


October 28-29, 2025
Orlando, FL




**TRANSPORTATION
SYMPOSIUM**

Errors & Omissions (E&O) – Lessons Learned

Brad Bradley, CO/Project Management Engineer
Tracy Hood, D7/District Quality Engineer
Kyle McCrary, D3/Project Manager

Transportation Symposium
Website



SCAN ME

1

Statutory Obligation

*To protect the public
interest!*

Florida Statute §337.015(3) -
“... the department shall
vigorously pursue claims
against contractors and
consultants for time overruns
and substandard work
products.”

Florida Statute 471.033(1)(g)
- “... engaging in fraud or
deceit, ***negligence***,
incompetence, or misconduct,
in the practice of engineering.”

**TRANSPORTATION
SYMPOSIUM**

2

2

High-Level Overview

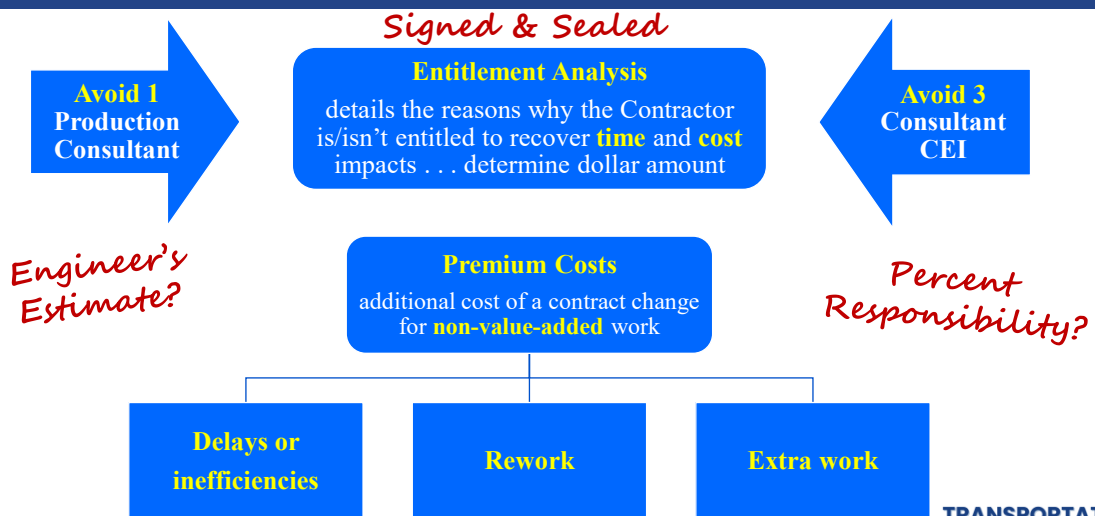


TRANSPORTATION
SYMPOSIUM

3

3

Terms of Art

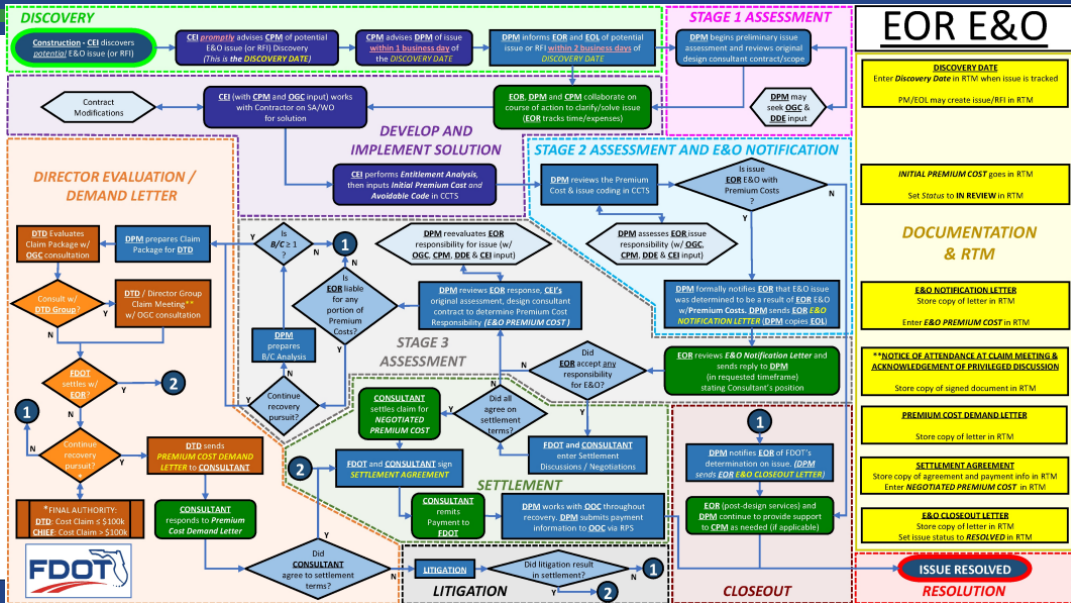


TRANSPORTATION
SYMPOSIUM

4

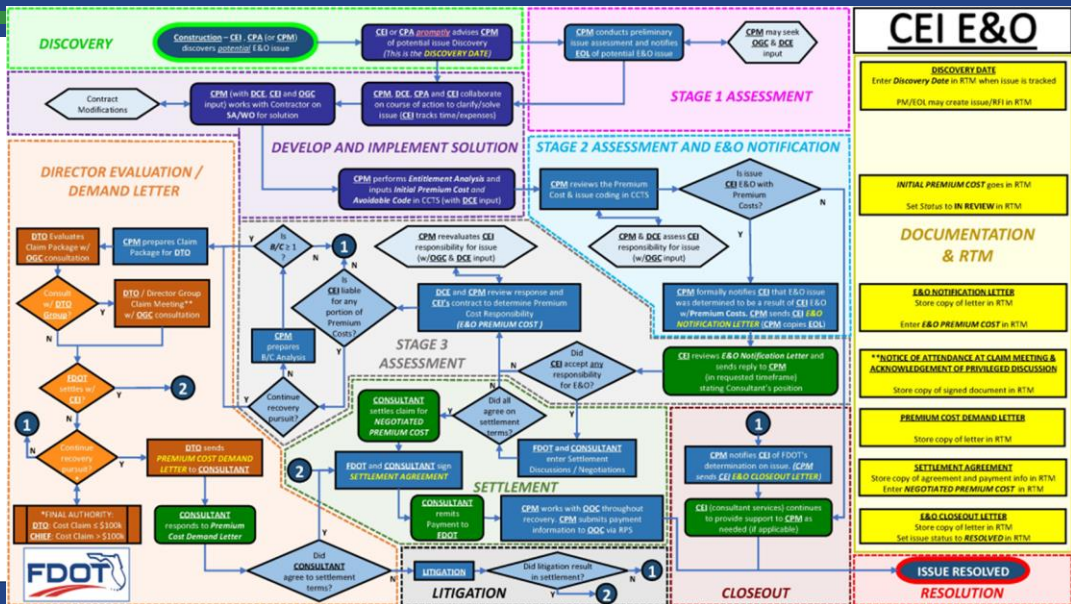
4

Flowchart – EOR (Avoid 1)



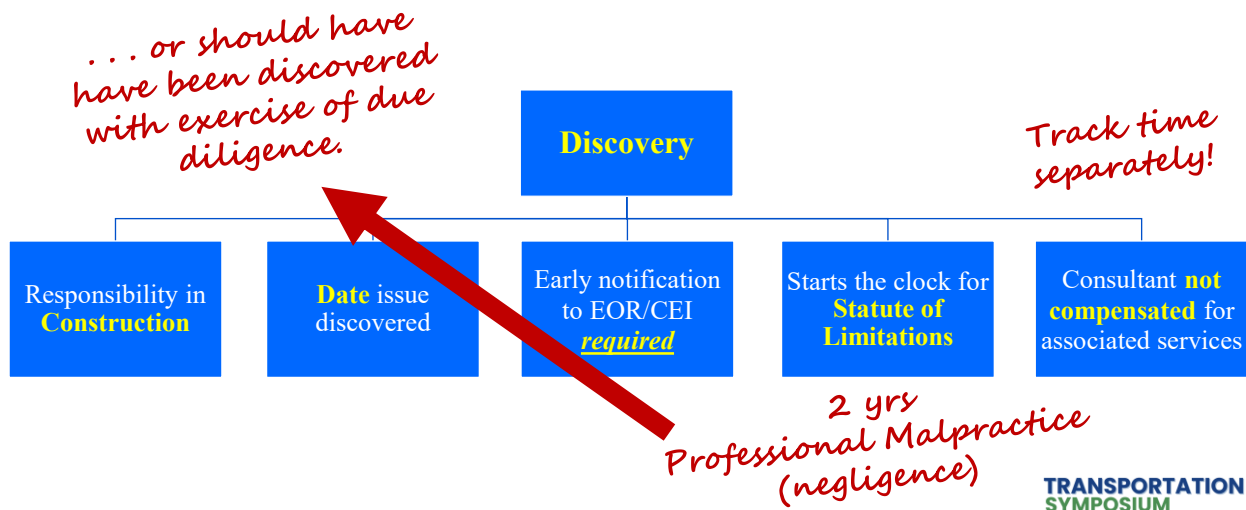
5

Flowchart – CEI (Avoid 3)



