

# District Three Design Newsletter

(Internet Address - <http://www.dot.state.fl.us/district3/design> )

Volume 5, Issue 4

OCTOBER—DECEMBER 2000

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## District III Quarterly Design Newsletter

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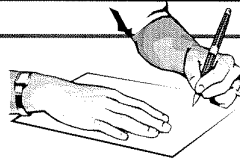
.....Brian Blanchard

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.....Keith Shores

.....Marvin Stuke



## From the Editors Desk

**Brian Blanchard, District Design Engineer**

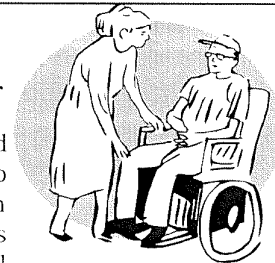
The District III Design Conference for 2001 has been scheduled for April 26 & 27 at the Bay Point Marriott in Panama City, FL. This year's conference will begin on Thursday at 1:00pm and conclude on Friday at noon. We will be providing consultants with information on such topics as plans preparation, right of way issues, CADD requirements for deliverables, geotechnical and drainage issues, as well as bidability issues. We encourage consultants to contact us with agenda items for discussion at this year's conference.

If you would like more information regarding hotel reservations, you may contact Judy Cook at the Florida Department of Transportation at (850)638-0250 ext. 422, or e-mail at [judy.cook@dot.state.fl.us](mailto:judy.cook@dot.state.fl.us)

## ADA Classes-Chipley Schedule

**Mary Anne Koos, Bicycle/Pedestrian Coordinator**

ADA classes are now scheduled for Chipley on February 19 and 20. Following is a tentative schedule, with times likely to change slightly due to conflicts. They will be taught by Dean Perkins, Special Structures Architect, ADA Coordinator. His phone number is 850-414-4359, SC 994-4359, and e-mail address is [dean.perkins@dot.state.fl.us](mailto:dean.perkins@dot.state.fl.us)



The offered classes are:

### Monday, February 19, 2001

12:30-2:15 ADA for Construction - BT-05-0062 (0029) (roadway-related)  
2:30-4:00 ADA for Maintenance - BT-07-0060 (0003) (roadway-related)

### Tuesday, February 20, 2001

8:30-12:30 ADA for Facilities - BT-05-0019 (0045) (building-related)  
2:00-4:00 ADA for Design - BT-05-0068 (0022) (roadway-related)

All the 2-hour classes are 'variations on a theme' -- that is they contain very similar material directed at different audiences. *The work books alone are worth the time!!! Very useful!!*

Coordinate with Barbara Forrest to sign-up for the Chipley classes. Barbara Forrest's contact information is District Training Manager, (850) 638-0250 Ext. 231, SC 767-1231, [barbara.forrest@dot.state.fl.us](mailto:barbara.forrest@dot.state.fl.us).

Consultants are welcome at no charge on a space available basis.

## **FDEP/FDOT Coordination**

**Brian Blanchard, District Design Engineer/  
Department of Environmental Protection**

District Three is striving to provide better coordination with the Florida Department of Environmental Protection (FDEP). We now are having quarterly coordination meetings between FDOT and FDEP. FDEP has requested that we implement the following recommended practices on all projects regarding wetland issues.

1.) Wetland Delineation Line. The FDOT standard symbol for a wetland delineation is a dashed line, and dashed lines are found all over the drawings. So, we can have trouble identifying the wetland line. As a solution, (A) the drawings should have frequent 'labels' for the wetlands, and (B) always hatch the pre-construction locations of the wetlands.

2.) Wetland Hatching: (A) As stated above, the extent of the pre-construction wetlands (not post-construction) should be hatched on the plan-view drawings.

(B) Use hatching to show the areas of fill in the wetlands. Since the toe of the berm is not being represented on the plan view drawing, DEP staff can have difficulty clearly identifying the extent of fill on the plan-view drawing. (It is much easier than referring to the cross-sectional drawings.)

3.) Identifying the Wetlands at or near the Treatment Ponds: DEP permitting staff would like to see wetland delineation lines (and hatching) at the treatment pond locations, as well as at the roadway widening locations. (Don't forget to send your wetland consultants to these properties as well as to the road right-of-ways.)

