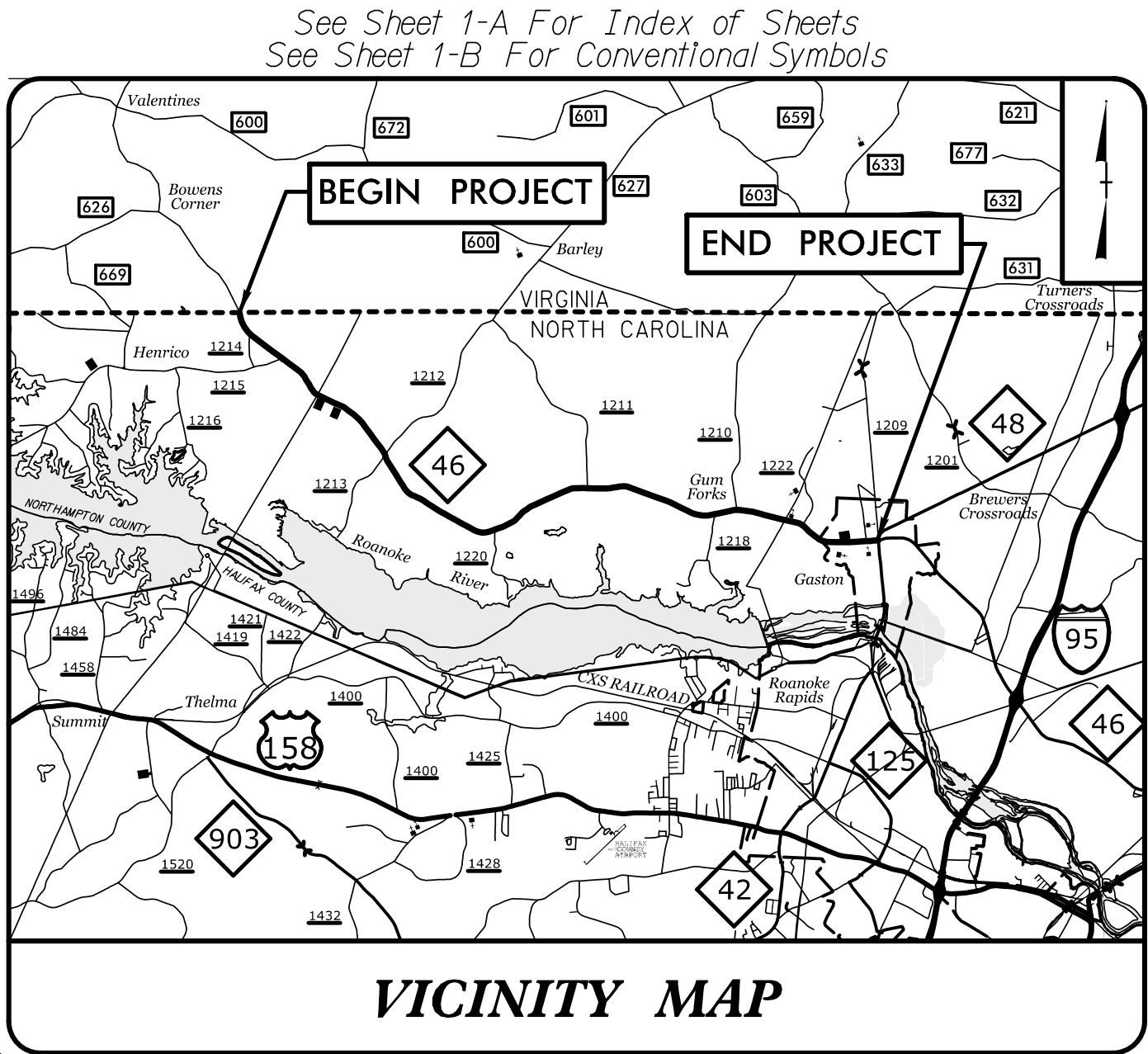


09.08/2019

TIP PROJECT: R-5739

CONTRACT: C205034

8/8/2025
X:\ncdot\ar-5739\roadway\proj\NR5739_RDY_TSH.dgn
User:bevans



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

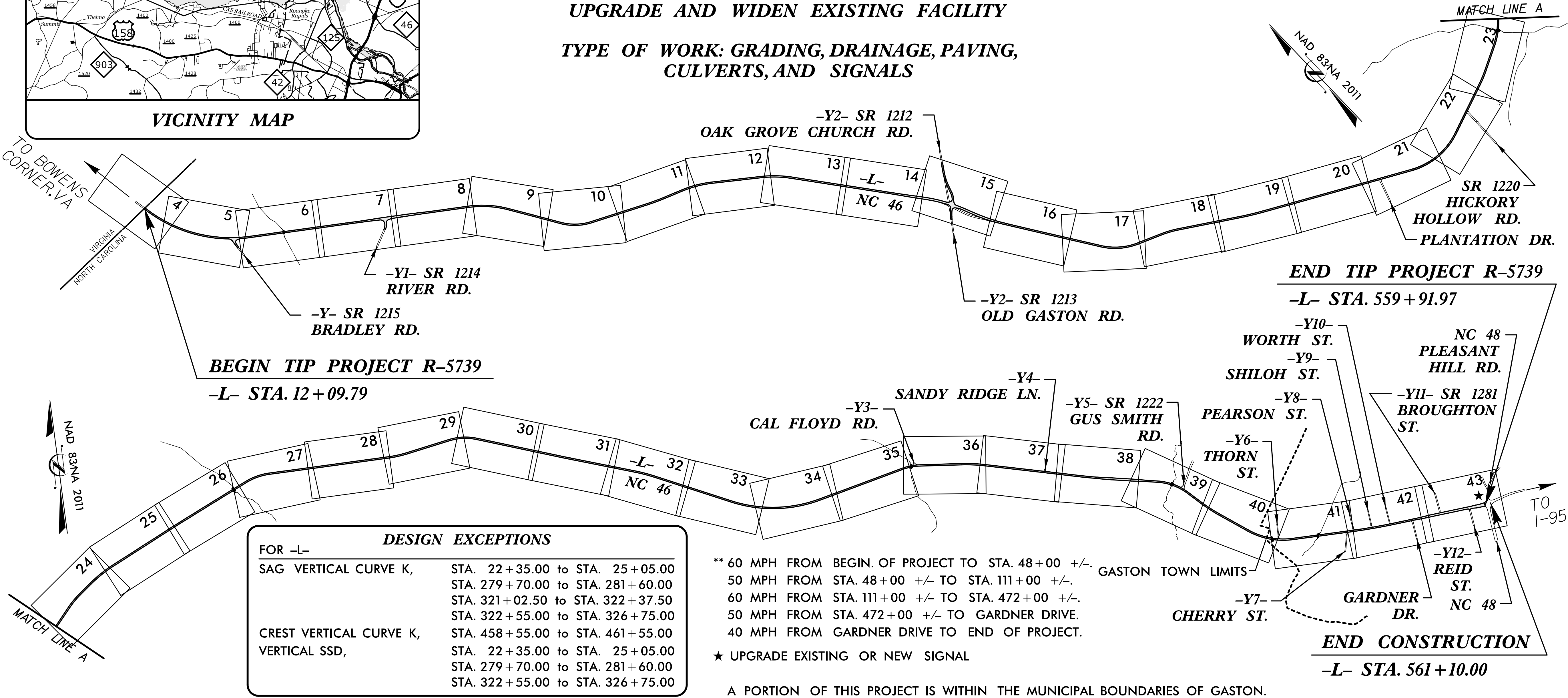
NORTHAMPTON COUNTY

LOCATION: NC 46 FROM THE VIRGINIA STATE LINE
