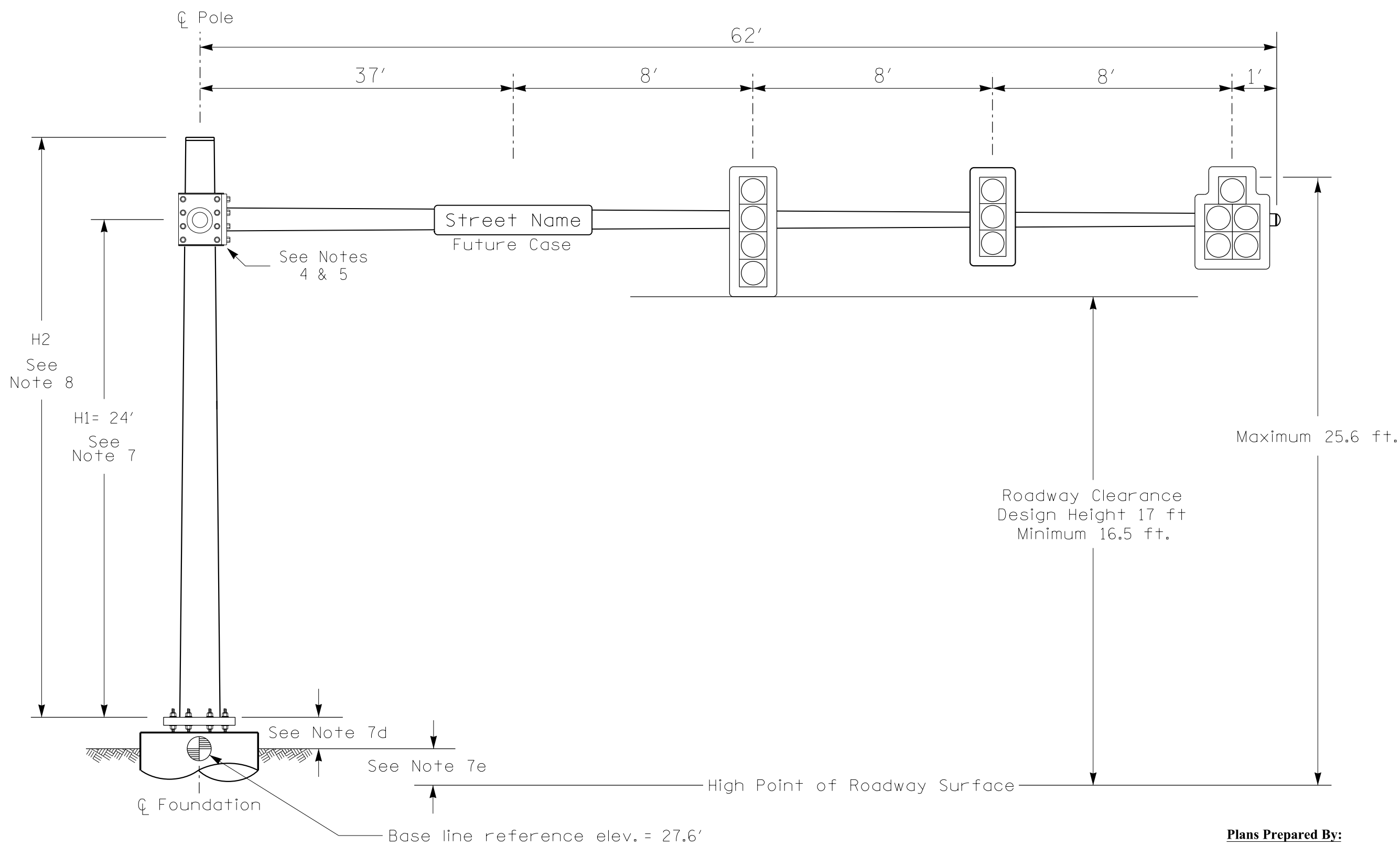


Technical drawing of a street lighting layout. The drawing shows a side view of a lighting fixture assembly mounted on a pole. The total length of the fixture assembly is 75'. The dimensions are as follows:

- 1' from the left end to the first luminaire.
- 22' between the first and second luminaires.
- 12' between the second and third luminaires.
- 6' between the third luminaire and the 'Street Name Future Case'.
- 6' between the 'Street Name Future Case' and the fourth luminaire.
- 28' from the fourth luminaire to the pole.

