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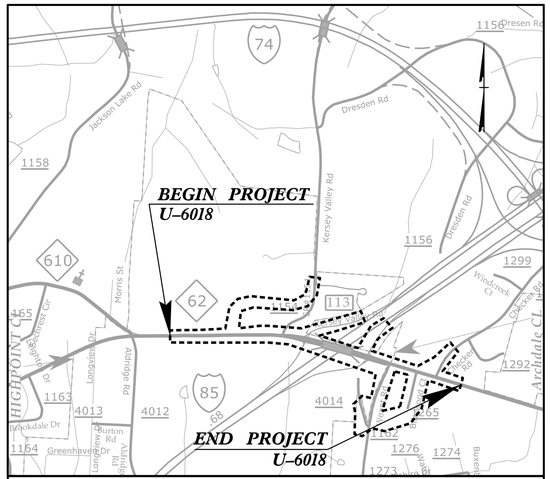
09/08/99

TIP PROJECT: U-6018

CONTRACT: C204798

See Sheet 1A For Index of Sheets
See Sheet 1B For Conventional Symbols



VICINITY MAP NTS

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

GUILFORD COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-6018	1	

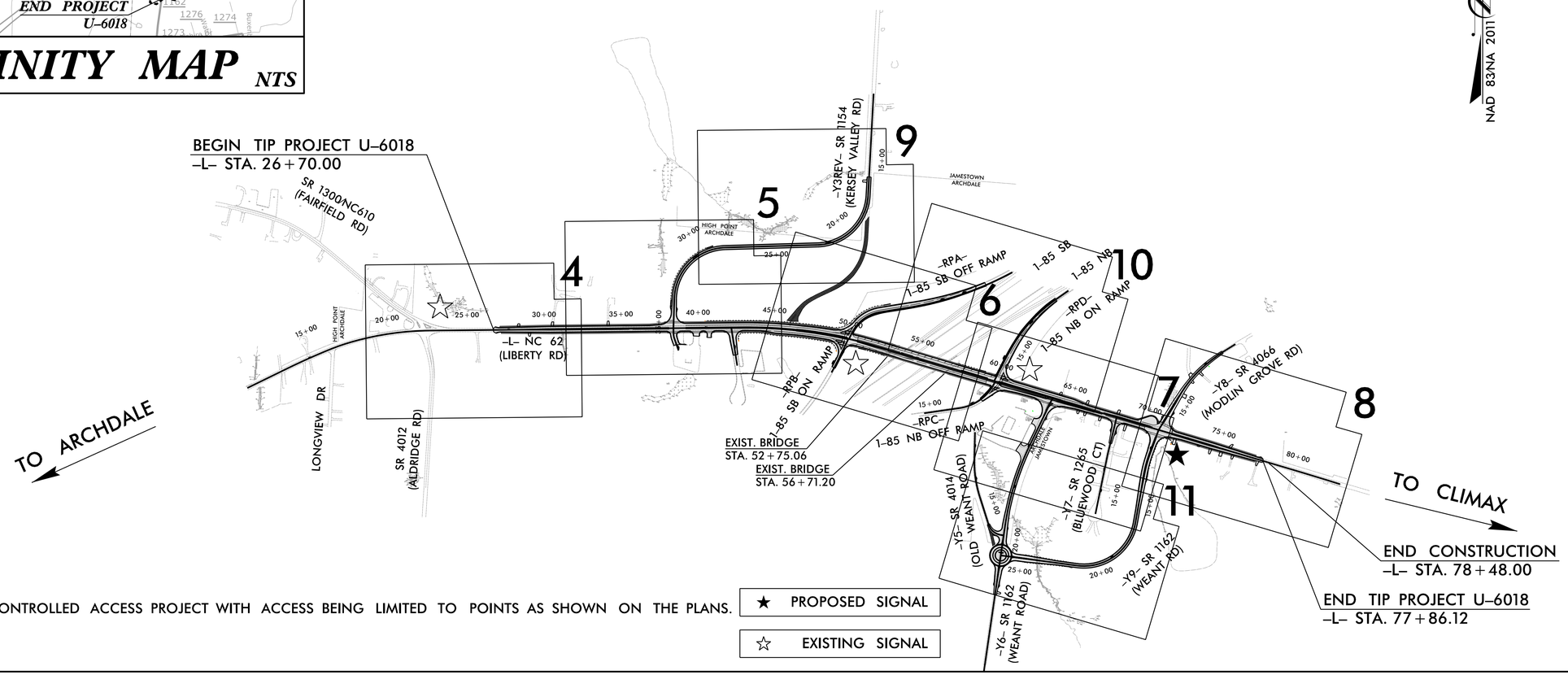
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
47163.1.1		PE
47163.2.1		R/W
47163.2.2		UTIL
47163.3.1		CONST

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

LOCATION: WIDENING OF NC 62 (LIBERTY RD) FROM EAST OF NC 610 (E. FAIRFIELD RD) TO EAST OF SR 4066 (MODLIN GROVE RD) AND THE REALIGNMENT OF SR 1154 (KERSEY VALLEY RD) AND SR 1162 (WEANT RD)

TYPE OF WORK: GRADING, PAVING, DRAINAGE, SIGNALS, & BRIDGE PRESERVATION

NAD 83/NA 2011



THIS IS A PARTIAL CONTROLLED ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS.

★ PROPOSED SIGNAL

☆ EXISTING SIGNAL

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 2025 = 11,700
ADT 2040 = 12,600
K = 11
D = 55%
T = 6%*
V = 50 MPH
*(TTST 2% + DUALS 4%)

FUNCTION CLASS:
MINOR ARTERIAL
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-6018 = 0.894 MILES
LENGTH EXIST. STRUCTURE TIP PROJECT U-6018 = 0.075 MILES
TOTAL LENGTH ROADWAY TIP PROJECT U-6018 = 0.969 MILES

NCDOT CONTACT: BRIAN K. KETNER, PE
DIV 7 – PROJECT DELIVERY TEAM LEAD
336-487-0075

Prepared in the Office of:

DRMP
ENGINEERS SURVEYORS PLANNERS SCIENTISTS

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5808 FARINGDON PLACE
RALEIGH, NC 27609
PHONE: 919-872-5115
www.drmp.com | NC License No. F-1524

2024 STANDARD SPECIFICATIONS

APRIL 14, 2021
RIGHT OF WAY DATE:
JUNE 17, 2025
LETTING DATE:

KAYLA M. POULOS, PE
PROJECT ENGINEER

HERB L. RIDGEWAY IV
PROJECT DESIGNER

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAREN HEFNER
DocuSigned by: Karen Hefner
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4/29/2025

SIGNATURE:

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAYLA M. POULOS
DocuSigned by: Kayla M. Poulos
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4/29/2025

SIGNATURE:

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

4/7/2025
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User: kpoulos

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PROJECT REFERENCE NO.	SHEET NO.
U-6018	1A-1
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER TANIA M. POULOS
4/29/2025

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PLANS PREPARED BY:
DRMP
DRMP, INC.
5808 FARINGDON PLACE
RALEIGH, NC 27609
NC LICENSE NO. F-1524 (919) 872-5115

INDEX OF SHEETS, GENERAL NOTES AND 2024 ROADWAY ENGLISH STANDARD DRAWINGS

INDEX OF SHEETS

1	TITLE SHEET
1A–1 THRU 1A–2	INDEX OF SHEETS, GENERAL NOTES, & STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A–1 THRU 2A–6	TYPICAL SECTIONS
2B–1 THRU 2B–9	ROADWAY DETAILS
2C–1 THRU 2C–10	SPECIAL DETAILS
3B–1	ROADWAY SUMMARY SHEET
3D–1 THRU 3D–5	DRAINAGE SUMMARY SHEET
3G–1	GEOTECHNICAL SUMMARY SHEET
3P–1	PARCEL INDEX
4 THRU 11	PLAN SHEETS
12 THRU 20	PROFILE SHEETS
RW–01 THRU RW–11	RIGHT OF WAY PLANS
TMP–1 THRU TMP–28	TRANSPORTATION MANAGEMENT PLANS
PMP–1 THRU PMP–9	PAVEMENT MARKING PLANS
E–1 THRU E–2	ELECTRICAL PLANS
EC–1 THRU EC–19	EROSION CONTROL PLANS
RF–1	REFORESTATION PLAN
SIGN–1 THRU SIGN–11	SIGNING PLANS
SIG–1.0 THRU SIG.M9	SIGNAL PLANS
SCP–1 THRU SCP–9	SIGNAL COMMUNICATION PLANS
UC–1 THRU UC–16	UTILITY CONSTRUCTION PLANS
UO–1 THRU UO–9	UTILITY BY OTHERS PLANS
X–1	CROSS SECTION INDEX
X–1A THRU X–1B	CROSS SECTION SUMMARY
X–2 THRU X–89	CROSS SECTIONS
S–1 THRU S–35	STRUCTURE PLANS

GENERAL NOTES 2024 SPECIFICATIONS EFF. 01–16–2024

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELELVATION 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. 225.04/05 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. 560.01/02.

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 ACCORANCE WITH STD. NO. 848.04 USING THE RADII NOTED ON PLANS.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104–7.

END BENTS:

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS–SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES

UTILITY OWNERS ON THIS PROJECT ARE DUKE ENERGY (POWER), SPECTRUM (TELECOMMUNICATIONS), NORTH STATE COMMUNICATION ((TELECOMMUNICATIONS) AT&T TRANSMISSION (TELECOMMUNICATIONS), VERIZON (TELECOMMUNICATIONS), & PIEDMONT NATURAL GAS (GAS). ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

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 IN ACCORDANCE WITH STD. 848.06.

4/2/2025
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PROJECT REFERENCE NO.	SHEET NO.
U-6018	1A-2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER Kayla M. Poulos
4/29/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

PLANS PREPARED BY:
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INDEX OF SHEETS, GENERAL NOTES AND 2024 ROADWAY ENGLISH STANDARD DRAWINGS

2024 ROADWAY ENGLISH STANDARD DRAWINGS EFF. 01–16–2024

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
225.01	GUIDE FOR GRADING SUBGRADE – INTERSTATE AND FREEWAY
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
310.10	DRIVEWAY PIPE CONSTRUCTION
DIVISION 5 – SUBRADE, BASES, AND SHOULDERS	
560.01	METHOD OF SHOULDER CONSTRUCTION – HIGH SIDE OF SUPERELEVATED CURVE – METHOD I
560.02	METHOD OF SHOULDER CONSTRUCTION – HIGH SIDE OF SUPERELEVATED CURVE – METHOD II
DIVISION 6 – ASPHALT BASES AND PAVEMENTS	
654.01	PAVEMENT REPAIRS

STD. NO.	TITLE
DIVISION 8 – INCIDENTALS	
815.02	SUBSURFACE DRAIN
838.01	CONCRETE ENDWALL FOR SINGLE AND DOUBLE PIPE CULVERTS – 15" THRU 48" PIPE 90 SKEW
838.11	BRICK ENDWALL FOR SINGLE & DOUBLE PIPE CULVERTS – 15" THRU 48" PIPE 90 SKEW
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
840.13	CONCRETE BRIDGE APPROACH DROP INLET – 12" THRU 24" PIPE
840.14	CONCRETE DROP INLET – 12" THRU 30" PIPE
840.15	BRICK DROP INLET – 12" THRU 30" PIPE
840.16	DROP INLET FRAME AND GRATES – FOR USE WITH STD. DWG 840.14 AND 840.15
840.18	CONCRETE GRATED DROP INLET TYPE 'B' – 12" THRU 36" PIPE
840.19	CONCRETE GRATED DROP INLET TYPE 'D' – 12" THRU 36" PIPE
840.22	FRAMES AND WIDE SLOT SAG GRATES
840.24	FRAMES AND NARROW SLOT SAG GRATES
840.27	BRICK GRATED DROP INLET TYPE 'B' – 12" THRU 36" PIPE
840.28	BRICK GRATED DROP INLET TYPE 'D' – 12" THRU 36" PIPE
840.31	CONCRETE JUNCTION BOX – 12" THRU 66" PIPE
840.32	BRICK JUNCTION BOX – 12" THRU 66" PIPE
840.34	TRAFFIC BEARING JUNCTION BOX – FOR USE WITH PIPES 42" AND UNDER
840.36	TRAFFIC BEARING GRATED DROP INLET – FOR STEEL (840.37) DOUBLE FRAME AND GRATES
840.37	STEEL GRATE AND FRAME
840.45	PRECAST DRAINAGE STRUCTURE
840.46	TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE
840.54	MANHOLE FRAME AND COVER
840.66	DRAINAGE STRUCTURE STEPS
840.71	CONCRETE AND BRICK PIPE PLUG
846.01	CONCRETE CURB, GUTTER, AND CURB & GUTTER
848.01	CONCRETE SIDEWALK
848.02	DRIVEWAY TURNOUT – RADIUS TYPE
848.04	STREET TURNOUT
848.06	CURB RAMP
852.01	CONCRETE ISLANDS
852.02	CONCRETE MOUNTABLE MEDIAN – FOR USE WITH RIGID OR FLEXIBLE PAVEMENT
852.04	METHOD FOR PLACEMENT OF DROP INLETS IN GRASS MEDIAN – USING 1'–6" CURB & GUTTER
852.05	MEDIAN CURB FOR CATCH BASIN – FOR USE WITH 1'–6" CURB & GUTTER
852.06	METHOD FOR PLACEMENT OF DROP INLETS IN CONCRETE ISLANDS
852.10	MEDIAN CONSTRUCTION – WITH CURB & GUTTER
862.01	GUARDRAIL PLACEMENT
862.03	STRUCTURE ANCHOR UNITS
876.01	RIP RAP IN CHANNELS AND DITCHES
876.02	GUIDE FOR RIP RAP AT PIPE OUTLETS
876.04	DRAINAGE DITCHES WITH CLASS 'B' RIP RAP

3/25/2025
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9/10/2021

PROJECT REFERENCE NO.	SHEET NO.
U-6018	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)
- Computed Property Corner
- Existing Concrete Monument (ECM)
- Parcel/Sequence Number
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary
- Proposed Wetland Boundary
- Existing Endangered Animal Boundary
- Existing Endangered Plant Boundary
- Existing Historic Property Boundary
- Known Contamination Area: Soil
- Potential Contamination Area: Soil
- Known Contamination Area: Water
- Potential Contamination Area: Water
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

- Gas Pump Vent or U/G Tank Cap
- Sign
- Well
- Small Mine
- Foundation
- Area Outline
- Cemetery
- Building
- School
- Church
- Dam

HYDROLOGY:

- Stream or Body of Water
- Hydro, Pool or Reservoir
- Jurisdictional Stream
- Buffer Zone 1
- Buffer Zone 2
- Flow Arrow
- Disappearing Stream
- Spring
- Wetland
- Proposed Lateral, Tail, Head Ditch
- False Sump

RAILROADS:

- Standard Gauge
- RR Signal Milepost
- Switch
- RR Abandoned
- RR Dismantled

RIGHT OF WAY & PROJECT CONTROL:

- Primary Horiz Control Point
- Primary Horiz and Vert Control Point
- Secondary Horiz and Vert Control Point
- Vertical Benchmark
- Existing Right of Way Monument
- Proposed Right of Way Monument (Rebar and Cap)
- Proposed Right of Way Monument (Concrete)
- Existing Permanent Easement Monument
- Proposed Permanent Easement Monument (Rebar and Cap)
- Existing C/A Monument
- Proposed C/A Monument (Rebar and Cap)
- Proposed C/A Monument (Concrete)
- Existing Right of Way Line
- Proposed Right of Way Line
- Existing Control of Access Line
- Proposed Control of Access Line
- Proposed ROW and CA Line
- Existing Easement Line
- Proposed Temporary Construction Easement
- Proposed Temporary Drainage Easement
- Proposed Permanent Drainage Easement
- Proposed Permanent Drainage/Utility Easement
- Proposed Permanent Utility Easement
- Proposed Temporary Utility Easement
- Proposed Aerial Utility Easement

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut
- Proposed Slope Stakes Fill
- Proposed Curb Ramp
- 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

EXISTING STRUCTURES:

MAJOR:

- Bridge, Tunnel or Box Culvert
- Bridge Wing Wall, Head Wall and End Wall

MINOR:

- Head and End Wall
- Pipe Culvert
- Footbridge
- Drainage Box: Catch Basin, DI or JB
- Paved Ditch Gutter
- Storm Sewer Manhole
- Storm Sewer

UTILITIES:

** SUE – Subsurface Utility Engineering*
LOS – Level of Service – A,B,C or D (Accuracy)

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- U/G Power Line Test Hole (SUE – LOS A)*
- U/G Power Line (SUE – LOS B)*
- U/G Power Line (SUE – LOS C)*
- U/G Power Line (SUE – LOS D)*

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole
- Telephone Pedestal
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole
- U/G Telephone Test Hole (SUE – LOS A)*
- U/G Telephone Cable (SUE – LOS B)*
- U/G Telephone Cable (SUE – LOS C)*
- U/G Telephone Cable (SUE – LOS D)*
- U/G Telephone Conduit (SUE – LOS B)*
- U/G Telephone Conduit (SUE – LOS C)*
- U/G Telephone Conduit (SUE – LOS D)*
- U/G Fiber Optics Cable (SUE – LOS B)*
- U/G Fiber Optics Cable (SUE – LOS C)*
- U/G Fiber Optics Cable (SUE – LOS D)*

WATER:

- Water Manhole
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line Test Hole (SUE – LOS A)*
- U/G Water Line (SUE – LOS B)*
- U/G Water Line (SUE – LOS C)*
- U/G Water Line (SUE – LOS D)*
- Above Ground Water Line

TV:

- TV Pedestal
- TV Tower
- U/G TV Cable Hand Hole
- U/G TV Test Hole (SUE – LOS A)*
- U/G TV Cable (SUE – LOS B)*
- U/G TV Cable (SUE – LOS C)*
- U/G TV Cable (SUE – LOS D)*
- U/G Fiber Optic Cable (SUE – LOS B)*
- U/G Fiber Optic Cable (SUE – LOS C)*
- U/G Fiber Optic Cable (SUE – LOS D)*

GAS:

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

SANITARY SEWER:

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

MISCELLANEOUS:

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

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8/17/99

PROJECT REFERENCE NO.	SHEET NO.
U-6018	2A-1

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAYLA M. POULOS
5/5/2025

PAVEMENT DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 028422 ENGINEER DONALD W. BROWN JR.
5/5/2025

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5808 FARRINGDON PLACE
RALEIGH, NC 27609
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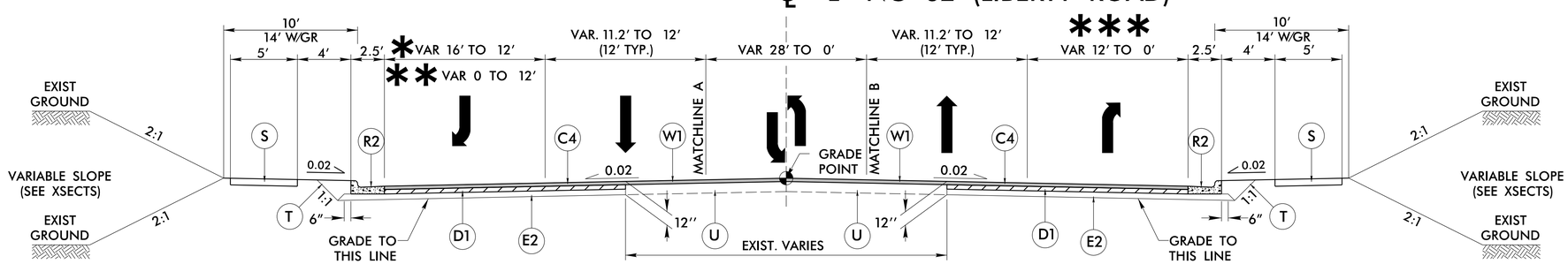
NC LICENSE NO. F-1524
www.drmp.com

FINAL PAVEMENT SCHEDULE

A1	7" JOINTED CONCRETE TRUCK APRON	D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	K	12" CLASS IV SUBGRADE STABILIZATION	S	4" CONCRETE SIDEWALK
C1	PROP. APPROX. 1.25" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 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 NO LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH.	N	GEOTEXTILE FOR SUBGRADE STABILIZATION	T	COMPACTED EARTH MATERIAL
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.	E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R1	1-6" CURB AND GUTTER	U	EXISTING PAVEMENT
C3	PROP. APPROX. 2.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 137.5 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	E2	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.	R2	2'-6" CURB AND GUTTER	V	INCIDENTAL MILLING (SEE DETAIL ON SHEET 2A-3)
C4	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	E3	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.	R3	SPILL CURB (SEE DETAIL ON SHEET 2A-5)	V1	1.5" MILLING
C5	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 1.5" IN DEPTH.	J1	6" AGGREGATE BASE COURSE	R4	5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED 4' OR GREATER / KEYED IN LESS THAN 4')	W1-W3	WEDGING (SEE DETAILS ON SHEET 2A-6)

NOTE: ALL PAVEMENT SLOPES ARE 1:1 UNLESS OTHERWISE SPECIFIED.

℄ -L- NC 62 (LIBERTY ROAD)

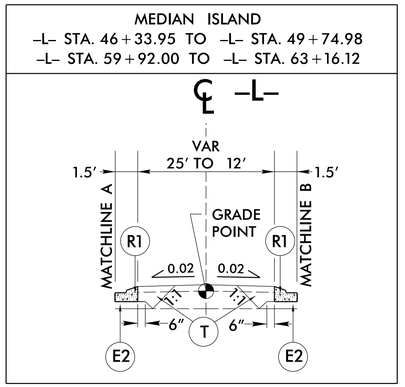


TYPICAL SECTION NO. 1

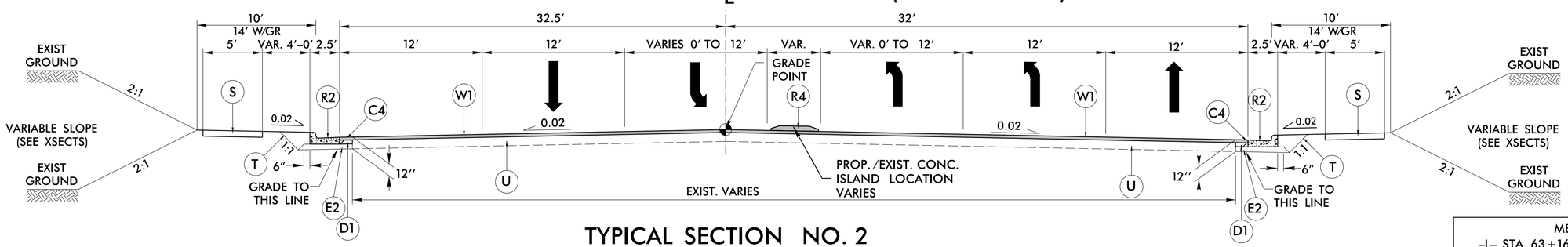
-L- STA. 26+70.00 TO -L- STA. 50+41.77
-L- STA. 59+19.32 TO -L- STA. 77+86.12
* -L- STA. 39+17.03 TO -L- STA. 48+66.94
** -L- STA. 60+96.82 TO -L- STA. 65+96.82
*** -L- STA. 44+05.07 TO -L- STA. 48+54.43

NOTE: SEE PLANS FOR LOCATION OF INTERSECTION TURNOUTS, TURN LANES, ISLANDS AND BULBOUT.

MEDIAN ISLAND
-L- STA. 46+33.95 TO -L- STA. 49+74.98
-L- STA. 59+92.00 TO -L- STA. 63+16.12



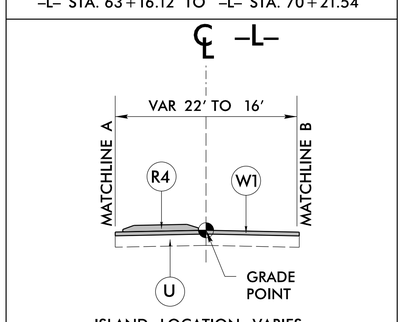
℄ -L- NC 62 (LIBERTY ROAD)



TYPICAL SECTION NO. 2

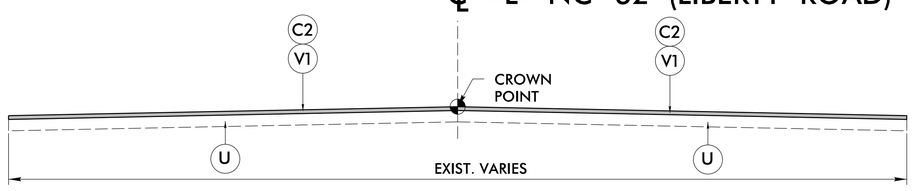
-L- STA. 50+41.77 TO -L- STA. 52+75.06
-L- STA. 56+71.20 TO -L- STA. 59+19.32
MAINTAIN EXIST. CONC. ISLAND AND GRADE FROM -L- STA. 52+33.96 TO -L- STA. 57+12.38 (EXISTING BRIDGE)
NOTE: SEE PLANS FOR LOCATION OF TURN LANES AND ISLANDS.

