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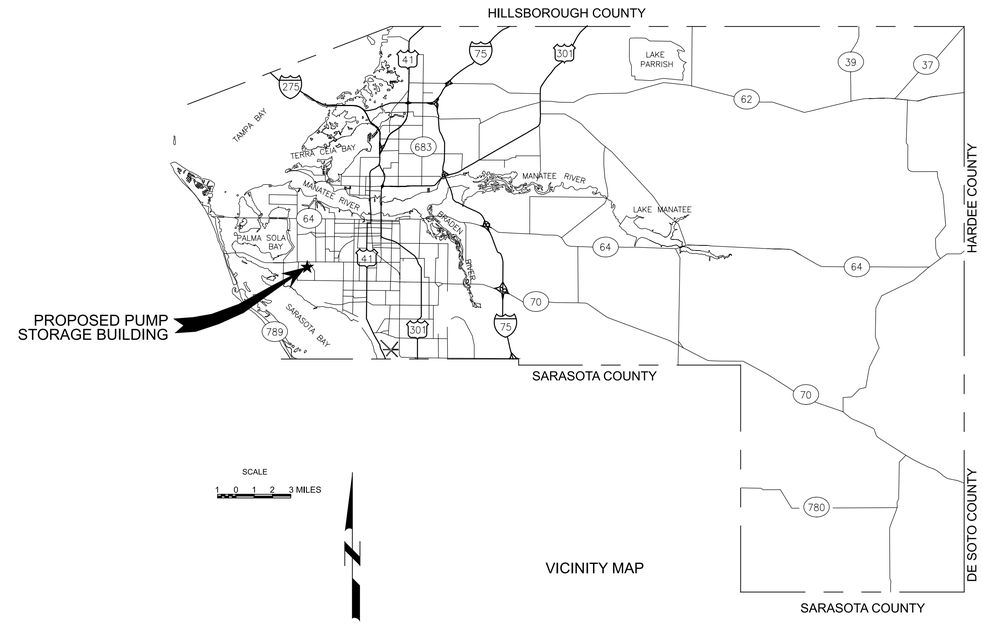
MANATEE COUNTY

FY 2026 PLANNING AND TECHNICAL ASSISTANCE FOR LIFT STATIONS - PUMP STORAGE BUILDING

COUNTY PROJECT NO. _____

MAY 2026

LOCATION MAP



VICINITY MAP

DISCIPLINE: GENERAL, DEMOLITION, STRUCTURAL

VANESSA NEGRON-VIEIRA LICENSE No 88924 STATE OF FLORIDA PROFESSIONAL ENGINEER

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JOB NO. 204759

DRAWING NO. 00G01

SHEET LIST:

SHEET NO.	DRAWING NO.	DESCRIPTION
1	00G01	COVER SHEET
2	00GS01	SHEET LIST AND GENERAL NOTES
3	00DS01	DEMOLITION EXISTING PUMP PADS
4	00S01	FOUNDATION PLAN
5	00S02	ROOF PLAN
6	00S03	SECTION
7	00TS01	STRUCTURAL TYPICAL DETAILS 1
8	00TS02	STRUCTURAL TYPICAL DETAILS 2

GENERAL NOTES:

1. USE STRUCTURAL DRAWINGS IN CONJUNCTION WITH PROJECT DRAWINGS BY OTHER DISCIPLINES AND WITH THE SPECIFICATIONS.

2. UNLESS DETAILED. SPECIFIED OR INDICATED OTHERWISE, CONSTRUCTION SHALL BE AS INDICATED IN THE GENERAL NOTES AND TYPICAL DETAILS.

3. PRESENTATION CONVENTIONS FOR STRUCTURAL DRAWINGS:

   A. SCREENED LINE WORK INDICATES EXISTING CONDITIONS.
   B.WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED SIZES.
   C.PLANS ARE TREATED AS HORIZONTAL SECTIONS. (I.E.: "PLAN AT ELEVATION 110" SHOWS CONSTRUCTION AT END BELOW ELEVATION 110.)

4. VERIFY DIMENSIONS AND CONDITIONS BEFORE BEGINNING WORK. ADVISE ENGINEER IMMEDIATELY OF DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DIMENSIONS, AND INFORMATION SHOWN ON THESE DRAWINGS. CONFIRM THE FOLLOWING BEFORE PREPARATION AND SUBMITTAL OF SHOP DRAWINGS:

   A. DIMENSIONS AND WEIGHTS FOR EQUIPMENT SELECTED.
   B. SIZES AND LOCATIONS OF EQUIPMENT PADS FOR EQUIPMENT SELECTED.

5. TYPICAL DETAILS ARE INCLUDED ON THE "TS" DRAWINGS.

   A. TYPICAL DETAILS ARE INTENDED TO APPLY AT LOCATIONS DESCRIBED BY THEIR TITLES, EVEN WHEN NOT SPECIFICALLY REFERENCED ON THE DRAWINGS.
   B. IN STRUCTURAL TYPICAL DETAILS, ORIENTATION OF BARS IN EACH MAT OF REINFORCEMENT (WHETHER "LINES" OR "DOTS" ARE CLOSER TO THE FACE OF THE CONCRETE) IS GENERALLY ARBITRARY. SEE DRAWINGS OF EACH STRUCTURE FOR ORIENTATION REQUIRED AT THAT STRUCTURE.

STRUCTURAL DESIGN CRITERIA - GENERAL:

SEE DRAWINGS OF INDIVIDUAL STRUCTURES FOR SPECIFIC DESIGN CRITERIA BASED ON THESE OVERALL CRITERIA FOR THE SITE.

