

District Three Design Newsletter



Volume 8, Issue 2

<http://www11.myflorida.com/rddesign/D-3/files/d3.htm>

APRIL—JUNE 2003

Inside this issue:

<i>From the Editors Desk</i>	1
<i>Utility Coordination</i> Scott Golden	1
<i>Design Spotlight:</i> John Coates	3
<i>Determining the Scope</i> Jason Peters	3
<i>Supplemental Agreement Report—March</i>	4
<i>Supplemental Agreement Report—April</i>	5
<i>Supplemental Agreement Report—May</i>	6
<i>Pay Item Notes.....</i>	6
<i>Re-occurring Errors in Specifications Submittals</i>	7
<i>Updated D3 Design Web Page</i>	8
<i>Stormwater Permitting Changes</i>	9

District III Quarterly Design Newsletter

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"I love deadlines. I especially like the whooshing sound they make as they go flying by."

Douglas Adams

From the Editor's Desk

Larry Kelley, P.E., District Design Engineer



That big date has come and gone. The first big wave of the DROP employees are retired. FDOT is certainly smaller and I think we are already smarter. We have been actively preparing for this moment for five years. We have increased privatization and we have also implemented many new ways of doing business.

The most notable changes in the Design Department are the implementation of "full service" contracts for the 3R program, and a new QC/QA plan in District 3. The "full service" concept will not work unless there is a good QC process in place and is adhered to.

DOT has no choice but to do business a smarter way and we have no choice but to contract with firms that intend to embrace the new concepts. A consultant firms reputation is on the line more than ever before. We feel we have measures in place through our QA process to detect trouble. However, when a project is processed for letting certain type errors, if any, will be obvious. Other problems, if any, will be obvious during construction. We fully intend to follow these full service projects through construction and develop and support a quality work force.

I completed 30 years at DOT on June 25. I have experience in many different areas and have seen many changes over the years. I have seen much more change though the last five years than the first 25. I don't think this trend will change. It's good to be an expert at something. However, I think a quality that is just as important is to be able to adjust and adapt to change. One must not view change as an unexpected obstacle, but as an everyday challenge. It's just part of the job.

We're here! Let's go do it!!

Utility Coordination

Scott Golden, P.E., Assistant Design Engineer



We, as designers, have many "customers" that utilize our products (designs). These customers start with contractors and include CEI personnel, utility companies, business owners, residents, maintenance personnel, the traveling public, local, state and federal officials, and the list goes on... I want to focus on three (3) key customers, CEI personnel, contractors, and utility companies. It is one of our responsibilities to do all that we can to make the contractors' and CEI's jobs as easy as possible. If we do that, then we are on our way to meeting the needs of all of our customers.

As you know, many of the utility coordination issues arise on reconstruction projects. For these projects, early and often coordination is essential. The Area

(Continued from page 1)

Utility Manager may request that the EOR hold a project kickoff meeting with the major utility owners near the 30% plans phase. The purpose of this meeting should be to discuss the conceptual design of the project. The utility owners could provide input on storm sewer trunk line locations, mast arm locations and other avoidance possibilities, etc.

Secondly, I would like for the Designers to provide a Utility Conflict Matrix (UCM) with the Phase II, Phase III and Phase IV plans. The UCM should be provided to the Utility Owners, Area Utility Manager, Maintenance and Construction Engineers **prior** to the 60% Utility Coordination Meeting. It should be plainly written on the UCM that: ***"It is the responsibility of the Utility Owner to locate, verify and protect their utilities. This matrix is for the benefit of all involved and is provided for informational purposes only."***

The Engineer of Record should conduct the 60% Utility Coordination meeting. The role of the Area Utility Manager as it relates to this meeting should be as follows:

1. Coordinates the meeting time and place.
 - a. Invites the appropriate Utility Owners.
 - b. Contact the Area Resident Construction and Maintenance Engineers and request their attendance (or designee) at the meeting.
 - c. Confirm with the PM that the meeting time and place is acceptable with the PM, EOR, Maintenance and Resident Engineer.
2. Request field locates from the Utility Owners prior to the meeting.
3. Serve as a facilitator during the meeting.
4. Ensure that the EOR and the Utility Owners are in compliance with FDOT policy and procedures.
5. Assists and advises the EOR on utility issues as needed.



The role of the EOR should be as follows:

1. EOR is responsible for conducting the meeting and ensuring that appropriate design personnel are present.
2. EOR should be prepared to discuss:
 - a. Scope of the project.
 - b. Major utility impacts (storm sewer location, mast arms, cross drains, etc.)
 - c. Schedule of the project.
 - d. Opportunities to design around/avoid utilities.
 - e. If major utility relocations are required:
 - i. Ask for input from the Owner on relocation methods/schedules.
 - ii. Provide input on "conceptual" MOT phasing to the Owner(s).
 - iii. Discuss ways to reduce relocation times/schedules.
 - iv. Ask Construction/Maintenance personnel for input.
 - v. Discuss any environmental issues.
 - vi. Schedule and participate in field reviews as required.
3. Discuss any potential scope changes.
4. Take notes and record meeting minutes (tape recordings may be a good way to handle these)
5. Discuss project design schedules.
6. Discuss project phases (year that Right of Way and Construction are funded).
7. Answer any questions regarding project specifics.
8. Provide contact information to Utility Owners.
9. Establish a tentative date for next meeting and establish goals to be accomplished prior to the next meeting (assistance from the Utility Manager).

These lists are not all inclusive. It is the responsibility of the EOR/Utility Manager to develop his or her own agenda and discussion items (these should be a minimum).

If you have any questions, please feel free to contact Bobby Ellis or me.



Design Spotlight, John Coates

Larry Kelley, P.E., District Design Engineer

John was born in Bonifay, Florida and raised in north Holmes County where his Dad's family had settled after moving from Alabama in the early 1900's. He received a high school education at Bethlehem High School, and from there attended and graduated from Chipola Jr. College. He studied Fine Art at Florida State University and began working with the Florida State Road Department in June of 1969. John began working in what was then known as the Drafting Department. Later it was known as the Design Department. One of his early responsibilities that he enjoyed very much was that of preparing perspective color renditions or illustrations of proposed roadway sections that would be used at public hearings to pictorially explain how a roadway might effect a particular piece of property. In 1984 he transferred to the Traffic Operations Department where he continued working in the plans production process. This work was a bit more specialized in that it centered on the plans components of Signing And Pavement Markings and Roadway Lighting. In 1990 the production area of Traffic Operations was made a part of District Design and so he found himself back where he had started with the Department. John has mostly been involved with traffic plans review. John will be with us for another couple of years before he ends his career with DOT.

I have worked with John for a couple of years in the Design Department, but I have known John for all of my 30 years at DOT. I find John to be a rather quiet person but always eager to help with any task or need. John has developed a good knowledge of design and he is a real expert in the Traffic Plans area.

I hope John is active in passing his knowledge on to the younger generation who will succeed him in a couple of years. His knowledge, his eagerness to help and his pleasant personality will be missed when he leaves.

John does not use his art talent in his work much anymore, but he is a very talented artist. He has indicated that he has begun to devote more time to his art and will enjoy it to a greater extent when he retires. I asked John for his perspective on his career and life. John said of his career at DOT: "It's been a hoot".

Concerning life John said "my biggest joy is rediscovering the world through the eyes of my grandson. It's amazing how much better it looks from Scooter's perspective".

Determining the Scope

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

It's that time of year again! The District has begun its annual Concept Report preparation process for future resurfacing projects identified in the Department's Work Program. Those of you that attended the District 3 Design Conference had the opportunity to witness an excellent presentation on the Department's Concept Report procedure.

I want to take this opportunity to mention the Concept Report activities because the Department takes this process very seriously. Since the Concept Report process began in the late 1990's, the District has experienced great improvements in its ability to be define project schedules, budget, and scope. By utilizing the Concept Reports, the District has seen improvements in our ability to provide better design and construction estimates, project schedules, and a better defined scope of services for the consultant. These facts are documented though the reduction of design supplemental agreements which lead to changes in the original scope, budget, and schedule. This activity has given the District more confidence in its initial estimates, thus, more confidence in its overall work program.

The Concept Report process involves a fast paced schedule and requires an extra effort from several individuals in various disciplines to gather preliminary project data, conduct field reviews, identify project needs, and determine project costs in a very short time frame. The information is compiled into a project needs and project cost summary. If costs exceed a level that is unacceptable, the estimates are discussed at the management level where project costs and available funds can be balanced. Depending on the availability of funds, minor improvements may be eliminated in the project scope so that more urgent needs can be considered on another project. Resurfacing dollars are limited so the Department evaluates needs and distributes funds accordingly. Once this process is complete, funds and necessary project

(Continued from page 3)

improvements are established for scope finalization.

Concept Reports are the instruments that the Department uses to document proposed project improvements and costs. The Concept Report may document needed improvements for a project which are then included in the scope, or, it may document a need that cannot be addressed under the project due to costs or type of funding. Therefore, all needs documented in the Concept Report are not always reflected in the scope. As a consultant preparing for a technical proposal or an interview, it is always good to compare your notes with the Concept Report as well as the Scope of Services. There may be items that you identify that are not mentioned in the Scope of Services. At this point, one should check the Concept Report because an item in question may be documented in the Concept Report and eliminated by the District during the cost review. Adding this item to the project needs will have an impact on the project budget and the Department's work program.

Finally, the success the District has had in the Concept Report process initiates a vision for improvements. Our goal is to continue to look at ways to refine the program in order to make a good process even better.

Supplemental Agreement Report—March

Larry Kelley, P.E., District Design Engineer

This is the Supplemental Agreement Report for the month of March 2003. 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 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.

FPID: 218653-1-52-01 (Escambia County)

Reason: Improvements under this contract consist of multilane construction, safety and drainage improvements, signalization and signing and pavement markings on SR 291 (Davis Highway).

Subsequent to beginning construction a safety issue evolved when vehicles began crossing the grassed median south of the project limits at Atwood Drive. This prohibited traffic movement created a safety hazard and caused severe rutting to the edge of the existing asphalt.

To immediately alleviate this situation an emergency Work Order was issued to place delineator posts in order to prevent traffic from crossing the median. To properly address the problem the Department recognized the need for the project limits to be extended so that a means could be provided to permanently repair the damaged median with additional grade work and sod.

Increase = \$6,887.00

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

Description Code 700: Overrun of existing pay

items when original contract amount is exceeded by over 5%.

FPID: 218653-1-52-01 (Escambia County)

Reason: Improvements under this contract consist of multilane construction, safety and drainage improvements, signalization and signing and pavement markings on SR 291 (Davis Highway).

Subsequently, certain items of work resulted in exceeding the original contract amount by more than five percent (5%). Also, the Contractor requested additional time due to the impacts of this increased work. These items are as follows:

(A) Off Duty Law Enforcement Officer: This overrun is due to the utilization of law enforcement officers during phase construction along with the increased duration of contract time for project completion.

(B) Type B Stabilization, Optional Base Group 09, Superpave Asphaltic Concrete Level C and Asphalt Concrete Friction Course FC-6. During construction of the proposed trunk line between Stations 79+63 and 90+72, it was determined that additional widening would be required in order to avoid potential conflicts with underground utilities and to lessen the impact to an existing adjacent sidewalk which was to remain. This was brought to the attention of the Designer who was in concurrence with the shift of the drainage structure trunk line. This action resulted in the increase to the items of work listed.

Increase = \$153,334.50

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

Supplemental Agreement Report—April

Larry Kelley, P.E., District Design Engineer

This is the Supplemental Agreement Report for the month of April 2003. The three (3) categories of supplemental agreements that are included in this monthly report are codes 005, 106 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 106: Inaccurate location, size, identification, conflict resolution, etc. of an existing or proposed utility (no JPA involved).

FPID: 218645-1-52-01 (Escambia County)

Reason: Improvements under this contract consist of the construction of a new bridge over Carpenter's Creek on SR 291 (Davis Highway).

A field review was conducted and the determination was made that the overhead electric lines were in conflict with the construction of the acrow detour bridge. Utility adjustment sheet 54 of the project plans showed the electric lines to remain, which was in conflict with structures sheet B-17 that showed the electric line to be relocated. All utility adjustments were made in accordance with sheet 54 of the roadway plans. The Engineer of Record reviewed the site and also agreed that the overhead electric line was in conflict.

Increase = \$29,868.43

Response: This supplemental agreement was the result of a design error. Recovery of the premium cost will be pursued if after further review it is determined that the consultant was at fault.

Description Code 005: Utility adjustments delaying contract work schedules caused by Utility Companies with no JPA involved (should be all premium and 3rd. party charged).

FPID: 220397-1-52-01 (Santa Rosa County)

Reason: Improvements under this contract consist of the construction of a new bridge on SR 10 (US 90) east of Milton over the CSX Railroad.

The contractor submitted a claim due to utility delays encountered during construction operations on this project. The Contractor contended that certain utility owners failed to adjust their utilities in a timely manner resulting in the Contractor's construction operations being delayed.

The Department reviewed and agreed with the Contractor's claim that the utility delays had a direct impact to the construction of the detour on US 90, MSE wall construction, installation of temporary steel sheet piling and the embankment and surcharge material placement.

Increase = \$122,141.50

Response: This supplemental agreement was not the result of a design error. It was the result of a 3rd. party (Utility Company outside of DOT or Consultant staffing control).

Description Code 101: Necessary pay item not included.

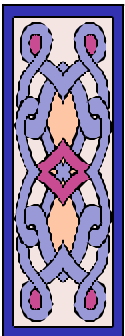
FPID: 403785-1-52-01 (Jefferson County)

Reason: Improvements under this contract consist of the construction of a box culvert at Welaunee Creek on Walker Springs Road (graded county road).

A pay item for filter fabric was not included. This supplemental agreement provides a means to pay for the Type D2 Woven Geo-textile Fabric placed beneath the bank and shore riprap rubble.

Increase = \$1,371.00

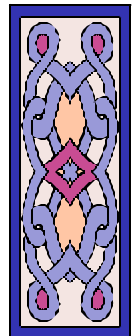
Response: This supplemental agreement was the result of a design error. The premium cost does not amount to the minimum per supplemental agreement. Therefore, future premiums will be monitored to determine if the aggregate total of all premiums reaches the threshold for pursuit.



Calvin: I'm a genius, but I'm a misunderstood genius.
Hobbes: What's misunderstood about you?
Calvin: Nobody thinks I'm a genius.

Calvin and Hobbes

(Bill Watterson, American Cartoonist)



Supplemental Agreement Report—May

Larry Kelley, P.E., District Design Engineer

This is the Supplemental Agreement Report for the month of May 2003. The two (2) categories of supplemental agreements that are included in this monthly report are codes 101 and 126. 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: 217864-1-52-01 (Bay County)

Reason: Improvements under this contract consist of the construction of an elevated roadway along S.R. 30 (U.S. 98) over the intersection at C.R. 3031 (Thomas Drive).

Subsequent to contract letting, a review of the contract documents was performed in conjunction with a review of the second and third stage plans by the Project, Design and Utility personnel. This review revealed the designer had inadvertently omitted pay items required to compensate the Contractor for the installation of certain scheduled utility modifications and improvements. Whereby, the utility owner would furnish the required materials and the Contractor would install them.

This review further revealed the proposed foundation and piers of the elevated roadway are in conflict with installation of the conduit and utility structures to be installed under this contract. Subsequently, the utility plans have been revised to resolve any conflicts. These revisions increased the original anticipated quantities for certain utility related items of work.

Increase = \$260,757.45

Response: This supplemental agreement was the result of a design error. However the CEI did not assess any premium cost for the additional work.

Description Code 126: Computation error.

FPID: 219383-1-52-01 (Jackson County)

Reason: Improvements under this contract consist of milling and resurfacing, paved shoulder construction and drainage structure improvements on S.R. 10 (U.S. 90).

While pouring the footer for the box culvert extensions on the project, a subcontractor discovered discrepancies in the computations for the concrete volume listed in the plans. The concrete volume quantities listed in the plans underestimated the actual concrete volume by 10.683 cubic meters. The Contractor had relied on the quantities stated in the Summary of Pay Items to prepare his bid.

Increase = \$8,051.60

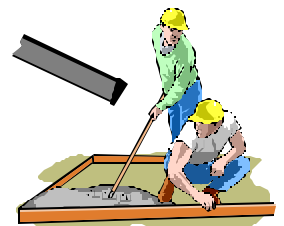
Response: This supplemental agreement was the result of a design error. There was not any premium cost incurred as the additional amount was paid for at the original unit price per cubic meter.

Pay Item Notes for Temporary Drive Way Connector Repairs and Construction

Keith Hinson, P.E., Assistant Construction Services and Support Engineer

Jimmy Miller, District Final Estimates Manager

District Three has encountered problems with driveway and business access on many construction projects. In most cases the plans do not provide any means other than commercial material for driveway maintenance. Our goal is to provide adequate access during construction which may require additional asphalt on existing connections or even temporary connections in different locations. We have many projects under construction that have required Supplemental Agreements and Work Orders in order to provide suitable access to businesses and private landowners. When additional work has to be added during construction, the Department often pays a premium cost for the additional work. Therefore, we are requesting that designers estimate and include the quantities in the plans for asphalt and/or turnout construction necessary to ensure adequate access is provided during construction. Designers should carefully consider the project phasing when calculating



(Continued from page 6)

the estimated quantities. Field reviews should include reviewing existing connections and possible locations of temporary connections if needed. The estimated duration of the impacts must also be considered in establishing the estimated quantities. Please begin immediately with the inclusion of the necessary items and quantities in all plans to ensure adequate access is provided during construction. The following pay item notes contain language proposed by the District Construction Office to address this issue:

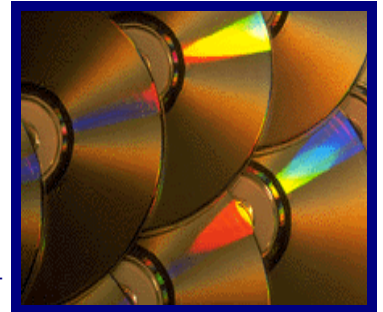
334- - Superpave Asphalt : This pay item includes an estimated ___?___ tons to be utilized in temporary maintenance or repairs to existing asphalt connections that will be impacted more than five (5) days due to phasing of project construction. Thickness or application rate will be dictated by the use or purpose of the connector with the minimum thickness being three (3) inches. The use of this item will be as directed by the Engineer or as specified by the designer at locations shown in the plans. Cost of material, labor, installation and removal to be included in the pay item for Superpave Asphalt.

286-2 Turnout Construction Tonnage: This pay item includes an estimated ___?___tons to be utilized in the temporary construction of asphalt connections when project construction requires the relocation of the existing connector due to planned project construction and the duration of the impacts will exceed five (5) days. Construction of temporary turnouts shall be in accordance with standard index 515. The use of this item will be as specified in the plans or as directed by the Engineer. Changes to project Maintenance of Traffic Plans, or work phasing requested by the Contractor that will result in direct increases to the use of this temporary item will not result in any increased cost to the Department. All changes must be approved by the Engineer. Cost of material, labor, installation and removal to be included in the pay item for turnout construction.

Re-occurring Errors in Specifications Submittals

Allan Hagans, District Scheduling/Specifications Specialist

Due to the changes of Consultants preparing Specifications Packages and electronic submittal of plans and specifications on the same CD, the District Specifications Office has provided the following list to assist in preventing re-occurring errors:



1. The front page of the workbook is not being completed.
2. Utilize the usage notes in the workbook and pay item numbers to ensure other specifications are added when required.
3. On Class I projects, the EOR's name should be typed in the footer of the first page and the number of pages of the specifications package. (Use the Specs Macro for preparing these spec packages - this macro is used for packages signed and sealed using PEDDS.)
4. On Class 7 projects, the EOR will sign, date, list the number of pages on the first page and manually seal the package. (Use the SpecsMacro for Manual Signature for preparing these spec packages. At this time the district projects are not electronic.)
5. The last page number should be included in the Table of Contents and on the last page of the specs package.
6. With multiple projects the footer should be shown as the following: FPID(S)123456-1-52-01, etc.

(Continued from page 7)

7. The Intent and Scope spec should include the description of the major items of work to be performed, the location and county of the project .
8. If using specs with inserts, i.e. Milling Existing Asphalt Pavement, Wage Rates for Federal Aid Projects and Computation of Contract Time (utility relocation/adjustments - time) the amounts should be included and underlined. All alternative contracting dollar amounts and number of days will be provided with comments by Construction.
9. On Technical Special Provisions, review the Handbook on the website for Specifications Package Preparation (www11.myflorida.com/specificationsoffice). Do not reference any proprietary listing this is based on FLA Statutes 337 Section 2, the TSP should clearly define the performance of the item not just naming a brand product.
10. On projects that are pilot projects (specs package and plans on the same CD) review PPM Volume I (January 2003 edition) Chapter 19 (Sealing Design Documents).
11. A response memo for addressing only the corrections commented on should be sent to the District Specifications Office. Inform the District Specifications Office of any other changes made that were not initially mentioned.

Our suggestion to the Project Managers is to ensure the Design Consultant has a quality control check/review system in place prior to submitting their "draft" spec package and workbook.

I know God will not give me anything I can't handle. I just wish that He didn't trust me so much.

—Mother Teresa



Updated District Three Design Web Page

Eddie Register, District Three Design Newsletter

Recently we have had some exciting changes to our District Three Design Web page which serves as the location for the District Three Design Newsletter . As some of you may well know, in the past we have made copies of the past issues of the Newsletter available upon request. Usually these copies were transmitted to the requester via fax or a hard copy by mail.

It is now our pleasure to inform you that all of our back issues, beginning with the first issue in March of 1996 and running thru the current issue, are now

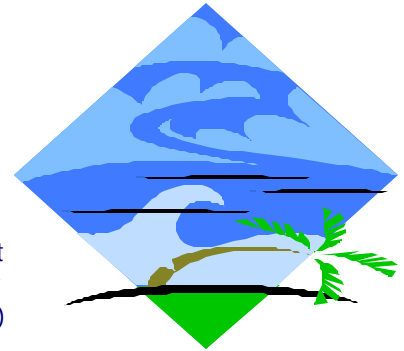
available on the District Three Design web page. You may go to the main page (<http://www.dot.state.fl.us/rddesign/D-3/files/d3.htm>) and scroll to the bottom of the page locating the link to **Older Issues**. Selecting this link will take you to the page offering all of our back issues. Or, you may select the following link to go directly to that page:

<http://www.dot.state.fl.us/rddesign/D-3/files/olderissues.htm>

Should you have any question or comments regarding this new link, please feel free to contact myself or Mr. Larry Kelley by using the information provided on the web page.

Effective Immediately: Stormwater Permitting Changes

Brian Blanchard, P.E., State Roadway Design Engineer



The stormwater discharge permitting authority for construction activities in the State of Florida has recently changed. The State of Florida Department of Environmental Protection (DEP) is now the sole permitting authority for stormwater in Florida. This means the Environmental Protection Agency (EPA) is out of the picture and the EPA National Pollutant Discharge Elimination System (NPDES) General Permit is no longer valid. It has been replaced with the new DEP Generic Permit for Stormwater Discharge from Large and Small Construction Activities.

The new DEP permit, the corresponding Notice of Intent (NOI) and Notice of Termination (NOT) forms, and additional permit information can be found on the DEP web page at:

<http://www.dep.state.fl.us/water/stormwater/npdes/index.htm>

We are currently in the process of updating the Plans Preparation Manual (PPM) to reflect these changes, and although they will not be reflected in the PPM until the January 1, 2004 Update, these changes have already been implemented. These permit changes have also had impacts on the Construction Office and the Specifications Office, and they have already posted their modifications on their respective web pages:

Construction (Memo Number 21-03):

<http://www11.myflorida.com/construction/memos/2003/dce21-03.pdf>

and **http://www11.myflorida.com/construction/memos/2003/dce21_Attach.pdf**

Specifications (Mandatory Revision No. 1: Specification Numbers 7-2.2, 104-5, and 104-7.1):

<http://www11.myflorida.com/specificationoffice/Mandatory/July03WB/specrev1.pdf>

Any questions regarding the above permit changes may be directed to your District Permitting Coordinator or the Statewide NPDES and Environmental Permit Coordinator, Donna Pope at (850) 410-5883.

**DISTRICT THREE DESIGN
FLORIDA DEPARTMENT OF
TRANSPORTATION**

If you have any questions or problems regarding obtaining a copy of this newsletter from the web page, contact Eddie Register in the District Design Office at (850) 638-0250 ext.—392