

# DISTRICT THREE DESIGN NEWSLETTER



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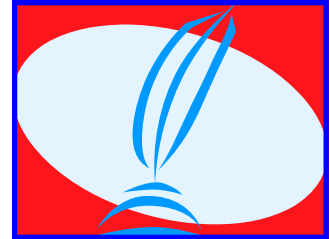
July—September, 2008

## *From the Editor's Desk*

Scott Golden, P.E., District Design Engineer

### Outstanding State Design Conference

I hope that most of you had an opportunity to attend the State Design Conference this summer. I thought that this year's conference was the best State Design Conference that I have ever attended. I truly wanted to go to more sessions than my schedule would allow. Please visit the State Design Office's web site (<http://www.dot.state.fl.us/officeofdesign/>) and you can view all of the presentations. I would like to call your attention to several roadway design topics that I have viewed and/or intend to view in the near future. Design and Utility Exception Submittal Requirements, Design & Utility Exception Crash & B/C Analysis Methods, Pavement Design Research Update-Base Clearance, Design Update Training, Strategic Highway Safety Plan, Cable Barriers-Update, AASHTO Highway Safety Manual, Designing for Bicyclists and Pedestrians, Specifications Writing 101, Design Exception Mitigation Strategies, Florida Unified Stormwater Rule, Machine Control - Moving Road Construction and its People More Efficiently, ADA for Florida Roads, Maintenance of Traffic for Pedestrians & Cyclists, An Ounce of Prevention is Worth a Pound of Cure, Wet Weather & Audible Pavement Marking Testing & Policy. As you can see, many of the topics that I have suggested relate to improving our designs, accommodating vulnerable road users, improving our documentation of and turn around time on design exceptions and last but certainly not least, safety.



### *District III Quarterly Design Newsletter*

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## *Electronic Phase Submittals*

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

As many of you are now aware, we have recently made the move to electronic phase submittals for plans reviews. While the memories of boxes upon boxes of plans for submittals is still a joyful and fresh memory for us all, I'm sure we all can endure the transition evoked by the new procedure. During this change, here are a few things worth remembering for Project Managers that will help make this a smooth and relatively seamless shift.

Before submitting a project for phase review, be sure to check the most up to date QA1 list for the county within which your project is located. This may seem like an obvious check to most, but this step is overlooked more often that it should be. Make note of the number of CDs to be made to cover Municipals, VMS maintained counties, and Utility Companies within the project limits.

Utility Companies may need special accommodations that may include CD deliveries with Microstation files for the purposes of providing markups. Early coordination with the utilities on the project should better define for the Designer and Project Manager the needs of each utility and their ability to use the Adobe files that are being distributed.

Before sending ERC (Electronic Review Comments) notifications of project submittals, all materials and documentation should be uploaded to the Production Management Sharepoint site. Plans, Design Documentation, Computation Books, and even Pond Siting Reports, Bridge Hydraulic Reports, and Bridge Development Reports are some of the files that are to be uploaded for respective submittals.

When preparing the ERC submittal, at a minimum the email notification should add the direct link to the file in which the documents have been uploaded. Our reviewers should not be expected to search through numerous files on Sharepoint to find the review information. There is also a way to include directly in the ERC system a link that would allow the reviewers to retrieve the documents after logging into the system.

We are certainly moving forward in this age of “going green” and reducing processes. At a time when our wallets are getting thinner and the cost of doing business is increasing, we need to do all we can to cut cost while maintaining quality. Electronic Phase Submittals are a step in the right direction, but we must all take part in assuring that the small details are not overlooked.

