

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

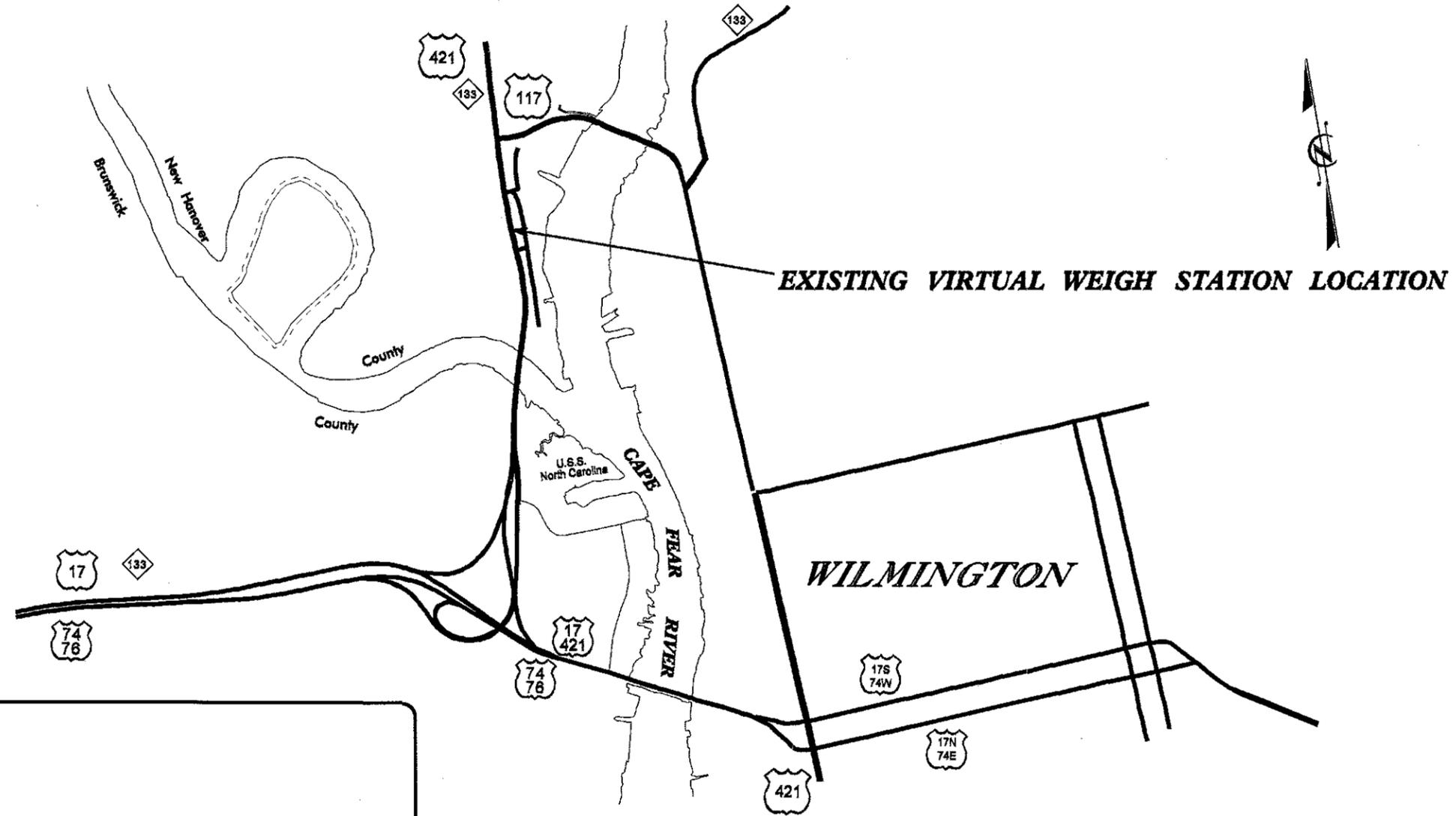
NEW HANOVER COUNTY

PLANS FOR PROPOSED

US 421/NC 133 AUTOMATED LICENSE PLATE RECOGNITION (ALPR) SYSTEM

THIS PROJECT CONSISTS OF FURNISHING, INSTALLING EQUIPMENT, AND INTEGRATION OF A NEW AUTOMATED LICENSE PLATE RECOGNITION (ALPR) SYSTEM AT THE EXISTING VIRTUAL WEIGH STATION NEAR WILMINGTON, NORTH CAROLINA. RELATED ITEMS CONSIST OF ALPR CAMERAS, SOFTWARE, INFRARED ILLUMINATORS, DATABASE INTERFACE, METAL POLE WITH FOLDING MAST ARM, METAL POLE FOUNDATION, AND FREEZE-FRAME CAMERA ASSEMBLY.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.
N.C.		ITS-1
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION



INDEX OF PLANS

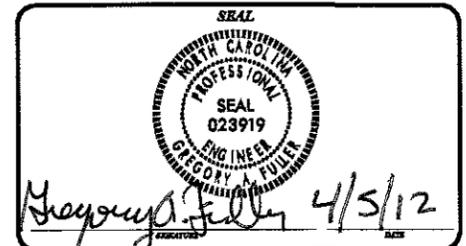
SHEET NUMBER	LOCATION / DESCRIPTION
ITS-1	TITLE SHEET
ITS-2	LEGEND AND GENERAL NOTES
ITS-3	PROJECT AREA OVERVIEW
ITS-4	AUTOMATED LICENSE PLATE RECOGNITION (ALPR) SYSTEM DETAIL
ITS-5	MAST ARM DETAIL

**NCDOT CONTACTS:
TRANSPORTATION MOBILITY AND SAFETY**

G.A. FULLER, P.E.
STATE ITS & SIGNALS ENGINEER



ENGLISH
ALL DIMENSIONS IN THESE PLANS ARE IN FEET UNLESS OTHERWISE NOTED

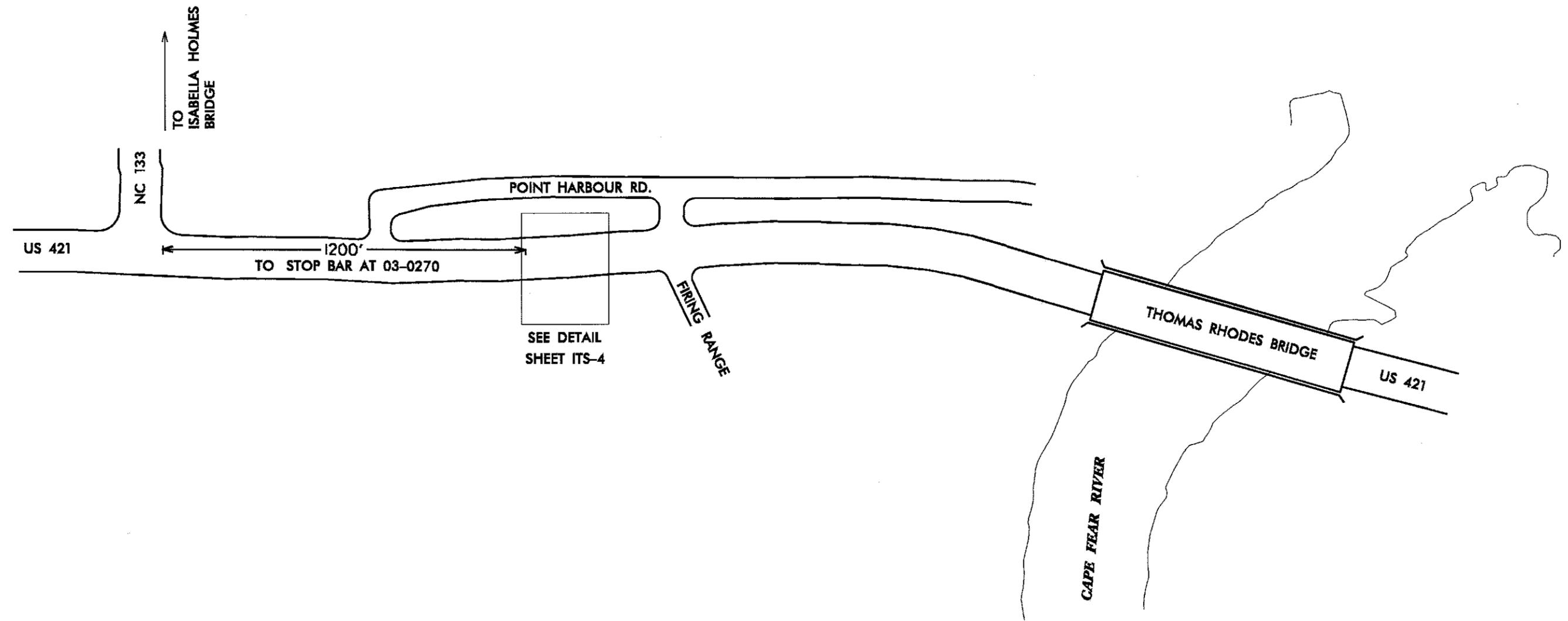


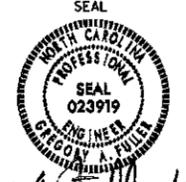
LEGEND		
PROPOSED		EXISTING
-----	TRENCHED CONDUIT	-----
○	CAMERA POLE	○
□	OVERSIZED JUNCTION BOX	■
