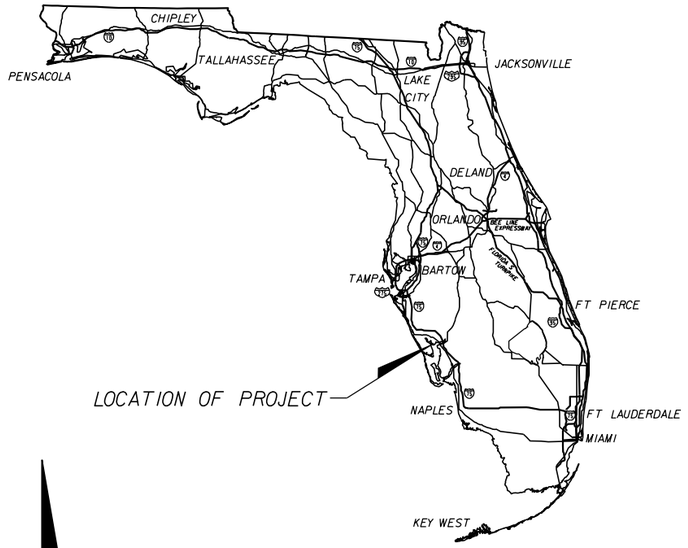
CHARLOTTE COUNTY

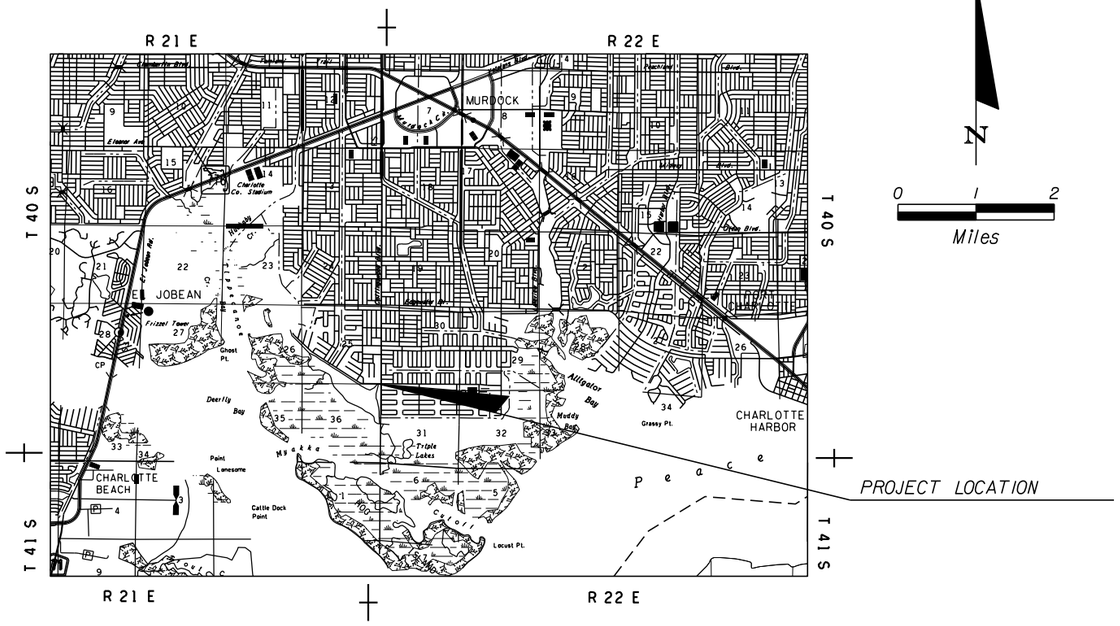
CONTRACT PLANS

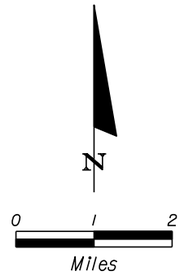
CHARLOTTE COUNTY PUBLIC WORKS
GREATER PORT CHARLOTTE BRIDGES
O'HARA DRIVE OVER
ATLANTUS WATERWAY (BR. NO. 014069)

FILE NO. 2024000117, WO NO. 289



INDEX OF STRUCTURES PLANS





PLANS PREPARED BY:

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(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.

JERRY MARCUS PICCOLO
LICENSE
No 80484
STATE OF FLORIDA
PROFESSIONAL ENGINEER

THIS ITEM HAS BEEN DIGITALLY
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ON THE DATE ADJACENT TO THE SEAL

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ON THE ELECTRONIC COPIES.

PREPARED FOR

CHARLOTTE COUNTY
FLORIDA

CHARLOTTE COUNTY, PROJECT MANAGER: KELLY SLAUGHTER

100% PLANS
SUBMITTAL
APRIL 2025

STRUCTURES PLANS
ENGINEER OF RECORD: JERRY MARCUS PICCOLO

P.E. NO.: 80484

SHEET NO.
B3-01

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

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

UTILITIES

1. Prior to commencement of any excavation, the Contractor shall comply with Florida Statute 556, underground facility damage prevention and safety.
2. 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.
3. 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.
4. Existing utilities are to remain in place unless otherwise noted.
5. The Contractor is responsible for the protection of all utilities to remain in place.
6. 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.
7. The Contractor is to use caution when working in or around areas of overhead electric lines, underground utilities, or near canal banks.

EROSION CONTROL

1. Comply with FDOT Standard Specifications for Road and Bridge Construction Section 104 "Prevention, Control, and Abatement of Erosion and Water Pollution".
2. 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.
3. 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.
4. The Contractor shall repair or remove any equipment leaking fuel, oil, or other fluids immediately.
5. Protection of Water Resources:
   A. 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.
   B. 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:

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

Concrete:

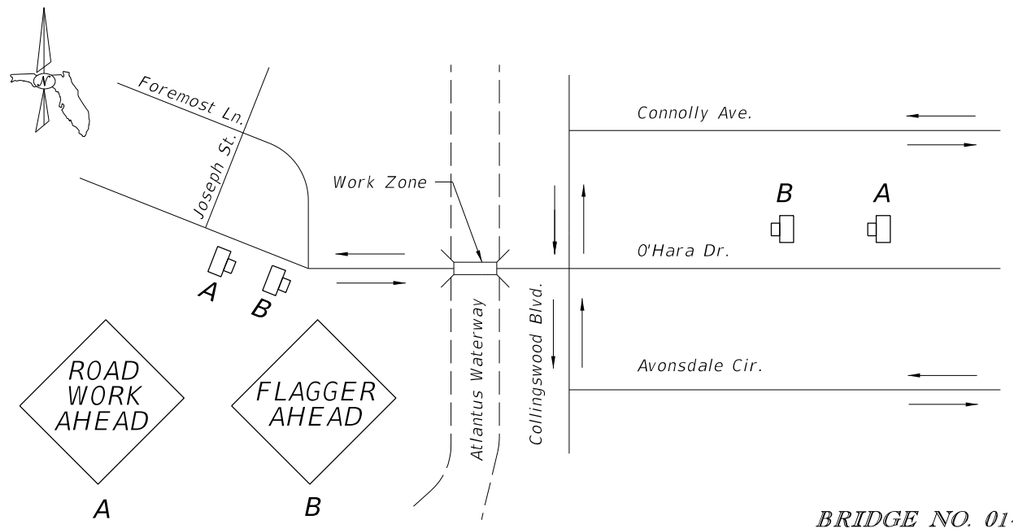
Concrete Class	Min. 28-day Compressive Strength (psi)	Location of Concrete in Structure
IV	5500 psi	T-Pile Jackets