## Design Spotlight—Ronnie Johnson

Scott Golden, P.E., District Design Engineer



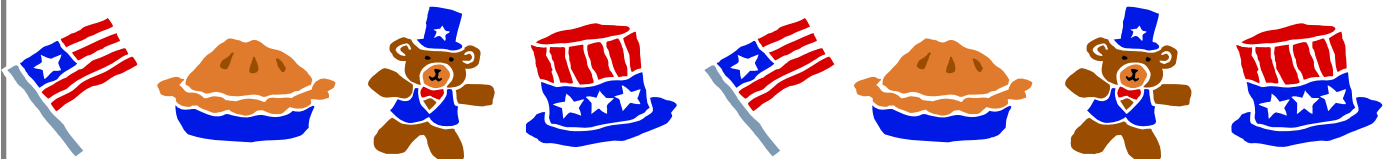
Ronnie Johnson has been with the Department for more than 37 years and works in the Drainage Section of Design as a Drainage Designer. He spent his first 5 years in Roadway Design.

Ronnie does the full range of storm water related design from Bridge Hydraulics and complex major roadway storm sewers and storm water management to public complaints. He is also the primary reviewer of Drainage Connection permits for new commercial developments. Ronnie does work commonly done by an experienced Professional Engineer. He is very knowledgeable which has given rise to the phrase “ask Ronnie”. As our ‘storm water historian’ he was involved with or remembers drainage issues from the past 37 years. He also participates in the school mentoring program. When not at work, Ronnie enjoys spending time with wife Beth who teaches school and his son (a PE in Tallahassee) and daughter (a State Prosecutor). Ronnie also enjoys fishing, hunting, and bicycling.

We certainly are glad to have Ronnie as part of our DOT team in Drainage.

## Top Ten Quality Control Comments July-Sept. 2008

1. Superelevation transition not calculated correctly.
2. Limits of milling and resurfacing not shown on side streets.
3. Sidewalk closure not addressed in MOT plans.
4. For Pay Item 0102-1, please ensure that the number of days for the secondary unit measure has been approved by F.D.O.T Construction.
5. Please ensure that the Pay Item 0110-4 has been included for any concrete pavement removal.
6. Please ensure for Pay Item 0110-1-1 that the acre (AC) quantity for clearing and grubbing is accurate. Compare this quantity to the disturbed area AC quantity in the SWPPP if applicable for the project. Clearing and grubbing limits on the Typical Sections should only include new construction, widening and shoulder construction areas.
7. Please ensure that the quantity in the Computation Book, Trans\*port and the Plans match.
8. Add any necessary documentation to the Computation Book. (Reference the Basis of Estimates Handbook.)
9. Show Utility Conflict Box.
10. The Typical Sections are not showing proposed stabilization under the shoulder.



## *Supplemental Agreement Report – June 2008-August 2008*

Scott Golden, P.E., District Design Engineer

This is the Supplemental Agreement Report for the months of June through August 2008. The three (3) categories of supplemental agreements that are included in this report are codes 009, 010, and 119. This report 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 costs to the public. Below is a description of those areas and our responses:

### **Description Code 009: Permit Related Issues**

**Reason:** Improvements under this Contract consist of installation of Mechanically Stabilized Earth (MSE) Walls, construction of new on and off-ramps, reconstruction, widening, drainage and safety improvements.

During construction it was determined that the existing Army Corps of Engineers Permit did not provide sufficient impacts to a wetland area to allow for installation of necessary erosion control devices during installation and construction of the new MSE Wall. As a result the Contractor was required to cease production work on MSE Wall until modification of the permit was completed. Additionally, the Contractor will furnish, install, maintain, and remove 560 LF of 36" SS pipe with a 36" mitered end section (MES) @ 91.12/LF = \$51,027.20, clear and grub an additional 0.12 acres @ \$13,280. 83/Acre = \$ 1,593.70 for a **LUMP SUM** amount of \$52,620.90.

50 Contract days will be added to the Allowable Contract Time (Disincentive portion). It is understood that the 50 days applies only to the Disincentive part of the Incentive-Disincentive Provision. The Department and Contractor agree that granting of the 50 days constitute a full and complete settlement of delay as provided in item (4) on page 1 of 2.