TO NC 48 IN GASTON
UPGRADE AND WIDEN EXISTING FACILITY

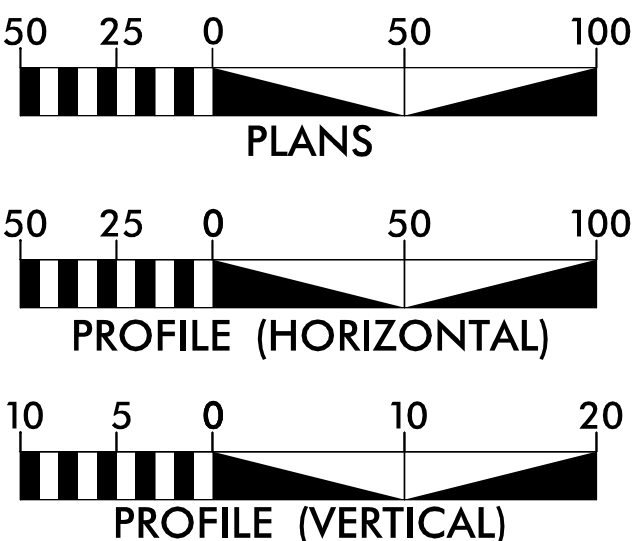
TYPE OF WORK: GRADING, DRAINAGE, PAVING,
CULVERTS, AND SIGNALS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-5739	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
50197.1.1		PE	
50197.2.1		RW	
50197.2.2		UTIL	
50197.3.1		CONST	

