

FLORIDA DEPARTMENT OF TRANSPORTATION

District Three Design Newsletter

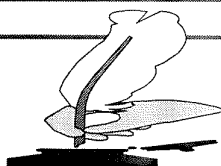
(Internet Address - <http://www.dot.state.fl.us/rddesign/D-3/files/d-3.htm>)

Volume 5, Issue 1

JANUARY—MARCH 2000

Inside this issue:

<i>From the Editors Desk</i>	1
<i>District Three Design Conference Reminder</i>	1
<i>Guardrail-Bridge Transition Special Detail</i>	2
<i>Guardrail for Evacuation Routes</i>	2
<i>Pedestrian and Bicycle Accommodations in Construction Areas</i>	2
<i>Potential Acquisitions and Construction Easements</i>	3
<i>Drop-Offs on 3R Projects</i>	3
<i>Claim for Stockpiling Excess Material</i>	4
<i>Plans and Plans Revisions</i>	4
<i>Restoration of Driveways</i>	4
<i>Mast Arms, PPM 2000 Update, BOE Update</i>	4
<i>Supplemental Agreement Report—January</i>	5
<i>Supplemental Agreement Report—February</i>	6



FROM THE EDITORS DESK

Brian Blanchard, District Design Engineer

On April 26 and 27, 2000 a Design Conference will be held to provide consultants with information on such topics as the work program, scheduling, plans preparation and design updates as they pertain to District Three Design.

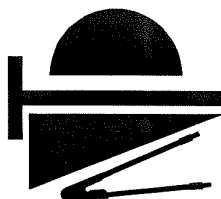
We have extended the conference to 1 ½ days to allow sufficient time for questions and interaction with Department personnel. Please refer to the information below concerning time, dates, and who to contact regarding reservations and registration for the conference.

DISTRICT THREE DESIGN CONFERENCE 2000

WHERE: Bay Point Marriott
Panama City, Florida

This years conference will begin Wednesday, April 26th at approximately 1:30 p.m., and will conclude Thursday April 27th at approximately 4:00 p.m.

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.



Guardrail-Bridge Transition Special Detail

Jim Mills, State Roadway Engineer

If you have metric projects scheduled for July, August, or September 2000 lettings which involve bridge construction and/or guardrail to bridge connections, PLEASE TAKE NOTE!

The new thrie beam guardrail transition (Detail J) in Index 400 of the Metric 2000 Standards provides ONLY details for connecting to a safety shape bridge rail extending across the full length of the approach slab. This is a completely new design that we developed working with the Structures Design Office.

However, details and instructions for the design of the bridge rail extending across the full length of the approach slab have not been released by the Structures Design Office to date (now expected April 2000). For metric projects let beginning July that do not include the new approach slab and rail design there will be conflicts in the contract documents since there are insufficient details in the Metric 2000 Standards for connecting the new Thrie Beam transition to bridges designed with shorter end/wing post designs currently provided in most bridge plans. These bridge designs were based on the w-beam guardrail transition that is only partially detailed in Index 401 of the Metric 2000 Standards. We realize that for metric projects scheduled for July, August and September 2000 letting you may not have sufficient time to redesign the bridge end/wing post to accommodate the Thrie beam transition. For these projects we have developed a special detail sheet with the w-beam transition details. This special detail is available on the Roadway Design Office Web site in the Interim Standards files:

Internet: http://www.dot.state.fl.us/rddesign/rd/rd_cadd.htm

Infonet: http://designweb.dot.state.fl.us/rdwy/main/rd_cadd.htm

The file name is m00clofl.exe

We have provided a stipulation that is stated in the file that use of this detail requires concurrence by the District Design Engineer.

Guardrail for Evacuation Routes

Brian Blanchard, District Design Engineer

The 2000 Roadway and Traffic Design Standards require special attention to guardrail anchorages on evacuation routes. When divided roadways are designated evacuation routes, approach end anchorage assemblies should be used for the design of the trailing end. Trailing ends without guardrail must be retrofitted with new guardrail. Existing guardrail at the trailing end with insufficient approach lengths must be corrected to protect the hazard.