MAINTENANCE OF TRAFFIC

1. 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.
2. The existing bridge shall remain open to bidirectional vehicular and marine traffic at all times during repairs.
3. 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 fora 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

4. The existing posted speed is 35 mph. The speed may be reduced to 25 mph during construction.
5. 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.
6. 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).
7. For temporary construction signs located in paved areas, the contractor shall provide temporary sign support which does not penetrate the pavement.
8. Seven days prior to beginning work install PCMs in each direction, 500' in advance of bridge with the following messages:



BRIDGE NO. 014069

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn
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P.E. LICENSE NUMBER 80484
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CHARLOTTE COUNTY PUBLIC WORKS	GENERAL NOTES	SHEET NO.
GREATER PORT CHARLOTTE BRIDGES	O'HARA DRIVE OVER ATLANTUS WATERWAY	B3-02

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
120-1A	Regular Excavation	LS	1	TS-07
305-1A	Bituminous Crack and Joint Sealing	LF	12	TS-08
339-1	Miscellaneous Asphalt	LS	1	TS-12
400-145A	Cleaning Concrete Surfaces	SF	7847	TS-14
401-70-1	Restore Spalled Areas, Epoxy	CF	1.3	TS-16
401-70-4	Restore Spalled Areas, Portland Cement Grout	CF	15.5	TS-17
411-1A	Crack Sealing - Structures Rehab	LF	30	TS-19
457-1-21A	Standard Integral Pile Jacket, Structural	EA	2	TS-21
458-1-21	Bridge Deck Expansion Joint, Rehabilitation, Poured Joint With Backer Rod	LF	222	TS-22
458-2	Polymer Nosing for Bridge Deck Expansion Joint	CF	29.8	TS-23
515-4-1A	Pipe Rail, Single Rail, End Transition: Furnish and Install	EA	4	TS-25
515-4-1B	Pipe Rail, Single Rail, Weld Repair	EA	3	TS-25
536-A	Guardrail Repairs	LS	1	TS-30
536-12-616A	Guardrail Repairs (Replace)(Offset Block)	EA	1	TS-30
536-83-1	Guardrail Post Replacement, Regular	EA	1	TS-30
563-4	Anti-Graffiti Coating, Non-Sacrificial	SF	6797	TS-32
570-1-2A	Performance Turf, Sod	LS	1	TS-33
700-1-500	Single Column Ground Sign Assembly, Relocate	EA	4	TS-34

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. This pay item shall also include the cost associated with the containment, collection, and proper off site disposal of all debris resulting from surface preparation and repairs. No debris will be permitted within the waterway.

Pay Item 401-70-1 Restore Spalled Areas, Epoxy
This pay item also includes the cost of containing and off site disposal of all debris resulting from these repairs.

Pay Items 401-70-4 Restore Spalled Areas, Portland Cement Grout
These pay items shall also include the cost of containing and proper off site disposal of all debris resulting from these repairs.

Pay Item 411-1A Crack Sealing – Structures Rehab
This pay item shall include all work as described on "Crack Repair Details" sheet.

Pay Item 457-1-21A Standard Integral Pile Jacket, Structural, T-Pile Jacket
This pay item shall include all work as described on the "Pile Jacket Repair Details" sheet. This pay item shall also include all costs for containing and off site disposal of all debris resulting from the pile jacket installation.

Pay Item 515-4-1A Pipe Rail, Single Rail, End Transition: Furnish and Install
This pay item includes all work described on "Railing Taper Details" sheet.

Pay Item 700-1-500 Single Column Ground Sign Assembly, Relocate
This pay item shall also include all costs associated with splicing/adjusting "U channel" supports to adhere to the sign mounting height.

BRIDGE NO. 014069

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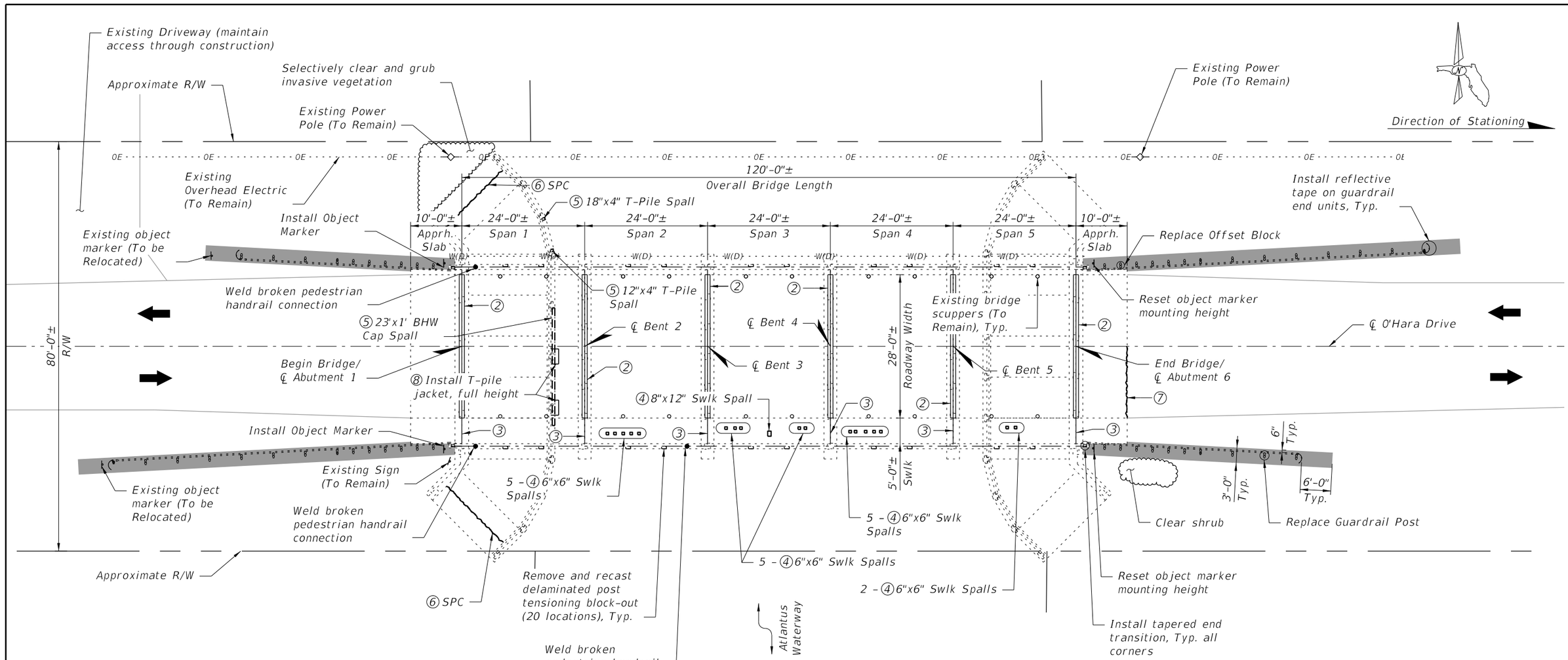
CHARLOTTE COUNTY PUBLIC WORKS	SUMMARY OF QUANTITIES	SHEET NO.
GREATER PORT CHARLOTTE BRIDGES	O'HARA DRIVE OVER ATLANTUS WATERWAY	B3-03