1. BUILDING CODE:

   A. 2023 FLORIDA BUILDING CODE, EIGHT EDITION W/ ASCE 7-22.

2. STRUCTURE RISK CATEGORY: II

3. DEAD LOADS: CALCULATED FOR STRUCTURE SELF-WEIGHT.

4. LIVE LOADS: (REDUCTIONS NOT USED)

   A. FLOOR LIVE LOAD: 250 PSF
   B. ROOF LIVE LOAD: SEE PLANS (20 PSF MINIMUM).

5. FLUID PRESSURE LOADS: NA

6. SNOW LOAD DATA: NA

7. WIND DESIGN DATA:

   A. ULTIMATE DESIGN WIND SPEED, V (3-SECOND GUST): 148 MPH
   B. NOMINAL DESIGN WIND SPEED, V: 115 MPH
   C. WIND EXPOSURE: C
   D. INTERNAL PRESSURE COEFFICIENTS: 0.55 +/-
   E. SPECIAL WIND REGION: YES-HURRICANE.
   F. WIND-BORNE DEBRIS REGION YES

8. EARTHQUAKE DESIGN DATA:

	0.2 SECOND	*1.0 SECOND
A. SITE CLASS: D (ASSUMED).		
B. MAPPED SPECTRAL RESPONSE ACCELERATIONS:	Ss = 0.059 g	S1 = 0.028 g
C. DESIGN SPECTRAL RESPONSE ACCELERATIONS:* (*5% DAMPED)	Sds = 0.053 g	Sd1= 0.039 g

   D. SEISMIC DESIGN CATEGORY: A

9. FLOOD LOADS:

   A. REFERENCE MAP ("FIRM"): 12081C0284F
   B. FLOOD ZONE: X

10. RAIN LOADS:

    A. DESIGN RAINFALL INTENSITY: i = 8.05 INCHES/ HOUR. (200 YEAR/1 HOUR EVENT)

11. ICE LOADS: NA

12. CONSTRUCTION LOADS:

    STRUCTURES HAVE BEEN DESIGNED FOR OPERATION LOADS ON COMPLETED FACILITIES. UNTIL CONSTRUCTION IS COMPLETE AND MEMBERS HAVE ACHIEVED THEIR DESIGN STRENGTH, PROTECT STRUCTURES AS REQUIRED BY SHORING, BRACING AND BALANCING.

GEOTECHNICAL REPORT / FOUNDATION DESIGN CRITERIA:

1. GEOTECHNICAL INVESTIGATION REPORT:

   TITLE: GEOTECHNICAL ENGINEERING SERVICES REPORT PUMP STORAGE BUILDING
   PREPARED BY: TIERRA INC.
   REPORT NO: 6511-24-247-001 DATED: MARCH 24, 2026.

2. FOUNDATION DESIGNS ARE BASED ON RECOMMENDATIONS IN THE GEOTECHNICAL INVESTIGATION REPORT.

   A. NET ALLOWABLE BEARING PRESSURE SEE PLANS.
   B. GROUNDWATER EL 6 FT BELOW EXISTING GRADE.

TYPICAL STRUCTURAL MATERIALS:

1. MATERIALS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

2. SEE PROJECT SPECIFICATIONS AND NOTES ON THE DRAWINGS OF SPECIFIC STRUCTURES FOR DETAILED AND LOCATION-SPECIFIC REQUIREMENTS.

REINFORCING STEEL (FOR CONCRETE AND MASONRY):

1. DEFORMED BARS:
   A. TYPICAL: ASTM A615, GRADE 60.
   B. WHERE INDICATED ON THE DRAWINGS: ASTM A706.

CONCRETE:

1. NORMAL DENSITY.

2. MINIMUM SPECIFIED CONCRETE COMPRESSIVE STRENGTH, f'c (AT 28 DAYS UNO).

   A. STRUCTURES: "CLASS A" OR "CLASS A-NA" f'c = 4000 PSI 4500 PSI.

CONSTRUCTION:

CONFORM TO THE FOLLOWING REQUIREMENTS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

EXCAVATION AND BACKFILLING:

1. EXPOSE AND PREPARE SUBGRADE AS SHOWN ON THE DRAWINGS AND SPECIFIED. OBTAIN ENGINEER'S OBSERVATION OF SUBGRADE SURFACES, AS EXPOSED AND AS PREPARED, BEFORE PROCEEDING WITH FOUNDATION CONSTRUCTION.

2. DO NOT PLACE BACKFILL AGAINST WALLS UNTIL STRUCTURES SUPPORTING THE TOP OF THE WALL ARE IN PLACE, ARE COMPLETE, AND (IN THE CASE OF CONCRETE) HAVE CURED TO THEIR MINIMUM SPECIFIED 28-DAY COMPRESSIVE STRENGTH.

3. WHERE BACKFILL MUST BE PLACED AGAINST WALLS BEFORE STRUCTURES ABOVE ARE COMPLETE, PROVIDE BRACING FOR WALLS. KEEP BRACING IN PLACE UNTIL THE STRUCTURE ABOVE IS COMPLETE AND (IN THE CASE OF CONCRETE) HAS CURED TO ITS MINIMUM SPECIFIED 28- COMPRESSIVE STRENGTH.

CONCRETE:

1. SEE SC001/TYP FOR CONCRETE NOTES, INCLUDING CLEAR COVER AND LAP SPLICE LENGTH REQUIREMENTS FOR REINFORCING.

2. SUBMIT LOCATIONS OF CONSTRUCTION JOINTS NOT SHOWN ON THE DRAWINGS FOR ACCEPTANCE BY THE ENGINEER BEFORE FORM LAYOUT.

3. PROVIDE CHAMFER AT EXPOSED EDGES OF CAST-IN-PLACE CONCRETE.

4. PROVIDE REINFORCING:
   A. AT CORNERS AND JUNCTIONS- AS INDICATED IN SC310/TYP, SUPPLEMENT WITH ADDED BARS WHERE INDICATED ON THE DRAWINGS.

5. WELDING OF REINFORCING IS NOT PERMITTED UNLESS DETAILED ON THE DRAWINGS OR ACCEPTED IN ADVANCE BY THE ENGINEER.

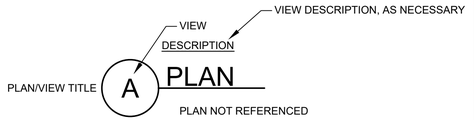
6. MAINTAIN MINIMUM 3 INCHES CLEAR CONCRETE COVER BETWEEN REINFORCING AND EMBEDMENTS.

