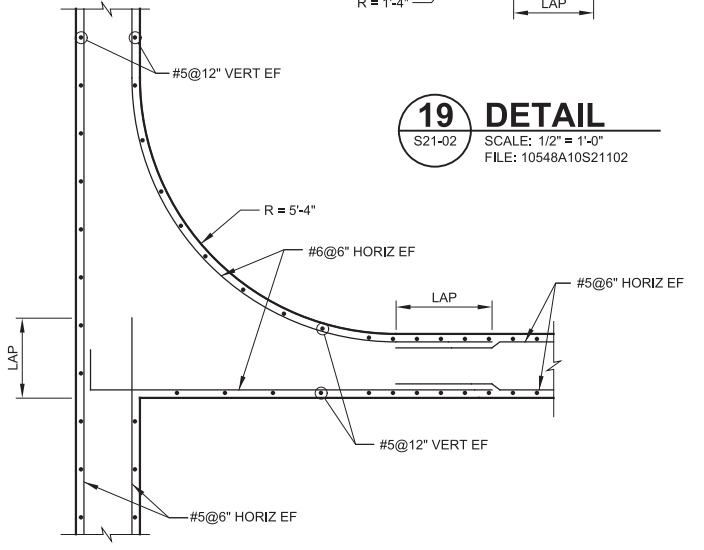
**19 DETAIL**  
S21-02 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21102



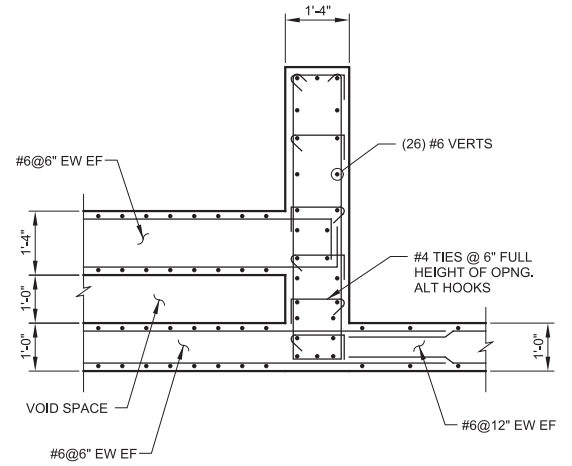
**40 DETAIL**  
S21-01 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21101



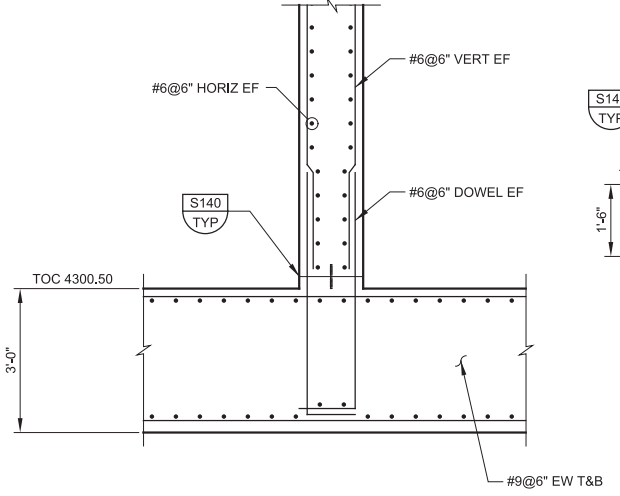
**18 DETAIL**  
S21-02 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21102



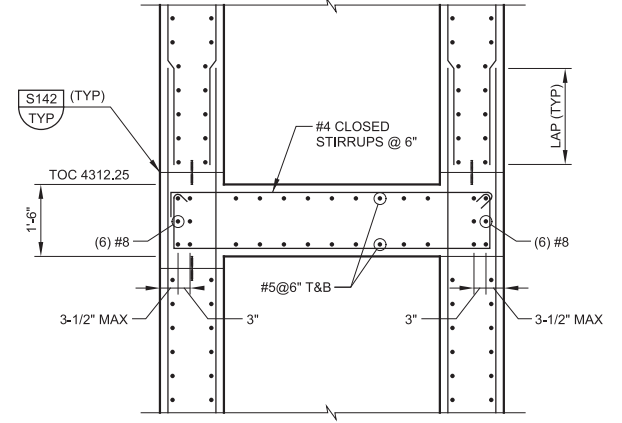
**20 DETAIL**  
S21-02 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21102



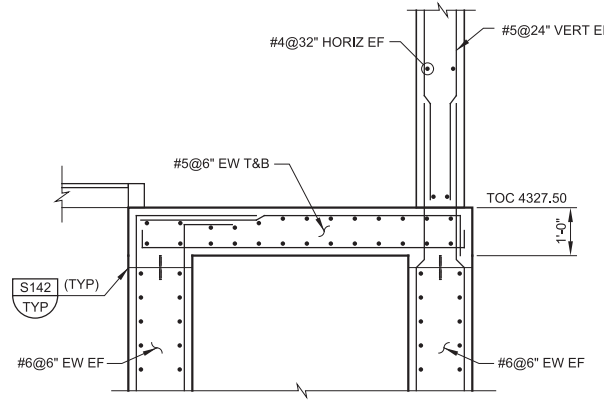
**39 DETAIL**  
S21-01 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21101



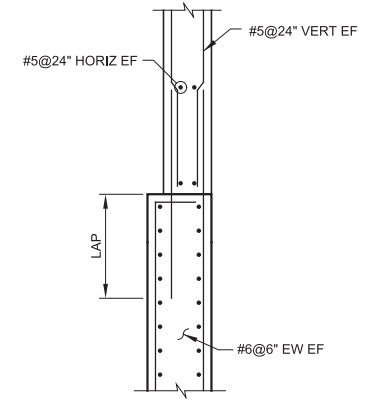
**22 DETAIL**  
S21-07 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21303



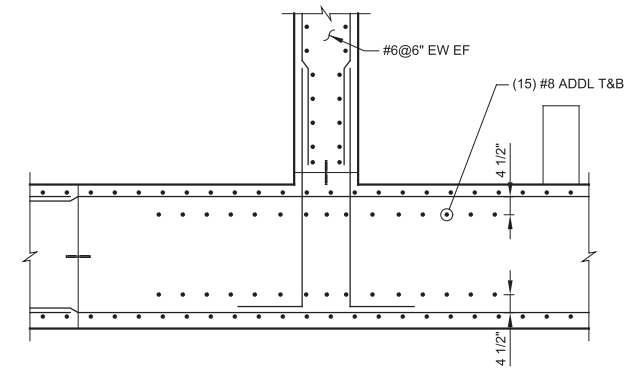
**23 DETAIL**  
S21-07 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21303



**24 DETAIL**  
S21-07 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21303



**25 DETAIL**  
S21-07 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21303



**43 DETAIL**  
S21-05 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21301

REV	DATE	BY	DESCRIPTION
1			
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DESIGNED DCB	
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**SV South Valley**  
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7495 South 1300 West  
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY  
PROJECT 5  
STRUCTURAL  
GRIT HANDLING FACILITY  
SECTIONS AND DETAILS 11

