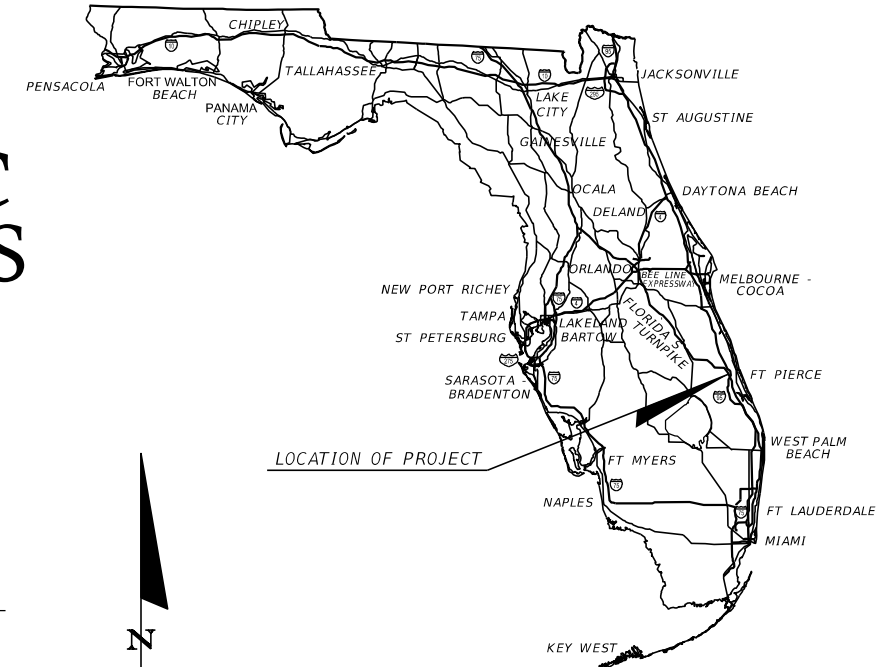


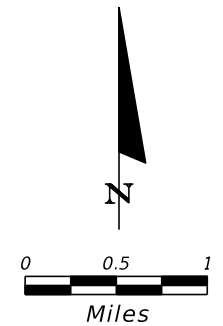
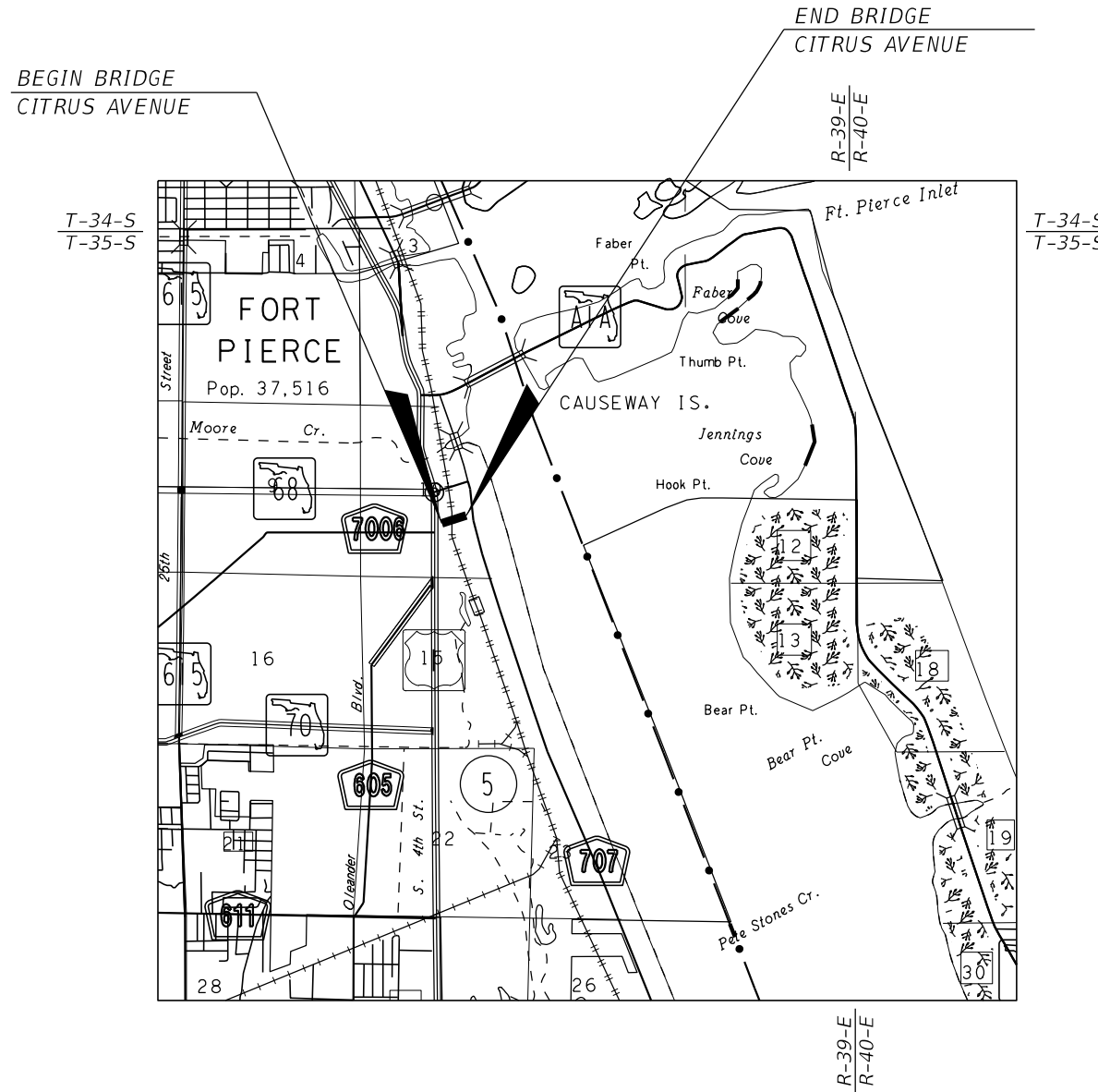
CONTRACT PLANS

CITRUS AVENUE OVER FEC RAILWAY BRIDGE REPAIRS



INDEX OF PLANS

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STRUCTURES SHOP DRAWINGS
TO BE SUBMITTED TO:
KIMLEY-HORN AND ASSOCIATES, INC.
JERRY MARCUS PICCOLO, P.E.
1920 WEKIVA WAY, SUITE 200
WEST PALM BEACH, FLORIDA 33411

PLANS PREPARED BY:
Kimley»Horn
1920 WEKIVA WAY, SUITE 200
WEST PALM BEACH, FL 33411
TEL (561) 845-0665
PROJECT NUMBER: 047922020
CERTIFICATE OF AUTHORIZATION: 00000696

STRUCTURES PLANS
ENGINEER OF RECORD: JERRY MARCUS PICCOLO, P.E.

P.E. NO.: 80484

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

100%
SUBMITTAL
JANUARY 2020

PREPARED FOR:
CITY OF FORT PIERCE

SHEET
NO.

B-1

GENERAL NOTES

DESIGN SPECIFICATIONS

FDOT Structures Manual dated January 2019 and subsequent Structures Design Bulletin 18-01.

FDOT Design Manual dated January, 2019.

GOVERNING STANDARDS AND CONSTRUCTION SPECIFICATIONS

Florida Department of Transportation, FY 2019-20 Standard Plans and revised Index Drawings as appended herein, and July 2019 Standard Specifications for Road and Bridge Construction, as amended by Contract Documents.

MATERIALS

Reinforcing Steel: Grade 60 carbon steel per Specifications Section 931.

Concrete:

Concrete	Min. 28-day Compressive Strength (psi)	Location of Concrete in Structure
Class II (Bridge Deck)	4,500	Bridge Deck

Concrete Cover:

Concrete cover dimensions shown in the plans do not include placement and fabrication tolerances unless shown as "minimum cover". See Specifications Section 415 for allowable tolerances. All dimensions pertaining to the location of reinforcing steel are to centerline of bar except where clear dimension is noted to face of concrete.

PLAN DIMENSIONS

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

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; 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 transmission lines, underground utilities, or near canal banks.

8. Existing Utility Contact Information:

Utility Company	Facility	Contact	Phone Number
AT&T	Fiber	Luke Folkerts	321-953-6172
Florida East Coast Railway	Railway Signal	FEC	800-342-1131 EXT. 2337
MCI	Fiber	Victor Wood	919-414-2782
Resurgence Infrastructure Group LLC	Fiber	USIC Dispatch Office	800-778-9140
Sprint	Fiber	Tom Nail	800-521-0579 EXT. 5141

JOINTS IN CONCRETE

Construction joints will be permitted only at the locations indicated in the plans. Additional construction joints or alterations to those shown shall require approval of the Engineer.

EXISTING BRIDGE CONSTRUCTION CONSIDERATIONS

Dimension Verification: Unless otherwise noted, the dimensions, elevations and intersecting angles shown are based on the field measurements. It is the Contractor's responsibility to verify this data before beginning construction and notify the Engineer of any discrepancies.

LEAD BASED PAINT

It has been determined that there is lead pigment in the existing paint system. See "Painting Notes" on sheet B-10 and FDOT Specifications 110 & 561 for additional information.

EROSION CONTROL

Comply with FDOT Standard Specifications for Road and Bridge Construction Section 104 "Prevention, Control, and Abatement of Erosion and Water Pollution".

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 City.

MAINTENANCE OF TRAFFIC

- Maintenance of traffic for this project shall be in compliance with the applicable FDOT Standard Plan Indices 102-600 Series and The Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) These documents 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 Contractor shall be responsible for submitting a detailed Maintenance of Traffic Plan to including the detour route to the City of Fort Pierce for approval. Upon approval, the Contractor shall place Portable Changable Message Boards on Northbound US1, South 2nd Street, and South Indian River Drive 2 weeks prior to closing the road and for the duration of road closure.
- At the end of each day, the FDOT Standard Plan Indices 102-600 Series shoulder treatment must be followed.
- The Contractor must maintain access to all Florida East Coast Railway and CEMEX maintenance personnel.
- At no time shall the Contractor close the road to through traffic without prior consent from the City of Fort Pierce.
- The Contractor shall not stage on private property or within Water Control District right-of-way without written approval from the owner.

SODDING

- All disturbed R/W shall be sodded.
- The Contractor will restore all areas disturbed by the construction to a condition equal to, or better than that now existing.

BRIDGE NO. 940047

REVISIONS							CITY OF FORT PIERCE	GENERAL NOTES	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		CITY OF FORT PIERCE BRIDGE REPAIR	CITRUS AVENUE OVER FEC RAILWAY	B-2
						<small>JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 CERTIFICATE OF AUTHORIZATION: 00000696</small>			

PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	Br. No. 940047
101-1	Mobilization	LS	1
102-1	Maintenance of Traffic	LS	1
104-2A	Prevention, Control, and Abatement of Erosion and Water Pollution	LS	1
110-1-1	Clearing & Grubbing	LS	1
110-3	Removal of Existing Structures - Bridge	LS/SF	612
120-6	Embankment	CY	2.5
121-70	Flowable Fill	CY	4
339-1	Miscellaneous Asphalt Pavement	TN	2
400-2-4	Concrete Class 11, Bridge Superstructure	CY	10
401-70-1	Restore Spalled Areas, Epoxy	CF	10
401-70-2	Restore Spalled Areas, Latex Modified Mortar-Styrene-Butadiene	CF	50
401-70-10	Restore Spalled Armored Angle Header, Epoxy	CF	10
458-1-21	Bridge Deck Expansion Joint, Rehabilitation, Poured Joint with Backer Rod	LF	1920
458-2	Polymer Nosing for Bridge Deck Expansion Joint	CF	10
561-1	Coating Existing Structural Steel	LS/SF	40000
570-1-2	Performance Turf, Sod	LS	1
635-3-12	Junction Box, Furnish and Install, Mounted	EA	5
713-1A	Permenant Tape	LS	1
999-01	Utility Coordination	LS	1

PAY ITEM NOTES

Pay Item 110-1-1 Clearing and Grubbing

This pay item shall also include the cost of clearing all vegetation growing on the bridge structure including but not limited to: bridge deck, traffic railing, utility supports, abutment caps, and bent caps. This pay item also includes the cost of removing all vegetation underneath the footprint of the bridge. This pay item also includes the cost of sweeping or blowing off the bridge decks clean of dirt and debris.

Pay Item 121-70 Flowable Fill

This Pay Item shall also include all cost for the labor, equipment, and materials required complete the work to backfill void under approach slab as described on sheet B-8.

Pay Item 401-70-1 Restore Spalled Areas, Epoxy

This pay item shall also include the cost of all work associated with Type ④ Spall Repairs as described on sheet B-6.

Pay Item 401-70-2 Restore Spalled Areas, Latex Modified Mortar Styrene-Butadiene

This pay item shall also include the cost of all work associated with Type ⑤ Spall Repairs as described on sheets B-6. This pay item shall also include the cost of temporarily supporting the fascia mounted lighting conduit and, after the spall repair material is fully cured, reattaching the fascia mounted lighting conduit to the fascia using Type 316 Stainless steel anchors and hangers.

Pay Item 401-70-10 Restored Spalled Armored Angle Header, Epoxy

This pay item shall also include the cost of all work associated with Type ② Armored Angle Header Repair as described on sheet B-5.

Pay Item 458-1-21 Bridge Deck Expansion Joint, Rehabilitation, Poured Joint with Backer Rod

This pay item shall also include the cost of preparing the surface of the existing steel armored angle header per Manufacturer's Recommendations.

Pay Item 458-2 Polymer Nosing for Bridge Deck Expansion Joint

This pay item shall also include the cost to prepare the surface of the existing header per Manufacturer's recommendations.

Pay Item 713-1A Permanent Tape

This pay item includes the cost of furnishing and installing permanent tape pavement markings in accordance with Standard Plan Index 711-001 and Standard Specification Section 713. It also includes the cost of furnishing and installing raised pavement marking in accordance with Standard Plan Index 706-001 and Standard Specification Section 706. This pay item also includes the cost of removing the existing pavement markings from the existing bridge deck. The new pavement markings shall match the existing pavement markings in size, location, and color.

