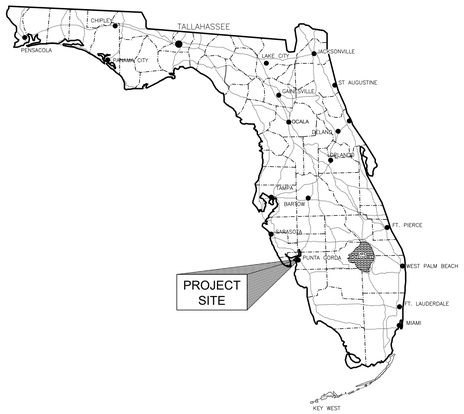


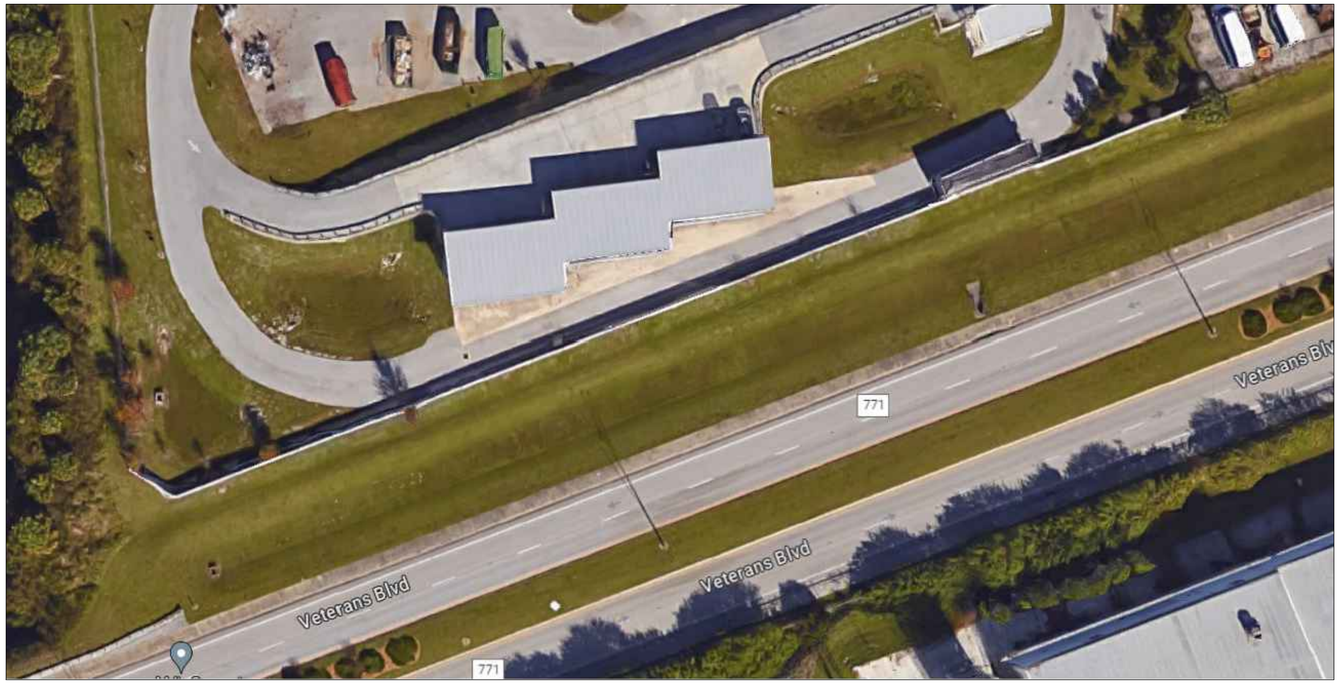
BLOCK WALL AT MID-COUNTY TRANSFER STATION

FOR

CHARLOTTE COUNTY

19765 KENILWORTH BLVD., PORT CHARLOTTE, FL 33954

INDEX OF DRAWINGS



PREPARED BY

THE WEILER ENGINEERING CORPORATION

201 WEST MARION AVENUE
SUITE 1306
PUNTA GORDA, FLORIDA 33950
EB # 6656
PHONE - 941-505-1700
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THE WEILER ENGINEERING CORPORATION

These plans are in Compliance with Florida Building Code 2023 for wind parameters indicated.

WIND PARAMETERS
Method of Design: ASCE 7-22
Building Risk Category: II
Design Wind Speed: Ultimate V_{ult}=150 MPH / Nominal V_{asd} = 116 MPH
Wind Importance Factor: 1.0 / Wind Exposure: B
Internal Pressure Coefficient: 0

FLOOD PARAMETERS
FEMA FIRM Map Number: 12015C0044G
FLOOD ZONE: ZONE "AE" 14.3' BFE

GEOTECHNICAL PARAMETERS
Data Source: TIERRA PROJECT NO. 6511-25-372
Vertical Bearing Capacity: 2,000 PSF

Project Information

Approved By:	MM	Design:	BTC
Scale:	AS NOTED	Drawn:	MSH
Job No.: CHA091-AAAA350-25014712		Checked:	CHECKED
Date Issued:	3-9-26		

WEILER ENGINEERING CORPORATION
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201 WEST MARION AVENUE
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PUNTA GORDA, FLORIDA 33950
(941) 505-1700
EB# 6656

TITLE PAGE

BLOCK WALL AT MID-COUNTY TRANSFER STATION
CHARLOTTE COUNTY
19765 KENILWORTH BOULEVARD
PORT CHARLOTTE, FL 33954

PERMIT SET

Revisions

Description

THIS SHEET IS NOT VALID WITHOUT THE ORIGINAL SIGNATURE OF A FLORIDA LICENSED ENGINEER.

Max Morgan,
State of Florida,
Professional Engineer,
License No. 94877
This item has been
digitally signed and sealed by
Max Morgan, P.E.
on the date indicated here.
3-9-26
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Max Morgan
Professional Engineer
State of Florida
Registration No. 94877

