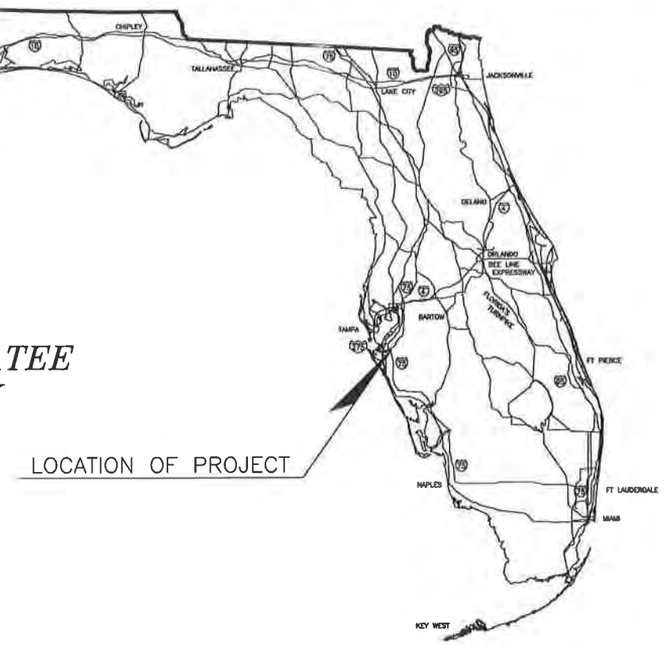
MANATEE COUNTY, FLORIDA
FORT HAMER BRIDGE
BRIDGE OVER MANATEE RIVER FROM UPPER MANATEE RIVER ROAD TO NORTH OF FORT HAMER PARK
COUNTY PROJECT NUMBER 6035560



STRUCTURE PLANS

SHOP DRAWINGS TO
BE SUBMITTED TO:

DAREN CARRIERE, P.E.
URS CORPORATION SOUTHERN
7650 West Courtney Campbell Causeway
Waterford Plaza, Suite 700
Tampa, Florida 33607–1462
(813) 286–1711

PLANS PREPARED BY:

URS

URS CORPORATION SOUTHERN
7650 West Courtney Campbell Causeway
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CERTIFICATE OF AUTHORIZATION NO. 00000002

KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

NOTE: THE PLANS AND ELECTRONIC FILES ARE NOT TO SCALE.

STRUCTURE PLANS
ENGINEER OF RECORD: MARK S. EICHOLTZ, P.E.

DATE: 11/03/2014

P.E. NO.: 36078

MANATEE COUNTY PROJECT MANAGER : Kent D. Bontrager, PE

SHEET NO.
B–1

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bcoversheet01.dwg LAYOUT NAME: cover sheet PLOTTED: Monday, November 03, 2014 10:55:11 AM USER: kathy_compton

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BRIDGE NO. 134123

REVISIONS

Date	By	Description	Date	By	Description

Drawn By: CJK 04-14
Checked By: BWJ 04-14
Designed By: MSE 04-14
Checked By: BWJ 04-14

URS Corporation Southern
7650 West Courtney
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Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
Mark Eicholtz
9/5/14
MARK S. EICHOLTZ
P.E. NO. 38078

SHEET TITLE: INDEX OF DRAWINGS

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

SHEET NO. B-2

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bindex01.dwg LAYOUT NAME: index of drawings PLOTTED: Friday, August 29, 2014 8:34:43 AM USER: kathy_compton

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE 134123

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
					P	F	P	F		
LUMP SUM ITEMS	0103 1	TEMPORARY WORK STRUCTURE		LS	1.00					
	0455 18	PROTECTION OF EXISTING STRUCTURES		LS	1.00					
	0460 6	ACCESS LADDER & PLATFORMS		LS	1.00					
FOUNDATION	0455 34 5	PRESTRESSED CONCRETE PILING, 24" SQ	END BENTS & PIERS	LF	9713.00					
	0455143 5	TEST PILES-PRESTRESSED CONCRETE, 24" SQ	END BENTS & PIERS	LF	1209.00					
	0459 71	PILES, POLYETHYLENE SHEETING	END BENT PILES	SY	275.00					
SUBSTRUCTURE	0400 3 20	CONC CLASS III, SEAL	FOOTINGS	CY	380.9					
	0400 4 5	CONCRETE CLASS IV, SUBSTRUCTURE	END BENTS & PEDESTALS	CY	140.50					
	0400 4 25	CONCRETE CLASS IV, MASS, SUBSTRUCTURE	FOOTINGS & PIERS	CY	2899.90					
	0415 1 5	REINFORCING STEEL - SUBSTRUCTURE	FOOTINGS, PIERS AND END BENTS	LB	601034.00					
	0524 2 2	CONCRETE SLOPE PAVEMENT, NONREINFORCED, 4"	FRONT OF END BENT CAP	SY	31.00					
APPROACH SLABS	0400 2 10	CONCRETE CLASS II, APPROACH SLABS	APPROACH SLAB 1 & 2	CY	116.20					
	0415 1 9	REINFORCING STEEL - APPROACH SLABS	APPROACH SLAB 1 & 2	LB	21492.00					
SUPERSTRUCTURE	0400 4 4	CONCRETE CLASS IV, SUPERSTRUCTURE	DIAPHRAGMS & DECK	CY	3401.60					
	0400 9	BRIDGE DECK GROOVING & PLANING, DECK 8.5"&>	DECK	SY	10364.00					
	0400147	COMPOSITE NEOPRENE PADS	BEARING PADS	CF	130.00					
	0415 1 4	REINFORCING STEEL - SUPERSTRUCTURE	DIAPHRAGMS & DECK	LB	862714.00					
	0450 2 72	PREST BEAMS: FLORIDA-I BEAM 72"	BEAMS	LF	11571.00					
	0458 1 12	BRIDGE DECK EXPANSION JOINT, NEW CONSTRUCTION, F&I STRIP SEAL	EXPANSION JOINTS	LF	361.00					
RAILING/ BARRIERS	0460 70 3	ALUMINUM BULLET RAILINGS, TRIPLE RAIL	BRIDGE & WALLS	LF	2773.00					
	0521 5 1	CONCRETE TRAFFIC RAILING, BRIDGE 32" F-SHAPE	BRIDGE & APPROACH SLABS	LF	4776.00					
	0521 6 11	CONRETE PARAPET, PEDESTRIAN/BICYCLE 27" HEIGHT	BRIDGE & APPROACH SLABS	LF	2398.00					
WALLS	0521 6 31	CONCRETE PARAPET, RETAINING WALL SYSTEM MOUNTED W/SIDEWALK, 27" HEIGHT	MSE WALLS 1 THRU 3	LF	375.00					
	0521 8 1	CONCRETE TRAFFIC RAILING BARRIER WITH JUNCTION SLAB, 32" F-SHAPE	MSE WALLS 1 & 2	LF	26.00					
	0548 12	RETAINING WALL SYSTEM, PERMANENT, EXCLUDING BARRIER	MSE WALLS 1 THRU 3	SF	8741.5					

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: BWJ 04-14
Designed By: BWJ 04-14
Checked By: MSE 04-14

URS Corporation Southern
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MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
Mark Eicholtz 9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: SUMMARY OF QUANTITIES

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

SHEET NO. B-3

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bsummaryqty01.dwg LAYOUT NAME: summary of quantities PLOTTED: Tuesday, September 02, 2014 5:15:23 PM USER: kathy_compton

GENERAL NOTES

DESIGN SPECIFICATIONS:
1. FDOT STRUCTURES MANUAL DATED MARCH 2010.
2. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) LOAD AND RESISTANCE FACTOR (LRFD) BRIDGE DESIGN SPECIFICATIONS, 5TH EDITION.

CONSTRUCTION SPECIFICATIONS:
FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2014 EDITION AND AS AMENDED BY CONTRACT DOCUMENTS.

VERTICAL DATUM:
NGVD 29

ENVIRONMENT:
SUBSTRUCTURE: EXTREMELY AGGRESSIVE (CHLORIDE 9100 MS/C)
SUPERSTRUCTURE: EXTREMELY AGGRESSIVE

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

DESIGN LOADINGS:
1. LIVE LOADS:
   HL-93 WITH IMPACT
   0.075 KSF PEDESTRIAN LOAD – SIDEWALK
2. DEAD LOADS:
   TRAFFIC RAILING----------420 PLF
   PEDESTRIAN RAILING----------235 PLF
   STAY-IN-PLACE FORMS----------20 PSF
   REINFORCED CONCRETE----------150 PCF
   FUTURE WEARING SURFACE-------NOT INCLUDED
3. THERMAL LOADS:
   1. NORMAL MEAN TEMPERATURE-----70°F
   2. THERMAL COEFFICIENT---------0.0000060°F
   3. TEMPERATURE RANGE FOR SIZING BEARINGS AND JOINTS
      RISE----------35°F
      FALL----------35°F
4. VESSEL COLLISION LOAD: NO ALLOWANCE FOR VESSEL COLLISION LOAD HAS BEEN INCLUDED IN THE DESIGN.
5. UTILITIES: NO ALLOWANCE FOR UTILITY LOADS HAS BEEN INCLUDED IN THE DESIGN.

MATERIALS:
1. CONCRETE:

CONCRETE CLASS	MINIMUM 28-DAY COMPRESSIVE STRENGTH (PSI)	LOCATION
III (SEAL)	F'c = 3,000	SEAL
II (BRIDGE DECK)	F'c = 4,500	APPROACH SLABS
IV	F'c = 5,500	TRAFFIC RAILING BARRIER
IV	F'c = 5,500	C.I.P. SUPERSTRUCTURE
IV	F'c = 5,500	RETAINING WALLS
IV	F'c = 5,500	C.I.P. SUBSTRUCTURE
V (SPECIAL)	F'c = 6,000	PRE-STRESSED PILES
VI	F'c = 8,500	PRE-STRESSED BEAMS

NOTES: 1. CORROSION PROTECTION – SILICA FUME, METAKAOLIN OR ULTRAFINE FLY ASH IS REQUIRED IN THE C.I.P. SUBSTRUCTURE CONCRETE FOR THE COLUMNS OF PIERS 4 THRU 16 FROM TOP OF FOOTING TO 12 FEET ABOVE MHW.
2. MASS CONCRETE – PIER FOOTINGS, COLUMNS AND CAPS SHALL MEET THE MASS CONCRETE REQUIREMENTS IN THE SPECS.

2. CONCRETE COVER:

SUPERSTRUCTURE	
COVER	LOCATION
2"	PRE-STRESSED BEAMS
¾"	PRE-STRESSED BEAMS – TOP OF TOP FLANGE
2½"	TOP DECK SURFACE
2"	ALL OTHER SURFACES
SUBSTRUCTURE	
COVER	LOCATION
4½"	EXTERNAL SURFACES AGAINST EARTH AND IN WATER
4"	EXTERNAL SURFACE FORMED
2"	TOP OF BEAM PEDESTALS
3"	RETAINING WALLS
3"	PRE-STRESSED PILING

CONCRETE COVER DIMENSIONS SHOWN IN THE PLANS DO NOT INCLUDE PLACEMENT AND FABRICATION TOLERANCES UNLESS SHOWN AS "MINIMUM COVER." SEE SPECIFICATION 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.

3. REINFORCING STEEL: PROVIDE ASTM A615 GRADE 60 CONVENTIONAL REINFORCING STEEL IN ACCORDANCE WITH SPECIFICATION 415.

APPLIED FINISH COATING:
A CONCRETE SEALER SHALL BE APPLIED TO THE PORTIONS OF THE STRUCTURES SHOWN ON THE SURFACE FINISH DETAIL SHEET. SEE TECHNICAL SPECIAL PROVISION FOR CONCRETE SEALER REQUIREMENTS.

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

UTILITIES:
FOR PLAN LOCATIONS OF EXISTING UTILITIES, SEE PLAN AND ELEVATION SHEETS. LOCATIONS OF UTILITIES SHOWN IN THE PLANS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY UTILITY LOCATIONS BEFORE COMMENCING WITH CONSTRUCTION. FOR DISPOSITION OF UTILITIES, SEE ROADWAY PLANS,

BRIDGE NAME:
PLACE THE FOLLOWING BRIDGE NAME ON THE TRAFFIC RAILING IN ACCORDANCE WITH THE TRAFFIC RAILING DESIGN STANDARDS:

FORT HAMER BRIDGE
MANATEE RIVER

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 THE THEORETICAL DEFLECTIONS DUE TO SELF WEIGHT, DECK CASTING SEQUENCE, DECK FORMING SYSTEMS, CONSTRUCTIONS 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.

BEARING REPLACEMENT:
FUTURE BEARING REPLACEMENT AND JACKING REQUIREMENTS HAVE NOT BEEN INCLUDED IN THE DESIGN.

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

TRAFFIC CONTROL PLANS/PHASING OF WORK:
WORK PHASING AND PROGRESSION OF THE WORK SHALL CONFORM TO THE TRAFFIC CONTROL PLANS LOCATED IN THE ROADWAY PLANS.

CONSTRUCTION:
1. FOR CONSTRUCTION LIMITATIONS SEE ROADWAY PLANS – GENERAL NOTES.
2. ANY VECP OR CONTRACTOR REDESIGN SHALL MAINTAIN THE SAME PIER AND WALL SHAPES, TEXTURES AND AESTHETICS AS THE ORIGINAL DESIGN.
3. THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN WATER TRAFFIC IN A MANNER SATISFACTORY TO BOTH THE COUNTY AND THE U.S. COAST GUARD AND IN CONFORMANCE WITH THE CONDITIONS OF THE BRIDGE PERMIT ISSUED BY THE U.S. COAST GUARD.
4. SEA GRASSES SHALL BE PROTECTED DURING ALL PHASES OF CONSTRUCTION. ALL DEEP-DRAFT WORK VESSELS, INCLUDING TUGS AND BARGES, WILL NOT BE ALLOWED TO TRANSIT OR MOOR IN SEA GRASS AREAS. SHALLOW DRAFT VESSELS WITH OUTBOARD MOTORS SHOULD TRANSIT SEA GRASS AREAS WITH THE PROP RAISED TO AVOID SCARRING OF SEA GRASS BEDS. BOUNDARIES OF THE SEA GRASS AREAS ARE TO BE DELINEATED WITH FLOATING MARKERS PRIOR TO CONSTRUCTION AND MARKERS SHALL REMAIN IN PLACE FOR PROJECT DURATION. FLOATING TURBIDITY BARRIERS ARE TO BE USED TO PROTECT SEA GRASS AREAS DURING PILE INSTALLATION. MARKER TYPE SHALL BE THE FOLLOWING OR AN APPROVED EQUAL:
   MANUFACTURER: ROLYAN (1-800-228-3693)
   MODEL NUMBER: B1428SW (BOTTOM ATTACHMENT)
   MESSAGE: SEA GRASS AREA – NO BOATS
5. TEMPORARY WORK STRUCTURES PLACED IN SEA GRASS AREAS SHALL BE DETAILED AND CONSTRUCTED TO MINIMIZE SHADE IMPACTS IN ACCORDANCE WITH THE PERMITS.
6. MANATEES AND OTHER LISTED SPECIES SHALL BE PROTECTED DURING ALL PHASES OF CONSTRUCTION IN ACCORDANCE WITH THE ENVIRONMENTAL PERMIT CONDITIONS.
7. PILING FOR TEMPORARY WORK STRUCTURES SHALL NOT BE INSTALLED WITHIN 10 FEET OF A PERMANENT BRIDGE PILE LOCATION. JETTING IS NOT ALLOWED FOR THE INSTALLATION OR REMOVAL OF TEMPORARY PILING.
8. TEMPORARY WORK STRUCTURES WILL BE REQUIRED FOR THE BRIDGE CONSTRUCTION DUE TO WETLANDS AND SEA GRASSES. THE CONTRACTOR IS RESPONSIBLE FOR THE SIZE, LOCATION, DESIGN AND ERECTION DETAILS OF THE TEMPORARY WORK STRUCTURES. PAYMENT FOR TEMPORARY WORK STRUCTURES SHALL BE INCLUDED IN PAY ITEM NO. 103-1. SHOP DRAWINGS THAT FULLY DETAIL THEIR LAYOUT AND COMPOSITION SHALL BE SUBMITTED WITH THE DESIGN CALCULATIONS, SIGNED AND SEALED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA, FOR REVIEW AND APPROVAL.

CERTIFICATE OF NON-CONTAMINATION:
THE CONTRACTOR SHALL PROVIDE A CERTIFICATE AFFIRMING THAT NO MATERIALS CONTAINING ASBESTOS WERE USED IN CONSTRUCTION OF THE PROJECT. A COPY OF THESE CERTIFICATIONS ARE TO BE PROVIDED TO:
KENT D. BONTRAGER
PROJECT MANAGEMENT DIVISION
1022 26TH AVENUE EAST
BRADENTON, FLORIDA 34208-3926

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

URS Corporation Southern
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C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 38078

SHEET TITLE: GENERAL NOTES (1 of 2)
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

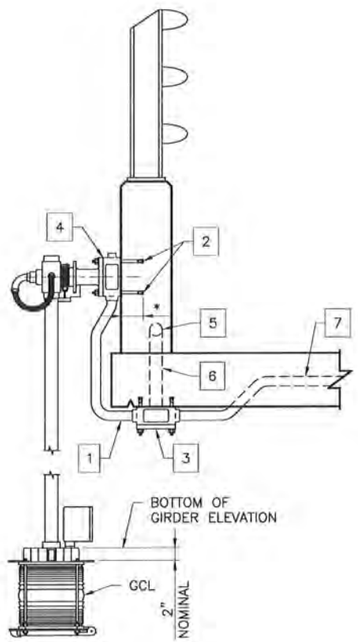
REF. DWG. NO.
SHEET NO. B-4

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bgenerainotes01.dwg LAYOUT NAME: general notes (1 of 2) PLOTTED: Friday, August 29, 2014 6:23:21 AM USER: kathy_compton

GENERAL NOTES

NAVIGATION LIGHTS:

1. FURNISH AND INSTALL NAVIGATION LIGHTING SYSTEMS PER SPECIFICATION SECTION 510, AND AS SHOWN IN THESE PLANS.
2. SEE LIGHTING PLANS FOR ADDITIONAL DETAILS.
3. CENTER CHANNEL MARKER NAVIGATION LIGHT DETAIL:



1. FLEXIBLE CONDUIT
2. ANCHOR BOLT
3. JUNCTION BOX
4. MOUNTING BOX
5. 2" ø PVC CONDUIT IN PEDESTRIAN/BICYCLE RAILING
6. BENT 2" ø PVC CONDUIT FROM PEDESTRIAN/BICYCLE RAILING TO TRANSFORMER/JUNCTION BOX (AS REQUIRED)
7. BENT 1½" ø PVC CONDUIT FROM BRIDGE DECK TO JUNCTION BOX (AS REQUIRED)

* DEPTH OF BOLT EMBEDMENT PER SPECIFICATION SECTION 510

GCL NOTES

1. SERVICE CHAIN NOT SHOWN. PROVIDE SERVICE CHAIN IN ACCORDANCE WITH SPECIFICATION SECTION 510.
2. PROVIDE AUTOMATIC LOCK POSITIONS FOR BOTH SERVICE AND OPERATING.

SECTION AT PEDESTRIAN/BICYCLE RAILING

(SECTION @ F-SHAPE BARRIER SIMILAR)

PAY ITEM NOTES:

1. FOR SUMMARY OF BRIDGE PAY ITEMS SEE SHEET B-3.
2. PAYMENT FOR INCIDENTAL ITEMS NOT SPECIFICALLY COVERED BY A PAY ITEM, SHALL BE INCLUDED IN THE ASSOCIATED PAY ITEM.
3. THE COST OF THE COFFERDAM OR FOUNDATION ENCLOSURE TO CONSTRUCT THE PIERS SHALL BE INCLUDED IN THE COST OF THE SEAL CONCRETE.

ABBREVIATIONS (FDOT DESIGN STANDARD INDEX 001 UNLESS NOTED BELOW):

FIB – FLORIDA-I-BEAM
FFBW – FRONT FACE OF BACK WALL
FFRW – FRONT FACE OF RETAINING WALL
GCL – GREEN CHANNEL LIGHTS
MSE – MECHANICALLY STABILIZED EARTH
PVC – POINT OF VERTICAL CURVATURE
PVI – POINT OF VERTICAL INTERSECTION
PMVC – POINT OF MINIMUM VERTICAL CLEARANCE
PVT – POINT OF VERTICAL TANGENCY
RCL – RED CHANNEL LIGHTS

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

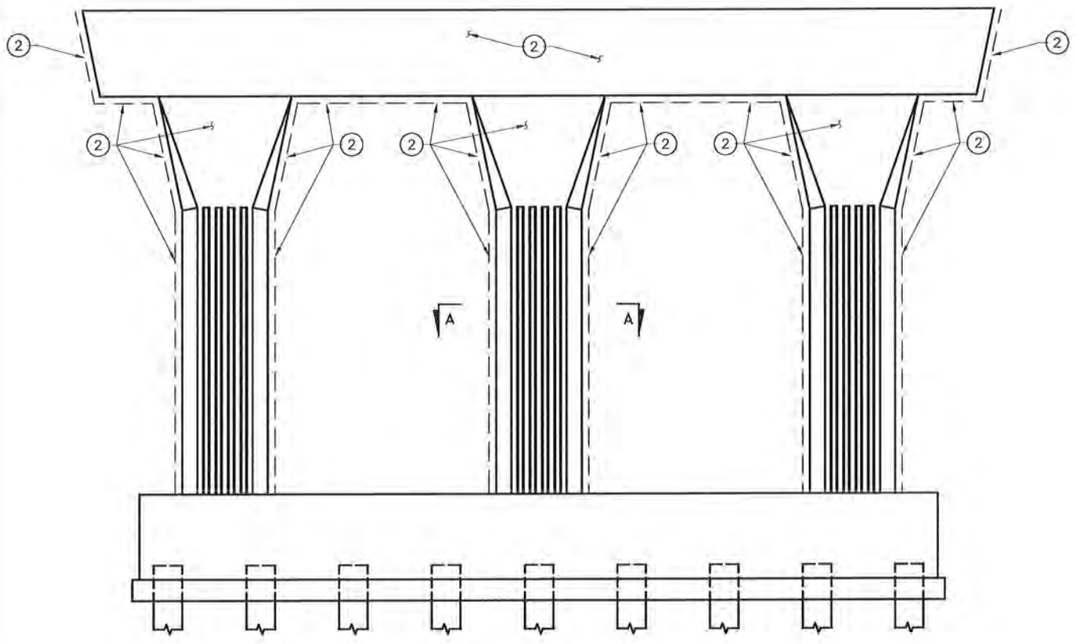
URS
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

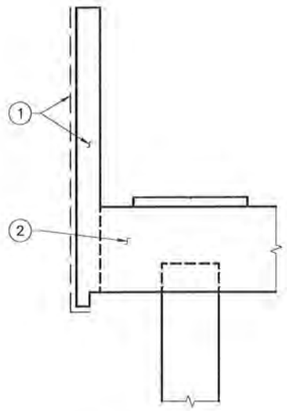
ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
7/5/14

SHEET TITLE: GENERAL NOTES (2 of 2)
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-5

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bgeneralnotes01.dwg LAYOUT NAME: general notes (2 of 2) PLOTTED: Friday, August 29, 2014 8:23:24 AM USER: kathy_compton



PIERS
(PIERS 4 THRU 7 SHOWN, OTHER SIMILAR)



END BENT

SURFACE FINISH NOTES

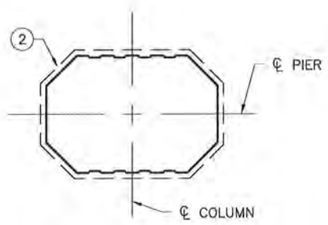
1. FINISH IN ACCORDANCE WITH ARTICLE 400-15.2 OF THE SPECIFICATIONS UNLESS NOTED OTHERWISE.
2. A CONCRETE SEALER SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES OF END BENTS (EXCEPT TOP OF CAPS), TRAFFIC RAILING BARRIERS, COLUMNS, PIER CAPS (EXCEPT TOP OF CAPS) UNDERNEATH SIDES AND SURFACES OF DECK SLAB CANTILEVER AND EXTERIOR FACE OF EXTERIOR CONCRETE BEAMS. THE COLOR OF THE FINISH COATING SHALL BE AS NOTED. SEE DETAILS, THIS SHEET.
3. APPLY A CLASS 4 FLOOR FINISH ON BRIDGE DECK AND IN ACCORDANCE WITH FDOT SPECIFICATION 400-15.2.5. AFTER MEETING THE CURING AND SMOOTHNESS REQUIREMENTS, GROOVE THE ENTIRE BRIDGE DECK.
4. EXPOSED SURFACES OF RETAINING WALL BARRIER AND COPING SHALL RECEIVE A CONCRETE SEALER. SEE SHEET BW-2.
5. THE SIDEWALK SHALL BE BUILT IN ACCORDANCE WITH SECTION 400 OF THE FDOT SPECIFICATIONS, EXCEPT THAT THE SIDEWALK SHALL BE FINISHED AS PER SECTION 522-7.2.

LEGEND

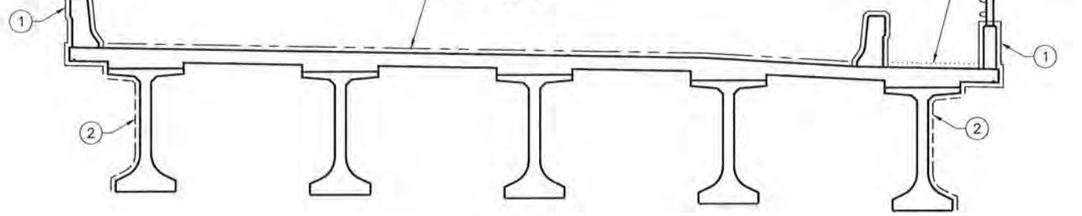
(1) COLOR OF FINISH COATING SHALL BE FEDERAL STANDARD 595B, COLOR NO. 27778. SEE NOTES 2 & 4.

(2) COLOR OF FINISH COATING SHALL BE FEDERAL STANDARD 595B, COLOR NO. 30475. SEE NOTES 2 & 4.

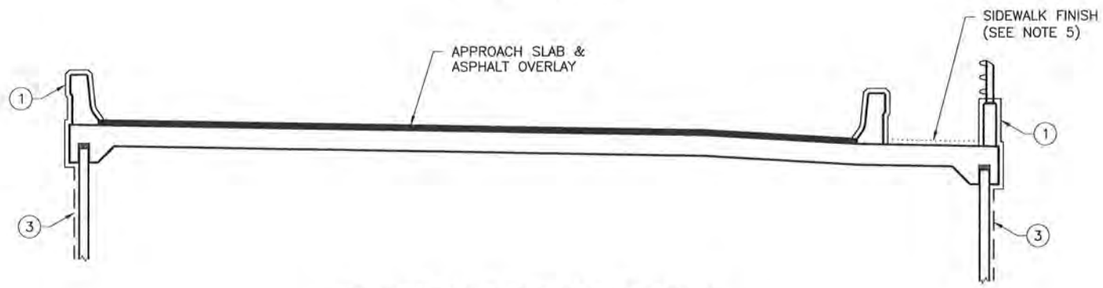
(3) COLOR OF FINISH COATING SHALL BE FEDERAL STANDARD 595B, COLOR NO. 33717. SEE NOTES 2 & 4.



SECTION A-A



TYPICAL SECTION



SECTION THRU APPROACH ROADWAY

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: AOS 01-11
Designed By: AOS 01-11
Checked By: MSE 01-11

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

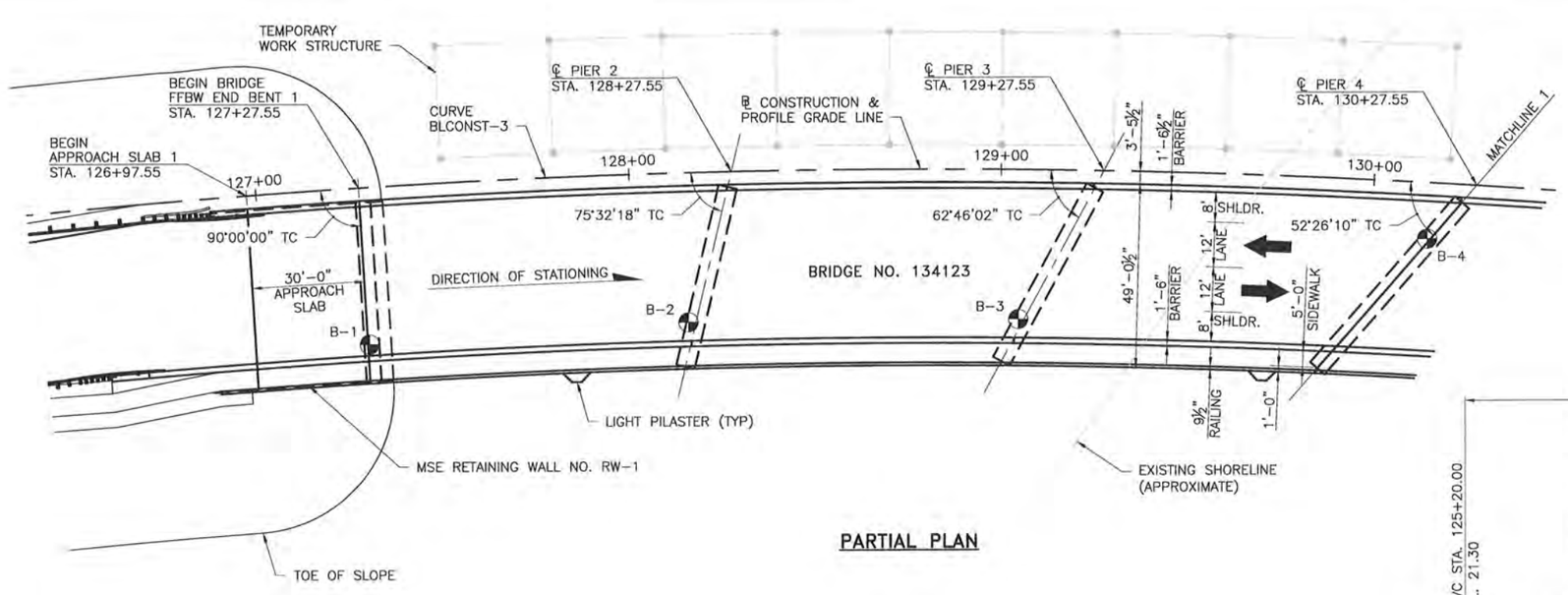
SHEET TITLE: SURFACE FINISH DETAILS

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

SHEET NO. B-6

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bsurfacefinish01.dwg LAYOUT NAME: surface finish details PLOTTED: Friday, August 29, 2014 6:23:31 AM USER: kathy_compton



PARTIAL PLAN

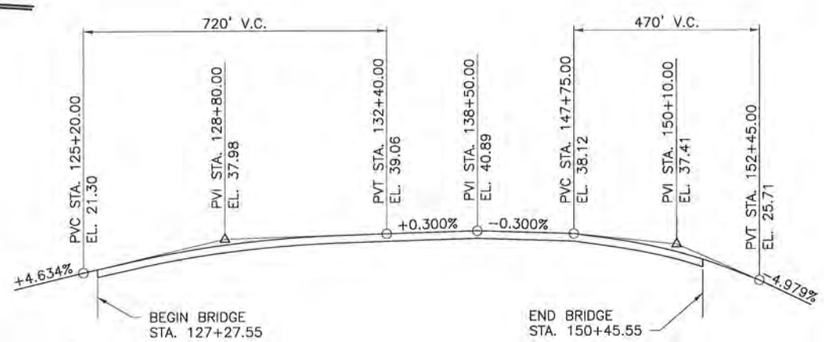
NOTES

1. LEGEND:

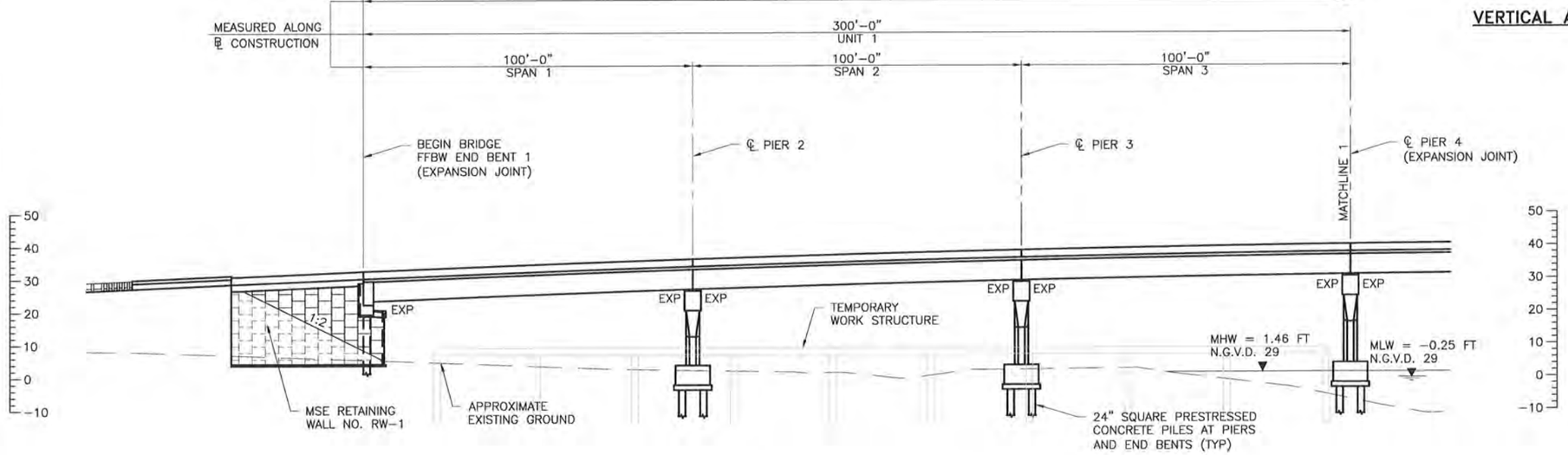
⊕ DENOTES APPROXIMATE LOCATION OF CORE BORING. FOR "REPORT OF CORE BORING" SHEETS, SEE GEOTECHNICAL REPORT.

CURVE BLCONST-3

P.I. STA. 125+94.49
△ = 23°22'59" RT.
Dc = 2°23'14"
T = 496.65'
L = 979.47'
R = 2400.00'
P.R.C. STA. 120+97.85
P.R.C. STA. 130+77.31



VERTICAL ALIGNMENT ℄ CONSTRUCTION



PARTIAL ELEVATION

TRAFFIC DATA				
ROADWAY	AADT YEAR 2015	AADT YEAR 2035	DESIGN SPEED	% TRUCKS
FORT HAMER ROAD BRIDGE	15,900	48,400	45	8

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

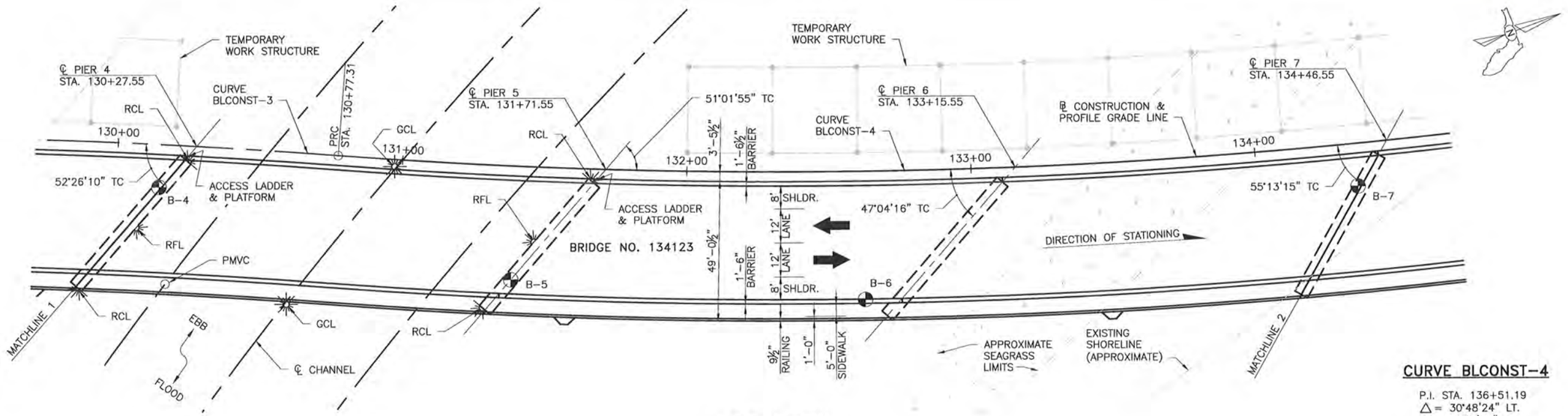
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: PLAN AND ELEVATION (1 OF 6)
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.
SHEET NO. B-7

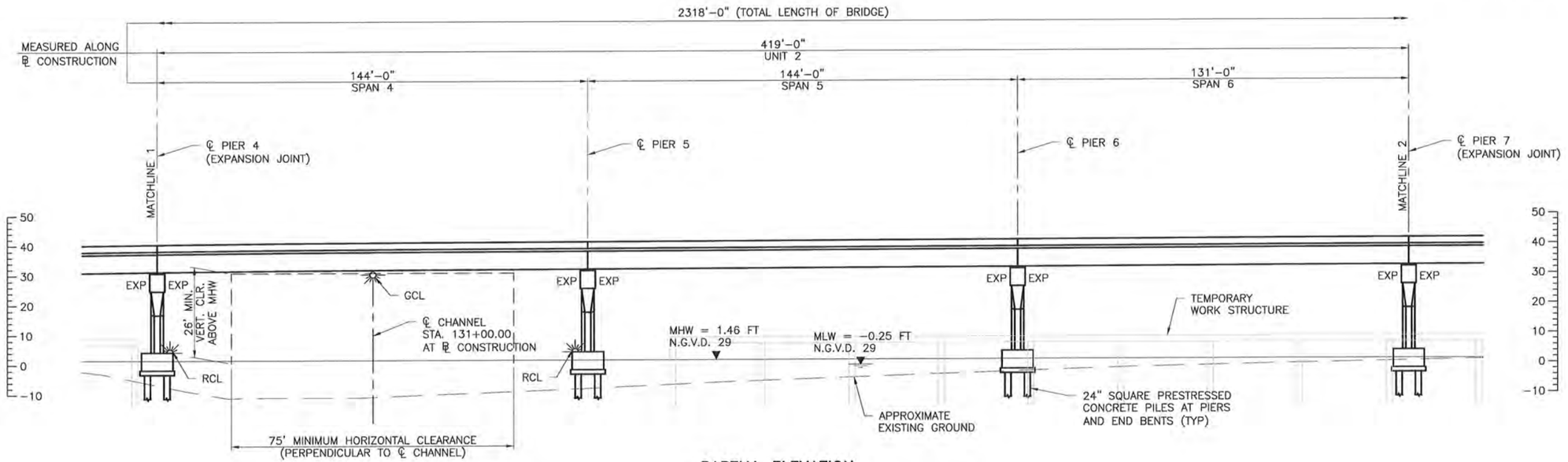
FILENAME: e:\autocad\2014\fort_harrier\dwg\sheets\bplanelev01.dwg LAYOUT NAME: plan and elevation (1 of 6) PLOTTED: Friday, August 29, 2014 8:23:42 AM USER: kathy_compton



PARTIAL PLAN

CURVE BLCONST-4

P.I. STA. 136+51.19
△ = 30°48'24" LT.
Dc = 2°45'02"
T = 573.88'
L = 1119.98'
R = 2083.00'
P.R.C. STA. 130+77.31
P.T. STA. 141+97.29



PARTIAL ELEVATION

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

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Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: PLAN AND ELEVATION (2 OF 6)
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
REF. DWG. NO.
SHEET NO. B-8

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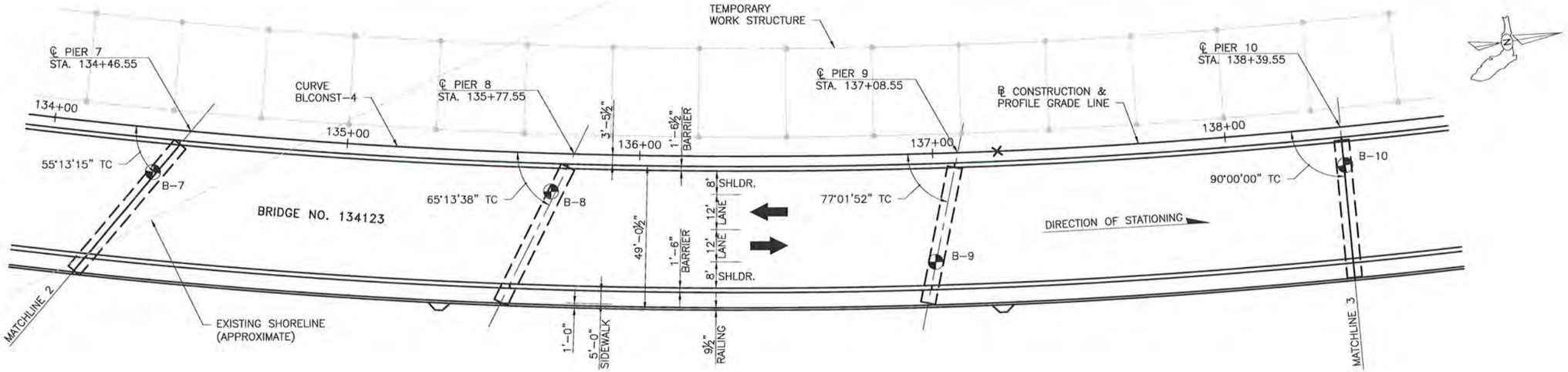
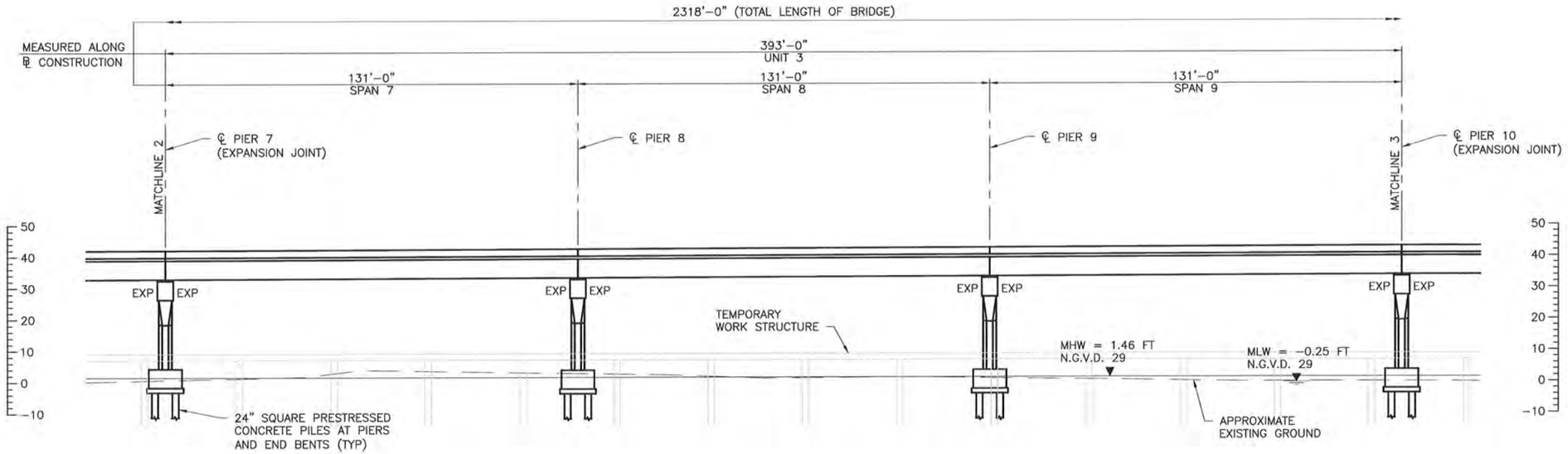


PARTIAL PLAN



PARTIAL ELEVATION

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078

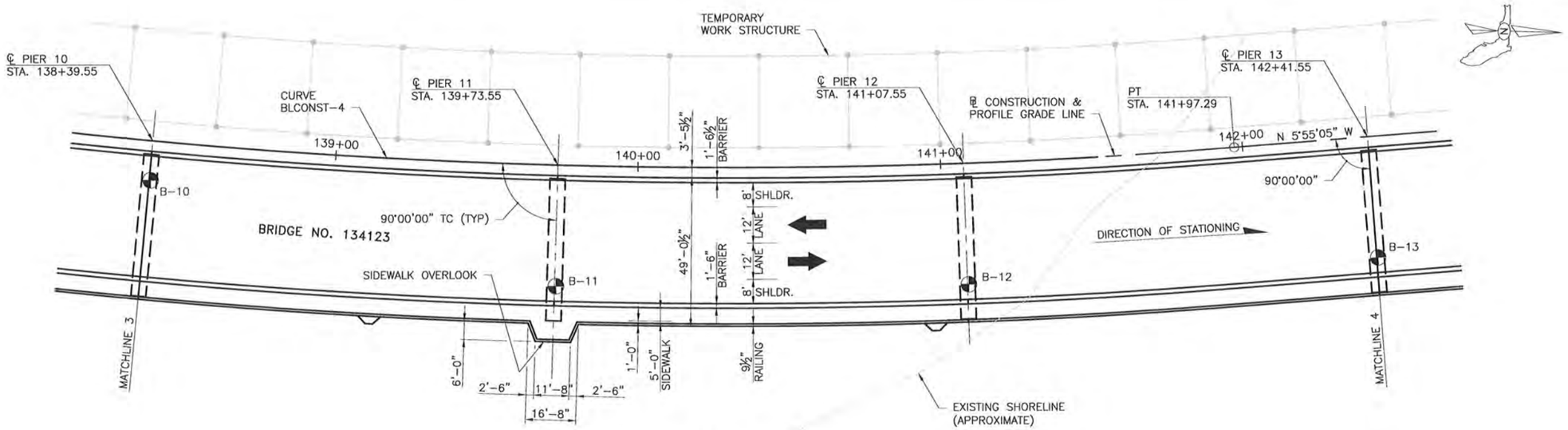
SHEET TITLE: PLAN AND ELEVATION (3 OF 6)

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

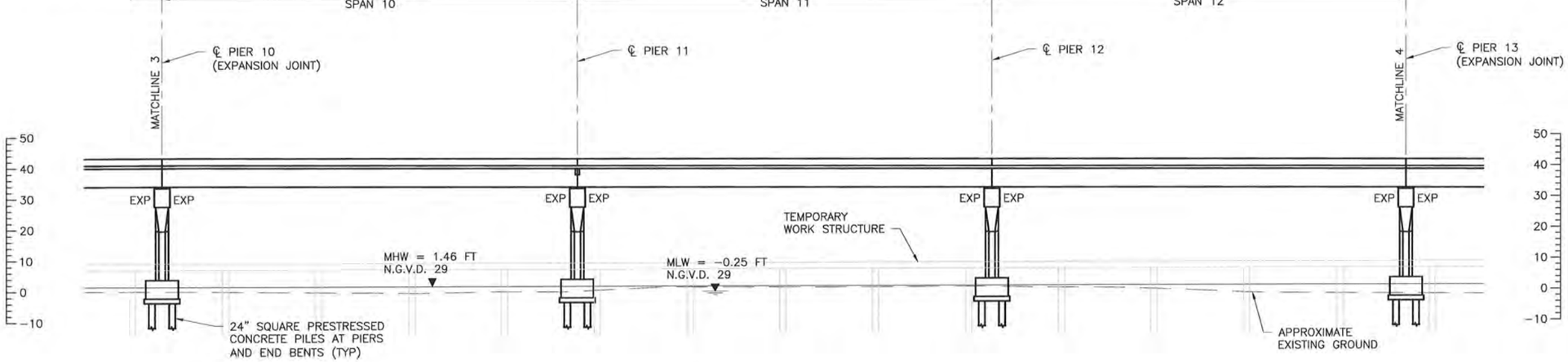
REF. DWG. NO.

SHEET NO. B-9

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bplanelev03.dwg LAYOUT NAME: plan and elevation (3 of 6) PLOTTED: Friday, August 29, 2014 6:24:07 AM USER: kathy_compton



PARTIAL PLAN



PARTIAL ELEVATION

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 11-10	
Checked By: AOS 11-10	
Designed By: AOS 11-10	
Checked By: CC 11-10	

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7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

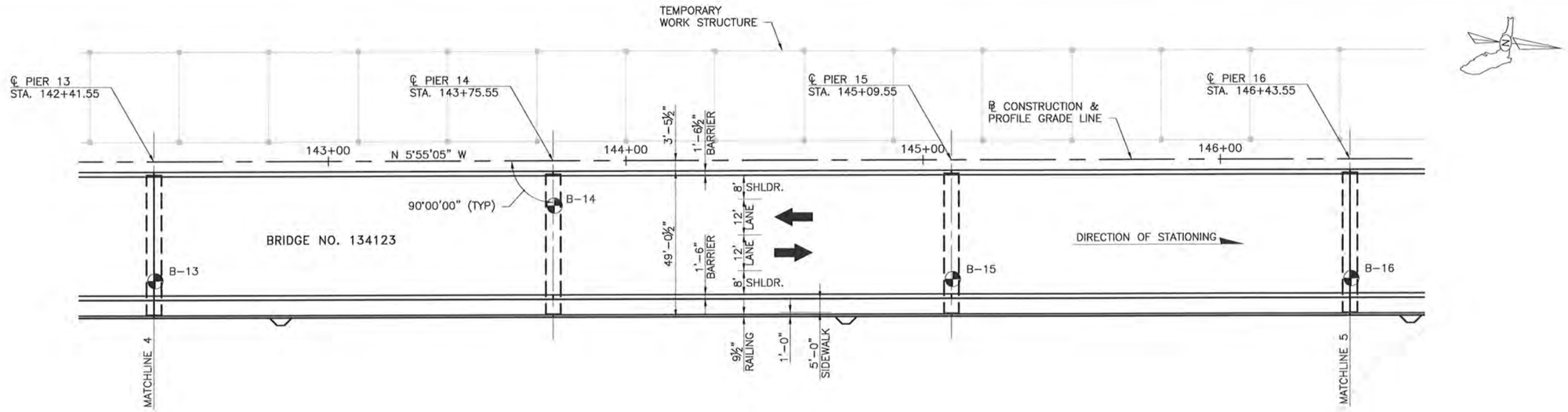
SHEET TITLE: PLAN AND ELEVATION (4 OF 6)

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

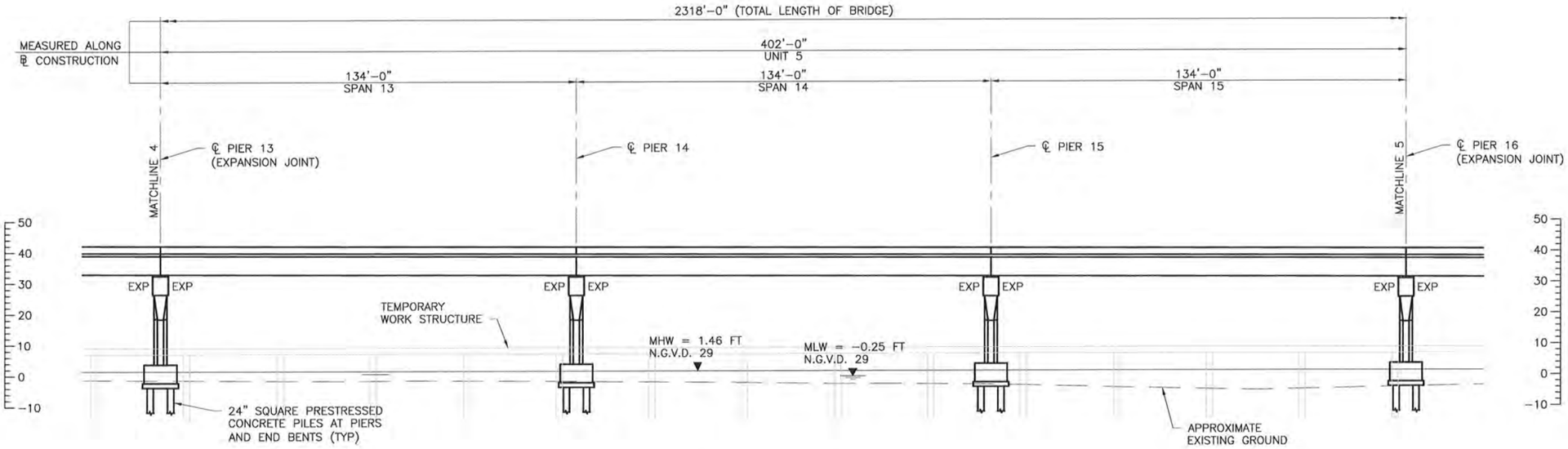
REF. DWG. NO.

SHEET NO. B-10

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bplanelev04.dwg LAYOUT NAME: plan and elevation (4 of 6) PLOTTED: Friday, August 29, 2014 6:24:17 AM USER: kathy_compton



PARTIAL PLAN



PARTIAL ELEVATION

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078

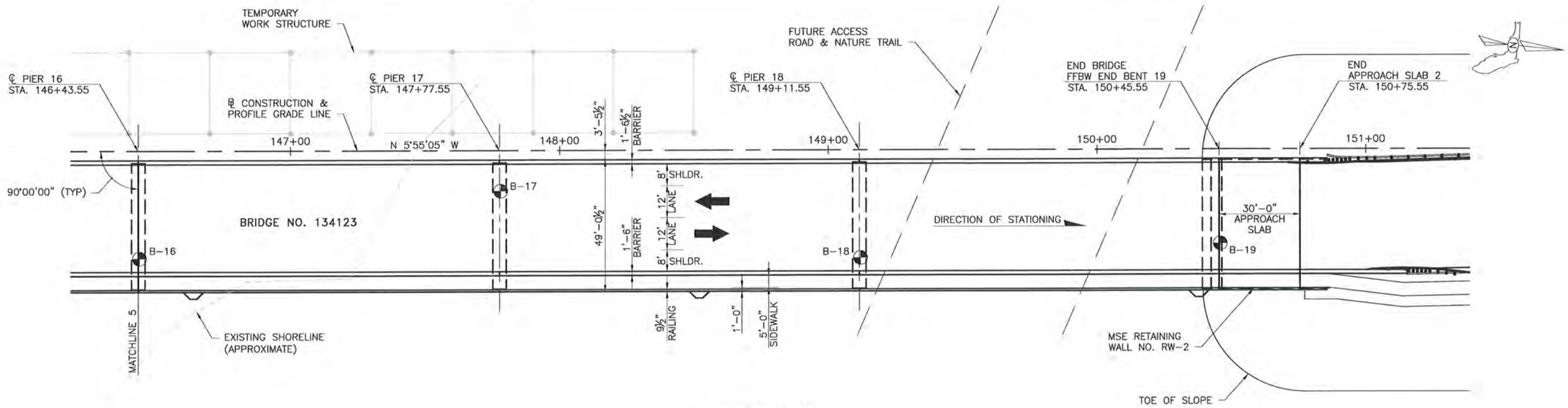
SHEET TITLE: PLAN AND ELEVATION (5 OF 6)

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

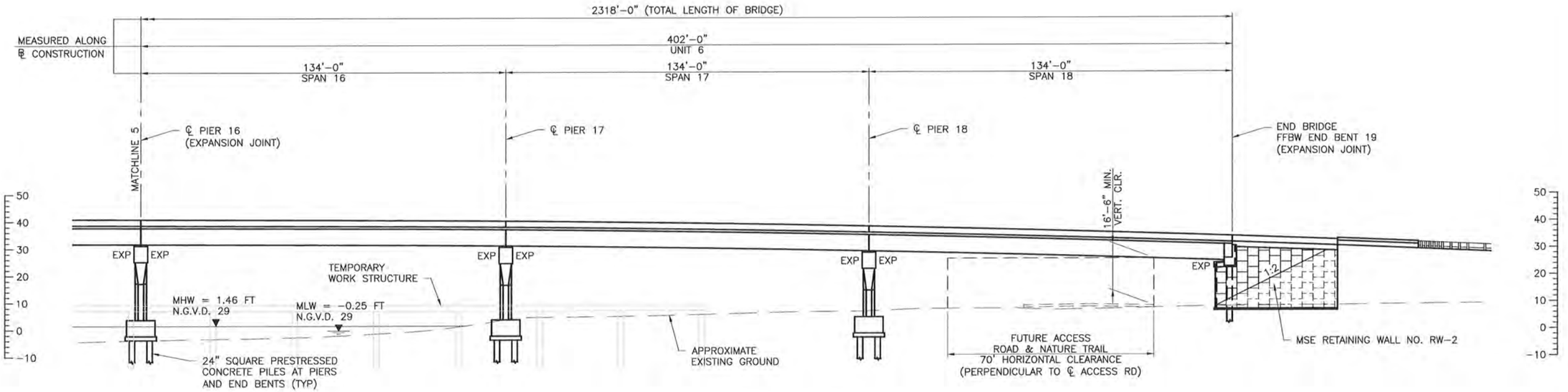
REF. DWG. NO.

SHEET NO. B-11

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bplanelev05.dwg LAYOUT NAME: plan and elevation (5 of 6) PLOTTED: Friday, August 29, 2014 6:24:27 AM USER: kathy_compton



PARTIAL PLAN



PARTIAL ELEVATION

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36076
9/5/14

SHEET TITLE: PLAN AND ELEVATION (6 OF 6)

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

SHEET NO. B-12

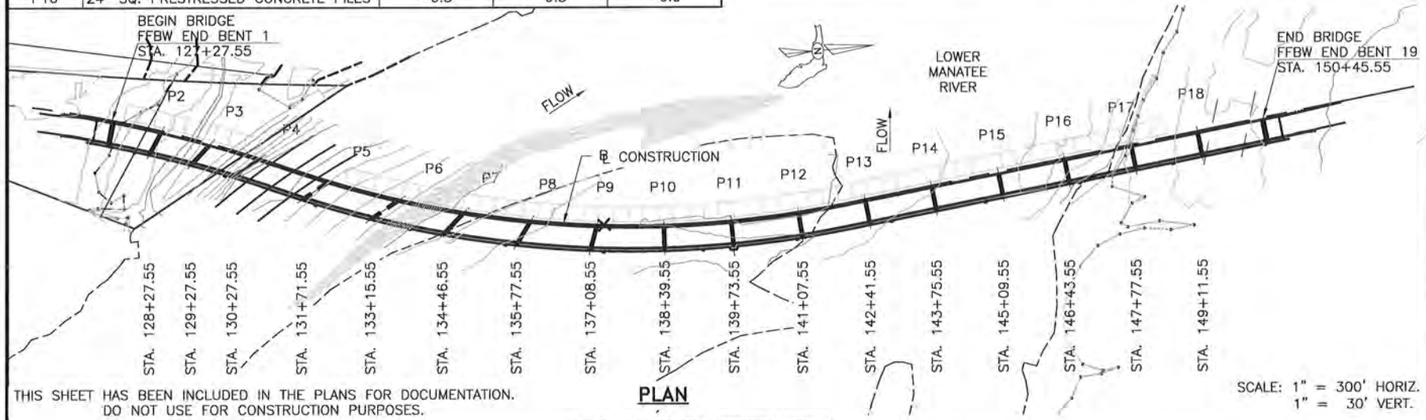
FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bplanelev06.dwg LAYOUT NAME: plan and elevation (6 of 6) PLOTTED: Friday, August 29, 2014 6:24:37 AM USER: kathy_compton

SCOUR PREDICTIONS

PIER NUMBER	SIZE AND TYPE	LONG TERM SCOUR ELEV. (NGVD)	100-YR SCOUR ELEV. WORSE CASE < 100 YR. (NGVD)(FT)	500-YR SCOUR ELEV. WORSE CASE < 500 YR. (NGVD)(FT)
EB1	RETAINING WALL	4.8	4.8	4.8
P2	24" SQ. PRESTRESSED CONCRETE PILES	2.1	2.1	2.1
P3	24" SQ. PRESTRESSED CONCRETE PILES	−0.8	−16.7	−17.0
P4	24" SQ. PRESTRESSED CONCRETE PILES	−10.2	−28.6	−29.8
P5	24" SQ. PRESTRESSED CONCRETE PILES	−5.7	−24.1	−25.3
P6	24" SQ. PRESTRESSED CONCRETE PILES	0.2	−17.9	−19.1
P7	24" SQ. PRESTRESSED CONCRETE PILES	0.8	−17.3	−18.5
P8	24" SQ. PRESTRESSED CONCRETE PILES	1.2	−2.3	−5.6
P9	24" SQ. PRESTRESSED CONCRETE PILES	1.2	−2.3	−5.6
P10	24" SQ. PRESTRESSED CONCRETE PILES	−0.5	−9.5	−9.9

SCOUR PREDICTIONS

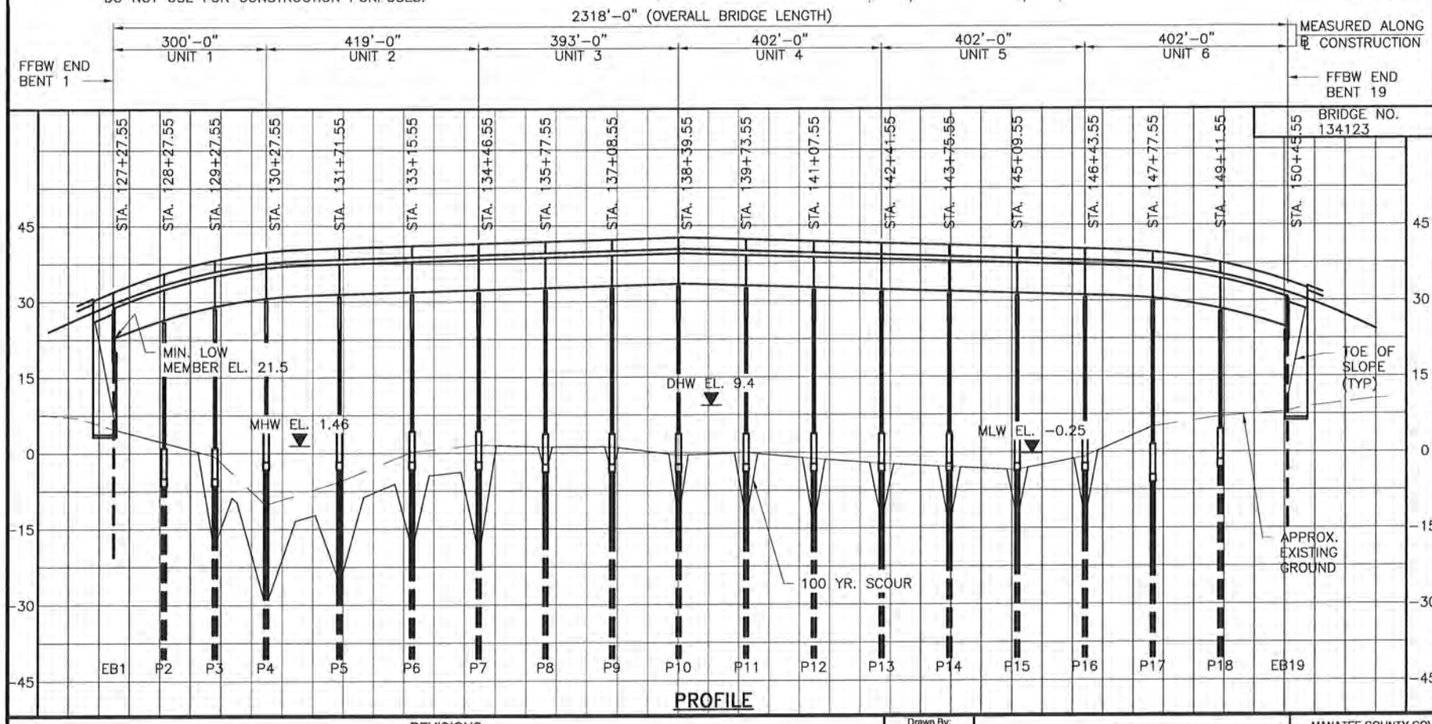
PIER NUMBER	SIZE AND TYPE	LONG TERM SCOUR ELEV. (NGVD)	100-YR SCOUR ELEV. WORSE CASE < 100 YR. (NGVD)(FT)	500-YR SCOUR ELEV. WORSE CASE < 500 YR. (NGVD)(FT)
P11	24" SQ. PRESTRESSED CONCRETE PILES	−0.2	−10.4	−10.8
P12	24" SQ. PRESTRESSED CONCRETE PILES	−1.2	−11.4	−11.8
P13	24" SQ. PRESTRESSED CONCRETE PILES	−2.2	−11.2	−11.6
P14	24" SQ. PRESTRESSED CONCRETE PILES	−2.9	−11.9	−12.3
P15	24" SQ. PRESTRESSED CONCRETE PILES	−3.5	−10.9	−11.2
P16	24" SQ. PRESTRESSED CONCRETE PILES	−0.9	−10.5	−11.0
P17	24" SQ. PRESTRESSED CONCRETE PILES	5.0	5.0	5.0
P18	24" SQ. PRESTRESSED CONCRETE PILES	7.0	7.0	7.0
EB19	RETAINING WALL	8.0	8.0	8.0



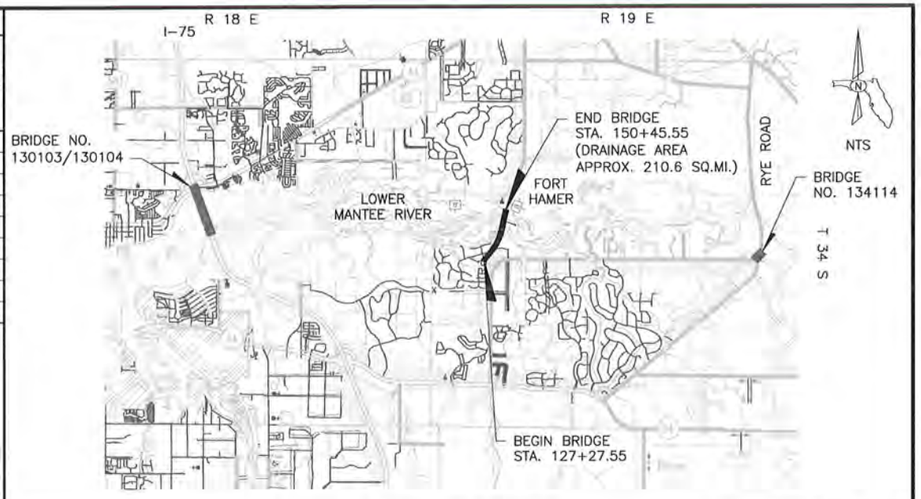
PLAN

SCALE: 1" = 300' HORIZ.
1" = 30' VERT.

THIS SHEET HAS BEEN INCLUDED IN THE PLANS FOR DOCUMENTATION. DO NOT USE FOR CONSTRUCTION PURPOSES.



PROFILE



(REFERENCE)	BR.NO. 130103/ 130104 (1)	EXISTING STRUCTURES BR.NO. 134114 (2)	(3)	(4)	PROPOSED STRUCTURE
FOUNDATION	PIERS ON PILES	NOT AVAILABLE			PIERS ON PILES
OVERALL LENGTH	3841'-7½"				2318 FT
SPAN LENGTH	40' TO 110'				*
TYPE CONSTRUCTION	CONCRETE BEAM				CONCRETE BEAM
AREA OF OPENING @ D.F.	39,000 SF ±				16,646.5 SF ±
BRIDGE WIDTH	58'-9" TO 66'-9"	EACH			49'-0½"
ELEV. LOW MEMBER	24' ±				21.5 FT NGVD

HYDRAULIC DESIGN DATA

NOTE:
The hydraulic data is shown for informational purposes only to indicate the flood discharges and water surface elevations which may be anticipated in any given year. This data was generated using highly variable factors determined by a study of the watershed. Many judgements and assumptions are required to establish these factors. The resultant hydraulic data is sensitive to changes, particularly antecedent conditions, urbanization, channelization and land use. Users of this data are cautioned against the assumption of precision which cannot be obtained.

TERMS:
Design Flood: Utilized to assure a desired level of hydraulic performance.
Base Flood: Has a 1% chance of being exceeded in any given year (100 year frequency)
Overtopping Flood: Causes flow over the highway, over a watershed divide, or thru emergency relief structures.
Greatest Flood: The most severe that can be predicted where overtopping is not practicable.

* 3 SPANS @ 100'
4 SPANS @ 131'
9 SPANS @ 134'
2 SPANS @ 144'

WATER SURFACE ELEVATIONS: N.H.W. (Tidal) N/A M.H.W. (Tidal) 1.46 FT NGVD
CONTROL (Non-Tidal) N/A M.L.W. (Tidal) −0.25 FT NGVD

FLOOD DATA:	MAX. EVENT OF RECORD	DESIGN FLOOD	BASE FLOOD	☐ OVERTOPPING OR ☒ GREATEST FLOOD
STAGE ELEV. NGVD (ft)	NO DATA	9.4	10.1	12.0
DISCHARGE (cfs)	NO DATA	27,597	32,182	44,174
AVERAGE VELOCITY (f/s)	NO DATA	1.4	1.6	1.8
EXCEEDANCE PROB. (%)	NO DATA	2%	1%	0.2%
FREQUENCY (yr.)	NO DATA	50	100	500

SCOUR PREDICTIONS FOR PROPOSED STRUCTURE DESCRIBED ABOVE:

PIER INFORMATION NUMBERS	SIZE AND TYPE	LONG TERM SCOUR ELEV.	TOTAL SCOUR ELEVATION WORST CASE < 100 yr. FREQ. (yr.) 100	WORST CASE < 500 yr. FREQ. (yr.) 500
SEE SCOUR PREDICTION TABLE	SEE SCOUR PREDICTION TABLE	SEE SCOUR PREDICTION TABLE	SEE SCOUR PREDICTION TABLE	SEE SCOUR PREDICTION TABLE

HYDRAULIC RECOMMENDATIONS

1. BEGIN BRIDGE STATION 127+27.55 END BRIDGE STATION 150+45.55 SKEW ANGLE AVERAGE 19°
2. CLEARANCE PROVIDED: NAV: HORIZ. 100' VERT. 26.8' ABOVE EL. 1.46 DRIFT: HORIZ. 100' VERT. 12.1' ABOVE EL. 9.4
3. MINIMUM CLEARANCE: NAV: HORIZ. 75' VERT. 26' ABOVE EL. 1.46 DRIFT: HORIZ. 10' VERT. 2' ABOVE EL. 9.4
4. END BENTS:

	BEGIN BRIDGE	END BRIDGE
RUBBLE GRADE:	N/A	N/A
SLOPE:	N/A	N/A
BURIED OR NON-BURIED HORIZ. TOE:	N/A	N/A
TOE HORIZ. DISTANCE:	N/A	N/A
LIMIT OF PROTECTION:	N/A	N/A

5. DECK DRAINAGE: BRIDGE DECK GRADING WILL DIRECT ROADWAY SURFACE RUN OFF TO NORTH AND SOUTH TREATMENT PONDS.

REMARKS: END BENTS BEYOND MSE WALL TO BE STABLIZED WITH SOD OR EQUIVALENT GEOTEXTILE OR ARMORING. LOCAL VELOCITIES ≤ 0.5 FPS.

BRIDGE NO. 134123

REVISIONS

Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: MSE 04-14
Designed By: ERG 04-14
Checked By: JMR 04-14

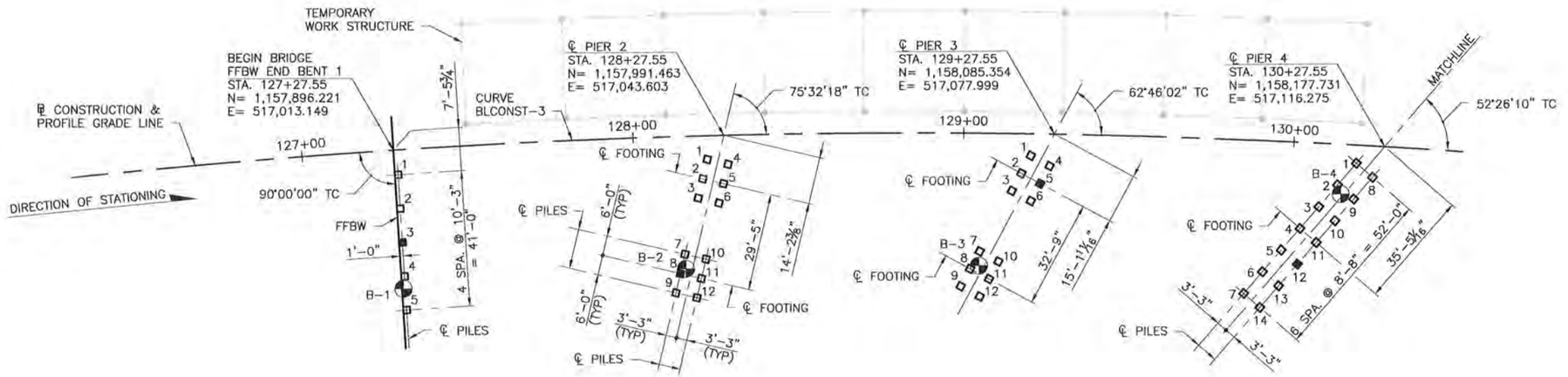
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
ELIZABETH R. GEURINK
P.E. NO. 51941
9/5/14

SHEET TITLE: BRIDGE HYDRAULIC RECOMMENDATIONS
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
REF. DWG. NO.
SHEET NO. B-13

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bbridgehydro01.dwg LAYOUT NAME: bridge hydraulic recommendations PLOTTED: Friday, August 29, 2014 6:25:01 AM USER: kathy_compton



PARTIAL FOUNDATION PLAN

NOTES

1. FOR PILE DATA TABLE, SEE SHEET B-15.
2. FOR HORIZONTAL CURVE DATA ALONG ℄ CONSTRUCTION, SEE SHEETS B-7 & B-8.
3. ALL PILES ARE TO BE 24" SQUARE PRESTRESSED CONCRETE IN ACCORDANCE WITH DESIGN STANDARD INDEX NOS. 20600, 20601, 20602 AND 20624. PILES SHALL BE DRIVEN TO THE NOMINAL BEARING RESISTANCE (AS SHOWN IN THE PILE DATA TABLE, SHEET B-15) IN ACCORDANCE WITH SECTION 455 OF THE SPECIFICATIONS.
4. PILE SPACINGS ARE MEASURED HORIZONTALLY ALONG FFBW AT BOTTOM OF END BENT CAPS AND ALONG ℄ PIERS AT BOTTOM OF PIER FOOTINGS.
5. DRIVE TEST PILES IN THE POSITION OF A PERMANENT PILE AS SHOWN OR AS DIRECTED BY THE ENGINEER. A DYNAMIC LOAD TEST SHALL BE PERFORMED ON ALL TEST PILES WITH THE PILE DRIVING ANALYZER (PDA) OR APPROVED EQUAL AS PER SECTION 455-5.13 OF THE SPECIFICATIONS.
6. DURING DRIVING OF PRODUCTION PILES THE COUNTY MAY PERIODICALLY PERFORM DYNAMIC LOAD TESTS TO EVALUATE THE CONTRACTOR'S HAMMER DRIVING SYSTEM. HAMMER DRIVING SYSTEM EVALUATION WILL CONSIST OF APPROXIMATELY 30 BLOWS TO A RECENTLY DRIVEN PILE USING A WARMED UP HAMMER. NO ADDITIONAL PAYMENT WILL BE MADE FOR DYNAMIC TEST MADE TO EVALUATE THE CONTRACTOR'S DRIVING EQUIPMENT PER SECTION 455 OF THE SPECIFICATIONS.
7. END BENT PILES SHALL BE DRIVEN OR CONSTRUCTED PRIOR TO THE CONSTRUCTION OF THE ADJACENT PROPRIETARY RETAINING WALL SYSTEM.
8. THE PORTION OF THE END BENT PILES EXPOSED ABOVE THE LEVELING PAD ELEVATION AND BELOW THE BOTTOM OF THE CONCRETE CAP SHALL BE WRAPPED WITH TWO INDEPENDENT SHEETS OF 6 MIL THICKNESS OF POLYETHYLENE PLASTIC FILM IN ACCORDANCE WITH SECTION 459 OF THE SPECIFICATIONS. THE COST OF FURNISHING AND INSTALLING POLYETHYLENE PLASTIC FILM SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR PAY ITEM 459-71 (POLYETHYLENE SHEETING ON CONCRETE PILES).
9. THE CONTRACTOR SHALL ANTICIPATE THE USE OF SPECIALIZED EQUIPMENT AND/OR METHODS INCLUDING, BUT NOT LIMITED TO, CORE BARRELS, ROCK AUGERS, PUNCHES, DRILL BITS, ETC. TO COMPLETE PREDRILLING AND/OR PREFORMING. IF DRILLING EQUIPMENT WITH A TAPER END IS USED TO CONSTRUCT THE PREFORMED PILE HOLES OR PREDRILLED PILE HOLES, THE MAXIMUM DIAMETER OF THE DRILLING EQUIPMENT SHALL EXTEND TO THE REQUIRED PREFORMED OR PREDRILLED ELEVATION.
10. THE PILE DATA TABLE PRESENTED HAS BEEN EXTRACTED FROM THE "GEOTECHNICAL REPORT FOR STRUCTURES", DATED JUNE 3, 2014, PREPARED BY URS CORPORATION AND SIGNED AND SEALED BY PROJECT GEOTECHNICAL ENGINEER MICHAEL R. SHARP, PE (FLORIDA PROFESSIONAL ENGINEER NUMBER 41205).
11. LEGEND:
    - ◔ DENOTES APPROXIMATE LOCATION OF CORE BORING. FOR "REPORT OF CORE BORING" SHEETS SEE GEOTECH REPORT.
    - □ DENOTES PLUMB CONCRETE PILE.
    - ■ DENOTES PLUMB CONCRETE TEST PILE.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

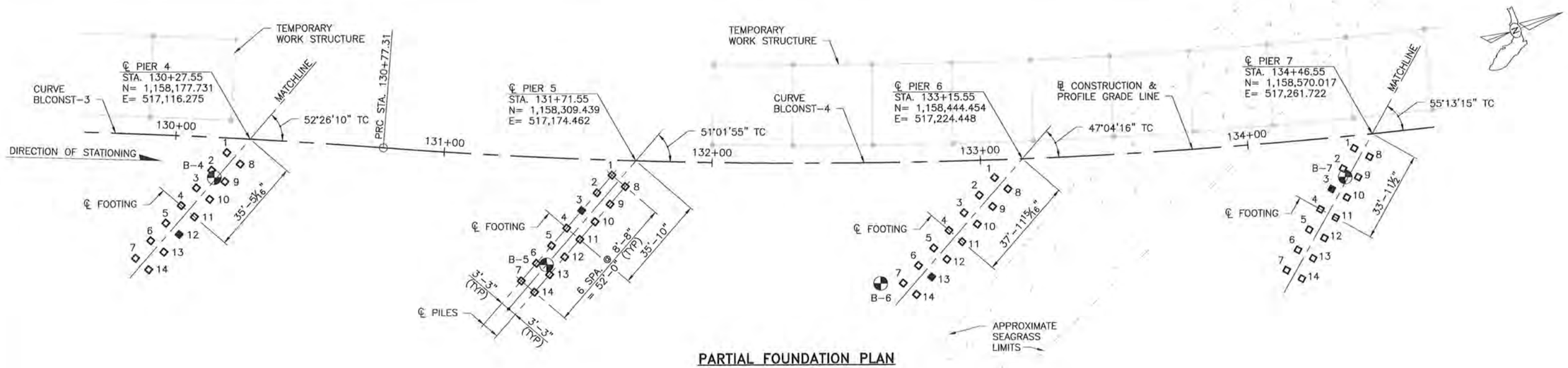
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
7/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: FOUNDATION LAYOUT (1 OF 6)
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-14

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bfoundlay01.dwg LAYOUT NAME: foundation layout (1 of 6) PLOTTED: Friday, August 29, 2014 6:25:14 AM USER: kathy_compton



PARTIAL FOUNDATION PLAN

PILE DATA TABLE

LOCATION	INSTALLATION CRITERIA: PILE SIZE (IN)	NOMINAL BEARING RESISTANCE (TONS) (A)	TENSION RESISTANCE (TONS)	MIN. TIP ELEV. (FT) (B)	TEST PILE: PILE NUMBER	TEST PILE: LENGTH (FT)	REQ'D JET ELEV. (FT) (D)	REQ'D PREFORM ELEV. (FT) (D)	DESIGN CRITERIA: FACTORED DESIGN LOAD (TONS)	DOWN DRAG (TONS)	TOTAL SCOUR RESIST. (TONS)	NET SCOUR RESIST. (TONS)	100 YEAR SCOUR ELEV. (FT)	LONG TERM SCOUR ELEV. (FT)	RESISTANCE FACTOR Φ (C)
END BENT 1	24	343	N/A	N/A	3	75	N/A	−17	198	25	N/A	N/A	4.80	4.75	0.65
PIER 2	24	285	N/A	N/A	8	50	N/A	N/A	185	N/A	N/A	N/A	2.10	2.11	0.65
PIER 3	24	285	N/A	N/A	5	60	N/A	−17	185	N/A	70	0	−16.70	−0.80	0.65
PIER 4	24	325	N/A	N/A	12	77	N/A	−25	193	N/A	105	18	−28.60	−10.20	0.65
PIER 5	24	365	N/A	N/A	3	72	N/A	−20	215	N/A	80	22	−24.10	−5.70	0.65
PIER 6	24	345	N/A	N/A	13	73	N/A	−30	224	N/A	16	0	−17.90	0.23	0.65
PIER 7	24	345	N/A	N/A	3	62	N/A	−17	224	N/A	50	0	−17.30	0.81	0.65
PIER 8	24	358	N/A	N/A	8	55	N/A	N/A	233	N/A	N/A	N/A	−2.30	1.17	0.65
PIER 9	24	358	N/A	N/A	2	55	N/A	N/A	233	N/A	N/A	N/A	−2.30	1.20	0.65
PIER 10	24	362	N/A	N/A	11	55	N/A	N/A	227	N/A	8	8	−9.50	−0.50	0.65
PIER 11	24	372	N/A	N/A	5	55	N/A	N/A	227	N/A	15	15	−10.40	−0.23	0.65
PIER 12	24	365	N/A	N/A	8	65	N/A	N/A	229	N/A	8	8	−11.40	−1.15	0.65
PIER 13	24	371	N/A	N/A	2	65	N/A	N/A	233	N/A	8	8	−11.20	−2.16	0.65
PIER 14	24	358	N/A	N/A	11	65	N/A	N/A	233	N/A	N/A	N/A	−11.90	−2.86	0.65
PIER 15	24	358	N/A	N/A	5	65	N/A	N/A	233	N/A	N/A	N/A	−10.90	−3.46	0.65
PIER 16	24	358	N/A	N/A	8	65	N/A	N/A	233	N/A	N/A	N/A	−10.50	−0.88	0.65
PIER 17	24	358	N/A	N/A	2	60	N/A	N/A	233	N/A	N/A	N/A	5.00	5.00	0.65
PIER 18	24	358	N/A	N/A	11	55	N/A	N/A	233	N/A	N/A	N/A	7.00	7.00	0.65
END BENT 19	24	406	N/A	N/A	3	80	N/A	N/A	238	26	N/A	N/A	8.00	8.00	0.65

PILE CUT-OFF ELEVATIONS

LOCATION	PILE NO.	ELEVATION
END BENT 1	1	19.64
	2	19.44
	3	19.23
	4	19.03
	5	18.82
PIER 2	1 THRU 12	−0.25
PIER 3	1 THRU 12	−0.25
PIER 4	1 THRU 14	−0.25
PIER 5	1 THRU 14	−0.25
PIER 6	1 THRU 14	−0.25
PIER 7	1 THRU 14	−0.25
PIER 8	1 THRU 12	−0.25
PIER 9	1 THRU 12	−0.25
PIER 10	1 THRU 12	−0.25
PIER 11	1 THRU 12	−0.25
PIER 12	1 THRU 12	−0.25
PIER 13	1 THRU 12	−0.25
PIER 14	1 THRU 12	−0.25
PIER 15	1 THRU 12	−0.25
PIER 16	1 THRU 12	−0.25
PIER 17	1 THRU 12	−0.25
PIER 18	1 THRU 12	0.50
END BENT 19	1	23.69
	2	23.49
	3	23.28
	4	23.08
	5	23.87

(A) $\frac{\text{FACTORED DESIGN LOAD + NET SCOUR RESISTANCE + DOWNDRAG}}{\Phi} <$ NOMINAL BEARING RESISTANCE

(B) MINIMUM TIP ELEVATION SHALL BE THE LOWER ELEVATION AS SHOWN IN THE TABLE OR DETERMINED IN ACCORDANCE WITH SECTION 455-5.8 OF THE SPECIFICATIONS.

