Florida Department of Transportation

DISTRICT THREE DESIGN NEWSLETTER

Inside this issue:

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Volume 21, Issue 1 **January - March, 2016**

From the Editor's Desk - What Does Quality Look Like?

Jared Perdue, P.E., District Design Engineer

We recently had the pleasure of attending the Regional FICE meeting for Districts 2 & 3 in Tallahassee. As always, it was a fruitful time of fellowship with friends and partners, but also there was very meaningful discussion on some topics that have been a focus for years and remain a challenge in today's climate. Two specific topics that were discussed are quality and innovation. Secretary Boxold has placed a high emphasis on efficiency, innovation, and exceptionalism and has challenged FDOT to continue growing, advancing and thriving in these three areas. Therefore, I would like to take the opportunity to expand a little on the topic of quality.

What does quality look like? Many would say that quality in our line of work can be measured by assessing the condition of the physical product that is being delivered (i.e. design plans, engineering reports & studies, specifications packages, etc.). This is true to some extent and we all strive for perfection, but who has ever achieved it? I have never seen a perfect deliverable, which prompts me to delve into this idea of quality and hopefully discover or understand the root or heart of the matter. Therefore, in an effort to generate fruitful thought and discourse on the topic of quality, I offer the following analogy as it relates to the relationship between a parent and a child.

> **If a parent asks a child to clean the living room, the child is now bound or obligated to deliver a "clean" living room. At some point in time later, the parent inspects the living room only to find that the final product was much less than what was desired or expected. The conclusion of the parent is that the final product is of a very low quality. In the meantime, the child continues with whatever else children do throughout the course of the day without giving second thought to the task of cleaning the living room or how it was received by the parent.**

The fact that the above scenario exists in real life is evidence that the standard for quality is not necessarily a core component of human nature and can be subjective. It is manifested in some places, and in other places there are no signs of its existence. If it was a core component of human nature then it could be said that quality was instinctively built in to everything that all human's produce from the time that they are born.

So how does the parent insure that the child meets expectations the next time the living room is cleaned? There are many different mechanisms or tools at the parent's disposal. For example, step by step instructions as the room is being cleaned, a checklist that covers all of the basics of cleaning a living room, the threat of consequences if expectations are not met, the promise of a reward if expectations are met, etc. While all of these tools may help improve the end result, do they actually achieve the expectation of "quality"? I believe the answer is very clear.

In reality, the only way for the child's deliverable to achieve the desired level of quality is for there to be a shared vision and shared desire between the parent and the child. The child's desire and vision for the final product has to become that of the parent. There has to be a culture of quality. This does not happen overnight. The seed has to be planted, it has to be watered, cultivated, and nurtured. It has to grow and mature until at last there is a culture that is always striving and desiring the highest level of quality that can be achieved. This is obviously easier said than done; however, we are all faced with the challenge of embedding quality into everything we do. We have to work to develop relationships and understand the needs, desires, and expectations of those we are serving. We must create a culture that never accepts "good enough" and is always striving to learn, improve, and adapt to achieve the new threshold of quality.

From Kerrie's Desk

"It is easy to come up with new ideas; the hard part is letting go of how we did it in the past."

We as designers and engineers need to get away from the traditional methods of design and think outside of the box in an effort to create a design that better preserves our environment. As we implement improvements to our roadways, drainage systems, bicycle/pedestrian facilities, etc., there are often challenges with fitting everything inside the right of way. Our first solution is often to relocate utilities and remove trees. Instead, we need to shift our way of thinking to make this a last resort. Let's get away from the "one size fits all" solutions and start looking at each conflict area individually to develop location-specific solutions. ***Think Innovatively!***

