ADDENDUM NO. 1

To: All Prospective Proposers

From: Roger Masten, District Five Contractual Services

Date: May 13, 2015

RE: RFP-DOT-14-15-5005-TRK
Central Florida Rail Corridor (CFRC) Track Renewal and Grade Crossing Upgrades, FM NO. 412994-4-52-11

You are hereby notified that the above referenced Request for Proposal (RFP) is modified as shown below:

The Technical Requirements are amended to include the following:

1.) Table of Contents
Appendix E has been added to the table of contents as shown below:
APPENDIX E – COLONIAL DRIVE CROSSING FUTURE ROADWAY WIDENING PLAN SHEET

2.) Section 1.1, F. Railroad Coordination on Page 4
The section has been modified as shown below:
The Contractor shall coordinate all work with the Engineer and the Department's CFRC operations and maintenance contractor (Bombardier Mass Transit Corporation) and the Department's CFRC signal maintenance of way contractor (Herzog Technologies, Inc.). Signal support shall be provided by Herzog Technologies, Inc. Roadway Worker Protection (RWP) training and track protection/employee in charge (EIC) personnel shall be provided by Bombardier Mass Transit Corporation. Contact information for operations and maintenance and signal maintenance of way contractors are shown below. Based on the hourly rates below, the Contractor shall estimate the operations and maintenance contractor and signal maintenance of way contractor man-hours needed to support the work and include these costs in their Lump Sum price.

Bombardier Mass Transit Corporation
Mike Dier, Chief Engineer
(407) 732-6726
Michael.Dier@us.transport.bombardier.com
Track Protection EIC RWP Training: $100/person, max of 10 per class
EIC/Flagging: $92/hr

Herzog Technologies, Inc.
Nathan Morrison
(407) 562-2703
nmorrison@herzog.com
Signal Maintenance of Way Manager
Signal Support: $118.03/hour

Track work windows shall be in accordance with the Central Florida Operating and Management Agreement (CFOMA). All track shall be returned to service with the appropriate slow order prior to 11 p.m. on week days (Monday through Friday) to accommodate train service. Except as noted otherwise herein, the Contractor shall not perform track work between midnight and 5 a.m.
In double track territory, one track shall remain open to train traffic between control points at all times

to allow train traffic to pass. The Contractor shall provide the Engineer with work plans for each portion of the work, including detailed schedules outlining what work will be accomplished in each work period.
Work plans shall be provided to the Engineer a minimum of 45 days prior to starting each portion of work. The Engineer shall be responsible for coordinating the work schedules with CSX Transportation Inc. (CSXT), National Railroad Passenger Corporation (Amtrak), and Florida Central Railroad. In single track territory, the Engineer will coordinate track outages with tenant railroads to accommodate this Technical Requirements. Track 1 from MP 761.8 to 763.1 shall be considered single track territory. The Contractor shall provide the Engineer with a single work plan, including schedules, covering all required work within single track territory a minimum of 60 days prior to starting all work within that territory. The Contractor shall have replacement rail in service to accommodate the scheduled Amtrak service during all construction phases. Rail replacement in single track territory shall be restricted to night windows defined as 10:00 11:00 p.m. Friday night to 9:00 a.m. on Saturday morning and 8:00 p.m. Saturday night to 9 a.m. Sunday morning. All rail replacement work in single track territory shall be completed in a maximum of six (6) night windows. Tie replacement in single track territory shall be restricted to night windows defined as 10 11:00 p.m. Friday night to 9:00 a.m. on Saturday morning and 8:00 p.m. Saturday night to 9 a.m. Sunday morning. All tie replacement in single track territory shall be completed in a maximum of five (5) night windows. The Contractor shall provide a six week look-ahead schedule for both single and double track territory, updated weekly, to the Engineer.

3.) Section 1.2, Table 2: Highway Grade Crossing Upgrades on Pages 9 and 10
The W. Colonial Drive row has been modified and footnote 3 added as shown below:
789.48 W. Colonial Dr. Upgrade Tracks 1 & 2 1 180 2883 9 p.m. Friday to 3a.m. Monday
3 – Existing Track 1 and Track 2 crossings are 90 feet each. The W. Colonial Drive grade crossing is planned for widening to the north. Extend the track upgrades 54 feet to the north on both tracks to accommodate the future widening. See Appendix E for the W. Colonial Drive Roadway Widening Plan Sheet.

4.) Section 1.2, D. Railroad Coordination on Page 13
The section has been modified as shown below:
The Contractor shall coordinate all work with the Engineer and the Department's CFRC operations and maintenance contractor (Bombardier Mass Transit Corporation) and the Department's CFRC signal maintenance of way contractor (Herzog Technologies, Inc.). Signal support shall be provided by Herzog Technologies, Inc. Roadway Worker Protection (RWP) training and track protection/employee in charge (EIC) personnel shall be provided by Bombardier Mass Transit Corporation. Contact information for operations and maintenance and signal maintenance of way contractors are shown below. Based on the hourly rates below, the Contractor shall estimate the operations and maintenance contractor and signal maintenance of way contractor man-hours needed to support the work and include these costs in their Lump Sum price.

Bombardier Mass Transit Corporation
Mike Dier, Chief Engineer
(407) 732-6726
Michael.Dier@us.transport.bombardier.com
Track Protection EIC RWP Training: $100/person, max of 10 per class
EIC/Flagging: $92/hr

Herzog Technologies, Inc.
Nathan Morrison
(407) 562-2703
nmorrison@herzog.com
Signal Maintenance of Way Manager
Signal Support: $118.03/hour

Track work windows shall be in accordance with the Central Florida Operating and Management

Agreement (CFOMA). All track shall be returned to service with the appropriate slow order prior to 11 p.m. on week days (Monday through Friday) to accommodate train service. Except as noted otherwise herein, the Contractor shall not perform track work between midnight and 5 a.m.
The Contractor is limited to performing grade crossing work that requires fouling mainline track from Friday night at 10 11:00 p.m. to Monday morning at 4 a.m. The Contractor shall have track panels in place to accommodate the scheduled Amtrak service during all construction phases.
In double track territory, one track shall remain open to train traffic between control points at all times to allow train traffic to pass. The Contractor shall provide the Engineer with work plans for each grade crossing, including detailed schedules outlining what work will be accomplished in the work period. The work plans, including schedules, shall be provided a minimum of 45 days prior to starting each grade crossing. The Engineer shall be responsible for coordinating the work schedules with CSXT, Amtrak, and Florida Central Railroad. In single track territory, the Engineer will coordinate track outages with tenant railroads to accommodate this Technical Requirements. Track 1 from MP 761.8 to 763.1 shall be considered single track territory. The Contractor shall provide the Engineer with a single work plan, including schedules, covering all required work within single track territory a minimum of 60 days prior to starting all work within that territory. The Contractor shall provide a six week look-ahead schedule for both single and double track territory, updated weekly, to the Engineer.

5.) Section 1.2, E. Critical Technical Requirements, Drainage on Page 16
The first bullet has been modified as follows:
Install 6-inch minimum perforated pipe, 12 inches off the end of the tie, at the bottom of the ballast layer, on both sides of each replaced track. Daylight perforated pipe to adjacent trackside ditch.

6.) Appendix A CWR Installation on Page A-1
The following row has been deleted from the table:
Lake Ave to 17/92 UGB (CURVE) 0 **1283** N/A N/A **1283**
Replace west rail for entire curve
with **1283 feet of 115RE head**
hardened rail

7.) Appendix D Maintenance of Way Instructions on Page 214 and 215 of 287
The Shunt Resistance Test for Concrete Panels drawing has been appended as the last page of MWI 901A on page 215 of 287. The following has been added to MWI 901A on page 214 of 287:
22. Contractor shall test all concrete crossing panels on site prior to installation according to the attached standard electrical test drawing. Document test results for each panel and submit results to the Engineer.

8.) Appendix E – Colonial Drive Crossing Future Roadway Widening Plan Sheet
Appendix E has been added and is attached to this addendum.

9) Appendix E has been added to the table of contents as shown below:
APPENDIX E – COLONIAL DRIVE CROSSING FUTURE ROADWAY WIDENING PLAN SHEET

10) In the Request for Proposal, Form no. 3 is replaced in its entirety with the attached Form No. 3.1, Contractor Data Sheet.

11) In the Request for Proposal Section 5) Diversity Achievement is hereby modified to include the following language

FEDERAL TRANSPORTATION ADMINISTRATION DBE GOAL:
The Federal Transportation Administration, (FTA) has established a goal of 8.72% DBE participation for this project.

DBE AND NON-DBE SMALL BUSINESS ASPIRATION GOAL:

It is the policy of FDOT to encourage the participation of small businesses and disadvantaged business enterprises ("DBE") in all facets of the business activities of FDOT, consistent with applicable laws and regulations. FDOT has established an aspiration goal of 10% DBE usage and an additional 3% non-DBE Small Business usage for the subject Project. Firms proposing for this Project shall aspire to have ten percent (10%) or more of the total contract costs performed by DBEs, and an additional three percent (3%) or more of the total contract costs performed by non-DBE small businesses. Although not a contract requirement, FDOT believes that the aforementioned aspiration goal can realistically be achieved based on current availability of DBEs and small businesses. FDOT further believes that the 13% overall goal can be achieved through race neutral means, using standard competitive procurement processes. Pursuant to the provisions of Section 339.0805, Florida Statutes, and Rule 14.78.005, Florida Administrative Code, FDOT has adopted rules to provide certified DBEs opportunities to participate in the business activities of FDOT as vendors, contractors, subcontractors, and consultants. FDOT has adopted the DBE definition set forth in Code 49 of Federal Regulations Section 26.5. The Department's DBE directory may be found at the following website: https://www3.dot.state.fl.us/EqualOpportunityOffice/biznet/mainmenu.asp Firms agree to apply their best efforts to utilize qualified non-DBE small businesses as vendors, contractors, subcontractors, and consultants for the Project. Qualifications for small businesses may be found at the following website: http://www.dot.state.fl.us/EqualOpportunityOffice/sizeStandards.shtm Firms will submit the Aspiration Goal Form for "DBE" and "Non-DBE Small Business" Firms at the Pre-Construction Conference.

12) In the Request for Proposal, Section 9.2 is replaced in its entirety as follows:

9.2 Construction Experience and Qualifications of Key Personnel

Construction Experience

The Proposer shall have specific expertise and experience in performing railroad construction and/or maintenance including the replacement of continuously welded rail, replacement of wood ties, and grade crossing replacements. Experience with Federal Railroad Administration (FRA) Code of Federal Regulations (CFR) compliance is required. The Proposer may use one or more subcontractors to meet the expertise and experience requirements for one or more of the work elements. To verify compliance with this requirement, the Proposer must provide a summary of the expertise and experience in a narrative form. In addition to the summary, the Proposal shall provide Form 8a a minimum of 10 most relevant construction and/or maintenance contracts in the U.S. for the past five (5) years, regardless of whether these contracts are currently active. The forms shall include a complete description of the work effort completed for the contract including the track mileage, number of trains per day and number of crossings. The individual cells on Form 8 may be expanded to provide all of the required information. Each project must include a reference with current contact information to be included in the evaluation of the experience.

13) In the Request for Proposal, Form no. 11 is replaced in its entirety with the attached Form No.11.1, “Proposal Of”.

TO ACKNOWLEDGE RECEIPT OF THIS NOTICE AND ALL CHANGES, PLEASE SIGN, RETURN BY FAX TO THIS OFFICE @ (386) 943-5405. THIS SHOULD BE RETURNED PRIOR TO THE PROPOSAL OPENING. ALSO, A SIGNED HARD COPY SHOULD BE SUBMITTED WITH YOUR PROPOSAL PACKAGE.