BRIDGE NO. 940047

REVISIONS						 <small>JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 CERTIFICATE OF AUTHORIZATION: 00000696</small>	CITY OF FORT PIERCE	SUMMARY OF QUANTITIES	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		CITY OF FORT PIERCE BRIDGE REPAIR		CITRUS AVENUE OVER FEC RAILWAY

FEC RAILWAY NOTES:

1. **Railway Crossing Location**
 SR 707 (Citrus Avenue)
 Roadway Design Sta. Bridge # 940047 Span 9 =
 Florida East Coast Railway (FEC)
 FEC Val-Map Sta. 12762+00'
 SR 707 (Citrus Avenue)
 AAR/DOT # 272240G
 RR MP: 241.70 (+3704')

2. **Railway Contact Information**
 Joseph (Leslie) Schonder - Public Projects Engineer
 Florida East Coast Railway
 7150 Phillips Highway
 Jacksonville, FL 32256
 Office: 904-279-3196
 E-mail: Leslie.Schonder@fecrwy.com

3. Prior to entering into, or working on the Railway's right-of-way, the Contractor will need to contact Florida Sunshine at 1-800-432-4770 for utility locates, as the Contractor will be working around live fiber-optic cables at this location. The Railway's signal cables are not listed with Sunshine and require a separate locate. Call 1-800-342-1131 ext. 2337 and select option 1 to schedule a signal cable locate. Call 1-800-342-1131 ext. 2337, and select option 2 for a watchman. The watchman will have to be scheduled 72 hours in advance of the start date for the work. To maintain a safe working environment, a watchman will have to be present anytime the Contractor(s) are working within the Railway's right-of-way. The Contractor will need to provide proof of insurance in the amounts required by the FEC at the time of construction. Additionally the use of Personal Protection Equipment (PPE) will be required by all Contractors working on the Railway's right-of-way. PPE includes the following items:
 - Orange Hard Hat with reflective band
 - Safety Glasses with side protection
 - Orange safety vest
 - Steel toed boots with minimum 6" cuff and non-slip tread
 - Hearing protection as needed

4. The following items will apply to all work performed within Railway Property:
 - A watchman is required for all work on top of the bridge within FEC right-of-way.
 - All movements of equipment within Railway Property must be coordinated with the Railway Watchman.
 - During Train Movements through the project location, Vehicles, Equipment, and Personnel will not be allowed to operate.
 - Any damage caused by the work, as detailed in the plans, to the track or Railway Property will require repair immediately upon notification from the Railway or their designated personnel or Contractor. If the damage affects the track, track structure, railway facilities, or train operations as determined by the railway, the repairs will be performed by the Railway at the Contractor's expense including all associated costs of delays of the Railway.
 - No crane or boom equipment will be allowed to set up to work or park within boom distance plus 15 feet of centerline of track without specific permission from railroad official or watchman.
 - No crane or boom equipment will be allowed to foul the track or lift a load over the track without flag protection and track time.
 - All employees will stay with their machines when crane or boom equipment is within 25 feet of or aligned in the direction of the track.
 - Swinging loads must be secured to prevent movement while train is passing.
 - During train movements, no load will be suspended above or within 25 feet of the track centerline.
 - No equipment will be allowed within 25 feet of centerline of track without specific authorization of the watchman.
 - Trucks, tractors or any equipment will not touch ballast line without specific permission from railroad official and watchman.
 - No equipment or load movement within 25 feet or above a standing train or railroad equipment without specific authorization of the watchman.
 - All operating equipment within railroad right-of-way must halt operations when a train is passing. All other operating equipment may be halted by the watchman if the watchman views the operation to be dangerous to the passing train.
 - All equipment, loads and cables are prohibited from touching rails.
 - The Contractor is not permitted to drive vehicles or equipment across the tracks.
 - While clearing and grubbing, no vegetation will be removed from the railroad embankment with heavy equipment without specific permission from the railroad engineer and watchman.
 - No equipment or materials will be parked or stored on Railway Property unless specific authorization is granted from the railroad engineer.
 - All unattended equipment that is left parked on Railway Property must be 25 feet clear of the center of track to any part of the equipment, and shall be effectively immobilized so that it cannot be moved by unauthorized persons.
 - All crane and boom equipment will be turned away and be a minimum of 25 feet clear from the centerline of track after each work day or whenever unattended by an operator.

5. The following MINIMUM TEMPORARY clearances shall be maintained during construction within Railway's right-of-way.
 - Vertical - 21.5 feet above top of rail (ATR) (TEMPORARY)
 - Horizontal - 15 feet in tangent sections of track measured perpendicular to the track (TEMPORARY).
 - Horizontal - 20 feet in curved sections of track measured perpendicular to the track (TEMPORARY).

6. The Railway reserves the right to comment/approve the City's construction plans affecting the Railway Property or facilities any time prior to the start of construction regardless if previous construction plan approval has been granted.

This reservation will be invoked only if the Railway has either internal policy or mandate of law revised its standards as applicable to this project. The Railway shall notify the City of changes as far as possible in advance of construction.

The City shall, prior to the start of construction, verify with the Railway in any revisions to standards are applicable to this project.

7. The Contractor is advised that the following submittals will also be review by FEC Railway, in addition to the Engineer, for approval prior to construction;
 - A. Scaffolding and Railway Protection Plans indicating the proposed measures to protect the tracks and trains from damage during construction.
 - B. Bridging or falsework plans.
 - C. A plan for railroad property protection containing the following information will be required for painting, sandblasting, water-jetting, sealing, overcoating, etc. operations:
 - Written documentation detailing the painting protection plan and safety measures to be followed within FEC right-of-way. This documentation should include:
 - A time line to include the proposed duration of all phases of the painting project within FEC right-of-way.
 - Information and drawings illustrating an overview of the plan to be utilized for the protection of Railway Property during the painting protection phase.
 - Information and drawings depicting the clearance height of all platforms and/or collection material (vinyl coated plastic sheeting/debris containers) suspended above the FEC ROW. NOTE: Minimum vertical clearances within FEC right-of-way are to be adhered to during the painting and protection phase of the project.
 - Information and drawings depicting the coverage area of all overlaying vinyl coated plastic sheeting covering the Railway Property at ground level.
 - The method and materials used to secure the overlaying vinyl coated plastic sheeting to the ground during work. This must account for the potential of high winds which may displace the sheeting within FEC right-of-way during work.
 - A contingency plan to account for failure of equipment or materials that have the ability to contaminate FEC Property and/or delay train movements through the rail corridor.
 - Information regarding the understanding for the need of, and intention to utilize, flagging services during all work within or adjacent to FEC right-of-way including the painting protection phase.
 - Information and drawings illustrating the collection process and type of containers to be used for collection and storage of all spent materials, such as water and debris (i.e., containment drums).
 - Spent material is to be contained outside of FEC right-of-way for the duration of the railway painting protection phase of the project.
 - D. Demo Plans are required to show the protection of railroad property during demolition activities, including but not limited; concrete saw cutting, concrete chipping, concrete removal, etc. operations.
 - Written documentation detailing the demo plan and safety measures to be followed within FEC right-of-way. This documentation should include:
 - Cover mat or similar protection system for the track ballast and structure to prevent damage from potential falling material during concrete removal operations and concrete dust accumulation during concrete saw cutting operations.
 - Crane and equipment placement/footprint from centerline of tracks. FEC requires all equipment to maintain a stationary distance of 25' minimum from the centerline of the tracks at all times.
 - For all crane lifts of any kind within or over the Railway Corridor, the Contractor must submit, prior to any crane operations within or adjacent to the railway right-of-way, a PE certified lifting pattern, and crane placement drawings showing all clearances to from the tracks, and additionally with calculations of all crane specifications, rigging, and material being lifted to meet or exceed 150% of the total load capacity, including all rigging and dead weight material being lifted or hoisted within or adjacent to the railway right-of-way that could or potentially reach the Railway right-of-way.

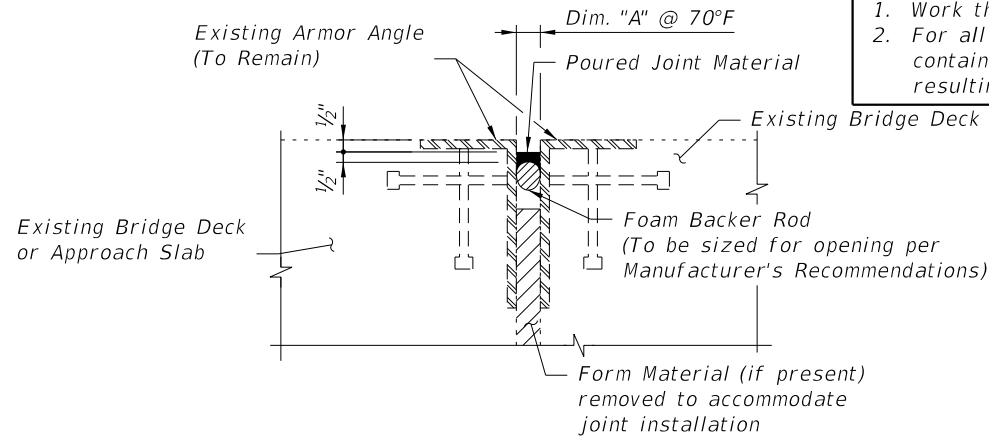
CEMEX RIGHT-OF-WAY NOTES:

1. CEMEX Contact Information
 Geoffery Fanning - West Ft. Pierce Plant Manager
 6100 W Midway Road
 Fort Pierce, FL 34981
 Office: 772-461-6700
 Mobile: 772-201-1871
 E-mail: geofferym.fanning@cemex.com

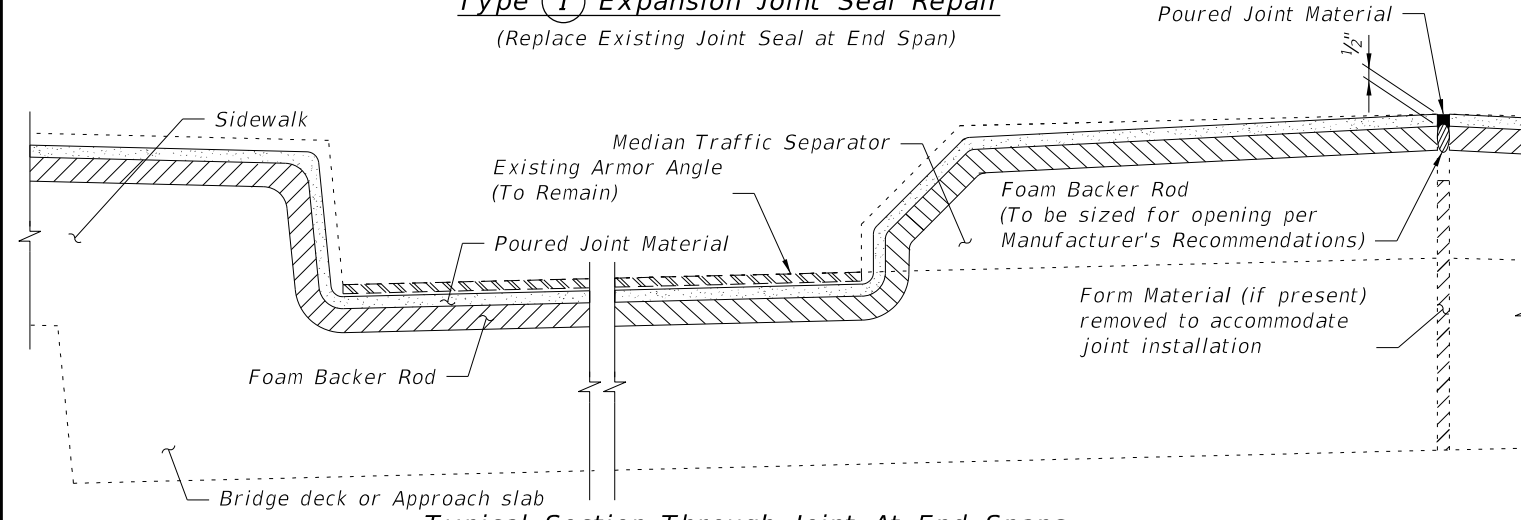
2. Prior to entering into, or working on the CEMEX's right-of-way, the Contractor will need to provide proof of insurance in the amounts required by the CEMEX at the time of Construction. Additionally the Contractor shall abide by CEMEX's safety requirements while working on CEMEX right-of-way.

