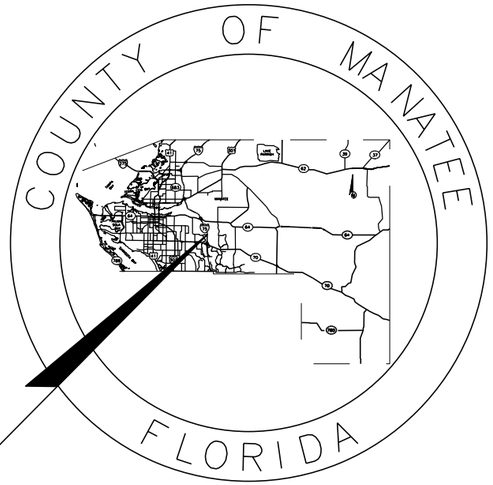
Exhibit 10

MANATEE COUNTY
PUBLIC WORKS DEPARTMENT

CONTRACT PLANS

MANATEE COUNTY
PROJECT NUMBER 6045662
44TH AVENUE EAST
PHASE 2
WEST OF I-75 TO LAKEWOOD RANCH BOULEVARD



STRUCTURE PLANS

44TH AVE EAST OVER SR 93 (I-75) (BRIDGE NO. 134XXX)

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B1-1 THRU B1-48	44TH AVE EAST OVER SR 93 (I-75)
BW1-1 THRU BW1-16	RETAINING WALLS
GW-1 THRU GW-11	REPORT OF CORE BORINGS

90% SUBMITTAL
02/2022

STRUCTURE PLANS
ENGINEER OF RECORD:
CHESTER A. SMITH, P.E.
P.E. NO.: 70756
HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
VENDOR NO. 47-0680568

MANATEE CO. PROJECT MANAGER:
ERIC S. SHROYER, P.E.

FISCAL YEAR	SHEET NO.
22	B-1

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GW-11	REPORT OF CORE BORINGS (11)

* WALLS 5 AND 6 ARE NOT INCLUDED IN THIS SUBMITTAL

BRIDGE NO. 134XXX

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: DRA
CHECKED BY: CAS
DESIGNED BY: DRA
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: INDEX OF SHEETS

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: B-2

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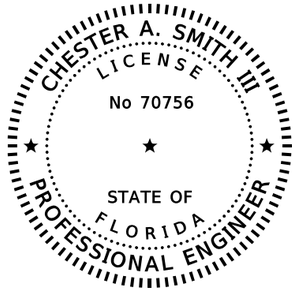

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ON THE DATE ADJACENT TO THE SEAL

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FL 34232
CHESTER A SMITH III, P.E. NO. 70756

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING NEW SHEETS IN ACCORDANCE WITH THE RULE 61G15 - 23.004, F.A.C.

STRUCTURE PLANS

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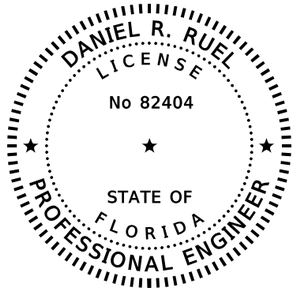
BW-15 - BW-16	WALL 4 - ELEVATION



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TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FL 33637
DANIEL R. RUEL, P.E. NO. 82404

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING NEW SHEETS IN ACCORDANCE WITH THE RULE 61G15 - 23.004, F.A.C.

STRUCTURE PLANS

SHEET NO.	SHEET DESCRIPTION
B-3	SIGNATURE SHEET
B1-3	REPORT OF CORE BORINGS
GW-1 - GW-11	REPORT OF CORE BORINGS

BRIDGE NO. 134XXX

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: –
CHECKED BY: –
DESIGNED BY: –
CHECKED BY: –

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: SIGNATURE SHEET

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: B-3

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SUMMARY OF STRUCTURE QUANTITIES

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
FOUNDATION	0455 34 5	PRESTRESSED CONCRETE PILING, 24" SQ	END BENT 1	LF	765.0		3870			
			PIER 2		2340.0					
			END BENT 3		765.0					
	0455 143 5	TEST PILES-PRESTRESSED CONCRETE,24" SQ	END BENT 1	LF	100.0		275			
			PIER 2		75.0					
			END BENT 3		100.0					
	0459 71	PILES, POLYETHYLENE SHEETING	END BENT 1	SY	231.8		468			
			END BENT 3		236.3					
SUBSTRUCTURE	0400 4 5	CONCRETE CLASS IV, BRIDGE SUBSTRUCTURE	END BENT 1	CY	91.38		186.3			
			PIER 2		3.50					
			END BENT 3		91.38					
	0400 4 25	CONCRETE CLASS IV, MASS, SUBSTRUCTURE	END BENT 1	CY	0.00		478.3			
			PIER 2		478.33					
			END BENT 3		0.00					
	0415 1 5	REINFORCING STEEL - BRIDGE SUBSTRUCTURE	END BENT 1	LB	19869.0		148608			
			PIER 2		108870.0					
			END BENT 3		19869.0					
	0524 2 2	CONCRETE SLOPE PAVEMENT, NON REINFORCED, 4"	END BENT 1	SY	42.9		86			
			END BENT 3		42.9					
APPROACH SLABS	0400 2 10	CONCRETE CLASS II, APPROACH SLABS	BEGIN BRIDGE APPROACH	CY	119.08		238.2			
			END BRIDGE APPROACH		119.08					
	0415 1 9	REINFORCING STEEL - APPROACH SLABS	BEGIN BRIDGE APPROACH	LB	21374.0		42748			
			END BRIDGE APPROACH		21374.0					
SUPERSTRUCTURE	0400 2 4	CONC CLASS II, BRIDGE SUPERSTRUCTURE	BRIDGE DECK	CY	1110.62		1110.6			
	0400 7 1	BRIDGE DECK GROOVING	APPROACH SLAB (BEGIN BRIDGE)	SY	14.2		2717			
			BRIDGE DECK		2688.1					
			APPROACH SLAB (END BRIDGE)		14.2					
	0400 9 1	BRIDGE DECK PLANING	APPROACH SLAB (BEGIN BRIDGE)	SY	14.2		2717			
			BRIDGE DECK		2688.1					
			APPROACH SLAB (END BRIDGE)		14.2					
	0415 1 4	REINFORCING STEEL - BRIDGE SUPERSTRUCTURE	BRIDGE DECK	LB	295571.0		295571			
	0400 147	COMPOSITE NEOPRENE PADS	END BENT 1	CF	7.41		27.5			
			PIER 2		12.69					
			END BENT 3		7.41					
	0460 2 2	STRUCTURAL STEEL, LOW ALLOY	BRIDGE SUPERSTRUCTURE	LS	1		1			
	0458 1 12	BRIDGE DECK EXPANSION JOINT, NEW CONSTRUCTION, F&I STRIP SEAL	END BENT 1	LF	99.6		199			
			END BENT 3		99.6					
RAILING/BARRIERS	0521 5 13	CONCRETE TRAFFIC RAILING- BRIDGE, 36" SINGLE-SLOPE	APPROACH SLAB (BEGIN BRIDGE)	LF	60.0		880			
			BRIDGE DECK		760.0					
			APPROACH SLAB (END BRIDGE)		60.0					
	0521 6 11	CONCRETE PARAPET, PEDESTRIAN/BICYCLE, 27" HEIGHT	APPROACH SLAB (BEGIN BRIDGE)	LF	60.0		880			
			BRIDGE DECK		760.0					
			APPROACH SLAB (END BRIDGE)		60.0					
	0550 10 354	FENCING, TYPE R, 8.1-10.0', WITH PARTIAL ENCLOSURE, TYPE R ONLY	APPROACH SLAB (BEGIN BRIDGE)	LF	60.0		880			
			BRIDGE DECK		760.0					
			APPROACH SLAB (END BRIDGE)		60.0					
	0520 70	CONCRETE TRAFFIC SEPARATOR, SPECIAL-VARIABLE WIDTH	APPROACH SLAB (BEGIN BRIDGE)	SY	56.7		831			
			BRIDGE DECK		717.8					
			APPROACH SLAB (END BRIDGE)		56.7					
	0630 2 16	CONDUIT, FURNISH & INSTALL, EMBEDDED- RAILINGS	APPROACH SLAB (BEGIN BRIDGE)	LF	188.7		2655			
			BRIDGE DECK		2278.0					
			APPROACH SLAB (END BRIDGE)		188.7					
	0635 3 13	JUNCTION BOX, FURNISH & INSTALL, EMBEDDED	LEFT COPING	EA	3.0		6			
			RIGHT COPING		3.0					

BRIDGE NO. 134XXX

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P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: DRA
CHECKED BY: QW
DESIGNED BY: RT
CHECKED BY: QW

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: SUMMARY OF STRUCTURES QUANTITIES
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B-4

GENERAL NOTES

DESIGN SPECIFICATIONS:

1. FDOT STRUCTURES MANUAL DATED JANUARY 2021 AND SUBSEQUENT STRUCTURES DESIGN BULLETINS 21-03 AND 21-04

2. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) LOAD AND RESISTANCE FACTOR (LRFD) BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION.

3. FDOT DESIGN MANUAL DATED JANUARY, 2021.

4. FLORIDA GREENBOOK DATED JULY, 2018.

GOVERNING STANDARDS AND CONSTRUCTION SPECIFICATIONS:

FLORIDA DEPARTMENT OF TRANSPORTATION, FY2021-22 STANDARDS PLANS AND REVISED INDEX DRAWINGS AS APPENDED HEREIN, AND JULY 2021 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS AMENDED BY CONTRACT DOCUMENTS.

VERTICAL DATUM:

NAVD 88.

DESIGN METHODOLOGY:

1. LOAD AND RESISTANCE FACTOR DESIGN (LRFD) METHOD USING STRENGTH, SERVICE, EXTREME EVENT AND FATIGUE LIMIT STATES.

2. OPERATIONAL IMPORTANCE FACTOR η = 1.0

STRUCTURAL ANALYSIS:

COMPONENT	SOFTWARE
STEEL GIRDER	MDX V6.5.4790

DESIGN LOADINGS:

1. LIVE LOADS: HL-93 WITH DYNAMIC LOAD ALLOWANCE

2. DEAD LOADS:

36" SINGLE-SLOPE TRAFFIC RAILING:	430 PLF
27" CONCRETE PARAPET:	225 PLF
STAY-IN-PLACE FORMS:	20 PSF
REINFORCED CONCRETE:	150 PCF
CONCRETE SEPARATOR:	1107 PLF
BRIDGE FENCING (CURVED TOP):	40 PLF

FUTURE WEARING SURFACE: DESIGN DOES NOT INCLUDE AN ALLOWANCE OF 15 PSF FOR FUTURE WEARING SURFACE.

THE 8½-INCH DECK THICKNESS INCLUDES A ONE-HALF INCH SACRIFICIAL THICKNESS INCLUDED IN THE DEAD LOAD OF THE DECK SLAB BUT OMITTED FROM THE SECTION PROPERTIES USED FOR DESIGN.

3. CONSTRUCTION LOADS:

FINISHING MACHINE LOAD:	16 KIPS
FINISHING MACHINE WHEEL LOCATION BEYOND THE EDGE OF DECK OVERHANG:	6 INCHES
CONSTRUCTION LIVE LOAD:	20 PSF EXTENDED OVER THE ENTIRE BRIDGE WIDTH AND 50-FEET IN LONGITUDINAL LENGTH CENTERED ON THE FINISHING MACHINE.
REMOVABLE DECK CANTILEVER TIMBER FORMS WITH OVERHANG BRACKETS:	15 PSF
LIVE LOAD AT OR NEAR THE OUTSIDE EDGE OF DECK DURING DECK CASTING:	75 PLF APPLIED AS A MOVING LOAD OVER A LENGTH OF 20 FT.
CONSTRUCTION INACTIVE DESIGN WIND SPEED:	90 MPH
VELOCITY PRESSURE EXPOSURE COEFFICIENT (KZ):	1.05
CONSTRUCTION ACTIVE DESIGN WIND SPEED:	30 MPH

4. VEHICULAR COLLISION FORCE: NEW PIER COLUMNS HAVE BEEN DESIGNED TO WITHSTAND THE 600 KIP VEHICULAR COLLISION FORCE PER LRFD.

5. UTILITIES: NO ALLOWANCE FOR UTILITY LOADS HAS BEEN INCLUDED IN THE DESIGN.

ENVIRONMENT:

BRIDGE NO.	SUPERSTRUCTURE	SUBSTRUCTURE
134XXX	SLIGHTLY AGGRESSIVE	CONCRETE: EXTREMELY AGGRESSIVE (SOIL-pH < 5.0) STEEL: EXTREMELY AGGRESSIVE (SOIL-pH < 6.0)

MATERIALS:

1. CONCRETE:

CONCRETE CLASS	MINIMUM 28-DAY COMPRESSIVE STRENGTH (psi)	LOCATION OF CONCRETE IN STRUCTURE
II	3,400	TRAFFIC RAILING
II (BRIDGE DECK)	4,500	C.I.P. SUPERSTRUCTURE & APPROACH SLABS
IV	5,500	C.I.P. SUBSTRUCTURE
V (SPECIAL) WITH HIGHLY REACTIVE POZZOLANS	6,000	PRESTRESSED CONCRETE PILES

2. CONCRETE COVER:

CONCRETE COVER DIMENSIONS SHOWN IN THE PLANS DO NOT INCLUDE PLACEMENT AND FABRICATION TOLERANCES UNLESS SHOWN AS "MINIMUM COVER". SEE SPECIFICATION SECTION 415 FOR ALLOWABLE TOLERANCES. ALL DIMENSIONS PERTAINING TO THE LOCATION OF REINFORCING STEEL ARE TO CENTERLINE OF BAR EXCEPT WHERE CLEAR DIMENSION IS NOTED TO FACE OF CONCRETE.

CAST-IN-PLACE SUPERSTRUCTURE (TOP OF DECK)	2½" *
CAST-IN-PLACE SUPERSTRUCTURE (EXCEPT TOP OF DECK)	2"
CAST-IN-PLACE SUBSTRUCTURE (CAST AGAINST EARTH OR SURFACES IN CONTACT WITH WATER)	4½"
CAST-IN-PLACE SUBSTRUCTURE (FORMED SURFACES)	4"
CAST-IN-PLACE SUBSTRUCTURE (BEAM PEDESTALS)	2"

* INCLUDES ½" SACRIFICIAL THICKNESS.

3. REINFORCING STEEL:

A. GRADE 60 CARBON STEEL PER SPECIFICATIONS SECTION 931.

B. TYPICAL REINFORCING BARS ARE DESIGNATED AS:

PLAN DIMENSIONS:

ALL DIMENSIONS IN THESE PLANS ARE MEASURED IN FEET EITHER HORIZONTALLY OR VERTICALLY UNLESS NOTED OTHERWISE.

UTILITIES:

FOR PLAN LOCATIONS OF EXISTING UTILITIES AND DISPOSITION OF UTILITIES, SEE THE UTILITY ADJUSTMENT SHEET(S) IN THE ROADWAY PLANS.

BRIDGE NAME AND NUMBER:

PLACE THE FOLLOWING BRIDGE NAME AND NUMBER ON THE TRAFFIC RAILINGS IN ACCORDANCE WITH THE TRAFFIC RAILING STANDARD PLANS:

BRIDGE NO.	NAME
134XXX	44TH AVE EAST OVER SR 93 (I-75)

CONCRETE SURFACE FINISH:

A CLASS 5 FINISH COATING SHALL BE APPLIED TO THE PORTIONS OF THE STRUCTURE SHOWN ON THE SURFACE FINISH DETAIL SHEET.

BRIDGE FENCE FINISH:

PROVIDE POLYVINYL CHLORIDE (PVC) COATED STEEL - 9 GAUGE ZINC COATED WIRE, CLASS 2B.

1. PAINT PVC COATED CHAIN LINK FABRIC BLACK AND IN ACCORDANCE WITH SPECIFICATION SECTION 975.

2. PAINT FENCE FRAMEWORK, TENSION WIRE AND FENCE FITTINGS TO MATCH THE COLOR OF THE PVC CHAIN LINK FABRIC.

3. PREPARE ALL GALVINIZED SURFACES TO BE PAINTED IN ACCORDANCE WITH ASTM D6386 AND THE MANUFACTURER OF THE COATING SYSTEM'S SPECIFICATIONS. PROVIDE A CLEAN AND SUITABLE GALVANIZED SURFACE THAT MAXIMIZES COATING SYSTEM ADHESION.

BRIDGE NO. 134XXX

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REVISIONS

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Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: DRA
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DESIGNED BY: CMH
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: GENERAL NOTES (1 OF 2)

REF. DWG. NO.

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO. B-5

CSMITH 2/17/2022 2:01:10 PM PW:\

GENERAL NOTES (CONT.)

SCREEDING DECK SLABS:

SCREED THE RIDING SURFACE OF THE BRIDGE DECK AND APPROACH SLABS TO ACHIEVE THE FINISH GRADE ELEVATIONS SHOWN IN THE PLANS. ACCOUNT FOR THEORETICAL DEFLECTIONS DUE TO SELF WEIGHT, DECK CASTING SEQUENCE, DECK FORMING SYSTEMS, CONSTRUCTION LOADS, OVERLAYS AND TEMPORARY SHORING, ETC. AS REQUIRED.

STAY-IN-PLACE DECK FORMS:

DESIGN INCLUDES ALLOWANCE FOR 20 PSF OVER THE PROJECTED PLAN AREA OF THE METAL FORMS FOR THE UNIT WEIGHT OF THE METAL FORMS AND THE CONCRETE REQUIRED TO FILL THE FORM FLUTES. STAY-IN-PLACE FORMS ARE NOT ALLOWED AT DECK CANTILEVERS.

JOINTS IN CONCRETE:

CONSTRUCTION JOINTS WILL BE PERMITTED ONLY AT THE LOCATIONS INDICATED IN THE PLANS. ADDITIONAL CONSTRUCTION JOINTS OR ALTERATIONS TO THOSE SHOWN SHALL REQUIRE APPROVAL OF THE ENGINEER.

PHASING OF WORK:

1. WORK PHASING AND PROGRESSION OF THE WORK SHALL CONFORM TO THE TRAFFIC CONTROL PLANS LOCATED IN THE ROADWAY PLANS AND THE NOTES ON THE CONSTRUCTION/ERECTION SEQUENCE DRAWINGS.

2. IF UTILIZED, PROTECT ALL TEMPORARY SUPPORTS WITHIN THE CLEAR ZONE FROM ADJACENT TRAFFIC BY TEMPORARY CONCRETE BARRIER (INDEX NO. 102-110).

3. PERFORM CONSTRUCTION OVER TRAFFIC IN ACCORDANCE WITH INDEX NO. 102-600.

FOUNDATIONS:

1. ALL CONSTRUCTION OF FOUNDATIONS EXCEPT PILE DRIVING TO BE DONE IN THE DRY.

2. DEWATERING - THE CONTRACTOR SHALL ANTICIPATE THE WATER TABLE MAY BE ENCOUNTERED DURING EXCAVATION FOR THE BRIDGE FOOTINGS ADJACENT TO LAFAYETTE CREEK. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE WATER LEVEL A MINIMUM OF 3'-0" OR MORE BELOW THE MAXIMUM DEPTH OF THE EXCAVATIONS. SEE ARTICAL 455-28 OF THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

STRUCTURAL STEEL:

ALL STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH A709, GRADE 50, UNLESS OTHERWISE NOTED.

CHAPPY V-NOTCH:

ALL MEMBERS SUBJECTED TO TENSILE STRESSES IDENTIFIED AS MAIN LOAD CARRYING MEMBERS SHALL BE TESTED IN ACCORDANCE WITH SPECIFICATIONS SECTION 962.

STEEL FABRICATION:

1. MAKE ALL SHOP SPLICES IN FLANGES AND WEBS PRIOR TO WELDING FLANGES TO WEBS. INDICATE ALL SPLICES ON THE SHOP DRAWINGS.

2. THE STEEL SUPERSTRUCTURE SHALL BE DETAILED FOR STEEL DEAD LOAD FIT (SDLF).

3. SHOP ASSEMBLIES ARE REQUIRED IN ACCORDANCE WITH SPECIFICATION SECTION 460.

4. ALL ENDS OF GIRDERS, BEARING STIFFENERS, END DIAPHRAGMS AND PIER DIAPHRAGMS SHALL BE VERTICAL AFTER DEAD LOAD IS APPLIED. ALL INTERMEDIATE STIFFENERS, INTERMEDIATE CROSSFRAMES AND FIELD SPLICES SHALL BE NORMAL TO GRADE.

WELDING:

1. PERFORM NON-DESTRUCTIVE TESTING ON WELDS AS REQUIRED BY THE 2015 EDITION WITH 2018 AND 2019 INTERIMS OF THE AASHTO/AWS D1.5 BRIDGE WELDING CODE.

2. FOR GRADE 50 BASE METAL. THE WELD FILLER METAL STRENGTH FOR FILLET WELDS SHALL BE $E_{xx}F$ = 70 KSI.

3. FIELD WELDING TO ANY STRUCTURAL STEEL FOR THE PURPOSE OF ATTACHING ERECTION HARDWARE SHALL BE FORMALLY SUBMITTED TO THE ENGINEER FOR APPROVAL.

4. FIELD WELDING SHALL BE PER REQUIREMENTS OF AASHTO/AWS D1.5 FOR NON-ANCILLARY ITEMS. AVOID DAMAGE TO BEARINGS WHEN FIELD WELDING SOLE PLATES TO GIRDER FLANGES. REPLACE BEARINGS DAMAGED BY FIELD WELDING AT THE CONTRACTOR'S EXPENSE.

5. THE FOLLOWING MEMBERS ARE CLASSIFIED AS ANCILLARY MEMBERS IN ACCORDANCE WITH THE CURRENT EDITION OF THE AASHTO/AWS D1.5 BRIDGE WELDING CODE:

   A. EXPANSION DAMS
   B. DRAINAGE COMPONENTS
   C. SHEET PILING
   D. BEARINGS

BOLTED CONNECTIONS:

ALL BOLTED CONNECTIONS SHALL BE MADE WITH 1" DIAMETER HIGH STRENGTH BOLTS IN ACCORDANCE WITH ASTM F3125 GRADE A325, TYPE 1 UNLESS OTHERWISE SHOWN. ALL BOLT HOLES SHALL BE 1⅛" DIAMETER UNLESS OTHERWISE SHOWN. THREADS SHALL BE EXCLUDED FROM THE SHEAR PLANE FOR PLATE THICKNESS OF ¾" OR GREATER ADJACENT TO THE NUT. BOLT HEADS SHALL BE ON THE EXTERIOR/EXPOSED FACE OF THE GIRDERS.

ANCHOR BOLTS:

ANCHOR BOLTS SHALL BE IN ACCORDANCE WITH ASTM F1554. THE ANCHOR BOLTS AND WASHERS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH SECTION 962 OF THE SPECIFICATIONS.

PAINTING:

PAINT ALL STEEL WITH A HIGH PERFORMANCE COATING SYSTEM. THE COLOR OF THE FINISH COAT SHALL CONFORM TO HEXADECIMAL COLOR CODE #CB6015

ABBREVIATIONS:

E.F.	DENOTES "EACH FACE"
N.F.	DENOTES "NEAR FACE"
F.F.	DENOTES "FAR FACE"
U.N.O.	DENOTES "UNLESS NOTED OTHERWISE"
INTER.	DENOTES "INTERMEDIATE"
FFBW	DENOTES "FRONT FACE OF BACKWALL"
E.J.	DENOTES "EXPANSION JOINT"
E	DENOTES "EXPANSION BEARING"
F	DENOTES "FIXED BEARING"
FS	DENOTES "FIELD SPLICE"

PAY ITEM NOTES:

1. FOR SUMMARY OF BRIDGE PAY ITEMS, SEE ROADWAY PLANS.

2. INCLUDE PAYMENT FOR INCIDENTAL ITEMS NOT SPECIFICALLY COVERED IN THE INDIVIDUAL PAY ITEMS IN THE CONTRACT UNIT PRICE FOR THE PAY ITEMS.

3. ALL QUANTITIES THAT ARE ASSOCIATED WITH THE INDIVIDUAL APPROACH SLABS ARE INCLUDED WITH THE BRIDGE QUANTITIES EXCEPT FOR THE ASPHALT OVERLAY QUANTITIES. THEY ARE INCLUDED WITH THE ROADWAY QUANTITIES.

4. INCLUDE THE COST OF ALL LABOR AND MATERIALS REQUIRED FOR THE INSTALLATION OF ROOFING PAPER AND PREMOLDED EXPANSION MATERIAL IN THE CONTRACT UNIT PRICE FOR THE ADJACENT CONCRETE PAY ITEM.

5. FOR TRAFFIC CONTROL PAY ITEM NOTES, SEE ROADWAY PLANS.

6. PAY ITEM NO. 400-4-5 (CONCRETE CLASS IV - SUBSTRUCTURE) INCLUDES FURNISHING AND INSTALLATION OF ANCHOR BOLTS AT THE END BENTS. LIKEWISE, PAY ITEM 400-4-25 (CONCRETE CLASS IV - MASS SUBSTRUCTURE) INCLUDES FURNISHING AND INSTALLATION OF ANCHOR BOLTS AT THE PIER.

7. INCLUDE THE COST OF STAY-IN-PLACE METAL FORMS, CONCRETE REQUIRED TO FILL FLUTES, METAL FORM ATTACHMENTS AND ACCESSORIES, AND ALL MISCELLANEOUS ITEMS REQUIRED TO INSTALL THE FORMS IN THE CONTRACT UNIT PRICE FOR THE SUPERSTRUCTURE CONCRETE PAY ITEM NO. 400-2-4.

8. INCLUDE THE COST OF COATING STRUCTURAL STEEL IN THE CONTRACT UNIT PRICE FOR STRUCTURAL STEEL PAY ITEM NO. 460-2-2.

9. ALL QUANTITIES ASSOCIATED WITH THE INSTALLATION OF LIGHTING ON THE BRIDGE AND MSE WALLS ARE INCLUDED WITH THE LIGHTING PLANS.

BRIDGE NO. 134XXX

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: DRA
CHECKED BY: CAS
DESIGNED BY: CMH
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: GENERAL NOTES (2 OF 2)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B-6

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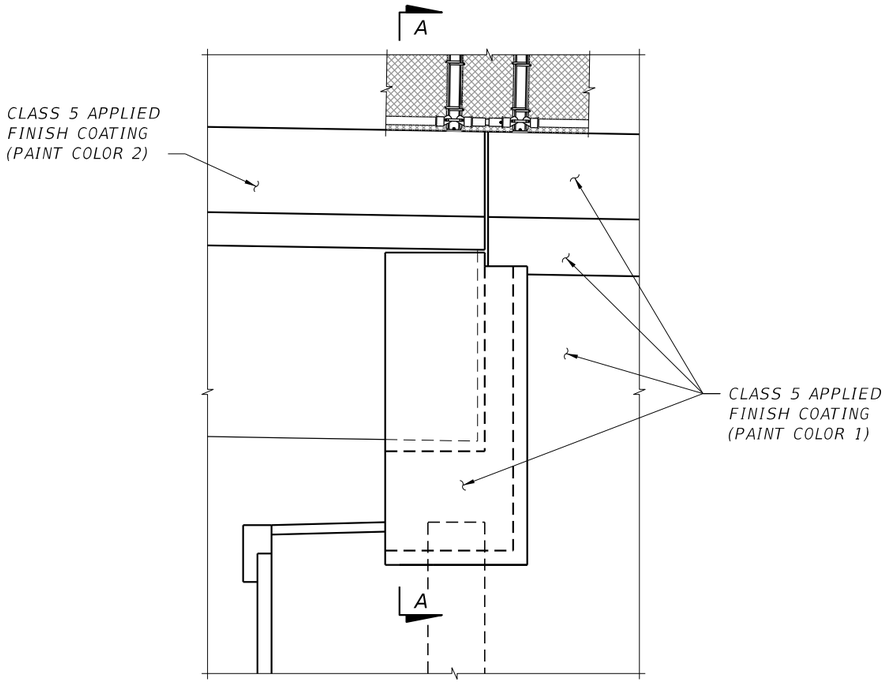
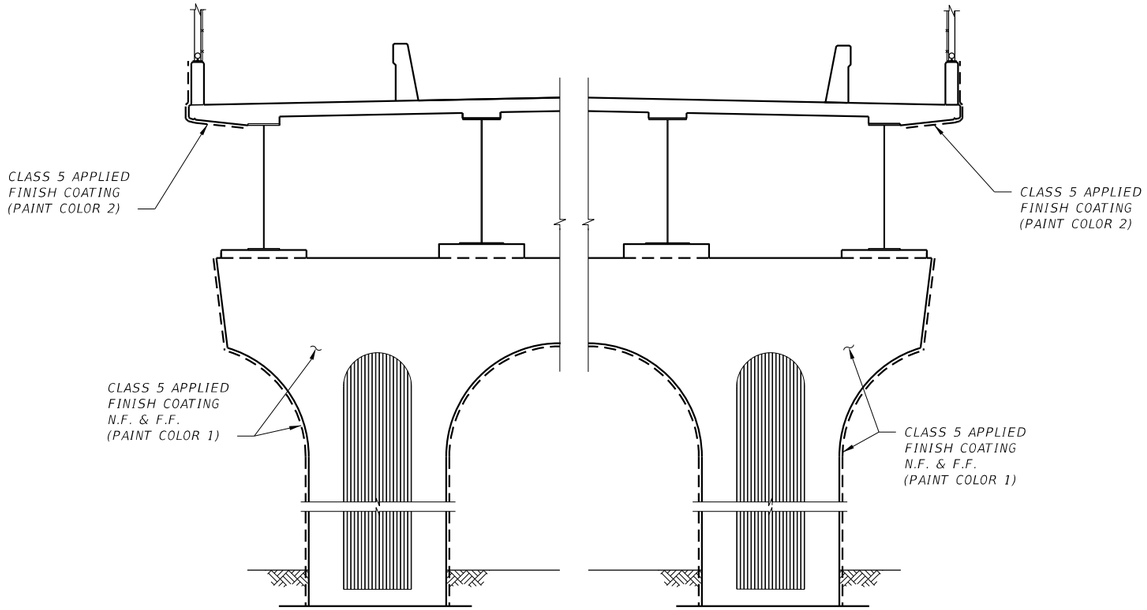
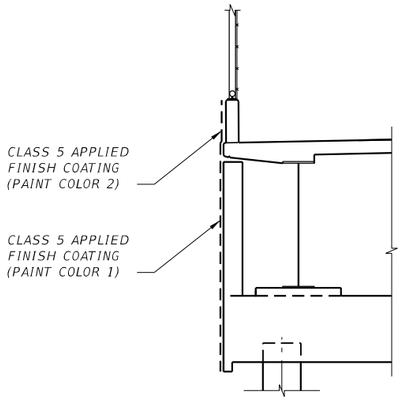


END BENT VIEW AT END BENT 3



PIER



VIEW A-A

SURFACE FINISH DETAILS

PAINT COLOR LEGEND:

1. FED-STD-595, TABLE VIII, SHADE NO. 36622
2. HEXADECIMAL COLOR CODE #64CCC9

BRIDGE NO. 134XXX

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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DESIGNED BY: CMH
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Manatee County FLORIDA
Manatee County Public Works

SHEET TITLE: SURFACE FINISH DETAILS
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B-7

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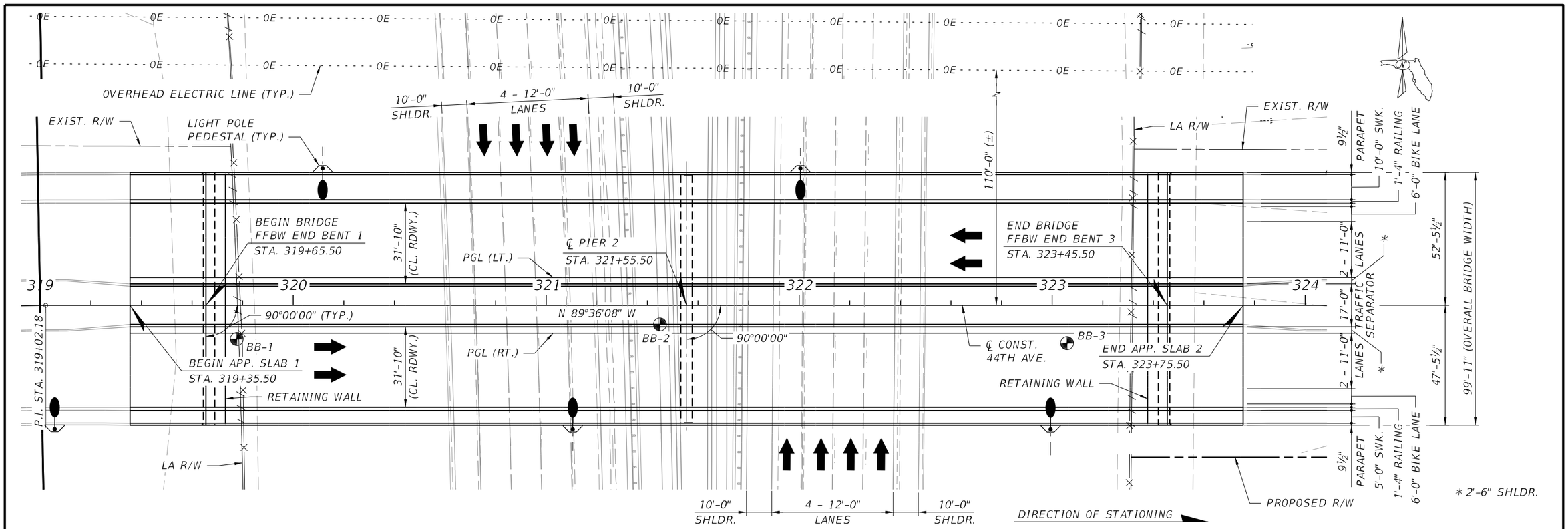
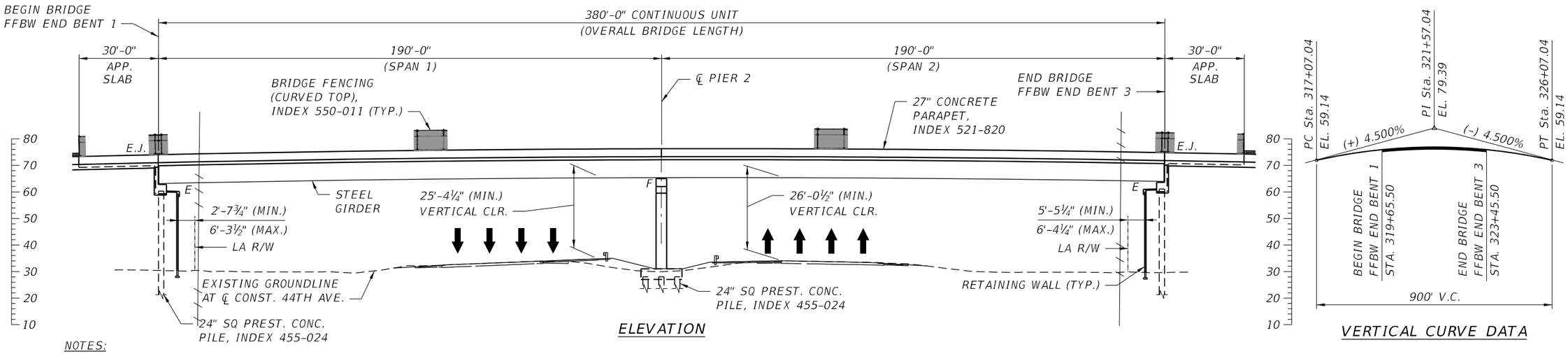


PLAN



ELEVATION

VERTICAL CURVE DATA

NOTES:

1. FOR RETAINING WALL GEOMETRY AND DETAILS, SEE WALL PLAN SHEETS.
2. FOR LIGHT POLE PEDESTAL NOTES AND DETAILS, SEE STANDARD PLANS INDEX 521-660.
3. FOR DISPOSITION OF UTILITIES, SEE UTILITY ADJUSTMENT SHEETS IN THE ROADWAY PLANS.
4. FOR LIGHT POLE LOCATIONS, SEE SUPERSTRUCTURE PLAN SHEET.

BRIDGE NO. 134XXX

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
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Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: PLAN AND ELEVATION

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: B1-1

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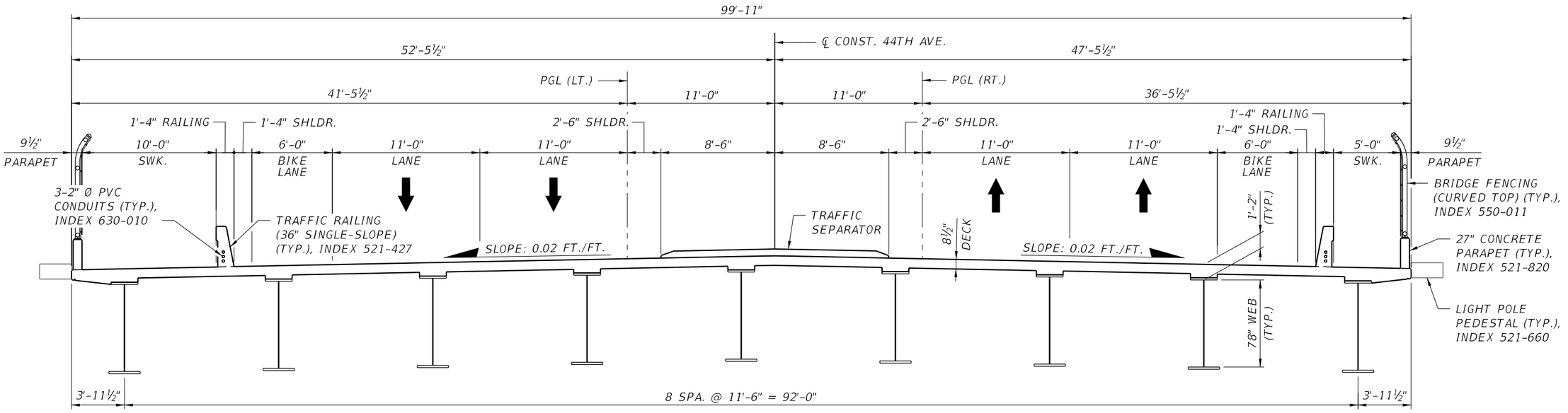

TYPICAL SECTION

BRIDGE NO. 134XXX

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
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HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

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Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: TYPICAL SECTION

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: B1-2

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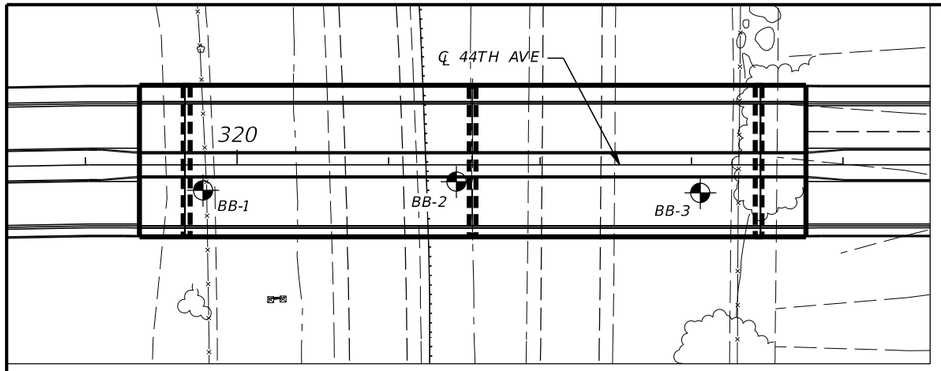
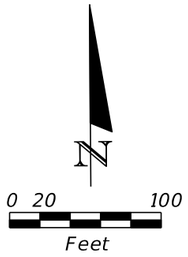




ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (pH = 4.9)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (pH = 4.9)
SUPERSTRUCTURE	SLIGHTLY AGGRESSIVE

SOIL TEST RESULTS:

RESISTIVITY	47,000 TO 77,000 OHM-CM
CHLORIDES	15 PPM
SULFATES	<5 PPM
pH	4.9 TO 5.7

LEGEND

- GRAY TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- GRAY SILTY SAND (SM)
- LIGHT BROWN TO GRAY CLAYEY SAND (SC)
- LIGHT GRAY SANDY CLAY TO CLAY TO SILT (CL/CH/MH)
- CEMENTED CLAY TO SILT, SOMETIMES WITH LIMESTONE FRAGMENTS (CL/CH/MH)

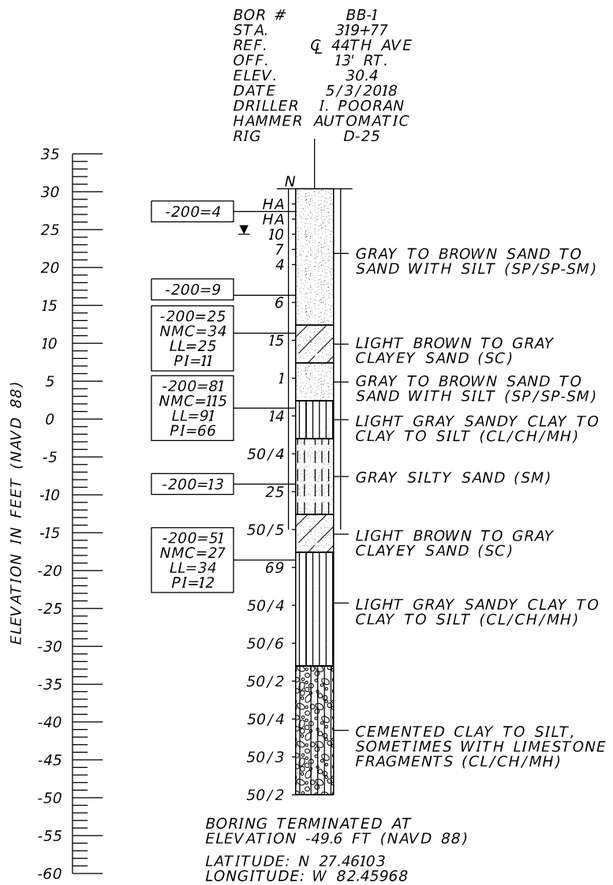
SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
HA	HAND AUGERED TO VERIFY UTILITY CLEARANCE
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988

- APPROXIMATE SPT BORING LOCATION
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- 100 LOSS OF CIRCULATION OF DRILLING FLUID (%)

℄ 44TH AVE CENTERLINE CONSTRUCTION OF 44TH AVENUE EAST

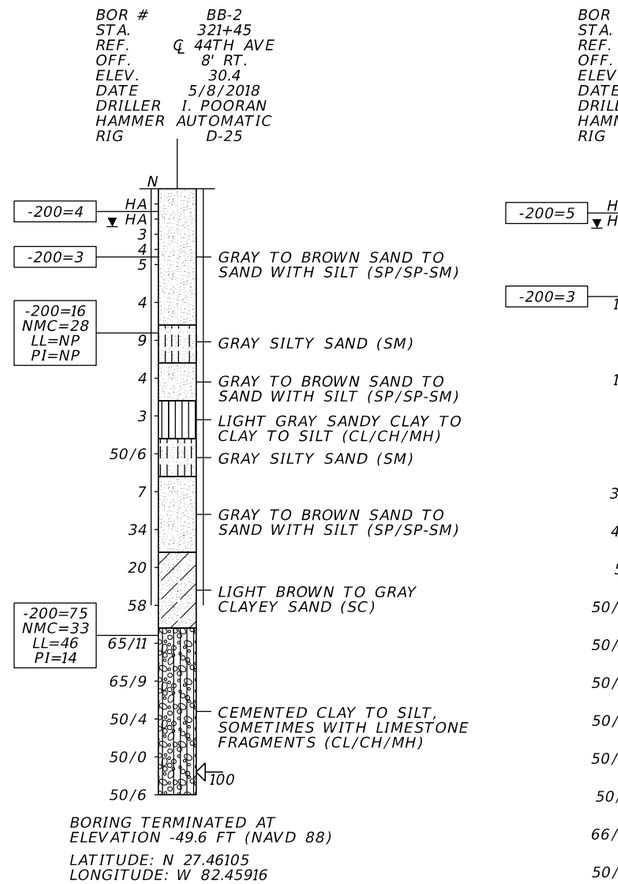
NOTE: THE LOCATIONS OF THE BORINGS WERE SURVEYED BY THE PROJECT SURVEYOR.

BORING LOCATION PLAN



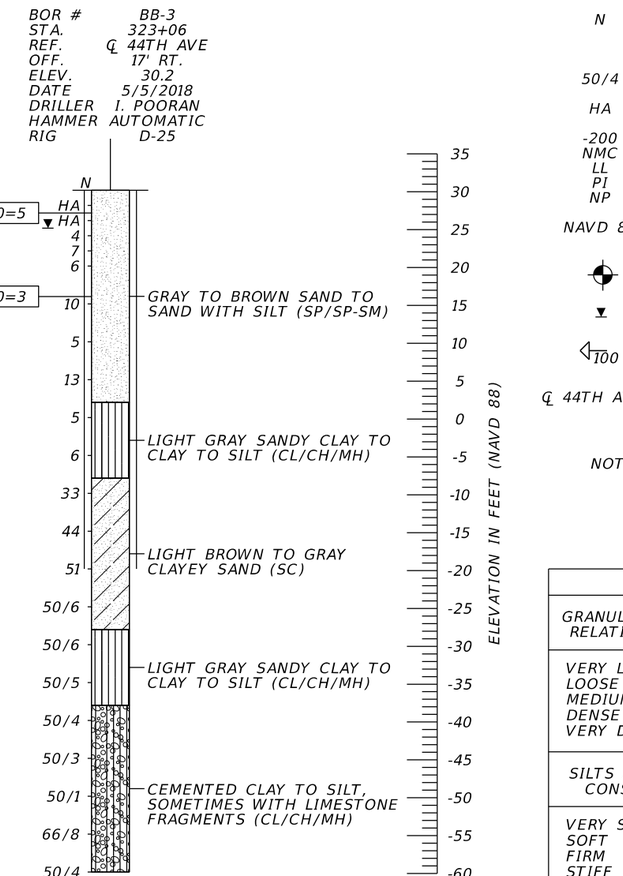
BORING TERMINATED AT ELEVATION -49.6 FT (NAVD 88)

LATITUDE: N 27.46103
LONGITUDE: W 82.45968



BORING TERMINATED AT ELEVATION -49.6 FT (NAVD 88)

LATITUDE: N 27.46105
LONGITUDE: W 82.45916



BORING TERMINATED AT ELEVATION -59.8 FT (NAVD 88)

LATITUDE: N 27.46103
LONGITUDE: W 82.45867

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BMG
CHECKED BY: DRR
DESIGNED BY: BMG
CHECKED BY: DRR

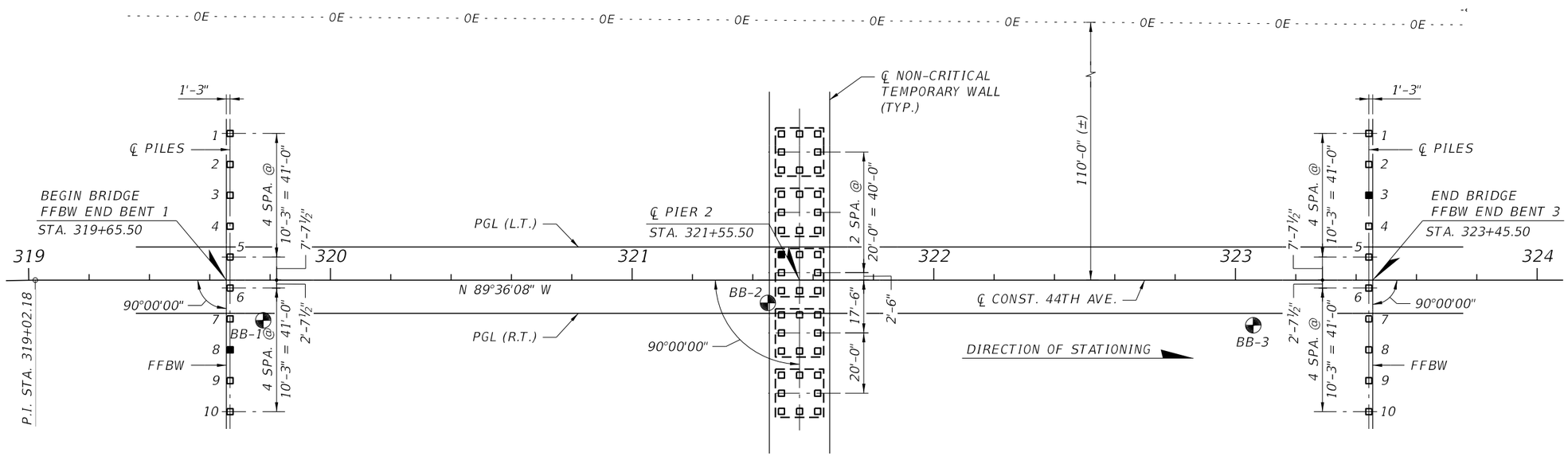
Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: REPORT OF CORE BORINGS (1)

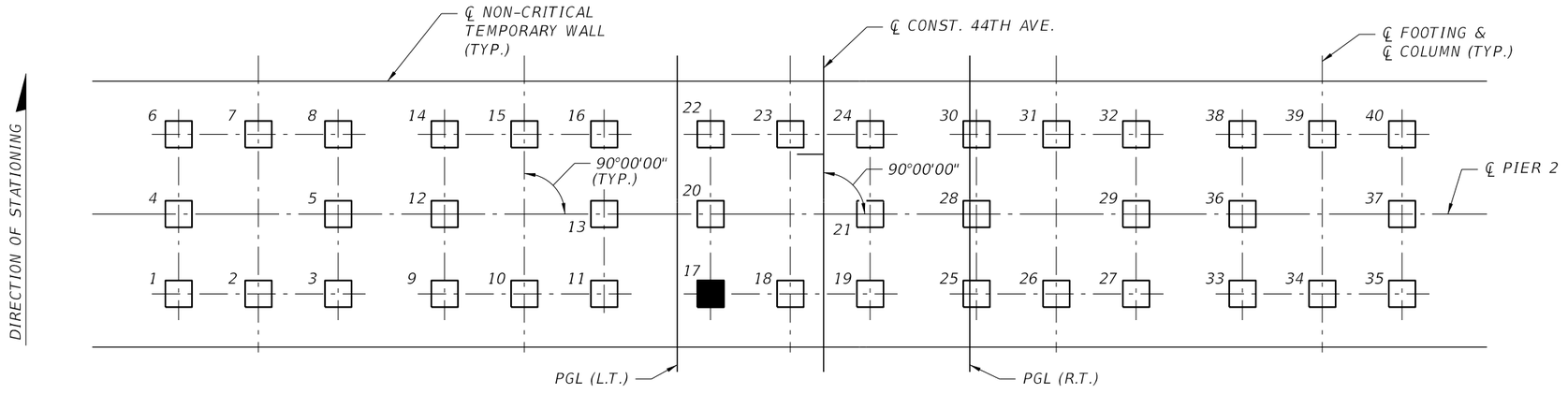
REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: B1-3



PLAN



PIER FOOTING PLAN

NOTES:

1. ■ INDICATES BORING LOCATION. FOR BORING DATA, SEE REPORT OF CORE BORING SHEETS.
2. □ INDICATES PROPOSED 24" SQ. PRESTRESSED CONCRETE PILE, INDEX 455-024.
3. ■ INDICATES PROPOSED 24" SQ. PRESTRESSED CONCRETE TEST PILE, INDEX 455-024.
4. FOR PILE INSTALLATION NOTES, SEE PILE DATA TABLE SHEET.
5. PILE SPACINGS ARE DIMENSIONED ALONG ℄ PILES.
6. FOR DISPOSITION OF UTILITIES, SEE THE UTILITY ADJUSTMENT SHEETS IN THE ROADWAY PLANS.
7. FOR RETAINING WALL GEOMETRY AND DETAILS, SEE WALL PLAN SHEETS.

BRIDGE NO. 134XXX

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
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HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY:	JRC
CHECKED BY:	CMH
DESIGNED BY:	CMH
CHECKED BY:	JVD

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: FOUNDATION LAYOUT

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: B1-4

CSMITH 2/17/2022 1:49:13 PM PW:\

PILE DATA TABLE

Table Date 01/01/16

INSTALLATION CRITERIA								DESIGN CRITERIA								PILE CUT-OFF ELEVATIONS
PIER or BENT NUMBER	PILE SIZE (in.)	NOMINAL BEARING RESISTANCE (tons)	NOMINAL UPLIFT RESISTANCE (tons)	MINIMUM TIP ELEVATION (ft.)	TEST PILE LENGTH (ft.)	REQUIRED JET ELEVATION (ft.)	REQUIRED PREFORM ELEVATION (ft.)	FACTORED DESIGN LOAD (tons)	FACTORED DESIGN UPLIFT LOAD (tons)	DOWN DRAG (tons)	TOTAL SCOUR RESISTANCE (tons)	NET SCOUR RESISTANCE (tons)	100-YEAR SCOUR ELEVATION (ft.)	Ø COMPRESSION	Ø UPLIFT	PILE 1 THRU 40
END BENT 1	24"	350	N/A	SEE NOTE 7	100	N/A	N/A	227	N/A	N/A	N/A	N/A	N/A	0.65	N/A	55.4 (TYP. FOR PILE 1 THRU 10)
PIER 2	24"	385	N/A	-20	75	N/A	N/A	250	N/A	N/A	N/A	N/A	N/A	0.65	N/A	24.0 (TYP. FOR PILE 1 THRU 40)
END BENT 3	24"	350	N/A	SEE NOTE 7	100	N/A	N/A	227	N/A	N/A	N/A	N/A	N/A	0.65	N/A	55.5 (TYP. FOR PILE 1 THRU 10)

$$\frac{\text{FACTORED DESIGN LOAD + NET SCOUR RESISTANCE + DOWNDRAG}}{\text{Ø}} \leq \text{NOMINAL BEARING RESISTANCE}$$

UPLIFT RESISTANCE - THE ULTIMATE SIDE FRICTION CAPACITY THAT MUST BE OBTAINED BELOW THE 100 YEAR SCOUR ELEVATION TO RESIST PULLOUT OF THE PILE (SPECIFY ONLY WHEN DESIGN REQUIRES UPLIFT CAPACITY).

TOTAL SCOUR RESISTANCE - AN ESTIMATE OF THE ULTIMATE STATIC SIDE FRICTION RESISTANCE PROVIDED BY THE SCOURABLE SOIL.

NET SCOUR RESISTANCE - AN ESTIMATE OF THE ULTIMATE STATIC SIDE FRICTION RESISTANCE PROVIDED BY THE SOIL FROM THE REQUIRED PERFORMED OR JETTING ELEVATION TO THE SCOUR ELEVATION.

100-YEAR SCOUR ELEVATION - ESTIMATED ELEVATION OF SCOUR DUE TO THE 100 YEAR STORM EVENT.

