

# District Three Design newsletter



**Inside this issue:**

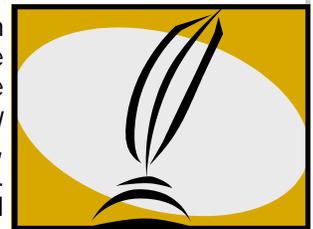
Editor's Desk- MOT Process Review	1
Top Ten Quality Control Comments	2
Design Spotlight—Teresa Barfield/ Miranda Glass	2
Supplemental Agreement Report	3
CADD Tricks , Tips and Updates	4

Volume 18. Issue 4

October—December, 2013

## *From the Editor's Desk - MOT Process Review* Miranda Glass, District Roadway Design Engineer

A Maintenance of Traffic Process Review was performed on September 12th and 13th of this year here in District Three. The Maintenance of Traffic Process Review Team, consisting of Stefanie Maxwell (State Construction Office), Felix Delgado (FHWA – Safety Engineer) and Ezzeldin Benghuzzi (State Roadway Design Office), visited seven (7) construction projects on the State Highway System. Their focus this year was centered on the use of barrier wall and crash cushions. Their purpose was to evaluate the usage of these items in the projects' respective MOT schemes and note any deviations from the approved and crash-tested standards as depicted in the Design Standards.



The seven (7) projects included in the review consisted of six (6) conventional let projects and one design-build project. Among those noted in the report were issues with anchor bolting of the barriers, incorrect transition staking, nonstandard offset blocks, use of Index 415 barrier (no longer allowed), damaged components, non-standard installation, inappropriate transition between differing barrier types, and insufficient guardrail height.

The MOT Process Review revealed some deficiencies attributable to the design of the maintenance of traffic schemes for some of the projects. A common oversight in the design plans was the need for an asphalt pad beneath the barrier or crash cushion. For example, Index 414, Sheet 6 requires flexible pavement, rigid pavement, or an asphalt pad beneath Type K Temporary Concrete Barrier Systems that extends for the deflection distance behind the barrier. This issue was noted frequently in the report.

Another recurring design-related deficiency was the lack of deflection space provided behind the barrier. Some instances were noted where construction equipment or material was staged within the required deflection space. Many cases, however, were included in the plans. One situation placed barrier directly along the curb and gutter line.

There were also a few cases where the designer neglected to connect or provide sufficient overlap between temporary barriers and permanent traffic railing during applicable phases of the temporary traffic control.



**District III Quarterly Design Newsletter**

Editor.....Scott Golden  
Layout/Graphics...Teresa Barfield

**CONTRIBUTORS:**

Keith Hinson      Miranda Glass  
Howard Helms      Kenny Rudd  
Carol Kreis        Billy Best  
Lester Forrest     Lisa Stone



## Top Ten Quality Control Comments Oct. – Dec., 2013

1. Value Engineering Studies for projects in the Design Phase will be scheduled after phase II plans.
2. Projects located off the FDOT system should include thermoplastic where the existing corridor markings already use thermoplastic. Otherwise, off-system projects should utilize paint only. No thermoplastic will be placed on off-system projects through Maintenance contracts.
3. When proposing the use of Pay Item 0102-3 Commercial Material For Driveway Maintenance, the minimum quantity is 250 CY, unless otherwise directed by the District Construction Office.
4. A summary box is required for Pay Items 0102-104 Temporary Signalization and Maintenance of Intersection and 0102-107-1 Temporary Traffic Detection and Maintenance of Intersection.
5. Taper length for turn lanes and turn lane lengths need to be compliant with Index 17346.
6. When there are trees being proposed in the medians they shall meet Index 700. (use flow chart)
7. Include locations of wildflower plots when they are within the limits of the project.
8. Note 4 of the table 2.3.2 from the PPM, states to pave median shoulders a minimum of 4 feet in sag vertical curves, 100 feet each side of the low point.
9. Make sure the appropriate pay items have been included for the proposed work.
10. If super elevation on curves do not need to be corrected, designers should have the contractor "Match Existing" super elevation (e) rates.

### Design Spotlight / Same Face, New Place

**Teresa Barfield, Area Utility Manager**

**Miranda Glass, P.E., District Drainage Engineer**

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



Teresa Barfield has recently taken a position as the Area Utility Manager over Holmes, Washington, Jackson, Bay, Calhoun and Gulf counties. She began her career at FDOT in June 1996 as an Engineering Technician in Drainage Design. Throughout her 17 year career at the Department, she has worked in Design, Maintenance, Admin, Personnel and Traffic Operations.

Teresa sings on the praise team at her church and likes reading, dancing, travelling, being on the water, snow skiing, going to the movies with friends, and spending time with two teenagers and her husband, Tod.

Our current District Drainage Engineer, Jim Kapinos, will be retiring at the end of February 2014 after almost 16 years with the Department of Transportation. The District Design Office. Miranda Glass, current District Roadway Design Engineer, will overlap his position as the new District Drainage Engineer beginning January 31<sup>st</sup>.

Miranda is a Civil Engineering graduate from Florida State University College of Engineering. She draws from over 11 years of experience in hydraulics, roadway and traffic design, and quality control as a Drainage Engineer, the District Roadway Design Engineer, and in the private sector. Miranda enjoys spending time with her husband and two kids, watching movies, songwriting, and is the worship leader at her local church.



## ***Supplemental Agreement Report – Sept, Oct., November, 2013***

**Keith Hinson, P.E., District Value Engineer/QA/QC Manager**

Following is a sample of Supplemental Agreements for September, October, and November, 2013. The category of Supplemental Agreements that are included in this summary are 118, 208, 010, 107, and 503. This summary 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 cost to the public. Below are brief descriptions of those errors or omissions and the Department's responses.

