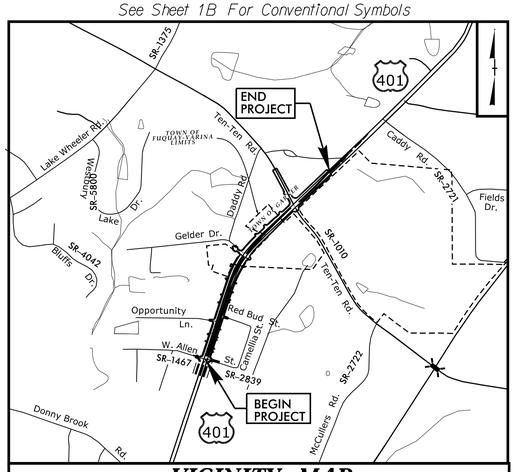
09/08/99

TIP PROJECT: U-5746

CONTRACT: C204968

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



VICINITY MAP
(NOT TO SCALE)

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAKE COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5746	1	

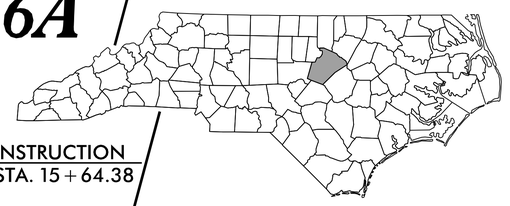
STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
54032.1.1	N/A	P.E.
54032.2.1	N/A	ROW
54032.2.2	N/A	UTIL.
54032.3.1	N/A	CONSTR.

NAD 83/NA 2011

LOCATION: US 401 (FAYETTEVILLE RD) FROM SR 1467 /2839 (ALLEN ST) TO NORTH OF SR 1010 (TEN-TEN RD)

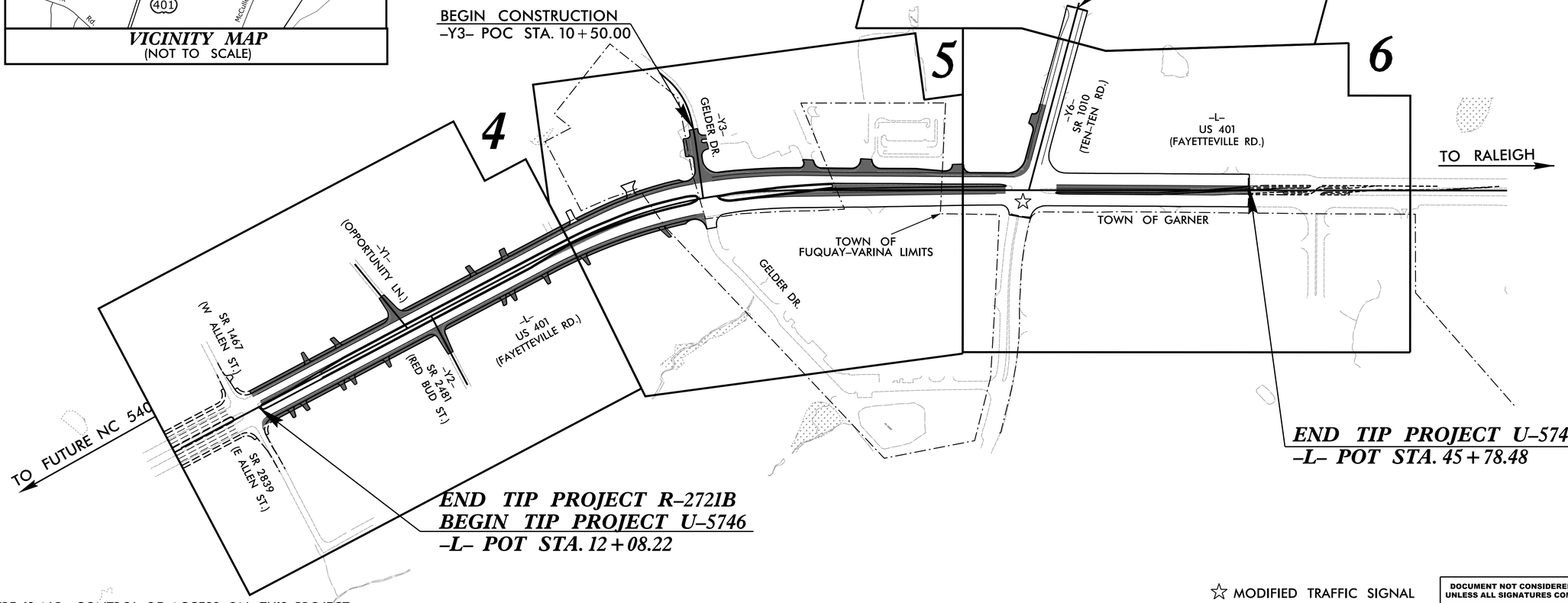
TYPE OF WORK: GRADING, PAVING, DRAINAGE, AND SIGNALS

6A



BEGIN CONSTRUCTION
-Y6- POT STA. 15+64.38

BEGIN CONSTRUCTION
-Y3- POC STA. 10+50.00



END TIP PROJECT U-5746
-L- POT STA. 45+78.48

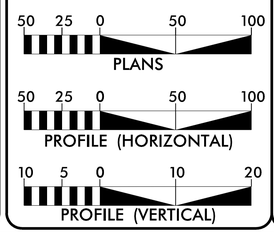
END TIP PROJECT R-2721B
BEGIN TIP PROJECT U-5746
-L- POT STA. 12+08.22

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT

☆ MODIFIED TRAFFIC SIGNAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

GRAPHIC SCALES



DESIGN DATA

ADT 2024 = 45,100
ADT 2044 = 64,000
K = 9 %
D = 70 %
T = 4 % *
V = 50 MPH
(* TTST 1% + DUAL 3%)
FUNC CLASS = RURAL ARTERIAL
STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-5746 = 0.638 MILES
TOTAL LENGTH TIP PROJECT U-5746 = 0.638 MILES

Prepared by the Office of:
HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
JANUARY 24, 2020

LETTING DATE:
NOVEMBER 19, 2024

CASEY HARRIS, PE
PROJECT ENGINEER

NIDHI SONAR
PROJECT DESIGN ENGINEER

BEN UPSHAW, PE
NCDOT CONTACT

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 053377 ENGINEER MICHAEL J. McNAMARA
9/9/2024
SIGNATURE: Michael McNamara *P.E.*

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 040286 ENGINEER CASEY E. HARRIS
9/9/2024
SIGNATURE: Casey Harris *P.E.*

STATE OF NORTH CAROLINA • DEPARTMENT OF TRANSPORTATION •

PLOT DRIVER: NCDOT.pdf.color.eng.50.plt PENTABLE: NCDOT.pshpfi.tbl
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8/17/99

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
U-5746	1A

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040286 ENGINEER CASEY E. HARRIS

9/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1 THRU 2A-4	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2C-1	TRANSITION FROM 2'-6" CURB & GUTTER TO VALLEY GUTTER
2C-2	CONCRETE SIDEWALK DETAIL IN LIEU OF STANDARD
3B-1	SUMMARY OF EARTHWORK, PAVEMENT REMOVAL SUMMARY AND GUARDRAIL SUMMARY
3D-1 THRU 3D-2	SUMMARY OF DRAINAGE QUANTITIES
3G-1	GEOTECHNICAL SUMMARIES
3P-1	PARCEL INDEX SHEET
4 THRU 6	PLAN SHEETS
7 THRU 9	PROFILE SHEETS
RW01 THRU RW06B	RIGHT OF WAY TITLE SHEET, SURVEY CONTROL SHEETS, PROPOSED ALIGNMENT CONTROL SHEETS, RIGHT OF WAY & EASEMENT CONTROL SHEETS, RIGHT OF WAY SHEETS
TMP-1 THRU TMP-11	TRANSPORTATION MANAGEMENT PLANS
PMP-1 THRU PMP-4	PAVEMENT MARKING PLANS
EC-1 THRU EC-9	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-7	SIGNING PLANS
SIG-1.0 THRU SIG-4.3	SIGNAL PLANS
SIG.M1A THRU SIG.M9	STANDARD DRAWINGS FOR METAL POLES
UC-1 THRU UC-5	UTILITY CONSTRUCTION PLANS
UO-1 THRU UO-4	UTILITIES BY OTHERS PLANS
X-0	CROSS-SECTION INDEX SHEET
X-0A	CROSS-SECTION EARTHWORK VOLUME SUMMARY
X-1 THRU X-23	CROSS-SECTIONS

2024 ROADWAY ENGLISH STANDARD DRAWINGS

EFF. 01-16-2024
REV.

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	
200.03	Method of Clearing - Method III
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
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, 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
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
815.02	Subsurface Drain
840.00	Concrete Base Pad for Drainage Structures
840.01	Brick Catch Basin - 12" thru 54" Pipe
840.02	Concrete Catch Basin - 12" thru 54" Pipe
840.03	Frame, Grates and Hood - for Use on Standard Catch Basin
840.14	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
840.22	Frames and Wide Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.45	Precast Drainage Structure
840.46	Traffic Bearing Precast Drainage Structure
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
846.01	Concrete Curb, Gutter and Curb & Gutter
848.01	Concrete Sidewalk
848.04	Street Turnout
848.06	Curb Ramp
852.01	Concrete Islands
852.06	Method for Placement of Drop Inlets in Concrete Islands
862.01	Guardrail Placement
862.02	Guardrail Installation

GENERAL NOTES

EFFECTIVE: 01-16-2024
REVISED:

GRADING AND SURFACING OR RESURFACING AND WIDENING:

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

CLEARING:

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

SUPERELEVATION:

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

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01 & 560.02.

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.

STREET TURNOUT:

STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE 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.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE DUKE ENERGY, AT&T, MCNC, SEGRA, SPECTRUM, NCDOT ITS, DOMINION ENERGY, TOWN OF FUQUAY-VARINA PUBLIC UTILITIES DEPARTMENT WATER & SEWER.