PILE INSTALLATION NOTES [Notes Date 11-01-20]:

1. ALL PILES SHALL BE DRIVEN PLUMB.
2. CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO DRIVING ANT PILES, NOTIFY ALL INVOLVED UTILITY COMPANIES PRIOR TO EXCAVATION, PILE DRIVING OR CONSTRUCTION AND SHALL ASSURE THAT UTILITIES ARE PROPERLY MAINTAINED AND PROTECTED AGAINST DAMAGE DURING CONSTRUCTION.
3. ALL TEST PILES SHALL BE DYNAMICALLY MONITORED AS PER SECTION 455-5.13 OF THE FDOT SPECIFICATIONS.
4. TEST PILES SHALL BE DRIVEN IN THE POSITION OF A PERMANENT PILE AT LOCATIONS SHOWN ON THE FOUNDATION LAYOUT SHEET OR AS DIRECTED BY THE ENGINEER OF RECORD.
5. DO NOT JET PILE LOCATIONS WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
6. THE PORTION OF ANY PILE DRIVEN PRIOR TO PLACING EMBANKMENT FILL SHALL BE WRAPPED WITH POLYETHYLENE SHEETING TO MINIMIZE DOWN DRAG. REFER TO SECTION 459 OF THE FDOT SPECIFICATIONS FOR EXPOSED PORTIONS OF PILING LOCATED ABOVE THE EXISTING GROUND LINE TO BELOW THE BOTTOM OF THE CONCRETE END BENT CAP.
7. MINIMUM TIP ELEVATION SHALL BE IN ACCORDANCE WITH SECTION 455 OF THE FDOT SPECIFICATIONS.

BRIDGE NO. 134XXX

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CHECKED BY: CAS
DESIGNED BY: CMH
CHECKED BY: JVD

Manatee County Public Works

SHEET TITLE: PILE DATA TABLE
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-5

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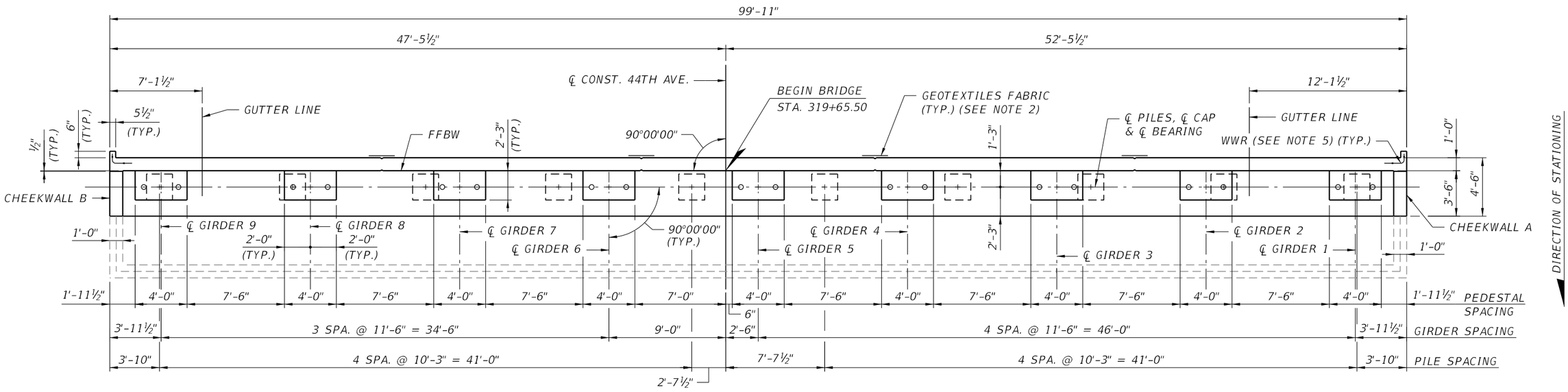
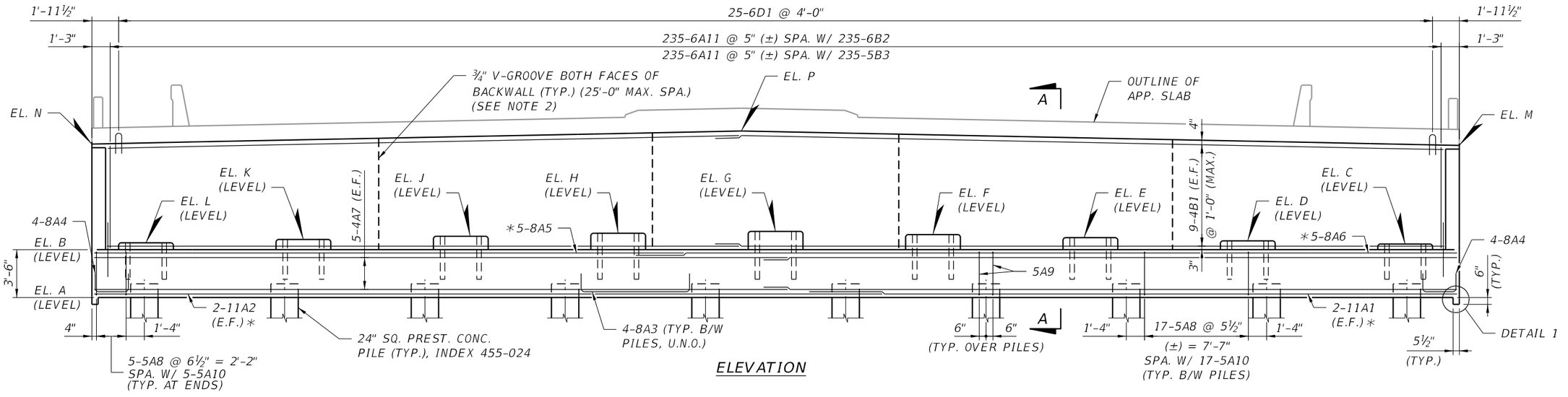


PLAN



ELEVATION

∗ ALTERNATE 11A1 & 11A2 BARS
ALTERNATE 8A5 & 8A6 BARS

NOTES:

1. FOR PILE LOADS AND PILE CUT-OFF ELEVATIONS, SEE PILE DATA TABLE SHEET.
2. ATTACH TYPE D-5 (SPECIFICATIONS SECTION 985) GEOTEXTILE FABRIC, 1'-0" WIDE AND FULL HEIGHT OF FILL, TO THE BACK OF BACKWALL WITH AN ADHESIVE APPROVED BY THE ENGINEER.
3. FOR SECTION A-A, DETAILS AND ELEVATIONS, SEE END BENT DETAILS SHEETS.
4. FOR REINFORCING BAR LIST, SEE REINFORCING BAR LIST SHEETS.
5. WELDED WIRE REINFORCING 4X4 - W 4.0X4.0 (MIN. 2'-6" WIDE) TIED TO INSIDE OF THE HORIZONTAL REINFORCING IN BACK FACE OF BACKWALL.
6. MINIMUM LAP: NO. 4 = 1'-9"
   NO. 8 = 3'-6"
   NO. 11 = 5'-4"

BRIDGE NO. 134XXX

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REVISIONS					
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P.E. LICENSE NUMBER 70756
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2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: DRA
CHECKED BY: CMH
DESIGNED BY: CMH
CHECKED BY: JVD

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: END BENT 1
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-6

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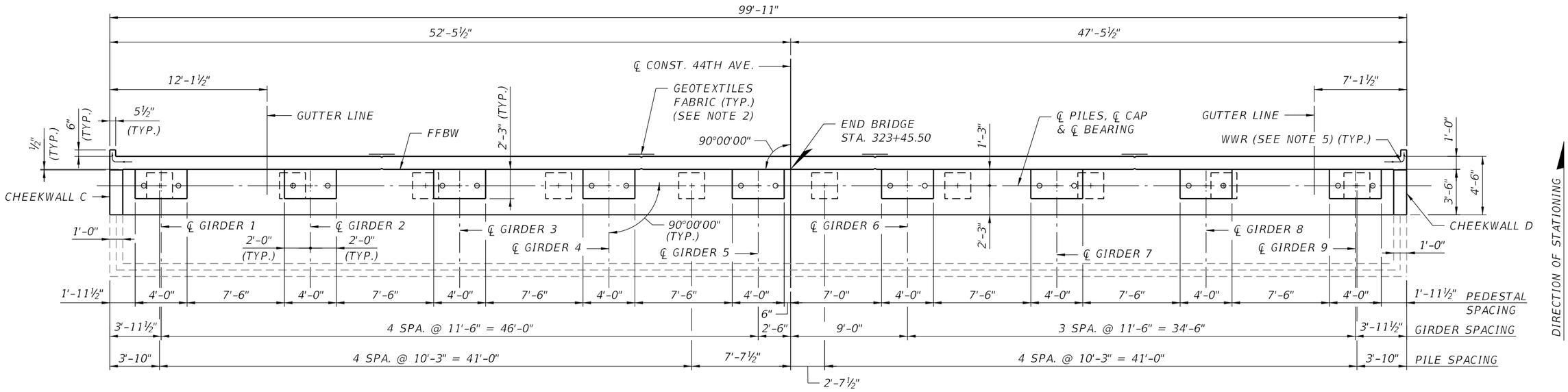
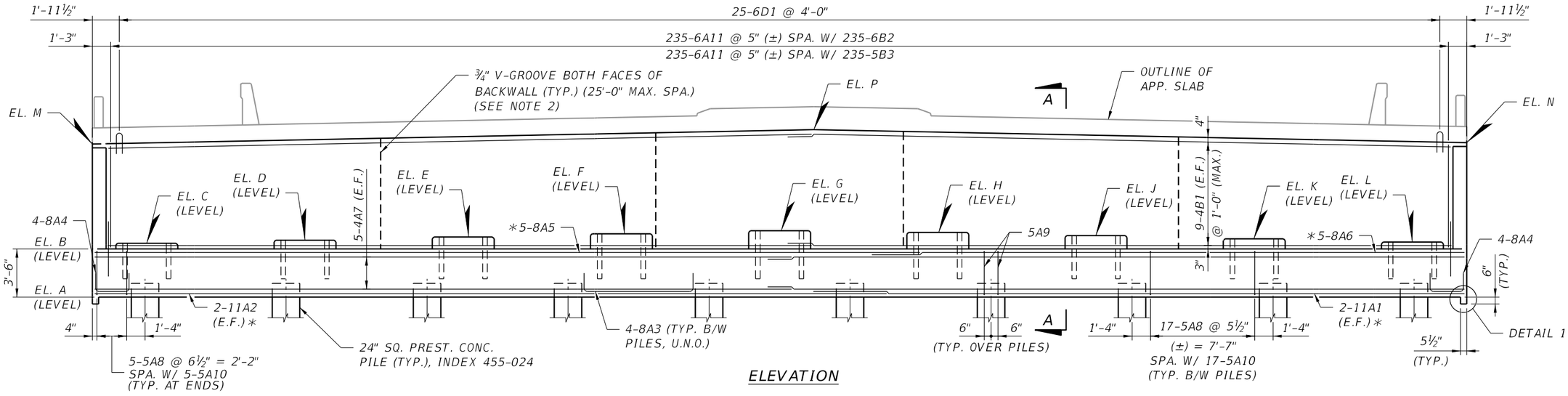


PLAN



ELEVATION

∗ ALTERNATE 11A1 & 11A2 BARS
ALTERNATE 8A5 & 8A6 BARS

NOTE:

FOR NOTES, SEE END BENT 1 SHEET.

BRIDGE NO. 134XXX

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
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HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
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CHECKED BY:	CMH
DESIGNED BY:	CMH
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Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE:	END BENT 3
REF. DWG. NO.	
PROJECT NAME:	44TH AVENUE EAST OVER I-75
SHEET NO.	B1-7

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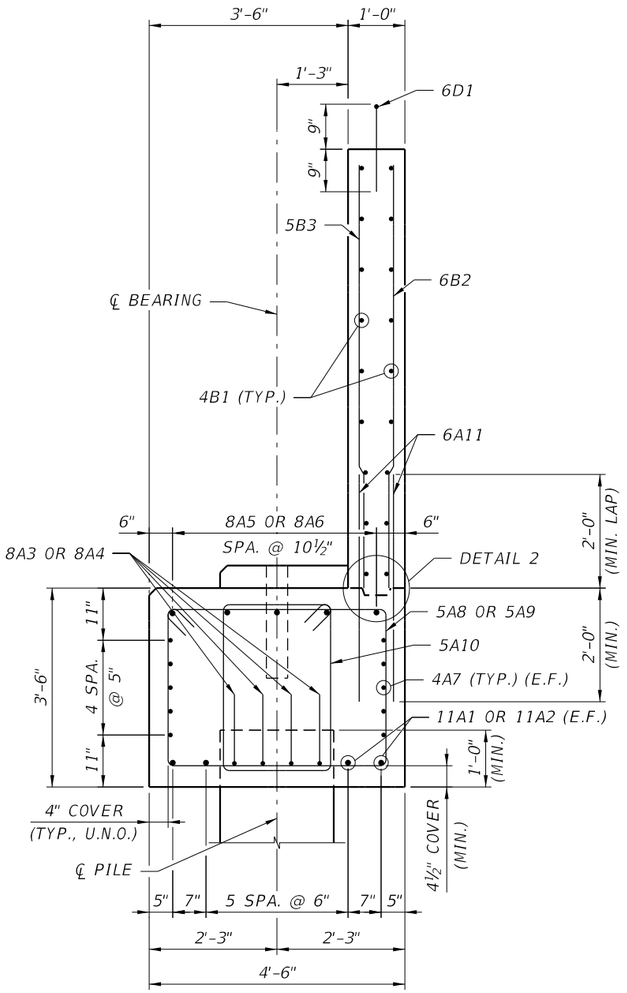
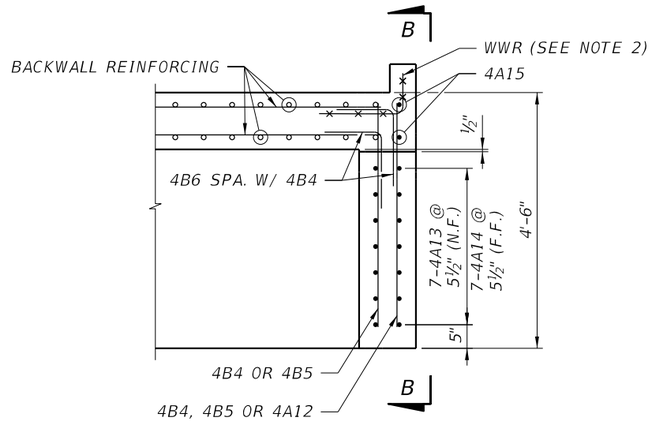
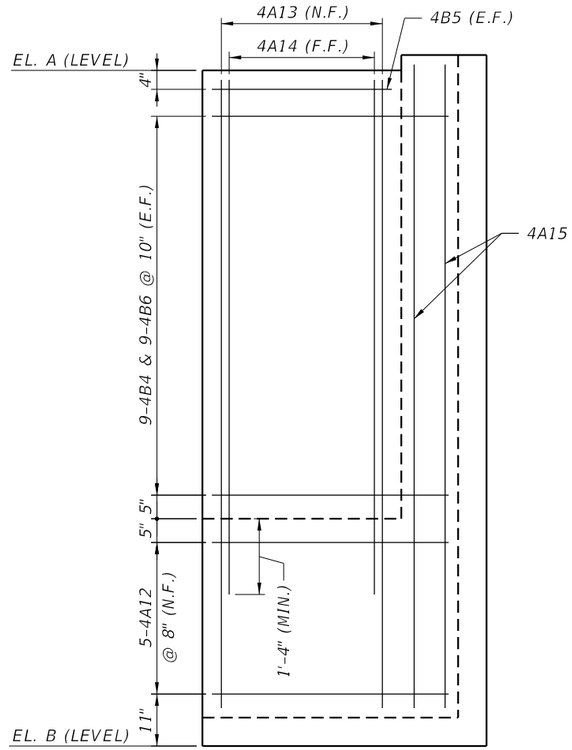


SECTION A-A



PLAN
(TYPICAL CHEEKWALL)

END BENT ELEVATIONS		
EL.	END BENT 1	END BENT 3
A	54.449	54.507
B	57.949	58.007
C	58.366	58.424
D	58.596	58.654
E	58.826	58.884
F	59.056	59.114
G	59.286	59.344
H	59.156	59.214
J	58.926	58.984
K	58.696	58.754
L	58.466	58.524
M	65.456	65.514
N	65.556	65.614
P	66.505	66.563



VIEW B-B

CHEEKWALL ELEVATIONS		
CHEEKWALL	EL. A	EL. B
A	65.185	53.949
B	65.285	53.949
C	65.243	54.007
D	65.343	54.007

NOTES:

1. FOR LOCATION OF SECTION A-A, CHEEKWALL AND END BENT ELEVATIONS, SEE END BENT SHEETS.
2. WELDED WIRE REINFORCING 4X4 – W 4.0X4.0 (MIN. 2'-6" WIDE) TIED TO INSIDE OF THE HORIZONTAL REINFORCING IN BACK FACE OF BACKWALL.
3. FOR DETAIL 2, SEE END BENT DETAILS (2 OF 2) SHEET.

BRIDGE NO. 134XXX

REVISIONS

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DESIGNED BY: CMH
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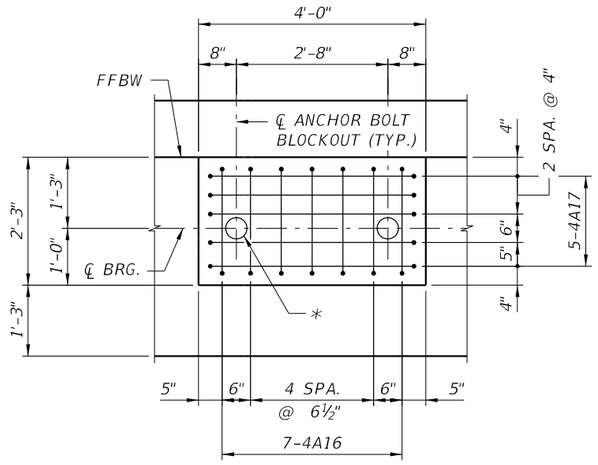
Manatee County FLORIDA — Manatee County Public Works

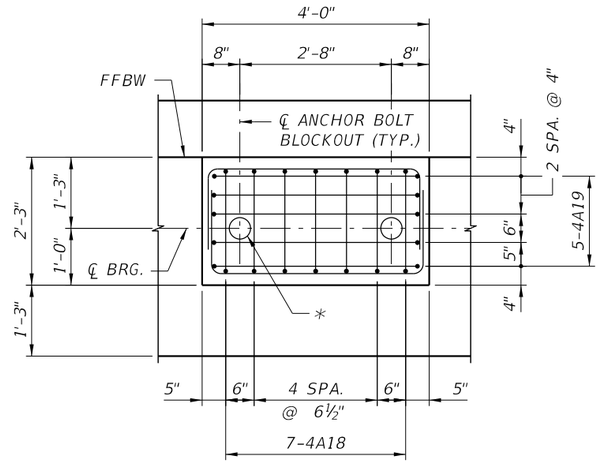
SHEET TITLE: END BENT DETAILS (1 OF 2)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-8

CSMITH 2/18/2022 9:38:04 AM PW:\



PLAN - TYPE 1 PEDESTAL

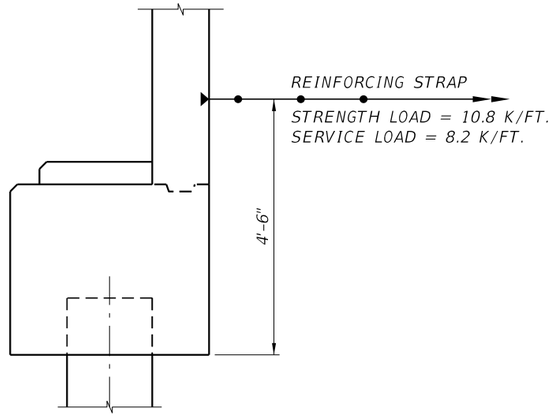
(GIRDERS 1 THRU 4 & 6 THRU 9)



PLAN - TYPE 2 PEDESTAL

(GIRDER 5 ONLY)

* 4" Ø ANCHOR BOLT BLOCKOUT (TYP.), (SEE ANCHOR BOLT BLOCKOUT DETAIL)

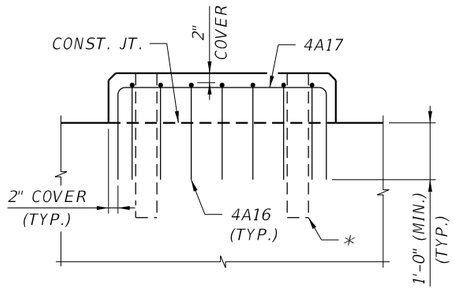


NOTES:

1. SPECIALTY ENGINEER TO DESIGN SOIL REINFORCEMENT ATTACHED TO THE BACKWALL FOR THE SERVICE AND FACTORED LOADS AS SHOWN USING THE DESIGN CRITERIA FOR THE PERMANENT MSE WALLS. COST OF FURNISHING AND INSTALLING THE SOIL REINFORCEMENT IS CONSIDERED INCIDENTAL TO THE COST OF THE END BENT.
2. STRAP LOCATION SHOWN ABOVE MAY CHANGE AS LONG AS THE FORCE IS RECALCULATED FOR THE NEW LOCATION.
3. SUBMIT TIE BACK SYSTEM FOR APPROVAL BY THE ENGINEER IN THE FORM OF SHOP DRAWINGS.

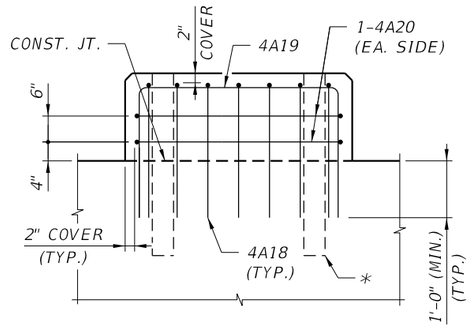
TIE BACK FORCE DIAGRAM

(REINFORCING NOT SHOWN FOR CLARITY)



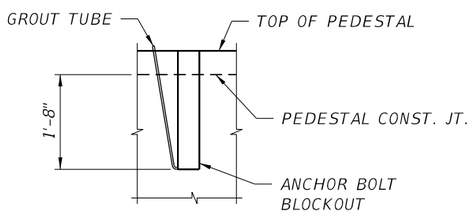
ELEVATION - TYPE 1 PEDESTAL

(GIRDERS 1 THRU 4 & 6 THRU 9)

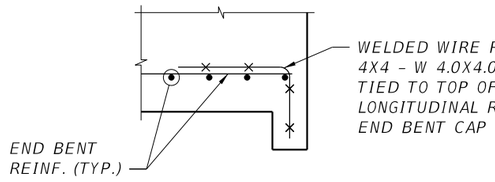


ELEVATION - TYPE 2 PEDESTAL

(GIRDER 5 ONLY)



BLOCKOUT DETAIL

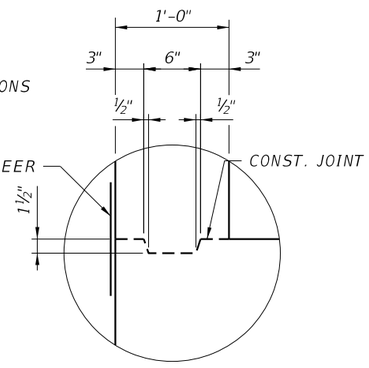


DETAIL 1

NOTES:

1. FOR LOCATION OF DETAIL 1, SEE END BENT 1 AND END BENT 3 SHEETS.
2. FOR LOCATION OF DETAIL 2, SEE END BENT DETAILS (1 OF 2) SHEET.
3. FORM ANCHOR BOLT BLOCKOUT WITH EITHER A CORRUGATED GALVANIZED METAL PIPE THAT IS TO REMAIN IN PLACE OR A SMOOTH REMOVABLE PIPE.
4. ADJUST REINFORCEMENT WITHIN THE PEDESTAL AND END BENT CAP TO CLEAR BLOCKOUTS.

ATTACHED TYPE D-5 (SPECIFICATIONS SECTION 985) GEOTEXTILE FABRIC. 1'-0" WIDE AND FULL LENGTH OF CONSTRUCTION JOINT WITH AN ADHESIVE APPROVED BY ENGINEER



DETAIL 2

BRIDGE NO. 134XXX

REVISIONS					
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DESIGNED BY: CMH
CHECKED BY: JVD

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: END BENT DETAILS (2 OF 2)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-9

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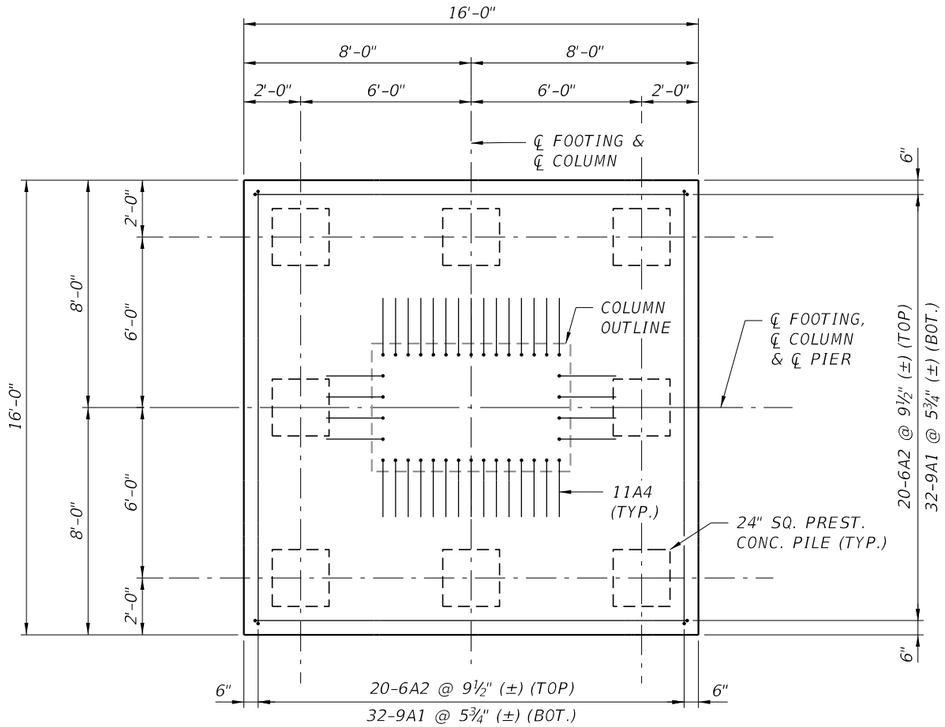
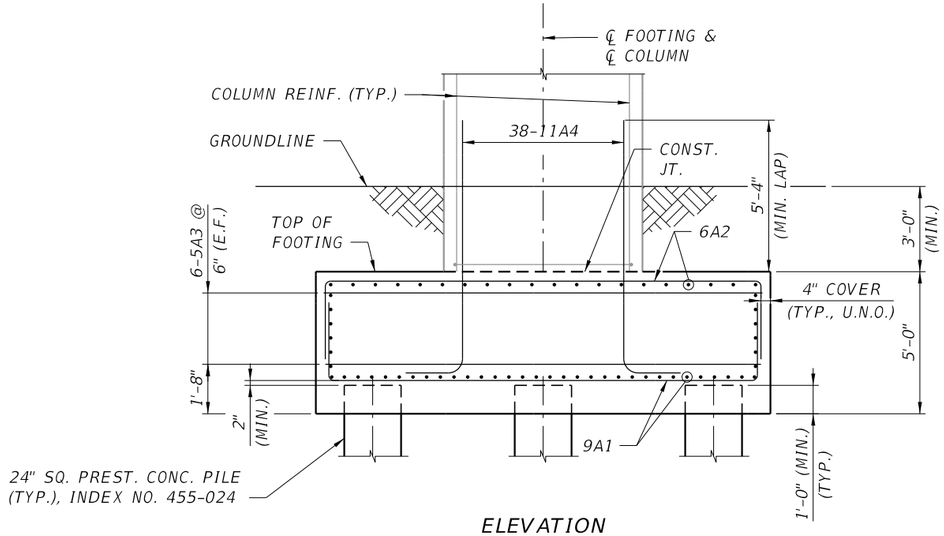


PLAN



ELEVATION

NOTES:

1. FOR PILE LOADS AND PILE CUT-OFF ELEVATIONS, SEE PILE DATA TABLE SHEET.
2. FOR REINFORCING BAR LISTS, SEE REINFORCING BAR LIST SHEETS.

BRIDGE NO. 134XXX

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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DESIGNED BY: CMH
CHECKED BY: JVD

Manatee County FLORIDA
Manatee County Public Works

SHEET TITLE: FOOTING DETAILS
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-10

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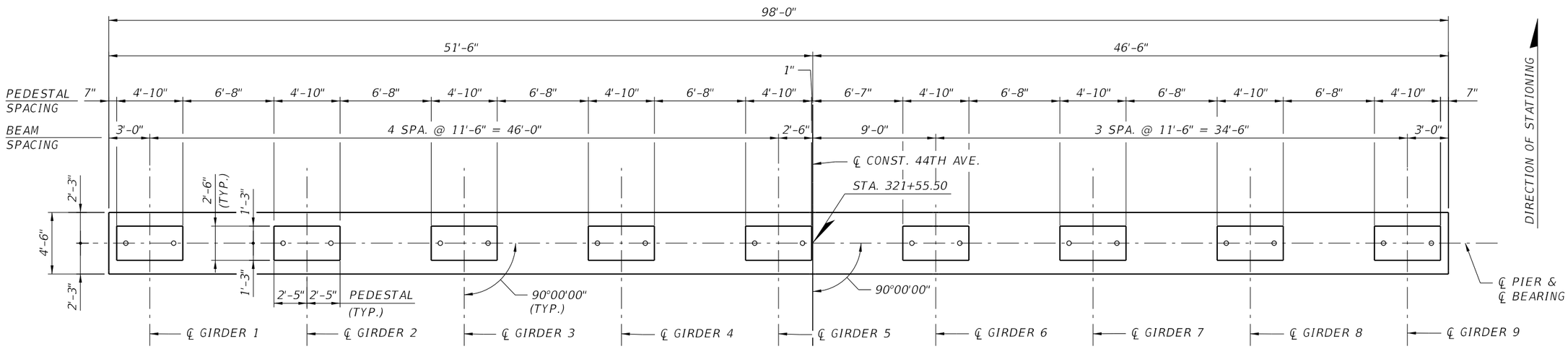
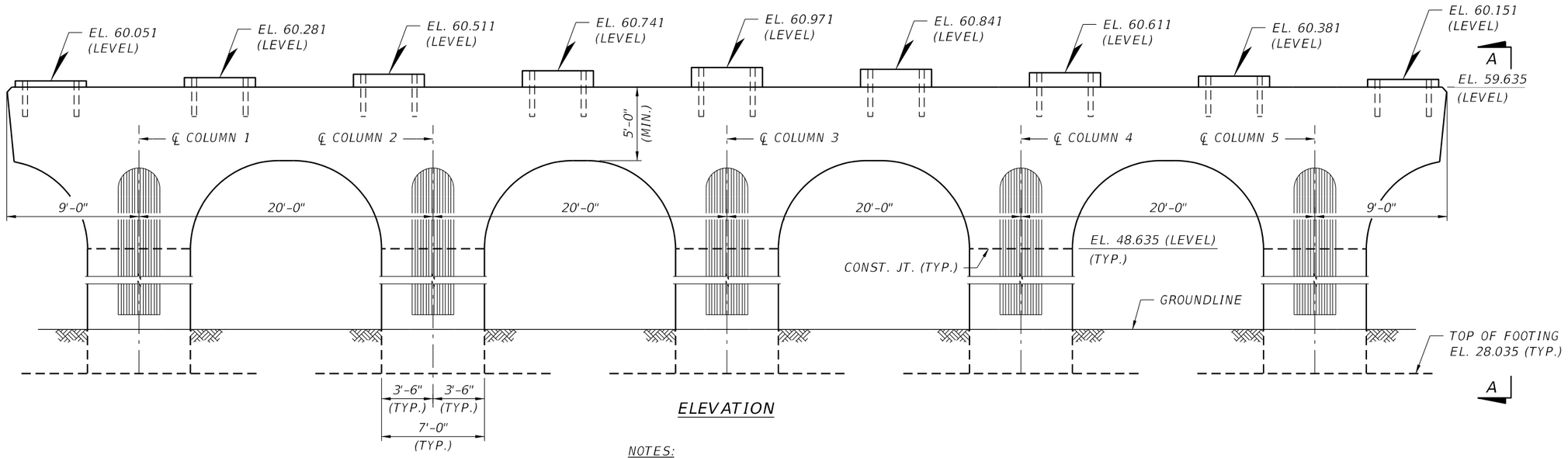


PLAN



ELEVATION

NOTES:

1. FOR FOOTING DIMENSIONS AND PILE LAYOUT, SEE FOOTING DETAILS SHEET.
2. FOR VIEW A-A, SEE PIER 2 (2 OF 2) SHEET.
3. ALL BEARING SURFACES SHALL BE FINISHED LEVEL.
4. CONCRETE FOR CAP AND COLUMN TO BE TREATED AS MASS CONCRETE.
5. FOR PIER 2 REINFORCING DETAILS, SEE PIER 2 DETAILS SHEETS.
6. FOR TYPICAL COLUMN FLARE GEOMETRY AND RUSTICATION DETAILS, SEE PIER 2 (2 OF 2) SHEET.
7. FOR PEDESTAL DETAILS, SEE PIER 2 DETAILS (2 OF 3) SHEET.

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Manatee County Public Works

SHEET TITLE: PIER 2 (1 OF 2)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-11

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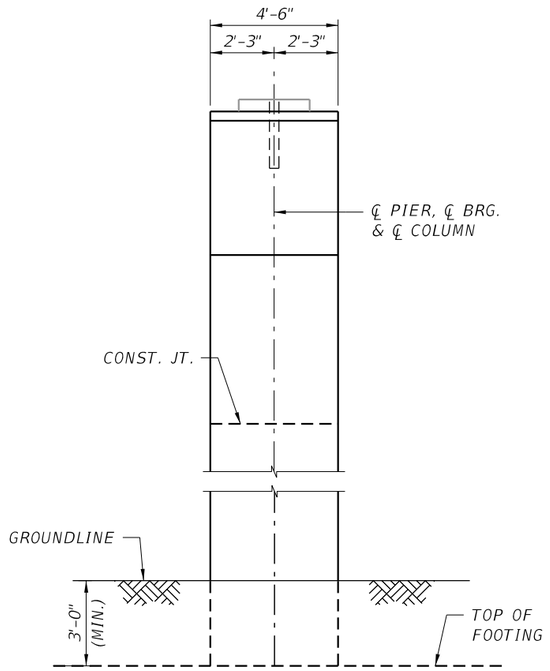
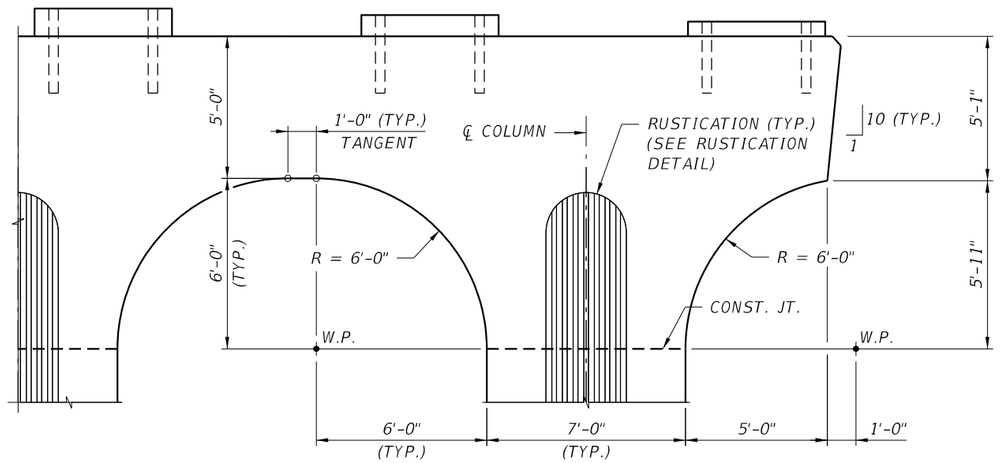
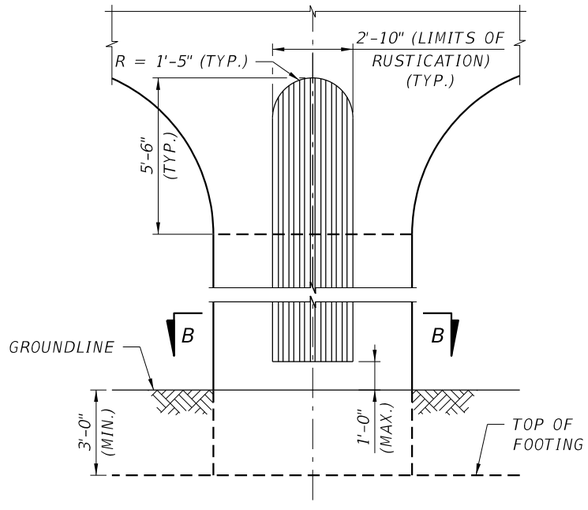


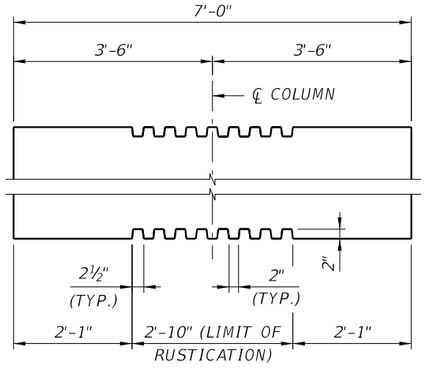
VIEW A-A



TYPICAL COLUMN FLARE
GEOMETRY DETAIL



RUSTICATION DETAIL



SECTION B-B

BRIDGE NO. 134XXX

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DESIGNED BY: CMH
CHECKED BY: JVD

Manatee County FLORIDA
Manatee County Public Works

SHEET TITLE: PIER 2 (2 OF 2)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-12

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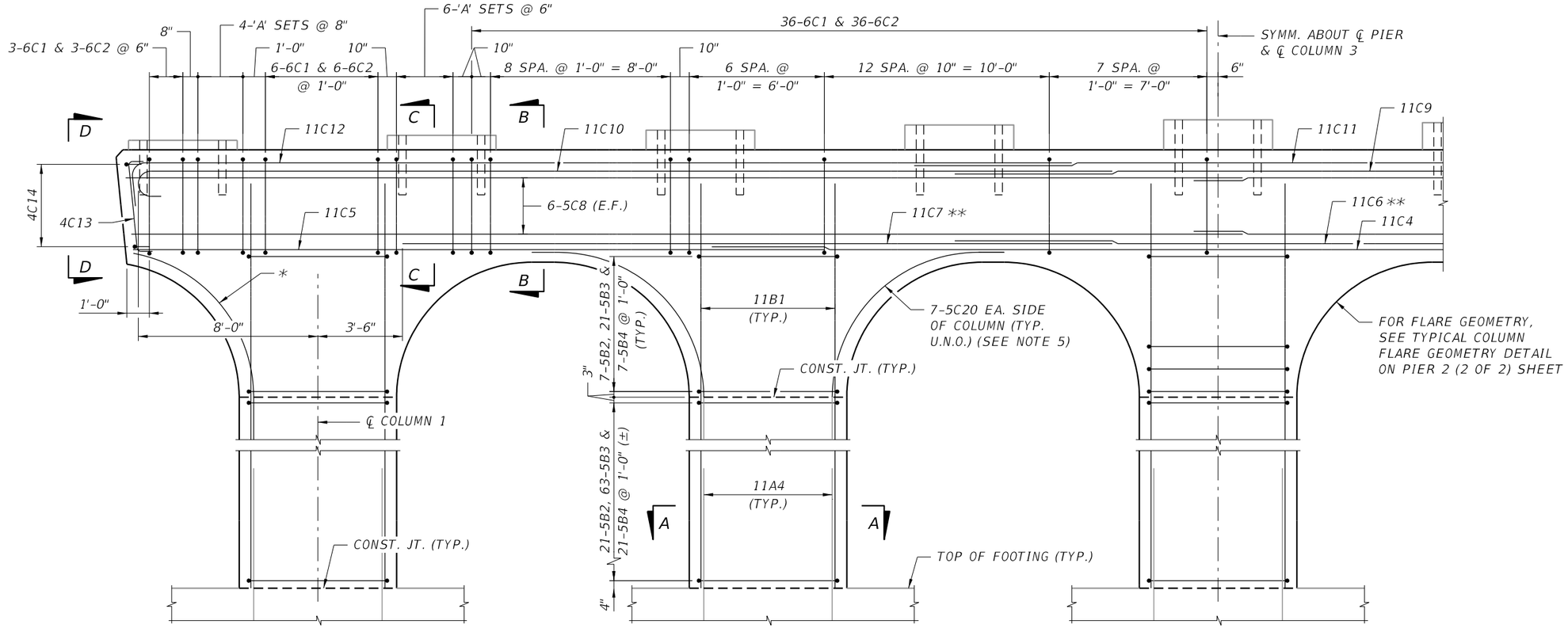
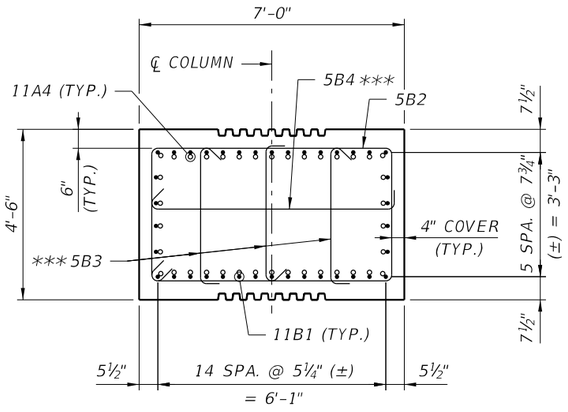


PARTIAL ELEVATION

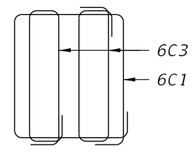


SECTION A-A

* 7-5C21 AT EA. END OF PIER (TYP.) (SEE NOTE 5)

** ALTERNATE 11C6 & 11C7 BARS

*** ALTERNATE ENDS AT EACH LEVEL



'A' SET
(1-6C1 & 2-6C3)

NOTES:

1. FOR PEDESTAL DETAILS, SECTION B-B, SECTION C-C AND VIEW D-D, SEE PIER DETAILS (2 OF 3) SHEET.
2. FOR 11A4 BARS AND FOOTING DETAILS, SEE FOOTING DETAILS SHEET.
3. FOR REINFORCING BAR LISTS, SEE REINFORCING BAR LIST SHEETS.
4. MINIMUM LAP: NO. 5 BAR = 2'-2"
   NO. 11 BAR = 7'-0"
5. FOR ADDITIONAL COLUMN REINFORCING NOT SHOWN AT FLARES, SEE PIER DETAILS (3 OF 3) SHEET.
6. FOR ADDITIONAL NOTES, SEE PIER 2 (1 OF 2) SHEET.

BRIDGE NO. 134XXX

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P.E. LICENSE NUMBER 70756
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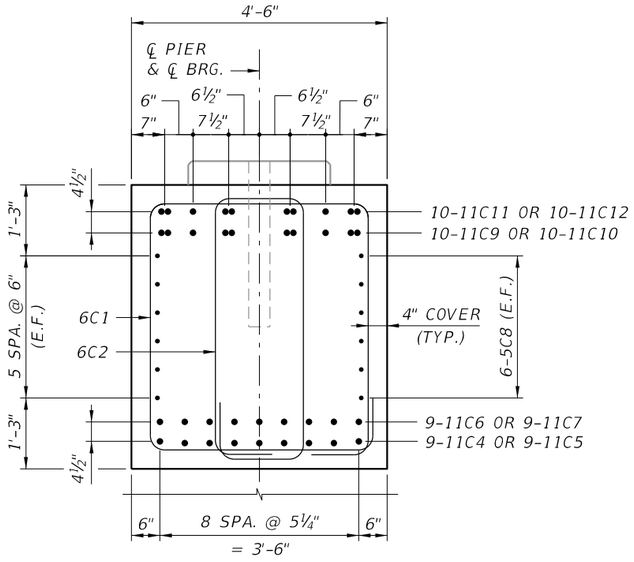
Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: PIER DETAILS (1 OF 3)

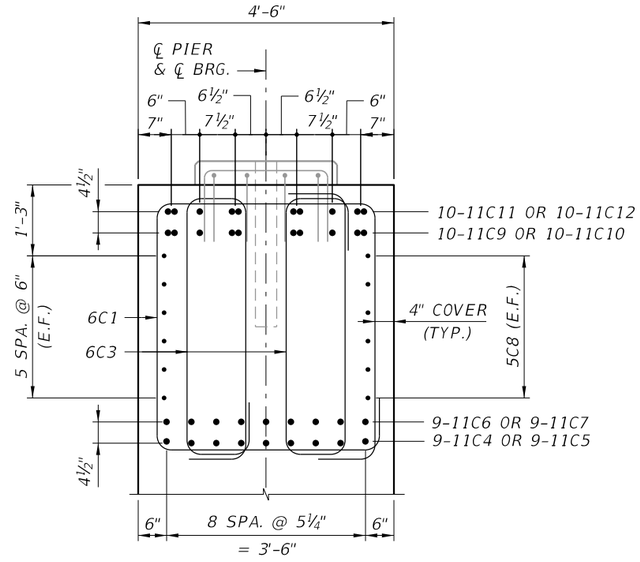
REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

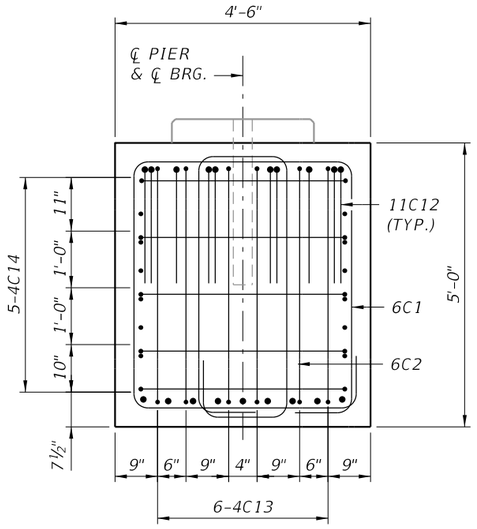
SHEET NO.: B1-13



SECTION B-B

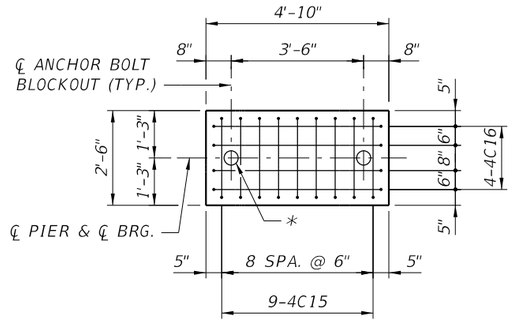


PARTIAL SECTION C-C



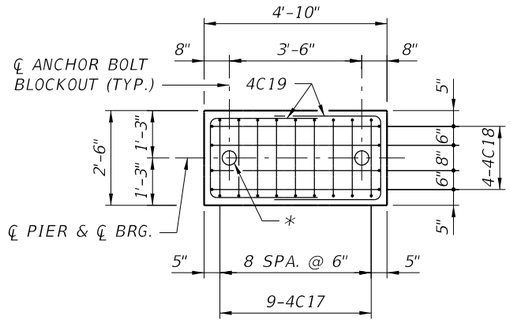
VIEW D-D

(PEDESTAL REINF. NOT SHOWN FOR CLARITY)



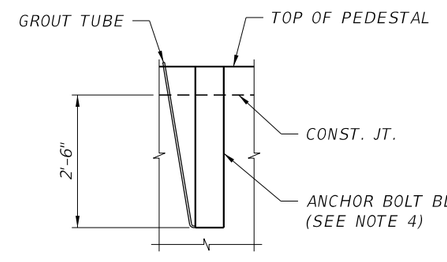
PLAN - TYPE 1 PEDESTAL

(GIRDERS 1 THRU 4 & 6 THRU 9)



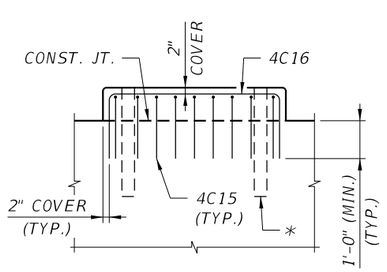
PLAN - TYPE 2 PEDESTAL

(GIRDER 5 ONLY)



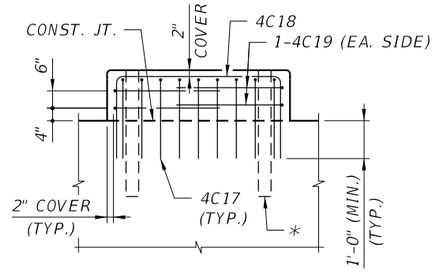
ANCHOR BOLT BLOCKOUT DETAIL

* 4½" Ø ANCHOR BOLT BLOCKOUT (TYP.), (SEE ANCHOR BOLT BLOCKOUT DETAIL)



ELEVATION - TYPE 1 PEDESTAL

(GIRDERS 1 THRU 4 & 6 THRU 9)



ELEVATION - TYPE 2 PEDESTAL

(GIRDER 5 ONLY)

NOTES:

1. ADJUST CAP REINFORCING TO AVOID CONFLICT WITH ANCHOR BOLT BLOCKOUT.
2. FOR LOCATION OF SECTION B-B, SECTION C-C AND VIEW D-D, SEE PIER DETAILS (1 OF 3) SHEET.
3. FOR ADDITIONAL NOTES, SEE PIER DETAILS (1 OF 3) SHEET.
4. USE EITHER A CORRUGATED GALVANIZED METAL FORM THAT IS TO BE LEFT IN PLACE OR A SMOOTH REMOVABLE FORM.

BRIDGE NO. 134XXX

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REVISIONS

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DESIGNED BY: CMH
CHECKED BY: JVD

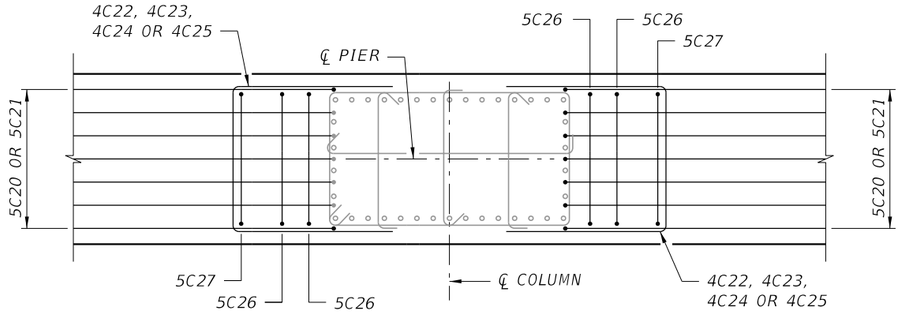
Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: PIER DETAILS (2 OF 3)

REF. DWG. NO.

PROJECT NAME: 44TH AVENUE EAST OVER I-75

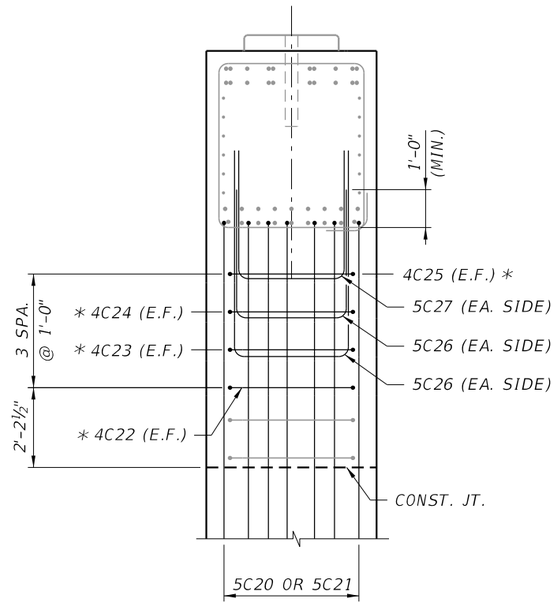
SHEET NO. B1-14



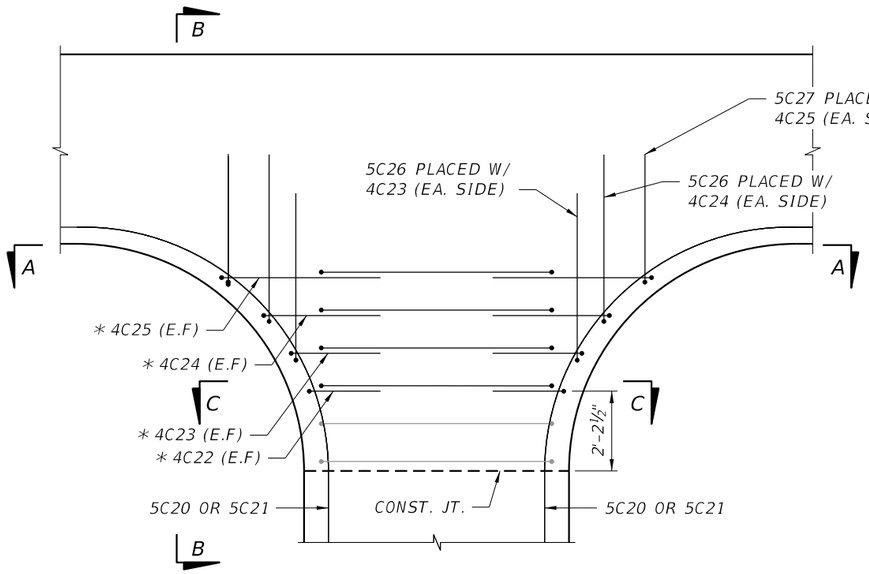
PARTIAL SECTION A-A

∗ SPACED W/ 5B2

∗∗ ALTERNATE ENDS AT EACH LEVEL

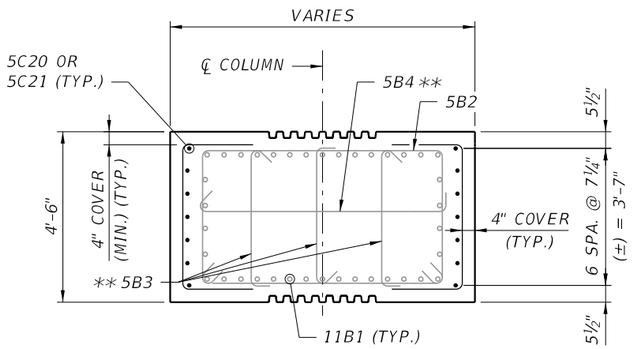


PARTIAL SECTION B-B



COLUMN FLARE REINFORCING DETAIL

(CAP & COLUMN REINF. NOT SHOWN FOR CLARITY)



SECTION C-C

NOTE:

FOR NOTES, SEE PIER DETAILS (1 OF 3) SHEET.

