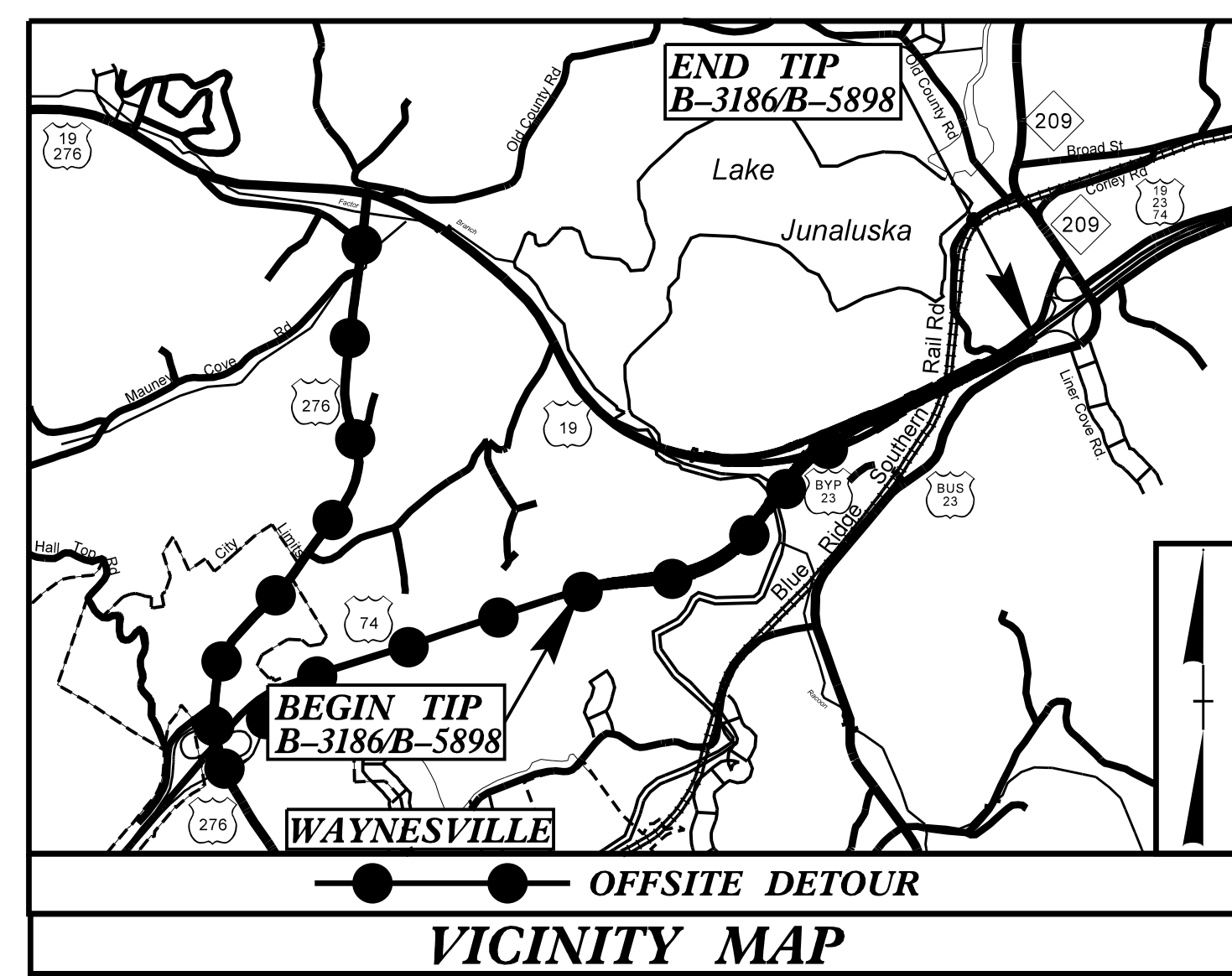


09_08/2019

CONTRACT: C204684 **TIP PROJECT: B-3186 / B-5898**

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 USER: CHARNDEN
 FILE: NCDOT\NCDOT-B3186_T02_c_16.0_CAD_BITMAP_6.2_Work_In_Progress\B-3186-B-5898_Roadway\Pro\B3186-B5898_RDY_TSH.dgn
 PENTABLE: NCDOT_pshpflt.tbl
 TIME: 9:55:05 AM
 DATE: 3/17/2022

See Sheet 1-A For Conventional Symbols

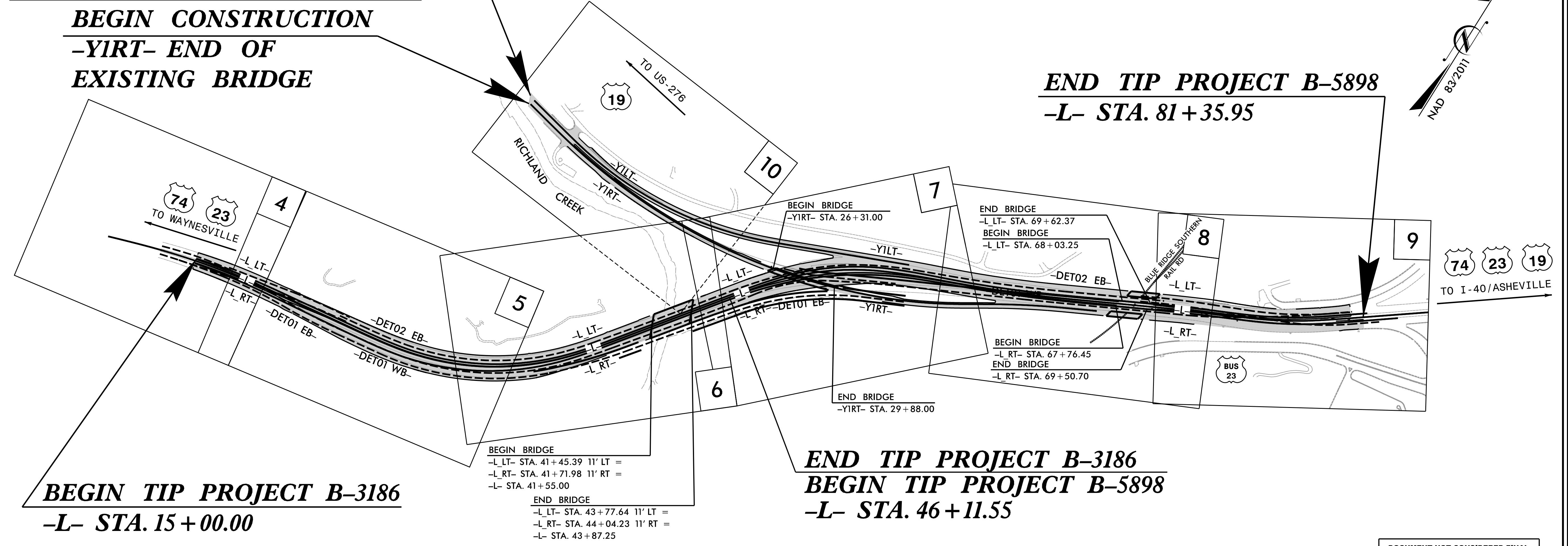
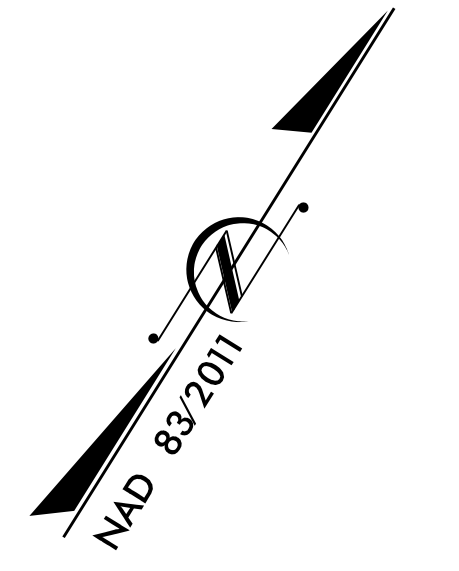
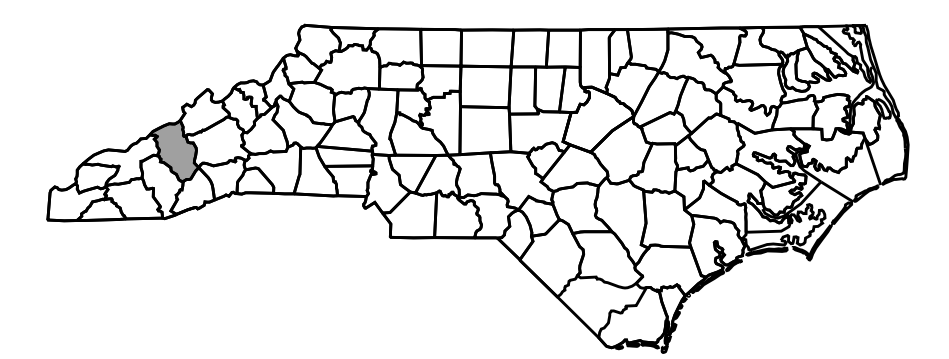


BEGIN CONSTRUCTION
-YIRT- END OF
EXISTING BRIDGE

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
HAYWOOD COUNTY

LOCATION: US 23/US 74/US 19 (GREAT SMOKY MOUNTAIN HWY)
FROM WEST OF NC 209(CRABTREE RD.) TO EAST OF RUSS AVE.
TYPE OF WORK: GRADING, DRAINAGE, PAVING, STRUCTURES
AND UTILITIES.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-3186 / B-5898	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38332.1.FS.1 (B-3186)	BRNHP-0023(32)	P.E.	
48030.1.FS.1 (B-5898)	BRSTP-0019(49)	P.E.	
38332.2.1 (B-3186)	BRNHP-0023(32)	RW/UTILITY	
48030.2.1 (B-5898)	BRSTP-0019(49)	RW/UTILITY	
38332.3.1 (B-3186)	BRNHP-0023(32)	CONST.	
48030.3.1 (B-5898)	BRSTP-0019(49)	CONST.	



BEGIN TIP PROJECT B-3186
-L- STA. 15 + 00.00

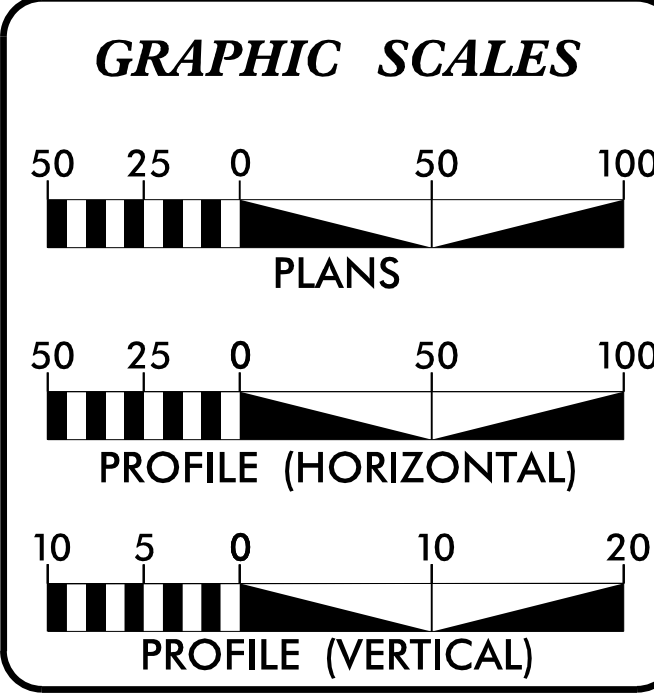
BEGIN BRIDGE
 -L LT- STA. 41+45.39 11' LT =
 -L RT- STA. 41+71.98 11' RT =
 -L- STA. 41+55.00
END BRIDGE
 -L LT- STA. 43+77.64 11' LT =
 -L RT- STA. 44+04.23 11' RT =
 -L- STA. 43+87.25

END TIP PROJECT B-3186
BEGIN TIP PROJECT B-5898
-L- STA. 46 + 11.55

END TIP PROJECT B-5898
-L- STA. 81 + 35.95

THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO INTERCHANGES

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



DESIGN DATA

ADT 2022 =	47,300
ADT 2042 =	59,400
K =	8 %
D =	55 %
T =	5 % *
V =	65 MPH
* TTST =	2% DUAL 3%
FUNC CLASS =	FREEWAY STATEWIDE TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-3186 =	0.545 miles
TOTAL STRUCTURES TIP PROJECT B-3186 =	0.044 miles
TOTAL LENGTH TIP PROJECT B-3186 =	0.589 miles
LENGTH ROADWAY TIP PROJECT B-5898 =	0.635 miles
TOTAL STRUCTURES TIP PROJECT B-5898 =	0.033 miles
TOTAL LENGTH TIP PROJECT B-5898 =	0.668 miles

(LENGTHS BASED ON L_RT ALIGNMENT)

Prepared in 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

2018 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 JULY 8, 2021

LETTING DATE:
 MAY 17, 2022

PHILLIP E. ROGERS, PE
 PROJECT ENGINEER

HENRY W. BARE
 PROJECT DESIGN ENGINEER

GARRETT HIGDON, EI
 NCDOT CONTACT

HYDRAULICS ENGINEER

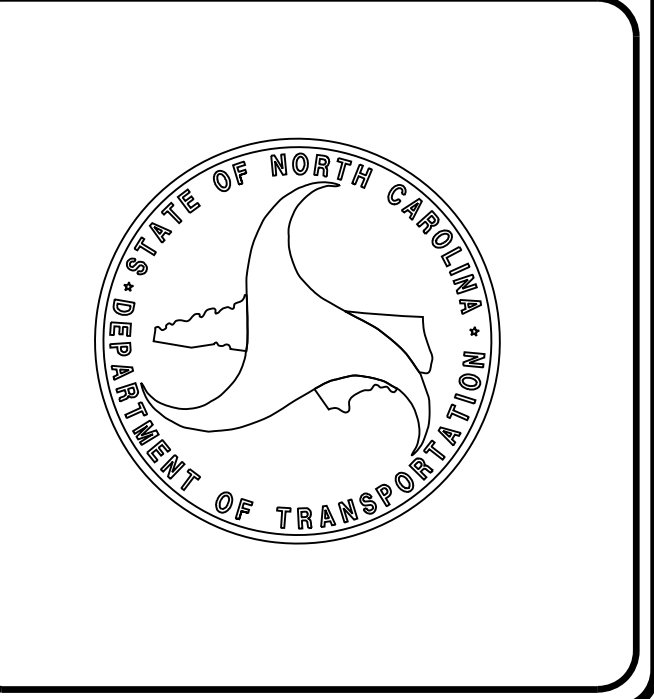
3/17/2022

Phillip E. Rogers
 SIGNATURE: P.E.

ROADWAY DESIGN ENGINEER

3/17/2022

Phillip E. Rogers
 SIGNATURE: P.E.



EFF. 01-16-2018
REV.

PROJECT REFERENCE NO.	SHEET NO.
B-3186 / B-5898	1-A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
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 STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1 THRU 2A-12	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-1	INTERSECTION DETAIL
2B-2 THRU 2B-18	DETOUR DETAILS
2B-19	GUARDRAIL DETAIL
2B-20 THRU 2B-22	DOUBLE FACED TYPE T2 BARRIER MODIFIED DETAILS
2C-1	2'-9" CONCRETE CURB AND GUTTER DETAIL
2C-2	GUARDRAIL INSTALLATION SPECIAL DETAIL
2C-3	COAL COMBUSTION PRODUCT DETAIL
2C-4	MEDIAN HAZARD PIER PROTECTION
2C-5	SHOULDER BERM GUTTER TO EXPRESSWAY GUTTER TRANSITION SECTION
2C-6	DETAIL TO CONVERT 2GI TO JB
2C-7	DETAIL TO CONVERT CB TO DI
2C-8	DETAIL OF TEMPORARY 1" STEEL COVER
2C-9	TYPE III REINFORCED BRIDGE APPROACH FILLS
2D-1 THRU 2D-2	DRAINAGE DETAILS
2G-1 THRU 2G-6	GEOTECH DETAILS
3B-1 THRU 3B-5	ROADWAY SUMMARIES
3D-1 THRU 3D-11	DRAINAGE SUMMARIES
3G-1 THRU 3G-2	GEOTECH SUMMARIES
3P-1	PARCEL INDEX SHEET
4 THRU 26	PLAN AND PROFILE SHEETS
TMP-01 THRU TMP-47	TRAFFIC MANAGEMENT PLANS
PMP-01 THRU PMP-08	PAVEMENT MARKING PLANS
E-1 THRU E-2	ELECTRICAL PLANS
EC-1 THRU EC-23	EROSION CONTROL PLANS
RF-1 THRU RF-3	REFORESTATION PLANS
SIGN-1 THRU SIGN-10A	SIGNING PLANS
ITS-01 THRU ITS-24	ITS PLANS
UC-1 THRU UC-5	UTILITY CONSTRUCTION PLANS
UO-1 THRU UO-9	UTILITIES BY OTHERS PLANS
X-1	CROSS-SECTION INDEX SHEET
X-1A THRU X-1C	CROSS-SECTION SUMMARY SHEET
X-2 THRU X-172	CROSS-SECTIONS
S01-01 THRU S01-59	STRUCTURE PLANS
S02-01 THRU S02-48	STRUCTURE PLANS
S03L-01 THRU S03L-44	STRUCTURE PLANS
S03R-01 THRU S03R-61	STRUCTURE PLANS
W-01 THRU W-09A	WALL PLANS

GENERAL NOTES: 2018 SPECIFICATIONS EFFECTIVE: 01-16-2018
REVISED:

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

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

SUPERELEVATION:
ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.05 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. 560.02

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.

BERM DITCHES:
BERM DITCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 240.01 AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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 RADIUS OR RADII AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

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 NOT SHOWN ON THE PLANS WILL BE PAID FOR AT THE CONTRACT PRICE FOR "TEMPORARY SHORING".

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 LAKE JUNALUSKA SANITARY DISTRICT; TOWN OF WAYNESVILLE; DOMINION ENERGY; DUKE ENERGY; AT&T; CHARTER COMMUNICATIONS; BALSAM WEST FIBER; EDUCATION & RESEARCH CONSORTIUM OF NC; SEGRA; HAYWOOD COUNTY GOVERNMENT
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.

2018 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2018 are applicable to this project and by reference hereby are considered a part of these plans:

STD. NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method III
225.01	Guide for Grading Subgrade - Interstate and Freeway
225.03	Deceleration and Acceleration Lanes
225.05	Method of Obtaining Superlevation - Divided Highways
225.09	Guide for Shoulder and Ditch Transition at Grade Separations
240.01	Guide for Berm Ditch Construction
275.01	Rock Plating
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 4 - MAJOR STRUCTURES	
422.01	Bridge Approach Fills - Type I Standard Approach Fill
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.02	Method of Shoulder Construction - High Side of Superelevated Curve - Method II
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
610.01	Guide for Paving Shoulders Under Bridges - Method I
610.04	Guide for Paving Shoulders Under Bridges - Method IV
654.01	Pavement Repairs
665.01	Asphalt Shoulders - Milled Rumble Strips
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
806.03	Concrete Contol of Access Marker
815.02	Subsurface Drain
820.01	Funnel and Funnel Drain - 12" Metal Funnel
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
840.17	Concrete Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.18	Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.19	Concrete Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.20	Frames and Wide Slot Flat Grates
840.22	Frames and Wide Slot Sag Grates
840.25	Anchorage for Frames - Brick or Concrete or Precast
840.26	Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.27	Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
840.28	Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe
840.29	Frames and Narrow Slot Flat Grates
840.31	Concrete Junction Box - 12" thru 66" Pipe
840.32	Brick Junction Box - 12" thru 66" Pipe
840.34	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
840.51	Brick Manhole - 12" thru 36" Pipe
840.54	Manhole Frame and Cover
840.66	Drainage Structure Steps
840.71	Concrete and Brick Pipe Plug
840.72	Pipe Collar
846.01	Concrete Curb, Gutter and Curb & Gutter
846.02	Drop Inlet Installation in Expressway Gutter
846.03	Funnel Drain Installation in Shoulder Berm Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
848.02	Driveway Turnout - Radius Type
848.04	Street Turnout
850.01	Concrete Paved Ditches
850.10	Guide for Berm Drainage Outlet - 15" and 18" Pipe
852.10	Median Construction - with Curb and Gutter
854.02	Double Faced Concrete Barrier - Types 'T', 'TI' and 'T2'
854.05	Concrete Median Transition Barrier - Location of Overhead Assembly
857.01	Precast Reinforced Concrete Barrier - 41" Single Faced
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
862.04	Anchoring End of Guardrail - B-77 and B-83 Anchor Units
866.02	Woven Wire Fence - with Wood Post
866.03	Woven Wire Fence - with Steel Post
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

PLOT DRIVER: NCDOT_ncdot_color_eng_50.plt
 USER: ASNIDER
 FILE: \

PENTABLE: B-3186 B-5898 NCDOT_dshp.fltdi
 DATE: 3/31/2022
 TIME: 2:45:51 PM

12/2/2016

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

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	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	---WLB---
Proposed Wetland Boundary	WLB
Existing Endangered Animal Boundary	---EAB---
Existing Endangered Plant Boundary	---EPB---
Existing Historic Property Boundary	---HPB---
Known Contamination Area: Soil	☠-S-☠
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	▬
False Sump	▽

RAILROADS:

Standard Gauge	-----
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	-----
New Right of Way Line with Pin and Cap	-----
New Right of Way Line with Concrete or Granite R/W Marker	-----
New Control of Access Line with Concrete C/A Marker	-----
Existing Control of Access	-----
New Control of Access	-----
Existing Easement Line	-----
New Temporary Construction Easement	-----
New Temporary Drainage Easement	-----
New Permanent Drainage Easement	-----
New Permanent Drainage /Utility Easement	-----
New Permanent Utility Easement	-----
New Temporary Utility Easement	-----
New Aerial Utility Easement	-----

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	☼

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

Hedge	-----
Woods Line	-----
Orchard	☼
Vineyard	□ Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	⊕
Storm Sewer	S

UTILITIES:

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 LOS B (S.U.E.*)	-----
U/G Power Line LOS C (S.U.E.*)	-----
U/G Power Line LOS D (S.U.E.*)	-----

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	⊕
Telephone Pedestal	⊠
Telephone Cell Tower	⊠
U/G Telephone Cable Hand Hole	-----
U/G Telephone Cable LOS B (S.U.E.*)	-----
U/G Telephone Cable LOS C (S.U.E.*)	-----
U/G Telephone Cable LOS D (S.U.E.*)	-----
U/G Telephone Conduit LOS B (S.U.E.*)	-----
U/G Telephone Conduit LOS C (S.U.E.*)	-----
U/G Telephone Conduit LOS D (S.U.E.*)	-----
U/G Fiber Optics Cable LOS B (S.U.E.*)	-----
U/G Fiber Optics Cable LOS C (S.U.E.*)	-----
U/G Fiber Optics Cable LOS D (S.U.E.*)	-----

WATER:

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

TV:

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

GAS:

Gas Valve	◇
Gas Meter	⊕
U/G Gas Line LOS B (S.U.E.*)	-----
U/G Gas Line LOS C (S.U.E.*)	-----
U/G Gas Line LOS D (S.U.E.*)	-----
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.*)	-----
SS Forced Main Line LOS C (S.U.E.*)	-----
SS Forced Main Line LOS D (S.U.E.*)	-----

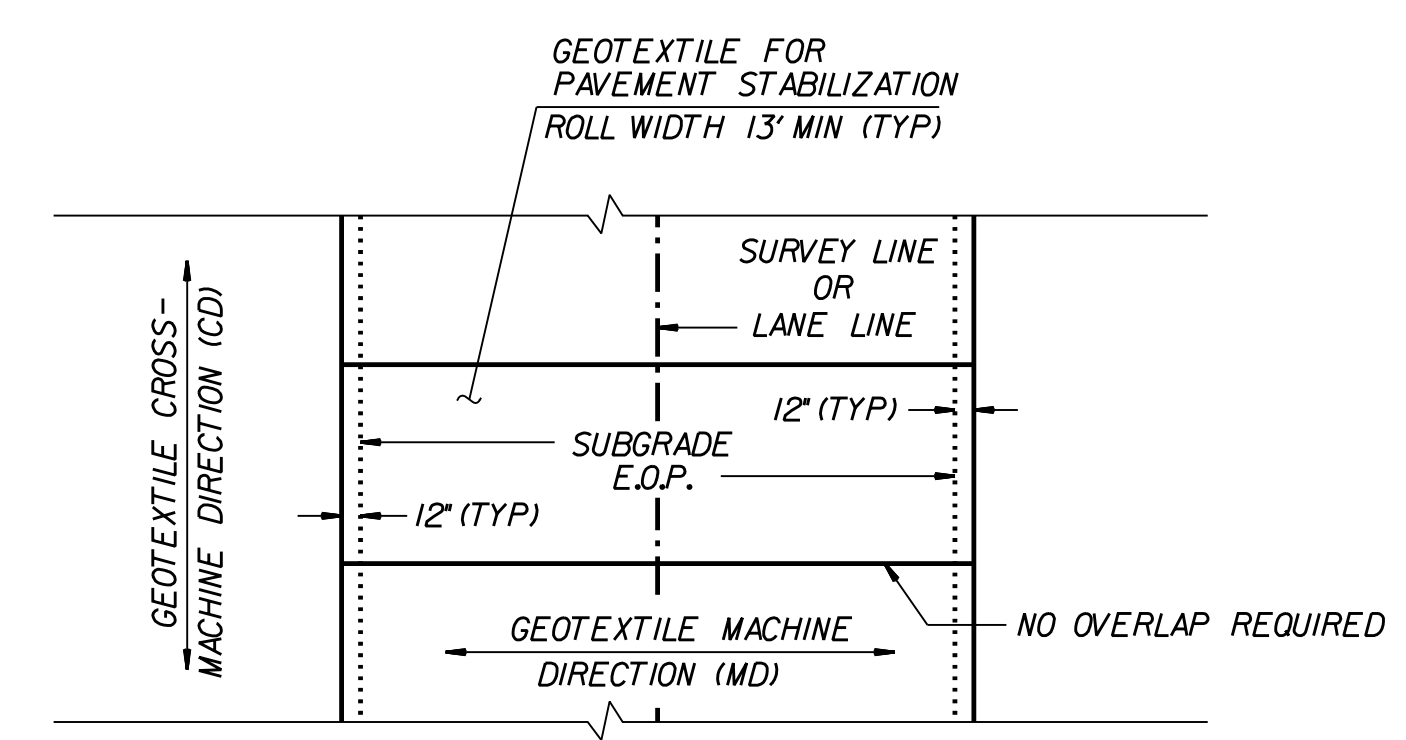
MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line LOS B (S.U.E.*)	-----
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.

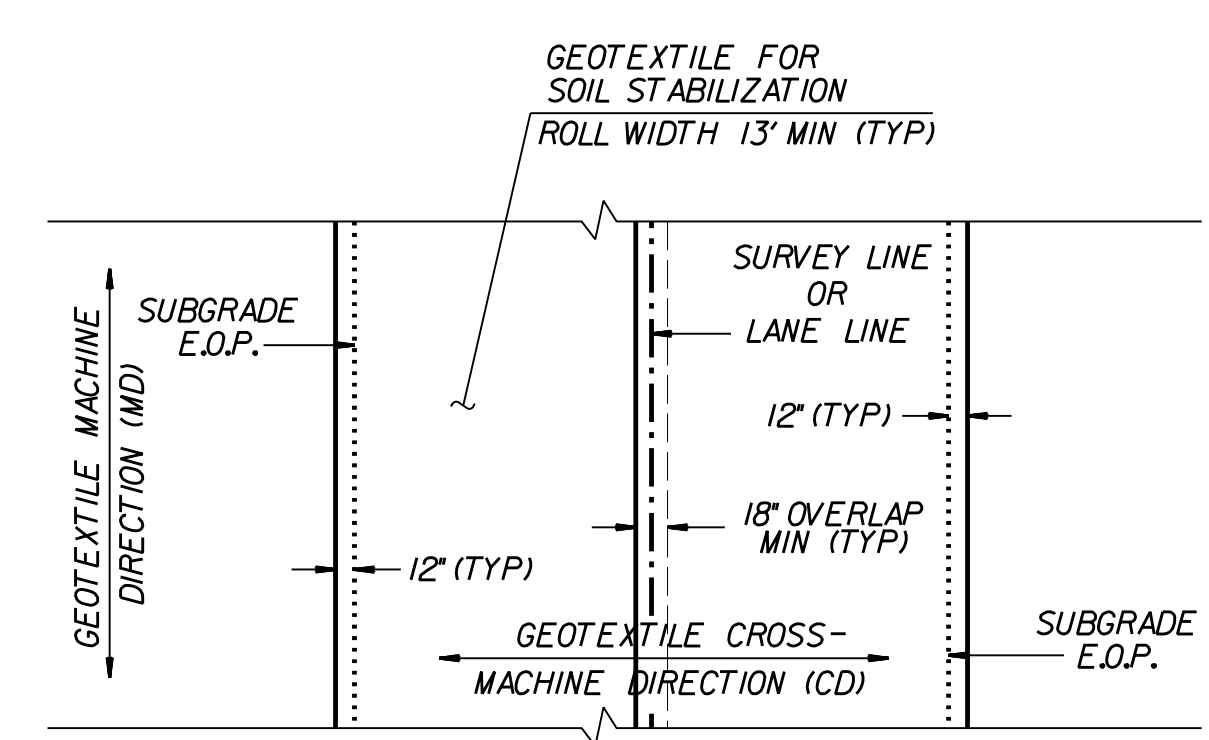
6/2/2022

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.	N1	GEOTEXTILE FOR SOIL STABILIZATION
C2	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.	N2	GEOTEXTILE FOR PAVEMENT STABILIZATION
C3	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.	P	PRIME COAT
C4	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1½" IN DEPTH OR GREATER THAN 2" IN DEPTH.	R1	1'-6" CONCRETE CURB AND GUTTER.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R2	2'-6" CONCRETE CURB AND GUTTER.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2½" IN DEPTH OR GREATER THAN 4" IN DEPTH.	R3	2'-9" CONCRETE CURB AND GUTTER.
E1	PROP. APPROX. 3" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.	R4	SHOULDER BERM GUTTER
E2	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.	R5	EXPRESSWAY GUTTER
E3	PROP. APPROX. 5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.	T	EARTH MATERIAL.
E4	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.	U	EXISTING PAVEMENT.
K	12" CLASS IV SUBGRADE STABILIZATION	V1	1½" MILLING
J1	6" AGGREGATE BASE COURSE	W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL).
J2	10" AGGREGATE BASE COURSE	Y	MILLED RUMBLE STRIPS

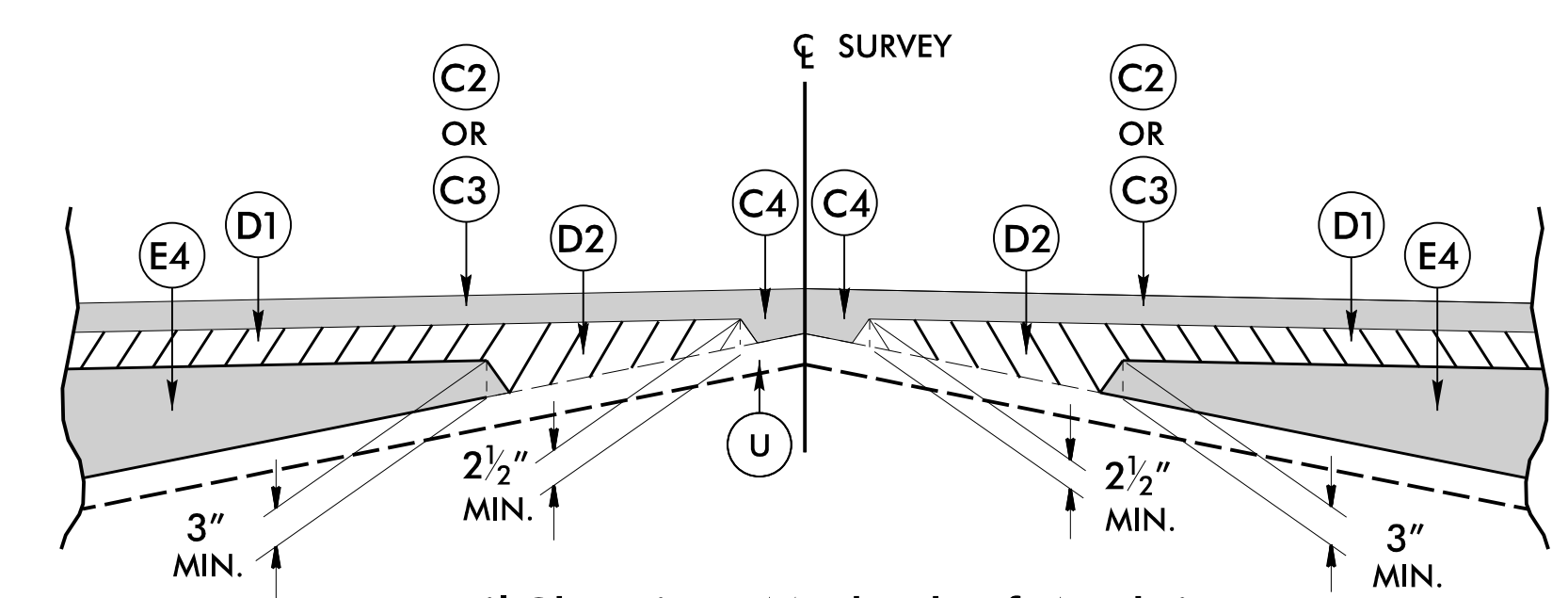


**GEOTEXTILE FOR PAVEMENT STABILIZATION PLACEMENT
(PLAN VIEW)**
(100% COVERAGE REQUIRED)

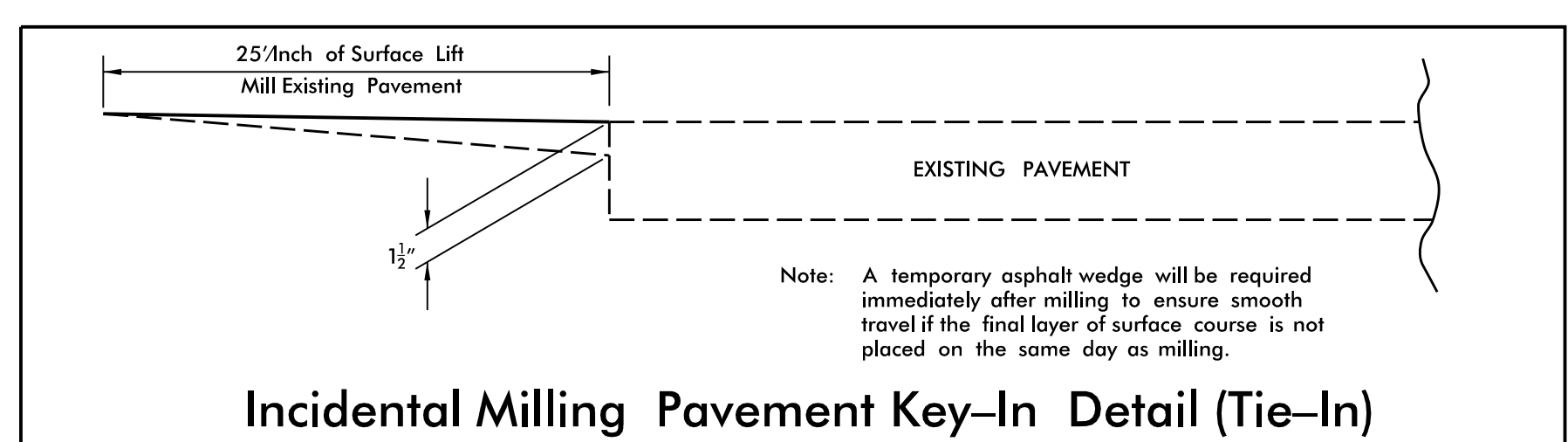


**GEOTEXTILE FOR SOIL STABILIZATION PLACEMENT
(PLAN VIEW)**
(100% COVERAGE REQUIRED)

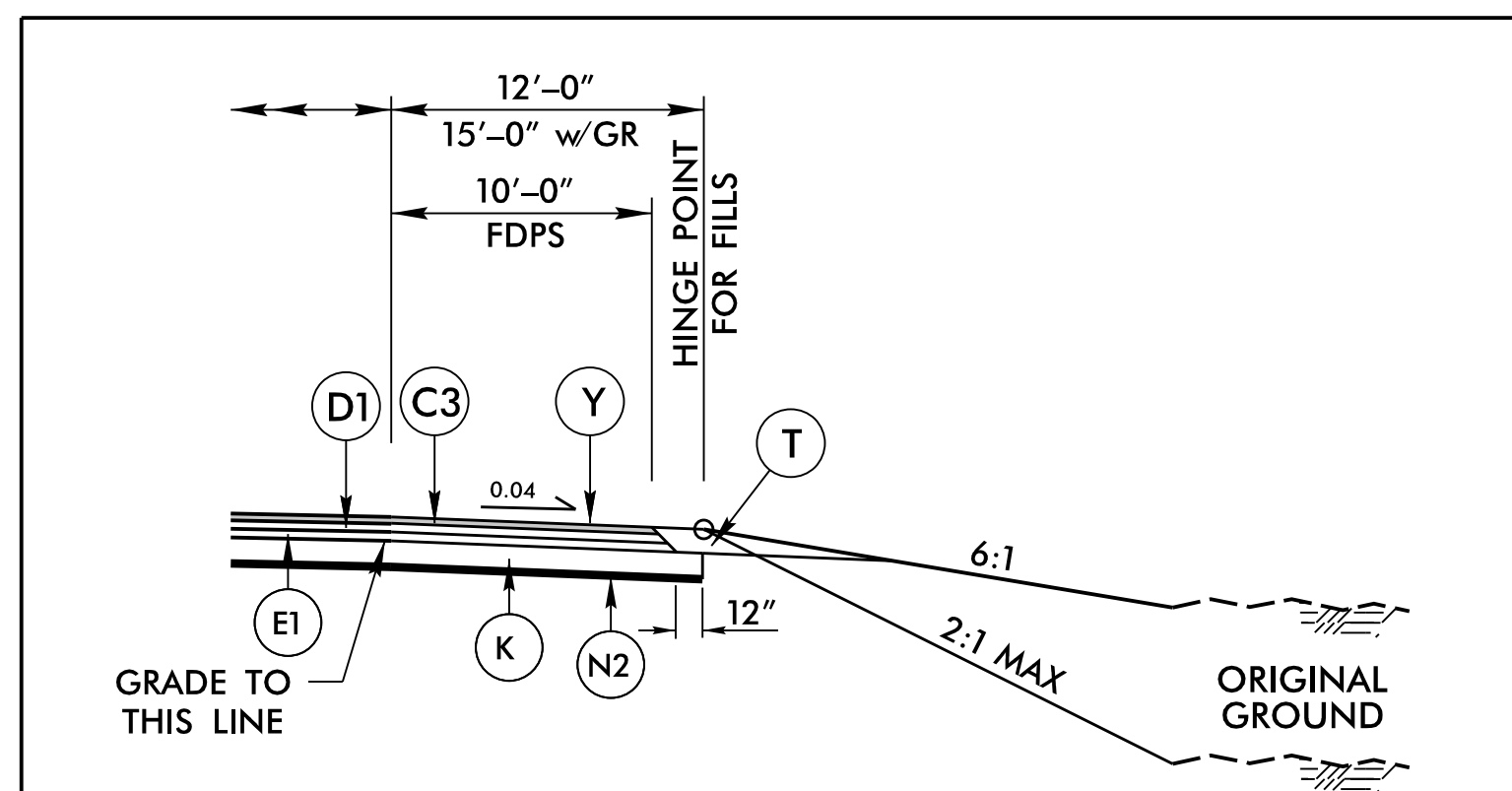
NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.