6

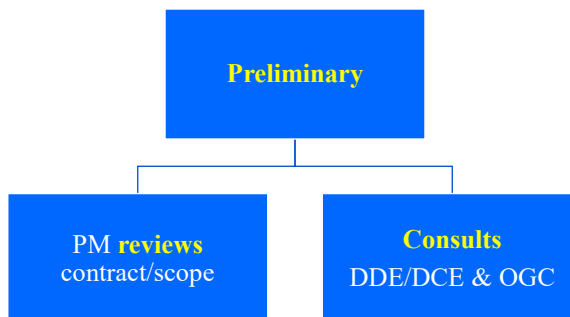
Discovery



7

7

Stage 1 Assessment

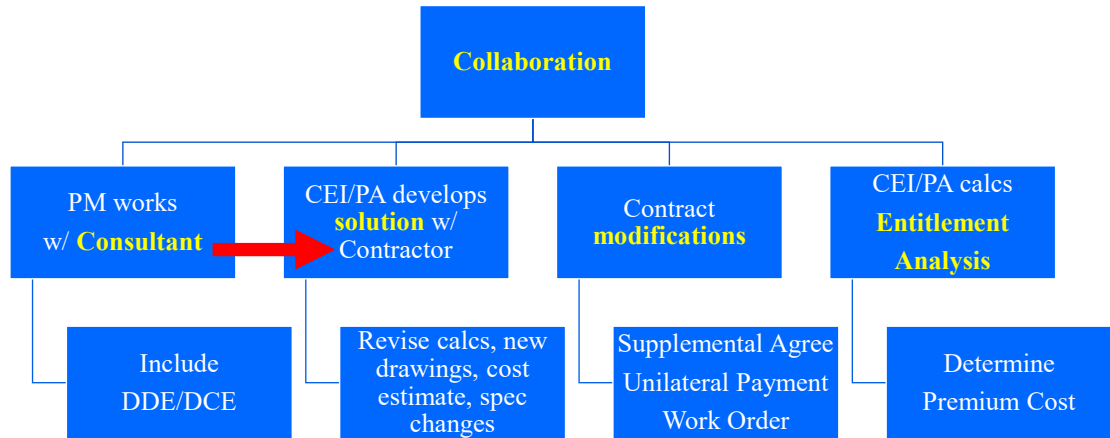


TRANSPORTATION SYMPOSIUM

8

8

Develop and Implement Solution

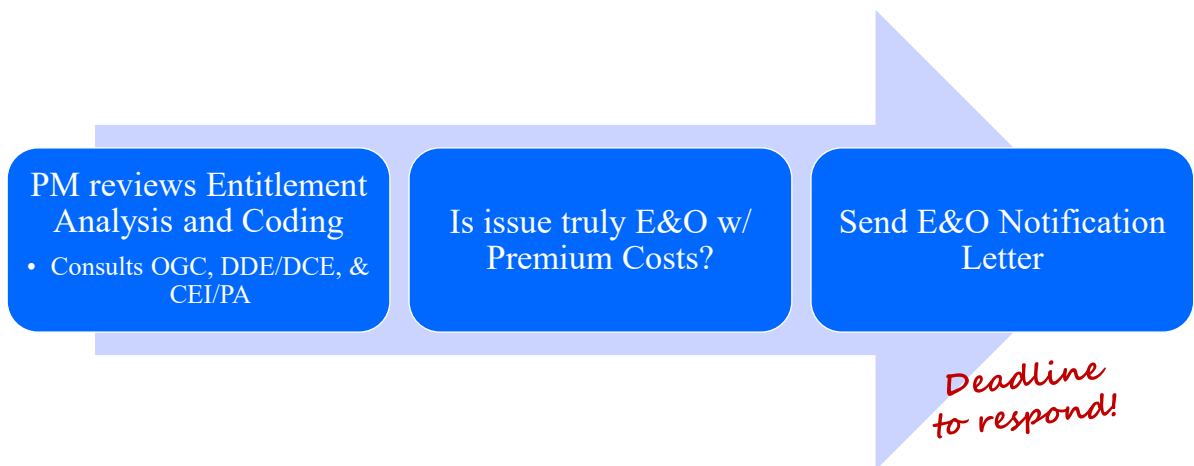


TRANSPORTATION
SYMPOSIUM

9

9

Stage 2 Assessment & Notification

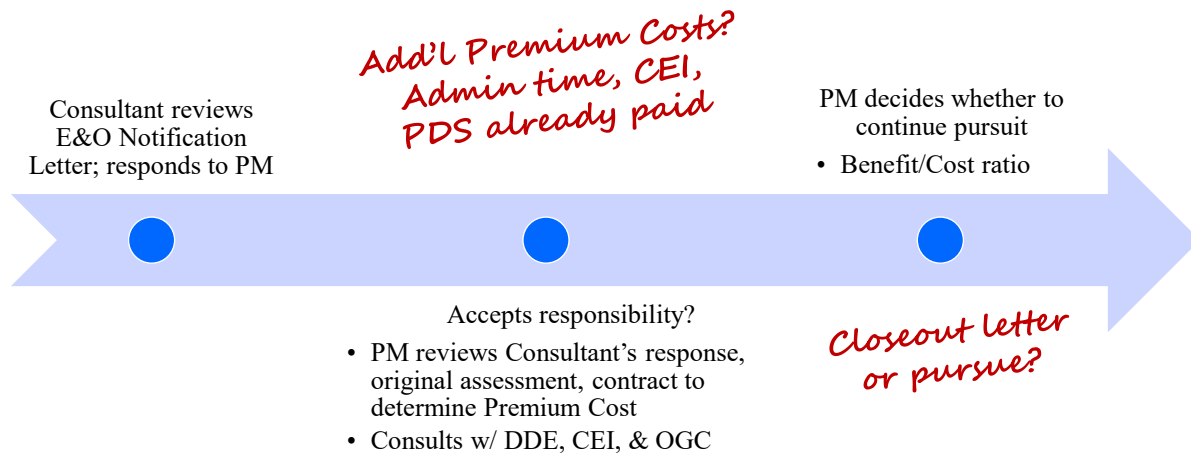


TRANSPORTATION
SYMPOSIUM

10

10

Stage 3 Assessment

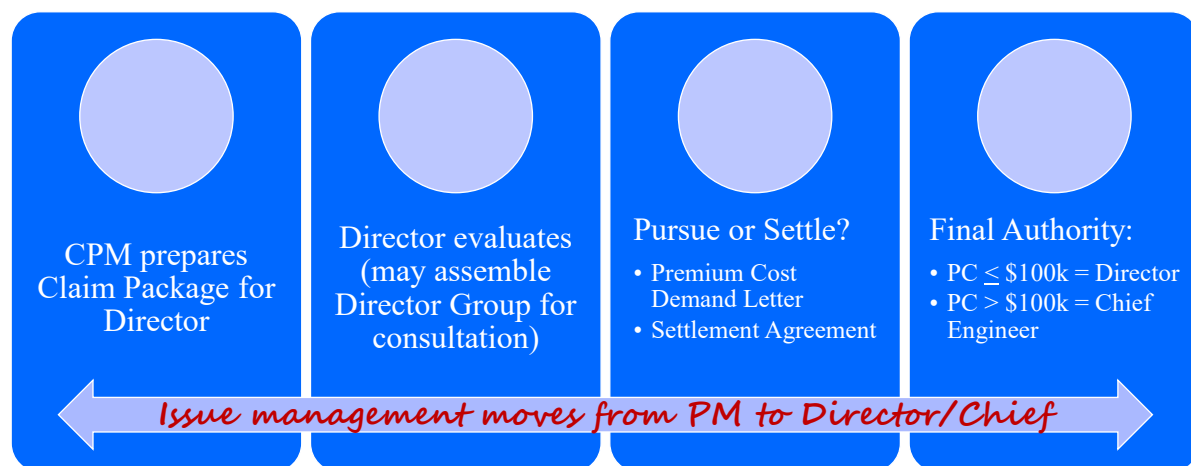


TRANSPORTATION
SYMPOSIUM

11

11

Director Evaluation / Demand Letter

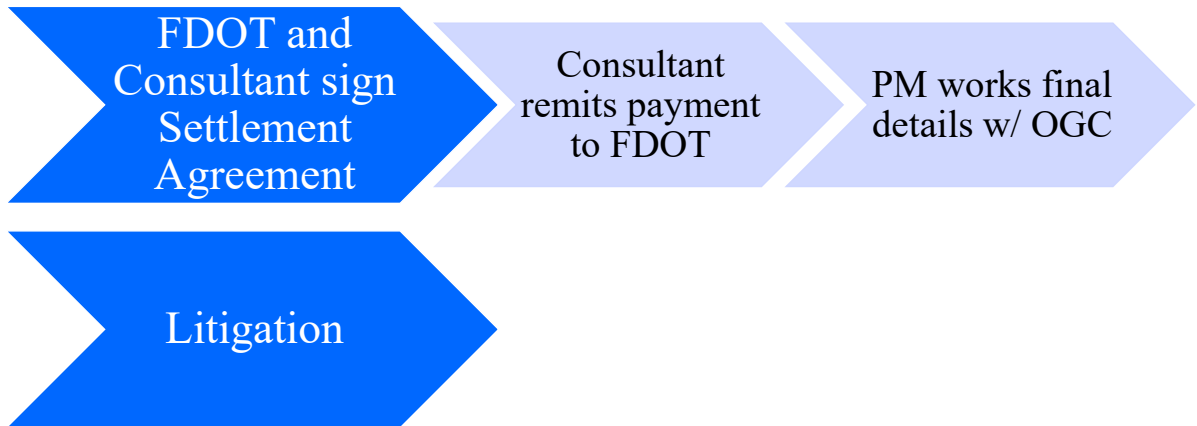


TRANSPORTATION
SYMPOSIUM

12

12

Settlement or Litigation

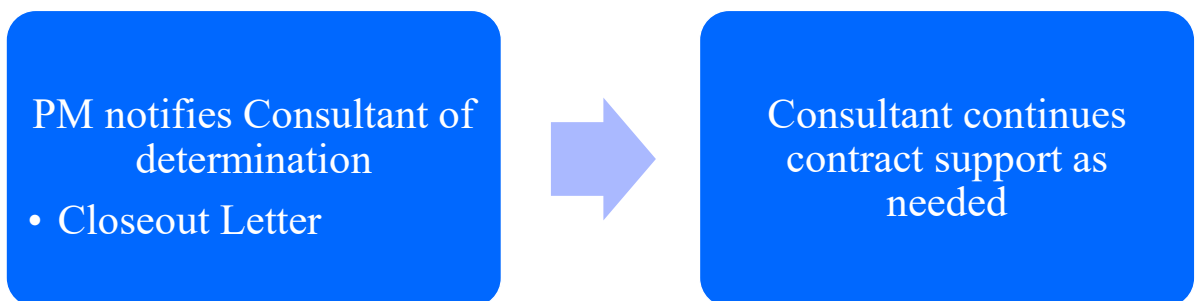


TRANSPORTATION
SYMPOSIUM

13

13

Closeout



TRANSPORTATION
SYMPOSIUM

14

14

District 7 Lessons Learned



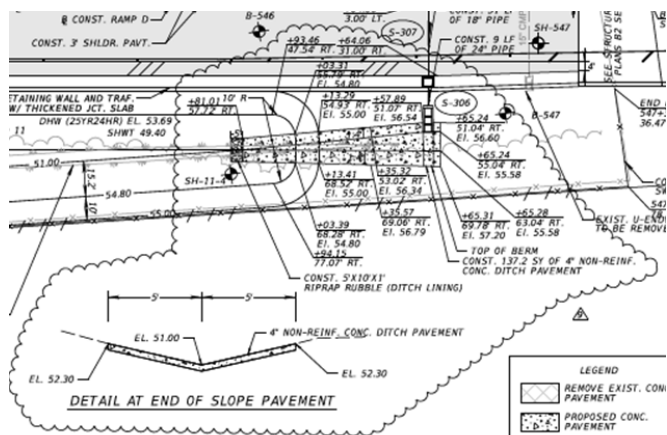
TRANSPORTATION
SYMPOSIUM

15

15

Example Issue 1

- Volume and velocity of discharge from a stormwater structure led to significant ditch erosion during construction.
- A plan revision was needed to add baffles or rubble rip rap and extend concrete ditch pavement, as well as regrade and restore the ditch.
- Only the regrading activities were considered premium costs to be recovered from the EOR.



TRANSPORTATION
SYMPOSIUM

16

Example 1 Resolution, Takeaways, Actions

• Resolution

