



# District Three Design Newsletter

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### District III Quarterly Design Newsletter

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## From the Editor's Desk

Larry Kelley, P.E., District Design Engineer



I want to take this opportunity to again compliment all of you who helped deliver the Third District's work program for the 01/02 fiscal year. We had a great year and were able to meet our commitments as well as produce the economic stimulus package.

Last newsletter we rolled out our updated Quality Control (QC) plan for District Three Design. We will begin soon to review all on-going contracts for compliance with the Project Quality Control Plan for each project.

Furthering our discussion on "Quality", I am convinced that QC involves issues that can be learned. However if that is not complimented with the right attitude, you will not achieve a quality product. You've got to strongly desire a quality product rather than just follow a checklist.

We've all heard the old saying "You cannot design in a vacuum". It is so true. You cannot lock out the influence and pressures associated with the environment and community. In my work on the Access Management Review Committee I occasionally see a situation where not enough information was gathered on the adjacent world. I encourage every designer to know the personality, the goals and the community values of the area where the project is located. Also, find out what lies down side roads and the impact it might have on the project.

One good source of information to get an idea of what is being planned in an area is the local land use or planning department. Another source is the DOT area maintenance office permits section.

If the project schedule has a gap in it between design and letting there's often a design update phase. If this is the case, do not assume that community values, zoning or proposed development has not changed. Check everything out and review those side roads and traffic again. There may not be a need to redo it all from scratch, but a quick review of what is going on out there in the real world might determine needed changes in the plans package.

Basically, "don't design in a vacuum" and "don't develop tunnel vision". Look around. Find out what's going on in the world.

Develop a strong desire for a quality product.

*"In three words  
I can sum up  
everything I've  
learned about  
life:  
It Goes On." -*

Robert Frost

## Design Spotlight: Judy Cook

Larry Kelley, P.E., District Design Engineer

Judy was born and raised in DeFuniak Springs, Florida and graduated from High School there in 1967. Over the years Judy has lived in Mississippi, Louisiana and



Alabama as she followed her husband, Curtis. His employment with Goodyear required frequent relocation. In 1994 Judy settled in Bonifay, Florida.

Judy was employed with the Haskell Company while the firm constructed the FDOT D3 Administration Building. Judy had an opportunity to work with DOT after completion of the Haskell Project, and started in a temporary office support position in the Administration area. In 1995 she accepted a career service position in the Design section. Judy continues to serve as Administrative Assistant to the District Design Engineer. Judy exclaims, "I'm proud to be a DOT employee. We're all team players and depend on each other for success and I have been very fortunate to work with such a great group of people in and out of Design".

I've known Judy for several years now and I have worked closely with her for the 1 1/2 years I've served as District Design Engineer. Judy is an excellent assistant. She is well liked and respected by all personnel, especially those in Design who know her best. She has a very professional approach to projects and treats everyone with concern and fairness. I have no worry when I'm out of the office because I know it's being run with knowledge, experience and dedication when Judy is there. Judy finds me when a critical issue comes up. She knows how I handle things and she gets things done; always to my satisfaction. Judy's professionalism does not interfere with her ability to be personable and caring. Judy is an easy person to like and I also call her my friend.

## ***Plans Update/Coordination of Work Times***

**Jason Peters, P.E., District Project Management Engineer**



At a recent Production/Operation Coordination Meeting, some of our customers from the Construction/Materials Office stressed concerns about project issues that should have been addressed during the Plans Update phase. As a result of the situations encountered during construction, we would like to stress the need to pay special attention to the following areas:

### **Plans Update Phase**

If a project is on an interrupted schedule for letting, there may be dead time for months or even years. Whether a plans update is official or unofficial, we should make sure certain issues are reconsidered and ensure the plans update is not just a "correction to new standards."

- 1) **Pavement Design** - The original pavement design may not be adequate if original traffic projections were lower than what actually is occurring. Also, for a 3R job, pavement deterioration may have progressed to a degree that was unexpected and modifications to the original pavement design may be necessary. Of course the Materials Office has responsibility in this matter. However, the project manager/designer should strive to ensure that an updated pavement design is included in the plans.
- 2) **Lane Closure Analysis** - Recently a project on US98 resulted in extreme traffic backup. Designers need to take a close look during the plans update phase to make sure lane closure analysis is as up to date as possible and is in coordination with dates associated with actual construction activity.
- 3) **Private Development** - Often times roadside development and developments down side roads change between the original design phase and the plans update phase. Designers should take a look at what is going on in the community and consider new development plans. Often the local Maintenance Office will be aware of planned development. The Access Management Review Committee has seen a few cases where there was possibly a need to modify the median design in the case where new developments are impacting traffic patterns.