**Detail Showing Method of Wedging
DETAIL SHOWING METHOD OF WEDGING**



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



LINE	STATION	STATION	LOCATION
-L-	22+50	29+00	RT
-L-	36+00	42+00	RT
-L-	44+00	45+00	RT/LT
-L-	45+00	47+50	RT
-L-	67+50	68+00	RT

AREAS WILL BE INVESTIGATED DURING CONSTRUCTION

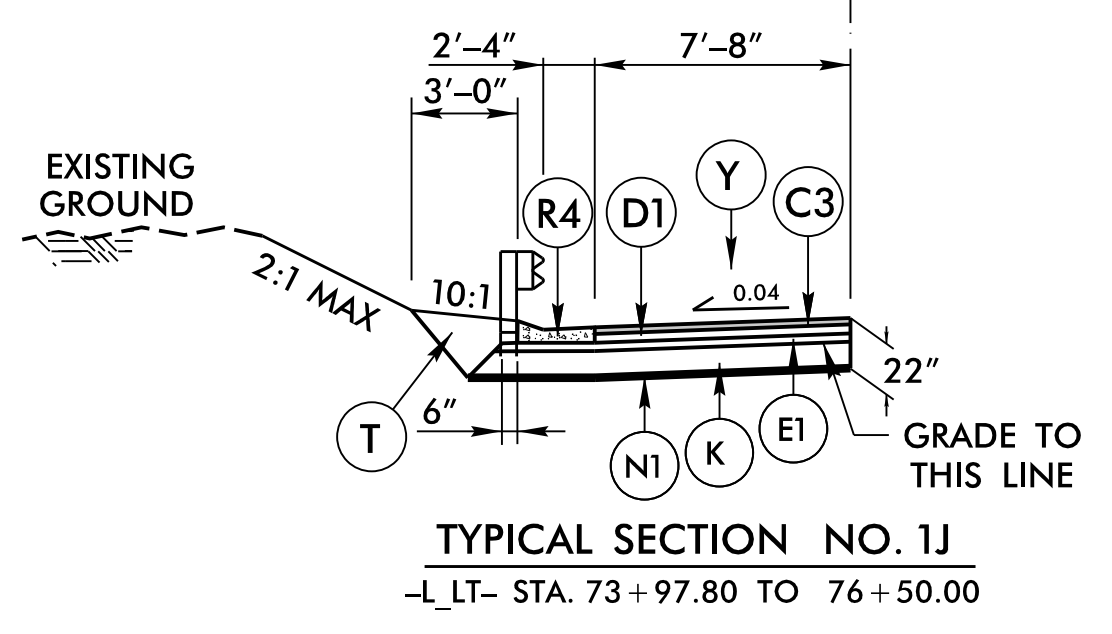
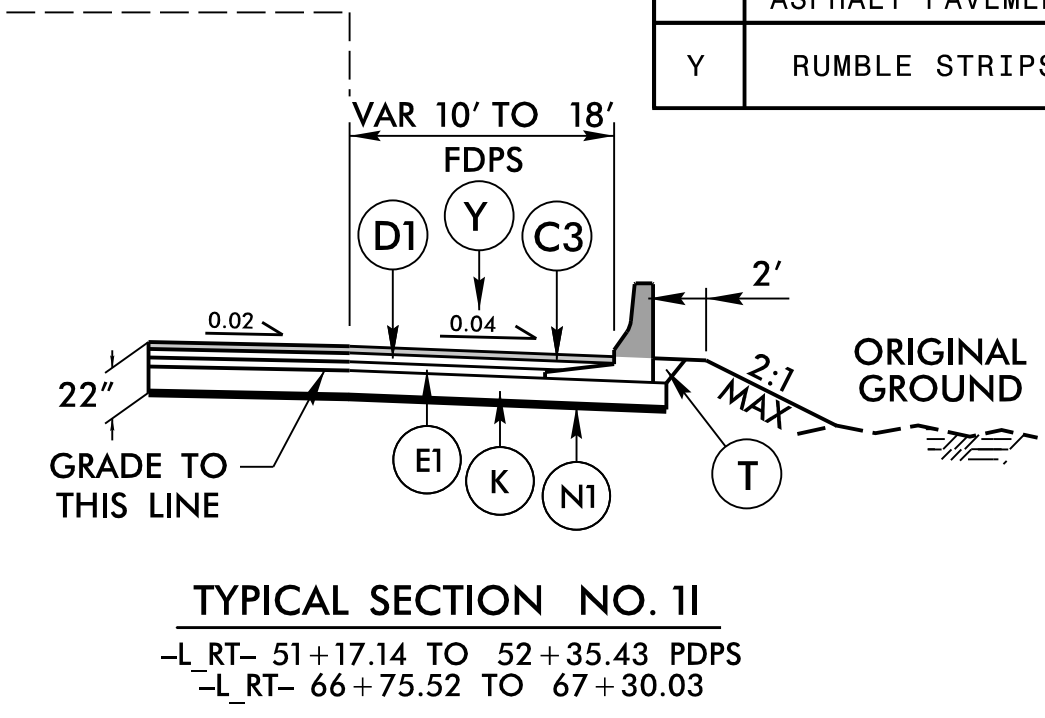
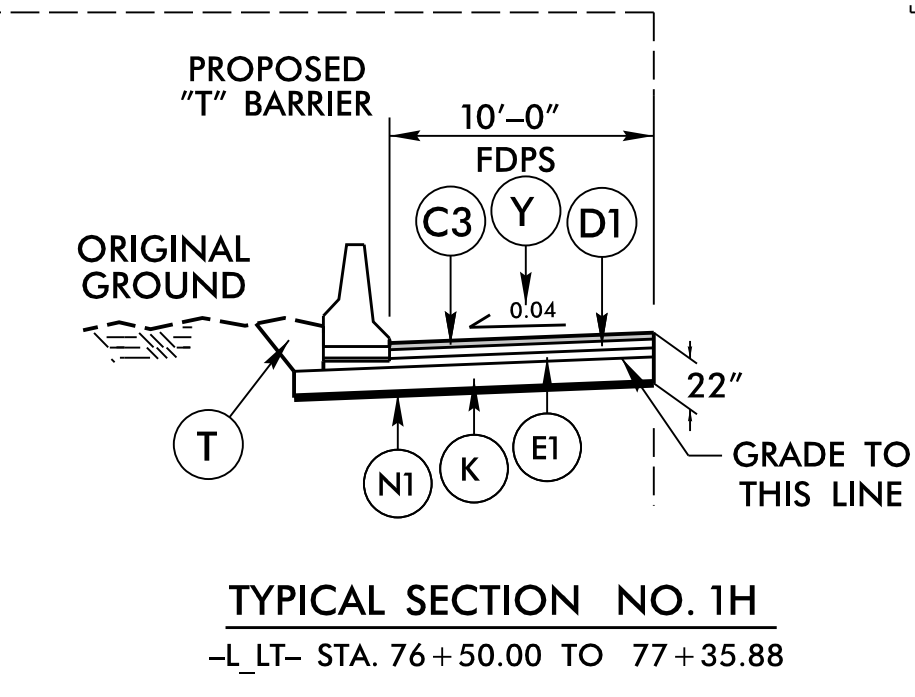
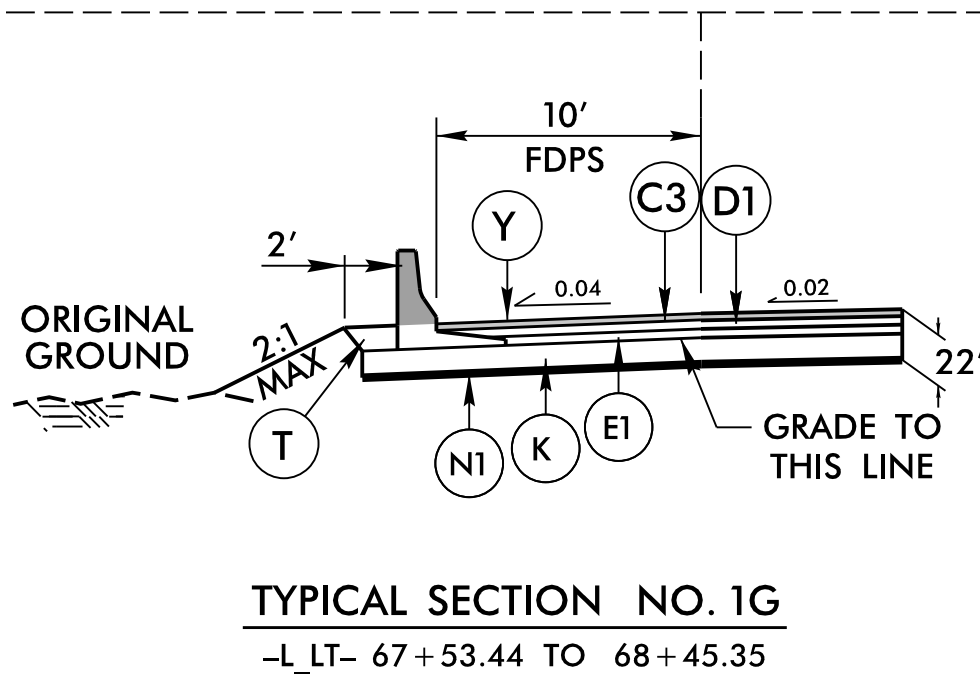
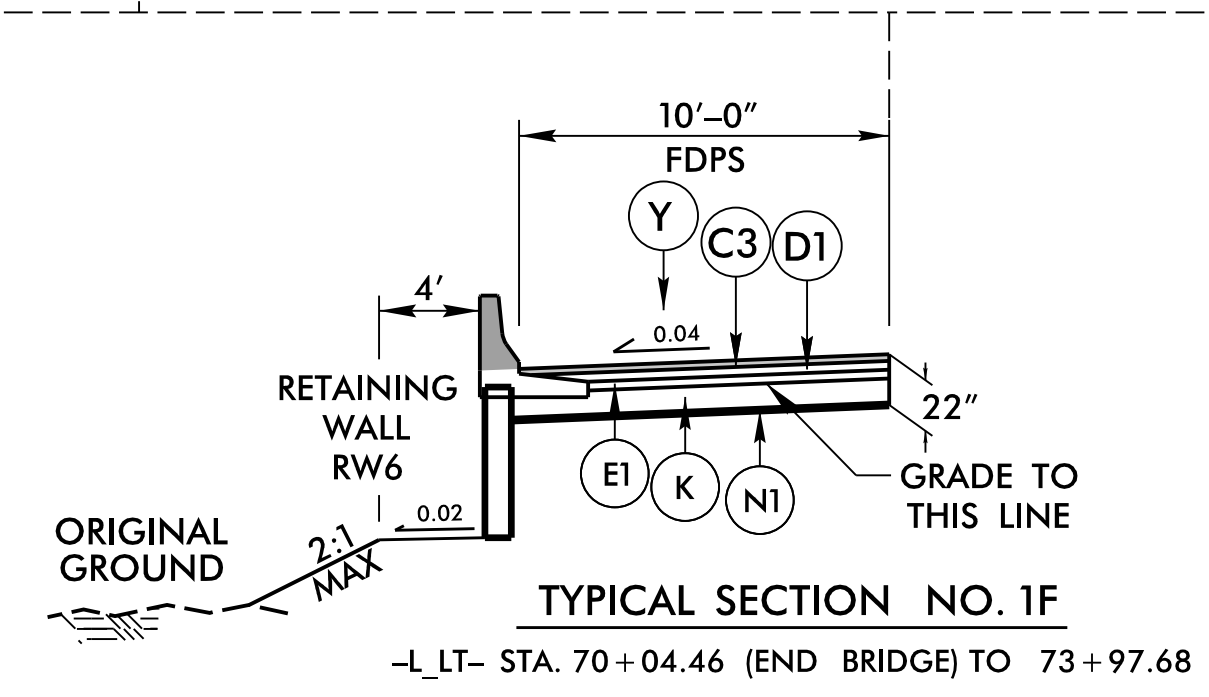
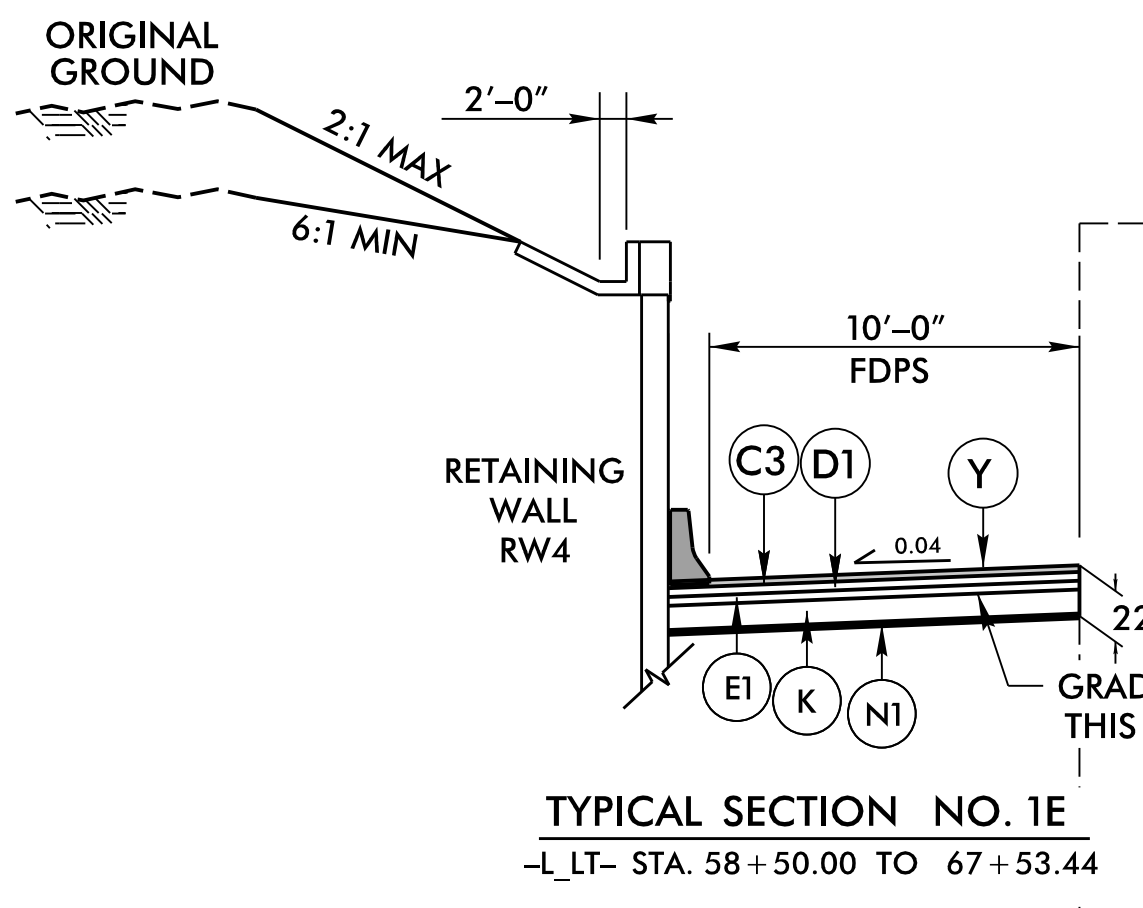
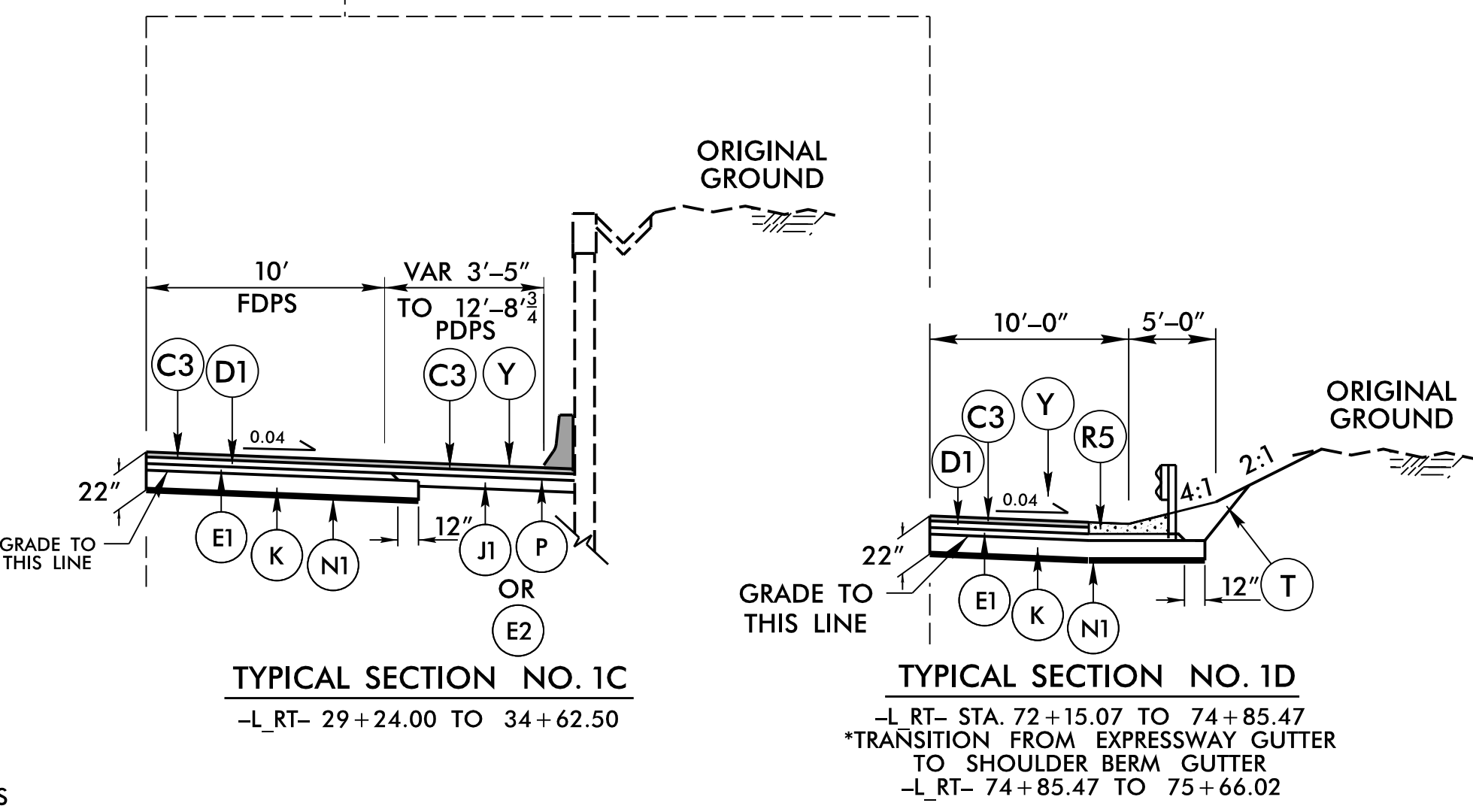
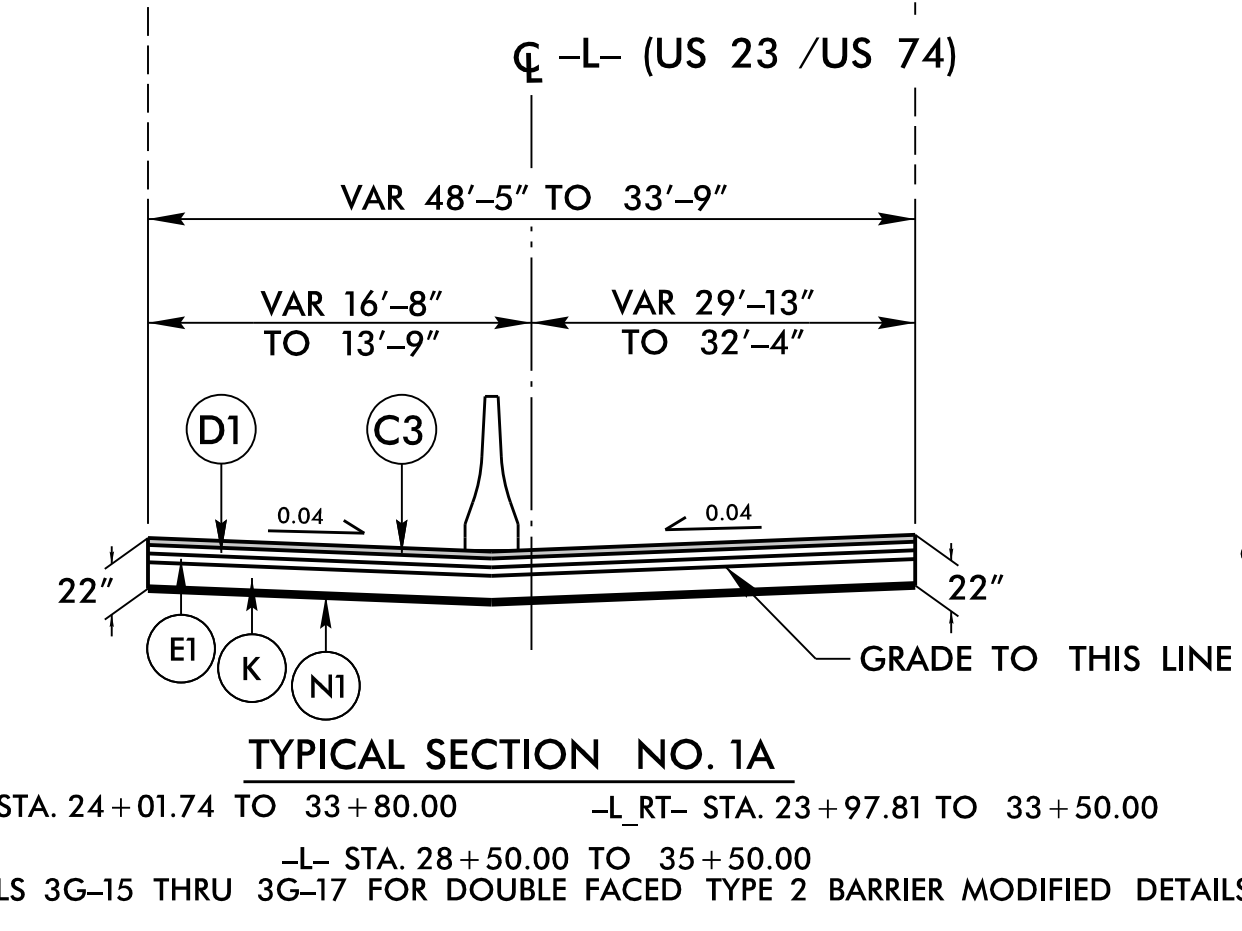
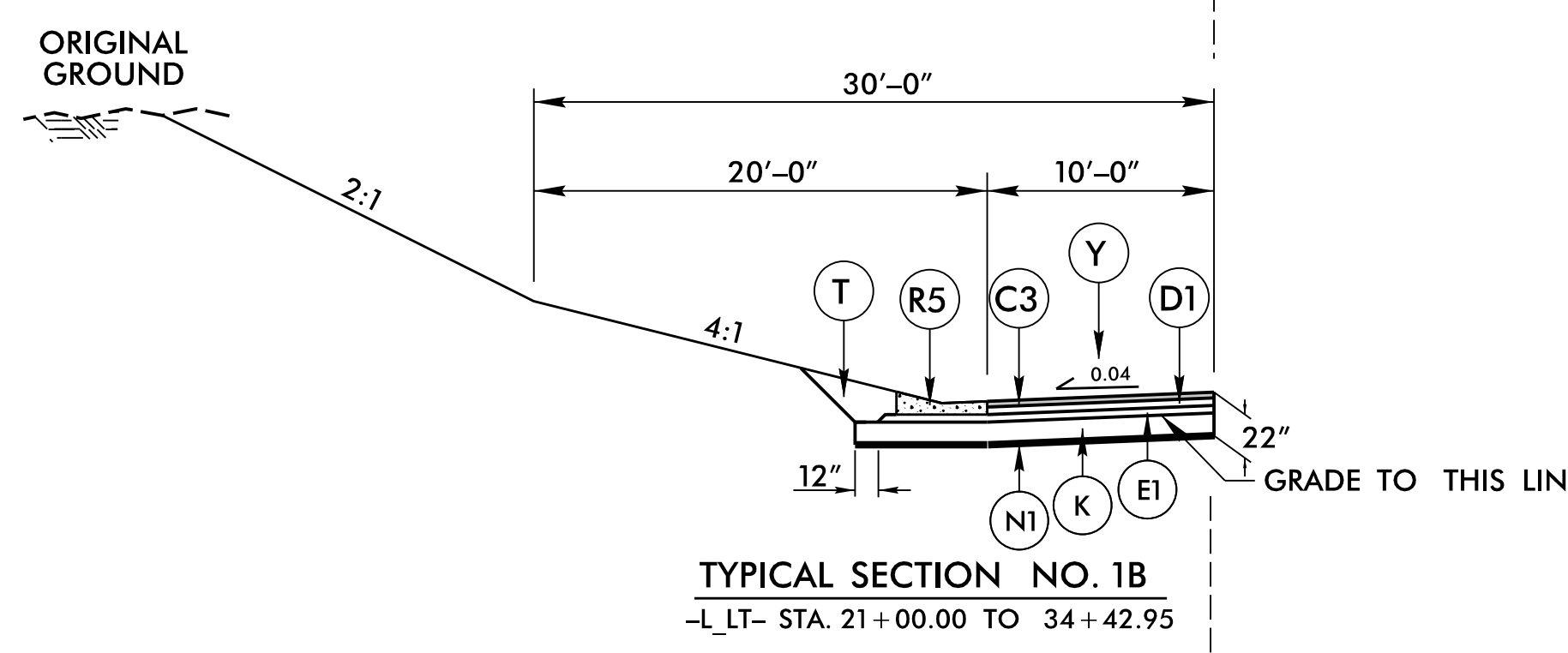
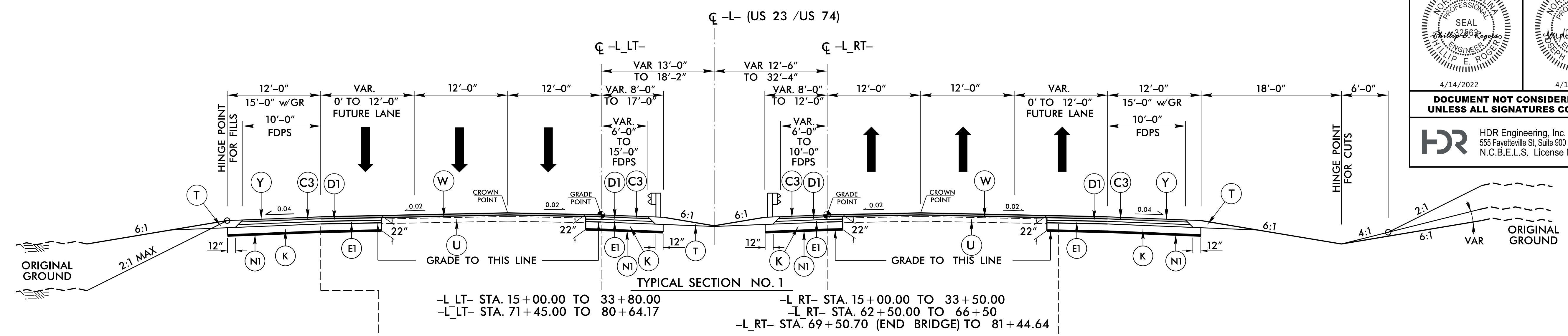
GEOTEXTILE FOR PAVEMENT STABILIZATION DETAIL
USE GEOTEXTILE FOR PAVEMENT STABILIZATION DETAIL IN CONJUNCTION WITH APPROPRIATE TYPICAL SECTIONS AT LOCATIONS NOTED. GEOTEXTILE FOR SOIL STABILIZATION SHALL NOT BE USED IN LOCATIONS WHERE GEOTEXTILE FOR PAVEMENT STABILIZATION IS RECOMMENDED

PROJECT REFERENCE NO. B-3186B-5898	SHEET NO. 2A-1
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER
4/14/2022	4/18/2022
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	

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6/2/2022

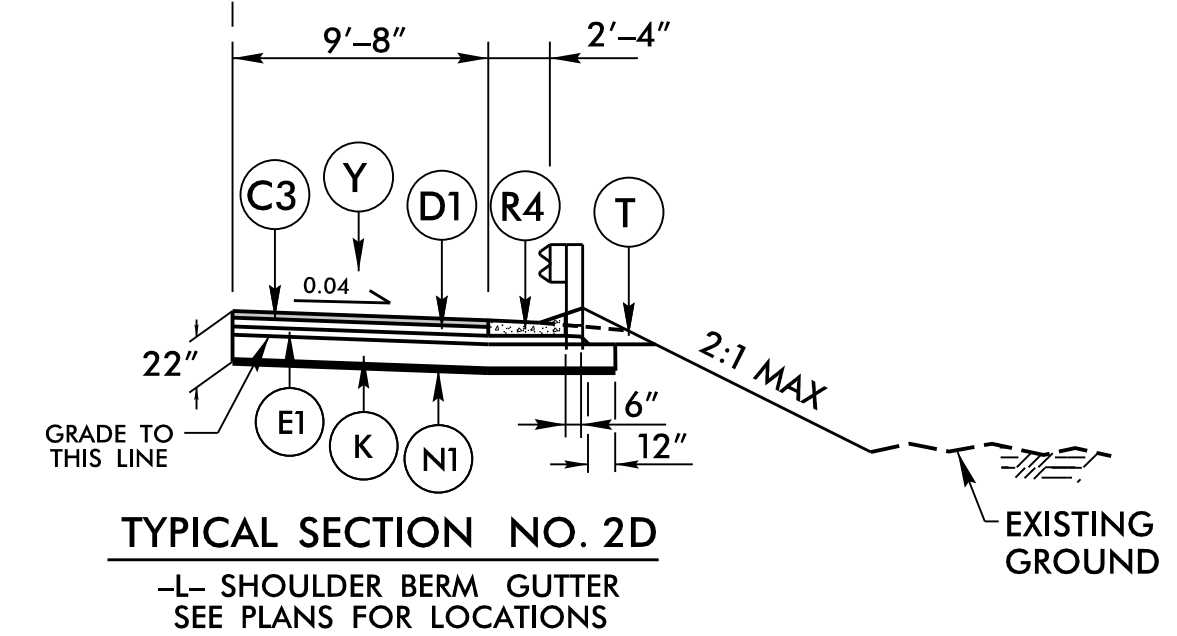
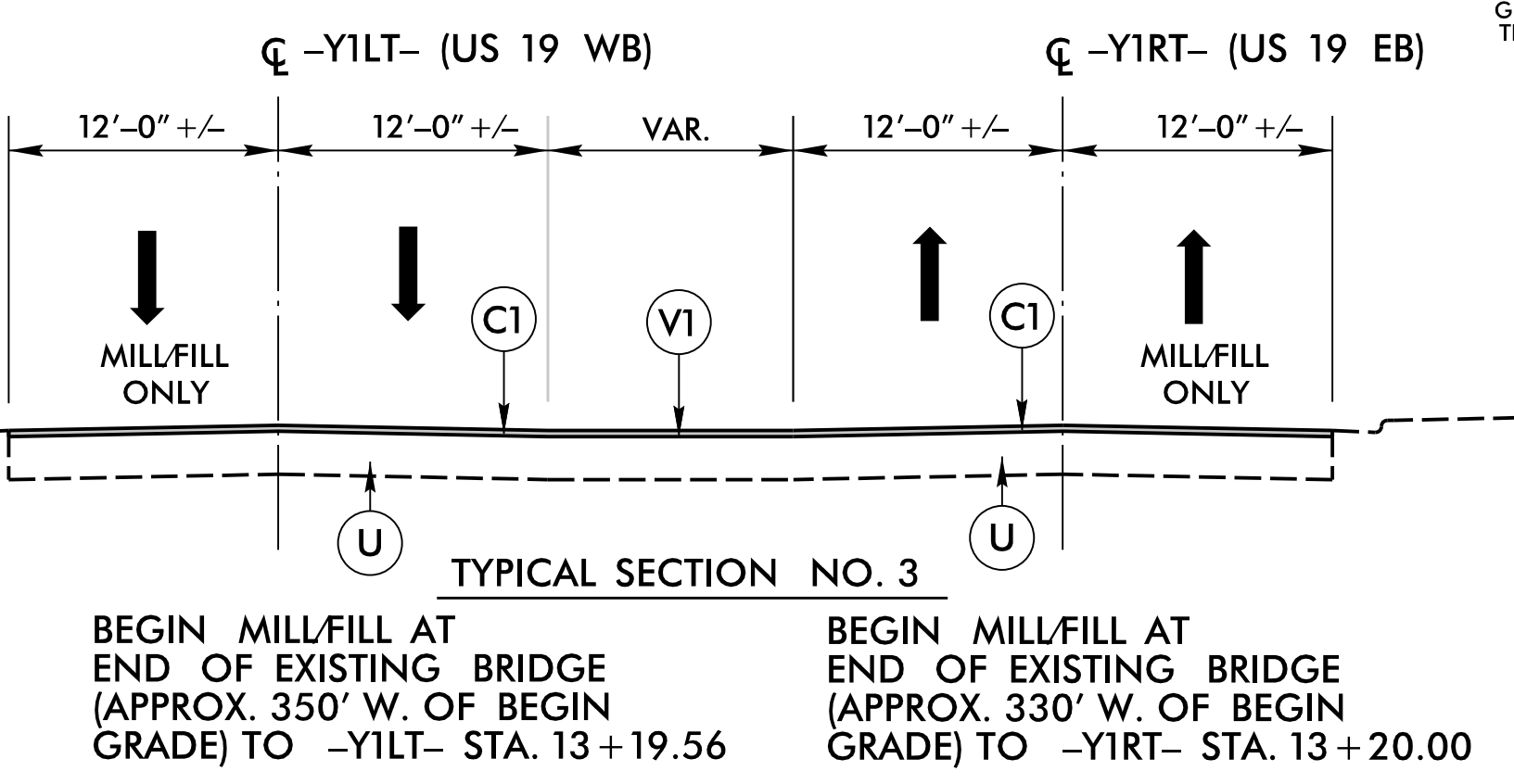
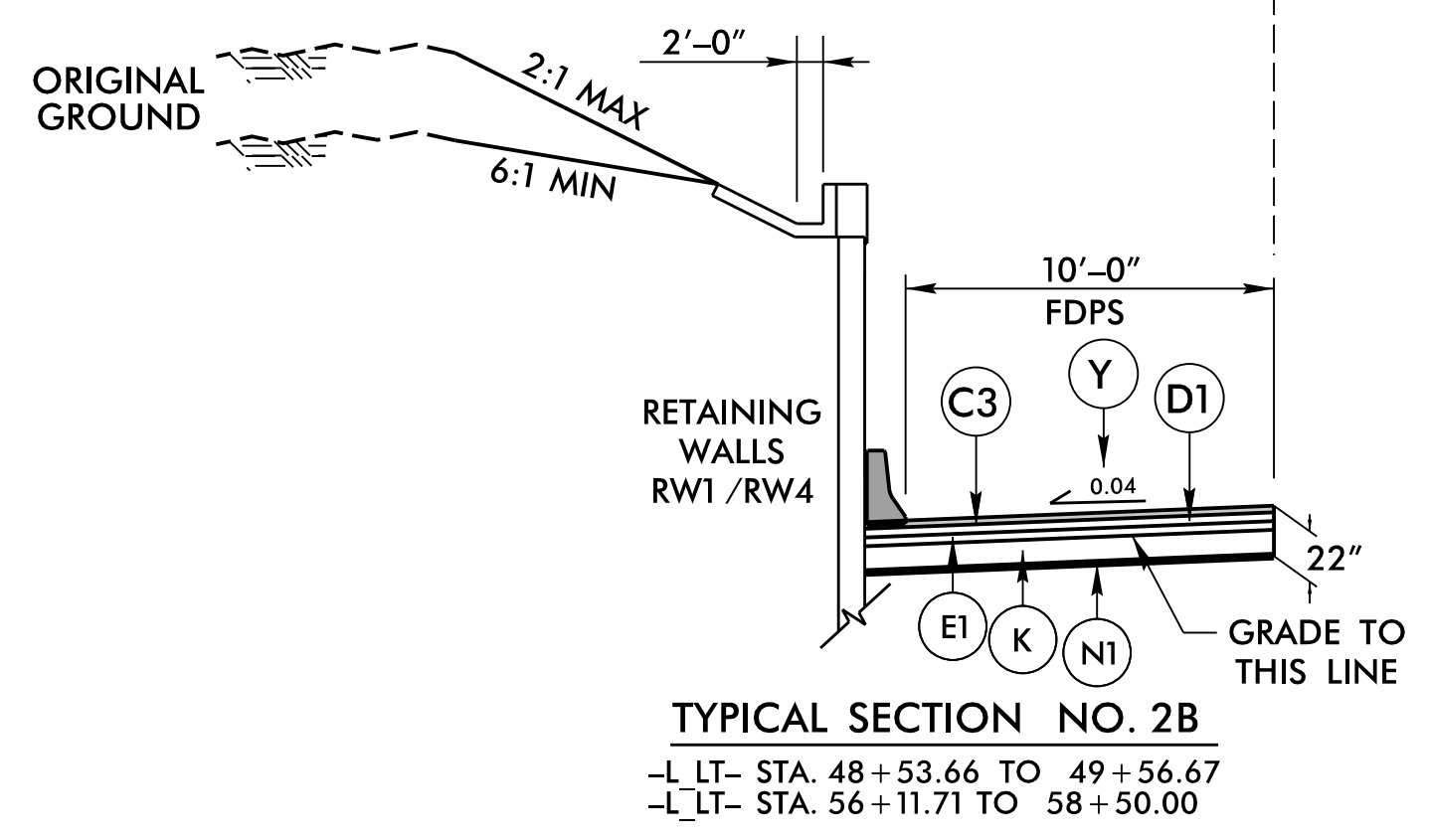
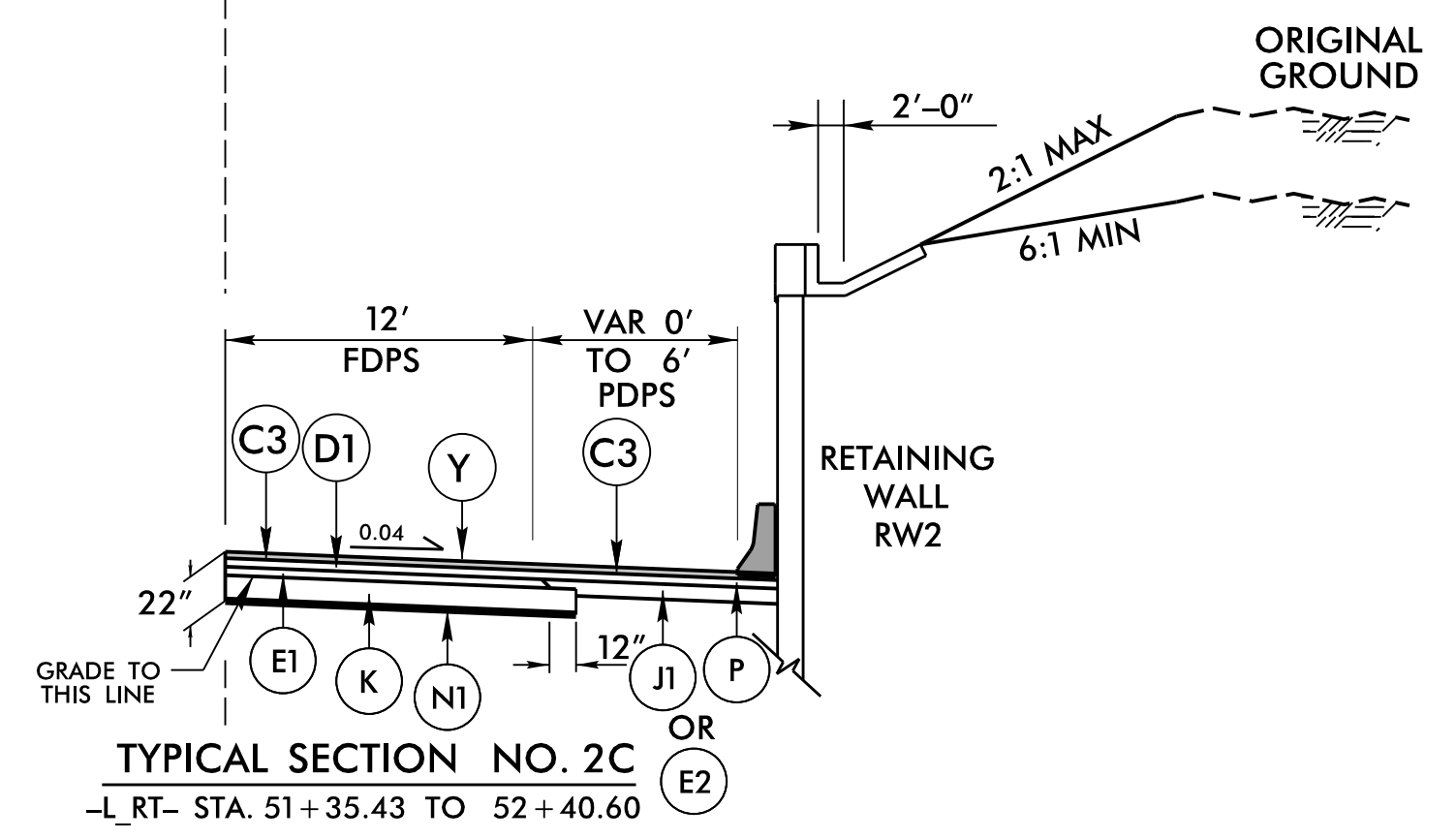
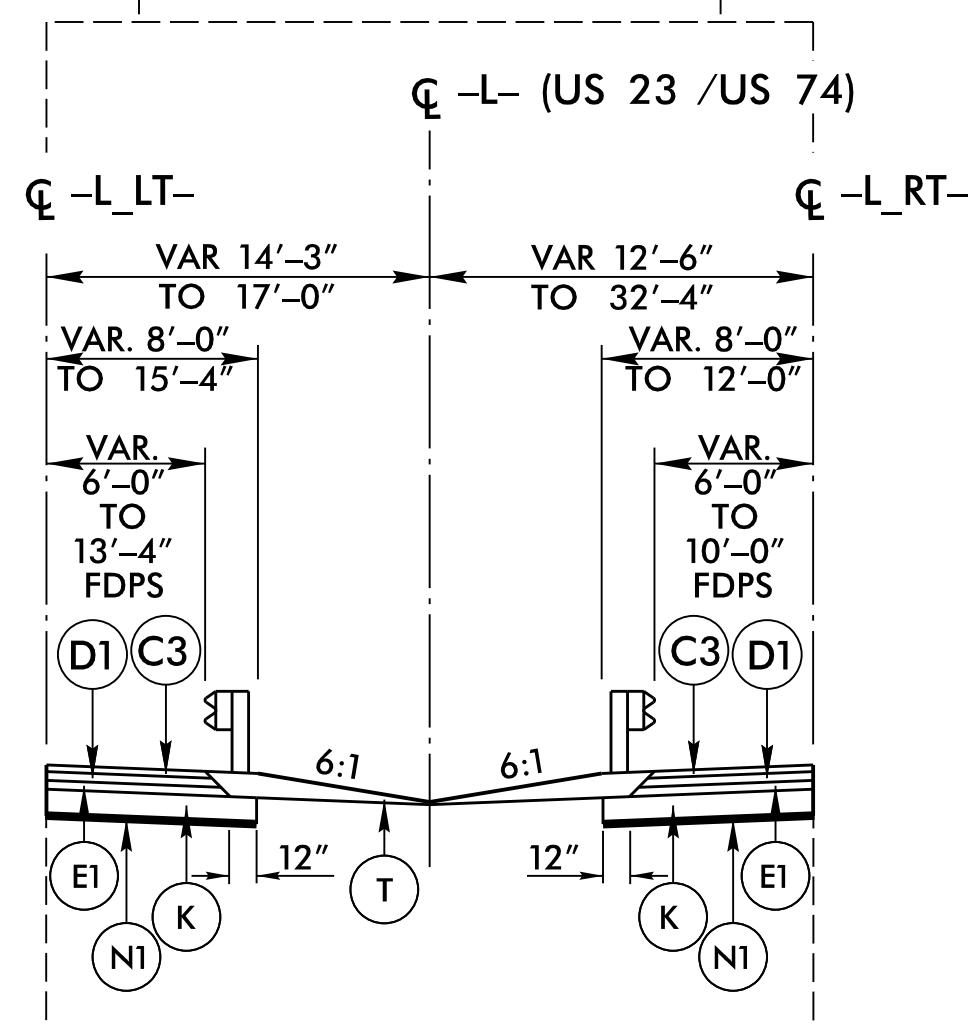
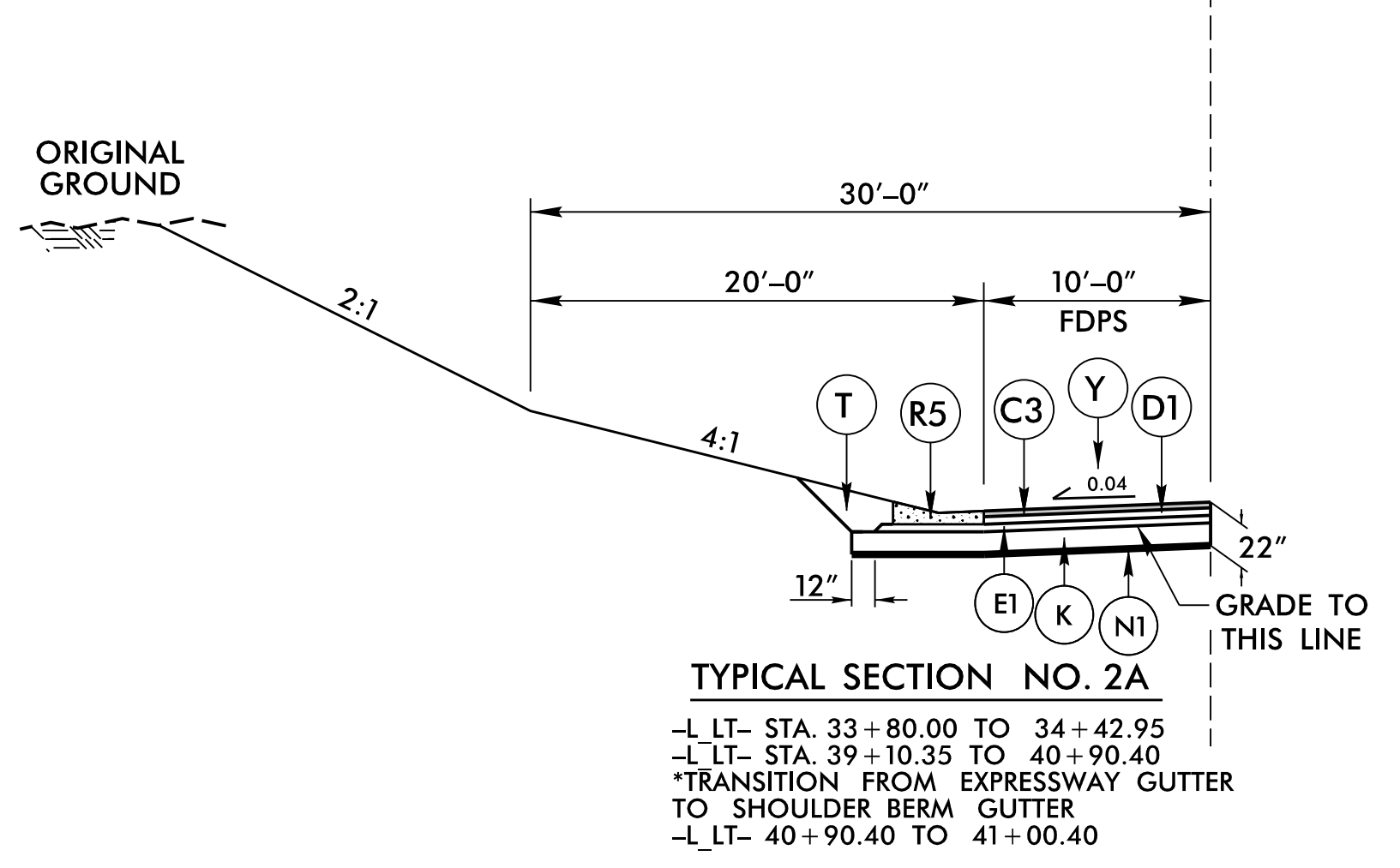
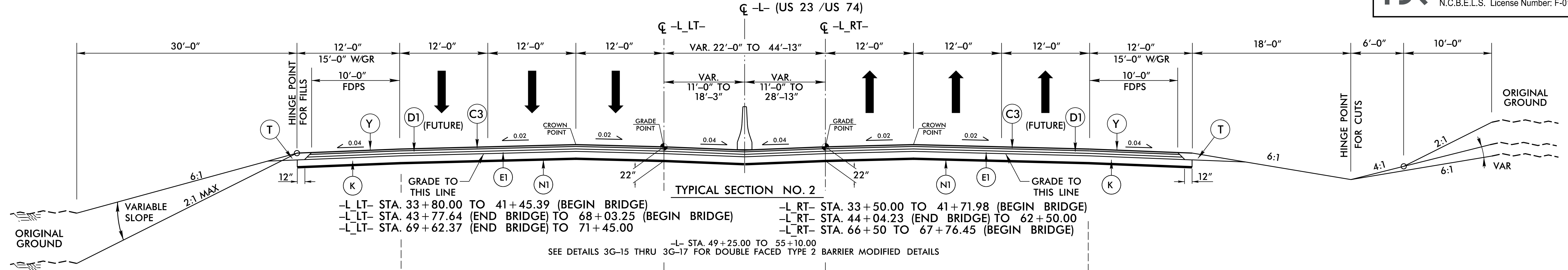
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ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER
4/14/2022	
4/18/2022	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St. Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	