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

RIGHT-OF-WAY MARKERS:

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

CURB RAMPS

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

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_pshpfl.tbl
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CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale **S.U.E. = Subsurface Utility Engineering*

PROJECT REFERENCE NO.	SHEET NO.
U-5746	1B

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St. Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

BOUNDARIES AND PROPERTY:

- State Line
- County Line
- Township Line
- City Line
- Reservation Line
- Property Line
- Existing Iron Pin — EIP
- Computed Property Corner
- Property Monument — ECM
- Parcel/Sequence Number — 123
- Existing Fence Line
- Proposed Woven Wire Fence
- Proposed Chain Link Fence
- Proposed Barbed Wire Fence
- Existing Wetland Boundary — WLB
- Proposed Wetland Boundary — WLB
- Existing Endangered Animal Boundary — EAB
- Existing Endangered Plant Boundary — EPB
- Existing Historic Property Boundary — HPB
- Known Contamination Area: Soil — S
- Potential Contamination Area: Soil — S
- Known Contamination Area: Water — W
- Potential Contamination Area: Water — W
- Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

- Standard Gauge — CSX TRANSPORTATION
- RR Signal Milepost — MILEPOST 35
- Switch — SWITCH
- RR Abandoned
- RR Dismantled

RIGHT OF WAY & PROJECT CONTROL:

- Secondary Horiz and Vert Control Point
- Primary Horiz Control Point
- Primary Horiz and Vert Control Point
- Exist Permanent Easement Pin and Cap
- New Permanent Easement Pin and Cap
- Vertical Benchmark
- Existing Right of Way Marker
- Existing Right of Way Line
- New Right of Way Line — RW
- New Right of Way Line with Pin and Cap — RW
- New Right of Way Line with Concrete or Granite R/W Marker — RW
- New Control of Access Line with Concrete C/A Marker — CA
- Existing Control of Access — CA
- New Control of Access — CA
- Existing Easement Line — E
- New Temporary Construction Easement — E
- New Temporary Drainage Easement — TDE
- New Permanent Drainage Easement — PDE
- New Permanent Drainage / Utility Easement — DUE
- New Permanent Utility Easement — PUE
- New Temporary Utility Easement — TUE
- New Aerial Utility Easement — AUE

ROADS AND RELATED FEATURES:

- Existing Edge of Pavement
- Existing Curb
- Proposed Slope Stakes Cut — C
- Proposed Slope Stakes Fill — F
- Proposed Curb Ramp — CR
- Existing Metal Guardrail
- Proposed Guardrail
- Existing Cable Guiderail
- Proposed Cable Guiderail
- Equality Symbol
- Pavement Removal

VEGETATION:

- Single Tree
- Single Shrub
- Hedge
- Woods Line
- Orchard
- Vineyard

EXISTING STRUCTURES:

MAJOR:

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

MINOR:

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

UTILITIES:

POWER:

- Existing Power Pole
- Proposed Power Pole
- Existing Joint Use Pole
- Proposed Joint Use Pole
- Power Manhole — P
- Power Line Tower
- Power Transformer
- U/G Power Cable Hand Hole
- H-Frame Pole
- U/G Power Line LOS B (S.U.E.*) — P
- U/G Power Line LOS C (S.U.E.*) — P
- U/G Power Line LOS D (S.U.E.*) — P

TELEPHONE:

- Existing Telephone Pole
- Proposed Telephone Pole
- Telephone Manhole — T
- Telephone Pedestal — T
- Telephone Cell Tower
- U/G Telephone Cable Hand Hole — HH
- U/G Telephone Cable LOS B (S.U.E.*) — T
- U/G Telephone Cable LOS C (S.U.E.*) — T
- U/G Telephone Cable LOS D (S.U.E.*) — T
- U/G Telephone Conduit LOS B (S.U.E.*) — TC
- U/G Telephone Conduit LOS C (S.U.E.*) — TC
- U/G Telephone Conduit LOS D (S.U.E.*) — TC
- U/G Fiber Optics Cable LOS B (S.U.E.*) — T FO
- U/G Fiber Optics Cable LOS C (S.U.E.*) — T FO
- U/G Fiber Optics Cable LOS D (S.U.E.*) — T FO

WATER:

- Water Manhole — W
- Water Meter
- Water Valve
- Water Hydrant
- U/G Water Line LOS B (S.U.E*) — W
- U/G Water Line LOS C (S.U.E*) — W
- U/G Water Line LOS D (S.U.E*) — W
- Above Ground Water Line — A/G Water

TV:

- TV Pedestal — C
- TV Tower
- U/G TV Cable Hand Hole — HH
- U/G TV Cable LOS B (S.U.E.*) — TV
- U/G TV Cable LOS C (S.U.E.*) — TV
- U/G TV Cable LOS D (S.U.E.*) — TV
- U/G Fiber Optic Cable LOS B (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS C (S.U.E.*) — TV FO
- U/G Fiber Optic Cable LOS D (S.U.E.*) — TV FO

GAS:

- Gas Valve
- Gas Meter
- U/G Gas Line LOS B (S.U.E.*) — G
- U/G Gas Line LOS C (S.U.E.*) — G
- U/G Gas Line LOS D (S.U.E.*) — G
- Above Ground Gas Line — A/G Gas

SANITARY SEWER:

- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- U/G Sanitary Sewer Line — SS
- Above Ground Sanitary Sewer — A/G Sanitary Sewer
- SS Forced Main Line LOS B (S.U.E.*) — FSS
- SS Forced Main Line LOS C (S.U.E.*) — FSS
- SS Forced Main Line LOS D (S.U.E.*) — FSS

MISCELLANEOUS:

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

REVISIONS

12/2/2016

6/2/99

PROJECT REFERENCE NO.	SHEET NO.
U–5746	2A–1

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040286 ENGINEER CASEY E. HARRIS

9/30/2024

PAVEMENT DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 038876 ENGINEER SHIHAI ZHANG

9/30/2024

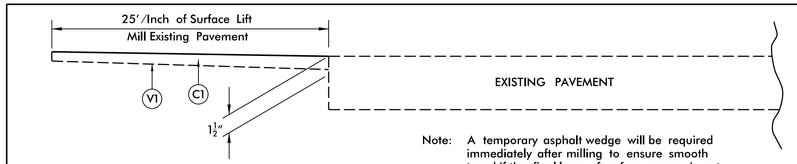
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

PAVEMENT SCHEDULE
(FINAL PAVEMENT DESIGN)

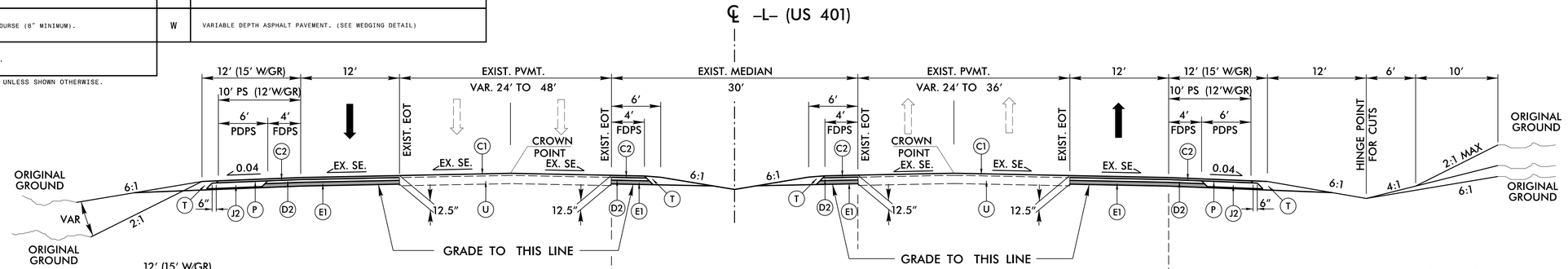
A1	6" PORTLAND CEMENT CONCRETE DRIVEWAY.	N	GEOTEXTILE FOR SUBGRADE STABILIZATION.
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	P	PRIME COAT AT THE RATE OF 0.35 GAL. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.	R1	2'-6" CONCRETE CURB AND GUTTER.
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.	R2	5" MONOLITHIC CONCRETE ISLAND (KEYED IN)
D1	PROP. APPROX. 2½" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.	R3	2'-6" CONCRETE VALLEY GUTTER. (SEE DETAIL 2C-1)
D2	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	S	4" CONCRETE SIDEWALK
D3	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.	T	EARTH MATERIAL.
E1	PROP. APPROX. 5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.	U	EXISTING PAVEMENT.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 3" IN DEPTH OR GREATER THAN 5½" IN DEPTH.	V1	INCIDENTAL MILLING.
J1	6" AGGREGATE BASE COURSE.	V2	VARIABLE DEPTH MILLING 0" TO 1½".
J2	VARIABLE DEPTH AGGREGATE BASE COURSE (8" MINIMUM).	W	VARIABLE DEPTH ASPHALT PAVEMENT. (SEE WEDGING DETAIL)
L	CLASS IV SUBGRADE STABILIZATION.		

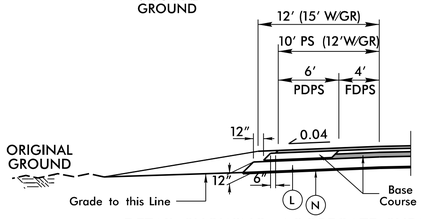
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



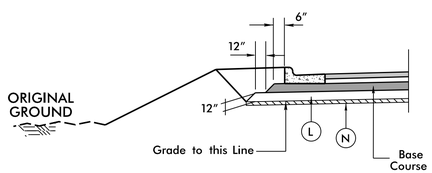
Note: A temporary asphalt wedge will be required immediately after milling to ensure smooth travel if the final layer of surface course is not placed on the same day as milling.

