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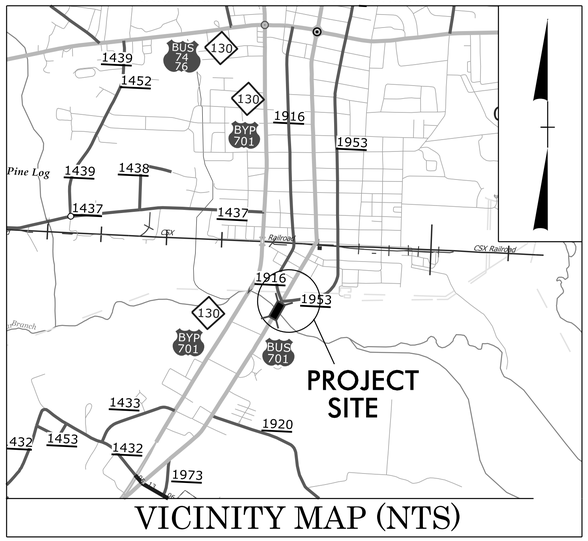
09/08/99

TIP PROJECT: HN-0023

CONTRACT: DF00540

See Sheet 1A For Index of Sheets



VICINITY MAP (NTS)

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

COLUMBUS COUNTY

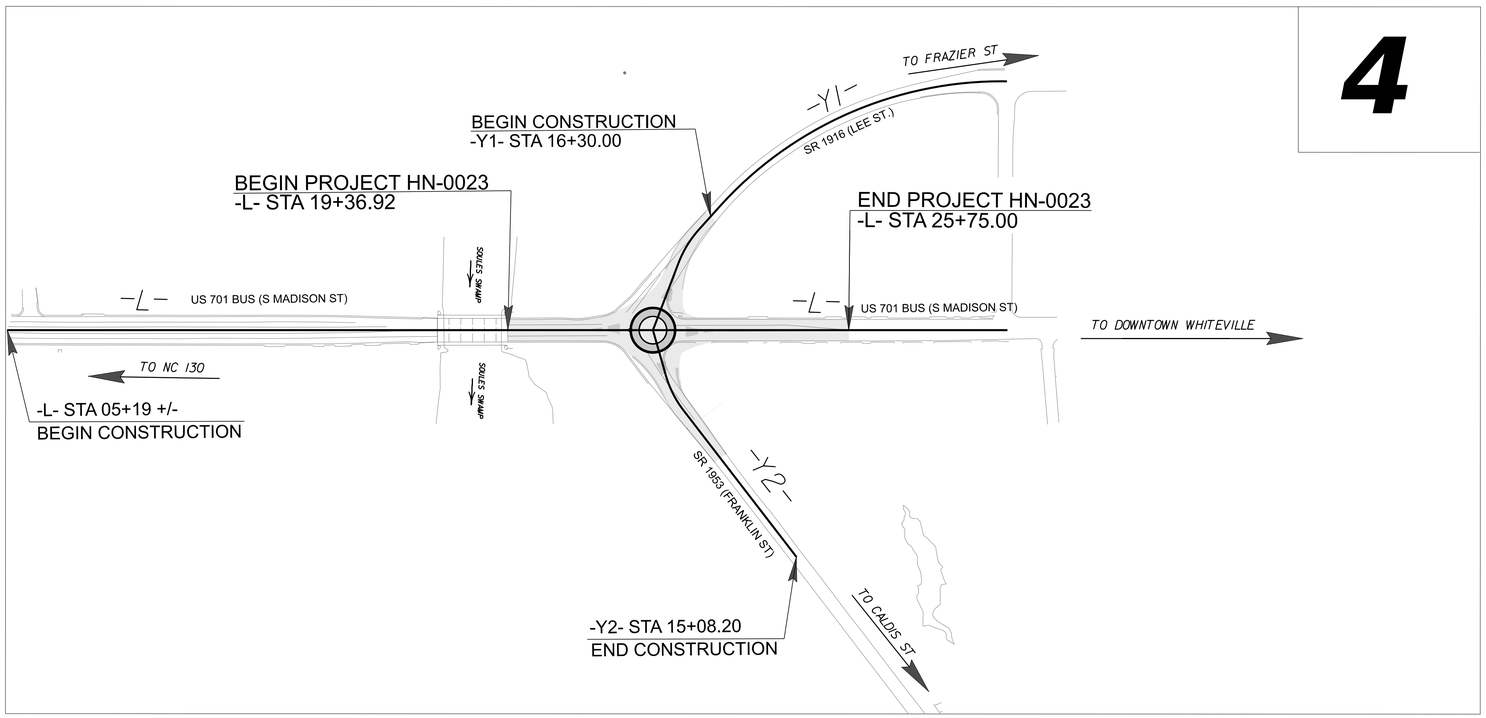
LOCATION: *US 701 BUS. (MADISON ST.) AT SR 1916 (LEE ST.) AND SR 1953 (FRANKLIN ST.)*

TYPE OF WORK: *GRADING, PAVING, AND DRAINAGE*

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HN-0023	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
51173.1.1	5117301	P.E.
51173.2.1	5117301	R/W
51173.2.2	5117301	UTIL.
51173.3.1	5117301	CONSTR.

FINAL CONTRACT PACKAGE PLAN SET
STAGE 4 PLANS (4RD1)



4

NAD 83/NA 2011

THIS PROJECT IS WITHIN MUNICIPAL BOUNDARIES OF THE CITY OF WHITEVILLE.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2026 = 15,955
ADT 2046 = 17,500
K = 9 %
D = 62.5%
T = 6 % *
V = 50 MPH
* TTST =2% DUAL 4%
FUNC CLASS =
MINOR ARTERIAL
REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT HN-0023 = 0.121 MILES

TOTAL LENGTH OF PROJECT HN-0023 = 0.121 MILES

Prepared in the Office of:
KCI ASSOCIATES OF N.C., P.A.
4800 Falls of Neuse Road, Suite 200
Raleigh, NC 27609
Phone (919) 783-9214
NC Firm License No: C-0764

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: JANUARY 28, 2025

LETTING DATE: FEBRUARY 18, 2026

BARRY C. SMITH, P.E.
PROJECT ENGINEER

TYLER M. KRAUSS, P.E.
PROJECT DESIGN ENGINEER

NCDOT CONTACT: CRAIG FREEMAN, P.E.
DIVISION 6 PROJECT MANAGER

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL 033860 ENGINEER JOHN M. YOUNG

Signed by: 11/19/2025 P.E.
SIGNATURE

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 034375 ENGINEER BARRY C. SMITH

DocuSigned by: Barry Smith 11/17/2025 P.E.
SIGNATURE

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

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5/26/20

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1 THRU 2A-2	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-1 THRU 2B-3	ROADWAY DETAILS
2C-1 THRU 2C-10	SPECIAL DETAILS
3B-1	ROADWAY SUMMARIES
3D-1	DRAINAGE SUMMARIES
4 THRU 5	PLAN AND PROFILE SHEETS
RW-1 THRU RW-4	SURVEY CONTROL, EXISTING CENTERLINES, RIGHT OF WAY, EASEMENT AND PROPERTY TIES
TMP-1 THRU TMP-15	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-04	PAVEMENT MARKING PLANS
EC-1 THRU EC-7	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-05	SIGNING PLANS
CRP-1 THRU CRP-5	CABLE ROUTING PLANS
UC-1 THRU UC-05	UTILITIES CONSTRUCTION PLANS
UO-1 THRU UO-02	UTILITIES BY OTHERS PLANS
X-1 THRU X-1A	INDEX OF CROSS-SECTIONS & CROSS-SECTION SUMMARY SHEET
X-2 THRU X-12	CROSS-SECTIONS

GENERAL NOTES: 2024 SPECIFICATIONS
EFFECTIVE: 01-16-2024
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

SUBSURFACE DRAINS:

SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3 FOOT RADII OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

STREET TURNOUT:

STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE BRIGHTSPEED, BRUNSWICK EMC, CHARTER, CITY OF WHITEVILLE WATER & SEWER, DUKE ENERGY, FOCUS BROADBAND, NCDOT ITS.

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

CURB RAMPS

CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. CONSTRUCT ALL CURB RAMPS ACCORDANCE WITH STD 848.06.

EFF. 01-16-2024
REV.

2024 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Contracts Standards and Development Unit - N. C. Department of Transportation - Raleigh, N. C., Dated January 16, 2024 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.02	Method of Clearing - Method II
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
225.06	Method of Grading Sight Distance at Intersections
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation (Use Details in Lieu of Standards for Sheets 1 and 2 of 2)
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
654.01	Pavement Repairs
DIVISION 8 - INCIDENTALS	
815.02	Subsurface Drain
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.24	Frames and Narrow Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.37	Steel Grate and Frame
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.52	Precast Manhole - 4', 5' and 6' Diameter 12" thru 48" Pipe
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
846.02	Drop Inlet Installation in Expressway Gutter
848.01	Concrete Sidewalk (Use Detail in Lieu of Standard for Sheet 1 of 1)
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
848.06	Curb Ramp (Use Details in Lieu of Standards for Sheets 9 and 10 of 13)
852.01	Concrete Islands
852.07	Median Curb for Traffic Bearing Grated Drop Inlet for Use with 2'-9" Curb and Gutter (Use Detail in Lieu of Standard for Sheet 1 of 1)
876.02	Guide for Rip Rap at Pipe Outlets
DIVISION 14 - LIGHTING	
1409.01	Electrical Duct

REVISIONS

HN-0023
4RD1 | 1A

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

ROADWAY DESIGN ENGINEER

11/17/2025

PREPARED BY

KCI ASSOCIATES OF N.C., P.A.
4000 Falls of Neuse Road, Suite 200
Raleigh, NC 27609-6270
Phone (919) 783-9214
NC Firm License No: C-0764

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

05/29/25

HN-0023 | 4RD1 | 1B

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) — EIP
- Computed Property Corner
- Existing Concrete Monument (ECM) — ECM
- Parcel / Sequence Number — 123
- Existing Fence Line
- 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
- Potential Contamination Area: Soil — S
- Known Contamination Area: Water — W
- Potential Contamination Area: Water — W
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign — S
- Well — W
- 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
- Proposed Lateral, Tail, Head Ditch — FLOW
- False Sump

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — 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 — RW
- Existing Control of Access Line — CA
- Proposed Control of Access Line — CA
- Proposed ROW and CA Line — RW CA
- Existing Easement Line — E
- Proposed Temporary Construction Easement — E
- Permanent Construction Easement — PE
- 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
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard — 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 — S
- 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 — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole — HH
- 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 — T
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- 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 — W
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line Test Hole (SUE - LOS A)*
- U/G Water Line (SUE - LOS B)* — W
- U/G Water Line (SUE - LOS C)* — W
- U/G Water Line (SUE - LOS D)* — W
- Above Ground Water Line — A/G Water

TV:

- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- 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 — S
- 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.

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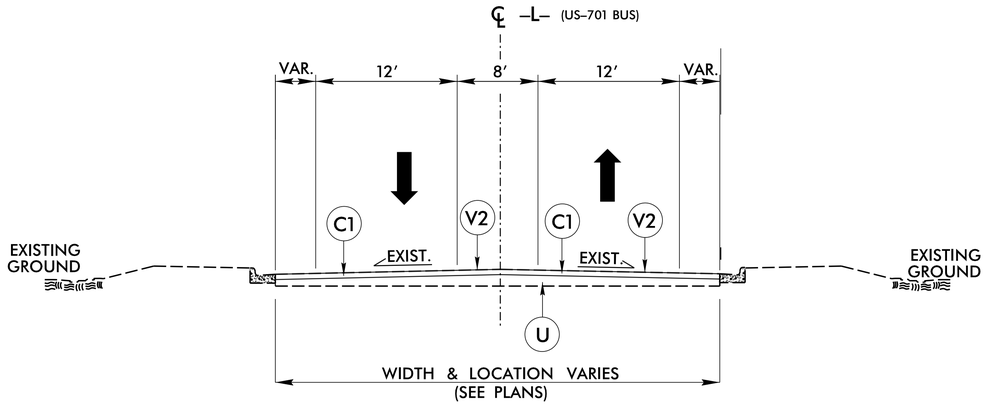
5/26/20

PAVEMENT SCHEDULE
(FINAL PAVEMENT DESIGN)

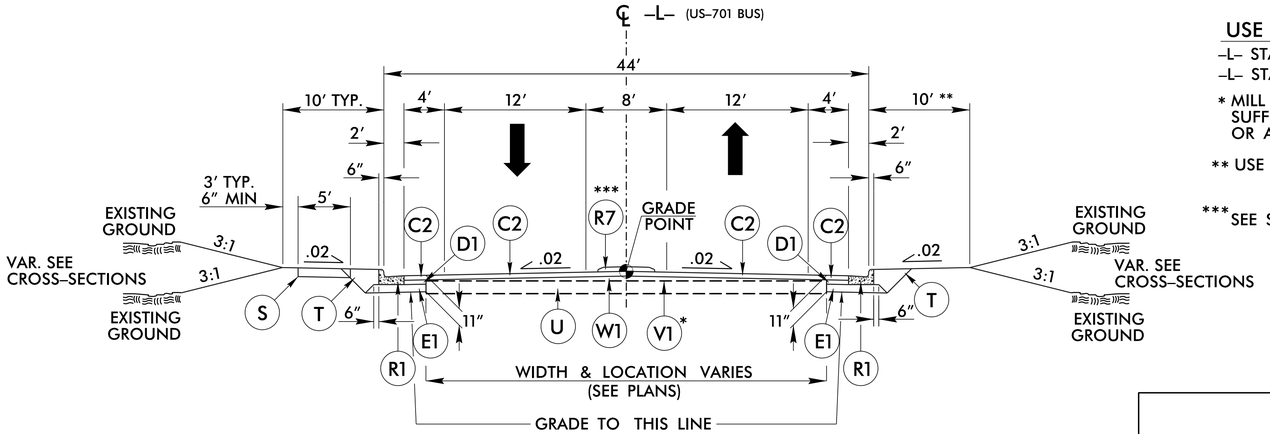
C1	PROP. APPROX. 1.5″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1″ DEPTH TO BE PLACED IN LAYERS NOT LESS THAT 1.5″ IN DEPTH OR GREATER THAN 2″ IN DEPTH.
C4	PROP. APPROX. 1.5″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
D1	PROP. APPROX. 4″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR.DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1″ DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2.5″ IN DEPTH OR GREATER THAN 4″ IN DEPTH.
E1	PROP. APPROX. 4″ ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1″ DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3″ IN DEPTH OR GREATER THAN 5.5″ IN DEPTH
J1	6″ AGGREGATE BASE COURSE
R1	2′-6″ CONCRETE CURB AND GUTTER
R2	2″ ROLLED CURB
R3	9″ JOINTED CONCRETE TRUCK APRON WITH WELDED WIRE MESH 15′ RADIAL JOINT SPACING
R4	9″ x 18″ CONCRETE CURB
R5	CONCRETE EXPRESSWAY GUTTER
R6	2′-9″ CONCRETE CURB AND GUTTER
R7	5″ MONOLITHIC CONCRETE ISLAND (KEYED-IN)
S	4″ CONC. SIDEWALK
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V1	INCIDENTAL MILLING
V2	1.5″ MILLING
W1	WEDGING

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE



TYPICAL SECTION NO. 1
USE FOR PAVEMENT MARKING CORRECTIONS

USE TYPICAL SECTION NO. 1
–L– STA. 19+36.92 (END BRIDGE) TO STA. 20+30.00
–L– STA. 23+95.00 TO STA. 25+75.00



TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2
–L– STA. 20+30.00 TO STA. 21+48.51
–L– STA. 22+68.51 TO STA. 23+95.00

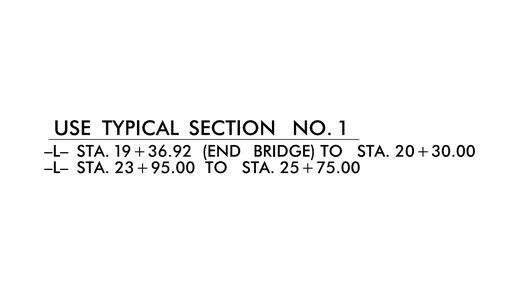
* MILL THE EXISTING PAVEMENT A MINIMUM OF 1.5″ SUFFICIENT TO PLACE AT LEAST 3″ S9.5C OR AS DIRECTED BY THE ENGINEER.

** USE 8′ FROM –L– STA. 23+35.00 TO STA 23+95.00 RT

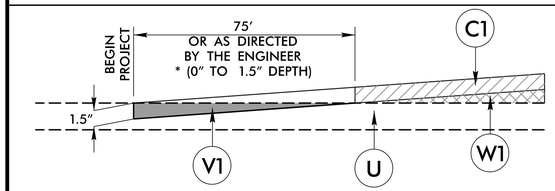
*** SEE SHEET 2B–1 FOR LIMITS OF R7.

NOTES:
1) –Y2– DRIVEWAY: USE ADJOINING ALIGNMENT PAVEMENT DESIGN
2) PARCEL 3 PARKING LOT: INSTALL 2″ S9.5B (AT AN AVERAGE RATE OF 110 LBS PER SQ. YD. IN EACH OF TWO LAYERS) AND 6″ ABC
3) ALL PAVEMENT EDGES NOT ADJACENT TO EXISTING CURB AND GUTTER SHALL BE SAWCUT.

CONTINGENCY SHALLOW UNDERCUT:
AT DISCRETION OF THE ENGINEER, IN AREAS OF TEMPORARY WIDENING AND PROPOSED WIDENING UNDERCUT THE EXISTING GROUND A MINIMUM 2′ BELOW SUBGRADE AND REPLACE WITH SELECT GRANULAR MATERIAL ON GEOTEXTILE FABRIC.



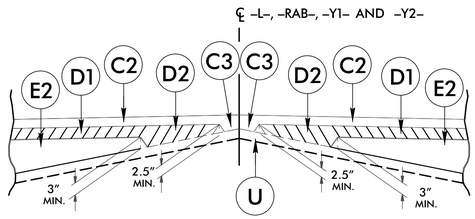
INSET A
USE WITH TYPICAL SECTION NO. 2
WHERE 2′–9″ C&G IS PRESENT
–L– STA. 22+68.51 LT TO STA. 22+96.29 LT



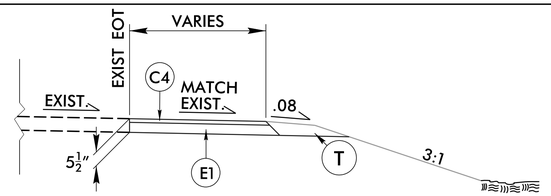
NOTE: MIRROR FOR END PROJECT\CONSTR.

* MILL DEPTH AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER

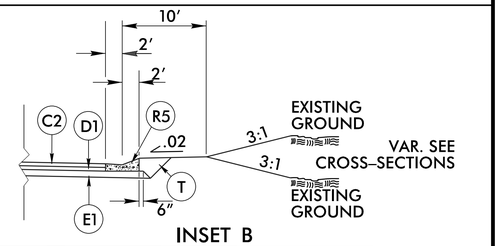
PAVEMENT MILLING DETAIL KEY–IN (TIE–IN)
–Y1– STA. 16+30 TO STA. 17+05
–Y2– STA. 12+00 TO STA. 12+75



DETAIL SHOWING METHOD OF WEDGING (W1)



TEMPORARY WIDENING
–Y1– STA. 17+10 RT TO –L– STA. 20+95 LT
–L– STA. 20+59 RT TO –Y2– STA. 11+80 RT



INSET B
USE WITH TYPICAL SECTION NO. 2
WHERE EXPRESSWAY GUTTER IS PRESENT
–L– STA. 21+21.04 RT TO STA. 21+48.51 RT
–L– STA. 22+68.51 RT TO STA. 23+25.31 RT

REVISIONS

HN-0023
4RD1 | 2A-1

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 034375 ENGINEER
11/26/2025

PAVEMENT DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 044590 ENGINEER
11/26/2025

PREPARED BY
KCI ASSOCIATES OF N.C., P.A.
4000 Falls of Neuse Road, Suite 200
Raleigh, NC 27609-6270
Phone (919) 783-9214
NC Firm License No: C-0764

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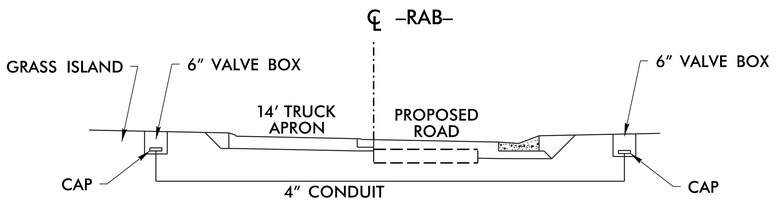
Docusign Envelope ID: 23728C57-E99F-43BC-86DA-35BE02245BD7

5/26/20

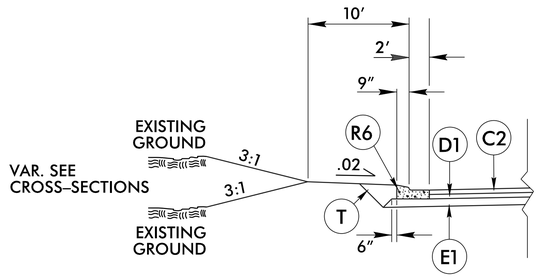
PAVEMENT SCHEDULE

C1	1.5″ TYPE S9.5C	R1	2′-6″ C&G	U	EXISTING PAVEMENT
C2	3″ TYPE S9.5C	R2	2″ ROLLED CURB	V1	INCIDENTAL MILLING
C3	VAR. DEPTH S9.5C	R3	9″ JC TRUCK APRON w/ WELDED WIRE MESH	V2	1.5″ MILLING
C4	1.5″ S9.5B	R4	9″ x 18″ CONC. CURB	W1	WEDGING
D1	4″ TYPE I19.0C	R5	EXPRESSWAY GUTTER		
D2	VAR. DEPTH I19.0C	R6	2′-9″ C&G		
E1	4″ TYPE B25.0C	R7	5″ MONO. ISLAND		
E2	VAR. DEPTH B25.0C	S	4″ CONC. SIDEWALK		
J1	6″ ABC	T	EARTH MATERIAL		

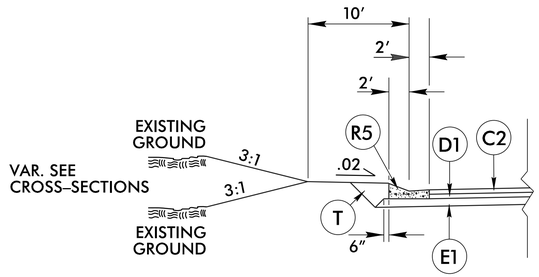


4″ PVC IRRIGATION CONDUIT DETAIL
(SEE SPECIAL PROVISIONS)

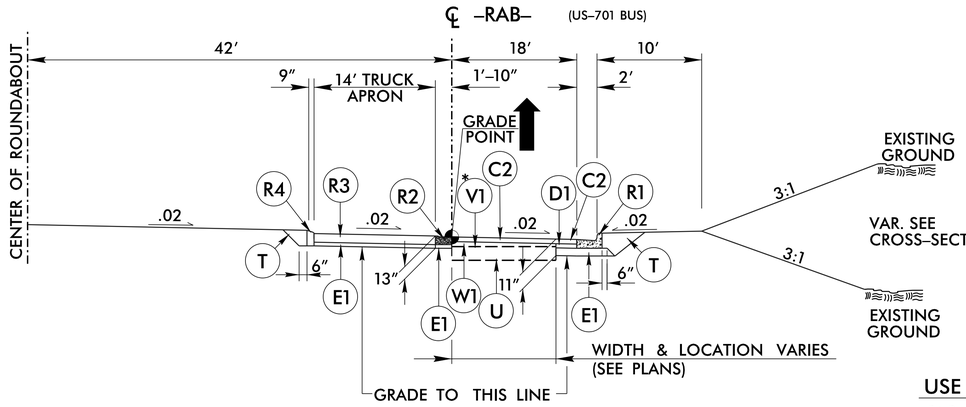
NOTES:
1) USE 4″ SDR21 PVC CONDUIT OR AS DIRECTED BY RESIDENT ENGINEER.
2) FOR VALVE BOX DETAILS, SEE UTILITY CONSTRUCTION PLANS.
3) CONTRACTOR WILL DRILL/BORE 4″ CONDUIT SLEEVE TO ACCOMODATE IRRIGATION TO ROUNDABOUT CENTER PER RESIDENT ENGINEER DIRECTION.



INSET D
USE WITH TYPICAL SECTION NO. 4 WHERE 2′–9″ C&G IS PRESENT
–Y1– STA. 17+76.29 LT TO STA. 18+10.77 LT



INSET E
USE WITH TYPICAL SECTION NO. 5 WHERE EXPRESSWAY GUTTER IS PRESENT
–Y2– STA. 10+43.00 LT TO STA. 10+81.10 LT

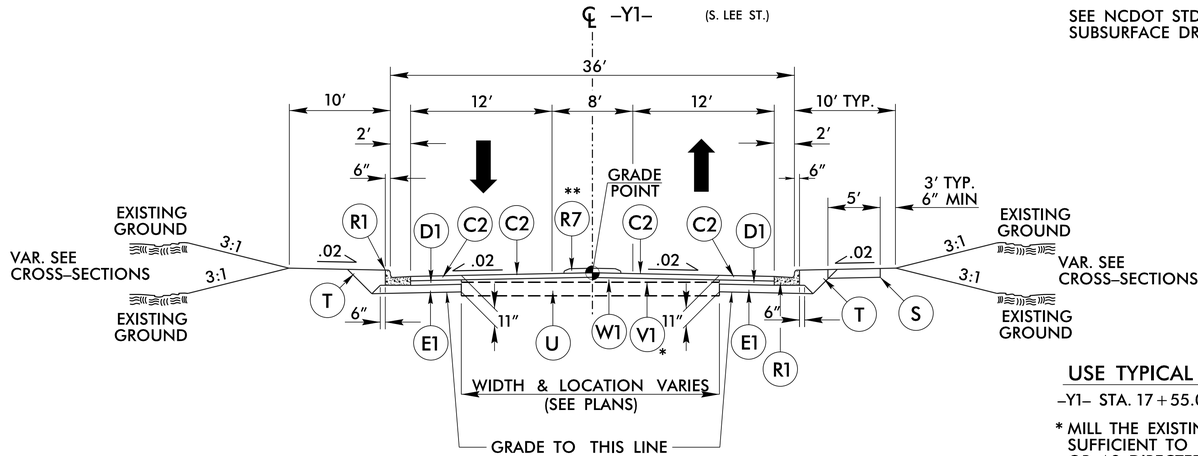


TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3
–RAB– STA. 10+00.00 TO STA. 12+70.18

* MILL THE EXISTING PAVEMENT A MINIMUM OF 1.5″ SUFFICIENT TO PLACE AT LEAST 3″ S9.5C OR AS DIRECTED BY THE ENGINEER.

SEE NCDOT STD. 815.02 FOR INSTALLATION OF SUBSURFACE DRAIN IN ROUNDABOUT

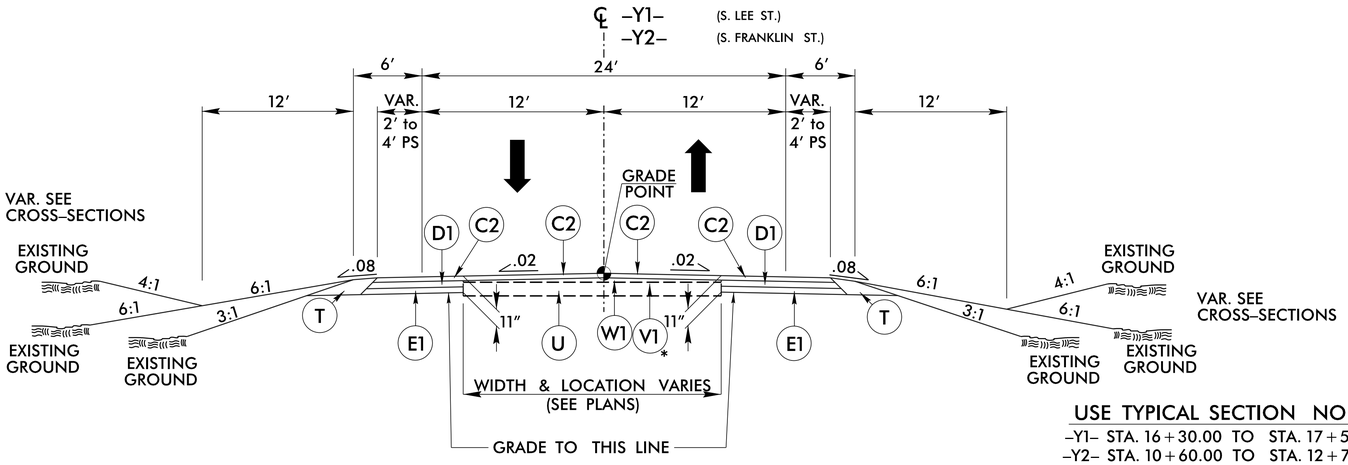


USE TYPICAL SECTION NO. 4
–Y1– STA. 17+55.00 TO STA. 18+10.77

* MILL THE EXISTING PAVEMENT A MINIMUM OF 1.5″ SUFFICIENT TO PLACE AT LEAST 3″ S9.5C OR AS DIRECTED BY THE ENGINEER.

** SEE SHEET 2B–1 FOR LIMITS OF R7 ON –Y1–

TYPICAL SECTION NO. 4



TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5
–Y1– STA. 16+30.00 TO STA. 17+55.00
–Y2– STA. 10+60.00 TO STA. 12+75.00

* MILL THE EXISTING PAVEMENT A MINIMUM OF 1.5″ SUFFICIENT TO PLACE AT LEAST 3″ S9.5C OR AS DIRECTED BY THE ENGINEER.

** SEE SHEET 2B–1 FOR LIMITS OF R7 ON –Y1–

REVISIONS

HN-0023
4RD1 | 2A-2

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 034375 ENGINEER
11/26/2025

PAVEMENT DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 044590 ENGINEER
11/26/2025

PREPARED BY
KCI ASSOCIATES OF N.C., P.A.
4000 Falls of Neuse Road, Suite 200
Raleigh, NC 27609-6270
Phone (919) 783-9214
NC Firm License No: C-0764

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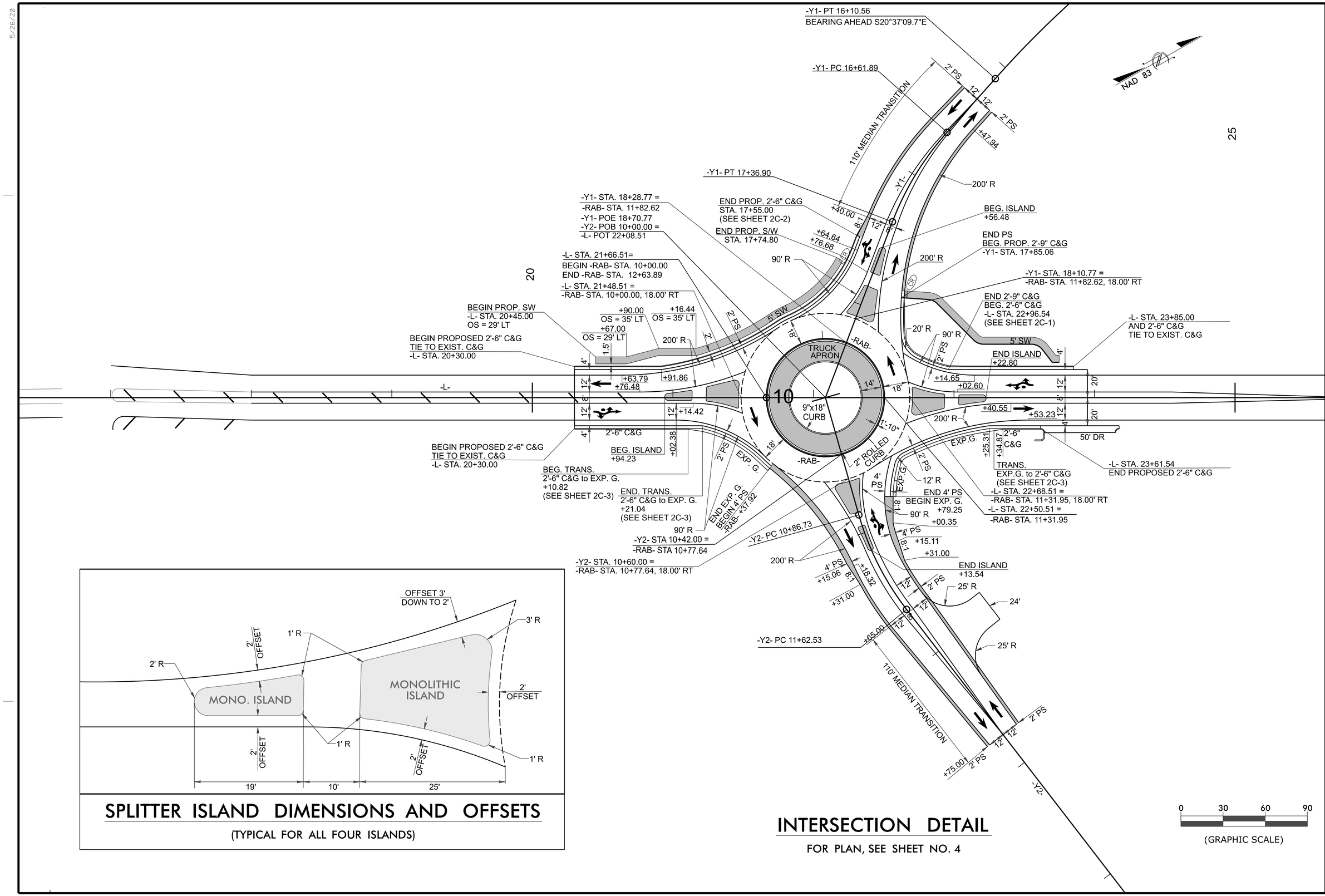
5/26/20



SPLITTER ISLAND DIMENSIONS AND OFFSETS

(TYPICAL FOR ALL FOUR ISLANDS)

INTERSECTION DETAIL

FOR PLAN, SEE SHEET NO. 4

0 30 60 90

(GRAPHIC SCALE)

HN-0023

4RD1 | 2B-1

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 036437 BARRY C. SMITH

11/17/2025

PREPARED BY

KCI ASSOCIATES OF N.C., P.A.
4000 Falls of Neuse Road, Suite 200
Raleigh, NC 27609-6270
Phone (919) 783-9214
NC Firm License No: C-0704

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REVISIONS

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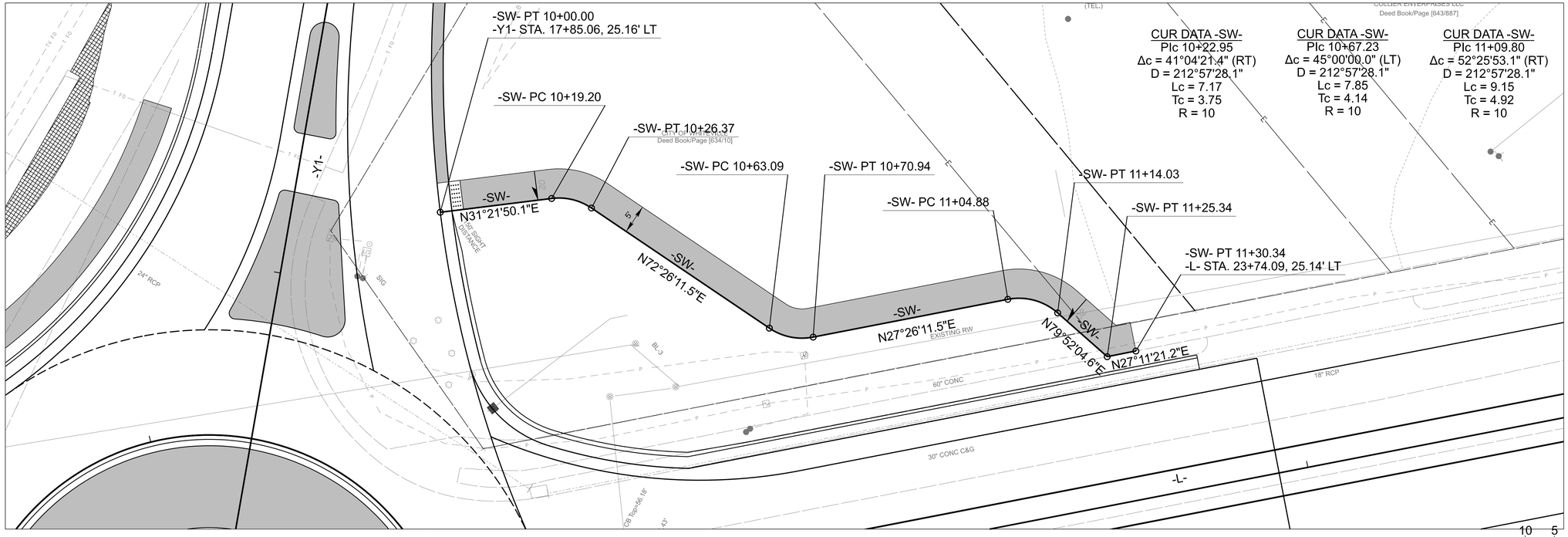

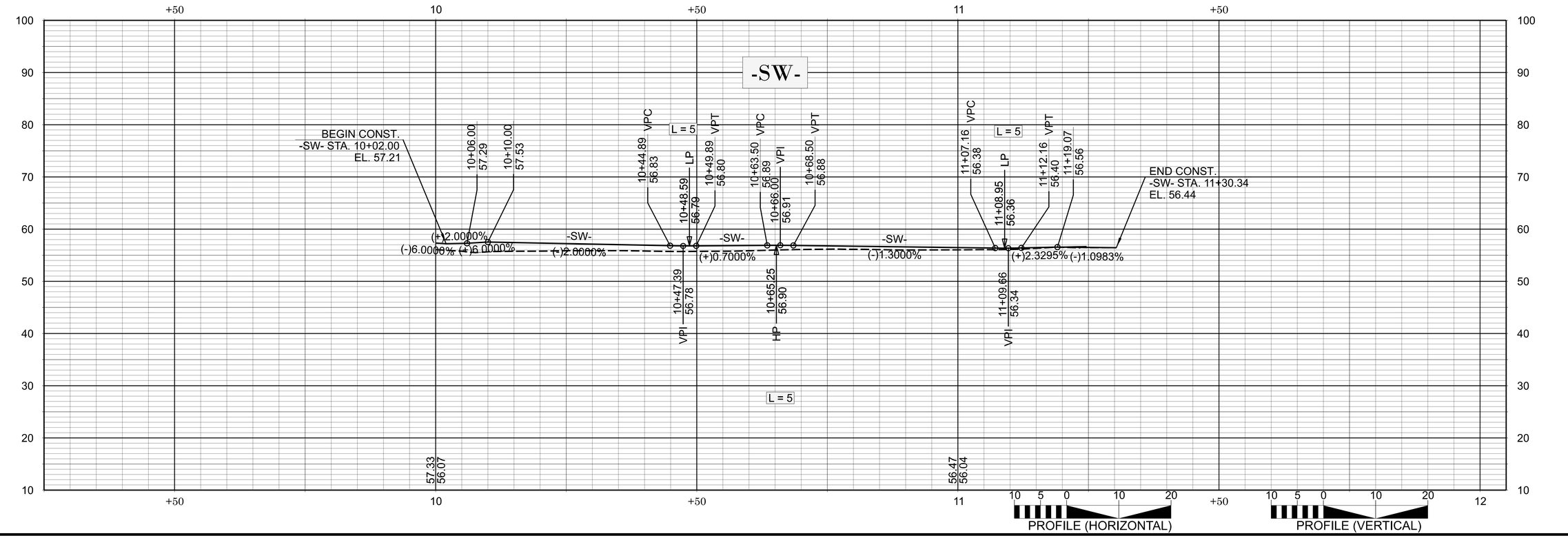

HN-0023

4RD1 | 2B-2

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 036437 BARRY C. SMITH

Digitally signed by Barry C. Smith

11/17/2025

PREPARED BY

KCI ASSOCIATES OF N.C., P.A.
4000 Falls of Neuse Road, Suite 200
Raleigh, NC 27609-6270
Phone (919) 783-9214
NC Firm License No: C-0764

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REVISIONS

5/26/20

LIGHTING AND ROUNDABOUT ELECTRICAL CONDUIT DETAIL

SEE UO-02 FOR ADDITIONAL CONDUIT INFORMATION

5150000000-E: ELECTRICAL DUCT, SCH 40, 2"	215 LF
5150000000-E: ELECTRICAL DUCT, SCH 40, 4"	122 LF

INSTALLATION METHOD ABBREVIATIONS
BD BURIED
TL TRENCHLESS

-Y1- PT 16+10.56
BEARING AHEAD S20°37'09.7"E

-Y1- PC 16+61.89

-Y1- PT 17+36.90
BEARING AHEAD S41°41'20.2"E

-L- POT STA. 21+66.51 =
BEGIN -RAB- STA. 10+00.00
END -RAB- STA. 12+63.89

-L- POT 22+08.51
-Y1- POT 18+70.77
-Y2- POT 10+00.00
BEARING AHEAD S78°28'37.8"E

-Y2- PC 10+86.73

-Y2- PT 11+62.53
BEARING AHEAD N79°48'28.3"E

-Y2- POE 15+08.20
END CONSTRUCTION

-RAB-

-L-
N27°26'11.5"E

NAD 83
NA 2011

NOTES:
1) EXTEND CONDUIT 2FT OUT OF GROUND (OR AS RECOMMENDED BY THE ENGINEER) AND CAP EXPOSED CONDUIT ENDS.
2) USE STD. NO. 1409.01 FOR ELECTRICAL DUCT INSTALLATION. ALL WORK SHALL BE IN CONFORMANCE WITH DIVISION 14 OF THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, DATED JANUARY 2024.

HN-0023
4RD1 | 2B-3

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

PREPARED BY

KCI ASSOCIATES OF N.C., P.A.
4000 Falls of Neuse Road, Suite 200
Raleigh, NC 27609-6270
Phone (919) 783-9214
NC Firm License No: C-0704

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REVISIONS

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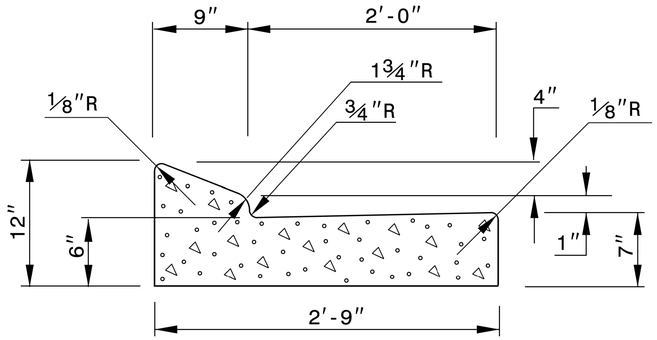
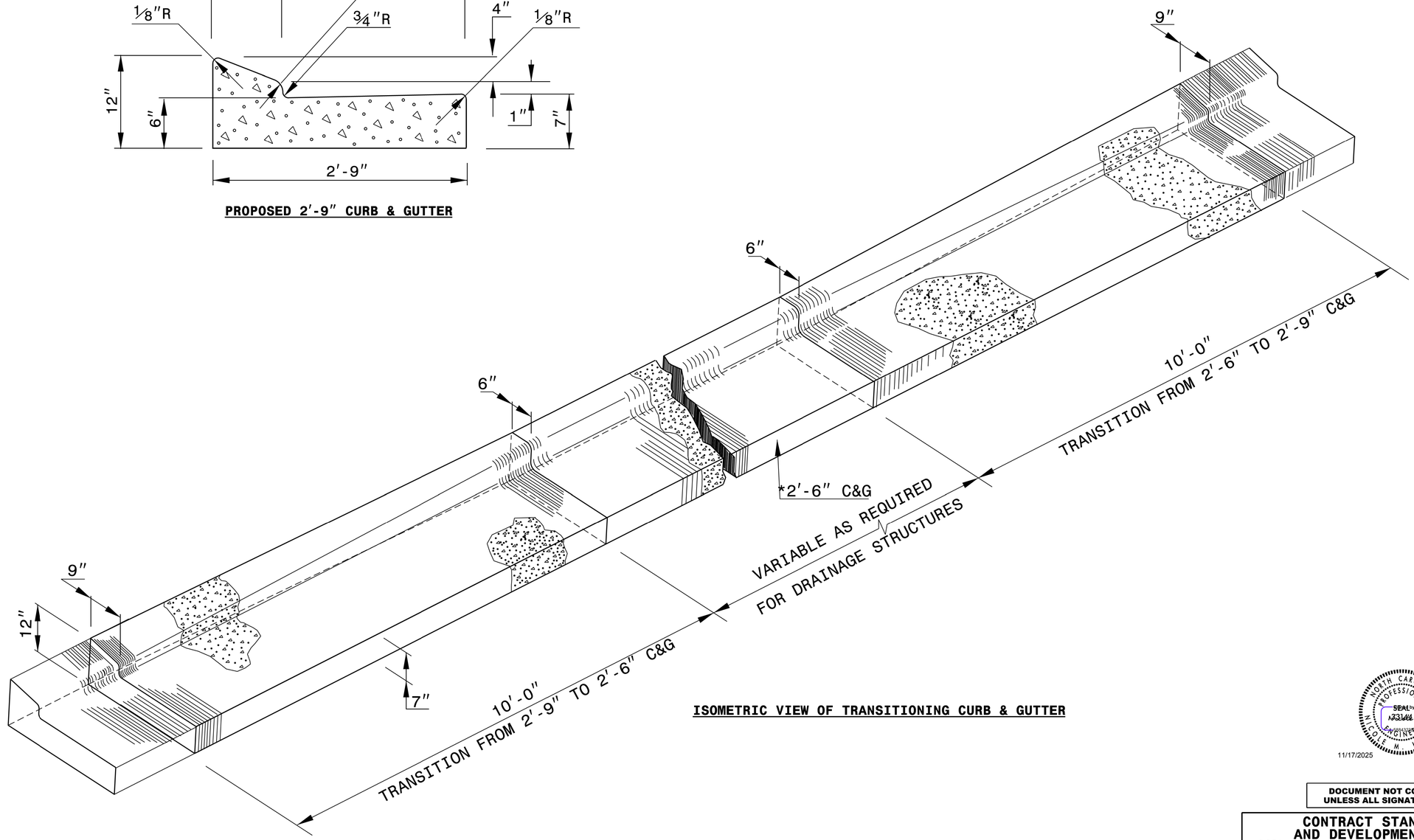
5/14/99

PROJECT REFERENCE NO.	SHEET NO.
HN-0023	2C-1

*NOTE: SEE STD. DWG. 846.01
FOR 2'-6" CURB AND GUTTER
INFORMATION.