Top Ten Quality Control Comments January - March, 2016

Lester Forrest - QA/QC Plans Reviewer

1. Designers need to be aware that there is new guidance concerning lane closure restrictions on resurfacing projects along Interstate 10 within the District. **"Lane closures are prohibited from 6:00 AM until 8:00 PM (Monday-Thursday) and from Friday at 6:00 AM until Sunday at 8:00 PM).**"
2. Designers are to give contractors all available pipe material options, unless a specific type is justified.
3. Effective with the January 2016 Letting, pay item 334-1-AA, overbuild summaries are to be included in the Summary of Pavement. Separate summary boxes for overbuild are no longer to be included in the plans. Reference: Basis of Estimates
4. The Department will no longer be doing thermoplastic through Maintenance contracts on projects over 365 days long. Reference: P.P.M Vol. II, Chapter 23. Section 23.1 and 23.10 the language related to separate thermoplastic contracts has been removed. Thermoplastic pavement markings will be included in Construction contracts.
5. All overhead electrical utilities that cross construction areas should be labeled with the line voltage.
6. The radii of the turnout(s) should be extended to the edge of pavement since this will be used to support traffic.
7. Please ensure pay item 0102-1 (MOT LS/DA with secondary units days in Trns*port matches the contract time from the current Construction Memorandum.
8. During the design of Shared Use Paths, designers are to take into consideration the expected use of pedestrians; therefore, ADA requirements must be met. (maximum cross-slope is 2%) Reference: P.P.M Vol I, Chapter 8, 8.6.3
9. CADD technicians should ensure that important information text; such as proposed cross slopes to be constructed are labeled in a way that it is visible and free of clutter.
10. Please ensure that every reasonable effort is taken to salvage existing trees.

"Desire is the key to motivation, but it's determination and commitment to an unrelenting pursuit of your goal – a commitment to excellence – that will enable you to attain the success you seek.~ Mario Andretti

Bid Set Revision(s)/Addenda(s): - January 2016

William Evans, District Specifications Coordinator

Resurfacing project: Including Utility Work by Highway Contractor (UWHC)
Federal Funds $4,457,807.00 Local Funds: $80,866.00

Correction Needed:
Sheet T-9 and T-10 Duplicate Drawings: **removed duplicate signing sheet T-9 (SR 20 @ E. Lafayette intersection) and replace with signing sheet T-9A (for the intersection @ E. Lafayette and Indian Head Road)**
Sheets 5A, S-9: **added the pay item total to the "Grand Totals" column.**
Sheet S-3: **added the pay item sheet total to the "Sheet Totals" column.**

Estimate Effect: Cost addition $1,750.00; No Change to Contract Time.

Pay Item	Sheet No.	Add. / Del. / Rev.	Old Quantity	New Quantity
0711-11-160	5A, S-9	Revised	16 EA	30 EA

Discovery of errors:

Bid Question: 12804: Signal plan sheet T-9 & T-10 appear to be the same intersection, but list different quantity amounts for pay items and plan notes. Please clarify.
Answer: Sheet T-9 was duplicated twice. A revision including the correct sheet is forthcoming.

Bid Question: 12947: There are 14 "Only" thermo messages missing from the signing and pavement quantities. They are counted in the tabulations of quantities on S-3 but are not added to the total for some reason. Can you correct this?
Answer: A revision is forthcoming.

Design Spotlight

Alaina Webb, P.E.

Assistant Consultant Project Management Engineer

Alaina has a new role as the Assistant District Consultant Project Management Engineer. She graduated from Florida State University (Panama City campus) with a Bachelor of Science in Civil Engineering in May 2008. Alaina interned at PBS&J during college and came to the Department after graduating from FSU. She completed the FDOT P.E. Training Program and has been working in Design for the past six years where she completed a specialty rotation in Drainage, Roadway Design, and Project Management. She has been married to her high school sweetheart, Corey, for seven years, and they have a two-year old son named Colton. In her free time she enjoys spending time with her family, hunting, and working in the children's ministry at her church. .

Supplemental Agreement Report – December 2015, Janurary, February 2016

Carol Kreis - QA/QC Plans Reviewer

Description Code: 503: Change resulting from engineering decision.
Reason: Reduce planned gutter drain and associated gutter drain pipes along with the addition of drainage structures and storm drain pipe to eliminate conflict with a wall.
Granted Time: 6 Days
Increase: $6,911.18
Response: Unavoidable: No action recommended.

Description Code: 101: Necessary Pay Item not included in the contract.
Reason: To add Temporary Navigational Lighting for the safety and protection of the traveling public and add the Pay Item for Channelizing Devices to delineate the Portable Changeable Message Signs within the project limits.
Granted Time: 0 Days
Increase: $1,628.00
Response: Avoidable: No action recommended.