Name of Company: _____

Authorized Signature: _____

Date: _____

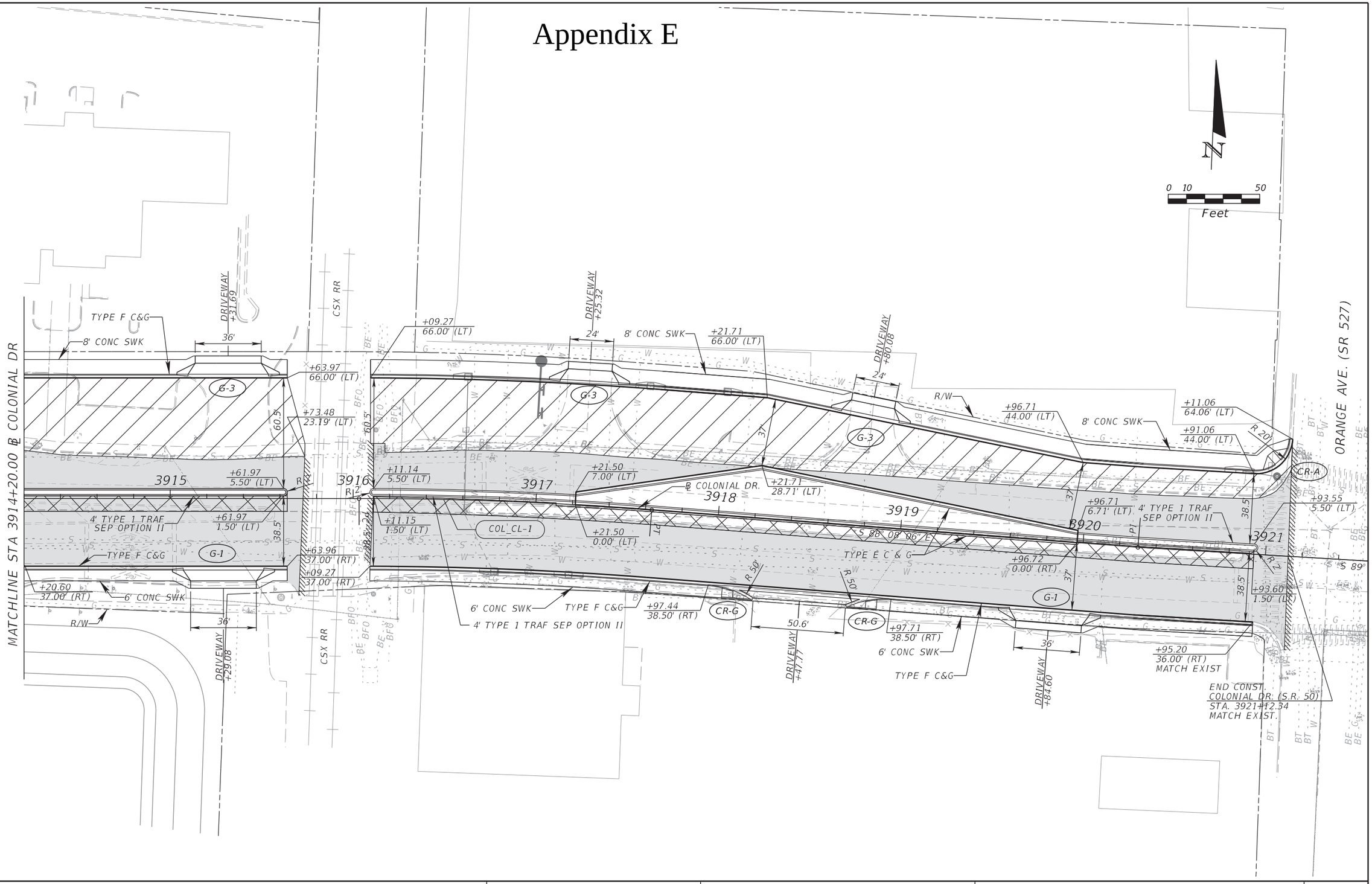
“FAILURE TO FILE A PROTEST WITHIN THE TIME PRESCRIBED IN SECTION 120.57(3), F.S. SHALL CONSTITUTE A WAIVER OF PROCEEDINGS UNDER CHAPTER 120, F.S.”

Central Florida Rail Corridor

Appendix E

Colonial Drive Crossing Future Roadway Widening

Appendix E



90% DRAWINGS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ADRIAN A. GUNDERSON, P.E.
P.E. LICENSE NUMBER 78065
HDR Engineering, Inc.
1551 Sandspur Road, Suite 200
Maitland, FL 32751-6138
CERTIFICATE OF AUTHORIZATION 4213

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
400	ORANGE	432193-1-52-01

ROADWAY PLAN (17)
SR 50 (COLONIAL DR)

AREA 2
SHEET NO.
30

jmccomas 2/24/2015 11:44:56 AM PW:\009449\00000000023274S\13.00_CAD\43219315201_2B\roadway\00_Submittal Packag

Technical Requirements

Track Renewal & Grade Crossing Upgrade Project

For the
Central Florida Rail Corridor

Florida Department of Transportation

District 5

Addendum #1 Dated 4/27/15

TABLE OF CONTENTS

1. Technical Requirements

These technical requirements establish the requirements for the Track Renewal & Grade Crossing Upgrade Project to furnish (excluding some ties and rail), distribute, and install rail, ties, concrete panel highway grade crossings, pedestrian grade crossings, ballast, and other related items of work within the Central Florida Rail Corridor (CFRC). The construction project is located between DeBary and South Orlando, FL, between MP A761.81 and MP A796.63. The work shall include the furnishing of all the necessary tools, equipment, labor, materials, insurance, plans, permits, etc. necessary for the installation of rails, ties, highway grade crossings, pedestrian crossing tie replacement, and other items necessary to complete the work in accordance with the CFRC Maintenance of Way Instructions (MWI) attached as Appendix D, this project's FDOT Specifications, and the other Contract Documents.

1.1 Track Renewal

The track renewal work consists of replacing jointed rail and older Continuous Welded Rail (CWR) with new 115RE & 132RE CWR, replacing wood crossties, and replacing crossties under concrete pedestrian crossing panels with ten foot ties. For all track renewal work, existing anchors shall not be reused, new knock on anchors shall be furnished and installed. The Contractor shall supply and use a dynamic track stabilizer to minimize slow orders. Slow Orders shall comply with CFRC MWI 1109 – Temporary Speed Restrictions.

A) Rail

The Department will furnish some of the rail for the project. See Section 3, Materials of this Technical Requirements for a breakdown of materials to be furnished by the Department. The remaining materials are to be furnished by the Contractor. The Contractor shall furnish, distribute, and install all other materials (insulated joints, other track material (OTM), welds, etc.) as necessary to complete the work. The rail sticks shall be flash butt welded to the lengths needed and field welded using thermite welds. Flash butt welding and field welding shall comply with CFRC MWI 801-06 – CFRC Welding Manual. Rail stockpiles are located at the following locations:

- MP 762.4 - North of Barwick Road, East of Track 2
- MP 766.6 – South of McCracken Road, West of Track 1
- MP 788.5 – South of Virginia Avenue – East of Track 2
- MP 790.6 – South of South Street – East of Track 2

No permanent rail joints will be permitted. Rail shall be installed before the ties so as not to spike kill the ties. Appendix A lists the location of CWR replacement and approximate quantity to be installed. The locations will be identified in the field by the Engineer. All insulated joints not shown to be replaced shall remain in track or be reinstalled following CWR installation. The Contractor shall be responsible for the removal of rail and OTM in accordance with local, state, and federal environmental regulations.

B) Ties

The Department will furnish a portion of the ties. See Section 3, Materials of this Technical Requirements for a breakdown of ties to be furnished by Department. The Contractor shall furnish all other material necessary to complete the Technical Requirements. The Contractor shall furnish, distribute, and install all other materials (OTM, tie plugs, etc.) as necessary to complete the work. The CFRC furnished ties are located at the following locations:

- MP 778.9, East of Track 2 - North St laydown yard
- MP 789.3, West of Track 1 – Colonial Drive laydown yard

Appendix B shows the tie quantities and approximate locations of installation. Ties requiring replacement shall be field identified by the Engineer.

C) Ballast

Shy ballast conditions exist from MP A782.8 to MP A791.9. The Contractor shall purchase, unload, distribute, tamp and regulate the amount of ballast required to bring the ballast section into conformance with the main track standard ballast section in accordance with CFRC MWI 2602 – Ballast Sections. Ballast shall be in conformance with AREMA gradation 4A. For bidding purposes, this quantity is estimated to be 5,000 tons. Ballast work is required for the following segments.

- MP 782.8 to MP 784.7 – Single Track (1.9 track miles)
- MP 784.7 to MP 791.9 – Double Track (14.4 track miles)

D) Pedestrian Crossing Tie Replacement

Pedestrian crossings at the SunRail stations were previously installed using 8.5 foot crossties and a tie parallel to the rail to secure the lag bolts of the crossing panel. The photograph below shows the existing condition of ties at the pedestrian crossings.

At the locations listed below, the Contractor shall remove the asphalt adjacent to the crossing, remove the crossing panels, replace the existing ties with ten-foot ties, and replace and secure the concrete panels and replace the adjacent asphalt.

- South End DeBary Station
- North End Sanford Station
- South End Sanford Station
- South End Lake Mary Station
- North End Longwood Station
- North End Altamonte Station
- South End Altamonte Station
- North End Maitland Station
- South End Maitland Station
- North of Morse Blvd
- South of Morse Blvd
- North End Florida Hospital Station
- South End Florida Hospital Station
- North End LYNX Station
- North End Orlando National Railroad Passenger Corporation (Amtrak) Station
- Orlando Amtrak Station South of the Mini-Hi's
- Orlando Amtrak Station at Amtrak Building
- Middle Orlando Amtrak Station
- North End Sand Lake Road Station
- South End Sand Lake Road Station

Existing ties removed from the pedestrian crossings shall be stockpiled by the Contractor at the Department's Vehicle Storage and Maintenance Facility (VSMF) laydown yard in Sanford.

E) Utility Coordination

The Contractor shall be responsible for maintaining all existing utilities within all work zones. The appropriate utility coordination is the responsibility of the Contractor. The Contractor shall coordinate all rail and tie installation with the Engineer who will be responsible for coordinating with CFRC Signal Maintenance of Way Contractor, Herzog Technologies, Inc., for the necessary signal support to identify, locate, protect, and restore all signal cabling, insulated joints, jumpers, and other items.

The Contractor shall follow Department standards, policies, and procedures for utility coordination. The Department standards, policies, procedures, and design criteria are contained in this project's FDOT Specifications, Rule 14-46.001 (Utility Accommodation Manual), Utility User's Guide, and the Contract terms and conditions. Preliminary review of Utility Compensable Property Interest has indicated that the following Utility Owners may be eligible for reimbursement, should relocation be required.

- CFRC Wayside Signal and Grade Crossing Warning Systems (CFRC Signal Maintenance of Way Contractor to locate CFRC signal utilities)
- CFRC Communications (CFRC Operations and Maintenance Contractor to locate communication, fiber, and station electrical utilities)
- Level 3
- Verizon
- Duke Energy, Inc.

It is the responsibility of the Contractor to verify all utility locations, along with any other Utility Compensable Property Interests, and should relocation be required, include these costs in its Lump Sum price.

F) Railroad Coordination

The Contractor shall coordinate all work with the Engineer and the Department's CFRC operations and maintenance contractor (Bombardier Mass Transit Corporation) and the Department's CFRC signal maintenance of way contractor (Herzog Technologies, Inc.). Signal support shall be provided by Herzog Technologies, Inc. Roadway Worker Protection (RWP) training and track protection/employee in charge (EIC) personnel shall be provided by Bombardier Mass Transit Corporation. Contact information for operations and maintenance and signal maintenance of way contractors are shown below. Based on the hourly rates below, the Contractor shall estimate the operations and maintenance contractor and signal maintenance of way contractor man-hours needed to support the work and include these costs in their Lump Sum price.

Bombardier Mass Transit Corporation
Mike Dier, Chief Engineer
(407) 732-6726
Michael.Dier@us.transport.bombardier.com
~~Track Protection EIC~~ RWP Training: $100/person, max of 10 per class
EIC/Flagging: $92/hr

Herzog Technologies, Inc.
Nathan Morrison
(407) 562-2703
nmorrison@herzog.com
Signal Maintenance of Way Manager
Signal Support: $112.95/hour

Track work windows shall be in accordance with the Central Florida Operating and Management Agreement (CFOMA). All track shall be returned to service with the appropriate slow order ~~prior to 11 p.m. on week days (Monday through Friday)~~ to accommodate train service. ~~Except as noted otherwise herein, the Contractor shall not perform track work between midnight and 5 a.m.~~

In double track territory, one track shall remain open to train traffic between control points at all times to allow train traffic to pass. The Contractor shall provide the Engineer with work plans for each portion of the work, including detailed schedules outlining what work will be accomplished in each work period. Work plans shall be provided to the Engineer a minimum of 45 days prior to starting each portion of work. The Engineer shall be responsible for coordinating the work schedules with CSX Transportation Inc. (CSXT), National Railroad Passenger Corporation (Amtrak), and Florida Central Railroad.

