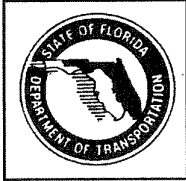


DISTRICT THREE DESIGN



STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

News Letter

**DISTRICT THREE
DESIGN
FLORIDA DEPARTMENT
OF
TRANSPORTATION**

**If you are interested in
obtaining a copy of this free
news letter, contact Brian
Blanchard, District Design
Engineer.
(850) 638-0250 X - 425
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THIRD QUARTER

**Brian Blanchard, P.E.
District Design Engineer**

The theme for this quarter is Community Awareness, Access Management during construction and constructing projects within budget and within the contract time.

Designers should expect to be involved in public workshops on projects as minor as urban resurfacing to major multilane projects.

Designers must provide better access during construction by using asphalt for driveways on grade in lieu of commercial stabilized material and using more black base on urban projects.

Once again, the focus is on building our projects on time and within budget. By January 1998, District Three will be writing Project Concept Reports on resurfacing projects prior to writing the scope of

services. This effort will save time and cost by reducing design and construction supplemental agreements as well as cost overruns.

NOTIFICATION OF ELECTRONIC FILE UPDATE

**Bill Hattaway,
State Rdway Design Engineer**

The office of Roadway Design Web Page has been updated to include Interim standards applicable to projects to be let January 1, 1998 through June 30, 1998. This update includes a new Interim Index for Modular Pole Cable Distribution System that is described in the cover letter of the 1997 update of the basis of Estimates Handbook. Designers will need to include applicable Interim Indexes provided in this update for any project starting with the January

PLANS PROCESSING AND RETENTION CHANGES IMPLEMENTATION

Bill Deyo,
State Highway Engineer

Starting with the Plans Package submittal to Tallahassee due on September 22, 1997, District Design offices will include only one "official" set of plans. That is, the Contract Plans Set will be an original CADD plot, sealed by the Engineer of Record, size "B", on bond paper. If federal funds are involved, the Plans Package will also include one copy of the plans set. Other plans package components will be included as specified in Chapter 20 of the Plans Preparation Manual (PPM). Plans Processing in Central Office will review and process Plans and Specifications together. Revisions will also include only one set of revised sheets, and one copy if federal funds are involved.

Reprographics in Central Office will make copies from the sealed Contract Plans Sets. Distribution by Maps and Publications in Central Office will continue as current.

Upon contract award, Plans Processing will mail the Contract Plans to District Construction. This plans set will be appended with sealed revisions and become the Final Plans Set once construction is complete, as outlined in the Construction Project Administration Manual (CPAM).

District Construction will send the Final Plans Set to District Final Estimates for processing the final payout. After the final payout, the District Final Estimates office will mail the Final Plans Set to the Department of State. The

Department of State will microfilm the Final Plans Set, return a copy of the microfilm to the District, and then proceed to destroy the paper based Final Plans Set.

The procedures of various affected offices including the PPM, the CPAM, the Field Standards for Final Estimates, the Specifications Package Preparation, and the Record Management will be revised by the respective office, to incorporate the above changes to the process in accordance with regular update schedules.

SUPPLEMENTAL AGREEMENT REPORT - JUNE

Brian Blanchard, P.E.
District Design Engineer

This is the Supplemental Agreement Report for the month of June, 1997. The Supplemental agreements (S.A) in each category indicate there were three problem areas (001, 503 and 107).

Below is a description of those areas and our responses:

Description Code 001: Subsoil Conditions Not Detected During Plans Development
% of Total S.A. For This Month = 21.46%

Reason: The improvements to this project include realignment of the horizontal curve from Station 6939+31 to Station 6961+05. During clearing and grubbing for the curve realignment, the contractor encountered soil that would not support heavy equipment in isolated areas.

An on-site investigation conducted by District Materials personnel concluded the subsoil in the

Supplemental Agreement Report - July

Brian Blanchard P.E.,
District Design Engineer

This is the Supplemental Agreement Report for the month of July, 1997. There were two (2) categories for this month containing the largest percentage of supplemental agreements (codes 002 and 126).

Below is a description of those areas and our responses:

Description Code 002: Subsurface Condition (Except Utilities) Not Anticipated in Design Effort

Reason: Subsequent to milling one proposed section of the existing asphalt delamination has occurred. An investigation revealed the delamination resulted from a thin layer of the existing Type S asphalt approximately 1/2" thick remaining after the milling was completed. In order to alleviate the delamination and prevent potential slippage of the new courses of asphalt, the District Bituminous Engineer has recommended increasing the milling to a 2" average depth in order to extend into the existing Type II layer of asphalt in areas that have been milled. In areas originally proposed but not milled, a recommendation to delete milling was made.