PLAN

Work Identification:

1. *Field weld the broken welds along the pedestrian handrail as depicted above and as shown on "Pipe Railing Repair Details" sheet (Pay Item 515-4-1B).*
2. *Install expansion joint headers and expansion joint seals at the existing expansion joints within the roadway limits as shown on the "Expansion Joint Repair Details" sheet (Pay Items 458-1-21 & 458-2).*
3. *Install expansion joint seal as depicted above and on "Expansion Joint Repair Details" sheet (Pay Item 458-1-21).*
4. *Repair minor concrete spalls on top surface of the bridge sidewalk as depicted above and on "Spall Repair Details" sheet (Pay Item 401-70-1).*
5. *Repair concrete spalls along bulkhead wall cap and T-Piles as depicted above and on "Spall Repair Details" sheet (Pay Item 401-70-4).*
6. *Seal the cracks in the slope pavement concrete as depicted above (Pay Item 411-1A).*
7. *Install asphalt crack seal as depicted above (Pay Item 305-1A*
8. *Install pile jackets on bulkhead wall T-piles as depicted above and on "T-Pile Jacket Repair Details" sheet (Pay Item 457-1-21A).*
9. *Install end transition at the ends of the existing pipe railing system as depicted above and on "Railing Taper Details" sheet (Pay Item 515-4-1A).*
10. *Repair transverse past tensioning bloack-outs as depicted above and on "Post Tensioning Block-Out Repair Details" sheet (Pay Item 401-70-4).*
11. *Remove all vegetation growing in or on the bridge structure. Selectively clear invasive vegetation in areas depicted above (Pay Item 110-2-2A).*
12. *Pressure clean and apply non-sacrificial graffiti-resistant coating on the traffic railing, sides of exterior slab units, underside of spans 1 and 5, waterward faces of abutment wingwalls, abutment facing sides of bent 2 and 5 caps, and slope protection as depicted on "Coating Details" sheet (Pay Items 400-145A & 563-4).*
13. *Install barrier delineators, install reflective tape on guardrail end units, restore all offset blocks to plumb, and tighten guardrail anchors (Pay Item 536-A).*
14. *Install miscellaneous asphalt under the existing guardrail system and to the limits depicted above (Pay Items 120-1A & 339-1).*
15. *Relocate and reset existing object marker signs to the location and mounting height depicted above and on "Crack Repair & Object Marker Details" sheet (Pay Item 700-1-500).*
16. *Replace split guardrail post along southeast approach guardrail (Pay Item 536-83-1).*
17. *Replace second offset block from the bridge along the northeast approach (Pay Item 536-12-616A).*

Pavement Notes:

1. *Asphalt cracking shall be sealed with Dura-fill 3405 or approved equal in accordance with FDOT Developmental Specification 305.*

Abbreviations:

SPC - Slope Pavement Concrete
BHW - Bulkhead Wall

Legend:

- Indicates 2" Miscellaneous Asphalt
- Approximate crack location. Cracks may vary in location and length.

BRIDGE NO. 014069

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CHARLOTTE COUNTY PUBLIC WORKS	PLAN WITH WORK IDENTIFICATION	SHEET NO.
GREATER PORT CHARLOTTE BRIDGES	O'HARA DRIVE OVER ATLANTUS WATERWAY	B3-04

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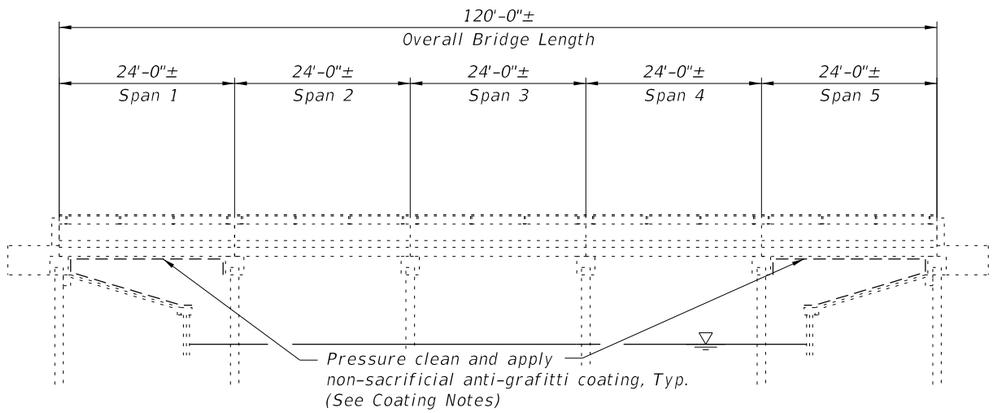
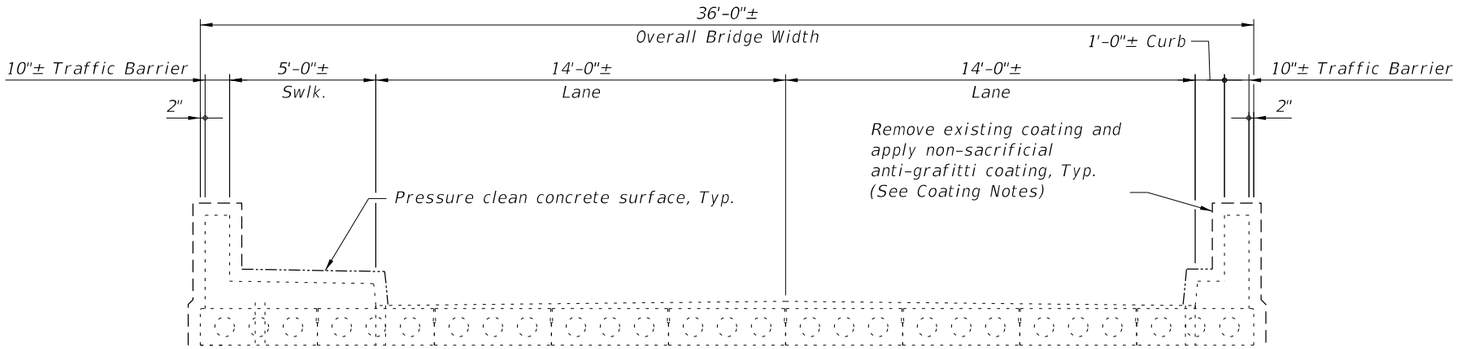