MEDIAN ISLAND
-L- STA. 63+16.12 TO -L- STA. 70+21.54



ISLAND LOCATION VARIES SEE PLANS

℄ -L- NC 62 (LIBERTY ROAD)



1.5" MILLING DETAIL

-L- STA. 51+75.00 TO -L- STA. 52+33.96
-L- STA. 57+12.38 TO -L- STA. 58+95.73

NOTE: USE IN CONJUNCTION WITH TYPICAL SECTION NO. 2

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PROJECT REFERENCE NO.	SHEET NO.
U-6018	2A-2

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAYLA M. POULOS — 5/5/2025

PAVEMENT DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 028422 ENGINEER DONALD W. BROWN JR. — 5/5/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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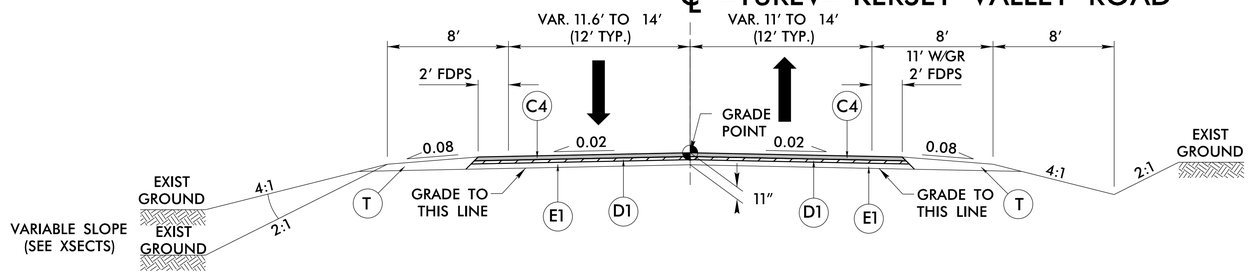
℄ –Y3REV– KERSEY VALLEY ROAD



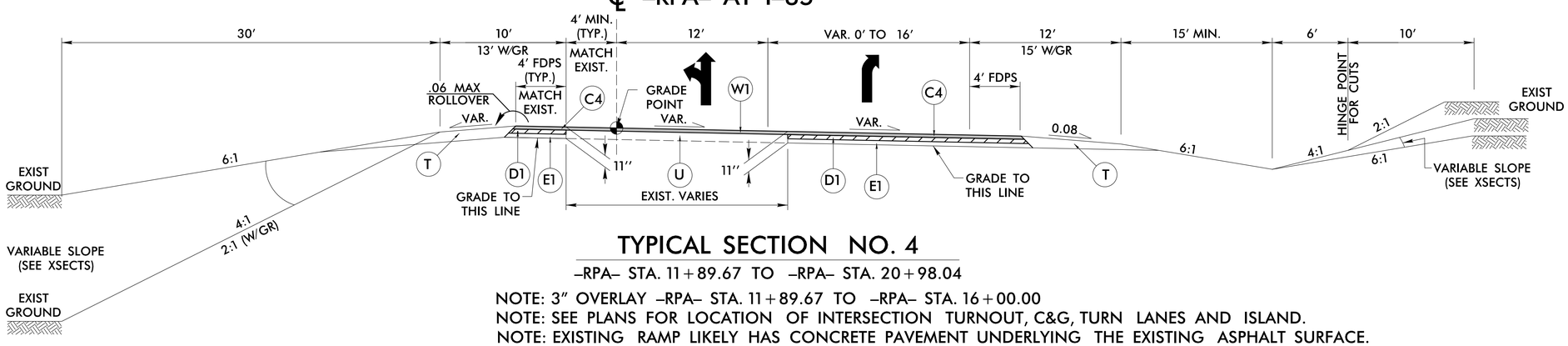
TYPICAL SECTION NO. 3

–Y3REV– STA. 16+02.67 TO –Y3REV– STA. 34+04.61

NOTE: RETAIN, MILL AND WEDGE (W3) EXISTING PAVEMENT FROM –Y3REV– STA. 16+02.67 TO –Y3REV– STA. 18+00.00

NOTE: SEE PLANS FOR LOCATION OF INTERSECTION TURNOUT AND C&G.

℄ –RPA– AT I–85



TYPICAL SECTION NO. 4

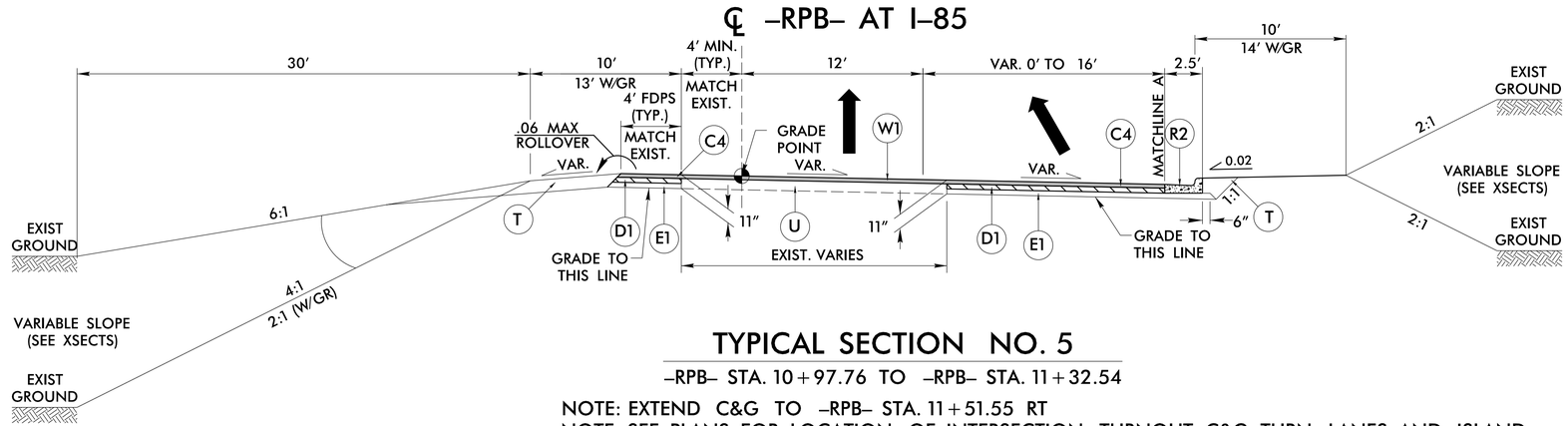
–RPA– STA. 11+89.67 TO –RPA– STA. 20+98.04

NOTE: 3" OVERLAY –RPA– STA. 11+89.67 TO –RPA– STA. 16+00.00

NOTE: SEE PLANS FOR LOCATION OF INTERSECTION TURNOUT, C&G, TURN LANES AND ISLAND.

NOTE: EXISTING RAMP LIKELY HAS CONCRETE PAVEMENT UNDERLYING THE EXISTING ASPHALT SURFACE. CONTRACTOR TO CONFIRM DEPTH OF EXISTING ASPHALT PRIOR TO MILLING OPERATIONS SO AS TO NOT DISTURB THE EXISTING CONCRETE PAVEMENT.

℄ –RPB– AT I–85



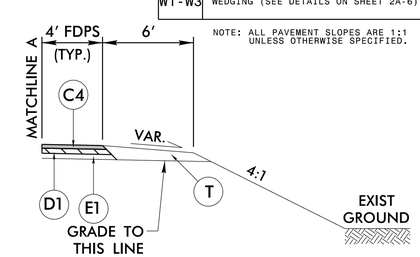
TYPICAL SECTION NO. 5

–RPB– STA. 10+97.76 TO –RPB– STA. 11+32.54

NOTE: EXTEND C&G TO –RPB– STA. 11+51.55 RT

NOTE: SEE PLANS FOR LOCATION OF INTERSECTION TURNOUT, C&G, TURN LANES AND ISLAND.

NOTE: EXISTING RAMP LIKELY HAS CONCRETE PAVEMENT UNDERLYING THE EXISTING ASPHALT SURFACE. CONTRACTOR TO CONFIRM DEPTH OF EXISTING ASPHALT PRIOR TO MILLING OPERATIONS SO AS TO NOT DISTURB THE EXISTING CONCRETE PAVEMENT.



PARTIAL TYPICAL NO. 5A

–RPB– STA. 11+32.54 TO –RPB– STA. 12+10.00

FINAL PAVEMENT SCHEDULE	
A1	7" PCC WITH WELDED WIRE FABRIC
C1	1.25" S9.5B
C2	1.5" S9.5B
C3	2.5" S9.5B
C4	3" S9.5B
C5	VAR. DEPTH S9.5B
D1	4" I19.0C
D2	VAR. DEPTH I19.0C
E1	4" B25.0C
E2	5" B25.0C
E3	VAR. DEPTH B25.0C
J1	6" ABC
R1	1-6" CURB AND GUTTER
R2	2'-6" CURB AND GUTTER
R3	SPILL CURB (SEE DETAIL ON SHEET 2A-5)
R4	5" MONOL. CONC. ISLAND
S	4" CONCRETE SIDEWALK
T	COMPACTED EARTH MATERIAL
U	EXISTING PAVEMENT
V	INCIDENTAL MILLING (SEE DETAIL ON SHEET 2A-3)
V1	1.5" MILLING
W1 - W3	WEDGING (SEE DETAILS ON SHEET 2A-6)

NOTE: ALL PAVEMENT SLOPES ARE 1:1 UNLESS OTHERWISE SPECIFIED.

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PROJECT REFERENCE NO.	SHEET NO.
U-6018	2A-3

ROADWAY DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAYLA M. POULOS — 5/5/2025

PAVEMENT DESIGN ENGINEER — NORTH CAROLINA PROFESSIONAL SEAL 028422 ENGINEER DONALD W. BROWN JR. — 5/5/2025

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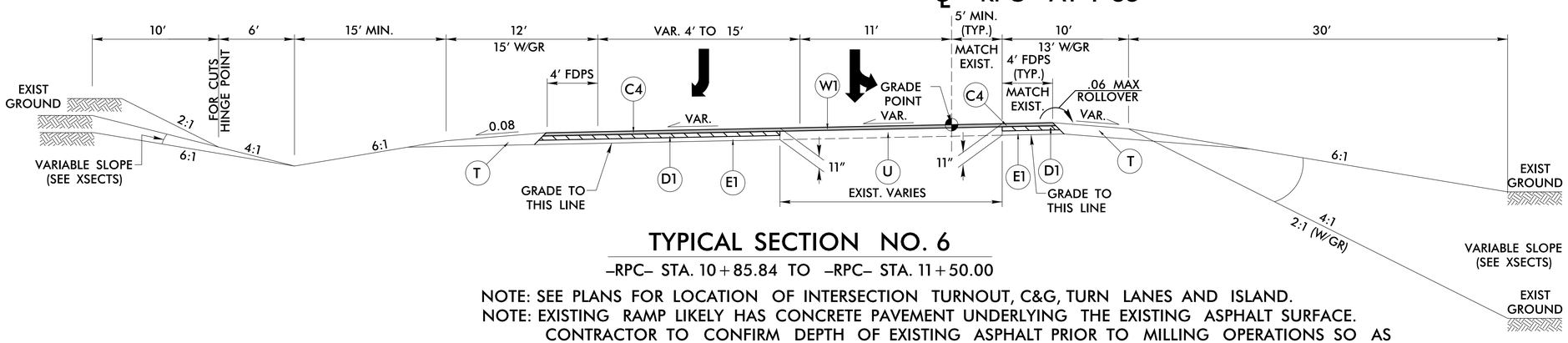
℄ –RPC– AT I–85

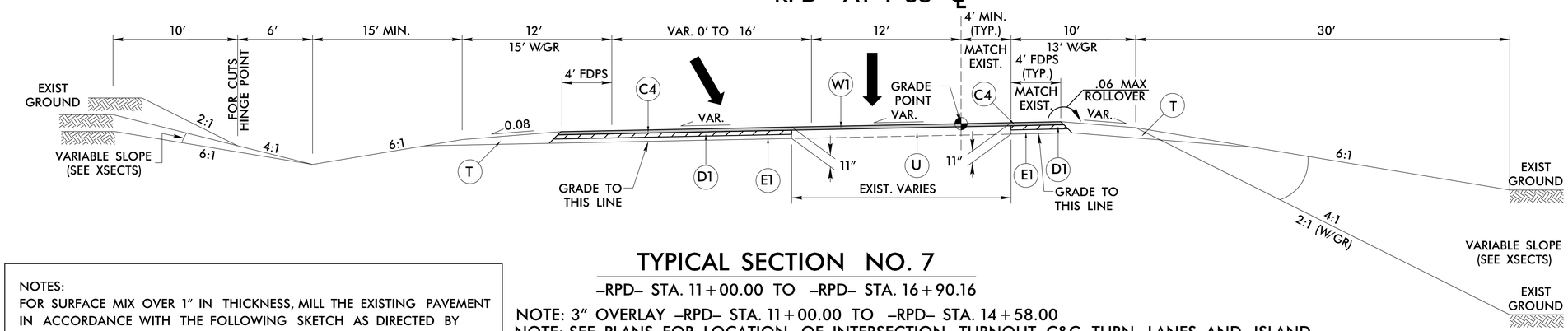


TYPICAL SECTION NO. 6

–RPC– STA. 10+85.84 TO –RPC– STA. 11+50.00

NOTE: SEE PLANS FOR LOCATION OF INTERSECTION TURNOUT, C&G, TURN LANES AND ISLAND.
NOTE: EXISTING RAMP LIKELY HAS CONCRETE PAVEMENT UNDERLYING THE EXISTING ASPHALT SURFACE. CONTRACTOR TO CONFIRM DEPTH OF EXISTING ASPHALT PRIOR TO MILLING OPERATIONS SO AS TO NOT DISTURB THE EXISTING CONCRETE PAVEMENT.

–RPD– AT I–85 ℄



TYPICAL SECTION NO. 7

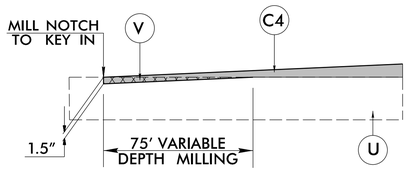
–RPD– STA. 11+00.00 TO –RPD– STA. 16+90.16

NOTE: 3″ OVERLAY –RPD– STA. 11+00.00 TO –RPD– STA. 14+58.00
NOTE: SEE PLANS FOR LOCATION OF INTERSECTION TURNOUT, C&G, TURN LANES AND ISLAND.
NOTE: EXISTING RAMP LIKELY HAS CONCRETE PAVEMENT UNDERLYING THE EXISTING ASPHALT SURFACE. CONTRACTOR TO CONFIRM DEPTH OF EXISTING ASPHALT PRIOR TO MILLING OPERATIONS SO AS TO NOT DISTURB THE EXISTING CONCRETE PAVEMENT.

NOTES:
FOR SURFACE MIX OVER 1″ IN THICKNESS, MILL THE EXISTING PAVEMENT IN ACCORDANCE WITH THE FOLLOWING SKETCH AS DIRECTED BY THE ENGINEER

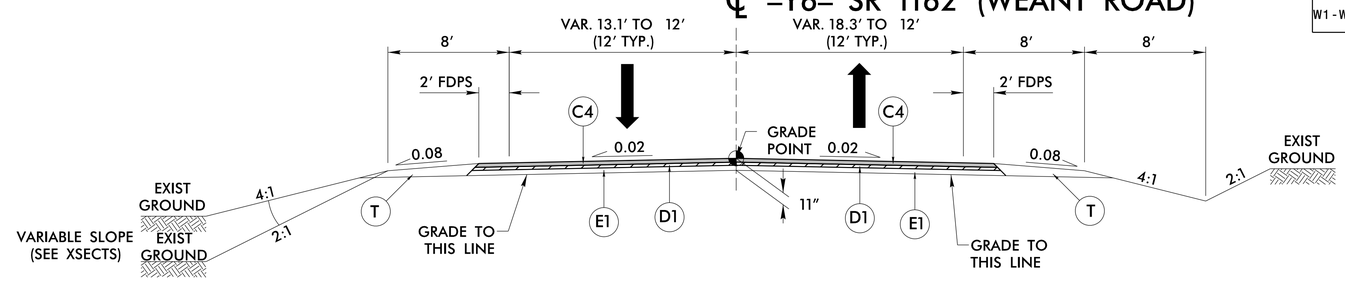
LOCATIONS SHALL INCLUDE TIES INTO EXISTING PAVEMENT.

PERFORM THE WORK IN ACCORDANCE WITH SECTION 607 OF THE JANUARY 2024 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES. RESURFACING WILL BE ACCOMPLISHED AT THE SAME TIME AS THE MILLING OPERATION.



INCIDENTAL MILLING DETAIL

℄ –Y6– SR 1162 (WEANT ROAD)



TYPICAL SECTION NO. 8

–Y6– STA. 11+41.06 TO –Y6– STA. 15+00.00

NOTE: SEE PLANS FOR LOCATION OF INTERSECTION TURNOUT, C&G AND ISLAND.

FINAL PAVEMENT SCHEDULE	
A1	7″ PCC WITH WELDED WIRE FABRIC
C1	1.25″ S9.5B
C2	1.5″ S9.5B
C3	2.5″ S9.5B
C4	3″ S9.5B
C5	VAR. DEPTH S9.5B
D1	4″ I19.0C
D2	VAR. DEPTH I19.0C
E1	4″ B25.0C
E2	5″ B25.0C
E3	VAR. DEPTH B25.0C
J1	6″ ABC
R1	1-6″ CURB AND GUTTER
R2	2′-6″ CURB AND GUTTER
R3	SPILL CURB (SEE DETAIL ON SHEET 2A-5)
R4	5″ MONOL. CONC. ISLAND
S	4″ CONCRETE SIDEWALK
T	COMPACTED EARTH MATERIAL
U	EXISTING PAVEMENT
V	INCIDENTAL MILLING (SEE DETAIL ON SHEET 2A-3)
V1	1.5″ MILLING
W1-W3	WEDGING (SEE DETAILS ON SHEET 2A-6)

NOTE: ALL PAVEMENT SLOPES ARE 1:1 UNLESS OTHERWISE SPECIFIED.

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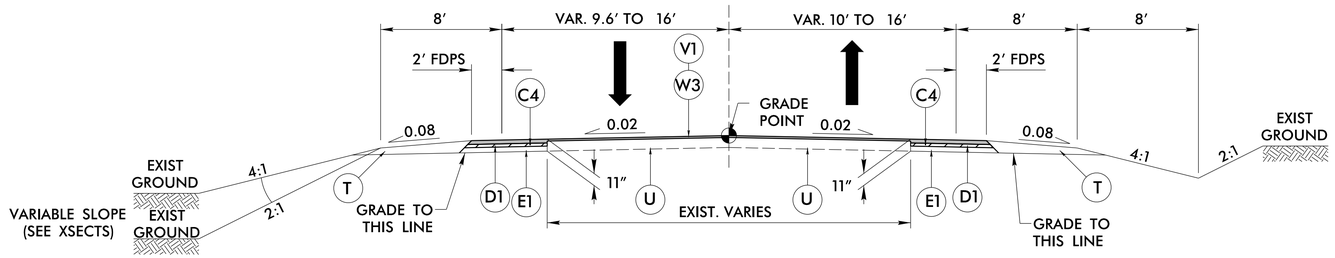
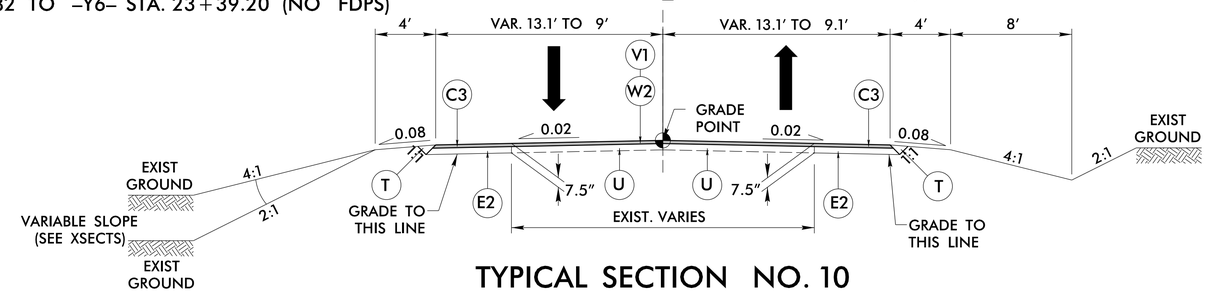
℄ –Y6– SR 1162 (WEANT ROAD)



TYPICAL SECTION NO. 9

–Y6– STA. 15+00.00 TO –Y6– STA. 18+99.72
–Y6– STA. 22+79.82 TO –Y6– STA. 23+39.20 (NO FDPS)

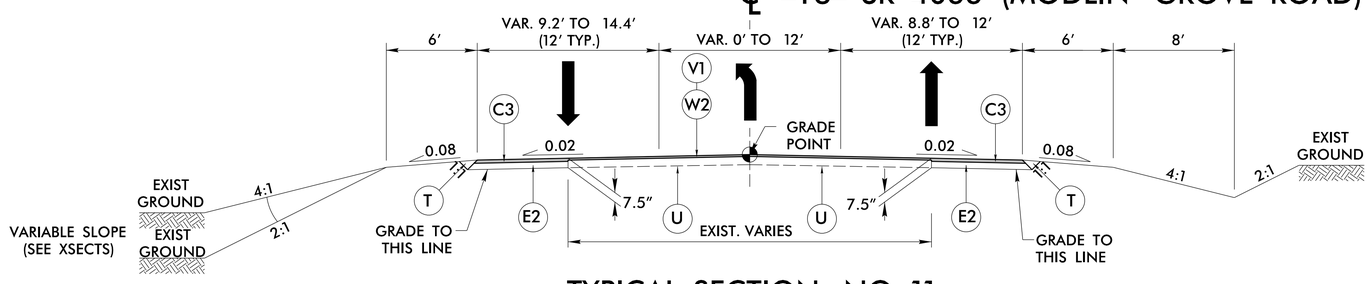
℄ –Y7– SR 1265 (BLUEWOOD COURT)



TYPICAL SECTION NO. 10

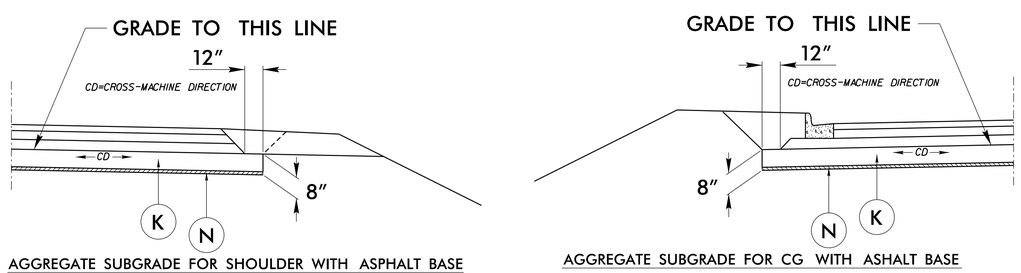
–Y7– STA. 11+03.27 TO –Y7– STA. 11+71.36

℄ –Y8– SR 4066 (MODLIN GROVE ROAD)



TYPICAL SECTION NO. 11

–Y8– STA. 11+00.00 TO –Y8– STA. 16+14.93

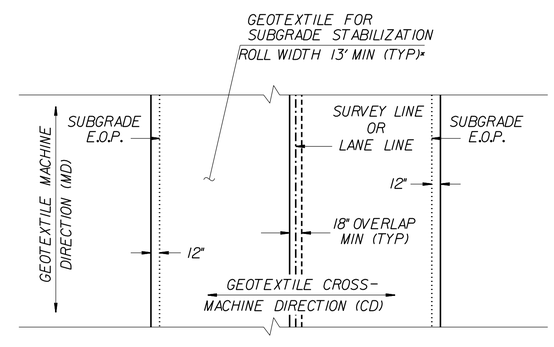


AGGREGATE SUBGRADE FOR SHOULDER WITH ASPHALT BASE

AGGREGATE SUBGRADE FOR CG WITH ASHALT BASE

DETAIL FOR SHALLOW UNDERCUT

–L– STA. 35+50 TO –L– STA. 37+50
–Y6– STA. 22+00 TO –Y6– STA. 23+00



GEOTEXTILE FOR SUBGRADE STABILIZATION PLACEMENT (PLAN VIEW)

(100% COVERAGE REQUIRED)

*INSTALL GEOTEXTILE FOR SUBGRADE STABILIZATION WITH MINIMUM ROLL WIDTH UNDER ROADWAY EDGES AND SHOULDERS ADJACENT TO FILL SLOPES

PROJECT REFERENCE NO.	SHEET NO.
U–6018	2A–4

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAYLA M. POULOS

5/5/2025

PAVEMENT DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 028422 ENGINEER DONALD W. BROWN JR.

5/5/2025

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FINAL PAVEMENT SCHEDULE	
A1	7″ PCC WITH WELDED WIRE FABRIC
C1	1.25″ S9.5B
C2	1.5″ S9.5B
C3	2.5″ S9.5B
C4	3″ S9.5B
C5	VAR. DEPTH S9.5B
D1	4″ I19.0C
D2	VAR. DEPTH I19.0C
E1	4″ B25.0C
E2	5″ B25.0C
E3	VAR. DEPTH B25.0C
J1	6″ ABC
K	12″ CLASS IV
N	GEOTEXTILE
R1	1-6″ CURB AND GUTTER
R2	2′-6″ CURB AND GUTTER
R3	SPILL CURB (SEE DETAIL ON SHEET 2A-5)
R4	5″ MONOL. CONC. ISLAND
S	4″ CONCRETE SIDEWALK
T	COMPACTED EARTH MATERIAL
U	EXISTING PAVEMENT
V	INCIDENTAL MILLING (SEE DETAIL ON SHEET 2A-3)
V1	1.5″ MILLING
W1-W3	WEDGING (SEE DETAILS ON SHEET 2A-6)

NOTE: 1) ALL PAVEMENT SLOPES ARE 1:1 UNLESS OTHERWISE SPECIFIED.
2) SEE PLANS FOR LOCATION OF INTERSECTION TURNOUT AND TURN LANES.

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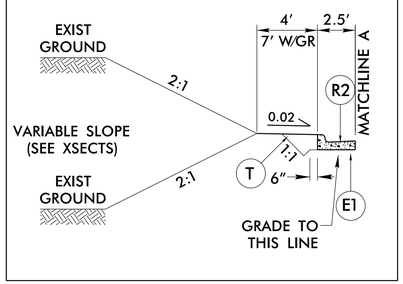
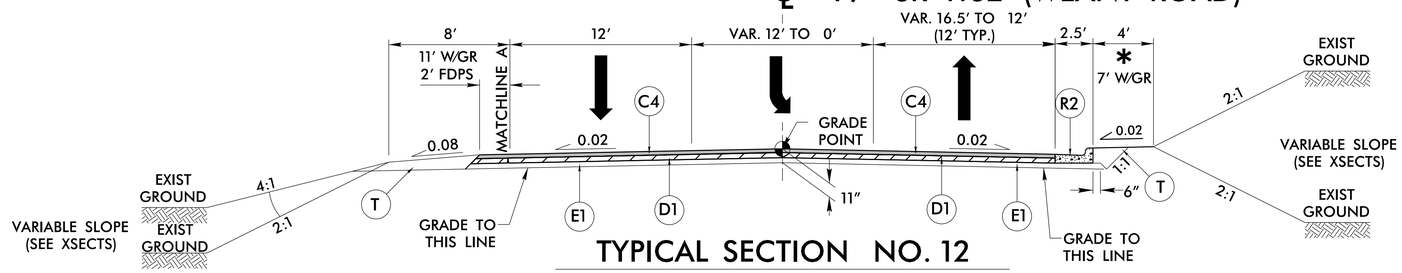
CURB & GUTTER LT
–Y9– STA. 10+35.77 TO –Y9– STA. 13+35.62
–Y9– STA. 21+77.95 TO –Y9– STA. 25+00.00



℄ –Y9– SR 1162 (WEANT ROAD)

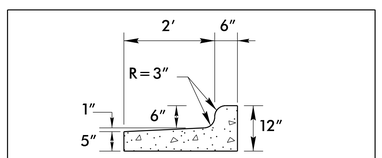


TYPICAL SECTION NO. 12

–Y9– STA. 11+07.43 TO –Y9– STA. 21+77.95

✱ TRANSITION FROM 4′ TO 9.5′ –Y9– STA. 21+44.31 TO –Y9– STA. 21+77.95 RT

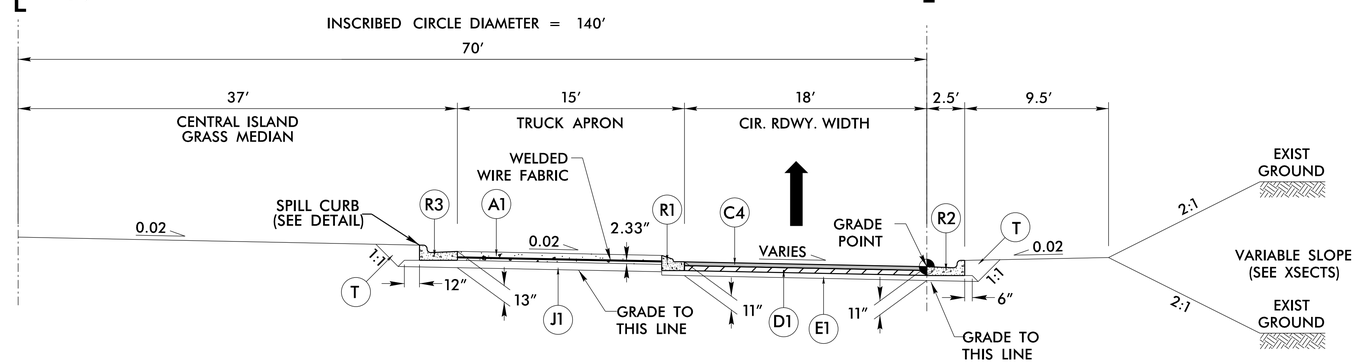
NOTE: SEE PLANS FOR LOCATION OF INTERSECTION TURNOUT, TURN LANE AND C&G.