Sheet No. S001.0

GENERAL REQUIREMENTS

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND DETAILS AND SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY ERRORS, OMISSIONS OR DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK.
2. ALL MATERIALS, EQUIPMENT, CONNECTORS, AND WORK SHALL MEET OR EXCEED THE DESIGN DATA AND COMPLIANCE CODE CITED.
3. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCING WORK AND DETERMINE THE LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO COMMENCING EXCAVATION AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR MAINTAINS THE RESPONSIBILITY FOR ALL CONSTRUCTION MEANS, METHODS AND TECHNIQUES REQUIRED FOR THE CONNECTIONS OF ALL PILINGS, DECK SYSTEMS AND STRUCTURES. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER.
5. THE STRUCTURAL INTEGRITY OF THE STRUCTURES SHOWN ON THESE PLANS IS DEPENDENT UPON COMPLETION ACCORDING TO PLANS AND SPECIFICATIONS. STRUCTURAL MEMBERS ARE NOT SELF SUPPORTING DURING CONSTRUCTION AND REQUIRE TEMPORARY BRACING UNTIL PERMANENTLY APPLIED TO STRUCTURE AS DIRECTED. THE STRUCTURAL ENGINEER ASSUMES NO LIABILITY FOR THE STRUCTURE DURING CONSTRUCTION UNLESS THE CONSTRUCTION METHOD AND BRACING ARE INCLUDED IN THE PLANS AND SPECIFICATIONS, OR ARE SUPERVISED BY THE STRUCTURAL ENGINEER DURING CONSTRUCTION.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISION / AUTHORITY OR ACTUAL AND/ OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/ OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES OF THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
7. IN ADDITION TO THE DEMOLITION WORK INDICATED ON THE DRAWINGS, MINOR LOCAL DEMOLITION OF EXISTING ELEMENTS MAY BE REQUIRED TO PERFORM THE STRUCTURAL WORK AS INDICATED ON THE PLANS, SECTIONS, AND DETAILS.
8. DISCHARGE ALL DRAIN LINES, CONDENSATE LINES, DOWN SPOUT, ETC. AT LEAST 1'-0" FROM STRUCTURES
9. ANY CHANGES OR SUBSTITUTIONS SHALL BE APPROVED BY THE ENGINEER.
10. DISSIMILAR METALS SHALL BE ISOLATED TO PREVENT GALVANIC ACTION.
11. THE ENTIRE SCOPE OF WORK SHALL MEET THE 75 FOOT RULE AND SQUARE FOOTAGE REQUIREMENTS OF NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 10 FOR NUMBER, TYPE AND PLACEMENT OF EXTINGUISHERS.
12. FIELD VERIFY ALL EXISTING ABOVE AND BELOW GROUND CONDITIONS PRIOR TO FABRICATION AND CONSTRUCTION.
13. THE STRUCTURAL DESIGN OF DOCKS AND BOARDWALKS IS BASED ON THE FULL INTERACTION OF ALL ITS COMPONENT PARTS. WITH NO PROVISION FOR CONDITION OCCURRING DURING CONSTRUCTION. THEREFORE, CONTRACTOR SHALL PROVIDE ADEQUATE BRACING DURING CONSTRUCTION.
14. STRUCTURAL DRAWINGS INDICATE TYPICAL AND CERTAIN SPECIFIC CONDITIONS ONLY. SHOP DRAWINGS SHALL DETAIL ALL CONDITIONS IN ACCORDANCE WITH SPECIFIED STANDARDS AND SPECIFIC REQUIREMENTS OF THIS PROJECT AS INDICATED ON THE DRAWINGS.
15. CONTRACTOR SHALL APPLY FOR AND OBTAIN ALL NECESSARY PERMITS FROM ALL GOVERNING JURISDICTIONS INCLUDING CHARLOTTE COUNTY, FLORIDA, FOR STRUCTURAL, ELECTRICAL, PLUMBING, AND ALL OTHERS REQUIRED TO COMPLETE THE JOB.

GENERAL STRUCTURAL SPECIFICATIONS

1. GOVERNING BUILDING CODE: 2023 FLORIDA BUILDING CODE 8TH EDITION (FBC)
2. DESIGN LOADS:
   STRUCTURAL LOADS (LOADS PER FBC TABLE 1607.1)
   - WALL WIND LOAD (MWMRS) ..... 33 PSF
   - WALL DEAD LOAD ..... 252 PSF

   WIND LOADS (PER ASCE 7-22)
   - BUILDING RISK CATEGORY (TABLE 1.5-1) II
   - BASIC WIND SPEED (FIG. 26.5-1A)
     - Ultimate (V_{ult}) (THREE SECOND GUST) ..... 150 MPH
     - Nominal (V_{asd}) ..... 116 MPH
   - IMPORTANCE FACTOR (TABLE 1.5-2) 1.00
   - EXPOSURE CATEGORY (26.7.3) ..... EXPOSURE B
   - INTERNAL PRESSURE COEFFICIENT (TABLE 26.13-1) ..... ±0.00 (OPEN)
   - COMPONENTS & CLADDING WIND PRESSURES ..... PER PLAN

   GEOTECHNICAL DESIGN DATA (PER FBC 1806)
   - DATA SOURCE: TIERRA PROJECT NO. 6511-25-372
   - VERTICAL BEARING CAPACITY ..... 2,000 PSF

   FLOOD DESIGN DATA (PER FBC 1612)
   - FEMA FIRM MAP 12015C0044G
   - FEMA FIRM MAP PANEL 0044
   - BASE FLOOD ELEVATION ..... "AE" 14.3'
3. MATERIALS
   - CONCRETE (NORMAL WEIGHT - 28 DAY COMPRESSIVE STRENGTH):
   - SLAB ON GRADE AND FOOTINGS ..... 5,000 PSI
   - COLUMNS: ..... 5,000 PSI
   - REINFORCING STEEL FOR: CONCRETE MASONRY UNITS (CMU) WALLS, FOOTINGS, BEAMS, ETC. ..... ASTM A615, GRADE 60, FY = 60,000 PSI
   - WELDED WIRE MESH: ..... ASTM A185
   - ANCHOR BOLTS: ..... ASTM A193, GRADE B8M, CLASS-1, TYPE 316 SS
   - HIGH STRENGTH BOLTS: ..... ASTM A193, GRADE B8M, CLASS-2, TYPE 316 SS
   - ANCHORS OR POWER ACTUATED FASTENERS:. HILTI OR APPROVED EQUAL, TYPE 316 SS
   - VAPOR BARRIER: ..... 6 MILS POLYETHYLENE
   - GROUT: ..... 3,000 PSI, NON SHRINK

APPLICABLE CODES

FLORIDA BUILDING CODE, BUILDING (FBC-B)	2023
FLORIDA FIRE PREVENTION CODE (FFPC)	2023
NATIONAL ELECTRICAL CODE (NEC)	2020
FDOT STANDARD SPECS FOR ROAD & BRIDGE CONST.	CURRENT ED
FDOT DESIGN STANDARDS	CURRENT ED
FLORIDA ACCESSIBILITY CODE	2023

SHOP DRAWINGS

1. SHOP DRAWINGS AND TEST RESULTS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW. NO MODIFICATIONS OR SUBSTITUTION OF DRAWINGS AND SPECIFICATIONS WILL BE ACCEPTED VIA SHOP DRAWINGS REVIEW. ONE COPY OF ALL TEST REPORTS SHALL BE SENT DIRECTLY TO THE ENGINEER OF RECORD, AND ONE COPY TO THE COUNTY. THE FOLLOWING SHOP DRAWINGS AND TEST RESULTS SHALL BE SUBMITTED.
   - 1.1. SUBMIT PROPOSED CONCRETE MIX DESIGN PRIOR TO CONSTRUCTION, INCLUDING BACK UP DATA IN ACCORDANCE WITH ACI 301 CHAPTER 4, SECTION 4.2.3, EXCLUDING SECTION 4.2.3.4B.
   - 1.2. SUBMIT DETAILED SHOP DRAWINGS OF REINFORCING BARS SHOWING NUMBER, SIZES, AND LOCATION. INCLUDE BAR LISTS AND BEND DIAGRAMS.
   - 1.3. SUBMIT TEST RESULTS PERFORMED BY A QUALIFIED TESTING LABORATORY FOR THE FOLLOWING CONCRETE TEST ON SITE;
     - 1.3.1. CYLINDER STRENGTH TESTS - ASTM C39/C39M-23.
     - 1.3.2. SLUMP TESTS - ASTM C143/C143M-20.
   - 1.4. SUBMIT SOIL DENSITY TEST
     - 1.4.1. 98% COMPACTION SHALL BE ACHIEVED AT ALL LOCATIONS WHERE NEW CONCRETE IS TO BE POURED, INCLUDING ALL SLABS AND FOUNDATIONS. REQUIRE 1 DENSITY TEST PER CONCRETE APPROACH SLAB AND 1 DENSITY TEST FOR KIOSK LOCATIONS
     - 1.4.2. USING MODIFIED PROCTOR (AASHTO T-180)
     - 1.4.3. PROCTOR TEST TO BE SUPPLIED BY CONTRACTOR (NO ADDITIONAL PAYMENT)
     - 1.4.4. CONTRACTOR TO SUPPLY SIGN & SEALED DENSITY TEST REPORT BY FLORIDA REGISTERED PROFESSIONAL ENGINEER..
2. CONTRACTOR SHALL REVIEW AND STAMP SHOP DRAWINGS PRIOR TO SUBMISSION TO THE ENGINEER OF RECORD. CONTRACTOR SHALL REVIEW FOR COMPLETENESS AND COMPLIANCE WITH CONTRACT DOCUMENTS.
3. SUBMIT SHOP DRAWINGS TO THE STRUCTURAL ENGINEER AS INDICATED OR SPECIFIED FOR REVIEW PRIOR TO FABRICATION. REVIEW WILL BE FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT CONVEYED IN CONTRACT DOCUMENTS.
4. WHEN ENGINEER IS REQUIRED TO SIGN AND STAMP SHOP DRAWINGS AND CALCULATIONS, ENSURE SEAL INDICATES ENGINEER AS REGISTERED IN THE STATE WHERE PROJECT SITE OCCURS.
5. SHOP DRAWINGS ARE NOT PART OF CONTRACT DOCUMENTS. THEREFORE, ENGINEER'S REVIEW DOES NOT CONSTITUTE ON AUTHORIZATION TO DEVIATE FROM THE TERMS AND CONDITIONS OF THE CONTRACT.
6. SHOP DRAWINGS WILL BE REJECTED FOR INCOMPLETENESS, LACK OF COORDINATION WITH OTHER PORTIONS OF CONTRACT DOCUMENTS, LACK OF CALCULATIONS (IF REQUIRED), OR WHERE MODIFICATIONS OR SUBSTITUTIONS ARE INDICATED WITHOUT PRIOR REVIEW. SUBMIT SHOP DRAWINGS AND CALCULATIONS TO GOVERNING CODE AUTHORITY WHEN SPECIFICALLY INDICATED OR REQUESTED.
7. STRUCTURAL ENGINEER REQUIRES 10 WORKING DAYS AFTER RECEIPT OF SHOP DRAWINGS AND CALCULATIONS FOR PROCESSING.
8. MAINTAIN A COPY OF ALL SHOP DRAWINGS ACCEPTED BY THE STRUCTURAL ENGINEER AT SITE DURING CONSTRUCTION PERIOD.
9. SUBMITTALS SHALL BE SUBMITTED TO ENGINEER OF RECORD FOR ANY PROPOSED ALTERNATIVES TO PRODUCTS SPECIFIED IN PLANS.