BRIDGE NO. 134XXX

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
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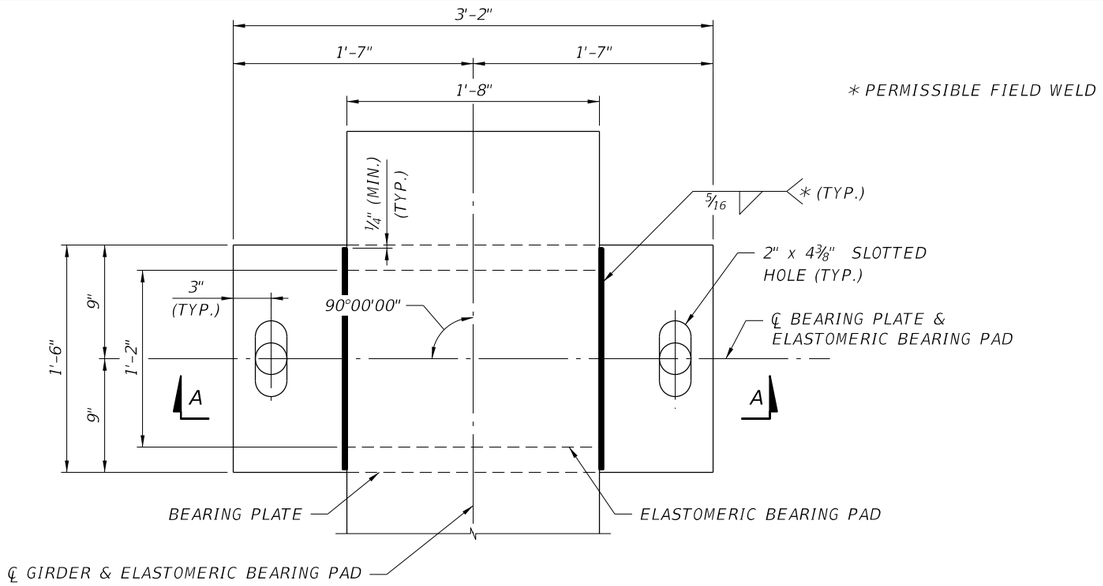
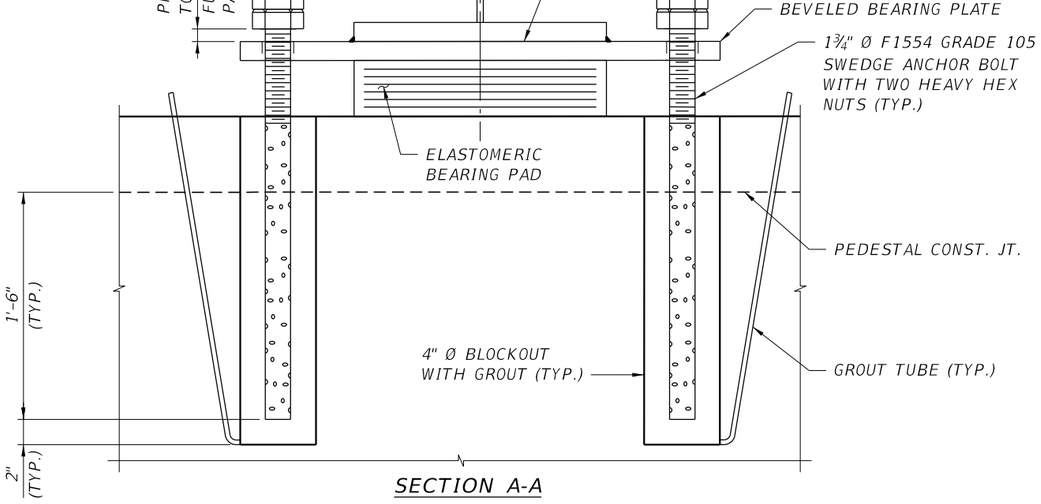
DRA	CMH	CMH	JVD

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE:	REF. DWG. NO.
PIER DETAILS (3 OF 3)	
PROJECT NAME:	SHEET NO.
44TH AVENUE EAST OVER I-75	B1-15



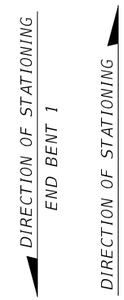
BEARING PLATE PLAN
(END BENT 1 & END BENT 3)

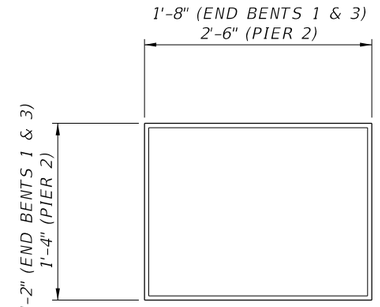


SECTION A-A

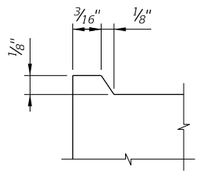
ANCHOR BOLT NOTE:

PRIOR TO GROUTING, CLEAR BLOCKOUT HOLE OF DEBRIS. GROUT BLOCKOUTS WITH A NON-SHRINK GROUT CONFORMING TO THE FDOT SPECIFICATIONS AND HAVING A MINIMUM STRENGTH OF 5,500 PSI.

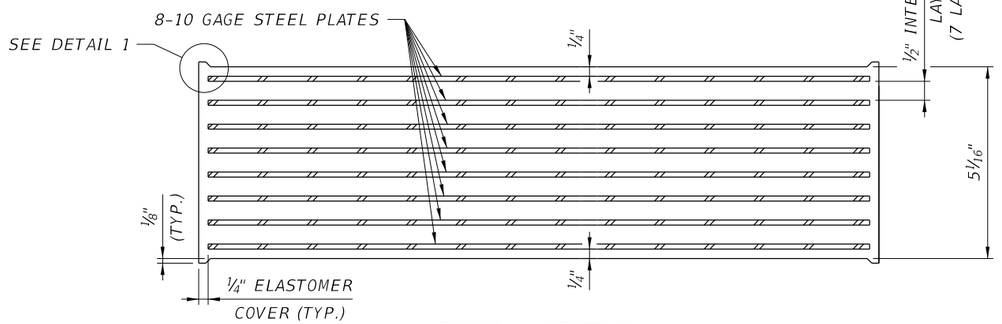




PLAN



DETAIL 1



TYPICAL SECTION

BEARING PAD DETAILS

BEARING PAD NOTES:

1. BEARING PAD SHOWN IS DESIGNED IN ACCORDANCE WITH AASHTO LRFD SPECIFICATIONS METHOD "B".
2. BEARING PAD DESIGN PARAMETERS: RATED SERVICE LOAD = 274 KIPS (END BENT 1 & 3)
   849 KIPS (PIER 2)
   NEOPRENE GRADE 50 DUROMETER HARDNESS
   SHEAR MODULUS = 110 KSI
3. VARIATIONS IN PAD DIMENSIONS WILL BE ALLOWED PROVIDED REVISED PADS WILL MEET THE FDOT SPECIFICATIONS AND ARE APPROVED BY THE ENGINEER.
4. BEARING SEAT SHALL BE FINISHED LEVEL.
5. INSTALL ANCHOR BOLTS AT FIXED ENDS BEFORE CONCRETE DECK PLACEMENT. INSTALL ANCHOR BOLTS, CENTERED IN SLOTTED HOLE AT 70° F, AT EXPANSION ENDS AFTER COMPLETION OF DECK PLACEMENT.
6. DESIGN TEMPERATURE RANGE: 110° (MAX.), 30° (MIN.).
7. FOR PIER BEARING PLATE PLAN AND BEVELED BEARING PLATE DETAILS, SEE BEARING DETAILS (2 OF 2) SHEET.

BRIDGE NO. 134XXX

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
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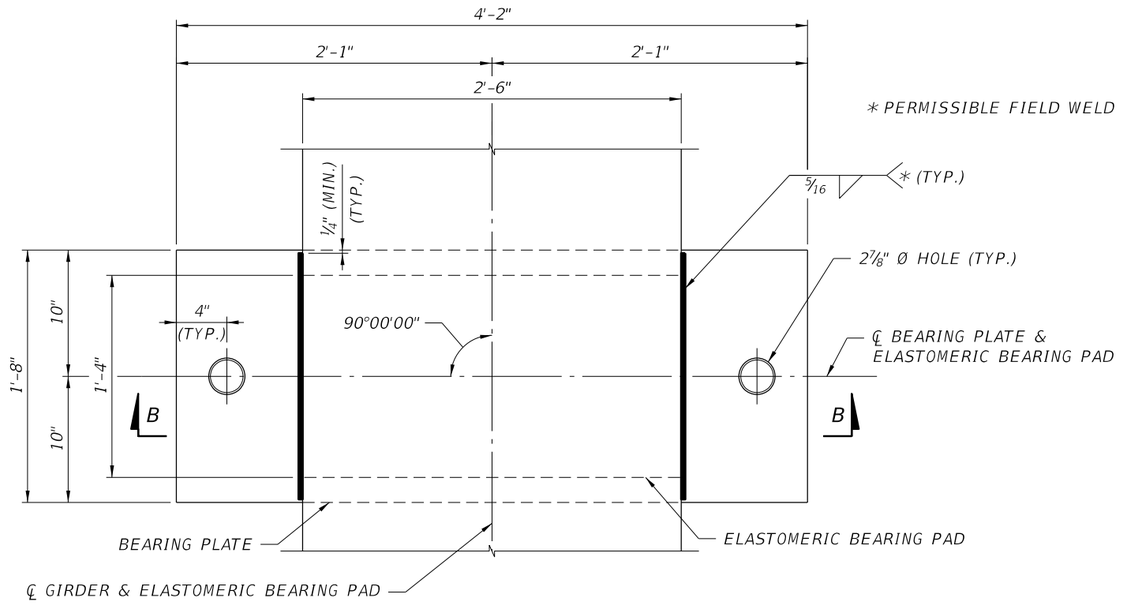
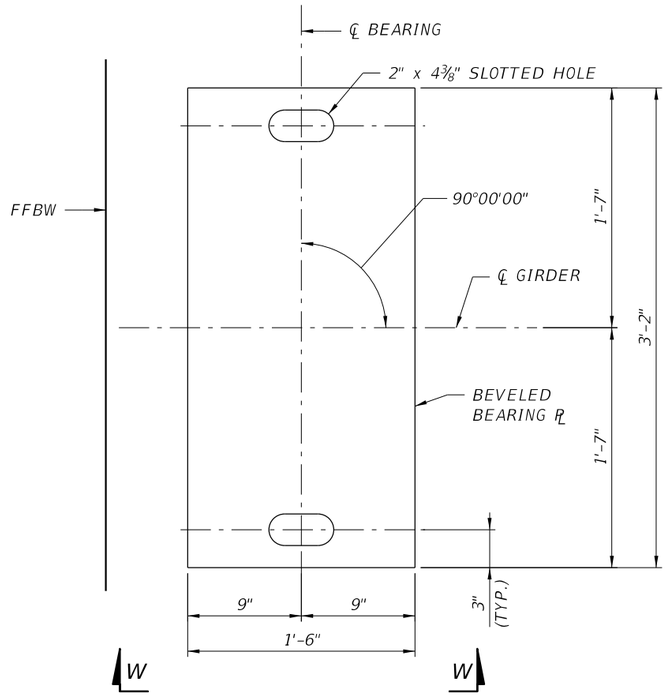
CHECKED BY: CMH
DESIGNED BY: CMH
CHECKED BY: CRG

Manatee County FLORIDA — Manatee County Public Works

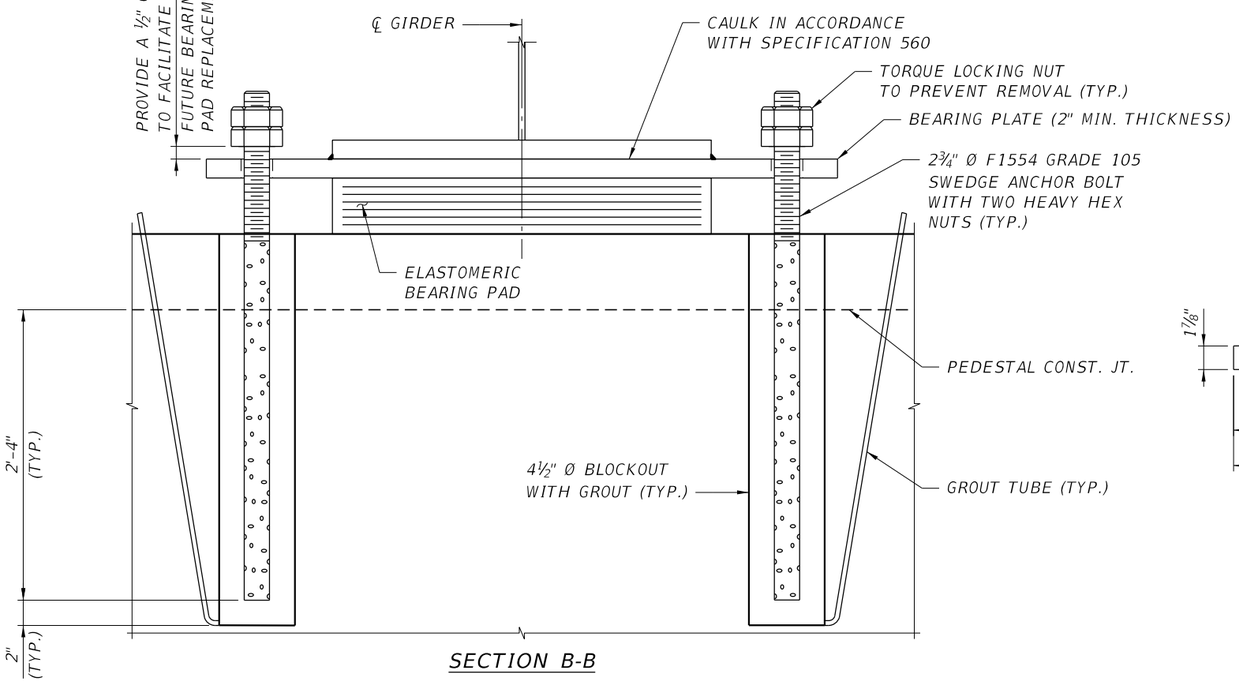
SHEET TITLE: BEARING DETAILS (1 OF 2)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-16



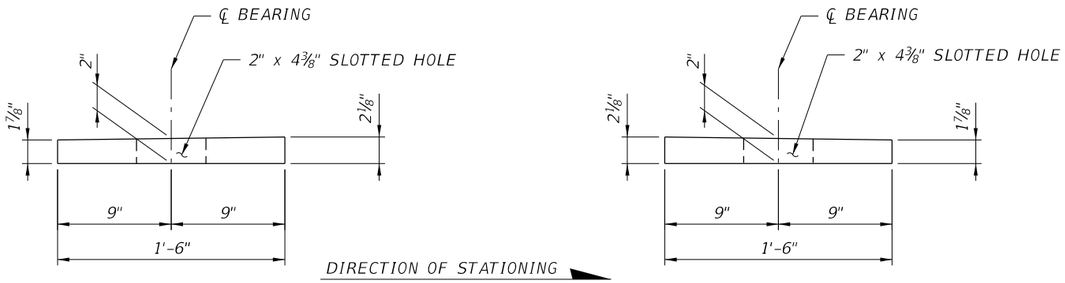
BEARING PLATE PLAN
(PIER 2)



BEVELED BEARING PLATE DETAIL



SECTION B-B



END BENT 1

END BENT 3

VIEW W-W

NOTE:

FOR NOTES, SEE BEARING DETAILS (1 OF 2) SHEET.

BRIDGE NO. 134XXX

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DRAWN BY: JRC
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DESIGNED BY: CMH
CHECKED BY: CRG

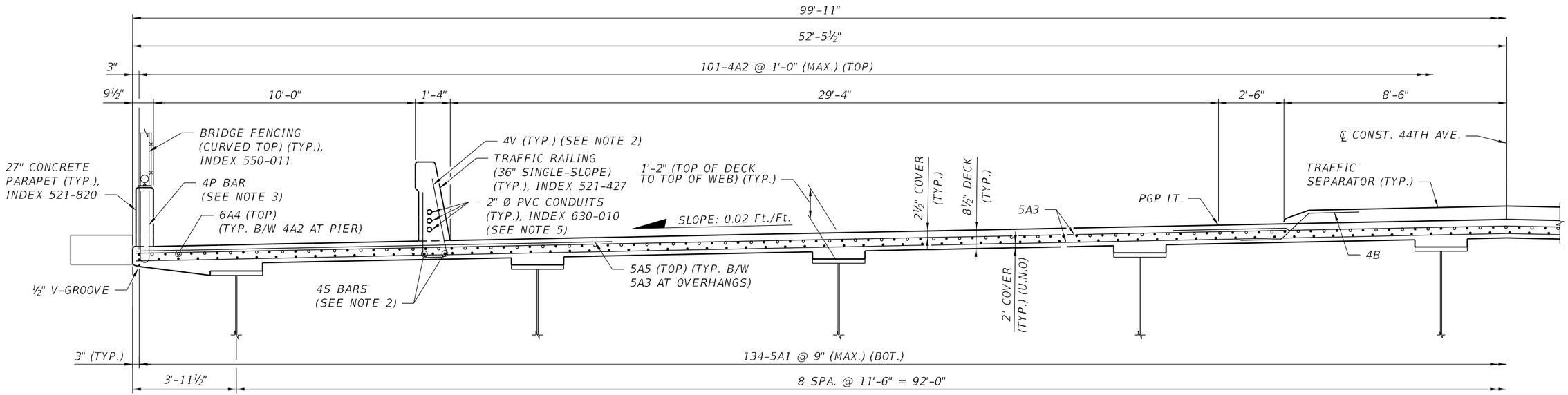
Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: BEARING DETAILS (2 OF 2)

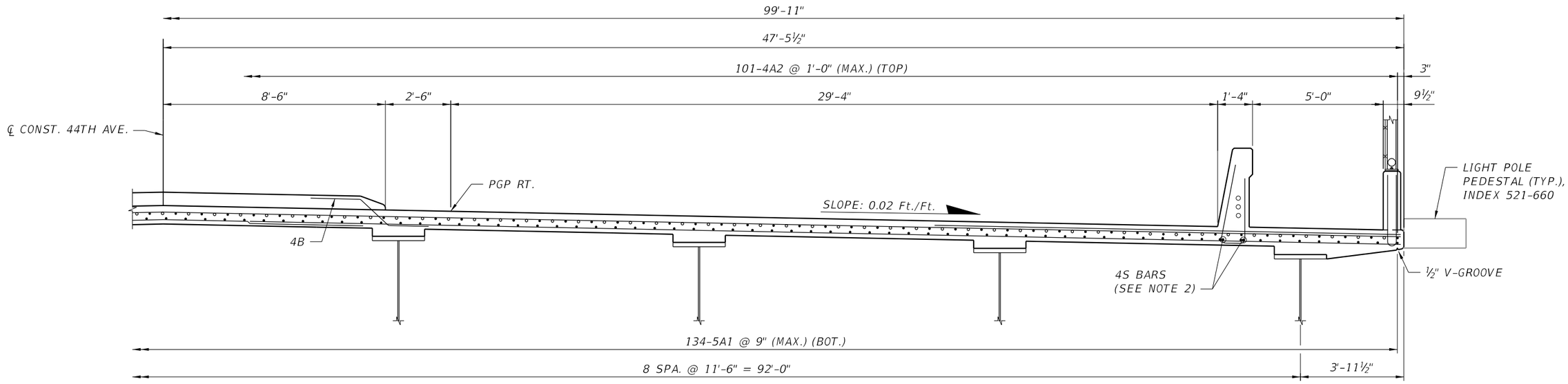
REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: B1-17



PARTIAL SECTION



PARTIAL SECTION

NOTES:

1. FOR REINFORCING BAR LISTS, SEE REINFORCING BAR LIST SHEETS.
2. BARS 4S AND 4V ARE INCIDENTAL TO TRAFFIC RAILING BARRIER. FOR DETAILS, SEE STANDARD PLANS INDEX 521-427.
3. 4P BARS ARE INCIDENTAL TO CONCRETE PARAPET. FOR DETAILS, SEE STANDARD PLANS INDEX 521-820.
4. FOR TRAFFIC SEPARATOR REINFORCEMENT, INCLUDING BARS 4B, SEE SUPERSTRUCTURE DETAILS (3 OF 3) SHEET.
5. FOR CONDUIT INSTALLATION IN RAILING AND PARAPET USE EMBEDDED JUNCTION BOXES "A" AND EXPANSION FITTINGS AT RAILING JOINT LOCATIONS. FOR DETAILS SEE STANDARD PLANS INDEX 630-010.

BRIDGE NO. 134XXX

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: SUPERSTRUCTURE SECTION
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-18

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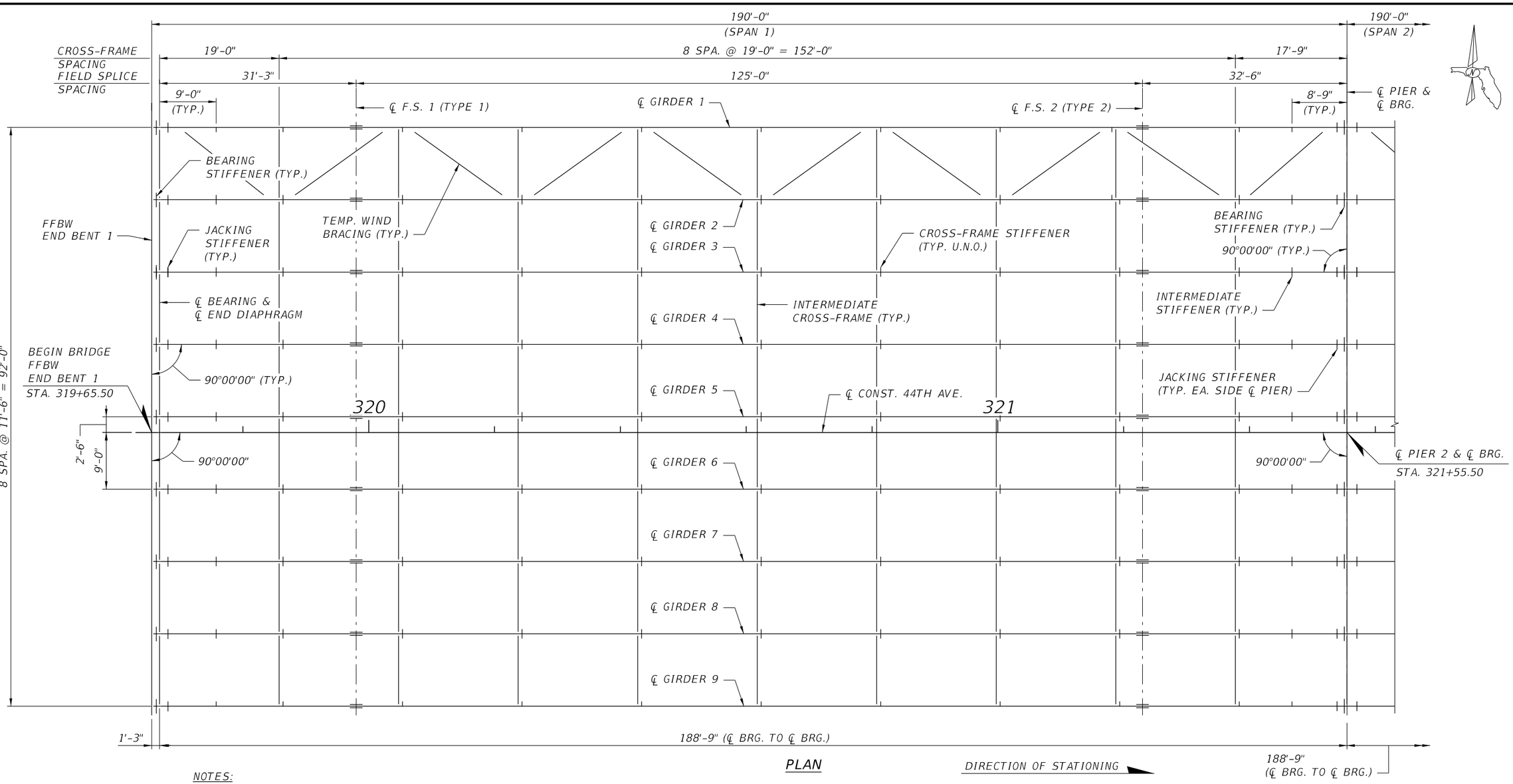

PLAN

NOTES:

1. LONGITUDINAL DIMENSIONS ARE MEASURED ALONG ℄ GIRDER. ALL TRANSVERSE DIMENSIONS ARE MEASURED HORIZONTALLY UNLESS NOTED OTHERWISE.
2. FOR GIRDER DIMENSIONS AND DETAILS, SEE GIRDER ELEVATION SHEETS.
3. FOR CROSS-FRAME AND DIAPHRAGM DETAILS, SEE CROSS-FRAME AND DIAPHRAGM DETAILS SHEETS.
4. FOR STIFFENER DETAILS, SEE STIFFENER DETAILS SHEETS.
5. FOR CVN IMPACT TEST REQUIREMENTS FOR STEEL GIRDERS, SEE GIRDER ELEVATION SHEETS.
6. FOR ERECTION SEQUENCE OF STEEL GIRDERS, SEE ERECTION SEQUENCE SHEETS.
7. FOR CAMBER DIAGRAMS, SEE CAMBER DIAGRAMS SHEETS.
8. FOR FIELD SPLICE DETAILS, SEE BOLTED FIELD SPLACE DETAILS SHEETS.
9. FOR BRACING, SEE DIAPHRAGM DETAILS SHEET AND CROSS-FRAME DETAILS SHEETS.
10. FOR BEARING AND JACKING DETAILS, SEE BEARING DETAILS AND JACKING DETAILS SHEETS.
11. FOR SUPERSTRUCTURE SECTION, SEE SUPERSTRUCTURE SECTION SHEET.
12. FOR TEMPORARY WIND BRACING DETAILS, SEE ERECTION SEQUENCE (4 OF 4) SHEET.

BRIDGE NO. 134XXX

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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DRAWN BY: JRC
CHECKED BY: CRG
DESIGNED BY: CRG
CHECKED BY: CAS

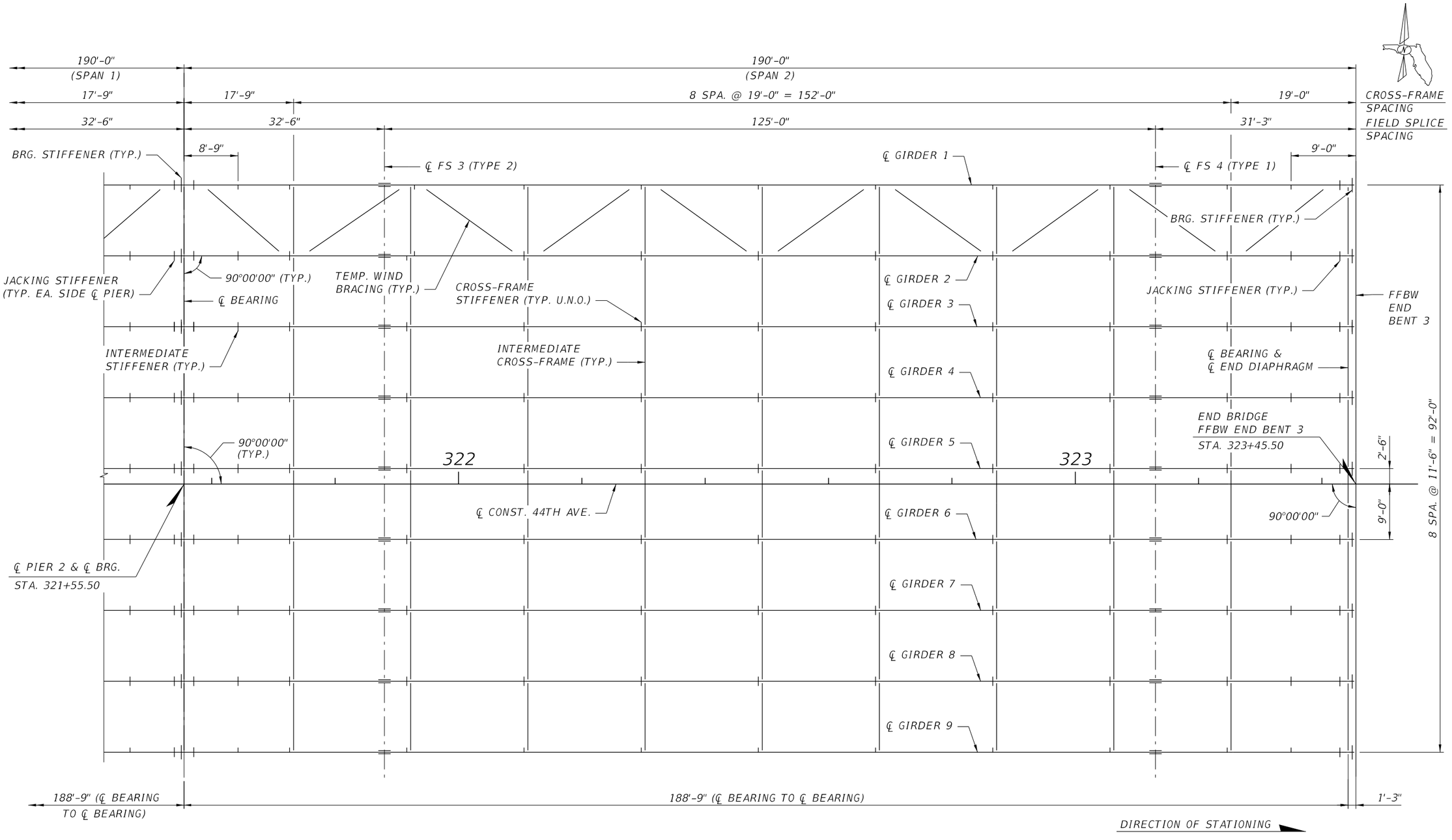
Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: FRAMING PLAN - (1 OF 2)

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: B1-19



PLAN

NOTE:

FOR NOTES, SEE FRAMING PLAN (1 OF 2) SHEET.

BRIDGE NO. 134XXX

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CHECKED BY:	CAS

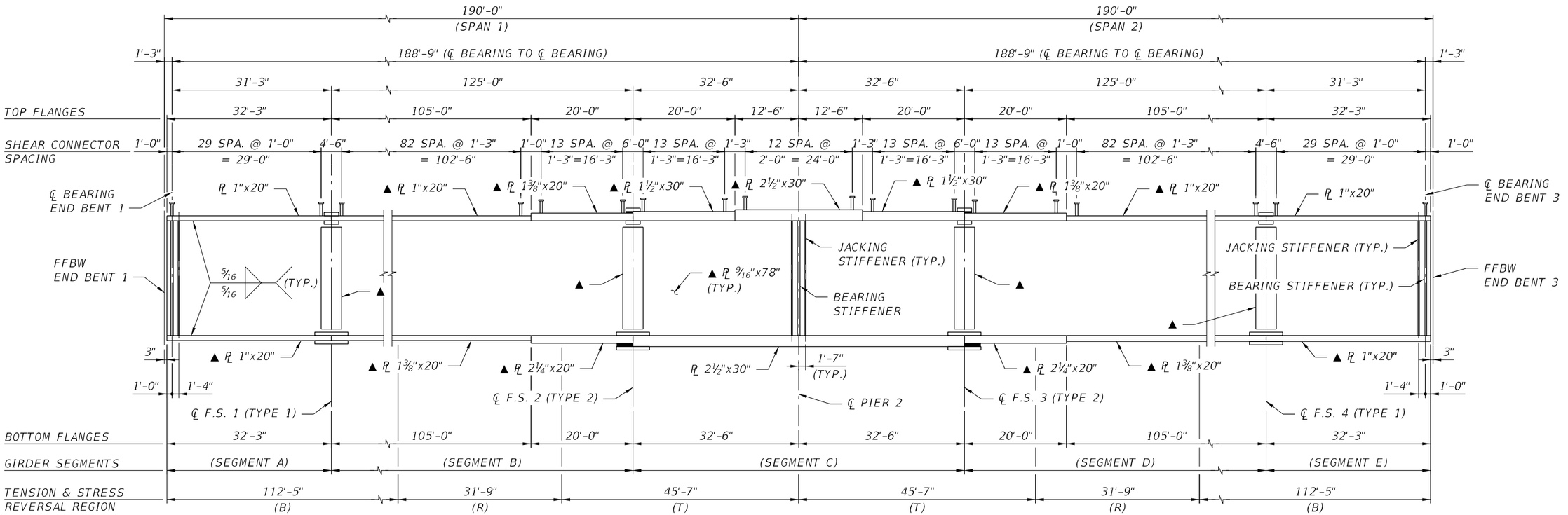
Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: FRAMING PLAN (2 OF 2)

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: B1-20

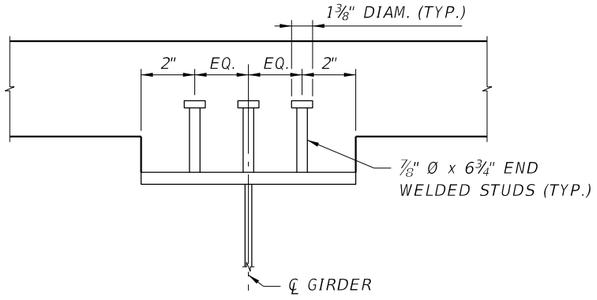


ELEVATION

(GIRDERS 1 THRU 9)

NOTES:

1. ALL DIMENSIONS ARE MEASURED ALONG ℄ OF GIRDER.
2. ▲ INDICATES TENSION MEMBERS DESIGNATED REDUNDANT FOR CVN IMPACT TEST REQUIREMENTS. END DIAPHRAGMS AND INTERMEDIATE DIAPHRAGMS SHALL ALSO MEET THIS REQUIREMENT. WEB SPLICE PLATES AND BOTTOM FLANGE SPLICE PLATES TO BE TESTED TO THE REQUIREMENTS OF THE TENSION COMPONENTS TO WHICH THEY ARE ATTACHED.
3. WELDED SPLICES FOR MEMBERS DESIGNATED WITH ▲ SHALL BE CONSIDERED AS TENSION MEMBERS FOR NONDESTRUCTIVE TESTING PURPOSES. THE WEB SHALL BE TESTED IN ACCORDANCE WITH JOINTS IN SHEAR.
4. T – DENOTES "TOP FLANGE"
   B – DENOTES "BOTTOM FLANGE"
   R – DENOTES "REVERSAL"
5. F.S. DENOTES "FIELD SPLICE"



SHEAR CONNECTION DETAIL

STRUCTURAL STEEL NOTES:

1. FOR ADDITIONAL STEEL NOTES, SEE GENERAL NOTES SHEETS.
2. ON EXTERIOR GIRDERS, PLACE INTERMEDIATE AND DIAPHRAGM CONNECTION STIFFENERS ON THE INSIDE OF THE WEB ONLY.
3. THE ENDS OF THE GIRDER AND ALL BEARING AND JACKING STIFFENERS SHALL BE VERTICAL AFTER FULL DEAD LOAD IS APPLIED.
4. INTERMEDIATE CROSS FRAME AND DIAPHRAGM CONNECTION STIFFENERS SHALL BE PLACED NORMAL TO GIRDER FLANGE.
5. FOR TYPICAL SECTION, SEE TYPICAL SECTION SHEET.
6. FOR DIAPHRAGM DETAILS, SEE DIAPHRAGM DETAILS SHEETS.
7. FOR BOLTED FIELD SPLICE, SEE BOLTED FIELD SPLICE SHEET.
8. FOR CAMBER DIAGRAM, SEE CAMBER DIAGRAM SHEETS.
9. FOR BEARING, INTERMEDIATE, JACKING AND DIAPHRAGM CONNECTION STIFFENER DETAILS, SEE STIFFENER DETAILS SHEET.
10. FOR INTERMEDIATE AND DIAPHRAGM CONNECTION STIFFENER LOCATIONS, SEE FRAMING PLAN SHEET.

BRIDGE NO. 134XXX

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DESIGNED BY: CRG
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: GIRDER ELEVATION
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-21

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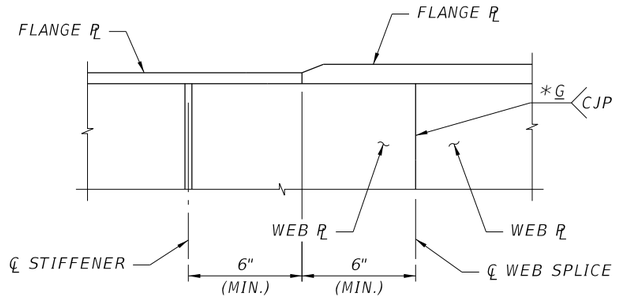

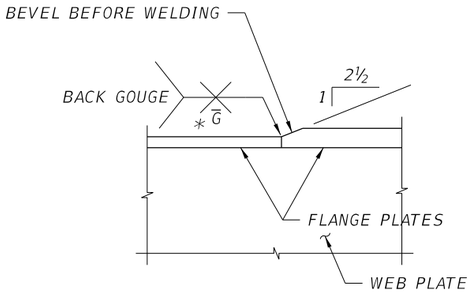

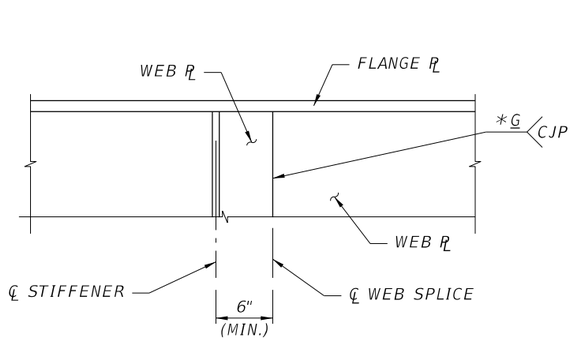

SHOP SPLICE CLEARANCE DETAIL

NOTE:

LOCATION OF WELDED SPLICES SHALL BE APPROVED BY THE ENGINEER.

TYPICAL WELDED FLANGE AND WEB SPLICE

NOTES:

1. USE PREQUALIFIED AWS FULL PENETRATION WELDS. SEE ANSI/AASHTO/AWS D1.5 SECTION 2.12. BUTT JOINTS OF FLANGES AND WEBS SUBJECT TO TENSILE STRESS SHALL, AS A MINIMUM, BE GROUND FLUSH ON ALL SIDES BY GRINDING PARALLEL TO THE LONGITUDINAL GIRDER DIRECTION IN ACCORDANCE WITH SECTION 3.6.3. ALL WEB PLATES SHALL BE CONSIDERED SUBJECT TO TENSILE STRESS. FOR TENSION FLANGE LIMITS, SEE GIRDER ELEVATION ON STEEL GIRDER SHEETS.
2. FOR STRUCTURAL STEEL NOTES, SEE GIRDER ELEVATION SHEET.
*3. ALL BOTTOM WELDS OF TOP AND BOTTOM FLANGES SHALL BE GROUND SMOOTH FOR AESTHETICS.

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DRAWN BY: JRC
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DESIGNED BY: CRG
CHECKED BY: CAS

Manatee County FLORIDA
Manatee County Public Works

SHEET TITLE: STEEL GIRDER DETAILS
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-22

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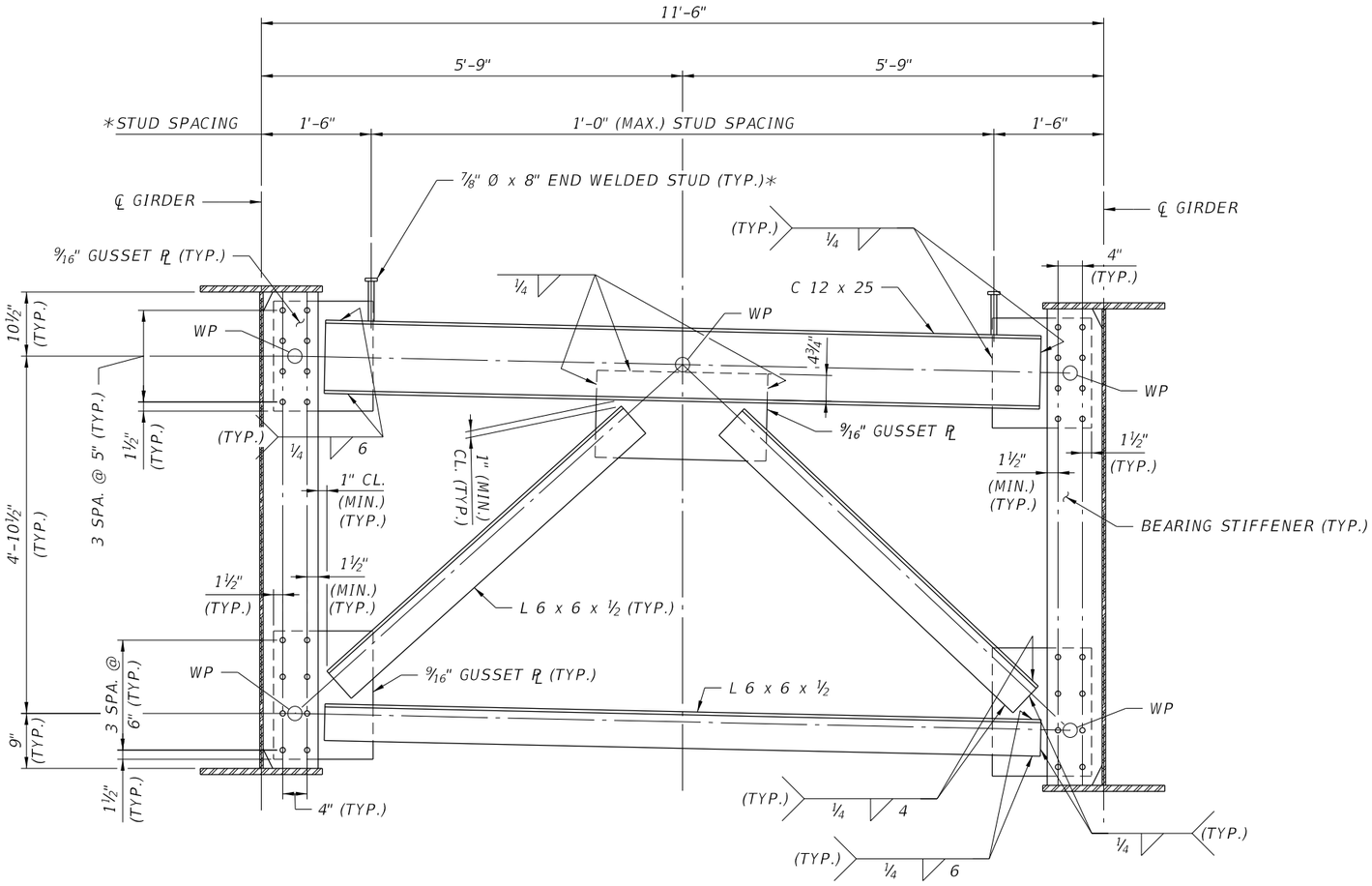

END DIAPHRAGM

* ONLY FOR END BENTS.

NOTES:

1. FOR CVN IMPACT TEST REQUIREMENTS, SEE GIRDER ELEVATION SHEET.
2. FOR STRUCTURAL STEEL NOTES, SEE GIRDER ELEVATION SHEET.
3. ALL FASTENERS FOR END DIAPHRAGMS SHALL BE 1" DIAMETER ASTM F3125 GRADE A325 TYPE 1 BOLTS IN 1⅛" DIAMETER HOLES. ALL FASTENERS FOR INTERMEDIATE CROSS FRAMES SHALL BE 1" DIAMETER ASTM F3125 GRADE A325 TYPE 1 BOLTS IN 1⅛" DIAMETER HOLES.
4. FOR ADDITIONAL STRUCTURAL STEEL NOTES, SEE GENERAL NOTES SHEETS.
5. FOR END DIAPHRAGM AND INTERMEDIATE CROSS FRAME LOCATIONS, SEE FRAMING PLAN SHEETS.
6. THE ALLOWABLE LOAD FOR SLIP CRITICAL CONNECTIONS IS BASED ON A CLASS "A" (SLIP COEFFICIENT = 0.30) CONTACT SURFACE OF BOLTED PARTS.
7. FOR WELD TERMINATION DETAIL, SEE STIFFENER DETAILS SHEET.
8. FOR SUPPORT BEARING AND JACKING STIFFENER DETAILS, SEE STIFFENER DETAILS SHEET.

BRIDGE NO. 134XXX

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DESIGNED BY: CMH
CHECKED BY: CRG

Manatee County FLORIDA
Manatee County Public Works

SHEET TITLE: DIAPHRAGM DETAILS
REF. DWG. NO.
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO. B1-23

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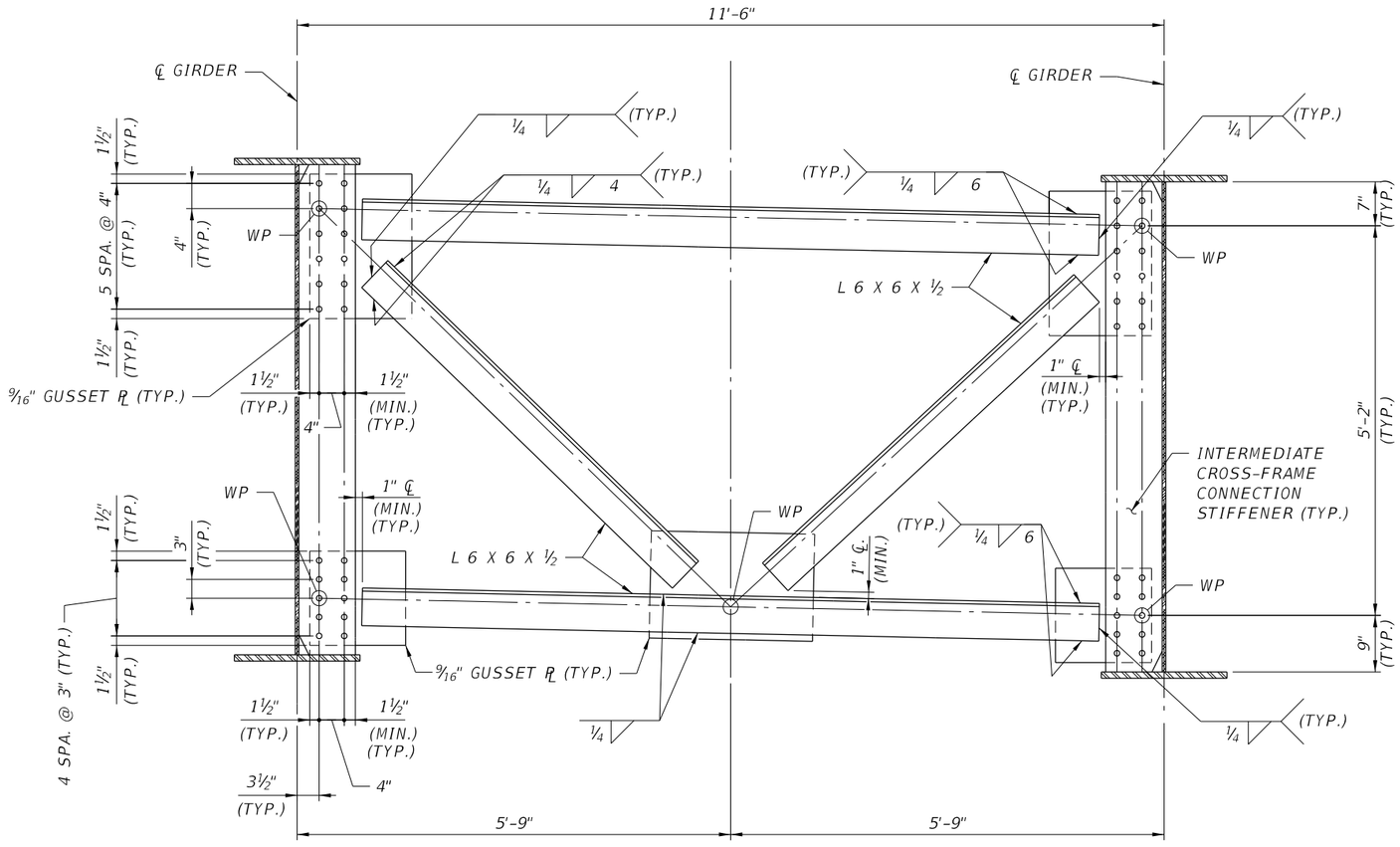

NOTE:

FOR NOTES, SEE DIAPHRAGM DETAILS SHEET.

BRIDGE NO. 134XXX

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DRAWN BY:	JRC
CHECKED BY:	CMH
DESIGNED BY:	CMH
CHECKED BY:	CRG

Manatee County FLORIDA — Manatee County Public Works

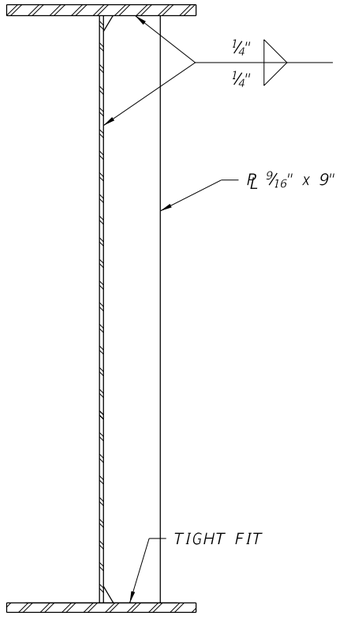
SHEET TITLE: CROSS FRAME DETAILS

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

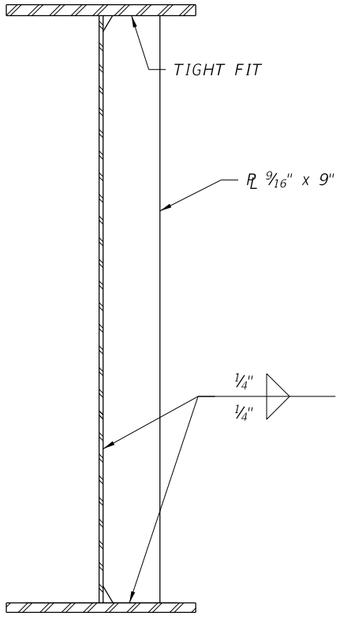
SHEET NO.: B1-24

CSMITH 2/17/2022 2:08:25 PM PW:\



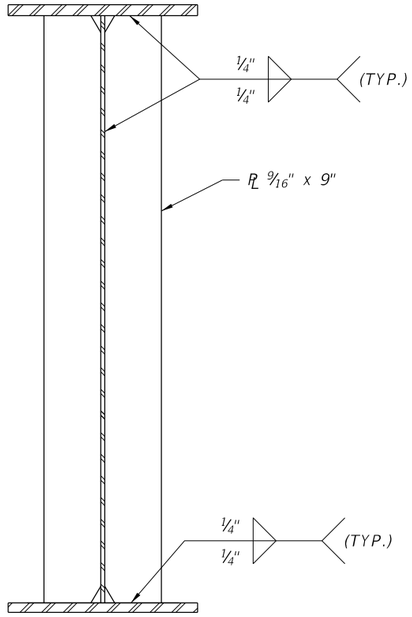
INTERMEDIATE STIFFENERS BOTTOM FLANGE TENSION ZONE

(PLATE REQUIRED ON ONE SIDE, SEE FRAMING PLAN)



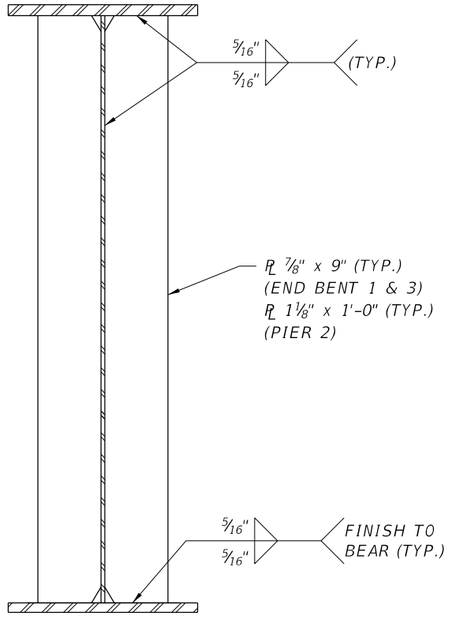
INTERMEDIATE STIFFENERS TOP FLANGE TENSION ZONE

(PLATE REQUIRED ON ONE SIDE, SEE FRAMING PLAN)

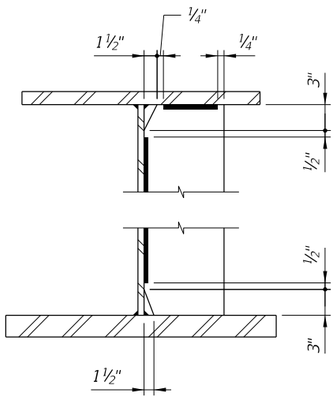


INTERMEDIATE CROSS-FRAME CONNECTION STIFFENERS

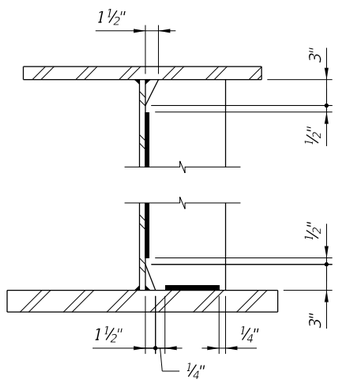
(PLATE REQUIRED ON ONE OR BOTH SIDES, SEE FRAMING PLAN)



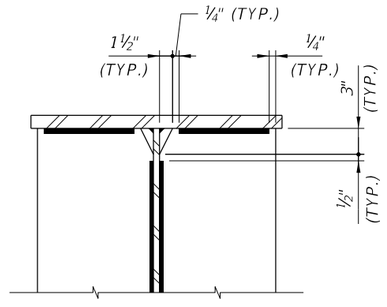
JACKING AND BEARING STIFFENERS



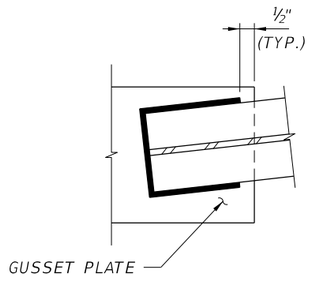
INTERMEDIATE STIFFENERS BOTTOM FLANGE TENSION ZONE



INTERMEDIATE STIFFENERS TOP FLANGE TENSION ZONE



INTERMEDIATE CROSS-FRAME, JACKING AND BEARING STIFFENERS



GUSSET PLATE

WELD TERMINATIONS AND CLIP DETAILS

NOTES:

1. FOR STRUCTURAL STEEL NOTES, SEE GIRDER ELEVATION SHEET.
2. FOR INTERMEDIATE CROSS-FRAME CONNECTION STIFFENER, INTERMEDIATE STIFFENER AND BEARING STIFFENER LOCATIONS, SEE STEEL GIRDER DETAILS AND FRAMING PLAN SHEETS.
3. FOR JACKING STIFFENER LOCATIONS, SEE GIRDER ELEVATION SHEET.