BRIDGE NO. 940047

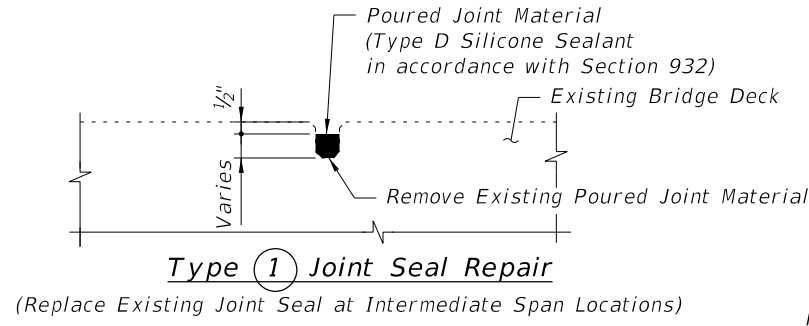
REVISIONS						 <small>JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 CERTIFICATE OF AUTHORIZATION: 00000696</small>	CITY OF FORT PIERCE	FEC RAILWAY & CEMEX NOTES	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		CITY OF FORT PIERCE BRIDGE REPAIR	CITRUS AVENUE OVER FEC RAILWAY	B-4



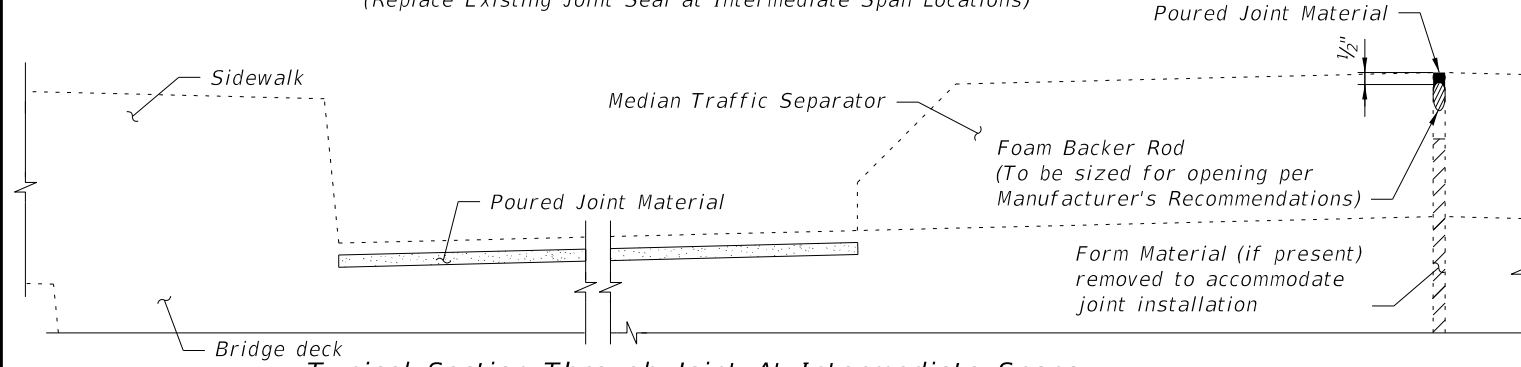
Type ① Expansion Joint Seal Repair
(Replace Existing Joint Seal at End Span)



Typical Section Through Joint At End Spans

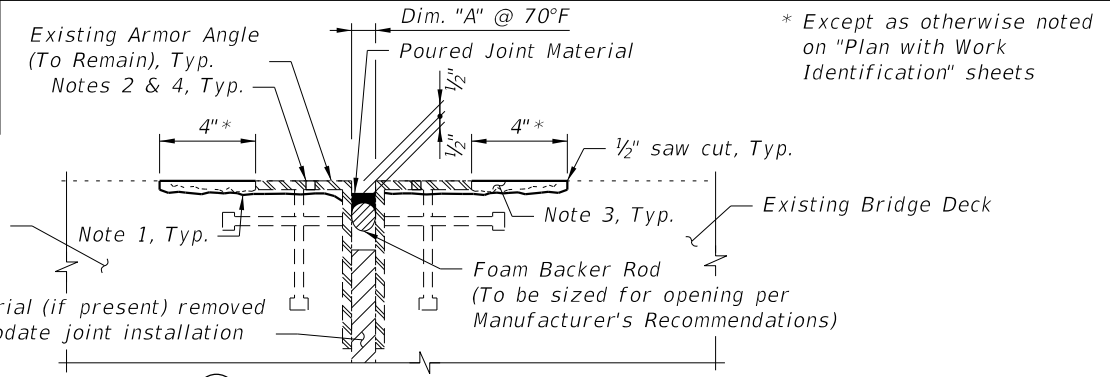


Type ① Joint Seal Repair
(Replace Existing Joint Seal at Intermediate Span Locations)



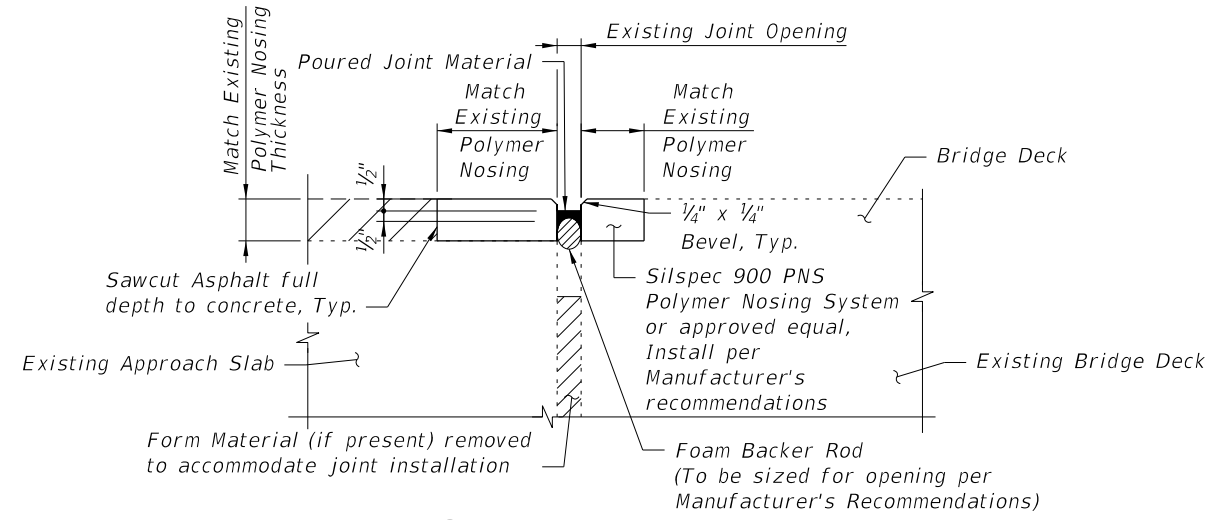
Typical Section Through Joint At Intermediate Spans

General Expansion Joint Repair Notes:
 1. Work this sheet with Standard Plan Index 458-110.
 2. For all Joint Repairs at Bents 7-10, the Contractor shall utilize a containment system to protect railroad property from any debris resulting from the joint repairs.



Type ② Armored Angle Header Repair
(Repair Armor Angle Header)

- Surface Preparation**
In areas adjacent to the existing armored angle, remove deteriorated concrete to sound material by scarification or by chipping with light duty pneumatic or electric concrete chippers (15 lbs or less in general and adjacent to reinforcing steel, hand tools adjacent to existing armored angle). Provide an aggregate-fractured surface with a minimum surface profile amplitude of 1/4 inch by use of a scabber or other appropriate means. Blast clean all reinforcing bars exposed after concrete removal and exposed surfaces of the armored angle assembly that will be in contact with repair material 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.
- Drill 3/8" injection ports 4 inches apart along the existing armor angle within the specified delaminated areas. Clean the surface below the armored angle with sufficient air pressure to remove loose materials entrapped under the armored angle.
- Repair material shall be Type F Epoxy in accordance with Specification Section 926 applied in accordance with Manufacturer's recommendations.
- Place the epoxy in accordance with the manufacturer's instructions through the ports along the armored angle to ensure bond between the bottom of the armored angle and epoxy.
- Type 2 Armored Angle Header Repairs are paid for under pay item 401-70-10.
- Exercise special care when removing unsound concrete to not damage existing reinforcing steel, armored angle assembly, or other embedded anchors or break the bond between the steel armored angle assembly and sound concrete to remain.
- Any existing reinforcing steel or armor angle 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.
- For locations of deficiencies, see bridge "Plan with Work Identification" sheets.



Type ③ Expansion Joint Header Repair
(Repair Polymer nosing at begin and end bridge)

BRIDGE NO. 940047

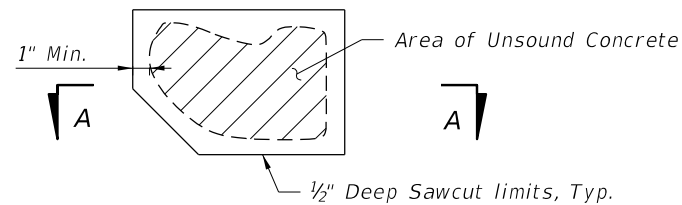
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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
 CERTIFICATE OF AUTHORIZATION: 00000696

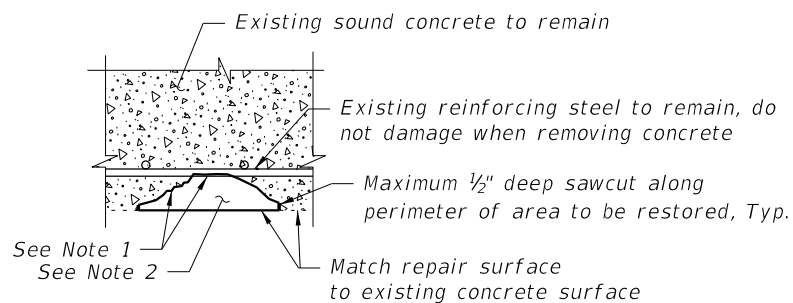
CITY OF FORT PIERCE
CITY OF FORT PIERCE
BRIDGE REPAIR

EXPANSION JOINT REPAIR DETAILS
CITRUS AVENUE
OVER FEC RAILWAY

SHEET NO.
B-5



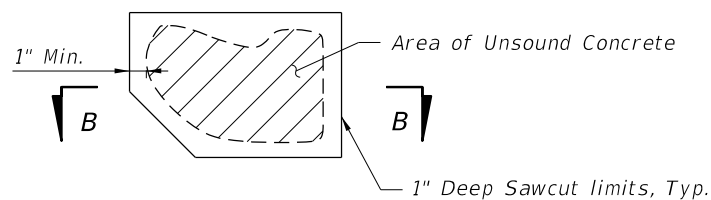
TYPE ④ - SPALL REPAIR



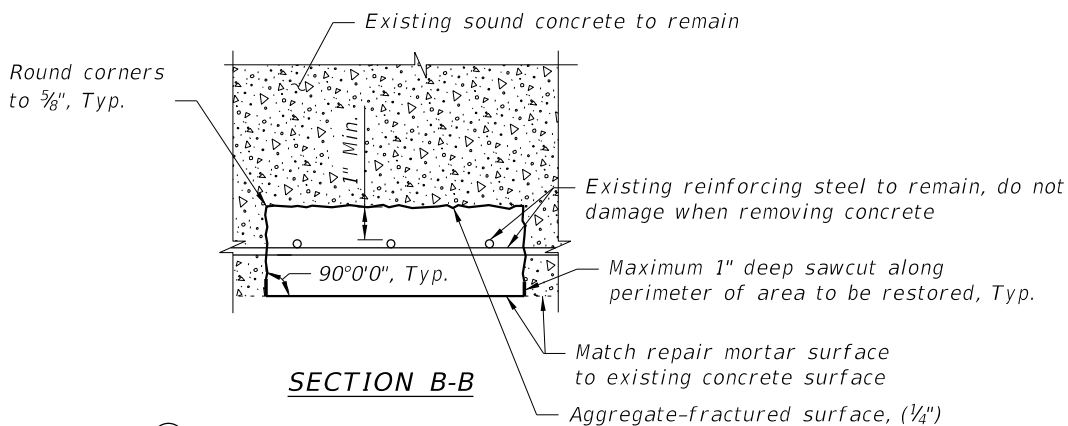
SECTION A-A

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 scabblor 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 Type 4 Spall Repairs within FEC right-of-way the Contractor shall utilize a containment system to protect railroad property from debris resulting from the spall repair work.
8. For locations of deficiencies, see bridge "Plan with Work Identification" sheets.
9. The Contractor shall contain all debris resulting from Type 4 repairs and disposed off site.



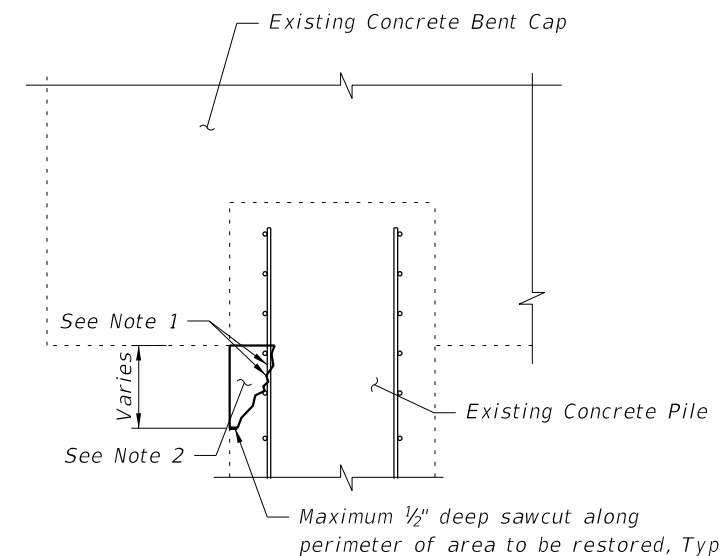
TYPE ⑤ - SPALL REPAIR



SECTION B-B

TYPE ⑤ SPALL REPAIR NOTES

1. Repair concrete spall areas in accordance with "Technical Special Provision (TSP) - T401", on next sheet.
2. 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.
3. Type 5 Spall Repairs shall be paid for under pay item 401-70-2.
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 Type 5 Spall Repairs within FEC right-of-way the Contractor shall utilize a containment system to protect railroad property from debris resulting from the spall repair work.
7. For locations of deficiencies, see bridge "Plan with Work Identification" sheets.
8. The Contractor shall contain all debris resulting from Type 5 repairs and disposed off site.



TYPE ⑥ - PILE SPALL REPAIR

TYPE ⑥ PILE 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 scabblor 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 Latex Modified Mortar-Styrene-Butadiene in accordance with Section T401-2 of "Technical Special Provision (TSP) T401" on next sheet.
3. Type 6 Pile Spall Repairs shall be paid for under pay item 401-70-2.
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" sheets.
8. The Contractor shall contain all debris resulting from Type 6 repairs and disposed off site.

BRIDGE NO. 940047

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
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF FORT PIERCE

CITY OF FORT PIERCE
BRIDGE REPAIR

SPALL REPAIR DETAILS

CITRUS AVENUE
OVER FEC RAILWAY

SHEET NO.

B-6

TECHNICAL SPECIAL PROVISION (TSP) - T401

T401-1 DESCRIPTION

Replace deteriorated concrete by placing new Polymer Modified 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 polymer/latex modified-silica fume enhanced mortar/concrete suitable for pumping, unless otherwise required in the Contract Documents. The selected material will achieve a minimum compressive strength of 3,000 psi at three days, 6,500 psi at 28 days and a chloride ion permeability (AASHTO T-277) of less than 600 Coulombs.

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 spalls near the tidal zone that may be submerged during cure, add anti-washout admixture. 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 (30 lbs or less in general, 15 lbs or less adjacent to prestressing strands, reinforcing steel, and structural limits of construction). 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 bars 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.

Where the bond between existing concrete and reinforcing steel has been destroyed, or where the steel is exposed, remove the concrete adjacent to the bar to a depth that will permit modified concrete to bond to the entire periphery of the exposed bar. A clearance of 3/4 inches to 1 inch behind the bar is required for this purpose. Prevent cutting, stretching, or damaging of exposed reinforcing steel. Any reinforcement damaged during this operation shall be repaired or replaced by the Contractor at no additional cost.

