




STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

MEMO TO: Roadway Design Unit  
Location and Surveys Unit  
Right of Way Unit  
Project Management Unit  
Structures Management Unit  
Contract Standards and Development  
Utilities Unit  
Environmental Analysis Unit  
Division Project Delivery Engineers  
Rail Division  
Design-Build  
Feasibility Studies Unit  
Environmental Policy Unit  
Materials and Tests Unit  
Transportation Planning Division  
Traffic Management Unit  
Construction Unit  
Division Construction Engineers  
Division Design Construction Engineers  
Division Right of Way Agents  
Project Managers

FROM: Tatia L. White, PE, PLS, CPM  
State Roadway Design Engineer

DocuSigned by:  
  
539CECE8F5E1472...

DATE: September 13, 2021

SUBJECT: Updates to RW/CA Symbology and CA Monuments/1B Sheet

A proposal was submitted through the CLEAR program to revise the symbology denoting where right of way and control of access are concurrent to differentiate it from standalone right of way and control of access. The initial comment period yielded additional concerns about control of access monument symbology, how monuments are staked in the field, and SUE (Subsurface Utility Engineering) symbology. Coordination was completed with staff representing the Right of Way, Location and Surveys, and Project Management Units and Divisions. The results are listed below and will be reflected in a new 1B Symbology Sheet (see attached).

- Developed a new line style for concurrent right of way and control of access.

*Mailing Address:*  
NC DEPARTMENT OF TRANSPORTATION  
ROADWAY DESIGN UNIT  
1582 MAIL SERVICE CENTER  
RALEIGH, NC 27699-1582

*Telephone:* (919) 707-6200  
*Fax:* (919) 250-4036  
*Customer Service:* 1-877-368-4968

*Website:* [www.ncdot.gov](http://www.ncdot.gov)

*Location:*  
1000 BIRCH RIDGE DRIVE  
RALEIGH, NC 27610

## Updates to Right of Way/Control of Access/Existing Utility Symbology

September 13, 2021

Page 2

- Provided separate entries for the right of way and control of access line styles and monuments.
- Replaced the proposed control of access monument symbol with two new symbols.
  - Proposed C/A Monument (Concrete)
  - Proposed C/A Monument (Rebar and Cap)
- Created a symbol for existing control of access monuments.
- Changed the word “New” to “Proposed” in the Right of Way & Project Control section of the 1B Sheet.
- Provided notes of explanation for the acronyms S.U.E. and LOS, and accuracy for the existing information in the Utilities section of the 1B sheet.

To ensure consistency across the Department and long-term sustainability of the Department’s right of way and control of access limits in the field, adherence to the following is key:

- Proposed right of way monuments are to be shown in the plans and staked for both proposed right of way and concurrent proposed right of way/control of access. This includes where it begins, ends, and changes direction, as well as at control points or intermediate points on long tangents.
- In the same manner, proposed control of access monuments are to be shown in the plans and staked where the proposed control of access does not run concurrent to the proposed right of way.  
Note: Location and Surveys will initially stake right of way and control of access monuments as rebar and cap. The Division will determine if they want a contractor to reset them as concrete or granite per the standard drawings which will require a pay item.

This information will be included in the updated Roadway Design Manual when it is released and updates have been made to the NCDOT workspaces. All projects with right of way dates after December 1, 2021, should be updated accordingly. Coordination should be completed with Project Managers and Divisions to evaluate whether there is value in updating plans when the right of way milestone predates December 1, 2021.

If there are any questions or concerns, please contact Jordan A. Woodard, PE, Deputy State Roadway Design Engineer at (919) 707-6208 or me at (919) 707-6342.

TLW/jw

cc: Ronnie Keeter, PE  
Chris Peoples, PE  
Lamar Sylvester, PE  
Chris Werner, PE  
Matt Clarke, PE  
Division Engineers  
Alyson Tamer, PE  
John Sullivan, PE (FHWA)  
Brad Hibbs (FHWA)  
Joseph Geigle (FHWA)

# STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

## BOUNDARIES AND PROPERTY:

State Line	-----	
County Line	-----	
Township Line	-----	
City Line	-----	
Reservation Line	-----	
Property Line	-----	
Existing Iron Pin (EIP)	-----	⊙
Computed Property Corner	-----	X
Existing Concrete Monument (ECM)	-----	⊠
Parcel/Sequence Number	-----	123
Existing Fence Line	-----	-x-x-x-
Proposed Woven Wire Fence	-----	○
Proposed Chain Link Fence	-----	⊠
Proposed Barbed Wire Fence	-----	◇
Existing Wetland Boundary	-----	WLB
Proposed Wetland Boundary	-----	WLB
Existing Endangered Animal Boundary	-----	EAB
Existing Endangered Plant Boundary	-----	EPB
Existing Historic Property Boundary	-----	HPB
Known Contamination Area: Soil	-----	⊗-s-⊗-s-
Potential Contamination Area: Soil	-----	⊗-s-⊗-s-
Known Contamination Area: Water	-----	⊗-w-⊗-w-
Potential Contamination Area: Water	-----	⊗-w-⊗-w-
Contaminated Site: Known or Potential	-----	☠ ☠

## BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	-----	○
Sign	-----	⊙
Well	-----	⊙
Small Mine	-----	⊗
Foundation	-----	⊠
Area Outline	-----	⊠
Cemetery	-----	⊠
Building	-----	⊠
School	-----	⊠
Church	-----	⊠
Dam	-----	⊠

## HYDROLOGY:

Stream or Body of Water	-----	
Hydro, Pool or Reservoir	-----	
Jurisdictional Stream	-----	JS
Buffer Zone 1	-----	BZ 1
Buffer Zone 2	-----	BZ 2
Flow Arrow	-----	←
Disappearing Stream	-----	→
Spring	-----	⊙
Wetland	-----	⊙
Proposed Lateral, Tail, Head Ditch	-----	⊙
False Sump	-----	⊙

## RAILROADS:

Standard Gauge	-----	
RR Signal Milepost	-----	⊙
Switch	-----	⊙
RR Abandoned	-----	-----
RR Dismantled	-----	-----

## RIGHT OF WAY & PROJECT CONTROL:

Primary Horiz Control Point	-----	⊙
Primary Horiz and Vert Control Point	-----	⊙
Secondary Horiz and Vert Control Point	-----	⊙
Vertical Benchmark	-----	⊙
Existing Right of Way Monument	-----	⊙
Proposed Right of Way Monument (Rebar and Cap)	-----	⊙
Proposed Right of Way Monument (Concrete)	-----	⊙
Existing Permanent Easement Monument	-----	⊙
Proposed Permanent Easement Monument (Rebar and Cap)	-----	⊙
Existing C/A Monument	-----	⊙
Proposed C/A Monument (Rebar and Cap)	-----	⊙
Proposed C/A Monument (Concrete)	-----	⊙
Existing Right of Way Line	-----	-----
Proposed Right of Way Line	-----	-----
Existing Control of Access Line	-----	-----
Proposed Control of Access Line	-----	-----
Proposed ROW and CA Line	-----	-----
Existing Easement Line	-----	-----
Proposed Temporary Construction Easement	-----	-----
Proposed Temporary Drainage Easement	-----	-----
Proposed Permanent Drainage Easement	-----	-----
Proposed Permanent Drainage/Utility Easement	-----	-----
Proposed Permanent Utility Easement	-----	-----
Proposed Temporary Utility Easement	-----	-----
Proposed Aerial Utility Easement	-----	-----

## ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----	-----
Existing Curb	-----	-----
Proposed Slope Stakes Cut	-----	-----
Proposed Slope Stakes Fill	-----	-----
Proposed Curb Ramp	-----	-----
Existing Metal Guardrail	-----	-----
Proposed Guardrail	-----	-----
Existing Cable Guiderail	-----	-----
Proposed Cable Guiderail	-----	-----
Equality Symbol	-----	-----
Pavement Removal	-----	-----
VEGETATION:		
Single Tree	-----	⊙
Single Shrub	-----	⊙
Hedge	-----	-----

Woods Line	-----	-----
Orchard	-----	-----
Vineyard	-----	-----

## EXISTING STRUCTURES:

MAJOR:		
Bridge, Tunnel or Box Culvert	-----	-----
Bridge Wing Wall, Head Wall and End Wall	-----	-----
MINOR:		
Head and End Wall	-----	-----
Pipe Culvert	-----	-----
Footbridge	-----	-----
Drainage Box: Catch Basin, DI or JB	-----	-----
Paved Ditch Gutter	-----	-----
Storm Sewer Manhole	-----	-----
Storm Sewer	-----	-----

