

CHARLOTTE COUNTY

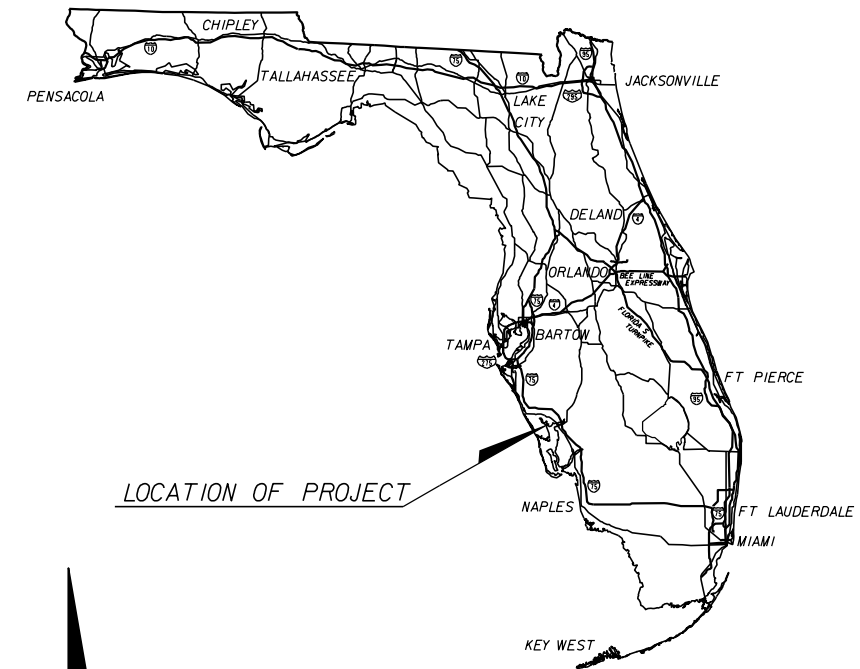
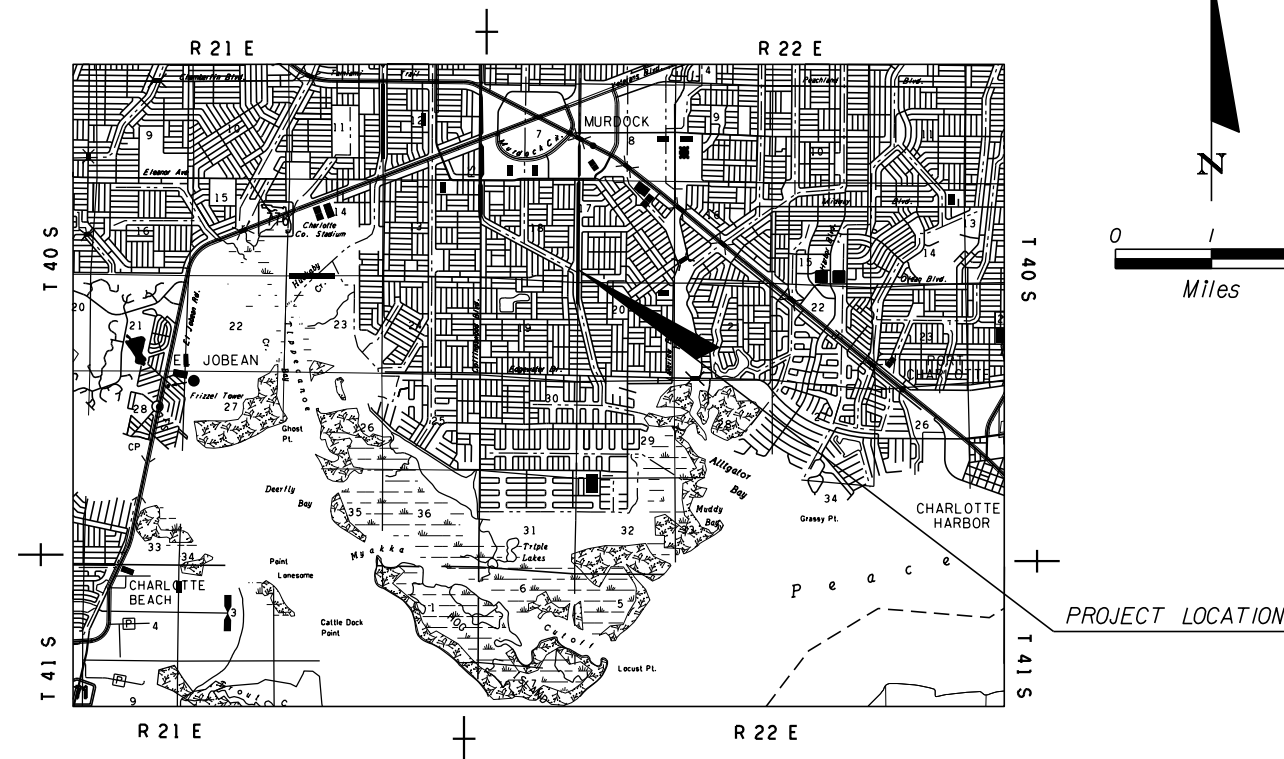
CONTRACT PLANS

CHARLOTTE COUNTY PUBLIC WORKS GREATER PORT CHARLOTTE BRIDGES PELLAM BOULEVARD OVER AUBURN WATERWAY (BR. NO. 014030)

FILE NO. 2024000117, WO NO. 289

INDEX OF STRUCTURES PLANS

SHEET NO.	SHEET DESCRIPTION
BI-01	KEY SHEET
BI-02	GENERAL NOTES
BI-03	SUMMARY OF QUANTITIES
BI-04	PLAN WITH WORK IDENTIFICATION
BI-05	SLOPE PROTECTION REPAIR DETAILS
BI-06	EXPANSION JOINT REPAIR AND SIGN DETAILS
BI-07	SPALL REPAIR DETAILS
BI-08	TECHNICAL SPECIAL PROVISIONS (TSP)-T401
BI-09	CRACK SEALING & COATING DETAILS
BI-10	BULLET RAILING REPAIR DETAILS
BI-11	RAILING REPLACEMENT DETAILS
BI-12	REPRESENTATIVE REPAIR FIELD PICTURES



PLANS PREPARED BY:

Kimley»Horn

1920 WEKIVA WAY, SUITE 200
WEST PALM BEACH, FL 33411
(561) 845 0665
PROJECT NUMBER: 140979107
REGISTRY NUMBER: 00035106

GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
FY 2024-25 STANDARD PLANS,
AND STANDARD SPECIFICATIONS FOR ROAD AND
BRIDGE CONSTRUCTION DATED FY 2024-25,
AS AMENDED BY CONTRACT DOCUMENTS.

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

PREPARED FOR

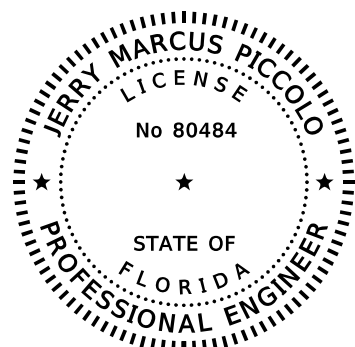


CHARLOTTE COUNTY, PROJECT MANAGER: KELLY SLAUGHTER

THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY:

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE
NOT CONSIDERED SIGNED AND SEALED
AND THE SIGNATURE MUST BE VERIFIED
ON THE ELECTRONIC COPIES.



100% PLANS
SUBMITTAL
APRIL 2025

STRUCTURES PLANS
ENGINEER OF RECORD: JERRY MARCUS PICCOLO

P.E. NO. 80484

SHEET
NO.

BI-01

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

GENERAL NOTES

GOVERNING STANDARDS AND CONSTRUCTION SPECIFICATIONS

Florida Department of Transportation, FY 2024-25 Standard Plans and revised Index Drawings as appended herein, and FY 2024-25 Standard Specifications for Road and Bridge Construction, as amended by Contract Documents.

PLAN DIMENSIONS

All dimensions in these plans are measured in feet either horizontally or vertically unless otherwise noted.

EXISTING BRIDGE CONSTRUCTION CONSIDERATIONS

Dimension Verification: Unless otherwise noted, the dimensions, elevations and intersecting angles shown are based on the information as detailed in the Original Construction Plans of the existing bridges and may not represent as-built conditions. It is the Contractor's responsibility to verify this data before beginning construction and notify the Engineer of any discrepancies.

EXISTING ELEMENTS TO REPAIR

Exercise special care not to damage any elements of the structure that are to remain, including reinforcing. Repair or replace to the satisfaction of the Engineer, any elements that are to remain, which are damaged during construction at no additional cost to the County.

SODDING

- The Contractor will restore all areas disturbed by the construction to a condition equal to, or better than that now existing.
- All areas where clearing and grubbing occurs shall be sodded at the completion of construction.
- Sod shall be Bahia.

UTILITIES

- Prior to commencement of any excavation, the Contractor shall comply with Florida Statute 556, underground facility damage prevention and safety.
- The Contractor shall call Sunshine (1-800-432-4770) for field locations two (2) business days prior to commencement of any excavation. The Contractor shall also be responsible to contact any utility owner(s) that may not be a "Sunshine" member.
- The location of some existing utilities are shown in their approximate location and are for reference only; the exact location shall be determined by the Contractor during construction. Relocation of utilities shall be coordinated with the utility companies after identification of conflict by the Contractor. Contractor shall notify Engineer in advance before any relocation.
- Existing utilities are to remain in place unless otherwise noted.
- The Contractor is responsible for the protection of all utilities to remain in place.
- The utility companies shall be notified by the Contractor two (2) business days in advance of any excavation involving their utilities so that company representative can be present.
- The Contractor is to use caution when working in or around areas of overhead electric lines, underground utilities, or near canal banks.