In single track territory, the Engineer will coordinate track outages with tenant railroads to accommodate this Technical Requirements. Track 1 from MP 761.8 to 763.1 shall be considered single track territory. The Contractor shall provide the Engineer with a single work plan, including schedules, covering all required work within single track territory a minimum of 60 days prior to starting all work within that territory.

The Contractor shall have replacement rail in service to accommodate the scheduled Amtrak service during all construction phases. Rail replacement in single track territory shall be restricted to night windows defined as ~~10:00~~ 11:00 p.m. Friday night to 9:00 a.m. on Saturday morning and 8:00 p.m. Saturday night to 9 a.m. Sunday morning. All rail replacement work in single track territory shall be completed in a maximum of six (6) night windows. Tie replacement in single track territory shall be restricted to night windows defined as ~~10~~ 11:00 p.m. Friday night to 9:00 a.m. on Saturday morning and 8:00 p.m. Saturday night to 9 a.m. Sunday morning. All tie replacement in single track territory shall be completed in a maximum of five (5) night windows.

The Contractor shall provide a six week look-ahead schedule for both single and double track territory, updated weekly, to the Engineer.

G) Critical Technical Requirements

The following outlines the critical technical requirements to complete the Technical Requirements for the track, ties and pedestrian crossing elements of the project. The Contractor is required to complete the Technical Requirements in accordance with the MWIs attached in Appendix D and the following critical technical requirements.

- Rail will be laid and anchored at a minimum rail laying temperature of 105°F
- All rail joints shall be welded
- Lay rail to 56-1/2” gage
- Following new tie insertion or ballast installation, tamp every tie over entire length of new ties installed
- Surface and line all track where new ties are installed. Maintain existing profile and alignment unless otherwise directed by the Engineer
- Following tie or ballast installation, stabilize the track with a dynamic track stabilizer before returning the track for to dispatch for train service
- Submit manufacturer model and specifications for the tamper and dynamic track stabilizer to the Engineer for approval prior to mobilization to the work site

- Final track profile and alignment at station platforms shall comply with the vertical and horizontal platform clearances shown in Table 1. The provided clearances in Table 1 are the maximum and minimum clearances for the final track profile and alignment – no additional tolerances are allowed.

Table 1: Track Clearances through Station Platforms

Track Clearances Through Platforms					
Platform	**Location**	**West Platform**		**East Platform**	
		Horizontal Clearance from gage side of field rail to face of platform (in)	Vertical Clearance from top of rail to top of platform (in)	Horizontal Clearance from gage side of field rail to face of platform (in)	Vertical Clearance from top of rail to top of platform (in)
DeBary	Standard Platform	32.75 to 33.25	7.5 to 8.0	Same as west platform	
	Mini-High[(1)(2)]	37.75 to 38.25	21.5 to 22.0		
Sanford	Standard Platform	32.75 to 33.25	7.5 to 8.0	Same as west platform	
	Mini-High[(1)(2)]	37.75 to 38.25	21.5 to 22.0		
Lake Mary	Standard Platform	32.75 to 33.25	7.5 to 8.0	Same as west platform	
	Mini-High[(1)(2)]	37.75 to 38.25	21.5 to 22.0		
Longwood	Standard Platform	32.75 to 33.25	7.5 to 8.0	Same as west platform	
	Mini-High[(1)(2)]	N/A	21.5 to 22.0		
Altamonte Springs	Standard Platform	32.75 to 33.25	7.5 to 8.0	Same as west platform	
	Mini-High[(1)(2)]	37.75 to 38.25	21.5 to 22.0		
Maitland	Standard Platform	32.75 to 33.25	7.5 to 8.0	Same as west platform	
	Mini-High[(1)(2)]	37.75 to 38.25	21.5 to 22.0		
Winter Park	Standard Platform	35.75 to 36.25	7.5 to 8.0	32.75 to 33.25	7.5 to 8.0
	Mini-High[(1)(2)]	N/A	21.5 to 22.0	N/A	21.5 to 22.0
Florida Hospital	Standard Platform	32.75 to 33.25	7.5 to 8.0	Same as west platform	
	Mini-High[(1)(2)]	37.75 to 38.25	21.5 to 22.0		
Lynx	Standard Platform	32.75 to 33.25	7.5 to 8.0	Same as west platform	
	Mini-High[(1)(2)]	37.75 to 38.25	21.5 to 22.0		
Church St	Standard	37.75 to 38.25	7.5 to 8.0	32.75 to 33.25	7.5 to 8.0

Track Clearances Through Platforms					
Platform	**Location**	**West Platform**		**East Platform**	
	Platform				
	Mini-High[(1)(2)]	37.75 to 38.25	21.5 to 22.0	32.75 to 33.25	21.5 to 22.0
Orlando Amtrak	Standard Platform	32.75 to 33.25	7.5 to 8.0	Same as west platform	
	Mini-High[(1)(2)]	N/A	21.5 to 22.0		
Sand Lake Road	Standard Platform	32.75 to 33.25	7.5 to 8.0	Same as west platform	
Sand Lake Road	Mini-High[(1)(2)]	37.75 to 38.25	21.5 to 22.0	Same as west platform	

(1) Mini-High horizontal measurement is to the face of the mini-high step

(2) Mini-high vertical measurement is to the top passenger boarding surface

1.2 Highway Grade Crossing Upgrade

Table 2 lists the 34 locations for highway grade crossing upgrades. Since there are two (2) track crossings at some locations, there are a total of 54 highway grade crossing upgrades. Track crossing removal and replacement with asphalt concrete roadway pavement is required at two (2) locations. Crossing upgrades shall consist of new concrete panels, new rail, new ties, new ballast and subballast, new OTM, new asphalt roadway pavement, milling and resurfacing, lining and surfacing, track stabilization, field welds, and all other materials needed to complete the work consistent with this Technical Requirements. The Contractor shall supply and use a dynamic track stabilizer to minimize slow orders. Slow Orders shall comply with CFRC MWI 1109 – Temporary Speed Restrictions.

Crossing upgrades shall be performed in priority order based on the priorities listed in Table 2. All Priority 1 crossings shall be completed prior to beginning work on Priority 2 crossings. All Priority 2 crossings shall be completed prior to beginning work on Priority 3 crossings.

Table 2: Highway Grade Crossing Upgrades

Highway Grade Crossing Upgrades						
MP	**Crossing**	**Work**	**Priority**	**Total Road Crossing Panel Length (ft)[1]**	**Maximum Road Closure Window**	**Notes**
767.03	W. 18th St.	Upgrade Track 2	3	36	9 p.m. Friday to 9 p.m. Saturday OR 9 p.m. Saturday to 9 p.m. Sunday	
767.07	Southwest Rd.	Upgrade Track 2	2	54	9 p.m. Friday to 9 p.m. Saturday OR 9 p.m. Saturday to 9 p.m. Sunday	

Highway Grade Crossing Upgrades						
MP	**Crossing**	**Work**	**Priority**	**Total Road Crossing Panel Length (ft)[1]**	**Maximum Road Closure Window**	**Notes**
767.51	Country Club Rd.	Upgrade Track 2	3	45	9 p.m. Friday to 9p.m. Saturday OR 9p.m. Saturday to 9p.m. Sunday	
773.58	S. Country Club Rd.	Upgrade Track 2	1	81	9 p.m. Friday to 9p.m. Saturday OR 9p.m. Saturday to 9p.m. Sunday	
777.52	E. Palmetto Ave.	Upgrade Track 1	1	36	9 p.m. Friday to 9p.m. Saturday OR 9p.m. Saturday to 9p.m. Sunday	
777.81	CR 427	Upgrade Tracks 1 & 2	1	432	9 p.m. Friday to 3 a.m. Monday	
780.36	Leonard St.	Upgrade Track 2	1	36	9 p.m. Friday to 9 p.m. Saturday OR 9 p.m. Saturday to 9 p.m. Sunday	
780.55	SR 436/ Altamonte Dr.[2]	Upgrade Track 2	1	135	9 p.m. Friday to 3 a.m. Monday	
781.24	Ballard St.	Upgrade Track 1	1	45	9 p.m. Friday to 9 p.m. Saturday OR 9 p.m. Saturday to 9 p.m. Sunday	
783.09	George Ave.	Upgrade SGL Main	3	36	9 p.m. Friday to 9 p.m. Saturday OR 9 p.m. Saturday to 9 p.m. Sunday	
783.66	Palmetto Ave (Private bike crossing)	Upgrade SGL Main	3	27	9 p.m. Friday to 9 p.m. Saturday OR 9 p.m. Saturday to 9 p.m. Sunday	
784.73	North Denning Dr.	Upgrade Tracks 1 & 2	1	108	9 p.m. Friday to 3 a.m. Monday	
785.08	Pennsylvania Ave.	Upgrade Tracks 1 & 2	1	306	9 p.m. Friday to 3 a.m. Monday	Roads intersect at crossing. Considered one location
785.17	Webster Ave.					
786.19	S. Pennsylvania	Upgrade Tracks 1 & 2	1	198	9 p.m. Friday to 3 a.m. Monday	Roads intersect at crossing.

Highway Grade Crossing Upgrades						
MP	**Crossing**	**Work**	**Priority**	**Total Road Crossing Panel Length (ft)[1]**	**Maximum Road Closure Window**	**Notes**
	Ave.					Considered one location
786.19	Holt Ave					
786.56	S. Denning Rd.	Upgrade Tracks 1 & 2	2	126	9 p.m. Friday to 3 a.m. Monday	
787.45	Wilkinson St	Upgrade Tracks 1 & 2	3	162	9 p.m. Friday to 3 a.m. Monday	
787.62	King St.	Upgrade Tracks 1 & 2	1	144	9 p.m. Friday to 3 a.m. Monday	
787.99	E. Princeton St.	Upgrade Tracks 1 & 2	1	216	9 p.m. Friday to 3 a.m. Monday	
788.43	W. Virginia Dr.	Upgrade Tracks 1 & 2	1	126	9 p.m. Friday to 3 a.m. Monday	
788.74	N. Highland Ave	Upgrade Tracks 1 & 2	2	108	9 p.m. Friday to 3 a.m. Monday	
789.48	W. Colonial Dr.	Upgrade Tracks 1 & 2	1	~~180~~ 288[3]	9 p.m. Friday to 3 a.m. Monday	
789.62	W. Concord St.	Upgrade Tracks 1 & 2	3	126	9 p.m. Friday to 3 a.m. Monday	
789.73	W. Amelia St.	Upgrade Tracks 1 & 2	1	126	9 p.m. Friday to 3 a.m. Monday	
790.23	W. Central Blvd	Upgrade Tracks 1 & 2	1	198	9 p.m. Friday to 3 a.m. Monday	
790.29	Pine St	Upgrade Tracks 1 & 2	2	144	9 p.m. Friday to 3 a.m. Monday	
790.82	America St	Upgrade Tracks 1 & 2	3	72	9 p.m. Friday to 3 a.m. Monday	
790.93	Ernestine St	Upgrade Tracks 1 & 2. Remove Track 3	3	72	9 p.m. Friday to 3 a.m. Monday	Crossing Removal
791.02	Gore St	Upgrade Tracks 1 & 2. Remove Track 3	1	144	9 p.m. Friday to 3 a.m. Monday	Crossing Removal
791.24	W. Columbia St	Upgrade Track 2	2	54	9 p.m. Friday to 9 p.m. Saturday OR 9 p.m. Saturday to 9 p.m. Sunday	
792.54	W Pineloch	Upgrade	2	72	9 p.m. Friday to 3	

Highway Grade Crossing Upgrades						
MP	**Crossing**	**Work**	**Priority**	**Total Road Crossing Panel Length (ft)[1]**	**Maximum Road Closure Window**	**Notes**
	St	Tracks 1 & 3			a.m. Monday	
792.98	Drennen Rd	Upgrade Tracks 1 & 3	2	72	9 p.m. Friday to 3 a.m. Monday	
793.57	Holden Ave	Upgrade Track 1	3	45	9 p.m. Friday to 9 p.m. Saturday OR 9 p.m. Saturday to 9 p.m. Sunday	
794.31	Stratemeyer St	Upgrade Track 2	3	54	9 p.m. Friday to 9 p.m. Saturday OR 9 p.m. Saturday to 9 p.m. Sunday	
795.87	Glen Rose Ave	Upgrade Track 1	3	27	9 p.m. Friday to 9 p.m. Saturday OR 9 p.m. Saturday to 9 p.m. Sunday	

[1] – Length of total road crossing panels is the minimum total length required for all track crossings (i.e., for a 2 track crossing with the length of 100 feet, each track shall have a minimum panel length of 50 feet for each track)

[2] – The SR 436 highway grade crossing shall be the third highway grade crossing to be completed. Two different Priority 1 highway grade crossings shall be completed prior to initiating work at the SR 436 highway grade crossing.