PROPOSED 2'-9" CURB & GUTTER



ISOMETRIC VIEW OF TRANSITIONING CURB & GUTTER

NORTH CAROLINA PROFESSIONAL SEAL 033446 ENGINEER NICOLE M. HAWKINS

11/17/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

DETAIL OF 2'-9" TO 2'-6" CURB & GUTTER TRANSITION SECTION

ORIGINAL BY:_____ DATE:_____
MODIFIED BY:_____ DATE:_____
CHECKED BY:_____ DATE:_____
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5/14/99

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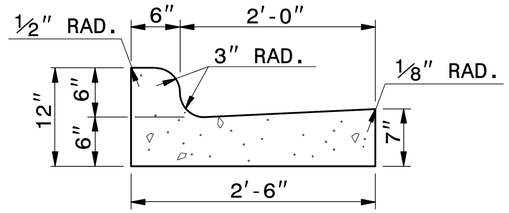
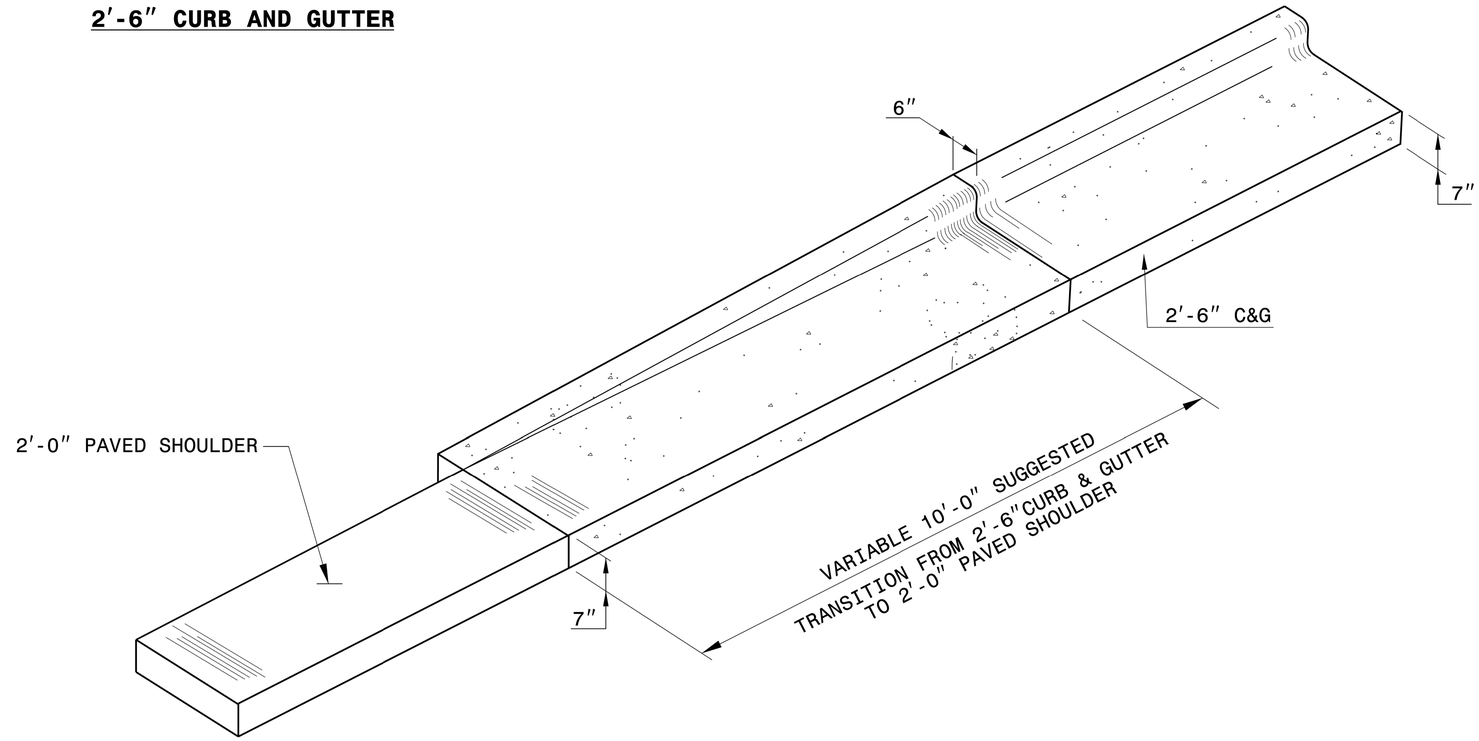
HN-0023	2C-2



2'-6" CURB AND GUTTER

*NOTE: SEE STD. DWG. 846.01 FOR GENERAL NOTES



ISOMETRIC VIEW OF TRANSITION

NORTH CAROLINA PROFESSIONAL SEAL 049121 ENGINEER NICOLE M. HACKLER

11/17/2025

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CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

DETAIL OF 10' TRANSITION FROM 2'-6"CURB & GUTTER TO 2'-0" PAVED SHOULDER

ORIGINAL BY: _____ DATE: _____
MODIFIED BY: rnbritt DATE: 04-13-2016
CHECKED BY: _____ DATE: _____
FILE SPEC.: details/nbritt/english/misc/c&g transition sections.dgn

10-MAR-2020 11:30
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jhowerton AT CSD-320965

Docusign Envelope ID: 225A0A00-71E2-434E-8A7A-0DF5581D6CBE

5/14/99

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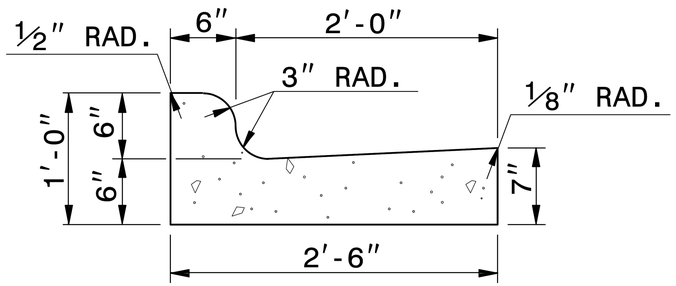
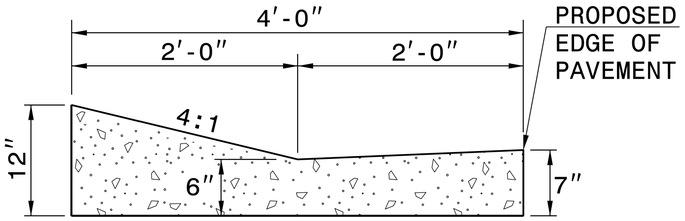
HN-0023	2C-3



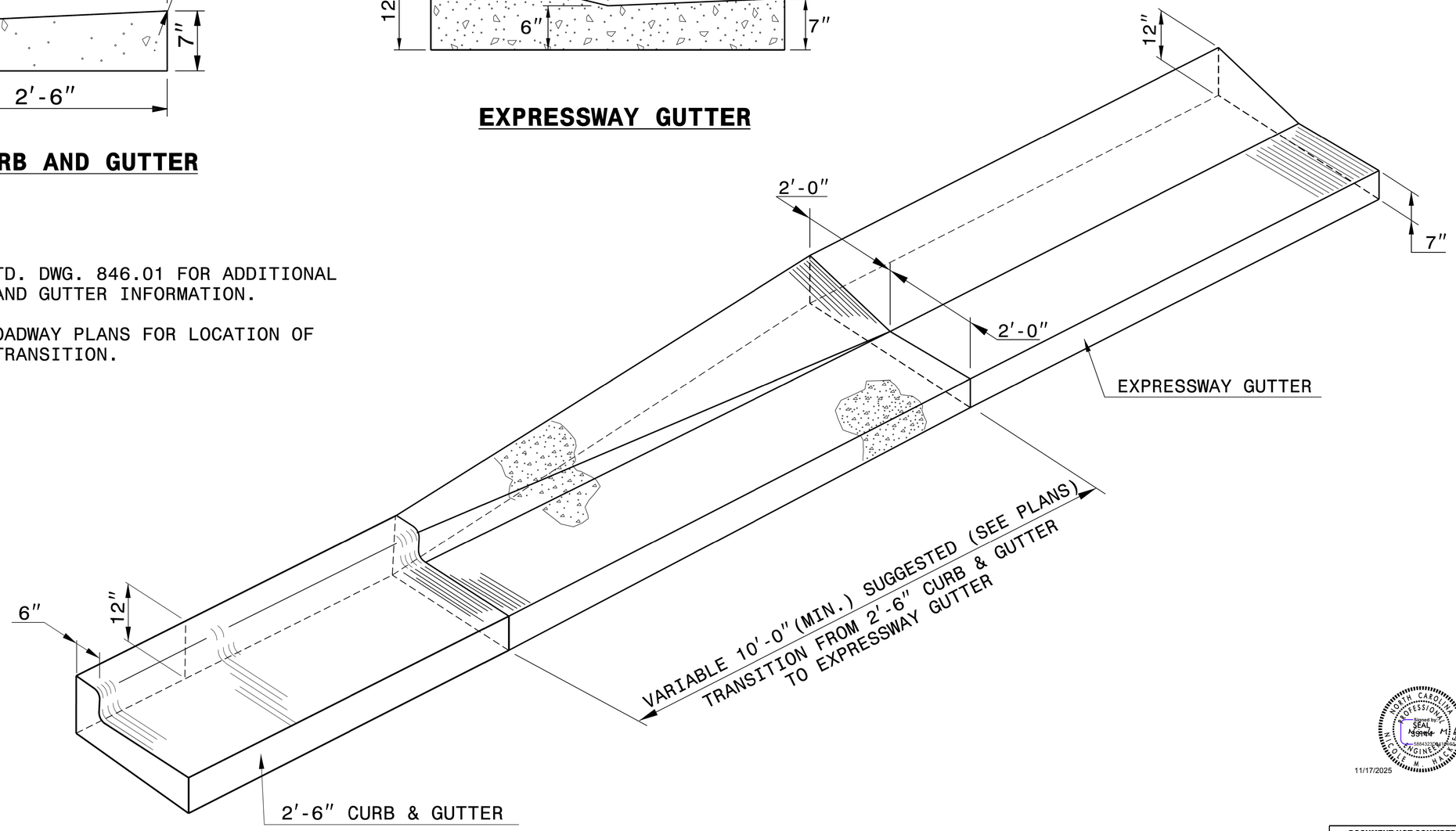
2'-6" CURB AND GUTTER



EXPRESSWAY GUTTER

NOTE: SEE STD. DWG. 846.01 FOR ADDITIONAL CURB AND GUTTER INFORMATION.

SEE ROADWAY PLANS FOR LOCATION OF CURB TRANSITION.



ISOMETRIC VIEW OF TRANSITION

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 038433 Signed by: Nicholas M. Haldeman

11/17/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

DETAIL OF 2'-6" CURB & GUTTER TO EXPRESSWAY GUTTER TRANSITION SECTION

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MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: w:usr/details/stand/cgtransit.dgn

05-OCT-2017 08:23
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jhowerton AT CSD-292595

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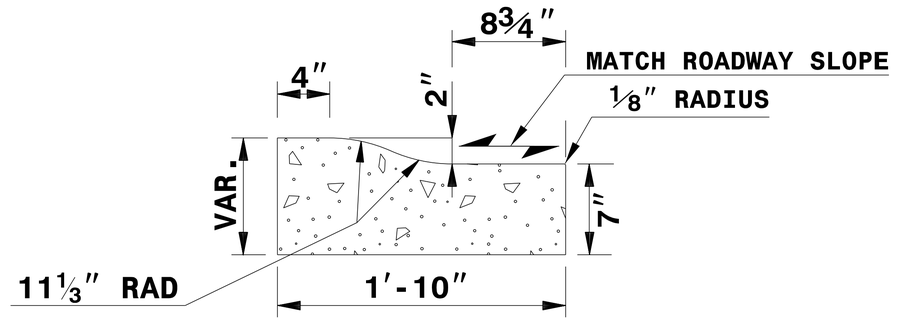

ROUNDABOUT TRUCK APRON CURB AND GUTTER

(2″ ROLLED CURB)

11/17/2025

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

DETAIL OF 2″ ROLLED CURB

ORIGINAL BY: R. KLUCKMAN DATE: 11/30/17
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: _____

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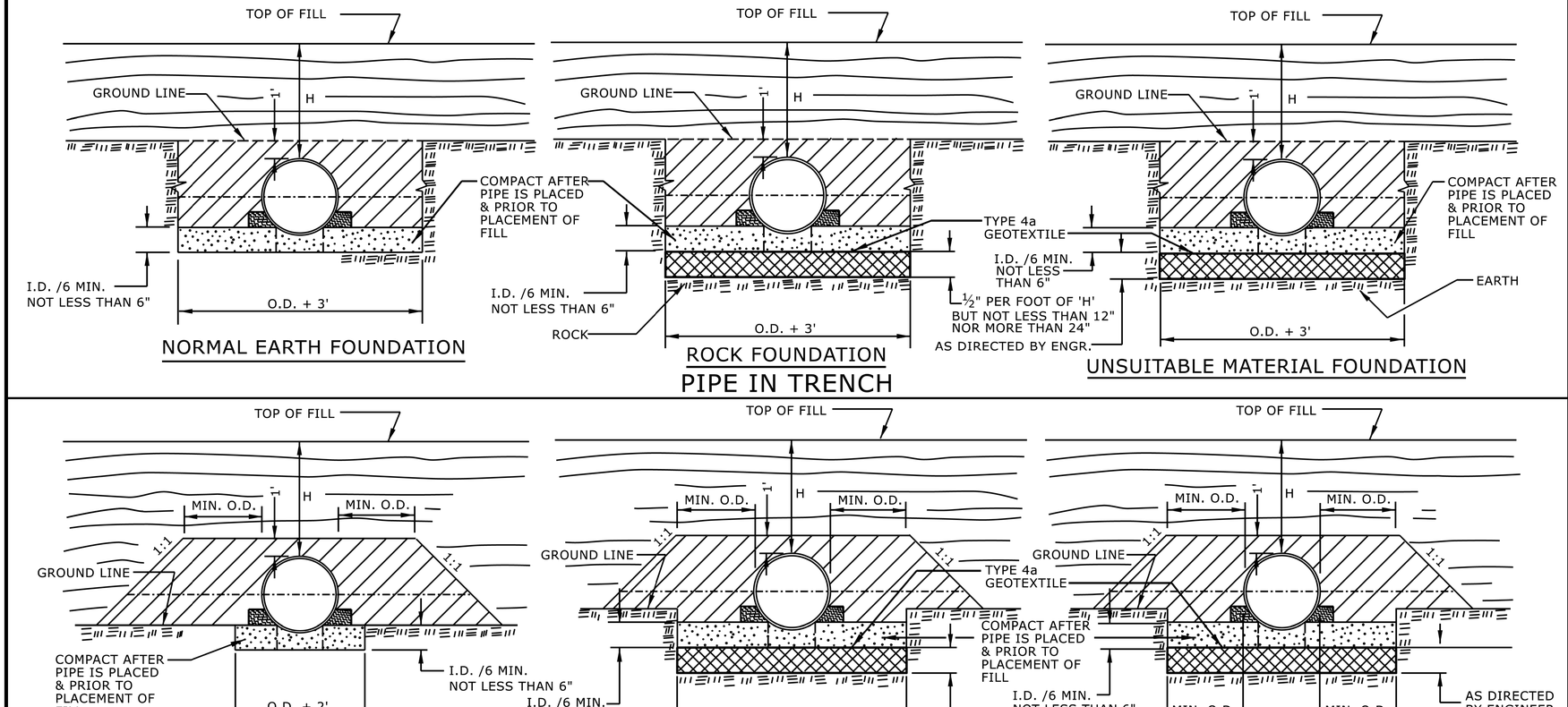

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

METHOD OF PIPE INSTALLATION

FLEXIBLE PIPE

SHEET 1 OF 2

300.01

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CONTRACTS STANDARDS AND DEVELOPMENT UNIT

Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

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MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

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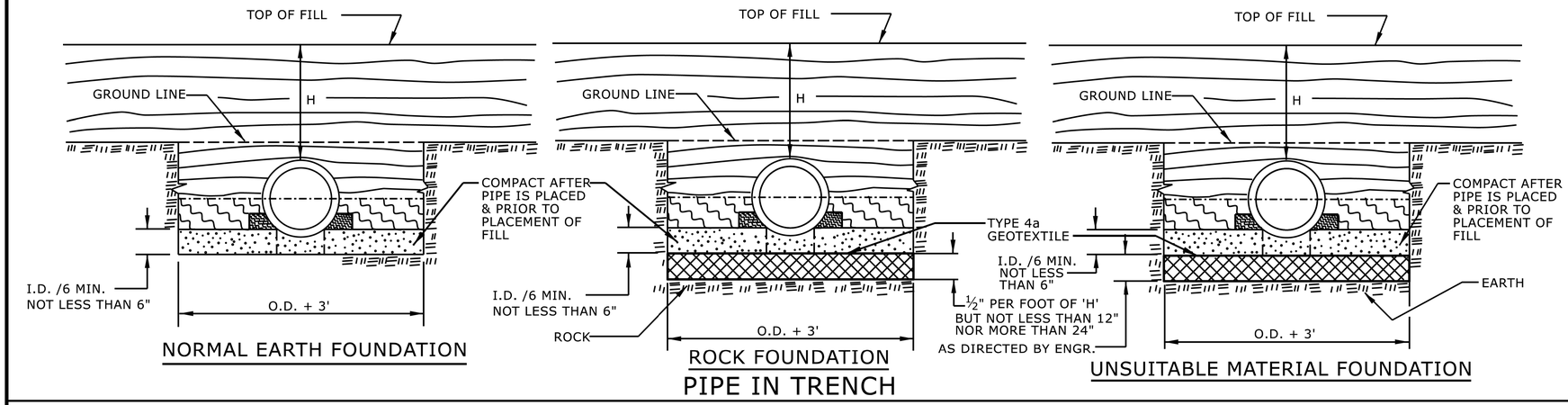
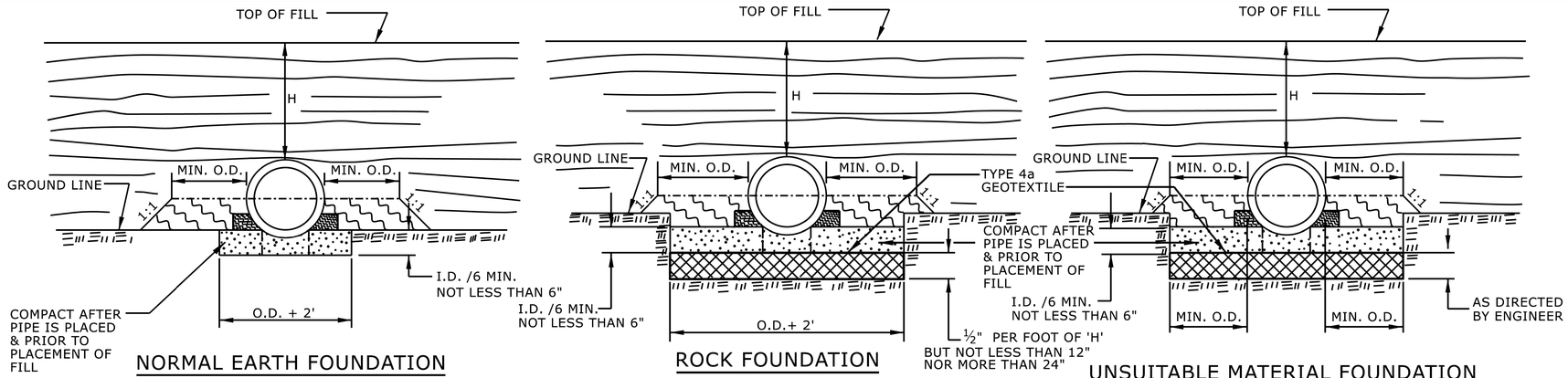
HN-0023	2C-6



PIPE IN TRENCH



PIPE ABOVE GROUND

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

METHOD OF PIPE INSTALLATION

RIGID PIPE

SHEET 2 OF 2

300.01

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CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

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MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
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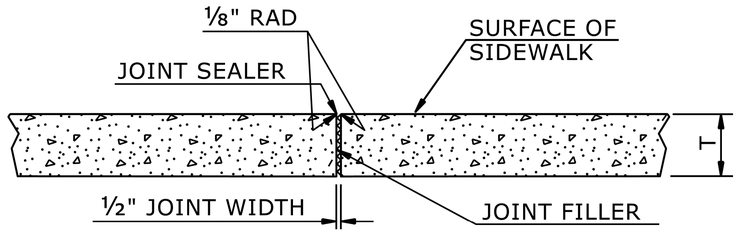
HN-0023	2C-7

NOTES:

CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

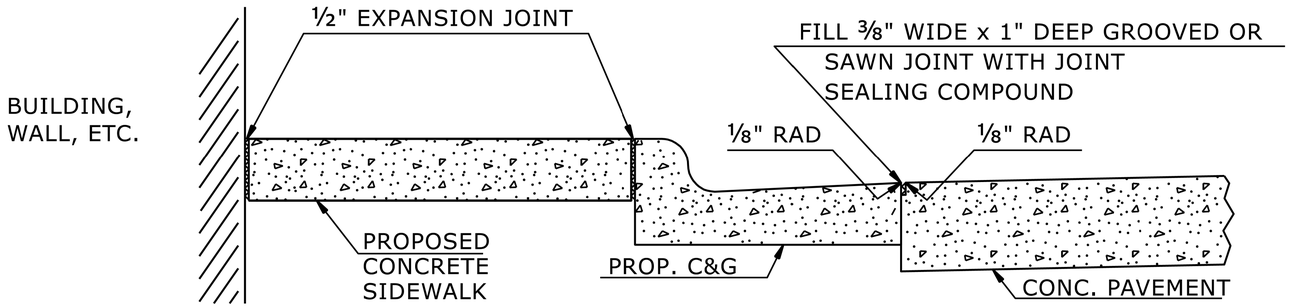
PLACE A GROOVE JOINT 1" DEEP WITH ⅛" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE ½" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A ½" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

SEE STD. DWG. 848.06 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



T = SIDEWALK THICKNESS

TRANSVERSE EXPANSION JOINT IN SIDEWALK



DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

CONCRETE SIDEWALK

SHEET 1 OF 1

848D01

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035144 NICOLE M. HACKETT
11/17/2025

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CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
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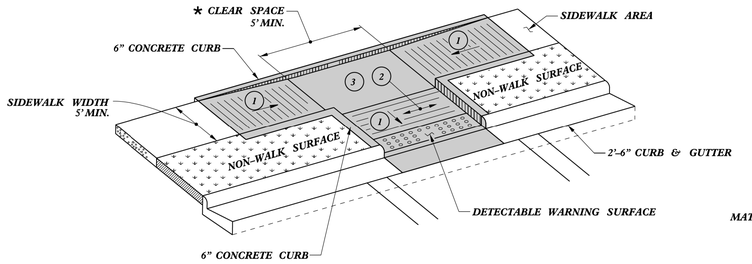
FILE SPEC.:

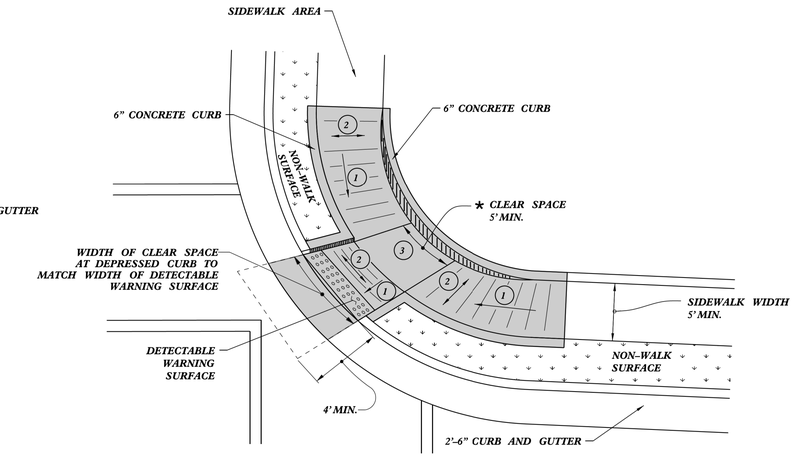
Docusign Envelope ID: 225A0A00-71E2-434E-8A7A-0DF5581D6CBE

PROJECT REFERENCE NO.	SHEET NO.
HN-0023	2C-8

* – *WHERE CLEAR SPACE IS CONSTRAINED ON TWO OR MORE SIDES, THE CLEAR SPACE SHALL BE 4'MINIMUM X 5'MINIMUM, WITH 5' PROVIDED IN THE DIRECTION OF THE PEDESTRIAN STREET CROSSING.*



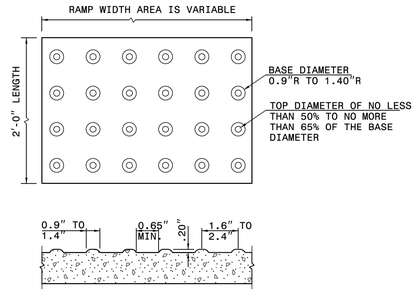
TYPE 3



TYPE 3 MODIFIED
INSTALLATION IN A RADIUS

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.

DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE

(1) *8.33% (12:1) MAX RAMP SLOPE*

(2) *CROSS SLOPE: 2.00%*

(3) *MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%.*

PAY LIMITS FOR 1 CURB RAMP

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
CURB RAMP
PARALLEL RAMP

SHEET 9 OF13

848D06

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033144 NICOLE M. HACKLER
11/17/2023

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CONTRACTS STANDARDS AND DEVELOPMENT UNIT
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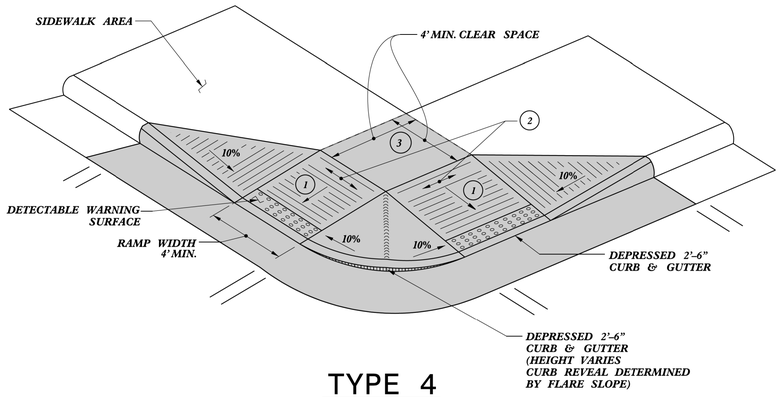
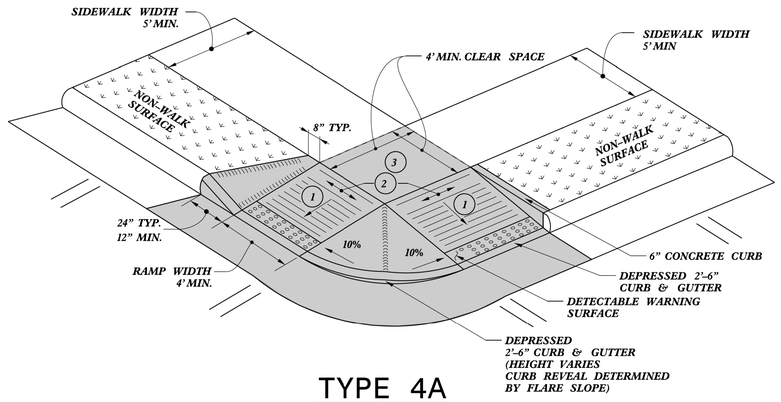
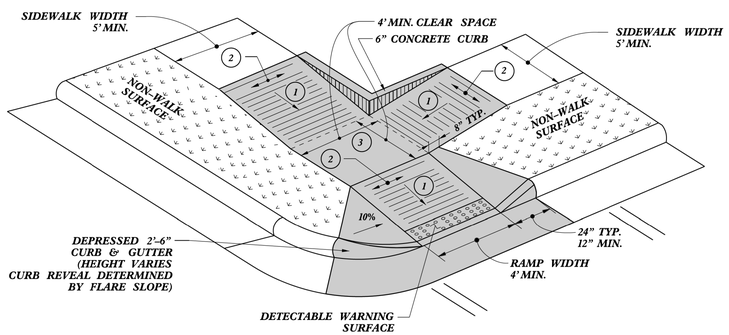
PROJECT REFERENCE NO.	SHEET NO.
HN-0023	2C-9



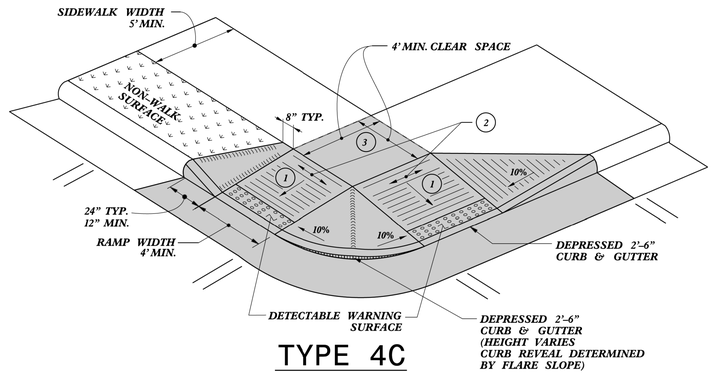
TYPE 4



TYPE 4A



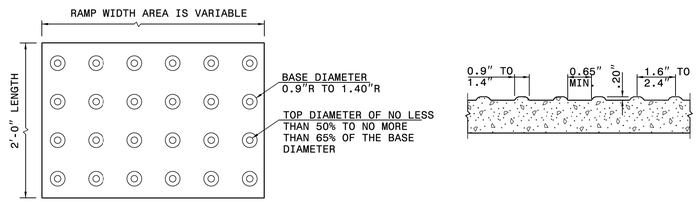
TYPE 4B



TYPE 4C

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.

DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE

1. 8.33% (12:1) MAX RAMP SLOPE
2. CROSS SLOPE: 2.00%
3. MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%.

PAY LIMITS FOR 1 OR 2 CURB RAMPS (CALCULATE BASED ON NUMBER OF SETS OF DETECTABLE WARNING SURFACES

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

CURB RAMP

SHARED LANDING

SEAL 033744 NORTH CAROLINA PROFESSIONAL ENGINEER NICOLE M. HACKLER
11/17/2023

SHEET 10 OF 13

848D06

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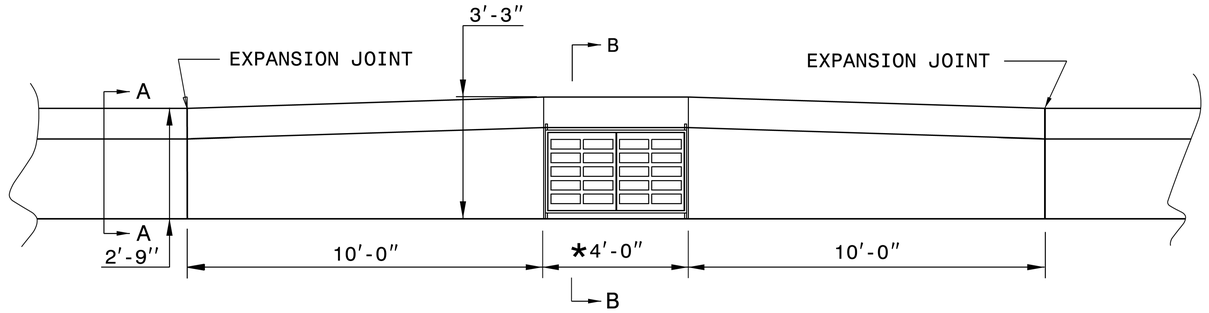
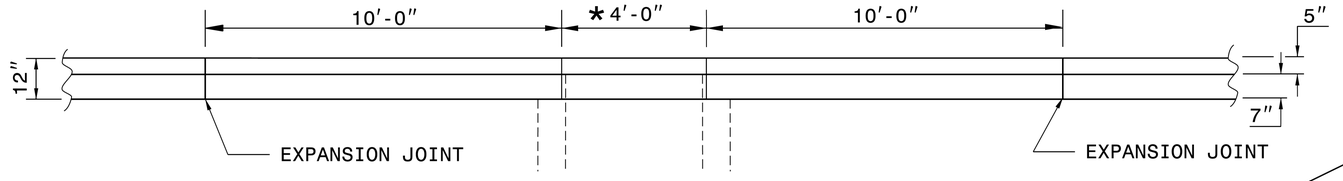
FILE SPEC.: special_details\nmhackler\848D0610.dgn

Docusign Envelope ID: 225A0A00-71E2-434E-8A7A-0DF5581D6CBE

PROJECT REFERENCE NO.	SHEET NO.
HN-0023	2C-10

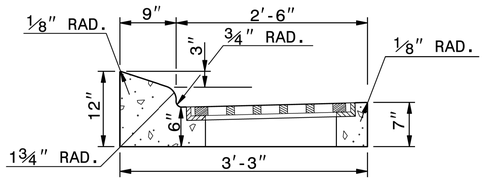


PLAN

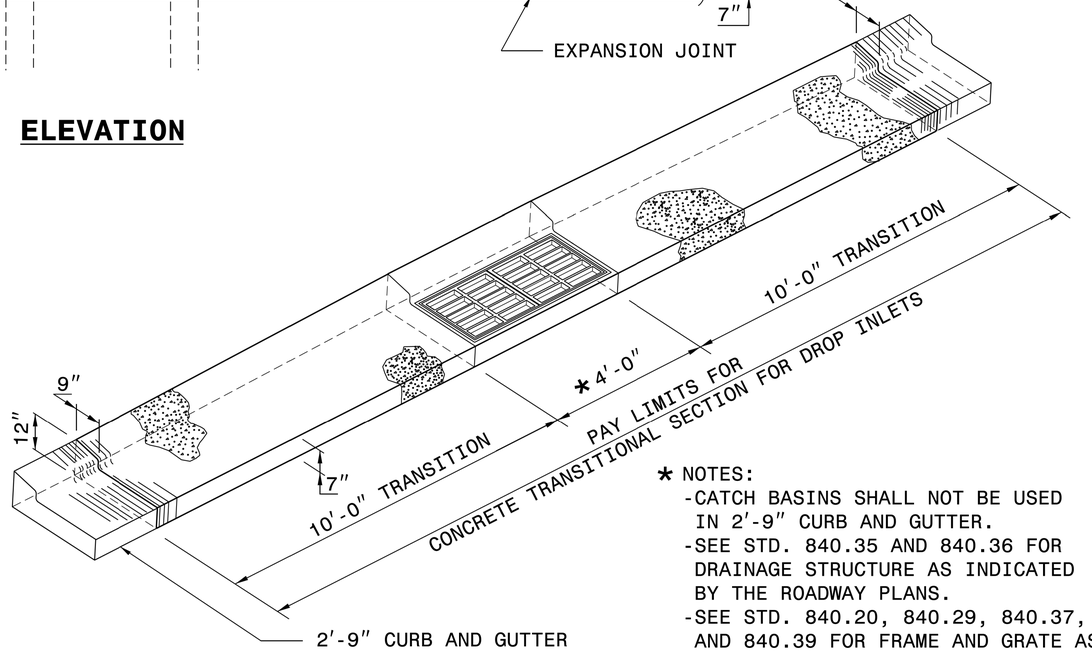


ELEVATION

SECTION - AA



SECTION - BB



* NOTES:
- -CATCH BASINS SHALL NOT BE USED IN 2′-9″ CURB AND GUTTER.
- -SEE STD. 840.35 AND 840.36 FOR DRAINAGE STRUCTURE AS INDICATED BY THE ROADWAY PLANS.
- -SEE STD. 840.20, 840.29, 840.37, AND 840.39 FOR FRAME AND GRATE AS INDICATED BY THE ROADWAY PLANS.

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

MEDIAN CURB FOR TRAFFIC BEARING GRATED DROP INLET

(FOR USE WITH 2′-9″ CURB AND GUTTER)

SHEET 1 OF 1

852D07

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 053144 NICOLE M. WACKER
11/17/2025

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CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

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11-JAN-2024 12:49
\852D0701.dgn
$$$$USERNAME$$$$

5/26/20

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SUMMARY OF EARTHWORK IN CUBIC YARDS

STATION	STATION	UNCL. EXCAV.	UNDERCUT EXCAV.	EMBANK.	BORROW	WASTE
–L– 20+30.00	23+95.00 (RAB INCL.)	173		621	448	
SUBTOTAL:		173		621	448	
–Y1– 16+30.00	18+10.77	44		159	115	
SUBTOTAL:		44		159	115	
–Y2– 10+60.00	12+75.00	105		183	78	
SUBTOTAL:		105		183	78	
TEMP. WIDENING PHASE 1 (–L– LT /–Y1– RT)		124		89		35
TEMP. WIDENING PHASE 1 (–L– RT /–Y2– RT)		178		4		174
SUBTOTAL:		302		93		209
TEMP. FILL REMOVAL		93				93
SUBTOTAL:		93				93
TOTALS:		717		1113	641	302
MATERIAL FOR SHOULDER CONSTRUCTION				58	58	
WASTE IN LIEU OF BORROW					–302	–302
PROJECT TOTAL:		716		1082	397	
EST 5% TO REPLACE TOP SOIL ON BORROW PIT					20	
GRAND TOTAL:		716			417	
SAY:		750			500	

EST. DDE = 25 CY
EST. SHALLOW UNDERCUT = 860 CY (CONTINGENCY PER DIVISION RECOMMENDATIONS)

NOTE:

EARTHWORK QUANTITIES ARE CALCULATED BY THE ROADWAY DESIGNER.

APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW, FINE GRADING, CLEARING AND GRUBBING, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING".

EXISTING PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD^2
–RAB–	10+00.00	12+70.18	CENTER	700.76
–L– /–Y2–	21+45.36	11+65.02	SOUTH QUAD.	131.54
–L– /–Y1–	20+30.00	16+67.42	WEST QUAD.	282.18
TEMP. WIDENING (PHASE 1: –L–LT AND –Y1– RT)				364.22
TEMP. WIDNEING (PHASE 1 –L– RT AND –Y2– RT)				169.22
			TOTAL:	1647.92
			SAY:	1650

HN-0023
4RD1 | 3B-1

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

PREPARED BY

KCI ASSOCIATES OF N.C., P.A.
4000 Falls of Neuse Road, Suite 200
Raleigh, NC 27609-6270
Phone (919) 783-9214
NC Firm License No: C-0764

$$$$$USERNAME$$$$

5/26/20

HN-0023	
4RD1	3D-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Alternate Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48	4 IRRIGATION PIPE	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PPP	DO NOT USE PVC
L23+16.87	22	LT	0404		56.7																		
			0404	0403		51.5	51.3																
L 23+25.5	22	RT	0403		56.8																		
			0403	0406		51.3	51.1																
L 22+65	67	RT	0406		56.5																		
			0406	0420		51.1	50.9																
Y2 11+77	40	LT	0420		56.2																		
			0420	0421		50.9	50.6																
Y2 12+71.5	40	LT	0421		56.1																		
			0421	0422		50.6	50.3																
Y2 13+54	45	LT	0422		55.2																		
			0422	0423		50.3	49.9																
Y2 14+66.45	44	RT	0423		49.9																		
Y1 18+00	35	LT	0416		56.8																		
			0416	0415		53.0	51.8																
Y1 18+50	0	MED	0430		58.4																		
			0430	0416		53.2	53.0																
L 20+94	23	LT	0431		57.2																		
			0431	0432						8								X	X	X		X	
Y1 17+98	28																						
RAB 10+31	0	CL															80	x	x	x	x	x	
REMOVAL																							
L 22+92	21	LT																					
Y2 11+15	31	LT																					
Y2 13+00	42	LT																					
Y2 13+50	42	LT																					
Y2 14+11																							
SHEET TOTALS (48" or Less)										8							80						
PROJECT TOTALS (48" or Less)										8							80						

LINE & STATION	C. S. PIPE 12 .064	15 .064	18 .064	24 .064		15 .079	18 .079	24 .079	30 .079	36 .079	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48
L23+16.87																		
														48				
L 23+25.5																		
														76				
L 22+65																		
														84				
Y2 11+77																		
															96			
Y2 12+71.5																		
																84		
Y2 13+54																		
																136		
Y2 14+66.45																		
Y1 18+00																		
													92					
Y1 18+50																		
												52						
L 20+94																		
Y1 17+98																		
RAB 10+31																		
REMOVAL																		
L 22+92																		
Y2 11+15																		
Y2 13+00																		
Y2 13+50																		
Y2 14+11																		
SHEET TOTALS (48" or Less)												52	92	208	96	220		
PROJECT TOTALS (48" or Less)												52	92	208	96	220		

LINE & STATION	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29
L23+16.87	1	0.2		1		1																			
L 23+25.5	1	0.5		1			1																		
L 22+65	1	0.4														1							1		
Y2 11+77	1	0.3														1							1		
Y2 12+71.5	1	0.5														1							1		
Y2 13+54	1															1							1		
Y2 14+66.45																									
Y1 18+00	1																								
Y1 18+50	1	0.2																							
L 20+94	1																								
Y1 17+98																									
RAB 10+31																									
REMOVAL																									
L 22+92																									
Y2 11+15																									
Y2 13+00																									
Y2 13+50																									
Y2 14+11																									
SHEET TOTALS (48" or Less)	9	2		2		1	1									4							4		
PROJECT TOTALS (48" or Less)	9	2		2		1	1									4							4		

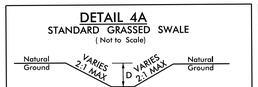
LINE & STATION	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	ADJUST C.B.	ADJUST D.I.	ADJUST J.B.	ADJUST M.H.	ADJUST 2G.I.		FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
L23+16.87																			
L 23+25.5																			
L 22+65																			
Y2 11+77																			
Y2 12+71.5																			
Y2 13+54																			
Y2 14+66.45																			
Y1 18+00			1		1														
Y1 18+50	1						1	1											
L 20+94									1										
																		8	EXTEND EXIST 15" PIPE FOR TEMP SIDWALK/REMOVE EXTENSION AFTER SIDEWALK IS REMOVED
Y1 17+98															14				PLUG EXIST 24" PIPE, WILL NOT BE REMOVED BUT WILL BE FILLED WITH FLOWABLE MATERIAL
RAB 10+31																			
REMOVAL																			
L 22+92																		45	
Y2 11+15																		62	
Y2 13+00																		41	
Y2 13+50																		41	
Y2 14+11																		144	
SHEET TOTALS (48" or Less)	1		1		1		1	1	1						14			341	
PROJECT TOTALS (48" or Less)	1		1		1		1	1	1						14			341	

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

Docusign Envelope ID: 162B6F53-3B86-4A7B-8734-D1A40331D54E

5/26/20

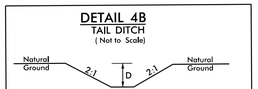
DETAIL 4A
STANDARD GRASSED SWALE
(Not to Scale)



Min. D = 0.5 Ft.
B = 5.0 Ft.
DDE = 20 CY

FROM STA. Y2 10+82 TO STA. 13+54 LT

DETAIL 4B
TAIL DITCH
(Not to Scale)



Min. D = 0.5 Ft.
B = 4.0 Ft.
DDE = 5 CY

FROM STA. Y2 14+60 RT

-Y1- PT 16+10.56
BEARING AHEAD S20°37'09.7"E
BEGIN CONSTRUCTION
-Y1- STA. 16+30.00
-Y1- PC 16+61.89

-Y1- PT 17+36.90
BEARING AHEAD S41°41'20.2"E

END MILL AND OVERLAY
BEGIN GRADE
-L- 20+30.00

BEGIN PROJECT HN-0023
BEGIN MILL AND OVERLAY
-L- 19+36.92

-L- POT STA. 21+66.51 =
BEGIN -RAB- STA. 10+00.00
END -RAB- STA. 12+63.89

EXTEND W/ TEMP. 15" HDPE BEFORE TEMP. SIDEWALK INSTALLATION

DO NOT DISTURB

EXIST. 24" PIPE WILL BE PLUG AND FILLED WITH FLOWABLE MATERIAL

CL. B RIP RAP ALONG BANKS 4 TONS 10 SY GEOTEXTILE

END GRADE
BEGIN MILL AND OVERLAY
-L- 23+95.00

END PROJECT HN-0023
END MILL AND OVERLAY
-L- 25+75.00

-Y2- PC 10+86.73

-Y2- PT 11+62.53
BEARING AHEAD N79°48'28.3"E

END GRADE
-Y2- STA. 12+75.00

-L- POT 22+08.51
-Y1- POT 18+70.77
-Y2- POB 10+00.00
BEARING AHEAD S78°28'37.8"E

-Y2- POE 15+08.20
END CONSTRUCTION

5' GRASSED SWALE
-Y2- STA. 10+82 TO STA. 13+54 LT
SEE DETAIL 4A

NOTE: REMOVE EXISTING PAVEMENT DOWN TO SOIL WITHIN CENTER OF ROUNDABOUT (GRASS AREA)

CUR DATA -Y1-	CUR DATA -Y1-	CUR DATA -RAB-	CUR DATA -Y2-
PIc 13+25.57	PIc 16+99.82	PIc 10+00.00	PIc 11+25.09
Δc = 49°14'37.3" (LT)	Δc = 21°04'10.5" (LT)	Δc = 360°00'00" (RT)	Δc = 21°42'54.0" (LT)
D = 08°03'55.3"	D = 28°05'10.2"	D = 136°25'06.7"	D = 28°38'52.4"
Lc = 610.56	Lc = 75.02	Lc = 131.95	Lc = 75.80
Tc = 325.57	Tc = 37.94	Tc = 0	Tc = 38.36
R = 710.39	R = 204	R = 42	R = 200
	SE = 0.02	SE = 0.02	SE = 0.02
	RO = SEE PLANS	RO = SEE PLANS	RO = SEE PLANS
	DS = 25 mph	DS =25 mph	DS = 25 mph

FOR PLAN DETAILS SEE SHEET 2B-1, 2B-2 & 2B-3
FOR RIGHT OF WAY & EASEMENT INFO SEE SHEET 4A
FOR PROFILES SEE SHEET 5

REVISIONS

HN-0023
4RDI | 004

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

ROADWAY DESIGN ENGINEER
SEAL 034375
Docusigned by: Kevin Smith
11/26/2025

HYDRAULICS ENGINEER
SEAL 033860
Signed by: Jason Young
11/26/2025

PREPARED BY
KCI ASSOCIATES OF N.C., P.A.
4000 Falls of Neuse Road, Suite 200
Raleigh, NC 27609-6270
Phone (919) 783-9214
NC Firm License No: C-0704

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Docusign Envelope ID: 6FDDD060-E2FC-4447-A7F4-3024E6373E48

5/26/20

-Y1- PT 16+10.56
BEARING AHEAD S20°37'09.7"E

-Y1- PC 16+61.89

-Y1- PT 17+36.90
BEARING AHEAD S41°41'20.2"E

-L- POT STA. 21+66.51 =
BEGIN -RAB- STA. 10+00.00
END -RAB- STA. 12+63.89

-Y2- PC 10+86.73

-Y2- PT 11+62.53
BEARING AHEAD N79°48'28.3"E

-L- POT 22+08.51
-Y1- POT 18+70.77
-Y2- POB 10+00.00
BEARING AHEAD S78°28'37.8"E

-Y2- POE 15+08.20
END CONSTRUCTION

-RAB-

-L-
N27°26'11.5"E

CITY OF WHITEVILLE
Deed Book/Page [634/10]

JESSE POWELL FISHER
Deed Book/Page [1256/34]

COLLIER ENTERPRISES LLC
Deed Book/Page [643/887]

COLLIER ENTERPRISES ANC PARTNERSHIP
Deed Book/Page [379/724]

SAMUEL R SIBBETT & MARCIA W SIBBETT
Deed Book/Page [560/886]

SAMUEL R SIBBETT & MARCIA W SIBBETT
Deed Book/Page [834/618]
Plat Book/Page [79/46]

BLACKMON ENTERPRISES LLC & COLLIER ENTERPRISES LLC
Deed Book/Page [1022/934]
Plat Book/Page [8/61]

LIFE CHANGING BEHAVIORAL HEALTH
Deed Book/Page [1267/616]
Plat Book/Page [23/58]

EDWARD G WHITE & PHYLLIS WHITE
Deed Book/Page [637/7]
Plat Book/Page [23/58]

EDWARD G WHITE & PHYLLIS WHITE
Deed Book/Page [1326/697]
Plat Book/Page [23/58]

HOUSE OF PRAYER & DELIVERANCE
BARBARA P POWELL
Deed Book/Page [1071/522]

PAISLEY EDWIN RUSS
Deed Book/Page [1065/581]
Plat Book/Page [4/28]

PAISLEY EDWIN RUSS
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Plat Book/Page [9/18]

J LIONEL TODD INVESTMENTS INC.
Deed Book/Page [922/328]
Plat Book/Page [1/78]

OWNER: NA

MARY ALICE BULLOCK
Deed Book/Page [1219/731]
Plat Book/Page [4/28]

MARY ALICE BULLOCK
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Plat Book/Page [4/28]
Plat Book/Page [15/21]

SUNSHINE LAUNDRY & DRY CLEANERS
Deed Book/Page [1410/257]
Plat Book/Page [4/28]

[Ronnie William Faulk & Calette Faulk]
Deed Book/Page [1310/1]
Plat Book/Page [37/4]

VICTOR CH
Deed Book/Page
Plat Book/Page

WHAT-A-PAIR ENTERPRISES,LLC
Deed Book/Page [832/196]
Plat Book/Page [767/270]

WHAT-A-PAIR ENTERPRISES LLC
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Plat Book/Page [767/270]

WHAT-A-PAIR ENTERPRISES LLC
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CITY OF WHITEVILLE
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Plat Book/Page [4/28]

CITY OF WHITEVILLE
Deed Book/Page [1122/808]
Plat Book/Page [4/28]

CITY OF WHITEVILLE
Deed Book/Page [634/10]

SOULES SWAMP

BM1
ELEVATION: 58.28'
HOLE IN CONC WW

70' EASEMENT CP&L PB 40 PG 05

65' EASEMENT BRUNSWICK ELECTRIC DB 211 PG 641

10' DRAINAGE EASEMENT
Deed Book/Page [251/79]

-Y1- +40.00
58.67' RT

-L- +30.00
60' LT
30' LT

-L- +00.00
60' LT

-Y1- +93.00
38.07' LT

-Y1- +93.00
52' LT

-Y1- +70.00
50' LT

-Y1- +60.00
50.84' LT

-L- +23.00
55' LT

-L- +21.00
45' LT

-L- +70.00
55' LT

-L- +60.00
45' LT

-L- +85.00
30' LT

-L- +35.00
30' RT

-L- +22.21
40' RT

-L- +95.00
40' RT
30' RT

-L- +30.00
45' RT
30' RT

-L- +07.87
45' RT

-Y2- +90.00
50.26' LT

-Y2- +85.00
45' LT

-Y2- +80.00
45' LT

-Y2- +75.00
45' LT

-Y2- +70.00
45' LT

-Y2- +65.00
45' LT

-Y2- +60.00
45' LT

-Y2- +55.00
45' LT

-Y2- +50.00
45' LT

-Y2- +45.00
45' LT

-Y2- +40.00
45' LT

-Y2- +35.00
45' LT

-Y2- +30.00
45' LT

-Y2- +25.00
45' LT

-Y2- +20.00
45' LT

-Y2- +15.00
45' LT

-Y2- +10.00
45' LT

-Y2- +05.00
45' LT

-Y2- +00.00
45' LT

CUR DATA -Y1-	CUR DATA -Y1-	CUR DATA -RAB-	CUR DATA -Y2-
PIc 13+25.57	PIc 16+99.82	PIc 10+00.00	PIc 11+25.09
Δc = 49°14'37.3" (LT)	Δc = 21°04'10.5" (LT)	Δc = 360°00'00" (RT)	Δc = 21°42'54.0" (LT)
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Tc = 325.57	Tc = 37.94	Tc = 0	Tc = 38.36
R = 710.39	R = 204	R = 42	R = 200
	SE = 0.02	SE = 0.02	SE = 0.02
	RO = SEE PLANS	RO = SEE PLANS	RO = SEE PLANS
	DS = 25 mph	DS =25 mph	DS = 25 mph

FOR PLAN DETAILS SEE SHEET 2B-1
FOR DRAINAGE AND DIMENSIONS SEE SHEET 4
FOR PROFILES SEE SHEET 5

REVISIONS

HN-0023

4RDI	004A

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 034775 ENGINEER BARRY C SMITH

