DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
10117 PRINCESS PALM AVE, SUITE 120
TAMPA, FLORIDA 33610-8302

October 10, 2017

REPLY TO ATTENTION OF

Regulatory Division
West Permits Branch
Tampa Permits Section
SAJ-2017-02335 (NW-LEO)

Manatee County Public Works Department
c/o Sia Mollanazar
1022 26th Avenue East
Bradenton, FL 34208
Via email: sia.mollanazar@mymanatee.org

Dear Applicant:

The U.S. Army Corps of Engineers (Corps) assigned your application for a Department of the Army permit, which the Corps received on July 17, 2017, the file number SAJ-2017-02335. A review of the information and drawings provided indicates that the proposed work involves widening two, 2-lane bridges on Rye Road by 6' and 9' to make public safety improvements, including shoulders and guardrails. Bridge widening will include driving steel piles, 3 or 4 each into the creek bottom to support the additional width of concrete bridge deck and driving sheet piles in uplands to stabilize the bridge abutments. Project would affect waters of the U.S. associated with Manatee River and a tributary of Mill Creek Branch. Project is located at Rye Road Bridge No. 134025 and Rye Road Bridge No. 134026 between SR 64 and Upper River Manatee Road, Bradenton in 23/27 Township 34S, Range 19E, Manatee County, FL.

Your project, as depicted on the enclosed drawings, is authorized by Nationwide Permit (NWP) Number 14 Linear Transportation Projects. In addition, project specific conditions have been enclosed. This verification is valid until **March 18, 2022**. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have 12 months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this nationwide permit. Please access the U.S. Army Corps of Engineers' (Corps) Jacksonville District's Regulatory Internet page to access Internet links to view the Final Nationwide Permits, Federal Register Vol. 82, dated January 6, 2017, specifically pages 1983 to 2008, and the table of Regional Conditions. The Internet page address is:

http://www.saj.usace.army.mil/Missions/Regulatory.aspx

Please be aware this Internet address is case sensitive and should be entered as it appears above. Once there you will need to click on "Source Book"; and, then click on "Nationwide Permits." These files contain the description of the Nationwide Permit authorization, the Nationwide Permit general conditions, and the regional conditions, which apply specifically to this verification for NWP 14. Enclosed is a list of General Conditions, which apply to all Department of the Army authorizations. You must comply with all of the special and general conditions and any project specific condition of this authorization or you may be subject to enforcement action. In the event you have not completed construction of your project within the specified time limit, a separate application or re-verification may be required.

The following special conditions are included with this verification:

1. **Reporting Address:** The Permittee shall submit all reports, documentation, and correspondence required by conditions of this permit to the following address: CESAJ-ComplyDocs@usace.army.mil. The Permittee shall reference this permit number, SAJ-2017-02335, on all submittals.

2. **Commencement Notification:** Within 10 days from the date of initiating the work authorized by this permit, the Permittee shall provide a written notification of the date of commencement of authorized work to the Corps.

3. **Self-Certification:** Within 60 days of completion of the work authorized by this permit, the Permittee shall complete the enclosed "Self-Certification Statement of Compliance" form and submit it to the Corps. In the event that the completed work deviates in any manner from the authorized work, the Permittee shall describe the deviations between the work authorized by this permit and the work as constructed on the "Self-Certification Statement of Compliance" form. The description of any deviations on the "Self-Certification Statement of Compliance" form does not constitute approval of any deviations by the Corps.

4. **Turbidity Barriers:** Prior to the initiation of any of the work authorized by this permit, the Permittee shall install floating turbidity barriers with weighted skirts that extend to within one foot of the bottom around all work areas that are in, or adjacent to, surface waters. The turbidity barriers shall remain in place and be maintained until the authorized work has been completed and all suspended and erodible materials have been stabilized. Turbidity barriers shall be removed upon stabilization of the work area.

5. **Regulatory Agency Changes:** Should any other agency require and/or approve changes to the work authorized or obligated by this permit, the Permittee is advised that a modification to this permit instrument is required prior to initiation of those changes. It is the Permittee's responsibility to request a modification of this permit from the Tampa Permits Section.

6. **Posting of Permit:** The Permittee shall have available and maintain for review a copy of this permit and approved plans at the construction site.

7. **Erosion Control:** Prior to the initiation of any work authorized by this permit, the Permittee shall install erosion control measures along the perimeter of all work areas to prevent the displacement of fill material outside the work area into waters of the United States. Immediately after completion of the final grading of the land surface, all slopes, land surfaces, and filled areas shall be stabilized using sod, degradable mats, barriers, or a combination of similar stabilizing materials to prevent erosion. The erosion control measures shall remain in place and be maintained until all authorized work is completed and the work areas are stabilized.

8. **Assurance of Navigation:** The authorization letter will contain a special condition stating that if future operations by the United States require the removal, relocation, or other alteration, of the structures or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the applicant would be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

9. **Cultural Resources/Historic Properties:**

a. No structure or work shall adversely affect impact or disturb properties listed in the *National Register of Historic Places* (NRHP) or those eligible for inclusion in the NRHP.

b. If during the ground disturbing activities and construction work within the permit area, there are archaeological/cultural materials encountered which were not the subject of a previous cultural resources assessment survey (and which shall include, but not be limited to: pottery, modified shell, flora, fauna, human remains, ceramics, stone tools or metal implements, dugout canoes, evidence of structures or any other physical remains that could be associated with Native American cultures or early colonial or American settlement), the Permittee shall immediately stop all work and ground-disturbing activities within a 100-meter diameter of the discovery and notify the Corps within the same business day (8 hours). The Corps shall then notify the Florida State Historic Preservation Officer (SHPO) and the appropriate Tribal Historic Preservation Officer(s) (THPO(s)) to assess the significance of the discovery and devise appropriate actions.

c. Additional cultural resources assessments may be required of the permit area in the case of unanticipated discoveries as referenced in accordance with the above Special Condition ; and if deemed necessary by the SHPO, THPO(s), or Corps, in

accordance with 36 CFR 800 or 33 CFR 325, Appendix C (5). Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume on non-federal lands without written authorization from the SHPO for finds under his or her jurisdiction, and from the Corps.

d. In the unlikely event that unmarked human remains are identified on non-federal lands, they will be treated in accordance with Section 872.05 Florida Statutes. All work and ground disturbing activities within a 100-meter diameter of the unmarked human remains shall immediately cease and the Permittee shall immediately notify the medical examiner, Corps, and State Archeologist within the same business day (8-hours). The Corps shall then notify the appropriate SHPO and THPO(s). Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume without written authorization from the State Archeologist and from the Corps.

This letter of authorization does not obviate the necessity to obtain any other Federal, State, or local permits, which may be required. Prior to the initiation of any construction, projects qualifying for this Nationwide permit must qualify for an exemption under section 403.813(1), Florida Statutes or 373.406, Florida Statutes, or otherwise be authorized by the applicable permit required under Part IV of Chapter 373, Florida Statutes, by the Department of Environmental Protection, a water management district under section 373.069, Florida Statutes, or a local government with delegated authority under section 373.441, Florida Statutes, and receive Water Quality Certification and applicable Coastal Zone Consistency Concurrence or waiver thereto, as well as any authorizations required for the use of state-owned submerged lands under Chapter 253, Florida Statutes, and, as applicable, Chapter 258, Florida Statutes. You should check State-permitting requirements with the Florida Department of Environmental Protection or the appropriate water management district.

This letter of authorization does not give absolute Federal authority to perform the work as specified on your application. The proposed work may be subject to local building restrictions mandated by the National Flood Insurance Program. You should contact your local office that issues building permits to determine if your site is located in a flood-prone area, and if you must comply with the local building requirements mandated by the National Flood Insurance Program.

If you are unable to access the internet or require a hardcopy of any of the conditions, limitations, or expiration date for the above referenced NWP, please contact me by telephone at 813-769-7071.

Thank you for your cooperation with our permit program. The Corps Jacksonville District Regulatory Division is committed to improving service to our customers. We strive

to perform our duty in a friendly and timely manner while working to preserve our environment. We invite you to complete our automated Customer Service Survey at: http://corpsmapu.usace.army.mil/cm_apex/f?p=regulatory_survey. Please be aware this Internet address is case sensitive; and, you will need to enter it exactly as it appears above. Your input is appreciated – favorable or otherwise.

Sincerely,

OBRA.LEANNE.ELIZABETH.1266391656

Digitally signed by OBRA.LEANNE.ELIZABETH.1266391656
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA, cn=OBRA.LEANNE.ELIZABETH.1266391656
Date: 2017.10.10 15:01:44 -04'00'

LEANNE OBRA
Project Manager

Enclosures:

1. General Conditions of 33CFR Part 320-330 (1 page)
2. Self-Certification Statement of Compliance (1 page)
3. Permit Transfer Request (1 page)
4. Project Plans (43 pages)

Copies Furnished:

1. Barry Lenz, HDR Engineering, Inc., barry.lenz@hdrinc.com
2. CESAJ-RD-PE- U.S. Army Corps, Regulatory Division, Enforcement Section

GENERAL CONDITIONS
33 CFR PART 320-330

1. The time limit for completing the work authorized ends on **March 18, 2022**.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort of if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow a representative from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

DEPARTMENT OF THE ARMY PERMIT TRANSFER REQUEST

PERMIT NUMBER: SAJ-2017-02335 (NW-LEO)

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. Although the construction period for works authorized by Department of the Army permits is finite, the permit itself, with its limitations, does not expire.

To validate the transfer of this permit and the associated responsibilities associated with compliance with its terms and conditions, have the transferee sign and date below and mail to the U.S. Army Corps of Engineers, Enforcement Section, Post Office Box 4970, Jacksonville, FL 32232-0019.

_____ _____

(TRANSFEREE-SIGNATURE) **(SUBDIVISION)**

_____ _____ _____

(DATE) **(LOT)** **(BLOCK)**

_____

(STREET ADDRESS)

_____

(NAME-PRINTED)

_____

_____

(MAILING ADDRESS)

_____

(CITY, STATE, ZIP CODE)

SELF-CERTIFICATION STATEMENT OF COMPLIANCE

Permit Number: SAJ-2017-02335

Permittee's Name & Address (please print or type):_____

_____

_____

Telephone Number:_____

Location of the Work:_____

_____

Date Work Started:_____ Date Work Completed:_____

PROPERTY IS INACCESSIBLE WITHOUT PRIOR NOTIFICATION: YES _____ NO_____

TO SCHEDULE AN INSPECTION PLEASE CONTACT _____ AT _____

Description of the Work (e.g. bank stabilization, residential or commercial filling, docks, dredging,
etc.):_____

_____

_____

Acreage or Square Feet of Impacts to Waters of the United States: _____

Describe Mitigation completed (if applicable): _____

_____

Describe any Deviations from Permit (attach drawing(s) depicting the deviations):

_____

_____

****

I certify that all work, and mitigation (if applicable) was done in accordance with the limitations and conditions as described in the permit. Any deviations as described above are depicted on the attached drawing(s).

_____
Signature of Permittee

_____
Date

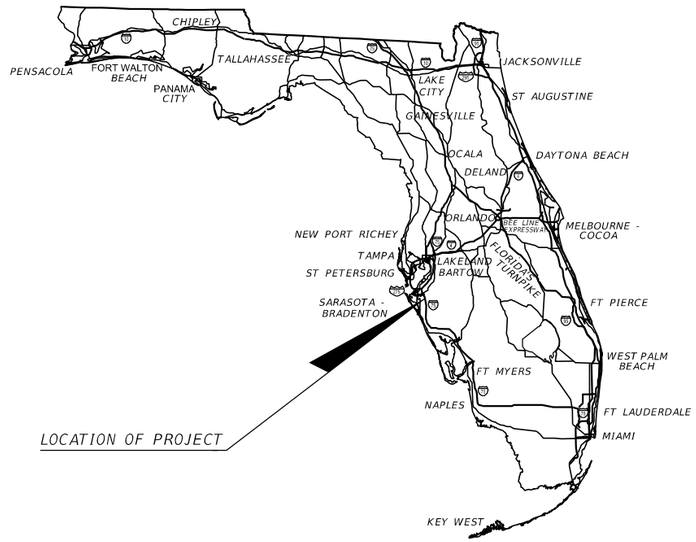
MANATEE COUNTY
PUBLIC WORKS DEPARTMENT

CONTRACT PLANS

MANATEE COUNTY
(6086160)

RYE ROAD
FROM SR 64 TO UPPER MANATEE RIVER ROAD

BRIDGE NO. 134025 - RYE ROAD OVER MILL CREEK BRANCH
BRIDGE NO. 134026 - RYE ROAD OVER MILL CREEK BRANCH



INDEX OF STRUCTURE WIDENING PLANS

Rye Rd. 100% Bridge Submittal

STRUCTURE SHOP DRAWINGS
TO BE SUBMITTED TO:

ANANDA B. KELLEY, P.E.
CARDNO, INC.
380 PARK PLACE BLVD., SUITE 300
CLEARWATER, FLORIDA 33759

PLANS PREPARED BY:

CARDNO
380 PARK PLACE BLVD, STE 300,
CLEARWATER, FL 33759
TEL: (727) 531- 3505
(800) 861-8314

www.cardno.com

Certificate of Authorization No. 29915

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

STRUCTURE PLANS
ENGINEER OF RECORD: ANANDA B. KELLEY, P.E.

P.E. NO.: 65632

KEY SHEET REVISIONS	
DATE	DESCRIPTION

MANATEE COUNTY PROJECT MANAGER: MICHAEL STURM, P.E.

FISCAL YEAR	SHEET NO.
16	B1

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE 134025

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
					P	F	P	F		
LUMP SUM ITEMS	110-3	REMOVAL OF EXISTING STRUCTURE	LEFT CURB, RIGHT 1'-10"	LS/SF	117					
FOUNDATION	455-35	STEEL PILING - HP14X73	PILES 1-7, 3-6, & 4-7	LF	117					
	422-133-3	STEEL SHEET PILING, F&I PERMANENT	END BENTS 1 & 4	SF	30					
	455-144	TEST PILES - STEEL, HP14X73	PILE 2-6	LF	50					
SUBSTRUCTURE	400-4-5	CONCRETE CLASS IV, SUBSTRUCTURE	BENTS 1 - 4	CY	12					
	415-1-5	REINFORCING STEEL, SUBSTRUCTURE	BENTS 1 - 4	LB	1620					
APPROACH SLABS	400-2-10	CONCRETE CLASS II, APPROACH SLABS	APPROACH SLAB 1 & 2	CY	7					
	415-1-9	REINFORCING STEEL, APPROACH SLABS	APPROACH SLAB 1 & 2	LB	820					
SUPERSTRUCTURE	400-2-4	CONCRETE CLASS II, SUPERSTRUCTURE	SPANS 1 - 3	CY	29					
	415-1-4	REINFORCING STEEL, SUPERSTRUCTURE	SPANS 1 - 3	LB	4400					
	458-1-11	BRIDGE DECK EXPANSION JOINT	AT EACH BENT	LF	43					
RAILING/ BARRIERS	460-71-1	METAL TRAFFIC RAILING, THRIE BEAM RETROFIT	LEFT & RIGHT BARRIERS	LF	122					

SUMMARY OF STRUCTURE QUANTITIES - BRIDGE 134026

SECTION	PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
					P	F	P	F		
LUMP SUM ITEMS	110-3	REMOVAL OF EXISTING STRUCTURE	LEFT CURB, RIGHT 1'-10"	LS/SF	117					
FOUNDATION	455-35	STEEL PILING - HP14X73	PILES 1-7 & 3-7	LF	46					
	422-133-3	STEEL SHEET PILING, F&I PERMANENT	END BENTS 1 & 4	SF	30					
	455-144	TEST PILES - STEEL, HP14X73	PILE 2-6	LF	40					
SUBSTRUCTURE	400-4-5	CONCRETE CLASS IV, SUBSTRUCTURE	BENTS 1 - 3	CY	11					
	415-1-5	REINFORCING STEEL, SUBSTRUCTURE	BENTS 1 - 3	LB	1485					
APPROACH SLABS	400-2-10	CONCRETE CLASS II, APPROACH SLABS	APPROACH SLAB 1 & 2	CY	7					
	415-1-9	REINFORCING STEEL, APPROACH SLABS	APPROACH SLAB 1 & 2	LB	820					
SUPERSTRUCTURE	400-2-4	CONCRETE CLASS II, SUPERSTRUCTURE	SPANS 1 & 2	CY	20					
	415-1-4	REINFORCING STEEL, SUPERSTRUCTURE	SPANS 1 & 2	LB	4400					
	458-1-11	BRIDGE DECK EXPANSION JOINT	AT EACH BENT	LF	32					
RAILING/ BARRIERS	460-71-1	METAL TRAFFIC RAILING, THRIE BEAM RETROFIT	LEFT & RIGHT BARRIERS	LF	92					

BRIDGES NO. 134025 & NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: FXH
DRAWN BY: FXH
CHECKED BY: ABK

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

SUMMARY OF QUANTITIES

SHEET NO.: B2

3:14:46 PM 9/30/2016 J:\00193\00193010.07\ms\struct\Br_134025_26\B01SumOfQuantities01.dgn

CONSTRUCTION SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (2016 EDITION) WITH SUPPLEMENTS THERETO.

MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS (FLORIDA GREEN BOOK) (2013 EDITION).

DESIGN SPECIFICATIONS:
FDOT STRUCTURES DESIGN GUIDELINES (SDG) FOR LOAD AND RESISTANCE FACTOR DESIGN (2016 EDITION). FDOT STRUCTURES MANUAL 2016.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), LRFD BRIDGE DESIGN SPECIFICATIONS SEVENTH EDITION/2014 WITH 2015 INTERIM REVISIONS.

DESIGN METHOD:
LOAD AND RESISTANCE FACTOR DESIGN METHOD (LRFD) FOR ALL NEW ELEMENTS UNLESS OTHERWISE NOTED. DESIGN METHOD FOR EXISTING STRUCTURE TO REMAIN IS UNKNOWN.

DESIGN LOADING:
DEAD LOADS:

UNIT WEIGHT OF REINFORCED CONCRETE (INCLUDING REINFORCEMENT)	150 pcf
FUTURE WEARING SURFACE ALLOWANCE (APPLIED OVER PROJECTED PLAN AREA OF THE EXPOSED BRIDGE DECK)	15 psf
GUARDRAIL	40 plf

LIVE LOADS:
HL-93 LOADING FOR ALL NEW CONSTRUCTION. ORIGINAL DESIGN LOADING FOR EXISTING STRUCTURE TO REMAIN IS UNKNOWN.

WIND LOADS:
WIND LOADS ARE IN ACCORDANCE WITH AASHTO, SECTION 3.8., & SDG 2.4.

EARTHQUAKE LOADS:
THE MINIMUM BEARING SUPPORT LENGTH IS DETERMINED IN ACCORDANCE WITH AASHTO, SECTION 4.7.4.4. NO SEISMIC FORCES ARE APPLIED IN ACCORDANCE WITH THE "STRUCTURES DESIGN GUIDELINES", SECTION 2.3.1.

TEMPERATURE EFFECTS:
STRUCTURE MATERIAL: CONCRETE

MEAN	RISE FROM MEAN	FALL FROM MEAN	RANGE
70°	+35°	+35°	70°

COEFFICIENT OF THERMAL EXPANSION: 0.000006 PER °F.

ENVIRONMENT:
SUPERSTRUCTURE - SLIGHTLY AGGRESSIVE
SUBSTRUCTURE - SLIGHTLY AGGRESSIVE (CONCRETE)
MODERATELY AGGRESSIVE (STEEL)

CONCRETE:

CLASS	MINIMUM 28-DAY COMPRESSIVE STRENGTH(PSI)	LOCATION OF CONCRETE IN STRUCTURE
II (BRIDGE DECK)	f'c = 4,500	C.I.P. CONCRETE DECK, APPROACH SLABS
IV	f'c = 5,500	C.I.P. SUBSTRUCTURE

CONCRETE COVER:
CONCRETE COVER SHOWN IN PLANS DOES NOT INCLUDE PLACEMENT AND FABRICATION TOLERANCES UNLESS SHOWN AS "MINIMUM COVER". SEE FDOT STANDARD SPECIFICATIONS FOR ALLOWABLE TOLERANCES.

CHAMFERS:
PROVIDE ¾" CHAMFER ON ALL EXPOSED EDGES, EXCEPT AS NOTED OTHERWISE.

SCREEDING DECK SLABS:
THE RIDING SURFACE OF THE BRIDGE DECK SHALL BE SCREEDED TO FINISHED GRADE WITH NO ALLOWANCE FOR PERMANENT CAMBER.

REINFORCING STEEL:
ALL REINFORCING STEEL SHALL BE ASTM A615, GRADE 60. ALL DIMENSIONS LOCATIONS OF REINFORCING ARE TO CENTERLINE OF BARS EXCEPT WHERE THE CLEAR DIMENSION IS SHOWN TO FACE OF CONCRETE.

PILE REQUIREMENTS:
SEE "FOUNDATION LAYOUT SHEET" FOR PILE SIZES.

UTILITIES:
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO UNCOVER AND VERIFY THE LOCATION OF THE EXISTING UTILITIES IN THE VICINITY OF PILE DRIVING OPERATION. UNLESS DIRECTED OTHERWISE BY THE ENGINEER, EXISTING UTILITIES MUST BE PROTECTED DURING CONSTRUCTION BY THE CONTRACTOR.

TURBIDITY CONTROL:
PROVIDE AND MAINTAIN FLOATING TURBIDITY BARRIERS AS REQUIRED TO CONTROL TURBIDITY CAUSED BY CONSTRUCTION OPERATIONS IN ACCORDANCE WITH PERMIT REQUIREMENTS.

JOINTS IN CONCRETE:
CONSTRUCTION JOINTS WILL BE PERMITTED ONLY AT LOCATIONS INDICATED IN THE PLANS. ADDITIONAL CONSTRUCTION JOINTS OR ALTERATIONS TO THOSE SHOWN SHALL REQUIRE APPROVAL OF THE ENGINEER. ALL CONTACTING SURFACES SHALL BE COATED WITH AN APPROVED EPOXY BONDING COMPOUND IN ACCORDANCE WITH THE SPECIFICATIONS IMMEDIATELY PRIOR TO CASTING THE NEW CONCRETE ADJACENT TO EXISTING CONCRETE. THE EPOXY BONDING COMPOUND SHALL BE APPLIED IN A MANNER THAT MINIMIZES THE ELAPSED TIME BETWEEN APPLICATION AND THE CASTING OF THE NEW CONCRETE. THE USE OF OTHER METHODS NOT UTILIZING EPOXY BONDING COMPOUND WILL REQUIRE THE PRIOR APPROVAL OF THE ENGINEER.

EXPANSION JOINTS:
EXISTING EXPANSION JOINTS TO REMAIN. PROVIDE NEW EXPANSION JOINTS FOR WIDENED SECTIONS IN ACCORDANCE WITH STANDARD SPECIFICATION 400-10.

SURVEY MARKERS:
CONTRACTOR SHALL PROTECT ALL SURVEY MARKERS FROM DAMAGE WITHIN THE PROJECT LIMITS EXCEPT AS NOTED HEREIN. THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND REPLACEMENT OF SURVEY MARKERS LOCATED ON STRUCTURES TO BE REMOVED WITH THE COUNTY PROJECT ENGINEER.

VERTICAL DATUM:
ELEVATIONS ARE ACCORDING TO THE NATIONAL GEODECTIC VERTICAL DATUM OF 1929 (NGVD 29).

EXISTING CONDITIONS:
THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND SHALL ADVISE THE ENGINEER OF ANY DISCREPANCIES BETWEEN SUCH FIELD CONDITIONS AND THE INFORMATION CONTAINED IN THESE PLANS, PRIOR TO THE BEGINNING OF CONSTRUCTION OF THE AFFECTED ELEMENT.

CONSTRUCTION SEQUENCE:
REFER TO THE CONSTRUCTION SEQUENCE PLAN SHEET FOR DETAILS.

BID ITEMS NOTES:
1. PAYMENT FOR INCIDENTAL ITEMS NOT SPECIFICALLY COVERED IN THE INDIVIDUAL PAY ITEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE BID ITEMS.

2. REMOVAL OF EXISTING STRUCTURES. REMOVE EXISTING GUARDRAIL CONCRETE CURB. THE ESTIMATED PLAN AREA OF CURB TO BE REMOVED UNDER PAY ITEM 110-3, REMOVAL OF EXISTING STRUCTURES IS APPROX. 117 SQ FT.

3. NO SEPARATE PAYMENT WILL BE MADE FOR EXCAVATIONS FOR CONSTRUCTION OF STRUCTURES. ALL COSTS FOR EXCAVATION SHALL BE INCIDENTAL TO THE ELEMENT REQUIRING SUCH WORK.

4. AFTER REMOVING THE EXISTING GUARDRAIL FROM THE LEFT EDGE OF THE BRIDGE, GRIND THE EXPOSED ANCHOR BOLTS TO 1" BELOW THE SURFACE OF THE ADJACENT CONCRETE, COAT WITH ZINC RICH PAINT, AND PATCH. COST SHALL BE INCLUDED UNDER PAY ITEM 110-3, REMOVAL OF EXISTING STRUCTURES.

5. THE COST OF THE TYPE HSHV ADHESIVE BONDING MATERIAL SHALL BE INCLUDED WITH THE COST OF REINFORCING STEEL, PAY ITEMS 415-1-4, 415-1-5, AND 415-1-9.

6. THE COST OF THE NS CONCRETE, CLEAN COMPACTED FILL, AND MISCELANEOUS ASPHALT BEHIND THE WINGWALLS SHALL BE INCLUDED WITH THE COST OF SUBSTRUCTURE CONCRETE, PAY ITEM 400-4-5.

7. THE CONTRACTOR SHOULD BE AWARE THAT SOME OF THE PAY ITEMS (PRICE SCHEDULE) MAY HAVE CONTINGENCY QUANTITIES. PAYMENT SHALL BE MADE ONLY FOR FINAL IN-PLACE QUANTITIES.

SURVEY MARKER ON BRIDGE No. 134025:
1. A MANATEE COUNTY DISK STAMPED **BM R-5 24.90** IS LOCATED ON TOP OF THE CAP OF END BENT 1 AT THE EAST END, 16'± EAST OF THE CENTERLINE OF RYE ROAD. THE ELEVATION IS RECORDED AS ELEV. 24.913' NGVD '29.

2. THE CONTRACTOR SHALL SECURE THE SERVICES OF A FLORIDA LICENSED SURVEYOR TO COORDINATE WITH THE MANATEE COUNTY SURVEYOR. THE CONTRACTOR'S SURVEYOR SHALL PROVIDE A TEMPORARY BENCHMARK PRIOR TO DEMOLITION OF THE BRIDGE AND DELIVER THE DISK TO THE COUNTY AT THE LOCATION BELOW. THE CONTRACTOR IS TO THEN INSTALL A BENCHMARK IN THE NEW END BENT CAP AT THE EAST END OF END BENT 1 TO THE NAVD '88 DATUM. THE BENCHMARK DISK WILL BE FURNISHED BY MANATEE COUNTY. THE CONTRACTOR'S SURVEYOR SHALL THEN DETERMINE THE ELEVATION AND PROVIDE THE DATA TO MANATEE COUNTY.

3. THE CONTRACTOR'S SURVEYOR IS TO COORDINATE WITH THE MANATEE COUNTY SURVEYOR, TODD BOYLE, SURVEY DIVISION MANAGER, 1112 MANATEE AVE WEST, BRADENTON, FLORIDA, 34205, (941) 749-3024 EXT. 3024. TODD.BOYLE@MYMANATEE.ORG.

4. THE COST OF INSTALLING THE MARKERS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE END BENT CAP CONSTRUCTION, CONC. CLASS IV, SUBSTRUCTURE.

BRIDGES NO. 134025 & NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: FXH
DRAWN BY: AAM
CHECKED BY: FXH

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

GENERAL NOTES (1 OF 2)

SHEET NO.: B3

3:14:47 PM 9/30/2016 J:\00193\00193010.07\ms\struct\Br_134025_26\B01GeneralNotes02.dgn

SURVEY MARKER ON BRIDGE No. 134026:

1. A MANATEE COUNTY RIVET AND DISK MARKED "MAN. CTY. B.M." IS LOCATED ON TOP OF THE CURB AT END BENT 3 AT THE NORTHEAST CORNER OF THE BRIDGE, 12'± EAST OF THE CENTERLINE OF RYE ROAD. THE ELEVATION IS RECORDED AS ELEV. 25.476' NGVD '29. ALSO, AT THE SOUTHEAST CORNER OF THE BRIDGE, AN ADDITIONAL MANATEE COUNTY DISK IS LOCATED ON TOP OF THE CAP OF END BENT 1 AT THE EAST END, 16'± EAST OF THE CENTERLINE OF RYE ROAD. HOWEVER, NO ELEVATION IS RECORDED.

2. THE CONTRACTOR SHALL SECURE THE SERVICES OF A FLORIDA LICENSED SURVEYOR TO COORDINATE WITH THE MANATEE COUNTY SURVEYOR. THE CONTRACTOR'S SURVEYOR SHALL PROVIDE A TEMPORARY BENCHMARK PRIOR TO DEMOLITION OF THE BRIDGE AND DELIVER THE DISKS TO THE COUNTY AT THE LOCATION BELOW. THE CONTRACTOR IS TO THEN INSTALL A BENCHMARK IN THE NEW END BENT CAP AT THE EAST END OF END BENT 1 TO THE NAVD '88 DATUM. THE BENCHMARK DISK WILL BE FURNISHED BY MANATEE COUNTY. THE CONTRACTOR'S SURVEYOR SHALL THEN DETERMINE THE ELEVATION AND PROVIDE THE DATA TO MANATEE COUNTY.

3. THE CONTRACTOR'S SURVEYOR IS TO COORDINATE WITH THE MANATEE COUNTY SURVEYOR, TODD BOYLE, SURVEY DIVISION MANAGER, 1112 MANATEE AVE WEST, BRADENTON, FLORIDA, 34205, (941) 749-3024 EXT. 3024. TODD.BOYLE@MYMANATEE.ORG.

4. THE COST OF INSTALLING THE MARKERS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR THE END BENT CAP CONSTRUCTION, CONC. CLASS IV, SUBSTRUCTURE.

UTILITY COORDINATION.

1. MR. GREG COOKER, WEST AREA RELOCATIONS COORDINATOR WITH FLORIDA POWER & LIGHT (FP&L) SHALL BE NOTIFIED TO ATTEND MANATEE COUNTY'S RYE BRIDGE WIDENINGS PRE-CONSTRUCTION MEETING.

   FP&L CONTACT INFORMATION:
   MR. GREG COKER
   FLORIDA POWER & LIGHT - DISTRIBUTION
   WEST AREA RELOCATIONS COORDINATOR
   1253 12th AVENUE EAST
   PALMETTO, FL 34221
   941-723-4430 (W)
   941-704-9087 (C)
   Greg.Coker@fpl.com

2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERY THE LOCATION OF THE POWER LINE PRIOR TO CONSTRUCTION. CONTRACTOR SHALL COORDINATE PILE DRIVING ACTIVITIES WITH FP&L; AND DETERMINE IF DE-ENERGIZING POWER LINES IS REQUIRED.

3. IN THE EVENT DE-ENERGIZING IS REQUIRED CONTRACTOR SHALL NOTIFY FP&L AT LEAST SIX WEEKS IN ADVANCE PRIOR TO DE-ENERGIZING POWER LINES.