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED



GRAPHIC SCALES



DESIGN DATA

ADT 2025 = 7,550
ADT 2045 = 9,200
V = 40 TO 60 MPH**
FUNC CLASS =
PRINCIPAL ARTERIAL

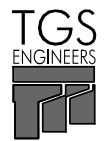
R-R-R DESIGN

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT R-5739 = 10.375 mile

TOTAL LENGTH TIP PROJECT R-5739 = 10.375 mile

Prepared For:
DIVISION OF HIGHWAYS
113 Airport Drive, Suite 100, Edenton, NC 27932



TGS ENGINEERS
706 HILLSBOROUGH ST
SUITE 200
RALEIGH, NC 27603

By:
PH (919) 773-8887
CORP. LICENSE NO.:
C-0275

2024 STANDARD SPECIFICATIONS

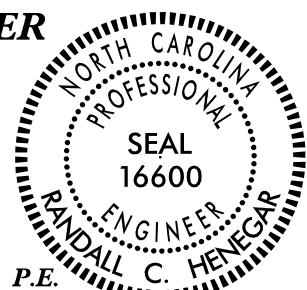
RIGHT OF WAY DATE:
DECEMBER 30, 2021

LETTING DATE:
OCTOBER 21, 2025

BURKE EVANS, PE
PROJECT ENGINEER

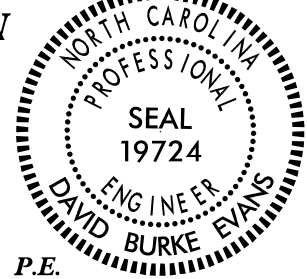
ROGER BULLOCK
PROJECT ENGINEER
NCDOT DIVISION 1

HYDRAULICS ENGINEER

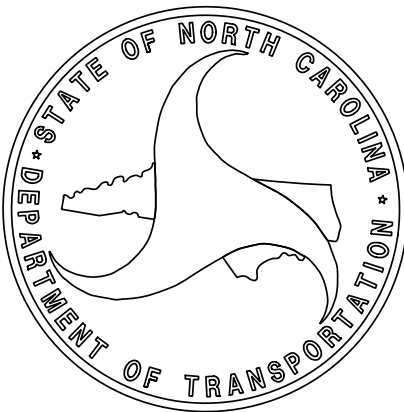


Signed by:
Randy Hinegar
Signature: 8/13/2025

ROADWAY DESIGN
ENGINEER



DocuSigned by:
David Burke Evans
Signature: 8/13/2025



5/28/99

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL PLAN SHEET SYMBOLS
2A-1 THRU 2A-2	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-1 THRU 2B-3	ROADWAY DETAILS
2C-1 THRU 2C-6	SPECIAL DETAILS
3B-1 THRU 3B-2	ROADWAY SUMMARIES
3D-1 THRU 3D-13	DRAINAGE SUMMARY SHEETS
3G-1	GEOTECHNICAL SUMMARIES
3P-1 THRU 3P-3	PARCEL INDEX SHEETS
4 THRU 66	PLAN AND PROFILE SHEETS
RW01 THRU RW43	RIGHT OF WAY SHEETS
TMP-1 THRU TMP-30	TRAFFIC MANAGEMENT PLANS
PMP-1 THRU PMP-11	PAVEMENT MARKING PLANS
EC-1 THRU EC-83	EROSION CONTROL PLANS
RF-1	REFORESTATION PLANS
SIGN-1 THRU SIGN-33	SIGNING PLANS
SIG-1.0 THRU SIG-2.1	SIGNAL PLANS
UC-1 THRU UC-100	UTILITY CONSTRUCTION PLANS
UO-1 THRU UO-41	UTILITY BY OTHERS PLANS
X-0	CROSS-SECTION INDEX
X-0A THRU X-0H	CROSS-SECTION SUMMARY SHEET
X-1 THRU X-166	CROSS-SECTIONS
C1-1 THRU C1-10	CULVERT PLANS (C1)
C2-1 THRU C2-9	CULVERT PLANS (C2)
C3-1 THRU C3-10	CULVERT PLANS (C3)
C4-1 THRU C4-9	CULVERT PLANS (C4)
C5-1 THRU C5-9	CULVERT PLANS (C5)
C6-1 THRU C6-11	CULVERT PLANS (C6)
C7-1 THRU C7-12	CULVERT PLANS (C7)

GENERAL NOTES

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

GRADE LINE:
GRADING AND SURFACING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

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

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

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

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

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

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

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

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".