11/17/2025

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 033860 ENGINEER LEAH M YOUNG

11/19/2025

PREPARED BY

KCI ASSOCIATES OF N.C., P.A.
4000 Falls of Neuse Road, Suite 200
Raleigh, NC 27609-6270
Phone (919) 783-9214
NC Firm License No: C-0704

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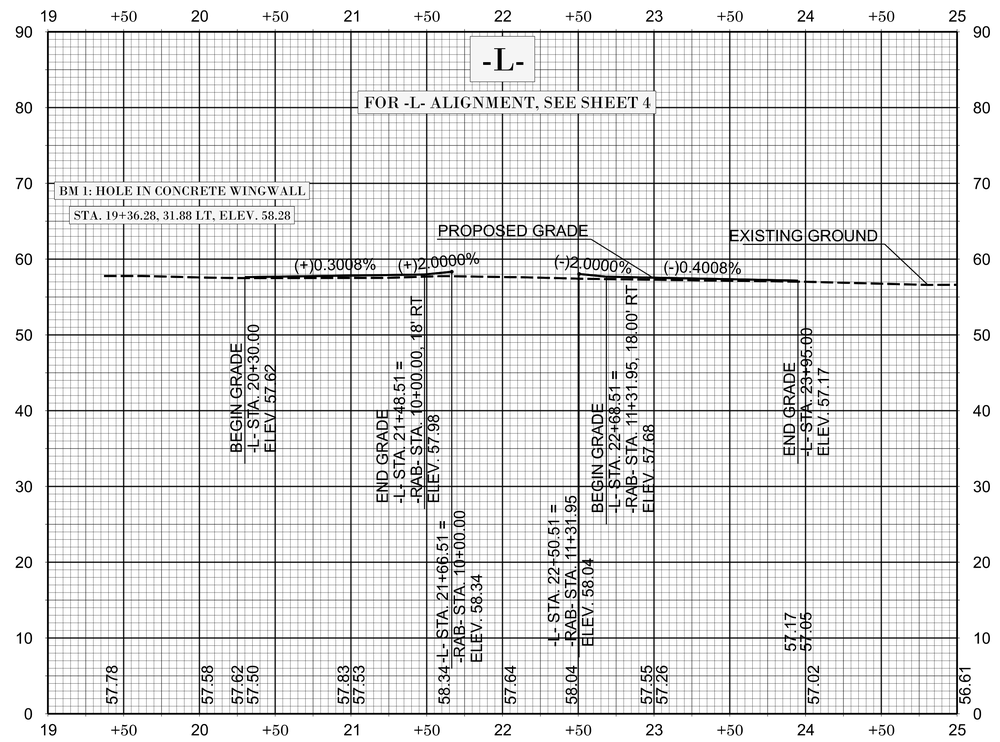
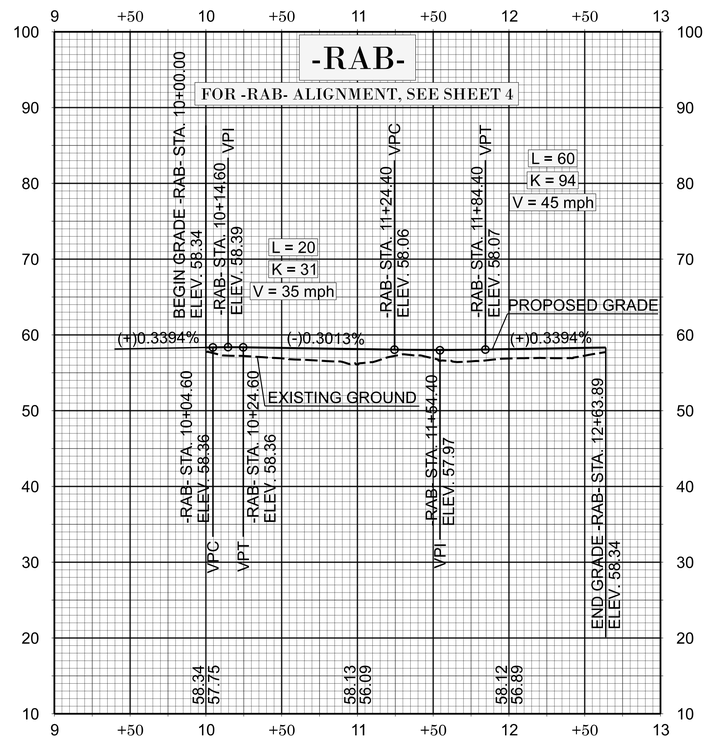
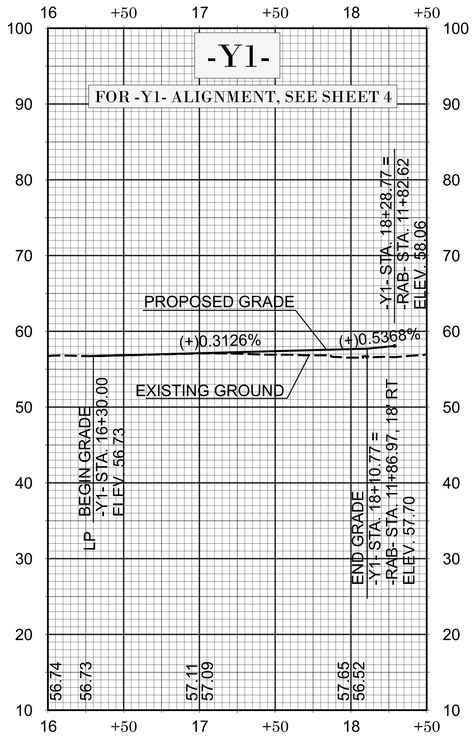
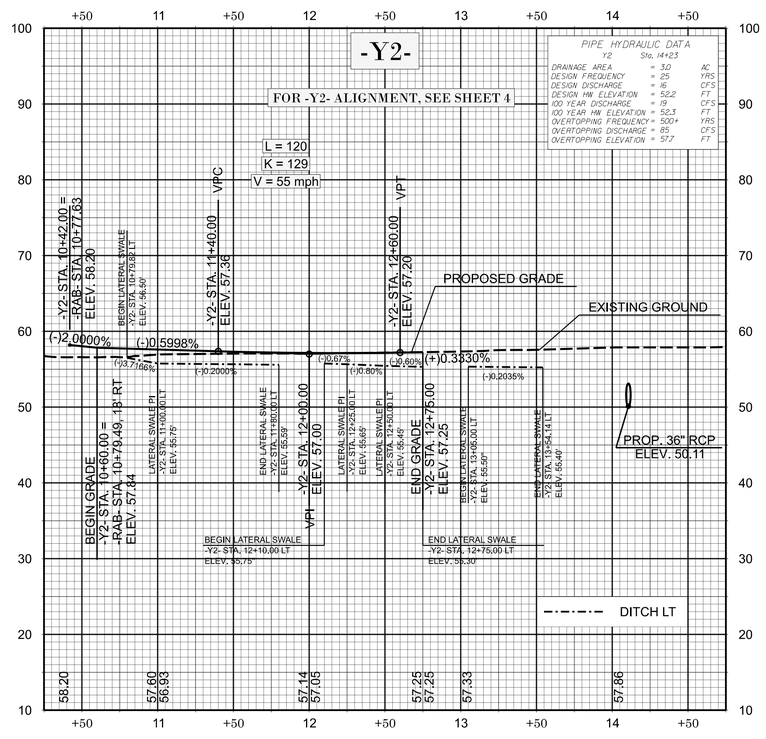
5/26/20









HN-0023

4RDI | 5

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 034735 ENGINEER BARRY C. SMITH

11/17/2025

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 033860 ENGINEER JEAN M. YOUNG

11/19/2025

PREPARED BY

KCI ASSOCIATES OF N.C., P.A.
4000 Falls of Neuse Road, Suite 200
Raleigh, NC 27609-6270
Phone (919) 783-9214
NC Firm License No: C-0764

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REVISIONS

09/08/99

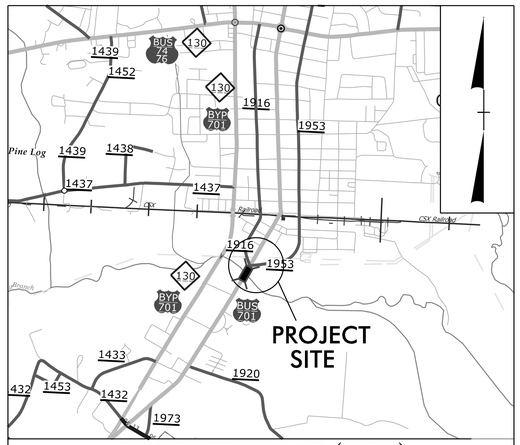
TIP PROJECT: *HN-0023*

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

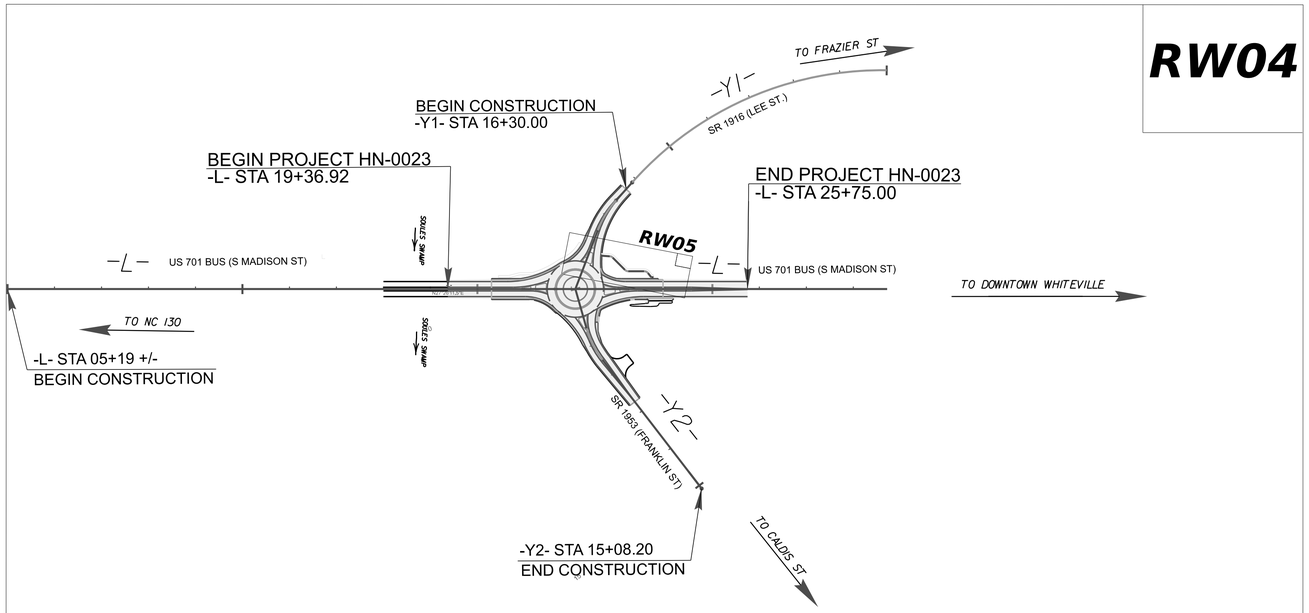
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HN-0023	RW01	6

SURVEY CONTROL, EXISTING CENTERLINES, RIGHT OF WAY, EASEMENTS AND PROPERTY TIES

COLUMBUS COUNTY



VICINITY MAP (NTS)



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES

125' 12.5' 0' 125' 250'

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT P3
WITH NAD83/2011 STATE PLANE GRID COORDINATES OF
NORTHING: 207634.3131 EASTING: 2089337.8349
ELEVATION: 56.72(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 1.000006757
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

Prepared in the Office of:

DEWBERRY ENGINEERS

2610 WYCLIFF ROAD

SUITE 410

RALEIGH, NC 27607

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: FEBRUARY 28, 2025

LETTING DATE: FEBRUARY 18, 2026

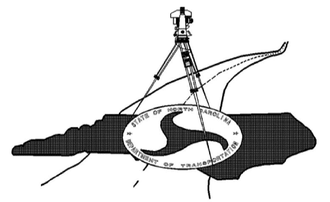
PROFESSIONAL LAND SURVEYOR

NORTH CAROLINA PROFESSIONAL SEAL L-4980 LAND SURVEYOR ADAM C. HALES

DocuSigned by: Adam Hales E91DDBC1163E43D...

1/6/2026

SIGNATURE: *DATE:*



5/26/20

I, Keith E. Honeycutt, 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: VRS
Dates of survey: March 2024
Datum/Epoch: NAD 83/2011
Published/Fixed-control use: N/A
Localized around: Panel Point P3
Northing: 207634.3131
Easting: 2089337.8349
Combined grid factor: 1.000006757
Geoid model: 2018
Units: US Survey Feet

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 in March 2024, 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.

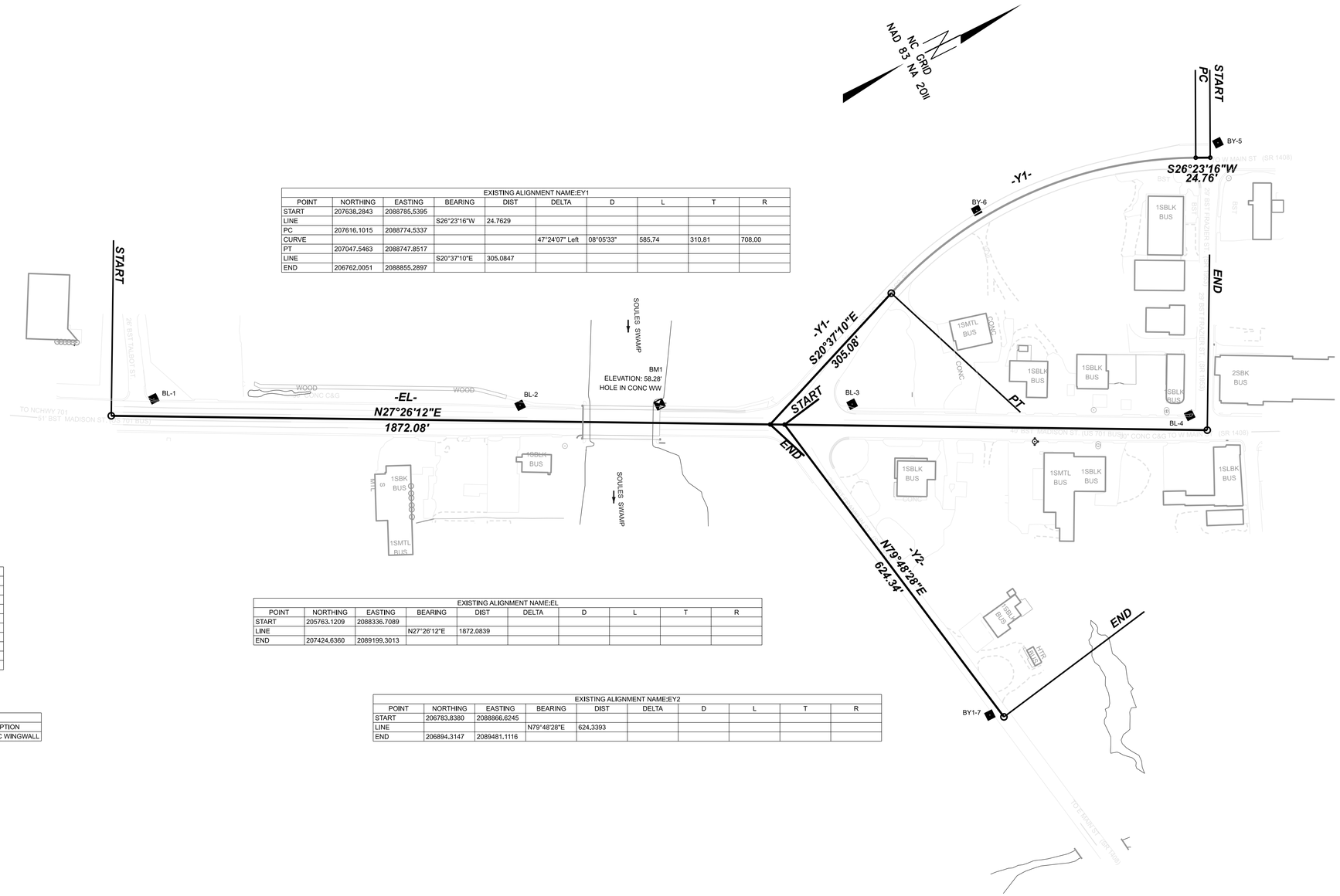
This 27th day of March, 2024.

DocuSigned by:
Keith E. Honeycutt
8C11B4DAEF3D4DF...
Professional Land Surveyor L-4169

GPS-101

SURVEY CONTROL SHEET

W/ EXISTING CENTERLINE ALIGNMENTS PRIOR TO CONSTRUCTION



EXISTING ALIGNMENT NAME:EY1									
POINT	NORTHING	EASTING	BEARING	DIST	DELTA	D	L	T	R
START	207638.2843	2088785.5395							
LINE			S26°23'16"W	24.7629					
PC	207616.1015	2088774.5337							
CURVE					47°24'07" Left	08°05'33"	585.74	310.81	708.00
PT	207047.5463	2088747.8517							
LINE			S20°37'10"E	305.0847					
END	206762.0051	2088855.2897							

EXISTING ALIGNMENT NAME:EL									
POINT	NORTHING	EASTING	BEARING	DIST	DELTA	D	L	T	R
START	205763.1209	2088336.7089							
LINE			N27°26'12"E	1872.0839					
END	207424.6360	2089199.3013							

EXISTING ALIGNMENT NAME:EY2									
POINT	NORTHING	EASTING	BEARING	DIST	DELTA	D	L	T	R
START	206783.8380	2088866.6245							
LINE			N79°48'28"E	624.3393					
END	206894.3147	2089481.1116							

BASELINE POINTS TABLE				
POINT	DESC	NORTH	EAST	ELEVATION
BL-1	4020	205841.0831	2088343.2967	56.4900
BL-2	4020	206395.1462	2088634.2465	57.6600
BL-3	4020	206902.6766	2088887.2005	56.7800
BL-4	4020	207409.2475	2089163.1676	56.4100
BY-5	4020	207661.4316	2088768.7254	56.6300
BY-6	4020	207241.3397	2088687.0408	55.7600
BY1-7	4020	206874.2202	2089467.5311	58.0700
101	4017	205174.9236	2087967.4008	61.1700
102	4017	204412.0206	2087536.6981	72.9600

BENCHMARK TABLE				
BENCHMARK	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM1	206608.7856	2088739.8253	58.2246	HOLE IN CONC WINGWALL

NOTES:

1. PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

2. THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

HN-0023
R/W | 02C-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PROFESSIONAL LAND SURVEYOR
NORTH CAROLINA PROFESSIONAL SEAL L-4169 LAND SURVEYOR KEITH E. HONEYCUTT
Digitally signed by: Keith E. Honeycutt
8C11B4DAEF3D4DF...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES ARE COMPLETED

2018 STANDARD SPECIFICATIONS

TIP PROJECT: HN-0023
County: Columbus

PREPARED FOR

LOCATION AND SURVEYS UNIT

PREPARED BY

Location & Surveys
Division 6
4834 US Hwy 301 S
Hope Mills, NC 28348

5/26/20

PROPOSED ALIGNMENT CONTROL SHEET

PROPOSED ALIGNMENT: L												
POINT	STATION	NORTHING	EASTING	BEARING	DIST	DELTA	D	L	T	R	LT	ST
START	10+00.00	205763.1209	2088336.7089	N27°26'11.5"E	1872.08							
END	28+72.08	207424.6360	2089199.3013									

PROPOSED ALIGNMENT: Y1												
POINT	STATION	NORTHING	EASTING	BEARING	DIST	DELTA	D	L	T	R	LT	ST
PC	10+00.00	207638.2843	2088785.5395	S03°39'01.4"W	591.94	49°14'37.3"	08°03'55.3"	610.56	325.57	710.39		
PT	16+10.56	207047.5463	2088747.8517	S20°37'09.7"E	51.33							
PC	16+61.89	206999.5068	2088765.9271	S31°09'14.9"E	74.60	21°04'10.5"	28°05'10.2"	75.02	37.94	204.00		
PT	17+36.90	206935.6694	2088804.5186	S41°41'20.2"E	133.87							
END	18+70.77	206835.7030	2088893.5507									

PROPOSED ALIGNMENT: Y2												
POINT	STATION	NORTHING	EASTING	BEARING	DIST	DELTA	D	L	T	R	LT	ST
START	10+00.00	206835.7030	2088893.5507	S78°28'37.8"E	86.73							
PC	10+86.73	206818.3780	2088978.5326	S89°20'04.7"E	75.35	21°42'54.0"	28°38'52.4"	75.80	38.36	200.00		
PT	11+62.53	206817.5030	2089053.8743	N79°48'28.3"E	345.67							
END	15+08.20	206878.6688	2089394.0869									

PROPOSED ALIGNMENT: RAB												
POINT	STATION	NORTHING	EASTING	BEARING	DIST	DELTA	D	L	T	R	LT	ST
PC	10+00.00	206798.4271	2088874.1986	N27°26'11.5"E	84.00	180°00'00.0"	136°25'06.7"	131.95	806000000000.00	42.00		
PCC	11+31.95	206872.9789	2088912.9030	S27°26'11.5"W	84.00	180°00'00.0"	136°25'06.7"	131.95	0.00	42.00		
END	12+63.89	206798.4271	2088874.1986									

I, ADAM C. HALES, PLS, CERTIFY THAT THE DATA COMPILED CAME FROM AVAILABLE SURVEYS/MAPPING PERFORMED BY OTHERS AND PROVIDED TO ME BY NCDOT AND DO NOT CERTIFY TO THE ACCURACY OR QUALITY OF THE INDIVIDUAL DATA SOURCES.

THIS 6th DAY OF JANUARY, 2026.

DocuSigned by:
Adam Hales
E91DDBC1163E43D...

PROFESSIONAL LAND SURVEYOR L-4980

NOTES:

1. THE PROPOSED ALIGNMENT CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

HN-0023
R/W | 020-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PROFESSIONAL LAND SURVEYOR
NORTH CAROLINA PROFESSIONAL SEAL L-4980 LAND SURVEYOR ADAM C. HALES

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES ARE COMPLETED

2024 STANDARD SPECIFICATIONS

TIP PROJECT: HN-0023
County:Columbus

PREPARED FOR

LOCATION AND SURVEYS UNIT

PREPARED BY
DEWBERRY ENGINEERS
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
(919) 881-9939

5/26/20

RIGHT OF WAY CONTROL SHEET

I , ADAM C. HALES, PLS, CERTIFY THAT THE RIGHT OF WAY AND PERMANENT EASEMENT MONUMENTATION FOR THIS PROJECT SHOWN HEREIN 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 1:10,000 (CLASS A). FIELD WORK WAS PERFORMED FROM 12/10/2025 TO 12/11/2025, AND ALL COORDINATES ARE BASED ON NAD83/NA 2011; THAT THIS SURVEY WAS PERFORMED TO MEET THE REQUIREMENTS OF 21NCAC 56.1600 AS APPLICABLE.

THIS 6th DAY OF JANUARY, 2026.

DocuSigned by:
Adam Hales
E91DDBC1163E43D...

PROFESSIONAL LAND SURVEYOR L-4980

PERMANENT ROW MARKER IRON PIN AND CAP: L				
STATION	OFFSET	NORTH	EAST	
23+21.00	-45.00	206956.2715	2088905.4421	
23+35.00	30.00	206934.1394	2088978.4570	
23+60.00	-45.00	206990.8849	2088923.4120	
23+85.00	-30.00	207006.1614	2088948.2440	* PAINT DOT

PERMANENT ROW MARKER IRON PIN AND CAP: Y1			
STATION	OFFSET	NORTH	EAST
16+93.00	-38.07	206989.9987	2088812.2424
16+93.00	-52.00	206996.8263	2088824.3801
17+70.00	-50.00	206944.2082	2088863.8691

PERMANENT ROW MARKER IRON PIN AND CAP: Y2			
STATION	OFFSET	NORTH	EAST
10+90.00	-50.26	206867.1567	2088990.9756

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

HN-0023
R/W | 03E-I

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PROFESSIONAL LAND SURVEYOR
SEAL L-4980 ADAM C. HALES

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES ARE COMPLETED

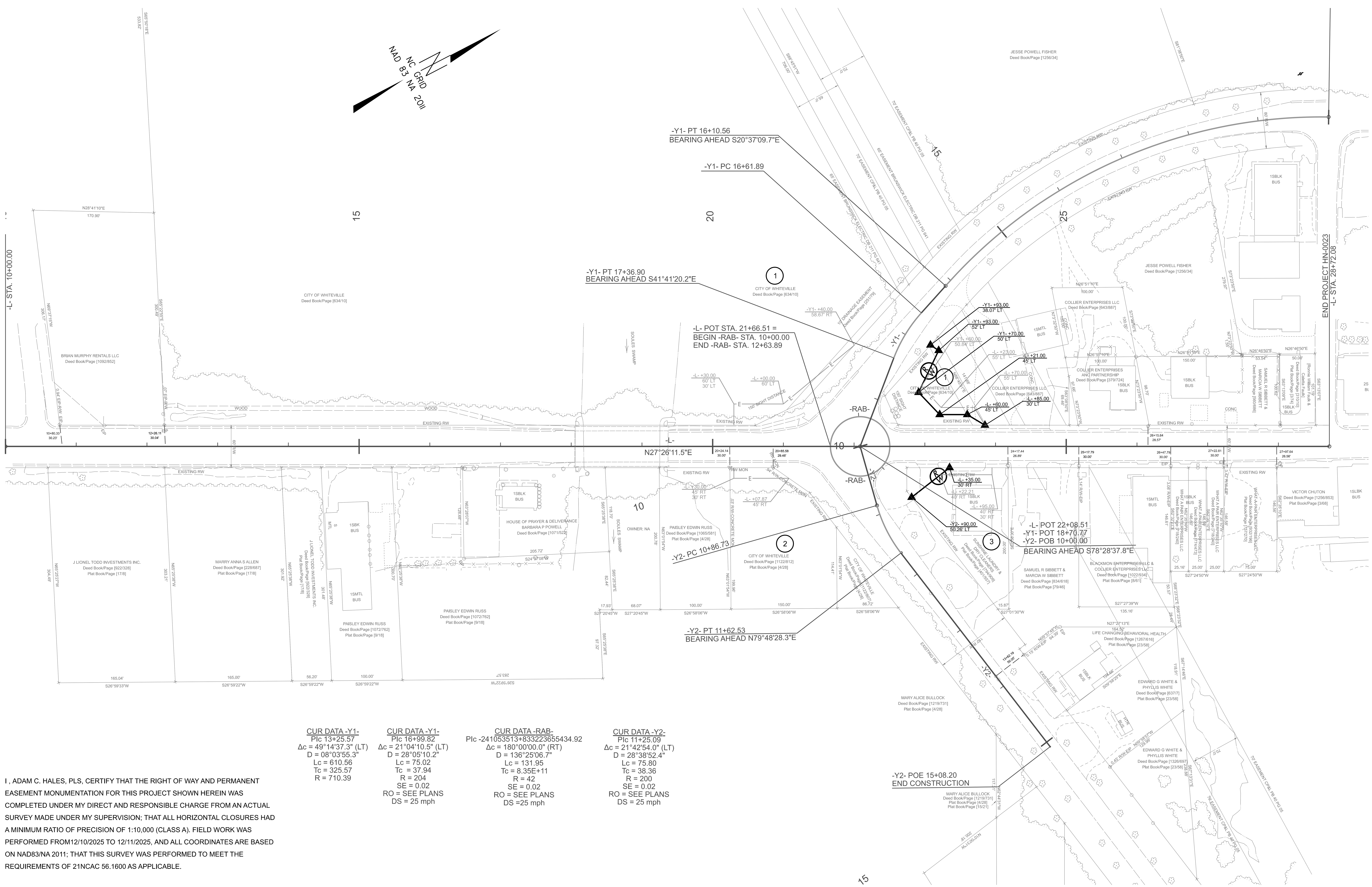
2024 STANDARD SPECIFICATIONS

TIP PROJECT: HN-0023
County: Columbus

PREPARED FOR

LOCATION AND SURVEYS UNIT

PREPARED BY
DEWBERRY ENGINEERS
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
(919) 881-9939



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D = 08°03'55.3"	D = 28°05'10.2"	D = 136°25'06.7"	D = 28°38'52.4"
Lc = 610.56	Lc = 75.02	Lc = 131.95	Lc = 75.80
Tc = 325.57	Tc = 37.94	Tc = 8.35E+11	Tc = 38.36
R = 710.39	R = 204	R = 42	R = 200
	SE = 0.02	SE = 0.02	SE = 0.02
	RO = SEE PLANS	RO = SEE PLANS	RO = SEE PLANS
	DS = 25 mph	DS =25 mph	DS = 25 mph

I , ADAM C. HALES, PLS, CERTIFY THAT THE RIGHT OF WAY AND PERMANENT EASEMENT MONUMENTATION FOR THIS PROJECT SHOWN HEREIN 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 1:10,000 (CLASS A). FIELD WORK WAS PERFORMED FROM12/10/2025 TO 12/11/2025, AND ALL COORDINATES ARE BASED ON NAD83/NA 2011; THAT THIS SURVEY WAS PERFORMED TO MEET THE REQUIREMENTS OF 21NCAC 56.1600 AS APPLICABLE.

THIS 19th DAY OF DECEMBER, 2025.

DocuSigned by:
Adam Hales
E91DDBC1163E43D...

PROFESSIONAL LAND SURVEYOR L-4980

50' 25' 0' 50' 100'

NOTES:

1. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

HN-0023

R/W 04

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PROFESSIONAL LAND SURVEYOR

SEAL L-4980 ADAM C. HALES

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PREPARED BY

DEWBERRY ENGINEERS

2610 WYCLIFF ROAD

SUITE 410

RALEIGH, NC 27607

(919) 881-9939

5/26/20

NC GRID
NAD 83 NA 2011

I , ADAM C. HALES, PLS, CERTIFY THAT THE RIGHT OF WAY AND PERMANENT EASEMENT MONUMENTATION FOR THIS PROJECT SHOWN HEREIN 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 1:10,000 (CLASS A). FIELD WORK WAS PERFORMED FROM 12/10/2025 TO 12/11/2025, AND ALL COORDINATES ARE BASED ON NAD83/NA 2011; THAT THIS SURVEY WAS PERFORMED TO MEET THE REQUIREMENTS OF 21NCAC 56.1600 AS APPLICABLE.

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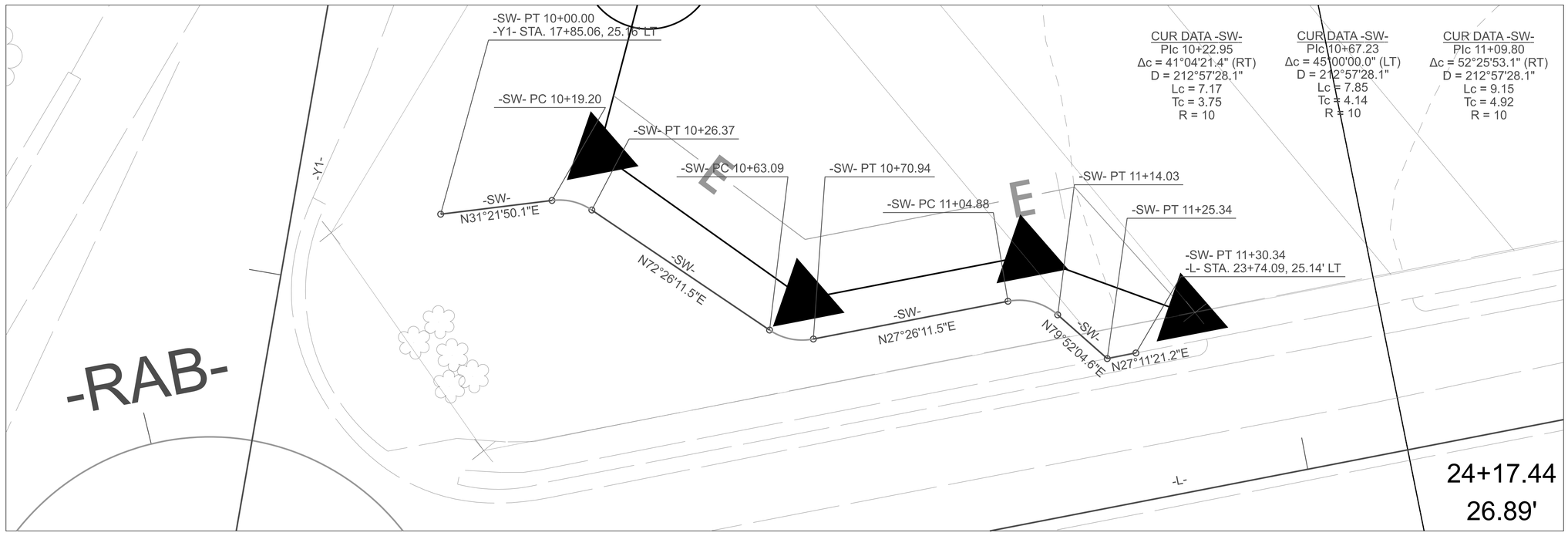

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Lc = 7.17
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Tc = 4.92
R = 10

10' 5' 0' 10' 20'

NOTES:

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HN-0023
R/W | 05

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PROFESSIONAL LAND SURVEYOR

NORTH CAROLINA PROFESSIONAL SEAL L-4980 LAND SURVEYOR ADAM C. HALES

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2024 STANDARD SPECIFICATIONS

TIP PROJECT: HN-0023
County: Columbus

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2610 WYCLIFF ROAD
SUIYE 410
RALEIGH, NC 27607
(919) 881-9939

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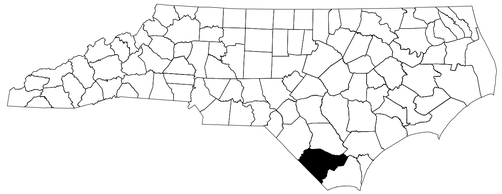
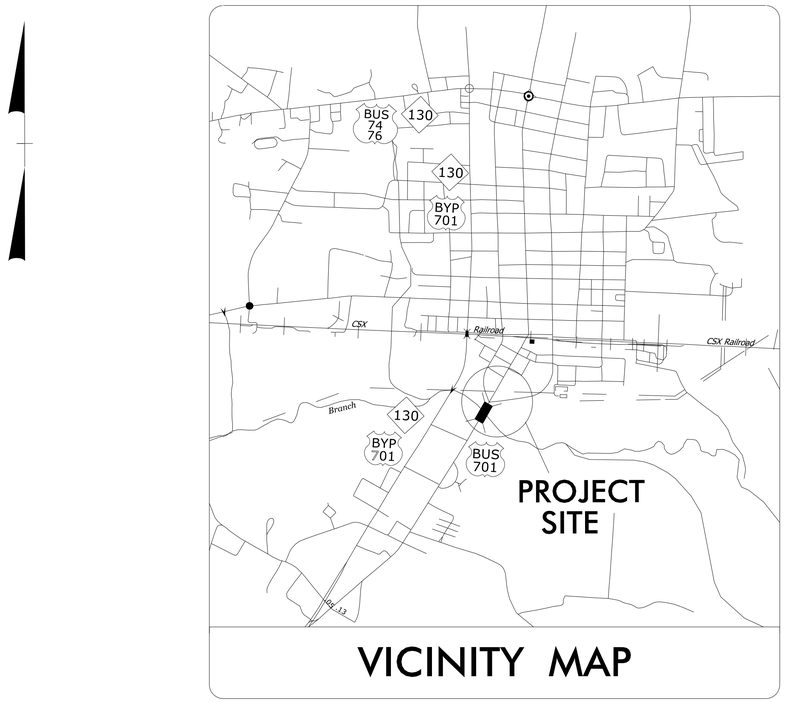
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

COLUMBUS COUNTY





VICINITY MAP

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	ROADWAY STANDARD DRAWINGS, LEGEND & TEMPORARY PAVEMENT MARKING SCHEDULE
MP-2 THRU TMP-2B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES)
TMP-3 & TMP-3A	TEMPORARY TRAFFIC CONTROL PHASING
TMP-4 THRU TMP-10	TEMPORARY TRAFFIC CONTROL DETAILS
TMP-11 & TMP-12	DETOUR ROUTES
TMP-13 THRU TMP-15	SIGN PLACEMENT DETAILS

SHEET NO.
TMP-1

TIP PROJECT: HN-0023

CONTRACT: DF00540

WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

PLANS PREPARED BY:

TODD BROOKS, PE
PROJECT ENGINEER

ABRAHAM WILES
PROJECT DESIGN ENGINEER

NCDOT CONTACTS:

CRAIG A. FREEMAN, PE
PROJECT MANAGER

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PLAN PREPARED FOR N.C.D.O.T. BY:

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

SEAL

Signed by:
J. Todd Brooks
B136C648C96B4EA...

NORTH CAROLINA SEAL 11566 ENGINEER J. TODD BROOKS

11/7/2025

11/6/2025
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PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-1A

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES - TYPE III
1150.01	FLAGGERS
1165.01	TRUCK MOUNTED ATTENUATOR
1180.01	SKINNY-DRUMS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTI-LANE ROADWAYS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.14	PAVEMENT MARKINGS - ROUNDABOUTS
1250.01	RAISED PAVEMENT MARKERS INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- WORK AREA

SIGNALS

- EXISTING
- PROPOSED
- TEMP TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM WITH SEQUENTIAL FLASHING WARNING LIGHTS
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

PAVEMENT MARKING LINES:

C1	SOLID WHITE EDGELINE	TYPE 4 REMOVABLE TAPE (4")
C13	YELLOW DOUBLE CENTER	TYPE 4 REMOVABLE TAPE (4")
P1	WHITE EDGELINE	PAINT (4")
P2	WHITE SOLID LANE LINE	PAINT (4")
P4	WHITE 3 FT / 9 FT MINISKIP	PAINT (4")
P10	YELLOW EDGELINE	PAINT (4")
P13	YELLOW DOUBLE CENTER	PAINT (4")
P40	WHITE GORELINE	PAINT (8")
P41	WHITE DIAGONAL	PAINT (8")
P46	WHITE CROSSWALK	PAINT (8")
P55	3FT-3FT WHITE MINISKIP	PAINT (12")
P62	WHITE CROSSWALK LINE	PAINT (24")

PAVEMENT MARKING SYMBOLS AND CHARACTERS:

P71	RIGHT TURN ARROW	PAINT
P103	YIELD LINE TRIANGLE	PAINT

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

Signed by: J. Todd Brooks
B136C648C96E4A...

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS
11/7/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

ROADWAY STANDARD DRAWINGS, LEGEND & TEMPORARY PAVEMENT MARKING SCHEDULE

11/6/2025
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User:iwiles

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PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-2

MANAGEMENT STRATEGIES

THE PURPOSE OF THIS PROJECT IS TO REPLACE THE EXISTING SIGNALIZED INTERSECTION OF US 701 BUSINESS AND S LEE STREET / S FRANKLIN STREET WITH A ROUNDABOUT. TRAFFIC WILL BE MAINTAINED THROUGH THE INTERSECTION DURING CONSTRUCTION USING TEMPORARY WIDENING AND OFFSITE DETOURS.

CONCERNING THE OFFSITE DETOURS, US 701 BUSINESS WILL BE CLOSED SOUTH OF FRAZIER STREET WHILE ALLOWING LOCAL BUSINESS ACCESS. NORTHBOUND THROUGH TRAFFIC WILL BE DETOURED VIA S FRANKLIN STREET. SOUTHBOUND THROUGH TRAFFIC WILL ACCESS US 701 BUSINESS SOUTH OF THE PROJECT AREA VIA LOCAL DETOURS TO S LEE STREET. REGARDING TEMPORARY WIDENING, TEMPORARY OUTSIDE WIDENING WILL BE CONSTRUCTED DURING PHASE I. TRAFFIC WILL BE PUSHED TO THAT OUTSIDE WIDENING DURING PHASE II TO ALLOW CONSTRUCTION OF MAJOR PORTIONS OF THE ROUNDABOUT AWAY FROM TRAFFIC.

THE EXISTING PEDESTRIAN MOBILITY BETWEEN THE NW AND SW CORNERS ACROSS THE WEST LEG OF THE INTERSECTION WILL BE MAINTAINED AT ALL TIMES USING A COMBINATION OF EXISTING SIDEWALK, PARTIALLY CONSTRUCTED SEGMENTS OF PROPOSED SIDEWALK, AND TEMPORARY PEDESTRIAN WALKWAYS AT ALL TIMES DURING CONSTRUCTION. THE PHASE I AND PHASE II TEMPORARY TRAFFIC PATTERNS ARE INTENDED TO FACILITATE CONSTRUCTION WITHOUT THE NEED TO CLOSE THE REMAINING SINGLE LANES OF TRAFFIC BEING MAINTAINED THROUGHT THE INTERSECTION.

PHASE I

IMPLEMENT PHASE I TEMPORARY TRAFFIC PATTERN, CLOSE US 701 BUSINESS AT S. LEE STREET/S. FRANKLIN STREET AND IMPLEMENT PROPOSED OFFSITE DETOUR TO CONSTRUCT TEMPORARY WIDENING IN THE SE AND SW CORNERS OF THE INTERSECTION AND TEMPORARY PEDESTRIAN FACILITIES.

PHASE II

WHILE MAINTAINING CLOSURE AND DETOUR OF US 701 BUSINESS, SHIFT VEHICULAR TRAFFIC ONTO THE TEMPORARY WIDENING CONSTRUCTED IN PHASE I AND SHIFT PEDESTRIANS TO A COMBINATION OF PROPOSED SIDEWALK AND TEMPORARY PEDESTRIAN WALKWAYS CONSTRUCTED IN PHASE I. BUILD THE MAJORITY OF THE ROUNDABOUT AWAY FROM TRAFFIC.

PHASE III

SHIFT TRAFFIC INTO TEMPORARY TRAFFIC PATTERN USING THE PARTIALLY COMPLETED ROUNDABOUT AND REOPEN US 701 BUSINESS TO TRAFFIC, DISCONTINUING THE OFFSITE DETOUR. CONSTRUCT THE REMAINDER OF THE ROUNDABOUT, NAMELY THE SOUTH LEG AND SIDEWALK IN THE SOUTHWEST CORNER, UNDER TRAFFIC USING FLAGGERS AND TEMPORARY LANE CLOSURES.

PAVE FINAL LAYER OF SURFACE COURSE,
INSTALL FINAL SIGNING AND PLACE FINAL PAVEMENT MARKINGS UNDER TRAFFIC USING FLAGGERS AND TEMPORARY LANE CLOSURES.

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

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.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

-L- US 701 BUSINESS
-Y1- S. LEE STREET
-Y2- S. FRANKLIN STREET

HOLIDAY

1. FOR UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.

2. FOR NEW YEAR'S DAY, BETWEEN THE HOURS OF 6:00 AM DECEMBER 31ST TO 6:00 PM JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 6:00 PM THE FOLLOWING TUESDAY.

3. FOR EASTER, BETWEEN THE HOURS OF 6:00 AM THURSDAY AND 6:00 PM MONDAY.

4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY AND 6:00 PM TUESDAY.

5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 AM THE DAY BEFORE INDEPENDENCE DAY AND 6:00 PM THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN BETWEEN THE HOURS OF 6:00 AM THE THURSDAY BEFORE INDEPENDENCE DAY AND 6:00 PM THE TUESDAY AFTER INDEPENDENCE DAY.

6. FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 AM FRIDAY AND 6:00 PM TUESDAY.

7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 AM TUESDAY AND 6:00 PM MONDAY.

8. FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 AM THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 6:00 PM THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

(CONTINUED ON TMP-2A)

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 19386 J. TODD BROOKS
Signed by: B136C648C96B4E0...
11/7/2025

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DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

TRANSPORTATION OPERATIONS PLAN

11/6/2025
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User:iwiles

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PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-2A

GENERAL NOTES

(CONTINUED FROM TMP-2)

A) - CONT.

SPECIAL EVENTS

9. FOR SPECIAL EVENTS OCCURRING IN DOWNTOWN WHITEVILLE, AS DETERMINED BY THE CITY OF WHITEVILLE. COORDINATE DAYS AND TIMES OF LANE CLOSURE RESTRICTIONS FOR SUCH SPECIAL EVENTS WITH THE CITY OF WHITEVILLE AND THE ENGINEER.

B) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVEL WAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

C) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE IS CLOSURE IS INSTALLED.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 5 FT OF AN OPEN TRAVEL LANE ON AN UNDIVIDED FACILITY, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 10 FT OF AN OPEN TRAVEL LANE ON A DIVIDED FACILITY, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1102.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAINS WITHIN THE CLOSED TRAVEL LANE.

PAVEMENT EDGE DROP OFF REQUIREMENTS

G) BACKFILL AT 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:

BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.

BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.

BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.

PAVEMENT EDGE DROP OFF REQUIREMENTS - CONT.

H) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 1000 FT. IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

I) NOTIFY THE ENGINEER THIRTY (30) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

J) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

K) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC CONTROL PLANS.

L) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER AND REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.

M) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

N) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 1000 FT. IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

O) WHEN LANE CLOSURES ARE NOT IN EFFECT, SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPENED TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.

P) PLACE TYPE III BARRICADES, WITH "ROAD CLOSED" SIGN R11-2 ATTACHED, OF SUFFICIENT LENGTH TO CLOSE THE ENTIRE ROADWAY.

Q) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES DRUMS PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

(CONTINUED ON TMP-2B)

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS
J. Todd Brooks
11/14/2025

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DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

TRANSPORTATION OPERATIONS PLAN

11/14/2025
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PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-2B

(CONTINUED FROM TMP-2A)

GENERAL NOTES

PAVEMENT MARKINGS AND MARKERS

R) INSTALL TEMPORARY PAVEMENT MARKINGS AND TEMPORARY PAVEMENT MARKERS ON INTERIM LAYERS OF PAVEMENT AS FOLLOWS:

ROAD NAME	MARKING	MARKER
-L- US 701 BUSINESS	PAINT	NONE
-Y1- S. LEE ST.	PAINT	NONE
-Y2- S. FRANKLIN ST.	PAINT	NONE
-RAB-	PAINT	NONE
EXISTING BRIDGE OVER SOULES SWAMP	COLD APPLIED PLASTIC, TYPE 4	NONE

S) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.

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

U) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

V) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

W) CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVELWAY HAS BEEN REMOVED FOR CONSTRUCTION OPERATIONS (UTILITIES, DRAINGE, ETC.).

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

Signed by: J. Todd Brooks
B136C648C96B4FA...

SEAL

11/7/2025

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

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DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

TRANSPORTATION OPERATIONS PLAN

11/6/2025
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PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-3

PHASING

PHASE I

OBJECTIVE: CLOSE US 701 BUSINESS AND DETOUR THROUGH TRAFFIC TO S. LEE STREET AND S. FRANKLIN STREET, THEN CONSTRUCT TEMPORARY ONSITE DETOURS FOR PHASE III.

STEP 1: USING RSD NO. 1101.01, SHEET 3 OF 3, INSTALL WORK ZONE ADVANCE WARNING SIGNS ON -L- US 701 BUSINESS (S. MADISON STREET), -Y1- S. LEE STREET, AND -Y2- S. FRANKLIN STREET.

STEP 2: USING RSD NO. 1101.02, SHEET 1 OF 19, BEGIN THE FOLLOWING WORK:

- CONSTRUCTION OF PROPOSED STORM DRAINAGE

- CONSTRUCTION OF PROPOSED WATER LINE ALONG EAST SIDE OF -L- US 701 BUSINESS (S. MADISON STREET)

- REMOVAL OF EXISTING SIGNAL COMMUNICATION CABLE

USING RSD NO. 1101.04, SHEET 1 OF 2, BEGIN CONSTRUCTION OF PROPOSED WATER LINE ON RIGHT SIDE OF US 701 BUSINESS.

INSTALL AND COVER OFFSITE ROAD CLOSURE AND DETOUR SIGNING FOR -Y2- CLOSURE SHOWN ON SHEETS TMP-4, TMP-11 AND TMP-13. PLACE CMS AS SHOWN ON TMP-14.

THE CONTRACTOR SHALL COMPLETE ALL WORK IN PHASE I, STEPS 3 THROUGH 5, WITHIN FOURTEEN (14) CALENDAR DAYS. [INTERMEDIATE CONTRACT TIME / LIQUIDATED DAMAGES]

STEP 3: PERFORM THE FOLLOWING WORK TO TEMOPRARILY CLOSE -Y2- S. FRANKLIN STREET AT -L- US 701 BUSINESS (MADISON STREET) IN ORDER TO CONSTRUCT WATER LINE AND STORM DRAINAGE PIPE ACROSS -Y2-:

- USING RSD NO. 1101.02, SHEET 3 OF 19, CLOSE THE RIGHT NORTHBOUND LANE OF US 701 BUSINESS APPROACHING -Y2- AS SHOWN ON SHEET TMP-4.

- PLACE DRUMS TO CLOSE -L- US 701 BUSINESS SOUTHBOUND LEFT TURN LANE ONTO -Y2- AS SHOWN ON SHEET TMP-4.

- UNCOVER THE PREVIOUSLY INSTALLED ROAD CLOSURE AND DETOUR SIGNING, PLACE TYPE III BARRICADES TO CLOSE -Y2- AND DETOUR TRAFFIC AS SHOWN ON SHEETS TMP-4 AND TMP-11.