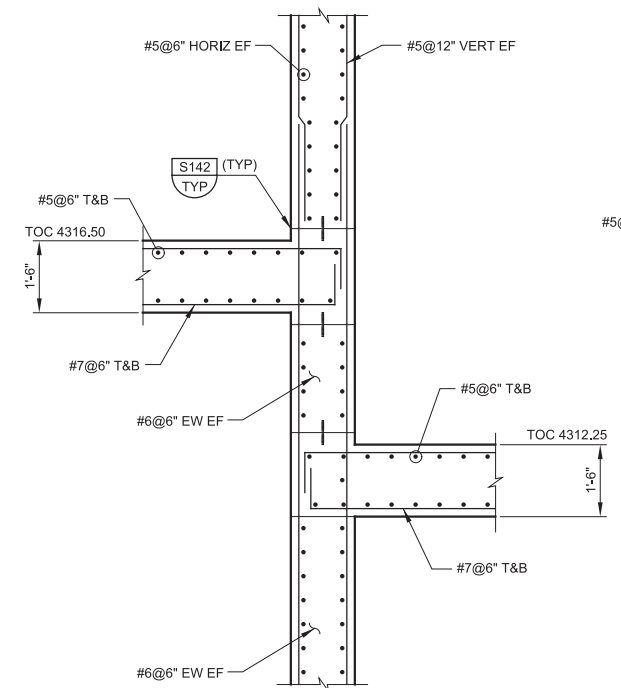
VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 10548A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. <b>S21-15</b>
	SHEET NO. 101 OF 159

Plot Date: 28-FEB-2019 2:30:47 PM

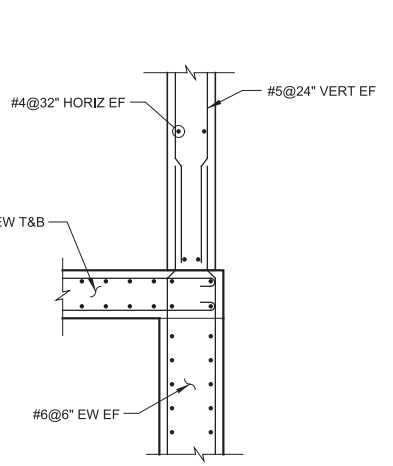
User: svcBW

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen PlotScale: 2:1

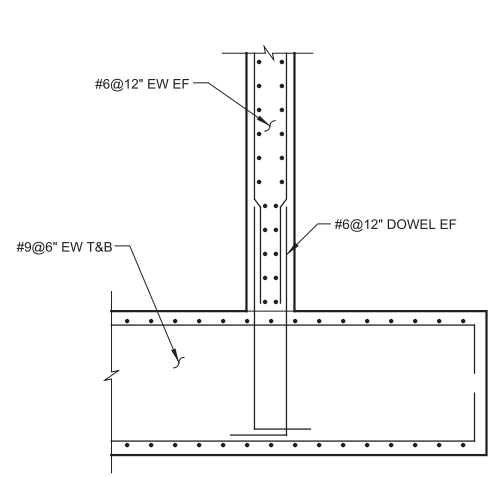
LAST SAVED BY: dscheele



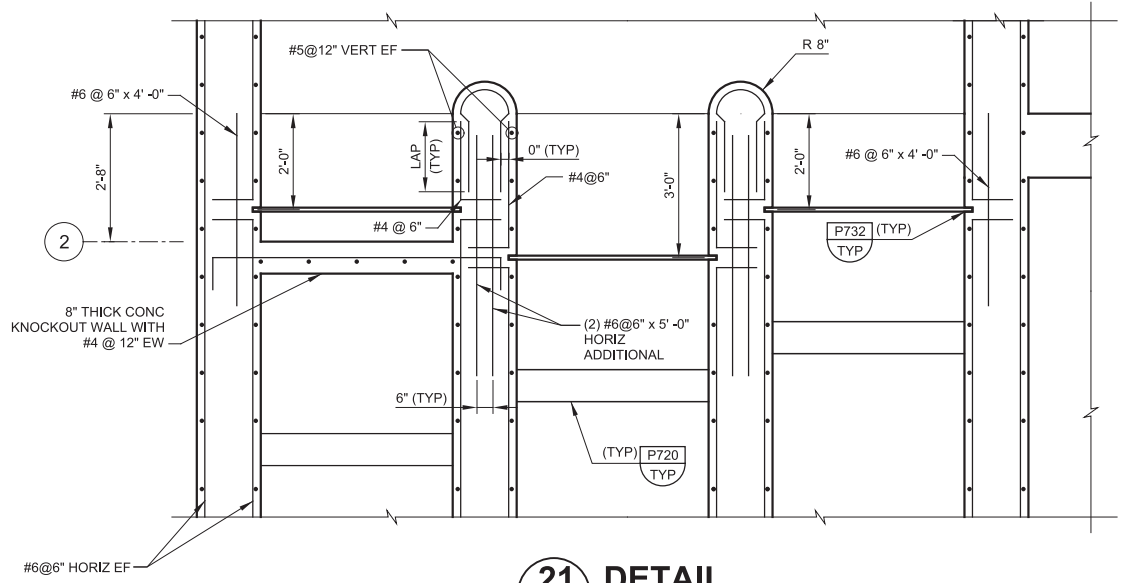
**31 DETAIL**  
S21-09 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21306



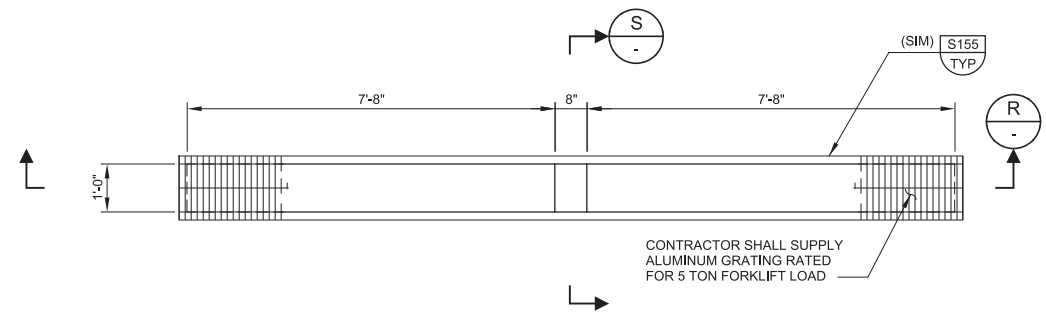
**32 DETAIL**  
S21-09 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21306



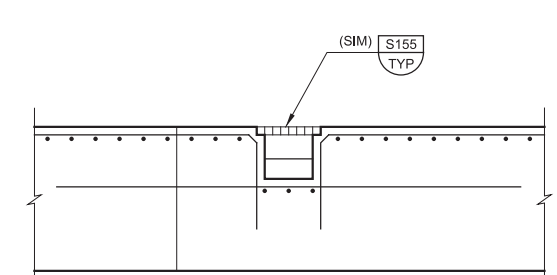
**33 DETAIL**  
S21-09 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21306