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: A concrete bonding agent, compatible with the repair material and approved, will be applied to the exposed reinforcing steel before the placement of new repair material, and, if recommended by the material manufacturer, to the existing concrete. The compound will be applied and cured in accordance with approved manufacturer's instructions. The bonding agent will contain corrosion inhibitors. Provide measures for dewatering areas near the waterline, or provide alternate suitable repair materials for use underwater.

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 polymer-modified 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 polymer-modified 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.

Coarse aggregate to extend repair material (when bagged mix is used) will be maintained at a clean, dry, location where protected from the elements to avoid material contamination. Quantity of aggregate for grout extension will be as recommended by material manufacturer. Use either prepackaged coarse aggregate (included within the repair material bag mix) or from a Department approved source.

T401-8 METHOD OF MEASUREMENT

The quantity to be paid for will be the volume of Latex Modified Mortar, Styrene-Butadiene 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.

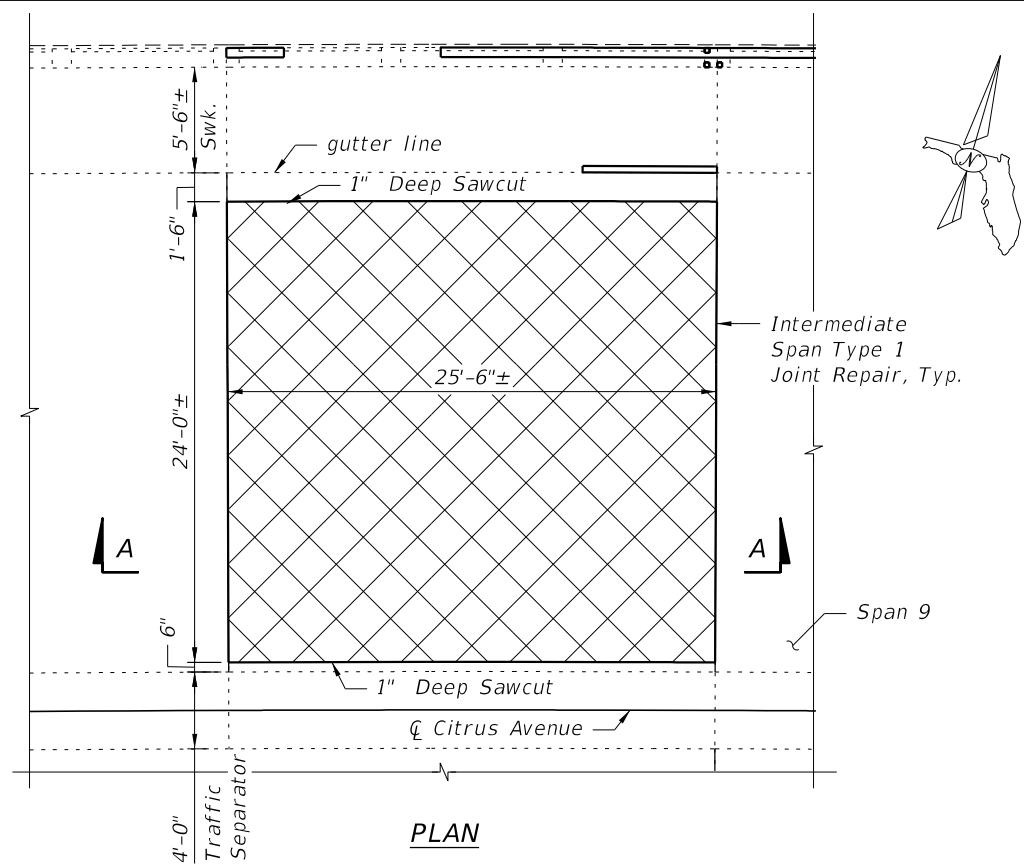
T401-8 METHOD OF MEASUREMENT

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

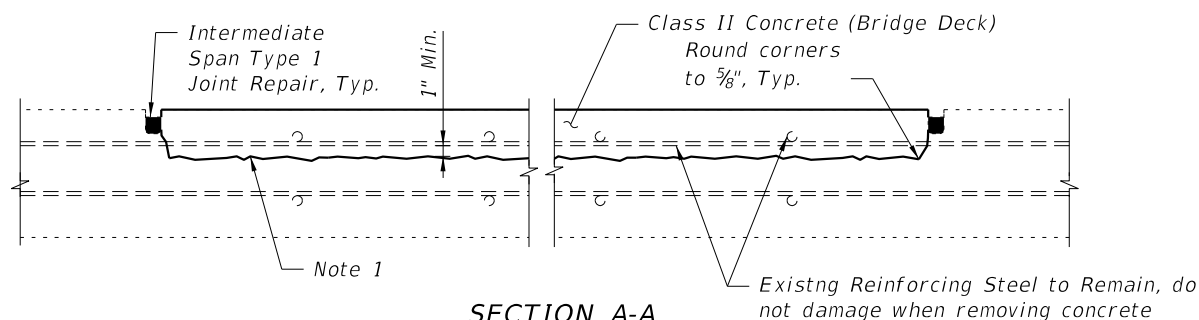
Pay Item No. 401 70 2 Restore Spalled Areas, Latex Modified Mortar-Styrene-Butadiene per cubic foot.

BRIDGE NO. 940047

REVISIONS						 JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 CERTIFICATE OF AUTHORIZATION: 00000696	CITY OF FORT PIERCE		TECHNICAL SPECIAL PROVISION (TSP) - T401		SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		CITY OF FORT PIERCE BRIDGE REPAIR		CITRUS AVENUE OVER FEC RAILWAY		B-7



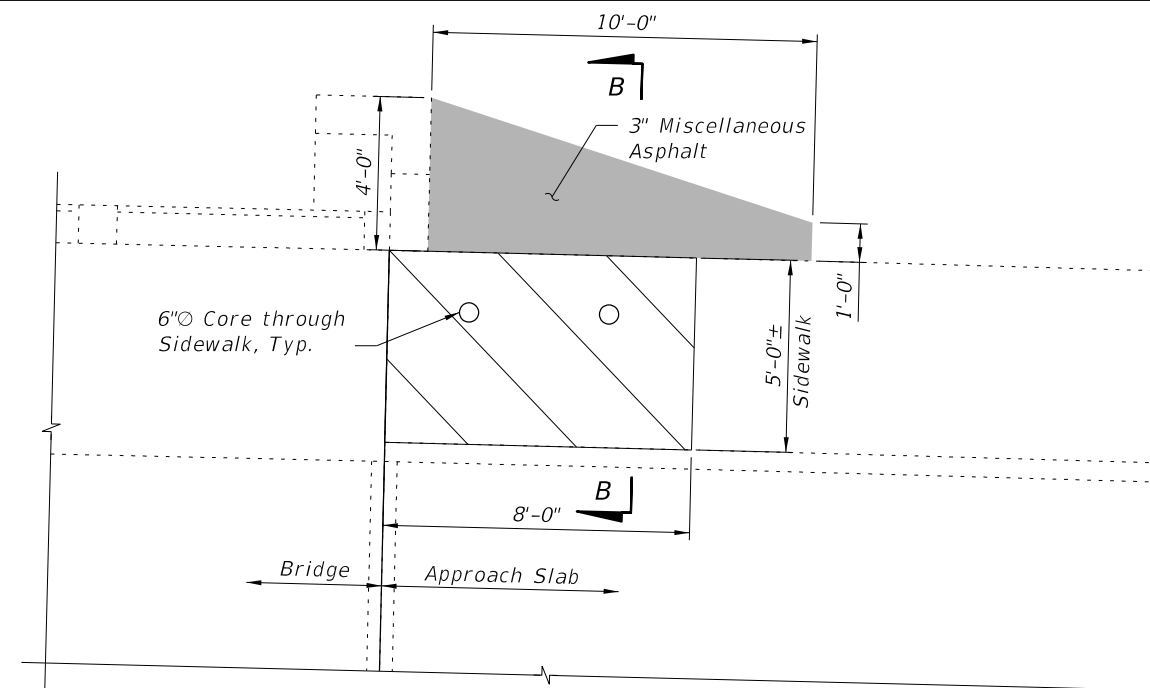
PLAN



SECTION A-A

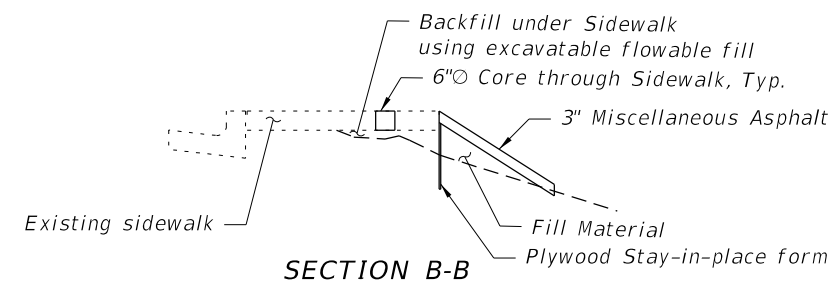
Partial Height Deck Repair Notes

- 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 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 Class II Bridge Deck Concrete.**
- 3. Partial height deck repair shall be paid for under Pay Items 110-3 & 400-2-4.**
- 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. For Partial Height Deck Repair, the Contractor shall utilize a containment system to protect railroad property from debris resulting from the partial height deck repair work.**



PLAN

(Northeast corner shown, others similar)



SECTION B-B

Backfill Void under Sidewalk Procedure

- 1. Place plywood stay-in-place form work on outside of sidewalk.**
- 2. Place fill material and miscellaneous asphalt outside of form as depicted above.**
- 3. Place form work as needed to contain flowable fill along the outside edge of the sidewalk adjacent to void.**
- 4. Core 6" holes through the sidewalk.**
- 5. Back fill under sidewalk by pumping excavatable flowable fill through the cores through sidewalk.**
- 6. Fill core holes in sidewalk with non-shrink grout in accordance with Specification Section 934.**
- 7. All work associated with backfilling under the sidewalk shall be paid for under Pay Items 120-6, 121-70, & 339-1.**

BRIDGE NO. 940047

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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JERRY MARCUS PICCOLO, P.E.
P.E. LICENSE NUMBER 80484
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(561) 845-0665
CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF FORT PIERCE

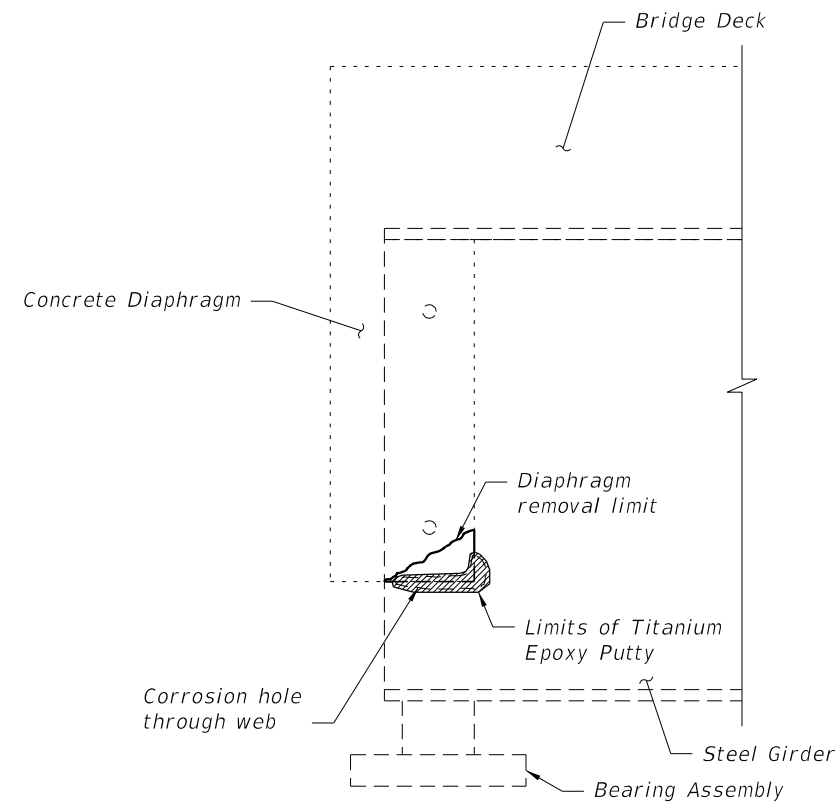
CITY OF FORT PIERCE
BRIDGE REPAIR

MISCELLANEOUS DETAILS (1 OF 2)

CITRUS AVENUE
OVER FEC RAILWAY

SHEET NO.

B-8



WEB CORROSION REPAIR DETAIL

General Web Corrosion Repair Notes:

1. All costs for labor and materials associated with repairing the corrosion hole in the web shall be included in Pay Item 561-1.
2. Repair Materials:
 - a. Titanium Epoxy Putty - Devcon Titanium Putty or Approved Equal

General Web Corrosion Repair Procedure:

1. Remove the concrete diaphragm to expose 2" of web beyond the limits of the corrosion hole.
2. Blast the steel girder in accordance with Specification Section 560, 561, 975, and the "Painting Notes" sheet.
3. Prepare the surface and apply the Repair Material in accordance with Manufacturer's Recommendations.
4. After material is cured, grind the repair material flush with the web of the girder.
5. Coat the repair material at the same time as the steel girders.
6. Repair the Diaphragm using the Type 4 Spall Repair Procedure.
7. All costs for labor and materials associated with the Web Corrosion Repair shall be included in Pay Items 561-1 & 401-70-1.

