



## *NCDOT Implementation of OpenRoads Designer*

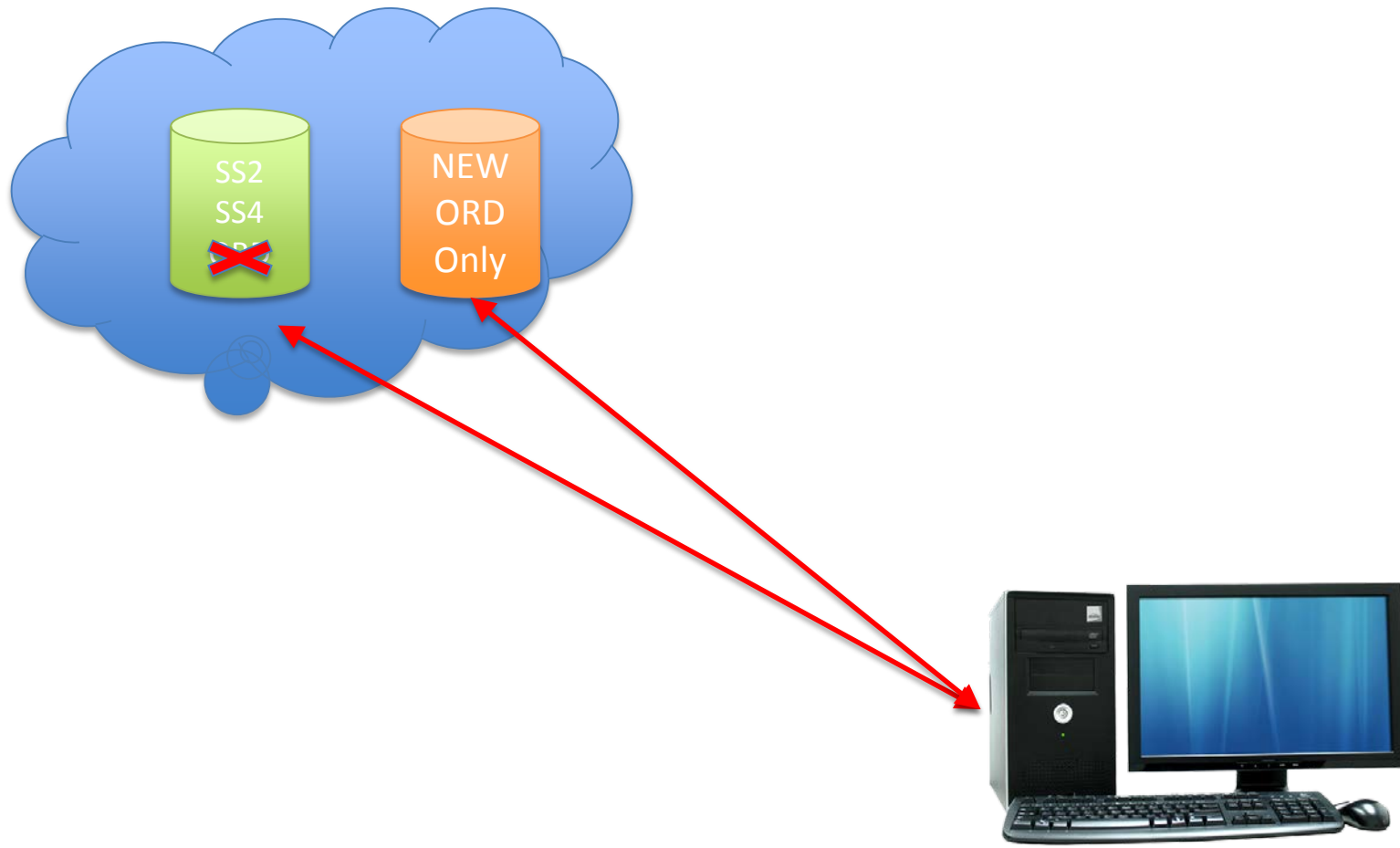


# Teamwork

## CADD Workspace Strategy Meetings

















# NCDOT CADD Workspaces
















# Separation of Workspaces

## Legacy

- >  NCDOT\_V8\_Config
- ▼  NCDOT\_V8\_WORKSPACE
  - >  EROSION\_CONTROL\_STDS
  - >  GEOTECHNICAL\_STDS
  - >  Hydraulics\_STDS
  - >  ITS\_STDS
  - >  LOCATION\_STDS
  - >  NATURAL\_ENVIRONMENT\_STDS
  - >  Ncdot\_CONNECT\_STDS
  - >  Ncdot\_Stds
  - >  ROADWAY\_STDS
  - >  Structures\_STDS
  - >  TRAFFIC\_CONTROL\_STDS
  - >  UTILITIES\_STDS