FOUNDATION SOIL

1) FOUNDATION AND SLAB NOTES: SUB-GRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION, COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDATIONS GIVEN IN THE SOILS REPORT OR AS DIRECTED BY THE PROJECT REPRESENTATIVE.

2) FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH (CONTROLLED, COMPACTED STRUCTURAL FILL OR BOTH) AT LEAST 18" BELOW LOWEST ADJACENT GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY. THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB SOILS ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE AS NOTED IN THE SOILS REPORT.

3) ALLOWABLE SOIL PRESSURE (PER GEOTECH REPORT) ..... 2000 PSF

4) ALL FILL SHALL BE CLEAN SELECT MATERIAL FREE OF DELETERIOUS MATERIALS SUCH AS WOOD, ROOTS, TRASH, OR OTHER EXTRANEOUS MATERIALS. PLACE FILL IN 8" LIFTS, MEASURED LOOSE, AND COMPACT EACH LIFT TO 95% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS MEASURED BY ASTM D698.

5) FOUNDATION CONCRETE SHALL BE PLACED BEFORE DETERIORATION OF THE SUB-GRADE DUE TO WEATHER, GROUND WATER SEEPAGE, FOOT TRAFFIC, OR CONSTRUCTION OPERATIONS. ANY PORTIONS OF THE SUBGRADE PERMITTED TO DETERIORATE SHALL BE REMOVED AND REPLACED WITH AN APPROVED COMPACTED BACKFILL OR LEAN CONCRETE (FLOWABLE FILL) WITHOUT ADDITIONAL COMPENSATION TO THE CONTRACTOR.

6) COMPACT BACKFILL 5'-0" OUT FROM BUILDING.

7) IRRIGATION / SPRINKLER SYSTEMS INCLUDING ALL RISERS AND SPRAY HEADS SHALL NOT BE INSTALLED WITHIN 1'-0" (12 INCHES / 12") OF THE BUILDING SIDE WALLS.

CAST IN PLACE CONCRETE

1) CONCRETE TO BE NORMAL WEIGHT WITH THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS:
   - A) FOOTINGS, SLABS & SLABS-ON-GRADE, ... 5,000 PSI
   - B) COLUMNS, WALLS, BEAMS, TOP-COAT CONCRETE ..... 5,000 PSI

2) CONCRETE SHALL BE READYMIX PER ASTM C94:
   - A) PORTLAND CEMENT - ASTM C150
   - B) AGGREGATES - ASTM C33 (3/4" MAX.)
   - C) NO CALCIUM CHLORIDE
   - D) AIR ENTRAINING - ASTM C260
   - E) WATER REDUCING - ASTM C494
   - F) FLYASH ASTM C618 CLASS F (20% MAXIMUM BY WEIGHT)
   - G) WATER - CLEAN AND POTABLE

3) REINFORCING STEEL:
   - A) FOUNDATION SLABS, FOOTINGS, CMU WALLS & TIE-BEAMS..... ASTM A615, GRADE 60, fy = 60,000 psi

4) REQUIRED SLUMP RANGE: = 3" TO 5".

5) WELDED WIRE FABRIC: .....ASTM A-1064. FURNISH SHEETS (NOT ROLLS) OR FIBERMESH

6) CODES AND STANDARDS: AMERICAN CONCRETE INSTITUTE (ACI) CURRENT EDITIONS
   - ACI 301-20 "SPEC FOR STRUCTURAL CONCRETE FOR BUILDINGS."
   - ACI PRC-305-20 "RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING."
   - ACI 318-19(22) "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY."
   - ACI 315R-18 "GUIDE TO PRESENTING REINFORCING STEEL DESIGN DETAILS"
   - ACI SP66-04 "ACI DETAILING MANUAL - 2004."

7) MINIMUM LAP SPLICES = 40 BAR DIAMETERS UNLESS NOTED OTHERWISE (REFER TO TENSION LAP SPLICE SCHEDULE).

8) PROVIDE PROPERLY TIED SPACERS, CHAIRS, BOLSTERS, ETC., AS REQUIRED AND NECESSARY TO ASSEMBLE, PLACE, AND SUPPORT ALL REINFORCING IN PLACE. USE WIRE BAR-TYPE SUPPORTS COMPLYING WITH CONCRETE REINFORCING STEEL INSTITUTE (CRSI), 30TH EDITION, RECOMMENDATIONS. USE PLASTIC TIP LEGS ON ALL EXPOSED SURFACES.

9) ALL BEAMS AND SLABS SHALL BE POURED MONOLITHICALLY, EXCEPT FOR REQUIRED CONSTRUCTION JOINTS. PROPOSED CONSTRUCTION JOINT LOCATION SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL.

10) CONTRACTOR SHALL VERIFY LOCATIONS OF ALL OPENINGS, SLEEVES, AND SLAB RECESSES AS REQUIRED BY OTHER TRADES BEFORE CONCRETE IS PLACED. NO SLEEVE, OPENING, OR INSERT MAY BE PLACED IN BEAMS, JOISTS, OR COLUMNS UNLESS APPROVED BY THE ENGINEER.

11) CONTRACTOR SHALL VERIFY EMBEDDED ITEMS, INCLUDING BUT NOT LIMITED TO ANCHOR BOLTS, BOLT CLUSTERS, WELD PLATES, ETC..., BEFORE PLACING CONCRETE. NOTIFY ENGINEER OF ANY CONFLICTS WITH REBAR.

12) SEE PROJECT PLANS AND SPECIFICATIONS FOR REQUIRED CONCRETE FINISHES. ALL FINISHES TO BE APPROVED BY OWNER PRIOR TO FINISHING.