[3] – Existing Track 1 and Track 2 crossings are 90 feet each. The W. Colonial Drive grade crossing is planned for widening to the north. Extend the track upgrades 54 feet to the north on both tracks to accommodate the future widening. See Appendix E for the W. Colonial Drive Roadway Widening Plan Sheet.

A) Material

The Department will furnish a portion of the rail and ties for the project. See Section 3, Materials for a breakdown of materials to be furnished by the Department. The remaining required materials are to be furnished by the Contractor. All ties and rail within the crossing will be replaced. Ties and rail will be stockpiled at the locations shown below:

Rail:

- MP 762.4 - North of Barwick Road, East of Track 2
- MP 766.6 – South of McCracken Road, West of Track 1
- MP 788.5 – South of Virginia Avenue – East of Track 2
- MP 790.6 – South of South Street – East of Track 2

Ties:

- MP 778.9, East of Track 2 - North St laydown yard
- MP 789.3, West of Track 1 – Colonial Drive laydown yard

The Contractor will distribute the materials as necessary to complete these Technical Requirements. The rail sticks shall be flash butt welded to lengths needed for the crossing track panels and field welded using thermite welds. No joints or thermite welds are permitted within the limits of the track panel for each grade crossing. The Contractor shall supply all other materials (concrete panels, OTM, welds, etc.) necessary to complete the Technical Requirements consistent with the CFRC MWIs attached in Appendix D, this project's FDOT Specifications, and the other Contract Documents.

B) Temporary Traffic Control Plan

The Contractor shall design a safe and effective Temporary Traffic Control Plan to maintain both rail and highway vehicular traffic during all phases of construction for each highway grade crossing. The temporary traffic control plan shall address how to maintain traffic throughout the duration of the work at each highway grade crossing. The Temporary Traffic Control Plan shall be prepared by a Professional Engineer registered in the State of Florida who is certified in the Advanced Training category by a Department approved training provider.

The Temporary Traffic Control Plans shall comply with the Department's Design Standards and the Roadway Plans Preparation Manual. The Contractor shall use Index Series 600 of the Department's Design Standards, latest edition, where applicable for highway elements. Should these standards not address each work area, a detailed Temporary Traffic Control Plan shall be developed. The Contractor shall prepare the Temporary Traffic Control Plans to include plan sheets, notes, and details. The details shall address the following: typical section sheet(s), general notes and construction sequence sheet(s), typical detail sheet(s), traffic control plan sheet(s), advanced signing sheet(s), and detour sheet(s). The Contractor shall prepare additional plan sheets such as cross sections, profiles, drainage structures, retaining wall details, and sheet piling as necessary for proper construction and implementation of the Temporary Traffic Control Plan.

The Contractor shall submit the Temporary Traffic Control Plans for approval for each highway grade crossing no later than 28 days prior to the road closure occurring at that crossing. The Department and the local jurisdiction shall have 14 days to review and accept the Temporary Traffic Control Plan for each crossing. No road closure will be authorized until the Department and the local agency with jurisdiction over the road have approved the Temporary Traffic Control Plans.

The road closure schedule will be subject to Department and local jurisdiction approval and will not be allowed to interfere with special events (parades, foot races, community events, etc.). Allowable hours for road closures by crossing are listed in Table 2. Road closures will generally be permitted to occur within two windows dependent on the crossing:

- 24 hour period from 9:00 p.m. Friday to 9:00 p.m. Saturday OR from 9:00 p.m. Saturday to 9:00 p.m. Sunday; OR

- 54 hour period from 9:00 p.m. on Friday to 3:00 a.m. on Monday

The following restrictions are placed on simultaneous road closures:

- 18th St. and Southwest Rd. – Cannot be closed at the same time
- SR 436 and Ballard St. – Cannot be closed at the same time
- N. Denning Dr. and Pennsylvania Ave./Webster Ave. – Cannot be closed at the same time
- King St. and Princeton St. – Cannot be closed at the same time
- Princeton St. and Virginia St. – Cannot be closed at the same time
- Colonial Dr. and W. Amelia St. – Cannot be closed at the same time
- America St and Ernestine St. – Cannot be closed at the same time
- Gore St. and W Columbia St. – Cannot be closed at the same time
- Pineloch Ave and Drennen Rd. – Cannot be closed at the same time
- Drennen Rd. and Holden Ave. – Cannot be closed at the same time

See Table 2 Highway Grade Crossing Upgrades for specific closure restrictions at each crossing.

C) Utility Coordination

The Contractor shall be responsible for maintaining all existing utilities within all work zones. The appropriate utility coordination is the responsibility of the Contractor. The Contractor shall coordinate all rail and tie installation with the Engineer who will be responsible for coordinating with CFRC Signal Maintenance of Way Contractor, Herzog Technologies, Inc., for the necessary signal support to identify, locate, protect, and restore all signal cabling, insulated joints, jumpers, and other items.

The Contractor shall follow Department standards, policies, and procedures for utility coordination. The Department standards, policies, procedures, and design criteria are contained in, this project's FDOT Specifications, Rule 14-46.001 (Utility Accommodation Manual), Utility User's Guide, and the Contract terms and conditions. Preliminary review of Utility Compensable Property Interest has indicated that the following Utility Owners may be eligible for reimbursement, should relocation be required.

- CFRC wayside and grade crossing warning systems (CFRC Signal Maintenance of Way Contractor to locate CFRC signal utilities)
- CFRC communications (CFRC Operations and Maintenance Contractor to locate communication, fiber, and station electrical utilities)
- Level 3
- Verizon
- Duke Energy, Inc.

It is the responsibility of the Contractor to verify all utility locations, along with any other Utility Compensable Property Interests, and should relocation be required, include these costs in its Lump Sum price.

D) Railroad Coordination

The Contractor shall coordinate all work with the Engineer and the Department's CFRC operations and maintenance contractor (Bombardier Mass Transit Corporation) and the Department's CFRC signal maintenance of way contractor (Herzog Technologies, Inc.). Signal support shall be provided by Herzog Technologies, Inc. Roadway Worker Protection (RWP) training and track protection/employee in charge (EIC) personnel shall be provided by Bombardier Mass Transit Corporation. Contact information for operations and maintenance and signal maintenance of way contractors are shown below. Based on the hourly rates below, the Contractor shall estimate the operations and maintenance contractor and signal maintenance of way contractor man-hours needed to support the work and include these costs in their Lump Sum price.

Bombardier Mass Transit Corporation
Mike Dier, Chief Engineer
(407) 732-6726
Michael.Dier@us.transport.bombardier.com
~~Track Protection EIC~~ RWP Training: $100/person, max of 10 per class
EIC/Flagging: $92/hr

Herzog Technologies, Inc.
Nathan Morrison
(407) 562-2703
nmorrison@herzog.com
Signal Maintenance of Way Manager
Signal Support: $112.95/hour

Track work windows shall be in accordance with the Central Florida Operating and Management Agreement (CFOMA). All track shall be returned to service with the appropriate slow order ~~prior to 11 p.m. on week days (Monday through Friday)~~ to accommodate train service. ~~Except as noted otherwise herein, the Contractor shall not perform track work between midnight and 5 a.m.~~

The Contractor is limited to performing grade crossing work that requires fouling mainline track from Friday night at ~~10~~ 11:00 p.m. to Monday morning at 4 a.m. The Contractor shall have track panels in place to accommodate the scheduled Amtrak service during all construction phases.

In double track territory, one track shall remain open to train traffic between control points at all times to allow train traffic to pass. The Contractor shall provide the Engineer with work plans for each grade crossing, including detailed schedules outlining what work will be accomplished in the work period. The work plans, including schedules, shall be provided a minimum of 45 days prior to starting each grade crossing. The Engineer shall be responsible for coordinating the work schedules with CSXT, Amtrak, and Florida Central Railroad.

In single track territory, the Engineer will coordinate track outages with tenant railroads to accommodate this Technical Requirements. Track 1 from MP 761.8 to 763.1 shall be considered single track territory. The Contractor shall provide the Engineer with a single work plan, including schedules,

covering all required work within single track territory a minimum of 60 days prior to starting all work within that territory.

The Contractor shall provide a six week look-ahead schedule for both single and double track territory, updated weekly, to the Engineer.

E) Critical Technical Requirements

The following outlines the critical technical requirements to complete the Technical Requirements for the highway grade crossing elements of the project. The Contractor is required to complete the Technical Requirements in accordance with the MWIs attached as Appendix D and the following critical technical requirements.

- Type of Crossing Surface Material
  - All crossing surfaces shown in Table 2 shall be concrete panel crossings unless otherwise noted.
    - Concrete panels shall have a shunt resistant gap in the metal banding of each gage panel
    - Concrete panels shall be designed for use in signaled territory
    - Concrete panels shall provide sufficient length to replace any existing pedestrian pathways through the highway grade crossing.
    - Rubber inserts shall be high resistance type rubber
    - Panels shall have an option for lag bolt and lift ring hole inserts available for ADA applications. Inserts shall be used in all pedestrian walkway/sidewalk locations.
    - Flangeway rubber inserts shall limit the horizontal flangeway gap to less than or equal to 2.5 inches in pedestrian walkway/sidewalk locations.
    - Shall comply with CFRC MWI 2527 and CFRC Specification 901A
    - Submit shop drawings to the Engineer for approval prior to procurement
- Coordination
  - Provide notification to the Department and local government agency responsible for crossing no later than 28 days prior to road closure
  - Provide notification and duration, 21 days in advance of road closure (911, fire, police, ambulance, rescue, post office, school district, tv/radio)
  - Provide Traffic Control Plans meeting FDOT and local government requirements for each crossing a minimum of 28 days prior to road closure.
- Signal Support – to be provided by CFRC Signal Maintenance of Way Contractor.
  - Assist on jumpers for road closures
  - Removal and reinstallation of track connections
  - Any other signal support, as needed to complete crossing upgrade work
- Asphalt Paving
  - Cut asphalt a minimum of three feet from edge of rail
  - At crossings where more than one track is being upgraded, replace all intertrack asphalt
  - Paved road surface level with top of rail for minimum of 30 inches
  - Runoff minimum of 1 inch per 10 feet

- Install asphalt in accordance with this project's FDOT Specifications. Asphalt shall be superpave (Type SP) traffic level C with a spread rate of 110 lbs/SY per inch. Thickness shall equal the height of rail. Asphalt shall be placed in a minimum of two lifts.
- At Ernestine St. and Gore St. Track 3 removals, replace track crossing with asphalt concrete. Match adjacent pavement thickness

- Ballast
  - Mainline AREMA gradation 4A
  - 12 inches below bottom of tie
  - Compact/roll ballast prior to track panel installation
  - Subballast to be a minimum 6 inches of crusher run
  - Roadbed shall be excavated and new ballast and subballast shall be installed to the full extents of the approach ties
  - See CFRC MWI 301
- Rail
  - 115 lb. RE SS rail to be used on all crossings, with exception of the following crossings:
    - MP 767.03 18th St. – Use 132 lb. RE SS
    - MP 767.07 Southwest Rd. – Use 132 lb. RE SS
    - MP 767.51 Country Club Rd. – Use 132 lb. RE SS
  - Rail to extend a minimum of 20 feet beyond outside end of each crossing panel assembly
  - Transition rail shall be used when necessary
  - See CFRC MWI 507
- Welds
  - Field Welds shall be thermite welds. All other welds shall be flash butt
  - Thermite welds may not be located within the limits of new rail for each grade crossing
  - All joints within 50 feet of each side of the crossing must be welded within three days
  - Ultrasonically hand test all welds within 30 days, submit test results to the Engineer
  - See CFRC MWI 801
- Ties
  - New 10-foot timber ties shall be used for grade crossings and include 10 additional 10-foot ties on each approach to the grade crossing panels and under the grade crossing panels
  - The use of white oak ties are prohibited
  - All ties within the crossing panel limits shall be replaced
  - See CFRC MWIs 401, 403, and 2527
  - Dispose of used ties (except removed pedestrian crossing ties to be stockpiled) in accordance with all environmental laws and regulations. Submit tie disposal certificates to the Engineer.
- Gage
  - Standard gage is 56-1/2 inches
- Spiking
  - Within the track panel limits use one rail holding spike and one plate holding spike on gage and field sides
  - Tie plates shall all be new