EROSION CONTROL

- Comply with FDOT Standard Specifications for Road and Bridge Construction Section 104 "Prevention, Control, and Abatement of Erosion and Water Pollution".
- The Contractor shall provide a washout station to be inspected and approved by the County prior to the use of any paint, concrete, grout materials, or any other polluting materials the require a washout.
- No debris or materials resulting from the work shall be permitted in the waterway. Contractor shall utilize containment systems or best management practices to contain all debris or materials and dispose of off site.
- The Contractor shall repair or remove any equipment leaking fuel, oil, or other fluids immediately.
- Protection of Water Resources:
 - The Contractor shall conduct his activities in a manner to avoid pollution of surface and groundwater and wetlands. The contractor's construction methods shall protect wetland and surface water areas from damage due to mechanical grading, erosion, sedimentation vehicular traffic, and turbid discharges. No storage or stockpiling of equipment shall be allowed within any wetland area unless specifically authorized under permit. Water wetland area unless specifically authorized under permit. Water retention areas to allow settling of suspended materials. All monitoring of any water areas that are affected by construction activities shall be the responsibility of the Contractor.
 - The Contractor shall prepare a spill contingency plan in accordance with 40CFR, Part 109. The contractor shall prevent oil, fuel, or other hazardous substances from entering the air, ground, drainage, and local bodies of water or wetlands. In the event that a spill occurs, despite design and procedural controls, the contractor shall take immediate action to contain and cleanup the spill and report the spill immediately to the county's representative. A written report providing certification of commitment of manpower, equipment, and materials necessary to prevent the spread and effect expeditious cleanup and disposal shall be submitted.

MATERIALS

Reinforcing Steel:

- ASTM A615 Grade 60 carbon steel per Specifications Section 931.
- All reinforcing steel shall be galvanized in accordance with ASTM A767 Class 1.
- Contractor shall follow the "Guidelines for Construction Practices at the Job-Site" set forth in ASTM A767 Appendix X1.

Concrete:

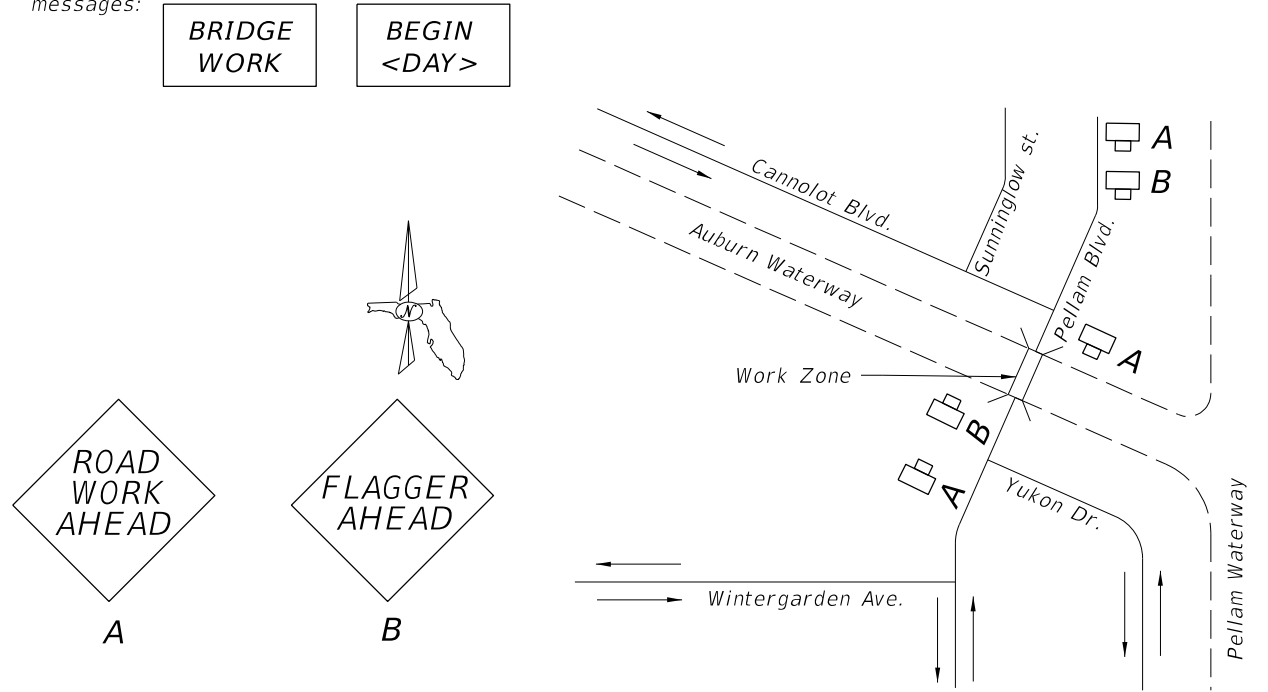
Concrete Class	Min. 28-day Compressive Strength (psi)	Location of Concrete in Structure
IV	5500 psi	C-I-P Topping Widening

MAINTENANCE OF TRAFFIC

- Maintenance of traffic for this project shall be in compliance with the applicable FDOT Standard Plan Indices 102-600 Series and these documents; The Manual on Uniform Traffic Control Devices for Streets and Highways (U.S. Department of Transportation, FHWA), shall be followed in the design, application, installation, maintenance and removal of all traffic control devices, warning devices, and barriers necessary to protect the public and workmen from hazards within the project limits.
- The existing bridge shall remain open to bidirectional vehicular, pedestrian, and marine traffic at all times during repairs. A temporary lane closure is anticipated to maintain pedestrian and bidirectional vehicular traffic. Temporary traffic signals are anticipated to facilitate the temporary lane closure. A 24-hour flagging operation will not be accepted.
- The Contractor shall inform local emergency and rescue agencies located in the project vicinity including but not limited to those agencies listed below as well as the Engineer 14 Days in advance of and County approved lane closures or restrictions, and again 24 hours in advance of each series of lane closures. All lanes must be reopened to normal traffic within 12 hours during an evacuation notice for a hurricane or any other emergency event and shall remain open for the duration of the event as directed by the County.

Charlotte County Fire Station 1	(941) 833-5600
Charlotte County Fire Station 2	(941) 627-8002
Charlotte County Fire Station 3	(941) 629-3334
Charlotte County Sheriff's Office - District 2	(941) 613-3245
Charlotte County Sheriff's Office - District 3	(941) 258-3900

- The existing posted speed is 35 mph. The speed may be reduced to 25 mph during construction.
- Personnel working on the maintenance of traffic must have the respective applicable FDOT MOT qualification of advanced, intermediate, and flagger based on their temporary traffic control duties.
- The contractor shall restore all existing pavement damaged as a result of construction or MOT operations to original condition (prior to construction) as determined by the engineer. All costs shall be included in Pay Item 102-1 Maintenance of Traffic (LS).
- For temporary construction signs located in paved areas, the contractor shall provide temporary sign support which does not penetrate the pavement.
- Seven days prior to beginning work install PCMs in each direction, 500' in advance of the bridge with the following messages:



BRIDGE NO. 014030

REVISIONS						Kimley»Horn	CHARLOTTE COUNTY PUBLIC WORKS	GENERAL NOTES	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		GREATER PORT CHARLOTTE BRIDGES	PELLAM BOULEVARD OVER AUBURN WATERWAY	B1-02
						JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106			

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

PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	QUANTITY	APPLICABLE TECHNICAL SPECIFICATIONS
101-1A	Mobilization/Demobilization	LS	1	TS-01
102-1	Maintenance of Traffic	LS	1	TS-02
104-2A	Prevention, Control, and Abatement of Erosion and Water Pollution	LS	1	TS-03
110-2-2A	Selective Clearing, Areas with Trees to Remain	LS	1	TS-04
110-3	Removal of Existing Structures/Bridges	SF	85	TS-05
110-4-10	Removal of Existing Concrete	SY	22.3	TS-05
110-4-102	Removal of Riprap Slope Protection	SY	62	TS-05
120-5A	Channel Excavation	LS	1	TS-07
400-4-4	Concrete Class IV, Superstructure	CY	2.6	TS-13
400-145A	Cleaning Concrete Surfaces	SF	5800	TS-14
400-153A	Non-Shrink Grout, F&I	CY	10	TS-15
401-70-4	Restore Spalled Areas, Portland Cement Grout	CF	4.1	TS-17
413-151	Methacrylate Monomer	GA	31	TS-20
413-154	Cleaning & Sealing Concrete Surfaces - Penetrant Sealer or Methacrylates	SF	3077	TS-20
458-1-21	Bridge Deck Expansion Joint, Rehabilitation, Poured Joint with Backer Rod	LF	64	TS-22
515-2-311	Pedestrian/Bicycle Railing, Aluminum Only, 42" Type 1	LF	122	TS-25
515-4-1C	Bullet Railing Repairs	LS	1	TS-25
522-2	Concrete Sidewalk & Driveways, 6" Thick	SY	22.3	TS-28
530-3-4	Riprap, Rubble F&I, Ditch Lining	TN	60.0	TS-29
536-A	Guardrail Repairs	LS	1	TS-30
562-A	Repair of Galvanized Surfaces	LS	1	TS-31
563-4	Anti-Graffiti Coating, Non-Sacrificial	SF	5800	TS-32
570-1-2A	Performance Turf, Sod	LS	1	TS-33
700-1-111	Single Column Ground Sign Assemble, FRI Ground Mount, Less than 12SF	EA	4	TS-34
706-1-3A	Raised Pavement Markers, Type B	LS	1	TS-35
710-12-101A	Painted Pavement Markings, Durable Paint, White, Solid, 6" Wide	LF	204	TS-36
710-12-201A	Painted Pavement Markings, Durable Paint, Yellow, Solid, 6" Wide	LF	204	TS-36
901-1A	67 Stone	LS	1	TS-37