(C) Φ IS BASED ON THE USE OF PILE DRIVING ANALYZER (PDA) AND CASE PILE WAVE ANALYSIS PROGRAM (CAPWAP).

(D) WHEN A REQUIRED JETTING OR PREFORMED ELEVATION IS NOT SHOWN IN THE TABLE, DO NOT JET OR PREFORM PILE LOCATIONS WITHOUT PRIOR WRITTEN APPROVAL OF THE GEOTECHNICAL ENGINEER. DO NOT ADVANCE JETS OR PREFORMED PILE HOLES DEEPER THAN THE JETTING OR PREFORMED ELEVATIONS SHOWN IN THE TABLE WITHOUT THE PRIOR APPROVAL OF THE GEOTECHNICAL ENGINEER. IF ACTUAL JETTING OR PREFORMING ELEVATIONS DIFFER FROM THOSE SHOWN IN THE TABLE, THE GEOTECHNICAL ENGINEER WILL DETERMINE THE REQUIRED DRIVING RESISTANCE.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: FOUNDATION LAYOUT (2 OF 6)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-15

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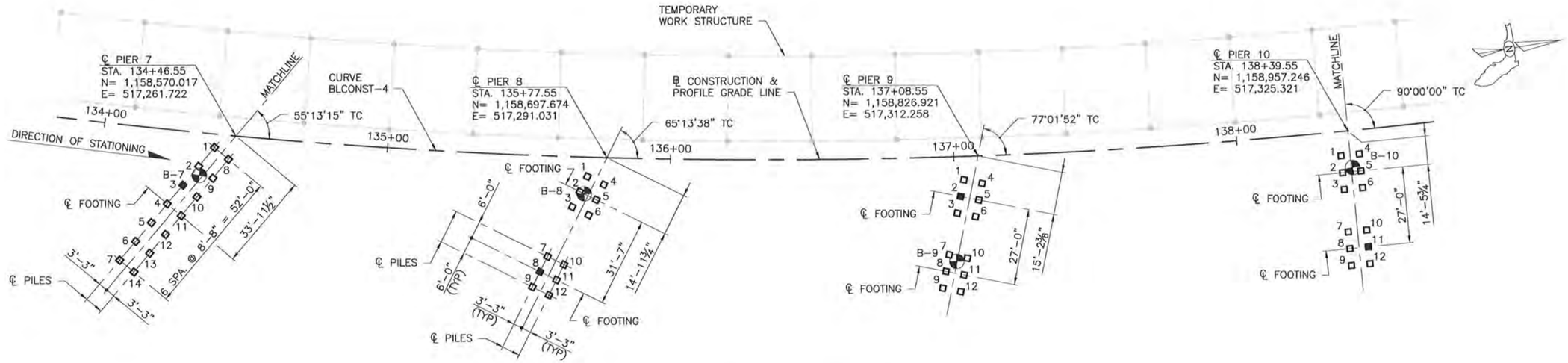


PARTIAL FOUNDATION PLAN

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

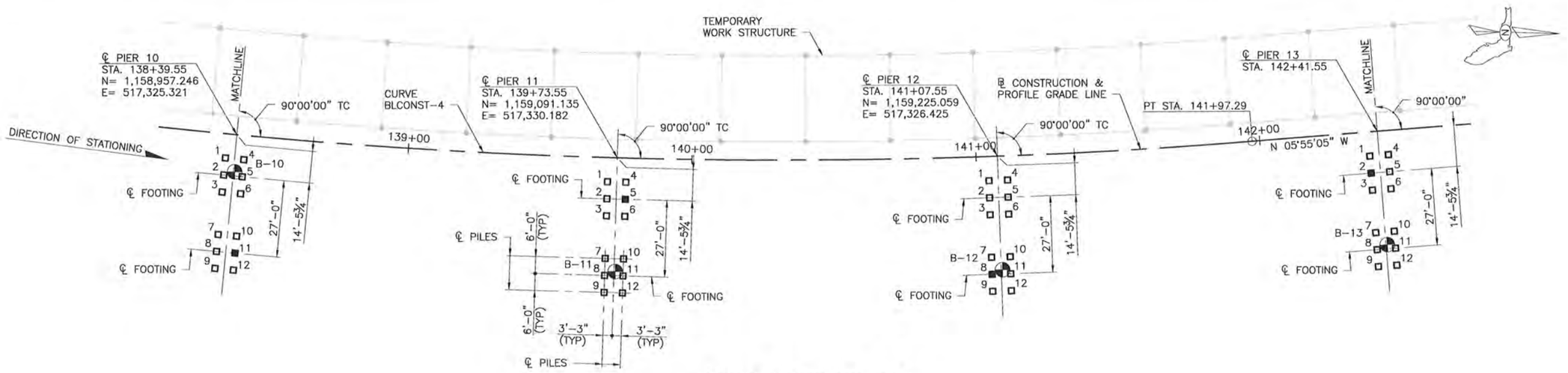
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: FOUNDATION LAYOUT (3 OF 6)
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
REF. DWG. NO.
SHEET NO. B-16

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bfoundlay03.dwg LAYOUT NAME: foundation layout (3 of 6) PLOTTED: Friday, August 29, 2014 6:25:49 AM USER: kathy_compton



PARTIAL FOUNDATION PLAN

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/05/14

SHEET TITLE: FOUNDATION LAYOUT (4 OF 6)

REF. DWG. NO.:

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO.: B-17

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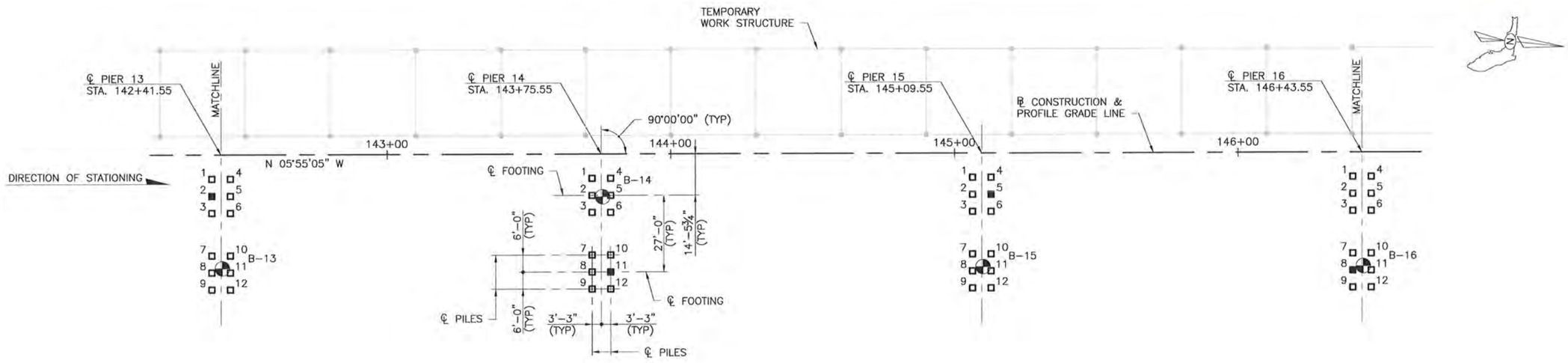

PARTIAL FOUNDATION PLAN

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: FOUNDATION LAYOUT (5 OF 6)
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-18

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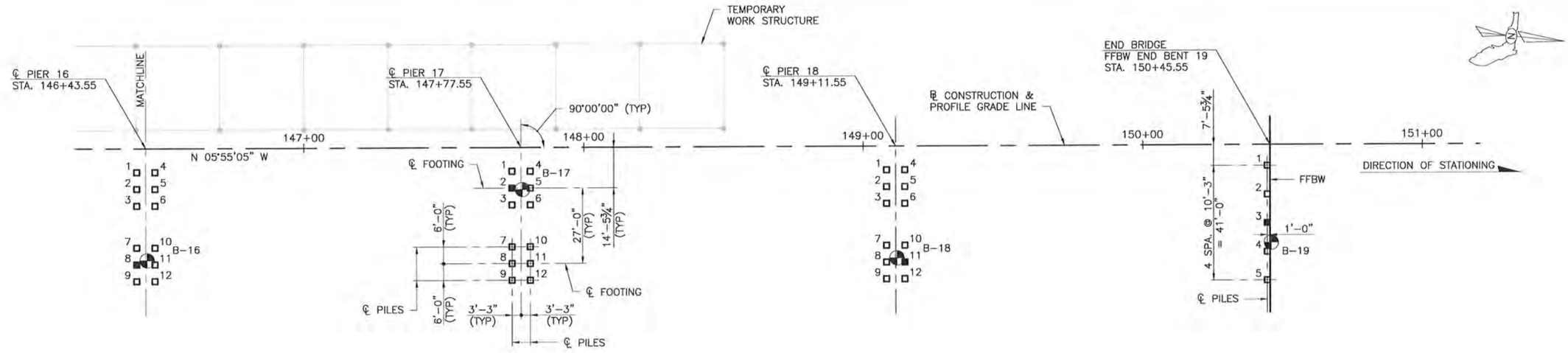


PARTIAL FOUNDATION PLAN

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

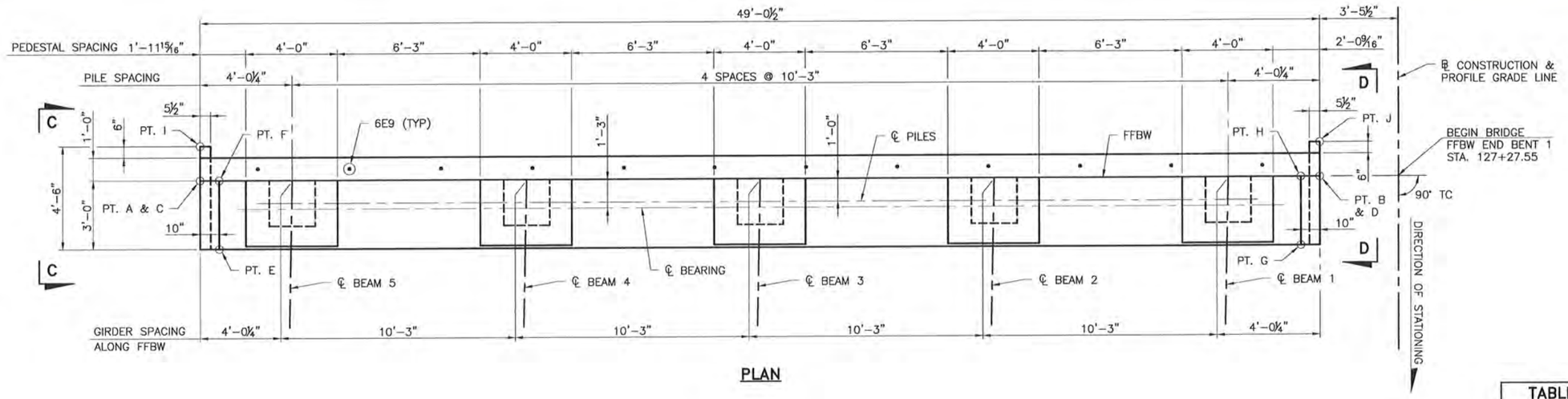
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

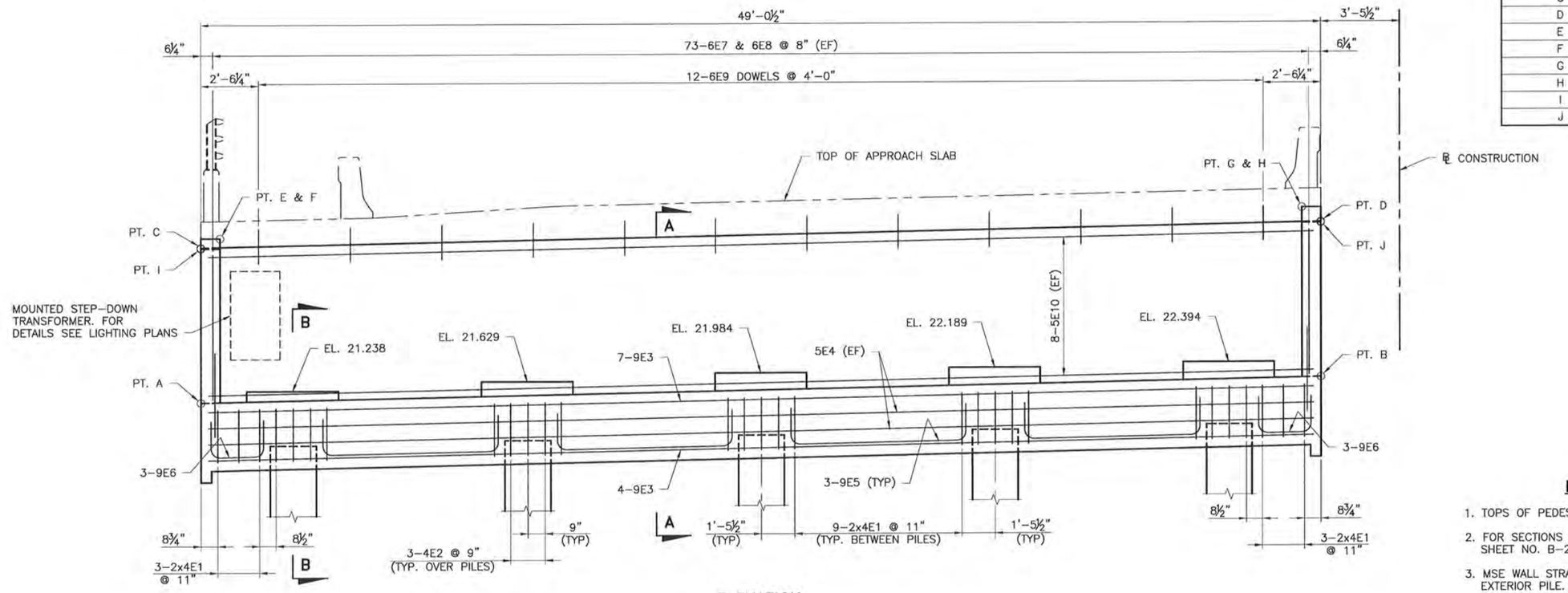
SHEET TITLE: FOUNDATION LAYOUT (6 OF 6)
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-19

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bfoundlay06.dwg LAYOUT NAME: foundation layout (6 of 6) PLOTTED: Friday, August 29, 2014 6:26:34 AM USER: kathy_compton



PLAN

TABLE OF ELEVATIONS	
POINT	ELEVATION
A	20.741
B	21.722
C	27.103
D	28.404
E	27.529
F	27.390
G	28.783
H	28.644
I	27.034
J	28.335



ELEVATION

NOTES

1. TOPS OF PEDESTALS SHALL BE LEVEL.
2. FOR SECTIONS AND ADDITIONAL DETAILS, SEE SHEET NO. B-22 AND B-23.
3. MSE WALL STRAPS SHALL BE DETAILED TO AVOID EXTERIOR PILE.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: TSP 01-11
Designed By: SJM 01-11
Checked By: TSP 01-11

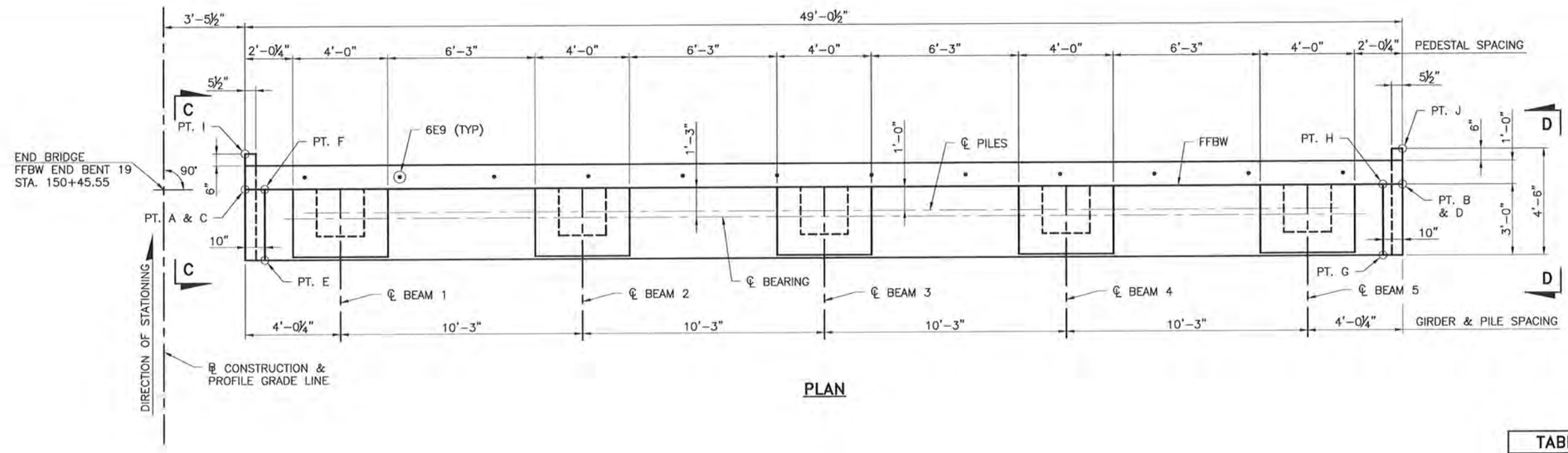
URS Corporation Southern
7650 West Courtney Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

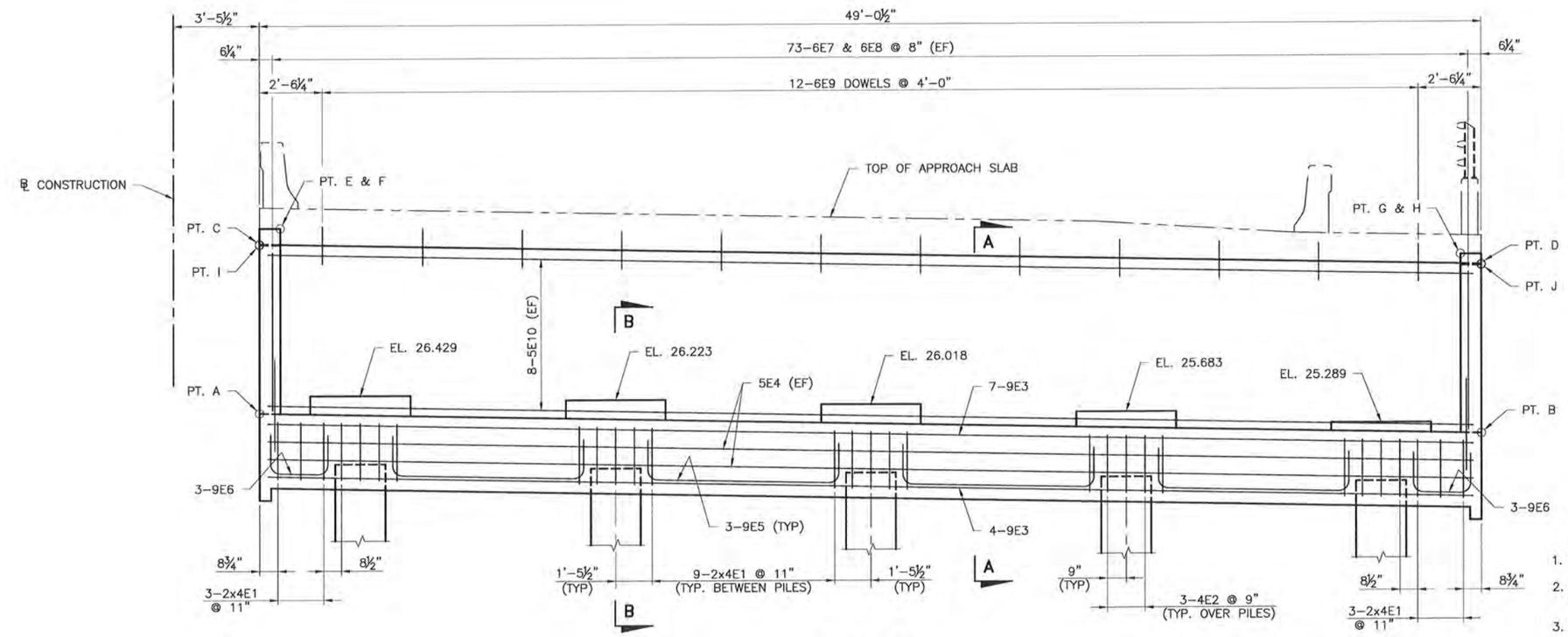
ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: END BENT 1
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-20

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bendbent01.dwg LAYOUT NAME: end bent 1 PLOTTED: Friday, August 29, 2014 6:26:41 AM USER: kathy_compton



PLAN



ELEVATION

TABLE OF ELEVATIONS	
POINT	ELEVATION
A	25.772
B	24.791
C	32.445
D	31.144
E	32.834
F	32.685
G	31.580
H	31.431
I	32.371
J	31.070

NOTES

1. TOPS OF PEDESTALS SHALL BE LEVEL.
2. FOR SECTIONS AND ADDITIONAL DETAILS, SEE SHEET NO. B-22 AND B-23.
3. MSE WALL STRAPS SHALL BE DETAILED TO AVOID EXTERIOR PILE.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: TSP 01-11
Designed By: SJM 01-11
Checked By: TSP 01-11

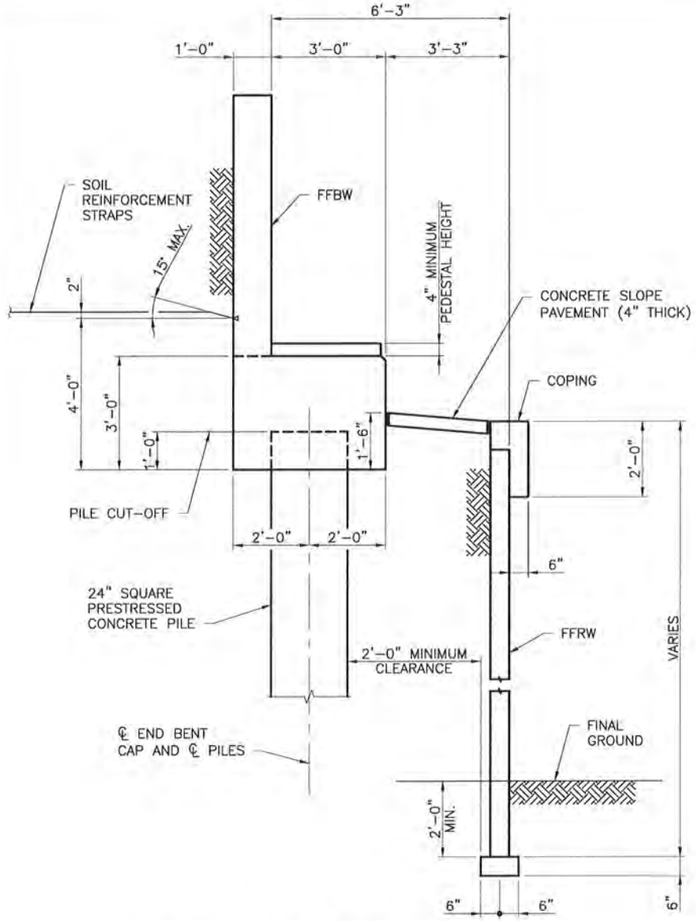
URS Corporation Southern
7650 West Courtney Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

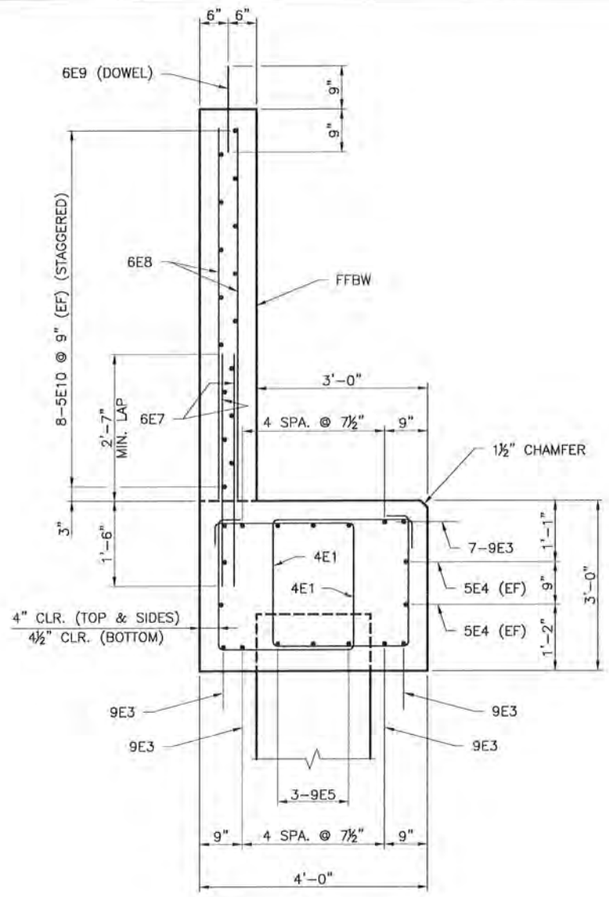
ENGINEER OF RECORD
7/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: END BENT 19
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
REF. DWG. NO.
SHEET NO. B-21

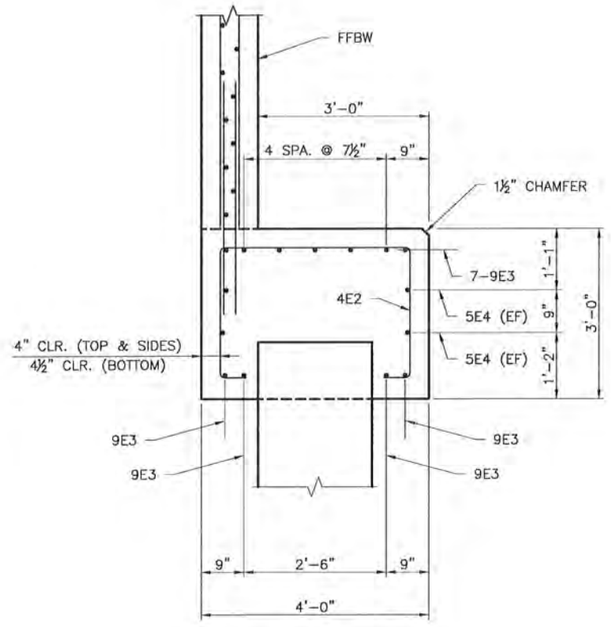
FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bendbent02.dwg LAYOUT NAME: end bent 19 PLOTTED: Friday, August 29, 2014 6:26:46 AM USER: kathy_compton



SECTION THRU END BENTS



SECTION A–A
(PEDESTAL NOT SHOWN)

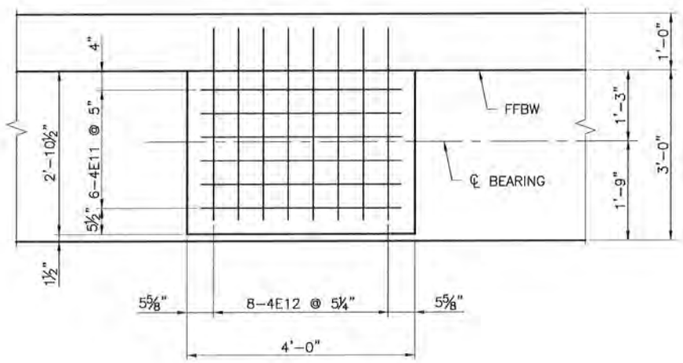


SECTION B–B
(PEDESTAL NOT SHOWN)

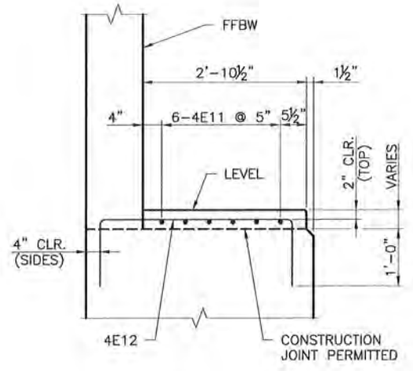
NOTES

1. SOIL REINFORCEMENT STRAPS ARE TO RESIST A LATERAL FORCE OF 6.83 KIPS PER FOOT OF BACKWALL (SERVICE LOAD). STRAPS ARE TO BE DESIGNED AND PROVIDED BY THE RETAINING WALL COMPANY AND INSTALLED BY THE CONTRACTOR. NUMBER OF STRAPS AND SPACING ARE TO BE SHOWN ON THE SHOP DRAWING. COST OF STRAPS AND FASTENERS ARE TO BE INCLUDED IN THE COST OF THE MSE WALLS.

ESTIMATED QUANTITIES				
ITEM		UNIT	QUANTITY	
			END BENT 1	END BENT 19
CLASS IV CONCRETE (SUBSTRUCTURE)	CAP	CU. YD.	21.1	21.1
	WALLS		13.4	13.3
	PEDESTALS		1.4	1.4
	TOTAL		35.9	35.8
REINFORCING STEEL (SUBSTRUCTURE)		LBS.	6,879	6,879
PRESTRESSED CONCRETE PILES (24" SQUARE)		LIN. FT.	SEE SUMMARY OF BRIDGE PAY ITEMS	



PEDESTAL – PLAN



PEDESTAL – SECTION

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 11-10
Checked By: TSP 01-11
Designed By: SJM 01-11
Checked By: TSP 01-11

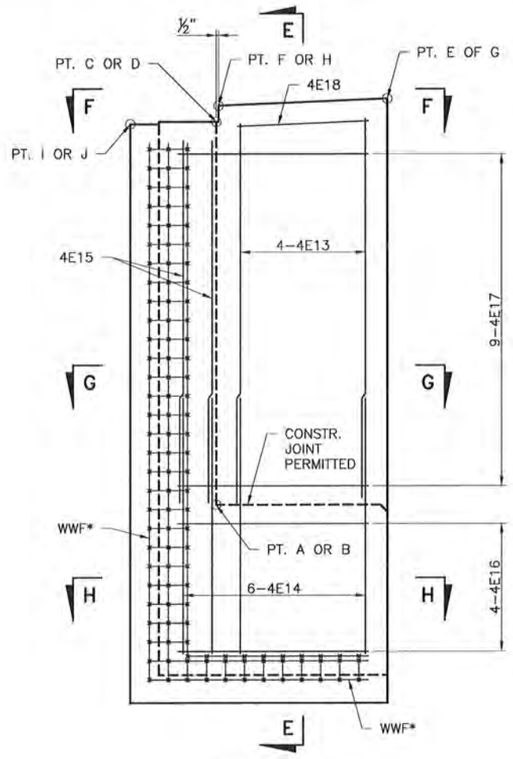
URS Corporation Southern
7650 West Courtney Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

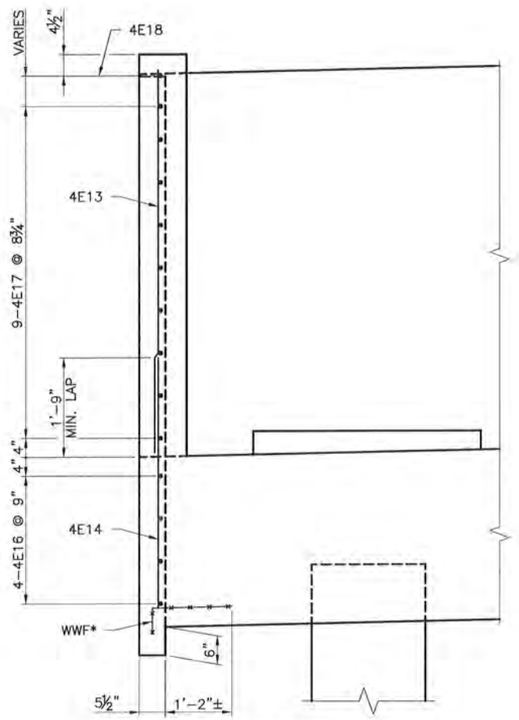
ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: END BENT DETAILS (1 OF 2)
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
REF. DWG. NO.
SHEET NO. B-22

FILENAME: e:\autocad\2014\fort_homer\dwg\sheets\pendbentdet01.dwg LAYOUT NAME: end bent details (1 of 2) PLOTTED: Friday, August 29, 2014 6:26:51 AM USER: kathy_compton

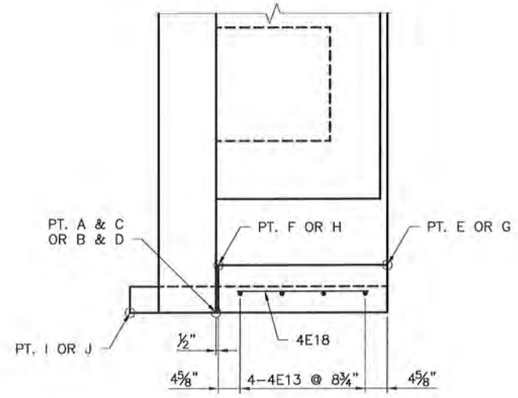


VIEW C–C & D–D
(VIEW C–C SHOWN,
VIEW D–D OPPOSITE HAND)

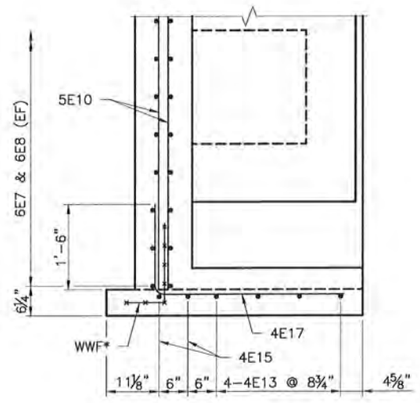


SECTION E–E

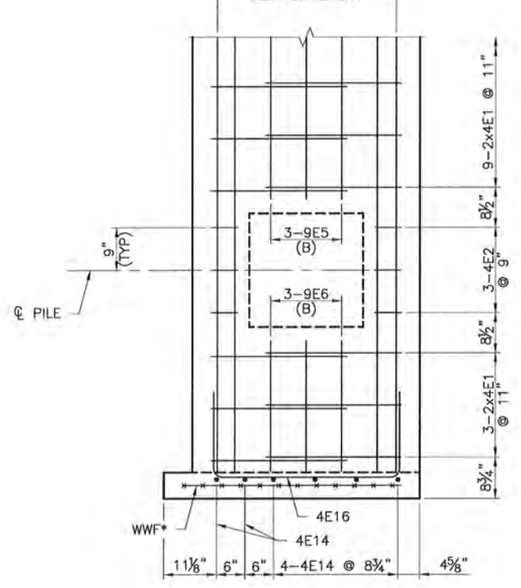
* WELDED WIRE FABRIC 4x4 – W4.0xW4.0 (MINIMUM 2'–3" WIDE) TIED TO BACKWALL AND CAP BARS



VIEW F–F



SECTION G–G



SECTION H–H

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: TSP 01-11
Designed By: SJM 01-11
Checked By: TSP 01-11

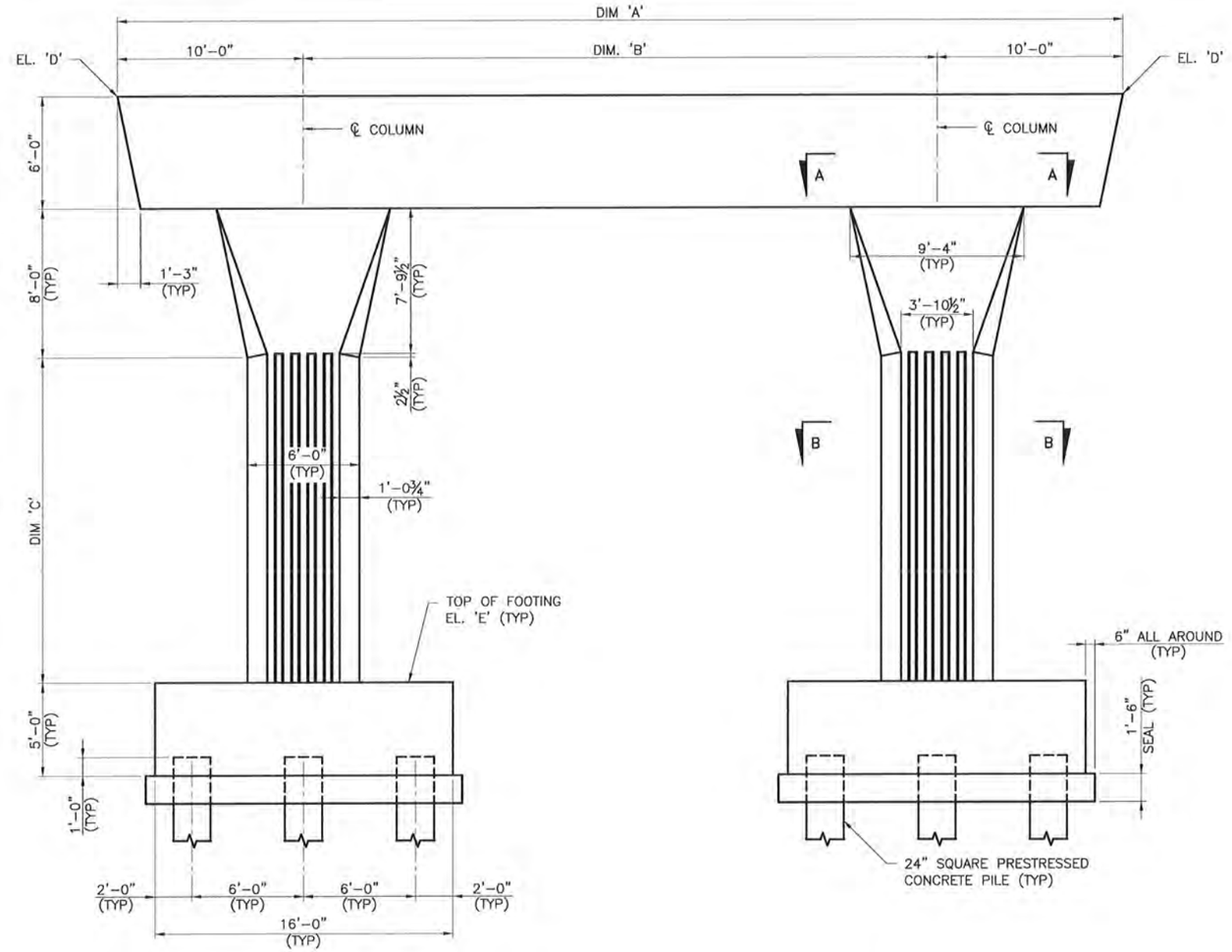
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
7/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: END BENT DETAILS (2 OF 2)
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
REF. DWG. NO.
SHEET NO. B-23

FILENAME: e:\autocad\2014\fort_homer\dwg\sheets\bendbentdet02.dwg LAYOUT NAME: end bent details (2 of 2) PLOTTED: Friday, August 29, 2014 6:26:56 AM USER: kathy_compton



ELEVATION – PIERS 2, 3 AND 8 THRU 18

TABLE OF VARIABLES

PIER	DIM. 'A'	DIM. 'B'	DIM. 'C'	EL. 'D'	EL. 'E'
2	49'-5"	29'-5"	5'-9½"	23.540	3.75
3	52'-9"	32'-9"	8'-0 1/16"	25.805	3.75
8	51'-7"	31'-7"	13'-3⅜"	31.071	3.75
9	47'-0"	27'-0"	13'-8 15/16"	31.497	3.75
10	47'-0"	27'-0"	14'-2 1/16"	31.923	3.75
11	47'-0"	27'-0"	13'-11 1/16"	31.672	3.75
12	47'-0"	27'-0"	13'-6 1/16"	31.257	3.75
13	47'-0"	27'-0"	13'-1⅜"	30.862	3.75
14	47'-0"	27'-0"	12'-8 9/16"	30.466	3.75
15	47'-0"	27'-0"	12'-3¾"	30.064	3.75
16	47'-0"	27'-0"	11'-10 5/16"	29.662	3.75
17	47'-0"	27'-0"	11'-6 3/16"	29.266	3.75
18	47'-0"	27'-0"	9'-6¼"	28.019	4.50

NOTE

1. FOR SECTIONS AND ADDITIONAL DETAILS, SEE SHEET B-33.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 11-10
Checked By: EAB 11-10
Designed By: AOS 10-10
Checked By: CC 11-10

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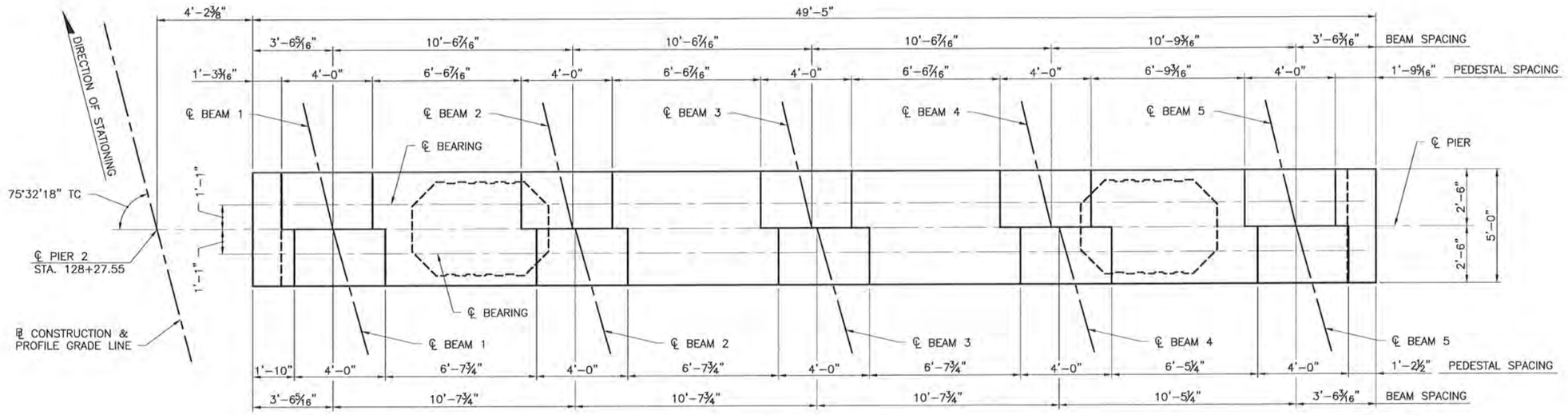
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

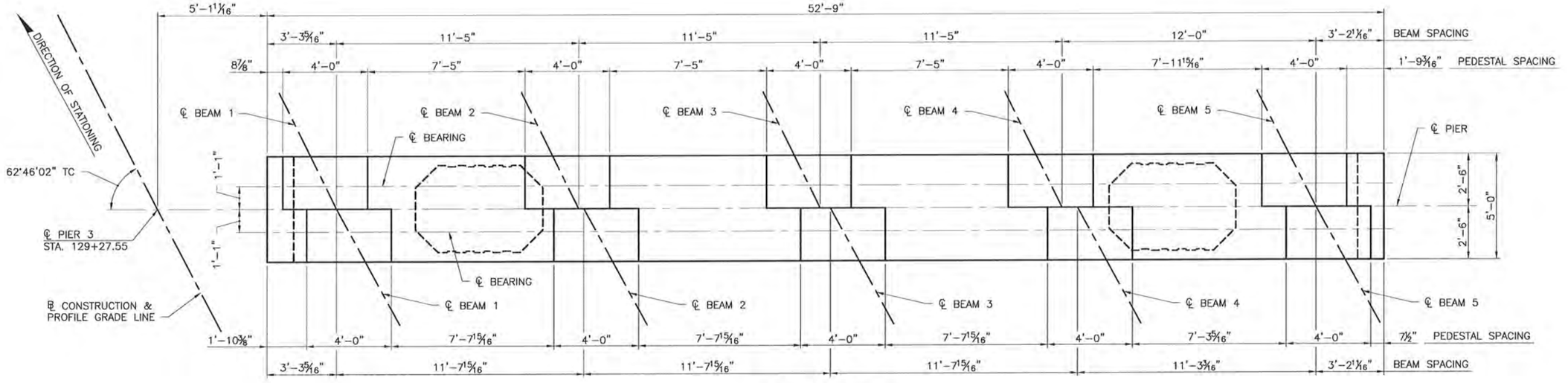
ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: PIER 2, 3 AND 8 THRU 18 GEOMETRY
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
REF. DWG. NO.
SHEET NO. B-24

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\pierdetails01.dwg LAYOUT NAME: pier 2 3 and 8 thru 18 geometry PLOTTED: Friday, August 29, 2014 6:27:01 AM USER: kathy_compton



PLAN – PIER 2



PLAN – PIER 3

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: BWJ 04-14
Designed By: TSP 01-11
Checked By: JBP 04-14

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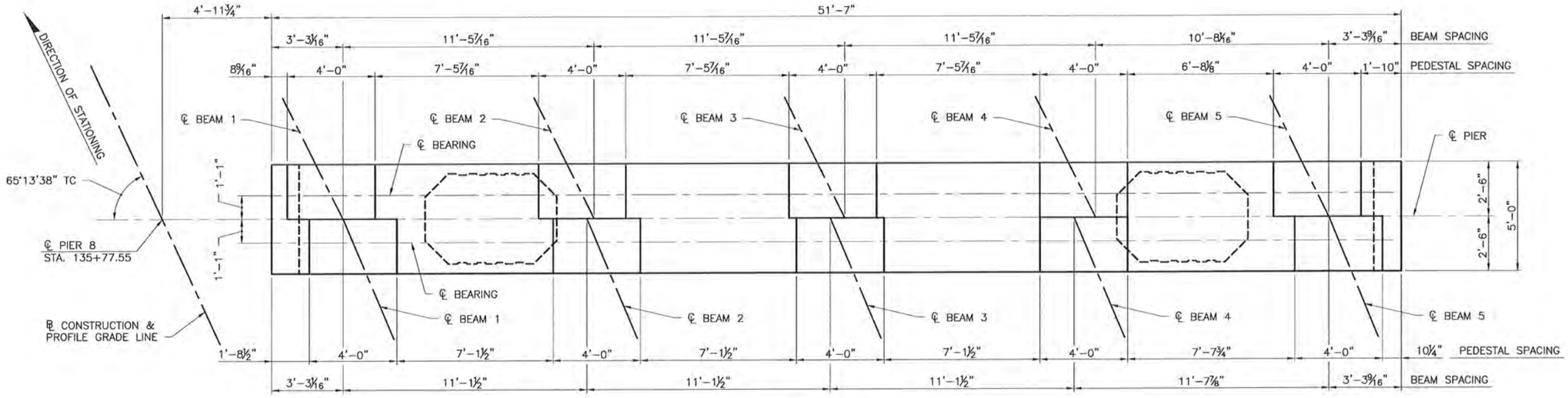
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

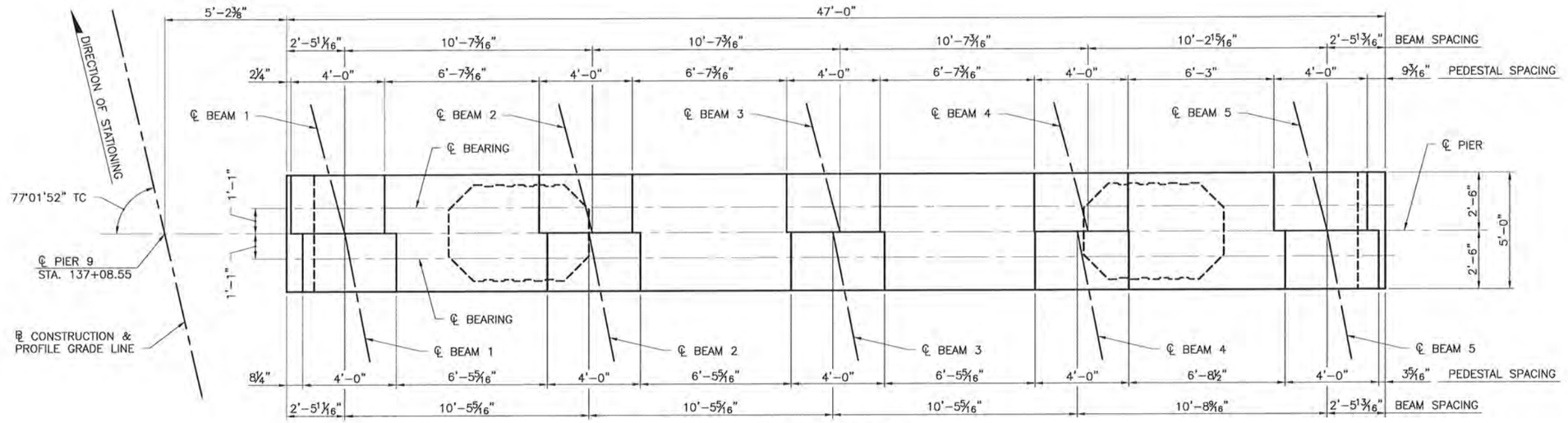
ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: PIER 2 & 3 CAP GEOMETRY
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-25

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bpierdetails09.dwg LAYOUT NAME: pier 2 & 3 cap geometry PLOTTED: Friday, August 29, 2014 6:27:06 AM USER: kathy_compton



PLAN – PIER 8



PLAN – PIER 9

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: BWJ 04-14
Designed By: TSP 01-11
Checked By: JPB 04-14

URS Corporation Southern
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Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

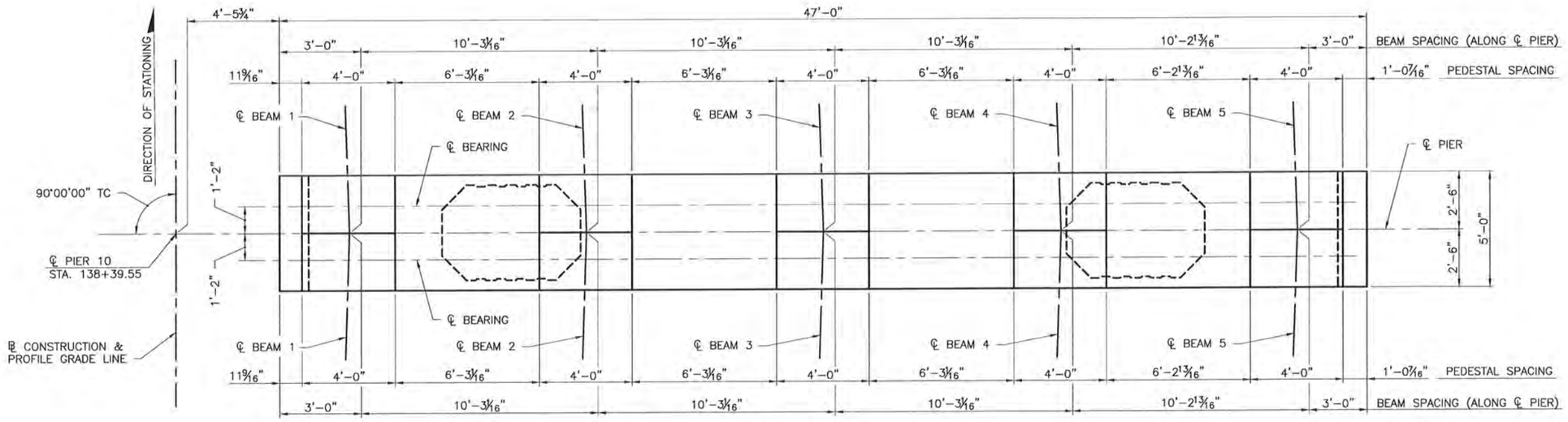
SHEET TITLE: PIER 8 & 9 CAP GEOMETRY

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

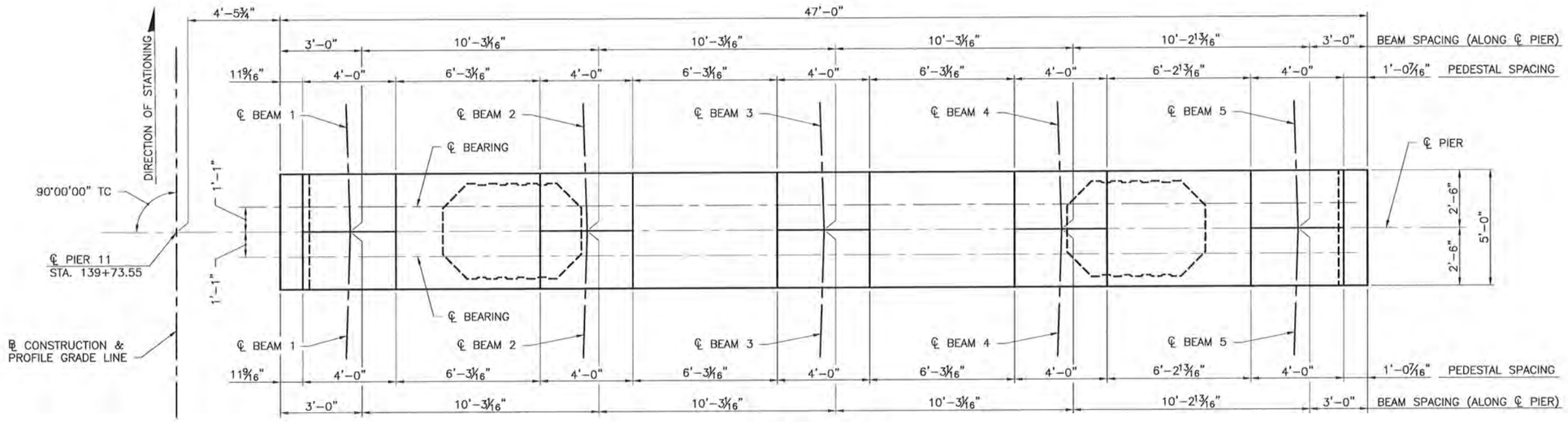
REF. DWG. NO.

SHEET NO. B-26

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bpierdetails10.dwg LAYOUT NAME: pier 8 & 9 cap geometry PLOTTED: Friday, August 29, 2014 6:27:11 AM USER: kathy_compton



PLAN – PIER 10



PLAN – PIER 11

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: BWJ 04-14
Designed By: TSP 01-11
Checked By: JPB 04-14

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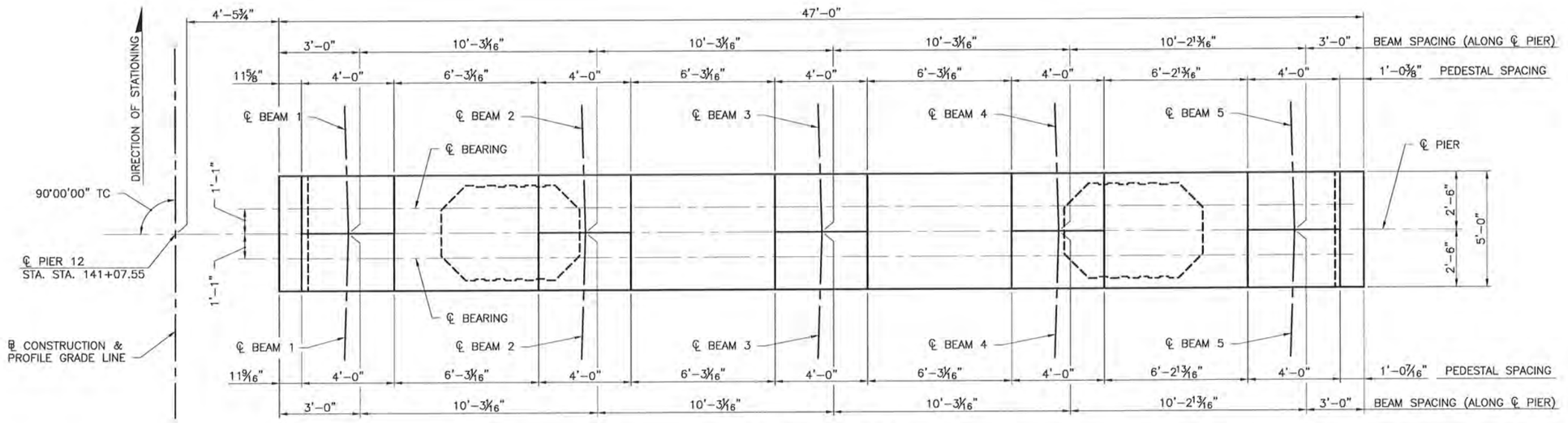
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

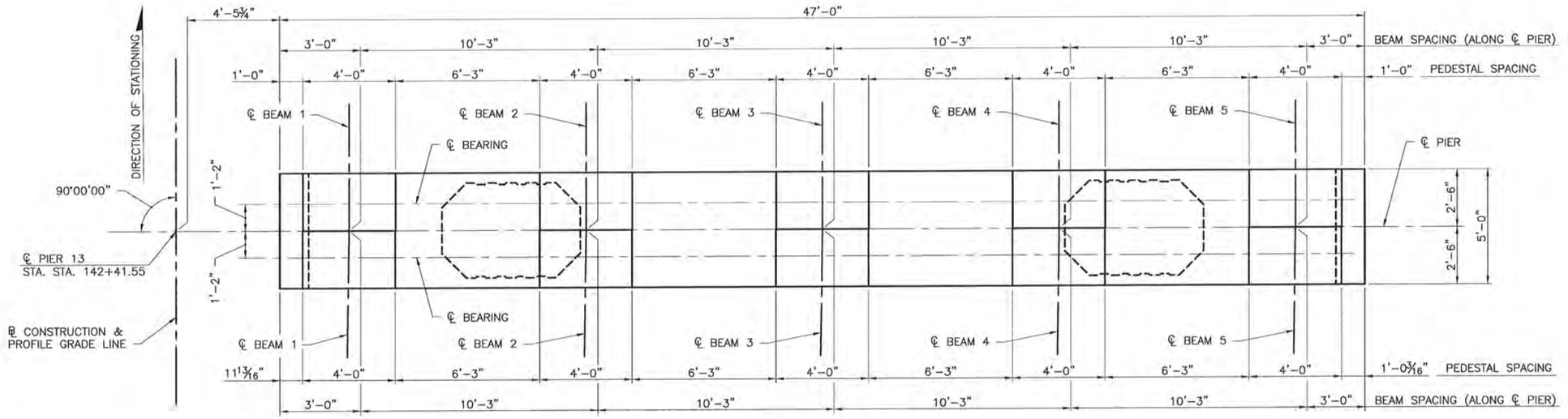
ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: PIER 10 & 11 CAP GEOMETRY
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-27

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bpierdetails11.dwg LAYOUT NAME: pier 10 & 11 cap geometry PLOTTED: Friday, August 29, 2014 6:27:16 AM USER: kathy_compton



PLAN – PIER 12



PLAN – PIER 13

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: BWJ 04-14
Designed By: TSP 01-11
Checked By: BWJ 04-14

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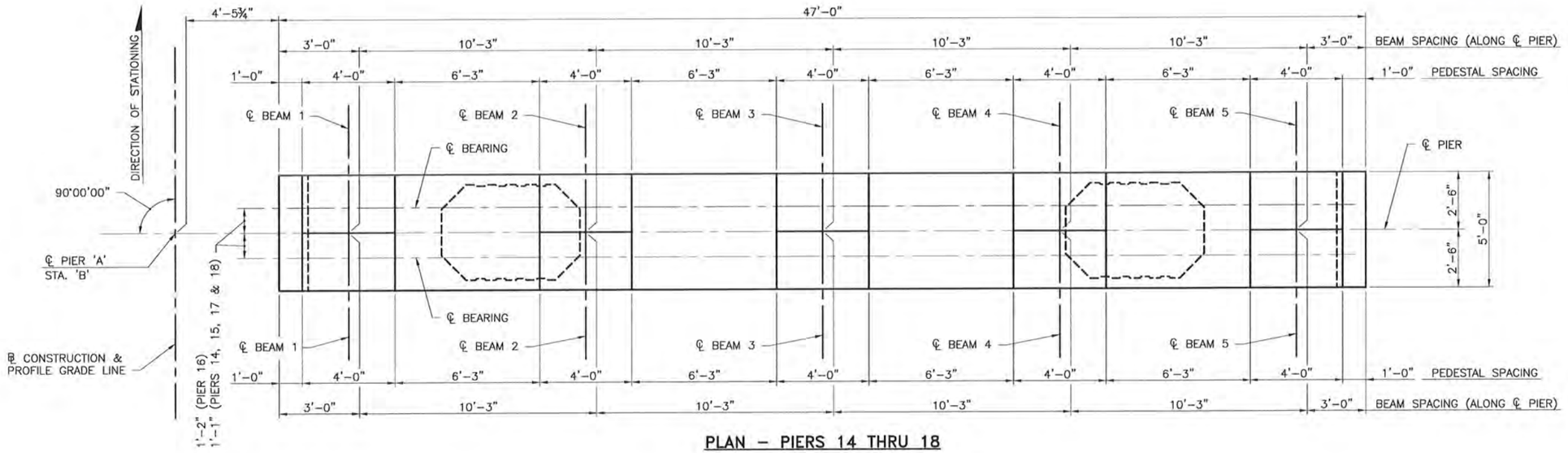
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: PIER 12 & 13 CAP GEOMETRY
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
REF. DWG. NO.
SHEET NO. B-28

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\pierdetails12.dwg LAYOUT NAME: pier 12 & 13 cap geometry PLOTTED: Friday, August 29, 2014 6:27:21 AM USER: kathy_compton



PLAN – PIERS 14 THRU 18

PIER DATA TABLE	
PIER NUMBER 'A'	STATION 'B'
14	143+75.55
15	145+09.55
16	146+43.55
17	147+77.55
18	149+11.55

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: BWJ 04-14
Designed By: TSP 01-11
Checked By: JPB 04-14

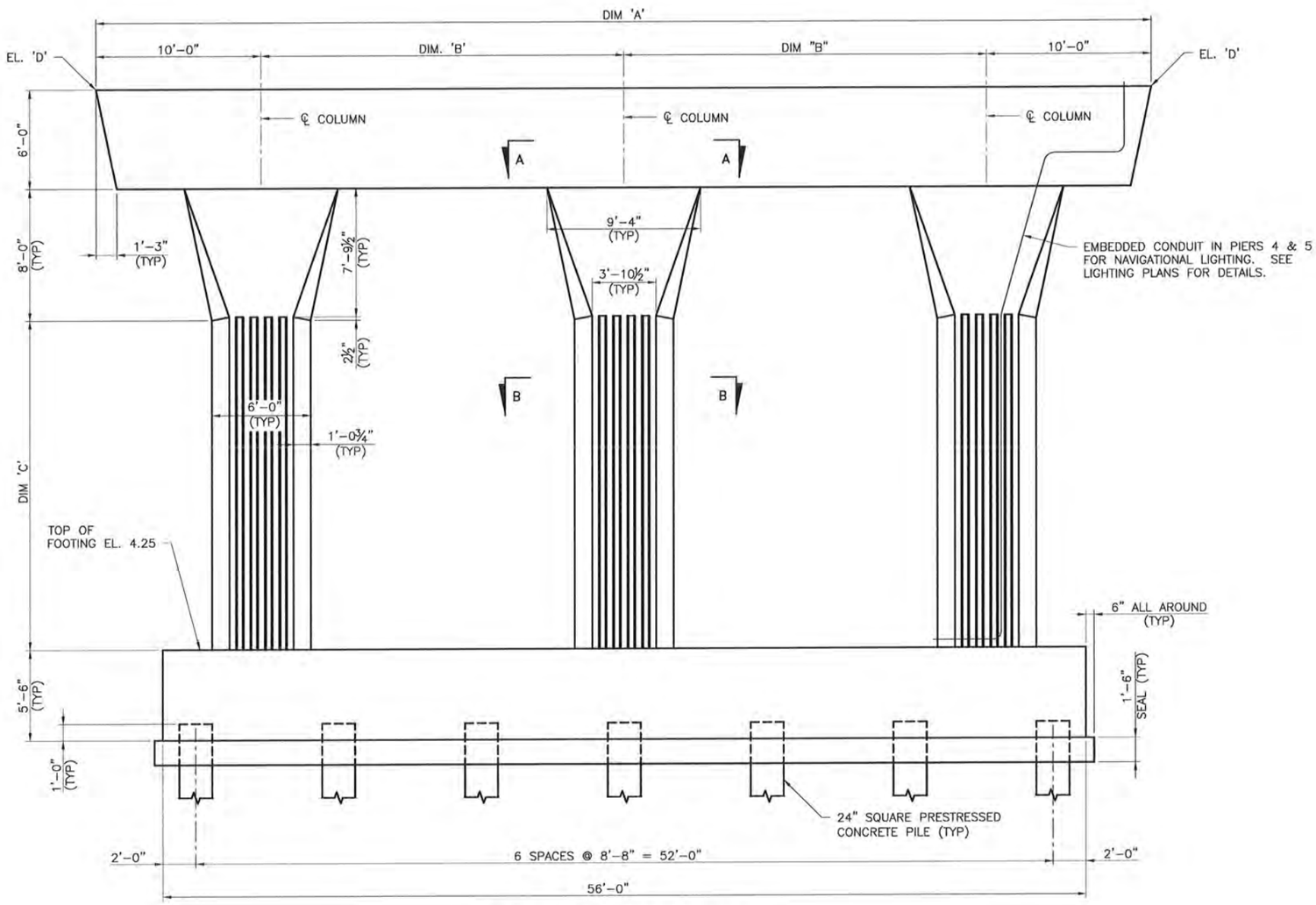
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36076
9/5/14

SHEET TITLE: PIER 14 THRU 18 CAP GEOMETRY
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-29

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bpierdetails13.dwg LAYOUT NAME: pier 14 thru 18 cap geometry PLOTTED: Friday, August 29, 2014 6:27:26 AM USER: kathy_compton



ELEVATION – PIERS 4 THRU 7

TABLE OF VARIABLES				
PIER	DIM. 'A'	DIM. 'B'	DIM. 'C'	EL. 'D'
4	58'-10"	19'-5"	9'-3 15/16"	27.583
5	58'-10"	19'-5"	11'-3 5/16"	29.524
6	62'-3"	21'-1½"	11'-11¾"	30.230
7	56'-2"	18'-1"	12'-4¾"	30.646

NOTE

1. FOR SECTIONS AND ADDITIONAL DETAILS, SEE SHEET B-33.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 11-10
Checked By: EAB 11-10
Designed By: AOS 10-10
Checked By: CC 11-10

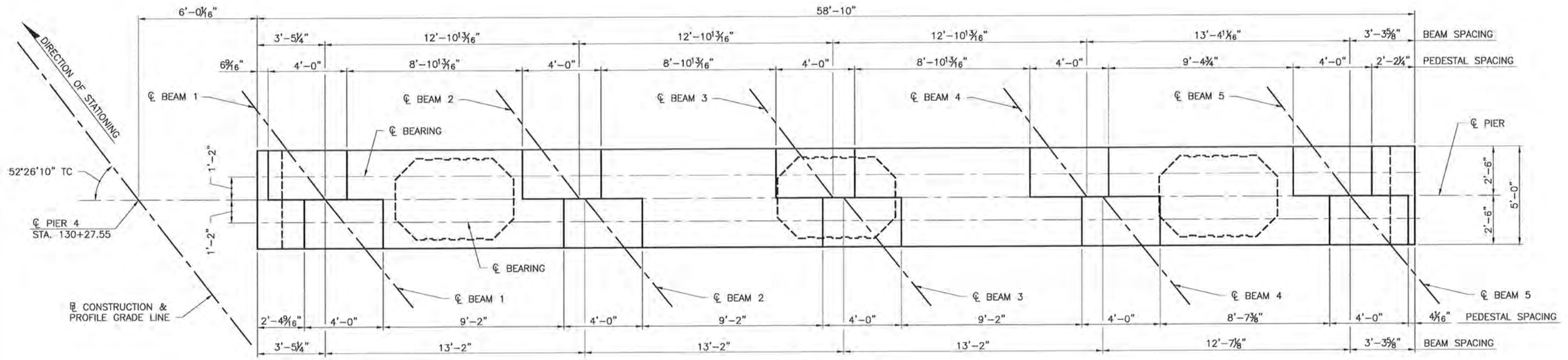
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

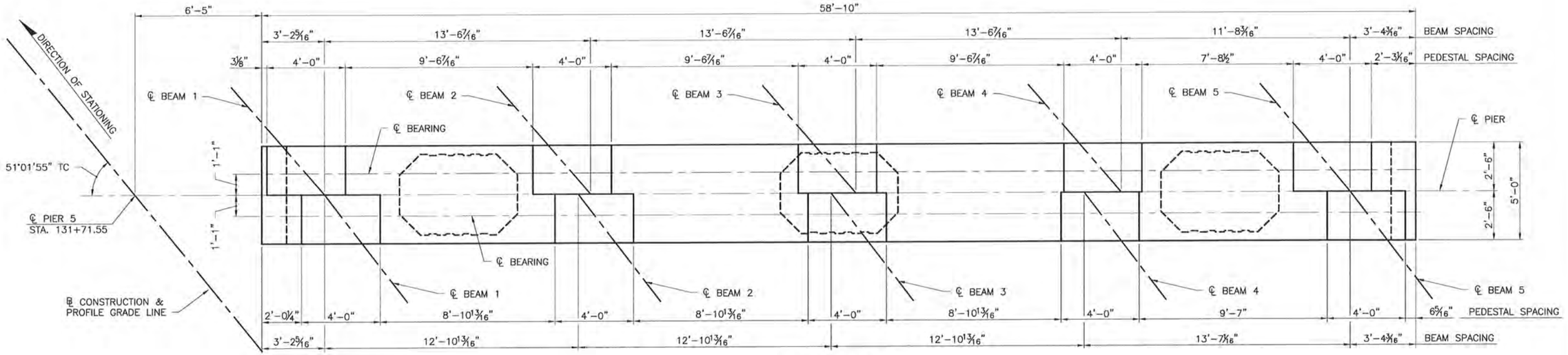
ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: PIER 4 THRU 7 GEOMETRY
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-30

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bpierdetails02.dwg LAYOUT NAME: pier 4 thru 7 geometry PLOTTED: Friday, August 29, 2014 6:27:31 AM USER: kathy_compton



PLAN – PIER 4



PLAN – PIER 5

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: BWJ 04-14
Designed By: TSP 01-11
Checked By: JPB 04-14

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 35078
9/5/14

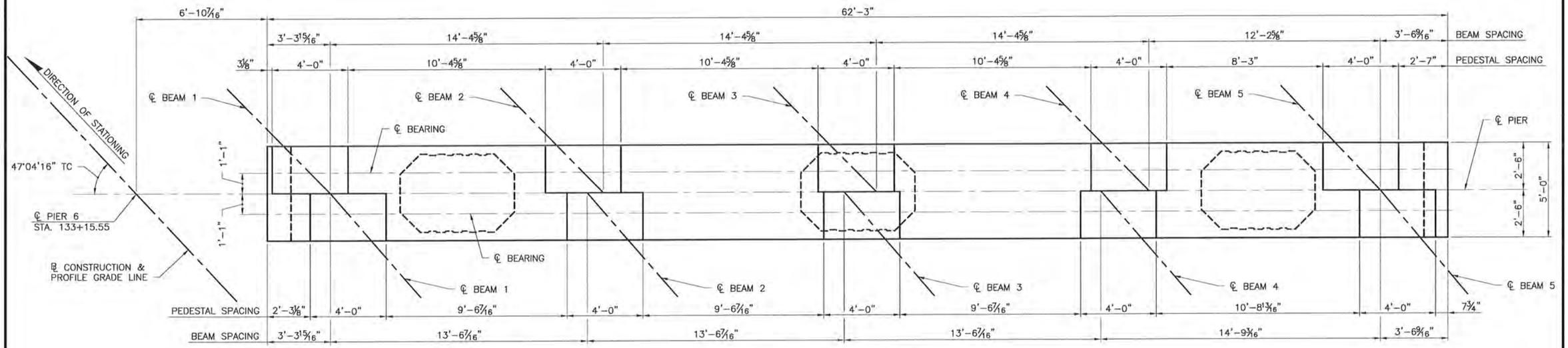
SHEET TITLE: PIER 4 & 5 CAP GEOMETRY

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

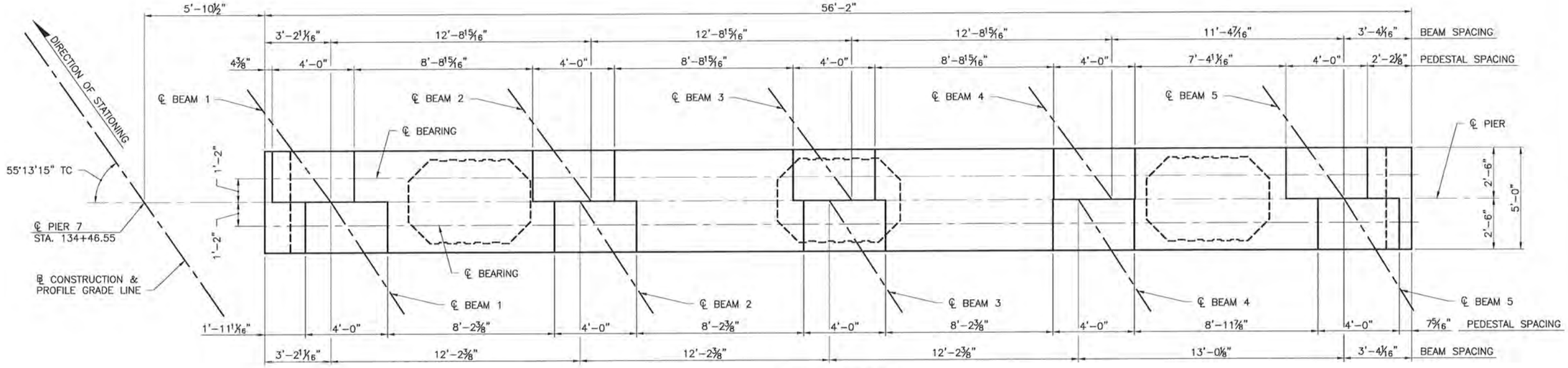
REF. DWG. NO.

SHEET NO. B-31

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bpierdetails14.dwg LAYOUT NAME: pier 4 & 5 cap geometry PLOTTED: Friday, August 29, 2014 6:27:36 AM USER: kathy_carnahan



PLAN – PIER 6



PLAN – PIER 7

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: BWJ 04-14
Designed By: TSP 01-11
Checked By: JPB 04-14

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URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

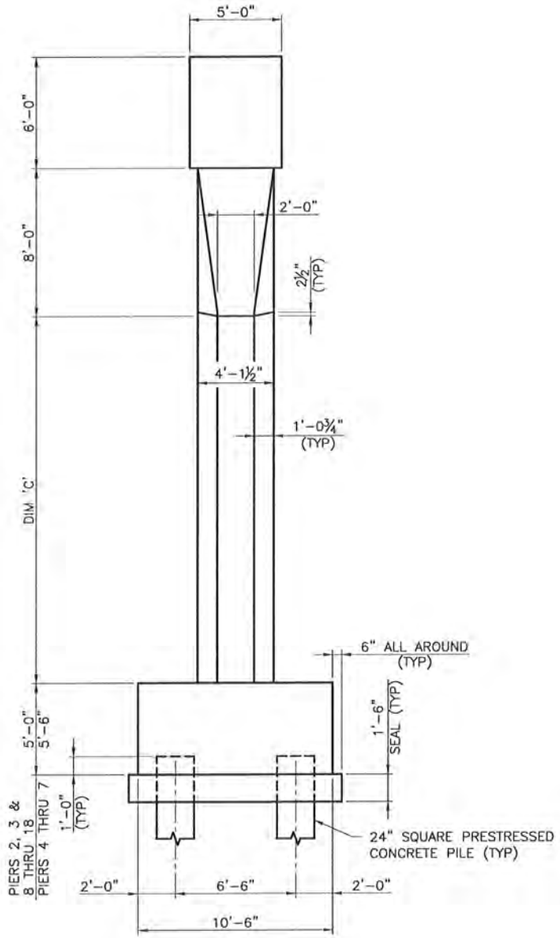
SHEET TITLE: PIER 6 & 7 CAP GEOMETRY

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

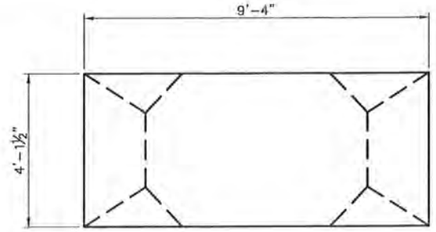
REF. DWG. NO.

SHEET NO. B-32

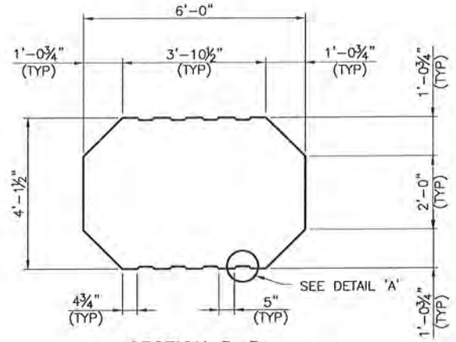
FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bpierdetails15.dwg LAYOUT NAME: pier 6 & 7 cap geometry PLOTTED: Friday, August 29, 2014 6:27:41 AM USER: kathy_compton



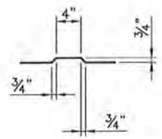
END ELEVATION



SECTION A-A



SECTION B-B



DETAIL 'A'

NOTE

1. FOR ADDITIONAL INFORMATION, SEE SHEETS B-24 & B-30.
2. SEAL DESIGN ASSUMED HIGH WATER AS MHW. IF ACTUAL WATER CONDITIONS EXCEED THIS ELEVATION, CONTRACTOR IS RESPONSIBLE FOR REDESIGNING SEALS.