- This occurred on two adjacent projects within a short timeframe, with two different outcomes.
- If, after reviewing calculations, the EOR could demonstrate that an appropriate velocity was used in the design calculations, the issue was dismissed with no cost recovery.
- If this could not be demonstrated, the issue was pursued as an E&O, and premium costs for the regrading activities were recovered.

• Takeaways

- Design calculations are important
- Documentation matters

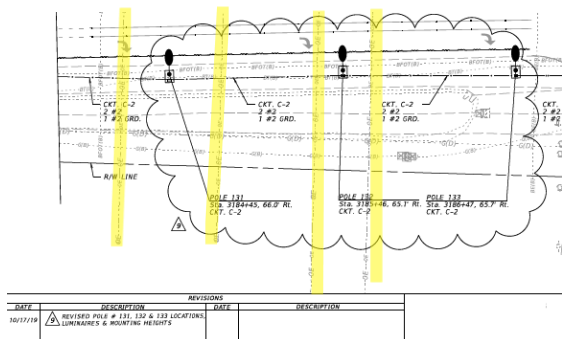
• Actions

- Create checklists for critical items

TRANSPORTATION
SYMPOSIUM

17

Example Issue 2



- While installing light poles, it was noted that three poles were in conflict with a TECO overhead high voltage transmission line.
- Following coordination with TECO, the pole heights were revised from 45' to 18'.

TRANSPORTATION
SYMPOSIUM

18

Example 2 Resolution, Takeaways, Actions

• Resolution

- This issue was pursued as an E&O with premium cost recovery. The Contractor was unable to return the 45' poles to the manufacturer, so the Department took possession of the three poles and recovered premium cost that was incurred for the three new poles.
- Outside of the Department's Settlement Agreement, the EOR helped coordinate transfer of the surplus poles to a local municipality for their use.