BRIDGE NO. 940047

REVISIONS							CITY OF FORT PIERCE MISCELLANEOUS DETAILS (2 OF 2)	CITY OF FORT PIERCE BRIDGE REPAIR	CITRUS AVENUE OVER FEC RAILWAY	SHEET NO. B-9
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION					
						<small> JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 CERTIFICATE OF AUTHORIZATION: 00000696 </small>	<small>1/17/2020 2:08:46 PM K:\WPB_Design\047922020_Citrus_Ave_Bridge\047922020\struct\B1\B05upe</small>	<small>Jerry.Piccolo</small>	<small>1/17/2020 2:08:46 PM K:\WPB_Design\047922020_Citrus_Ave_Bridge\047922020\struct\B1\B05upe</small>	

PAINTING NOTES

A. GENERAL

1. In addition to the below painting notes, see "FEC Railway & CEMEX Notes" sheet for additional information and requirements as well as FEC temporary vertical and horizontal clearance requirements.
 2. Perform all cleaning and painting operations in accordance with Sections 560, 561 and 975 of the Florida Department of Transportation (FDOT) Standard Specifications for Road and Bridge Construction, these notes and all remaining contract documents. Hot-dip galvanize new structural steel in accordance with ASTM A 123 and new fasteners and hardware in accordance with ASTM A 153; and all remaining contract documents. If there is a conflict in requirements, then the most stringent is applicable unless otherwise directed by the City.
 3. Apply stripe coats with brushes only.
 4. During the following operations erect and maintain containment that meets the listed requirements of SSPC Guide 6:
 - a. Pressurized Water Washing: Class 2W
 - b. Abrasive Blast Cleaning: Class 1A
 - c. Power Tool Cleaning: Class 3P
 5. At a minimum, work platforms shall meet the requirements of OSHA 3150, "A Guide to Scaffolding Use in the Construction Industry" and Federal Specification RR-C-27-1D2, "Chains and Attachments, Welded and Weldless." The Contractor's Specialty Engineer must inspect the erected work platform and attest in writing, that all staging, work platforms and containment systems are in accordance with the Contractor's approved plan.
 6. Do not use any product intended for pre-treatment of waste that reduces or masks hazardous content in any manner.
 7. Ensure the lighting inside the containment is in accordance with SSPC Guide 12, Guide for Illumination of Industrial Painting Projects. In addition to the requirements of SSPC Guide 12, provide lighting to a minimum of 20 foot-candles for general observation, 50 foot-candles for work, and 200 foot-candles for inspection.
 8. All coatings used must be from the same manufacturer.
 9. In the event specified coatings preparation or application requirements are not possible, submit a request for information to the City. The City will make final determination of appropriate surface preparation and/or coatings application.
 10. In the event damage occurs or a defect is identified, provide a proposed corrective action plan to the City for review. Do not perform corrective actions until the corrective action plan is approved.
- B. SUBMITTALS** – Provide the following and receive written acceptance by the City prior to performing any work associated with cleaning, or painting operations:
1. Corporate and Site-Specific Quality Control Plan which must include and fully address the following:
 - a. Contractor's Organizational Chart clearly identifying a line of authority and each individual's project responsibility.
 - b. Resumes, qualifications and training certifications for project personnel.
 - c. Quality Control inspection standards and equipment.
 - d. Equipment logs indicating inspection of cleaning and painting equipment, and calibration of inspection instruments.
 - e. Surface preparation standards, equipment and procedures for compliance.
 - f. Coatings application standards, equipment and procedures.
 - g. Frequency, type, and passing criterion for all QC tests and reports.
 - h. Repair procedures.
 - i. Materials control, handling and storage.
 - j. Adjacent area protection plan.
 - k. A letter from a technical representative of the coating's manufacturer stating that all proposed coatings, caulk, and solvents are compatible.
 2. Contractor's Corporate and Site Specific Environmental, Health and Safety (EH&S) plan which must include and fully address the following:
 - a. Soil Protection and Testing
 1. Soil Contamination Reporting and Clean-up Procedures
 2. Pre and Post Project Soil Sampling number and location of samples.
 3. Certifications of the proposed laboratory.
 - b. Waste Management
 1. Waste Handling, Storage, Transportation, Treatment and Disposal Procedures.
 2. Laboratory Analysis and Laboratory Certification
 3. Location of Waste Storage Site
 - c. Ambient Air Monitoring
 1. Type, number and location of monitors.
 2. Monitoring Procedures
 3. Laboratory Certification
 - d. Visible Emissions Monitoring
 1. Method
 2. Reports
 3. Corrective Actions

- e. Regulated Area
 1. Personal Air Pump Monitoring
 2. Laboratory Certification
 3. Method of Demarcating Regulated Area
- f. Dust Collection and Containment Ventilation
- g. Contingencies for Emergencies
 1. Hurricane Preparedness: containment requirements and hurricane evacuation route
 2. Location of nearest Emergency Medical Treatment Centers
 3. First Aid Procedures
 4. Spills or Leaks
 5. Fire or Explosion Prevention
- h. Employee Training Records for Project Personnel
- i. Site Clean-up and De-mobilization
- j. Employee Medical Surveillance
- k. Respirator Program
- l. Safety protocols for working over or near water

C. CLEANING AND PAINTING

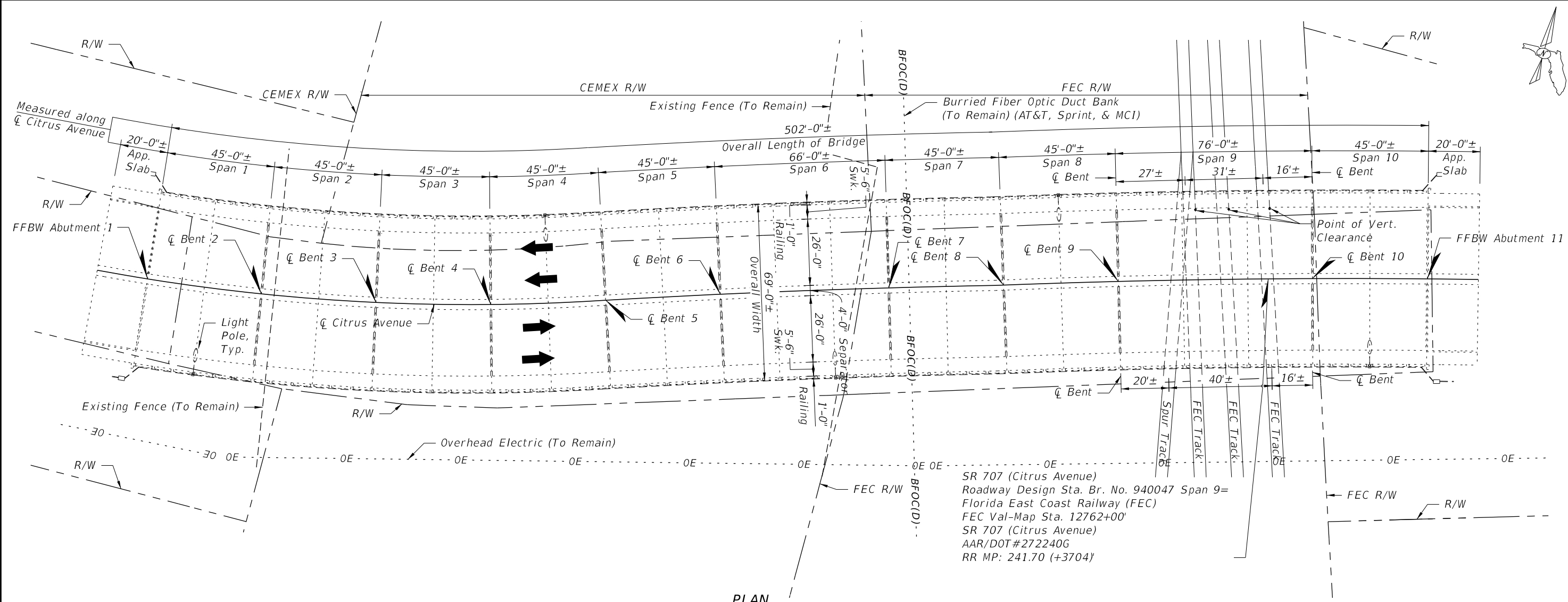
1. Existing Structural Steel – Mechanically clean in accordance with Section 561-6.2 and in addition power tool grind welds smooth. Clean structural steel utilizing a minimum of 3,000 psi pressurized potable water cleaning at with an oscillating tip and solvent cleaning to meet the requirements of SSPC-SP1. Do not hold the nozzle more than 12 inches from the surface being cleaned. After the surfaces have completely dried, abrasive blast clean surfaces to meet the requirements of SSPC-SP 10, "Near White Blast." All coating repairs shall be performed prior to application of the clear coat. The sequence of painting shall be as follows:
 - a. Apply one full coat of organic zinc rich epoxy primer. Apply the prime coat to abrasive blast cleaned or power tool cleaned surfaces within 8 hours of the performed surface preparation.
 - b. Apply a stripe coat of organic zinc rich primer.
 - c. Apply one full coat of epoxy intermediate paint.
 - d. Apply a stripe coat of aluminum epoxy mastic primer.
 - e. Caulk all faying surfaces, crevices, joints, gaps in accordance with Section 560.
 - f. Apply one full coat aliphatic polyurethane finish coat.
 - g. Apply one full coat of polyurethane clear coat containing a UV dissipating colorant to facilitate application and inspection.
 - h. Finish Coat Color – The color of the structural steel finish paint shall match SAE AMS-STD-595 Color No. 2XXXX.

D. CONTRACTOR QUALITY ASSURANCE / QUALITY CONTROL (QA/QC)

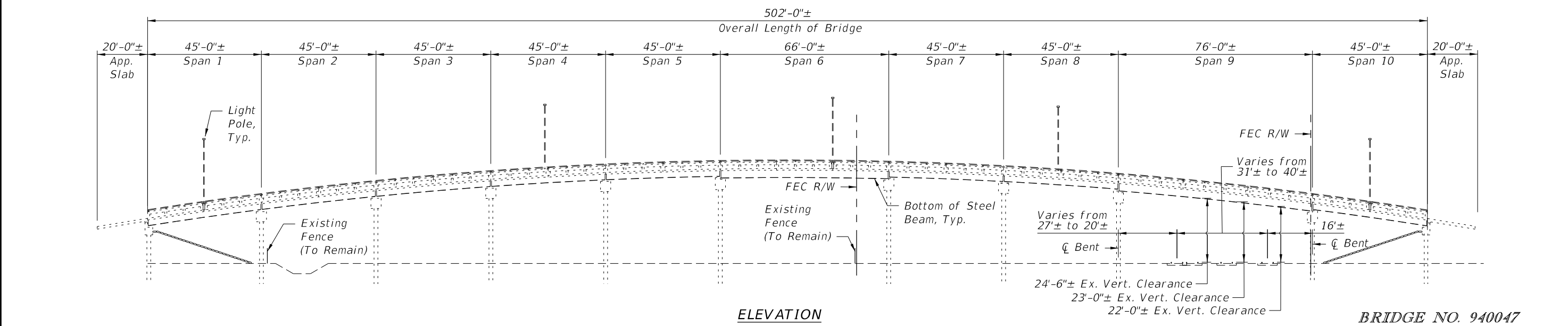
1. At a minimum, conduct all testing required by Sections 560 and 561, these plan notes, and the Contractor's QC Plan. QC personnel cannot supervise or participate in any production activities, e.g. superintendent, foreman, blasting, mixing, coating application, galvanizing, etc. The following minimum inspection hold points are required. If at any hold point the work or conditions do not meet contract requirements, cease all work immediately, identify the source of non-conformity, propose a corrective action and proceed only after approval by the City.
 - a. Containment compliance
 - b. Ambient conditions
 - c. Pre-cleaning – Verify the surfaces meet pressure washing, solvent cleaning, and soluble salt level requirements.
 - d. Pre-coating Verify the surfaces meet abrasive blasting and power tool cleaning requirements.
 - e. Dry Film Thickness
 - f. Visual application defects between coats, including caulking
 - g. Cleanliness between coats
 - h. Recoat Windows
2. After QC Inspection has verified the work meets contract requirements request City designated QA Inspection. Only QC Personnel can request a QA inspection and the request will be documented for each inspection. Provide safe, OSHA compliant access for QA inspection personnel at all times. Request 90% inspection to the City prior to the removal of any access platforms and at a minimum of 7 days prior to the requested inspection date. The size of the area(s) for 90% inspection will be at the discretion of the City.

BRIDGE NO. 940047

REVISIONS						 <small>JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 CERTIFICATE OF AUTHORIZATION: 00000696</small>	CITY OF FORT PIERCE	PAINTING NOTES CITRUS AVENUE OVER FEC RAILWAY	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION		CITY OF FORT PIERCE BRIDGE REPAIR		B-10



PLAN



ELEVATION

BRIDGE NO. 940047

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

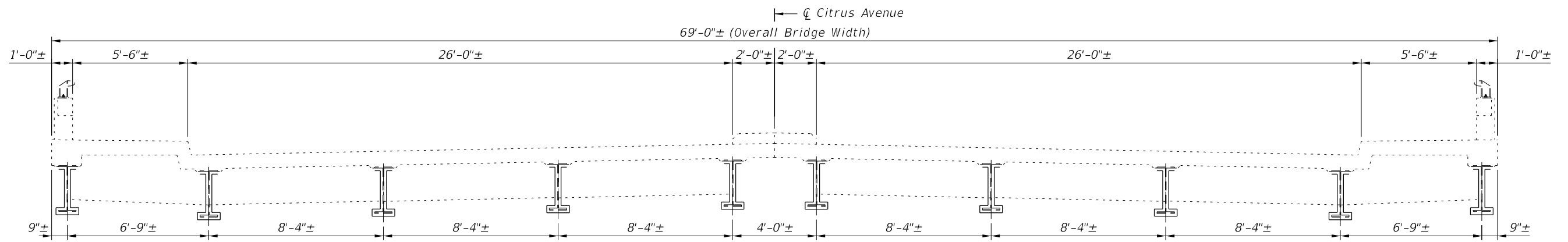
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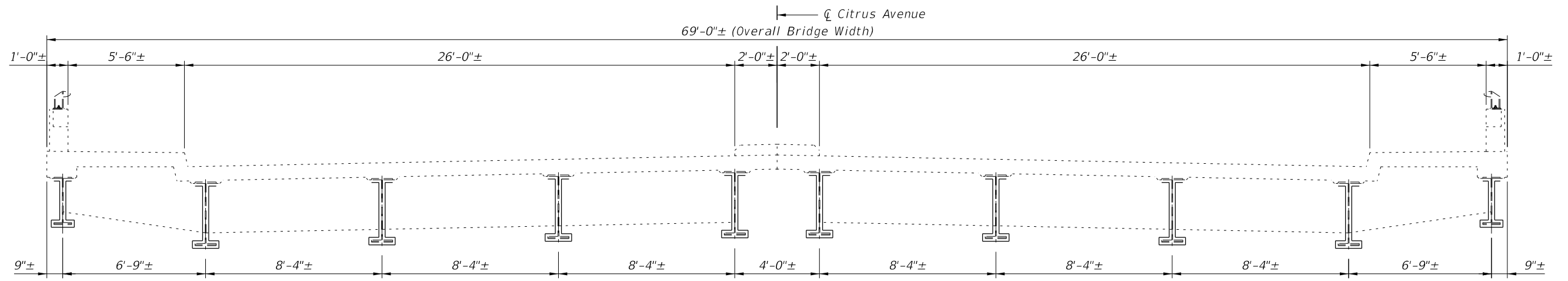
CITY OF FORT PIERCE
 CITY OF FORT PIERCE
 BRIDGE REPAIR

