



DISTRICT THREE DESIGN

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION NEWSLETTER

DISTRICT THREE DESIGN FLORIDA DEPARTMENT OF TRANSPORTATION

**If you are interested in
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newsletter, contact
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District Three
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DISTRICT THREE DESIGN CONFERENCE

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

We want to inform all consultants and our other customers of the upcoming District Design Conference on April 23, 1998 in Panama City. We will be discussing the District's work program as well as other design issues. This is an active time of year with many projects being advertised for design. It will also be a busy upcoming fiscal year (98/99) for construction with a 293 million district letting scheduled as compared to this year's 140 million letting. There are also major changes proposed in the state legislative (eminent domain, utility issues) as well as a new ISTEA bill proposed in congress. All of the above will have a major impact on how the Department serves its many customers.

TYPICAL SECTION PACKAGE REQUIREMENTS

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

I have reviewed the typical section package requirements in an effort to streamline the process currently in place. All projects which add or alter cross section elements and all resurfacing projects require approval of the typical section. The typical section package must be approved before phase I roadway plans production. The following guidelines are to be followed when Consultants submit typical section packages:

Draft typical section packages are to be faxed (850 638-6148) directly to Ronnie Peel, Quality Assurance Engineer. Ronnie will coordinate his comments with the engineer of record (EOR) by phone or fax. Following Ronnie's approval, the consultant shall submit 2 signed and sealed packages (three if FHWA oversight

reg'd) to the project managers for my signature.

Certain items such as the following don't have to be shown in the typical section package but must be detailed in the plans:

- ☐ Traffic data (Show on Data Sheet)
- ☐ Pavement design
- ☐ Typical section notes
- ☐ Clear zone
- ☐ Clearing and grubbing
- ☐ Erosion control items

Ronnie will be attaching comments for informational purposes. Comments concerning sod, seeding and mulching, clearing and grubbing, clear zone etc. will be attached to assist the E.O.R and various Department plans reviewers. These guidelines will remain in effect until Senior Designers Team can address this issue on a statewide level.

SUPPLEMENTAL AGREEMENT REPORT - NOVEMBER

Brian Blanchard, P.E.
District Design Engineer

This is the Supplemental Agreement Report for the month of November, 1997. The two (2) categories for this month containing the largest percentage of supplemental agreements were codes 012 and 700.

Below is a description of those areas and our responses:

Description Code 012: (Damage Sustained to Project Subsequent to Design)

S.P. No. 57518-3501 (Okaloosa County)

Reason: Prestressed Concrete Pile Furnished: This contract provides for rehabilitation of damaged areas of the fender system for Mid-Bay Bridge. The contract provides for extraction and replacement of piles that are damaged or out of alignment. The original quantity was established on the assumption 9 of the existing pilings could be reused in the rehabilitation work. An examination of the extracted piles by the Department revealed they were damaged beyond use and would have to be replaced with new piles.

Prestressed Concrete Pile Driven: The original quantity was calculated utilizing an assumed penetration of 70 feet. The quantity should have been calculated using the difference between cutoff elevation and the required minimum tip elevation which is 115 L.F. creating an overrun of 720 L.F. of pile driven. (Listed separately under code 126, Computation error; \$57,600)

Removal & Disposal of Fender System & Treated Structural Timber: Subsequent to preparation of plans for repair of the south fender system, the north fender system received additional damage from unknown water borne traffic. The Department has determined that remedial action is required to repair the damage to the north fender system under this contract. Recommended action includes removal and disposal of the damaged parts of the fender system and installation of additional treated structural timber.

Increase = \$126,093

Response: This supplemental agreement was due to unforeseen conditions. It was not avoidable or a design error.

S.P. No. 57518-3502 (Okaloosa County)

Reason: The work included under this District Contract consists of external post-tensioning tendon sheath repair on Bridge No. 570091 (Mid-Bay Bridge) on S.R. 293 (White Point Road) in Okaloosa County. Subsequent to commencement of work to repair external post tensioning sheaths, the Contractor has encountered damaged sheaths that were not included in the original plans. Inspection of the post tensioning ducts throughout the structure reveals a substantial numbers of areas that are in need of repair due to not being detected during original inspection or have deteriorated subsequent to that inspection.