13) ALL CONCRETE SHALL BE CURED IMMEDIATELY AFTER FINISHING OPERATIONS IN ACCORDANCE WITH ONE OF THE FOLLOWING METHODS:
   - A) APPLY A LIQUID MEMBRANE FORMING CHEMICAL CURING COMPOUND IN ACCORDANCE WITH ASTM C309-19 "STANDARD SPECIFICATION FOR LIQUID MEMBRANE-FORMING COMPOUNDS FOR CURING CONCRETE."
   - B) PROVIDE CONTINUOUS MOISTURE TO CONCRETE IN ACCORDANCE WITH ACI 301-20.

15) GENERAL CONTRACTOR IS RESPONSIBLE FOR THE PROPER DESIGN AND CONSTRUCTION OF ALL FORM WORK, SHORING, AND RESHORING. DESIGN SHALL BE PERFORMED BY A LICENSED FLORIDA ENGINEER.

16) A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO PERFORM THE FOLLOWING CONCRETE TESTS ON SITE:
   - A) CYLINDER STRENGTH TESTS - ASTM C39/C39M-23 "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS." ONE SET OF FOUR CYLINDERS FOR EACH 50 CUBIC YARDS OR FRACTION THEREOF. TEST ONE CYLINDER AT 7 DAYS AND TWO AT 28 DAYS. HOLD THE FINAL CYLINDER IN RESERVE.
   - B) SLUMP TESTS - ASTM C143/C143M-20 "STANDARD TEST METHOD FOR SLUMP OF HYDRAULIC-CEMENT CONCRETE."

17) CONTRACTOR SHALL PROVIDE THE FOLLOWING SUBMITTALS:
   - 1.1. SUBMIT TEST RESULTS FOR CYLINDER STRENGTH TESTS RESULTS AND SLUMP TESTS
   - 1.2. SUBMIT PROPOSED CONCRETE MIX DESIGN PRIOR TO CONSTRUCTION, INCLUDING BACK UP DATA IN ACCORDANCE WITH ACI 301, "SPECIFICATIONS FOR CONCRETE CONSTRUCTION," CHAPTER 4, SECTION 4.2.3, EXCLUDING SECTION 4.2.3.4B.
   - 1.3. SUBMIT DETAILED SHOP DRAWINGS OF REINFORCING BARS SHOWING NUMBER, SIZES, AND LOCATION. INCLUDE BAR LISTS AND BEND DIAGRAMS.

18) RESTRICT THE ADDITION OF MIX WATER AT THE JOB SITE. DO NOT ADD WATER WITHOUT THE APPROVAL OF THE GENERAL CONTRACTOR AND DO NOT EXCEED SLUMP LIMITATIONS OR TOTAL ALLOWABLE WATER TO CEMENT RATIO. USE COLD WATER FROM THE TRUCK TANK AND RE-MIX TO ACHIEVE CONSISTENCY. TEST REPORTS SHALL INDICATE QUANTITY OF WATER ADDED AT THE JOB SITE. ALL TESTS SHALL BE PREPARED AFTER THE ADDITION OF WATER TO THE MIX.

19) MAXIMUM WATER TO CEMENT RATIO WHEN NO BACK UP DATA IS AVAILABLE:
   - A) 5,000 PSI, 28-DAY COMPRESSIVE STRENGTH; W / C RATIO, 0.40 MAXIMUM (NON-AIR-ENTRAINED), 0.34 MAXIMUM (AIR ENTRAINED)
   - B) 4,000 PSI, 28-DAY COMPRESSIVE STRENGTH; W/C RATIO, 0.47 MAXIMUM (NON-AIR-ENTRAINED), 0.39 MAXIMUM (AIR-ENTRAINED)
   - C) 3,000 PSI, 28-DAY COMPRESSIVE STRENGTH; W/C RATIO, 0.54 MAXIMUM (NON-AIR-ENTRAINED), 0.45 MAXIMUM (AIR-ENTRAINED)

20) REINFORCING BAR COVER:
   - A) FOOTINGS = 3"
   - B) COLUMNS =1-1/2"
   - C) BEAMS = 1-1/2"
   - D) SLABS = 3/4" (INTERIOR) 1-1/2" (EXTERIOR)

21) CONCRETE SHALL BE PLACED WITHIN 90 MINUTES OF BATCH TIME.

22) WHERE BAR LENGTHS ARE GIVEN ON DRAWINGS, LENGTH OF HOOK, IF REQUIRED IS NOT INCLUDED.

23) PROVIDE COMMERCIAL FORM COATING COMPOUNDS THAT WILL NOT BOND, STAIN, OR ADVERSELY AFFECT CONCRETE SURFACES. WET FORMS BEFORE PLACING CONCRETE.

24) ALL CONCRETE SHALL BE CONSOLIDATED IN PLACE USING INTERNAL VIBRATORS.

25) REPAIR AND PATCH DEFECTIVE AREAS WITH CEMENT MORTAR IMMEDIATELY AFTER REMOVAL OF FORMS, EXCEPT WHERE REINFORCING IS VISIBLE. CONTACT STRUCTURAL ENGINEER FOR EVALUATION OF EXPOSED REINFORCING.

26) PROVIDE 3/4" CHAMFERS ON ALL EXPOSED CORNERS OF COLUMNS, BEAMS, AND WALLS UNLESS NOTED OTHERWISE ON DRAWINGS OR SPECIFICATIONS.

27) PROVIDE CORNER BARS AT ALL BEAM AND WALL FOOTING CORNERS TO MATCH HORIZONTAL BARS.

28) SUBMITTALS:
   - A) SUBMIT PROPOSED CONCRETE MIX DESIGN PRIOR TO CONSTRUCTION, INCLUDING BACK UP DATA IN ACCORDANCE WITH ACI 301, "SPECIFICATIONS FOR CONCRETE CONSTRUCTION," CHAPTER 4, SECTION 4.2.3, EXCLUDING SECTION 4.2.3.4B.
   - B) SUBMIT DETAILED SHOP DRAWINGS OF REINFORCING BARS SHOWING NUMBER, SIZES, AND LOCATION. INCLUDE BAR LISTS AND BEND DIAGRAMS.