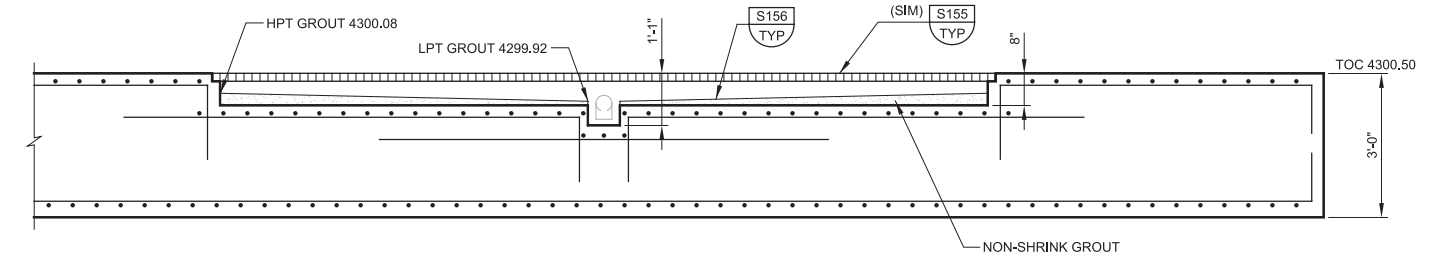
**21 DETAIL**  
S21-02 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21102



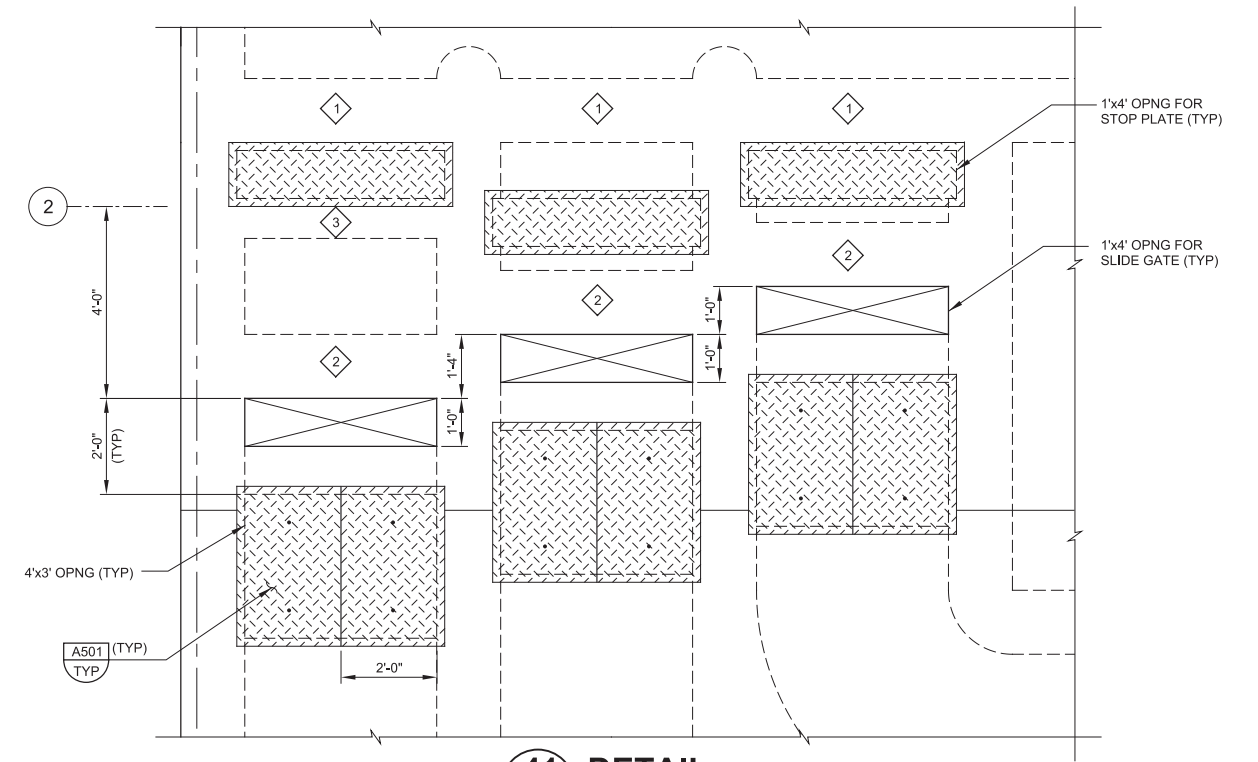
**1 DETAIL**  
S21-01 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21401



**S SECTION**  
SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21302



**R SECTION**  
SCALE: 1" = 1'-0"  
FILE: 10548A10S21305



**41 DETAIL**  
S21-03 SCALE: 1/2" = 1'-0"  
FILE: 10548A10S21103

- KEY NOTES:**
- 1 1'-4" WIDE CONC BEAM BELOW TOP SLAB. SEE DETAIL 28/S21-08.
  - 2 1'-4" WIDE CONC WALL BELOW TOP SLAB. SEE DETAIL 28/S21-08.
  - 3 8" THICK CONC KNOCKOUT WALL

REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED DCB	
DRAWN JRL	
CHECKED GLS	
DATE MARCH 2019	



**South Valley**  
WATER RECLAMATION FACILITY  
7495 South 1300 West  
West Jordan, Utah 84084

**SOUTH VALLEY WATER RECLAMATION FACILITY**  
**PROJECT 5**  
STRUCTURAL  
**GRIT HANDLING FACILITY**  
**SECTIONS AND DETAILS 12**

VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. 10548A.10
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWING NO. <b>S21-16</b>
	SHEET NO. 102 OF 159