PAVEMENT SCHEDULE	
C3	3" S9.5C
D1	4" I19.0C
E1	3" B25.0C
E2	4" B25.0C
J1	6" ABC
K	12" CL IV SUB. STAB.
N1	GEOTEXTILE
P	PRIME COAT
R4	SBG
R5	EXP. GUTTER
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	VAR. DEPTH ASPHALT PAVEMENT
Y	RUMBLE STRIPS

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PROJECT REFERENCE NO. B-3186B-5898	SHEET NO. 2A-3
ROADWAY DESIGN ENGINEER SEAL Philip E. Rogers 4/14/2022	PAVEMENT DESIGN ENGINEER SEAL D. Holliman 4/18/2022
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	

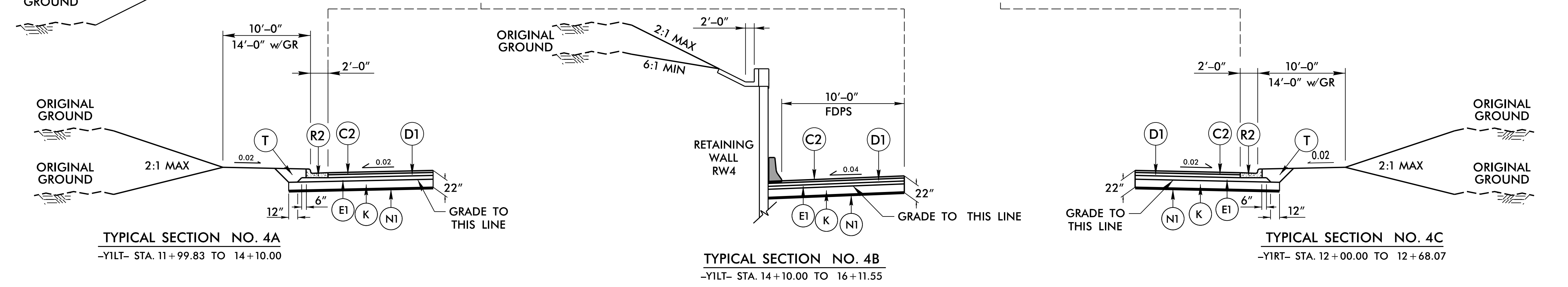
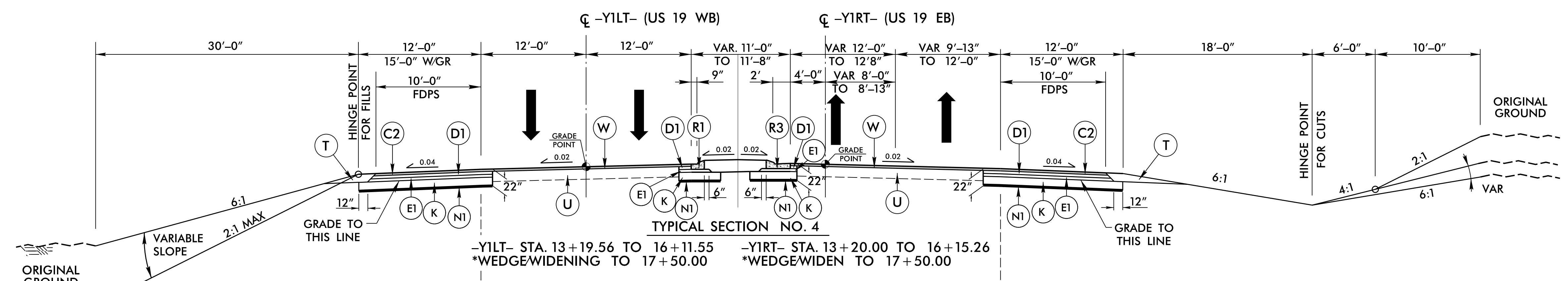


PAVEMENT SCHEDULE	
C1	1 1/2" S9.5B
C3	3" S9.5C
D1	4" I19.0C
E1	3" B25.0C
E2	4" B25.0C
J1	6" ABC
K	12" CL IV SUB. STAB.
N1	GEOTEXTILE
P	PRIME COAT
R4	SBG
R5	EXP. GUTTER
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	1 1/2" MILLING
Y	RUMBLE STRIPS

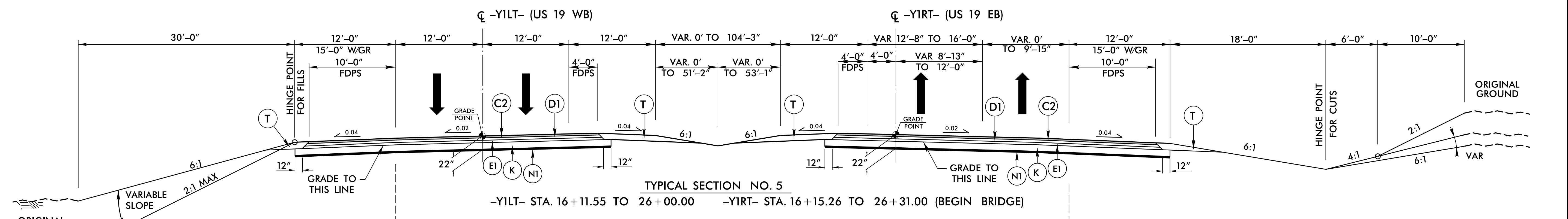
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6/2/2022

PROJECT REFERENCE NO. B-3186B-5898	SHEET NO. 2A-4
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER 
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	
C2	3" S9.5B
D1	4" I19.0C
E1	3" B25.0C
J1	6" ABC
K	12" CL IV SUB. STAB.
N1	GEOTEXTILE
P	PRIME COAT
R1	1'-6" C&G
R2	2'-6" C&G
R3	2'-9" C&G
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	VAR. DEPTH ASPHALT PAVEMENT

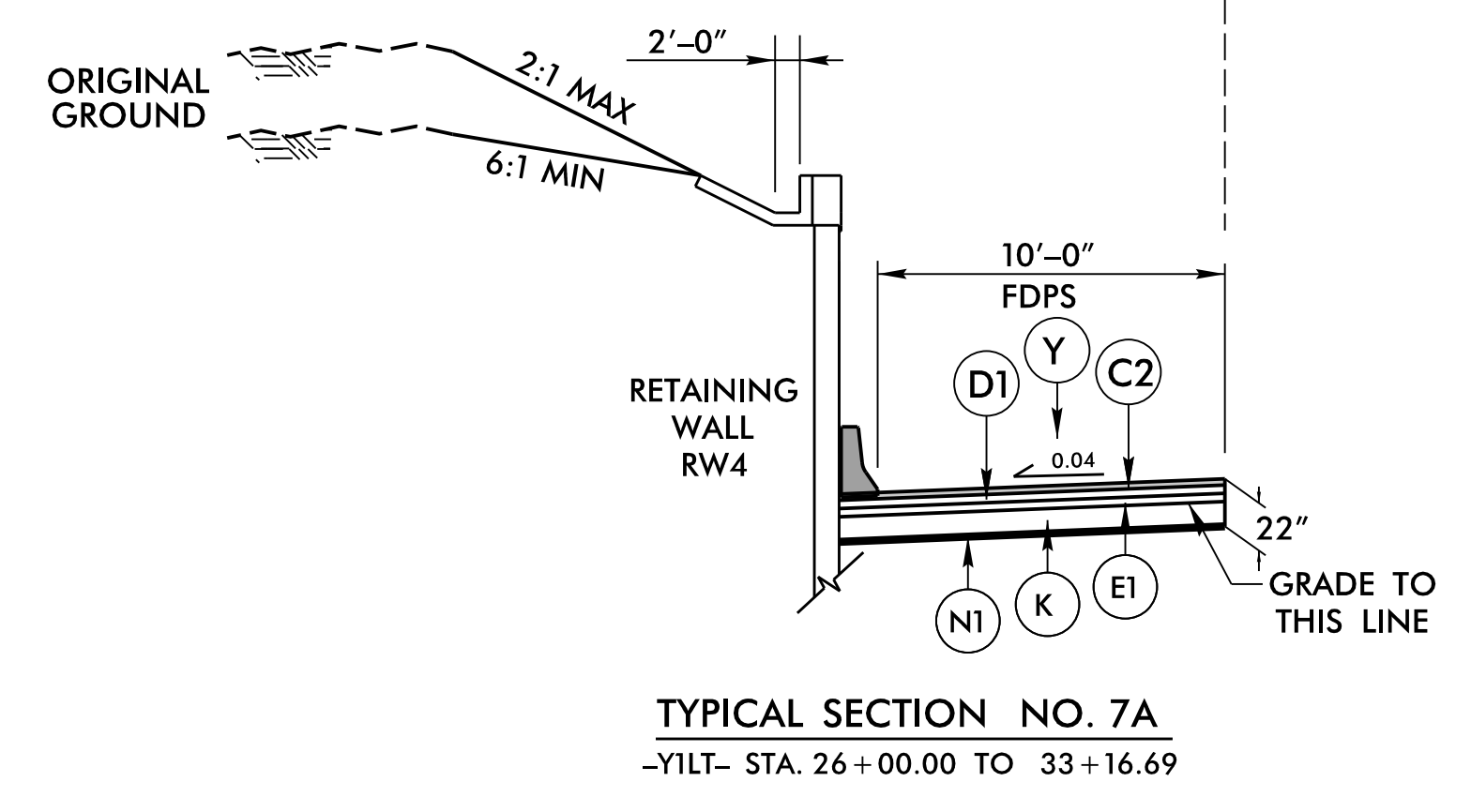
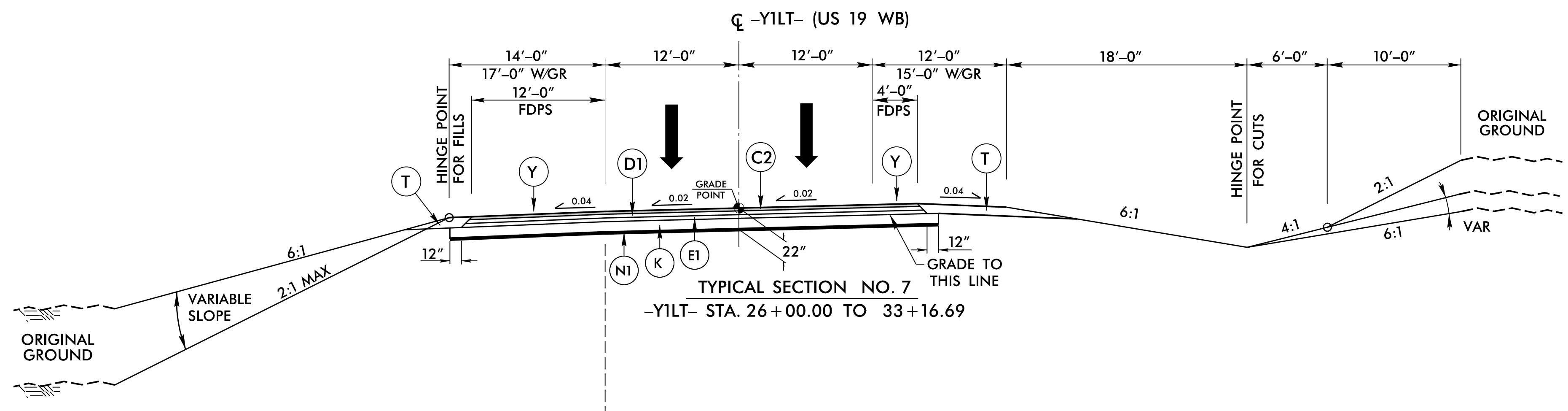
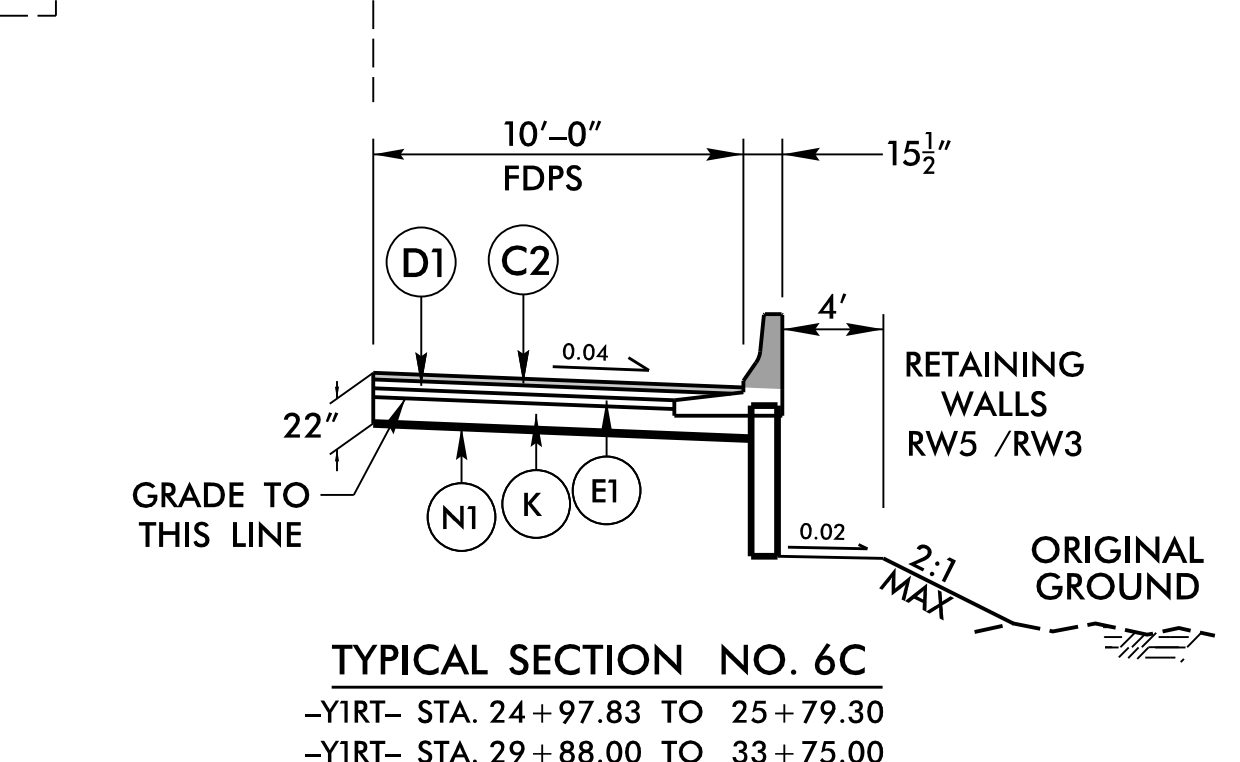
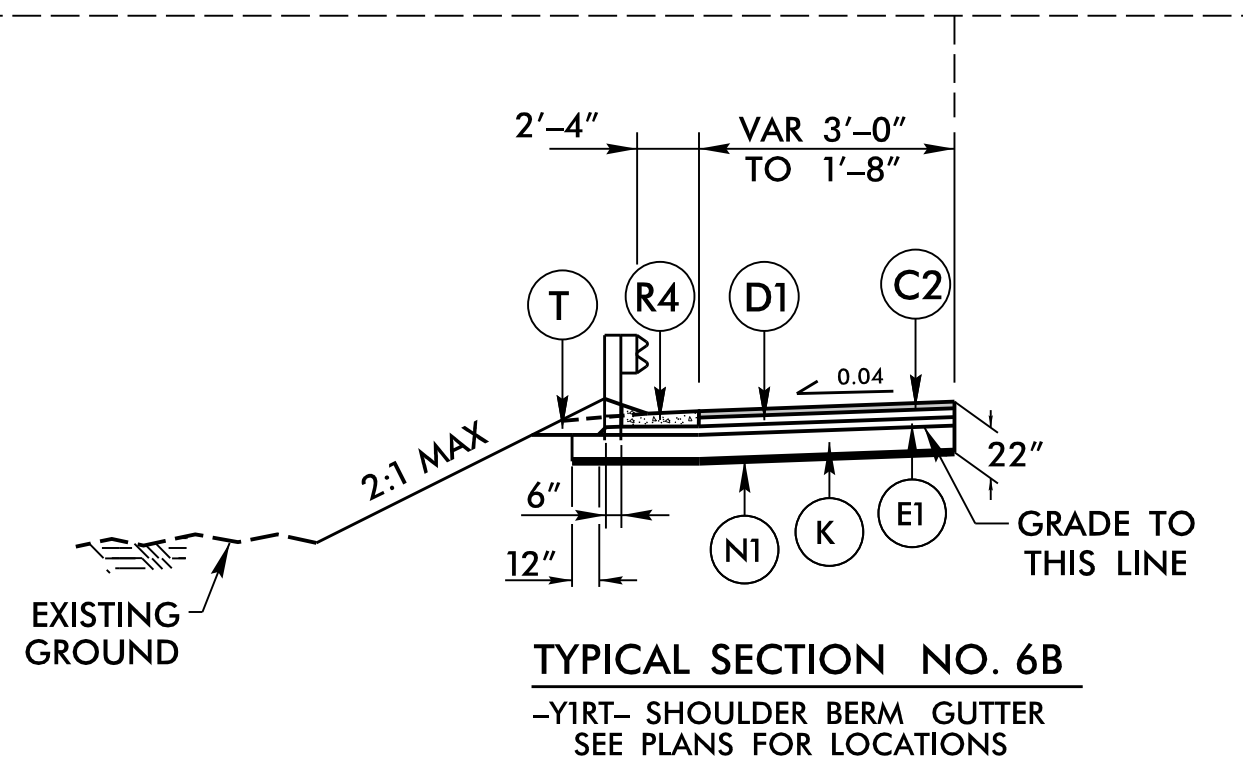
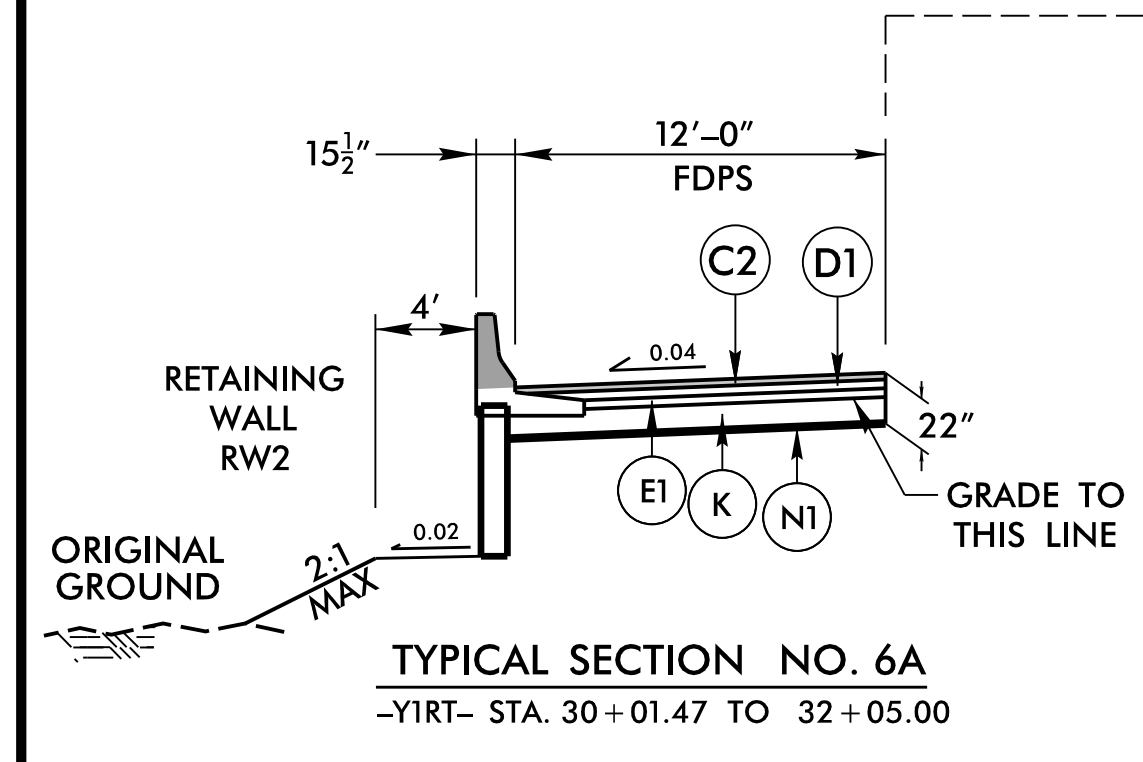
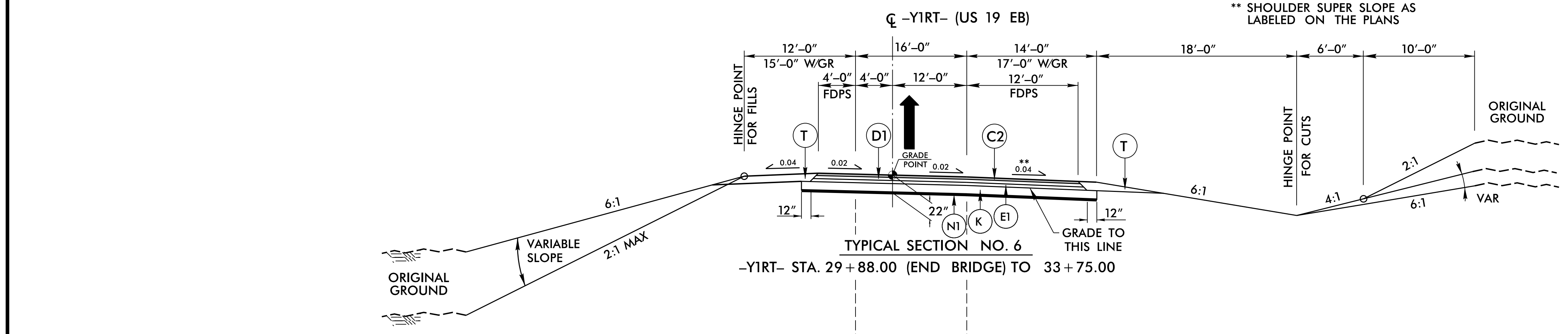


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6/2/2022


PROJECT REFERENCE NO. B-3186B-5898	SHEET NO. 2A-5
ROADWAY DESIGN ENGINEER <i>[Signature]</i> SEAL LIP E. ROGUE 4/14/2022	PAVEMENT DESIGN ENGINEER <i>[Signature]</i> SEAL DEB T. HOLLAND 4/18/2022
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	

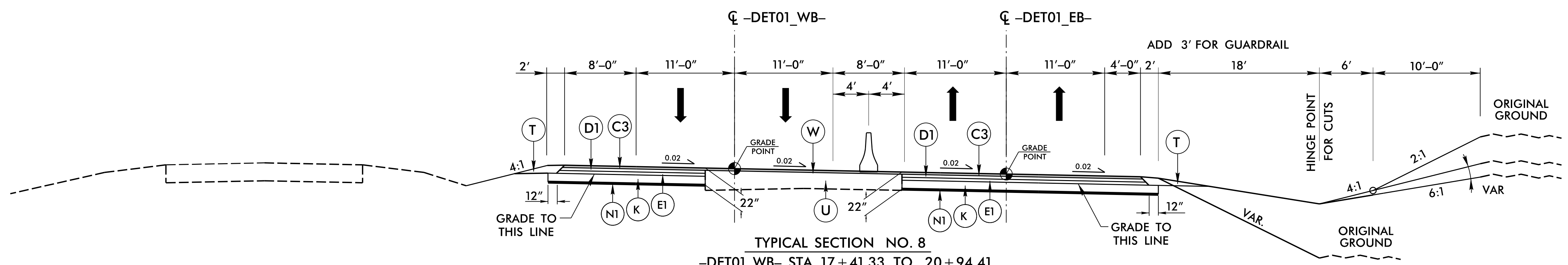
PAVEMENT SCHEDULE	
C2	3" S9.5B
D1	4" I19.0C
E1	3" B25.0C
K	12" CL IV SUB. STAB.
N1	GEOTEXTILE
R4	SBG
T	EARTH MATERIAL
U	EXIST. PAVEMENT
Y	RUMBLE STRIPS



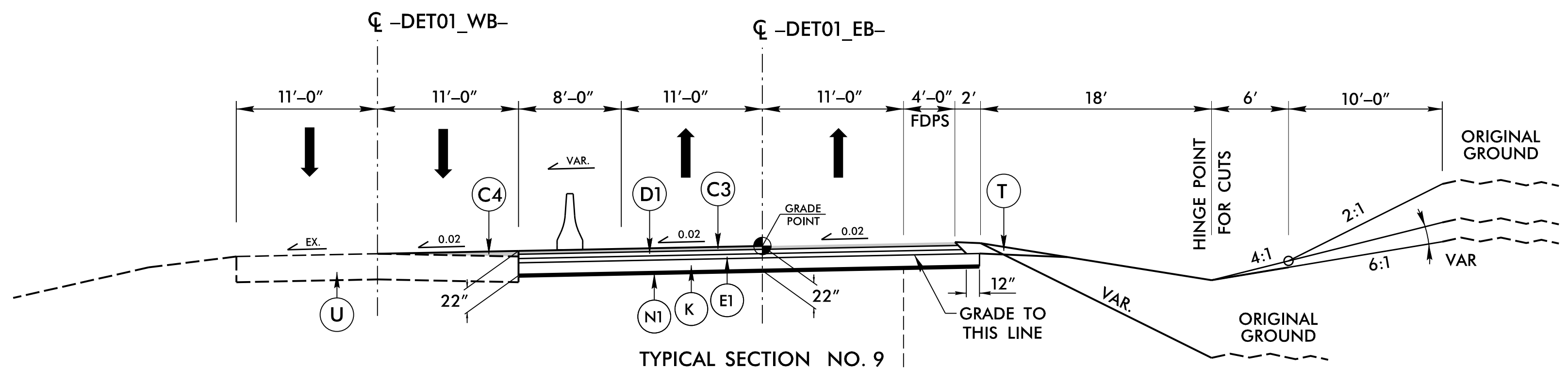
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6/2/2019

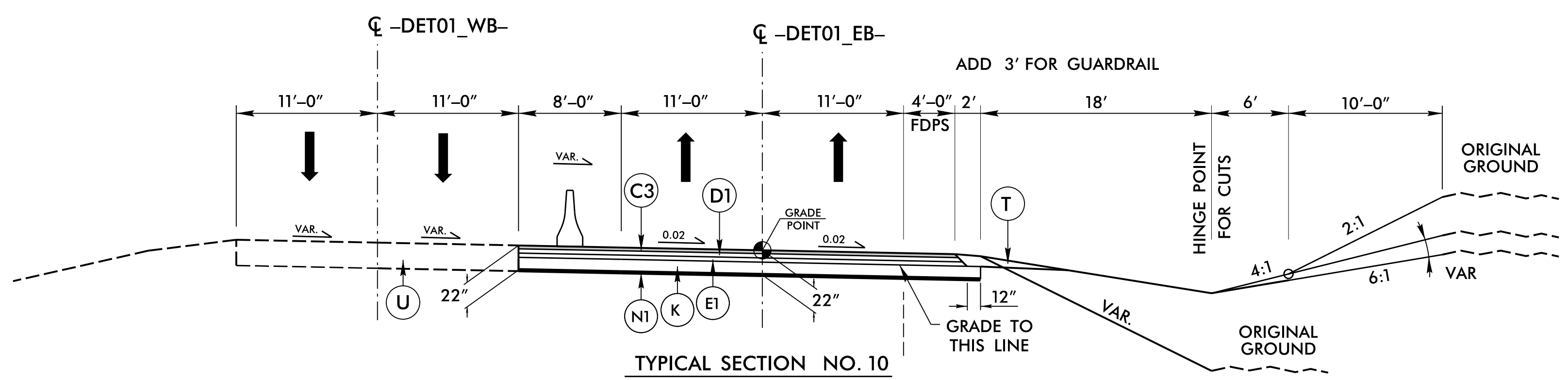
PROJECT REFERENCE NO. B-3186B-5898	SHEET NO. 2A-6
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DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St. Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	



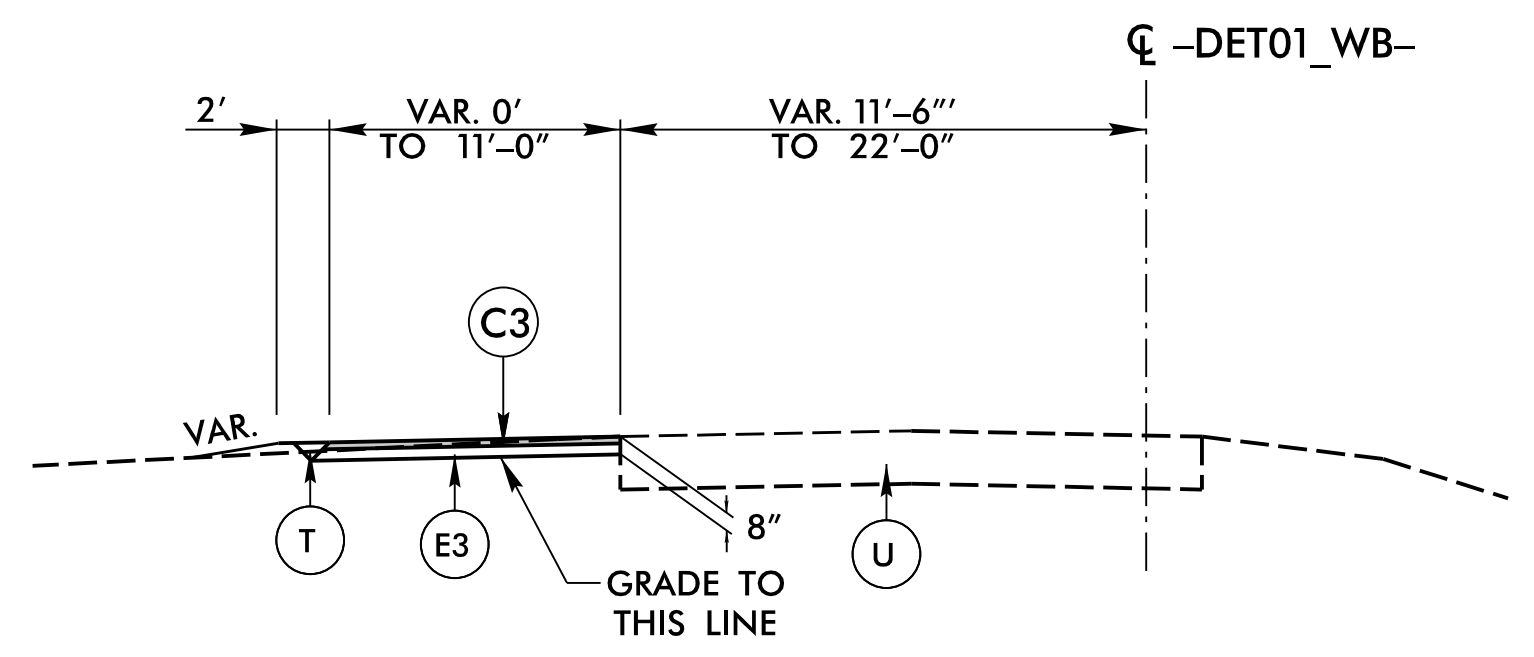
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 -DET01_EB- STA. 20+25.47 TO 20+89.55