MASONRY

1. CODES AND STANDARDS:
   - 1.1. TMS 402/602-16 "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES"
2. HOLLOW LOAD BEARING UNITS SHALL CONFORM TO ASTM C90, NORMAL WEIGHT, TYPE II. MINIMUM NET COMPRESSIVE STRENGTH = 1,900 PSI. (NET AREA COMPRESSIVE STRENGTH F'_M = 1,500 PSI.).
3. MORTAR SHALL BE TYPE M OR S AND CONFORM TO ASTM C270 (PROPORTION OR PROPERTY SPECIFICATION).
4. COARSE GROUT SHALL CONFORM TO ASTM C476:
   - 4.1. 3,000 PSI AT 28-DAYS.
   - 4.2. 1/4" MAXIMUM AGGREGATE.
   - 4.3. 8" - 11" SLUMP.
5. CONCRETE MASONRY UNITS SHALL BE PLUMB, TRUE, WITH LEVEL COURSES ACCURATELY SPACED AND BUILT TO THE THICKNESS AND IN A RUNNING BOND AS INDICATED AND CONFORMING TO THE TOLERANCES SPECIFIED IN TMS 402/602-16. CONCRETE UNITS SHALL BE STORED OFF THE GROUND SURFACE AND COVERED TO PROTECT THEM FROM ABSORBING RAIN OR BEING CONTAMINATED WITH OTHER FOREIGN MATTER. CONCRETE UNITS SHALL BE DRY WHEN LAID. EACH UNIT SHALL BE ADJUSTED TO FINAL POSITION IN THE WALL WHILE THE MORTAR IS STILL SOFT AND PLASTIC. ANY UNIT DISTURBED AFTER THE MORTAR HAS STIFFENED SHALL BE REMOVED AND RE-LAID WITH FRESH MORTAR. VERTICAL CELLS SHALL BE ALIGNED TO PROVIDE A CONTINUOUS, UNOBSTRUCTED OPENING. ALL ANCHORS, ACCESSORIES, FLASHING, AND OTHER ITEMS TO BE BUILT-IN SHALL BE INSTALLED AS THE MASONRY WORK PROGRESSES. ALL CUTTING AND FITTING OF MASONRY, INCLUDING THAT REQUIRED TO ACCOMMODATE THE WORK OF OTHERS SHALL BE DONE BY MASONRY CRAFTSMEN WITH MASONRY SAWS. LOCATE CONTROL JOINTS AT 20 FEET ON CENTER MAXIMUM AT ALL COLUMNS, AND AT CHANGES IN DIRECTION. CAULK THE EXPOSED SIDE OF ALL JOINTS WITH BACKER ROD AND SEALANT. COLOR OF SEALANT TO MATCH WALL COLOR.
6. HOLLOW UNITS SHALL BE LAID WITH FULL HEAD AND BED JOINTS TO THE THICKNESS OF THE FACE SHELL AS A MINIMUM THE WEBS SHALL ALSO BE BEDDED IN ALL COURSES STARTING AT THE FOUNDATION, ADJACENT TO CELLS TO BE REINFORCED AND/ OR FILLED WITH GROUT OR CONCRETE. MORTAR JOINTS SHALL BE TOOLED WHEN THE MORTAR ID "THUMBPRINT" HARD, BOTH ON THE INSIDE AND OUTSIDE SURFACES OF THE BUILDING WALL, WITH A TOOL PRODUCING A CONCAVE SURFACE BED JOINTS SHALL BE 3/8" IN THICKNESS AND HEAD JOINTS SHALL BE 3/8" IN THICKNESS.
7. ALL REINFORCING STEEL TO BE GRADE 60 PER ASTM A615, REINFORCING BARS SHALL BE PLACED IN THE MIDDLE OF THE CELLS AND TIED OR OTHERWISE SECURELY SUPPORTED AT THE TOP AND BOTTOM TO ENSURE THE BAR DOES NOT MOVE DURING GROUTING. MINIMUM LAP AT ALL SPLICES OR DOWELS SHALL BE 30 INCHES UNLESS OTHERWISE NOTED ON THE DRAWINGS.
8. GROUTING SHALL BE ACCOMPLISHED IN 4 FOOT LIFTS FOR CONCRETE MASONRY AND 2 FOOT LIFTS FOR BRICK MASONRY. EACH LIFT SHALL BE MECHANICALLY CONSOLIDATED INTO THE PREVIOUS LIFT WHEN PLACED, SO AS TO PREVENT COLD JOINTS. RECONSOLIDATE AS REQUIRED FOR CONCRETE MASONRY A 12" SQUARE INCH CLEANOUT OPENING SHALL BE PLACED AT THE BOTTOM OF EACH CELL. FOR BRICK MASONRY, PUDDLE GROUT DURING AND AFTER PLACEMENT TO ENSURE COMPLETE FILLING OF THE CELL. GROUT PLACEMENT STOPPED FOR MORE THAN ONE HOUR SHALL BE STOPPED BELOW THE TOP OF THE MASONRY UNIT 1-1/2" TO PROVIDE A KEY FOR SUBSEQUENT GROUTING.
9. THE MINIMUM CONTINUOUS UNOBSTRUCTED CELL AREA TO RECEIVE GROUT MUST NOT BE LESS THAN 2"X3". MORTAR FINS MUST BE REMOVED AS BLOCK PLACEMENT PROCEEDS. MORTAR DROPPING MUST BE KEPT OUT OF CELLS WHICH ARE TO BE GROUTED.
10. UNLESS SPECIFICALLY SHOWN OTHERWISE, PROVIDE #9 GA. "DUR-O-WALL" TRUSS TYPE REINFORCING IN EVERY OTHER OF CONTINUOUS WALLS FOR CONCRETE MASONRY, AND EVERY FOURTH COURSE FOR BRICK MASONRY. DO NOT LAY JOINT REINFORCEMENT ACROSS EXPANSION JOINTS.
11. TEMPORARY BRACING AND SHORING OF ALL CONCRETE MASONRY CONSTRUCTION TO PROVIDE STABILITY DURING CONSTRUCTION UNTIL CONSTRUCTION ACHIEVES IT'S PROPER STRENGTH SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
12. UNLESS SPECIFICALLY SHOWN OTHERWISE, PROVIDE #9 GA. "DUR-O-WALL" TRUSS TYPE REINFORCING IN EVERY OTHER OF CONTINUOUS WALLS FOR CONCRETE MASONRY, AND EVERY FOURTH COURSE FOR BRICK MASONRY. DO NOT LAY JOINT REINFORCEMENT ACROSS EXPANSION OR CONTROL JOINTS.
13. TEMPORARY BRACING AND SHORING OF ALL CONCRETE MASONRY CONSTRUCTION TO PROVIDE STABILITY DURING CONSTRUCTION UNTIL CONSTRUCTION ACHIEVES IT'S PROPER STRENGTH SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
14. CONTROL JOINTS SHALL BE PROVIDED IN CMU WALLS AT 25'-0" O.C. MAXIMUM FOR CONTINUOUS WALL SEGMENTS, AND AT EACH CORNER, RETURN, AND EACH SIDE OF OPENINGS, UNLESS NOTED OTHERWISE. INSTALL CONTROL JOINT MATERIAL, BACKER ROD, AND SEALANT PER TMS 402/602 AND MANUFACTURER RECOMMENDATIONS.

CHEMICAL (ADHESIVE) ANCHORS

SHALL BE AN EQUAL TWO PART EPOXY POLYMER INJECTION SYSTEM, SUCH AS RED-HEAD EPCON, SIMPSON SET EPOXY, OR HILTI HSE2411 EPOXY DOWELING SYSTEM, OR ENGINEER APPROVED SUBSTITUTION, INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS. INSTALLERS SHALL BE TRAINED BY THE MANUFACTURER'S REPRESENTATIVE. MINIMUM EMBEDMENT SHALL BE TWELVE (12) TIMES FASTENER DIAMETER UNLESS NOTED OTHERWISE.

CONSTRUCTION OBSERVATION

THE STRUCTURAL ENGINEER OF RECORD HAS NOT BEEN RETAINED TO PERFORM CONSTRUCTION OBSERVATION SERVICES FOR THIS PROJECT. THEREFORE, ANY AS-BUILT CONSTRUCTION OR CHANGES MADE TO THE STRUCTURE OR TO THESE PLANS WITHOUT THE ENGINEER'S WRITTEN CONSENT SHALL RENDER THE DESIGN AND THE ENGINEERS SEAL ON THESE PLANS NULL AND VOID

WIND BORNE DEBRIS REGION REQUIREMENTS

1. DESIGN WIND PRESSURES ARE BASED ON STRUCTURE CLASSIFICATION INDICATED IN GENERAL STRUCTURAL SPECIFICATIONS.
2. ALL COMPONENTS AND CLADDING AS REQUIRED SHALL BE DESIGNED BY THE MANUFACTURER IN ACCORDANCE WITH SECTION 1609 OF THE FLORIDA BUILDING CODE FOR DESIGN PRESSURES GENERATED BY AN ULTIMATE DESIGN WIND VELOCITY AS INDICATED IN GENERAL STRUCTURAL SPECIFICATIONS.
3. THE ENGINEER OF RECORD DOES NOT CERTIFY THE STRUCTURAL INTEGRITY OF THESE ITEMS.
4. THE BUILDER SHALL PROVIDE NECESSARY COPIES OF DETAILS, CERTIFICATIONS, ETC... TO THE BUILDING DEPARTMENT TO SHOW COMPLIANCE WITH THIS PARAGRAPH.