4.) Impacts Outside of the Toe of the Berm. Some contractors apparently believe that they can clear, grub and re-grade any or all areas within the R/W,

even in the area of the wetlands. DEP enforcement staff perceive this as a violation if that impact is not clearly identified in the wetlands permit. Any proposed impact (including clearing, grubbing, re-grading, etc.) should be clearly identified in the permit application, preferably on the plan-view drawings. Suggestion: In addition to identifying the filled areas, clearly label or hatch the undisturbed wetland areas and clearly label the areas that will be impacted by the construction.

### **STORMWATER ISSUES**

1.) Stamped Drawings, Calcs, & Permit Applications: We need STAMPED drawings, calculation and a stamped application form. Often, we get photocopied drawings, calculations notebooks, etc. that do not have a stamp.

2.) Representing Erosion Control Barriers. Silt fencing and hay bales should be shown in plan view drawings (using the standard symbols). Avoid only using notes that tell the contractor where to establish the erosion control barriers.

4.) Littoral Zone Issues: When plantings are required to establish a littoral zone in a wet detention pond, we would like to have notes to ensure that (A) the littoral will be established within 30 days of the pond becoming operational, and (B) there shall be 85% coverage (not 85% survival rate) within 24 months.

### **GENERAL ISSUES:**

1.) Please provide a 'zoomed-out' plan-view drawing of the project so that the general locations of the ponds and the wetlands can be easily identified. This greatly helps our field inspectors.

2.) Within the drawing package, we would prefer to have a 'Symbols, hatching & Line-type sheet' so that the field inspectors and permit processors can more easily identify the pertinent information on the drawings.

3.) We require 8.5"x11" drawings for the Wetland permits, however, if they are difficult to read, please provide a larger drawing in addition to the 8.5"x11".

## **Disposal and Delivery of Milled Material**

**Keith Shores, District Specifications Engineer  
Brian Blanchard, District Design Engineer**



Effective with the January 2001 Letting, we have a special provision which is to be inserted in the specifications package when the plans provide a location for the stockpiling of milled material. In this special provision, we are to specify the quantity to be delivered to this location.

Currently, the plans address this issue with plan or pay item notes. Section 327 is currently located in the Specifications Book. The third paragraph of Article 327-1 tells the contractor to "Take ownership of milled material." Article 5-2 says that in case of discrepancies, the Plans would override the Specifications Book and this is the current scenario and should not be a problem. However, when Section 327 becomes a Special Provision, it will still tell the contractor to "Take ownership of milled material." Now we have a discrepancy between the Special Provisions and the Plans. According to Article 5-2, the Special Provisions override the Plans. The contractor could certainly argue this point and retain all the milled material. This has happened in District Two.

Since we will have a Special Provision to cover milled material, (effective January 2001), we will no longer need the pay item 2110-86, delivery of salvageable material. If *other* material is being salvaged, then this pay item would still be necessary.

## Transit Friendly Highway Design

**Marvin Stukey, Director of Planning and Public Transportation**

**Highway projects should be designed with considerations of the transit user and the transit operator.** These considerations will involve coordination with the local transit agency. At an absolute minimum, projects should maintain the existing level of transit friendly design as before the project.

Depending on the type of project, different projects have different processes and or studies associated with them. **These guidelines are not intended to implement additional processes or studies, rather use the existing processes to include transit considerations during design.** The following processes are used for different type projects. When these processes or studies are implemented the items listed should be provided or considered as appropriate.

### During the PD&E process:

\*List the transit system, phone number and address along with a contact person, usually the manager. This information can be obtained from the District Public Transportation Office.

\*Review the current adopted MPO's Long Range Plan and the Cost Feasible component for transit issues.

\*Contact the transit system manager for transit related input. Include specific issues, letters, or directions in the report

### During the Project Concept:

List the transit system, phone number and address

along with a contact person, usually the manager. This information can be obtained from the District Public Transportation Office.

\* Contact the transit system manager for transit related input.

\* Note whether or not the transit system manager would like to review the plans. If they want to review the plans, note in the report for copies to be sent for review during the normal plans review process.

\* Address how needs might be met, when funds are not available for a specific need. For instance, a joint participation agreement with the local government might be executed for additional work which would not otherwise be included in the project.

\* Consider all items related to transit:

### Examples:

Existing bus stop signs, cross walks, shelters etc.

The future need for bus stop signs, cross walks, shelters etc..

Signs of insufficient turning radii

Signs of high pedestrian/transit traffic

### Traffic Operations Studies:

Transit should be considered during traffic operations studies. At a minimum the transit agency should be contacted for input. The name, address, and phone numbers can be obtained from the District Public Transportation Office.