DESIGNATIONS:

PCF = POUNDS PER CUBIC FOOT	ES = EACH SIDE
PLF = POUNDS PER LINEAL FOOT	BTWN = BETWEEN
BOTT. = BOTTOM	EJ = EXPANSION JOINT
EF = EACH FACE	E = EXPANSION

BRIDGES NO. 134025 & NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: FXH
DRAWN BY: AAM
CHECKED BY: FXH

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

GENERAL NOTES (2 OF 2)

SHEET NO.: B4

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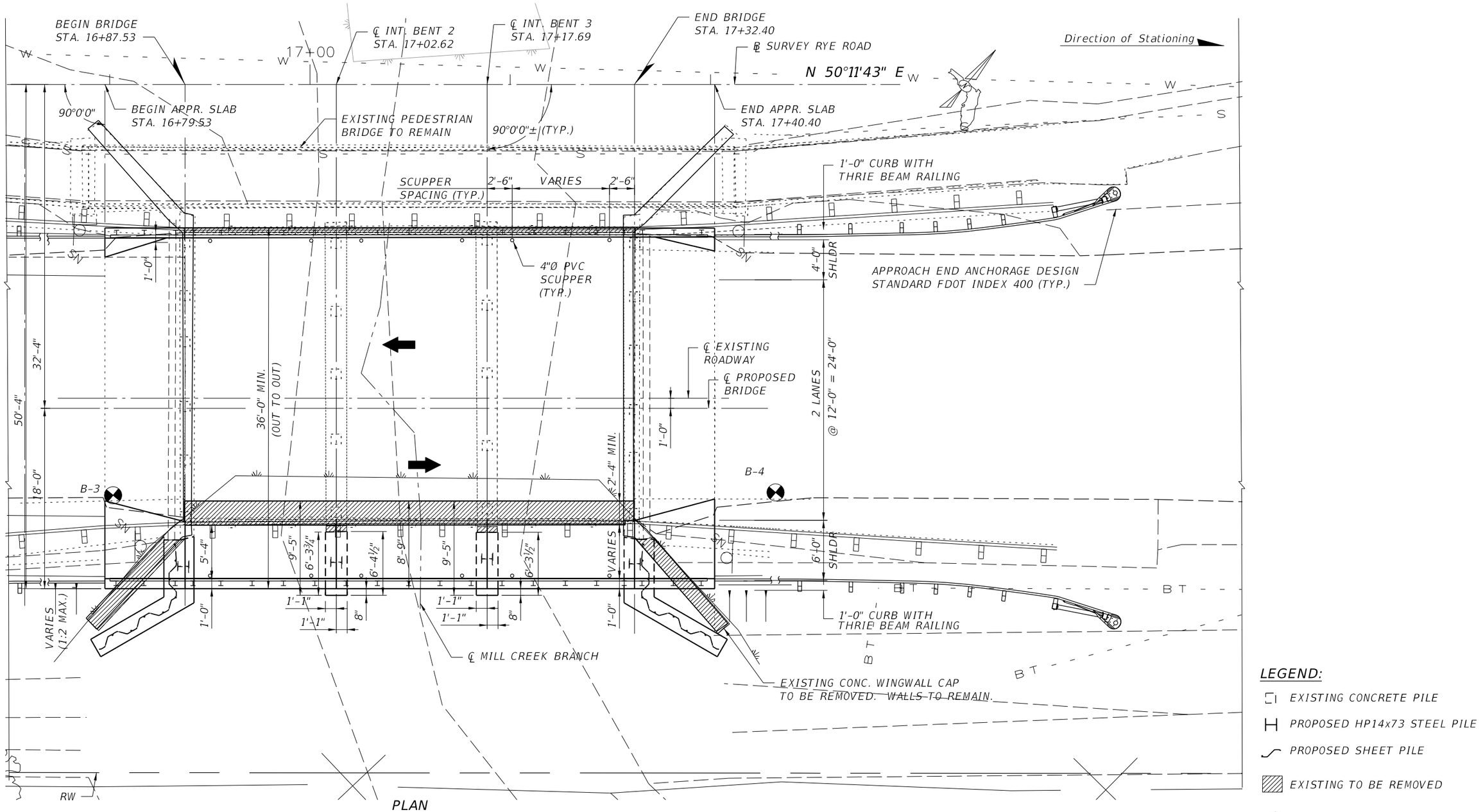

PLAN

LEGEND:

- EXISTING CONCRETE PILE
- PROPOSED HP14x73 STEEL PILE
- PROPOSED SHEET PILE
- EXISTING TO BE REMOVED
- STP BORING LOCATION

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: RFN
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

PLAN AND ELEVATION

SHEET NO.: BI-1

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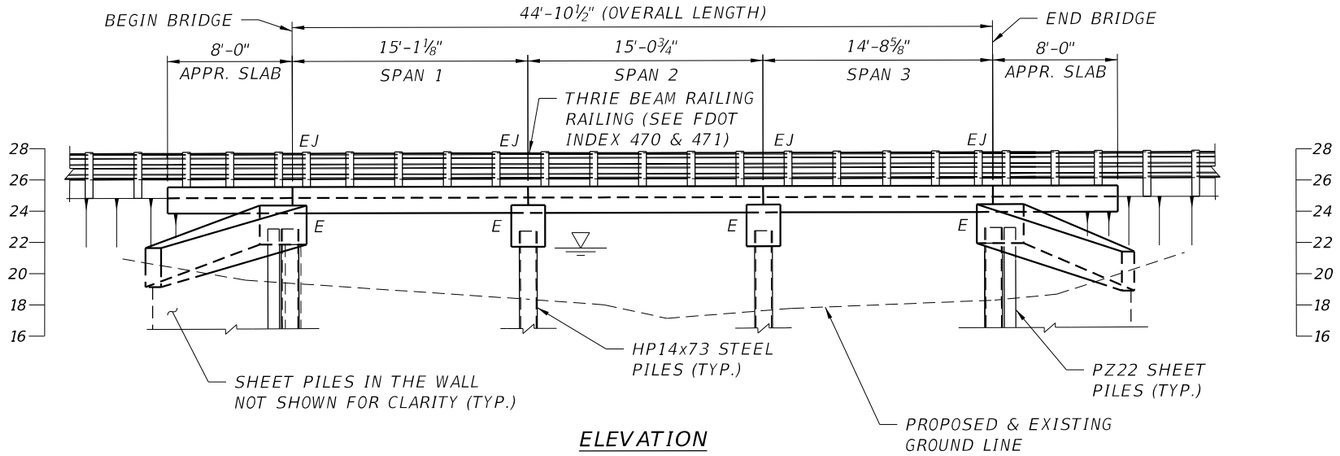

ELEVATION

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: RFN
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

ELEVATION

SHEET NO.: BI-2

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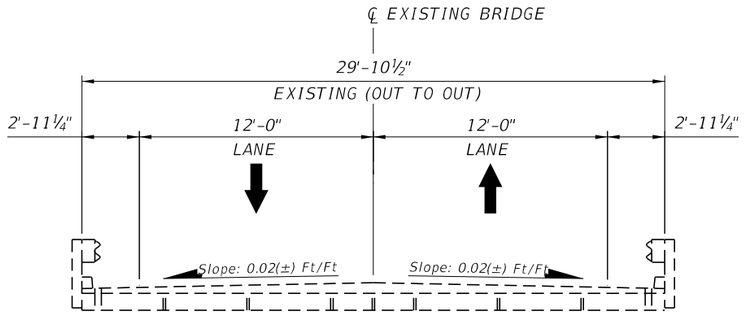
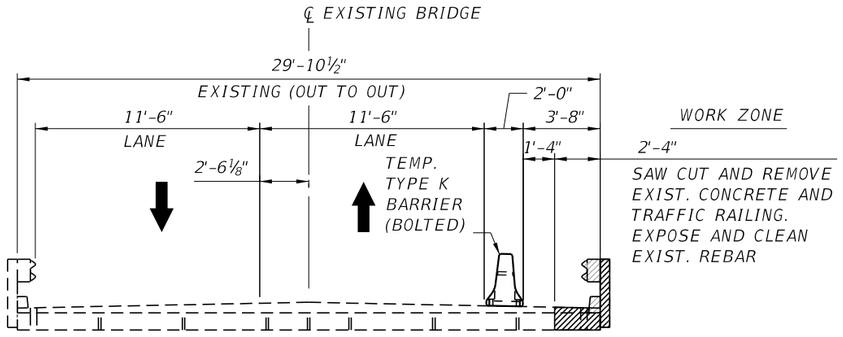


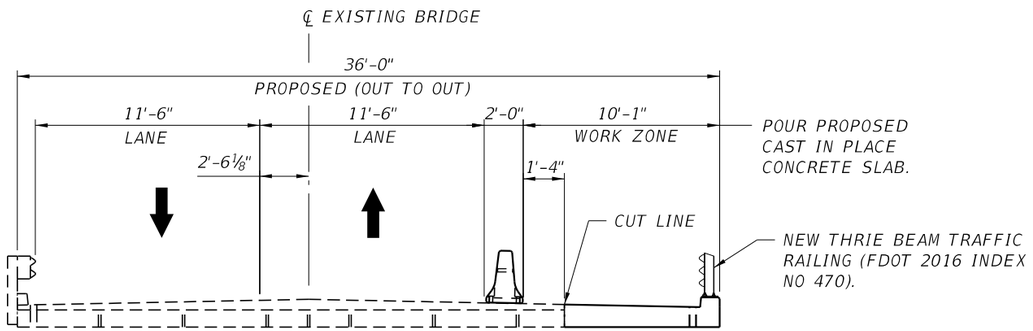
EXISTING CONDITION



PHASE 1 - CONSTRUCTION, STEP 1

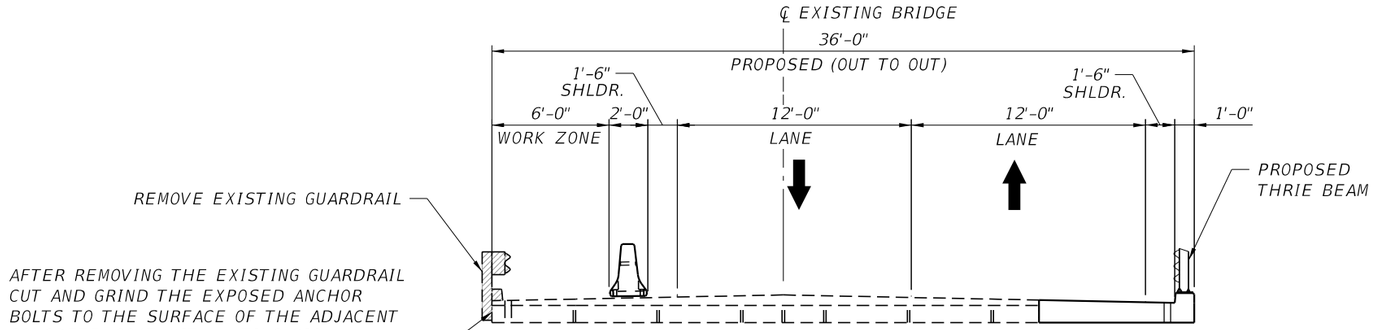
NOTE: COMPLETE SUBSTRUCTURE WIDENING PRIOR TO PHASE 1.

1. SHIFT TRAFFIC LANES TO THE WEST – MAKE EACH LANE 11'-6" FOOT WIDE.
2. INSTALL TEMPORARY K BARRIER.
3. REMOVE EAST SIDE EXISTING BARRIER.
4. SAW CUT AND REMOVE 2'-4" OF EXISTING CONCRETE.
5. EXPOSE AND CLEAN EXISTING REBAR.



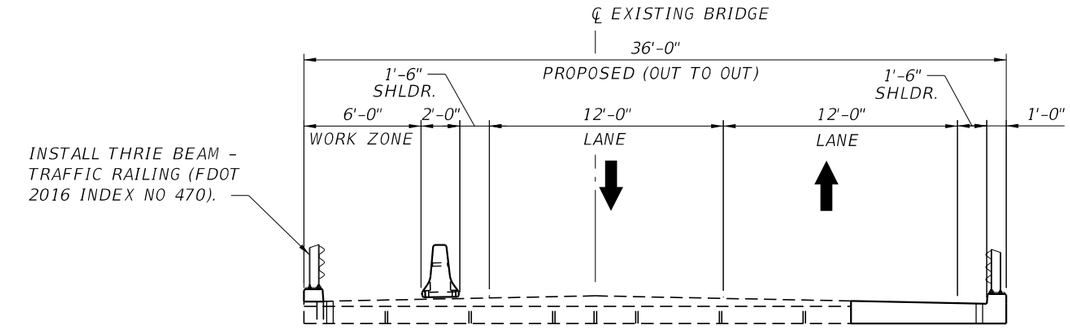
PHASE 1 - CONSTRUCTION, STEP 2

1. PLACE PROPOSED SLAB REINFORCEMENT.
2. POUR PROPOSED CAST IN PLACE CONCRETE SLAB UNIT.
3. INSTALL NEW THRIE BEAM TRAFFIC RAILING.



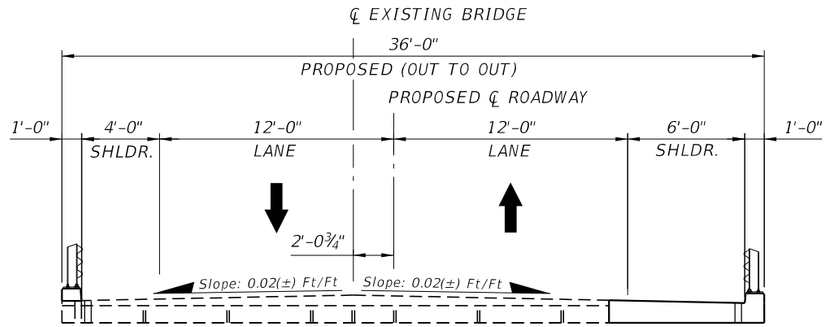
PHASE 2 - CONSTRUCTION, STEP 1

1. SHIFT TRAFFIC LANES TO THE EAST – MAKE EACH LANE 12 FEET WIDE.
2. MOVE TEMPORARY K BARRIER TO NEW LOCATION.
3. REMOVE WEST SIDE EXISTING GUARDRAIL.



PHASE 2 - CONSTRUCTION, STEP 2

1. INSTALL NEW THRIE BEAM TRAFFIC RAILING.
2. INSTALL NEW SCUPPER.
3. REMOVE TEMPORARY K BARRIER.
4. SHIFT TRAFFIC LANES TO FINAL LOCATION.



PROPOSED TYPICAL SECTION

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: MAV
DRAWN BY: MAV
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

CONSTRUCTION SEQUENCE

SHEET NO.: BI-3

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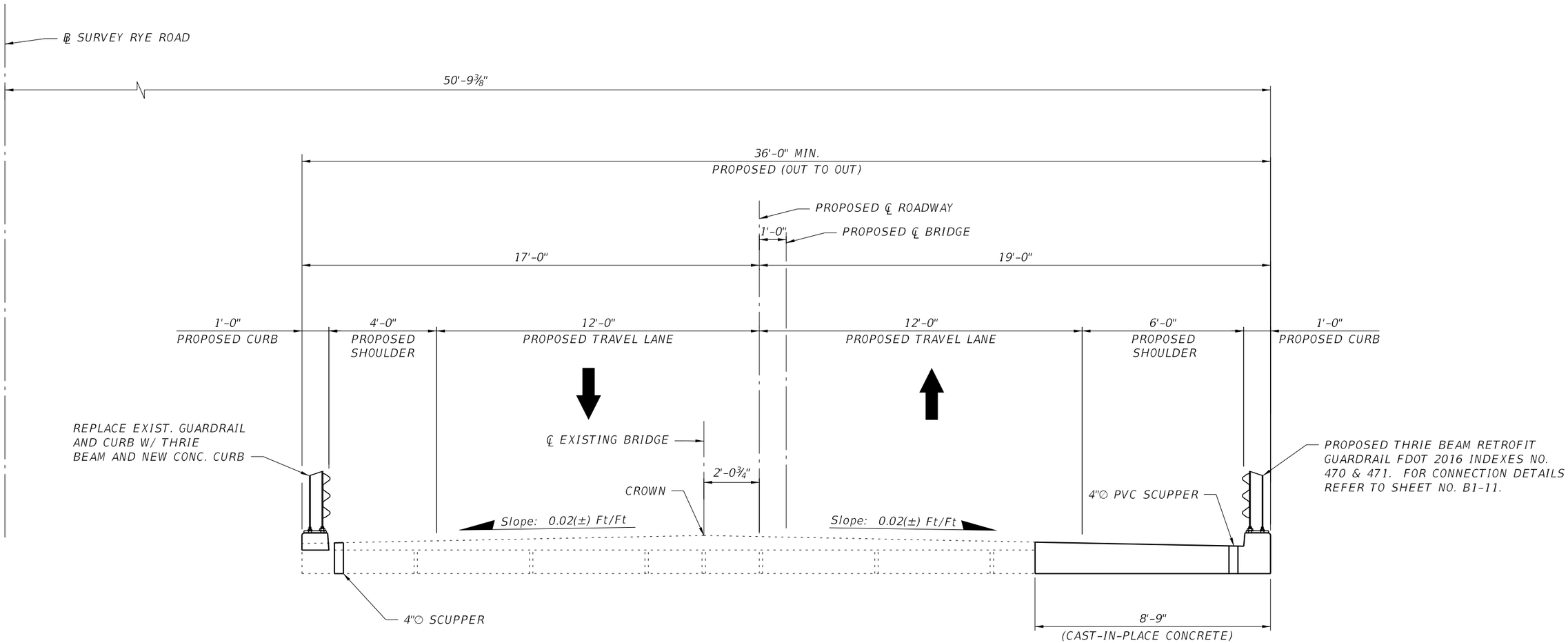

TYPICAL SECTION

NOTE: SCUPPER TO BE RELOCATED TO THE NEW CURB LINE ALONG THE ROADWAY STATIONING TO MATCH THE EXISTING SCUPPER LOCATIONS.

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: RFN
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

TYPICAL SECTION

SHEET NO.: B1-4

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SOURCE: GOOGLE EARTH PRO

0' 10' 20' 40'

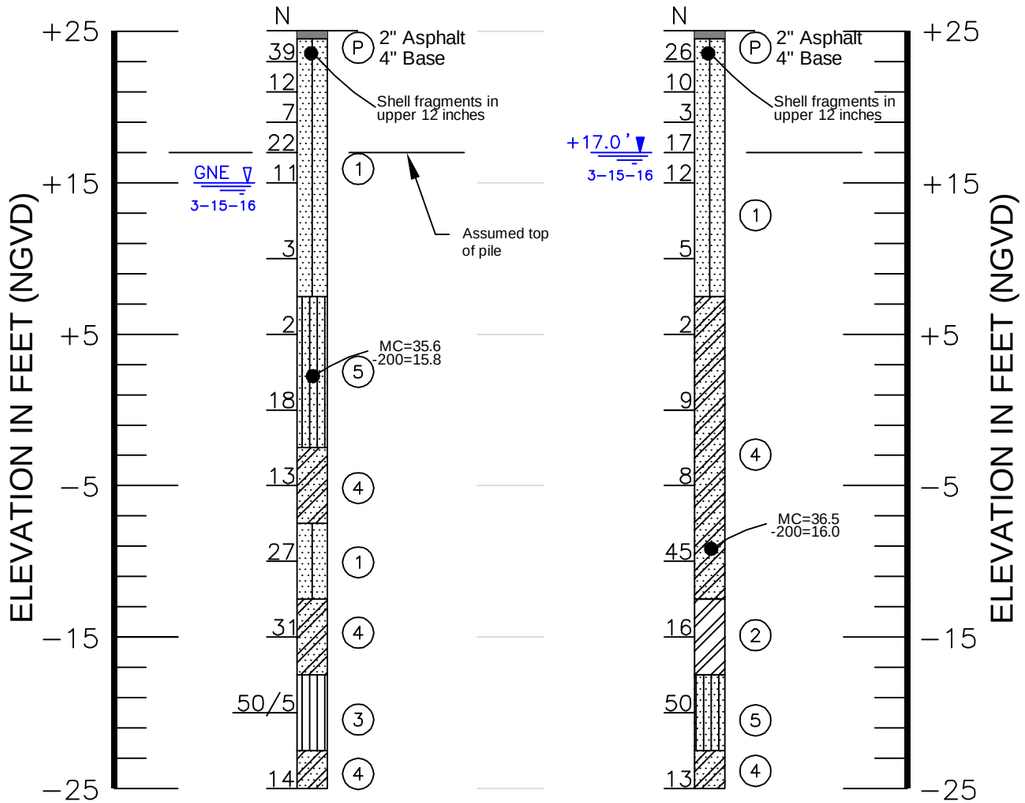
B-3 APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING

CORROSION TEST RESULTS

Sample Location	RESISTIVITY ohm-cm	CHLORIDES ppm	SULFATES ppm	pH
B-3 (2'-4' & 4'-6') & B-4 (2'-4')	4,600	21.6	<1.6	7.2

	Steel	Concrete
Substructure Environment Classification:	Moderately Aggressive	Slightly Aggressive

BORING NO.	B-3	B-4
STATION:	16+80	17+40
OFFSET:	40' Rt.	40' Rt.
ELEVATION:	+25' +/-	+25' +/-



GENERAL LEGEND

- (P) Asphaltic concrete over limestone gravel base
- (1) Gray, dark gray, and brown fine SAND with trace to slight amounts of silt (SP, SP-SM)
- (2) Light gray silty, sandy CLAY (CL)
- (3) Light gray to gray sandy, clayey SILT (ML) (Weathered Limestone)
- (4) Gray to brown clayey SAND (SC)
- (5) Gray to dark gray silty SAND with sand size to gravel size limestone gravel fragments (SM)

N – Indicates the number of blows of a 140 pound hammer, freely falling a distance of 30 inches, required to drive a 2-inch diameter sampler 12 inches (ASTM D 1586)

B-3 – Standard Penetration Test (SPT) Boring and number

SP – Unified Soil Classification System Group Symbol (ASTM D 2487)

+17.0 ▽ 3-15-16 – Elevation of groundwater (feet-NGVD) & date measured

GNE ▽ 3-15-16 – Groundwater not encountered prior to the introduction of drilling mud

50/5 – Indicates fifty SPT hammer blows were required to drive the sampler 5 inches

MC – Moisture Content (%)

-200 – Amount Finer Than The U.S. Standard No. 200 Sieve (%)

ENGINEERING CLASSIFICATION (SAFTEY HAMMER)

GRANULAR MATERIALS

Relative Density	SPT BLOW-COUNTS
Very Loose	Less than 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

SILTS AND CLAYS

Consistency	BLOW-COUNTS
Very Soft	Less than 2
Soft	2 - 4
Firm	4 - 8
Stiff	8 - 15
Very Stiff	15 - 30
Hard	Greater than 30

STANDARD PENETRATION TEST DATA

SPOON INSIDE DIA.	1.375 inch
SPOON OUTSIDE DIA.	2.00 inches
AVG. HAMMER DROP	30 inches
HAMMER WEIGHT	140 pounds

NOTES

(1) Borings were drilled on March 15, 2016 using a track-mounted BR-2500 drilling rig.

(2) Strata boundaries are approximate and represent soil strata at each test hole location only. Soil transitions may be more gradual than implied.

(3) Groundwater depths shown on the subsurface profiles represent the groundwater surfaces on the dates shown. Groundwater level fluctuations should be anticipated throughout the year.

(4) Station, offset, and elevation were estimated based on the topographic survey provided by Cardno.

No.	REVISIONS	DATE	BY
1	ADD BORING ELEVATION	5-11-16	JMJ

SCALE AS_NOTED
DESIGNED BY JMJ
DRAWN BY JMJ
CHECKED BY KEA

DUNKELBERGER ENGINEERING & TESTING
8260 VICO COURT, UNIT B
SARASOTA, FLORIDA 34240
CERTIFICATE OF AUTHORIZATION 6870

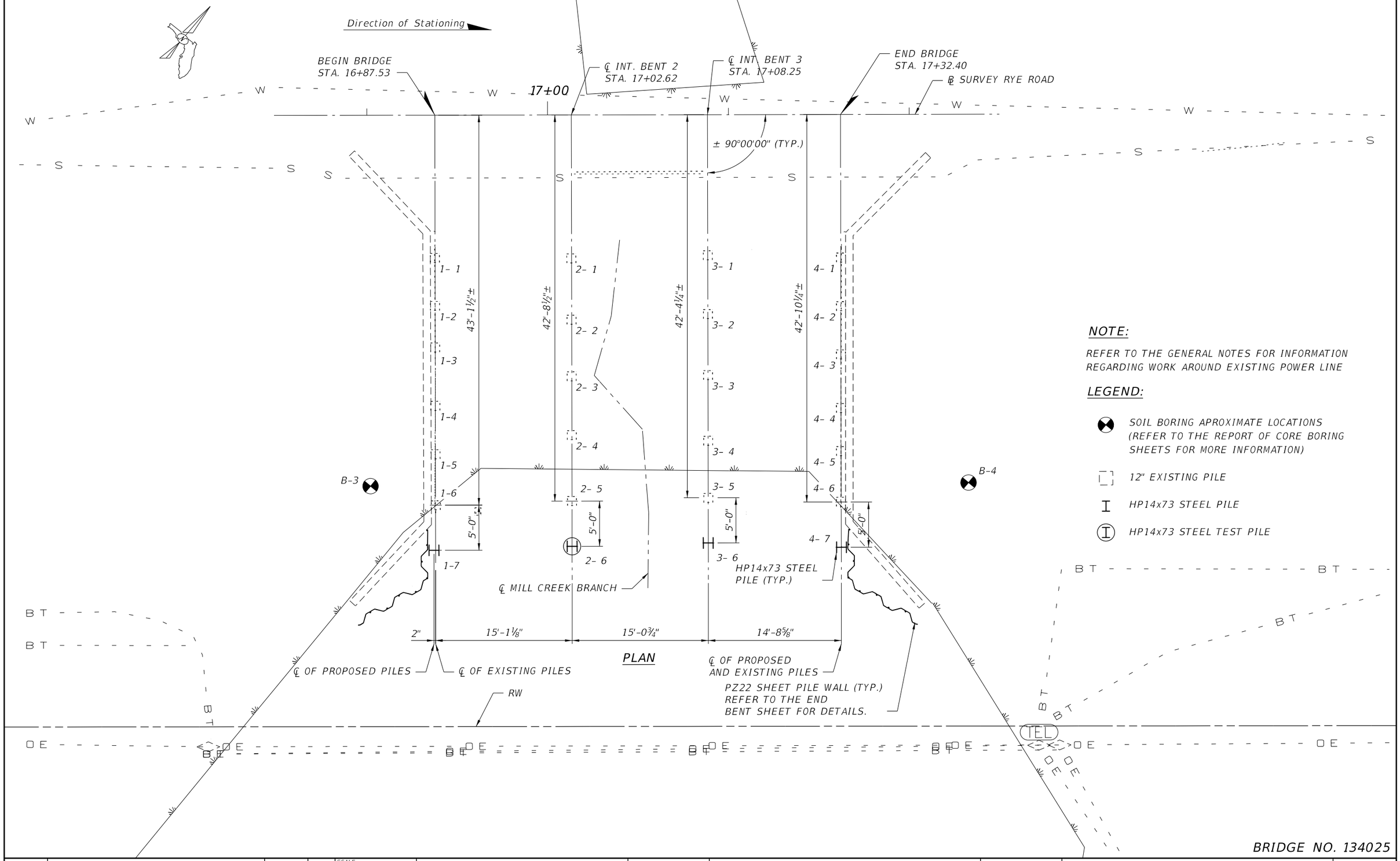
DATE 4/2016
PROJECT NO. 225338

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER JAMES M. JACKSON
FL. LICENSE NO. 77733

REPORT OF CORE BORINGS FOR STRUCTURES
PROJECT NAME: RYE ROAD BRIDGE 134025 MANATEE COUNTY, FLORIDA

SHEET NO. B1-5



PLAN

NOTE:

REFER TO THE GENERAL NOTES FOR INFORMATION REGARDING WORK AROUND EXISTING POWER LINE

LEGEND:

- SOIL BORING APROXIMATE LOCATIONS (REFER TO THE REPORT OF CORE BORING SHEETS FOR MORE INFORMATION)
- 12" EXISTING PILE
- HP14x73 STEEL PILE
- HP14x73 STEEL TEST PILE

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: FXH
DRAWN BY: AAM
CHECKED BY: FXH

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

FOUNDATION LAYOUT

SHEET NO.: BI-6

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PILE DATA TABLE

INSTALLATION CRITERIA								DESIGN CRITERIA								
BENT NUMBER / PILE NUMBER	PILE SIZE (in.)	NOMINAL BEARING RESISTANCE (tons)	NOMINAL UPLIFT RESISTANCE (tons)	MINIMUM TIP ELEVATION (ft.)	TEST PILE LENGTH (ft.)	REQUIRED JET ELEVATION (ft.)	REQUIRED PREFORM ELEVATION (ft.)	FACTORED DESIGN LOAD (tons)	FACTORED DESIGN UPLIFT LOAD (tons)	DOWN DRAG (tons)	TOTAL SCOUR RESISTANCE (tons)	NET SCOUR RESISTANCE (tons)	100-YEAR SCOUR ELEVATION (ft.)	LONG TERM SCOUR ELEVATION (ft.)	Ø COMPRESSION	Ø UPLIFT
1-7	HP14x73	40	N/A	-6.0	N/A	N/A	N/A	24	N/A	N/A	2	0	12.8	12.8	0.65	0.65
2-6	HP14x73	54	N/A	-6.0	50	N/A	N/A	33	N/A	N/A	2	0	12.8	12.8	0.65	0.65
3-6	HP14x73	54	N/A	-6.0	N/A	N/A	N/A	33	N/A	N/A	2	0	12.8	12.8	0.65	0.65
4-7	HP14x73	40	N/A	-6.0	N/A	N/A	N/A	24	N/A	N/A	2	0	12.8	12.8	0.65	0.65

PILE CUT-OFF ELEVATIONS

PIER or BENT NUMBER	PILE 6	PILE 7
1	NA	22.93
2	22.76	NA
3	22.76	NA
4	NA	22.93

$$\frac{\text{Factored Design Load + Net Scour Resistance + Down Drag}}{Ø} \leq \text{Nominal Bearing Resistance}$$

TENSION RESISTANCE – The ultimate side friction capacity that must be obtained below the 100 year scour elevation to resist pullout of the pile (Specify only when design requires tension capacity).

TOTAL SCOUR RESISTANCE – An estimate of the ultimate static side friction resistance provided by the scourable soil.

NET SCOUR RESISTANCE – An estimate of the ultimate static side friction resistance provided by the soil from the required preformed or jetting elevation to the scour elevation.

100-YEAR SCOUR ELEVATION – Estimated elevation of scour due to the 100 year storm event.

LONG TERM SCOUR ELEVATION – Estimated elevation of scour used in design for extreme event loading.

PILE INSTALLATION NOTES [Notes Date 7-01-13]:

Contractor to verify location of all utilities prior to any pile installation activities.

Minimum Tip Elevation is required for lateral stability.

When a required jetting elevation is shown, the jet shall be lowered to the elevation and continue to operate at this elevation until the pile driving is completed. If jetting or preforming elevations differ from those shown on the table, the Engineer shall be responsible for determination of the required driving resistance.

No jetting will be allowed without the approval of the Engineer.

The Contractor should not anticipate being allowed to jet piles below the 100-year scour elevation or required jet elevation, whichever is deeper.

At each Bent, pile driving is to commence at the center of the Bent and proceed outward.

PILE CUT-OFF NOTE:

Contractor shall verify the existing top-of-bent elevations on which the pile cut-off elevations are based. Refer to the End Bent plan sheet for more information.

