

DISTRICT THREE DESIGN NEWSLETTER



Volume 9, Issue 3

August—October 2004

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From the Editor's Desk

Larry Kelley, P.E., District Design Engineer



When I was growing up in the 60's one of my heroes was legendary University of Alabama football coach Paul "Bear" Bryant. I remember reading his life story in the book "The Bear". He did not profess to be a really smart man. He simply indicated he was lucky.

However, as you read on you realize he was obsessed with having a good plan and practicing it, and practicing it, and practicing it. He also always had a "Plan B". This reminds me of an anonymous quote I read recently....."Nothing improves your luck like hard work".

I did not do much design work in September due to all the hurricanes. I am also Emergency Coordination Officer for District 3. Those duties include planning and preparation in advance of hurricanes. I think we were very well organized and prepared for Ivan. Ivan was very destructive to the highway system in Escambia, Santa Rosa and Okaloosa Counties. District 3 experienced some damage that I have not seen in my 31 year career. Had we not been prepared for a worst case scenario, it would have taken us significantly longer to bounce back. We had a detailed organization in place to handle the worst that could happen; and it happened.

"Nothing improves your luck like hard work"

Good planning cannot be overly emphasized. It has saved me many times. I've also always tried to have a "Plan B" as Coach Bryant did. I think this philosophy works in every aspect of business. Try it, you'll like it.

I hope to share our Ivan experience with you at our District 3 Design Conference in April '05.

District III Quarterly Design Newsletter

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Final CADD Files

Jonathan Harris, Assistant Quality Assurance Coordinator

As we approach the time for full electronic project submittals clarification on certain requirements have become apparent. The timeline for Final CADD Files and Plans and Specs Files will be addressed in a later article. We will briefly touch on the requirements for these CD's.

Final CADD Files CD should be generated according to the CADD Manual and CADD Production Criteria Handbook. Several important items commonly missing from submittals include the HTML index, the Project.ps (Project PostScript) file, the Project.pdf (Project Adobe Acrobat) file, and the QC reports. These items are very important as the HTML index will be used to browse the PostScript images. All electronic submittals require the PEDDS information and hard copy QC reports to be included. PEDDS insures the files secured in one office are the same ones which arrive at another office. If the project is to be electronic let the PostScript images must be signed and sealed using the PEDDS software. The signatory documents must accompany these files and be signed and sealed by the appropriate professionals.

Plans and Specs CD's should be generated from the Final CADD Files CD according to the CADD Manual and CADD Production Criteria Handbook. This insures the PostScript images released for bid are the same as the images on the Final CADD Files CD which are made the official record of the project. The Plans and Specs CD should accompany the Final CADD Files CD.

As stated earlier, project managers will publish a timeline these CD's are expected. If you have questions about the electronic submittal process please contact Jonathan Harris, District 3 Design, Quality Assurance.



Project Quality Control Plans

Scott Golden, P.E., Assistant District Design Engineer

Prior to beginning a project in District 3, the selected Consultant is required to submit their Project Quality Control Plan to the FDOT Project Manager. The majority of the QC plans that I have seen did not address the electronic submittal process. As of today, there have been 35 electronic submittals and only 8 met the requirements without sending the information back to the Consultant for further revisions. This does not mean that you have to have a section in your PQCP that addresses the electronic submittal process. However, it may save you some time in the long run. Here are the statistics:

# of FPID's reviewed	35
# of FPID's accepted first time	8
Total # of submittals	73
Accepted submittals	34 (some FPID's had revisions and multiple accepted submittals)
Rejected submittals	39 (some FPID's had multiple submittals)
Pending	7 (FPID's rejected one or more times awaiting resubmittal.)

District 3 has not added an electronic delivery section to our PQCP's. However, it is in draft form and will be added for all future projects. I realize (probably more than most) that electronic delivery is new and all of the "bugs" are not yet worked out. However, we are moving in the right direction and will update you as we learn more.

Also, I am seeing PQCP's without some form of a bid/constructability section. I feel that this is an essential part of a PQCP. I have not rejected any Consultant PQCP based on the lack of bid/const. reviews....yet! If your PQCP does not have this type of review, please consider adding it to your PQCP. If you have any questions regarding these topics, please feel free to give me or Jonathan Harris a call at 850-638-0250.