ESTIMATED QUANITITES

ITEM		UNIT	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14	PIER 15	PIER 16	PIER 17	PIER 18
CLASS IV CONCRETE (MASS SUBSTRUCTURE)	CAP	CY	53.5	57.2	64.0	64.0	67.8	61.0	55.9	50.8	50.8	50.8	50.8	50.8	50.8	50.8	50.8	50.8	50.8
	COLUMN		27.7	31.5	50.4	55.3	57.0	58.1	40.3	41.0	41.7	41.3	40.6	39.9	39.3	38.6	37.9	37.3	33.9
	FOOTING		60.4	60.4	117.7	117.7	117.7	117.7	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4	60.4
	TOTAL		141.7	149.2	232.1	237.0	242.5	236.8	156.6	152.2	153.0	152.5	151.8	151.2	150.5	149.9	149.2	148.5	145.2
CLASS IV CONCRETE (SUBSTRUCTURE)	PEDESTALS		4.3	4.7	4.9	4.5	4.3	4.2	4.1	4.1	4.0	3.7	3.7	3.7	3.7	3.7	3.7	3.9	3.8
REINFORCING STEEL (SUBSTRUCTURE)		LB	30,155	31,525	41,910	42,937	43,550	43,148	33,689	32,396	32,596	32,448	32,333	32,218	32,041	31,949	31,748	31,665	30,968
24" SQ. PRESTRESSED CONCRETE PILES		LF	SEE SUMMARY OF BRIDGE PAY ITEMS																

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 11-10
Checked By: EAB 11-10
Designed By: AOS 10-10
Checked By: CC 11-10

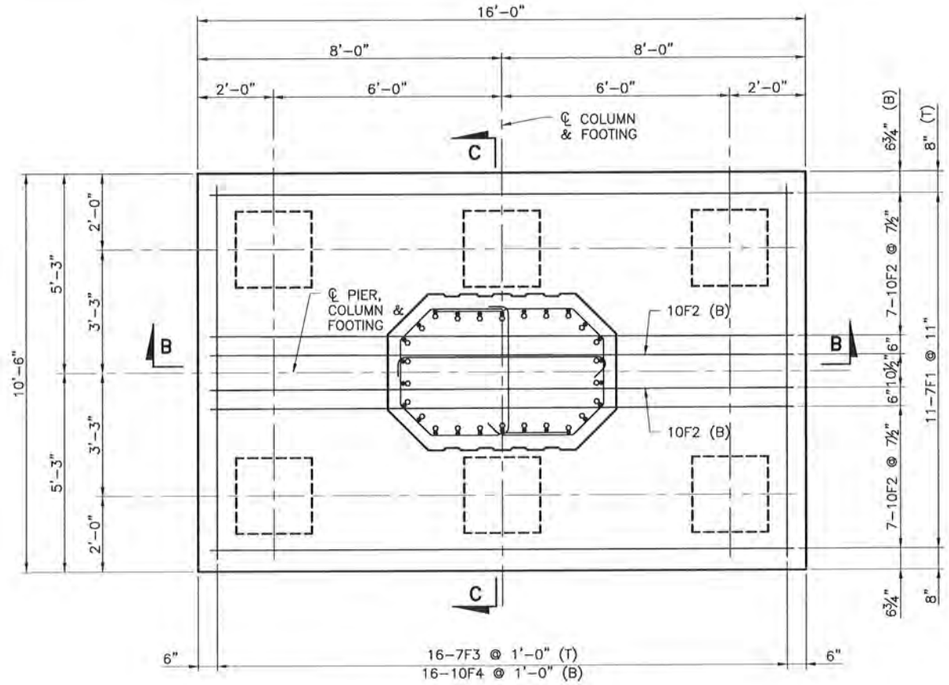
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

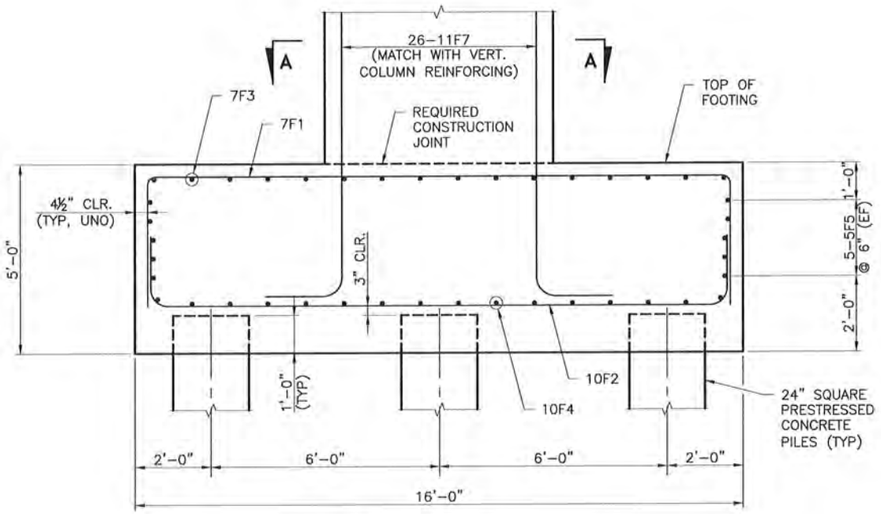
ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: PIER GEOMETRY DETAILS
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-33

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bpierdetails03.dwg LAYOUT NAME: pier geometry details PLOTTED: Tuesday, September 02, 2014 5:26:07 PM USER: kathy_compton

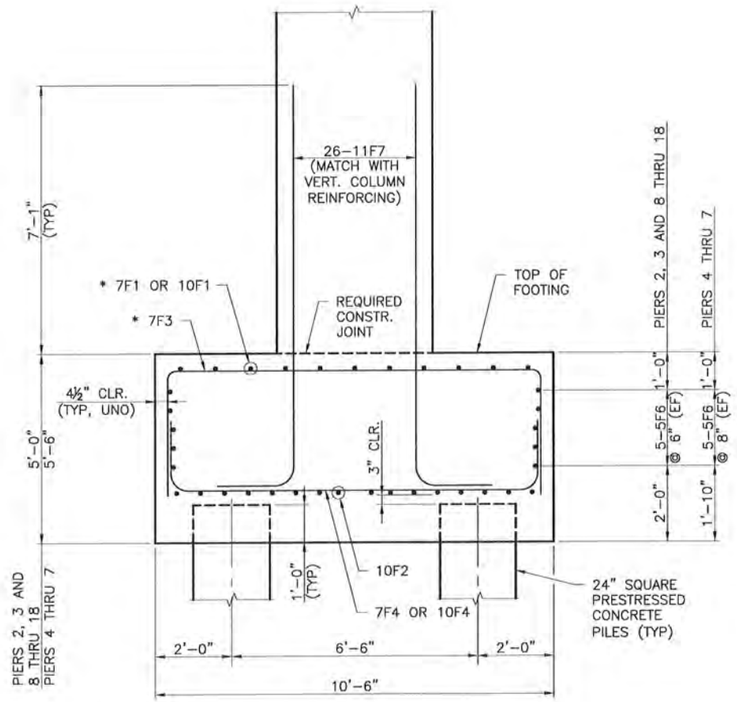


PLAN – PIERS 2, 3 AND 8 THRU 18



SECTION B–B

* BARS MAY BE SHIFTED UP TO 1" TO AVOID CONFLICTS WITH COLUMN REINFORCEMENT.



SECTION C–C

NOTES

1. FOR SECTION A–A, SEE SHEET B–38.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: JPB 04-14
Designed By: TSP 01-11
Checked By: JPB 04-14

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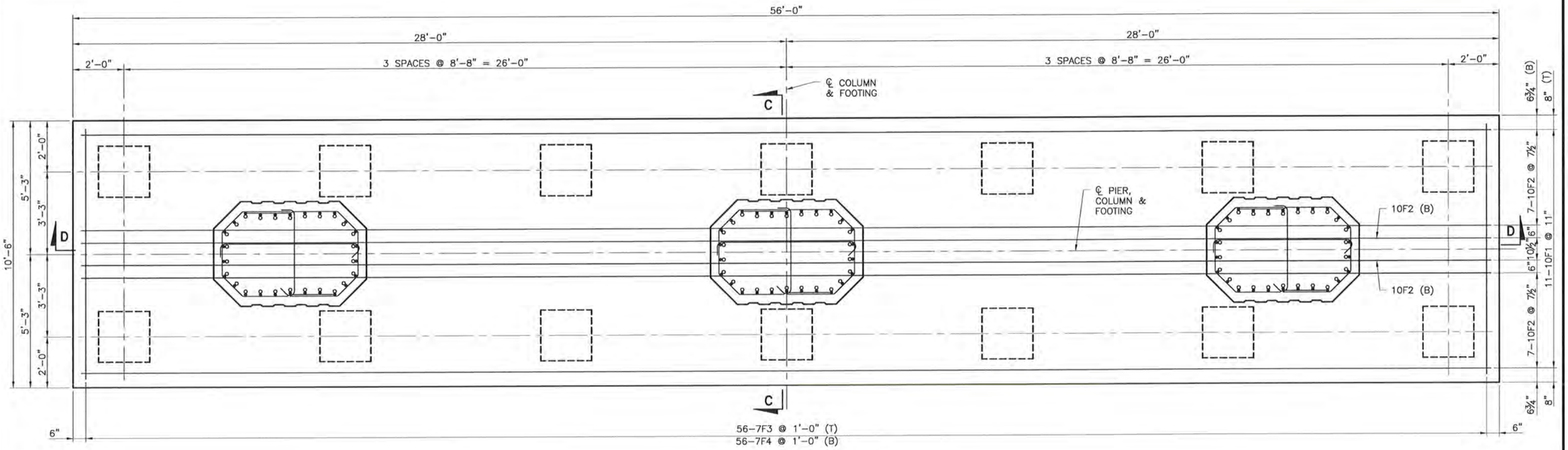
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

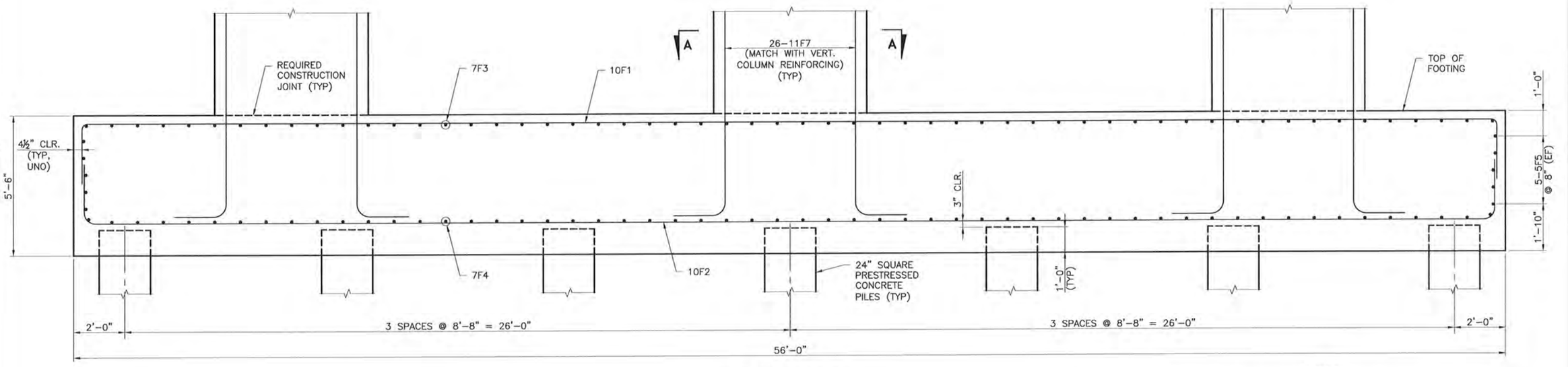
ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: FOOTING DETAILS (1 OF 2)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B–34

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bfootingdet01.dwg LAYOUT NAME: footing details (1 of 2) PLOTTED: Friday, August 29, 2014 6:27:51 AM USER: kathy_compton



PLAN – PIERS 4 THRU 7
(PIERS 4 & 5 SHOWN, PIERS 6 & 7 SIMILAR)



SECTION D–D

NOTES

1. FOR SECTION A–A, SEE SHEET B–38.
2. FOR SECTION C–C, SEE SHEET B–34.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: JPB 04-14
Designed By: TSP 01-11
Checked By: JPB 04-14

URS Corporation Southern
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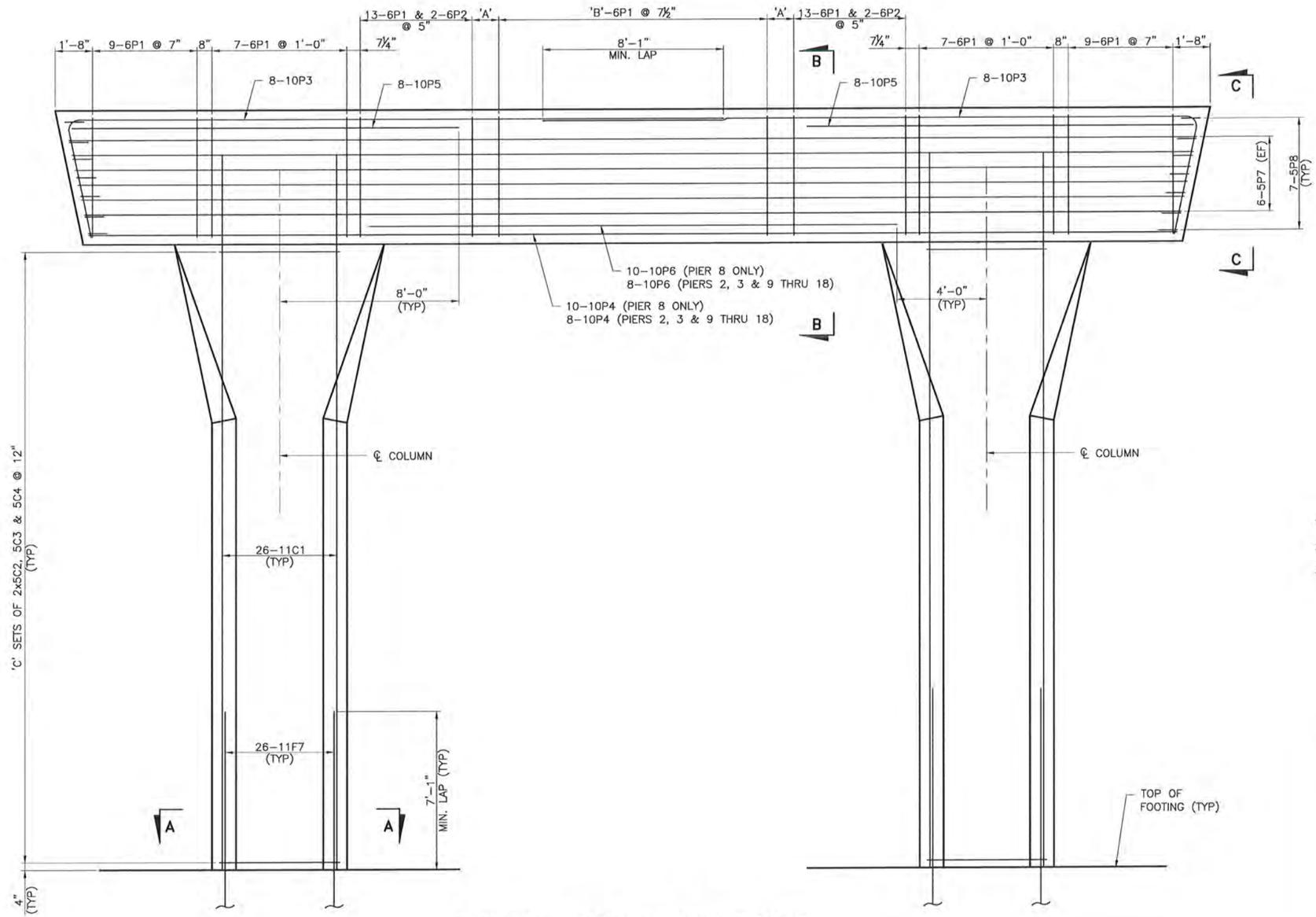
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: FOOTING DETAILS (2 OF 2)
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-35

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bfootingdet02.dwg LAYOUT NAME: footing details (2 of 2) PLOTTED: Friday, August 29, 2014 6:27:56 AM USER: kathy_compton



ELEVATION – PIERS 2, 3 AND 8 THRU 18
(PEDESTALS NOT SHOWN)

NOTES

1. FOR PIER GEOMETRY, SEE SHEETS B-24 THRU B-29.
2. FOR SECTIONS & ADDITIONAL DETAILS, SEE SHEETS B-38 & B-39.
3. FOR FOOTING DETAILS, SEE SHEET B-34.

TABLE OF VARIABLES			
LOCATION	'A'	'B'	'C'
PIER 2	5¾"	19	14
PIER 3	7"	24	17
PIER 8	9¾"	23	22
PIER 9	6¼"	15	22
PIER 10	6¼"	15	23
PIERS 11 THRU 13	6¼"	15	22
PIERS 14 & 15	6¼"	15	21
PIERS 16 & 17	6¼"	15	20
PIER 18	6¼"	15	18

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 11-10
Checked By: EAB 11-10
Designed By: AOS 10-10
Checked By: CC 11-10

URS Corporation Southern
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Tampa, Florida 33607-1462
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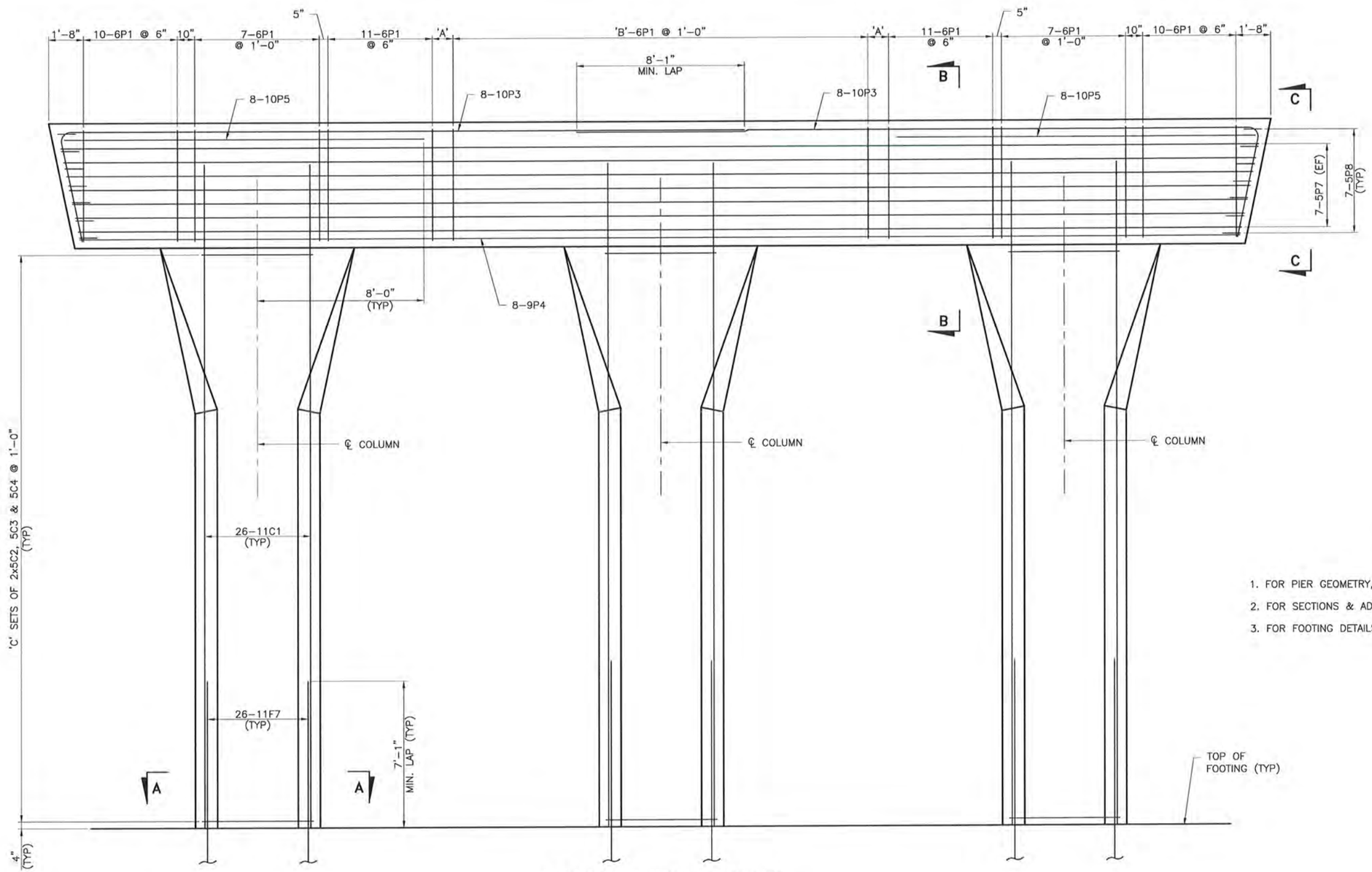
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: PIER 2, 3 AND 8 THRU 18 REINFORCEMENT
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
REF. DWG. NO.
SHEET NO. B-36

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bpierdetails04.dwg LAYOUT NAME: pier 2 3 and 8 thru 18 reinforcement PLOTTED: Friday, August 29, 2014 6:28:01 AM USER: kathy_compton



ELEVATION – PIERS 4 THRU 7

(PEDESTALS NOT SHOWN)

TABLE OF VARIABLES			
LOCATION	'A'	'B'	'C'
PIER 4	1'–0"	21	18
PIER 5	1'–0"	21	20
PIER 6	8½"	25	20
PIER 7	8"	19	21

NOTES

1. FOR PIER GEOMETRY, SEE SHEETS B–30 THRU B–32.
2. FOR SECTIONS & ADDITIONAL DETAILS, SEE SHEETS B–38 & B–39.
3. FOR FOOTING DETAILS, SEE SHEET B–35.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: JPB 04-14
Designed By: TSP 01-11
Checked By: JPB 04-14

URS Corporation Southern
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Tampa, Florida 33607-1462
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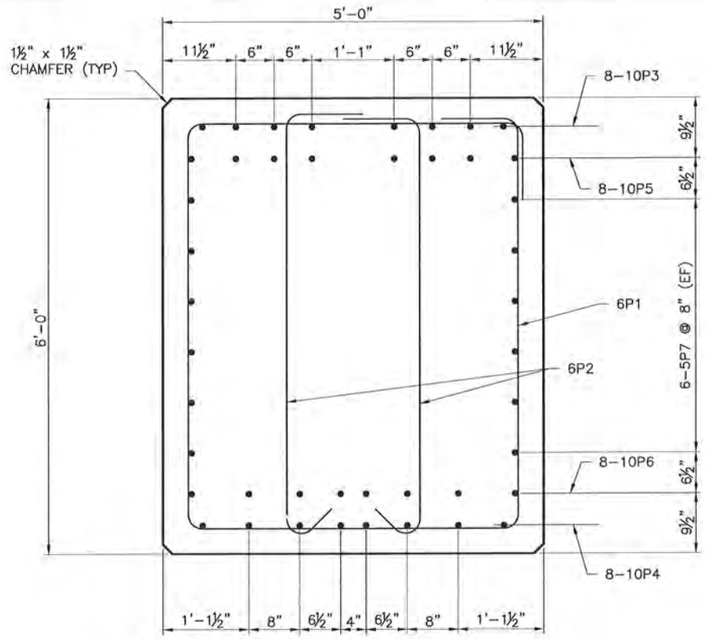
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

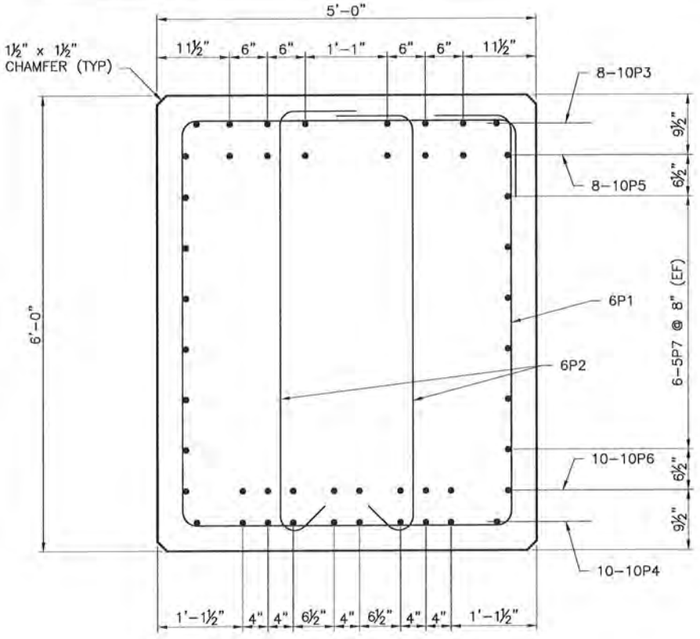
ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: PIER 4 THRU 7 REINFORCEMENT
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B–37

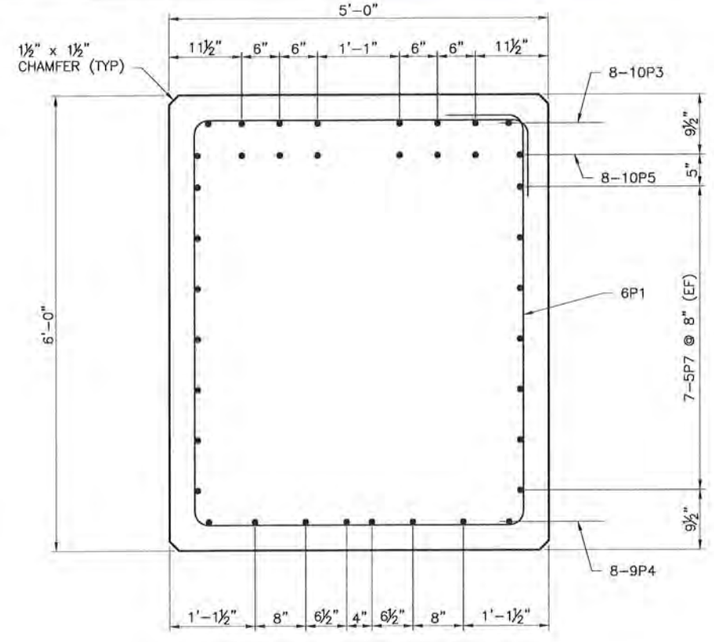
FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bpierdetails06.dwg LAYOUT NAME: pier 4 thru 7 reinforcement PLOTTED: Friday, August 29, 2014 6:28:06 AM USER: kathy_compton



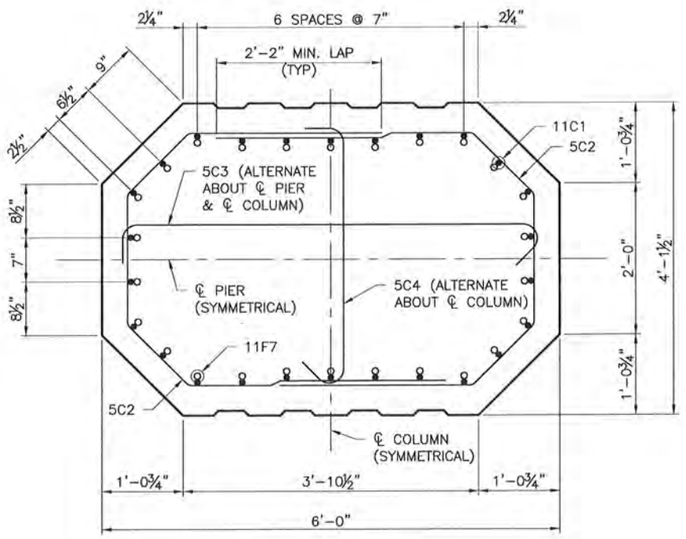
SECTION B-B (PIERS 2, 3 & 9 THRU 18)



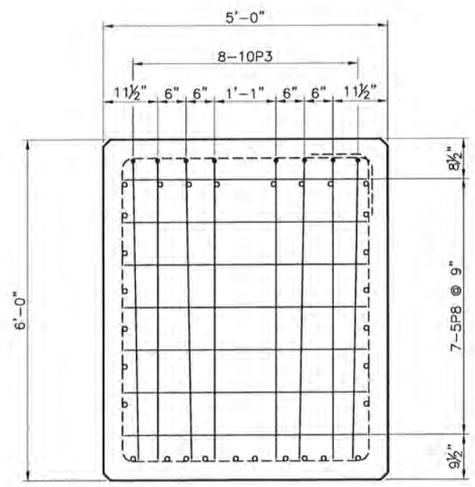
SECTION B-B (PIER 8 ONLY)



SECTION B-B (PIERS 4 THRU 7)



SECTION A-A



VIEW C-C

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: JPB 04-14
Designed By: TSP 01-11
Checked By: JPB 04-14

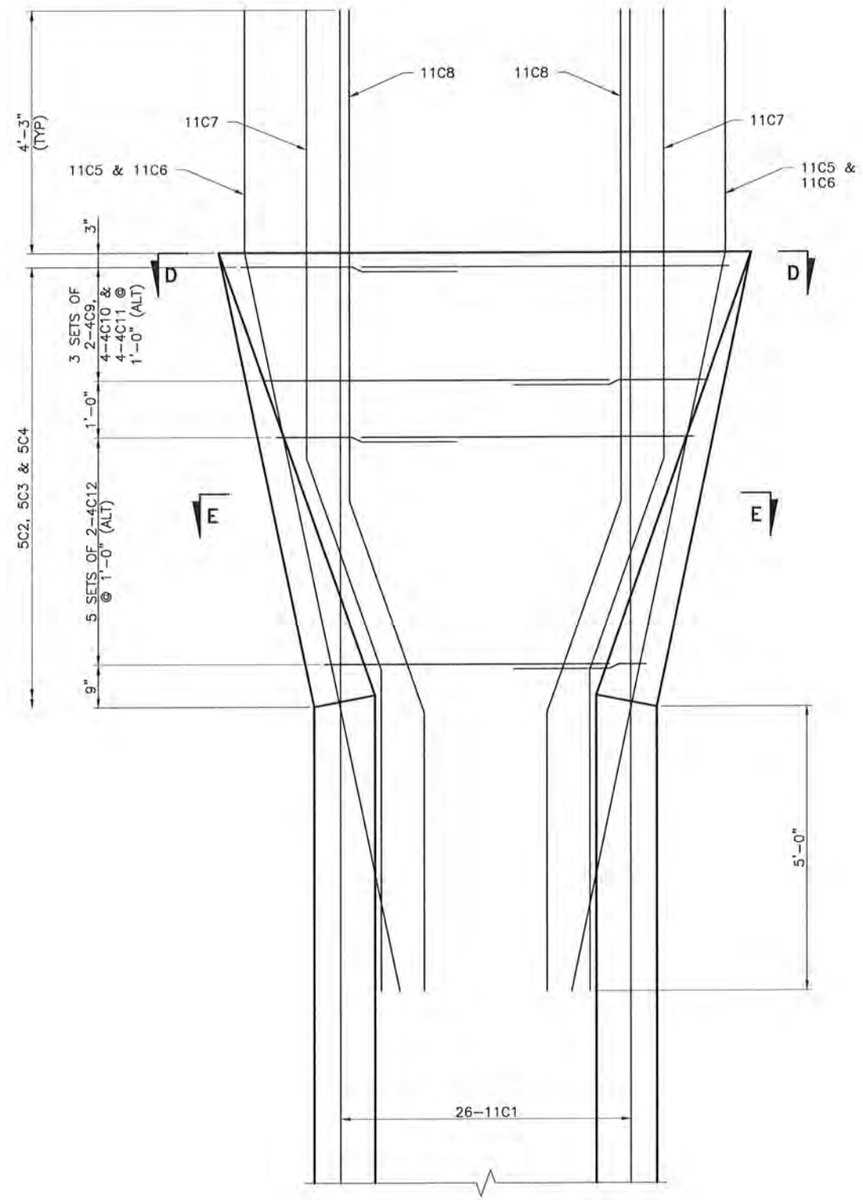
URS Corporation Southern
7650 West Courtney Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

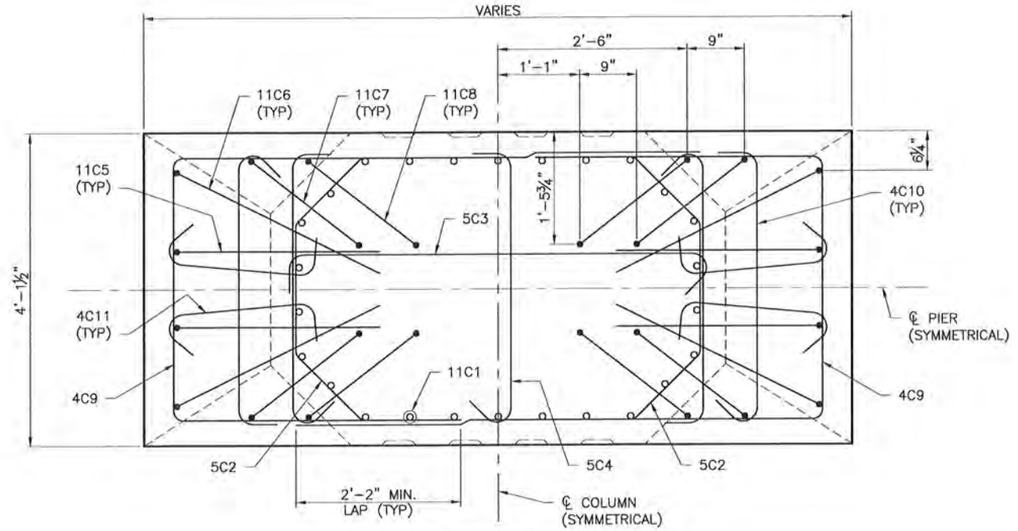
ENGINEER OF RECORD
7/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: PIER REINFORCEMENT DETAILS (1 OF 2)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-38

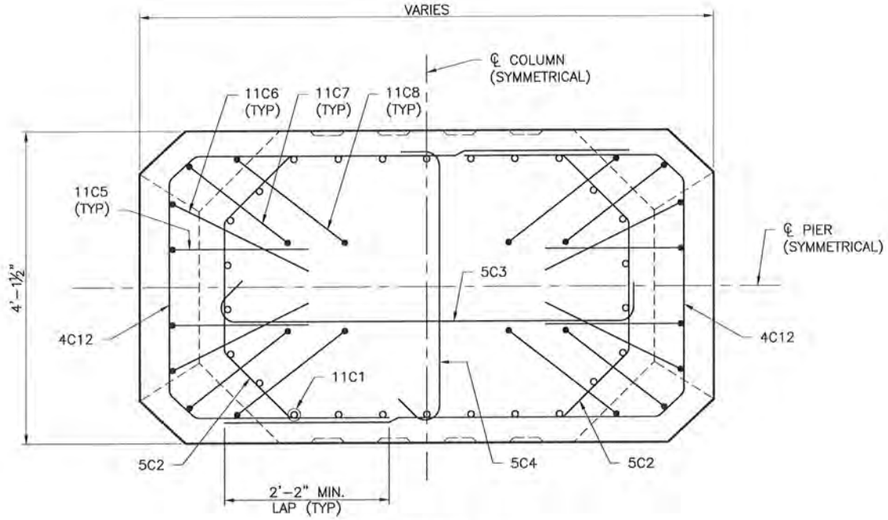
FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bpierdetails05.dwg LAYOUT NAME: pier reinforcement details (1 of 2) PLOTTED: Friday, August 29, 2014 6:28:11 AM USER: kathy_campton



DETAIL "A"



SECTION D-D



SECTION E-E

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: JPB 04-14
Designed By: TSP 01-11
Checked By: JPB 04-14

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
7/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

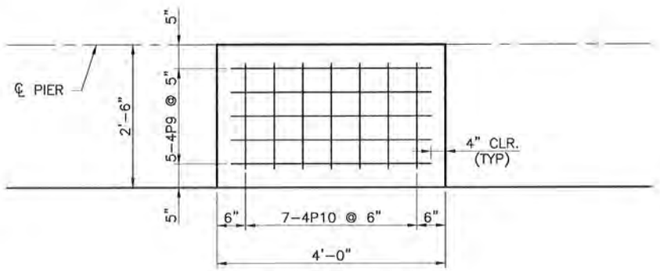
SHEET TITLE: PIER REINFORCEMENT DETAILS (2 OF 2)

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

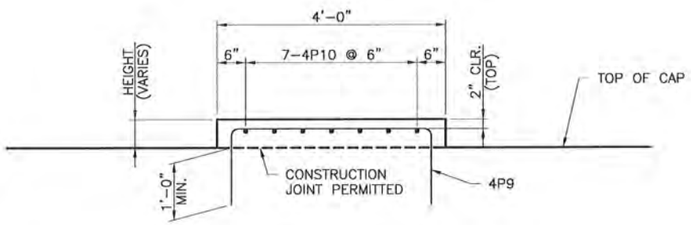
REF. DWG. NO.

SHEET NO. B-39

FILENAME: o:\autocad\2014\fort_hamer\dwg\sheets\bpierdetails07.dwg LAYOUT NAME: pier reinforcement details (2 of 2) PLOTTED: Friday, August 29, 2014 6:28:16 AM USER: kathy_compton

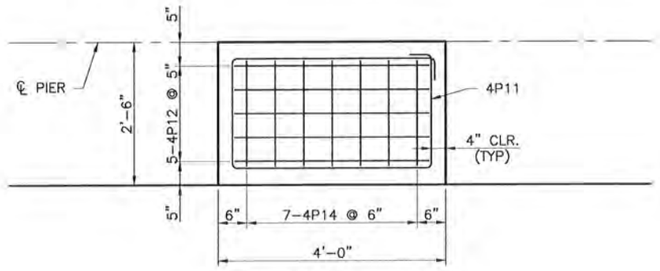


PLAN – PEDESTAL REINFORCING

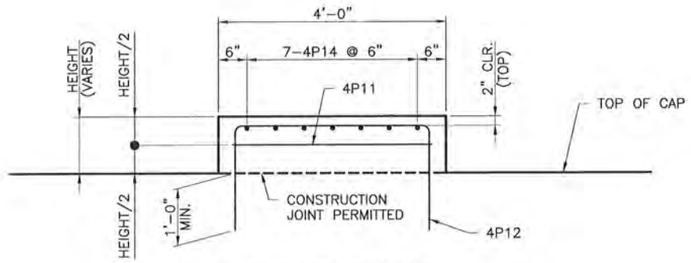


SECTION THRU PEDESTAL

PEDESTAL TYPE A

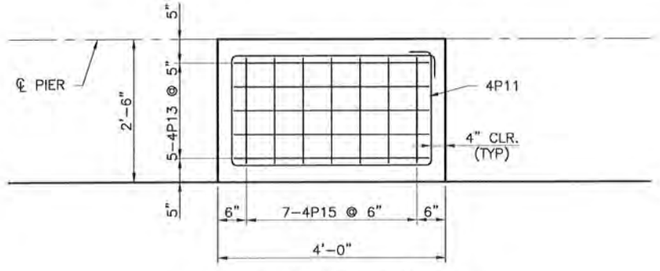


PLAN – PEDESTAL REINFORCING

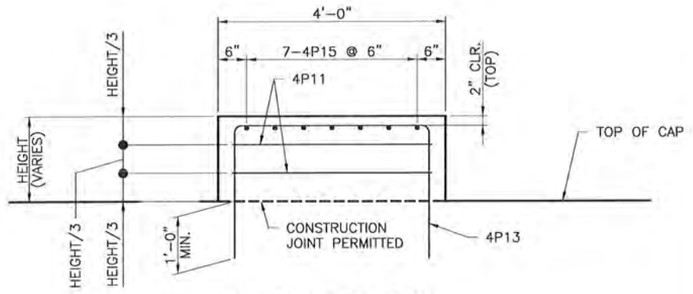


SECTION THRU PEDESTAL

PEDESTAL TYPE B



PLAN – PEDESTAL REINFORCING



SECTION THRU PEDESTAL

PEDESTAL TYPE C

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 04-14
Checked By: BWJ 04-14
Designed By: JPB 04-14
Checked By: BWJ 04-14

URS Corporation Southern
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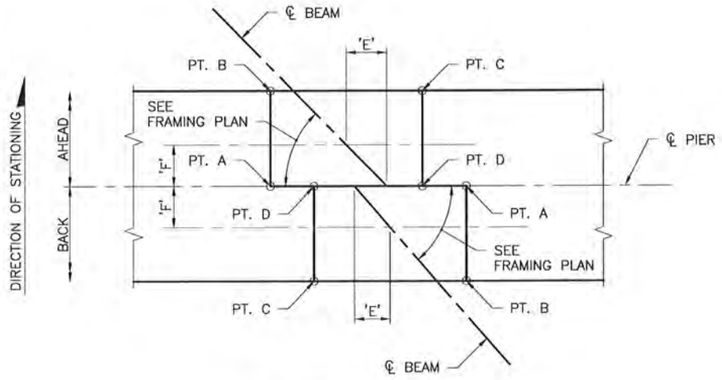
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
7/5/14

SHEET TITLE: PIER PEDESTAL DETAILS (1 OF 2)
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-40

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bpierdetails16.dwg LAYOUT NAME: pier pedestal details (1 of 2) PLOTTED: Friday, August 29, 2014 6:28:21 AM USER: kathy_compton



BEAM SEAT GEOMETRY

BEARING PEDESTAL

LOCATION	BEAM NUMBER	PEDESTAL ELEVATIONS PT. A	PT. B	PT. C	PT. D	DIMENSIONS "E"	"F"	PEDESTAL TYPE
PIER 2 BACK	1	25.339				3 5/8"	1'-1"	C
	2	25.057						C
	3	24.773						B
	4	24.334						B
	5	23.874				3 11/16"		A
PIER 2 AHEAD	1	25.408				3 1/16"	1'-1"	C
	2	25.129						C
	3	24.849						B
	4	24.426						B
	5	23.945				3 3/16"		A
PIER 3 BACK	1	27.790				7 1/16"	1'-1"	C
	2	27.463						C
	3	27.132						B
	4	26.639						B
	5	26.138				7 3/16"		A
PIER 3 AHEAD	1	27.915	27.958	27.925	27.882	6 3/8"	1'-1"	C
	2	27.596	27.640	27.606	27.562			C
	3	27.207						B
	4	26.748						B
	5	26.202				6 9/16"		A
PIER 4 BACK	1	29.731	29.694	29.742	29.779	11 5/16"	1'-2"	C
	2	29.389	29.351	29.400	29.439			C
	3	28.976						B
	4	28.461						B
	5	27.946				11 9/16"		A
PIER 4 AHEAD	1	29.732	29.755	29.727	29.703	10 11/16"	1'-2"	C
	2	29.397	29.422	29.392	29.368			C
	3	29.060	29.085	29.054	29.029			B
	4	28.598	28.625	28.592	28.566			B
	5	28.039	28.066	28.033	28.005			A
PIER 5 BACK	1	31.389	31.365	31.394	31.417	9 15/16"	1'-1"	C
	2	31.123	31.099	31.129	31.153			C
	3	30.855	30.830	30.861	30.886			B
	4	30.472	30.445	30.478	30.504			B
	5	29.975	29.947	29.981	30.008			A
PIER 5 AHEAD	1	31.380				11 3/16"	1'-1"	C
	2	31.139						C
	3	30.859						B
	4	30.404	30.415	30.400	30.389			B
	5	30.009	30.019	30.005	29.995	10 13/16"		A

BEARING PEDESTAL

LOCATION	BEAM NUMBER	PEDESTAL ELEVATIONS PT. A	PT. B	PT. C	PT. D	DIMENSIONS "E"	"F"	PEDESTAL TYPE
PIER 6 BACK	1	31.964				11 3/16"	1'-1"	C
	2	31.773						C
	3	31.544						B
	4	31.210	31.199	31.214	31.225			B
	5	30.745	30.735	30.749	30.759	10 13/16"		A
PIER 6 AHEAD	1	31.872				1'-0 13/16"	1'-1"	C
	2	31.690						B
	3	31.421						B
	4	31.078						B
	5	30.684				1'-0 7/16"		A
PIER 7 BACK	1	32.261				9"	1'-2"	C
	2	32.098						B
	3	31.848						B
	4	31.593						B
	5	31.101				8 3/4"		A
PIER 7 AHEAD	1	32.270				10 3/8"	1'-2"	C
	2	32.097						B
	3	31.837						B
	4	31.518						B
	5	31.109				10 1/8"		A
PIER 8 BACK	1	32.659				5 1/2"	1'-1"	C
	2	32.502						B
	3	32.258						B
	4	32.002						B
	5	31.527				5 5/16"		A
PIER 8 AHEAD	1	32.666				6 1/2"	1'-1"	C
	2	32.503						B
	3	32.252						B
	4	31.954						B
	5	31.534				6 3/8"		A
PIER 9 BACK	1	33.057				2 9/16"	1'-1"	C
	2	32.906						B
	3	32.667						B
	4	32.409						B
	5	31.952				2 7/16"		A
PIER 9 AHEAD	1	33.064				3 7/16"	1'-1"	C
	2	32.909						B
	3	32.667						B
	4	32.388						B
	5	31.959				3 3/8"		A
PIER 10 BACK	1	33.455				7/16"	1'-2"	C
	2	33.309						B
	3	33.076						B
	4	32.815						B
	5	32.378				1/2"		A
PIER 10 AHEAD	1	33.464				7/16"	1'-2"	C
	2	33.308						B
	3	33.110						B
	4	32.831						B
	5	32.375						A
PIER 11 BACK	1	33.130				7/16"	1'-1"	B
	2	32.974						B
	3	32.776						B
	4	32.497						B
	5	32.041						A
PIER 11 AHEAD	1	33.093				7/16"	1'-1"	B
	2	32.938						B
	3	32.740						B
	4	32.461						B
	5	32.005						A
PIER 12 BACK	1	32.698				7/16"	1'-1"	B
	2	32.542						B
	3	32.344						B
	4	32.065						B
	5	31.610						A

BEARING PEDESTAL

LOCATION	BEAM NUMBER	PEDESTAL ELEVATIONS PT. A	PT. B	PT. C	PT. D	DIMENSIONS "E"	"F"	PEDESTAL TYPE
PIER 12 AHEAD	1	32.691				3/8"	1'-1"	B
	2	32.529						B
	3	32.330						B
	4	32.041						B
	5	31.590						A
PIER 13 BACK	1	32.296				3/16"	1'-2"	B
	2	32.134						B
	3	31.935						B
	4	31.647						B
	5	31.196						A
PIER 13 AHEAD	1	32.340				0"	1'-2"	B
	2	32.161						B
	3	31.959						B
	4	31.634						B
	5	31.201						A
PIER 14 BACK	1	31.944				0"	1'-1"	B
	2	31.765						B
	3	31.563						B
	4	31.238						B
	5	30.806						A
PIER 14 AHEAD	1	31.938				0"	1'-1"	B
	2	31.759						B
	3	31.557						B
	4	31.232						B
	5	30.799						A
PIER 15 BACK	1	31.542				0"	1'-1"	B
	2	31.363						B
	3	31.161						B
	4	30.836						B
	5	30.404						A
PIER 15 AHEAD	1	31.536				0"	1'-1"	B
	2	31.357						B
	3	31.155						B
	4	30.830						B
	5	30.397						A
PIER 16 BACK	1	31.141				0"	1'-2"	B
	2	30.962						B
	3	30.760						B
	4	30.435						B
	5	30.002						A
PIER 16 AHEAD	1	31.134				0"	1'-2"	B
	2	30.955						B
	3	30.753						B
	4	30.428						B
	5	29.995						A
PIER 17 BACK	1	30.738				0"	1'-1"	B
	2	30.559						B
	3	30.357						B
	4	30.032						B
	5	29.599						A
PIER 17 AHEAD	1	30.900	30.875	30.875	30.900	0"	1'-1"	C
	2	30.694	30.669	30.669	30.694			B
	3	30.489	30.464	30.464	30.489			B
	4	30.155	30.130	30.130	30.155			B
	5	29.760	29.735	29.735	29.760			A
PIER 18 BACK	1	29.570	29.595	29.595	29.570	0"	1'-1"	C
	2	29.365	29.389	29.389	29.365			B
	3	29.159	29.184	29.184	29.159			B
	4	28.825	28.850	28.850	28.825			B
	5	28.430	28.455	28.455	28.430			A
PIER 18 AHEAD	1	29.492				0"	1'-1"	B
	2	29.286						B
	3	29.081						B
	4	28.746						A
	5	28.352						A

BRIDGE NO. 134123

REVISIONS

Date	By	Description	Date	By	Description

Drawn By: CER 01-11
Checked By: BWJ 04-14
Designed By: SJM 02-11
Checked By: EAB 02-11

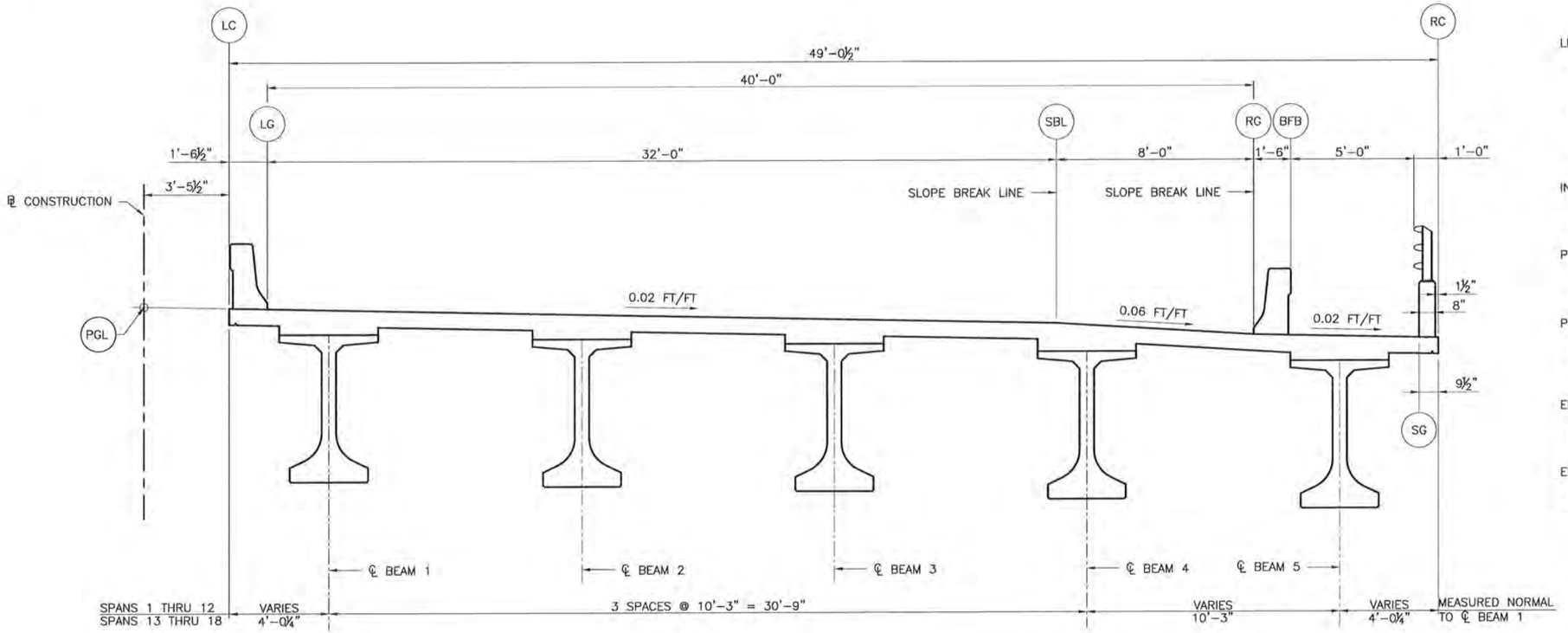
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: PIER PEDESTAL DETAILS (2 OF 2)
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
REF. DWG. NO.
SHEET NO. B-41

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\pierdetails08.dwg LAYOUT NAME: pier pedestal details (2 of 2) PLOTTED: Friday, August 29, 2014 6:28:26 AM USER: kathy_compton



TYPICAL SECTION

NOTES

LEGEND:

PGL – DENOTES PROFILE GRADE LINE
LC – DENOTES LEFT COPING
LG – DENOTES LEFT GUTTER
SBL – DENOTES SLOPE BREAK LINE
RG – DENOTES RIGHT GUTTER
BFB – DENOTES BACK FACE OF BARRIER
SG – DENOTES SIDEWALK GUTTER
RC – DENOTES RIGHT COPING

INCREMENT DISTANCE:
THE DISTANCE ALONG PROFILE GRADE LINE, COPING LINES, GUTTER LINES, ℄ BEAMS, SLOPE BREAK LINE AND SIDEWALK LINES.

POINTS FOR BRIDGE:
POINT "0" IS LOCATED AT FFBW OR ℄ PIER AT THE BEGINNING OF THE SPAN AND THE LAST POINT IS AT FFBW OR ℄ PIER AT THE END OF THE SPAN.

POINTS FOR APPROACH SLABS:
POINT "0" IS LOCATED AT BEGIN OF APPROACH SLAB 1 AND FFBW FOR APPROACH SLAB 2. POINT "2" IS LOCATED AT FFBW FOR APPROACH SLAB 1 AND END OF APPROACH SLAB 2.

ELEVATIONS FOR BRIDGE:
ELEVATIONS GIVEN ARE TOP OF SLAB ELEVATIONS AT COPING LINES, GUTTER LINES, ℄ BEAMS, SLOPE BREAK LINE AND SIDEWALK LINES.

ELEVATIONS FOR APPROACH SLABS:
ELEVATIONS GIVEN ARE TOP OF RIDING SURFACE ELEVATIONS ALONG COPING LINES, GUTTER LINES, SLOPE BREAK LINE AND SIDEWALK LINES.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: CC 01-11
Designed By: AOS 01-11
Checked By: CC 01-11

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
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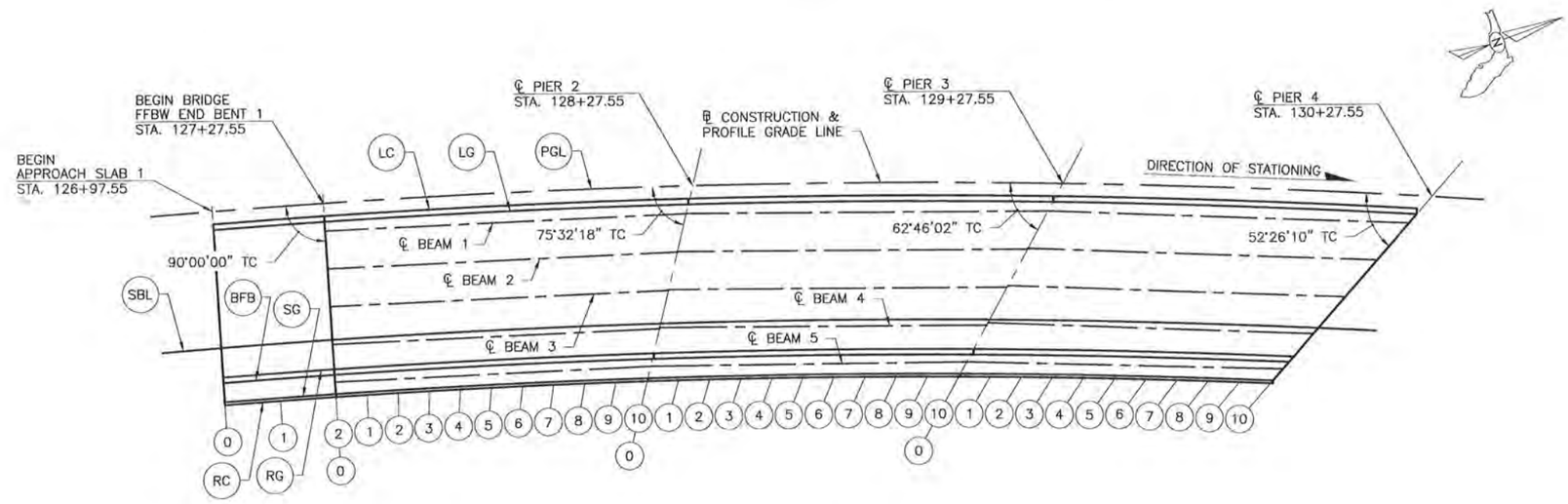
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: FINISH GRADE ELEVATIONS (1 OF 7)
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
REF. DWG. NO.
SHEET NO. B-42

FILENAME: c:\autocad\2014\fort_hamer\dwg\sheets\bfinishgrade01.dwg LAYOUT NAME: finish grade elevations (1 of 7) PLOTTED: Friday, August 29, 2014 6:28:36 AM USER: kathy_compton



PLAN – UNIT 1

FINISH GRADE ELEVATIONS – APPROACH SLAB 1				
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS		
		0	1	2
PGL	15.000	28.577	29.105	29.619
LC	15.000	28.505	29.034	29.550
LG	15.000	28.474	29.004	29.519
SBL	15.000	27.820	28.357	28.879
RG	15.000	27.336	27.875	28.399
BFB	15.000	27.306	27.844	28.369
SG	15.000	27.199	27.739	28.265
RC	15.000	27.183	27.723	28.249

FINISH GRADE ELEVATIONS – SPAN 1												
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	10.000	29.619	29.955	30.284	30.607	30.925	31.236	31.542	31.841	32.134	32.422	32.703
LC	9.850	29.550	29.881	30.206	30.526	30.839	31.147	31.449	31.745	32.035	32.319	32.598
LG	9.850	29.519	29.850	30.176	30.495	30.809	31.116	31.418	31.714	32.004	32.288	32.567
BEAM 1	9.775	29.470	29.795	30.115	30.431	30.741	31.047	31.347	31.643	31.933	32.219	32.499
BEAM 2	9.467	29.265	29.581	29.893	30.200	30.503	30.800	31.093	31.382	31.665	31.944	32.218
BEAM 3	9.158	29.060	29.367	29.670	29.969	30.263	30.553	30.839	31.120	31.396	31.668	31.935
SBL	8.891	28.879	29.182	29.481	29.774	30.062	30.346	30.625	30.898	31.167	31.431	31.690
BEAM 4	8.849	28.805	29.097	29.386	29.673	29.956	30.237	30.514	30.789	31.061	31.330	31.597
RG	8.651	28.399	28.695	28.987	29.273	29.555	29.833	30.105	30.373	30.637	30.895	31.149
BFB	8.606	28.369	28.664	28.954	29.239	29.520	29.796	30.068	30.335	30.597	30.855	31.108
BEAM 5	8.546	28.330	28.620	28.906	29.188	29.466	29.741	30.011	30.278	30.540	30.799	31.053
SG	8.450	28.265	28.555	28.841	29.122	29.398	29.670	29.938	30.201	30.460	30.714	30.964
RC	8.450	28.249	28.539	28.825	29.106	29.382	29.655	29.922	30.185	30.444	30.698	30.948

FINISH GRADE ELEVATIONS – SPAN 2												
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	10.000	32.703	32.978	33.247	33.511	33.768	34.019	34.264	34.503	34.736	34.963	35.185
LC	9.851	32.598	32.870	33.137	33.398	33.653	33.902	34.145	34.382	34.614	34.839	35.059
LG	9.851	32.567	32.839	33.106	33.367	33.622	33.871	34.114	34.351	34.583	34.808	35.028
BEAM 1	9.776	32.499	32.767	33.029	33.287	33.540	33.787	34.030	34.267	34.500	34.728	34.950
BEAM 2	9.463	32.221	32.482	32.739	32.991	33.238	33.481	33.719	33.952	34.181	34.404	34.623
BEAM 3	9.149	31.941	32.197	32.447	32.694	32.936	33.173	33.406	33.635	33.859	34.079	34.294
SBL	8.892	31.690	31.944	32.194	32.438	32.677	32.912	33.141	33.366	33.586	33.801	34.011
BEAM 4	8.836	31.618	31.860	32.098	32.333	32.566	32.796	33.023	33.247	33.468	33.686	33.902
RG	8.652	31.149	31.399	31.643	31.883	32.118	32.349	32.575	32.796	33.013	33.224	33.432
BFB	8.607	31.108	31.356	31.600	31.839	32.073	32.303	32.528	32.749	32.965	33.176	33.383
BEAM 5	8.547	31.053	31.297	31.538	31.774	32.007	32.235	32.460	32.680	32.897	33.110	33.318
SG	8.450	30.964	31.209	31.449	31.686	31.917	32.144	32.367	32.585	32.799	33.008	33.213
RC	8.450	30.948	31.193	31.434	31.670	31.901	32.129	32.351	32.570	32.783	32.993	33.197

FINISH GRADE ELEVATIONS – SPAN 3												
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	10.000	35.185	35.400	35.609	35.812	36.009	36.200	36.385	36.564	36.736	36.903	37.064
LC	9.852	35.059	35.273	35.481	35.683	35.879	36.070	36.254	36.433	36.606	36.773	36.934
LG	9.852	35.028	35.242	35.450	35.652	35.848	36.039	36.223	36.402	36.575	36.742	36.903
BEAM 1	9.777	34.950	35.160	35.365	35.564	35.759	35.949	36.134	36.313	36.488	36.658	36.823
BEAM 2	9.455	34.630	34.837	35.038	35.235	35.427	35.615	35.798	35.976	36.149	36.318	36.482
BEAM 3	9.132	34.308	34.510	34.709	34.903	35.092	35.277	35.458	35.634	35.806	35.973	36.136
SBL	8.995	34.011	34.216	34.416	34.611	34.801	34.987	35.167	35.343	35.514	35.680	35.840
BEAM 4	8.809	33.948	34.138	34.326	34.510	34.692	34.870	35.046	35.219	35.390	35.557	35.721
RG	8.654	33.432	33.634	33.832	34.025	34.214	34.398	34.577	34.751	34.921	35.086	35.246
BFB	8.608	33.383	33.585	33.782	33.975	34.163	34.347	34.526	34.700	34.869	35.034	35.195
BEAM 5	8.548	33.318	33.517	33.712	33.902	34.089	34.272	34.451	34.625	34.796	34.963	35.126
SG	8.450	33.213	33.413	33.609	33.800	33.987	34.170	34.347	34.521	34.690	34.854	35.014
RC	8.450	33.197	33.398	33.593	33.785	33.971	34.154	34.332	34.505	34.674	34.838	34.998

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: CC 01-11
Designed By: CC 01-11
Checked By: AOS 01-11

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

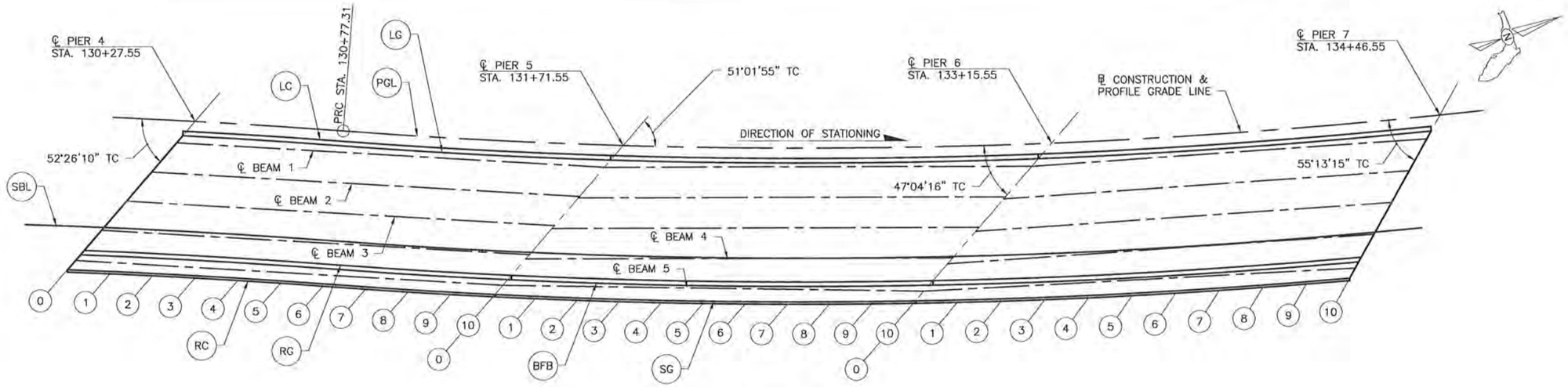
SHEET TITLE: FINISH GRADE ELEVATIONS (2 OF 7)

REF. DWG. NO.

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. B-43

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bfinishgrade02.dwg LAYOUT NAME: finish grade elevations (2 of 7) PLOTTED: Friday, August 29, 2014 6:28:41 AM USER: kathy_compton



PLAN – UNIT 2

FINISH GRADE ELEVATIONS – SPAN 4												
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	14.400	37.064	37.285	37.494	37.690	37.874	38.045	38.204	38.350	38.484	38.605	38.714
LC	14.393	36.934	37.159	37.371	37.571	37.758	37.932	38.093	38.242	38.379	38.503	38.615
LG	14.393	36.903	37.128	37.340	37.540	37.727	37.901	38.062	38.211	38.348	38.473	38.584
BEAM 1	14.389	36.823	37.048	37.263	37.468	37.661	37.840	38.005	38.155	38.291	38.413	38.520
BEAM 2	14.389	36.489	36.721	36.943	37.154	37.354	37.541	37.713	37.870	38.013	38.142	38.257
BEAM 3	14.389	36.150	36.390	36.619	36.837	37.043	37.239	37.417	37.581	37.732	37.868	37.990
SBL	14.374	35.840	36.090	36.327	36.551	36.762	36.960	37.142	37.309	37.465	37.608	37.740
BEAM 4	14.389	35.768	36.008	36.240	36.464	36.681	36.891	37.087	37.264	37.423	37.565	37.688
RG	14.376	35.246	35.502	35.746	35.976	36.193	36.398	36.588	36.760	36.920	37.068	37.204
BFB	14.377	35.195	35.452	35.696	35.928	36.146	36.352	36.544	36.717	36.877	37.026	37.163
BEAM 5	14.377	35.126	35.380	35.623	35.855	36.075	36.284	36.482	36.660	36.824	36.974	37.110
SG	14.380	35.014	35.275	35.524	35.760	35.983	36.192	36.389	36.566	36.730	36.882	37.022
RC	14.380	34.998	35.260	35.508	35.744	35.967	36.177	36.373	36.550	36.714	36.866	37.006

FINISH GRADE ELEVATIONS – SPAN 5												
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	14.400	38.714	38.810	38.894	38.965	39.024	39.071	39.114	39.157	39.200	39.243	39.287
LC	14.374	38.615	38.715	38.802	38.876	38.939	38.989	39.032	39.075	39.118	39.161	39.204
LG	14.374	38.584	38.684	38.771	38.846	38.908	38.958	39.001	39.044	39.087	39.130	39.173
BEAM 1	14.359	38.520	38.630	38.725	38.807	38.873	38.926	38.968	39.008	39.046	39.082	39.116
BEAM 2	14.359	38.244	38.361	38.465	38.554	38.630	38.691	38.738	38.779	38.818	38.855	38.890
BEAM 3	14.359	37.963	38.089	38.200	38.297	38.381	38.450	38.505	38.548	38.588	38.627	38.663
SBL	14.215	37.740	37.858	37.964	38.059	38.142	38.213	38.273	38.320	38.362	38.404	38.446
BEAM 4	14.359	37.588	37.745	37.885	38.007	38.112	38.198	38.267	38.318	38.356	38.389	38.416
RG	14.178	37.204	37.327	37.438	37.537	37.625	37.701	37.766	37.819	37.862	37.903	37.945
BFB	14.171	37.163	37.287	37.399	37.499	37.588	37.665	37.730	37.784	37.828	37.869	37.911
BEAM 5	14.159	37.110	37.243	37.362	37.468	37.561	37.640	37.706	37.759	37.798	37.833	37.866
SG	14.147	37.022	37.148	37.263	37.366	37.458	37.538	37.607	37.664	37.710	37.752	37.793
RC	14.147	37.006	37.132	37.247	37.350	37.442	37.522	37.591	37.649	37.694	37.736	37.777

FINISH GRADE ELEVATIONS – SPAN 6												
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	13.100	39.287	39.326	39.365	39.405	39.444	39.483	39.522	39.562	39.601	39.640	39.680
LC	13.249	39.204	39.243	39.283	39.323	39.362	39.402	39.441	39.481	39.521	39.560	39.600
LG	13.249	39.173	39.212	39.252	39.292	39.331	39.371	39.411	39.450	39.490	39.530	39.569
BEAM 1	13.320	39.116	39.164	39.210	39.254	39.296	39.337	39.376	39.413	39.449	39.482	39.515
BEAM 2	13.669	38.875	38.925	38.973	39.019	39.064	39.106	39.147	39.186	39.224	39.259	39.293
BEAM 3	14.018	38.634	38.686	38.736	38.785	38.831	38.876	38.919	38.960	38.999	39.036	39.071
SBL	14.190	38.446	38.488	38.530	38.571	38.613	38.655	38.697	38.739	38.781	38.822	38.864
BEAM 4	14.367	38.297	38.376	38.448	38.516	38.577	38.632	38.682	38.726	38.764	38.796	38.822
RG	14.422	37.945	37.987	38.030	38.072	38.114	38.157	38.199	38.241	38.284	38.326	38.368
BFB	14.465	37.911	37.953	37.996	38.038	38.081	38.123	38.166	38.208	38.250	38.293	38.335
BEAM 5	14.520	37.866	37.918	37.967	38.015	38.060	38.104	38.145	38.185	38.223	38.258	38.292
SG	14.616	37.793	37.836	37.879	37.921	37.964	38.007	38.050	38.093	38.135	38.178	38.221
RC	14.616	37.777	37.820	37.863	37.906	37.948	37.991	38.034	38.077	38.120	38.162	38.205

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: CC 01-11
Designed By: CC 01-11
Checked By: AOS 01-11

URS Corporation Southern
7650 West Courtney
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Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

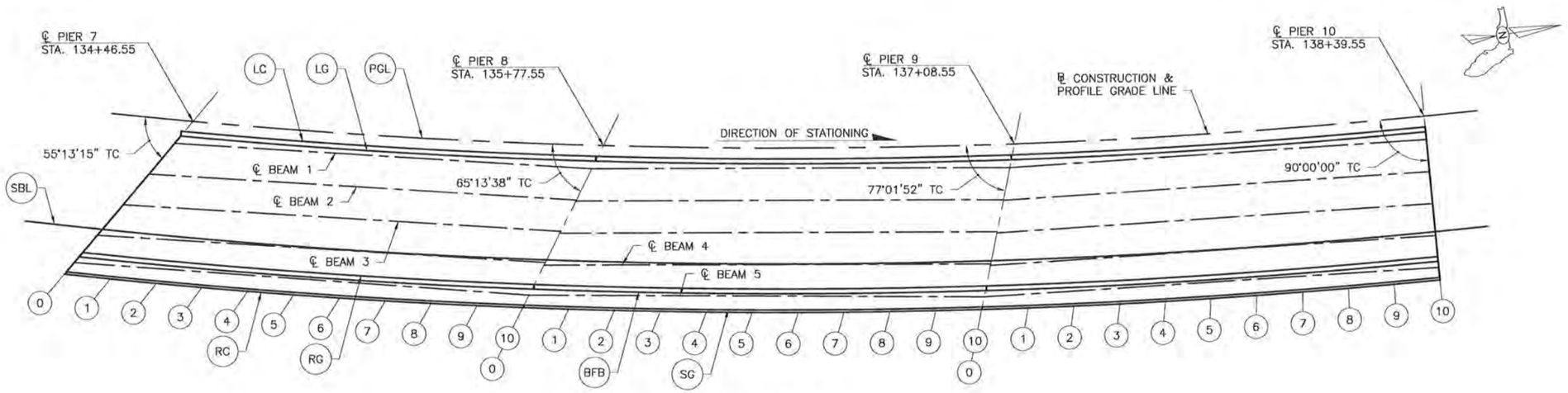
SHEET TITLE: FINISH GRADE ELEVATIONS (3 OF 7)

REF. DWG. NO.

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. B-44

FILENAME: e:\autocad\2014\fort_homer\dwg\sheets\bfinishgrade03.dwg LAYOUT NAME: finish grade elevations (3 of 7) PLOTTED: Friday, August 29, 2014 6:28:47 AM USER: kathy_compton



PLAN – UNIT 3

FINISH GRADE ELEVATIONS – SPAN 7												
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	13.100	39.680	39.719	39.758	39.798	39.837	39.876	39.915	39.955	39.994	40.033	40.073
LC	13.248	39.600	39.640	39.679	39.719	39.759	39.798	39.838	39.878	39.917	39.957	39.997
LG	13.248	39.569	39.609	39.649	39.688	39.728	39.768	39.807	39.847	39.886	39.926	39.966
BEAM 1	13.319	39.515	39.562	39.608	39.652	39.694	39.735	39.774	39.811	39.847	39.881	39.913
BEAM 2	13.644	39.283	39.332	39.380	39.426	39.470	39.512	39.552	39.591	39.628	39.663	39.697
BEAM 3	13.970	39.051	39.102	39.152	39.199	39.245	39.289	39.331	39.371	39.409	39.446	39.481
SBL	14.187	38.864	38.906	38.948	38.990	39.031	39.073	39.115	39.157	39.199	39.241	39.282
BEAM 4	14.295	38.737	38.813	38.882	38.946	39.004	39.056	39.103	39.143	39.178	39.207	39.230
RG	14.420	38.368	38.411	38.453	38.495	38.538	38.580	38.622	38.665	38.707	38.749	38.792
BFB	14.464	38.335	38.378	38.420	38.463	38.505	38.548	38.590	38.632	38.675	38.717	38.760
BEAM 5	14.519	38.292	38.343	38.393	38.440	38.486	38.529	38.571	38.611	38.648	38.684	38.718
SG	14.615	38.221	38.264	38.307	38.349	38.392	38.435	38.478	38.520	38.563	38.606	38.649
RC	14.615	38.205	38.248	38.291	38.333	38.376	38.419	38.462	38.505	38.547	38.590	38.633

FINISH GRADE ELEVATIONS – SPAN 8												
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	13.100	40.073	40.112	40.151	40.191	40.230	40.269	40.308	40.348	40.387	40.426	40.466
LC	13.247	39.997	40.036	40.076	40.116	40.155	40.195	40.234	40.274	40.314	40.353	40.393
LG	13.247	39.966	40.005	40.045	40.085	40.124	40.164	40.204	40.243	40.283	40.323	40.362
BEAM 1	13.318	39.913	39.960	40.006	40.050	40.092	40.133	40.172	40.209	40.245	40.279	40.311
BEAM 2	13.628	39.690	39.739	39.786	39.832	39.875	39.917	39.958	39.996	40.032	40.067	40.100
BEAM 3	13.938	39.468	39.518	39.567	39.614	39.659	39.702	39.743	39.782	39.820	39.856	39.890
SBL	14.185	39.282	39.324	39.366	39.408	39.450	39.491	39.533	39.575	39.617	39.659	39.701
BEAM 4	14.248	39.175	39.247	39.313	39.374	39.429	39.478	39.522	39.559	39.591	39.617	39.638
RG	14.419	38.792	38.834	38.876	38.919	38.961	39.004	39.046	39.088	39.131	39.173	39.215
BFB	14.463	38.760	38.802	38.845	38.887	38.930	38.972	39.014	39.057	39.099	39.142	39.184
BEAM 5	14.518	38.718	38.769	38.819	38.866	38.912	38.955	38.997	39.036	39.074	39.110	39.143
SG	14.615	38.649	38.692	38.734	38.777	38.820	38.863	38.906	38.948	38.991	39.034	39.077
RC	14.615	38.633	38.676	38.719	38.761	38.804	38.847	38.890	38.932	38.975	39.018	39.061

FINISH GRADE ELEVATIONS – SPAN 9												
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	13.100	40.466	40.505	40.544	40.584	40.623	40.662	40.701	40.741	40.780	40.819	40.859
LC	13.247	40.393	40.433	40.472	40.512	40.552	40.591	40.631	40.671	40.710	40.750	40.789
LG	13.247	40.362	40.402	40.441	40.481	40.521	40.560	40.600	40.640	40.679	40.719	40.759
BEAM 1	13.317	40.311	40.358	40.404	40.448	40.491	40.531	40.570	40.607	40.643	40.677	40.709
BEAM 2	13.619	40.097	40.146	40.193	40.238	40.281	40.323	40.362	40.401	40.437	40.471	40.504
BEAM 3	13.922	39.884	39.933	39.981	40.027	40.072	40.114	40.155	40.194	40.231	40.266	40.299
SBL	14.184	39.701	39.742	39.784	39.826	39.868	39.910	39.951	39.993	40.035	40.077	40.119
BEAM 4	14.224	39.611	39.680	39.743	39.801	39.853	39.899	39.939	39.974	40.003	40.026	40.044
RG	14.419	39.215	39.258	39.300	39.342	39.385	39.427	39.469	39.512	39.554	39.596	39.639
BFB	14.463	39.184	39.227	39.269	39.312	39.354	39.396	39.439	39.481	39.524	39.566	39.609
BEAM 5	14.518	39.143	39.195	39.244	39.292	39.337	39.381	39.423	39.462	39.500	39.535	39.569
SG	14.615	39.077	39.119	39.162	39.205	39.248	39.291	39.333	39.376	39.419	39.462	39.504
RC	14.615	39.061	39.104	39.146	39.189	39.232	39.275	39.318	39.360	39.403	39.446	39.489

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: CC 01-11
Designed By: CC 01-11
Checked By: AOS 01-11

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
7/5/14

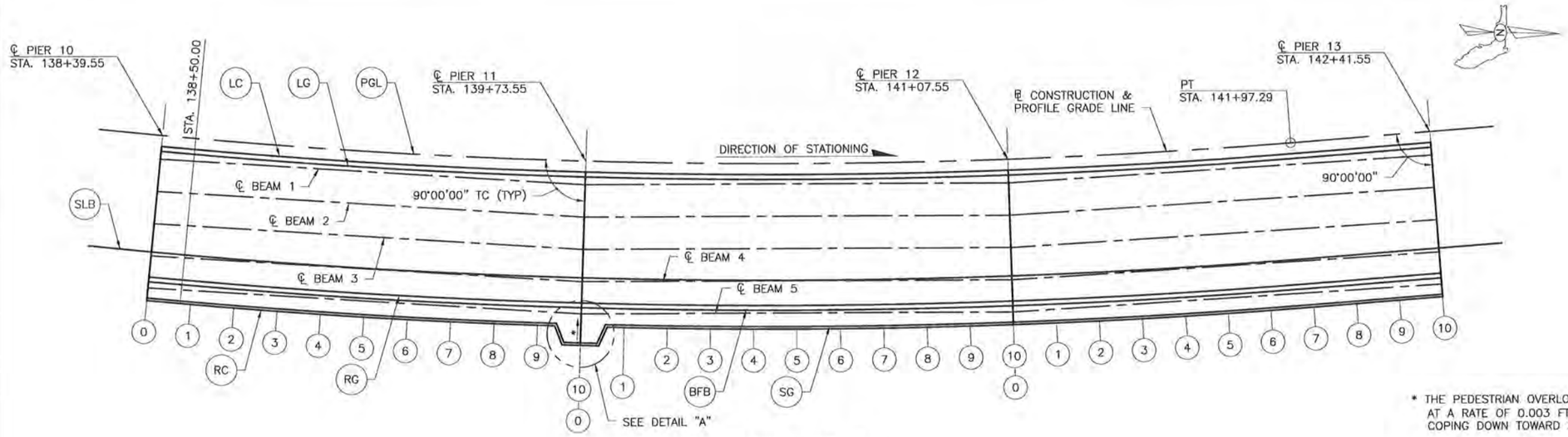
SHEET TITLE: FINISH GRADE ELEVATIONS (4 OF 7)

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

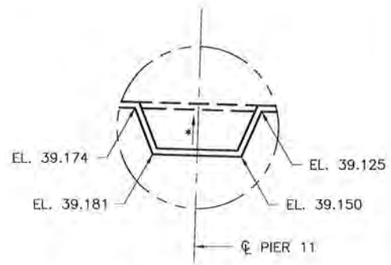
REF. DWG. NO.

SHEET NO. B-45

FILENAME: c:\autocad\2014\fort_hamer\dwg\sheets\bfinishgrade04.dwg LAYOUT NAME: finish grade elevations (4 of 7) PLOTTED: Friday, August 29, 2014 6:28:51 AM USER: kathy_compton



PLAN – UNIT 4



DETAIL "A"

* THE PEDESTRIAN OVERLOOK SHALL SLOPE AT A RATE OF 0.003 FT/FT FROM OVERLOOK COPING DOWN TOWARD SIDEWALK GUTTERLINE.