Description Code: 112: Phasing or plan components not constructible as shown in Plans.
Reason: Additional MOT, 3" Milling and 1.5" SP-9.5 to improve ride ability and structural stability of the roadway at an intersection by removing of the excessive asphalt rutting.
Granted Time: 4 Days
Increase: $134,132.50
Response: Unavoidable: No action recommended.

Description Code: 503: Change resulting from engineering decision**.**
Reason: Plans called for 36" cross drain installation to be performed as open trench construction. The plan was revised to allow for jack & bore construction to prevent the need to open cut across the mainline roadway. This reduced impacts to the motorists along the corridor by not requiring lane closures during this installation.
Granted Time: 0 Days
Increase: $42,898.41
Response: Unavoidable: No action recommended.

Description Code: 101: Necessary Pay Item not included in the contract.
Reason: Additional work is necessary to provide proper driveway maintenance and erosion control. Five thermoplastic pay items were incorrect, because these pay items were for open graded asphalt surfaces and this project had a dense/closed graded friction course. New thermoplastic pay items were added, but the quantities and unit prices remained the same. Business signs were added for the benefit of maintaining business access and awareness for the traveling public.
Granted Time: 0 Days
Increase: $4,053.00
Response: Avoidable: No action recommended.

Description Code: 012: Deterioration of, or Damage to Project (not weather related).
Reason: Additional work was necessary to improve pavement conditions within the project. The deterioration of the existing asphalt created a potential safety issue to the traveling public. The additional work was to improve the safety and ride quality of the existing roadway for the traveling public.
Granted Time: 0 Days
Increase: $219,618.52
Response: Unavoidable: No action recommended.

Description Code: 101: Necessary Pay Item not included in the contract.
Reason: To add a pay item for superpave asphaltic concrete, traffic level D to provide a finished asphalt sur-

(Continued on page 5)

Supplemental Agreement Report – SeptemberDecember 2015, Janurary, February 2016 Carol Kreis - QA/QC Plans Reviewer

(Continued from page 4)

face on the shoulder once the special detour is removed.
Granted Time: 0 Days
Increase: $17,489.95
Response: Unavoidable: No action recommended.

Description Code: 106: Inaccurate identification of utility with no Joint Project agreement.
Reason: To eliminate a conflict with an existing 4" waterline which is not at the depth indicated in the plans, the base course thickness was reduced and use limerock and asphalt base in these areas.
Granted Time: 6 Days
Increase: $2,414.50
Response: Unavoidable: No action recommended.

Description Code: 107: Modification of Maintenance of Traffic for pedestrians, boats, cars, bikes, etc.
Reason: To compensate the contractor for additional work required to modify existing signs and temporary MOT signs along with regarding the shoulder to allow for the installation of temporary guardrail, and the addition of temporary guardrail, end treatments and its removal. The sign changes and temporary guardrail were necessary to ensure safety for the traveling public through the work zone.
Granted Time: 0 Days
Increase: $48,069.04
Response: Unavoidable: No action recommended.

Description Code: 115: Required drainage modifications.
Reason: To install riprap ditch lining where concrete ditch pavement is not feasible and remove an existing inlet in a driveway and replace it with a 24" reinforced concrete pipe.
Granted Time: 0 Days
Increase: $20,339.32
Response: Unavoidable: No action recommended.

Design Spotlight
Adam Scurlock, P.E.
Roadway Design Project Manager

Please join me in welcoming Adam Scurlock, P.E. to our Roadway Design Group. Adam was recently hired in our roadway design section to fill the role of Engineer Supervisor and will be responsible for leading one of our roadway design teams on various in-house design projects. Adam graduated from Florida State University with a Bachelor of Science in Civil Engineering in December 2005. While attending school, Adam worked at the FDOT Structures Lab in Tallahassee as an OPS employee. After graduation, he moved to Panama City and accepted a job at an engineering company in Panama City Beach. For the past 6 years he has worked for a local consultant on FDOT projects as a project engineer. Adam is married to Amber and they have two children, Jackson and Lyla. Adam grew up in the area and is in the process of moving back to Chipley.