BRIDGE NO. 134XXX

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: JRC
CHECKED BY: CRG
DESIGNED BY: CMH
CHECKED BY: CRG

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: STIFFENER DETAILS

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: B1-25

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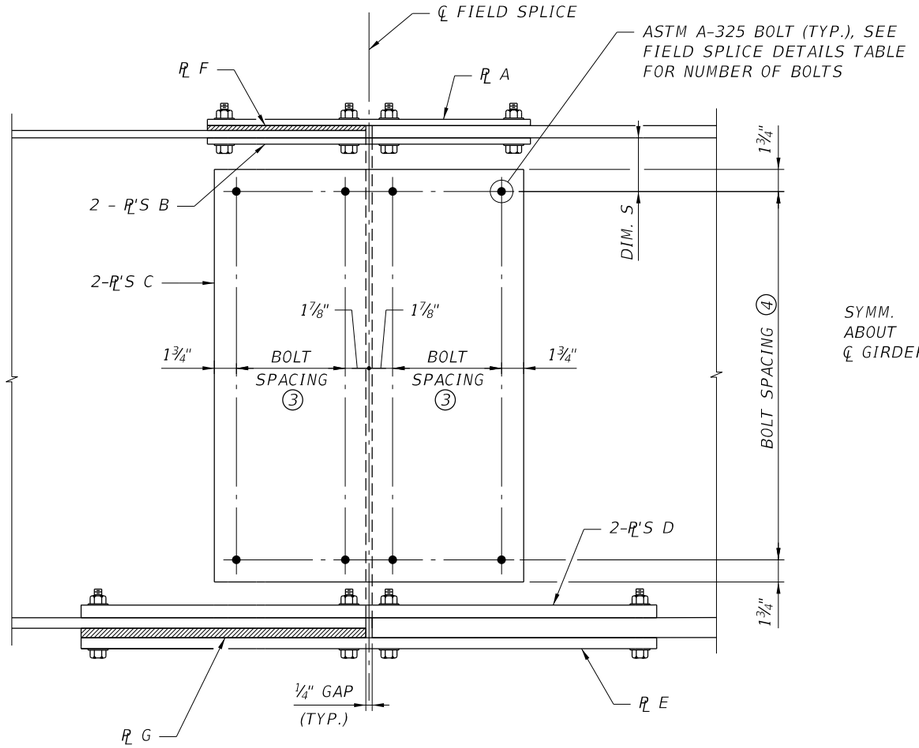
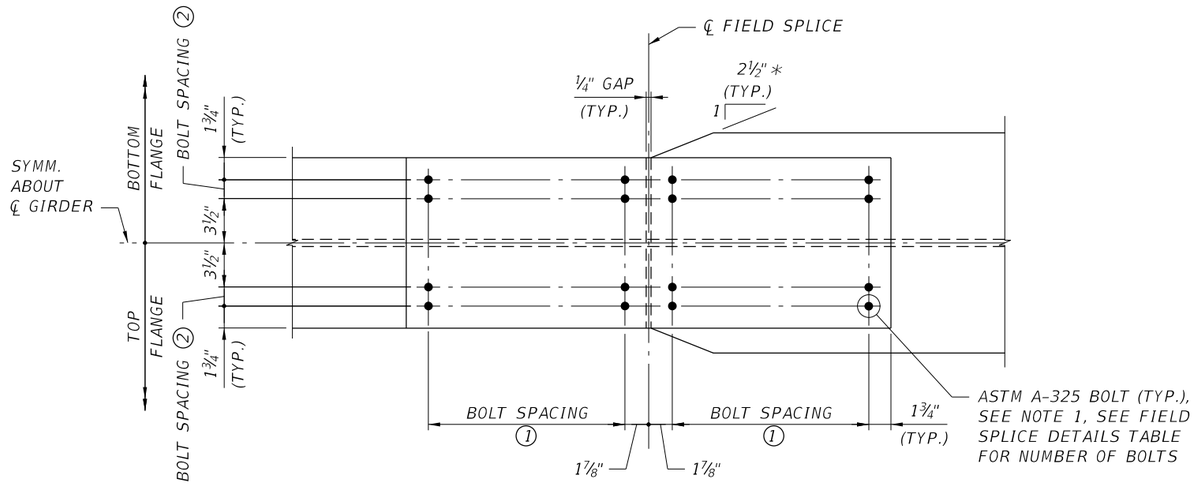


FIELD SPLICE ELEVATION



FIELD SPLICE PLAN

* TAPER TOP & BOTTOM FLANGE ONLY WHERE REQUIRED

FIELD SPLICE DETAILS													
		TOP FLANGE SPLICE						WEB PLATE SPLICE					
FIELD SPLICE TYPE	FIELD SPLICE LOCATION	PLATE A	PLATE B (2 REQUIRED)	PLATE F	BOLT SPACING ①	BOLT SPACING ②	TOTAL NUMBER OF BOLTS	WEB PLATE C (2 REQUIRED)	BOLT SPACING ③	BOLT SPACING ④	DIM. S	TOTAL NUMBER OF BOLTS
1	1 & 4	¾" X 1'-8" X 3'-1¼"	⅞" X 8¼" X 3'-1¼"	-	5 @ 3"	1 @ 4¾"	48	7/16" X 1'-1¼" X 5'-9⅝"	1 @ 3"	23 @ 2⅞"	5 15/16"	96
2	2 & 3	¾" X 1'-8" X 5'-1¼"	1" X 8¼" X 5'-1¼"	⅛" X 1'-8" X 2'-6½"	9 @ 3"	1 @ 4¾"	80	7/16" X 1'-7¼" X 5'-9⅝"	2 @ 3"	23 @ 2⅞"	5 15/16"	144

FIELD SPLICE DETAILS							
		BOTTOM FLANGE SPLICE					
FIELD SPLICE TYPE	FIELD SPLICE LOCATION	PLATE D (2 REQUIRED)	PLATE E	PLATE G	BOLT SPACING ①	BOLT SPACING ②	TOTAL NUMBER OF BOLTS
1	1 & 4	⅞" X 8¼" X 3'-1¼"	¾" X 1'-8" X 3'-1¼"	⅜" X 1'-8" X 1'-6½"	5 @ 3"	1 @ 4¾"	48
2	2 & 3	1¾" X 8¼" X 5'-1¼"	1½" X 1'-8" X 5'-1¼"	¼" X 1'-8" X 2'-6½"	9 @ 3"	1 @ 4¾"	80

NOTES:

1. ALL BOLTS SHALL BE ⅞" Ø ASTM A-325 TYPE 1 HIGH STRENGTH BOLTS IN 15/16" Ø HOLES WITH THREADS EXCLUDED FROM SHEAR PLANE.
2. ALL SPLICE AND FILL PLATES SHALL BE ASTM A709 GRADE 50.
3. ALL CONTACT SURFACES SHALL BE CLASS A FAYING SURFACE.
4. BOLT HEADS SHALL BE PLACED ON THE EXPOSED SIDE OF THE EXTERIOR GIRDER WEBS AND THE BOTTOM SIDE OF FLANGES AT GIRDER SPLICES.
5. ALL SPLICE PLATES SHALL BE CHARPY V-NOTCH IMPACT TESTED. FOR STRUCTURAL STEEL NOTES, SEE FRAMING PLAN - NOTES SHEET.
6. FOR ADDITIONAL STRUCTURAL STEEL NOTES, REFER TO GENERAL NOTES SHEETS.

BRIDGE NO. 134XXX

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: JRC
CHECKED BY: CRG
DESIGNED BY: CRG
CHECKED BY: RST

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: BOLTED FIELD SPLICE DETAILS
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-26

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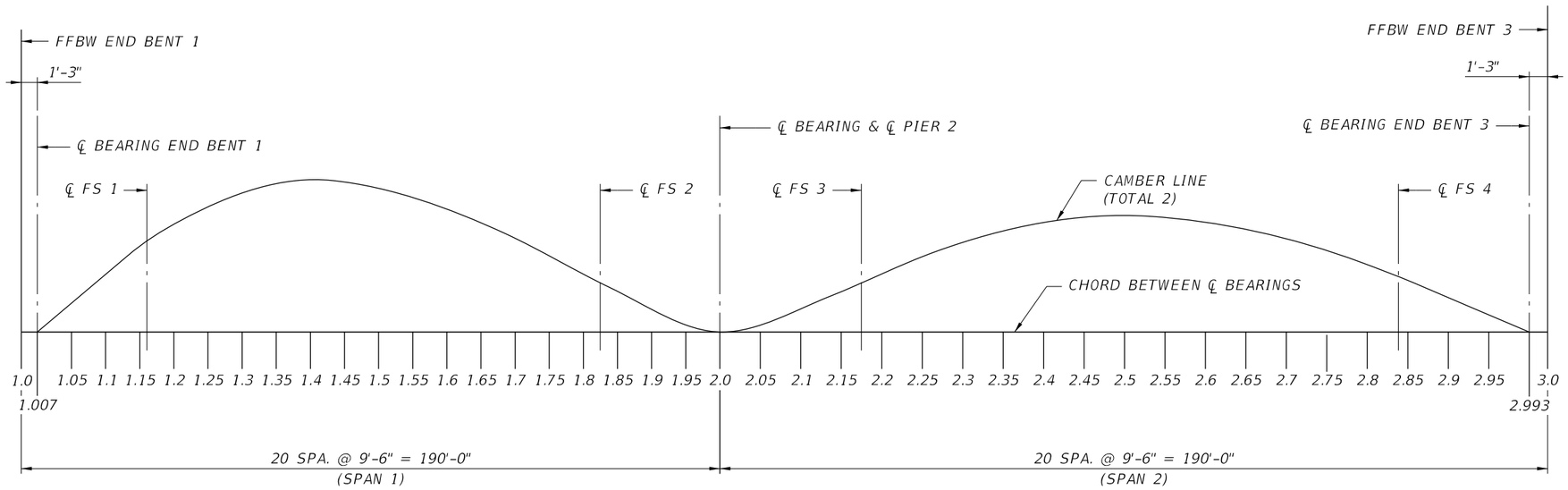

CAMBER DIAGRAM

NOTES:

1. DL 1 – NON-COMPOSITE CONCRETE DEAD LOAD INCLUDING THE SLAB, STAY IN PLACE FORMS AND HAUNCHES.
   DL 2 – COMPOSITE CONCRETE DEAD LOAD INCLUDING THE TRAFFIC RAILINGS.
   TOTAL 1 – REQUIRED ADJUSTMENTS TO DECK FORMS AND CONSTRUCTION ELEVATIONS TO ACCOUNT FOR DEFLECTIONS FROM DL 1 AND DL 2.
   DL STEEL – DEAD LOAD DEFLECTION OF STEEL ONLY INCLUDING THE PLATE GIRDER, SPLICE PLATES, CROSSFRAMES, STIFFENERS AND OTHER MISCELLANEOUS STEEL DETAILS.
   GEOMETRY – VERTICAL CURVE CORRECTION INCLUDES THE ADJUSTMENTS NECESSARY DUE TO THE ROADWAY PROFILE AND CROSS SLOPE.
   TOTAL 2 – TOTAL GIRDER CAMBER REQUIRED FOR FABRICATION.
2. POSITIVE CAMBERS ARE UPWARD.
3. ALL CAMBER VALUES ARE IN INCHES.
4. CAMBER VALUES ARE MEASURED FROM A CHORD BETWEEN THE FRONT FACE OF BACKWALL AT END BENTS TO THE CENTERLINE OF BEARING AT PIER 2.
5. FOR CAMBER ORDINATES, SEE CAMBER DIAGRAM (2 OF 3) THRU (3 OF 3).
6. GIRDERS SHALL BE CAMBERED FOR TOTAL DEAD LOAD DEFLECTION AND VERTICAL CURVE CORRECTION. GIRDER LENGTHS SHALL BE ADJUSTED FOR GRADE AND CAMBER.
7. CAMBER ORDINATES ARE BASED ON THE POURING SEQUENCE OUTLINED IN SUPERSTRUCTURE DETAILS (2 OF 3).

BRIDGE NO. 134XXX

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: JRC
CHECKED BY: CRG
DESIGNED BY: CRG
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: CAMBER DIAGRAM (1 OF 3)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-27

TABLE OF CAMBER ORDINATES (IN)

LOCATION	CAMBER ORDINATES	CL BRG. END BENT 1	SPAN 1 (BR 134XXX)																				CL BRG. PIER 2
			1.05	1.10	1.15	FS1	1.20	1.25	1.30	1.35	1.40	1.45	1.50	1.55	1.60	1.65	1.70	1.75	1.80	FS2	1.85	1.90	1.95	
GIRDER 1 & GIRDER 9	DL STEEL	0.000	0.239	0.457	0.660	0.731	0.829	0.968	1.065	1.122	1.139	1.112	1.052	0.953	0.837	0.692	0.550	0.403	0.275	0.209	0.161	0.077	0.024	0.000
	DL 1	0.000	1.326	2.540	3.676	4.078	4.630	5.423	5.994	6.346	6.471	6.355	6.042	5.487	4.829	4.006	3.204	2.385	1.667	1.297	1.028	0.537	0.194	0.000
	DL 2	0.000	0.116	0.220	0.317	0.351	0.398	0.463	0.510	0.538	0.547	0.536	0.510	0.465	0.410	0.342	0.274	0.202	0.139	0.106	0.082	0.040	0.012	0.000
	TOTAL 1	0.000	1.442	2.760	3.993	4.429	5.028	5.886	6.504	6.884	7.018	6.891	6.552	5.952	5.239	4.348	3.478	2.587	1.806	1.403	1.110	0.577	0.206	0.000
	VC	0.000	0.893	1.821	2.641	2.953	3.352	3.954	4.449	4.835	5.113	5.282	5.344	5.297	5.141	4.878	4.506	4.026	3.437	3.047	2.740	1.935	1.022	0.000
	TOTAL 2	0.000	2.574	5.038	7.294	8.113	9.209	10.808	12.018	12.841	13.270	13.285	12.948	12.202	11.217	9.918	8.534	7.016	5.518	4.659	4.011	2.589	1.252	0.000
GIRDER 2 & GIRDER 8	DL STEEL	0.000	0.244	0.467	0.674	0.747	0.847	0.988	1.088	1.146	1.163	1.135	1.075	0.974	0.854	0.707	0.563	0.412	0.281	0.214	0.165	0.079	0.024	0.000
	DL 1	0.000	1.364	2.611	3.779	4.192	4.759	5.573	6.159	6.519	6.647	6.528	6.207	5.636	4.960	4.115	3.292	2.450	1.712	1.332	1.055	0.550	0.198	0.000
	DL 2	0.000	0.115	0.219	0.316	0.350	0.396	0.461	0.507	0.535	0.544	0.534	0.507	0.462	0.408	0.340	0.272	0.200	0.138	0.105	0.081	0.039	0.012	0.000
	TOTAL 1	0.000	1.479	2.830	4.095	4.541	5.155	6.034	6.666	7.054	7.191	7.062	6.714	6.098	5.368	4.455	3.564	2.650	1.850	1.437	1.136	0.589	0.210	0.000
	VC	0.000	0.893	1.821	2.641	2.953	3.352	3.954	4.449	4.835	5.113	5.282	5.344	5.297	5.141	4.878	4.506	4.026	3.437	3.047	2.740	1.935	1.022	0.000
	TOTAL 2	0.000	2.616	5.118	7.410	8.241	9.354	10.976	12.203	13.035	13.467	13.479	13.133	12.369	11.363	10.040	8.633	7.088	5.568	4.697	4.041	2.603	1.256	0.000
GIRDER 3 & GIRDER 7	DL STEEL	0.000	0.248	0.475	0.685	0.759	0.860	1.004	1.105	1.164	1.181	1.153	1.092	0.989	0.868	0.718	0.571	0.419	0.286	0.217	0.167	0.080	0.024	0.000
	DL 1	0.000	1.392	2.666	3.857	4.278	4.857	5.688	6.286	6.653	6.784	6.661	6.333	5.751	5.061	4.198	3.358	2.498	1.745	1.357	1.074	0.559	0.201	0.000
	DL 2	0.000	0.115	0.219	0.315	0.348	0.394	0.459	0.505	0.533	0.542	0.531	0.505	0.460	0.407	0.339	0.271	0.200	0.137	0.105	0.081	0.039	0.012	0.000
	TOTAL 1	0.000	1.507	2.885	4.172	4.626	5.251	6.147	6.791	7.186	7.326	7.192	6.838	6.211	5.468	4.537	3.629	2.698	1.882	1.461	1.155	0.598	0.213	0.000
	VC	0.000	0.893	1.821	2.641	2.953	3.352	3.954	4.449	4.835	5.113	5.282	5.344	5.297	5.141	4.878	4.506	4.026	3.437	3.047	2.740	1.935	1.022	0.000
	TOTAL 2	0.000	2.648	5.181	7.498	8.338	9.463	11.105	12.345	13.185	13.620	13.627	13.274	12.497	11.477	10.133	8.706	7.143	5.605	4.725	4.062	2.613	1.259	0.000
GIRDER 4 & GIRDER 6	DL STEEL	0.000	0.251	0.479	0.691	0.766	0.868	1.013	1.115	1.175	1.192	1.164	1.102	0.998	0.876	0.725	0.576	0.422	0.288	0.219	0.169	0.081	0.025	0.000
	DL 1	0.000	1.409	2.698	3.903	4.330	4.916	5.757	6.362	6.734	6.866	6.741	6.409	5.819	5.121	4.247	3.396	2.526	1.764	1.371	1.085	0.565	0.203	0.000
	DL 2	0.000	0.114	0.218	0.314	0.347	0.393	0.458	0.504	0.532	0.541	0.530	0.504	0.459	0.405	0.338	0.270	0.199	0.137	0.105	0.081	0.039	0.012	0.000
	TOTAL 1	0.000	1.523	2.916	4.217	4.677	5.309	6.215	6.866	7.266	7.407	7.271	6.913	6.278	5.526	4.585	3.666	2.725	1.901	1.475	1.166	0.604	0.215	0.000
	VC	0.000	0.893	1.821	2.641	2.953	3.352	3.954	4.449	4.835	5.113	5.282	5.344	5.297	5.141	4.878	4.506	4.026	3.437	3.047	2.740	1.935	1.022	0.000
	TOTAL 2	0.000	2.667	5.216	7.549	8.395	9.529	11.182	12.430	13.276	13.712	13.717	13.359	12.573	11.543	10.188	8.748	7.173	5.626	4.741	4.075	2.620	1.262	0.000
GIRDER 5	DL STEEL	0.000	0.251	0.480	0.694	0.769	0.871	1.016	1.119	1.178	1.196	1.168	1.105	1.001	0.879	0.727	0.578	0.423	0.289	0.220	0.169	0.081	0.025	0.000
	DL 1	0.000	1.414	2.708	3.919	4.347	4.935	5.779	6.387	6.760	6.893	6.767	6.434	5.842	5.140	4.263	3.409	2.535	1.770	1.376	1.089	0.567	0.204	0.000
	DL 2	0.000	0.114	0.218	0.314	0.347	0.393	0.458	0.504	0.531	0.540	0.530	0.503	0.459	0.405	0.337	0.270	0.199	0.137	0.105	0.081	0.039	0.012	0.000
	TOTAL 1	0.000	1.528	2.926	4.233	4.694	5.328	6.237	6.891	7.291	7.433	7.297	6.937	6.301	5.545	4.600	3.679	2.734	1.907	1.480	1.170	0.606	0.216	0.000
	VC	0.000	0.893	1.821	2.641	2.953	3.352	3.954	4.449	4.835	5.113	5.282	5.344	5.297	5.141	4.878	4.506	4.026	3.437	3.047	2.740	1.935	1.022	0.000
	TOTAL 2	0.000	2.672	5.227	7.568	8.416	9.551	11.207	12.459	13.304	13.742	13.747	13.386	12.599	11.565	10.205	8.763	7.183	5.633	4.747	4.079	2.622	1.263	0.000

BRIDGE NO. 134XXX

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REVISIONS

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Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: JRC
CHECKED BY: CRG
DESIGNED BY: CRG
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: CAMBER DIAGRAM (2 OF 3)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-28

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TABLE OF CAMBER ORDINATES (IN)

LOCATION	CAMBER ORDINATES	CL BRG. PIER 2	SPAN 2 (BR 134XXX)																				CL BRG. END BENT 3
			2.05	2.10	2.15	FS3	2.20	2.25	2.30	2.35	2.40	2.45	2.50	2.55	2.60	2.65	2.70	2.75	2.80	FS4	2.85	2.90	2.95	
GIRDER 1 & GIRDER 9	DL STEEL	0.000	0.023	0.077	0.166	0.212	0.275	0.412	0.551	0.704	0.838	0.963	1.055	1.118	1.142	1.125	1.068	0.967	0.832	0.730	0.656	0.458	0.240	0.000
	DL 1	0.000	0.024	0.198	0.545	0.734	0.994	1.582	2.196	2.881	3.498	4.080	4.523	4.846	4.987	4.950	4.724	4.295	3.708	3.258	2.931	2.054	1.077	0.000
	DL 2	0.000	0.012	0.039	0.084	0.107	0.139	0.206	0.274	0.347	0.411	0.469	0.511	0.539	0.548	0.539	0.511	0.463	0.399	0.350	0.315	0.221	0.116	0.000
	TOTAL 1	0.000	0.036	0.237	0.629	0.841	1.133	1.788	2.470	3.228	3.909	4.549	5.034	5.385	5.535	5.489	5.235	4.758	4.107	3.609	3.246	2.275	1.193	0.000
	VC	0.000	1.022	1.935	2.740	3.047	3.437	4.026	4.506	4.878	5.141	5.297	5.344	5.282	5.113	4.835	4.449	3.954	3.352	2.953	2.641	1.821	0.893	0.000
	TOTAL 2	0.000	1.081	2.249	3.535	4.100	4.845	6.226	7.527	8.810	9.888	10.809	11.433	11.785	11.790	11.449	10.752	9.679	8.291	7.292	6.543	4.554	2.326	0.000
GIRDER 2 & GIRDER 8	DL STEEL	0.000	0.024	0.079	0.170	0.217	0.281	0.421	0.563	0.719	0.856	0.983	1.077	1.142	1.166	1.149	1.090	0.987	0.849	0.745	0.670	0.468	0.245	0.000
	DL 1	0.000	0.028	0.210	0.571	0.766	1.035	1.643	2.276	2.983	3.617	4.216	4.671	5.003	5.147	5.108	4.875	4.434	3.828	3.364	3.026	2.121	1.113	0.000
	DL 2	0.000	0.012	0.039	0.084	0.107	0.138	0.205	0.272	0.345	0.409	0.466	0.508	0.536	0.546	0.537	0.509	0.461	0.397	0.349	0.314	0.220	0.115	0.000
	TOTAL 1	0.000	0.040	0.249	0.655	0.873	1.173	1.848	2.548	3.328	4.026	4.682	5.179	5.539	5.693	5.645	5.384	4.895	4.225	3.713	3.340	2.341	1.228	0.000
	VC	0.000	1.022	1.935	2.740	3.047	3.437	4.026	4.506	4.878	5.141	5.297	5.344	5.282	5.113	4.835	4.449	3.954	3.352	2.953	2.641	1.821	0.893	0.000
	TOTAL 2	0.000	1.086	2.263	3.565	4.137	4.891	6.295	7.617	8.925	10.023	10.962	11.600	11.963	11.972	11.629	10.923	9.836	8.426	7.411	6.651	4.630	2.366	0.000
GIRDER 3 & GIRDER 7	DL STEEL	0.000	0.024	0.080	0.173	0.221	0.286	0.427	0.572	0.730	0.870	0.999	1.094	1.160	1.184	1.167	1.108	1.003	0.863	0.757	0.680	0.476	0.249	0.000
	DL 1	0.000	0.030	0.217	0.588	0.788	1.064	1.687	2.336	3.059	3.708	4.321	4.786	5.125	5.272	5.231	4.992	4.540	3.919	3.444	3.099	2.172	1.139	0.000
	DL 2	0.000	0.012	0.039	0.084	0.106	0.137	0.204	0.271	0.344	0.407	0.465	0.506	0.534	0.544	0.534	0.507	0.459	0.395	0.348	0.313	0.219	0.115	0.000
	TOTAL 1	0.000	0.042	0.256	0.672	0.895	1.201	1.891	2.607	3.403	4.115	4.786	5.292	5.659	5.816	5.765	5.499	4.999	4.314	3.792	3.412	2.391	1.254	0.000
	VC	0.000	1.022	1.935	2.740	3.047	3.437	4.026	4.506	4.878	5.141	5.297	5.344	5.282	5.113	4.835	4.449	3.954	3.352	2.953	2.641	1.821	0.893	0.000
	TOTAL 2	0.000	1.088	2.271	3.585	4.162	4.924	6.344	7.685	9.011	10.126	11.082	11.730	12.101	12.113	11.767	11.056	9.956	8.529	7.502	6.733	4.688	2.396	0.000
GIRDER 4 & GIRDER 6	DL STEEL	0.000	0.024	0.081	0.174	0.222	0.288	0.431	0.577	0.737	0.878	1.008	1.104	1.171	1.195	1.178	1.118	1.012	0.871	0.764	0.686	0.480	0.251	0.000
	DL 1	0.000	0.031	0.221	0.597	0.800	1.080	1.711	2.369	3.102	3.761	4.382	4.854	5.197	5.347	5.305	5.062	4.603	3.973	3.491	3.141	2.202	1.154	0.000
	DL 2	0.000	0.012	0.039	0.083	0.106	0.137	0.203	0.271	0.343	0.406	0.463	0.505	0.533	0.542	0.533	0.505	0.458	0.394	0.347	0.312	0.218	0.115	0.000
	TOTAL 1	0.000	0.043	0.260	0.680	0.906	1.217	1.914	2.640	3.445	4.167	4.845	5.359	5.730	5.889	5.838	5.567	5.061	4.367	3.838	3.453	2.420	1.269	0.000
	VC	0.000	1.022	1.935	2.740	3.047	3.437	4.026	4.506	4.878	5.141	5.297	5.344	5.282	5.113	4.835	4.449	3.954	3.352	2.953	2.641	1.821	0.893	0.000
	TOTAL 2	0.000	1.089	2.276	3.594	4.175	4.942	6.371	7.723	9.060	10.186	11.150	11.807	12.183	12.197	11.851	11.134	10.027	8.590	7.555	6.780	4.721	2.413	0.000
GIRDER 5	DL STEEL	0.000	0.024	0.081	0.175	0.223	0.289	0.432	0.579	0.739	0.880	1.011	1.108	1.174	1.199	1.182	1.122	1.015	0.873	0.766	0.689	0.481	0.252	0.000
	DL 1	0.000	0.031	0.222	0.599	0.804	1.085	1.719	2.380	3.116	3.778	4.402	4.876	5.221	5.371	5.329	5.085	4.624	3.991	3.507	3.155	2.211	1.160	0.000
	DL 2	0.000	0.012	0.039	0.083	0.106	0.137	0.203	0.270	0.343	0.406	0.463	0.505	0.532	0.542	0.533	0.505	0.458	0.394	0.346	0.311	0.218	0.114	0.000
	TOTAL 1	0.000	0.043	0.261	0.682	0.909	1.222	1.922	2.650	3.459	4.184	4.865	5.381	5.753	5.913	5.862	5.590	5.082	4.385	3.853	3.466	2.429	1.274	0.000
	VC	0.000	1.022	1.935	2.740	3.047	3.437	4.026	4.506	4.878	5.141	5.297	5.344	5.282	5.113	4.835	4.449	3.954	3.352	2.953	2.641	1.821	0.893	0.000
	TOTAL 2	0.000	1.089	2.277	3.597	4.179	4.948	6.380	7.735	9.076	10.205	11.173	11.833	12.209	12.225	11.879	11.161	10.051	8.610	7.573	6.796	4.731	2.419	0.000

BRIDGE NO. 134XXX

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
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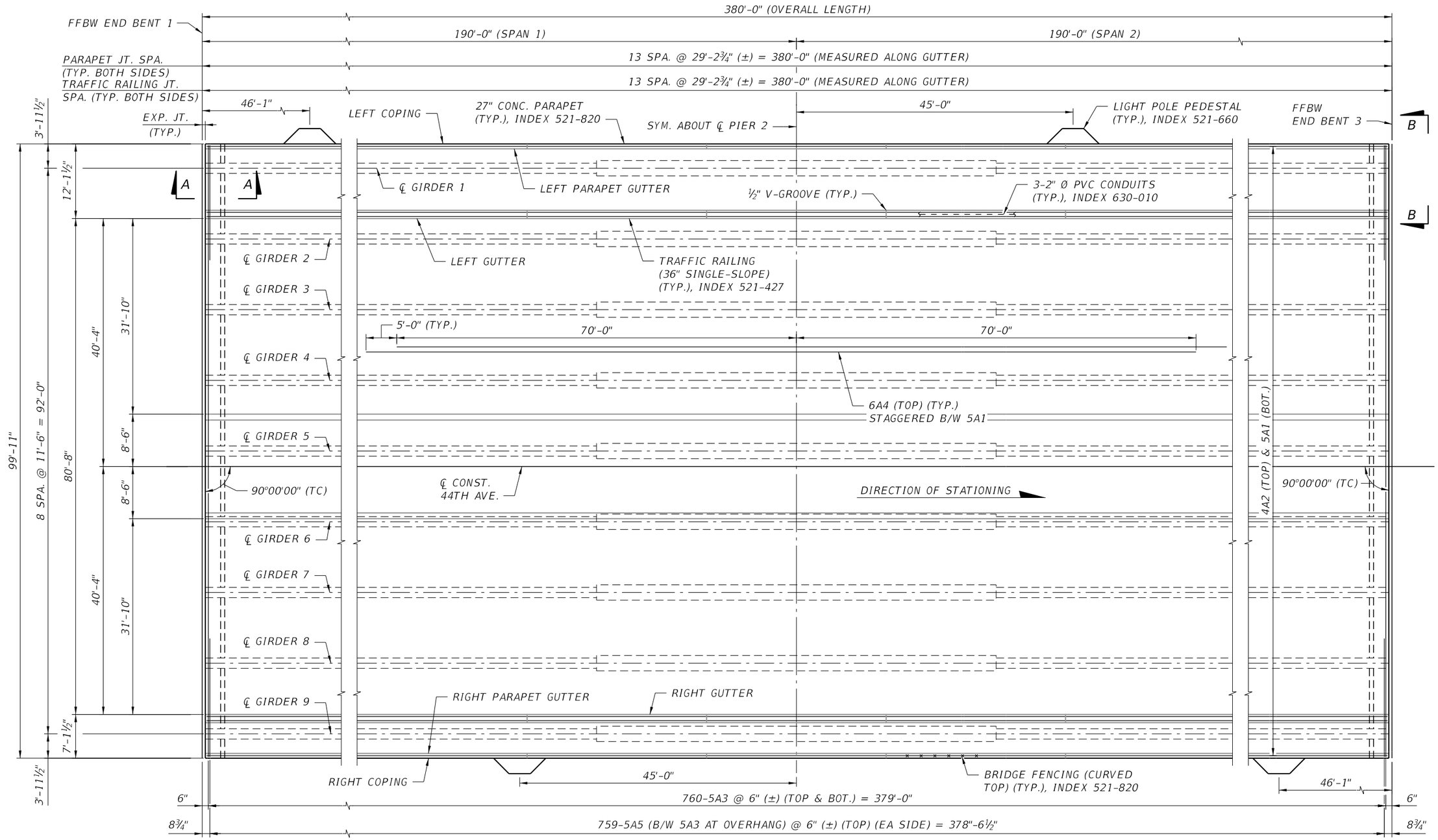
DESIGNED BY: CRG
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: CAMBER DIAGRAM (3 OF 3)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-29



PLAN

NOTES:

1. FOR SUPERSTRUCTURE SECTION, SEE SUPERSTRUCTURE SECTION SHEET.
2. FOR SECTION A-A, VIEW B-B AND SUPERSTRUCTURE DETAILS, SEE SUPERSTRUCTURE DETAILS SHEET.
3. FOR REINFORCING BAR LIST, SEE REINFORCING BAR LIST SHEETS.
4. MINIMUM LAP: NO. 4 BAR = 1'-6"
   NO. 5 BAR = 1'-11"
   NO. 6 BAR = 2'-3"

BRIDGE NO. 134XXX

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
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Manatee County FLORIDA
Manatee County Public Works

SHEET TITLE: SUPERSTRUCTURE PLAN
REF. DWG. NO.
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO. B1-30

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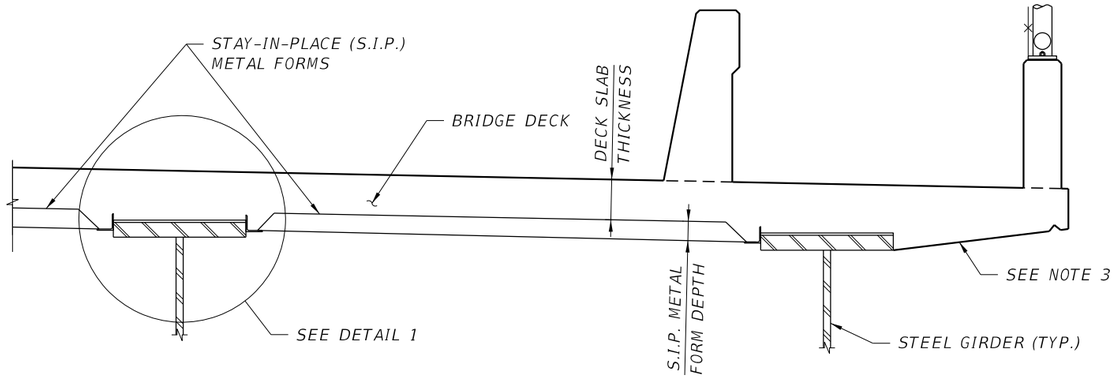
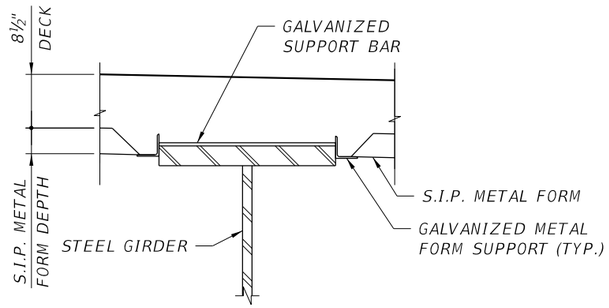
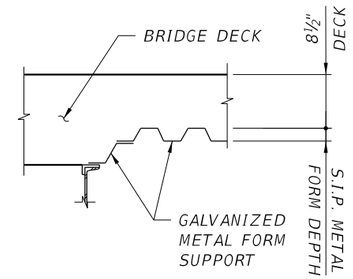


PARTIAL SECTION THRU SUPERSTRUCTURE



DETAIL 1



PARTIAL SECTION
THRU END OF SPAN

STAY-IN-PLACE METAL FORMS

STRIP SEAL EXPANSION JOINT DATA TABLE INDEX 458-100								Table Date 01/01/12
LOCATION	TOTAL DESIGN MOVEMENT			MOVEMENT ANGLE α	SKEW ANGLE		DIM. A @ 70°F	DIM. A ADJUSTMENT PER 10°F
	IN DIRECTION OF MOVEMENT	PERPENDICULAR TO ℄ JOINT	PARALLEL TO ℄ JOINT		LEFT SIDE	RIGHT SIDE		
END BENT 1	1½"	1½"	0"	0°	0°	0°	2"	3/16"
END BENT 3	1½"	1½"	0"	0°	0°	0°	2"	3/16"

NOTE:
Dim. A adjustment per 10°F shown is measured perpendicular to ℄ Expansion Joint. For theoretical direction of movement, see Index 458-100, Sheet 1.

STAY-IN-PLACE METAL FORM NOTES:

1. THE SUPERSTRUCTURE CONCRETE QUANTITIES SHOWN ON THESE PLANS DO NOT INCLUDE THE CONCRETE REQUIRED TO FILL THE STAY-IN-PLACE METAL FORM FLUTES.
2. SEE SECTION 400 OF THE SPECIFICATIONS FOR INSTALLATION REQUIREMENTS FOR S.I.P. FORMS AND SUPPORT COMPONENTS.
3. S.I.P. METAL FORMS ARE NOT ALLOWED TO BE USED FOR THE OVERHANGS AND FOR CLOSURE POURS.

BRIDGE NO. 134XXX

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
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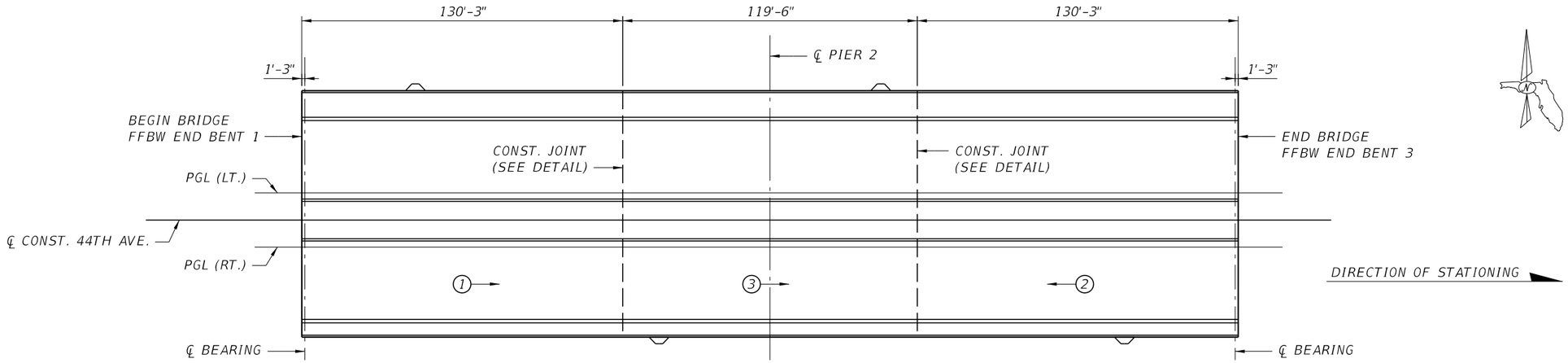
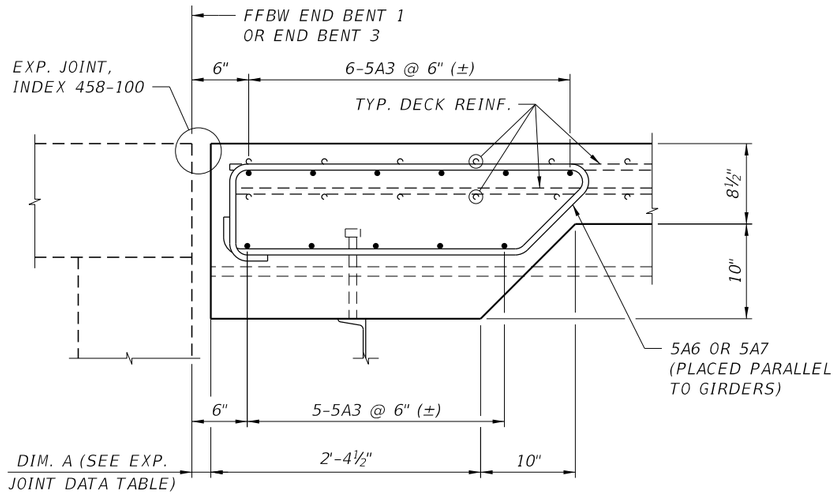
CHECKED BY: CAS

Manatee County FLORIDA
Manatee County Public Works

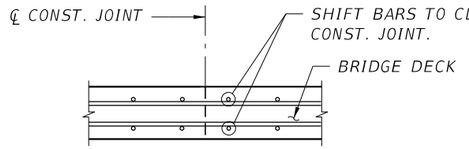
SHEET TITLE: SUPERSTRUCTURE DETAILS (1 OF 3)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-31



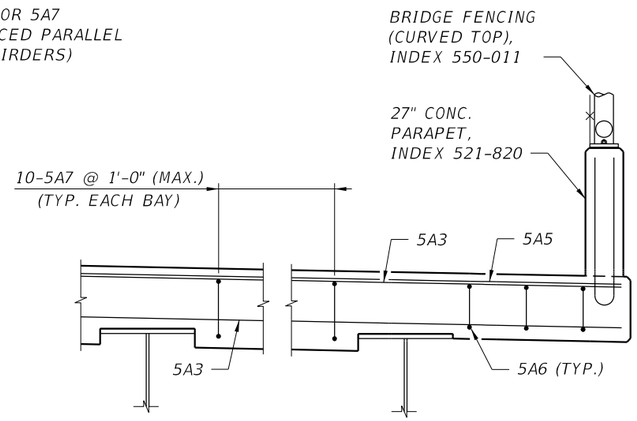
CONCRETE PLACEMENT SEQUENCE



SECTION A-A



CONST. JOINT DETAIL



PARTIAL VIEW B-B

EDGE BEAM NOTES:

1. FOR LOCATION OF SECTION A-A AND VIEW B-B, SEE SUPERSTRUCTURE PLAN SHEET.
2. FOR EXPANSION JOINT DATA TABLE, SEE SUPERSTRUCTURE DETAILS (1 OF 3).

CONCRETE PLACEMENT SEQUENCE NOTES:

1. (X) SEQUENCE OF CONCRETE PLACEMENT. X = DECK POUR SECTION.
2. → INDICATES DIRECTION OF CONCRETE PLACEMENT.
3. ALL DIMENSIONS ARE MEASURED ALONG BASELINE.
4. PLACEMENT SHALL PROCEED AT FULL WIDTH OF BRIDGE DECK.
5. ALL GIRDERS, CROSS FRAMES, STAY-IN-PLACE FORMS AND DECK REINFORCING SHALL BE IN PLACE PRIOR TO ANY DECK PLACEMENT.
6. A MINIMUM OF 72-HOURS IS REQUIRED BETWEEN SUCCESSIVE POURS IN A GIVEN CONTINUOUS UNIT.
7. FOR STAY-IN-PLACE FORM DETAILS AND NOTES, SEE SUPERSTRUCTURE DETAILS (1 OF 3) SHEET.
8. ADJUST THE SET-TIME OF CONCRETE MIX WITH PLASTICIZERS OR RETARDANTS AS NECESSARY TO ASSURE COMPLETE PLACEMENT OF DECK CONCRETE BETWEEN CONSTRUCTION JOINTS BEFORE INITIAL SET BEGINS IN THE PLASTIC CONCRETE.
9. THE DECK CASTING SEQUENCE MAY NOT BE CHANGED UNLESS THE CONTRACTOR'S SPECIALTY ENGINEER PERFORMS A NEW STRACTURAL ANALYSIS, NEW BUILD-UP DIAGRAMS ARE DEVELOPED, REVISED DECK REINFORCING STEEL LAYOUTS AND BAR LISTS ARE DEVELOPED, AND A NEW LOAD RATING IS PERFORMED.

BRIDGE NO. 134XXX

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
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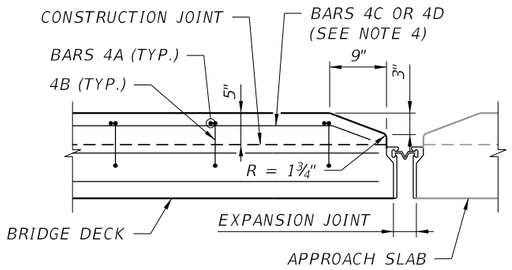
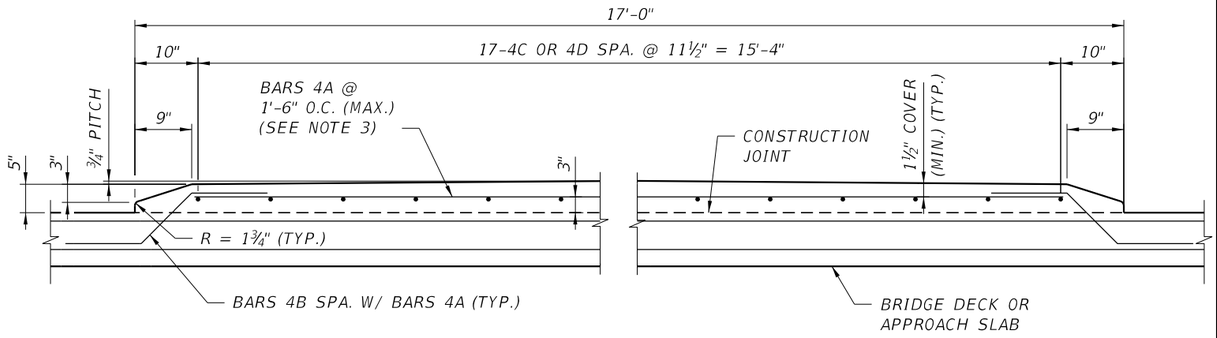
Manatee County Public Works

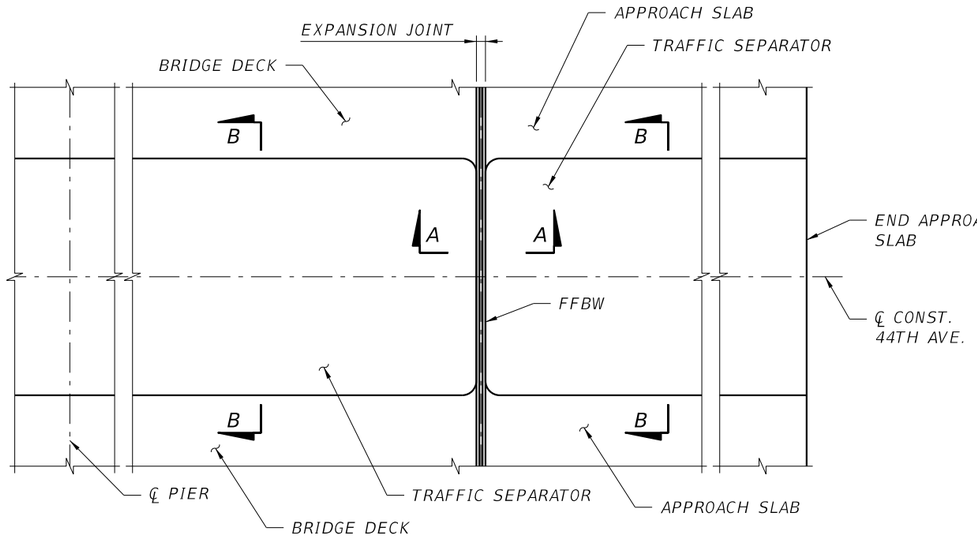
SHEET TITLE: SUPERSTRUCTURE DETAILS (2 OF 3)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-32



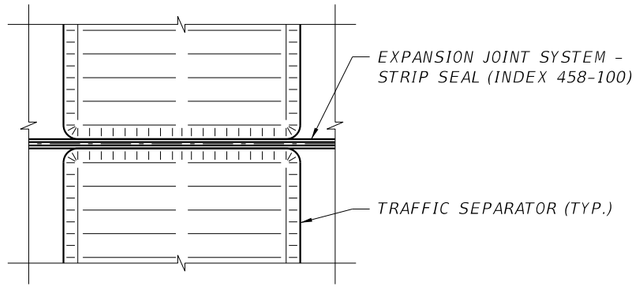
SECTION A-A



SECTION B-B



PLAN



EXPANSION JOINT DETAIL

NOTES:

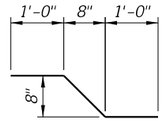
1. TRAFFIC SEPARATOR ENDS AT DECK EXPANSION JOINT SHALL FOLLOW THE DECK JOINT LIMITS. PLACE ½" V-GROOVES PERPENDICULAR TO THE ℄ OF THE TRAFFIC SEPARATOR. FOR V-GROOVE SPACING, SEE SUPERSTRUCTURE PLAN SHEETS.
2. FOR EXPANSION JOINT DIMENSIONS AND ORIENTATION, SEE SUPERSTRUCTURE DETAILS SHEETS.
3. AT THE CONTRACTOR'S OPTION, A ONE PIECE BAR MAY BE SUBSTITUTED FOR BARS 4A AND 4B.
4. FIELD BEND AND CUT REBAR AS REQUIRED TO MAINTAIN COVER.
5. FOR MATERIAL REQUIREMENTS, SEE GENERAL NOTES SHEETS.
6. TRAFFIC SEPARATOR QUANTITIES:
   CONCRETE QUANTITIY: 0.273 CY PER FT. OF BRIDGE LENGTH
   REINFORCING STEEL: 20.9 LBS PER FT. OF BRIDGE LENGTH

BILL OF REINFORCING STEEL

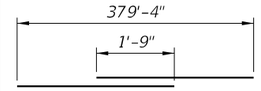
MARK	SIZE	NUMBER REQUIRED	LENGTH
BRIDGE			
A	4	254	15'-6"
B	4	508	3'-0"
C	4	17	389'-10"
APPROACH SLAB 1 OR 2			
A	4	20	15'-6"
B	4	40	3'-0"
D	4	17	29'-8"

BENDING DIAGRAMS

BARS 4A & 4D

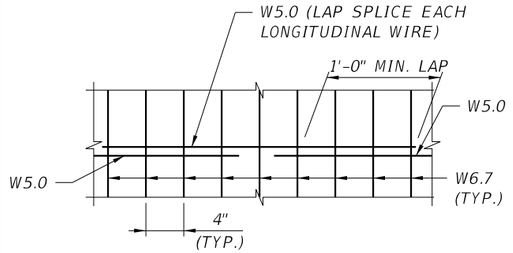


BAR 4B



BAR 4C

NOTE: ALL DIMENSIONS ARE OUT TO OUT.



SPLICE DETAIL
(BETWEEN WWR 3 X 4 - W5.0 X W6.7 SECTIONS)

ALTERNATE REINFORCING STEEL DETAILS
(WELDED WIRE REINFORCEMENT)

NOTES:

1. USE WELDED WIRE REINFORCEMENT 3 X 4 - W5.0 X W6.7 AS REQUIRED BY PLANS IN PLACE OF BARS 4A, 4B, 4C AND 4D. BEND THE WELDED WIRE REINFORCEMENT TO THE DIMENSIONS OF BAR 4B SHOWN IN THE BENDING DIAGRAM FOR REINFORCING STEEL.
2. WELDED WIRE REINFORCEMENT TO CONSIST OF SMOOTH WIRE MEETING THE REQUIREMENTS OF SPECIFICATION 931.

BRIDGE NO. 134XXX

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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DESIGNED BY: CMH
CHECKED BY: CAS

Manatee County Public Works

SHEET TITLE: SUPERSTRUCTURE DETAILS (3 OF 3)
REF. DWG. NO.
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO. B1-33

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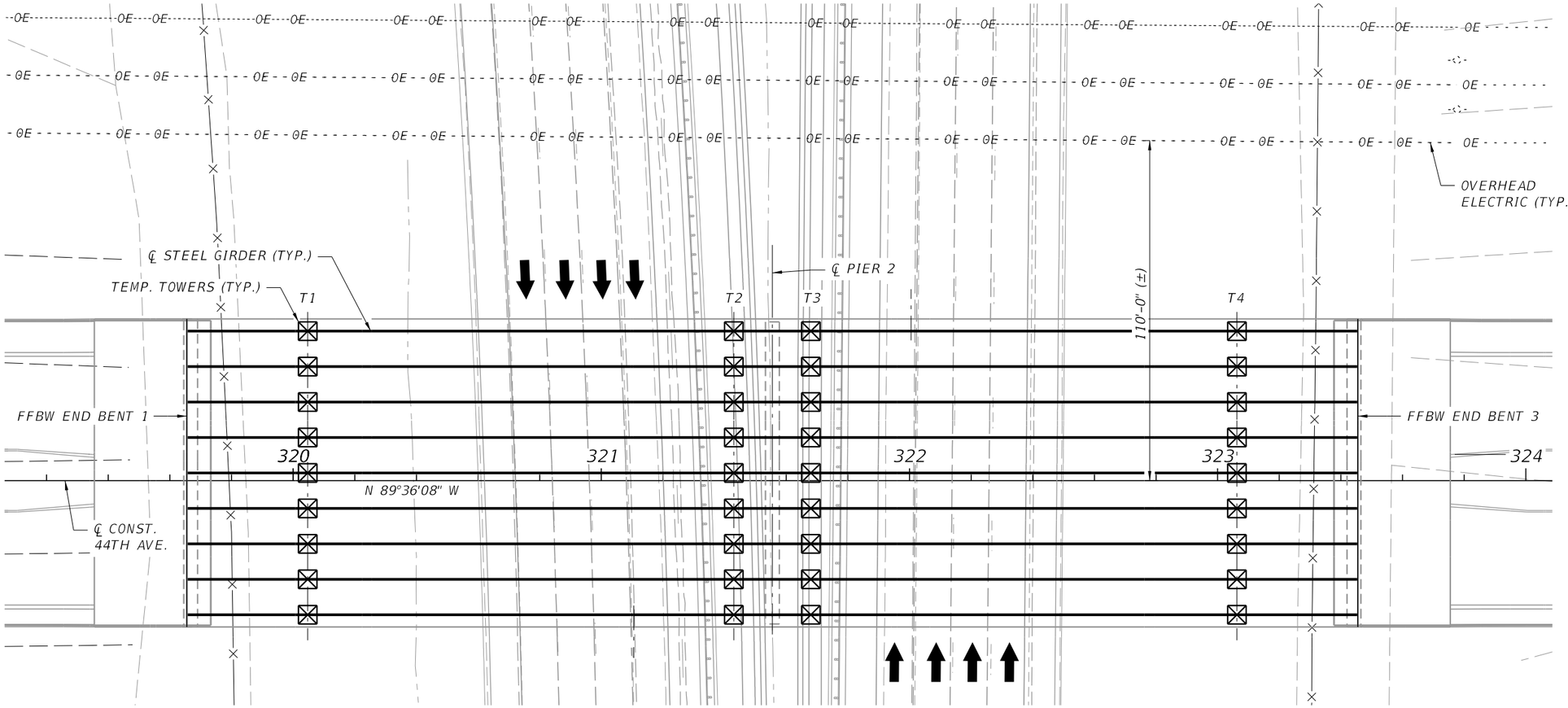

PLAN

GENERAL ERECTION NOTES (APPLIES TO ALL STAGES):

1. THE CONTRACTOR'S SPECIALTY ENGINEER IS RESPONSIBLE FOR DETERMINING THE NEED FOR TEMPORARY BRACES, TEMPORARY TOWERS, HOLD CRANES, AND ANY OTHER ADDITIONAL MEANS NECESSARY TO FACILITATE PROPER FIT-UP AND ENSURE STABILITY OF THE ERECTED STRUCTURE DURING ALL STAGES OF ERECTION.
2. ERECTION SEQUENCE OF GIRDER SECTIONS MAY BE REVISED BY THE CONTRACTOR. SUBMIT THE REVISED SEQUENCE TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL.
3. THE CONTRACTOR MAY CHOOSE TO SPLICE SOME OF THE GIRDER SECTIONS AT GROUND LEVEL AND ELIMINATE SOME OF THE ERECTION TOWERS SHOWN. SUBMIT THE REVISED ERECTION SEQUENCE TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL.
4. FOR DECK CONCRETE PLACEMENT DETAILS AND LIMITS, SEE SUPERSTRUCTURE DETAILS (3 OF 3) SHEET.
5. NEVER LIFT STRUCTURAL MEMBERS OVER ACTIVE TRAFFIC. BEFORE RELEASING TRAFFIC, ENSURE THAT STRUCTURAL MEMBERS ARE STABLE.
6. CONTRACTOR SHALL NOT FIELD WELD TEMPORARY MEMBERS TO PERMENANT STEEL MEMBERS.
7. ALL BOLTED FIELD SPLICES AND CROSSFRAME ASSEMBLIES SHALL BE COMPLETED BEFORE END OF WORK SHIFT AND BEFORE TRAFFIC IS RELEASED.
8. BEARINGS SHALL BE PLACED ON THE APPROPRIATE END BENT OR PIER PRIOR TO STRUCTURAL STEEL ERECTION.
9. FOR TEMPORARY SHORING TOWER LOADS, SEE ERECTION SEQUENCE (4 OF 4) SHEET.