FINISH GRADE ELEVATIONS – SPAN 10

LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS											
		0	1	2	3	4	5	6	7	8	9	10	Sta 138+50
PGL	13.400	40.859	40.881	40.841	40.801	40.761	40.720	40.680	40.640	40.600	40.560	40.519	40.890
LC	13.432	40.789	40.812	40.772	40.732	40.691	40.651	40.611	40.571	40.531	40.490	40.450	40.821
LG	13.432	40.759	40.781	40.741	40.701	40.661	40.620	40.580	40.540	40.500	40.460	40.419	40.790
BEAM 1	13.446	40.709	40.739	40.705	40.669	40.632	40.592	40.551	40.509	40.464	40.418	40.370	40.747
BEAM 2	13.512	40.504	40.534	40.500	40.464	40.427	40.387	40.346	40.303	40.259	40.213	40.165	40.542
BEAM 3	13.578	40.299	40.329	40.295	40.259	40.222	40.182	40.141	40.098	40.054	40.008	39.960	40.336
SBL	13.638	40.119	40.141	40.101	40.061	40.021	39.980	39.940	39.900	39.860	39.820	39.779	40.150
BEAM 4	13.644	40.044	40.090	40.068	40.041	40.009	39.971	39.929	39.881	39.827	39.769	39.705	40.094
RG	13.689	39.639	39.661	39.621	39.581	39.541	39.500	39.460	39.420	39.380	39.340	39.299	39.670
BFB	13.699	39.609	39.631	39.591	39.551	39.511	39.470	39.430	39.390	39.350	39.310	39.269	39.640
BEAM 5	13.710	39.569	39.600	39.566	39.530	39.492	39.453	39.412	39.369	39.324	39.278	39.230	39.607
SG	13.733	39.504	39.527	39.487	39.447	39.406	39.366	39.326	39.286	39.246	39.205	39.165	39.536
RC	13.733	39.489	39.511	39.471	39.431	39.391	39.350	39.310	39.270	39.230	39.190	39.149	39.520

FINISH GRADE ELEVATIONS – SPAN 11

LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS									
		0	1	2	3	4	5	6	7	8	9	10
PGL	13.400	40.519	40.479	40.439	40.399	40.359	40.318	40.278	40.238	40.198	40.158	40.117
LC	13.432	40.450	40.410	40.370	40.330	40.289	40.249	40.209	40.169	40.129	40.088	40.048
LG	13.432	40.419	40.379	40.339	40.299	40.259	40.218	40.178	40.138	40.098	40.058	40.017
BEAM 1	13.446	40.370	40.337	40.303	40.267	40.230	40.190	40.149	40.107	40.062	40.016	39.968
BEAM 2	13.512	40.165	40.132	40.098	40.062	40.025	39.985	39.944	39.901	39.857	39.811	39.763
BEAM 3	13.578	39.960	39.927	39.893	39.857	39.820	39.780	39.739	39.696	39.652	39.606	39.558
SBL	13.638	39.779	39.739	39.699	39.659	39.619	39.578	39.538	39.498	39.458	39.418	39.377
BEAM 4	13.644	39.705	39.688	39.666	39.639	39.607	39.569	39.527	39.479	39.425	39.367	39.303
RG	13.689	39.299	39.259	39.219	39.179	39.139	39.098	39.058	39.018	38.978	38.938	38.897
BFB	13.699	39.269	39.229	39.189	39.149	39.109	39.068	39.028	38.988	38.948	38.908	38.867
BEAM 5	13.710	39.230	39.198	39.164	39.128	39.090	39.051	39.010	38.967	38.922	38.876	38.828
SG	13.733	39.165	39.125	39.085	39.045	39.004	38.964	38.924	38.884	38.844	38.803	38.763
RC	13.733	39.149	39.109	39.069	39.029	38.989	38.948	38.908	38.868	38.828	38.788	38.747

FINISH GRADE ELEVATIONS – SPAN 12

LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	13.400	40.117	40.077	40.037	39.997	39.957	39.916	39.876	39.836	39.796	39.756	39.715
LC	13.422	40.048	40.008	39.968	39.928	39.887	39.847	39.807	39.767	39.727	39.686	39.646
LG	13.422	40.017	39.977	39.937	39.897	39.857	39.816	39.776	39.736	39.696	39.656	39.615
BEAM 1	13.431	39.968	39.934	39.899	39.863	39.824	39.784	39.742	39.698	39.654	39.610	39.566
BEAM 2	13.475	39.763	39.729	39.695	39.658	39.619	39.579	39.537	39.494	39.449	39.405	39.361
BEAM 3	13.519	39.558	39.524	39.490	39.453	39.415	39.375	39.333	39.289	39.245	39.200	39.156
SBL	13.559	39.377	39.337	39.297	39.257	39.217	39.178	39.138	39.097	39.057	39.016	38.975
BEAM 4	13.563	39.303	39.284	39.259	39.229	39.195	39.155	39.109	39.059	39.006	38.954	38.901
RG	13.594	38.897	38.857	38.817	38.777	38.737	38.696	38.656	38.616	38.576	38.536	38.495
BFB	13.600	38.867	38.827	38.787	38.747	38.707	38.666	38.626	38.586	38.546	38.506	38.465
BEAM 5	13.608	38.828	38.795	38.760	38.724	38.685	38.645	38.604	38.560	38.515	38.471	38.426
SG	13.623	38.763	38.723	38.683	38.643	38.602	38.562	38.522	38.482	38.442	38.401	38.361
RC	13.623	38.747	38.707	38.667	38.627	38.587	38.546	38.506	38.466	38.426	38.386	38.345

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: CC 01-11
Designed By: CC 01-11
Checked By: AOS 01-11

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

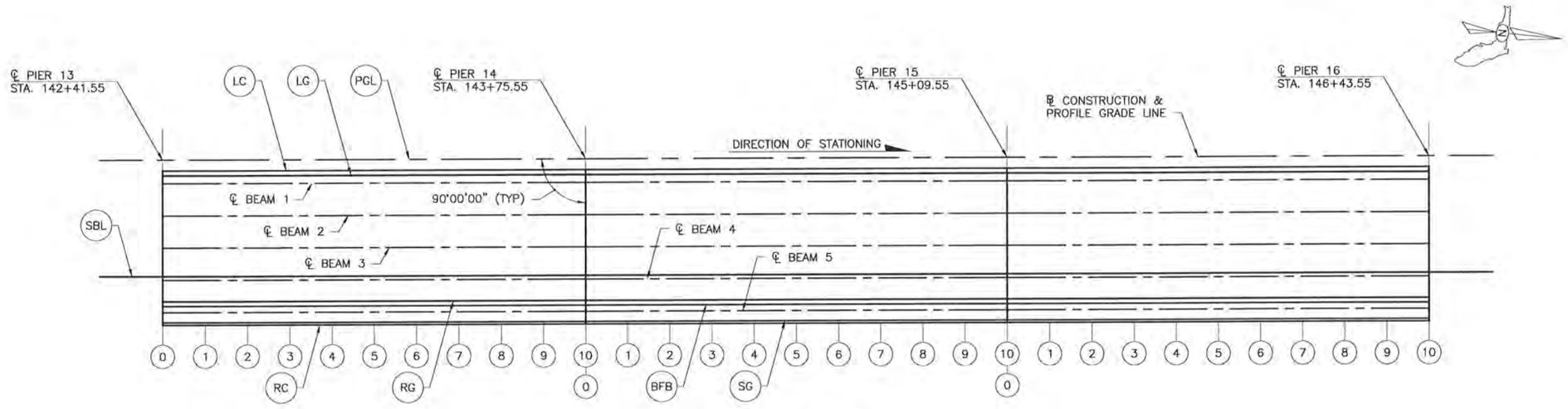
SHEET TITLE: FINISH GRADE ELEVATIONS (5 OF 7)

REF. DWG. NO.

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. B-46

FILENAME: c:\autocad\2014\fort_hamer\dwg\sheets\bfinishgrade05.dwg LAYOUT NAME: finish grade elevations (5 of 7) PLOTTED: Friday, August 29, 2014 6:28:57 AM USER: kathy_compton



PLAN – UNIT 5

FINISH GRADE ELEVATIONS – SPAN 13												
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	13.400	39.715	39.675	39.635	39.595	39.555	39.514	39.474	39.434	39.394	39.354	39.313
LC	13.400	39.646	39.606	39.566	39.526	39.485	39.445	39.405	39.365	39.325	39.284	39.244
LG	13.400	39.615	39.575	39.535	39.495	39.455	39.414	39.374	39.334	39.294	39.254	39.213
BEAM 1	13.400	39.566	39.526	39.485	39.445	39.405	39.365	39.325	39.284	39.244	39.204	39.164
BEAM 2	13.400	39.361	39.321	39.280	39.240	39.200	39.160	39.120	39.079	39.039	38.999	38.959
BEAM 3	13.400	39.156	39.116	39.075	39.035	38.995	38.955	38.915	38.874	38.834	38.794	38.754
SBL	13.400	38.975	38.935	38.895	38.855	38.815	38.774	38.734	38.694	38.654	38.614	38.573
BEAM 4	13.400	38.902	38.861	38.821	38.781	38.741	38.701	38.660	38.620	38.580	38.540	38.500
RG	13.400	38.495	38.455	38.415	38.375	38.335	38.294	38.254	38.214	38.174	38.134	38.093
BFB	13.400	38.465	38.425	38.385	38.345	38.305	38.264	38.224	38.184	38.144	38.104	38.063
BEAM 5	13.400	38.426	38.386	38.345	38.305	38.265	38.225	38.185	38.144	38.104	38.064	38.024
SG	13.400	38.361	38.321	38.281	38.241	38.200	38.160	38.120	38.080	38.040	37.999	37.959
RC	13.400	38.345	38.305	38.265	38.225	38.185	38.144	38.104	38.064	38.024	37.984	37.943

FINISH GRADE ELEVATIONS – SPAN 14												
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	13.400	39.313	39.273	39.233	39.193	39.153	39.112	39.072	39.032	38.992	38.952	38.911
LC	13.400	39.244	39.204	39.164	39.124	39.083	39.043	39.003	38.963	38.923	38.882	38.842
LG	13.400	39.213	39.173	39.133	39.093	39.053	39.012	38.972	38.932	38.892	38.852	38.811
BEAM 1	13.400	39.164	39.124	39.083	39.043	39.003	38.963	38.923	38.882	38.842	38.802	38.762
BEAM 2	13.400	38.959	38.919	38.878	38.838	38.798	38.758	38.718	38.677	38.637	38.597	38.557
BEAM 3	13.400	38.754	38.714	38.673	38.633	38.593	38.553	38.513	38.472	38.432	38.392	38.352
SBL	13.400	38.573	38.533	38.493	38.453	38.413	38.372	38.332	38.292	38.252	38.212	38.171
BEAM 4	13.400	38.500	38.459	38.419	38.379	38.339	38.299	38.258	38.218	38.178	38.138	38.098
RG	13.400	38.093	38.053	38.013	37.973	37.933	37.892	37.852	37.812	37.772	37.732	37.691
BFB	13.400	38.063	38.023	37.983	37.943	37.903	37.862	37.822	37.782	37.742	37.702	37.661
BEAM 5	13.400	38.024	37.984	37.943	37.903	37.863	37.823	37.783	37.742	37.702	37.662	37.622
SG	13.400	37.959	37.919	37.879	37.839	37.798	37.758	37.718	37.678	37.638	37.597	37.557
RC	13.400	37.943	37.903	37.863	37.823	37.783	37.742	37.702	37.662	37.622	37.582	37.541

FINISH GRADE ELEVATIONS – SPAN 15												
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	13.400	38.911	38.871	38.831	38.791	38.751	38.710	38.670	38.630	38.590	38.550	38.509
LC	13.400	38.842	38.802	38.762	38.722	38.681	38.641	38.601	38.561	38.521	38.480	38.440
LG	13.400	38.811	38.771	38.731	38.691	38.651	38.610	38.570	38.530	38.490	38.450	38.409
BEAM 1	13.400	38.762	38.722	38.681	38.641	38.601	38.561	38.521	38.480	38.440	38.400	38.360
BEAM 2	13.400	38.557	38.517	38.476	38.436	38.396	38.356	38.316	38.275	38.235	38.195	38.155
BEAM 3	13.400	38.352	38.312	38.271	38.231	38.191	38.151	38.111	38.070	38.030	37.990	37.950
SBL	13.400	38.171	38.131	38.091	38.051	38.011	37.970	37.930	37.890	37.850	37.810	37.769
BEAM 4	13.400	38.098	38.057	38.017	37.977	37.937	37.897	37.856	37.816	37.776	37.736	37.696
RG	13.400	37.691	37.651	37.611	37.571	37.531	37.490	37.450	37.410	37.370	37.330	37.289
BFB	13.400	37.661	37.621	37.581	37.541	37.501	37.460	37.420	37.380	37.340	37.300	37.259
BEAM 5	13.400	37.622	37.582	37.541	37.501	37.461	37.421	37.381	37.340	37.300	37.260	37.220
SG	13.400	37.557	37.517	37.477	37.437	37.396	37.356	37.316	37.276	37.236	37.195	37.155
RC	13.400	37.541	37.501	37.461	37.421	37.381	37.340	37.300	37.260	37.220	37.180	37.139

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: CC 01-11
Designed By: CC 01-11
Checked By: AOS 01-11

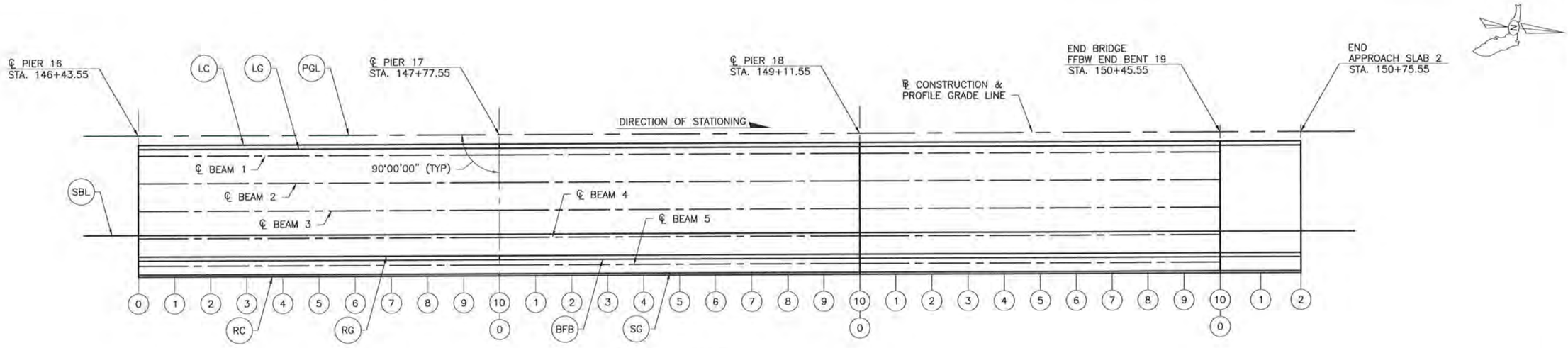
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: FINISH GRADE ELEVATIONS (6 OF 7)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-47

FILENAME: e:\autocad\2014\fort_homer\dwg\sheets\sfinishgrade06.dwg LAYOUT NAME: finish grade elevations (6 of 7) PLOTTED: Friday, August 29, 2014 6:29:01 AM USER: kathy_compton



PLAN – UNIT 6

FINISH GRADE ELEVATIONS – SPAN 16												
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	13.400	38.509	38.469	38.429	38.389	38.349	38.308	38.268	38.228	38.188	38.148	38.107
LC	13.400	38.440	38.400	38.360	38.320	38.279	38.239	38.199	38.159	38.119	38.078	38.038
LG	13.400	38.409	38.369	38.329	38.289	38.249	38.208	38.168	38.128	38.088	38.048	38.007
BEAM 1	13.400	38.360	38.320	38.279	38.239	38.199	38.159	38.119	38.078	38.038	37.998	37.957
BEAM 2	13.400	38.155	38.115	38.074	38.034	37.994	37.954	37.914	37.873	37.833	37.793	37.752
BEAM 3	13.400	37.950	37.910	37.869	37.829	37.789	37.749	37.709	37.668	37.628	37.588	37.547
SBL	13.400	37.769	37.729	37.689	37.649	37.609	37.568	37.528	37.488	37.448	37.408	37.367
BEAM 4	13.400	37.696	37.655	37.615	37.575	37.535	37.495	37.454	37.414	37.374	37.334	37.293
RG	13.400	37.289	37.249	37.209	37.169	37.129	37.088	37.048	37.008	36.968	36.928	36.887
BFB	13.400	37.259	37.219	37.179	37.139	37.099	37.058	37.018	36.978	36.938	36.898	36.857
BEAM 5	13.400	37.220	37.180	37.139	37.099	37.059	37.019	36.979	36.938	36.898	36.858	36.817
SG	13.400	37.155	37.115	37.075	37.035	36.994	36.954	36.914	36.874	36.834	36.793	36.753
RC	13.400	37.139	37.099	37.059	37.019	36.979	36.938	36.898	36.858	36.818	36.778	36.737

FINISH GRADE ELEVATIONS – SPAN 17												
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	13.400	38.107	38.054	37.984	37.896	37.790	37.666	37.524	37.364	37.186	36.991	36.777
LC	13.400	38.038	37.985	37.915	37.827	37.720	37.596	37.455	37.295	37.117	36.922	36.708
LG	13.400	38.007	37.954	37.884	37.796	37.690	37.566	37.424	37.264	37.086	36.891	36.677
BEAM 1	13.400	37.957	37.905	37.834	37.746	37.640	37.516	37.374	37.214	37.037	36.841	36.628
BEAM 2	13.400	37.752	37.700	37.629	37.541	37.435	37.311	37.169	37.009	36.832	36.636	36.423
BEAM 3	13.400	37.547	37.495	37.424	37.336	37.230	37.106	36.964	36.804	36.627	36.431	36.218
SBL	13.400	37.367	37.314	37.244	37.156	37.050	36.926	36.784	36.624	36.446	36.251	36.037
BEAM 4	13.400	37.293	37.241	37.170	37.082	36.976	36.852	36.710	36.550	36.372	36.177	35.964
RG	13.400	36.887	36.834	36.764	36.676	36.570	36.446	36.304	36.144	35.966	35.771	35.557
BFB	13.400	36.857	36.804	36.734	36.646	36.540	36.416	36.274	36.114	35.936	35.741	35.527
BEAM 5	13.400	36.817	36.765	36.694	36.606	36.500	36.376	36.234	36.074	35.897	35.701	35.488
SG	13.400	36.753	36.700	36.630	36.542	36.435	36.311	36.170	36.010	35.832	35.637	35.423
RC	13.400	36.737	36.684	36.614	36.526	36.420	36.296	36.154	35.994	35.816	35.621	35.407

FINISH GRADE ELEVATIONS – SPAN 18												
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS										
		0	1	2	3	4	5	6	7	8	9	10
PGL	13.400	36.777	36.546	36.297	36.030	35.745	35.442	35.121	34.783	34.427	34.052	33.660
LC	13.400	36.708	36.477	36.228	35.961	35.676	35.373	35.052	34.714	34.357	33.983	33.591
LG	13.400	36.677	36.446	36.197	35.930	35.645	35.342	35.021	34.683	34.327	33.952	33.560
BEAM 1	13.400	36.628	36.396	36.147	35.880	35.595	35.293	34.972	34.633	34.277	33.903	33.510
BEAM 2	13.400	36.423	36.191	35.942	35.675	35.390	35.088	34.767	34.428	34.072	33.698	33.305
BEAM 3	13.400	36.218	35.986	35.737	35.470	35.185	34.883	34.562	34.223	33.867	33.493	33.100
SBL	13.400	36.037	35.806	35.557	35.290	35.005	34.702	34.381	34.043	33.687	33.312	32.920
BEAM 4	13.400	35.964	35.732	35.483	35.216	34.931	34.628	34.308	33.969	33.613	33.238	32.846
RG	13.400	35.557	35.326	35.077	34.810	34.525	34.222	33.901	33.563	33.207	32.832	32.440
BFB	13.400	35.527	35.296	35.047	34.780	34.495	34.192	33.871	33.533	33.177	32.802	32.410
BEAM 5	13.400	35.488	35.256	35.007	34.740	34.455	34.153	33.832	33.493	33.137	32.763	32.370
SG	13.400	35.423	35.192	34.943	34.676	34.391	34.088	33.767	33.429	33.072	32.698	32.306
RC	13.400	35.407	35.176	34.927	34.660	34.375	34.072	33.751	33.413	33.057	32.682	32.290

FINISH GRADE ELEVATIONS – APPROACH SLAB 2				
LOCATION	INCREMENT DIST.	FINISH GRADE ELEVATIONS AT POINTS		
		0	1	2
PGL	15.000	33.660	33.200	32.717
LC	15.000	33.591	33.131	32.648
LG	15.000	33.560	33.100	32.617
SBL	15.000	32.920	32.460	31.977
RG	15.000	32.440	31.980	31.497
BFB	15.000	32.410	31.950	31.467
SG	15.000	32.306	31.846	31.363
RC	15.000	32.290	31.830	31.347

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: CC 01-11
Designed By: CC 01-11
Checked By: AOS 01-11

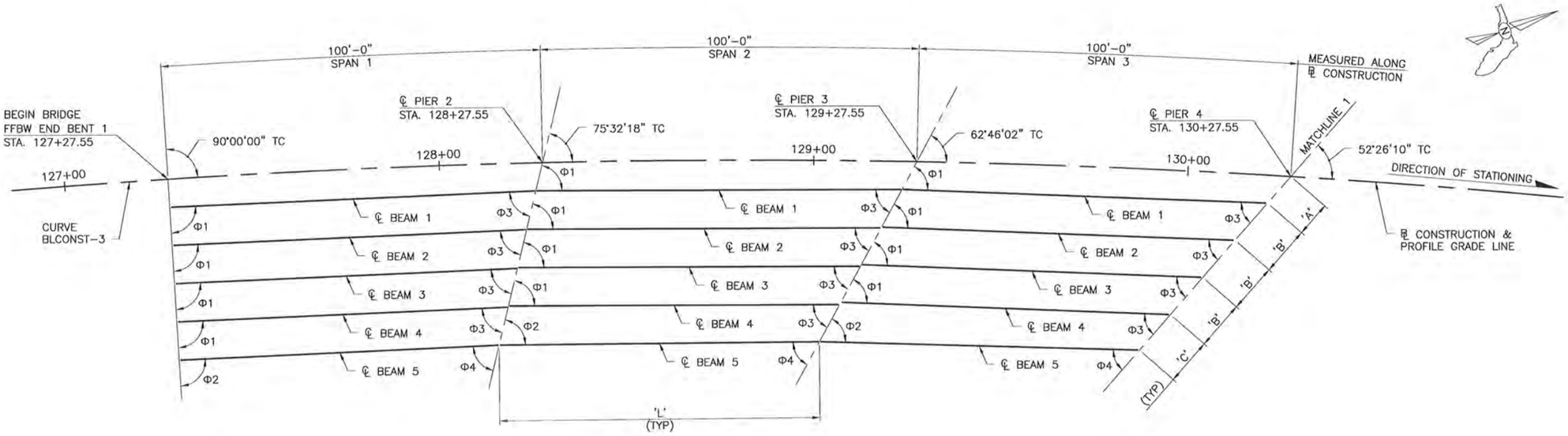
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
Mark Eicholtz 9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: FINISH GRADE ELEVATIONS (7 OF 7)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-48

FILENAME: a:\autocad\2014\fort_hamer\dwg\sheets\bfinishgrade07.dwg LAYOUT NAME: finish grade elevations (7 of 7) PLOTTED: Friday, August 29, 2014 6:29:06 AM USER: kathy_compton



FRAMING PLAN – UNIT 1

BEAM LENGTH CONTROL					
LOCATION	'L'				
	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5
SPAN 1	97'-9"	94'-8"	91'-6 1⁵⁄₁₆"	88'-5 1⁵⁄₁₆"	85'-5⁹⁄₁₆"
SPAN 2	97'-9⅛"	94'-7½"	91'-5⅞"	88'-4¹³⁄₁₆"	85'-5⅝"
SPAN 3	97'-9⁵⁄₁₆"	94'-6¹³⁄₁₆"	91'-3 1⁵⁄₁₆"	88'-1⅛"	85'-5¼"

BEAM LENGTH IS MEASURED ALONG ℄ BEAM FROM FFBW/℄ PIER TO ℄ PIER.

BEAM SPACING				
LOCATION		'A'	'B'	'C'
SPAN 1	BACK	7'-5¾"	10'-3"	10'-3"
	AHEAD	7'-8 1⁵⁄₁₆"	10'-7¾"	10'-5¼"
SPAN 2	BACK	7'-8 1⁵⁄₁₆"	10'-6⁷⁄₁₆"	10'-9¼"
	AHEAD	8'-5"	11'-7 1⁵⁄₁₆"	11'-3¼"
SPAN 3	BACK	8'-5"	11'-5"	12'-0"
	AHEAD	9'-5⁹⁄₁₆"	13'-2"	12'-7⅛"

BEAM SPACING IS MEASURED ALONG FFBW/℄ PIER.

BEAM ANGLES				
LOCATION	Φ1	Φ2	Φ3	Φ4
SPAN 1	88°49'46"	88°57'32"	74°19'17"	74°11'32"
SPAN 2	76°39'46"	76°16'29"	61°30'16"	61°06'59"
SPAN 3	63°50'45"	63°11'57"	51°07'39"	50°28'50"

NOTES

1. ALL BEAMS ARE FLORIDA-I 72 BEAMS. FOR DETAILS, SEE SHEETS B-77 THRU B-80.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

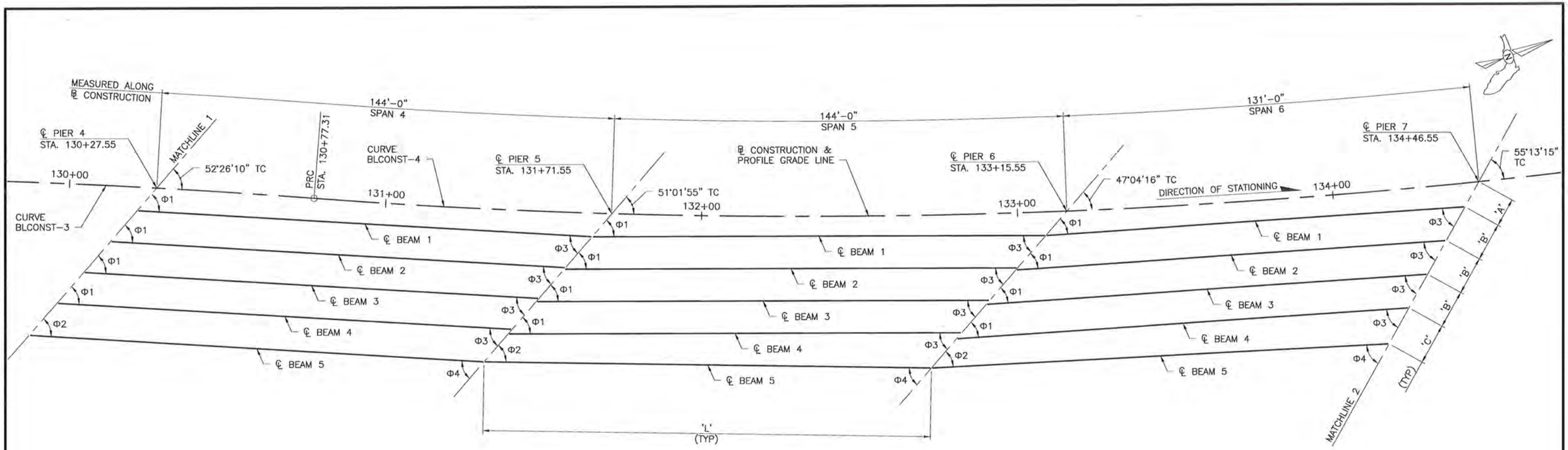
URS Corporation Southern
7650 West Courtney Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
2/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: FRAMING PLAN – SPANS 1, 2 & 3
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-49

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bframingplan01.dwg LAYOUT NAME: framing plan – spans 1 2 & 3 PLOTTED: Friday, August 29, 2014 6:29:11 AM USER: kathy_compton



FRAMING PLAN – UNIT 2

BEAM LENGTH CONTROL					
LOCATION	'L'				
	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5
SPAN 4	143'-10 1/16"	143'-10 1/16"	143'-10 1/16"	143'-10 1/16"	143'-9 1/4"
SPAN 5	143'-7"	143'-7"	143'-7"	143'-7"	141'-7 7/16"
SPAN 6	133'-2 1/16"	136'-8 5/16"	140'-2 1/8"	143'-8"	145'-2 3/8"

BEAM LENGTH IS MEASURED ALONG ℄ BEAM FROM ℄ PIER TO ℄ PIER.

BEAM SPACING				
LOCATION		'A'	'B'	'C'
SPAN 4	BACK	9'-5 5/16"	12'-10 13/16"	13'-4 3/4"
	AHEAD	9'-7 5/16"	12'-10 13/16"	13'-7/8"
SPAN 5	BACK	9'-7 5/16"	13'-6 7/16"	11'-8 3/16"
	AHEAD	10'-2 3/8"	13'-6 7/16"	14'-9 1/4"
SPAN 6	BACK	10'-2 3/8"	14'-4 5/8"	12'-2 9/16"
	AHEAD	9'-1 3/16"	12'-2 3/8"	13'-0 3/16"

BEAM SPACING IS MEASURED ALONG ℄ PIER.

BEAM ANGLES				
LOCATION	Φ1	Φ2	Φ3	Φ4
SPAN 4	52°37'21"	52°41'03"	52°37'21"	52°41'03"
SPAN 5	49°13'46"	50°10'30"	49°13'46"	50°10'30"
SPAN 6	45°26'08"	46°19'11"	47°11'20"	58°04'22"

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

URS Corporation Southern
7650 West Courtney
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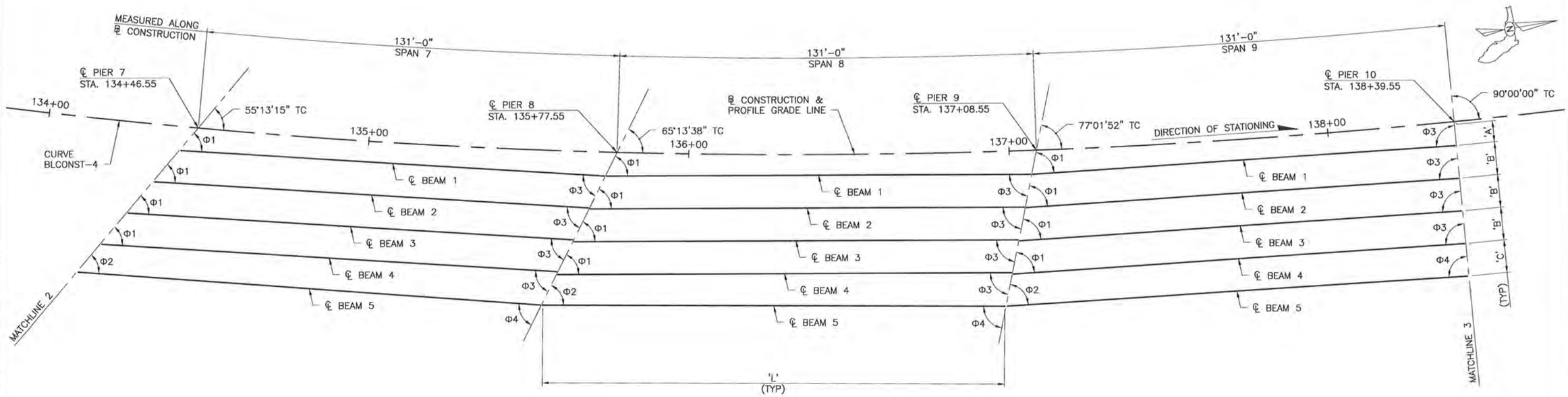
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: FRAMING PLAN – SPANS 4, 5 & 6
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-50

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bframingplan02.dwg LAYOUT NAME: framing plan – spans 4 5 & 6 PLOTTED: Friday, August 29, 2014 6:29:16 AM USER: kathy_compton



FRAMING PLAN – UNIT 3

BEAM LENGTH CONTROL					
LOCATION	'L'				
	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5
SPAN 7	133'–2¼"	136'–5⁵⁄₁₆"	139'–8⅜"	142'–11⅜"	145'–2¼"
SPAN 8	133'–2⅛"	136'–3⁵⁄₁₆"	139'–4⁵⁄₁₆"	142'–5¾"	145'–2³⁄₁₆"
SPAN 9	133'–2¹⁄₁₆"	136'–2⁵⁄₁₆"	139'–2⅝"	142'–2¹⁵⁄₁₆"	145'–2⅛"

BEAM LENGTH IS MEASURED ALONG ℄ BEAM FROM ℄ PIER TO ℄ PIER.

BEAM SPACING				
LOCATION		'A'	'B'	'C'
SPAN 7	BACK	9'–1³⁄₁₆"	12'–8¹⁵⁄₁₆"	11'–4⁷⁄₁₆"
	AHEAD	8'–2¹³⁄₁₆"	11'–1½"	11'–7¹⁵⁄₁₆"
SPAN 8	BACK	8'–2¹³⁄₁₆"	11'–5⁷⁄₁₆"	10'–8"
	AHEAD	7'–8¹⁄₁₆"	10'–5⁵⁄₁₆"	10'–8½"
SPAN 9	BACK	7'–8¹⁄₁₆"	10'–7³⁄₁₆"	10'–2¹⁵⁄₁₆"
	AHEAD	7'–5¾"	10'–3¹⁄₁₆"	10'–2¹³⁄₁₆"

BEAM SPACING IS MEASURED ALONG ℄ PIER.

BEAM ANGLES				
LOCATION	Φ1	Φ2	Φ3	Φ4
SPAN 7	53°32'15"	54°10'09"	67°08'50"	67°46'44"
SPAN 8	63°29'47"	63°52'32"	78°54'13"	79°16'58"
SPAN 9	75°15'11"	75°22'46"	88°10'29"	88°02'54"

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

URS
URS Corporation Southern
7650 West Courtney
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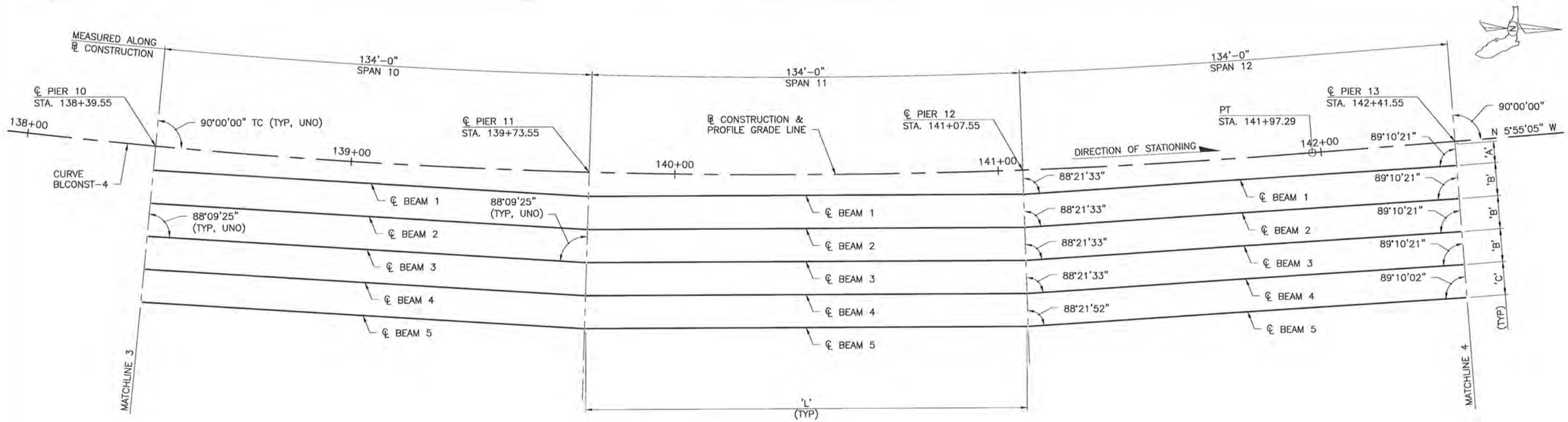
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: FRAMING PLAN – SPANS 7, 8 & 9
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
REF. DWG. NO.
SHEET NO. B-51

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bframingplan03.dwg LAYOUT NAME: framing plan – spans 7 8 & 9 PLOTTED: Friday, August 29, 2014 6:29:21 AM USER: kathy_compton



FRAMING PLAN – UNIT 4

BEAM LENGTH CONTROL					
LOCATION	'L'				
	BEAM 1	BEAM 2	BEAM 3	BEAM 4	BEAM 5
SPAN 10	134'-5½"	135'-1 7/16"	135'-9 9/16"	136'-5¼"	137'-1⅛"
SPAN 11	134'-5½"	135'-1 7/16"	135'-9 9/16"	136'-5¼"	137'-1⅛"
SPAN 12	134'-3 1/16"	134'-9"	135'-2 9/16"	135'-7⅞"	136'-0⅞"

BEAM LENGTH IS MEASURED ALONG ℄ BEAM FROM ℄ PIER TO ℄ PIER.

BEAM SPACING				
LOCATION		'A'	'B'	'C'
SPAN 10	BACK	7'-5¾"	10'-3 3/16"	10'-2 13/16"
	AHEAD	7'-5¾"	10'-3 3/16"	10'-2 13/16"
SPAN 11	BACK	7'-5¾"	10'-3 3/16"	10'-2 13/16"
	AHEAD	7'-5¾"	10'-3 3/16"	10'-2 13/16"
SPAN 12	BACK	7'-5¾"	10'-3 1/16"	10'-2⅞"
	AHEAD	7'-5¾"	10'-3"	10'-2 15/16"

BEAM SPACING IS MEASURED ALONG ℄ PIER.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

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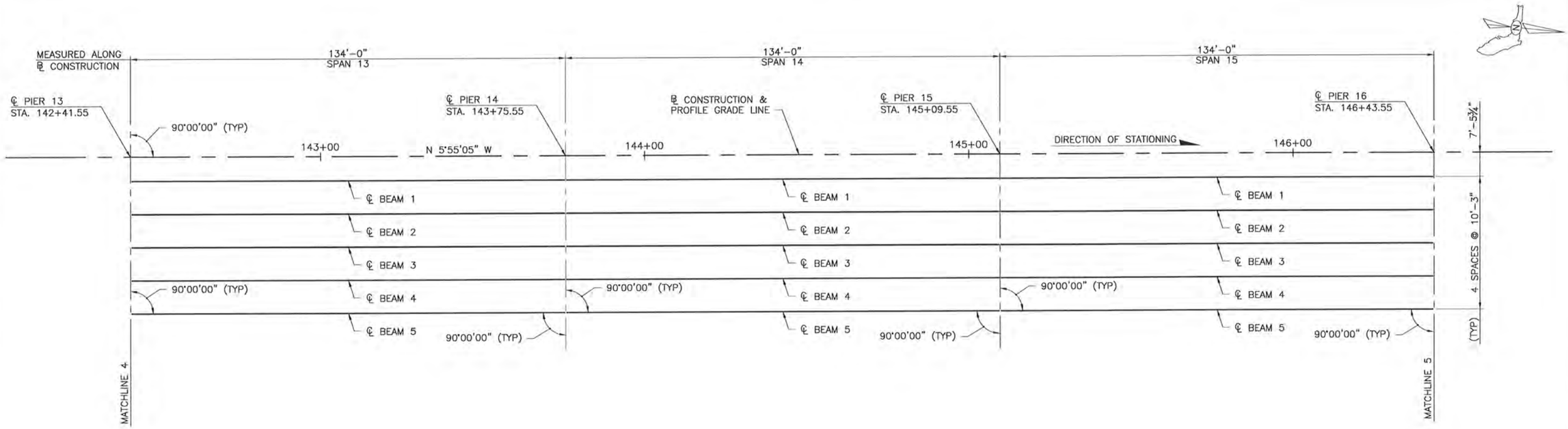
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: FRAMING PLAN – SPANS 10, 11 & 12
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-52

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bframingplan04.dwg LAYOUT NAME: framing plan – spans 10 11 & 12 PLOTTED: Friday, August 29, 2014 6:29:26 AM USER: kathy_compton



FRAMING PLAN – UNIT 5

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

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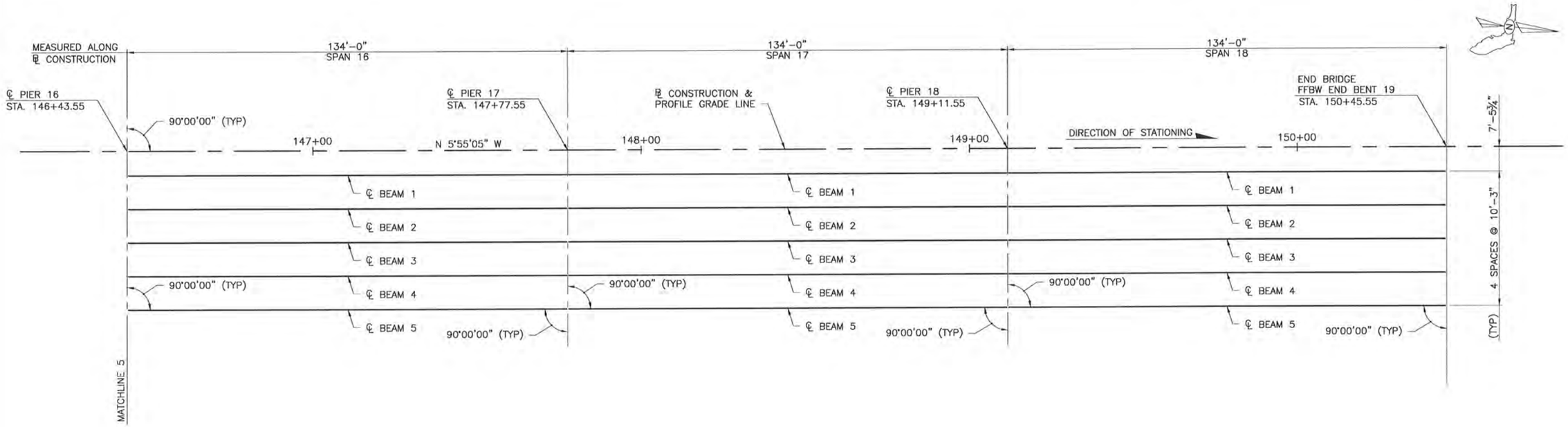
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
Mark Eicholtz 9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: FRAMING PLAN – SPANS 13, 14 & 15
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-53

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bframingplan05.dwg LAYOUT NAME: framing plan – spans 13 14 & 15 PLOTTED: Friday, August 29, 2014 6:29:31 AM USER: kathy_compton



FRAMING PLAN – UNIT 6

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

URS Corporation Southern
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Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
Mark Eicholtz 9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

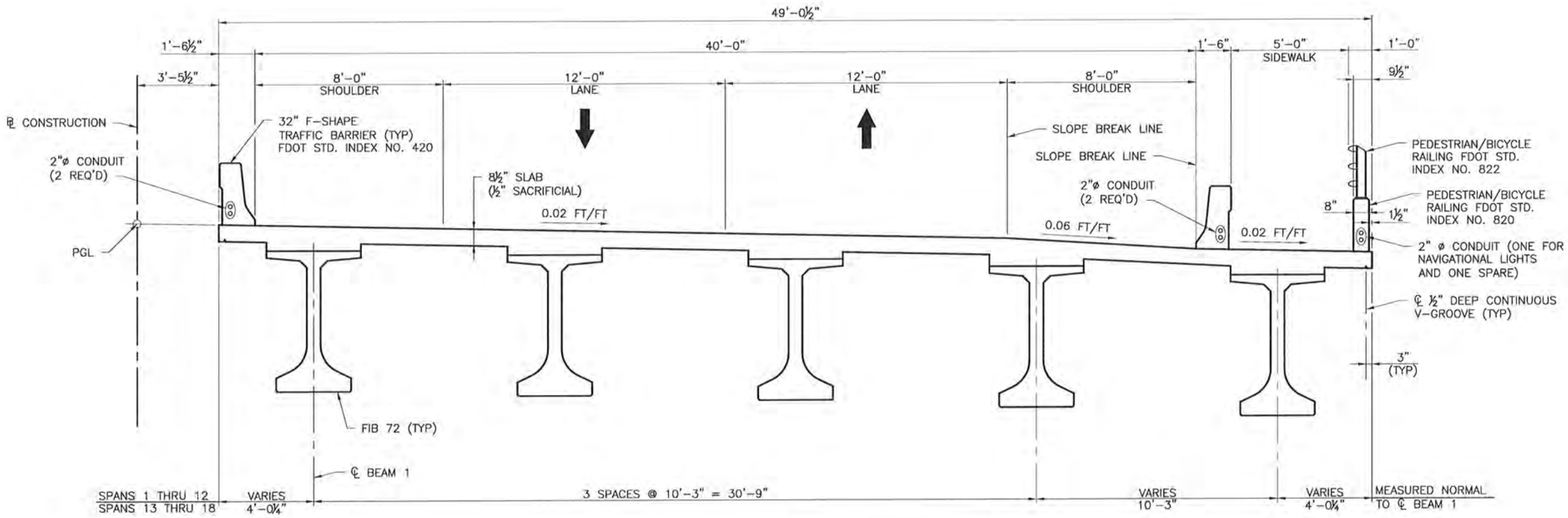
SHEET TITLE: FRAMING PLAN – SPANS 16, 17 & 18

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

SHEET NO. B-54

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bframingplan06.dwg LAYOUT NAME: framing plan – spans 16 17 & 18 PLOTTED: Friday, August 29, 2014 6:29:36 AM USER: kathy_compton



TYPICAL SECTION

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 11-10
Checked By: AOS 11-10
Designed By: AOS 11-10
Checked By: CC 11-10

URS Corporation Southern
7650 West Courtney
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MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
Mark Eicholtz 9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

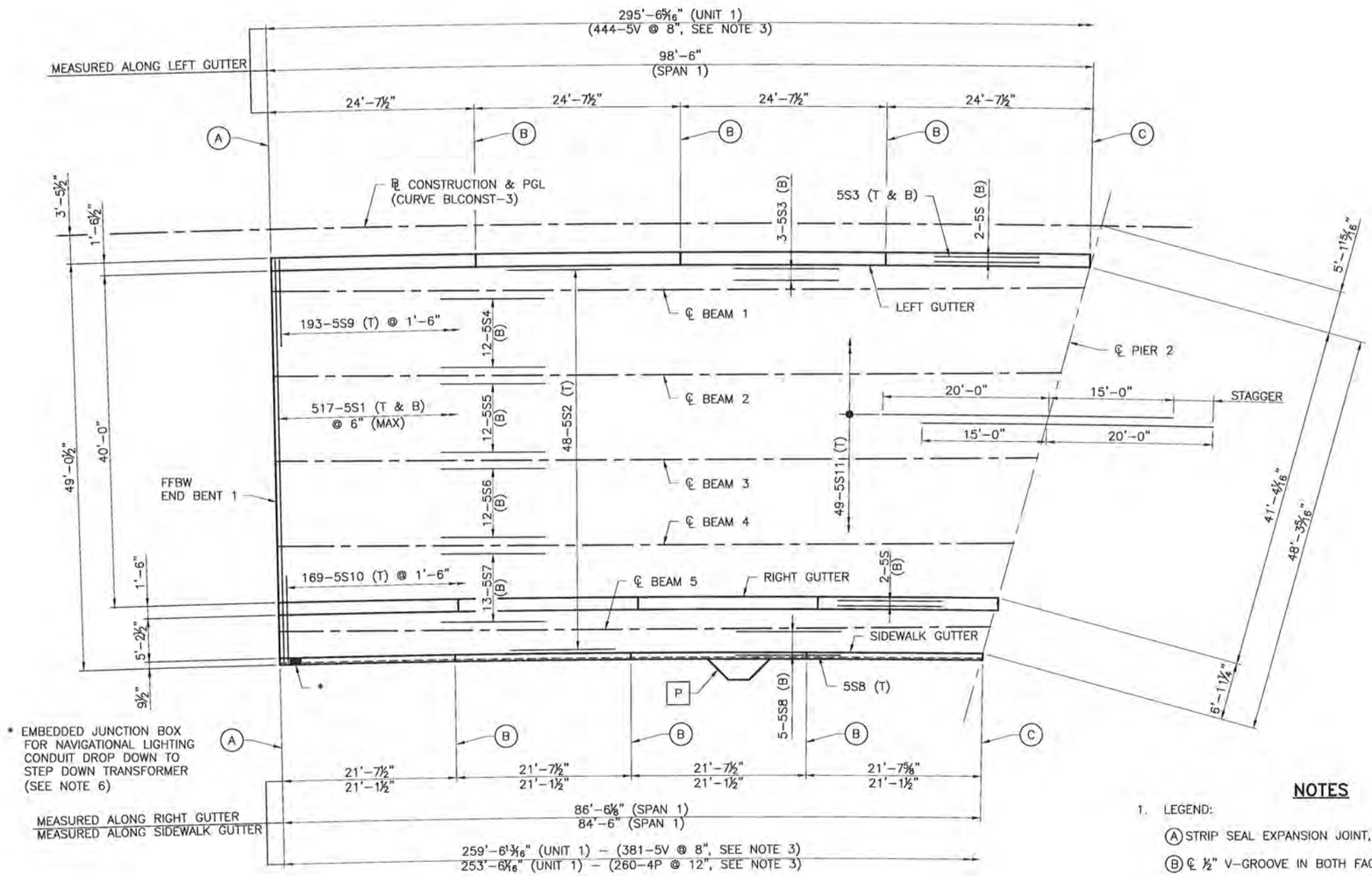
SHEET TITLE: TYPICAL SECTION

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

SHEET NO. B-55

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\btypicalsection01.dwg LAYOUT NAME: typical section PLOTTED: Friday, August 29, 2014 6:29:41 AM USER: kathy_compton



PLAN - SPAN 1

NOTES

1. LEGEND:
   - (A) STRIP SEAL EXPANSION JOINT, SEE TABLE, SHEET B-75.
   - (B) ℄ ½" V-GROOVE IN BOTH FACES AND TOP OF BARRIER.
   - (C) ℄ OPEN JOINT IN BARRIER.
   - [P] LIGHT POLE PILASTER.
2. ALL REINFORCING STEEL SHALL HAVE 2" CLEAR COVER, UNLESS NOTED OTHERWISE.
3. BARS 4P, 5S AND 5V ARE INCLUDED IN THE COST FOR TRAFFIC RAILING BARRIER AND BICYCLE/PEDESTRIAN RAILING.
4. FOR ADDITIONAL DETAILS, SEE SHEETS B-71, B-74 & B-75.
5. FOR LIGHT POLE PILASTER LOCATIONS SEE LIGHTING PLANS. FOR LIGHT POLE PEDESTAL DETAILS, SEE FDOT STANDARD INDEX NO. 21200. LIGHT POLES ARE NOT INCLUDED IN THIS CONTRACT.
6. CONDUIT AND ADDITIONAL JUNCTION BOXES FOR NAVIGATIONAL LIGHTING SHOWN. SPARE CONDUITS AND JUNCTION BOXES IN TRAFFIC BARRIERS AND PEDESTRIAN/BICYCLE RAILING NOT SHOWN.
7. FOR CENTER CHANNEL MARKER NAVIGATION LIGHT DETAIL, SEE SHEET B-5.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

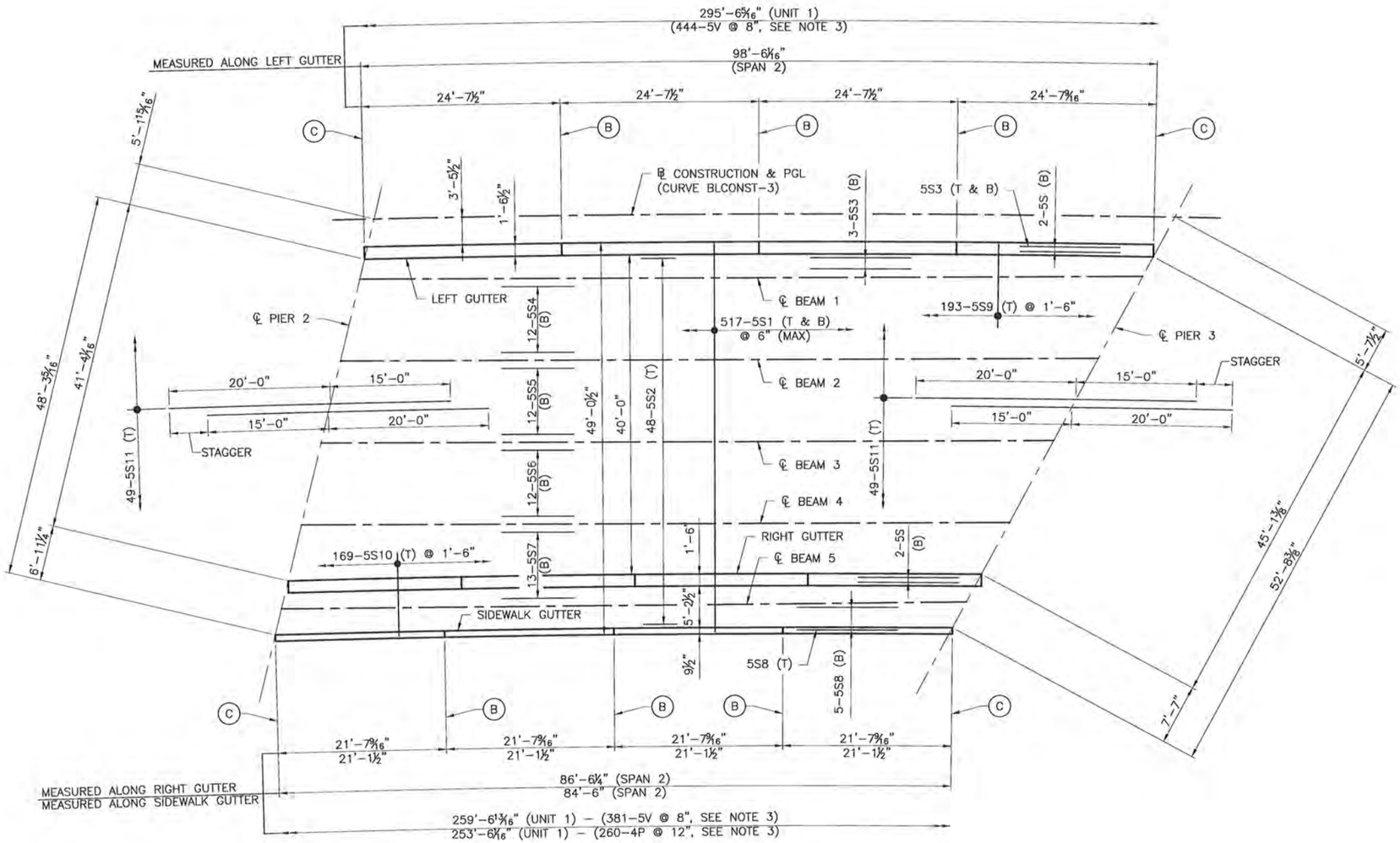
Drawn By: JLS 01-11
Checked By: BWJ 04-14
Designed By: JDC 11-10
Checked By: CC 12-10

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: SUPERSTRUCTURE PLAN - SPAN 1
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-56



PLAN - SPAN 2

NOTE: FOR NOTES AND LEGEND, SEE SHEET B-56.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: JLS 01-11
Checked By: BWJ 04-14
Designed By: JDC 11-10
Checked By: CC 12-10

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARI S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: SUPERSTRUCTURE PLAN - SPAN 2
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-57

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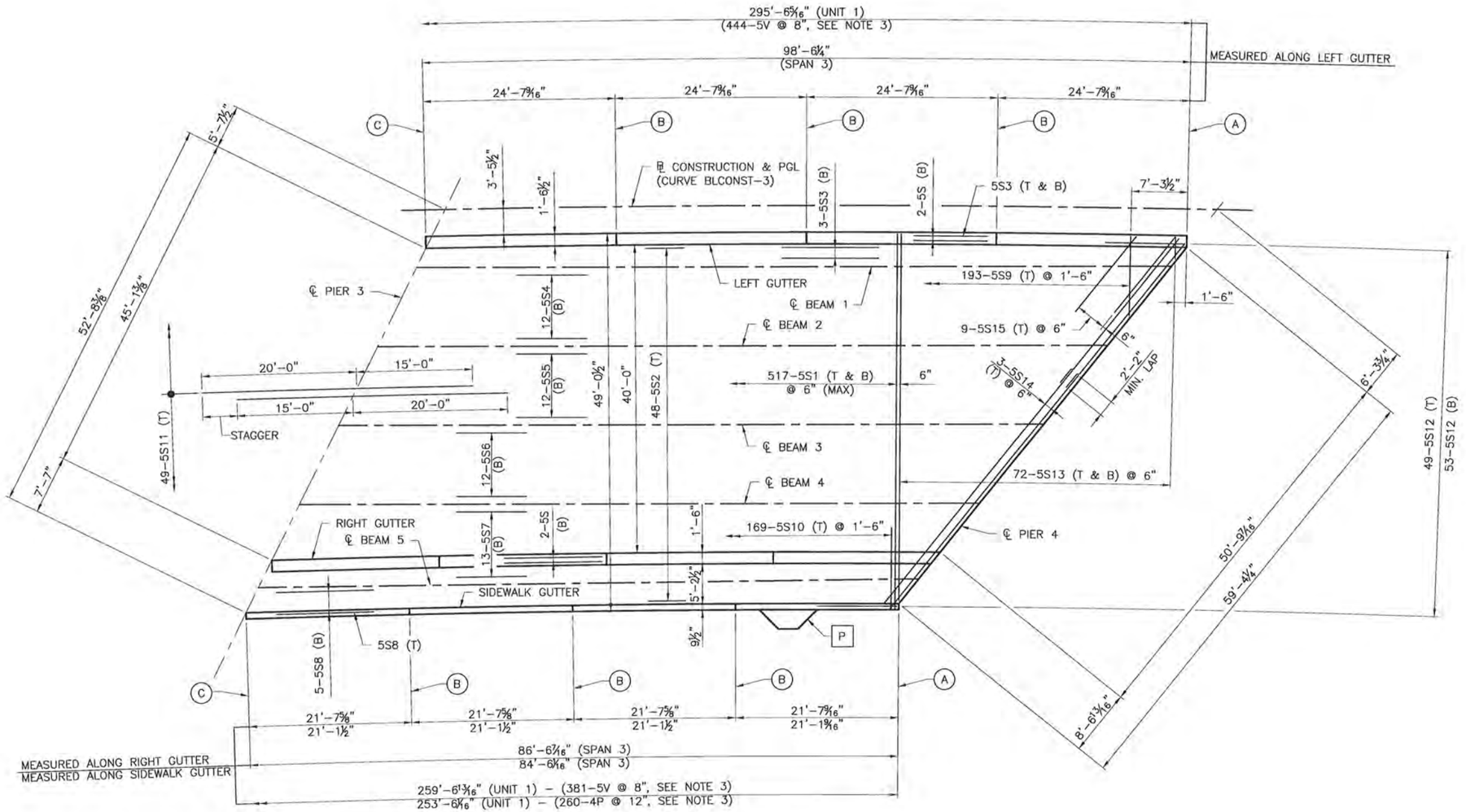


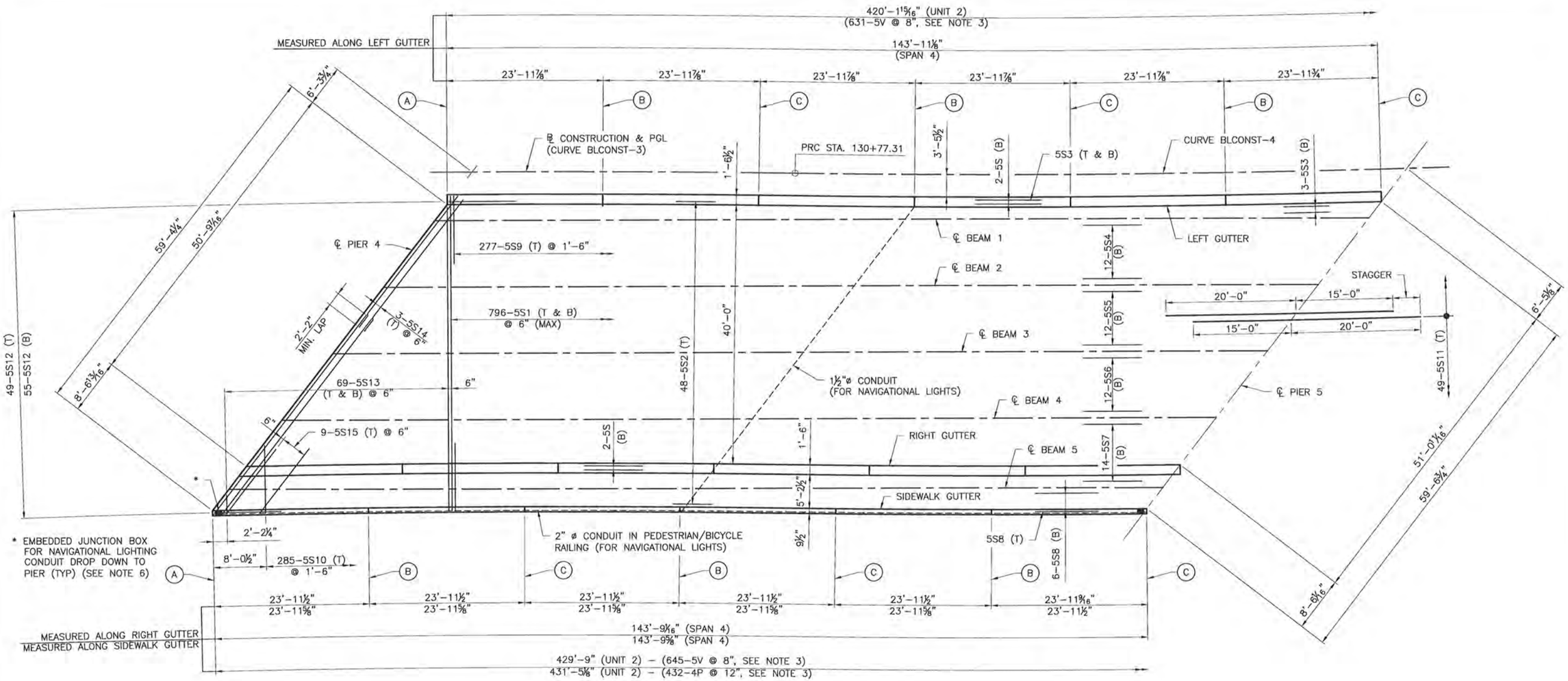
PLAN – SPAN 3

NOTE: FOR NOTES AND LEGEND, SEE SHEET B-56.

BRIDGE NO. 134123

REVISIONS						Drawn By: JLS 01-11	URS Corporation Southern 7650 West Courtney Campbell Causeway Tampa, Florida 33607-1462 C.A. No. 00000002	MANATEE COUNTY GOVERNMENT MANATEE COUNTY, FLORIDA	ENGINEER OF RECORD MARK S. EICHOLTZ P.E. NO. 36078 9/5/14	SHEET TITLE: SUPERSTRUCTURE PLAN – SPAN 3	REF. DWG. NO.
Date	By	Description	Date	By	Description	Checked By: BWJ 04-14				PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER	SHEET NO. B-58
						Designed By: JDC 11-10					
						Checked By: CC 12-10					

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bsuperst1c.dwg LAYOUT NAME: superstructure plan – span 3 PLOTTED: Friday, August 29, 2014 6:29:56 AM USER: kathy_compton



PLAN - SPAN 4

NOTE: FOR NOTES AND LEGEND, SEE SHEET B-56.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: JLS 01-11
Checked By: BWJ 04-14
Designed By: JDC 11-10
Checked By: CC 12-10

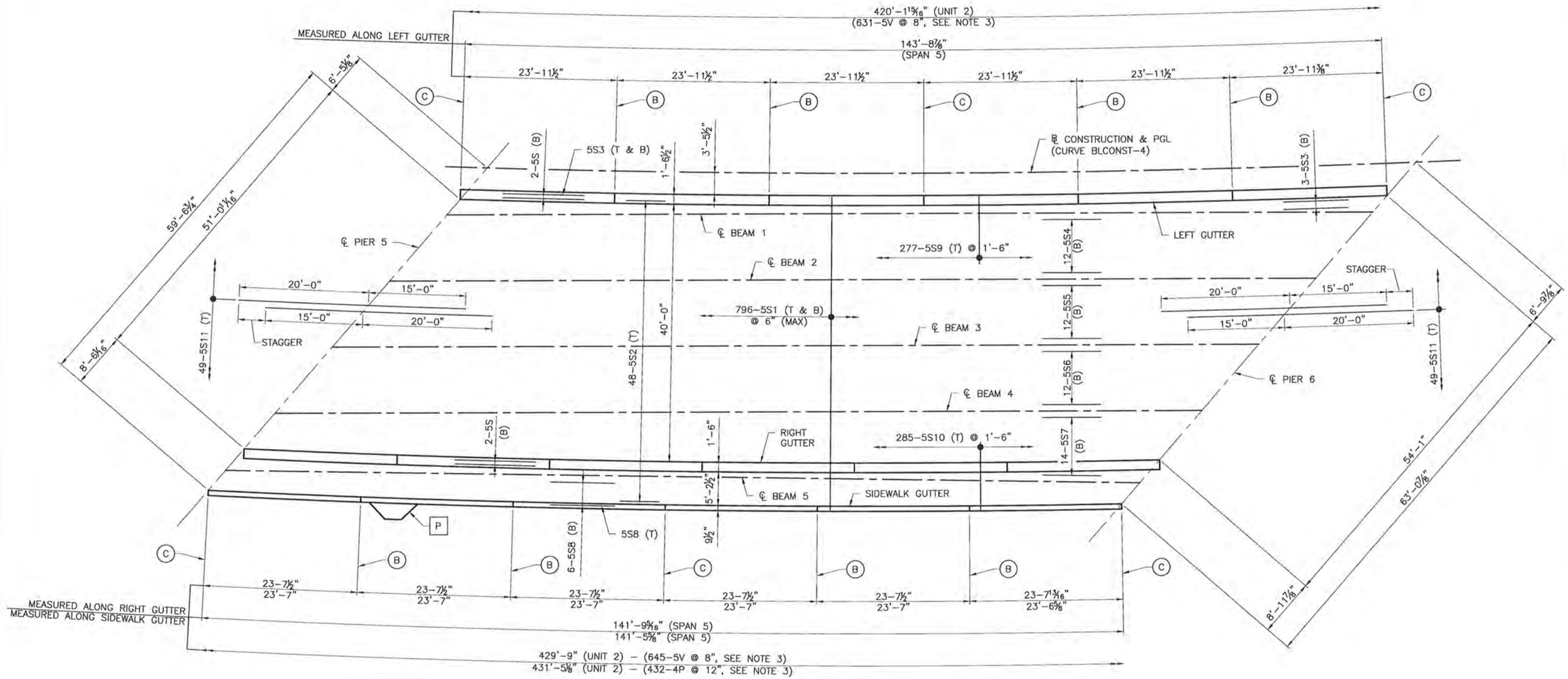
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: SUPERSTRUCTURE PLAN - SPAN 4
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-59

FILENAME: c:\autocad\2014\fort_hamer\dwg\sheets\bsuperst2a.dwg LAYOUT NAME: superstructure plan - span 4 PLOTTED: Friday, August 29, 2014 6:30:01 AM USER: kathy_compton



PLAN - SPAN 5

NOTE: FOR NOTES AND LEGEND, SEE SHEET B-56.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: JLS 01-11
Checked By: BWJ 04-14
Designed By: JDC 11-10
Checked By: CC 12-10

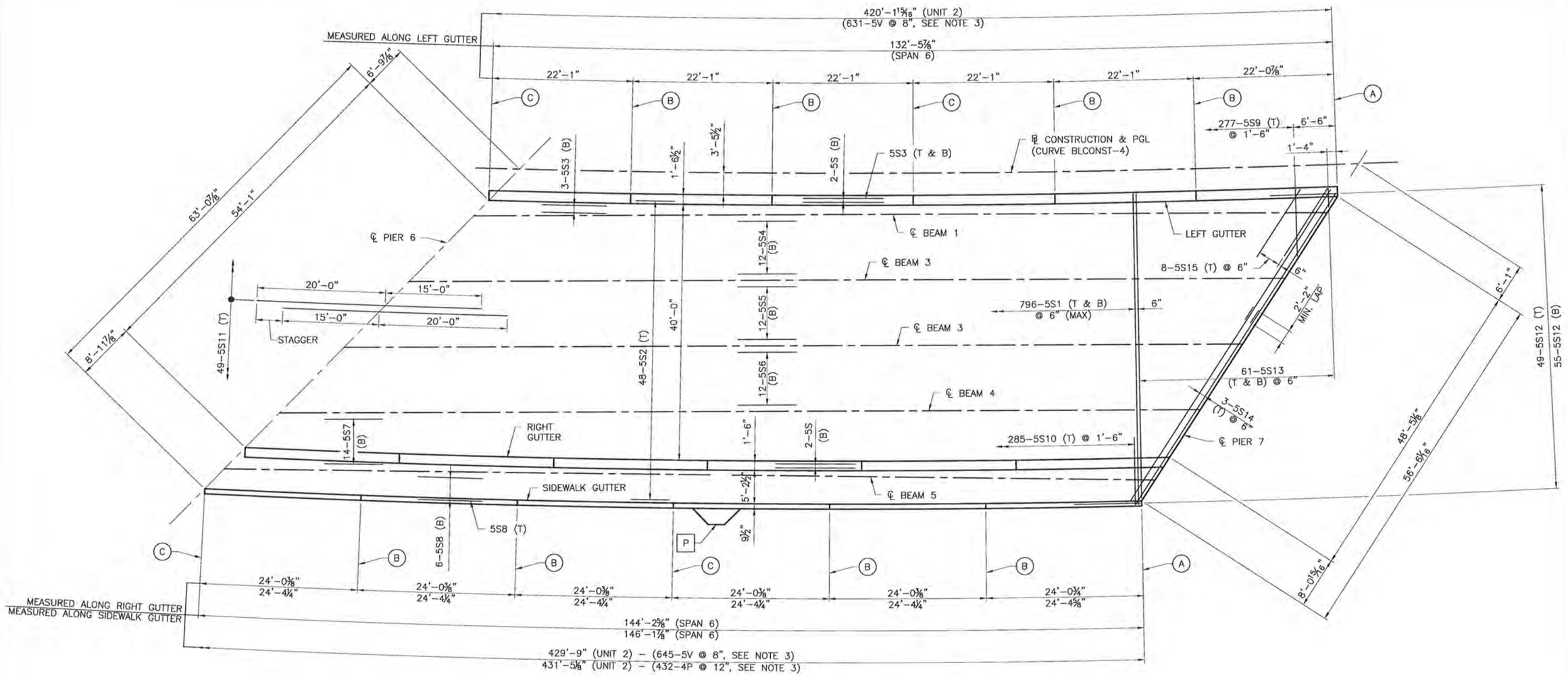
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: SUPERSTRUCTURE PLAN - SPAN 5
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-60

FILENAME: e:\autocad\2014\fort_homer\dwg\sheets\bsuperst2b.dwg LAYOUT NAME: superstructure plan - span 5 PLOTTED: Friday, August 29, 2014 6:30:06 AM USER: kathy_compton



PLAN - SPAN 6

NOTE: FOR NOTES AND LEGEND, SEE SHEET B-56.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: JLS 01-11
Checked By: BWJ 04-14
Designed By: JDC 11-10
Checked By: CC 12-10

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Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

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ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

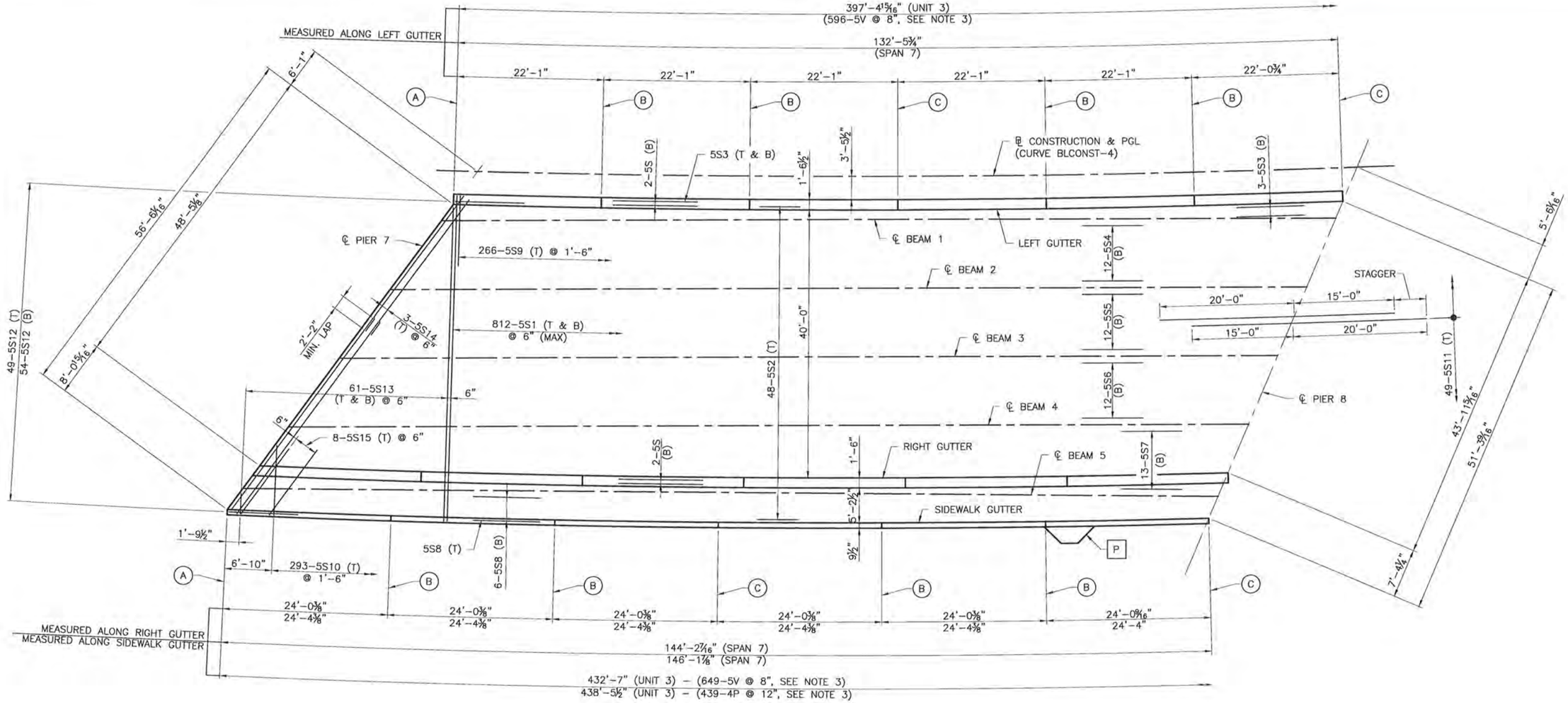
SHEET TITLE: SUPERSTRUCTURE PLAN - SPAN 6

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

SHEET NO. B-61

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bsuperst2c.dwg LAYOUT NAME: superstructure plan - span 6 PLOTTED: Friday, August 29, 2014 6:30:11 AM USER: kathy_compton



PLAN – SPAN 7

NOTE: FOR NOTES AND LEGEND, SEE SHEET B-56.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: JLS 01-11
Checked By: BWJ 04-14
Designed By: JDC 11-10
Checked By: CC 12-10

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7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

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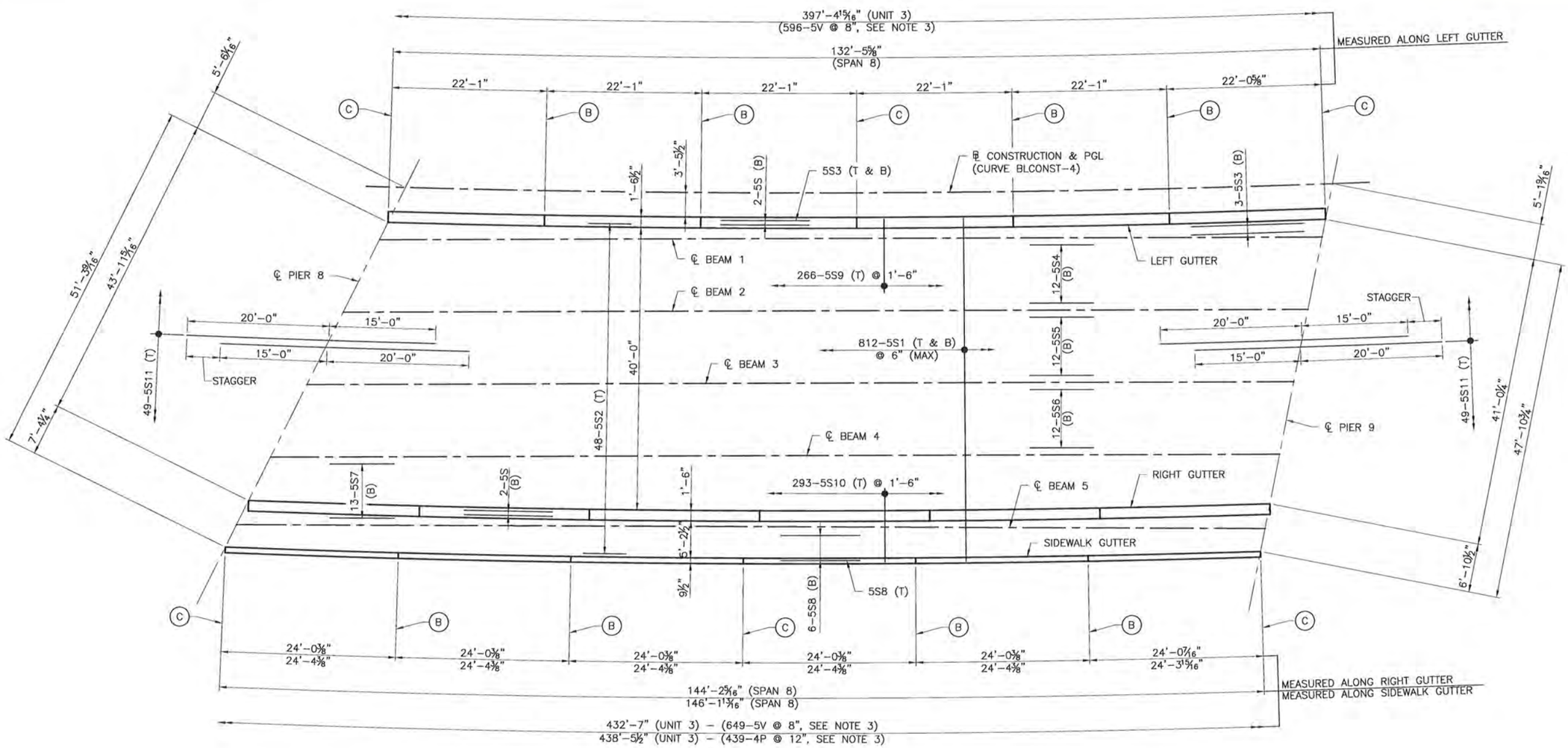
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
Mark Eicholtz 9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: SUPERSTRUCTURE PLAN – SPAN 7
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-62

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bsuperst3a.dwg LAYOUT NAME: superstructure plan - span 7 PLOTTED: Friday, August 29, 2014 6:30:16 AM USER: kathy_compton



PLAN - SPAN 8

NOTE: FOR NOTES AND LEGEND, SEE SHEET B-56.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: JLS 01-11
Checked By: BWJ 04-14
Designed By: JDC 11-10
Checked By: CC 12-10

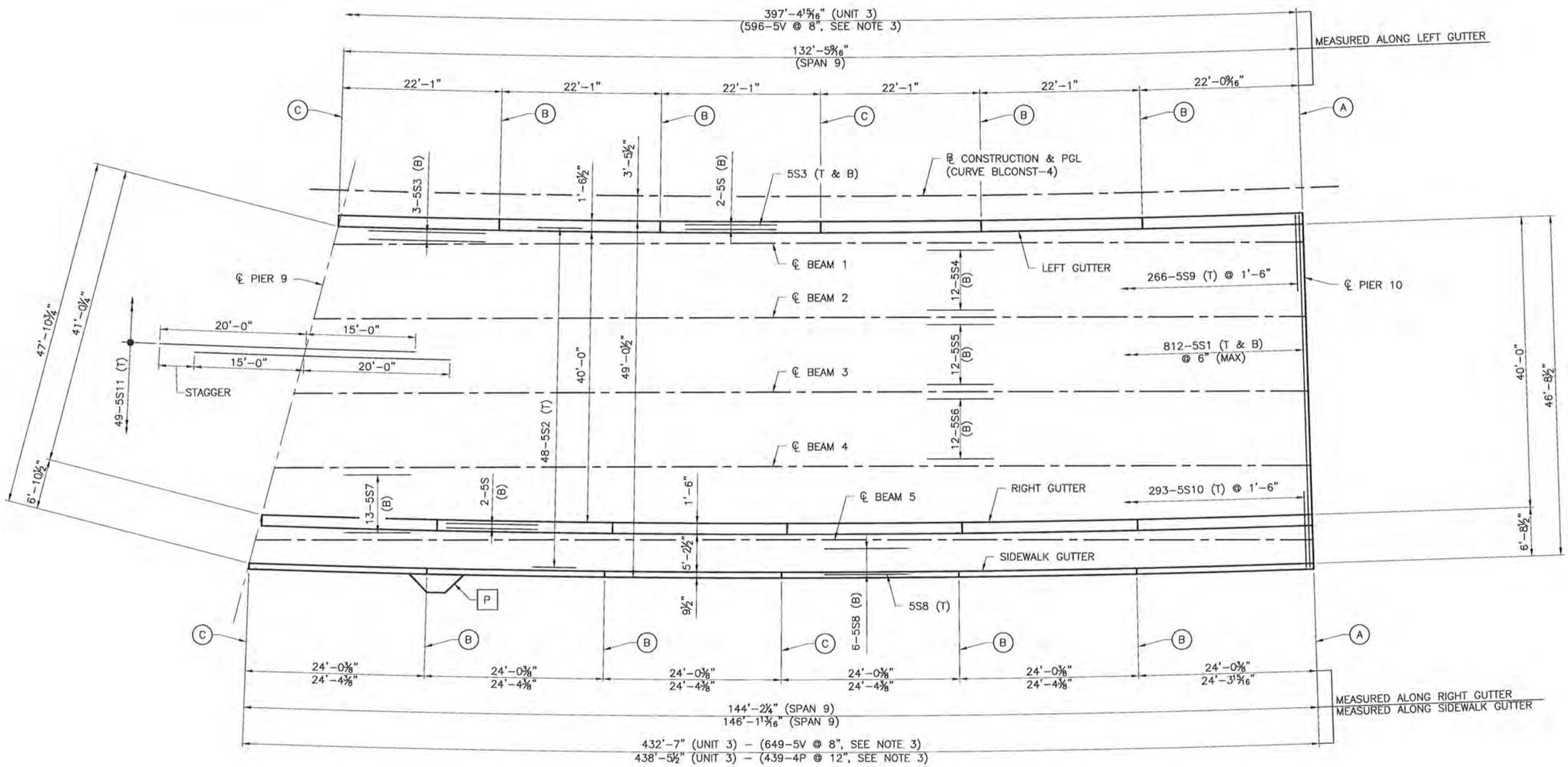
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: SUPERSTRUCTURE PLAN - SPAN 8
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-63

