

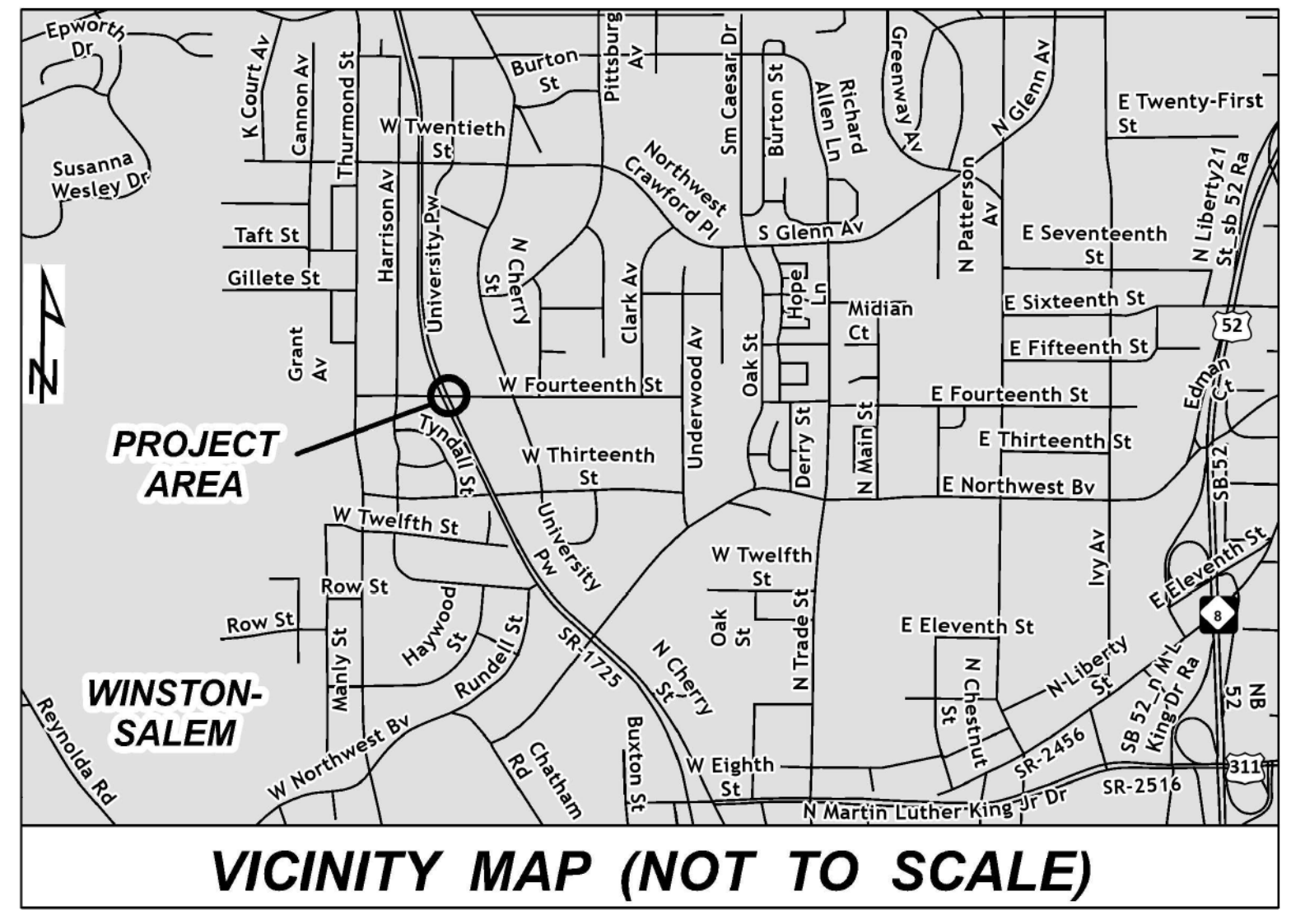
09_08/24/19

See Sheet 1A For Index of Sheets

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

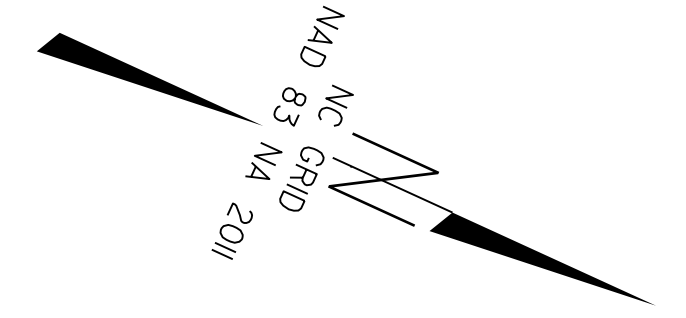
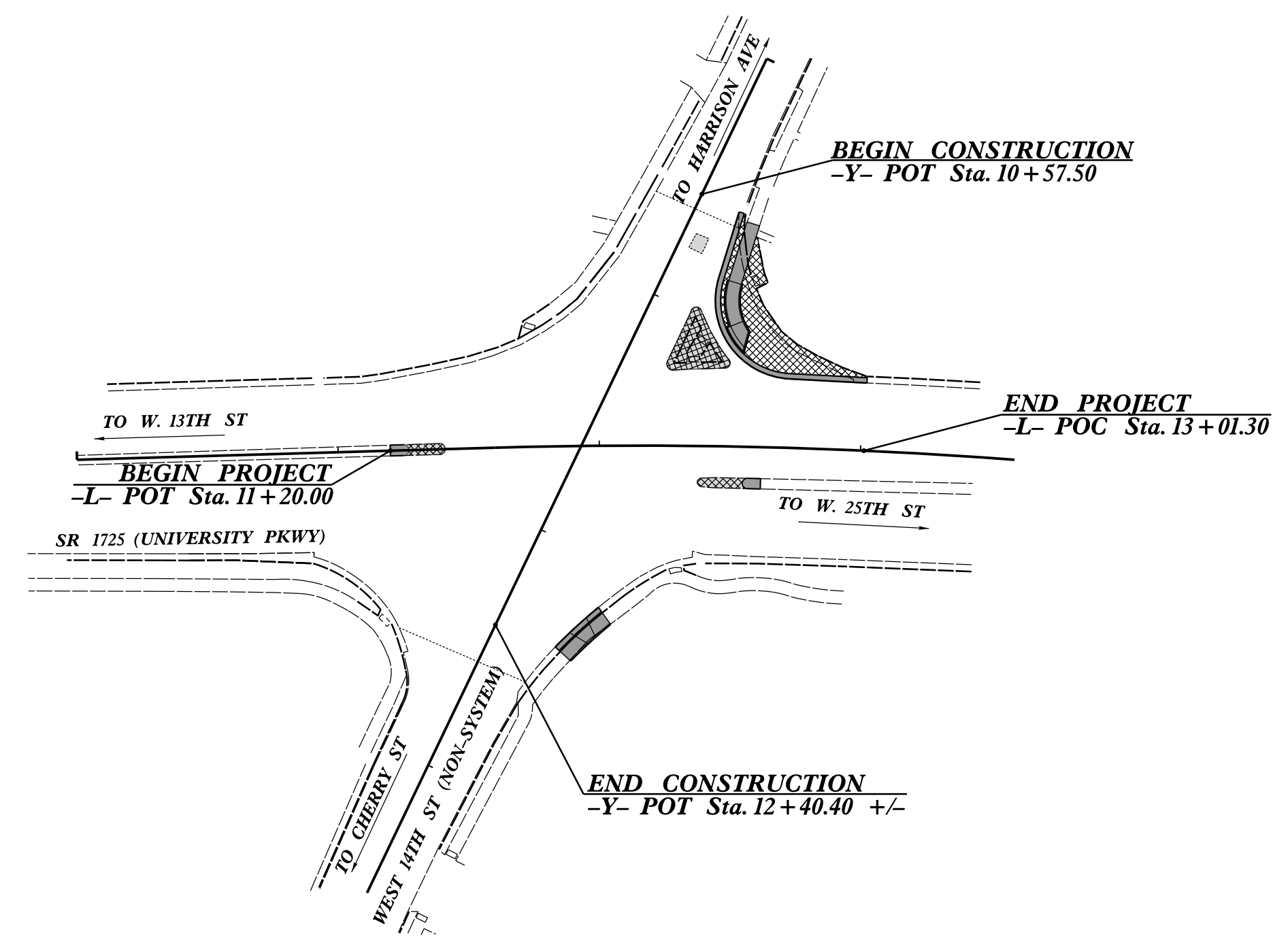
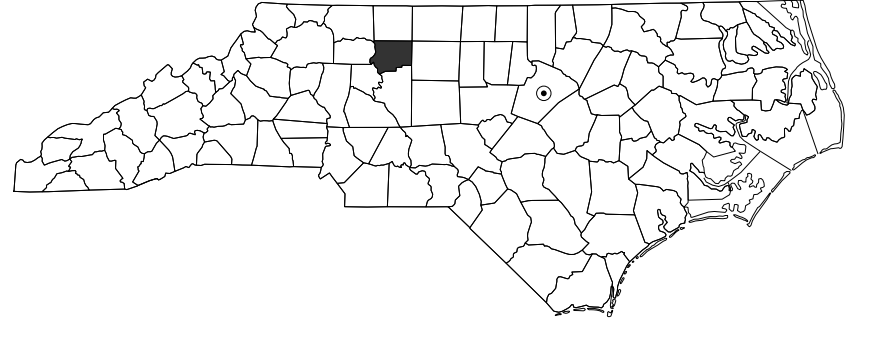
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HS-2409C	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50981.1.4	5098102	PE	
50981.3.4	5098102	CONST	

TIP PROJECT: HS-2409C

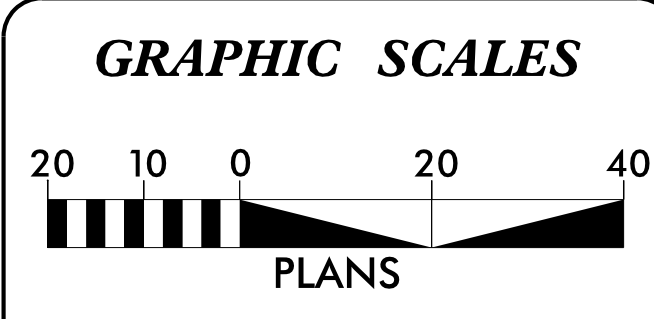


FORSYTH COUNTY

LOCATION: SR 1725 (UNIVERSITY PARKWAY) AT WEST 14TH STREET IN WINSTON-SALEM.
TYPE OF WORK: CURB RAMP INSTALLATION, SIGNALS, AND PAVEMENT MARKINGS