• Takeaways

- Make good use of field reviews (look where footprint or airspace use is changing)

• Actions

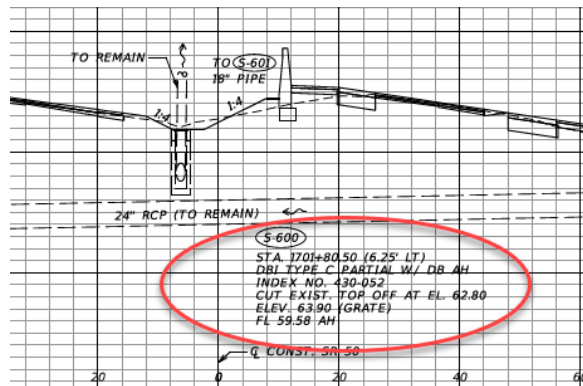
- Field review checklist
- Field review ready bag

TRANSPORTATION
SYMPOSIUM

19

Example Issue 3

- The plans called for installing Type C Partial Ditch Bottom Inlet tops on two existing structures, but the Type C tops specified were not the correct dimensions and required concrete reducer slabs to be installed.



TRANSPORTATION
SYMPOSIUM

20

Example 3 Resolution, Takeaways, Actions

- Resolution

- The tops should have been noted on the plans as a non-standard type, which would have prompted the need for shop drawing preparation and review.
- Premium costs were recovered for the reducer slabs that were required to be installed.

- Takeaways

- Address non-standard elements in the plans

- Actions

- Checklist of typical non-standard items (partial drainage structures, gravity walls, curb cuts, complex grading, etc.)

TRANSPORTATION
SYMPOSIUM

21

Example Issue 4

- The Department directed the Contractor to stop work on an MSE wall after it was noted that the incorrect panel pattern was being installed. The pattern had been changed in a plan revision prepared by the EOR, but the EOR then approved the shop drawing based on the old pattern. The CEI firm monitored installation of approximately 3,300 sf of panels before the discrepancy was noted.

WALL AESTHETICS AND PANEL TREATMENTS			
WALL LOCATION	ITEM	COLOR	ANTI-GRAFFITI COATING
ALL WALLS	NOISE WALL		
	CONCRETE BARRIER		N/A
	COPING		
	SLUR RUBY		
W-3C			
W-4A, 4B			
W-5A, 5B			
W-6A			
W-7C			
W-10A			
W-11A, 11B, 11C			
W-12C, 12D			
W-13C			
W-1A, 1B			
W-13C			
W-13G			
W-16A, 16B			
W-15A, 15C, 15D			
W-16A, 16B			
W-17C			
W-18A			
W-19A			
W-20A, 20B			
W-21A, 21B, 21C, 21D			
W-22A, 22B, 22C			
	WALL PANELS	STAINED CONCRETE	NON-SACRIFICIAL
	FLORIDA NATIVE	RAL 1013	(563-001-007)
	LIMESTONE TEXTURE	(SATIN FINISH)	RAPTOR-CO/AC
		FED-STD-595B-2777B	
	WALL PANELS	STAINED CONCRETE	N/A
	BRICK TEXTURE	SW 2837	
	"A" AND "B"	(AURORA BROWN)	
		COLOR	

TRANSPORTATION
SYMPOSIUM

22

Example 4 Resolution, Takeaways, Actions

• Resolution

- The Contractor removed the incorrect panels and replaced with the correct pattern.
- Premium costs included the removal and disposal of the incorrect panels, installation of the new panels, and subcontractor remobilization for reinstallation of the whalers.
- Premium costs were split with approximately 65% attributable to the CEI firm and 35% attributable to the EOR. They were pursued as separate E&O issues with each firm with premium cost recovery for the Department.

• Takeaways

- Take shop drawing review seriously
- Version control is important
- CEI can be held accountable

• Actions

- Checklist items (data elements, plan date, revision #, etc.)
- Version log

TRANSPORTATION
SYMPOSIUM

23

Example Issue 5

- During shop drawing review of a mast arm, the EOR incorrectly modified the mounting height. This was not noted until after installation, when the signal head measured too high above the pavement, violating MUTCD Section 4D.15.
- The Contractor had to take down, modify, and re-install the upright.

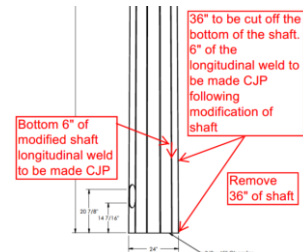
(F) DENOTES FUTURE SIGNAL HEAD DESIGN

* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY

					SIGNAL DATA																					
ID NO.	SHEET NO.	LOCATION BY STA.	TOP OF SIGNAL ELEVATION	ARM NO.	CROWN ELEV.	SIGNAL V/F/N	BACK PLATE V/F/N	PED. SIGNAL V/F/N	DISTANCE FROM POLE												TOTAL LENGTH	ARM N.H.				
									1	*	2	*	3	*	4	*	5	*	6	*						
1	T-4	881+68.5	17.10	1	16.78	V	Y	N	31.5	3	42.5	3	53.5	3	64.5	4									70	21.5
2	T-4	881+60.9	16.80	2	14.95	V	Y	N	40.1	5	52.4	5	63.4	3											70	20
3	T-4	880+86.3	16.58	1	15.85	V	Y	Y	35.4	3	46.4	3	57.4	3	68.4	4									70	21
				2	15.96	V	Y	Y	20.6	5	28.4	3	36.4	5	44.4	3									60	21

UPRIGHT POST TYPE

QTY	PAY ITEM #	STRENGTH NO.	HH ORIENT FROM ARM 1 (P-CCW) (270° IF BLANK)	UPRIGHT POST	HT	MAST ARM	BASE	DAF
1		1-1	270	TS/SIL	26'-6"	21'-1"	C	
1		1-2	270	PS/S	25'-10"	20'-0"	24	
1		1-2	270	PS/DLS	24'-6"	21'-0"	24	



TRANSPORTATION
SYMPOSIUM

24

Example 5 Resolution, Takeaways, Actions

• Resolution

- This issue was pursued as an E&O with premium cost recovery. Had the modification not been made during shop drawing review and everything been installed as designed, the rework would not have been required.