Incidental Milling Pavement Key–In Detail (Tie–In)



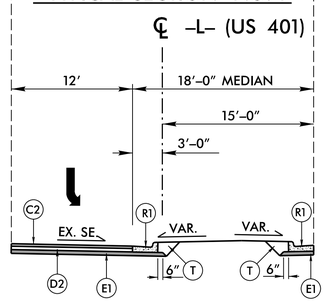


DETAIL SHOWING AGGREGATE SUBGRADE FOR SHALLOW UNDERCUT IN SHOULDER SECTIONS CONTINGENCY



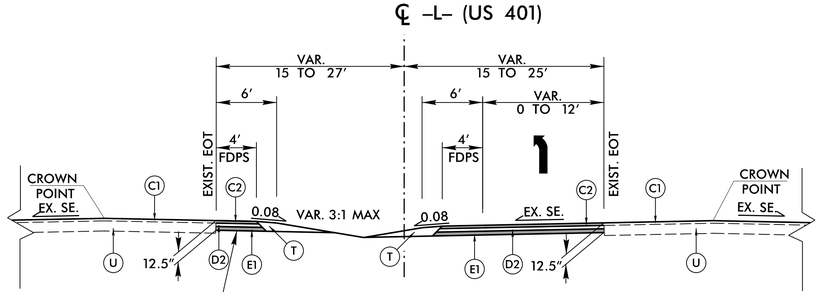
DETAIL SHOWING AGGREGATE SUBGRADE FOR SHALLOW UNDERCUT IN CURB & GUTTER SECTIONS CONTINGENCY

TYPICAL SECTION NO. 1



MEDIAN DETAIL NO. 1A

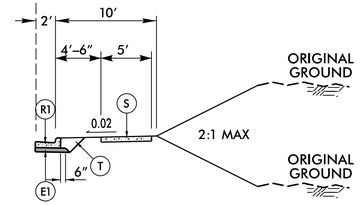
USE MEDIAN DETAIL 1A FOR:
–L– STA. 12+15.00 TO STA. 14+43.93



LEFT TURN DETAIL NO. 1C

USE LEFT TURN DETAIL 1C FOR:
–L– STA. 22+00.00 TO STA. 27+90.79

USE TYPICAL SECTION NO. 1 FOR:
–L– STA. 12+08.22 TO STA. 28+48.65



CURB AND GUTTER DETAIL NO. 1B

USE CURB AND GUTTER DETAIL 1B FOR :
–L– STA. 27+31.02 TO STA. 28+01.85 RT

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt
USER: CHARRIS
FILE: NCDOT\2016_NCDOT_Central_Reg_Div_Plan_Design_On-Call_M_\U-5746_Task_Order_3\6.0_CAD_BIM\6.2_WIP\U-5746_T0_3\Roadway\Proj\U5746_RDY_TYP.dgn
PENTABLE: NCDOT_pshpfl.tbl
DATE: 9/30/2024
TIME: 10:18:15 AM

PROJECT REFERENCE NO.	SHEET NO.
U–5746	2A–2

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040286 ENGINEER CASEY E. HARRIS

9/9/2024

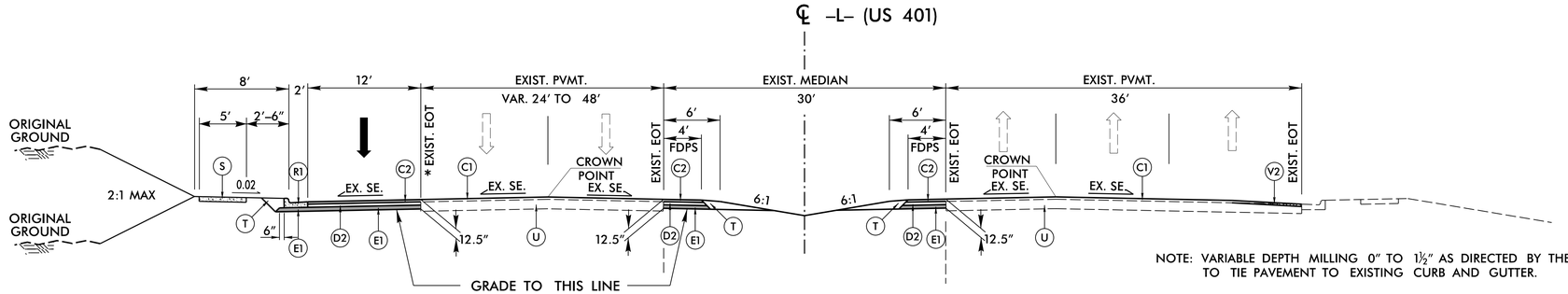
PAVEMENT DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 038126 ENGINEER SHIHAI ZHANG

9/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

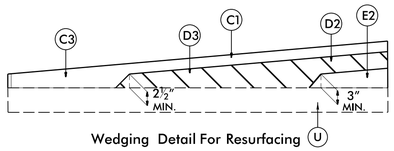


NOTE: VARIABLE DEPTH MILLING 0″ TO 1½″ AS DIRECTED BY THE ENGINEER TO TIE PAVEMENT TO EXISTING CURB AND GUTTER.

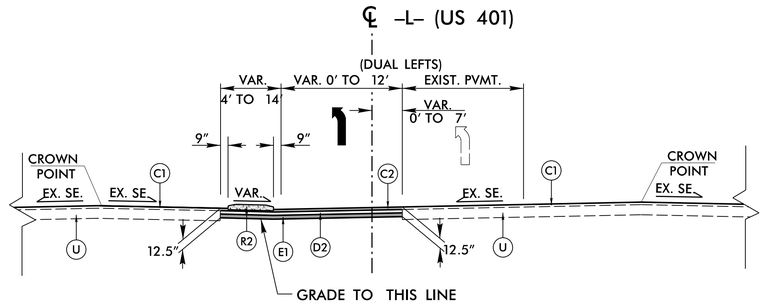
* WEDGE ASPHALT TO CORRECT CROSS SLOPE AT EXIST. LANE LINE. SEE PLANS FOR SUPERELEVATION.

TYPICAL SECTION NO. 2

USE TYPICAL SECTION NO. 2 FOR:
–L– STA. 28+48.65 TO STA. 38+63.89



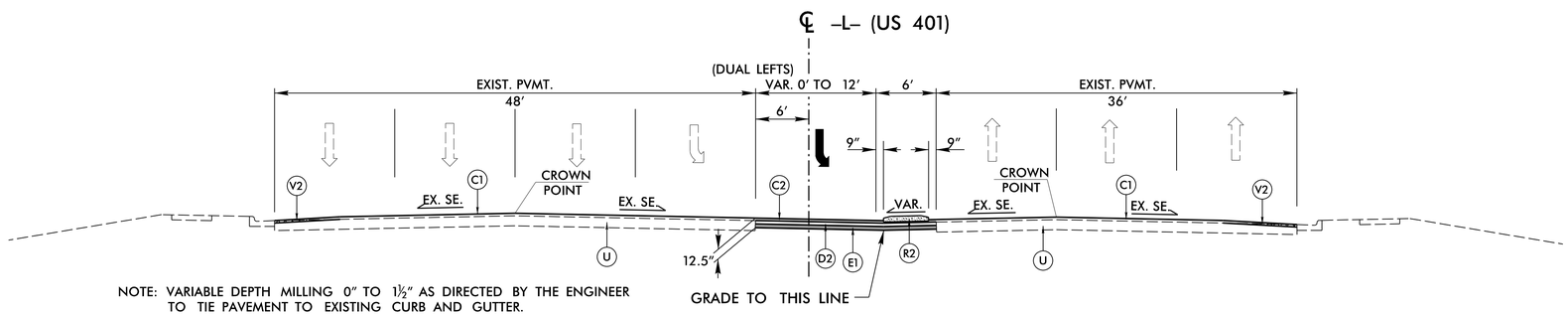
Wedging Detail For Resurfacing



LEFT TURN DETAIL NO. 2A

USE LEFT TURN DETAIL NO. 2A FOR:
–L– STA. 32+25.00 TO STA. 37+90.00

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
A1	6″ CONC. DRIVEWAY
C1	1.5″ S9.5C
C2	3″ S9.5C
C3	VAR. S9.5C
D1	2.5″ I19.0C
D2	4″ I19.0C
D3	VAR. I19.0C
E1	5.5″ B25.0C
E2	VAR. B25.0C
J1	6″ ABC
J2	VAR. ABC (8″ MIN.)
P	PRIME COAT
R1	2′-6″ CURB & GUTTER
R2	5″ MONOLITHIC CONC. ISLAND
R3	2′-6″ VALLEY GUTTER
S	4″ CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	INCIDENTAL MILLING
V2	VAR. DEPTH MILLING
W	VAR. DEPTH ASPHALT



NOTE: VARIABLE DEPTH MILLING 0″ TO 1½″ AS DIRECTED BY THE ENGINEER TO TIE PAVEMENT TO EXISTING CURB AND GUTTER.

TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3 FOR:
–L– STA. 38+63.89 TO STA. 45+78.48

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt PENTABLE: NCDOT_pshpfl.tbl
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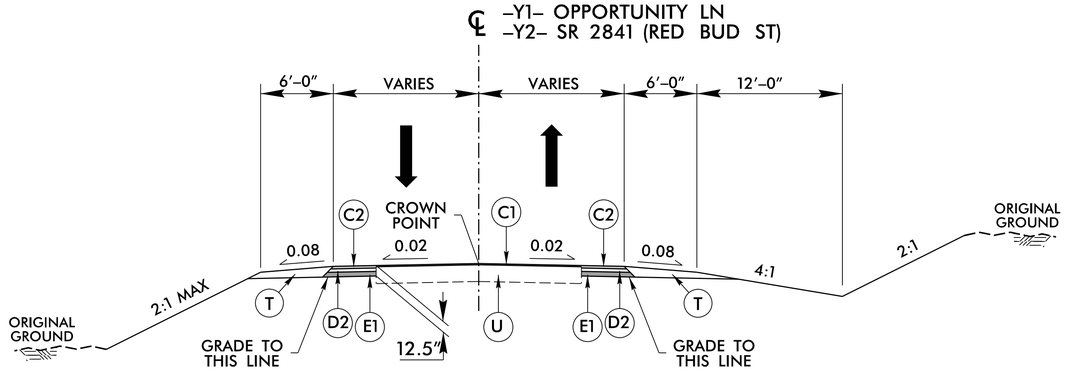
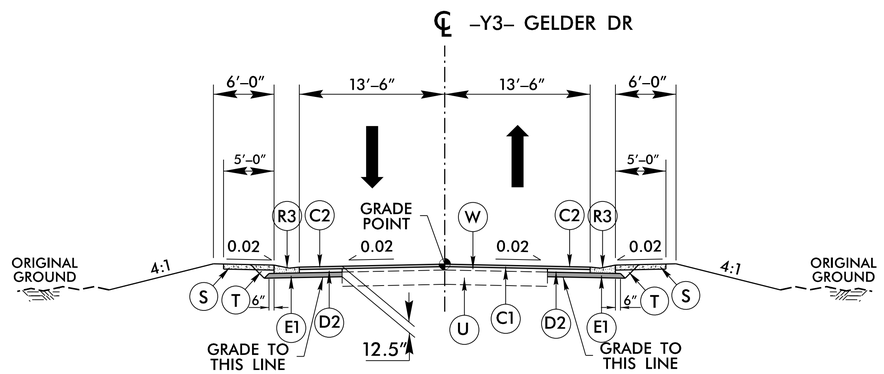


