

# Summary Report

Seminole Expressway (SR 417) Resurfacing and Safety Improvements  
Financial Project Nos. 429023-1-52-01 & 429023-3-52-01  
Contract E8N21

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## Project Scope of Work

This project consists of Milling and Resurfacing of SR 417 from US 17-92 to I-4 (MP 50-55) with median guardrail installation and drainage improvements along Mainline. Reconstruction of Ramp D (17-92 NB off ramp)

## Contract Time

Original Contract Time:	170 days
Time Extensions for Weather Impacts:	62 days
Time Extensions for Holidays and Special Events:	32 days
Other Time Extensions:	7 days
<u>Total Time Extensions:</u>	<u>99 days</u>
Total Allowable Contract Time:	271 days

Project completed on Day 271 of 271 Allowable Days.

## Contract Amount

Original Contract Amount: \$6,573,418.19

- There were four Supplemental Agreements, totaling \$63,530.66
- There were seven \$0.00 Work Orders (6 DCE Memos & 1 Time Extension)
- There were nine work orders, totaling \$66,002.67.

**Total Amount Paid to Contractor: \$ 6,899,025.51 (4.95% over Original Contract Amount)**

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FPN 429023-1-52-01 & 429023-3-52-01

Contract E8N21

**Significant Overruns:**

	<b>Pay item</b>	<b>Plan Quantity</b>	<b>Installed</b>	<b>Overrun</b>
<b>0037 7 22 5</b>	<b>Asphalt Concrete Friction Course, Inc Bit, FC-5</b>	<b>8450 TN</b>	<b>9300.1 TN</b>	<b>\$107,037.00</b>
<b>0334 1 22</b>	<b>Superpave Asphalt Conc, Traffic B</b>	<b>5518.6 TN</b>	<b>5960.1 TN</b>	<b>\$48,565.00</b>
	* 284.6 tons of necessary overbuild were not identified in the plans. Ramp D had wider sections than identified in the plans (15' wide, versus 12' shown in plans). A higher spread rate of 105% plan quantity was often placed.			
<b>0102 14</b>	<b>Traffic Control Officer</b>	<b>2720 MH</b>	<b>3384 MH</b>	<b>\$27,888.00</b>
	* The Contractor's slow production rate required more nights of paving, often with two paving crews in the same night. The contract time was extended due to several rain events, and the minimum charge for officers was incurred for many cancellations.			

**Significant Underruns:**

	<b>Pay item</b>	<b>Plan Quantity</b>	<b>Installed</b>	<b>Overrun</b>
<b>0210 2</b>	<b>Limerock - New Material for reworking base</b>	<b>485 CY</b>	<b>0</b>	<b>-\$16,005.00</b>
	* This was an 'in-case' item, per the EOR, if the existing limerock base showed reflective cracking after the mill operations. Ultimately, no reflective cracking was visible after the milling.			
<b>0210 9</b>	<b>Reworking Limerock Base, 3"</b>	<b>5819 CY</b>	<b>0</b>	<b>-\$13,674.65</b>
	* Same reason as previous pay item. This was an 'in-case' item, per the EOR, if the existing limerock base showed reflective cracking after the mill operations. Ultimately, no reflective cracking was visible after the milling.			
<b>0120 6</b>	<b>Embankment</b>	<b>9000 CY</b>	<b>7986 CY</b>	<b>-\$12,168.00</b>
	* Plan quantity error contained 1014CY of additional embankment.			