Plot Date: 26-FEB-2019 11:42:51 AM

User: svcPW

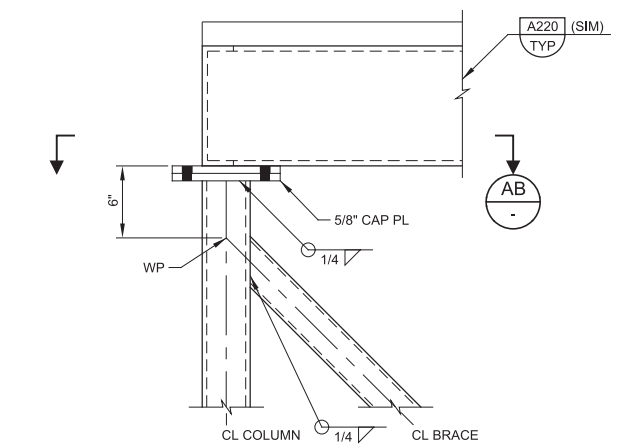
PlotScale: 2:1

DesignScript: Carollo\_Sld\_Pen\_v0905.pen

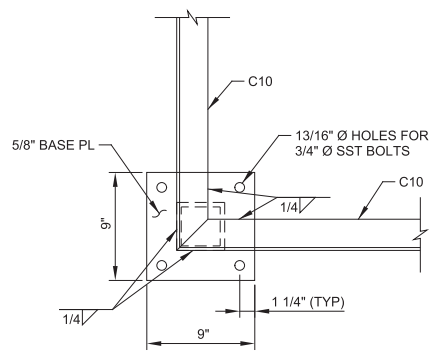
ColorTable: gshade.ctb

Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen PlotScale: 2:1

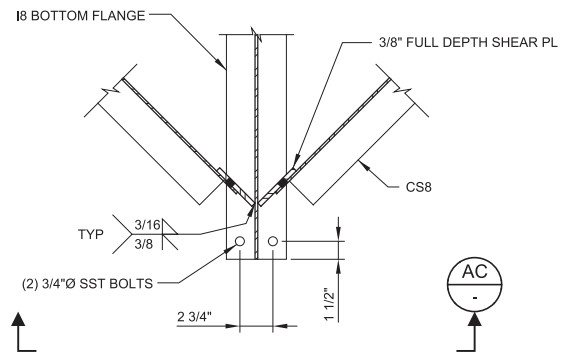
LAST SAVED BY: ascheale



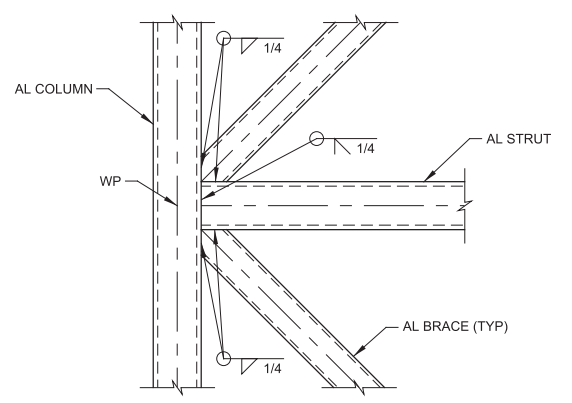
**37 DETAIL**  
S21-10 SCALE: 1 1/2" = 1'-0"  
FILE: 10548A10S21401



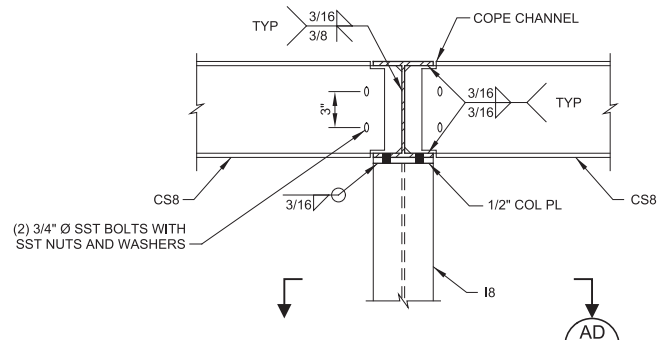
**AB SECTION**  
SCALE: 1 1/2" = 1'-0"  
FILE: 10548A10S21401



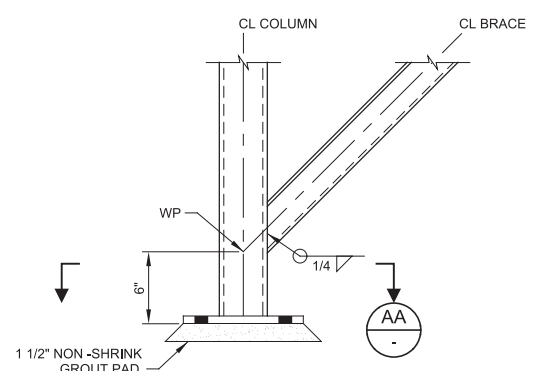
**38 DETAIL**  
S21-04 SCALE: 1 1/2" = 1'-0"  
FILE: 10548A10S21401



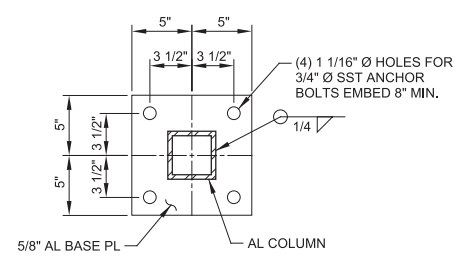
**36 DETAIL**  
S21-10 SCALE: 1 1/2" = 1'-0"  
FILE: 10548A10S21401



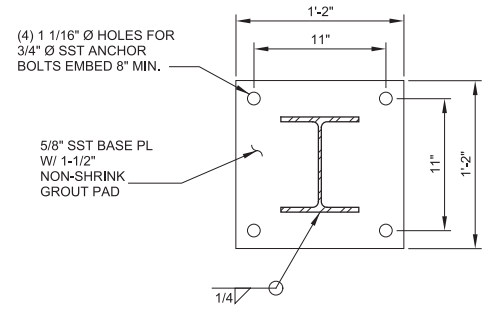
**AC SECTION**  
SCALE: 1 1/2" = 1'-0"  
FILE: 10548A10S21401



**35 DETAIL**  
S21-10 SCALE: 1 1/2" = 1'-0"  
FILE: 10548A10S21401



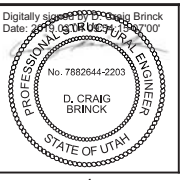
**AA SECTION**  
SCALE: 1 1/2" = 1'-0"  
FILE: 10548A10S21401



**AD SECTION**  
SCALE: 1 1/2" = 1'-0"  
FILE: 10548A10S21401

REV	DATE	BY	DESCRIPTION

DESIGNED	DCB
DRAWN	DCS
CHECKED	GLS
DATE	MARCH 2019



SOUTH VALLEY WATER RECLAMATION FACILITY  
PROJECT 5  
STRUCTURAL  
GRIT HANDLING FACILITY  
SECTIONS AND DETAILS 13

VERIFY SCALES	JOB NO. 10548A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. <b>S21-17</b>
0 1"	SHEET NO. 103 OF 159
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

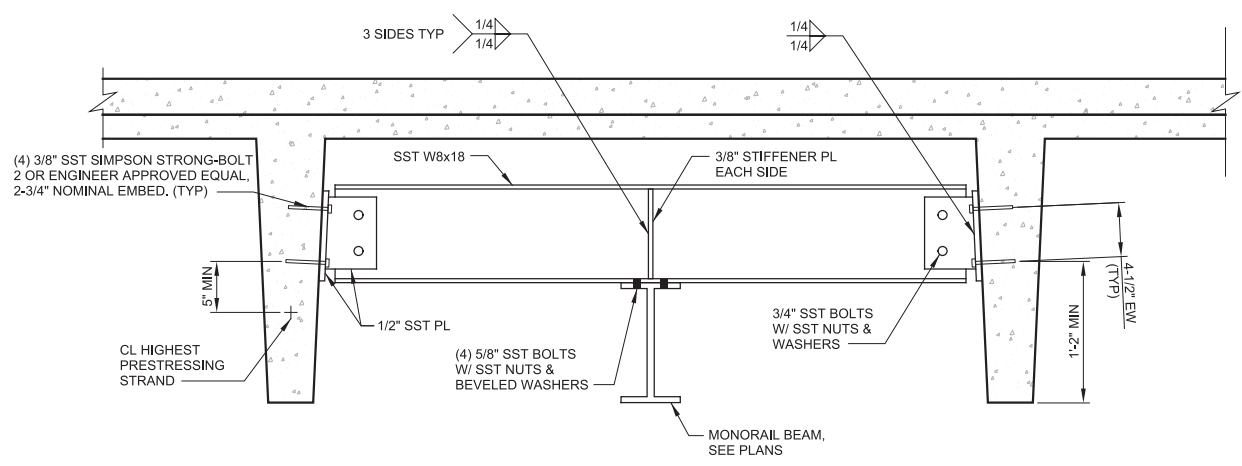
Plot Date: 28-FEB-2019 2:30:45 PM

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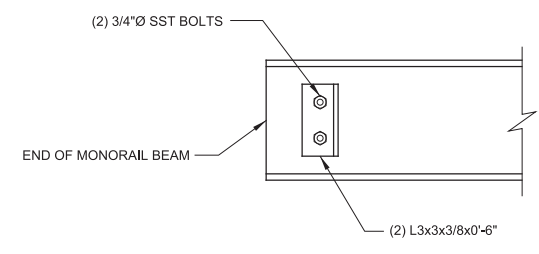
Plot Scale: 2:1