SPILL CURB DETAIL

USE IN CONJUNCTION WITH TYPICAL SECTION NO. 13

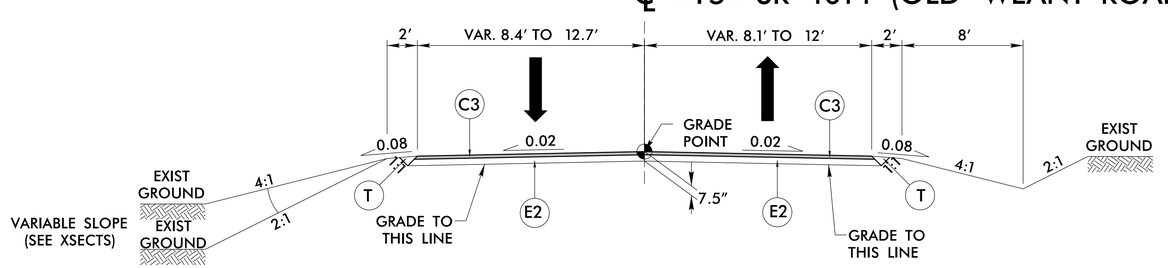
℄ –Y9– ℄ –RAB2–



TYPICAL SECTION NO. 13

–RAB2– WEANT ROAD ROUNDABOUT

℄ –Y5– SR 4014 (OLD WEANT ROAD)



TYPICAL SECTION NO. 14

–Y5– STA. 16+11.24 TO –Y5– STA. 16+80.99

NOTE: SEE PLANS FOR LOCATION OF INTERSECTION TURNOUT AND C&G.

PROJECT REFERENCE NO.	SHEET NO.
U–6018	2A–5

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAYLA M. POULOS
5/5/2025

PAVEMENT DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 028422 ENGINEER DONALD W. BROWN, JR.
5/5/2025

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FINAL PAVEMENT SCHEDULE

A1	7″ PCC WITH WELDED WIRE FABRIC
C1	1.25″ S9.5B
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C3	2.5″ S9.5B
C4	3″ S9.5B
C5	VAR. DEPTH S9.5B
D1	4″ I19.0C
D2	VAR. DEPTH I19.0C
E1	4″ B25.0C
E2	5″ B25.0C
E3	VAR. DEPTH B25.0C
J1	6″ ABC
R1	1-6″ CURB AND GUTTER
R2	2′-6″ CURB AND GUTTER
R3	SPILL CURB (SEE DETAIL ON SHEET 2A-5)
R4	5″ MONOL. CONC. ISLAND
S	4″ CONCRETE SIDEWALK
T	COMPACTED EARTH MATERIAL
U	EXISTING PAVEMENT
V	INCIDENTAL MILLING (SEE DETAIL ON SHEET 2A-3)
V1	1.5″ MILLING
W1-W3	WEDGING (SEE DETAILS ON SHEET 2A-6)

NOTE: ALL PAVEMENT SLOPES ARE 1:1 UNLESS OTHERWISE SPECIFIED.

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PROJECT REFERENCE NO.	SHEET NO.
U-6018	2A-6

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAYLA M. POULOS
5/5/2025

PAVEMENT DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 028422 ENGINEER DONALD W. BROWN JR.
5/5/2025

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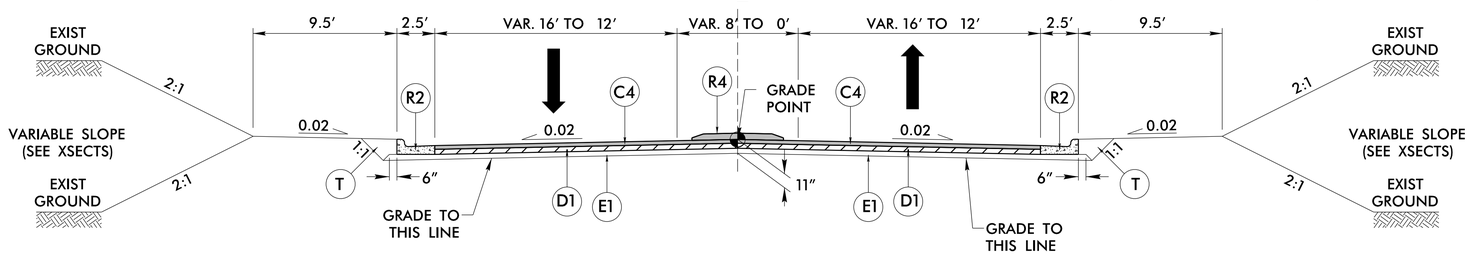
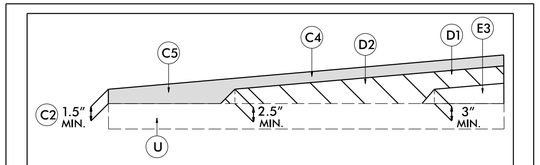
℄ –Y6– & –Y9– SR 1162 (WEANT ROAD)



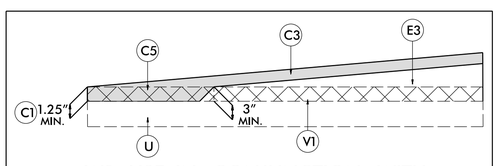
TYPICAL SECTION NO. 15

–Y6– STA. 18+99.72 TO –Y6– STA. 20+11.50
–Y6– STA. 21+51.50 TO –Y6– STA. 22+79.82
–Y9– STA. 21+77.95 TO –Y9– STA. 25+72.94

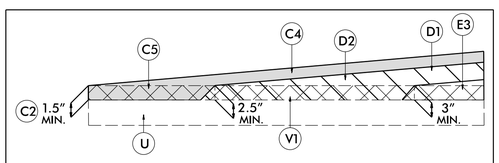
NOTE: RETAIN, MILL AND WEDGE (W3) EXISTING PAVEMENT ON –Y6–
NOTE: SEE PLANS FOR LOCATION OF APPROACHES TO RAB AND ISLANDS.



W1: USE IN CONJUNCTION WITH TYPICAL SECTION NOs. 1, 2, 4, 5, 6, 7



W2: USE IN CONJUNCTION WITH TYPICAL SECTION NOs. 10, 11

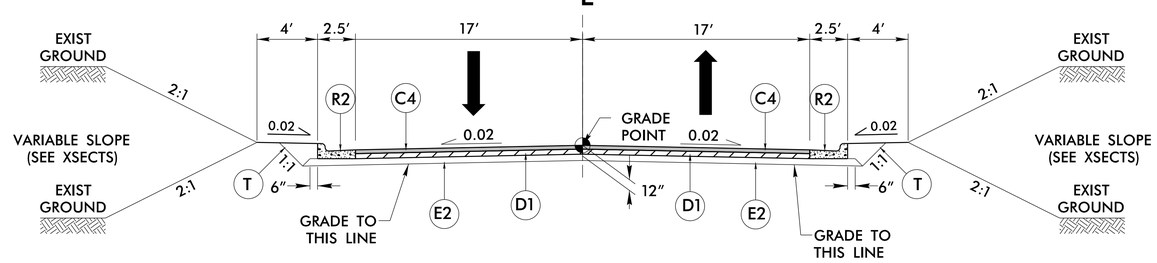


W3: USE IN CONJUNCTION WITH TYPICAL SECTION NOs. 3, 9, 15, 17

WEDGING DETAILS FOR RESURFACING

MILL 1.5″ OF THE PAVEMENT OFF OF THE EXISTING ROADWAY SURFACE PRIOR TO WEDGING.

℄ –DR1–

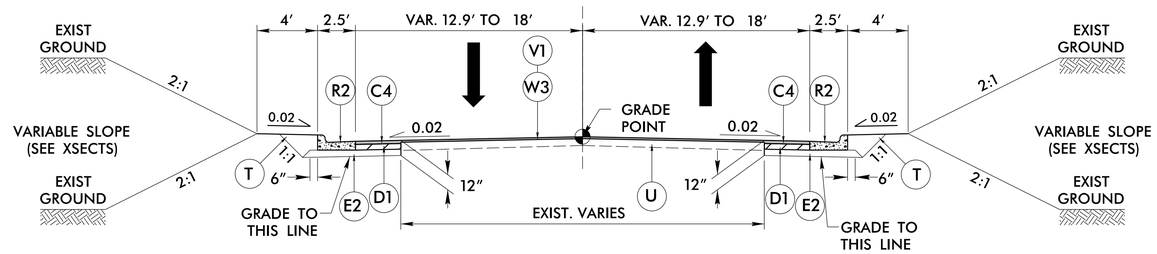


TYPICAL SECTION NO. 16

–DR1– STA. 10+60.36 TO –DR1– STA. 11+10.00

NOTE: SEE PLANS FOR LOCATION OF INTERSECTION TURNOUT AND C&G.

℄ –SR1–



TYPICAL SECTION NO. 17

–SR1– STA. 10+79.03 TO –SR1– STA. 11+79.03

NOTE: SEE PLANS FOR LOCATION OF INTERSECTION TURNOUT AND C&G.

FINAL PAVEMENT SCHEDULE

A1	7″ PCC WITH WELDED WIRE FABRIC
C1	1.25″ S9.5B
C2	1.5″ S9.5B
C3	2.5″ S9.5B
C4	3″ S9.5B
C5	VAR. DEPTH S9.5B
D1	4″ I19.0C
D2	VAR. DEPTH I19.0C
E1	4″ B25.0C
E2	5″ B25.0C
E3	VAR. DEPTH B25.0C
J1	6″ ABC
R1	1-6″ CURB AND GUTTER
R2	2′-6″ CURB AND GUTTER
R3	SPILL CURB (SEE DETAIL ON SHEET 2A-5)
R4	5″ MONOL. CONC. ISLAND
S	4″ CONCRETE SIDEWALK
T	COMPACTED EARTH MATERIAL
U	EXISTING PAVEMENT
V	INCIDENTAL MILLING (SEE DETAIL ON SHEET 2A-3)
V1	1.5″ MILLING
W1-W3	WEDGING (SEE DETAILS ON SHEET 2A-6)

NOTE: ALL PAVEMENT SLOPES ARE 1:1 UNLESS OTHERWISE SPECIFIED.

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PROJECT REFERENCE NO.	SHEET NO.
U-6018	2B-1
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAILA M. POLICH
Kaila M. Polich
DocuSigned by: 1B077D7C2C9D4...
4/29/2025

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 30325 ENGINEER KAREN HEFNER
Karen Hefner
DocuSigned by: BE66C8D7C2464B...
4/29/2025

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RALEIGH, NC 27609
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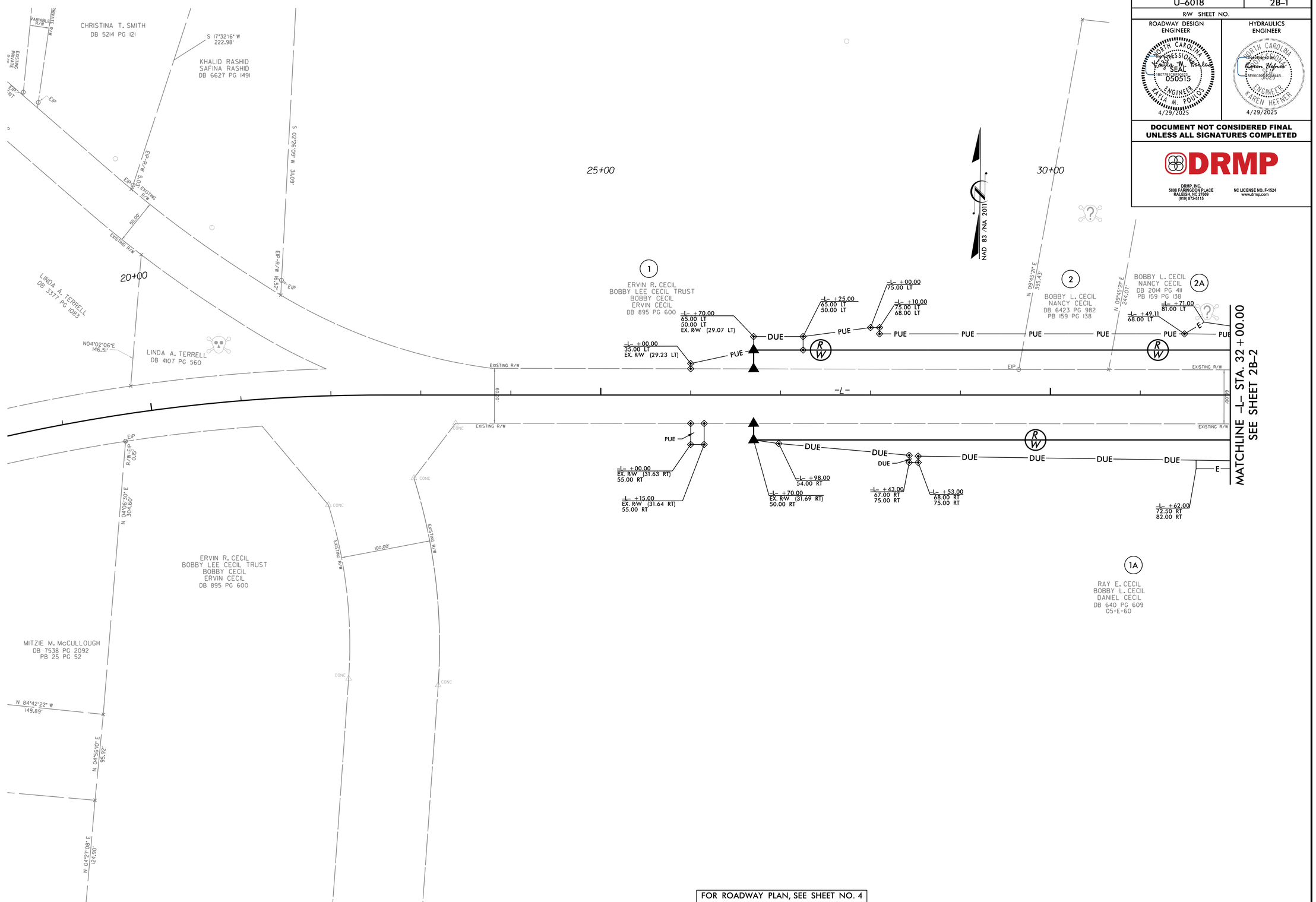

FOR ROADWAY PLAN, SEE SHEET NO. 4

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PROJECT REFERENCE NO.	SHEET NO.
U-6018	2B-2
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAILA M. POLICK
Kaila M. Polick
4/29/2025

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 30025 ENGINEER KAREN HEFNER
Karen Hefner
4/29/2025

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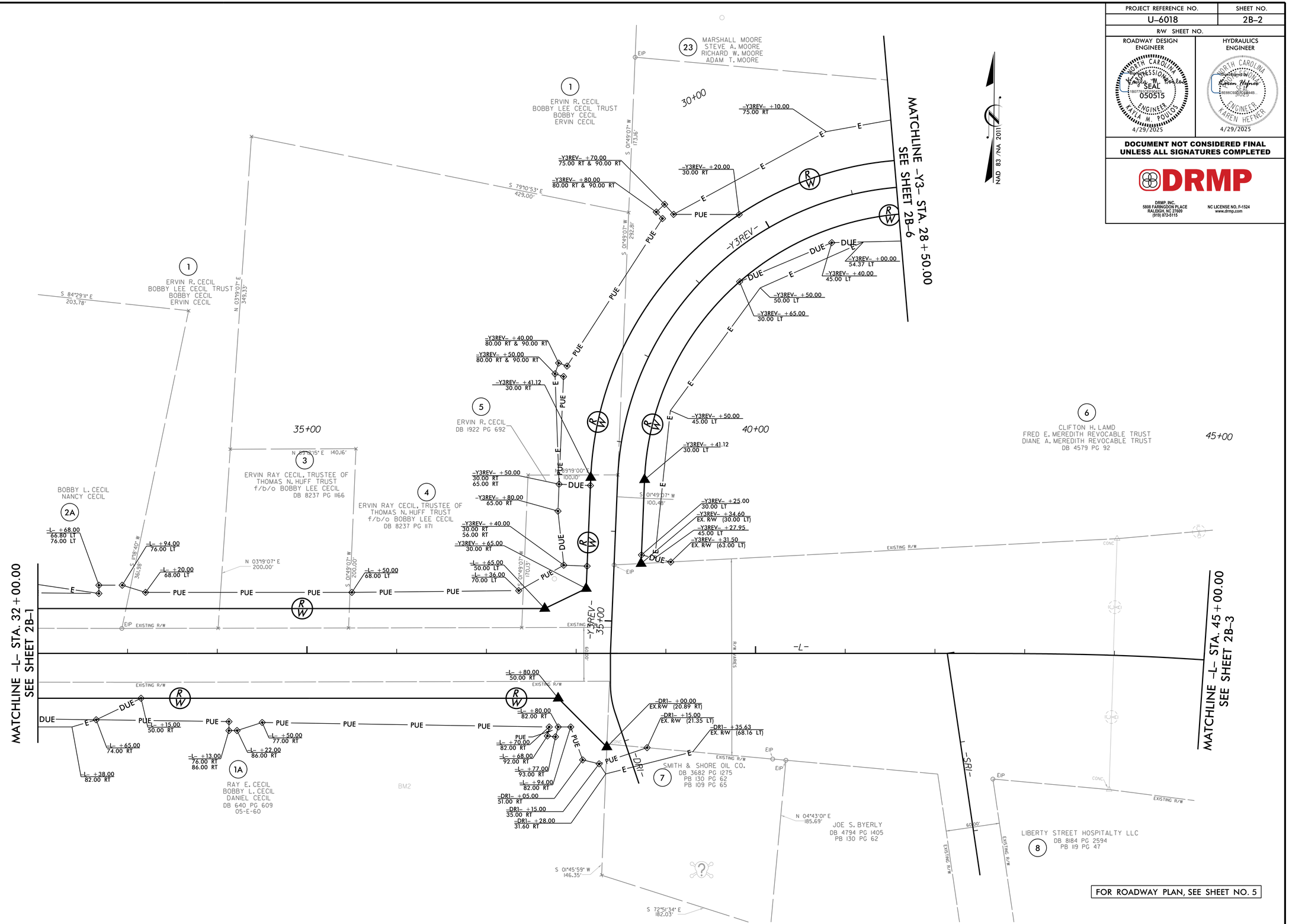

FOR ROADWAY PLAN, SEE SHEET NO. 5

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PROJECT REFERENCE NO.	SHEET NO.
U-6018	2B-3
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAILA M. POULOS
DocuSigned by: Kaila M. Poulos
1B07F0A7C4C9D4...
4/29/2025

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 30325 ENGINEER KAREN HEFNER
DocuSigned by: Karen Hefner
BE66C9D7C2464B...
4/29/2025

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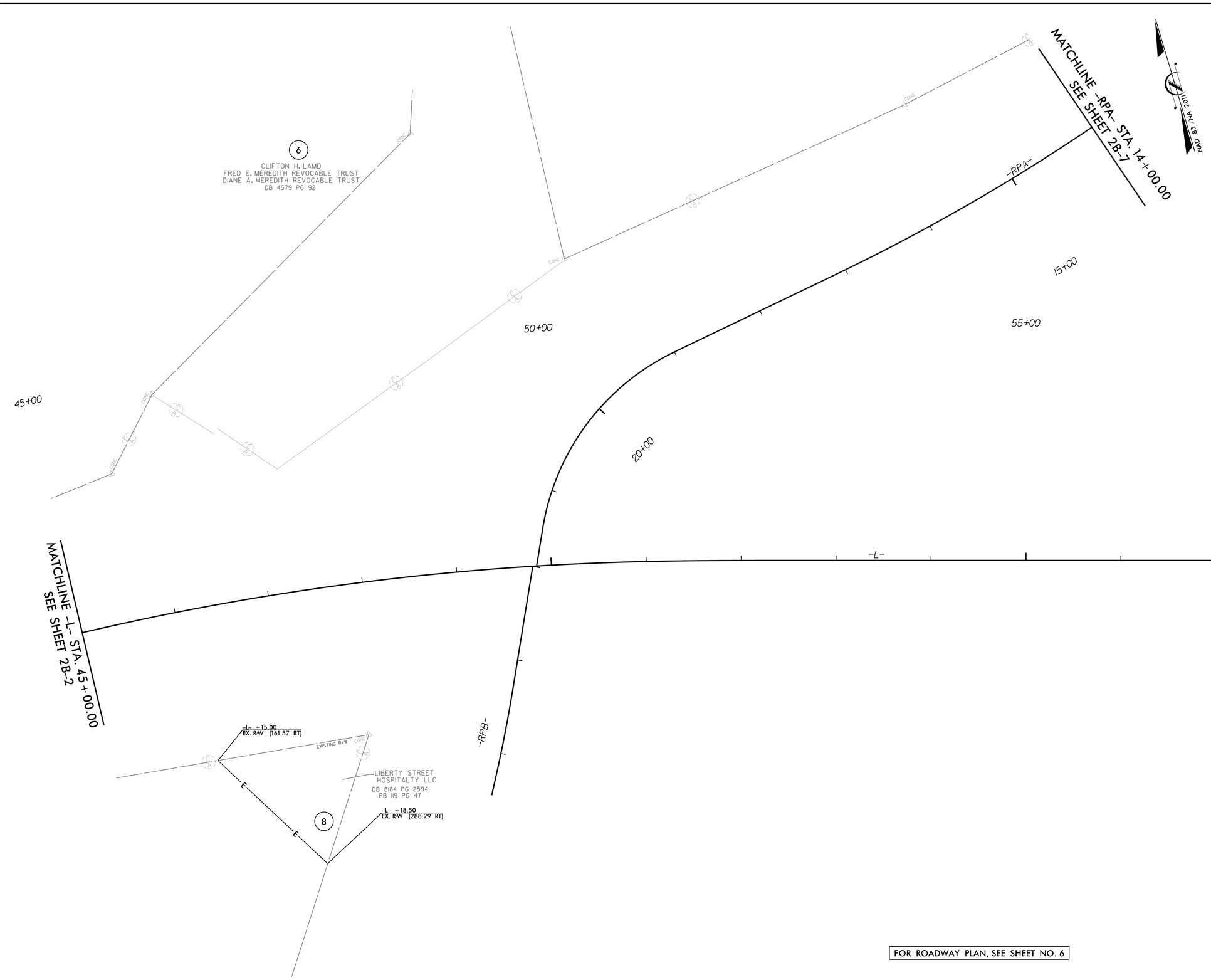

FOR ROADWAY PLAN, SEE SHEET NO. 6

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PROJECT REFERENCE NO.	SHEET NO.
U-6018	2B-4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAILA M. POLICH — Kaila M. Polich — 4/29/2025

HYDRAULICS ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 030325 ENGINEER KAREN HEFNER — DocuSigned by: Karen Hefner — 4/29/2025

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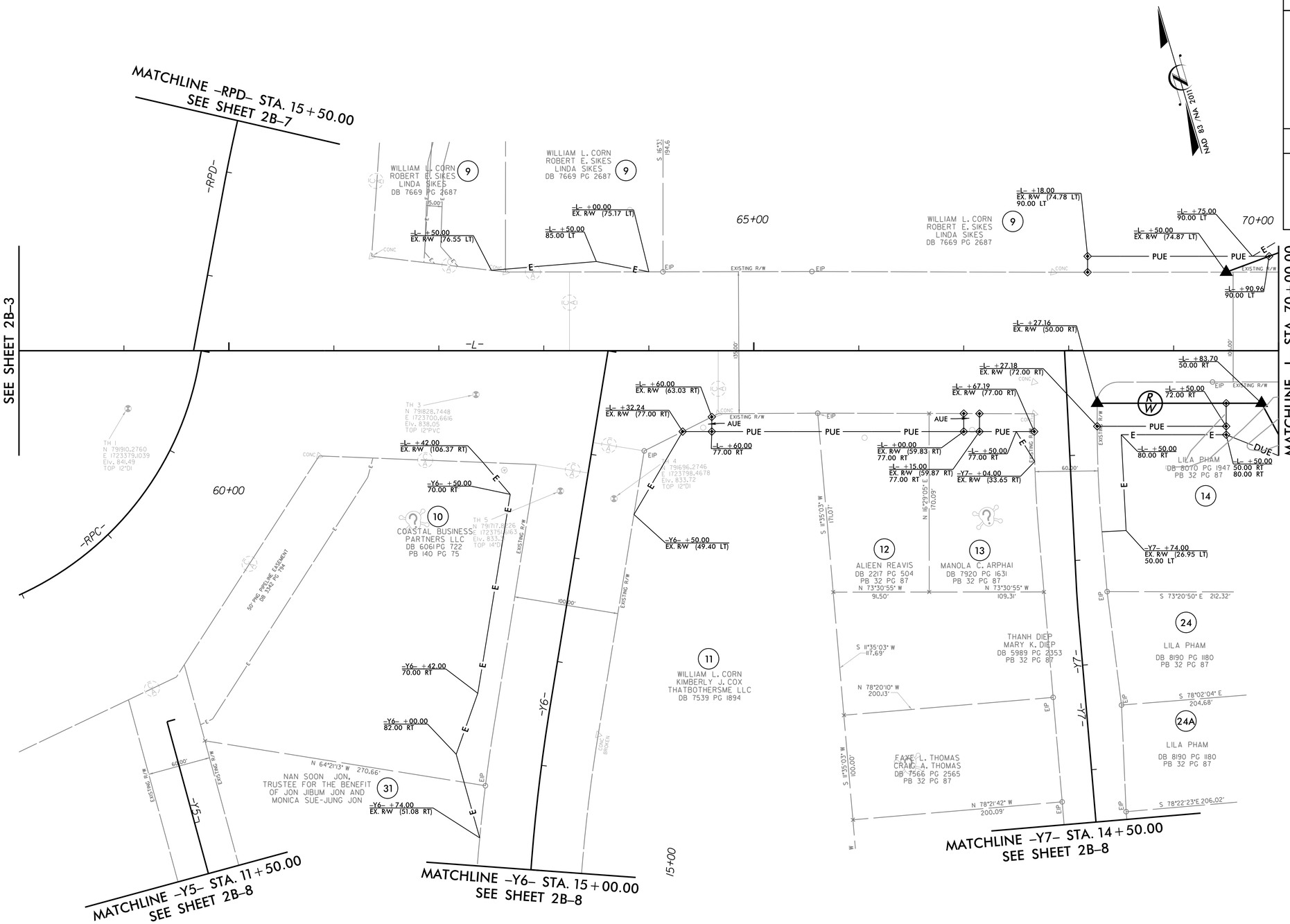