UTILITIES:
UTILITY OWNERS ON THIS PROJECT ARE:

DOMINION ENERGY (POWER) – HARLEY BOWEN, LUCIAN GREGORY, JAMES PULLEN, TRACEY BROWN, JUSTIN KING
SPECTRUM (TELECOM) – WILBUR HAYNES, MATT McCALL
BRIGHTSPEED (TELECOM) – ROD MEDLIN, JON RADUNS
NORTHAMPTON COUNTY PUBLIC WORKS – (WATER & SEWER) – REBECCA TURNER, KIRK ROGERS, CHRIS WHEELER
ROANOKE RAPIDS SANITARY DISTRICT (WATER & SEWER) – JUSTIN D. BLACKMON

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

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



706 HILLSBOROUGH ST. SUITE 200
RALEIGH, NC 27603
(919) 733-8887 | tgsengineers.com
CORP. LICENSE NO.: C-0275

PROJECT REFERENCE NO.
R-5739

SHEET NO.
1A

ROADWAY DESIGN
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

STANDARD DRAWINGS

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	
200.02	METHOD OF CLEARING – METHOD II
225.02	GUIDE FOR GRADING SUBGRADE – SECONDARY AND LOCAL
225.04	METHOD OF OBTAINING SUPERELEVATION – TWO LANE PAVEMENT
225.06	METHOD OF GRADING SIGHT DISTANCE AT INTERSECTIONS

DIVISION 3 – PIPE CULVERTS	
300.01	METHOD OF PIPE INSTALLATION (USE DETAILS IN LIEU OF STANDARDS FOR SHEETS 1 AND 2 OF 2)
310.10	DRIVEWAY PIPE CONSTRUCTION

DIVISION 5 – SUBGRADE, BASES AND SHOULDERS	
560.01	METHOD OF SHOULDER CONSTRUCTION – HIGH SIDE OF SUPERELEVATED CURVE – METHOD I

DIVISION 6 – ASPHALT BASES AND PAVEMENTS	
654.01	PAVEMENT REPAIRS

DIVISION 8 – INCIDENTALS	
815.02	SUBSURFACE DRAIN
838.01	CONCRETE ENDWALL FOR SINGLE AND DOUBLE PIPE CULVERTS – 15" THRU 48" PIPE 90 SKEW
838.11	BRICK ENDWALL FOR SINGLE AND DOUBLE PIPE CULVERTS – 15" THRU 48" PIPE 90 SKEW
838.21	REINFORCED CONCRETE ENDWALL – FOR SINGLE 54" PIPE 90 SKEW
838.45	NOTES FOR REINFORCED CONCRETE ENDWALL – STD. DWG 838.21 THRU 838.40
838.51	REINFORCED BRICK ENDWALL – FOR SINGLE 54" PIPE 90 SKEW
838.75	NOTES FOR REINFORCED BRICK ENDWALL – STD. DWG 838.51 THRU 838.70
838.80	PRECAST ENDWALLS – 12" THRU 72" PIPE 90 SKEW
840.00	CONCRETE BASE PAD FOR DRAINAGE STRUCTURES
840.01	BRICK CATCH BASIN – 12" THRU 54" PIPE
840.02	CONCRETE CATCH BASIN – 12" THRU 54" PIPE
840.03	FRAME, GRATES AND HOOD – FOR USE ON STANDARD CATCH BASIN
840.04	CONCRETE OPEN THROAT CATCH BASIN – 12" THRU 48" PIPE
840.05	BRICK OPEN THROAT CATCH BASIN – 12" THRU 48" PIPE
840.14	CONCRETE DROP INLET – 12" THRU 30" PIPE
840.15	BRICK DROP INLET – 12" THRU 30" PIPE
840.16	DROP INLET FRAME AND GRATES – FOR USE WITH STD. DWG 840.14 AND 840.15
840.18	CONCRETE GRATED DROP INLET TYPE 'B' – 12" THRU 36" PIPE
840.24	FRAMES AND NARROW SLOT SAG GRATES
840.27	BRICK GRATED DROP INLET TYPE 'B' – 12" THRU 36" PIPE
840.29	FRAMES AND NARROW SLOT FLAT GRATES
840.34	TRAFFIC BEARING JUNCTION BOX – FOR USE WITH PIPES 42" AND UNDER
840.35	TRAFFIC BEARING GRATED DROP INLET – FOR CAST IRON DOUBLE FRAME AND GRATES
840.54	MANHOLE FRAME AND COVER
840.55	MANHOLE FRAME AND COVER (FLUSH WITH SLAB FOR OPEN THROAT CATCH BASIN)
840.71	CONCRETE AND BRICK PIPE PLUG
840.72	PIPE COLLAR
846.01	CONCRETE CURB, GUTTER AND CURB & GUTTER
848.02	DRIVEWAY TURNOUT – RADIUS TYPE
848.04	STREET TURNOUT
851.01	CONCRETE ISLANDS
862.01	GUARDRAIL PLACEMENT (Use Detail in Lieu of Standards for Sheet 6 of 15)
862.02	GUARDRAIL INSTALLATION
876.01	RIP RAP IN CHANNELS AND DITCHES
876.02	GUIDE FOR RIP RAP AT PIPE OUTLETS
876.04	DRAINAGE DITCHES WITH CLASS 'B' RIP RAP