ELEVATION

Legend:

- – – -Pressure clean and apply anti-grafitti 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. 014069

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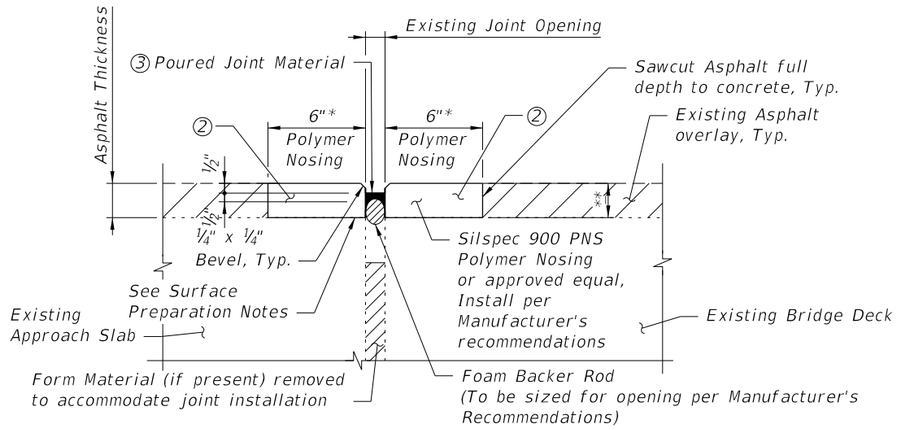
CHARLOTTE COUNTY PUBLIC WORKS	COATING REPAIR DETAILS	SHEET NO.
GREATER PORT CHARLOTTE BRIDGES	O'HARA DRIVE OVER ATLANTUS WATERWAY	B3-05



TYPE ②&③ EXPANSION JOINT HEADER REPAIR AND JOINT SEAL REPAIR

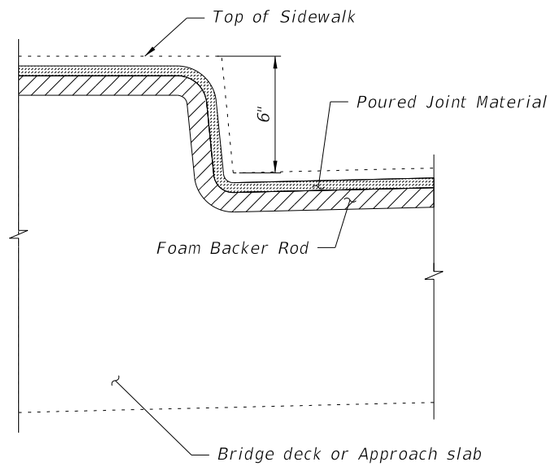
(Construct new header on asphalt overlay bridges and replace existing joint seal)

* The width of the polymer nosing is a minimum of 6" unless otherwise required by the Manufacturer's recommendations.

** The thickness of the polymer nosing is the thickness of the asphalt overlay. Adjust the width of the polymer nosing in accordance with the Manufacturer's recommendations for the asphalt thickness.

Surface Preparation Notes:

1. Remove asphalt within the limits of polymer nosing applications.
2. Prepare the concrete surface the polymer nosing will bond to by sand blasting and intentionally roughing the concrete surface to an aggregate fracture surface finish with minimum ¼" amplitude.
3. Immediately prior to placement of polymer, air blast polymer nosing repair area free of all loose material.
4. Install the polymer nosing in accordance with Manufacturer's Recommendations.



Typical Section through Curb at Raised Sidewalks

General Expansion Joint Repair Notes:

1. Work this sheet with Standard Plan Index 45B-110.

BRIDGE NO. 014069

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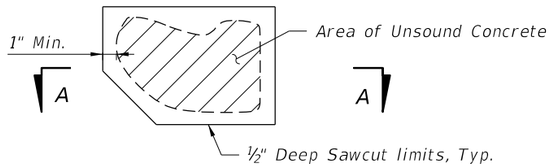
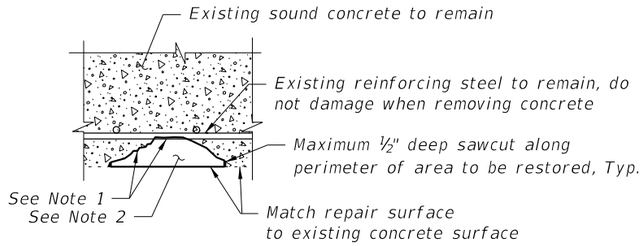
CHARLOTTE COUNTY PUBLIC WORKS	EXPANSION JOINT REPAIR DETAILS	SHEET NO.
GREATER PORT CHARLOTTE BRIDGES	O'HARA DRIVE OVER ATLANTUS WATERWAY	B3-06



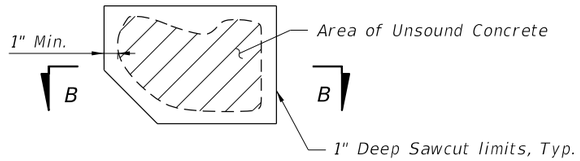
TYPE ④ - SPALL REPAIR



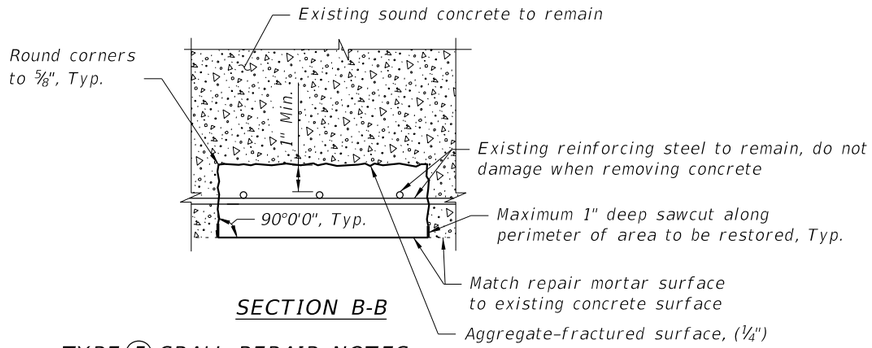
SECTION A-A

TYPE ④ SPALL REPAIR NOTES

1. Surface Preparation
   Remove deteriorated concrete to sound material by scarification or by chipping with light duty pneumatic or electric concrete chippers (30 lbs or less in general, 15 lbs or less adjacent to prestressing strands, reinforcing steel, and structural limits of construction). Provide an aggregate-fractured surface with a minimum surface profile amplitude of 1/4 inch by use of a scabbler or other appropriate means. Blast clean all reinforcing bars exposed after concrete removal in accordance with SSPC SP-10 "Near-White Blast Cleaning." 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.
2. Repair material shall be Type F Epoxy in accordance with Specification Section 926 applied in accordance with Manufacturer's recommendations.
3. Type ④ Spall Repairs are paid for under pay item 401-70-1.
4. Exercise special care when removing unsound concrete to not damage existing reinforcing steel or other embedded anchorages or break the bond between the steel and sound concrete to remain.
5. 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.
6. Detail applies to both horizontal and vertical repairs.
7. For locations of deficiencies, see bridge "Plan with Work Identification" sheet.
8. The Contractor shall contain all debris resulting from Type ④ repairs and disposed off site.