CONTRACT: DI-00373



DESIGN DATA
 ADT 2025 = 17,700
 ADT 2035 = 18,600

V = 50 MPH

FUNC CLASS =
 PRIMARY ARTERIAL

PROJECT LENGTH
 TOTAL LENGTH TIP PROJECT HS-2409C = 0.034 MILES

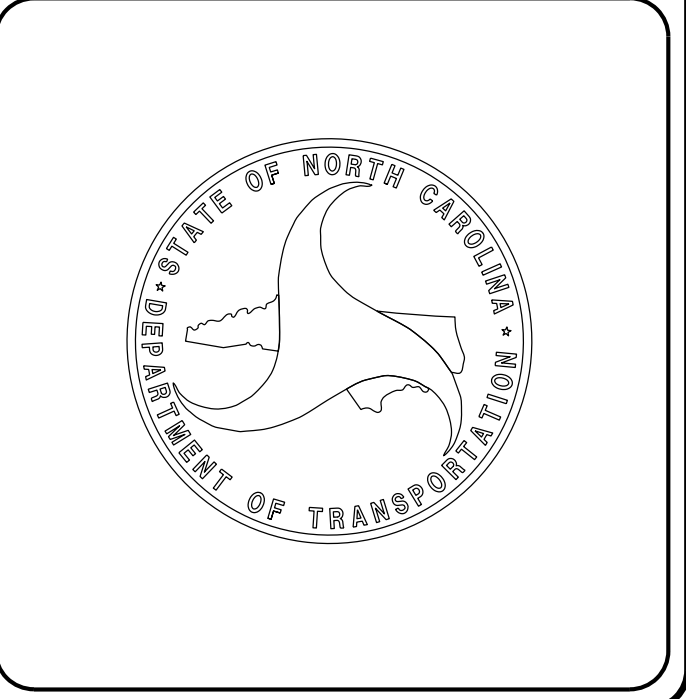
Prepared In the Office of:
DIVISION OF HIGHWAYS
 NINTH DIVISION DESIGN/CONSTRUCT
 375 SILAS CREEK PARKWAY WINSTON-SALEM, NC 27127
 2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: DANIEL C. ULRICH, PE, PLS
 NA PROJECT ENGINEER

LETTING DATE: DANIEL C. ULRICH, PE, PLS
 SEPTEMBER 24, 2025 PROJECT DESIGN ENGINEER

ROADWAY DESIGN ENGINEER

DocuSigned by:
 Daniel Ulrich
 31384995516400
 SIGNATURE: P.E.



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

08-AUG-2025 13:28 S:\Project_Development\TIP_P\Projects_HS\HS-2409C-Univer sityPkwy-14thSt\Roadway\HS-2409C_D09-TSH.dgn \$\$\$USERNAME\$\$\$

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	×
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	WLB
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	E
Proposed Temporary Drainage Easement	TDE
Proposed Permanent Drainage Easement	PDE
Proposed Permanent Drainage/Utility Easement	DUE
Proposed Permanent Utility Easement	PUE
Proposed Temporary Utility Easement	TUE
Proposed Aerial Utility Easement	AUE

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	C
Proposed Slope Stakes Fill	F
Proposed Curb Ramp	CR
Existing Metal Guardrail	T
Proposed Guardrail	T
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	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	○
Storm Sewer	S

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	PH
H-Frame Pole	●
U/G Power Line Test Hole (SUE - LOS A)*	⊗
U/G Power Line (SUE - LOS B)*	P
U/G Power Line (SUE - LOS C)*	P
U/G Power Line (SUE - LOS D)*	P

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	○
Telephone Pedestal	□
Telephone Cell Tower	⊕
U/G Telephone Cable Hand Hole	PH
U/G Telephone Test Hole (SUE - LOS A)*	⊗
U/G Telephone Cable (SUE - LOS B)*	T
U/G Telephone Cable (SUE - LOS C)*	T
U/G Telephone Cable (SUE - LOS D)*	T
U/G Telephone Conduit (SUE - LOS B)*	TC
U/G Telephone Conduit (SUE - LOS C)*	TC
U/G Telephone Conduit (SUE - LOS D)*	TC
U/G Fiber Optics Cable (SUE - LOS B)*	T FO
U/G Fiber Optics Cable (SUE - LOS C)*	T FO
U/G Fiber Optics Cable (SUE - LOS D)*	T FO

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)*	P
U/G Water Line (SUE - LOS C)*	P
U/G Water Line (SUE - LOS D)*	P
Above Ground Water Line	A/G Water
TV:	
TV Pedestal	□
TV Tower	⊗
U/G TV Cable Hand Hole	PH
U/G TV Test Hole (SUE - LOS A)*	⊗
U/G TV Cable (SUE - LOS B)*	TV
U/G TV Cable (SUE - LOS C)*	TV
U/G TV Cable (SUE - LOS D)*	TV
U/G Fiber Optic Cable (SUE - LOS B)*	TV FO
U/G Fiber Optic Cable (SUE - LOS C)*	TV FO
U/G Fiber Optic Cable (SUE - LOS D)*	TV FO

GAS:

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

SANITARY SEWER:

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

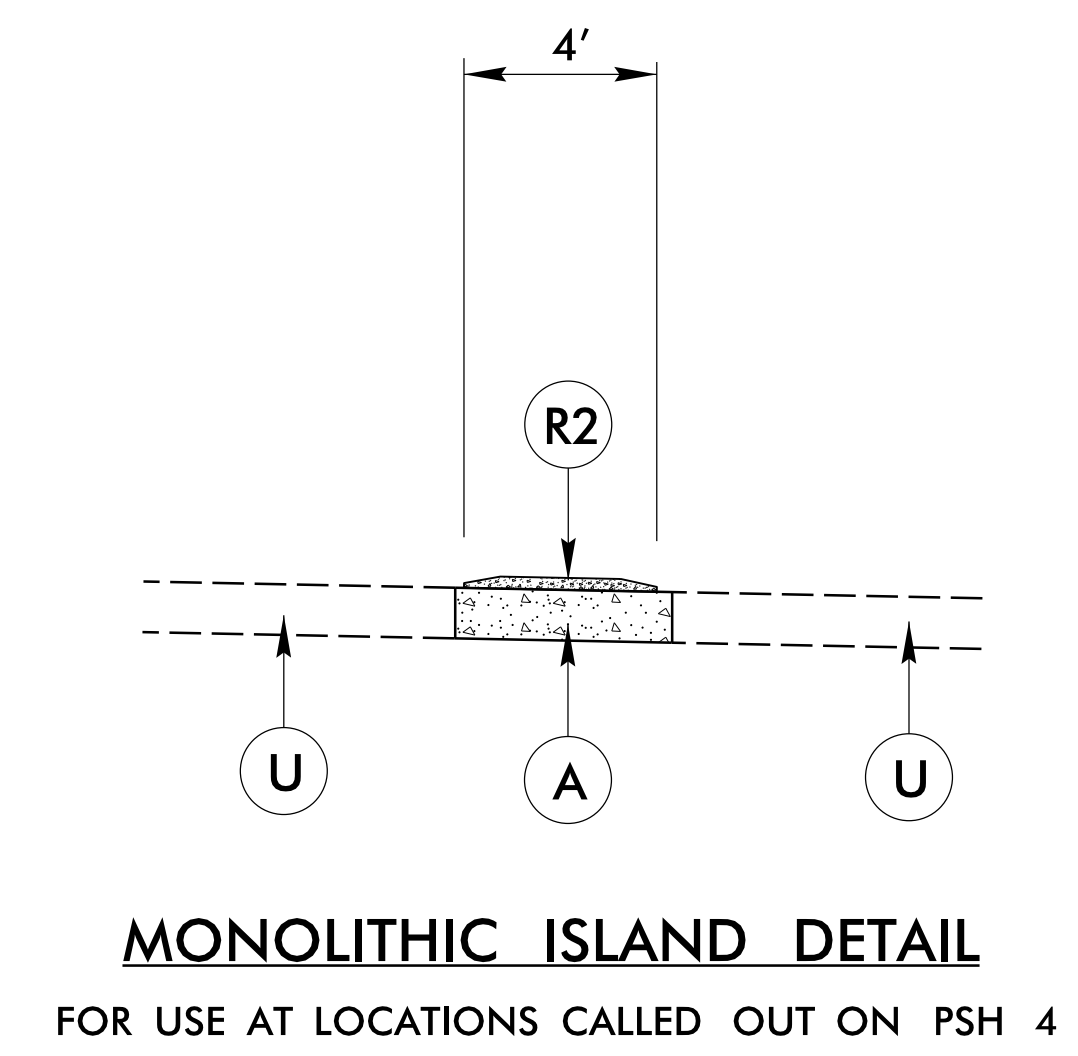
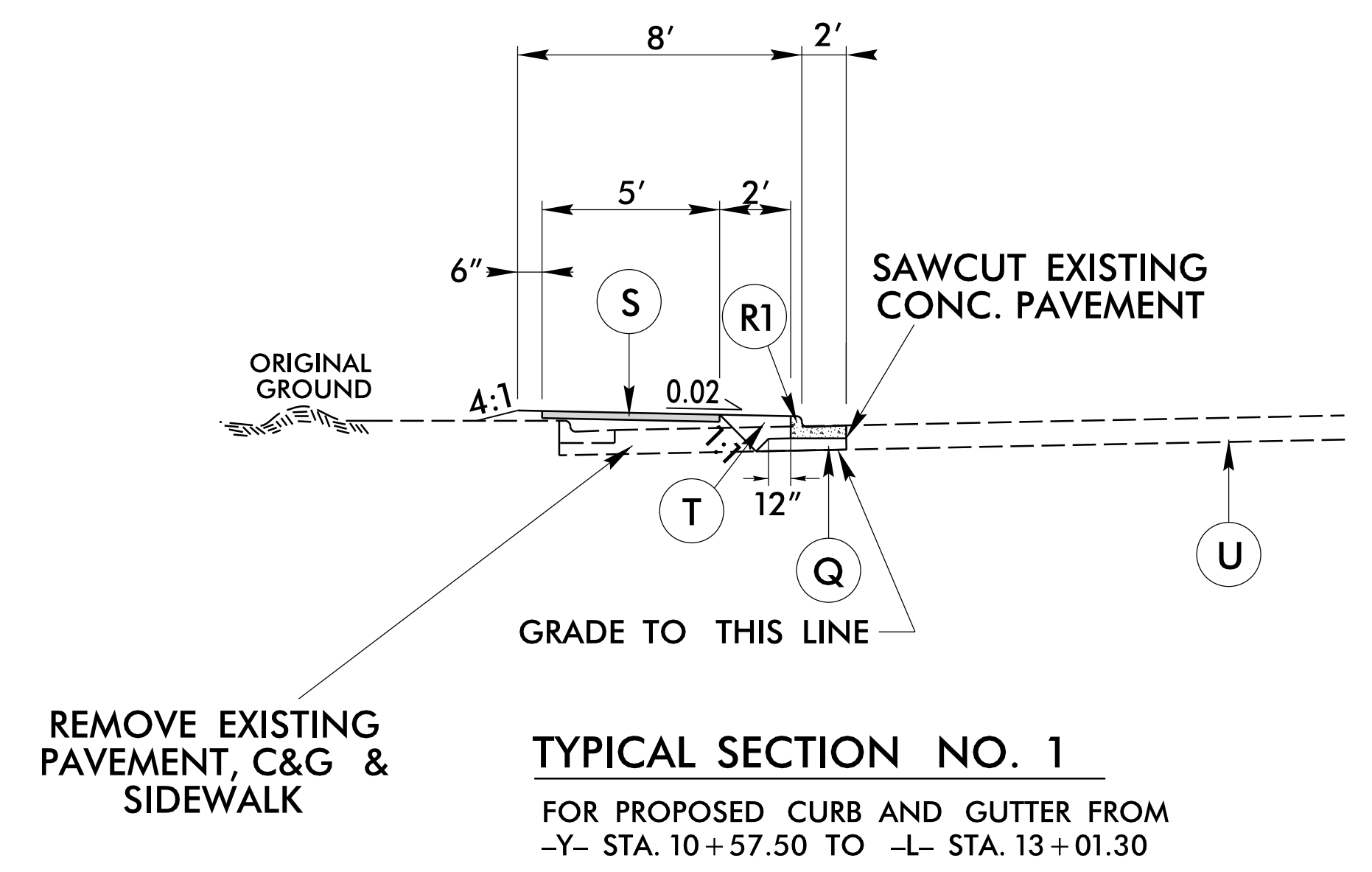
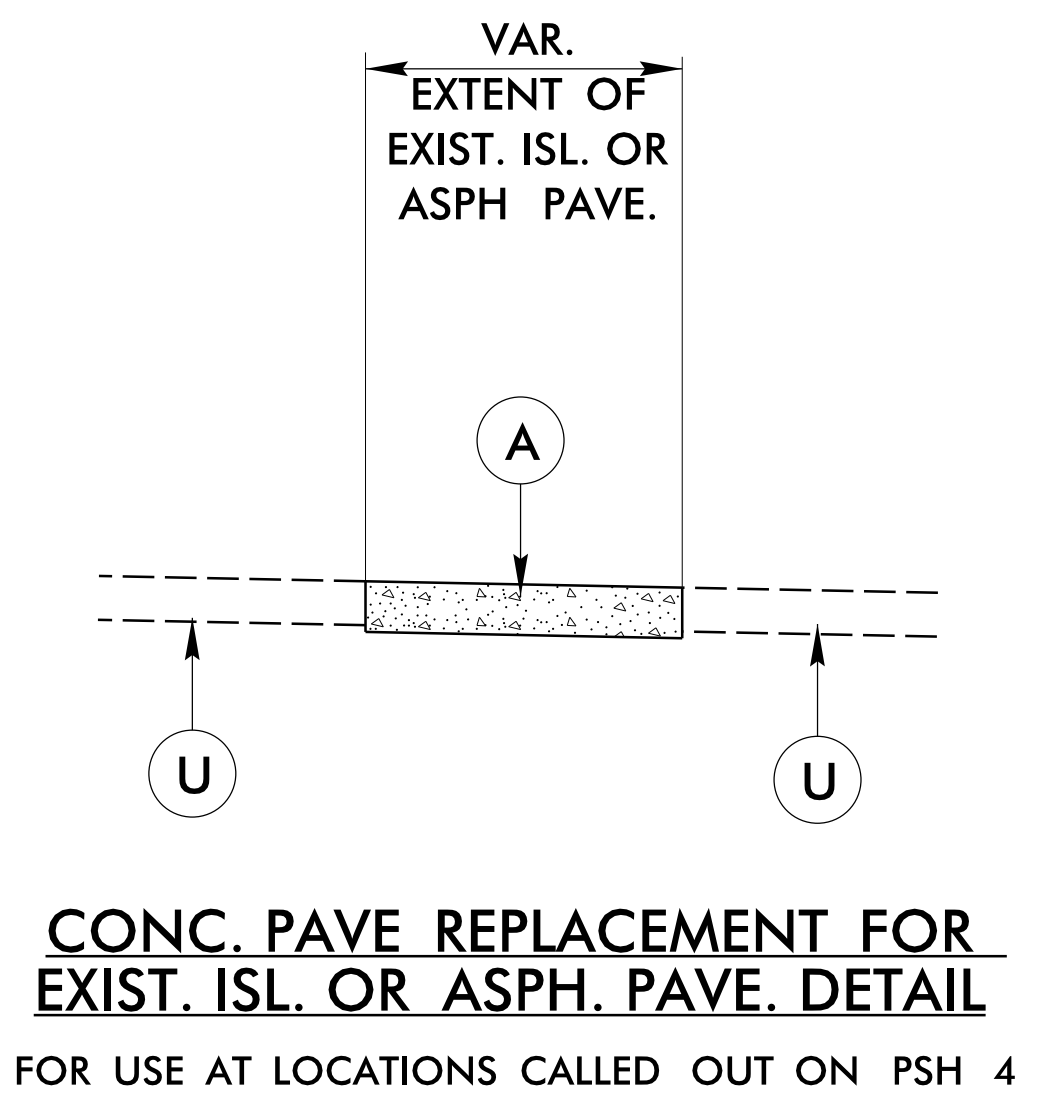
MISCELLANEOUS:

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

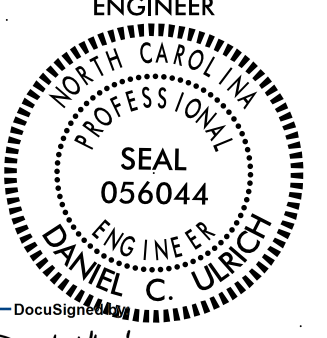
REVISIONS

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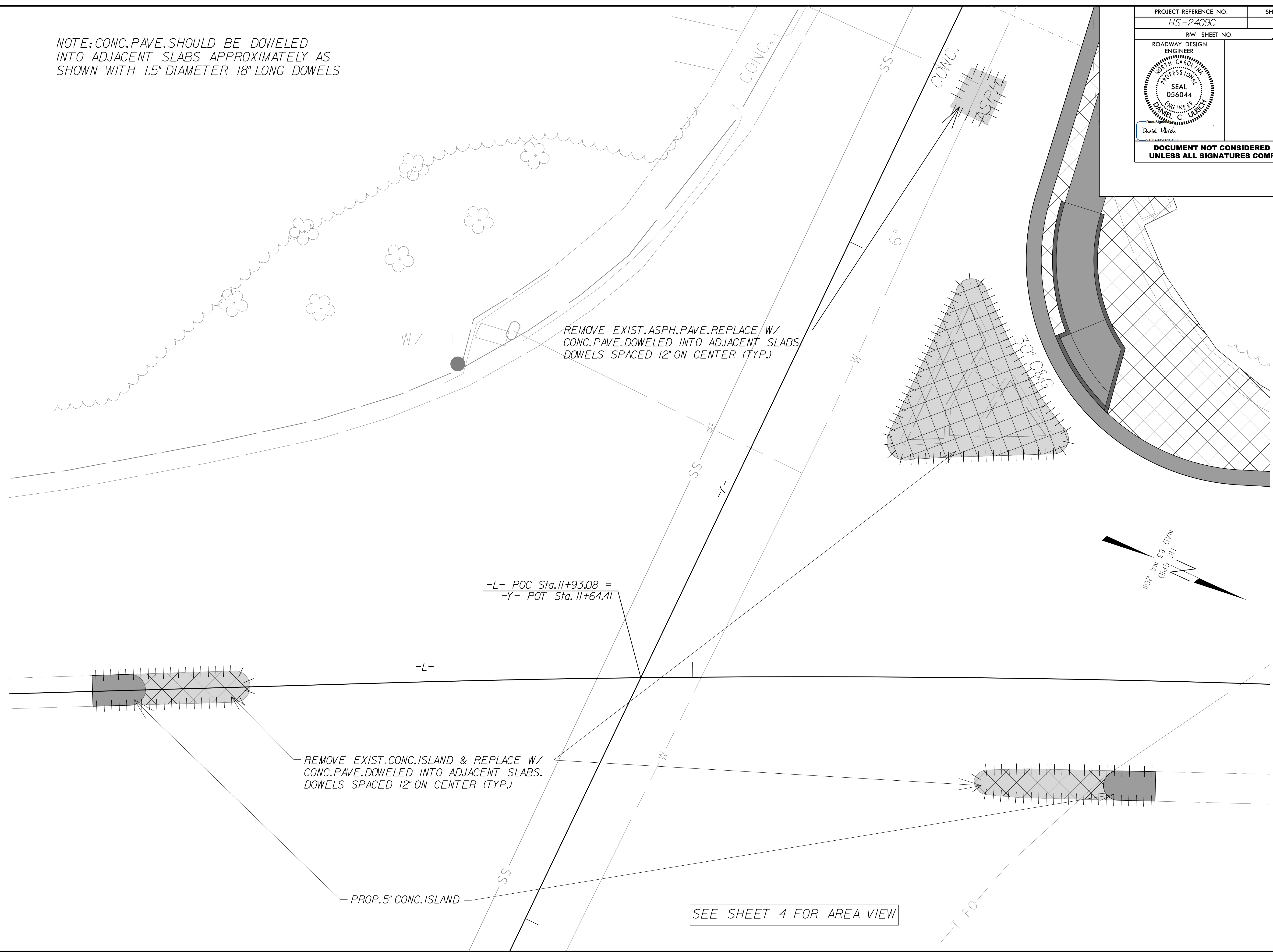
PAVEMENT SCHEDULE	
A	14" PORTLAND CEMENT CONCRETE PAVEMENT
Q	6" (MAX.) INCIDENTAL STONE BASE
R1	PROP. 2'-6" CONCRETE CURB & GUTTER
R2	5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT.



PROJECT REFERENCE NO. <i>HS-2409C</i>	SHEET NO. <i>2A</i>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER SEAL 056044 DANIEL C. ULRICH DANIEL C. ULRICH	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

PROJECT REFERENCE NO. HS-2409C	SHEET NO. 2B
RW SHEET NO.	
ROADWAY DESIGN ENGINEER FOR THE STATE OF NORTH CAROLINA PROFESSIONAL SEAL 056044 DANIEL C. ULRICH ENGINEER	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

NOTE: CONC. PAVE. SHOULD BE DOWELED INTO ADJACENT SLABS APPROXIMATELY AS SHOWN WITH 1.5" DIAMETER 18" LONG DOWELS

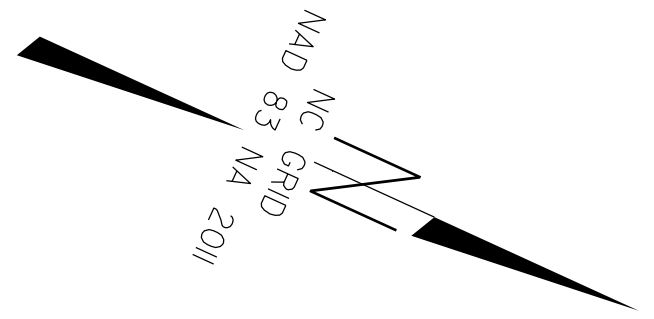


REMOVE EXIST. ASPH. PAVE. REPLACE W/
CONC. PAVE. DOWELED INTO ADJACENT SLABS.
DOWELS SPACED 12" ON CENTER (TYP.)