• Takeaways

- Take shop drawing review seriously
- Version control is important
- Design changes made in shop drawings should be avoided or get comprehensive review

• Actions

- Checklist items (data elements, plan date, revision #, etc.)
- Version log
- Checkbox for design confirmed/revised **FOR ALL COMPONENTS**

TRANSPORTATION
SYMPOSIUM

25

Example Issue 6

- During the bid advertisement for a project, multiple questions were asked regarding the proposed soil anchors and associated pay items shown in the plans. Based on a tight schedule for a June letting, poor team coordination, and a failure to recognize the significance, the decision was made to let the project as shown and issue a revision post-letting.
- The pay item used was 0451 70 1, Prestressed Soil Anchor, Performance Test. The plans should have used 0451 70, Prestressed Soil Anchor, as well as 0451 70 1 and 0451 70 2, Prestressed Soil Anchor, Creep Test.
- The Structures and Roadway component were prepared by different firms under different contracts, requiring additional coordination.

△	BM3	0451 70	PRESTRESSED SOIL ANCHOR	623+42.40 TO 630+00.00	12	EA	67.2	380
				630+00.00 TO 640+00.00	12		174.2	
				640+00.00 TO 649+50.00	12		26.1	
				649+50.00 TO 658+00.00	12		22.5	
				658+00.00 TO 661+00.00	12		32.8	
				661+00.00 TO 665+00.00	12		43.5	
				665+00.00 TO 667+00.00	12		21.6	
				667+00.00 TO 670+00.00	12		33.2	
				670+00.00 TO 675+50.00	12		59.6	
				675+50.00 TO 677+00.70	12		12.2	
△	BM2	0451 70 1	PRESTRESSED SOIL ANCHOR, PERFORMANCE TEST	623+42.40 TO 677+00.70	12	EA	36	36
△	BM3	0451 70 2	PRESTRESSED SOIL ANCHOR, CREEP TEST	623+42.40 TO 677+00.70	12	EA	29	29

TRANSPORTATION
SYMPOSIUM

26

Example 6 Resolution

- Structures firm prepared the plans revision for issuance to the Contractor after the letting date.
- Since it was not included in the original bid, premium costs were high and were negotiated between the Contractor and the Department. The premium cost calculated for this E&O is what could have been expected if the correct pay items were included in the original bid.
- Department determined that 50% of the premium cost was the Department's responsibility. The remaining 50% was divided between the Structures and Roadway firms.
- Structures firm provided in-kind services to the Department for their portion of the premium cost.
- Roadway firm negotiated a lower premium cost recovery amount and provided a check to the Department for their portion.

TRANSPORTATION
SYMPOSIUM

27

Example 6 Takeaways, Actions

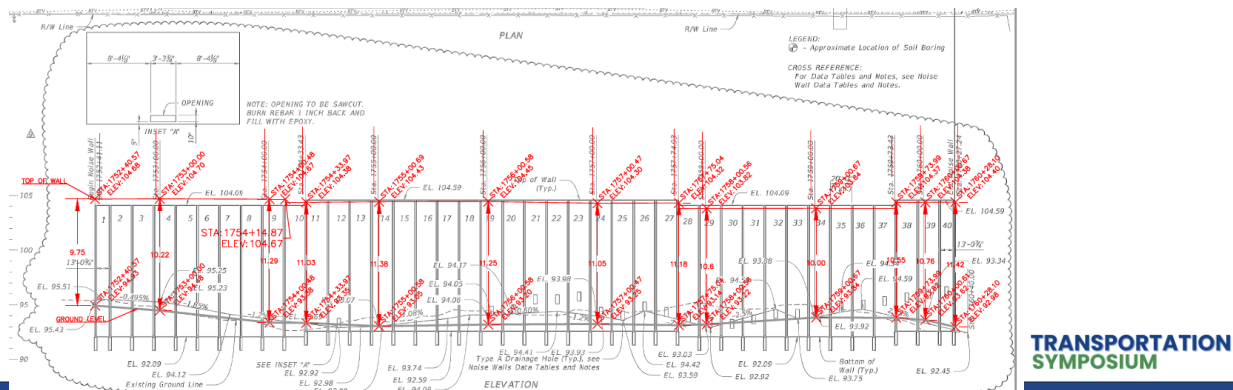
- **Takeaways**
 - Be aware of interdependent pay items
 - Fully define overlapping team responsibilities
 - Lines of communication are important
 - Use bid questions as a warning signal
 - Resolve ALL issues with a sense of urgency
- **Actions**
 - List of interdependent pay items
 - Multi-discipline (full team) review
 - Bid question response QC/QA process
 - Communication and/or issue resolution plan

TRANSPORTATION
SYMPOSIUM

28

Example Issue 7

- After constructing the noise barrier, it was discovered that the original plans inaccurately reflected the existing ground surface with reverse stationing.
- This led to drainage slots that were located too high compared to the existing ground elevation.



29

Example 7 Resolution, Takeaways, Actions

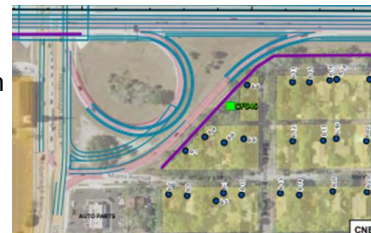
- Resolution
 - The EOR provided a plan revision showing the location of an additional drainage slot needed to be installed in the noise barrier.
 - Regrading was also required for proper drainage.
 - Issue was pursued as an E&O, with premium costs for this additional work recovered by the Department.
- Takeaways
 - Cross-check overlapping responsibilities
- Actions
 - Multi-discipline (full team) review
 - Checklist items (sta/el on walls, drainage structures, signals, etc.)