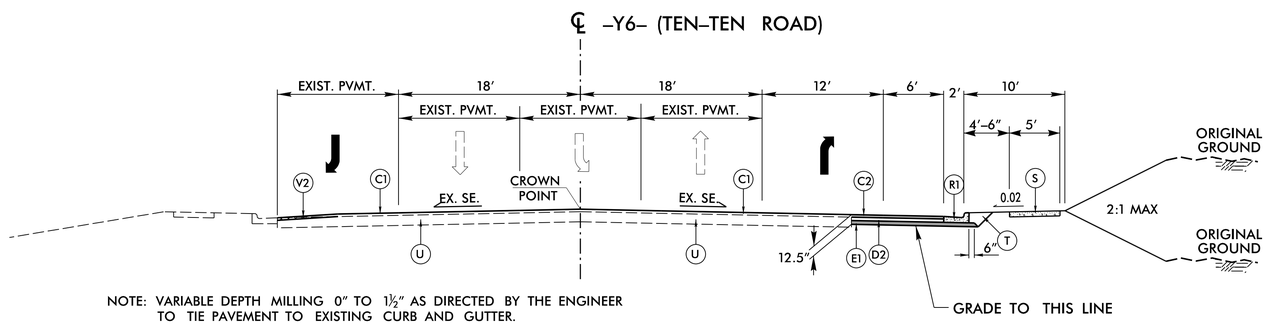
TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4 FOR:
–Y1– STA. 11+36.61 TO STA. 12+17.72
–Y2– STA. 10+51.00 TO STA. 11+35.49



TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5 FOR:
–Y3– STA. 10+50.00 TO STA. 12+01.17



NOTE: VARIABLE DEPTH MILLING 0″ TO 1½″ AS DIRECTED BY THE ENGINEER TO TIE PAVEMENT TO EXISTING CURB AND GUTTER.

TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6 FOR:
–Y6– STA. 18+96.18 TO STA. 21+19.42

PROJECT REFERENCE NO.	SHEET NO.
U–5746	2A–3

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 040286 ENGINEER CASEY E. HARRIS
9/9/2024

PAVEMENT DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 038126 ENGINEER SHIHAI ZHANG
9/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

PAVEMENT SCHEDULE
(FINAL PAVEMENT DESIGN)

A1	6″ CONC. DRIVEWAY
C1	1.5″ S9.5C
C2	3″ S9.5C
C3	VAR. S9.5C
D1	2.5″ I19.0C
D2	4″ I19.0C
D3	VAR. I19.0C
E1	5.5″ B25.0C
E2	VAR. B25.0C
J1	6″ ABC
J2	VAR. ABC (8″ MIN.)
P	PRIME COAT
R1	2′-6″ CURB & GUTTER
R2	5″ MONOLITHIC CONC. ISLAND
R3	2′-6″ VALLEY GUTTER
S	4″ CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	INCIDENTAL MILLING
V2	VAR. DEPTH MILLING
W	VAR. DEPTH ASPHALT

REVISIONS

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6/2/99

PROJECT REFERENCE NO.	SHEET NO.
U–5746	2A–4

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040286 ENGINEER CASEY E. HARRIS

9/9/2024

PAVEMENT DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 038126 ENGINEER SHIHAI ZHANG

9/9/2024

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555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
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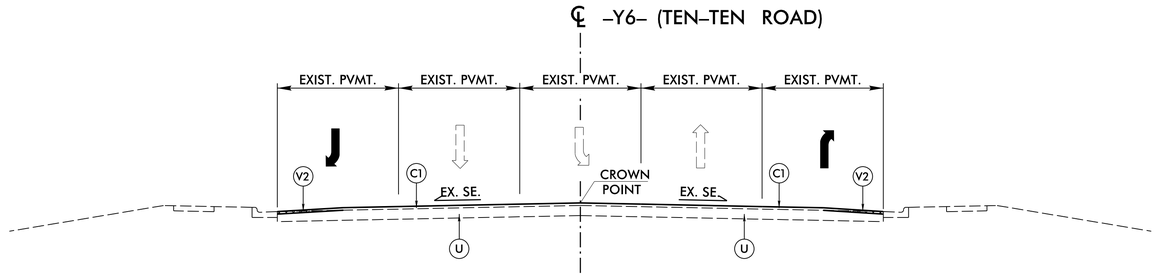
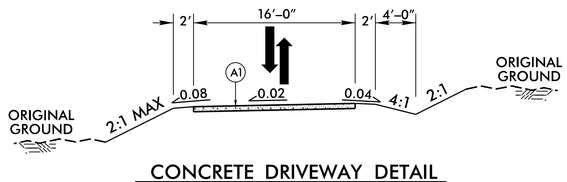


NOTE: VARIABLE DEPTH MILLING 0" TO 1½" AS DIRECTED BY THE ENGINEER TO TIE PAVEMENT TO EXISTING CURB AND GUTTER.

TYPICAL SECTION NO. 7

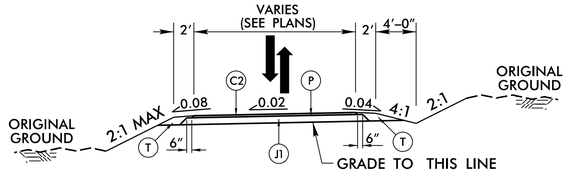
USE TYPICAL SECTION NO. 7 FOR:
–Y6– STA. 15+64.38 TO STA. 18+96.18

PAVEMENT SCHEDULE (FINAL PAVEMENT DESIGN)	
A1	6" CONC. DRIVEWAY
C1	1.5" S9.5C
C2	3" S9.5C
C3	VAR. S9.5C
D1	2.5" I19.0C
D2	4" I19.0C
D3	VAR. I19.0C
E1	5.5" B25.0C
E2	VAR. B25.0C
J1	6" ABC
J2	VAR. ABC (8" MIN.)
P	PRIME COAT
R1	2'-6" CURB & GUTTER
R2	5" MONOLITHIC CONC. ISLAND
R3	2'-6" VALLEY GUTTER
S	4" CONCRETE SIDEWALK
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	INCIDENTAL MILLING
V2	VAR. DEPTH MILLING
W	VAR. DEPTH ASPHALT



CONCRETE DRIVEWAY DETAIL

USE CONC. DRIVEWAY DETAIL FOR:
–L– STA. 14+17.00 LT
–L– STA. 14+84.00 RT
–L– STA. 15+23.00 RT
–L– STA. 16+48.00 RT
–L– STA. 26+51.00 RT



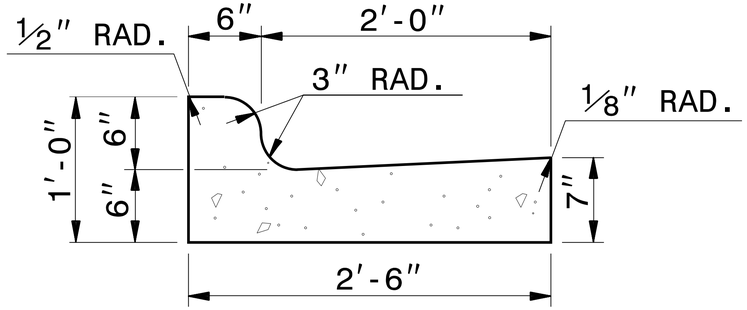
ASPHALT DRIVEWAY DETAIL

USE ASPHALT DRIVEWAY DETAIL FOR:

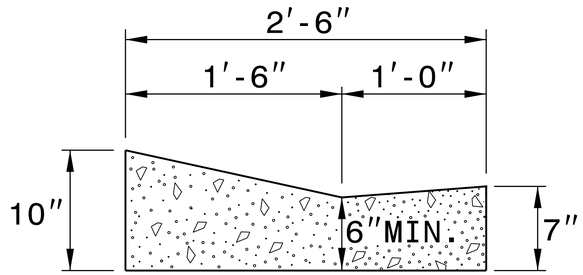
–L– STA. 12+98.00 RT	–L– STA. 23+77.00 RT
–L– STA. 13+48.00 RT	* –L– STA. 23+90.00 LT
* –L– STA. 15+24.00 LT	–L– STA. 25+90.00 LT
* –L– STA. 20+21.00 LT	* –L– STA. 31+49.00 LT
* –L– STA. 21+45.00 LT	* –L– STA. 33+37.00 LT
–L– STA. 20+71.00 RT	–L– STA. 36+35.00 LT
–L– STA. 21+09.00 RT	–L– STA. 37+46.76 LT
–L– STA. 22+31.00 RT	–Y6– STA. 19+46.00 RT

* USE 2½" I19.0C (D1) IN BETWEEN C2 AND J1 AND OMIT PRIME COAT (P)