STEP 4: BEHIND ROAD CLOSURE, CONSTRUCT THE SEGMENT OF THE PROPOSED STORM DRAINAGE PIPE THAT CROSS -Y2- S. FRANKLIN STREET AS SHOWN ON SHEET TMP-4. ONCE PIPE IS INSTALLED, BACKFILL EXCAVATION AND PATCH THE PAVEMENT.

STEP 5: REMOVE TYPE III BARRICADES, REMOVE NORTHBOUND RIGHT LANE CLOSURE AND SOUTHBOUND LEFT TURN LANE CLOSURE ON US 701 BUSINESS AT -Y2-, COVER/REMOVE ALL ROAD CLOSURE AND DETOUR SIGNING AND REOPEN -Y2- S. FRANKLIN STREET TO TRAFFIC.

STEP 6: USING RSD NO. 1101.02, SHEET 3 OF 19, CLOSE THE RIGHT NORTHBOUND LANE OF US 701 BUSINESS SOUTH OF THE PROJECT LIMITS AND REVISE THE PAVEMENT MARKINGS IN THE RIGHT LANE FOR PHASE I TEMPORARY PATTERN SHOWN ON TMP-5 AND TMP-6/6A.

INSTALL AND COVER WORK ZONE WARNING AND OFFSITE DETOUR SIGNING SHOWN ON SHEETS TMP-12, TMP-14 AND TMP-15.

COMPLETE CONSTRUCTION OF PROPOSED WATER LINE BEGUN IN PHASE I, STEP 2.

PHASE I - CONT.

THE CONTRACTOR SHALL COMPLETE ALL WORK IN PHASE I, STEP 7 THROUGH PHASE III, STEP 1, WITHIN NINETY (90) CALENDAR DAYS. [INTERMEDIATE CONTRACT TIME / LIQUIDATED DAMAGES]

STEP 7: COMPLETE ALL WORK REQUIRED TO SHIFT TRAFFIC INTO THE PHASE I TEMPORARY TRAFFIC PATTERN AS SHOWN ON SHEETS TMP-5 AND TMP-6 DURING A SINGLE WORK PERIOD:

- UNCOVER THE OFFSITE DETOUR SIGNING INSTALLED DURING PHASE I, STEP 6. ACTIVATE THE CHANGEABLE MESSAGE SIGN SHOWN ON SHEETS TMP-14 AND TMP-15.

- USING RSD 1101.02, SHEET 1 OF 19, REVISE PAVEMENT MARKINGS ON -L-, -Y1- AND -Y2- AS SHOWN ON SHEETS TMP-5 AND TMP-6/6A. SHIFT VEHICULAR TRAFFIC TO THE TEMPORARY TRAFFIC PATTERN SHOWN ON SHEETS TMP-5 AND TMP-6. CONTINUE TO MAINTAIN PEDESTRIAN TRAFFIC ON EXISTING SIDEWALKS.

- USE THE DETAILS SHOWN ON TMP-5, TMP-6 AND TMP-12 TO CLOSE US 701 (S. MADISON STREET).

- DEACTIVATE AND BAG THE SIGNAL AT THE INTERSECTION OF -L-, -Y1- AND -Y2-.

STEP 8: PERFORM THE FOLLOWING AWAY FROM TRAFFIC:

- PERMANENTLY REMOVE THE SIGNAL AT THE INTERSECTION OF -L-, Y1- AND -Y2-.

- CONSTRUCT THE PORTION OF THE PROPOSED DRAINAGE, CURB & GUTTER AND SIDEWALK IN THE NW QUADRANT OF THE INTERSECTION AS SHOWN ON SHEET TMP-6.

- CONSTRUCT THE PORTION OF TEMPORARY WIDENING IN THE SW QUADRANT OF THE INTERSECTION OF -L- AND -Y1- / -Y2- AS SHOWN ON SHEET TMP-6.

- BEGIN CONSTRUCTION OF THE TEMPORARY WIDENING IN THE SE QUADRANT OF THE INTERSECTION OF -L- AND -Y1- / -Y2- AS SHOWN ON SHEET TMP-6.

- CONSTRUCT TEMPORARY 5′ PEDESTRIAN WALKWAYS IN THE SW AND NW QUADRANTS OF THE INTERSECTION AS SHOWN ON SHEET TMP-6.

STEP 9: PROVIDE A MARKED CROSSING ACROSS THE WORK AREA FOR PEDESTRIANS CROSSING BETWEEN THE SW AND NW QUANDRANTS AS SHOWN ON TMP-6. SHIFT PEDESTRIAN TRAFFIC TO THE WALKWAYS AS SHOWN ON SHEET TMP-7.

CONTINUE TO MAINTAIN VEHICULAR TRAFFIC IN THE PHASE II, STEP 3 PATTERN. ONCE PEDESTRIAN TRAFFIC IS SHIFTED TO THE PATTERN SHOWN ON TMP-7, CONSTRUCT THE REMAINING PORTION OF TEMPORARY PAVEMENT IN THE SOUTHWEST QUADRANT OF THE INTERSECTION AWAY FROM TRAFFIC.

AWAY FROM TRAFFIC, COMPLETE CONSTRUCTION OF THE TEMPORARY WIDENING IN THE SE QUADRANT OF THE INTERSECTION OF -L- AND -Y1- / -Y2-. [SEE TMP-7]

CONTINUED ON SHEET TMP-3A

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

Signed by:
B136C648C96B9E5...

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 052786 ENGINEER J. TODD BROOKS
11/7/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

PHASING

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PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-3A

PHASING

CONTINUED FROM SHEET TMP-3

PHASE II

OBJECTIVE: SHIFT S LEE STREET AND S FRANKLIN STREET TRAFFIC ONTO ONSITE DETOURS, THEN CONSTRUCT THE MAJORITY OF THE PROPOSED ROUNDABOUT UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

STEP 1: USING FLAGGERS, REVISE THE TEMPORARY MARKINGS ON -L-, -Y1- AND -Y2- AS SHOWN ON SHEET TMP-9. SHIFT TRAFFIC ONTO THE ONSITE DETOURS (TEMPORARY WIDENING) CONSTRUCTED IN PHASE I. SEE SHEET TMP-9.

STEP 2: AWAY FROM TRAFFIC, CONSTRUCT PORTIONS OF THE PROPOSED ROUNDABOUT SHOWN ON SHEET TMP-9 UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

PHASE III

OBJECTIVE: CONSTRUCT THE REMAINDER OF THE PROPOSED ROUNDABOUT THAT WAS PROHIBITED BY THE PHASE II TRAFFIC PATTERN. DEMOLISH TEMPORARY PAVEMENT USED DURING THE ONSITE DETOURS.

STEP 1: USING RSD 1101.02, SHEETS 1 AND 18 OF 19 TO ALTERNATELY CLOSE LANES, PERFORM THE FOLLOWING WORK TO REOPEN US 701 BUSINESS AND OPEN PROPOSED ROUNDABOUT TO PHASE III TEMPORARY PATTERN SHOWN ON TMP-10:

- COMPLETE TIE-IN (PAVEMENT ONLY INCLUDING INCIDENTAL MILLING AS NEEDED; NO CURB & GUTTER OR SPLITTER ISLAND CONSTRUCTION) OF SOUTHERN, EASTERN AND WESTERN LEGS OF THE ROUNDABOUT UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE.

- PLACE TEMPORARY MARKINGS AND SHIFT TRAFFIC.

- ONCE US 701 IS REOPENED TO TRAFFIC, REMOVE THE OFFSITE DETOUR SIGNING AND CMSs SHOWN ON SHEETS TMP-12, TMP-14 AND TMP-15.

STEP 2: USING RSD 1101.02, SHEET 18 OF 19, COMPLETE SPLITTER ISLAND ON THE SOUTH LEG OF US 701 BUSINESS. USE EXISTING PAVEMENT AND TEMPORARY WIDENING AS NEEDED TO PUSH TRAFFIC TO THE OUTSIDE WHILE WORKING IN THE MIDDLE. SEE SHEET TMP-10.

STEP 3: USING RSD 1101.04, SHEET 1 OF 2, TO CLOSE THE ADJACENT SHOULDER, DEMOLISH THE TEMPORARY PAVEMENT USED AS ON-SITE DETOURS DURING CONSTRUCTION. [SEE TMP-10]

USING RSD 1101.02, SHEET 18 OF 19, COMPLETE OUTSIDE CURB AND GUTTER IN THE SOUTHWEST AND SOUTHEAST CORNERS OF THE PROPOSED ROUNDABOUT. THIS INCLUDES THE REMAINING PORTION OF PROPOSED SIDEWALK IN THE SW QUADRANT. [SEE TMP-10]

USING RSD 1102.02, SHEETS 1 AND 18 OF 19, COMPLETE ANY REMAINING INCIDENTAL MILLING AND PAVING UP TO BUT NOT INCLUDING FINAL LAYER OF SURFACE COURSE NOT COMPLETED IN PHASE III, STEP 1, ON US 701 BUSINESS FROM -L- STA. 20+30+/- TO STA. 21+48.51.

ONCE ALL SIDEWALKS ARE COMPLETE, SHIFT PEDESTRIAN TRAFFIC TO THE NEWLY BUILT SIDEWALKS AND REMOVE TEMPORARY WALKWAYS.

PHASE III - CONTINUED

STEP 4: USING RSD 1101.02, SHEETS 1 AND 3 OF 19, TO ALTERNATELY CLOSE LANES, MILL EXISTING PAVEMENT, PAVE FINAL LAYER OF SURFACE COURSE, PLACE FINAL PAVEMENT MARKINGS AND INSTALL FINAL SIGNING AS FOLLOWS (SEE SIGNING PLAN AND PAVEMENT MARKING PLAN):

- US 701 BUSINESS SOUTH OF THE PROJECT LIMITS FROM -L- STA. 19+36.92 (END BRIDGE) TO STA. 20+30.

- PROPOSED ROUNDABOUT:

  * SOUTH LEG (US 701 BUS) FROM -L- STA. 20+30 TO STA. 21+48.01
  * CIRCULATORY ROADWAY FROM -RAB- STA. 10+00 TO STA. 12+70.18
  * NORTH LEG (US 701 BUS) FROM -L- STA. 22+68.51 TO STA. 23+95
  * WEST LEG (S. LEE ST.) FROM -Y1- STA. 17+55 TO STA. 18+10.77, -Y1- STA. 16+30 TO STA. 17+55
  * EAST LEG (S. FRANKLIN ST.) FROM -Y2- STA. 10+60 TO STA. 12+75

- US 701 BUSINESS NORTH OF THE PROJECT LIMITS FROM -L- STA. 23+95+/- TO STA. 25+75+/-.

ONCE ALL FINAL PAVING HAS BEEN COMPLETED AND PERMANENT SIGNING AND PAVEMENT MARKINGS HAVE BEEN PLACED, REMOVE ANY REMAINING TRAFFIC CONTROL DEVICES AND TEMPORARY SIGNING.

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS
Signature
DocuSigned by:
B1B0C6A4C9C9E8...
1/14/2026

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DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

PHASING

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PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-4

A

R11-2
48" x 30"
ROAD CLOSED
DETOUR
M4-10L
48" x 18"
TYPE III BARRICADE

R11-2
48" x 30"
ROAD CLOSED
DETOUR
M4-10L
48" x 18"
TYPE III BARRICADE

B

TYPE III BARRICADE

C

R11-2
48" x 30"
ROAD CLOSED
TYPE III BARRICADE(S)

SEE SHEET TMP-11 FOR DETOUR ROUTES AND ADVANCED DETOUR SIGNING AND DEVICES

-L- US 701 BUSINESS
(S. MADISON ST)

15

20

DETOUR
M4-8
24" X 12"
M6-3
21" X 15"

DETOUR
M4-8
24" X 12"
M6-1 L
21" X 15"

END DETOUR
M4-8 A
24" X 18"

ROAD CLOSED AHEAD
W20-3
48" X 48"

NEXT LEFT
SP-4L
42" X 12"

20'

25

0+00

35'

35'

205' MERGE TAPER

SEE RSD 1101.02, SHEET 3 OF 19, FOR SIGNING AND DEVICES IN ADVANCE OF LANE CLOSURE

SOULES SWAMP

-Y1-
S LEE ST

MATCHLINE
(SEE THIS SHEET)

NAD 83

20

3+00

3+49

2+00

1+00

A

B

CONSTRUCT PROPOSED
WATER LINE

ROAD CLOSED AHEAD
W20-3
48" X 48"

NEXT RIGHT
SP-4R
42" X 12"

PROPOSED WATER LINE CROSSING FRANKLIN STREET TO BE INSTALLED USING TRENCHLESS METHODS (NOT PART OF WORK TO BE COMPLETED UNDER ICT)

-Y2-
S FRANKLIN ST

ONLY THE WORK AREA CROSSING FRANKLIN STREET WILL BE DONE UNDER ROAD CLOSURE AND ICT

CONSTRUCT PROPOSED
DRAINAGE

C

INSET '1'

DETOUR AHEAD
W20-2
48" X 48"

-Y1-
S LEE ST

MATCHLINE
(SEE THIS SHEET)

SEE RSD 1101.03, SHEET 2 OF 9, FOR ADDITIONAL SIGNING

FRAZIER ST

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED:

DATE:

Signed by:
J. Todd Brooks
B136C648C96F4E6...

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

11/7/2025

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

PHASE I, STEPS 2 THRU 4 DETAIL

11/6/2025
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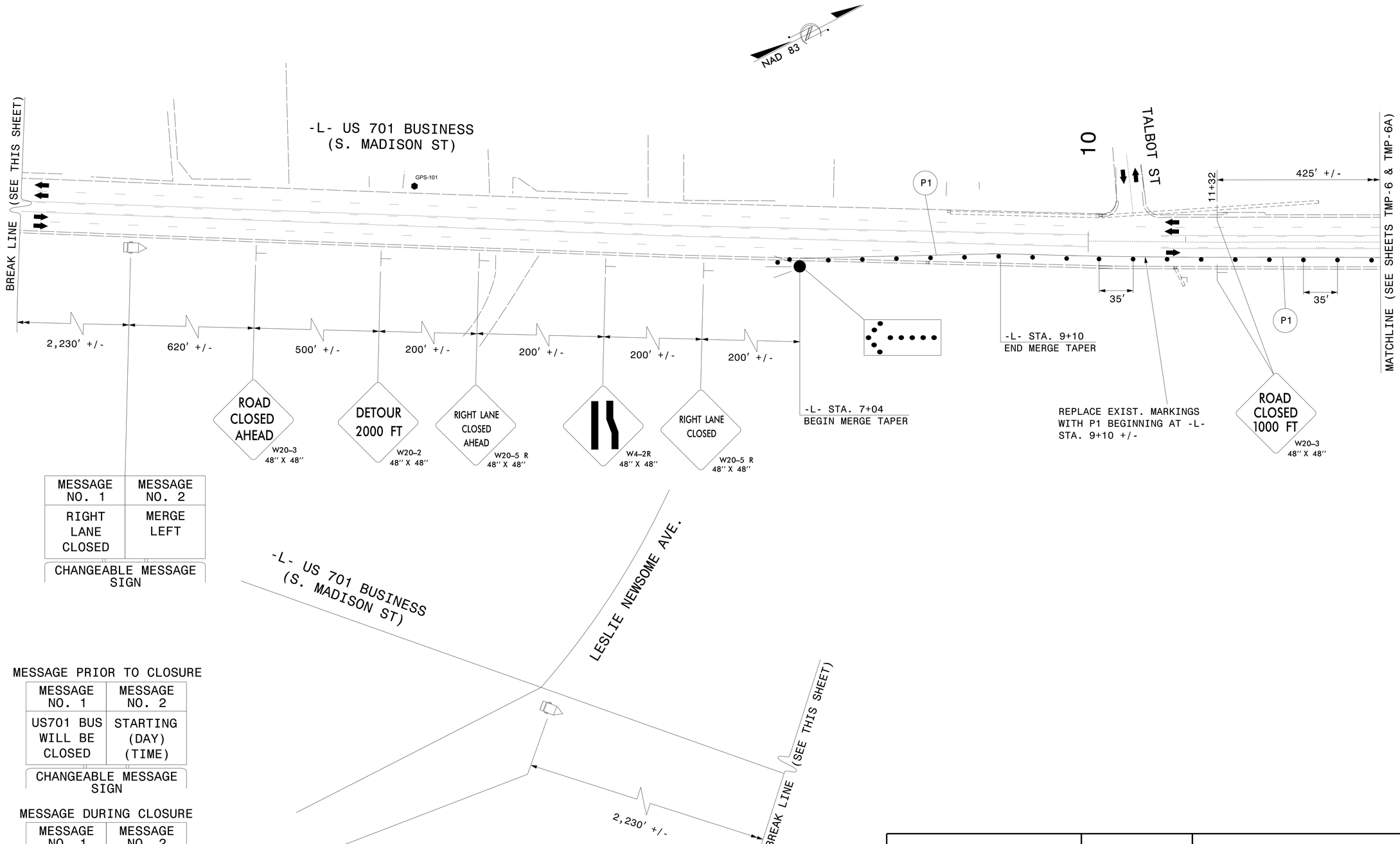
PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-5



MESSAGE NO. 1	MESSAGE NO. 2
RIGHT LANE CLOSED	MERGE LEFT

CHANGEABLE MESSAGE SIGN

MESSAGE PRIOR TO CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
US701 BUS WILL BE CLOSED	STARTING (DAY) (TIME)

CHANGEABLE MESSAGE SIGN

MESSAGE DURING CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
US701 BUS CLOSED AT LEE	FOLLOW POSTED DETOUR

CHANGEABLE MESSAGE SIGN

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

Signed by: J. Todd Brooks
B136C648C96B4A7...

SEAL

SEAL
NORTH CAROLINA PROFESSIONAL
17586
ENGINEER
J. TODD BROOKS

11/7/2025

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PHASE I, STEPS 6 THRU 8 DETAIL

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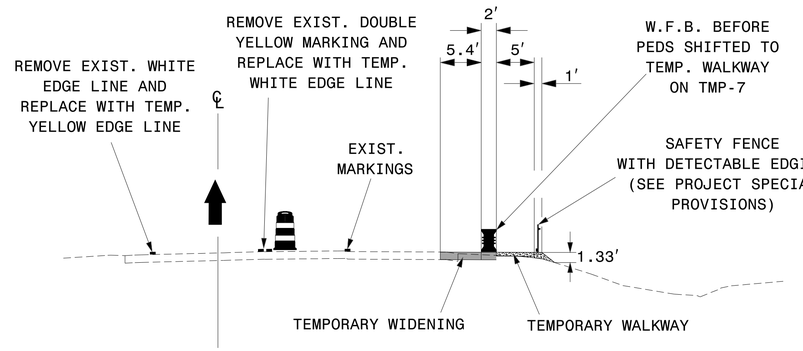
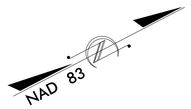
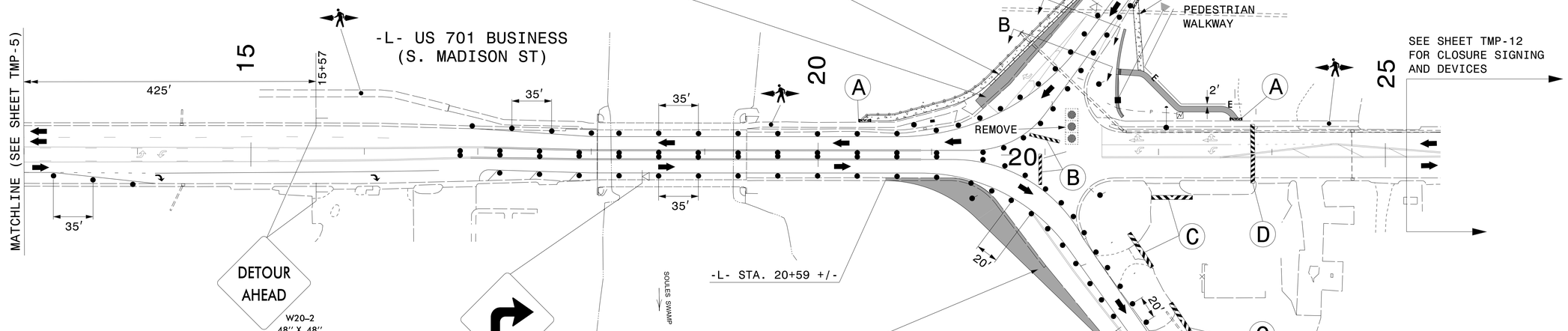
PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-6

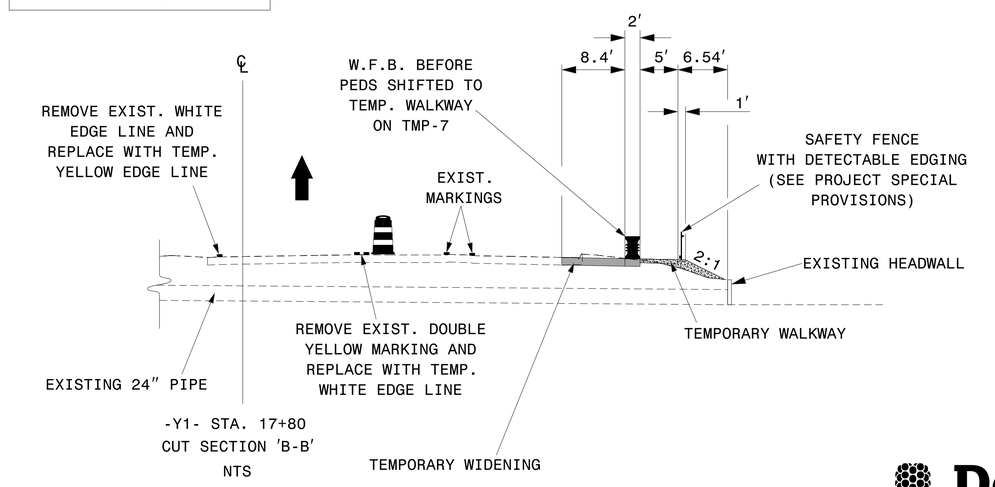


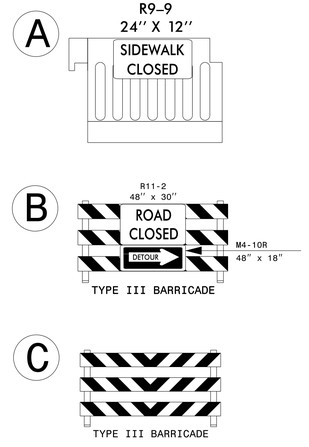


SEE SHEET TMP-12 FOR DETOUR ROUTES AND ADVANCED DETOUR SIGNING AND DEVICES



SEE SHEET TMP-6A FOR TEMPORARY PAVEMENT MARKING CALLOUTS AND DIMENSIONS





Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

Signed by: J. Todd Brooks
B136C648C96B4EA...

SEAL
NORTH CAROLINA
17586
J. TODD BROOKS
ENGINEER

11/7/2025

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PHASE I, STEPS 6 THRU 8 DETAIL

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PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-6A

NAD 83

-Y1- STA. 15+00 +/-
BEGIN TEMPORARY MARKING
TIE TO EXISTING

-Y1-
S LEE ST

PC -Y1- STA. 15+82 +/-
PC -Y1- STA. 17+73 +/-
PC -Y1- STA. 18+42 +/-
PC -L- STA. 21+36 +/-
-L- STA. 19+37 +/-
-L- STA. 20+90 +/-
-L- STA. 18+05 +/-
PC -L- STA. 20+70 +/-
-L- STA. 18+00 +/-
-L- STA. 17+00 +/-
-L- STA. 17+05 +/-
TIE TO EXISTING
-L- STA. 13+25 +/-

R=320′
R=200′
R=80′
R=160′
R=130′
R=500′

10′
11′
12′
8′
6′
4′
16′

15
20
25

-L-

MATCHLINE (SEE SHEET TMP-5)

P1 P4 P71 P2 P71 P13 P41 P1 P13 P1 C1 C13 C1 C13 P13 P1 P10 P1 P10 P1 P10

-L- STA. 16+66 +/-
-L- STA. 16+94 +/-
TIE TO EXISTING
-L- STA. 17+02 +/-
-L- STA. 18+00 +/-
-L- STA. 14+15 +/-

PC -L- STA. 20+90 +/-
PC -L- STA. 21+18 +/-

SOULES SWAMP

PC -Y2- STA. 10+79 +/-
PC -Y2- STA. 10+83 +/-
PC -Y2- STA. 12+69 +/-
PC -Y2- STA. 13+26 +/-

-Y2-
S FRANKLIN ST

-Y2- STA. 13+93 +/-
END TEMP. MARKINGS
TIE TO EXISTING

-L- US 701 BUSINESS
(S. MADISON ST)

INSET '2'

150′ +/-

-Y1-
S LEE ST

MATCHLINE
(SEE SHEET TMP-6)

ROAD CLOSED AHEAD
W20-3
48″ X 48″

NEXT LEFT
SP-4L
42″ X 12″

FRAZIER ST

Dewberry
2610 WYCLIFF ROAD
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SEAL

11/7/2025

NORTH CAROLINA SEAL 17586 ENGINEER J. TODD BROOKS

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11/6/2025
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PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-7

MAINTAIN VEHICULAR TRAFFIC IN THE PHASE I, STEP 7 PATTERN. SHIFT PEDESTRIAN TRAFFIC TO THE RECENTLY CONSTRUCTED SIDEWALKS (PERMANENT AND TEMPORARY) AND CONSTRUCT THE REMAINING PORTION OF TEMPORARY PAVEMENT IN THE SOUTHWEST QUADRANT OF THE INTERSECTION.

5' TEMPORARY PEDESTRIAN WALKWAY

R11-2
48" x 30"
ROAD CLOSED
DETOUR
M4-10R
48" x 18"
TYPE III BARRICADE

W11-2
36" X 36"
W16-9P
24" X 12"
AHEAD

10
M.P.H.

NAD 83

CONSTRUCT TEMPORARY WIDENING FROM -Y1- STA. 18+55 +/- TO -L- STA. 20+95 +/-

MAINTAIN TRAFFIC PATTERN
FROM PERVIOUS PHASE/STEP

SAFETY FENCE WITH DETECTABLE EDGING
(SEE PROJECT SPECIAL PROVISIONS)

PREVIOUSLY
INSTALLED
WATER-FILLED
BARRIER

CONSTRUCTION FENCING

PREVIOUSLY CONSTRUCTED
PORTION OF THE PROPOSED
CURB & GUTTER AND DRAINAGE

5' TEMPORARY
PEDESTRIAN WALKWAY

SEE SHEET TMP-12
FOR CLOSURE SIGNING
AND DEVICES

-L- US 701 BUSINESS
(S. MADISON ST)

-Y1- S LEE ST

-Y2- S FRANKLIN ST

15
20
25
10

A
B
C
D
E
P46

DETOUR
AHEAD

ONGOING CONSTRUCTION

SOULES SWAMP

R11-2
48" x 30"
ROAD CLOSED
DETOUR
M4-10R
48" x 18"
TYPE III BARRICADE

R11-2
48" x 30"
ROAD CLOSED
TYPE III BARRICADE(S)

A
R9-9
24" X 12"
SIDEWALK CLOSED

B
W11-2
36" X 36"
W16-7p
24" X 12"

C
W11-2
36" X 36"
W16-7p
24" X 12"

D
TYPE III BARRICADE

E
TYPE III BARRICADE

SEE SHEET TMP-12 FOR DETOUR ROUTES AND ADVANCED DETOUR SIGNING AND DEVICES

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

Signed by:
J. Todd Brooks
B136C548C96D4EC...

SEAL
NORTH CAROLINA
17586
ENGINEER
J. TODD BROOKS
11/7/2025

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

PHASE I, STEP 9 DETAIL

11/6/2025
pw://kci-pw.bentley.com:kci-pw-05/Documents/Projects/2023/252302454.04/2.Design/Work Zone Traffic Control/Sheets/HN-0023_TMP_07.dgn
User:jwiles

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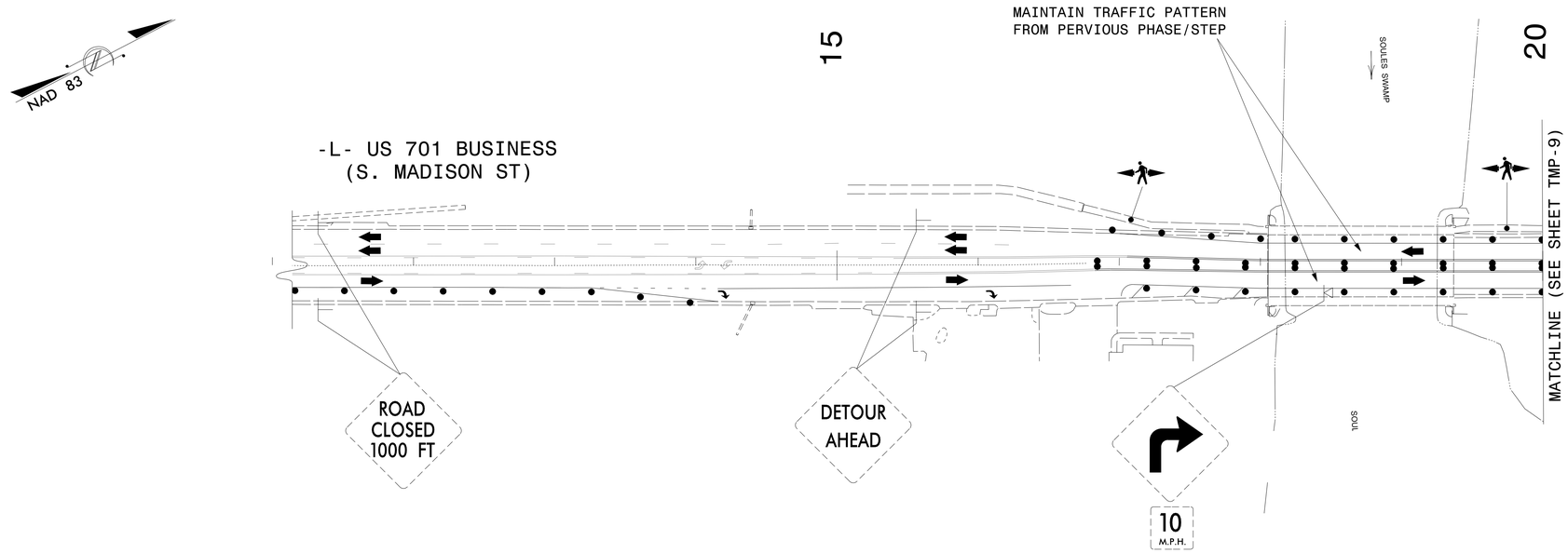
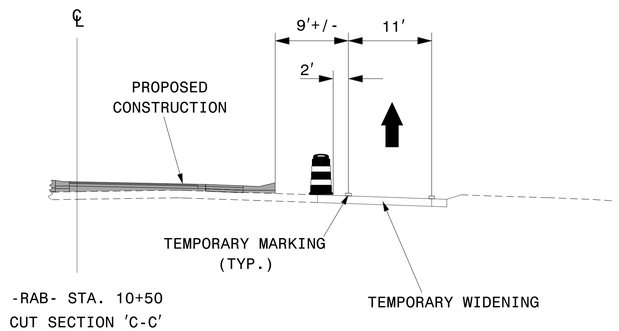
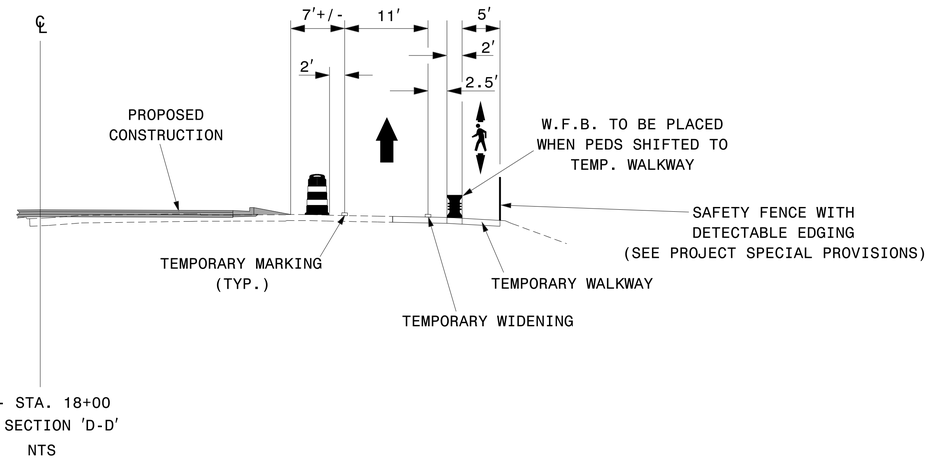
PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-8







SEE SHEET TMP-9 FOR CUT-SECTIONS C-C AND D-D CORRESPONDING PLAN VIEW

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

Signed by: J. Todd Brooks
B136C848C96B4CF...

SEAL
NORTH CAROLINA
PROFESSIONAL
SEAL
17586
ENGINEER
J. TODD BROOKS
11/7/2025

DOCUMENT NOT CONSIDERED FINAL
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DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

PHASE II DETAIL

11/6/2025
pw://kci-pw.bentley.com:kci-pw-05/Documents/Projects/2023/25230245 4.04/2.Design/Work Zone Traffic Control/Sheets/HN-0023_TMP_08.dgn
User:iwiles

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PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-9

SEE SHEET TMP-8 FOR CUT-SECTIONS C-C AND D-D

SEE SHEET TMP-12 FOR DETOUR ROUTES AND ADVANCED DETOUR SIGNING AND DEVICES

SEE INSET '2' ON SHEET TMP-6A FOR ADDITIONAL -Y1- WARNING SIGNING

-Y1- STA. 15+00 +/-

-Y1- S LEE ST

FRAZIER ST

NAD 83

-L- US 701 BUSINESS (S. MADISON ST)

CALDIS ST

S FRANKLIN ST -Y2-

-RAB-

MATCHLINE (SEE SHEET TMP-8)

TEMPORARY PEDESTRIAN WALKWAY

WATER-FILLED BARRIER

SAFETY FENCE WITH DETECTABLE EDGING (SEE PROJECT SPECIAL PROVISIONS)

PREVIOUSLY PLACED TEMPORARY MARKINGS

AHEAD

P1 P10 P13

TYPE III BARRICADE

TEMPORARY PEDESTRIAN WALKWAY

CONSTRUCTION FENCING

SEE SHEET TMP-12 FOR CLOSURE SIGNING AND DEVICES

1. -L- STA. 20+50+/- BEGIN REVISED TEMP. MARKINGS TIE TO PREVIOUSLY PLACED TEMP. MARKINGS
2. -L- STA. 20+53+/- BEGIN REVISED TEMP. MARKINGS TIE TO PREVIOUSLY PLACED TEMP. MARKINGS
3. -Y2- STA. 10+22+/-
4. -L- STA. 20+69+/- BEGIN REVISED TEMP. MARKINGS TIE TO PREVIOUSLY PLACED TEMP. MARKINGS
5. -L- STA. 20+96+/-
6. -Y1- STA. 18+53+/-
7. -Y1- STA. 18+58+/-
8. -Y1- STA. 16+30+/-

PREVIOUSLY PLACED TEMPORARY MARKINGS

-Y2- STA. 11+79+/- END P1 P10 BEGIN P13

-Y2- STA. 13+90+/- END P13

MAINTAIN PROPERTY INGRESS AND EGRESS BY CONSTRUCTING PROP. DRIVEWAY IN HALF SECTIONS

TYPE III BARRICADE

TYPE III BARRICADE(S)

R11-2 48" x 30" ROAD CLOSED

A R9-9 24" X 12" SIDEWALK CLOSED

B PREVIOUSLY INSTALLED SIGN

C PREVIOUSLY INSTALLED SIGN

D TYPE III BARRICADE

E PREVIOUSLY INSTALLED SIGN 10 M.P.H.

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

Signed by: J. Todd Brooks
B136C548C9084EF...

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER 17586 J. TODD BROOKS

11/7/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

PHASE II DETAIL

11/6/2025
P:\\kci-pw.bentley.com\kci-pw-05\Documents\Projects\2023\252302454.04\2. Design\Work Zone Traffic Control\Sheets\HN-0023_TMP_09.dgn
User:jwiles

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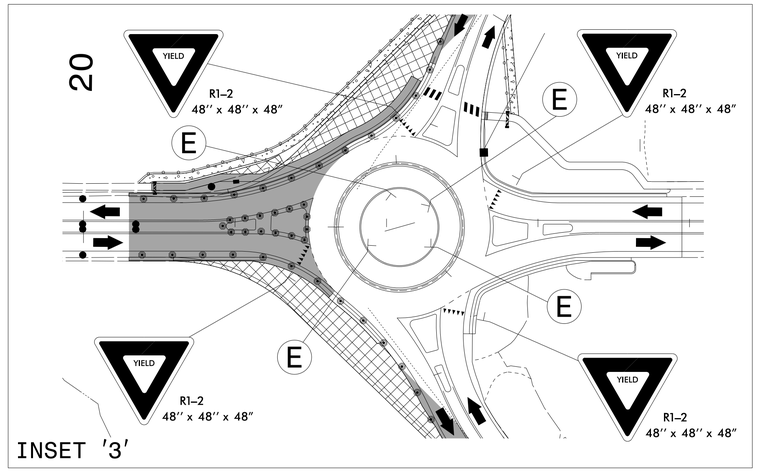
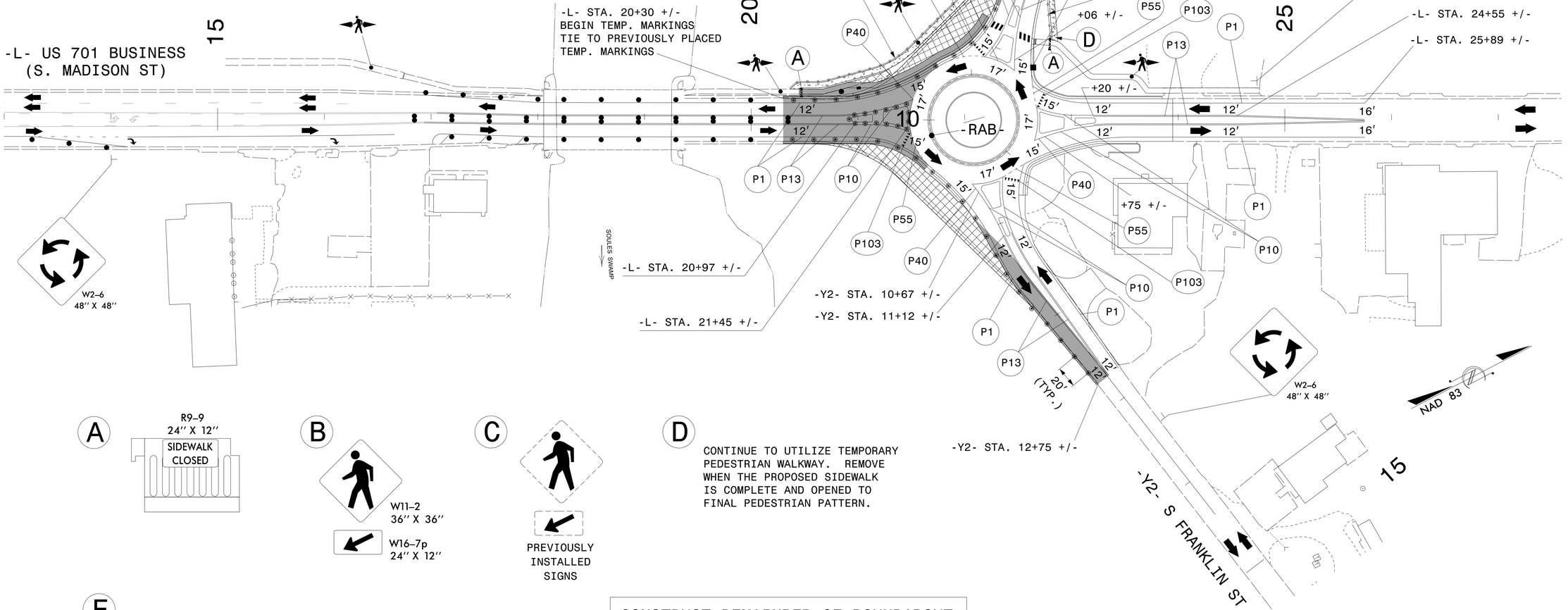
PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-10

INSET '3'



USE TEMPORARY MARKINGS TO PLACE TRAFFIC IN FINAL PATTERN

SEE INSET '3' THIS SHEET FOR SIGNING IN THE ROUNDABOUT



A

R9-9
24" X 12"
SIDEWALK
CLOSED

B

W11-2
36" X 36"

W16-7p
24" X 12"

C

PREVIOUSLY
INSTALLED
SIGNS

D

CONTINUE TO UTILIZE TEMPORARY PEDESTRIAN WALKWAY. REMOVE WHEN THE PROPOSED SIDEWALK IS COMPLETE AND OPENED TO FINAL PEDESTRIAN PATTERN.

E

ONE WAY
R6-1 R
36" X 12"

OM1-3
18 X 18

CONSTRUCT REMAINDER OF ROUNDABOUT UNDER TRAFFIC USING RSD 1101.02, SHEET 18 OF 19

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

Signed by:
E136C648C96B4EA...

SEAL
17586
NORTH CAROLINA
ENGINEER
J. TODD BROOKS
11/7/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

PHASE III DETAIL

11/6/2025
P:\\kci-pw.bentley.com\kci-pw-05\Documents\Projects\2023\252302454.04\2. Design\Work Zone Traffic Control\Sheets\HN-0023_TMP_i0.dgn
User:jwiles

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PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-11

S. FRANKLIN STREET
NORTHBOUND DETOUR

S. FRANKLIN STREET
SOUTHBOUND DETOUR

NAD 83

S LEE STREET

S LEE STREET

FRAZIER STREET

PECAN STREET

W COMMERCE STREET

W MAIN STREET

US 701 BUSINESS
(S MADISON STREET)

S FRANKLIN STREET

CALDIS STREET

ROAD CLOSED AHEAD
W20-3
48" X 48"

NEXT RIGHT
SP-4R
42" X 12"

E COMMERCE STREET

MILL STREET

SEE SHEET TMP-13

DETOUR
M4-8
24" X 12"

M6-1
21" X 15"

E MAIN STREET

SEE RSD 1101.03,
SHEET 1 OF 9 FOR
ADDITIONAL SIGNING

SEE SHEET TMP-14

ROAD CLOSED AHEAD
W20-3
48" X 48"

NEXT RIGHT
SP-4R
42" X 12"

S FRANKLIN STREET

ROAD CLOSED AHEAD
W20-3
48" X 48"

NEXT LEFT
SP-4L
42" X 12"

ROAD CLOSED 1000 FT
W20-3
48" X 48"

END DETOUR
M4-8 A
24" X 18"

R11-2
48" x 30"
ROAD CLOSED

TYPE III BARRICADE(S)

SEE SHEET TMP-4

ROAD CLOSED 500 FT
W20-3
48" X 48"

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

SEAL

Signed by: J. Todd Brooks
B136C848C9B84E6...

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

11/7/2025

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

DETOUR ROUTE

11/6/2025
pw://KCI-pw.bentley.com:kci-pw-05/Documents/Projects/2023/252302454.04/2.Design/Work Zone Traffic Control/Sheets/HN-0023_TMP_ll.dgn
User:jwiles

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PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-12

SOUTHBOUND US 701
BUSINESS DETOUR

NORTHBOUND US 701
BUSINESS DETOUR

A

DETOUR M4-8 24" X 12"
SOUTH M3-3P 24" X 12"
BUSINESS M4-3P 24" X 12"
701 M1-4 30" X 24"
M6-3 21" X 15"

B

DETOUR M4-8 24" X 12"
SOUTH M3-3P 24" X 12"
BUSINESS M4-3P 24" X 12"
701 M1-4 30" X 24"
M6-1 L 21" X 15"

C

DETOUR M4-8 24" X 12"
SOUTH M3-3P 24" X 12"
BUSINESS M4-3P 24" X 12"
701 M1-4 30" X 24"
M6-1 21" X 15"

D

DETOUR M4-8 24" X 12"
SOUTH M3-3P 24" X 12"
BUSINESS M4-3P 24" X 12"
701 M1-4 30" X 24"
M6-3 21" X 15"

END DETOUR M4-8 A 24" X 18"
NORTH M3-1P 24" X 12"
BUSINESS M4-3P 24" X 12"
701 M1-4 30" X 24"

E

DETOUR M4-8 24" X 12"
NORTH M3-1P 24" X 12"
BUSINESS M4-3P 24" X 12"
701 M1-4 30" X 24"
M6-3 21" X 15"

F

DETOUR M4-8 24" X 12"
NORTH M3-1P 24" X 12"
BUSINESS M4-3P 24" X 12"
701 M1-4 30" X 24"
M6-1 L 21" X 15"

G

END DETOUR M4-8 A 24" X 18"
SOUTH M3-3P 24" X 12"
BUSINESS M4-3P 24" X 12"
701 M1-4 30" X 24"

H

R11-2 48" x 30"
ROAD CLOSED
TYPE III BARRICADE(S)

I

R11-3 60" x 30"
ROAD CLOSED
0.1 MILES AHEAD
LOCAL TRAFFIC ONLY
TYPE III BARRICADE

R11-3 60" x 30"
ROAD CLOSED
0.1 MILES AHEAD
LOCAL TRAFFIC ONLY
TYPE III BARRICADE

J

ROAD CLOSED R11-3 60" x 30"
0.3 MILES AHEAD
LOCAL TRAFFIC ONLY
DETOUR M4-10R 48" x 18"
OM3-L 12" x 36"
SEE TMP-11

ROAD CLOSED R11-3 60" x 30"
0.3 MILES AHEAD
LOCAL TRAFFIC ONLY
DETOUR M4-10R 48" x 18"
OM3-L 12" x 36"

K

ROAD CLOSED R11-3 60" x 30"
0.4 MILES AHEAD
LOCAL TRAFFIC ONLY
DETOUR M4-10R 48" x 18"
OM3-L 12" x 36"
SEE TMP-12

ROAD CLOSED R11-3 60" x 30"
0.4 MILES AHEAD
LOCAL TRAFFIC ONLY
DETOUR M4-10R 48" x 18"
OM3-L 12" x 36"

S LEE STREET

ROAD CLOSED AHEAD W20-3 48" X 48"
NEXT RIGHT SP-4R 42" X 12"

FRAZIER STREET

PECAN STREET

W COMMERCE STREET

ROAD CLOSED AHEAD W20-3 48" X 48"
NEXT RIGHT SP-4R 42" X 12"

W MAIN STREET

SEE SHEET TMP-14

SEE RSD 1101.03, SHEET 1 OF 9, FOR ADDITIONAL SIGNING

ROAD CLOSED AHEAD W20-3 48" X 48"
NEXT LEFT SP-4L 42" X 12"

E MAIN STREET

ROAD CLOSED AHEAD W20-3 48" X 48"
NEXT RIGHT SP-4R 42" X 12"

SEE SHEET TMP-15

S FRANKLIN STREET

ROAD CLOSED AHEAD W20-3 48" X 48"
NEXT LEFT SP-4L 42" X 12"

SEE RSD 1101.03, SHEET 1 OF 9, FOR ADDITIONAL SIGNING

US 701 BUSINESS
(S MADISON STREET)

SEE SHEET TMP-5

SEE SHEETS TMP-6 AND TMP-6A

S FRANKLIN STREET

NAD 83

CALDIS STREET

ROAD CLOSED 500 FT W20-3 48" X 48"

ROAD CLOSED 1000 FT W20-3 48" X 48"

CALDIS STREET

ROAD CLOSED AHEAD W20-3 48" X 48"
NEXT LEFT SP-4L 42" X 12"

E COMMERCE STREET

ROAD CLOSED 1000 FT W20-3 48" X 48"

MILL STREET

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED:

DATE:

Signed by:
B136C648C96B4A1...