FOR ROADWAY PLAN, SEE SHEET 7

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PROJECT REFERENCE NO.	SHEET NO.
U-6018	2B-5
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAILA M. POLICY
Signed by: Kaila M. Policy
4/29/2025

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 30025 ENGINEER KAREN HEFNER
Signed by: Karen Hefner
4/29/2025

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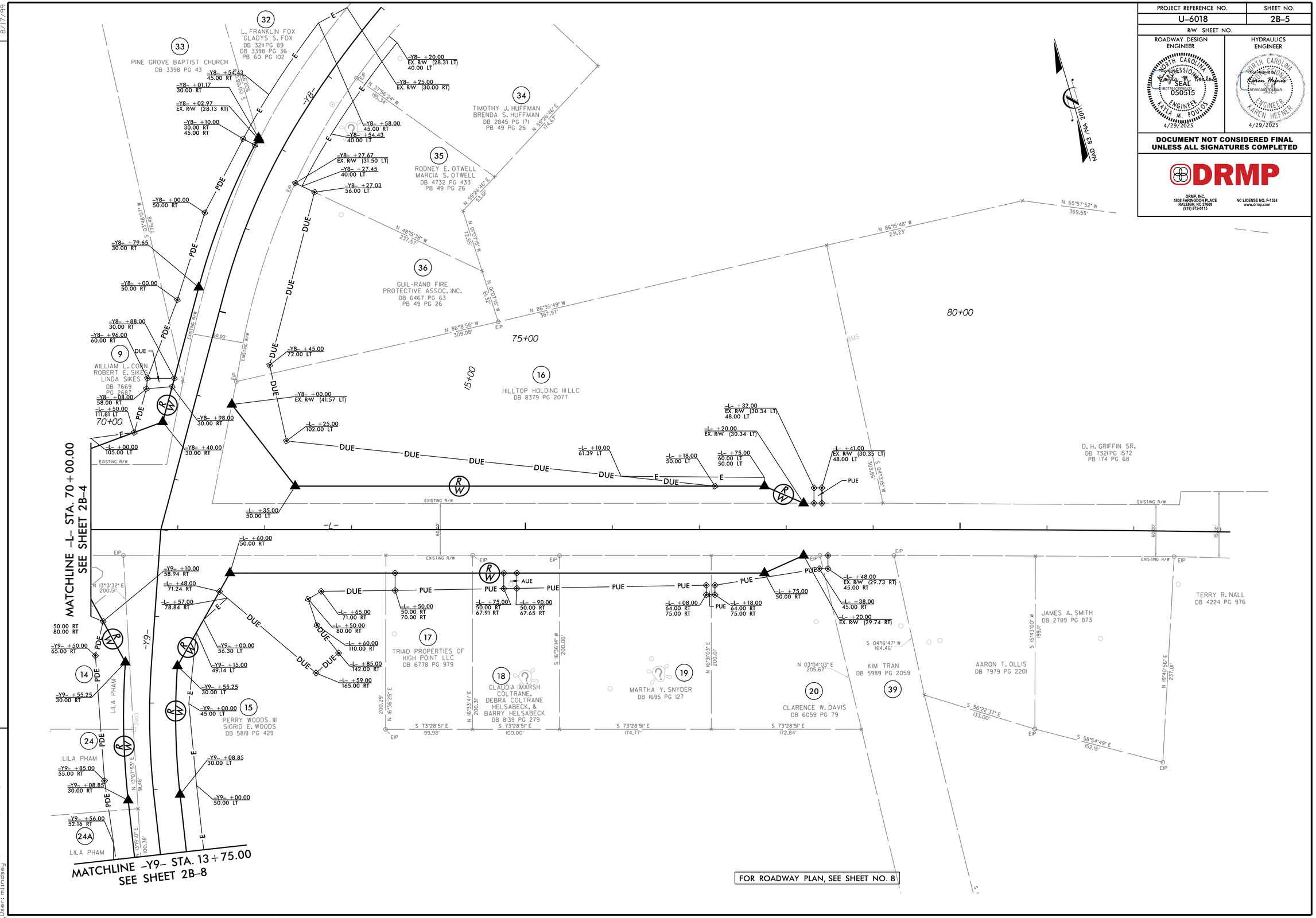

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PROJECT REFERENCE NO.	SHEET NO.
U-6018	2B-6
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAILA M. POULOS
Kaila M. Poulos
4/29/2025

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 30025 ENGINEER KAREN HEFNER
Karen Hefner
4/29/2025

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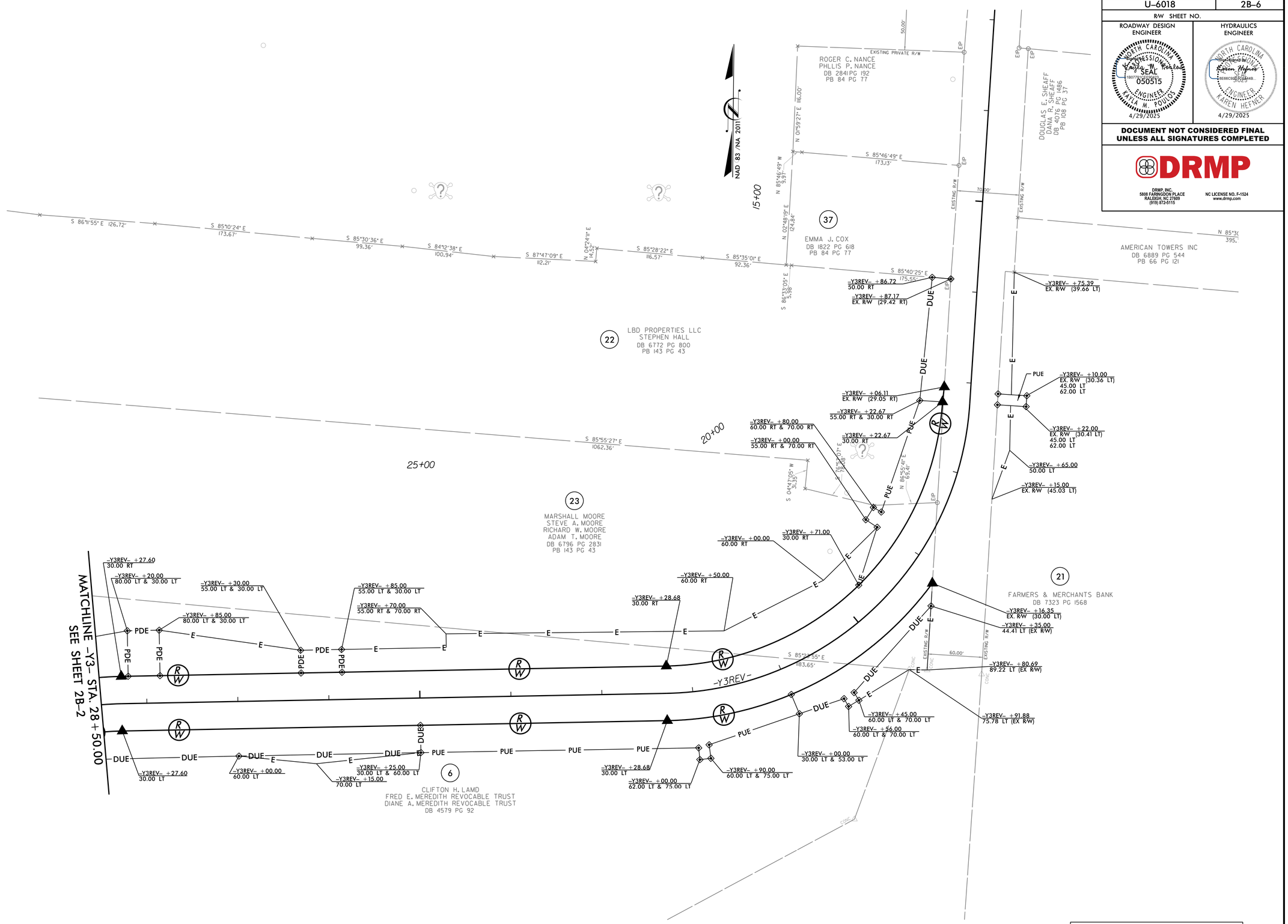

FOR ROADWAY PLAN, SEE SHEET NO. 9

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PROJECT REFERENCE NO.	SHEET NO.
U-6018	2B-7
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAILA M. POULOS	NORTH CAROLINA PROFESSIONAL SEAL 30025 ENGINEER KAREN HEFNER
Signed by: Kaila M. Poulos 180775D7AC9D4...	Signed by: Karen Hefner BE66C8D7B2464B...
4/29/2025	4/29/2025

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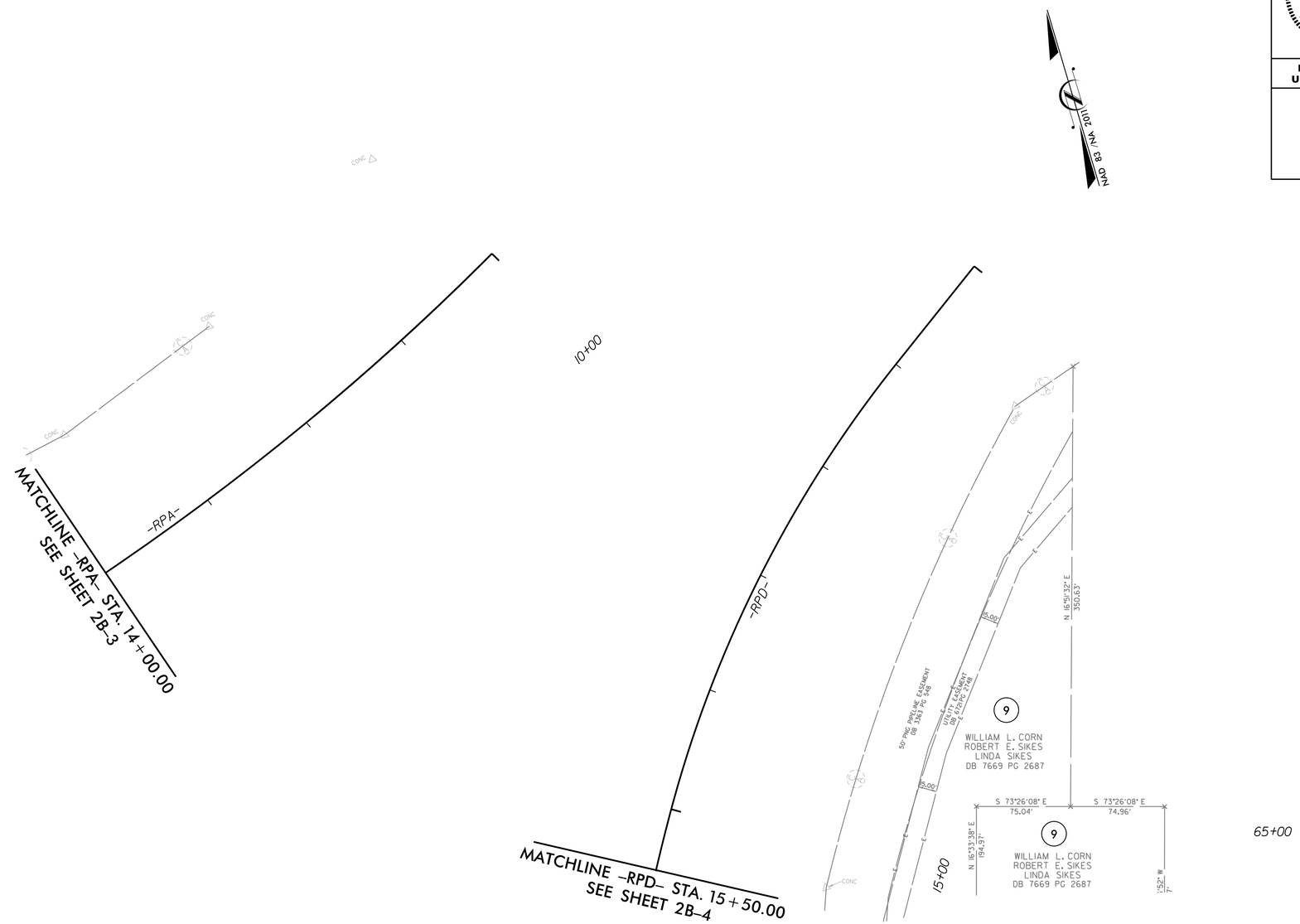

FOR ROADWAY PLAN, SEE SHEET NO. 10

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PROJECT REFERENCE NO.	SHEET NO.
U-6018	2B-8
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAILA M. POLICH — 4/29/2025

HYDRAULICS ENGINEER: NORTH CAROLINA PROFESSIONAL SEAL 030325 ENGINEER KAREN HEFNER — 4/29/2025

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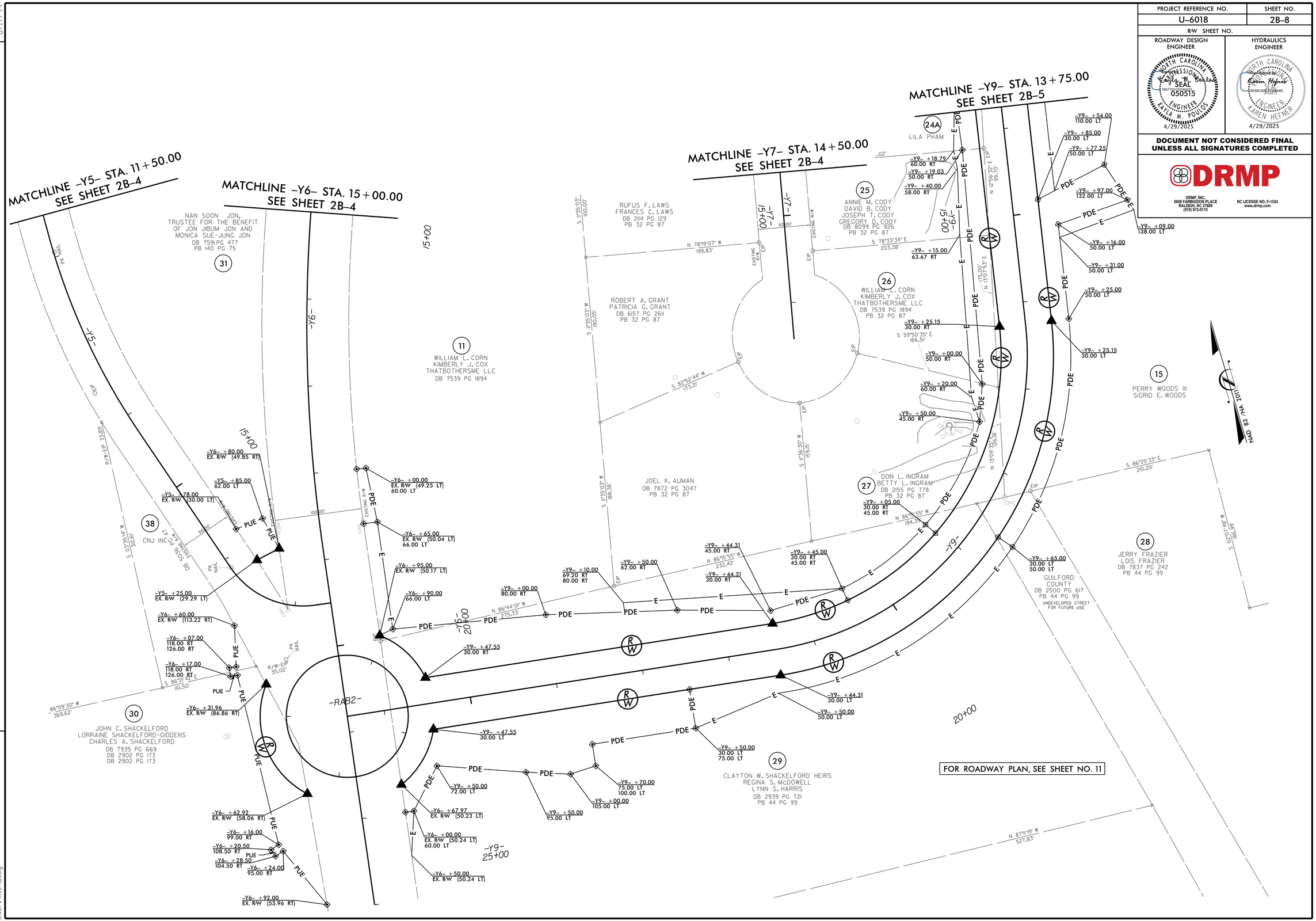

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PROJECT REFERENCE NO.	SHEET NO.
U-6018	2B-9
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAILA M. POLICH
DocuSigned by: Kaila M. Polich
4/29/2025

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 030254 ENGINEER KAREN HEFNER
DocuSigned by: Karen Hefner
4/29/2025

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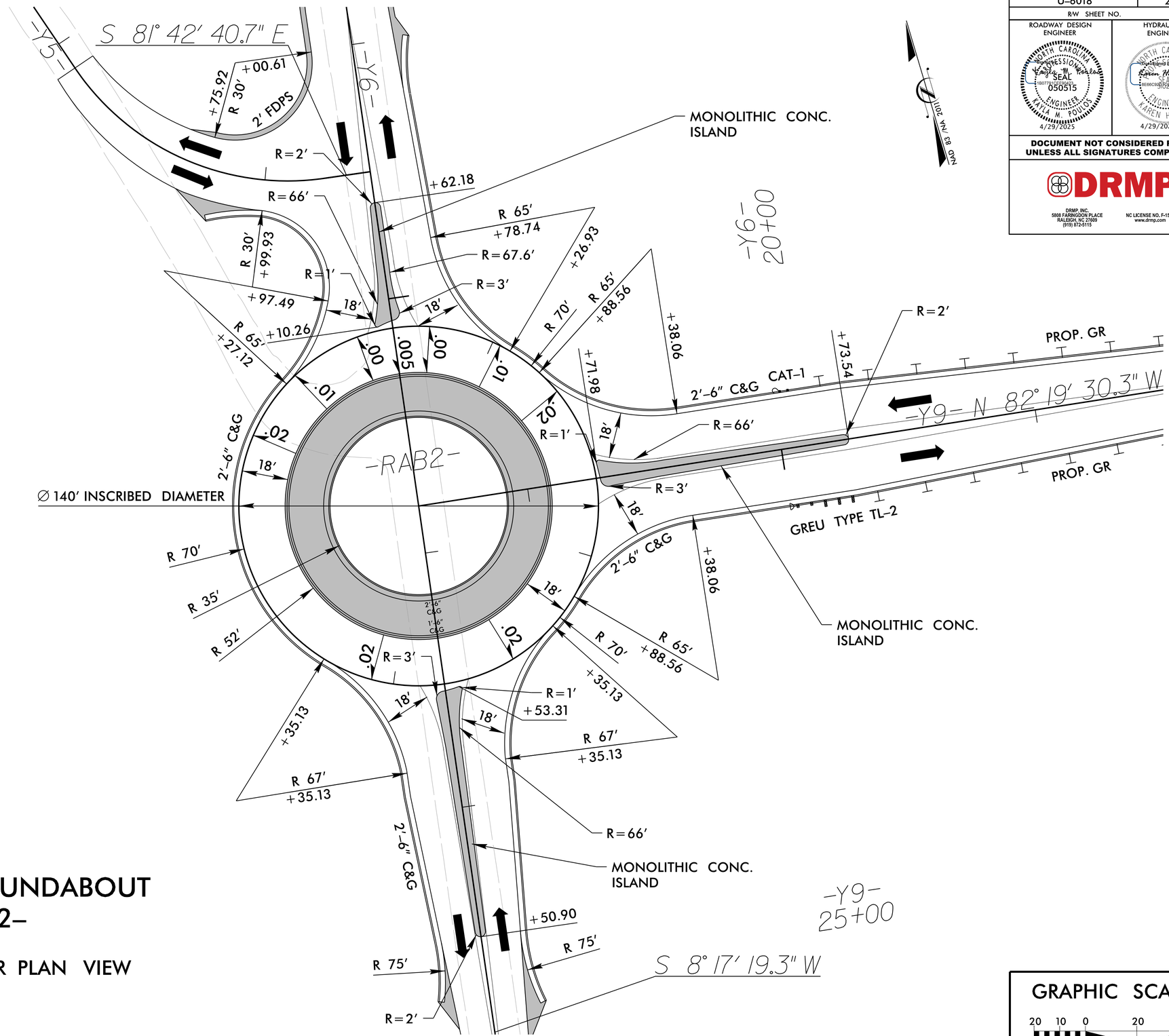

DETAIL OF ROUNDABOUT
-RAB2-

SEE SHEET 11 FOR PLAN VIEW

GRAPHIC SCALE
20 10 0 20 40

2/13/2025
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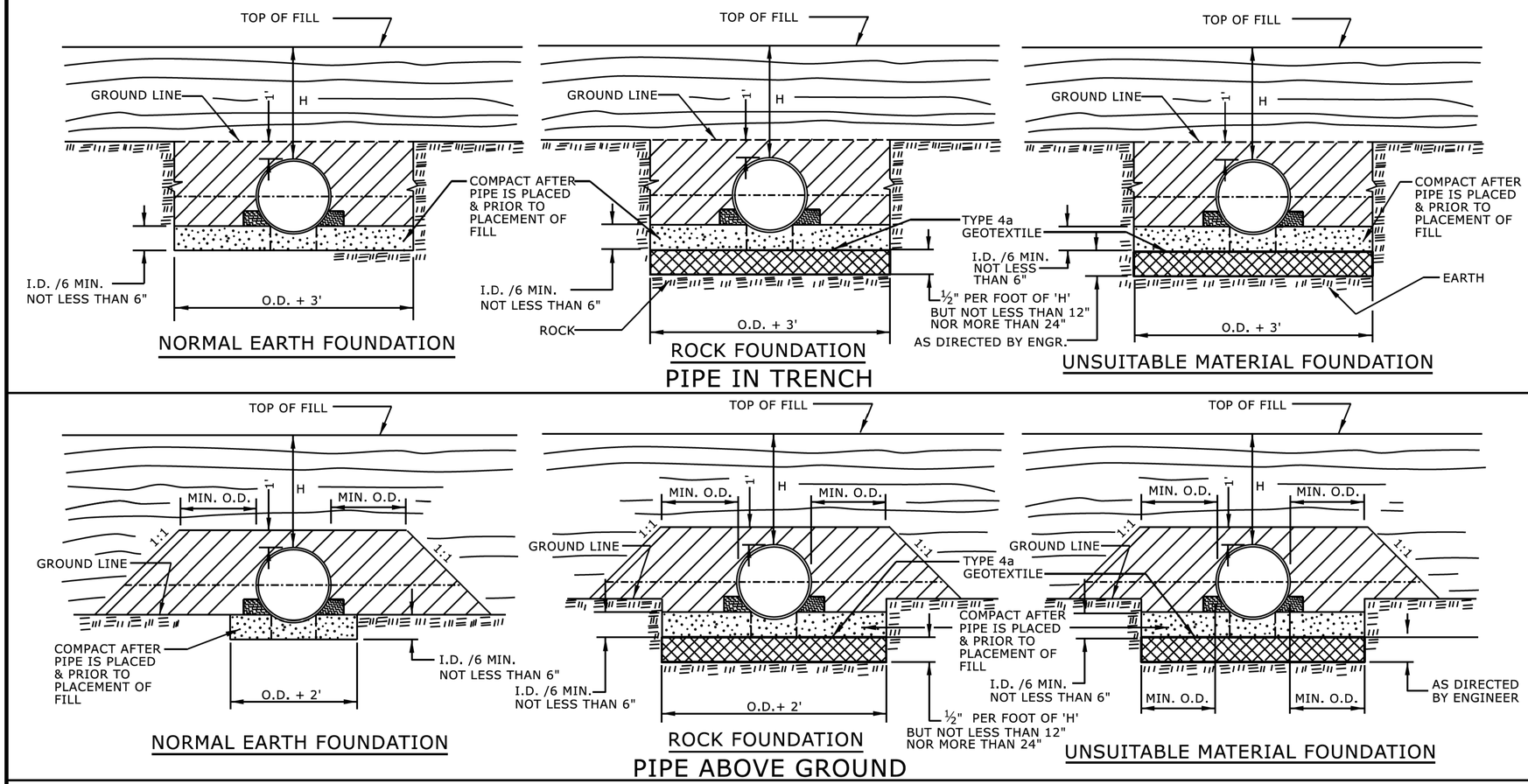

GENERAL NOTES:

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

NORTH CAROLINA PROFESSIONAL SEAL 033144 ENGINEER NICOLE M. HACKER
4/29/2025

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

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

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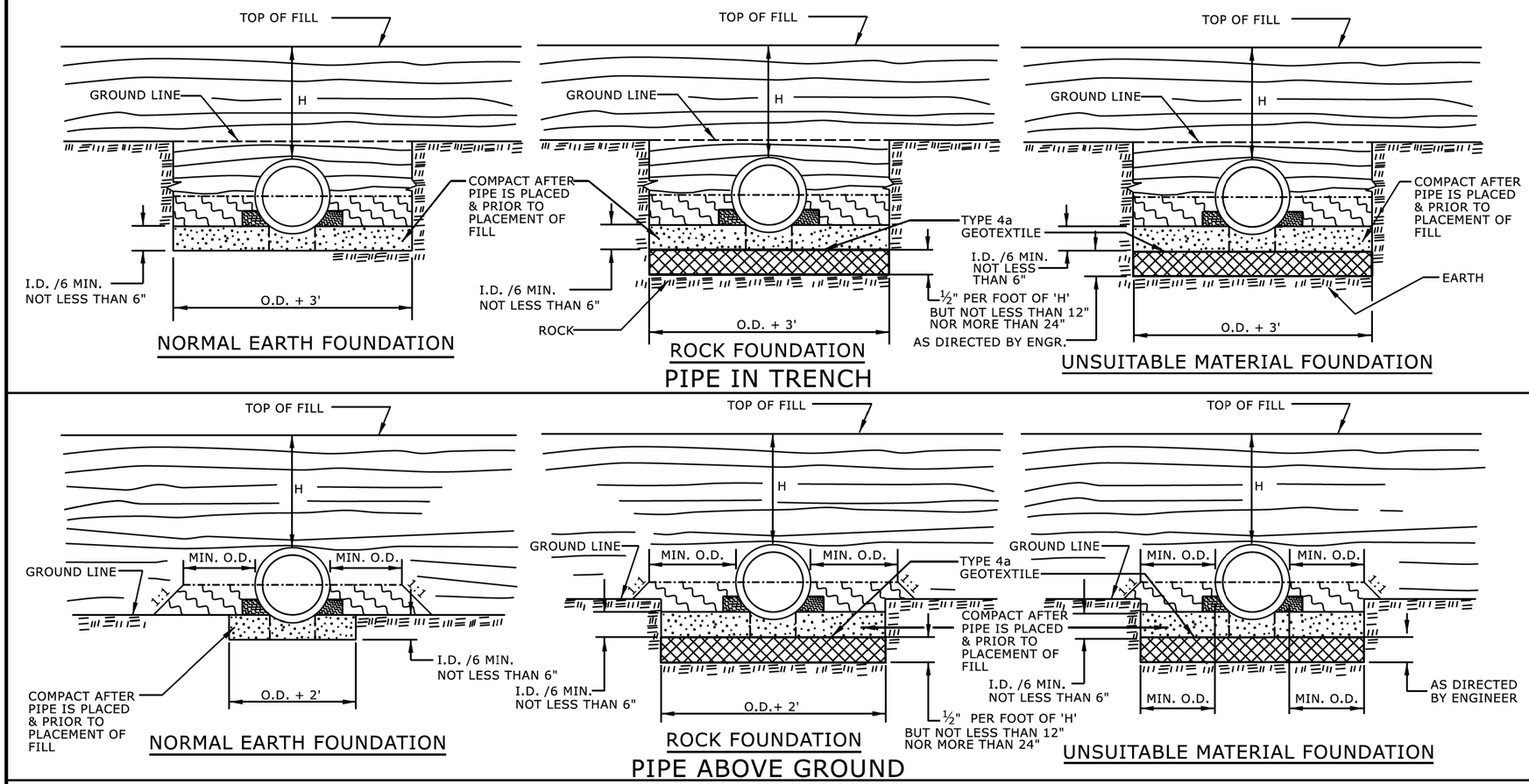
U-6018	2C-2



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

Docusign Envelope ID: E0326208-8107-4EE9-B137-89AB1D32E98A

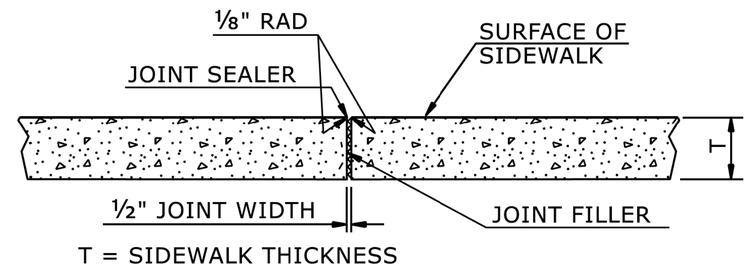
PROJECT REFERENCE NO.	SHEET NO.
U-6018	2C-3

NOTES:

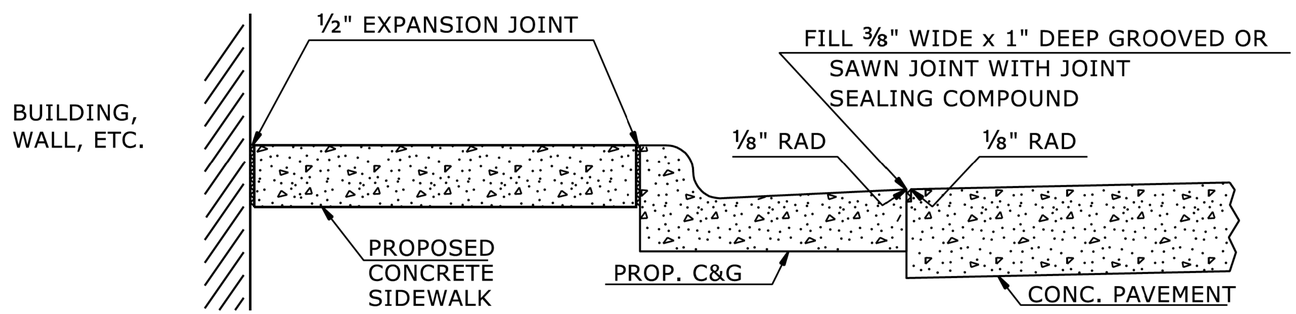
CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

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.



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 033144 NICOLE M. HACKER
4/29/2025

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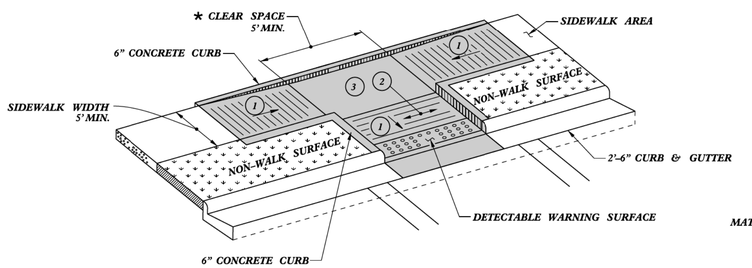
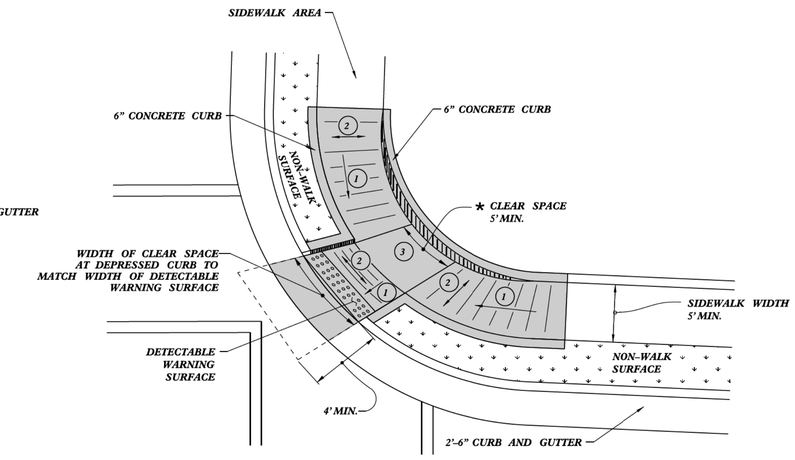
★ - WHERE CLEAR SPACE IS CONSTRAINED ON TWO OR MORE SIDES, THE CLEAR SPACE SHALL BE 4' MINIMUM X 5' MINIMUM, WITH 5' PROVIDED IN THE DIRECTION OF THE PEDESTRIAN STREET CROSSING.



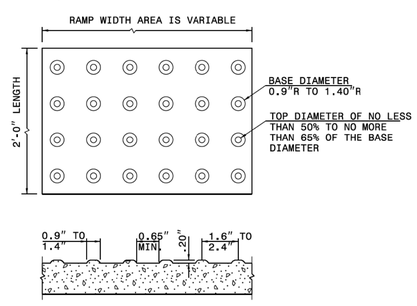
TYPE 3



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

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ROADWAY DETAIL DRAWING FOR
CURB RAMP
PARALLEL RAMP

SHEET 9 OF 13
848D06

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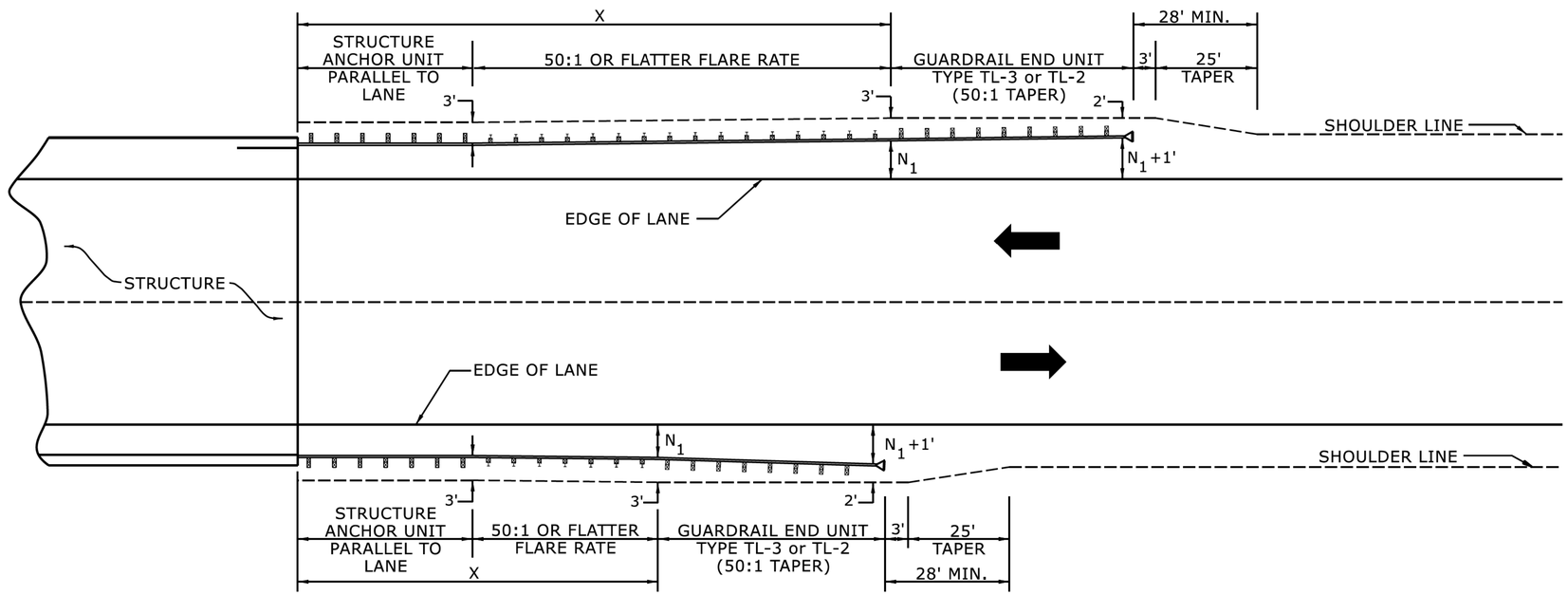
PROJECT REFERENCE NO.	SHEET NO.
U-6018	2C-5



USE FLARE RATE AS THE CONTROL IF THE "N_1" DISTANCE IS NOT OBTAINED.
("N_1" IS BASED ON SHOULDER WIDTHS IN THE ROADWAY DESIGN MANUAL)

SEE STD. 862.03 FOR STRUCTURE ANCHOR UNITS

FOR POSTED SPEEDS ≥ 45MPH USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45MPH USE GREU TYPE TL-2

GUARDRAIL LENGTH OF NEED (X) IS CALCULATED BASED ON THE AASHTO ROADSIDE DESIGN GUIDE.

LENGTHS AND OFFSETS FOR PROPOSED GUARDRAIL AT TWO LANE - TWO WAY LOCATIONS

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DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT

SHEET 4 OF 15

862D01

NORTH CAROLINA PROFESSIONAL SEAL 033144 ENGINEER NICOLE M. HACKLER
4/29/2025

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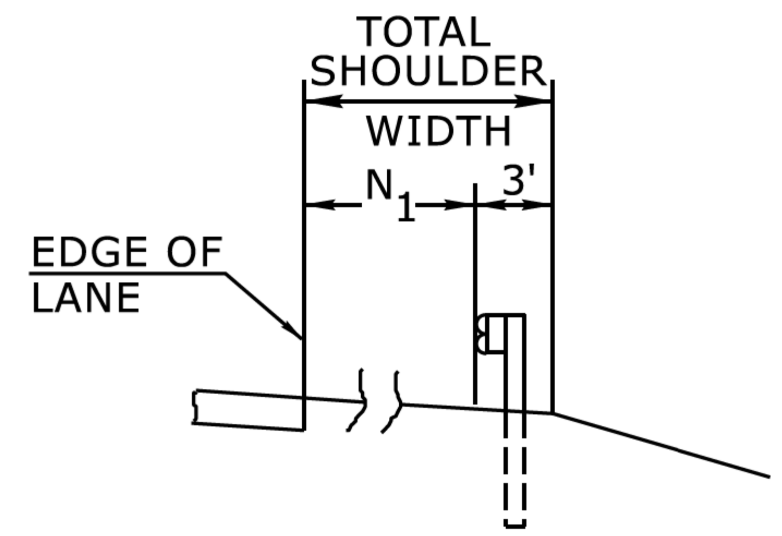
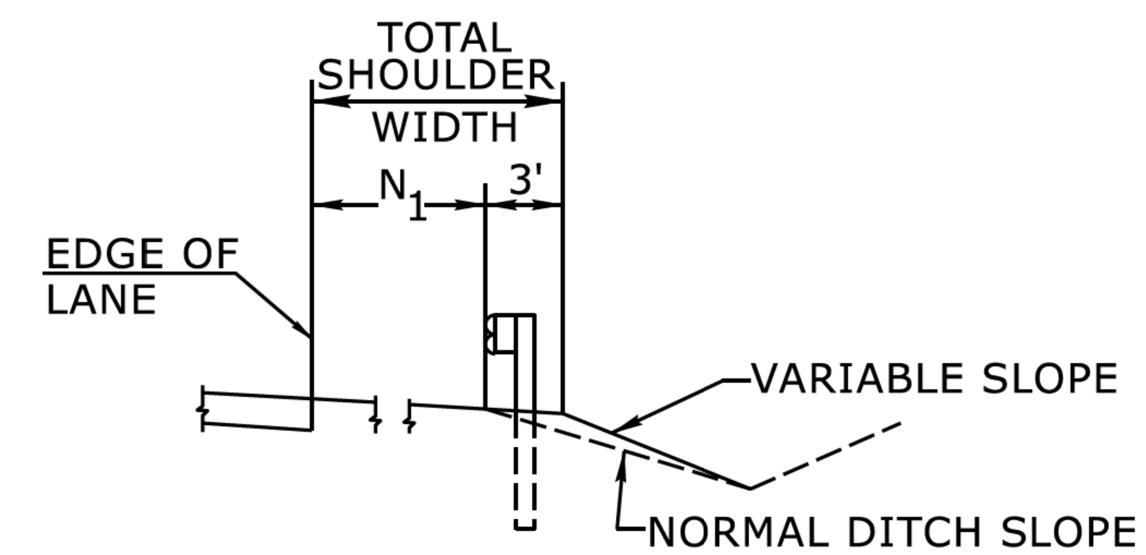
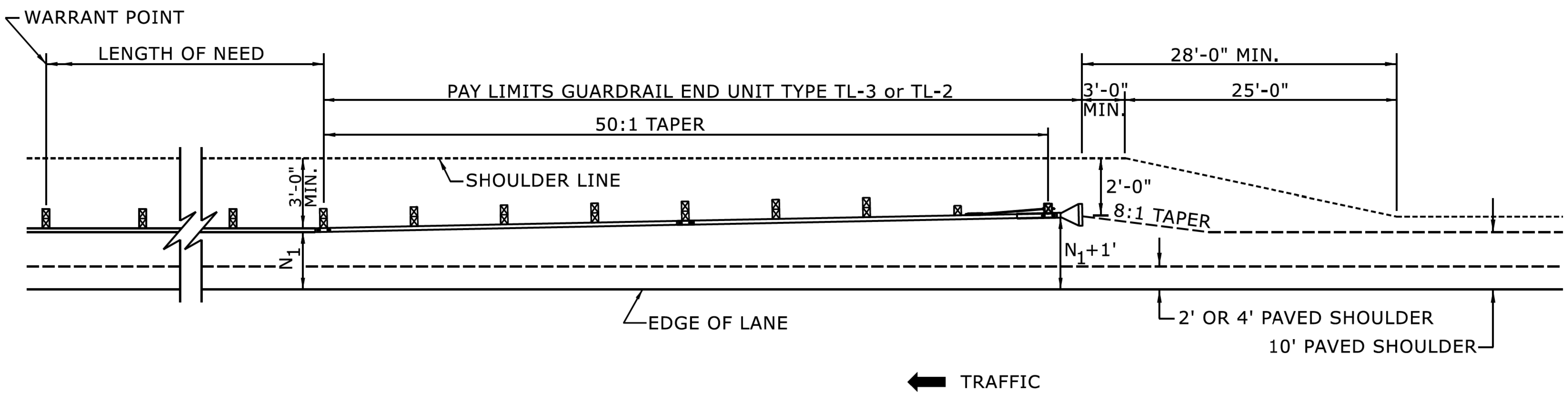


FILL SECTION



CUT SECTION

"N_1"= DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL WHERE GUARDRAIL IS PARALLEL TO LANE.



FOR POSTED SPEEDS ≥ 45mph USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45mph USE GREU TYPE TL-2

DETAIL OF BEGINNING OF GUARDRAIL IN CUT OR FILL SECTION

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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT

SHEET 6 OF 15
862D01

NORTH CAROLINA PROFESSIONAL SEAL 033144 ENGINEER NICOLE M. HACKLER
4/29/2025

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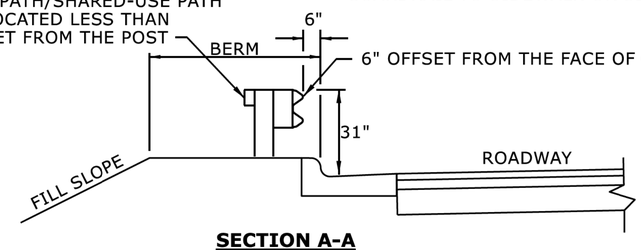
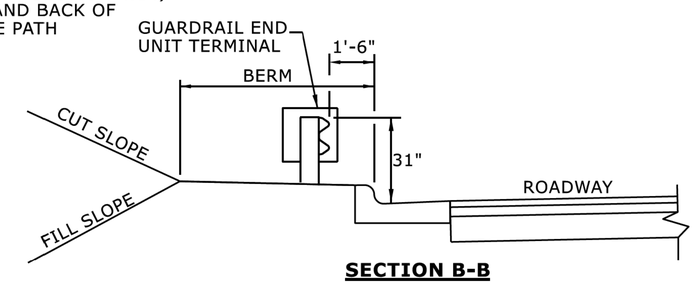
U-6018	2C-7

PLACE APPROVED BICYCLE FRIENDLY RAILINGS, FENCE, OR RUB RAILS IF SIDEPATH/SHARED-USE PATH IS LOCATED LESS THAN 4 FEET FROM THE POST

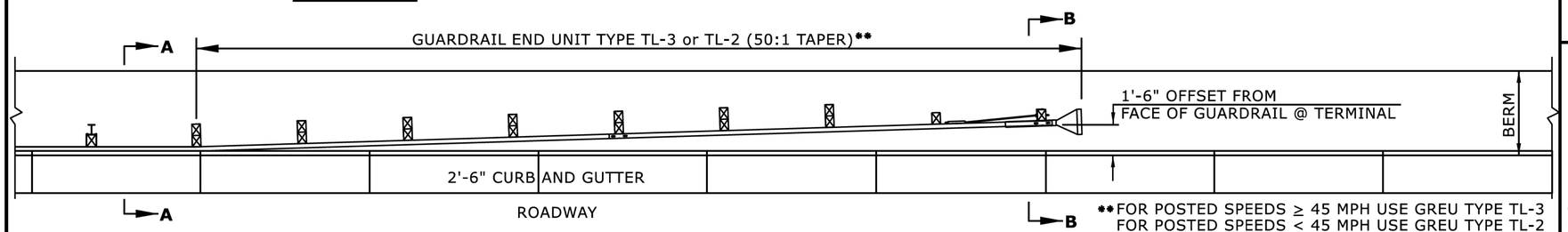
SEE THE ROADWAY DESIGN MANUAL (PART I CHAPTER 4 SECTION 4.14) FOR OFFSET DISTANCES FROM FACE OF GUARDRAIL AND BACK OF GUARDRAIL TO SIDEWALK OR SIDEPATH/SHARED-USE PATH



SECTION A-A



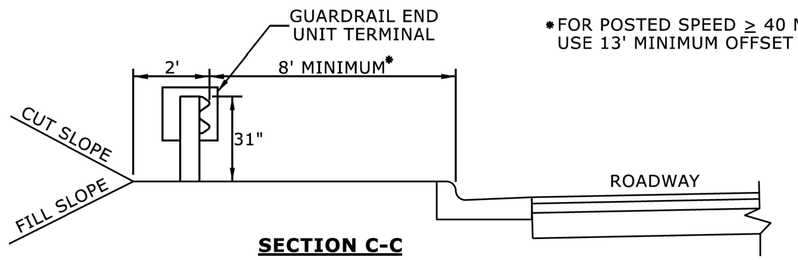
SECTION B-B



**FOR POSTED SPEEDS ≥ 45 MPH USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45 MPH USE GREU TYPE TL-2

BICYCLE FRIENDLY RAILINGS, FENCE OR RUB RAIL SHOULD NOT BE PLACED WITHIN THE LIMITS OF THE STRUCTURAL ANCHOR OR END UNITS

GUARDRAIL 6" FROM THE FACE OF CURB



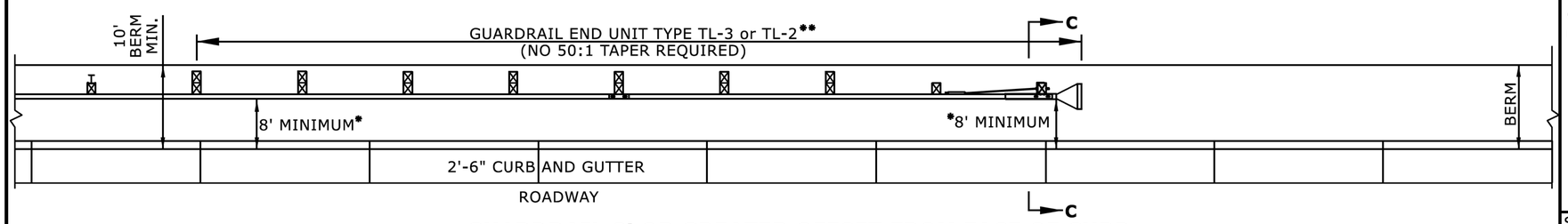
SECTION C-C

*FOR POSTED SPEED ≥ 40 MPH USE 13' MINIMUM OFFSET

SEE THE ROADWAY DESIGN MANUAL (PART I CHAPTER 4 SECTION 4.14) FOR OFFSET DISTANCES FROM FACE OF GUARDRAIL AND BACK OF GUARDRAIL TO SIDEWALK OR SIDEPATH/SHARED-USE PATH

**FOR POSTED SPEEDS ≥ 45 MPH USE GREU TYPE TL-3
FOR POSTED SPEEDS < 45 MPH USE GREU TYPE TL-2

BICYCLE FRIENDLY RAILINGS, FENCE OR RUB RAIL SHOULD NOT BE PLACED WITHIN THE LIMITS OF THE STRUCTURAL ANCHOR OR END UNITS



GUARDRAIL 8' OR GREATER OFFSET FROM FACE OF CURB

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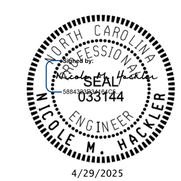
ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT
GUARDRAIL TREATMENT AT CURB AND GUTTER

SHEET 12 OF 15

862D01



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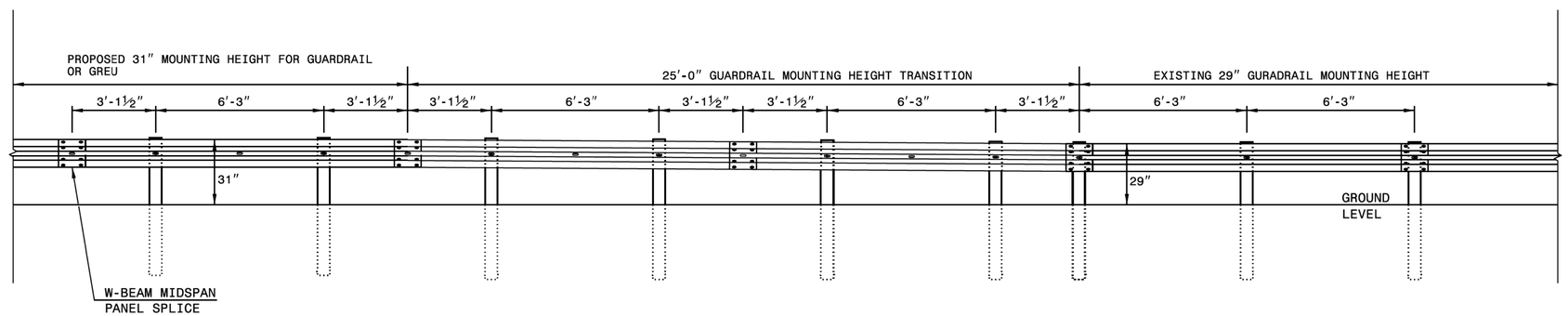
NOTE: IF EXISTING GUARDRAIL IS LOWER THAN 29″, USE AN ADDITIONAL 12′-6″ LONG SECTION OF GUARDRAIL, FOR EVERY 1″ OF HEIGHT DIFFERENCE, TO TRANSITION FROM EXISTING GUARDRAIL TO PROPOSED 31″ GUARDRAIL.