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: AAM
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

PILE DATA TABLE

SHEET NO.: BI-7

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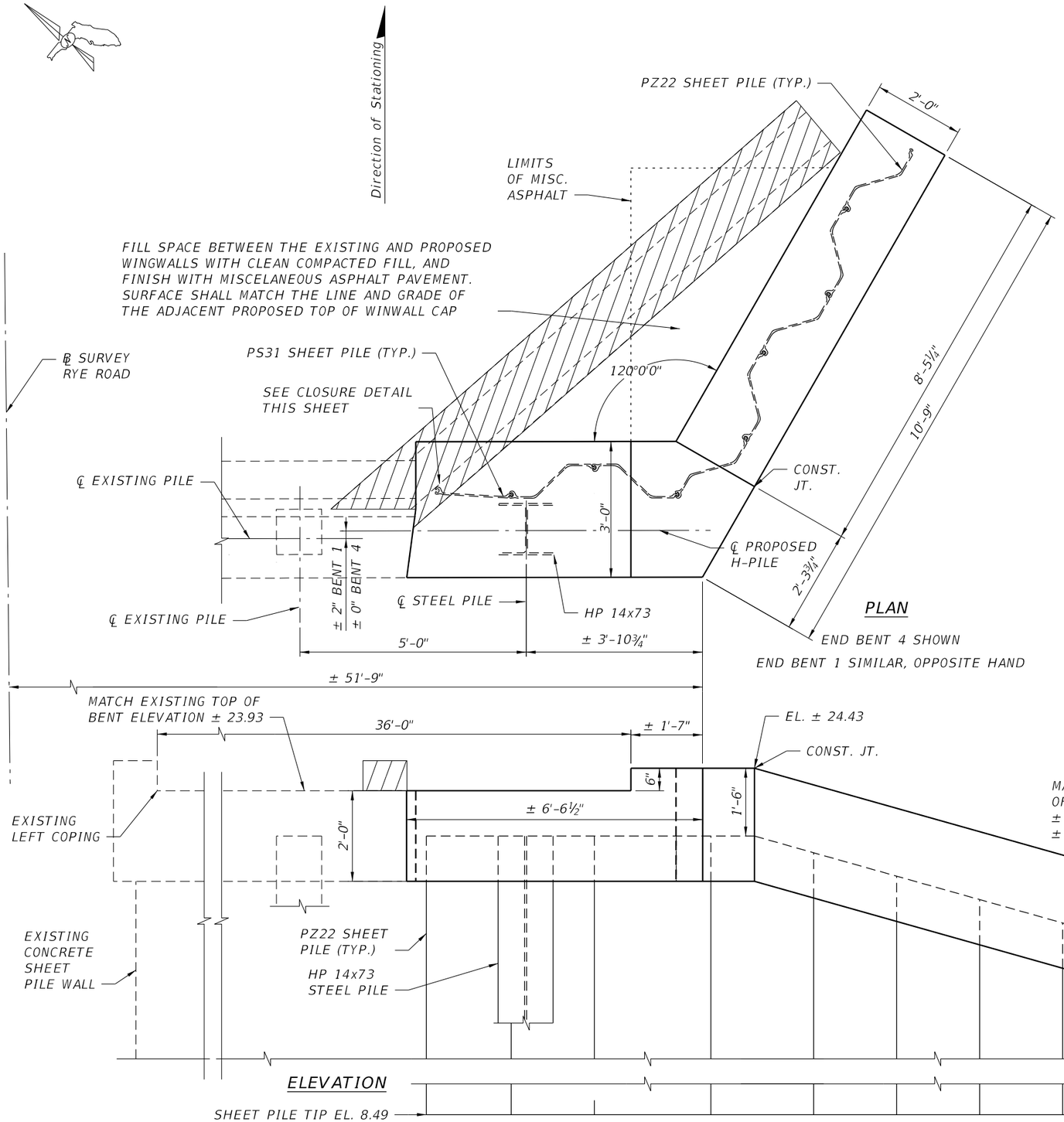

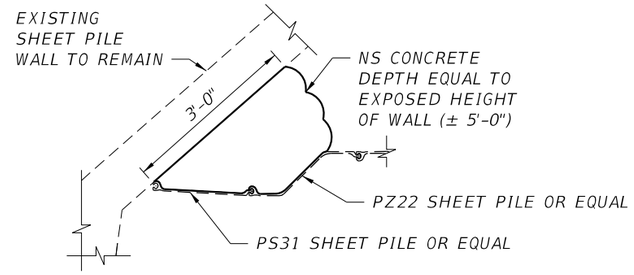

CLOSURE DETAIL

LEGEND:

- EXISTING TO BE REMOVED
- EXISTING CONCRETE PILE
- PROPOSED PS31 SHEET PILE
- PROPOSED PZ22 SHEET PILE
- PROPOSED HP 14x73 STEEL PILE

NOTES:

1. WORK THIS SHEET WITH THE END BENT DETAILS SHEET. REFER TO THE END BENT DETAILS SHEET FOR SECTIONS A-A, B-B, AND C-C.
2. REMOVE EXISTING WINGWALL CAP TO PROVIDE FOR INSTALLATION OF THE PROPOSED STEEL SHEET PILE WALL. ABANDON EXISTING WINGWALL SHEET PILES IN PLACE.
3. AFTER REMOVING THE EXISTING CHEEKWALL, GRIND THE EXPOSED REINFORCING STEEL TO THE SURFACE OF THE ADJACENT CONCRETE AND APPLY A ZINC-RICH PAINT. FINISH SURFACE TO MATCH THE LINE AND GRADE OF THE ADJACENT CONCRETE.
4. MINIMUM SHEET PILE SECTON PROPERTIES (HOT ROLL), USE PZ22 OR EQUAL:

   THICKNESS OF FLANGE: TF=0.375 IN
   THICKNESS OF WEB:TW=0.375 IN
   YIELD STRENGTH:FY=39,000 PSI
   SECTION MODULUS:S=18.1 IN3/FT
   MOMENT OF INERTIA:I=84.38 IN4/FT

   A PS31 SHEET PILE MAY BE USED ADJACENT TO THE EXISTING SHEET PILE WALL TO REMAIN. REFER TO THE CLOSURE DETAIL IN THIS SHEET FOR MORE INFORMATION.
5. CONTRACTOR SHALL VERIFY DIMENSIONS AND ELEVATIONS SHOWN ± ON THIS SHEET.

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: AAM
CHECKED BY: FMH

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

END BENT

SHEET NO.: BI-8

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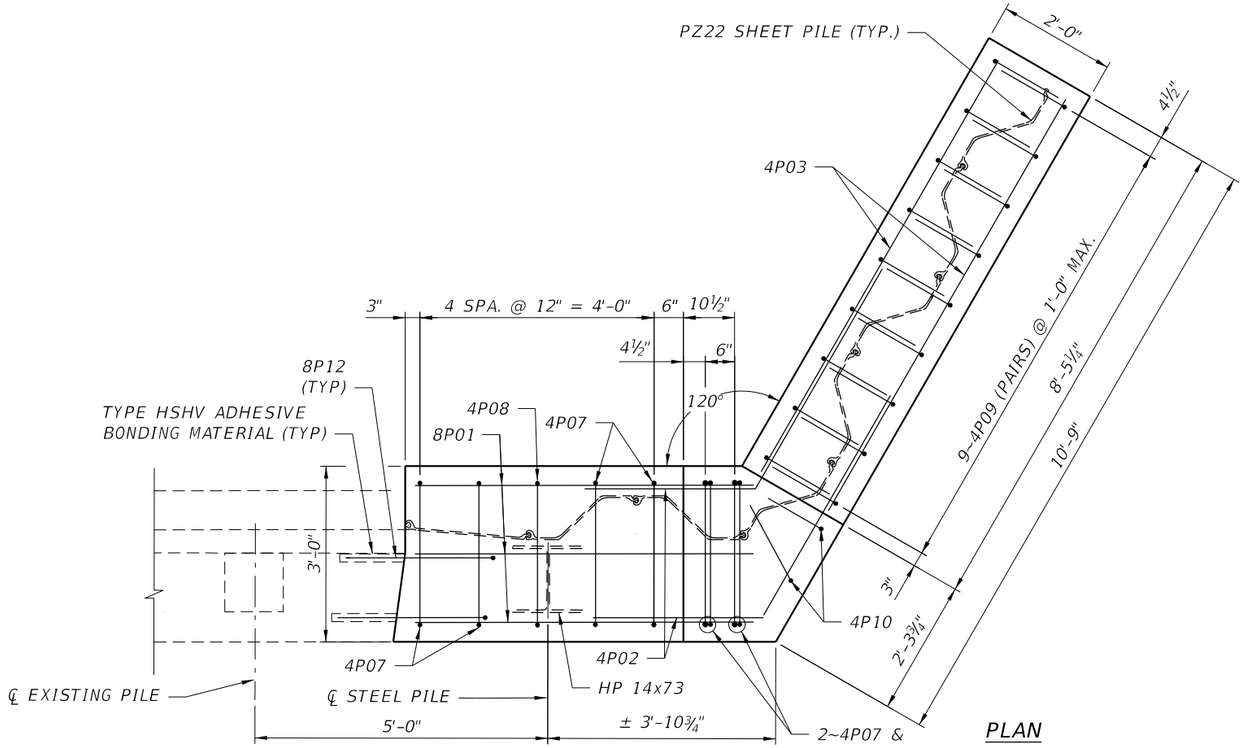
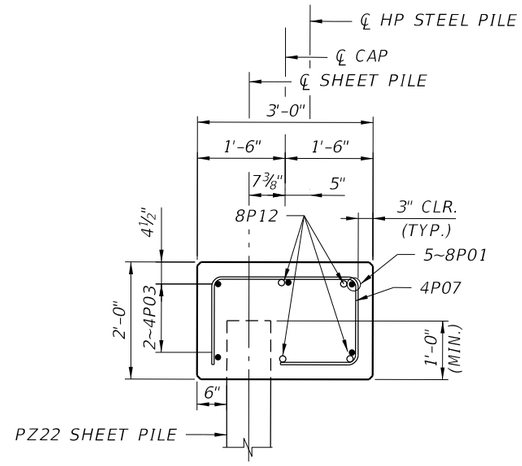
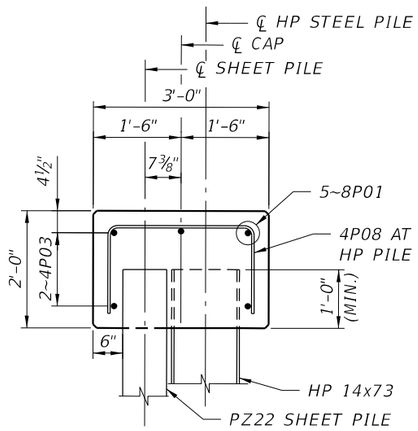


PLAN

END BENT 4 SHOWN END BENT 1 SIMILAR, OPPOSITE HAND REFER TO VIEW D-D FOR TOP LAYER OF STEEL ON CORNER.



SECTION A-A



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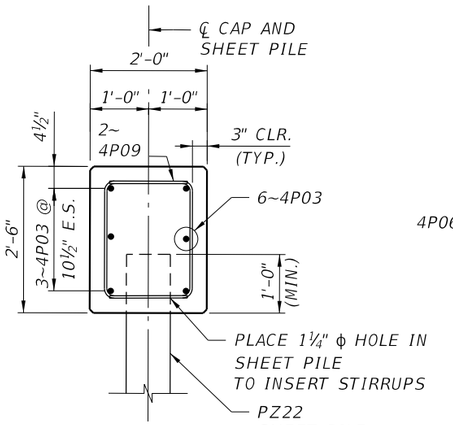
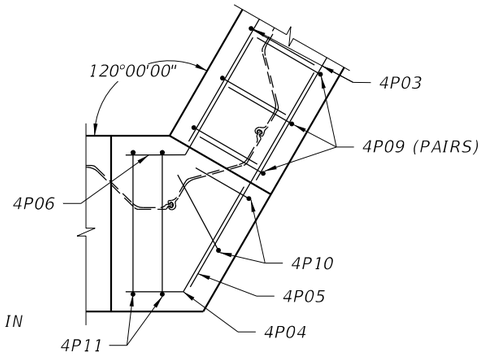
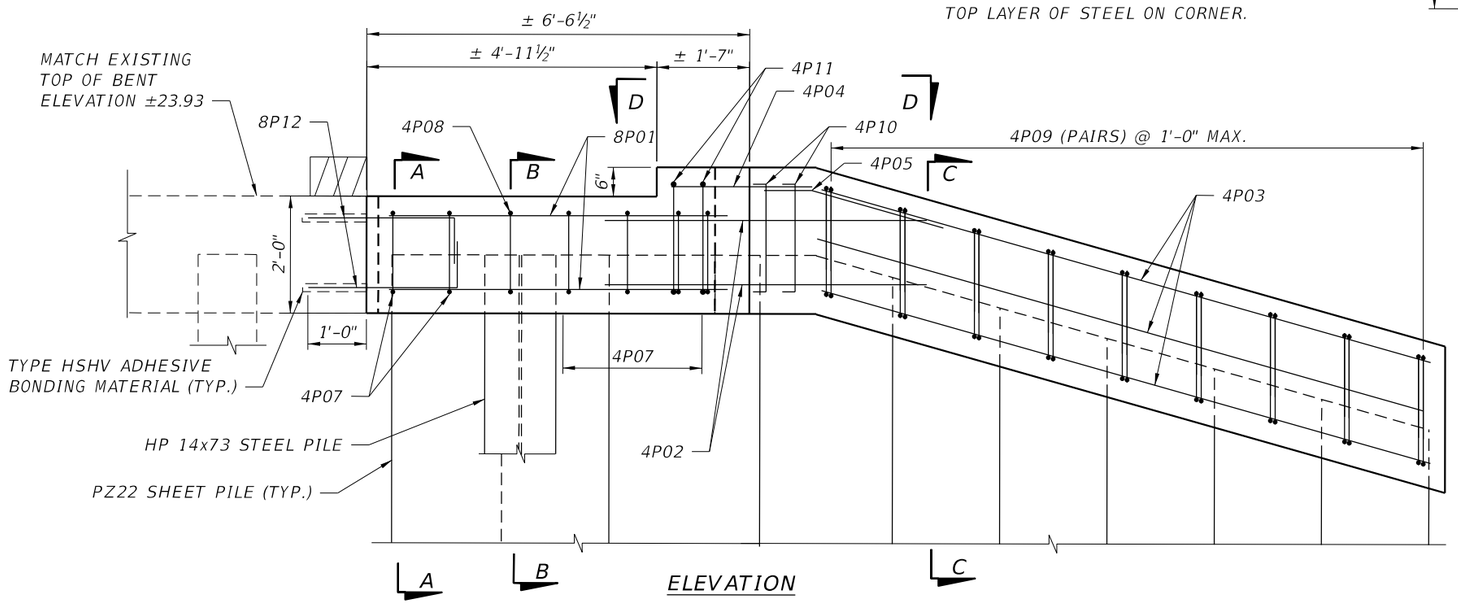


SECTION C-C



VIEW D-D

FOR CLARITY, ONLY TOP LAYER OF REINFORCING STEEL IS SHOWN



ELEVATION

NOTES:

1. WORK THIS SHEET WITH THE END BENT SHEET.

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: FXH
DRAWN BY: AAM
CHECKED BY: FXH

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

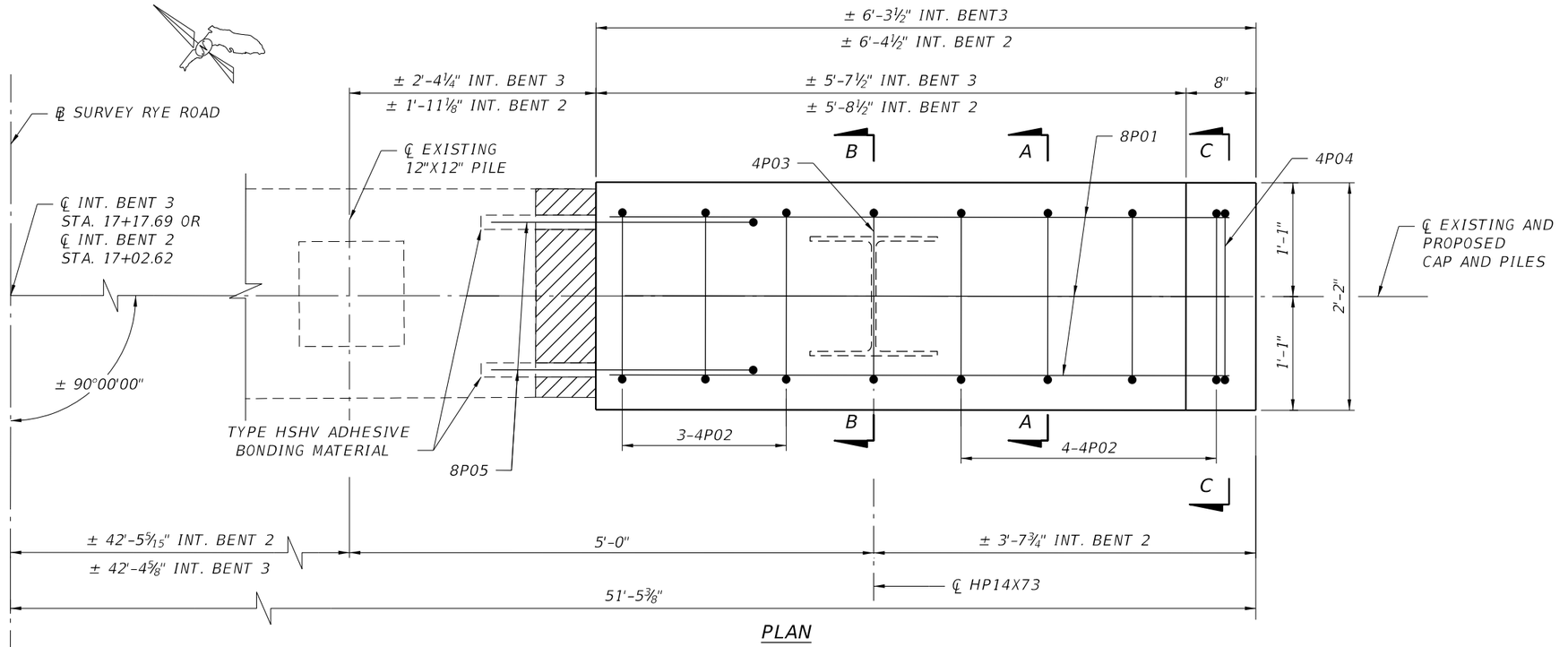
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

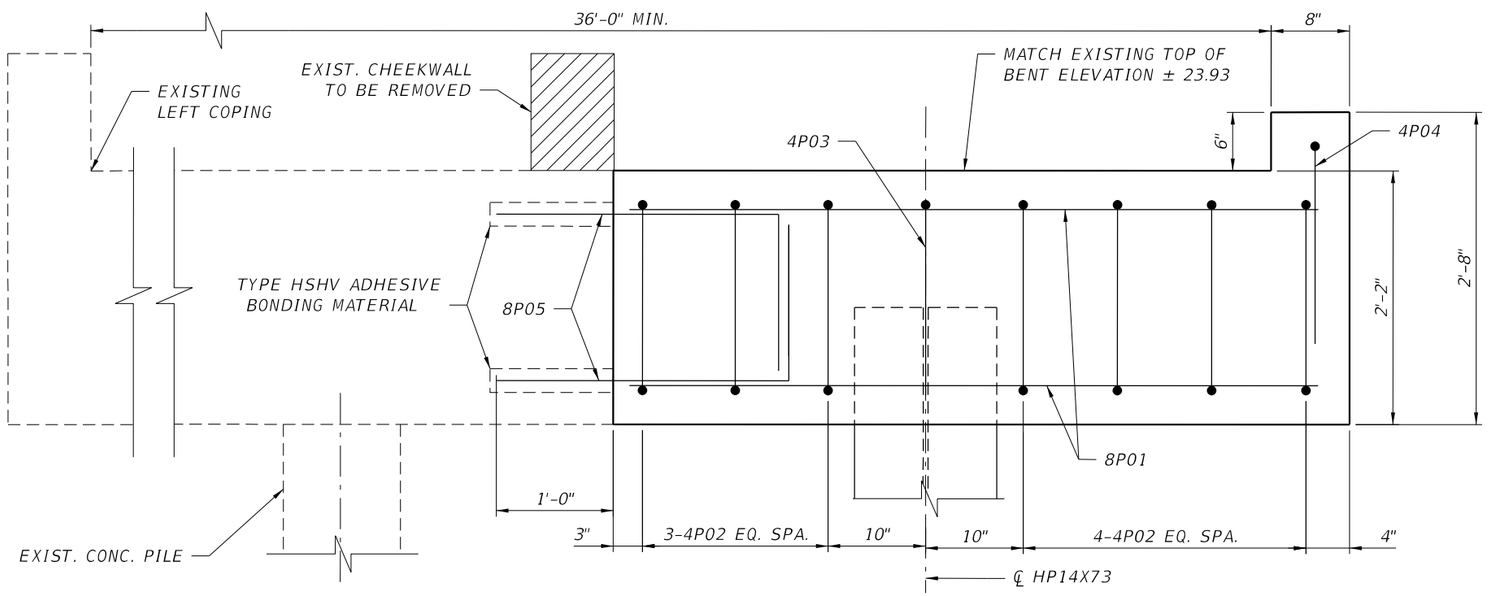
END BENT DETAILS

SHEET NO.: BI-9

4:51:45 PM 9/30/2016 J:\00193\00193010.07\ms\struct\Br 134025\B01EndBentDet02.dgn



PLAN



ELEVATION

NOTES:

1. WORK THIS SHEET WITH THE INTERMEDIATE BENT DETAILS SHEET.
2. AFTER REMOVING THE EXISTING CHEEKWALL, CUT GRIND THE EXPOSED REINFORCING STEEL TO 1" THE SURFACE ZINC RICH OF THE ADJACENT CONCRETE AND APPLY PAINT. FINISH SURFACE TO MATCH THE LINE AND GRADE OF THE ADJACENT CONCRETE.
3. CONTRACTOR SHALL VERIFY DIMENSIONS AND ELEVATIONS SHOWN ± ON THIS SHEET.

LEGEND:

EXISTING TO BE REMOVED

EXISTING CONCRETE PILE

PROPOSED HP14x73 STEEL PILE

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: AAM
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

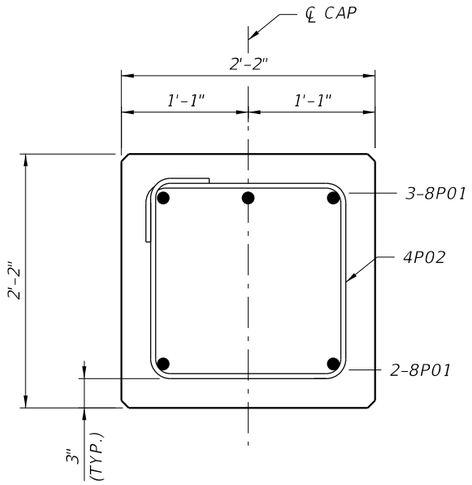
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

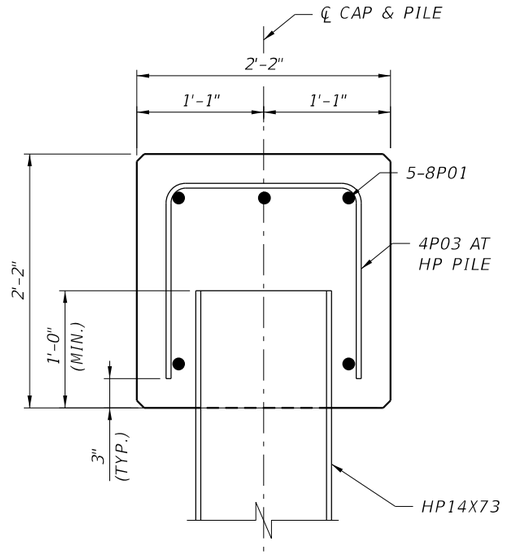
INTERMEDIATE BENT

SHEET NO.: BI-10

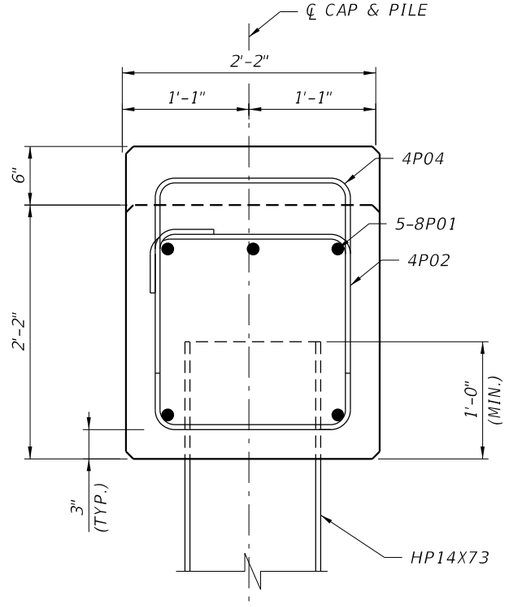
3:14:43 PM 9/30/2016 J:\00193\00193010.07\ms\struct\Br 134025\B01IntBent01.dgn



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

1. WORK THIS SHEET WITH THE INTERMEDIATE BENT SHEET.

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: AAM
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

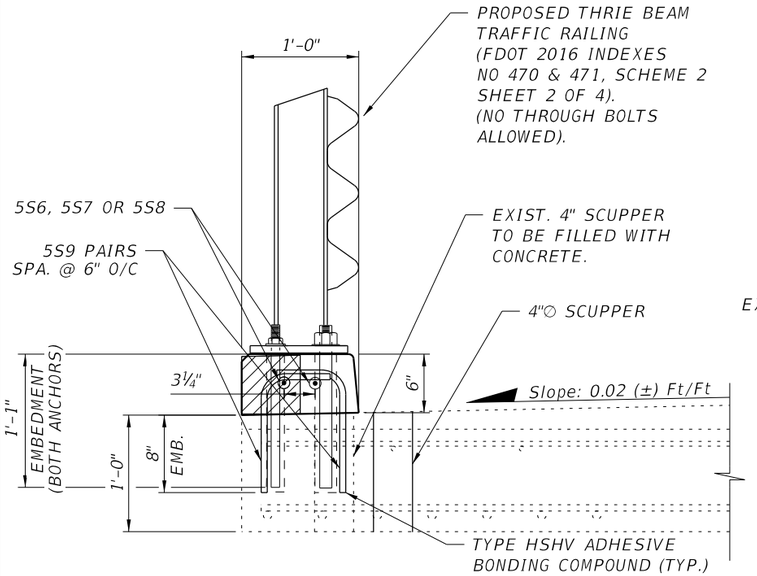
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

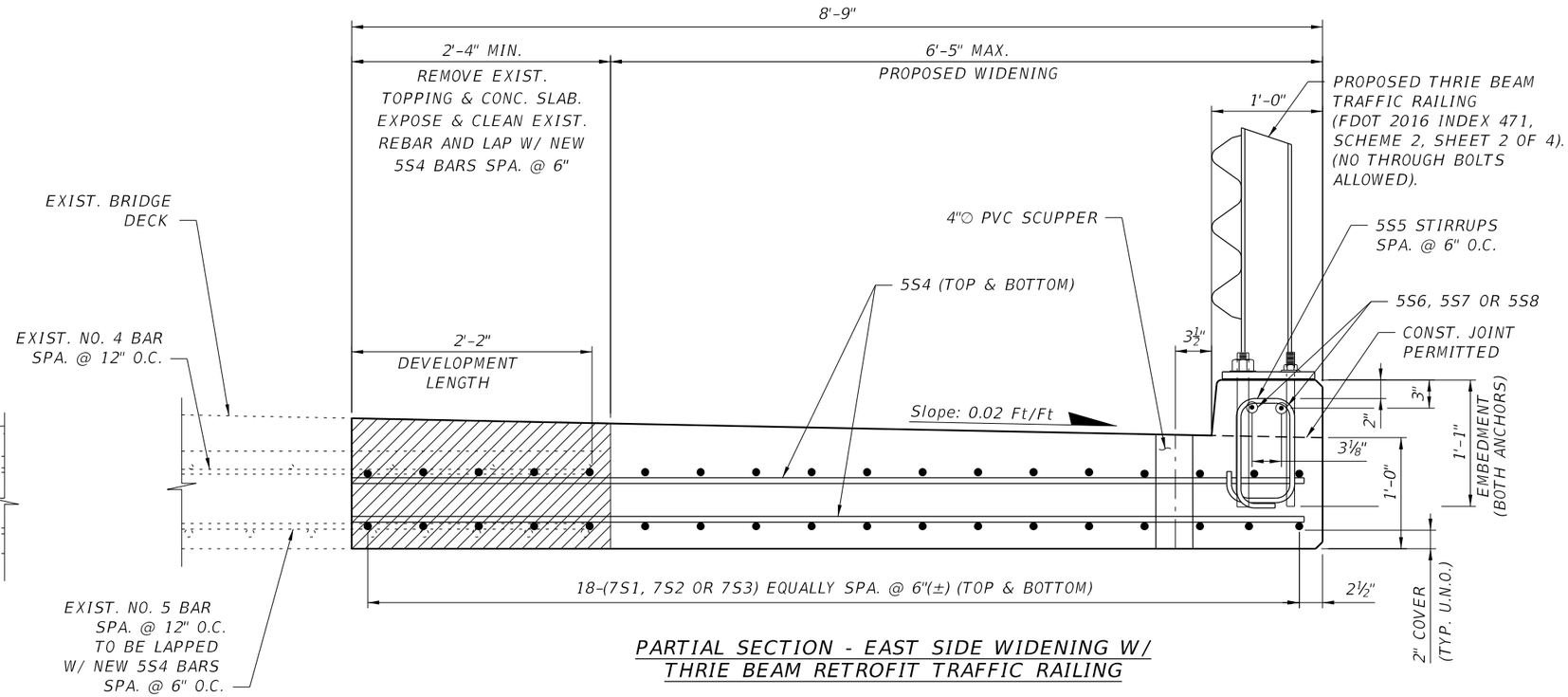
INTERMEDIATE BENT DETAILS

SHEET NO.: BI-II

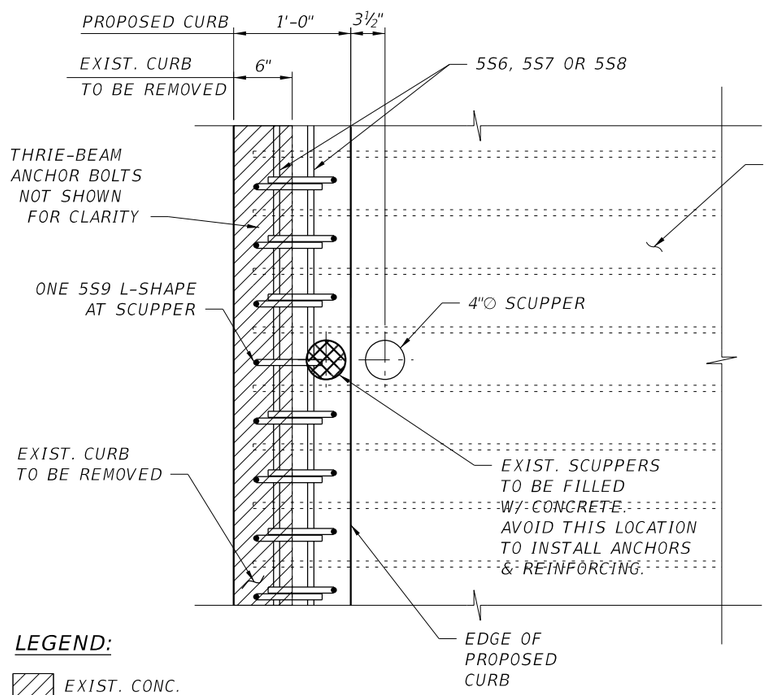
3:14:44 PM 9/30/2016 J:\00193\00193010.07\ms\struct\Br 134025\B01IntBentDet01.dgn