**The most important part of everything listed above is that coordination and mutual understanding with the transit agency is necessary. This coordination should start with the PD&E phase and be included in all phases through design and in some cases include construction.**

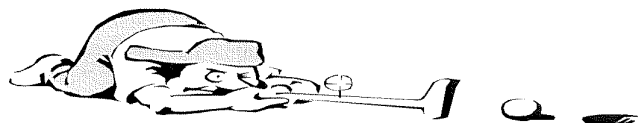


## First Annual PTGA Golf Tournament

**Brian Little, Project Designer/Manager**

The First Annual Panhandle Transportation Golf Association (PTGA) Invitational Golf Tournament has been scheduled for Friday, May 18 at Indian Springs Golf Club in Marianna. The tournament format will be a blind-draw, three-man scramble, ideally with one FDOT employee per team.

The tournament proceeds will benefit the FDOT/Florida State Employee Charitable Campaign (FSECC). Be sure and mark this date on your calendar. As the date approaches additional information will be mailed out. If you have any questions regarding how you can volunteer or contribute to the tournament, contact Brian Little at 850-638-0250, Ext. 450



# Supplemental Agreement Report-September

**Brian Blanchard, District Design Engineer**

This is the Supplemental Agreement Report for the month of September 2000. The three (3) categories of supplemental agreements that are included in this monthly report are codes 001, 009 and 107. This report is included in the Quarterly Design Newsletter as a tool to inform designers (anyone that receives it) 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 001: Subsurface material or feature encountered not shown in plans - assuming reasonable engineering judgment/ processes used in plans preparation (i.e. muck, old piling, boulders, artesian springs, abandoned utility lines, etc.).**

**S.P. Nos. 47010-3519 & 56010-3520, FPID Nos. 218046-1-52-01 & 219939-1-52-01 (Calhoun & Liberty Counties)**

**Reason:** Project plans provided for construction of a new eastbound 2-lane bridge across the Apalachicola River and the refurbishing of the existing bridge to provide a 2-lane westbound bridge across the river. The plans also provided roadway connections at each end of the bridges connecting them to the existing 2-lane roadway as well as drainage retention/detention ponds for treating the storm water.

The plans provided for constructing 1:2 slopes into the side of a large hill on the east side of the river as part of pond number 1 construction. It was necessary to construct the pond from the side of the hill for the pond to be above the flood plain. During construction of the 1:2 slopes forming one side of the pond, considerable water seepage was encountered almost to the condition of an artesian spring. This seepage caused considerable erosion into the newly formed pond and caused silt to escape the limits of the pond construction thereby violating the erosion control requirements of the permits. It became apparent that stabilizing the 1:2 slope would not be possible. The Department made the decision that the slope would require flattening to a 1:4 and additional drainage measures provided to contain the seepage. This led to the construction of something similar to a French Drain system in the side of the hill. However, the construction of the 1:4 slope and French Drain system was delayed until Right of Way could be acquired to accommodate the revised plan.

*It's much harder to ask the right question than it is to find the right answer for the wrong question.*

**EE Morison, Educator**

This supplemental agreement is to compensate the contractor for this delay period and for making repairs to pond from washouts.

**Increase = \$142,582.56**

**Response:** This supplemental agreement was not the result of a design error, but unforeseeable conditions.

**Description Code 009: Permit related issues.**

**Reason:** See previous reason. Silt escaped project limits and violated permit requirements and had to be reclaimed.

**Increase = \$49,917.44**

**Response:** See previous response.

**Description Code 107: Modification of approved MOT plan to accommodate various modes of transportation (i.e. peds, boats, cars, bikes, etc.).**

**S.P. No. 56520-3602, FPID: 221923-1-52-01 (Liberty County)**

**Reason:** Improvements under this contract provided for replacement of an existing bridge located on CR 2224 in Liberty County. The offset distance between the detour bridge and the new bridge alignment did not allow sufficient clearance to install the permanent guardrail at the approaches prior to removal of the detour. The Engineer made the decision that temporary concrete barrier wall and impact attenuators were needed to protect the new bridge rail ends during the removal of the detour, construction of permanent guardrail and final stages of embankment construction of the approaches. The additional use of the temporary barrier wall and impact attenuators resulted in overruns exceeding 5 percent to these items of work.