Plans Processing & Specifications Process Updates

Iris Walden, P.E., District Specifications Engineer

The July-December 2016 Specifications Book is now available! We had a great meeting with the Project Managers after the last March Production Meeting to discuss the changes with the new Specs book. For additional information on Plans Processing changes please ask your Project Manager for the Power Point presentation, updated D3 QC Checklist and redundant plan note spreadsheet.

Through Q/A at that meeting it was decided to revise the CD requirements for Plans Processing and Specification Submittals (PPS).
1st PPS ERC and 2nd PPS ERC submittal we do not need Project CDs, the ERC is sufficient. Please continue to send via email or FTA the supporting documents (CADD Zip Files).
Completed PPS Submittal prior to transmittal we still require a labeled CD/DVD with Project PDF, Specifications PDF and CADD zip files.

Notable changes to the plans include:

- Fiscal Year on Key Sheet to 17
- Each component set should be a separate (PDF) file.
- Adding Contract No. to each components Key Sheet.
- If you have only one signature it can go on the Key Sheet as long as you include the signature block information.
- Governing Standards and Specifications block should be updated to say:
  Florida Department of Transportation, FY 2016-17 Design Standards And revised Index Drawings as appended herein, and July 2016 Standard Specifications for Road and Bridge Construction, as Amended by Contract Documents.

  For Design Standards click on the "Design Standards" link at The following web site:
  http://www.dot.state.fl.us/rddesign/

  For the Standard Specifications for Road and Bridge Construction click on the "Specifications" link at the
  Following web site:
  http://www.dot.state.fl.us/specificationsoffice/

Specifications Updates include:

- The July-December 2016 Specs Workbook is available through Specs on the web, the correct letting month has to be selected to include the most recent revisions.
- SP007110RR CSX: consolidated section for rail operations, now only one Special Provision.
- SP0071600 WAGE RATE for resurfacing projects work description within table should read: "All highway work under this Contract". See link for wage rate number: http://www.wdol.gov/dba.aspx#0