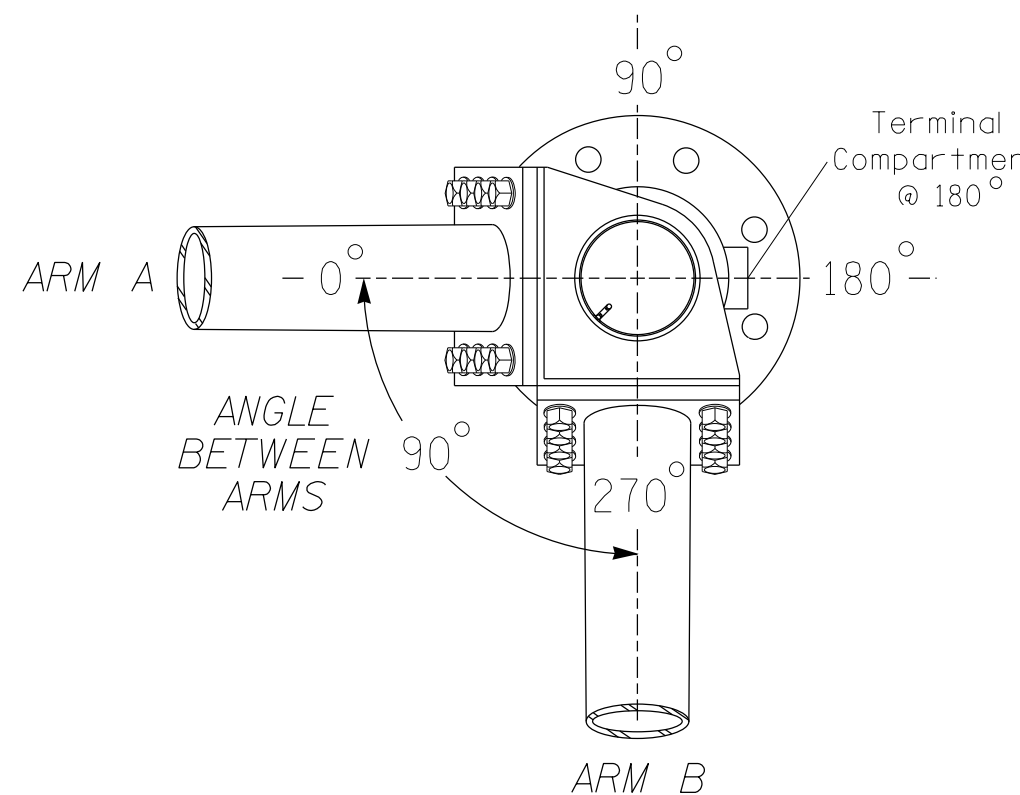
The pole is labeled 'Pole' at the top. The 'Street Name Future Case' is labeled 'Street Name Future Case'. The pole height is indicated as 'H2 See Note 8' and 'H1 = 24' See Note 7'. The base of the pole is labeled 'Foundation' and 'See Note 7e'. The base line reference elevation is 27.6'. The roadway clearance design height is 17 ft, with a minimum of 16.5 ft. The maximum height of the fixture assembly is 25.6 ft. The high point of the roadway surface is indicated. Other notes include 'See Notes 4 & 5' and 'See Note 7d'.