REMOVE EXIST. CONC. ISLAND & REPLACE W/
CONC. PAVE. DOWELED INTO ADJACENT SLABS.
DOWELS SPACED 12" ON CENTER (TYP.)

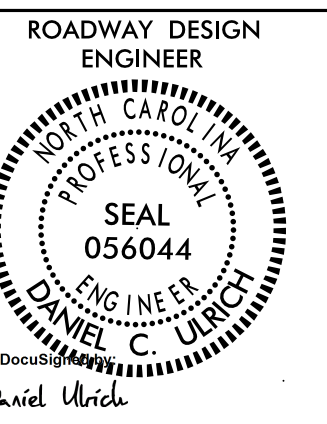
-L- POC Sta. 11+93.08 =
-Y- POT Sta. 11+64.41

SEE SHEET 4 FOR AREA VIEW



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 REVISIONS

ROADWAY DESIGN ENGINEER



David Urick
03/18/2008/01/14/2008

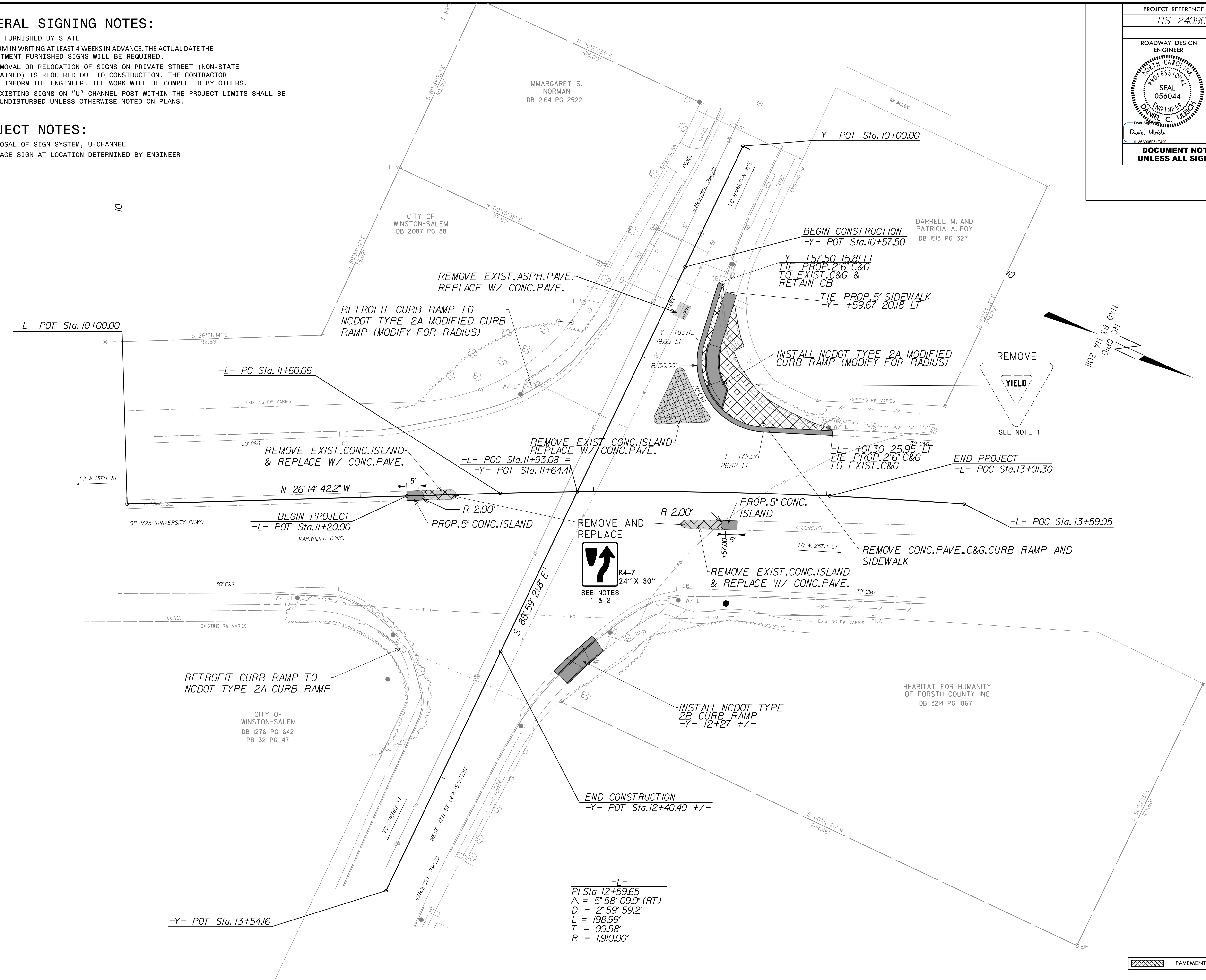
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

GENERAL SIGNING NOTES:

- SIGNS FURNISHED BY STATE
- CONFIRM IN WRITING AT LEAST 4 WEEKS IN ADVANCE, THE ACTUAL DATE THE DEPARTMENT FURNISHED SIGNS WILL BE REQUIRED.
- IF REMOVAL OR RELOCATION OF SIGNS ON PRIVATE STREET (NON-STATE MAINTAINED) IS REQUIRED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL INFORM THE ENGINEER. THE WORK WILL BE COMPLETED BY OTHERS.
- ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE LEFT UNDISTURBED UNLESS OTHERWISE NOTED ON PLANS.

PROJECT NOTES:

- DISPOSAL OF SIGN SYSTEM, U-CHANNEL
- REPLACE SIGN AT LOCATION DETERMINED BY ENGINEER



-L-
PI Sta 12+59.65
Δ = 5' 58" 09.0" (RT)
D = 2' 59" 59.2"
L = 198.99'
T = 99.58'
R = 1,910.00'

 PAVEMENT REMOVAL

REVISIONS

08-AUG-2006 13:49
 S:\P\0\0\0\Development\TIP_Projects_HSN\HS-2409C\Roadway\14thSt\Roadway\HS-2409C_009_ash4.dgn
 \$\$\$\$DISPERN\$\$\$

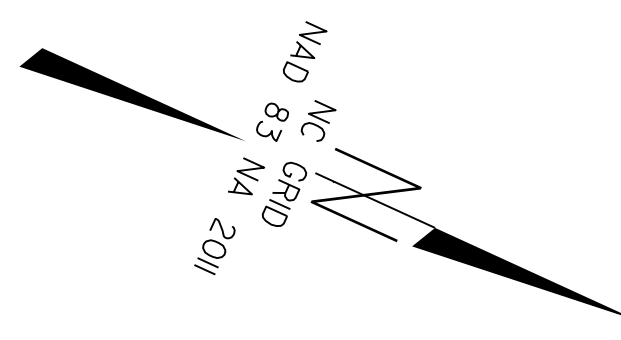
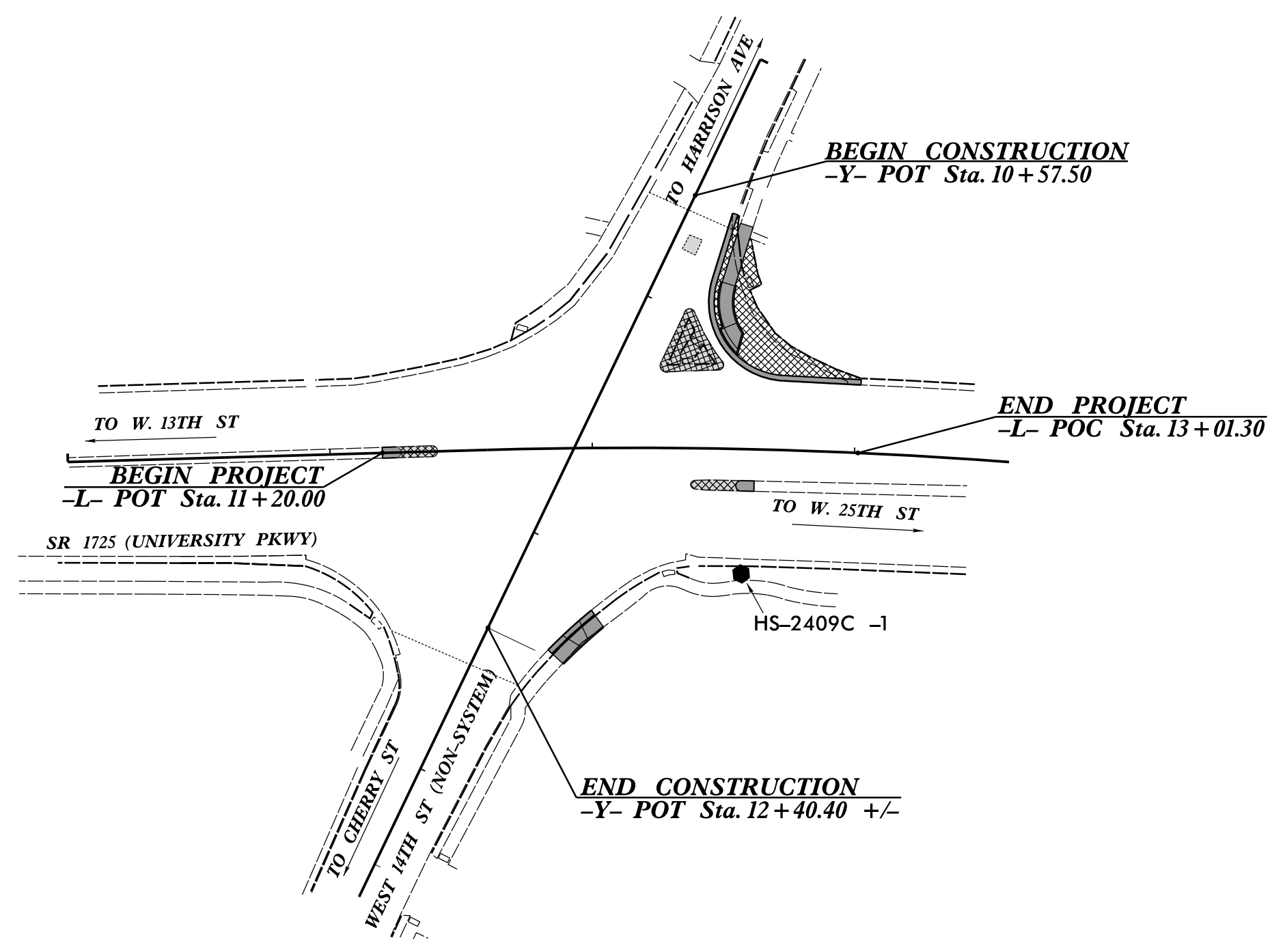
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HS-2409C	RW01	1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SURVEY CONTROL, EXISTING CENTERLINES,