ELEVATION VIEW

TRANSITION FROM 29″ TO 31″ W-BEAM GUARDRAIL MOUNTING HEIGHT

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DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 5 OF 9

862D02

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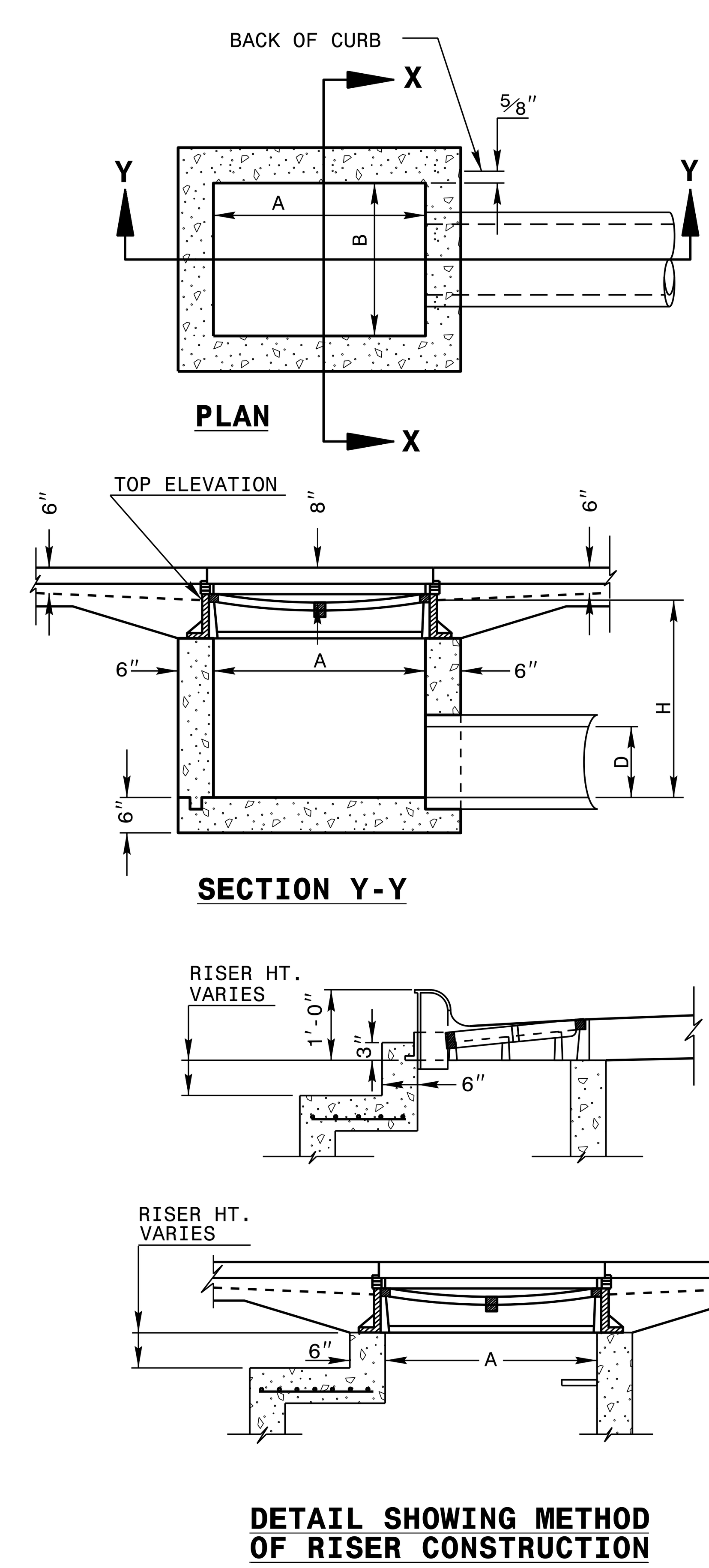
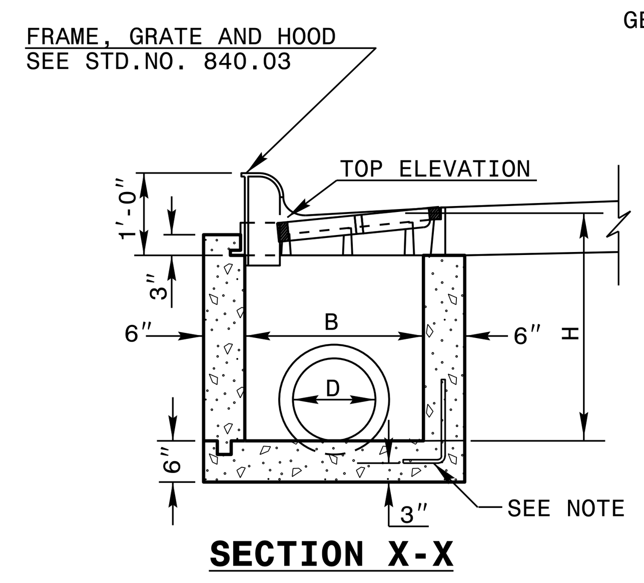
ENGLISH DETAIL DRAWING FOR
MINIMUM DEPTH
CONCRETE CATCH BASIN
12" THRU 84" PIPE

SHEET 1 OF 2
840D02





GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.

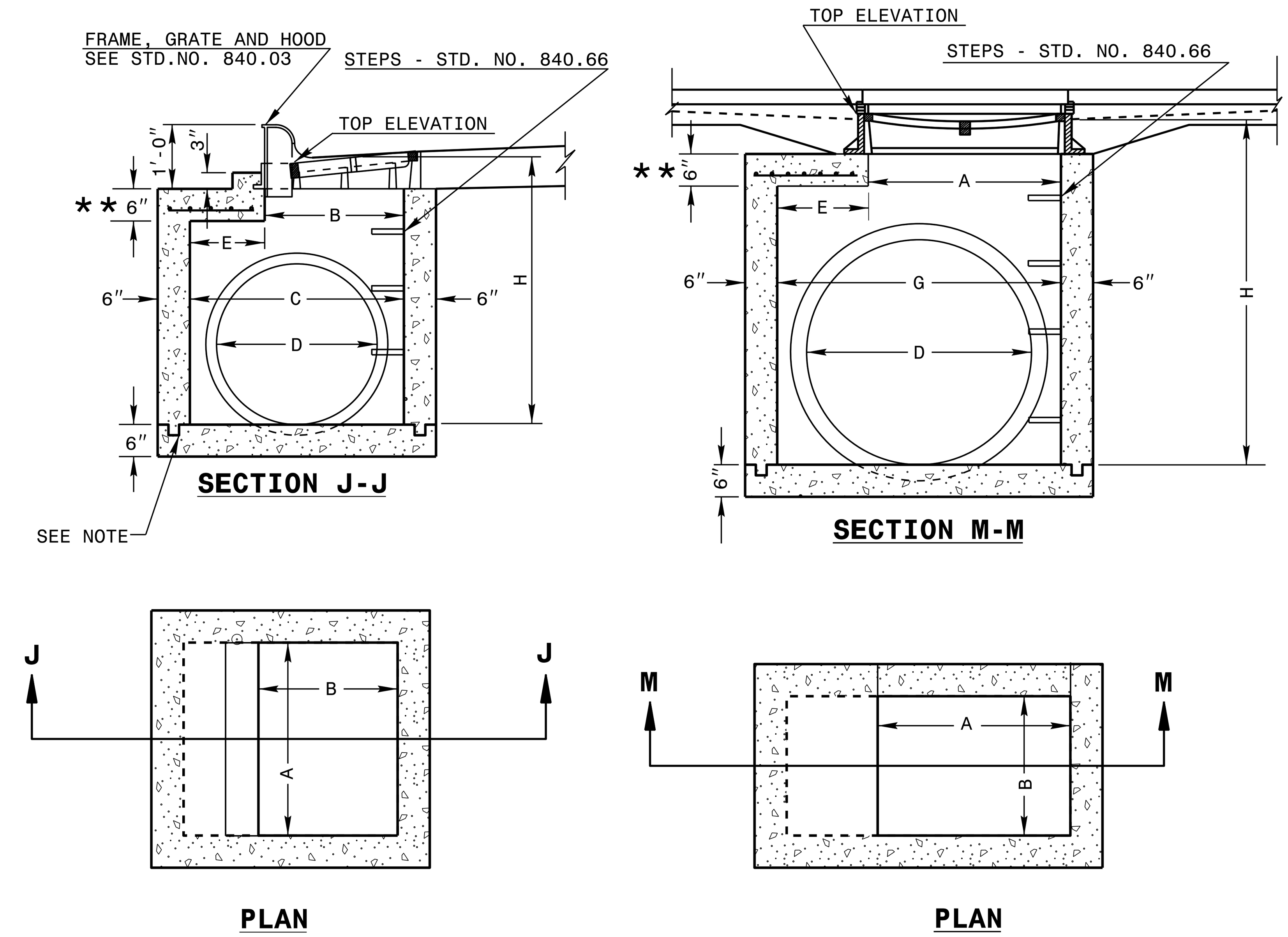
USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.

FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 8'-0" TO 16'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.

CONSTRUCT WITH PIPE CROWNS MATCHING.

CHAMFER ALL EXPOSED CORNERS 1".

** FOR STRUCTURES WITH PIPE LARGER THAN 54", MAKE THE TOP SLAB 8" THICK.



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ENGLISH DETAIL DRAWING FOR
MINIMUM DEPTH
CONCRETE CATCH BASIN
12" THRU 84" PIPE

SHEET 1 OF 2
840D02

STATE OF
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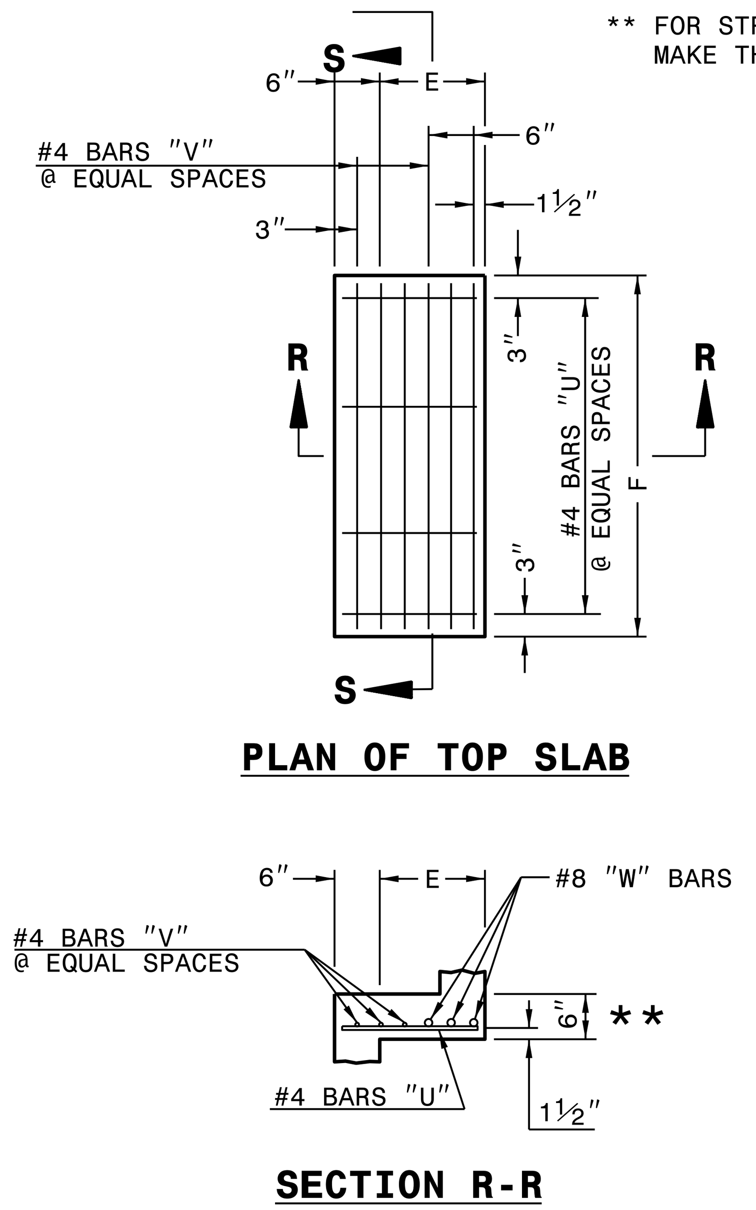
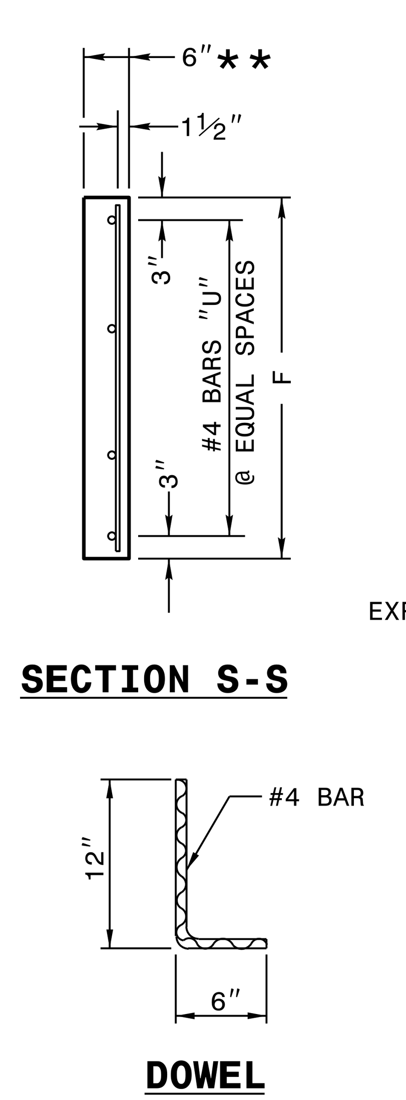
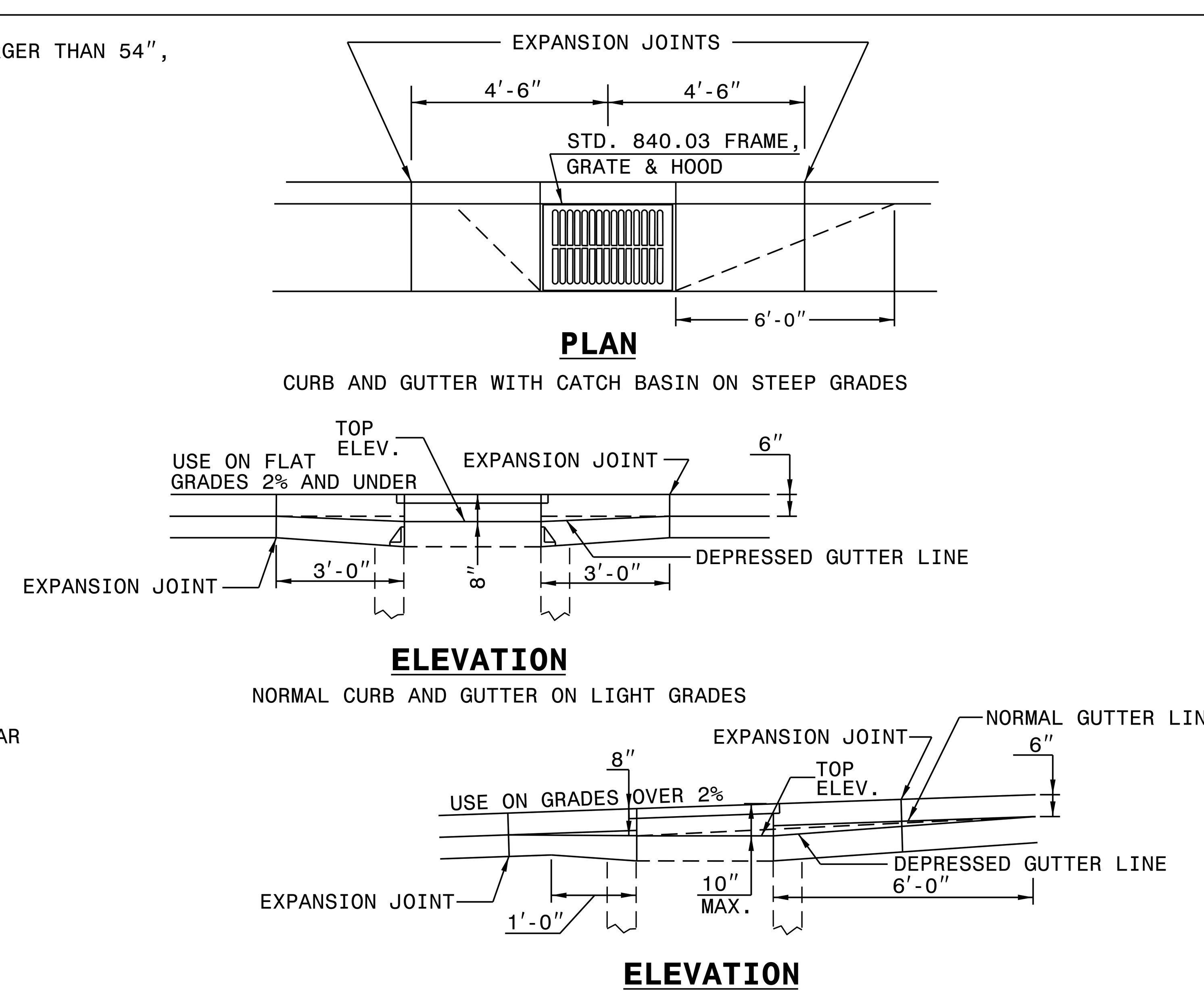
ENGLISH DETAIL DRAWING FOR
MINIMUM DEPTH
CONCRETE CATCH BASIN
12" THRU 84" PIPE

SHEET 2 OF 2
840D02

** FOR STRUCTURES WITH PIPE LARGER THAN 54", MAKE THE TOP SLAB 8" THICK.







* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN(BASED ON MIN. HEIGHT, H, WITH NO RISER) *

DIMENSIONS OF BOX AND PIPE						COVER DIMENSION									CU.YDS. CONC. IN BOX			DEDUCTIONS ONE PIPE	
PIPE	SPAN	WIDTH	WIDTH	SPAN	MIN. HEIGHT			BARS-U		BARS-V		BARS-W		TOTAL LBS.	TOP SLAB	BOTTOM SLAB	TOT. CONC. FOR MINIMUM HEIGHT, H		
D	A	B	C	G	H	E	F	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH					C.M.	R.C.
12"	3'-0"	2'-2"	--	--	2'-0"	--	--	--	--	--	--	--	--	--	--	0.235	0.772	0.015	0.026
15"	3'-0"	2'-2"			2'-3"											0.235	0.829	0.023	0.036
18"	3'-0"	2'-2"			2'-6"											0.235	0.887	0.033	0.049
24"	3'-0"	2'-2"			3'-1"											0.235	1.001	0.059	0.085
30"	3'-0"	2'-2"	3'-4"	3'-4"	3'-10"	1'-2"	4'-4"	4	1'-5"	2	4'-1"	3	4'-1"	39	0.123	0.347	1.433	0.092	0.127
36"	3'-0"	2'-2"	3'-10"	3'-10"	4'-6"	1'-8"	4'-10"	4	1'-11"	3	4'-7"	3	4'-7"	43	0.161	0.432	1.714	0.132	0.178
42"	3'-0"	2'-2"	4'-5"	4'-5"	4'-11"	2'-2"	5'-5"	5	2'-5"	4	5'-2"	3	5'-2"	47	0.200	0.543	1.738	0.180	0.243
48"	3'-0"	2'-2"	5'-0"	5'-0"	5'-6"	2'-10"	6'-0"	5	3'-1"	4	5'-9"	3	5'-9"	51	0.235	0.667	2.052	0.235	0.317
54"	3'-0"	2'-2"	5'-7"	5'-7"	6'-0"	3'-5"	6'-7"	6	3'-8"	5	6'-4"	3	6'-4"	56	0.289	0.802	2.387	0.297	0.401
60"	3'-0"	2'-2"	6'-3"	6'-3"	6'-6"	4'-1"	7'-3"	6	4'-4"	5	7'-0"	3	7'-0"	61	0.340	0.973	2.722	0.363	0.546
66"	3'-0"	2'-2"	6'-11"	6'-11"	7'-0"	4'-9"	7'-11"	7	5'-0"	6	7'-8"	3	7'-8"	66	0.391	1.160	3.057	0.440	0.655
72"	3'-0"	2'-2"	7'-6"	7'-6"	7'-6"	5'-3"	8'-6"	7	5'-6"	6	8'-3"	3	8'-3"	72	0.442	1.340	3.392	0.524	0.774
78"	3'-0"	2'-2"	8'-1"	8'-1"	8'-0"	5'-11"	9'-1"	8	6'-2"	7	8'-10"	3	8'-10"	78	0.493	1.530	3.727	0.615	0.893
84"	3'-0"	2'-2"	8'-9"	8'-9"	8'-6"	6'-7"	9'-9"	8	6'-10"	7	9'-6"	3	9'-6"	84	0.544	1.760	4.062	0.713	1.010

STATE OF
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RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
MINIMUM DEPTH
CONCRETE CATCH BASIN
12" THRU 84" PIPE

SHEET 2 OF 2
840D02

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033144 NICOLE M. HACKLER
4/29/2025

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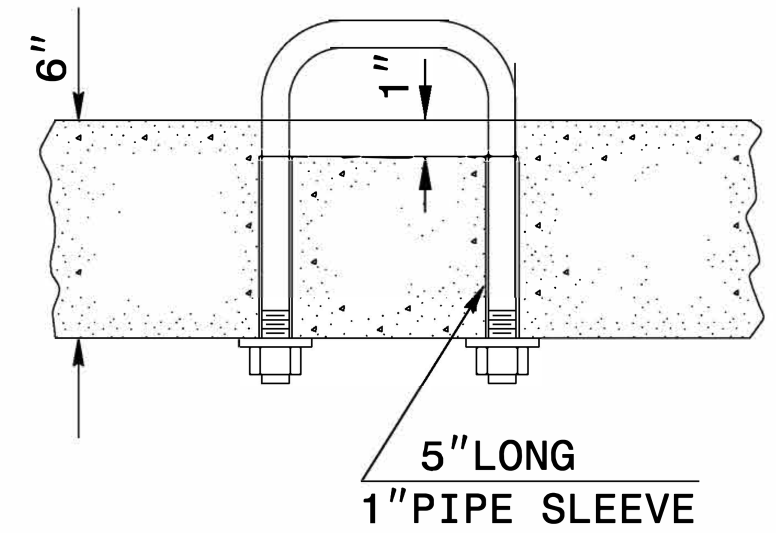
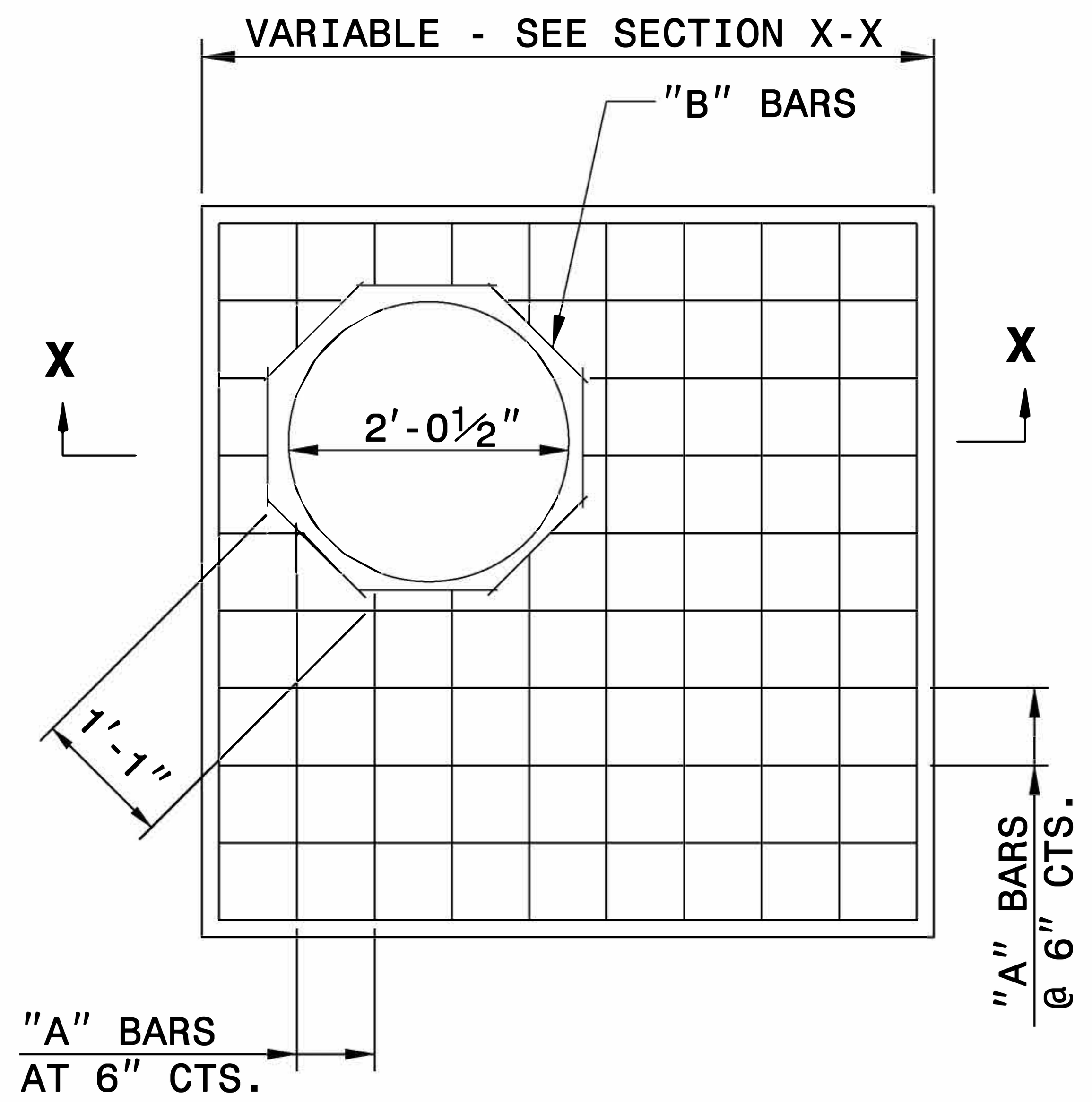
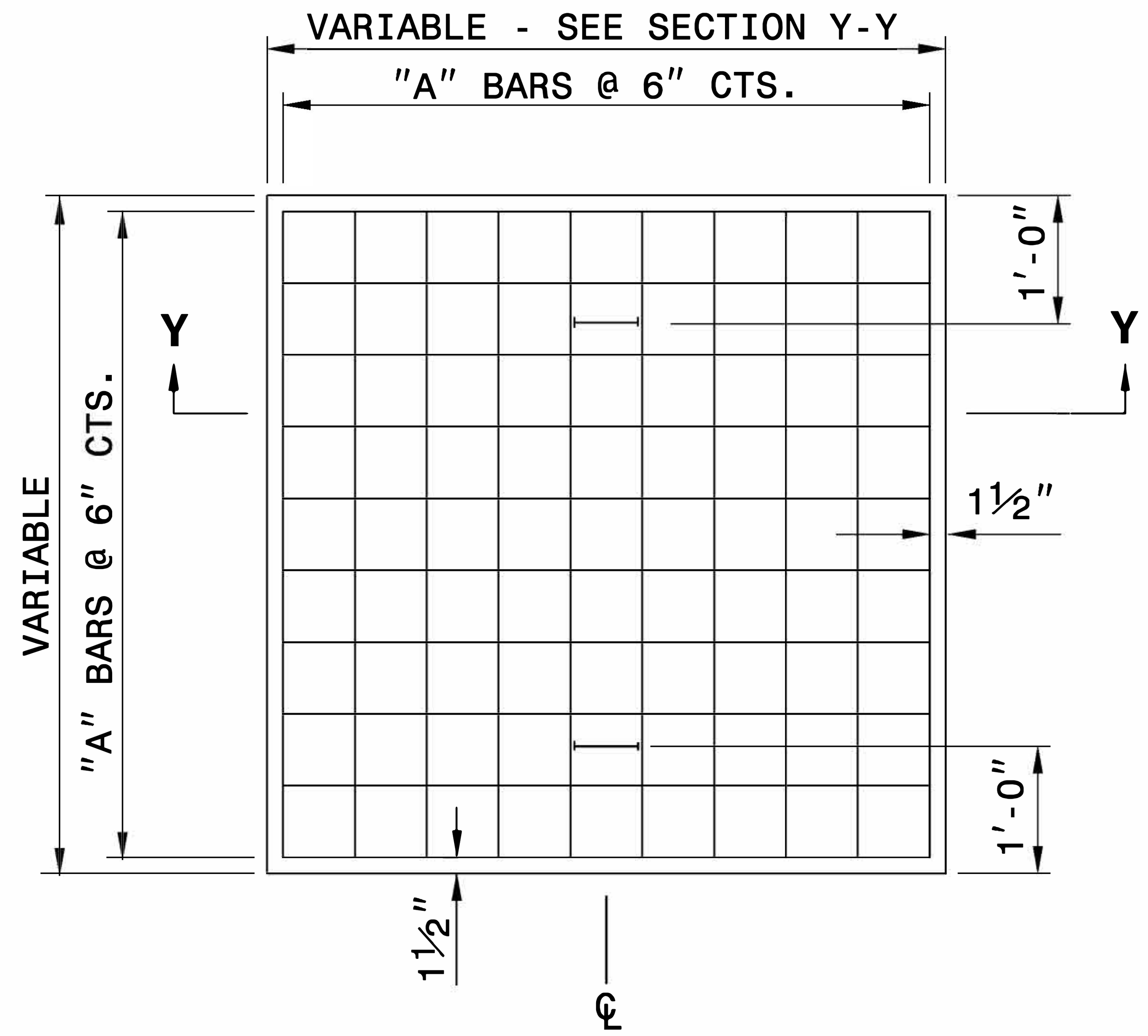


PARTIAL SECTION



PLAN



PLAN

GENERAL NOTES:

CONSTRUCT IN ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.