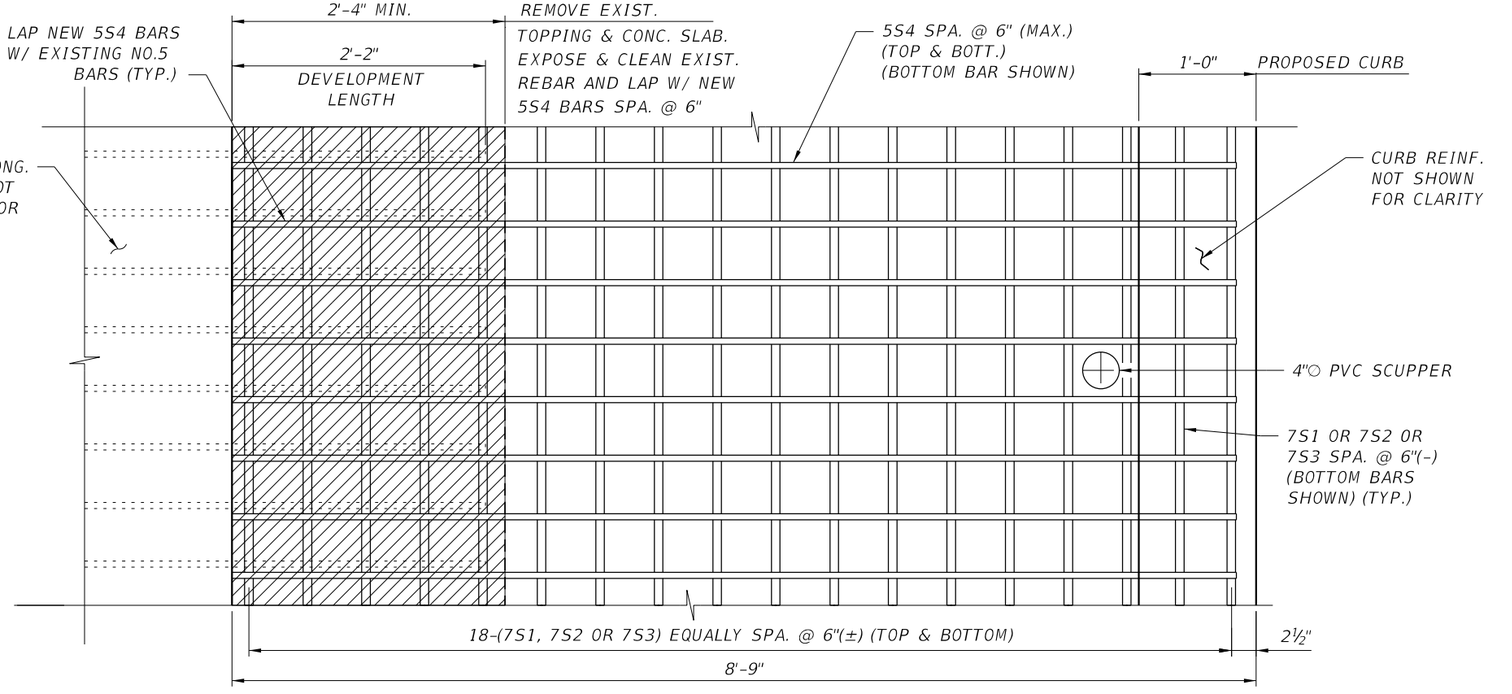
PARTIAL SECTION - WEST SIDE
THRIE-BEAM RETROFIT
TRAFFIC RAILING



PARTIAL SECTION - EAST SIDE WIDENING W/
THRIE BEAM RETROFIT TRAFFIC RAILING



PARTIAL PLAN - WEST SIDE



PARTIAL PLAN - EAST SIDE WIDENING

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: MAV
DRAWN BY: MAV
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

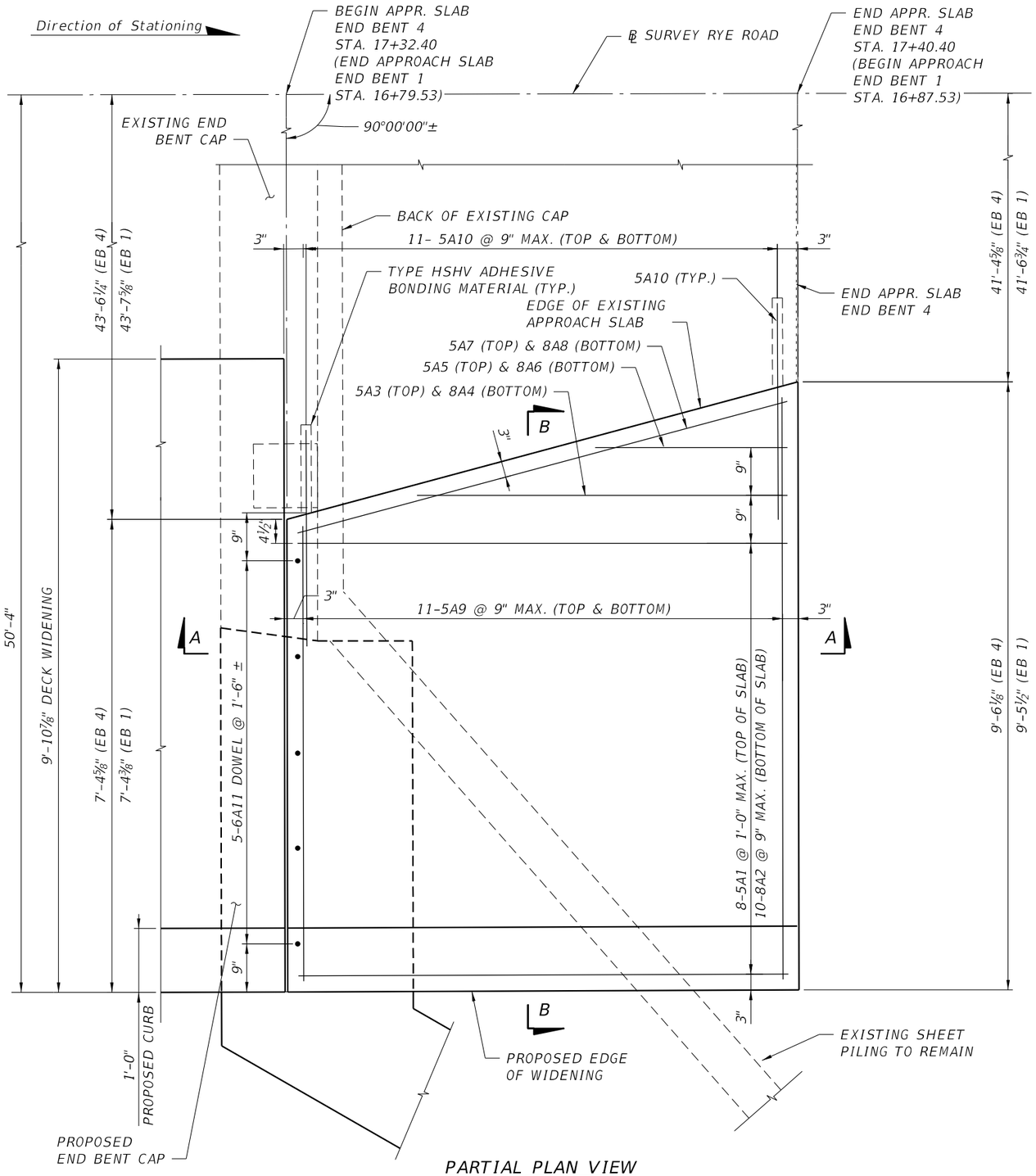
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

SUPERSTRUCTURE DETAILS

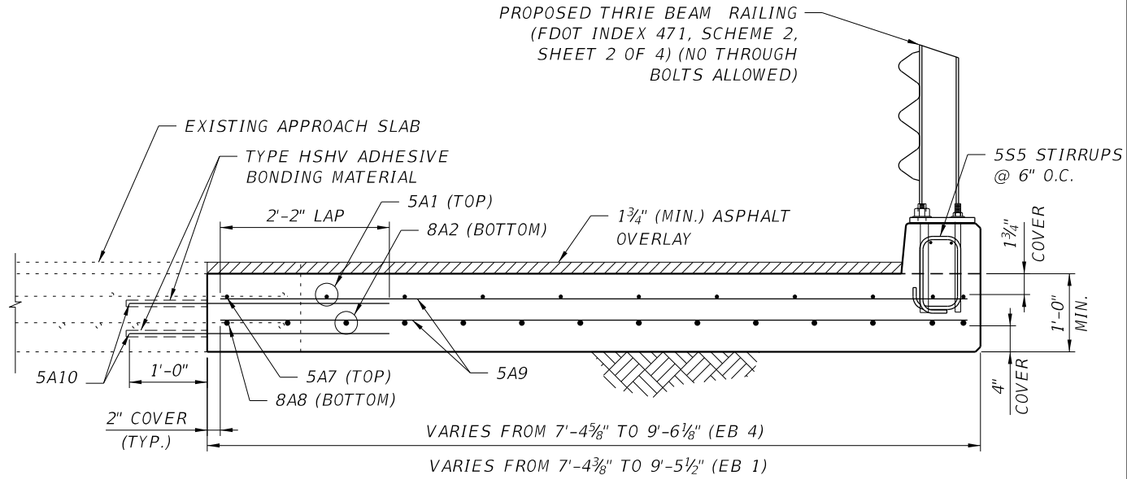
SHEET NO.: BI-12

7:40:24 PM 9/30/2016 J:\00193\00193010.07\ms\struct\Br 134025\B01SuperDet01.DGN



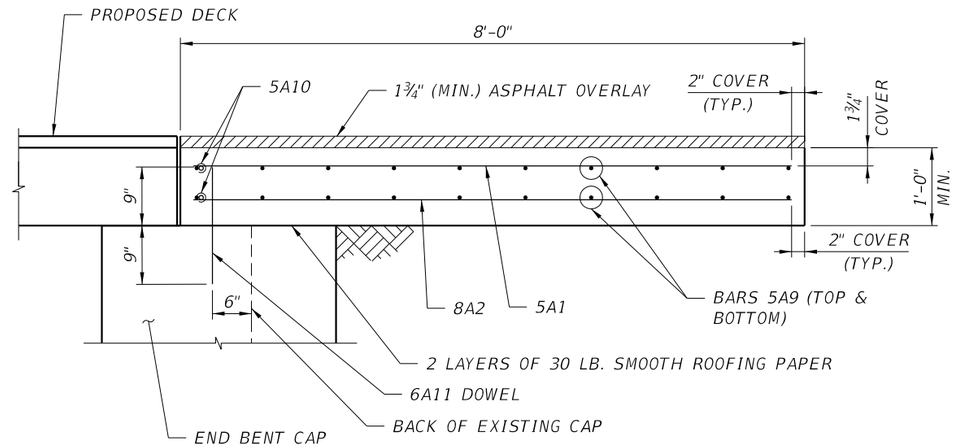
PARTIAL PLAN VIEW

END BENT (EB) 4 SHOWN, END BENT (EB) 1 SIMILAR



SECTION B-B

NOTE: ADJUST BARS 5A7 TO AVOID CONFLICT WITH EXISTING APPROACH SLAB REINFORCING.



SECTION A-A

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: MAV
DRAWN BY: APP
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

APPROACH SLAB

SHEET NO.: BI-13

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	Ø
SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG
LOCATION SUPERSTRUCTURE DECK SPAN 1																				NO. REQUIRED = 1													
7	S1	14- 8		36	1			14- 8																									
5	S4	8- 6		66	1			8- 6																									
5	S5	3-10		33	4	4	4	0-11			0- 6																						
5	S6	14- 8		4	1			14- 8																									
5	S9	1- 6		65	10			1- 0			0- 6																						
LOCATION SUPERSTRUCTURE DECK SPAN 2																				NO. REQUIRED = 1													
7	S2	14- 8		36	1			14- 7 ½																									
5	S4	8- 6		66	1			8- 6																									
5	S5	3-10		33	4	4	4	0-11			0- 6																						
5	S7	14- 8		4	1			14- 7 ½																									
5	S9	1- 6		65	10			1- 0			0- 6																						
LOCATION SUPERSTRUCTURE DECK SPAN 3																				NO. REQUIRED = 1													
7	S3	14- 4		36	1			14- 3 ½																									
5	S4	8- 6		60	1			8- 6																									
5	S5	3-10		30	4	4	4	0-11			0- 6																						
5	S8	14- 4		4	1			14- 3 ½																									
5	S9	1- 6		59	10			1- 0			0- 6																						
LOCATION END BENT																				NO. REQUIRED = 2													
8	P01	6- 0		5	1			6- 0																									
4	P02	7- 3		4	12			2-11			4- 4																						60
4	P03	8- 2		6	1			8- 2																									
4	P04	3- 1		1	12			1- 2			1-11																						60
4	P05	3-11		1	12			1-11			2- 0																						19
4	P06	2- 9		1	12			0-10			1-11																						63
4	P07	6- 9		6	37			2- 6			1- 5			1- 5			1- 5																
4	P08	5- 4		1	11			2- 6			1- 5			1- 5																			
4	P09	5- 0		18	11			2- 0			1- 6			1- 6																			
4	P10	4-11		2	11			1-11			1- 6			1- 6																			
4	P11	6- 6		2	11			2- 6			2- 0			2- 0																			
8	P12	3-10		4	10			2- 6			1- 4																						
LOCATION INT BENT																				NO. REQUIRED = 2													
8	P01	5-10		5	1			5-10																									
4	P02	7- 5		7	4	4	4	1- 8			1- 8																						
4	P03	5- 0		1	11			1- 8			1- 8			1- 8																			
4	P04	4-10		1	11			1- 8			1- 7			1- 7																			
8	P05	3-10		4	10			2- 6			1- 4																						
LOCATION APPROACH SLAB EB1																				NO. REQUIRED = 1													
5	A1	7- 8		8	1			7- 8																									
8	A2	7- 8		10	1			7- 8																									
5	A3	5- 8		1	1			5- 8																									
8	A4	5- 8		1	1			5- 8																									
5	A5	2-10		1	1			2-10																									
8	A6	2-10		1	1			2-10																									
5	A7	7-11		1	1			7-11																									
8	A8	7-11		1	1			7-11																									
5	A9	VARY		22	1			7- 1																									
		8- 1		0	1			9- 0																									
5	A10	3- 5		22	1			3- 5																									
6	A11	1- 6		5	1			1- 6																									

MARK		LENGTH		NO	TYP	STY		B			C			D			E			F			H			J			K			N	Ø
SIZE	DES	FT	IN	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG
LOCATION APPROACH SLAB EB4																				NO. REQUIRED = 1													
5	A1	7- 8		8	1			7- 8																									
8	A2	7- 8		10	1			7- 8																									
5	A3	5- 9		1	1			5- 9																									
8	A4	5- 9		1	1			5- 9																									
5	A5	3- 0		1	1			2-11 ¼																									
8	A6	3- 0		1	1			2-11 ¼																									
5	A7	7-11		1	1			7-11																									
8	A8	7-11		1	1			7-11																									
5	A9	VARY		22	1			7- 1																									
		8- 1		0	1			9- 1																									
5	A10	3- 5		22	1			3- 5																									
6	A11	1- 6		5	1			1- 6																									

END OF LIST

BRIDGE NO. 134025

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: AAM
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

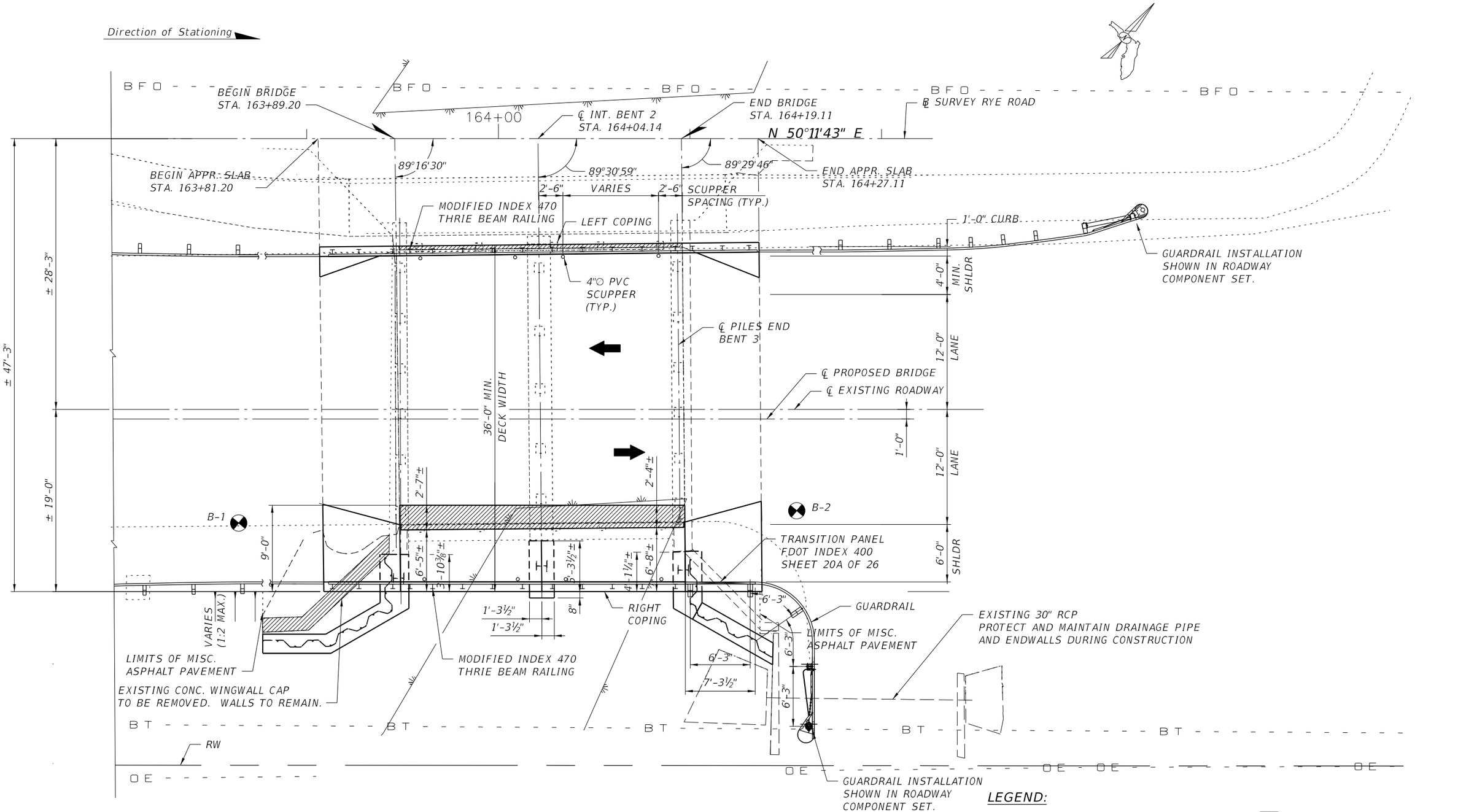
DATE: 4/2016
PROJECT NO.: 225338

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

REBAR LIST

SHEET NO.: BI-14



PLAN

BRIDGE NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: RFN
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

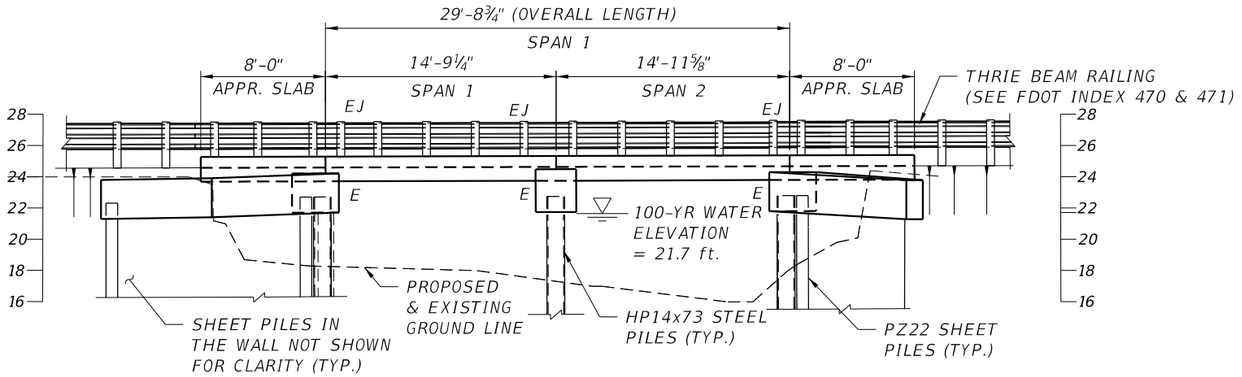
Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

PLAN

SHEET NO.: B2-1

3:27:04 PM 9/30/2016 J:\00193\00193010.07\ms\struct\Br 134026\B02PlanElev01.dgn



ELEVATION

BRIDGE NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: RFN
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

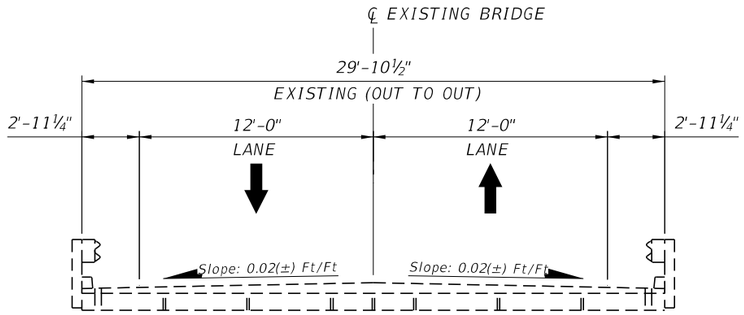
Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

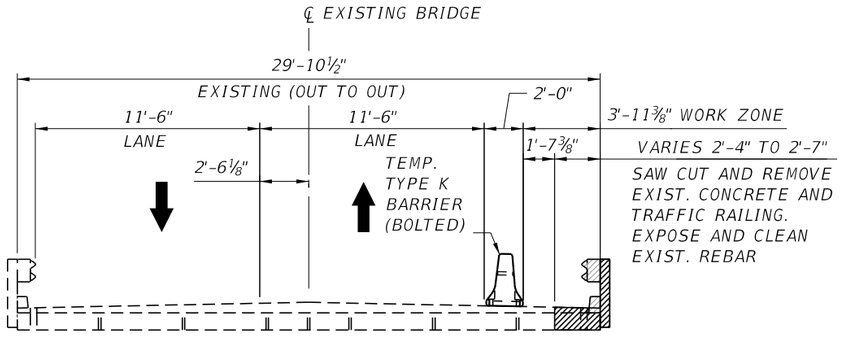
ELEVATION

SHEET NO.: B2-2

3:27:05 PM 9/30/2016 J:\00193\00193010.07\ms\struct\Br 134026\B02PlanElev02.dgn



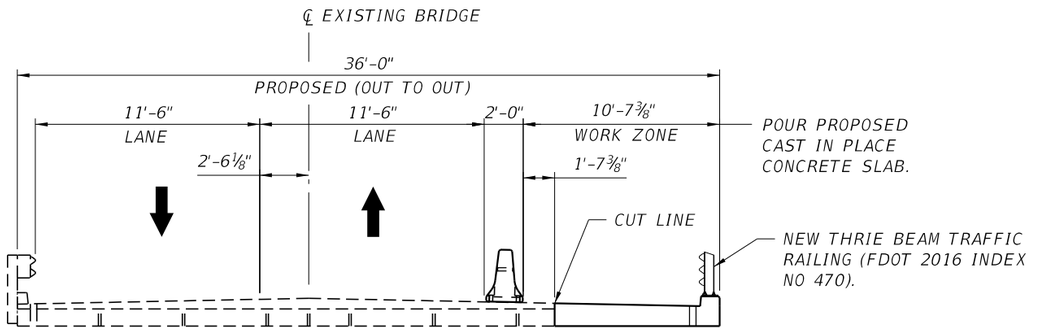
EXISTING CONDITION



PHASE 1 - CONSTRUCTION, STEP 1

NOTE: COMPLETE SUBSTRUCTURE WIDENING PRIOR TO PHASE 1.

1. SHIFT TRAFFIC LANES TO THE WEST – MAKE EACH LANE 11'-6" WIDE.
2. INSTALL TEMPORARY K BARRIER.
3. REMOVE EAST SIDE EXISTING BARRIER.
4. SAW CUT AND REMOVE 2'-4" TO 2'-7" OF EXISTING CONCRETE.
5. EXPOSE AND CLEAN EXISTING REBAR.

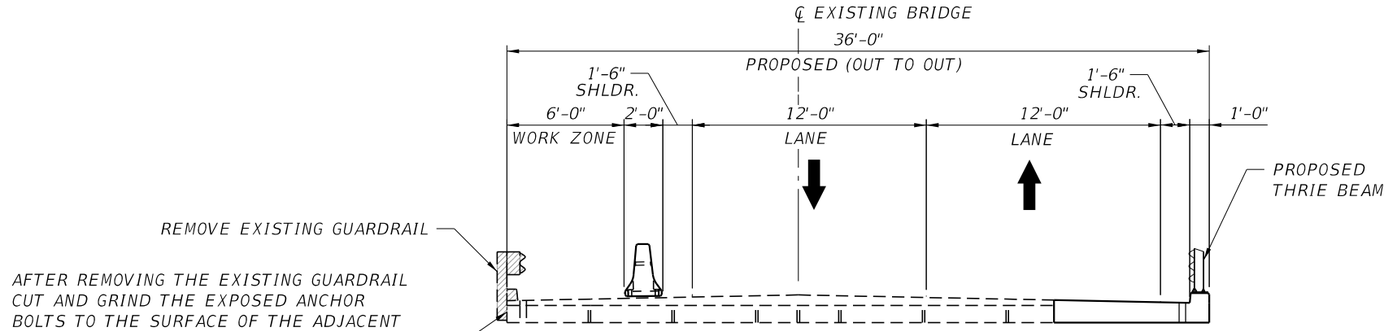


PHASE 1 - CONSTRUCTION, STEP 2

1. PLACE PROPOSED SLAB REINFORCEMENT.
2. POUR PROPOSED CAST IN PLACE CONCRETE SLAB UNIT.
3. INSTALL NEW THRIE BEAM TRAFFIC RAILING.

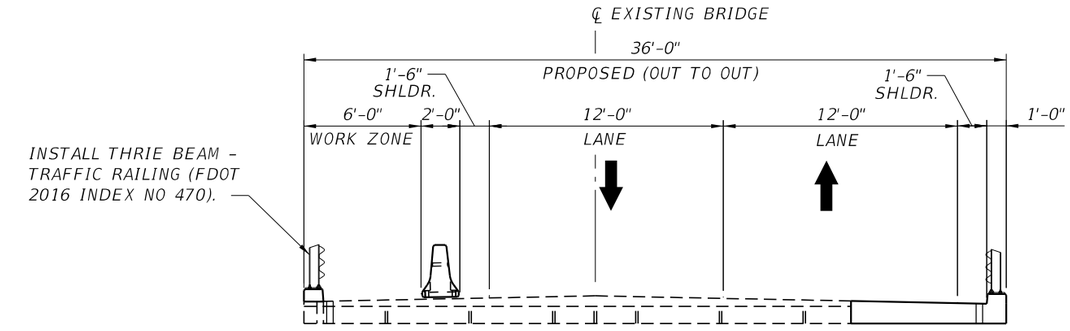
LEGEND

EXISTING STRUCTURE TO BE REMOVED



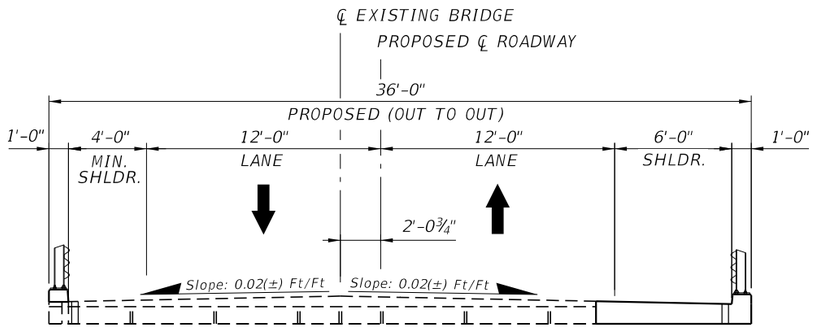
PHASE 2 - CONSTRUCTION, STEP 1

1. SHIFT TRAFFIC LANES TO THE EAST – MAKE EACH LANE 12 FEET WIDE.
2. MOVE TEMPORARY K BARRIER TO NEW LOCATION.
3. REMOVE WEST SIDE EXISTING GUARDRAIL.



PHASE 2 - CONSTRUCTION, STEP 2

1. INSTALL NEW THRIE BEAM TRAFFIC RAILING.
2. INSTALL NEW SCUPPER.
3. REMOVE TEMPORARY K BARRIER.
4. SHIFT TRAFFIC LANES TO FINAL LOCATION.



PROPOSED TYPICAL SECTION

BRIDGE NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: MAV
DRAWN BY: MAV
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

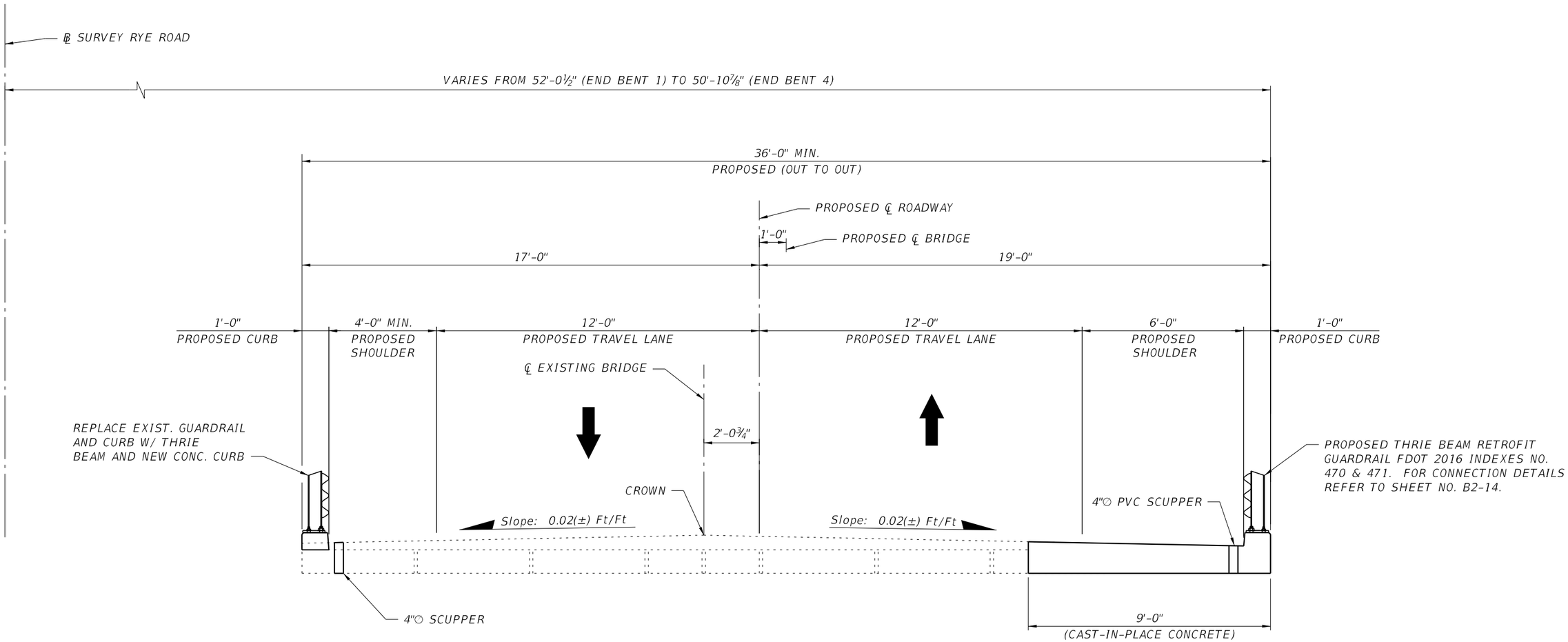
Manatee County FLORIDA

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

CONSTRUCTION SEQUENCE

SHEET NO.: B2-3



TYPICAL SECTION

NOTE: SCUPPER TO BE RELOCATED TO THE NEW CURB LINE ALONG THE ROADWAY. STATIONING TO MATCH THE EXISTING SCUPPER LOCATIONS.

