Florida Department of Transportation

DISTRICT THREE DESIGN NEWSLETTER

Volume 14, Issue 3 July—September, 2009

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District III Quarterly Design Newsletter

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From the Editor's Desk– Cross Slope

Scott Golden, P.E., District Design Engineer

District Three recently had a Quality Assurance Review (QAR) performed by Central Office, Office of Design, Pavement Management Section. Although the overall results of the QAR were positive, there were some areas identified for improvement. There were two (2) projects identified where the pavement cross slopes on tangent sections were substandard. The following is quoted from the QAR (*FPID #'s and project descriptions were deleted*):

- Cross-slope deficiencies were found based on field survey performed by CEI prior to start of construction.
- Although the typical sections on the plans show to match existing with 0.02 minimum slopes, the typical sections from station 345+60 to 359+82 especially on the West Bound lanes have existing cross-slope that did not match the 0.02 based on field survey.
- Based on the CEI field survey information, the District requested the State Materials Office to use the Multi-Purpose Survey Vehicle to further evaluate the existing cross-slope.
- Overbuild was not provided in the plans for the tangent sections to correct these cross-slope deficiencies.
- A similar situation existed on another project but the existing cross-slope was not as far out of tolerance.

District Three evaluated the results of this QAR and found it to be accurate. Upon further review, the survey for these projects did indicate a need to evaluate the tangent section cross slopes further.

Most of you know that the RRR survey criteria require a cross section at 1000 feet increments (on tangent sections). The Engineer of Record (EOR) should evaluate this information when it is received from the surveyor. If there is an indication of a potential cross slope deficiency, the EOR should perform additional field reviews (take a smart level or a good ol' fashioned level and rod to the field with you) and determine if additional cross sections (by your surveyor) are justified. As always, it is very important to minimize the design (and construction) costs on all projects. However, we do not want to sacrifice safety, quality, efficiency of our transportation system or the quality of our environment to save a few dollars. Please remember to use "good engineering judgment" throughout the design. Always wear appropriate safety equipment and be safe when you are on field reviews!

School has started. Drive safely, buckle-up and watch for those "little ones."

Design Spotlight—Tim Smith, P.E.

Scott Golden, P.E., District Design Engineer

I am pleased to introduce the new District Three Utilities and Specification Engineer. He started his career with PBS&J in December 2000 in roadway design and transferred to Chipley where he spent the last 5 years of his career as a Project Manager through the PBS&J GEC Program.
Tim is a native of Cottondale, FL. He graduated from Cottondale High School in 1991 then attended Chipola Junior College and Florida State University (oh well, we can't all be SEC graduates) where he earned a Bachelor of Science in Civil Engineering. He has been married to his wife Cecily for 9 years and they have a 3 year old daughter, Carley Katheryn. When not at work, Tim enjoys the outdoors, going to the gym, and spending time with his family. Tim's varied experience in Design and Project Management makes him uniquely qualified for this position. Please feel free to contact Tim should you have any Utility or Specifications

Top Ten Quality Control Comments July – Sept. 2009

1. For Pay Item 0102-1, please ensure that the Number of Days for the Secondary Unit of Measure have been approved by F.D.O.T. Construction.
2. Indicate in the Standard Mast Arm Assemblies Data Table that Grout Pads are not required. Grout Pads trap moisture and allow corrosion of the anchor bolts to go undetected.
3. Per Construction's request, "Please ensure that sufficient temporary paint quantities are included for this Project. Include gore areas, turn arrows, messages, etc. and sufficient quantities for each lift of Asphalt and the Milled areas. We have had several projects let to contract that do not have sufficient temporary paint quantities. Most of these projects will have enough paint for center lines and edge lines, but have omitted temporary paint for gore areas, turn arrows, messages, etc. In addition, enough quantities should be included for each lift of asphalt and the milled areas."
4. Clearly indicate transverse utilities and any special side ditches in the profile.
5. The Design High Water symbol is not being shown for bridge projects.
6. Posted Speed is being shown on Landscape Plans instead of the Design Speed.
7. Label all horizontal curves and the tangent bearing in the plan view.
8. Dimension and label the Limits of Resurfacing on all side streets and turn outs.
9. Ensure a 2% cross slope for pedestrians crossing at turnouts.
10. When you have adequate cross sections of the project, use pay item 120-1 Regular Excavation rather than 120-71 Excavation (3R).

