



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY  
GOVERNOR

ANTHONY J. TATA  
SECRETARY

November 5, 2013

**To: Prospective Bidders**

**From: Lloyd G. Royall, Jr.**  
**Division Proposals Engineer**

A handwritten signature in blue ink, appearing to read "LGR", enclosed within a blue oval scribble.

**WBS Element: 20001.11**

**Subject: Addendum #3** Automated License Plate Recognition System

The Subject contract proposal contains the following addendum:

1. Revisions to page 20 of 38 in the Project Special Provisions.
2. Revisions to Plan Sheet ITS-5

**This should address and clarify the intentions of the Plans and Specifications.**

Attach this sheet to the back of the existing contract. Addendum must be signed and dated.

**You MUST sign as your acknowledgement that you did in fact receive this addendum. Failure to do so shall cause the bid to be considered irregular and shall be grounds for rejection of the bid.**

**Signature** \_\_\_\_\_ **Date** \_\_\_\_\_

LGR/lgr

For holes in the poles used to accommodate cables, install grommets before wiring pole or arm. Do not cut or split grommets.

Attach the terminal compartment cover to the pole by a sturdy chain or cable. Ensure the chain or cable is long enough to permit the cover to hang clear of the compartment opening when the cover is removed, and is strong enough to prevent vandalism. Ensure the chain or cable will not interfere with service to the cables in the pole base.

Attach cap to pole with a sturdy chain or cable. Ensure the chain or cable is long enough to permit the cap to hang clear of the opening when the cap is removed.

Perform repair of damaged galvanizing that complies with the *Standard Specifications*, Article 1076-6 "Repair of Galvanizing."

Install galvanized wire mesh around the perimeter of the base plate to cover the gap between the base plate and top of foundation for debris and pest control.

Install a ¼" thick plate for concrete foundation tag to include: concrete grade, depth, diameter, and reinforcement sizes of the installed foundation.

## 5.2 METAL POLE UPRIGHT

### A. Materials

Provide steel poles with hinged pole/arm flange plates as indicated on the plans.

**Comply with the following for Steel Poles:**

- Have shafts of the tapered tubular type and fabricated of steel conforming to ASTM A-595 Grade A or an approved equivalent.
- Have galvanization in accordance with AASHTO M 111 (ASTM A 123).
- Have shafts that are continuously welded for the entire length by the submerged arc process, and with exposed welds ground or rolled smooth and flush with the base metal. Provide welding that conforms to Article 1072-20 per *Standard Specification* except that no field welding on any part of the pole will be permitted.
- Have anchor bases for steel poles fabricated from plate steel meeting as a minimum the requirements of ASTM A 36M or cast steel meeting the requirements of ASTM A 27M Grade 485-250 or an approved equivalent.

Refer to Metal Pole Standard Drawing Sheet M2, M4, and M5 for mast arm pole fabrication details.

Have poles permanently stamped above the hand holes with the identification tag details as shown on Metal Pole Standard Drawing Sheet M2.

Fabricate poles from a single piece of steel or aluminum with single line seam weld with no transverse butt welds. Fabrication of two ply pole shafts is unacceptable with the exception of fluted shafts. Provide tapers for all shafts that begin at base and that have diameters which decrease uniformly at the rate of not more than 0.14 inch per foot (11.7 millimeters per meter) of length.

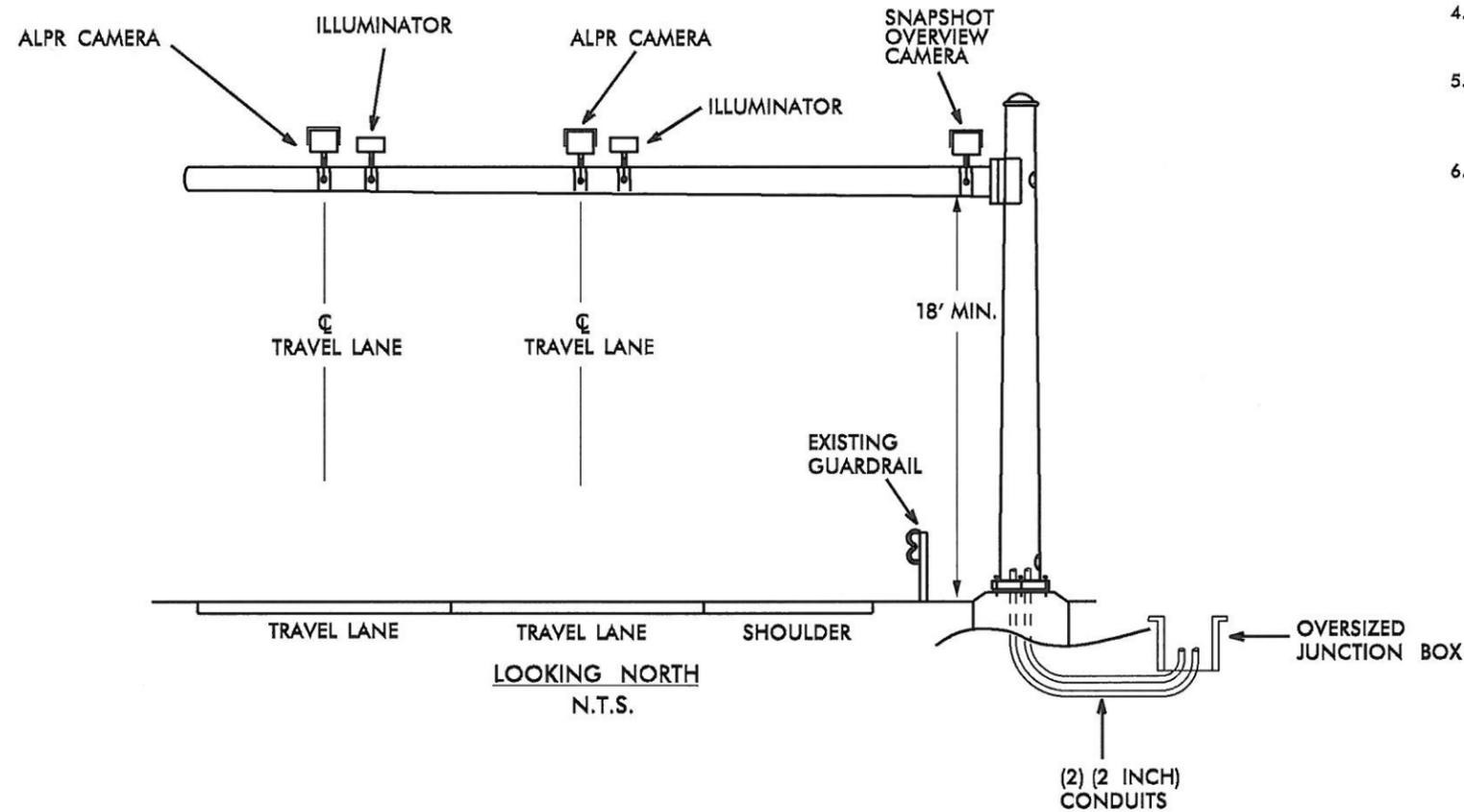
~~Ensure that allowable pole deflection does not exceed that allowed per 4<sup>th</sup> Edition AASHTO. For mast arm poles (with primarily moment loads), ensure that maximum angular rotation of the top of the pole does not exceed 1° 40'.~~