CADD TRICKS, TIPS, UPDATES

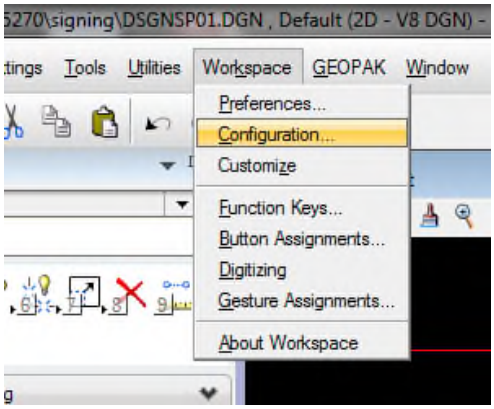
Howard Helms, CADD Manager

How to get back the cursor hover details

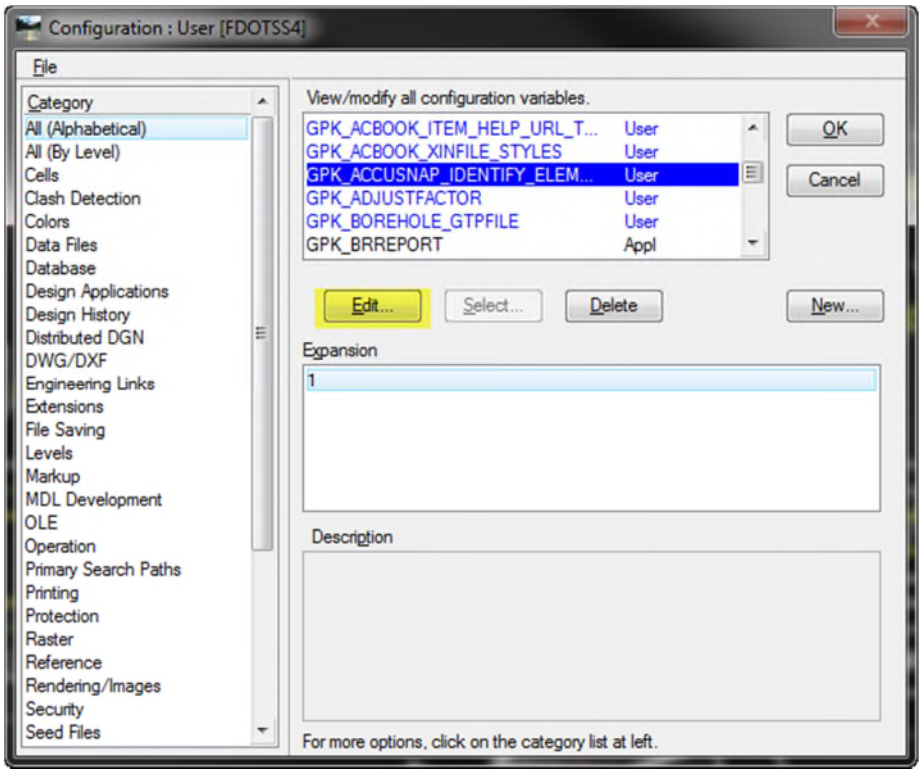
If you are running PowerGeopakSS4 and FDOTSS4, you might have noticed when you click on and/or hover over elements in your design file it does not give you all of the info it used to, DDB Features, ADHOC Attributes, Etc. Here is how to get that back.

NOTE: ECSO has warned that changing this and doing 3D designs may cause more crashes than normal.

Go to MicroStation toolbar: Workspace > Configuration



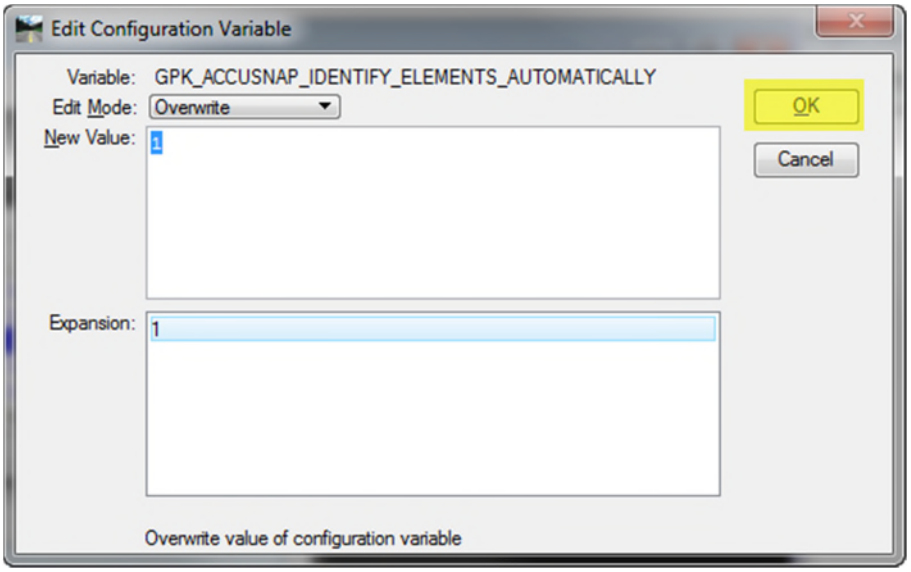
Find GPK_ACCUSNAP_IDENTIFY_ELEMENTS_AUTOMATICALLY click on it then click edit