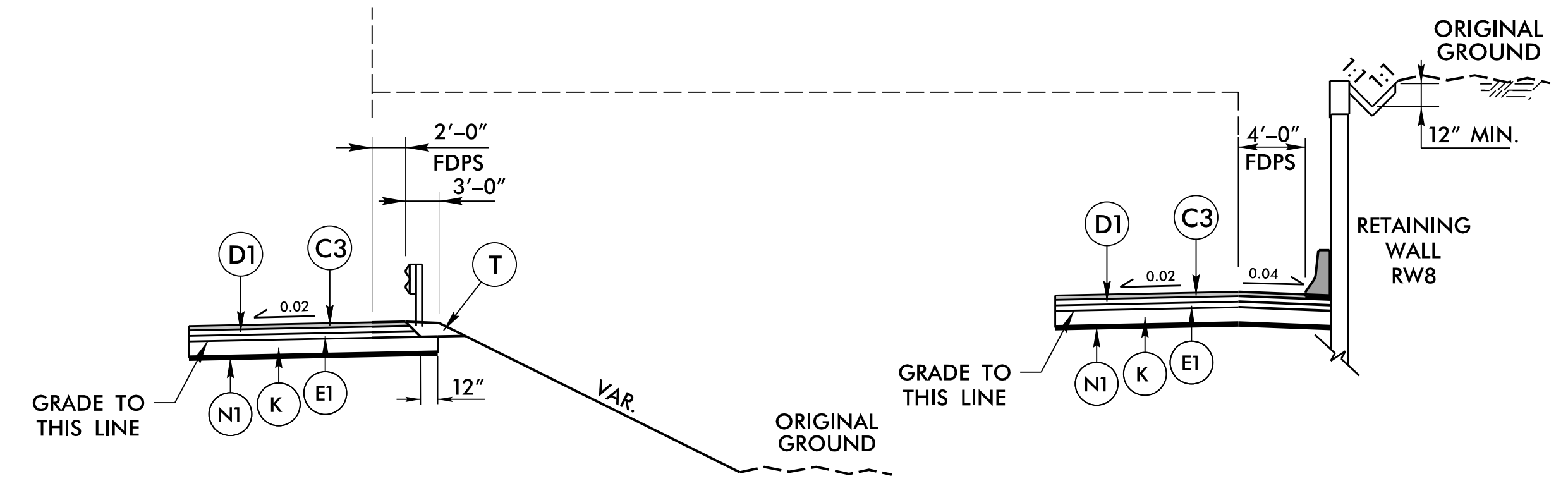
TYPICAL SECTION NO. 9
 -DET01_EB- STA. 20+89.55 TO 25+69.92



TYPICAL SECTION NO. 10
 -DET01_EB- STA. 25+69.92 TO 35+00



TYPICAL SECTION NO. 11
 -DET01_WB- STA. 31+34.50 TO 39+30.80



TYPICAL SECTION NO. 10A
 -DET01_EB- STA. 20+89.55 TO 29+30.71
 -DET01_EB- STA. 34+83.86 TO 37+50.00

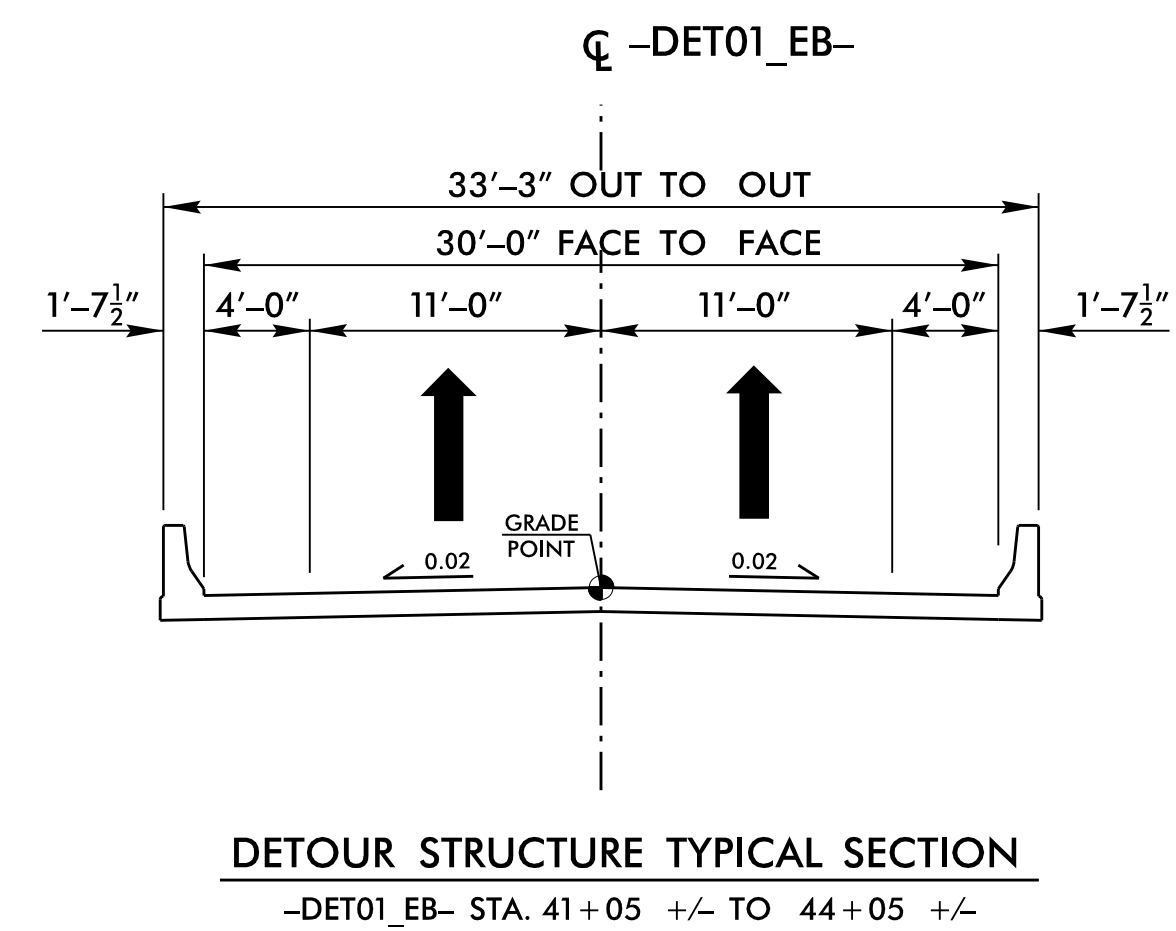
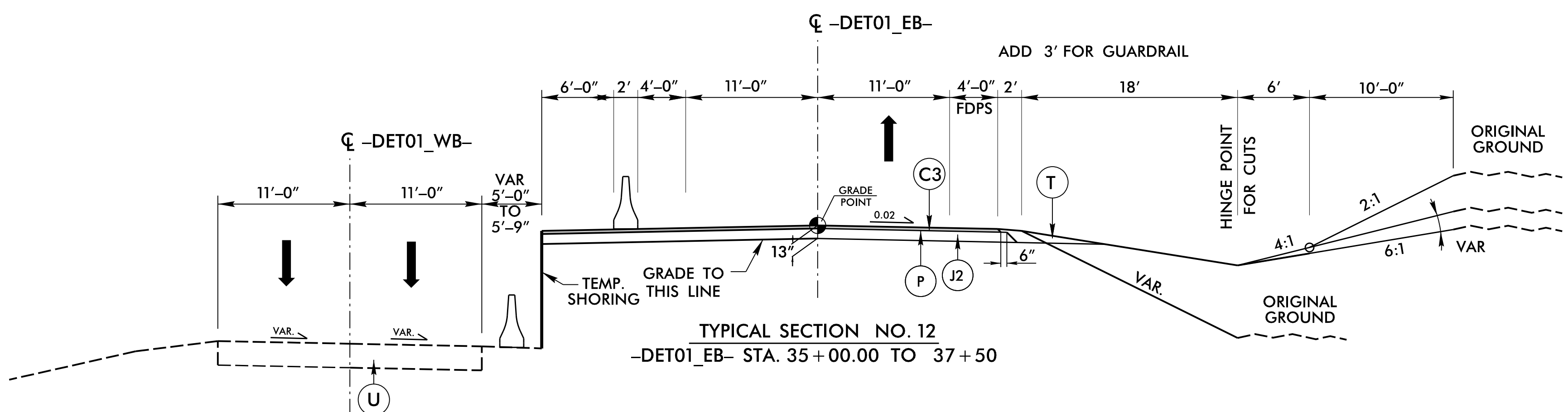
TYPICAL SECTION NO. 10B
 -DET01_EB- STA. 29+30.48 TO 34+83.83

PAVEMENT SCHEDULE	
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C4	VAR. DEPTH S9.5C
D1	4" I19.0C
E1	3" B25.0C
E3	5" B25.0C
K	12" CL IV SUB. STAB.
N1	GEOTEXTILE
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	VAR. DEPTH ASPHALT PAVEMENT

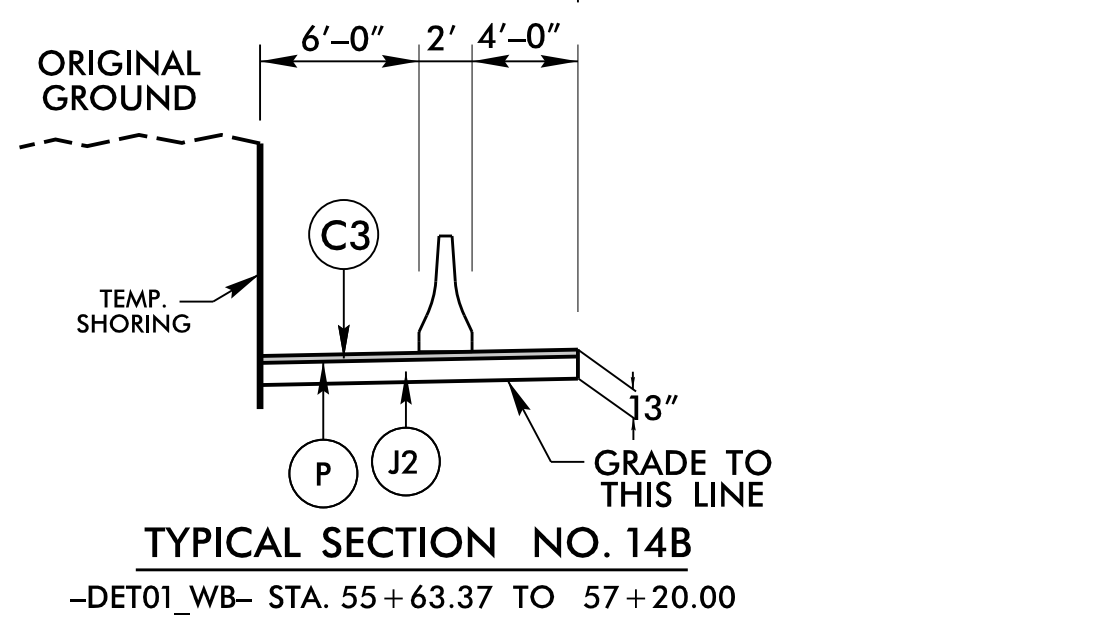
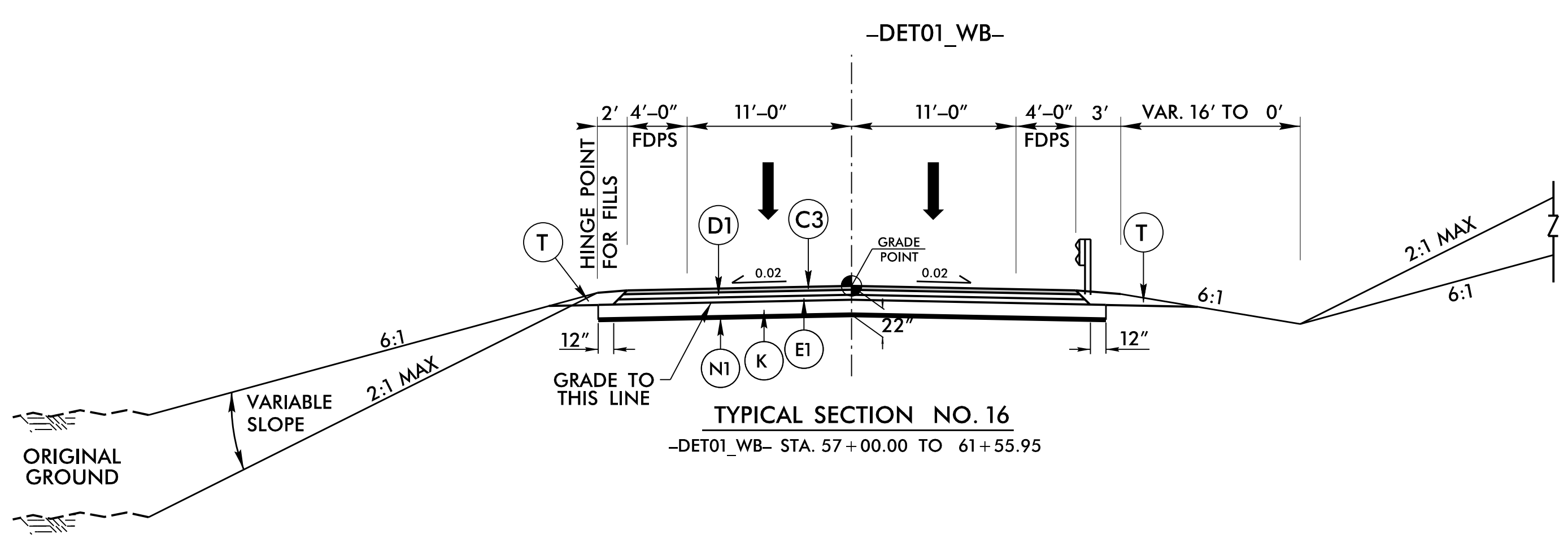
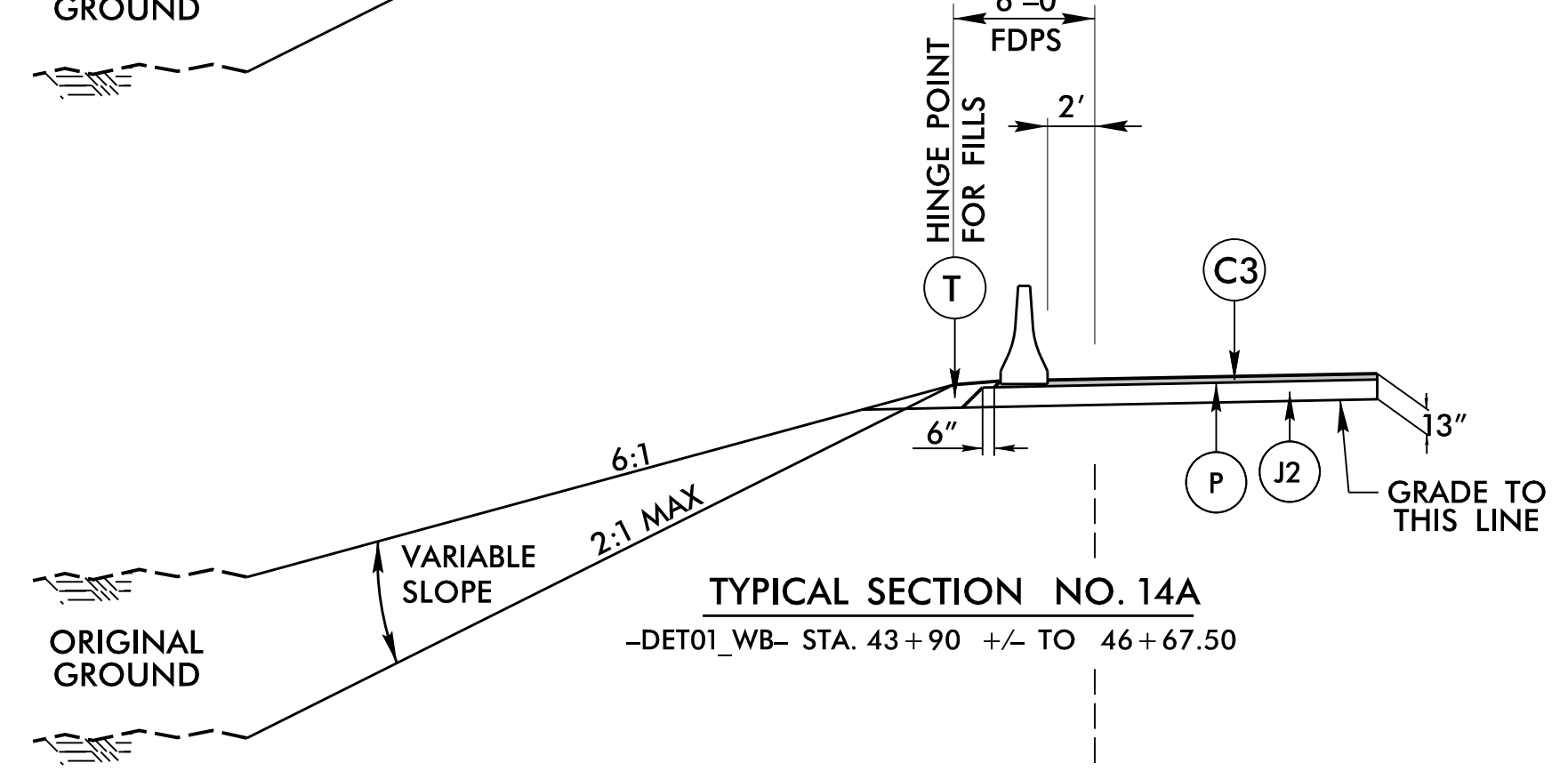
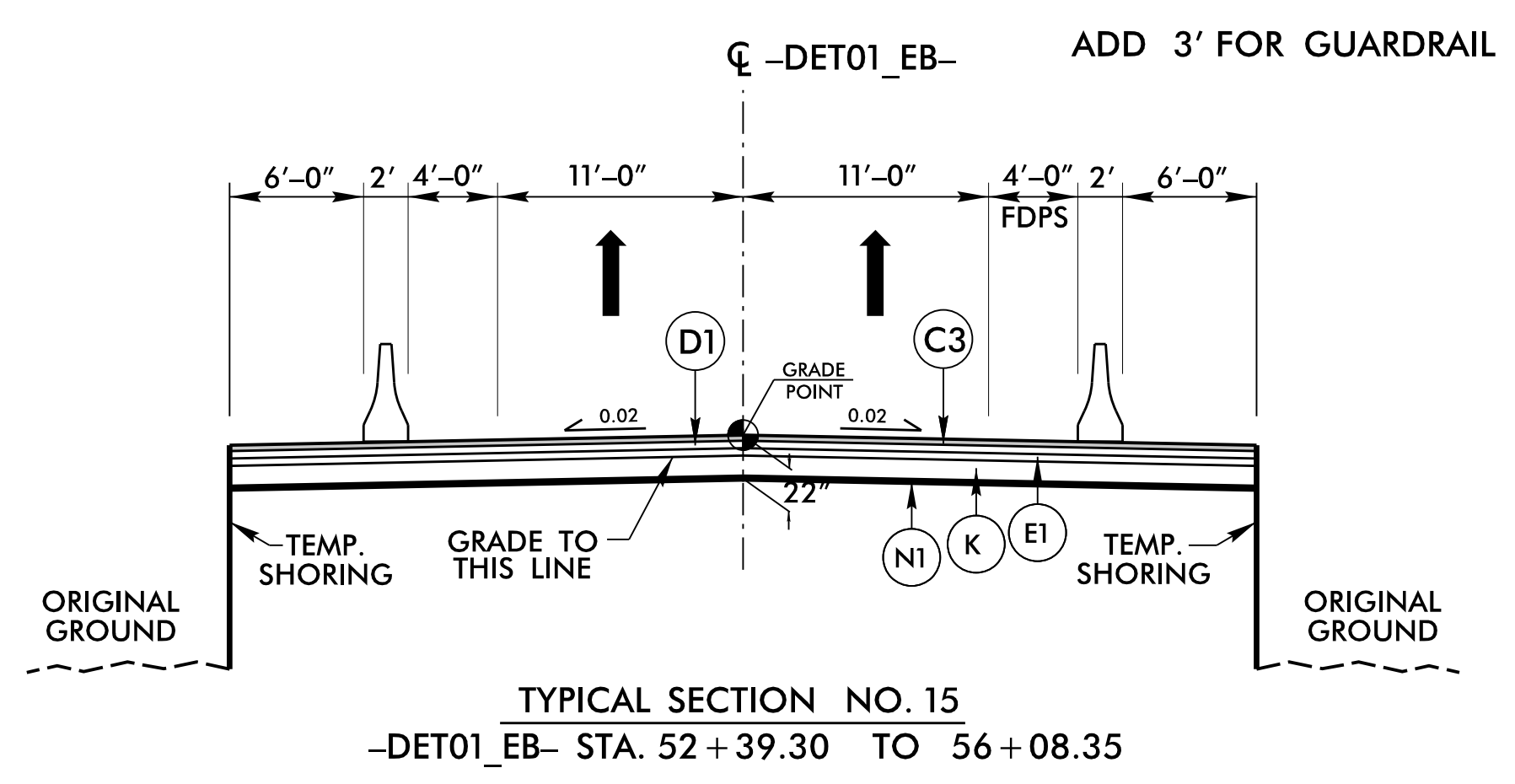
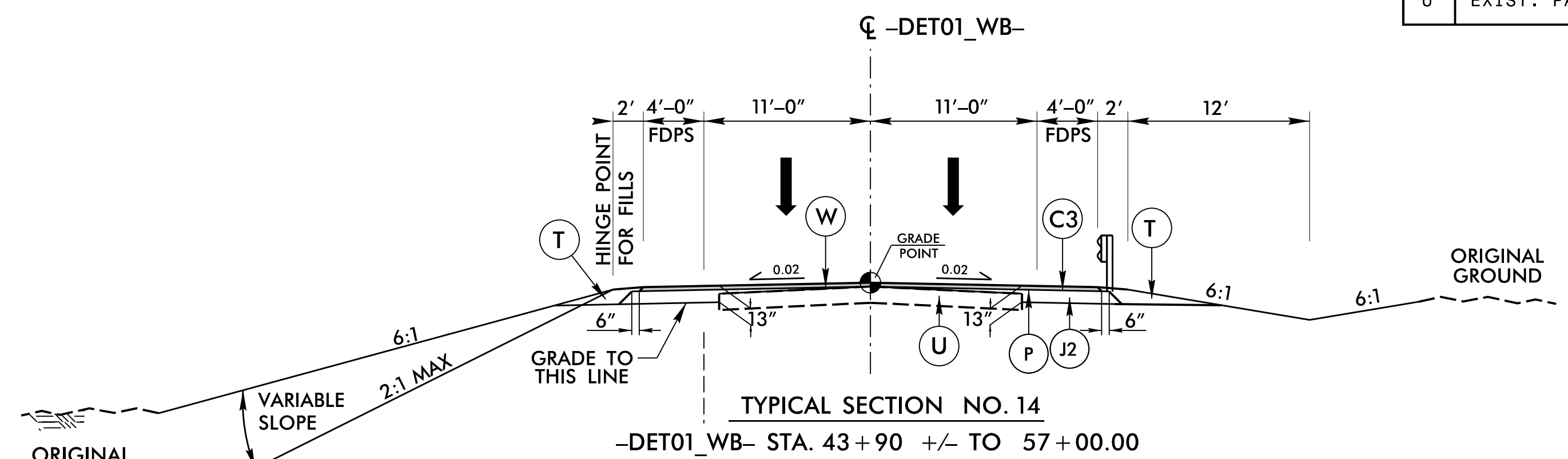
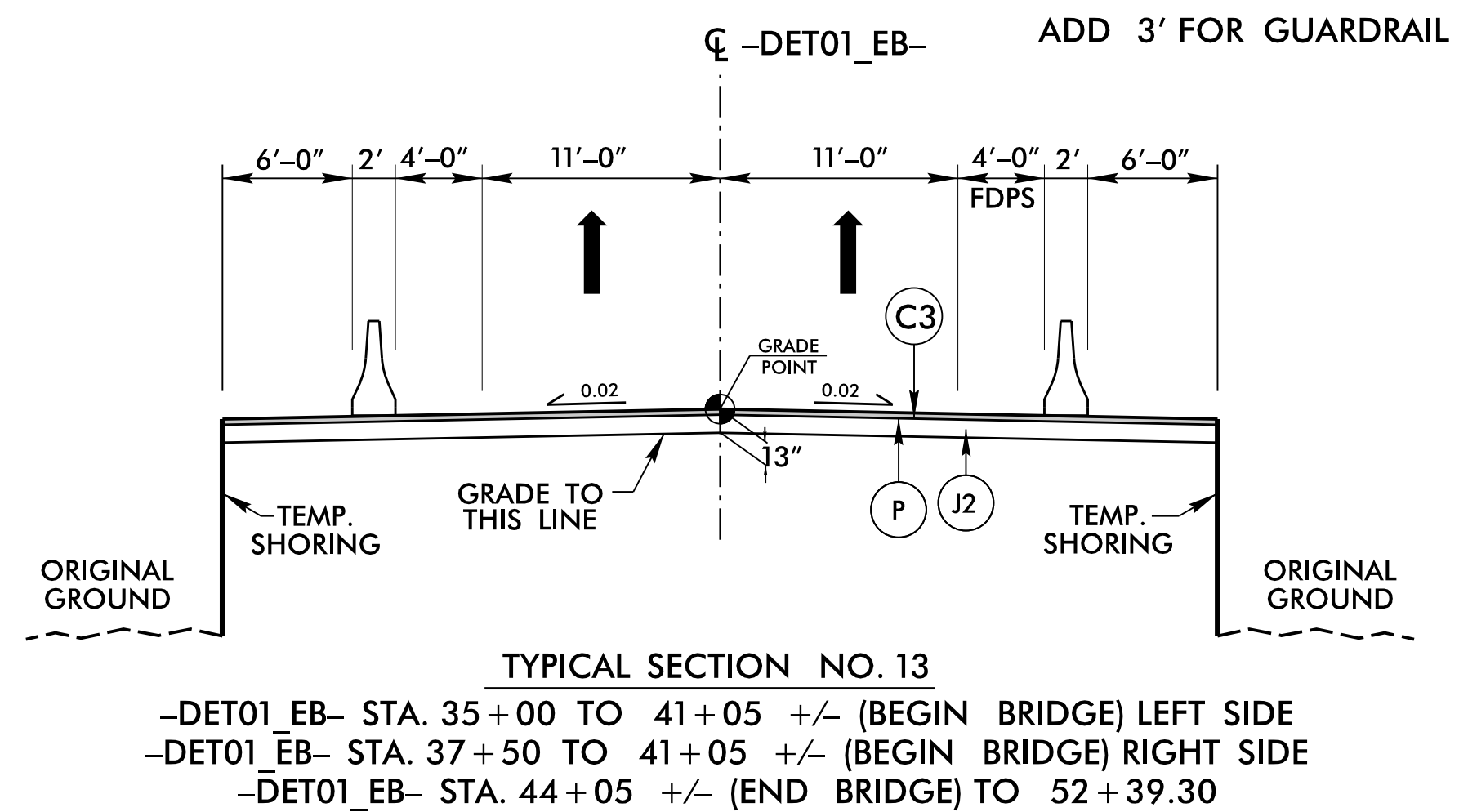
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6/2/2022

PROJECT REFERENCE NO. B-3186B-5898	SHEET NO. 2A-7
ROADWAY DESIGN ENGINEER <i>[Signature]</i> SEAL 32862 CLIP E. ROGE 3/17/2022	PAVEMENT DESIGN ENGINEER <i>[Signature]</i> SEAL 32862 GUY T. HOLLAND 3/17/2022
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
HDR 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	
C3	3" S9.5C
J2	10" ABC
P	PRIME COAT
T	EARTH MATERIAL
U	EXIST. PAVEMENT

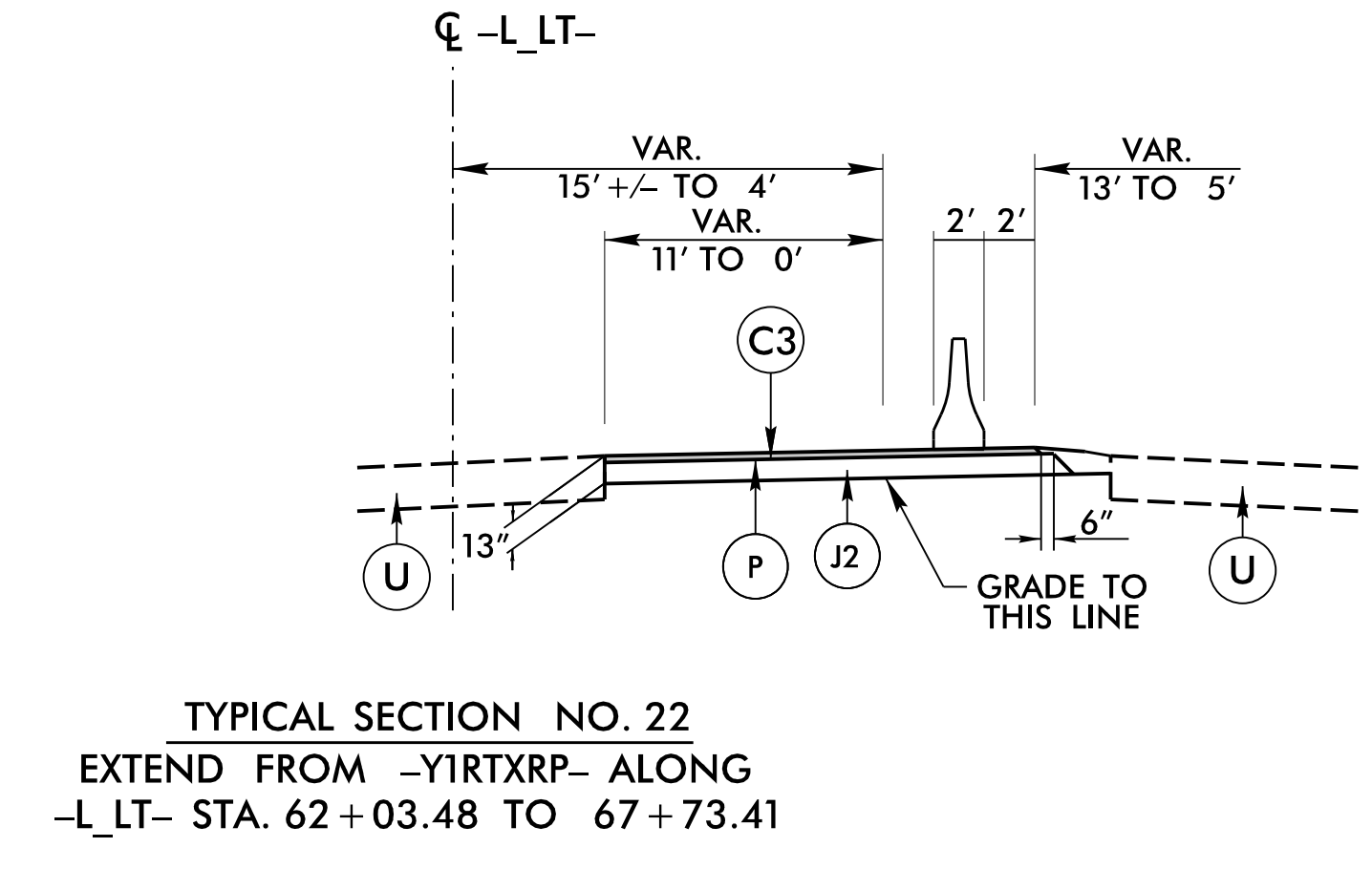
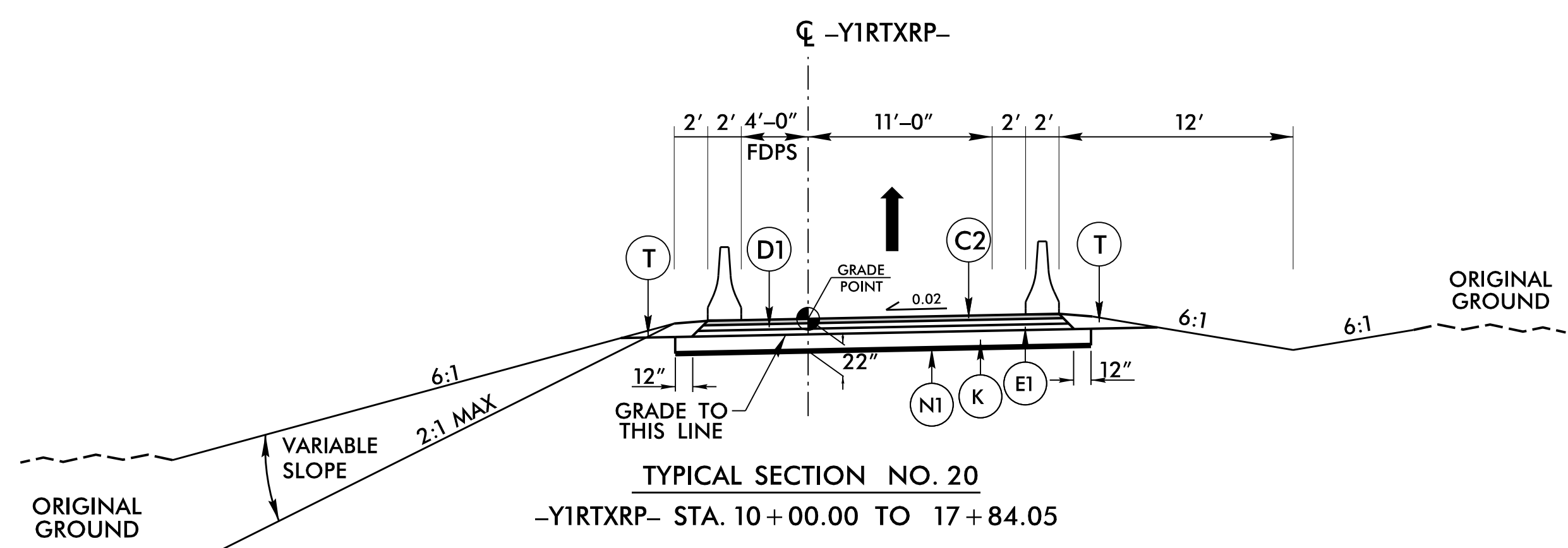
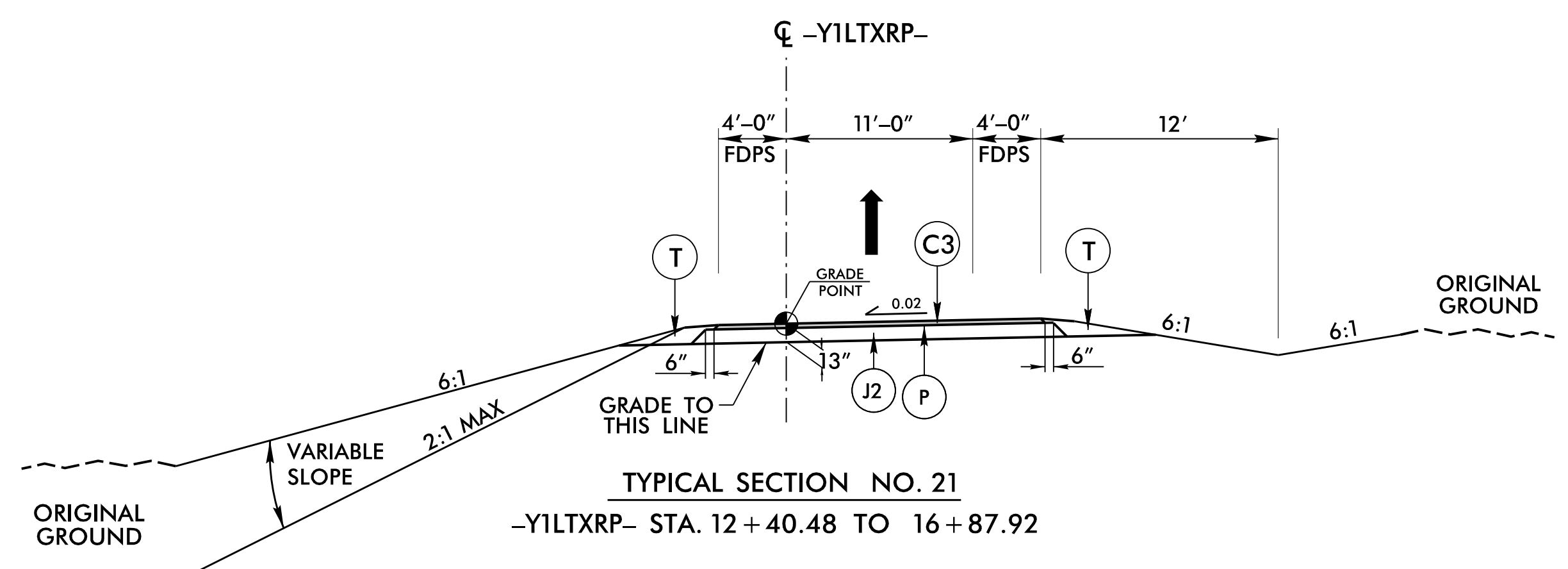
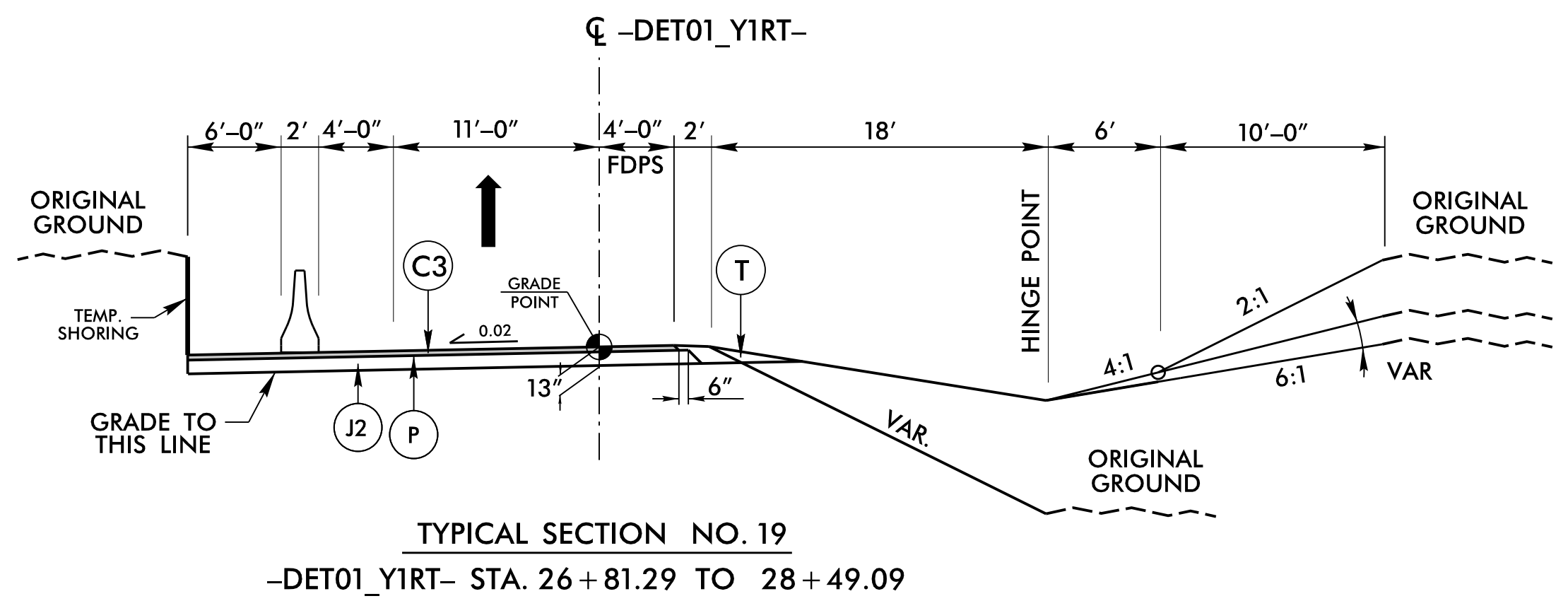
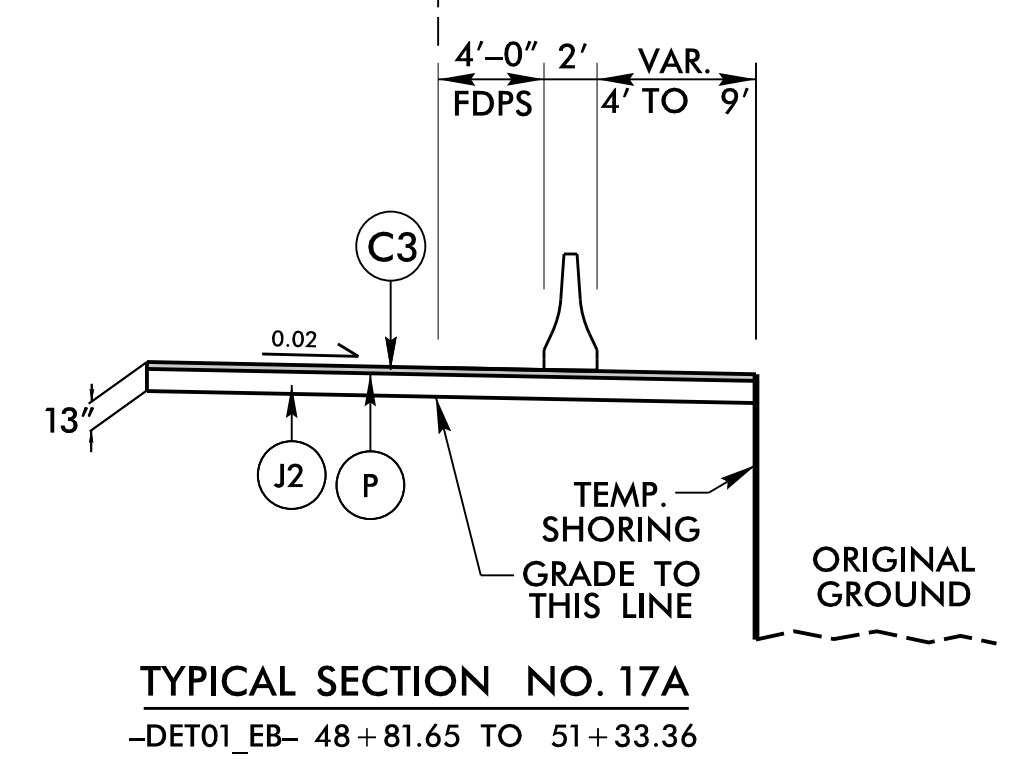
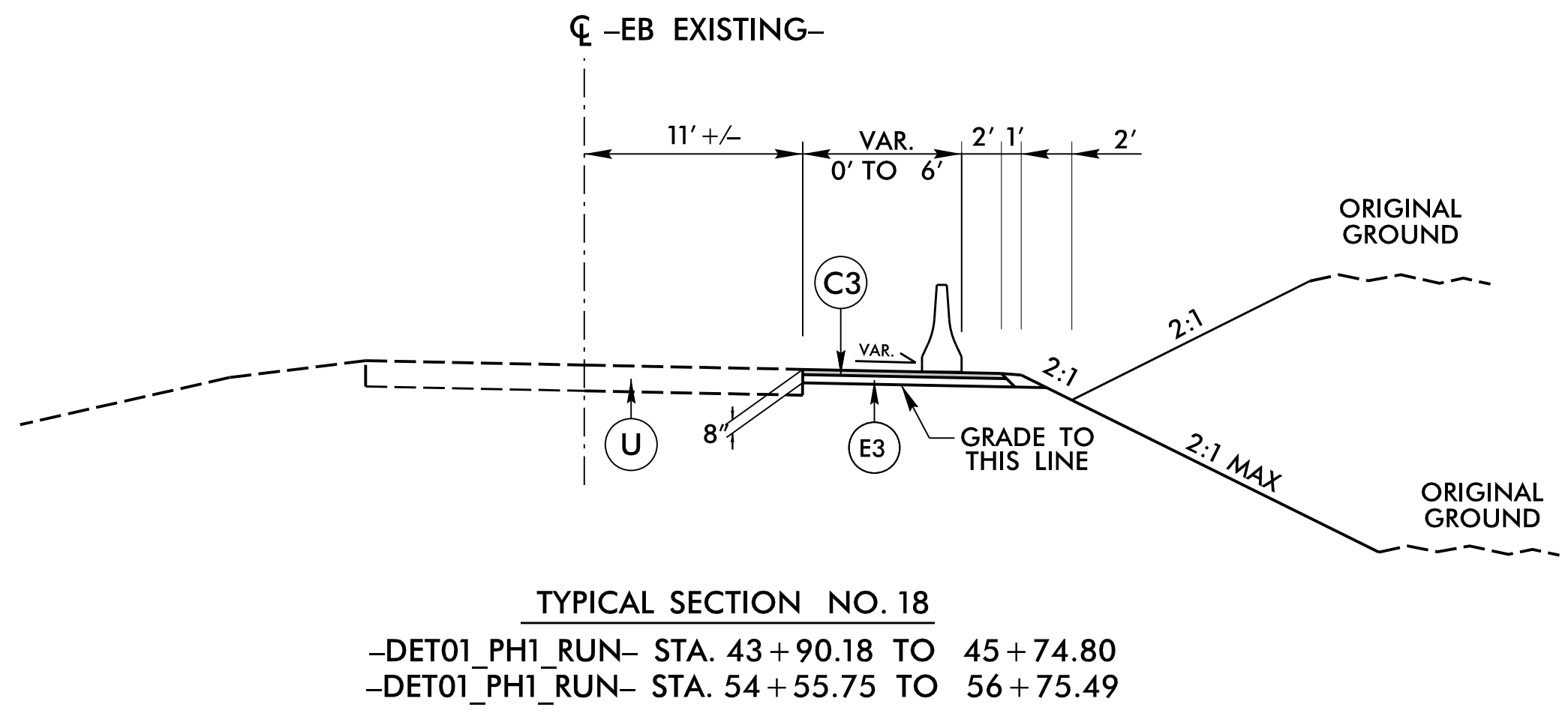
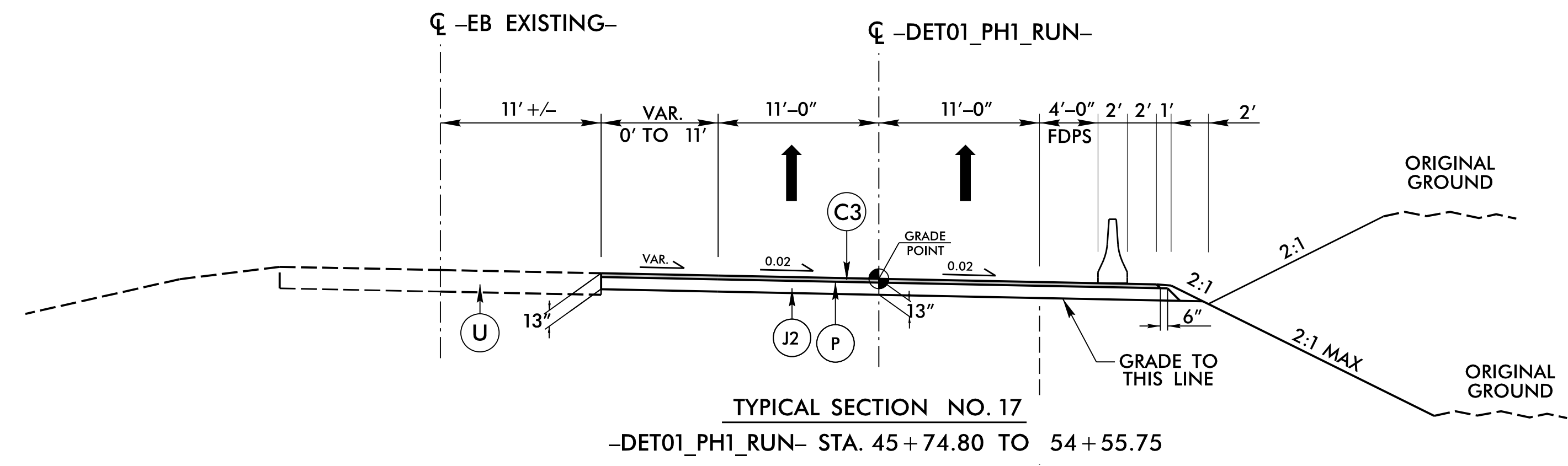