Model: Layout1

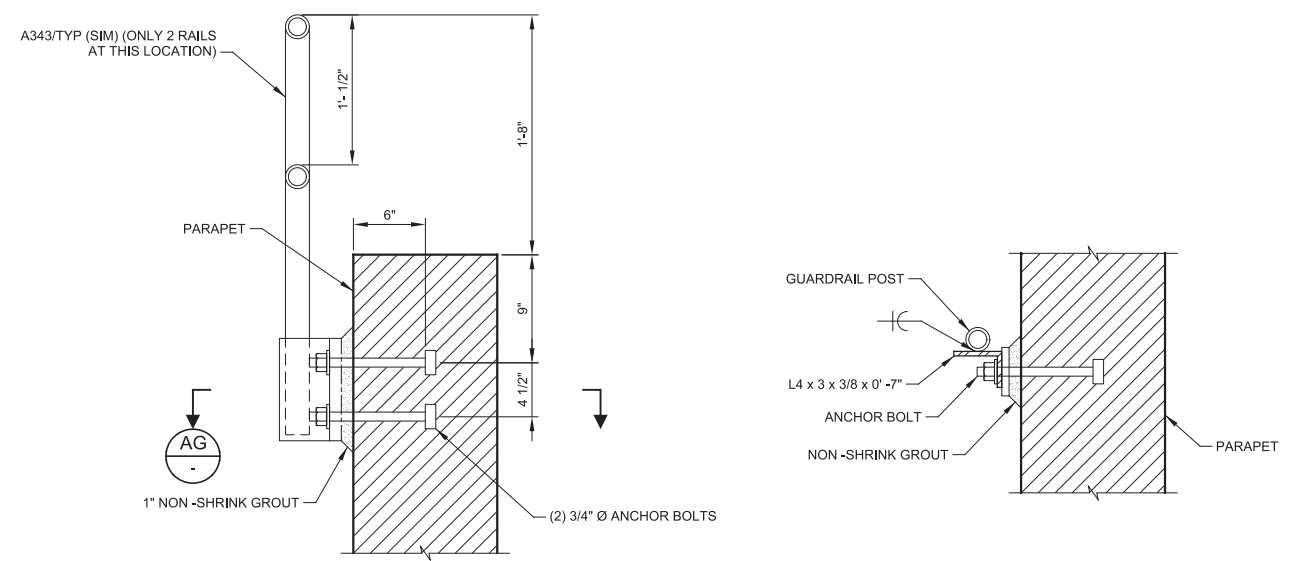
Last Saved By: ascheale



**AE SECTION**  
S21-04 SCALE: 1-1/2" = 1'-0"  
FILE: 10548A10S21302



**AF SECTION**  
S21-04 SCALE: 1-1/2" = 1'-0"  
FILE: 10548A10S21401



**42 DETAIL**  
S21-04 SCALE: 1-1/2" = 1'-0"  
FILE: 10548A10S21401

**AG SECTION**  
S21-04 SCALE: 1-1/2" = 1'-0"  
FILE: 10548A10S21401

REV	DATE	BY	DESCRIPTION

DESIGNED  
DCB

DRAWN  
JRL

CHECKED  
GLS

DATE  
MARCH 2019

Digitally signed by D. Craig Brinck  
Date: 2019.03.07 10:00:00 -0700

**PROFESSIONAL ENGINEER**  
D. CRAIG BRINCK  
No. 7882644-2203  
STATE OF UTAH



**SV South Valley**  
WATER RECLAMATION FACILITY

7495 South 1300 West  
West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY

PROJECT 5  
STRUCTURAL

GRIT HANDLING FACILITY  
SECTIONS AND DETAILS 14

VERIFY SCALES  
BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.  
10548A.10

DRAWING NO.  
**S21-18**

SHEET NO.  
104 OF 159



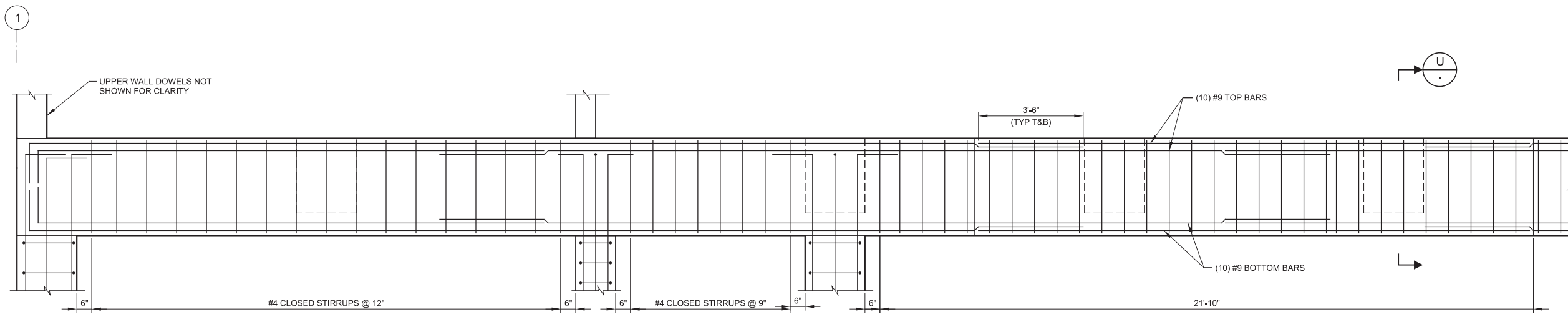
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User: svcBW