FORSYTH COUNTY

TIP PROJECT: HS-2409C



**PROPOSED ALIGNMENTS
(EXISTING RETAINED)**

TYPE	STATION	L	
		NORTH	EAST
POT	10+00.00	862064.4219	1629135.1726
PC	11+60.06	862207.9835	1629064.3913
PT	13+59.05	862390.7137	1628985.8447

TYPE	STATION	Y	
		NORTH	EAST
POT	10+00.00	862240.6240	1628885.6636
POT	13+54.16	862234.3775	1629239.7653

I, Daniel C. Ulrich, PLS, certify that the Project Control was performed under my supervision from an actual GPS survey made under my supervision and the following information was used to perform the survey:

Class of survey: AA
Type of GPS field procedure: RTN
Dates of survey: June 18 through June 30, 2025
Datum/Epoch: NAD 83 (2011)
Published/Fixed-control use: N/A
Localized around: "HS-2409C-1"
Northing: 862,315.594 (ft)
Easting: 1,629,067.138 (ft)
Combined grid factor: 0.999949153

Geoid model: 18
Units: US Survey Foot

I also certify that the Baseline Control for this project was completed under my direct and responsible charge from an actual survey made under my supervision; that all horizontal closures had a minimum ratio of precision of 1:20,000 (Class AA) and Vertical accuracy to Class A. Field work was performed from 06/18/2025 to 06/30/2025, and all coordinates are based on NAD 83/2011 and all elevations are based on NAVD 88; that this survey was performed to meet the requirements of 21NCAC 56.1600 as applicable.

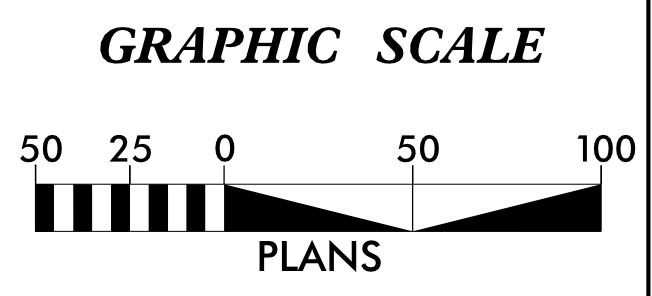
This 14th day of August, 2025.

DocuSigned by:
David Ulrich
01368A055F81E400
Professional Land Surveyor
L-5635

SURVEY CONTROL

BL	POINT	DESC.	NORTH	EAST	ELEVATION
1		HS-2409C-1	862315.5940	1629067.1380	759.79
2		HS-2409C-2	862204.8550	1629513.4860	762.89

● HS-2409C -2



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "HS-2409C-1" WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 862,315.594(ft) EASTING: 1,629,067.138(ft) ELEVATION: 759.790(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999949153
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "HS-2409C-1" TO -L- STATION 10+00 IS S 15-09'21.43" E 260.22(ft)
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

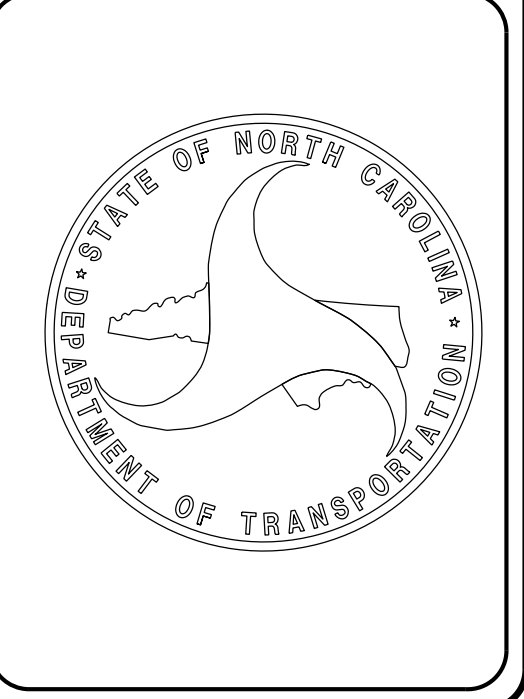
Prepared in the Office of:
DIVISION OF HIGHWAYS
NINTH DIVISION DESIGN/CONSTRUCT
375 SILAS CREEK PARKWAY WINSTON-SALEM, NC 27127

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: N/A	LETTING DATE: 09/24/2025
----------------------------------	------------------------------------

PROFESSIONAL LAND SURVEYOR

DocuSigned by:
David Ulrich
01368A055F81E400
SIGNATURE: _____ Date: _____



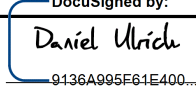
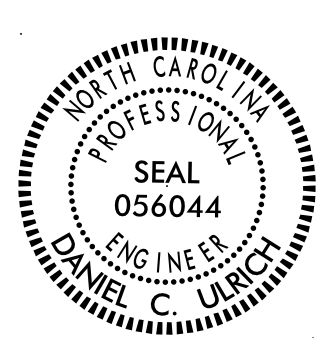
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\$\$\$\$\$USERNAME\$\$\$\$\$

**STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

PAVEMENT MARKING PLAN

FORSYTH COUNTY

**LOCATION: SR 1725 (UNIVERSITY PARKWAY) AT WEST
14TH STREET IN WINSTON- SALEM.**

TIP NO. HS-2409C	SHEET NO. PMP-1
APPROVED:  <small>DocuSigned by: Daniel Ulrich 0136A96F61E400</small>	
DATE: 08/15/2025	
SEAL 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

T.I.P.: HS-2409C

CONTRACT: DI-00373

INDEX

<u>SHEET NO.</u>	<u>DESCRIPTION</u>
PMP-1	PAVEMENT MARKING PLAN TITLE SHEET
PMP-2	PAVEMENT MARKING PLAN

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

ROAD NAME	MARKING	MARKER
ALL	COLD APPLIED PLASTIC	NONE

B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

D) STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES 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:

<u>STD. NO.</u>	<u>TITLE</u>
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS

PAVEMENT MARKING SCHEDULE

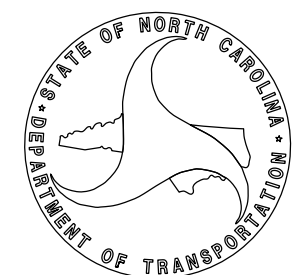
<u>SYMBOL</u>	<u>DESCRIPTION</u>
C10	COLD APPLIED PLASTIC (4") YELLOW EDGE LINE
C13	COLD APPLIED PLASTIC (4") YELLOW DOUBLE CENTER
C46	COLD APPLIED PLASTIC (8") WHITE CROSSWALK LINE
C61	COLD APPLIED PLASTIC (24") WHITE STOPBAR

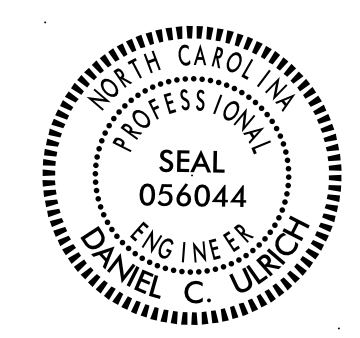
SUMMARY OF QUANTITIES

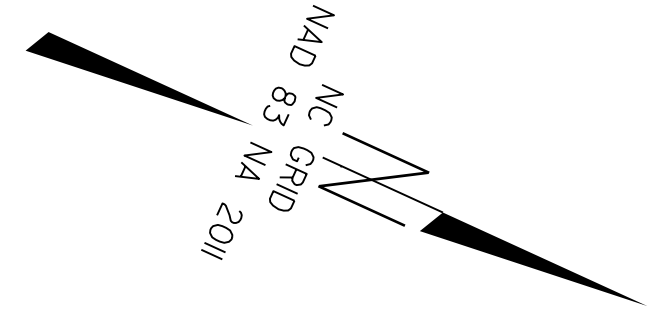
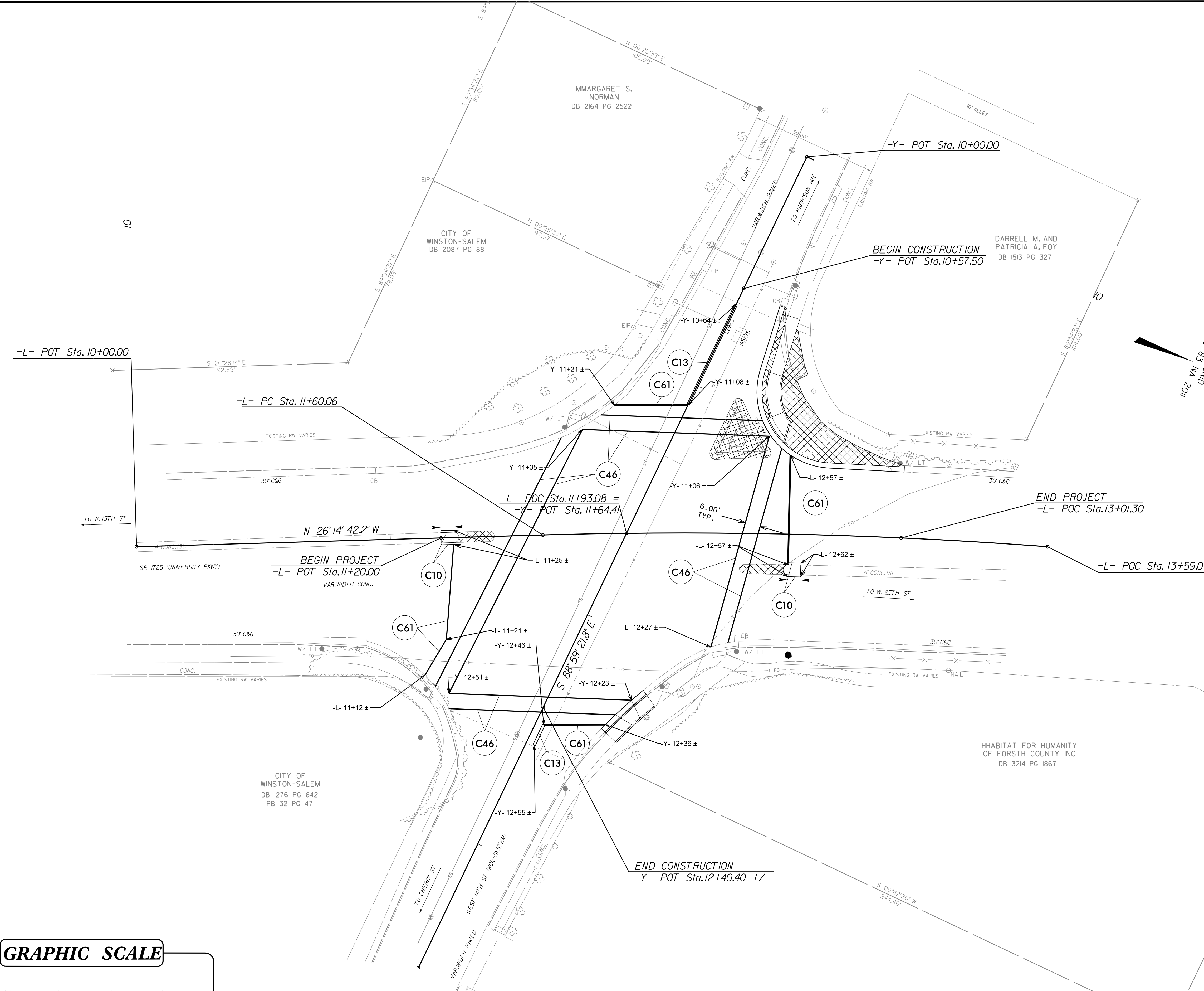
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4780000000-E	1205	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE II (8")	670	LF
4795000000-E	1205	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE II (24")	155	LF
4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	275	LF
4860000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (8")	250	LF
4870000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (24")	150	LF