NA	6' x 6' INDUCTIVE LOOP DETECTOR	○
⊠	CAMERA ASSEMBLY	▶
NA	EQUIPMENT CABINET	□
NA	PIEZOELECTRIC QUARTZ SENSOR	▬

GENERAL NOTES

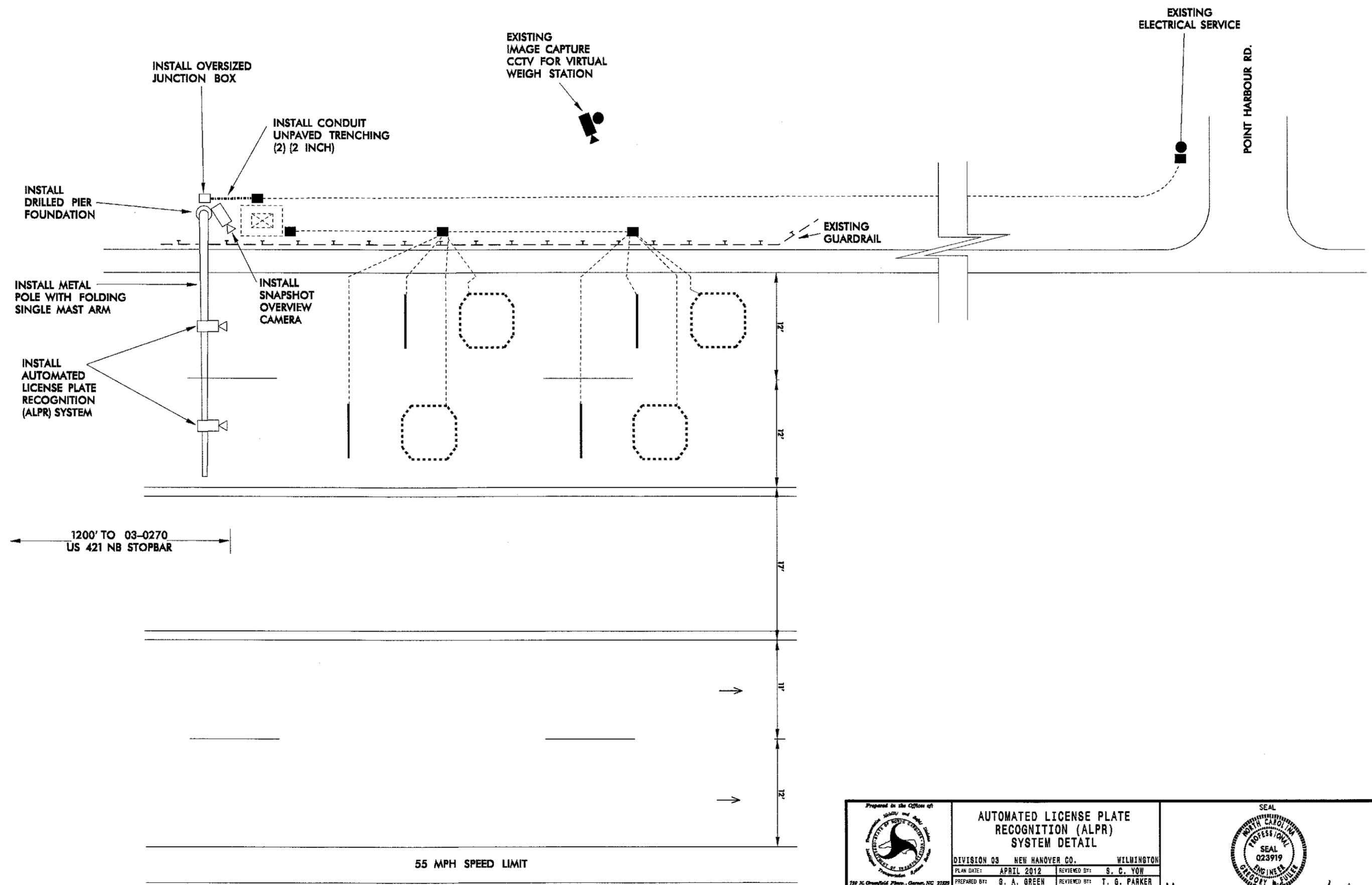
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CALL THE NC ONE CALL CENTER OR 811 BEFORE PERFORMING ANY UNDERGROUND WORK ON THIS PROJECT.
2. OBTAIN APPROVAL FROM THE ENGINEER PRIOR TO INSTALLATION FOR ITEMS TO BE INSTALLED AS PART OF THIS PROJECT.
3. BURIED UTILITIES AND STRUCTURES: PIPELINES, STORM SEWERS, POWER CABLES, UTILITY CABLES, AND OTHER PUBLICLY AND PRIVATELY OWNED UNDERGROUND OBSTRUCTIONS MAY EXIST ADJACENT TO AND WITHIN THE ROADWAY RIGHT-OF-WAY WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT. INVESTIGATE THE LOCATION OF SUCH BURIED UTILITIES AND STRUCTURES WITH PUBLIC AND PRIVATE UTILITIES.
4. IT IS THE CONTACTOR'S RESPONSIBILITY TO COORDINATE WITH THE OWNER OF ALL AFFECTED UTILITIES FOR WORK THAT MAY IMPACT ANY UTILITY FACILITY.
5. NOTIFY THE DEPARTMENT (SAMUEL F. BOGAN AT (919) 835-8079) SEVEN (7) CALENDAR DAYS PRIOR TO PERFORMING ANY UNDERGROUND WORK. THE DEPARTMENT WILL LOCATE THE EXISTING CONDUITS USED FOR POWER, COMMUNICATIONS, AND DETECTOR LEAD-IN CABLES FOR THE EXISTING VIRTUAL WEIGH STATION EQUIPMENT.