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6/2/2022

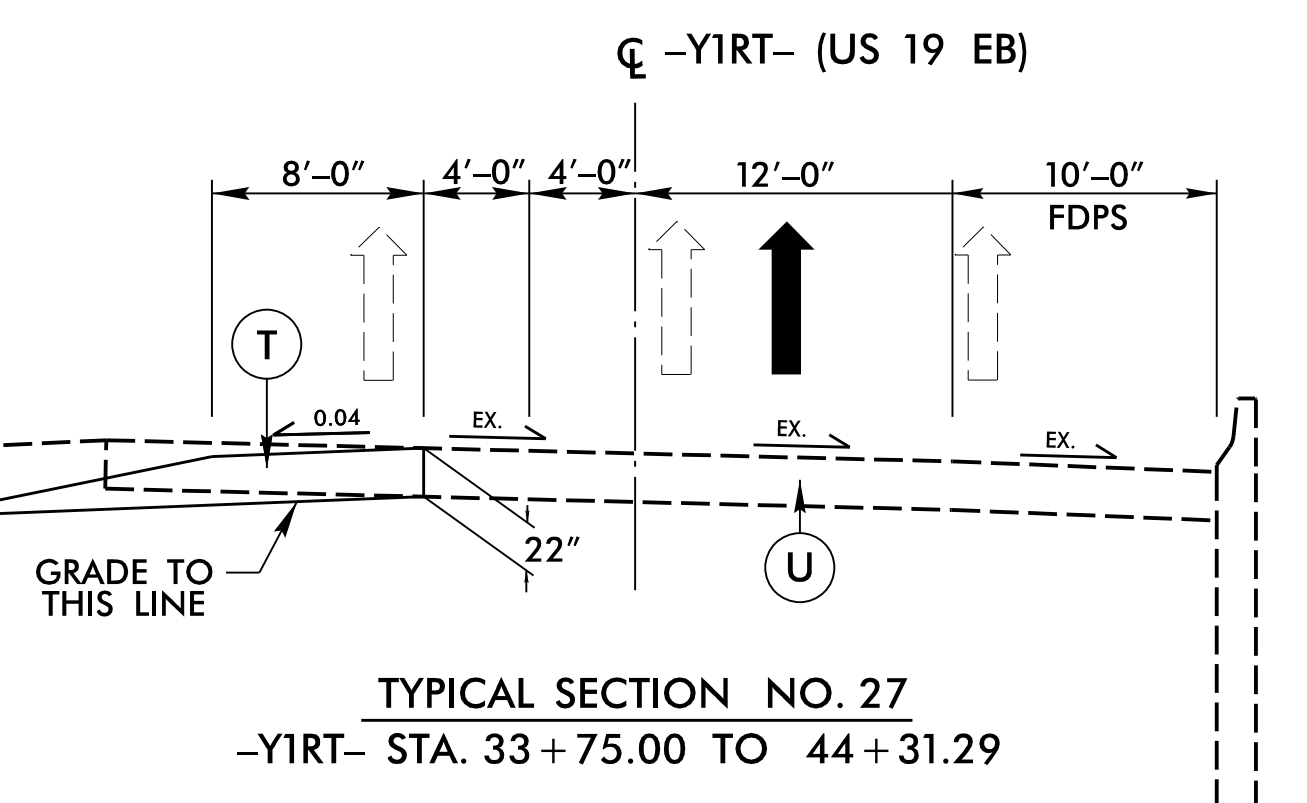
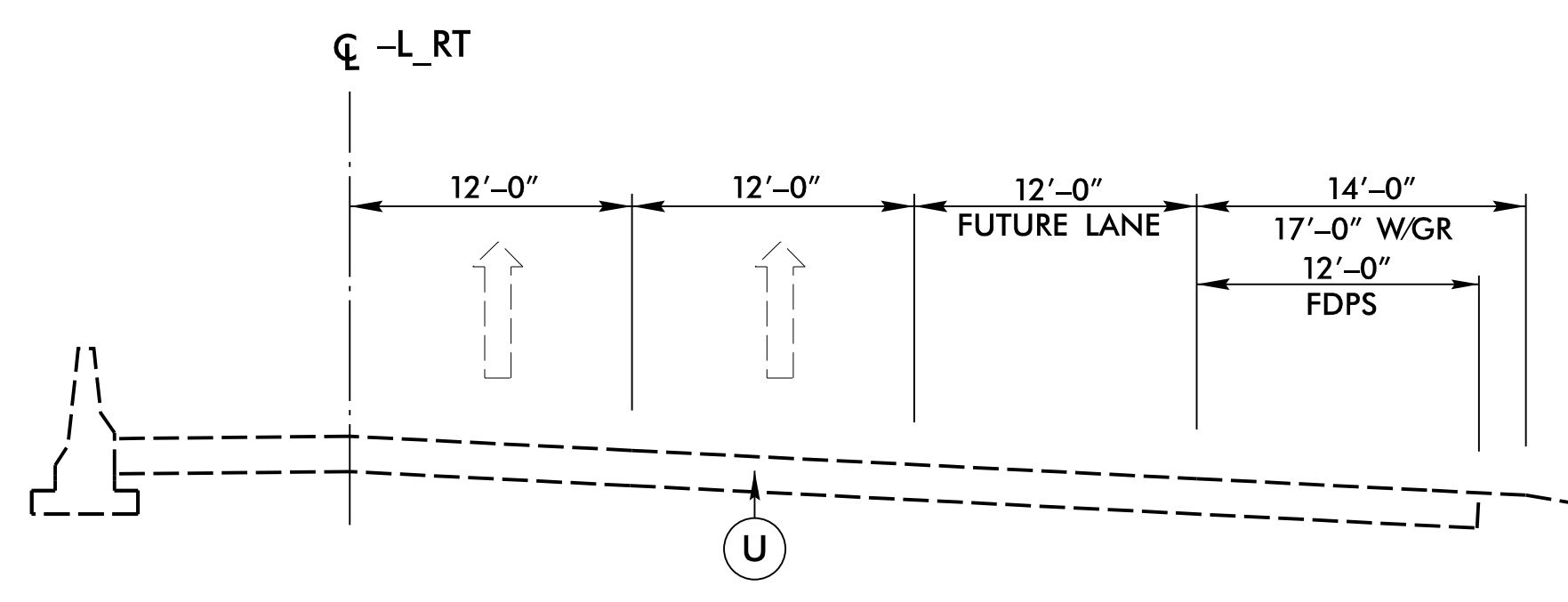
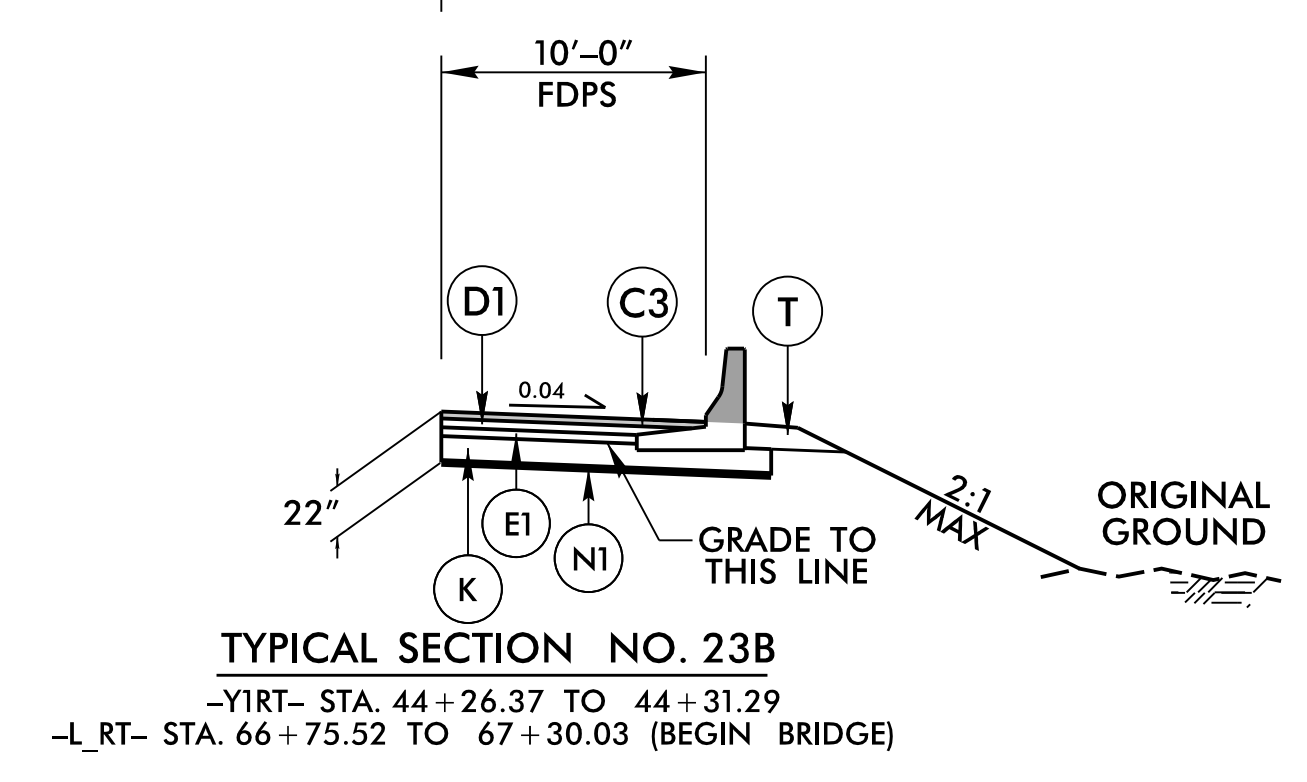
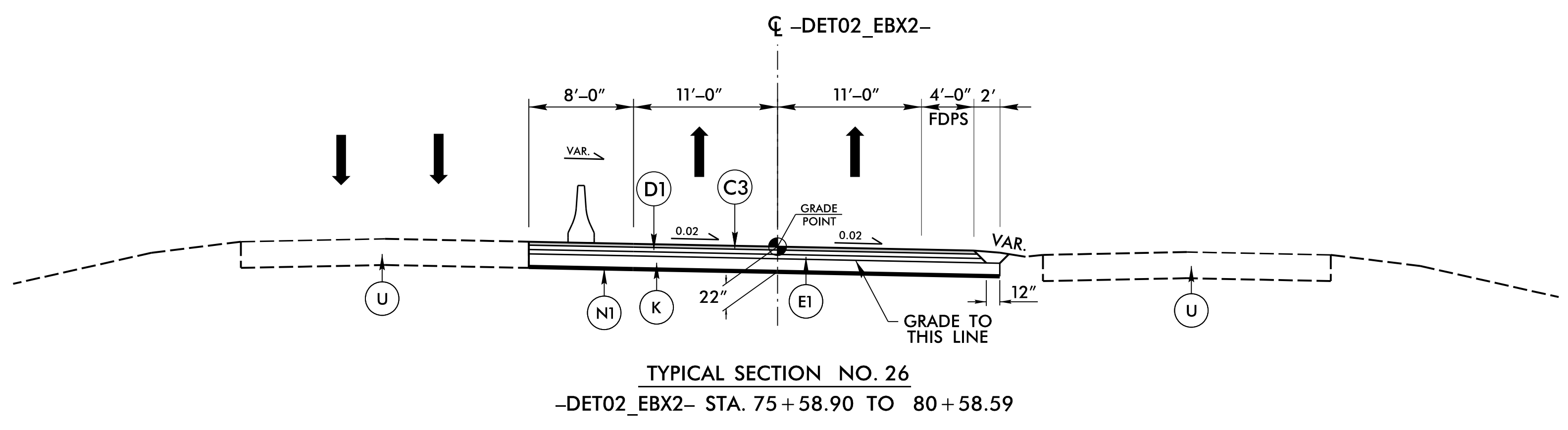
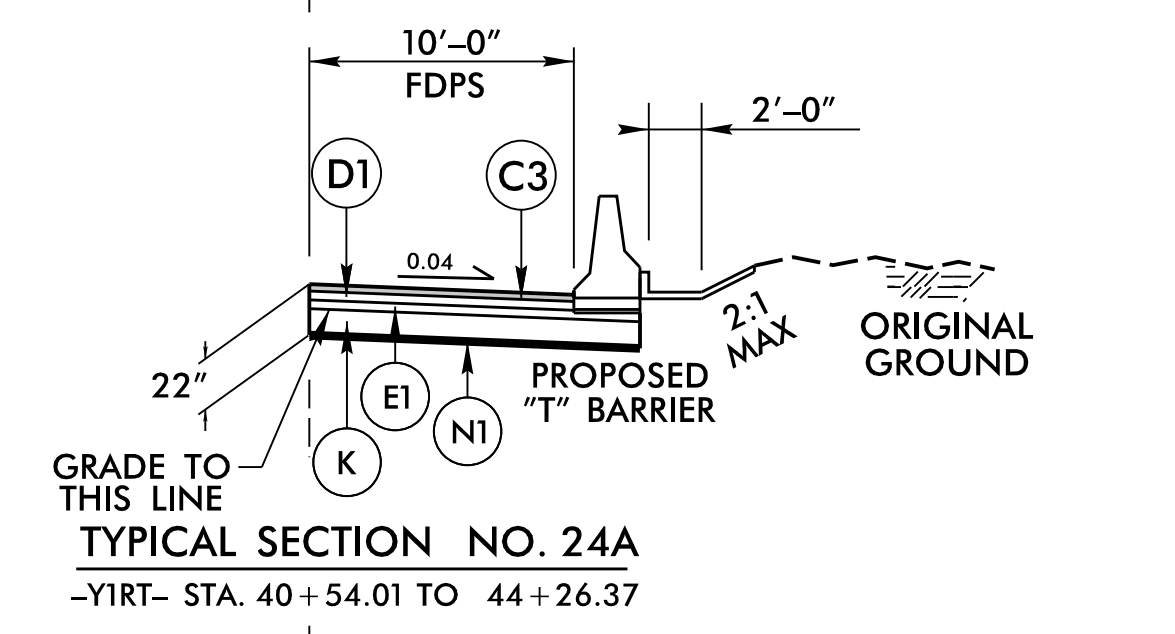
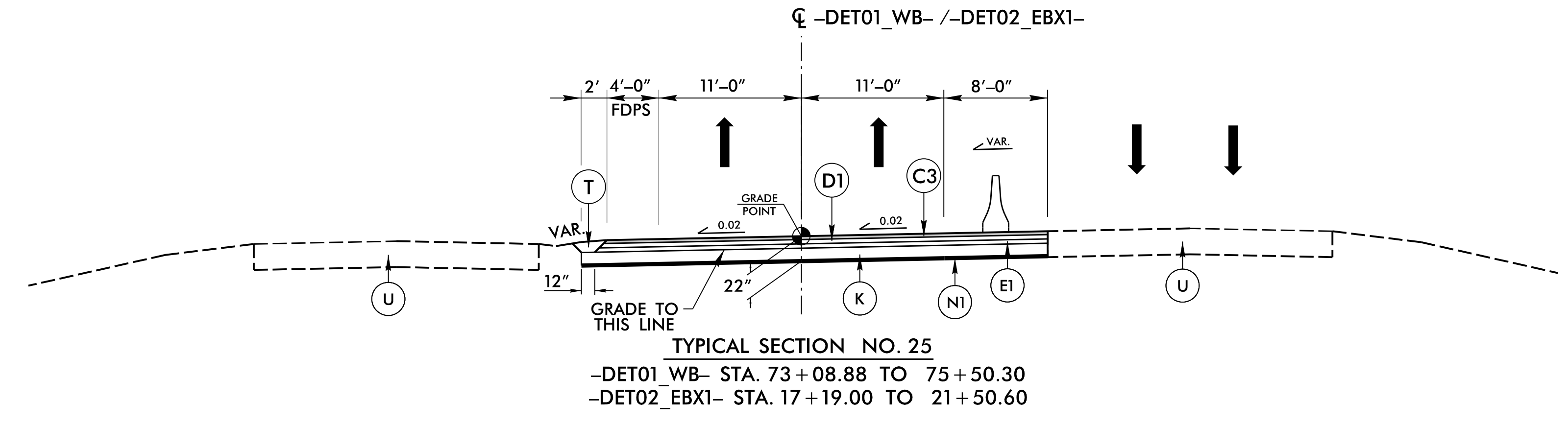
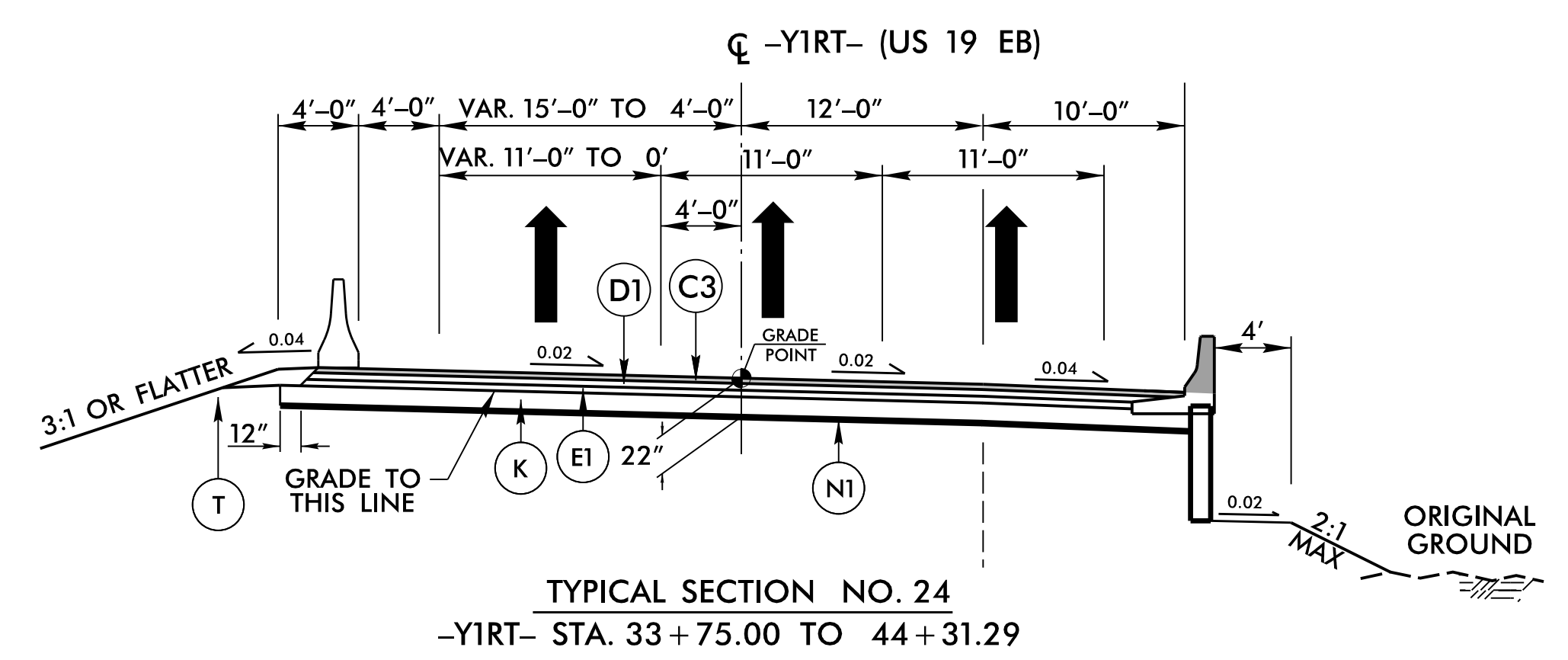
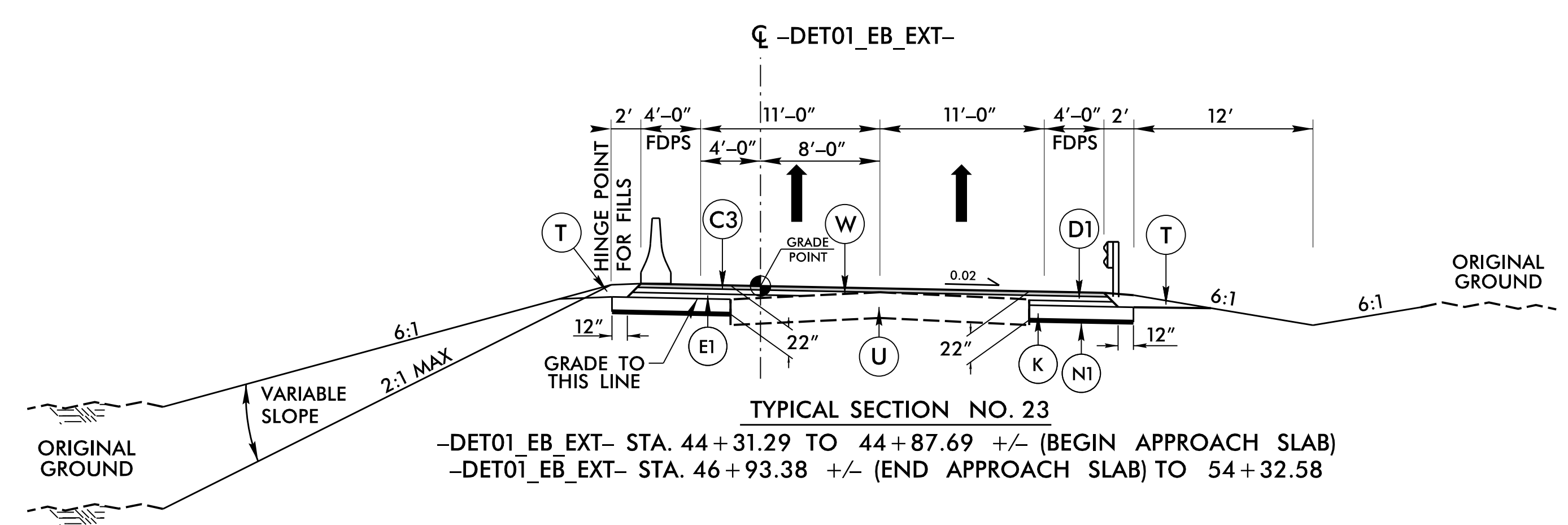
PROJECT REFERENCE NO. B-3186B-5898	SHEET NO. 2A-8
ROADWAY DESIGN ENGINEER SEAL 32862 WILLIAM E. ROBERTS 3/17/2022	PAVEMENT DESIGN ENGINEER SEAL 1024864 JOSEPH T. HOLLAND 3/17/2022
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 HDR Engineering, Inc. of the Carolinas 555 Fayetteville St, Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

PAVEMENT SCHEDULE	
C2	3" S9.5B
C3	3" S9.5C
E3	5" B25.0C
J2	10" ABC
P	PRIME COAT
T	EARTH MATERIAL
U	EXIST. PAVEMENT



PLOT DRIVER: NCDOT.pdf_color_eng_50.ppt
 USER: HBAFE
 FILE: \
 PENTABLE: B-3186 B-5898 NCDOT_pshpfl.tbl
 DATE: 1/13/2022
 TIME: 6:55:34 AM

6/2/2022





PROJECT REFERENCE NO. B-3186B-5898	SHEET NO. 2A-9
ROADWAY DESIGN ENGINEER <i>[Signature]</i> SEAL 4/14/2022	PAVEMENT DESIGN ENGINEER <i>[Signature]</i> SEAL 4/18/2022
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	
C3	3" S9.5C
D1	4" I19.0C
E1	3" B25.0C
K	12" CL IV SUB. STAB.
N1	GEOTEXTILE
T	EARTH MATERIAL
U	EXIST. PAVEMENT
W	VAR. DEPTH ASPHALT PAVEMENT

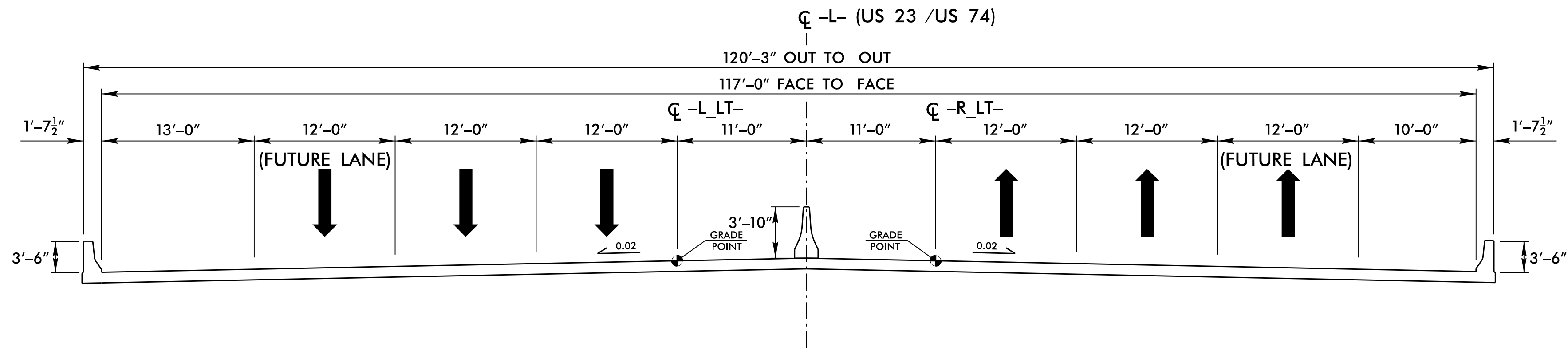
PLOT DRIVER: NCDOT_color_eng_50.plt
 USER: HBARE
 DATE: 3/28/2022
 TIME: 7:56:56 AM
 FILE: NCDOT\NCDOT-B3186-T02.c. \6.0.CAD.BITM\6.2.Work.In.Progress\B-3186-B-5898\Roadway\Proj\B3186-B5898-RDY_TYP.dgn

6/2/2022

SITE 1 STRUCTURE TYPICAL SECTIONS

PROJECT REFERENCE NO. B-3186B-5898	SHEET NO. 2A-10
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER
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	

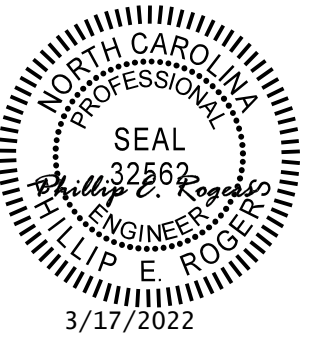

BRIDGE AT -L- (US 23 /US 74) STATION 42+71.13
OVER RICHLAND CREEK



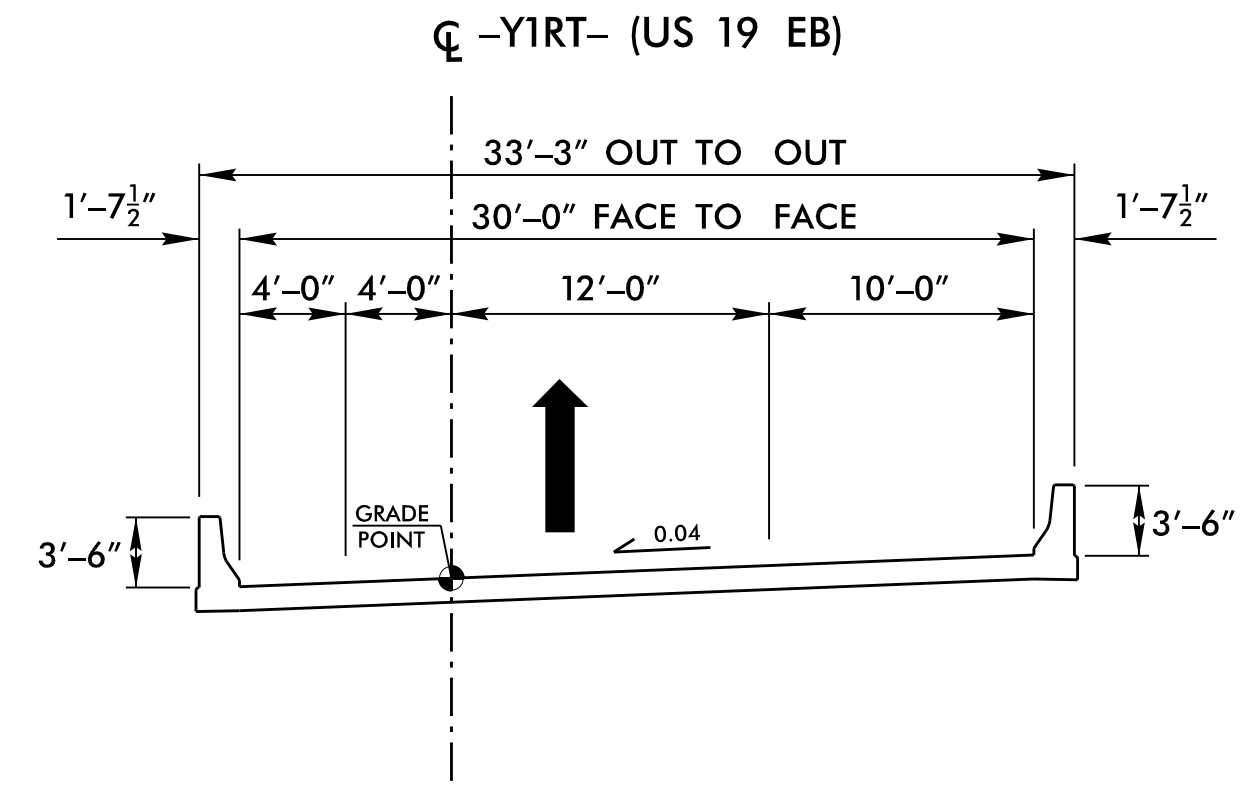
STRUCTURE TYPICAL SECTION

6/2/2022

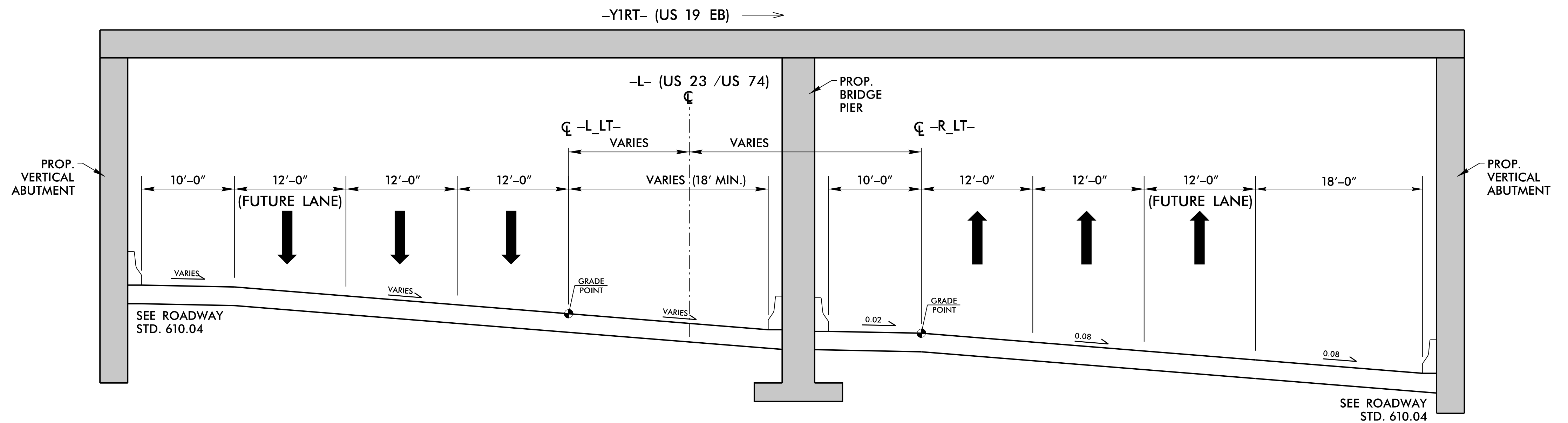
SITE ② STRUCTURE TYPICAL SECTIONS

PROJECT REFERENCE NO. B-3186B-5898	SHEET NO. 2A-11
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER
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	