TRANSPORTATION
SYMPOSIUM

30

Example Issue 9

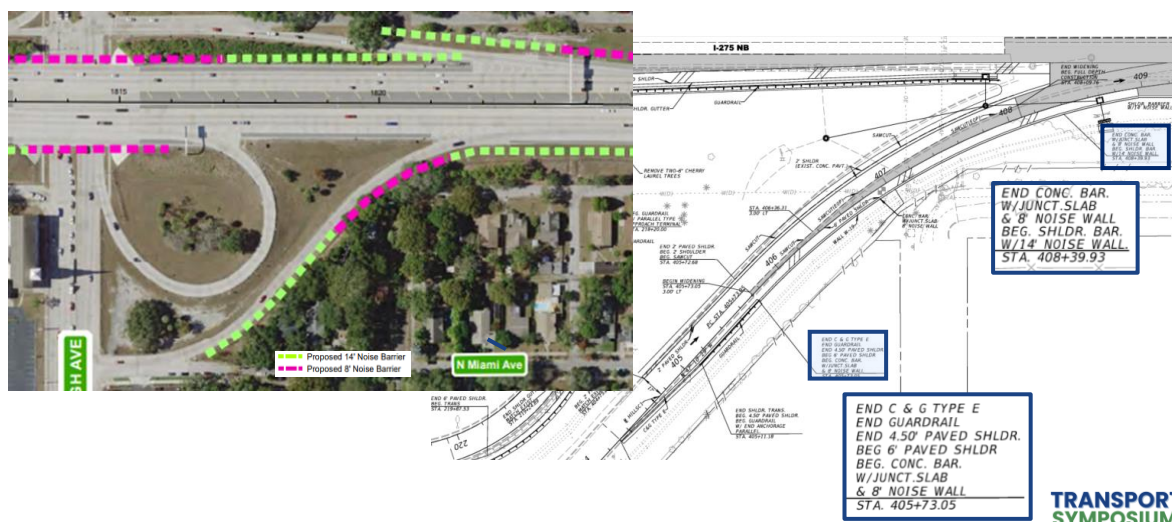
- A noise barrier adjacent to the interstate was required, where reasonable and feasible, by the Noise Study Report and environmental commitments. The required wall limits extended down an interchange ramp to the terminus.
- For funding reasons, the project was rescoped to end at this interchange, with the ramp work tying into the existing ramp and ending prior to the terminus.
- The design plans showed the wall ending where the ramp work ended, therefore, a section of the noise barrier that was shown in the environmental documents was excluded from the design plans.
- There was no record or recollection of any coordination to determine a wall terminus location different from the location shown in the Noise Study.
- Adjacent property owner complained about the missing noise barrier during construction, which led to an investigation into the issue.



TRANSPORTATION
SYMPOSIUM

33

Example Issue 9



TRANSPORTATION
SYMPOSIUM

34

Example 9 Resolution, Takeaways, Actions

- Resolution

- The EOR issued a plan revision for the additional work that was omitted from the original plans.
- Construction of the additional section barrier and rework of transition led to premium cost, which was recovered by the Department.

- Takeaways

- Look at everything when there is a change
- Coordinate and document design decisions and/or scope clarification

- Actions

- Change management log/process
- Design decisions log/process

TRANSPORTATION
SYMPOSIUM

35

Example Issue 10

- Use of Pay Item 0633 6, Fiber Optic Cable Locator
 - Basis of Estimates states the entire contract time should be used for per day quantity
 - Reviewer entered comment during Phase IV plans review stating it did not need to be for the entire contract time
- Quantity was reduced from 400 days (contract time) to 120 days per reviewer comment
- Will be premium costs, potentially \$292,000+

TRANSPORTATION
SYMPOSIUM

36

Example 10 Resolution, Takeaways, Actions

- Resolution
 - Can't pursue premium cost recovery from EOR as this change was made based on reviewer's direction
 - Cost recovery from GEC?
- Takeaways
 - Reviewers should be subject matter experts
 - The reviewer is not always right
- Actions
 - Reviewers reference criteria that is the basis of the comment
 - Speak up if you think a comment is incorrect

TRANSPORTATION
SYMPOSIUM

37

District 3 Lessons Learned



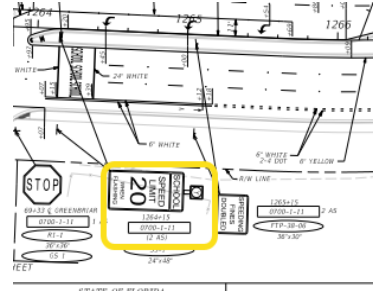
TRANSPORTATION
SYMPOSIUM

38

38

Example 1

- Plans show flashing beacons to be installed at a school zone, however pay items were not included in the plans.
- Local Agency notified the department of beacons not installed during construction.
- Pay items were added, Premium Cost was recovered for the amount difference in the price of the beacons during bid (2018) to construction (2023).



			PLAN
700-1-11	Single Post Sign, F&U, Ground Mount, Up to 12 SF	AS	
700-1-12	Single Post Sign, F&U, Ground Mount, 12-20 SF	AS	
700-1-40	Single Post Sign, Remove	AS	
705-10-1	Object Marker, Type 4	EA	
705-11-1	Adjustable Flexible Tabular	EA	
*	Reflective Pavement Markers	EA	
WIR		EA	22
YIF		EA	
	Values: School Zone	CC	

**TRANSPORTATION
SYMPOSIUM**

39

39

Example 1 Resolution, Takeaways, Actions

- **Resolution**
 - This project had 4 signs that had to have solar powered beacons installed.
 - Historical cost had doubled from 2018 to 2023 for the items needed.
- **Takeaways**
 - Documentation matters
 - Historical price changes can have large impacts.
- **Actions**
 - Checklists for phase and local reviews.

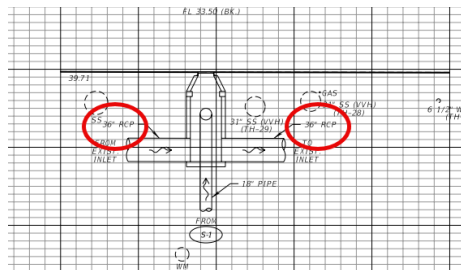
**TRANSPORTATION
SYMPOSIUM**

40

40

Example 2

- Plans called for a junction box to accept multiple 36" pipes.
- During construction it was discovered existing pipes were 48".
- Roadway was under a temporary closure and detour.
- Premium cost for the additional work was pursued.