Supplemental Agreement Report – July 2009 – Sept. 2009

Following is a sample of Supplemental Agreements for the third quarter of 2009 (July through September). The three (3) categories of Supplemental Agreements that are included in this summary are 007, 101, and 115. This summary is included in the Quarterly Design Newsletter as a tool to inform designers of errors and omissions that can lead to Supplemental Agreements and unnecessary cost to the public. Below are brief descriptions of those errors or omissions and the department's responses.

Description Code: 007 Work added or deleted from 3rd party agreements.

Reason: Improvements under this contract consist of Phase II construction of a County-Wide Advance Traffic Management System (ATMS) including traffic signals, cameras, system software, servers, and workstations.
During construction of Phase II of the ATMS project the County began construction of their new County Administration building that includes space allocated for a new Traffic Management Center (TMC). The County desires and has requested that certain designated Phase II ATMS components be installed at the new TMC site in lieu of the existing County Public Works Facility. In addition to the above changes, the County requested the deployment of additional infrastructure and components at the TMC to complement the identified Phase II work and ensure a complete TMC solution.

Granted Time: 45 days

Increase: $398,000.00

Response: Unavoidable (no remedial action required) / no cost recovery action is recommended.

Supplemental Agreement Report – July 2009 - Sept. 2009

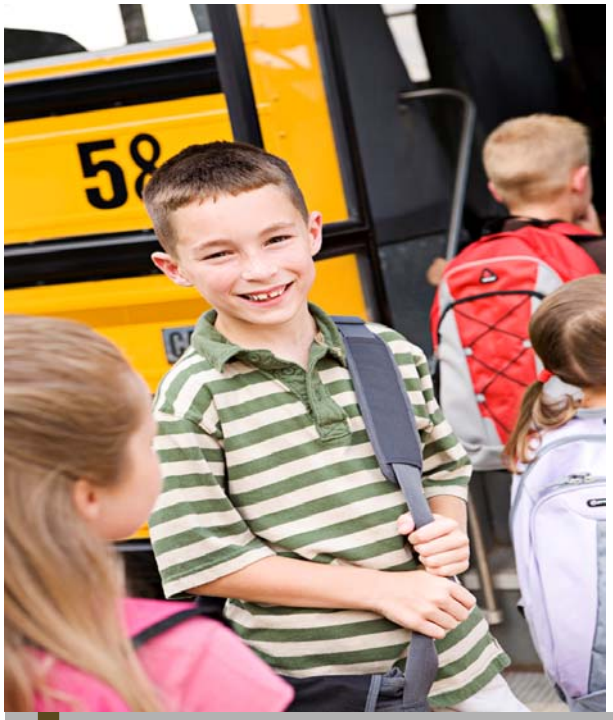
Miranda Glass, P.E., District Roadway Design Engineer

Description Code: 101 necessary pay item(s) not included in contract.
Reason: Improvements under this contract included milling, resurfacing, sidewalks, and signalization. The Bid/Contract Schedule of Items did not include pay items for Directional Arrows, Traffic Stripe Skip 6" (Yellow and White), Solid Traffic Stripe 8" (White), Solid Traffic Stripe 12" (White), Solid Traffic Stripe 18" (White), Solid Traffic Stripe 18" (Yellow), and Solid Stripe 24" (Yellow). The Department amended the contract to allow means of payment for these items.
Granted Time: 0 days
Increase: $34,228.75
Response: Avoidable / no cost recovery action is recommended.

Description Code: 115 Required drainage modifications.
Reason: The improvements under this contract consist of intersection improvement.

Subsequent to beginning work on this project several drainage conflicts were discovered that were not shown in the plans. Revisions were needed to provide positive drainage. Due to the proximity of the structures and pipes to one another and the constricted space that work was to be performed, it was decided to use Flowable Fill in shallow trench sections and throughout other areas of the project as needed to insure the integrity of the pipe run. This necessitated amending the contract to include the pay item for Flowable Fill.

Granted Time: 0 days
Increase: $10,696.78
Response: Unavoidable (no remedial action required) / no cost recovery action is recommended.



Keep Our Children Safe!

Go Slow Through School Zones!!

"One's mind, once stretched by a new idea, never regains its original dimensions."
~Oliver Wendell Holmes