## OpenRoads


- ▼  MICROSTATION\_CONNECT\_WORKSPACE
  - ▼  Configuration
    - ▼  Organization-Civil
      - >  NCDOT
  - ▼  WorkSpaces
    - ▼  NCDOT
      - >  NCDOT\_Hydraulics
      - >  NCDOT\_Roadway
      - >  NCDOT\_Structures
      - >  NCDOT\_Survey
      - >  NCDOT\_Traffic
      - >  NCDOT\_Uilities
      - >  NULL





# UpdateWs for CONNECT


<https://connect.ncdot.gov/resources/CADD/Pages/default.aspx>


### Workspace Resources

[Alternate CADD Workspaces for Consultants.pdf](#)   
pdf file on an alternate way to install the NCDOT workspaces on a non-NCDOT workstation.

[CADD Consultant Workspace Setup.zip](#)   
zip file containing information on how to acquire and install the NCDOT workspaces on a non-NCDOT PC

**[Installing the NCDOT\\_ORD Connect Workspaces \(Testing Only\)](#)**   
a PDF file describing how to install the NCDOT Workspaces for OpenRoads Connect edition.

[Installing\\_NCDOT\\_Standard\\_Workspaces.pdf](#)   
Instructions on installing the NCDOT workspaces

[Setting up a Supplemental Workspace.pdf](#)   
pdf on how to setup a supplemental workspace within the NCDOT workspaces.

**UpdateWS**  
The workspace update program (UpdateWS.exe) will allow the user to check and update any of the standard NCDOT Workspaces

**UpdateConnectWS – (Testing only)**  
This program administers the new CONNECT ORD workspaces. Be aware that NCDOT is still in early stages of development of ORD Workspaces. Please do not use for Production!

UpdateConnectWs - Version: 18.4.26.3

Admin Update Information

Update	Status	WorkspaceName	Details	Progress
<input type="checkbox"/>	✓	NCDOT	39.91 MB - 4/26/2018	0%
<input type="checkbox"/>	✓	NCDOT_Geotechnical	7.98 KB - 4/26/2018	0%
<input type="checkbox"/>	✓	NCDOT_Hydraulics	44.71 MB - 4/26/2018	0%
<input type="checkbox"/>	✓	NCDOT_Photogrammetry	59.38 KB - 4/25/2018	0%
<input type="checkbox"/>	✓	NCDOT_Roadway	8.85 MB - 4/25/2018	0%
<input type="checkbox"/>	✓	NCDOT_Survey	71.20 KB - 4/26/2018	0%
<input type="checkbox"/>	✓	NCDOT_Traffic	1.66 MB - 4/25/2018	0%
<input type="checkbox"/>	✓	NCDOT_Utilities	1.84 MB - 4/26/2018	0%
<input type="checkbox"/>	✓	NoWorkSpace	1.34 KB - 4/25/2018	0%
<input type="checkbox"/>	✓	NULL	97.42 KB - 4/25/2018	0%
<input type="checkbox"/>	✓	Template	60.00 KB - 4/25/2018	0%

Refresh List  
Update

Note: works as expected in IE and Edge, but Chrome may not work as expected .. It downloads the program