PAY ITEM NOTES

- Pay Item 104-2A Prevention, Control, and Abatement of Erosion and Water Pollution

This pay item includes all costs for the labor, equipment, and materials required to provide erosion and water pollution control measures in accordance with Standard Specification Section 104.
- Pay Item 401-70-4 Restore Spalled Areas, Portland Cement Grout

The pay item shall also include the cost of containing and proper off site disposal of all debris resulting from these repairs.
- Pay Item 400-4-4 Concrete Class IV, Superstructure

This pay item shall also include all costs associated with surface preparation and reinforcement.

- Pay Item 562-A Repair of Galvanized Surfaces

This pay item shall include all costs associated with repairing the galvanized finish on various bullet railing anchor bolts in accordance with FDOT Standard Section 562 and replacing existing nuts and washers as necessary.
- Pay Item 706-1-3A Raised Pavement Markers, Type B

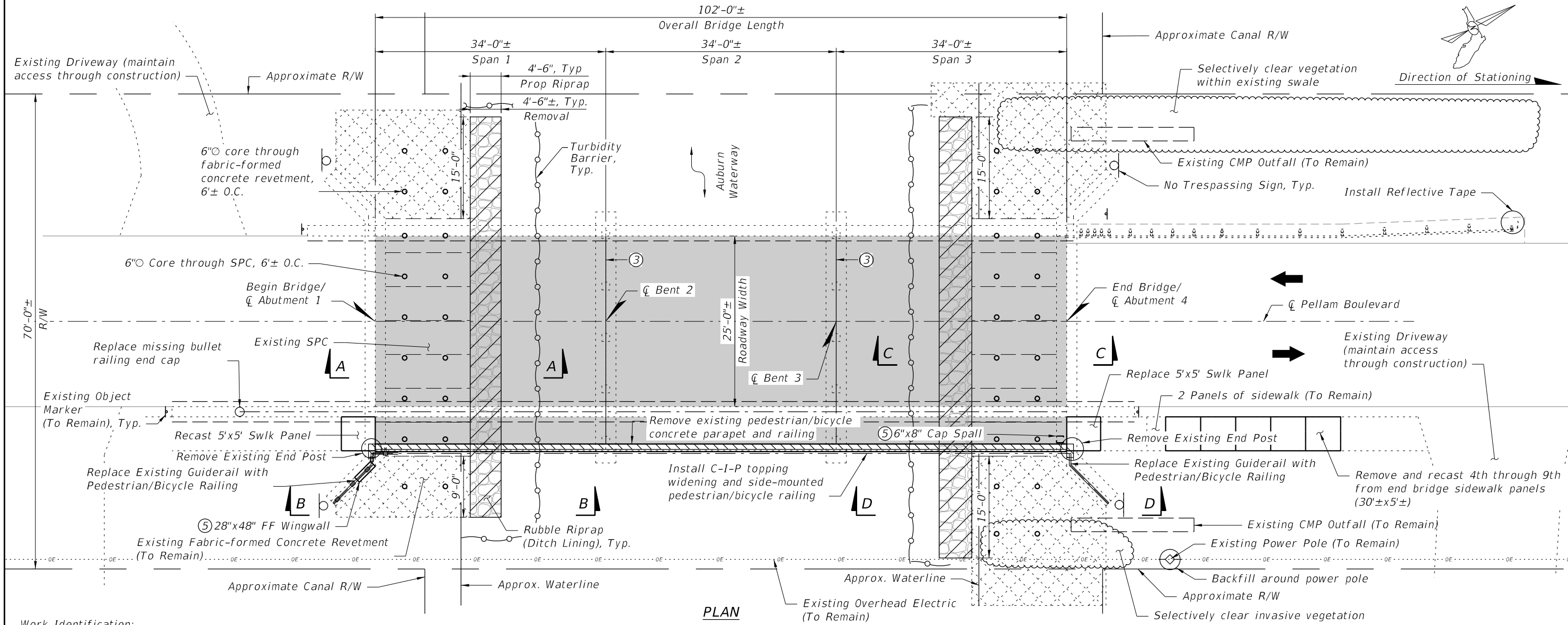
This pay item includes all costs associated with finishing and installing raised pavement markers in accordance with Standard Plan Index 706-001 and FDOT Standard Specification Section 706.
- Pay Item 710-12-101A & 710-12-201A Painted Pavement Markings, Durable Paint, (White & Yellow), Solid, 6" Wide

This pay item includes all costs associated to finish and install painted pavement markings matching the existing pavement markings in width, color, and location.

BRIDGE NO. 014030

REVISIONS						Kimley»Horn JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106	CHARLOTTE COUNTY PUBLIC WORKS	SUMMARY OF QUANTITIES	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		GREATER PORT CHARLOTTE BRIDGES	PELLAM BOULEVARD OVER AUBURN WATERWAY	B1-03

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



PLAN

Work Identification:

1. Clean bullet railing anchors and coat with zinc rich paint (Pay Item 562-A).
2. Replace the missing bullet railing end cap at the south end of the traffic railing mounted bullet railing (Pay Item 515-4-1C).
3. Install expansion joint seal as depicted above and on "Expansion Joint Repair Details" sheet (Pay Item 458-1-21).
4. Remove and recast sidewalk panels as depicted above (Pay Items 100-4-10 & 522-2).
5. Repair concrete spalls in the abutment cap and wingwall as depicted above and on "Spall Repair Details" sheet (Pay Item 401-70-4).
6. Apply high molecular weight methacrylate to the bridge riding surface and bridge sidewalks (Pay Items 413-151 & 413-154).
7. Replace roadway striping with painted pavement markings and replace retroreflective pavement markers within the limits of the bridge deck (Pay Items 710-1-3A, 710-12-101A, & 710-12-201A).
8. Replace the existing concrete parapet and pedestrian/bicycle railing with a side-mounted aluminum bridge pedestrian/bicycle railing as depicted above and shown on "Railing Replacement Details" sheet (Pay Items 110-3, 515-2-311, & 400-4-4).
9. Saw cut the existing fabric-formed concrete revetment (parallel to waterway) in line with the toe of concrete slope pavement, remove the saw cut fabric-formed concrete revetment, and install rip rap as shown above and on the "Slope Protection Repair Details" sheet (Pay Items 110-4-102, 120-5A & 530-3-4).
10. Core 6"± holes at 6'± on-center into the existing concrete slope protection and fabric-formed concrete revetment (To Remain) and fill voids with grout as shown above and on "Slope Protection Repair Details" sheet. Fill separations forming between the fabric-formed concrete revetment and concrete slope protection with grout at all four corners (Pay Item 400-153A).

11. Remove all non-protected plant species growing within or on the bridge, wing walls, and slope protection. Selectively clear at northwest and northeast approaches as depicted above (Pay Item 110-2-2A).
12. Pressure clean and apply non-sacrificial graffiti-resistant coating on the traffic railing (including drains), Concrete slope pavement, the water ward face of the abutments, exposed portions of wingwalls, the underside of Span 1 and Span 3 slab units, and the sides of the exterior slab units. See Coating Notes (Pay Items 400-145A & 563-4).
13. Restore all offset blocks to plumb, replace any missing fasteners, tighten guardrail bolts, install barrier delineators, and install reflective tape on the northeast guardrail end unit per FDOT Standard Index 536-001 (Pay Item 536-A).
14. Remove existing aluminum guide rail at southeast and northeast wingwalls and replace with aluminum pedestrian/bicycle railing as depicted above and on "Railing Replacement Details" sheet (Pay Item 515-2-311).
15. Clean all scuppers through bridge deck of all dirt and debris (Pay Item 101-1A).
16. Back fill localized area of erosion surrounding power pole using 67 stone. Place filter fabric over gravel with 3" of potting soil and sod atop the filter fabric (Pay Items 901-1A and 570-1-2A).
17. Install "No Trespassing" Signs the locations depicted above and on "Expansion Joint Repair and Sign Details" Sheet (Pay Item 700-1-111)

Abbreviations:

SPC - Slope Pavement Concrete
FF - Front Face

Sidewalk Notes:

1. After the existing sidewalk is removed, re-grade and compact fill material to ensure new sidewalk is flush with existing abutting sidewalks to remain.
2. Restore and sod all area damaged by sidewalk installation.
3. Replacement footprint varies from original sidewalk panel. See "Railing Replacement Details" sheet for proposed sidewalk panel layout.