BRIDGE NO. 134XXX

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
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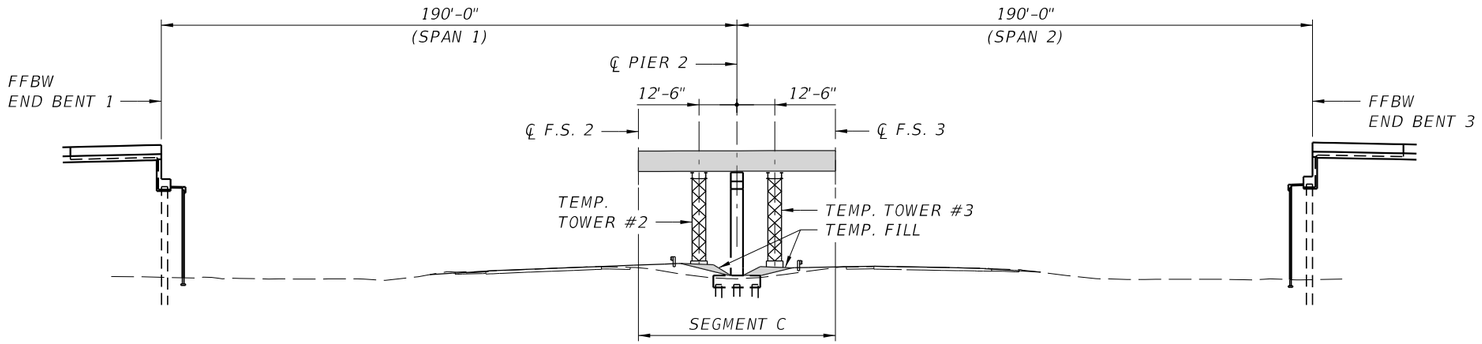
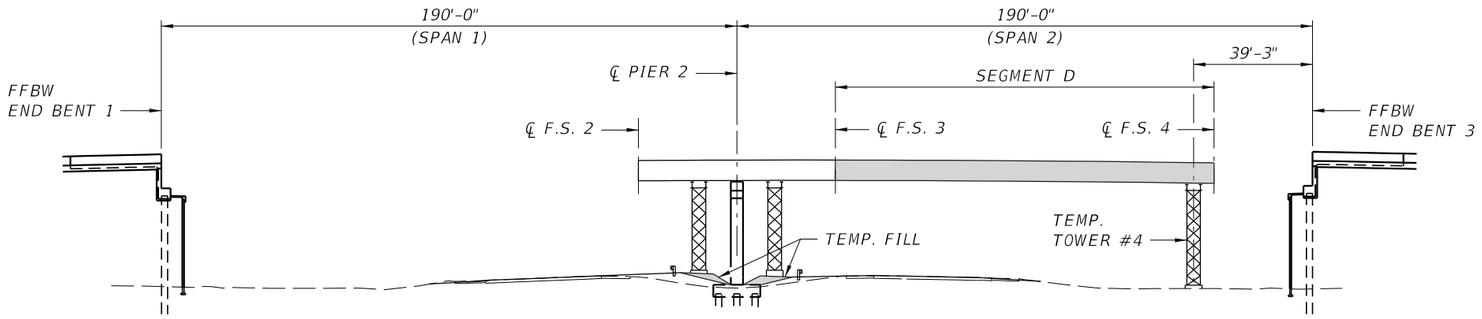
DESIGNED BY: CRG
CHECKED BY: RST

Manatee County FLORIDA — Manatee County Public Works

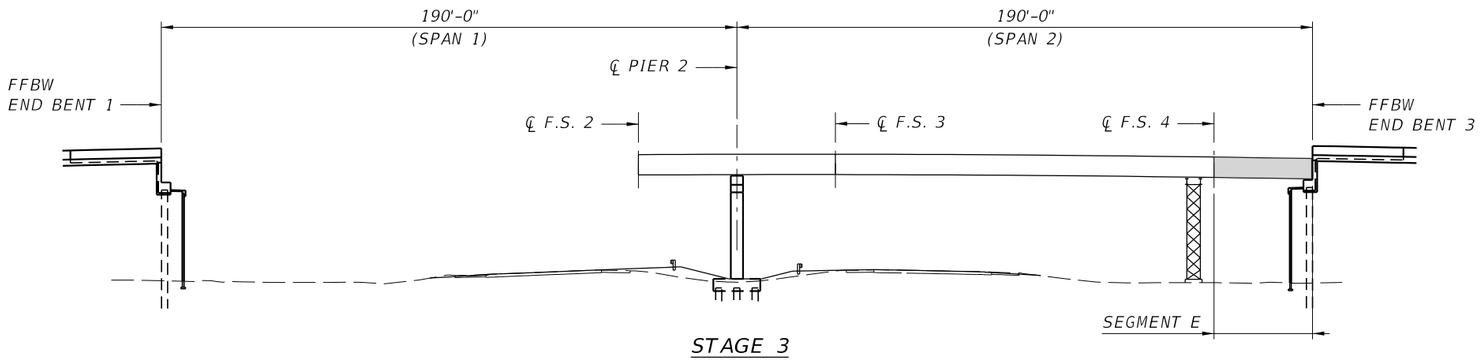
SHEET TITLE: ERECTION SEQUENCE (1 OF 4)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-34



STAGE 1



STAGE 2



STAGE 3

ERECTION NOTES:

BEFORE BEGINNING ERECTION SEQUENCE, PIER AND END BENTS CONSTRUCTION SHALL BE COMPLETED AS WELL AS PERMANENT AND TEMPORARY MSE WALLS.

STAGE 1

1. INSTALL SUITABLE TEMPORARY FILL AROUND PIER 2 FOR CONSTRUCTION OF TEMPORARY TOWERS 2 AND 3.
2. CONSTRUCT TEMPORARY TOWERS 2 AND 3; TEMPORARY TOWERS 1 AND 4 MAY BE CONSTRUCTED IN ADVANCE OF GIRDER ERECTION.
3. ASSEMBLE GIRDER 1 SEGMENT C AND GIRDER 2 SEGMENT C ON THE GROUND WITH STEEL DIAPHRAGMS AND CROSS-FRAMES.
4. ERECT COMBINED SEGMENT C GIRDERS 1 AND 2 INTO PLACE BETWEEN TEMPORARY TOWER 2 AND TEMPORARY TOWER 3 AS SHOWN.
5. CONNECT GIRDERS 1 AND 2 SEGMENT C TO PIER 2 BEARINGS AND PROVIDE RESTRAINT AT TEMPORARY TOWERS AS NOTED TO PROVIDE STABILITY BEFORE RELEASING THE GIRDERS.
6. ERECT GIRDER 3 SEGMENT C INTO PLACE BETWEEN TEMPORARY TOWERS 2 AND 3. ATTACH GIRDER 3 SEGMENT C TO PIER 2 BEARINGS, RESTRAIN GIRDER AT TEMPORARY TOWERS, AND CONNECT GIRDER 3 TO ADJACENT GIRDER WITH CROSS-FRAMES BEFORE RELEASING THE GIRDER.
7. REPEAT STEP 6 FOR GIRDER 4 SEGMENT C THRU GIRDER 9 SEGMENT C.

STAGE 2

1. CONSTRUCT TEMPORARY TOWER 4.
2. ASSEMBLE GIRDER 1 SEGMENT D AND GIRDER 2 SEGMENT D ON THE GROUND WITH CROSS-FRAMES.
3. ERECT COMBINED SEGMENT D GIRDERS 1 AND 2 INTO PLACE BETWEEN TEMPORARY TOWER 3 AND TEMPORARY TOWER 4 AS SHOWN. MAKE FIELD SPLICE BETWEEN SEGMENT C AND SEGMENT D.
4. INSTALL LATERAL WIND BRACING BETWEEN ERECTED GIRDERS 1 AND 2.
5. PROVIDE RESTRAINT AT TEMPORARY TOWER 4 FOR GIRDER 1 SEGMENT D AND GIRDER 2 SEGMENT D; REMOVE TEMPORARY TOWERS 2 AND 3 LOCATED BENEATH GIRDERS 1 THRU 3 BEFORE RELEASING THE GIRDERS.
6. ERECT GIRDER 3 SEGMENT D INTO PLACE BETWEEN TEMPORARY TOWER 3 AND TEMPORARY TOWER 4 AS SHOWN. MAKE FIELD SPLICE BETWEEN SEGMENT C AND SEGMENT D. CONNECT GIRDER 3 TO ADJACENT GIRDER WITH CROSS-FRAMES.
7. PROVIDE RESTRAINT AT TEMPORARY TOWER 4 FOR GIRDER 3 SEGMENT D AND REMOVE SUPPORT AT TEMPORARY TOWERS 2 AND 3 FOR GIRDER 4 BEFORE RELEASING GIRDER 3 SEGMENT D.
8. REPEAT STEPS 7 AND 8 FOR GIRDER 4 SEGMENT D THRU GIRDER 9 SEGMENT D. REMOVE TEMPORARY TOWERS 2 AND 3; REMOVE TEMPORARY FILL AROUND PIER 2.

STAGE 3

1. ASSEMBLE GIRDER 1 SEGMENT E AND GIRDER 2 SEGMENT E ON THE GROUND WITH CROSS-FRAMES AND STEEL DIAPHRAGMS.
2. ERECT COMBINED SEGMENT E GIRDERS 1 AND 2 INTO PLACE BETWEEN TEMPORARY TOWER 4 AND END BENT 3 AS SHOWN. MAKE FIELD SPLICE BETWEEN SEGMENT D AND SEGMENT E.
3. INSTALL LATERAL WIND BRACING BETWEEN ERECTED GIRDERS 1 AND 2.
4. CONNECT GIRDER 1 SEGMENT E AND GIRDER 2 SEGMENT E TO BEARINGS AT THE END BENT, THEN RELEASE COMBINED SEGMENT D GIRDERS 1 AND 2 FROM CRANE.
5. ERECT GIRDER 3 SEGMENT D INTO PLACE BETWEEN TEMPORARY TOWER 3 AND TEMPORARY TOWER 4 AS SHOWN. MAKE FIELD SPLICE BETWEEN SEGMENT C AND SEGMENT D. CONNECT GIRDER 3 TO ADJACENT GIRDER WITH CROSS-FRAMES.
6. CONNECT GIRDER 3 SEGMENT E TO BEARINGS AT END BENT 3 BEFORE RELEASING THE GIRDER.
7. REPEAT STEPS 5 & 6 FOR GIRDER 4 SEGMENT E THRU GIRDER 9 SEGMENT E. REMOVE TEMPORARY TOWER 4.

BRIDGE NO. 134XXX

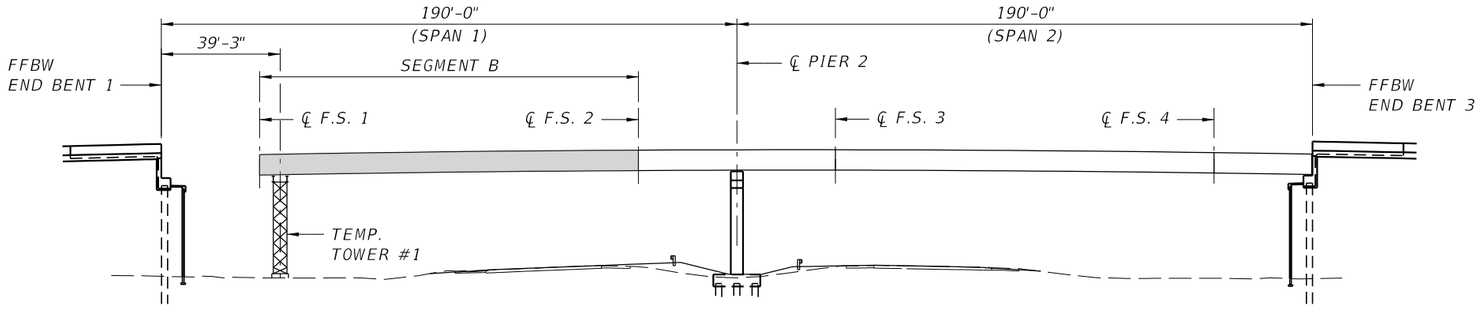
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

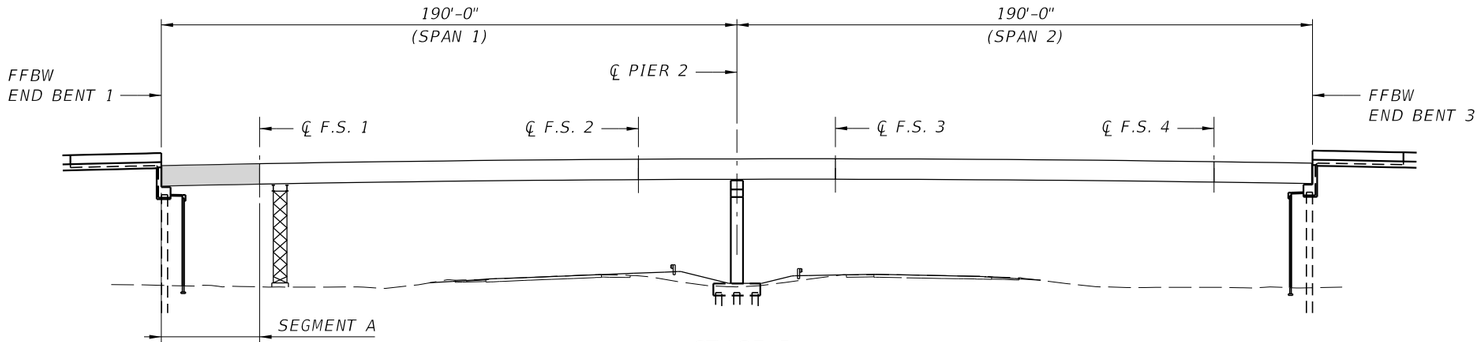
DRAWN BY: DRA
CHECKED BY: CRG
DESIGNED BY: CRG
CHECKED BY: RST

Manatee County FLORIDA
Manatee County Public Works

SHEET TITLE: ERECTION SEQUENCE (2 OF 4)
REF. DWG. NO.
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO. B1-35



STAGE 4



STAGE 5

STAGE 4
1. CONSTRUCT TEMPORARY TOWER 1.
2. ASSEMBLE GIRDER 1 SEGMENT B AND GIRDER 2 SEGMENT B ON THE GROUND WITH CROSS-FRAMES.
3. ERECT COMBINED SEGMENT B GIRDERS 1 AND 2 INTO PLACE BETWEEN TEMPORARY TOWER 1 AND FIELD SPLICE 2 AS SHOWN. MAKE FIELD SPLICE BETWEEN SEGMENT B AND SEGMENT C.
4. INSTALL LATERAL WIND BRACING BETWEEN ERECTED GIRDERS 1 AND 2.
5. PROVIDE RESTRAINT AT TEMPORARY TOWER 1 FOR GIRDER 1 SEGMENT B AND GIRDER 2 SEGMENT B BEFORE RELEASING GIRDERS.
6. ERECT GIRDER 3 SEGMENT B INTO PLACE BETWEEN TEMPORARY TOWER 1 AND FIELD SPLICE 2 AS SHOWN. MAKE FIELD SPLICEBETWEEN SEGMENT B AND SEGMENT C. CONNECT GIRDER 3 TO ADJACENT GIRDER WITH CROSS-FRAMES.
7. PROVIDE RESTRAINT AT TEMPORARY TOWER 1 FOR GIRDER 3 SEGMENT B BEFORE RELEASING THE GIRDER. REPEAT STEPS 6 AND 7 FOR GIRDER 4 SEGMENT B THRU GIRDER 9 SEGMENT B.

STAGE 5
1. ASSEMBLE GIRDER 1 SEGMENT A AND GIRDER 2 SEGMENT A ON THE GROUND WITH CROSS-FRAMES AND STEEL DIAPHRAGMS.
2. ERECT COMBINED SEGMENT A GIRDERS 1 AND 2 INTO PLACE BETWEEN END BENT 1 AND TEMPORARY TOWER 1 AS SHOWN. MAKE FIELD SPLICE BETWEEN SEGMENT A AND SEGMENT B.
3. INSTALL LATERAL WIND BRACING BETWEEN ERECTED GIRDERS 1 AND 2.
4. CONNECT GIRDER 1 SEGMENT A AND GIRDER 2 SEGMENT A TO BEARINGS AT THE END BENT BEFORE RELEASING COMBINED SEGMENT A GIRDERS 8 AND 9.
5. ERECT GIRDER 3 SEGMENT A INTO PLACE BETWEEN END BENT 1 AND TEMPORARY TOWER 1 AS SHOWN. MAKE FIELD SPLICE BETWEEN SEGMENT A AND SEGMENT B. CONNECT GIRDER 3 TO ADJACENT GIRDER WITH CROSS-FRAMES.
6. CONNECT GIRDER 3 SEGMENT A TO BEARINGS AT END BENT 1 BEFORE RELEASING THE GIRDER.
7. REPEAT STEPS 5 AND 6 FOR GIRDER 4 SEGMENT A THRU GIRDER 9 SEGMENT A.
8. REMOVE TEMPORARY TOWER 1.

SUPPORT REACTION NOTES:

1. NEGATIVE VALUES INDICATE TEMPORARY UPLIFT CONDITIONS. CONTRACTOR SHALL PROVIDE TEMPORARY TIE DOWNS.

2. ALL REACTIONS ARE SERVICE LOADS AND REPRESENT THE GOVERNING LOADS OF ALL STAGES OF ERECTION. FOR SUBSTRUCTURE REACTIONS AFTER THE TEMPORARY TOWERS HAVE BEEN REMOVED, SEE BEARING DETAILS SHEET.

3. MAXIMUM TRANSVERSE LOADS REPRESENT THE MAXIMUM LOADS PRODUCED BY WIND FOR THE INACTIVE CONSTRUCTION CONDITION DURING ALL PHASES OF ERECTION. MAXIMUM LONGITUDINAL LOADS REPRESENT A FRICTION FORCE BETWEEN THE GIRDER AND THE TOWER (FR = 0.20 DL) CAUSED BY THERMAL MOVEMENT. PIER 2 IS A FIXED ELASTOMERIC BEARING THAT RESISTS ALL OTHER LONGITUDINAL LOADS.

4. THE CONTRACTOR'S SPECIALTY ENGINEER IS RESPONSIBLE FOR THE DESIGN OF SHORING TOWERS AND ANY RESTRAINT DEVICES REQUIRED TO RESIST THE LOADINGS SHOWN IN THE TABLE. SERVICE REACTIONS SHOWN IN THE TABLE ARE PER GIRDER AND AT THE TOP OF TOWER LOCATION. VERTICAL LOADS ARE SUMMATIONS OF DEAD AND WIND LOAD. UPLIFT REACTIONS REQUIRE A HOLD DOWN DEVICE TO MAINTAIN CONTACT BETWEEN THE GIRDER AND SUPPORT. TRANSVERSE AND LONGITUDINAL REACTIONS ARE HORIZONTAL WIND LOADS. DEAD LOAD REPRESENTS ONLY THE SELF WIEGHT OF THE GIRDERS AND DIAPHRAGMS. WIND LOAD REPRESENTS ONLY THE WIND LOADS ON THE GIRDERS AND DIAPHRAGMS. ALL LOADS ARE UNFACTORED SERVICE LOADS. ANY ADDITIONAL LOAD DUE TO CONSTRUCTION ACTIVITIES, EQUIPMENT, RIGGING, SHORING, OR ANY OTHER ITEMS ASSOCIATED WITH THE ERECTION SEQUENCE SHALL ALSO BE ACCOUNTED FOR IN THE SHORING TOWER DESIGN.

TEMPORARY TOWER SERVICE REACTIONS DURING ERECTION, PER GIRDER (KIPS)

SUPPORT	DL MAX. VERTICAL	DL MIN. VERTICAL	WS MAX. VERTICAL	WS MIN. VERTICAL	WS MAX. TRANSVERSE	MAX. LONGITUDINAL
END BENT 1	25.61	-1.48	1.12	-3.20	56.02	5.12
TEMPORARY TOWER 1	39.48	0.00	17.63	-13.39	19.74	7.90
TEMPORARY TOWER 2	37.21	0.00	13.77	-3.96	14.24	7.44
PIER 2	158.46	-5.34	69.47	-7.83	30.29	83.50
TEMPORARY TOWER 3	58.37	0.00	13.88	-3.96	16.25	11.67
TEMPORARY TOWER 4	84.81	0.00	24.21	-13.98	21.94	16.96
END BENT 3	36.42	-20.90	37.52	-24.85	57.07	7.28

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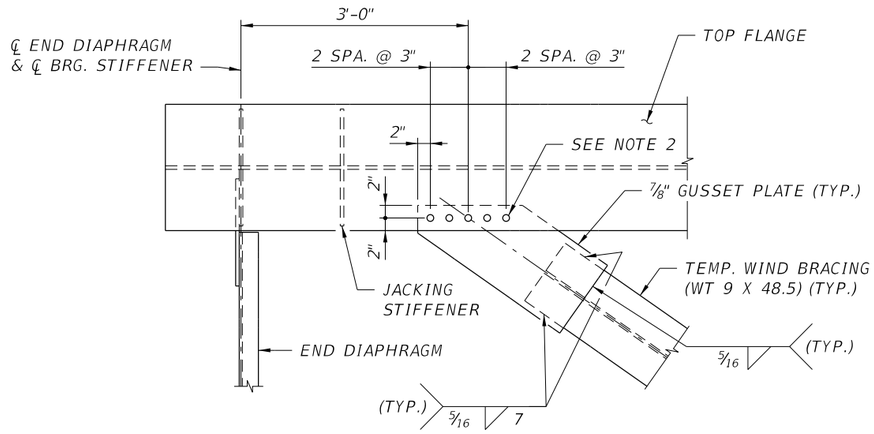
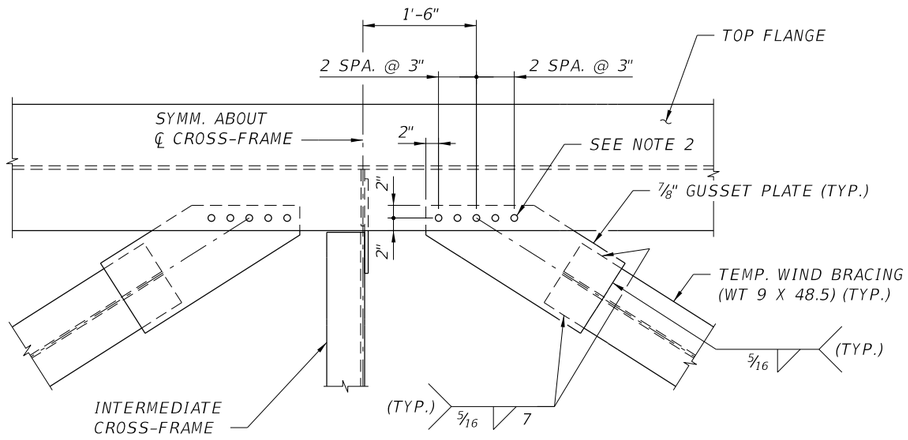
DESIGNED BY: CRG
CHECKED BY: RST

Manatee County FLORIDA — Manatee County Public Works

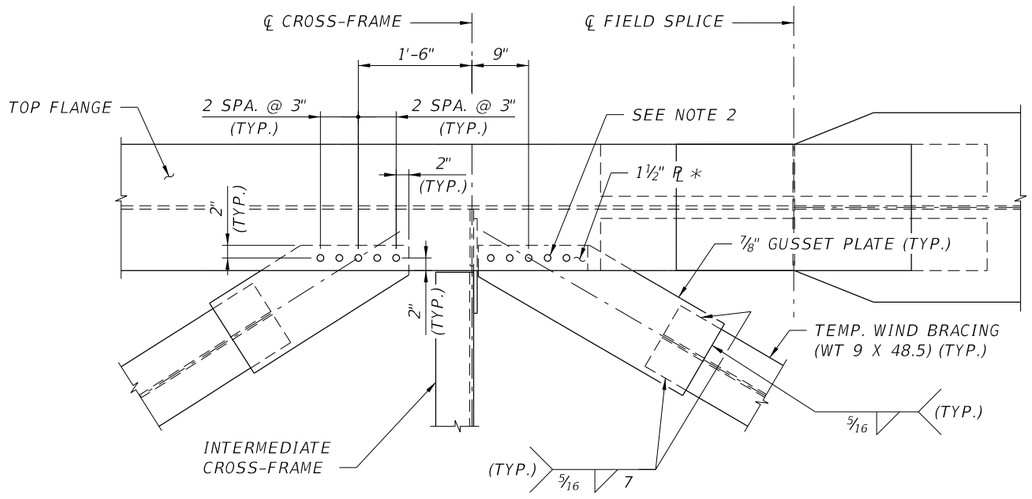
SHEET TITLE: ERECTION SEQUENCE (3 OF 4)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-36



TEMPORARY WIND BRACING DETAIL AT END BENT DIAPHRAGM

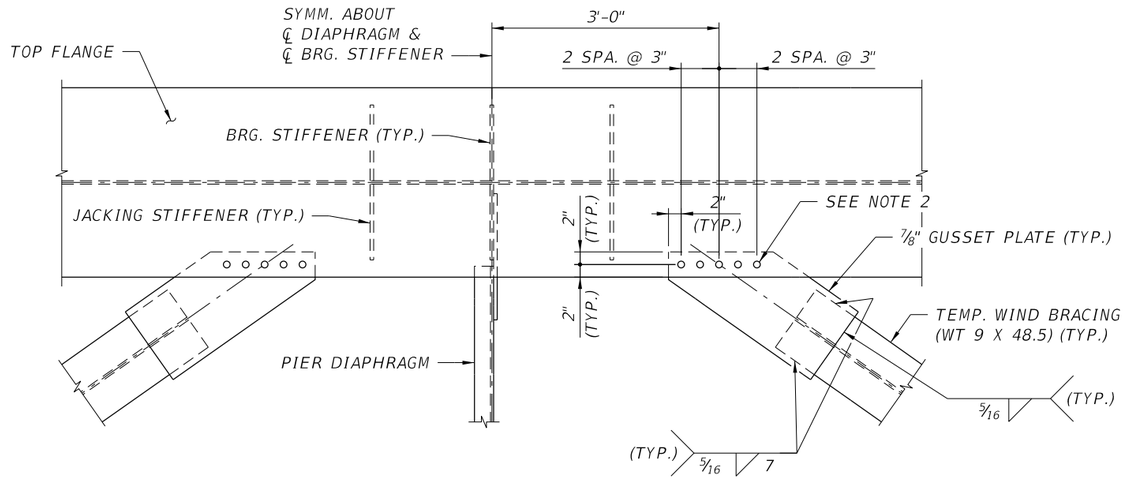


TYPICAL TEMPORARY WIND BRACING DETAIL



TEMPORARY WIND BRACING DETAIL AT FIELD SPLICES 2 & 3

* 1½" PL IS REQ'D IN ORDER FOR GUSSET PLATE TO CLEAR TOP FLANGE FIELD SPLICE PLATE



TEMPORARY WIND BRACING DETAIL AT PIER DIAPHRAGM

NOTES:

1. FOR CVN IMPACT TEST REQUIREMENTS AND STRUCTURAL STEEL NOTES, SEE GIRDER ELEVATION SHEET.
2. ALL FASTENERS FOR WIND BRACING SHALL BE 1" Ø ASTM F3125 GRADE A325 TYPE 1 BOLTS IN 1 1/8" DIAMETER HOLES.
3. FOR TEMPORARY WIND BRACING LOCATIONS, SEE FRAMING PLAN SHEETS.

BRIDGE NO. 134XXX

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2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

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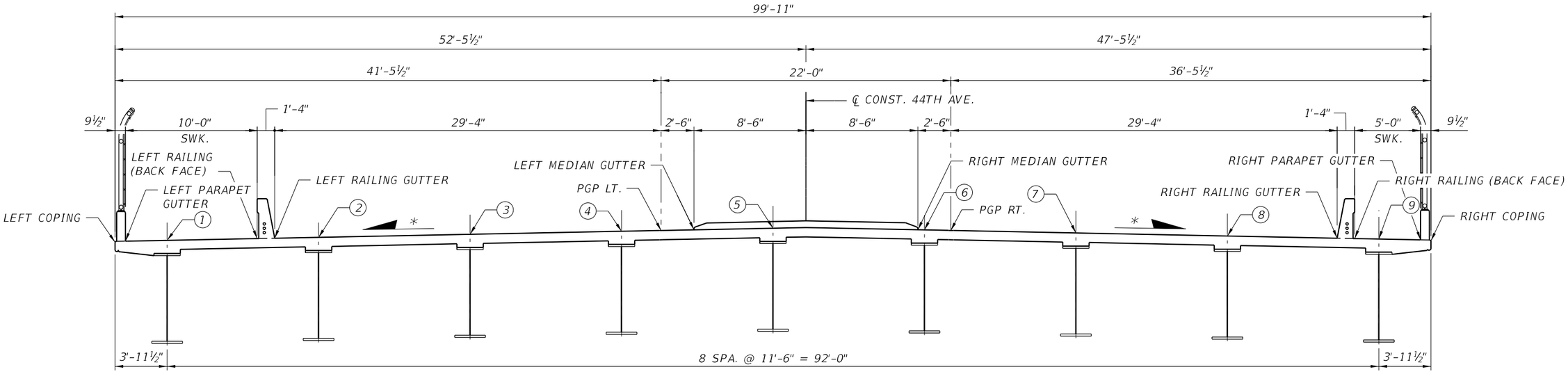
DESIGNED BY: CRG
CHECKED BY: RST

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: ERECTION SEQUENCE (4 OF 4)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-37



TYPICAL SECTION

(SPAN 1 SHOWN, SPAN 2 SIMILAR)

∗ SLOPE: 0.02 FT./FT.

NOTES:

1. FOR FINISH GRADE ELEVATIONS TABLES, SEE FINISH GRADE ELEVATIONS (3 OF 4) AND (4 OF 4) SHEETS.
2. ALL ELEVATIONS ARE TO TOP OF FINISHED DECK SURFACE.
3. FOR APPROACH SLAB FINISH GRADE ELEVATIONS, SEE FINISH GRADE ELEVATIONS APPROACH SLABS SHEETS.
4. (#) DENOTES GIRDER NUMBER AND ℄ GIRDER AT THE TOP OF DECK.

BRIDGE NO. 134XXX

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Chester A. Smith III, P.E.
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DRAWN BY: KE
CHECKED BY: CMH
DESIGNED BY: CMH
CHECKED BY: CRG

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: FINISH GRADE ELEVATIONS (1 OF 4)

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: B1-38

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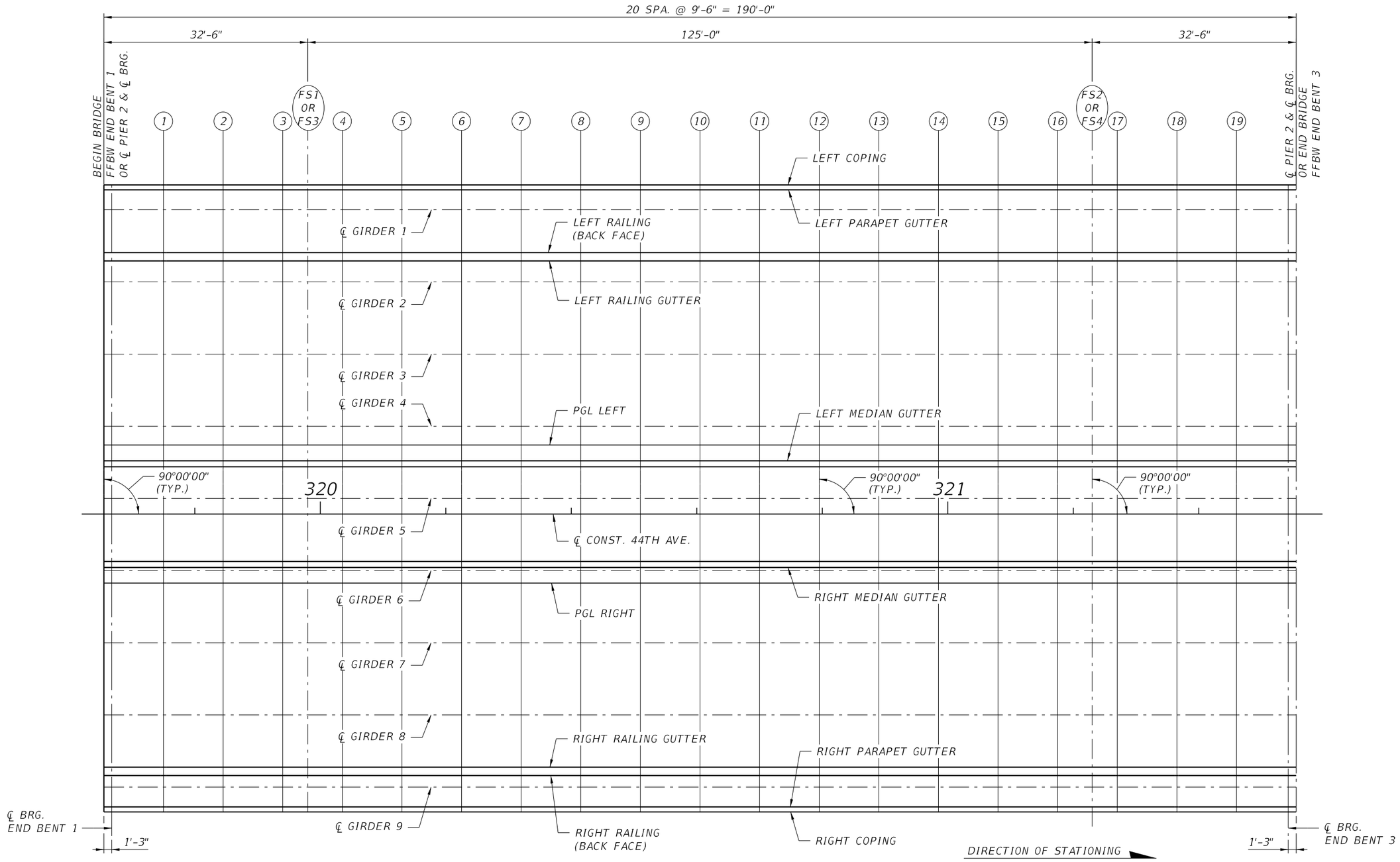

PLAN

NOTE:

FOR NOTES, SEE FINISH GRADE ELEVATION (1 OF 4) SHEET.

BRIDGE NO. 134XXX

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Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

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CHECKED BY:	CMH
DESIGNED BY:	CMH
CHECKED BY:	CRG

Manatee County FLORIDA
Manatee County Public Works

SHEET TITLE: FINISH GRADE ELEVATIONS (2 OF 4)

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: B1-39

CSMITH 2/17/2022 2:19:52 PM PW:\

FINISH GRADE ELEVATIONS - SPAN 1

LOCATION	BEGIN BRIDGE FFBW END BENT 1	℄ BRG.	1	2	3	FS 1	4	5	6	7	8	9	10 MID-SPAN	11	12	13	14	15	16	FS 2	17	18	19	℄ PIER 2
LEFT COPING	66.602	66.625	66.779	66.947	67.107	67.171	67.257	67.399	67.531	67.654	67.768	67.874	67.970	68.057	68.135	68.204	68.265	68.316	68.358	68.378	68.391	68.415	68.430	68.436
LEFT PARAPET GUTTER	66.617	66.641	66.795	66.963	67.123	67.187	67.273	67.414	67.547	67.670	67.784	67.889	67.986	68.073	68.151	68.220	68.280	68.331	68.374	68.394	68.407	68.431	68.446	68.452
℄ GIRDER 1	66.681	66.705	66.858	67.027	67.186	67.250	67.336	67.478	67.610	67.733	67.848	67.953	68.049	68.136	68.214	68.284	68.344	68.395	68.437	68.457	68.470	68.494	68.509	68.515
LEFT RAILING (BACK FACE)	66.817	66.841	66.995	67.163	67.323	67.387	67.473	67.614	67.747	67.870	67.984	68.089	68.186	68.273	68.351	68.420	68.480	68.531	68.574	68.594	68.607	68.631	68.646	68.652
LEFT RAILING GUTTER	66.844	66.868	67.021	67.190	67.349	67.414	67.500	67.641	67.773	67.897	68.011	68.116	68.212	68.300	68.378	68.447	68.507	68.558	68.600	68.620	68.633	68.657	68.672	68.678
℄ GIRDER 2	66.911	66.935	67.088	67.257	67.416	67.480	67.566	67.708	67.840	67.963	68.078	68.183	68.279	68.366	68.444	68.514	68.574	68.625	68.667	68.687	68.700	68.724	68.739	68.745
℄ GIRDER 3	67.141	67.165	67.318	67.487	67.646	67.710	67.796	67.938	68.070	68.193	68.308	68.413	68.509	68.596	68.674	68.744	68.804	68.855	68.897	68.917	68.930	68.954	68.969	68.975
℄ GIRDER 4	67.371	67.395	67.548	67.717	67.876	67.940	68.026	68.168	68.300	68.423	68.538	68.643	68.739	68.826	68.904	68.974	69.034	69.085	69.127	69.147	69.160	69.184	69.199	69.205
PGL LEFT	67.431	67.455	67.608	67.777	67.936	68.000	68.086	68.228	68.360	68.483	68.598	68.703	68.799	68.886	68.964	69.034	69.094	69.145	69.187	69.207	69.220	69.244	69.259	69.265
LEFT MEDIAN GUTTER	67.481	67.505	67.658	67.827	67.986	68.050	68.136	68.278	68.410	68.533	68.648	68.753	68.849	68.936	69.014	69.084	69.144	69.195	69.237	69.257	69.270	69.294	69.309	69.315
℄ GIRDER 5	67.601	67.625	67.778	67.947	68.106	68.170	68.256	68.398	68.530	68.653	68.768	68.873	68.969	69.056	69.134	69.204	69.264	69.315	69.357	69.377	69.390	69.414	69.429	69.435
℄ CONST 44TH AVE.	67.651	67.675	67.828	67.997	68.156	68.220	68.306	68.448	68.580	68.703	68.818	68.923	69.019	69.106	69.184	69.254	69.314	69.365	69.407	69.427	69.440	69.464	69.479	69.485
RIGHT MEDIAN GUTTER	67.481	67.505	67.658	67.827	67.986	68.050	68.136	68.278	68.410	68.533	68.648	68.753	68.849	68.936	69.014	69.084	69.144	69.195	69.237	69.257	69.270	69.294	69.309	69.315
℄ GIRDER 6	67.471	67.495	67.648	67.817	67.976	68.040	68.126	68.268	68.400	68.523	68.638	68.743	68.839	68.926	69.004	69.074	69.134	69.185	69.227	69.247	69.260	69.284	69.299	69.305
PGL RIGHT	67.431	67.455	67.608	67.777	67.936	68.000	68.086	68.228	68.360	68.483	68.598	68.703	68.799	68.886	68.964	69.034	69.094	69.145	69.187	69.207	69.220	69.244	69.259	69.265
℄ GIRDER 7	67.241	67.265	67.418	67.587	67.746	67.810	67.896	68.038	68.170	68.293	68.408	68.513	68.609	68.696	68.774	68.844	68.904	68.955	68.997	69.017	69.030	69.054	69.069	69.075
℄ GIRDER 8	67.011	67.035	67.188	67.357	67.516	67.580	67.666	67.808	67.940	68.063	68.178	68.283	68.379	68.466	68.544	68.614	68.674	68.725	68.767	68.787	68.800	68.824	68.839	68.845
RIGHT RAILING GUTTER	66.844	66.868	67.021	67.190	67.349	67.414	67.500	67.641	67.773	67.897	68.011	68.116	68.212	68.300	68.378	68.447	68.507	68.558	68.600	68.620	68.633	68.657	68.672	68.678
RIGHT RAILING (BACK FACE)	66.817	66.841	66.995	67.163	67.323	67.387	67.473	67.614	67.747	67.870	67.984	68.089	68.186	68.273	68.351	68.420	68.480	68.531	68.574	68.594	68.607	68.631	68.646	68.652
℄ GIRDER 9	66.781	66.805	66.958	67.127	67.286	67.350	67.436	67.578	67.710	67.833	67.948	68.053	68.149	68.236	68.314	68.384	68.444	68.495	68.537	68.557	68.570	68.594	68.609	68.615
RIGHT PARAPET GUTTER	66.717	66.741	66.895	67.063	67.223	67.287	67.373	67.514	67.647	67.770	67.884	67.989	68.086	68.173	68.251	68.320	68.380	68.431	68.474	68.494	68.507	68.531	68.546	68.552
RIGHT COPING	66.702	66.725	66.879	67.047	67.207	67.271	67.357	67.499	67.631	67.754	67.868	67.974	68.070	68.157	68.235	68.304	68.365	68.416	68.458	68.478	68.491	68.515	68.530	68.536

NOTE:

FOR LOCATION OF ELEVATIONS, SEE FINISH GRADE ELEVATIONS (1 OF 4) AND (2 OF 4) SHEETS.

BRIDGE NO. 134XXX

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Sarasota, FL 34232

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DESIGNED BY: CMH
CHECKED BY: CRG

Manatee County FLORIDA
Manatee County Public Works

SHEET TITLE: FINISH GRADE ELEVATIONS (3 OF 4)

REF. DWG. NO.

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO. B1-40

CSMITH 2/17/2022 2:26:41 PM PW:\

FINISH GRADE ELEVATIONS - SPAN 2

LOCATION	℄ PIER 2	1	2	3	FS 3	4	5	6	7	8	9	10 MID-SPAN	11	12	13	14	15	16	FS 4	17	18	℄ BRG.	19	END BRIDGE FFBW END BENT 3
LEFT COPING	68.436	68.433	68.421	68.400	68.388	68.369	68.330	68.282	68.225	68.159	68.083	67.999	67.906	67.804	67.692	67.572	67.442	67.304	67.220	67.157	67.000	66.684	66.835	66.660
LEFT PARAPET GUTTER	68.452	68.449	68.436	68.415	68.404	68.385	68.346	68.298	68.241	68.175	68.099	68.015	67.922	67.819	67.708	67.588	67.458	67.320	67.236	67.172	67.016	66.699	66.850	66.676
℄ GIRDER 1	68.515	68.512	68.500	68.479	68.467	68.449	68.409	68.361	68.304	68.238	68.163	68.078	67.985	67.883	67.771	67.651	67.522	67.383	67.299	67.236	67.079	66.763	66.914	66.739
LEFT RAILING (BACK FACE)	68.652	68.649	68.636	68.615	68.604	68.585	68.546	68.498	68.441	68.375	68.299	68.215	68.122	68.019	67.908	67.788	67.658	67.520	67.436	67.372	67.216	66.899	67.050	66.876
LEFT RAILING GUTTER	68.678	68.675	68.663	68.642	68.630	68.612	68.573	68.525	68.467	68.401	68.326	68.242	68.148	68.046	67.935	67.814	67.685	67.546	67.462	67.399	67.243	66.926	67.077	66.903
℄ GIRDER 2	68.745	68.742	68.730	68.709	68.697	68.679	68.639	68.591	68.534	68.468	68.393	68.308	68.215	68.113	68.001	67.881	67.752	67.613	67.529	67.466	67.309	66.993	67.144	66.969
℄ GIRDER 3	68.975	68.972	68.960	68.939	68.927	68.909	68.869	68.821	68.764	68.698	68.623	68.538	68.445	68.343	68.231	68.111	67.982	67.843	67.759	67.696	67.539	67.223	67.374	67.199
℄ GIRDER 4	69.205	69.202	69.190	69.169	69.157	69.139	69.099	69.051	68.994	68.928	68.853	68.768	68.675	68.573	68.461	68.341	68.212	68.073	67.989	67.926	67.769	67.453	67.604	67.429
PGL LEFT	69.265	69.262	69.250	69.229	69.217	69.199	69.159	69.111	69.054	68.988	68.913	68.828	68.735	68.633	68.521	68.401	68.272	68.133	68.049	67.986	67.829	67.513	67.664	67.489
LEFT MEDIAN GUTTER	69.315	69.312	69.300	69.279	69.267	69.249	69.209	69.161	69.104	69.038	68.963	68.878	68.785	68.683	68.571	68.451	68.322	68.183	68.099	68.036	67.879	67.563	67.714	67.539
℄ GIRDER 5	69.435	69.432	69.420	69.399	69.387	69.369	69.329	69.281	69.224	69.158	69.083	68.998	68.905	68.803	68.691	68.571	68.442	68.303	68.219	68.156	67.999	67.683	67.834	67.659
℄ CONST 44TH AVE.	69.485	69.482	69.470	69.449	69.437	69.419	69.379	69.331	69.274	69.208	69.133	69.048	68.955	68.853	68.741	68.621	68.492	68.353	68.269	68.206	68.049	67.733	67.884	67.709
RIGHT MEDIAN GUTTER	69.315	69.312	69.300	69.279	69.267	69.249	69.209	69.161	69.104	69.038	68.963	68.878	68.785	68.683	68.571	68.451	68.322	68.183	68.099	68.036	67.879	67.563	67.714	67.539
℄ GIRDER 6	69.305	69.302	69.290	69.269	69.257	69.239	69.199	69.151	69.094	69.028	68.953	68.868	68.775	68.673	68.561	68.441	68.312	68.173	68.089	68.026	67.869	67.553	67.704	67.529
PGL RIGHT	69.265	69.262	69.250	69.229	69.217	69.199	69.159	69.111	69.054	68.988	68.913	68.828	68.735	68.633	68.521	68.401	68.272	68.133	68.049	67.986	67.829	67.513	67.664	67.489
℄ GIRDER 7	69.075	69.072	69.060	69.039	69.027	69.009	68.969	68.921	68.864	68.798	68.723	68.638	68.545	68.443	68.331	68.211	68.082	67.943	67.859	67.796	67.639	67.323	67.474	67.299
℄ GIRDER 8	68.845	68.842	68.830	68.809	68.797	68.779	68.739	68.691	68.634	68.568	68.493	68.408	68.315	68.213	68.101	67.981	67.852	67.713	67.629	67.566	67.409	67.093	67.244	67.069
RIGHT RAILING GUTTER	68.678	68.675	68.663	68.642	68.630	68.612	68.573	68.525	68.467	68.401	68.326	68.242	68.148	68.046	67.935	67.814	67.685	67.546	67.462	67.399	67.243	66.926	67.077	66.903
RIGHT RAILING (BACK FACE)	68.652	68.649	68.636	68.615	68.604	68.585	68.546	68.498	68.441	68.375	68.299	68.215	68.122	68.019	67.908	67.788	67.658	67.520	67.436	67.372	67.216	66.899	67.050	66.876
℄ GIRDER 9	68.615	68.612	68.600	68.579	68.567	68.549	68.509	68.461	68.404	68.338	68.263	68.178	68.085	67.983	67.871	67.751	67.622	67.483	67.399	67.336	67.179	66.863	67.014	66.839
RIGHT PARAPET GUTTER	68.552	68.549	68.536	68.515	68.504	68.485	68.446	68.398	68.341	68.275	68.199	68.115	68.022	67.919	67.808	67.688	67.558	67.420	67.336	67.272	67.116	66.799	66.950	66.776
RIGHT COPING	68.536	68.533	68.521	68.500	68.488	68.469	68.430	68.382	68.325	68.259	68.183	68.099	68.006	67.904	67.792	67.672	67.542	67.404	67.320	67.257	67.100	66.784	66.935	66.760

NOTE:

FOR LOCATION OF ELEVATIONS, SEE FINISH GRADE ELEVATIONS (1 OF 4) AND (2 OF 4) SHEETS.

BRIDGE NO. 134XXX

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: KE
CHECKED BY: CMH
DESIGNED BY: CMH
CHECKED BY: CRG

Manatee County FLORIDA — Manatee County Public Works

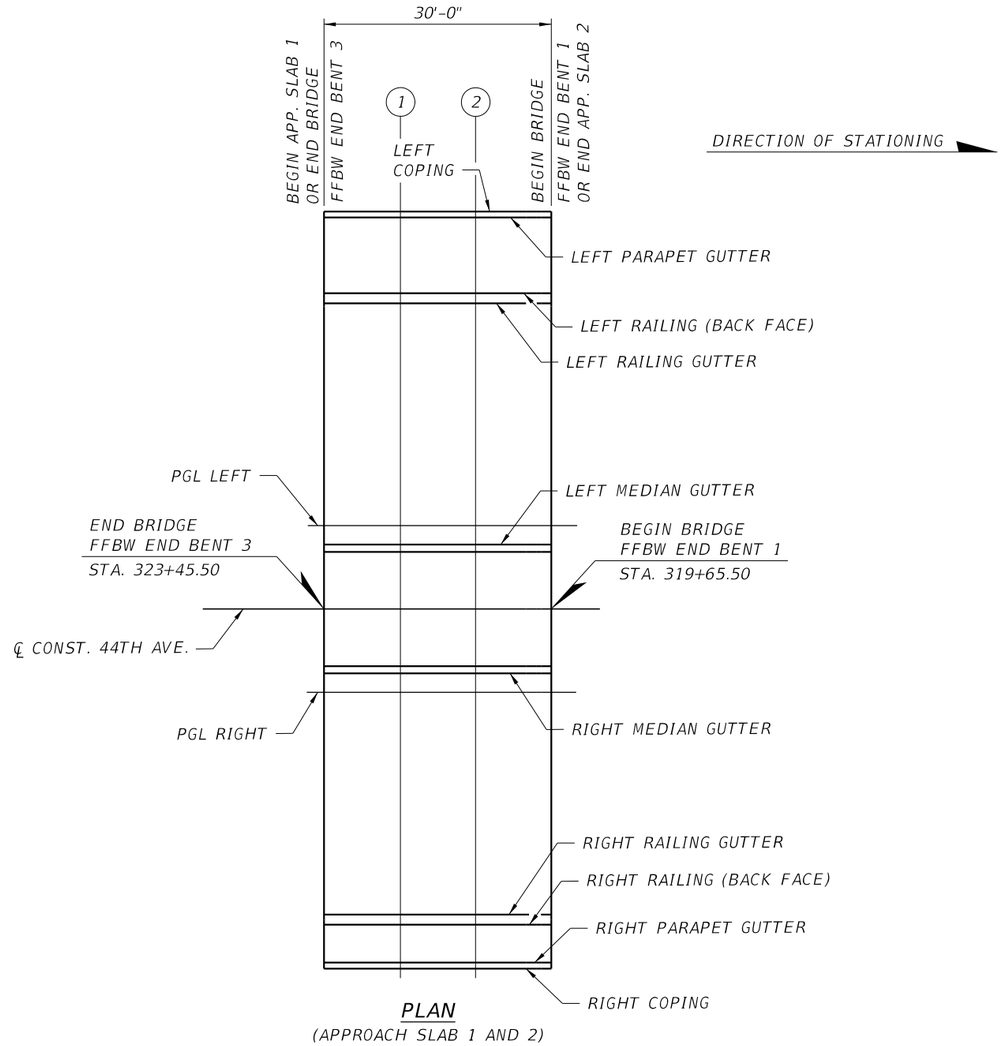
SHEET TITLE: FINISH GRADE ELEVATIONS (4 OF 4)

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: B1-41

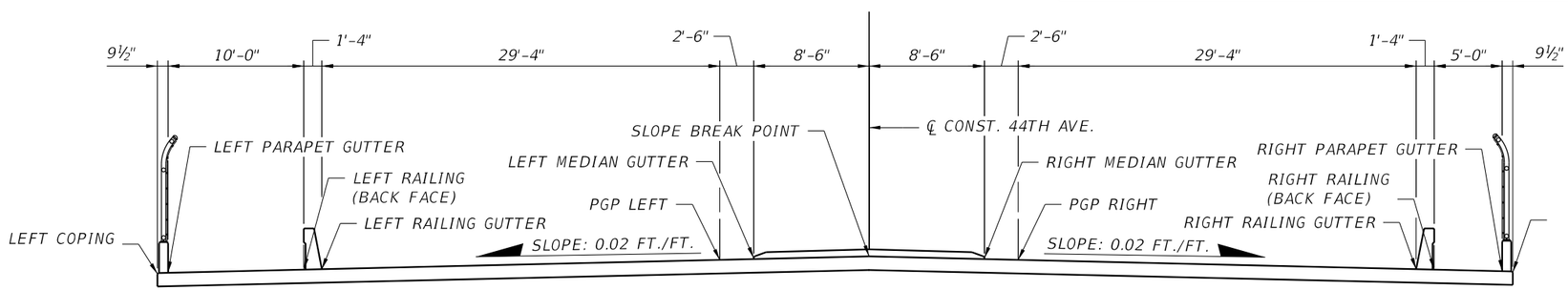
CSMITH 2/17/2022 2:27:45 PM PW:\



PLAN
(APPROACH SLAB 1 AND 2)

FINISH GRADE ELEVATIONS - APPROACH SLAB 1				
LOCATION	BEGIN APPROACH SLAB 1	1	2	BEGIN BRIDGE FFBW END BENT 1
LEFT COPING	65.982	66.198	66.405	66.602
LEFT PARAPET GUTTER	65.998	66.214	66.421	66.617
LEFT RAILING (BACK FACE)	66.198	66.414	66.621	66.817
LEFT RAILING GUTTER	66.224	66.441	66.647	66.844
PGL LEFT	66.811	67.028	67.234	67.431
LEFT MEDIAN GUTTER	66.861	67.078	67.284	67.481
℄ CONST. 44TH AVE.	67.031	67.248	67.454	67.651
RIGHT MEDIAN GUTTER	66.861	67.078	67.284	67.481
PGL RIGHT	66.811	67.028	67.234	67.431
RIGHT RAILING GUTTER	66.224	66.441	66.647	66.844
RIGHT RAILING (BACK FACE)	66.198	66.414	66.621	66.817
RIGHT PARAPET GUTTER	66.098	66.314	66.521	66.717
RIGHT COPING	66.082	66.298	66.505	66.702

FINISH GRADE ELEVATIONS - APPROACH SLAB 2				
LOCATION	END BRIDGE FFBW END BENT 3	1	2	END APPROACH SLAB 2
LEFT COPING	66.660	66.467	66.263	66.050
LEFT PARAPET GUTTER	66.676	66.482	66.279	66.065
LEFT RAILING (BACK FACE)	66.876	66.682	66.479	66.265
LEFT RAILING GUTTER	66.903	66.709	66.506	66.292
PGL LEFT	67.489	67.296	67.092	66.879
LEFT MEDIAN GUTTER	67.539	67.346	67.142	66.929
℄ CONST. 44TH AVE.	67.709	67.516	67.312	67.099
RIGHT MEDIAN GUTTER	67.539	67.346	67.142	66.929
PGL RIGHT	67.489	67.296	67.092	66.879
RIGHT RAILING GUTTER	66.903	66.709	66.506	66.292
RIGHT RAILING (BACK FACE)	66.876	66.682	66.479	66.265
RIGHT PARAPET GUTTER	66.776	66.582	66.379	66.165
RIGHT COPING	66.760	66.567	66.363	66.150



TYPICAL SECTION

NOTE:

ALL ELEVATIONS ARE TO TOP OF FINISHED DECK SURFACE.