This requirement should be applied to all interstate roadway projects in District Three. Any additions/modifications to the policy will be brought to your attention.



Pedestrian and Bicycle Accommodations in Construction Areas

Greg Xanders, State Construction Engineer

Billy Hattaway, State Roadway Design Engineer

A recent process reviewed by FHWA indicated the need for the Department to enhance pedestrian and bicycle accommodations in our construction projects. In addition, the issue also came up at a recent Executive Committee Meeting. Secretary Barry asked that we ensure that pedestrian and bicycle needs are being addressed.

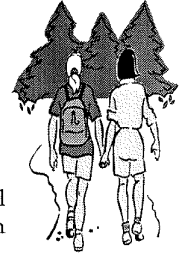
It is imperative that pedestrians/bicyclists are considered when construction activities conflict with normal use. Temporary traffic control plans should reasonably provide for the continuity of pedestrian/bicycle movements during construction. However, it is realized that no set of plans can typically satisfy all conditions for a given project and defining detailed standards that would be adequate to cover all applications is simply not practical.

Some active construction projects may not be meeting the intent of accommodating the needs of pedestrian and bicycles within construction areas. In some cases, the project plans do not address pedestrian and bicycle accommodations and in other cases the project plans are deficient in detailing certain phases. In any case, you should review existing projects to insure that pedestrians and bicyclists are reasonably accommodated in all phases of work.

For your information, pedestrian considerations in a work zone should meet the following criteria:

(Continued on page 3)

- 1.) Pedestrians should not be led into direct conflicts with work site vehicles, equipment or operations.
- 2.) Pedestrians should not be led into direct conflicts with mainline traffic moving through or around the work site. Bicyclists should be provided with a travel route through or around the work site that replicates as nearly as possible the most desirable characteristics of a paved shoulder or bike lane.
- 3.) Pedestrians should be provided with a safe, convenient travel path that replicates as nearly as possible the most desirable characteristics of sidewalks or footpaths. *Provisions for the disabled must be included.*
- 4.) Bicyclists should not be directed onto the same path used by pedestrians.



This criteria is outlined in Section 6D-1 of the MUTCD and the FDOT Plans Preparation Manual Chapter 10—Work Zone Traffic Control. These sections also provide additional details, along with Standard Index 660 for your consideration.

Potential Acquisitions and Construction Easements

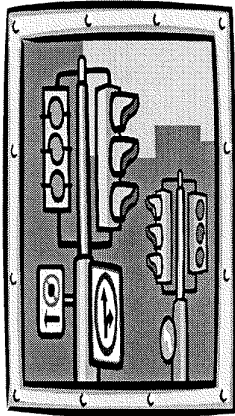
Robert L. Brooks,
District Deputy Right of Way Manager of Appraisal

On a recent project, the question was posed concerning several potential TCE's to remove signal strain poles and control boxes presently existing outside of the Department's right of way.

I have discussed this issue with John Duncan, District Right of Way Administrator, and with Bob Deal, District General Council. They indicated the District's guideline for removing signal poles no longer needed by the Department is to simply remove the poles as part of the road improvement. In a case where the Department does not own the property by deed, we still would have the right to enter and remove the pole, provided it has been in place for over four years.

In cases where the poles have been there for over four years the Department would not attempt to acquire any type of document to enter the property. The Department has the right to enter and remove these structures based on the State Maintenance Statute.

In order to reduce the risk of any future liability, the contractor should use extreme caution during removal and be sure no unsafe conditions exist after removal.



Off-Duty Law Enforcement

Brian Blanchard, District Design Engineer

The following Pay Item Footnote should be added to all Plans which require the use of Off-duty Law Enforcement Services.

102-10 -Includes xx hours for the services of an off duty law enforcement officer to be used for the conditions as detailed in the Traffic Control Plan. All other off-duty law enforcement services beyond those detailed in the TCP shall be included under pay item 102-1 (MOT-Lump Sum) USAGE NOTE: To be used with Pay Item 102-10 (Off-duty Law Enforcement Officer). The Designer must detail the uses for the off duty law enforcement officer in the TCP as required by the Plan Preparation Manual.