Legend:

- Removal of existing fabric (Concrete Revetment)
- Indicates HMWM Application Limits
- C-I-P Topping and Pedestrian/Bicycle Railing Removal Limits
- Existing Fabric-formed Concrete Revetment (To Remain)
- Riprap
- Limits of Cleaning and Coating

Coating Notes:

1. Non-sacrificial graffiti resistant coating shall be GRAFFITI GARD® IV or approved equal in the color Antique Ivory. Surface preparation and coating shall be in accordance with FDOT Specification Section 563.

BRIDGE NO. 014030

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn

JERRY MARCUS PICCOLO, P.E.
P.E. LICENSE NUMBER 80484
1920 WEKIVA WAY, SUITE 200
WEST PALM BEACH, FL 33411
(561) 845-0665
REGISTRY NO. 35106

CHARLOTTE COUNTY
PUBLIC WORKS

GREATER PORT CHARLOTTE BRIDGES

PLAN
WITH WORK IDENTIFICATION

PELLAM BOULEVARD
OVER AUBURN WATERWAY

SHEET
NO.

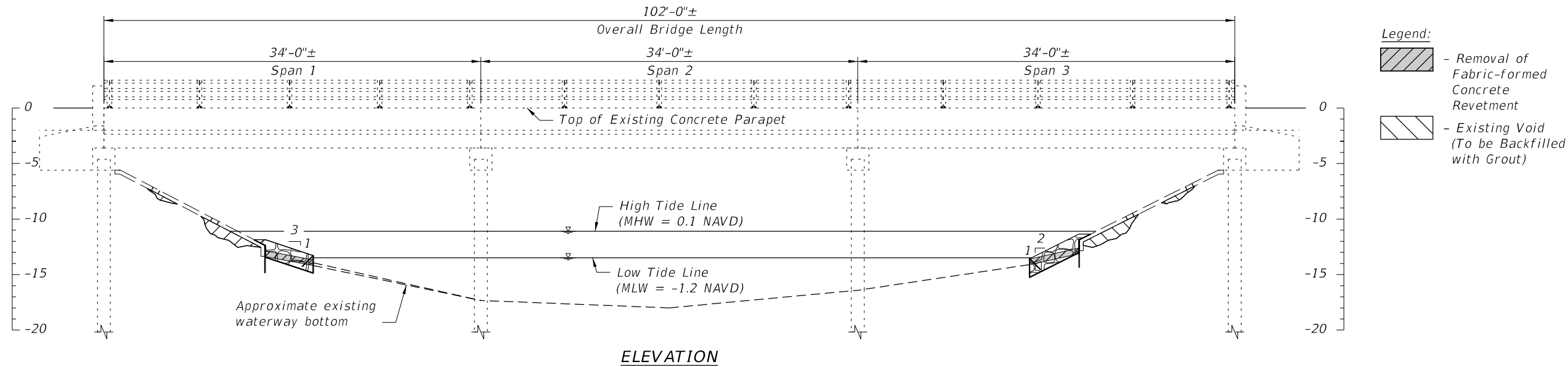
B1-04

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

Slope Protection Backfilling

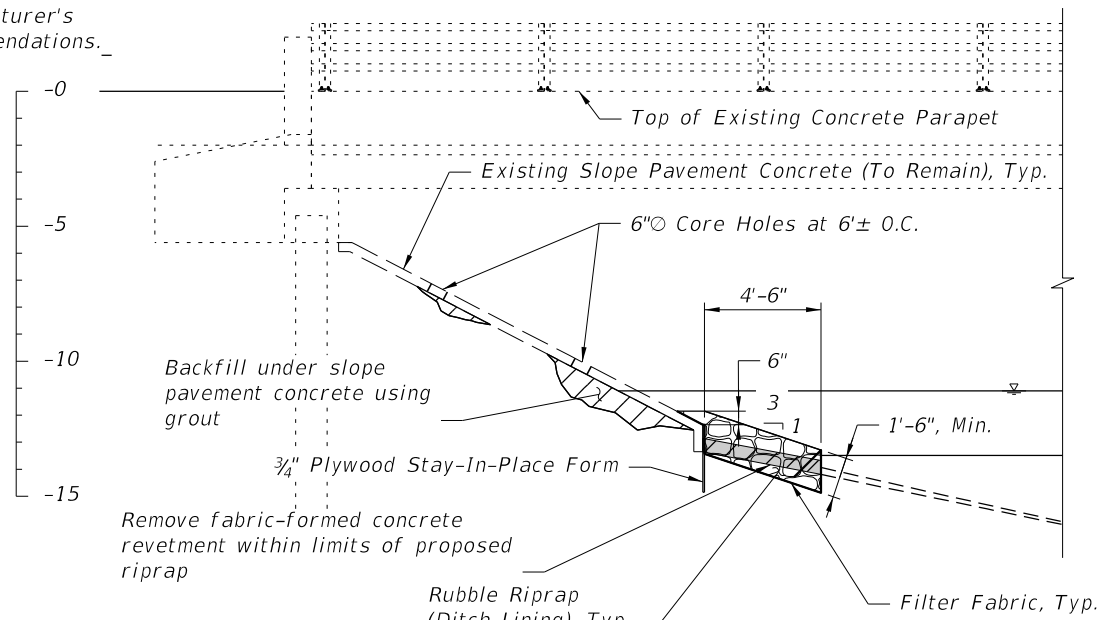
Notes:

1. Contractor shall core holes in slope pavement concrete or fabric-formed concrete revetment as shown. Additional cores may be needed to backfill voids.
2. Prior to back filling with grout, the $\frac{3}{4}$ " plywood stay-in-place form and waterward riprap shall be installed. No flowable fill or grout is permitted in the waterway.
3. Contractor may elect to use flowable fill instead of grout at no additional cost to the county.
4. Grout shall be mixed to a flowing consistency in accordance to manufacturer's recommendations.

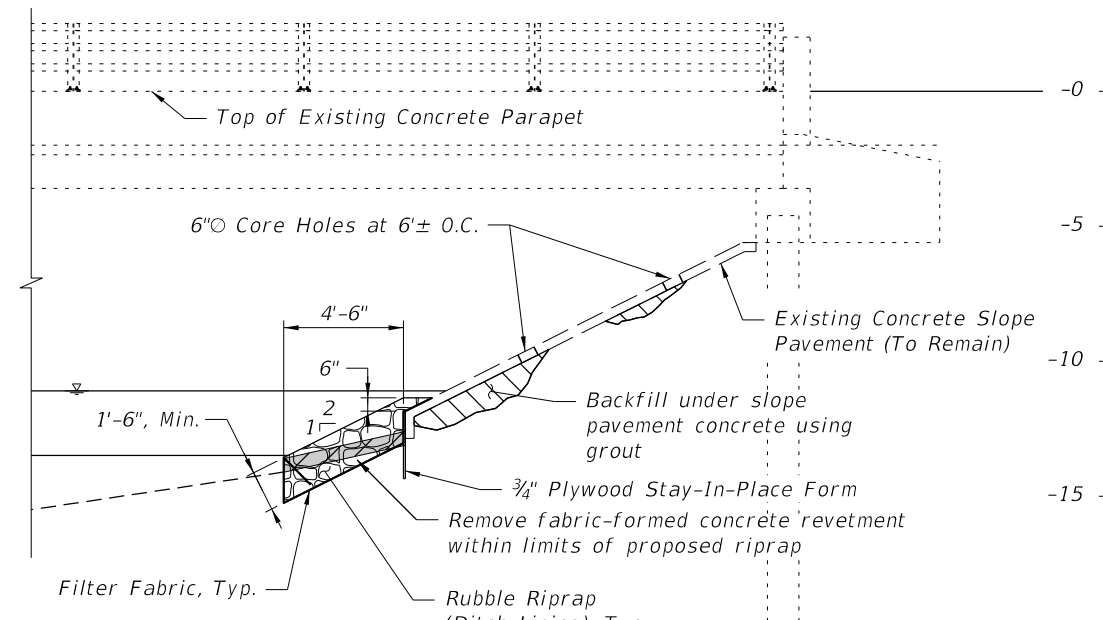


Legend:

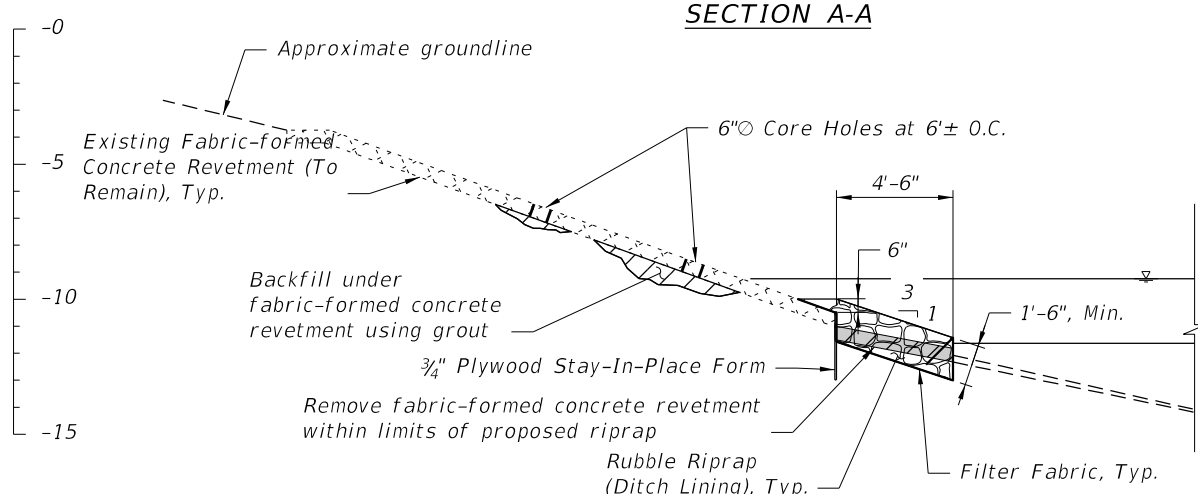
- Removal of Fabric-formed Concrete Revetment
- Existing Void (To be Backfilled with Grout)