### **Coordination of Work Times**

Recently two projects which were adjacent to one another had different construction time restrictions. There may be cases where this makes sense. However, the construction personnel indicated that in this case that the time restrictions should have been coordinated and should also have been at times that best fit peak traffic flow. Additionally, lane closures should not occur during peak hours. Project Managers/Designers should always consider the need for time restrictions and also have a knowledge of adjacent projects and any possible conflicts or need for coordination.

## ***Supplemental Agreement Report—June***

Larry Kelley, P.E., District Design Engineer

This is the Supplemental Agreement Report for the month of June 2002. The two (2) categories of supplemental agreements that are included in this monthly report are codes 107 and 112. 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.

Following is a description of those areas and our responses:

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

**FPID: 218487-1-52-01 (Escambia County)**

**Reason:** Improvements under this contract consisted of multilane construction of SR 30 (US 98). The existing 2-lane roadway is being reconstructed to a divided 4-lane facility.

The Phase II Traffic Control Plan did not account for left or right turn lanes for the westbound traffic onto Navy Exchange Road, Fairfield Drive or Blue Angel Parkway. Because of traffic congestion and delays, there was an immediate need for temporary turn lanes at the listed intersections. The Contractor provided all the labor and equipment necessary for the layout and grading prep work prior to placement of Type S Asphalt for three temporary left turn lanes. He also will remove and dispose of the temporary asphalt and re-grade to the proposed finished grade line. The Type S Asphalt was paid for under pay item 2331-2.

**Increase = \$5,600.00**

**Response:** This supplemental agreement is the result of a design error. However, there was no premium cost incurred.

The Designer should have considered that if there are existing left turn lanes at an intersection, turn lanes will need to be provided in a similar situation during phase construction unless the phase is for a very short duration. It should also be discussed with the Traffic Operations Department.

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

**FPID: 218487-1-52-01 (Escambia County)**

**Reason:** Improvements under this contract consisted of multilane construction of SR 30 (US 98). The existing 2-lane roadway is being reconstructed

to a divided 4-lane facility.

The Contractor furnished all the labor, equipment and embankment material to construct a swale and berm along the north right-of-way line on Navy property (easement was granted) to contain and guide the storm water run-off from the Navy property into storm water drainage structures S-74 through S-82 per the intent of the project plans.

**Increase = \$2,340.00**

**Response:** This supplemental agreement is the result of a design error. However, there was no premium cost incurred.

A review of the plans indicated that the drainage structure sections for structures S-74 through S-82 did not agree with the back slopes shown on the cross sections in the same areas. Therefore, the sections were not compatible/constructible as provided.

## ***Supplemental Agreement Report—July***

Larry Kelley, P.E., District Design Engineer

This is the Supplemental Agreement Report for the month of July 2002. The two (2) categories of supplemental agreements that are included in this monthly report are codes 101 and 115. 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 101: Necessary pay item(s) not included.**

**FPID: 222444-1-52-01 (Escambia County)**

**Reason:** Improvements under this contract consist of the construction of a Weigh-In-Motion Station on SR 8 (I-10) in Escambia County.

Subsequent to beginning work on this project a discrepancy was found between the plan sheets showing the barrier wall locations and the Summary of Pay Items sheet in the plans.

The Pay Item for Concrete Barrier Wall (Plain Shoulder) (2521-72-6) was not included although the barrier wall locations were clearly indicated on the original plan sheets. The total quantity of barrier wall being provided was included in the pay item

(Continued from page 3)

for Barrier Wall Concrete (Pre-cast) (2521-1-1) therefore a new pay item was established and the quantities separated to be under the appropriate pay item.

**Increase = \$35,641.69**

**Response:** This supplemental agreement is the result of a design error. However, there was no premium cost incurred. The established price for the new pay item was below the District Average for the pay item.

**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.**

**FPID: 218487-1-52-01 (Escambia County)**

**Reason:** Improvements under this contract consisted of multilane construction of SR 30 (US 98). The existing 2-lane roadway is being reconstructed to a divided 4-lane facility.