Design Loading for METAL POLE NO. 3, MAST ARM B

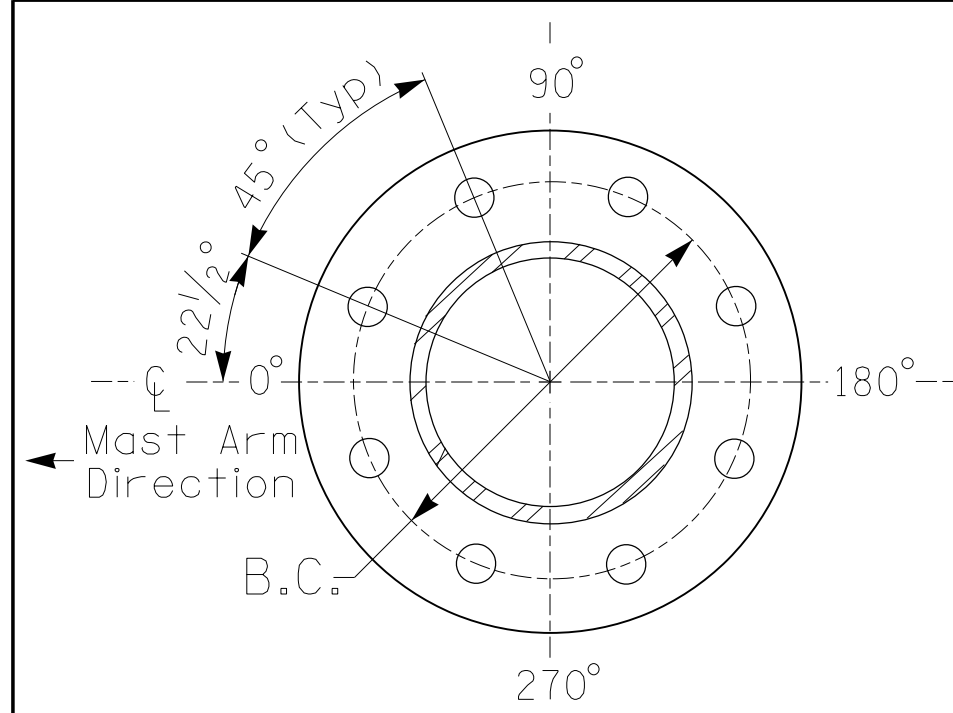
**Plans Prepared By:**

The contractor is responsible for verifying that the mast arm attachment height (H1) will 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 Differences for:	Arm A	Arm B
Baseline reference point at ① Foundation ② ground level 	27.6 ft.	27.6 ft.
Elevation difference at High point of roadway surface	+5.1 ft.	+0.3 ft.
Elevation difference at Edge of travelway or face of curb	+2.7 ft.	-0.4 ft.

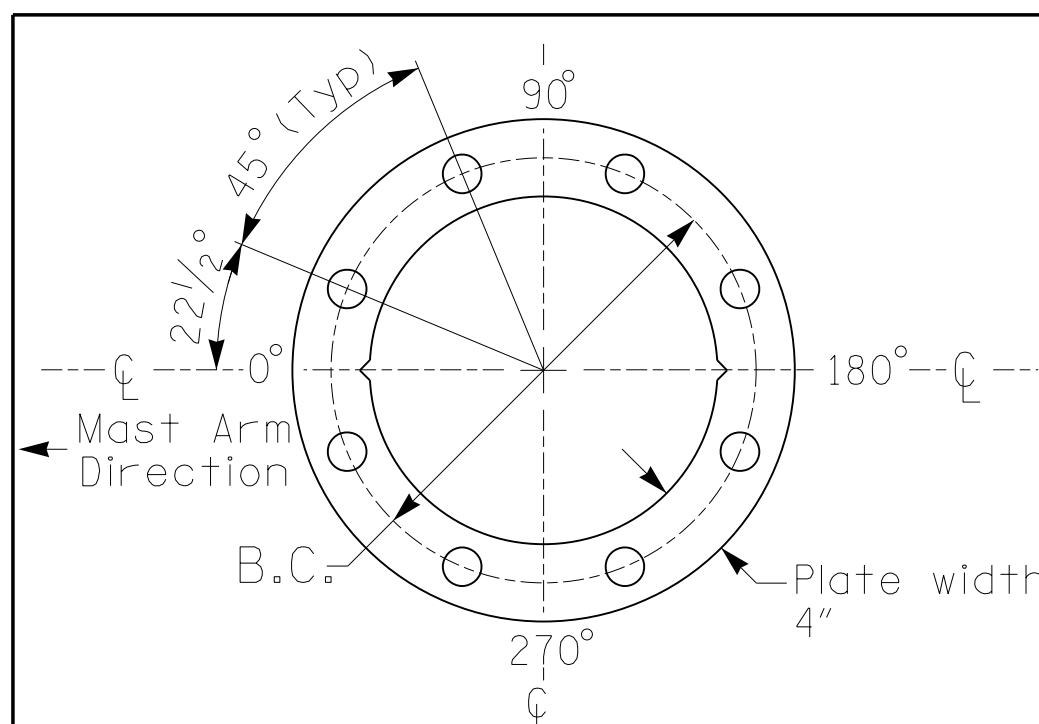


POLE RADIAL ORIENTATION



8 BOLT BASE PLATE DETAIL

See Note 6



BASE PLATE TEMPLATE & ANCHOR BOLT
LOCK PLATE DETAIL
For 8 Bolt Base Plate

PROJECT REFERENCE NO.	SHEET NO.
R-4463A	Sig-7.4

LOADING SYMBOL	DESCRIPTION	AREA	SIZE	WEIGHT
	RIGID MOUNTED SIGNAL HEAD 12"x5 SECTION-WITH BACKPLATE	16.3 S.F.	42.0" W X 56.0" L	103 LBS
	RIGID MOUNTED SIGNAL HEAD 12"x4 SECTION-WITH BACKPLATE	11.5 S.F.	25.5" W X 66.0" L	74 LBS
	RIGID MOUNTED SIGNAL HEAD 12"x3 SECTION-WITH BACKPLATE	9.3 S.F.	25.5" W X 52.5" L	60 LBS
	STREET NAME SIGN RIGID MOUNTED	16.0 S.F.	24.0" W X 96.0" L	36 LBS