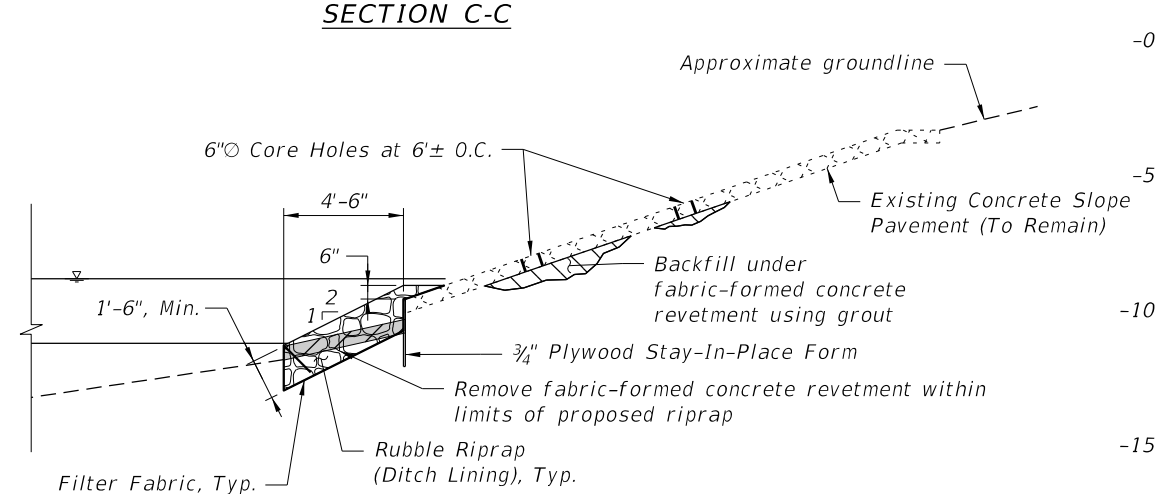
SECTION A-A



SECTION C-C



SECTION B-B



SECTION D-D

BRIDGE NO. 014030

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

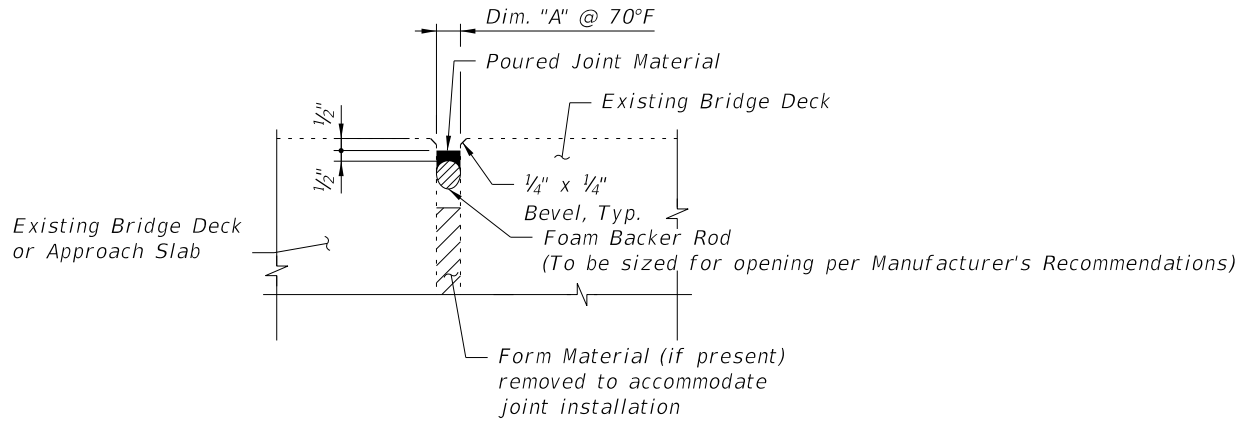
Kimley»Horn
JERRY MARCUS PICCOLO, P.E.
P.E. LICENSE NUMBER 80484
1920 WEKIVA WAY, SUITE 200
WEST PALM BEACH, FL 33411
(561) 845-0665
REGISTRY NO. 35106

CHARLOTTE COUNTY
PUBLIC WORKS
GREATER PORT CHARLOTTE BRIDGES

SLOPE PROTECTION REPAIR DETAILS
PELLAM BOULEVARD
OVER AUBURN WATERWAY

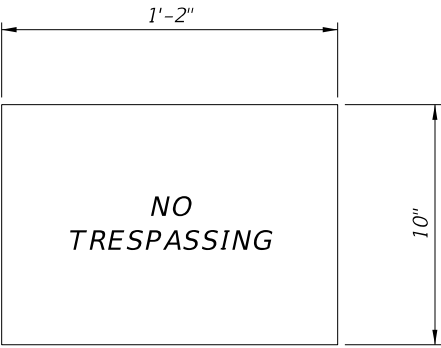
SHEET
NO.
B1-05

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



TYPE ③ JOINT SEAL REPAIR
(Replace Existing Joint Seal)

General Expansion Joint Repair Notes:
1. Work this sheet with FDOT Standard Plan Index 458-110.

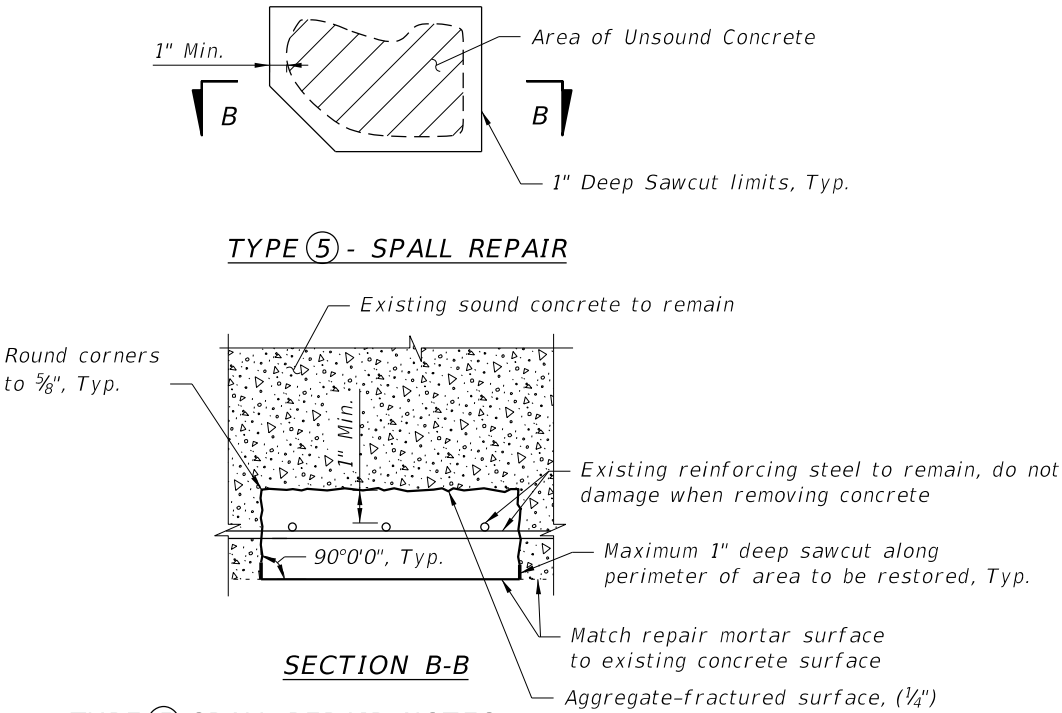


- Sign Notes:
- 1. Minimum sign lettering size shall be 2" tall.
 - 2. Lettering shall be bold font.
 - 3. Sign shall be mounted on aluminum plating following FDOT standard Plan Index 700-010.
 - 4. Sign panel shall be retro reflective
 - 5. Sign shall be mounted following FDOT standard Plan Index 700-010.

BRIDGE NO. 014030

REVISIONS						Kimley»Horn JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106	CHARLOTTE COUNTY PUBLIC WORKS	EXPANSION JOINT REPAIR AND SIGN DETAILS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		GREATER PORT CHARLOTTE BRIDGES	PELLAM BOULEVARD OVER AUBURN WATERWAY	B1-06

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



TYPE 5 SPALL REPAIR NOTES

- 1. Repair concrete spall areas in accordance with "Technical Special Provision (TSP) - T401" excluding section T401-2 Materials. See note 2 for repair material.
- 2. Repair Material shall be SikaCrete 211 SCC Plus or approved equal in accordance with Specification 930 for Ultra High Performance Repair Material.
- 3. Type 5 Spall Repairs shall be paid for under pay item 401-70-4.
- 4. Any existing reinforcing steel damaged by the Contractor's actions in the process of removing unsound concrete or cleaning reinforcing steel shall be repaired to the satisfaction of the Engineer at the Contractor's expense.
- 5. Detail applies to both horizontal and vertical repairs.
- 6. For locations of deficiencies, see bridge "Plan with Work Identification" sheets.
- 7. The Contractor shall contain all debris resulting from Type 5 repairs and disposed off site. No debris will be permitted in the waterway.