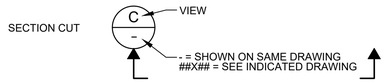
7. FINISH CONCRETE AS SPECIFIED IN SECTION 03_30_01

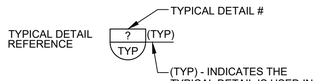
STRUCTURAL ABBREVIATIONS:

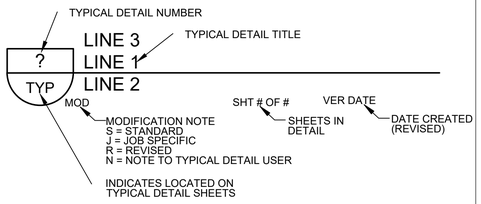
&	AND
@	AT
#	NUMBER
ADDTL	ADDITIONAL
ALUM	ALUMINUM
BM	BEAM
BOT	BOTTOM
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CTR	CENTER
DIA	DIAMETER
DWG	DRAWING
EA	EACH
EL	ELEVATION
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EXIST	EXISTING
FG	FINISHED GRADE
FTG	FOOTING
HORIZ	HORIZONTAL
MIN	MINIMUM
OC	ON CENTER
PL	PLATE
PSF	POUNDS PER SQUARE FOOT
REINF	REINFORCING
SST	STAINLESS STEEL
STL	STEEL
T/	TOP OF
T&B	TOP AND BOTTOM
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W/	WITH

DETAIL REFERENCES:









HATCH PATTERNS:

DEFERRED DESIGN SUBMITTALS

AS DEFINED IN THE BUILDING CODE, DEFERRED DESIGN SUBMITTALS ARE PORTIONS OF THE DESIGN THAT ARE NOT SUBMITTED AT THE TIME OF PERMIT APPLICATION, AND THAT ARE SUBSEQUENTLY SUBMITTED TO THE BUILDING OFFICIAL.

DEFERRED DESIGN SUBMITTALS FOR THE PROJECT INCLUDE:

1. DIVISION: 03 CONCRETE

   A. 03_30_01 CONCRETE MIX

2. DIVISION 13 SPECIAL CONSTRUCTION.

   A. 13_34_19 METAL BUILDING SYSTEM.

REV	DATE	BY	DESCRIPTION
			BID DOCUMENTS

DESIGNED VNV
DRAWN CRH
CHECKED JS
DATE MAY 2026

VANESSA NEGRON-VIEIRA LICENSE No 88924 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been digitally signed and sealed by Vanessa Negron-Vieira on the date adjacent to the seal.

Signature must be verified on any electronic copies.

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Tampa, Florida 33602

Manatee County
1022 26th Avenue East, Bradenton, FL 34208

MANATEE COUNTY PUBLIC WORKS DEPARTMENT
PUMP STORAGE BUILDING
STRUCTURAL
SHEET LIST AND GENERAL NOTES

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

JOB NO. 204759
DRAWING NO. 00GS01
SHEET NO. 2 OF 8

LAST SAVED BY: avaldi

PROJECT NO. 204759-000000 FILE NAME: 204759_00GS01.dwg

Plot Date: 2/27/2025 9:41:33 AM

GENERAL NOTES:

1. FOR GENERAL STRUCTURAL NOTES SEE 00GS01.
2. COORDINATE WITH OWNER AND ENGINEER BEFORE STARTING DEMOLITION WORK.

KEY NOTES:

1. DEMOLISH EXISTING PUMP PADS.

A DS01 PHOTO
SCALE: NO SCALE

REV	DATE	BY	DESCRIPTION
			BID DOCUMENTS

DESIGNED VNV
DRAWN CRH
CHECKED JS
DATE MAY 2026

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PUMP STORAGE BUILDING

DEMOLITION

EXISTING PUMP PADS

VERIFY SCALES
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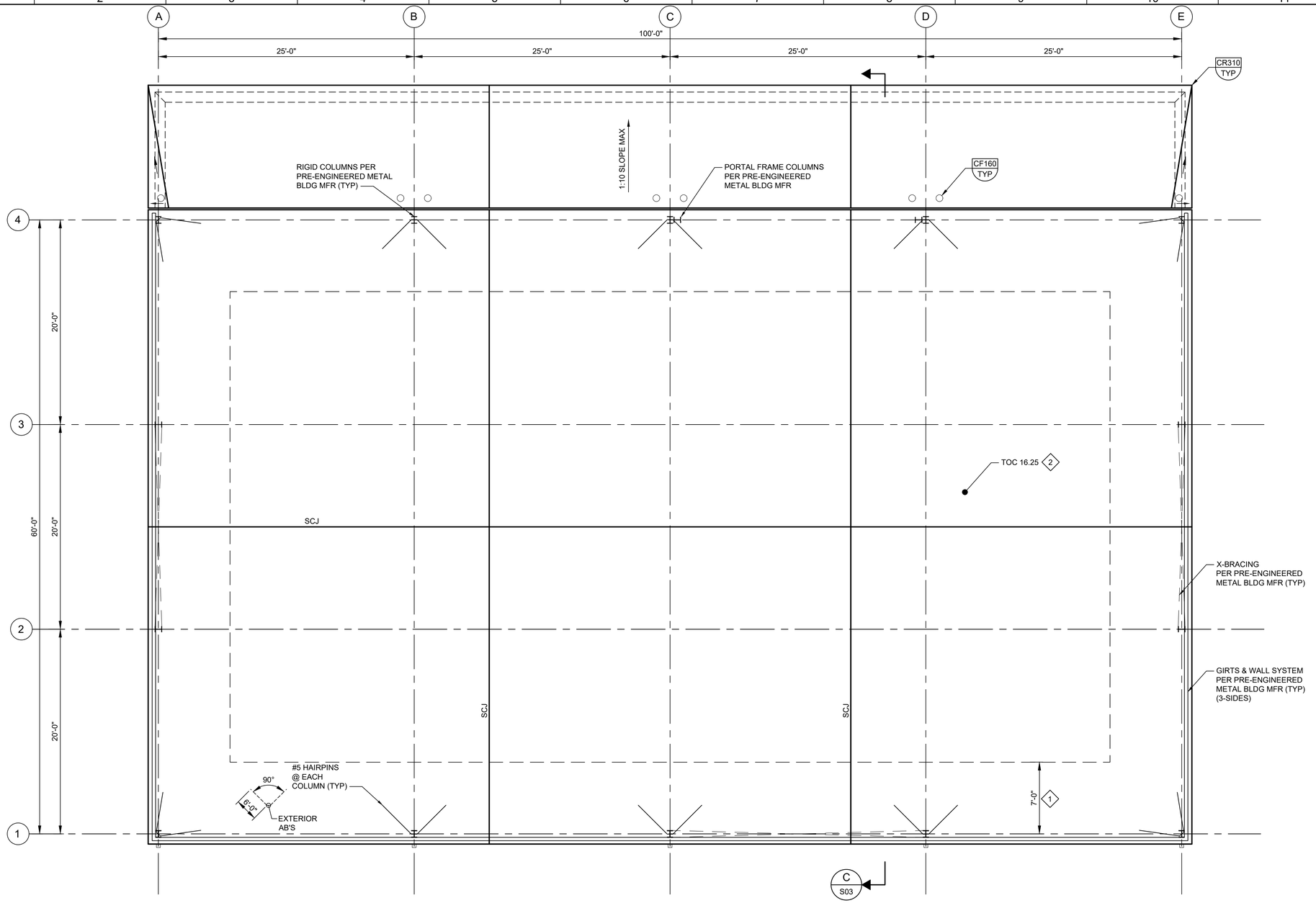
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 204759
DRAWING NO. DS01
SHEET NO. 3 OF 8