BRIDGE NO. 134XXX

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

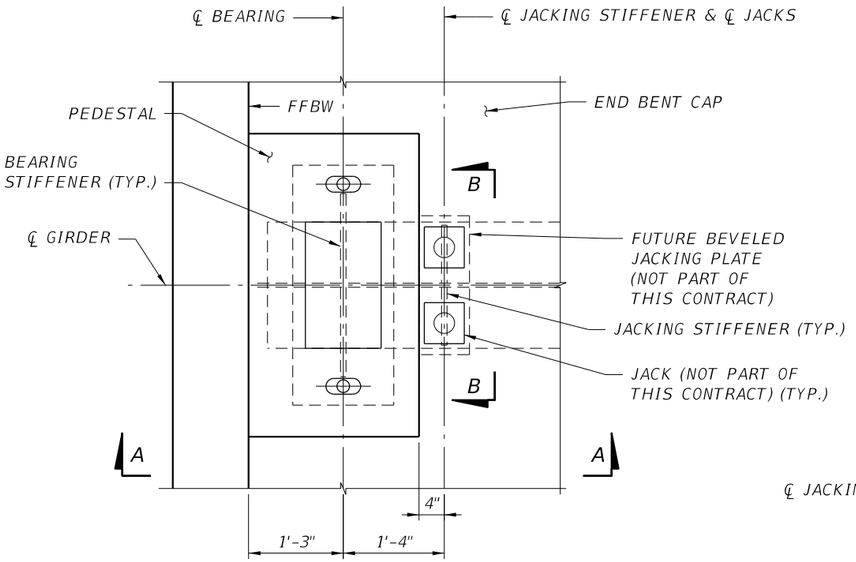
Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: KE
CHECKED BY: CMH
DESIGNED BY: CMH
CHECKED BY: CRG

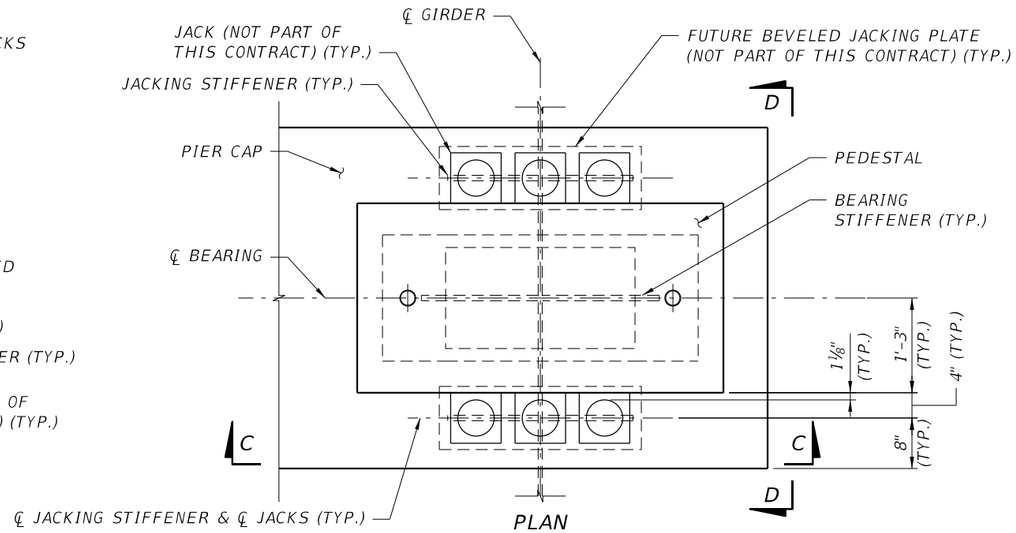
Manatee County FLORIDA
Manatee County Public Works

SHEET TITLE: FINISH GRADE ELEVATIONS - APPROACH SLABS
REF. DWG. NO.
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO. B1-42

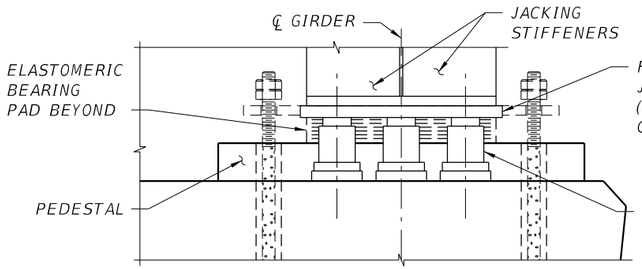
CSMITH 2/17/2022 2:29:59 PM PW:\



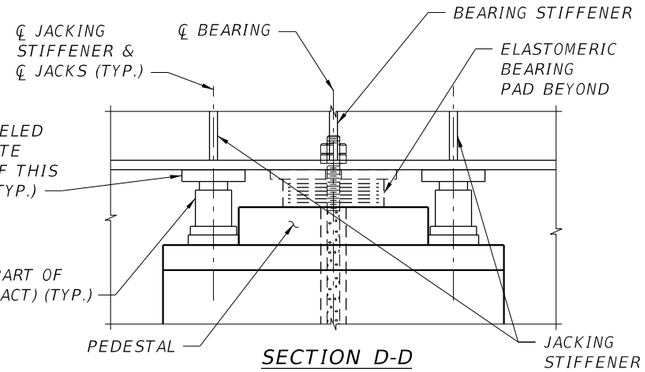
PLAN
(END BENT 1 AND END BENT 3)



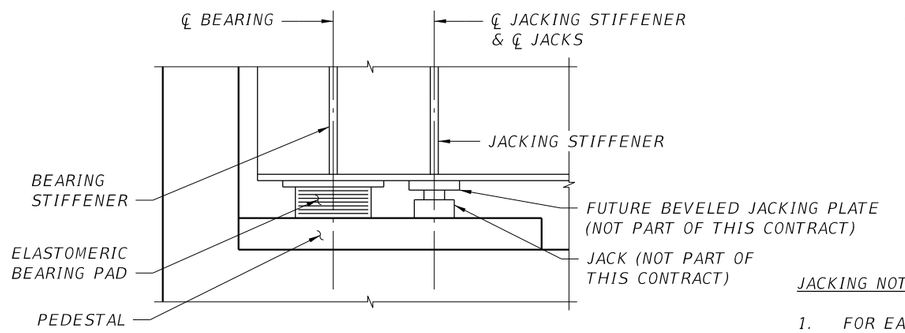
PLAN
(PIER 2)



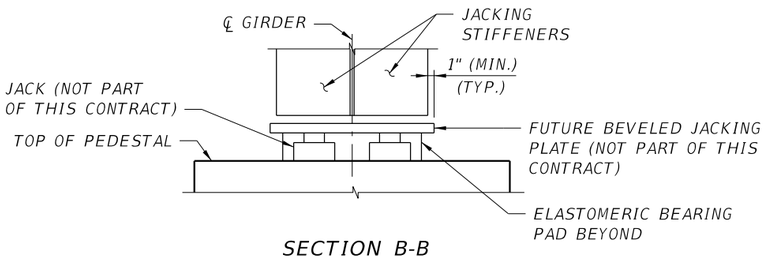
SECTION C-C



SECTION D-D



SECTION A-A



SECTION B-B
(END BENT 1 AND END BENT 3)

JACKING NOTES FOR FUTURE REPLACEMENT OF BEARING PADS:

1. FOR EACH BEAM BEARING, EACH JACK SHALL SUSTAIN A MINIMUM OF 72 TONS OF UNFACTORED JACKING FORCE SHALL BE PLACED AS SHOWN IN PLAN.
2. THE JACKING FORCE (PER BEARING) INCLUDES AN UNFACTORED DEAD LOAD OF 36 TONS AND AN UNFACTORED LIVE LOAD EQUAL TO 33 TONS AT THE END BENTS. THE JACKING FORCE (PER BEARING) INCLUDES AN UNFACTORED DEAD LOAD EQUAL TO 48 TONS AND AN UNFACTORED LIVE LOAD EQUAL TO 24 TONS AT THE PIER. THE REQUIRED JACKING LOAD IS MAXIMUM OF EITHER SERVICE LOAD REACTION (DL + LL) OR PERMANENT DEAD LOAD REACTION (1.3 * DL), DIVIDED BETWEEN THE JACKS.
3. ALL BEAMS AT ANY ONE BENT SHALL BE JACKED SIMULTANEOUSLY AND AT THE SAME RATE USING A MANIFOLD SYSTEM. THE JACKING SHALL CONTINUE UNTIL BEARINGS CAN BE FREED. THE MAXIMUM HEIGHT TO WHICH THE BRIDGE MAY BE JACKED IS ½".
4. JACKS SHALL BE PLACED ON A STEEL BEARING PLATE AND SHALL BE EQUIPPED WITH LOCKING RINGS. BEVELED JACKING PLATES SHALL BE USED TO PROVIDE A LEVEL JACKING SURFACE.
5. TRAFFIC IS ALLOWED TO BE MAINTAINED DURING JACKING.
6. JACKING OF THE SUPERSTRUCTURE AND EQUIPMENT REQUIRED (JACKS, SHIMS, BEVELED JACKING PLATES AND FILL PLATES) ARE NOT INCLUDED IN THIS CONTRACT UNLESS THEY ARE REQUIRED TO REPLACE OR REPAIR DEFECTIVE MATERIALS OR TO CORRECT RELATED CONSTRUCTION PROBLEMS.
7. FOR END BENT DETAILS, SEE END BENT AND END BENT DETAILS SHEETS.
8. FOR PIER DETAILS, SEE PIER 2 AND PIER DETAILS SHEETS.
9. FOR BEARING DETAILS, SEE BEARING DEAILS SHEETS.
10. FOR JACKING STIFFENER DETAILS, SEE STIFFENER DETAIL SHEET.

BRIDGE NO. 134XXX

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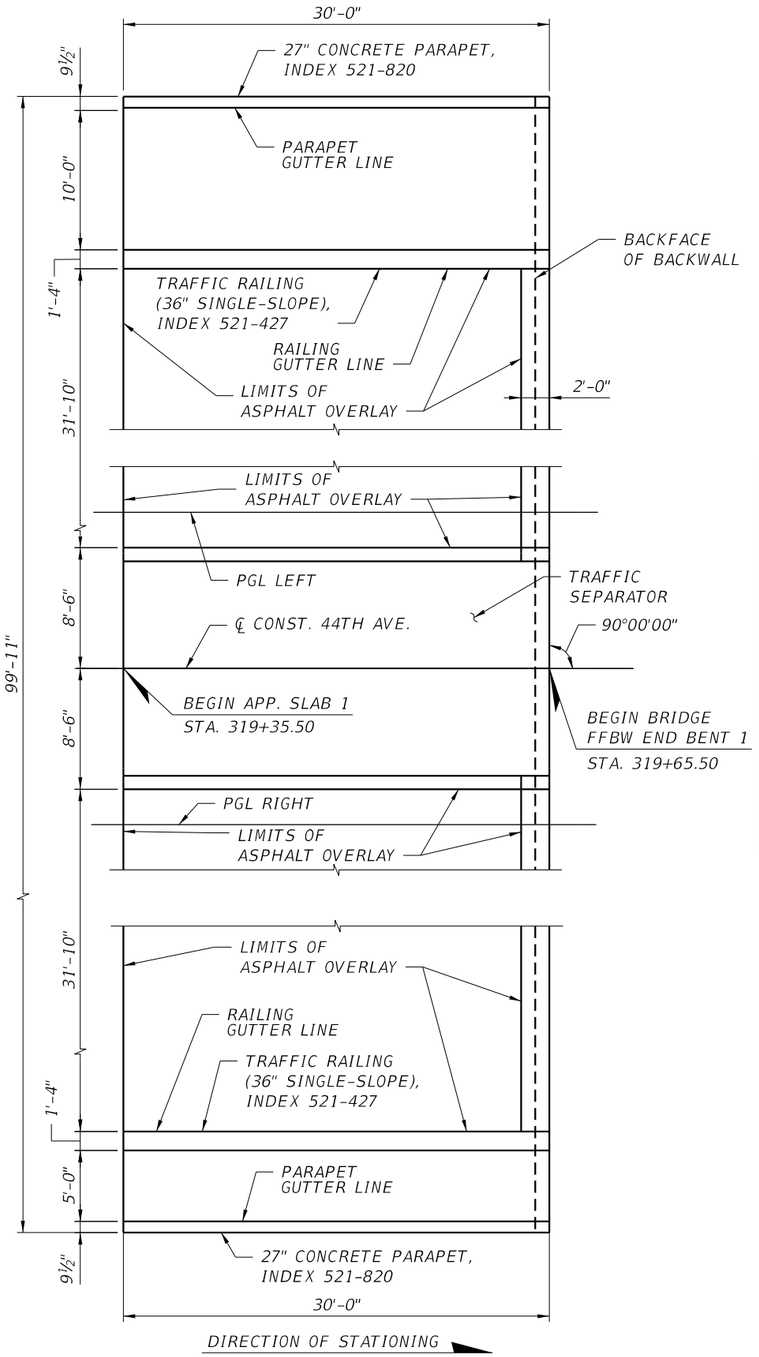
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: JRC
CHECKED BY: CRG
DESIGNED BY: CRG
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: JACKING DETAILS
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-43



APPROACH SLAB 1

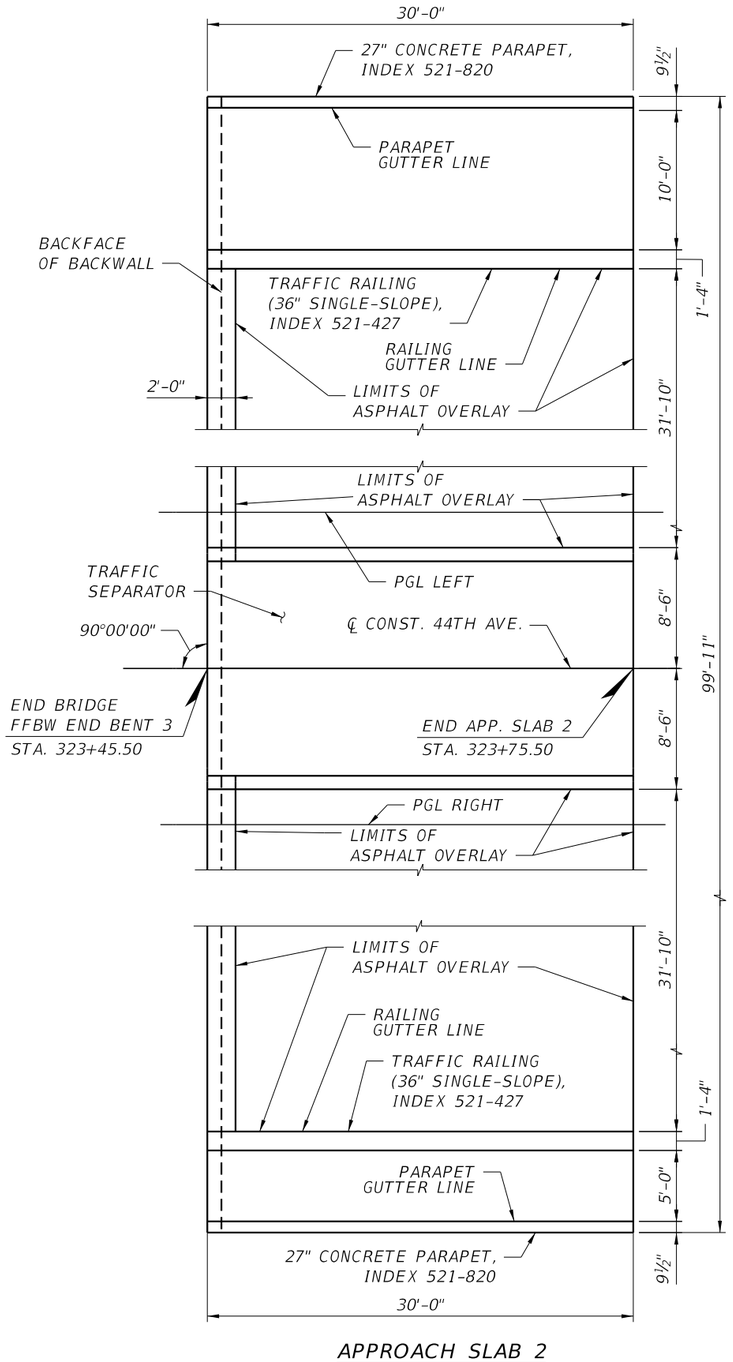
APPROACH SLAB TABLE OF DIMENSIONS						Table Date 11-01-16
LOCATION	DIMENSIONS					ANGLE Ø
	L1	L2	M1	M2	N	
APPROACH SLAB 1	SEE APPROACH SLAB 1					
APPROACH SLAB 2	SEE APPROACH SLAB 2					

Dimension Notes:
Dimensions L1 & L2 are measured along gutter line, inside face of parapet or inside face of railing on raised sidewalks.
Dimensions L1 & L2 are arc dimensions within curved alignments.

Work this Data Table with Standard Plans Index 400-090.

NOTE:

FOR TRAFFIC SEPARATOR DETAILS, SEE SUPERSTRUCTURE DETAILS (3 OF 3) SHEET.



APPROACH SLAB 2

BRIDGE NO. 134XXX

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY:	CHECKED BY:	DESIGNED BY:	CHECKED BY:
DRA	CMH	CMH	CAS

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: APPROACH SLABS

PROJECT NAME: 44TH AVENUE EAST OVER I-75

REF. DWG. NO.

SHEET NO. B1-44

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MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
END BENT 1 OR 3														(NO. REQUIRED = 2)		
11	A1	47- 2	4	1			47- 2									
11	A2	57- 5	4	1			57- 5									
8	A3	10- 3	36	11			7- 7	1- 4	1- 4							
8	A4	4-11	8	11			2- 3	1- 4	1- 4							
8	A5	60- 0	5	1			60- 0									
8	A6	42- 9	5	1			42- 9									
4	A7	101- 0	10	2			1- 9	99- 3							1	
5	A8	14- 2	163	4	5	5	2- 9 ½	3-10								
5	A9	10- 7	20	5			2- 9 ½	3-10	0- 7	0- 7						
5	A10	10- 5	163	4	5	5	2- 9 ½	1-11 ¼								
6	A11	5- 1	470	1			5- 1									
4	A12	3-10	10	1			3-10									
4	A13	10- 0	14	1			10- 0									
4	A14	8- 2	14	1			8- 2									
4	A15	10- 3	4	1			10- 3									
4	A16	6- 1	56	11			1-11	2- 1	2- 1							
4	A17	7- 8	40	11			3- 8	2- 0	2- 0							
4	A18	6- 4	7	11			1-10	2- 3	2- 3							
4	A19	7-11	5	11			3- 7	2- 2	2- 2							
4	A20	7- 4	4	11			3- 8	1-10	1-10							
4	B1	100- 1	18	2			1- 9	98- 4							1	
6	B2	7- 2	235	1			7- 2									
5	B3	7- 2	235	1			7- 2									
4	B4	3-10	36	1			3-10									
4	B5	2-10	4	1			2-10									
4	B6	3- 6	36	10			1- 9	1- 9								
6	D1	3- 4	25	23			1- 3	0- 3	1- 3							

BRIDGE NO. 134XXX

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P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: JRC
CHECKED BY: CRG
DESIGNED BY: CRG
CHECKED BY: CAS

Manatee County FLORIDA
Manatee County Public Works

SHEET TITLE: REINFORCING BAR LIST (1 OF 3)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-45

MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
PIER 2													(NO. REQUIRED = 1)			
9	A1	20- 6	320	11			15- 4	2- 7	2- 7							
6	A2	20- 6	200	11			15- 4	2- 7	2- 7							
5	A3	15- 4	120	1			15- 4									
11	A4	11- 2	190	10			9- 2	2- 0								
11	B1	30- 2	190	1			30- 2									
5	B2	20- 7	140	4	5	5	3- 6	6- 4								
5	B3	4- 6	420	18	5	4	3- 6									
5	B4	7- 4	140	18	5	4	6- 4									
6	C1	18- 4	110	4	4	4	4- 4	3-10								
6	C2	14- 2	90	4	4	4	4- 4	1- 9								
6	C3	13- 2	40	4	4	4	4- 4	1- 3								
11	C4	54- 0	9	1			54- 0									
11	C5	31- 9	18	1			31- 9									
11	C6	47- 2	9	1			47- 2									
11	C7	33- 0	9	1			33- 0									
5	C8	49- 9	24	1			49- 9									
11	C9	25- 2	10	1			25- 2									
11	C10	44- 3	20	17	1		42- 8									
11	C11	27- 2	10	1			27- 2									
11	C12	44- 3	20	14			42- 3	2- 0								84
4	C13	8- 3	12	15			4- 2 3/4	2- 0	2- 0						84	84
4	C14	7- 9	10	11			3- 8 1/2	2- 0	2- 0							
4	C15	6- 6	72	11			2- 2	2- 2	2- 2							
4	C16	8-10	32	11			4- 6	2- 2	2- 2							
4	C17	6- 7	9	11			2- 1	2- 3	2- 3							
4	C18	9- 1	4	11			4- 5	2- 4	2- 4							
4	C19	8- 4	4	11			2- 2	3- 1	3- 1							
5	C20	12- 1	56	36			1- 4	6- 0	1- 4							90
5	C21	9- 5	14	36				6- 0	1- 4							77
4	C22	6- 8	10	11			3- 9 1/2	1- 5	1- 5							
4	C23	7- 8	10	11			3- 9 1/2	1-11	1-11							
4	C24	9- 4	10	11			3- 9 1/2	2- 9	2- 9							
4	C25	11-10	10	11			3- 9 1/2	4- 0	4- 0							
5	C26	12- 3	20	11			3- 8 1/2	4- 3	4- 3							
5	C27	8- 3	10	11			3- 8 1/2	2- 3	2- 3							

BRIDGE NO. 134XXX

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: JRC
CHECKED BY: CRG
DESIGNED BY: CRG
CHECKED BY: CAS

Manatee County FLORIDA
Manatee County Public Works

SHEET TITLE: REINFORCING BAR LIST (2 OF 3)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-46

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	Ø
SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG
SUPERSTRUCTURE (NO. REQUIRED = 1)																																	
5	A1	391-10		134	2			2- 1			379- 4																					6	
4	A2	389- 4		101	2			1- 8			379- 4																					6	
5	A3	101- 8		1542	2			2- 1			99- 7																					1	
6	A4	149-10		100	2			2- 5			145- 0																					2	
5	A5	17- 0		1518	1			17- 0																									
5	A6	8- 5		12	9	4	4	3- 2	3/4		0- 7	3/4		0- 7	3/4		2- 7																
5	A7	9- 1		160	9	4	4	3- 2	3/4		1- 1	1/4		1- 1	1/4		2- 1	1/2															

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	Ø
SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG
APPROACH SLAB (NO. REQUIRED = 2)																																	
5	A1	29- 8		101	1			29- 8																									
8	A2	29- 8		134	1			29- 8																									
5	B	101- 8		72	2			2- 1			99- 7																					1	

BRIDGE NO. 134XXX

REVISIONS

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HDR Engineering, Inc.
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CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: REINFORCING BAR LIST (3 OF 3)

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: B1-47

Load Rating Summary Details for Steel Girder Bridges

Table Date 01-01-11

Table 2 - LRFR

Level	Limit State	Vehicle	Weight (tons)	Load Factors			Moment (Strength) or Stress (Service)					Shear (Strength)					Comments: Interior/exterior beam DF method if other than LRFD. Other appropriate comments
				LL	DC	DW	Distribution Factor (DF) (See Note 3)	Rating Factor	Tons	Location	Dimension	Distribution Factor (DF) (See Note 3)	Rating Factor	Tons	Location	Dimension	
Design Load Rating	Strength I (Inv)	HL-93	36.0	1.75	1.25	1.50	N/A	1.14	N/A	C	188'-9"	N/A	1.28	N/A	D	18'-10½"	EXTERIOR GIRDER - SPAN 1 (M)
	Strength I (Op)	HL-93	36.0	1.35	1.25	1.50	N/A	1.48	N/A	C	188'-9"	N/A	1.66	N/A	D	18'-10½"	EXTERIOR GIRDER - SPAN 1 (M)
	Service II (Inv)[4]	HL-93	36.0	1.30	1.00	1.00	N/A	1.46	N/A	B	75'-6"	N/A	N/A	N/A	N/A	N/A	EXTERIOR GIRDER - SPAN 1 (M)
	Service II (Op)[4]	HL-93	36.0	1.00	1.00	1.00	N/A	1.89	N/A	B	75'-6"	N/A	N/A	N/A	N/A	N/A	EXTERIOR GIRDER - SPAN 1 (M)
Permit Load Rating	Strength II	FL120	60.0	1.35	1.25	1.50	N/A	1.90	114	B	75'-6"	N/A	1.42	85.2	A	0'-0"	INTERIOR GIRDER - SPAN 1 (V)
	Service II[4]	FL120	60.0	0.90	1.00	1.00	N/A	1.85	111	B	75'-6"	N/A	N/A	N/A	N/A	N/A	EXTERIOR GIRDER - SPAN 1 (M)

General Notes:
1. This table is based on the requirements established in the January 2021 "Structures Manual".

Table 2 Notes:
1. Permit capacity is determined by using the permit vehicle in all lanes.
2. MDX version 6.5.4790 refined model was used for structural analysis.
3. Distribution factors (DF) are not applicable. Load distribution was obtained using refined analysis software listed above.
4. "Service" means the allowable tension limit for the steel girder.
5. "Dimension" is measured from the down-station substructure unit.

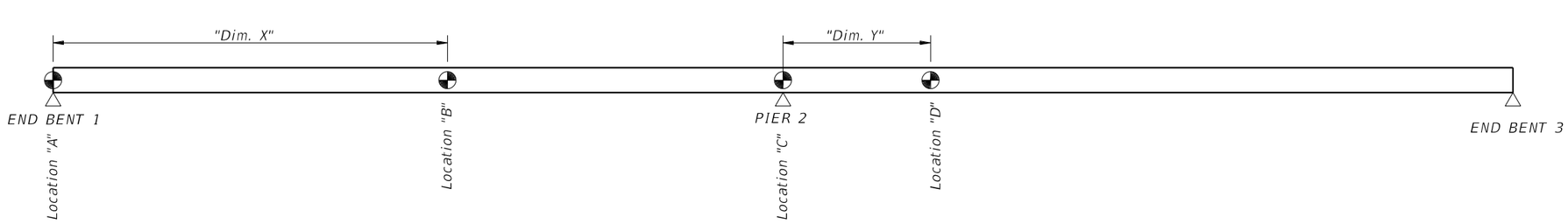
Abbreviations:

Inv - Inventory

Op - Operating

M - Moment Rating

V - Shear Rating



RATING LOCATIONS

BRIDGE NO. 134XXX

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
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DRAWN BY: JRC
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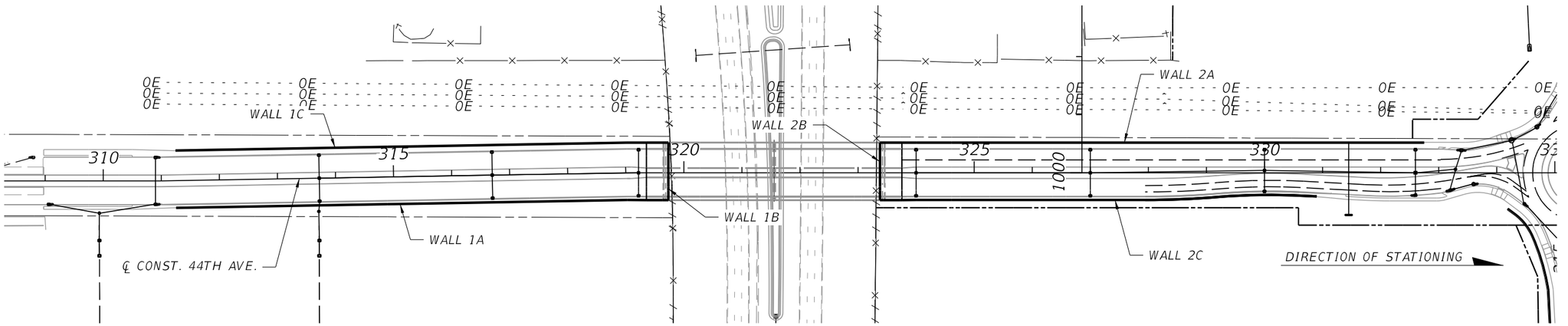
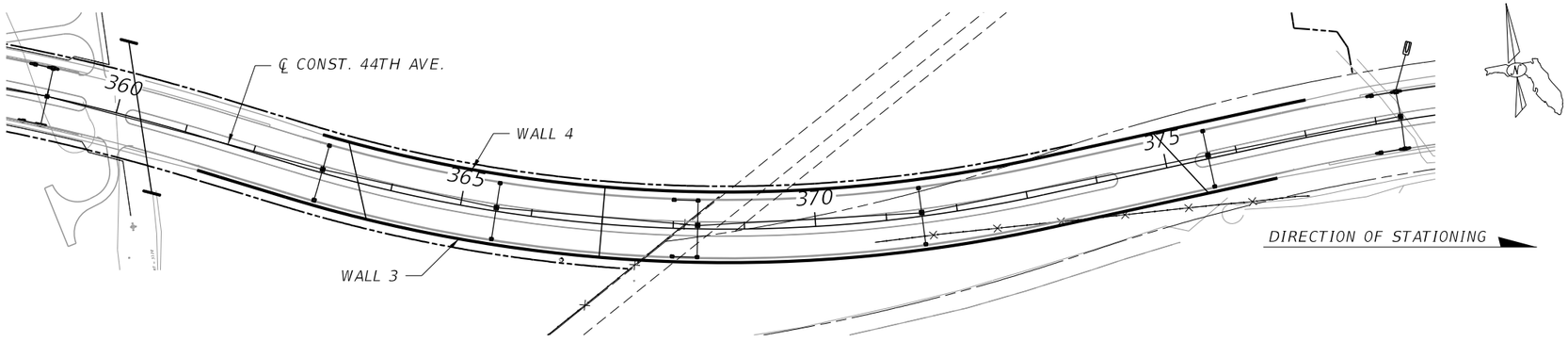
Manatee County FLORIDA
Manatee County Public Works

SHEET TITLE: LOAD RATING TABLE
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: B1-48



PLAN

(WALLS 1 & 2)



PLAN

(WALLS 3 & 4)

NOTE TO REVIEWER:

WALLS 5 AND 6 WILL BE INCLUDED WITH THE NEXT SUBMITTAL

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
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HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: EC
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DESIGNED BY: CMH
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: WALL LOCATION PLAN

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: BW - 1

CSMITH 2/18/2022 8:26:13 AM PW:\

GEOTECHNICAL INFORMATION - WALL 1A, 1B & 1C				Table Date 1-01-11
Wall 1	Reinforced Soil & Random Backfill	Loose to Medium Dense Sand	Firm to Stiff Clayey Sands	Very Stiff Cemented Clay to Silt
Depth Below Existing Ground Line (ft.)	——	0'-27'	27'-44'	44'-80'
Effective Unit Weight (pcf)	105	43	58	63
Cohesion (PSF)/Ultimate Shear Strength (PSF)	0	0	1,000	4,000
Internal Friction Angle	30°	29°	0°	0

GEOTECHNICAL INFORMATION - WALL 2A, 2B & 2C				Table Date 1-01-11
Wall 2	Reinforced Soil & Random Backfill	Loose to Medium Dense Sand	Firm to Stiff Clayey Sands	Very Stiff Cemented Clay to Silt
Depth Below Existing Ground Line (ft.)	——	0'-22'	22'-42'	42'-90'
Effective Unit Weight (pcf)	105	43	58	63
Cohesion (PSF)/Ultimate Shear Strength (PSF)	0	0	1,000	4,000
Internal Friction Angle	30°	29°	0°	0

GEOTECHNICAL INFORMATION - WALL 3 (PENDING)				Table Date 1-01-11
Wall 3	Reinforced Soil & Random Backfill	Loose to Medium Dense Sand	Firm to Stiff Clayey Sands	Very Stiff Cemented Clay to Silt
Depth Below Existing Ground Line (ft.)	——	--	--	--
Effective Unit Weight (pcf)	--	--	--	--
Cohesion (PSF)/Ultimate Shear Strength (PSF)	0	--	--	--
Internal Friction Angle	--	--	--	--

GEOTECHNICAL INFORMATION - WALL 4 (PENDING)				Table Date 1-01-11
Wall 4	Reinforced Soil & Random Backfill	Loose to Medium Dense Sand	Firm to Stiff Clayey Sands	Very Stiff Cemented Clay to Silt
Depth Below Existing Ground Line (ft.)	——	--	--	--
Effective Unit Weight (pcf)	--	--	--	--
Cohesion (PSF)/Ultimate Shear Strength (PSF)	0	--	--	--
Internal Friction Angle	--	--	--	--

NOTE:
IF THE UNIT WEIGHT AND/OR INTERNAL FRICTION ANGLE OF THE FILL PROPOSED BY THE CONTRACTOR DIFFERS FROM THAT SHOWN ABOVE, THE PROJECT ENGINEER WILL CONTACT BOTH THE DISTRICT GEOTECHNICAL ENGINEER AND THE WALL DESIGNER FOR A POSSIBLE REDESIGN.

NOTES [NOTES DATE 09-01-19]:

1. CONCRETE FACING PANEL SURFACES TREATMENT WILL BE ASHLAR STONE.
2. IF REQUIRED, THE SOIL REINFORCEMENT AND FASTENERS FOR THE ABUTMENT BACK WALL WILL BE DESIGNED AND FURNISHED BY THE PROPRIETARY WALL COMPANY. THE SOIL REINFORCEMENT WILL BE DESIGNED TO RESIST A FACTORED HORIZONTAL LOAD PER FT. OF BACKWALL WIDTH. SEE BRIDGE PLANS FOR LOCATIONS AND FORCES. THE COST OF SOIL REINFORCEMENT AND FASTENERS (IF REQUIRED) WILL BE INCLUDED IN THE COST OF THE RETAINING WALL SYSTEM.
3. APPLICABLE FDOT WALL TYPES FOR EACH WALL LOCATION ARE LISTED BELOW. SEE THE APPROVED PRODUCTS LIST FOR APPROVED WALL SYSTEMS AND STANDARD PLANS INDEX 548-020 FOR ALLOWABLE WALL TYPE SUBSTITUTIONS.
   WALL NO. 1 (1A, 1B & 1C) - FDOT WALL TYPE: 2B
   WALL NO. 2 (2A, 2B & 2C) - FDOT WALL TYPE: 2B
   WALL NO. 3 - FDOT WALL TYPE: TBD
   WALL NO. 4 - FDOT WALL TYPE: TBD
   WALL NO. 5 - FDOT WALL TYPE: TBD
   WALL NO. 6 - FDOT WALL TYPE: TBD
4. CONCRETE FOR COPING AND/OR JUNCTION SLAB SHALL BE CLASS IV (F'C = 5,500 PSI) WITHOUT HIGHLY REACTIVE POZZOLANS.
5. SEE STANDARD PLANS INDEX 548-020 FOR GENERAL NOTES AND DETAILS.

RETAINING WALL VARIABLES					Table Date 7-01-13
Wall No.	Wall Settlement				Design High Water Elevation (ft.)
	Long Term Settlement (in.)	Short Term Settlement (in.)	Differential Settlement		
			Longitudinal (%) (ft./100ft.)	Transverse (in.)	
1A, 1B & 1C	<1.0	1.0 - 3.5	0.1 - 0.3	0.5 - 1.5	N/A
2A, 2B & 2C	<1.0	1.0 - 3.5	0.1 - 0.3	0.5 - 1.5	N/A
3	--	--	--	--	N/A
4	--	--	--	--	N/A

NOTE:
DESIGN WALLS FOR THE SETTLEMENTS NOTED IN THE TABLE.
LONG TERM SETTLEMENT IS MEASURED FROM THE END OF WALL FILL PLACEMENT.
SHORT TERM SETTLEMENT IS MEASURED DURING THE DURATION OF WALL CONSTRUCTION.
TRANSVERSE DIFFERENTIAL SETTLEMENT IS MEASURED FROM THE FACE OF WALL TO THE END OF THE SOIL REINFORCEMENT.

NOTES TO REVIEWER:

1. GEOTECHNICAL DATA FOR WALLS 3 AND 4 IS PENDING
2. WALLS 5 AND 6 WILL BE INCLUDED WITH THE NEXT SUBMITTAL

NOTE:

FOR SOIL REINFORCEMENT LENGTHS FOR EXTERNAL STABILITY TABLE, SEE PERMANENT RETAINING WALL DATA TABLES (2 OF 2) SHEET.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
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2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

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CHECKED BY: CMH
DESIGNED BY: CMH
CHECKED BY: CAS

Manatee County Public Works

SHEET TITLE: PERMANENT RETAINING WALL DATA TABLES (1 OF 2)

REF. DWG. NO.

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO. BW - 2

CSMITH 2/18/2022 8:23:13 AM PW:\

SOIL REINFORCEMENT LENGTHS FOR EXTERNAL STABILITY

Table Date 1-01-11

Wall No. 1A, 1B & 1C	Wall Height (ft.)	≤ 8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
	Reinforcement Length (ft.)	8	8	10	11	12	13	14	16	18	19	21	22	24	25	27	29	30
	Factored Bearing Resistance (psf)	3919	3623	4104	4196	4287	4378	4470	4967	5457	5556	6044	6144	6631	6733	7218	7701	7806
Wall No. 2A, 2B & 2C	Wall Height (ft.)	≤ 8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
	Reinforcement Length (ft.)	8	8	10	11	12	13	14	16	18	19	21	22	24	25	27	29	30
	Factored Bearing Resistance (psf)	3919	3623	4104	4196	4287	4378	4470	4967	5457	5556	6044	6144	6631	6733	7218	7701	7806
Wall No. 3	Wall Height (ft.)	≤ 8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
	Reinforcement Length (ft.)																	
	Factored Bearing Resistance (psf)																	
Wall No. 4	Wall Height (ft.)	≤ 8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
	Reinforcement Length (ft.)																	
	Factored Bearing Resistance (psf)																	

NOTES:

1. THE REINFORCEMENT STRAP LENGTHS SHOWN ABOVE ARE THE MINIMUM LENGTHS REQUIRED FOR EXTERNAL STABILITY. THE REINFORCEMENT LENGTHS USED IN THE CONSTRUCTION OF THE RETAINING WALLS WILL BE THE LONGER OF THAT REQUIRED FOR EXTERNAL OR INTERNAL STABILITY (DETERMINED BY PROPRIETARY WALL COMPANIES).
2. THE FACTORED BEARING RESISTANCES SHOWN ABOVE ARE THE CRITICAL (LOWEST) VALUES FROM ALL THE LOAD CASES ANALYZED USING LRFD METHODOLOGY.

NOTES TO REVIEWER:

1. GEOTECHNICAL DATA FOR WALLS 3 AND 4 IS PENDING

2. WALLS 5 AND 6 WILL BE INCLUDED WITH THE NEXT SUBMITTAL

NOTE:

FOR RETAINING WALL VARIABLES TABLE AND GEOTECHNICAL INFORMATION TABLES, SEE PERMANENT RETAINING WALL DATA TABLES (1 OF 2) SHEET.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
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Sarasota, FL 34232

DRAWN BY: EC
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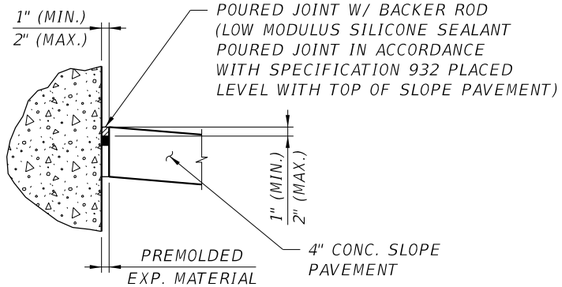
Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: PERMANENT RETAINING WALL DATA TABLES (2 OF 2)

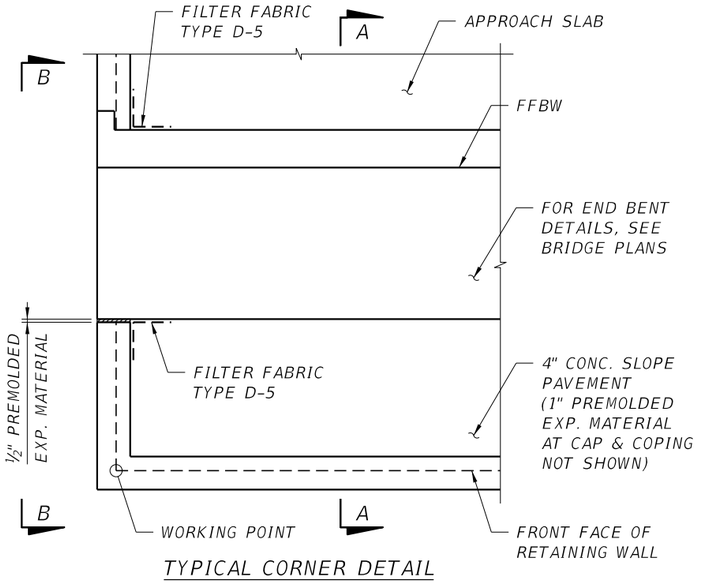
REF. DWG. NO.

PROJECT NAME: 44TH AVENUE EAST OVER I-75

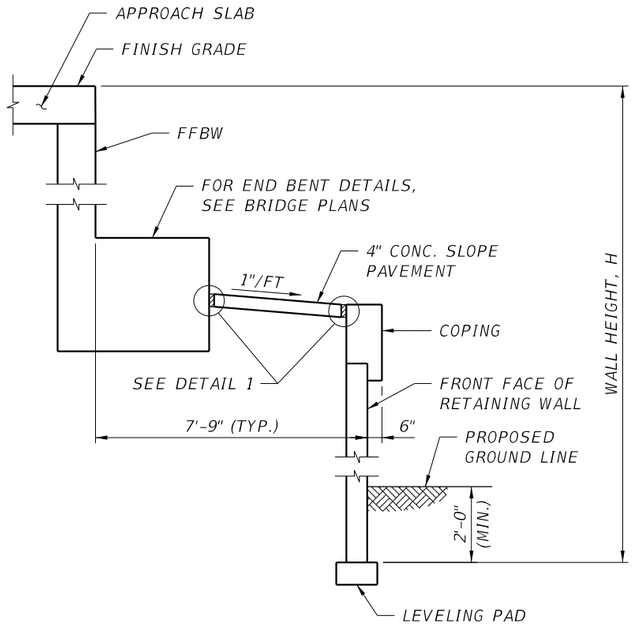
SHEET NO. BW - 3



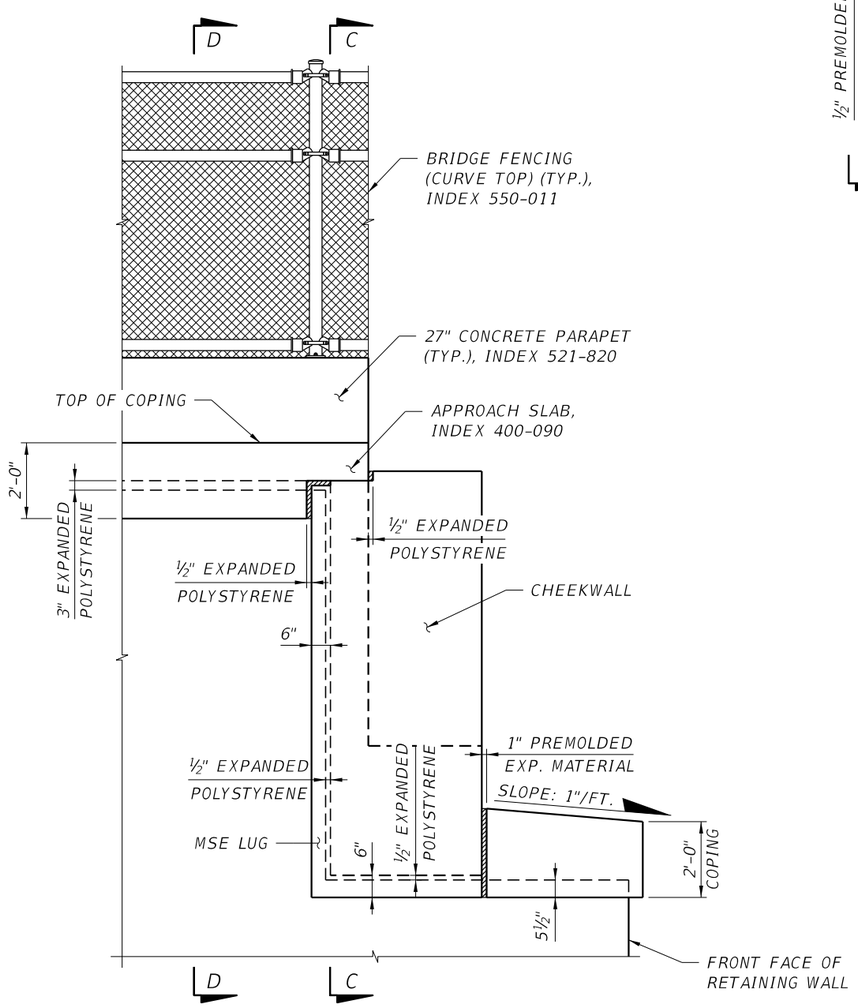
DETAIL 1



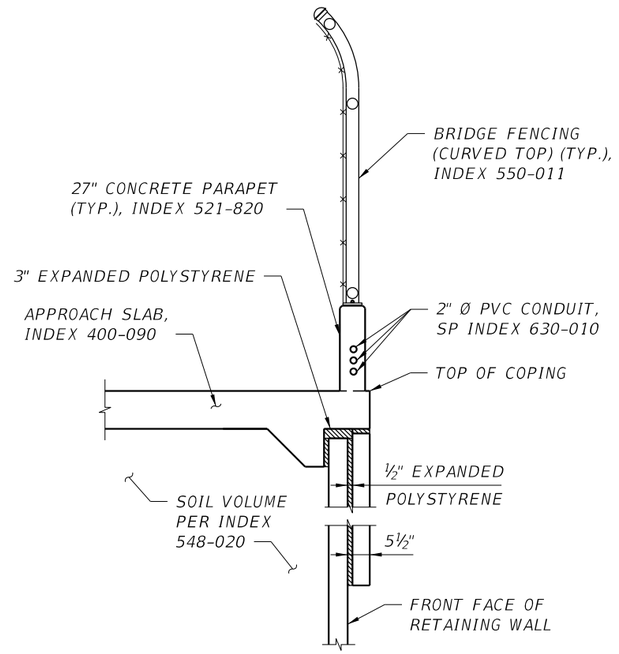
TYPICAL CORNER DETAIL



SECTION A-A



VIEW B-B



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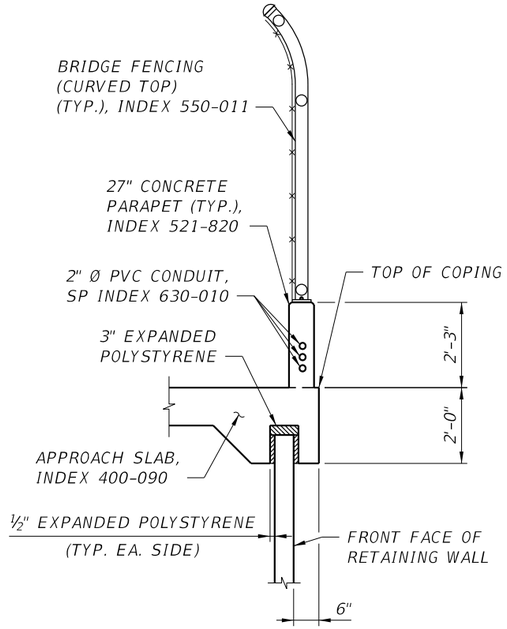

SECTION D-D

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REVISIONS					
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Chester A. Smith III, P.E.
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2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: JRC
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DESIGNED BY: CMH
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

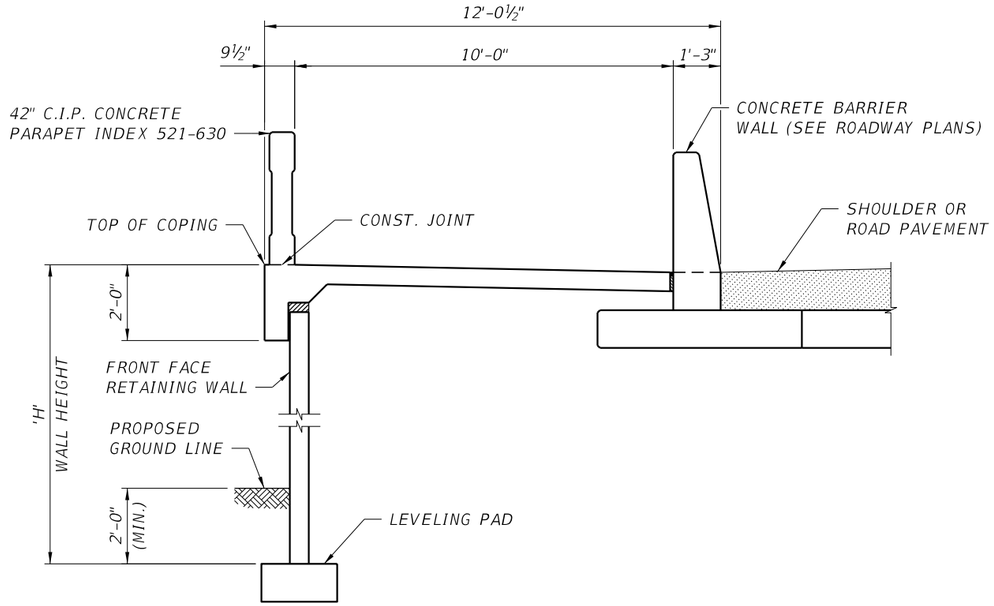
SHEET TITLE: PERMANENT RETAINING WALL DETAILS (1 OF 2)

REF. DWG. NO.

PROJECT NAME: 44TH AVENUE EAST OVER I-75

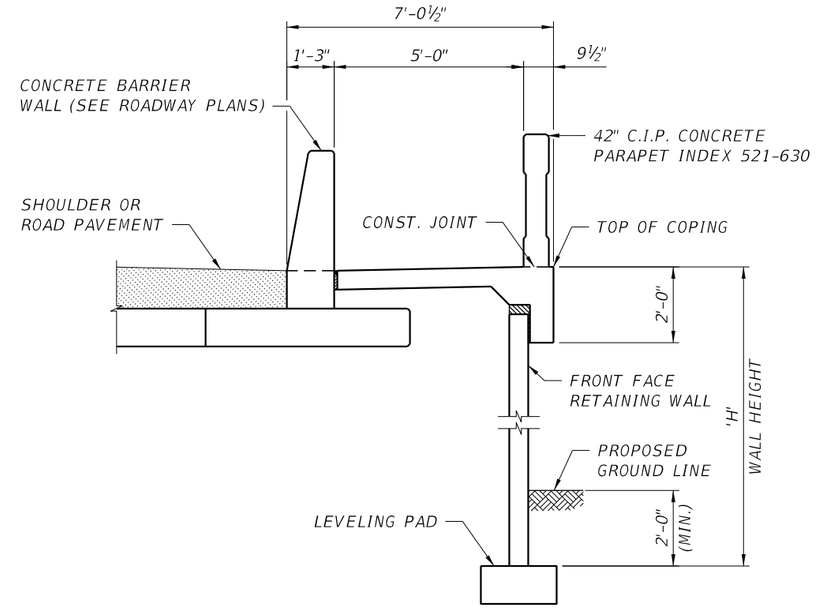
SHEET NO. BW - 4

CSMITH 2/17/2022 8:49:52 PM PW:\



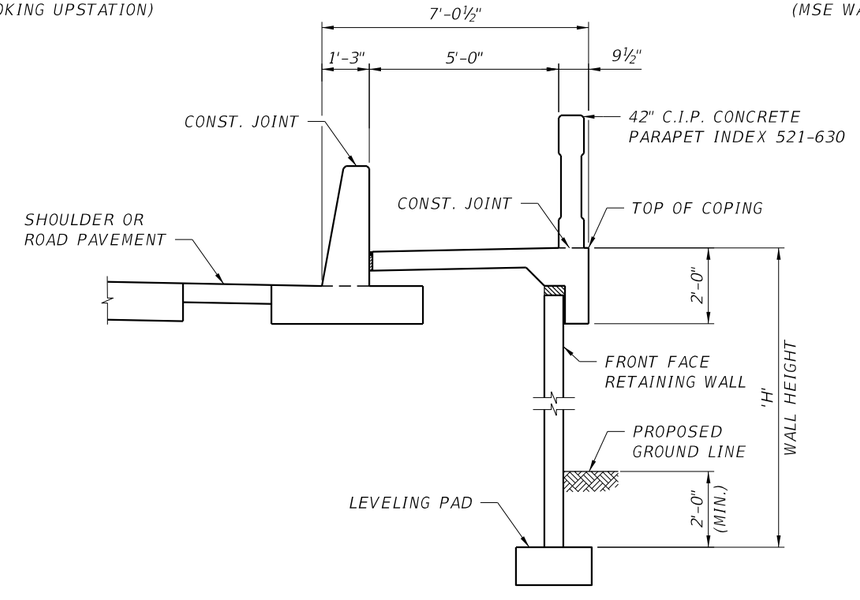
RETAINING WALL SECTION THRU 10'-0" SIDEWALK

(MSE WALLS 1 AND 2 - LOOKING UPSTATION)



RETAINING WALL SECTION THRU 5'-0" SIDEWALK

(MSE WALLS 1 AND 2 - LOOKING UPSTATION)



RETAINING WALL SECTION THRU 5'-0" SIDEWALK

(WALLS 3 SHOWN, WALL 4 OPPOSITE HAND)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
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DESIGNED BY: CMH
CHECKED BY: CAS

Manatee County Public Works

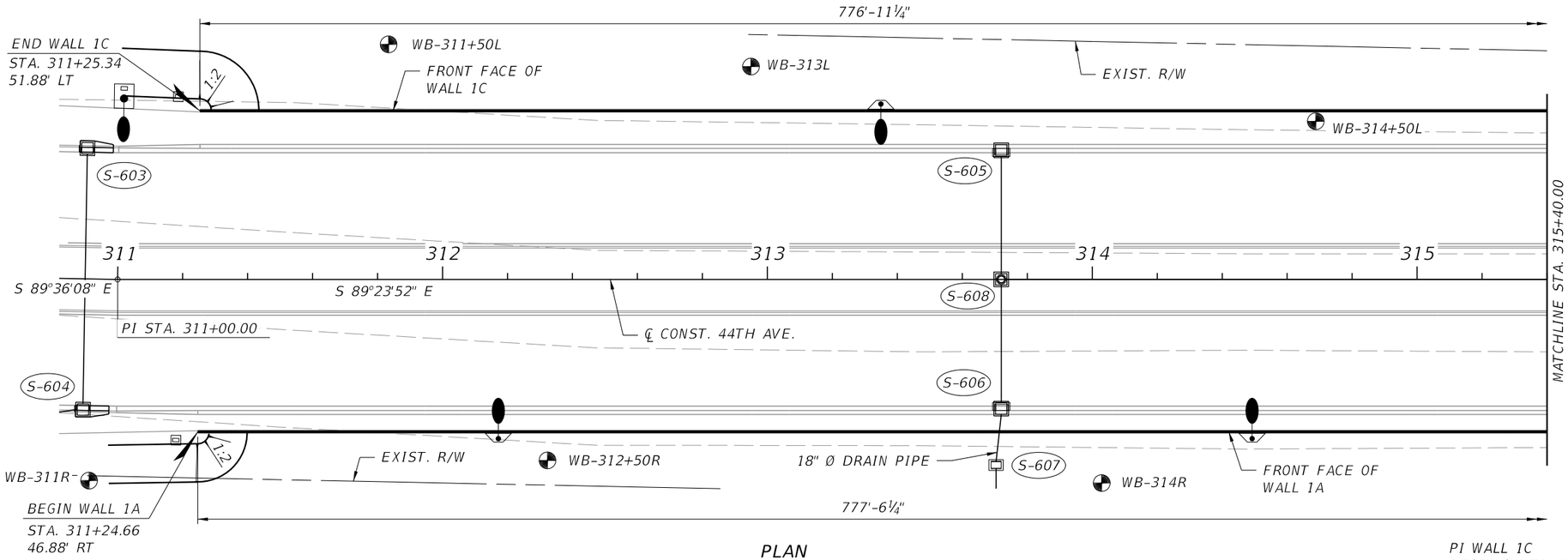
SHEET TITLE: PERMANENT RETAINING WALL DETAILS (2 OF 2)

REF. DWG. NO.