Increase = \$36,815

Response: This supplemental agreement was not avoidable or a design error.

Description Code 700: Minor Changes in the Plans and/or Specifications**S.P. No. 60070-3507 (Walton County)**

Reason: Pilings Furnished(Prest. Concrete)(18" SQ);Piling Driven(Prest.Concrete)(18" SQ)

During the test piling driving operation longer piles were required to achieve the required driving resistance. After evaluation by the Geotechnical Engineer on the difficulties encountered in attempting to attain the required bearing, it was decided to add additional pilings to Bent #3 and #4. This action will result in an overrun of the above items as well as pile splices, dynamic test loads and test pile furnished.

Increase = \$88,489

Response: This supplemental agreement was due to unforeseen soil conditions causing minor changes in the plans. This change was not an error or avoidable.

REGULATORY SPEEDS IN WORK ZONES

**J.B. Lairscey, Director
Office of Construction**

The Department is experiencing difficulty slowing down the traveling public as they enter the work zones. Part of the problem is the over use and poor monitoring of speed reduction signs in the past. We have required speed reductions when they are not appropriate, established speed reductions far in advance of actual conditions that would require it, signed a longer portion of a project than is necessary and left the speed reductions in place long after the conditions that required them no longer existed. The result is the traveling public does not believe in the necessity to slow down even in situations when it is necessary.

A revised Plans Preparation Manual was recently published. Chapter 10 of this manual provides new directions for regulatory speeds in the work zones. Please request the District Construction Offices to review the TCP at the various phase reviews to assure that these new directions are being adhered to.

With the publication of the revised PPM, now is an appropriate time to remind all construction personnel of the directions provided on page 2 of Standard Index 600 concerning Regulatory Speeds in Work Zones. The Standard Index also references the P.P.M., Volume 1, Chapter 10.

We need to emphasize that the temporary speed control signs should be covered up or removed as soon as the conditions permit.

Only after re-establishing a measure of credibility with the traveling public can we hope

to have compliance with temporary speed reductions when they are required.

SUPPLEMENTAL AGREEMENT REPORT- DECEMBER

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

This is the Supplemental Agreement Report for the month of December, 1997. The two (2) categories for this month containing the largest dollar amounts for supplemental agreements were codes 004 and 124.

Below is a description of those areas and our responses:

Description Code 004: (Design standard or specification change occurring after letting)

S.P. No. 46060-3549 (Bay County)

Reason: This project consists of improvements to the intersection of SR 77 and SR 368 (23rd. St.). This intersection is subjected to extremely heavy traffic congestion with various turning movements. The plan typical sections proposed the use of Type S Asphalt Superpave Mix with Asphaltic Concrete Friction Course (FC-3) to correct the excessive rutting and distortion of the pavement at this intersection.

In an on-going quest to improve performance of asphalt pavements, the Department has developed improvements to specifications for superpave mixes and pavement designs to enhance performance of pavement structures. The department has determined that current specification revisions for superpave mixes shall be incorporated into this contract and the final

wearing surface shall be Asphaltic Concrete Friction Course (FC-6) in lieu of Asphaltic Concrete Friction Course (FC-3). This action is designed to enhance performance of the pavement structure and reduce rutting and displacement of the pavement. **Increase = \$109,862**

Response: This supplemental agreement was the result of ongoing improvements to the Superpave Mixes and Friction Courses. The Department requested these improvements be incorporated into the project. It was not avoidable or a design error.

Description Code 124: (Work required to harmonize project into adjoining roadways/structures)

S.P. No. 53040-3509 (Jackson County)

Reason: Improvements under this contract includes milling, widening and resurfacing and adding paved shoulders on SR 71 from Calhoun County Line to SR 8 (I-10). Due to the increase in the volume of traffic on this roadway and subsequent to design of this project, the Department's Traffic Operations Section conducted a survey and recommended construction of a turn lane at the intersection of SR 71 and Peacock Bridge Road.