**Increase = \$52,620.90**

**Response:** This supplemental agreement was not the result of a design error.

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### **Description Code 010: Weather Related new work, repairs, overruns or contract changes due to weather**

**Reason:** The improvements under this contract consist of construction of a split diamond interchange.

The storm water run-off volume was unable to enter the new pipe system at a rate to prevent flooding of the southbound roadway due to Best Management Practices (BMP's) that had been installed to prevent sediment and silt from entering into the new pipe system. The Department determined it would be in their best interest to reduce the amount of BMP's in order to immediately alleviate the roadway flooding. When the protection devices were removed the volume of water carried debris and sediment into the new storm water system.

This Supplemental Agreement provides compensation for the removal of construction debris and siltation drawn in the new storm water pipe when the protection systems were removed.

**Increase = \$35,090.22**

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*If we all did the things we are capable of doing, we would literally astound ourselves. ~Thomas Edison*

## ***Supplemental Agreement Report – June 2008– August 2008***

Scott Golden, P.E., District Design Engineer

### **Description Code 119: Revisions required related to major structural component changes**

**Reason:** The improvements under this contract consist of reconstruction of devastated areas as a result of Hurricane Dennis

The Department recognized the need for additional protective measures to be implemented in an attempt to preserve the integrity of the roadway in the event of a new storm event. Subsequently, this contract was let that provides for the installation of such additional protective measures. These measures include the combination of an Articulating Block and Soldier Pile Wall System being installed between the eastbound roadway and the right-of-way line.

Subsequent to the commencement of construction, it became apparent that the permanent sheet pile quantity reflected in the plans was insufficient in order to provide stability of the existing roadway during construction of the Articulating Block and Soldier Wall system. Review of the design documentation revealed extreme depths of penetration required to meet allowable sheet pile deflections, large amounts of excavation required in order to construct soldier pile wall and very restrictive work space in some areas. Upon review of this information, it was determined that it is not cost feasible to overrun steel sheet piling quantities in order to construct wall sections with a cap elevation of 12' to 15' using the current design. A new design was submitted to the Contractor that allows for a Coal Tar Epoxy Coated Permanent Sheet Pile Wall with a Waler and rip rap rubble be installed in lieu of the bulkhead panels where wall section cap elevations are 12' to 15'.

As a result of the new design, the contractor was instructed to cease production of the precast bulkhead panels. At the time the cease work notice was given, the precast producer had already cast 19,506 square feet of panels that will not be incorporated into the new design. The Department will take delivery of this salvageable material at a location in close proximity to the precast facility. The Department will compensate the Contractor for excess precast panels at invoice price plus delivery of the materials to the location designated by the Engineer.

This supplemental agreement provides for the reduction and inclusion of the necessary pay items and performance of this work as directed by the Department.

**Increase = \$986,719.16**

**Reason:** This is being considered a design error with \$374,403.36 in premium costs.

### **"Old Glory"**

The name "Old Glory" was first applied to the U.S. flag by a young sea captain who lived in Salem, Mass. On his twenty-first birthday, March 17, 1824, Capt. William Driver was presented a beautiful flag by his mother and a group of local young ladies. Driver was delighted with the gift. He exclaimed, "I name her 'Old Glory.'" Then Old Glory accompanied the captain on his many voyages.

Captain Driver quit the sea in 1837 and settled in Nashville, Tenn. On patriotic days, he displayed Old Glory proudly from a rope extending from his house to a tree across the street. After Tennessee seceded from the Union in 1861, Captain Driver hid Old Glory by sewing the flag inside a comforter. When Union soldiers entered Nashville on February 25, 1862, Driver removed Old Glory from its hiding place, carried the flag to the state capitol building, and proudly raised it for all to see.

Shortly before his death, the old sea captain placed a small bundle into the arms of his daughter. He said to her, "Mary Jane, this is my ship flag, Old Glory. It has been my constant companion. I love it as a mother loves her child. Cherish it as I have cherished it."

The flag remained as a precious heirloom in the Driver family until 1922. Then it was sent to the Smithsonian Institution in Washington, D.C., where it is carefully preserved under glass today.