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bsuperst3b.dwg LAYOUT NAME: superstructure plan - span 8 PLOTTED: Friday, August 29, 2014 6:30:21 AM USER: kathy_compton



PLAN – SPAN 9

NOTE: FOR NOTES AND LEGEND, SEE SHEET B-56.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: JLS 01-11
Checked By: BWJ 04-14
Designed By: JDC 11-10
Checked By: CC 12-10

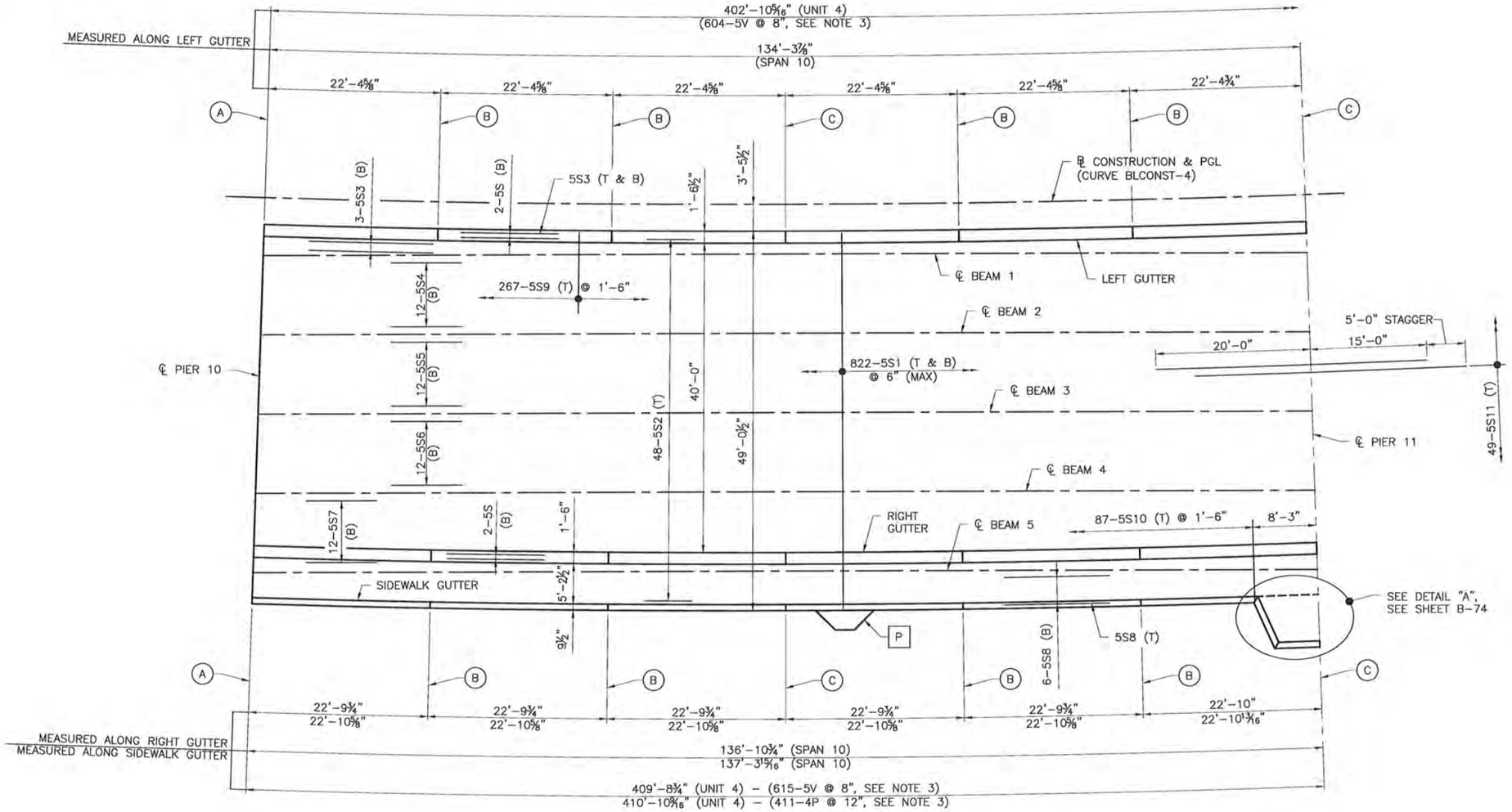
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
Mark Eicholtz
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: SUPERSTRUCTURE PLAN – SPAN 9
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-64

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bsuperst3c.dwg LAYOUT NAME: superstructure plan – span 9 PLOTTED: Friday, August 29, 2014 6:30:26 AM USER: kathy_compton



PLAN – SPAN 10

NOTE: FOR NOTES AND LEGEND, SEE SHEET B-56.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: JLS 01-11
Checked By: BWJ 04-14
Designed By: JDC 11-10
Checked By: CC 12-10

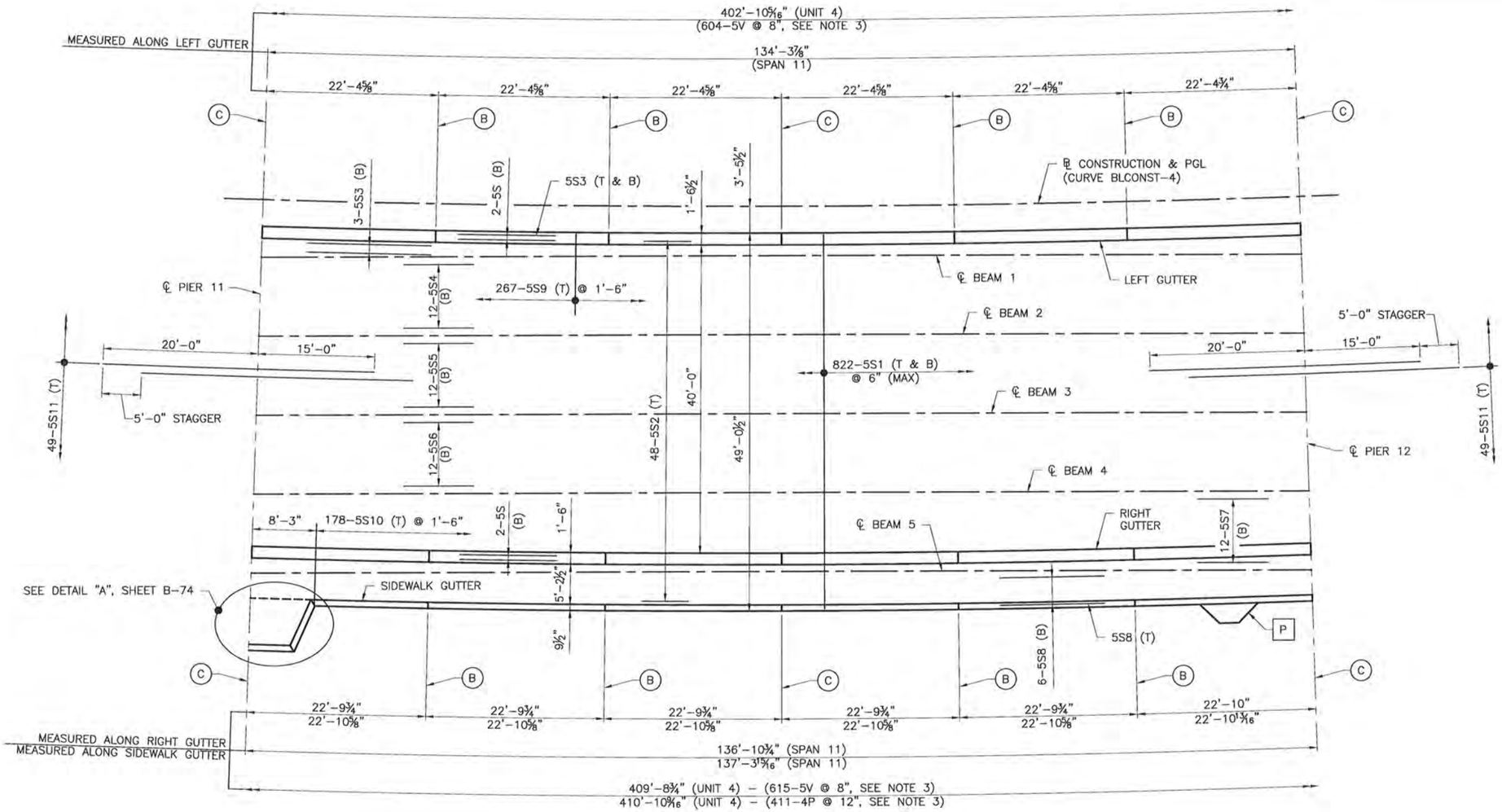
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: SUPERSTRUCTURE PLAN – SPAN 10
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-65

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bsuperst4a.dwg LAYOUT NAME: superstructure plan – span 10 PLOTTED: Friday, August 29, 2014 6:30:31 AM USER: kathy_compton

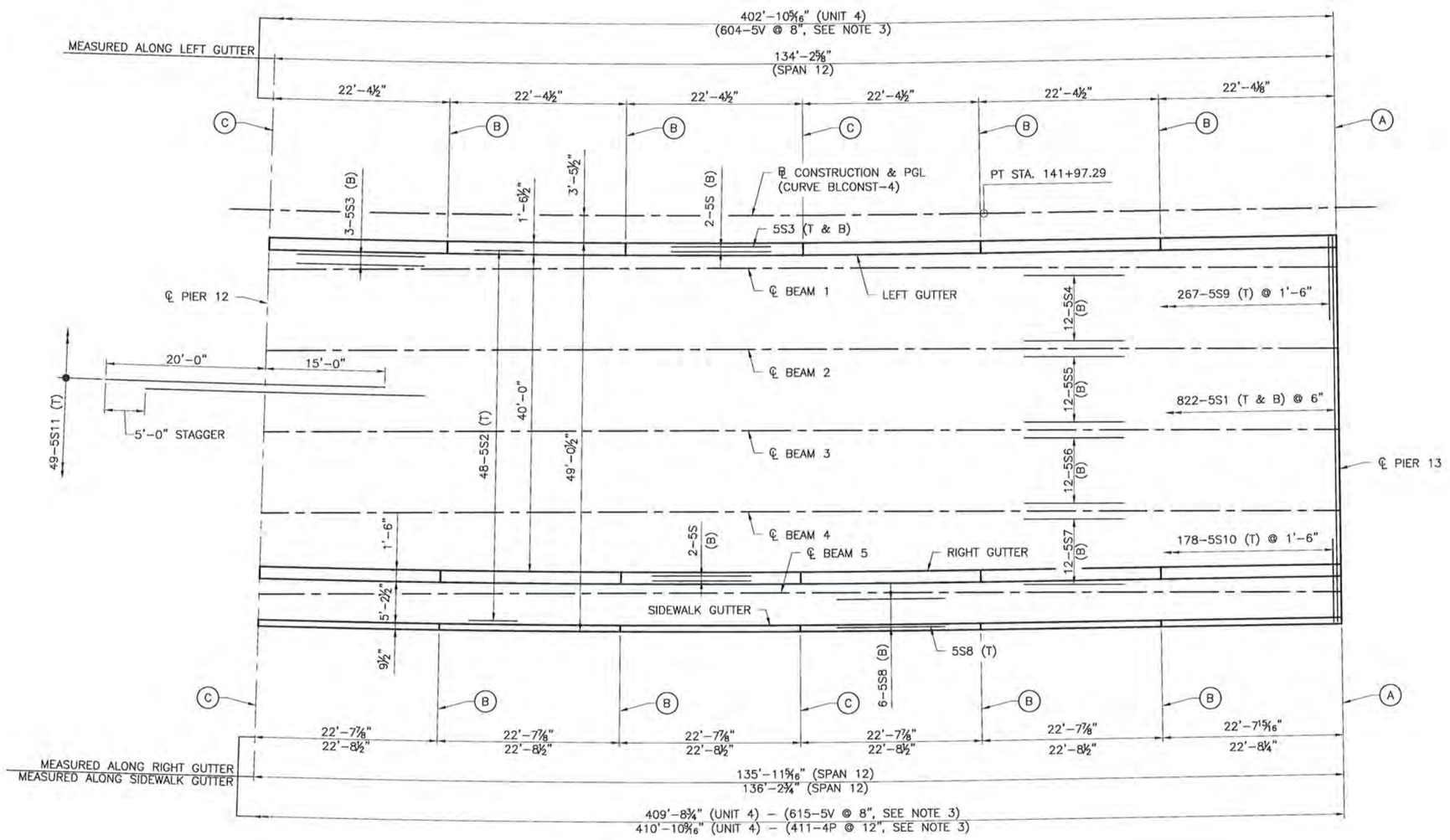


PLAN - SPAN 11

NOTE: FOR NOTES AND LEGEND, SEE SHEET B-56.

BRIDGE NO. 134123

REVISIONS						Drawn By: JLS 01-11	URS Corporation Southern 7650 West Courtney Campbell Causeway Tampa, Florida 33607-1462 C.A. No. 00000002	MANATEE COUNTY GOVERNMENT MANATEE COUNTY, FLORIDA	ENGINEER OF RECORD MARK S. EICHOLTZ P.E. NO. 38078	SHEET TITLE: SUPERSTRUCTURE PLAN - SPAN 11	REF. DWG. NO.
Date	By	Description	Date	By	Description	Checked By: BWJ 04-14				PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER	SHEET NO. B-66
						Designed By: JDC 11-10					
						Checked By: CC 12-10					



PLAN - SPAN 12

NOTE: FOR NOTES AND LEGEND, SEE SHEET B-56.

BRIDGE NO. 134123

REVISIONS						Drawn By: JLS 01-11	URS Corporation Southern 7650 West Courtney Campbell Causeway Tampa, Florida 33607-1462 C.A. No. 00000002	MANATEE COUNTY GOVERNMENT MANATEE COUNTY, FLORIDA	ENGINEER OF RECORD MARK S. EICHOLTZ P.E. NO. 36078 9/5/14	SHEET TITLE: SUPERSTRUCTURE PLAN - SPAN 12	REF. DWG. NO.
Date	By	Description	Date	By	Description	Checked By: BWJ 04-14				PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER	SHEET NO. B-67
						Designed By: JDC 11-10					
						Checked By: CC 12-10					

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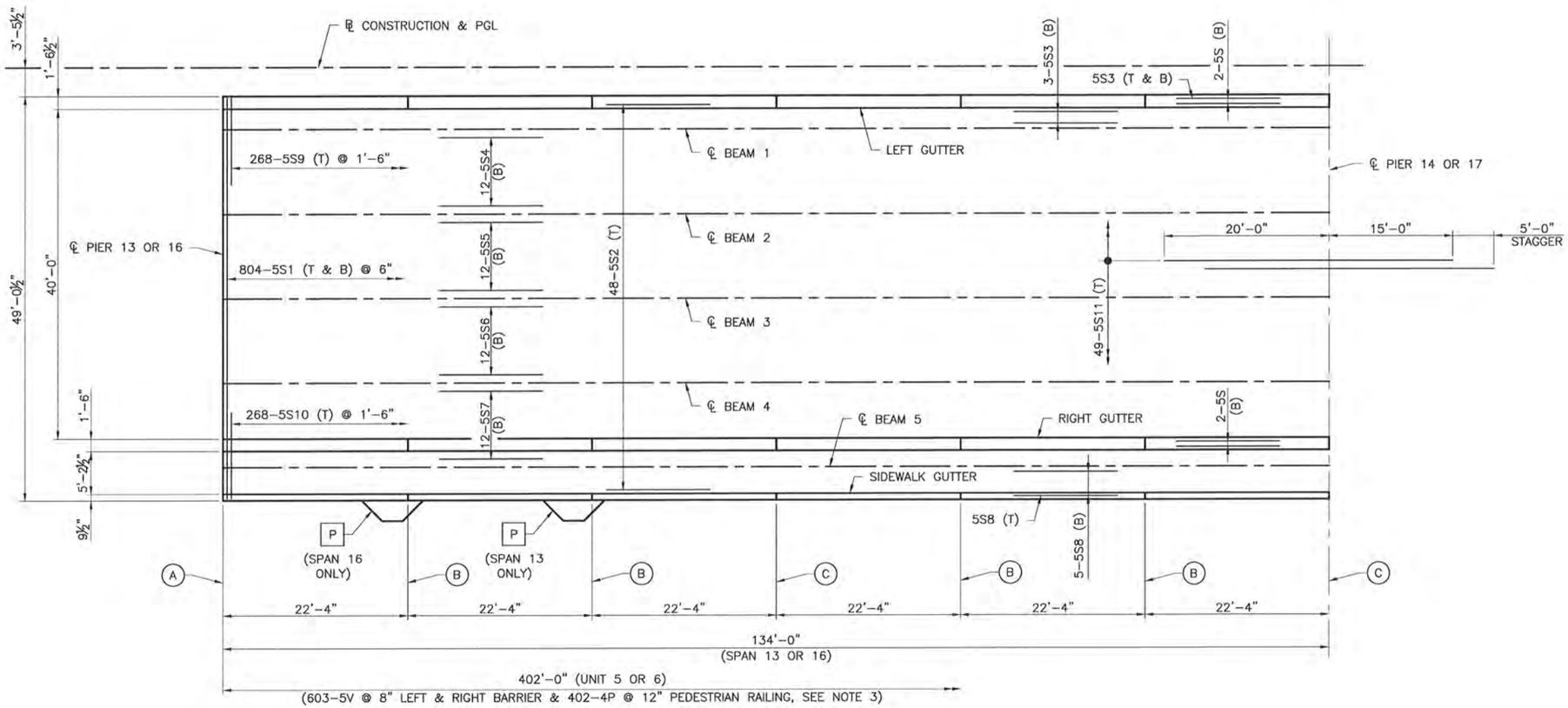


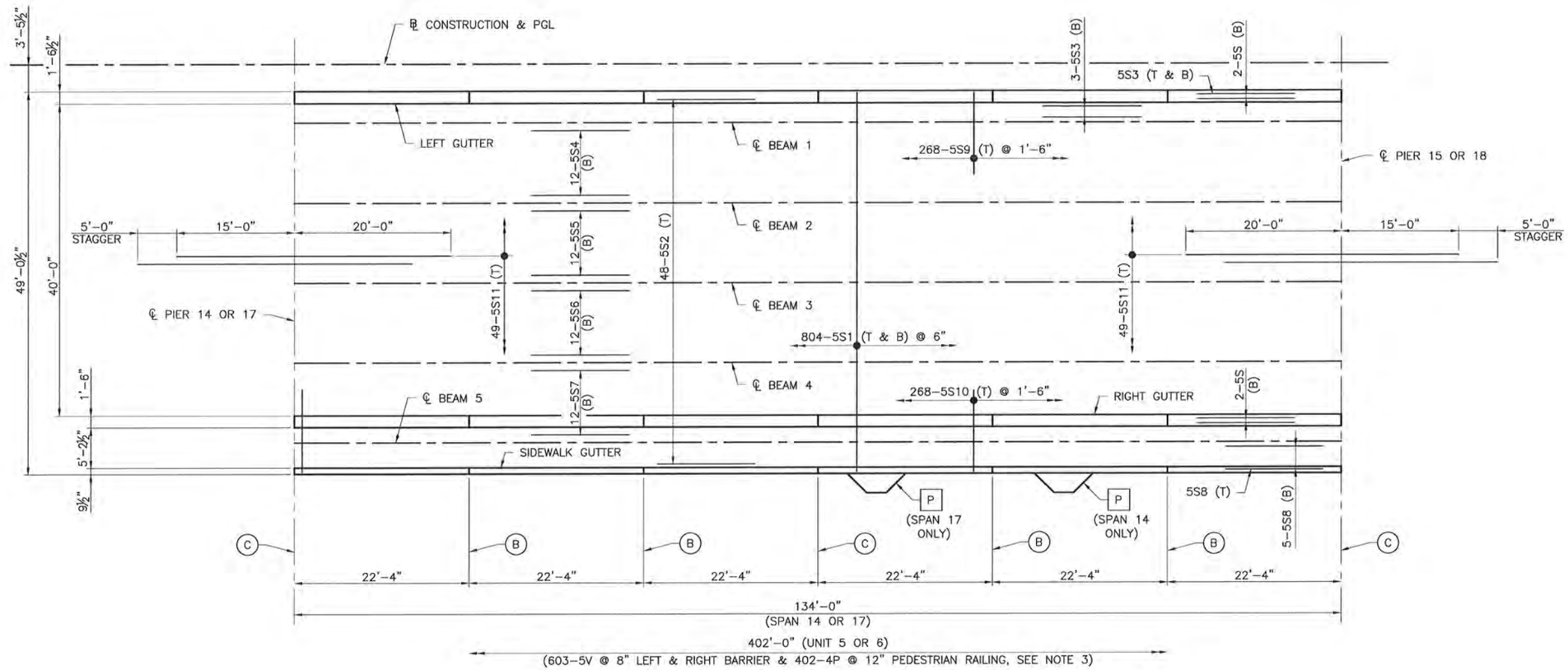
PLAN – SPAN 13 & 16

NOTE: FOR NOTES AND LEGEND, SEE SHEET B-56.

BRIDGE NO. 134123

REVISIONS						Drawn By: JLS 01-11	URS Corporation Southern 7650 West Courtney Campbell Causeway Tampa, Florida 33607-1462 C.A. No. 00000002	MANATEE COUNTY GOVERNMENT MANATEE COUNTY, FLORIDA	ENGINEER OF RECORD MARK S. ETCHOLTZ P.E. NO. 36078 9/5/14	SHEET TITLE: SUPERSTRUCTURE PLAN – SPAN 13 & 16	REF. DWG. NO.
Date	By	Description	Date	By	Description	Checked By: BWJ 04-14				PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER	SHEET NO. B-68
						Designed By: JDC 11-10					
						Checked By: CC 12-10					

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bsuperst5-6a.dwg LAYOUT NAME: superstructure plan – span 13 & 16 PLOTTED: Friday, August 29, 2014 6:30:46 AM USER: kathy_compton



PLAN – SPAN 14 & 17

NOTE: FOR NOTES AND LEGEND, SEE SHEET B-56.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: JLS 01-11
Checked By: BWJ 04-14
Designed By: JDC 11-10
Checked By: CC 12-10

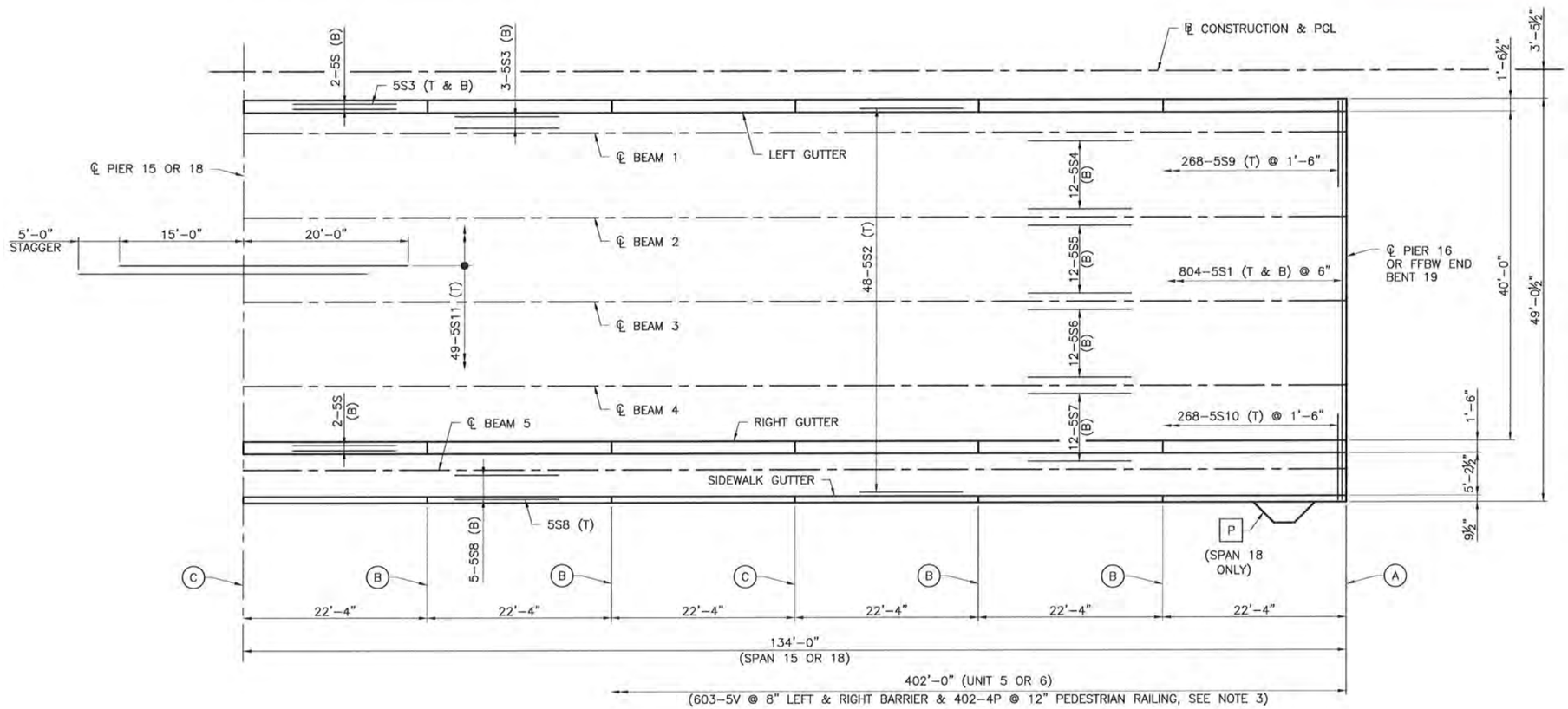
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: SUPERSTRUCTURE PLAN – SPAN 14 & 17
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-69

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bsuperst5-6b.dwg LAYOUT NAME: superstructure plan – span 14 & 17 PLOTTED: Friday, August 29, 2014 6:30:51 AM USER: kathy_compton



PLAN – SPAN 15 & 18

NOTE: FOR NOTES AND LEGEND, SEE SHEET B-56.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: JLS 01-11
Checked By: BWJ 04-14
Designed By: JDC 11-10
Checked By: CC 12-10

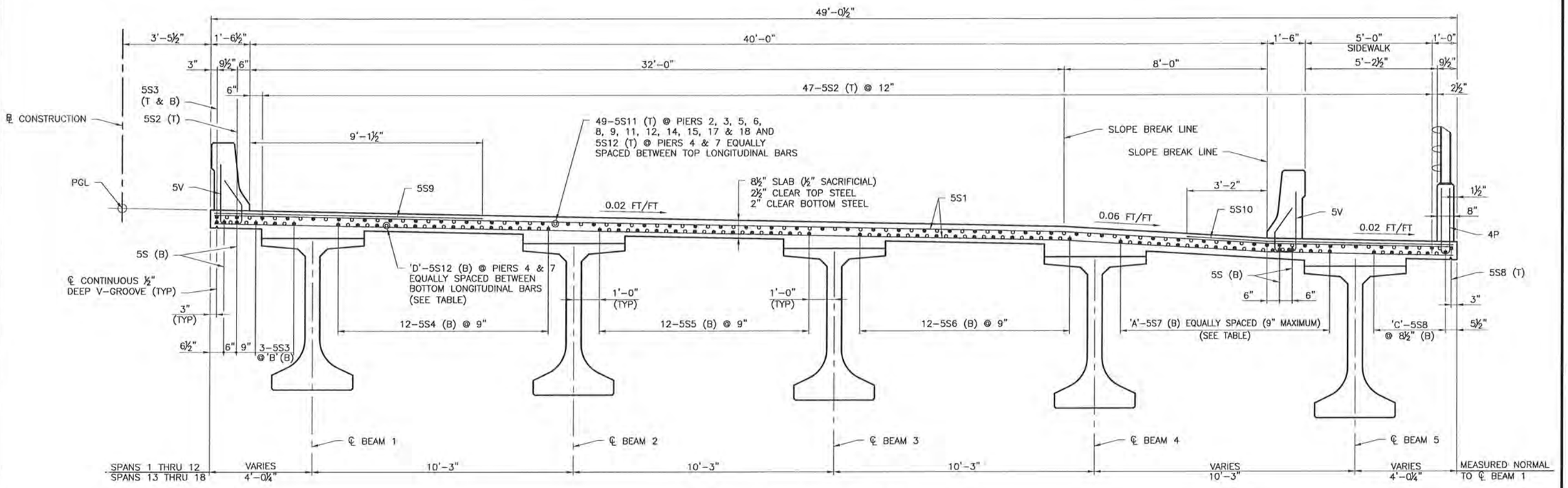
URS
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: SUPERSTRUCTURE PLAN – SPAN 15 & 18
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-70

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bsuperst5-6c.dwg LAYOUT NAME: superstructure plan – span 15 & 18 PLOTTED: Friday, August 29, 2014 6:30:56 AM USER: kathy_compton



SECTION THRU SLAB

(SPANS 13 THRU 18 SHOWN, OTHERS SIMILAR)

TABLE OF VARIABLES				
UNIT NUMBER	'A'	'B'	'C'	'D'
1	13	9"	5	53
2	14	7"	6	55
3	13	7"	6	54
4	12	7"	6	N/A
5 & 6	12	9"	5	N/A

ESTIMATED QUANITITES																			
ITEM		UNIT	UNIT 1			UNIT 2			UNIT 3			UNIT 4			UNIT 5			UNIT 6		
			SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5	SPAN 6	SPAN 7	SPAN 8	SPAN 9	SPAN 10	SPAN 11	SPAN 12	SPAN 13	SPAN 14	SPAN 15	SPAN 16	SPAN 17	SPAN 18
CLASS IV CONCRETE (SUPERSTRUCTURE)	SLAB	CY	117.7	117.7	117.7	185.1	183.5	179.3	179.2	179.2	179.2	176.2	176.2	174.0	172.4	172.4	172.4	172.4	172.4	172.4
	HAUNCH		4.8	4.8	4.8	7.4	7.6	10.3	10.3	10.3	10.3	9.7	10.7	11.0	11.9	11.9	11.9	11.9	6.9	6.9
	DIAPHRAGMS		12.4	13.2	14.7	15.7	16.2	15.8	14.2	13.0	12.4	12.2	12.2	12.2	12.5	12.5	12.5	12.5	12.5	12.5
	TOTAL		134.9	135.8	137.3	208.2	207.2	205.3	203.7	202.5	201.9	198.1	199.1	197.2	196.8	196.8	196.8	196.8	191.8	191.8
PRESTRESSED BEAMS: FLORIDA I-BEAM 72"		LF	453	453	451	715	711	694	693	693	692	675	676	672	665	666	665	665	666	665
REINFORCING STEEL (SUPERSTRUCTURE)		LB	106,182			161,208			154,874			149,650			145,400			145,400		

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: JLS 01-11
Checked By: CC 01-11
Designed By: JDC 11-10
Checked By: CC 12-10

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36076
9/5/14

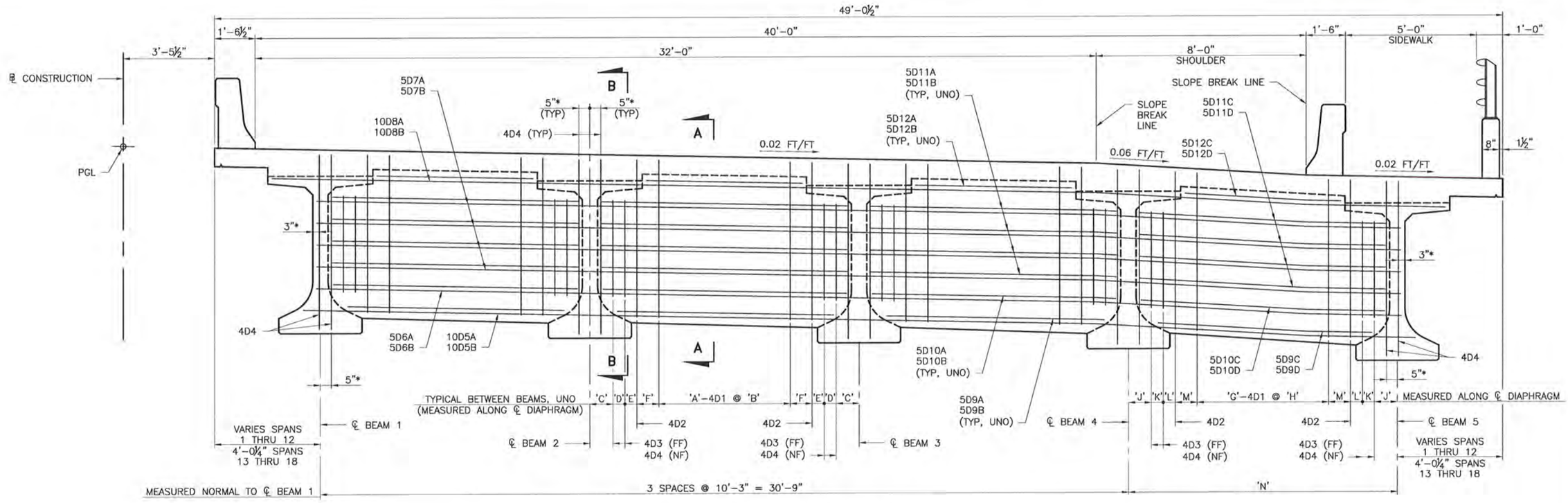
SHEET TITLE: SECTION THRU SLAB

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

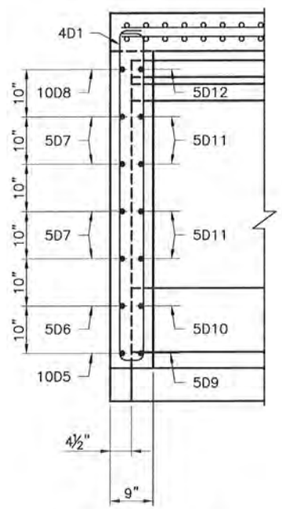
SHEET NO. B-71

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bsuperstdet01.dwg LAYOUT NAME: section thru slab PLOTTED: Tuesday, September 02, 2014 5:36:45 PM USER: kathy_compton

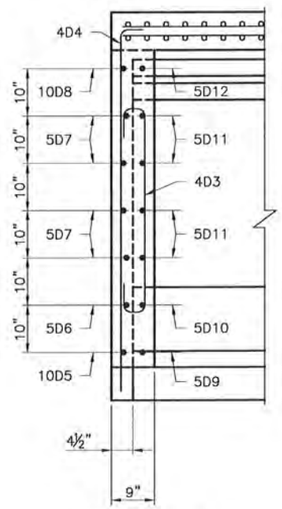


ELEVATION AT END DIAPHRAGM

* MEASURED ALONG ℄ DIAPHRAGM.



SECTION A–A



SECTION B–B

NOTES

1. HORIZONTAL DIMENSIONS ARE NORMAL TO ℄ CONSTRUCTION, UNO.
2. BAR MARK DESIGNATIONS "A" AND "C" ARE LOCATED STATIONS BACK.
   BAR MARK DESIGNATIONS "B" AND "D" ARE LOCATED STATIONS AHEAD.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 01–11
Checked By: BWJ 04–14
Designed By: CC 12–10
Checked By: SJM 01–11

URS Corporation Southern
7650 West Courtney Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: ELEVATION AT END DIAPHRAGM (1 OF 2)
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B–72

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bdiaphragmdet01.dwg LAYOUT NAME: elevation at end diaphragm (1 of 2) PLOTTED: Friday, August 29, 2014 6:31:06 AM USER: kathy_compton

TABLE OF VARIABLES

SPAN		DIMENSION												
		A	B	C	D	E	F	G	H	J	K	L	M	N
1	BACK	7	10"	10½"	5½"	5½"	10"	7	10"	10½"	5½"	5½"	10"	10'–2⅞"
	AHEAD	9	9"	10⅜"	5½"	6"	6"	7	10"	10⅝"	6"	6"	10"	10'–0⁹⁄₁₆"
2	BACK	9	9"	10¹⁄₁₆"	5½"	6"	5"	9	9"	10⅝"	6"	6"	6"	10'–5¹³⁄₁₆"
	AHEAD	9	9½"	1'–0"	6"	7"	7"	9	9"	11⅝"	6"	8"	6"	9'–10¹³⁄₁₆"
3	BACK	9	9½"	11½"	6"	7"	6"	9	10"	10¹⁵⁄₁₆"	6"	8"	7"	10'–9¼"
	AHEAD	11	8½"	1'–0½"	7"	8½"	8½"	9	10"	1'–0⅛"	7"	10"	6½"	9'–9¹⁄₁₆"
4	BACK	9	10"	11⅜"	7"	9"	10"	11	9"	1'–0⅜"	7"	9"	7"	10'–7¾"
	AHEAD	9	10"	1'–0⅜"	7"	8"	10"	11	9"	1'–0¹⁄₁₆"	7"	9"	8½"	10'–9⅝"
5	BACK	11	9"	1'–0³⁄₁₆"	8"	9"	7"	7	10"	1'–0³⁄₁₆"	8"	10"	10"	8'–10³⁄₁₆"
	AHEAD	11	9"	1'–0³⁄₁₆"	8"	9"	7"	11	10"	1'–0⁹⁄₁₆"	7"	9½"	9½"	11'–2¼"
6	BACK	11	9"	1'–1⁵⁄₁₆"	8"	10"	10"	9	9"	1'–1⁵⁄₁₆"	8"	9"	7"	8'–8⁷⁄₁₆"
	AHEAD	9	10"	1'–0³⁄₁₆"	6"	8"	7"	11	9"	11¹⁄₁₆"	6"	9"	7"	10'–11¹⁵⁄₁₆"
7	BACK	9	10"	1'–0½"	6"	8"	10"	9	9"	11¼"	7"	8"	6"	9'–1¾"
	AHEAD	9	9"	10¾"	6"	7"	7"	9	9"	10¹⁵⁄₁₆"	6"	8"	9"	10'–8¹⁵⁄₁₆"
8	BACK	9	9"	10¾"	6"	7"	9"	7	10"	11"	6"	7"	10"	9'–3⅛"
	AHEAD	7	10"	10¹⁄₁₆"	6"	6"	10"	9	8½"	10¾"	5½"	5½"	8½"	10'–6⅛"
9	BACK	7	10"	10⅝"	6"	7"	10"	7	10"	10½"	5½"	5½"	10"	9'–10¹³⁄₁₆"
	AHEAD	7	10"	10½"	5½"	5½"	10"	7	10"	10⅜"	5½"	5½"	10"	10'–2¾"
10	BACK	7	10"	10⁹⁄₁₆"	5½"	5½"	10"	7	10"	10⅜"	5½"	5½"	10"	10'–2¾"
	AHEAD	7	10"	10⁹⁄₁₆"	5½"	5½"	10"	7	10"	10⅜"	5½"	5½"	10"	10'–2¾"
11	BACK	7	10"	10⁹⁄₁₆"	5½"	5½"	10"	7	10"	10⅜"	5½"	5½"	10"	10'–2¾"
	AHEAD	7	10"	10⁹⁄₁₆"	5½"	5½"	10"	7	10"	10⅜"	5½"	5½"	10"	10'–2¾"
12	BACK	7	10"	10½"	5½"	5½"	10"	7	10"	10⁷⁄₁₆"	5½"	5½"	10"	10'–2¹³⁄₁₆"
	AHEAD	7	10"	10½"	5½"	5½"	10"	7	10"	10½"	5½"	5½"	10"	10'–2¹⁵⁄₁₆"
13 THRU 18	BACK	7	10"	10½"	5½"	5½"	10"	7	10"	10½"	5½"	5½"	10"	10'–3"
	AHEAD	7	10"	10½"	5½"	5½"	10"	7	10"	10½"	5½"	5½"	10"	10'–3"

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 01–11
Checked By: BWJ 04–14
Designed By: CC 12–10
Checked By: SJM 01–11

URS Corporation Southern
7650 West Courtney
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C.A. No. 00000002

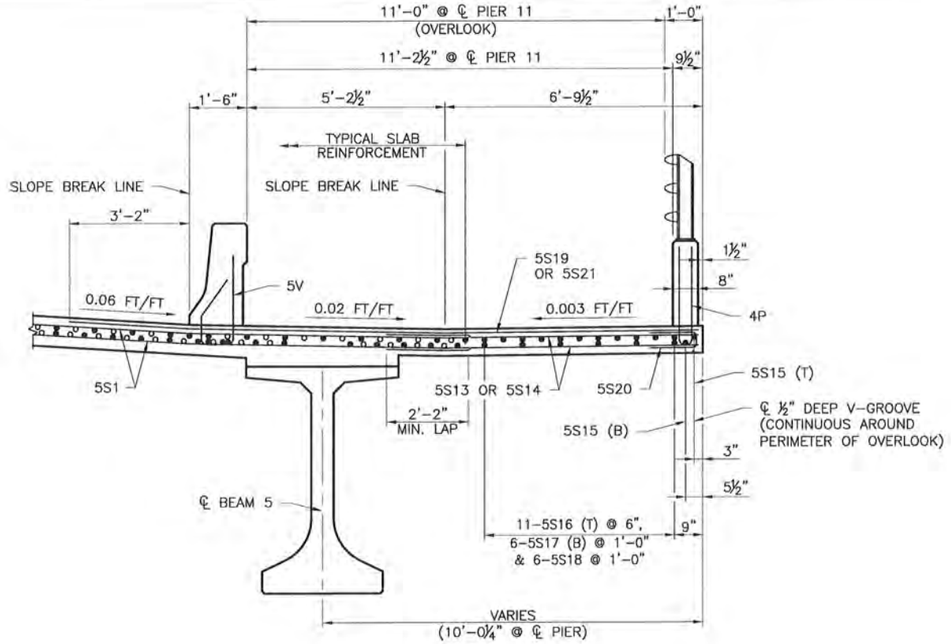
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

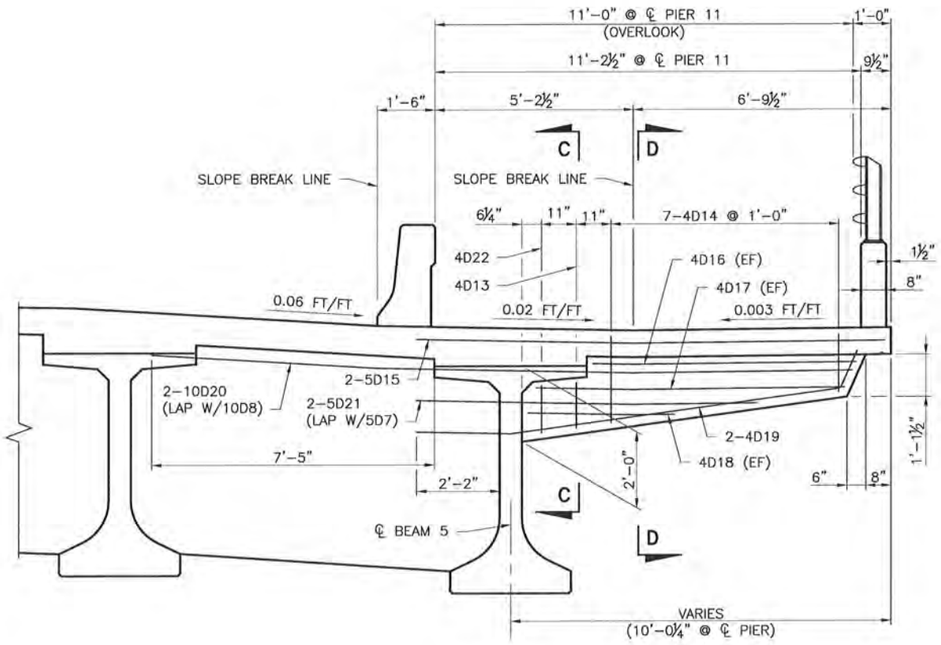
SHEET TITLE: ELEVATION AT END DIAPHRAGM (2 OF 2)
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.
SHEET NO. B–73

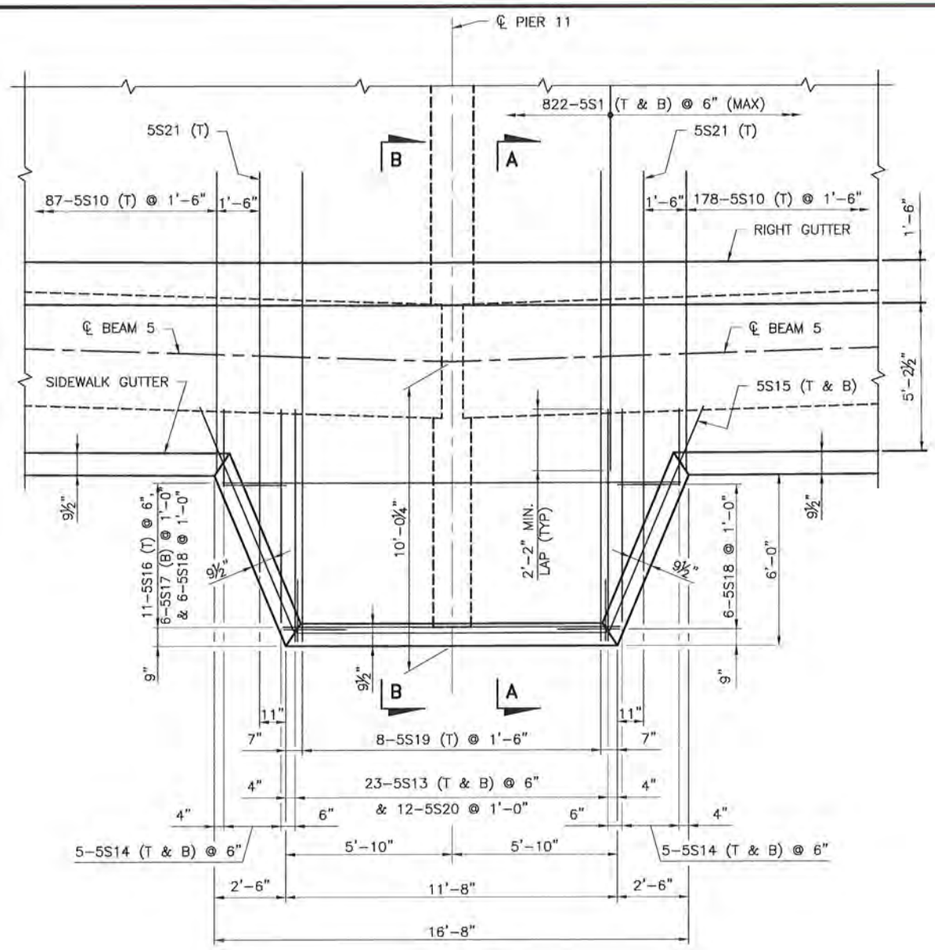
FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bdiaphragmdet02.dwg LAYOUT NAME: elevation at end diaphragm (2 of 2) PLOTTED: Friday, August 29, 2014 6:31:11 AM USER: kathy_compton



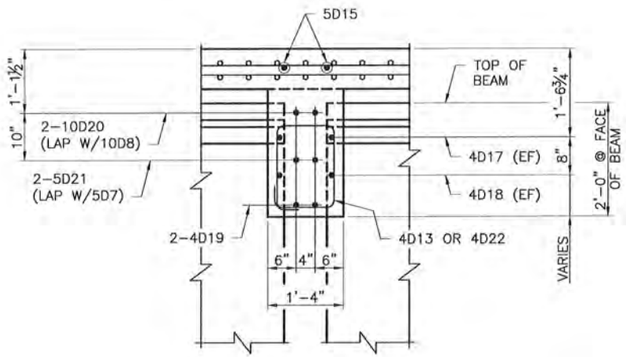
SECTION A-A



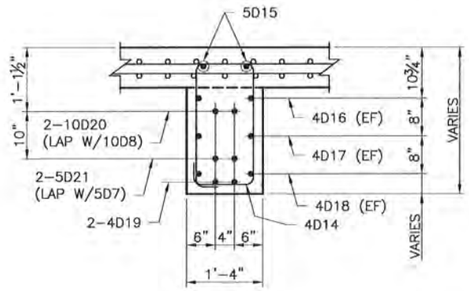
SECTION B-B
(DIAPHRAGM & SLAB REINFORCING NOT SHOWN)



DETAIL "A"



SECTION C-C



SECTION D-D

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 01-11
Checked By: BWJ 04-14
Designed By: CC 12-10
Checked By: SJM 01-11

URS Corporation Southern
7650 West Courtney
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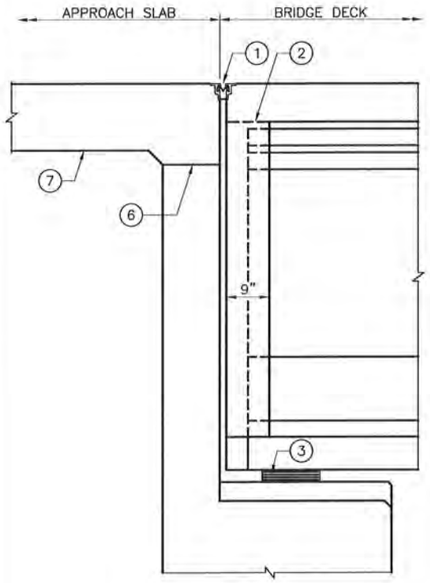
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

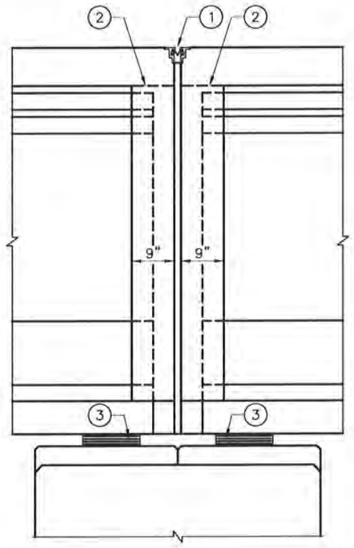
ENGINEER OF RECORD
7/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: SUPERSTRUCTURE DETAILS (1 OF 2)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-74

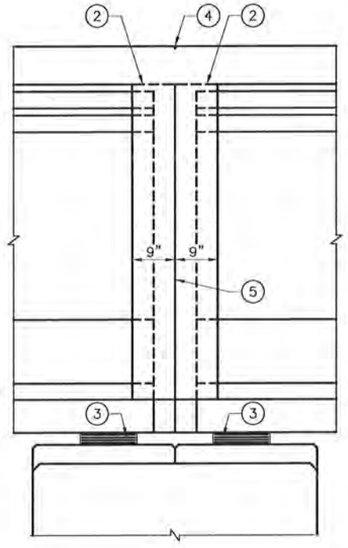
FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bsuperside02.dwg LAYOUT NAME: superstructure details (1 of 2) PLOTTED: Friday, August 29, 2014 6:31:17 AM USER: kathy_compton



SECTION AT END BENTS



SECTION AT PIERS (EXPANSION JOINTS)



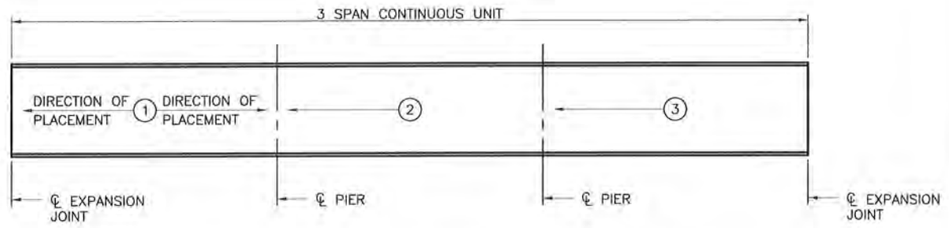
SECTION AT PIERS (CONTINUOUS SLAB)

LIST OF STANDARD NOTATIONS

1. STRIP SEAL EXPANSION JOINT, FDOT STANDARD INDEX NO. 21100
2. CONSTRUCTION JOINT REQUIRED
3. COMPOSITE NEOPRENE BEARING PAD
4. SEE DECK CONSTRUCTION JOINT DETAILS AT INTERMEDIATE SUPPORTS
5. TWO LAYERS OF 55 POUND SMOOTH ROOFING PAPER
6. TWO LAYERS OF 30 POUND SMOOTH ROOFING PAPER
7. APPROACH SLAB

DECK CONSTRUCTION JOINT NOTES

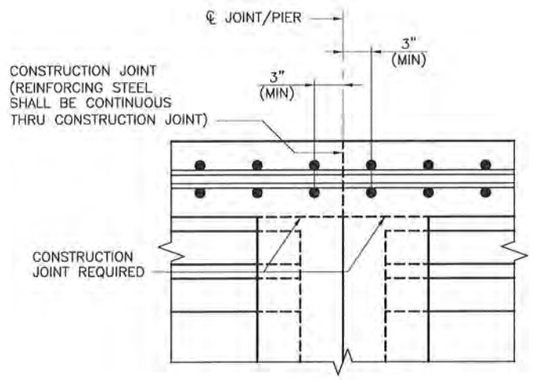
1. USE DETAIL "B" WHERE A POUR TERMINATES AT AN INTERMEDIATE SUPPORT.
2. USE DETAIL "C" WHERE DECK POURS ARE CONTINUOUS OVER INTERMEDIATE SUPPORTS.
3. COST OF CONSTRUCTING DETAIL "C" SHALL BE INCLUDED IN THE DECK CONCRETE. CONSTRUCT EITHER A TOOLED GROOVE OR V-GROOVE PLACED PRIOR TO THE CONCRETE OBTAINING INITIAL SET.
4. LOW MODULUS SILICONE (TYPE D) SEALANT MAY BE USED IN LIEU OF HOT-POURED SEAL IN GROOVE. ENSURE GROOVE IS CLEAN AND FREE OF GREASE AND DEBRIS BEFORE FILLING THE GROOVE.
5. FOR DECK PLACEMENT SEQUENCE, SEE DETAIL ON THIS SHEET.



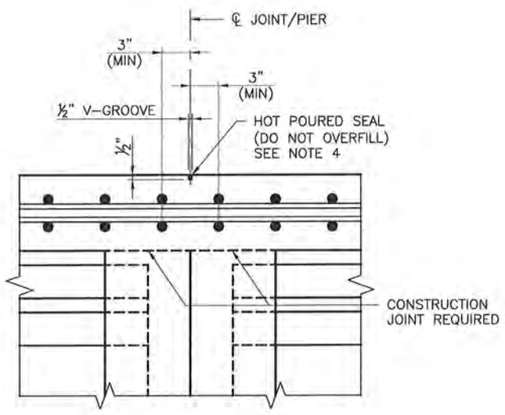
PLAN – PLACEMENT SEQUENCE OF 3 SPAN UNIT

PLACEMENT SEQUENCE NOTES

1. (1) DENOTES SECTION PLACEMENT SEQUENCE PER UNIT.
2. NO UNIT SHALL BE PLACED ADJACENT TO A PREVIOUSLY PLACED UNIT THAT IS NOT A MINIMUM OF 72 HOURS OLD.
3. UNITS WITH IDENTICAL LABELS MAY BE PLACED INDIVIDUALLY OR SIMULTANEOUSLY.
4. CONTRACTOR SHALL TAKE INTO CONSIDERATION THE TEMPERATURE AFFECTS ON THE BEAM CAMBER WHEN SELECTING TIME OF DAY FOR CONCRETE PLACEMENT AND SETTING SCREED.
5. THE CONTRACTOR MAY SUBMIT FOR APPROVAL A REVISED CASTING SEQUENCE.



DETAIL "B"



DETAIL "C"

DECK CONSTRUCTION JOINT DETAILS AT INTERMEDIATE SUPPORTS

STRIP SEAL EXPANSION JOINT DATA TABLE INDEX NO. 21100

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	PARALEL TO ℄ JOINT		LEFT SIDE	RIGHT SIDE		
END BENT 1	1.01	1.01	0.00	−1.64	0	0	2.00	0.10
PIER 4	2.70	2.12	1.67	+0.58	37.656	38.411	1.75	0.20
PIER 7	3.28	2.69	1.87	+0.05	34.684	33.943	1.50	0.25
PIER 10	3.22	3.22	0.00	+0.09	0	0	1.75	0.30
PIER 13	3.16	3.16	0.05	+0.86	0	0	1.75	0.29
PIER 16	3.18	3.18	0.00	0.00	0	0	1.75	0.29
END BENT 19	1.53	1.53	0.00	0.00	0	0	2.00	0.14

NOTE:
DIM. A ADJUSTMENT PER 10°F SHOWN IS MEASURED PERPENDICULAR TO ℄ EXPANSION JOINT. FOR THEORETICAL DIRECTION OF MOVEMENT, SEE INDEX NO. 21100, SHEET 1.

BRIDGE NO. 134123

REVISIONS

Date	By	Description	Date	By	Description

Drawn By: CJK 01-11
Checked By: BWJ 04-14
Designed By: CC 12-10
Checked By: SJM 01-11

URS
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7650 West Courtney
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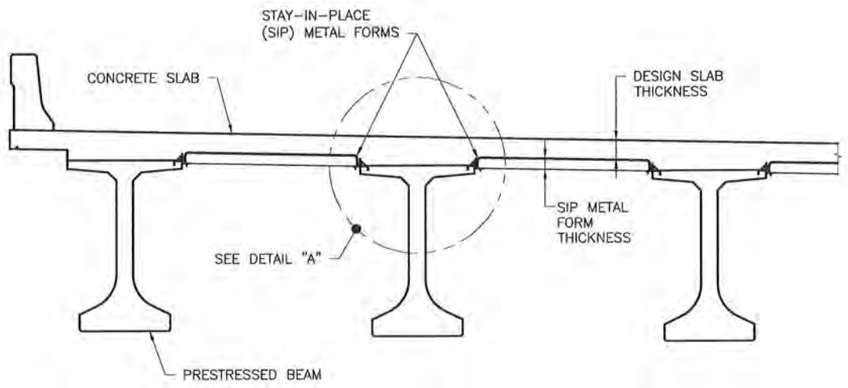
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

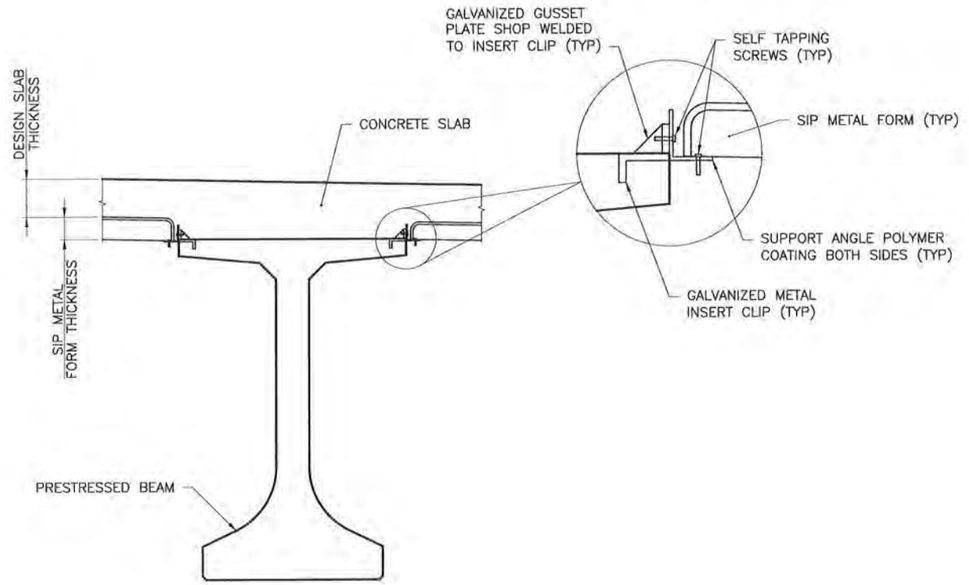
SHEET TITLE: SUPERSTRUCTURE DETAILS (2 OF 2)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-75

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bsuperstde03.dwg LAYOUT NAME: superstructure details (2 of 2) PLOTTED: Friday, August 29, 2014 6:31:21 AM USER: kathy_compton

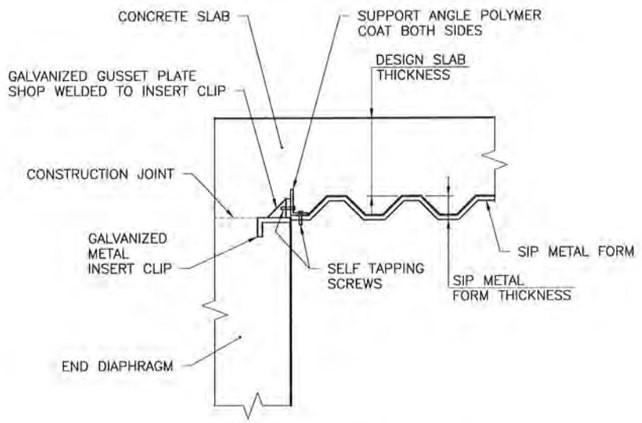


PARTIAL SECTION THRU SUPERSTRUCTURE

(SHOWING TYPICAL DETAILS AND NOTES FOR SIP METAL FORMS)



DETAIL "A"



PARTIAL SECTION THRU END OF SPAN

NOTES

1. THE SUPERSTRUCTURE CONCRETE QUANTITIES SHOWN IN THE PLANS DO NOT INCLUDE THE CONCRETE REQUIRED TO FILL THE STAY-IN-PLACE METAL FORM FLUTES.
2. THE COST OF THE STAY-IN-PLACE METAL FORMS, THE CONCRETE REQUIRED TO FILL THE FLUTES, THE METAL FORM ATTACHMENTS AND ACCESSORIES AND ALL MISCELLANEOUS ITEMS REQUIRED TO INSTALL THE FORMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE SUPERSTRUCTURE CONCRETE.
3. SEE SECTION 400 OF THE SPECIFICATIONS FOR INSTALLATION REQUIREMENTS OF SIP FORMS AND SUPPORT COMPONENTS. ELECTRICAL GROUNDING TO REINFORCING STEEL IS PROHIBITED.
4. COORDINATE SIP FORMS AND BEAM FRAMING SHOP DRAWINGS.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: AOS 01-11
Designed By: AOS 01-11
Checked By: MSE 01-11

URS Corporation Southern
7650 West Courtney
Campbell Causeway
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C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 38078

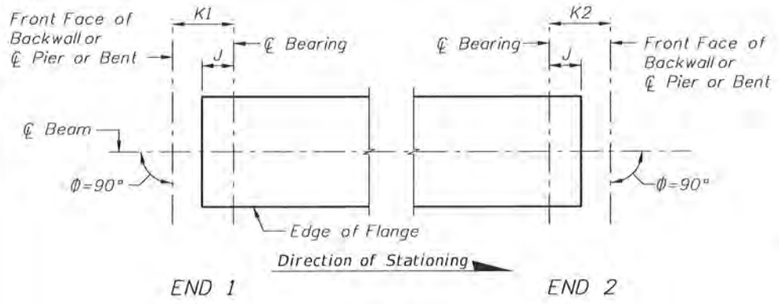
SHEET TITLE: STAY-IN-PLACE FORM DETAILS

REF. DWG. NO.

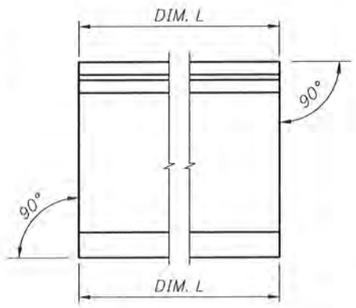
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. B-76

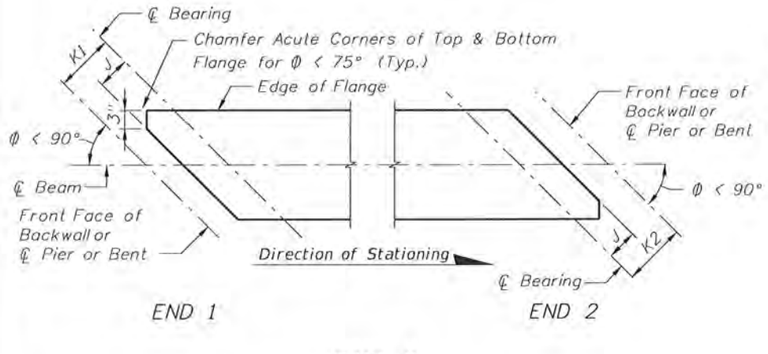
FILENAME: a:\autocad\2014\fort_hamer\dwg\sheets\bsuperstdet04.dwg LAYOUT NAME: stay-in-place form details PLOTTED: Friday, August 29, 2014 6:31:26 AM USER: kathy_compton



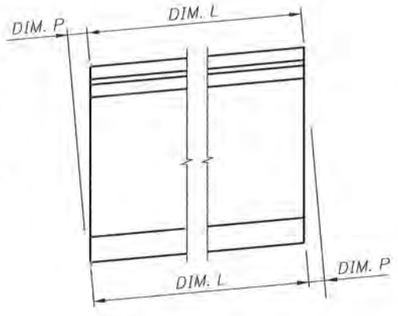
CASE 1



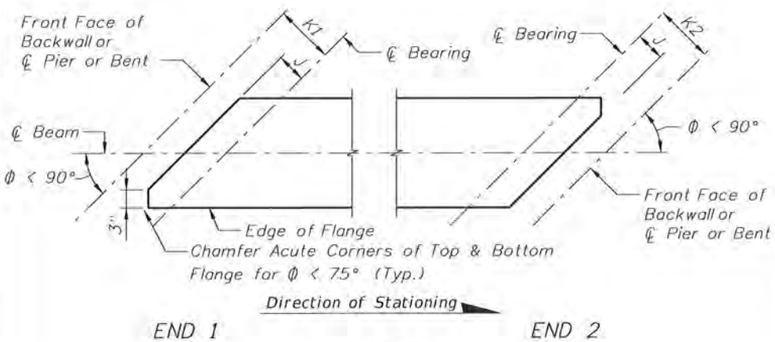
CONDITION 1
(P = 0.0)



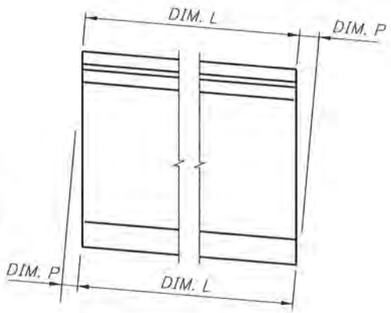
CASE 2



CONDITION 2



CASE 3



CONDITION 3

SCHEMATIC PLAN VIEWS AT BEAM ENDS

SCHEMATIC END ELEVATIONS OF BEAMS
(Showing Vertical Bevel of Beam End)

BEAM NOTES

1. All bar dimensions are out-to-out.
2. Place one (1) Bar 5K or 5Z at each location as detailed alternating the direction of the ends for each bar (see "ELEVATION AT END OF BEAM", Florida-I 72 Beam Standard Details, Sheets B-79 & B-80.
3. Bars 4L shall be bent prior to the beam leaving the prestressing yard. Bars 4L shall be bent parallel to the ends of the beams.
4. Caution should be used with Bars 4L in the ends of exterior beams to assure the bent portion of the bar is properly oriented so that the bar will be embedded in the diaphragm concrete.
5. Strands N shall be either ASTM A416, Grade 250 or Grade 270, seven-wire strands ⅜" Φ or larger, stressed to 10,000 lbs. each.
6. Unless otherwise noted, the minimum concrete cover for reinforcing steel shall be 2".
7. At the Contractors option, welded deformed wire reinforcement may be used in lieu of Bars 3D, 5K, 4M, and 5Z as shown on the Standard Details for each beam size. Welded deformed wire reinforcement shall conform to AASHTO M221, with a minimum yield strength of 75 ksi.
8. Install Safety Sleeves approximately 2'-0" from ends of beam and spaced on 8'-0" (Max.) centers. Safety Sleeves shall be 2½" NPS x 5" Sch. 40 PVC Pipe with Cap. Holes shall be free of debris and water prior to casting deck.
9. For beams with skewed end conditions, the end reinforcement, defined as Bars 4C1, 4C2, 3D1, 3D2, 5K, 4M1, 4M2, 5Y and 5Z placed within the limits of the spacing for Bars 4C in "ELEVATION AT END OF BEAM", shall be placed parallel to the skewed end of the beam. Bars 3D3, 5K and 4M3 located beyond the limits of Bars 4C shall be placed perpendicular to the longitudinal axis of the beam. Fan Bars as needed to avoid overlapping bars at the transition to Bars 3D3 and 4M3, and field cut to maintain minimum cover. Provide additional Bars 4M1, 4M2, 3D1 and 3D2 as required; additional bars are not included in the Number Required on the "BILL OF REINFORCING STEEL". For placement locations, see "SKEWED BEAM END DETAILS". Adjust the dimensions of Bars 4C1, 4C2, 3D1, 3D2, 4M1 and 4M2 as shown on the "BENDING DIAGRAM" for skewed end conditions.
10. Placement of Bars 4C1, 3D1 and 4M1 correspond to END 1, and Bars 4C2, 3D2 and 4M2 correspond to END 2. END 1 and END 2 are shown on the beam "ELEVATION".
11. For Beams with vertically beveled end conditions, place first row of Bars 4C1, 4C2, 3D1, 3D2, 5K, 5Y and 5Z parallel to the end of the beam. Progressively rotate remaining bars within the limits of Bars 5Z until vertical by adjusting the spacing at the top of beam up to a maximum of 1". For welded deformed wire reinforcement, cut top cross wire and rotate bars as required or reduce end cover at top of the beam to minimum 1".
12. For beams with skewed end conditions, welded deformed wire reinforcement shall not be used for end reinforcement (Bars 3D1, 3D2, 4M1 and 4M2).
13. Bars 5K and 5Z shall be placed and tied to the fully bonded strands in the bottom or center row (see "STRAND PATTERN" on the Table of Beam Variables in Structures Plans). For welded deformed wire reinforcement, supplemental transverse #4 bars are permitted to support Pieces K & S under the cross wires on the bottom row of strands.
14. At the Contractor's option, Bars 3D1, 3D2 and 3D3 may be fabricated as a single bar with a 1'-0" minimum lap splice of the top legs.
15. For referenced Dimensions, Angles and Case Numbers, see the Table of Beam Variables, Sheets B-81 thru B-84.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 07-14
Checked By: JPB 07-14
Designed By: EAB 01-11
Checked By: AOS 01-11

URS Corporation Southern
7650 West Courtney
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MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 38078
3/5/14

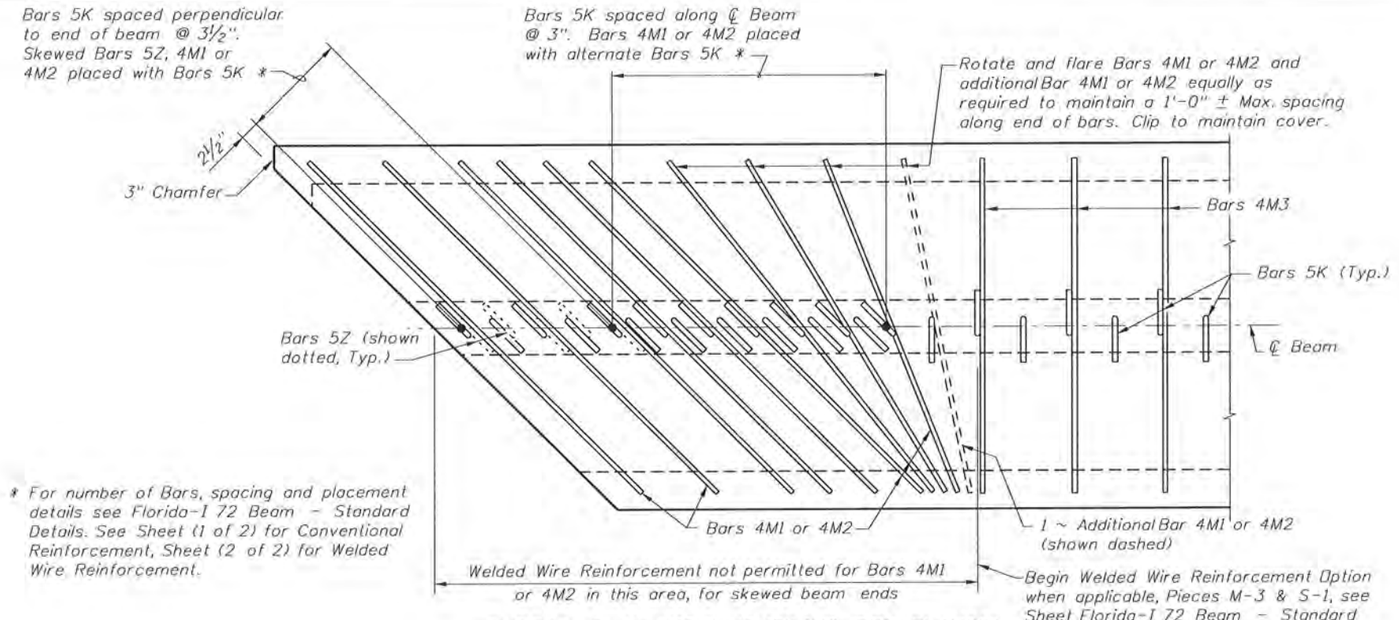
SHEET TITLE: TYPICAL FLORIDA-I BEAM DETAILS AND NOTES (1 OF 2)

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

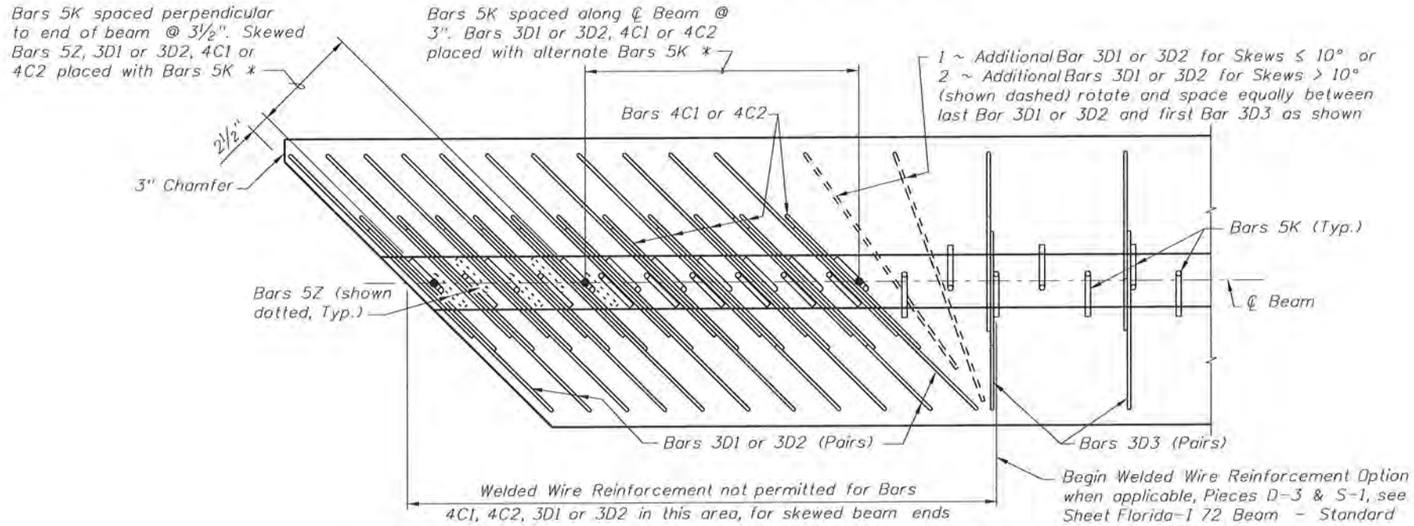
SHEET NO. B-77

FILENAME: e:\autocad\2014\fort_hamer\dgn\bstrborder01.dwg LAYOUT NAME: model PLOTTED: Tuesday, August 26, 2014 8:23:42 AM USER: kathy_compton



* For number of Bars, spacing and placement details see Florida-I 72 Beam - Standard Details. See Sheet (1 of 2) for Conventional Reinforcement, Sheet (2 of 2) for Welded Wire Reinforcement.