GENERAL PLAN & ELEVATION
 CITRUS AVENUE
 OVER FEC RAILWAY

SHEET NO.
 B-11




TYPICAL SECTION - SPANS 1, 2, 3, 4, 5, 7, 8, & 10



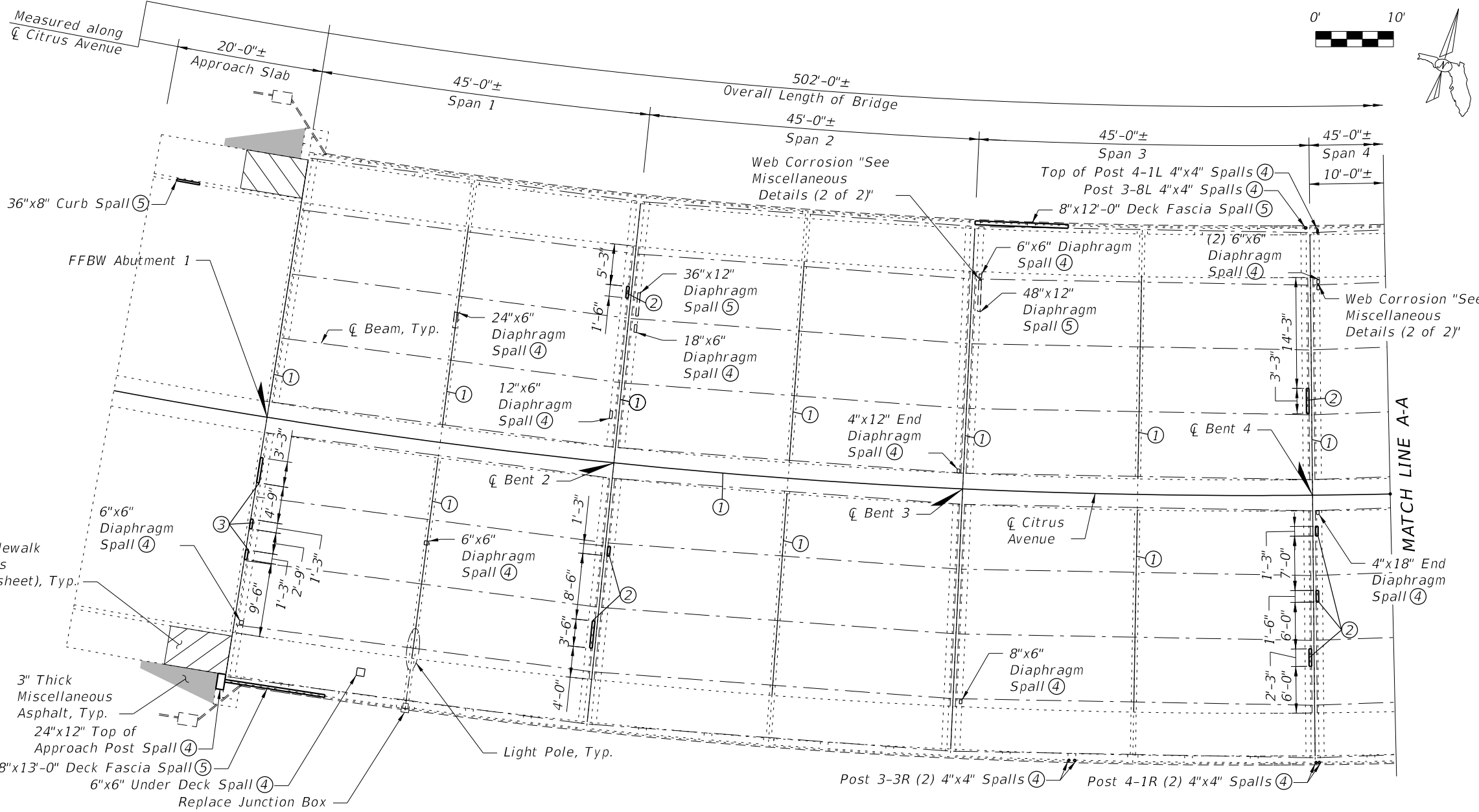
TYPICAL SECTION - SPANS 6 & 9

LEGEND

 - Indicates structural and nonstructural steel to be cleaned and painted

BRIDGE NO. 940047

REVISIONS						 <small>JERRY MARCUS PICCOLO, P.E. P.E. LICENSE NUMBER 80484 1920 WEKIVA WAY, SUITE 200 WEST PALM BEACH, FL 33411 (561) 845-0665 CERTIFICATE OF AUTHORIZATION: 00000696</small>	CITY OF FORT PIERCE CITY OF FORT PIERCE BRIDGE REPAIR	TYPICAL SECTION CITRUS AVENUE OVER FEC RAILWAY	SHEET NO. B-12
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				



PLAN

- LEGEND:**
- Indicates Miscellaneous Asphalt
 - Indicates Backfilling Under Sidewalk
 - Indicates Post, SPAN #X, POST #Y, Left or Right side of bridge

Work Identification

- ① Replace the existing longitudinal and transverse joint seals (Pay Item 458-1-21).
- ② Repair the delaminated armored angle expansion joint header as depicted above (Pay Item 401-70-10).
- ③ Repair the damaged expansion joint headers as depicted above (Pay Item 458-2).
- ④ Repair the minor spalls on the bridge deck, railings, underside of the bridge deck, and diaphragms as depicted above (Pay Item 401-70-1).
- ⑤ Repair spalls as depicted above (Pay Item 401-70-2).
6. Cleaning and painting of all structural and non-structural steel including all steel beams and bearing assemblies. Repair areas in web where section loss has occurred as depicted above (Pay Item 561-1).
7. Replace existing lighting mounted junction boxes (Pay Item 635-3-12)
8. Backfill the voids under the approach sidewalk and install miscellaneous asphalt to the limits shown above (Pay Items 120-6, 121-70, & 339-1).
9. Remove all vegetation growing on the edge of bridge deck, exterior beams, bent caps, piles, and underneath the bridge (Pay Item 110-1-1).
10. Sweep or blow off bridge deck clean of dirt and debris (Pay Item 110-1-1).
11. Replace the striping within the limits of the bridge with permanent tape (Pay Item 713-1A).

BRIDGE NO. 940047

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

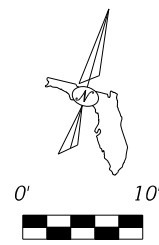
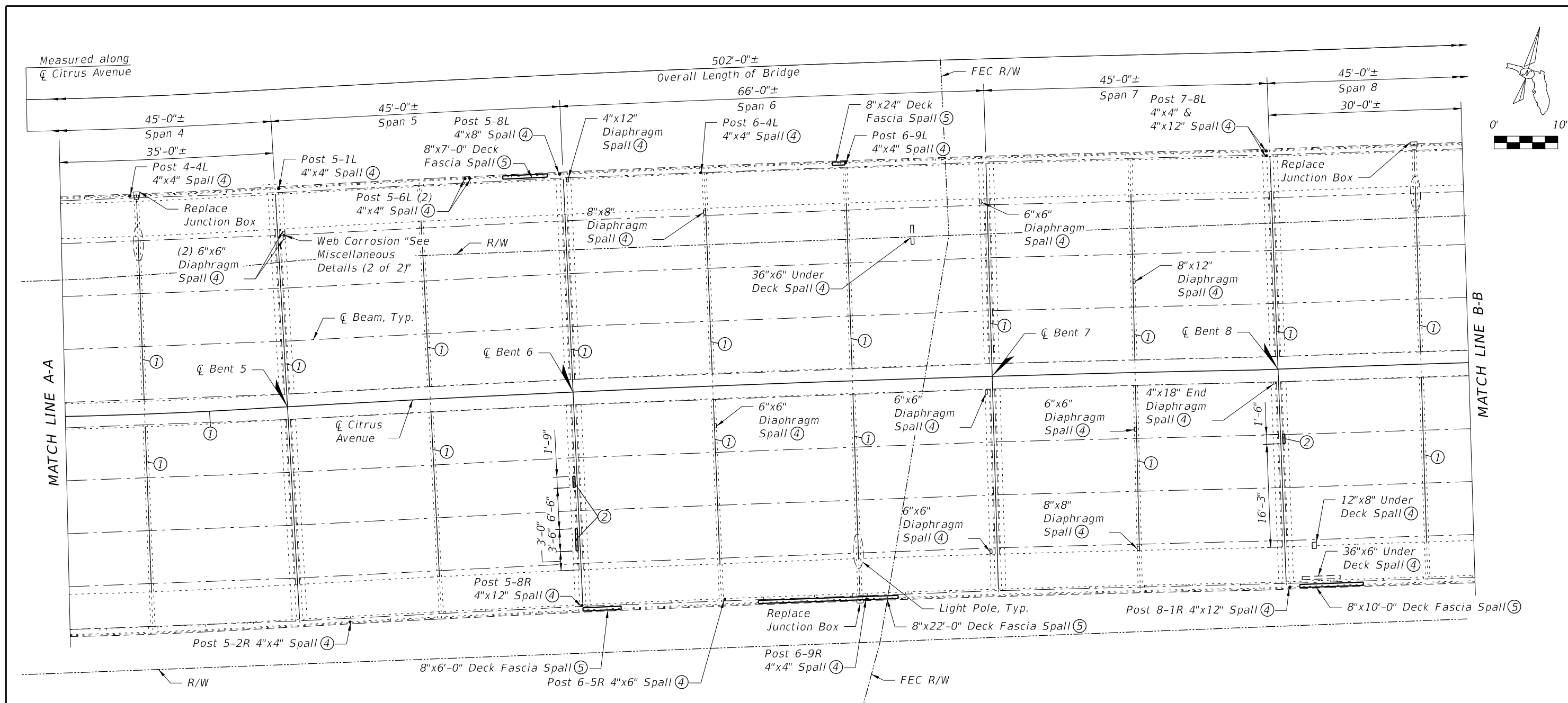
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 CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF FORT PIERCE
 CITY OF FORT PIERCE
 BRIDGE REPAIR

PLAN WITH
 WORK IDENTIFICATION (1 OF 3)
 CITRUS AVENUE
 OVER FEC RAILWAY

SHEET NO.
 B-13



PLAN

Work Identification

- ① Replace the existing longitudinal and transverse joint seals (Pay Item 458-1-21).
- ② Repair the delaminated armored angle expansion joint header as depicted above (Pay Item 401-70-10).
- ③ Replace existing lighting mounted junction boxes (Pay Item 635-3-12)
- ④ Repair the minor spalls on the bridge deck, railings, underside of the bridge deck, and diaphragms as depicted above (Pay Item 401-70-1).
- ⑤ Repair spalls as depicted above (Pay Item 401-70-2).
- 6. Cleaning and painting of all structural and non-structural steel including all steel beams and bearing assemblies. Repair areas in web where section loss has occurred as depicted above (Pay Item 561-1).
- 7. Remove all vegetation growing on the edge of bridge deck, exterior beams, bent caps, piles, and underneath the bridge (Pay Item 110-1).
- 8. Sweep or blow off bridge deck clean of dirt and debris (Pay Item 110-1-1).
- 9. Replace the striping within the limits of the bridge with permanent tape (Pay Item 713-1A).

LEGEND

Post X-(L or R) - Indicates Post, SPAN #X, POST #Y, Left or Right side of bridge

BRIDGE NO. 940047

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
 CERTIFICATE OF AUTHORIZATION: 00000696

CITY OF FORT PIERCE

CITY OF FORT PIERCE

BRIDGE REPAIR

PLAN WITH

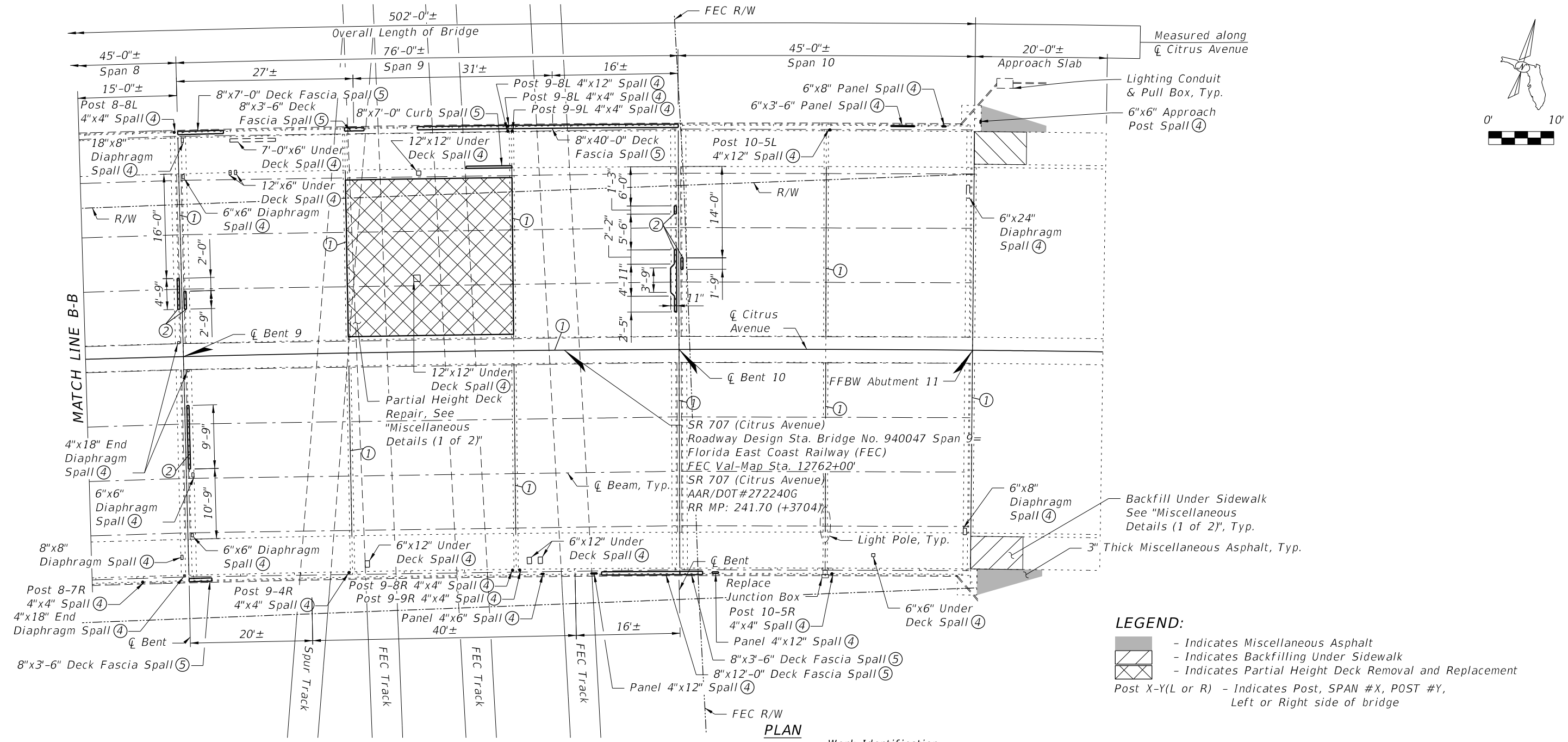
WORK IDENTIFICATION (2 OF 3)

CITRUS AVENUE

OVER FEC RAILWAY

SHEET NO.