BRIDGE NO. 014030

REVISIONS						Kimley»Horn JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106	CHARLOTTE COUNTY PUBLIC WORKS	SPALL REPAIR DETAILS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		GREATER PORT CHARLOTTE BRIDGES	PELLAM BOULEVARD OVER AUBURN WATERWAY	B1-07

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

TECHNICAL SPECIAL PROVISION (TSP) - T401

T401-1 DESCRIPTION

Replace deteriorated concrete by placing new Portland Cement Mortar as specified in this Section and in accordance with the manufacturer's recommendations. Perform surface preparation and application to all areas as shown on the plans or as directed by the Engineer. No concrete removal will be performed without the Engineer's approval.

T401-2 MATERIALS

Mortar/concrete will be a mortar/concrete suitable for pumping, unless otherwise required in the Contract Documents. The selected material will achieve a minimum compressive strength of 2,000 psi at 24 hours and 5,000 psi at 28 days.

For horizontal or vertical spalls with a minimum depth of 1 inch, use repair mortar that includes an aggregate in accordance with the manufacturer's recommendations. For horizontal or vertical spalls less than 1 inch deep, hand-apply repair mortar in accordance with manufacturer's recommendations.

Provide proposed repair material and method of application, including manufacturer's technical specifications and formulation. Do not place patch materials in lifts. For vertical and overhead applications, place the material using form and pump methods unless otherwise approved based on specific condition of deficiencies. For horizontal applications, place the material using form and pour methods unless otherwise approved based on specific condition of deficiencies.

Materials will be applied in accordance with this Technical Special Provision and manufacturer's recommendations.

T401-3 SURFACE PREPARATION

Remove deteriorated concrete to sound material (or limits described on the plans) by scarification or by chipping with light duty pneumatic or electric concrete chippers (15 lbs or less in general and adjacent to structural limits of construction) and hand tools adjacent to pre stressing strands and reinforcing steel. Remove concrete that is contaminated with grease or oil.

Provide an aggregate-fractured surface with a minimum surface profile amplitude of 1/4 inch by use of a scabblor or other appropriate means. Blast clean all reinforcing bars exposed after concrete removal in accordance with SSPC SP-10 "Near-White Blast Cleaning." Replace rebars that have lost 25% or more of their original diameter with new bars spliced in place within the original cover, lapping rebar to develop the full strength of the bar as detailed on the plans and, if necessary, providing additional chipping. Dual bars of equivalent or greater section may be used.

Exercise special care when removing unsound concrete to not damage the bond between the prestressing strand and any sound concrete.

Blast clean existing concrete surfaces that will be in contact with freshly placed repair material and clean to remove loose material and dust immediately before application of repair material.

T401-4 MIXING

Provide a Mix Plan for quantities of bag mix in excess of 1 cubic yard at a single location for the Engineer's approval including: manufacturer's specifications, method of mixing, means of application, and placement procedure to provide a homogenous pour free of cold joints. Use clean mixers and accurately proportioned ingredients. Mix the materials at the site. Ensure that the material, as discharged from the mixer, is uniform in composition and consistency

T401-5 PLACING AND FINISHING

T401-5.1 Typical Spall Repair:

Repair areas of unsound concrete with the following modifications for spalls greater than 1 inch deep. Cut the upper perimeter of sound concrete to an angle sloping slightly upward to avoid entrapping air and water. Form area to be repaired to original neat lines. Forms will withstand the anticipated head pressure of the repair material and a minimum pressure of 10 psi. Place form work and form work supports by stainless steel inserts where required. Stainless steel inserts shall be located in sound concrete and may remain in place. Stainless steel inserts to remain in place will be recessed and patched.

The Contractor will employ a qualified Specialty Engineer to design all forming systems (including method of support and attachment). Prior to placement of form work, submit detailed plans and design calculations for approval which have been signed and sealed by a qualified Specialty Engineer.

Apply form release agent, compatible to the repair material, to the interior surfaces of form. Pump material into forms with proper venting to ensure complete filling of voids, starting with a port at the bottom of the form. Perform external form vibration as necessary to insure proper consolidation. Cap vents when steady flow of material is ensured then fill until an immediate increase of 3 to 5 psi is detected. See plans for additional details. At the Engineer's discretion, gravity fed pours may be allowed in some cases for uniform deficiency shapes where quality control can be assured after trial installations.

When the depth of concrete removal exceeds 2", install welded wire fabric and adhesive hooks, as detailed on the plans.

Match repair surface to surrounding concrete surfaces. All exposed edges will be chamfered 3/4 inches unless otherwise noted or directed by the Engineer. Provide V-grooves, construction joints, and drip notches to match any existing. Open construction joints are not permitted. Cure as required to prevent shrinkage cracking.

T401-6 QUALITY CONTROL

Include the work under this Technical Special Provision in the Contractor Quality Control General Requirements set forth in Section 105.

The Contractor will secure the services of a manufacturer representative to visit the construction site to train inspection and contractor personnel in the application of the mortar/concrete repair system prior to application. The representative will also observe initial application and testing to confirm that application is performed in accordance with the manufacturer instructions. At a minimum, manufacturer representative will be available to the Contractor and the Engineer for technical advice and inspection of the application during the duration of mortar/concrete repairs. Upon completion of the project, the manufacturer will provide a notarized statement indicating that the material has been applied as per manufacturer requirements.

T401-7 LIMITATIONS

Make 4 to 6 extra test cylinders (as requested by the Engineer) and test for compressive strength gain determinations. The Engineer will determine the time of testing. Cure test cylinders in air for the full curing period required before testing. Do not place repair material at ambient temperatures below 45°F, or above 85°F, or more stringent temperature ranges provided by the manufacturer unless adequate protection is provided against adverse effects of extreme temperature conditions.

T401-8 METHOD OF MEASUREMENT

The quantity to be paid for will be the volume of Portland Cement Grout in cubic feet authorized, furnished, installed, and accepted to restore spalled areas. The method used in determining the volume will be the surface area in square feet multiplied by the average depth of such areas.

T401-9 BASIS OF PAYMENT

Price and payment will be full compensation for all work specified in this Technical Special Provision.

Pay Item No. 401 70 4 Restore Spalled Areas, Portland Cement Grout per cubic foot.

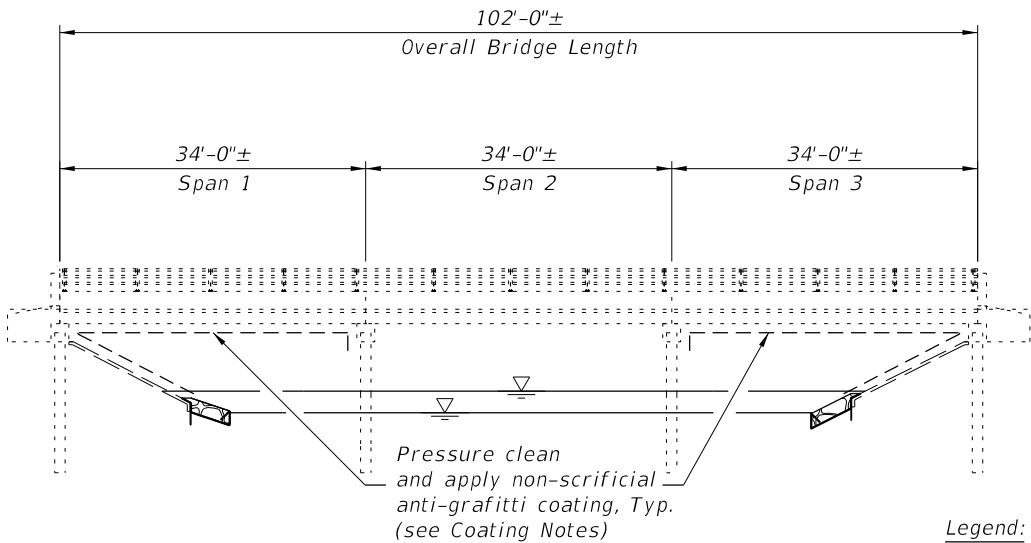
BRIDGE NO. 014030

REVISIONS						Kimley»Horn JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106	CHARLOTTE COUNTY PUBLIC WORKS	TECHNICAL SPECIAL PROVISIONS (TSP) - T401	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		GREATER PORT CHARLOTTE BRIDGES	PELLAM BOULEVARD OVER AUBURN WATERWAY	B1-08

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

HIGH MOLECULAR WEIGHT METHACRYLATE (HMWM) NOTES:

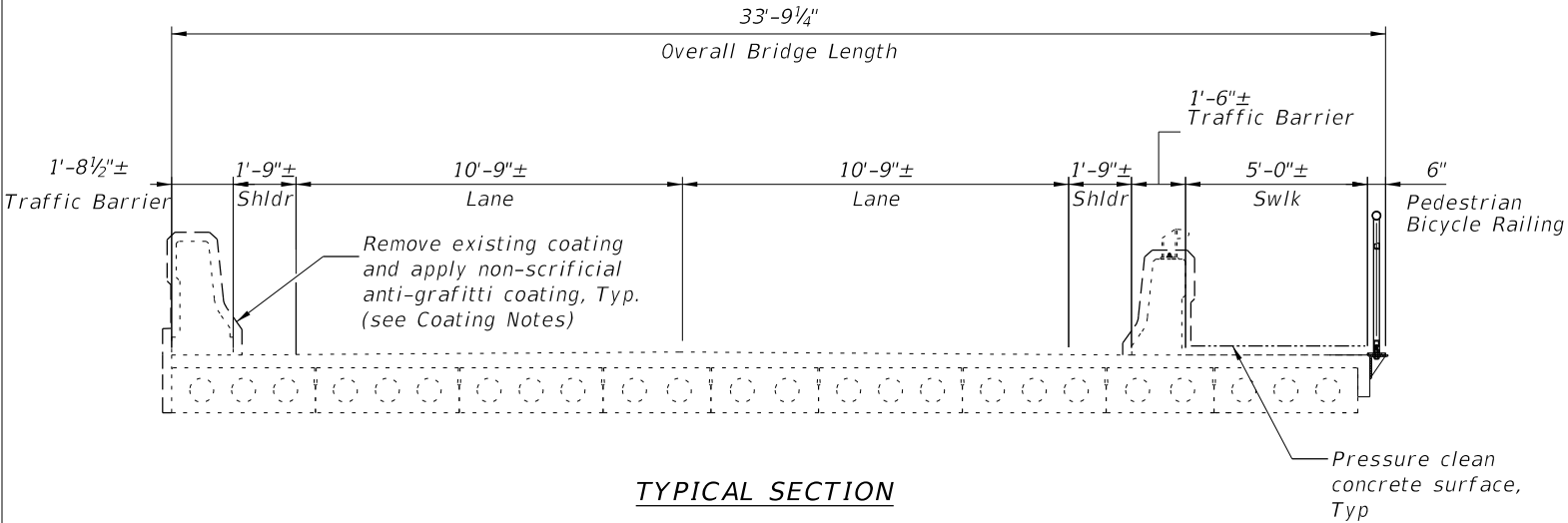
1. Clean and prepare the bridge deck and sidewalk surface of any dust, dirt, debris, and other contaminants in accordance with the manufacturer's recommendations.
2. HMWM sealer shall be Duraguard 401-30E or approved equal in accordance with FDOT Standard Specification Section 413.
3. Pre-fill any cracks 1/8" wide or wider with HMWM.
4. HMWM sealer shall be installed in accordance with the manufacturer's recommendations and FDOT Standard Specification Section 413.
5. See "Plan With Work Identification" sheet for limits of HMWM application.
6. Contractor shall contain all debris and materials (sealer) associated with the surface preparation and sealing of bridge deck. No debris or materials are permitted in the waterway.



ELEVATION

Legend:

- - - - -Pressure clean and apply
anti-graffiti coating
--Pressure clean



TYPICAL SECTION

COATING NOTES

1. Non-sacrificial graffiti resistant coating shall be GRAFFITI GARD® IV or approved equal in the color Antique Ivory. Surface preparation and coating shall be in accordance with FDOT Specification Section 563.

BRIDGE NO. 014030

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn

JERRY MARCUS PICCOLO, P.E.
P.E. LICENSE NUMBER 80484
1920 WEKIVA WAY, SUITE 200
WEST PALM BEACH, FL 33411
(561) 845-0665
REGISTRY NO. 35106

CHARLOTTE COUNTY
PUBLIC WORKS

GREATER PORT CHARLOTTE BRIDGES

CRACK SEALING & COATING
REPAIR DETAILS

PELLAM BOULEVARD
OVER AUBURN WATERWAY

SHEET
NO.

B1-09

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



TYPICAL BULLET RAILING ANCHOR CLEANING DETAIL



BULLET RAILING END CAP DETAIL

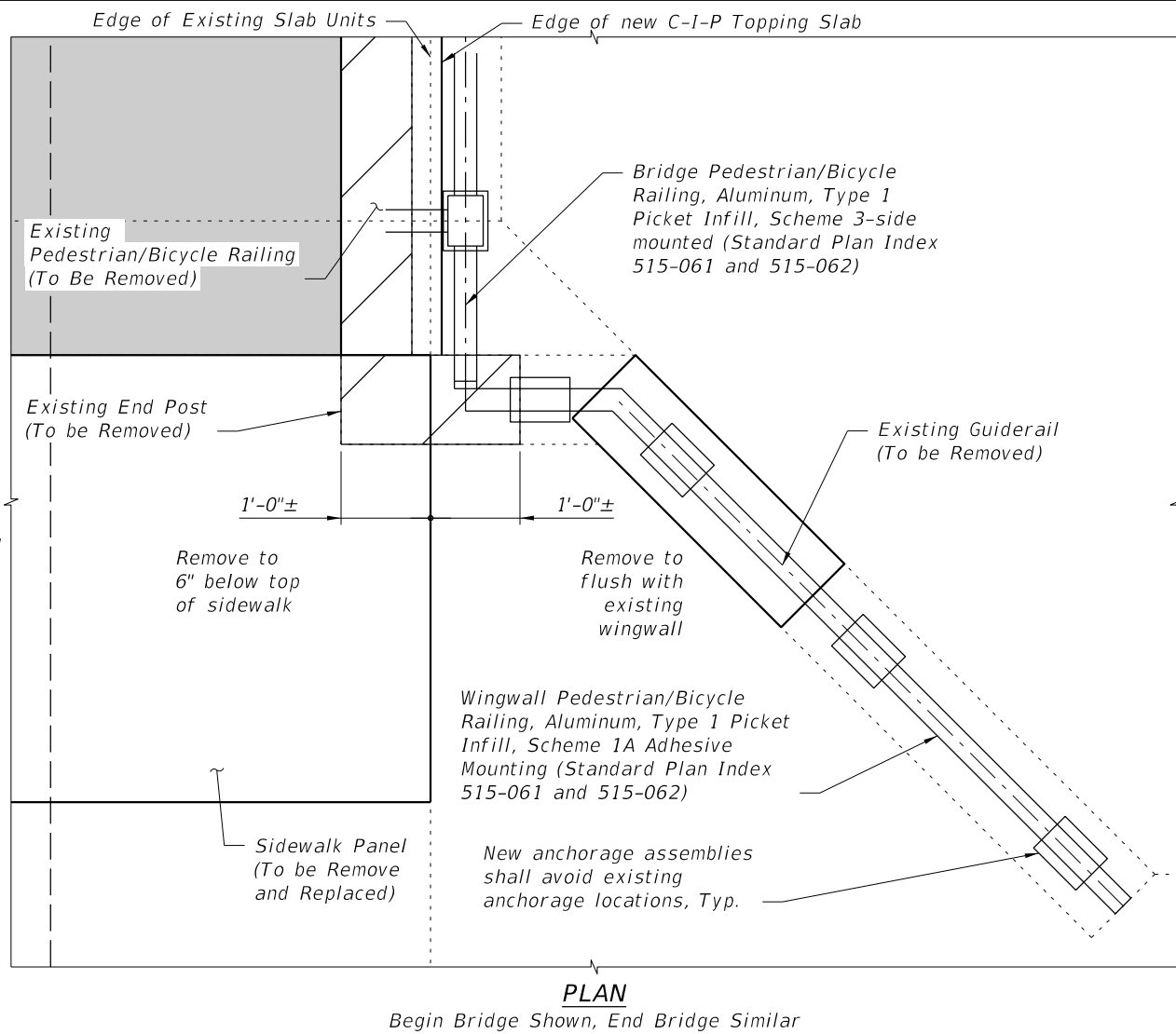
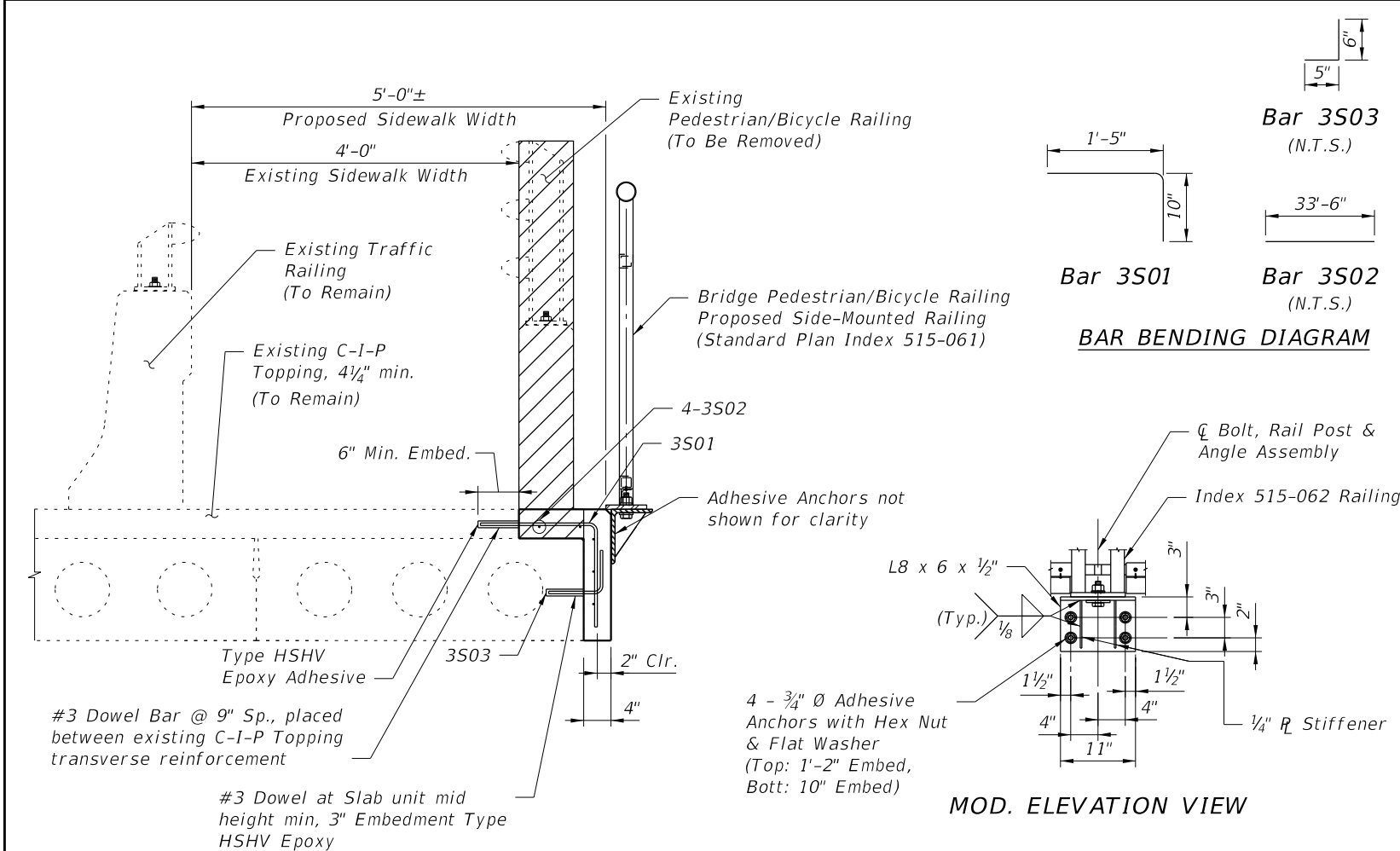
General Bullet Railing Repair Notes:

1. Contractor to provide new nuts and washers at bullet railing anchorage locations experiencing corrosion.
2. Contractor shall not damage existing anchor bolts to remain. Any existing anchor bolts damaged by the Contractor will be replaced at the Contractor's expense.
3. All work associated with bullet railing cleaning and coating including that but not limited to, surface preparation and repairing galvanized finish on exposed anchor bolts, nuts, and washers shall be included in Pay Item 562-A.
4. All work associated with replacing bullet railing end caps shall be included in Pay Item 515-4-1C.

BRIDGE NO. 014030

REVISIONS						 JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106	CHARLOTTE COUNTY PUBLIC WORKS	BULLET RAILING REPAIR DETAILS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				
							GREATER PORT CHARLOTTE BRIDGES	PELLAM BOULEVARD OVER AUBURN WATERWAY	B1-10

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



- REMOVAL NOTES:**
- Contractor shall saw cut and remove existing pedestrian/bridge railing and remove C-I-P topping without damaging reinforcement in topping slab within the limits shown above and on the "Plan with Work Identification" sheet.
 - Contractor shall exercise caution to not damage existing slab units to remain.
 - Contractor shall remove sidewalk panels depicted on the "Plan with Work Identification" prior to existing end post removal.
 - Existing end posts shall be partially cut flush at the bottom of the adjacent approach sidewalk panel as depicted above. The remaining section of end post shall be removed and saw cut flush with the adjacent wingwall.
 - Any reinforcement exposed due to removal of the end post shall be saw cut to 1" depth below finish surface and filled with Epoxy Compound Type F. See FDOT Standard Specification 926 for epoxy material.
 - Existing guide rail shall be removed and existing anchor bolts be sawcut to 1" depth and filled with Epoxy Compound Type F. See FDOT Standard Specification 926 for epoxy material.

- SURFACE PREPARATION:**
- Existing slab unit top and side surface shall be cleared of any oil, grease, dirt, or other foreign materials, which could inhibit proper bonding.
 - All existing concrete surfaces that will be in contact with the C-I-P topping widening shall be roughened to a minimum 1/4" amplitude. Any existing topping slab reinforcement exposed shall be blasted clean to SSPC-10 Near White Metal.
 - Prior to forming the C-I-P topping widening, surface preparation and reinforcement shall be reviewed and approved by the Engineer.
 - C-I-P topping slab shall be discontinuous at all abutments and bents. Extend expansion joint through C-I-P topping.

- MATERIALS:**
- Concrete (C-I-P): Class IV in accordance with FDOT Standard Specifications Section 346 (Minimum 28-day compressive strength = 5,500 psi).
 - Reinforcement: A615 Grade 60 Carbon Steel per FDOT Standard Specifications Section 931.
 - Adhesive Bond Material: Type HSHV Adhesive per FDOT Standard Specifications Section 937.

- PLACING:**
- Maintain a 2" minimum cover between reinforcement and external surfaces unless noted otherwise.
 - Match existing bridge sidewalk walking surface finish.
 - Adhesive anchors shall be installed in accordance with Specification Section 416 using Type HSHV Epoxy.
 - Contractor shall verify all dimensions prior to ordering reinforcement.

- RAILING INSTALLATION:**
- Contractor shall install pedestrian/bicycle railing adhesive anchors and anchorage assemblies following Standard Plan Index 515-061 and 515-062.

- METHOD OF MEASUREMENT:**
- All costs associated with the removal of the existing bridge pedestrian/bicycle railing, end posts, and existing concrete topping shall be included in Pay Item 110-3.
 - All costs associated with the reinforcement and casting of the bridge topping widening shall be included in Pay Item 400-4-4.
 - All costs associated with the installation of the side-mounted pedestrian/bicycle railing shall be included in Pay Item 515-2-311.
 - All costs associated with the installation of the wingwall pedestrian/bicycle railing shall be included in Pay Item 515-2-311.

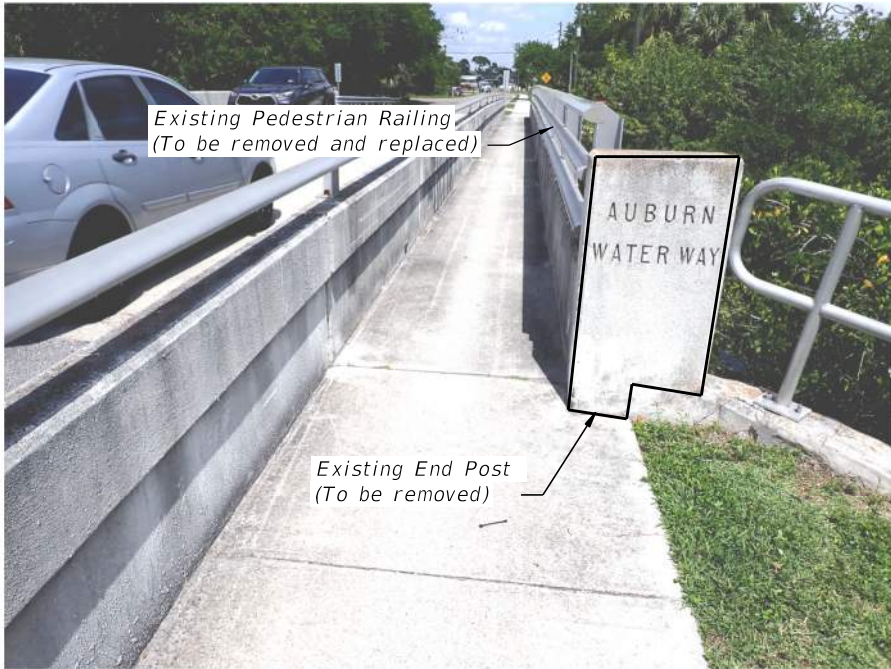
BRIDGE NO. 014030

REVISIONS						Kimley»Horn	Charlotte County Public Works	RAILING REPLACEMENT DETAILS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				
						JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 REGISTRY NO. 35106	GREATER PORT CHARLOTTE BRIDGES	PELLAM BOULEVARD OVER AUBURN WATERWAY	B1-11

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



Bridge Expansion Joint
(Other Expansion Joints similar)



Existing End Post and Pedestrian/Bicycle Railing
(To be removed)



Existing Deck Drain
(To be cleaned)



Existing Guiderail
(Southeast Wingwall guiderail shown)



Wingwall Spall
(Southeast Wingwall shown)



Slope Pavement Concrete
(North slope protection shown, South similar)

BRIDGE NO. 014030

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn

JERRY MARCUS PICCOLO, P.E.
P.E. LICENSE NUMBER 80484
1920 WEKIVA WAY, SUITE 200
WEST PALM BEACH, FL 33411
(561) 845-0665
REGISTRY NO. 35106

CHARLOTTE COUNTY
PUBLIC WORKS

GREATER PORT CHARLOTTE BRIDGES

REPRESENTATIVE REPAIR
FIELD PICTURES

PELLAM BOULEVARD
OVER AUBURN WATERWAY

SHEET
NO.

B1-12