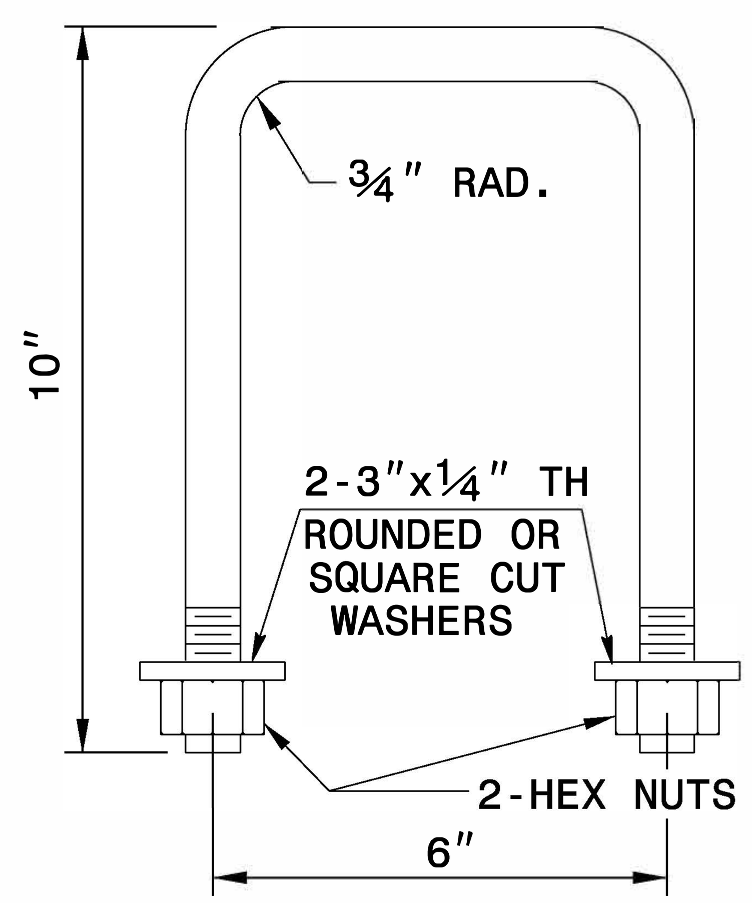
THE DIMENSIONS FOR THE EXISTING BOXES ARE APPROXIMATE AND MAY VARY SLIGHTLY.

DETAIL INTENDED FOR NON-TRAFFIC BEARING DRAINAGE STRUCTURES.

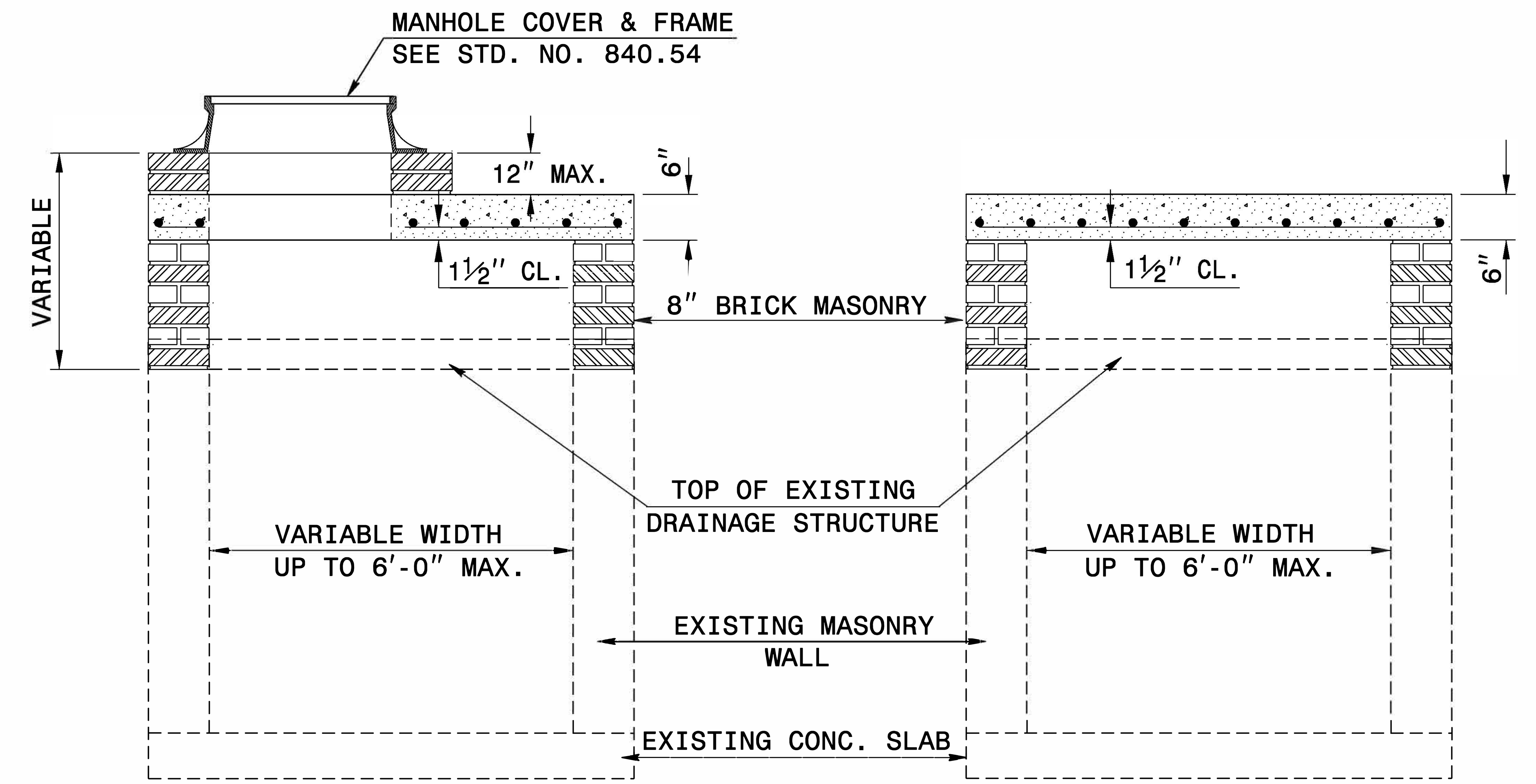
BILL OF MATERIALS

REINFORCING STEEL				
CODE	SIZE	QTY.	LENGTH	REINF. STEEL LBS.
A	#4	20	4'-6"	60.12
B	#4	8	1'-1"	5.79
TOTAL				65.91 *

MASONRY	CU YDS
TOP SLAB CONCRETE CLASS "B"	.4326 *
BRICK MASONRY PER FT HT (MIN)	.4111



DETAIL OF HANDLE



SECTION X-X **SECTION Y-Y**

★ NOTE:
QUANTITIES BASED ON 3'-6" X 3'-6" DRAINAGE STRUCTURE. ADJUST QUANTITIES FOR LARGER STRUCTURES AND MANHOLE CONSTRUCTION.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 38144 NICOLE M. HACKLER
4/29/2025

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

DETAIL TO CONVERT EXISTING DI, CB, OTCB or GI TO JUNCTION BOX (MANHOLE OPTIONAL)

ORIGINAL BY: T.S.S. DATE: NOV.1997
MODIFIED BY: T.S.S. DATE: FEB.2000
CHECKED BY: DATE:
FILE SPEC.: ds174:/usr/details/stand/boxtojbe.dgn

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

COMPUTED BY:	KMP & DR	DATE:	10/12/2020
CHECKED BY:	CMKR	DATE:	3/22/2021

PROJECT NO.	SHEET NO.
U-6018	3B-1

DRMP
DRMP, INC.
5808 FARINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115
NC LICENSE NO. F-1524
www.drmp.com

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK
(IN CUBIC YARDS)

LINE	Station	Station	Uncl. Excav.	Undercut Excav.	Embank. +%	Borrow	Waste
L	26+70.00	52+50.00	826	1200	19412	18586	1200
DR1	10+00.00	11+10.00	115		176	61	
SR1	10+00.00	11+79.30	21		83	62	
Y3 REV	16+00.00	35+18.01	3183	4500	9618	6435	4500
SUBTOTAL			4145	5700	29289	25144	5700
L	57+12.38	77+86.12	1350		6799	5449	
RPA	11+50.00	21+50.00	1038		2394	1356	
RPB	10+00.00	11+50.00	0		396	396	
SUBTOTAL			2388	0	9589	7201	0
RPC	10+00.00	11+50.00	0		25		84
RPD	11+00.00	17+40.16	0		536		833
Y6	10+00.00	20+11.50	0		800	95	0
Y7	10+00.00	11+71.36	18		317	299	0
Y8	11+00.00	17+40.27	242		1762	1520	
Y9	10+19.38	25+50.00	789		15636	14847	
SUBTOTAL			3232	0	19076	16761	917
Y6	21+50.00	23+39.20	90		148	58	
Y5	16+00.00	17+21.93	28		30	2	
RAB2	10+00.00	14+39.82	144		2170	2026	0
SUBTOTAL			262	0	2348	2086	0
TOTAL			10027	5700	60302	51192	6617
ADJUSTMENTS DUE TO							
Est. Loss Due To Clearing And Grubbing			0			0	
Shoulder Material					2520	2520	
Additional Undercut				2250	2700	2700	2250
0							
0							
Earth Waste to Replace Borrow						-917	-917
PROJECT TOTAL			10027	7950	65522	55495	7950
Est. 5% to Replace Topsoil in Borrow Pits						2775	
GRAND TOTAL			10027	7950		58270	
SAY			10100	7950		58300	
Est. Drainage Ditch Excav.	240 CY						
Select Granular Material	7700 CY						
Geotextile For Soil Stab.	10200 SY						
Estimate Shallow Undercut	850 CY						
Class IV Subgrade Stab.	1675 TONS						

SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL

LINE	Station	Station	LOC LT/RT/CL	SY
Y3 REV	16+73	L-EOP	LT	3157
Y6	10+22	15+00	CL	1880
Y6	20+12	20+52	CL	307
Y5	16+11	Y6-EOP	CL/RT	407
L	46+34	49+75	CL	503
L	59+92	63+16	CL	885
			TOTAL:	7139
			SAY:	7140

Clearing and grubbing, unclassified excavation, fine grading, and removal of existing asphalt pavement will be paid for at the contract lump sum price for "Grading".

Quantities are approximate only. The Resident Engineer will recross-section the work accurately when the project is staked out. These cross-section notes will be used in computing the final quantities for which the contractor will be paid.

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

LINE	BEG. STA.	END STA.	LOC.	LENGTH (LF) STRAIGHT	LENGTH (LF) SHOP CURVED	LENGTH (LF) DOUBLE FACED	WARRANT POINT APPR. END	WARRANT POINT TRAIL. END	"N" DIST FROM E.O.L.	TOTAL SHLDR WIDTH	FLARE LENGTH APPR. END	FLARE LENGTH TRAIL. END	W APPR. END	W TRAIL. END	ANCHORS III	ANCHORS III SHOP CURVED	ANCHORS GREU TL-2	ANCHORS GREU TL-3	ANCHORS AT-1	ANCHORS CAT-1	ANCHORS TES	IMPACT ATTEN. TYPE 350 EA	IMPACT ATTEN. TYPE 350 G	IMPACT ATTEN. TYPE 350 NG	REMOVE EXISTING GUARDRAIL	REINF. CONC. BARRIER	REMARKS
L	40+42.70	48+71.93	LT	837.50					14											1					201		
L/RPA	48+71.93	20+91.33	LT		125.00																						
RPA	18+23.71	20+91.33	RT	300.00					12	15	50		1					1									
SR1/L		42+93.67	RT		75.00						6.25		4						1								
L	42+93.67	48+54.43	RT	562.50					14																584		
L/RPB	48+54.43		RT		87.50															1							
L	50+59.33	52+34.33	RT	175.00				BRIDGE	9.7		50		1		1			1							196		
L	57+11.99	58+99.49	LT	187.50				BRIDGE	9.3		50		1		1			1							201		
Y9/L	10+95.88	71+36.51	RT		75.00																						
L	71+36.51	71+61.51	RT	25.00																							
L	71+61.51		RT		50.00							6.25	2						1								
																		2									
Y3REV	29+00.00	34+00.00	RT	500.00					8	11	50	50	1	1				2							387		
Y9	10+95.88	13+20.88	LT	225.00					2		50		1					1									
Y9	22+00.00	25+00.00	LT	300.00					2		25	25	1	1			2										
Y9	22+00.00	25+00.00	RT	300.00					2		25		1				1			1							
	DEDUCT ANCHORS:		SUBTOTAL	3412.50	412.50										2		3	8	2	3					1569		
	III	2		18.75	-37.5																						
	GREU TL-2	3		25.00	-75																						
	GREU TL-3	8		50.00	-400																						
	AT-1	2		6.25		-12.5																					
	CAT-1	3		6.25	-12.5	-6.25																					
			TOTAL	2887.50	393.75										2		3	8	2	3					1600		
	ADDITONAL POSTS:	5	SAY	2900	400																						

HERB082023

COMPUTED BY:	LMJ / KAH	DATE:	5/12/22; Rev 3/25/25
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PROJECT NO.	SHEET NO.
U-6018	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 %	Drainage Pipe (RCP, CSP, HDPE, or PVC) 15	18	24		DO NOT USE RCP	DO NOT USE CSP	DO NOT USE HDPE	DO NOT USE PVC	C. S. PIPE 15 .064	18 .064	24 .064		R. C. PIPE CLASS IV 15	18	24	30	36	42		R. C. PIPE CLASS V 15	18	24	30		ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	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	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	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	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING D.I. TO J.B.	ADJUST D.I.	15" C.S. ELBOW		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
L 27+02	16 LT	0401		826.1																															1			1	1																																					
		0401	0402		823.1	822.9														28																																																							
L 30+74	20 LT	0403		827.3																															1			1	1																																				SEE SPECIAL DETAIL 2C-9
		0403	0404		825.1	825.0																					4																																																		
L 30+78	20 LT	0404		827.3																															1			1	1																																				SEE SPECIAL DETAIL 2C-9
		0404	0412		825.0	824.8														28																																																						
L 27+01	17 RT	0405		826.1																															1				1																																					
		0405	0407		823.9	822.9														376																																																							
L 30+74	20 RT	0407		827.3																															1			1	1																																				
		0407	0413		822.9	822.7														32																																																							
L 30+78	20 RT	0408		827.3																															1			1	1																																				
		0408	0407		824.3	824.2														4																																																							
L 31+20	43 LT	0409		826.0																																																																									PIPE STUB OUT
		0409	0410		822.8	820.9																88																																																						
L 29+04	41 RT	0414						36																																																																				
L 30+47	41 LT	0415						52																																																																				
L 32+50	20 LT	0501		827.8																															1			1		1																																			SEE SPECIAL DETAIL 2C-9
		0501	0508		825.5	825.4														24																																																							
L 35+50	20 LT	0502		833.0																															1			1		1																																		
		0502	0501		829.5	825.5														304																																																							
Y3 34+06	23 RT	0503		833.4																															1			1			1																																		
		0503	0504		830.4	829.1		12																																																																					
L 39+35	32 LT	0505		837.7																															1			1		1																																		
		0505	0507		834.7	833.3														32																																																							
L 32+50	20 RT	0509		827.8																															1			1			1																																		
		0509	0510		824.8	824.5														32																																																							
L 35+50	20 RT	0511		833.0																															1			1			1																																		
		0511	0502		830.0	829.5														40																																																								
L 43+00	20 RT	0512		841.2																															1			1			1																																		
		0512	0514		837.0	826.8	2.8									48																																																								2						
L 44+07	20 RT	0513		842.0																															1			1			1																																		
		0513	0512		838.0	837.0	0.5													108																																																								
L 41+61	59 RT	0515		832.8																															1															1								1																						
		0515	0516		830.3	830.0															44																																																						
SR1 10+63	20 RT	0516		838.1																															1	3.1		1		1																																		
L 39+36	46 RT	0520		835.1																															1															1								1																						
L 40+22	55 RT	0521		834.9																															1															1								1																						
L 41+25	58 RT	0522		832.5																															1															1								1																						
		0522	0515		830.6	830.3															40																																																					
L 38+45	39 RT																																																																											0.090		
L 45+00	31 RT	0601		842.5																															1			1			1																																		
		0601	0513		839.0	838.0	0.4													96																																																								
L 46+50	32 RT	0602		843.8																															1			1			1																																		
		0602	0601		840.8	839.0														152																																																							
L 46+50	4 LT	0603		845.0																															1			1			1			1																																				
		0603	0602		842.0	840.8														40																																																								
L 48+00	5 LT	0604		846.4																															1			1			1			1																																				
		0604	0603		843.4	842.0														152																																																							
L 50+30	34 RT	0605		846.0																															1			1			1																																		
		0605	0606		843.0	840.8														200																																																							
							SHEET TOTALS	100								48				1648	84	88					4								24	3.1		19	6	4	10			2						4							4																2				0.090		

ABBREVIATIONS

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

HERB082023

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-6018	3D-2

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 %	Drainage Pipe (RCP, CSP, HDPE, or PVC) 15	18	24		DO NOT USE RCP	DO NOT USE CSP	DO NOT USE HDPE	DO NOT USE PVC	C. S. PIPE 15 .064	18 .064	24 .064		R. C. PIPE CLASS IV 15	18	24	30	36	42		R. C. PIPE CLASS V 15	18	24	30	
L 52+31	34 RT	0606		847.3																											
		0606	0607		840.8	840.0														20											
L 52+24	51 RT	0607		845.3	837.8																										
L 52+10	35 LT	0608		847.6																											
		0608	0609		844.6	842.0														84											
L 52+93	34 LT	0609		847.4																											
L 52+58	4 RT	0626		848.2	841.3																										
		0610	0611		828.4	822.8										56															
RPB 11+32	15 RT	0610		840.1																											
RPA 13+37	49 RT	1010		816.8																											
RPA 12+63	22 LT	1012		817.9																											
L 57+02	35 LT	0615A			846.7																										
L 57+17	35 LT	0615		846.7																											
		0615A	0615		841.7	841.2														16											
L 56+47.5	34 RT	0616A		846.7																											
L 56+55	34 RT	0616		846.7																											
		0616A	0616		840.7	840.2														8											
		0616	0617		840.2	840.1	0.3													12											
L 56+49	40 RT	0617		847.4																											
L 46+24	88 RT	0619		813.9																											
		0619	0620		806.9	806.8																		32							
RPA 13+00	31 LT	1011		817.4																											
		1011	1012		814.7	813.7														40											
L 50+50	5 RT	0625		847.5																											
		0625	0605		844.9	843.0														36											
		0704	0705		836.2	834.3														32											
RPD 16+16	33 LT	0704		839.2																											
L 62+36	30 RT	0706		843.4																											
		0706	0707		840.4	839.5														32											
Y6 11+39	20 RT	0708		840.8																											
		0708	0709		838.6	837.8																					40				
		0709	0710		837.8	837.5										16															
Y6 11+39	22 LT	0709		840.8																											
L 62+00	34 LT	0711		842.6																											
		0711	0724		841.8	841.6														20											
L 64+95	34 LT	0712		837.8																											
		0712	0713		834.8	832.2														104											
L 66+00	22 LT	0713		835.2																											
		0713	0714		832.2	823.0														308											
L 69+09	22 LT	0714		825.1																											
		0714	0715		822.1	821.9	0.3													28											
L 67+33	22 RT	0716		831.2																											
		0716	0717		828.2	821.0														236											
L 69+69	22 RT	0717		822.7																											
		0717	0718		819.4	818.9														48											
L 67+33	40 RT	0719																													
		0719	0716		830.1	828.2														20											
L 59+00	6 LT	0720		847.0																											
		0720	0721		842.0	841.5														40											
L 59+00	34 RT	0721		846.2																											
SHEET TOTALS																72				1084				32			40				

LINE & STATION	FROM	TO	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	5' THRU 10' (A) LIN. FT.	10' AND ABOVE (B) LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G	
L 52+31	0606					1	1.5						
	0606	0607											
L 52+24	0607					1	2.5						
L 52+10	0608					1			1			1	
	0608	0609											
L 52+93	0609					1	0.4						
L 52+58	0626					1	3.2						
	0610	0611											
RPB 11+32	0610					1	5.0	1.7	1			1	
RPA 13+37	1010												
RPA 12+63	1012												
L 57+02	0615A					1							
L 57+17	0615					1	0.5		1			1	
	0615A	0615											
L 56+47.5	0616A					1	1.7						
L 56+55	0616					1	1.5						
	0616A	0616											
	0616	0617											
L 56+49	0617												
L 46+24	0619					1	2.0						
	0619	0620											
RPA 13+00	1011					1							
	1011	1012											
L 50+50	0625					1							
	0625	0605											
	0704	0705											
RPD 16+16	0704					1			1		1		
L 62+36	0706					1			1		1		
	0706	0707											
Y6 11+39	0708					1			1		1		
	0708	0709											
	0709	0710											
Y6 11+39	0709					1			1			1	
L 62+00	0711					1			1			1	
	0711	0724											
L 64+95	0712					1			1			1	
	0712	0713											
L 66+00	0713					1			1			1	
	0713	0714											
L 69+09	0714					1			1			1	
	0714	0715											
L 67+33	0716					1			1		1		
	0716	0717											
L 69+69	0717					1			1		1		
	0717	0718											
L 67+33	0719												
	0719	0716											
L 59+00	0720					1							
	0720	0721											
L 59+00	0721					1	1.2		1			1	
SHEET TOTALS						25	19.5	1.7	14		5	9	

LINE & STATION	FROM	TO	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	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	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	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING D.I. TO J.B.	ADJUST D.I.	15" C.S. ELBOW		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
L 52+31	0606					1																															DI IN APPROACH SLAB
	0606	0607																																			
L 52+24	0607																					1						1									
L 52+10	0608																																				
	0608	0609																																			
L 52+93	0609					1																															
L 52+58	0626		1																						1	1											TB DI W/STEEL GRATE/FRAME
	0610	0611																																			
RPB 11+32	0610																																				
RPA 13+37	1010																													1							
RPA 12+63	1012																											1	1								SEE SPECIAL DETAIL 2C-10
L 57+02	0615A					1																															
L 57+17	0615																																				
	0615A	0615																																			
L 56+47.5	0616A					1																															
L 56+55	0616					1																															
	0616A	0616																																			
	0616	0617																																			
L 56+49	0617																											1	1								SEE SPECIAL DETAIL 2C-10
L 46+24	0619																					1															JB W/SLAB LID
	0619	0620																																			
RPA 13+00	1011									1					1																						
	1011	1012																																			
L 50+50	0625		1																						1	1											TB DI W/STEEL GRATE/FRAME
	0625	0605																																			
	0704	0705																																			
RPD 16+16	0704																																				
L 62+36	0706																																				
	0706	0707																																			
Y6 11+39	0708																																				SEE SPECIAL DETAIL 2C-9
	0708	0709																																			
	0709	0710																																			
Y6 11+39	0709																																				
L 62+00	0711																																				SEE SPECIAL DETAIL 2C-9
	0711	0724																																			
L 64+95	0712																																				
	0712	0713																																			
L 66+00	0713																																				
	0713	0714																																			
L 69+09	0714																																				
	0714	0715																																			
L 67+33	0716																																				
	0716	0717																																			
L 69+69	0717																																				
	0717	0718																																			
L 67+33	0719																																				PIPE STUB OUT
	0719	0716																																			
L 59+00	0720		1																						1	1											TB DI W/STEEL GRATE/FRAME
	0720	0721																																			
L 59+00	0721																																				
SHEET TOTALS			3			5				1					1							2			3	3		3	2	1							