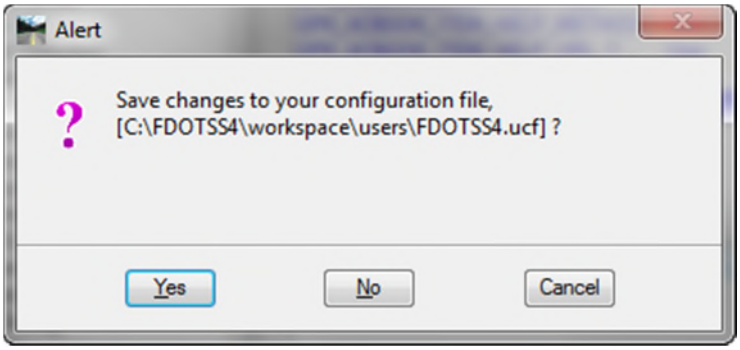
CADD TRICKS, TIPS, UPDATES

Howard Helms, CADD Manager

Change the new value from 0 to 1 and click OK



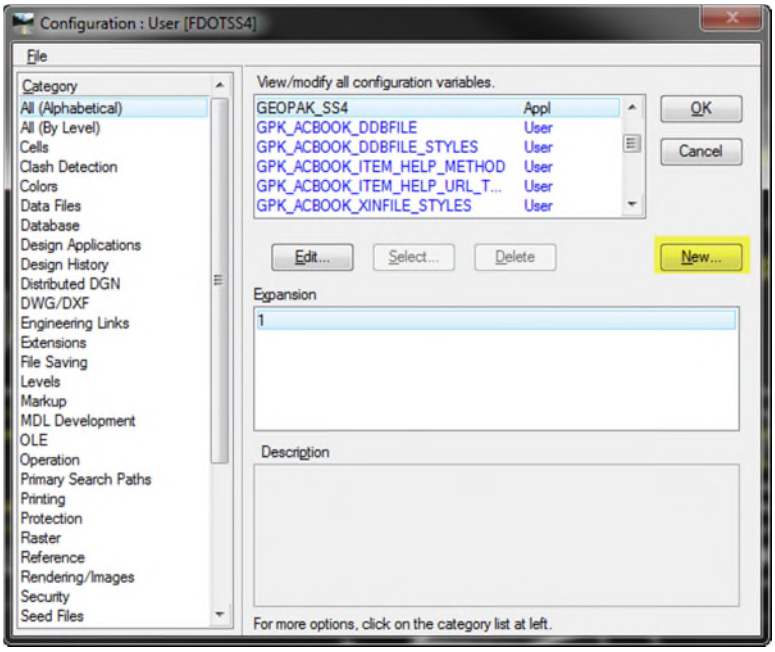
Click yes to save changes. You will have to restart Microstation for the changes to take effect.



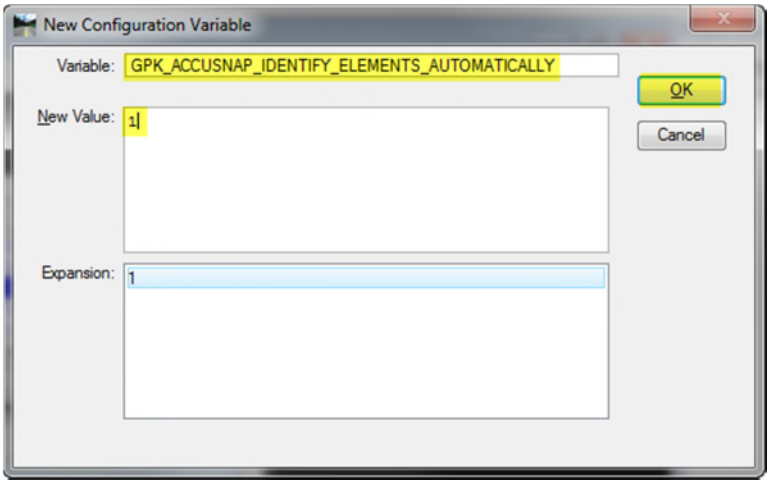
If you can't find GPK_ACCUSNAP_IDENTIFY_ELEMENTS_AUTOMATICALLY. Create it from NEW

CADD TRICKS, TIPS, UPDATES

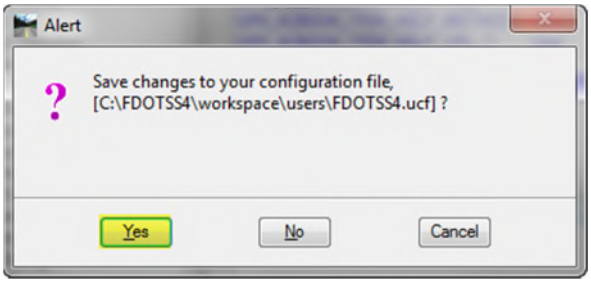
Howard Helms, CADD Manager



Set the Variable to: GPK_ACCUSNAP_IDENTIFY_ELEMENTS_AUTOMATICALLY and New Value to 1 and click OK