The Department recognizes the need exist to add a turn lane at the above referenced location and has determined these improvements shall be performed under this contract. This action is taken in order to provide adequate safety for southbound motorist turning onto Peacock Bridge Road and to avoid disruption of the flow of traffic on SR 71. **Increase = \$97,341**

Response: This supplemental agreement was not a design error. The Department chose to include the turn lane on this project in lieu of a

future project, thereby saving money on design plans, etc.

SUPPLEMENTAL AGREEMENT REPORT - JANUARY

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

This is the Supplemental Agreement Report for the month of January, 1998. The two (2) categories for this month containing the largest dollar amounts for supplemental agreements were codes 115 and 700.

Below is a description of those areas and our responses:

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. 50020-3526 (Gadsden County)

Reason: This contract provides for removal of the existing box culvert located at station 21+51 and subsequent construction of a double pipe cross drain at this location. The proposed structure was designed to raise the flow line elevation above that of the existing box culvert. A field review conducted by project personnel and the District Drainage Engineer concluded raising the flow line elevation of this structure will result in potential flooding of adjacent properties upstream. Concerns of potential flooding resulted in a decision by the Department to maintain the existing flow line elevation of this structure. This decision eliminates the need for complete removal of the

existing structure. The plans have been revised to provide for desilting and extensions of the existing box culvert to meet current design standards. **Increase = \$8,429**

Response: This supplemental agreement was the result of improper drainage design at this structure (incorrect elevation/improper hydraulic design). It was avoidable and a design error.

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

S.P. Nos. 58010-3557 & 58010-3558 (Santa Rosa County)

Reason: Quantity overruns to various work items will result in the original contract amounts being exceeded by more than 5%. The overruns are as follows:

Barricades (Temp.) (Types I, II, VP & drums); Barricades (Temp.) (Type III); Signs (Construction) (Temp. Post Mounted); Panels (Arrow Advance Warning); High Intensity Flashing Lights) (Type B); Signs (Temp.) (Regulatory) & Signs (Variable Message).

The extension of approved contract time resulted in a substantial increase of these MOT items. These items are necessary to maintain the traffic on the project for the contract duration.

Increase = \$38,236

Response: This supplemental agreement was not a design error. The Department and the Contractor agreed on the contract time adjustment and the adjusted quantities for the above items.

SUPPLEMENTAL AGREEMENTAL REPORT - FEBRUARY

Brian Blanchard, P.E.
District Design Engineer

This is the Supplemental Agreement Report for the month of February, 1998. The two (2) categories for this month containing the largest dollar amounts for supplemental agreements were codes 104 and 128.

Below is a description of those areas and our responses:

Description Code 104: (Incorrect method of measurement or payment shown for earth work items) (ie. Two jobs are combined, one has earthwork paid by tonnage the other has it in another item).

S.P. No. 47040-3508 (Calhoun County)

Reason: Improvements under this contract consist of construction of Cypress Creek Bridge and approaches on S.R. 73. The plans include construction of a detour to maintain traffic through the construction site during replacement of the existing structure. The detour was designed to be constructed adjacent to and parallel to the bridge approaches with portions of the roadway and detour embankment common to one another.

Subsequent to completion of this project, the Contractor filed a claim for borrow excavation due to the department reducing the final pay quantity for this item of work. The contractor takes exception to the reduction in quantity and is seeking additional compensation.

Review of project records reveal the

Department became aware of discrepancies in the elevation of the existing ground line early in the life of this project. In accordance with established guidelines, the Engineer obtained additional cross sections to document existing field conditions prior to commencement of construction. Subsequent to removal of the detour and completion of the roadway fill, the Engineer obtained additional sections and established the in-place embankment quantity of fill for use in determining final pay quantity for borrow excavation.

The contractor states the department did not apprise him of the suspect discrepancies related to the work and is in disagreement with the documentation for this pay item. The contractor attests this project was constructed to lines and grades required by the plans and material in excess of plan requirements was deposited on the job site and further contends the Department has no justification to arbitrarily change the method for determination of pay quantities for borrow material from truck measure to cross section measurement.