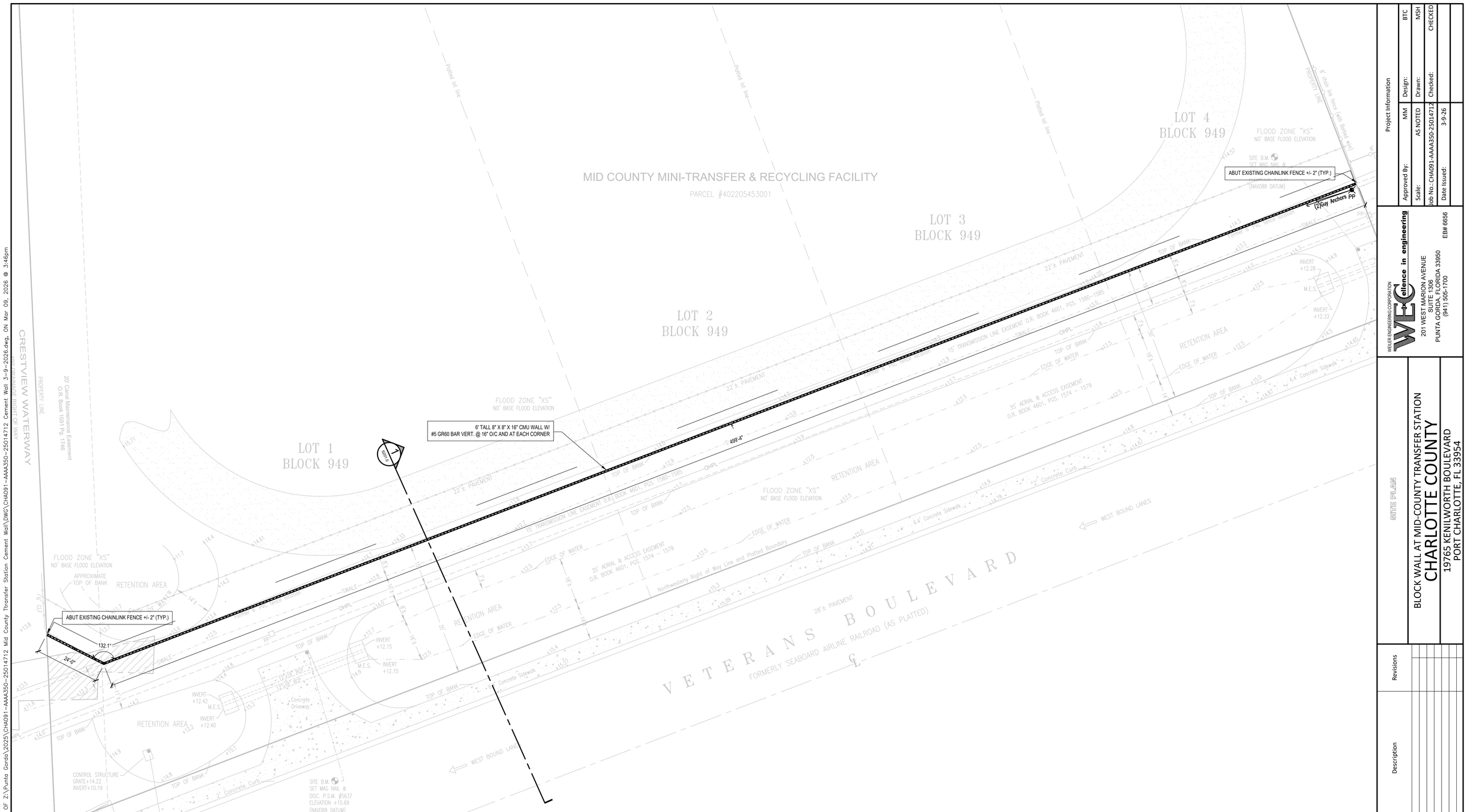
TENSION LAP SPLICE SCHEDULE (CLASS B)
f'_c=5000 psi. f_y=60,000 psi.

BAR SIZE	#3	#4	#5	#6	#7	#8	#9	#10	#11
TOP BAR	22"	29"	36"	43"	63"	72"	81"	91"	101"
OTHER BAR	17"	22"	28"	33"	49"	55"	63"	70"	78"

1. LAP SPLICES ARE IN ACCORDANCE WITH ACI 318-19(22).
2. CLEAR SPACING OF BARS IS ≥db AND CLEAR COVER IS NOT LESS THAN db OR CLEARANCES AND TIES PER ACI 318-19(22). SECTION 12.2.2
3. TOP BAR SPLICE IS REQUIRED WHERE MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW HORIZONTAL REINFORCEMENT

STRUCTURAL ABBREVIATIONS

#	NUMBER OR POUND	ASD	ALLOWABLE STRESS DESIGN	BRG	BEARING	DEFL	DEFLECTION	FB	FLAT BAR	HSA	HEADED STUD ANCHOR	MANUF	MANUFACTURER	OC	ON CENTER	R	RISER	STR	STRAIGHT	VERT	VERTICAL
Ø	ROUND OR DIAMETER	ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	C TO C	CENTER TO CENTER	DET	DETAIL	FD	FLOOR DRAIN	MATL	MATERIAL	OD	OUTSIDE DIAMETER	R OR RA	RADIUS	STRUCT	STRUCTURAL	VTR	VENT THRU ROOF
□	SQUARE	ASSY	ASSEMBLY	CANT	CANTILEVER	DIAG	DIAGONAL	FDN	FOUNDATION	MAX	MAXIMUM	OF	OUTSIDE FACE	RD	ROUND	SYM	SYMMETRICAL		
&	AND	ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	CJ	CONSTRUCTION JOINT	DIA	DIAMETER	FF	FINISH FLOOR	HS	HIGH STRENGTH	MHWL	MEAN HIGH WATER LINE	OHWL	ORDINARY HIGH WATER LEVEL	REINF	REINFORCE(MENT)	T	TREAD	W/	WITH
@	AT	AWC	AMERICAN WOOD COUNCIL	CL	CENTER LINE	DIF	DIFFERENT	FFE	FINISH FLOOR ELEVATION	HT	HEIGHT	MECH	MECHANICAL	O/O	OUT TO OUT	REQ	REQUIRE	T&B	TOP & BOTTOM	WH	WATER HEATER
db	DIAMETER OF REINFORCEMENT BAR	AWPA	AMERICAN WOOD PROTECTION ASSOCIATION	CLR	CLEAR	DI



SITE PLAN 1/16" = 1'-0"

THE WEILER ENGINEERING CORPORATION

These plans are in Compliance with Florida Building Code 2023 for wind parameters indicated.

WIND PARAMETERS
Method of Design: ASCE 7-22
Building Risk Category: II
Design Wind Speed: Ultimate V_{ult}=150 MPH / Nominal V_{asd} = 116 MPH
Wind Importance Factor: 1.0 / Wind Exposure: B
Internal Pressure Coefficient: 0

FLOOD PARAMETERS
FEMA FIRM Map Number: 12015C0044G
FLOOD ZONE: ZONE "AE" 14.3' BFE

GEOTECHNICAL PARAMETERS
Data Source: TIERRA PROJECT NO. 6511-25-372
Vertical Bearing Capacity: 2,000 PSF

PERMIT SET

SITE PLAN

BLOCK WALL AT MID-COUNTY TRANSFER STATION
CHARLOTTE COUNTY
19765 KENILWORTH BOULEVARD
PORT CHARLOTTE, FL 33954

Project Information

Approved By:	MM	Design:	BTC
Scale:	AS NOTED	Drawn:	MSH
Job No.: CHA091-AAAA350-25014712		Checked:	CHECKED
Date Issued:	3-9-26		

WEILER ENGINEERING CORPORATION
WEC eficence in engineering
201 WEST MARION AVENUE
SUITE 1306
PUNTA GORDA, FLORIDA 33950
(941) 505-1700
EB# 6656