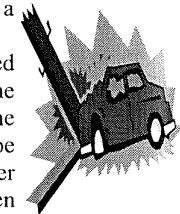
Drop-offs on 3R Projects

Brian Blanchard, District Design Engineer

The Plans Preparation Manual (PPM) does not provide criteria for drop-offs on 3R projects. The PPM requires that drop-offs on new or reconstruction projects be protected with a roadside barrier. Protection should occur if vertical drop-offs created by retaining walls occur within the clear zone on roadways with flush shoulder sections. For curbed sections, a roadside barrier is required for drop-offs greater than 5 (five) feet high created by retaining walls located within 16 feet of a traffic lane.

For 3R projects, I have established guidance for the above conditions. The engineer-of-record should review the crash history for "run off the road" type accidents. Generally, if there are fewer than 2 crashes in a three year period, then no action is required.

If a roadside barrier is warranted, other factors such as intersection site distance, sidewalk width, utilities and right of way should be reviewed. Even though there is no criteria for drop-offs on 3R projects, a design variation (with crash data attached) should be submitted to document the investigation.



Everyone is trying to accomplish something big, not realizing that life is made up of little things.

Frank A. Clark



Claim for Stockpiling Excess Material

Brian Blanchard, District Design Engineer

I received correspondence regarding a claim notice from the Prime Contractor. The contractor wants additional payment for removing the excess material from the project site to the Department's Empire Pit. The plans reflect that the Contractor is to contact Mr. Tom Tobiassen for additional information regarding the stockpiling of the material.

I am requesting that on future projects the Designer identify the location (s) in addition to a contact person regarding material that is delivered or stockpiled off or on the project. This will help reduce unanticipated work for the Construction offices and possible additional payment to the Contractors.

Plans and Plans Revisions

Brian Blanchard, District Design Engineer

Included for your information are reoccurring problems with plans and plans revisions submitted for Letting which stop the processing of a project until it is corrected.

Please stress the importance of one last check by Quality Control/Project Managers prior to the plans being mailed to Tallahassee. By doing this, we can alleviate these problems and loss of production time.

- Incorrect F.P.I.D. and S.P.N.'s
- Illegible and non-reproducible F.P.I.D., S.P.N.'s and sheets
- Adding F.P.I.D., S.P.N.'s and sheet numbers by hand and plans sheets using pencil (Pencil does not reproduce....USE BLACK INK)
- Plans sheets with existing topography in shades of light gray tone will not reproduce legible
- Plan sheets not signed, sealed and dated
- Plan sheets missing (based on Index of Sheet numbers)
- Plan sheets of poor quality for reproducing (too light, small print, borders cut off, etc.)

Restoration of Driveways

Brian Blanchard, District Design Engineer

Please note that when cutting driveways for paved shoulders or other reasons, the replacement material for transitioning the driveway back to the edge of roadway/shoulder pavement must be of similar material (i.e., concrete for concrete, asphalt for asphalt, etc.).



This will help us avoid future complaints from residences and businesses. Projects requiring concrete removal will need a separate pay item for concrete removal since it is not covered under clearing and grubbing.

Mast Arms, PPM 2000 Update, Basis of Estimates Update

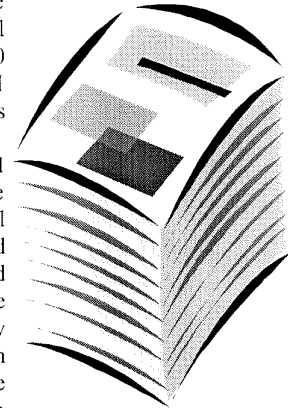
Jim Mills, State Roadway Engineer

At the March DDE/DCPME meeting we explained that we would not issue a mid-year update to the PPM this year (July 2000). However, Upper Management has directed new standards and design procedures for Mast Arms for Signals that have been developed by the Structures Design Office be implemented ASAP. This will require that we issue a July 2000 update to the PPM. The July PPM update will only include changes related to Mast Arms.