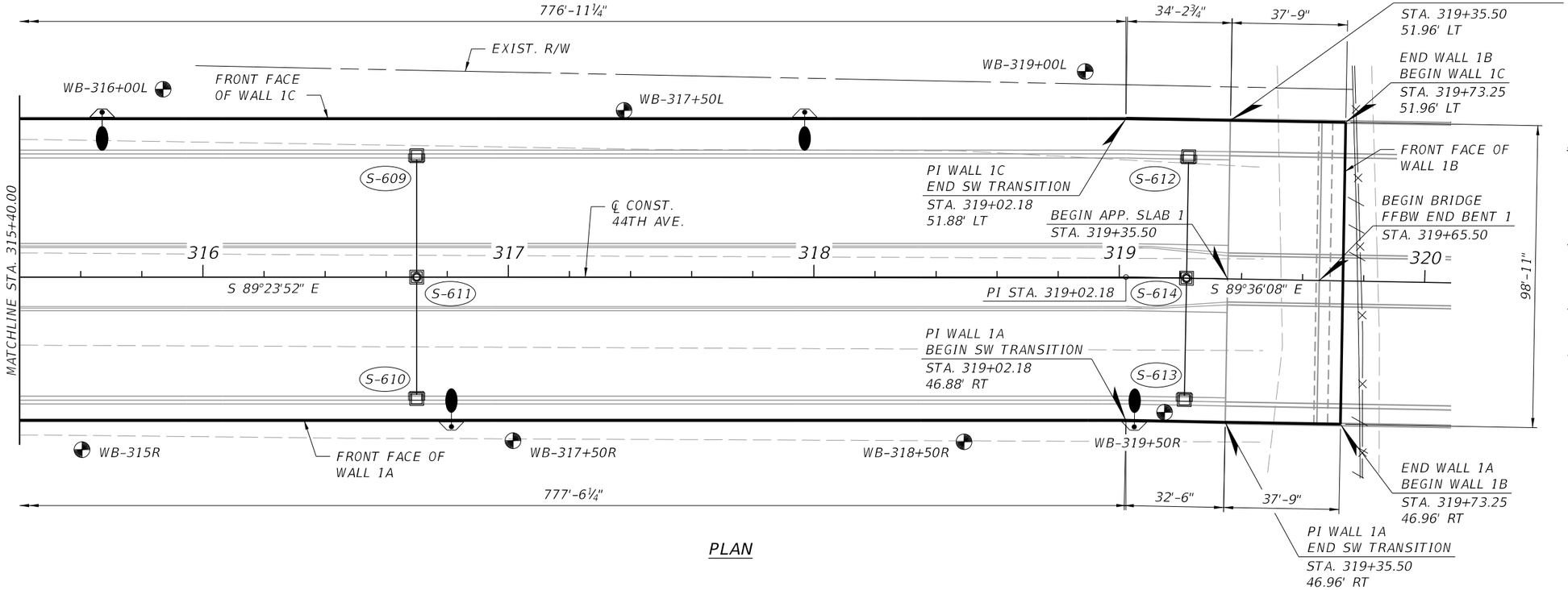
PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO. BW-5

CSMITH 2/17/2022 8:50:09 PM PW:\



PLAN



PLAN

DIRECTION OF STATIONING

LEGEND:

X-XXX — DRAINAGE STRUCTURE NUMBER

SOIL BORING

DIRECTION OF STATIONING

NOTES:

1. FOR WALL ELEVATION DATA, SEE PERMANENT RETAINING WALL 1 – ELEVATION SHEETS.
2. SEE ROADWAY PLANS FOR DRAINAGE DATA AND UTILITY ADJUSTMENT DETAILS.
3. SEE LIGHTING PLANS FOR LIGHTING DETAILS.
4. WALL LENGTHS AND OFFSETS ARE MEASURED ALONG FRONT FACE OF WALL.

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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DRAWN BY: EC
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CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

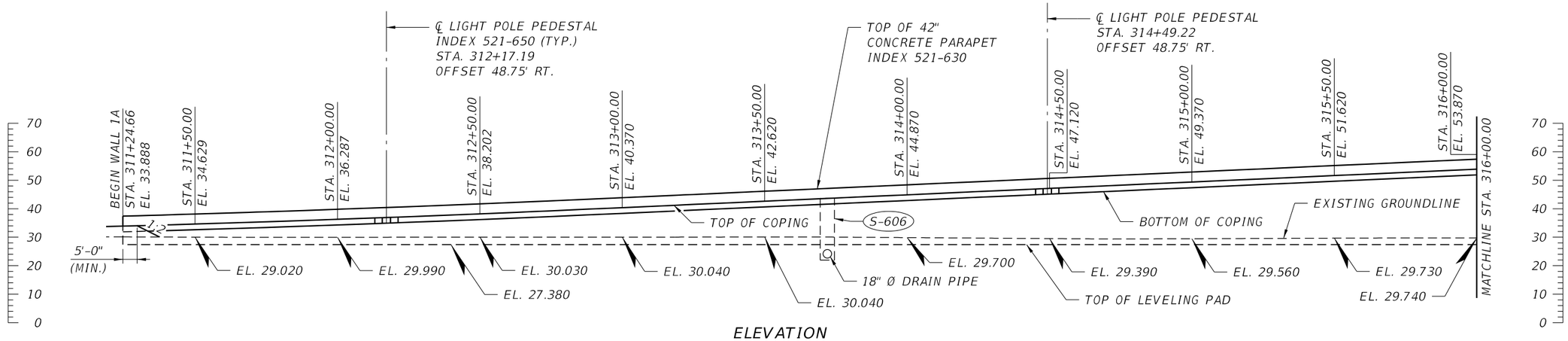
SHEET TITLE: PERMANENT RETAINING WALL 1 - PLAN

REF. DWG. NO.

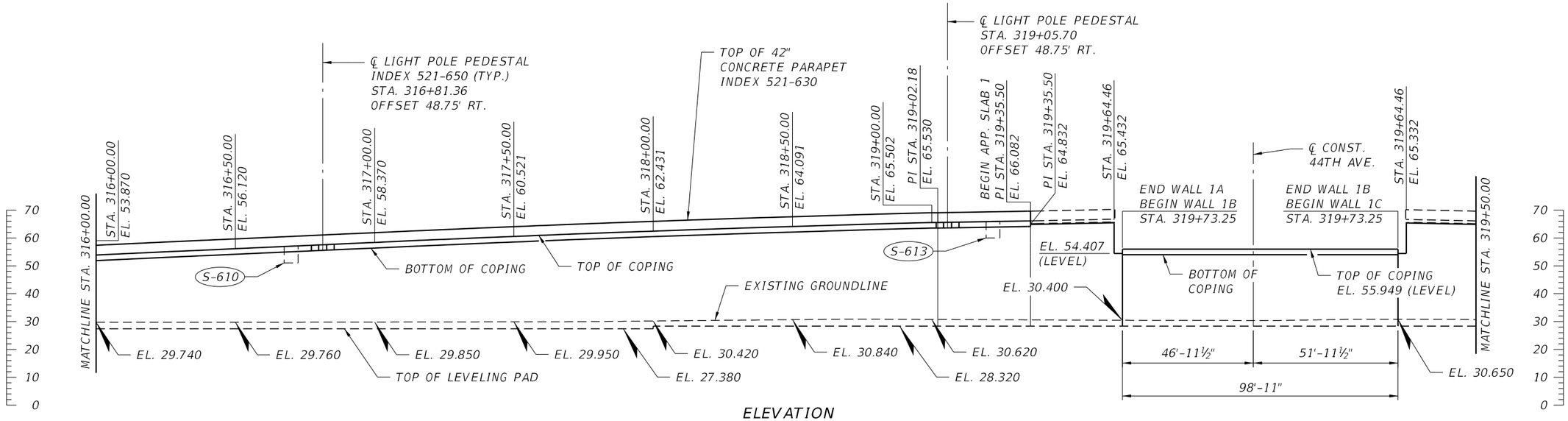
PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO. BW - 6

CSMITH 2/17/2022 8:50:31 PM PW:\



ELEVATION



ELEVATION

NOTES:

1. TOP OF LEVELING PAD EMBEDMENT SHALL BE A MINIMUM OF 2'-0" BELOW GROUNDLINE.
2. FOR DRAINAGE STRUCTURES AND UTILITY SHEETS, SEE ROADWAY PLANS.
3. WALL LENGTHS ARE MEASURED ALONG THE FRONT FACE OF THE WALL.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: EC
CHECKED BY: CMH
DESIGNED BY: CMH
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: PERMANENT RETAINING WALL 1 - ELEVATION (1 OF 2)

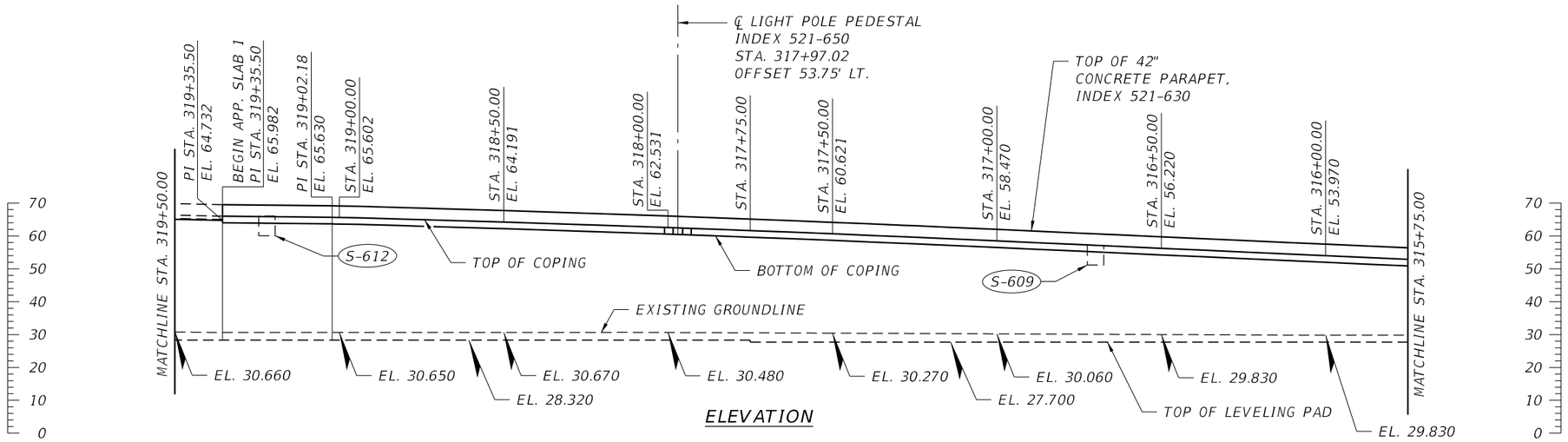
REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

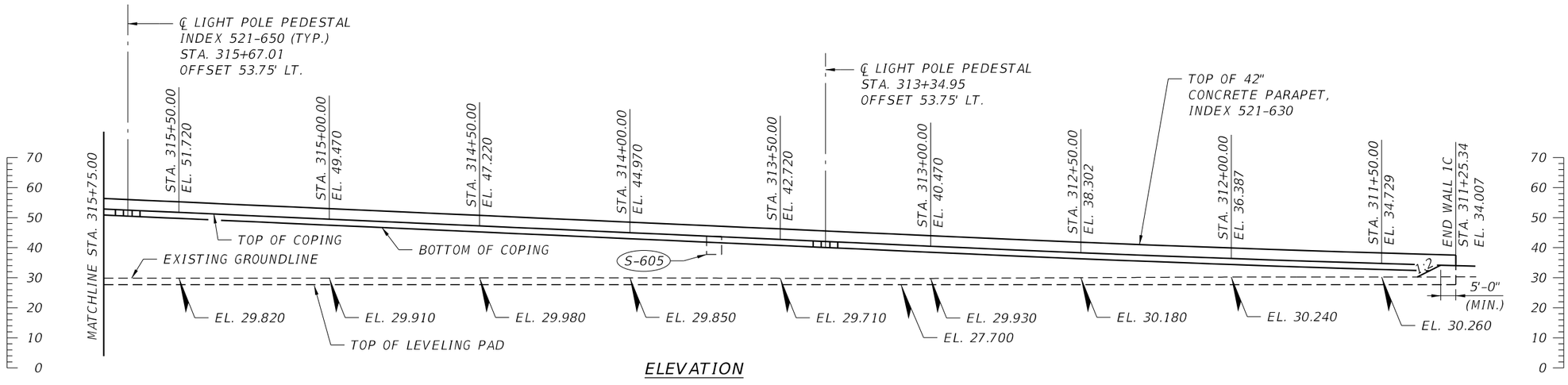
SHEET NO.: BW-7

CSMITH 2/17/2022 8:50:53 PM PW:\

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



ELEVATION



ELEVATION

NOTE:

FOR NOTES, SEE PERMANENT RETAINING WALL 1 - ELEVATON (1 OF 2) SHEET.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: EC
CHECKED BY: CMH
DESIGNED BY: CMH
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

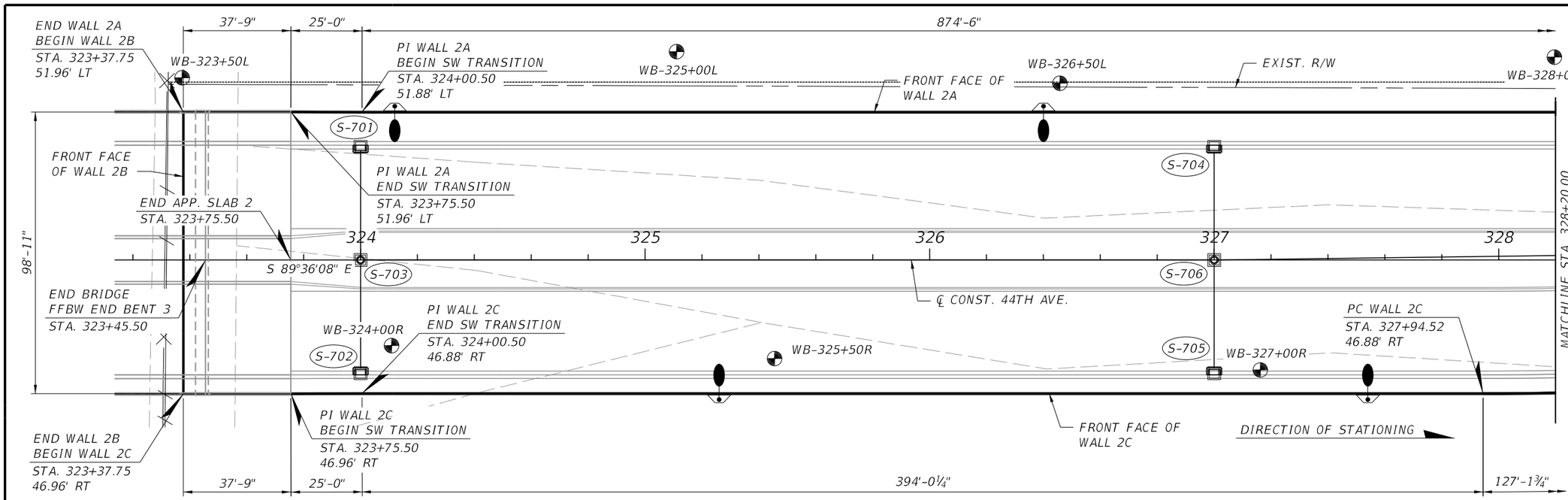
SHEET TITLE: PERMANENT RETAINING WALL 1 - ELEVATION (2 OF 2)

REF. DWG. NO.:

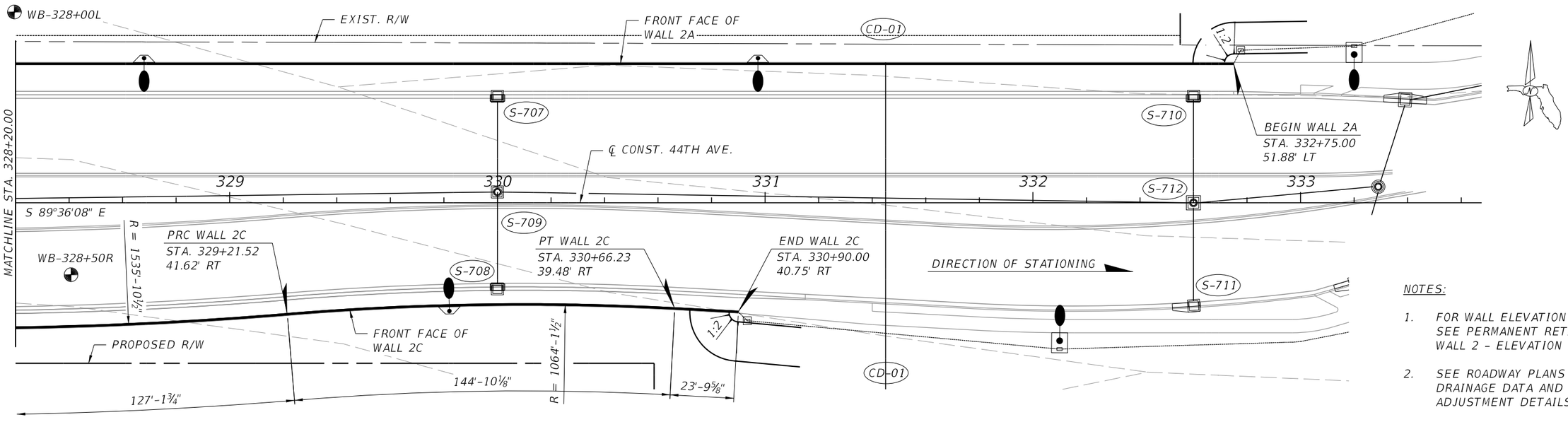
PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: BW-8

CSMITH 2/17/2022 8:51:14 PM PW:\



PLAN



PLAN

LEGEND:

(X-XXX) DRAINAGE STRUCTURE NUMBER

SOIL BORING

NOTES:

1. FOR WALL ELEVATION DATA, SEE PERMANENT RETAINING WALL 2 – ELEVATION SHEETS.
2. SEE ROADWAY PLANS FOR DRAINAGE DATA AND UTILITY ADJUSTMENT DETAILS.
3. SEE LIGHTING PLANS FOR LIGHTING DETAILS.
4. WALL LENGTHS AND OFFSETS ARE MEASURED ALONG FRONT FACE OF WALL.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: EC
CHECKED BY: CMH
DESIGNED BY: CMH
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

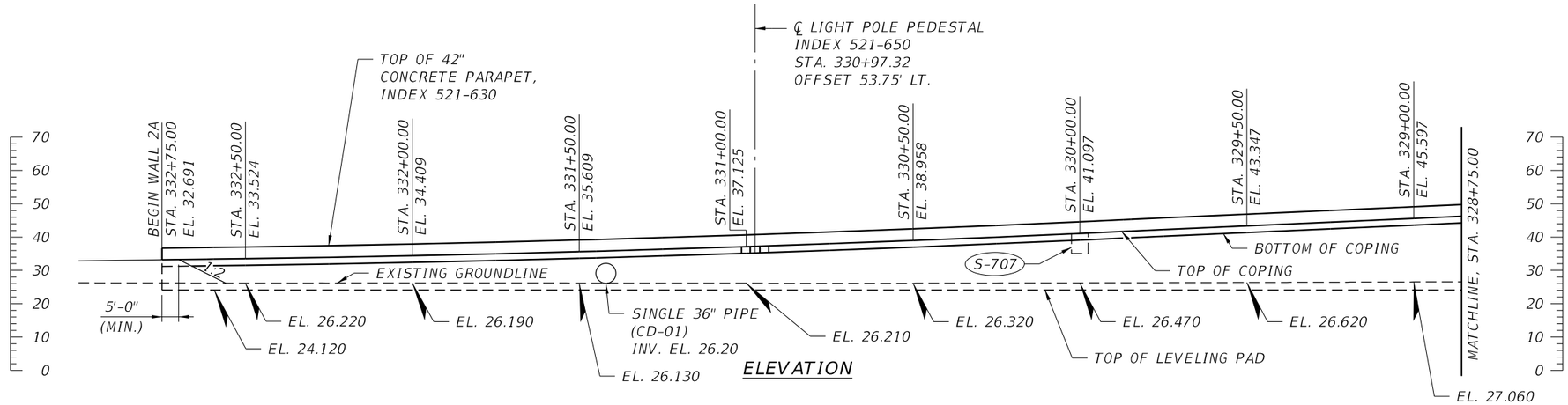
SHEET TITLE: PERMANENT RETAINING WALL 2 - PLAN

REF. DWG. NO.:

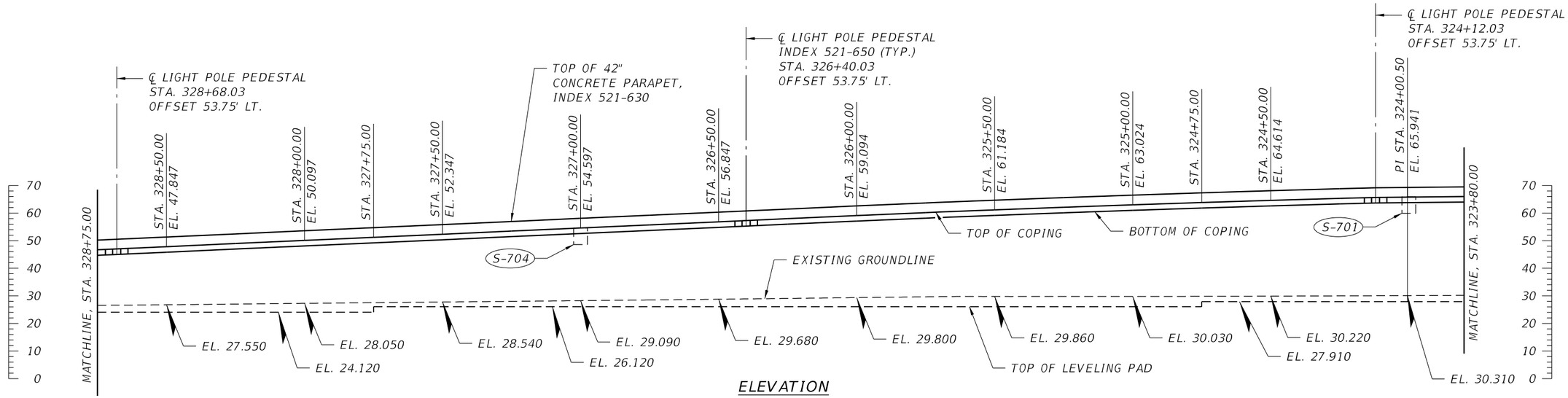
PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: BW-9

CSMITH 2/17/2022 8:51:45 PM PW:\



ELEVATION



ELEVATION

NOTES:

1. TOP OF LEVELING PAD EMBEDMENT SHALL BE A MINIMUM OF 2'-0" BELOW GROUNDLINE.
2. FOR DRAINAGE STRUCTURES AND UTILITY SHEETS, SEE ROADWAY PLANS.
3. WALL LENGTHS ARE MEASURED ALONG THE FRONT FACE OF THE WALL.
4. DRAINAGE PIPE HEADWALL REQUIRES DESIGN AND DETAILING TO BE PERFORMED BY THE MSE WALL SUPPLIER TO MAINTAIN COMPATIBILITY WITH ADJACENT PANELS.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY:	EC
CHECKED BY:	CMH
DESIGNED BY:	CMH
CHECKED BY:	CAS

Manatee County FLORIDA — Manatee County Public Works

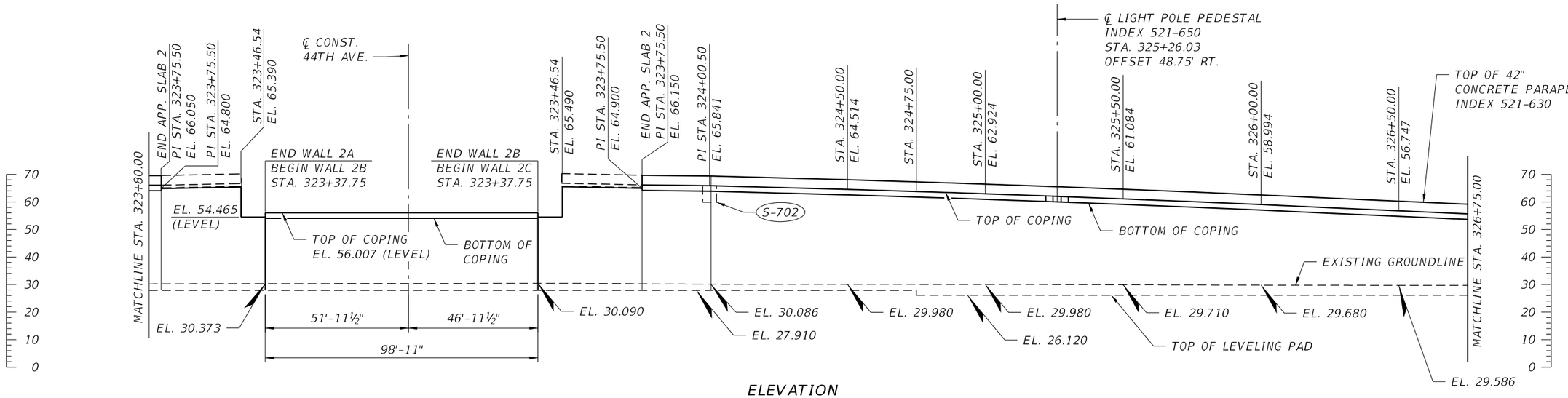
SHEET TITLE: PERMANENT RETAINING WALL 2 - ELEVATION (1 OF 2)

REF. DWG. NO.:

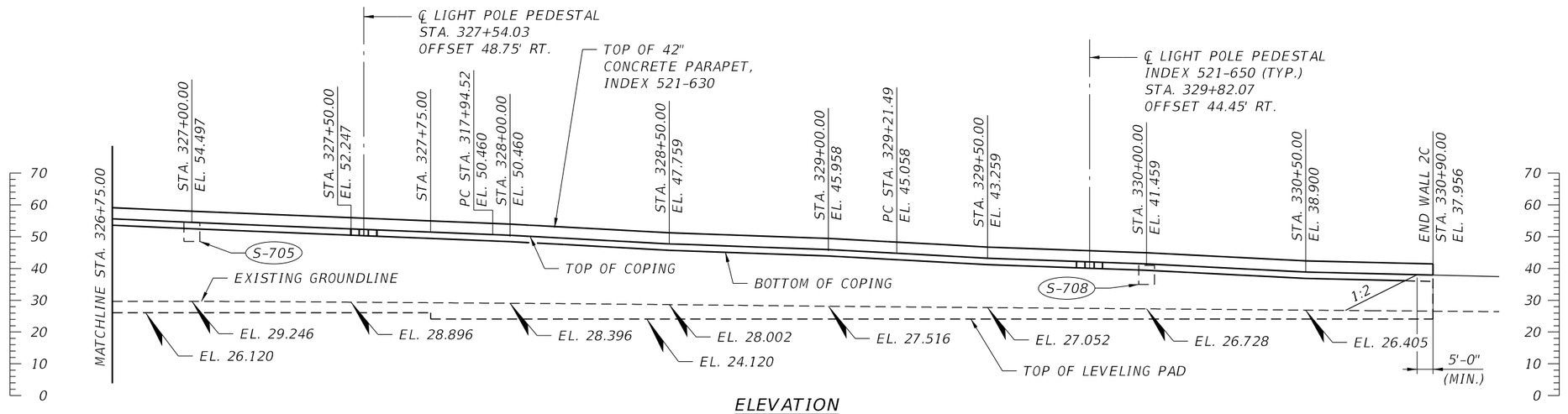
PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: BW - 10

CSMITH 2/17/2022 8:52:09 PM PW:\



ELEVATION



ELEVATION

NOTE:

FOR NOTES, SEE PERMANENT RETAINING WALL 2 – ELEVATON (1 OF 2) SHEET.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: EC
CHECKED BY: CMH
DESIGNED BY: CMH
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: PERMANENT RETAINING WALL 2 - ELEVATION (2 OF 2)

REF. DWG. NO.

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO. BW-11

CSMITH 2/17/2022 8:53:06 PM PW:\

CURVE 9

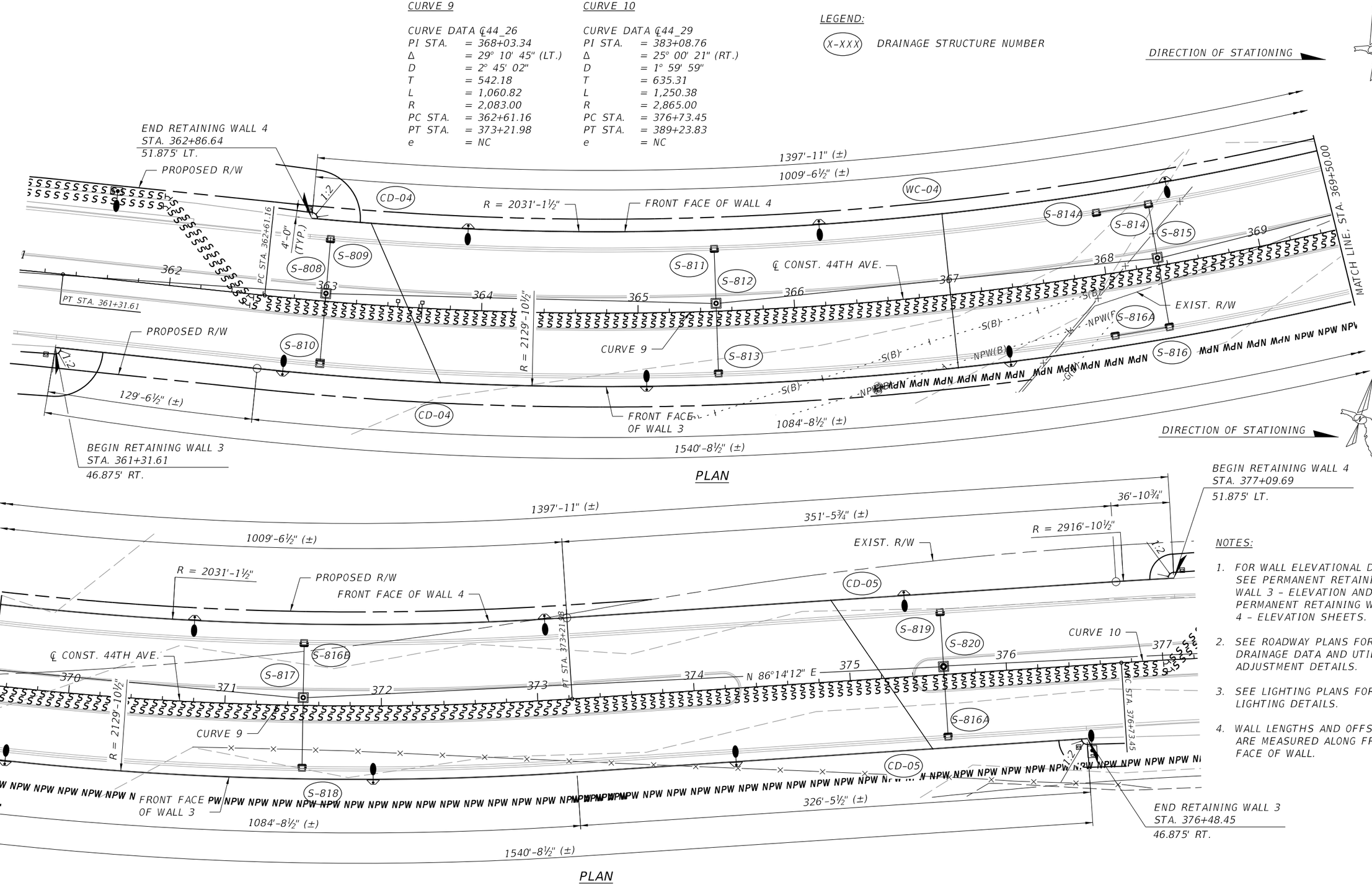
CURVE DATA ℄44_26
PI STA. = 368+03.34
Δ = 29° 10' 45" (LT.)
D = 2° 45' 02"
T = 542.18
L = 1,060.82
R = 2,083.00
PC STA. = 362+61.16
PT STA. = 373+21.98
e = NC

CURVE 10

CURVE DATA ℄44_29
PI STA. = 383+08.76
Δ = 25° 00' 21" (RT.)
D = 1° 59' 59"
T = 635.31
L = 1,250.38
R = 2,865.00
PC STA. = 376+73.45
PT STA. = 389+23.83
e = NC

LEGEND:

X-XXX DRAINAGE STRUCTURE NUMBER



NOTES:

1. FOR WALL ELEVATIONAL DATA, SEE PERMANENT RETAINING WALL 3 - ELEVATION AND PERMANENT RETAINING WALL 4 - ELEVATION SHEETS.
2. SEE ROADWAY PLANS FOR DRAINAGE DATA AND UTILITY ADJUSTMENT DETAILS.
3. SEE LIGHTING PLANS FOR LIGHTING DETAILS.
4. WALL LENGTHS AND OFFSETS ARE MEASURED ALONG FRONT FACE OF WALL.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

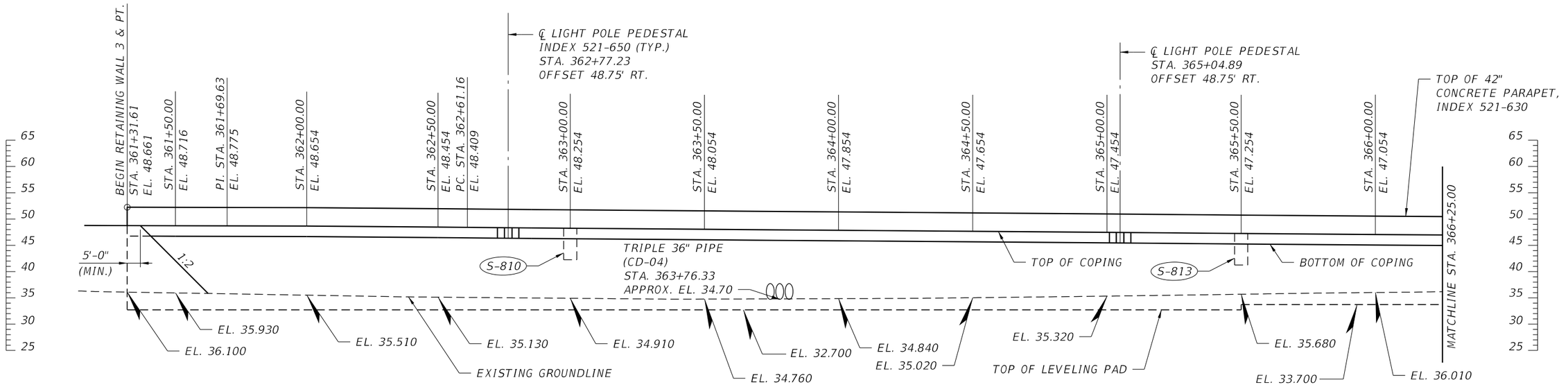
Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: KE
CHECKED BY: CMH
DESIGNED BY: CMH
CHECKED BY: CAS

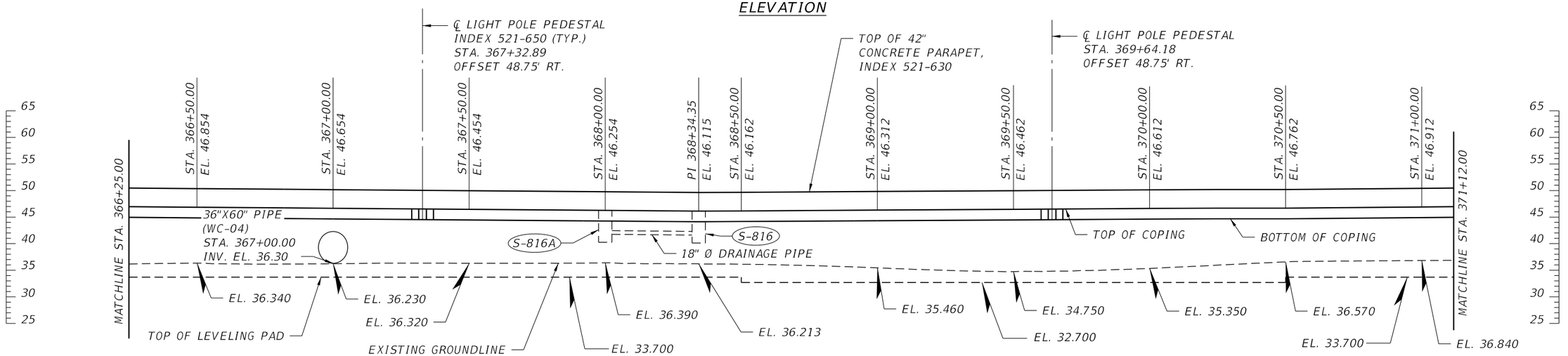
Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: PERMANENT RETAINING WALLS 3 AND 4 - PLAN
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: BW - 12

DARANDER 2/17/2022 9:14:50 PM PW:\3658\10001270\10042644\6.0_CAD_BIM\6.2_Work_In_Progress\12345615201\struct\Ret



ELEVATION



ELEVATION

NOTES:

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4. DRAINAGE PIPE HEADWALL REQUIRES DESIGN AND DETAILING TO BE PERFORMED BY THE MSE WALL SUPPLIER TO MAINTAIN COMPATIBILITY WITH ADJACENT PANELS.

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY:	KE
CHECKED BY:	CMH
DESIGNED BY:	CMH
CHECKED BY:	CAS

Manatee County FLORIDA — Manatee County Public Works

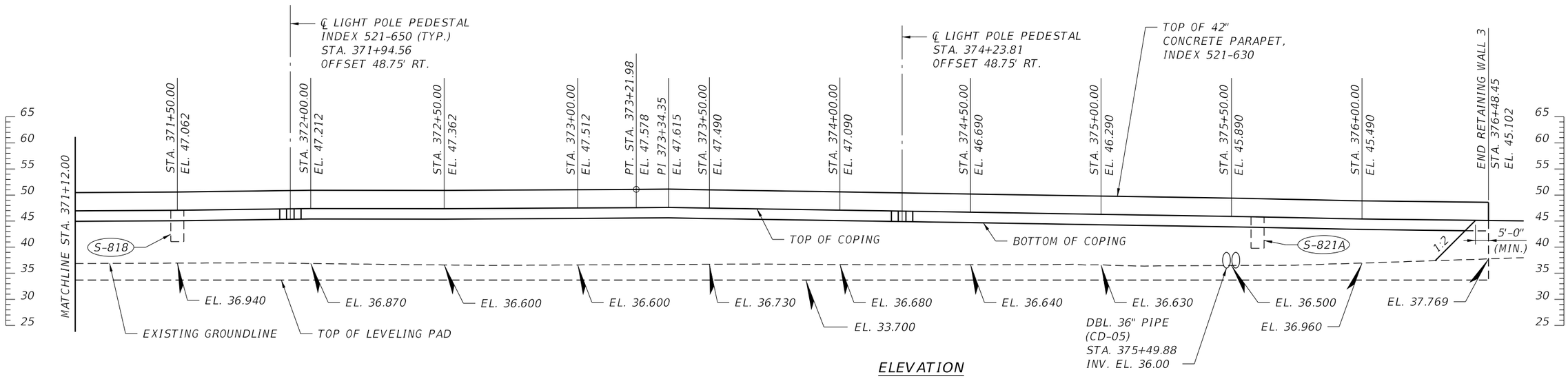
SHEET TITLE: PERMANENT RETAINING WALL 3 - ELEVATION (1 OF 2)

REF. DWG. NO.

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO. BW-13

CSMITH 2/17/2022 8:53:38 PM PW:\



ELEVATION

NOTE:

FOR NOTES, SEE PERMANENT RETAINING WALL 3 – ELEVATION (1 OF 2) SHEET.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: KE
CHECKED BY: CMH
DESIGNED BY: CMH
CHECKED BY: CAS

Manatee County FLORIDA
Manatee County Public Works

SHEET TITLE: PERMANENT RETAINING WALL 3 - ELEVATION (2 OF 2)

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: BW - 14

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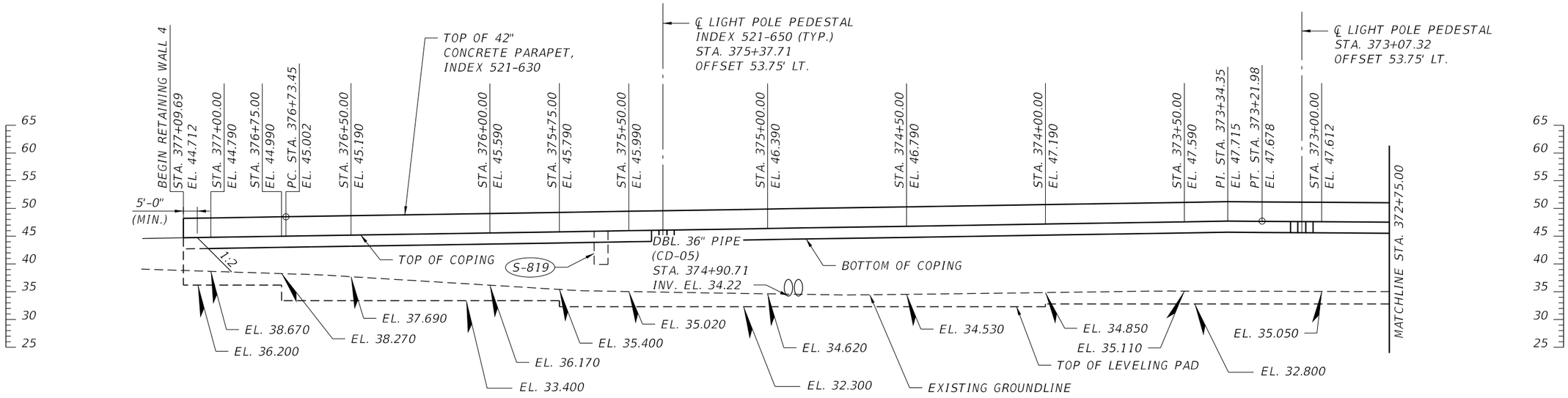
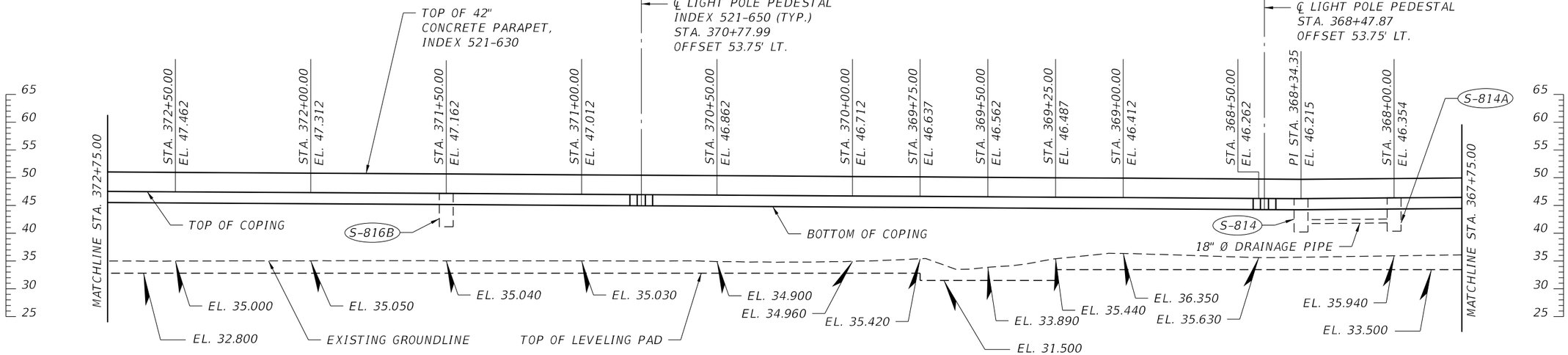


ELEVATION



ELEVATION

NOTES:

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2. FOR DRAINAGE STRUCTURES AND UTILITY SHEETS, SEE ROADWAY PLANS.
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4. DRAINAGE PIPE HEADWALL REQUIRES DESIGN AND DETAILING TO BE PERFORMED BY THE MSE WALL SUPPLIER TO MAINTAIN COMPATIBILITY WITH ADJACENT PANELS.

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REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: KE
CHECKED BY: CMH
DESIGNED BY: CMH
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

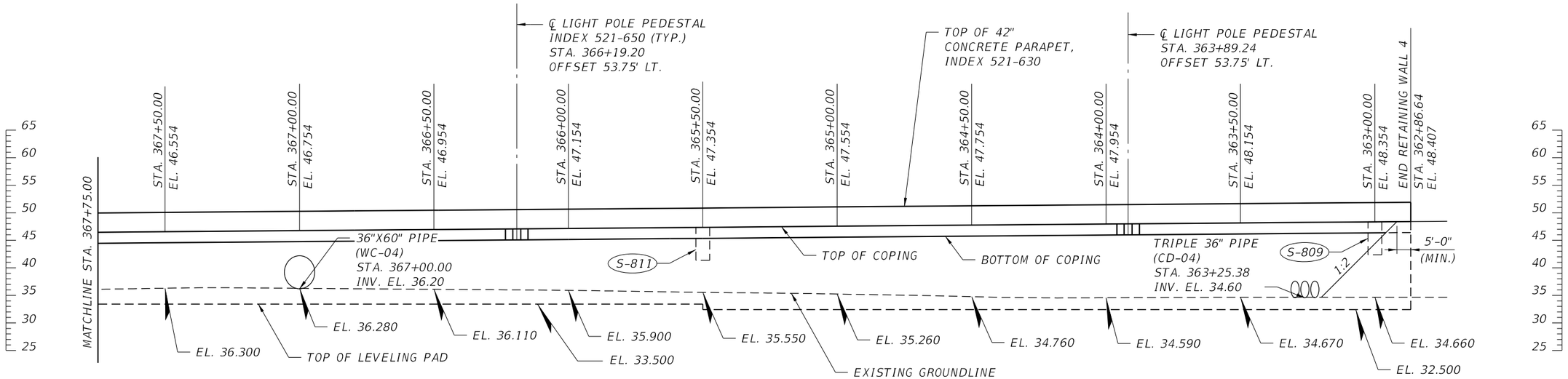
SHEET TITLE: PERMANENT RETAINING WALL 4 - ELEVATION (1 OF 2)

REF. DWG. NO.

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO. BW - 15

CSMITH 2/17/2022 8:54:13 PM PW:\



ELEVATION

NOTE:

FOR NOTES, SEE PERMANENT RETAINING WALL 4 – ELEVATION (1 OF 2) SHEET.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Chester A. Smith III, P.E.
P.E. LICENSE NUMBER 70756
HDR Engineering, Inc.
2601 Cattlemen Road, Suite 400
Sarasota, FL 34232

DRAWN BY: KE
CHECKED BY: CMH
DESIGNED BY: CMH
CHECKED BY: CAS

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: PERMANENT RETAINING WALL 4 - ELEVATION (2 OF 2)

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: BW - 16

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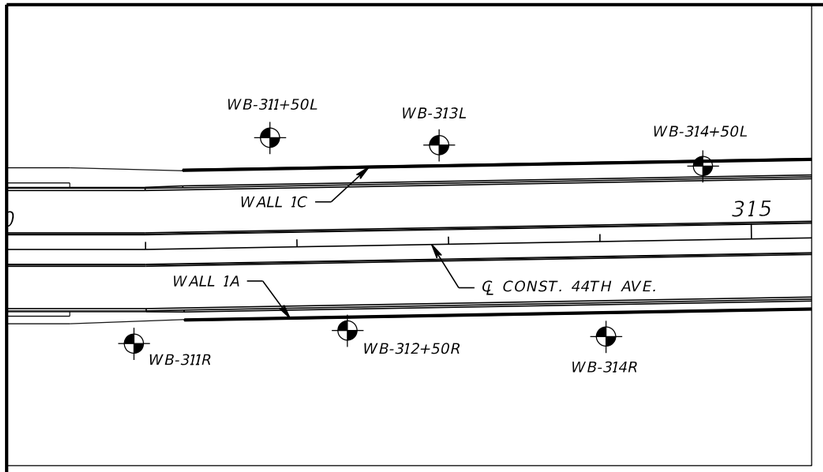
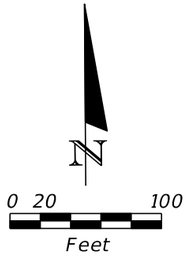




BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (pH = 4.9)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (pH = 4.9)
SUPERSTRUCTURE	SLIGHTLY AGGRESSIVE

SOIL TEST RESULTS:

RESISTIVITY	47,000 TO 77,000 OHM-CM
CHLORIDES	15 PPM
SULFATES	<5 PPM
pH	4.9 TO 5.7

LEGEND

- GRAY TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- GRAY SILTY SAND (SM)
- LIGHT BROWN TO GRAY CLAYEY SAND (SC)
- LIGHT GRAY SANDY CLAY TO CLAY TO SILT (CL/CH/MH)
- CEMENTED CLAY TO SILT, SOMETIMES WITH LIMESTONE FRAGMENTS (CL/CH/MH)

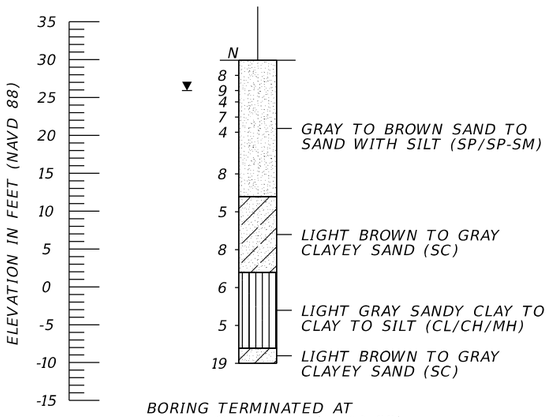
SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988

- APPROXIMATE SPT BORING LOCATION
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- CASING

GNA GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.

℄ 44TH AVE. CENTERLINE CONSTRUCTION OF 44TH AVENUE EAST

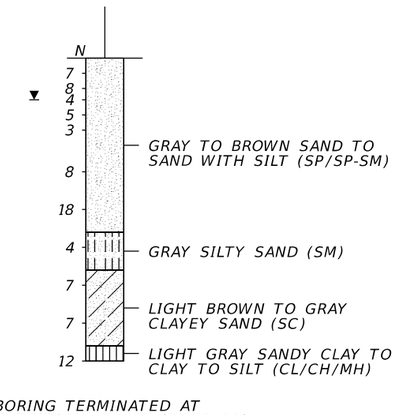
BOR # WB-311R
STA. 310+92
REF. ℄ 44TH AVE.
OFF. 62' RT.
ELEV. 29.9
DATE 1/26/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -10.1 FT (NAVD 88)

LATITUDE: N 27.46088
LONGITUDE: W 82.46241

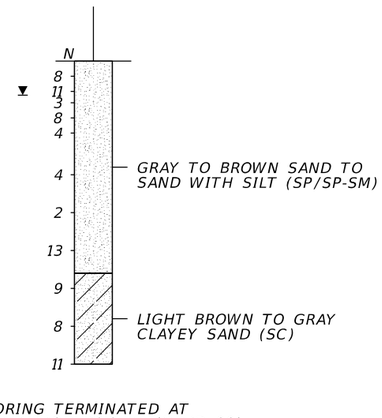
BOR # WB-311+50L
STA. 311+83
REF. ℄ 44TH AVE.
OFF. 72' LT.
ELEV. 30.2
DATE 1/27/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -9.8 FT (NAVD 88)

LATITUDE: N 27.46125
LONGITUDE: W 82.46223

BOR # WB-312+50R
STA. 312+32
REF. ℄ 44TH AVE.
OFF. 56' RT.
ELEV. 29.8
DATE 1/26/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -10.2 FT (NAVD 88)

LATITUDE: N 27.46090
LONGITUDE: W 82.46197

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

WALLS 1A & 1C

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BMG
CHECKED BY: DRR
DESIGNED BY: BMG
CHECKED BY: DRR

Manatee County Public Works

SHEET TITLE: REPORT OF CORE BORINGS (1)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: GW-1

CSMITH 2/17/2022 8:54:45 PM PW:\

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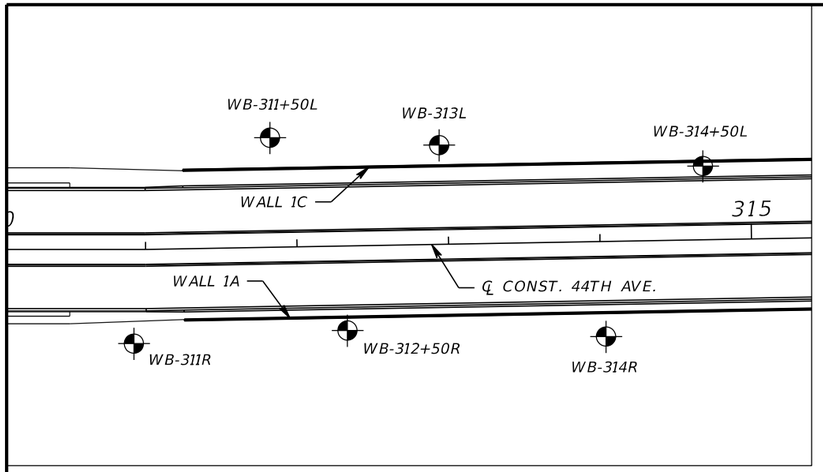
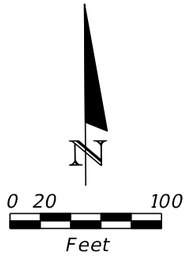




BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (pH = 4.9)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (pH = 4.9)
SUPERSTRUCTURE	SLIGHTLY AGGRESSIVE

SOIL TEST RESULTS:

RESISTIVITY	47,000 TO 77,000 OHM-CM
CHLORIDES	15 PPM
SULFATES	<5 PPM
pH	4.9 TO 5.7

LEGEND

- GRAY TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- GRAY SILTY SAND (SM)
- LIGHT BROWN TO GRAY CLAYEY SAND (SC)
- LIGHT GRAY SANDY CLAY TO CLAY TO SILT (CL/CH/MH)
- CEMENTED CLAY TO SILT, SOMETIMES WITH LIMESTONE FRAGMENTS (CL/CH/MH)

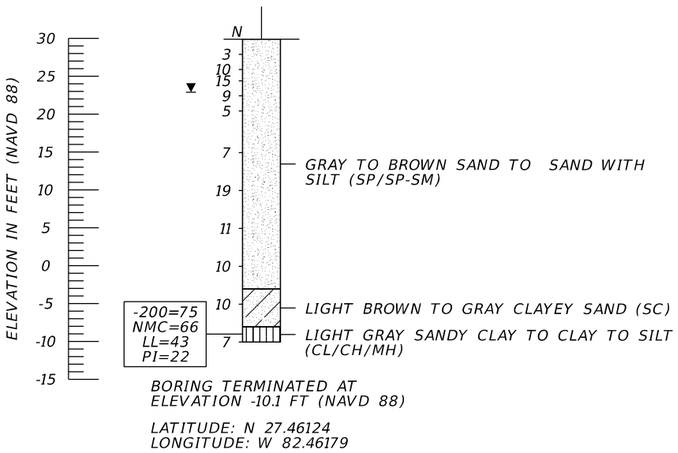
SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988

- APPROXIMATE SPT BORING LOCATION
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- CASING

GNA — GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.