ABBREVIATIONS

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

HERB082023

COMPUTED BY: LMJ / KAH DATE: 5/12/22; Rev 3/25/25

CHECKED BY: WKJ / WHT DATE: 5/12/22; Rev 4/2/25

PROJECT NO.	SHEET NO.
U-6018	3D-3

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 %	Drainage Pipe (RCP, CSP, HDPE, or PVC) 15	18	24		DO NOT USE RCP	DO NOT USE CSP	DO NOT USE HDPE	DO NOT USE PVC	C. S. PIPE 15 .064	18 .064	24 .064		R. C. PIPE CLASS IV 15	18	24	30	36	42		R. C. PIPE CLASS V 15	18	24	30		ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	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	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	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	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING D.I. TO J.B.	ADJUST D.I.	15" C.S. ELBOW		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
			0721	0722		841.5	840.6														48																																																								
L 59+00	34	LT	0723		846.2																														1			1		1																																					
			0723	0720		842.7	842.0														28																																																								
L 64+07	50	LT	0730					24																																																																				
L 65+88	42	LT	0731					24																																																																				
L 68+00	43	LT	0732					24																																																																				
Y6 65+47	41	RT	0733					24																																																																				
L 65+94	41	RT	0734					24																																																																				
L 66+95	40	RT	0735					24																																																																				
Y6 14+03	28	RT	0736																	96																																																							
L 70+51	62	LT	0801		819.9																														1			1	1																																					
			0801	0802		817.8	815.4														24																																																								
Y8 16+50	14	LT	0803																			108																																																						
L 72+16	3	RT	0805	0806																				120								3.400																																										
			0807	0808		813.8	813.8														8																																																								
L 72+81	20	LT	0807		816.8																														1			1	1																																					
L 72+74	20	LT	0808		816.8																														1			1	1																																					
			0808	0809		813.8	811.2														36																																																								
			0810	0811		813.9	813.8														8																																																								
L 72+81	20	RT	0810		816.8																														1			1	1																																					
			0811	0812		813.8	813.1														32																																																								
L 72+74	20	RT	0811		816.8																														1			1	1																																					
Y9 11+65	20	LT	0820		813.3																														1			1			1																																				SEE SPECIAL DETAIL 2C-9
			0820	0821		811.1	808.8														116																																																								
Y9 12+83	20	LT	0821		811.0																														1			1			1																																				SEE SPECIAL DETAIL 2C-9
			0821	0822		808.8	808.3														52																																																								
Y9 13+33	24	LT	0822		811.3																														1			1			1																																					
			0822	1103		808.3	807.9														68																																																								
L 74+39	39	RT	0830					24																																																																				
L 75+13	39	RT	0831					24																																																																				
L 75+88	38	RT	0832					20																																																																				
L 77+87	19	RT	0834		822.3																														1											1	1																													
			0834	0833		820.1	819.9														56																																																								
L 75+66	42	LT	0835					56																																																																				
L 77+87	29	LT	0836					44																																																																				
Y8 14+86	36	LT	0837					36																																																																				
Y8 13+48	27	RT	0838					40																																																																				
Y3 25+44	5	RT	0901	0902		815.6	815.0															72																																																							
Y3 27+20	4	RT	0903	0904		816.9	815.8															72																																																							
Y3 15+72	37	RT	0907							24																																																																			
RPD 13+50	35	RT	1001		823.2																														1															1							1																			
			1001	1002		820.5	818.5														32																																																								
			1003	1004		823.5	817.4	2.9										28																																																												
RPD 13+25	76	LT	1003		825.2																																																																									PIPE STUB OUT
RPD 13+24	49	LT	1004		820.4																														1															1							1																			
			1004	1005		817.4	814.9	1.3													120																																																									
RPD 12+00	41	LT	1005		817.1																														1																1						1																			
			1005	1006		814.9	814.0	1.5													72																																																									
RPD 12+13	28	RT	1006																																																																1							
RPD 13+17	38	LT																																																																													0.090		
SHEET TOTALS									388		24							28			508	432		108	120								3.400			13			9	5	1	3						1	1		2	1						3													1						0.090		

ABBREVIATIONS

- **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

HERB082023

COMPUTED BY:	LMJ / KAH	DATE:	5/12/22; Rev 3/25/25
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PROJECT NO.	SHEET NO.
U-6018	3D-4

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 %	Drainage Pipe (RCP, CSP, HDPE, or PVC) 15	18	24		DO NOT USE RCP	DO NOT USE CSP	DO NOT USE HDPE	DO NOT USE PVC	C. S. PIPE 15 .064	18 .064	24 .064		R. C. PIPE CLASS IV 15	18	24	30	36	42		R. C. PIPE CLASS V 15	18	24	30		ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	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	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	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	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING D.I. TO J.B.	ADJUST D.I.	15" C.S. ELBOW		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
Y9 15+00	15	RT	1101		813.1																															1			1			1																																		
			1101	1130		808.9	807.5	0.5																32																																																						
Y9 14+00	18	RT	1102		812.1																															1			1			1																																		
			1102	1103		809.8	807.9																					36																																																						
Y9 14+00	17	LT	1103		812.1																															1																												1						1										
			1103	1130		807.9	807.8														104																																																											
Y9 21+44	14	RT	1104		819.9																															1			1		1																																					SEE SPECIAL DETAIL 2C-9
			1104	1105		817.4	817.2														28																																																										
Y9 21+70	14	RT	1105		820.2																															1			1	1																																						
			1105	1114		817.2	816.6														24																																																										
Y9 22+45	14	RT	1106		821.0																															1			1			1																																		
			1106	1105		818.0	817.2														76																																																										
Y9 25+50	1	RT	1107		827.2																															1			1					1																							1	1											TB DI W/STEEL GRATE/FRAME
			1107	1117		824.2	823.5														52																																																										
RAB2 14+00	3	RT	1108		826.5																															1			1			1																																		SEE SPECIAL DETAIL 2C-9
			1108	1116		824.2	823.8														24																																																										
RAB2 10+50	2	RT	1109		826.9																															1			1		1																																					SEE SPECIAL DETAIL 2C-9
			1109	1108		824.7	824.2																					88																																																						
RAB2 11+70	2	RT	1110		827.4																															1			1		1																																					SEE SPECIAL DETAIL 2C-9
			1110	1119		825.2	825.0														56																																																											
Y6 21+83	1	RT	1111		827.6																															1								1																							1	1											TB DI W/STEEL GRATE/FRAME
			1111	1118		824.9	824.5														48																																																										
Y9 22+55	14	LT	1113		821.2																															1			1		1																																					
			1113	1115		817.1	816.9														32																																																										
Y9 22+83	14	LT	1115		821.5																															1	5.0		1			1																																		
			1115	1127		811.6	810.2															44																																																								
Y6 21+60	0	CL	1119		828.7																															1																											1																
			1119	1111		825.0	824.9														24																																																										
Y9 15+00	37	RT	1120		811.9																																																																												PIPE STUB OUT
			1120	1101		809.6	808.9	0.5																24																																																							
Y9 24+05	4	LT	1124																						128								3.400																																															
Y9 22+94	48	RT	1126		815.3																																																																												PIPE STUB OUT
			1126	1115		813.6	811.6															68																																																							
Y9 15+00	14	LT	1130		813.4																															1	0.9																											1					1										
			1130	1121		807.5	807.0	0.6																28																																																									
Y6 17+74	1	LT	1133																					128																																																									
L 68+19	28	RT																																																																													118	
Y6 17+73	1	LT																																																																													125	
L 38+89	42	RT																																																																													88	
L 41+89	64	RT																																																																													31	
L 46+24	91	RT																																																																													6	
L 46+32	67	RT																																																																													63	
Y6 13+91	29	RT																																																																													68	
Y3 15+68	21	RT																																																																													31	
L 31+21	1	RT																																																																														Remove 42' of Existing 24" RCP
RPD 13+24	60	LT																																																																													33	
RPD 13+20	40	LT																																																																													6	
L 77+90	19	LT																																																																													28	
L 77+69	30	LT																																																																													19	
L 77+50	20	RT																																																																													26	
SHEET TOTALS																					468	112		212	128			124					3.400			15	5.9		11	1	4	5		2																			1	2		2	2		2								642	

ABBREVIATIONS

- 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

HERB082023

COMPUTED BY:	LMJ / KAH	DATE:	5/12/22; Rev 3/25/25
CHECKED BY:	WKJ / WHT	DATE:	5/12/22; Rev 4/2/25

PROJECT NO.	SHEET NO.
U-6018	3D-5

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 %	Drainage Pipe (RCP, CSP, HDPE, or PVC) 15	Drainage Pipe 18	Drainage Pipe 24	Drainage Pipe	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE HDPE	DO NOT USE PVC	C. S. PIPE 15 .064	C. S. PIPE 18 .064	C. S. PIPE 24 .064	C. S. PIPE	R. C. PIPE CLASS IV 15	R. C. PIPE CLASS IV 18	R. C. PIPE CLASS IV 24	R. C. PIPE CLASS IV 30	R. C. PIPE CLASS IV 36	R. C. PIPE CLASS IV 42	R. C. PIPE CLASS IV	R. C. PIPE CLASS V 15	R. C. PIPE CLASS V 18	R. C. PIPE CLASS V 24	R. C. PIPE CLASS V 30	R. C. PIPE CLASS V
L 77+11	20 RT																														
L 76+60	21 RT																														
L 76+05	21 RT																														
L 75+59	20 RT																														
L 75+14	19 RT																														
L 74+57	18 RT																														
L 77+75	20 RT																														
Y8 17+03	20 LT																														
L 72+16	1 RT																														
L 73+50	18 RT																														
L 75+54	19 LT																														
L 66+94	37 RT																														
L 65+90	35 RT																														
L 65+42	36 RT																														
L 65+89	34 LT																														
L 64+13	36 LT																														
L 67+99	34 LT																														
Y8 13+53	12 RT																														
Y8 14+86	25 LT																														
Y8 15+64	30 LT																														
L 52+27	36 RT																														
L 52+23	46 RT																														
L 41+48	60 RT																														
L 34+16	40 LT	0530						24																							
SHEET TOTALS								56																							
PROJECT TOTALS								512		24						120	28			3708	628	88	320	280			168				

LINE & STATION	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	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	CONCRETE TRANSITIONAL SECTION 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	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	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	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING D.I. TO J.B.	ADJUST D.I.	15" C.S. ELBOW		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
L 77+11																																													51	
L 76+60																																													52	
L 76+05																																													58	
L 75+59																																													34	
L 75+14																																													52	
L 74+57																																													56	
L 77+75																																													25	
Y8 17+03																																													48	
L 72+16																																														Remove 41' Existing 24" RCP
L 73+50																																													24	
L 75+54																																													20	
L 66+94																																													26	
L 65+90																																													19	
L 65+42																																													22	
L 65+89																																													28	
L 64+13																																													48	
L 67+99																																													31	
Y8 13+53																																													53	
Y8 14+86																																													20	
Y8 15+64																																													15	
L 52+27																																													10	
L 52+23																																													9	
L 41+48																																														Remove 41' Existing 18" RCP
L 34+16																																														
SHEET TOTALS																																													733	
PROJECT TOTALS	6.800			77	30.7		53	12	14	27		5	2		5	1	1		7	1				1		7					3	2		5	5		5	2	2	2				0.180	1343	

ABBREVIATIONS

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

COMPUTED BY: Andrew Drda DATE: 3/17/2025
CHECKED BY: Jinyoung Park DATE: 3/17/2025

(2-3-23)

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-6018	3G-1

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				SD	1000
				TOTAL LF:	1000

*UD = Underdrain
*BD = Blind Drain
*SD = Subsurface Drain

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type* ASU(1/2)/ AST	Aggregate Thickness INCHES [8" for ASU(2)]	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Subgrade Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
-L-	35+50.00	37+50.00	ASU(1)	12"	225	450	675		
-Y6-	22+00.00	23+00.00	ASU(1)	12"	125	225	325		
CONTINGENCY			ASU(1)	12"	500	1000	1500		
			TOTAL CY/TONS/SY:		850	1675**	2500**	0	0

*ASU(1/2) = Aggregate Subgrade (Type 1 or 2)
*AST = Aggregate Stabilization
**Total tons of "Class IV Subgrade Stabilization" and total square yards of "Geotextile for Subgrade Stabilization" are only the estimated quantities for ASU(1/2)/AST and may only represent a portion of the subgrade stabilization and geotextile quantities shown in the Item Sheets of the Proposal.

COMPUTED BY:	MML	DATE:	12/21/2022
CHECKED BY:	KMP	DATE:	12/21/2022

PROJECT NO.	SHEET NO.
U-6018	3P-1

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5808 FARRINGDON PLACE
RALEIGH, NC 27609
(919) 872-5115
NC LICENSE NO. F-1524
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PARCEL INDEX

NOTE: ALL AREAS ARE IN SF

PARCEL NO.	PLAN SHEET NO.	PROPERTY OWNER NAME	R/W AREA TAKEN	TEMP CONST ESMT	PERM DRAIN ESMT	PERM UTIL ESMT	AERIAL UTIL ESMT	DRAINAGE UTIL ESMT
1	4, 5	ERVIN R. CECIL, BOBBY LEE CECIL TRUST, BOBBY CECIL, ERVIN CECIL	6313			5571		825
1A	4, 5	RAY E. CECIL, BOBBY L. CECIL, DANIEL CECIL	22768	848		16072		11081
2	4	BOBBY L. CECIL, NANCY CECIL	5170			1801		
2A	4, 5	BOBBY L. CECIL, NANCY CECIL	5035	786		4329		
3	5	ERVIN RAY CECIL, TRUSTEE OF THOMAS N. HUFF TRUST, f/b/o BOBBY LEE CECIL	3160			2602		
4	5	ERVIN RAY CECIL, TRUSTEE OF THOMAS N. HUFF TRUST, f/b/o BOBBY LEE CECIL	6974	575		11980		
5	5	ERVIN R. CECIL	7091	5		2693		2880
6	5, 6, 9	CLIFTON H. LAMD, FRED E. & DIANE A. MEREDITH REVOCABLE TRUST	75736	38884	2875	18356		16044
7	5	SMITH & SHORE OIL CO.		1162		434		
8	5, 6	LIBERTY STREET HOSPITALITY LLC		10148				
9	7, 8, 10	WILLIAM L. CORN, ROBERT E. SYKES, LINDA SYKES	4405	1276	2556	2313		328
10	7	COASTAL BUSINESS PARTNERS LLC		7120				
11	7, 11	WILLIAM L. CORN, KIMBERLY J. COX, THATBOTHERSME LLC	30	3033	1332	1745	194	
12	7	AILEEN REAVIS				1831		
13	7	MANOLA C. ARPHAI		244		1459	257	
14	7, 8	LILA PHAM	7889	3148	3128	2702		1897
15	8, 11	PERRY WOODS III, SIGRID E. WOODS	50824	7862	10636			9685
16	8	HILLTOP HOLDING III LLC	17303	1150		159		16575
17	8	TRIAD PROPERTIES OF HIGH POINT LLC	2039			1716		215
18	8	CLAUDIA MARSH COLTRANE, DEBRA COLTRANE HELSABECK & BARRY HELSABECK	2033			1502	267	
19	8	MARTHA Y. SNYDER	3522			2745		
20	8	CLARENCE W. DAVIS	1694			1506		
21	9	FARMERS & MERCHANTS BANK		2867		380		
22	9	LBD PROPERTIES LLC, STEPHEN HALL	910			3868		3154
23	5, 9	MARSHALL MOORE, STEVE A. MOORE, RICHARD W. MOORE, ADAM T. MOORE	12413	11066		2116		1767
24	7, 8	LILA PHAM	1056		2326			
24A	7, 8, 11	LILA PHAM	752	318	2182			
25	11	ANNIE M. CODY, DAVID B. CODY, JOSEPH T. CODY, GREGORY D. CODY	235	924	2127			
26	11	WILLIAM L. CORN, KIMBERLY J. COX, THATBOTHERSME LLC		2038	3502			
27	11	DON L. INGRAM, BETTY L. INGRAM	2729	374	2457			
28	11	JERRY FRAZIER, LOIS FRAZIER	208		783			
29	11	CLAYTON W. SHACKELFORD HEIRS, REGINA S. McDOWELL, LYNN S. HARRIS	48392	15007	37608			
30	11	JOHN C. SHACKELFORD, LORRAINE SHACKELFORD-GIDDENS, CHARLES A. SHACKELFORD	3080			7288		
31	7, 11	NAN SOON JON, TRUSTEE FOR THE BENEFIT OF JON JIBUM JON & MONICA SUE-JUNG JON	953	508		1248		
32	8	L. FRANKLIN FOX, GLADYS S. FOX		2416				
33	8	PINE GROVE BAPTIST CHURCH	1688	251	4587			
34	8	TIMOTHY J. HUFFMAN, BRENDA S. HUFFMAN		730				
35	8	RODNEY E. OTWELL, MARCIA S. OTWELL		1457				
36	8	GUILD-RAND FIRE PROTECTIVE ASSOC. INC.						7826
37	9	EMMA J. COX	NO CLAIM					
38	11	CNJ INC				639		
39	8	KIM TRAN				113		

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8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
U-6018	4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAILA M. POLICK
4/29/2025

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 030325 ENGINEER KAREN HEFNER
4/29/2025

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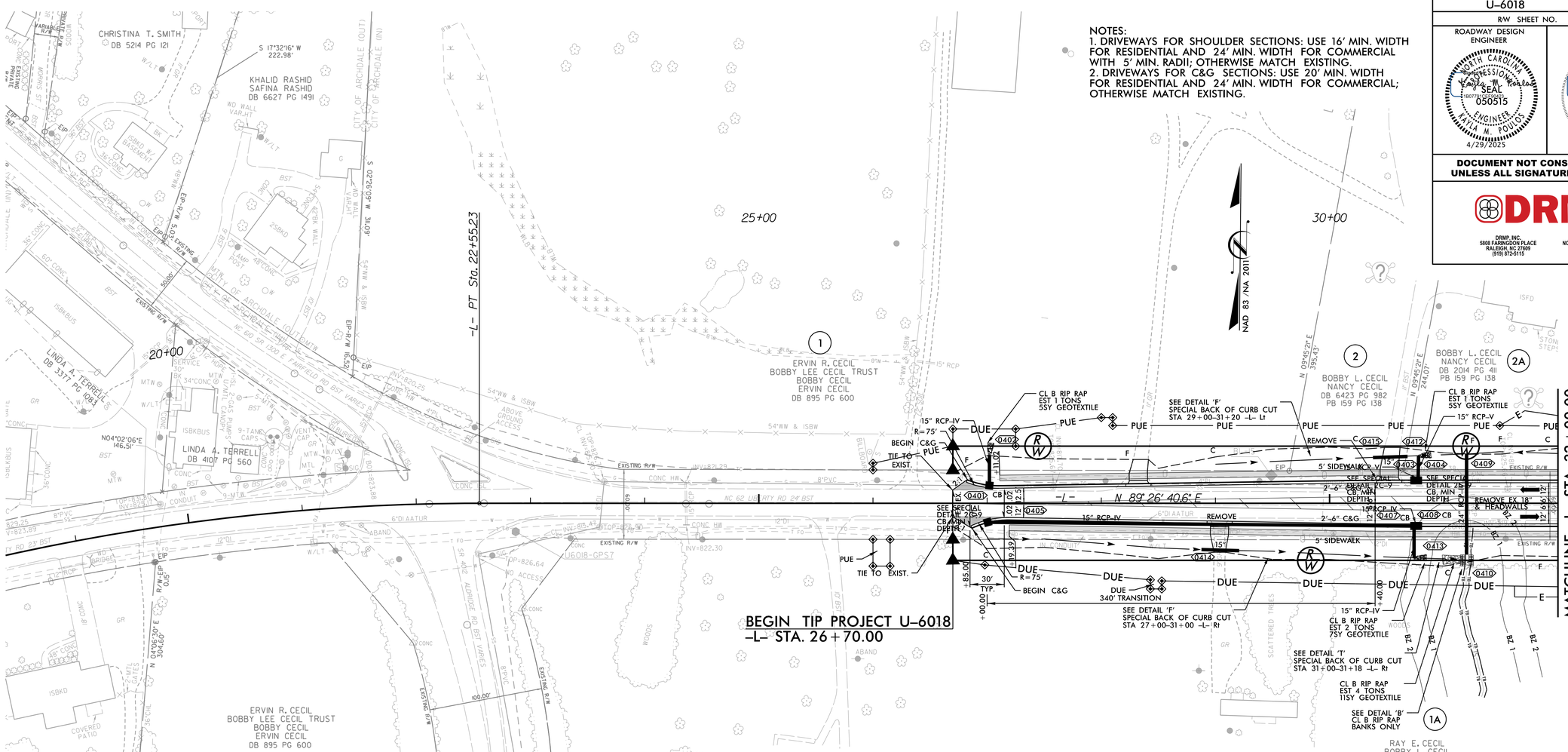
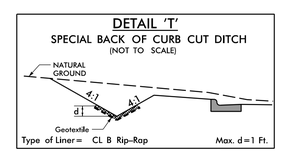
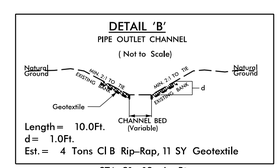
NOTES:
1. DRIVEWAYS FOR SHOULDER SECTIONS: USE 16' MIN. WIDTH FOR RESIDENTIAL AND 24' MIN. WIDTH FOR COMMERCIAL WITH 5' MIN. RADII; OTHERWISE MATCH EXISTING.
2. DRIVEWAYS FOR C&G SECTIONS: USE 20' MIN. WIDTH FOR RESIDENTIAL AND 24' MIN. WIDTH FOR COMMERCIAL; OTHERWISE MATCH EXISTING.

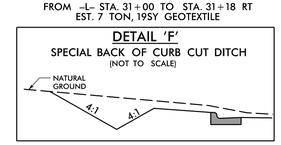




FROM -L- STA. 31+00 TO STA. 31+18 RT
EST. 7 TON, 19SY GEOTEXTILE



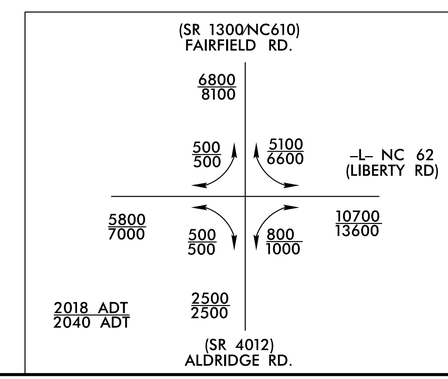
STA. 31+18 -L- Rt
DDE=3 CY



FROM STA. 29+00 TO STA. 31+20 -L- Lt
FROM STA. 27+00 TO STA. 31+00 -L- Rt

-L-
PI Sta 20+09.86
Δ = 14° 48' 19.7" (RT)
D = 3° 00' 00.0"
L = 493.52'
T = 248.14'
R = 1,909.86'

FOR R/W PLAN, SEE SHEET NO. 2B-1
FOR -L- PROFILE, SEE SHEET NO. 12



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User: mlindsey

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REVISIONS

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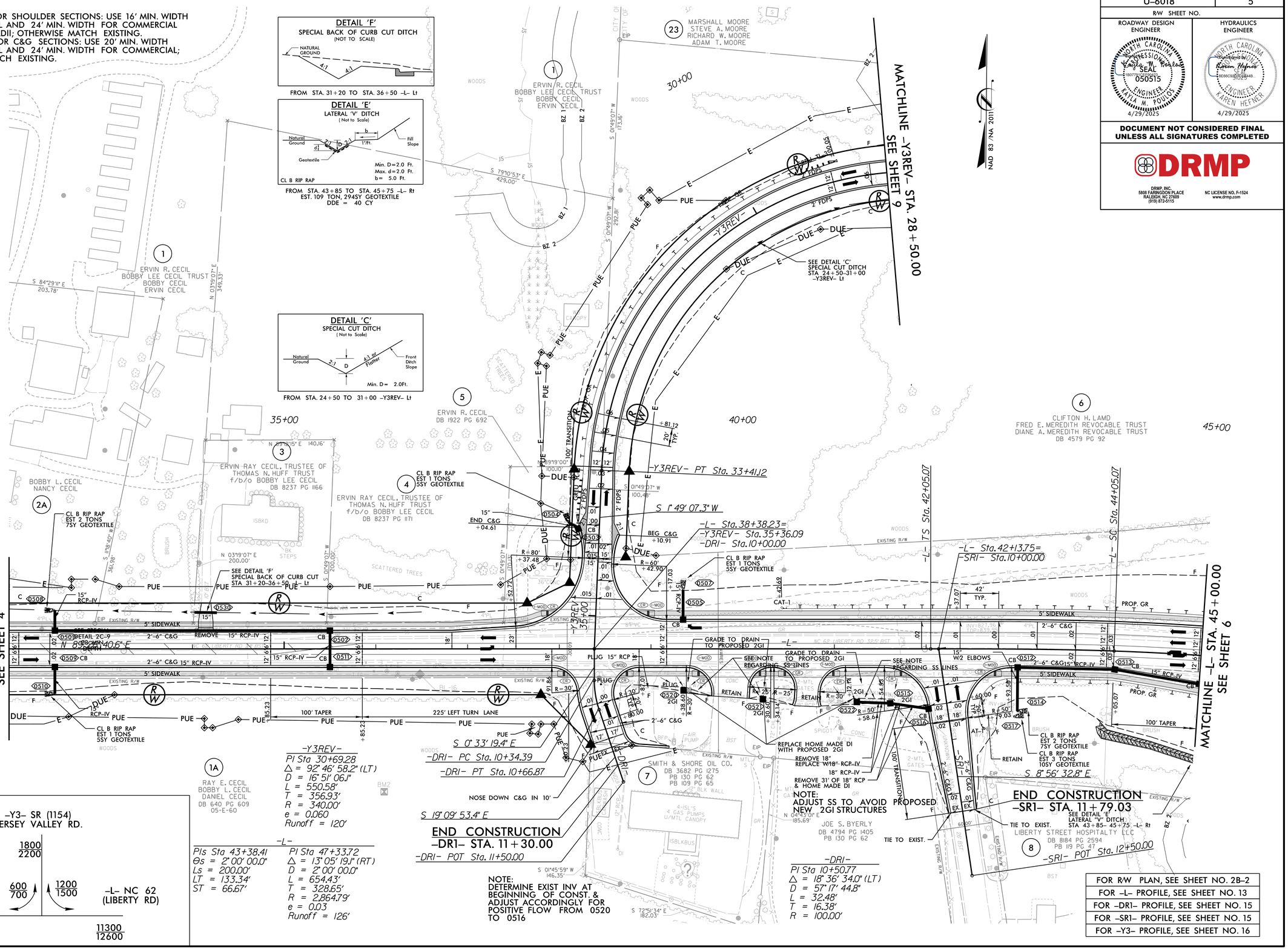
2. DRIVEWAYS FOR C&G SECTIONS: USE 20' MIN. WIDTH FOR RESIDENTIAL AND 24' MIN. WIDTH FOR COMMERCIAL; OTHERWISE MATCH EXISTING.



PROJECT REFERENCE NO.	SHEET NO.
U-6018	5
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 050515 ENGINEER KAILA M. POULOS
4/29/2025

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 050325 ENGINEER KAREN HEFNER
4/29/2025

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FOR R/W PLAN, SEE SHEET NO. 2B-2
FOR -L- PROFILE, SEE SHEET NO. 13
FOR -DR1- PROFILE, SEE SHEET NO. 15
FOR -SR1- PROFILE, SEE SHEET NO. 15
FOR -Y3- PROFILE, SEE SHEET NO. 16

3/25/2025
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User: mlindsey