Revisions

Description

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Max Morgan
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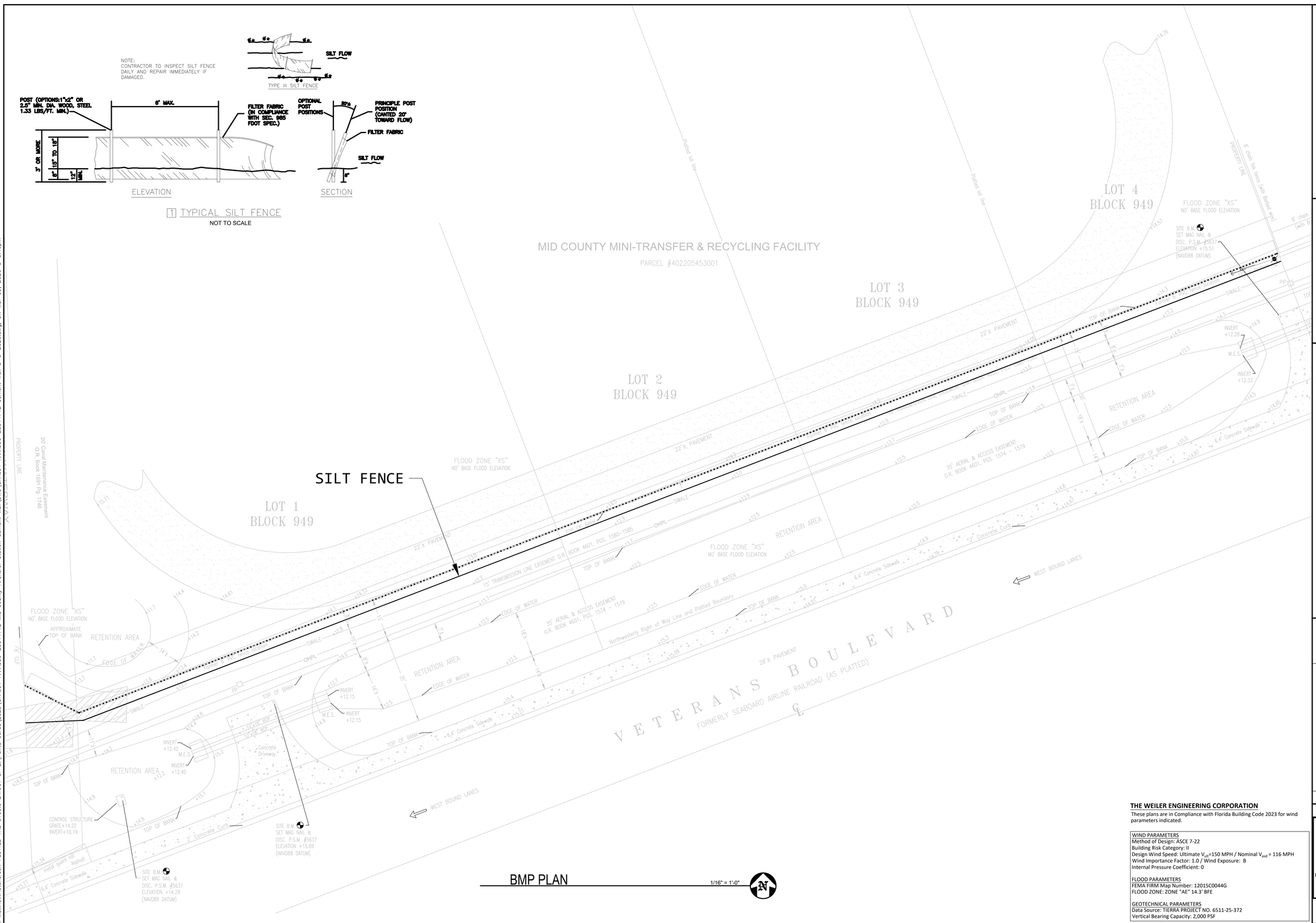
Sheet No. C102.0

1 TYPICAL SILT FENCE

NOT TO SCALE



BMP PLAN

1/16" = 1'-0"

THE WEILER ENGINEERING CORPORATION

These plans are in Compliance with Florida Building Code 2023 for wind parameters indicated.

WIND PARAMETERS
Method of Design: ASCE 7-22
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FLOOD PARAMETERS
FEMA FIRM Map Number: 12015C0044G
FLOOD ZONE: ZONE "AE" 14.3' BFE

GEOTECHNICAL PARAMETERS
Data Source: TIERRA PROJECT NO. 6511-25-372
Vertical Bearing Capacity: 2,000 PSF

PERMIT SET

BMP PLAN

BLOCK WALL AT MID-COUNTY TRANSFER STATION
CHARLOTTE COUNTY
19765 KENILWORTH BOULEVARD
PORT CHARLOTTE, FL 33954

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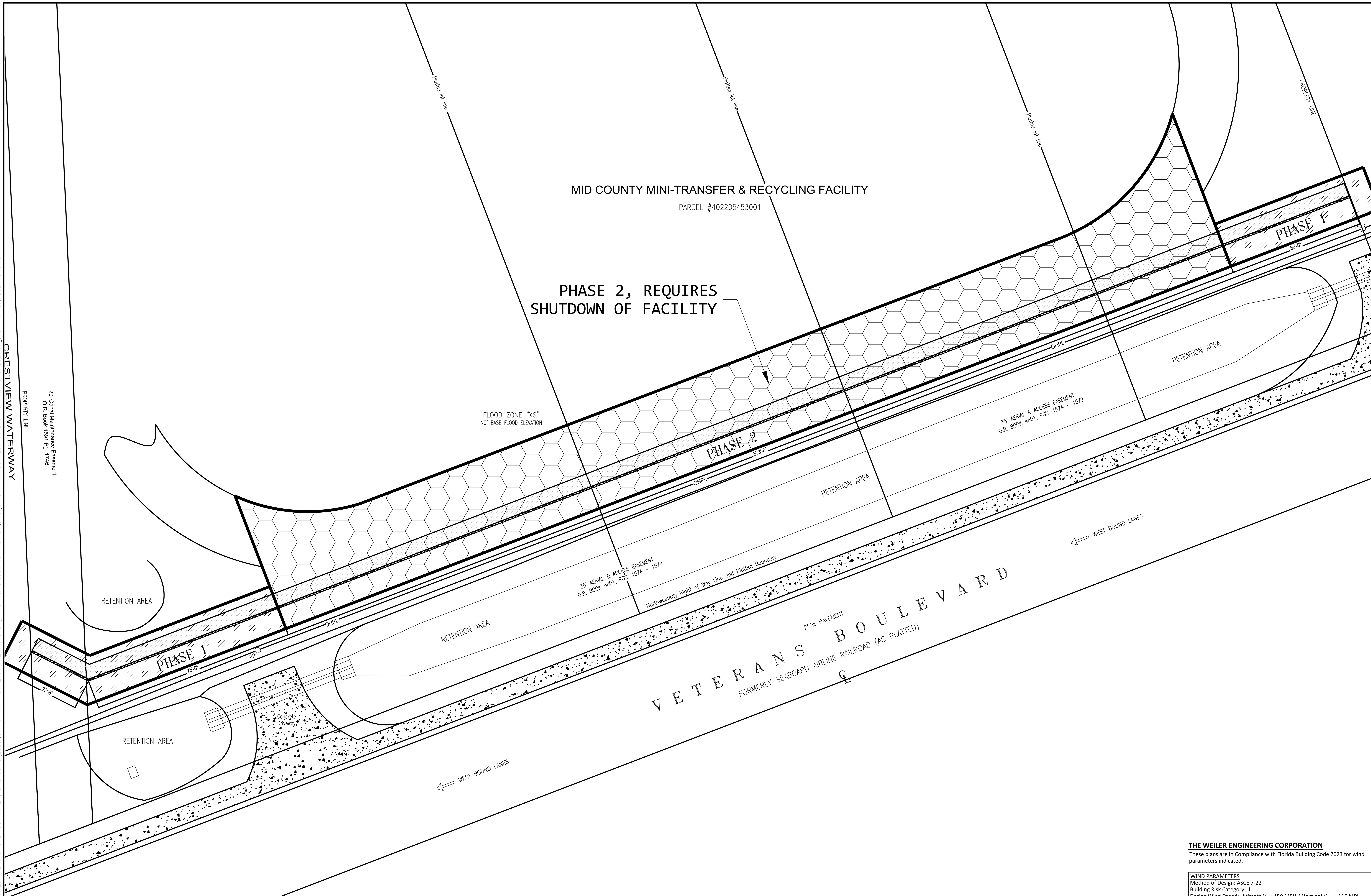
Sheet No. C103.0