**Increase = \$75,200.00**

**Response:** This supplemental agreement was the result of a design error. The Designer provided MOT items for the construction of the bridge and safe use of the detour. However, he failed to consider the impact that the overlap in the permanent shoulder and the temporary detour shoulder would have on the guardrail construction and subsequent placing of traffic on the new roadway.

The additional temporary barrier wall and impact attenuator modules were furnished at the original bid price per unit for each item therefore no premium cost was incurred.

# Supplemental Agreement Report—October

**Brian Blanchard, District Design Engineer**

This is the Supplemental Agreement Report for the month of October 2000. The two (2) categories of supplemental agreements that are included in this monthly report are codes 001 and 115. This report is included in the Quarterly Design Newsletter as a tool to inform designers (anyone that receives it) 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 001: Subsurface material or feature encountered not shown in plans - assuming reasonable engineering judgment/ processes used in plans preparation (i.e. muck, old piling, boulders, artesian springs, abandoned utility lines, etc.).**

**S.P. No. 54001-3409, FPID No. 222670-1-52-01 (Jefferson County)**

**Reason:** Project plans provided for rubblizing and resurfacing of the concrete pavement along with resurfacing the existing paved shoulders on a section of I-10 in Jefferson County.

(A) Subsequent to rubblizing and resurfacing of the concrete roadway and exposure to traffic, one of the eastbound lanes between Sta. 238+21 and 243+07 exhibited subsurface failure. This condition resulted in severe rutting, pumping and loss of structural integrity of the existing pavement structure. The District Materials Office determined that the corrective action necessary would consist of milling the new asphalt from the roadway and inside paved shoulder, complete removal of the rubblized concrete pavement, subsurface excavation on a 0.02 adverse slope, installation of underdrain, placement of geogrid and graded aggregate base. These measures will eliminate the unstable condition and provide a foundation that will effectively restore structural integrity to the pavement structure.

(B) During performance of work on main travel lanes, work phasing required the utilization of the outside paved shoulder to maintain traffic. Subsequently, isolated areas of the paved shoulder experienced subsurface failure which resulted in loss of pavement structure stability. The District Materials Office determined that the corrective action necessary would consist of removal of the existing pavement structure, subsurface excavation, installation of geogrid, graded aggregate base and replacement of asphalt pavement within these isolated areas. These measures will restore

structural integrity to the paved shoulders where the failures occurred.

**Increase = \$159,849.35**

**Response:** This supplemental agreement was not the result of a design error, but unforeseeable conditions.

**Description Code 115: Drainage modifications required due to grade differentials, structure omissions, problems with pond designs, offsite flow not handled, incorrect elevations of structures, improper hydraulic design, etc.**

**S.P. No. 55050-3542, FPID: 219776-1-52-01 (Leon County)**

**Reason:** Improvements under this contract provided for reconstruction and 4-laning of SR 61 (Thomasville Highway) from Mt. Zion Church to Georgia Line.

This supplemental agreement was for providing compensation for pumping down the stormwater treatment facility at Sta. 354+22, cleaning out the inlet and pipe at structure S-18, re-grading the ditch, berm and slope to S-18, removing and replacing the northbound roadway Type B Stabilization, limerock base and asphalt pavement at the new S-18A, Sta. 355+21. The flow line elevation at S-18 was designed lower than the stormwater treatment facility top of berm elevation at Sta. 354+22 causing water to back up into the inlet (S-18) and creating erosion problems in the ditch, berm and slope adjacent to S-18. An additional inlet (S-18A) and pipe was added by the designer to solve this problem.

**Increase = \$20,791.55**

**Response:** This supplemental agreement appears to be the result of a design error. The Department will pursue collecting the premium costs if after further evaluation by the FDOT/GC Project Manager, CEI, Construction, District Drainage and other Department personnel that the error was avoidable.

*Give some people an inch.....  
.....and they think they're a ruler.*

# Supplemental Agreement Report—November

**Brian Blanchard, District Design Engineer**

This is the Supplemental Agreement Report for the month of November 2000. The two (2) categories of supplemental agreements that are included in this monthly report are codes 018 and 101. This report is included in the Quarterly Design Newsletter as a tool to inform designers (anyone that receives it) 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 018: Special events or excessive traffic congestion impacting contract.**

**S.P. No. 57040-3578, FPID No. 220177-1-52-01 (Okaloosa County)**

**Reason:** Subsequent to commencement of construction, the project experienced severe congestion along this corridor. This congestion is due to the fact that this roadway serves as a main connector for motorist commuting to Niceville, Crestview, Eglin Air Force Base and is further compounded by seasonal and tourist traffic.

