EXTINGUISH THE TORCH MEETING
SESSION ONE

FIN: 442901-7-52-01
Contract No.: E8R57
Project: Turnpike Mainline Shoulder Excavation NB (MP 140-210)
Contractor: Ranger Construction Industries
Project Acceptance Date: May 21, 2019.
County: Osceola, Okeechobee, St Lucie

MEETING AGENDA

1. Introductions – Project Team:

CEI Senior Project Engineer:	Anu Shah, P.E., Mehta & Associates, Inc.
CEI Project Administrator:	Virgil Versaggi, P.E., Mehta & Associates, Inc.
FTE Project Manager:	Christopher NeSmith P.E., WSP USA
FTE Design Project Manager:	Anil Sharma, P.E., HNTB
Engineer of Record:	Karen M. Van Den Avont, P.E., Protean
Contractor Project Manager:	Candace Ercolano, Ranger Construction

2. Project Scope of Work
3. Contract Time and Money
4. Supplemental Agreements and Work Orders – See Appendix A
5. Contractor's Notices of Intent to File Claims – No NOI's
6. Review the Summary Report
   a. What worked well
      1. Coordination with adjacent projects (Turnpike widening)
      2. Coordination between the EOR, CEI and the contractor
   b. Lessons Learned – what needed improvement
      1. Control Points for the inside shoulder widening at MP 150.3 and MP 152.89
      2. Traffic Grates should be noted as H-20 Loading in Summary of Drainage Items
      3. Crash Cushion on Bridge
7. Feedback

LESSONS LEARNED

SUMMARY REPORT

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Engineer of Record

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ATTACHMENTS

D. LESSONS LEARNED SUMMARY:

1. **Edge of Widening** – Widening and/or resurfacing should remove all of Rumble Strip
2. **Proper Traffic Grate** – If traffic loaded grate is required, this needs to be identified in the plans
3. **Crash Cushion Location** – Best to place before the bridge rather than on the bridge
4. **Pipe Plan Quantity** – Quantity should be accurate estimate rather than an over estimate
5. **Placement of Rumble Strips (and edge of FC-5)** – Should follow traffic lane

1) Widening was in the middle of the existing Rumble Strips

Issue summary:

The control points provided by the EOR placed the widening in the center of the Rumble Strips leaving a portion of the existing rumble strips (see picture below. The blue line represents the limit of widening as depicted on plans).

Resolution:

The EOR agreed with the CEI recommendation to relocate the control point to 1" outside of the existing rumble strips and widen the roadway from that point to the interface of the existing roadway, increasing the width of the widening strip by an average of 8.5". Resulting in an overrun of Pay Item 285-714 Optional Base Group 14 (50 SY), 285-7-15 Optional Base Group 15 (53 SY), & 334-1-14 Superpave Asphaltic Concrete (35 tons).

Cost Impact:
No Time Impact

Lesson learned / Recommendation:

The EOR/Department should not rely on old as-built information for the development of plans. The reference line provided in the plans was the face of the bottom of the Barrier Wall which is a variable distance from the Rumble Strips which put the edge of widening in the middle of the rumble strips instead of the outside edge. Survey should be performed to locate the Rumble Strips.

Issue: Picture of layout of widening per Plans.

Resolution: Picture of widening with increased width

2) H-20 Loaded Traffic Grate for Drainage Structure S-1

Issue summary:

During Shop Drawing review the Turnpike & EOR required Ranger to provide a H-20 Loaded Traffic Grate for Structure S-1, which was not identified in the plans.

QUANTITY	STR. NO.	STATION	SIDE	DESCRIPTION	BARRELS	STORM AND CROSS DRAIN OPTIONAL PIPE	GUTTER INLET	REMARKS
						ROUND PIPE	S	
						15"	<10'	
P	1	1926+17.25	RT.	INLET	1	8	1	INCL. CONC. JACKET
F								
P								
F								
P								
F								
GRAND TOTALS				PLAN QUANTITY		8	1	
				FINAL QUANTITY				

Resolution:

Contractor agreed to provide the H-20 loaded grate at an addition cost to the Turnpike. This was processed with Work Order.

Work Order 2: $441.17
No Time Impact

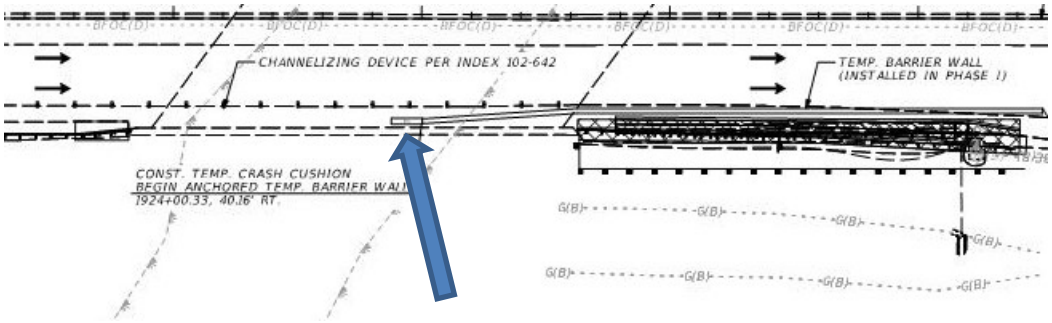
Lesson learned / Recommendation:

EOR should include in the remarks the requirements of H-20 loading for all shoulder gutter inlets for all future Turnpike projects.