PROJECT REFERENCE NO.	SHEET NO.
U-5746	2C-1



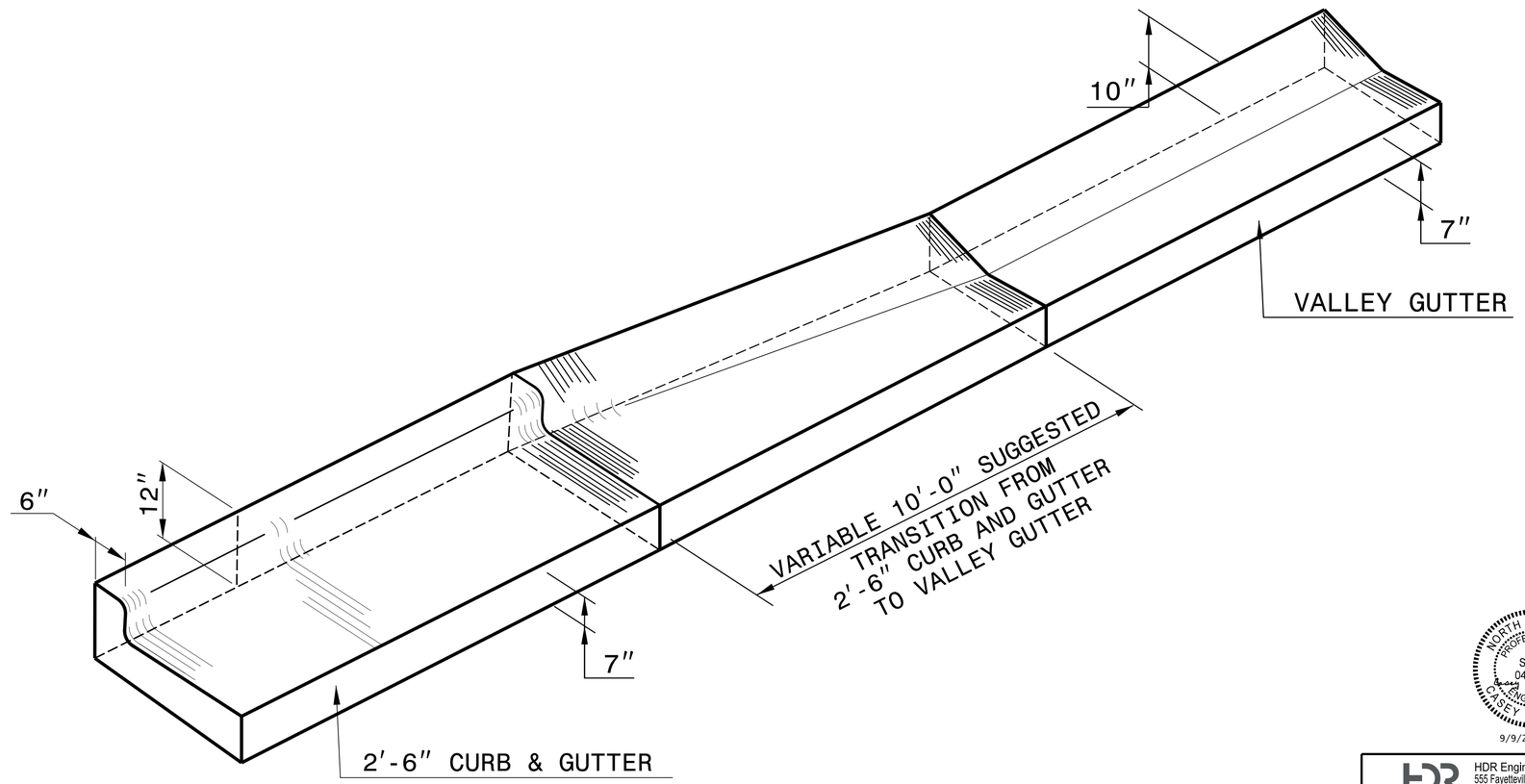
2'-6" CURB AND GUTTER



VALLEY GUTTER

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

REFER TO SECTION 846 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION METHODS, MEASUREMENT AND PAYMENT.



ISOMETRIC VIEW OF TRANSITION

NORTH CAROLINA PROFESSIONAL SEAL 040286 ENGINEER CASEY E. HARRIS

9/9/2024

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

TRANSITION FROM 2'-6" CURB AND GUTTER TO VALLEY GUTTER

ORIGINAL BY:	T.S.SPELL	DATE:	FEB.4.2009
MODIFIED BY:	C. HARRIS	DATE:	JUN.25,2024
CHECKED BY:		DATE:	
FILE SPEC.:			

9/3/2024
...\U5746_c&g transition sections.dgn
11:24:03 AM

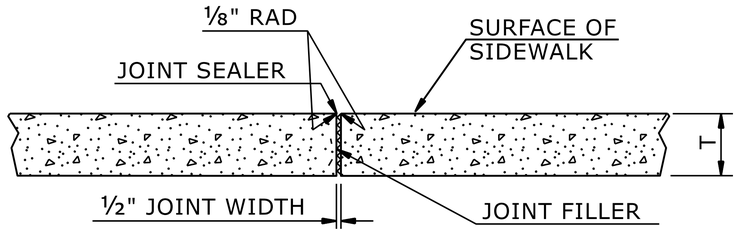
PROJECT REFERENCE NO.	SHEET NO.
U-5746	2C-2

NOTES:

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

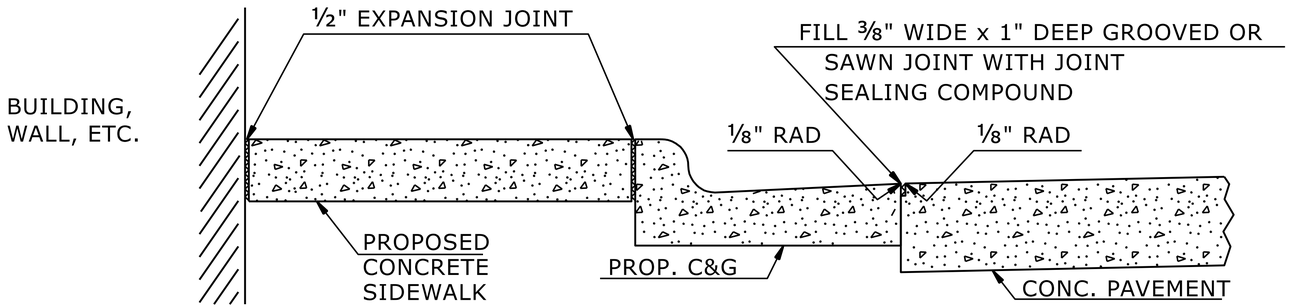
PLACE A GROOVE JOINT 1" DEEP WITH ⅛" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE ½" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A ½" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

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



T = SIDEWALK THICKNESS

TRANSVERSE EXPANSION JOINT IN SIDEWALK



DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

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

ROADWAY DETAIL DRAWING FOR
CONCRETE SIDEWALK

SHEET 1 OF 1

848D01

SEAL
033144
NORTH CAROLINA PROFESSIONAL ENGINEER
NICOLE M. HACKLER

9/9/2024

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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: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: _____

COMPUTED BY: _____CEH_____ DATE: _2/19/2020_
CHECKED BY: _____SMP_____ DATE: _04/30/2020_

PROJECT NO.	SHEET NO.
U-5746	3B-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK
IN CUBIC YARDS

Station	Station	Uncl. Excav.	Embank. +%	Borrow	Waste
-L- RT Sta. 12+28.24	-L- RT Sta. 27+31.02	2,555	210	0	2,345
SUBTOTALS:		2,555	210	0	2,345
-L- LT Sta. 12+08.22	-L- LT Sta. 38+00.00	2,872	2,066	0	806
-Y3- Sta. 10+50.00	-Y3- Sta. 12+00.00	14	89	75	0
-Y6- Sta. 18+96.18	-Y6- Sta. 21+00.00	57	265	208	0
SUBTOTALS:		2,943	2,420	283	806
-L- MED Sta. 12+08.22	-L- MED Sta. 38+00.00	1,634	900	0	734
-L- MED Sta. 39+02.90	-L- MED Sta. 45+78.48	360	0	0	360
SUBTOTALS:		1,994	900	0	1,094
TOTAL		7,492	3,530	283	4,245
WASTE IN LIEU OF BORROW :				-283	-283
GRAND TOTALS:		7,492	3,530	0	3,962
SAY:		**7,600**			

EST. DDE = 20 CY
SHOULDER BORROW = 1,250 CY
EST. UNDERCUT = 450 CY
EST. SHALLOW UNDERCUT = 200 CY
CLASS IV SUBGRADE STABILIZATION = 100 TONS

Note: Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

Note: Approximate quantities only. Unclassified Excavation, Shoulder Borrow, Fine Grading, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract lump sum price for grading.

PAVEMENT REMOVAL SUMMARY
IN SQUARE YARDS

SURVEY LINE	Station	Station	LOCATION LT/RT/CL	ASPHALT REMOVAL	ASPHALT BREAKUP	CONCRETE REMOVAL	CONCRETE BREAKUP
-L-	12+08.22	17+26.92	LT	198.52			
-L-	17+56.30	27+92.46	LT	325.31			
-L-	33+56.12	37+32.52	LT	124.39			
-L-	37+60.47	38+57.65	LT	60.01			
-L-	12+08.22	27+91.75	CL/LT	425.9			
-L-	30+25.68	38+12.08	CL/LT	268.8			
-L-	39+00.13	45+72.82	CL/LT	81.23			
-L-	12+08.22	27+91.75	CL/RT	358.45			
-L-	28+47.48	38+12.08	CL/RT	185.16			
-L-	39+00.13	43+25.76	CL/RT	118.77			
-L-	12+28.24	18+33.26	RT	264.5			
-L-	18+54.15	26+99.58	RT	332.78			
-Y6-	19+27.18	20+86.99	RT	51.36			
			TOTAL :	2,795.18			
			SAY :	**2,800**			

NOTE : ALL LOCATIONS ARE EXISTING PAVED SHOULDER LOCATIONS

"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
LENGTHS SHOWN IN LINEAR FEET

GUARDRAIL SUMMARY

G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL WIDTH	FLARE LENGTH		W		ANCHORS							IMPACT ATTENUATOR		SINGLE FACED CONCRETE BARRIER	REMOVE EXISTING GUARDRAIL	REMOVE & STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	Type III	B-77	GREU, TL-3	GREU, TL-2	CAT-1	AT-1	Type III SC	B-77 SC		G	NG				
L	22+18.35	23+78.36	LT	156.25	31.25		22+61.62	22+42.37	10'	13'									1	1								
SUB-TOTAL =				**156.25**	**31.25**														**1**	**1**								
	Less Anchor Deductions																											
	CAT-1	1	6.25	-6.25			**Additional Guardrail Posts = 5**																					
	AT-1	1	6.25		-6.25																							
GRAND TOTAL				**150.00**	**25.00**																							
SAY				**175.00**	**50.00**																							