**PLAN PREPARED BY: NCDOT HIGHWAY DIVISION 9
DIVISION DESIGN/CONSTRUCT**

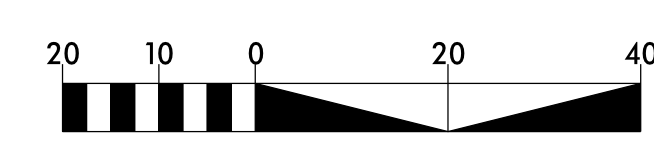
DANIEL C. ULRICH, PE, PLS PROJECT ENGINEER
DANIEL C. ULRICH, PE, PLS PROJECT DESIGN ENGINEER



TIP NO.	SHEET NO.
HS-2409C	PMP-2
APPROVED: <i>Daniel Ulrich</i> 9184066F81E400	
DATE: 08/15/2025	
SEAL	
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



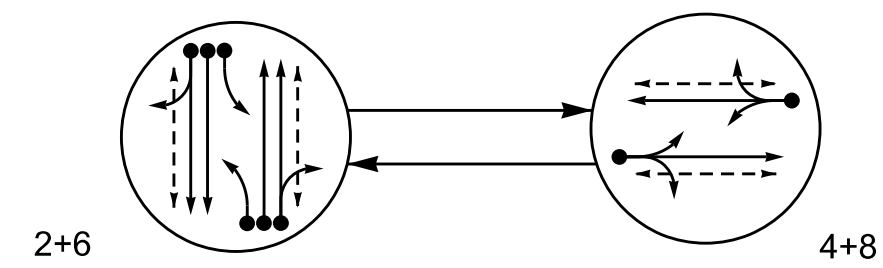
GRAPHIC SCALE



PAVEMENT MARKING PLAN

I4-AUG-2025 13:42
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 \$\$\$\$SUPERMARI\$\$\$\$

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

- ←●→ DETECTED MOVEMENT
- ← UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- ←---→ PEDESTRIAN MOVEMENT

SIGNAL FACE	PHASE		
	2+6	4+8	FLIGHT
21, 22	G	R	R
23	Y	R	R
41, 42	R	G	R
61, 62	G	R	R
63	Y	R	R
81, 82	R	G	R
P21, P22	W	DW	DRK
P41, P42	DW	W	DRK
P61, P62	W	DW	DRK
P81, P82	DW	W	DRK

OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

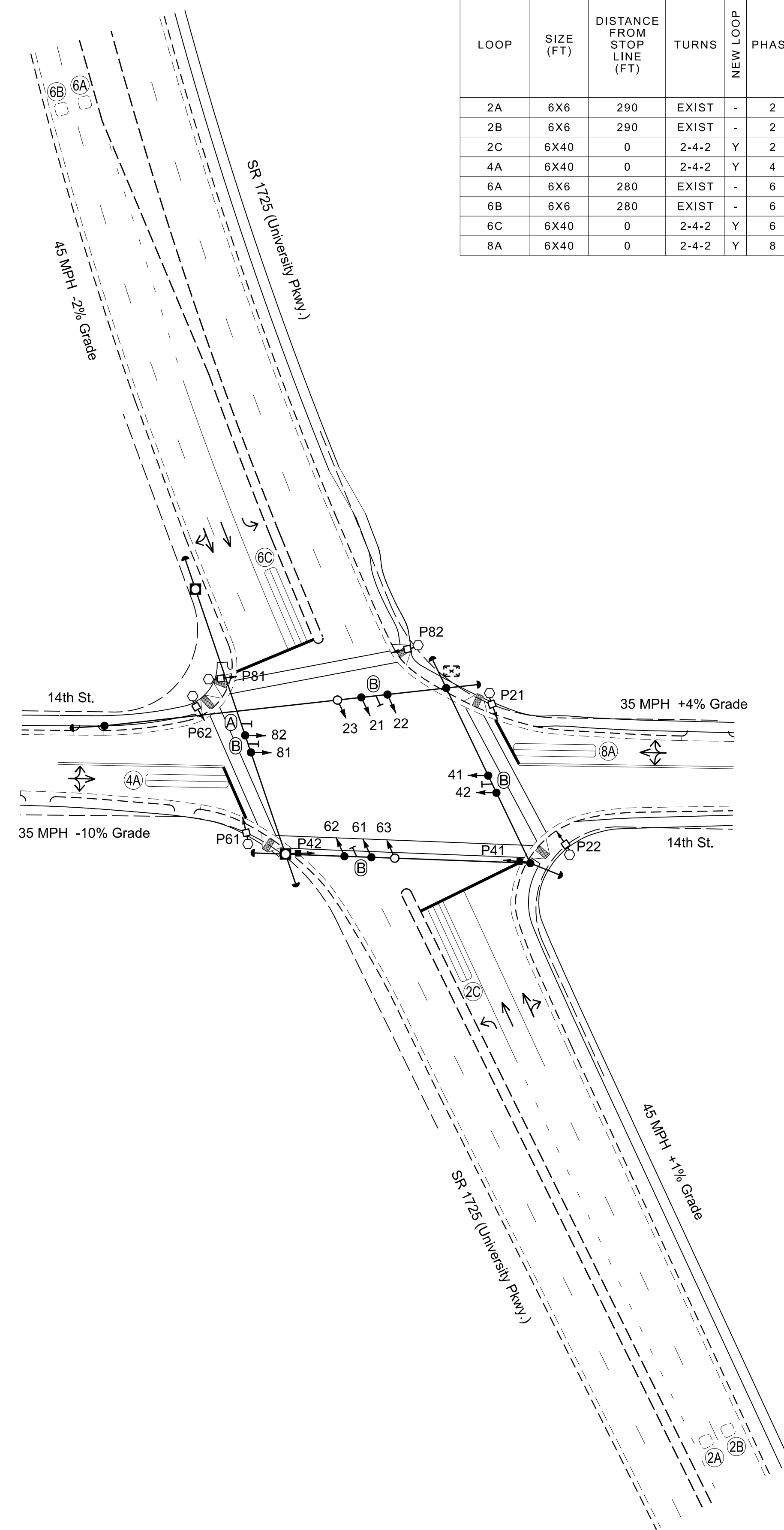
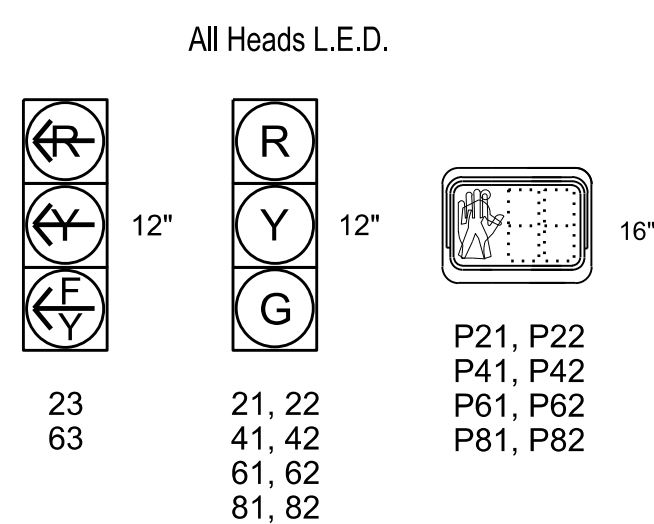
LOOP	SIZE (FT)	DISTANCE FROM STOP LINE (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	290	EXIST	-	2	Y	Y	-	-	-	-	-
2B	6X6	290	EXIST	-	2	Y	Y	-	-	-	-	-
2C	6X40	0	2-4-2	Y	2	Y	Y	Y	-	3	-	-
4A	6X40	0	2-4-2	Y	4	Y	Y	-	-	5	-	-
6A	6X6	280	EXIST	-	6	Y	Y	-	-	-	-	-
6B	6X6	280	EXIST	-	6	Y	Y	-	-	-	-	-
6C	6X40	0	2-4-2	Y	6	Y	Y	Y	-	3	-	-
8A	6X40	0	2-4-2	Y	8	Y	Y	-	-	3	-	-

2 Phase Fully Actuated (Winston-Salem Signal System)

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Reposition existing signal heads 21, 22, 61, and 62.
- Set all detector units to presence mode.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Remove Existing Left Arrow "ONLY" signs (R3-5L).
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

SIGNAL FACE I.D.