BRIDGE AT -Y1RT- (US 19 EB) STATION 27+54.43
OVER -L- STATION 49+91.10



STRUCTURE TYPICAL SECTION



TYPICAL SECTION ON ROADWAY UNDER STRUCTURE

PLOT DRIVER: NCDOT.pdf_color_eng-50.plt
USER: HBAFE
FILE: \

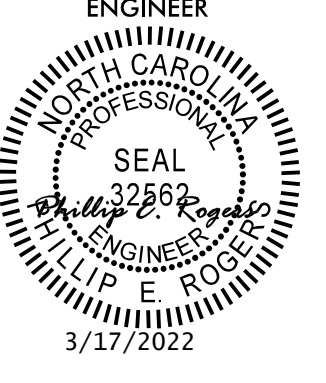

DATE: 1/13/2022

TIME: 6:55:36 AM

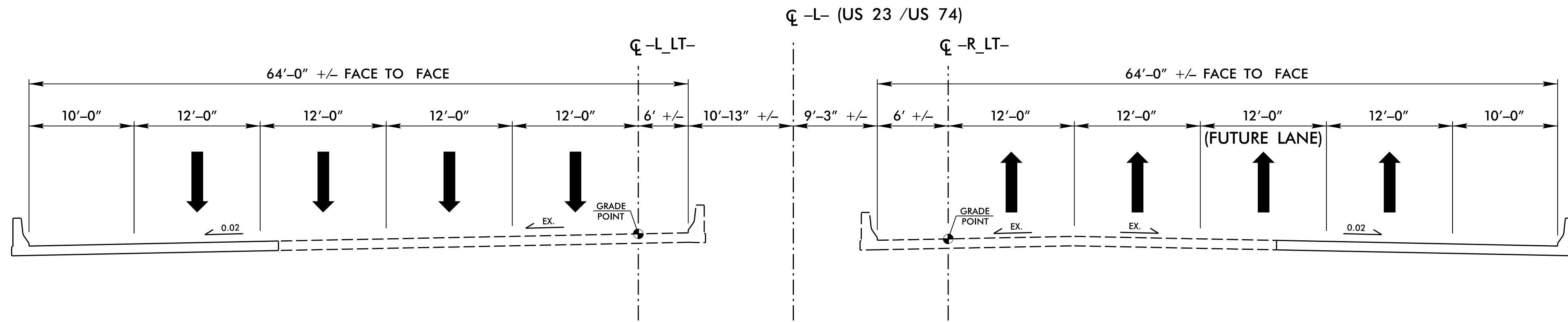
PENTABLE: B-3186 B-5898 NCDOT_pshp.flx.tbl

6/2/2022

SITE ③ STRUCTURE TYPICAL SECTIONS

PROJECT REFERENCE NO. B-3186B-5898	SHEET NO. 2A-12
ROADWAY DESIGN ENGINEER 	PAVEMENT DESIGN ENGINEER
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	

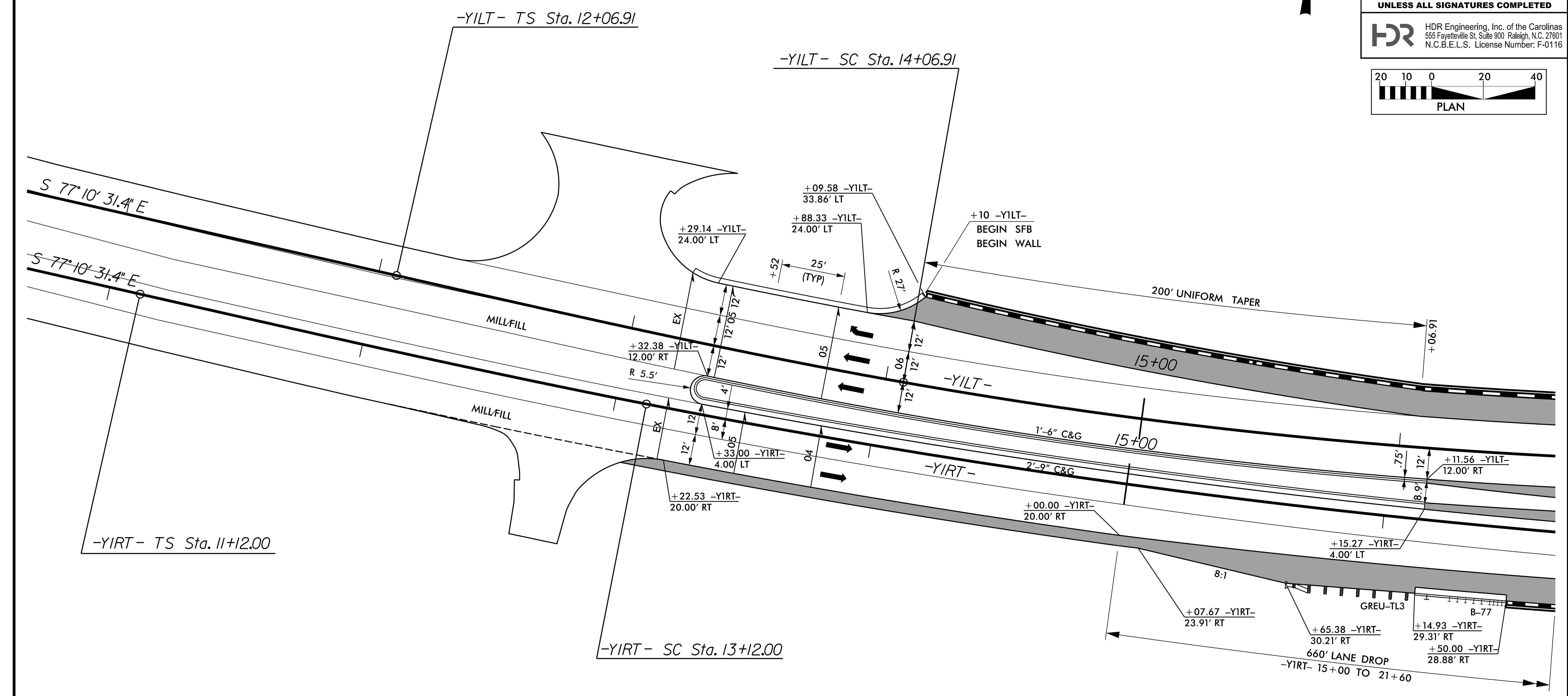
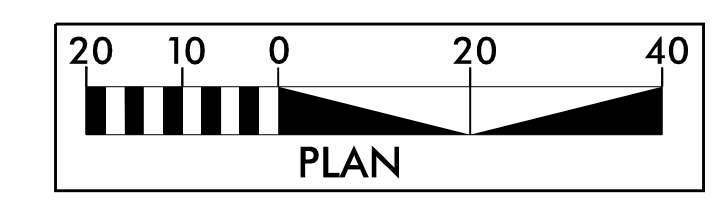
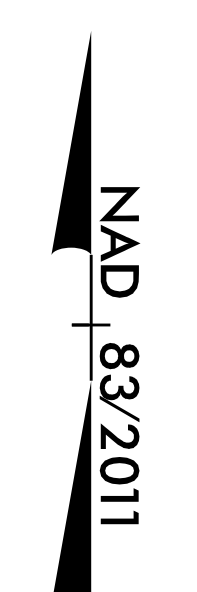
BRIDGE AT -L- (US 23 /US 74) STATION 68+72.05
OVER NORFOLK SOUTHERN RAILROAD



STRUCTURE TYPICAL SECTION

5/14/09

PROJECT REFERENCE NO. B-3186B-5898	SHEET NO. 2B-1
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	
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	



INTERSECTION DETAIL
-YIRT- & -YILT-

3/29/2022 10:53:56 AM
...\\s1166-08-08-RDY_PSH02B-01.dgn

-DETO1_EB-

PI Sta 15+18.36	PI Sta 18+51.60
$\Delta = 3^{\circ}09'23.8''$ (RT)	$\Delta = 8^{\circ}37'37.9''$ (RT)
D = 1'30'28.0"	D = 2'19'10.8"
L = 209.35'	L = 371.92'
T = 104.70'	T = 186.31'
R = 3,800.00'	R = 2,470.00'
SE = EX.	SE = EX.

-DETO1_WB-

PI Sta 13+60.49	PI Sta 16+83.35
$\Delta = 1^{\circ}59'19.4''$ (RT)	$\Delta = 15^{\circ}33'49.8''$ (RT)
D = 1'38'38.6"	D = 2'59'03.0"
L = 120.96'	L = 521.55'
T = 60.49'	T = 262.39'
R = 3,485.00'	R = 1,920.00'
SE = EX.	SE = 0.06
	DS = 55mph

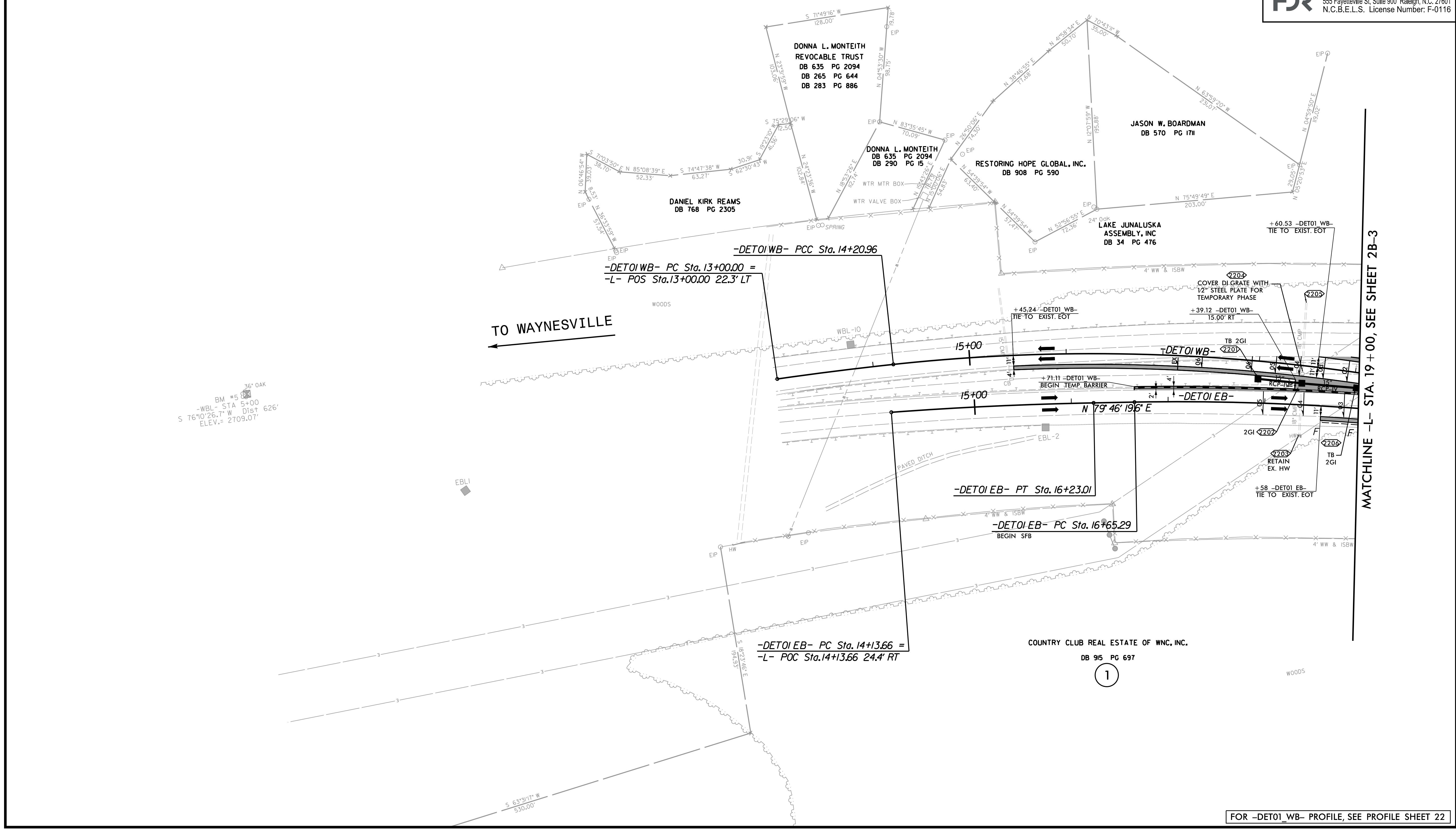
NOTES:
 RETAIN ALL EXISTING PIPES UNLESS OTHERWISE NOTED.
 FOR ALL DRAINAGE PIPES WITHOUT SPECIFIED MATERIAL,
 PIPE MATERIAL TO BE SELECTED BY CONTRACTOR.



PROJECT REFERENCE NO. B-3186 / B-5898	SHEET NO. 2B-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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	

DETOURS DETAIL

-DETO1_EB- & -DETO1_WB-



BM #5
 -WBL- STA 5+00
 S 76°10'26.7\"/>

MATCHLINE -L- STA. 19+00, SEE SHEET 2B-3

FOR -DETO1_WB- PROFILE, SEE PROFILE SHEET 22

PLOT DRIVER: NCDOT_color_eng_50.plt
 USER: HBARE
 FILE: \

PENTABLE: B-3186 B-5898 NCDOT_pshp.plt
 DATE: 1/13/2022
 TIME: 6:55:41 AM

PROJECT REFERENCE NO. B-3186 / B-5898	SHEET NO. 2B-3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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	

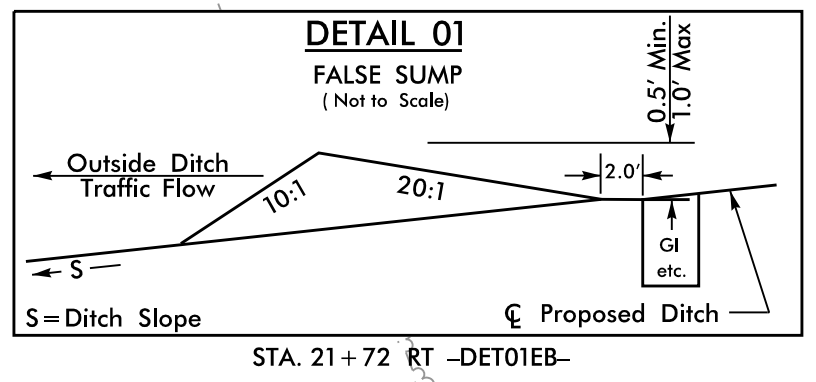
-DETO1_WB-

PI Sta 16+83.35 Δ = 15° 33' 49.8" (RT) D = 2° 59' 03.0" L = 521.55' T = 262.39' R = 1,920.00' SE = 0.06 DS = 55mph	PI Sta 21+61.89 Δ = 7° 40' 35.0" (LT) D = 1° 45' 07.8" L = 438.11' T = 219.38' R = 3,270.00' SE = EX.	PIs Sta 26+97.21 Θs = 5° 50' 47.4" Ls = 300.00' LT = 200.11' ST = 100.10'	PI Sta 32+32.09 Δ = 32° 58' 05.3" (LT) D = 3° 53' 51.6" L = 845.84' T = 434.99' R = 1,470.00' SE = EX.
---	---	---	--

-DETO1_EB-

PI Sta 18+51.60 Δ = 8° 37' 37.9" (RT) D = 2° 19' 10.8" L = 371.92' T = 186.31' R = 2,470.00' SE = EX.	PI Sta 22+05.12 Δ = 5° 49' 33.2" (LT) D = 1° 44' 10.4" L = 335.55' T = 167.92' R = 3,300.00' SE = 0.04 DS = 55mph	PI Sta 31+24.61 Δ = 36° 06' 19.5" (LT) D = 3° 47' 39.9" L = 951.54' T = 492.16' R = 1,510.00' SE = 0.07 DS = 55mph
---	--	---

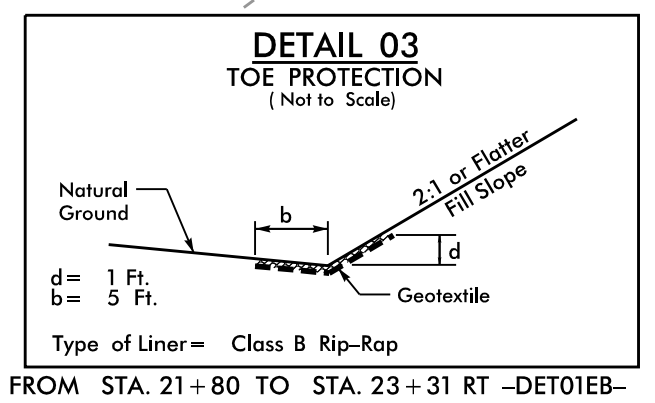
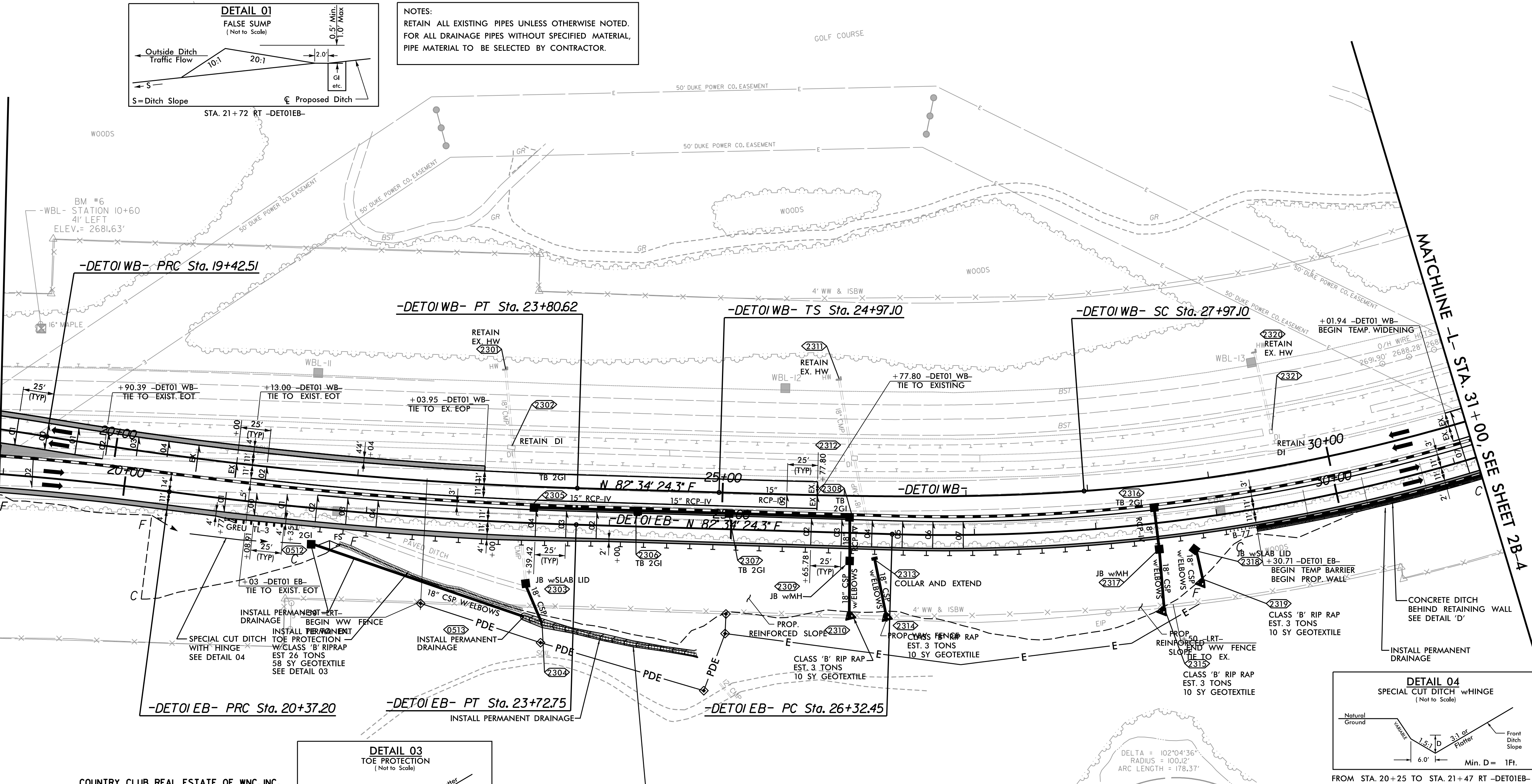
LAKE JUNALUSKA
ASSEMBLY, INC
DB 34 PG 476



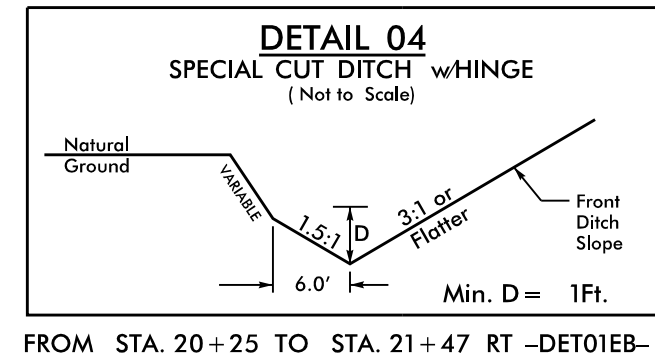
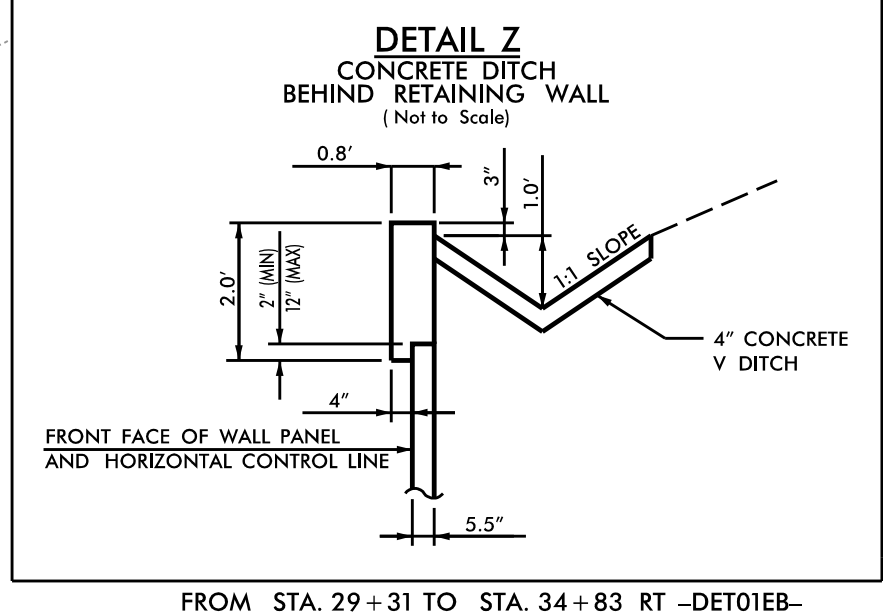
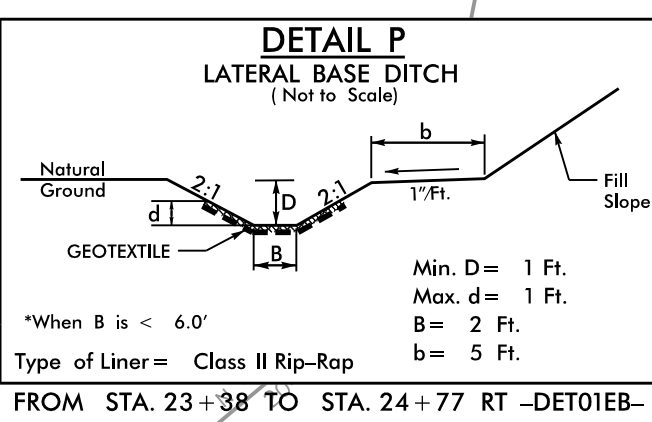
NOTES:
RETAIN ALL EXISTING PIPES UNLESS OTHERWISE NOTED.
FOR ALL DRAINAGE PIPES WITHOUT SPECIFIED MATERIAL,
PIPE MATERIAL TO BE SELECTED BY CONTRACTOR.

MATCHLINE -L- STA. 19+00, SEE SHEET 2B-2

MATCHLINE -L- STA. 31+00, SEE SHEET 2B-4



DESIGNER NOTE:
PERMANENT DRAINAGE STRUCTURES MAY NEED TO BE INSTALLED DURING THE CONSTRUCTION OF REINFORCED SOIL SLOPE.



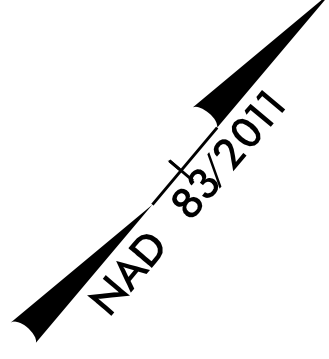
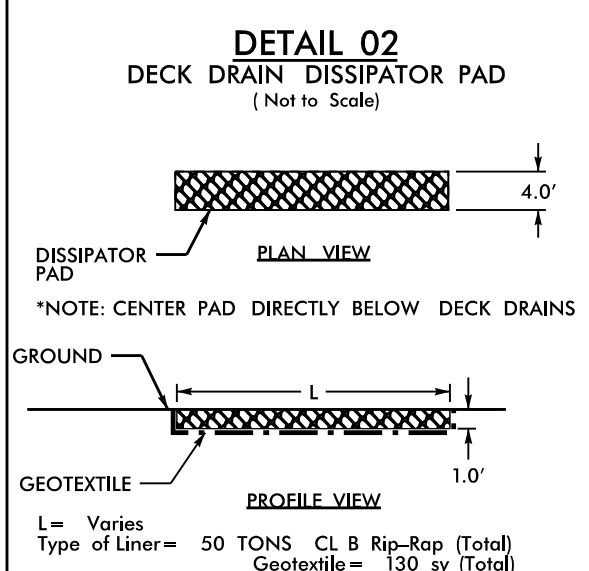
DETOURS DETAIL

-DETO1_EB- & -DETO1_WB-

FOR -DETO1_EB- PROFILE, SEE PROFILE SHEET 20
FOR -DETO1_WB- PROFILE, SEE PROFILE SHEET 22

PLOT DRIVER: NCDOT_color_eng_50.plt
 USER: HBARE
 FILE:
 PENTABLE: B-3186 B-5898 NCDOT_pshp.plt
 TIME: 6:55:43 AM
 DATE: 1/13/2022
 DB 95 PG 697

PROJECT REFERENCE NO. B-3186 / B-5898	SHEET NO. 2B-4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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	



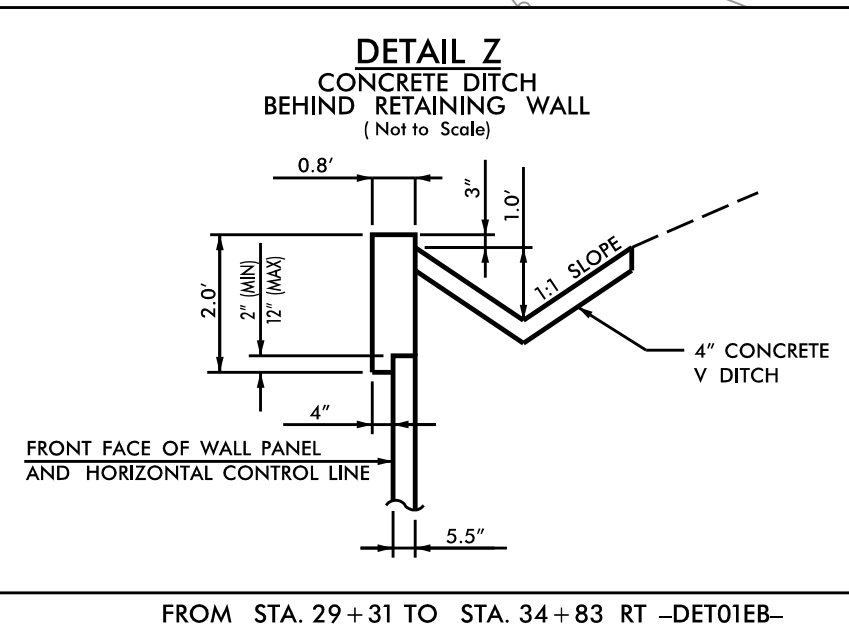
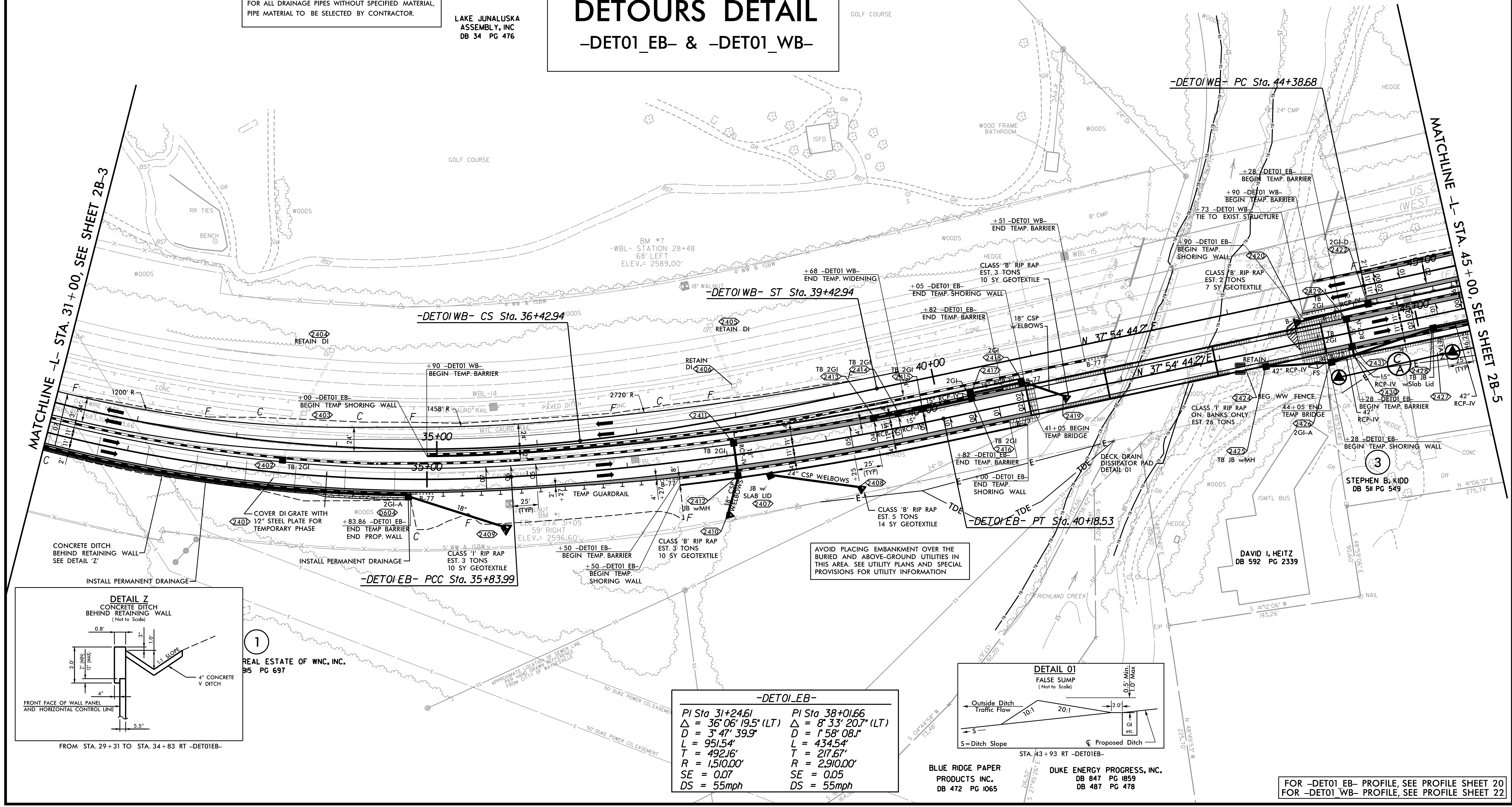
-DETO1_WB-

PI Sta 32+32.09	PIs Sta 37+43.04	PI Sta 46+08.64
$\Delta = 32^{\circ}58'05.3''$ (LT)	$\Delta = 5^{\circ}50'47.4''$	$\Delta = 2^{\circ}43'24.8''$ (LT)
$D = 3^{\circ}53'51.6''$	$Ls = 300.00'$	$D = 0^{\circ}48'04.8''$
$L = 845.84'$	$LT = 200.11'$	$L = 339.87'$
$T = 434.99'$	$ST = 100.10'$	$T = 169.97'$
$R = 1,470.00'$		$R = 7,150.00'$
$SE = EX.$		$SE = 0.02$
		$DS = 55mph$

NOTES:
RETAIN ALL EXISTING PIPES UNLESS OTHERWISE NOTED.
FOR ALL DRAINAGE PIPES WITHOUT SPECIFIED MATERIAL,
PIPE MATERIAL TO BE SELECTED BY CONTRACTOR.

LAKE JUNALUSKA
ASSEMBLY, INC
DB 34 PG 476

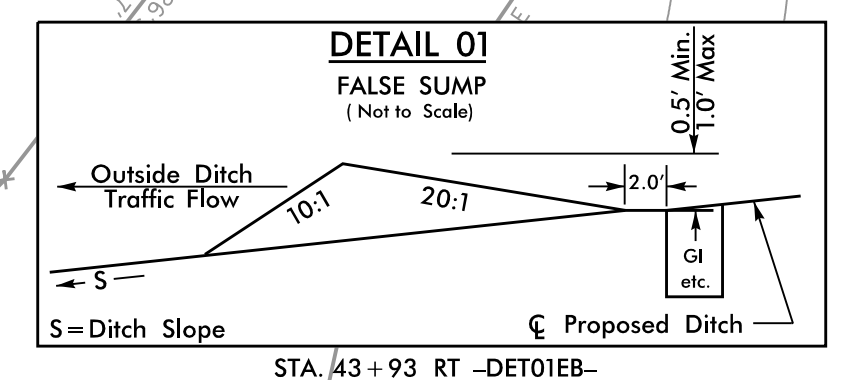
DETOURS DETAIL
-DETO1_EB- & -DETO1_WB-



1
REAL ESTATE OF WNC, INC.
915 PG 697

-DETO1_EB-

PI Sta 31+24.61	PI Sta 38+01.66
$\Delta = 36^{\circ}06'19.5''$ (LT)	$\Delta = 8^{\circ}33'20.7''$ (LT)
$D = 3^{\circ}47'39.9''$	$D = 1^{\circ}58'08.1''$
$L = 951.54'$	$L = 434.54'$
$T = 492.16'$	$T = 217.67'$
$R = 1,510.00'$	$R = 2,910.00'$
$SE = 0.07$	$SE = 0.05$
$DS = 55mph$	$DS = 55mph$



FOR -DETO1_EB- PROFILE, SEE PROFILE SHEET 20
FOR -DETO1_WB- PROFILE, SEE PROFILE SHEET 22

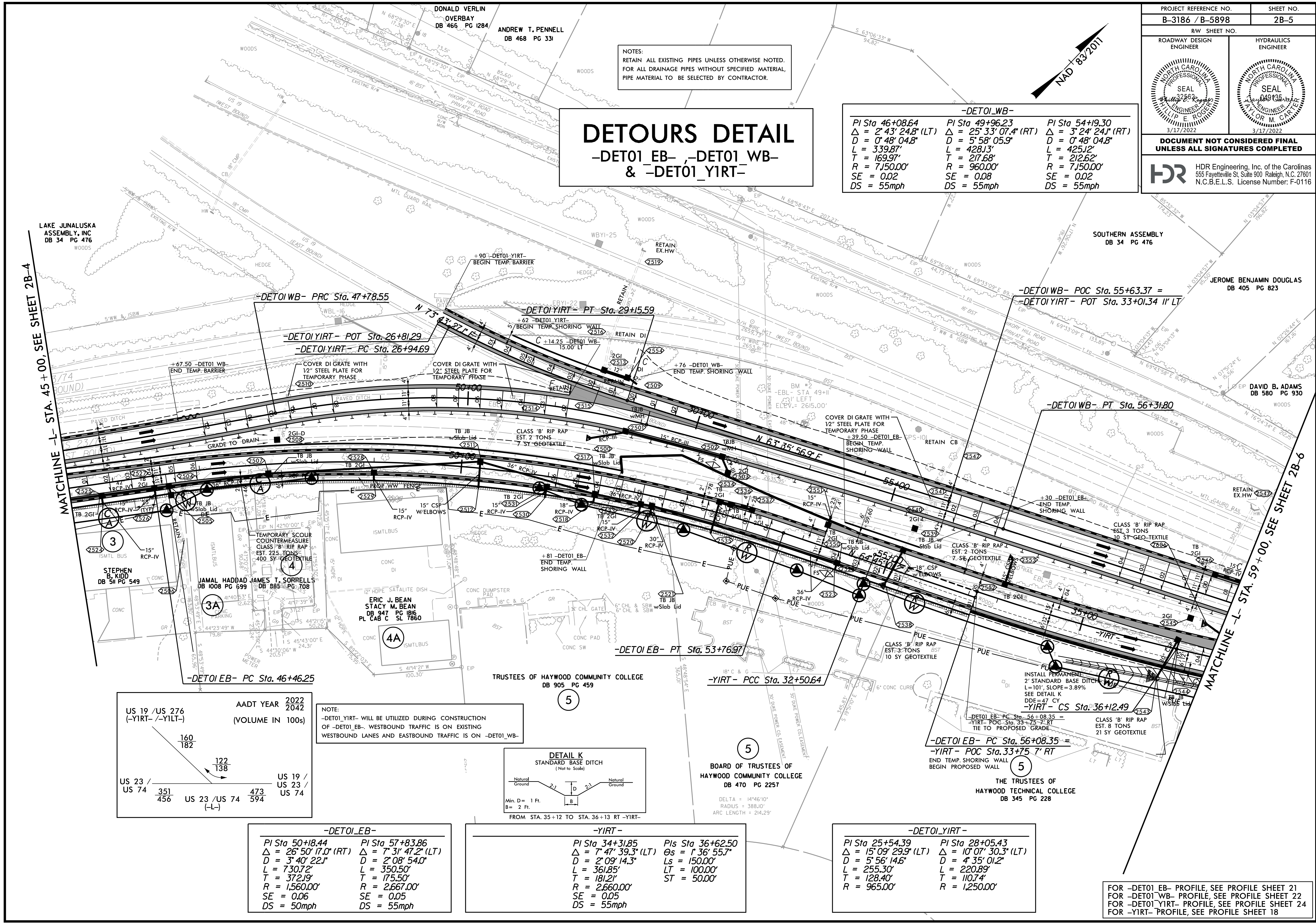
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USER: HBARE
DATE: 1/13/2022
TIME: 6:55:46 AM
FILE: \

PROJECT REFERENCE NO. B-3186 / B-5898	SHEET NO. 2B-5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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	

DETOURS DETAIL

-DETO1 EB- -DETO1 WB- & -DETO1_YIRT-

-DETO1_WB-		
PI Sta 46+08.64	PI Sta 49+96.23	PI Sta 54+19.30
$\Delta = 2' 43' 24.8" (LT)$	$\Delta = 25' 33' 07.4" (RT)$	$\Delta = 3' 24' 24.1" (RT)$
$D = 0' 48' 04.8"$	$D = 5' 58' 05.9"$	$D = 0' 48' 04.8"$
$L = 339.87'$	$L = 428.13'$	$L = 425.12'$
$T = 169.97'$	$T = 217.68'$	$T = 212.62'$
$R = 7,150.00'$	$R = 960.00'$	$R = 7,150.00'$
$SE = 0.02$	$SE = 0.08$	$SE = 0.02$
$DS = 55mph$	$DS = 55mph$	$DS = 55mph$



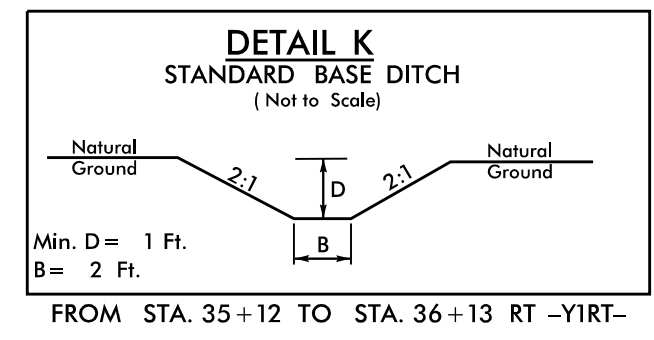
NOTES:
 RETAIN ALL EXISTING PIPES UNLESS OTHERWISE NOTED.
 FOR ALL DRAINAGE PIPES WITHOUT SPECIFIED MATERIAL,
 PIPE MATERIAL TO BE SELECTED BY CONTRACTOR.