SEAL
NORTH CAROLINA
ENGINEER
J. TODD BROOKS
17586
SEAL

11/7/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

DETOUR ROUTE

11/6/2025
pw://kci-pw.bentley.com:kci-pw-05/Documents/Projects/2023/252302454.04/2.Design/Work Zone Traffic Control/Sheets/HN-0023_TMP_12.dgn
User:jwiles

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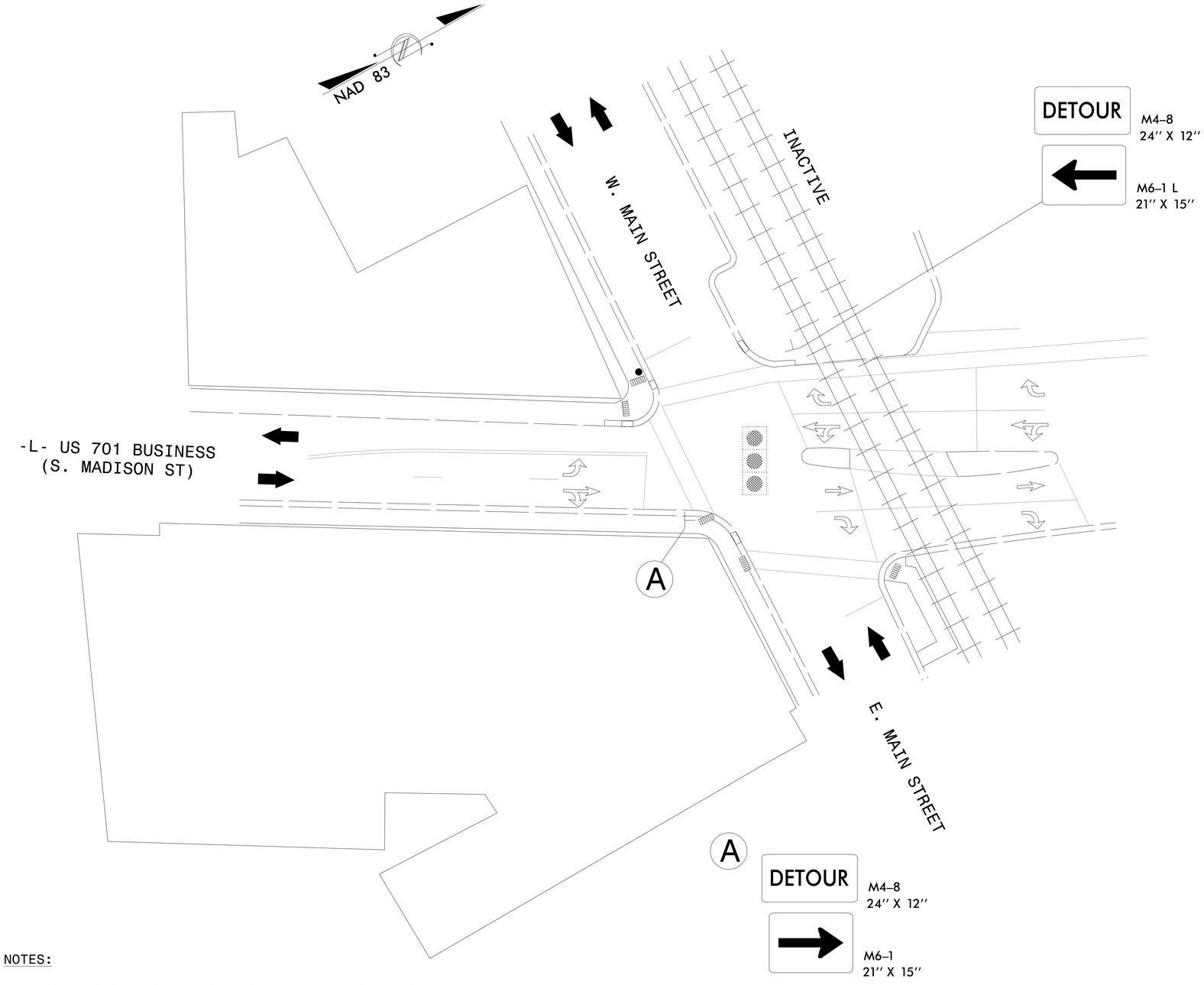
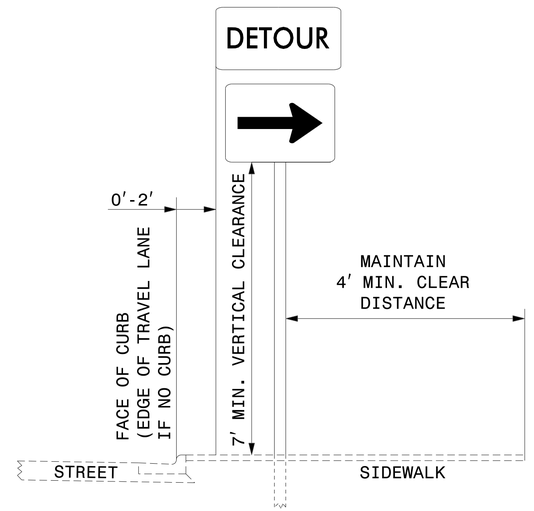
PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-13





INSTALLATION DETAIL

NOTES:

1) INSTALL SIGN ASSEMBLIES IN SIDEWALK DIRECTLY BEHIND THE BACK OF CURB. ENSURE THAT INSTALLATION DOES NOT CONFLICT WITH ANY ANY EXISTING UTILITIES OR DRAINAGE STRUCTURES. ALSO ENSURE THAT SIGN ASSEMBLIES DO NOT CONFLICT WITH EXISTING PEDESTRIAN FEATURES SUCH AS DETECTABLE WARNING MATS OR RAMPS.

2) THIS SIGN ASSEMBLY WILL BE REPLACED WITH THE SIGN ASSEMBLY 'B' SHOWN ON SHEET TMP-14.

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

SEAL

Signed by: J. Todd Brooks
B136B648C9BBE5...
11/7/2025

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

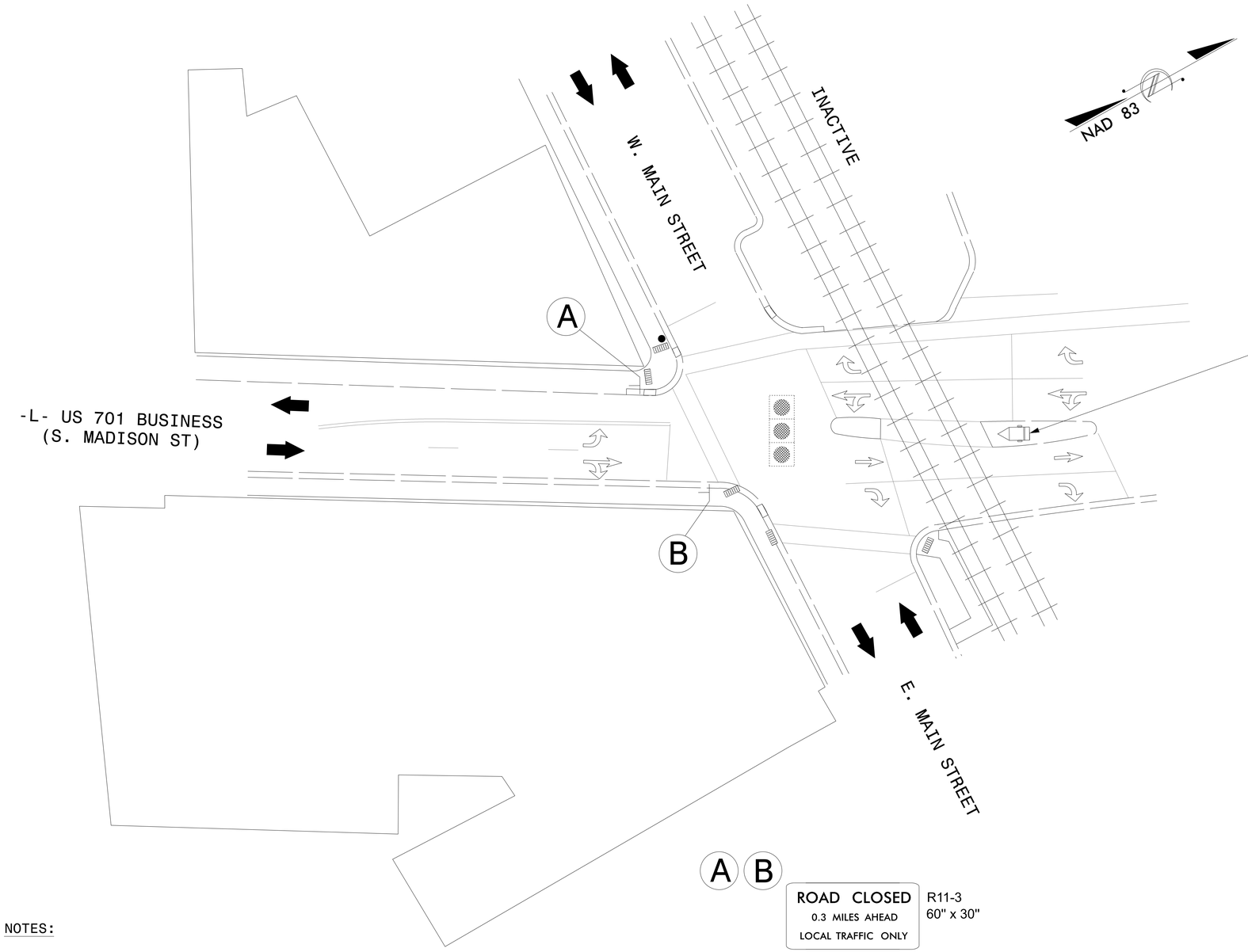
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

SIGN PLACEMENT DETAIL

11/6/2025
P:\\kci-pw.bentley.com:kci-pw-05\Documents\Projects\2023\25230245A.04\2.Design\Work Zone Traffic Control\Sheets\HN-0023_TMP_13.dgn
User:jwiles

Docusign Envelope ID: 28B728FE-179F-48D6-AF6B-BA537112DA41

PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-14



MESSAGE PRIOR TO CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
US701 BUS WILL BE CLOSED	STARTING (DAY) (TIME)

CHANGEABLE MESSAGE SIGN

MESSAGE DURING CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
US701 BUS CLOSED AT LEE	THRU TRAFFIC NEXT RT

CHANGEABLE MESSAGE SIGN

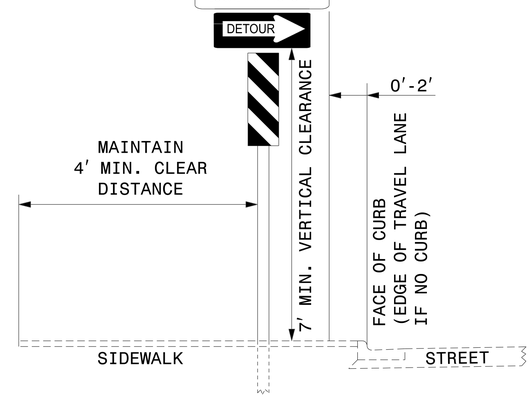
PLACE PCMS IN CONCRETE MEDIAN ON APPROACH TO INACTIVE RR GRADE CROSSING

A B

ROAD CLOSED
0.3 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
60" x 30"

DETOUR
M4-10R
48" x 18"

OM3-L
12" x 36"



INSTALLATION DETAIL

NOTES:

1) INSTALL SIGN ASSEMBLIES IN SIDEWALK DIRECTLY BEHIND THE BACK OF CURB. ENSURE THAT INSTALLATION DOES NOT CONFLICT WITH ANY ANY EXISTING UTILITIES OR DRAINAGE STRUCTURES. ALSO ENSURE THAT SIGN ASSEMBLIES DO NOT CONFLICT WITH EXISTING PEDESTRIAN FEATURES SUCH AS DETECTABLE WARNING MATS OR RAMPS.

2) SIGN ASSEMBLY 'B' THIS SHEET WILL REPLACE SIGN ASSEMBLY 'A' SHOWN ON SHEET TMP-13.

3) UNDER THE DIRECTION OF THE ENGINEER, REPAIR SIDEWALK ONCE THE SIGN ASSEMBLIES ARE REMOVED.

4) OM3-L OBJECT MARKER SHALL BE BLACK AND ORANGE.

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

SEAL

Signed by:
B136C648C96B4F5...

NORTH CAROLINA PROFESSIONAL SEAL 47586 ENGINEER J. TODD BROOKS

11/7/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

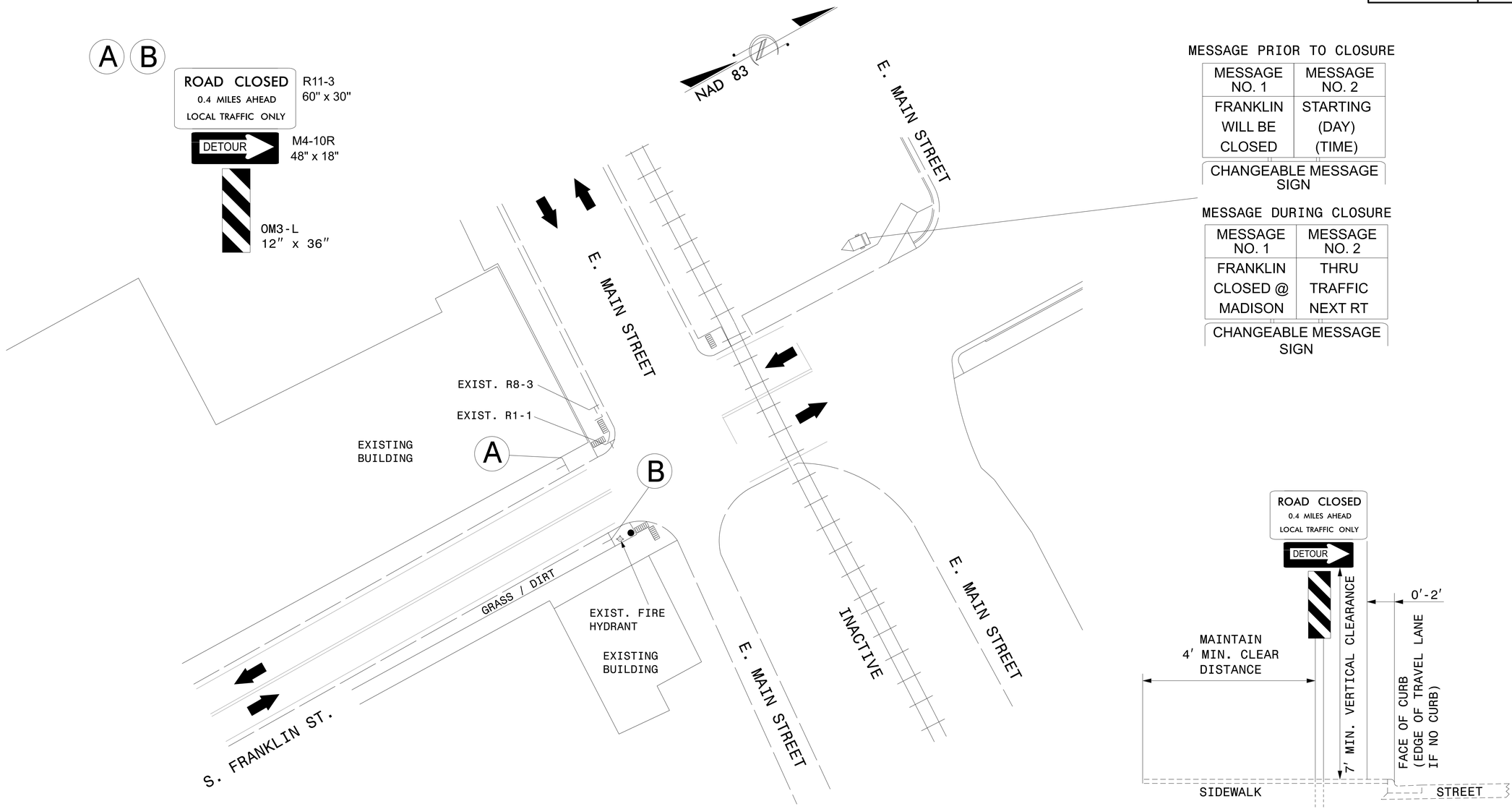
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
WORK ZONE TRAFFIC CONTROL

SIGN PLACEMENT DETAIL

11/6/2025
P:\\kci-pw.bentley.com:kci-pw-05\Documents\Projects\2023\25230245A.04\2.Design\Work Zone Traffic Control\Sheets\HN-0023_TMP_I4.dgn
User:jwiles

Docusign Envelope ID: 28B728FE-179F-48D6-AF6B-BA537112DA41

PROJ. REFERENCE NO.	SHEET NO.
HN-0023	TMP-15



MESSAGE PRIOR TO CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
FRANKLIN WILL BE CLOSED	STARTING (DAY) (TIME)

CHANGEABLE MESSAGE SIGN

MESSAGE DURING CLOSURE

MESSAGE NO. 1	MESSAGE NO. 2
FRANKLIN CLOSED @ MADISON	THRU TRAFFIC NEXT RT

CHANGEABLE MESSAGE SIGN

INSTALLATION DETAIL

NOTES:

SIGN A) INSTALL SIGN ASSEMBLY IN OPEN SPACE BETWEEN THE EXISTING BUILDING AND THE EXISTING PAVEMENT AS SHOWN ON THIS SHEET. LOCATE AND AVOID ANY EXISTING UTILITIES.

SIGN B) INSTALL SIGN ASSEMBLY IN THE OPEN SPACE BETWEEN THE EXISTING SIDEWALK AND THE EXISTING PAVEMENT. PLACE ASSEMBLY JUST TO THE SOUTH OF THE EXISTING FIRE HYDRANT AS SHOWN ON THIS SHEET. LOCATE AND AVOID ANY EXISTING UTILITIES.

SIGNS A & B) OM3-L OBJECT MARKERS SHALL BE BLACK AND ORANGE.

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

APPROVED: _____

DATE: _____

Signed by:
J. Todd Brooks
B136C848C96B4E5...

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

11/7/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DIVISION OF HIGHWAYS · STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION · WORK ZONE TRAFFIC CONTROL

SIGN PLACEMENT DETAIL

11/6/2025
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User: jwiles

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T.I.P.: HN-0023

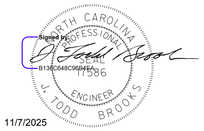
CONTRACT: DF00540

TIP NO.	SHEET NO.
HN-0023	PMP-1

APPROVED: _____

DATE: _____

SEAL



11/7/2025

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING PLAN
COLUMBUS COUNTY
LOCATION: US 701 BUS. (MADISON ST.) AT SR 1916 (LEE ST.) AND SR 1953 (FRANKLIN ST.)

INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING PLAN TITLE SHEET
PMP-1A	ROADWAY STANDARD DRAWING NO. 1250D0102, SHEET 2 OF 3
PMP-2	PAVEMENT MARKING SCHEDULE
PMP-3	PAVEMENT MARKING DETAIL
PMP-4	PAVEMENT MARKING DETAIL

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 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.12	PAVEMENT MARKINGS - BRIDGES
1205.13	PAVEMENT MARKINGS - LANE REDUCTIONS
1205.14	PAVEMENT MARKINGS - ROUNDABOUTS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING - SHEET 1 AND 3 OF 3

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
US 701 BUS.	THERMOPLASTIC	PERMANENT RAISED
BRIDGE	COLD APPLIED PLASTIC, TYPE 2	PERMANENT RAISED
ALL -Y- LINES	THERMOPLASTIC	PERMANENT RAISED

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

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

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

E) REMOVE ALL RESIDUE AND SURFACE LAITANCE BY ACCEPTABLE METHODS ON CONCRETE BRIDGE DECKS PRIOR TO PLACING COLD APPLIED PLASTIC PAVEMENT MARKING MATERIAL.

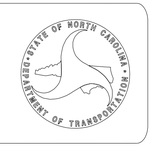
F) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.

G) TYPE 3 COLD APPLIED PLASTIC MAY BE USED IN LIEU OF TYPE 2 COLD APPLIED PLASTIC. IF TYPE 3 COLD APPLIED PLASTIC IS USED, IT SHALL BE PAID FOR USING THE TYPE 2 COLD APPLIED PLASTIC PAY ITEM.

H) SEE ROADWAY PLANS FOR ALTERNATE CURB RAMP DESIGNS WHEN INDICATED ON PAVEMENT MARKING DETAIL SHEETS.

PLAN REVIEWED BY: N.C.D.O.T. SIGNING AND DELINIATION UNIT

MITCH EATON, PE	SIGNING & DELINEATION REGIONAL ENGINEER
ANDREW SCOTT	SIGNING & DELINEATION PROJECT DESIGN ENGINEER



PLAN PREPARED BY:

J. TODD BROOKS, PE	PROJECT ENGINEER
EDDIE CARGOR II	PROJECT DESIGN ENGINEER

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919-881-9939
NC COA No. F-0929

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TIP NO.	SHEET NO.
HN-0023	PMP-1A

APPROVED: _____

DATE: _____

SEAL

11/12/2025

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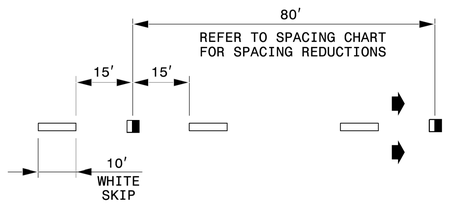
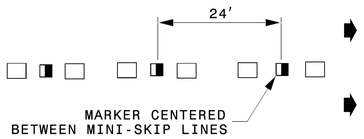
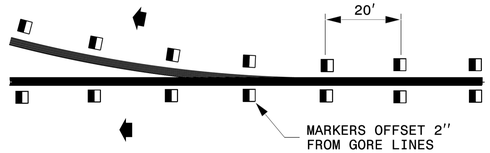
10′-30′/SP SKIP LINE



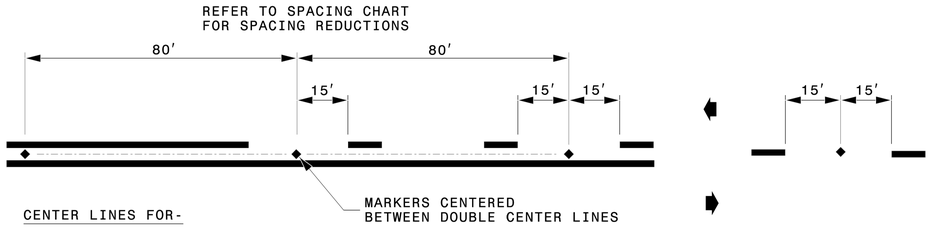
3′-9′/SP MINI-SKIP LINE



GORE LINES



YELLOW CENTER LINES

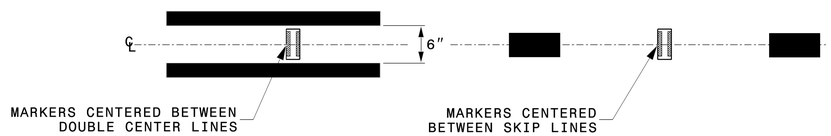


CENTER LINES FOR-

TWO-LANE, TWO-WAY ROADWAYS
UNDIVIDED ROADWAYS
TWO-WAY LEFT TURN LANES

DETAIL OF PAVEMENT MARKER PLACEMENT

RAISED REFLECTIVE PAVEMENT MARKERS



LEGEND

- CRYSTAL/RED PAVEMENT MARKER
- YELLOW/YELLOW PAVEMENT MARKER
- DIRECTION OF TRAFFIC FLOW

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

RAISED PAVEMENT MARKERS

INSTALLATION SPACING

SHEET 2 OF 3

1250D01

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919-881-9939
NC COA No. F-0929

ROADWAY STANDARD DRAWING DETAIL

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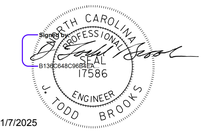

11/7/2025

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PAVEMENT MARKING SCHEDULE

PAVEMENT MARKING LINES

T1	WHITE EDGELINE	THERMOPLASTIC (4″, 90 mils)
T2	WHITE SOLID LANE LINE	THERMOPLASTIC (4″, 90 mils)
T3	10 FT. WHITE SKIP	THERMOPLASTIC (4″, 90 mils)
T4	3 FT. -9 FT./SP WHITE MINISKIP	THERMOPLASTIC (4″, 90 mils)
T10	YELLOW EDGELINE	THERMOPLASTIC (4″, 90 mils)
T11	YELLOW SINGLE CENTER	THERMOPLASTIC (4″, 90 mils)
T12	10 FT. YELLOW SKIP	THERMOPLASTIC (4″, 90 mils)
T13	YELLOW DOUBLE CENTER	THERMOPLASTIC (4″, 90 mils)
T40	WHITE GORELINE	THERMOPLASTIC (8″, 90 mils)
T41	WHITE DIAGONAL	THERMOPLASTIC (8″, 90 mils)
T42	YELLOW DIAGONAL	THERMOPLASTIC (8″, 90 mils)
T45	3 FT. -3 FT./SP WHITE MINISKIP	THERMOPLASTIC (8″, 90 mils)
T62	WHITE CROSSWALK LINE	THERMOPLASTIC (24″, 90 mils)
T103	YIELD LINE TRIANGLE	THERMOPLASTIC (24″, 90 mils)
C1	WHITE EDGELINE	COLD APPLIED PLASTIC (4″)
C13	YELLOW DOUBLE CENTER	COLD APPLIED PLASTIC (4″)
C42	YELLOW DIAGONAL	COLD APPLIED PLASTIC (8″)

PAVEMENT MARKING SYMBOLS

T70	LEFT TURN ARROW	THERMOPLASTIC
T71	RIGHT TURN ARROW	THERMOPLASTIC
T79	MERGE ARROW	THERMOPLASTIC

PAVEMENT MARKERS

MA	YELLOW AND YELLOW	PERMANENT RAISED
MB	CRYSTAL AND RED	PERMANENT RAISED

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919-881-9939
NC COA No. F-0929

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PAVEMENT MARKING SCHEDULE

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APPROVED: _____

DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

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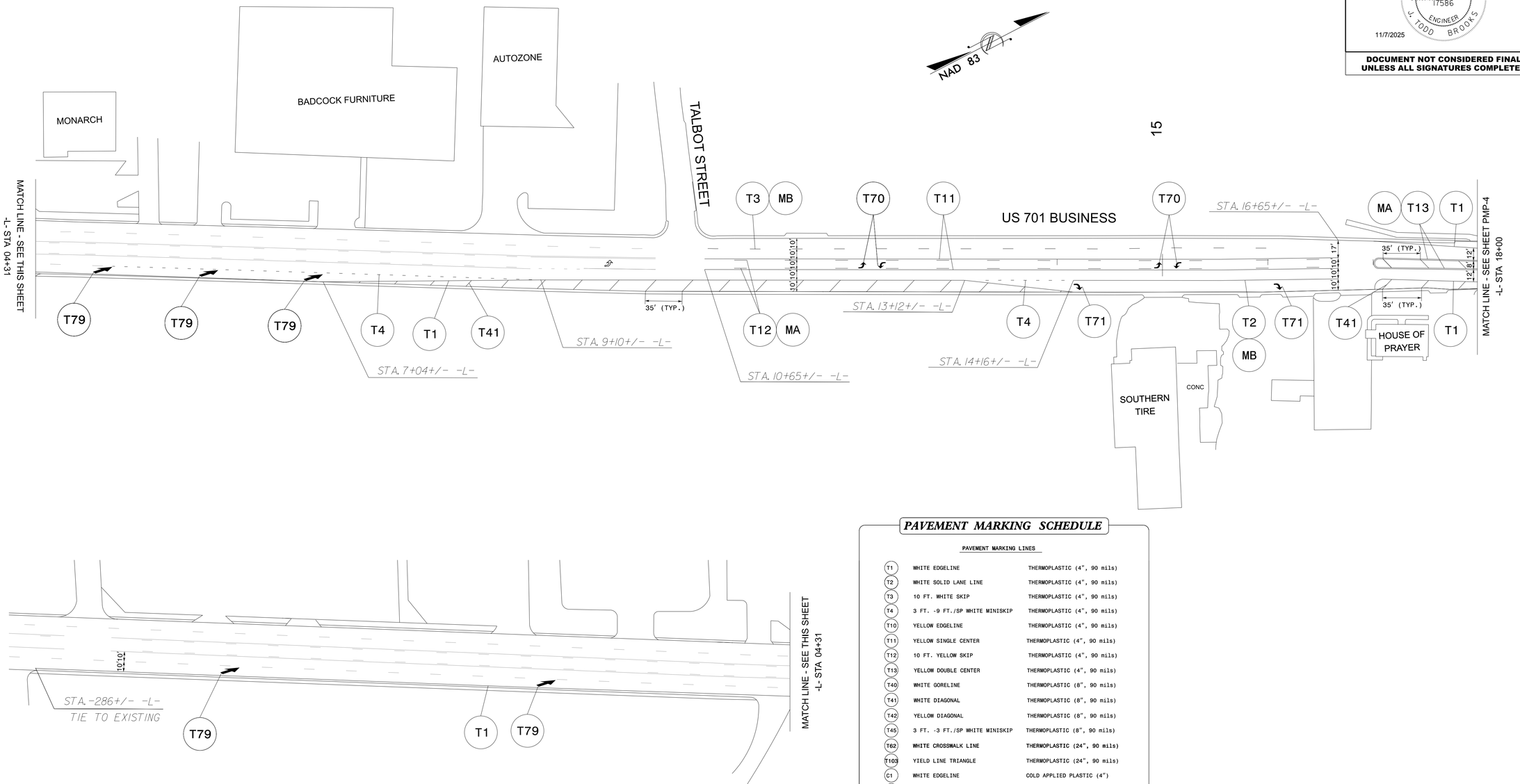
11/7/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



PAVEMENT MARKING SCHEDULE

PAVEMENT MARKING LINES

T1	WHITE EDGELINE	THERMOPLASTIC (4", 90 mils)
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PAVEMENT MARKING SYMBOLS

T70	LEFT TURN ARROW	THERMOPLASTIC
T71	RIGHT TURN ARROW	THERMOPLASTIC
T79	MERGE ARROW	THERMOPLASTIC

PAVEMENT MARKERS

MA	YELLOW AND YELLOW	PERMANENT RAISED
MB	CRYSTAL AND RED	PERMANENT RAISED

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919-881-9939
NC COA No. F-0929

PROPOSED PAVEMENT MARKING DETAIL

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TIP NO.	SHEET NO.
HN-0023	PMP-4

APPROVED: _____

DATE: _____

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

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11/7/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PAVEMENT MARKING SCHEDULE

PAVEMENT MARKING LINES

T1	WHITE EDGELINE	THERMOPLASTIC (4", 90 mils)
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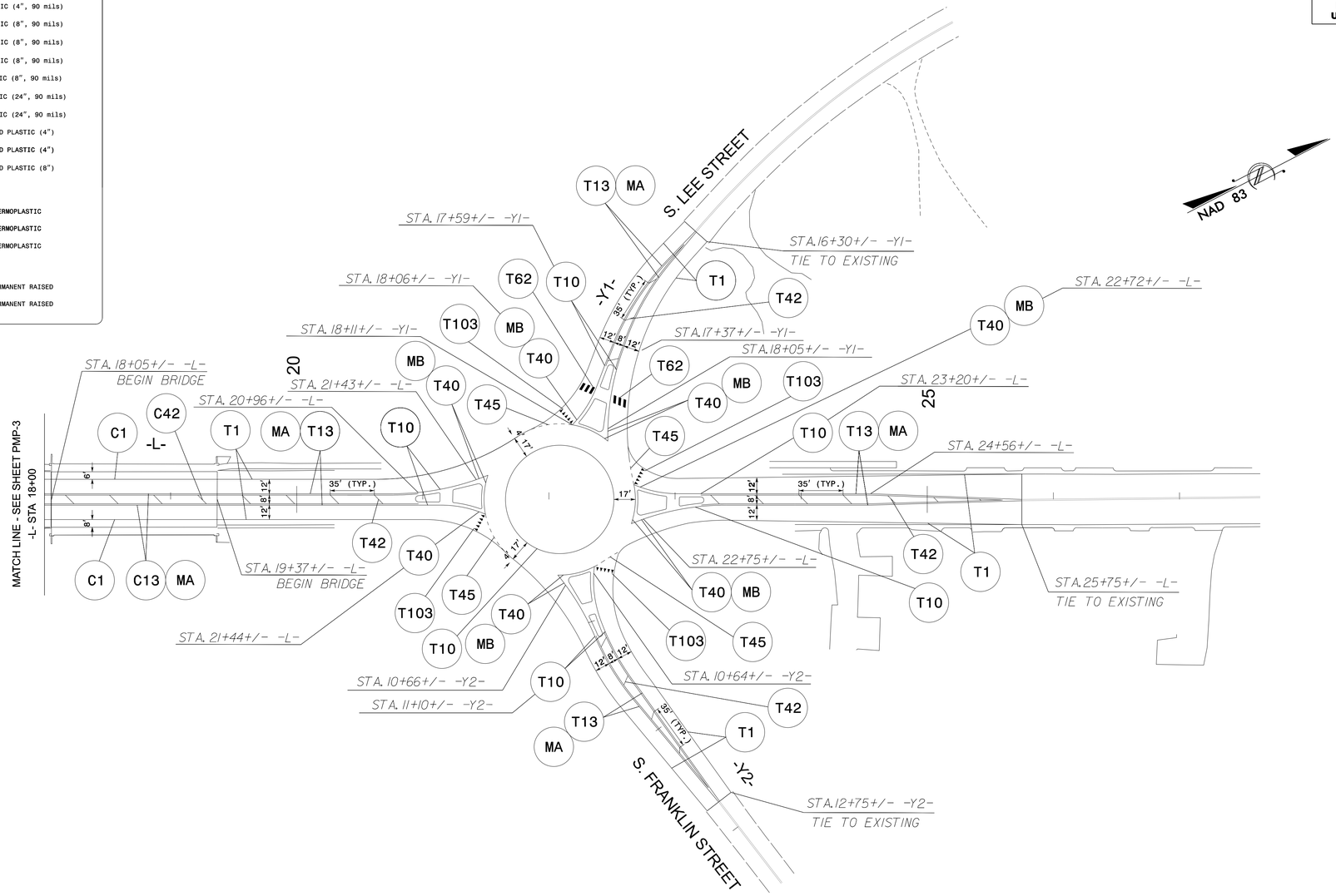
MA	YELLOW AND YELLOW	PERMANENT RAISED
MB	CRYSTAL AND RED	PERMANENT RAISED



Dewberry

2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919-881-9939
NC COA No. F-0929

PROPOSED PAVEMENT MARKING DETAIL

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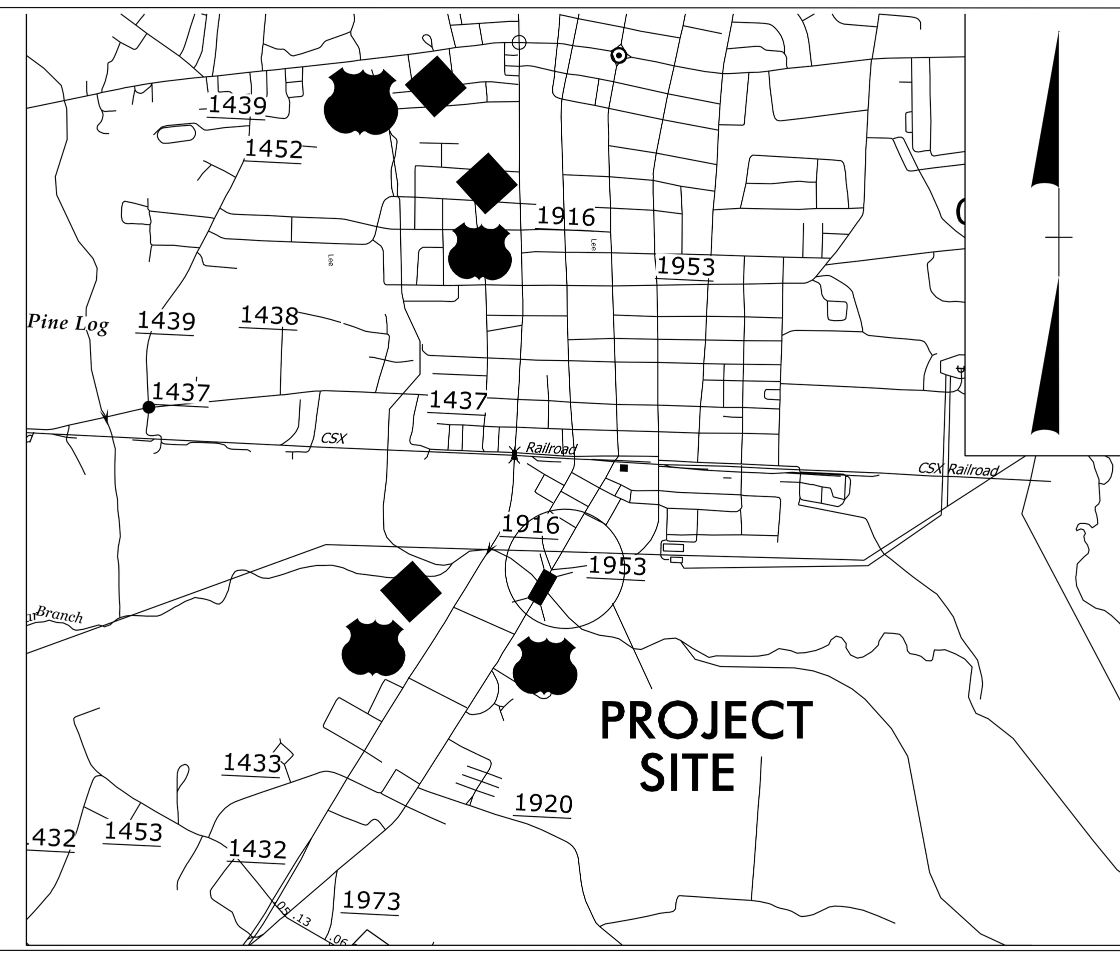
TIP PROJECT: HN-0023

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HN-0023	EC-1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION



VICINITY MAP

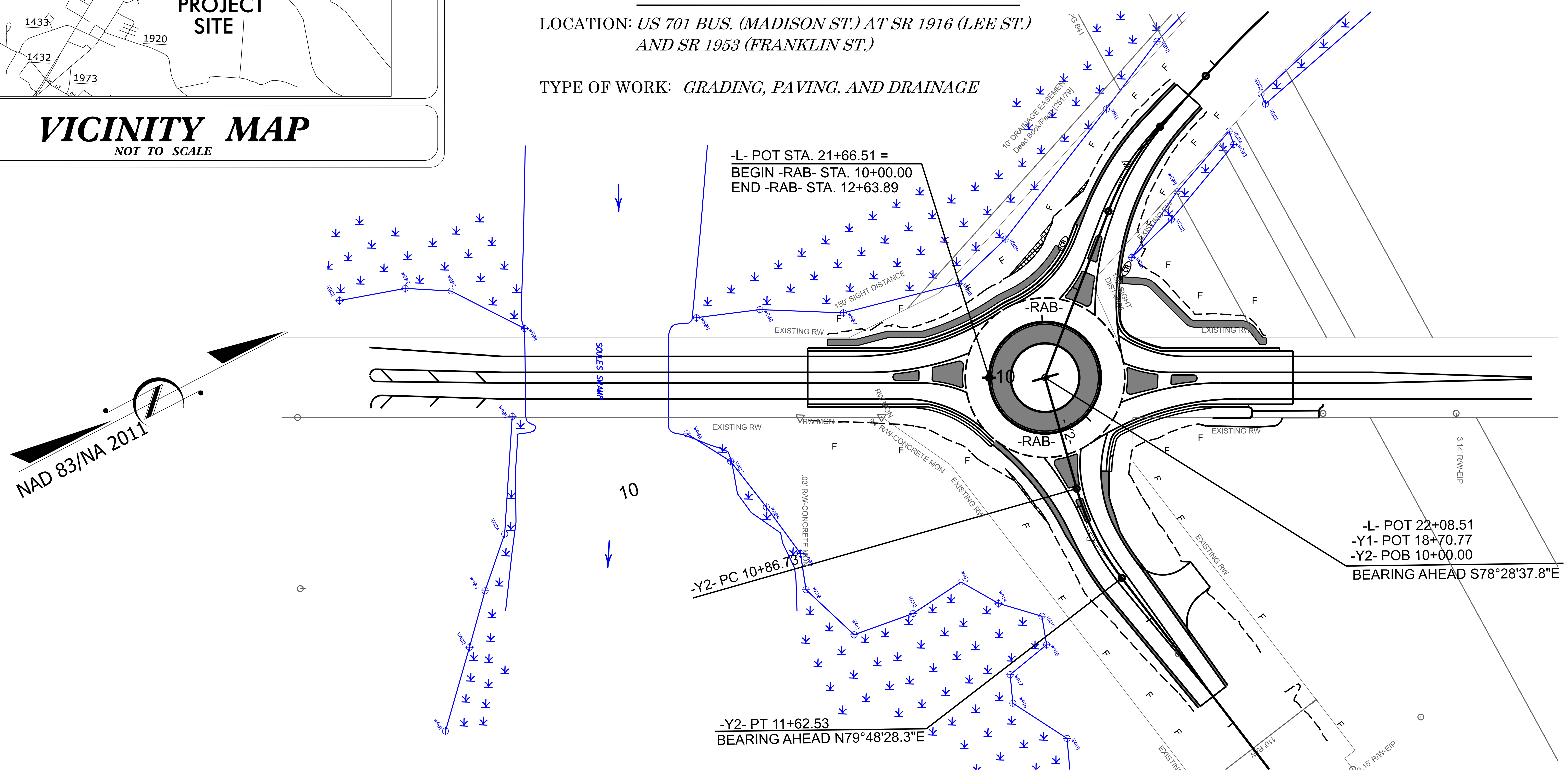
NOT TO SCALE

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLAN FOR PROPOSED
HIGHWAY EROSION CONTROL

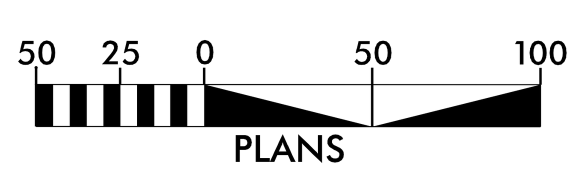
LOCATION: *US 701 BUS. (MADISON ST.) AT SR 1916 (LEE ST.) AND SR 1953 (FRANKLIN ST.)*

TYPE OF WORK: *GRADING, PAVING, AND DRAINAGE*



THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

GRAPHIC SCALE



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL STORMWATER CONSTRUCTION PERMIT ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES.

KCI

Prepared In the Office of:

KCI ASSOCIATES OF N.C., P.A.
4800 Falls of Neuse Road, Suite 200
Raleigh, NC 27609
Phone (919) 783-9214
NC Firm License No: C-0764

Designed by:

CRYSTAL MOORE — *3124*

NAME — *LEVEL III CERTIFICATION NO.*

Roadway Standard Drawings

The "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2024 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

$$$$$$SYSTIME$$$$$ $$$$$$$$$$DGN$$$$$$$$$$$$$$$$ $$$$$USERNAME$$$$

PROJECT REFERENCE NO.	SHEET NO.
HN-0023	EC-02
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

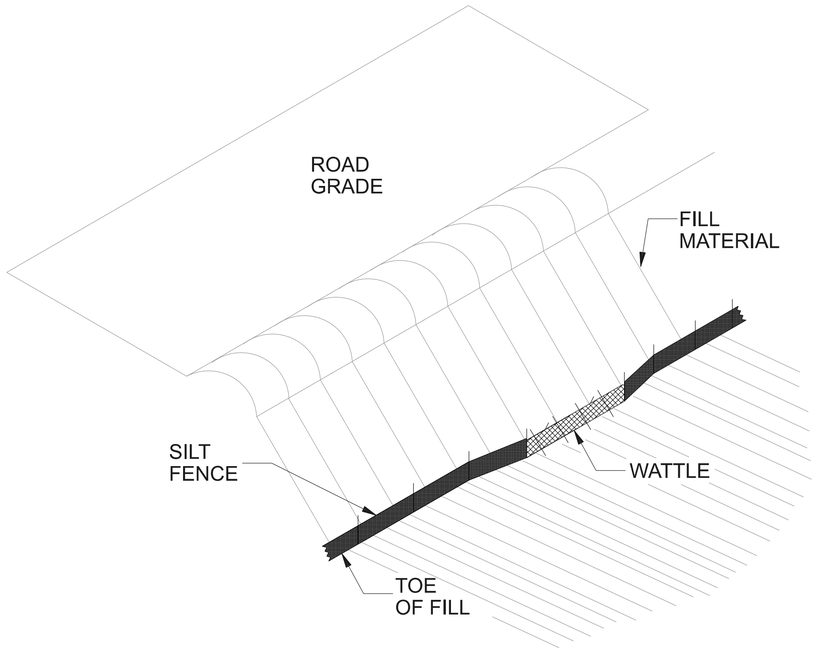
EROSION & SEDIMENT CONTROL LEGEND

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1630.03	Temporary Silt Ditch	TSD
1630.04	Stilling Basin	
1630.05	Temporary Diversion	TD
1630.06	Special Stilling Basin	
1630.07	Skimmer Basin	
1630.08	Tiered Skimmer Basin	
1630.09	Earthen Dam with Skimmer	
	Infiltration Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C

Std. #	Description	Symbol
1633.01	Temporary Rock Silt Check Type A	
1633.02	Temporary Rock Silt Check Type B	
1633.03	Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant	
1634.01	Temporary Rock Sediment Dam Type A	
1634.02	Temporary Rock Sediment Dam Type B	
1635.01	Rock Pipe Inlet Sediment Trap Type A	A
1635.02	Rock Pipe Inlet Sediment Trap Type B	B
1636.01	Excelsior Wattle Check	
1636.01	Excelsior Wattle Check with Flocculant	
1636.01	Coir Fiber Wattle Check	
1636.01	Coir Fiber Wattle Check with Flocculant	
1636.02	Silt Fence Excelsior Wattle Break	EW
	Silt Fence Coir Fiber Wattle Break	CFW
1636.03	Excelsior Wattle Barrier	EW EW EW
1636.03	Coir Fiber Wattle Barrier	CFW CFW CFW

PROJECT REFERENCE NO.	SHEET NO.
HN-0023	EC-2A
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



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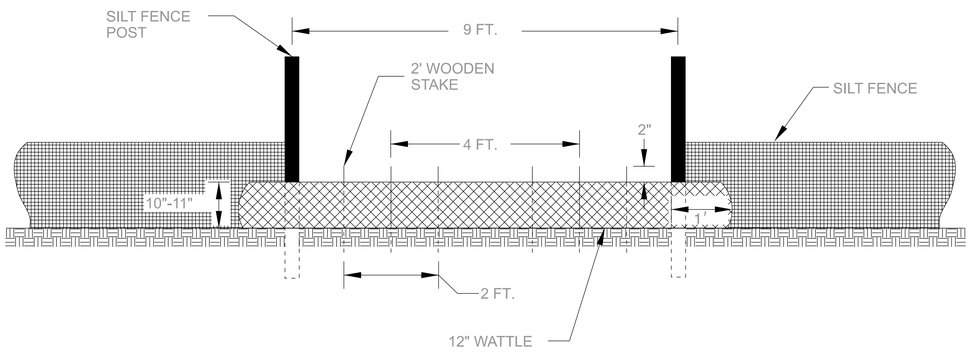


VIEW FROM SLOPE

NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLE ON TOE OF SLOPE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

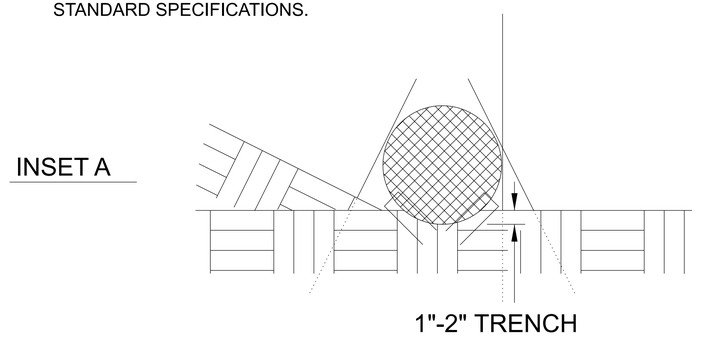
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

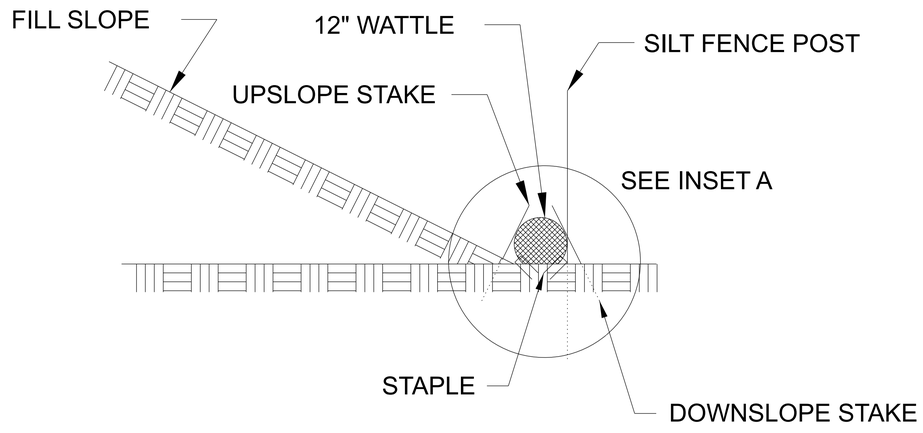
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

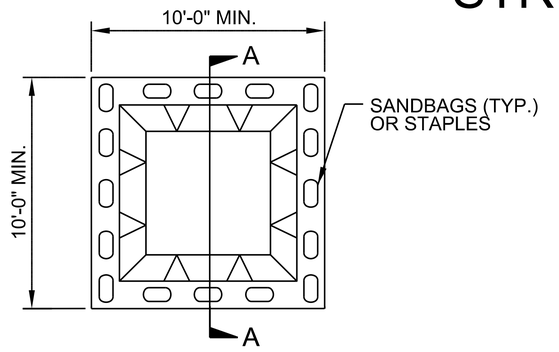




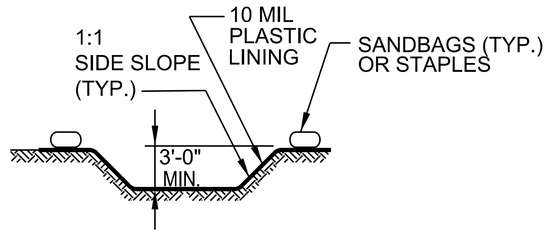
SIDE VIEW

PROJECT REFERENCE NO.	SHEET NO.
HN-0023	EC-28
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

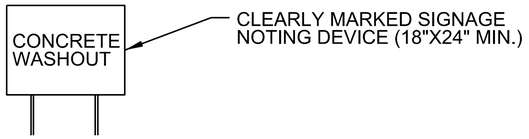
ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



PLAN



SECTION A-A



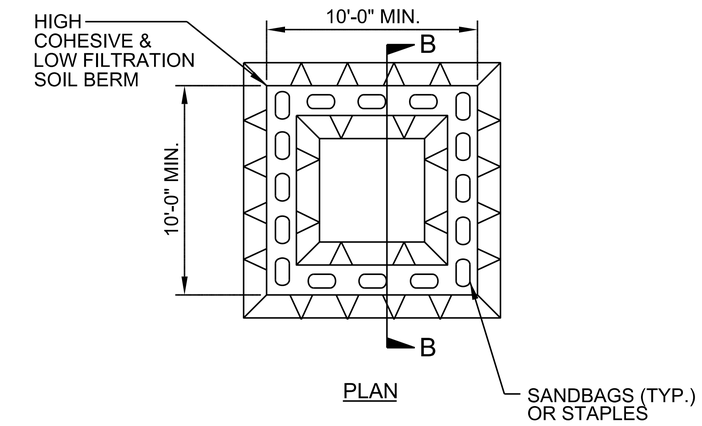
NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

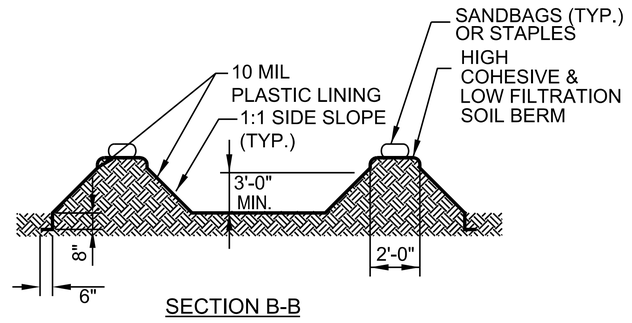
3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

BELOW GRADE WASHOUT STRUCTURE

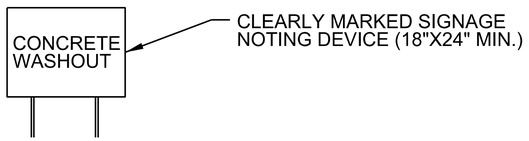
NOT TO SCALE



PLAN



SECTION B-B



NOTES:
1. ACTUAL LOCATION DETERMINED IN FIELD

2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.