LEGEND

- | | | | |
|--|--|--|--|
| | PROPOSED Traffic Signal Head | | EXISTING Traffic Signal Head |
| | PROPOSED Modified Signal Head | | EXISTING N/A |
| | PROPOSED Sign | | EXISTING Sign |
| | PROPOSED Pedestrian Signal Head | | EXISTING Pedestrian Signal Head |
| | PROPOSED Signal Pole with Guy | | EXISTING Signal Pole with Sidewalk Guy |
| | PROPOSED Inductive Loop Detector | | EXISTING Inductive Loop Detector |
| | PROPOSED Controller & Cabinet | | EXISTING Controller & Cabinet |
| | PROPOSED Junction Box | | EXISTING Junction Box |
| | PROPOSED 2-in Underground Conduit | | EXISTING 2-in UC |
| | PROPOSED Right of Way | | EXISTING Right of Way |
| | PROPOSED Directional Arrow | | EXISTING Directional Arrow |
| | PROPOSED Curb Ramp | | EXISTING Curb Ramp |
| | PROPOSED Metal Strain Pole | | EXISTING Metal Strain Pole |
| | PROPOSED Type II Signal Pedestal | | EXISTING Type II Signal Pedestal |
| | PROPOSED "NO TURN ON RED" Sign (R10-11) | | EXISTING "NO TURN ON RED" Sign (R10-11) |
| | PROPOSED Street Name Sign By Others (D3-1) | | EXISTING Street Name Sign By Others (D3-1) |

OASIS 2070 TIMING CHART

FEATURE	PHASE			
	2	4	6	8
Min Green 1*	12	7	12	7
Extension 1*	6.0	2.0	6.0	2.0
Max Green 1*	90	25	90	25
Yellow Clearance	4.7	4.8	4.7	4.8
Red Clearance	2.1	2.7	2.1	2.7
Red Revert	2.0	2.0	2.0	2.0
Advance Walk	7	7	7	7
Walk 1*	14	14	14	13
Don't Walk 1	17	31	15	21
Seconds Per Actuation*	1.5	-	1.5	-
Max Variable Initial*	34	-	34	-
Time Before Reduction*	15	-	15	-
Time To Reduce*	30	-	30	-
Minimum Gap	3.0	-	3.0	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

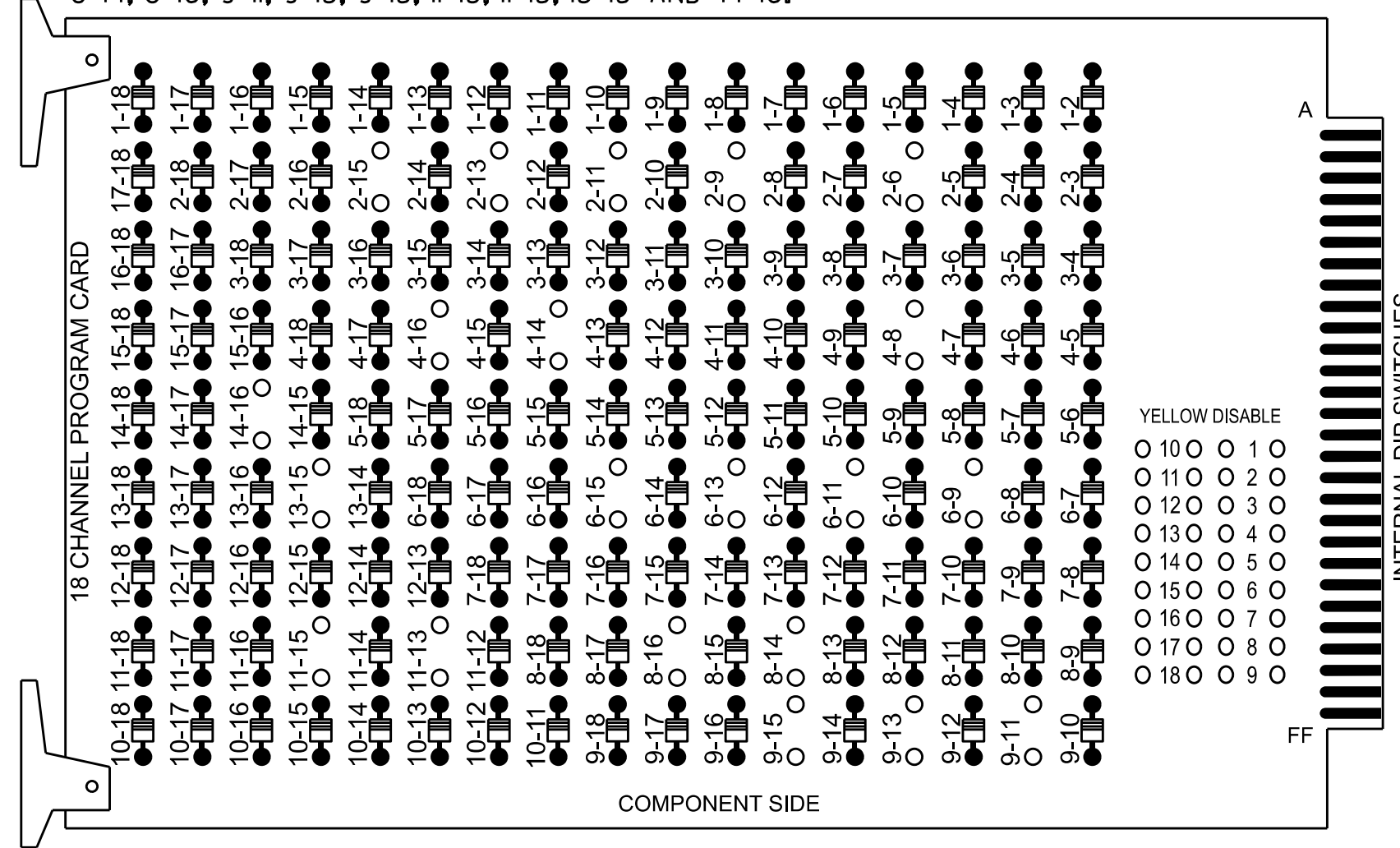
Signal Upgrade

<p>750 N. Greenfield Pkwy, Garner, NC 27529</p>	<p>SR 1725 (University Parkway) at 14th Street</p>		
	<p>Division 9 Forsyth County Winston-Salem</p>	<p>PLANNED BY: J.A. Lohr</p>	
<p>SCALE 1"=40'</p>	<p>REVISIONS</p>	<p>INIT. DATE</p>	<p>DATE 06/19/2025</p>

18 CHANNEL IP CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

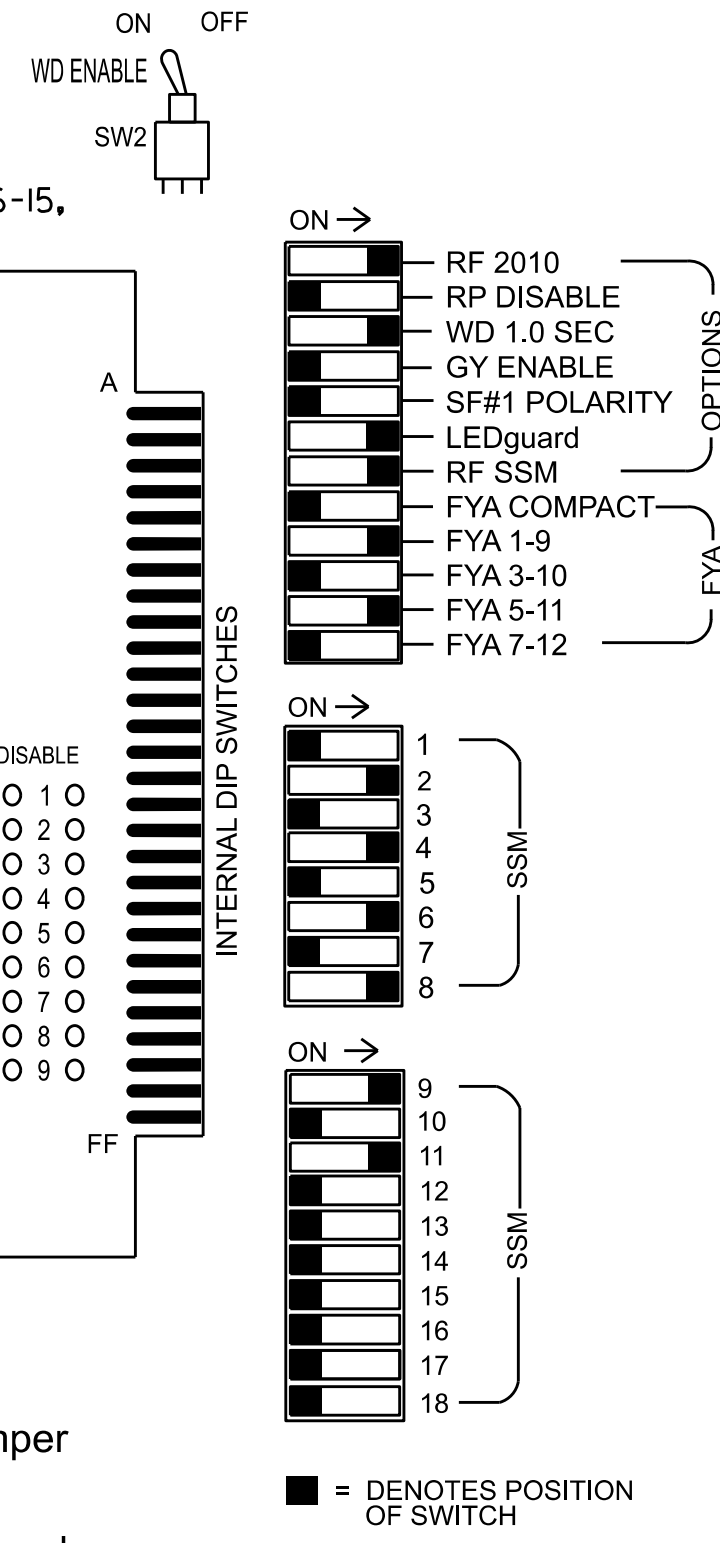
REMOVE DIODE JUMPERS 2-6, 2-9, 2-11, 2-13, 2-15, 4-8, 4-14, 4-16, 6-9, 6-11, 6-13, 6-15, 8-14, 8-16, 9-11, 9-13, 9-15, 11-13, 11-15, 13-15 AND 14-16.



REMOVE JUMPERS AS SHOWN

NOTES:

- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
- Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
- Ensure that the Red Enable is active at all times during normal operation.
- Integrate monitor with Ethernet network in cabinet.



NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the Signal Plans.
- Program phases 4 and 8 for Dual Entry.
- Enable Simultaneous Gap-Out for all phases.
- Program phases 2 and 6 for Variable Initial and Gap Reduction.
- Remove phases 2 and 6 from Start Up In Green.
- Remove phases 2, 4, 6 and 8 from 'STARTUP PED CALL'.
- Program phases 2 and 6 as First Phases.
- Remove phases 2 and 6 for Yellow Flash and program overlaps overlaps 1 as Wag Overlaps.
- The cabinet and controller are part of the Winston-Salem Signal System.