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

BOUNDARIES AND PROPERTY:

State Line	
County Line	
Township Line	
City Line	
Reservation Line	
Property Line	
Existing Iron Pin (EIP)	
Computed Property Corner	
Existing Concrete Monument (ECM)	
Parcel/Sequence Number	
Existing Fence Line	
Proposed Woven Wire Fence	
Proposed Chain Link Fence	
Proposed Barbed Wire Fence	
Existing Wetland Boundary	
Proposed Wetland Boundary	
Existing Endangered Animal Boundary	
Existing Endangered Plant Boundary	
Existing Historic Property Boundary	
Known Contamination Area: Soil	
Potential Contamination Area: Soil	
Known Contamination Area: Water	
Potential Contamination Area: Water	
Contaminated Site: Known or Potential	

BUILDINGS AND OTHER CULTURE:

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

HYDROLOGY:

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

RAILROADS:

Standard Gauge	
RR Signal Milepost	
Switch	
RR Abandoned	
RR Dismantled	

RIGHT OF WAY & PROJECT CONTROL:

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

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	
Existing Curb	
Proposed Slope Stakes Cut	
Proposed Slope Stakes Fill	
Proposed Curb Ramp	
Existing Metal Guardrail	
Proposed Guardrail	
Existing Cable Guiderail	
Proposed Cable Guiderail	
Equality Symbol	
Pavement Removal	
Single Tree	
Single Shrub	
Hedge	

VEGETATION:

Woods Line	
Orchard	
Vineyard	

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	
Bridge Wing Wall, Head Wall and End Wall	
MINOR:	
Head and End Wall	
Pipe Culvert	
Footbridge	
Drainage Box: Catch Basin, DI or JB	
Paved Ditch Gutter	
Storm Sewer Manhole	
Storm Sewer	

UTILITIES:

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

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

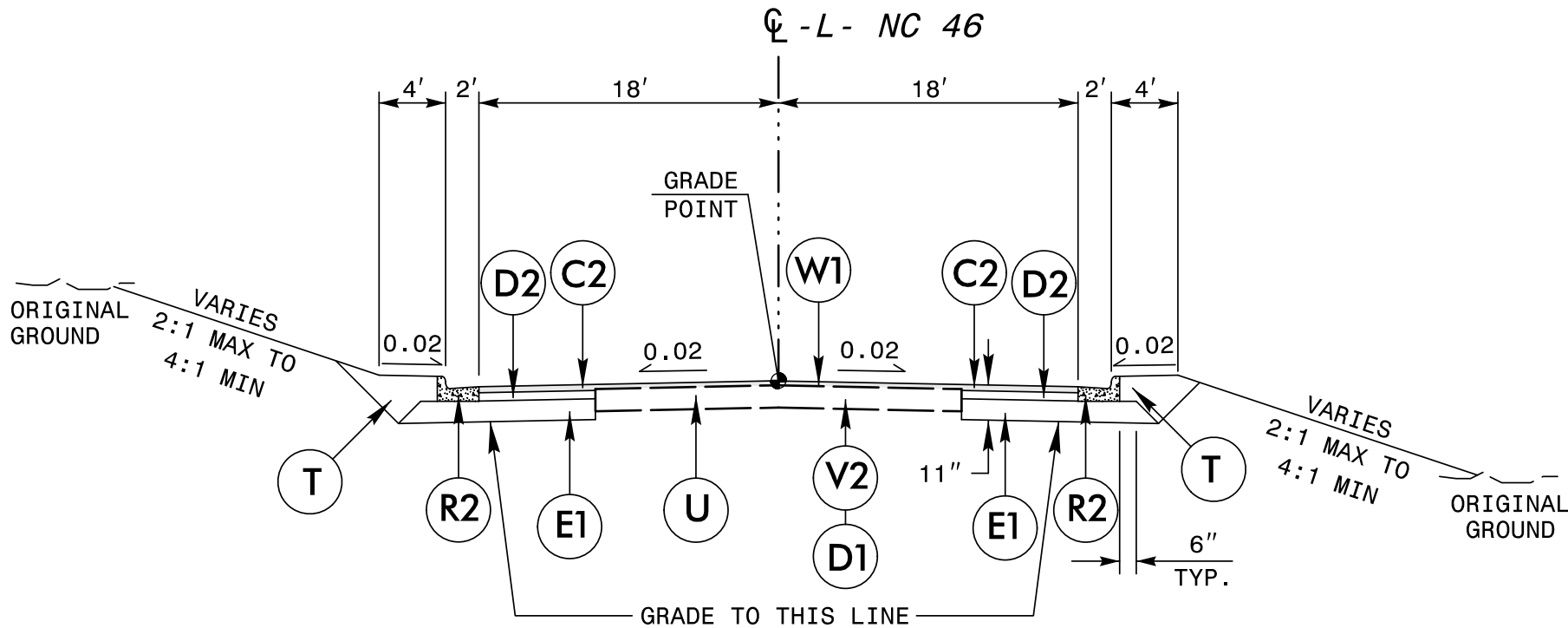
Sanitary Sewer Manhole	
Sanitary Sewer Cleanout	
U/G Sanitary Sewer Line	
Above Ground Sanitary Sewer	
SS Force Main Line Test Hole (SUE – LOS A)*	
SS Force Main Line (SUE – LOS B)*	
SS Force Main Line (SUE – LOS C)*	
SS Force Main Line (SUE – LOS D)*	

MISCELLANEOUS:

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

PAVEMENT SCHEDULE	
C1	2" S9.5 B
C2	3" S9.5 B
C3	VAR. S9.5 B
D1	2.5" I19.0 C
D2	4" I19.0 C
D3	VAR. I19.0 C
E1	4" B25.0 C
E2	VAR. B25.0 C
J	6" ABC
P	PRIME COAT
R1	CONC. EXPRESSWAY GUTTER
R2	2'-6" C & G
T	EARTH MATERIAL
U	EXIST. PAVEMENT
V1	INC. MILLING
V2	MILLING, 2.5"
W1	WEDGING
W2	WEDGING
Y1	12" SINUSOIDAL RUMBLE STRIPS
Y2	18" SINUSOIDAL RUMBLE STRIPS

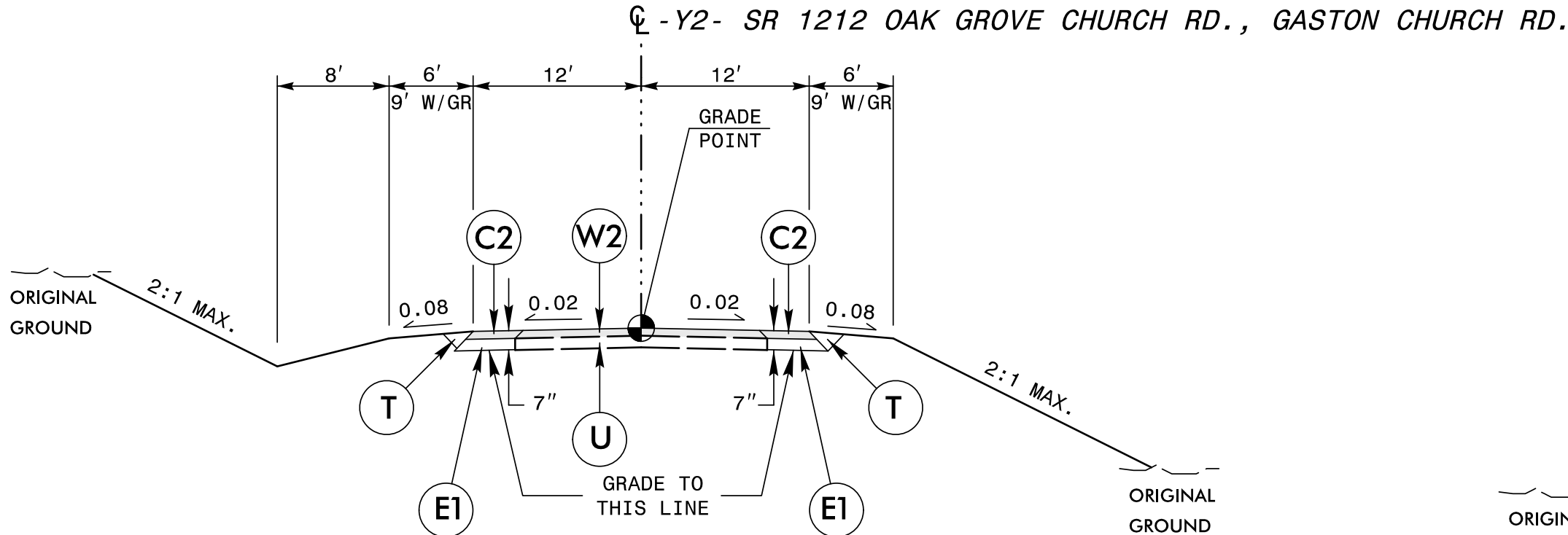
PAVEMENT EDGE SLOPES 1:1 UNLESS NOTED OTHERWISE