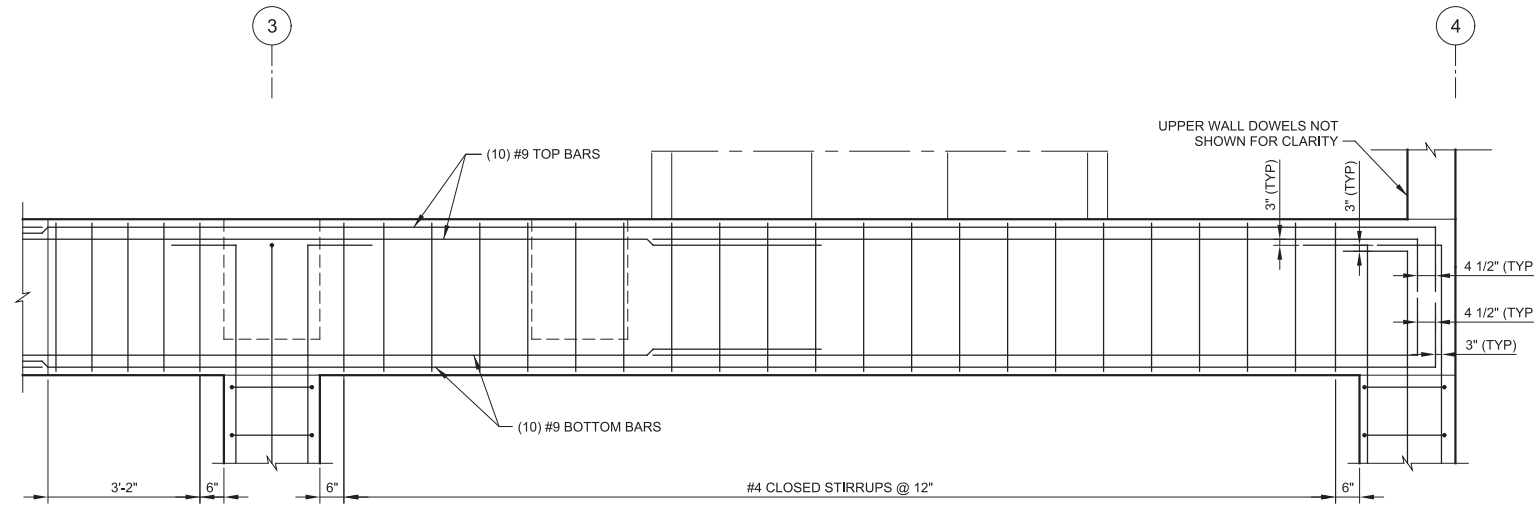
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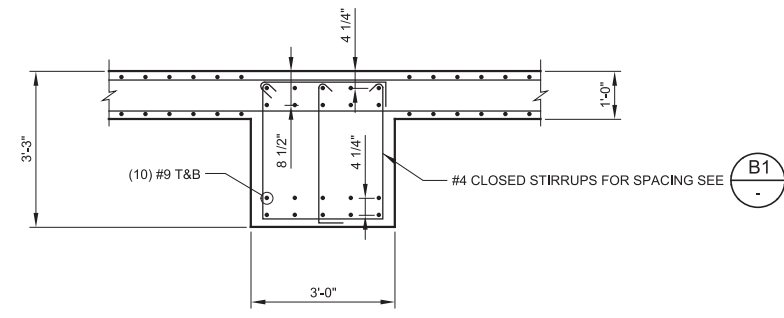
LAST SAVED BY: ascheele



**B1 BEAM 21-B01**  
 S21-03 SCALE: 1/2" = 1'-0"  
 FILE: 10548A10S21320



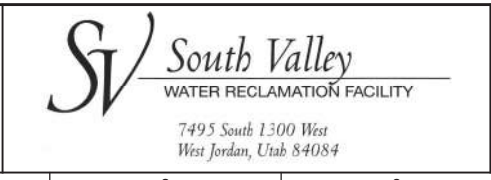
**B1 BEAM 21-B01**  
 S21-03 SCALE: 1/2" = 1'-0"  
 FILE: 10548A10S21320



**U SECTION**  
 SCALE: 1/2" = 1'-0"  
 FILE: 10548A10S21320

REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED DCB	
DRAWN JRL	
CHECKED GLS	
DATE MARCH 2019	



SOUTH VALLEY WATER RECLAMATION FACILITY  
 PROJECT 5  
 STRUCTURAL  
 GRIT HANDLING FACILITY  
 BEAM SECTIONS 1

VERIFY SCALES	JOB NO. 10548A.10
BAR IS ONE INCH ON ORIGINAL DRAWING	DRAWING NO. <b>S21-19</b>
0 1" SCALE BAR	SHEET NO. 105 OF 159
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	

Plot Date: 26-FEB-2019 11:42:59 AM

User: svcBW

Plot Scale: 2:1

Design Script: Carollo\_Sld\_Pen\_v0905.pen

Color Table: gshade.ctb

Model: Layout1

Color Table: gshade.ctb

Design Script: Carollo\_Sld\_Pen\_v0905.pen

Plot Scale: 2:1

User: svcBW

Plot Date: 26-FEB-2019 11:42:59 AM

A

B

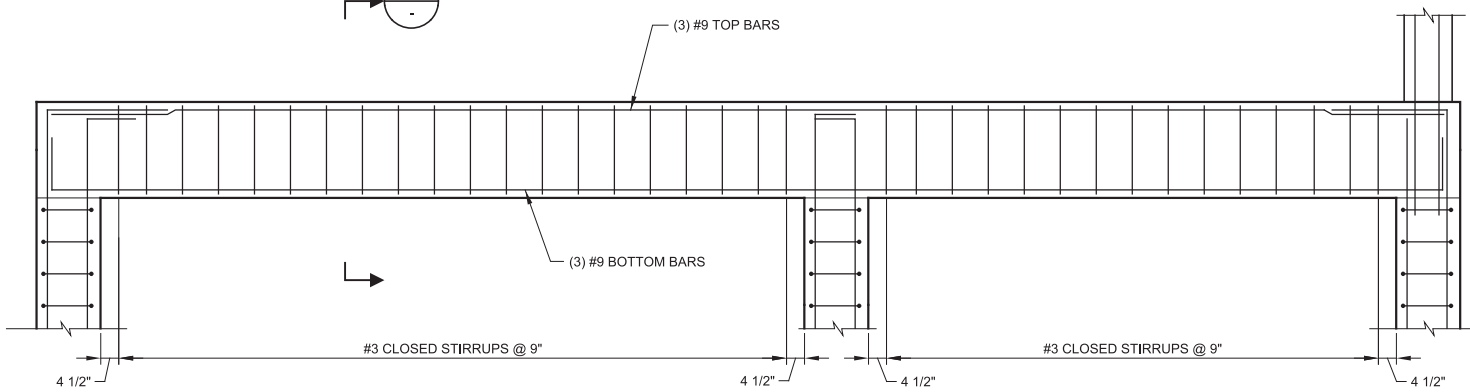
C

D

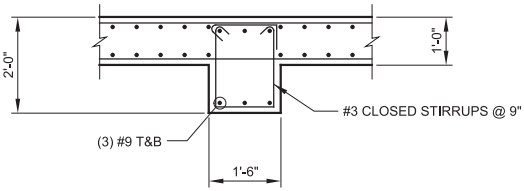
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F