EQUIPMENT INFORMATION

CONTROLLER.....2070L
 CABINET.....332 /W/ AUX
 SOFTWARE.....ECONOLITE OASIS
 CABINET MOUNT.....BASE
 OUTPUT FILE POSITIONS...18 WITH AUX. OUTPUT FILE
 LOAD SWITCHES USED.....S2,S3,S5,S6,S8,S9,S11,S12,
 AUX S1,AUX S4.
 PHASES USED.....2,2 PED,4,4 PED,6,6 PED,8,8 PED
 OVERLAP "A".....2
 OVERLAP "B".....NOT USED
 OVERLAP "C".....6
 OVERLAP "D".....NOT USED

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6
CMU CHANNEL NO.	1	2	13	3	4	14	5	6	15	7	8	16	9	10	17	11	12	18
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	NU	21,22	P21, P22	NU	41,42	P41, P42	NU	61,62	P61, P62	NU	81,82	P81, P82	63	NU	NU	23	NU	NU
RED		128			101			134			107							
YELLOW		129			102			135			108							
GREEN		130			103			136			109							
RED ARROW													A121			A114		
YELLOW ARROW													A122			A115		
FLASHING YELLOW ARROW													A123			A116		
GREEN ARROW																		
Hand icon							113			104		119				110		
Walking person icon																		

NU = Not Used

* Denotes install load resistor. See load resistor installation detail this sheet.

★ See pictorial of head wiring in detail this sheet.

INPUT FILE POSITION LAYOUT

(front view)

FILE "I"	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
U	S	∅ 2	∅ 2	S	S	∅ 4	S	S	S	S	S	S	∅ 2 PED	∅ 6 PED	FS
I	2A	2C	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	DC ISOLATOR	DC ISOLATOR	DC ISOLATOR
L	∅ 2	2B	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	∅ 4 PED	∅ 8 PED	ST
U	S	∅ 6	∅ 6	S	S	∅ 8	S	S	S	S	S	S	S	S	S
I	6A	6C	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED
L	∅ 6	6B	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED	NOT USED

EX.: 1A, 2A, ETC. = LOOP NO.'S

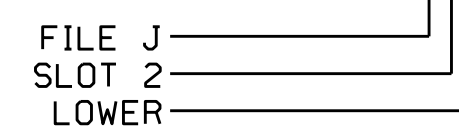
FS = FLASH SENSE
 ST = STOP TIME

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
2A	TB2-5,6	I2U	39	1	2	2	Y	Y			
2B	TB2-7,8	I2L	43	5	12	2	Y	Y			
2C	TB2-9,10	I3U	63	25	32	2	Y	Y	Y		3
4A	TB4-9,10	I6U	41	3	4	4	Y	Y			5
6A	TB3-5,6	J2U	40	2	6	6	Y	Y			
6B	TB3-7,8	J2L	44	6	16	6	Y	Y			
6C	TB3-9,10	J3U	64	26	36	6	Y	Y	Y		3
8A	TB5-9,10	J6U	42	4	8	8	Y	Y			3
PED PUSH BUTTONS											
P21,P22	TB8-4,6	I12U	67	29							PED 2
P41,P42	TB8-5,6	I12L	69	31							PED 4
P61,P62	TB8-7,9	I13U	68	30							PED 6
P81,P82	TB8-8,9	I13L	70	32							PED 8

NOTE:
 INSTALL DC ISOLATORS
 IN INPUT FILE SLOTS
 112 AND 113.

INPUT FILE POSITION LEGEND: J2L



COUNTDOWN PEDESTRIAN SIGNAL OPERATION

Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.

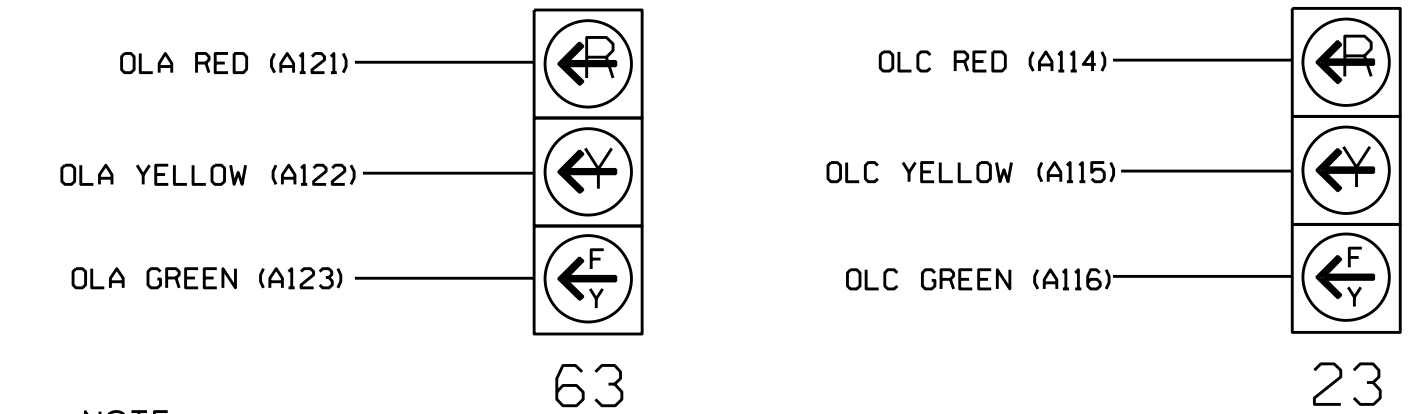
ADVANCE WALK NOTE

(program controller as shown below)

From Main Menu press '2' (Phase Control), then '1' (Phase Control Functions). Program phases 2, 4, 6 and 8 for 'Advanced Walk'. Make sure the Walk Advance Time shown on the Signal Design plans are programmed in the 'Phase Timing' menu.

FYA SIGNAL WIRING DETAIL

(wire signal heads as shown)



NOTE

- See sheet 2 of 2 for programming instructions.

THIS ELECTRICAL DETAIL IS FOR
 THE SIGNAL DESIGN: 09-0129
 DESIGNED: May 2025
 SEALED: 06-19-25
 REVISED: N/A

Electrical Detail - Sheet 1 of 2

Prepared in the Offices of:

 750 N. Greenfield Pkwy, Garner, NC 27529

SR 1725 (University Parkway) at 14th Street

Division 9 Forsyth County Winston-Salem

PLAN DATE: May 2025 REVIEWED BY:

PREPARED BY: James Peterson REVIEWED BY:

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

 Ryan W. Haugl
 ENGINEER
 STATE OF NORTH CAROLINA
 License No. 036833
 06/19/2025
 SIGNATURE DATE
 SIG. INVENTORY NO. 09-0129

19-JUN-2025 13:33 p:\p\road\pwb\m\ey.com\concord-pw-01\Documents\ACDOT_TSMO\Sigal Design\an01\signal_09-0129\0129-06-09\0129_sm.ei.e-yyyymmdd.dgn jtp:parson

**PEDESTRIAN DETECTOR ASSIGNMENT
PROGRAMMING DETAIL**
(program controller as shown below)

FROM MAIN MENU PRESS '7' (DETECTORS), THEN '2'
(PEDESTRIAN DETECTOR ASSIGNMENTS). PRESS '+'
UNTIL PED DETECTOR #4 IS REACHED.

```

PED DETECTOR #4 SETTINGS (+/- DET)
PHASE#      :12345678910111213141516
PHASES ASSIGNED : X X
SETTING:                (Y/N)
ENABLE DETECTOR.....Y
ENABLE LOGGING.....Y
ENABLE DIAGNOSTICS.....N
RECALL IF FAILED.....Y
MAX CALLS/MINUTE (0-255).....255
MAX CALLS/DIAG PERIOD (0-255).....0
MAX OCCUPANCY % (0-100%).....100
    
```

FROM MAIN MENU PRESS '7' (DETECTORS), THEN '2'
(PEDESTRIAN DETECTOR ASSIGNMENTS). PRESS '+'
UNTIL PED DETECTOR #8 IS REACHED.

```

PED DETECTOR #8 SETTINGS (+/- DET)
PHASE#      :12345678910111213141516
PHASES ASSIGNED : X X
SETTING:                (Y/N)
ENABLE DETECTOR.....Y
ENABLE LOGGING.....Y
ENABLE DIAGNOSTICS.....N
RECALL IF FAILED.....Y
MAX CALLS/MINUTE (0-255).....255
MAX CALLS/DIAG PERIOD (0-255).....0
MAX OCCUPANCY % (0-100%).....100
    
```

PED PROGRAMMING COMPLETE

OVERLAP PROGRAMMING DETAIL
(program controller as shown below)

FROM MAIN MENU PRESS '8' (OVERLAPS), THEN
'1' (VEHICLE OVERLAP SETTINGS).

```

PAGE 1: VEHICLE OVERLAP 'A' SETTINGS
PHASE#      :12345678910111213141516
VEH OVL PARENTS: X
VEH OVL NOT VEH:
VEH OVL NOT PED:
VEH OVL GRN EXT:
STARTUP COLOR: - RED - YELLOW - GREEN
FLASH COLORS: - RED - YELLOW X GREEN
SELECT VEHICLE OVERLAP OPTIONS: (Y/N)
FLASH YELLOW IN CONTROLLER FLASH?...N
GREEN EXTENSION (0-255 SEC).....0
YELLOW CLEAR (0=PARENT,3-25.5 SEC)..0.0
RED CLEAR (0=PARENT,0.1-25.5 SEC)..0.0
OUTPUT AS PHASE # (0=NONE, 1-16)....0
    
```

← NOTICE GREEN FLASH

PRESS '+' TWICE

```

PAGE 1: VEHICLE OVERLAP 'C' SETTINGS
PHASE#      :12345678910111213141516
VEH OVL PARENTS: X
VEH OVL NOT VEH:
VEH OVL NOT PED:
VEH OVL GRN EXT:
STARTUP COLOR: - RED - YELLOW - GREEN
FLASH COLORS: - RED - YELLOW X GREEN
SELECT VEHICLE OVERLAP OPTIONS: (Y/N)
FLASH YELLOW IN CONTROLLER FLASH?...N
GREEN EXTENSION (0-255 SEC).....0
YELLOW CLEAR (0=PARENT,3-25.5 SEC)..0.0
RED CLEAR (0=PARENT,0.1-25.5 SEC)..0.0
OUTPUT AS PHASE # (0=NONE, 1-16)....0
    
```


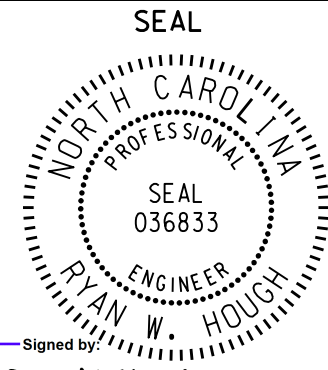
← NOTICE GREEN FLASH

OVERLAP PROGRAMMING COMPLETE

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 09-0129
DESIGNED: May 2025
SEALED: 06-19-25
REVISED: N/A

Electrical Detail - Sheet 2 of 2

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

	Sr 1725 (University Parkway) at 14th Street		
	Division 9 Forsyth County Winston-Salem	PLAN DATE: May 2025 REVIEWED BY:	
REVISIONS	INIT.	DATE	Signed by: <i>Ryan W. Hough</i> 430202FA202543 06/19/2025 SIGNATURE DATE
SIG. INVENTORY NO. 09-0129			