PARTIAL PLAN VIEW (SHOWING TOP FLANGE)
(End 1 Shown, End 2 Similar)
(Bars 6A, 4L, 5Y & Strands N not shown for clarity)



PARTIAL SECTION THRU WEB (SHOWING BOTTOM FLANGE)
(End 1 Shown, End 2 Similar)
(Bars 4L, Bars 5Y & Strands not shown for clarity)

SKEWED BEAM END DETAILS
(Florida-I 36 Beam shown, others similar)

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 07-14
Checked By: JPB 07-14
Designed By: EAB 01-11
Checked By: AOS 01-11

URS Corporation Southern
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MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
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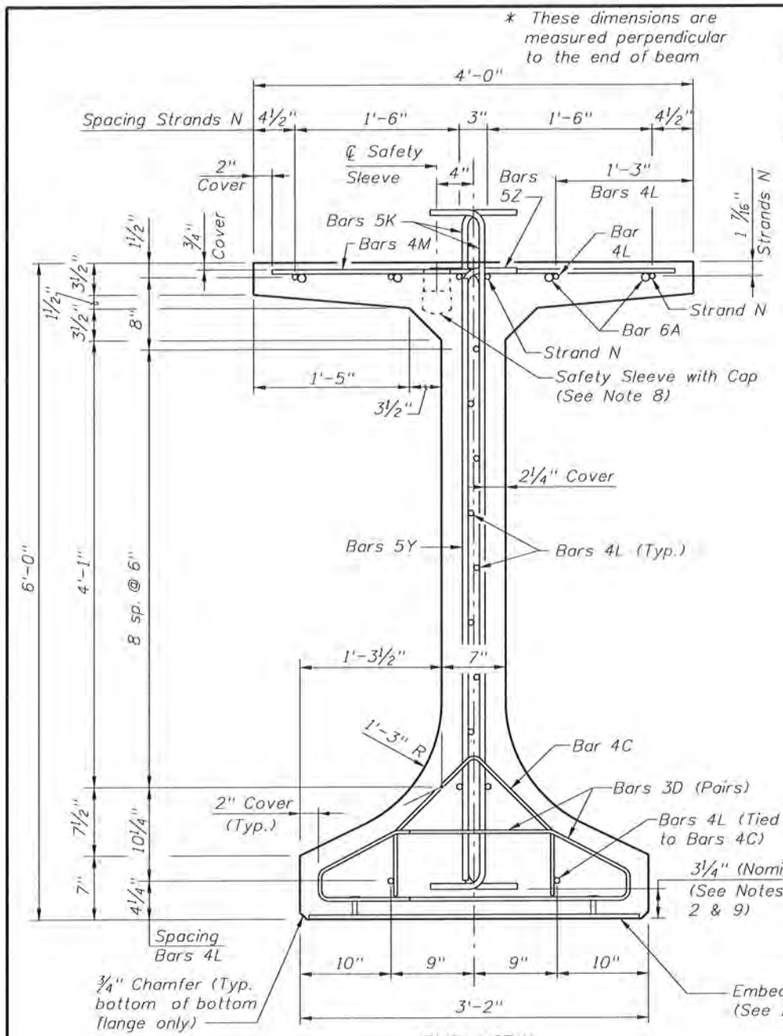
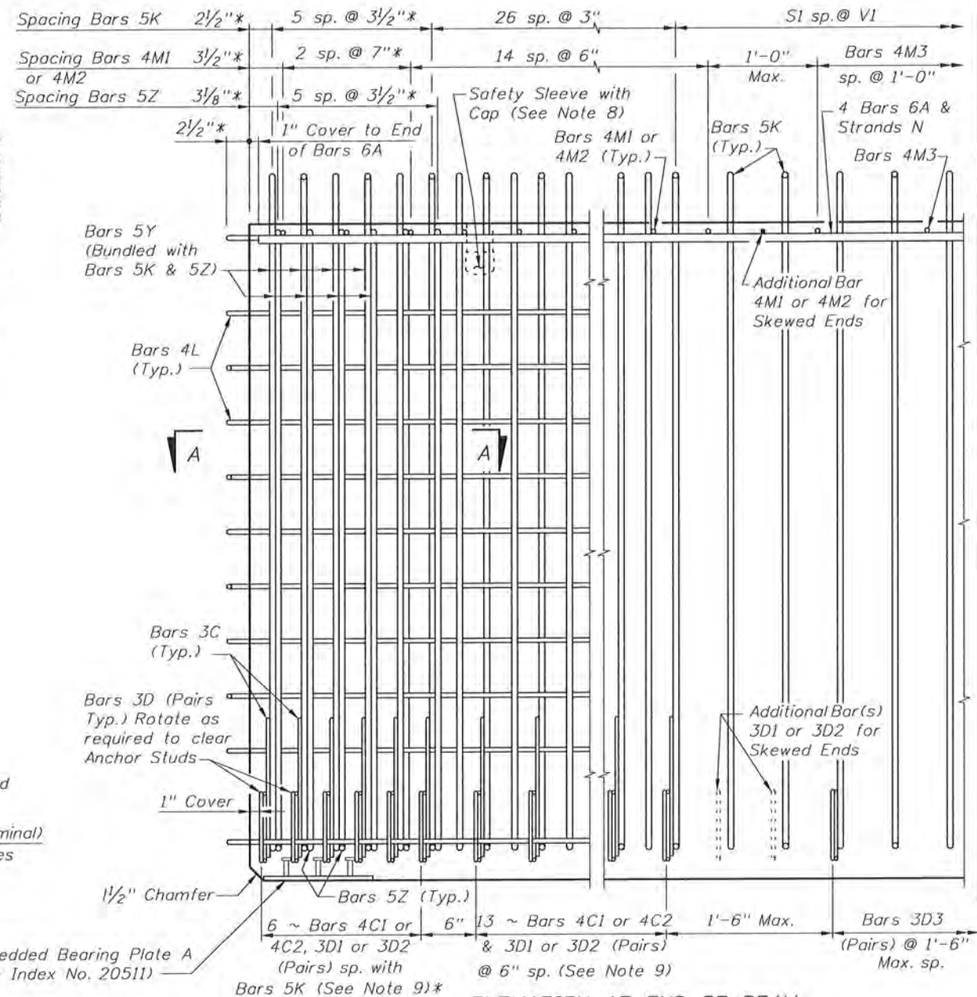
7/5/14

SHEET TITLE: TYPICAL FLORIDA-I BEAM DETAILS AND NOTES (2 OF 2)
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-78

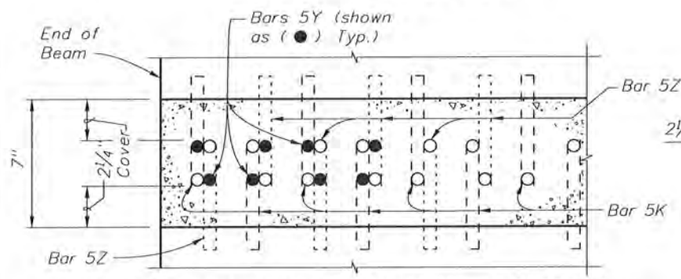
FILENAME: e:\autocad\2014\fort_hamer\dgn\bstrborder01.dwg LAYOUT NAME: model PLOTTED: Tuesday, August 26, 2014 8:23:42 AM USER: kathy_compton



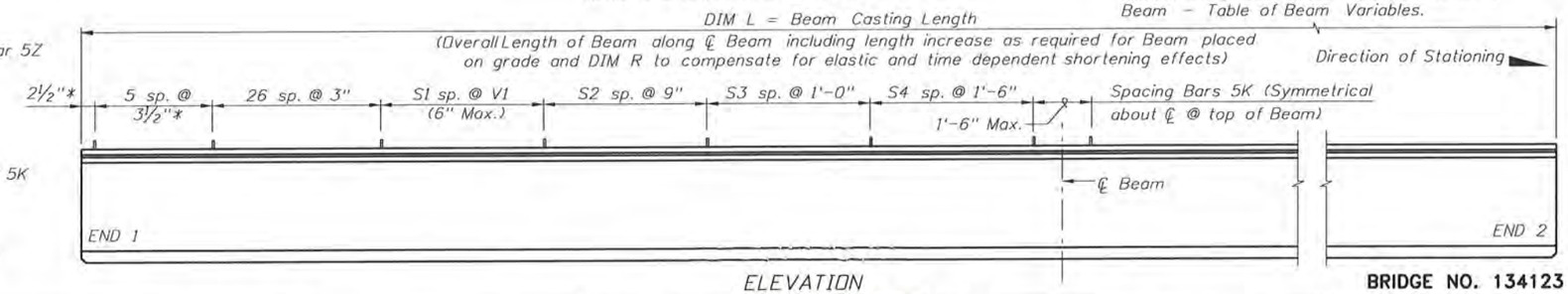
END VIEW



ELEVATION AT END OF BEAM
(Flanges Not Shown For Clarity)
(End 1 Shown, End 2 Similar)



SECTION A-A FOR CONVENTIONAL REINFORCING
(Showing Bars 5K, 5Y & 5Z Only)



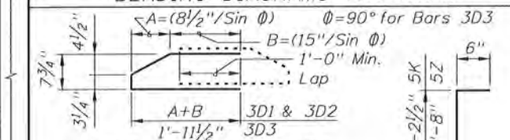
ELEVATION

CONVENTIONAL REINFORCING BAR BENDING DETAILS

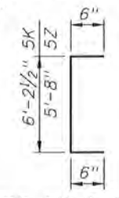
BILL OF REINFORCING STEEL

MARK	NOTE NUMBERS	SIZE	NUMBER REQUIRED	LENGTH (NOTE 1)
A	—	6	8	26'-0"
C1	9, 10 & 11	4	19 (End 1)	Varies
C2	9, 10 & 11	4	19 (End 2)	Varies
D1	9, 10, 11 & 14	3	38 (End 1)	Varies
D2	9, 10, 11 & 14	3	38 (End 2)	Varies
D3	9 & 14	3	See Table	4'-3"
K	2, 9, 11 & 13	5	See Table	7'-2"
L	3 & 4	4	28	4'-10"
M1	9 & 10	4	17 (End 1)	Varies
M2	9 & 10	4	17 (End 2)	Varies
M3	9	4	See Table	3'-8"
N	5	⅜" Ø Strand	4	DIM L+5"
Y	9 & 11	5	16	5'-6"
Z	2, 9, 11 & 13	5	12	6'-8"

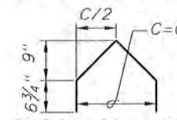
BENDING DIAGRAMS (See Note 1)



BARS 3D1, 3D2 & 3D3

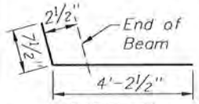


BARS 5K & 5Z



BARS 4C1 & 4C2

6A	26'-0"
5Y	5'-6"
4M1 & 4M2	D=3'-8"/Sin Ø
4M3	3'-8"



BARS 4L

BARS 6A, 4M1, 4M2, 4M3 & 5Y

NOTES:
A. Work this Sheet with Sheets - Typical Florida-I Beam Details and Notes and the Florida-I Beam - Table of Beam Variables.
B. For referenced notes, see Typical Florida-I Beam Details and Notes, Sheets B-77 & B-78.
C. For Dimensions A, B, C, D, L, R & V1 and number of spaces S1 thru S4, see Florida-I Beam - Table of Beam Variables.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 07-14
Checked By: JPB 07-14
Designed By: EAB 01-11
Checked By: AOS 01-11

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Mark Eichholtz 9/5/14
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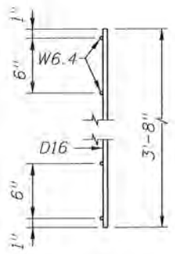
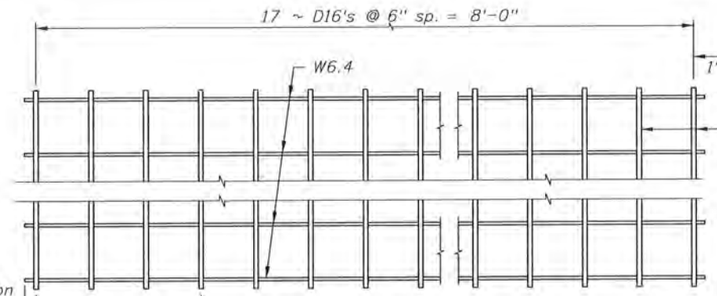
SHEET TITLE: FLORIDA-I 72 BEAM - STANDARD DETAILS (1 OF 2)
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-79

FILENAME: e:\autocad\2014\fort_hamer\dgn\bstrborder01.dwg LAYOUT NAME: model PLOTTED: Tuesday, August 26, 2014 8:23:42 AM USER: kathy_compton

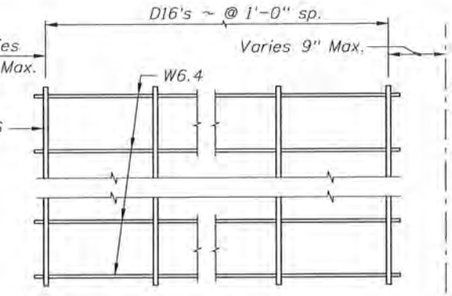
ALTERNATE REINFORCING STEEL (WELDED WIRE REINFORCEMENT) DETAILS



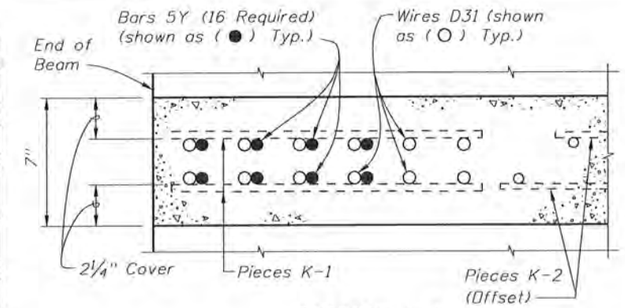
PIECES M
END VIEW



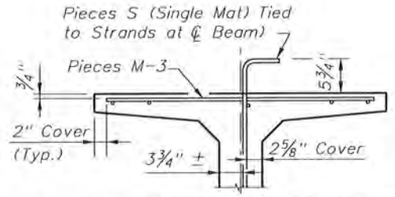
PLAN VIEW
PIECE M-1
(2 Required)



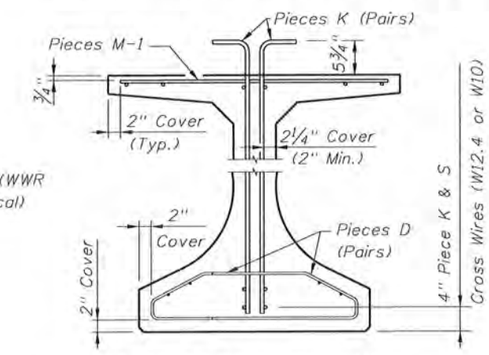
PLAN VIEW
PIECE M-3
(2 Required)



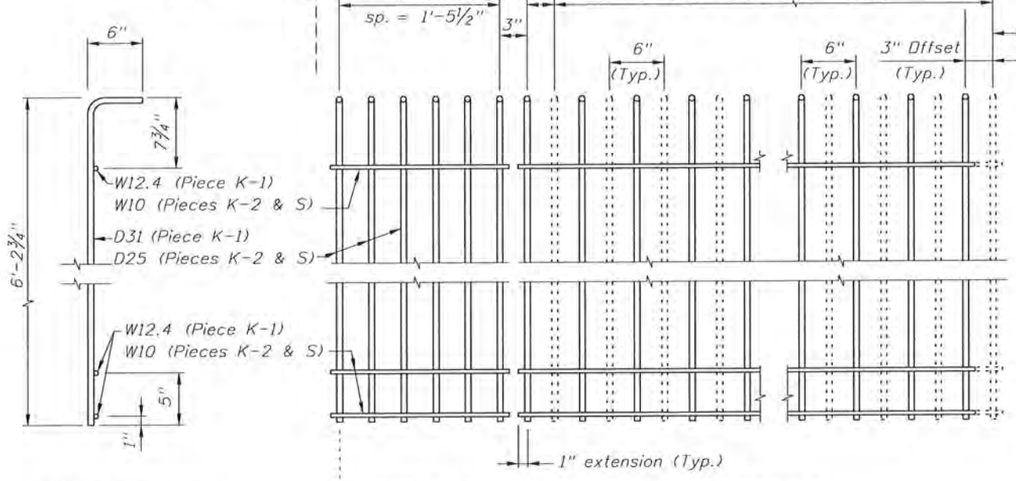
SECTION A-A
FOR WELDED WIRE REINFORCEMENT



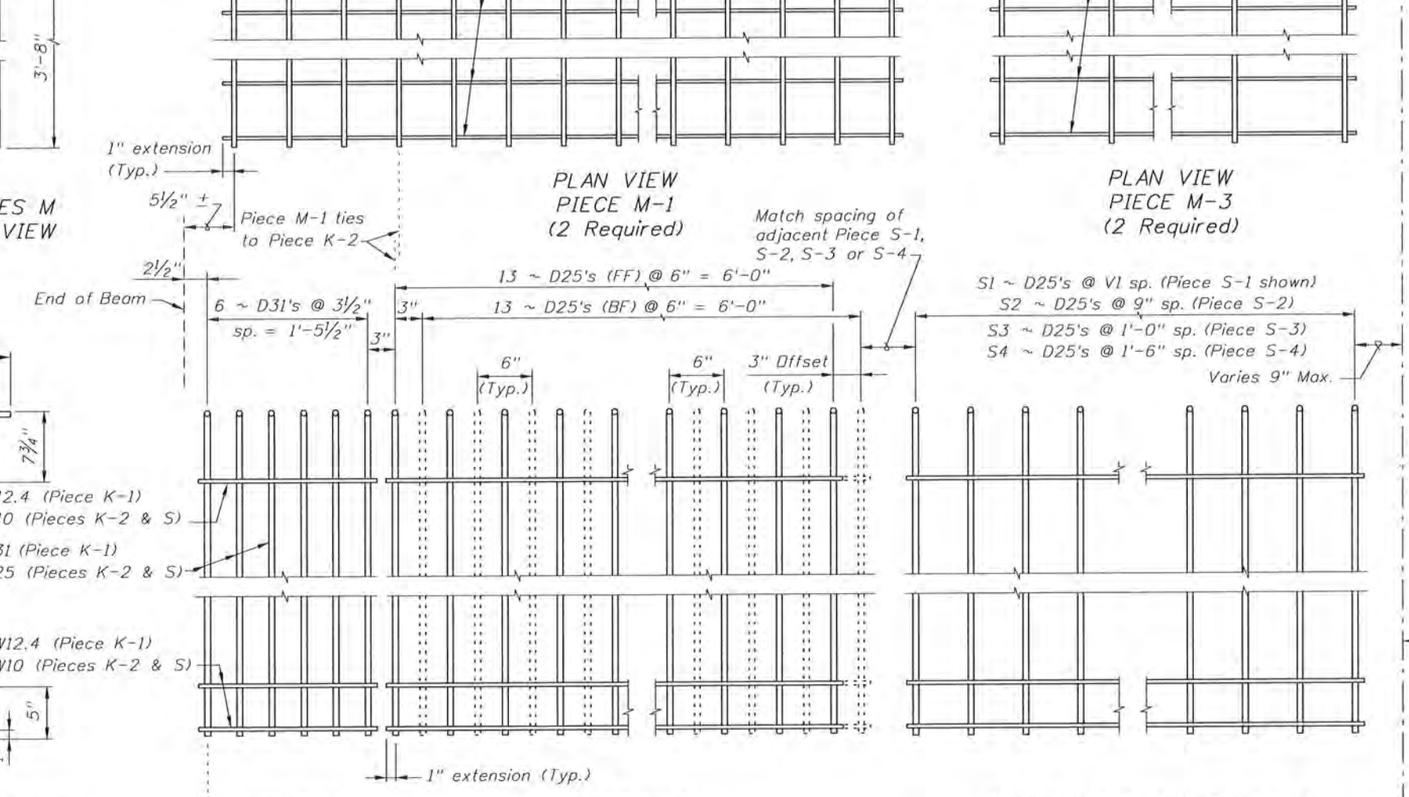
PARTIAL SECTION AT CENTER BEAM



PARTIAL BEAM END VIEW
(Conventional Reinforcing Bars A, C, L, Y
and Strands not Shown for Clarity)



PIECES K & S
END VIEW

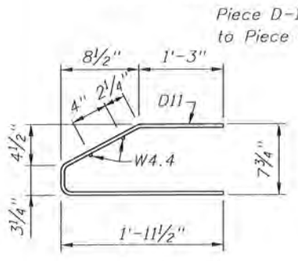


PIECE K-1
(Aligned EF)
(4 Required
~ 2 Pairs)

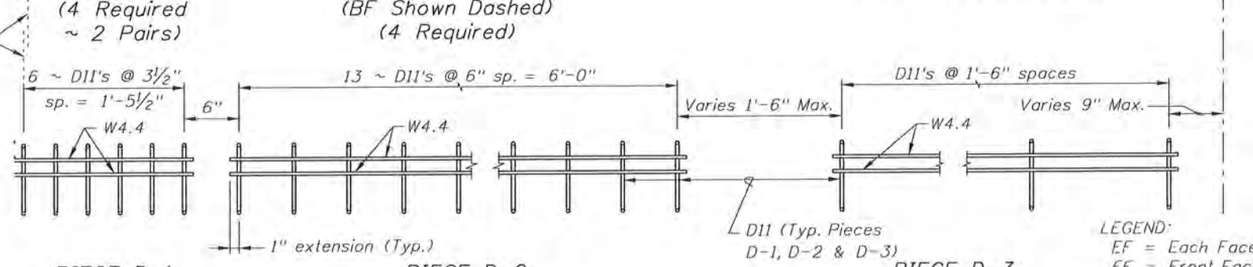
PIECE K-2
(FF Shown Solid)
(BF Shown Dashed)
(4 Required)

PIECE S-1, S-2, S-3 or S-4
(2 Required Each Piece)

℄ Beam (WWR
Symmetrical)



PIECES D
END VIEW



PIECE D-1
(4 Required ~ 2 Pairs)

PIECE D-2
(4 Required~ 2 Pairs)

PIECE D-3
(4 Required ~ 2 Pairs)

LEGEND:
EF = Each Face
FF = Front Face
BF = Back Face

NOTES:

a. See Sheet 1 for placement details & Table of Beam Variables in Structures Plans for variables S1, S2, S3, S4 & V1.
b. Place Conventional Reinforcement Bars 6A, 4C & 4L as shown on Sheet 1. Place additional Bars 5Y as shown in Section A-A for Welded Wire Reinforcement. Bars 5Z will not be used with the WWR Option.
c. Pieces may be fabricated in multiple length sections.
d. For beams with skewed end conditions, Pieces D-1, D-2 & M-1 shall not be used; Conventional Reinforcement Bars D1, D2, C1, C2, M1 & M2 shall be used. See Typical Florida-I Beam Details & Notes, Skew Details and Note 9 for placement details. Shift Pieces K & Bars 5Y to accommodate skewed end conditions and align with Bars C and D.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 07-14
Checked By: JPB 07-14
Designed By: EAB 01-11
Checked By: AOS 01-11

URS Corporation Southern
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MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

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9/5/14
MARK S. EICHOLTZ
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SHEET TITLE: FLORIDA-I 72 BEAM – STANDARD DETAILS (2 OF 2)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-80

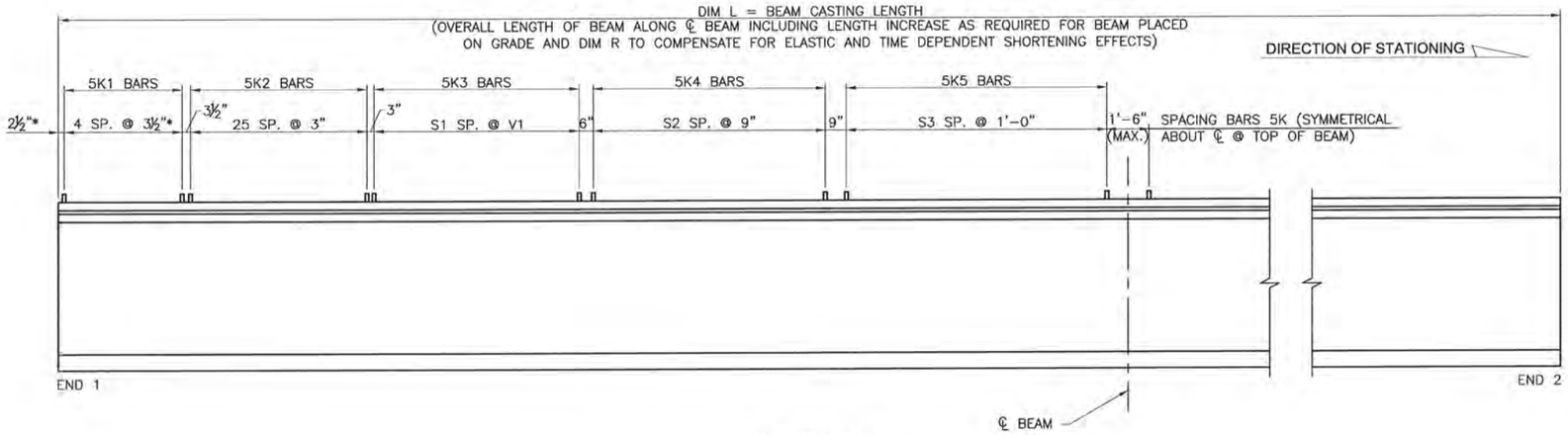
FILENAME: e:\autocad\2014\fort_hamer\dgn\bstrborder01.dwg LAYOUT NAME: model PLOTTED: Tuesday, August 26, 2014 8:23:42 AM USER: kathy_compton

FLORIDA–I BEAM – TABLE OF BEAM VARIABLES

TABLE DATE 7–01–13

LOCATION		BEAM TYPE	CONCRETE PROPERTIES			STND. PTRN. TYPE	END ELEV. COND.	PLAN VIEW CASE		BRG. PLATE MARK ***		END OF BEAM & BEARING DIMENSIONS **						BEAM DIMENSIONS *		REINFORCING STEEL																							
SPAN NO.	BEAM NO.		CLASS	STRENGTHS (psi)				END 1	END 2	END 1	END 2	ANGLE PHI		DIM P	DIM J	DIM K1	DIM K2			3C1	3C2	3D1		3D2		3D3	4M1	4M2	4M3	5K1	5K2	5K3	5K4	5K5	NO. OF SPACES BARS 5K					SP. BARS 5K *
				28 Day	Release							END 1	END 2					DIM L	DIM R	C	C	A	B	A	B	NO.	D	D	NO.	NO.	NO.	NO.	NO.	NO.	S1	S2	S3	S4	V1
1	1	72	VI	8500	5500	1	2	2	3	T1-1	T1-2	89	75	2 1/4"	7 1/2"	1'-3"	1'-1"	96'-8 5/8"	5/16"	1'-5 1/2"	1'-6 3/16"	8 1/2"	1'-3"	8 13/16"	1'-3 9/16"	160	3'-8"	3'-9 11/16"	79	10	52	16	18	58	14	16	58	0	6"
	2	72	VI	8500	5500	1	2	2	3	T1-1	T1-2	89	75	2 1/4"	7 1/2"	1'-3"	1'-1"	93'-7 5/8"	5/16"	1'-5 1/2"	1'-6 3/16"	8 1/2"	1'-3"	8 13/16"	1'-3 9/16"	154	3'-8"	3'-9 11/16"	76	10	52	16	22	52	14	20	52	0	6"
	3	72	VI	8500	5500	1	2	2	3	T1-1	T1-2	89	75	2 1/4"	7 1/2"	1'-3"	1'-1"	90'-6 9/16"	1/4"	1'-5 1/2"	1'-6 3/16"	8 1/2"	1'-3"	8 13/16"	1'-3 9/16"	148	3'-8"	3'-9 11/16"	73	10	52	16	18	52	14	16	52	0	6"
	4	72	VI	8500	5500	1	2	2	3	T1-1	T1-2	89	75	2 1/4"	7 1/2"	1'-3"	1'-1"	87'-5 1/2"	1/4"	1'-5 1/2"	1'-6 3/16"	8 1/2"	1'-3"	8 13/16"	1'-3 9/16"	142	3'-8"	3'-9 11/16"	70	10	52	16	16	50	14	14	50	0	6"
	5	72	VI	8500	5500	1	2	2	3	T1-3	T1-4	89	75	2 5/16"	7 1/2"	1'-3"	1'-1"	84'-5 1/8"	1/4"	1'-5 1/2"	1'-6 3/16"	8 1/2"	1'-3"	8 13/16"	1'-3 9/16"	136	3'-8"	3'-9 3/4"	67	10	52	16	20	44	14	18	44	0	6"
2	1	72	VI	8500	5500	1	2	3	3	T2-1	T2-2	77	62	1 13/16"	7 1/2"	1'-1"	1'-1"	96'-9 7/8"	5/16"	1'-6"	1'-7 15/16"	8 3/4"	1'-3 7/16"	9 11/16"	1'-5 1/16"	160	3'-9 1/4"	4'-2 1/16"	79	10	52	16	18	58	14	16	58	0	6"
	2	72	VI	8500	5500	1	2	3	3	T2-1	T2-2	77	62	1 13/16"	7 1/2"	1'-1"	1'-1"	93'-8 1/4"	5/16"	1'-6"	1'-7 15/16"	8 3/4"	1'-3 7/16"	9 11/16"	1'-5 1/16"	154	3'-9 1/4"	4'-2 1/16"	76	10	52	16	22	52	14	20	52	0	6"
	3	72	VI	8500	5500	1	2	3	3	T2-3	T2-2	77	62	1 7/8"	7 1/2"	1'-1"	1'-1"	90'-6 5/8"	1/4"	1'-6"	1'-7 15/16"	8 3/4"	1'-3 7/16"	9 11/16"	1'-5 1/16"	148	3'-9 1/4"	4'-2 1/16"	73	10	52	16	18	52	14	16	52	0	6"
	4	72	VI	8500	5500	1	2	3	3	T2-3	T2-2	77	62	1 7/8"	7 1/2"	1'-1"	1'-1"	87'-5"	1/4"	1'-6"	1'-7 15/16"	8 3/4"	1'-3 7/16"	9 11/16"	1'-5 1/16"	142	3'-9 1/4"	4'-2 1/16"	70	10	52	16	16	50	14	14	50	0	6"
	5	72	VI	8500	5500	1	2	3	3	T2-4	T2-5	77	62	1 15/16"	7 1/2"	1'-1"	1'-1"	84'-6 1/4"	1/4"	1'-6"	1'-8"	8 3/4"	1'-3 7/16"	9 11/16"	1'-5 1/8"	136	3'-9 5/16"	4'-2 1/4"	67	10	52	16	18	46	14	16	46	0	6"

NOTE: WORK THIS SHEET WITH TYPICAL FLORIDA–I BEAM DETAILS AND NOTES AND THE "FLORIDA–I 72 BEAM STANDARD DETAILS" SHEETS.



ELEVATION

* THESE DIMENSIONS ARE MEASURED PERPENDICULAR TO THE END OF THE BEAM

DIMENSION NOTES

* ALL LONGITUDINAL BEAM DIMENSIONS SHOWN ON THIS SHEET WITH A SINGLE ASTERISK (*) ARE MEASURED ALONG THE CENTERLINE OF BEAM. DIMENSION "R" IS CALCULATED AT MID–HEIGHT OF THE BEAM.

** END BEAM BEARING DIMENSIONS "J" AND "K" ARE MEASURED PERPENDICULAR TO ℄ BEARING ALONG THE BOTTOM OF THE BEAM.

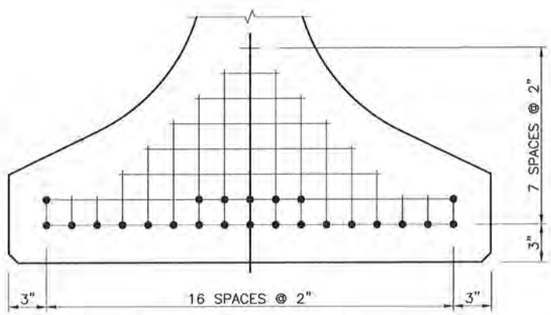
BEARING PLATES

*** SEE INDEX NO. 20511 AND THE BEARING PLATE DATA TABLE FOR DETAILS.

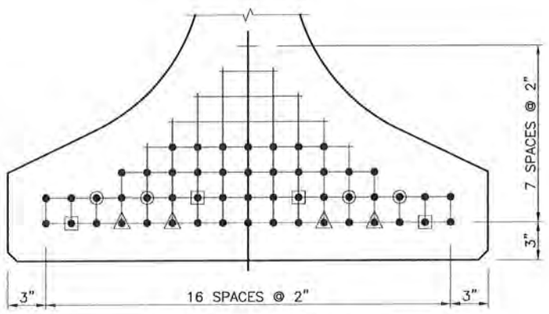
STRAND DEBONDING LEGEND

- ● – FULLY BONDED STRANDS
- ◉ – STRANDS DEBONDED 10'–0" FROM END OF BEAM
- ▣ – STRANDS DEBONDED 20'–0" FROM END OF BEAM
- ◬ – STRANDS DEBONDED 30'–0" FROM END OF BEAM
- ◈ – STRANDS DEBONDED 40'–0" FROM END OF BEAM

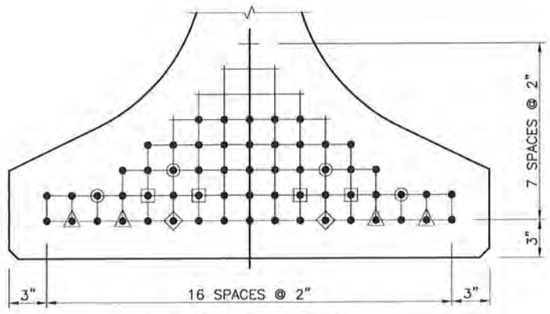
NOTE: ON BEAMS WITH SKEWED ENDS, THE DEBONDED LENGTH SHALL BE MEASURED ALONG THE SHIELDED STRAND.



TYPE ① 24 STRANDS



TYPE ② 52 STRANDS



TYPE ③ 59 STRANDS

BARS 5K

STRAND DESCRIPTION: USE 0.6" DIAMETER, GRADE 270, LOW RELAX STRANDS STRESSED AT 43.94 KIPS EACH. AREA PER STRAND EQUALS 0.217 SQ. IN.

STRAND PATTERNS

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01–11
Checked By: BWJ 04–14
Designed By: EAB 01–11
Checked By: AOS 01–11

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: FLORIDA–I BEAM – TABLE OF BEAM VARIABLES (1 OF 4)

REF. DWG. NO.

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. B–81

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bdatatable_beams01.dwg LAYOUT NAME: florida–I beam – table of beam variables (1 of 4) PLOTTED: Friday, August 29, 2014 6:31:32 AM USER: kathy_compton

FLORIDA–I BEAM – TABLE OF BEAM VARIABLES

TABLE DATE 7-01-13

LOCATION		BEAM TYPE	CONCRETE PROPERTIES			STND. PTRN. TYPE	END ELEV. COND.	PLAN VIEW CASE		BRG. PLATE MARK ***		END OF BEAM & BEARING DIMENSIONS **						BEAM DIMENSIONS *		REINFORCING STEEL																						
SPAN NO.	BEAM NO.		CLASS	STRENGTHS (psi)				END 1	END 2	END 1	END 2	ANGLE PHI		DIM P	DIM J	DIM K1	DIM K2			3C1	3C2	3D1		3D2		3D3	4M1	4M2	4M3	5K1	5K2	5K3	5K4	5K5	NO. OF SPACES BARS 5K					SP. BARS 5K *
				28 Day	Release							END 1	END 2					DIM L	DIM R	C	C	A	B	A	B	NO.	D	D	NO.	NO.	NO.	NO.	NO.	NO.	S1	S2	S3	S4	V1
3	1	72	VI	8500	5500	1	2	3	3	N/A	N/A	64	52	1 3/8"	7 1/2"	1'-1"	1'-2"	96'-7 5/16"	5/16"	1'-7 1/2"	1'-10 1/2"	9 1/2"	1'-4 11/16"	10 15/16"	1'-7 1/4"	160	4'-1"	4'-8 1/2"	79	10	52	16	18	58	14	16	58	0	6"
	2	72	VI	8500	5500	1	2	3	3	N/A	N/A	64	52	1 7/16"	7 1/2"	1'-1"	1'-2"	93'-4 9/16"	5/16"	1'-7 1/2"	1'-10 1/2"	9 1/2"	1'-4 11/16"	10 15/16"	1'-7 1/4"	154	4'-1"	4'-8 1/2"	76	10	52	16	16	56	14	14	56	0	6"
	3	72	VI	8500	5500	1	2	3	3	T3-1	T3-2	64	52	1 7/16"	7 1/2"	1'-1"	1'-2"	90'-1 13/16"	1/4"	1'-7 1/2"	1'-10 1/2"	9 1/2"	1'-4 11/16"	10 15/16"	1'-7 1/4"	146	4'-1"	4'-8 1/2"	73	10	52	16	20	50	14	18	50	0	6"
	4	72	VI	8500	5500	1	2	3	3	T3-1	T3-2	64	52	1 7/16"	7 1/2"	1'-1"	1'-2"	86'-11 1/16"	1/4"	1'-7 1/2"	1'-10 1/2"	9 1/2"	1'-4 11/16"	10 15/16"	1'-7 1/4"	140	4'-1"	4'-8 1/2"	70	10	52	16	18	48	14	16	48	0	6"
	5	72	VI	8500	5500	1	2	3	3	T3-3	T3-4	64	51	1 1/2"	7 1/2"	1'-1"	1'-2"	84'-3 5/8"	1/4"	1'-7 5/8"	1'-10 11/16"	9 1/2"	1'-4 13/16"	11"	1'-7 7/16"	134	4'-1 5/16"	4'-9 1/16"	67	10	52	16	20	44	14	18	44	0	6"
4	1	72	VI	8500	6000	3	2	3	3	N/A	N/A	53	53	7/8"	8 1/2"	1'-2"	1'-1"	142'-11 3/16"	1 "	1'-10"	1'-10"	10 11/16"	1'-6 7/8"	10 11/16"	1'-6 7/8"	252	4'-7 3/8"	4'-7 3/8"	126	10	52	56	34	72	54	32	72	0	6"
	2	72	VI	8500	6000	3	2	3	3	N/A	N/A	53	53	7/8"	8 1/2"	1'-2"	1'-1"	142'-11 3/16"	1 "	1'-10"	1'-10"	10 11/16"	1'-6 7/8"	10 11/16"	1'-6 7/8"	252	4'-7 3/8"	4'-7 3/8"	126	10	52	56	34	72	54	32	72	0	6"
	3	72	VI	8500	6000	3	2	3	3	N/A	N/A	53	53	15/16"	8 1/2"	1'-2"	1'-1"	142'-11 3/16"	1 "	1'-10"	1'-10"	10 11/16"	1'-6 7/8"	10 11/16"	1'-6 7/8"	252	4'-7 3/8"	4'-7 3/8"	126	10	52	56	34	72	54	32	72	0	6"
	4	72	VI	8500	6000	3	2	3	3	N/A	N/A	53	53	15/16"	8 1/2"	1'-2"	1'-1"	142'-11 1/4"	1 "	1'-10"	1'-10"	10 11/16"	1'-6 7/8"	10 11/16"	1'-6 7/8"	252	4'-7 3/8"	4'-7 3/8"	126	10	52	56	34	72	54	32	72	0	6"
	5	72	VI	8500	6000	3	2	3	3	N/A	N/A	53	53	1 "	8 1/2"	1'-2"	1'-1"	142'-9 13/16"	1 "	1'-10"	1'-10"	10 11/16"	1'-6 7/8"	10 11/16"	1'-6 7/8"	252	4'-7 5/16"	4'-7 5/16"	125	10	52	56	34	72	54	32	72	0	6"
5	1	72	VI	8500	6000	3	2	3	3	N/A	N/A	50	50	5/16"	8 1/2"	1'-1"	1'-1"	142'-8 1/8"	1 "	1'-11 1/8"	1'-11 1/8"	11 1/4"	1'-7 13/16"	11 1/4"	1'-7 13/16"	252	4'-10 1/8"	4'-10 1/8"	125	10	52	56	34	72	54	32	72	0	6"
	2	72	VI	8500	6000	3	2	3	3	N/A	N/A	50	50	5/16"	8 1/2"	1'-1"	1'-1"	142'-8 1/8"	1 "	1'-11 1/8"	1'-11 1/8"	11 1/4"	1'-7 13/16"	11 1/4"	1'-7 13/16"	252	4'-10 1/8"	4'-10 1/8"	125	10	52	56	34	72	54	32	72	0	6"
	3	72	VI	8500	6000	3	2	3	3	N/A	N/A	50	50	3/8"	8 1/2"	1'-1"	1'-1"	142'-8 1/8"	1 "	1'-11 1/8"	1'-11 1/8"	11 1/4"	1'-7 13/16"	11 1/4"	1'-7 13/16"	252	4'-10 1/8"	4'-10 1/8"	125	10	52	56	34	72	54	32	72	0	6"
	4	72	VI	8500	6000	3	2	3	3	N/A	N/A	50	50	7/16"	8 1/2"	1'-1"	1'-1"	142'-8 3/16"	1 "	1'-11 1/8"	1'-11 1/8"	11 1/4"	1'-7 13/16"	11 1/4"	1'-7 13/16"	252	4'-10 1/8"	4'-10 1/8"	125	10	52	56	34	72	54	32	72	0	6"
	5	72	VI	8500	6000	3	2	3	3	N/A	N/A	51	51	3/8"	8 1/2"	1'-1"	1'-1"	140'-8 3/8"	1 "	1'-10 13/16"	1'-10 13/16"	11 1/16"	1'-7 1/2"	11 1/16"	1'-7 1/2"	248	4'-9 5/16"	4'-9 5/16"	123	10	52	56	34	70	54	32	70	0	6"
6	1	72	VI	8500	5500	2	2	3	3	N/A	N/A	46	58	3/16"	8 1/2"	1'-1"	1'-2"	132'-2 7/16"	7/8"	2'-0 9/16"	1'-8 13/16"	11 15/16"	1'-9 1/16"	10 1/8"	1'-5 7/8"	230	5'-1 3/4"	4'-4 3/8"	115	10	52	56	36	60	54	34	60	0	6"
	2	72	VI	8500	5500	2	2	3	3	N/A	N/A	46	58	1/4"	8 1/2"	1'-1"	1'-2"	135'-8 5/16"	7/8"	2'-0 9/16"	1'-8 13/16"	11 15/16"	1'-9 1/16"	10 1/8"	1'-5 7/8"	238	5'-1 3/4"	4'-4 3/8"	118	10	52	56	38	62	54	36	62	0	6"
	3	72	VI	8500	6000	3	2	3	3	N/A	N/A	46	58	1/4"	8 1/2"	1'-1"	1'-2"	139'-2 1/4"	15/16"	2'-0 9/16"	1'-8 13/16"	11 15/16"	1'-9 1/16"	10 1/8"	1'-5 7/8"	244	5'-1 3/4"	4'-4 3/8"	122	10	52	56	32	70	54	30	70	0	6"
	4	72	VI	8500	6000	3	2	3	3	N/A	N/A	46	58	1/4"	8 1/2"	1'-1"	1'-2"	142'-8 1/8"	1 "	2'-0 9/16"	1'-8 13/16"	11 15/16"	1'-9 1/16"	10 1/8"	1'-5 7/8"	252	5'-1 3/4"	4'-4 3/8"	125	10	52	56	34	72	54	32	72	0	6"
	5	72	VI	8500	6000	3	2	3	3	N/A	N/A	47	59	3/16"	8 1/2"	1'-1"	1'-2"	144'-2 11/16"	1"	2'-0 3/16"	1'-8 5/8"	11 3/4"	1'-8 3/4"	10"	1'-5 11/16"	254	5'-0 13/16"	4'-3 13/16"	127	10	52	56	36	72	54	34	72	0	6"
7	1	72	VI	8500	5500	2	2	3	3	N/A	N/A	54	68	3/16"	8 1/2"	1'-2"	1'-1"	132'-3 3/8"	7/8"	1'-9 3/4"	1'-7"	10 9/16"	1'-6 5/8"	9 1/4"	1'-4 1/4"	230	4'-6 11/16"	3'-11 3/4"	115	10	52	56	36	60	54	34	60	0	6"
	2	72	VI	8500	5500	2	2	3	3	N/A	N/A	54	68	3/16"	8 1/2"	1'-2"	1'-1"	135'-6 7/16"	7/8"	1'-9 3/4"	1'-7"	10 9/16"	1'-6 5/8"	9 1/4"	1'-4 1/4"	238	4'-6 11/16"	3'-11 3/4"	118	10	52	56	38	62	54	36	62	0	6"
	3	72	VI	8500	6000	3	2	3	3	N/A	N/A	54	68	1/4"	8 1/2"	1'-2"	1'-1"	138'-9 5/8"	15/16"	1'-9 3/4"	1'-7"	10 9/16"	1'-6 5/8"	9 1/4"	1'-4 1/4"	244	4'-6 11/16"	3'-11 3/4"	121	10	52	56	34	68	54	32	68	0	6"
	4	72	VI	8500	6000	3	2	3	3	N/A	N/A	54	68	1/4"	8 1/2"	1'-2"	1'-1"	142'-0 11/16"	1 "	1'-9 3/4"	1'-7"	10 9/16"	1'-6 5/8"	9 1/4"	1'-4 1/4"	250	4'-6 11/16"	3'-11 3/4"	125	10	52	56	36	70	54	34	70	0	6"
	5	72	VI	8500	6000	3	2	3	3	N/A	N/A	55	68	3/16"	8 1/2"	1'-2"	1'-1"	144'-3 5/8"	1"	1'-9 9/16"	1'-6 7/8"	10 1/2"	1'-6 1/2"	9 3/16"	1'-4 3/16"	254	4'-6 1/4"	3'-11 1/2"	127	10	52	56	36	72	54	34	72	0	6"
8	1	72	VI	8500	5500	2	2	3	3	N/A	N/A	64	79	3/16"	8 1/2"	1'-1"	1'-1"	132'-5 3/8"	7/8"	1'-7 9/16"	1'-5 13/16"	9 1/2"	1'-4 3/4"	8 11/16"	1'-3 5/16"	232	4'-1 3/16"	3'-8 13/16"	115	10	52	56	36	60	54	34	60	0	6"
	2	72	VI	8500	5500	2	2	3	3	N/A	N/A	64	79	3/16"	8 1/2"	1'-1"	1'-1"	135'-6 9/16"	7/8"	1'-7 9/16"	1'-5 13/16"	9 1/2"	1'-4 3/4"	8 11/16"	1'-3 5/16"	238	4'-1 3/16"	3'-8 13/16"	118	10	52	56	38	62	54	36	62	0	6"
	3	72	VI	8500	6000	3	2	3	3	N/A	N/A	64	79	3/16"	8 1/2"	1'-1"	1'-1"	138'-7 7/8"	15/16"	1'-7 9/16"	1'-5 13/16"	9 1/2"	1'-4 3/4"	8 11/16"	1'-3 5/16"	244	4'-1 3/16"	3'-8 13/16"	121	10	52	56	34	68	54	32	68	0	6"
	4	72	VI	8500	6000	3	2	3	3	N/A	N/A	64	79	1/4"	8 1/2"	1'-1"	1'-1"	141'-9 1/8"	1 "	1'-7 9/16"	1'-5 13/16"	9 1/2"	1'-4 3/4"	8 11/16"	1'-3 5/16"	250	4'-1 3/16"	3'-8 13/16"	124	10	52	56	38	68	54	36	68	0	6"
	5	72	VI	8500	6000	3	2	3	3	N/A	N/A	64	80	3/16"	8 1/2"	1'-1"	1'-1"	144'-5 5/8"	1"	1'-7 1/2"	1'-5 13/16"	9 7/16"	1'-4 11/16"	8 5/8"	1'-3 1/4"	256	4'-1"	3'-8 3/4"	127	10	52	56	36	72	54	34	72	0	6"
9	1	72	VI	8500	5500	2	2	3	2	N/A	N/A	76	89	3/16"	8 1/2"	1'-1"	1'-2"	132'-4 3/4"	7/8"	1'-6 1/8"	1'-5 1/2"	8 13/16"	1'-3 1/2"	8 1/2"	1'-3"	232	3'-9 1/2"	3'-8"	115	10	52	56	36	60	54	34	60	0	6"
	2	72	VI	8500	5500	2	2	3	2	N/A	N/A	76	89	3/16"	8 1/2"	1'-1"	1'-2"	135'-5 1/16"	7/8"	1'-6 1/8"	1'-5 1/2"	8 13/16"	1'-3 1/2"	8 1/2"	1'-3"	238	3'-9 1/2"	3'-8"	118	10	52	56	32	66	54	30	66	0	6"
	3	72	VI	8500	6000	3	2	3	2	N/A	N/A	76	89	3/16"	8 1/2"	1'-1"	1'-2"	138'-5 7/16"	15/16"	1'-6 1/8"	1'-5 1/2"	8 13/16"	1'-3 1/2"	8 1/2"	1'-3"	244	3'-9 1/2"	3'-8"	121	10	52	56	36	66	54	34	66	0	6"
	4	72	VI	8500	6000	3	2	3	2	N/A	N/A	76	89	1/4"	8 1/2"	1'-1"	1'-2"	141'-5 3/4"	1 "	1'-6 1/8"	1'-5 1/2"	8 13/16"	1'-3 1/2"	8 1/2"	1'-3"	250	3'-9 1/2"	3'-8"	124	10	52	56	32	72	54	30	72	0	6"
	5	72	VI	8500	6000	3	2	3	2	N/A	N/A	76	89	3/16"	8 1/2"	1'-1"	1'-2"	144'-5"	1"	1'-6 1/16"	1'-5 1/2"	8 13/16"	1'-3 1/2"	8 1/2"	1'-3"	256	3'-9 1/2"	3'-8"	127	10	52	56	36	72	54	34	72	0	6"
10	1	72	VI	8500	5500	2	3	3	2	N/A	N/A	89	89	3/16"	8 1/2"	1'-2"	1'-1"	133'-8 3/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	234	3'-8"	3'-8"	116	10	52	56	38	60	54	36	60	0	6"
	2	72	VI	8500	5500	2	3	3	2	N/A	N/A	89	89	3/16"	8 1/2"	1'-2"	1'-1"	134'-4 1/4"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	236	3'-8"	3'-8"	117	10	52	56	36	62	54	34	62	0	6"
	3	72	VI	8500	5500	2	3	3	2	N/A	N/A	89	89	3/16"	8 1/2"	1'-2"	1'-1"	135'-0 3/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	236	3'-8"	3'-8"	118	10	52	56	32	66	54	30	66	0	6"
	4	72	VI	8500	5500	2	3	3	2	N/A	N/A	89	89	3/16"	8 1/2"	1'-2"	1'-1"	135'-8 1/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	238	3'-8"	3'-8"	118	10	52	56	38	62	54	36	62	0	6"
	5	72	VI	8500	5500	2	3	3	2	N/A	N/A	89	89	3/16"	8 1/2"	1'-2"	1'-1"	136'-4 1/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	240	3'-8"	3'-8"	119	10	52	56	36	64	54	34	64	0	6"
11	1	72	VI	8500	5500	2	3	3	2	N/A	N/A	89	89	3/16"	8 1/2"	1'-1"	1'-1"	133'-9 3/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	234	3'-8"	3'-8"	116	10	52	56	38	60	54	36	60	0	6"
	2	72	VI	8500	5500	2	3	3	2	N/A	N/A	89	89	3/16"	8 1/2"	1'-1"	1'-1"	134'-5 1/4"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	236	3'-8"	3'-8"	117	10	52	56	36	62	54	34	62	0	6"
	3	72	VI	8500	5500	2	3	3	2	N/A	N/A	89	89	3/16"	8 1/2"	1'-1"	1'-1"	135'-1 3/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	236	3'-8"	3'-8"	118	10	52	56	32	66	54	30	66	0	6"
	4	72	VI	8500	5500	2	3	3	2	N/A	N/A	89	89	3/16"	8 1/2"	1'-1"	1'-1"	135'-9 1/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	238	3'-8"	3'-8"	118	10	52	56	38	62	54	36	62	0	6"
	5	72	VI	8500	5500	2	3	3	2	N/A	N/A	89	89	3/16"	8 1/2"	1'-1"	1'-1"	136'-5 1/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	240	3'-8"	3'-8"	119	10	52	56	36	64	54	34	64	0	6"
12	1	72	VI	8500	5500	2	3	3	2	N/A	N/A	89	90	3/16"	8 1/2"	1'-1"	1'-2"	133'-6 9/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	234	3'-8"	3'-8"	116	10	52	56	38	60	54	36	60	0	6"
	2	72	VI	8500	5500	2	3	3	2	N/A	N/A	89	90	3/16"	8 1/2"	1'-1"	1'-2"	133'-11 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	234	3'-8"	3'-8"	117	10	52	56	38	60	54	36	60	0	6"
	3	72	VI	8500	5500	2	3	3	2	N/A	N/A	89	90	3/16"	8 1/2"	1'-1"	1'-2"	134'-5 3/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	236	3'-8"	3'-8"	117	10	52	56	36	62	54	34	62	0	6"
	4	72	VI	8500	5500	2	3	3	2	N/A	N/A	89	90	3/16"	8 1/2"	1'-1"	1'-2"	134'-10 1/2"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	236	3'-8"	3'-8"	117	10	52	56	34	64	54	32	64	0	6"
	5	72	VI	8500	5500	2	3	3	2	N/A	N/A	89	90	3/16"	8 1/2"	1'-1"	1'-2"	135'-3 3/4"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	236	3'-8"	3'-8"	118	10	52	56	32	66	54	30	66	0	6"

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: BWJ 04-11
Designed By: SJM 02-11
Checked By: EAB 02-11

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: FLORIDA–I BEAM – TABLE OF BEAM VARIABLES (2 OF 4)
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-82

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bdatatable_beams01.dwg LAYOUT NAME: florida-i beam – table of beam variables (2 of 4) PLOTTED: Friday, August 29, 2014 6:31:39 AM USER: kathy_compton

FLORIDA–I BEAM – TABLE OF BEAM VARIABLES

TABLE DATE 7-01-13

LOCATION		BEAM TYPE	CONCRETE PROPERTIES			STND. PTRN. TYPE	END ELEV. COND.	PLAN VIEW CASE		BRG. PLATE MARK ***		END OF BEAM & BEARING DIMENSIONS **						BEAM DIMENSIONS *		REINFORCING STEEL																													
SPAN NO.	BEAM NO.		CLASS	STRENGTHS (psi)				END 1	END 2	END 1	END 2	ANGLE PHI		DIM P	DIM J	DIM K1	DIM K2			3C1	3C2	3D1		3D2		3D 3	4M1	4M2	4M 3	5K 1	5K 2	5K 3	5K 4	5K 5	NO. OF SPACES BARS 5K					SP. BARS 5K *
				28 Day	Release							END 1	END 2					DIM L	DIM R	C	C	A	B	A	B	NO.	D	D	NO.	NO.	NO.	NO.	NO.	NO.	S1	S2	S3	S4	V1
13	1	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-2"	1'-1"	133'-0 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	2	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-2"	1'-1"	133'-0 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	3	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-2"	1'-1"	133'-0 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	4	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-2"	1'-1"	133'-0 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	5	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-2"	1'-1"	133'-0 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
14	1	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-1"	1'-1"	133'-1 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	2	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-1"	1'-1"	133'-1 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	3	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-1"	1'-1"	133'-1 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	4	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-1"	1'-1"	133'-1 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	5	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-1"	1'-1"	133'-1 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
15	1	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-1"	1'-2"	133'-0 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	2	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-1"	1'-2"	133'-0 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	3	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-1"	1'-2"	133'-0 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	4	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-1"	1'-2"	133'-0 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	5	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-1"	1'-2"	133'-0 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
16	1	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-2"	1'-1"	133'-0 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	2	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-2"	1'-1"	133'-0 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	3	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-2"	1'-1"	133'-0 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	4	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-2"	1'-1"	133'-0 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	5	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	3/16"	7 1/2"	1'-2"	1'-1"	133'-0 7/8"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
17	1	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	11/16"	7 1/2"	1'-1"	1'-1"	133'-1 15/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	2	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	11/16"	7 1/2"	1'-1"	1'-1"	133'-1 15/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	3	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	11/16"	7 1/2"	1'-1"	1'-1"	133'-1 15/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	4	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	11/16"	7 1/2"	1'-1"	1'-1"	133'-1 15/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	5	72	VI	8500	5500	2	3	1	1	N/A	N/A	90	90	11/16"	7 1/2"	1'-1"	1'-1"	133'-1 15/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
18	1	72	VI	8500	5500	2	3	1	1	T4-1	T4-2	90	90	1 11/16"	7 1/2"	1'-1"	1'-3"	133'-0 5/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	2	72	VI	8500	5500	2	3	1	1	T4-1	T4-2	90	90	1 11/16"	7 1/2"	1'-1"	1'-3"	133'-0 5/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	3	72	VI	8500	5500	2	3	1	1	T4-1	T4-2	90	90	1 11/16"	7 1/2"	1'-1"	1'-3"	133'-0 5/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	4	72	VI	8500	5500	2	3	1	1	T4-1	T4-2	90	90	1 11/16"	7 1/2"	1'-1"	1'-3"	133'-0 5/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"
	5	72	VI	8500	5500	2	3	1	1	T4-1	T4-2	90	90	1 11/16"	7 1/2"	1'-1"	1'-3"	133'-0 5/16"	7/8"	1'-5 1/2"	1'-5 1/2"	8 1/2"	1'-3"	8 1/2"	1'-3"	232	3'-8"	3'-8"	116	10	52	56	32	64	54	30	64	0	6"

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01–11
Checked By: BWJ 04–14
Designed By: SJM 02–11
Checked By: EAB 02–11

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36076
7/5/14

SHEET TITLE: FLORIDA–I BEAM – TABLE OF BEAM VARIABLES (3 OF 4)

REF. DWG. NO.

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. B–83

FILENAME: a:\autocad\2014\fort_hamer\dwg\sheets\bdatatable_beams01.dwg LAYOUT NAME: florida-i beam – table of beam variables (3 of 4) PLOTTED: Friday, August 29, 2014 6:31:49 AM USER: kathy_compton

K BARS						
SPAN NO.	BEAM NO.	K BARS (HEIGHT)				
		K1	K2	K3	K4	K5
1	1	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	2	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	3	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	4	6'-3"	6'-3"	6'-3"	6'-3"	6'-3"
	5	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
2	1	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	2	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	3	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	4	6'-3"	6'-3"	6'-3"	6'-3"	6'-3"
	5	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
3	1	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	2	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	3	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	4	6'-3"	6'-3"	6'-3"	6'-3"	6'-3"
	5	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
4	1	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	2	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	3	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	4	6'-3 1/2"	6'-3 1/2"	6'-3 1/2"	6'-3 1/2"	6'-3 1/2"
	5	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
5	1	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	2	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	3	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	4	6'-3 1/2"	6'-3 1/2"	6'-3 1/2"	6'-4"	6'-4"
	5	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
6	1	6'-3 1/2"	6'-3 1/2"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	2	6'-2 3/4"	6'-2 3/4"	6'-2 3/4"	6'-2 1/2"	6'-2 1/2"
	3	6'-3"	6'-3"	6'-3"	6'-2 1/2"	6'-2 1/2"
	4	6'-3"	6'-3"	6'-3"	6'-3"	6'-3"
	5	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
7	1	6'-3 1/2"	6'-3 1/2"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	2	6'-3"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	3	6'-3"	6'-3"	6'-3"	6'-2 1/2"	6'-2 1/2"
	4	6'-3"	6'-3"	6'-3"	6'-3"	6'-3"
	5	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
8	1	6'-3 1/2"	6'-3 1/2"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	2	6'-3"	6'-3"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	3	6'-3"	6'-3"	6'-3"	6'-2 1/2"	6'-2 1/2"
	4	6'-3"	6'-3"	6'-3"	6'-3"	6'-3"
	5	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
9	1	6'-3 3/4"	6'-3 3/4"	6'-3"	6'-2 1/2"	6'-2 1/2"
	2	6'-3"	6'-3"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	3	6'-3 1/2"	6'-3 1/2"	6'-3"	6'-2 1/2"	6'-2 1/2"
	4	6'-3"	6'-3"	6'-3"	6'-3"	6'-3"
	5	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
10	1	6'-3 1/2"	6'-3 1/2"	6'-3"	6'-2 1/2"	6'-2 1/2"
	2	6'-3"	6'-3"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	3	6'-3"	6'-3"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	4	6'-3"	6'-3"	6'-3"	6'-3"	6'-3"
	5	6'-3"	6'-3"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
11	1	6'-3 3/4"	6'-3 1/2"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	2	6'-3 1/2"	6'-3 1/2"	6'-3"	6'-2 1/2"	6'-2 1/2"
	3	6'-3 1/2"	6'-3 1/2"	6'-3"	6'-2 1/2"	6'-2 1/2"
	4	6'-3 1/2"	6'-3 1/2"	6'-3 1/2"	6'-3"	6'-3"
	5	6'-3 1/2"	6'-3 1/2"	6'-3"	6'-2 1/2"	6'-2 1/2"

K BARS						
SPAN NO.	BEAM NO.	K BARS (HEIGHT)				
		K1	K2	K3	K4	K5
12	1	6'-3 3/4"	6'-3 1/2"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	2	6'-3 1/2"	6'-3 1/2"	6'-3"	6'-2 1/2"	6'-2 1/2"
	3	6'-3 1/2"	6'-3 1/2"	6'-3"	6'-2 1/2"	6'-2 1/2"
	4	6'-3 1/2"	6'-3 1/2"	6'-3 1/2"	6'-3"	6'-3"
	5	6'-3 1/2"	6'-3 1/2"	6'-3"	6'-2 1/2"	6'-2 1/2"
13	1	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	2	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	3	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	4	6'-4 1/2"	6'-4 1/2"	6'-4"	6'-3 1/2"	6'-3"
	5	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
14	1	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	2	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	3	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	4	6'-4 1/2"	6'-4 1/2"	6'-4"	6'-3 1/2"	6'-3"
	5	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
15	1	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	2	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	3	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	4	6'-4 1/2"	6'-4 1/2"	6'-4"	6'-3 1/2"	6'-3"
	5	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
16	1	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	2	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	3	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
	4	6'-4 1/2"	6'-4 1/2"	6'-4"	6'-3 1/2"	6'-3"
	5	6'-3 3/4"	6'-3 3/4"	6'-3 1/4"	6'-2 1/2"	6'-2 1/2"
17	1	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	2	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	3	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-3"
	4	6'-3"	6'-3"	6'-3 1/2"	6'-3 1/2"	6'-4"
	5	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
18	1	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	2	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"
	3	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-3"
	4	6'-3"	6'-3"	6'-3 1/2"	6'-3 1/2"	6'-4"
	5	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"	6'-2 1/2"

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: BWJ 04-14
Designed By: SJM 02-11
Checked By: EAB 02-11

URS Corporation Southern
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MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: FLORIDA-I BEAM – TABLE OF BEAM VARIABLES (4 OF 4)

REF. DWG. NO.

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. B-84

FILENAME: c:\autocad\2014\fort_hamer\dwg\sheets\bdatatable_beams01.dwg LAYOUT NAME: florida-i beam - table of beam variables (4 of 4) PLOTTED: Friday, August 29, 2014 6:31:59 AM USER: kathy_compton

BUILD–UP & DEFLECTION DATA TABLE FOR PRESTRESSED I–BEAMS

TABLE DATE 7–01–13

LOCATION		REQUIRED THEORETICAL BUILD–UP OVER ℄ BEAM			NET BEAM CAMBER (PRESTRESS – DEAD LOAD OF BEAMS) @120 DAYS	DEAD LOAD DEFLECTION DURING DECK POUR @120 DAYS DIM A	BUILD–UP CASE NO.
SPAN NO(s).	BEAM NO(s).	AT BEGIN SPAN DIM B	AT ℄ SPAN DIM C	AT END SPAN DIM D			
1-3	1	1 "	1 1/8"	1 "	1 3/16"	5/8"	4
	2	1 "	1 1/16"	1 "	1 3/16"	9/16"	4
	3	1 "	1 "	1 "	1 3/16"	1/2"	3
	4	2 3/16"	1 15/16"	2 3/16"	1 3/16"	7/16"	3
	5	1 3/16"	1 "	1 3/16"	1 1/8"	5/16"	3
4	1	1"	1 1/4 "	1"	4 7/16"	2 11/16"	4
	2	1"	1 11/16"	1"	4 7/16"	3 1/8"	4
	3	1"	1 3/4 "	1"	4 7/16"	3 1/8"	4
	4	1 15/16"	2 13/16"	1 15/16"	4 7/16"	3 3/8"	4
	5	1"	1 3/8 "	1"	4 7/16"	2 13/16"	4
5	1	1 7/16 "	1 "	1 7/16"	4 7/16"	2 11/16"	3
	2	1"	1 1/8 "	1'	4 7/16"	3 1/8"	4
	3	1"	1 3/8 "	1"	4 7/16"	3 1/8"	4
	4	1 15/16"	3 1/4"	1 15/16"	4 7/16"	3 3/8"	4
	5	1"	1 3/16"	1"	4 7/16"	2 13/16"	4
6	1	2 3/4"	1"	2 3/4"	3 3/4"	1 3/4"	3
	2	2"	1 "	2"	3 13/16"	2 1/2"	3
	3	2 5/16"	1 "	2 5/16"	4 7/16"	2 13/16"	3
	4	2 3/8"	1 15/16"	2 3/8"	4 7/16"	3 1/8"	3
	5	1 15/16"	1 "	1 15/16"	4 7/16"	3 3/16"	3
7-9	1	2 3/4"	1 "	2 3/4"	3 3/4"	1 3/4"	3
	2	2"	1 "	2"	3 3/16"	2 1/2"	3
	3	2 5/16"	1 "	2 5/16"	4 7/16"	2 13/16"	3
	4	2 3/8"	1 15/16"	2 3/8"	4 7/16"	3 1/8"	3
	5	1 15/16"	1 "	1 15/16"	4 7/16"	3 3/16"	3
10	1	2 5/8"	1 "	2 5/8"	4 1/8"	1 7/8"	3
	2	2"	1 "	2"	4 1/8"	2 1/2"	3
	3	1 15/16"	1 "	1 15/16"	4 1/8"	2 9/16"	3
	4	2 3/16"	1 15/16"	2 3/16"	4 3/16"	2 3/4"	3
	5	2 "	1 "	2 "	4 3/16"	2 1/2"	3
11	1	3 "	1 "	3 "	4 1/8"	1 7/8"	3
	2	2 3/8"	1 "	2 3/8"	4 1/8"	2 1/2"	3
	3	2 5/16"	1 "	2 5/16"	4 1/8"	2 9/16"	3
	4	2 9/16"	1 15/16"	2 9/16"	4 3/16"	2 3/4"	3
	5	2 3/8"	1 "	2 3/8"	4 3/16"	2 1/2"	3
12	1	3"	1 "	3"	4 1/8"	1 15/16"	3
	2	2 7/16"	1 "	2 7/16"	4 1/8"	2 7/16"	3
	3	2 3/8"	1 "	2 3/8"	4 1/8"	2 1/2"	3
	4	2 13/16"	1 15/16"	2 13/16"	4 1/8"	2 11/16"	3
	5	2 1/2"	1 "	2 1/2"	4 1/8"	2 3/8"	3
13-16	1	3 1/16"	1 "	3 1/16"	4 1/8"	2 1/16"	1
	2	2 3/4"	1 "	2 3/4"	4 1/8"	2 3/8"	1
	3	2 11/16"	1 "	2 11/16"	4 1/8"	2 7/16"	1
	4	3 9/16"	1 15/16"	3 9/16"	4 1/8"	2 9/16"	1
	5	3 1/16"	1 "	3 1/16"	4 1/8"	2 1/16"	1
17	1	1 "	1 9/16"	1 "	4 1/8"	2 1/16"	4
	2	1 "	1 15/16"	1 "	4 1/8"	2 3/8"	4
	3	1 "	1 15/16"	1 "	4 1/8"	2 7/16"	4
	4	1 15/16"	3"	1 15/16"	4 1/8"	2 9/16"	4
	5	1 "	1 5/8"	1 "	4 1/8"	2 1/16"	4
18	1	1 "	1 9/16"	1 "	4 1/8"	2 1/16"	4
	2	1 "	1 15/16"	1 "	4 1/8"	2 3/8"	4
	3	1 "	1 15/16"	1 "	4 1/8"	2 7/16"	4
	4	1 15/16"	3"	1 15/16"	4 1/8"	2 9/16"	4
	5	1 "	1 5/8"	1 "	4 1/8"	2 1/16"	4

BEARING PAD DATA TABLE

TABLE DATE 7–01–13

SPAN NO(s).	BEAM NO(s).	PAD TYPE	BEAM TYPE	BEAM END*
1–3	1–5	H	FLORIDA–I 72	END 1 / END 2
4–12	1–5	K	FLORIDA–I 72	END 1 / END 2
13–18	1–5	H	FLORIDA–I 72	END 1 / END 2

NOTE:
WORK THIS TABLE WITH INDEX NO. 20510 FOR PAD TYPES A, C, D, E, F, G, H, J & K, AND/OR ANY OTHER PROJECT SPECIFIC BEARING PADS.
*END 1 = BEGIN BRIDGE END OF BEAM (BACK STATION).
END 2 = END BRIDGE END OF BEAM (AHEAD STATION).

ESTIMATED BEARING PAD QUANTITIES

TABLE DATE 7–01–09

PAD TYPE	NUMBER REQUIRED	QUANTITY (CF)
H	90	53.13
K	90	76.88

NOTE:
WORK THIS SHEET WITH DESIGN STANDARD INDEX NO. 20199.

BRIDGE NO. 134123

REVISIONS

Date	By	Description	Date	By	Description

Drawn By: KAC 01–11
Checked By: BWJ 04–14
Designed By: SJM 02–11
Checked By: EAB 02–11

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MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 38078
9/5/14

SHEET TITLE:
BEARING PAD AND
BEAM BUILD–UP DEFLECTION DATA TABLES

REF. DWG. NO.

PROJECT NAME:
FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO.
B–85

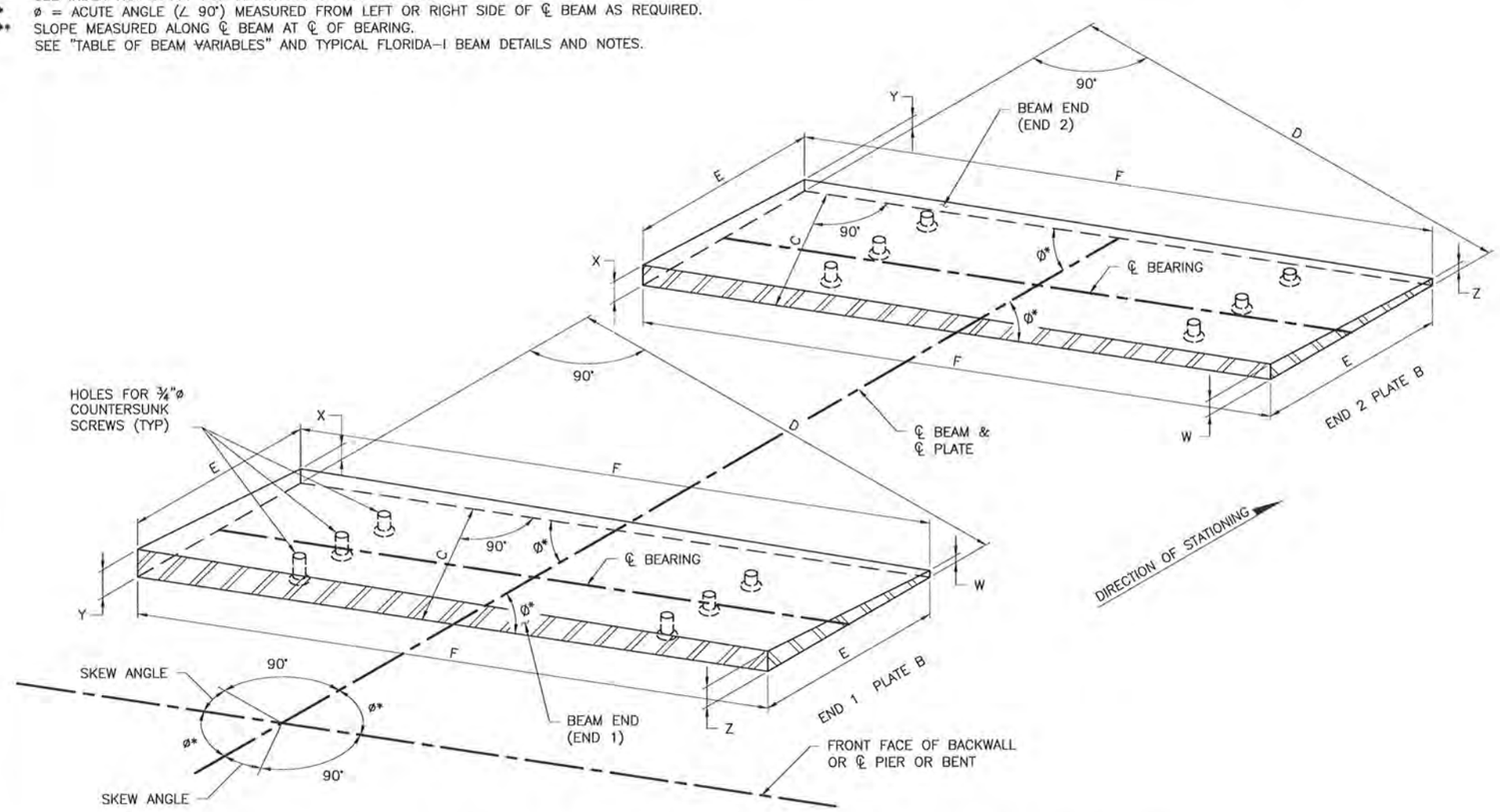
FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bdatatable_bearingpad_beambuildupdeflection.dwg LAYOUT NAME: bearing pad & beam build–up deflection data tables PLOTTED: Friday, August 29, 2014 6:32:06 AM USER: kathy_compton

BEARING PLATE DATA TABLE

Table Date 7-01-13

GENERAL BEARING PLATE DATA								EMBEDDED PLATE DIMENSIONS (PLATE A)		BEVELED PLATE REQUIRED (Yes/No)	BEVELED PLATE DIMENSIONS (PLATE B)							
BRG. PLATE MARK ***	SPAN NO(s).	BEAM NO(s).	PAD TYPE	BEAM END	PLAN VIEW CASE	SLOPE (%) **	ANGLE ø *	G	D		C	D	E	F	W	X	Y	Z
T1-1	1	1	H	1	2	3.10	89	1'-1 1/2"	3'-0"	Yes	1'-0"	3'-0"	1'-0"	3'-0"	7/8"	7/8"	1/2"	1/2"
T1-2	1	1	H	2	3	3.10	75	1'-2"	3'-0"	Yes	1'-0"	3'-0"	1'-0 7/16"	3'-1 1/4"	1/2"	13/16"	1 3/16"	7/8"
T1-1	1	2	H	1	2	3.12	89	1'-1 1/2"	3'-0"	Yes	1'-0"	3'-0"	1'-0"	3'-0"	7/8"	7/8"	1/2"	1/2"
T1-2	1	2	H	2	3	3.12	75	1'-2"	3'-0"	Yes	1'-0"	3'-0"	1'-0 7/16"	3'-1 1/4"	1/2"	13/16"	1 3/16"	7/8"
T1-1	1	3	H	1	2	3.14	89	1'-1 1/2"	3'-0"	Yes	1'-0"	3'-0"	1'-0"	3'-0"	7/8"	7/8"	1/2"	1/2"
T1-2	1	3	H	2	3	3.14	75	1'-2"	3'-0"	Yes	1'-0"	3'-0"	1'-0 7/16"	3'-1 1/4"	1/2"	13/16"	1 3/16"	7/8"
T1-1	1	4	H	1	2	3.15	89	1'-1 1/2"	3'-0"	Yes	1'-0"	3'-0"	1'-0"	3'-0"	7/8"	7/8"	1/2"	1/2"
T1-2	1	4	H	2	3	3.15	75	1'-2"	3'-0"	Yes	1'-0"	3'-0"	1'-0 7/16"	3'-1 1/4"	1/2"	13/16"	1 3/16"	7/8"
T1-3	1	5	H	1	2	3.19	89	1'-1 1/2"	3'-0"	Yes	1'-0"	3'-0"	1'-0"	3'-0"	7/8"	7/8"	1/2"	1/2"
T1-4	1	5	H	2	3	3.19	75	1'-2"	3'-0"	Yes	1'-0"	3'-0"	1'-0 7/16"	3'-1 1/4"	1/2"	13/16"	1 3/16"	7/8"
T2-1	2	1	H	1	3	2.51	77	1'-1 7/8"	3'-0"	Yes	1'-0"	3'-0"	1'-0 5/16"	3'-0 15/16"	13/16"	1"	11/16"	1/2"
T2-2	2	1	H	2	3	2.51	62	1'-3 5/16"	3'-0"	Yes	1'-0"	3'-0"	1'-1 9/16"	3'-4 3/4"	1/2"	1 "	1 5/16"	13/16"
T2-1	2	2	H	1	3	2.54	77	1'-1 7/8"	3'-0"	Yes	1'-0"	3'-0"	1'-0 5/16"	3'-0 15/16"	13/16"	1"	11/16"	1/2"
T2-2	2	2	H	2	3	2.54	62	1'-3 5/16"	3'-0"	Yes	1'-0"	3'-0"	1'-1 9/16"	3'-4 3/4"	1/2"	1 "	1 5/16"	7/8"
T2-3	2	3	H	1	3	2.57	77	1'-1 7/8"	3'-0"	Yes	1'-0"	3'-0"	1'-0 5/16"	3'-0 15/16"	13/16"	1"	11/16"	1/2"
T2-2	2	3	H	2	3	2.57	62	1'-3 5/16"	3'-0"	Yes	1'-0"	3'-0"	1'-1 9/16"	3'-4 3/4"	1/2"	1 "	1 5/16"	7/8"

NOTES:
SEE INDEX NO. 20511 FOR ADDITIONAL NOTES AND DETAILS.
* ø = ACUTE ANGLE (∠ 90°) MEASURED FROM LEFT OR RIGHT SIDE OF ℄ BEAM AS REQUIRED.
** SLOPE MEASURED ALONG ℄ BEAM AT ℄ OF BEARING.
SEE "TABLE OF BEAM VARIABLES" AND TYPICAL FLORIDA-I BEAM DETAILS AND NOTES.



ISOMETRIC VIEW OF BEVELED BEARING PLATES (TYPE 1) FOR FLORIDA I-BEAMS

(SKEWED PLATES SHOWN, NON-SKEWED PLATES SIMILAR)

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: BWJ 04-14
Designed By: SJM 02-11
Checked By: EAB 02-11

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ENGINEER OF RECORD
Mark S. Eicholtz
7/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: BEARING PLATE DATA TABLE (1 OF 3)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-86

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bdatatable_bearingplate01.dwg LAYOUT NAME: bearing plate data table (1 of 3) PLOTTED: Friday, August 29, 2014 6:32:16 AM USER: kathy_compton

BEARING PLATE DATA TABLE

Table Date 7-01-13

GENERAL BEARING PLATE DATA								EMBEDDED PLATE DIMENSIONS (PLATE A)		BEVELED PLATE REQUIRED (Yes/No)	BEVELED PLATE DIMENSIONS (PLATE B)							
BRG. PLATE MARK ***	SPAN NO(s).	BEAM NO(s).	PAD TYPE	BEAM END	PLAN VIEW CASE	SLOPE (%) **	ANGLE ø *	G	D		C	D	E	F	W	X	Y	Z
T2-3	2	4	H	1	3	2.58	77	1'-1 7/8"	3'-0"	Yes	1'-0"	3'-0"	1'-0 5/16"	3'-0 15/16"	13/16"	1 1/16"	11/16"	1/2"
T2-2	2	4	H	2	3	2.58	62	1'-3 5/16"	3'-0"	Yes	1'-0"	3'-0"	1'-1 9/16"	3'-4 3/4"	1/2"	1 "	1 3/8"	7/8"
T2-4	2	5	H	1	3	2.65	77	1'-1 7/8"	3'-0"	Yes	1'-0"	3'-0"	1'-0 5/16"	3'-0 15/16"	13/16"	1 1/16"	3/4"	1/2"
T2-5	2	5	H	2	3	2.65	62	1'-3 5/16"	3'-0"	Yes	1'-0"	3'-0"	1'-1 9/16"	3'-4 3/4"	1/2"	1"	1 3/8"	7/8"
N/A	3	1	H	1	3	1.91	64	1'-3"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	3	1	H	2	3	1.91	52	1'-5 1/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	3	2	H	1	3	1.96	64	1'-3"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	3	2	H	2	3	1.96	52	1'-5 1/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
T3-1	3	3	H	1	3	2.00	64	1'-3"	3'-0"	Yes	1'-0"	3'-0"	1'-1 3/8"	3'-4 1/16"	3/4"	1 1/8"	7/8"	1/2"
T3-2	3	3	H	2	3	2.00	52	1'-5 1/8"	3'-0"	Yes	1'-0"	3'-0"	1'-3 1/4"	3'-9 11/16"	1/2"	1 1/16"	1 3/8"	13/16"
T3-1	3	4	H	1	3	2.01	64	1'-3"	3'-0"	Yes	1'-0"	3'-0"	1'-1 3/8"	3'-4 1/16"	3/4"	1 1/8"	7/8"	1/2"
T3-2	3	4	H	2	3	2.01	52	1'-5 1/8"	3'-0"	Yes	1'-0"	3'-0"	1'-3 1/4"	3'-9 11/16"	1/2"	1 1/16"	1 3/8"	13/16"
T3-3	3	5	H	1	3	2.11	64	1'-3"	3'-0"	Yes	1'-0"	3'-0"	1'-1 3/8"	3'-4 1/16"	13/16"	1 1/8"	7/8"	1/2"
T3-4	3	5	H	2	3	2.11	51	1'-5 3/8"	3'-0"	Yes	1'-0"	3'-0"	1'-3 7/16"	3'-10 5/16"	1/2"	1 1/8"	1 7/16"	13/16"
N/A	4	1	K	1	3	1.18	53	1'-4 7/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	4	1	K	2	3	1.18	53	1'-4 7/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	4	2	K	1	3	1.23	53	1'-4 7/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	4	2	K	2	3	1.23	53	1'-4 7/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	4	3	K	1	3	1.28	53	1'-4 7/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	4	3	K	2	3	1.28	53	1'-4 7/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	4	4	K	1	3	1.33	53	1'-4 7/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	4	4	K	2	3	1.33	53	1'-4 7/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	4	5	K	1	3	1.38	53	1'-4 7/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	4	5	K	2	3	1.38	53	1'-4 7/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	5	1	K	1	3	0.42	50	1'-5 5/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	5	1	K	2	3	0.42	50	1'-5 5/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	5	2	K	1	3	0.45	50	1'-5 5/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	5	2	K	2	3	0.45	50	1'-5 5/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	5	3	K	1	3	0.49	50	1'-5 5/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	5	3	K	2	3	0.49	50	1'-5 5/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	5	4	K	1	3	0.58	50	1'-5 5/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	5	4	K	2	3	0.58	50	1'-5 5/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	5	5	K	1	3	0.53	51	1'-5 3/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	5	5	K	2	3	0.53	51	1'-5 3/8"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	6	1	K	1	3	0.30	46	1'-6 3/4"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	6	1	K	2	3	0.30	58	1'-3 15/16"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	6	2 - 3	K	1	3	0.31	46	1'-6 3/4"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	6	2 - 3	K	2	3	0.31	58	1'-3 15/16"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	6	4	K	1	3	0.37	46	1'-6 3/4"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	6	4	K	2	3	0.37	58	1'-3 15/16"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	6	5	K	1	3	0.29	47	1'-6 7/16"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	6	5	K	2	3	0.29	59	1'-3 3/4"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	7	1 - 2	K	1	3	0.30	54	1'-4 11/16"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	7	1 - 2	K	2	3	0.30	68	1'-2 9/16"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	7	3	K	1	3	0.31	54	1'-4 11/16"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	7	3	K	2	3	0.31	68	1'-2 9/16"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	7	4	K	1	3	0.35	54	1'-4 11/16"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	7	4	K	2	3	0.35	68	1'-2 9/16"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	7	5	K	1	3	0.29	55	1'-4 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	7	5	K	2	3	0.29	68	1'-2 9/16"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	8	1 - 3	K	1	3	0.30	64	1'-3"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	8	1 - 3	K	2	3	0.30	79	1'-1 3/4"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	8	4	K	1	3	0.32	64	1'-3"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	8	4	K	2	3	0.32	79	1'-1 3/4"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	8	5	K	1	3	0.29	64	1'-3"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	8	5	K	2	3	0.29	80	1'-1 11/16"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: BWJ 04-14
Designed By: SJM 02-11
Checked By: EAB 02-11

URS Corporation Southern
7650 West Courtney
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Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: BEARING PLATE DATA TABLE (2 OF 3)

REF. DWG. NO.