- Tie plates shall be double shoulder type
- Spiking pattern on approach ties shall follow standard spiking patterns
- See MWI 2512

- Anchors
  - New anchors shall be used on all road crossings
  - On crossings 50 feet in width or greater in CWR territory, each tie shall be box anchored on every tie for 130 ties in each direction (In jointed rail territory use standard anchor patterns)
  - See CFRC MWI 703
- Drainage
  - Install 6-inch minimum perforated pipe, 12 inches off the end of the tie, at the bottom of the ballast layer, on both sides of each replaced track. Daylight perforated pipe to adjacent trackside ditch.
  - Extend perforated pipe to a minimum of 10 feet off each end of the roadway panels.
  - Adequate drainage shall be provided at all four quadrants, sloped or diverted away from the crossing.
- Geotextile Fabric (Filter Fabric)
  - Geotextile fabric shall be used on all crossings
  - Geotextile fabric shall be nonwoven type, 16 to 20 ounces/square yard
  - Install 12 inches below bottom of tie
  - See CFRC MWI 1003
- Signal Conduit
  - Install two (2) four inch orange HDPE SDR-11 conduits with one No. 12 AWG pull wire in each conduit. Cap all pipe ends.
  - Place both conduits in same locations, at bottom of ballast layer, 12 inches off the end of the tie.
  - Extend conduits 10 feet past the end of the crossing panels on both sides of the crossing.
  - Document location on Highway Grade Crossing Installation Report (see attached).
- Cleanup
  - Dispose of all scrap material and remove old asphalt within 7 days after completion of each crossing upgrade.
  - The Contractor shall be responsible for the removal of rail and OTM in accordance with local, state, and federal environmental regulations.
- Documentation
  - Fill out and submit to the Engineer the Highway Grade Crossing Installation Report (see attached Appendix C)
  - Complete other reports as necessary (track disturbance, field welding report, etc.)

2. Schedule & Submittals

The Contractor shall prepare and submit a schedule for completion of the Technical Requirements from Notice-to-Proceed (NTP) through final acceptance by the Department. The schedule shall include all activities required to complete this Technical Requirements and shall show tasks and durations in sufficient detail to allow the Department to analyze the time required to complete. Prior to

procurement of the concrete crossing panels, the Contractor shall submit shop drawings to the Engineer for review and approval. All work which requires road closures or will impact rail operations must be within the windows shown in Table 2. Further restrictions may be required based upon local special events (parades, etc.) and the need to accommodate tenant railroads.

Schedule to include as a minimum the following:

- Order Materials
- Deliver Materials
- Plan submittals – Work Plans and Temporary Traffic Control Plans
- Field activities – preparation, curfew requirements, speed restriction start/finish of field activities, execution of each major field activities, clean-up/closeout
- Estimated slow orders & removal plan
- Follow-up Field Testing of welds

The following schedule limitations shall apply to the schedule:

- Pedestrian tie replacement within the stations shall be completed within 84 days from issuance of NTP.
- Grade Crossing Upgrade Priority Group One crossing work shall be completed within 182 days from issuance of NTP
- Grade Crossing Upgrade Priority Group Two crossing work shall be completed within 224 days from issuance of NTP
- Grade Crossing Upgrade Priority Group Three crossing work shall be completed within 330 days from issuance of NTP
- Remainder of track renewal work (excluding rail, tie and pedestrian work within the stations) shall be completed within 330 days from issuance of NTP

3. Materials

The Department will furnish the following ties and rail to the contractor at stockpiled locations to complete the Technical Requirements:

- 61,061 LF 115RE Rail in 74 to 80 foot sticks
- 2,849 LF 132 RE Rail in 74 to 80 foot sticks
- 9,213 8.5 foot ties
- 1,727 10 foot ties

The Contractor shall furnish all other ties, rail, crossing panels and OTM necessary to complete the Technical Requirements.

4. Potential Additional Services

Potential Additional Services are described herein solely for informational purposes and are not to be included in the lump sum price for this project. These additional services are contemplated by the Department, and may or may not be provided, at the Department's sole discretion, by other contractors

or this Contractor. If and when such services are sought additional information will be provided to the Contractor.

These potential additional services may include the installation of additional crossing surfaces associated with the implementation of Quiet Zones and other railroad improvements. These potential additional services could include: track panels with rail, ties and concrete crossing panels; concrete crossing panel extensions; and OTM

5. Technical Criteria

All material supply, testing, construction work and documentation shall be in accordance with the latest versions of the following documents at the time of advertisement:

1) CFRC MWI's attached in Appendix D
2) CFRC 49 CFR Part 213 Continuous Welded Rail Plan
3) FRA 49 CFR Part 213 Track Safety Standards
4) AREMA Manual of Practice, Volume 1
5) This Project's FDOT Specifications
6) FDOT Design Standards for Construction Operations on the State Highway System

All Roadway Worker Protection shall be in accordance with the latest version, at the time of advertisement, of the CFRC Roadway Worker Protection plan.

5.1 Additional Definitions

"Central Florida Operating and Management Agreement (CFOMA)" means the Central Florida Operating and Management Agreement between the State of Florida Department of Transportation and CSX Transportation, Inc. pertaining to the Central Florida Rail Corridor, a line of railroad between DeLand, Florida, MP A749.61 and Poinciana, Florida, MP A813.82 and related properties dated November 30, 2007, and amendments.

"VSMF" means Vehicle Storage and Maintenance Facility at Rand Yard in Sanford, Florida.

"Amtrak" means the National Railroad Passenger Corporation.

"CSXT" means CSX Transportation Inc.

5.2 Safety Certification Process

This work is to be certified through the Safety Certification Process in accordance with the SunRail Safety Certification Plan. The contractor shall prepare Safety and Security Construction Conformance Checklists for review and approval by the Engineer. The contractor shall coordinate construction activities, inspections, reports and all other appropriate documentation to ensure verification and conformance with the Safety and Security Construction Conformance Checklists. The Safety

Certification process will follow the methodology found in the Federal Transit Authority's "Handbook for Transit Safety and Security Certification", November 2002.

5.3 CFRC Maintenance of Way Instructions/Standard Drawings for Track Renewal & Grade Crossing Upgrade Project

Maintenance of Way Instructions/Standard Drawings for Track Renewal & Grade Crossing Upgrade project to complete the Technical Requirements is included in Appendix D.

The following changes to Maintenance of Way Instructions/Standard Drawings for Track Renewal & Grade Crossing Upgrade Project included in Appendix D apply:

- The terms **CFRC Maintenance of Way Manager, CFRC Chief Operating Office, Chief Engineer, Roadmaster, Track Manager, Signal Maintenance Manager, Signal Manager, Bridge Manager**, are replaced with the term **Engineer**. The definition of the term **Engineer** is defined in the FDOT Standard Specifications for Road and Bridge Construction
- MWI 301-04 page 4 of 7 – Item (6) paragraph (B): The 4th sentence is deleted and replaced with the following:
    - The reports shall be forwarded in a consolidated monthly summary of tests in an electronic tabulated format.
- MWI 99001 page 1 of 20 – Item 1.0 Scope: The 2nd sentence is deleted.
- MWI 507-04 page 2 of 6 – Section I Item G.: Item G is deleted and replaced with the following:
    - G. All flash butt welds will be magnetic particle tested in accordance with AREMA manual for Railway Engineering Volume 1, Chapter 4 Rail, Part 3 Joining of Rail
- MWI 507-04 page 3 of 6 - Section II Item B: The 1st sentence is deleted. The column containing Stock Control # is deleted in its entirety.
- MWI 708-01 page 1 of 3 – Section II Subsection A Item 1: Item 1 is deleted and replaced with the following:
    - 1. Premium insulated joints are joints design to exhibit more elasticity or stiffness than standard insulated joints
- MWI 801-06 various locations – the terms listed in the left side column of the following table are deleted in every instance they appear in MWI 801-06. Replacement terms are provided in the right side column if applicable:

Deleted Term	Replacement
SNOOP	Liquid Leak Detector
Orgo Thermit	N/A
Boutet	N/A
Railtech	N/A
CJ Crucible	sealed, felt lined, lid type crucible
CJ Crucible (one-shot)	Sealed, felt lined, lid type crucible
Victor HD310C Torch Handle	Torch Handle with built in reverse flow check valves
Teflon	Polytetrafluoroethylene (PTFE)

Deleted Term	Replacement
Maximo	N/A
Tempilstick	Temperature indicating stick
CJ Fork	Fork
CJ Crucible Fork	Crucible Fork
Plasser	N/A

- MWI 801-06 Page A-8 – Item 10. Item 10 is deleted and replaced with the following:
  - 10. All ground connection must be mechanically strong, close to the work, and of adequate size electrically. Never attach ground clamp to the rail base. Use of a magnetic ground clamp that attaches to the ball of the rail is recommended.
- MWI 801-06 Page C-1 – Item 1. Item 1 is deleted and replaced with the following:
  - Engine burns in carbon steel rails will be repaired through the use of the electric-arc welding process with the mandatory use of either heating blocks or a rail heater
- MWI 801-06 Page G-7 – Sketch G-4A. The following sentence is deleted:
  - Ordering Reference Class 015 Item 0001750
- MWI 801-06 Page I-6 – Item 25. Item 25 is deleted.
- MWI 801-06 Page I-7 - Heading for Hydraulic Rail Puller Procedures for Geismar Model TH-120-STP is deleted and replaced with the following:
  - Hydraulic Rail Puller Procedures for 120 Ton Rail Puller
- MWI 801-06 Page I-10 - Heading for Hydraulic Rail Puller Procedures for Simplex RP 120 is deleted and replaced with the following:
  - Hydraulic Rail Puller Procedures for 120 Ton Rail Puller
- MWI 801-06 Page I-14 – Item j. The third sentence in Item j. is deleted and replaced with the following:
  - Use of a “Canting Tool” is very helpful in removing twist from the rail
- MWI 801-06 Page I-16 – Item g. Item g. is deleted and replaced with the following:
  - g. Ready-to-use luting material is available.
- MWI 801-06 Page I-17 – Item d. Item d. is deleted and replaced with the following:
  - d. Follow all manufacturer’s approved preheating instructions
- MWI 801-06 Page I-24 – Item e. Item e. is deleted and replaced with the following:
  - e. The proper preheat working pressures are: Propane – 15 PSI; Oxygen – 65 PSI; Burner Hgt – 1 1/2”
- MWI 801-06 Page I-27 Item d. Sub-item 2. Sub-item 2 is deleted and replaced with the following:
  - 2. Use a mechanical or hydraulic jack under the center of the two rail ends, and lift them slightly. Place the four wedges under each side of the tie plate on both ties to nearly the desired height. Then remove the jack. A few light hits with a dead blow hammer should be all that is required to reach the desired crown and elevation.
- MWI 801-06 Page I-32 Item e. Item e. is deleted and replaced with the following:
  - e. Use the manufacturer approved preheating equipment
- MWI 801-06 Page I-35 Item 9. Item 9 is deleted and replaced with the following:

- 9. REPORTING
  - A welding report must be submitted at the completion of each work day, as well as a Track Disturbance Record for any Thermite weld made in the track structure. Be sure to use "WG" as the weld type instead of "BU" so the proper credit will be recorded when making Wide Gap Welds. Also record the thermite weld batch/serial numbers.

- MWI 801-06 Page M-1 Item e. Item e. is deleted and replaced with the following:
  - e. Electric flash butt welds shall be marked on the field side web of the rail near the weld with an identifying marking. This marking will include the following information:
    - The vender or CFRC equipment making the weld; use vender or CFRC abbreviations
    - The equipment number of the machine/truck making the weld
    - Was this a closure weld?
      - If it was insert a "C" before the sequence number
      - If not, leave blank
    - The weld sequence number
    - The date the weld was made
  - A sample marking for a closure weld made by XYZ corporation, using truck # 555 follows: XYZ 555 C 1234 1/18/06
- MWI 801-06 Page M-4 the 6th paragraph under the heading REPAIR WELDING PROCEDURE. The 6th paragraph is deleted and replaced with the following:
  - Temperature Measuring Device – The In-Track Welding Team is normally equipped with a digital thermometer with an industrial surface probe both having temperature ranges of at least -127°C to 600°C. It should read instantly and temperature measurements can be made quickly
- MWI 801-06 Pages N-1 thought N-3. Section N is deleted and replaced with the following:

- **N. APPROVED WELDING ELECTRODES AND WIRES**

FOR USED WITH MANAGANESE FROGS

Size	***Polarity***	***Description***	***Use***
3/16" Electrode	*DCRP*	Coated 22% manganese alloy.	Build-up and repair of manganese components in frogs and crossings.
1/16" Wire	*DCRP*	Flux core, self-shielded 25% manganese alloy.	Build-up and repair of manganese components In frogs and crossings.