TYPE ⑤ - SPALL REPAIR



SECTION B-B

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" sheet.
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. 014069

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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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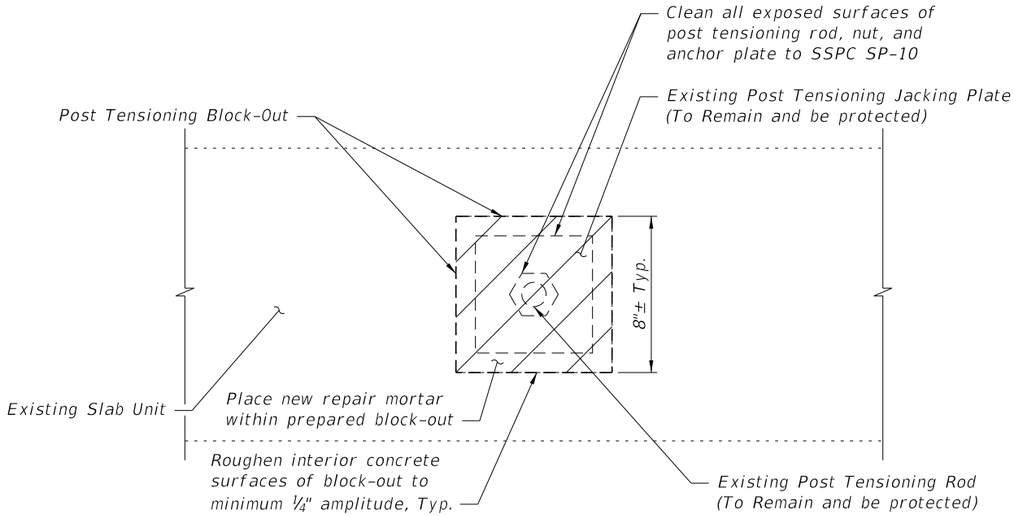
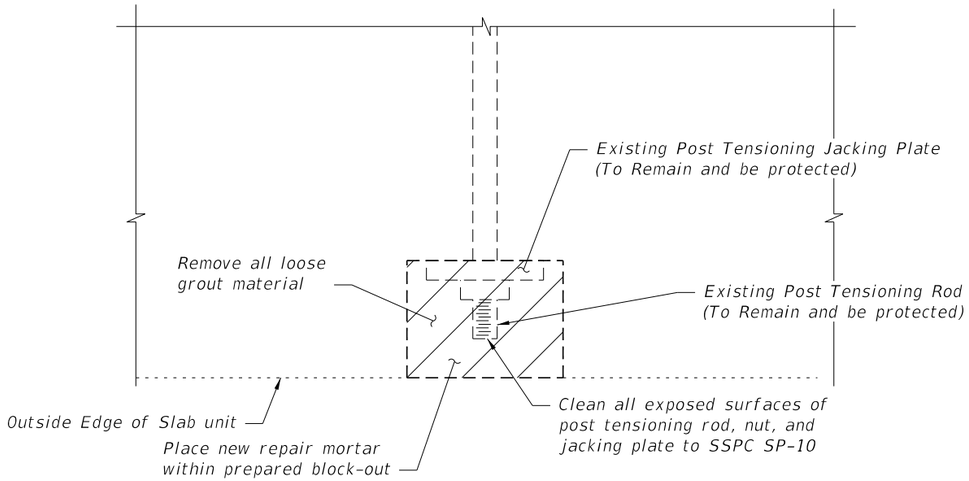
CHARLOTTE COUNTY PUBLIC WORKS	SPALL REPAIR DETAILS	SHEET NO.
GREATER PORT CHARLOTTE BRIDGES	O'HARA DRIVE OVER ATLANTUS WATERWAY	B3-07



ELEVATION - POST TENSIONING BLOCK-OUT



PLAN - POST TENSIONING BLOCK-OUT

SAMPLE PICTURE

(Elevation View at Post Tensioning Block-Out)

Post Tensioning Block-Out Repair Notes:

Location:
1. Post Tensioning Block-Outs are located along the outside edge of the exterior slab units along both sides of the bridge. A total of four block-outs occur in each span, two block-outs per side at approximately the ⅓ span locations.

General:
1. All costs associated with the block-out repairs shall be included in Pay Item 401-70-4.

Grout Removal:
1. Remove all existing loose grout present within the post tensioning block-outs utilizing small hand tools.
2. Exercise extreme caution while removing existing loose grout material not to damage the transverse post tensioning rod, nut, or jacking plate.

Surface Preparation:
1. Clean all exposed steel surfaces of post tensioning rod, nut, and jacking plate free of all rust and meeting SSPC SP-10 "Near White Blast Cleaning".
2. Provide an aggregate-fractured surface finish with a minimum surface profile of amplitude of ¼ inch by use of hand tools or appropriate means without damaging the post tensioning system.
3. Contractor shall collect all debris resulting from the work. No debris is permitted within the waterway.

Material:
1. Place repair mortar/concrete as necessary to ensure full contact with all interior surfaces of the block-out. Repair material shall be Sikacrete 211 SCC Plus or approved equal in accordance with Specification Section 930 for Ultra High Performance Repair Material. Repair material shall be self consolidating cementitious material.
2. Repair Material shall be placed in accordance with "Technical Special Provision (TSP) – T401" and Manufacturer's Recommendations.