# Configuration for NCDOT

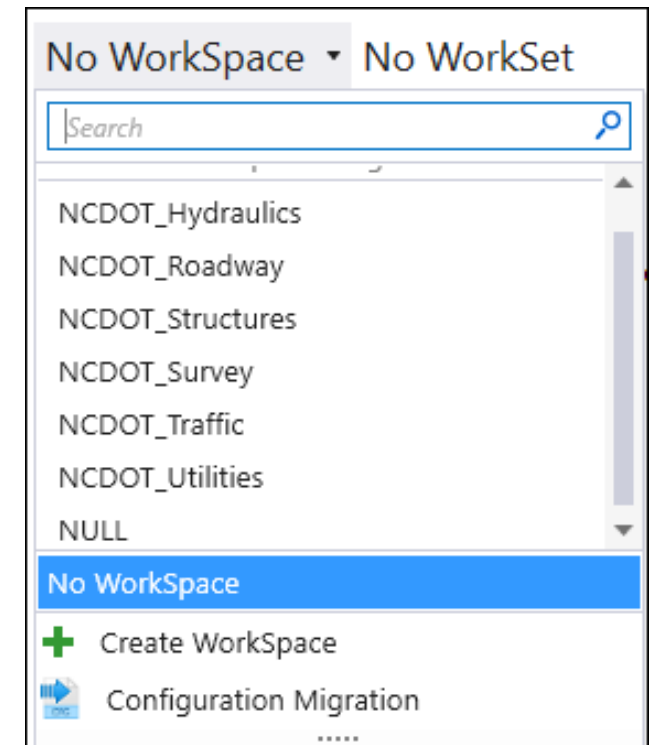
1

Variable name = ORD\_CONNECT\_WORKSPACE\_DIR  
 Variable value = C:\MICROSTATION\_CONNECT\_WORKSPACE\  
  
 Variable name = ORD\_ORGANIZATION-CIVIL  
 Variable value = NCDOT

Copy the *WorkspaceSetup.cfg* to the  
*C:\ProgramData\Bentley\OpenRoads Designer CE\Configuration* folder.  
 Replace the file that is currently in this folder

2

Name	Date modified	Type
Organization	6/6/2018 10:18 AM	File folder
Organization-Civil	4/26/2018 11:57 AM	File folder
WorkSpaces	6/6/2018 10:18 AM	File folder
ConfigurationSetup.cfg	7/25/2018 1:37 PM	Bentley MicroStati...
WorkSpaceSetup.cfg	4/27/2018 2:32 PM	Bentley MicroStati...



# Accommodating Other Agency Standards

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Instructions on installing the NCDOT workspaces

[Setting up a Supplemental Workspace.pdf](#)



pdf on how to setup a supplemental workspace within the NCDOT workspaces.

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Variable name = ORD\_CONNECT\_WORKSPACE\_DIR

Variable value = C:\MICROSTATION\_CONNECT\_WORKSPACE\

Variable name = ORD\_ORGANIZATION-CIVIL

Variable value = NCDOT

## MicroStation\_Connect\_Workspace

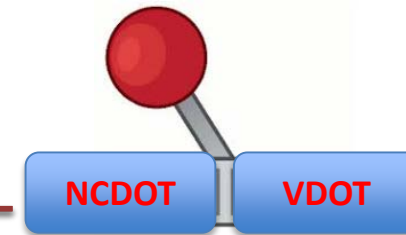
### Configuration

#### Organization-Civil

- NCDOT
- VDOT
- NCDOT.cfg
- VDOT.cfg

#### WorkSpaces

- NCDOT
- VDOT



How could consultant setup work?

The ORD\_Organization-Civil environment variable acts as a switch and can be defined for other agency standards if desired.

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Variable name = ORD\_CONNECT\_WORKSPACE\_DIR  
Variable value = C:\MICROSTATION\_CONNECT\_WORKSPACE\

Variable name = ORD\_ORGANIZATION-CIVIL  
Variable value = **VDOT**

## MicroStation\_Connect\_Workspace

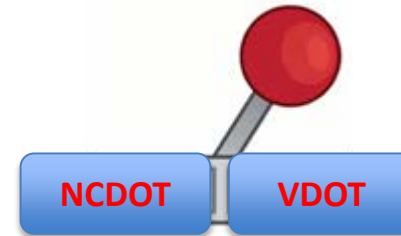
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#### Organization-Civil