3.CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

ABOVE GRADE WASHOUT STRUCTURE

NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
HN-0023	EC-3

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

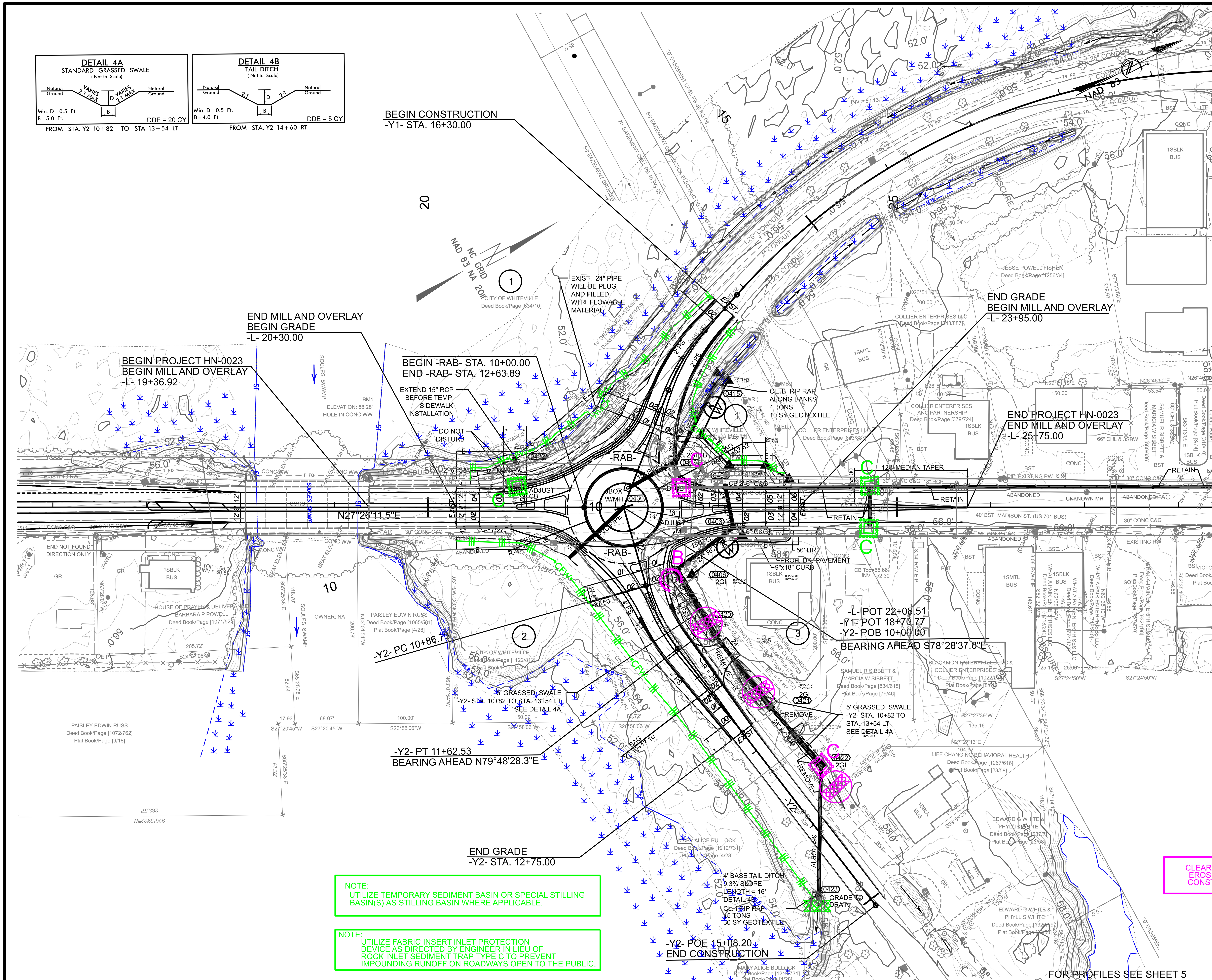
SOIL STABILIZATION TIMEFRAMES

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 TO 4:1	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH WITH SLOPES STEEPER THAN 4:1. 7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	7 DAYS FOR PERIMETER DIKES, SWALES, DITCHES PERIMETER SLOPES, AND HQW ZONES

PROJECT REFERENCE NO.	SHEET NO.
HN-0023	EC-4/CONST.4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DETAIL 4A
STANDARD GRASSED SWALE
(Not to Scale)
Natural Ground — VARIES 2:1 MAX — D — B — VARIES 2:1 MAX — Natural Ground
Min. D = 0.5 Ft.
B = 5.0 Ft.
DDE = 20 CY
FROM STA. Y2 10+82 TO STA. 13+54 LT

DETAIL 4B
TAIL DITCH
(Not to Scale)
Natural Ground — 2:1 — D — B — 2:1 — Natural Ground
Min. D = 0.5 Ft.
B = 4.0 Ft.
DDE = 5 CY
FROM STA. Y2 14+60 RT

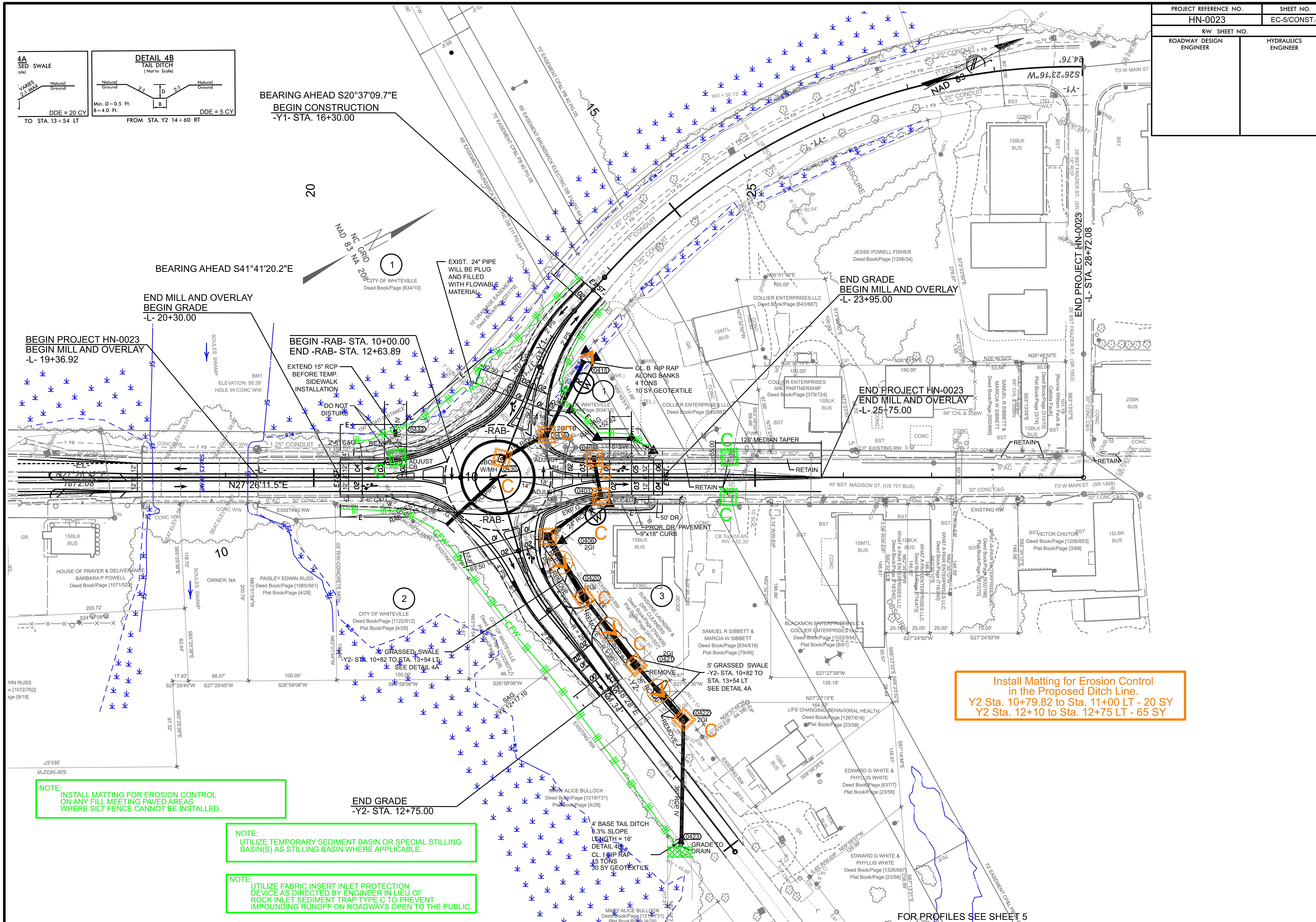


NOTE:
UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.

NOTE:
UTILIZE FABRIC INSERT INLET PROTECTION DEVICE AS DIRECTED BY ENGINEER IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C TO PREVENT IMPOUNDING RUNOFF ON ROADWAYS OPEN TO THE PUBLIC.

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

FOR PROFILES SEE SHEET 5
FOR PLAN DETAILS SEE SHEET 2B-1


PROJECT REFERENCE NO. HN-0023
SHEET NO. EC-5/CONST.4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
DETAIL 4A
GRASSED SWALE
VARIES 2:1 MAX
Natural Ground
DDE = 20 CY
TO STA. 13+54 LT
DETAIL 4B
TAIL DITCH
(Not to Scale)
Natural Ground
2:1
D
B
Min. D = 0.5 Ft.
B = 4.0 Ft.
DDE = 5 CY
FROM STA. Y2 14+60 RT
BEARING AHEAD S20°37'09.7"E
BEGIN CONSTRUCTION
-Y1- STA. 16+30.00
BEARING AHEAD S41°41'20.2"E
NAD 83 NA 2011
NC GRID
END MILL AND OVERLAY
BEGIN GRADE
-L- 20+30.00
BEGIN PROJECT HN-0023
BEGIN MILL AND OVERLAY
-L- 19+36.92
BEGIN -RAB- STA. 10+00.00
END -RAB- STA. 12+63.89
EXTEND 15" RCP BEFORE TEMP. SIDEWALK INSTALLATION
DO NOT DISTURB
EXIST. 24" PIPE WILL BE PLUG AND FILLED WITH FLOWABLE MATERIAL
CL. B RIP RAP ALONG BANKS 4 TONS 10 SY GEOTEXTILE
END GRADE
BEGIN MILL AND OVERLAY
-L- 23+95.00
END PROJECT HN-0023
END MILL AND OVERLAY
-L- 25+75.00
END PROJECT HN-0023
-L- STA. 28+72.08
120' MEDIAN TAPER
RETAIN
N27°26'11.5"E
40' BST MADISON ST. (US 701 BUS)
TO W MAIN ST (SR 1408)
29' BST FRAZIER ST. (SR 1953)
5' GRASSED SWALE
-Y2- STA. 10+82 TO STA. 13+54 LT
SEE DETAIL 4A
END GRADE
-Y2- STA. 12+75.00
4' BASE TAIL DITCH
0.3% SLOPE
LENGTH = 16'
DETAIL 4B
CL. I RIP RAP
15 TONS
30 SY GEOTEXTILE
GRADE TO DRAIN
CITY OF WHITEVILLE Deed Book/Page [634/10]
CITY OF WHITEVILLE Deed Book/Page [1122/812] Plat Book/Page [4/28]
HOUSE OF PRAYER & DELIVERANCE BARBARA P POWELL Deed Book/Page [1071/522]
PAISLEY EDWIN RUSS Deed Book/Page [1065/581] Plat Book/Page [4/28]
JESSE POWELL FISHER Deed Book/Page [1256/34]
COLLIER ENTERPRISES LLC Deed Book/Page [643/887]
COLLIER ENTERPRISES AND PARTNERSHIP Deed Book/Page [379/724]
SAMUEL R SIBBETT & MARCIA W SIBBETT Deed Book/Page [834/618] Plat Book/Page [79/46]
BLACKMON ENTERPRISES LLC & COLLIER ENTERPRISES LLC Deed Book/Page [1022/934] Plat Book/Page [8/61]
VICTOR CHUTON Deed Book/Page [1256/853] Plat Book/Page [3/68]
LIFE CHANGING BEHAVIORAL HEALTH Deed Book/Page [1267/616] Plat Book/Page [23/58]
EDWARD G WHITE & PHYLLIS WHITE Deed Book/Page [637/7] Plat Book/Page [23/58]
EDWARD G WHITE & PHYLLIS WHITE Deed Book/Page [1326/697] Plat Book/Page [23/58]
MARY ALICE BULLOCK Deed Book/Page [1219/731] Plat Book/Page [4/28]
SUNSHINE LAUNDRY & DRY CLEANERS Deed Book/Page [794/909] Plat Book/Page [401/557]
Install Matting for Erosion Control in the Proposed Ditch Line.
Y2 Sta. 10+79.82 to Sta. 11+00 LT - 20 SY
Y2 Sta. 12+10 to Sta. 12+75 LT - 65 SY
NOTE: INSTALL MATTING FOR EROSION CONTROL ON ANY FILL MEETING PAVED AREAS WHERE SILT FENCE CANNOT BE INSTALLED.
NOTE: UTILIZE TEMPORARY SEDIMENT BASIN OR SPECIAL STILLING BASIN(S) AS STILLING BASIN WHERE APPLICABLE.
NOTE: UTILIZE FABRIC INSERT INLET PROTECTION DEVICE AS DIRECTED BY ENGINEER IN LIEU OF ROCK INLET SEDIMENT TRAP TYPE C TO PREVENT IMPOUNDING RUNOFF ON ROADWAYS OPEN TO THE PUBLIC.
FOR PROFILES SEE SHEET 5
FOR PLAN DETAILS SEE SHEET 2B-1

Docusign Envelope ID: 2FDCD059-783D-4476-964E-105E2D39D36A

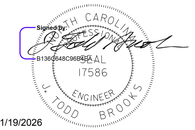
CONTRACT: DF00540 T.I.P.: HN-0023

TIP NO.	SHEET NO.
HN-0023	SIGN-1

APPROVED: _____

DATE: _____

SEAL



1/19/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

SIGNING PLAN
COLUMBUS COUNTY

LOCATION: US 701 BUS. (MADISON ST.) AT SR 1916 (LEE ST.) AND SR 1953 (FRANKLIN ST.)

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 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
901.50	ARROWS AND SHIELDS
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS
910D40	SINGLE LANE URBAN ROUNDABOUT SIGNING, WITH PEDESTRIANS

GENERAL NOTES

. SIGNS FURNISHED BY CONTRACTOR
. CONFIRM IN WRITING AT LEAST 4 MONTHS 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.
. WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER
. ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
. WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.
. THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.

SUMMARY OF QUANTITIES

ITEM NO.		ITEM DESCRIPTION	QUANTITY	UNIT
DESC. NO.	SECT. NO.			
4025000000	901	CONTRACTOR FURNISHED, TYPE E SIGN	217.75	S.F.
4072000000	903	SUPPORTS, 3 LB STEEL U-CHANNEL	251	L.F.
4102000000	904	SIGN ERECTION, TYPE E	39	EA.
4155000000	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	6	EA.
4238000000	907	DISPOSAL OF SIGN, TYPE E	1	EA.
4273000000	SP	IN-STREET PED CROSSING SIGN (2 SIDED)	1	EA.

INDEX

SHEET NO.	DESCRIPTION
SIGN-1	TITLE SHEET
SIGN-2	TYPE E SHEET
SIGN-3	SIGN DESIGNS
SIGN-4	SIGN DETAIL SHEET
SIGN-5	SIGN DETAIL SHEET

PLAN REVIEWED BY: N.C.D.O.T. SIGNING AND DELINIATION UNIT

MITCH EATON, PE — SIGNING & DELINEATION REGIONAL ENGINEER

ANDREW SCOTT — SIGNING & DELINEATION PROJECT DESIGN ENGINEER

PLAN PREPARED BY:

J. TODD BROOKS, PE — PROJECT ENGINEER

EDDIE CARGOR II — PROJECT DESIGN ENGINEER

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919-881-9939
NC COA No. F-0929

19-JAN-2026 12:35
pw://kci-pwbentley.com:kci-pw-05/Documents/Projects/2023/252302454.04/2.Design/Signing and Delineation/Plans/250/250_001_HN-0023_Sgn_Let_Sgn01_25II05
jwiles
AT PW0A007L

Docusign Envelope ID: 3A1E077C-D070-4EBA-BD21-9611AEB32252

TIP NO.	SHEET NO.
HN-0023	SIGN-2

APPROVED: _____

DATE: _____

SEAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

401 QUANTITY REQ'D 4

30 X 30
W2-6

ONE "U" POST PER SIGN

402 QUANTITY REQ'D 1

30 X 30
W3-2A

ONE "U" POST PER SIGN

403 QUANTITY REQ'D 8

36 X 36 X 36
R1-2

ONE "U" POST PER SIGN

404 QUANTITY REQ'D 4

30 X 30
R6-5P

MOUNTED BELOW SIGN 403 IN 4 INSTALLATIONS

405 QUANTITY REQ'D 4

36 X 12
R6-1R

ONE "U" POST PER SIGN

406 QUANTITY REQ'D 2

24 X 12
W16-7p

FLUORESCENT YELLOW/GREEN

MOUNTED BELOW SIGN NO. 407 IN 2 INSTALLATIONS

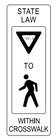
407 QUANTITY REQ'D 2

36 X 36
W11-2

FLUORESCENT YELLOW/GREEN

ONE U-POST PER SIGN

408 QUANTITY REQ'D 2



12 X 36
R1-6

TWO SIGNS MOUNTED BACK TO BACK IN 1 INSTALLATION
IN-STREET PED XING SIGN

409 QUANTITY REQ'D 1

24 X 36
R3-1B

ONE U-POST PER SIGN

410 QUANTITY REQ'D 1

36 X 36
W4-2R

ONE U-POST PER SIGN

411 QUANTITY REQ'D 1

36 X 36
W9-1R

ONE U-POST PER SIGN

412 QUANTITY REQ'D 1

24 X 24
D9-2

ONE U-POST PER SIGN

413 QUANTITY REQ'D 1

21 X 15
M5-1R

WHITE LEGEND & BORDER ON BLUE BACKGROUND

ONE U-POST PER SIGN

414 QUANTITY REQ'D 1

24 X 30
R2-1

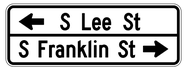
ONE U-POST PER SIGN

415 QUANTITY REQ'D 2

42 X 8
W16-8P

MOUNTED BELOW SIGN NO. 401 IN 2 INSTALLATIONS

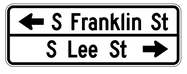
416 QUANTITY REQ'D 1



42 X 15
W16-8aP

MOUNTED BELOW SIGN NO. 401 IN 1 INSTALLATION

417 QUANTITY REQ'D 1



42 X 15
W16-8aP

MOUNTED BELOW SIGN NO. 401 IN 1 INSTALLATION

418 QUANTITY REQ'D 1

30 X 30
R1-1

MOUNTED ON EXISTING U-POST

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919-881-9939
NC COA No. F-0929

TYPE "E" SIGNS

10-NOV-2025 08:11
pw://kci-pw.bentley.com:kci-pw-05/Documents/Projects/2023/252302454.04/2.Design/Signing and Delineation/Plans/HN-0023_SIGN_2.dgn
ecargor
AT PF4C66LV

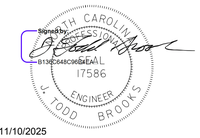
Docusign Envelope ID: E6D292CF-6BFB-45CD-AE4A-F36E89ADF672

TIP NO.	SHEET NO.
HN-0023	SIGN-3

APPROVED: _____

DATE: _____

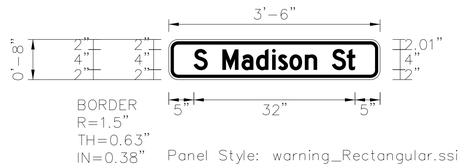
SEAL



11/10/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

DESIGN BY: E Cargor II CHECKED BY: T Brooks DATE: Oct 10, 2025
PROJECT ID: HN-0023 DIV: 6



SIGN NUMBER	415
TYPE	E
QUANTITY	1
WIDTH x HGHT.	3'-6" x 0'-8"
BORDER WIDTH	0.63"
CORNER RADIUS	1.5"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Yellow
LEGEND/BORDER	TYPE: Non-reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT

Panel Style: warning_Rectangular.ssi
Dimensions are in inches.tenths Letter spacings are to start of next letter

USE NOTES: 1,2

1. Legend and border shall be silk-screened opaque black ink.
2. Background shall be Grade C reflective sheeting.

LETTER POSITIONS (X)

	S		M	a	d	i	s	o	n		S	t										LENGTH SERIES/SIZE
																					D 2000	
4.98	2.72	3	3.8	2.88	3.2	1.2	2.24	3.08	2.36	3	2.96	1.6	4.98								32.04	4,4/3

DESIGN BY: E Cargor II CHECKED BY: T Brooks DATE: Oct 10, 2025
PROJECT ID: HN-0023 DIV: 6

SIGN NUMBER	416
TYPE	E
QUANTITY	1
WIDTH x HGHT.	3'-6" x 1'-3"
BORDER WIDTH	0.63"
CORNER RADIUS	1.5"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Yellow
LEGEND/BORDER	TYPE: Non-reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	90	3.15	8.76	3.96	5.94
AR_Type D	270	32.9	2.21	3.96	5.94

Panel Style: warning_Rectangular.ssi
Dimensions are in inches.tenths Letter spacings are to start of next letter

USE NOTES: 1,2

1. Legend and border shall be silk-screened opaque black ink.
2. Background shall be Grade C reflective sheeting.

LETTER POSITIONS (X)

	S		L	e	e		S	t													LENGTH SERIES/SIZE
																					C 2000	
13.05	2.24	3	2.4	2.44	2.04	3	2.52	1.44	9.87												19.08	4,4/3
	S		F	r	a	n	k	l	i	n		S	t								C 2000	
3.15	2.24	2.5	2.52	1.56	2.6	2.72	2.56	1.28	1.28	2.04	2.5	2.52	1.44	1.09							27.76	4,4/3

DESIGN BY: E Cargor II CHECKED BY: T Brooks DATE: Oct 10, 2025
PROJECT ID: HN-0023 DIV: 6

SIGN NUMBER	417
TYPE	E
QUANTITY	1
WIDTH x HGHT.	3'-6" x 1'-3"
BORDER WIDTH	0.63"
CORNER RADIUS	1.5"
MOUNTING	Ground
BACKGROUND	TYPE: Reflective
	COLOR: Yellow
LEGEND/BORDER	TYPE: Non-reflective
	COLOR: Black/Black

SYMBOL	ROT	X	Y	WID	HT
AR_Type D	90	3.15	8.76	3.96	5.94
AR_Type D	270	32.91	2.21	3.96	5.94

Panel Style: warning_Rectangular.ssi
Dimensions are in inches.tenths Letter spacings are to start of next letter

USE NOTES: 1,2

1. Legend and border shall be silk-screened opaque black ink.
2. Background shall be Grade C reflective sheeting.

LETTER POSITIONS (X)

	S		F	r	a	n	k	l	i	n		S	t								LENGTH SERIES/SIZE
																					C 2000	
11.09	2.24	2.5	2.52	1.56	2.6	2.72	2.56	1.28	1.28	2.04	2.5	2.52	1.44	3.15							27.76	4,4/3
	S		L	e	e		S	t													C 2000	
9.83	2.24	3	2.4	2.44	2.04	3	2.52	1.44	13.09												19.08	4,4/3

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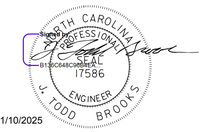

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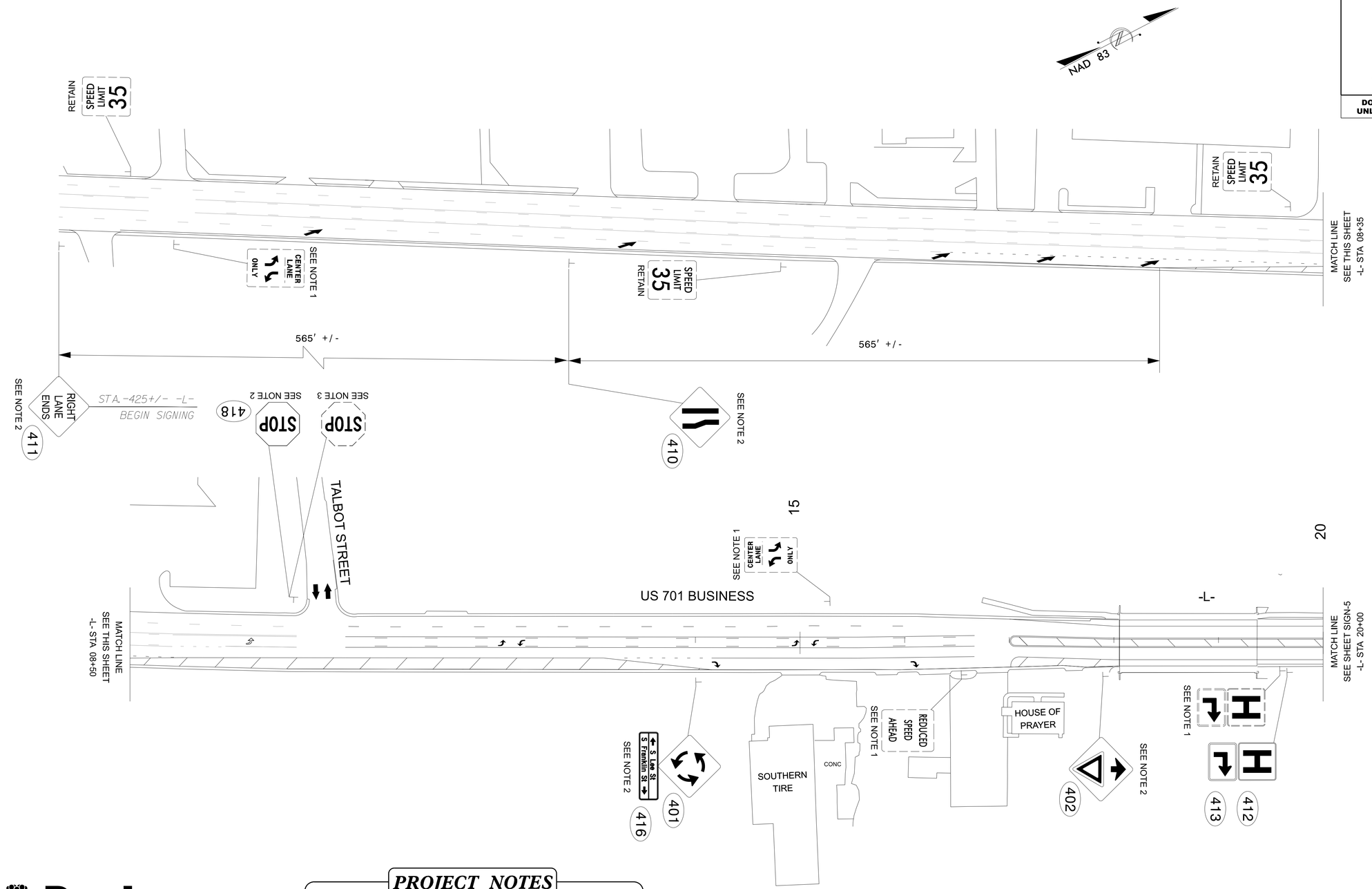

Dewberry

2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919-881-9939
NC COA No. F-0929

PROJECT NOTES

1. DISPOSAL OF SIGN SYSTEM, U-CHANNEL
2. SIGN ERECTION, TYPE E
3. DISPOSAL OF SIGN, TYPE E

PROPOSED SIGNING DETAIL

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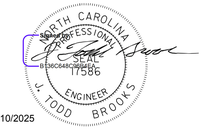

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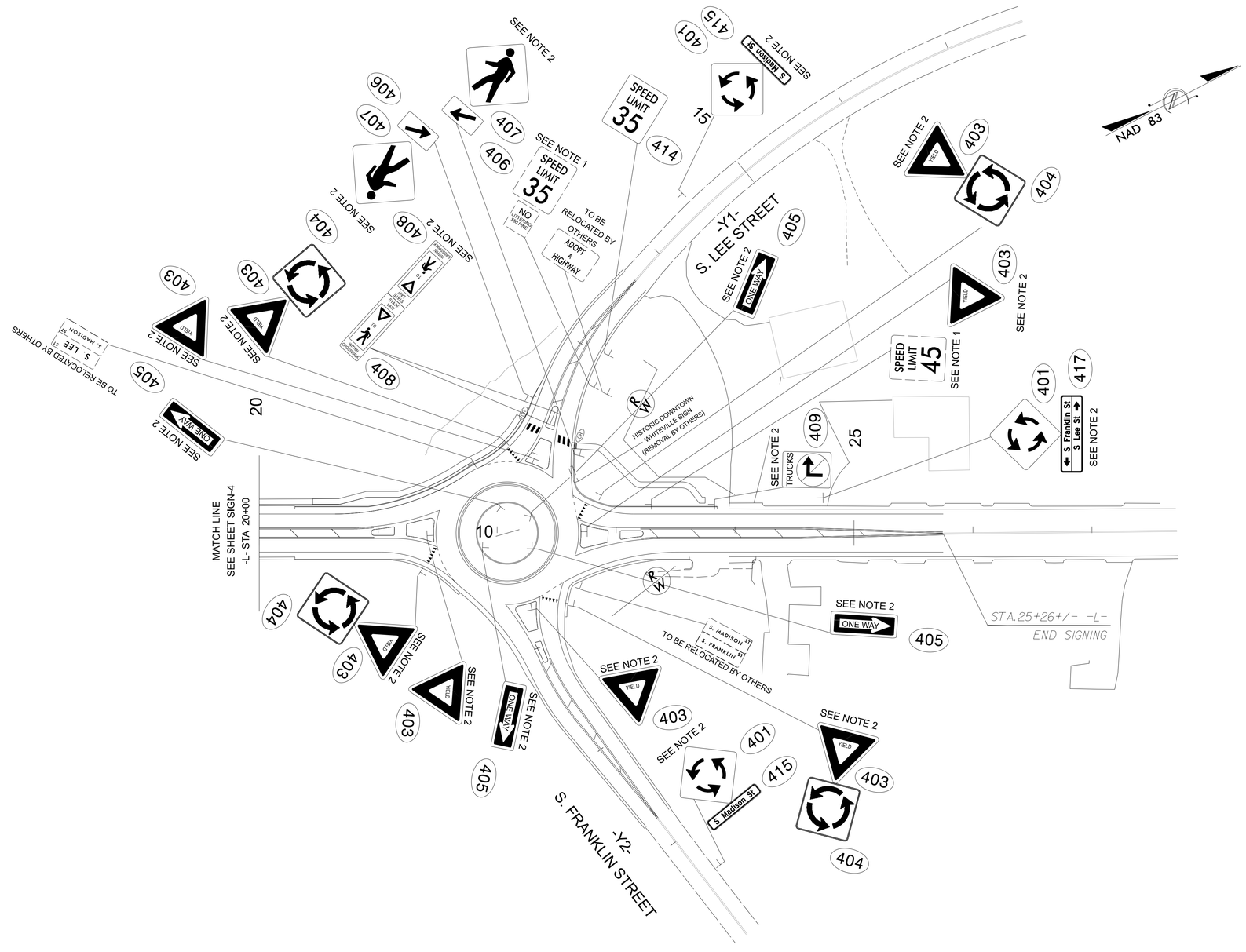

Dewberry

2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919-881-9939
NC COA No. F-0929

PROJECT NOTES

1. DISPOSAL OF SIGN SYSTEM, U-CHANNEL
2. SIGN ERECTION, TYPE E
3. DISPOSAL OF SIGN, TYPE E

EXISTING AND PROPOSED SIGNING DETAIL

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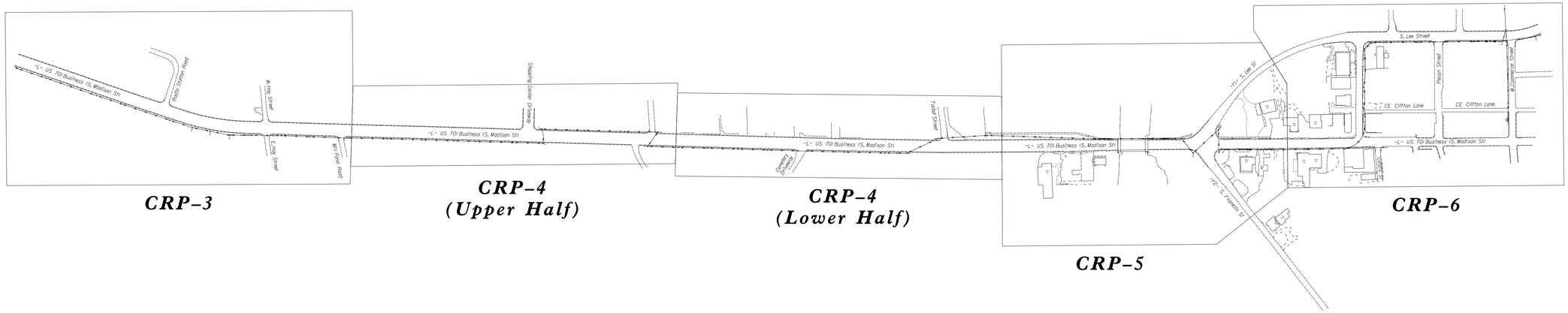
Project No.	Sheet No.
HN–0023	CRP–1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

COLUMBUS COUNTY

LOCATION: US 701 BUS. (MADISON ST.) FROM SOUTH OF RADIO STATION RD. TO COMMERCE ST. IN WHITEVIILE

TYPE OF WORK: REMOVAL OF FIBER OPTIC COMMUNICATION CABLES



CRP–3

CRP–4 (Upper Half)

CRP–4 (Lower Half)

CRP–5

CRP–6

Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.

Index of Plans

Sheet #	*Location/Description*
CRP–1	*Title Sheet*
CRP–2	*Construction Notes*
CRP–3 THRU CRP–6	*Communications Cable and Conduit Routing Plans*

SEAL
NORTH CAROLINA
PROFESSIONAL
17586
ENGINEER
J. TODD BROOKS

Signed by: B136C648C9664EA...
11/7/2025
SIGNATURE DATE

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

J. TODD BROOKS, PE - DEWBERRY PROJECT MANAGER
J. ABRAHAM WILES - DEWBERRY PROJECT DESIGNER

Prepared In the Office of:
DIVISION OF HIGHWAYS
TRANSPORTATION MOBILITY & SAFETY DIVISION

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •
TSMO UNIT

750 N. Greenfield Parkway, Garner, NC 27529

Project: HN–0023

Contract: DF00540

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ecargo
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PROJECT REFERENCE NO.	SHEET NO.
HN-0023	CRP-2

1 INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE

2 INSTALL REA, PE – 38, (FIGURE 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE

3 INSTALL REA, PE – 39, (UNDERGROUND) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE

4 INSTALL SMFO CABLE

5 INSTALL MMFO CABLE

6 INSTALL FIBER OPTIC DROP CABLE

7 INSTALL TRACER WIRE

8 TRENCH OR PLOW

9 INSTALL PVC CONDUIT

10 INSTALL RIGID, GALVANIZED STEEL CONDUIT

11 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD

12 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING

13 INSTALL OUTER–DUCT POLYETHYLENE CONDUIT

14 INSTALL POLYETHYLENE CONDUIT

15 DIRECTIONAL DRILL CONDUIT

16 BORE AND JACK CONDUIT

17 INSTALL CABLE(S) IN EXISTING CONDUIT

18 INSTALL CABLE(S) IN NEW CONDUIT

19 INSTALL CABLE(S) IN EXISTING RISER

20 INSTALL CABLE(S) IN NEW RISER

21 INSTALL CABLE(S) IN EXISTING CONDUIT STUB–OUTS

22 INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB–OUTS WHEN AVAILABLE)

23 INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB–OUTS WHEN AVAILABLE)

24 INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET

25 INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET

26 TERMINATE COMMUNICATIONS CABLE ON EXISTING TELEMETRY INTERFACE PANEL IN TRAFFIC SIGNAL CONTROLLER CABINET

27 INSTALL NEW TELEMETRY INTERFACE PANEL IN TRAFFIC SIGNAL CONTROLLER CABINET

28 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS AND FUSION SPLICE CABLE IN CABINET

29 INSTALL UNDERGROUND SPLICE ENCLOSURE

30 INSTALL AERIAL SPLICE ENCLOSURE

31 INSTALL POLE MOUNTED SPLICE CABINET

32 INSTALL BASE MOUNTED SPLICE CABINET

33 REMOVE EXISTING SPLICE CABINET

34 INSTALL CABINET FOUNDATION

35 REMOVE EXISTING CABINET FOUNDATION

36 INSTALL CCTV CAMERA ASSEMBLY

37 INSTALL CCTV CAMERA WOOD POLE

38 INSTALL CCTV CAMERA METAL POLE AND FOUNDATION

39 INSTALL JUNCTION BOX

40 INSTALL OVERSIZED JUNCTION BOX

41 REMOVE EXISTING JUNCTION BOX

42 INSTALL WOOD POLE

43 REMOVE EXISTING WOOD POLE

44 INSTALL AERIAL GUY ASSEMBLY

45 INSTALL STANDARD GUY ASSEMBLY

46 INSTALL SIDEWALK GUY ASSEMBLY

47 INSTALL MESSENGER CABLE

48 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE

49 REMOVE EXISTING MESSENGER CABLE

50 INSTALL TELEPHONE SERVICE

51 INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE

52 INSTALL DELINEATOR MARKER

53 STORE 20 FEET OF COMMUNICATIONS CABLE

54 LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE

55 LASH CABLE(S) TO EXISTING MESSENGER CABLE

56 LASH CABLE(S) TO NEW MESSENGER CABLE

57 MODIFY EXISTING ELECTRICAL SERVICE

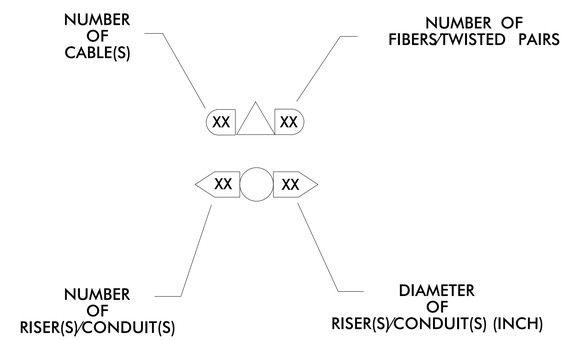
58 INSTALL NEW ELECTRICAL SERVICE

LEGEND

- FO — NEW FIBER OPTIC COMMUNICATIONS CABLE
- TWIST PR — NEW TWISTED PAIR COMMUNICATIONS CABLE
- EXI — EXISTING COMMUNICATIONS CABLE
- REM — EXISTING COMMUNICATIONS CABLE TO BE REMOVED
- NEW AERIAL GUY ASSEMBLY
- NEW CONDUIT
- EXISTING CONDUIT
- DD — NEW DIRECTIONAL DRILLED CONDUIT
- B&J — NEW BORED AND JACKED CONDUIT
- NEW JUNCTION BOX
- EXISTING JUNCTION BOX
- NEW WOOD POLE
- EXISTING WOOD POLE
- S — AERIAL SPLICE ENCLOSURE
- NEW METAL POLE
- EXISTING METAL POLE
- NEW CCTV ASSEMBLY
- EXISTING CCTV ASSEMBLY
- DMS — NEW DYNAMIC MESSAGE SIGN
- DMS — EXISTING DYNAMIC MESSAGE SIGN
- NEW MICROWAVE VEHICLE DETECTION
- EXISTING MICROWAVE VEHICLE DETECTION
- NEW STANDARD GUY ASSEMBLY
- NEW SIDEWALK GUY ASSEMBLY
- NEW CABLE STORAGE RACKS (SNOW SHOES)
- EXISTING CONTROLLER AND CABINET
- S — EXISTING SPLICE CABINET
- S — NEW SPLICE CABINET
- SP — SIGNAL POLE
- 02-XXXX — SIGNAL INVENTORY NUMBER
- CCTV-XX — CCTV IDENTIFICATION NUMBER

CONSTRUCTION NOTE SYMBOLOGY KEY

- XX — INDICATES NUMBER OF CABLES, LOOPS, ETC.
- XX — INDICATES NUMBER OF FIBERS PER CABLE, TWISTED PAIRS PER CABLE, ETC.
- XX — INDICATES NUMBER OF RISER(S)/CONDUIT(S)
- XX — INDICATES DIAMETER OF RISER(S)/CONDUIT(S) (INCH)



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2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

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Prepared for the Offices of:
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 Greenfield Parkway, Garner, NC 27529

US 701 Business
Construction Notes

Division 6 Columbus County Whiteville
PLAN DATE: September 2025 REVIEWED BY: JT Brooks
PREPARED BY: JA Wiles REVIEWED BY:

SCALE 0 NONE 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 17586 ENGINEER J. TODD BROOKS

Signed by: B136C648C96B4EA...
11/7/2025
SIGNATURE DATE

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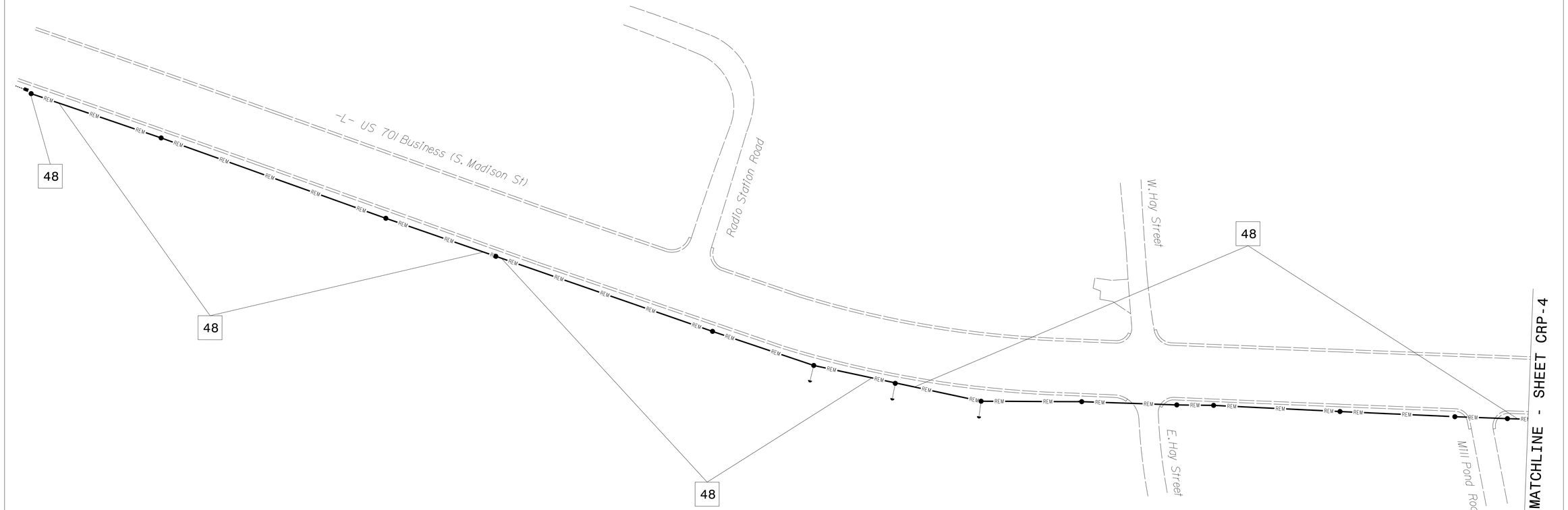
HN-0023	CRP-3



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2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared for the Offices of:
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section

750 Greenfield Parkway, Garner, NC 27529

US 701 Business
Cable Routing Plans

Division 6 Columbus County Whiteville

PLAN DATE: September 2025 REVIEWED BY: JT Brooks

PREPARED BY: JA Wiles REVIEWED BY:

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER J. TODD BROOKS

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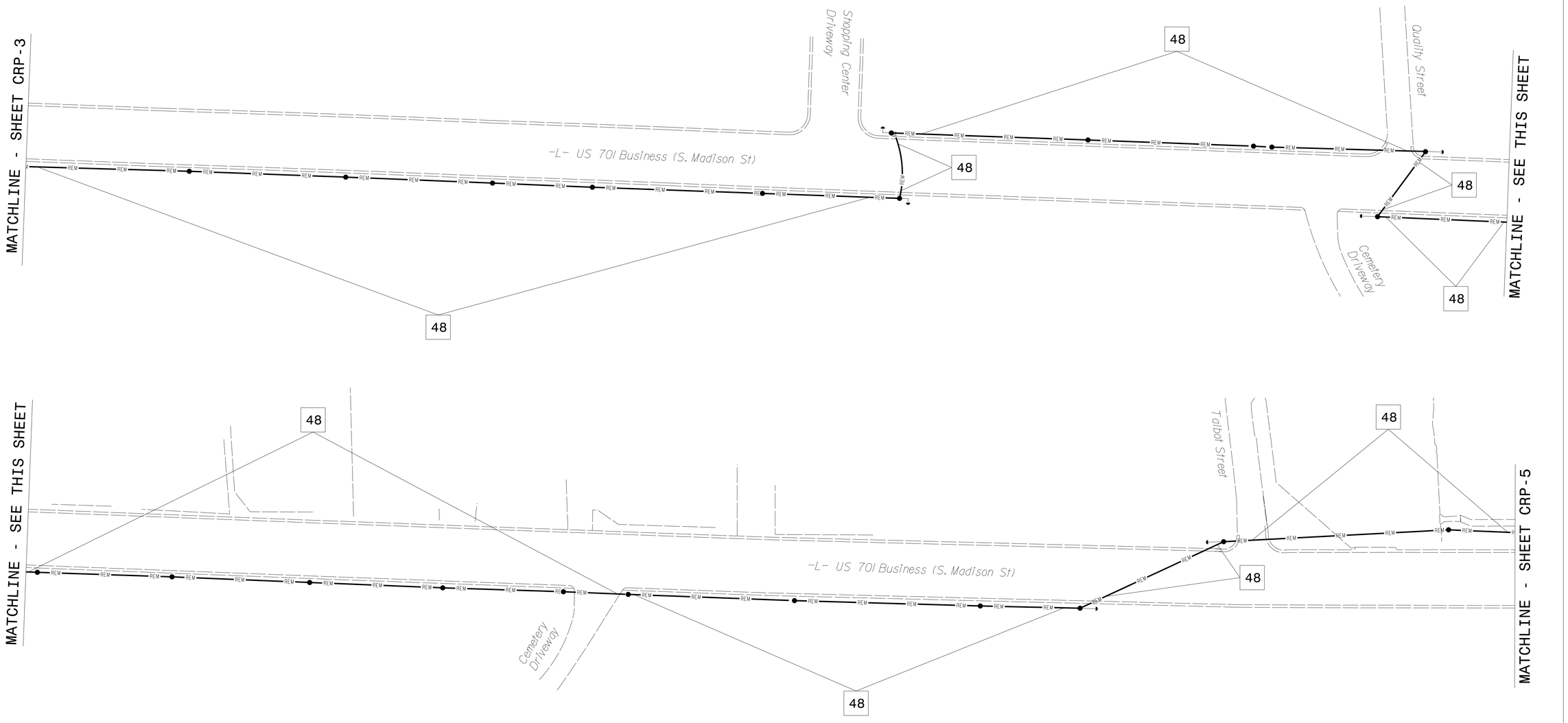

Dewberry
2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared for the Offices of:
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 Greenfield Parkway, Garner, NC 27529

US 701 Business
Cable Routing Plans

Division 6 | Columbus County | Whiteville

PLAN DATE: September 2025 | REVIEWED BY: JT Brooks

PREPARED BY: JA Wiles | REVIEWED BY:

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 15896 J. TODD BROOKS

Signed by: B13BC648C96B4EA...