TRANSPORTATION
SYMPOSIUM

41

41

Example 2 Resolution, Takeaways, Actions

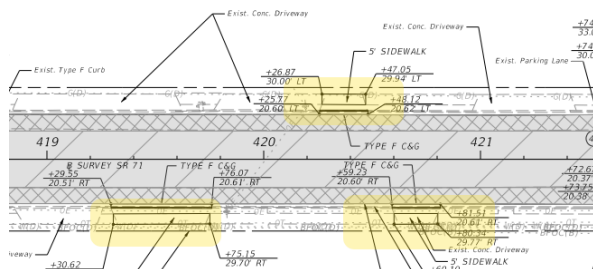
- Resolution
 - Previous as-built plans indicated correct pipe size.
 - Construction modified pipe and opened roadway.
- Takeaways
 - Accurate Survey data is important.
 - Review historical data for existing features.
- Actions
 - Field and plans-in-hand reviews
 - Reviewing historical data can verify changed or existing features.

TRANSPORTATION
SYMPOSIUM

42

42

Example 3



A rural project with multiple staff changes from PMs to EORs and Designers.

- Multiple driveways were modified without proper notifications.
- During construction property owners complained about driveways being closed.
- Several reopened at request of owners.

TRANSPORTATION
SYMPOSIUM

43

43

Example 3 Resolution, Takeaways, Actions

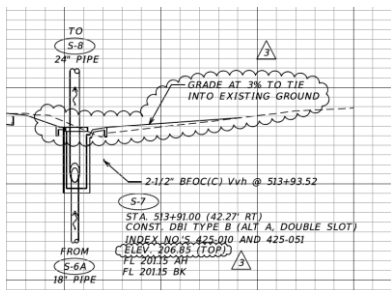
- Resolution
 - FDOT met with property owners onsite.
 - Proper documentation and authorizations obtained.
- Takeaways
 - Development and coordinating documents should be authorized and maintained.
 - Brief new staff with project details.
- Actions
 - Checklist of approvals, request, and development requirements.

TRANSPORTATION
SYMPOSIUM

44

44

Example 4



- This was unique because multiple issues arose from a single SA.
- Prime and Sub both had separate issues, causes, and resolutions.
- An Error, an Omission and a field dictated change all in one.

TRANSPORTATION
SYMPOSIUM

45

45

Example 4 Resolution, Takeaways, Actions

- Resolution
 - Drainage calculations were obtained – Error by EOR – Pursued rework
 - Missing Pay items – Omission by EOR – Pursued price difference
 - Changes in field conditions – Field Change – No pursuit
- Takeaways
 - Calculations are important
 - Checklist for pay items
 - Documentation of revisions, RFIs, etc. is very crucial when determining issues.
- Actions
 - QC calculations
 - Checklist for projects
 - Document all changes throughout post design

TRANSPORTATION
SYMPOSIUM

46

46

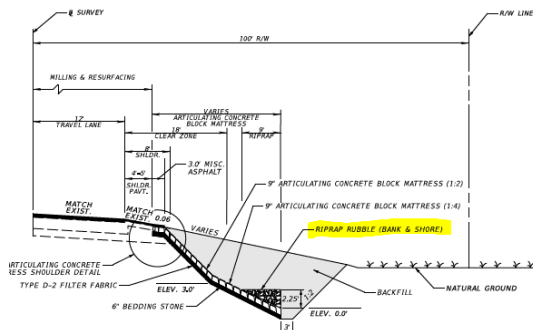
Example 5 Resolution, Takeaways, Actions

- **Resolution**
 - New material that complied with TSP was approved by EOR.
 - Bridge work had to be redone.
- **Takeaways**
 - Reviews are very serious.
 - Ensure compliance with contract documents.
- **Actions**
 - Checklist for project requirements and provisions
 - Simple QC reviews of shop drawings.

Example 6

- A phase of a project omitted quantities for drainage work of a temporary diversion.
- SA totaled to be over \$110K of miscalculated items. A unilateral agreement was entered with the contractor for the large quantity of missing items.
- **Resolution**
 - Premium cost recovered for the amount difference if it were included at the time of the bid.
- **Takeaways**
 - Quantities and QC checks are important
 - Constructability reviews are serious.

Example 7



- During the bid question of the project a questions was raised regarding the installation of articulating concrete block mattress and RipRap.
- It was decided to change the design and process a revision.
- Quantities and Pay Item changes resulted in large change order.
- EOR demonstrated accurate calculations and design, E&O was not pursued.

TRANSPORTATION
SYMPOSIUM

51

51

Example 7 Resolution, Takeaways, Actions

- **Resolution**
 - New pay items established.
 - Revision processed.
- **Takeaways**
 - Calculations are crucial
 - Bid Questions are serious and should be answered in a timely manor.
- **Actions**
 - Document revisions and any request for revisions.
 - Ensure calculations and designs are functional and constructable

TRANSPORTATION
SYMPOSIUM

52

52

Safety Message



53

Contact Us

- Brad Bradley, P.E., Project Management Engineer
Central Office, Tallahassee 850-414-4295
- Tracy Hood, P.E., District Quality Engineer
District 7, Tampa 813-392-9690
- Kyle McCrary, Project Manager
District 3, Chipley 850-330-1447

TRANSPORTATION
SYMPOSIUM

54


54


Contact Us 


Errors and Omissions Liaisons

District	Contact	Telephone
1	Joel Hobbs	863-519-2376
2	Belqis Majboor	386-961-7444
3	Kyle McCrary	850-330-1447
4	Bing Wang	954-777-4406
5	Stan Carroll	386-943-5346
6	Ivette Funtanellas	305-470-5270
7	Megan Miller	813-975-4854
Turnpike	Kenzot Jasmin	407-264-3113
CO	Brad Bradley	850-414-4295

TRANSPORTATION
SYMPOSIUM

 October 28-29, 2025
 Orlando, FL


 **TRANSPORTATION
SYMPOSIUM**



DEADLINE

Please be sure to **certify your attendance** before leaving this event or no later than **November 30th**, in order to receive PDH/CEC. Detailed instructions are available on the Transportation Symposium website.

Transportation Symposium Website


SCAN ME