In consideration of this claim the Department finds that the Contractor's sequence of operations for placement of the fill material and removal of the detour was such that it was extremely difficult to accurately document the quantity of borrow by truck measurement. It is apparent the department's records do not contain sufficient documentation to clearly indicate the volume of material from the detour that was incorporated into the project or disposed of off site.

Increase = \$28,737.

Response: This supplemental agreement could partially be attributed to inaccurate existing ground line (survey). However, the condition was known prior to commencement of construction and was not rectified with the

contractor. The supplemental agreement possibly could have been avoided or cost reduced if addressed at that time.

Construction personnel pointed out that because of the Contractor's sequence of operation, it was difficult to establish an accurate quantity for borrow excavation by truck measure. They desire that on future projects the fill be paid for by embankment, which is easier to document and the source of the fill is not important as long as it meets specifications for embankment.

A review of the plans indicates that established guidelines for constructing a detour were followed. Borrow by truck measure was predominately how we have paid for fill on most bridge replacement projects where the quantity is less than 50,000 cubic yards.

Recent Plan Preparation Manual instructions on earthwork have indicated a desire to use Embankment on as many projects as possible. Therefore, in the future the fill will be paid for by embankment.

We will include instructions in a future newsletter for fill on all bridge replacement projects to be paid for as embankment.

Especially on those where the contractor is allowed to use the fill from the detour for roadway fill.

Description Code 128: (Inaccurate or inadequate survey information used in plans preparation)

S.P. No. 57010-3526 (Okaloosa County)

Reason: Improvements under this contract includes construction of mechanically stabilized earthwalls adjacent to the bridge over CSX Railroad on US 90 located in Okaloosa County. The walls and leveling pads were designed

utilizing existing ground elevations indicated in the project plans. A field investigation has revealed the existing ground elevation for wall no. 6 and portions of wall nos. 3 & 4 are considerably lower than indicated in the plans. In order to correct this discrepancy the leveling pads are bearing on existing soil.

The Department and Contractor are in agreement as to the cost of additional work resulting from the design change to the leveling pad, but were unable to reach an agreement as to contract time required for performance of this additional work. **Increase = \$8,264**

Response: This supplemental agreement was a design error attributable to inaccurate survey information. It resulted in a tentative estimated premium amount of \$3910. Premium cost is not being pursued at this time. When the accumulated supplemental agreement cost attributable to a consultant exceeds \$25,000 in premium cost, recovery will be pursued.

S.P. No. 50080-3511 (Gadsden County)

Reason: The contractor submitted a claim to recover alleged losses incurred due to delays during preparation of revised plan to correct elevation discrepancies for proposed roadway at the CSX Railroad crossing and at the intersection of SR 267 and US 90.

The Department has reviewed the Contractor's claim and project records and recognizes the Contractor is due additional compensation, but is not in agreement with the amount claimed by the Contractor. **Increase = \$56,056**

Response: This supplemental agreement was a design error attributable to inaccurate survey information due to changed conditions. During the update phase of plans development, the Engineer of Record should determine if the

survey should be updated.

Financial Project Number

Carlos Bonilla

On March 16, 1998, the new Financial Project Number (FPN) was implemented. An FPN will be assigned to all current projects including plans in production. Initially, this unit (Central office Plans Processing) will ink the FPN to the right of the State Project Number on the lead key sheet of Plans Packages already mailed. However, instruct Project Managers that will be mailing Plans Packages and Revisions to Central Office (Plans Processing, MS 32) once the FPN's are available, that they must insure the lead FPN is inked on the lead key sheet.

Bill Gerry, in the Engineering/CADD Systems Office, is working on the key sheet CADD cell to include the FPN. This cell should be available now. You can use it immediately and suspend inking of the number. Bill also is preparing a new Cadd sub-cell, for the FPN to be added to non-key sheets of plans already in production. Provided the FPN is implemented on schedule, by September 1998 all CADD plans sheet must show the new FPN.

The WPI, the SPN and the FPN will remain on the plans of projects in the Work Program. Once the FPN is implemented, projects entering the Work Program will carry only the FPN.

Note: In September, all CADD plan sheets should show the new number. However, a grace period will be allowed beyond September for projects already on the shelf.

Brian Blanchard

DISTRICT THREE DESIGN NEWS LETTER

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