**Description Code: 118** – Improper or inadequate signing, signalization or pavement design or features.

Reason: Add additional "Contract" Pay Items to compensate the contractor for added traffic signal equipment necessary to make the project functional with the design intent. Addition of conduit and pull boxes was necessary because no conduit existed to route lead-in cables for traffic loops back to the controller cabinets. Other work included replacing existing damaged pull boxes in areas where new sidewalk is to be constructed.

Granted Time: 0 Days

Increase: \$12, 511.48

Response: Avoidable; No action recommended.

**Description Code: 208** – No specification provided for item of work.

Reason: This safety enhancement, directed by the Department, is to improve safety for the traveling public to reduce the abrupt roadway surface change created by the use of steel cover plates where finger joints and concrete is being replaced within the confines of the bridge.

Granted Time: 17 Days

Increase: \$38, 223.64

Response: Unavoidable; No action recommended.

**Description Code: 010** – Weather related new work, repairs, overruns or contract changes due to weather.

Reason: Extra work to repair the failing pipe and structure, stabilize the FDOT R/W to prevent further collapse of adjacent property.

Granted Time: 2 Days

Increase: \$58, 615.53

Response: Unavoidable; No action recommended.

**Description Code: 107** - MOT: Modification of Maintenance of Traffic for pedestrians, boats, cars, bikes, etc.

Reason: To add Pay Items to the Contract for the use of additional Maintenance of Traffic Items. The arrow boards will be used during paving operations at night in order to better direct traffic in congested dark areas throughout the project limits. The Portable Changeable Message Signs will be used to inform the traveling public of upcoming paving operations in which lane closures will occur.

Granted Time: 0 Days

Increase: \$760.62

Response: Unavoidable; No action recommended.

**Description Code: 503** – Change resulting from engineering decision to use Structural Pile Jackets instead of the designed Non-Structural Pile Jackets.

Reason: The Structural Pile Jackets were necessary due to piles having exposed/broken strands.

Granted Time: 10 Days

Increase: \$216, 880.72

Response: Unavoidable; No action recommended.

***"Be So Good They Cannot Ignore You."- Steve Martin,  
Actor***

# ***CADD TRICKS, TIPS, UPDATES– How to overlay your .dgn***

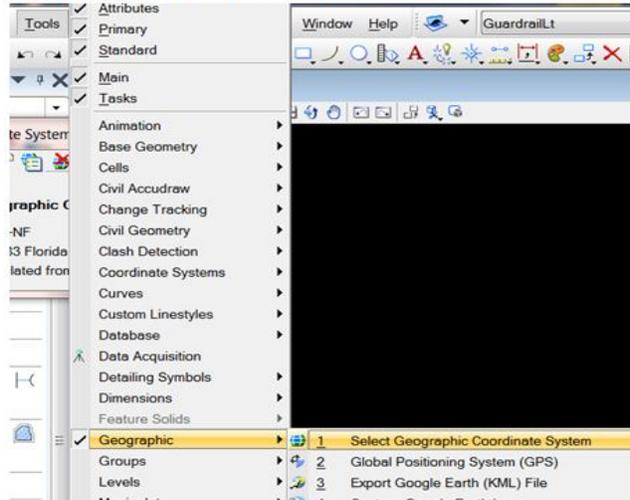
Howard Helms, CADD Manager ; Kenny Rudd, Senior Roadway Design CADD Specialist

## How to overlay your .dgn in Google Earth

Select a Geographic Coordinate System, then export a Google Earth KML file

While in MicroStation on main toolbar:

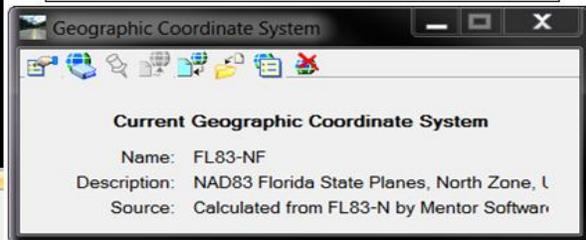
**TOOLS > GEOGRAPHIC > SELECT GEOGRAPHIC COORDINATE SYSTEM**



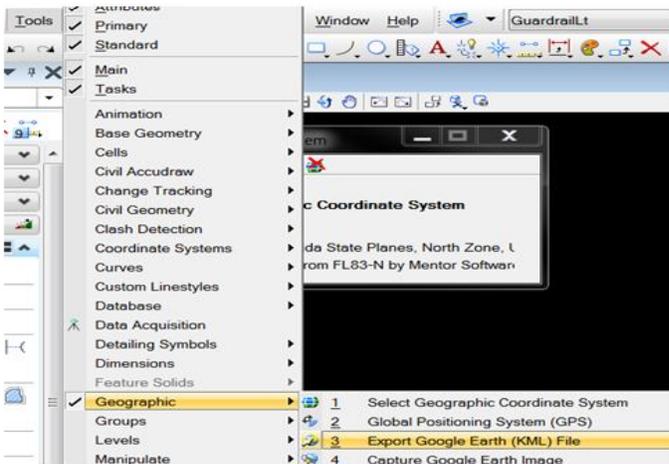
From Library

**Library>Projected (northing, easting,\_)>North America>United States of America>Florida>FL83-NF**

This will be what ever coordinate system you are on.



**TOOLS > GEOGRAPHIC > EXPORT GOOGLE EARTH (KML) FILE**



It will ask you to save the file. The file it saves is actually a “.kmz” file.

After saving the file it will open Google Earth and zoom into the area.

Double clicking on the “.kmz” file you created will also open Google Earth and zoom into the area.