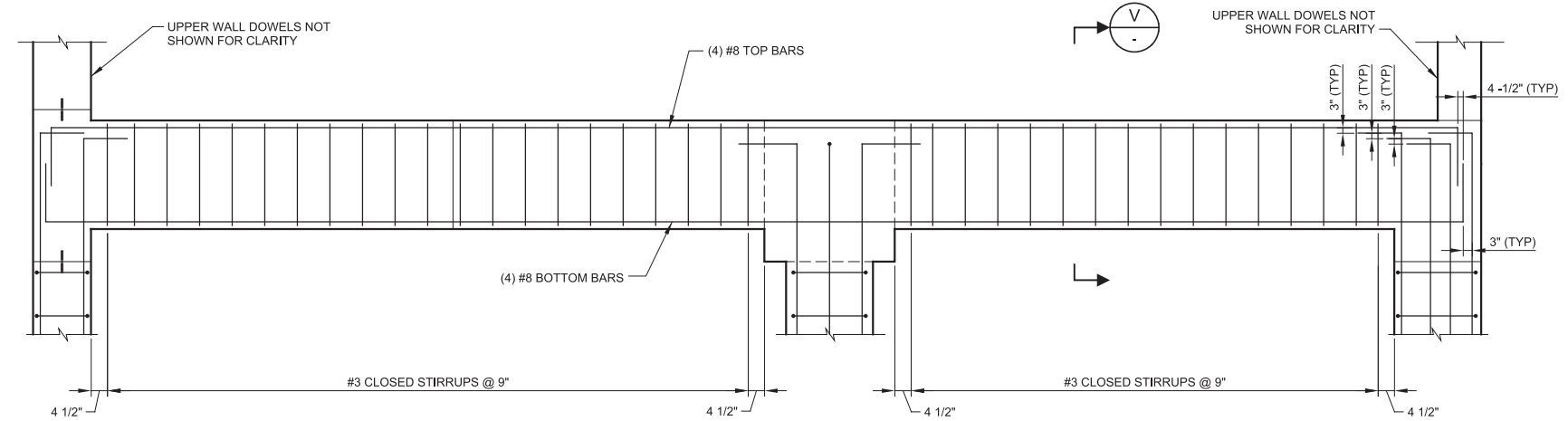
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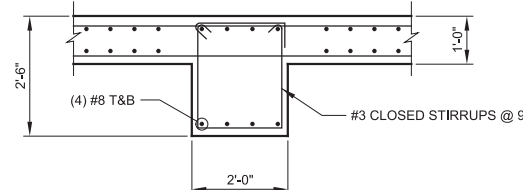
**B3 BEAM 21-B03**  
 S21-03 SCALE: 1/2" = 1'-0"  
 FILE: 10548A10S21322



**W SECTION**  
 SCALE: 1/2" = 1'-0"  
 FILE: 10548A10S21322



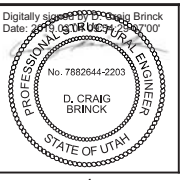
**B2 BEAM 21-B02**  
 S21-03 SCALE: 1/2" = 1'-0"  
 FILE: 10548A10S21321



**V SECTION**  
 SCALE: 1/2" = 1'-0"  
 FILE: 10548A10S21321

REV	DATE	BY	DESCRIPTION

DESIGNED  
DCB  
 DRAWN  
JRL  
 CHECKED  
GLS  
 DATE  
MARCH 2019



**SV South Valley**  
 WATER RECLAMATION FACILITY  
 7495 South 1300 West  
 West Jordan, Utah 84084

SOUTH VALLEY WATER RECLAMATION FACILITY  
 PROJECT 5  
 STRUCTURAL  
**GRIT HANDLING FACILITY**  
**BEAM SECTIONS 2**

VERIFY SCALES  
 BAR IS ONE INCH ON ORIGINAL DRAWING  
 0 1"  
 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

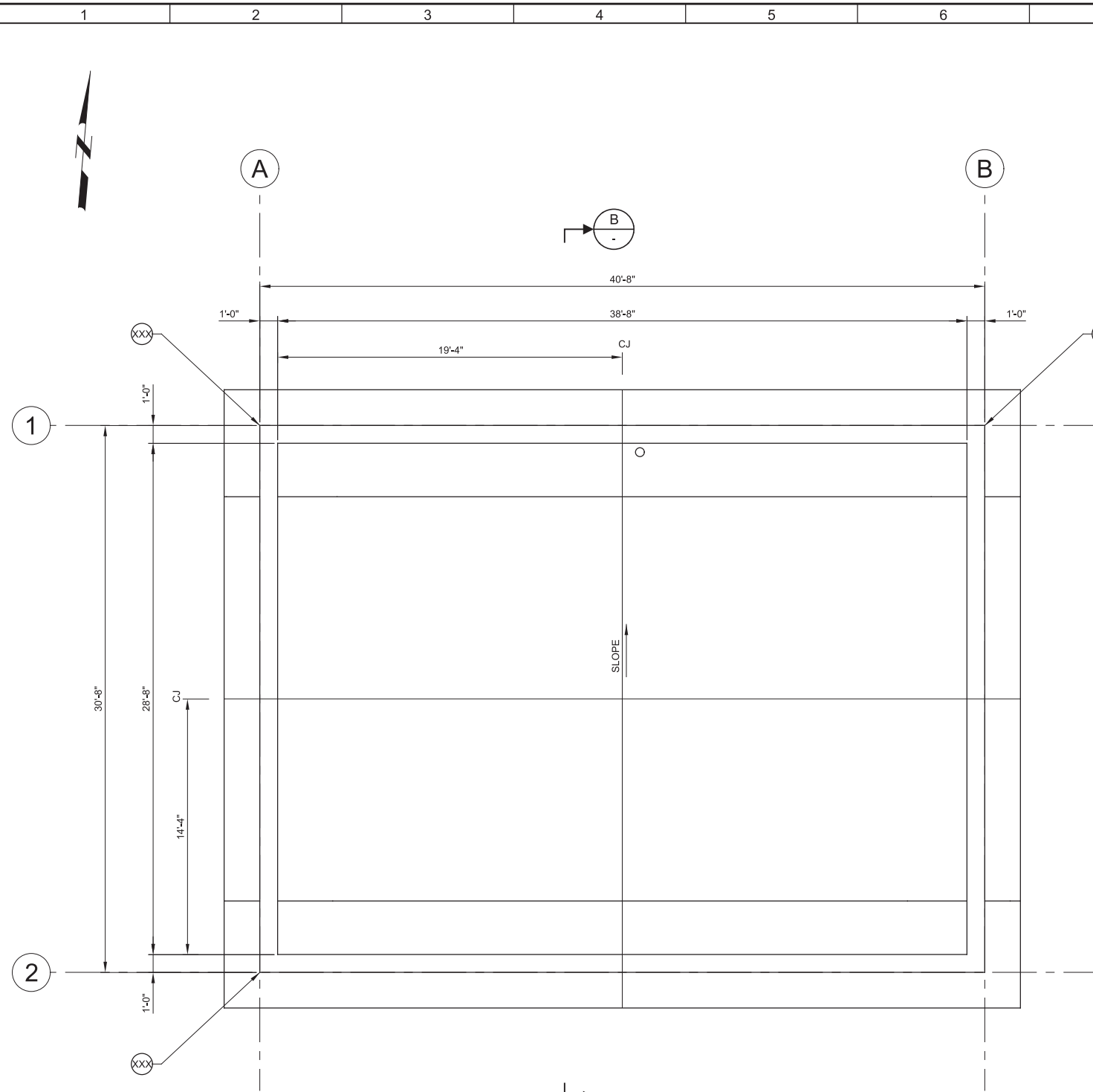
JOB NO.  
10548A.10  
 DRAWING NO.  
**S21-20**  
 SHEET NO.  
106 OF 159