Contractor's NOI's

1. Compensable time for plan revision delay; shoulder revision at 1902+00 to 1907+00.

## Lessons Learned

### 1) Milling Rumble Strips

#### Issue Summary

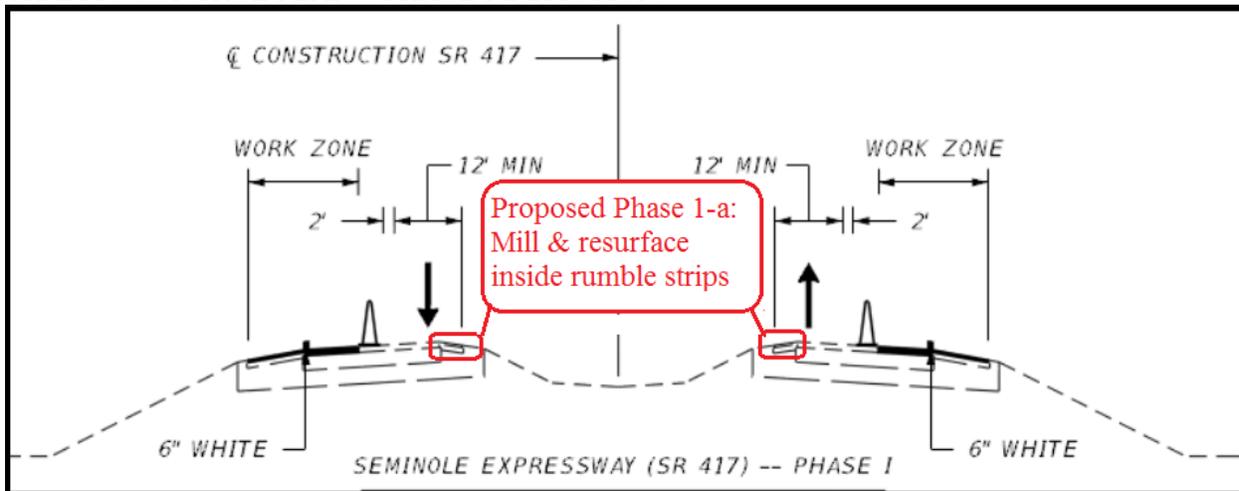
The plans called for milling up inside shoulder rumble strips and replacing with asphalt, as well as outside shoulders through super elevated sections. The purpose was to ensure a smooth shoulder surface was maintained for any vehicles that may partially shift out of the travel lane.

The issue this presents is an entire TCP phase to prevent a temporary and unlikely smoothness issue,

TEMPORARY TCP NOTE (sheet 54):

PHASE 1-A (NOT SHOWN)  
UTILIZE LANE CLOSURES PER INDEX 670 TO MILL AND RESURFACE THE INSIDE SHOULDER (TO REMOVE EXISTING RUMBLE STRIPS) (OUTSIDE SHOULDER THROUGH SUPER ELEVATED SECTIONS)

TRAFFIC CONTROL PLAN – PHASE 1 DEPICTION:



#### Resolution

It was agreed to simply pave over the rumble strips, without milling them out. This approach was agreed upon with concurrence from the EOR and Turnpike Bituminous Engineer. Pros: less equipment required, no millings to sweep and dispose of. Paving over removes the drop off, providing a smoother surface for the vehicles to ride on. Credit to the project was realized (\$8,071.84).

#### Lessons Learned / Recommendations

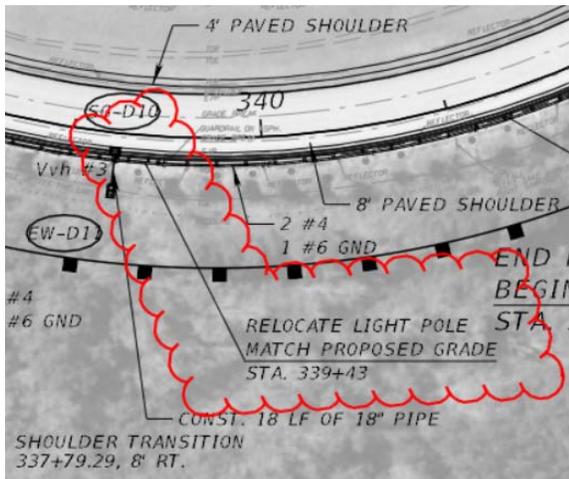
It is recommended that for instances when the Traffic Control plans call for traffic to be temporarily shifted to the shoulder, for short periods and lower speeds, to pave over the rumble strips instead of milling and paving. The low traffic volumes should not cause the underlying rumble strips to reflect in such a short period of time.

## 2) Temporary Lighting

### *Issue Summary*

No temporary lighting or means of payment was identified in the plans, during the construction of ramp D lanes and side slopes. The plans only called for existing lighting was to be relocated.

It was determined that temporary lighting would be required during the ramp's 1<sup>st</sup> construction phase



### *Resolution*

A change order was processed to pay for the construction of the temporary lighting. New light pole bases were ordered to replace the existing.

### *Lessons Learned / Recommendations*

On any project with lighting pay-items, it is recommended that the designer evaluate the need for temporary lighting, identify the requirements, and provide the necessary notes, specs, and pay items to allow the contractor to properly bid.

## 3) Lighting relocation

### *Issue Summary*

The Plans called for relocating lighting, but the existing bases were not reusable, as they did not meet the current standard for wind loading (screw bases & embedment on a steeper slope)

### *Resolution*

A supplemental agreement was processed for the addition of new bases to support the relocated poles.

### *Lessons Learned / Recommendations*

It is recommended for any relocation of existing lighting, the designer evaluate whether the existing bases are reusable or proper notation in the plans to alert the contractor to include it in his bid.

#### 4) Desilting existing pipes

##### *Issue Summary*

Access to desilt Ramp C & D's pipes was a challenge, as most of the headwalls were submerged by heavy overgrowth of vegetation. The plans provided pay items for the desilting, but did not consider the extensive clearing needed to access these structures.