5/64” Wire	*DCRP*	Flux core, self-shielded 25% manganese alloy.	Build-up and repair of manganese components in frogs and crossings.
5/32” 3/16” Electrode 5/64” 1/16” Wire	DCRP	Coated CR NI MG alloy. Deposit hardness 200 BHN. Work hardens to 470 BHN.	Build-up and repair of manganese components in frogs and crossings. Peened as deposited except first and last pass.
Size	***Polarity***	***Description***	***Use***
5/32” 3/16” 3/16” Electrode	DCRP DCRP DCRP	Coated High Strength joining electrode. As deposited 160 BHN. Work hardens to 450 BHN.	Repairing flangeway cracks and defects in manganese frogs and crossings, and starter pads for manganese build-up. Keep 3/8" below running surface.
1/16” 5/64” Wire	DCRP	Flux core, self shielded Austenitic Manganese 11% to 14% - As deposited 220 BHN. Work Hardens to 530 BHN.	Build-up and repair of manganese components in frogs and crossings. Peened as deposited except first and last pass.

FOR USE WITH RAILS

Size	***Polarity***	***Description***	***Use***
3/16” Electrode	*DCRP*	Coated Carbon Steel Alloy. Deposit hardness 208 BHN Work hardens to 390 BHN	Build-up and repair of carbon steel components; rail ends, switch points engine burns, and rail, bolted frogs and crossings Use approximately 180 amps..

1/16” 5/64”Wire 1/16”Wire 5/64” Wire	DCRP	Coated Carbon Steel Alloy. Deposit hardness 208 BHN Work hardens to 390 BHN	Build-up and repair of carbon steel components; rail ends, switch points engine burns, and rail, bolted frogs and crossings Use approximately 28 Vo
1/8” 3/16” Electrode	DCRP	Coated Carbon Steel Alloy. Deposit hardness 208 BHN Work hardens to 390 BHN	Build-up and repair of carbon steel components; rail ends, switch points engine burns, and rail, bolted frogs and crossings Use approximately 180 Amps
Size	***Polarity***	***Description***	***Use***
1/8” 5/32” 3/16” Rod	DCRP	Hardalloy	Build-up and repair of carbon steel components; rail ends, switch points engine burns, and rail, bolted frogs and crossings
1/16” 5/64” Wire	DCRP	Carbon Steel Alloy	Build-up and repair of carbon steel components; rail ends, switch points engine burns, and rail, bolted frogs and crossings Use approximately 28 Vo
1/8” 5/32” 3/16” 1/4" Rod	DCRP		Use ¼” only with machines capable of 300+ amps

OTHER RODS

Size	*Polarity*	*Description*	*Use*
1/4” x 22” 1/4” x 44”	*DCRP*	Tubular metal rod	For removal of defective material from manganese components
5/32" x 12" 3/16" x 12" 1/4" x 12" 5/16" x 12" 3/8" x 12" 3/8” x 5/32” X12” 5/8" x 3/16" x 12" 3/8” x 12”	*DCRP*	Copper coated carbon Arc	For removal of defective material by gouging.
1/8” 5/32" 3/16" 3/32” 1/4”x18” Electrode	*DCRP*	Electrode made to AWS E7018E specifications.	Welding structural steel, repairing roadway machines, frames, etc.

MWI 801-06 Pages O-1 thought O-10. Section O is deleted.

- MWI 901-07 various locations – the terms listed in the left side column of the following table are deleted in every instance they appear in MWI 901-07. Replacement terms are provided in the right side column if applicable:

Deleted Term	Replacement
Torx	Star
(015.0001283.1)	N/A
Pandrol	Positive Restraint Tie

- MWI 1101-05 Page 5 of 8 Item 1. d) – Item 1. d) is deleted and replaced with the following:
  - d) Rail anchors, spikes, screws or positive restraint rail fasteners will be handled bulk through team supply chains
- MWI 1101-05 Page 8 of 8 Item A. Item A. is deleted and replaced with the following:
  - A. The Engineer will ensure that the Daily Production Reports are input into the appropriate computer system, completed with a hand held device, faxed in using the proper form, or telephoned into the office. These reports must be completed for each day's production. Care must be exercised to ensure that all information is accurate.
- MWI 1103-04 Page 10 of 10 Curve Alignment Reference Form, Type of Fasteners, Pandrol Plates; The term Pandrol Plates is deleted and replaced with the following:
  - (Positive Restraint Tie Plates)
- MWI 1109-11 Page 7 of 18 Item 3. Item 3 is deleted and replaced with the following:
  - 3. When any of the activities or conditions identified in section II.G.1. & II.G.2. are performed, regardless of rail temperature, a *Track Disturbance Report* must be completed. The *Track Disturbance* Report should be reviewed periodically to ensure that temporary speed restrictions are placed when temperature conditions warrant.
- MWI 1125-03 Page 8 of 11 Item 4. – Item 4. Is deleted
- MWI 1125-03 Page 11 of 11 Item A. – Item A is deleted and replaced with the following:
  - The employee–in-charge of the rail laying will complete the records of rail laying on a continuous basis during rail installation. All records shall be provided to the Engineer.
- MWI Volume II Standard Drawings – Epoxy Bonded Insulated Joint for 115RE, 132RE, 136RE, and 141RE Rail. The following items are deleted from the subject standard drawing
  - 013.30000300.1 LB FOSTER BONDED INSULATED JOINT BOLT REPLACEMENT KIT
  - 013.30000400.1 PORTEC/KOPPERS BONDED INSULATED JOINT BOLT REPLACEMENT KIT
- MWI Volume II Standard Drawings – Main Track Spiking Patterns Side Track Spiking Patterns. the terms listed in the left side column of the following table are deleted in every instance they appear in subject standard drawing. Replacement terms are provided in the right side column if applicable:

Deleted Term	Replacement
PANDROL ROLLED PLATE	POSITIVE RESTRAINT ROLLED PLATE
PANDROL VICTOR PLATE	AREMA TYPE POSITIVE RESTRAINT PLATE

APPENDIX A - CWR INSTALLATION							
LOCATIONS	**Track 1 East Rail**	**Track 1 West Rail**	**Track 2 East Rail**	**Track 2 West Rail**	**Total Lineal Feet**	**Insul-ated Joints**	**REMARKS**
DeBary Station	512	512	0	0	**1024**	**2**	Replace from north of existing insulated joints to 100 feet south of station platform. Install 2 new insulated joints at existing locations. All rail/IJ's to be 132RE.
Lake Mary Station	315	297	0	0	**612**		Replace from Palmetto Ave. grade crossing tangent to spiral (TS) point
Longwood Station	250	260	0	0	**510**		Replace as marked within station
Maitland Station	206	216	0	0	**422**		Replace from spiral to tangent (ST) point to 100 feet south of the mini-hi
CP 783 to Sybelia Ave	283	283	N/A	N/A	**566**		Replace from switch to Sybelia Ave grade crossing
Sybelia Ave to George Ave	495	495	N/A	N/A	**990**		Replace from Sybelia Ave to 2003 rail
Horatio Ave to Packwood Ave	271	267	N/A	N/A	**538**		Replace from Horatio Ave to 2003 rail
Ventris Ave to Palmetto Ave	500	485	N/A	N/A	**985**		Replace from Ventris Ave to 2003 curve rail
Palmetto Ave to Lake Ave	555	212	N/A	N/A	**767**		Replace from south end of curve to Lake Ave grade crossing
Lake Ave to 17/92 UGB	507	0	N/A	N/A	**507**		Replace from Lake Ave grade crossing to tangent to spiral (TS) point of curve
~~Lake Ave to 17/92 UGB (CURVE)~~	~~0~~	~~**1283**~~	~~N/A~~	~~N/A~~	~~**1283**~~		~~Replace west rail for entire curve with **1283 feet of 115RE head hardened rail**~~
Lake Ave to 17/92 UGB (BRIDGE)	**400**	**400**	N/A	N/A	**800**		Replace from just north of US 17/92 bridge to just south of US 17/92 bridge. Replace with **400 feet of 115RE head hardened rail for each rail.**
US 17/92 bridge to CP 784	741	726	N/A	N/A	**1467**		Replace from US 17/92 bridge to beginning of curve
CP 784 to N. Denning Dr (CURVE)	**214**	**222**	0	0	**436**	**3**	Replace east and west rail from turnout to N. Denning Dr grade crossing. On west rail, replace insulated joint at turnout and at signal. On east rail, replace insulated joint at signal.
Signal 785.4 to new CWR 130 feet to the north of Signal 785.4	130	34	0	0	**164**		Replace between the signal and the new CWR located approximately 130 feet north of the signal
New York Ave to Signal 785.4	32	0	0	28	**60**		Replace from insulated joints at MP 785.4 signal to New York Ave grade crossing
New York Ave to Canton Ave	0	0	0	**82**	**82**		Replace between the grade crossings with **115RE head hardened rail.**
Canton Ave to Morse Blvd	142	165	167	211	**685**		Replace jointed rail from the Winter Park station pedestrian crossing north of Morse Blvd to Morse Blvd grade crossing
Canton Ave to Morse Blvd (CURVE)				**710**	**710**		Replace Track 2 west rail from Canton Ave grade crossing to the end of the curve with **710 feet of 115RE head hardened rail**

APPENDIX A - CWR INSTALLATION							
LOCATIONS	**Track 1 East Rail**	**Track 1 West Rail**	**Track 2 East Rail**	**Track 2 West Rail**	**Total Lineal Feet**	**Insul-ated Joints**	**REMARKS**
Morse Blvd to New England Ave	155	573	0	**571**	**1299**		Replace Track 1 east rail from Morse Blvd grade crossing to beginning of curve. Track 1 west rail from grade crossing to grade crossing. Track 2 west rail, **replace with 571 feet 115RE head hardened rail** from grade crossing to grade crossing
New England Ave to New York Ave/Lyman Ave	0	260	0	**271**	**531**		Replace Track 1 west rail from New England Ave grade crossing to insulated joint at the signal north of New York Ave/Lyman Ave grade crossing. Track 2 west rail, **replace with 271 feet 115RE head hardened rail** from New England Ave grade crossing to insulated joint at the signal north of New York Ave/Lyman Ave grade crossing.
New York Ave/Lyman Ave to Fairbanks	610	897	0	**300**	**1807**		Replace Track 1 west rail from New York Ave/Lyman Ave grade crossing to Fairbanks Ave grade crossing. Track 1 east rail from spiral to tangent (ST) point to Fairbanks Ave grade crossing. Track 2 west rail, **replace with 300 feet 115RE head hardened rail**, from New York Ave/Lyman Ave grade crossing to spiral to tangent (ST) point
Fairbanks Ave to Holt Ave/Pennsylvania Ave	466	442	0	0	**908**		Replace from grade crossing to grade crossing
Holt Ave/Pennsylvania Ave to Minnesota Ave	590	617	0	0	**1207**		Replace from spiral to tangent (TS) point of curve to Minnesota Ave grade crossing
Minnesota Ave to S. Denning Dr	638	638	0	0	**1276**		Replace from grade crossing to grade crossing
S. Denning to Orlando Ave	776	775	0	0	**1551**		Replace Track 1 replace east rail (452 feet) and west rail (475 feet) from S Denning Dr grade crossing to north end of curve. Track 1 replace east rail (324 feet) and west rail (300 feet) from south end of curve to Orlando Ave grade crossing.
Orlando Ave to Westchester Ave	789	770	0	0	**1559**		Replace from grade crossing to grade crossing
Westchester Ave to Wilkinson St	850	547	0	0	**1397**	**1**	Replace Track 1 replace east rail (484 feet) and west rail (547 feet) from Westchester Ave grade crossing to north end of curve. Track 1 south of curve to Wilkinson St grade crossing, replace east rail (366 feet) and insulated joint on east rail at signal.
King St to Rollins St	625	732	0	0	**1357**		Replace Track 1 replace east and west rails from King St grade crossing to north end of curve.