	LEGEND AND GENERAL NOTES		
	DIVISION 03 NEW HANOVER CO. WILMINGTON		
PLAN DATE: APRIL 2012	REVIEWED BY: S. G. YON		SIGNATURE: <i>Gregory A. Green</i> DATE: 4/5/12
PREPARED BY: G. A. GREEN	REVIEWED BY: T. G. PARKER		
SCALE: 0 N/A	REVISIONS:	INIT. DATE	DATE



 Prepared in the Office of Planning and Design DIVISION 03 250 N. Greenfield Place, Cary, NC 27513	PROJECT AREA OVERVIEW		SEAL  GREGORY A. FULLER PROFESSIONAL ENGINEER SEAL 023919 NORTH CAROLINA
	DIVISION 03 NEW HANOVER CO. WILMINGTON		
PLAN DATE: APRIL 2012	REVIEWED BY: S. G. YOW	SIGNATURE: <i>Gregory A. Fuller</i> DATE: 4/5/12	
PREPARED BY: G. A. GREEN	REVIEWED BY: T. G. PARKER	REVISIONS:	SHEET: DATE:
SCALE: 0 N/A	CAD FILE:		

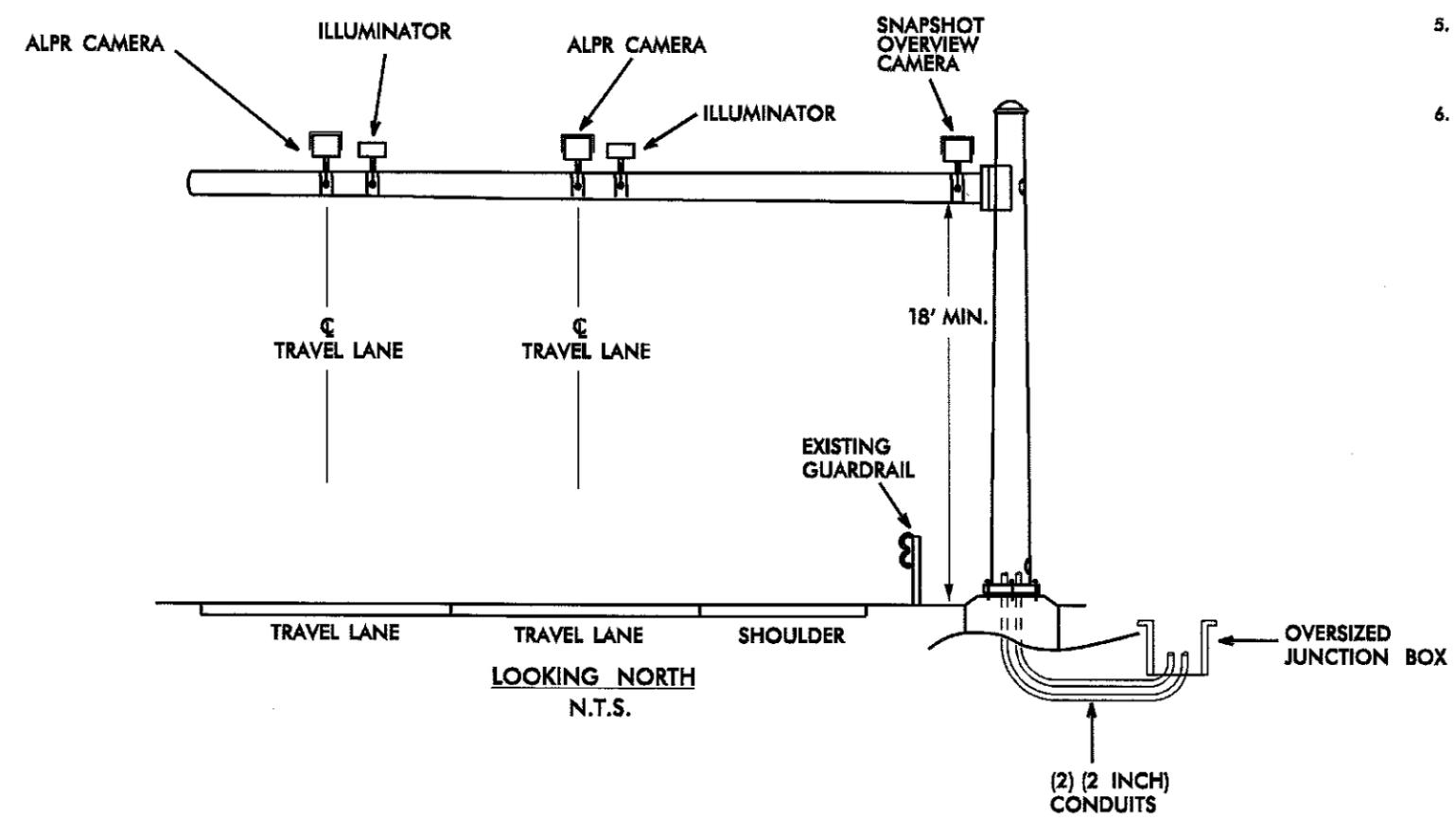
NOTE: CALL NC ONE CALL CENTER OR 811 BEFORE YOU DIG.



	AUTOMATED LICENSE PLATE RECOGNITION (ALPR) SYSTEM DETAIL		
	DIVISION 03 NEW HANOVER CO. WILMINGTON		
PLAN DATE: APRIL 2012	REVIEWED BY: S. C. YOW		SIGNATURE: <i>Gregory A. Fuller</i> DATE: 4/5/12
PREPARED BY: G. A. GREEN	REVIEWED BY: T. G. PARKER		
SCALE: N/A	REVISIONS	INIT. DATE	CAD: F11

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.
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.



	MAST ARM POLE DETAIL		
	DIVISION 09 NEW HANOVER CO. WILMINGTON		
PLAN DATE: APRIL 2012	REVIEWED BY: S. C. YONKER	PREPARED BY: G. A. GREEN	
SCALE: N/A	REVISIONS:	INIT.: T. G. PARKER	DATE: 4/5/12
SIGNATURE: <i>Gregory A. Yonker</i>			DATE: 4/5/12