## UTILITIES:

\* SUE - Subsurface Utility Engineering  
LOS - Level of Service - A,B,C or D (Accuracy)

POWER:		
Existing Power Pole	-----	-----
Proposed Power Pole	-----	-----
Existing Joint Use Pole	-----	-----
Proposed Joint Use Pole	-----	-----
Power Manhole	-----	-----
Power Line Tower	-----	-----
Power Transformer	-----	-----
U/G Power Cable Hand Hole	-----	-----
H-Frame Pole	-----	-----
U/G Power Line Test Hole (SUE - LOS A)*	-----	-----
U/G Power Line (SUE - LOS B)*	-----	-----
U/G Power Line (SUE - LOS C)*	-----	-----
U/G Power Line (SUE - LOS D)*	-----	-----

## TELEPHONE:

Existing Telephone Pole	-----	-----
Proposed Telephone Pole	-----	-----
Telephone Manhole	-----	-----
Telephone Pedestal	-----	-----
Telephone Cell Tower	-----	-----
U/G Telephone Cable Hand Hole	-----	-----
U/G Telephone Test Hole (SUE - LOS A)*	-----	-----
U/G Telephone Cable (SUE - LOS B)*	-----	-----
U/G Telephone Cable (SUE - LOS C)*	-----	-----
U/G Telephone Cable (SUE - LOS D)*	-----	-----
U/G Telephone Conduit (SUE - LOS B)*	-----	-----
U/G Telephone Conduit (SUE - LOS C)*	-----	-----
U/G Telephone Conduit (SUE - LOS D)*	-----	-----
U/G Fiber Optics Cable (SUE - LOS B)*	-----	-----
U/G Fiber Optics Cable (SUE - LOS C)*	-----	-----
U/G Fiber Optics Cable (SUE - LOS D)*	-----	-----

## WATER:

Water Manhole	-----	-----
Water Meter	-----	-----
Water Valve	-----	-----
Water Hydrant	-----	-----
U/G Water Line Test Hole (SUE - LOS A)*	-----	-----
U/G Water Line (SUE - LOS B)*	-----	-----
U/G Water Line (SUE - LOS C)*	-----	-----
U/G Water Line (SUE - LOS D)*	-----	-----
Above Ground Water Line	-----	-----

## TV:

TV Pedestal	-----	-----
TV Tower	-----	-----
U/G TV Cable Hand Hole	-----	-----
U/G TV Test Hole (SUE - LOS A)*	-----	-----
U/G TV Cable (SUE - LOS B)*	-----	-----
U/G TV Cable (SUE - LOS C)*	-----	-----
U/G TV Cable (SUE - LOS D)*	-----	-----
U/G Fiber Optic Cable (SUE - LOS B)*	-----	-----
U/G Fiber Optic Cable (SUE - LOS C)*	-----	-----
U/G Fiber Optic Cable (SUE - LOS D)*	-----	-----

## GAS:

Gas Valve	-----	-----
Gas Meter	-----	-----
U/G Gas Line Test Hole (SUE - LOS A)*	-----	-----
U/G Gas Line (SUE - LOS B)*	-----	-----
U/G Gas Line (SUE - LOS C)*	-----	-----
U/G Gas Line (SUE - LOS D)*	-----	-----
Above Ground Gas Line	-----	-----

## SANITARY SEWER:

Sanitary Sewer Manhole	-----	-----
Sanitary Sewer Cleanout	-----	-----
U/G Sanitary Sewer Line	-----	-----
Above Ground Sanitary Sewer	-----	-----
SS Force Main Line Test Hole (SUE - LOS A)*	-----	-----
SS Force Main Line (SUE - LOS B)*	-----	-----
SS Force Main Line (SUE - LOS C)*	-----	-----
SS Force Main Line (SUE - LOS D)*	-----	-----

## MISCELLANEOUS:

Utility Pole	-----	-----
Utility Pole with Base	-----	-----
Utility Located Object	-----	-----
Utility Traffic Signal Box	-----	-----
Utility Unknown U/G Line (SUE - LOS B)*	-----	-----
U/G Tank; Water, Gas, Oil	-----	-----
Underground Storage Tank, Approx. Loc.	-----	-----
A/G Tank; Water, Gas, Oil	-----	-----
Geoenvironmental Boring	-----	-----
Abandoned According to Utility Records	-----	-----
End of Information	-----	-----