11/7/2025

SIGNATURE DATE

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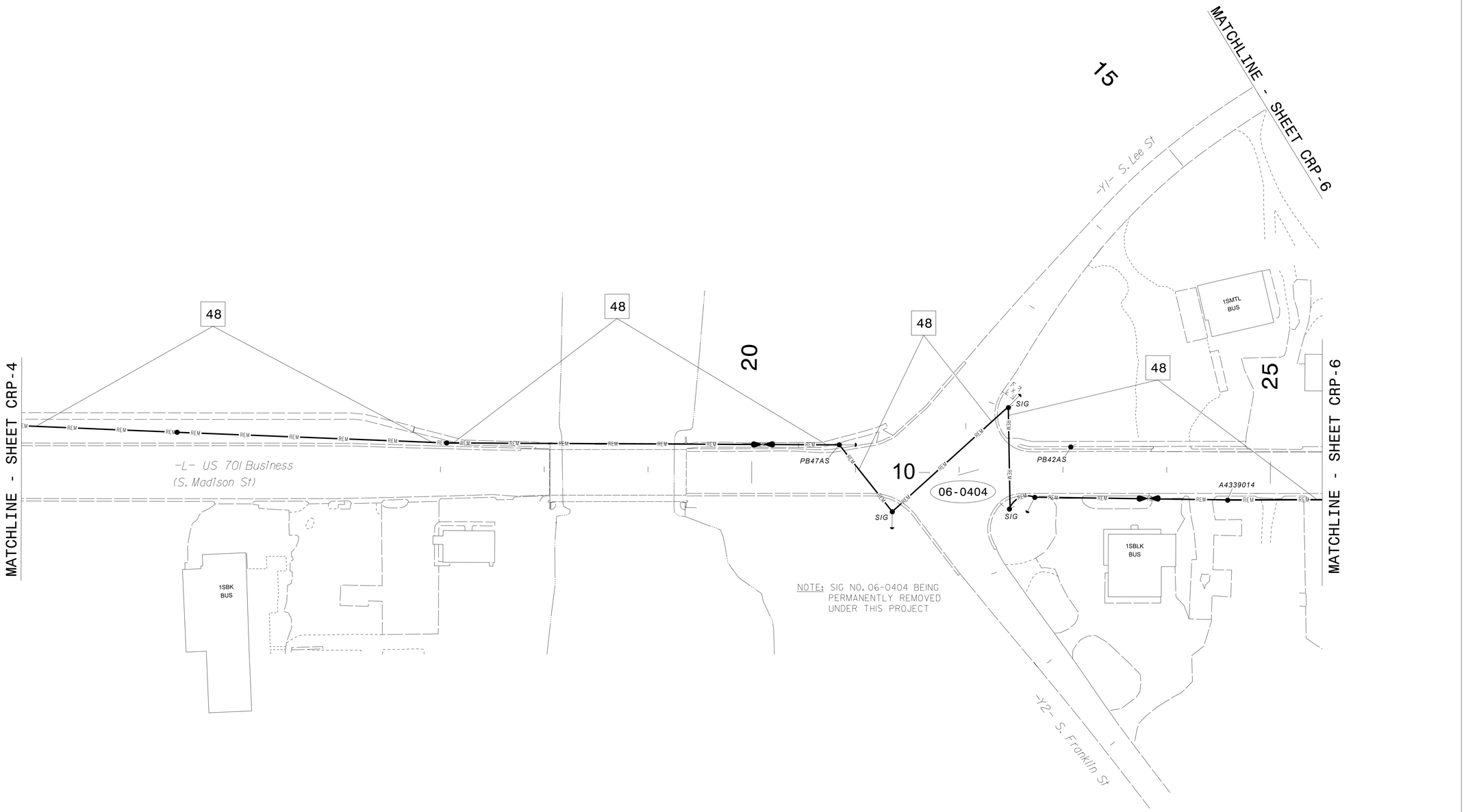

NOTE: SIG NO. 06-0404 BEING PERMANENTLY REMOVED UNDER THIS PROJECT

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2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
NC COA No. F-0929

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Prepared for the Offices of:
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 Greenfield Parkway, Garner, NC 27529

US 701 Business
Cable Routing Plans

Division 6 | Columbus County | Whiteville

PLAN DATE: September 2025 | REVIEWED BY: JT Brooks
PREPARED BY: JA Wiles | REVIEWED BY:

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER J. TODD BROOKS 17586

Signed by: B136C648C96B4EA...
11/7/2025
SIGNATURE DATE

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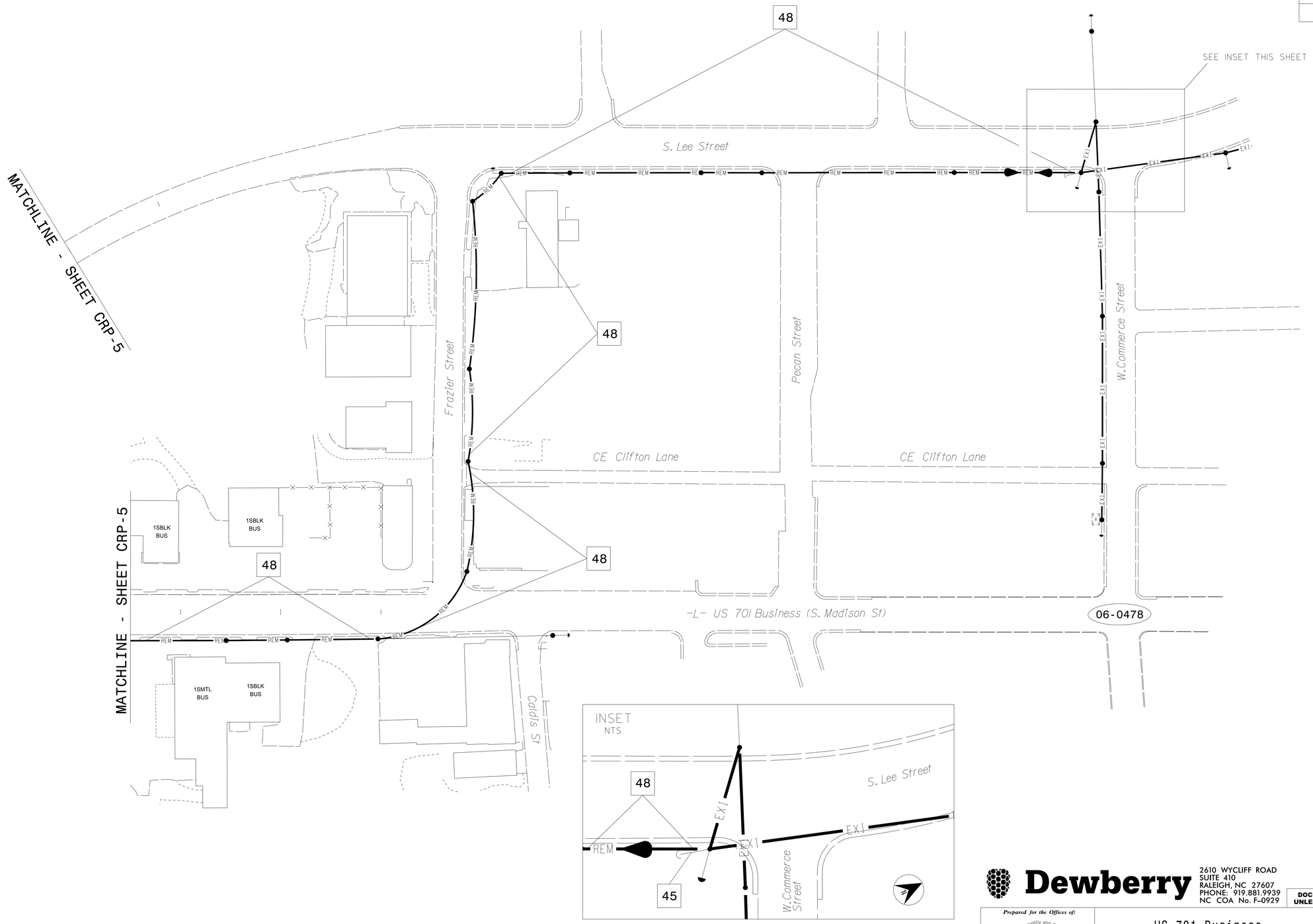
HN-0023	CRP-6



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2610 WYCLIFF ROAD
SUITE 410
RALEIGH, NC 27607
PHONE: 919.881.9939
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Prepared for the Offices of:
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 Greenfield Parkway, Garner, NC 27529

US 701 Business Cable Routing Plans

Division 6 | Columbus County | Whiteville

PLAN DATE: September 2025 | REVIEWED BY: JT Brooks
PREPARED BY: JA Wiles | REVIEWED BY:

SCALE 0 50 1"=50'

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER J. TODD BROOKS

Signed by: B136C688C96B4EA...
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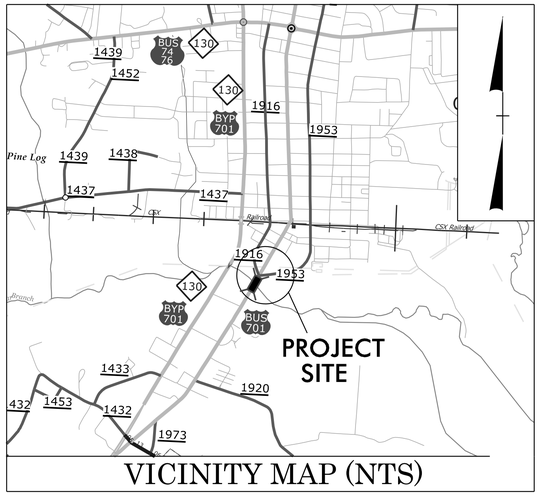
CONTRACT: DF00540



VICINITY MAP (NTS)

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS
COLUMBUS COUNTY

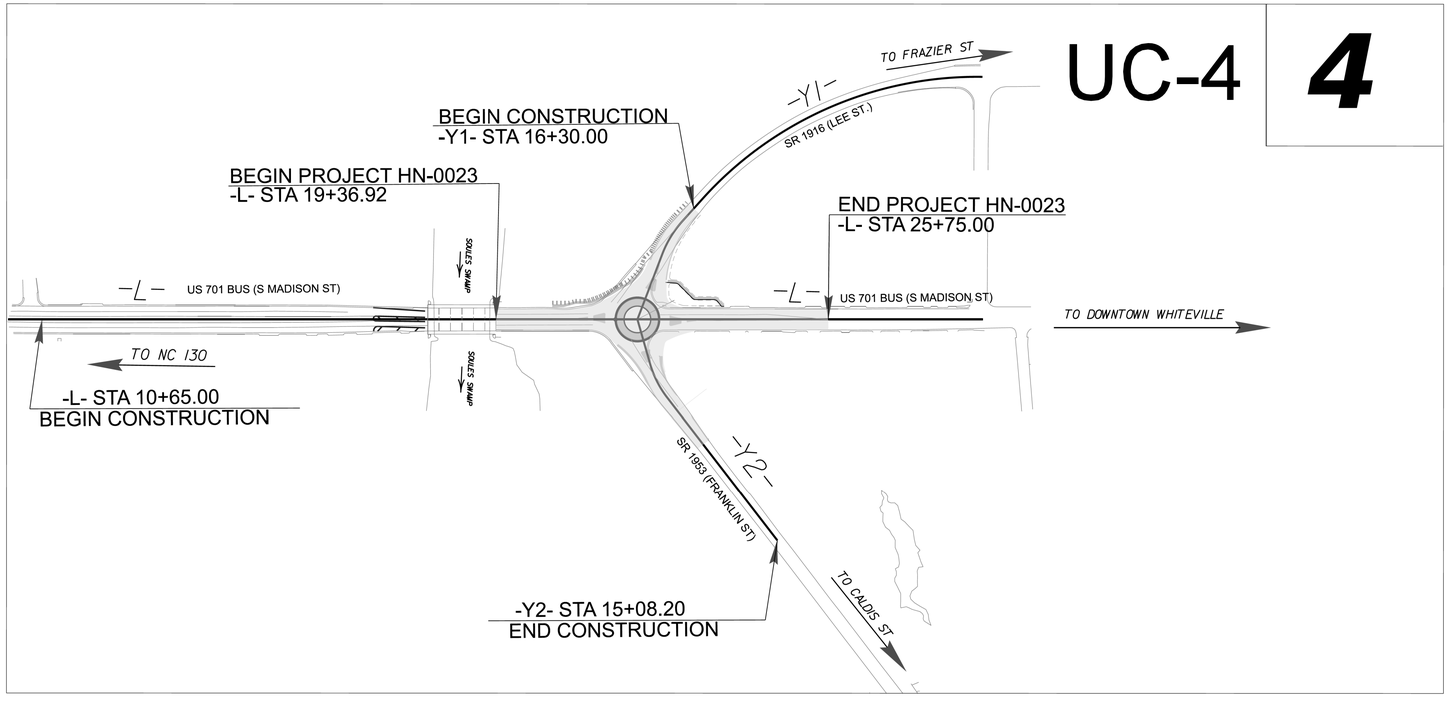
LOCATION: US 701 BUS. (MADISON ST.) AT SR 1916 (LEE ST.) AND SR 1953 (FRANKLIN ST.)

TYPE OF WORK: WATER LINE RELOCATION

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	HN-0023	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
51173.1.1	5117301	P.E.
51173.2.1	5117301	R/W
51173.2.2	5117301	UNTIL.
51173.3.1	5117301	CONSTR.

FINAL CONTRACT PACKAGE
PLAN SET
STAGE 4 PLANS (4UT1)



NAD 83/NA 2011

THIS PROJECT IS WITHIN MUNICIPAL BOUNDARIES OF THE CITY OF WHITEVILLE

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

INDEX OF SHEETS

SHEET NO.:	*DESCRIPTION:*
UC-1	*TITLE SHEET*
UC-2	*UTILITY SYMBOLOGY*
UC-3	*NOTES*
UC-3A	*DETAILS*
UC-4	*UTILITY CONSTRUCTION SHEET*
UC-5	*PROFILE SHEET*

WATER AND SEWER OWNERS ON PROJECT

(A) WATER
CITY OF WHITEVILLE
317 S. MADISON STREET
WHITEVILLE, NC 24872

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 056420 1/19/2026 ENGINEER CHARLES S. SHEARON

Prepared in the Office of:
KCI ASSOCIATES OF N.C., P.A.
4800 Falls of Neuse Road, Suite 200
Raleigh, NC 27609
Phone (919) 783-9214
NC Firm License No: C-0764

THOMAS BACH, PE	*PROJECT MANAGER*
CHARLES SHEARON, PE	*PROJECT ENGINEER*
NATHAN POWELL	*DRAFTER*

DIVISION OF HIGHWAYS
DIVISION 6
558 GILLESPIE ST.
FAYETTVILLE NC 28301
PHONE (910) 486-1959
FAX (910) 486-1959

RICK HANDLIN	*DIVISION UTILITY ENGINEER*
LOUIS CANIAC	*SENIOR DIVISION UTILITY COORDINATOR*
SHAWN EVANS	*DIV UTILITY COORDINATOR*
CRAIG FREEMAN, PE	*DIV PROJECT ENGINEER*

Docusign Envelope ID: 8FCA8626-41FD-4B72-B606-D71838CC3FDD

06/16/22

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITIES PLAN SHEET SYMBOLS

PROPOSED WATER SYMBOLS

- Water Line (Sized as Shown) — WL
- 11¼ Degree Bend
- 22½ Degree Bend
- 45 Degree Bend
- 90 Degree Bend
- Plug
- Tee
- Cross
- Reducer
- Gate Valve — GV
- Butterfly Valve — BV
- Tapping Valve — TGV
- Line Stop — LS
- Line Stop with Bypass — LS/BP
- Blow Off — BO
- Fire Hydrant — PFH
- Relocate Fire Hydrant — RFH
- Remove Fire Hydrant — REM FH
- Water Meter — PWM
- Relocate Water Meter — RWM
- Remove Water Meter — REM WM
- Water Pump Station — PS(W)
- RPZ Backflow Preventer — PRPZ
- DCV Backflow Preventer — PBFP
- Relocate RPZ Backflow Preventer — RRPZ
- Relocate DCV Backflow Preventer — RBFP

PROPOSED SEWER SYMBOLS

- Gravity Sewer Line (Sized as Shown) — SS
- Force Main Sewer Line (Sized as Shown) — FSS
- Manhole (Sized per Note)
- Sewer Pump Station — PS(SS)

PROPOSED MISCELLANOUS UTILITIES SYMBOLS

- Power Pole
- Telephone Pole
- Joint Use Pole
- Telephone Pedestal — TEL_PED
- Utility Line by Others (Type as Shown) — OH POW
- Trenchless Installation — TRENCHLESS WL
- Encasement Method — OPEN CUT
- Encasement
- Thrust Block
- Air Release Valve — AR
- Utility Vault — UV
- Concrete Pier — CP
- Steel Pier — SP
- Plan Note — NOTE
- Pay Item Note — PAY ITEM

EXISTING UTILITIES SYMBOLS

- Power Pole
- Telephone Pole
- Joint Use Pole
- Utility Pole
- Utility Pole with Base
- H-Frame Pole
- Power Transmission Line Tower
- Water Manhole
- Power Manhole
- Telephone Manhole
- Sanitary Sewer Manhole
- Hand Hole for Cable
- Power Transformer
- Telephone Pedestal
- CATV Pedestal
- Gas Valve
- Gas Meter
- Located Miscellaneous Utility Object
- Abandoned According to Utility Records — AATUR
- End of Information — E.O.I.
- *Underground Power Line — P
- *Underground Telephone Cable — T
- *Underground Telephone Conduit — TC
- *Underground Fiber Optics Telephone Cable — T FO
- *Underground TV Cable — TV
- *Underground Fiber Optics TV Cable — TV FO
- *Underground Gas Pipeline — G
- Aboveground Gas Pipeline — A/G Gas G
- *Underground Water Line — W
- Aboveground Water Line — A/G Water W
- *Underground Gravity Sanitary Sewer Line — SS
- Aboveground Gravity Sanitary Sewer Line — A/G Sanitary Sewer SS
- *Underground SS Forced Main Line — FSS
- Underground Unknown Utility Line — ?UTL
- SUE Test Hole
- Water Meter
- Water Valve
- Fire Hydrant
- Sanitary Sewer Cleanout

*For Existing Utilities

- Utility Line Drawn from Record (Type as Shown) — W
- Designated Utility Line (Type as Shown)

REVISIONS

HN-0023
4UTI | UC-2

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

UTILITY CONSTRUCTION
PLANS ONLY

NORTH CAROLINA PROFESSIONAL SEAL 056420 1/19/2026 ENGINEER CHARLES S. SHEARON

Charles S. Shearon

DESIGNED BY:	NP
DRAWN BY:	NP
CHECKED BY:	CS
APPROVED BY:	TB
REVISED:	

PREPARED BY

KCI ASSOCIATES OF N.C., P.A.
4800 Falls of Neuse Road, Suite 300
Raleigh, NC 27609-6270
Phone (919) 783-2714
NC Firm License No: C-0764

Docusign Envelope ID: 8FCA8626-41FD-4B72-B606-D71838CC3FDD

06/16/22

UTILITY CONSTRUCTION

GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2024.

2. THE EXISTING UTILITIES BELONG TO CITY OF WHITEVILLE.

3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.

4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.

5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.

7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.

8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.

9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

PROJECT SPECIFIC NOTES:

1. PROPOSED WATER LINE FROM -W/L- STA. 0+00 TO -W/L- STA. 1+60 AND -W/L- STA. 3+09 TO -W/L- STA. 3+76 SHALL BE 6" CLASS 350 RESTRAINED JOINT DUCTILE IRON PIPE (RJ DIP). PROPOSED WATER LINE FROM -W/L- STA. 1+60 TO -W/L- STA. 3+09 SHALL BE 8" (ID GREATER THAN OR EQUAL TO 6") HDPE DR 13.5

2. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.

3. CONTRACTOR SHALLL NOT MAKE CONNECTION TO EXISTING WATER MAIN UNTIL NEW WATER MAIN HAS BEEN SUCCESSFULLY TESTED AND DISINFECTED.

4. CONTRACTOR SHALL COORDINATE WITH THE CITY OF WHITEVILLE PUBLIC WORKS DEPARTMENT TO SCHEDULE A PRECONSTRUCTION MEETING AND TO ARRANGE ANY REQUIRED SHUTDOWNS AND INSPECTIONS. CONTACT TRAVIS FAULK, PUBLIC WORKS DIRECTOR, AT (910)-642-3422 OR BY EMAIL AT TFAULK@CI.WHITEVILLE.NC.US

5. CONTRACTOR SHALL ENSURE RESTRAINT OF EXISTING ASBESTOS CONCRETE (AC) PIPE USING A THRUST COLLAR AND INSTALL A TRANSITION COUPLING (ROMAC MACRO HP, SMITH-BLAIR 441, JCM 212, OR APPROVED EQUAL). THESE COUPLINGS ARE NOT RESTRAINED; THEREFORE THE CONTRACTOR SHALL PROVIDE ADEQUATE RESTRAINT TO THE PIPE BEFORE AND AFTER THE COUPLING. THRUST BLOCKING SHALL BE USED TO RESTRAIN HORIZONTAL BENDS.

6. CONTRACTOR SHALL RESTRAIN PIPE USING RESTRAINED JOINT PIPE AND FITTINGS, AND PROVIDE THRUST BLOCKING AT ALL HORIZONTAL BENDS.

7. THE CONTRACTOR SHAL FOLLOW ALL SPECIAL PROVISIONS ASSOCIATED WITH HANDLING OF EXISTING ASBESTOS CEMENT PIPING.

8. WATER MAINS SHALL BE INSTALLED WITH A MINIMUM 10 FEET HORIZONTAL SEPARATION FROM SANITARY SEWER LINES, MEASURED EDGE-TO-EDGE. WHERE 10 FEET OF HORIZONTAL SEPARATION CANNOT BE MAINTAINED, WATER MAINS SHALL BE INSTALLED WITH A MINIMUM 18 INCHES OF VERTICAL SEPARATION, WITH THE WATER MAIN LOCATED ABOVE THE SEWER, IN ACCORDANCE WITH NCDEQ REQUIREMENTS; INSTALLATION IN THE SAME TRENCH SHALL ONLY BE PERMITTED WHERE ALLOWED BY THE RULES. AT WATER MAIN AND SEWER CROSSINGS, A MINIMUM 18 INCHES OF VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN THE OUTSIDE SURFACES OF THE PIPES, AND ONE FULL LENGTH OF WATER PIPE SHALL BE CENTERED OVER OR UNDER THE CROSSING SO THAT JOINTS ARE AS FAR FROM THE SEWER AS PRACTICABLE. WATER MAINS SHALL MAINTAIN REQUIRED SEPARATION DISTANCES FROM STORM DRAINS, RECLAIMED WATER LINES, AND OTHER NON-POTABLE UTILITIES IN ACCORDANCE WITH 15A NCAC 18C .0900.

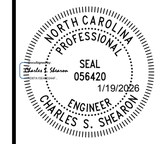
REVISIONS

HN-8023

4UTI | UC-3

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

UTILITY CONSTRUCTION PLANS ONLY



DESIGNED BY: NP
DRAWN BY: NP
CHECKED BY: CS
APPROVED BY: TB
REVISED: 12/16/2025

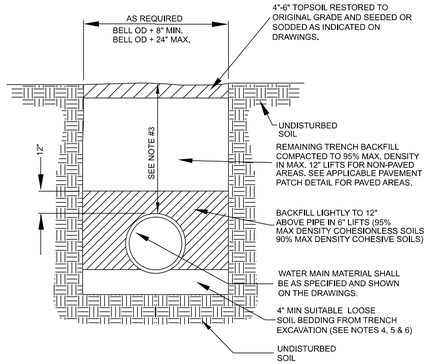
PREPARED BY

KCI ASSOCIATES OF N.C., P.A.
4800 Falls of Neuse Road, Suite 200
Raleigh, NC 27609-6270
Phone (919) 783-9214
NC Firm License No: C-0764

Docusign Envelope ID: 8FCA8626-41FD-4B72-B606-D71838CC3FDD

06/16/22

PROJECT TYPICAL DETAILS

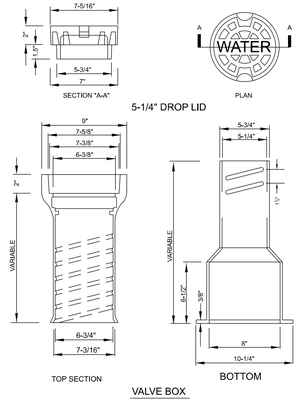


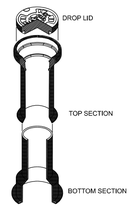
NOTES:

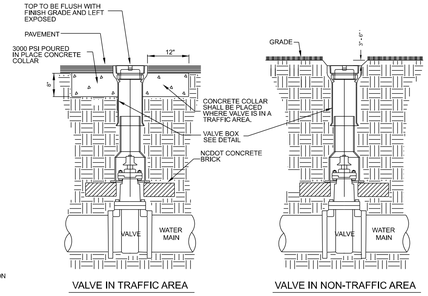
1. ALL EXCAVATIONS SHALL COMPLY WITH THE TERMS AND CONDITIONS OF THE CONSTRUCTION STANDARDS FOR EXCAVATIONS IN OSHA "SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION", CHAPTER XVII OF TITLE 29, CFR, PART 1926. THE CONTRACTOR SHALL HAVE A COMPETENT PERSON ON SITE AT ALL TIMES DURING EXCAVATION AND BACKFILLING.
2. CONTRACTOR SHALL USE TRENCH BOX SHORING IN ALL OPEN CUTS IN PAVED AREAS. TRENCH WIDTH SHALL BE MAINTAINED AT THE MINIMUM PRACTICAL WIDTH.
3. SEE PLANS FOR MINIMUM COVER.
4. LOOSE SOIL OR SELECT MATERIAL IS DEFINED AS "NATIVE" SOIL EXCAVATED FROM THE TRENCH, FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH.
5. BEDDING MATERIAL SHALL EXTEND TO UNDISTURBED TRENCH WALLS AND TRENCH BOTTOM. BEDDING MATERIAL WILL NOT BE PAID FOR UNLESS SPECIFICALLY APPROVED BY THE PROJECT REPRESENTATIVE AND ONLY FOR THE AUTHORIZED QUANTITY.
6. WHERE NATIVE SOIL IS DETERMINED TO BE ADEQUATE BY THE ENGINEER, NO EXCAVATION BELOW THE BOTTOM OF PIPE IS REQUIRED.
7. BEDDING MATERIAL SHALL BE PROPERLY RODDED AND COMPACTED AROUND THE PIPE HAUNCHES.
8. TEST FOR DENSITY OF COMPACTION MAY BE MADE AT THE OPTION OF THE ENGINEER AND DEFICIENCIES SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE ENGINEER MAY HAVE COMPACTION TEST PERFORMED AFTER THE BACKFILL IS COMPLETE. CONTRACTOR SHALL BE REQUIRED TO EXCAVATE TO VARIOUS ELEVATIONS FOR DENSITY TESTING EXCAVATION, BACKFILL AND RECOMPACTION SHALL BE PERFORMED AT NO ADDITIONAL COSTS TO THE OWNER.

WATER MAIN BEDDING DETAIL

NTS



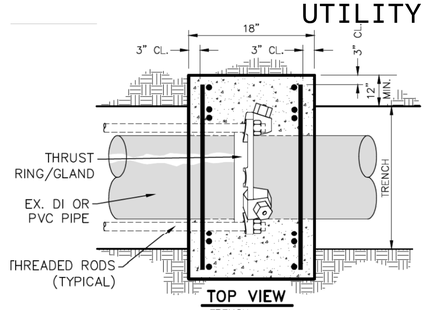




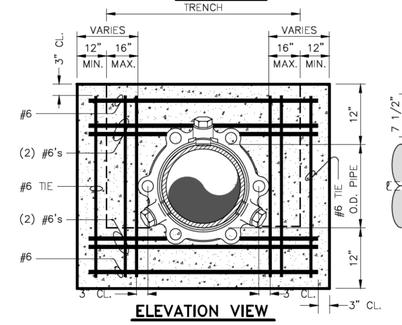
Valve Box Detail

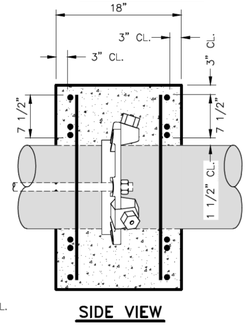
NTS

UTILITY CONSTRUCTION



PIPE SIZE	CONCRETE	#6-REBAR
INCH	C.F.	LBS
6	20	98
8	22	102
12	25	111
16	29	119
18	31	123
20	33	127
24	37	126
30	43	148
36	49	161

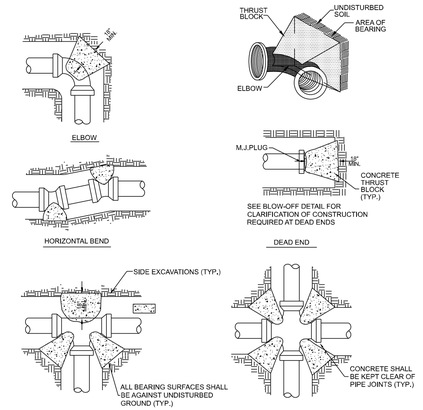




CONCRETE THRUST COLLAR NOTES:

1. CONCRETE SHALL BE 3,000 P.S.I. MINIMUM.
2. REINFORCING BARS SHALL BE DEFORMED, AND TIED TOGETHER.
3. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK(S) INSTALLATION SHALL BE THE MINIMUM WIDTH.
4. BACKFILL AND COMPACT IN 6"LAYERS.
5. PLACE RESTRAINED JOINT THRUST RING 4'MINIMUM FROM END OF EXISTING PIPE.
6. ROD THRUST RING/GLAND TO PROPOSED VALVE OR RESTRAINED FITTING.
7. SEE DETAILS FOR THRUST RING/GLAND AND TIE ROD ANCHORS.

CONCRETE THRUST COLLAR DETAIL



NOTES:

1.) THRUST BLOCKS SHALL BE INSTALLED ON PVC WATER DISTRIBUTION LINES 6" THRU 12" DIA. IN THE MANNER SHOWN.

2.) PIPE GREATER THAN 12 INCH DIAMETER SHALL REQUIRE RESTRAINT JOINT PIPE FOR THE PROPER LENGTH.

3.) SAC-CRETE SHALL NOT BE ALLOWED.

4.) NO CONCRETE SHALL BE PLACED ON BOLTS. WRAP JOINT FITTINGS WITH PLASTIC.

5.) CONCRETE SHALL BE A MINIMUM 3,000 psi.

6.) ALL BEARING SURFACES SHALL BE AGAINST UNDISTURBED SOIL.

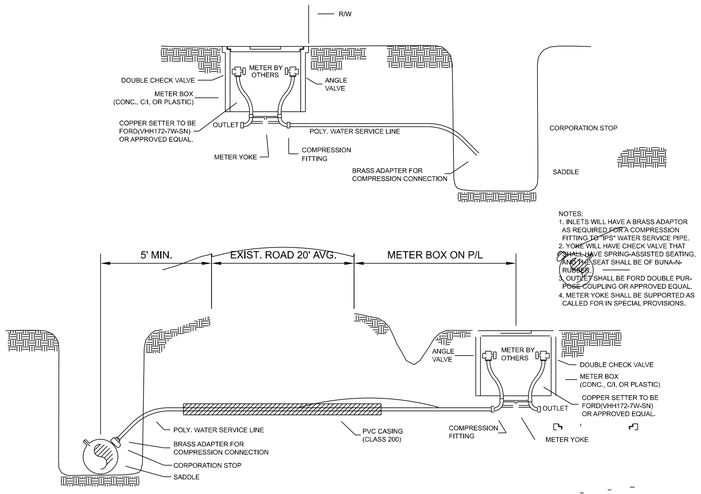
CONCRETE THRUST BLOCK DETAIL

NTS

THRUST BLOCKING SCHEDULE						
FITTING SIZE (IN.)	MINIMUM BLOCKING AREA AND VOLUME IN S.F. AND (C.Y.)					
	11 1/4°	22 1/2°	45°	90°	TEE	PLUG
2			0,23 (0,11)	0,38 (0,11)	0,30 (0,11)	0,30 (0,11)
4			0,83 (0,18)	1,35 (0,18)	0,98 (0,18)	0,98 (0,18)
6	0,40 (0,01)	0,80 (0,02)	1,73 (0,20)	3,00 (0,33)	2,17 (0,25)	2,17 (0,25)
8	0,80 (0,02)	1,50 (0,04)	3,08 (0,34)	5,40 (0,60)	3,83 (0,42)	3,83 (0,42)
10	1,20 (0,03)	2,30 (0,07)	4,72 (0,52)	8,40 (0,94)	5,92 (0,66)	5,92 (0,66)
12	1,70 (0,05)	3,30 (0,12)	6,82 (0,75)	12,00 (1,33)	8,48 (0,94)	8,48 (0,94)
16	3,00 (0,33)	5,90 (0,65)	11,60 (0,86)	21,30 (1,57)	15,00 (0,97)	15,00 (0,97)
20	4,60 (0,52)	9,20 (0,76)	18,00 (1,32)	33,30 (3,60)	23,30 (1,87)	23,30 (1,87)
24	6,70 (0,75)	13,20 (0,97)	26,00 (2,28)	48,00 (5,29)	33,60 (3,24)	33,60 (3,24)
30	10,40 (0,77)	20,70 (1,80)	40,60 (4,45)	75,00 (10,30)	52,50 (6,32)	52,50 (6,32)
36	15,00 (1,28)	29,80 (3,11)	58,40 (7,67)	108,0 (17,90)	75,60 (10,90)	75,60 (10,90)

NOTE: Values given are based on 150 psi water pressure and 2000 lb/sf soil bearing capacity. Soils with less bearing capacity such as muck, peat or soft clay will require greater blocking areas and volumes.

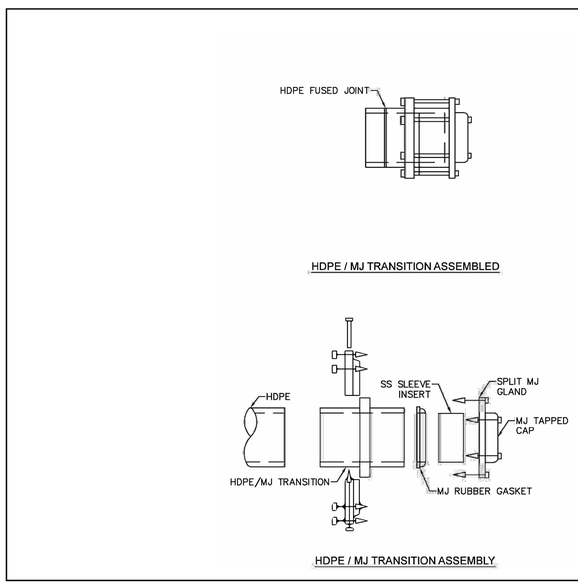
The thrust blocking shown above is based on the use of mechanical joint as shown on plans.



NOTES:
1. INLETS WILL HAVE A BRASS ADAPTOR AS REQUIRED FOR A COMPRESSION FITTING 3/4" O.D. WATER SERVICE PIPE.
2. YOKE WILL HAVE CHECK VALVE THAT SHALL HAVE SPRING-ASSISTED SEATING. SEAT SHALL BE OF BUNA-N RUBBER.
3. OUTLET SHALL BE FORD DOUBLE PURPOSE COUPLING OR APPROVED EQUAL.
4. METER YOKE SHALL BE SUPPORTED AS CALLED FOR IN SPECIAL PROVISIONS.

Typical House Service Detail

NTS



HORIZONTAL DIRECTIONAL DRILL TRANSITION DETAIL #: G-4

KCI TECHNOLOGIES
ENGINEERS | PLANNERS | SCIENTISTS | CONSTRUCTION MANAGERS

HN-0023
4UTI UC-3A

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

UTILITY CONSTRUCTION PLANS ONLY

NORTH CAROLINA PROFESSIONAL SEAL 056420 1/19/2026 ENGINEER CHARLES S. SHEARON
Brooks & Shearon

DESIGNED BY:	NP
DRAWN BY:	NP
CHECKED BY:	CS
APPROVED BY:	TB
REVISED:	

PREPARED BY

KCI ASSOCIATES OF N.C., P.A.
4800 Falls of Neuse Road, Suite 200
Raleigh, NC 27609-6270
Phone (919) 783-9214
NC Firm License No: C-0764

REVISIONS

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02/02/22

UTILITY CONSTRUCTION

NAD 83

NOTE:
1. PRIOR TO COMMENCING ANY WORK ON TRENCHLESS INSTALLATION CERTIFIED BY AN ENGINEER LICENSED BY THE STATE OF NORTH CAROLINA. AS REQUIRED BY SUB-ARTICLE 1550-3(B) OF THE STANDARD SPECIFICATIONS
2. CONTRACTOR SHAL ENSURE RESTRAINT OF EXISTING ASBESTOS CONCRETE (AC) PIPE USING A THRUST COLLAR AND INSTALL A TRANSITION COUPLING (ROMAC MACRO HP, SMITH-BLAIR 441, JCM 212, OR APPROVED EQUAL). THESE COUPLINGS ARE NOT RESTRAINED; THEREFORE, THE CONTRACTOR SHALL PROVIDE ADEQUATE RESTRAINT TO THE PIPE BEFORE AND AFTER THE COUPLING. THRUST BLOCKING SHALL BE USED TO RESTRAIN HORIZONTAL BENDS.

DDE = 20 CY

DDE = 5 CY

SEE ROADWAY PLANS FOR CONDUIT DETAILS

ABANDON 239 LF 6" UTILITY PIPE

PROP. 6" GATE VALVE

TIE TO EX. 6" WATER LINE WITH A RESTRAINED COUPLING

SEE ROADWAY PLANS FOR CONDUIT DETAILS

PROP. THRUST BLOCK

EX. 6" ASBSETOS CONCRETE WATER LINE

EXTEND W/ TEMP. 15" HDPE BEFORE TEMP. SIDEWALK INSTALLATION

EXIST. 24" PIPE WILL BE PLUG AND FILLED WITH FLOWABLE MATERIAL

SEE ROADWAY PLANS FOR CONDUIT DETAILS

ABANDON 55 LF 6" UTILITY PIPE

RELOCATE WATER METER 64 LF WATER SERVICE LINE

TIE TO EX. 6" WATER LINE WITH A RESTRAINED COUPLING

N27°26'11.5"E

EX. 8" SANITARY SEWER

PROP. 22.5° BEND -W/L- STA. 0+05.45

PROP. 22.5° BEND -W/L- STA. 0+43.09

PROP. 160 LF 6" WATER LINE DUCTILE IRON RESTRAINED JOINT PIPE

PROP. SLURRY CONTAINMENT PIT

PROP. 90° BEND -W/L- STA. 1+54.52

TRANSITION ADAPTER DUCTILE IRON TO HDPE

PROP. 149 LF DIRECTIONAL DRILLING OF 8"

PROP. 149 LF 8" WATER LINE

HDPE SDR 13.5

SEE ROADWAY PLANS FOR CONDUIT DETAILS

PROP. THRUST BLOCK

PROP. 6" GATE VALVE

PROP. 67 LF OF 6" WATER LINE DUCTILE IRON RESTRAINED JOINT PIPE

PROP. 22.5° BEND -W/L- STA. 3+15.81

PROP. SLURRY CONTAINMENT PIT

TRANSITION ADAPTER DUCTILE IRON TO HDPE

EX. 16" RCP

PROP 24" RCP

EX. FIBER OPTIC UTILITY

EX. TELECOMMUNICATION UTILITY

4' BASE TAIL DITCH
0.3% SLOPE
LENGTH = 16'
DETAIL 4B
CL. I RIP RAP
15 TONS
30 SY GEOTEXTILE

570 LBS OF DUCTILE IRON WATER PIPE FITTINGS

HN-0023	
4UT1	UC-4

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

UTILITY CONSTRUCTION PLANS ONLY

NORTH CAROLINA PROFESSIONAL SEAL 056420 1/19/2026 ENGINEER CHARLES S. SHEARON

DESIGNED BY: NP
DRAWN BY: NP
CHECKED BY: CS
APPROVED BY: TB
REVISED: 12/16/2025

PREPARED BY

KCI ASSOCIATES OF N.C., P.A.
4800 Falls of Neuse Road, Suite 200
Raleigh, NC 27609-6270
Phone (919) 783-9214
NC Firm License No: C-0764

REVISIONS

Docusign Envelope ID: 8FCA8626-41FD-4B72-B606-D71838CC3FDD

5/26/20

UTILITY CONSTRUCTION

NOTE:
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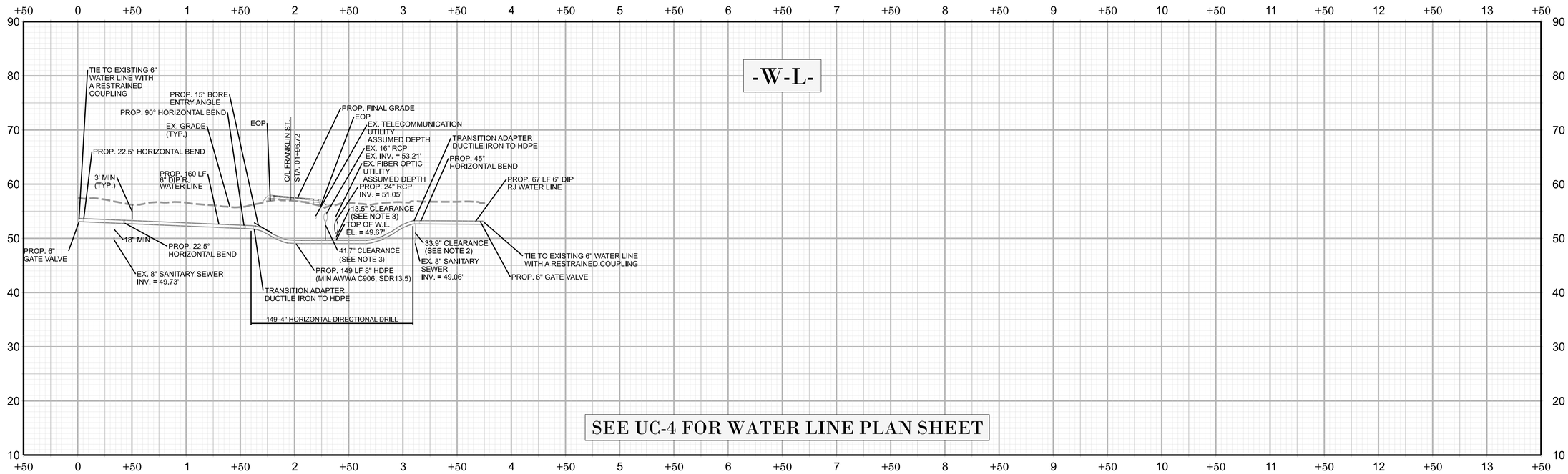
2. WATER MAINS CROSSING SANITARY SEWERS SHALL BE INSTALLED WITH A MINIMUM VERTICAL SEPARATION OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THE WATER MAIN SHALL BE LOCATED ABOVE THE SEWER WHERE PRACTICABLE. A FULL-LENGTH SECTION OF WATER PIPE SHALL BE CENTERED AT THE CROSSING SO THAT JOINTS ARE AS FAR FROM THE SEWER AS PRACTICABLE.
3. AT CROSSINGS WITH OTHER UTILITIES, A MINIMUM CLEARANCE OF 12 INCHES SHALL BE MAINTAINED BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE CROSSING UTILITY TO ALLOW FOR CONSTRUCTION AND FUTURE MAINTENANCE.



SEE UC-4 FOR WATER LINE PLAN SHEET

HN-0023
4UT1 | UC-5

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

UTILITY CONSTRUCTION PLANS ONLY

DESIGNED BY:	NP
DRAWN BY:	NP
CHECKED BY:	CS
APPROVED BY:	TB
REVISED:	

PREPARED BY

KCI ASSOCIATES OF N.C., P.A.
4600 Falls of Neuse Road, Suite 200
Raleigh, NC 27609-6270
Phone (919) 783-9214
NC Firm License No: C-0764

09/08/99

TIP PROJECT: HN-0023

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

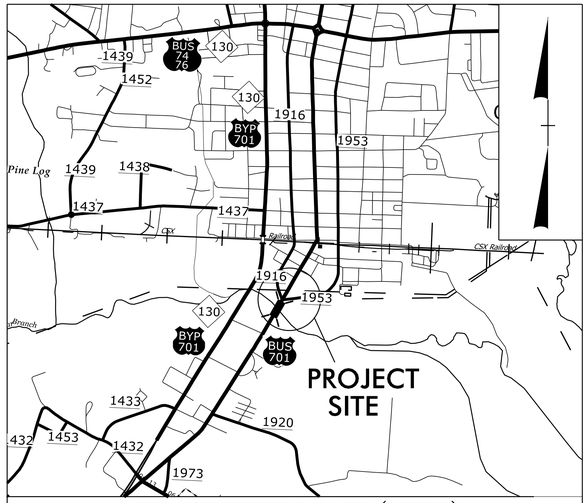
UTILITIES BY OTHERS PLANS
COLUMBUS COUNTY

T.I.P. NO.	SHEET NO.
HN–0023	UO–1

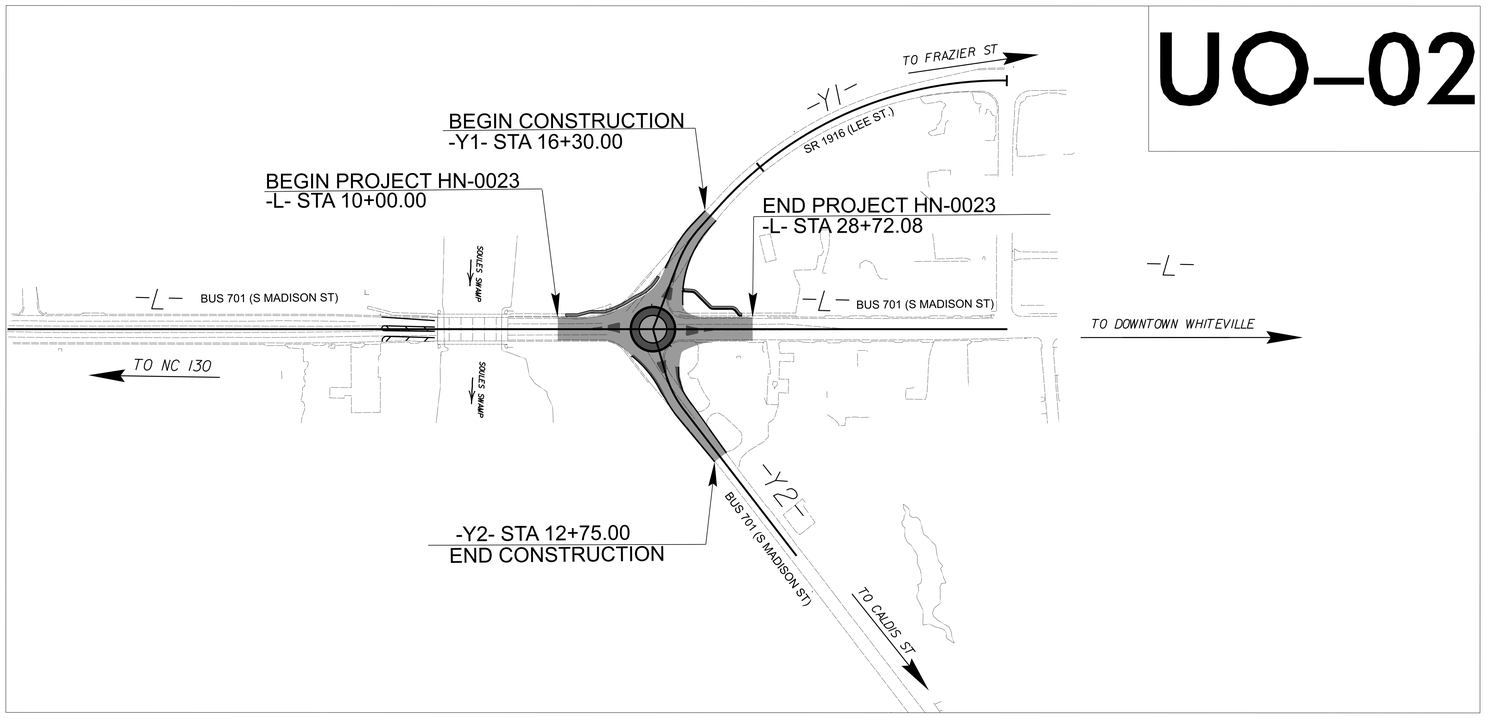
NOTE:
ALL UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS.
NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR UTILITY WORK SHOWN ON THIS SHEET.

LOCATION: *US 701 BUS. (MADISON ST.) AT SR 1916 (LEE ST.) AND SR 1953 (FRANKLIN ST).*

TYPE OF WORK: *RELOCATION OF AERIAL POWER & AERIAL/BURIED COMMUNICATION*



VICINITY MAP (NTS)



UO–02

NAD 83/NA 2011

THIS PROJECT IS WITHIN MUNICIPAL BOUNDARIES.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD __.