2TK41005VG

COMPUTED BY: MJM DATE: 09/05/2024

CHECKED BY: CGM DATE: 09/05/2024

PROJECT NO.	SHEET NO.
U-5746	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 %	Side Drain Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18		DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48		STRUCTURAL PLATE PIPE 60	66	72		
L 12+26	1	LT	3314																												
L 18+26	2	LT	0402		393.7																										
			0402	0408		388.8	387.1	0.4												380											
L 21+65	4	LT	0403		396.7																										
			0403	0402		393.9	389.0												336												
L 18+29	59	LT	0404		394.3																										
			0404	0402		389.5	388.8													56											
L 18+30	74	LT	0405		392.2																										
			0405	0404		389.9	389.5													16											
18+33	223	LT	0406		395.7																										
L 12+26	13	RT	0407		390.6																										
			0407	3314		387.6	387.0												16												
L 14+46	2	RT	0408		390.3																										
			0408	3314		387.3	386.7	0.6												216											
L 13+28	14	RT	0410		391.2																										
			0410	0407		388.2	387.6												100												
L 23+00	6	LT	0411		397.6																										
			0411	0403		394.9	393.9												132												
L 25+69	9	LT	0501		400.0																										
			0501	0514		397.3	396.4												116												
L 28+77	100	LT	0502		405.8																										
			0502	0503		403.5	403.5												24												
L 28+77	76	LT	0503		408.4																										
			0503	0504		403.5	403.1												116												
L 29+90	75	LT	0504		409.2																										
			0504	0505		402.9	402.6													104											
L 30+90	74	LT	0505		408.3																										
			0505	0510		402.2	400.5													64											
L 31+91	73	LT	0506		408.0																										
			0506	0505		403.7	402.2													108											
L 32+87	72	LT	0507		407.2																										
			0507	0506		404.0	403.7													96											
L 33+85	71	LT	0508		408.1																										
			0508	0507		404.9	404.0													96											
L 35+05	70	LT	0509		409.4																										
			0509	0508		406.1	404.9													120											
L 30+82	5	LT	0510		403.5																										
			0510	0511		400.3	395.7													68											
L 29+51	5	RT	0512		402.7																										
			0512	0510		400.6	400.3													128											
L 32+31	6	LT	0513		406.4																										
			0513	0510		403.0	400.3													144											
L 24+50	8	LT	0514		399.6																										
			0514	0411		396.4	394.9												148												
L 34+00	9	LT	0515		408.9																										
			0515	0519		405.8	405.7												12												
L 36+00	12	LT	0516		411.5																										
			0516	0521		408.3	408.3												4												
L 32+31	21	LT	0517		407.2																										
			0517	0513		404.0	403.3												12												
SHEET TOTALS																			1016	1596											

STRUCTURE NUMBER 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	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	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	##" SPRING BOX PIPE	SPRING BOX STD. 840.41		M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54		ADJUST C.B.	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
3314																																																472	
0402					1															1					1																								
0402	0408																																															581	
0403					1															1					1																								
0403	0402																																															337	
0404					1																											1											1						
0404	0402																																																
0405					1															1					1																								
0405	0404																																															13	
0406																																																	
0407					1			1		1																																							
0407	3314																																																
0408					1															1					1																								
0408	3314																																																
0410					1			1		1																																							
0410	0407																																																
0411					1															1					1																								
0411	0403																																																
0501					1															1					1																								
0501	0514																																																
0502					1												1	1																															
0502	0503																																																
0503					1			1		1																																							
0503	0504																																																
0504					1	1.8		1		1																																							
0504	0505																																															72	
0505					1	0.4		1		1																																							
0505	0510																																															65	
0506					1			1		1																																							
0506	0505																																															118	
0507					1			1		1																																							
0507	0506																																																
0508					1			1		1																																							
0508	0507																																															121	
0509					1			1		1																																							
0509	0508																																																
0510					1																1				1																								
0510	0511																																												1				
0512					1																1				1																								
0512	0510																																																
0513					1								1																1						1														
0513	0510																																															294	
0514					1															1					1																								
0514	0411																																															402	
0515					1								1																1						1														
0515	0519																																																
0516					1								1																1						1														
0516	0521																																																
0517					1								1																1						1														
0517	0513																																																
SHEET TOTALS					24	2.2		9		9			4				1	1		7	2				9				4			1			4								1		1			2475	

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

2TK41005VG

COMPUTED BY:	MJM	DATE:	09/05/2024
CHECKED BY:	CGM	DATE:	09/05/2024

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-5746	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 %	Side Drain Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18		DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48		STRUCTURAL PLATE PIPE 60	66	72		
L 33+00	21 LT	0518		408.2																										
		0518	0517		405.0	404.0												68												
L 34+00	20 LT	0519		409.3																										
		0519	0518		405.7	405.0												96												
L 36+75	58 LT	0601		412.5																										
		0601	0509		409.3	406.1													168											
L 37+86	57 LT	0602		414.5																										
		0602	0601		410.2	409.3													112											
Y6 20+81	38 RT	0603		416.0																										
		0603	0602		410.7	410.5												80												
Y6 19+71	38 RT	0604		414.0																										
		0604	0603		411.0	410.7												108												
L 41+50	9 RT	0605		414.7																										
		0605	0606		412.0	408.6												124												
L 42+75	9 RT	0606		411.4																										
		0606	0607		408.6	406.0												100												
L 43+77	4 RT	0607		408.7																										
		0607	0608		406.0	401.1												156												
L 45+25	5 LT	0608		403.8																										
		0608	0609		400.3	399.7												4												
L 45+36	2 LT	0609		403.8																										
		0609	0600		399.7	399.7	0.3											20												
L 11+47	66 LT	0424							32																					
L 14+18	74 LT	0425								24																				
L 20+21	75 LT	0412							32																					
L 21+43	75 LT	0413							32																					
L 23+89	89 LT	0524							36																					
L 12+97	79 RT	0415							28																					
L 13+47	78 RT	0416							28																					
L 14+83	74 RT	0417							28																					
L 15+24	74 RT	0418							20																					
L 16+48	75 RT	0419							20																					
L 18+43	76 RT	0420																44												
L 20+72	75 RT	0421							24																					
L 21+10	75 RT	0422							20																					
L 22+30	75 RT	0423							24																					
L 23+74	77 RT	0520							24																					
L 26+62	83 RT	0523							24																					
L 25+89	102 LT	0522							56																					
L 35+93	19 LT	0521		412.2																										
		0521	0519		408.3	405.7												196												
L 11+94	74 LT	0409		386.8																										
		0409	3312		383.3	383.3														12										
SHEET TOTALS									428	24								996	280	12										
PROJECT TOTALS									428	24								2012	1876	12										

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	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	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	##" SPRING BOX PIPE	SPRING BOX STD. 840.41		M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54		ADJUST C.B.	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 33+00				1								1																1						1														
L 34+00				1								1																1						1														
L 36+75				1			1		1																																							
L 37+86				1			1		1																																							
Y6 20+81				1	0.3		1			1																																						
Y6 19+71				1			1			1																																						
L 41+50				1								1																1						1														
L 42+75				1								1																1						1														
L 43+77				1								1																1						1														
																																														181	
L 45+25				1								1																1						1														
L 45+36				1								1																1						1														
L 11+47																																														20	
L 14+18																																														20	
L 20+21																																														20	
L 21+43																																														35	
L 23+89																																														32	
L 12+97																																														19	
L 13+47																																														20	
L 14+83																																														22	
L 15+24																																														16	
L 16+48																																														17	
L 18+43																																														32	
L 20+72																																														17	
L 21+10																																														23	
L 22+30																																														20	
L 23+74																																														20	
L 26+62																																														20	
L 25+89																																														28	
L 35+93				1								1																1						1														
L 11+94				1															1					1																								
																																														61	
SHEET TOTALS				13	0.3		4		2	2		8							1					1				8						8													623	
PROJECT TOTALS				37	2.5		13		11	2		12				1	1		8	2				10				12			1			12							1		1				3098	

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: Geotech	DATE: 6/13/2019
CHECKED BY: CEH	DATE: 2/24/2020

(12-17-19)

PROJECT NO.	SHEET NO.
U-5746	3G-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				SD	200
				TOTAL LF:	200

*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	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Subgrade Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
CONTINGENCY			ASU (1)	12	200	100	200		
				TOTAL CY/TONS/SY:	200	100**	200**	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 Soil 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.