A little girl was diligently pounding away on her father's word processor. She told him she was writing a story. "What's it about?" he asked. "I don't know," she replied. "I can't read."

Electronic Lettings Update

Jason Peters, P.E., Assistant District Design Engineer

It seems as if the State of Florida has become a hurricane magnet the last few weeks. Department personnel throughout the state have been focused on hurricane recovery efforts. With all the emergency response activities on-going, production schedules are continuing as well. Although emergency response has been our main focus, we cannot overlook our production demands, especially the Department's commitment to have fully Electronic Lettings beginning with the July 2005 lettings.

July 2005 sounds like a long time off, however, the Department is currently processing the February 2005 projects. So, technically speaking, we are only five months away. Are you ready? I hope everyone has personnel ready and able to meet the demands for electronic submittals. If not, it's too late!

District Three's plan begins with eight electronic lettings in July 2005 and then seven in August 2005. Of the fifteen projects to be let, eleven different consultants will be involved in the effort. Unfortunately, it's our understanding that of the eleven, only four have had the opportunity to participate in one of the Department's Pilot Projects. The Pilot Program was not a training effort. It was an exercise to ensure that all the pieces are in place to achieve full Electronic Lettings.

I would like to share a few key points that we have learned thus far:

1. **Maintain Seed Files Daily** – The final hour rush to meet the deadline results in costly errors and difficulties in meeting the letting date.
2. **Be prepared** – Waiting until the last minute is costly for everyone.
3. **Be accurate** – Don't submit something just to make a deadline. Again, this will cost you valuable time.
4. **Be flexible** – You can't be successful doing business the old way!

District Three Design Conference

APRIL 7-8, 2005

[HTTP://WWW.SANDESTINBEACHHILTON.COM](http://www.sandestinbeachhilton.com)



For Room Reservations please call:
1-800-367-1271

When making Reservations, you must use one of the following codes:

- DTG** - (DOT Design Con. Gov.) for DOT personnel
- DTC** - (DOT Design Con. Civ.) for civilian (non-DOT) personnel

Conference Time:

Thursday, April 7, 2005 — 8:00 am till 5:00 pm
Friday, April 8, 2005 — 8:00 am till 12:00 pm



*You must Register with DOT to attend this conference.
Please FAX the below information to 850-638-6148, ATTN: Terri Cook.*

Please...use a separate registration form for each attendee...Thank you!

Registration Deadline is March 18, 2005

Conference Attendee: _____
(please print)

Company Name: _____
(please print)

Email Address: _____
(please print)

Phone Number: _____
(please print)

Supplemental Agreement Report—June and July

Larry Kelley, P.E., District Design Engineer

This is the Supplemental Agreement Report for the months of June and July 2004. 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 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.).

Reason: Improvements under this contract consist of lane additions to provide a 6-lane roadway, bridge construction, drainage improvements, signalization and signing and pavement marking in Escambia County.

Subsequent to beginning work on this project a review of the jobsite revealed potential problems with the sheet piling as depicted in the plans. The sheet piles to be installed at Critical Temporary Wall # 2 could not be driven to the elevation required in the contract plans due to encountering a subsurface clay pan. Also the sheet pile would need to be cut off and left in place at the completion of the work to prevent damage to the MSE wall which was to be installed adjacent to CTW # 2.

This agreement will compensate the contractor for furnishing all equipment, material and labor to cut the sheet pile below the final ground elevation at CTW # 2 upon completion of work.

Increase = \$145,562.05

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

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.).

Reason: Improvements under this contract consist of lane additions to provide a 6-lane roadway, bridge construction, drainage improvements, signalization and signing and pavement marking in Escambia County.

Subsequent to completion of the asphalt base on Ramp B1 through an existing wetland area the sub-grade began pumping water causing the asphalt base to rut and break apart. The soil report for

this area indicated that the area may retain moisture and be difficult to compact.

This agreement will compensate the contractor for furnishing all equipment, material and labor for the removal and replacement of 3,682 SY of asphalt base and for furnishing and installing 1140 LF of Type I Under-drain and 1400 LF of Edge-drain Draincrete.

Increase = \$105,606.96

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

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.

Reason: Improvements under this contract consist of lane additions to provide a 6-lane roadway, bridge construction, drainage improvements, signalization and signing and pavement marking in Escambia County.