℄ 44TH AVE. — CENTERLINE CONSTRUCTION OF 44TH AVENUE EAST

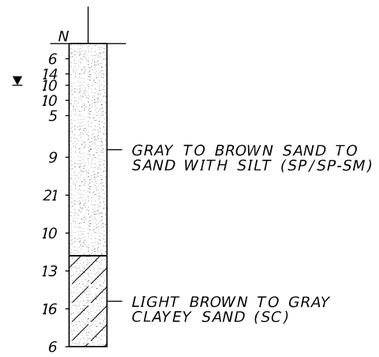
BOR # WB-313L
STA. 312+95
REF. ℄ 44TH AVE.
OFF. 66' LT.
ELEV. 29.9
DATE 1/27/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -10.1 FT (NAVD 88)

LATITUDE: N 27.46124
LONGITUDE: W 82.46179

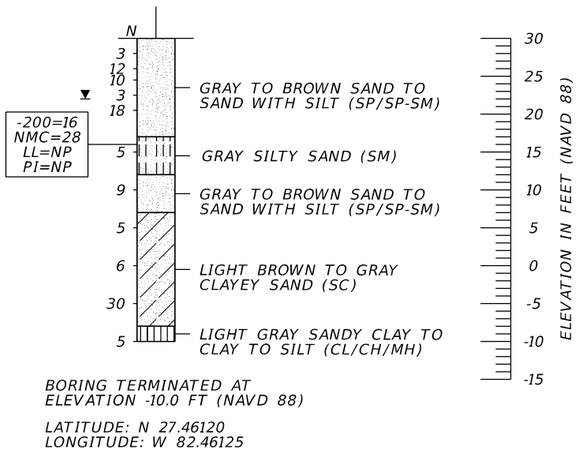
BOR # WB-314R
STA. 314+03
REF. ℄ 44TH AVE.
OFF. 63' RT.
ELEV. 29.3
DATE 1/26/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -10.7 FT (NAVD 88)

LATITUDE: N 27.46089
LONGITUDE: W 82.46145

BOR # WB-314+50L
STA. 314+69
REF. ℄ 44TH AVE.
OFF. 49' LT.
ELEV. 30.0
DATE 1/27/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -10.0 FT (NAVD 88)

LATITUDE: N 27.46120
LONGITUDE: W 82.46125

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

WALLS 1A & 1C

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BMG
CHECKED BY: DRR
DESIGNED BY: BMG
CHECKED BY: DRR

Manatee County Public Works

SHEET TITLE: REPORT OF CORE BORINGS (2)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: GW-2

CSMITH 2/17/2022 8:54:56 PM PW:\

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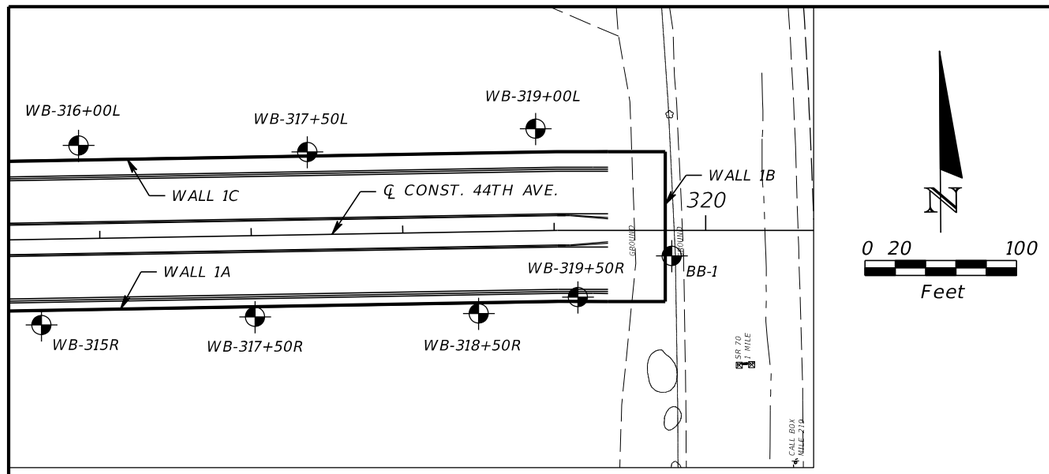


0 20 100

Feet

BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (pH = 4.9)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (pH = 4.9)
SUPERSTRUCTURE	SLIGHTLY AGGRESSIVE

SOIL TEST RESULTS:

RESISTIVITY	47,000 TO 77,000 OHM-CM
CHLORIDES	15 PPM
SULFATES	<5 PPM
pH	4.9 TO 5.7

LEGEND

- GRAY TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- GRAY SILTY SAND (SM)
- LIGHT BROWN TO GRAY CLAYEY SAND (SC)
- LIGHT GRAY SANDY CLAY TO CLAY TO SILT (CL/CH/MH)
- CEMENTED CLAY TO SILT, SOMETIMES WITH LIMESTONE FRAGMENTS (CL/CH/MH)

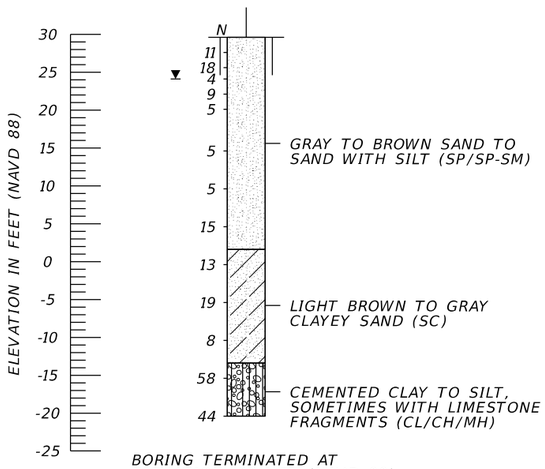
SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988

- APPROXIMATE SPT BORING LOCATION
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- CASING

GNA — GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.

℄ 44TH AVE. — CENTERLINE CONSTRUCTION OF 44TH AVENUE EAST

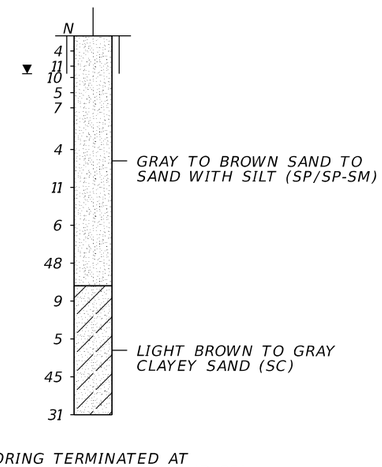
BOR # WB-315R
STA. 315+60
REF. ℄ 44TH AVE.
OFF. 57' RT.
ELEV. 29.6
DATE 1/25/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -20.4 FT (NAVD 88)

LATITUDE: N 27.46091
LONGITUDE: W 82.46096

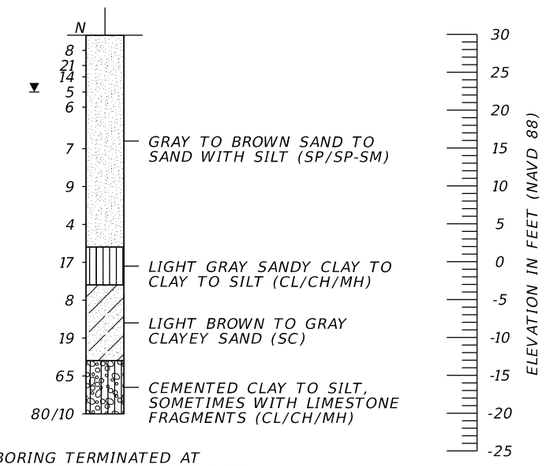
BOR # WB-316+00L
STA. 315+87
REF. ℄ 44TH AVE.
OFF. 62' LT.
ELEV. 29.8
DATE 1/27/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -20.2 FT (NAVD 88)

LATITUDE: N 27.46124
LONGITUDE: W 82.46089

BOR # WB-317+50R
STA. 317+02
REF. ℄ 44TH AVE.
OFF. 54' RT.
ELEV. 29.9
DATE 1/25/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -20.1 FT (NAVD 88)

LATITUDE: N 27.46093
LONGITUDE: W 82.46053

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

WALLS 1A, 1B & 1C

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BMG
CHECKED BY: DRR
DESIGNED BY: BMG
CHECKED BY: DRR

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: REPORT OF CORE BORINGS (3)

REF. DWG. NO.:

PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: GW-3

CSMITH 2/17/2022 8:55:08 PM PW:\

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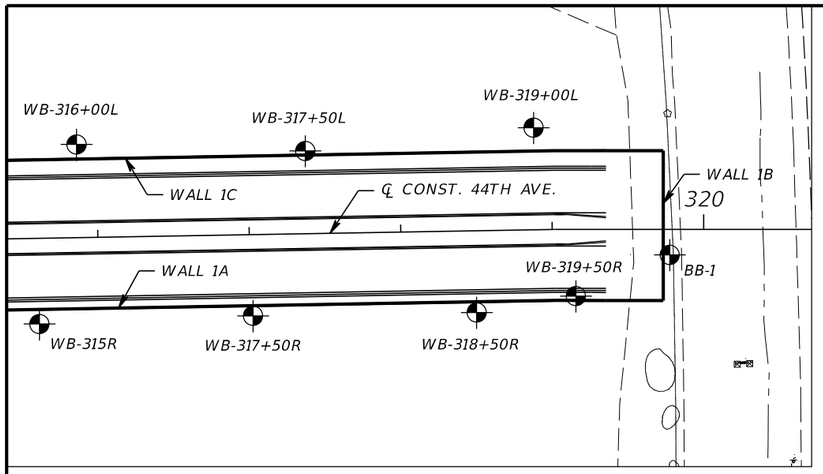
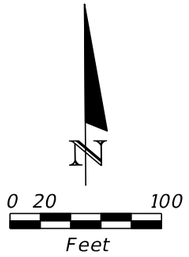




BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (pH = 4.9)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (pH = 4.9)
SUPERSTRUCTURE	SLIGHTLY AGGRESSIVE

SOIL TEST RESULTS:

RESISTIVITY	47,000 TO 77,000 OHM-CM
CHLORIDES	15 PPM
SULFATES	<5 PPM
pH	4.9 TO 5.7

LEGEND

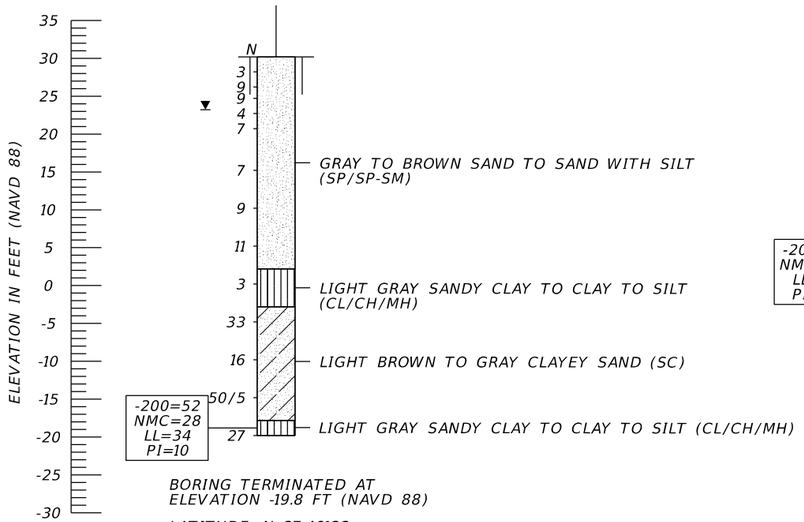
- GRAY TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- GRAY SILTY SAND (SM)
- LIGHT BROWN TO GRAY CLAYEY SAND (SC)
- LIGHT GRAY SANDY CLAY TO CLAY TO SILT (CL/CH/MH)
- CEMENTED CLAY TO SILT, SOMETIMES WITH LIMESTONE FRAGMENTS (CL/CH/MH)

SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988

- APPROXIMATE SPT BORING LOCATION
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- CASING

GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.
℄ 44TH AVE.	CENTERLINE CONSTRUCTION OF 44TH AVENUE EAST

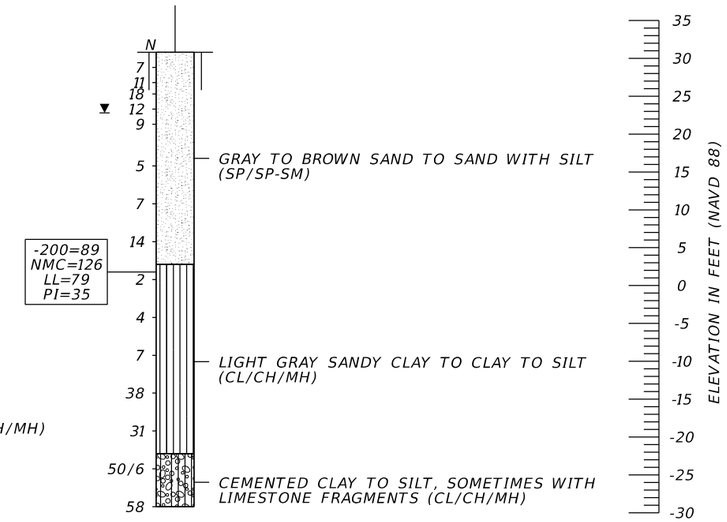
BOR # WB-317+50L
STA. 317+38
REF. ℄ 44TH AVE.
OFF. 55' LT.
ELEV. 30.2
DATE 1/27/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -19.8 FT (NAVD 88)

LATITUDE: N 27.46122
LONGITUDE: W 82.46042

BOR # WB-318+50R
STA. 318+49
REF. ℄ 44TH AVE.
OFF. 54' RT.
ELEV. 30.8
DATE 1/25/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -29.2 FT (NAVD 88)

LATITUDE: N 27.46093
LONGITUDE: W 82.46007

GRANULAR MATERIALS- RELATIVE DENSITY	SAFETY HAMMER SPT N-VALUE (BLOWS/FT.)	AUTOMATIC HAMMER SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	**SPT N-VALUE (BLOWS/FT.)**	**SPT N-VALUE (BLOWS/FT.)**
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

WALLS 1A, 1B & 1C

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

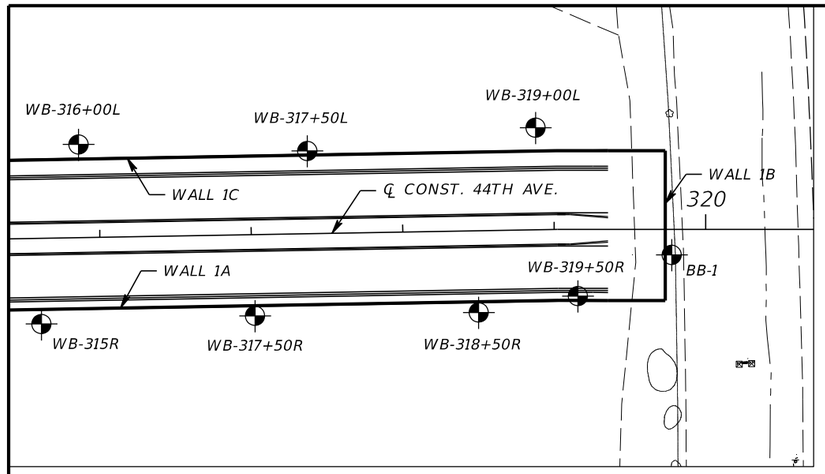
DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

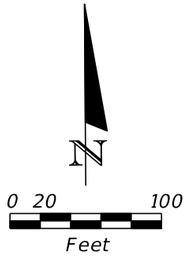
DRAWN BY: BMG
CHECKED BY: DRR
DESIGNED BY: BMG
CHECKED BY: DRR

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: REPORT OF CORE BORINGS (4)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: GW-4

CSMITH 2/17/2022 8:55:19 PM PW:\





BORING LOCATION PLAN

ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (pH = 4.9)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (pH = 4.9)
SUPERSTRUCTURE	SLIGHTLY AGGRESSIVE

SOIL TEST RESULTS:

RESISTIVITY	47,000 TO 77,000 OHM-CM
CHLORIDES	15 PPM
SULFATES	<5 PPM
pH	4.9 TO 5.7

LEGEND

- GRAY TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- GRAY SILTY SAND (SM)
- LIGHT BROWN TO GRAY CLAYEY SAND (SC)
- LIGHT GRAY SANDY CLAY TO CLAY TO SILT (CL/CH/MH)
- CEMENTED CLAY TO SILT, SOMETIMES WITH LIMESTONE FRAGMENTS (CL/CH/MH)

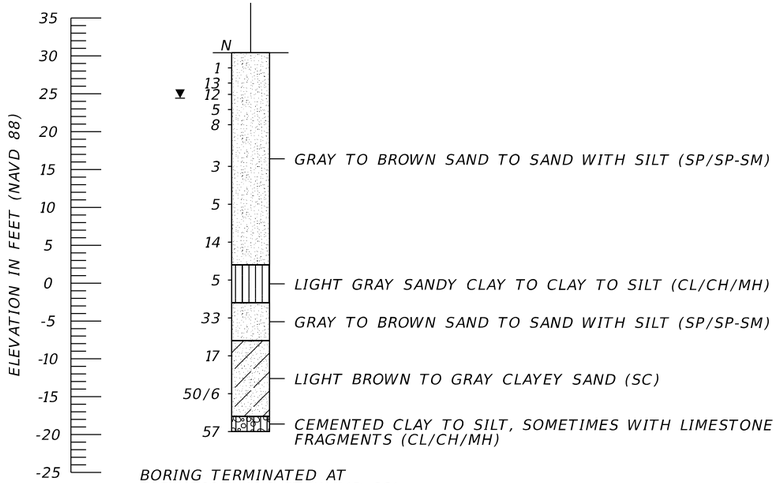
SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988

- APPROXIMATE SPT BORING LOCATION
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- CASING

GNA GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.

℄ 44TH AVE. CENTERLINE CONSTRUCTION OF 44TH AVENUE EAST

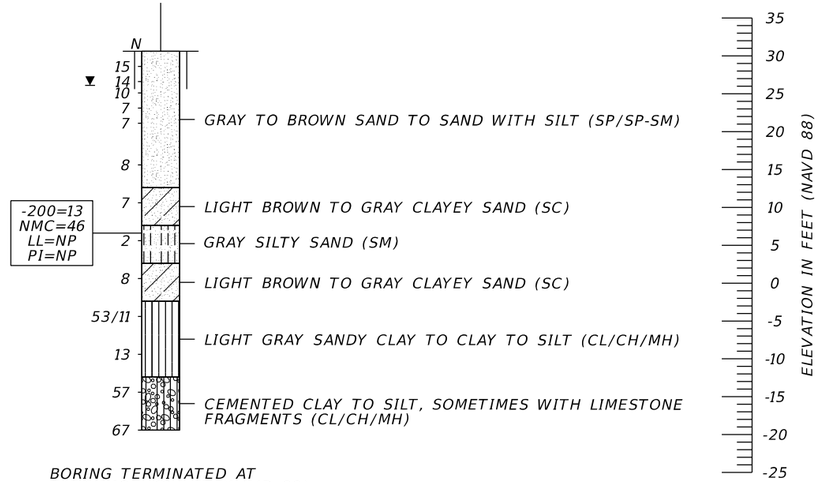
BOR # WB-319+00L
STA. 318+89
REF. ℄ 44TH AVE.
OFF. 67' LT.
ELEV. 30.4
DATE 1/26/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -19.6 FT (NAVD 88)

LATITUDE: N 27.46127
LONGITUDE: W 82.45995

BOR # WB-319+50R
STA. 319+16
REF. ℄ 44TH AVE.
OFF. 44' RT.
ELEV. 30.6
DATE 1/24/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -19.4 FT (NAVD 88)

LATITUDE: N 27.46096
LONGITUDE: W 82.45987

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

WALLS 1A, 1B & 1C

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

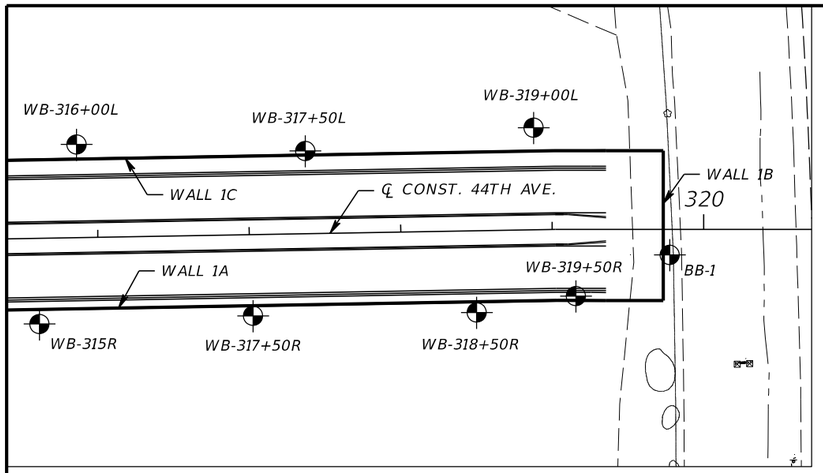
DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

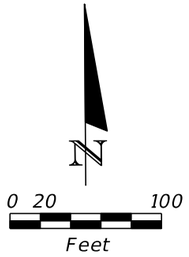
DRAWN BY: BMG
CHECKED BY: DRR
DESIGNED BY: BMG
CHECKED BY: DRR

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: REPORT OF CORE BORINGS (5)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: GW-5

CSMITH 2/17/2022 8:55:30 PM PW:\





BORING LOCATION PLAN

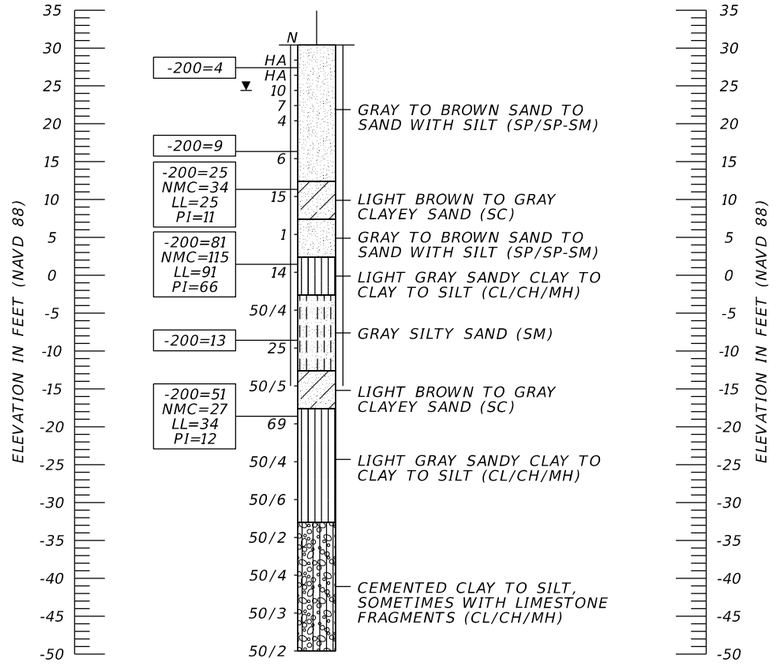
ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (pH = 4.9)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (pH = 4.9)
SUPERSTRUCTURE	SLIGHTLY AGGRESSIVE

SOIL TEST RESULTS:

RESISTIVITY	47,000 TO 77,000 OHM-CM
CHLORIDES	15 PPM
SULFATES	<5 PPM
pH	4.9 TO 5.7

BOR #	BB-1
STA.	319+77
REF.	℄ 44TH AVE
OFF.	13' RT.
ELEV.	30.4
DATE	5/3/2018
DRILLER	I. POORAN
HAMMER	AUTOMATIC
RIG	D-25



BORING TERMINATED AT ELEVATION -49.6 FT (NAVD 88)

LATITUDE: N 27.46103
LONGITUDE: W 82.45968

LEGEND

- GRAY TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- GRAY SILTY SAND (SM)
- LIGHT BROWN TO GRAY CLAYEY SAND (SC)
- LIGHT GRAY SANDY CLAY TO CLAY TO SILT (CL/CH/MH)
- CEMENTED CLAY TO SILT, SOMETIMES WITH LIMESTONE FRAGMENTS (CL/CH/MH)

SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988

- APPROXIMATE SPT BORING LOCATION
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- CASING

GNA — GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.

℄ 44TH AVE. — CENTERLINE CONSTRUCTION OF 44TH AVENUE EAST

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

WALLS 1A, 1B & 1C

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

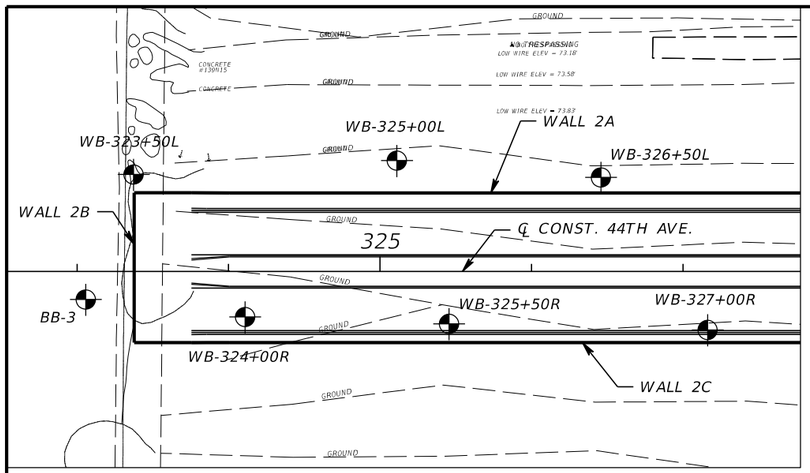
DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BMG
CHECKED BY: DRR
DESIGNED BY: BMG
CHECKED BY: DRR

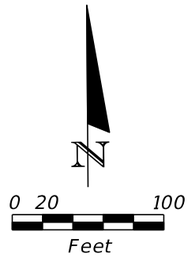
Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: REPORT OF CORE BORINGS (6)
REF. DWG. NO.
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO. GW-6

CSMITH 2/17/2022 8:55:41 PM PW:\



BORING LOCATION PLAN



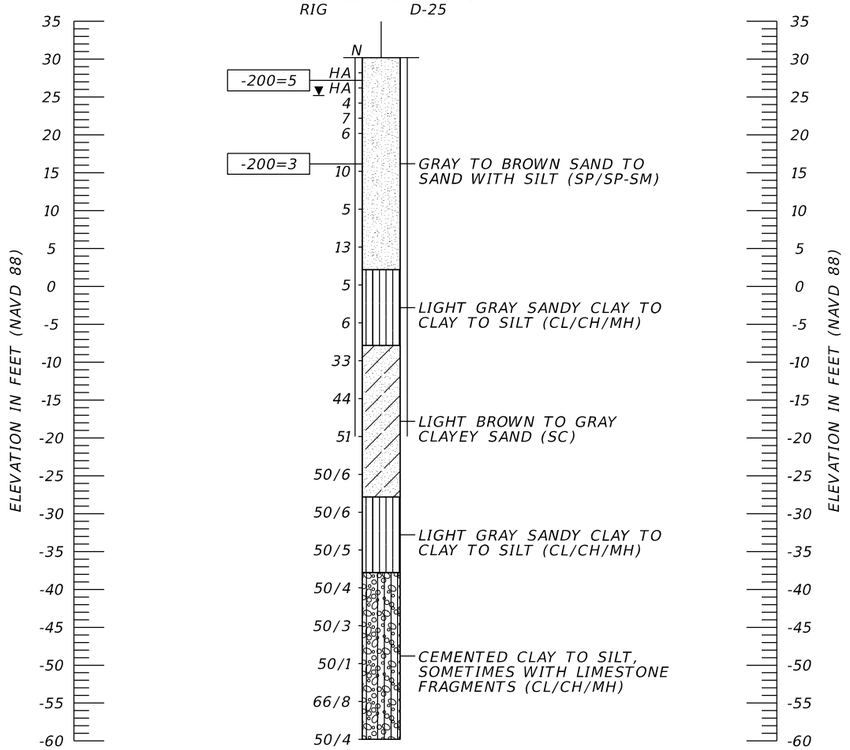
ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (pH = 4.9)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (pH = 4.9)
SUPERSTRUCTURE	SLIGHTLY AGGRESSIVE

SOIL TEST RESULTS:

RESISTIVITY	47,000 TO 77,000 OHM-CM
CHLORIDES	15 PPM
SULFATES	<5 PPM
pH	4.9 TO 5.7

BOR #	BB-3
STA.	323+06
REF.	℄ 44TH AVE
OFF.	17' RT.
ELEV.	30.2
DATE	5/5/2018
DRILLER	I. POORAN
HAMMER	AUTOMATIC
RIG	D-25



BORING TERMINATED AT ELEVATION -59.8 FT (NAVD 88)

LATITUDE: N 27.46103
LONGITUDE: W 82.45867

LEGEND

- GRAY TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- GRAY SILTY SAND (SM)
- LIGHT BROWN TO GRAY CLAYEY SAND (SC)
- LIGHT GRAY SANDY CLAY TO CLAY TO SILT (CL/CH/MH)
- CEMENTED CLAY TO SILT, SOMETIMES WITH LIMESTONE FRAGMENTS (CL/CH/MH)

SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988

- APPROXIMATE SPT BORING LOCATION
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- CASING

GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.

℄ 44TH AVE. CENTERLINE CONSTRUCTION OF 44TH AVENUE EAST

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

WALLS 2A, 2B & 2C

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY:	BMG
CHECKED BY:	DRR
DESIGNED BY:	BMG
CHECKED BY:	DRR

Manatee County FLORIDA — Manatee County Public Works

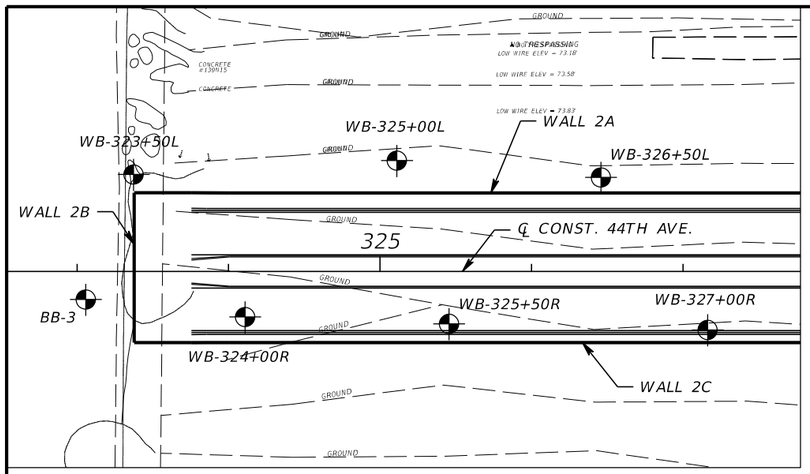
SHEET TITLE: REPORT OF CORE BORINGS (7)

REF. DWG. NO.:

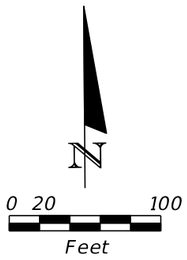
PROJECT NAME: 44TH AVENUE EAST OVER I-75

SHEET NO.: GW-7

CSMITH 2/17/2022 8:55:53 PM PW:\



BORING LOCATION PLAN



ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (pH = 4.9)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (pH = 4.9)
SUPERSTRUCTURE	SLIGHTLY AGGRESSIVE

SOIL TEST RESULTS:

RESISTIVITY	47,000 TO 77,000 OHM-CM
CHLORIDES	15 PPM
SULFATES	<5 PPM
pH	4.9 TO 5.7

LEGEND

- GRAY TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- GRAY SILTY SAND (SM)
- LIGHT BROWN TO GRAY CLAYEY SAND (SC)
- LIGHT GRAY SANDY CLAY TO CLAY TO SILT (CL/CH/MH)
- CEMENTED CLAY TO SILT, SOMETIMES WITH LIMESTONE FRAGMENTS (CL/CH/MH)

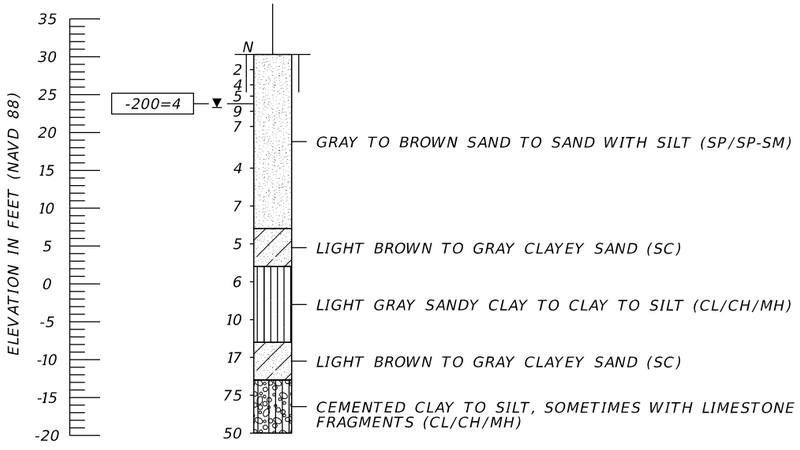
SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988

- APPROXIMATE SPT BORING LOCATION
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- CASING

GNA — GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.

℄ 44TH AVE. — CENTERLINE CONSTRUCTION OF 44TH AVENUE EAST

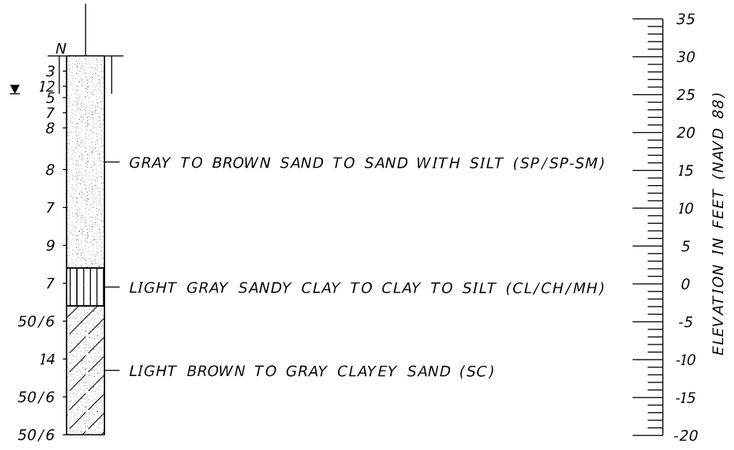
BOR # WB-323+50L
STA. 323+37
REF. ℄ 44TH AVE.
OFF. 64' LT.
ELEV. 30.3
DATE 1/31/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -19.7 FT (NAVD 88)

LATITUDE: N 27.46122
LONGITUDE: W 82.45855

BOR # WB-324+00R
STA. 324+11
REF. ℄ 44TH AVE.
OFF. 30' RT.
ELEV. 30.1
DATE 1/31/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -19.9 FT (NAVD 88)

LATITUDE: N 27.46094
LONGITUDE: W 82.45838

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

WALLS 2A, 2B & 2C

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

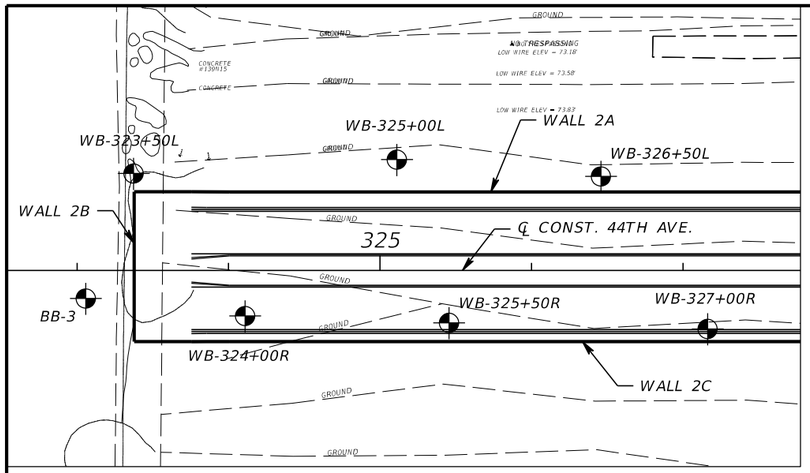
DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BMG
CHECKED BY: DRR
DESIGNED BY: BMG
CHECKED BY: DRR

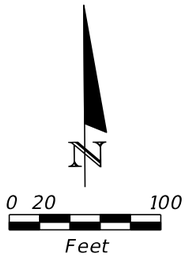
Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: REPORT OF CORE BORINGS (8)
REF. DWG. NO.
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO. GW-8

CSMITH 2/17/2022 8:56:04 PM PW:\



BORING LOCATION PLAN



ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (pH = 4.9)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (pH = 4.9)
SUPERSTRUCTURE	SLIGHTLY AGGRESSIVE

SOIL TEST RESULTS:

RESISTIVITY	47,000 TO 77,000 OHM-CM
CHLORIDES	15 PPM
SULFATES	<5 PPM
pH	4.9 TO 5.7

LEGEND

- GRAY TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- GRAY SILTY SAND (SM)
- LIGHT BROWN TO GRAY CLAYEY SAND (SC)
- LIGHT GRAY SANDY CLAY TO CLAY TO SILT (CL/CH/MH)
- CEMENTED CLAY TO SILT, SOMETIMES WITH LIMESTONE FRAGMENTS (CL/CH/MH)

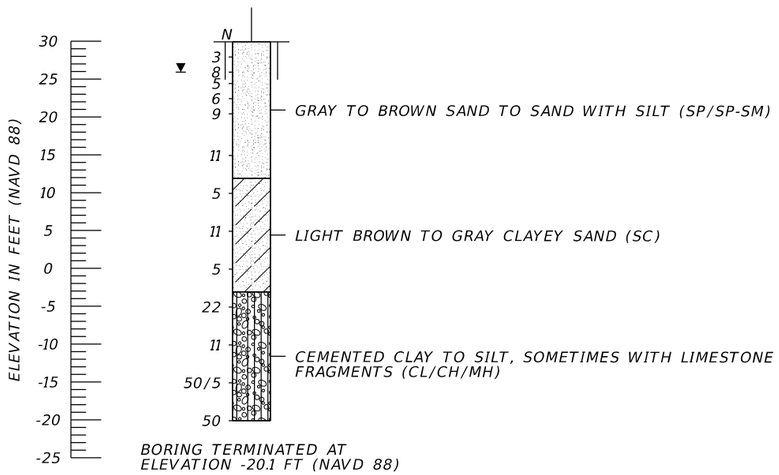
SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988

- APPROXIMATE SPT BORING LOCATION
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- CASING

GNA — GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.

℄ 44TH AVE. — CENTERLINE CONSTRUCTION OF 44TH AVENUE EAST

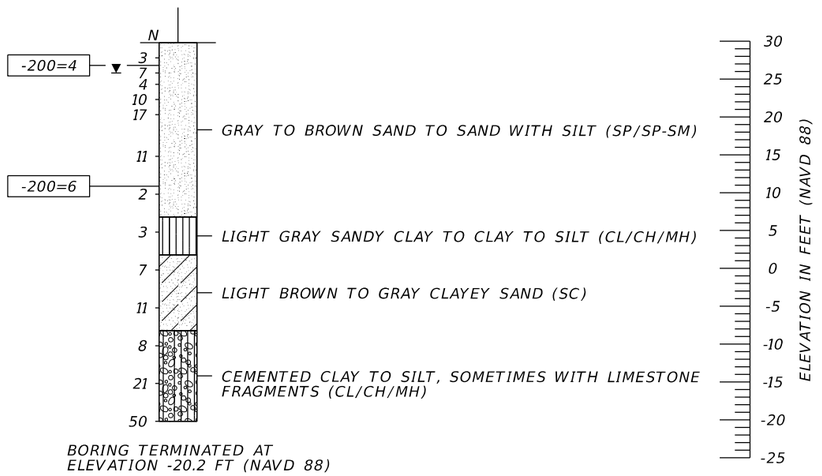
BOR # WB-325+00L
STA. 325+11
REF. ℄ 44TH AVE.
OFF. 73' LT.
ELEV. 29.9
DATE 1/31/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -20.1 FT (NAVD 88)

LATITUDE: N 27.46121
LONGITUDE: W 82.45807

BOR # WB-325+50R
STA. 325+46
REF. ℄ 44TH AVE.
OFF. 35' RT.
ELEV. 29.8
DATE 1/31/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT ELEVATION -20.2 FT (NAVD 88)

LATITUDE: N 27.46094
LONGITUDE: W 82.45792

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

WALLS 2A, 2B & 2C

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

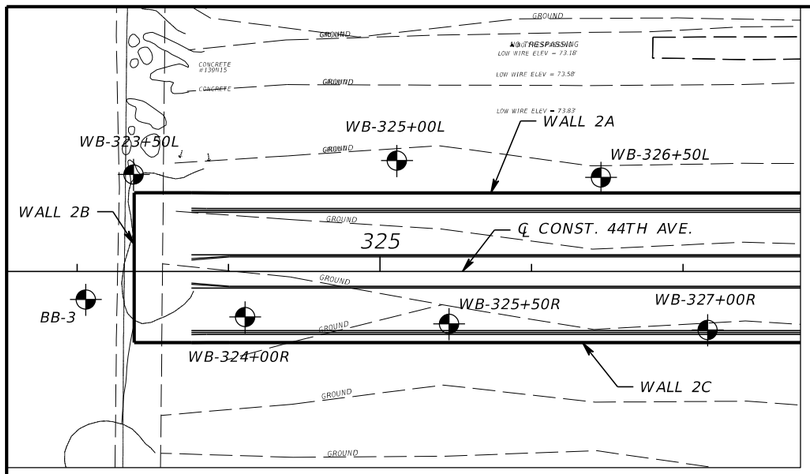
DRAWN BY: BMG
CHECKED BY: DRR
DESIGNED BY: BMG
CHECKED BY: DRR

Manatee County Public Works

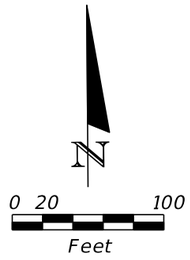
SHEET TITLE: REPORT OF CORE BORINGS (9)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: GW-9

CSMITH 2/17/2022 8:56:16 PM PW:\

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



BORING LOCATION PLAN



ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (pH = 4.9)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (pH = 4.9)
SUPERSTRUCTURE	SLIGHTLY AGGRESSIVE

SOIL TEST RESULTS:

RESISTIVITY	47,000 TO 77,000 OHM-CM
CHLORIDES	15 PPM
SULFATES	<5 PPM
pH	4.9 TO 5.7

LEGEND

- GRAY TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- GRAY SILTY SAND (SM)
- LIGHT BROWN TO GRAY CLAYEY SAND (SC)
- LIGHT GRAY SANDY CLAY TO CLAY TO SILT (CL/CH/MH)
- CEMENTED CLAY TO SILT, SOMETIMES WITH LIMESTONE FRAGMENTS (CL/CH/MH)

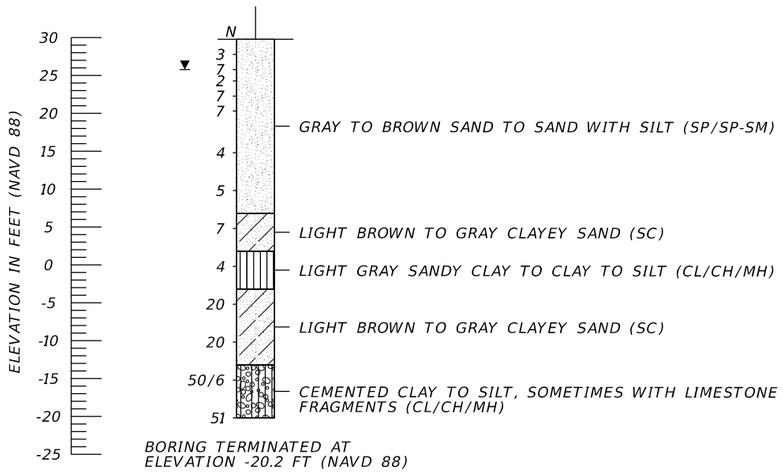
SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988

- APPROXIMATE SPT BORING LOCATION
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- CASING

GNA	GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.

℄ 44TH AVE. CENTERLINE CONSTRUCTION OF 44TH AVENUE EAST

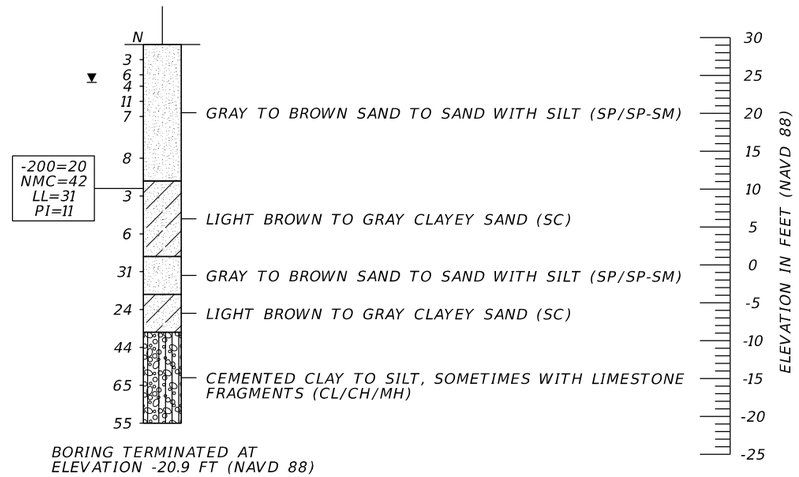
BOR # WB-326+50L
STA. 326+46
REF. ℄ 44TH AVE.
OFF. 62' LT.
ELEV. 29.8
DATE 2/1/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -20.2 FT (NAVD 88)

LATITUDE: N 27.46121
LONGITUDE: W 82.45762

BOR # WB-327+00R
STA. 327+16
REF. ℄ 44TH AVE.
OFF. 39' RT.
ELEV. 29.1
DATE 2/1/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -20.9 FT (NAVD 88)

LATITUDE: N 27.46094
LONGITUDE: W 82.45746

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

WALLS 2A, 2B & C

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BMG
CHECKED BY: DRR
DESIGNED BY: BMG
CHECKED BY: DRR

Manatee County FLORIDA
Manatee County Public Works

SHEET TITLE: REPORT OF CORE BORINGS (10)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: GW-10

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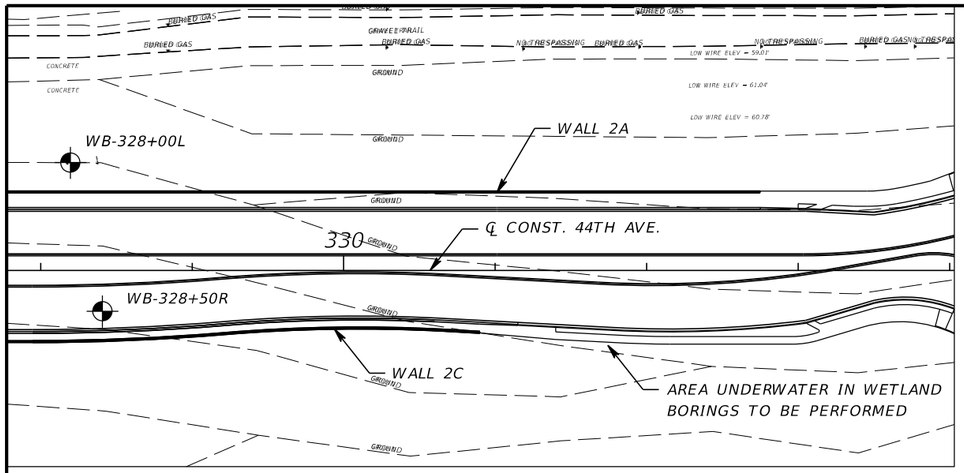
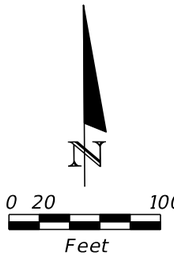


BORING LOCATION PLAN



ENVIRONMENTAL CLASSIFICATION:

SUBSTRUCTURE	CONCRETE: EXTREMELY AGGRESSIVE (pH = 4.9)
SUBSTRUCTURE	STEEL: EXTREMELY AGGRESSIVE (pH = 4.9)
SUPERSTRUCTURE	SLIGHTLY AGGRESSIVE

SOIL TEST RESULTS:

RESISTIVITY	47,000 TO 77,000 OHM-CM
CHLORIDES	15 PPM
SULFATES	<5 PPM
pH	4.9 TO 5.7

LEGEND

- GRAY TO BROWN SAND TO SAND WITH SILT (SP/SP-SM)
- GRAY SILTY SAND (SM)
- LIGHT BROWN TO GRAY CLAYEY SAND (SC)
- LIGHT GRAY SANDY CLAY TO CLAY TO SILT (CL/CH/MH)
- CEMENTED CLAY TO SILT, SOMETIMES WITH LIMESTONE FRAGMENTS (CL/CH/MH)

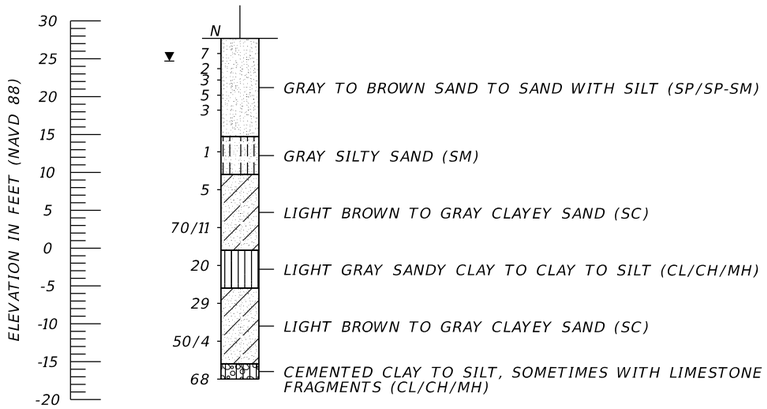
SP	UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND LABORATORY TESTING ON SELECTED SAMPLES FOR CONFIRMATION OF VISUAL REVIEW.
N	NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).
50/4	NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION
-200	PERCENT PASSING #200 SIEVE
NMC	NATURAL MOISTURE CONTENT (%)
LL	LIQUID LIMIT (%)
PI	PLASTICITY INDEX (%)
NP	NON-PLASTIC
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988

- APPROXIMATE SPT BORING LOCATION
- GROUNDWATER LEVEL ENCOUNTERED DURING FIELD EXPLORATIONS
- CASING

GNA — GROUNDWATER NOT APPARENT DUE TO THE INTRODUCTION OF DRILLING FLUID.

℄ 44TH AVE. — CENTERLINE CONSTRUCTION OF 44TH AVENUE EAST

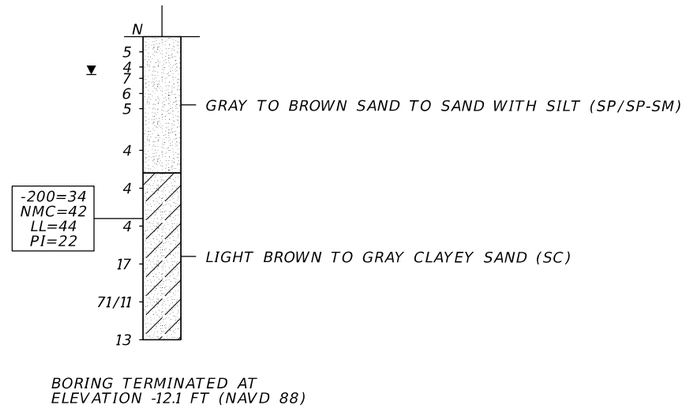
BOR # WB-328+00L
STA. 328+20
REF. ℄ 44TH AVE.
OFF. 71' LT.
ELEV. 27.7
DATE 2/1/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -17.3 FT (NAVD 88)

LATITUDE: N 27.46121
LONGITUDE: W 82.45715

BOR # WB-328+50R
STA. 328+41
REF. ℄ 44TH AVE.
OFF. 27' RT.
ELEV. 27.9
DATE 2/1/2022
DRILLER R. SHUEY
HAMMER AUTOMATIC
RIG D-25



BORING TERMINATED AT
ELEVATION -12.1 FT (NAVD 88)

LATITUDE: N 27.46094
LONGITUDE: W 82.45699

	SAFETY HAMMER	AUTOMATIC HAMMER
GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4 to 10	3 to 8
MEDIUM DENSE	10 to 30	8 to 24
DENSE	30 to 50	24 to 40
VERY DENSE	GREATER THAN 50	GREATER THAN 40
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2 to 4	1 to 3
FIRM	4 to 8	3 to 6
STIFF	8 to 15	6 to 12
VERY STIFF	15 to 30	12 to 24
HARD	GREATER THAN 30	GREATER THAN 24

WALLS 2A, 2B & 2C

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DANIEL R. RUEL, P.E.
P.E. LICENSE NUMBER 82404
TIERRA, INC.
7351 TEMPLE TERRACE HIGHWAY
TAMPA, FLORIDA 33637

DRAWN BY: BMG
CHECKED BY: DRR
DESIGNED BY: BMG
CHECKED BY: DRR

Manatee County FLORIDA — Manatee County Public Works

SHEET TITLE: REPORT OF CORE BORINGS (11)
REF. DWG. NO.:
PROJECT NAME: 44TH AVENUE EAST OVER I-75
SHEET NO.: GW-11

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