B-14



LEGEND:

- Indicates Miscellaneous Asphalt
- Indicates Backfilling Under Sidewalk
- Indicates Partial Height Deck Removal and Replacement
- Post X-Y(L or R) - Indicates Post, SPAN #X, POST #Y, Left or Right side of bridge

- Work Identification**
- ① Replace the existing longitudinal and transverse joint seals (Pay Item 458-1-21).
 - ② Repair the delaminated armored angle expansion joint header as depicted above (Pay Item 401-70-10).
 - ③ Repair the damaged expansion joint headers as depicted above (Pay Item 458-2).
 - ④ Repair the minor spalls on the bridge deck, railings, underside of the bridge deck, and diaphragms as depicted above (Pay Item 401-70-1).
 - ⑤ Repair spalls as depicted above (Pay Item 401-70-2).
 6. Cleaning and painting of all structural and non-structural steel including all steel beams and bearing assemblies (Pay Item 561-1).
 7. Replace existing lighting mounted junction boxes (Pay Item 635-3-12).
 8. Backfill the voids under the approach sidewalk and install miscellaneous asphalt to the limits shown above (Pay Items 120-6, 121-70, & 339-1).
 9. Remove and recast the top partial height of the deck to the limits shown above (Pay Items 110-3, 400-2-4).
 10. Remove all vegetation growing on the edge of bridge deck, exterior beams, bent caps, piles, and underneath the bridge (Pay Item 110-1-1).
 11. Sweep or blow off bridge deck clean of dirt and debris (Pay Item 110-1-1).
 12. Replace the striping within the limits of the bridge with permanent tape (Pay Item 713-1A).

BRIDGE NO. 940047

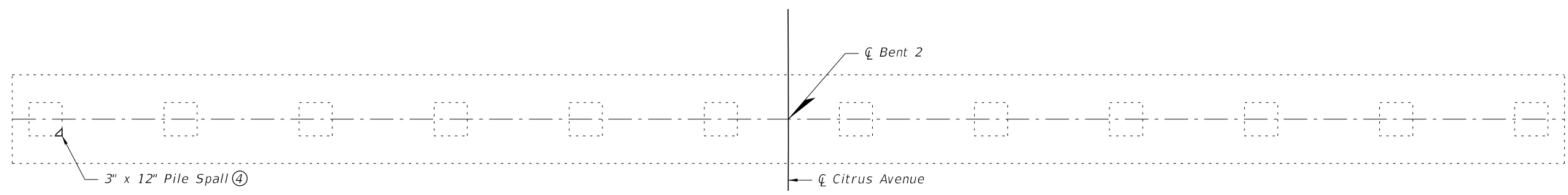
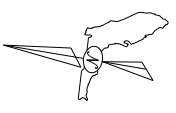
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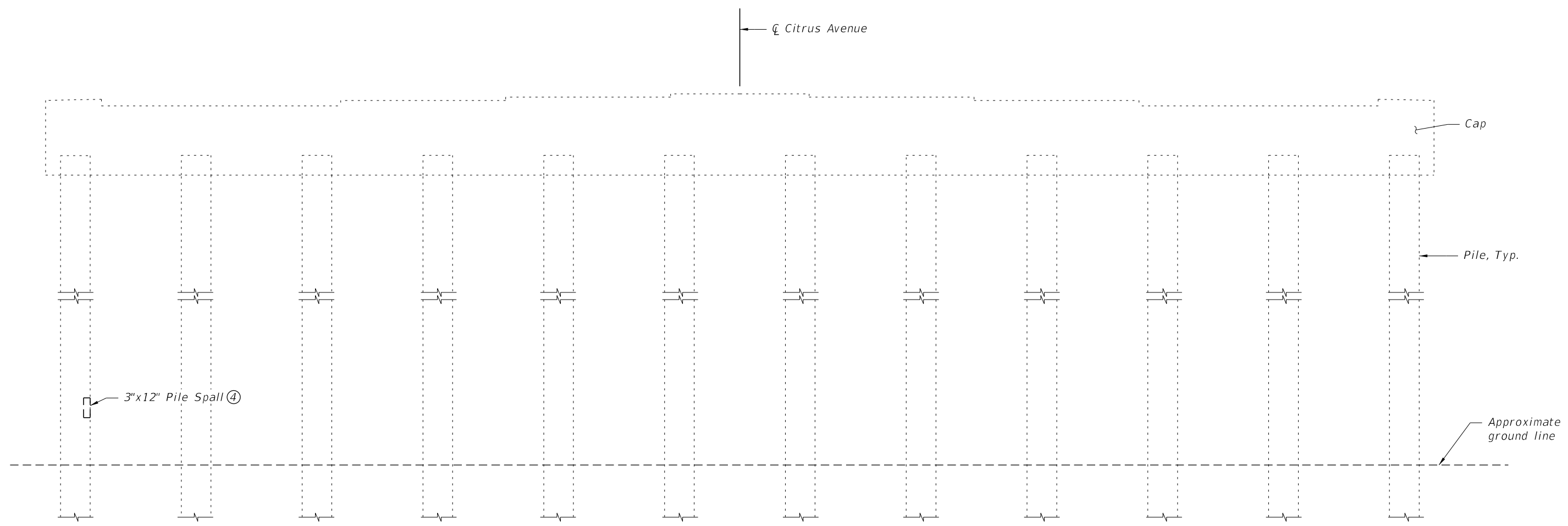
CITY OF FORT PIERCE
 CITY OF FORT PIERCE
 BRIDGE REPAIR

PLAN WITH
 WORK IDENTIFICATION (3 OF 3)
 CITRUS AVENUE
 OVER FEC RAILWAY

SHEET NO.
 B-15



PLAN



ELEVATION

BRIDGE NO. 940047

REVISIONS					
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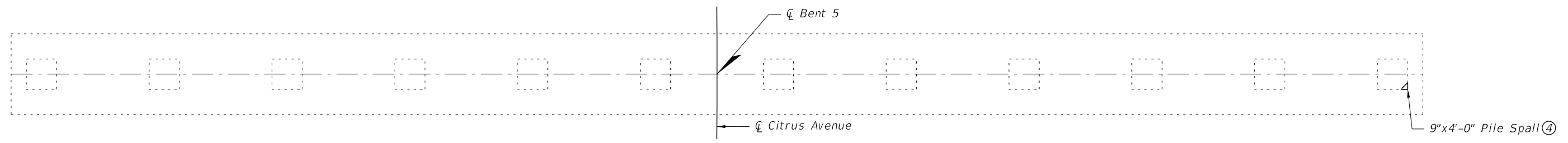
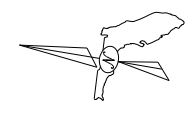
CITY OF FORT PIERCE

CITY OF FORT PIERCE
 BRIDGE REPAIR

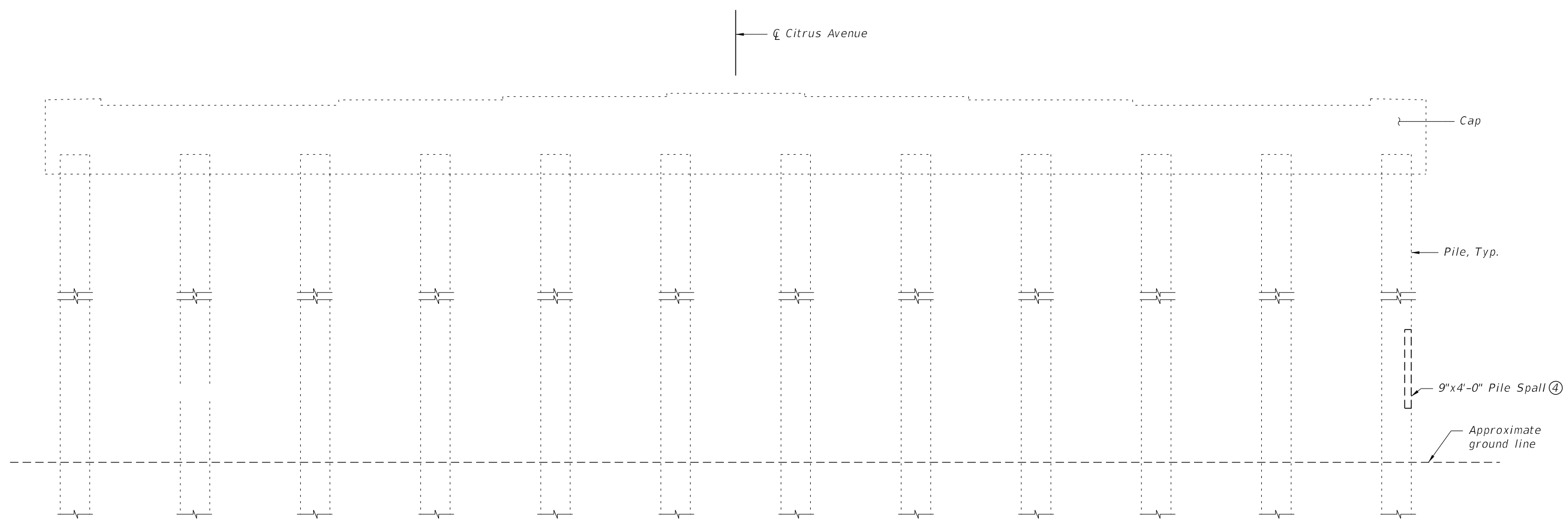
BENT 2 REPAIRS

CITRUS AVENUE
 OVER FEC RAILWAY

SHEET NO.
 B-16



PLAN



ELEVATION

BRIDGE NO. 940047

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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CITY OF FORT PIERCE

CITY OF FORT PIERCE

BRIDGE REPAIR

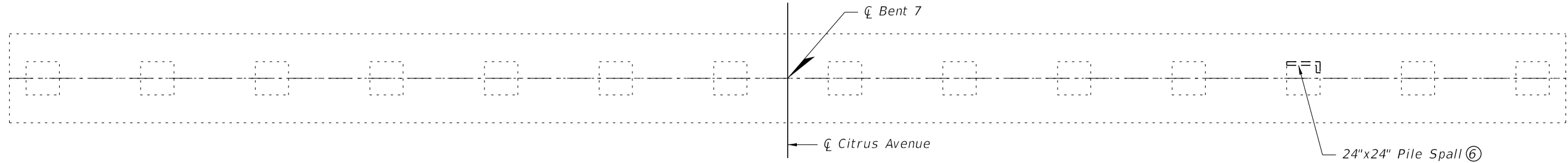
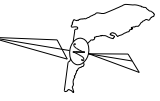
BENT 5 REPAIRS

CITRUS AVENUE

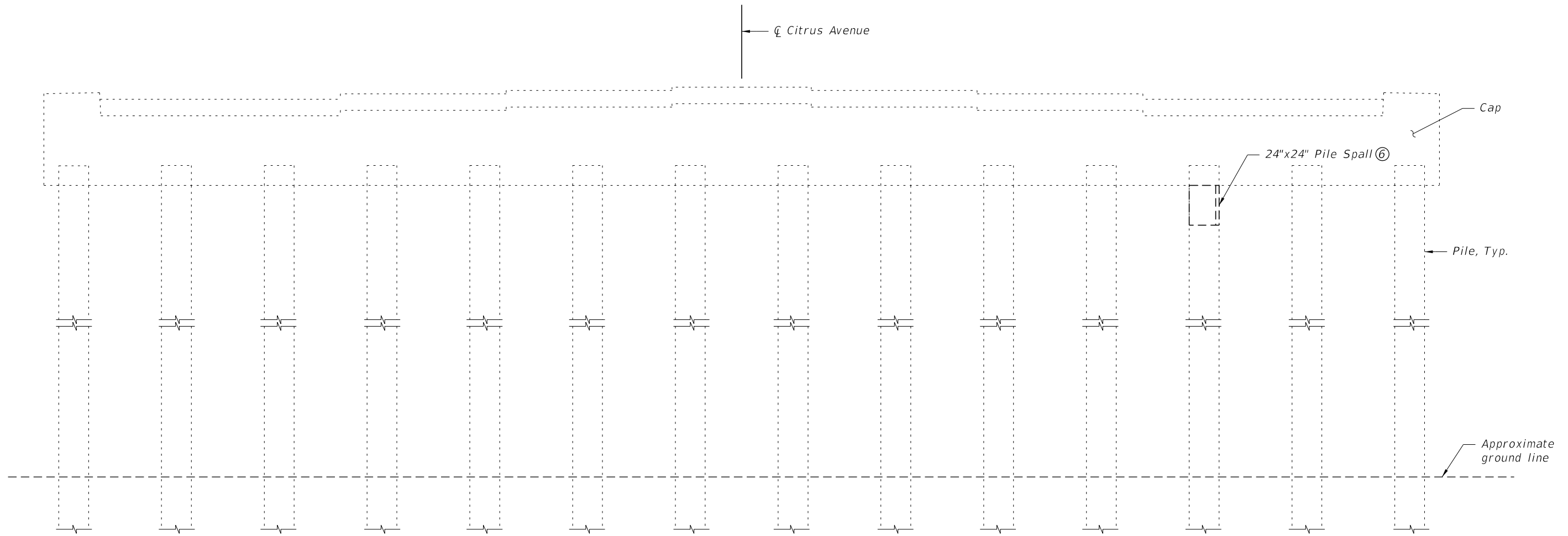
OVER FEC RAILWAY

SHEET NO.