BRIDGE NO. 014069

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CHARLOTTE COUNTY PUBLIC WORKS	POST TENSIONING BLOCK-OUT REPAIR DETAILS	SHEET NO.
GREATER PORT CHARLOTTE BRIDGES	O'HARA DRIVE OVER ATLANTUS WATERWAY	B3-08

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 prestressing 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 scabbler 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 formwork and formwork 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 formwork, 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. 014069

REVISIONS					
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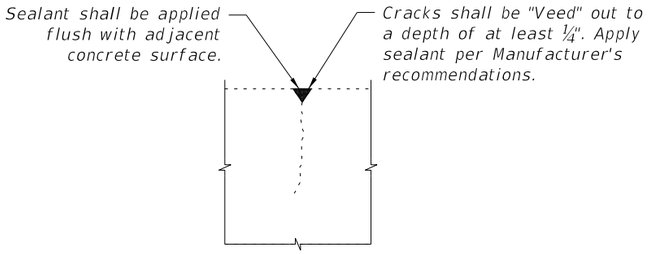
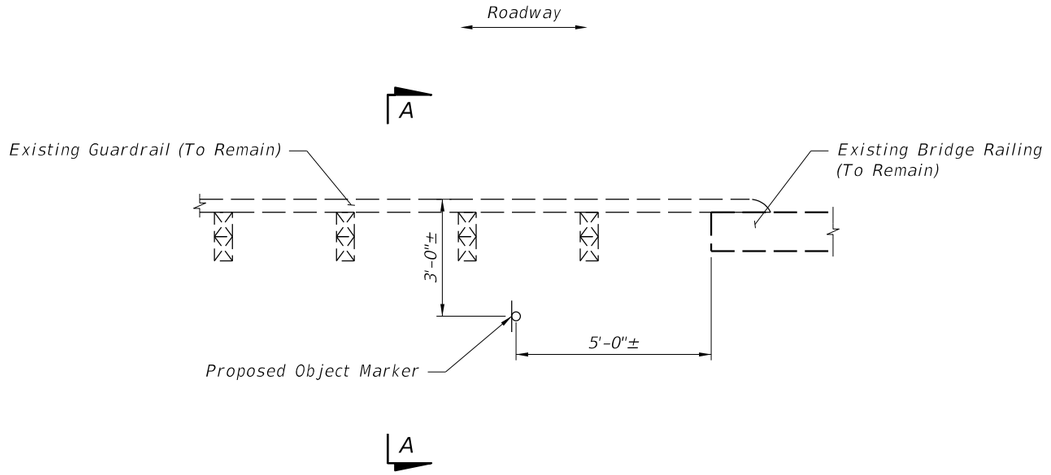
CHARLOTTE COUNTY PUBLIC WORKS	TECHNICAL SPECIAL PROVISIONS (TSP) - T401	SHEET NO.
GREATER PORT CHARLOTTE BRIDGES	O'HARA DRIVE OVER ATLANTUS WATERWAY	B3-09



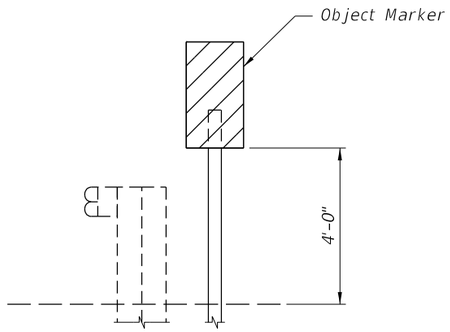
TYPE ⑥ CRACK REPAIR DETAIL

TYPE 6 CRACK REPAIR NOTES:

1. Seal cracks by polyurethane seal coat.
2. Color to match concrete as close as practicable.
3. Crack seal material shall be Sikaflex-1A or approved equal.
4. Where sealant is being applied in close proximity to tidal waters, time the installation to maximize dry curing time during low tide.
5. Contractor shall contain all debris resulting from crack sealing operations.



PLAN



SECTION A-A

Notes:

1. If sign support "U channel" does not provide adequate length for new mounting height, contractor may splice section of "U channel" to achieve proper mounting heights.

BRIDGE NO. 014069

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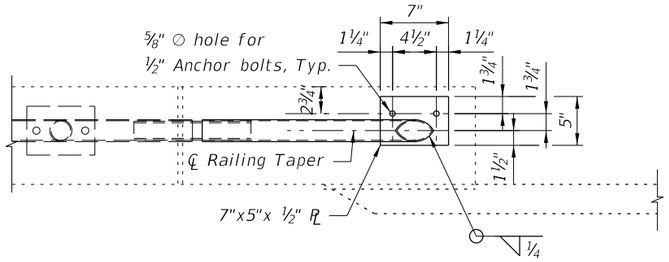
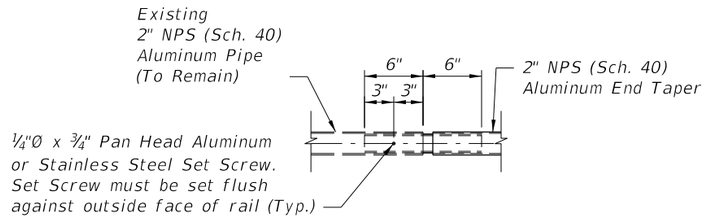
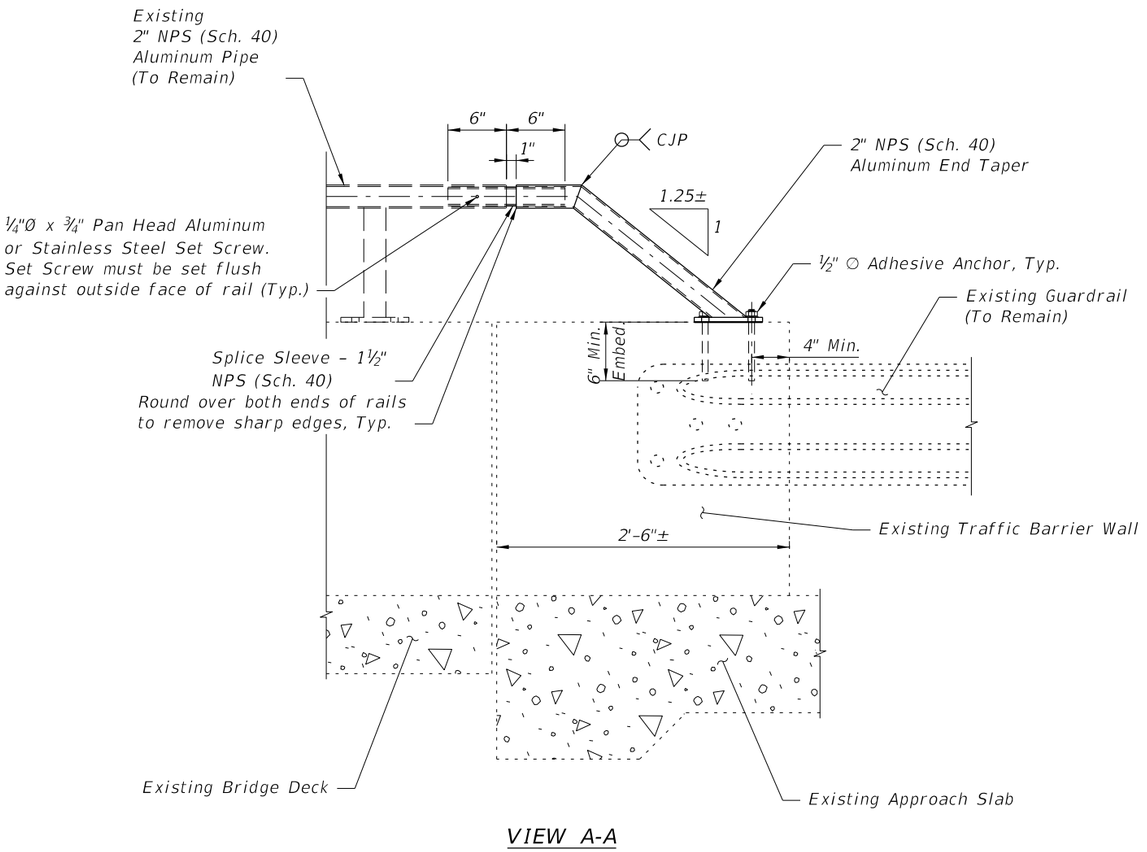
CHARLOTTE COUNTY PUBLIC WORKS	CRACK REPAIR & OBJECT MARKER DETAILS	SHEET NO.
GREATER PORT CHARLOTTE BRIDGES	O'HARA DRIVE OVER ATLANTUS WATERWAY	B3-10



PLAN - RAILING TAPER



EXPANSION JOINT DETAIL



VIEW A-A

Railing Taper Notes:

Shop Drawings:
1. Prior to fabrication, Contractor shall take all necessary field dimensions and provide shop drawings to the Engineer for review and approval.