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. B-87

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bdatatable_bearingplate01.dwg LAYOUT NAME: bearing plate data table (2 of 3) PLOTTED: Friday, August 29, 2014 6:32:19 AM USER: kathy_compton

BEARING PLATE DATA TABLE

Table Date 7-01-13

GENERAL BEARING PLATE DATA								EMBEDDED PLATE DIMENSIONS (PLATE A)		BEVELED PLATE REQUIRED (Yes/No)	BEVELED PLATE DIMENSIONS (PLATE B)							
BRG. PLATE MARK ***	SPAN NO(s).	BEAM NO(s).	PAD TYPE	BEAM END	PLAN VIEW CASE	SLOPE (%) **	ANGLE ø *	G	D		C	D	E	F	W	X	Y	Z
N/A	9	1 - 4	K	1	3	0.30	76	1'-1 15/16"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	9	1 - 4	K	2	2	0.30	89	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	9	5	K	1	3	0.29	76	1'-1 15/16"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	9	5	K	2	2	0.29	89	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	10	1 - 5	K	1	3	-0.25	89	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	10	1 - 5	K	2	2	-0.25	89	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	11	1 - 3	K	1	3	-0.30	89	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	11	1 - 3	K	2	2	-0.30	89	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	11	4 - 5	K	1	3	-0.29	89	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	11	4 - 5	K	2	2	-0.29	89	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	12	1 - 4	K	1	3	-0.30	89	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	12	1 - 4	K	2	2	-0.30	90	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	12	5	K	1	3	-0.30	89	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	12	5	K	2	2	-0.30	90	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	13 - 16	1 - 5	H	1	1	-0.30	90	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	13 - 16	1 - 5	H	2	1	-0.30	90	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	17	1 - 5	H	1	1	-0.99	90	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
N/A	17	1 - 5	H	2	1	-0.99	90	1'-1 1/2"	3'-0"	No	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
T4-1	18	1 - 4	H	1	1	-2.33	90	1'-1 1/2"	3'-0"	Yes	1'-0"	3'-0"	1'-0"	3'-0"	1/2"	1/2"	3/4"	3/4"
T4-2	18	1 - 4	H	2	1	-2.33	90	1'-1 1/2"	3'-0"	Yes	1'-0"	3'-0"	1'-0"	3'-0"	3/4"	3/4"	1/2"	1/2"
T4-1	18	5	H	1	1	-2.33	90	1'-1 1/2"	3'-0"	Yes	1'-0"	3'-0"	1'-0"	3'-0"	1/2"	1/2"	3/4"	3/4"
T4-2	18	5	H	2	1	-2.33	90	1'-1 1/2"	3'-0"	Yes	1'-0"	3'-0"	1'-0"	3'-0"	3/4"	3/4"	1/2"	1/2"

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: BWJ 04-14
Designed By: SJM 02-11
Checked By: EAB 02-11

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7650 West Courtney
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C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: BEARING PLATE DATA TABLE (3 OF 3)

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

SHEET NO. B-88

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bdatatable_bearingplate01.dwg LAYOUT NAME: bearing plate data table (3 of 3) PLOTTED: Friday, August 29, 2014 6:32:24 AM USER: kathy_compton

TABLE OF WIND LOAD VARIABLES	TABLE DATE 1-01-11
WIND SPEED, BASIC (MPH)	130
WIND SPEED, CONSTRUCTION INACTIVE (MPH)	78
WIND SPEED, CONSTRUCTION ACTIVE (MPH)	20
VELOCITY PRESSURE EXPOSURE COEFFICIENT	SEE TABLE
GUST EFFECT FACTOR	0.85

TABLE OF ASSUMED CONSTRUCTION LOADS (UNFACTORED)	TABLE DATE 1-01-11
BUILD-UP (PLF)	125
FORM WEIGHT (PSF)	20
FINISHING MACHINE TOTAL WEIGHT (KIP)	11
FINISHING MACHINE WHEEL LOCATION BEYOND EDGE OF DECK OVERHANG (IN)	2.5
DECK WEIGHT (PSF)	106.25
LIVE LOAD (PSF)	20
LIVE LOAD AT EXTREME DECK EDGE (PLF)	75

VELOCITY PRESSURE EXPOSURE COEFFICIENT		
SPANS 1 THRU 3	SPANS 4 THRU 9	SPANS 10 THRU 18
1.015	1.027	1.032

TABLE OF TEMPORARY BRACING VARIABLES						TABLE DATE 1-01-11	
SPAN NO.	LB, MAXIMUM UNBRACED LENGTH (FT)	HORIZONTAL FORCE AT EACH BEAM END AND ANCHOR BRACE (KIP)	HORIZONTAL FORCE AT EACH INTERMEDIATE SPAN BRACE (KIP)	OVERTURNING FORCE AT EACH BEAM END AND ANCHOR BRACE (KIPxFT)	OVERTURNING FORCE AT EACH INTERMEDIATE SPAN BRACE (KIPxFT)	BRACE END PRIOR TO CRANE RELEASE?	TOTAL LINES OF BRACING
1 THRU 3	44.365	0.64	4.932	49.66	72.918	NO	3
4 THRU 9	46.778	0.50	4.621	48.85	70.943	NO	4
10 THRU 18	44.536	0.48	4.425	48.72	69.756	NO	4

BEAM TEMPORARY BRACING NOTES

BASED ON INVESTIGATION OF THE BEAM STABILITY, TEMPORARY BRACING AS SHOWN IN THE 'TABLE OF TEMPORARY BRACING VARIABLES' AND DESIGN STANDARD INDEX NO. 20005 IS REQUIRED. THE TABLE AND FOLLOWING INFORMATION IS PROVIDED TO AID THE CONTRACTOR IN DESIGN OF BEAM TEMPORARY BRACING:

1. DESIGN THE BRACING MEMBERS AND CONNECTIONS TO TRANSFER BOTH COMPRESSIVE AND TENSILE FORCES EQUAL TO THE HORIZONTAL FORCES GIVEN IN THE 'TABLE OF TEMPORARY BRACING VARIABLES'. ALSO DESIGN BRACING MEMBERS AND CONNECTIONS TO BE CAPABLE OF RESISTING THE OVERTURNING FORCES GIVEN IN THE TABLE, NON-SIMULTANEOUSLY WITH HORIZONTAL FORCES. ASSUME THAT HORIZONTAL BRACING FORCES ARE APPLIED PERPENDICULAR TO THE BEAM WEB AT MID-HEIGHT OF THE BEAM, AND ASSUME THAT OVERTURNING BRACING FORCES ARE APPLIED AT THE CENTERLINE OF THE BEAM AT THE TOP OF THE TOP FLANGE.

2. THE HORIZONTAL BRACE FORCES HAVE BEEN DETERMINED BY APPLICATION OF THE CONSTRUCTION INACTIVE WIND LOAD AS LISTED IN THE 'TABLE OF WIND LOAD VARIABLES'. THE OVERTURNING BRACE FORCES HAVE BEEN DETERMINED BY APPLICATION OF THE CONSTRUCTION ACTIVE WIND LOAD AS LISTED IN THE 'TABLE OF WIND LOAD VARIABLES' PLUS THE ASSUMED CONSTRUCTION LOADS SHOWN IN THE 'TABLE OF ASSUMED CONSTRUCTION LOADS'. IT IS THE CONTRACTOR'S RESPONSIBILITY TO RE-CALCULATE THE BRACING REQUIREMENTS IF THE ACTUAL CONSTRUCTION LOADS EXCEED THE ASSUMED LOADS SHOWN, OR IF THE FINISHING MACHINE WHEEL LOCATION FROM THE EDGE OF THE DECK OVERHANG EXCEEDS THE VALUE LISTED.

3. THE TEMPORARY BRACING AT THE ENDS OF THE BEAMS SHALL BE INSTALLED PRIOR TO CRANE RELEASE IF INDICATED IN THE 'TABLE OF TEMPORARY BRACING VARIABLES'. BEAMS SHALL NOT BE LEFT UN-BRACED DURING NON-WORK HOURS. BRACING SHALL REMAIN IN PLACE UNTIL DIAPHRAGM CONCRETE OR BRIDGE DECK CONCRETE REACHES 2500 PSI.

4. THE EXPOSURE PERIOD (DEFINED AS THE TIME PERIOD FOR WHICH TEMPORARY LOAD CASES OF THE SUPERSTRUCTURE EXIST) IS ASSUMED TO BE LESS THAN ONE YEAR. HORIZONTAL BRACING FORCES, AS SPECIFIED IN THE 'TABLE OF TEMPORARY BRACING VARIABLES', ARE NOT VALID IF THE EXPOSURE PERIOD IS MORE THAN ONE YEAR; FOR THIS CASE THE CONTRACTOR SHALL RE-CALCULATE BRACING REQUIREMENTS.

5. HORIZONTAL AND OVERTURNING FORCES ARE FACTORED PER THE STRENGTH III LIMIT STATE FOR CONSTRUCTION.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: BWJ 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

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MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

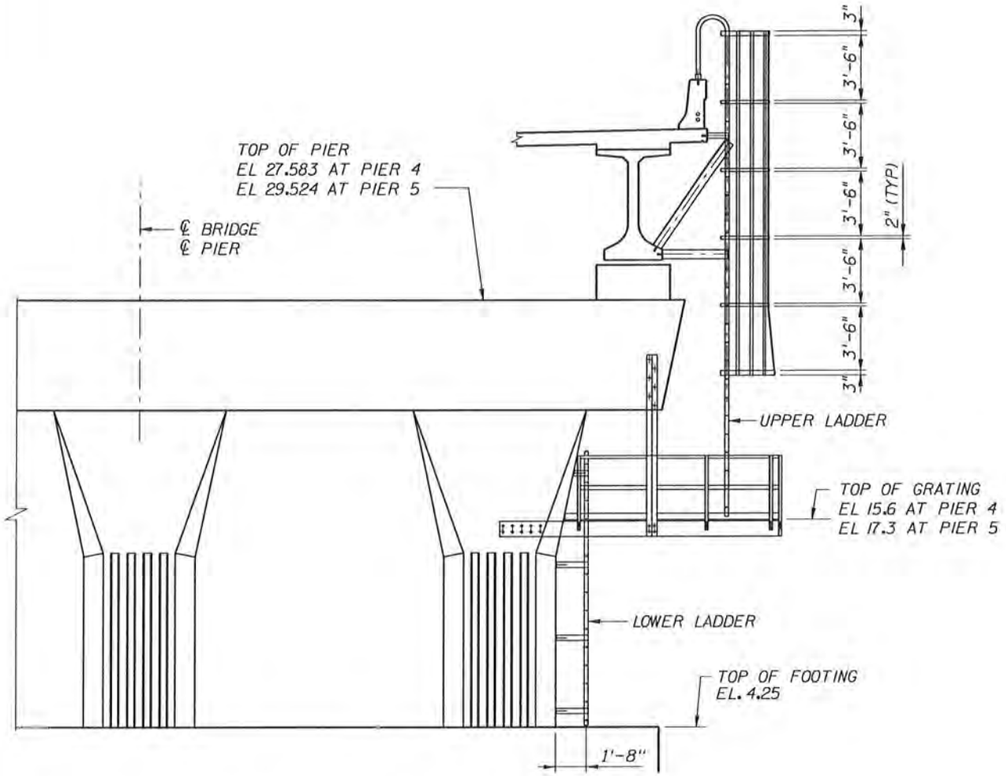
SHEET TITLE: PRESTRESSED I-BEAM TEMPORARY BRACING DATA TABLES

REF. DWG. NO.:

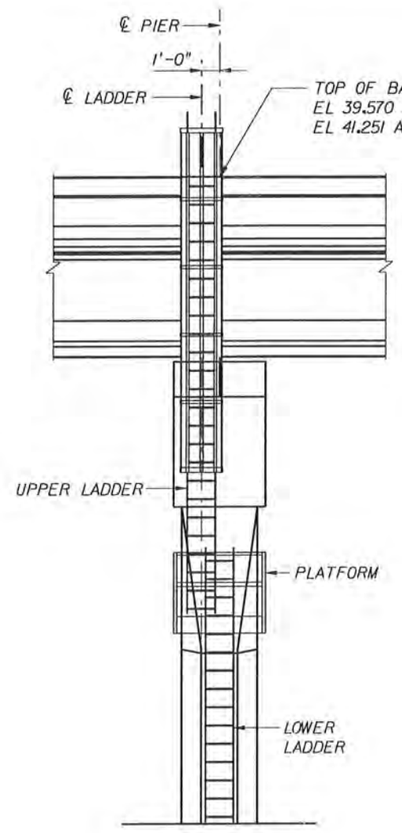
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO.: B-89

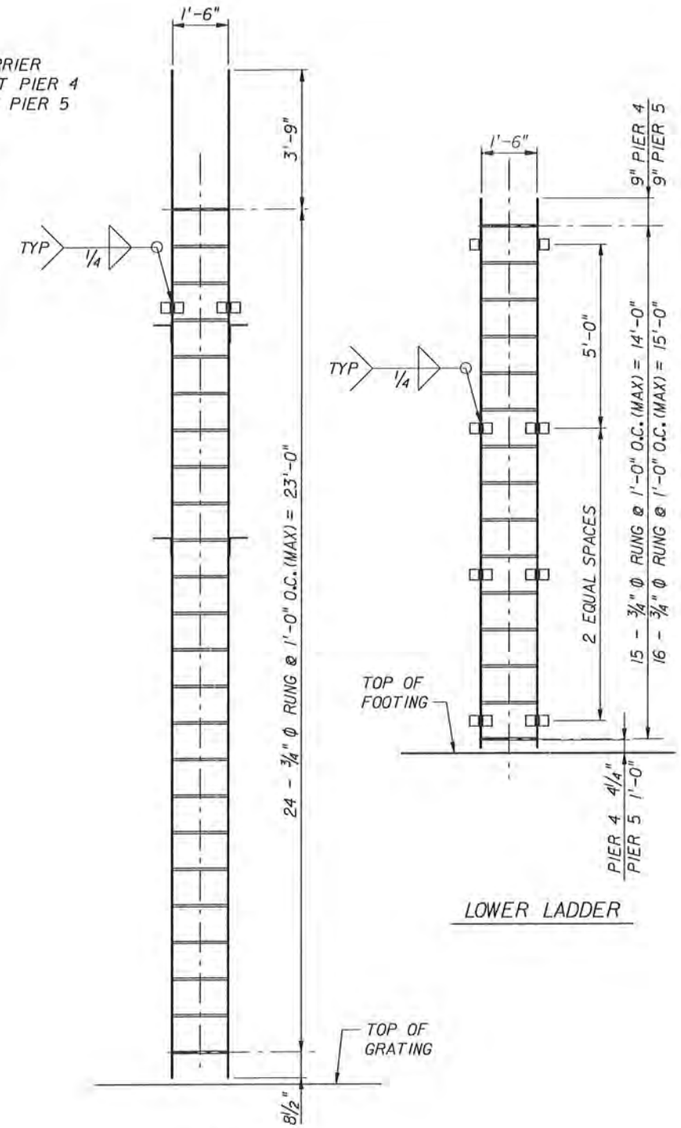
FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bdatatable_ibeambracing.dwg LAYOUT NAME: prestressed i-beam temporary bracing data tables PLOTTED: Friday, August 29, 2014 6:32:31 AM USER: kathy_compton



ELEVATION - PIERS 4 & 5
(LOOKING STATONS BACK)



SIDE ELEVATION



UPPER LADDER

LOWER LADDER

NOTES

1. ALL STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH A.S.T.M. A-709 (GRADE 50). WELD MATERIAL TO BE E70XX.
2. ALL STEEL FOR LADDERS INCLUDING PLATES, SHAPES, BARS, BOLTS, NUTS AND WASHERS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE SPECIFICATIONS. WELDING OF PARTS SHALL BE COMPLETED PRIOR TO GALVANIZING.
3. ALL EXPANSION ANCHORS SHALL BE 3/4" DIA. HILTI KWIK BOLT 3 316 STAINLESS STEEL WITH A MINIMUM EMBEDMENT OF 3 1/4" (OR APPROVED EQUAL).
4. ALL OTHER BOLTS SHALL BE A.S.T.M. A-325 AND SHALL BE ELECTROPLATED IN ACCORDANCE WITH THE SPECIFICATIONS.
5. COPE ALL ANGLES AND CHANNELS AS REQUIRED.
6. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO MANUFACTURING AND INSTALLING ITEMS.
7. CONTRACTOR SHALL SUBMIT COMPLETE SHOP DRAWINGS OF LADDERS AND PLATFORM SYSTEM FOR REVIEW, INCLUDING FASTENERS AND ANCHORS.
8. LADDERS, RAILS AND PLATFORMS SHALL CONFORM TO OSHA REGULATIONS.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 8-14
Checked By: MSE 8-14
Designed By: MSE 8-14
Checked By: JB 8-14

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ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

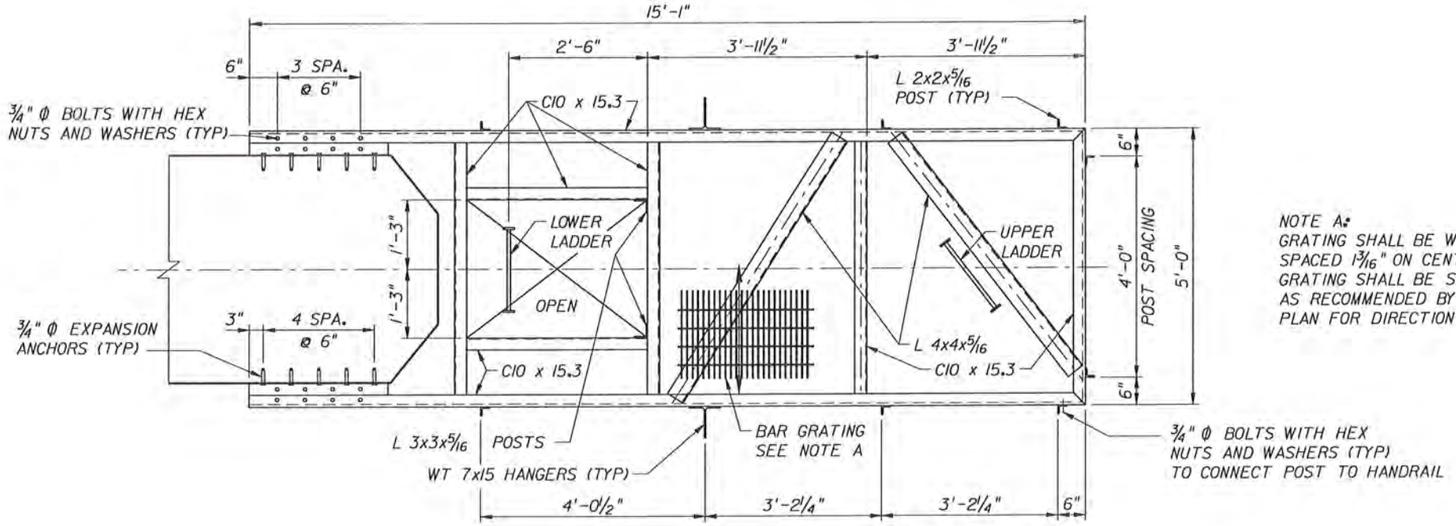
SHEET TITLE: ACCESS LADDER & PLATFORM DETAILS (1 OF 3)

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

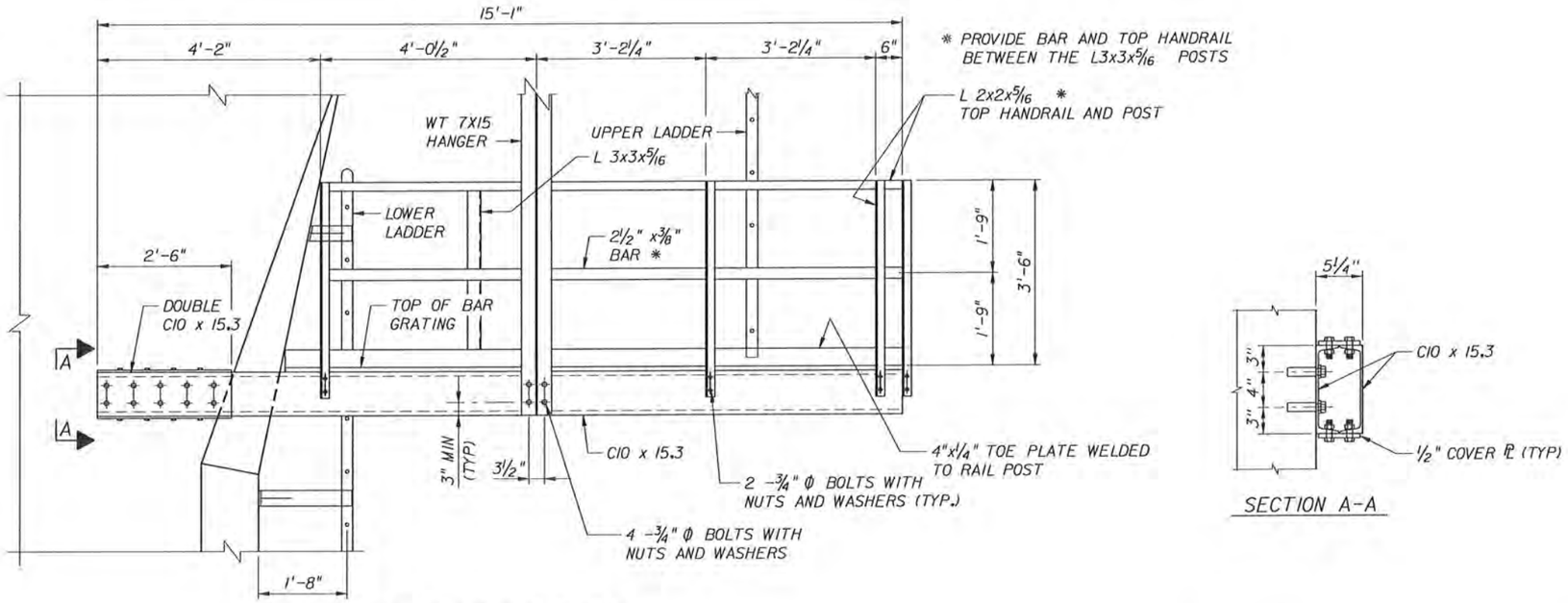
SHEET NO. B-89A

FILENAME: e:\autocad\2014\fort_hamer\dgn\bstrborder01.dwg LAYOUT NAME: model PLOTTED: Tuesday, August 26, 2014 8:23:42 AM USER: kathy_compton



PLATFORM - FRAMING PLAN

NOTE A:
GRATING SHALL BE WELDED STEEL, GALVANIZED, 1"x3/16" BEARING BARS SPACED 1 3/16" ON CENTERS, WITH CROSS BARS SPACED 4" ON CENTERS. GRATING SHALL BE SECURED WITH GALVANIZED CLIPS AND BOLTS AS RECOMMENDED BY THE MANUFACTURER. SEE ARROW ON FRAMING PLAN FOR DIRECTION OF GRATING.



PLATFORM - ELEVATION

SECTION A-A

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 8-14
Checked By: MSE 8-14
Designed By: MSE 8-14
Checked By: JB 8-14

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7650 West Courtney Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

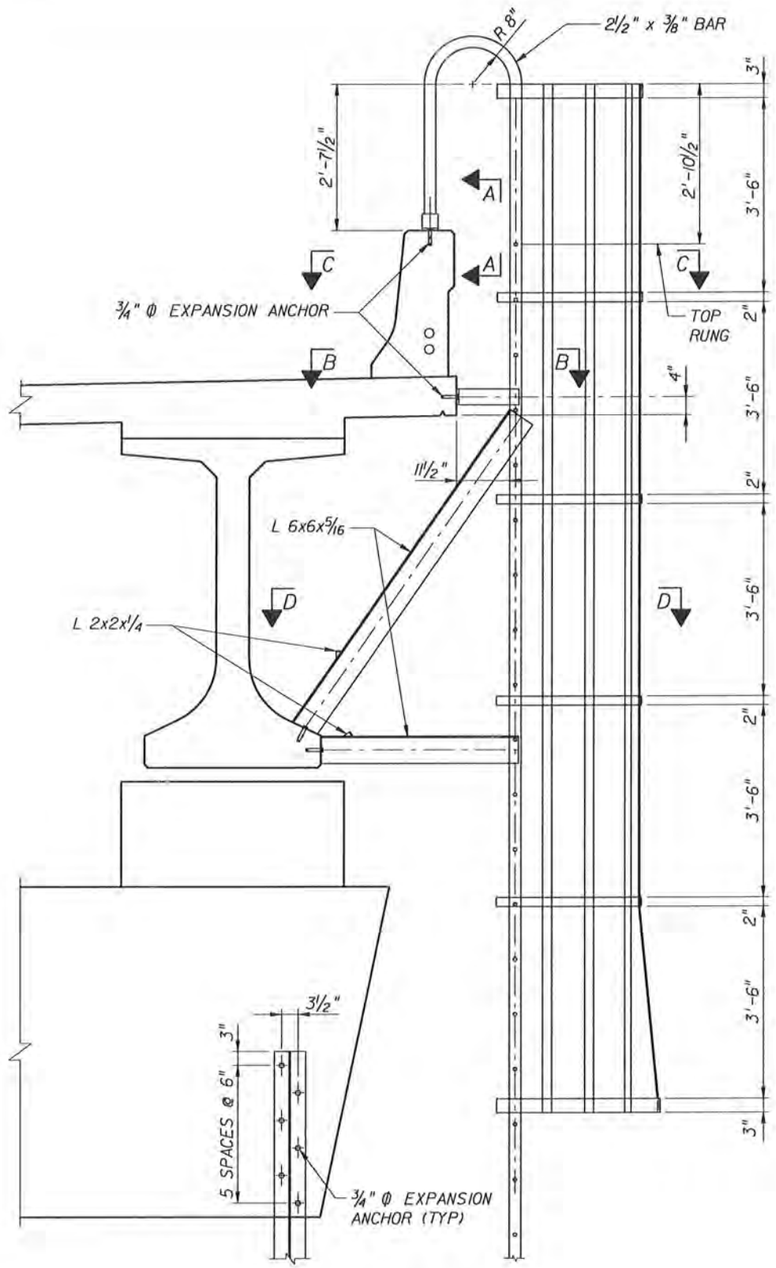
SHEET TITLE: ACCESS LADDER & PLATFORM DETAILS (2 OF 3)

REF. DWG. NO.

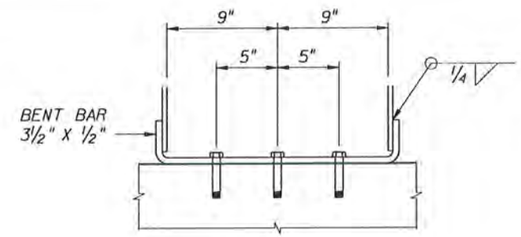
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. B-89B

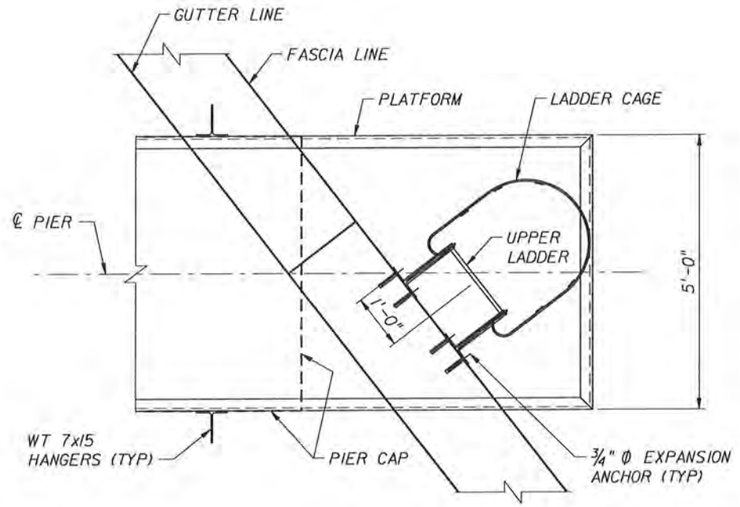
FILENAME: e:\autocad\2014\fort_homer\dgn\bstrborder01.dwg LAYOUT NAME: model PLOTTED: Tuesday, August 26, 2014 8:23:42 AM USER: kathy_compton



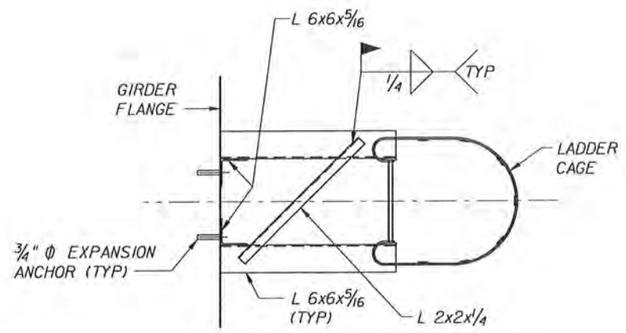
LADDER CAGE DETAILS



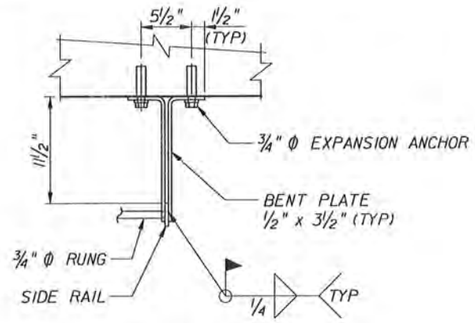
VIEW A-A



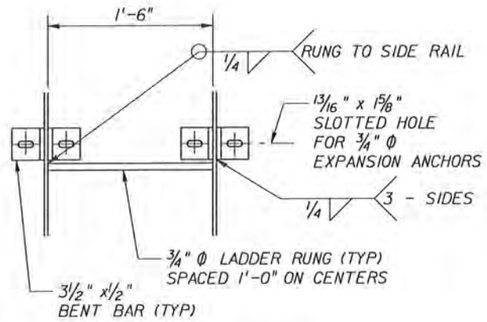
VIEW C-C



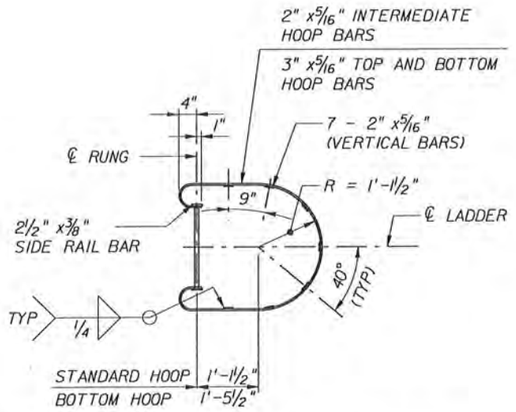
VIEW D-D



SECTION B-B



TYPICAL LADDER SUPPORT DETAIL



NOTE: REMOVE ALL SHARP EDGES BEFORE GALVANIZING

SECTION THRU LADDER CAGE

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 8-14
Checked By: MSE 8-14
Designed By: MSE 8-14
Checked By: JB 8-14

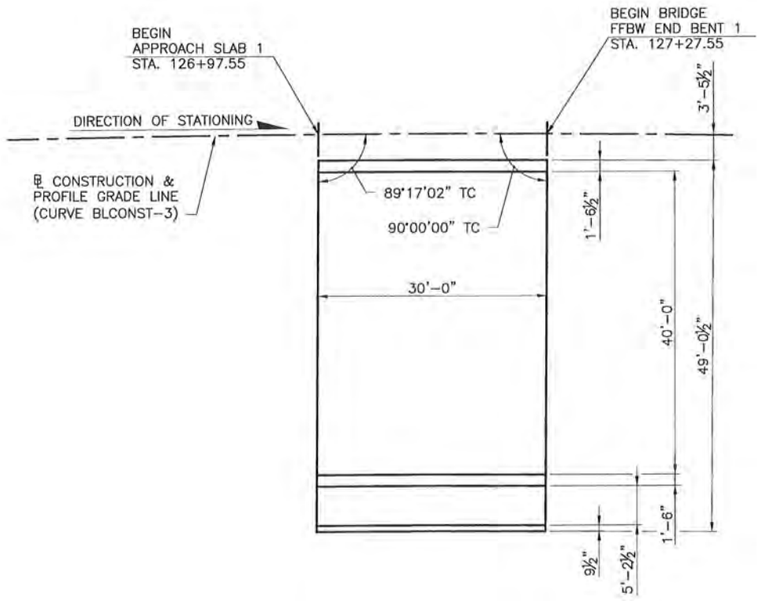
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

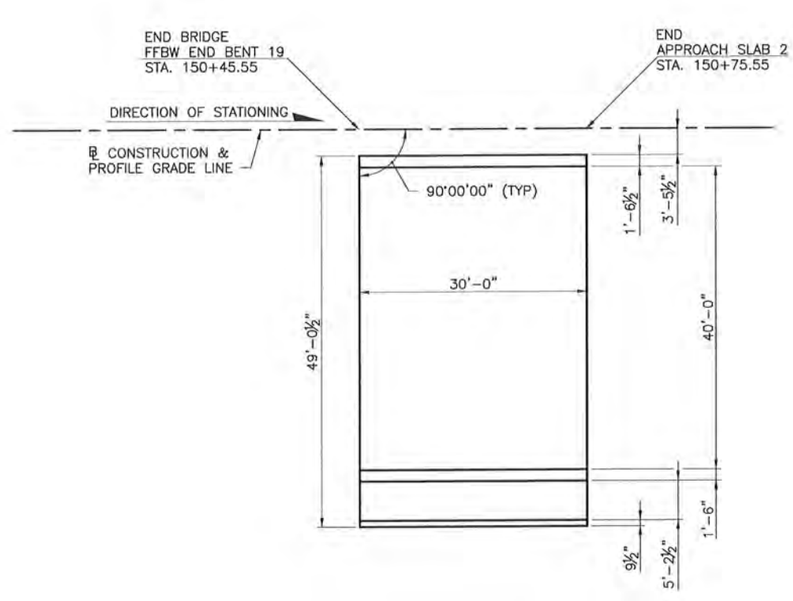
ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: ACCESS LADDER & PLATFORM DETAILS (3 OF 3)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-89C

FILENAME: c:\autocad\2014\fort_homer\dwg\xrefs\bstrborder01.dwg LAYOUT NAME: model PLOTTED: Tuesday, April 29, 2014 6:47:44 PM USER: kathy_compton



PLAN – APPROACH SLAB 1



PLAN – APPROACH SLAB 2

APPROACH SLAB INDEX NO. 20900 TABLE OF DIMENSIONS AND ESTIMATED QUANTITIES								TABLE DATE 7-01-05
LOCATION	DIMENSIONS					ANGLE ø	REINFORCING STEEL (LBS.)	CLASS II CONCRETE (BRIDGE DECK) (C.Y.)
	L1	L2	M1	M2	N			
END BENT 1 – APPROACH SLAB 1	30'-0"	30'-0"	1'-6½"	9½"	46'-8½"	0°00'00" TC	10,746	58.1
END BENT 19 – APPROACH SLAB 2	30'-0"	30'-0"	1'-6½"	9½"	46'-8½"	0°00'00"	10,746	58.1

DIMENSION AND QUANTITY NOTES:

DIMENSIONS 'L1' & 'L2' ARE MEASURED ALONG GUTTER LINE OR INSIDE FACE OF PARAPET.
DIMENSIONS 'L1' & 'L2' ARE ARC DIMENSIONS WITHIN CURVED ALIGNMENTS.

QUANTITIES DO NOT INCLUDE ITEMS PLACED ON THE SLAB SUCH AS TRAFFIC RAILINGS AND PEDESTRIAN/BICYCLE RAILING.

FOR TRAFFIC RAILING QUANTITIES SEE SHEET B-3.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: CC 01-11
Designed By: CC 01-11
Checked By: AOS 01-11

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C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
7/5/14

SHEET TITLE: APPROACH SLAB DETAILS
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-90

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bapproachslab01.dwg LAYOUT NAME: approach slab details PLOTTED: Friday, August 29, 2014 6:32:36 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION END BENT 1 NO. REQUIRED = 1																																	
4	E1	10- 0		84	4	4	4	2- 3 1/2			2- 4																						
4	E2	8- 9		15	5			2- 3 1/2			3- 4			0- 5			0- 5															
9	E3	48- 5		11	1			48- 4 1/2																									
5	E4	48- 5		4	1			48- 4 1/2																									
9	E5	10-11		12	11			7- 9			1- 7			1- 7																			
9	E6	5- 7		6	11			2- 5			1- 7			1- 7																			
6	E7	4- 5		146	1			4- 5																									
6	E8	6- 3		146	1			6- 2 1/2																									
6	E9	1- 6		12	1			1- 6																									
5	E10	48- 5		16	1			48- 4 1/2																									
4	E11	6- 6		30	11			3- 4			1- 7			1- 7																			
4	E12	6- 5		40	11			3- 2 1/2			1- 7			1- 7																			
4	E13	6- 5		8	1			6- 4 1/2																									
4	E14	4- 8		12	1			4- 8																									
4	E15	6- 3		4	1			6- 2 1/2																									
4	E16	7- 4		8	11			3- 4			2- 0			2- 0																			
4	E17	5- 3		18	10			3- 3			2- 0																						
4	E18	2- 6		2	1			2- 6																									

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION END BENT 19 NO. REQUIRED = 1																																	
4	E1	10- 0		84	4	4	4	2- 3 1/2			2- 4																						
4	E2	8- 9		15	5			2- 3 1/2			3- 4			0- 5			0- 5															
9	E3	48- 5		11	1			48- 4 1/2																									
5	E4	48- 5		4	1			48- 4 1/2																									
9	E5	10-11		12	11			7- 9			1- 7			1- 7																			
9	E6	5- 7		6	11			2- 5			1- 7			1- 7																			
6	E7	4- 5		146	1			4- 5																									
6	E8	6- 3		146	1			6- 2 1/2																									
6	E9	1- 6		12	1			1- 6																									
5	E10	48- 5		16	1			48- 4 1/2																									
4	E11	6- 6		30	11			3- 4			1- 7			1- 7																			
4	E12	6- 5		40	11			3- 2 1/2			1- 7			1- 7																			
4	E13	6- 5		8	1			6- 4 1/2																									
4	E14	4- 8		12	1			4- 8																									
4	E15	6- 3		4	1			6- 2 1/2																									
4	E16	7- 4		8	11			3- 4			2- 0			2- 0																			
4	E17	5- 3		18	10			3- 3			2- 0																						
4	E18	2- 6		2	1			2- 6																									

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION FOOTING - PIERS 2, 3 AND 8 THRU 18 NO. REQUIRED = 26																																	
7	F1	22- 0		11	11			15- 3			3- 4 1/2			3- 4 1/2																			
10	F2	19- 3		16	11			15- 3			2- 0			2- 0																			
7	F3	16- 6		16	11			9- 9			3- 4 1/2			3- 4 1/2																			
10	F4	13- 9		16	11			9- 9			2- 0			2- 0																			
5	F5	9- 9		10	1			9- 9																									
5	F6	15- 3		10	1			15- 3																									
11	F7	12- 8		26	10			10- 8			2- 0																						

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: BWJ 04-14
Designed By: JPB 04-14
Checked By: BWJ 04-14

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
7/5/14

SHEET TITLE: REINFORCING BAR LIST (1 OF 24)

REF. DWG. NO.

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. B-91

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brbarlist01.dwg LAYOUT NAME: reinforcing bar list (1 of 24) PLOTTED: Friday, August 29, 2014 6:32:41 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION FOOTING - PIERS 4 THRU 7 NO. REQUIRED = 4																																	
10	F1	60- 0		11	11			55- 3			2- 4 1/2			2- 4 1/2																			
10	F2	60- 0		16	11			55- 3			2- 4 1/2			2- 4 1/2																			
7	F3	17- 6		56	11			9- 9			3-10 1/2			3-10 1/2																			
7	F4	13- 9		56	11			9- 9			2- 0			2- 0																			
5	F5	9- 9		10	1			9- 9																									
5	F6	55- 3		10	1			55- 3																									
11	F7	13- 3		78	10			11- 3			2- 0																						

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION PIER 2 NO. REQUIRED = 1																																	
11	C1	18- 1		52	1			18- 1																									
5	C2	9- 9		56	43			0- 9 1/4			1- 8 1/4			0- 9 1/4			3- 8 1/4			2- 2													
5	C3	6- 3		28	18	5	4	5- 3																									
5	C4	4- 3		28	18	5	4	3- 3																									
11	C5	17- 5		8	12			13- 2			4- 3																						12
11	C6	18-10		8	12			14- 7			4- 3																						12
11	C7	17- 6		8	15			4- 3			5- 0			8- 3																		20	200
11	C8	17- 7		8	15			3- 4			5- 0			9- 3																		25	205
4	C9	14- 0		12	11			3- 3			6- 5 1/2			4- 3 1/2																			
4	C10	4- 0		24	18	5	4	3- 3																									
4	C11	2- 5		24	18	5	4	1- 8																									
BAR BILLED TWICE FOR QUANTITY PURPOSES																																	
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
6	P1	21- 4		77	4	4	4	5- 4			4- 4																						
6	P2	7- 0		52	18	4	5	5- 4																									
10	P3	33-11		16	14			28- 5			5- 5 1/2																						12
10	P4	46- 3		8	1			46- 3																									
10	P5	17- 8		16	1			17- 8																									
10	P6	21- 5		8	1			21- 5																									
5	P7	46- 3		12	1			46- 3																									
5	P8	8- 6		14	11			4- 4			2- 1			2- 1																			
4	P9	6- 6		10	11			3- 4			1- 7			1- 7																			
4	P10	5- 0		14	11			1-10			1- 7			1- 7																			
4	P11	11- 1		12	4	4	4	1-10			3- 4																						
4	P12	7-11		20	11			3- 3			2- 4			2- 4																			
4	P13	8- 8		20	11			3- 3			2- 8 1/2			2- 8 1/2																			
4	P14	6- 5		28	11			1- 9			2- 4			2- 4																			
4	P15	7- 2		28	11			1- 9			2- 8 1/2			2- 8 1/2																			

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: BWJ 04-14
Designed By: JPB 04-14
Checked By: BWJ 04-14

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C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: REINFORCING BAR LIST (2 OF 24)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-92

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist02.dwg LAYOUT NAME: reinforcing bar list (2 of 24) PLOTTED: Friday, August 29, 2014 6:32:46 AM USER: kathy_compton

LOCATION PIER 3 NO. REQUIRED = 1

MARK SIZE	MARK DES	LENGTH FT-IN	NO BARS	TYP BAR	STY A	STY G	B	C	D	E	F	H	J	K	N NO	φ ANG
11	C1	20- 4	52	1			20- 4									
5	C2	9- 9	68	43			0- 9 1/4	1- 8 1/4	0- 9 1/4	3- 8 1/4	2- 2					
5	C3	6- 3	34	18	5	4	5- 3									
5	C4	4- 3	34	18	5	4	3- 3									
11	C5	17- 5	8	12			13- 2	4- 3								12
11	C6	18-10	8	12			14- 7	4- 3								12
11	C7	17- 6	8	15			4- 3	5- 0	8- 3						20	200
11	C8	17- 7	8	15			3- 4	5- 0	9- 3						25	205
4	C9	14- 0	12	11			3- 3	6- 5 1/2	4- 3 1/2							
4	C10	4- 0	24	18	5	4	3- 3									
4	C11	2- 5	24	18	5	4	1- 8									
BAR BILLED TWICE FOR QUANTITY PURPOSES																
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
6	P1	21- 4	82	4	4	4	5- 4	4- 4								
6	P2	7- 0	52	18	4	5	5- 4									
10	P3	35- 7	16	14			30- 1	5- 5 1/2								12
10	P4	49- 7	8	1			49- 7									
10	P5	17- 8	16	1			17- 8									
10	P6	24- 9	8	1			24- 9									
5	P7	49- 7	12	1			49- 7									
5	P8	8- 6	14	11			4- 4	2- 1	2- 1							
4	P9	6- 6	10	11			3- 4	1- 7	1- 7							
4	P10	5- 0	14	11			1-10	1- 7	1- 7							
4	P11	11- 1	12	4	4	4	1-10	3- 4								
4	P12	7-11	20	11			3- 3	2- 4	2- 4							
4	P13	9- 2	20	11			3- 3	2-11 1/4	2-11 1/4							
4	P14	6- 5	28	11			1- 9	2- 4	2- 4							
4	P15	7- 8	28	11			1- 9	2-11 1/4	2-11 1/4							

LOCATION PIER 4 NO. REQUIRED = 1

MARK SIZE	MARK DES	LENGTH FT-IN	NO BARS	TYP BAR	STY A	STY G	B	C	D	E	F	H	J	K	N NO	φ ANG
11	C1	21- 7	78	1			21- 7									
5	C2	9- 9	108	43			0- 9 1/4	1- 8 1/4	0- 9 1/4	3- 8 1/4	2- 2					
5	C3	6- 3	54	18	5	4	5- 3									
5	C4	4- 3	54	18	5	4	3- 3									
11	C5	17- 5	12	12			13- 2	4- 3								12
11	C6	18-10	12	12			14- 7	4- 3								12
11	C7	17- 6	12	15			4- 3	5- 0	8- 3						20	200
11	C8	17- 7	12	15			3- 4	5- 0	9- 3						25	205
4	C9	14- 0	18	11			3- 3	6- 5 1/2	4- 3 1/2							
4	C10	4- 0	36	18	5	4	3- 3									
4	C11	2- 5	36	18	5	4	1- 8									
BAR BILLED THREE TIMES FOR QUANTITY PURPOSES																
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
6	P1	21- 4	77	4	4	4	5- 4	4- 4								
10	P3	38- 7	16	14			33- 1 1/2	5- 5 1/2								12
9	P4	55- 8	8	1			55- 8									
10	P5	17- 8	16	1			17- 8									
5	P7	55- 8	14	1			55- 8									
5	P8	8- 6	14	11			4- 4	2- 1	2- 1							
4	P9	6- 6	10	11			3- 4	1- 7	1- 7							
4	P10	5- 0	14	11			1-10	1- 7	1- 7							
4	P11	11- 1	12	4	4	4	1-10	3- 4								
4	P12	7-11	20	11			3- 3	2- 4	2- 4							
4	P13	9- 2	20	11			3- 3	2-11 1/4	2-11 1/4							
4	P14	6- 5	28	11			1- 9	2- 4	2- 4							
4	P15	7- 8	28	11			1- 9	2-11 1/4	2-11 1/4							

BRIDGE NO. 134123

REVISIONS

Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: BWJ 04-14
Designed By: JPB 04-14
Checked By: BWJ 04-14

URS
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: REINFORCING BAR LIST (3 OF 24)
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
REF. DWG. NO.
SHEET NO. B-93

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist03.dwg LAYOUT NAME: reinforcing bar list (3 of 24) PLOTTED: Friday, August 29, 2014 6:32:51 AM USER: kathy_compton

LOCATION PIER 5 — NO. REQUIRED = 1

MARK SIZE	MARK DES	LENGTH FT-IN	NO BARS	TYP BAR	STY A	STY G	B FT-IN-FR	C FT-IN-FR	D FT-IN-FR	E FT-IN-FR	F FT-IN-FR	H FT-IN-FR	J FT-IN-FR	K FT-IN-FR	N NO	ϕ ANG
11	C1	23- 8	78	1			23- 8									
5	C2	9- 9	120	43			0- 9 1/4	1- 8 1/4	0- 9 1/4	3- 8 1/4	2- 2					
5	C3	6- 3	60	18	5	4	5- 3									
5	C4	4- 3	60	18	5	4	3- 3									
11	C5	17- 5	12	12			13- 2	4- 3								12
11	C6	18-10	12	12			14- 7	4- 3								12
11	C7	17- 6	12	15			4- 3	5- 0	8- 3						20	200
11	C8	17- 7	12	15			3- 4	5- 0	9- 3						25	205
4	C9	14- 0	18	11			3- 3	6- 5 1/2	4- 3 1/2							
4	C10	4- 0	36	18	5	4	3- 3									
4	C11	2- 5	36	18	5	4	1- 8									
BAR BILLED THREE TIMES FOR QUANTITY PURPOSES																
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
6	P1	21- 4	77	4	4	4	5- 4	4- 4								
10	P3	38- 7	16	14			33- 1 1/2	5- 5 1/2								12
9	P4	55- 8	8	1			55- 8									
10	P5	17- 8	16	1			17- 8									
5	P7	55- 8	14	1			55- 8									
5	P8	8- 6	14	11			4- 4	2- 1	2- 1							
4	P9	6- 6	10	11			3- 4	1- 7	1- 7							
4	P10	5- 0	14	11			1-10	1- 7	1- 7							
4	P11	11- 1	12	4	4	4	1-10	3- 4								
4	P12	7-11	20	11			3- 3	2- 4	2- 4							
4	P13	8- 5	20	11			3- 3	2- 7	2- 7							
4	P14	6- 5	28	11			1- 9	2- 4	2- 4							
4	P15	6-11	28	11			1- 9	2- 7	2- 7							

LOCATION PIER 6 — NO. REQUIRED = 1

MARK SIZE	MARK DES	LENGTH FT-IN	NO BARS	TYP BAR	STY A	STY G	B FT-IN-FR	C FT-IN-FR	D FT-IN-FR	E FT-IN-FR	F FT-IN-FR	H FT-IN-FR	J FT-IN-FR	K FT-IN-FR	N NO	ϕ ANG
11	C1	24- 3	78	1			24- 3									
5	C2	9- 9	120	43			0- 9 1/4	1- 8 1/4	0- 9 1/4	3- 8 1/4	2- 2					
5	C3	6- 3	60	18	5	4	5- 3									
5	C4	4- 3	60	18	5	4	3- 3									
11	C5	17- 5	12	12			13- 2	4- 3								12
11	C6	18-10	12	12			14- 7	4- 3								12
11	C7	17- 6	12	15			4- 3	5- 0	8- 3						20	200
11	C8	17- 7	12	15			3- 4	5- 0	9- 3						25	205
4	C9	14- 0	18	11			3- 3	6- 5 1/2	4- 3 1/2							
4	C10	4- 0	36	18	5	4	3- 3									
4	C11	2- 5	36	18	5	4	1- 8									
BAR BILLED THREE TIMES FOR QUANTITY PURPOSES																
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
6	P1	21- 4	81	4	4	4	5- 4	4- 4								
10	P3	40- 4	16	14			34-10	5- 5 1/2								12
9	P4	59- 1	8	1			59- 1									
10	P5	17- 8	16	1			17- 8									
5	P7	59- 1	14	1			59- 1									
5	P8	8- 6	14	11			4- 4	2- 1	2- 1							
4	P9	6- 6	10	11			3- 4	1- 7	1- 7							
4	P10	5- 0	14	11			1-10	1- 7	1- 7							
4	P11	11- 1	11	4	4	4	1-10	3- 4								
4	P12	7-11	25	11			3- 3	2- 4	2- 4							
4	P13	8- 2	15	11			3- 3	2- 5 1/2	2- 5 1/2							
4	P14	6- 5	35	11			1- 9	2- 4	2- 4							
4	P15	6- 8	21	11			1- 9	2- 5 1/2	2- 5 1/2							

BRIDGE NO. 134123

REVISIONS

Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: BWJ 04-14
Designed By: JPB 04-14
Checked By: BWJ 04-14

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: REINFORCING BAR LIST (4 OF 24)

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

SHEET NO. B-94

MARK SIZE	MARK DES	LENGTH FT IN	NO BARS	TYP BAR	STY A	STY G	B FT IN FR	C FT IN FR	D FT IN FR	E FT IN FR	F FT IN FR	H FT IN FR	J FT IN FR	K FT IN FR	N NO	φ ANG
LOCATION PIER 7										NO. REQUIRED = 1						
11	C1	24- 8	78	1			24- 8									
5	C2	9- 9	126	43			0- 9 1/4	1- 8 1/4	0- 9 1/4	3- 8 1/4	2- 2					
5	C3	6- 3	63	18	5	4	5- 3									
5	C4	4- 3	63	18	5	4	3- 3									
11	C5	17- 5	12	12			13- 2	4- 3								12
11	C6	18-10	12	12			14- 7	4- 3								12
11	C7	17- 6	12	15			4- 3	5- 0	8- 3						20	200
11	C8	17- 7	12	15			3- 4	5- 0	9- 3						25	205
4	C9	14- 0	18	11			3- 3	6- 5 1/2	4- 3 1/2							
4	C10	4- 0	36	18	5	4	3- 3									
4	C11	2- 5	36	18	5	4	1- 8									
BAR BILLED THREE TIMES FOR QUANTITY PURPOSES																
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
6	P1	21- 4	75	4	4	4	5- 4	4- 4								
10	P3	37- 3	16	14			31- 9 1/2	5- 5 1/2								12
9	P4	53- 0	8	1			53- 0									
10	P5	17- 8	16	1			17- 8									
5	P7	53- 0	14	1			53- 0									
5	P8	8- 6	14	11			4- 4	2- 1	2- 1							
4	P9	6- 6	10	11			3- 4	1- 7	1- 7							
4	P10	5- 0	14	11			1-10	1- 7	1- 7							
4	P11	11- 1	10	4	4	4	1-10	3- 4								
4	P12	7-11	30	11			3- 3	2- 4	2- 4							
4	P13	8- 0	10	11			3- 3	2- 4 1/4	2- 4 1/4							
4	P14	6- 5	42	11			1- 9	2- 4	2- 4							
4	P15	6- 6	14	11			1- 9	2- 4 1/4	2- 4 1/4							

MARK SIZE	MARK DES	LENGTH FT IN	NO BARS	TYP BAR	STY A	STY G	B FT IN FR	C FT IN FR	D FT IN FR	E FT IN FR	F FT IN FR	H FT IN FR	J FT IN FR	K FT IN FR	N NO	φ ANG
LOCATION PIER 8										NO. REQUIRED = 1						
11	C1	25- 7	52	1			25- 7									
5	C2	9- 9	88	43			0- 9 1/4	1- 8 1/4	0- 9 1/4	3- 8 1/4	2- 2					
5	C3	6- 3	44	18	5	4	5- 3									
5	C4	4- 3	44	18	5	4	3- 3									
11	C5	17- 5	8	12			13- 2	4- 3								12
11	C6	18-10	8	12			14- 7	4- 3								12
11	C7	17- 6	8	15			4- 3	5- 0	8- 3						20	200
11	C8	17- 7	8	15			3- 4	5- 0	9- 3						25	205
4	C9	14- 0	12	11			3- 3	6- 5 1/2	4- 3 1/2							
4	C10	4- 0	24	18	5	4	3- 3									
4	C11	2- 5	24	18	5	4	1- 8									
BAR BILLED TWICE FOR QUANTITY PURPOSES																
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
4	C12	VARY	10	43			0- 2	2-11	0- 2	6-10 1/2	2- 6					
		11- 8	0	43			0- 8 1/4	1-10 1/2	0- 9	4- 1	2- 6					
6	P1	21- 4	81	4	4	4	5- 4	4- 4								
6	P2	7- 0	52	18	4	5	5- 4									
10	P3	35- 0	16	14			29- 6	5- 5 1/2								12
10	P4	48- 5	10	1			48- 5									
10	P5	17- 8	16	1			17- 8									
10	P6	23- 7	10	1			23- 7									
5	P7	48- 5	12	1			48- 5									
5	P8	8- 6	14	11			4- 4	2- 1	2- 1							
4	P9	6- 6	10	11			3- 4	1- 7	1- 7							
4	P10	5- 0	14	11			1-10	1- 7	1- 7							
4	P11	11- 1	10	4	4	4	1-10	3- 4								
4	P12	7-11	30	11			3- 3	2- 4	2- 4							
4	P13	8- 2	10	11			3- 3	2- 5	2- 5							
4	P14	6- 5	42	11			1- 9	2- 4	2- 4							
4	P15	6- 8	14	11			1- 9	2- 5	2- 5							

BRIDGE NO. 134123

REVISIONS

Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: BWJ 04-14
Designed By: JPB 04-14
Checked By: BWJ 04-14

URS

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: REINFORCING BAR LIST (5 OF 24)

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

SHEET NO. B-95

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist05.dwg LAYOUT NAME: reinforcing bar list (5 of 24) PLOTTED: Friday, August 29, 2014 6:33:12 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION PIER 9 NO. REQUIRED = 1																																	
11	C1	26- 0		52	1			26- 0																									
5	C2	9- 9		88	43			0- 9 1/4			1- 8 1/4			0- 9 1/4			3- 8 1/4			2- 2													
5	C3	6- 3		44	18	5	4	5- 3																									
5	C4	4- 3		44	18	5	4	3- 3																									
11	C5	17- 5		8	12			13- 2			4- 3																					12	
11	C6	18-10		8	12			14- 7			4- 3																					12	
11	C7	17- 6		8	15			4- 3			5- 0			8- 3																		20	200
11	C8	17- 7		8	15			3- 4			5- 0			9- 3																		25	205
4	C9	14- 0		12	11			3- 3			6- 5 1/2			4- 3 1/2																			
4	C10	4- 0		24	18	5	4	3- 3																									
4	C11	2- 5		24	18	5	4	1- 8																									
BAR BILLED TWICE FOR QUANTITY PURPOSES																																	
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
6	P1	21- 4		73	4	4	4	5- 4			4- 4																						
6	P2	7- 0		52	18	4	5	5- 4																									
10	P3	32- 8		16	14			27- 2 1/2			5- 5 1/2																					12	
10	P4	43-10		8	1			43-10																									
10	P5	17- 8		16	1			17- 8																									
10	P6	19- 0		8	1			19- 0																									
5	P7	43-10		12	1			43-10																									
5	P8	8- 6		14	11			4- 4			2- 1			2- 1																			
4	P9	6- 6		10	11			3- 4			1- 7			1- 7																			
4	P10	5- 0		14	11			1-10			1- 7			1- 7																			
4	P11	11- 1		10	4	4	4	1-10			3- 4																						
4	P12	7-11		30	11			3- 3			2- 4			2- 4																			
4	P13	8- 1		10	11			3- 3			2- 4 3/4			2- 4 3/4																			
4	P14	6- 5		42	11			1- 9			2- 4			2- 4																			
4	P15	6- 7		14	11			1- 9			2- 4 3/4			2- 4 3/4																			

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION PIER 10 NO. REQUIRED = 1																																	
11	C1	26- 6		52	1			26- 6																									
5	C2	9- 9		92	43			0- 9 1/4			1- 8 1/4			0- 9 1/4			3- 8 1/4			2- 2													
5	C3	6- 3		46	18	5	4	5- 3																									
5	C4	4- 3		46	18	5	4	3- 3																									
11	C5	17- 5		8	12			13- 2			4- 3																					12	
11	C6	18-10		8	12			14- 7			4- 3																					12	
11	C7	17- 6		8	15			4- 3			5- 0			8- 3																		20	200
11	C8	17- 7		8	15			3- 4			5- 0			9- 3																		25	205
4	C9	14- 0		12	11			3- 3			6- 5 1/2			4- 3 1/2																			
4	C10	4- 0		24	18	5	4	3- 3																									
4	C11	2- 5		24	18	5	4	1- 8																									
BAR BILLED TWICE FOR QUANTITY PURPOSES																																	
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
6	P1	21- 4		73	4	4	4	5- 4			4- 4																						
6	P2	7- 0		52	18	4	5	5- 4																									
10	P3	32- 8		16	14			27- 2 1/2			5- 5 1/2																					12	
10	P4	43-10		8	1			43-10																									
10	P5	17- 8		16	1			17- 8																									
10	P6	19- 0		8	1			19- 0																									
5	P7	43-10		12	1			43-10																									
5	P8	8- 6		14	11			4- 4			2- 1			2- 1																			
4	P9	6- 6		10	11			3- 4			1- 7			1- 7																			
4	P10	5- 0		14	11			1-10			1- 7			1- 7																			
4	P11	11- 1		10	4	4	4	1-10			3- 4																						
4	P12	7-11		30	11			3- 3			2- 4			2- 4																			
4	P13	8- 0		10	11			3- 3			2- 4 1/2			2- 4 1/2																			
4	P14	6- 5		42	11			1- 9			2- 4			2- 4																			
4	P15	6- 6		14	11			1- 9			2- 4 1/2			2- 4 1/2																			

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: BWJ 04-14
Designed By: JPB 04-14
Checked By: BWJ 04-14

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: REINFORCING BAR LIST (6 OF 24)

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

SHEET NO. B-96

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist06.dwg LAYOUT NAME: reinforcing bar list (6 of 24) PLOTTED: Friday, August 29, 2014 6:33:21 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION PIER 11 NO. REQUIRED = 1																																	
11	C1	26- 3		52	1			26- 3																									
5	C2	9- 9		88	43			0- 9 1/4			1- 8 1/4			0- 9 1/4			3- 8 1/4			2- 2													
5	C3	6- 3		44	18	5	4	5- 3																									
5	C4	4- 3		44	18	5	4	3- 3																									
11	C5	17- 5		8	12			13- 2			4- 3																						12
11	C6	18-10		8	12			14- 7			4- 3																						12
11	C7	17- 6		8	15			4- 3			5- 0			8- 3																		20	200
11	C8	17- 7		8	15			3- 4			5- 0			9- 3																		25	205
4	C9	14- 0		12	11			3- 3			6- 5 1/2			4- 3 1/2																			
4	C10	4- 0		24	18	5	4	3- 3																									
4	C11	2- 5		24	18	5	4	1- 8																									
BAR BILLED TWICE FOR QUANTITY PURPOSES																																	
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
6	P1	21- 4		73	4	4	4	5- 4			4- 4																						
6	P2	7- 0		52	18	4	5	5- 4																									
10	P3	32- 8		16	14			27- 2 1/2			5- 5 1/2																						12
10	P4	43-10		8	1			43-10																									
10	P5	17- 8		16	1			17- 8																									
10	P6	19- 0		8	1			19- 0																									
5	P7	43-10		12	1			43-10																									
5	P8	8- 6		14	11			4- 4			2- 1			2- 1																			
4	P9	6- 6		10	11			3- 4			1- 7			1- 7																			
4	P10	5- 0		14	11			1-10			1- 7			1- 7																			
4	P11	11- 1		8	4	4	4	1-10			3- 4																						
4	P12	7-11		40	11			3- 3			2- 4			2- 4																			
4	P14	6- 5		56	11			1- 9			2- 4			2- 4																			

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION PIER 12 NO. REQUIRED = 1																																	
11	C1	25-10		52	1			25-10																									
5	C2	9- 9		88	43			0- 9 1/4			1- 8 1/4			0- 9 1/4			3- 8 1/4			2- 2													
5	C3	6- 3		44	18	5	4	5- 3																									
5	C4	4- 3		44	18	5	4	3- 3																									
11	C5	17- 5		8	12			13- 2			4- 3																						12
11	C6	18-10		8	12			14- 7			4- 3																						12
11	C7	17- 6		8	15			4- 3			5- 0			8- 3																		20	200
11	C8	17- 7		8	15			3- 4			5- 0			9- 3																		25	205
4	C9	14- 0		12	11			3- 3			6- 5 1/2			4- 3 1/2																			
4	C10	4- 0		24	18	5	4	3- 3																									
4	C11	2- 5		24	18	5	4	1- 8																									
BAR BILLED TWICE FOR QUANTITY PURPOSES																																	
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
6	P1	21- 4		73	4	4	4	5- 4			4- 4																						
6	P2	7- 0		52	18	4	5	5- 4																									
10	P3	32- 8		16	14			27- 2 1/2			5- 5 1/2																						12
10	P4	43-10		8	1			43-10																									
10	P5	17- 8		16	1			17- 8																									
10	P6	19- 0		8	1			19- 0																									
5	P7	43-10		12	1			43-10																									
5	P8	8- 6		14	11			4- 4			2- 1			2- 1																			
4	P9	6- 6		10	11			3- 4			1- 7			1- 7																			
4	P10	5- 0		14	11			1-10			1- 7			1- 7																			
4	P11	11- 1		8	4	4	4	1-10			3- 4																						
4	P12	7-11		40	11			3- 3			2- 4			2- 4																			
4	P14	6- 5		56	11			1- 9			2- 4			2- 4																			

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: BWJ 04-14
Designed By: JPB 04-14
Checked By: BWJ 04-14

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: REINFORCING BAR LIST (7 OF 24)

REF. DWG. NO.

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. B-97

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist07.dwg LAYOUT NAME: reinforcing bar list (7 of 24) PLOTTED: Friday, August 29, 2014 8:33:32 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION PIER 13 NO. REQUIRED = 1																																	
11	C1	25- 5		52	1			25- 5																									
5	C2	9- 9		88	43			0- 9 1/4			1- 8 1/4			0- 9 1/4			3- 8 1/4			2- 2													
5	C3	6- 3		44	18	5	4	5- 3																									
5	C4	4- 3		44	18	5	4	3- 3																									
11	C5	17- 5		8	12			13- 2			4- 3																						12
11	C6	18-10		8	12			14- 7			4- 3																						12
11	C7	17- 6		8	15			4- 3			5- 0			8- 3																		20	200
11	C8	17- 7		8	15			3- 4			5- 0			9- 3																		25	205
4	C9	14- 0		12	11			3- 3			6- 5 1/2			4- 3 1/2																			
4	C10	4- 0		24	18	5	4	3- 3																									
4	C11	2- 5		24	18	5	4	1- 8																									
BAR BILLED TWICE FOR QUANTITY PURPOSES																																	
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
6	P1	21- 4		73	4	4	4	5- 4			4- 4																						
6	P2	7- 0		52	18	4	5	5- 4																									
10	P3	32- 8		16	14			27- 2 1/2			5- 5 1/2																						12
10	P4	43-10		8	1			43-10																									
10	P5	17- 8		16	1			17- 8																									
10	P6	19- 0		8	1			19- 0																									
5	P7	43-10		12	1			43-10																									
5	P8	8- 6		14	11			4- 4			2- 1			2- 1																			
4	P9	6- 6		10	11			3- 4			1- 7			1- 7																			
4	P10	5- 0		14	11			1-10			1- 7			1- 7																			
4	P11	11- 1		8	4	4	4	1-10			3- 4																						
4	P12	7-11		40	11			3- 3			2- 4			2- 4																			
4	P14	6- 5		56	11			1- 9			2- 4			2- 4																			

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION PIER 14 NO. REQUIRED = 1																																	
11	C1	25- 0		52	1			25- 0																									
5	C2	9- 9		84	43			0- 9 1/4			1- 8 1/4			0- 9 1/4			3- 8 1/4			2- 2													
5	C3	6- 3		42	18	5	4	5- 3																									
5	C4	4- 3		42	18	5	4	3- 3																									
11	C5	17- 5		8	12			13- 2			4- 3																						12
11	C6	18-10		8	12			14- 7			4- 3																						12
11	C7	17- 6		8	15			4- 3			5- 0			8- 3																		20	200
11	C8	17- 7		8	15			3- 4			5- 0			9- 3																		25	205
4	C9	14- 0		12	11			3- 3			6- 5 1/2			4- 3 1/2																			
4	C10	4- 0		24	18	5	4	3- 3																									
4	C11	2- 5		24	18	5	4	1- 8																									
BAR BILLED TWICE FOR QUANTITY PURPOSES																																	
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
6	P1	21- 4		73	4	4	4	5- 4			4- 4																						
6	P2	7- 0		52	18	4	5	5- 4																									
10	P3	32- 8		16	14			27- 2 1/2			5- 5 1/2																						12
10	P4	43-10		8	1			43-10																									
10	P5	17- 8		16	1			17- 8																									
10	P6	19- 0		8	1			19- 0																									
5	P7	43-10		12	1			43-10																									
5	P8	8- 6		14	11			4- 4			2- 1			2- 1																			
4	P9	6- 6		10	11			3- 4			1- 7			1- 7																			
4	P10	5- 0		14	11			1-10			1- 7			1- 7																			
4	P11	11- 1		8	4	4	4	1-10			3- 4																						
4	P12	7-11		40	11			3- 3			2- 4			2- 4																			
4	P14	6- 5		56	11			1- 9			2- 4			2- 4																			

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: BWJ 04-14
Designed By: JPB 04-14
Checked By: BWJ 04-14

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: REINFORCING BAR LIST (8 OF 24)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-98

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist08.dwg LAYOUT NAME: reinforcing bar list (8 of 24) PLOTTED: Friday, August 29, 2014 6:33:42 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION PIER 15 NO. REQUIRED = 1																																	
11	C1	24- 8		52	1			24- 8																									
5	C2	9- 9		84	43			0- 9 1/4			1- 8 1/4			0- 9 1/4			3- 8 1/4			2- 2													
5	C3	6- 3		42	18	5	4	5- 3																									
5	C4	4- 3		42	18	5	4	3- 3																									
11	C5	17- 5		8	12			13- 2			4- 3																					12
11	C6	18-10		8	12			14- 7			4- 3																					12
11	C7	17- 6		8	15			4- 3			5- 0			8- 3																	20	200
11	C8	17- 7		8	15			3- 4			5- 0			9- 3																	25	205
4	C9	14- 0		12	11			3- 3			6- 5 1/2			4- 3 1/2																		
4	C10	4- 0		24	18	5	4	3- 3																									
4	C11	2- 5		24	18	5	4	1- 8																									
BAR BILLED TWICE FOR QUANTITY PURPOSES																																	
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
6	P1	21- 4		73	4	4	4	5- 4			4- 4																						
6	P2	7- 0		52	18	4	5	5- 4																									
10	P3	32- 8		16	14			27- 2 1/2			5- 5 1/2																					12
10	P4	43-10		8	1			43-10																									
10	P5	17- 8		16	1			17- 8																									
10	P6	19- 0		8	1			19- 0																									
5	P7	43-10		12	1			43-10																									
5	P8	8- 6		14	11			4- 4			2- 1			2- 1																			
4	P9	6- 6		10	11			3- 4			1- 7			1- 7																			
4	P10	5- 0		14	11			1-10			1- 7			1- 7																			
4	P11	11- 1		8	4	4	4	1-10			3- 4																						
4	P12	7-11		40	11			3- 3			2- 4			2- 4																			
4	P14	6- 5		56	11			1- 9			2- 4			2- 4																			

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION PIER 16 NO. REQUIRED = 1																																	
11	C1	24- 2		52	1			24- 2																									
5	C2	9- 9		80	43			0- 9 1/4			1- 8 1/4			0- 9 1/4			3- 8 1/4			2- 2													
5	C3	6- 3		40	18	5	4	5- 3																									
5	C4	4- 3		40	18	5	4	3- 3																									
11	C5	17- 5		8	12			13- 2			4- 3																					12
11	C6	18-10		8	12			14- 7			4- 3																					12
11	C7	17- 6		8	15			4- 3			5- 0			8- 3																	20	200
11	C8	17- 7		8	15			3- 4			5- 0			9- 3																	25	205
4	C9	14- 0		12	11			3- 3			6- 5 1/2			4- 3 1/2																		
4	C10	4- 0		24	18	5	4	3- 3																									
4	C11	2- 5		24	18	5	4	1- 8																									
BAR BILLED TWICE FOR QUANTITY PURPOSES																																	
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
6	P1	21- 4		73	4	4	4	5- 4			4- 4																						
6	P2	7- 0		52	18	4	5	5- 4																									
10	P3	32- 8		16	14			27- 2 1/2			5- 5 1/2																					12
10	P4	43-10		8	1			43-10																									
10	P5	17- 8		16	1			17- 8																									
10	P6	19- 0		8	1			19- 0																									
5	P7	43-10		12	1			43-10																									
5	P8	8- 6		14	11			4- 4			2- 1			2- 1																			
4	P9	6- 6		10	11			3- 4			1- 7			1- 7																			
4	P10	5- 0		14	11			1-10			1- 7			1- 7																			
4	P11	11- 1		8	4	4	4	1-10			3- 4																						
4	P12	7-11		40	11			3- 3			2- 4			2- 4																			
4	P14	6- 5		56	11			1- 9			2- 4			2- 4																			

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: BWJ 04-14
Designed By: JPB 04-14
Checked By: BWJ 04-14

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S EICHOLTZ
P.E. NO. 36078

SHEET TITLE: REINFORCING BAR LIST (9 OF 24)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-99

FILENAME: e:\autocad\2014\fort_harner\dwg\sheets\brebarlist09.dwg LAYOUT NAME: reinforcing bar list (9 of 24) PLOTTED: Friday, August 29, 2014 6:33:52 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION PIER 17 NO. REQUIRED = 1																																	
11	C1	23-10		52	1			23-10																									
5	C2	9- 9		80	43			0- 9 1/4			1- 8 1/4			0- 9 1/4			3- 8 1/4			2- 2													
5	C3	6- 3		40	18	5	4	5- 3																									
5	C4	4- 3		40	18	5	4	3- 3																									
11	C5	17- 5		8	12			13- 2			4- 3																					12
11	C6	18-10		8	12			14- 7			4- 3																					12
11	C7	17- 6		8	15			4- 3			5- 0			8- 3																		20	200
11	C8	17- 7		8	15			3- 4			5- 0			9- 3																		25	205
4	C9	14- 0		12	11			3- 3			6- 5 1/2			4- 3 1/2																			
4	C10	4- 0		24	18	5	4	3- 3																									
4	C11	2- 5		24	18	5	4	1- 8																									
BAR BILLED TWICE FOR QUANTITY PURPOSES																																	
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
6	P1	21- 4		73	4	4	4	5- 4			4- 4																						
6	P2	7- 0		52	18	4	5	5- 4																									
10	P3	32- 8		16	14			27- 2 1/2			5- 5 1/2																					12
10	P4	43-10		8	1			43-10																									
10	P5	17- 8		16	1			17- 8																									
10	P6	19- 0		8	1			19- 0																									
5	P7	43-10		12	1			43-10																									
5	P8	8- 6		14	11			4- 4			2- 1			2- 1																			
4	P9	6- 6		10	11			3- 4			1- 7			1- 7																			
4	P10	5- 0		14	11			1-10			1- 7			1- 7																			
4	P11	11- 1		9	4	4	4	1-10			3- 4																						
4	P12	7-11		35	11			3- 3			2- 4			2- 4																			
4	P13	8- 2		5	11			3- 3			2- 5 1/4			2- 5 1/4																			
4	P14	6- 5		49	11			1- 9			2- 4			2- 4																			
4	P15	6- 8		7	11			1- 9			2- 5 1/4			2- 5 1/4																			

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION PIER 18 NO. REQUIRED = 1																																	
11	C1	21-10		52	1			21-10																									
5	C2	9- 9		72	43			0- 9 1/4			1- 8 1/4			0- 9 1/4			3- 8 1/4			2- 2													
5	C3	6- 3		36	18	5	4	5- 3																									
5	C4	4- 3		36	18	5	4	3- 3																									
11	C5	17- 5		8	12			13- 2			4- 3																					12
11	C6	18-10		8	12			14- 7			4- 3																					12
11	C7	17- 6		8	15			4- 3			5- 0			8- 3																		20	200
11	C8	17- 7		8	15			3- 4			5- 0			9- 3																		25	205
4	C9	14- 0		12	11			3- 3			6- 5 1/2			4- 3 1/2																			
4	C10	4- 0		24	18	5	4	3- 3																									
4	C11	2- 5		24	18	5	4	1- 8																									
BAR BILLED TWICE FOR QUANTITY PURPOSES																																	
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
4	C12	VARY		10	43			0- 2			2-11			0- 2			6-10 1/2			2- 6													
		11- 8		0	43			0- 8 1/4			1-10 1/2			0- 9			4- 1			2- 6													
6	P1	21- 4		73	4	4	4	5- 4			4- 4																						
6	P2	7- 0		52	18	4	5	5- 4																									
10	P3	32- 8		16	14			27- 2 1/2			5- 5 1/2																					12
10	P4	43-10		8	1			43-10																									
10	P5	17- 8		16	1			17- 8																									
10	P6	19- 0		8	1			19- 0																									
5	P7	43-10		12	1			43-10																									
5	P8	8- 6		14	11			4- 4			2- 1			2- 1																			
4	P9	6- 6		15	11			3- 4			1- 7			1- 7																			
4	P10	5- 0		21	11			1-10			1- 7			1- 7																			
4	P11	11- 1		8	4	4	4	1-10			3- 4																						
4	P12	7-11		30	11			3- 3			2- 4			2- 4																			
4	P13	8- 1		5	11			3- 3			2- 4 3/4			2- 4 3/4																			
4	P14	6- 5		42	11			1- 9			2- 4			2- 4																			
4	P15	6- 7		7	11			1- 9			2- 4 3/4			2- 4 3/4																			

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: BWJ 04-14
Designed By: JPB 04-14
Checked By: BWJ 04-14

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: REINFORCING BAR LIST (10 OF 24)

REF. DWG. NO.

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. B–100

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist10.dwg LAYOUT NAME: reinforcing bar list (10 of 24) PLOTTED: Friday, August 29, 2014 6:34:02 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION CONTINUOUS SLAB UNIT 1 (SPANS 1-3) NO. REQUIRED = 1																																	
CONTINUOUS UNIT 1 STEEL																																	
5	S1	48- 9		1034	28			33- 4 1/2			7- 4			8- 0			0- 5 3/4																
5	S2	VARY		48	2			2- 2			295- 2																					4	
		282-10		0	2			2- 2			253- 2																					4	
5	S9	10- 6		193	1			10- 6																									
5	S10	10- 6		169	12			7- 4			3- 2																						3
5	S11	35- 0		98	1			35- 0																									
SPAN 1																																	
5	S3	100- 4		5	2			2- 2			98- 2																					1	
5	S4	99- 7		12	2			2- 2			97- 5																					1	
5	S5	96- 6		12	2			2- 2			94- 4																					1	
5	S6	93- 5		12	2			2- 2			91- 3																					1	
5	S7	90- 4		13	2			2- 2			88- 2																					1	
5	S8	87- 3		6	2			2- 2			85- 1																					1	
4	D1	13- 3		62	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	42- 0		1	1			42- 0																									
10	D5B	43- 4		1	1			43- 4																									
5	D6A	41- 3		1	1			41- 3																									
5	D6B	42- 7		1	1			42- 7																									
5	D7A	41- 3		4	1			41- 3																									
5	D7B	42- 7		4	1			42- 7																									
10	D8A	44- 8		1	1			44- 8																									
10	D8B	46- 2		1	1			46- 2																									
5	D9A	7- 11		3	1			7- 11																									
5	D9B	8- 2		3	1			8- 2																									
5	D9C	7- 11		1	1			7- 11																									
5	D9D	8- 0		1	1			8- 0																									
5	D10A	9- 4		3	1			9- 4																									
5	D10B	9- 8		3	1			9- 8																									
5	D10C	9- 3		1	1			9- 3																									
5	D10D	9- 6		1	1			9- 6																									
5	D11A	9- 4		12	1			9- 4																									
5	D11B	9- 8		12	1			9- 8																									
5	D11C	9- 3		4	1			9- 3																									
5	D11D	9- 6		4	1			9- 6																									
5	D12A	5-11		3	1			5-11																									
5	D12B	6- 2		3	1			6- 2																									
5	D12C	5-10		1	1			5-10																									
5	D12D	5-11		1	1			5-11																									
SPAN 2																																	
5	S3	100- 4		5	2			2- 2			98- 2																					1	
5	S4	99- 7		12	2			2- 2			97- 5																					1	
5	S5	96- 5		12	2			2- 2			94- 3																					1	
5	S6	93- 3		12	2			2- 2			91- 1																					1	
5	S7	90- 2		13	2			2- 2			88- 0																					1	
5	S8	87- 3		6	2			2- 2			85- 1																					1	
4	D1	13- 3		72	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	43- 4		1	1			43- 4																									
10	D5B	47- 3		1	1			47- 3																									
5	D6A	42- 6		1	1			42- 6																									
5	D6B	46- 7		1	1			46- 7																									
5	D7A	42- 6		4	1			42- 6																									
5	D7B	46- 7		4	1			46- 7																									
10	D8A	46- 1		1	1			46- 1																									
10	D8B	50- 5		1	1			50- 5																									
5	D9A	8- 1		3	1			8- 1																									

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 04-14
Checked By: BWJ 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

URS
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: REINFORCING BAR LIST (11 OF 24)

REF. DWG. NO.