PHASE PLAN

1/16" = 1'-0"

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FEMA FIRM Map Number: 12015C0044G
FLOOD ZONE: ZONE "AE" 14.3' BFE

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Data Source: TIERRA PROJECT NO. 6511-25-372
Vertical Bearing Capacity: 2,000 PSF

Project Information

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PHASING PLAN

BLOCK WALL AT MID-COUNTY TRANSFER STATION
CHARLOTTE COUNTY

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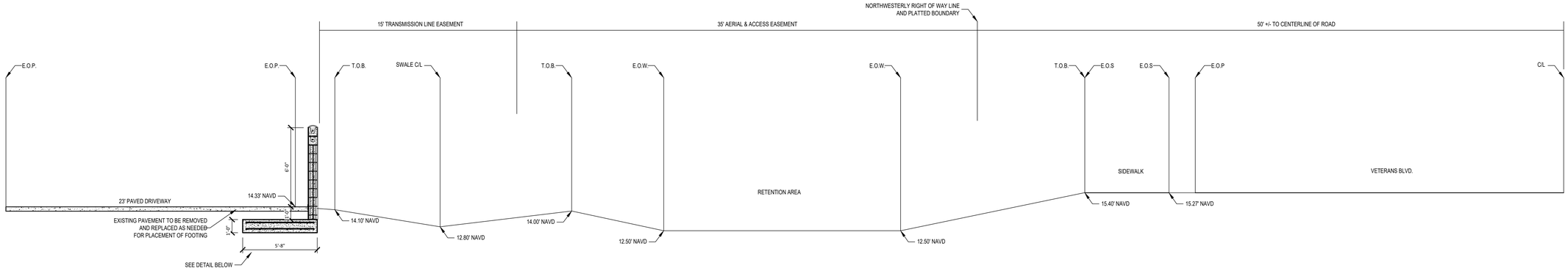
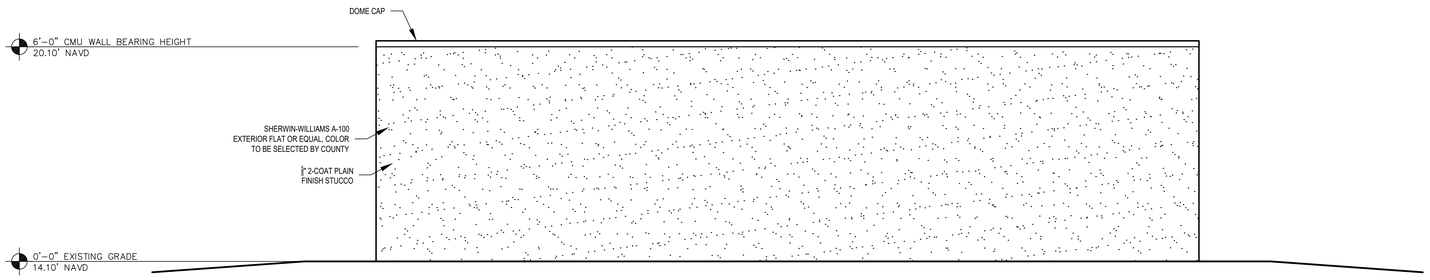
Sheet No. C104.0

PERMIT SET

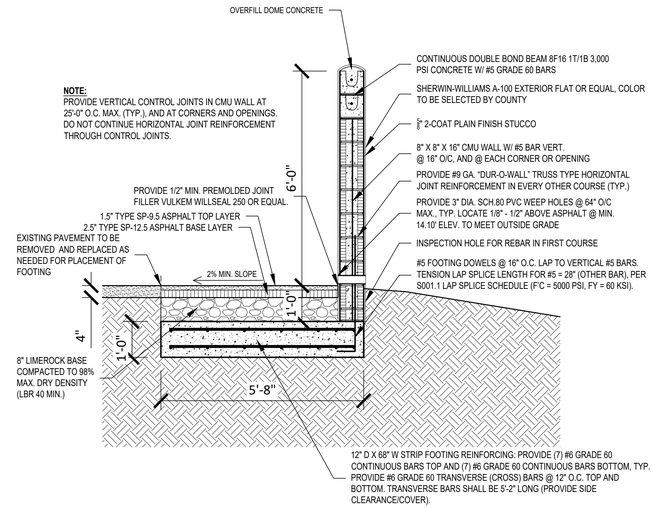
USER: Matthew.Hutcherson PLOTTED THE C104.0 LAYOUT OF Z:\Punta Gorda\2025\CHA091-AAAA350-25014712 Mid County Transfer Station Cement Wall\DWG\CHA091-AAAA350-25014712 Cement Wall 3-9-2026.dwg, ON Mar 09, 2026 @ 3:46pm



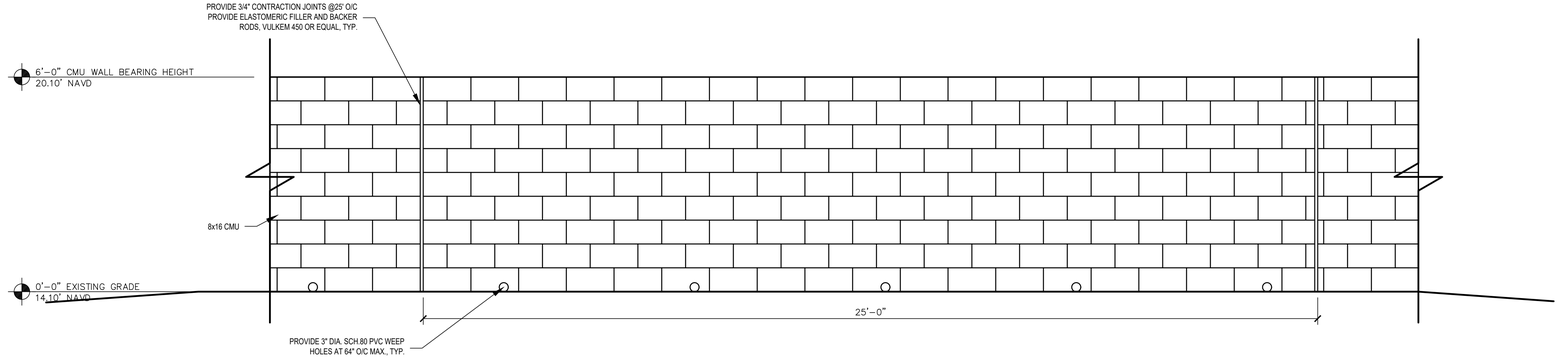
1 SITE SECTION
1/4" = 1'-0"



WALL ELEVATION 1/2" = 1'-0"



BEARING WALL SECTION 1/2" = 1'-0"



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

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FEMA FIRM Map Number: 12015C0044G
FLOOD ZONE: ZONE "AE" 14.3' BFE

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Vertical Bearing Capacity: 2,000 PSF

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SECTIONS

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