APPENDIX A - CWR INSTALLATION							
LOCATIONS	**Track 1 East Rail**	**Track 1 West Rail**	**Track 2 East Rail**	**Track 2 West Rail**	**Total Lineal Feet**	**Insul-ated Joints**	**REMARKS**
Florida Hospital Station (Rollins St to Princeton St)	436	560	0	0	**996**		Replace Track 1 replace east and west rails from south end of curve to Princeton St grade crossing
Princeton St to Virginia Ave	**1453**	730	0	0	**2183**		Replace Track 1 in the curve, **replace east rail with 713 feet of 115RE head hardened rail**. Track 1 from south end of curve to Virginia Ave grade crossing, replace east rail (740 feet) and west rail (730 feet).
Highland Ave to Magnolia Ave	178	497	0	0	**675**		Replace Track 1 west rail, replace rail from south end of curve to Magnolia Ave grade crossing. Track 1 east rail, replace jointed rail north of Magnolia Ave grade crossing.
Magnolia Ave to Orange Ave	276	180	0	0	**456**		Replace Track 1 replace east and west rails from Magnolia Ave grade crossing to north end of curve.
Marks St to Colonial Dr	110	0	0	0	**110**		Replace Track 1 east rail, replace jointed rail north of Colonial Dr grade crossing.
Colonial Dr to Concord St	654	636	0	0	**1290**		Replace from grade crossing to grade crossing
Concord St to Amelia St	463	462	0	0	**925**		Replace from grade crossing to grade crossing
LYNX Station (Amelia St to Livingston St)	560	560	0	0	**1120**		Replace from grade crossing to grade crossing
Livingston St to Robinson St	553	563	0	0	**1116**	**2**	Replace from grade crossing to grade crossing. Replace existing insulated joints at signal
Robinson St to Jefferson St.	281	278	0	0	**559**		Replace from grade crossing to grade crossing
Jefferson St to Washington St	144	68	0	0	**212**		Replace Track 1 north of switch, replace east rail (108 feet) and west rail (26 feet). Track 1 south of switch, replace east rail (36 feet) and west rail (42 feet)
Washington St to Central Ave	478	470	0	0	**948**		Replace from grade crossing to grade crossing
Central Ave to Pine St	180	180	0	0	**360**		Replace from grade crossing to grade crossing.
Pine St to Church St	268	268	0	0	**536**		Replace from grade crossing to grade crossing
Church St Station (Church St to South St)	555	525	0	0	**1080**		Replace from grade crossing to grade crossing
Church St Station (South St to Anderson St Bridge) (Curve)	0	0	0	**879**	**879**		Track 2, **replace west rail in curve with 879 feet of 115RE head hardened rail**
Under Anderson St overhead bridge (tangent between two curves	218	98	101	0	**417**	**0**	Replace tangent section between the two curves, approximately under the Anderson St bridge

APPENDIX A - CWR INSTALLATION							
LOCATIONS	**Track 1 East Rail**	**Track 1 West Rail**	**Track 2 East Rail**	**Track 2 West Rail**	**Total Lineal Feet**	**Insul-ated Joints**	**REMARKS**
Anderson St Bridge to America St (Curve)	0	0	**953**	**965**	**1918**	**0**	Track 2, **replace east rail (953 feet) and west rail (965 feet) within curve with 115RE head hardened rail.**
America St to Ernestine St	515	512	0	0	**1027**	**0**	Replace from grade crossing to grade crossing
Ernestine St. to Crossover south of Ernestine St	37	32	0	0	**69**	**0**	Replace Track 1 from Ernestine St grade crossing to the crossover south of Ernestine St.
Crossover north of Gore St to Gore St grade crossing	135	121	0	0	**256**	**0**	Replace from the crossover north of Gore St to the Gore St grade crossing
Gore St grade crossing to the north end of the crossover south of Gore St	187	190	0	0	**377**	**0**	Replace from Gore St grade crossing to the north end of the crossover south of Gore St
South end of crossover south of Gore St to the new CWR to the south	34	33	0	0	**67**	**0**	Replace from the south end of the crossover south of Gore St to the new CWR to the south of the crossover
Track 1 to 3 turnout to the new CWR to the north of the turnout	83	77	0	0	**160**	**0**	Replace from the track 1 to 3 turnout North of Columbia St to the new CWR to the north of the turnout
Track 1 to 3 turnout to Columbia St	250	258	**45**	**45**	**598**	**2**	Replace from the track 1 to 3 turnout to Columbia St. Cut out the 45 foot insulated joints on east and west rails from track 3 and replace with standard 115 RE rail. Replace the existing east and west rail poly bars on track 1 at the signal with the track 3 insulated joints.
Columbia St to turnout north of Kaley St	2482	2482	0	0	**4964**	**0**	Replace from grade crossing to grade crossing
Kaley St. to crossover south of Kaley St	94	93	0	0	**187**	**0**	Replace from Kaley St grade crossing to first crossover south of Kaley St
Sand Lake Station	540	540	0	0	**1080**	**2**	Replace from 100 feet north of the station to 100 feet south of the mini-high. Replace two IJ's at north end of the station.
NON-STATION TOTAL LF	**20393**	**20696**	**1266**	**4062**	**46417**	**8**	**Eliminates 1950's jointed rail**
STATIONS TOTAL LF	**1823**	**1825**	**0**	**0**	**3648**	**4**	**Replaces old CWR within stations**
Note: red numbers indicate head hardened rail shall be used **Note: All rail is 115 RE SS unless otherwise noted.**							
				Rail Miles:	**9.48**		
				Track Miles	**4.74**		

APPENDIX B - TIES TO BE REPLACED				
STATIONS & Other Locations	**Track 1**	**Track 2**	**Total**	**Remarks**
DeBary Station	66	0	**66**	
Sanford Station	41	130	**171**	
Old Sanford Station (North of McCracken Rd)	156	162	**318**	
Lake Mary Station	14	0	**14**	
Longwood Station	50	0	**50**	Ties located on the north end of the station
Altamonte Station	0	75	**75**	
Maitland Station	78	0	**78**	
CP 783 to Sybelia Ave	20	**N/A**	**20**	Ties located between switch and Sybelia Ave road crossing
Sybelia Ave to George Ave	60	**N/A**	**60**	Ties located between grade crossings
George Ave to Horatio Ave	70	**N/A**	**70**	Ties located between grade crossings
Horatio Ave to Packwood Ave	90	**N/A**	**90**	Ties located between grade crossings
Packwood Ave to Maitland Ave	20	**N/A**	**20**	Ties located between grade crossings
Maitland Ave to Ventris Ave	40	**N/A**	**40**	Ties located between grade crossings
Ventris Ave to Palmetto Ave	175	**N/A**	**175**	Ties located between grade crossings
Palmetto Ave to Lake Ave	230	**N/A**	**230**	Ties located between grade crossings
Lake Ave to US 17/92 bridge	510	**N/A**	**510**	Ties located between Lake Ave and US 17/92 bridge
US 17/92 bridge to CP 784	170	**N/A**	**170**	Ties located between US 17/92 bridge and switch
CP 784 to N. Denning Drive	50	30	**80**	Ties located between switch and N. Denning Drive grade crossing
Denning Dr to Penn/Webster Ave	273	247	**520**	Ties located between grade crossings
Penn/Webster Ave to New York Ave	298	226	**524**	Ties located between grade crossings
Winter Park Station	127	147	**274**	Ties located from north end of station to Morse Blvd grade crossing
Winter Park Station	32	0	**32**	Ties located from Morse Blvd grade crossing to New England Ave grade crossing
Winter Park Station	100	76	**176**	Ties located from New England Ave grade crossing to Lyman Ave grade crossing
Lyman Ave /New York Ave to Fairbanks Ave	152	0	**152**	Ties located between grade crossings
Fairbanks Ave to Holt/Penn Ave	72	73	**145**	Ties located between grade crossings
Holt/Penn Ave to Minnesota Ave	163	158	**321**	Ties located between grade crossings
Minnesota Ave to S Denning Dr	131	0	**131**	Ties located between grade crossings
Denning Dr to US 17/92	202	220	**422**	Ties located between grade crossings
US 17/92 to Westchester Ave	145	157	**302**	Ties located between grade crossings
Westchester Ave to Wilkinson St	309	0	**309**	Ties located between grade crossings
Wilkinson St to King St	174	0	**174**	Ties located between grade crossings
King St to Rollins St	143	0	**143**	Ties located between grade crossings

APPENDIX B - TIES TO BE REPLACED				
STATIONS & Other Locations	**Track 1**	**Track 2**	**Total**	**Remarks**
Florida Hospital Station	212	209	**421**	Ties located between Rollins St grade crossing and Princeton St grade crossing
Princeton Ave to Virginia Ave	362	0	**362**	Ties located between grade crossings
Virginia Ave to Alden Rd	107	0	**107**	Ties located between grade crossings
Alden Rd to Highland Ave	37	0	**37**	Ties located between grade crossings
Highland Ave to Magnolia Ave	233	0	**233**	Ties located between grade crossings
Magnolia Ave to Orange Ave	87	0	**87**	Ties located between grade crossings
Colonial Dr to Concord St	124	140	**264**	Ties located between grade crossings
LYNX Station	154	160	**314**	Ties located between Amelia St grade crossing and Livingston St grade crossing
Robinson St to Jefferson St	60	60	**120**	Ties located between grade crossings
Jefferson St to Washington St	5	40	**45**	Track 1 ties located between switch and Washington St grade crossing. Track 2 ties located between grade crossings
Washington St to Central Ave	45	49	**94**	Ties located between grade crossings
Central Ave to Pine St	25	28	**53**	Ties located between grade crossings
Pine St to Church St	44	54	**98**	Ties located between grade crossings
Church Street Station	126	120	**246**	Ties located between Church St grade crossing and South St grade crossing
Church Street Station	96	87	**183**	Ties located between South St grade crossing and signal at MP 790.5
Signal at MP 790.5 to East-West Expressway Overhead Bridge	80	33	**113**	Ties located between signal at MP 790.5 and East-West Expressway overhead bridge
America St to Ernestine St	118	68	**186**	Ties located between grade crossings
Ernestine St to Crossover	21	0	**21**	Ties located between Ernestine St grade crossing and crossover
Crossover north of Gore St to Gore St	42	0	**42**	Ties located between crossover and Gore St
Gore St to Crossover south of Gore St	57	77	**134**	Ties located between Gore St and crossover
Crossover south of Gore St to turnout to Track 3	37	77	**114**	Ties located between crossover and turnout to Track 3
Track 1 to 3 Turnout to Columbia Ave	61	0	**61**	Ties located between turnout to Track 3 and Columbia Ave grade crossing
Orlando Amtrak Station	165	450	**615**	Ties located between Columbia Ave grade crossing and south end of Orlando Amtrak station
South end of Orlando Amtrak Station to Kaley St	100	186	**286**	Ties located between south end of Orlando Amtrak station and Kaley St grade crossing
Kaley St to Crossover south of Kaley St	16	19	**35**	Ties located between Kaley St grade crossing and crossover
Sand Lake Rd Station	70	0	**70**	
TOTALS	**6645**	**3558**	**10203**	**8.5' ties**
Pedestrian Crossing 10' Ties 6 EA @ 40 locations (see Section 1.1.D for locations)			**240**	**10' Ties**

CFRC
Central Florida Rail Corridor

Appendix C
Highway Grade Crossing Installation Report

Date Installed: _____

Track (s): _____ MP: _____

Crossing Name: _____

Type of Crossing: _____ (Public, Private, Pedestrian)

Length of Crossing (ft): _____

Rail Weight: _____

Crossing Type Installed _____ (Conc. Panel, Asph. w/ Rubber, etc.)