LAST SAVED BY: avajdl

PROJECT NO.:204759-000000 FILE NAME: 204759_DS01.dwg



GENERAL NOTES:

1. FOR GENERAL STRUCTURAL NOTES SEE 00GS01.
2. NET ALLOWABLE SOIL BEARING PRESSURE = 2,000 PSF.
3. FLOOR LIVE LOAD = 250 PSF.
4. CONCRETE JOINTS ARE DESIGNATED AS FOLLOWS: SCJ = SLAB CONSTRUCTION JOINT, SEE SD102/TYP. - REINFORCING BAR LAP SPLICING LOCATIONS SHALL CLEAR CONSTRUCTION JOINTS.

KEY NOTES:

1. 18" THICKENED EDGE. SEE SECTION FOR REINFORCEMENT.
2. 12" THICK SLAB. SEE SECTION FOR REINFORCEMENT.

A PLAN

SCALE: 3/16" = 1'-0"

REV	DATE	BY	DESCRIPTION
			BID DOCUMENTS

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DATE MAY 2026

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PUMP STORAGE BUILDING

STRUCTURAL

FOUNDATION PLAN

VERIFY SCALES
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0 1"
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JOB NO. 204759
DRAWING NO. S01
SHEET NO. 4 OF 8

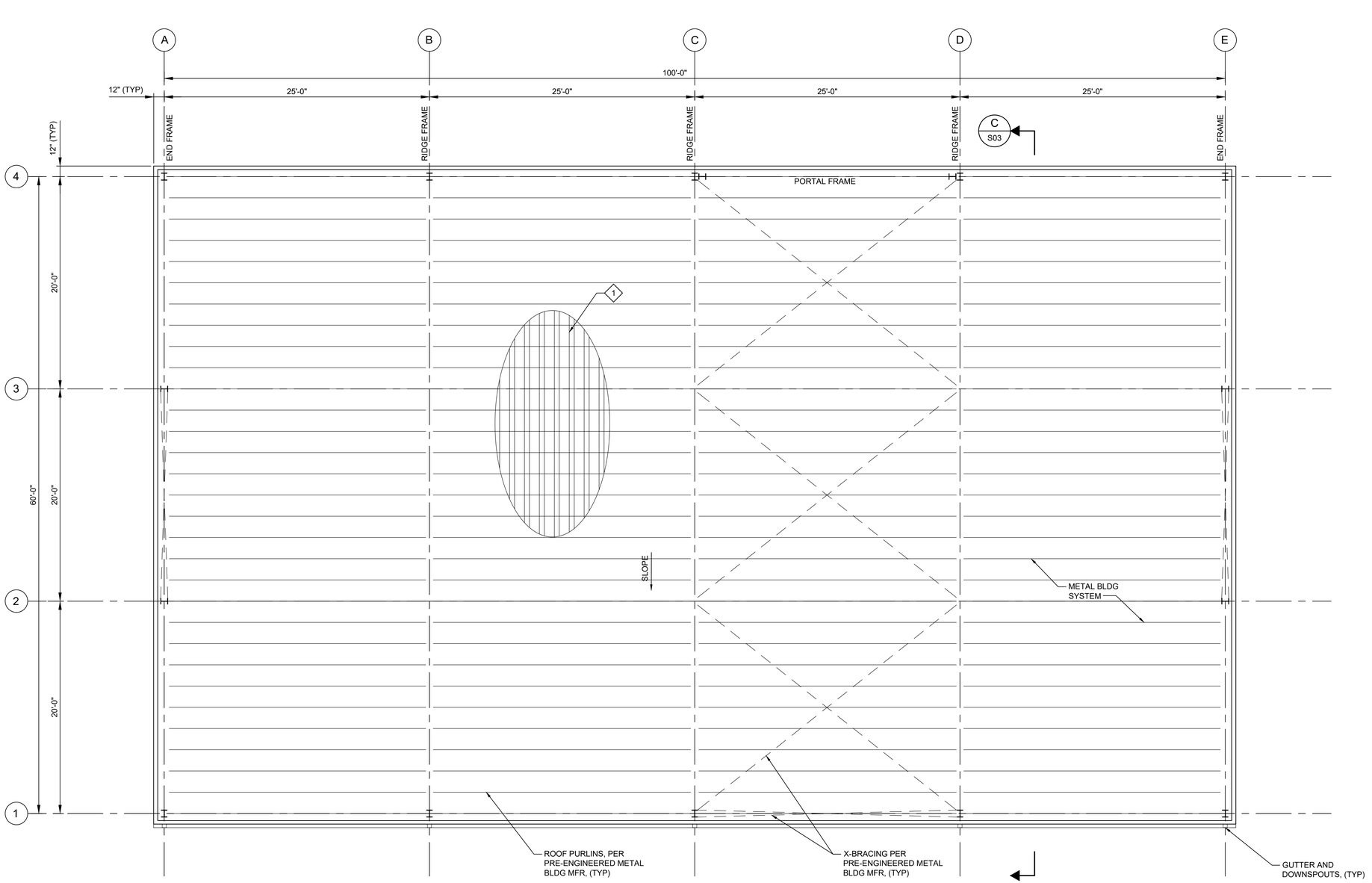
Plot Date: 2/27/2025 9:41:33 AM

GENERAL NOTES:

1. FOR GENERAL STRUCTURAL NOTES SEE 00GS01.
2. ROOF LIVE LOAD = 20 PSF.
3. REFER TO SPECIFICATION SECTION 13_34_19 FOR METAL BUILDING DESIGN REQUIREMENTS.

KEY NOTES:

1. STANDING SEAM METAL DECKING, BY PRE-ENGINEERED METAL BUILDING (PEMB) MANUFACTURER (MFR).



B PLAN
SCALE: 3/16" = 1'-0"

REV	DATE	BY	DESCRIPTION

BID DOCUMENTS

DESIGNED VNV
DRAWN CRH
CHECKED JS
DATE MAY 2026

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MANATEE COUNTY PUBLIC WORKS DEPARTMENT

PUMP STORAGE BUILDING

STRUCTURAL

ROOF PLAN

VERIFY SCALES
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0 1"
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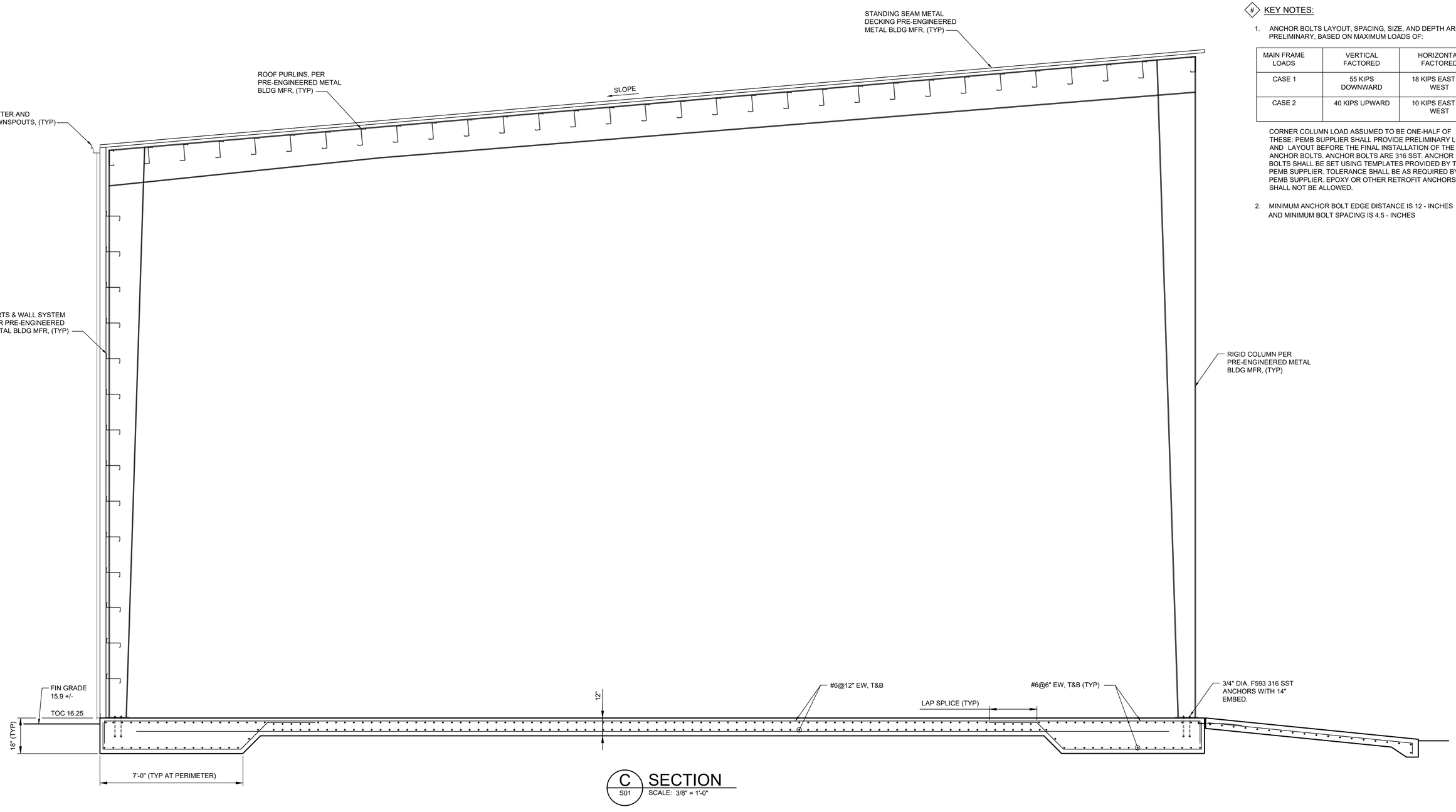
JOB NO. 204759
DRAWING NO. SO2
SHEET NO. 5 OF 8

LAST SAVED BY: avajdi

PROJECT NO.:204759-000000 FILE NAME: 204759_S02.dwg

Plot Date: 5/20/2026 3:49:29 PM



C S01 SECTION

SCALE: 3/8" = 1'-0"

GENERAL NOTES:

1. FOR GENERAL STRUCTURAL NOTES SEE 00GS01.
2. REFER TO SPECIFICATION SECTION 13_34_19 FOR METAL BUILDING DESIGN REQUIREMENTS.