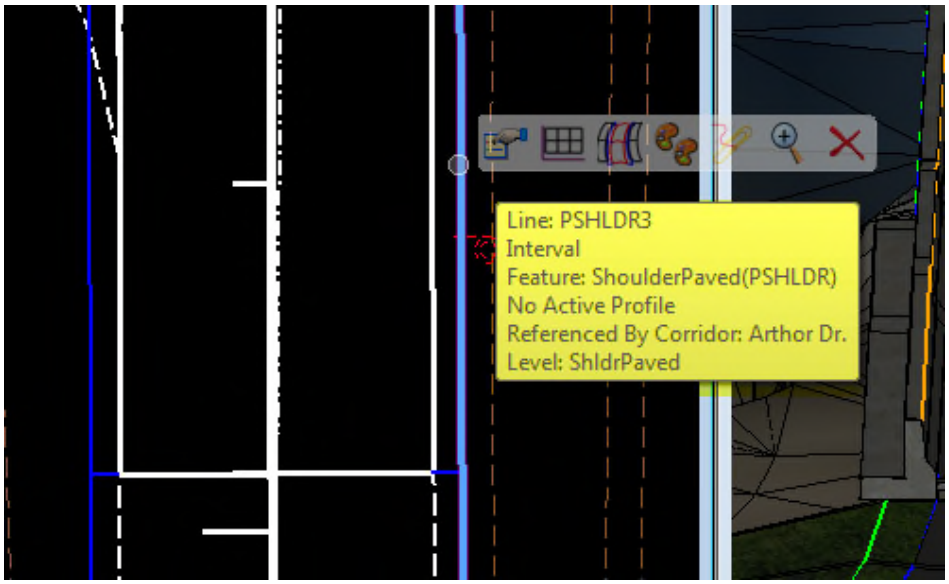
Click yes to save changes. You will have to restart Microstation for the changes to take effect.



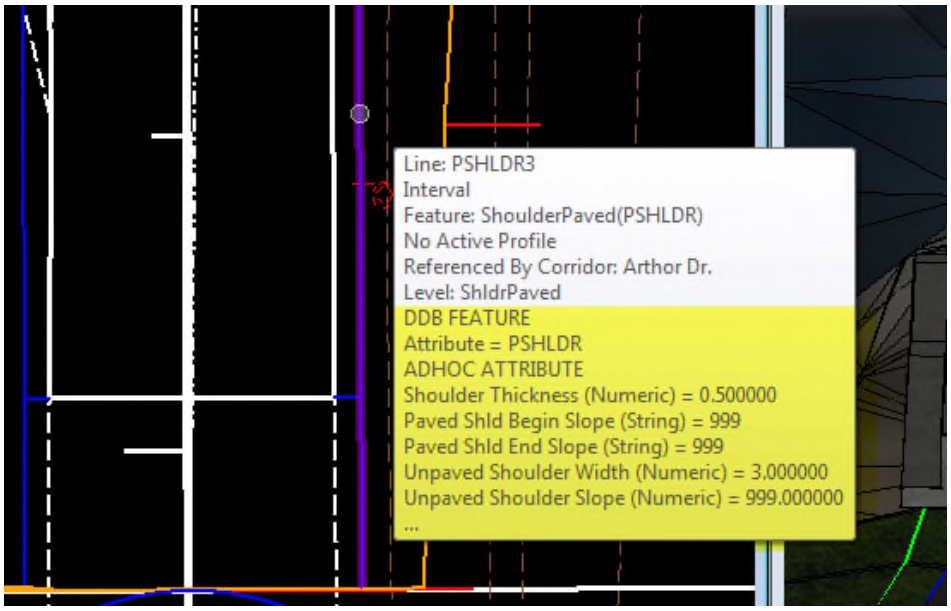
CADD TRICKS, TIPS, UPDATES

Howard Helms, CADD Manager

BEFORE



AFTER



"We learned that economic growth and environmental protection can and should go hand in hand. ~ Christopher Dodd