3) Location of Crash Cushion on Bridge

Issue summary:

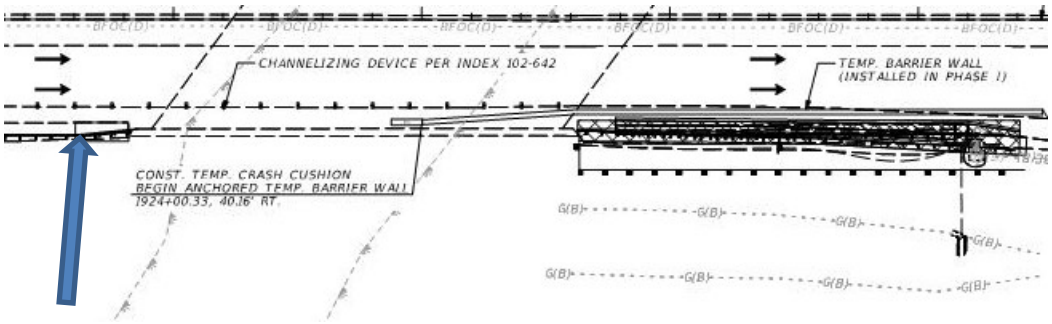
Sheet 37 depicted installation of a Temporary Crash Cushion on a Bridge, which could cause unavoidable impacts to the structural integrity of the bridge (cut tendons or reinforcing bars depending on bridge construction).



Resolution:

The EOR agreed with the CEI recommendation the crash cushion to be relocated to Station 1922+50 from 1923+92. This required 140 feet of additional barrier wall paid for by overrunning the quantity.

Cost Impact: $12,600
No Time Impact



Lesson learned / Recommendation:

The EOR should pay attention to the placement of the Crash Cushions and not propose crash cushions to be installed on bridges unless it unavoidable. Most crash cushions require the placement of 10 to 20 bolts/anchors to be installed in a confined area which has the potential to impact the reinforcing and/or structural steel causing significant impacts to the capacity and service life of the bridge.

4) Plan Quantity for Pipe

Issue summary:

The Plan Quantity for the installation of 15" Round Pipe was estimated by the EOR as 8 LF. Per our discussion, the EOR estimated a full pipe length instead of the actual pipe length installed, 1 LF. Based on the FDOT Specification Plan Quantity Analysis the Contractor is only entitled to 1 LF. The contractor indicated that this work required the same material to be purchased and required the same labor to install than if the entire 8' had been needed but they were being paid 1/8th the expected cost.

QUANTITY	STR. NO.	STATION	SIDE	DESCRIPTION	BARRELS	STORM AND CROSS DRAIN OPTIONAL PIPE	GUTTER INLET	REMARKS
						ROUND PIPE	S	
						15"	<10'	
P	1	1926+17.25	RT.	INLET	1	8	1	INCL. CONC. JACKET
F								
P								
F								
P								
F								
GRAND TOTALS -				PLAN QUANTITY / FINAL QUANTITY		8	1	

Resolution:

Contractor agreed not to pursue recovery of additional cost for the drastic difference in actual length installed versus plan quantity.

No Cost Impact
No Time Impact

Lesson learned / Recommendation:

The EOR should have the pipe inspected to determine location of nearest pipe joint instead of assuming a full pipe length. As an alternative the EOR could add a note stating that the Contractor should anticipate the actual length of pipe to be significantly shorter and bid accordingly.

5) Placement of rumble strips and edge of FC-5

Issue summary:

According to Typical Section for inside widening (MP 150.390 & MP 152.89), the FC-5 was supposed to be flush with the structure and no overlap (0" overlap); so the yellow stripes falls 2" from the edge of FC-5. But the existing FC-5 had an 8" overlap (see issue picture under item 1). We had to transition from 8" overlap to 0" overlap. In addition, the pavement marking plans did not address the 2 to 3 feet transition from existing pavement to newly widened roadway.

The plans show the FC-5 and the rumble strip move away from the lane the entire 2 to 3 feet at the beginning of the widening strip; however, the yellow strip transitions over a few hundred feet. This would have resulted in either the rumble strip being too far from the yellow stripes through the transition area or the rumble strip would have to be cut through the FC-5 to keep it at the correct location relative to the yellow strip. To fix this, we transitioned the edge of FC-5 to match the transition of the yellow stripe; keeping the edge of FC-5 2" outside where the yellow strip was to be placed (except, we started the FC-5 with an 8" overlap and quickly transitioned the overlap to 0" overlap).

Resolution:

The CEI team coordinated with the FTE and EOR and made an adjustment to edge of friction course (transitioning from 8" overhang to 0") to avoid placement of rumble strips on FC-5 in the transition area.

Cost Impact:
No Time Impact

Lesson learned / Recommendation:

The EOR should consider the placement of friction course and rumble strips in the transition area and ensure that rumble strips can be installed according to Standard Plans and should provide details in the plans. width of the shoulder and placement of the rumble strips when shifting mainline traffic towards median barrier wall.