MATCHLINE -L- STA. 45+00, SEE SHEET 2B-4

MATCHLINE -L- STA. 59+00, SEE SHEET 2B-6

US 19 / US 276 (-YIRT- / -YILT-)	AADT YEAR 2022 2042 (VOLUME IN 100s)
160 182	
122 138	
US 23 / US 74 351 456	US 19 / US 23 / US 74 473 594
US 23 / US 74 (-L-)	

NOTE:
 -DETO1_YIRT- WILL BE UTILIZED DURING CONSTRUCTION
 OF -DETO1_EB-. WESTBOUND TRAFFIC IS ON EXISTING
 WESTBOUND LANES AND EASTBOUND TRAFFIC IS ON -DETO1_WB-



-DETO1_EB-	
PI Sta 50+18.44	PI Sta 57+83.86
$\Delta = 26' 50' 17.0" (RT)$	$\Delta = 7' 47' 39.3" (LT)$
$D = 3' 40' 22.1"$	$D = 2' 08' 54.0"$
$L = 730.72'$	$L = 350.50'$
$T = 372.19'$	$T = 175.50'$
$R = 1,560.00'$	$R = 2,667.00'$
$SE = 0.06$	$SE = 0.05$
$DS = 50mph$	$DS = 55mph$

-YIRT-		
PI Sta 34+31.85	PIs Sta 36+62.50	
$\Delta = 7' 47' 39.3" (LT)$	$\Delta = 1' 36' 55.7"$	$\Delta = 1' 36' 55.7"$
$D = 2' 09' 14.3"$	$D = 150.00'$	$D = 150.00'$
$L = 361.85'$	$L = 100.00'$	$L = 100.00'$
$T = 181.21'$	$T = 50.00'$	$T = 50.00'$
$R = 2,660.00'$		
$SE = 0.05$		
$DS = 55mph$		

-DETO1_YIRT-	
PI Sta 25+54.39	PI Sta 28+05.43
$\Delta = 15' 09' 29.9" (LT)$	$\Delta = 10' 07' 30.3" (LT)$
$D = 5' 56' 14.6"$	$D = 4' 35' 01.2"$
$L = 255.30'$	$L = 220.89'$
$T = 128.40'$	$T = 110.74'$
$R = 965.00'$	$R = 1,250.00'$

FOR -DETO1_EB- PROFILE, SEE PROFILE SHEET 21
 FOR -DETO1_WB- PROFILE, SEE PROFILE SHEET 22
 FOR -DETO1_YIRT- PROFILE, SEE PROFILE SHEET 24
 FOR -YIRT- PROFILE, SEE PROFILE SHEET 18

PLOT DRIVER: NCDOT_color_eng_50.plt
 USER: HBARE
 FILE:
 PENTABLE: B-3186 B-5898 NCDOT_pshp.plt
 TIME: 6:55:49 AM
 DATE: 1/13/2022

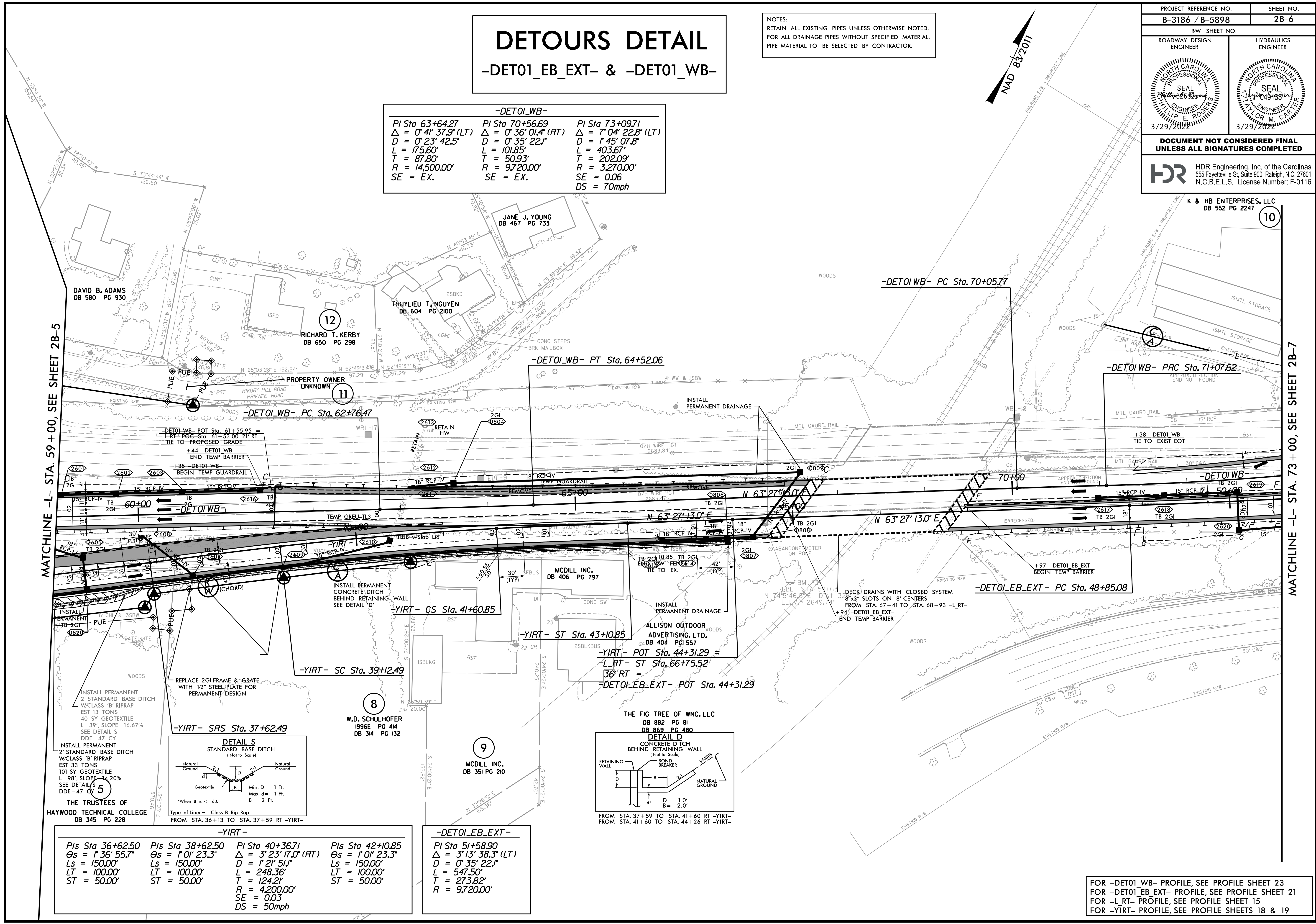
DETOURS DETAIL

-DETO1_EB_EXT- & -DETO1_WB-

NOTES:
RETAIN ALL EXISTING PIPES UNLESS OTHERWISE NOTED.
FOR ALL DRAINAGE PIPES WITHOUT SPECIFIED MATERIAL,
PIPE MATERIAL TO BE SELECTED BY CONTRACTOR.

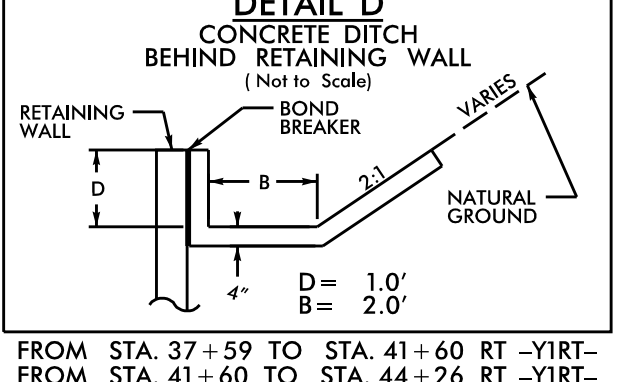
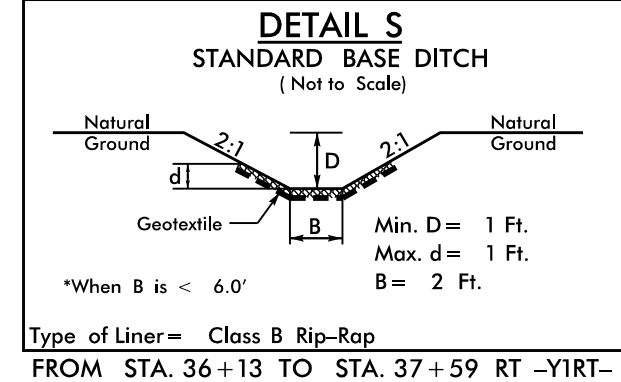
PROJECT REFERENCE NO. B-3186 / B-5898	SHEET NO. 2B-6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
HDR Engineering, Inc. of the Carolinas 555 Fayetteville St. Suite 900 Raleigh, N.C. 27601 N.C.B.E.L.S. License Number: F-0116	

-DETO1_WB-		
PI Sta 63+64.27	PI Sta 70+56.69	PI Sta 73+09.71
$\Delta = 0' 41' 37.9" (LT)$	$\Delta = 0' 36' 01.4" (RT)$	$\Delta = 7' 04' 22.8" (LT)$
$D = 0' 23' 42.5"$	$D = 0' 35' 22.1"$	$D = 1' 45' 07.8"$
$L = 175.60'$	$L = 101.85'$	$L = 403.67'$
$T = 87.80'$	$T = 50.93'$	$T = 202.09'$
$R = 14,500.00'$	$R = 9,720.00'$	$R = 3,270.00'$
$SE = EX.$	$SE = EX.$	$SE = 0.06$
		$DS = 70mph$



-YIRT-			
PIs Sta 36+62.50	PIs Sta 38+62.50	PI Sta 40+36.71	PIs Sta 42+10.85
$\Theta s = 1' 36' 55.7"$	$\Theta s = 1' 01' 23.3"$	$\Delta = 3' 23' 17.0" (RT)$	$\Theta s = 1' 01' 23.3"$
$Ls = 150.00'$	$Ls = 150.00'$	$D = 1' 21' 51.1"$	$Ls = 150.00'$
$LT = 100.00'$	$LT = 100.00'$	$L = 248.36'$	$LT = 100.00'$
$ST = 50.00'$	$ST = 50.00'$	$T = 124.21'$	$ST = 50.00'$
		$R = 4,200.00'$	
		$SE = 0.03$	
		$DS = 50mph$	

-DETO1_EB_EXT-	
PI Sta 51+58.90	
$\Delta = 3' 13' 38.3" (LT)$	
$D = 0' 35' 22.1"$	
$L = 547.50'$	
$T = 273.82'$	
$R = 9,720.00'$	



PLOT DRIVERS: NCDOT_pdf_color_eng_50.plt
 USER: HBARE
 FILE: NCDOT\NCDOT-B3186_T02.c. \6.0.CAD.BTM.6.2_Work.In_Progress\B-3186-B-5898\Roadway\Pro\B3186-B5898.RDY_PSH02B-06.dgn
 PENTABLE: NCDOT_pshp.flt.tdi
 TIME: 6:15:06 AM
 DATE: 3/29/2022

FOR -DETO1_WB- PROFILE, SEE PROFILE SHEET 23
 FOR -DETO1_EB_EXT- PROFILE, SEE PROFILE SHEET 21
 FOR -L_RT- PROFILE, SEE PROFILE SHEET 15
 FOR -YIRT- PROFILE, SEE PROFILE SHEETS 18 & 19

PROJECT REFERENCE NO. B-3186 / B-5898		SHEET NO. 2B-7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
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			

-DETOI_WB-

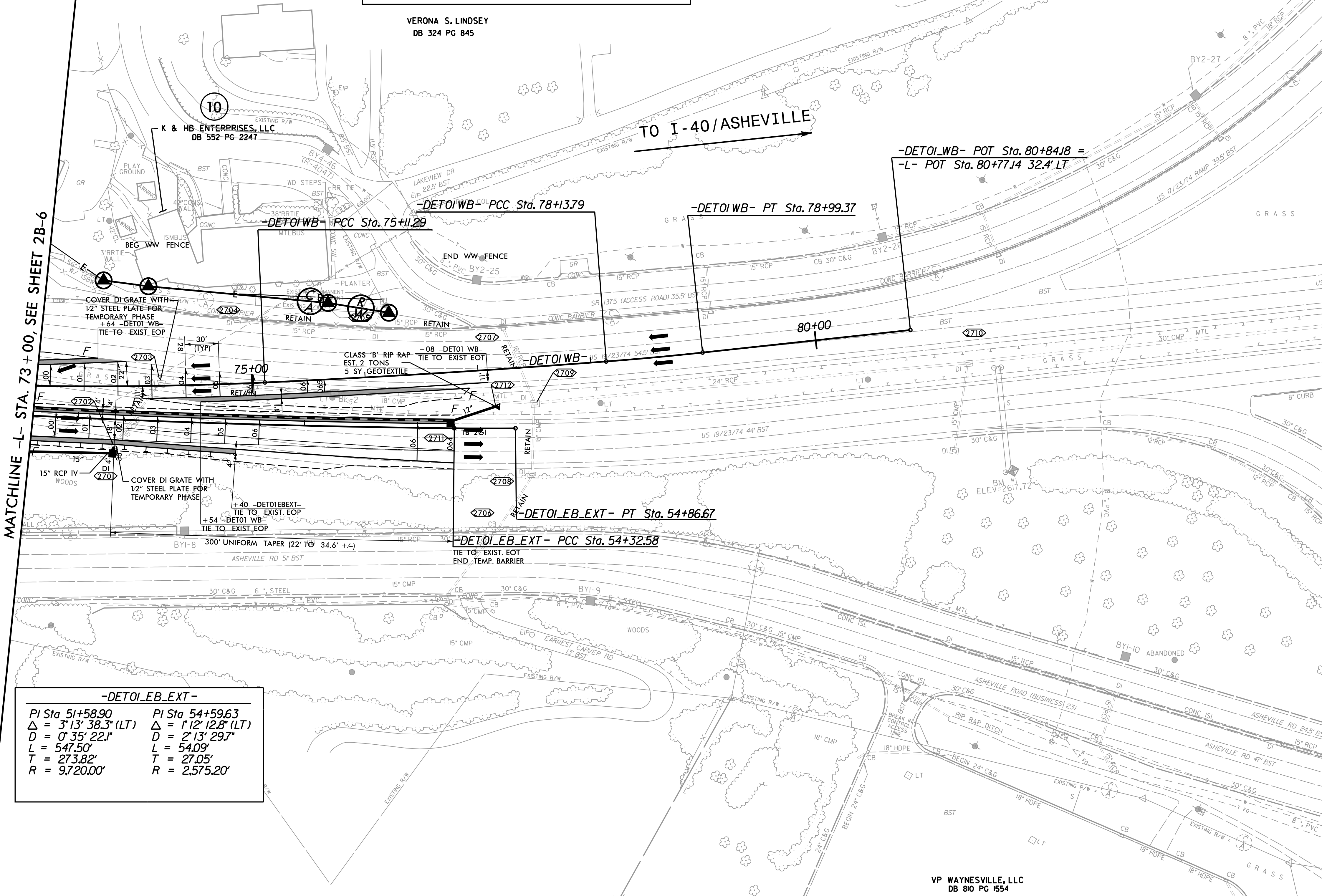
PI Sta 73+09.71 $\Delta = 7'04'22.8"$ (LT) D = 1'45'07.8" L = 403.67' T = 202.09' R = 3,270.00' SE = 0.06 DS = 70mph	PI Sta 76+62.55 $\Delta = 1'46'59.2"$ (LT) D = 0'35'22.1" L = 302.50' T = 151.26' R = 9,720.00' SE = EX.	PI Sta 78+56.58 $\Delta = 1'46'35.7"$ (LT) D = 2'04'33.4" L = 85.58' T = 42.79' R = 2,760.00' SE = EX.
---	--	--

NOTES:
RETAIN ALL EXISTING PIPES UNLESS OTHERWISE NOTED.
FOR ALL DRAINAGE PIPES WITHOUT SPECIFIED MATERIAL,
PIPE MATERIAL TO BE SELECTED BY CONTRACTOR.

DETOURS DETAIL

-DETOI_EB_EXT- & -DETOI_WB-

VERONA S. LINDSEY
DB 324 PG 845



-DETOI_EB_EXT-

PI Sta 51+58.90 $\Delta = 3'13'38.3"$ (LT) D = 0'35'22.1" L = 547.50' T = 273.82' R = 9,720.00'	PI Sta 54+59.63 $\Delta = 1'12'12.8"$ (LT) D = 2'13'29.7" L = 54.09' T = 27.05' R = 2,575.20'
--	--

FOR -DETOI_EB_EXT- PROFILE, SEE PROFILE SHEET 21
FOR -DETOI_WB- PROFILE, SEE PROFILE SHEET 23

PLOT DRIVER: NCDOT_color_eng_50.plt
USER: HBARE
FILE: \

PENTABLE: B-3186 B-5898 NCDOT_pshp.plt
TIME: 6:56:55 AM

DATE: 1/13/2022

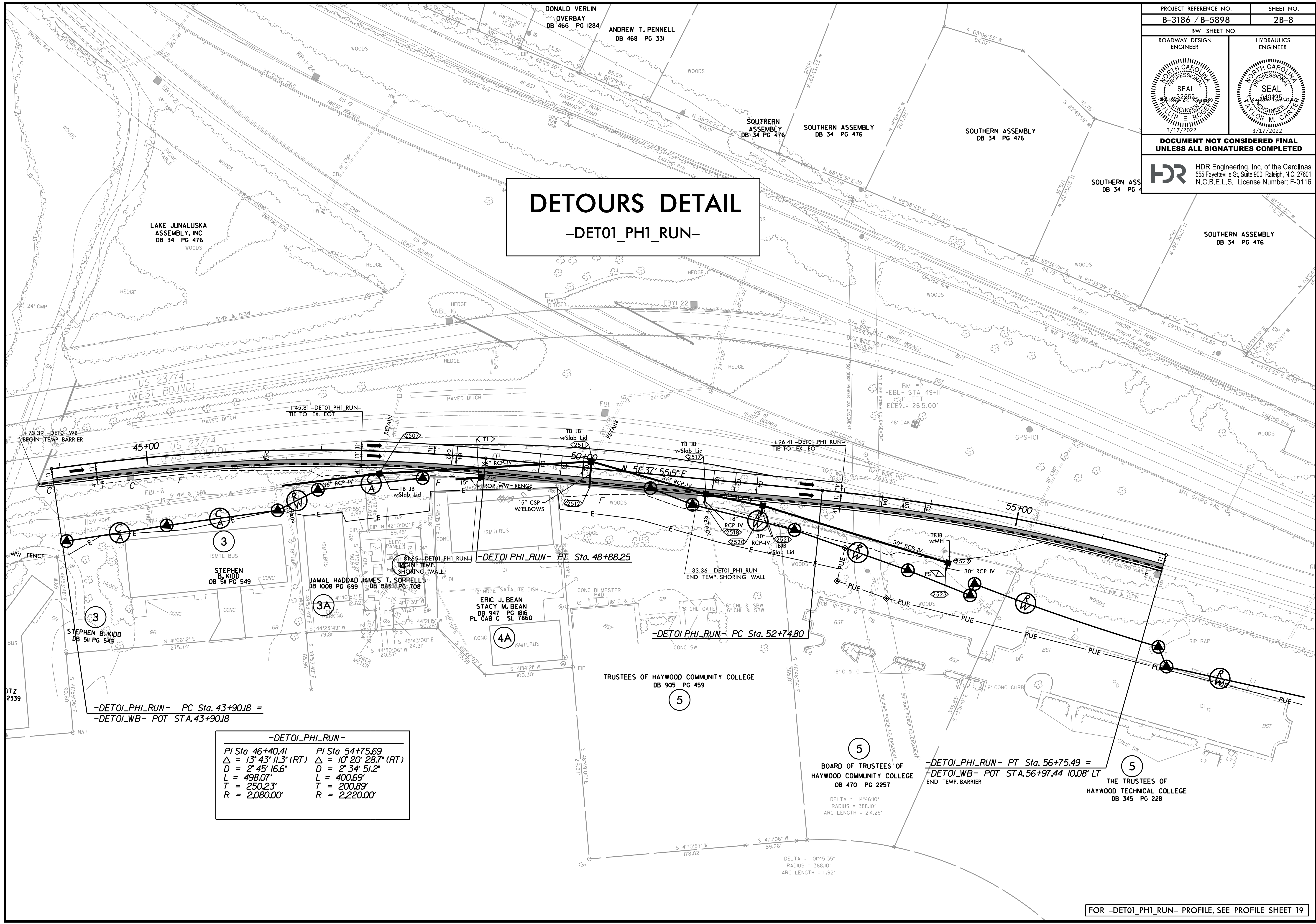
PROJECT REFERENCE NO. B-3186 / B-5898	SHEET NO. 2B-8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

**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

DETOURS DETAIL

-DETO1_PHI_RUN-



-DETO1_PHI_RUN-	
PI Sta 46+40.41	PI Sta 54+75.69
$\Delta = 13^{\circ} 43' 11.3''$ (RT)	$\Delta = 10^{\circ} 20' 28.7''$ (RT)
D = 2' 45' 16.6"	D = 2' 34' 51.2"
L = 498.07'	L = 400.69'
T = 250.23'	T = 200.89'
R = 2,080.00'	R = 2,220.00'

-DETO1_PHI_RUN- PC Sta. 43+90.8 =
-DETO1_WB- POT STA. 43+90.8

-DETO1_PHI_RUN- PT Sta. 48+88.25

-DETO1_PHI_RUN- PC Sta. 52+74.80

-DETO1_PHI_RUN- PT Sta. 56+75.49 =
-DETO1_WB- POT STA. 56+97.44 10.08' LT

THE TRUSTEES OF
HAYWOOD TECHNICAL COLLEGE
DB 345 PG 228

BOARD OF TRUSTEES OF
HAYWOOD COMMUNITY COLLEGE
DB 470 PG 2257

DELTA = 01°45'35"
RADIUS = 388.00'
ARC LENGTH = 11.92'

DELTA = 14°46'10"
RADIUS = 388.00'
ARC LENGTH = 214.29'

PLOT DRIVER: NCDOT_color_eng_50.plt
 USER: HBARE
 FILE: \\\n
 PENTABLE: B-3186 B-5898 NCDOT_pshp.plt
 TIME: 6:55:58 AM
 DATE: 1/13/2022

DETOURS DETAIL

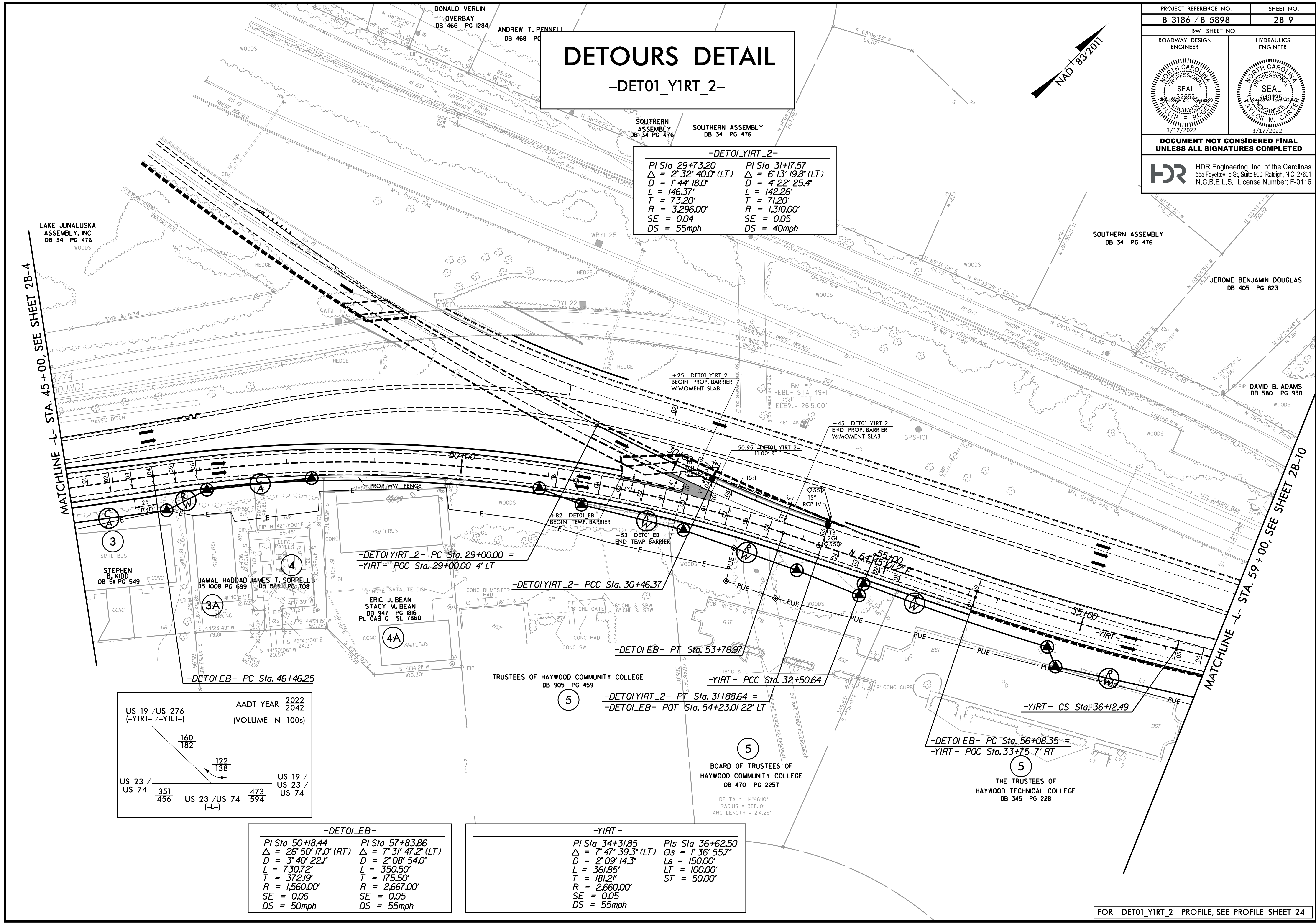
-DETO1_YIRT_2-

PROJECT REFERENCE NO. B-3186 / B-5898	SHEET NO. 2B-9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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

-DETO1_YIRT_2-	
PI Sta 29+73.20	PI Sta 31+17.57
$\Delta = 2^{\circ} 32' 40.0''$ (LT)	$\Delta = 6^{\circ} 13' 19.8''$ (LT)
D = 1' 44' 18.0"	D = 4' 22' 25.4"
L = 146.37'	L = 142.26'
T = 73.20'	T = 71.20'
R = 3,296.00'	R = 1,310.00'
SE = 0.04	SE = 0.05
DS = 55mph	DS = 40mph



US 19 / US 276 (-YIRT- / -YILT-)	AADT YEAR 2022 2042 (VOLUME IN 100s)
160 182	
122 138	
US 23 / US 74 351 456	US 19 / US 23 / US 74 473 594
(L-)	

-DETO1_EB-	
PI Sta 50+18.44	PI Sta 57+83.86
$\Delta = 26^{\circ} 50' 17.0''$ (RT)	$\Delta = 7^{\circ} 31' 47.2''$ (LT)
D = 3' 40' 22.1"	D = 2' 08' 54.0"
L = 730.72'	L = 350.50'
T = 372.19'	T = 175.50'
R = 1,560.00'	R = 2,667.00'
SE = 0.06	SE = 0.05
DS = 50mph	DS = 55mph

-YIRT-		
PI Sta 34+31.85	PIs Sta 36+62.50	
$\Delta = 7^{\circ} 47' 39.3''$ (LT)	$\Delta s = 1^{\circ} 36' 55.7''$	
D = 2' 09' 14.3"	Ls = 150.00'	
L = 361.85'	LT = 100.00'	
T = 181.21'	ST = 50.00'	
R = 2,660.00'		
SE = 0.05		
DS = 55mph		

MATCHLINE -L- STA. 45+00, SEE SHEET 2B-4

MATCHLINE -L- STA. 59+00, SEE SHEET 2B-10

FOR -DETO1_YIRT_2- PROFILE, SEE PROFILE SHEET 24

PLOT DRIVER: NCDOT_pdf_color_eng_50.plt
 USER: HBARE
 FILE: \

PENTABLE: B-3186 B-5898 NCDOT_pshp.plt
 TIME: 6:56:01 AM
 DATE: 1/13/2022

DETOURS DETAIL

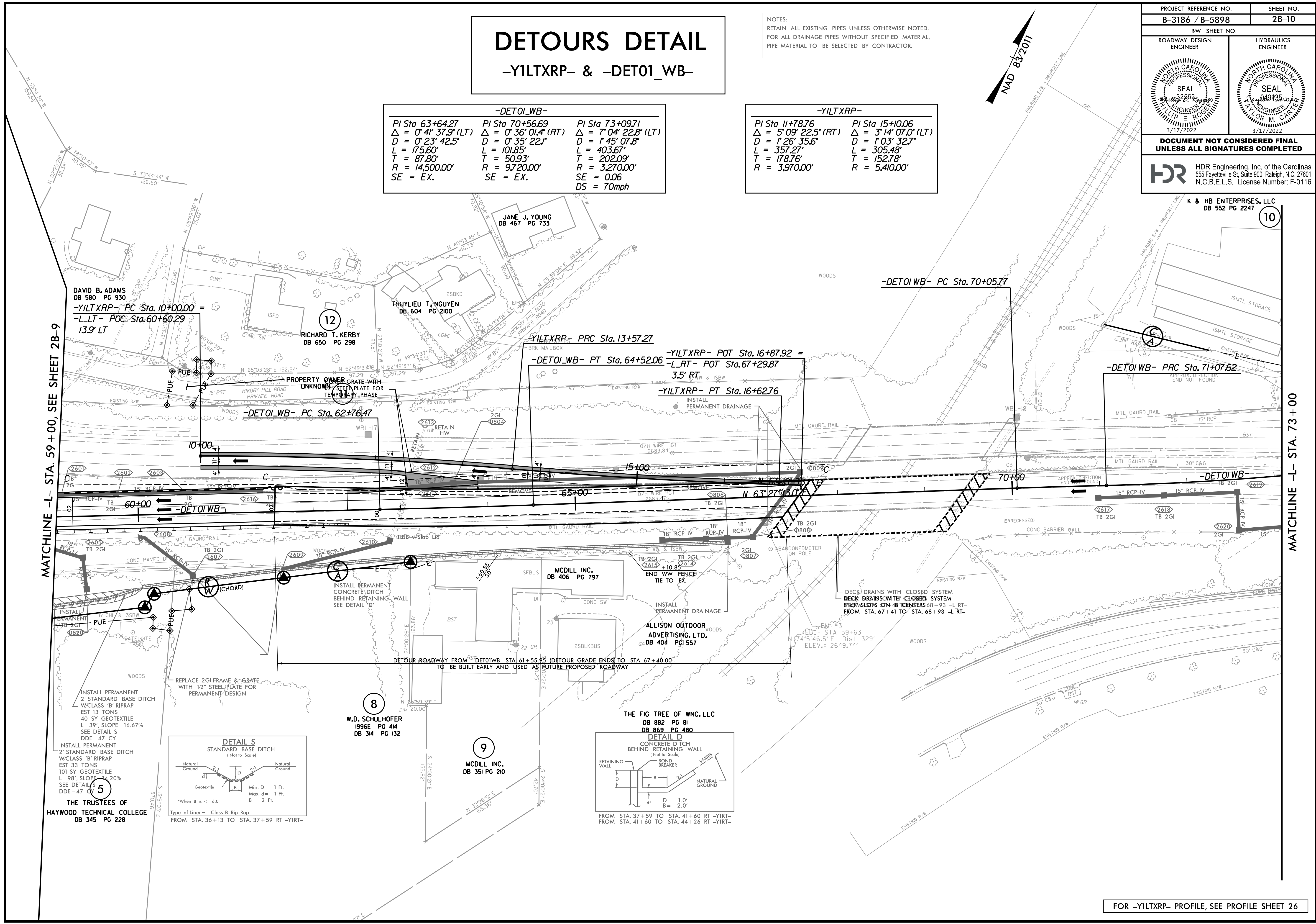
-YILT XRP- & -DETO1_WB-

NOTES:
RETAIN ALL EXISTING PIPES UNLESS OTHERWISE NOTED.
FOR ALL DRAINAGE PIPES WITHOUT SPECIFIED MATERIAL,
PIPE MATERIAL TO BE SELECTED BY CONTRACTOR.

-DETO1_WB-		
PI Sta 63+64.27	PI Sta 70+56.69	PI Sta 73+09.71
$\Delta = 0' 41' 37.9"$ (LT)	$\Delta = 0' 36' 01.4"$ (RT)	$\Delta = 7' 04' 22.8"$ (LT)
$D = 0' 23' 42.5"$	$D = 0' 35' 22.1"$	$D = 1' 45' 07.8"$
$L = 175.60'$	$L = 101.85'$	$L = 403.67'$
$T = 87.80'$	$T = 50.93'$	$T = 202.09'$
$R = 14,500.00'$	$R = 9,720.00'$	$R = 3,270.00'$
$SE = EX.$	$SE = EX.$	$SE = 0.06$
		$DS = 70mph$

-YILT XRP-	
PI Sta 11+78.76	PI Sta 15+10.06
$\Delta = 5' 09' 22.5"$ (RT)	$\Delta = 3' 14' 07.0"$ (LT)
$D = 1' 26' 35.6"$	$D = 1' 03' 32.7"$
$L = 357.27'$	$L = 305.48'$
$T = 178.76'$	$T = 152.78'$
$R = 3,970.00'$	$R = 5,410.00'$

PROJECT REFERENCE NO. B-3186 / B-5898	SHEET NO. 2B-10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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	



MATCHLINE -L- STA. 59+00, SEE SHEET 2B-9

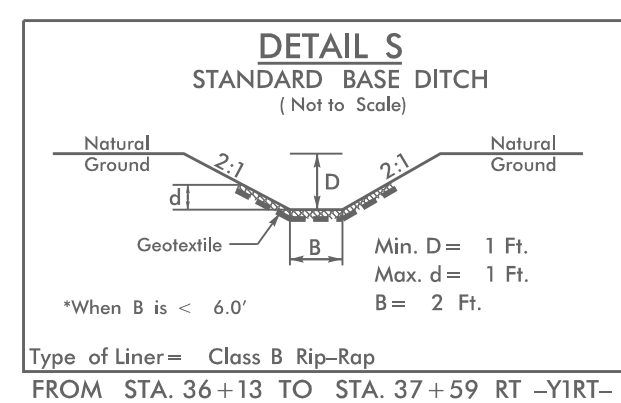
MATCHLINE -L- STA. 73+00

DAVID B. ADAMS
DB 580 PG 930
-YILT XRP- PC Sta. 10+00.00 =
-L_LT- POC Sta. 60+60.29
13.9' LT

INSTALL PERMANENT
2' STANDARD BASE DITCH
W/CLASS 'B' RIPRAP
EST 13 TONS
40 SY GEOTEXTILE
L=39', SLOPE=16.67%
SEE DETAIL S
DDE=47 CY

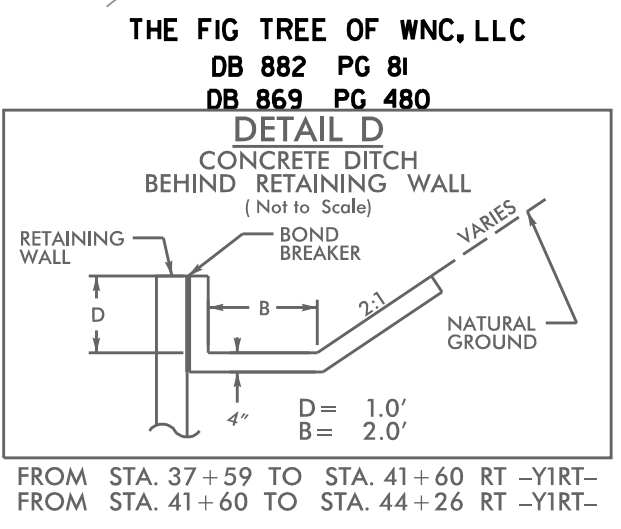
INSTALL PERMANENT
2' STANDARD BASE DITCH
W/CLASS 'B' RIPRAP
EST 33 TONS
101 SY GEOTEXTILE
L=98', SLOPE=14.20%
SEE DETAIL S
DDE=47 CY

THE TRUSTEES OF
HAYWOOD TECHNICAL COLLEGE
DB 345 PG 228



8
W.D. SCHULHOFER
1996E PG 414
DB 314 PG 132

9
MCDILL INC.
DB 351 PG 210



DECK DRAINS WITH CLOSED SYSTEM
DECK DRAINS WITH CLOSED SYSTEM
8% SLOPE ON 48\"/>

PLOT DRIVER: NCDOT_color_eng_50.plt
USER: HBARE
DATE: 1/13/2022
TIME: 6:56:04 AM
PENTABLE: B-3186 B-5898 NCDOT_pshp.plt
FILE:

PROJECT REFERENCE NO. B-3186 / B-5898	SHEET NO. 2B-11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

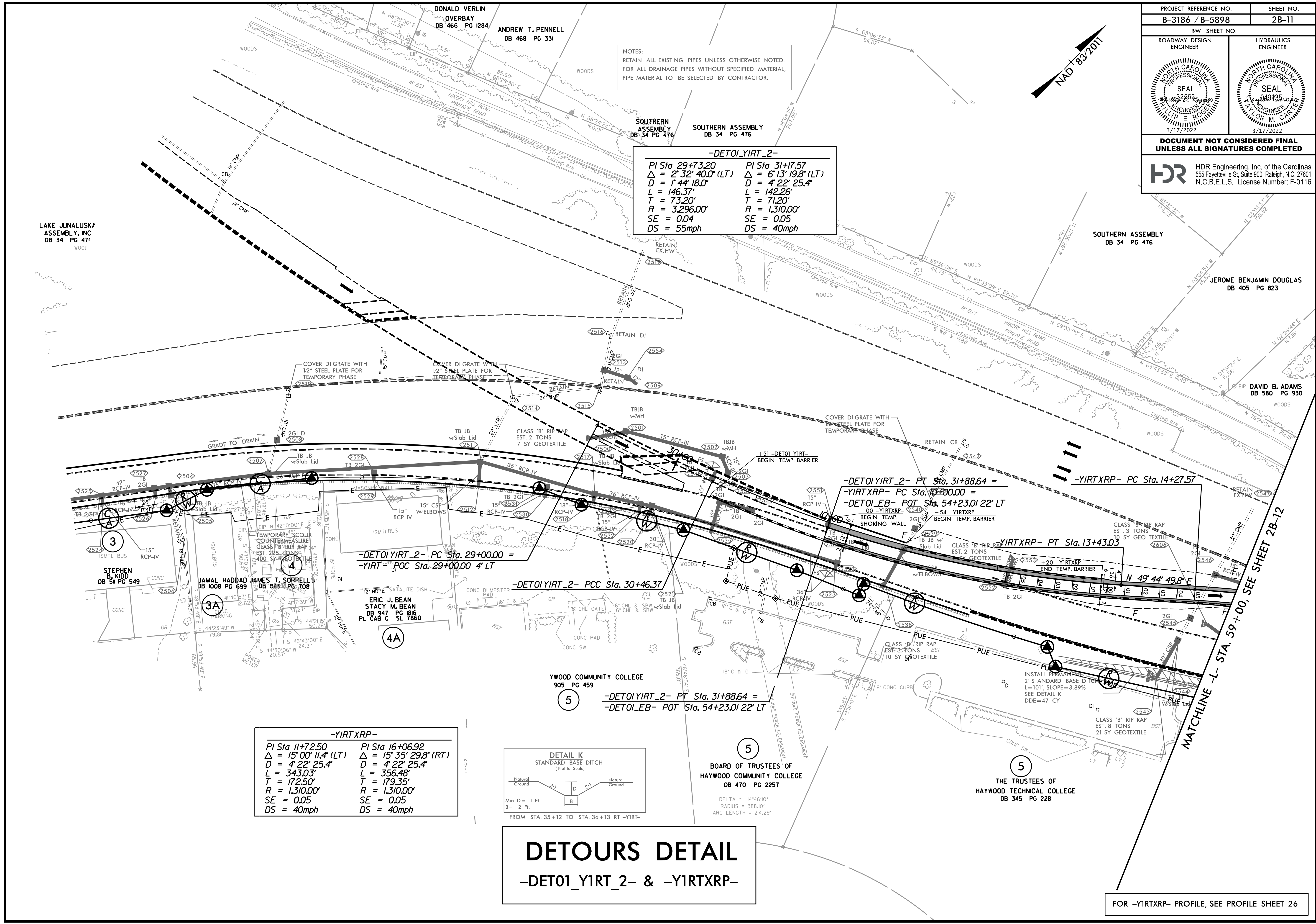
HDR HDR Engineering, Inc. of the Carolinas
555 Fayetteville St. Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-01116

NOTES:
RETAIN ALL EXISTING PIPES UNLESS OTHERWISE NOTED.
FOR ALL DRAINAGE PIPES WITHOUT SPECIFIED MATERIAL,
PIPE MATERIAL TO BE SELECTED BY CONTRACTOR.