TYPICAL SECTION NO. 3

USE TYPICAL SECTION NO. 3

-L- STA. 548+85.00 TO STA. 559+91.97

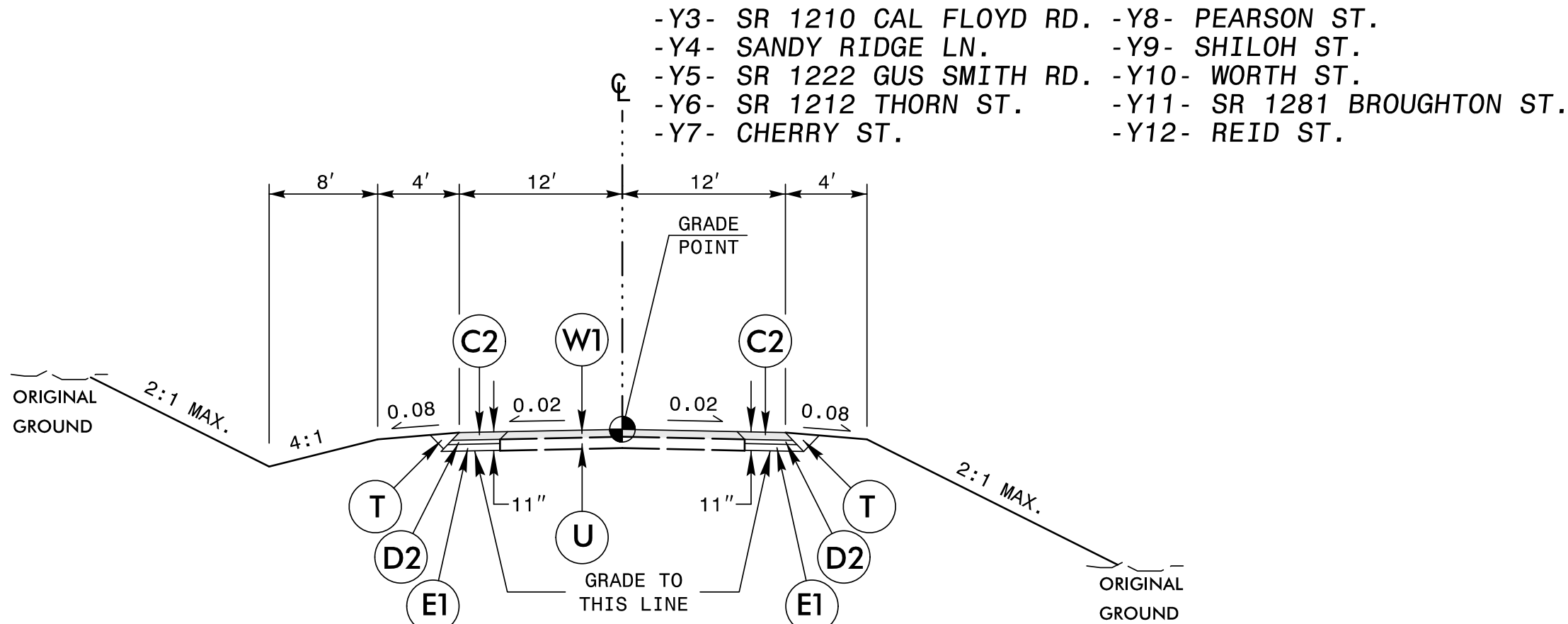


TYPICAL SECTION NO. 5

USE TYPICAL SECTION NO. 5

-Y2- STA. 12+35.00 TO STA. 15+94.12

-Y2- STA. 20+42.89 TO STA. 22+90.66



TYPICAL SECTION NO. 7