NOTES

DESIGN REFERENCE MATERIAL

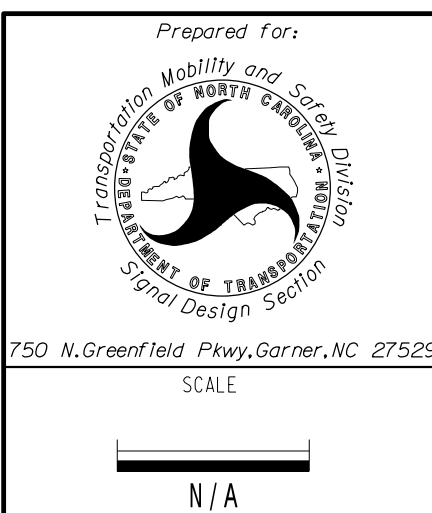
1. Design the traffic signal structure and foundation in accordance with:
 - The 1st Edition 2015 AASHTO LRFD "Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, including all of the latest interim revisions.
 - The 2024 NCDOT "Standard Specifications for Roads and Structures." The latest addenda to the specifications can be found in the traffic signal project special provisions.
 - The 2024 NCDOT Roadway Standard Drawings.
 - The traffic signal project plans and special provisions.
 - The NCDOT "Metal Pole Standards" located at the following NCDOT website:
<https://connect.ncdot.gov/resources/safety/Pages/ITS-Design-Resources.aspx>

DESIGN REQUIREMENTS

3. Design the traffic signal structure using the loading conditions shown in the elevation views. These are anticipated worst case "design loads" and may not represent the actual loads that will be applied at the time of the installation. The contractor should refer to the traffic signal plans for the actual loads that will be applied at the time of the installation.
3. Design all signal supports using force ratios that do not exceed 0.9.
4. The camber design for the mast arm deflection should provide an appearance of a low pitched arch where the tip or the free end of the mast arm does not deflect below horizontal when fully loaded.
5. A clamp-type bolted mast arm-to-pole connection may be used instead of the welded ring stiffened box connection shown as long as the connection meets all of the design requirements.
6. Design base plate with 8 anchor bolt holes. Provide 2 inch x 60 inch anchor bolts.
7. The mast arm attachment height (H1) shown is based on the following design assumptions:
 - a. Mast arm slope and deflection are not considered in determining the arm attachment height as they are assumed to offset each other.
 - b. Signalheads are rigidly mounted and vertically centered on the mast arm.
 - c. The roadway clearance height for design is as shown in the elevation views.
 - d. The top of the pole base plate is 0.75 feet above the ground elevation.
 - e. Refer to the Elevation Data Chart for the elevation differences between the proposed foundation ground level and the high point of the roadway.
8. The pole manufacturer will determine the total height (H2) of each pole using the greater of the following:
 - Mast arm attachment height (H1) plus 2 feet, or
 - H1 plus 1/2 of the total height of the mast arm attachment assembly plus 1 foot.
9. If pole location adjustments are required, the contractor must gain approval from the Engineer as this may affect the mast arm lengths and arm attachment heights. The contractor may contact the Signal Design Section Senior Structural Engineer for assistance at (919) 814-5000.
10. The contractor is responsible for verifying that the mast arm length shown will allow proper positioning of the signalheads over the roadway.
11. The contractor is responsible for providing soil penetration testing data (SPT) to the pole manufacturer so site specific foundations can be designed.

NCDOT Wind Zone 2 (140 mph)

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**



NC 43
at
Savoy Drive/Shadow Brook Lane

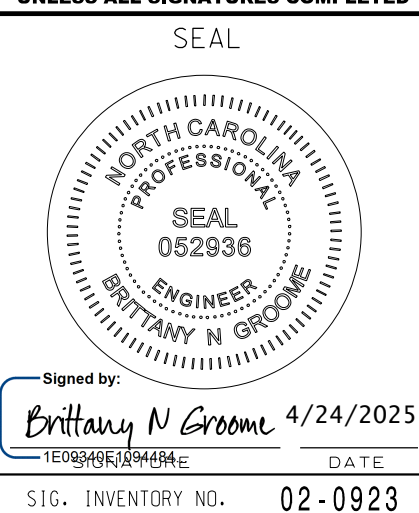
Division 2 Craven County New Bern

PLAN DATE:	April 2025	REVIEWED BY:	BN Groome
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PREPARED BY: DS Griffith	DRMP PROJ. NO.: 17359 (040)
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REVISIONS	INIT.	DATE
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[illegible]

Signed by: _____
Date: 4/24/2025

1E09340E109484 DATE

SIG. INVENTORY NO. 02-0923