PROJ. REFERENCE NO.	SHEET NO.
U-5746	3P-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PARCEL INDEX SHEET

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
1	4	WEST, GEORGE DAVIS & WEST, BARBARA S
2	4	ANCHOR PROPERTIES OF RALEIGH LLC
3	4	FIVE PERCENT MORE LLC
4	4	FIVE PERCENT MORE LLC
5	4, 5	FEORE, JOHN J & FEORE, JOANNE M
6	4	HOLDER JR, DAVID F
7	4	HASSAN, AHMED ABU & DARWISH, FATIMAH
8	4	ABU HASSAN, AHMED ABED RABU
9	4	YANG, CHANGHUI & LIN, YING
10	4	SUNNI SKYS LLC
11	4	HALES, BEVAN L & HALES, DIANE W
12	4, 5	WILLIFORD, MARY LOUISE M
13	5	WRIGHT, ROBERT W
14	5	CAH HOLDINGS LLC
15	5	E W WILLIAMS CONSTRUCTION CO INC
16	5	LIEBHERR MINING & CONSTRUCTION EQUIPMENT INC
17	5	HT FUEL NC LLC
18	5	SHAAK, DAVID A & SHAAK, SUZETTE D
19	5	SPLASH CARWASH, LLC
20	5, 6	BNE RESTAURANT GROUP II LLC
21	6	CALVARY BAPTIST TEMPLE CHURCH
22	6	UTICA ASSETS LLC
23	5	KINGS GRANT COMMONS LLC
24	5	JOHNSONS WELDING LLC
25	6	MCCULLERS CROSSING II LLC
26	6	CBC OF EDENTON LLC
27	5	MCCULLERS BRANCH, LLC
28	5	CAMBRIDGE FV-LLC
29	5	HT FUEL NC LLC
30	5	JOHNSONS WELDING LLC

PARCEL No.	SHEET No.	PROPERTY OWNER NAME

PROJECT REFERENCE NO.	SHEET NO.
U-5746	4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040286 ENGINEER CASEY E HARRIS

9/9/2024

HYDRAULICS ENGINEER

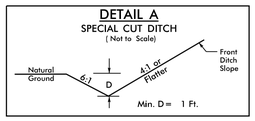
NORTH CAROLINA PROFESSIONAL SEAL 053877 ENGINEER MICHAEL J McLAMB

9/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

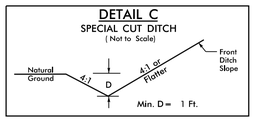
HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

DETAIL A
SPECIAL CUT DITCH
(Not to Scale)



FROM STA. 12+00 TO STA. 16+00 –L– RT

DETAIL C
SPECIAL CUT DITCH
(Not to Scale)



FROM STA. 22+50 TO STA. 23+50 –L– LT

END TIP PROJECT R-2721B
BEGIN TIP PROJECT U-5746
BEGIN CONSTRUCTION
–L– STA. 12+08.22

BEGIN CONSTRUCTION
–Y1– STA. 11+36.61

NAD 83/2011

–L– POT Sta. 9+25.00

–Y1– POT Sta. 10+00.00

–Y1– POT Sta. 12+69.76 =
–L– POT Sta.17+55.50

–L– POT Sta. 18+41.84 = –Y2– POT Sta. 10+00.00

–Y2– POT Sta. 12+53.03

–L– TS Sta. 21+84.43

END CONSTRUCTION
–Y2– STA. 11+35.49

MATCHLINE –L– STA. 23+50, SEE SHEET 5

–L–		
PIs Sta 23+84.53	PI Sta 27+08.31	PIs Sta 30+29.12
θs = 5° 37' 30.0"	Δ = 16° 40' 21.0" (RT)	θs = 5° 37' 30.0"
Ls = 300.00'	D = 3° 45' 00.0"	Ls = 300.00'
LT = 200.10'	L = 444.60'	LT = 200.10'
ST = 100.09'	T = 223.88'	ST = 100.09'
	R = 1,527.89'	

PROPOSED PAVED SHOULDER

SEE SHEET 7 FOR –L– PROFILE
DRIVEWAY RADII 10' UNLESS OTHERWISE NOTED

REVISIONS

PLOT DRIVER: NCDOT_pdf_color_eng_50.pltPENTABLE: NCDOT_pshpfl.tbl
USER: CHARRIS DATE: 9/4/2024 TIME: 4:28:23 PM
FILE: NCDOT\2016_NCDOT_Central_Reg_Div_Plan_Design_On-Call_M_\U-5746_Task_Order_3\6_0_CAD_BIM\6_2_WIP\U-5746_TO_3\Roadway\Proj\U5746_RDY_PSH_04.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5746	5
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040286 ENGINEER CASEY E HARRIS

9/9/2024

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 053377 ENGINEER MICHAEL J McNAMARA

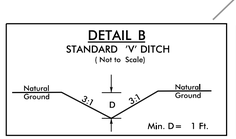
9/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

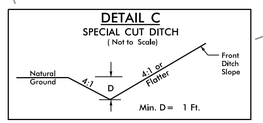
NAD 83/2011

DETAIL B
STANDARD 'V' DITCH
(Not to Scale)



FROM STA. 24+33 TO STA. 24+35 -L- LT

DETAIL C
SPECIAL CUT DITCH
(Not to Scale)



FROM STA. 23+50 TO STA. 27+85 -L- LT

-Y3- POT Sta. 8+29.33
-Y3- PC Sta. 8+58.13
-Y3- PCC Sta. 10+08.89
-Y3- PT Sta. 11+07.00
-Y3- POT Sta. 12+75.42 = -L- POC Sta. 28+07.23
-L- CS Sta. 29+29.03
-L- ST Sta. 32+29.03
-L- SC Sta. 24+84.43

BEGIN CONSTRUCTION -Y3- STA. 10+50.00 (TIE TO IMPROVEMENTS BY OTHERS)

TIE TO EXISTING OUTFALL STANDARD 'V' DITCH SEE DETAIL 'B' DDE = 16CY

MATCHLINE -L- STA. 23+50, SEE SHEET 4

MATCHLINE -L- STA. 36+50, SEE SHEET 6

-Y3-	
PI Sta 9+36.09	PI Sta 10+58.00
Δ = 35° 59' 29.8" (RT)	Δ = 6° 36' 47.6" (RT)
D = 23° 52' 23.7"	D = 6° 44' 26.4"
L = 150.76'	L = 98.11'
T = 77.96'	T = 49.11'
R = 240.00'	R = 850.00'

-L-		
PIs Sta 23+84.53	PI Sta 27+08.31	PIs Sta 30+29.12
Θs = 5° 37' 30.0"	Δ = 16° 40' 21.0" (RT)	Θs = 5° 37' 30.0"
Ls = 300.00'	D = 3° 45' 00.0"	Ls = 300.00'
LT = 200.10'	L = 444.60'	LT = 200.10'
ST = 100.09'	T = 223.88'	ST = 100.09'
	R = 1,527.89'	

PROPOSED PAVED SHOULDER

SEE SHEET 7 FOR -L- PROFILE
SEE SHEET 9 FOR -Y3- PROFILE
DRIVEWAY RADII 10' UNLESS OTHERWISE NOTED

REVISIONS

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PROJECT REFERENCE NO.	SHEET NO.
U-5746	6
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 040286 ENGINEER CASEY E. HARRIS
9/9/2024

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 053377 ENGINEER MICHAEL J. McNAMARA
9/9/2024

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

HDR Engineering, Inc. of the Carolinas
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2020 ADT
2040 ADT
(ADT IN 100's)

SR 1010 TEN-TEN RD.
174/253
US 401: 263/565 | 37/68 | 26/40
37/56 | 51/89 | 178/258 | 341/602 US 401
SR 1010 TEN-TEN RD.

MATCHLINE –Y6– STA. 16+75.00, SEE SHEET 6A

BEGIN WIDENING –Y6– STA. 18+96.18

MATCHLINE –L– STA. 36+50, SEE SHEET 5

END TIP PROJECT U-5746
END CONSTRUCTION
–L– STA. 45+78.48

NAD 83/2011

ISLANDS AND PAVING DONE BY OTHERS

END MILLING

ISLAND TO EDGE OF TRAVEL BUFFER TRANSITIONS FROM 0.75' TO 4'

–Y6– POT Sta. 21+76.11 =
–L– POT Sta. 38+63.89

SEE SHEET 8 FOR –L– PROFILE
SEE SHEET 9 FOR –Y6– PROFILE
DRIVEWAY RADII 10' UNLESS OTHERWISE NOTED

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REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
U-5746	6A
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040286 ENGINEER CASEY E. HARRIS

9/9/2024

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 053377 ENGINEER MICHAEL J. McNAMARA

9/9/2024

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NAD 83/2011

JAMES CARY BOWLING
DB 13694 PG 188

BARBARA S CUMMINGS HEIRS,
& SENTER, MAXINE
DB 1954 PG 639

AREPS LLC
DB 15080 PG 1471

CAMBRIDGE-FV LLC
DB 17511 PG 1263
BM 2019 PG 1006

CALVARY BAPTIST TEMPLE CHURCH
DB 9829 PG 618
BM 2002 PG 214

CALVARY BAPT
ISBKCH

-Y6- POT Sta. 10+00.00

-Y6- PC Sta. 11+72.31

-Y6- PT Sta. 14+59.08

BEGIN CONSTRUCTION
OVERLAY ONLY
-Y6- STA. 15+64.38

-Y6-
PI Sta 13+16.28
△ = 12° 38' 19.9" (RT)
D = 4° 24' 26.5"
L = 286.77'
T = 143.97'
R = 1,300.00'

-Y6- +32.84
ON PL

-Y6- +30.67
ON PL

-Y6- +59.08
50.00' RT

MATCHLINE -Y6-
STA. 16+75.00, SEE SHEET 6

SEE SHEET 9 FOR -Y6- PROFILE
DRIVEWAY RADII 10' UNLESS OTHERWISE NOTED

REVISIONS

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PROJECT REFERENCE NO.	SHEET NO.
U–5746	7

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040286 ENGINEER CASEY E. HARRIS

9/9/2024

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 053377 ENGINEER MICHAEL J. MCNAMARA

9/9/2024

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DITCH LEGEND	
LEFT DITCH	—·—·—
RIGHT DITCH	----------

BEGIN TIP PROJECT U–5746
BEGIN WIDENING/OVERLAY
–L– STA. 12+08.22
EL. 389.74'

℄ EXISTING GROUND

–L– STA. 17+55.50 =
–Y1– STA. 12+69.76
ELEV. = 394.27'

–L– STA. 18+41.84 =
–Y2– STA. 10+00.00
ELEV. = 395.11'

SPECIAL CUT DITCH @ 1.43%

STA. 12+00.00 RT
ELEV. 384.22

STA. 16+00.00 RT
ELEV. 389.94

SPECIAL CUT DITCH @ 0.30%

STA. 22+50.00 LT
ELEV. 397.15

SPECIAL CUT DITCH @ 0.74%

STA. 23+00.00 LT
ELEV. 397.00

SEE SHEET 4 FOR –L– PLAN

EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP
EL. 389.43' (39.35' LT)	EL. 390.34' (39.08' LT)	EL. 391.09' (39.40' LT)	EL. 392.07' (38.90' LT)	EL. 392.90' (39.02' LT)	EL. 393.66' (39.15' LT)	EL. 394.52' (39.30' LT)	EL. 395.44' (39.20' LT)	EL. 396.27' (39.76' LT)	EL. 397.23' (39.84' LT)	EL. 398.26' (39.84' LT)	EL. 399.51' (39.90' LT)		
EL. 389.52' (44.24' RT)	EL. 390.45' (39.63' RT)	EL. 391.23' (39.38' RT)	EL. 391.88' (39.26' RT)	EL. 392.66' (39.22' RT)	EL. 393.59' (39.14' RT)	EL. 394.47' (39.17' RT)	EL. 395.35' (38.99' RT)	EL. 396.28' (39.03' RT)	EL. 397.23' (39.12' RT)	EL. 398.27' (38.90' RT)	EL. 399.26' (39.64' RT)		
EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP		