KEY NOTES:

1. ANCHOR BOLTS LAYOUT, SPACING, SIZE, AND DEPTH ARE PRELIMINARY, BASED ON MAXIMUM LOADS OF:

MAIN FRAME LOADS	VERTICAL FACTORED	HORIZONTAL FACTORED
CASE 1	55 KIPS DOWNWARD	18 KIPS EAST OR WEST
CASE 2	40 KIPS UPWARD	10 KIPS EAST OR WEST

CORNER COLUMN LOAD ASSUMED TO BE ONE-HALF OF THESE: PEMB SUPPLIER SHALL PROVIDE PRELIMINARY LOADS AND LAYOUT BEFORE THE FINAL INSTALLATION OF THE ANCHOR BOLTS. ANCHOR BOLTS ARE 316 SST. ANCHOR BOLTS SHALL BE SET USING TEMPLATES PROVIDED BY THE PEMB SUPPLIER. TOLERANCE SHALL BE AS REQUIRED BY PEMB SUPPLIER. EPOXY OR OTHER RETROFIT ANCHORS SHALL NOT BE ALLOWED.

2. MINIMUM ANCHOR BOLT EDGE DISTANCE IS 12 - INCHES AND MINIMUM BOLT SPACING IS 4.5 - INCHES

REV	DATE	BY	DESCRIPTION
			BID DOCUMENTS

DESIGNED VNV
DRAWN CRH
CHECKED JS
DATE MAY 2026

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MANATEE COUNTY PUBLIC WORKS DEPARTMENT

PUMP STORAGE BUILDING

STRUCTURAL

SECTION

VERIFY SCALES
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0 1"
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JOB NO. 204759
DRAWING NO. S03
SHEET NO. 6 OF 8

LAST SAVED BY: avajdi

PROJECT NO.:204759-000000 FILE NAME: 204759_S03.dwg

Plot Date: 2/12/2026 2:08:38 PM

1. SEE DIVISION 03 SPECIFICATION FOR REQUIREMENTS FOR CONCRETE CONSTRUCTION.
2. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, MINIMUM REINFORCEMENT OF CONCRETE WALLS OR SLABS SHALL BE AS FOLLOWS. CONTACT ENGINEER FOR LOCATIONS INSIDE CONCRETE.
   - 10" THICK OR LESS: .....#5 @ 12" EACH WAY.
   - MORE THAN 10" THICK: .....#5 @ 12" EACH WAY, EACH FACE.
3. WALL REINFORCEMENT AT CORNERS OR JUNCTIONS OF WALLS SHALL BE CONTINUOUS, LAP SPLICED, OR TERMINATED IN AN ACI STANDARD 90 DEGREE HOOK. SEE DETAIL SC310/TYP.
4. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, DOWELS BETWEEN ADJACENT CONCRETE PLACEMENTS SHALL BE THE SAME SIZE AND SPACING AS THE REINFORCEMENT WHICH IS SPLICED TO THE DOWELS.
5. SLAB, BEAM AND COLUMN REINFORCING BARS SHALL HAVE A MINIMUM EXTENSION OR ANCHORAGE INTO SUPPORTS IN ACCORDANCE WITH ACI 318 AND ACI 350.
6. PROVIDE STIRRUP SUPPORT BARS SHALL BE TO SECURE TOP BARS AGAINST DISPLACEMENT AS REQUIRED.
7. 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"

SC001 TYP — REINFORCED CONCRETE - NOTES

D. 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

8. 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, SPLICING 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, SPLICING WATERSTOPS IN WALLS WITH WATERSTOPS IN SLAB.
9. 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 THEN 3 TIMES DAILY.
10. 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).
11. LAP SPLICES:
    - A. SEE TABLE 1 OF THIS DETAIL FOR LAP SPLICE LENGTHS.
    - B. WHEN MULTIPLE BARS ARE SPLICED AT THE SAME SECTION, THE "CLEAR BAR SPACING" IS DEFINED AS THE MINIMUM CLEAR DISTANCE BETWEEN THE BARS OUTSIDE THE SPLICE LENGTH MINUS ONE BAR DIAMETER.
    - C. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, BARS AT A LAP SPLICE 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.
12. FORM EXPOSED CONCRETE CORNERS AND EDGES WITH 3/4" CHAMFER UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

SC001 TYP — REINFORCED CONCRETE - NOTES

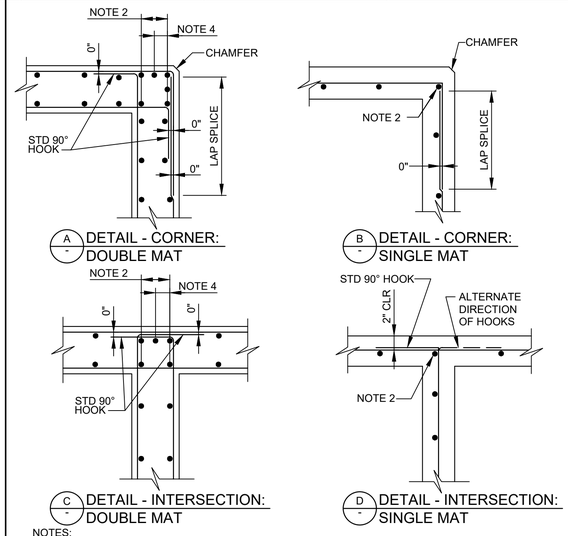
TABLE 1: REINFORCING BAR LAP SPLICES: f'c = 4000 PSI, Fy = 60,000 PSI

BAR SIZE	MINIMUM COVER (BAR DIA)	MINIMUM CLEAR BAR SPACING (BAR DIA)	LAP SPLICE 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 SPLICE TABLE NOTES:

1. TABULATED SPLICE LENGTHS ARE APPLICABLE ONLY WHEN BOTH REQUIREMENTS FOR MINIMUM COVER AND FOR MINIMUM CLEAR BAR SPACING ARE SATISFIED.
2. * = 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 SPLICE LENGTH SHALL BE INCREASED BY 50 PERCENT.