In addition, a larger clearing effort of the surrounding outfall/swale areas was necessary to ensure the long term clearance of the pipes. One extreme case required ~ 7' of excavation to uncover the pipe. Functionality of the pipe and nearby swales was stifled by years of overgrowth. Simply clearing in front of the headwall openings would not allow water conveyance to or from the pipes.



##### *Resolution*

A partnering effort, between Turnpike's Maintenance & Construction departments, was made to clear immediately in front of the headwalls and desilt where possible. TPK Maintenance performed the clearing with an excavator, and the Construction Contractor attempted to plug the pipes for desilting.

The desilting effort was complicated by concrete block obstructions found inside the pipe openings (believed to be riprap or spill-way pads that were pushed into the pipes in historic clearing efforts). Access to remove these obstructions was arduous, given their mass, poor visibility in submerged murky pipes, and encasement within dense muck. Consequently, plugging these pipes was not possible, and desilting was abandoned for those circumstances.

Due to time constraints and being cost prohibitive, only one pipe was completely desilted.

*Lessons Learned / Recommendations*

- 1.) Designer and Department confirm the conditions of any pipes to be desilted, and convey any necessary efforts needed for the benefit of the bid. (i.e. clearing limits).
- 2.) Modify Standard Specification 430-10 to include all clearing required for access, the use of coffer dams, dikes, or other measures to dewater the pipe. Section 430-10 is currently stated as the following, which does not address any clearing efforts:

**430-10 Desilting Pipe or Concrete Box Culvert.**

Desilt pipe culvert and concrete box culvert as designated in the Plans.

**5) Lane Closure Restrictions in Low Traffic Area**

*Issue Summary*

Paving operations were halted by ongoing wet & cold conditions, in tandem with lane closure restrictions limiting work to night time operations. September 2014 was a historically rainy month, and storms developed nearly every day at (or just prior to) the allowable lane closure time. 60 weather days were ultimately granted on an original contract of 170s.

*Resolution*

Turnpike Traffic Operations evaluated traffic volumes at this section of Florida's Turnpike, and daytime lane closures were ultimately allowed. These closures facilitated work in favorable temperatures and outside of rain events.

*Lessons Learned / Recommendations*

It is recommended that day time lane closures be considered on less heavily travelled portions of the Turnpike system. Resurfacing projects should be scheduled for completion in warmer months, with consideration of weather and holidays possibly "pushing" the completion into unfavorable paving conditions.

**6) Laser Profiler Post-Construction Cross Slope Measurements**

The Materials Department performed a pavement evaluation shortly after final friction course was placed. Cross slope

## Appendix A - Summary of Contract Changes

### Work Orders 429023-1-52-01

Work Order 1 – DCE Memo 11-14 Work Zone Signs	\$ 0.00
Work Order 2 – DCE Memo 10-14 Sod Netting	\$ 0.00
Work Order 3 – Relocate existing sign to allow pond access	\$ 777.47
Work Order 4 – Adding time for additional work 7 days (conduit installation)	\$ 0.00
Work Order 5 – Relocate 3 existing multi-post signs (Ramp D)	\$ 19,894.50
Work Order 6 – Re-establish special ditch	\$ 27,169.95
Work Order 7 – Replace light pole fuses	\$ 1,977.20
Overall change to Original Contract Amount:	\$ 49,819.12

### Work Orders 429023-3-52-01

Work Order 1 – DCE Memo 11-14 Work Zone Signs	\$ 0.00
Work Order 2 – DCE Memo 10-14 Sod Netting	\$ 0.00
Work Order 3 – Removal of existing structure E-1	\$ 2,912.45
Work Order 4 – Disposal of unforeseen concrete	\$ 3,070.75
Work Order 5 – Adding time for additional work 7 days (conduit installation)	\$ 0.00
Work Order 6 – DCE Memo 16-14	\$ 0.00
Work Order 7 – Additional MOT for drainage work (Sta. 1902+00 Rt. Rdwy)	\$ 2,441.85
Work Order 8 – Existing guardrail damage repair	\$ 4,310.71
Work Order 9 – Lightpole / foundation pads	\$ 3,447.79
Overall change to Original Contract Amount:	\$ 16,183.55

### Supplemental Agreements 429023-3-52-01 & 429023-3-52-01

SA 1 – Temporary Lighting	\$ 39,220.50
SA 2 – Light pole bases	\$ 24,865.86
SA 3 – Rumble strip credit	\$ ( 8,071.84)
SA 4 – De-silting cross drains on Ramp D	\$ 7,516.14
Overall change to Original Contract Amount:	\$ 63,530.66