B-17



PLAN



ELEVATION

BRIDGE NO. 940047

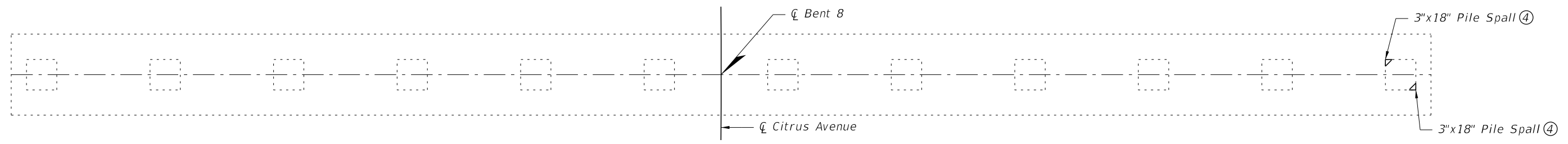
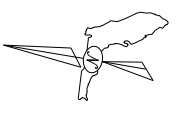
REVISIONS					
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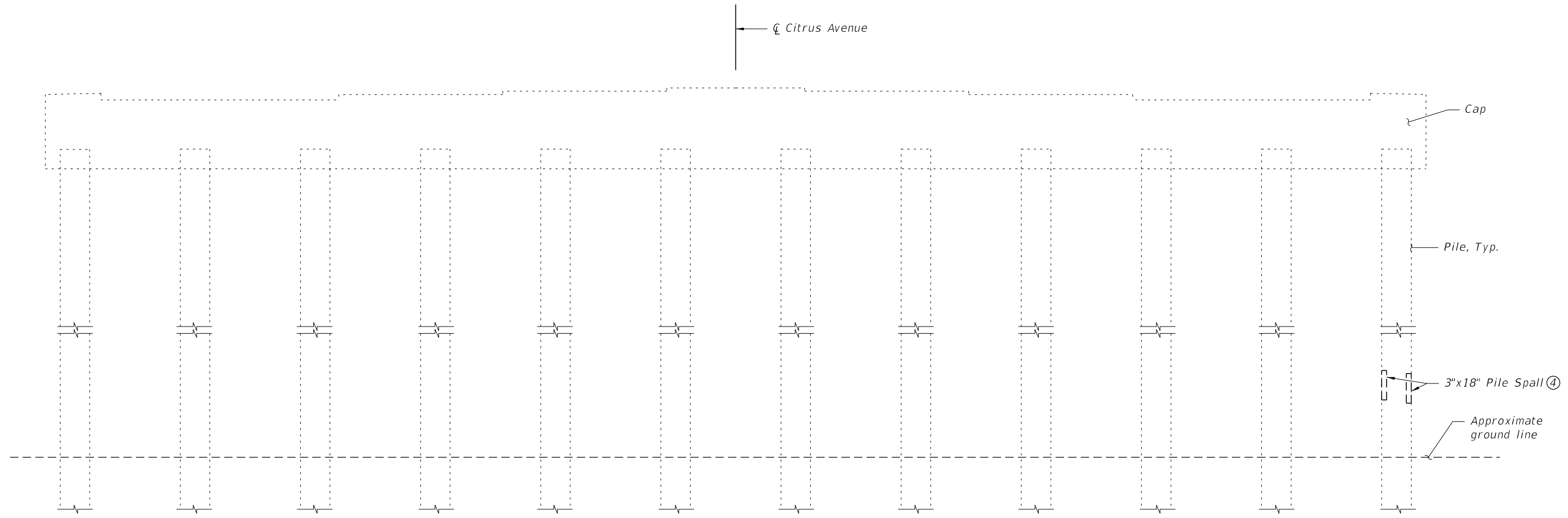
CITY OF FORT PIERCE
 CITY OF FORT PIERCE
 BRIDGE REPAIR

BENT 7 REPAIRS
 CITRUS AVENUE
 OVER FEC RAILWAY

SHEET NO.
 B-18



PLAN



ELEVATION

BRIDGE NO. 940047

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

Kimley»Horn

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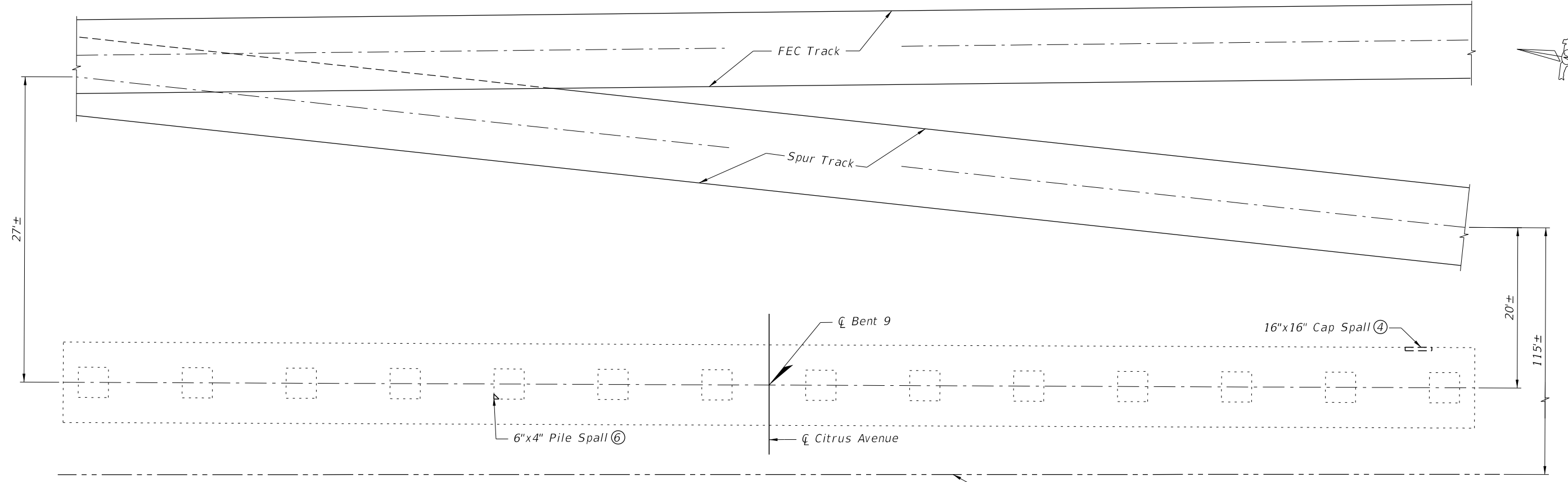
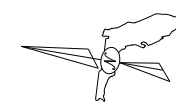
CITY OF FORT PIERCE

CITY OF FORT PIERCE
 BRIDGE REPAIR

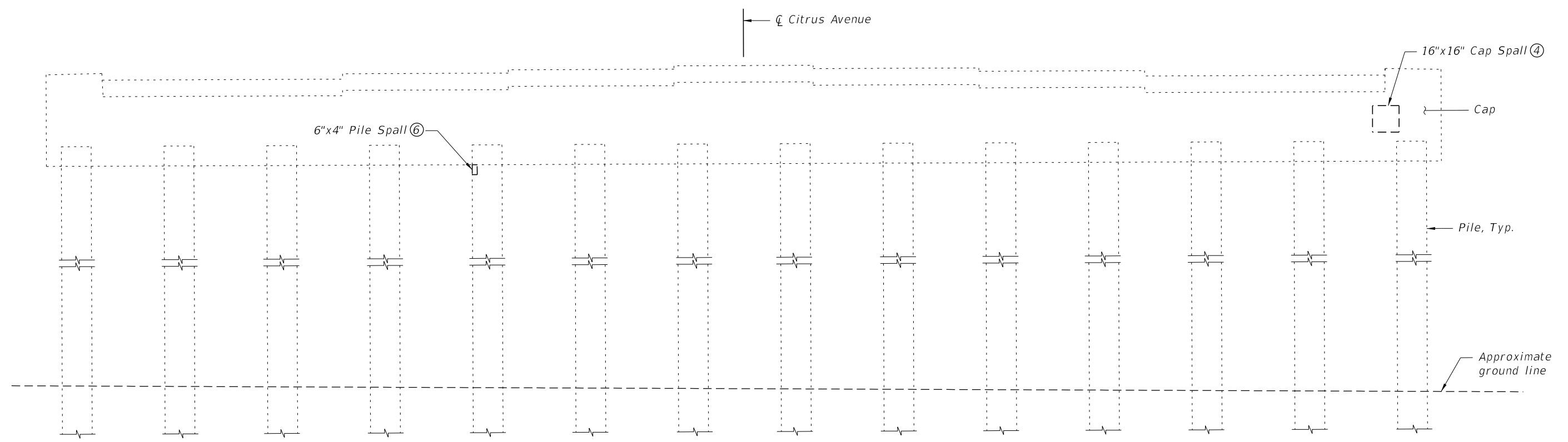
BENT 8 REPAIRS

CITRUS AVENUE
 OVER FEC RAILWAY

SHEET NO.
 B-19



PLAN



ELEVATION

BRIDGE NO. 940047

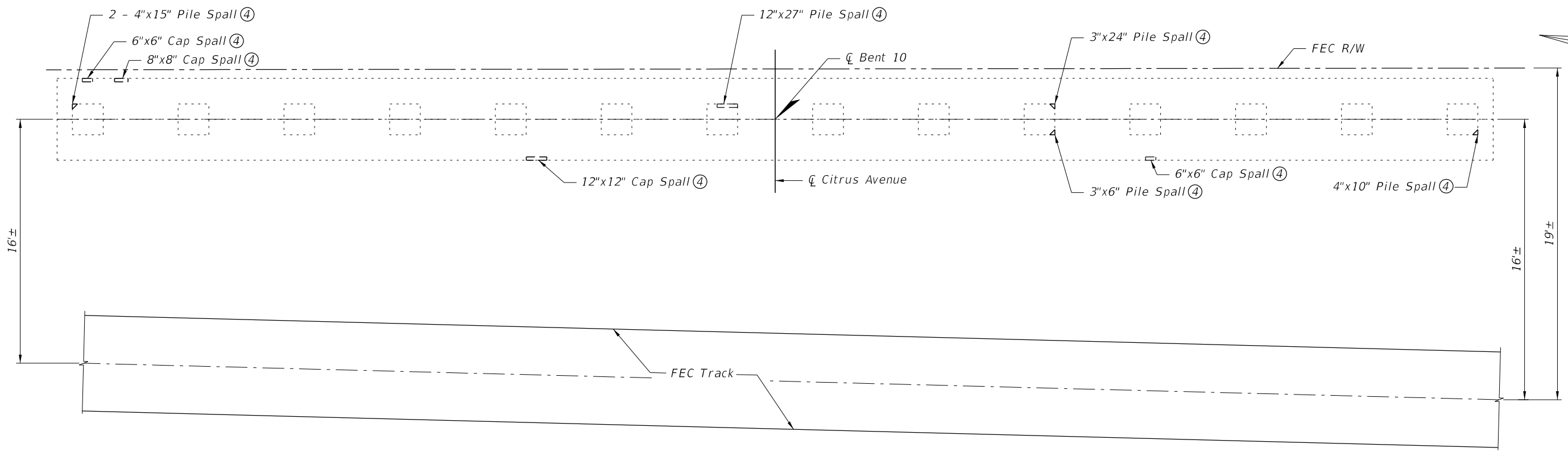
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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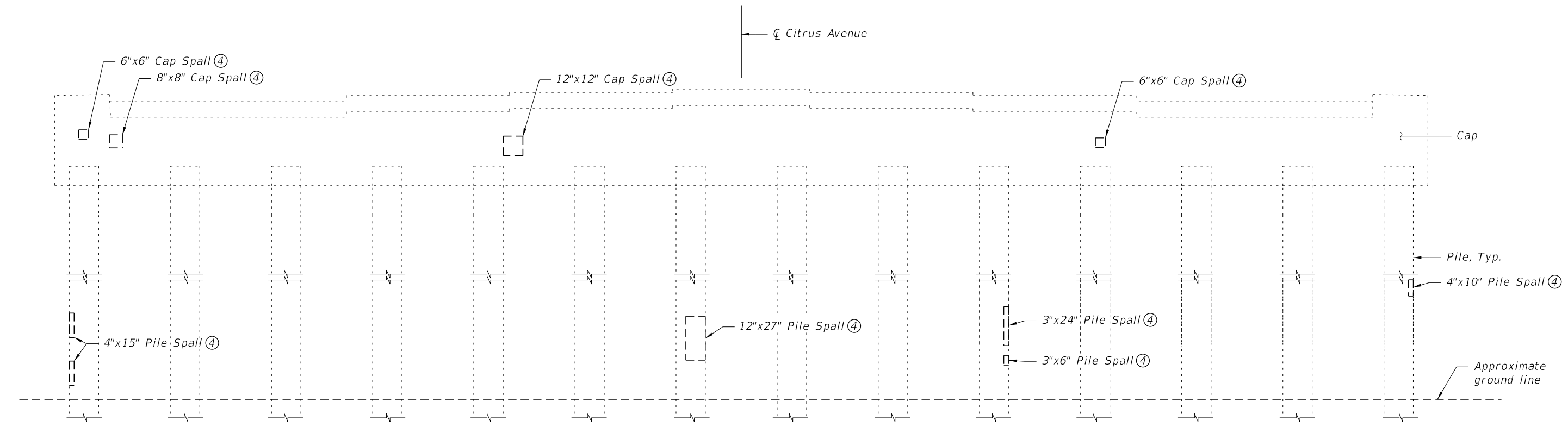
CITY OF FORT PIERCE
CITY OF FORT PIERCE
BRIDGE REPAIR

BENT 9 REPAIRS
CITRUS AVENUE
OVER FEC RAILWAY

SHEET NO.
B-20



PLAN



ELEVATION

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CITY OF FORT PIERCE
 CITY OF FORT PIERCE
 BRIDGE REPAIR

BENT 10 REPAIRS
 CITRUS AVENUE
 OVER FEC RAILWAY

SHEET NO.
 B-21