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

50 25 0 50 100
PROFILE (VERTICAL)

INDEX OF SHEETS

SHEET NO.:	DESCRIPTION:
UO-1	TITLE SHEET
UO-02	UBO PLAN SHEETS

UTILITY OWNERS WITH CONFLICTS

(A) POWER (TRANSMISSION) – BRUNSWICK EMC
(B) POWER (DISTRIBUTION) – DUKE ENERGY
(C) COMMUNICATION – BRIGHTSPEED
(D) COMMUNICATION – CHARTER
(E) COMMUNICATION – FOCUS BROADBAND
(F) SEWER – CITY OF WHITEVILLE
(G) WATER – CITY OF WHITEVILLE

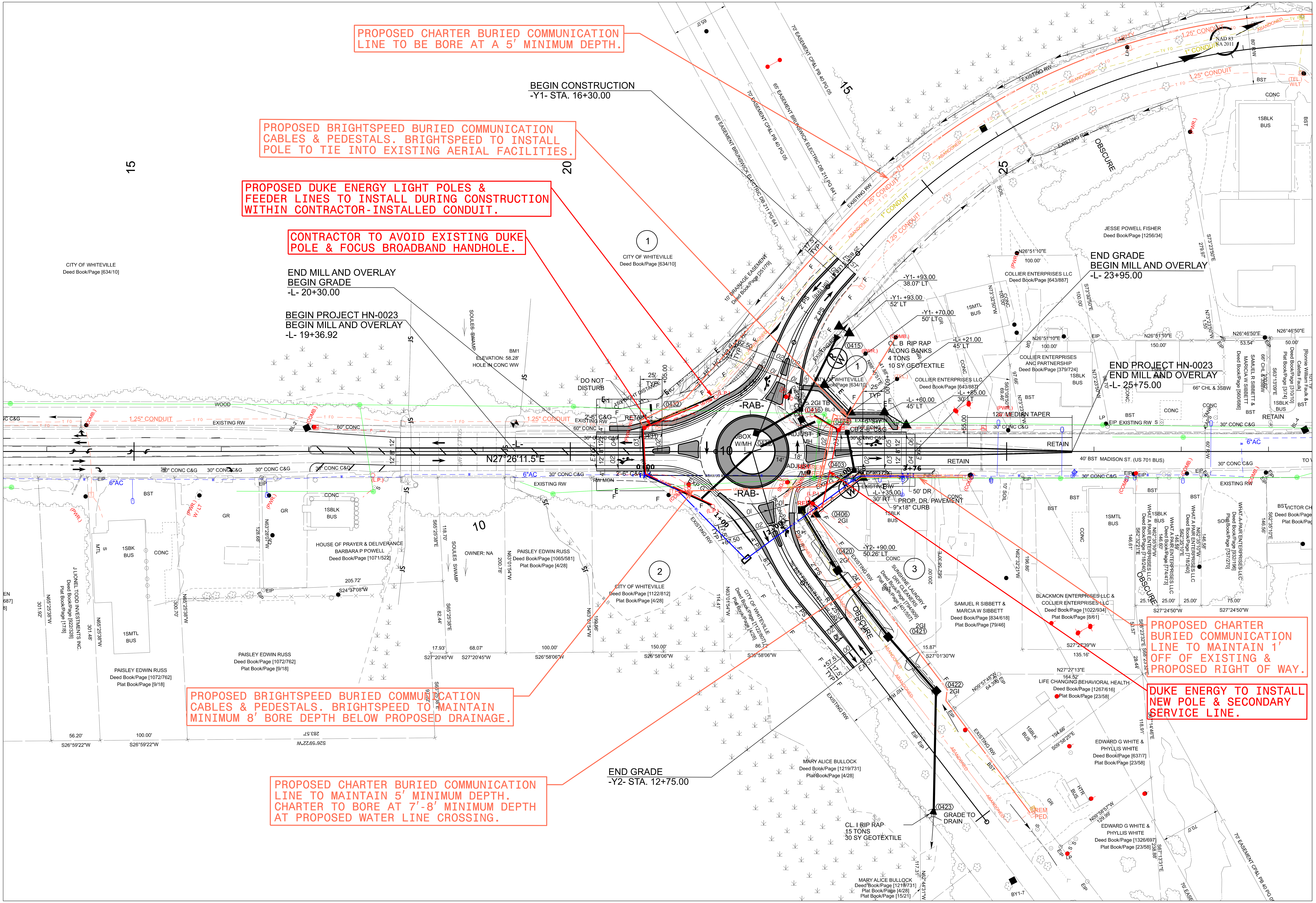
PREPARED IN THE OFFICE OF:

KCI
http://www.kci.com
KCI Associates of N.C., P.A.
4800 Falls of Neuse Road, Suite 200
Raleigh, NC 27609
Phone (919) 783-9214
Fax (919) 783-9266

JOHN FAISON	UTILITY PROJECT MANAGER
DANIEL ALLEN	PROJECT UTILITY DESIGNER
CHRIS HARMON	PROJECT UTILITY DESIGNER

DIVISION OF HIGHWAYS
DIVISION 6
558 GILLESPIE ST.
FAYETTEVILLE, NC 28301

RICK HANDLIN	***DIV. UTILITY ENGINEER***
RICK BOUNDS	***DIV. UTILITY UNIT***
LOUIS CANIAC	***DIV. UTILITY UNIT***



5/26/20

HN-0023

UO | 002

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
COLUMBUS COUNTY

KCI UTILITY SERVICES

JOHN FAISON
UTILITY COORDINATOR

DANIEL ALLEN
UTILITY DESIGNER

UTILITY OWNERS WITHIN LIMITS

(A) POWER DISTRIBUTION - DUKE ENERGY
(B) POWER TRANSMISSION - DUKE ENERGY
(C) POWER TRANSMISSION - BRUNSWICH
(D) COMMUNICATION - BRIGHTSPEED
(E) COMMUNICATION - FOCUS BROADBAND
(F) COMMUNICATION - CHARTER
(G) WATER/SEWER - CITY OF WHITEVILLE

UTILITIES BY OTHERS PLAN

US 701 BUS. (MADISON ST.) AT SR 1916 (LEE ST.) AND SR 1953 (FRANKLIN ST.)

NOTE: ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS. NO PAYMENT WILL BE MADE TO THE CONTRACTOR FOR PROPOSED UTILITY WORK SHOWN ON THIS SHEET.

PREPARED BY

KCI ASSOCIATES OF N.C., P.A.
4505 Falls of Neuse Road, Suite 400
Raleigh, NC 27609-6270
Phone (919) 783-9214
NC Firm License No: C-0764

REVISIONS

5/26/20

HN-0023
X | 001

INDEX OF CROSS SECTIONS

ALIGNMENT	STATION TO STATION	SHEET NO.
-L-	20+00.00 TO 24+00.00	X-002 TO X-005
-RAB-	10+00.00 TO 12+50.00	X-006 TO X-007
-Y1-	16+00.00 TO 18+00.00	X-008 TO X-009
-Y2-	11+00.00 TO 13+50.00	X-010 TO X-012

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HN-0023
X | 001A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

Approximate quantities only. Unclassified excavation, borrow excavation, fine grading, clearing and grubbing, and removal of existing pavement will be paid for at the contract lump sum price for "Grading".

Note: Embankment column does not include backfill for undercut.

CROSS-SECTION SUMMARY

Station L w/ RAB	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
20+30.00	0	0
20+50.00	7	2
21+00.00	30	14
21+48.51	36	34
21+50.00	1	2
21+65.18	2	26
22+00.00	8	134
22+50.00	14	119
22+68.51	11	31
23+00.00	24	75
23+50.00	26	55
23+75.00	7	5
23+95.00	7	1

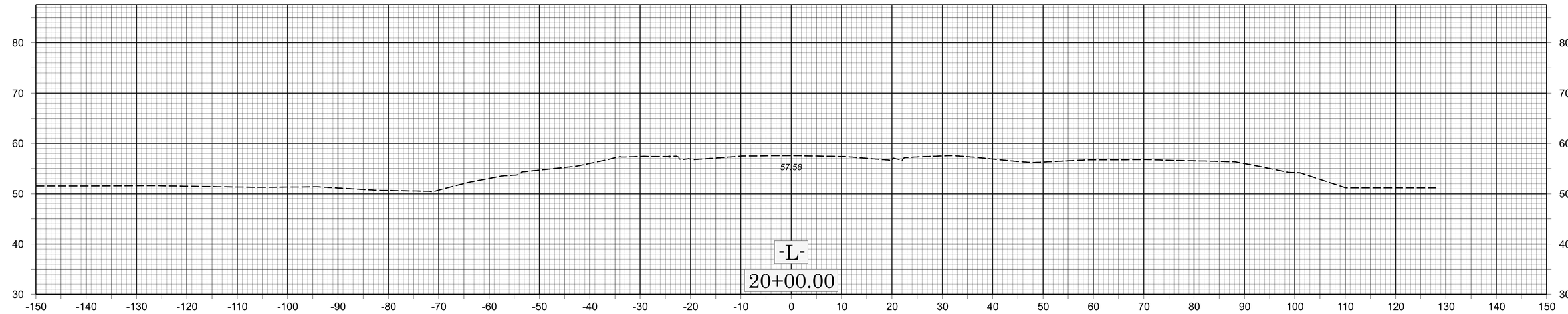
Station Y1	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
16+30.00	0	0
16+50.00	7	0
16+75.00	7	1
17+00.00	6	1
17+25.00	4	1
17+50.00	4	4
17+75.00	4	35
18+00.00	7	61
18+10.77	5	24

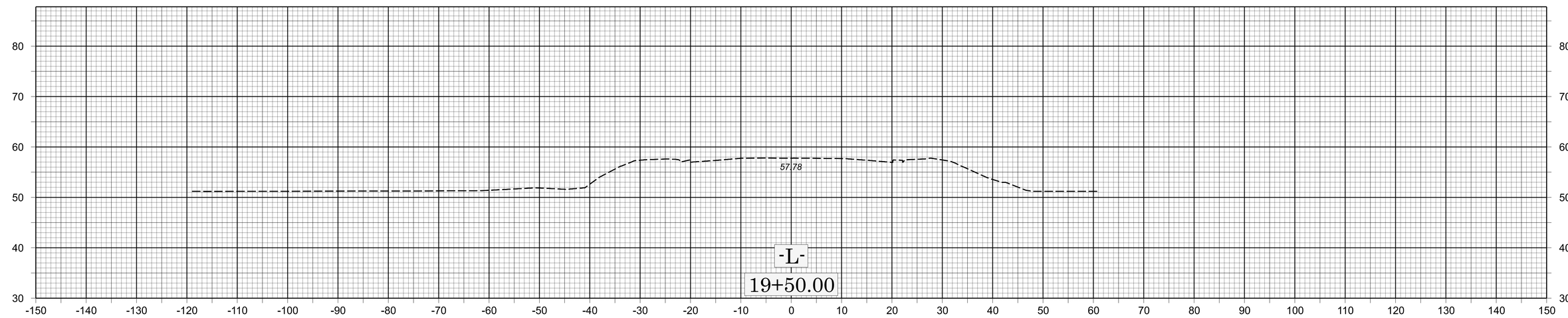
Station Y2	Uncl. Exc. (cu. yd.)	Embt (cu. yd.)
10+60.00	0	0
10+75.00	2	24
11+00.00	2	20
11+25.00	3	9
11+50.00	8	15
11+75.00	13	19
12+00.00	15	10
12+25.00	17	13
12+50.00	20	24
12+75.00	24	13

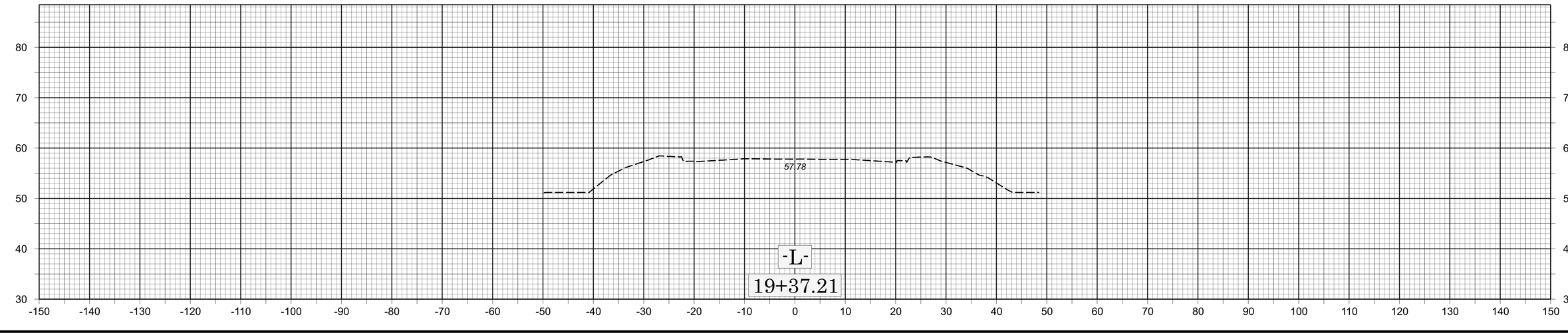
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

0 10 20

HN-0023
X | 002







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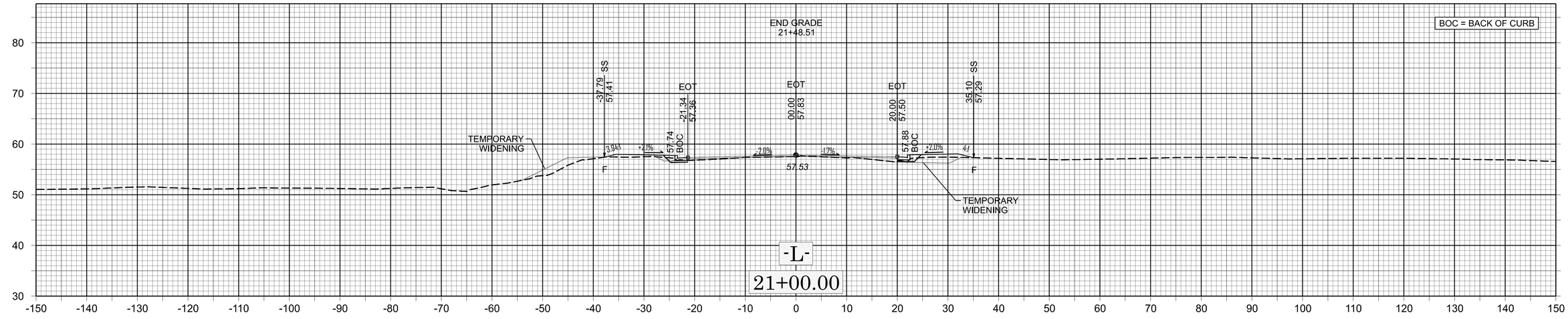
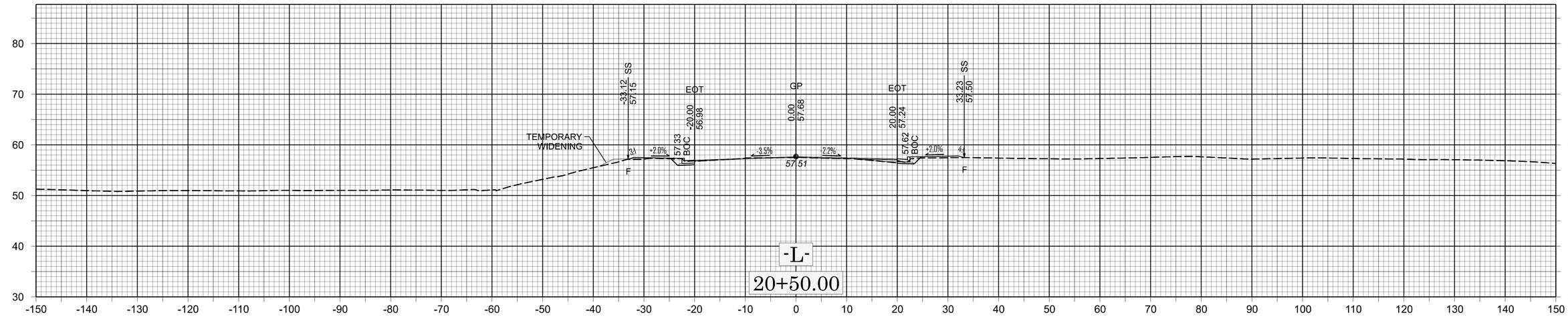
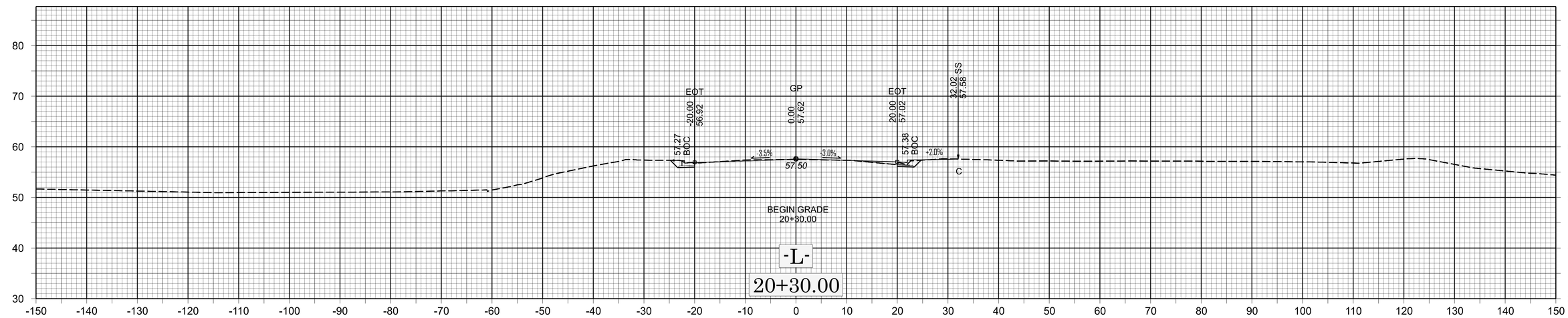
HN-0023
X | 003







5/26/20

0 10 20

HN-0023
X | 004

END GRADE
23+95.00

EOT
-20.00
56.07

GP
0.00
57.17

EOT
20.00
56.27

-5.5%
-20.0%
-4.5%
-4.0%
57.05

-L-
23+95.00

-46.96
55.61
SS

EOT
-20.00
56.43

GP
0.00
57.35

EOT
20.00
56.83

36.71
56.86
SS

56.76
BOC
-4.1%
-1.9%
-4.5%
-2.6%
57.20
BOC
+2.0%
-1.2%
4.1
F
57.12

-L-
23+50.00

-70.89
55.66
SS

EOT
-20.00
57.01

GP
00.00
57.55

EOT
25.35
57.01

42.14
56.44
SS

57.37
BOC
-1.6%
-2.7%
-2.1%
56.93
+1.9%
4.24
6.15
F
57.26

BEGIN GRADE
22+68.51

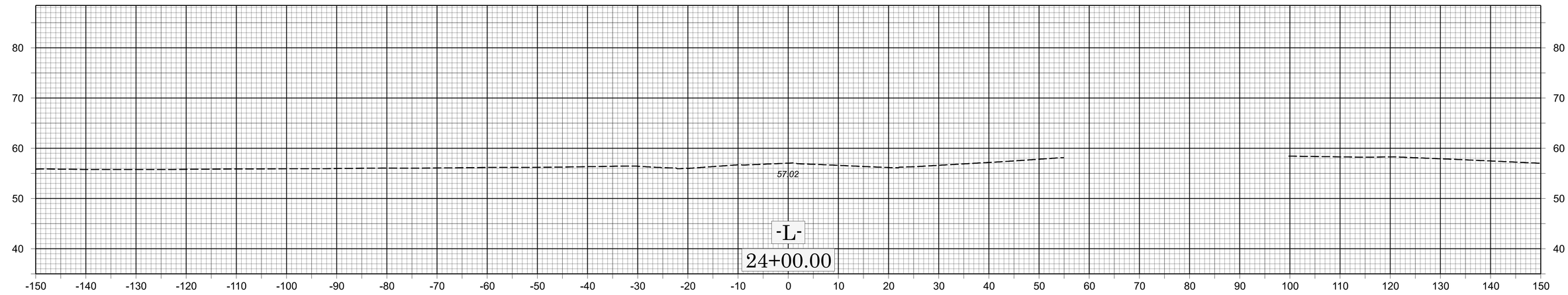
-L-
23+00.00

5/26/20

0 10 20

HN-0023

X | 005



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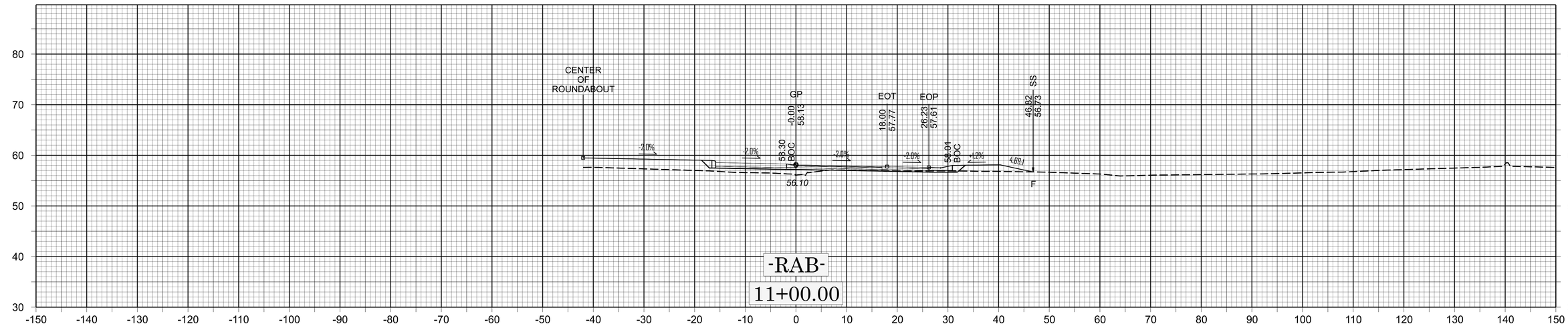
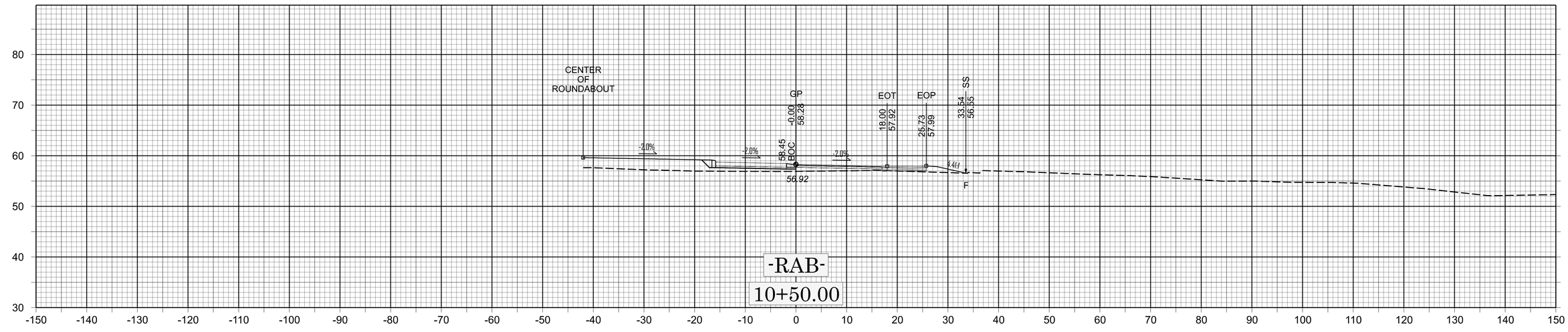
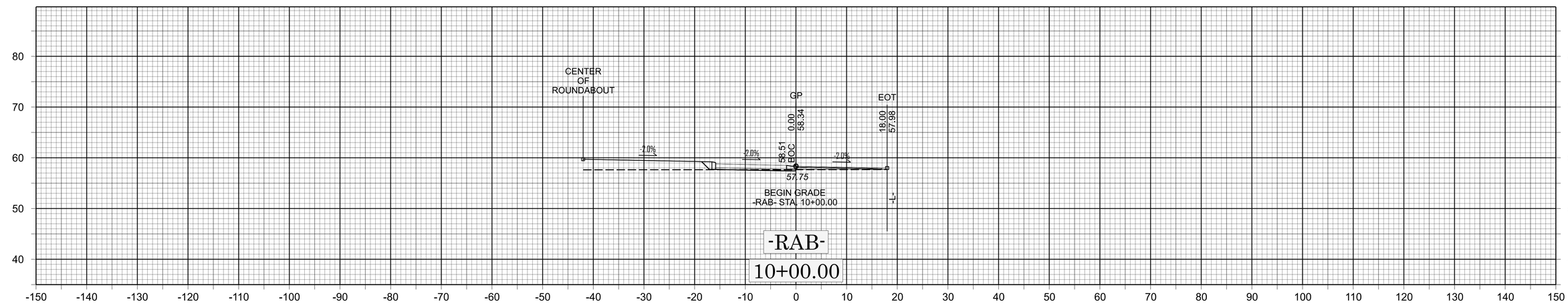
0 10 20

HN-0023
X | 006







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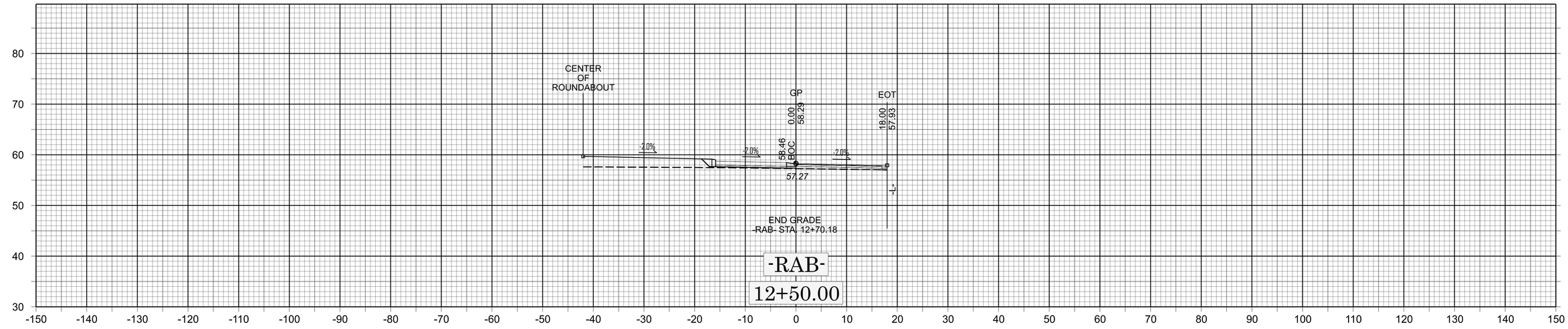
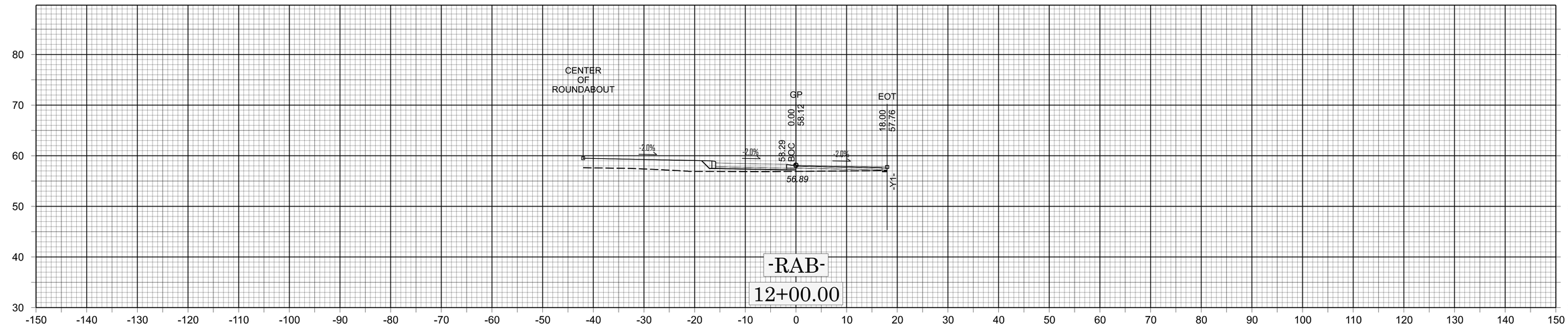
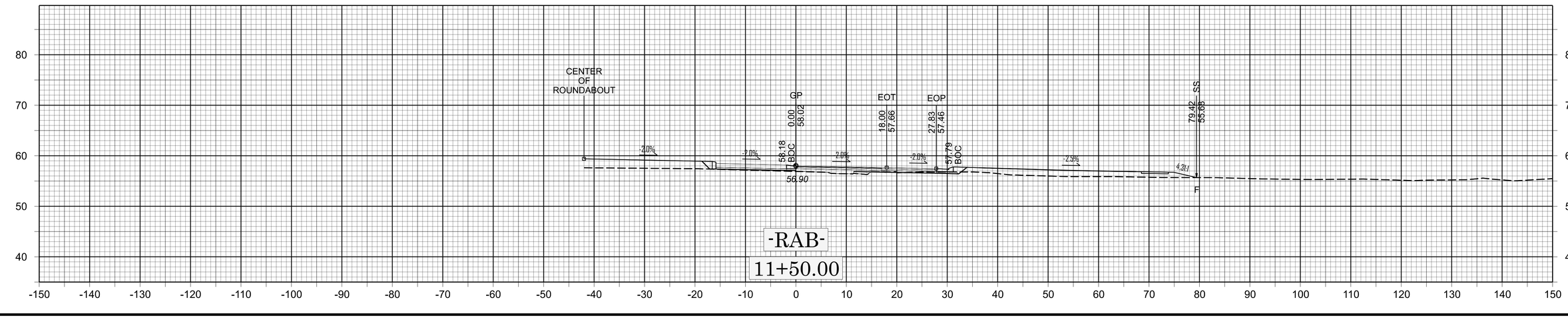
HN-0023
X 007







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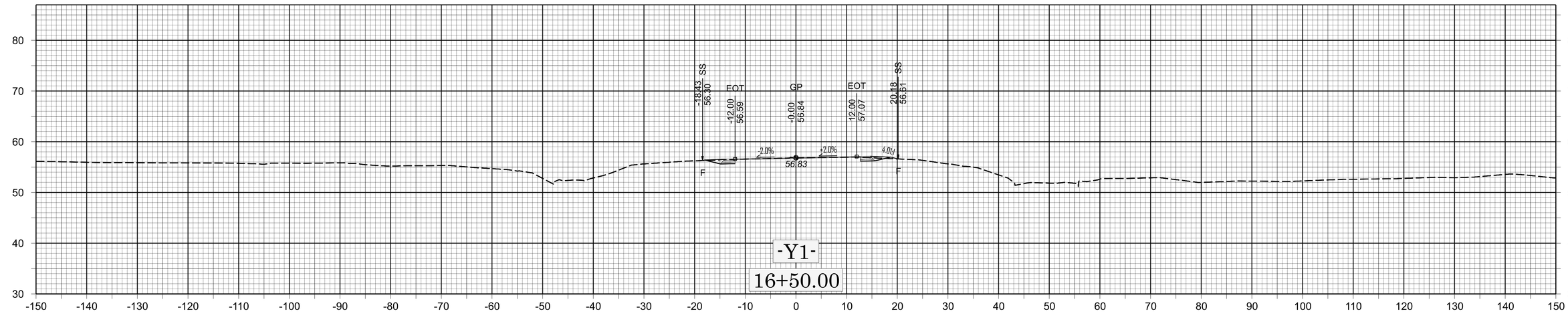
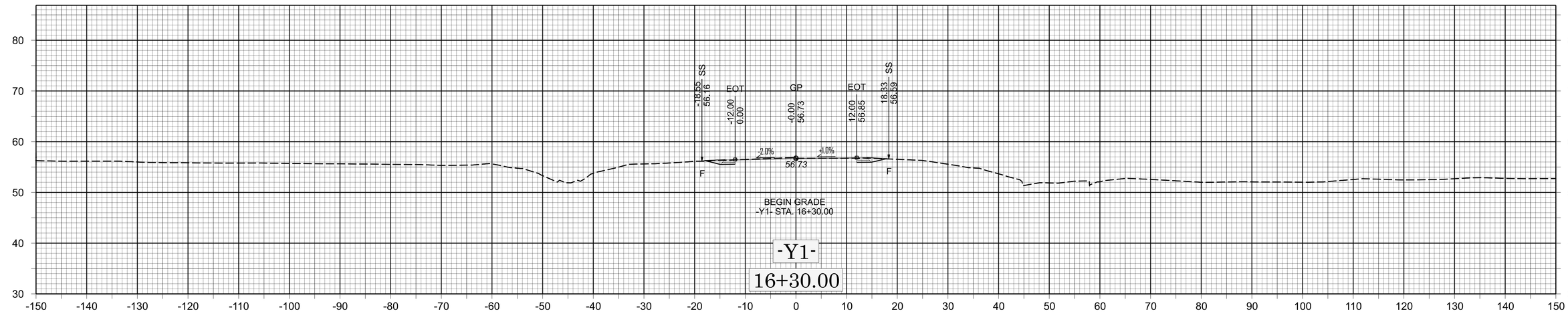
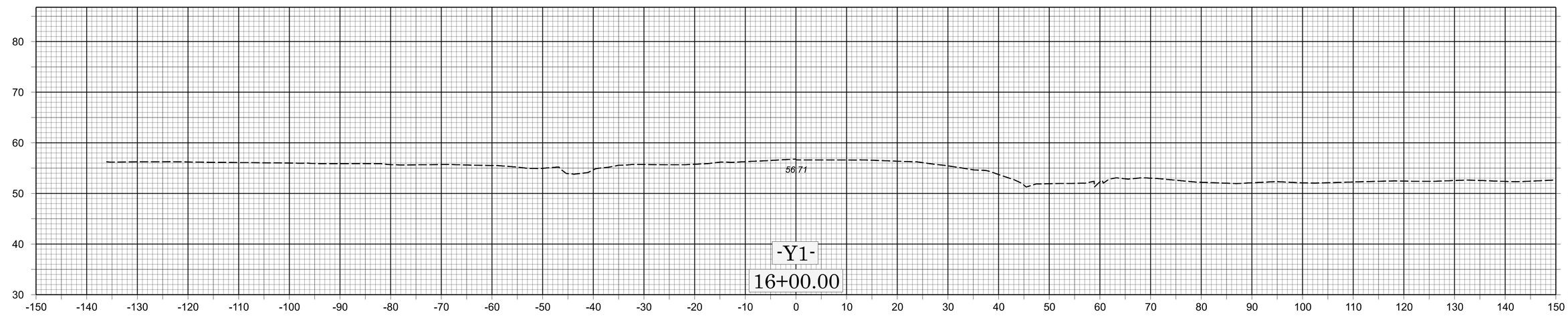
HN-0023
X 008







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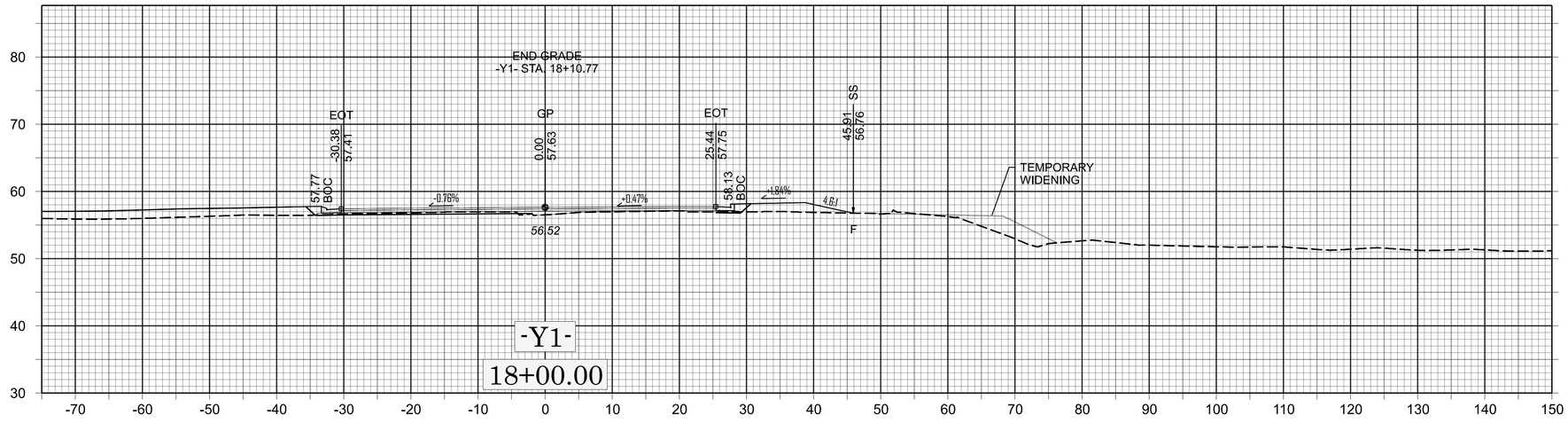

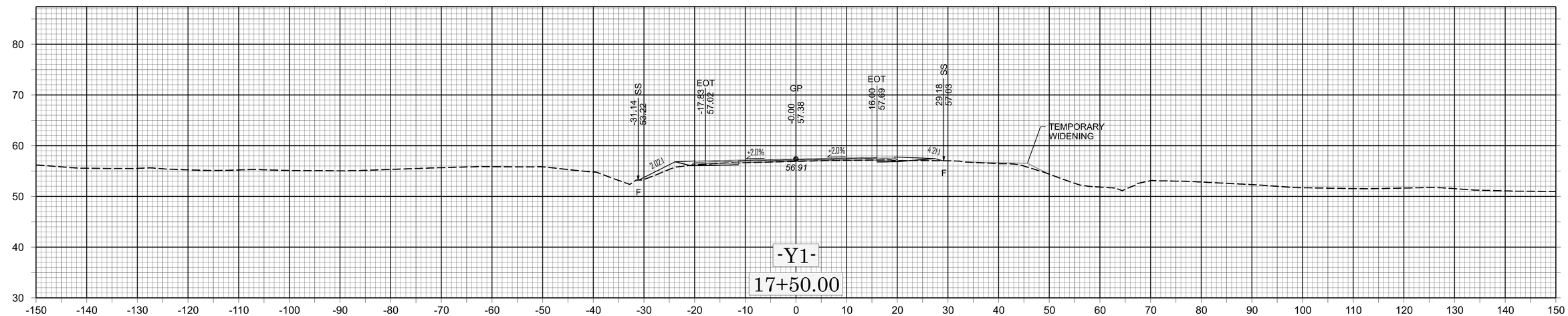

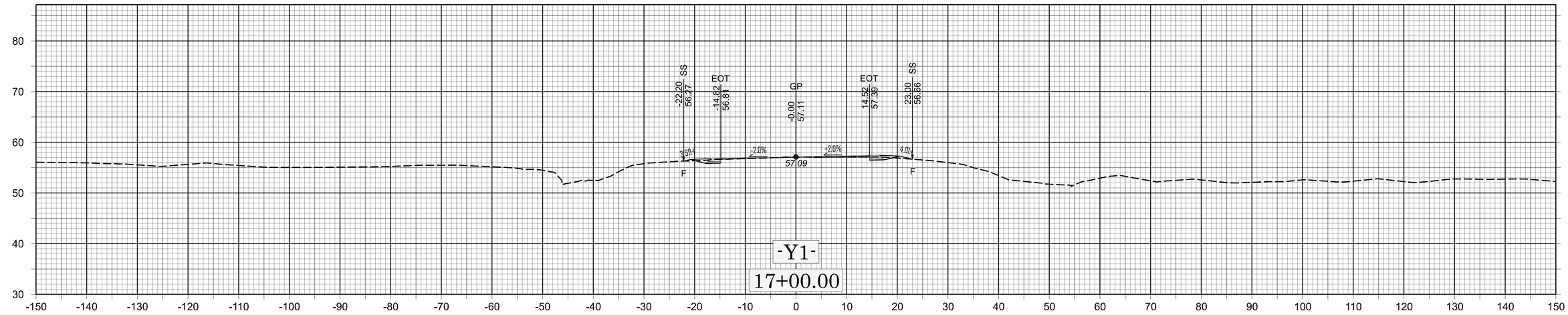

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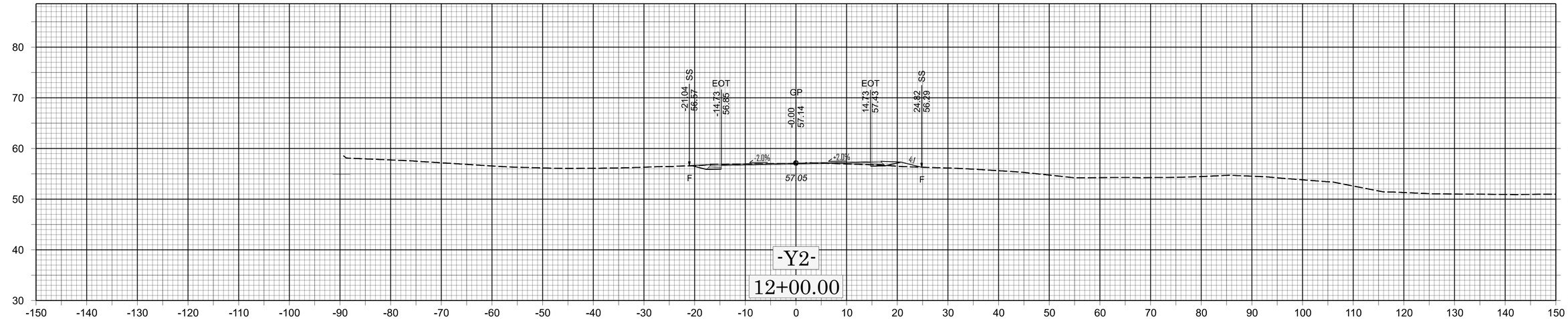

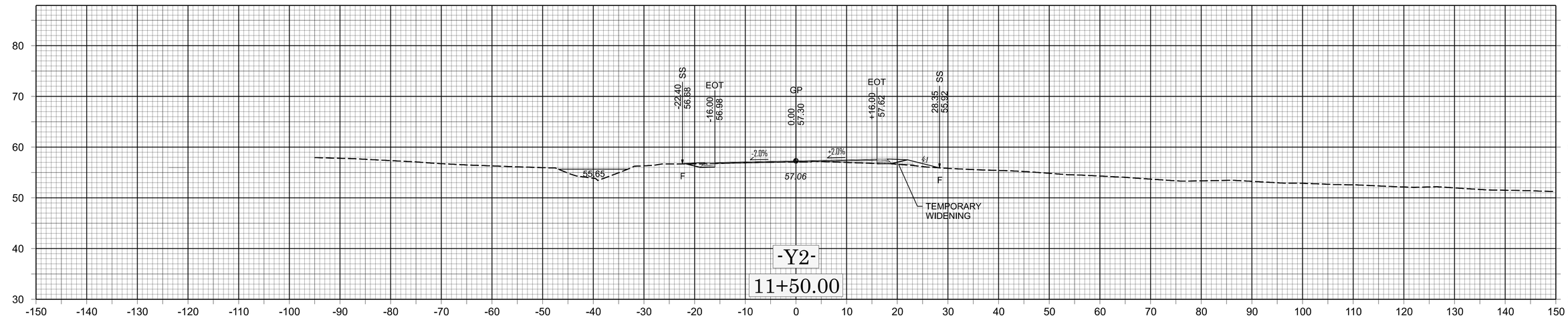

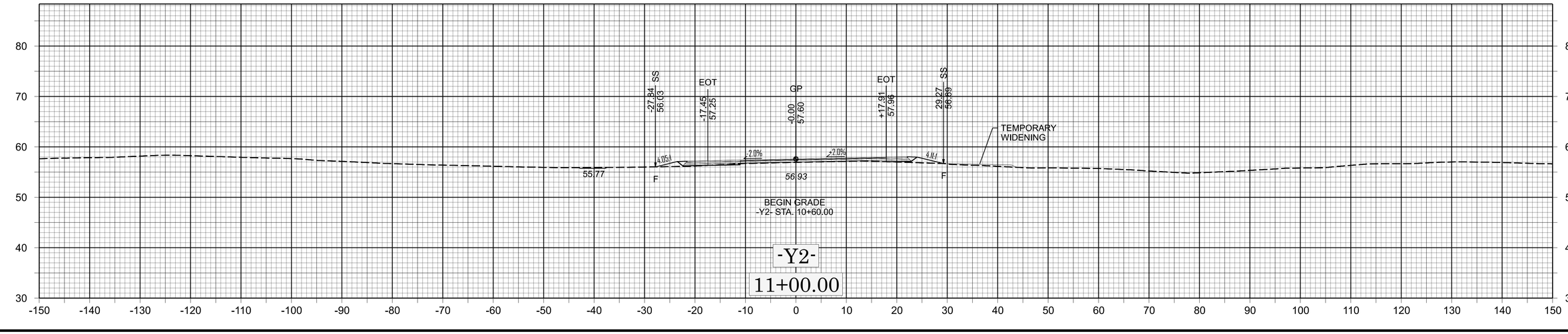

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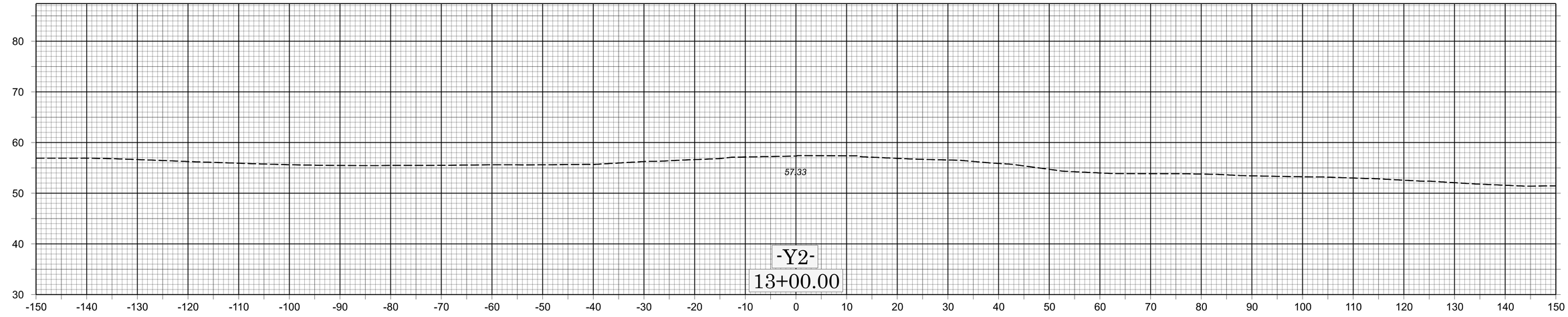
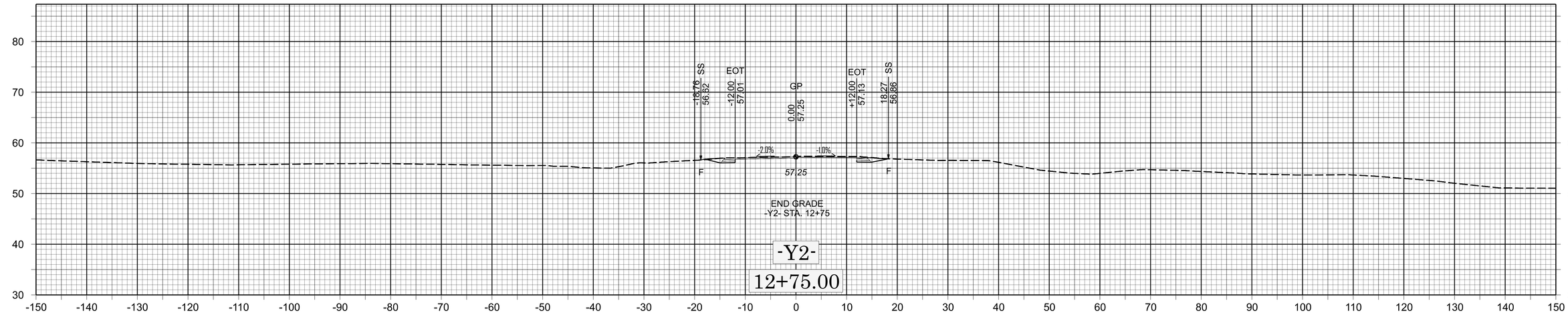
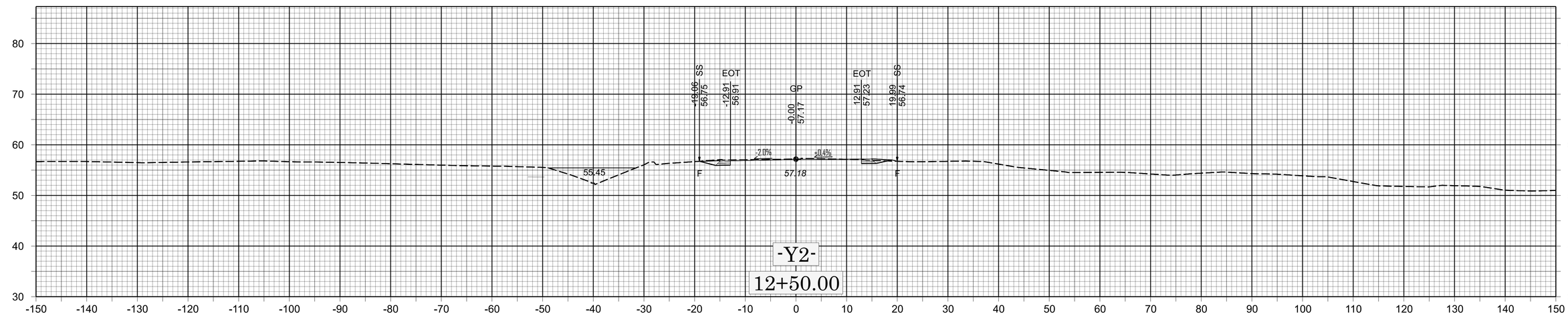
HN-0023
X | 011







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HN-0023

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