We plan to distribute the July PPM update in early May. There will be Interim Indexes, Special Detail Sheets, Pay Item changes and Specification changes associated with this. Plans are to have everything in place in time to allow Districts to use the new Mast Arm Standards beginning with the January 2001 letting, with mandatory implementation beginning with the July 2001 letting.

In addition to the Mast Arm changes, there have been some other Pay Item changes scheduled for January 2001 that will be identified in a "special update" to the BOE that will be distributed at the same time as the PPM update.

If your would like to see the BOE update sooner, we will have it posted on the Roadway Design Office Web Site.



To succeed it is necessary to accept the world as it is and rise above it.

Michael Korda

Writer and publishing executive

Supplemental Agreement Report—January

Brian Blanchard, District Design Engineer

This is the Supplemental Agreement Report for the month of January 2000. The two (2) categories of supplemental agreements that are included in this monthly report are codes 503 and 700. 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 503: Change resulting from engineering decision (use specific code when possible).

S.P. No. 48525-3602, FPID: 221287-1-52-01 (Escambia County)

Reason: Improvements under this contract included removal and replacement of existing drainage facilities along Davis Hwy. The Contractor proposed that a section of the existing drainage system from structure S-148 to S-152 be allowed to remain in place in lieu of removal and replacement. The proposal allowed the existing 18" concrete pipe to remain in place with conversion of existing inlets to junction boxes and installation of proposed inlets as per plan requirements. The Department determined the change would function in accordance with the intent of the original design and would result in a reduction in cost to the project.

The plans also provided for construction of a stabilized subgrade in the area of pavement widening along Davis Hwy. The Contractor proposed that he be allowed to substitute an additional three (3") of ABC III in lieu of performing stabilizing operations at no increase in cost to the project.

Review of the plans and site conditions revealed the presence of underground utilities in the widening areas that are shown to remain, but are located in close proximity to the subgrade. The Contractor, Utility Owners and the Department were concerned as to the impact and potential for damage the stabilizing operation might have on the buried utilities.

"The Department will pursue recovery of the premium cost if it exceeds \$10,000 for this supplemental agreement, or when a cumulative total of \$25,000 for all supplemental agreements on the project is reached."

The Department made the decision that the Contractor's proposal would be accepted without compromising the structural integrity of the pavement structure.

Decrease = \$5,182.23

Response: This supplemental agreement was not the result of a design error. Both proposals were made by the Contractor and agreed upon by the Department. The plans were constructible as provided in the contract even though the revisions resulted in a savings to the Department.

Description Code 700: Overrun of existing pay items when original contract amount is exceeded by over 5%.

S.P. No. 49030-3504, FPID: 218765-1-52-01 (Franklin County)

Reason: Improvements to this project included the resurfacing of the existing roadway along with superelevation correction on SR 377 in Franklin County.

A review of the contract plans revealed that the established quantity of bituminous material for tack coat did not include all the surface area requiring placement of asphalt pavement as described by the typical section. The quantity was further increased by the required multiple layering of the type S asphalt utilized in the superelevation buildup necessary for correcting deficient curve cross slopes. Therefore, the Department determined that the overrun of bituminous material for tack coat was necessary to ensure the structural bonding of the subsequent layers of asphalt for the resurfacing areas as well as within the superelevation correction limits.

Increase = \$28,352.00

Response: This supplemental agreement is attributable to a design error by the consultant. The designer failed to consider all the resurfacing areas requiring a tack coat as well as between subsequent layers for overbuild in superelevation correction areas.



The Department will pursue recovery of the premium cost if it exceeds \$10,000 for this supplemental agreement or when a cumulative total of \$25,000 for all supplemental agreements on the project is reached.

Supplemental Agreement Report—February

**Brian Blanchard, District Design
Engineer**

This is the Supplemental Agreement Report for the month of February 2000. The three (3) categories of supplemental agreements that are included in this monthly report are codes 007, 012 and 112. 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 007: Work added or deleted resulting from agreements with other parties (non DOT) to address concerns within projects limits not in original scope (not permit related).