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00

BM #37
-L- STA. 26+16.56 (317' RT)
EL. 393.82'
BENCH TIE IN 28" WHITE OAK

–Y3– STA. 12+75.42
–L– STA. 28+07.23
EL. = 404.39'

℄ EXISTING GROUND

SPECIAL CUT DITCH @ 0.74%

STA. 24+00.00 LT
ELEV. 396.26

SPECIAL CUT DITCH @ 3.60%

SPECIAL CUT DITCH @ 3.53%

STA. 24+35.00 LT
ELEV. 395.00

STA. 25+50.00 LT
ELEV. 399.06

SPECIAL CUT DITCH @ 1.34%

STA. 27+85.00 LT
ELEV. 402.22

GELDER DR. INTERSECTION

SEE SHEET 5 FOR –L– PLAN

EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP
EL. 401.57' (41.30' LT)	EL. 403.54' (44.83' LT)	EL. 404.65' (48.99' LT)	EL. 405.85' (50.95' LT)	EL. 408.25' (59.40' LT)	EL. 407.55' (53.30' LT)	EL. 407.37' (48.84' LT)	EL. 407.68' (51.50' LT)	EL. 408.66' (57.35' LT)	EL. 409.98' (53.29' LT)	EL. 411.93' (44.11' LT)			
EL. 400.04' (41.72' RT)	EL. 400.49' (44.39' RT)	EL. 400.36' (48.11' RT)	EL. 400.91' (55.71' RT)	EL. 403.49' (57.24' RT)	EL. 405.04' (56.41' RT	EL. 405.92' (56.07' RT)	EL. 406.68' (54.99' RT)	EL. 408.13' (54.78' RT)	EL. 410.03' (52.05' RT)	EL. 411.62' (50.00' RT)			
EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP	EXIST. EOP			

24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00 33+00 34+00 35+00 36+00

REVISIONS

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PROJECT REFERENCE NO.	SHEET NO.
U–5746	8

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040286 ENGINEER CASEY E. HARRIS

9/9/2024

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 053377 ENGINEER MICHAEL J. McNAMARA

9/9/2024

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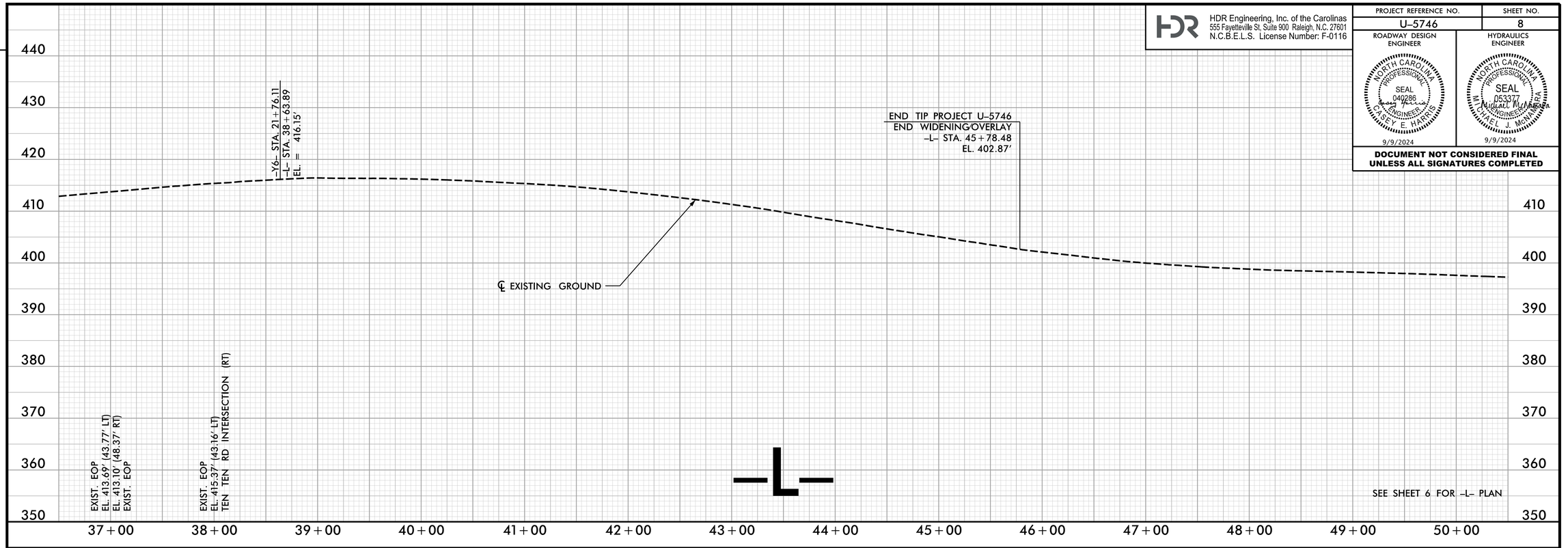

REVISIONS

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DATE: 6/25/2024

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PROJECT REFERENCE NO.	SHEET NO.
U-5746	9

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 040286 ENGINEER CASEY E. HARRIS

9/9/2024

HYDRAULICS ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 053377 ENGINEER MICHAEL J. McNAMARA

9/9/2024

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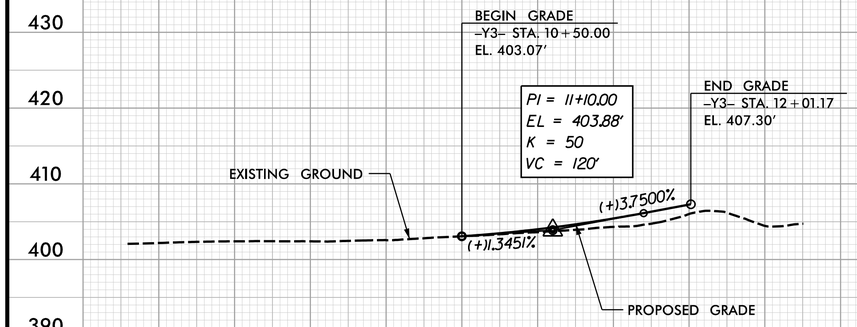
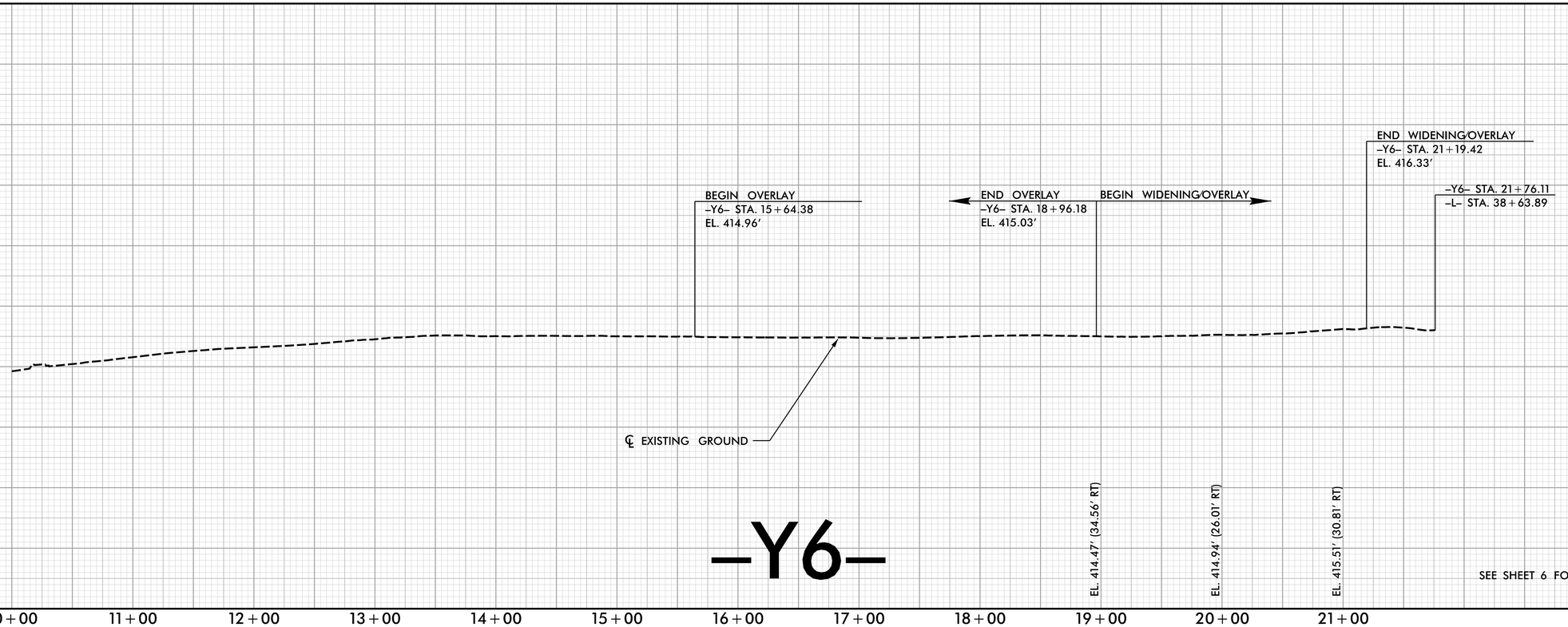


–Y3–

SEE SHEET 5 FOR –Y3– PLAN



–Y6–

SEE SHEET 6 FOR –Y6– PLAN

REVISIONS

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