Panel Manufacturer: _____

Surfaced? _____ Track Stabilizer Used? _____

# of Welds: _____ Slow Order Applied/Duration? _____

Ballast Depth: _____ inches

Perforated Pipe Used/Size? Yes or No Size / _____ inches Bury Depth: _____ inches

Track: _____ Side: E or W

Two 4" Signal Conduit with pull wire installed? Yes or No Bury Depth: _____ inches

Track: _____ Side: E or W

Filter Fabric Used? Yes or No Bury Depth: _____ inches

Contractor's name performing crossing work: _____

Contractor's name performing detour work: _____

Contractor's name performing paving work: _____

Notes: _____

Foreman's Signature: _____ Date: _____

Manager's Signature: _____ Date: _____

CONTRACTOR DATA SHEET
CENTRAL FLORIDA RAIL Corridor (CFRC)
Track Renewal & Grade Crossing Upgrade
RFP-DOT-14-15-5005-TRK

CORPORATE INFORMATION DATE:_____

FEDERAL EMPLOYER IDENTIFICATION NUMBER (FEID): _____
(State Purchasing System (SPURS) Contractor Number)

CONTRACTOR NAME:_____

CORPORATE STRUCTURE: (Inc./LLC):_____

ADDRESS:_____

CITY, STATE, ZIP:_____

TELEPHONE:_____

CELLULAR:_____

TOLL FREE NO.: (800)_____ FAX NO.:_____/_____

INTERNET E-MAIL ADDRESS:_____

INTERNET WEBSITE URL:_____

LOCAL OFFICE INFORMATION, (If other than above)

CONTACT NAME:_____

ALTERNATE CONTACT:_____

ADDRESS:_____

CITY, STATE, ZIP:_____

TELEPHONE:_____

CELLULAR:_____

TOLL FREE NO.: (800)_____ FAX NO.:_____/_____

INTERNET E-MAIL ADDRESS:_____

CONTRACTOR DATA SHEET
CENTRAL FLORIDA RAIL Corridor (CFRC)
Track Renewal & Grade Crossing Upgrade
RFP-DOT-14-15-5005-TRK

RFP Requirements

1) REGISTERED IN MYFLORIDAMARKETPLACE: (Y/N) _____Attach Proof

5.2) AUTHORIZED TO DO BUSINESS IN THE STATE OF FLORIDA: (Y/N)_____Attach Proof

5.3) LICENSED TO CONDUCT BUSINESS IN THE STATE OF FLORIDA: (Y/N)_____
Attach Proof

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

PROPOSAL OF

375-020-08
CONTRACTS ADMINISTRATION
OGC - 05/12

_____

(Proposer's Firm Name) (Prequalified Name, if Applicable)

_____

(Proposing Firm's Physical Address -- City -- State -- Zip)

F.E.I.D. No. _____ Telephone No. (____) _____ FAX No. (____) _____

Email Address: _____

for constructing or otherwise improving a Bridge(s) and/or Section(s) of Road(s) No(s). or building(s) Central Florida Rail Corridor, (CFRC) Track Renewal and Grade Crossing Upgrade

in Orange County(ies),

_____

_____ approximately _____

in length, and known as Federal Aid Project No(s).:

Contract No.: Financial Project No(s).: 412994-4-52-11

TO THE STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION: Submitted _____

The Bidder, hereby declares that no person or persons, firm or corporation, other than the Bidder, is interested, in this proposal, as principals, and that this Proposal is made without collusion with any person, firm or corporation, and we have carefully and to our full satisfaction examined the Proposal forms, the Standard Specifications as amended by the Specifications Package and any Supplemental Specifications Packages, and the Plans, and that we have made a full examination of the location of the proposed work and the sources of supply of materials, and we hereby agree to furnish all necessary labor, equipment, and materials, fully understanding that the quantities shown herewith are approximate only, and that we will fully complete all necessary work in accordance with the Plans and Specifications, and the requirements under them of the Engineer, within the time limit specified in this Proposal for the following unit prices, to wit:

Was an addendum issued on this project?

☐ Yes ☐ No

I (We) hereby acknowledge receipt of the following Addenda issued during the bidding period.

Addendum No.	Dated	Addendum No.	Dated

The Bidder agrees to perform all necessary work, as provided for in the contract, and if awarded the contract, to execute the Contract within 10 calendar days, excluding Saturdays, Sundays, and state holidays, after the date on which the notice of award has been given, and to fully complete all necessary work under the same within not more than 330 calendar days. It is understood and agreed that the date on which calendar days will begin to be charged to the project shall be either (1) the 30 calendar day from the date of issuance of the initial notice to begin work or (2) the date on which the Bidder actually begins work, whichever date is the earlier. The Bidder further agrees to furnish a sufficient and satisfactory bond in the sum of not less than 100 percent of the Contract price of the work as indicated by the approximate quantities shown herein.

The Bidder further agree(s) to bear the full cost of maintaining all work until final acceptance, as provided in the Contract.

If the total amount of this bid exceeds $150,000.00, a bid guaranty of five percent (5%) of the bid, payable to the Florida Department of Transportation, must accompany this proposal. The guaranty amount shall include all bid items except construction days for A+B Bidding and lane closure for Lane Rental Bidding. If this proposal is accepted and the Bidder fails to execute the Contract under the conditions of this proposal, the bid guaranty shall be forfeited to the Department; otherwise, said guaranty is to be returned to the Bidder upon delivery of a satisfactory bond. The Florida Department of Transportation officials and employees are prohibited by law from soliciting and accepting funds or gifts from any person who has, maintains, or seeks business relations with the Department pursuant to Section 334.195, Florida Statutes.

The Bidder, hereby certifies that it has carefully examined this proposal after the same was completed, and has verified each item placed thereon. The Bidder agrees to indemnify, defend, and save harmless, the Department against any cost, damage, or expense which it may incur or be caused by any error in the Bidder's preparation of same. By signing and submitting this proposal, the Bidder certifies that no principal (which includes officers, directors, or executives) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any federal department or agency.

The Bidder hereby certifies that the submitted unit price sheets are generated from the diskette provided by the STATE OF FLORIDA, DEPARTMENT OF TRANSPORTATION or accurate reproductions generated from the Department's issued Expedite Bidding System (EBS) program. If any errors have been made by the Bidder in preparing the generated sheets, the Bidder hereby consents that such errors will be applied by the Department in the manner most beneficial to the Department.

The Bidder hereby certifies and obligates its firm as "Principal (bidder)" to the attached Bid or Proposal Bond, (Form 375-020-09) as if and to the same effect as if the Bidder had affixed its signature thereon.

Section 287.134(3)(a), Florida Statutes, requires: An entity or affiliate who has been placed on the discriminatory vendor list may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for the construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform work as as contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity.

Section 553.62, Florida Statutes, incorporates the Occupational Safety and Health Administration's (OSHA) safety standards, 29 CFR s. 1926.650 Subpart P, as the state standard. The Department of Labor and Employment Security may adopt updated or revised versions by rule. Other state or political subdivisions may also have standards that are applicable. If trench excavation will be required on the project in excess of five feet in depth, the Bidder must identify the cost of compliance with the applicable trench safety standards below. If there will be no trench excavation on the project in excess of five feet in depth, write "not applicable" below.

	Trench Safety Measure (Description)	Units of Measure	Quantity	Unit Cost	Extended Cost
A.					
B.					
C.					

(ATTACH SEPARATE SHEET IF NECESSARY)

TOTAL: $ _____

If applicable, this certifies that all trench excavation done within the control of the contractor will be in accordance with all applicable standards and with the specifications, and all requirements of Sections 553.63(1)(a), 553.63(1)(b), and 553.63(1)(c), Florida Statutes.

Job No(s):

412994-4-52-11

375-020-08
CONTRACTS ADMINISTRATION
OGC - 05/12

The Bidder hereby declares that the undersigned is the person or persons responsible within the firm for the final decision as to the price(s) and amount of this bid and the Bidder further declares that:

1. The price(s) and amount of this bid have been arrived at independently, without consultation, communication, or agreement for the purpose of restricting competition with any other contractor, bidder or potential bidder.

2. Neither the price(s) nor the amount of this bid have been disclosed to any other firm or person who is a bidder or potential bidder on this project, and will not be so disclosed prior to the bid opening.

3. No attempt has been made or will be made to solicit, cause, or induce any firm or person to refrain from bidding on this project, or to submit a bid higher than the bid of this firm, or any intentionally high or non-competitive bid or other form of complementary bid.

4. The bid is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any other firm or person to submit a complementary bid.

5. The Bidder has not offered or entered into a subcontract or agreement regarding the purchase of materials or services from any other firm or person, or offered, promised, or paid cash or anything of value to any other Bidder or person, whether in connection with this or any other project, in consideration for an agreement or promise by any other firm or person to refrain from bidding or to submit a complementary bid on this project.

6. The Bidder has not accepted or been promised any subcontract or agreement regarding the sale of materials or services to any other firm or person, and has not been promised or paid cash or anything of value by any other firm or person, whether in connection with this or any other project, in consideration for the firm's submitting a complementary bid, or agreeing to do so, on this project.

7. The Bidder has made a diligent inquiry of all members, officers, employees, and agents of the Bidder with responsibilities relating to the preparation, approval or submission of the firm's bid on this project and have been advised by each of them that he or she has not participated in any communication, consultation, discussion, agreement, collusion, act, or other conduct inconsistent with any of the statements and representations made in this Declaration.

8. As required by Section 337.165, Florida Statutes, the Bidder has fully informed the Florida Department of Transportation in writing of all convictions of the firm, its affiliates (as defined in Section 337.165(1)(a), Florida Statutes), and all directors, officers, and employees of the firm and its affiliates for violation of state or federal antitrust laws with respect to a public contract or for violation of any state or federal law involving fraud, bribery, collusion, conspiracy, or material misrepresentation with respect to a public contract. This includes disclosure of the names of current employees of the firm or affiliates who were convicted of contract crimes while in the employ of another company.

9. The Bidder certifies that, except as noted below, neither the firm nor any person associated therewith in the capacity of owner, partner, director, officer, principal, investigator, project director, manager, auditor, and/or position involving the administration of federal funds:

(a) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions, as defined in 49 CFR s29.110(a), by any federal department or agency;

(b) has within a three-year period preceding this certification been convicted of or had a civil judgment rendered against it for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state, or local government transaction or public contract; violation of federal or state antitrust statutes; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) is presently indicted for or otherwise criminally or civilly charged by a federal, state, or local governmental entity with commission of any of the offenses enumerated in paragraph 9(b) of this certification; and

(d) has within a three-year period preceding this certification had one or more federal, state, or local government public transactions terminated for cause or default.

10. The Bidder certifies that it shall not knowingly enter into any transaction with any subcontractor, material supplier, or vendor who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this project by any federal agency unless authorized by the Florida Department of Transportation.

11. The firm certifies that the bidder is not a nonresident alien, or a foreign corporation/entity formed under the laws of a country other than the United States.

12. The Bidder certifies that the company is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and does not have business operations, as defined by 287.135, F.S., in Cuba or Syria.

Where the Bidder is unable to declare or certify as to any of the statements contained in the above stated paragraphs numbered (1) through (12), the Bidder has provided an explanation in the "Exceptions" portion on page 4 of 4 or by attached separate sheet.

EXCEPTIONS:

Any exception listed above will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted, indicate to whom it applies, initiating agency, and dates of agency action. Providing false information may result in criminal prosecution and/or administrative sanctions. I declare under penalty of perjury that the foregoing is true and correct.

CORPORATION:

_____
Bidder

Signature: _____
President or Vice President (Circle Title)

_____
Print Name

(Affix Corporate Seal)

INDIVIDUAL OR FIRM TRADING AS:

_____
Bidder

Signature: _____
Individual or Owner

_____
Print Name

PARTNERSHIP

_____
Bidder

Signature: _____
General Partner (Circle Title)

_____
Print Name

Signature: _____
General Partner (Circle Title)

_____
Print Name

LIMITED LIABILITY COMPANY:

_____
Contractor

Signature: _____
Manager or Member (Circle Title)

_____
Print Name

JOINT VENTURE:

_____
Bidder

Signature: _____
Attorney-in-Fact

_____
Print Name

CONTRACTOR: _____ (Seal)

Signature: _____
President or Vice President (Circle Title)

CONTRACTOR: _____ (Seal)

Signature: _____
President or Vice President (Circle Title)

CONTRACTOR: _____ (Seal)

Signature: _____
President or Vice President (Circle Title)

Organized and existing under the laws of the State of _____ and authorized to do business in the State of Florida, pursuant to the laws of the State of Florida, certificate of incorporation or organization or certificate of authority having been issued by the Florida Department of State.

FAILURE TO FULLY COMPLETE AND EXECUTE THIS DOCUMENT MAY RESULT IN THE BID BEING DECLARED NONRESPONSIVE

ATTACH BID BOND

Job No(s):

412994-4-52-11