S.P. No. 55050-3544, FPID: 219773-1-52-01 (Leon County)

Reason: Improvements under this contract included milling and resurfacing in conjunction with removal of existing median traffic separation on Kerry Forest Parkway. Subsequent to commencement of construction, it was brought to the Department's attention that the Northampton Master Association (NMA) held ownership of the existing medians and the proposed improvements did not adequately address the concerns and interest of the NMA for the improvements on Kerry Forest Parkway. The Department evaluated the contract documents and determined that revisions needed to be made to address the NMA's concerns with regards to aesthetics and traffic movements. The Department thereby entered into an agreement with the NMA, whereby the existing roadway would be revised within this section providing reconstruction in lieu of milling and resurfacing and utilizing criteria as specified in the formal agreement.

Improvements on Thomasville Highway included construction of an urban roadway utilizing access management control. Subsequent to construction beginning, an evaluation of the plans revealed provisions for egress onto Old Water Oak Plantation Road from SR 61 was not shown as part of the proposed plans. The Access Management Committee determined that revisions to the plans were warranted to construct a directional median opening to accommodate left turn movements for northbound traffic onto Old Water Oak Plantation Road.

Increase = \$367,731.27

Response: This supplemental agreement was not the result of a design error. The NMA had access to preliminary plans at the public workshop prior to construction. Information concerning coordination with Local Public Agency (LPA) right of way was included in the December 1998 Design Newsletter. It is now the consultant's responsibility to coordinate this effort with the LPA during the design phase. The Department is required to seek conveyance of right of way or some form of consent to the Department's use.

The locations of the directional and full access median openings as provided in the contract plans had been reviewed and approved by the Department.

S.P. No. 60040-3542, FPID: 220669-1-52-01 (Walton County)

Reason: Improvements under this contract included milling and resurfacing of SR 83 (US 331) from US 98 to SR 20 in Walton County. Subsequent to this project being let to contract, the Walton County Planning Commission requested that turn lanes and turn outs for access to a proposed development adjacent to this roadway be incorporated into this project. This property is the site of the proposed New Town Center planned for this area. The Department reviewed the Planning Commission's request and recognized the most feasible time to address access to the proposed center was during construction of this project. The Department made the decision to incorporate the construction of the turn lanes and turn outs for the Town Center into this contract. The contract plans were revised to include this additional work.

Increase = \$343,414.00

Response: This supplemental agreement was not the result of a design error. Again, I believe the Walton County Planning Commission had access to preliminary plans and could have made the request prior to the letting of the project.

Description Code 012: Deterioration/damage (not weather related) sustained on project subsequent to design.

S.P. No. 48040-3570, FPID: 218624-1-52-01 (Escambia County)

Reason: Improvements to this project included the

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milling and resurfacing of the existing roadway. Subsequent to the project being let it was determined that the existing asphalt had deteriorated at an accelerated rate since the pavement design was finalized. The pavement was cracking and splitting down to the granular base material throughout the project. Milling would further strip and damage the pavement structure.

The Department made the decision to eliminate the milling and to construct an asphalt rubber membrane interlayer on the mainline between the two layers of superpave. The mainline and shoulder structure course was done in the same paving operation after the spread rate for the shoulders was increased to 110 kg/m². Thereby, one paving operation over the entire job was eliminated and the need for closing the outside lane for the purpose of paving the shoulder in a separate pass was eliminated.

Increase = \$563,519.12

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

Description Code 112: Project phasing or plans components not constructible as shown.

Section No. 52010, FPID: 220784-2-52-01 (Holmes

County)

Reason: Improvements to this project included the construction of the roadway approach and Maintenance of Traffic necessary in Holmes County leading up to the new Choctawhatchee River Bridge in Washington County.

Special Detour No. 1 in the plans did not make an allowance for the construction of the project to tie to the existing roadway. The detour therefore had to be extended in order to span the limits of the new construction, which started at station 115+50.886.

Increase = \$27,637.68

Response: This supplemental agreement was the result of a design error. The detour should span the limits of new construction if at all possible to minimize maintenance of traffic problems and rerouting of traffic multiple times. No premium costs were attributed to the supplemental agreement by Construction.



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FLORIDA DEPARTMENT OF
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If you have any questions about or problems regarding obtaining a copy of this newsletter from the web page, contact Eddie Register in the District Utilities Office.
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