**Ensure that allowable pole deflection does not exceed that allowed per 4<sup>th</sup> Edition ASHTO. For vertical supports (dead load only with primary moment loads), ensure that maximum angular rotation of the top of the pole does not exceed 1° 40'.**

Revised Last Paragraph: Marya J. Falls Date: 11-4-13

NOTES:

1. THE CONTRACTOR SHALL GATHER ALL "S" DIMENSION DATA NEEDED TO DESIGN THE METAL POLE WITH FOLDING MAST ARM AND FOUNDATION.
2. CONTRACTOR SHALL DESIGN THE FOUNDATION EMBEDMENT DEPTH, REINFORCEMENT, ANCHOR BOLT SIZE, AND LENGTH. FURNISH DESIGN CALCULATIONS, SIGNED AND SEALED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER AND SUBMIT TO THE ENGINEER FOR APPROVAL. SUBMIT ALL SOIL BORING INFORMATION USED IN THE FOUNDATION DESIGN. INCLUDE CONDUIT AND GROUNDING DESIGN IN ACCORDANCE WITH NCDOT STANDARDS AND THE PROJECT SPECIAL PROVISIONS.
3. DESIGN THE POLE, MAST ARM AND THE HINGE ASSEMBLY USING SIZE AND WEIGHT OF THE ACTUAL EQUIPMENT BEING INSTALLED AND IN ACCORDANCE WITH THE 2001 AASHTO "STANDARD SPECIFICATIONS FOR THE STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS 4TH EDITION" USING A 130 MPH WIND ZONE VELOCITY. SUBMIT POLE, MAST ARM AND HINGE ASSEMBLY DESIGN CALCULATIONS, SIGNED AND SEALED BY A NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER TO THE ENGINEER FOR APPROVAL.
4. ~~DESIGN THE METAL POLES AND MAST ARMS SO THAT THE MAXIMUM TOTAL DEFLECTION OF THE POLE AND THE ARM WILL NOT EXCEED 1.0% OF THE TOTAL MAST ARM LENGTH UNDER MAXIMUM LOADING CONDITIONS.~~
4. DESIGN THE METAL POLES AND MAST ARMS SO THAT THE MAXIMUM TOTAL DEFLECTION OF THE POLE AND THE ARM WILL NOT EXCEED 3.0% OF THE TOTAL MAST ARM LENGTH UNDER MAXIMUM LOADING CONDITIONS.
5. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT THE MAST ARM ATTACHMENT HEIGHT VALUE SHOWN WILL PROVIDE THE REQUIRED VERTICAL CLEARANCES FROM THE ROADWAY SHOWN ON THIS SHEET PRIOR TO SUBMITTING FINAL SHOP DRAWINGS FOR THESE POLES.
6. MOUNT THE ALPR CAMERAS, ILLUMINATORS, AND SNAPSHOT CAMERA WITH STAINLESS STEEL HARDWARE AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS.



 Prepared in the Office of: Transportation 1700 N. Greenfield Place, Cary, NC 27513	<b>MAST ARM POLE DETAIL</b>		THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY <b>GREGORY A. FULLER</b> 028919 ON 4/5/12
	DIVISION 03 NEW HANOVER CO. WILMINGTON		
	PLAN DATE: APRIL 2012	REVIEWED BY: S. C. YOW	
PREPARED BY: G. A. GREEN	REVIEWED BY: T. G. PARKER	DATE: 11/13	SIGNATURE: _____ DATE: _____
SCALE: 0 N/A	REVISIONS: V MODIFIED MAXIMUM POLE DEFLECTION	DATE: 11/13	CADD Filenome: _____