Increase = \$70,000

Response: Pavement cores are performed by the Materials Department for use in developing a pavement design. The existing pavement layers vary due to construction tolerances, cross-slope corrections etc. Layer

thicknesses from cores are averages and unforeseen conditions are expected. This was not coded as a design error and not considered avoidable.

Description Code 126: Computation Error

Reason:

- A.** (1) A field investigation revealed numerous existing sidedrain pipes are deteriorated and require replacement in order to restore the structural integrity of these structures. (2) The proposed mitred end section for the existing sidedrain located at Dads Road intersection will result in blocking of the ditch along Dads Road if constructed in accordance with the plans. To resolve this conflict, a Type H ditch bottom inlet shall be constructed in conjunction with the mitred-end section to intercept runoff entering the project and direct the flow into the roadway ditch.
- B.** Safety improvements include extending the existing 36" cross drain located at Station 559+45 in order to provide an adequate recovery zone for motorist in this area. A field review revealed the presence of a monitoring well that is in close proximity to the proposed extension. The Department's DEMO Section confirmed this is a hazardous material contaminated area. In order to avoid disturbing the contaminated soil by excavating as required for the pipe extension, a decision was made by the Department to place guardrail at this structure in lieu of constructing the pipe extension.
- C.** During the design phase of this project, a calculation error was made in establishing the quantity of bituminous material needed to construct the proposed asphalt rubber membrane interlayer (ARMI). This Supplemental Agreement will increase the

(A) Pavement Removal, Asphalt Concrete Type S, Sidewalk Concrete (6" Thick) - Utilization of these items of work as required to construct transition from existing grades to proposed grades at turnout and driveways will result in substantial overruns. Additional asphalt required to correct cross slope contributed to the overrun of Type S asphalt.

(B) This contract provides for widening and resurfacing a section of SR 30/US 98 located in Escambia County. The project begins approximately 600 feet east of the Perdido River Bridge. A field review revealed roadway pavement between the Perdido River Bridge and beginning of this project is deteriorated. The Department has evaluated the condition of the pavement and made a decision to extend this project westward in order to begin at the bridge approach. This action is taken in order to restore the structural integrity of the pavement structure and to provide a smooth transition between the bridge and this project.

Increase = \$115,511

Response: The majority of this work involved changed conditions (extending the project limits). These quantity overruns were not coded as a design error or avoidable.

S.P. No. 53020-3540 (Jackson County)

Description Code 014: Changes resulting from an Administrative Decision.

Claim Settlement = \$595,000

Reason:

Claim #1: Dura-Stress claim that FDOT is alleged to have advised Dura-Stress that the horizontal strand positioning devices, previously approved by the Department, were

now no longer approved. This rejection of the devices, together with confusion over the interpretation of the new 450 specification resulted in rejection by the Department of all the beams with a resultant direct delay in production of 78 days.

Increase = \$78,074

Claim #2: GLF proceeded with the fill to the area between bridges using approved material and conventional methods of compaction, as provided for in the contract documents and their bid.

During these operations, difficulties were experienced in achieving compaction and the required densities due to the continual seepage of water from the existing embankment.

Increase = \$26,604

Claim #3: On the completion of normal subsoil excavation to the West Approach, GLF was unable to achieve the required densities due to pumping of the underlying existing material.

GLF was directed to undercut an additional 3 feet of existing material in an attempt to expose suitable firm material. No firm material was found to exist and GLF was directed by the Department to "build it according to plan."

GLF commenced milling operations to remove asphalt paving to the existing roadway as per plan. The removal of the existing asphalt exposed a 10" thick concrete roadway, which was not shown on the plans, or included in the specifications.

Increase = \$44,265

Claim #4: The contract provided for the

REMOVAL OF PAY ITEM FOR THERMOPLASTIC PAVEMENT MARKINGS FROM CONTRACTS

**Bill Deyo,
State Highway Engineer**

In order to improve the quality of our permanent pavement markings on newly constructed asphaltic concrete pavements, we will no longer include this item in the initial contract. Traffic paint will be used along with reflective pavement markers to place the pavement markings after the friction course is complete. Permanent pavement markings are to be placed under separate contract, no earlier than 90 days after initial placement of the asphalt surface. Longer periods between final asphalt construction and permanent pavement markings should be based on district striping experience, through visual and measured reflective values.