During placement of a proposed 1200 mm RCP drainage pipe between structures S43 (84+60 It.) and S-47 (86+05 It.) the Contractor encountered an existing 1200 mm drainage pipe (labeled in the plans to remain) extending from the Naval Hospital property at approximate station 85+09 crossing the proposed pipe at a right angle. Therefore, to continue placement of the proposed drainage pipe as designed required the construction of a very large conflict structure that was not provided for in the plans.

**Increase = \$25,055.94**

**Response:** This supplemental agreement is the result of a design error and premium cost was incurred.

A review of the plans indicated that the existing 1200 mm pipe to remain was shown in the profile portion of the plan sheet along with the estimated flow line at the junction point of the pipe crossing. It appeared that the proposed pipe would fit under the existing pipe, however when calculating the difference between the flow line of the existing pipe and the inside crown of the proposed pipe there was only a 0.094 meter (4") difference. The designer failed to take into account the wall thickness of the 2 pipes (1200 mm (48") Class B pipe has a wall thickness of 5").

**The premium cost may be pursued if after review by the appropriate people the premium cost estimated by the CEI (\$18,262.89) is correct.**

## Supplemental Agreement Report—August

Larry Kelley, P.E., District Design Engineer

This is the Supplemental Agreement Report for the month of August 2002. The two (2) categories of supplemental agreements that are included in this monthly report are codes 107 and 117. 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.

Following is a description of those areas and our responses:

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

**FPID: 220637-1-52-01 & 220642-1-52-01 (Walton County)**

**Reason:** Improvements under this contract consist of the 4laning of SR 30 (US 98) in Walton County from Mack Bayou Road to CR 30A and from CR 30A to SR 83 (US 331). The existing 2-lane roadway is being reconstructed to a divided 4-lane facility.

The plans called for the connections of CR 393 and CR 30A to be new construction. The Traffic Control plans showed phase constructing the connections while maintaining traffic on one lane of pavement. However, the decision was made to add pay item 2334-1-12 (Superpave Asphalt, Traffic B) for the purpose of overbuilding the existing asphalt on the two side roads.

The reason for overbuilding the existing pavement on CR 393 and CR 30A was to reduce the amount of inconvenience to the traveling public. The contract Traffic Control plan would inconvenience the traveling public with detours and one-lane construction for at least three weeks, thereby adding unsafe traveling conditions to these highly traveled roadways. However, the use of overbuild reduced the amount of time one-lane was closed and traffic was restored to both lanes much quicker.

**Increase = \$27,281.59**

**Response:** This supplemental agreement was not the result of a design error. However, Designers should consider the impact the construction will have on the traveling public when designing the project and provide a Traffic Control Plan that is best suited for a particular situation.

*Marriage is neither heaven nor hell. It is simply purgatory.*

President Abraham Lincoln 1809-1865



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**Description Code 117: Access management issues.**

**FPID: 220800-1-52-01 (Washington County)**

**Reason:** Improvements under this contract consisted of milling and resurfacing and paved shoulder construction. It also included the complete reconstruction of the curbed section within the town of Wausau. During construction of the curb and gutter section in Wausau, it was determined that the driveway to the Tom Thumb Store was in conflict with the gasoline pump island and would need to be relocated to the southernmost edge of the property. This required that (S-21) a curb inlet that had previously been installed be converted into a junction box, install additional pipe, set a P-5 inlet (S-22) 17.5 meters north of S-21 and remove and replace curb and gutter.

**Increase = \$7,835.63**

**Response:** This supplemental agreement is the result of a design error and premium cost was incurred. The amount of premium incurred was below the threshold for pursuing the added cost for a single supplemental agreement. The project will be monitored until complete and if additional premium costs are incurred that add up to a total of \$25,000, the premium cost may be pursued at that time.

## ***Quality Assurance/Quality Control***

Hal Gore, Jr., P.E., Assistant District Design Engineer

Attention all designers (consultant/in-house):

We will be starting quality assurance audits November 1, 2002 and we intend to audit all projects currently in the design phase. Each design project should have a Project Quality Control Plan (PQCP), as defined in the D3 Quality Control Plan. We will be asking the project manager to provide us with the PQCP and the latest set of checked plans. If you haven't already provided this to your project manager, then please do so as soon as possible.

These Audits are being implemented to comply with the recently updated Quality Control Plan for District Three Design.



**DISTRICT THREE DESIGN  
FLORIDA DEPARTMENT OF  
TRANSPORTATION**

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