BRIDGE NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: RFN
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

TYPICAL SECTION

SHEET NO.: B2-4

3:27:06 PM 9/30/2016 J:\00193\00193010.07\ms\struct\Br 134026\B02TypicalSection01.DGN

SOURCE: GOOGLE EARTH PRO

0' 10' 20' 40'

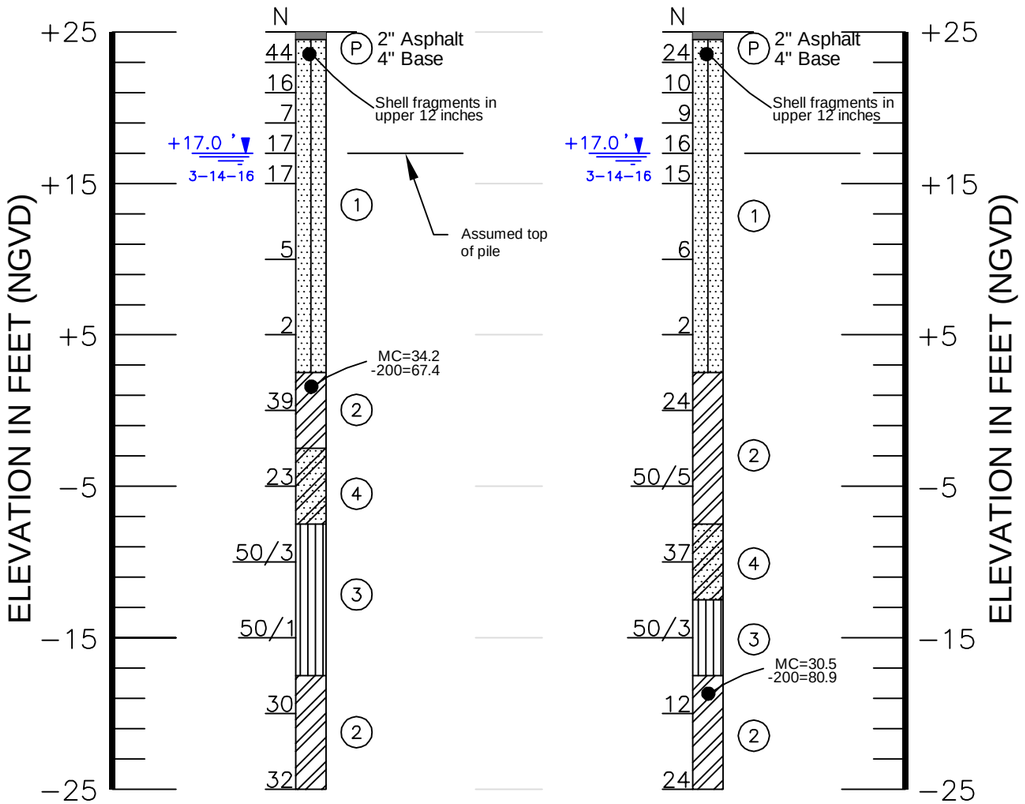
B-1 APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING

CORROSION TEST RESULTS

Sample Location	RESISTIVITY ohm-cm	CHLORIDES ppm	SULFATES ppm	pH
B-1 (33.5'-35') & B-2 (23.5'-25' & 28.5'-30')	3,100	21.6	<1.6	7.1

	Steel	Concrete
Substructure Environment Classification:	Moderately Aggressive	Slightly Aggressive

BORING NO.	B-1	B-2
STATION:	163+80	164+30
OFFSET:	35' Rt.	35' Rt.
ELEVATION:	+25' +/-	+25' +/-



GENERAL LEGEND

- P — Asphaltic concrete over limestone gravel base
- 1 — Gray, dark gray, and brown fine SAND with trace to slight amounts of silt (SP, SP-SM)
- 2 — Light gray silty, sandy CLAY (CL)
- 3 — Light gray to gray sandy, clayey SILT (ML) (Weathered Limestone)
- 4 — Gray to brown clayey SAND (SC)
- 5 — Gray to dark gray silty SAND with sand size to gravel size limestone gravel fragments (SM)

N – Indicates the number of blows of a 140 pound hammer, freely falling a distance of 30 inches, required to drive a 2-inch diameter sampler 12 inches (ASTM D 1586)

B-1 – Standard Penetration Test (SPT) Boring and number

SP – Unified Soil Classification System Group Symbol (ASTM D 2487)

+17.0 ▼ 3-14-16 – Elevation of groundwater (feet-NGVD) & date measured

50/3 – Indicates fifty SPT hammer blows were required to drive the sampler 3 inches

MC – Moisture Content (%)

-200 – Amount Finer Than The U.S. Standard No. 200 Sieve (%)

ENGINEERING CLASSIFICATION (SAFTEY HAMMER)

GRANULAR MATERIALS

Relative Density	SPT BLOW-COUNTS
Very Loose	Less than 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

SILTS AND CLAYS

Consistency	BLOW-COUNTS
Very Soft	Less than 2
Soft	2 - 4
Firm	4 - 8
Stiff	8 - 15
Very Stiff	15 - 30
Hard	Greater than 30

STANDARD PENETRATION TEST DATA

SPOON INSIDE DIA.	1.375 inch
SPOON OUTSIDE DIA.	2.00 inches
AVG. HAMMER DROP	30 inches
HAMMER WEIGHT	140 pounds

NOTES

(1) Borings were drilled on March 14, 2016 using a track-mounted BR-2500 drilling rig.

(2) Strata boundaries are approximate and represent soil strata at each test hole location only. Soil transitions may be more gradual than implied.

(3) Groundwater depths shown on the subsurface profiles represent the groundwater surfaces on the date shown. Groundwater level fluctuations should be anticipated throughout the year.

(4) Station, offset, and elevation were estimated based on the topographic survey provided by Cardno.

No.	REVISIONS	DATE	BY
1	ADD BORING ELEVATION	5-11-16	JMJ

SCALE AS_NOTED
DESIGNED BY JMJ
DRAWN BY JMJ
CHECKED BY KEA

DUNKELBERGER ENGINEERING & TESTING
8260 VICO COURT, UNIT B
SARASOTA, FLORIDA 34240
CERTIFICATE OF AUTHORIZATION 6870

DATE 4/2016
PROJECT NO. 225338

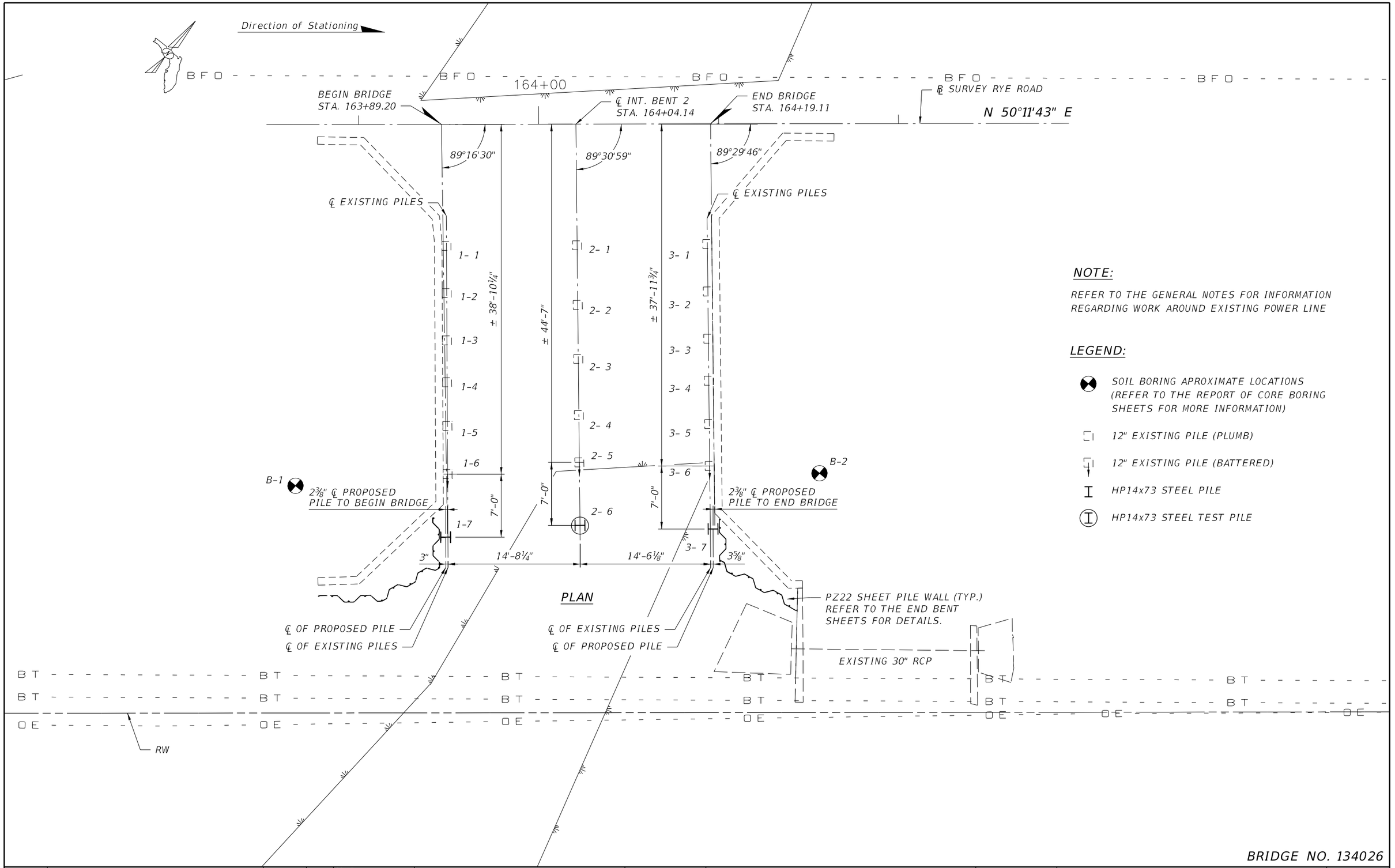
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER JAMES M. JACKSON
FL. LICENSE NO. 77733

REPORT OF CORE BORINGS FOR STRUCTURES

PROJECT NAME: RYE ROAD BRIDGE 134026
MANATEE COUNTY, FLORIDA

SHEET NO. B2-5



NOTE:

REFER TO THE GENERAL NOTES FOR INFORMATION REGARDING WORK AROUND EXISTING POWER LINE

LEGEND:

- SOIL BORING APROXIMATE LOCATIONS (REFER TO THE REPORT OF CORE BORING SHEETS FOR MORE INFORMATION)
- 12" EXISTING PILE (PLUMB)
- 12" EXISTING PILE (BATTERED)
- HP14x73 STEEL PILE
- HP14x73 STEEL TEST PILE

BRIDGE NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: FXH
DRAWN BY: AAM
CHECKED BY: FXH

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

FOUNDATION LAYOUT

SHEET NO.: B2-6

3:26:58 PM 9/30/2016 J:\00193\00193010.07\ms\struct\Br 134026\B02Foundlay02.dgn

PILE DATA TABLE																
INSTALLATION CRITERIA								DESIGN CRITERIA								
BENT NUMBER PILE NUMBER	PILE SIZE (in.)	NOMINAL BEARING RESISTANCE (tons)	NOMINAL UPLIFT RESISTANCE (tons)	MINIMUM TIP ELEVATION (ft.)	TEST PILE LENGTH (ft.)	REQUIRED JET ELEVATION (ft.)	REQUIRED PREFORM ELEVATION (ft.)	FACTORED DESIGN LOAD (tons)	FACTORED DESIGN UPLIFT LOAD (tons)	DOWN DRAG (tons)	TOTAL SCOUR RESISTANCE (tons)	NET SCOUR RESISTANCE (tons)	100-YEAR SCOUR ELEVATION (ft.)	LONG TERM SCOUR ELEVATION (ft.)	Ø COMPRESSION	Ø UPLIFT
1-7	HP14x73	40	N/A	0.0	N/A	N/A	N/A	24	N/A	N/A	2	0	12.8	12.8	0.65	0.65
2-6	HP14x73	55	N/A	0.0	40	N/A	N/A	34	N/A	N/A	2	0	12.8	12.8	0.65	0.65
3-7	HP14x73	40	N/A	0.0	N/A	N/A	N/A	24	N/A	N/A	2	0	12.8	12.8	0.65	0.65

PILE CUT-OFF ELEVATIONS		
PIER or BENT NUMBER	PILE 6	PILE 7
1	NA	22.8
2	22.8	NA
3	NA	22.8

$$\frac{\text{Factored Design Load + Net Scour Resistance + Down Drag}}{Ø} \leq \text{Nominal Bearing Resistance}$$

TENSION RESISTANCE – The ultimate side friction capacity that must be obtained below the 100 year scour elevation to resist pullout of the pile (Specify only when design requires tension capacity).

TOTAL SCOUR RESISTANCE – An estimate of the ultimate static side friction resistance provided by the scourable soil.

NET SCOUR RESISTANCE – An estimate of the ultimate static side friction resistance provided by the soil from the required preformed or jetting elevation to the scour elevation.

100-YEAR SCOUR ELEVATION – Estimated elevation of scour due to the 100 year storm event.

LONG TERM SCOUR ELEVATION – Estimated elevation of scour used in design for extreme event loading.

PILE INSTALLATION NOTES [Notes Date 7-01-13]:

Contractor to verify location of all utilities prior to any pile installation activities.

Minimum Tip Elevation is required for lateral stability.

When a required jetting elevation is shown, the jet shall be lowered to the elevation and continue to operate at this elevation until the pile driving is completed. If jetting or preforming elevations differ from those shown on the table, the Engineer shall be responsible for determination of the required driving resistance.

No jetting will be allowed without the approval of the Engineer.

The Contractor should not anticipate being allowed to jet piles below the 100-year scour elevation or required jet elevation, whichever is deeper.

At each Bent, pile driving is to commence at the center of the Bent and proceed outward.

PILE CUT-OFF NOTE:

Contractor shall verify the existing top-of-bent elevations on which the pile cut-off elevations are based. Refer to the End Bent plan sheet for more information.

BRIDGE NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: AAM
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

PILE DATA TABLE

SHEET NO.: B2-7

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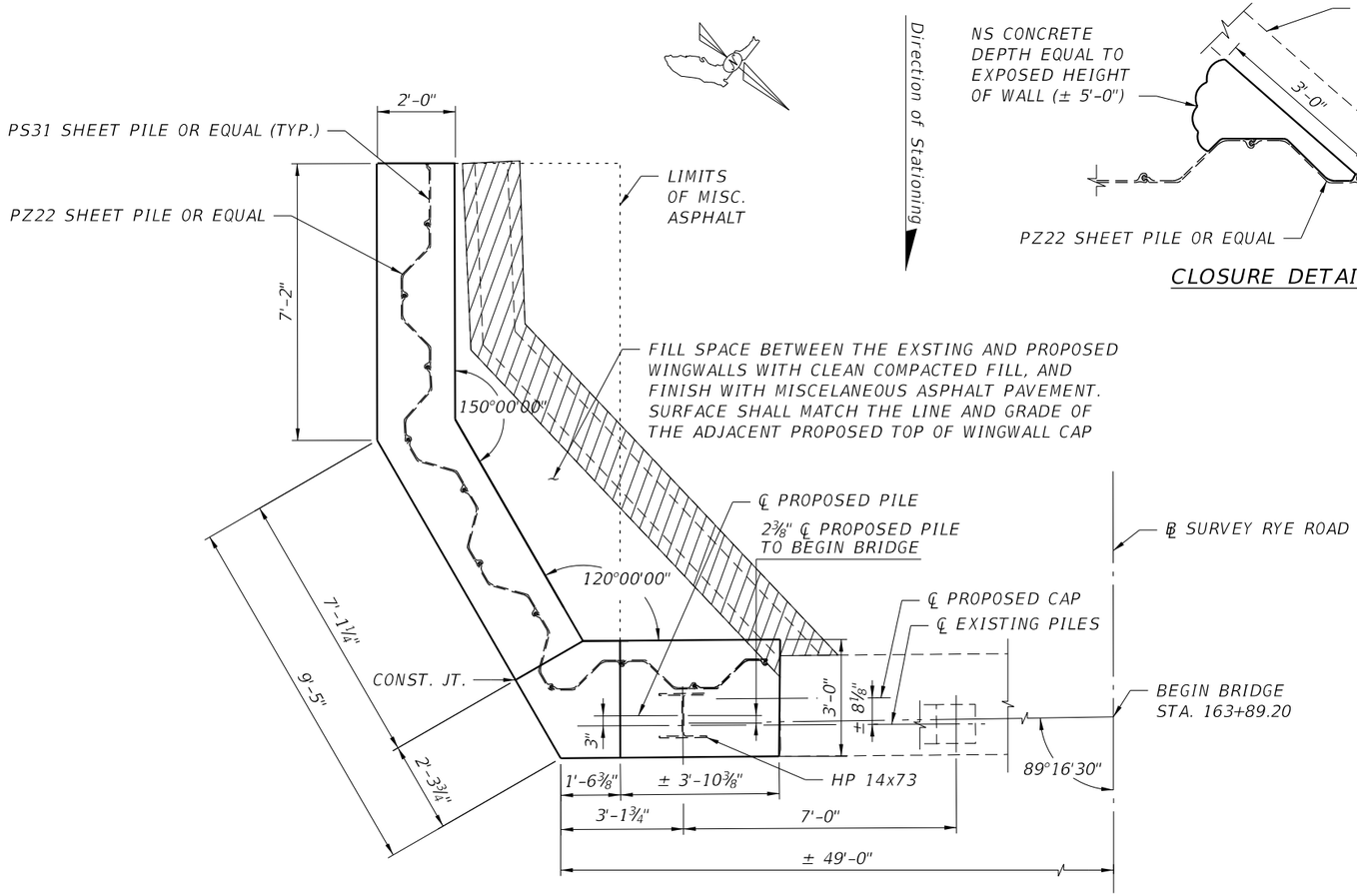
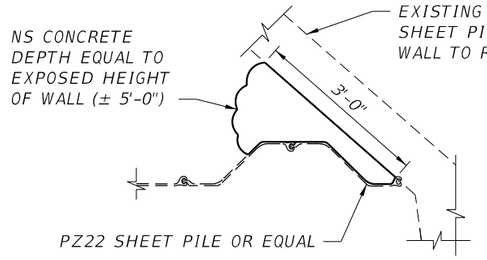
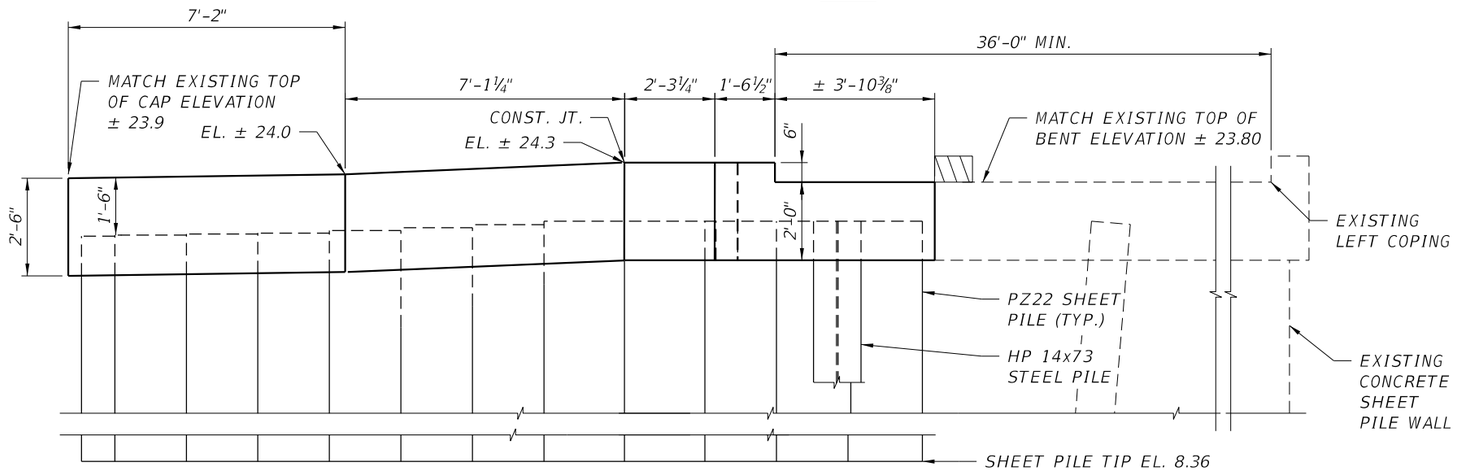


PLAN



CLOSURE DETAIL



ELEVATION

LEGEND:

- EXISTING TO BE REMOVED
- EXISTING CONCRETE PILE
- PROPOSED PS31 SHEET PILE
- PROPOSED PZ22 SHEET PILE
- PROPOSED HP 14x73 STEEL PILE

NOTES:

1. WORK THIS SHEET WITH THE END BENT 1 DETAILS SHEET.
2. REMOVE THE EXISTING WINGWALL CAP TO PROVIDE FOR INSTALLATION OF THE PROPOSED STEEL SHEET PILE WALL. REMOVE THE TOP OF THE EXISTING WINGWALL SHEET PILES THAT ARE IN CONFLICT WITH THE PROPOSED WINGWALL CAP, AND ABANDON THE REMAINDER OF THE EXISTING SHEET PILES IN PLACE.
3. AFTER REMOVING THE EXISTING CHEEKWALL, GRIND THE EXPOSED REINFORCING STEEL TO THE SURFACE OF THE ADJACENT CONCRETE AND APPLY A ZINC-RICH PAINT. FINISH SURFACE TO MATCH THE LINE AND GRADE OF THE ADJACENT CONCRETE.
4. MINIMUM SHEET PILE SECTON PROPERTIES (HOT ROLL), USE PZ22 OR EQUAL:

   THICKNESS OF FLANGE: TF=0.375 IN
   THICKNESS OF WEB:TW=0.375 IN
   YIELD STRENGTH:FY=39,000 PSI
   SECTION MODULUS:S=18.1 IN3/FT
   MOMENT OF INERTIA:I=84.38 IN4/FT

   A PS31 SHEET PILE MAY BE USED ADJACENT TO THE EXISTING SHEET PILE WALL TO REMAIN. REFER TO THE CLOSURE DETAIL IN THIS SHEET FOR MORE INFORMATION.
5. CONCRETE FOR CLOSURE DETAIL AND FILL BETWEEN THE EXISTING AND PROPOSED WINGWALLS SHALL BE INCIDENTAL TO THE COST OF THE SHEET PILE WALL. MISCELANEOUS ASPHALT PAVEMENT SHALL BE INCIDENTAL TO THE COST OF THE MODIFIED THRIE BEAM GUARDRAIL.
6. CONTRACTOR SHALL VERIFY DIMENSIONS AND ELEVATIONS SHOWN ± ON THIS SHEET.

BRIDGE NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: AAM
CHECKED BY: FMH

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

END BENT 1

SHEET NO.: B2-8

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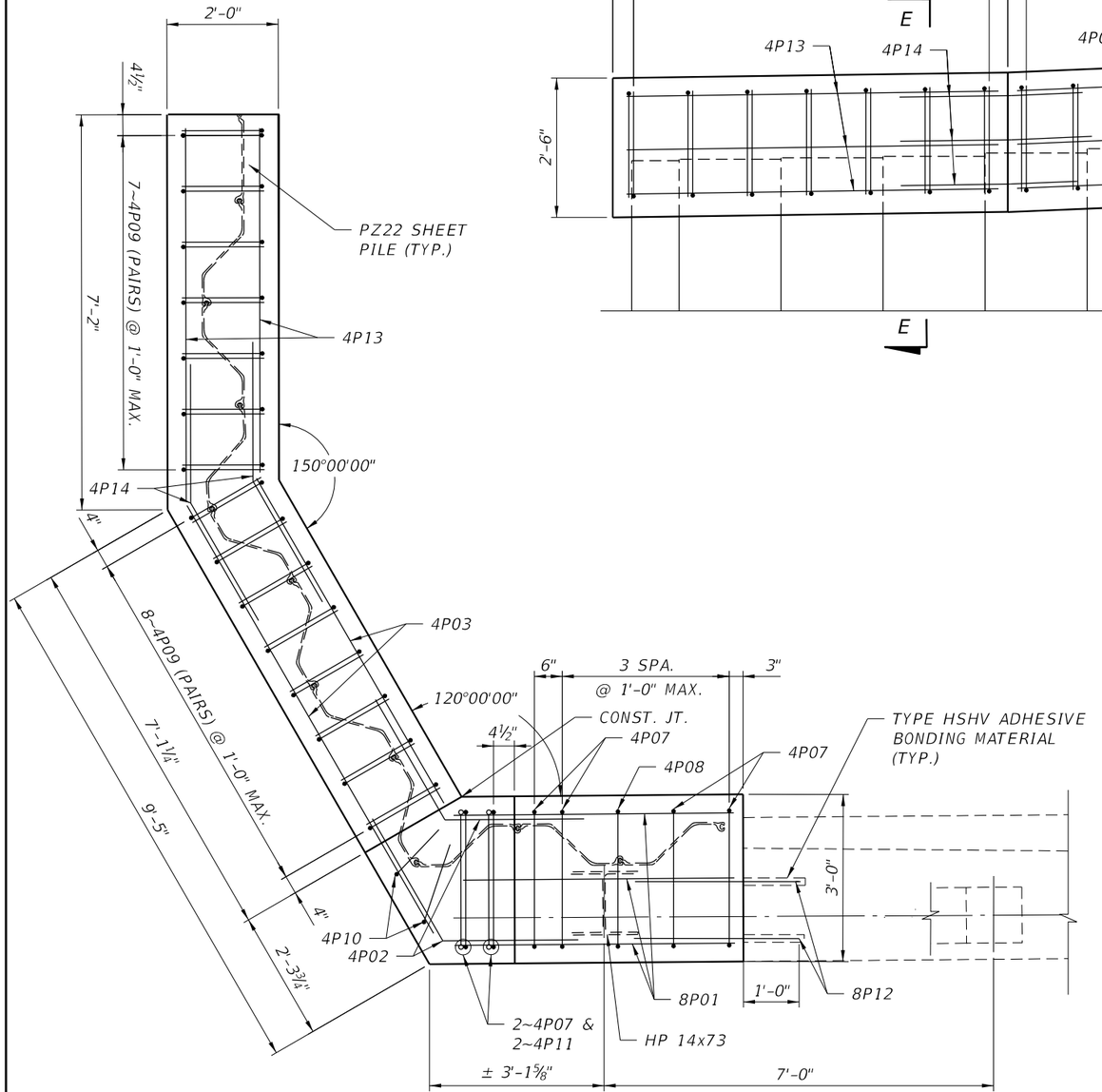
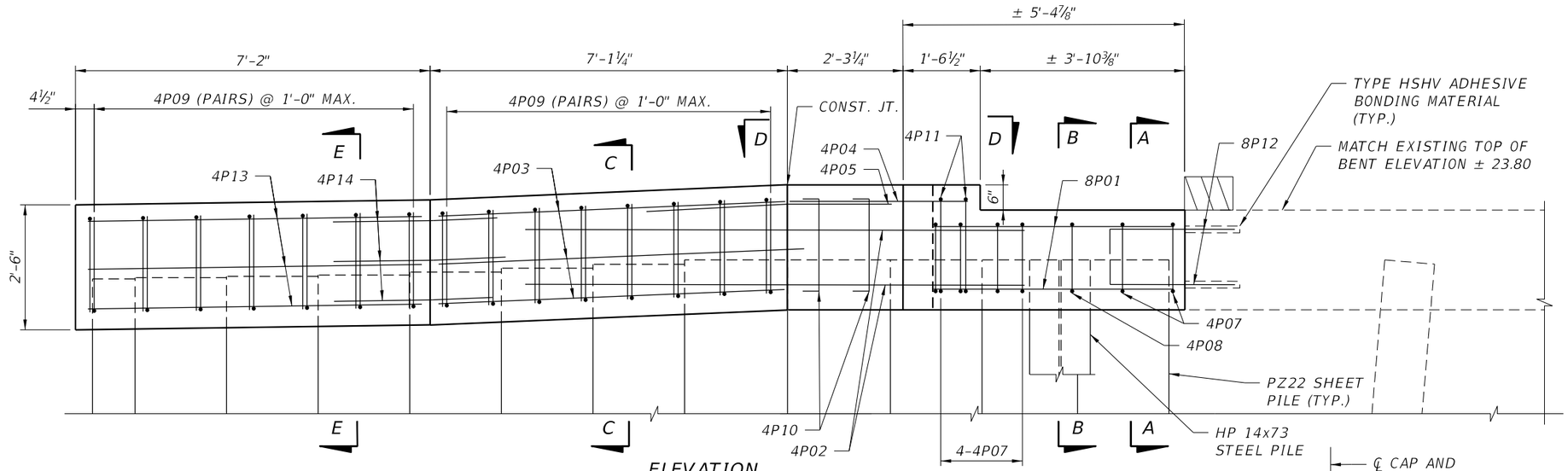
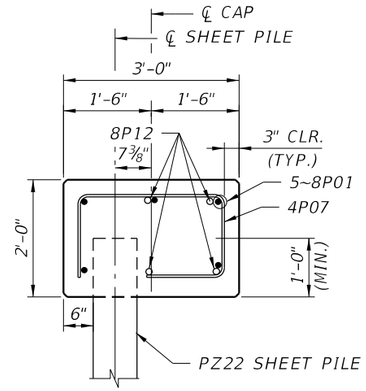


PLAN

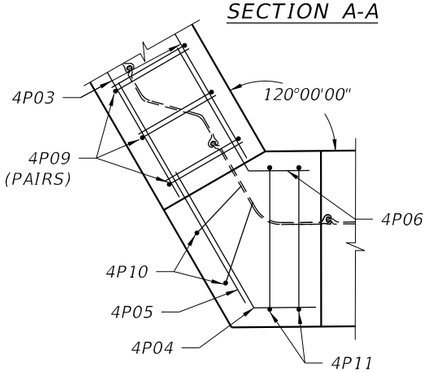
REFER TO VIEW D-D FOR TOP LAYER OF STEEL IN CORNER.



ELEVATION

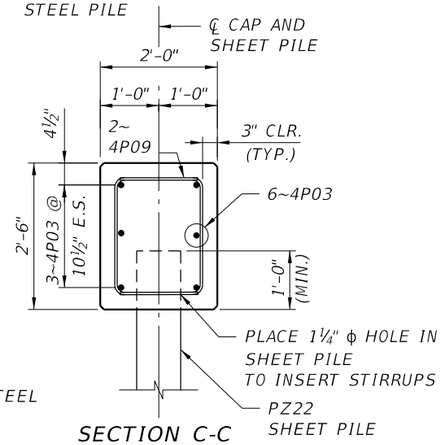


SECTION A-A

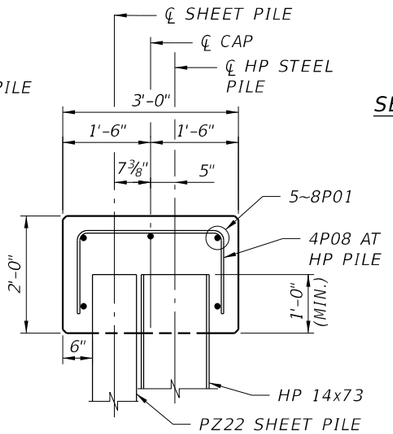


VIEW D-D

FOR CLARITY, ONLY TOP LAYER OF REINFORCING STEEL IS SHOWN



SECTION C-C



SECTION B-B

NOTES:

1. WORK THIS SHEET WITH THE END BENT 1 SHEET.

BRIDGE NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: FXH
DRAWN BY: AAM
CHECKED BY: FXH

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

END BENT 1 DETAILS

SHEET NO.: B2-9

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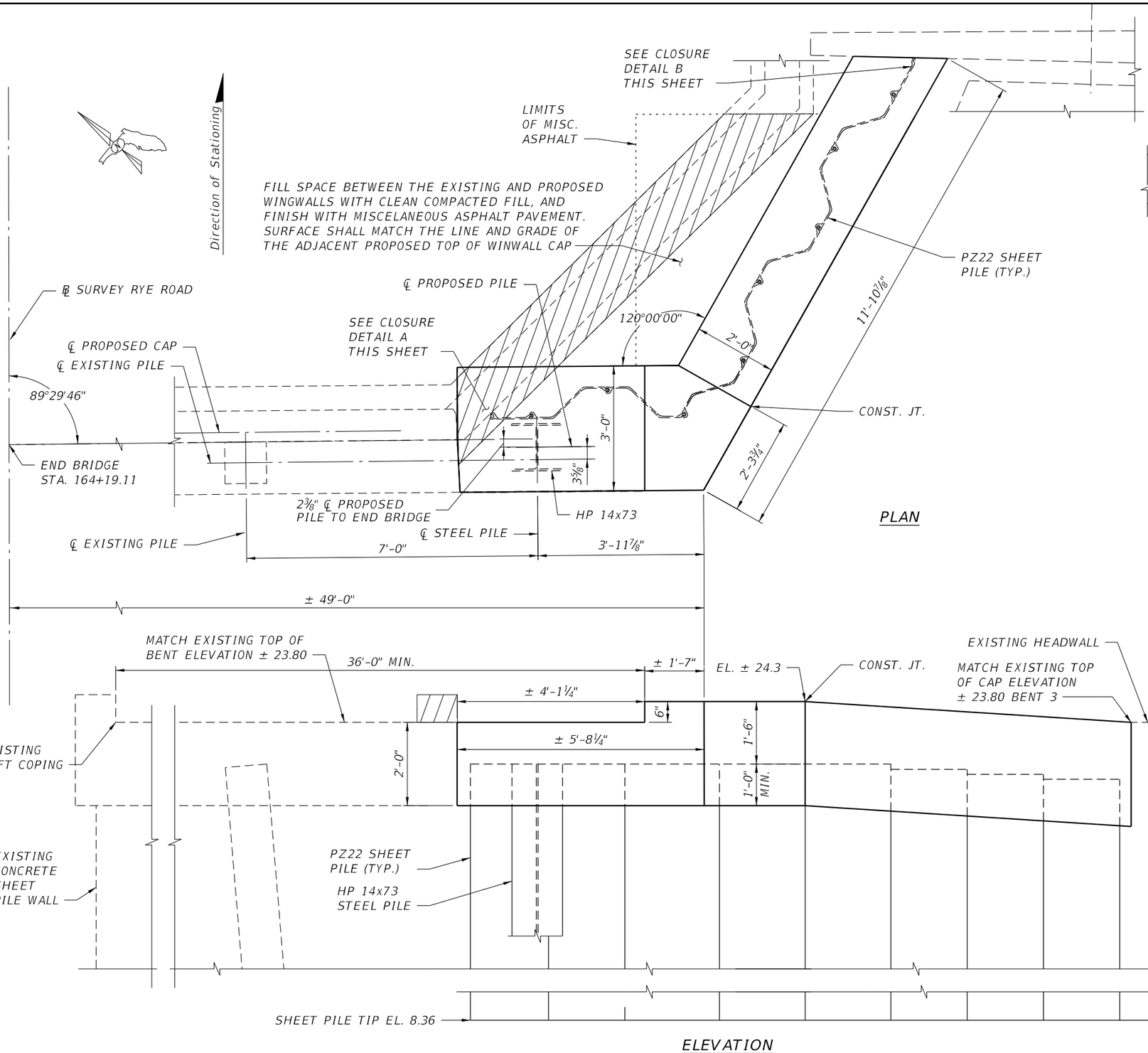
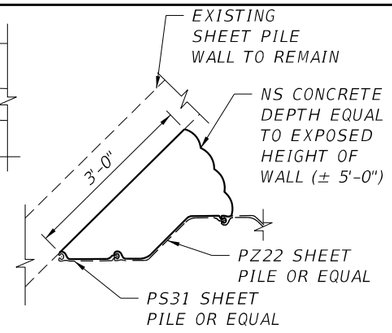
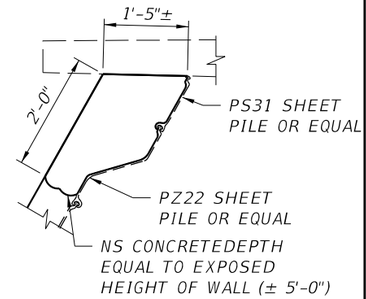




DETAIL A



DETAIL B

CLOSURE DETAILS

LEGEND

- EXISTING TO BE REMOVED
- EXISTING CONCRETE PILE
- PROPOSED PS31 SHEET PILE
- PROPOSED PZ22 SHEET PILE
- PROPOSED HP 14x73 STEEL PILE

NOTES:

1. WORK THIS SHEET WITH THE END BENT 3 DETAILS SHEET.
2. REMOVE THE EXISTING WINGWALL CAP TO PROVIDE FOR INSTALLATION OF THE PROPOSED STEEL SHEET PILE WALL. REMOVE THE TOP OF THE EXISTING WINGWALL SHEET PILES THAT ARE IN CONFLICT WITH THE PROPOSED WINGWALL CAP, AND ABANDON THE REMAINDER OF THE EXISTING SHEET PILES IN PLACE.
3. AFTER REMOVING THE EXISTING CHEEKWALL, GRIND THE EXPOSED REINFORCING STEEL TO THE SURFACE OF THE ADJACENT CONCRETE AND APPLY A ZINC-RICH PAINT. FINISH SURFACE TO MATCH THE LINE AND GRADE OF THE ADJACENT CONCRETE.
4. MINIMUM SHEET PILE SECTON PROPERTIES (HOT ROLLED), USE PZ22 OR EQUAL:

THICKNESS OF FLANGE:	TF=0.375 IN
THICKNESS OF WEB:	TW=0.375 IN
YIELD STRENGTH:	FY=39,000 PSI
SECTION MODULUS:	S=18.1 IN3/FT
MOMENT OF INERTIA:	I=84.38 IN4/FT

5. CONCRETE FOR CLOSURE DETAIL AND FILL BETWEEN THE EXISTING AND PROPOSED WINGWALLS SHALL BE INCIDENTAL TO THE COST OF THE STEEL SHEET PILING. MISCELANEOUS ASPHALT PAVEMENT SHALL BE INCIDENTAL TO THE COST OF THE MODIFIED THRIE BEAM GUARDRAIL.
6. CONTRACTOR SHALL VERIFY DIMENSIONS AND ELEVATIONS SHOWN ± ON THIS SHEET.

BRIDGE NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: AAM
CHECKED BY: FMH

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

END BENT 3

SHEET NO.: B2-10

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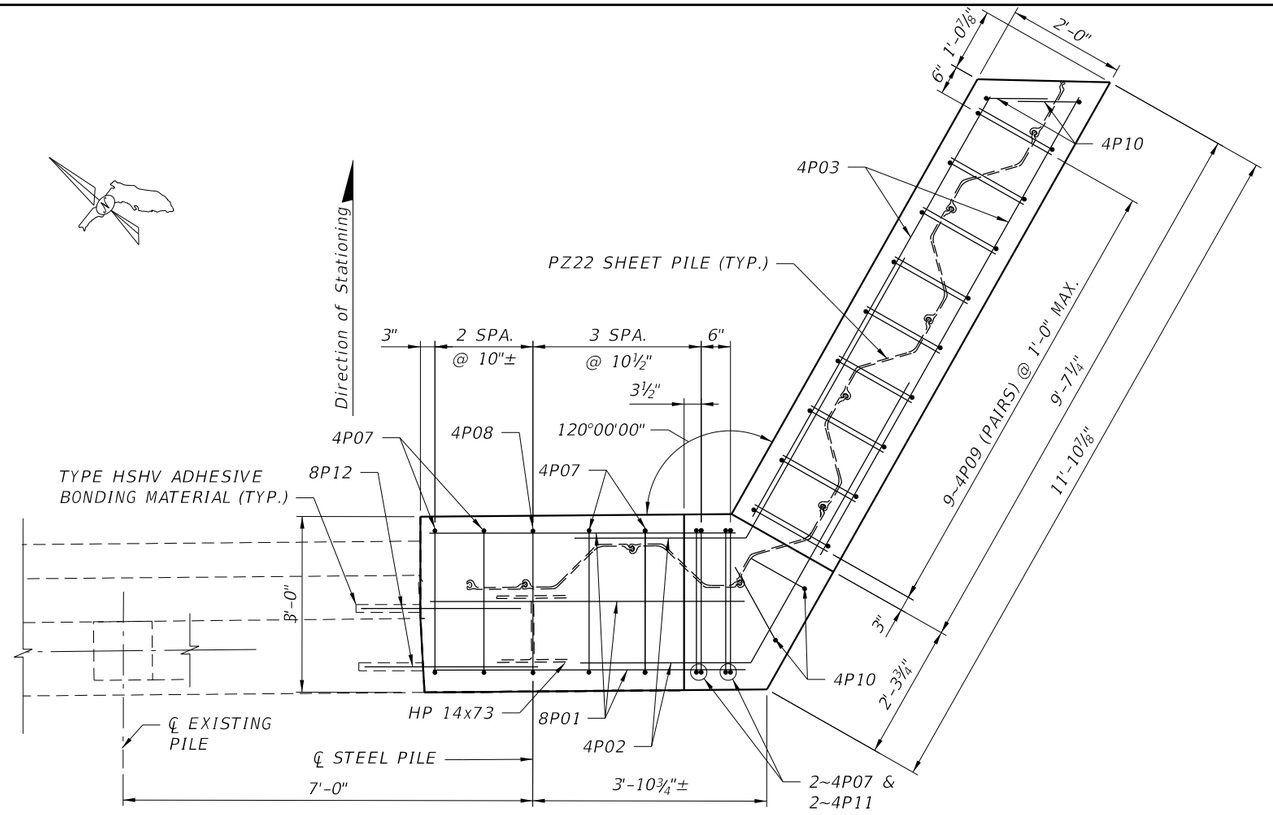
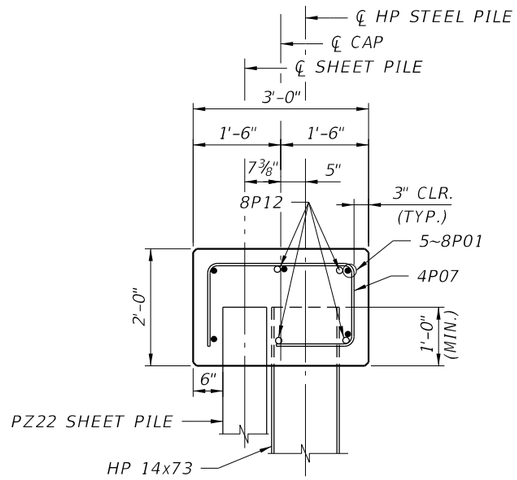
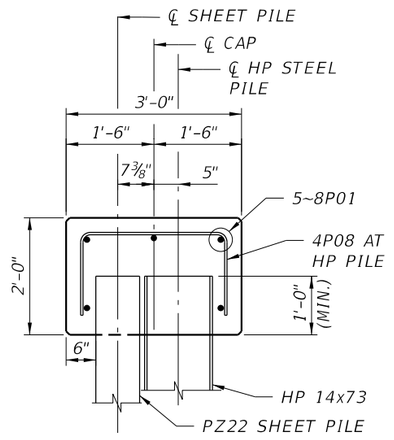


PLAN

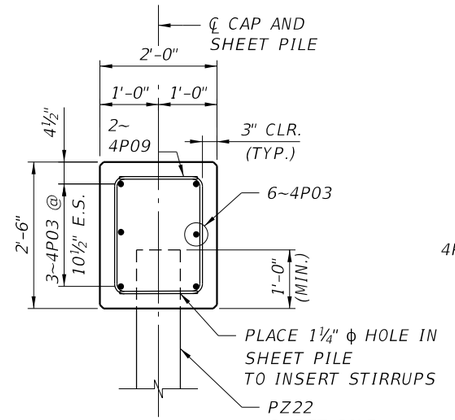
REFER TO VIEW D-D FOR TOP LAYER OF STEEL IN CORNER.



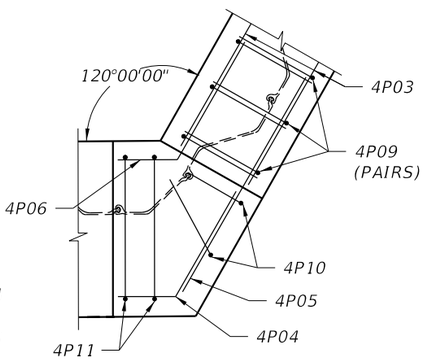
SECTION A-A



SECTION B-B

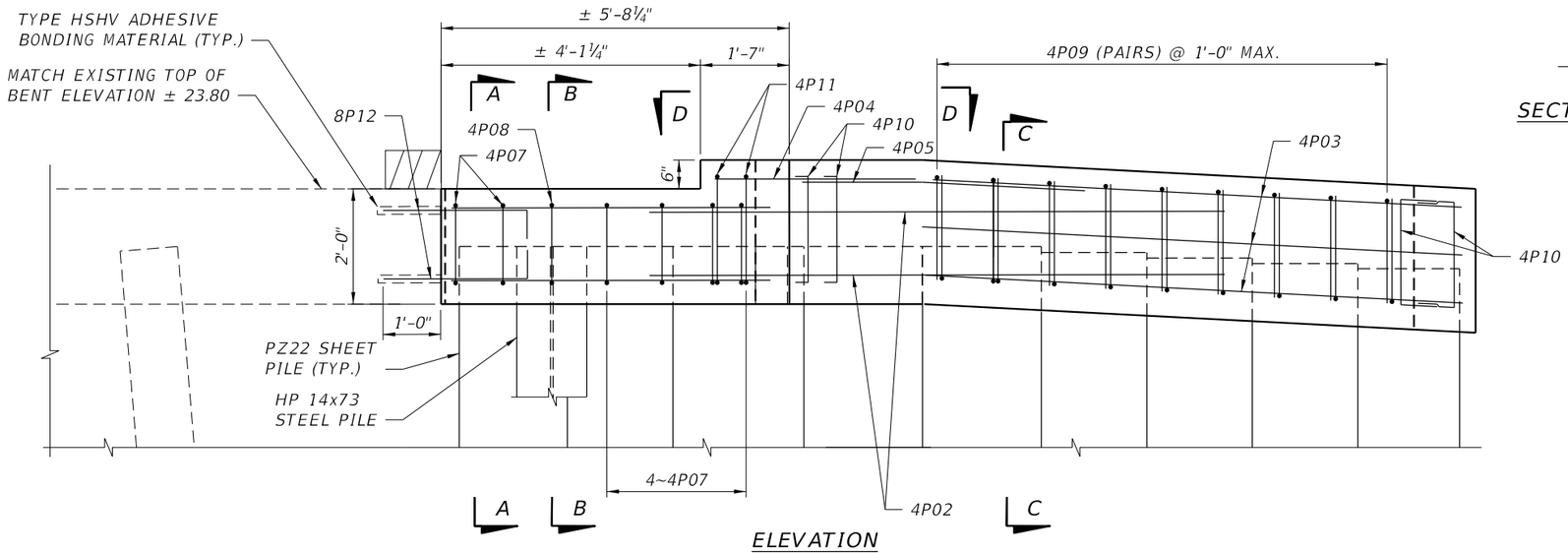


SECTION C-C



VIEW D-D

FOR CLARITY, ONLY TOP LAYER OF REINFORCING STEEL IS SHOWN



ELEVATION

NOTES:

1. WORK THIS SHEET WITH SHEET THE END BENT 3 SHEET.

BRIDGE NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: AAM
CHECKED BY: FMH

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

END BENT 3 DETAILS

SHEET NO.: B2-II

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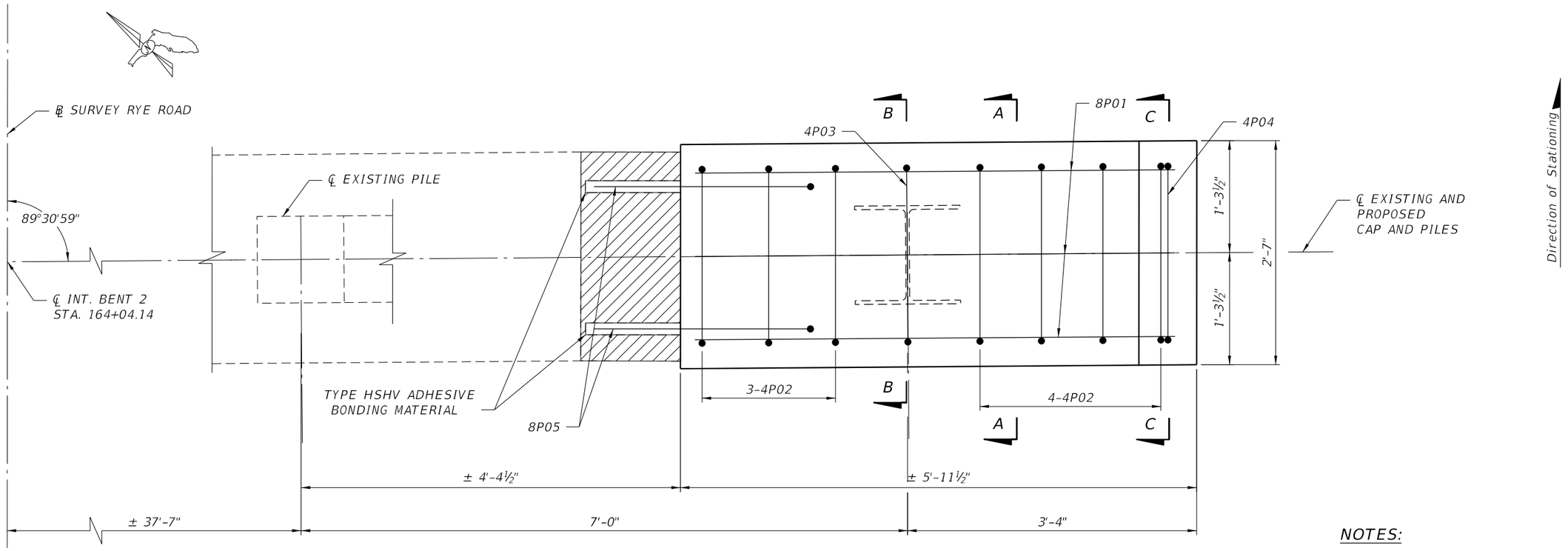
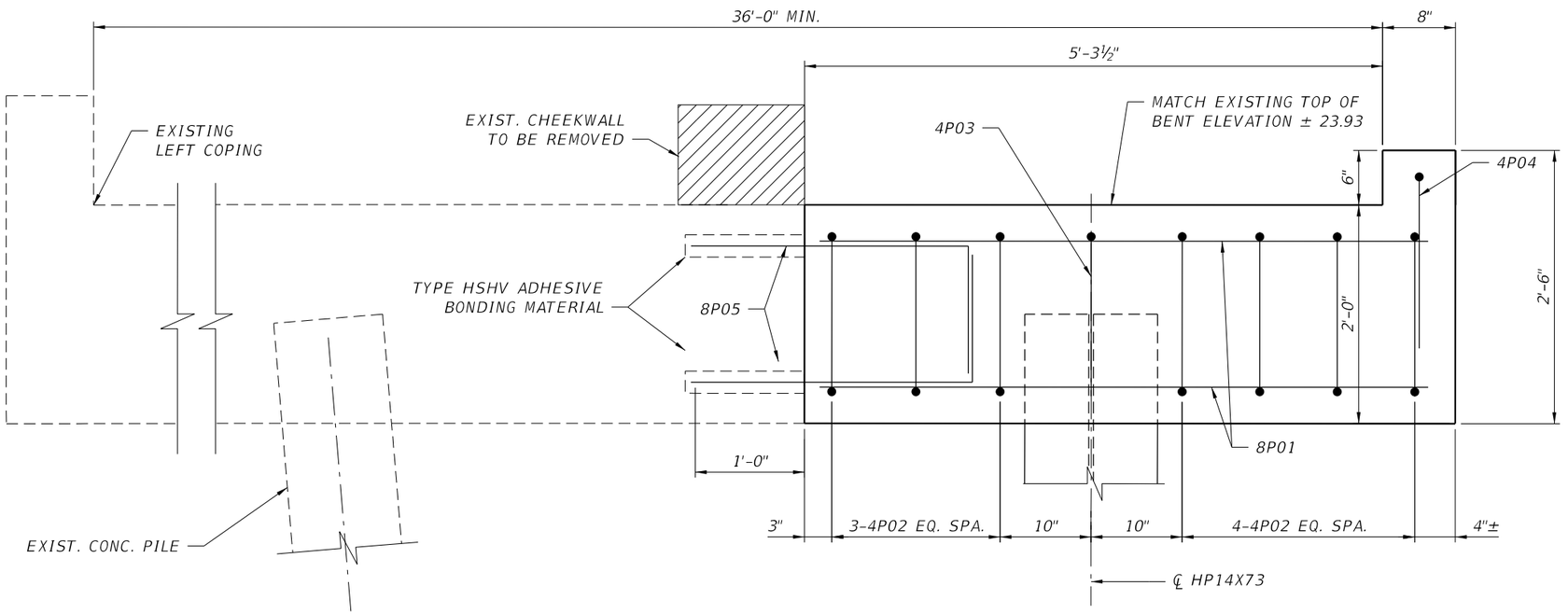


PLAN



ELEVATION

NOTES:

1. WORK THIS SHEET WITH THE INTERMEDIATE BENT DETAILS SHEET.
2. AFTER REMOVING THE EXISTING CHEEKWALL, GRIND THE EXPOSED REINFORCING STEEL TO THE SURFACE OF THE ADJACENT CONCRETE AND APPLY A ZINC-RICH PAINT FINISH SURFACE TO MATCH THE LINE AND GRADE OF THE ADJACENT CONCRETE.
3. CONTRACTOR SHALL VERIFY DIMENSIONS AND ELEVATIONS SHOWN ± ON THIS SHEET.

LEGEND:

EXISTING TO BE REMOVED

EXISTING CONCRETE PILE

PROPOSED HP14x73 STEEL PILE

BRIDGE NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: AAM
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

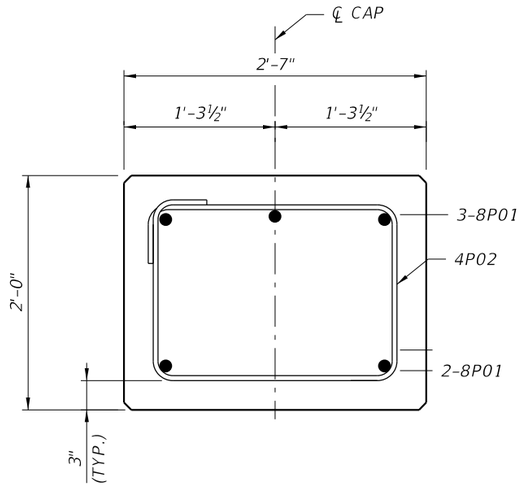
Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

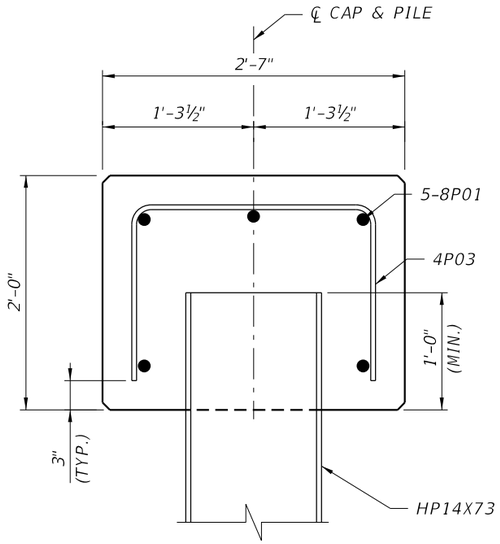
INTERMEDIATE BENT

SHEET NO.: B2-12

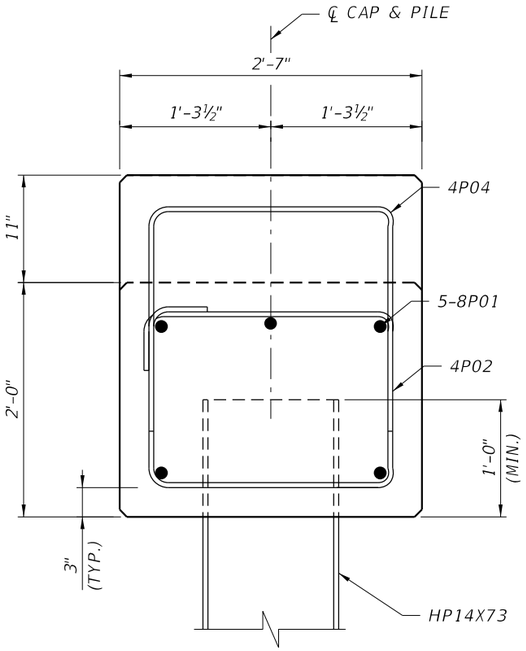
3:27:03 PM 9/30/2016 J:\00193\00193010.07\ms\struct\Br 134026\B02IntBent01.dgn



SECTION A-A



SECTION B-B



SECTION C-C

NOTES:

1. WORK THIS SHEET WITH THE INTERMEDIATE BENT SHEET.

BRIDGE NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: AAM
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

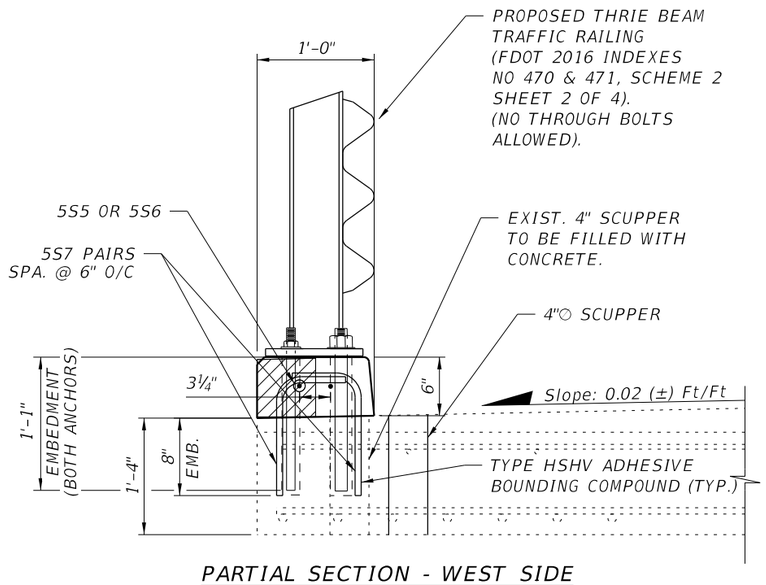
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

INTERMEDIATE BENT DETAILS

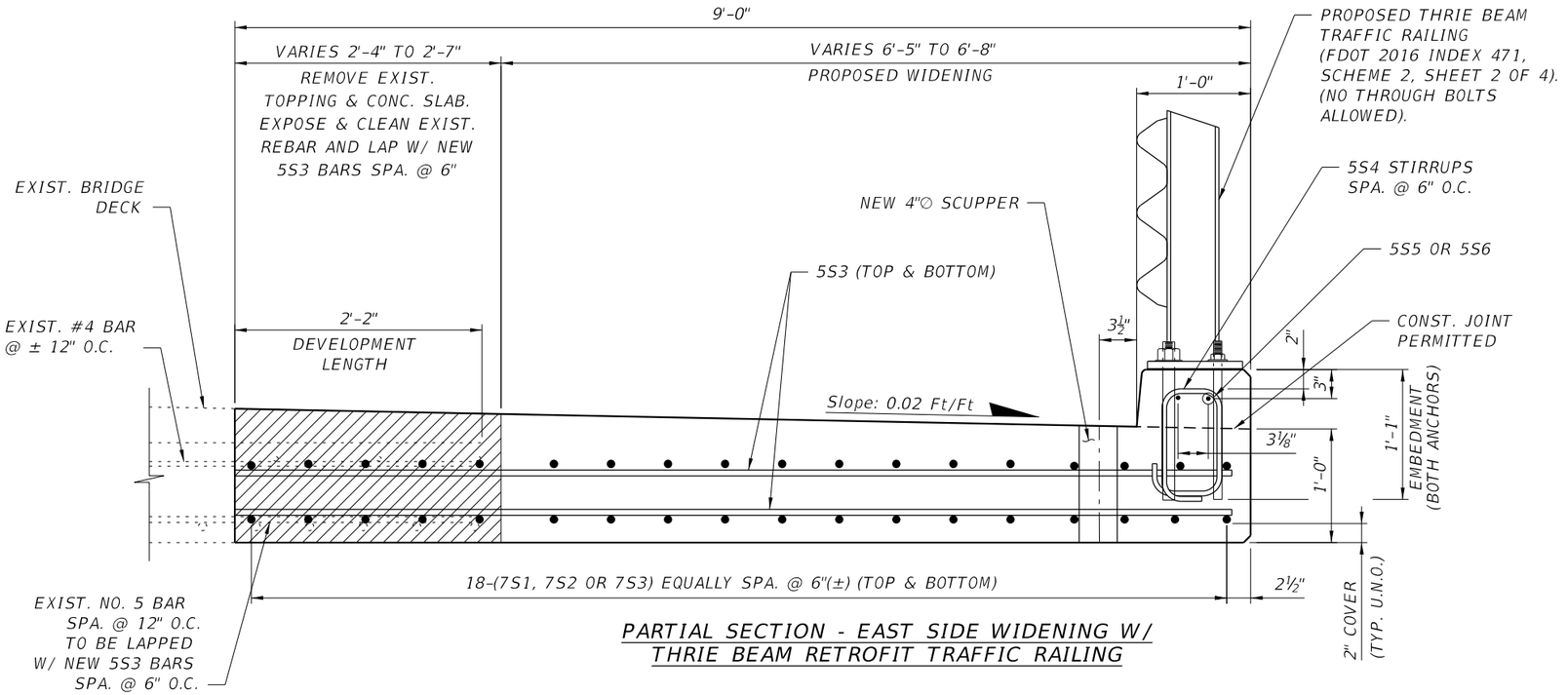
SHEET NO.: B2-13

3:27:03 PM 9/30/2016 J:\00193\00193010.07\ms\struct\Br 134026\B02IntBentDet01.dgn

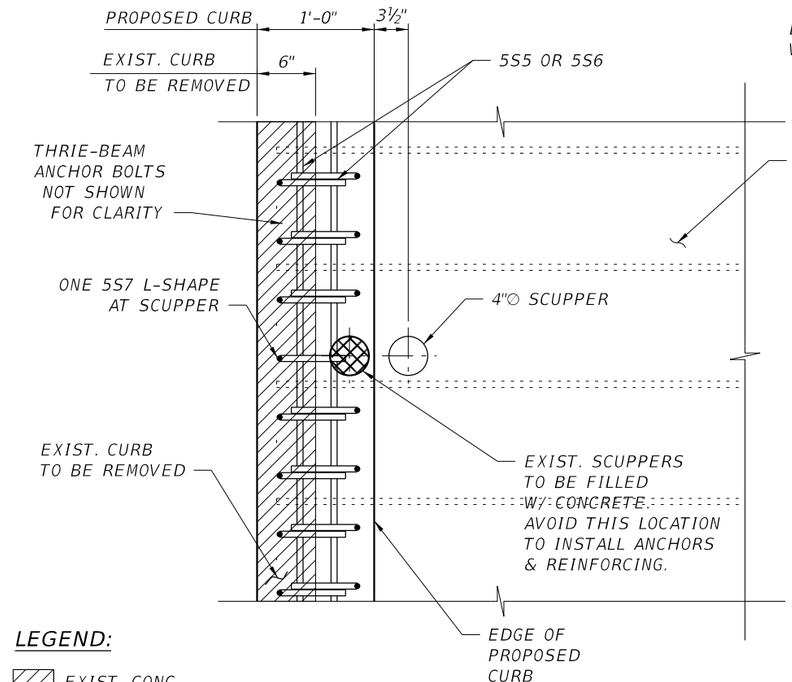


PARTIAL SECTION - WEST SIDE THRIE-BEAM RETROFIT TRAFFIC RAILING

INSTALL ANCHORS USING TYPE HSHV ADHESIVE IN ACCORDANCE WITH THE REQUIREMENTS OF STANDARD SPECIFICATION 416.



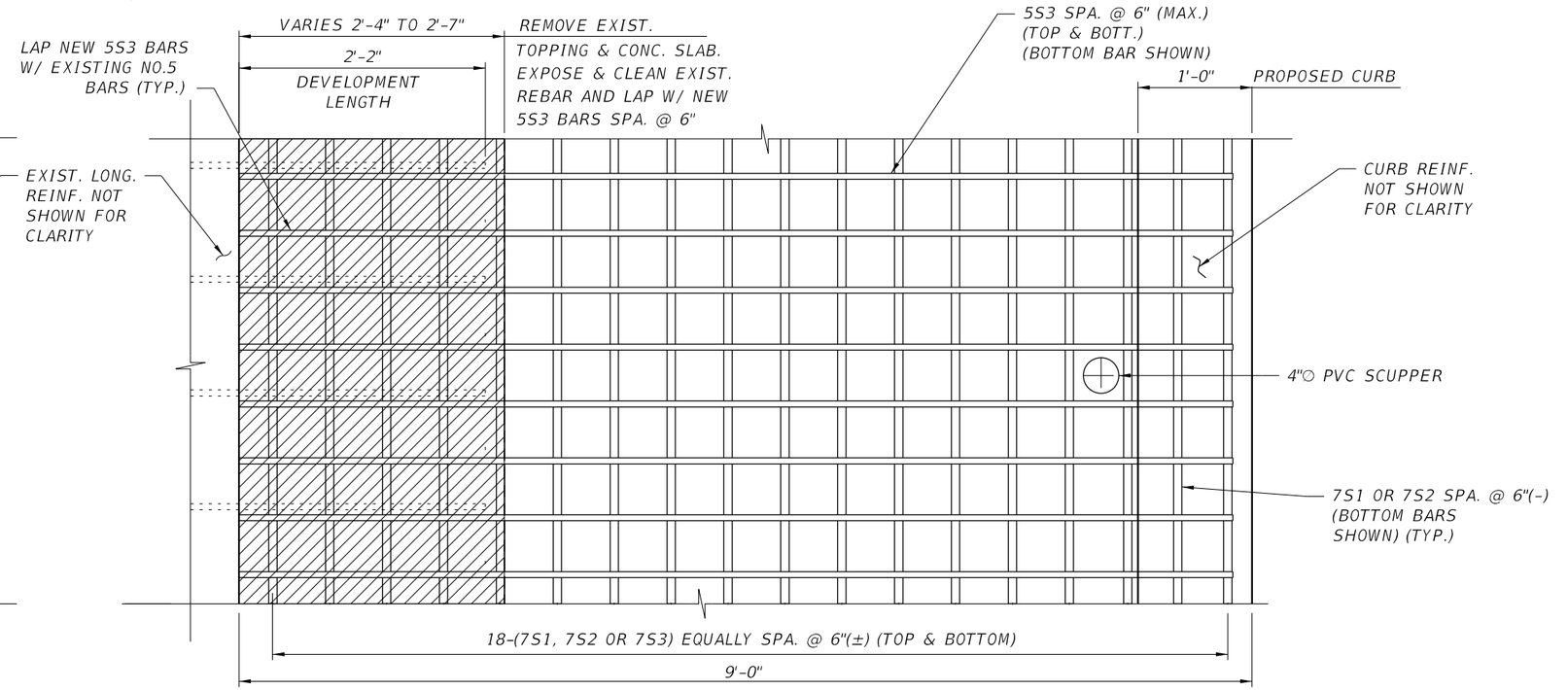
PARTIAL SECTION - EAST SIDE WIDENING W/ THRIE BEAM RETROFIT TRAFFIC RAILING



LEGEND:

EXIST. CONC. TO BE REMOVED

PARTIAL PLAN - WEST SIDE



PARTIAL PLAN - EAST SIDE WIDENING

BRIDGE NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: MAV
DRAWN BY: MAV
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

SUPERSTRUCTURE DETAILS

SHEET NO.: B2-14

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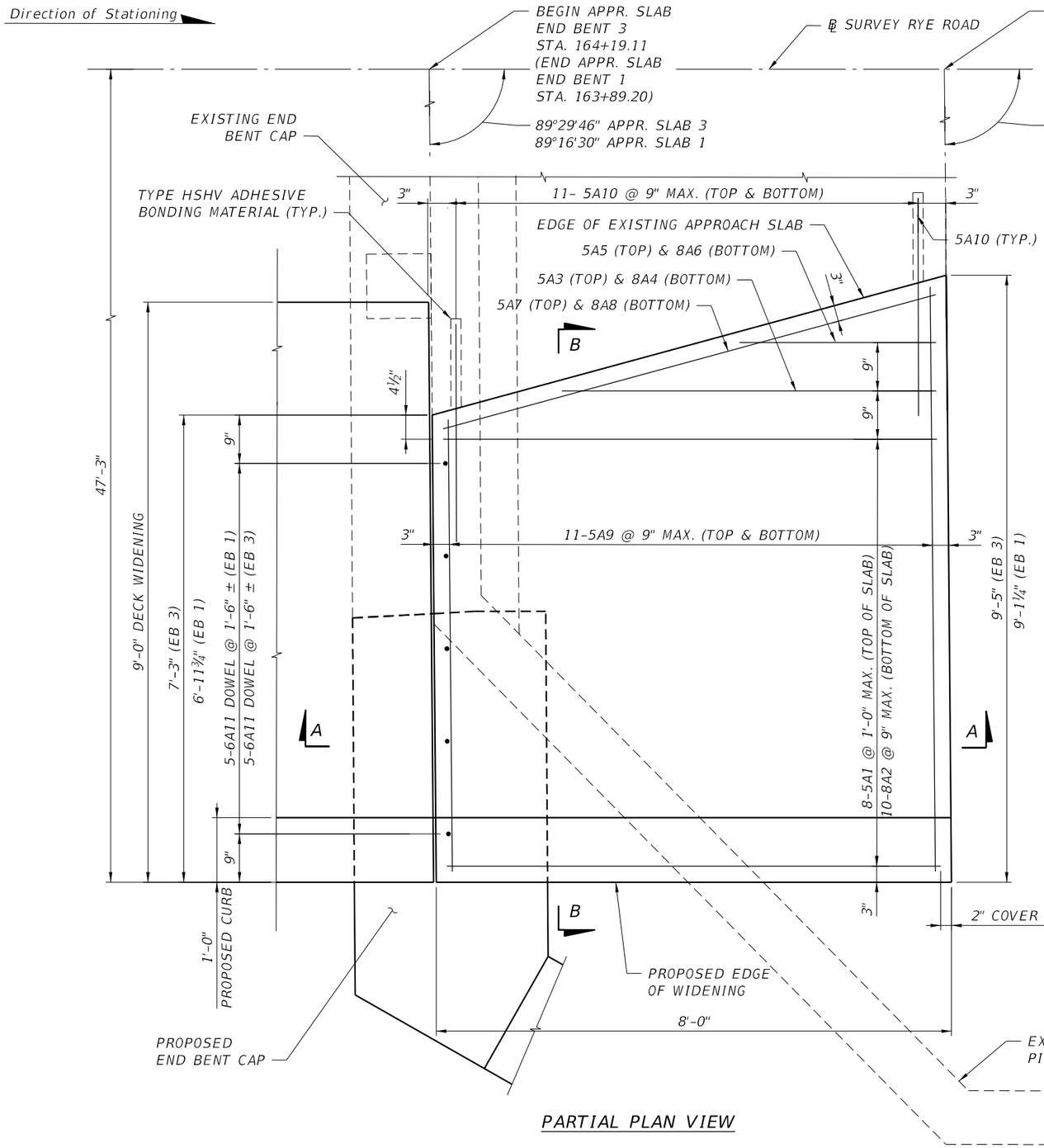
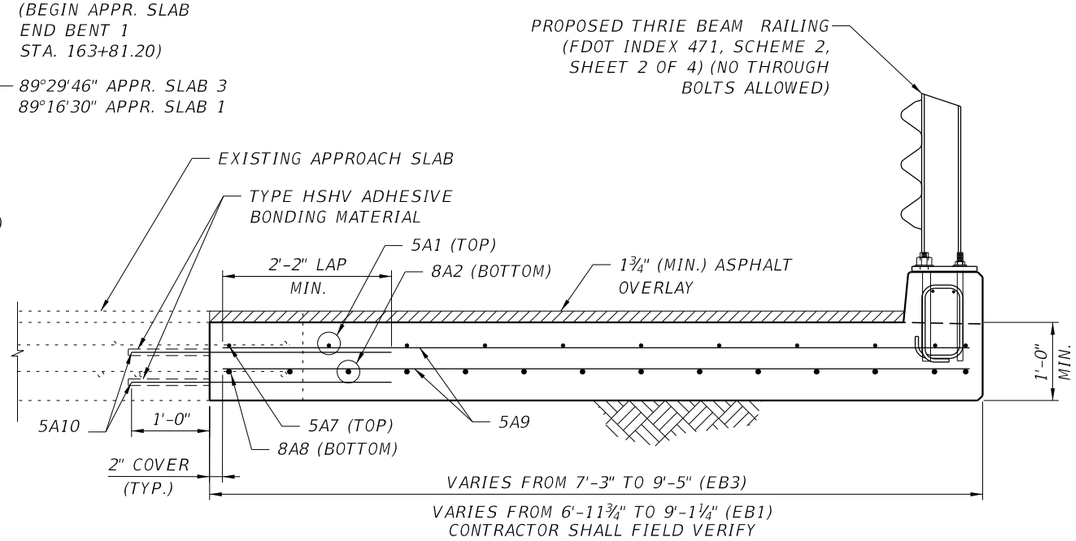


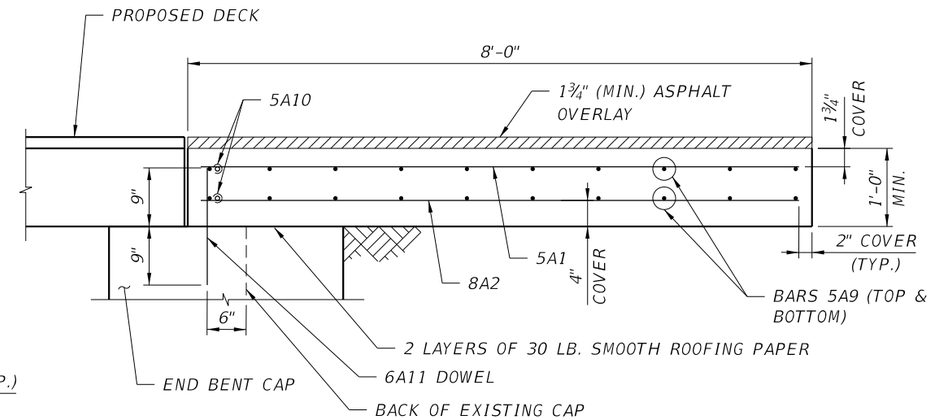
PARTIAL PLAN VIEW

END BENT 3 SHOWN, END BENT 1 SIMILAR OPPOSITE HAND



SECTION B-B

NOTE: ADJUST BARS 5A8 TO AVOID CONFLICT WITH EXISTING APPROACH SLAB REINFORCING.



SECTION A-A

BRIDGE NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: MAV
DRAWN BY: APP
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

APPROACH SLAB

SHEET NO.: B2-15

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MARK		LENGTH	NO	TYP	STY		B	C	D	E	F	H	J	K	N	Ø
SIZE	DES	FT IN	BARS	BAR	A	G	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	FT IN FR	NO	ANG
LOCATION SUPERSTRUCTURE DECK SPAN 1											NO. REQUIRED = 1					
7	S1	14- 5	36	1			14- 4 1/4									
5	S3	8- 6	60	1			8- 6									
5	S4	3-10	30	4	4	4	0-11	0- 6								
5	S5	14- 5	4	1			14- 4 1/4									
5	S7	1- 6	59	10			1- 0	0- 6								
LOCATION SUPERSTRUCTURE DECK SPAN 2											NO. REQUIRED = 1					
7	S2	14- 7	36	1			14- 6 1/2									
5	S3	8-10	60	1			8-10									
5	S4	3-10	30	4	4	4	0-11	0- 6								
5	S6	14- 7	4	1			14- 6 1/2									
5	S7	1- 6	59	10			1- 0	0- 6								
LOCATION END BENT 1											NO. REQUIRED = 1					
8	P01	4-10	5	1			4-10									
4	P02	4- 0	4	12			2- 0	2- 0								60
4	P03	6-10	6	1			6-10									
4	P04	3- 1	1	12			1- 2	1-11								60
4	P05	3-11	1	12			1-11	2- 0								19
4	P06	2- 9	1	12			0-10	1-11								63
4	P07	6- 9	5	37			2- 6	1- 5	1- 5	1- 5						
4	P08	5- 4	1	11			2- 6	1- 5	1- 5							
4	P09	5- 0	30	11			2- 0	1- 6	1- 6							
4	P10	4-11	2	11			1-11	1- 6	1- 6							
4	P11	6- 6	2	11			2- 6	2- 0	2- 0							
8	P12	3-10	4	10			2- 6	1- 4								
4	P13	6- 2	6	1			6- 2									
4	P14	5- 0	6	12			2- 6	2- 6								30
LOCATION INTERMEDIATE BENT 2											NO. REQUIRED = 1					
8	P01	5- 5	5	1			5- 5									
4	P02	7-11	7	4	4	4	1- 6	2- 1								
4	P03	5- 1	1	11			2- 1	1- 6	1- 6							
4	P04	5- 3	1	11			2- 1	1- 7	1- 7							
8	P05	3-10	4	10			2- 6	1- 4								
LOCATION END BENT 3											NO. REQUIRED = 1					
8	P01	5- 2	5	1			5- 2									
4	P02	8- 5	4	12			2-11	5- 6								60
4	P03	7- 0	6	1			7- 0									
4	P04	3- 1	1	12			1- 2	1-11								60
4	P05	3-11	1	12			1-11	2- 0								19
4	P06	2- 9	1	12			0-10	1-11								63
4	P07	6- 9	6	37			2- 6	1- 5	1- 5	1- 5						
4	P08	5- 4	1	11			2- 6	1- 5	1- 5							
4	P09	5- 0	18	11			2- 0	1- 6	1- 6							
4	P10	4-11	4	11			1-11	1- 6	1- 6							
4	P11	6- 6	2	11			2- 6	2- 0	2- 0							
8	P12	3-10	4	10			2- 6	1- 4								
LOCATION APPROACH SLAB END BENT 1											NO. REQUIRED = 1					
5	A1	7- 8	8	1			7- 8									
8	A2	7- 8	10	1			7- 8									
5	A3	5- 9	1	1			5- 9									
8	A4	5- 9	1	1			5- 9									
5	A5	3- 0	1	1			2-11 1/4									
8	A6	3- 0	1	1			2-11 1/4									
5	A7	8- 0	1	1			7-11 1/4									
8	A8	8- 0	1	1			7-11 1/4									
5	A9	VARY	22	1			6- 8 1/4									
		7- 9	0	1			8- 8 1/4									
5	A10	3- 5	22	1			3- 5									
6	A11	1- 6	5	1			1- 6									
LOCATION APPROACH SLAB END BENT 3											NO. REQUIRED = 1					
5	A1	7- 8	8	1			7- 8									
8	A2	7- 8	10	1			7- 8									
5	A3	5-10	1	1			5- 9 3/4									
8	A4	5-10	1	1			5- 9 3/4									
5	A5	3- 1	1	1			3- 0 1/2									
8	A6	3- 1	1	1			3- 0 1/2									
5	A7	8- 0	1	1			7-11 1/4									
8	A8	8- 0	1	1			7-11 1/4									
5	A9	VARY	22	1			6-11 3/4									
		8- 0	0	1			9- 0 1/4									
5	A10	3- 5	22	1			3- 5									
6	A11	1- 6	5	1			1- 6									

END OF LIST

BRIDGE NO. 134026

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: ABK
DRAWN BY: AAM
CHECKED BY:

CARDNO, INC.
380 PARK PLACE BLVD, SUITE 300
CLEARWATER, FLORIDA 33759
CERTIFICATE OF AUTHORIZATION 29915

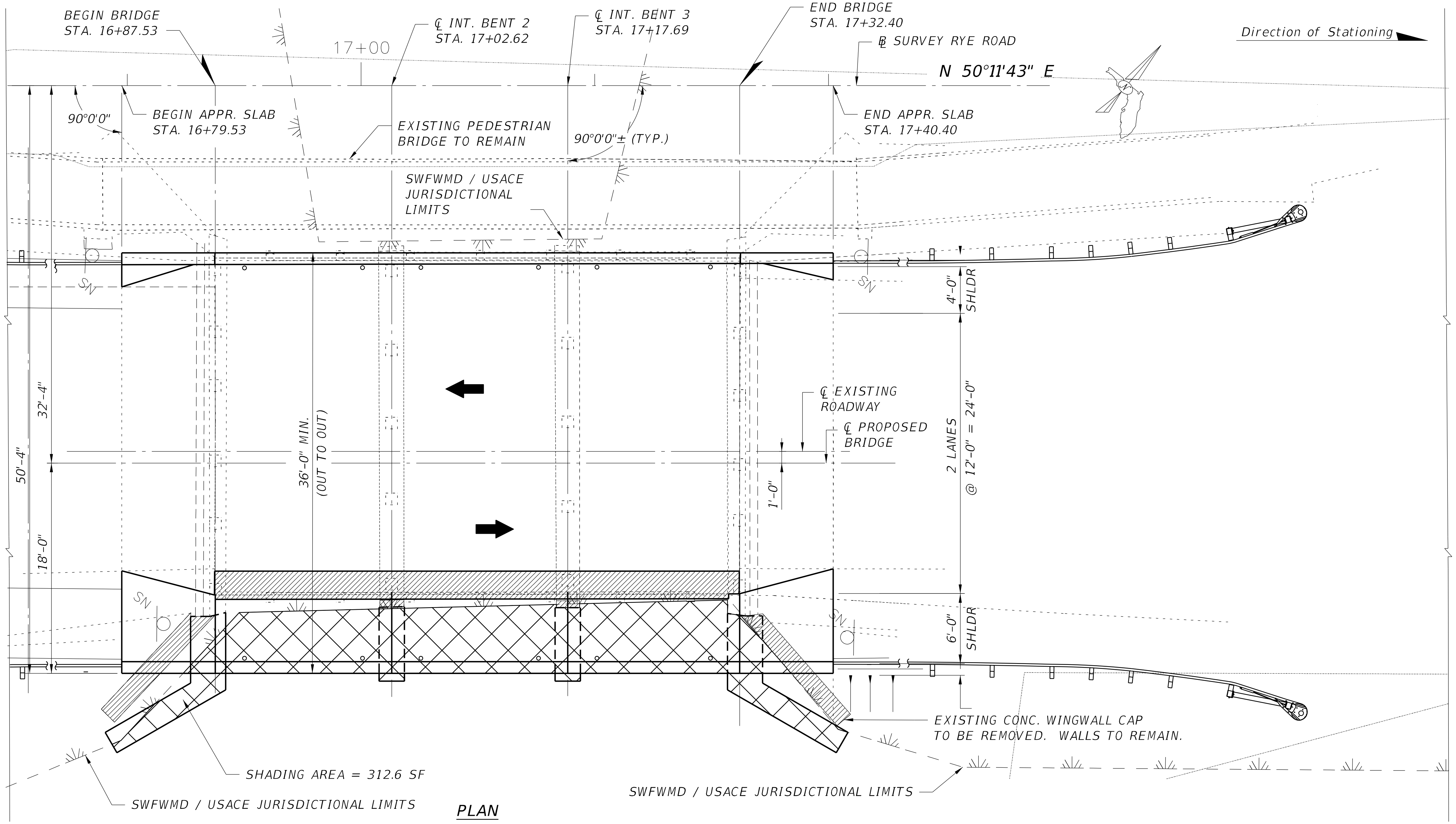
DATE: 4/2016
PROJECT NO.: 225338

Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: ANANDA B. KELLEY
FL. LICENSE NO.: 65632

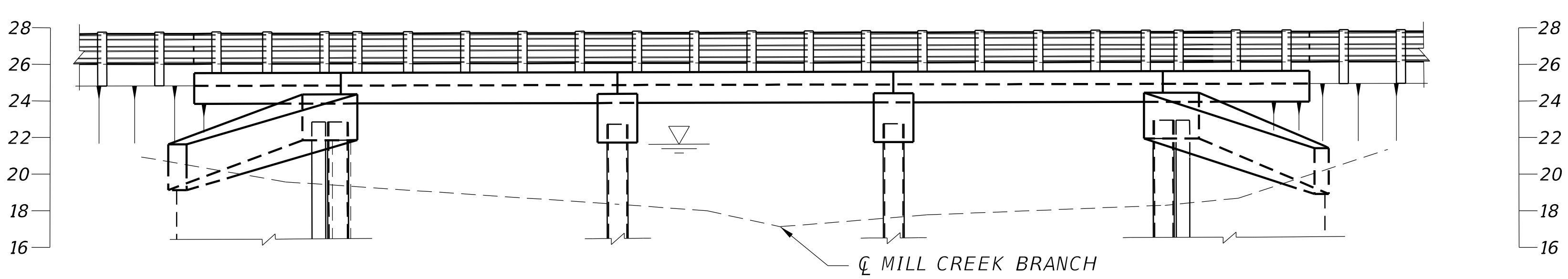
REBAR LIST

SHEET NO.: B2-16



PLAN

LEGEND:
- EXISTING CONCRETE PILE
- EXISTING TO BE REMOVED
- ADDITIONAL SHADING AREA



ELEVATION

No.	REVISIONS	DATE	BY

SCALE AS NOTED
DESIGNED BY JLS
DRAWN BY JHC
CHECKED BY JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE 09/2017
PROJECT NO. 6086160

MANATEE COUNTY PUBLIC WORKS

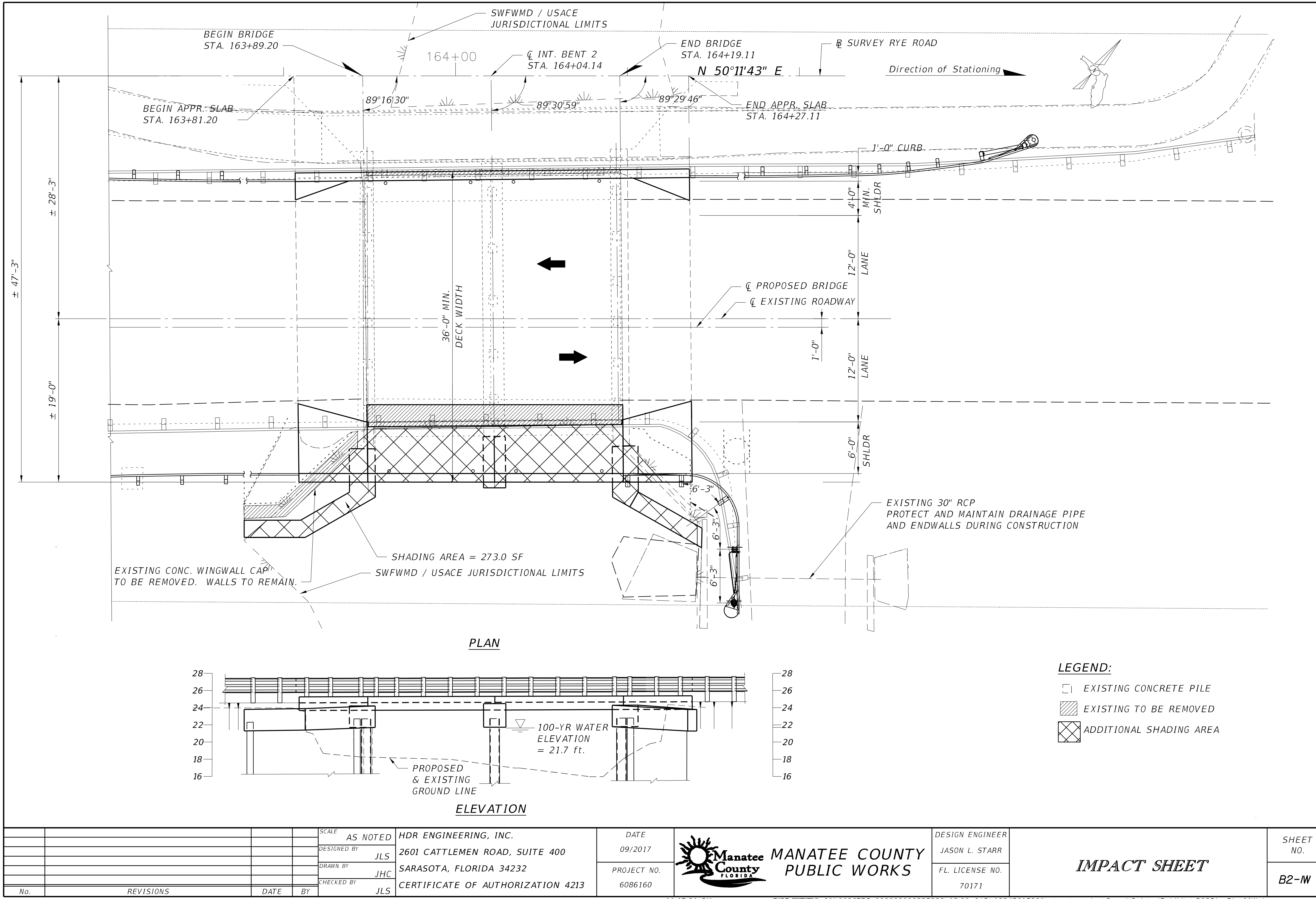
DESIGN ENGINEER JASON L. STARR
FL. LICENSE NO. 70171

IMPACT SHEET

SHEET NO. BI-IW

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

11:14:11 PM 9/27/2017 ...\CON0086775\000000000225338\13.00_CAD\12345615201\struct-cardno\PermitRelatedExhibits\B01PlanElev01W.DGN



SWFWMD / USACE JURISDICTIONAL LIMITS
BEGIN BRIDGE STA. 163+89.20
164+00
℄ INT. BENT 2 STA. 164+04.14
END BRIDGE STA. 164+19.11
℄ SURVEY RYE ROAD
N 50°11'43" E
Direction of Stationing
89°16'30"
89°30'59"
89°29'46"
BEGIN APPR. SLAB STA. 163+81.20
END APPR. SLAB STA. 164+27.11
1'-0" CURB
± 28'-3"
± 47'-3"
± 19'-0"
4'-0" MIN. SHLDR
12'-0" LANE
℄ PROPOSED BRIDGE
℄ EXISTING ROADWAY
36'-0" MIN. DECK WIDTH
1'-0"
12'-0" LANE
6'-0" SHLDR
6'-3"
6'-3"
6'-3"
EXISTING 30" RCP
PROTECT AND MAINTAIN DRAINAGE PIPE AND ENDWALLS DURING CONSTRUCTION
SHADING AREA = 273.0 SF
EXISTING CONC. WINGWALL CAP TO BE REMOVED. WALLS TO REMAIN.
SWFWMD / USACE JURISDICTIONAL LIMITS
PLAN
28
26
24
22
20
18
16
100-YR WATER ELEVATION = 21.7 ft.
PROPOSED & EXISTING GROUND LINE
ELEVATION
LEGEND:
EXISTING CONCRETE PILE
EXISTING TO BE REMOVED
ADDITIONAL SHADING AREA
NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.
No.
REVISIONS
DATE
BY
SCALE AS NOTED
DESIGNED BY JLS
DRAWN BY JHC
CHECKED BY JLS
HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213
DATE 09/2017
PROJECT NO. 6086160
Manatee County FLORIDA
MANATEE COUNTY PUBLIC WORKS
DESIGN ENGINEER JASON L. STARR
FL. LICENSE NO. 70171
IMPACT SHEET
SHEET NO.
B2-IW
11:17:21 PM
9/27/2017

GENERAL

THE FOLLOWING NARRATIVE OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) CONTAINS REFERENCES TO THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE FDOT DESIGN STANDARDS, THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEWER MANUAL, AND OTHER SHEETS OF THESE CONSTRUCTION PLANS.

THE COMPLETE STORMWATER POLLUTION PREVENTION PLAN INCLUDES SEVERAL ITEMS:
THIS NARRATIVE DESCRIPTION,
THE DOCUMENTS REFERENCED IN THIS NARRATIVE,
THE CONTRACTOR'S APPROVED EROSION CONTROL PLAN REQUIRED BY SPECIFICATION SECTION 104, AND REPORTS OF INSPECTIONS MADE DURING CONSTRUCTION.
HAZARDOUS MATERIALS SPILL CONTROL PLAN

THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING THESE ITEMS TO FDEP IN ORDER FOR THE NPDES PERMIT TO BE PROCESSED. ALL COSTS OF DOCUMENT PREPARATION SHALL BE PAID FOR UNDER THE COST OF THE MOBILIZATION PAY ITEM.

THE CONTRACTOR MAY ELECT TO SUBMIT A REVISED SWPPP THAT IS IN COMPLIANCE WITH THE STORM WATER REGULATIONS AT 40 CFR 122.26(B)(14) AND STATE WATER QUALITY STANDARDS. THE CONTRACTOR'S MODIFIED SWPPP MUST RECEIVE APPROVAL FROM THE COUNTY ENGINEER PRIOR TO IMPLEMENTATION.

THIS INFORMATION SHOULD BE SUBMITTED TO THE COUNTY THIRTY DAYS PRIOR TO ANY CLEARING AND GRUBBING ACTIVITIES. NO SOIL DISTURBING ACTIVITIES CAN BE CONDUCTED UNTIL THE NPDES PACKAGE HAS BEEN SUBMITTED TO THE FDEP.

I. SITE DESCRIPTION:

(1) NATURE OF CONSTRUCTION ACTIVITY
MANATEE COUNTY PROPOSES TO MILL & RESURFACE AND WIDEN APPROXIMATELY 2.8 MILES OF RYE ROAD TO A MINIMUM OF 24 FT WIDE. PAVED SHOULDERS ARE PROPOSED FOR THE PROJECT LENGTH AND A LEFT TURN LANE IS PROPOSED AT THE INTERSECTION WITH WATERLINE ROAD. NO CULVERTS OR BRIDGES SHALL BE EXTENDED.

(2) SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:
(a) THE CONTRACTOR SHALL BE REQUIRED TO PREPARE A SITE SPECIFIC EROSION AND SEDIMENT CONTROL PLAN ALONG WITH A DETAILED CONSTRUCTION SCHEDULE TO INDICATE DATES OF MAJOR GRADING ACTIVITIES AND DETERMINE SEQUENCES OF TEMPORARY AND PERMANENT SOIL DISTURBING ACTIVITIES ON ALL PORTIONS OF THE PROJECT.
(b) THE CONTRACTOR WILL BE REQUIRED TO MODIFY THE PLAN OR MATERIALS TO ADAPT TO SEASONAL VARIATIONS, CONSTRUCTION ACTIVITY VARIATIONS, OR AS DIRECTED BY THE ENGINEER.
(c) APPLICABLE EROSION AND SEDIMENT CONTROL DEVICES AND IMPLEMENTATION PROCEDURES ARE SUPPLIED IN THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEW MANUAL (E&SC MANUAL).
(d) THE ENGINEER IS RESPONSIBLE FOR DETERMINING IF ANY MODIFICATIONS OR ADDITIONAL CONTROLS ARE REQUIRED AND TO OBTAIN DEPLOYMENT SCHEDULES FOR THE IMPLEMENTATION OF ALL ADDITIONAL EROSION AND SEDIMENT CONTROL DEVICES FROM THE CONTRACTOR.

(3) GENERAL NOTES:
(a) ALL EROSION AND SEDIMENT CONTROL DEVICES FOR EACH PHASE OF WORK ARE TO BE INSTALLED PRIOR TO BEGINNING WORK ON THAT PHASE.
(b) INSTALL EROSION AND SEDIMENT CONTROL DEVICES WHERE LISTED IN THE CONTRACTOR'S APPROVED EROSION AND SEDIMENT CONTROL PLAN FOR PERIMETER CONTROLS BEFORE THE LAND IS DISTURBED.
(c) PROVIDE SEDIMENT BARRIERS WHERE LISTED IN THE CONTRACTOR'S APPROVED EROSION AND SEDIMENT CONTROL PLAN FOR DITCH/SWALE CHECK DAMS DURING CONSTRUCTION.
(d) PROVIDE INLET PROTECTION SYSTEMS AT INLET OPENINGS.
(e) COVER OR STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE.
(f) DO NOT DISTURB AN AREA UNTIL IT IS NECESSARY FOR CONSTRUCTION TO PROCEED.
(g) TIME CONSTRUCTION ACTIVITIES TO LIMIT IMPACT FROM SEASONAL CLIMATE CHANGES OR WEATHER EVENTS.
(h) DO NOT REMOVE PERIMETER CONTROLS UNTIL ALL UPSTREAM AREAS ARE FULLY STABILIZED AND PERMANENT VEGETATION IS ESTABLISHED.

(4) PROJECT AREAS:
THE ESTIMATED TOTAL PROJECT AREA IS 34.84 ACRES. THE ESTIMATED AREA TO BE DISTURBED DURING CONSTRUCTION ACTIVITIES IS 23.41 ACRES.

(5) RUNOFF COEFFICIENTS BEFORE Cw (B), DURING Cw (D) AND AFTER Cw (A) CONSTRUCTION:
RUNOFF COEFFICIENT FOR: GRASSED SHOULDERS ADJACENT TO ROADWAY: C=0.35
IMPERVIOUS ROADWAYS AND PAVED SHOULDER: C=0.95
DISTURBED AREAS, EXPOSED SOIL, ETC., DURING CONSTRUCTION: C=0.40
WEIGHTED RUNOFF COEFFICIENT:
BEFORE: Cw (B) = 0.42 DURING: Cw (D) = 0.50 AFTER: Cw (A) = 0.68
THE RUNOFF COEFFICIENT DURING CONSTRUCTION, Cw (D), IS CALCULATED ASSUMING THAT THE MAXIMUM ALLOWABLE AREA OF SOIL IS DISTURBED DURING CONSTRUCTION AND THE REMAINING AMOUNT IS THE EXISTING IMPERVIOUS AND GRASSED SHOULDER AREAS.

(6) DESCRIPTION OF SOIL OR QUALITY OF DISCHARGE:
THE SOILS WITHIN THE PROJECT AREA ARE PRIMARILY COMPOSED OF 20 – EAU GALLIE FINE SAND WITH ADDITIONAL SEGMENTS OF 48 – WABASSO FINE SAND, 11 – CASSIA FINE SAND, 26 – FLORIDANA–IMMOKALEE–OKEELANTA ASSOCIATION, AND 3 – BRADEN FINE SAND ACCORDING TO THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS).

(7) ESTIMATED DRAINAGE FLOW DIRECTION AND AVERAGE SLOPE OF DRAINAGE AREA FOR EACH OUTFALL:
(a) SITE MAP: THE CONSTRUCTION PLANS ARE BEING USED AS THE SITE MAP.
(b) DRAINAGE PATTERNS: THE DRAINAGE PATTERNS AND GENERAL FLOW DIRECTIONS ARE SHOWN ON THE PLAN SHEETS AND CROSS SECTIONS.
(c) APPROXIMATE SLOPES: THE EXISTING AND PROPOSED SLOPES WITHIN THE PROJECT LIMITS ARE DEPICTED IN THE CROSS SECTIONS AND ON THE TYPICAL SECTION SHEETS.

(8) RECEIVING WATERS:
MILL CREEK
MANATEE RIVER BELOW DAM

(9) THE MILL CREEK OUTFALLS ARE 303(d) LISTED, IMPAIRED WATERS FOR NUTRIENTS AND DISSOLVED OXYGEN AND FECAL COLIFORM. MANATEE RIVER BELOW DAM IS IMPAIRED FOR FECAL COLIFORM ONLY.

(10) OUTFALL LOCATIONS: (PERMANENT)

	DESCRIPTION	LATITUDE	LONGITUDE
(a)	(1) 106" X 68" PIPE	N 27° 29' 00"	W 82° 24' 12"
(b)	(1) 24" PIPE	N 27° 29' 15"	W 82° 23' 53"
(c)	(2) 48" PIPE	N 27° 29' 24"	W 82° 23' 41"
(d)	(1) 30' BRIDGE	N 27° 29' 36"	W 82° 23' 25"
(e)	(1) 38" X 24" PIPE	N 27° 29' 48"	W 82° 23' 09"
(f)	(1) 43' BRIDGE	N 27° 29' 55"	W 82° 22' 58"

(11) WETLAND AND/OR SURFACE WATER IMPACTS ASSOCIATED WITH THIS PROJECT ARE LESS THAN 0.1 ACRES.

(12) DESCRIPTION OF STORMWATER MANAGEMENT: (EXISTING/PROPOSED)
(a) EXISTING DRAINAGE FLOWS ARE TYPICALLY THROUGH ROADSIDE DITCHES TO BRIDGE CULVERTS.
(b) OFF–SITE RUNOFF SHOULD BE DIVERTED AWAY OR THROUGH THE CONSTRUCTION AREA, IF POSSIBLE. THIS ADDITIONAL FLOW, IF NOT DIVERTED, CAN ADD VOLUME AND SIZE TO STRUCTURAL PRACTICES, REQUIRING MORE FREQUENT MAINTENANCE AND LIMITING EFFECTIVENESS OF EROSION AND SEDIMENT CONTROLS.
(c) THE CONTRACTOR WILL PROVIDE POLLUTION CONTROL BY IMPLEMENTING DUST CONTROL DURING ALL PHASES OF CONSTRUCTION. SEDIMENT CONTROL WILL BE ACCOMPLISHED BY USING STREET OR VACUUM SWEEPERS.
(d) THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO PREVENT UNAUTHORIZED MATERIALS FROM ENTERING WETLANDS, WATERWAYS, OTHER SURFACE WATERS OR WATERS OF THE U.S.

II. CONTROLS:
SEDIMENT AND EROSION CONTROLS

(1) WATER QUALITY MONITORING:

(a) WATER QUALITY MONITORING SHALL BE CONDUCTED IN ACCORDANCE WITH THE SPECIAL CONDITIONS OF ANY ENVIRONMENTAL PERMIT OR BY THE CONTRACTOR UPON THE OBSERVATION THAT WATER QUALITY STANDARDS MAY BE VIOLATED BY THE CONTRACTOR'S ACTIVITIES. MONITORING LOCATIONS MAY BE SPECIFIED IN THE ENVIRONMENTAL PERMIT OR MAY BE DESIGNATED BY THE CONTRACTOR AND APPROVED BY THE PROJECT ADMINISTRATOR.

(b) THE PROJECT ADMINISTRATOR WILL BE RESPONSIBLE FOR MONITORING ANY ACTIVITIES FOR VIOLATION OF WATER QUALITY STANDARDS AS THEY RELATE TO TURBIDITY (NO GREATER THAN 29 NTU'S ABOVE BACKGROUND OR GREATER THAN 0 NTU'S ABOVE BACKGROUND FOR DIRECT DISCHARGES TO OFW'S).

(c) IF WATER QUALITY STANDARDS ARE VIOLATED, CONSTRUCTION SHALL BE STOPPED IMMEDIATELY, THE ENVIROMENTAL PERMIT CONDITIONS FOLLOWED AND EROSION AND SEDIMENT CONTROL DEVICES REEVALUATED AND APPROVED BY THE ENGINEER PRIOR TO ANY CONTINUATION OF ACTIVITY. MONITORING ACTIVITIES AND TURBIDITY READINGS SHALL BE RECORDED ON THE CONSTRUCTION INSPECTION REPORT AND CONTINUED UNTIL TURBIDITY READINGS FALL BELOW AN ACCEPTABLE LEVEL (LESS THAN 29 NTU'S ABOVE BACKGROUND OR LESS THAN 0 NTU'S ABOVE BACKGROUND FOR DIRECT DISCHARGES TO OFW'S).

(d) WATER QUALITY MONITORING MAY BE CONDUCTED DURING ANY PHASE OF CONSTRUCTION AS DIRECTED BY THE PROJECT ENGINEER.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

STORMWATER POLLUTION PREVENTION PLAN NOTES (1)

SHEET NO.: 59

(2) STABILIZATION PRACTICES:

(a) STABILIZATION MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO MAINTAINING, ESTABLISHING AND USING VEGETATION, APPLYING MULCHES, SODDING, SEEDING, BEST MANAGEMENT PRACTICE (BMP)'S AND THE USE OF ROLLED EROSION CONTROLLED PRODUCTS. WHEN CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, SIDE SLOPES SHALL BE STABILIZED WITH PERFORMANCE SODDING OR SEEDING OR ANY OTHER APPROVED METHOD OF STABILIZATION INCLUDED IN THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEW MANUAL (E&SC MANUAL).

(b) STABILIZATION SHALL TAKE PLACE AS SOON AS PRACTICAL IN PORTIONS OF THE PROJECT WHERE CONSTRUCTION ACTIVITIES HAVE CEASED, BUT NO LATER THAN 7 DAYS AFTER ANY CONSTRUCTION ACTIVITY CEASES EITHER TEMPORARILY OR PERMANENTLY.

(c) ALL EROSION CONTROL DEVICES SHALL BE INSTALLED ACCORDING TO THE CONTRACT DOCUMENTS, AND THE CONTRACTOR'S APPROVED EROSION CONTROL PLAN.

(d) ANY TEMPORARY MATERIAL USED FOR POLLUTION OR EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT AND FINAL STABILIZATION OF THE PROJECT HAS BEEN ACHIEVED.

(e) SEDIMENT BARRIERS SHOULD BE USED ALONG THE LENGTH OF THE PROJECT WHERE THE GROUND SLOPES AWAY FROM THE RIGHT OF WAY OR WHERE THERE IS POTENTIAL FOR SEDIMENT TO BE DIRECTED OFF-SITE. PARTICULAR CARE SHOULD BE USED WHEN THERE ARE WETLANDS OR WATERS OF THE U.S. ARE INVOLVED. SEDIMENT BARRIERS SHOULD BE USED AROUND THE PERIMETER OF STOCKPILE AREAS.

(f) SPACING OF SEDIMENT BARRIERS USED AS DITCH OR SWALE CHECKS/DAMS SHOULD BE BASED UPON THE HEIGHT OF THE BARRIER AND THE SLOPE OF THE DITCH OR SWALE.

(g) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFYING SOIL TRACKING PREVENTION SYSTEMS OR PROCEDURES AS NEEDED.

(3) STRUCTURAL PRACTICES FOR EROSION AND SEDIMENT CONTROL

(a) ROLLED EROSION CONTROL PRODUCTS (ARTIFICIAL COVERINGS)

PURPOSE: TO PROTECT DISTURBED SLOPE SURFACES AGAINST EROSION DUE TO RAINFALL OR FLOWING WATER.

(1) USED FOR PAUSES IN CONSTRUCTION DUE TO INCLEMENT WEATHER OR OTHER CIRCUMSTANCES. COULD INCLUDE NATURAL OR SYNTHETIC FIBER MATS, PLASTIC SHEETING OR NETS.
(2) USED FOR EROSION CONTROL THAT FACILITATES PLANT GROWTH WHILE PERMANENT GRASS IS ESTABLISHED. COULD INCLUDE BIODEGRADABLE EROSION CONTROL BLANKETS INSTALLED ON A SEEDED AREA, ON FILL SLOPES OR IN DITCHES.
(3) USED TO STABILIZE DRAINAGE CHANNELS. CONSULT E&SC MANUAL TO DETERMINE CORRECT PRODUCT TYPE FOR CHANNEL STABILIZATION.

(b) SEDIMENT BARRIERS (TEMPORARY CONSTRUCTION SITE BMP'S)

PURPOSE: SEDIMENT BARRIERS EITHER OBSTRUCT FLOW OR PREVENT THE PASSAGE OF WATER WHILE CONSTRUCTION ACTIVITIES OCCUR. SMALLER SEDIMENT BARRIERS MAY FUNCTION AS A SMALL SEDIMENT CONTAINMENT SYSTEM OR AS A METHOD TO REDUCE FLOW VELOCITY.

(1) THESE CONSTUCTION BMP'S CAN INCLUDE SYNTHETIC BALES, STAKED SILT FENCE, TURBIDITY BARRIER, STORM SEWER INLET BARRIERS, ROCK BARRIERS, GEOSYNTHETIC BARRIERS, ETC.
(2) APPROPRIATE LOCATIONS INCLUDE SITE PERIMETER, BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION, BELOW THE TOE OF EXPOSED AND ERODIBLE SLOPES, ALONG THE TOE OF STREAM AND CHANNEL BANKS, AROUND DRAINS AND INLETS LOCATED IN LOWPOINTS OR THE DOWNSTREAM EDGE OF AREAS UNDERGOING VERTICAL OR BOX CULVERT CONSTRUCTION ACTIVITIES.
(3) INAPPROPRIATE LOCATIONS FOR THESE SAME MEASURES INCLUDE PARALLEL TO A HILLSIDE CONTOUR, IN CHANNELS WITH CONCENTRATED FLOW (UNLESS PROPERLY REINFORCED), UPSTREAM OR DOWNSTREAM OF CULVERTS WITH CONCENTRATED FLOW, IN FRONT OF OR AROUND INLETS ON A GRADE WITH CONCENTRATED FLOW OR IN FLOWING STREAMS.

(c) FLOATING TURBIDITY BARRIER

PURPOSE: USED IN PERMANENT BODIES OF WATER TO RETAIN SEDIMENT AND FLOATING DEBRIS FROM A CONSTRUCTION AREA SO THAT REMOVAL OR CONTAINMENT OF THE MATERIAL IS POSSIBLE. THEY ARE ALSO USED TO CONTROL MIGRATION OF SUSPENDED SEDIMENTS.

(1) TYPE I, LIGHT DUTY, IS USED WHERE THERE IS LITTLE OR NO CURRENT, NO WIND AND NO WAVE ACTION.
(2) TYPE II, MODERATE DUTY, IS USED WITH SOME CURRENT (<3.5 FT. PER SECOND) AND SOME EXPOSURE TO WIND.
(3) TYPE III, HEAVY DUTY, IS USED WITH GREATER CURRENT (3.5-5.0 FT. PER SECOND), MODERATE WIND AND WAVE ACTION
(4) BARRIER MUST BE ATTACHED AT BOTH ENDS AND WEIGHTED ON THE BOTTOM.
(5) MULTIPLE LINES OF BARRIER MAY BE USED IN SOME CIRCUMSTANCES FOR ADDITIONAL PROTECTION.
(6) STANDARD PANELS FOR WATER DEPTHS ARE 5.0'. ADDITIONAL PANELS CAN BE USED FOR WATER DEPTHS > 5.0'.

(d) SOIL TRACKING PREVENTION DEVICE

PURPOSE: TEMPORARY STRUCTURES TO ASSIST WITH THE REMOVAL OF SOIL MATERIAL CAPTURED ON VEHICLE TIRES BEFORE THE VEHICLES ENTER THE ROADWAY.

(1) USE ONE DEVICE PER MILE WITH A MINIMUM OF TWO PER PROJECT.
(2) USE ADDITIONAL DEVICES FOR CONSRUCTION AREAS THAT ARE NOT ADJACENT TO THE ROAD RIGHT OF WAY AND NO ACCESS IS PROVIDED THROUGH A SOIL TRACKING PREVENTION DEVICE.
(3) RRR PROJECTS SHOULD BE HANDLED ON A CASE BY CASE BASIS.

III. OTHER CONTROLS:

(1) WASTE DISPOSAL
(a) THE CONTRACTOR WILL PROVIDE LITTER CONTROL AND COLLECTION WITHIN THE PROJECT BOUNDARIES DURING CONSTRUCTION ACTIVITIES.
(b) ALL FERTILIZER AND CHEMICAL CONTAINERS SHALL BE DISPOSED OF BY THE CONTRACTOR ACCORDING TO EPA'S STANDARD PRACTICES AS DETAILED BY THE MANUFACTURER.
(c) NO SOLID MATERIALS, INCLUDING BUILDING AND CONSTRUCTION MATERIALS, SHALL BE DISCHARGED TO WETLANDS OR BURIED ON SITE.
(d) ALL SANITARY WASTE WILL BE COLLECTED FROM PORTABLE UNITS BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR AS REQUIRED BY STATE REGULATIONS.

(2) OFF-SITE VEHICLE TRACKING – WILL BE CONTROLLED BY THE FOLLOWING METHODS:
(a) LOADED HAUL TRUCKS ARE TO BE COVERED BY A TARPAULIN AT ALL TIMES.
(b) EXCESS DIRT ON ROAD WILL BE REMOVED DAILY.

(3) STATE AND FEDERAL REGULATIONS: PERMITS WILL BE REQUIRED FROM THE FOLLOWING AGENCIES:

(a) SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD) PERMIT EXEMPTION FOR ROADWAY WIDENING
(b) STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION GENERIC PERMIT FOR STORMWATER DISCHARGES FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES.

(4) NON-STORMWATER (INCLUDING SPILL REPORTING)
THE CONTRACTOR WILL PROVIDE THE FDOT WITH AN EROSION AND SEDIMENT CONTROL PLAN THAT WILL INCLUDE SPILL CONTAINMENT, REPORTING, AND RESPONSES. THE PLAN SHALL SPECIFY WHAT MANAGEMENT PRACTICES AND CONTAINMENT METHODS WILL BE USED TO PREVENT POTENTIAL POLLUTANTS (FUEL, LUBRICANTS, HERBICIDES, ETC.) FROM SPILLING ONTO THE SOIL OR INTO THE SURFACE WATERS. IF A SPILL DOES OCCUR, OR IF CONTAMINATED SOIL OR GROUNDWATER IS ENCOUNTERED, CONTACT MANATEE COUNTY AT (941) 708-7480.

IV. MAINTENANCE:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIRS OF ALL EROSION AND SEDIMENT CONTROL DEVICES AND REMOVAL OF EROSION AND SEDIMENT CONTROL DEVICES WHEN NOTICE OF TERMINATION IS MAILED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND PROPER DISPOSAL OF SEDIMENT BUILDUP THROUGH THE LIFE OF THE INSTALLED EROSION AND SEDIMENT CONTROL DEVICES.

(1) ALL CONTROL MEASURES WILL BE MAINTAINED DAILY BY THE CONTRACTOR AND ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF NOTICE.
(2) SODDING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
(3) SYNTHETIC BALES SHALL BE MAINTAINED TO ENSURE THEIR USEFULNESS AND NOT BLOCK OR IMPEDE STORMWATER FLOW OR DRAINAGE.
(4) STABILIZED CONSTRUCTION ENTRANCES SHALL BE MAINTAINED TO PREVENT CLOGGING OF ROCK BEDDING WHICH MAY IMPEDE THE USEFULNESS OF THE STRUCTURE.

V. INSPECTION:

(1) THE CONTRACTOR SHALL INSTALL AND MAINTAIN RAIN GAUGES ON THE PROJECT SITE AND RECORD WEEKLY RAINFALL IN ACCORDANCE WITH THE NPDES PERMIT.
(2) ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSPECTED DAILY BY CONTRACTOR'S PERSONNEL WHO ARE F.D.E.P. CERTIFIED STORMWATER MANAGEMENT INSPECTORS.
(3) THE CONTRACTOR SHALL COMPLETE ALL SWPPP INSPECTION REPORT FORMS REQUIRED FOR THE NPDES PERMIT.

VI. TRACKING AND REPORTING:

(1) THE CONTRACTOR SHALL SUBMIT A WEEKLY REPORT TO THE DEPARTMENT DOCUMENTING THE DAILY INSPECTIONS AND MAINTENANCE OR REPAIRS TO THE EROSION AND SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL MAINTAIN ALL REQUIRED REPORTS AND COMPLETE ALL SWPPP INSPECTION FORMS.
(2) PREPARATION OF ALL THE CONTRACTOR'S REPORTS OF INSPECTION, MAINTENANCE AND REPAIRS REQUIRED FOR THE CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION, SHALL BE INCLUDED IN THE INDIVIDUAL COSTS OF THE EROSION AND SEDIMENT CONTROL DEVICES.
(3) THE CONTRACTOR SHALL USE THE SWPPP CONSTRUCTION INSPECTION REPORT FORM # 650-040-03, FOR DAILY INSPECTIONS.

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

STORMWATER POLLUTION PREVENTION PLAN NOTES (2)

SHEET NO.: 60

2:19:45 PM 9/27/2017 PW:\007982\CON0086775\00000000225338\13.00_CAD\12345615201\roadway\swpprd51.dgn

RYE ROAD

RYE ROAD PROFESSIONAL CENTER

18TH PLACE EAST

SR 64

S40

100

105

110

PEDESTRIAN BRIDGE

FLOATING TURBIDITY BARRIER

SEDIMENT BARRIER (TYP.)

℄ SURVEY RYE ROAD

EXIST. R/W

SEDIMENT BARRIER

2' MIN.

2' MIN.

DETAIL A

SEDIMENT BARRIER AT DRIVEWAYS

1" = 100'

POT STA. 100+00.00

BEGIN PROJECT
STA. 100+38.32

MATCHLINE STA. 114+40.00

SEDIMENT BARRIER (TYP.)

FLOATING TURBIDITY BARRIER

18TH PLACE EAST

RYE ROAD

WOODVIEW WAY

1" = 100'

MATCHLINE STA. 114+40.00

SEDIMENT BARRIER (TYP.)

℄ SURVEY RYE ROAD

115

120

125

N 50° 11' 43" E

MATCHLINE STA. 129+20.00

SEDIMENT BARRIER (TYP.)

15TH DRIVE EAST

No.	REVISIONS	DATE	BY

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SARASOTA, FLORIDA 34232
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DATE 09/2017

PROJECT NO. 6086160

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER JASON L. STARR

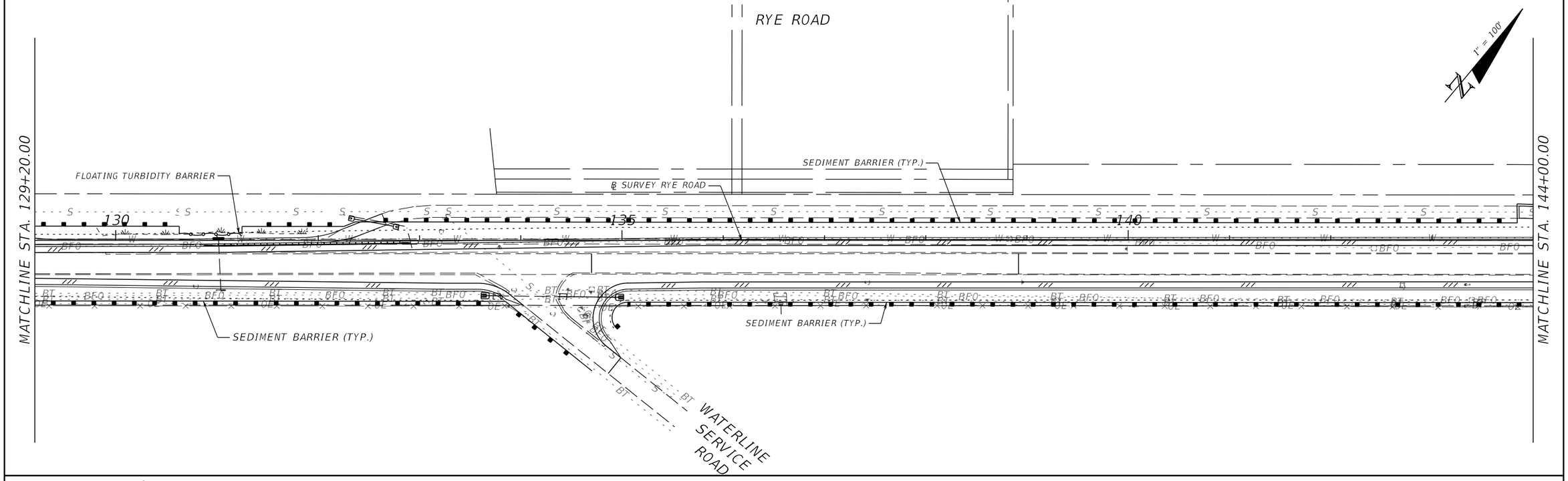
FL. LICENSE NO. 70171

EROSION CONTROL PLAN SHEET (1)

SHEET NO. 61

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

2:20:00 PM 9/27/2017 PW:\007982\C0N0086775\000000000225338\13.00_CAD\12345615201\roadway\SWPPRD01.dgn



No.	REVISIONS	DATE	BY

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE 09/2017
PROJECT NO. 6086160

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER JASON L. STARR
FL. LICENSE NO. 70171

EROSION CONTROL PLAN SHEET (2)

SHEET NO. 62

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RYE ROAD

MATCHLINE STA. 158+80.00

MILL CREEK BRANCH TRIBUTARY

FLOATING TURBIDITY BARRIER

SEDIMENT BARRIER (TYP.)

℄ SURVEY RYE ROAD

160 165 170

BRIDGE NO. 134026

SEDIMENT BARRIER (TYP.)

FLOATING TURBIDITY BARRIER

MATCHLINE STA. 173+60.00

1" = 100'

RYE ROAD

MATCHLINE STA. 173+60.00

GENE WITT ELEMENTARY SCHOOL

SEDIMENT BARRIER (TYP.)

℄ SURVEY RYE ROAD

FLOATING TURBIDITY BARRIER

175 180 185 10

N 50° 11' 43" E

POT1 STA. 10+00.00

EQUATION:
Sta 188+00.09 BK =
Sta 10+00.00 AH

MATCHLINE STA. 10+40.00

SEDIMENT BARRIER (TYP.)

FLOATING TURBIDITY BARRIER

1" = 100'

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

No.	REVISIONS	DATE	BY

SCALE: AS NOTED
DESIGNED BY: JLS
DRAWN BY: JHC
CHECKED BY: JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

EROSION CONTROL PLAN SHEET (3)

SHEET NO.: 63

11:04:55 PM 9/27/2017 PW:\007982\C0N0086775\000000000225338\13.00_CAD\12345615201\roadway\SWPPRD03.dgn

RYE ROAD

DEL TIERRA

MILL CREEK BRANCH

HIGH BELL PLACE

1" = 100'

MATCHLINE STA. 10+40.00

MATCHLINE STA. 25+20.00

FLOATING TURBIDITY BARRIER

SEDIMENT BARRIER (TYP.)

℄ SURVEY RYE ROAD

BRIDGE NO. 134025

FLOATING TURBIDITY BARRIER

SEDIMENT BARRIER (TYP.)

RYE ROAD

1" = 100'

MATCHLINE STA. 25+20.00

MATCHLINE STA. 40+00.00

SEDIMENT BARRIER (TYP.)

℄ SURVEY RYE ROAD

SEDIMENT BARRIER (TYP.)

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No.	REVISIONS	DATE	BY

SCALE	AS NOTED
DESIGNED BY	JLS
DRAWN BY	JHC
CHECKED BY	JLS

HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE 09/2017

PROJECT NO. 6086160

Manatee County FLORIDA

MANATEE COUNTY PUBLIC WORKS

DESIGN ENGINEER JASON L. STARR

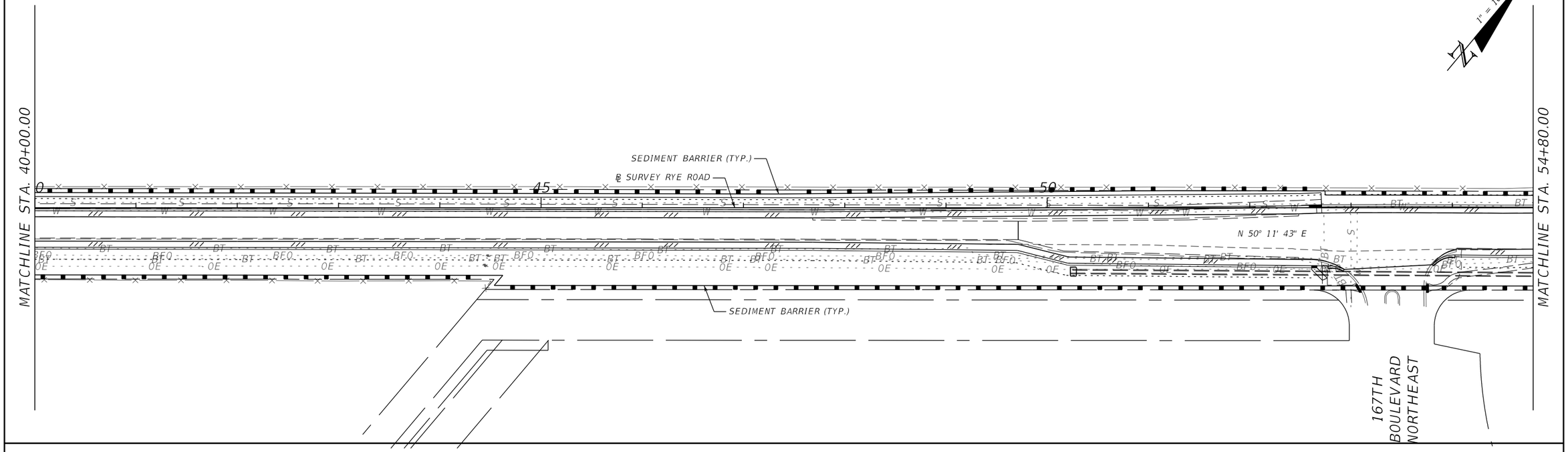
FL. LICENSE NO. 70171

EROSION CONTROL PLAN SHEET (4)

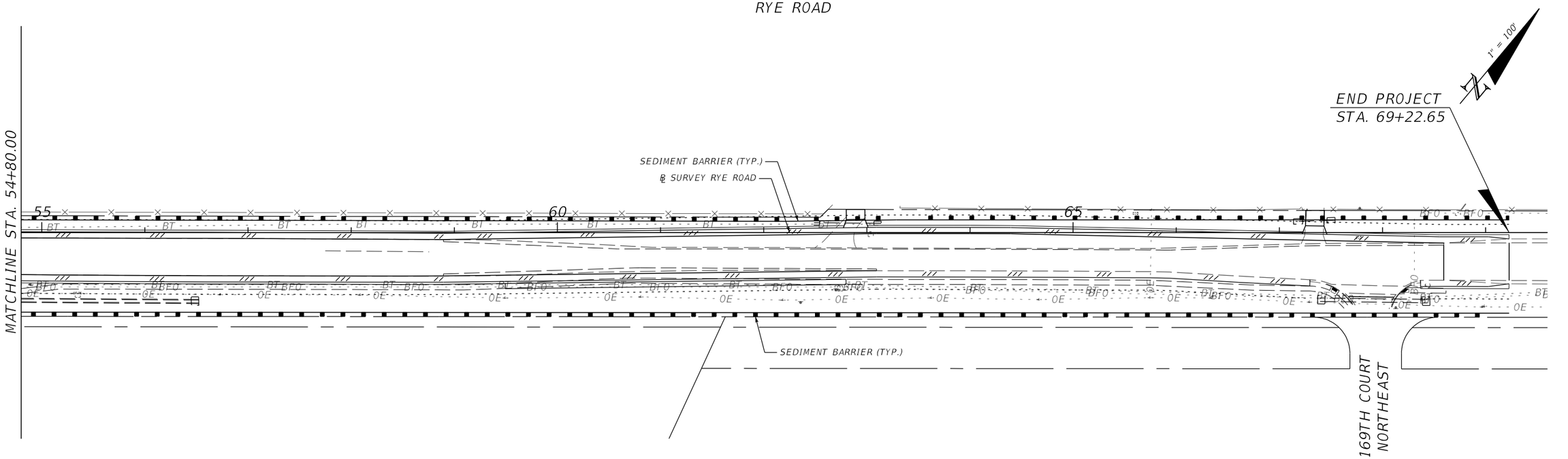
SHEET NO. 64

11:06:28 PM 9/27/2017 PW:\007982\C0N0086775\000000000225338\13.00_CAD\12345615201\roadway\SWPPRD04.dgn

RYE ROAD



RYE ROAD



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No.	REVISIONS	DATE	BY

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HDR ENGINEERING, INC.
2601 CATTLEMEN ROAD, SUITE 400
SARASOTA, FLORIDA 34232
CERTIFICATE OF AUTHORIZATION 4213

DATE: 09/2017
PROJECT NO.: 6086160

Manatee County FLORIDA
MANATEE COUNTY
PUBLIC WORKS

DESIGN ENGINEER: JASON L. STARR
FL. LICENSE NO.: 70171

EROSION CONTROL PLAN SHEET (5)

SHEET NO.: 65

2:20:53 PM 9/27/2017 PW:\007982\C0N0086775\000000000225338\13.00_CAD\12345615201\roadway\SWPPRD05.dgn