Materials:
1. Pan Head Set Screws: Aluminum Alloy 2024-74 or 7075-T73 or Stainless Steel (SS) Type 316 or 18-8 Alloy
2. Base Plates: ASTM B209, Alloy 6061-T6
3. Structural Pipe Tube: ASTM B221 or ASTM B429, Alloy 6061-T6
4. Galvanized Steel Fasteners:
   a. Adhesive Anchors: ASTM F1554 Grade 36 fully threaded rods
   b. Hex Nuts: ASTM A563
   c. Flat Washers: ASTM F436
5. Bearing Pads: Plain, Fabric Reinforced, or Fabric Laminated meeting requirements of Specifications 515 & 932.

Fabrication:
1. All welding shall be in accordance with AWS D1.2. Filler material shall be either ER 5356, ER 5183, or ER 5556.
2. All welds shall be done by an AWS Certified Welder and in compliance with AWS D1.2.
3. Adhesive anchors shall be installed in accordance with FDOT Specification Section 416, Type HV Adhesive.

General:
1. All costs associated with fabricating and installing the railing taper ends shall be included in Pay Item 515-4-1A.

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CHARLOTTE COUNTY PUBLIC WORKS	RAILING TAPER DETAILS	SHEET NO.
GREATER PORT CHARLOTTE BRIDGES	O'HARA DRIVE OVER ATLANTUS WATERWAY	B3-11

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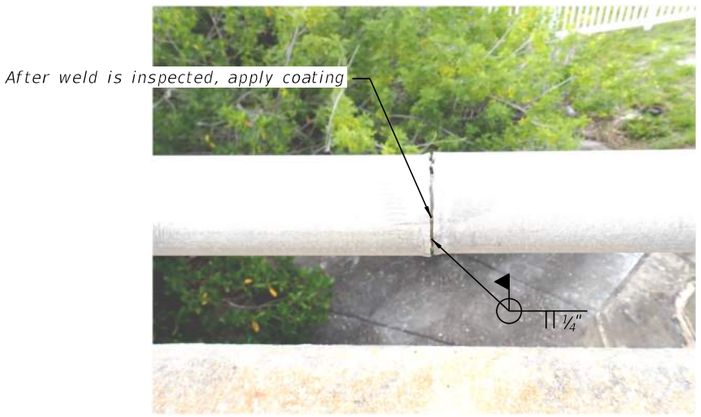

Broken Pedestrian Handrail

(Northwest shown, others similar)

PIPE HANDRAIL REPAIR NOTES:

1. *Contractor to clean pipe handrail to near white metal in accordance with SSPC-SP 10.*

2. *Contractor shall contain all debris from the cleaning and coating process. No debris shall enter waterway.*

3. *Contractor shall not damage existing pipe handrail. Any existing pipe handrail damaged by the Contractor will be repaired at the Contractor's expense to the satisfaction of the Engineer.*

4. *Materials*
   -Electrode e70XX

5. *Coatings*
   -Field Weld: All exposed portions of the pipe handrail repair shall have galvanized paint applied in accordance with Specification Section 562.

6. *All work associated with pipe handrail repairs including but not limited to, repairing galvanized finish and surface preparation shall be included in Pay Item 515-4-1B.*