As a result of undue public concerns, the Department scheduled a meeting with local citizens, business owners, state and local county officials in order to acquire input as to a possible solution to the traffic delays and inconveniences being experienced throughout the project. The outcome of this meeting was a commitment from the Department and Contractor to undertake actions that would accelerate construction of the project.

These actions included:

1. The utilization of stay-in-place forms for bridge deck construction in lieu of conventional forming.
2. Slip forming of traffic railing in lieu of erecting hand forms.
3. Provide for increased base thickness in lieu of type "B" stabilization in areas of base construction.
4. Provide compensation for increased cost associated with the acceleration of the Contractor's work effort to achieve a 120 calendar day reduction in contract time.

**Increase = \$898,677.54**

**Response:** This supplemental agreement was not the result of a design error, nor was any premium cost involved.

However, this supplemental agreement is being

included as a part of this report for the purpose of bringing attention to future design projects that may experience similar traffic congestion conditions. Hopefully it will encourage Designers and the Department's staff to consider time conserving measures in the Contract Plans and Documents to help deter this type of Supplemental Agreement.

**Description Code 101: Necessary pay item(s) not included.**

**S.P. No. 58001-3514, FPID: 220387-1-52-01 (Santa Rosa County)**

**Reason:** Improvements under this contract provided for reconstruction and 4-laning of SR 89 from SR 10 (US 90) to SR 87 and included JPA plans for utility relocations and construction.

Subsequent to the contract letting a discrepancy was detected in the bid item provided and the actual pipe size being called for in the plans. The bid item list contained an item for 19 mm Polyethylene Pipe and the plans required the use of 102 mm Polyethylene Pipe, resulting in the correct pay item not being provided.

**Increase = \$84,218.00**

**Response:** This supplemental agreement is the result of a design error. However, there was no premium cost incurred per the CEI and General Consultant reviewers.

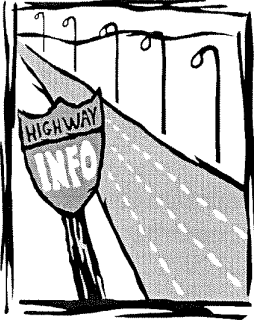
**S.P. No. 58050-3519, FPID: 220405-1-52-01 (Santa Rosa County)**

**Reason:** Improvements under this contract provided for reconstruction and 4-laning of SR 87 from end of 4-lane in Milton to end of Clear Creek Bridge and included JPA plans for utility relocations and construction.

Subsequent to the contract letting a discrepancy was detected in the bid item provided and the actual pipe size being called for in the plans. The bid item list contained an item for 19 mm Polyethylene Pipe and the plans required the use of 102 mm Polyethylene Pipe, resulting in the correct pay item not being provided.

**Increase = \$22,894.40**

**Response:** This supplemental agreement is the result of a design error. However, there was no premium cost incurred per the CEI and General Consultant reviewers.



## Rumble Strips

John Peters, District Scheduling Engineer

On recent resurface jobs we have encountered a problem with the rumble strips not being addressed prior to the milling operation. When traffic is shifted to either the outside or inside shoulder this presents an unexpected safety problem to the traveling public. On all projects that has not been sent to Tallahassee to bid or is still in the design phase, we would like to ask each project manager to please include a method for covering these strips prior to beginning the milling operation.

### DISTRICT THREE DESIGN FLORIDA DEPARTMENT OF TRANSPORTATION

If you have any questions or problems regarding  
obtaining a copy of this newsletter from the web page,  
contact Eddie Register in the District Utilities Office.  
(850) 638-0250 ext.-392  
or fax (850) 638-6148

If you are planning to attend the 2001 District III Design Conference, the required registration form below should be completed and mailed to:

Florida Department of Transportation  
Attn: Judy Cook, Design Department  
1074 Highway 90  
Chipley, FL 32428

Please Print

## 2001 District III Design Conference Registration Form

Your Name: \_\_\_\_\_  
(one person per registration card, please)

Your Company's Name: \_\_\_\_\_  
(please use abbreviations where possible)

IN LIEU OF MAILING, YOU MAY FAX YOUR REGISTRATION FORM  
TO:

Attn: Judy Cook  
850-638-6148