-DETOI_YIRT_2-

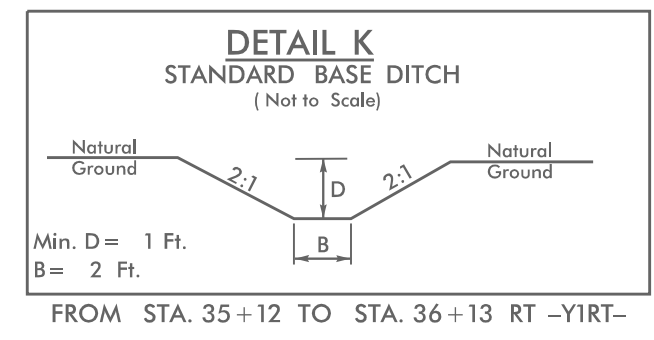
PI Sta 29+73.20	PI Sta 31+17.57
$\Delta = 2' 32" 40.0" (LT)$	$\Delta = 6' 13" 19.8" (LT)$
$D = 1' 44" 18.0"$	$D = 4' 22" 25.4"$
$L = 146.37'$	$L = 142.26'$
$T = 73.20'$	$T = 71.20'$
$R = 3,296.00'$	$R = 1,310.00'$
$SE = 0.04$	$SE = 0.05$
$DS = 55\text{mph}$	$DS = 40\text{mph}$

LAKE JUNALUSKA
ASSEMBLY, INC
DB 34 PG 47



-YIRTXRP-

PI Sta 11+72.50	PI Sta 16+06.92
$\Delta = 15' 00" 11.4" (LT)$	$\Delta = 15' 35" 29.8" (RT)$
$D = 4' 22" 25.4"$	$D = 4' 22" 25.4"$
$L = 343.03'$	$L = 356.48'$
$T = 172.50'$	$T = 179.35'$
$R = 1,310.00'$	$R = 1,310.00'$
$SE = 0.05$	$SE = 0.05$
$DS = 40\text{mph}$	$DS = 40\text{mph}$



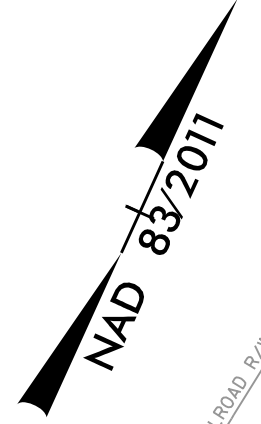
DETOURS DETAIL

-DETOI_YIRT_2- & -YIRTXRP-

FOR -YIRTXRP- PROFILE, SEE PROFILE SHEET 26

PLOT DRIVER: NCDOT_color_eng_50.plt
USER: HBARE
DATE: 1/13/2022
TIME: 6:56:07 AM
PENTABLE: B-3186 B-5898 NCDOT_pshp.plt

NOTES:
RETAIN ALL EXISTING PIPES UNLESS OTHERWISE NOTED.
FOR ALL DRAINAGE PIPES WITHOUT SPECIFIED MATERIAL,
PIPE MATERIAL TO BE SELECTED BY CONTRACTOR.

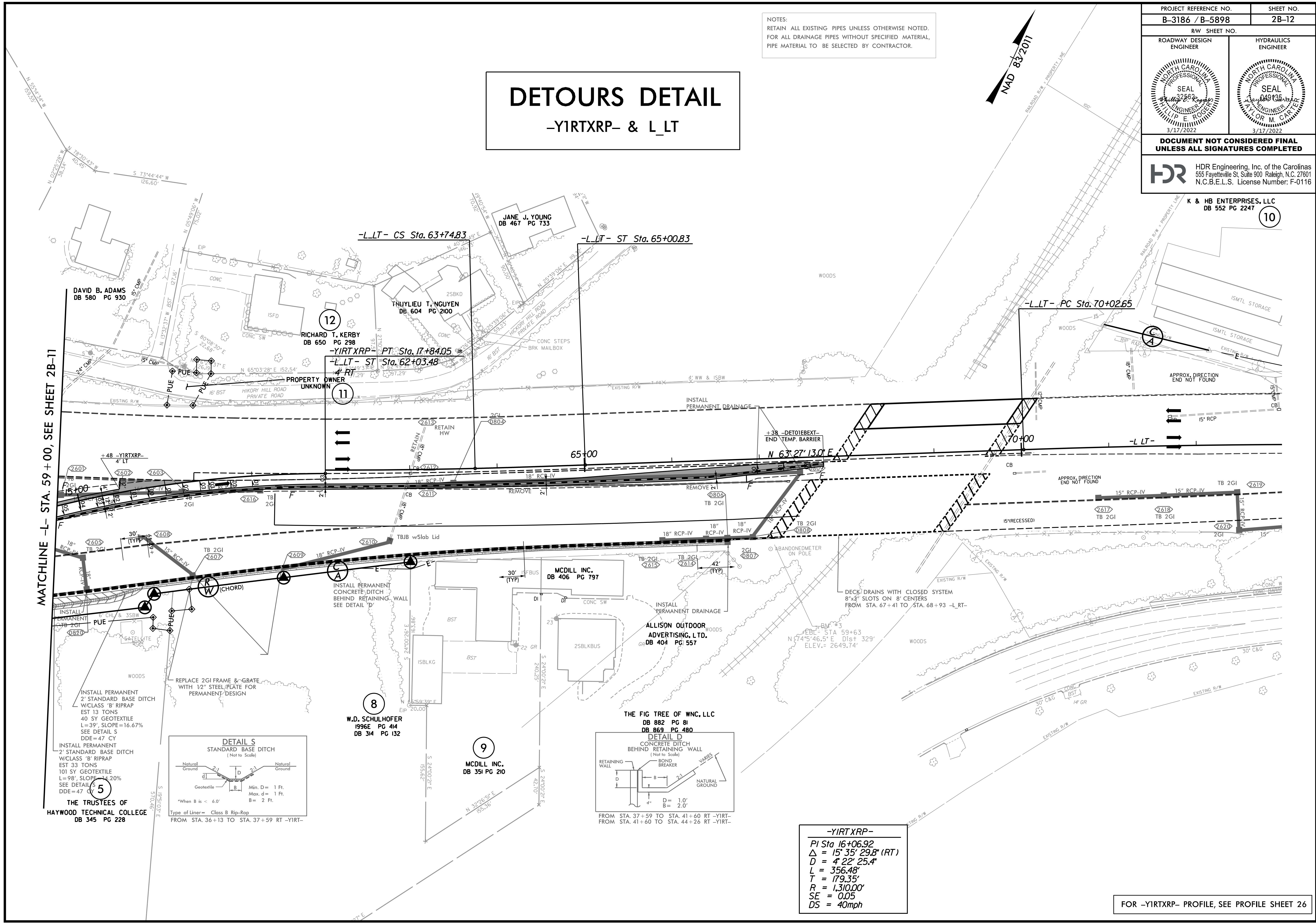


DETOURS DETAIL

-YIRTXRP- & L_LT

PROJECT REFERENCE NO. B-3186 / B-5898	SHEET NO. 2B-12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

K & HB ENTERPRISES, LLC
DB 552 PG 2247
10

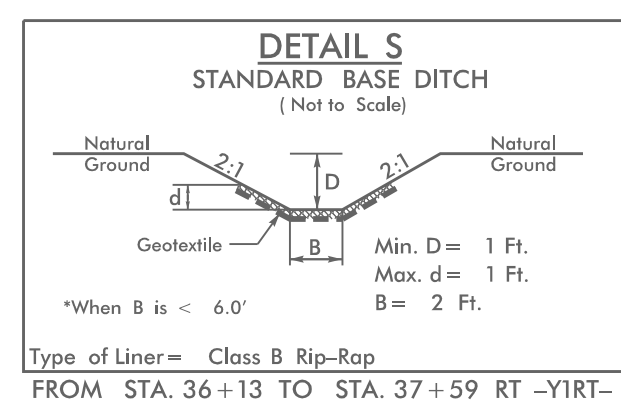


MATCHLINE -L- STA. 59+00, SEE SHEET 2B-11

INSTALL PERMANENT 2' STANDARD BASE DITCH W/CLASS 'B' RIPRAP EST 13 TONS 40 SY GEOTEXTILE L=39', SLOPE=16.67% SEE DETAIL S DDE=47 CY

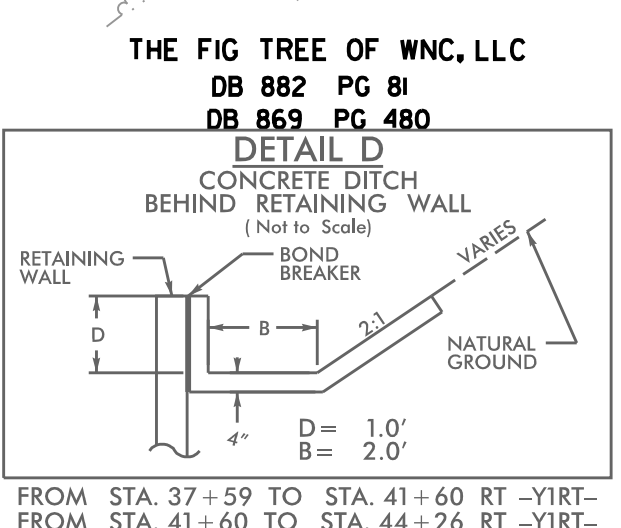
INSTALL PERMANENT 2' STANDARD BASE DITCH W/CLASS 'B' RIPRAP EST 33 TONS 101 SY GEOTEXTILE L=98', SLOPE=14.20% SEE DETAIL S DDE=47 CY

5
THE TRUSTEES OF HAYWOOD TECHNICAL COLLEGE
DB 345 PG 228



8
W.D. SCHULHOFER
1996 PG 414
DB 314 PG 132

9
MCDILL INC.
DB 351 PG 210



-YIRTXRP-
PI Sta 16+06.92
Δ = 15' 35" 29.8" (RT)
D = 4' 22" 25.4"
L = 356.48'
T = 179.35'
R = 1,310.00'
SE = 0.05
DS = 40mph

FOR -YIRTXRP- PROFILE, SEE PROFILE SHEET 26

PLOT DRIVER: NCDOT_color_eng_50.plt
USER: HBARE
DATE: 1/13/2022
TIME: 6:56:11 AM
PENTABLE: B-3186 B-5898 NCDOT_pshp.plt

DETOURS DETAIL

-DET02_WB_X1- & -DET02_EB_X1-



PROJECT REFERENCE NO. B-3186 / B-5898		SHEET NO. 2B-13	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
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-01116			

BM #5
-WBL- STA 5+00
S 76°10'26.7" W Dist 626'
ELEV. = 2709.07'

TO WAYNESVILLE

-L- SC Sta. 13+00.00 =
-DET02 EB X1- PC Sta. 13+00.00 22.54' RT

-DET02 EB X1- PT Sta. 14+09.05

-L- POC Sta. 16+84.43 =
-DET02 WB X1- POT Sta. 16+85.33 28.92' LT

-DET02_EB_X1-
PI Sta 13+54.53
Δ = 1' 38' 39.4" (RT)
D = 1' 30' 28.0"
L = 109.05'
T = 54.53'
R = 3,800.00'
SE = EX.

COUNTRY CLUB REAL ESTATE OF WNC, INC.
DB 915 PG 697

1

MATCHLINE -L- STA. 19+00, SEE SHEET 2B-14

FOR -DET02_EB_X1- PROFILE, SEE PROFILE SHEET 25

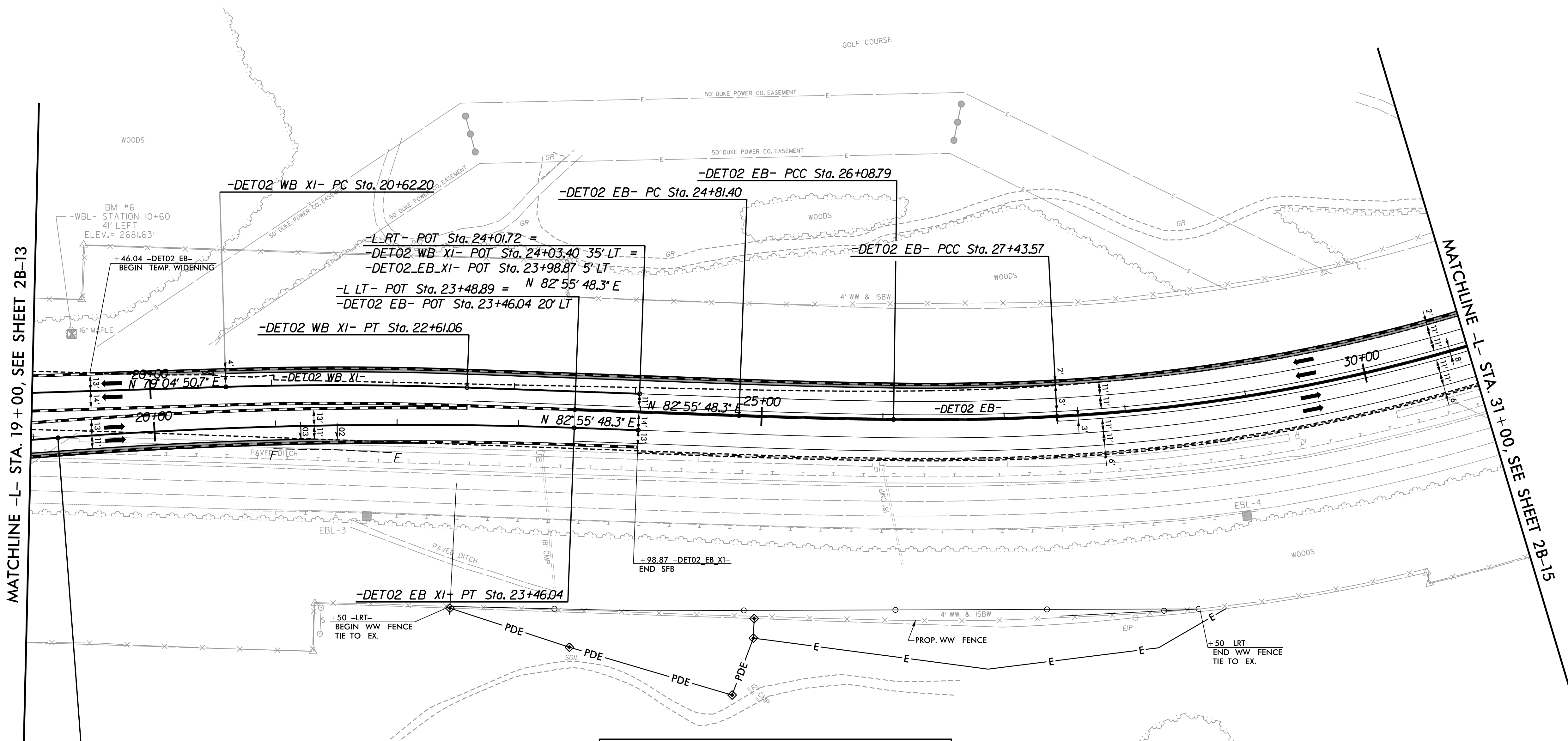
PLOT DRIVER: NCDOT_color_eng_50.plt
USER: HBARE
DATE: 1/13/2022
TIME: 6:56:14 AM
PENTABLE: B-3186 B-5898 NCDOT_pshpc.plt

-DETO2_EB-		
PI Sta 25+45.0	PI Sta 26+76.21	PI Sta 32+06.93
$\Delta = 1'16'41.9" (LT)$	$\Delta = 3'47'07.2" (LT)$	$\Delta = 35'12'57.1" (LT)$
$D = 1'00'12.3"$	$D = 2'48'31.0"$	$D = 3'55'27.7"$
$L = 127.39'$	$L = 134.78'$	$L = 897.36'$
$T = 63.70'$	$T = 67.41'$	$T = 463.36'$
$R = 5,710.00'$	$R = 2,040.00'$	$R = 1,460.00'$
SE = EX.	SE = EX.	SE = EX.

NAD 83/2011

PROJECT REFERENCE NO. B-3186 / B-5898	SHEET NO. 2B-14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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-01116	

LAKE JUNALUSKA ASSEMBLY, INC DB 34 PG 476



DETOURS DETAIL
 -DETO1_WB_XI-, -DETO2_EB_XI- & -DETO2_EB-

-DETO2_EB_XI-
PI Sta 21+33.35
$\Delta = 6'23'13.0" (RT)$
$D = 1'29'59.6"$
$L = 425.83'$
$T = 213.13'$
$R = 3,820.00'$
SE = 0.03
DS = 50mph

-DETO2_WB_XI-
PI Sta 21+61.67
$\Delta = 3'50'57.6" (RT)$
$D = 1'56'08.4"$
$L = 198.86'$
$T = 99.47'$
$R = 2,960.00'$
SE = EX.

DELTA = 45°09'56"
RADIUS = 130.02'
ARC LENGTH = 102.49'

FOR -DETO2_EB_XI- PROFILE, SEE PROFILE SHEET 25

MATCHLINE -L- STA. 19+00, SEE SHEET 2B-13

MATCHLINE -L- STA. 31+00, SEE SHEET 2B-15

-DETO2_EB_XI- PC Sta. 19+20.22
COUNTRY CLUB REAL ESTATE OF WNC, INC.
DB 915 PG 697

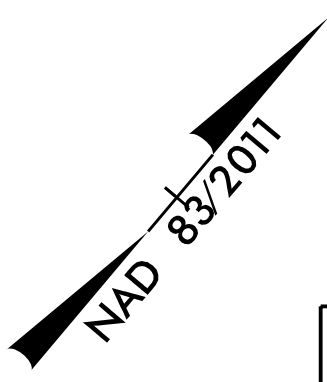
1

PLOT DRIVER: NCDOT_color_eng_50.plt
USER: HBARE
FILE: \

PENTABLE: B-3186 B-5898 NCDOT_pshp.plt
TIME: 6:56:17 AM

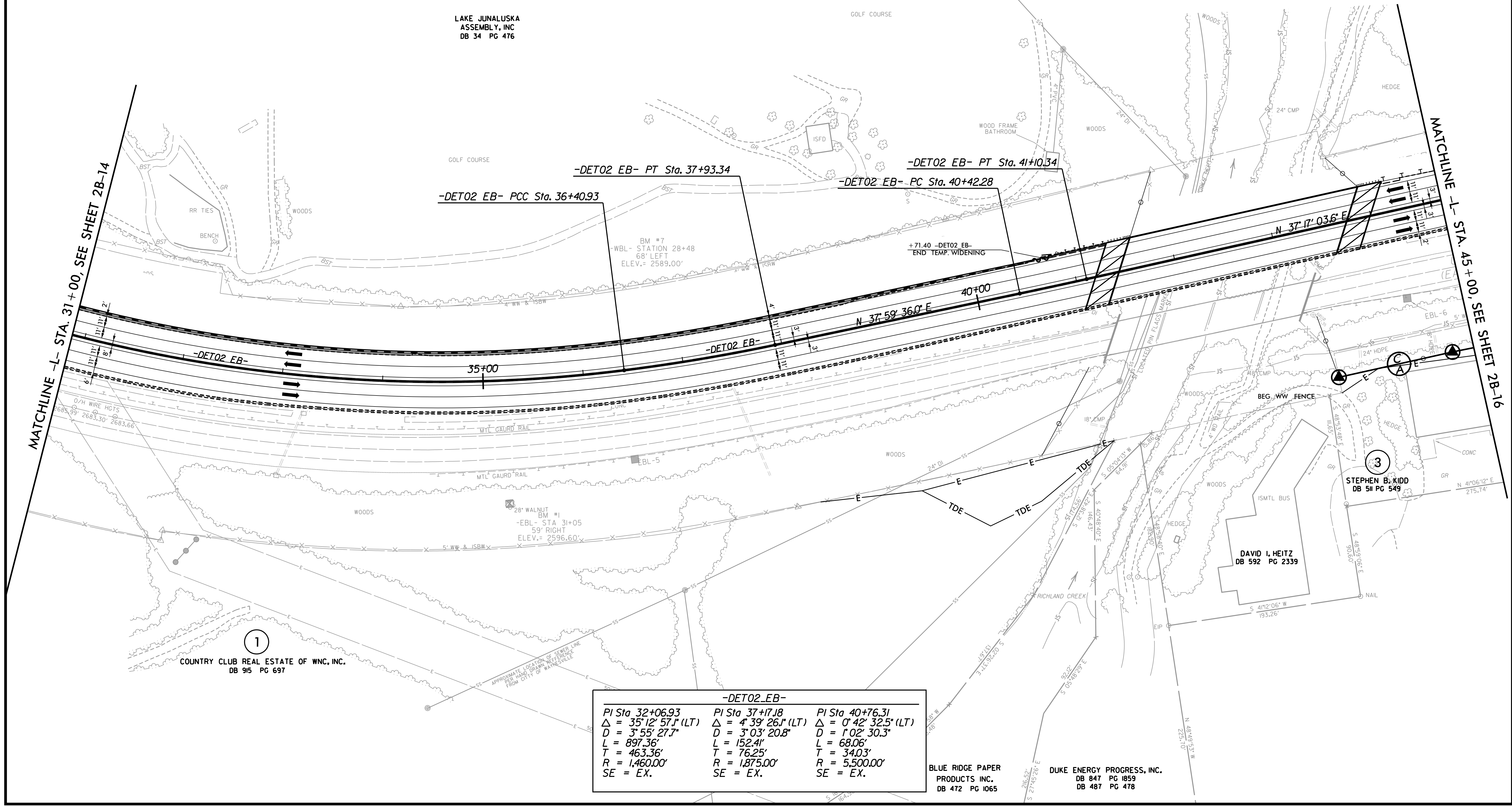
DATE: 1/13/2022

PROJECT REFERENCE NO. B-3186 / B-5898		SHEET NO. 2B-15
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
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		



DETOURS DETAIL

-DET02_EB-



LAKE JUNALUSKA
ASSEMBLY, INC
DB 34 PG 476

-DET02_EB- PT Sta. 37+93.34

-DET02_EB- PCC Sta. 36+40.93

-DET02_EB- PC Sta. 40+42.28

-DET02_EB- PT Sta. 41+10.34

BM #7
=WBL- STATION 28+48
68' LEFT
ELEV.= 2589.00'

+71.40 -DET02_EB-
END TEMP. WIDENING

-DET02_EB-		
PI Sta 32+06.93	PI Sta 37+17.18	PI Sta 40+76.31
$\Delta = 35^{\circ}12'57.1''$ (LT)	$\Delta = 4^{\circ}39'26.1''$ (LT)	$\Delta = 0^{\circ}42'32.5''$ (LT)
$D = 3^{\circ}55'27.7''$	$D = 3^{\circ}03'20.8''$	$D = 1^{\circ}02'30.3''$
$L = 897.36'$	$L = 152.41'$	$L = 68.06'$
$T = 463.36'$	$T = 76.25'$	$T = 34.03'$
$R = 1,460.00'$	$R = 1,875.00'$	$R = 5,500.00'$
SE = EX.	SE = EX.	SE = EX.

BLUE RIDGE PAPER
PRODUCTS INC.
DB 472 PG 1065

DUKE ENERGY PROGRESS, INC.
DB 847 PG 1859
DB 487 PG 478

MATCHLINE -L- STA. 31+00, SEE SHEET 2B-14

MATCHLINE -L- STA. 45+00, SEE SHEET 2B-16

PENTABLE: B-3186 B-5898 NCDOT_pshpfl.tdi
USER: HBARE
DATE: 1/13/2022
TIME: 6:56:20 AM

PLOT DRIVER: NCDOT_pdf_color_eng_50.pht
USER: HBARE
DATE: 1/13/2022
TIME: 6:56:20 AM




1
COUNTRY CLUB REAL ESTATE OF WNC, INC.
DB 95 PG 697

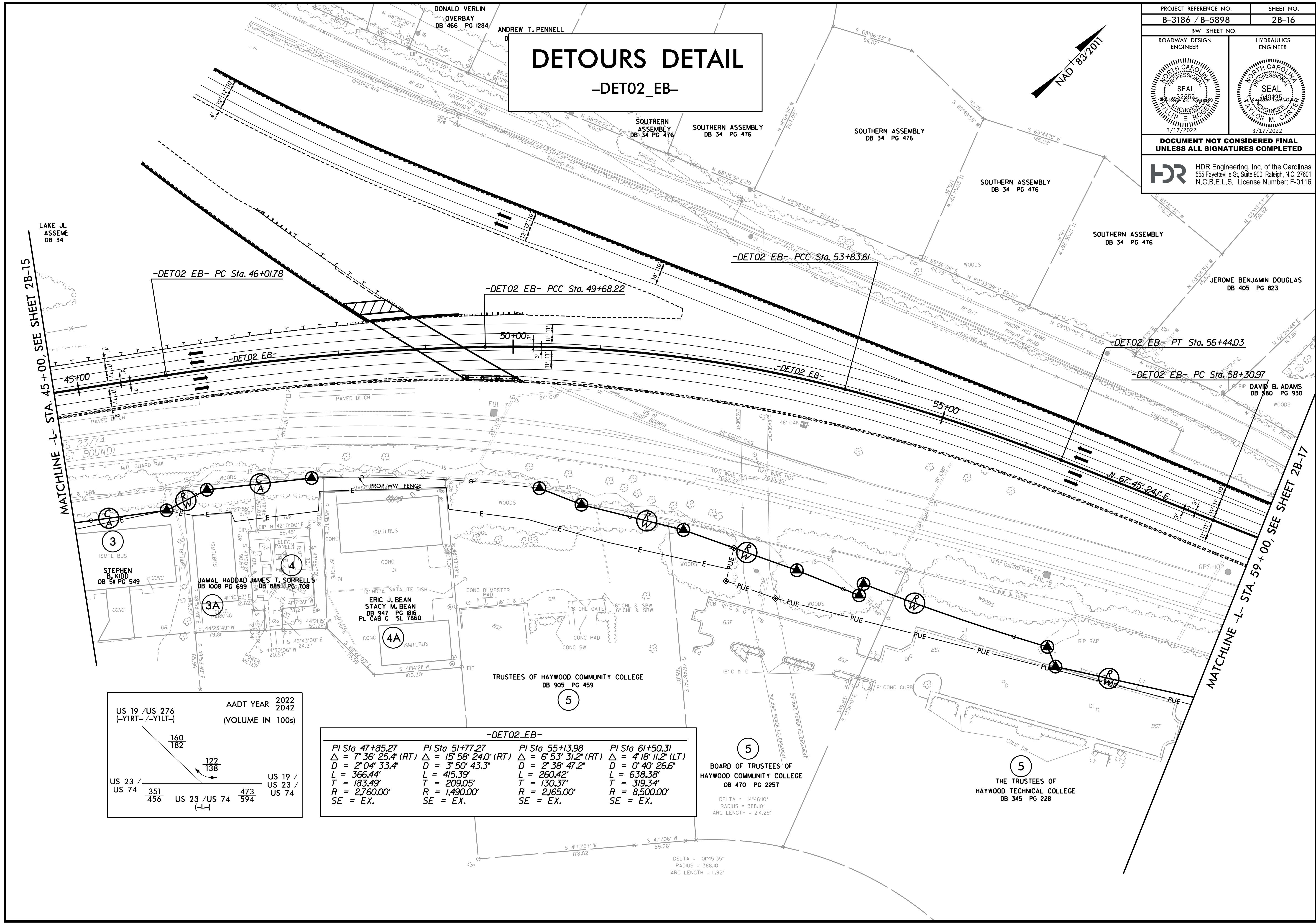
DAVID I. HEITZ
DB 592 PG 2339

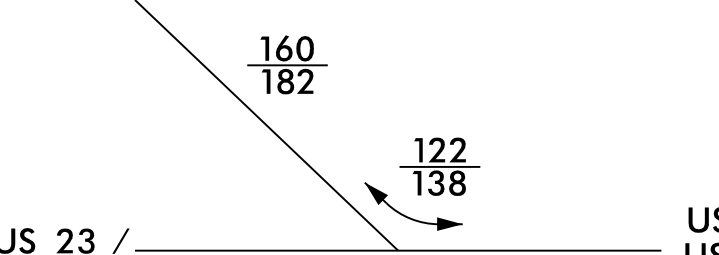
3
STEPHEN B. KIDD
DB 511 PG 549

DETOURS DETAIL

-DET02_EB-

PROJECT REFERENCE NO. B-3186 / B-5898	SHEET NO. 2B-16
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
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	



US 19 / US 276 (-YIRT- / -YILT-)	AADT YEAR 2022 2042 (VOLUME IN 100s)
	
US 23 / US 74 351 / 456	US 19 / US 23 / US 74 473 / 594
US 23 / US 74 (-L-)	

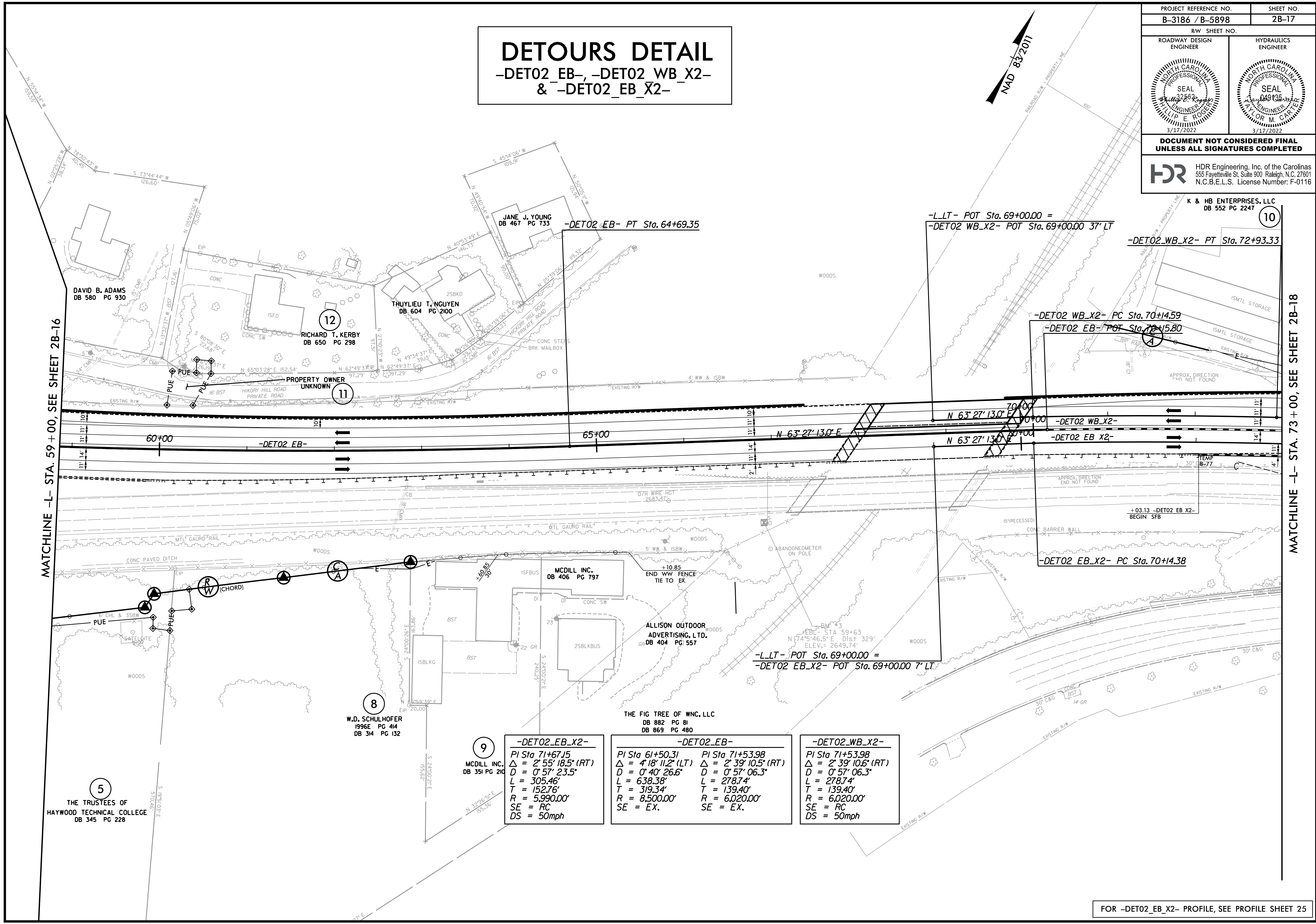
-DET02_EB-			
PI Sta 47+85.27 Δ = 7° 36' 25.4" (RT) D = 2° 04' 33.4" L = 366.44' T = 183.49' R = 2,760.00' SE = EX.	PI Sta 51+77.27 Δ = 15° 58' 24.0" (RT) D = 3° 50' 43.3" L = 415.39' T = 209.05' R = 1,490.00' SE = EX.	PI Sta 55+13.98 Δ = 6° 53' 31.2" (RT) D = 2° 38' 47.2" L = 260.42' T = 130.37' R = 2,165.00' SE = EX.	PI Sta 61+50.31 Δ = 4° 18' 11.2" (LT) D = 0° 40' 26.6" L = 638.38' T = 319.34' R = 8,500.00' SE = EX.

PLOT DRIVER: NCDOT_color_eng_50.plt
 USER: HBARE
 FILE: PENTABLE: B-3186 B-5898 NCDOT_pshp.plt
 DATE: 1/13/2022
 TIME: 6:56:23 AM

DETOURS DETAIL

-DETO2_EB-, -DETO2_WB_X2-
& -DETO2_EB_X2-

PROJECT REFERENCE NO. B-3186 / B-5898	SHEET NO. 2B-17
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
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	



MATCHLINE -L- STA. 59+00, SEE SHEET 2B-16

MATCHLINE -L- STA. 73+00, SEE SHEET 2B-18

-DETO2_EB_X2-

PI Sta 71+67.15
$\Delta = 2' 55' 18.5" (RT)$
$D = 0' 57' 23.5"$
$L = 305.46'$
$T = 152.76'$
$R = 5,990.00'$
SE = RC
DS = 50mph

-DETO2_EB-

PI Sta 61+50.31
$\Delta = 4' 18' 11.2" (LT)$
$D = 0' 40' 26.6"$
$L = 638.38'$
$T = 319.34'$
$R = 8,500.00'$
SE = EX.

PI Sta 71+53.98
$\Delta = 2' 39' 10.5" (RT)$
$D = 0' 57' 06.3"$
$L = 278.74'$
$T = 139.40'$
$R = 6,020.00'$
SE = EX.

-DETO2_WB_X2-

PI Sta 71+53.98
$\Delta = 2' 39' 10.6" (RT)$
$D = 0' 57' 06.3"$
$L = 278.74'$
$T = 139.40'$
$R = 6,020.00'$
SE = RC
DS = 50mph

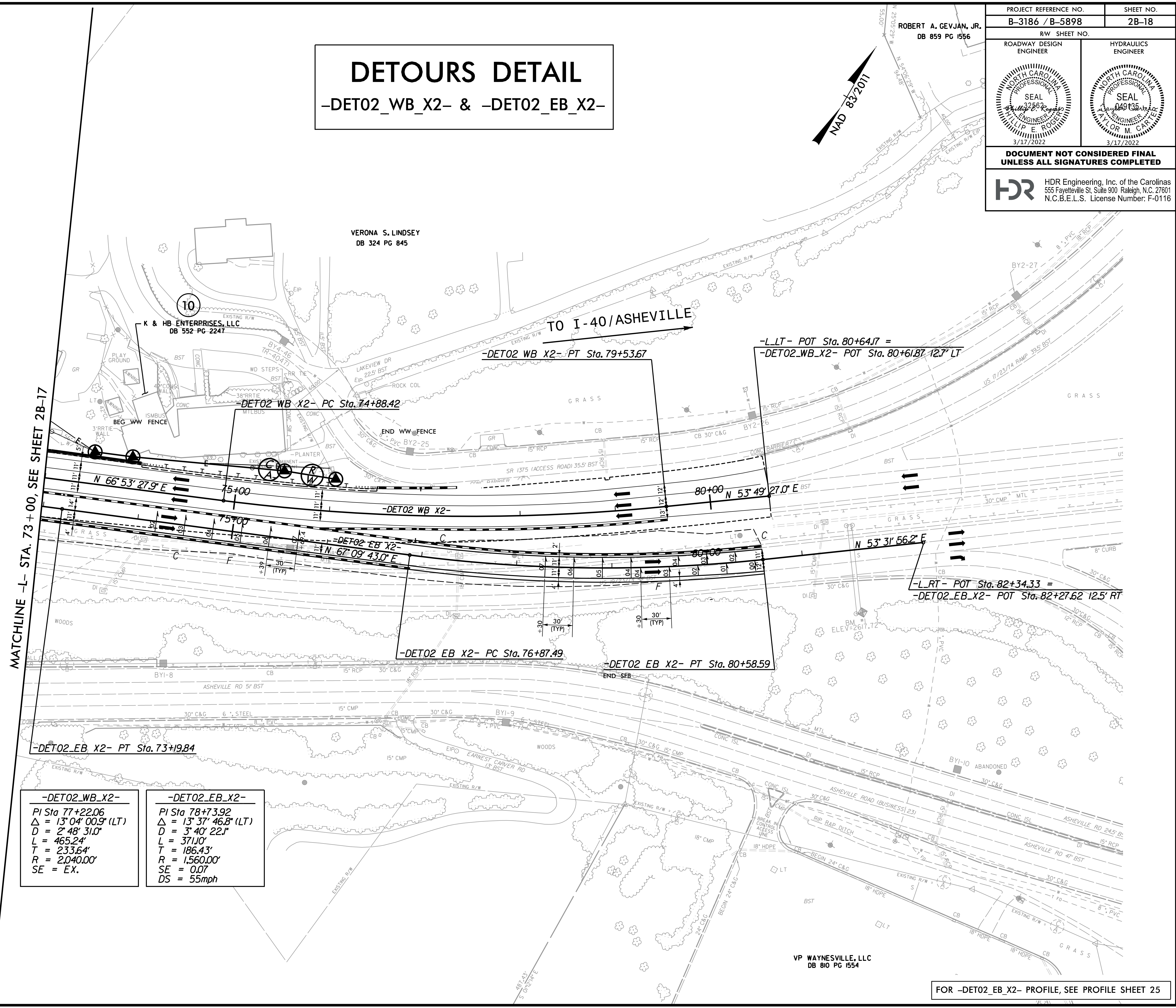
PLOT DRIVER: NCDOT_color_eng_50.plt
USER: HBARE
DATE: 1/13/2022
TIME: 6:56:42 AM

FOR -DETO2_EB_X2- PROFILE, SEE PROFILE SHEET 25

DETOURS DETAIL

-DET02_WB_X2- & -DET02_EB_X2-

PROJECT REFERENCE NO. B-3186 / B-5898		SHEET NO. 2B-18	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
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			



-DET02_WB_X2-
 PI Sta 77+22.06
 $\Delta = 13^{\circ}04'00.9''$ (LT)
 D = 2' 48" 31.0"
 L = 465.24'
 T = 233.64'
 R = 2,040.00'
 SE = EX.

-DET02_EB_X2-
 PI Sta 78+73.92
 $\Delta = 13^{\circ}37'46.8''$ (LT)
 D = 3' 40" 22.1"
 L = 371.0'
 T = 186.43'
 R = 1,560.00'
 SE = 0.07
 DS = 55mph

VP WAYNESVILLE, LLC
DB 810 PG 1554

FOR -DET02_EB_X2- PROFILE, SEE PROFILE SHEET 25

PLOT DRIVER: NCDOT_color_eng_50.plt
 USER: HBARE
 FILE: \

PENTABLE: B-3186 B-5898 NCDOT_pshp.plt
 TIME: 6:56:45 AM

DATE: 1/13/2022