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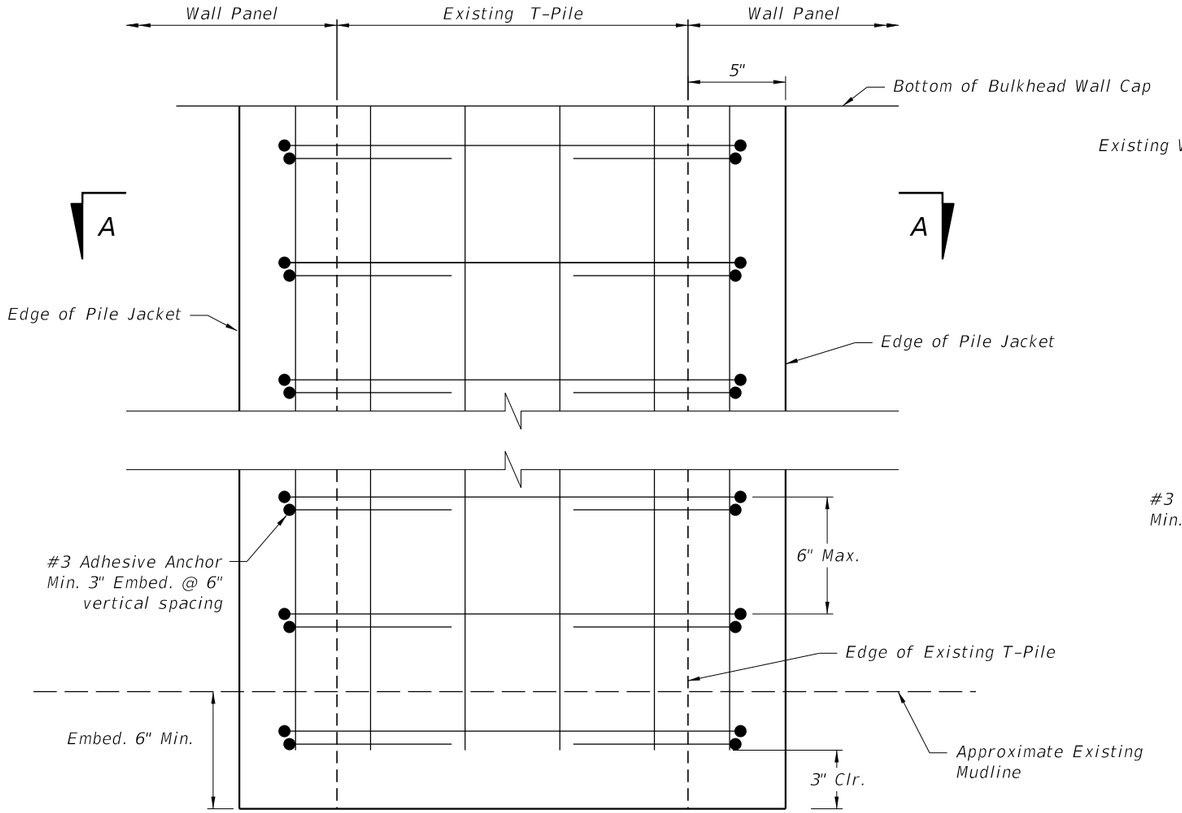
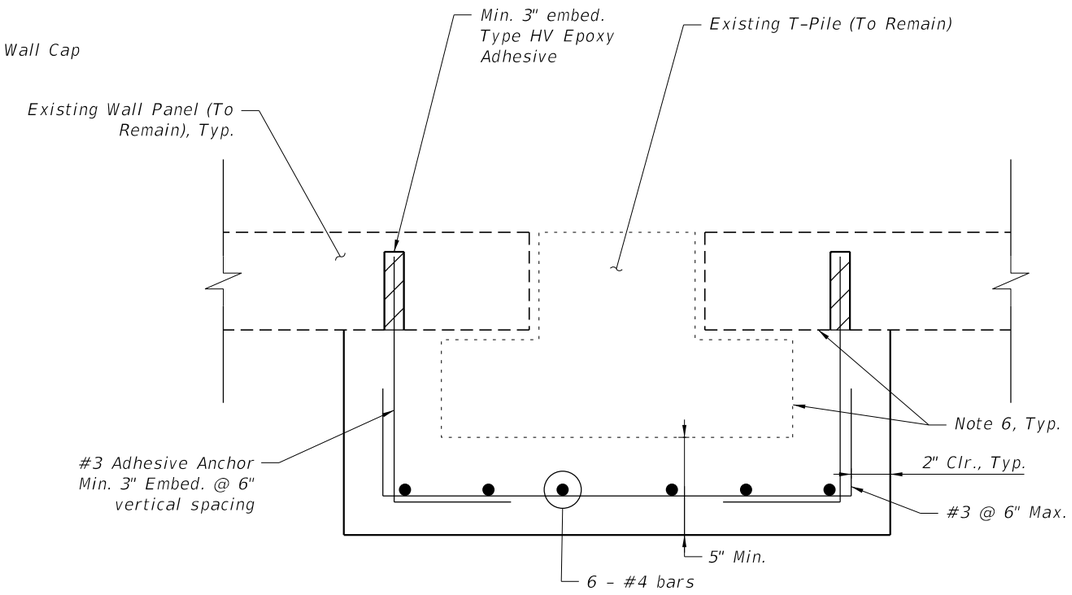
CHARLOTTE COUNTY PUBLIC WORKS	PIPE RAILING REPAIR DETAILS	SHEET NO.
GREATER PORT CHARLOTTE BRIDGES	O'HARA DRIVE OVER ATLANTUS WATERWAY	B3-12



T-PILE JACKET ELEVATION



SECTION A-A

T-PILE JACKET ⑧ REPAIR

T-PILE JACKET NOTES:

1. All loose or soft concrete shall be removed using hand tools or a 10 lb or less chipping hammer. All debris, residue, or marine growth on the surface of the pile where the jacket will be installed shall be removed. Where reinforcement is encountered, it shall be cleaned to near white metal in accordance with SSPC SP-10. All encountered reinforcement shall be treated with corrosion inhibitor following Manufacturer's recommendations.
2. Existing pile surface, above and below water, shall be cleared of any oil, grease, dirt, or other foreign materials, which could inhibit proper bonding.
3. The bottom of the T-Pile jacket shall be embedded in the mudline as shown above and extend up to the bottom of bulkhead wall cap.
4. The maximum time interval between surface preparation of the T-Piles and concrete placement shall be 36 hours.
5. Prior to forming the jacket, pile surface preparation and reinforcement placement shall be reviewed and approved by the Engineer.
6. All existing concrete surfaces that will be in contact with the pile jacket shall be roughened to a minimum ¼" amplitude.
7. Prior to forming the pile jacket, Contractor shall pressure wash all existing concrete to be in contact with new material with potable water.
8. Prior to pouring pile jacket, Contractor shall rinse all areas within the form with potable water.
9. Stay-in-place forms will not be permitted on the T-Piles, including but not limited to, fiberglass, wood, or polymer form systems.
10. Adhesive anchors shall be installed in accordance with Specification Section 416 using Type HV Epoxy.
11. Contractor shall place pile jacket cementitious material to maximize the amount of initial cure time unsubmerged during low tide.
12. Contractor shall contain all debris resulting from the T-Pile jacket work. No debris is permitted in the waterway.
13. At Contractor's option, Contractor may propose a bag mix similar to Class IV concrete.

BRIDGE NO. 014069

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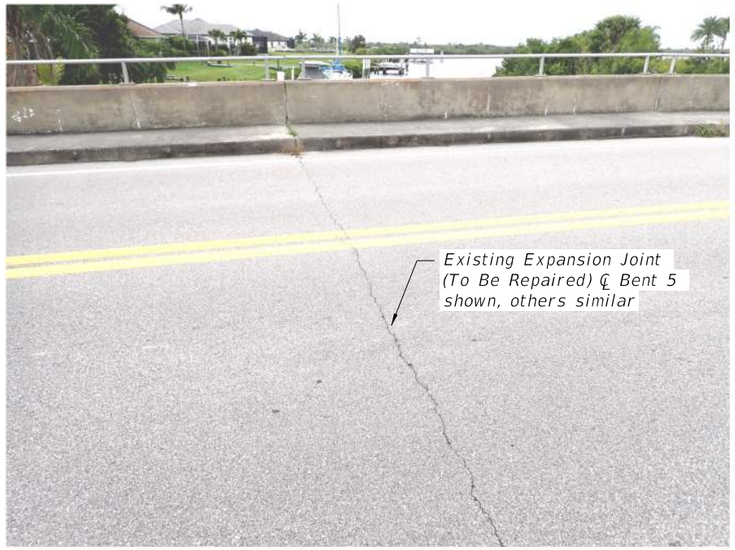
CHARLOTTE COUNTY PUBLIC WORKS	T-PILE JACKET REPAIR DETAILS	SHEET NO.
GREATER PORT CHARLOTTE BRIDGES	O'HARA DRIVE OVER ATLANTUS WATERWAY	B3-13



Bridge Expansion Joint
(Other Expansion Joints similar)

Invasive Vegetation
(Selective Clear and Grub, Southwest corner shown)

Traffic Railing and Sidewalk

Bulkhead Wall Cap
(West Bulkhead Wall shown)

Broken Pedestrian Handrail
(Northwest shown, others similar)

BRIDGE NO. 014069

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CHARLOTTE COUNTY PUBLIC WORKS	REPRESENTATIVE REPAIR FIELD PICTURES	SHEET NO.
GREATER PORT CHARLOTTE BRIDGES	O'HARA DRIVE OVER ATLANTUS WATERWAY	B3-14