- NCDOT
- VDOT ←
- NCDOT.cfg
- VDOT.cfg

#### WorkSpaces

- NCDOT
- VDOT ←



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# CADD Standards for ORD



Features Definition

Features Symbology

Element Template

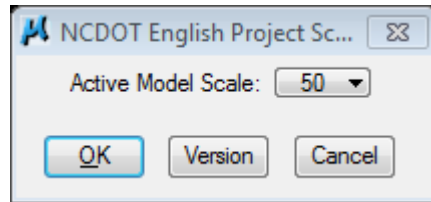
Levels





# New Scaling Method

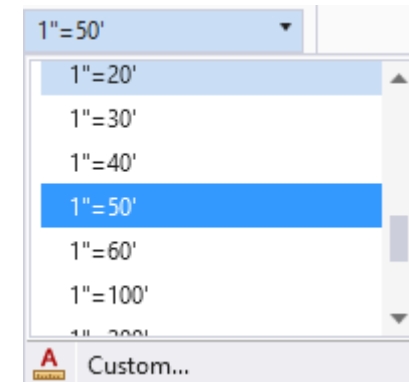
## Legacy



Ratio (50:1)  
Multiplication factor: 50x

Vs

## OpenRoads

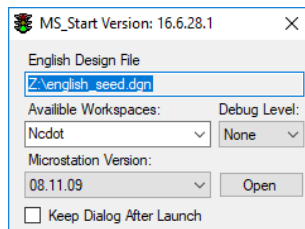


Scale = (50 x 12)  
Multiplication factor : 600x

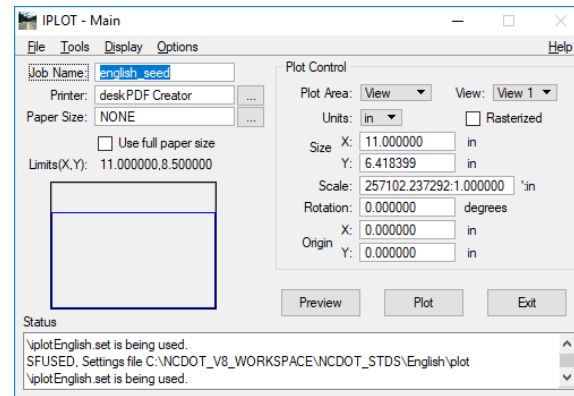
For ORD Workspace, all Cells and linestyles that are scalable must be reduced by a factor of 12

# The End of some things ...

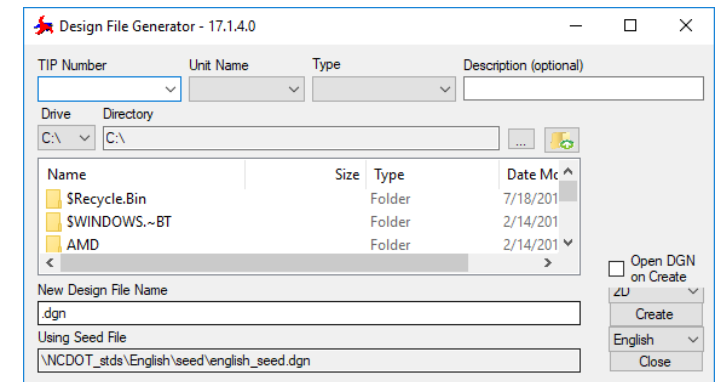
## MS\_Start



## Iplot



## Design File Generator



Replaced with Print/Plot

Replaced by ProjectWise

# OpenRoads Designer

## Performance/Speed issues

- Memory intensive
- Some SUDA processing seems very slow
- Our going forward CADD equipment:
  - I7-6700 Processor
  - 32 GB DDR4
  - Solid State Drives

## Release Schedule

- Quarterly Updates from Bentley
  - Update 3 released in April
  - Backwards compatibility of files
- 2018 Release 2 (last week !)

## Other Agency Adoption

2018 – None

2019 – 1<sup>st</sup> Quarter

PennDOT  
Georgia DOT  
Illinois DOT

**NCDOT**

Summer

Florida  
South Carolina  
Texas

# NCDOT Implementation Plan Details

- ❑ Pilot projects
- ❑ Integrated with ProjectWise
- ❑ March 2019 Implementation
  - Tentative
  - Will nearly complete projects remain in SS2/SS4?
  - Manday estimates
- ❑ Transition Period (Dual Versions)
  - How long ?
  - Windows 7 support ends January 2020
  - SS2 on Windows 10
- ❑ Training
  - Bentley LEARN