Funds for placing the permanent pavement markings should be from the same funding category as the original contract. However, there is considerable latitude available in programming Federal-aid participation in a system-wide or district-wide project. Normal Federal-aid procedures will apply.

**THIS WILL BE EFFECTIVE THE
JANUARY 1998 LETTING.**

THERMOPLASTIC PROJECTS

**Brian Blanchard P.E.,
District Design Engineer**

District Three will apply permanent pavement markers using thermoplastic approximately 6 months after completion of the roadway project. Consultants will be required to prepare two sets of striping plans, one with traffic paint and a separate set using thermoplastic. The thermoplastic striping plans will be submitted to the project manager for future use (after the roadway project is complete).

Thermoplastic contracts will be let twice per year. A federal and state contract will be let for 3 geographical areas of our district (Ecambia to Walton County line; Walton County line to Appalahaicola River, Appalahaicola River to Jefferson County) for a maximum of 12 contracts per year. Thermoplastic contracts will consist of 3-6 projects combined with one key sheet and one CE quantity sheet. The same funding category will be used as the original roadway project.

NUMBERS FOR NEW BRIDGES

**John B. Locke, P.E.
D-3 Structures
Maintenance Engineer**

As you know, we number bridges rather than bridge locations so each new structure requires a newly assigned number. The new bridge may be requested from Mr. Max Laney in this office. Attention is directed to the requirement for consultants to provide a load rating for the new structure and submit it with the 90% plans. The load rating is required to be performed

3114668 Premium Cost = \$2294
 3110323 Premium Cost = \$7717.40
 3113121 Pending Project Completion
 (Total S.A. was \$2,200,016; involves
 earthwork)
 3111990 Pending (Total S.A. = \$3103.03)

Fiscal Year 97/98

Total S.A.'s coded as avoidable design errors=3

Total amount attributed to avoidable design
 errors = \$229,456.14

Total amount involving a premium cost = \$0

Those projects listed above with premium costs
 were less than \$10,000. We will be monitoring
 further such supplemental agreements. When
 accumulative findings of no-value exceed
 \$25,000, we will evaluate further pursuing
 recovery.

When premium costs are less than \$10,000, we
 put the consultant on notice that the additional
 cost associated with the subject supplemental
 was unnecessary and must not occur again. We
 tell the consultant that the Department may
 elect to pursue recovery regardless of the
 amount of premium costs.

**Implementation Update
 for New Asphalt Mixes**

**Bruce Dietrich,
 State Pavement
 Design Engineer**

FC-2, FC-3 by the ton

The FDOT Executive Committee has approved
 a recommendation from the Flexible Pavement
 Committee to begin paying for friction courses
 by the ton. Specifications are currently out for
 general review. All projects beginning with the
 March 1998 letting should use tonnage pay
 items rather than square meter. The maximum

spread rates to be shown on the typical sections
 and used for plan quantities are 34 kg/m² for
 FC-2 and 60 kg/m² for FC-3. These are the
 maximum allowable spread rates and by
 specification the appropriate rate will be set in
 the field by the Engineer, depending on the type
 of aggregate chosen by the contractor.

Superpave

The first full project using the revised
 Superpave Type SP specification is under
 construction on I-10 in Suwannee County and is
 going well, with both higher density and
 impermeability being achieved on Traffic Level
 5 mixes. The FDOT Pavement Policy
 Committee has directed that Superpave shall be
 used in place of Type S structural asphalt on all
 projects beginning pavement design in 1998.
 Each district should let at least two Superpave
 projects this year, or as soon as practical to gain
 experience prior to full implementation. One of
 the projects per district should be a Traffic
 Level 4 or below, since these levels constitute
 the majority of FDOT pavements. All districts
 may continue to use Superpave on current
 projects where the district deems appropriate. A
 phase out date for Type S asphalt will be set in
 the future by the Pavement Policy Committee.

Superpave mixes are either fine or coarse
 graded as defined in the specification. Fine
 graded mixes are only permitted for Traffic
 Levels 4 and below (less than 10 million
 ESALS). The fine graded mixes are subject to
 the same layer restrictions as the equivalent
 Type S mixes per Index 513. Equivalent mixes
 are as follows:

Type SP-9.5 Type S-III

Type SP-12.5 Type S-I

Type SP-19.0 Type S-II

For Traffic Levels 5 and above, the revised
 specification requires coarse gradations and
 thicker lifts than for comparable Type S mixes.
 Index 513 lift limitations DO NOT apply to
 these higher Traffic Level mixes. The following
 lift minimum and maximums are required by the
 specification for coarse SP mixes: