NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
CONCORD
DYNAMIC MESSAGE SIGN INSTALLATION

FINAL DYNAMIC MESSAGE SIGN PLANS

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" ROADWAY DESIGN UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C. - DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS

STG. NO.  TITLE
1700.01 ELECTRICAL, SERVICE OPTIONS
1700.02 ELECTRICAL, SERVICE BUDGING
1715.01 UNDERGROUND CONDUIT TRENCHING
1715.02 UNDERGROUND ELEVATED TRENCHING
1750.01 FIBER OPTIC CABLE
1751.01 CONTROLLER AND CABINETS
1751.02 CONTROLLER AND CABINETS

PLANS PREPARED BY:
Kimley-Horn

CITY OF CONCORD CONTACTS:

Kimley-Horn CONTACTS: DANIEL A. JOHNSON, P.E. - PROJECT MANAGER
PVC POST-MOUNTED DELINEATOR MARKER

NOTE:
STUMP WITH EXCAVATED MATERIAL AND COMPACT
THE SOIL TO 95% OF ITS ORIGINAL DENSITY, REMOVE
ROCK AND DEBRIS FROM BACKFILL MATERIAL.
NOTES

1. INSTALL A MINIMUM OF THREE (3) GROUNDING ELECTRODES SPACED A MINIMUM OF 10 FEET APART. ENSURE THAT EXISTING UNDERGROUND FACILITIES ARE NOT DAMAGED DURING INSTALLATION.

2. TEST GROUNDING SYSTEM USING AN APPROVED METHOD. SYSTEM SHOULD MEASURE TWENTY (20) OHMS OR LESS. ADDITIONAL GROUNDING ELECTRODES SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER TO MEET THIS REQUIREMENT.

3. EXOTHERMICALLY WELD ALL CONNECTIONS TO GROUND RODS.

4. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.

5. REMOVE BONDING JUMPER IN EQUIPMENT CABINET IF INSTALLED BETWEEN AC NEUTRAL AND EQUIPMENT GROUND.

6. BOND ALL REINFORCED STEEL CONDUCTS ENTERING THE CABINET TO "EQUIPMENT GROUND".

7. INSTALL CONDUIT BETWEEN DISCONNECT, TRANSFORMER, AND CABINET.

8. ENSURE EQUIPMENT GROUND IS ELECTRICALLY BONDED TO CABINET.
SPECIAL NOTE

The contractor is responsible for selecting the proper structural dimensions and attachment heights to provide the design height clearance from the roadway before submitting final shop drawings for approval. Verify elevation data below which was obtained by field measurement or from available project survey data.

Elevation Data for DMS Attachment

<table>
<thead>
<tr>
<th>Elevation Difference for</th>
<th>Left Side</th>
<th>Right Side</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pole Reference point</td>
<td>50.0 ft</td>
<td>50.0 ft</td>
</tr>
<tr>
<td>Elevation @ ground level</td>
<td>12.0 ft</td>
<td>12.0 ft</td>
</tr>
<tr>
<td>High point of roadway surface</td>
<td>10.8 ft</td>
<td>10.8 ft</td>
</tr>
<tr>
<td>Top of structure or pole</td>
<td>13.0 ft</td>
<td>13.0 ft</td>
</tr>
</tbody>
</table>

NOTES

1. USE ACTUAL DIMENSIONS AND WEIGHT OF THE DMS TO COMPLETE THE DESIGN OF THE DMS STRUCTURE.
2. FIELD VERIFY ALL FOOTING ELEVATIONS AND GROUND SLOPES AT THE FOOTING USING THE LATEST MICHIGAN STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
3. ENSURE THAT THE TOP OF THE FOOTING EXTENDS AT LEAST 6 INCHES AND NOT MORE THAN 12 INCHES ABOVE THE HIGHEST POINT OF THE GROUND SURFACE AT THE FOOTING.
4. DESIGN AND CONSTRUCT THE DMS STRUCTURES AND DMS ENCLOSURE TO WITHSTAND WIND VELOCITIES OF 50 MPH.
5. VERIFY ALL UNDERGROUND UTILITY LOCATIONS BEFORE BEGINNING ANY UNDERGROUND WORK. DO NOT DAMAGE ANY EXISTING UTILITIES OR NEW CABLES DURING CONSTRUCTION.
NOTES
1. MAINTAIN A MINIMUM OF 30 FEET FROM THE EDGE OF PAVEMENT WHEN TRENCHING PARALLELS TO THE ROADWAY.
2. CONTACT THE CITY ENGINEER TO CONFIRM THE LOCATION OF THE DMS.
3. CONDUITS SHOWN IN PARALLELS TO BE INSTALLED IN THE SAME TRENCH.
4. INCIDENTAL TO THE DMS ASSEMBLY, AS PER THE PROJECT SPECIAL PROVISIONS.
5. COORDINATE WITH LOCAL UTILITY PROVIDER, CITY OF CONCORD, POWER, TELEPHONE, AND INFORMATION SERVICES, CONDUITS TO BE INSTALLED WITHIN THE SAME TRENCH AS THE PROPOSED COMMUNICATIONS CABLE CONDUIT BETWEEN THE EXISTING COMMUNICATION JUNCTION BOX AND THE PROPOSED DMS CABLE.

NOTE:
ELECTRICAL SERVICE DETAILS AND CONSTRUCTION METHODS DEPICT FIELD CONDITIONS AT THE TIME OF DESIGN. CONTRACTOR TO VERIFY ACTUAL CONDITIONS AT THE TIME OF CONSTRUCTION AND OBTAIN APPROVAL FROM ENGINEER PRIOR TO MAKING ANY CHANGES.
PROPOSED CABINET SPLICES
INTERSECTION 10-1523 (BRUTON SMITH BLVD AT I-85 NORTHBOUND RAMP) AND
DMS LOCATION 4 CABINET (I-85 NORTHBOUND RAMP)

LEGEND

- FUSION SPLICE INDIVIDUAL FIBER
- SPLITTING SPICE
- CLEANING CLEANING BLADE TRIM TO MAINTAIN
- SPLICE INSERT INSERTION TUBE OR MAINTAIN
- FUSION FUSION if desired by project
- SNAP SNAP ROLL ONLY IF REQUIRED AND
- WAX WAX TO ADHESIVE

NOTES:
1. INTERCONNECT CENTER Backs ARE SCHMATIC.
2. ONLY ONE EQUIPMENT FACE MAY BE PICTURED.
3. FUSION SPICE TERMINATION CONSIDERATION.
4. AVOID TISSUES OR OTHER MATERIALS FOR DETERMINING COMPATIBLE FIBER TERMINATION.
5. CONTRACTOR is RESPONSIBLE FOR FIELD ENSURING CENTER SPLICING THE CONTRACTOR SHALL
   COORDINATE WITH THE ENGINEER WHERE CENTER SPLICING IS NOT AS EXPECTED.

CABINET AT DMS LOCATION 4

PROPOSED SPLICE TRUNK

EXISTING CABLE TO INTERSECTION 10-1523
(BRUTON SMITH BLVD AT WEDDINGTON ROAD)

EXISTING CABLE TO INTERSECTION 10-1523
(CONCORD MILL BLVD AT I-85 SB RAMP)

LEAVES IN 2 BUFFER TUBES

STATION (4)
STATION (5)
STATION (6)
STATION (7)