During construction of the barrier wall in the median, the Contractor identified numerous locations where the profile grade was near flat. It was determined these areas would result in storm water ponding.

A review by the Designer and project personnel of existing conditions, resulted in the decision to include installation of slotted drain pipe and drainage structures as required to collect and discharge runoff to alleviate the condition. The Designer provided the necessary revisions for this additional work.

Increase = \$354,509.46

Response: This supplemental agreement appears to be the result of a design error/omission. The CEI estimated the premium for this work to be \$31,908.94. A review of the supplemental agreement will be made by the appropriate personnel to determine if it was an avoidable design error and if recovery will be pursued.



Supplemental Agreement Report—August

Larry Kelley, P.E., District Design Engineer

This is the Supplemental Agreement Report for the month of August 2004. The two (2) categories of supplemental agreements that are included in this monthly report are codes 003 and 101. 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 003: Harmonize project with adjacent projects, features or adjacent R/W after plans have been completed.

Reason: Improvements under this contract consist of milling and resurfacing, signalization improvements, signal loop replacement and signing and pavement markings on an existing 5-lane roadway in Bay County.

The Department requested to expand the project limits to include milling and resurfacing and striping of a ¾ mile section

on Collegiate Drive.

Increase = \$142,713.45

Response: This supplemental agreement is not the result of a design error. The Department believed that money could be saved by allowing the contractor to perform this work while he was mobilized to this area.

Description Code 101: Necessary pay item not included.

Reason: Improvements under this contract consist of multi-lane construction, drainage improvements, signalization and signing and pavement markings.

The contract plans called for the construction of cantilever school zone signs at an Elementary School. However, the designer failed to include the pay items for Conduit (F&I) (Aboveground), Electrical Service Wire, Electrical Power Service and the Concrete Pedestals needed in the construction of the cantilever school zone signs.

Increase = \$4,123.08

Response: This supplemental agreement is being attributed to a design error with no estimated premium cost.

Reason: Improvements under this contract consist of milling and resurfacing, drainage improvements, signalization and signing and pavement markings.

Subsequent to beginning construction it was discovered that the contract plans called for 6.9 meters of 750 MM pipe being placed but there was not a pay item for this size pipe in the contract.

Increase = \$4,830.00

Response: This supplemental agreement is being attributed to a design error with an estimated premium cost of \$3,538.32 based on the State wide average for 750 MM Pipe. An evaluation of the premium cost will be made, as per meter cost is in line with the prices listed for other sizes of pipe in the contract (State wide averages may not apply because of small quantity used).

Design Spotlight—Burton Kent

Larry Kelley, P.E., District Design Engineer

The spotlight this quarter is on Burton Kent in the Design Survey Section. Burton is rightly respected for his surveying knowledge and many call on Burton to clear up various scenarios that need further explanation.

Burton was born in Marianna, Florida in 1948. He attended Washington County Schools in Chipley until his graduation in 1966. Burton went on to Lively Vocational Technical School in Tallahassee, Florida studying drafting. His first drafting appointment was with the Leon County Tax Assessor (now called property appraiser) where he met and started working with land surveyors from around the area. He studied and passed the Land Surveyor's Exam in winter of 1981.

Burton started with the Department in 1970 with Right of Way Mapping, but moved back to the private world and worked for different land surveyors and governmental agencies until 1991. He returned to the department in 1991 to work on a survey crew in Tallahassee. He was promoted to a party chief position in Chipley around 1994 and has been in Chipley since working in all aspects of route surveying.

I have found Burton to be a very knowledgeable but quiet individual. He does not force his ideas on you, but when you express a need or an interest, Burton is there to help. He possesses a calm, composed approach to issues that make them easily understandable in such a highly technical field. I enjoy working with Burton and respect his knowledge and commitment to DOT.

Burton married Martha Bowen in 1970 and they have three children along with eight grandchildren. His hobbies include gardening and electronics. He holds an advanced class amateur radio license and likes to work on computers.



The concept is interesting and well-formed, but in order to earn better than a 'C,' the idea must be feasible.

Anonymous Yale University management professor in response to Fred Smith's paper proposing reliable overnight delivery service. (Smith went on to found Federal Express Corp.)