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. B-101

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist11.dwg LAYOUT NAME: reinforcing bar list (11 of 24) PLOTTED: Friday, August 29, 2014 6:34:11 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION CONTINUOUS SLAB UNIT 1 (SPANS 1-3) NO. REQUIRED = 1																																	
SPAN 2 CONTINUED																																	
5	D9B	9- 0		3	1			9- 0																									
5	D9C	8- 4		1	1			8- 4																									
5	D9D	8- 8		1	1			8- 8																									
5	D10A	9- 7		3	1			9- 7																									
5	D10B	10- 8		3	1			10- 8																									
5	D10C	9-10		1	1			9-10																									
5	D10D	10- 2		1	1			10- 2																									
5	D11A	9- 7		12	1			9- 7																									
5	D11B	10- 8		12	1			10- 8																									
5	D11C	9-10		4	1			9-10																									
5	D11D	10- 2		4	1			10- 2																									
5	D12A	6- 1		3	1			6- 1																									
5	D12B	6- 9		3	1			6- 9																									
5	D12C	6- 3		1	1			6- 3																									
5	D12D	6- 4		1	1			6- 4																									
SPAN 3																																1	
5	S3	100- 4		5	2			2- 2			98- 2																					1	
5	S4	99- 7		12	2			2- 2			97- 5																					1	
5	S5	96- 4		12	2			2- 2			94- 2																					1	
5	S6	93- 1		12	2			2- 2			90-11																					1	
5	S7	89-11		13	2			2- 2			87- 9																					1	
5	S8	87- 3		6	2			2- 2			85- 1																					1	
5	S12	11- 0		102	1			11- 0																									
S13 BILLED TWICE FOR QUANTITY PURPOSES																																	
5	S13	VARY		72	1			3- 0																									
		25- 6		0	1			47-11																									
5	S13	VARY		72	1			3- 0																									
		25- 6		0	1			47-11																									
FIELD BEND S13 BARS AS NEEDED																																	
5	S14	61- 3		3	2			2- 2			59- 0 1/2																					1	
5	S15	13- 3		9	1			13- 3																									
4	D1	13- 3		78	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	47- 1		1	1			47- 1																									
10	D5B	53- 1		1	1			53- 1																									
5	D6A	46- 6		1	1			46- 6																									
5	D6B	52- 6		1	1			52- 6																									
5	D7A	46- 6		4	1			46- 6																									
5	D7B	52- 6		4	1			52- 6																									
10	D8A	50- 4		1	1			50- 4																									
10	D8B	56-11		1	1			56-11																									
5	D9A	8-10		3	1			8-10																									
5	D9B	10 - 3		3	1			10- 3																									
5	D9C	9- 4		1	1			9- 4																									
5	D9D	9- 8		1	1			9- 8																									
5	D10A	10- 5		3	1			10- 5																									
5	D10B	12- 1		3	1			12- 1																									
5	D10C	11- 0		1	1			11- 0																									
5	D10D	11- 6		1	1			11- 6																									
5	D11A	10- 5		12	1			10- 5																									
5	D11B	12- 1		12	1			12- 1																									
5	D11C	11- 0		4	1			11- 0																									
5	D11D	11- 6		4	1			11- 6																									
5	D12A	6- 7		3	1			6- 7																									
5	D12B	7- 8		3	1			7- 8																									
5	D12C	7- 2		1	1			7- 2																									
5	D12D	7- 1		1	1			7- 1																									

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 04-14
Checked By: BWJ 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

URS
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: REINFORCING BAR LIST (12 OF 24)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-102

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist12.dwg LAYOUT NAME: reinforcing bar list (12 of 24) PLOTTED: Friday, August 29, 2014 6:34:21 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION CONTINUOUS SLAB UNIT 2 (SPANS 4-6) NO. REQUIRED = 1																																	
CONTINUOUS UNIT 2 STEEL																																	
5	S1	48- 9		1592	28			33- 4 1/2			7- 4			8- 0			0- 5 3/4																
5	S2	VARY		48	2			2- 2			431- 1																					7	
		440- 8		0	2			2- 2			419-10																					7	
5	S9	10- 6		277	1			10- 6																									
5	S10	10- 6		285	12			7- 4			3- 2																						3
5	S11	35- 0		98	1			35- 0																									
SPAN 4																																	
5	S3	147-11		5	2			2- 2			143- 7																					2	
5	S4	147-11		12	2			2- 2			143- 7																					2	
5	S5	147-11		12	2			2- 2			143- 7																					2	
5	S6	147-11		12	2			2- 2			143- 7																					2	
5	S7	147-11		14	2			2- 2			143- 7																					2	
5	S8	147- 9		7	2			2- 2			143- 5																					2	
5	S12	11- 0		104	1			11- 0																									
S13 BILLED TWICE FOR QUANTITY PURPOSES																																	
5	S13	VARY		69	1			3- 0																									
		25- 6		0	1			47-11																									
5	S13	VARY		69	1			3- 0																									
		25- 6		0	1			47-11																									
FIELD BEND S13 BARS AS NEEDED																																	
5	S14	63- 8		3	2			2- 2			61- 6																					1	
5	S15	13- 3		9	1			13- 3																									
4	D1	13- 3		76	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	53- 1		1	1			53- 1																									
10	D5B	53- 3		1	1			53- 3																									
5	D6A	52- 5		1	1			52- 5																									
5	D6B	52- 8		1	1			52- 8																									
5	D7A	52- 5		4	1			52- 5																									
5	D7B	52- 8		4	1			52- 8																									
10	D8A	56- 9		1	1			56- 9																									
10	D8B	56-11		1	1			56-11																									
5	D9A	10- 0		3	1			10- 0																									
5	D9B	9-11		3	1			9-11																									
5	D9C	10- 5		1	1			10- 5																									
5	D9D	10- 6		1	1			10- 6																									
5	D10A	11-10		3	1			11-10																									
5	D10B	11-10		3	1			11-10																									
5	D10C	12- 4		1	1			12- 4																									
5	D10D	12- 6		1	1			12- 6																									
5	D11A	11-10		12	1			11-10																									
5	D11B	11-10		12	1			11-10																									
5	D11C	12- 4		4	1			12- 4																									
5	D11D	12- 6		4	1			12- 6																									
5	D12A	7- 6		3	1			7- 6																									
5	D12B	8- 0		3	1			8- 0																									
5	D12C	7- 6		1	1			7- 6																									
5	D12D	8- 2		1	1			8- 2																									

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: JPB 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

URS Corporation Southern
7650 West Courtney Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: REINFORCING BAR LIST (13 OF 24)

REF. DWG. NO.:

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO.: B-103

FILENAME: c:\autocad\2014\fort_hamer\dwg\sheets\brebarlist13.dwg LAYOUT NAME: reinforcing bar list (13 of 24) PLOTTED: Friday, August 29, 2014 6:34:27 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION CONTINUOUS SLAB UNIT 2 (SPANS 4-6) NO. REQUIRED = 1																																	
SPAN 5																																	
5	S3	147- 9		5	2			2- 2			143- 5																					2	
5	S4	147- 7		12	2			2- 2			143- 3																					2	
5	S5	147- 7		12	2			2- 2			143- 3																					2	
5	S6	147- 7		12	2			2- 2			143- 3																					2	
5	S7	147- 7		14	2			2- 2			143- 3																					2	
5	S8	145- 7		7	2			2- 2			141- 3																					2	
4	D1	13- 3		84	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	53- 4		1	1			53- 4																									
10	D5B	56- 5		1	1			56- 5																									
5	D6A	52- 8		1	1			52- 8																									
5	D6B	55- 9		1	1			55- 9																									
5	D7A	52- 8		4	1			52- 8																									
5	D7B	55- 9		4	1			55- 9																									
10	D8A	57- 2		1	1			57- 2																									
10	D8B	60- 0		1	1			60- 0																									
5	D9A	10- 6		3	1			10- 6																									
5	D9B	10- 5		3	1			10- 5																									
5	D9C	8- 9		1	1			8- 9																									
5	D9D	11- 8		1	1			11- 8																									
5	D10A	12- 5		3	1			12- 5																									
5	D10B	12- 5		3	1			12- 5																									
5	D10C	10- 7		1	1			10- 7																									
5	D10D	13- 8		1	1			13- 8																									
5	D11A	12- 5		12	1			12- 5																									
5	D11B	12- 5		12	1			12- 5																									
5	D11C	10- 7		4	1			10- 7																									
5	D11D	13- 8		4	1			13- 8																									
5	D12A	7-11		3	1			7-11																									
5	D12B	7-11		3	1			7-11																									
5	D12C	6- 1		1	1			6- 1																									
5	D12D	9- 2		1	1			9- 2																									
SPAN 6																																	
5	S3	137- 2		5	2			2- 2			132-10																					2	
5	S4	140- 8		12	2			2- 2			136- 4																					2	
5	S5	144- 2		12	2			2- 2			139-10																					2	
5	S6	147- 8		12	2			2- 2			143- 4																					2	
5	S7	149- 2		14	2			2- 2			144-10																					2	
5	S8	150- 2		7	2			2- 2			145-10																					2	
5	S12	11- 0		104	1			11- 0																									
S13 BILLED TWICE FOR QUANTITY PURPOSES																																	
5	S13	VARY		61	1			3- 0																									
		25- 6		0	1			47-11																									
5	S13	VARY		61	1			3- 0																									
		25- 6		0	1			47-11																									
FIELD BEND S13 BARS AS NEEDED																																	

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: JPB 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

URS
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: REINFORCING BAR LIST (14 OF 24)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B–104

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist14.dwg LAYOUT NAME: reinforcing bar list (14 of 24) PLOTTED: Friday, August 29, 2014 6:34:32 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION CONTINUOUS SLAB UNIT 2 (SPANS 4-6) NO. REQUIRED = 1																																	
SPAN 6 CONTINUED																																	
5	S14	61- 3		3	2			2- 2			59- 1																					1	
5	S15	13- 3		8	1			13- 3																									
4	D1	13- 3		80	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	56- 6		1	1			56- 6																									
10	D5B	50- 7		1	1			50- 7																									
5	D6A	55-10		1	1			55-10																									
5	D6B	49-11		1	1			49-11																									
5	D7A	55-10		4	1			55-10																									
5	D7B	49-11		4	1			49-11																									
10	D8A	60- 0		1	1			60- 0																									
10	D8B	54- 0		1	1			54- 0																									
5	D9A	11- 3		3	1			11- 3																									
5	D9B	9- 4		3	1			9- 4																									
5	D9C	9- 1		1	1			9- 1																									
5	D9D	10- 2		1	1			10- 2																									
5	D10A	13- 2		3	1			13- 2																									
5	D10B	11- 2		3	1			11- 2																									
5	D10C	11- 1		1	1			11- 1																									
5	D10D	11-11		1	1			11-11																									
5	D11A	13- 2		12	1			13- 2																									
5	D11B	11- 2		12	1			11- 2																									
5	D11C	11- 1		4	1			11- 1																									
5	D11D	11-11		4	1			11-11																									
5	D12A	8- 5		3	1			8- 5																									
5	D12B	7- 1		3	1			7- 1																									
5	D12C	6- 4		1	1			6- 4																									
5	D12D	7-11		1	1			7-11																									

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: JPB 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: REINFORCING BAR LIST (15 OF 24)

REF. DWG. NO.:

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO.: B-105

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist15.dwg LAYOUT NAME: reinforcing bar list (15 of 24) PLOTTED: Friday, August 29, 2014 6:34:37 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION CONTINUOUS SLAB UNIT 3 (SPANS 7-9) NO. REQUIRED = 1																																	
CONTINUOUS UNIT 3 STEEL																																	
5	S1	48- 9		1624	28			33- 4 1/2			7- 4			8- 0			0- 5 3/4																
5	S2	VARY		48	2			2- 2			438- 2																					7	
		432-10		0	2			2- 2			397- 1																					7	
5	S9	10- 6		266	1			10- 6																									
5	S10	10- 6		293	12			7- 4			3- 2																						3
5	S11	35- 0		98	1			35- 0																									
SPAN 7																																	
5	S3	137- 2		5	2			2- 2			132-10																					2	
5	S4	140- 6		12	2			2- 2			136- 2																					2	
5	S5	143- 8		12	2			2- 2			139- 4																					2	
5	S6	147- 0		12	2			2- 2			142- 8																					2	
5	S7	149- 2		13	2			2- 2			144-10																					2	
5	S8	150- 2		7	2			2- 2			145-10																					2	
5	S12	11- 0		103	1			11- 0																									
S13 BILLED TWICE FOR QUANTITY PURPOSES																																	
5	S13	VARY		61	1			3- 0																									
		25- 6		0	1			47-11																									
5	S13	VARY		61	1			3- 0																									
		25- 6		0	1			47-11																									
FIELD BEND S13 BARS AS NEEDED																																	
5	S14	61- 2		3	2			2- 2			59- 0																					1	
5	S15	13- 3		8	1			13- 3																									
4	D1	13- 3		72	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	50- 8		1	1			50- 8																									
10	D5B	46- 0		1	1			46- 0																									
5	D6A	50- 0		1	1			50- 0																									
5	D6B	45- 3		1	1			45- 3																									
5	D7A	50- 0		4	1			50- 0																									
5	D7B	45- 3		4	1			45- 3																									
10	D8A	54- 2		1	1			54- 2																									
10	D8B	49- 0		1	1			49- 0																									
5	D9A	9- 11		3	1			9-11																									
5	D9B	8- 6		3	1			8- 6																									
5	D9C	8- 6		1	1			8- 6																									
5	D9D	9- 1		1	1			9- 1																									
5	D10A	11- 8		3	1			11- 8																									
5	D10B	10- 2		3	1			10- 2																									
5	D10C	10- 3		1	1			10- 3																									
5	D10D	10- 8		1	1			10- 8																									
5	D11A	11- 8		12	1			11- 8																									
5	D11B	10- 2		12	1			10- 2																									
5	D11C	10- 3		4	1			10- 3																									
5	D11D	10- 8		4	1			10- 8																									
5	D12A	7- 5		3	1			7- 5																									
5	D12B	6- 5		3	1			6- 5																									
5	D12C	6- 1		1	1			6- 1																									
5	D12D	7- 0		1	1			7- 0																									
SPAN 8																																	
5	S3	137- 2		5	2			2- 2			132-10																					2	
5	S4	140- 3		12	2			2- 2			135-11																					2	
5	S5	143- 5		12	2			2- 2			139- 1																					2	
5	S6	146- 6		12	2			2- 2			142- 2																					2	
5	S7	149- 2		13	2			2- 2			144-10																					2	
5	S8	150- 2		7	2			2- 2			145-10																					2	
4	D1	13- 3		64	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 04-14
Checked By: BWJ 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

URS
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
Mark Eicholtz
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: REINFORCING BAR LIST (16 OF 24)

REF. DWG. NO.

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. B–106

FILENAME: a:\autocad\2014\fort_hamer\dwg\sheets\brebarlist16.dwg LAYOUT NAME: reinforcing bar list (16 of 24) PLOTTED: Friday, August 29, 2014 6:34:42 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION CONTINUOUS SLAB UNIT 3 (SPANS 7-9) NO. REQUIRED = 1																																	
SPAN 8 CONTINUED																																	
10	D5A	46- 0		1	1			46- 0																									
10	D5B	43- 0		1	1			43- 0																									
5	D6A	45- 4		1	1			45- 4																									
5	D6B	42- 3		1	1			42- 3																									
5	D7A	45- 4		4	1			45- 4																									
5	D7B	42- 3		4	1			42- 3																									
10	D8A	49- 2		1	1			49- 2																									
10	D8B	45- 9		1	1			45- 9																									
5	D9A	8-10		3	1			8-10																									
5	D9B	8- 0		3	1			8- 0																									
5	D9C	8- 1		1	1			8- 1																									
5	D9D	8- 3		1	1			8- 3																									
5	D10A	10- 5		3	1			10- 5																									
5	D10B	9- 6		3	1			9- 6																									
5	D10C	9- 8		1	1			9- 8																									
5	D10D	9- 9		1	1			9- 9																									
5	D11A	10- 5		12	1			10- 5																									
5	D11B	9- 6		12	1			9- 6																									
5	D11C	9- 8		4	1			9- 8																									
5	D11D	9- 9		4	1			9- 9																									
5	D12A	6- 8		3	1			6- 8																									
5	D12B	6- 0		3	1			6- 0																									
5	D12C	5-10		1	1			5-10																									
5	D12D	6- 3		1	1			6- 3																									
SPAN 9																																2	
5	S3	137- 2		5	2			2- 2			132-10																					2	
5	S4	140- 2		12	2			2- 2			135-10																					2	
5	S5	143- 2		12	2			2- 2			138-10																					2	
5	S6	146- 3		12	2			2- 2			141-11																					2	
5	S7	149- 2		13	2			2- 2			144-10																					2	
5	S8	150- 2		7	2			2- 2			145-10																					2	
4	D1	13- 3		56	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	43- 0		1	1			43- 0																									
10	D5B	41-11		1	1			41-11																									
5	D6A	42- 3		1	1			42- 3																									
5	D6B	41- 2		1	1			41- 2																									
5	D7A	42- 3		4	1			42- 3																									
5	D7B	41- 2		4	1			41- 2																									
10	D8A	45-10		1	1			45-10																									
10	D8B	44- 8		1	1			44- 8																									
5	D9A	8- 2		3	1			8- 2																									
5	D9B	7-11		3	1			7-11																									
5	D9C	7-10		1	1			7-10																									
5	D9D	7-11		1	1			7-11																									
5	D10A	9- 8		3	1			9- 8																									
5	D10B	9- 4		3	1			9- 4																									
5	D10C	9- 3		1	1			9- 3																									
5	D10D	9- 3		1	1			9- 3																									
5	D11A	9- 8		12	1			9- 8																									
5	D11B	9- 4		12	1			9- 4																									
5	D11C	9- 3		4	1			9- 3																									
5	D11D	9- 3		4	1			9- 3																									
5	D12A	6- 1		3	1			6- 1																									
5	D12B	5-11		3	1			5-11																									
5	D12C	5- 9		1	1			5- 9																									
5	D12D	5-10		1	1			5-10																									

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 04-14
Checked By: BWJ 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

URS
URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: REINFORCING BAR LIST (17 OF 24)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B–107

FILENAME: a:\autocad\2014\fort_hamer\dwg\sheets\brebarlist17.dwg LAYOUT NAME: reinforcing bar list (17 of 24) PLOTTED: Friday, August 29, 2014 6:34:52 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION CONTINUOUS SLAB UNIT 4 (SPANS 10-12) NO. REQUIRED = 1																																	
CONTINUOUS UNIT 4 STEEL																																	
5	S1	48- 9		1644	28			33- 4 1/2			7- 4			8- 0			0- 5 3/4																
5	S2	VARY		48	2			2- 2			410- 6																					7	
		421- 8		0	2			2- 2			402- 6																					7	
5	S9	10- 6		267	1			10- 6																									
5	S10	10- 6		265	12			7- 4			3- 2																						3
5	S11	35- 0		98	1			35- 0																									
SPAN 10																																	
5	S3	138- 6		5	2			2- 2			134- 2																					2	
5	S4	139- 1		12	2			2- 2			134- 9																					2	
5	S5	139- 9		12	2			2- 2			135- 5																					2	
5	S6	140- 5		12	2			2- 2			136- 1																					2	
5	S7	141- 1		12	2			2- 2			136- 9																					2	
5	S8	141- 4		7	2			2- 2			137- 0																					2	
4	D1	13- 3		56	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	41-11		1	1			41-11																									
10	D5B	41-11		1	1			41-11																									
5	D6A	41- 3		1	1			41- 3																									
5	D6B	41- 3		1	1			41- 3																									
5	D7A	41- 3		4	1			41- 3																									
5	D7B	41- 3		4	1			41- 3																									
10	D8A	44- 8		1	1			44- 8																									
10	D8B	44- 8		1	1			44- 8																									
5	D9A	7-11		3	1			7-11																									
5	D9B	7-11		3	1			7-11																									
5	D9C	7-10		1	1			7-10																									
5	D9D	7-10		1	1			7-10																									
5	D10A	9- 4		3	1			9- 4																									
5	D10B	9- 4		3	1			9- 4																									
5	D10C	9- 3		1	1			9- 3																									
5	D10D	9- 3		1	1			9- 3																									
5	D11A	9- 4		12	1			9- 4																									
5	D11B	9- 4		12	1			9- 4																									
5	D11C	9- 3		4	1			9- 3																									
5	D11D	9- 3		4	1			9- 3																									
5	D12A	5-11		3	1			5-11																									
5	D12B	5-11		3	1			5-11																									
5	D12C	5-10		1	1			5-10																									
5	D12D	5-10		1	1			5-10																									
SPAN 11																																	
5	S3	138- 6		5	2			2- 2			134- 2																					2	
5	S4	139- 1		12	2			2- 2			134- 9																					2	
5	S5	139- 9		12	2			2- 2			135- 5																					2	
5	S6	140- 5		12	2			2- 2			136- 1																					2	
5	S7	141- 1		12	2			2- 2			136- 9																					2	
5	S8	141- 4		7	2			2- 2			137- 0																					2	
4	D1	13- 3		56	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	41-11		1	1			41-11																									
10	D5B	41-11		1	1			41-11																									
5	D6A	41- 3		1	1			41- 3																									
5	D6B	41- 3		1	1			41- 3																									
5	D7A	41- 3		4	1			41- 3																									
5	D7B	41- 3		4	1			41- 3																									
10	D8A	44- 8		1	1			44- 8																									
10	D8B	44- 8		1	1			44- 8																									
5	D9A	7-11		3	1			7-11																									

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 04-14
Checked By: BWJ 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

URS Corporation Southern
7650 West Courtney Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: REINFORCING BAR LIST (18 OF 24)
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B–108

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist18.dwg LAYOUT NAME: reinforcing bar list (18 of 24) PLOTTED: Friday, August 29, 2014 6:34:57 AM USER: kathy_compton

LOCATION CONTINUOUS SLAB UNIT 4 (SPANS 10-12) NO. REQUIRED = 1

MARK SIZE	MARK DES	LENGTH (FT-IN)	NO BARS	TYP BAR	STY A	STY G	B (FT-IN-FR)	C (FT-IN-FR)	D (FT-IN-FR)	E (FT-IN-FR)	F (FT-IN-FR)	H (FT-IN-FR)	J (FT-IN-FR)	K (FT-IN-FR)	N NO	ϕ ANG
SPAN 11 CONTINUED																
5	D9B	7-11	3	1			7-11									
5	D9C	7-10	1	1			7-10									
5	D9D	7-10	1	1			7-10									
5	D10A	9- 4	3	1			9- 4									
5	D10B	9- 4	3	1			9- 4									
5	D10C	9- 3	1	1			9- 3									
5	D10D	9- 3	1	1			9- 3									
5	D11A	9- 4	12	1			9- 4									
5	D11B	9- 4	12	1			9- 4									
5	D11C	9- 3	4	1			9- 3									
5	D11D	9- 3	4	1			9- 3									
5	D12A	5-11	3	1			5-11									
5	D12B	5-11	3	1			5-11									
5	D12C	5-10	1	1			5-10									
5	D12D	5-10	1	1			5-10									
SPAN 12																
5	S3	138- 3	5	2			2- 2	133-11							2	
5	S4	138- 9	12	2			2- 2	134- 5							2	
5	S5	139- 2	12	2			2- 2	134-10							2	
5	S6	139- 8	12	2			2- 2	135- 4							2	
5	S7	140- 1	12	2			2- 2	135- 9							2	
5	S8	140- 3	7	2			2- 2	135-11							2	
4	D1	13- 3	56	5			6- 0	0- 5	0- 5	0- 5						
4	D2	12- 0	16	8			6- 0	0- 5	4- 8 1/2	0- 5	0- 5					
4	D3	5- 6	32	5			0- 5	3- 8	0- 6	0- 6						
4	D4	7- 1	52	10			6- 8	0- 5								
10	D5A	41-11	1	1			41-11									
10	D5B	41-11	1	1			41-11									
5	D6A	41- 3	1	1			41- 3									
5	D6B	41- 3	1	1			41- 3									
5	D7A	41- 3	4	1			41- 3									
5	D7B	41- 3	4	1			41- 3									
10	D8A	44- 8	1	1			44- 8									
10	D8B	44- 8	1	1			44- 8									
5	D9A	7-11	3	1			7-11									
5	D9B	7-11	3	1			7-11									
5	D9C	7-10	1	1			7-10									
5	D9D	7-10	1	1			7-10									
5	D10A	9- 4	3	1			9- 4									
5	D10B	9- 4	3	1			9- 4									
5	D10C	9- 3	1	1			9- 3									
5	D10D	9- 3	1	1			9- 3									
5	D11A	9- 4	12	1			9- 4									
5	D11B	9- 4	12	1			9- 4									
5	D11C	9- 3	4	1			9- 3									
5	D11D	9- 3	4	1			9- 3									
5	D12A	5-11	3	1			5-11									
5	D12B	5-11	3	1			5-11									
5	D12C	5-10	1	1			5-10									
5	D12D	5-10	1	1			5-10									
PIER 11 PEDESTRIAN OVERLOOK																
5	S13	8- 2	46	1			8- 2									
S14 BILLED FOUR TIMES FOR QUANTITY PURPOSES																
5	S14	VARY	5	1			8- 0									
		5- 2	0	1			2- 4									
5	S14	VARY	5	1			8- 0									
		5- 2	0	1			2- 4									
5	S14	VARY	5	1			8- 0									
		5- 2	0	1			2- 4									
5	S14	VARY	5	1			8- 0									
		5- 2	0	1			2- 4									

BRIDGE NO. 134123

REVISIONS

Date	By	Description	Date	By	Description

Drawn By: CJK 04-14
Checked By: BWJ 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: REINFORCING BAR LIST (19 OF 24)

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

SHEET NO. B–109

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION CONTINUOUS SLAB UNIT 4 (SPANS 10-12) NO. REQUIRED = 1																																	
PIER 11 PEDESTRIAN OVERLOOK CONTINUED																																	
5	S15	29- 2		2	13			11- 4			8-11			8-11																		67	67
5	S16	VARY		11	1			16- 2																									
		13- 8		0	1			11- 2																									
5	S17	VARY		6	1			16- 2																									
		13- 8		0	1			11- 2																									
5	S18	3- 4		12	11			0- 4			1- 6			1- 6																			
5	S19	16- 6		8	1			16- 6																									
5	S20	3- 4		12	11			0- 4			1- 6			1- 6																			
5	S21	14- 0		2	1			14- 0																									
4	D13	5- 1		1	4	4	4	1- 2			1- 0																						
4	D14	VARY		7	4	4	4	2- 3 1/2			1- 0																						
		6- 7		0	4	4	4	1- 6			1- 0																						
5	D15	12- 4		2	12			6- 7 1/2			5- 8 1/4																						2
4	D16	6-11		2	1			6-11																									
4	D17	8- 2		2	1			8- 1 1/4																									
4	D18	3-10		2	1			3-10																									
4	D19	12- 4		2	13			8- 9			2- 6			1- 1																		58	9
10	D20	18- 5		2	12			12- 5 1/2			5-11 1/4																						2
5	D21	9- 0		2	1			8-11 1/4																									
4	D22	5- 2		1	4	4	4	1- 2 1/2			1- 0																						

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 04-14
Checked By: BWJ 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
Mark Eicholtz 9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: REINFORCING BAR LIST (20 OF 24)

REF. DWG. NO.:

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO.: B-110

FILENAME: c:\autocad\2014\fort_hamer\dwg\sheets\brebarlist20.dwg LAYOUT NAME: reinforcing bar list (20 of 24) PLOTTED: Friday, August 29, 2014 6:35:16 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION CONTINUOUS SLAB UNIT 5 (SPANS 13-15) NO. REQUIRED = 1																																	
CONTINUOUS UNIT 5 STEEL																																	
5	S1	48- 9		1608	28			33- 4 1/2			7- 4			8- 0			0- 5 3/4																
5	S2	414- 8		48	2			2- 2			401- 8																					6	
5	S9	10- 6		268	1			10- 6																									
5	S10	10- 6		268	12			7- 4			3- 2																						3
5	S11	35- 0		98	1			35- 0																									
SPAN 13																																	
5	S3	138- 0		5	2			2- 2			133- 8																					2	
5	S4	138- 0		12	2			2- 2			133- 8																					2	
5	S5	138- 0		12	2			2- 2			133- 8																					2	
5	S6	138- 0		12	2			2- 2			133- 8																					2	
5	S7	138- 0		12	2			2- 2			133- 8																					2	
5	S8	138- 0		6	2			2- 2			133- 8																					2	
4	D1	13- 3		56	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	41-11		1	1			41-11																									
10	D5B	41-11		1	1			41-11																									
5	D6A	41- 3		1	1			41- 3																									
5	D6B	41- 3		1	1			41- 3																									
5	D7A	41- 3		4	1			41- 3																									
5	D7B	41- 3		4	1			41- 3																									
10	D8A	44- 8		1	1			44- 8																									
10	D8B	44- 8		1	1			44- 8																									
5	D9A	7-11		3	1			7-11																									
5	D9B	7-11		3	1			7-11																									
5	D9C	7-11		1	1			7-11																									
5	D9D	7-11		1	1			7-11																									
5	D10A	9- 4		3	1			9- 4																									
5	D10B	9- 4		3	1			9- 4																									
5	D10C	9- 4		1	1			9- 4																									
5	D10D	9- 4		1	1			9- 4																									
5	D11A	9- 4		12	1			9- 4																									
5	D11B	9- 4		12	1			9- 4																									
5	D11C	9- 4		4	1			9- 4																									
5	D11D	9- 4		4	1			9- 4																									
5	D12A	5-11		3	1			5-11																									
5	D12B	5-11		3	1			5-11																									
5	D12C	5-11		1	1			5-11																									
5	D12D	5-11		1	1			5-11																									
SPAN 14																																	
5	S3	138- 0		5	2			2- 2			133- 8																					2	
5	S4	138- 0		12	2			2- 2			133- 8																					2	
5	S5	138- 0		12	2			2- 2			133- 8																					2	
5	S6	138- 0		12	2			2- 2			133- 8																					2	
5	S7	138- 0		12	2			2- 2			133- 8																					2	
5	S8	138- 0		6	2			2- 2			133- 8																					2	
4	D1	13- 3		56	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	41-11		1	1			41-11																									
10	D5B	41-11		1	1			41-11																									
5	D6A	41- 3		1	1			41- 3																									
5	D6B	41- 3		1	1			41- 3																									
5	D7A	41- 3		4	1			41- 3																									
5	D7B	41- 3		4	1			41- 3																									
10	D8A	44- 8		1	1			44- 8																									
10	D8B	44- 8		1	1			44- 8																									
5	D9A	7-11		3	1			7-11																									
5	D9B	7-11		3	1			7-11																									
5	D9C	7-11		1	1			7-11																									

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: JPB 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: REINFORCING BAR LIST (21 OF 24)

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

SHEET NO. B–111

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist21.dwg LAYOUT NAME: reinforcing bar list (21 of 24) PLOTTED: Friday, August 29, 2014 6:35:22 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION CONTINUOUS SLAB UNIT 5 (SPANS 13-15) NO. REQUIRED = 1																																	
SPAN 14 CONTINUED																																	
5	D9D	7-11		1	1			7-11																									
5	D10A	9- 4		3	1			9- 4																									
5	D10B	9- 4		3	1			9- 4																									
5	D10C	9- 4		1	1			9- 4																									
5	D10D	9- 4		1	1			9- 4																									
5	D11A	9- 4		12	1			9- 4																									
5	D11B	9- 4		12	1			9- 4																									
5	D11C	9- 4		4	1			9- 4																									
5	D11D	9- 4		4	1			9- 4																									
5	D12A	5-11		3	1			5-11																									
5	D12B	5-11		3	1			5-11																									
5	D12C	5-11		1	1			5-11																									
5	D12D	5-11		1	1			5-11																									
SPAN 15																																	
5	S3	138- 0		5	2			2- 2			133- 8																					2	
5	S4	138- 0		12	2			2- 2			133- 8																					2	
5	S5	138- 0		12	2			2- 2			133- 8																					2	
5	S6	138- 0		12	2			2- 2			133- 8																					2	
5	S7	138- 0		12	2			2- 2			133- 8																					2	
5	S8	138- 0		6	2			2- 2			133- 8																					2	
4	D1	13- 3		56	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	41-11		1	1			41-11																									
10	D5B	41-11		1	1			41-11																									
5	D6A	41- 3		1	1			41- 3																									
5	D6B	41- 3		1	1			41- 3																									
5	D7A	41- 3		4	1			41- 3																									
5	D7B	41- 3		4	1			41- 3																									
10	D8A	44- 8		1	1			44- 8																									
10	D8B	44- 8		1	1			44- 8																									
5	D9A	7-11		3	1			7-11																									
5	D9B	7-11		3	1			7-11																									
5	D9C	7-11		1	1			7-11																									
5	D9D	7-11		1	1			7-11																									
5	D10A	9- 4		3	1			9- 4																									
5	D10B	9- 4		3	1			9- 4																									
5	D10C	9- 4		1	1			9- 4																									
5	D10D	9- 4		1	1			9- 4																									
5	D11A	9- 4		12	1			9- 4																									
5	D11B	9- 4		12	1			9- 4																									
5	D11C	9- 4		4	1			9- 4																									
5	D11D	9- 4		4	1			9- 4																									
5	D12A	5-11		3	1			5-11																									
5	D12B	5-11		3	1			5-11																									
5	D12C	5-11		1	1			5-11																									
5	D12D	5-11		1	1			5-11																									

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: JPB 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

URS Corporation Southern
7650 West Courtney
Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: REINFORCING BAR LIST (22 OF 24)
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: B-112

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist22.dwg LAYOUT NAME: reinforcing bar list (22 of 24) PLOTTED: Friday, August 29, 2014 6:35:32 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION CONTINUOUS SLAB UNIT 6 (SPANS 16-18) NO. REQUIRED = 1																																	
CONTINUOUS UNIT 6 STEEL																																	
5	S1	48- 9		1608	28			33- 4 1/2			7- 4			8- 0			0- 5 3/4																
5	S2	414- 8		48	2			2- 2			401- 8																					6	
5	S9	10- 6		268	1			10- 6																									
5	S10	10- 6		268	12			7- 4			3- 2																						3
5	S11	35- 0		98	1			35- 0																									
SPAN 16																																	
5	S3	138- 0		5	2			2- 2			133- 8																					2	
5	S4	138- 0		12	2			2- 2			133- 8																					2	
5	S5	138- 0		12	2			2- 2			133- 8																					2	
5	S6	138- 0		12	2			2- 2			133- 8																					2	
5	S7	138- 0		12	2			2- 2			133- 8																					2	
5	S8	138- 0		6	2			2- 2			133- 8																					2	
4	D1	13- 3		56	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	41-11		1	1			41-11																									
10	D5B	41-11		1	1			41-11																									
5	D6A	41- 3		1	1			41- 3																									
5	D6B	41- 3		1	1			41- 3																									
5	D7A	41- 3		4	1			41- 3																									
5	D7B	41- 3		4	1			41- 3																									
10	D8A	44- 8		1	1			44- 8																									
10	D8B	44- 8		1	1			44- 8																									
5	D9A	7-11		3	1			7-11																									
5	D9B	7-11		3	1			7-11																									
5	D9C	7-11		1	1			7-11																									
5	D9D	7-11		1	1			7-11																									
5	D10A	9- 4		3	1			9- 4																									
5	D10B	9- 4		3	1			9- 4																									
5	D10C	9- 4		1	1			9- 4																									
5	D10D	9- 4		1	1			9- 4																									
5	D11A	9- 4		12	1			9- 4																									
5	D11B	9- 4		12	1			9- 4																									
5	D11C	9- 4		4	1			9- 4																									
5	D11D	9- 4		4	1			9- 4																									
5	D12A	5-11		3	1			5-11																									
5	D12B	5-11		3	1			5-11																									
5	D12C	5-11		1	1			5-11																									
5	D12D	5-11		1	1			5-11																									
SPAN 17																																	
5	S3	138- 0		5	2			2- 2			133- 8																					2	
5	S4	138- 0		12	2			2- 2			133- 8																					2	
5	S5	138- 0		12	2			2- 2			133- 8																					2	
5	S6	138- 0		12	2			2- 2			133- 8																					2	
5	S7	138- 0		12	2			2- 2			133- 8																					2	
5	S8	138- 0		6	2			2- 2			133- 8																					2	
4	D1	13- 3		56	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	41-11		1	1			41-11																									
10	D5B	41-11		1	1			41-11																									
5	D6A	41- 3		1	1			41- 3																									
5	D6B	41- 3		1	1			41- 3																									
5	D7A	41- 3		4	1			41- 3																									
5	D7B	41- 3		4	1			41- 3																									
10	D8A	44- 8		1	1			44- 8																									
10	D8B	44- 8		1	1			44- 8																									
5	D9A	7-11		3	1			7-11																									
5	D9B	7-11		3	1			7-11																									
5	D9C	7-11		1	1			7-11																									

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: JPB 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

URS Corporation Southern
7650 West Courtney
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Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: REINFORCING BAR LIST (23 OF 24)

REF. DWG. NO.

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. B-113

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist23.dwg LAYOUT NAME: reinforcing bar list (23 of 24) PLOTTED: Friday, August 29, 2014 6:35:37 AM USER: kathy_compton

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION CONTINUOUS SLAB UNIT 6 (SPANS 16-18) NO. REQUIRED = 1																																	
SPAN 17 CONTINUED																																	
5	D9D	7-11		1	1			7-11																									
5	D10A	9- 4		3	1			9- 4																									
5	D10B	9- 4		3	1			9- 4																									
5	D10C	9- 4		1	1			9- 4																									
5	D10D	9- 4		1	1			9- 4																									
5	D11A	9- 4		12	1			9- 4																									
5	D11B	9- 4		12	1			9- 4																									
5	D11C	9- 4		4	1			9- 4																									
5	D11D	9- 4		4	1			9- 4																									
5	D12A	5-11		3	1			5-11																									
5	D12B	5-11		3	1			5-11																									
5	D12C	5-11		1	1			5-11																									
5	D12D	5-11		1	1			5-11																									
SPAN 18																																	
5	S3	138- 0		5	2			2- 2			133- 8																					2	
5	S4	138- 0		12	2			2- 2			133- 8																					2	
5	S5	138- 0		12	2			2- 2			133- 8																					2	
5	S6	138- 0		12	2			2- 2			133- 8																					2	
5	S7	138- 0		12	2			2- 2			133- 8																					2	
5	S8	138- 0		6	2			2- 2			133- 8																					2	
4	D1	13- 3		56	5			6- 0			0- 5			0- 5			0- 5																
4	D2	12- 0		16	8			6- 0			0- 5			4- 8 1/2			0- 5			0- 5													
4	D3	5- 6		32	5			0- 5			3- 8			0- 6			0- 6																
4	D4	7- 1		52	10			6- 8			0- 5																						
10	D5A	41-11		1	1			41-11																									
10	D5B	41-11		1	1			41-11																									
5	D6A	41- 3		1	1			41- 3																									
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5	D7A	41- 3		4	1			41- 3																									
5	D7B	41- 3		4	1			41- 3																									
10	D8A	44- 8		1	1			44- 8																									
10	D8B	44- 8		1	1			44- 8																									
5	D9A	7-11		3	1			7-11																									
5	D9B	7-11		3	1			7-11																									
5	D9C	7-11		1	1			7-11																									
5	D9D	7-11		1	1			7-11																									
5	D10A	9- 4		3	1			9- 4																									
5	D10B	9- 4		3	1			9- 4																									
5	D10C	9- 4		1	1			9- 4																									
5	D10D	9- 4		1	1			9- 4																									
5	D11A	9- 4		12	1			9- 4																									
5	D11B	9- 4		12	1			9- 4																									
5	D11C	9- 4		4	1			9- 4																									
5	D11D	9- 4		4	1			9- 4																									
5	D12A	5-11		3	1			5-11																									
5	D12B	5-11		3	1			5-11																									
5	D12C	5-11		1	1			5-11																									
5	D12D	5-11		1	1			5-11																									

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	ϕ
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
LOCATION APPROACH SLAB NO. REQUIRED = 2																																	
APPROACH SLAB																																	
5	A1	29- 8		50	1			29- 8																									
8	A2	29- 8		66	1			29- 8																									
5	B	48- 9		72	1			48- 8 1/2																									
5	C	5- 0		60	1			5- 0																									

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: JPB 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

URS
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MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
Mark Eicholtz
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: REINFORCING BAR LIST (24 OF 24)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. B-114

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\brebarlist24.dwg LAYOUT NAME: reinforcing bar list (24 of 24) PLOTTED: Friday, August 29, 2014 6:35:47 AM USER: kathy_compton

LOAD RATING SUMMARY DETAILS FOR PRESTRESSED CONCRETE BRIDGES (FLAT SLAB AND DECK/GIRDER)

TABLE 2 – LRFR

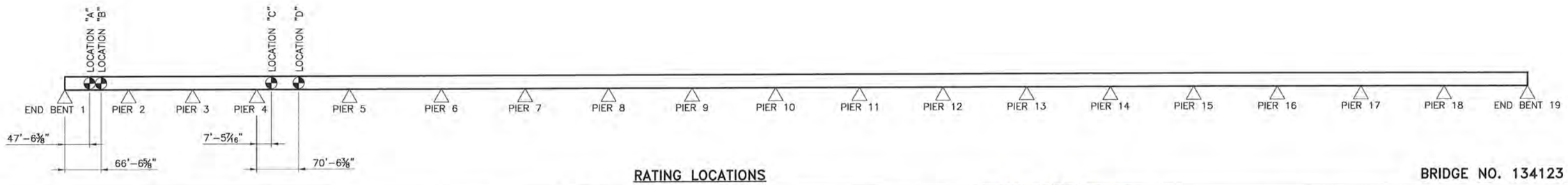
LEVEL	LIMIT STATE	VEHICLE	WEIGHT (TONS)	LOAD FACTORS			MOMENT (STRENGTH) OR STRESS (SERVICE)					SHEAR (STRENGTH)					
				LL	DC	DW	DISTRIBUTION FACTOR (DF)	RATING FACTOR	TONS	LOCATION	DIMENSION *	DISTRIBUTION FACTOR (DF)	RATING FACTOR	TONS	LOCATION	DIMENSION *	COMMENTS: INTERIOR/EXTERIOR BEAM DF METHOD IF OTHER THAN LRFD. OTHER APPROPRIATE COMMENTS.
DESIGN LOAD RATING	STRENGTH I (INV)	HL-93	N/A	1.75	1.25	1.50	0.96	1.40	N/A	A	47.53	1.08	1.41	N/A	B	66.55	SPAN 3 EXTERIOR
	STRENGTH I (OP)	HL-93	N/A	1.35	1.25	1.50	0.96	1.81	N/A	A	47.53	1.13	2.34	N/A	C	7.45	SPAN 3 EXTERIOR – MOMENT SPAN 4 INTERIOR – SHEAR
	SERVICE III (INV)	HL-93	N/A	0.80	1.00	1.00	0.96	1.10	N/A	A	47.53	N/A	N/A	N/A	N/A	N/A	SPAN 3 EXTERIOR
	SERVICE III (OP)	HL-93	N/A	0.80	1.00	1.00	0.80	1.58	N/A	D	70.53	N/A	N/A	N/A	N/A	N/A	SPAN 4 INTERIOR
PERMIT LOAD RATING	STRENGTH II	FL120	60.0	1.35	1.25	1.50	0.96	1.51	90.60	A	47.53	0.99	1.47	88.20	B	66.55	SPAN 3 EXTERIOR
	SERVICE III	FL120	60.0	1.00	1.00	1.00	0.80	1.78	106.80	D	70.53	N/A	N/A	N/A	N/A	N/A	SPAN 4 INTERIOR

* DIMENSION MEASURED FROM ℄ BEARING.

GENERAL NOTES:
1. THIS TABLE IS BASED ON THE REQUIREMENTS ESTABLISHED IN THE JANUARY 2014 "STRUCTURES MANUAL".

TABLE 2 NOTES:
1. PERMIT CAPACITY IS DETERMINED BY USING THE PERMIT VEHICLE IN ALL LANES.
2. SERVICE III DESIGN INVENTORY TENSILE STRESS LIMITS = $3\sqrt{f'c}$. SERVICE III DESIGN OPERATING, LEGAL, AND PERMIT TENSILE STRESS LIMITS = $7.5\sqrt{f'c}$.
3. HAS THE AASHTO LRFD SPECIFICATIONS ARTICLE 5.8.3.5 LONGITUDINAL REINFORCEMENT BEEN SATISFIED?
   ☒ YES ☐ NO
4. SOFTWARE USED FOR RATING=
   LEAP CONSPAN
   VERSION: 13.00.00.68
   DATE: 04/2014

ABBREVIATIONS:
INV – INVENTORY
OP – OPERATING



RATING LOCATIONS

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: BWJ 04-14
Designed By: BWJ 04-14
Checked By: JPB 04-14

URS Corporation Southern
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C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
Mark Eicholtz 9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

SHEET TITLE: LOAD RATING SUMMARY

PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.

SHEET NO. B-115

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bdatatable_loadrating01.dwg LAYOUT NAME: load rating summary PLOTTED: Friday, August 29, 2014 6:35:56 AM USER: kathy_compton

PERMANENT RETAINING WALL SYSTEM DATA TABLES

GEOTECHNICAL INFORMATION

DEPTH BELOW EXISTING GROUND LINE (ft)	ALL WALLS	WALL RW-1				WALL RW-2			WALL RW-3	
	REINFORCED SOIL & RANDOM BACKFILL	MEDIUM DENSE SILTY SAND	VERY DENSE CLAYEY SAND	MEDIUM DENSE SANDY SILT	STIFF SILTY CLAY	VERY LOOSE SAND w/some SILT	MEDIUM DENSE SILTY SAND	VERY STIFF SILTY CLAY	MEDIUM DENSE SAND w/some SILT	MEDIUM DENSE TO LOOSE SILTY SAND
	———	0 TO 15	15 TO 20	20 TO 35	35 TO 50	0 TO 4	4 TO 18	18 TO 50	0 TO 6	6 TO 15
EFFECTIVE UNIT WEIGHT (pcf)	105	47.6	52.6	57.6	57.6	42.6	52.6	57.6	47.6	47.6
COHESION (psf)	0	0	0	0	1500	0	0	3500	0	0
INTERNAL FRICTION ANGLE (degrees)	30	31	32	30	0	28	31	0	30	31

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.

RETAINING WALL VARIABLES

WALL NO.	WALL SETTLEMENT			
	LONG-TERM SETTLEMENT (in)	SHORT-TERM SETTLEMENT (in)	DIFFERENTIAL SETTLEMENT	
			LONGITUDINAL (%) (ft/100 ft)	TRANSVERSE (in)
RW-1	¼	1	N/A	½
RW-2	¼	1¼	N/A	½
RW-3	¼	½	0.02	N/A

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

SOIL REINFORCEMENT LENGTH FOR EXTERNAL STABILITY

WALL RW-1	WALL HEIGHT (ft)	≤ 10	11 - 12	13 - 14	15	16 - 17	18	19 - 20	21	22	23 - 24	25	26 - 27	28
	REINFORCEMENT LENGTH (ft)	8	9	10	11	12	13	14	15	16	17	18	19	20
	FACTORED BEARING RESISTANCE (psf)	5900	6100	6300	6600	6800	7200	7400	7700	8100	8300	8700	8900	9200
WALL RW-2	WALL HEIGHT (ft)	≤ 10	11 - 12	13 - 14	15	16 - 17	18	19 - 20	21	22	23 - 24	25	26 - 27	28
	REINFORCEMENT LENGTH (ft)	8	9	10	11	12	13	14	15	16	17	18	19	20
	FACTORED BEARING RESISTANCE (psf)	4900	5100	5200	5500	5700	6000	6100	6400	6700	6900	7200	7500	7700
WALL RW-3	WALL HEIGHT (ft)	≤ 10												
	REINFORCEMENT LENGTH (ft)	8												
	FACTORED BEARING RESISTANCE (psf)	5200												

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.

GENERAL NOTES

1. FOR CONCRETE FACING PANEL SURFACES TREATMENT SEE MSE WALL AESTHETIC DETAIL SHEET.
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 OF 9.80 KIPS/FT. OF BACK WALL WIDTH. THE COST OF SOIL REINFORCEMENT AND FASTENERS 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 QUALIFIED PRODUCTS LIST FOR APPROVED WALL SYSTEMS AND DESIGN STANDARDS INDEX NO. 6020 FOR ALLOWABLE WALL TYPE SUBSTITUTIONS.
   WALL NO. 1 – FDOT WALL TYPE 2F
   WALL NO. 2 – FDOT WALL TYPE 2F
   WALL NO. 3 – FDOT WALL TYPE 2F
4. CONCRETE FOR COPING AND/OR JUNCTION SLAB SHALL BE CLASS IV (f'c 5,500 PSI) WITH SILICA FUME, METAKAOLIN OR ULTRAFINE FLY ASH.
5. LONGITUDINAL DIMENSIONS SHOWN IN THE PLANS ARE MEASURED ALONG THE EXTERIOR FACE OF THE WALL. ELEVATIONS SHOWN ARE TO THE TOP OF COPING AND TOP OF LEVELING PAD, UNLESS NOTED OTHERWISE.
6. GEOTECHNICAL INFORMATION, SETTLEMENT ESTIMATES AND EXTERNAL STABILITY ANALYSIS PROVIDED BY URS CORPORATION, GEOTECHNICAL REPORT DATED JUNE 3, 2014.
7. SEE DESIGN STANDARDS INDEX. NO. 6020 FOR GENERAL NOTES AND DETAILS.

ESTIMATED QUANTITIES

WALL NO.	ITEM	UNIT	QUANTITY
1	RETAINING WALL SYSTEM, PERMANENT, EXCLUDING BARRIER	SF	3,122
	CONCRETE TRAFFIC RAILING WITH JUNCTION SLAB (32" F-SHAPE)	LF	13
	CONCRETE PARAPET WITH JUNCTION SLAB (PEDESTRIAN/BICYCLE RAILING)	LF	12
2	RETAINING WALL SYSTEM, PERMANENT, EXCLUDING BARRIER	SF	3,153
	CONCRETE TRAFFIC RAILING WITH JUNCTION SLAB (32" F-SHAPE)	LF	13
	CONCRETE PARAPET WITH JUNCTION SLAB (PEDESTRIAN/BICYCLE RAILING)	LF	11
3	RETAINING WALL SYSTEM, PERMANENT, EXCLUDING BARRIER	SF	2,466
	CONCRETE PARAPET WITH JUNCTION SLAB (PEDESTRIAN/BICYCLE RAILING)	LF	352

BRIDGE NO. 134123

REVISIONS

Date	By	Description	Date	By	Description

Drawn By: KAC 01-11
Checked By: CC 01-11
Designed By: CC 11-10
Checked By: AOS 11-10

URS Corporation Southern
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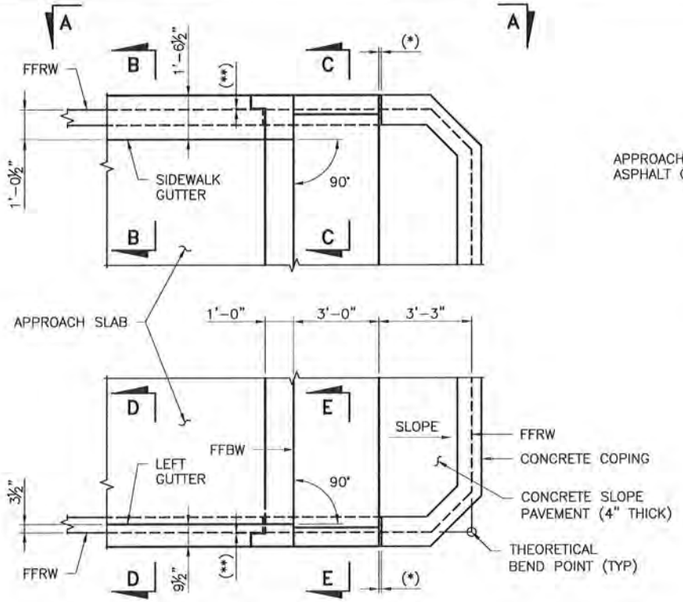
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

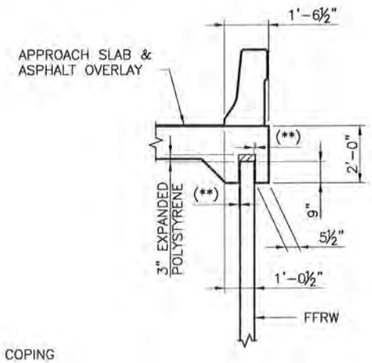
ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: MSE WALL NOTES & TABLES
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
REF. DWG. NO.
SHEET NO. BW-1

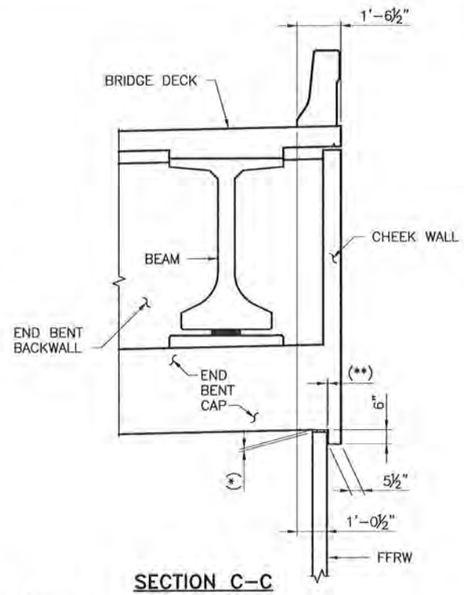
FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bmsewall_notestables01.dwg LAYOUT NAME: mse wall notes & tables PLOTTED: Friday, August 29, 2014 6:36:01 AM USER: kathy_compton



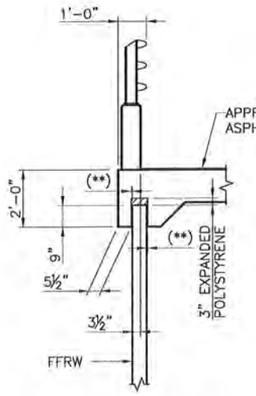
PLAN



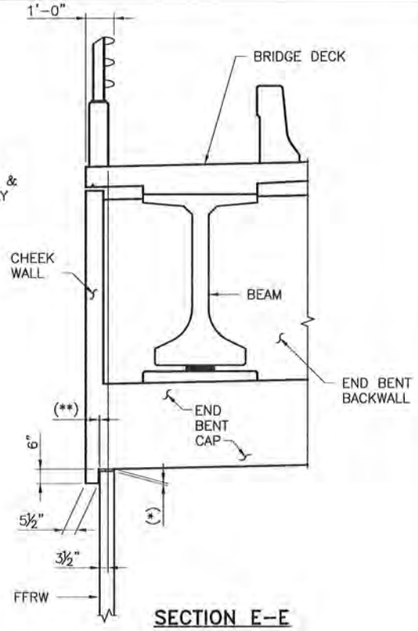
SECTION B–B



SECTION C–C



SECTION D–D



SECTION E–E

VIEW A–A
(REFLECTED VIEW)

TYPICAL SECTION UNDER BRIDGE AT END BENT

DETAIL "A"

NOTE: DETAIL "A" APPLIES TO ALL CONTACT SURFACES OF SLOPE PAVEMENT WITH END BENTS, EDGES OF BERM AND CONSTRUCTION JOINTS.

NOTES

1. SOIL REINFORCEMENT STRAPS ARE TO RESIST A LATERAL FORCE OF 6.83 KIPS PER FOOT OF BACKWALL (SERVICE LOAD). STRAPS ARE TO BE DESIGNED AND PROVIDED BY THE RETAINING WALL COMPANY AND INSTALLED BY THE CONTRACTOR. NUMBER OF STRAPS AND SPACING ARE TO BE SHOWN ON THE SHOP DRAWING. COST OF STRAPS AND FASTENERS ARE TO BE INCLUDED IN THE COST OF THE MSE WALLS. FOR ADDITIONAL INFORMATION, SEE SHEET NO. B–22.

LEGEND

(1) COLOR OF FINISH COATING SHALL CONFORM TO FEDERAL STANDARD NO. 595B COLOR NO. 27778. SEE SURFACE FINISH DETAIL SHEET FOR ADDITIONAL INFORMATION.

(3) COLOR OF FINISH COATING SHALL CONFORM TO FEDERAL STANDARD NO. 595B COLOR NO. 33717. SEE SURFACE FINISH DETAIL SHEET FOR ADDITIONAL INFORMATION.

(*) 1" EXPANDED POLYSTYRENE.
(**) ½" EXPANDED POLYSTYRENE.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 01–10
Checked By: CC 01–11
Designed By: CC 11–10
Checked By: AOS 11–10

URS Corporation Southern
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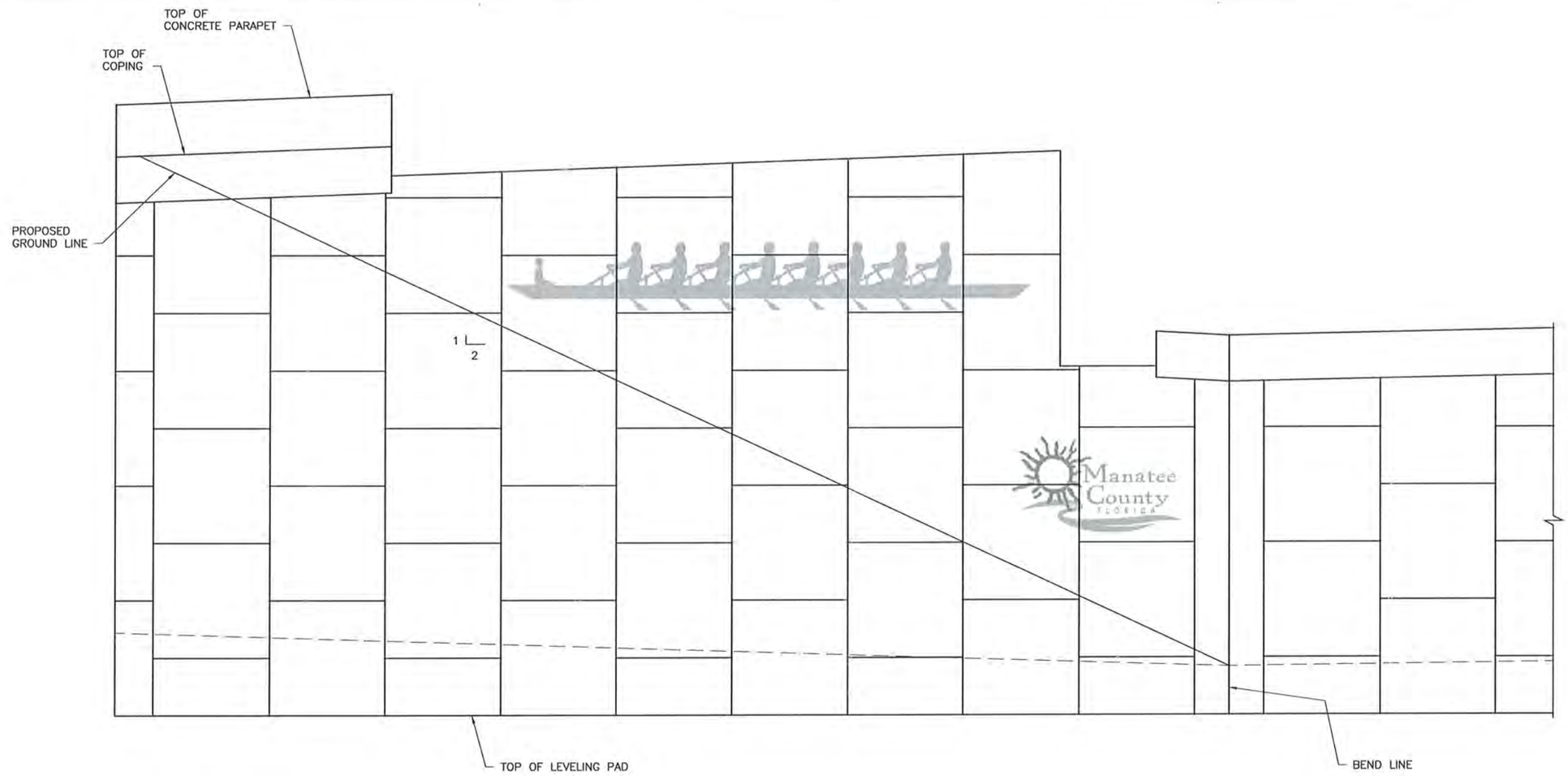
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

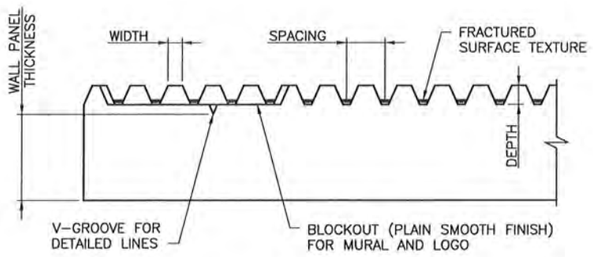
SHEET TITLE: MSE WALL DETAILS
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

REF. DWG. NO.
SHEET NO. BW–2

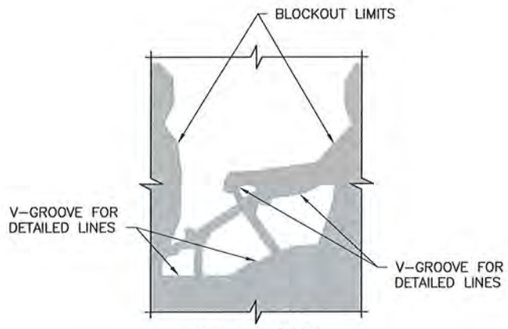
FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bmsewalldet01.dwg LAYOUT NAME: mse wall details PLOTTED: Friday, August 29, 2014 6:36:07 AM USER: kathy_compton



ELEVATION – WALL RW–2 WEST FACE
(WALL RW–1 WEST FACE SIMILAR)



DETAIL "A"



DETAIL "B"

NOTES

1. THE CONCRETE FACING PANEL FORM LINER SHALL BE A VERTICAL RUSTICATION AS SHOWN IN DETAIL "A". THE DEPTH OF THE FLUTES SHALL BE A MINIMUM OF ¾ INCH OR MAXIMUM 1 INCH. THE WIDTH OF THE RIBS SHALL BE A MINIMUM OF ¾ INCH. THE RIBS SHALL BE UNIFORM WITH A MINIMUM SPACING OF 2 INCHES OR MAXIMUM OF 2½ INCHES. THE BOTTOM OF THE FLUTE SHALL HAVE A FRACTURED SURFACE TEXTURE.
2. THE SCULLING MURAL AND MANATEE COUNTY LOGO SHALL BE CREATED BY USING BLOCKOUTS WITH A PLAIN SMOOTH FINISH ON THE VERTICAL RUSTICATION FORMLINER BACKGROUND. FOR SMALL DETAIL LINES AS SHOWN IN DETAIL "B", USE ½ INCH DEEP "V" GROOVES. THE MURAL AND LOGO ARE TO BE PLACED ON THE WEST FACE OF WALL RW–1 AND RW–2.
3. DETAILS OF THE FORM LINER, GEOMETRIC DIMENSIONS OF THE MURAL AND MANATEE COUNTY LOGO SHOULD BE INCLUDED IN THE SHOP DRAWING SUBMITTAL FOR REVIEW AND APPROVAL.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CJK 08-14	
Checked By: MSE 08-14	
Designed By: MSE 08-14	
Checked By: JB 08-14	

URS Corporation Southern
7650 West Courtney Campbell Causeway
Tampa, Florida 33607-1462
C.A. No. 00000002

MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ENGINEER OF RECORD
9/5/14
MARK S. EICHOLTZ
P.E. NO. 36078

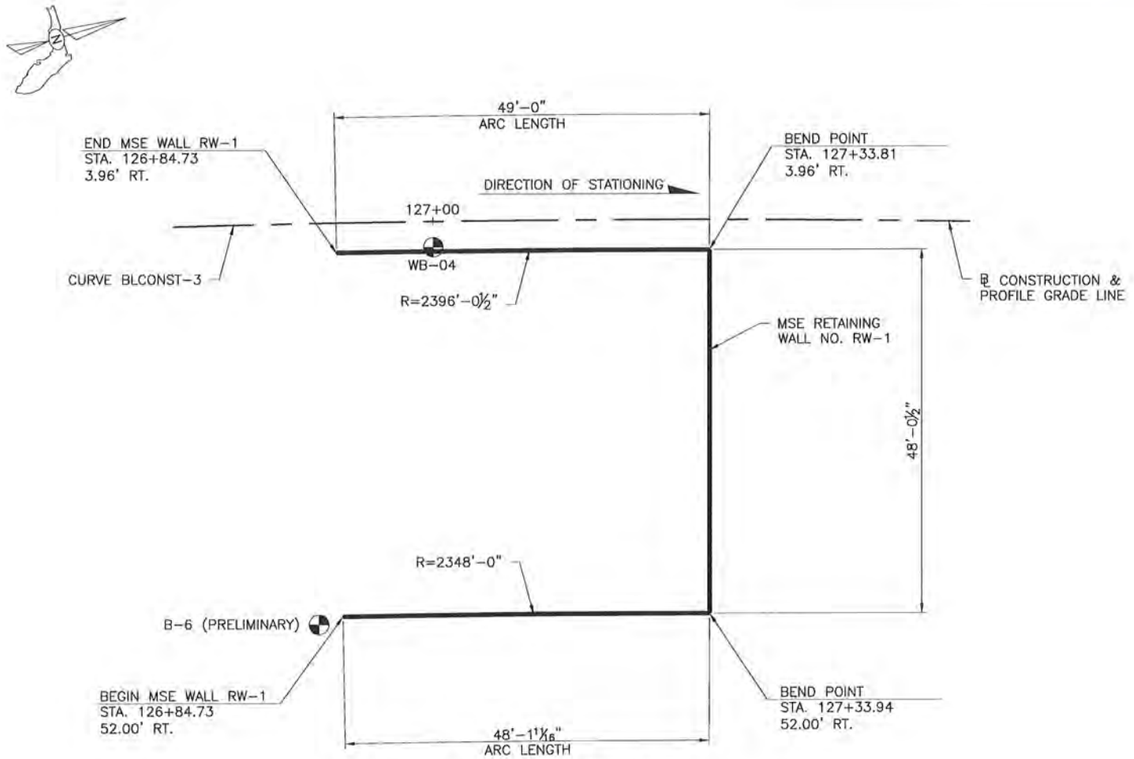
SHEET TITLE: MSE WALL AESTHETIC DETAILS

REF. DWG. NO.

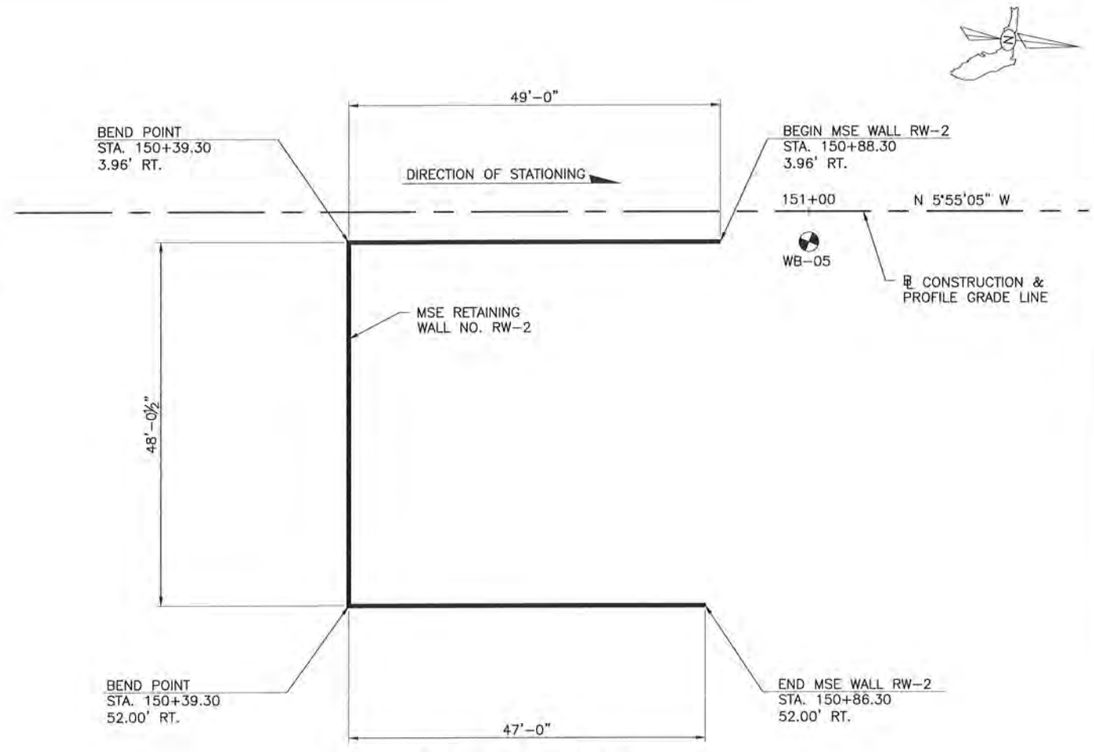
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER

SHEET NO. BW–2A

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bmsewalldet02.dwg LAYOUT NAME: mse wall aesthetic details PLOTTED: Thursday, September 04, 2014 2:55:41 PM USER: craig_kuthy



PLAN – WALL RW-1



PLAN – WALL RW-2

CURVE BLCONST-3

P.I. STA. 125+94.49
△ = 23°22'59" RT.
Dc = 2°23'14"
T = 496.65'
L = 979.47'
R = 2400.00'
e = NC
P.R.C. STA. 120+97.84
P.R.C. STA. 130+77.31

LEGEND

DENOTES APPROXIMATE LOCATION OF CORE BORING. FOR "REPORT OF CORE BORING" SHEETS, SEE GEOTECHNICAL REPORT.

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 11-10
Checked By: CC 11-10
Designed By: CC 11-10
Checked By: AOS 11-10

URS Corporation Southern
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MANATEE COUNTY GOVERNMENT
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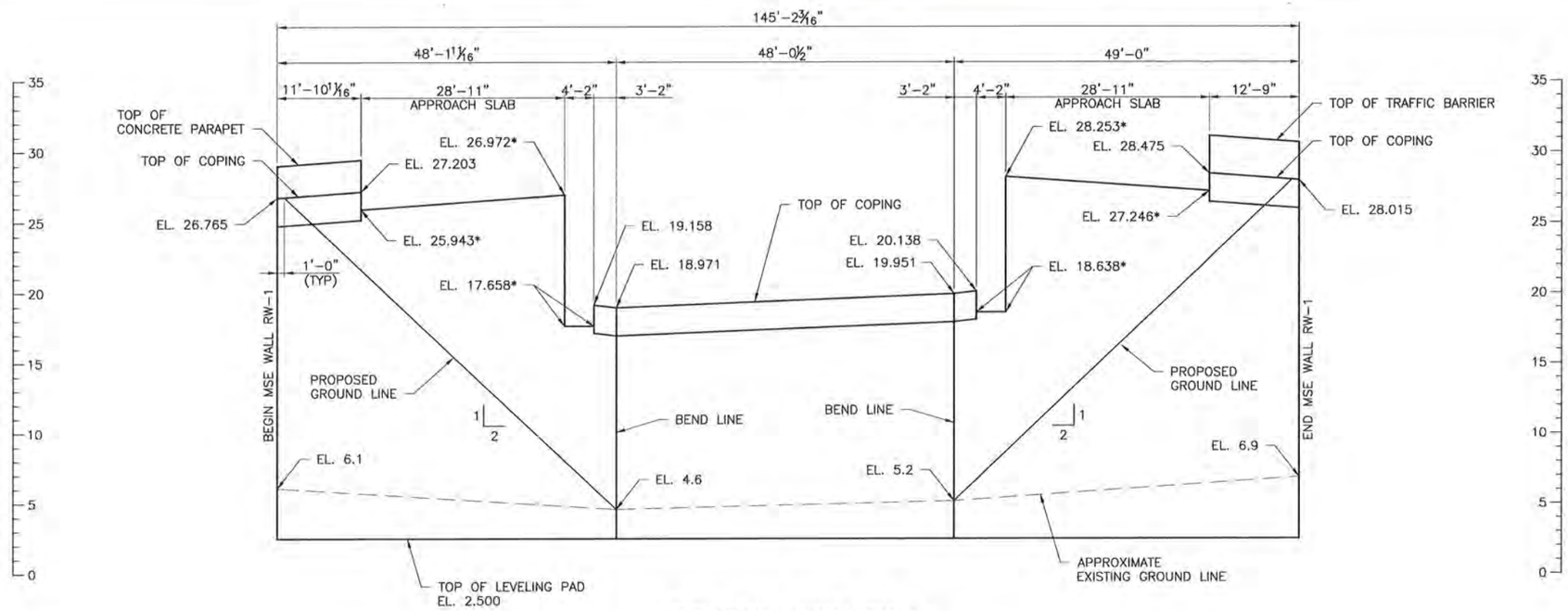
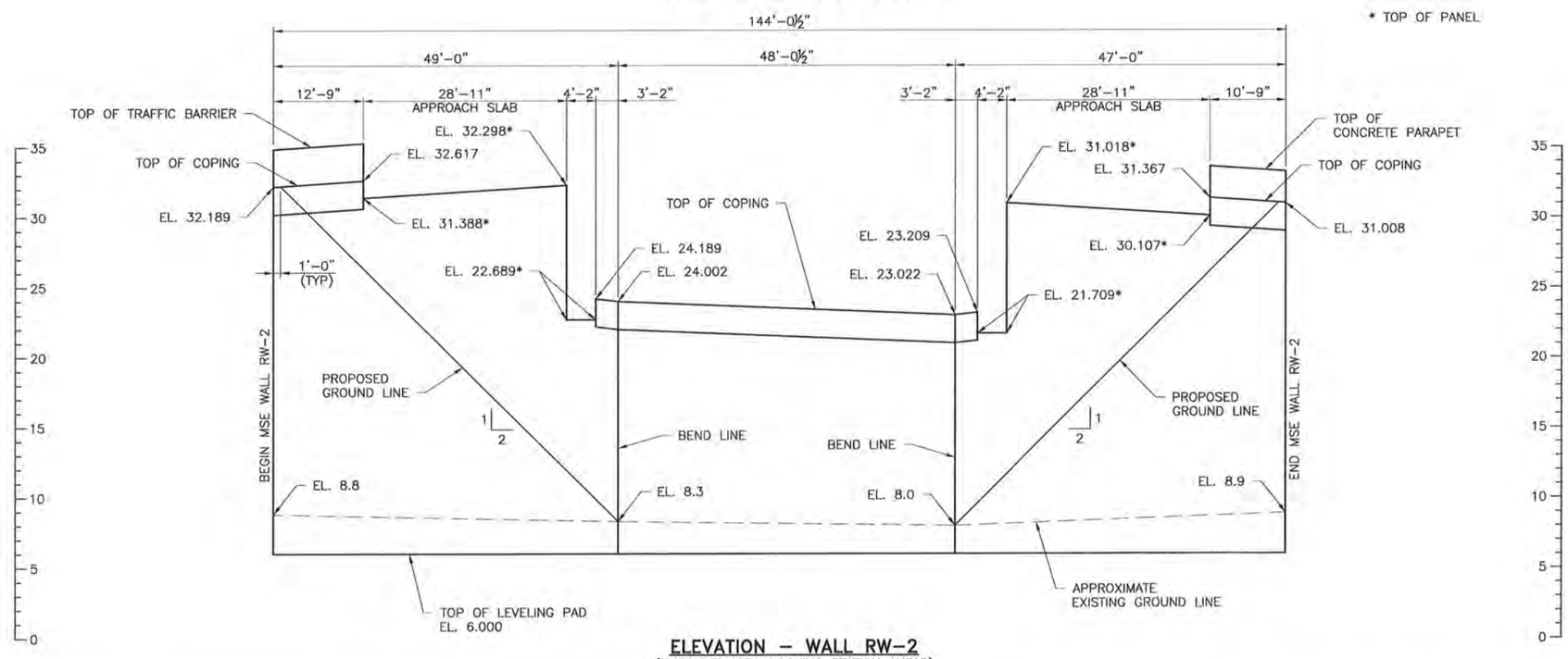
ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
7/5/14

SHEET TITLE: MSE WALL CONTROL DRAWING (1 OF 4)
REF. DWG. NO.:
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO.: BW-3

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bmsewall01.dwg LAYOUT NAME: mse wall control drawing (1 of 4) PLOTTED: Friday, August 29, 2014 6:36:21 AM USER: kathy_compton



ELEVATION – WALL RW-1
(UNFOLDED VIEW LOOKING STATION BACK)



ELEVATION – WALL RW-2
(UNFOLDED VIEW LOOKING STATION AHEAD)

* TOP OF PANEL

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: CER 11-10
Checked By: CC 11-10
Designed By: CC 11-10
Checked By: AOS 11-10

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MANATEE COUNTY GOVERNMENT
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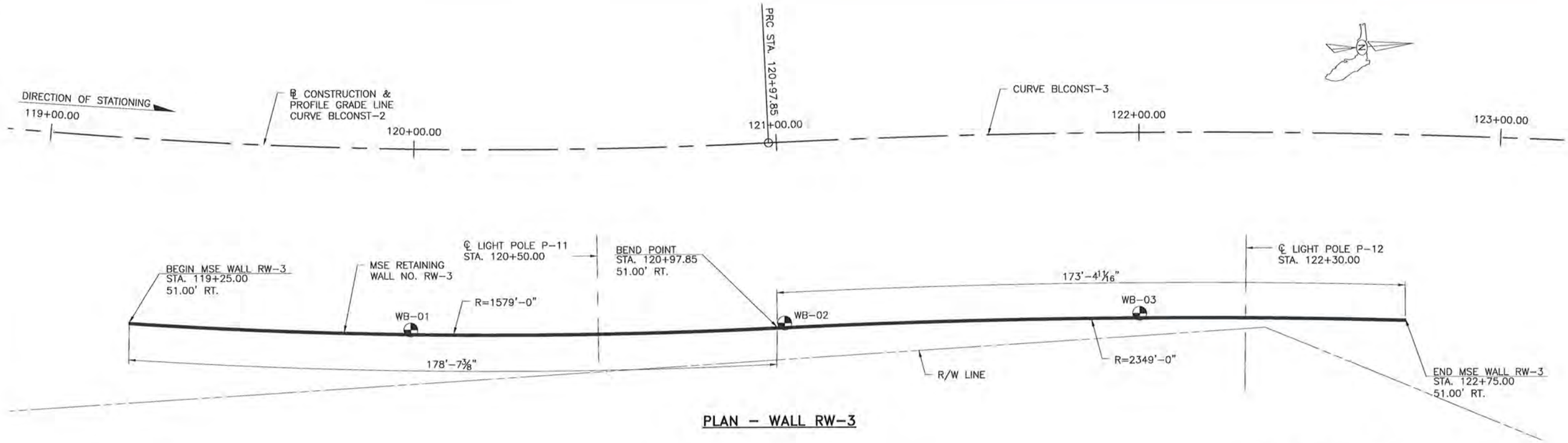
ENGINEER OF RECORD
MARK S. EICHOLTZ
P.E. NO. 36078
9/5/14

SHEET TITLE: MSE WALL CONTROL DRAWING (2 OF 4)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. BW-4

FILENAME: o:\autocad\2014\fort_hamer\dwg\sheets\brnsewall02.dwg LAYOUT NAME: mse wall control drawing (2 of 4) PLOTTED: Friday, August 29, 2014 6:36:28 AM USER: kathy_compton



PLAN – WALL RW-3

CURVE BLCONST-2

P.I. STA. 114+64.45
△ = 51°12'21" LT.
Dc = 3°44'59"
T = 732.19'
L = 1365.59'
R = 1528.00'
e = NC
P.R.C. STA. 107+32.25
P.R.C. STA. 120+97.85

NOTE:

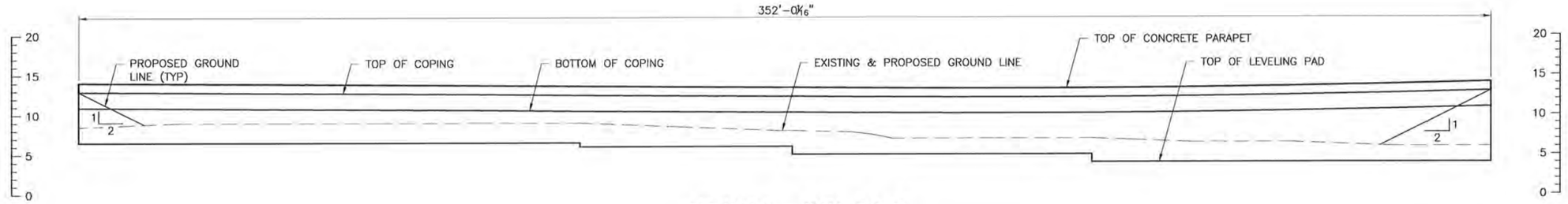
1. REFERENCE INDEX 6200 FOR LIGHT POLE PEDESTAL DETAILS.

LEGEND

◓ DENOTES APPROXIMATE LOCATION OF CORE BORING. FOR "REPORT OF CORE BORING" SHEETS, SEE GEOTECHNICAL REPORT.

CURVE BLCONST-3

P.I. STA. 125+94.49
△ = 23°22'59" RT.
Dc = 2°23'14"
T = 496.65'
L = 979.47'
R = 2400.00'
e = NC
P.R.C. STA. 120+97.84
P.R.C. STA. 130+77.31



ELEVATION – WALL RW-3

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: MSE 04-14
Designed By: JPB 04-14
Checked By: MSE 04-14

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MARK S. EICHOLTZ
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9/5/14

SHEET TITLE: MSE WALL CONTROL DRAWING (3 OF 4)
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
REF. DWG. NO.
SHEET NO. BW-5

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bmsewall03.dwg LAYOUT NAME: mse wall control drawing (3 of 4) PLOTTED: Friday, August 29, 2014 6:36:43 AM USER: kathy_complon

ELEVATIONS – WALL RW-3			
STATION	TOP OF COPING	PROPOSED GROUND	TOP OF LEVELING PAD
119+25.00	12.930	12.9	6.500
119+50.00	12.860	9.0	6.500
119+75.00	12.780	9.0	6.500
120+00.00	12.710	9.0	6.500
120+25.00	12.630	9.0	6.500
120+50.00	12.490	9.0	6.500/6.000
120+75.00	12.400	8.5	6.000
120+97.85	12.310	8.0	6.000
121+00.00	12.310	8.0	6.000
121+15.00	12.250	7.8	6.000/5.000
121+20.00	12.230	7.5	5.000
121+25.00	12.220	7.0	5.000
121+50.00	12.170	7.0	5.000
121+75.00	12.190	7.0	5.000
121+85.00	12.230	6.8	5.000/4.000
122+00.00	12.290	6.5	4.000
122+25.00	12.450	6.5	4.000
122+50.00	12.680	6.0	4.000
122+75.00	12.970	13.0	4.000

BRIDGE NO. 134123

REVISIONS					
Date	By	Description	Date	By	Description

Drawn By: KAC 04-14
Checked By: MSE 04-14
Designed By: JPB 04-14
Checked By: MSE 04-14

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9/5/14

SHEET TITLE: MSE WALL CONTROL DRAWING (4 OF 4)
REF. DWG. NO.
PROJECT NAME: FORT HAMER BRIDGE OVER MANATEE RIVER
SHEET NO. BW-6

FILENAME: e:\autocad\2014\fort_hamer\dwg\sheets\bmsewall04.dwg LAYOUT NAME: mse wall control drawing (4 of 4) PLOTTED: Friday, August 29, 2014 6:36:46 AM USER: kathy_compton