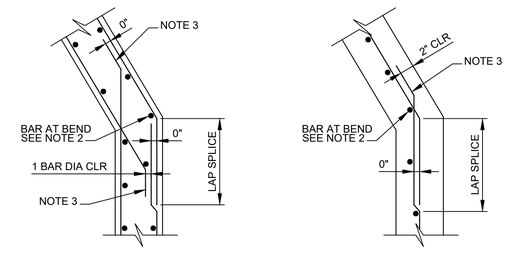
SC001 TYP — REINFORCED CONCRETE - NOTES

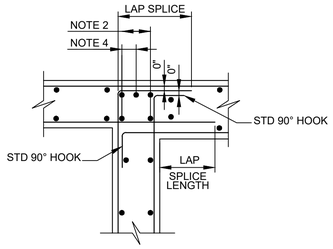


NOTES:

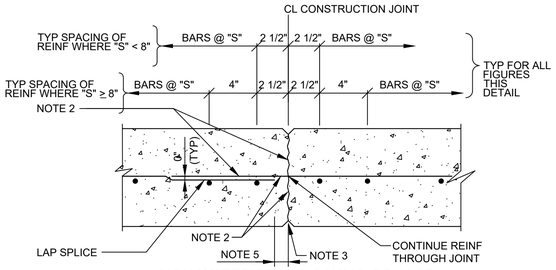
1. BAR SIZE, SPACING, AND ORIENTATION OF BAR LAYERS SHALL BE AS INDICATED ON THE DRAWINGS.
2. AT INTERSECTION, MAKE BAR SIZE THE LARGER OF BAR SIZES IN CONNECTING WALLS. PLACE BARS IN SAME LAYERS AS AT CONNECTING WALLS (TYP).
3. BAR TAILS: 12 BAR DIAMETERS PLUS 12".
4. EXTERIOR VERTICAL BARS SHALL BE PROVIDED AT A SPACING THAT DOES NOT EXCEED THE SPACING SPECIFIED ON THE DRAWINGS REGARDLESS OF THE WALL THICKNESS.

SC310 TYP — CONCRETE - REINFORCEMENT - WALL CORNERS AND INTERSECTIONS

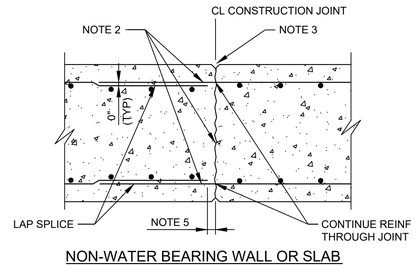




SC310 TYP — CONCRETE - REINFORCEMENT - WALL CORNERS AND INTERSECTIONS



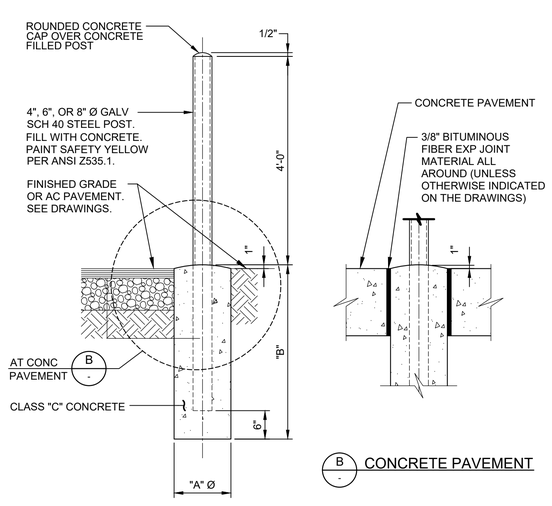
NON-WATER BEARING WALL OR SLAB
SINGLE LAYER REINFORCEMENT



NON-WATER BEARING WALL OR SLAB
DOUBLE LAYER REINFORCEMENT

SD102 TYP R — CONCRETE JOINTS - CONSTRUCTION JOINT - WALL OR SLAB

04/14/2026



SIZE	"A"	"B"
4"Ø	1'-3"	3'-0"
6"Ø	1'-6"	4'-0"
8"Ø	1'-9"	5'-0"

CF160 TYP N — GUARD POST

5/21/2024

REV	DATE	BY	DESCRIPTION
			BID DOCUMENTS

DESIGNED CE
DRAWN CE
CHECKED JS
DATE MAY 2026

VANESSA NEGRON-VIEIRA LICENSE No 88924 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been digitally signed and sealed by Vanessa Negron-Vieira on the date adjacent to the seal.

Signature must be verified on any electronic copies.

Carollo Engineers, Inc.
101 East Kennedy Blvd
Tampa, Florida 33602

Manatee County
1022 26th Avenue East, Bradenton, FL 34208

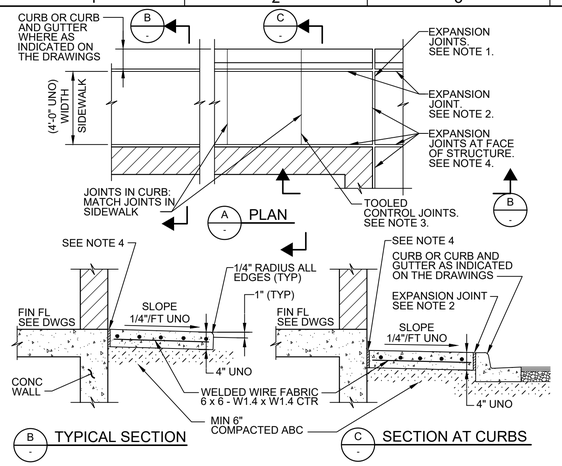
MANATEE COUNTY PUBLIC WORKS DEPARTMENT
PUMP STORAGE BUILDING
TYPICAL DETAILS
STRUCTURAL 1

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

JOB NO. 204759
DRAWING NO. TS01
SHEET NO. 7 OF 8

LAST SAVED BY: avaldi

PROJECT NO.:204759-000000 FILE NAME: 204759_TS01.dwg



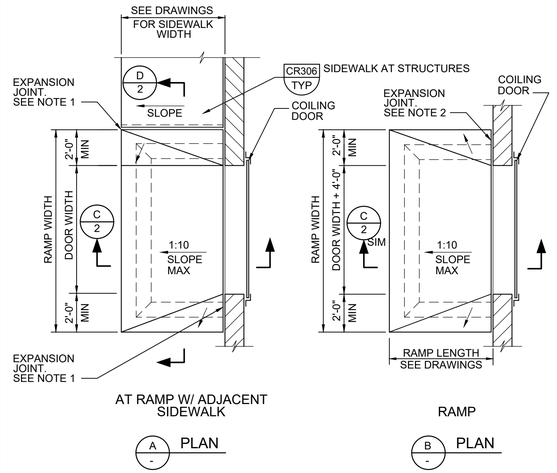
NOTES:

1. PROVIDE EXPANSION JOINTS AT ENDS OF CONCRETE PLACEMENT, AT POINTS OF CURVATURE, AT BOTH SIDES OF DRIVEWAYS, AT INTERSECTIONS, AT CORNERS OF STRUCTURES, AND AT MAXIMUM SPACING OF 30 FEET. EXPANSION JOINTS SHALL BE 3/4" WIDE BITUMINOUS FIBER WITH 1/4" RADIUS CONCRETE EDGES AT EACH SIDE.
2. PROVIDE EXPANSION JOINT AT CURB. JOINT SHALL BE 3/8" WIDE BITUMINOUS FIBER WITH 1/4" RADIUS CONCRETE EDGE AT SIDEWALK.
3. PROVIDE WEAKENED PLANE JOINTS AT UNIFORM SPACING EQUAL TO 1.0 TO 1.25 TIMES SIDEWALK WIDTH, BUT NOT GREATER THAN 10 FEET OC MAXIMUM. PROVIDE 1/4" RADIUS CONCRETE EDGE EACH SIDE AT JOINTS.
4. PROVIDE EXPANSION JOINT AT FACE OF STRUCTURE. CONTINUE JOINTS THROUGH ADJACENT SIDEWALKS. JOINTS SHALL BE 3/8" WIDE BITUMINOUS FIBER.
5. TOP OF CONCRETE ELEVATIONS: AS INDICATED ON THE DRAWINGS.

CR306 TYP — SIDEWALK - AT STRUCTURES

N

9/9/2022



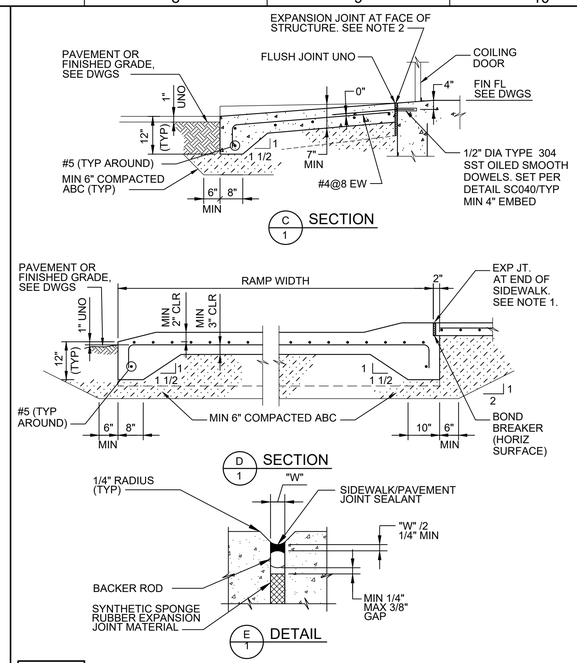
NOTES:

1. EXPANSION JOINT AT END OF SIDEWALK CONCRETE PLACEMENT. JOINT 3/4" WIDE, AND AS INDICATED IN DETAIL E ON SHEET 2
2. EXPANSION JOINT AT FACE OF STRUCTURE. CONTINUE JOINT TO PERPENDICULAR EXPANSION JOINTS AT ENDS OF SIDEWALK. JOINT 3/8" WIDE, AND AS INDICATED IN DETAIL E ON SHEET 2.

CR310 TYP — SIDEWALK - AT STRUCTURES - RAMP AT COILING DOOR

SHEET 1 OF 2

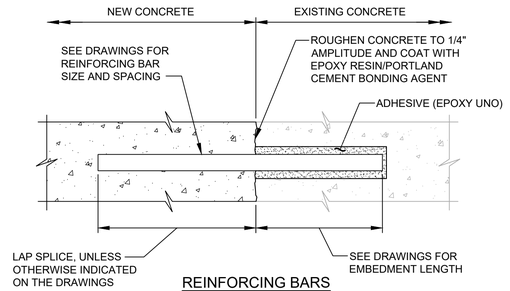
6/3/2024



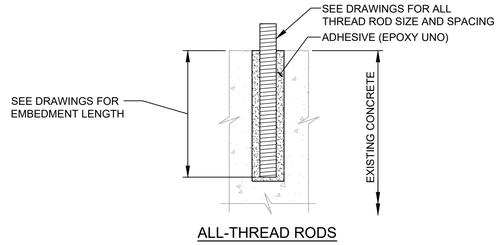
CR310 TYP — SIDEWALK - AT STRUCTURES - RAMP AT COILING DOOR

SHEET 2 OF 2

6/3/2024



REINFORCING BARS



ALL-THREAD RODS

NOTE:

1. INSTALLATION OF REINFORCING BARS AND ALL THREAD RODS AS INDICATED IN THE SPECIFICATIONS.

SC040 TYP — CONCRETE REINFORCEMENT - ADHESIVE-BONDED BARS AND ALL-THREAD RODS

N

03/17/2025

REV	DATE	BY	DESCRIPTION
			BID DOCUMENTS

DESIGNED CE
DRAWN CE
CHECKED JS
DATE MAY 2026

VANESSA NEGRON-VIEIRA LICENSE No 88924 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been digitally signed and sealed by Vanessa Negron-Vieira on the date adjacent to the seal.

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MANATEE COUNTY PUBLIC WORKS DEPARTMENT

PUMP STORAGE BUILDING

TYPICAL DETAILS

STRUCTURAL 2

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

JOB NO. 204759
DRAWING NO. TS02
SHEET NO. 8 OF 8

Plot Date: 5/12/2026 2:08:27 PM
LAST SAVED BY: avajdi
PROJECT NO.:204759-000000 FILE NAME: 204759_TS02.dwg