Plot Date: 26-FEB-2019 11:42:45 AM

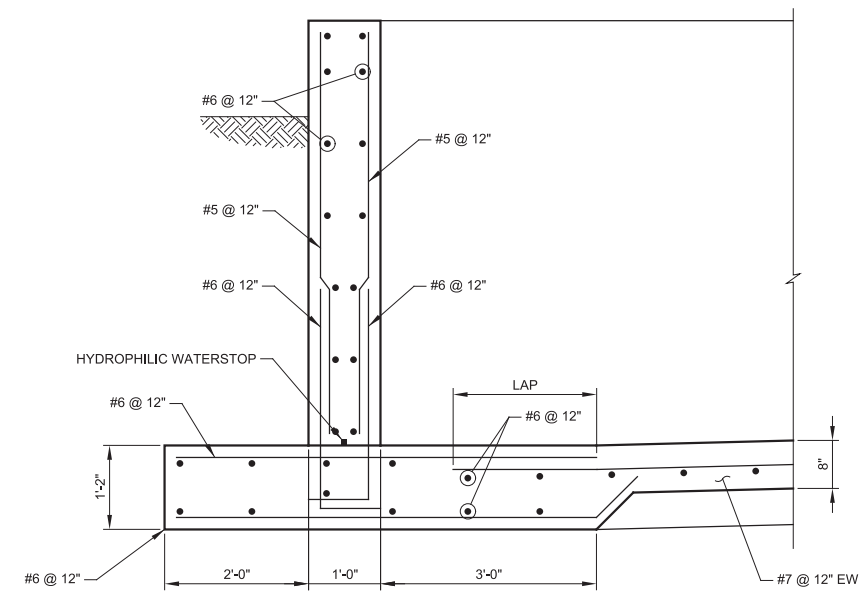
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Model: Layout1 ColorTable: gshade.ctb DesignScript: Carollo\_Sld\_Pen\_v0905.pen PlotScale: 2:1

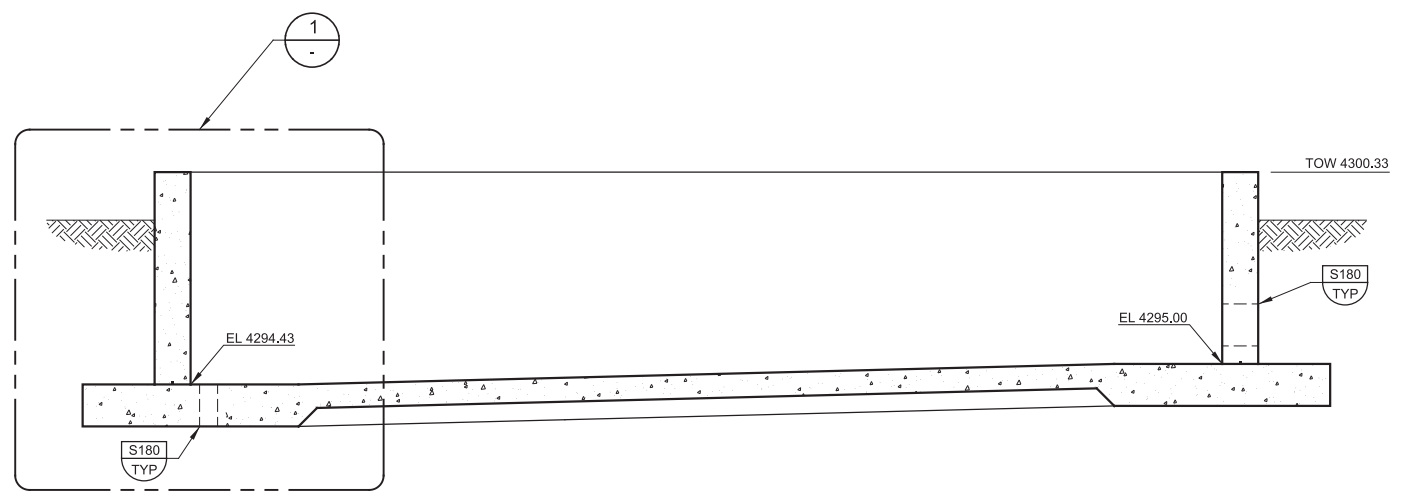
LAST SAVED BY: ascheale



**A PLAN**  
SCALE: 1/4" = 1'-0"  
FILE: 10548A10\_21S-130



**1 DETAIL**  
SCALE: 3/4" = 1'-0"  
FILE: 10548A10\_21S-330



**B SECTION**  
SCALE: 3/8" = 1'-0"  
FILE: 10548A10\_21S-330

- GENERAL NOTES:**
- ALL GRIDLINES ARE AT THE OUTSIDE FACES OF WALLS.
  - COORDINATE PIPE PENETRATIONS WITH MECHANICAL DRAWINGS. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR PIPE AND CONDUIT PENETRATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS.
  - XXX INDICATES STRUCTURE COORDINATE LOCATION. SEE CIVIL DRAWINGS FOR COORDINATES.
  - SEE DRAWING GS-01 FOR STRUCTURAL ABBREVIATIONS.
  - CJ INDICATES CONCRETE CONSTRUCTION JOINT. SEE TYPICAL DETAILS.

**STRUCTURAL DESIGN CRITERIA**

REFER TO GS-01 FOR GENERAL STRUCTURAL DESIGN CRITERIA. THE FOLLOWING ARE SPECIFIC CRITERIA FOR THE BIOFILTER STRUCTURE:

- LIVE LOADS:**
  - A. SOIL SURCHARGE: 200 PSF
- EARTHQUAKE DESIGN DATA:**
  - A. BASIC SEISMIC FORCE RESISTING SYSTEM:
    - FLAT-BOTTOM GROUND-SUPPORTED TANK, REINFORCED CONCRETE, REINFORCED NON-SLIDING BASE.
    - RESPONSE MODIFICATION COEFFICIENT, R: 2.0
    - OVERSTRENGTH FACTOR: 2.0
    - DEFLECTION AMPLIFICATION FACTOR: 2.0
    - DESIGN BASE SHEAR COEFFICIENT: 0.574 (STRENGTH)
    - DESIGN BASE SHEAR: 80 KIP

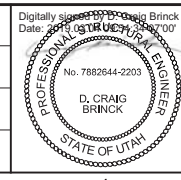
REV	DATE	BY	DESCRIPTION
1			
2			
3			

DESIGNED  
DCB

DRAWN  
KHB

CHECKED  
GLS

DATE  
MARCH 2019



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SOUTH VALLEY WATER RECLAMATION FACILITY

PROJECT 5

STRUCTURAL

**BIOFILTER**

PLAN AND SECTIONS

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING

0 1"

IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.  
10548A.10

DRAWING NO.  
**S21-21**

SHEET NO.  
107 OF 159