USE TYPICAL SECTION NO. 7

- Y3- STA. 10+57.00 TO STA. 11+83.75

* -Y4- STA. 10+95.00 TO STA. 11+84.00

-Y5- STA. 10+95.00 TO STA. 11+83.61

-Y6- STA. 11+40.00 TO STA. 11+83.79

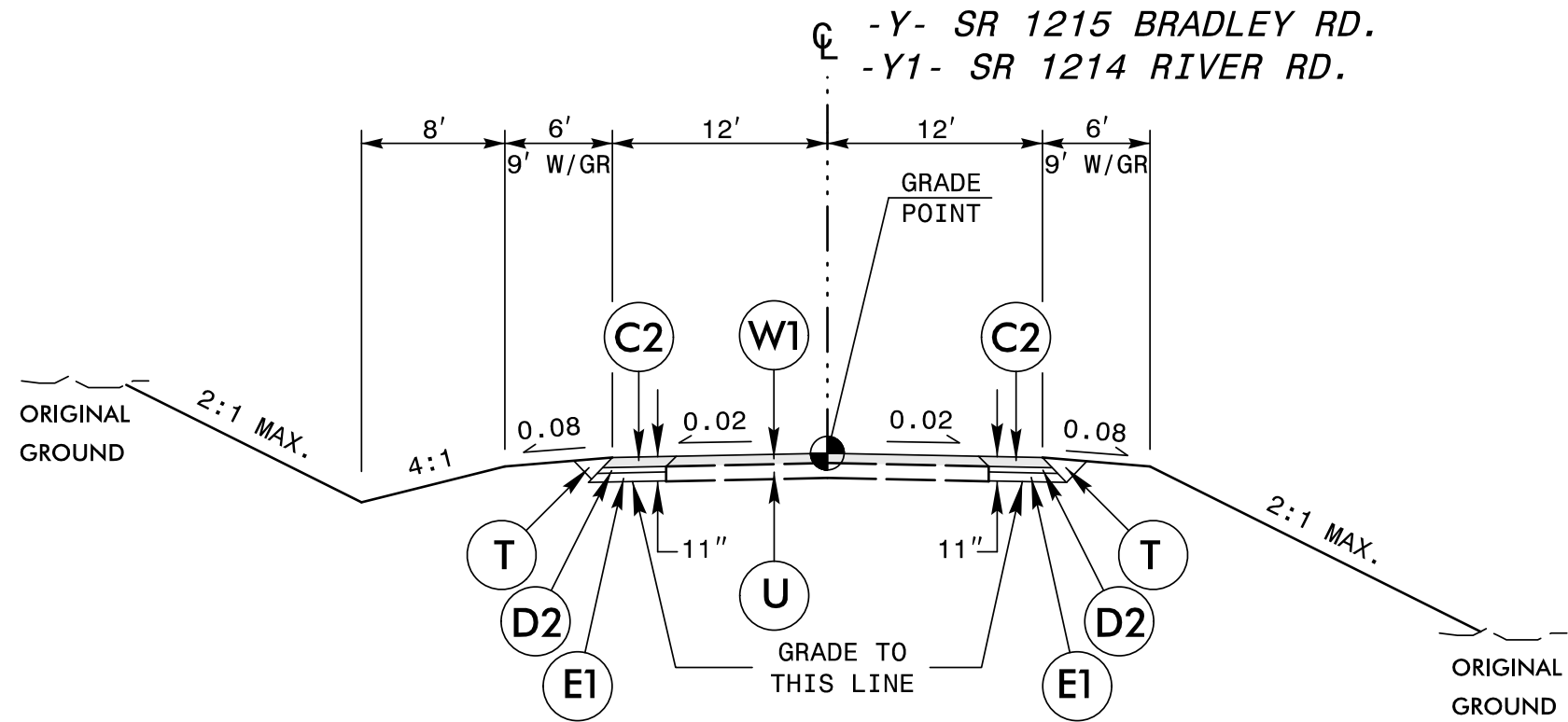
-Y7- STA. 10+16.29 TO STA. 10+80.00
- Y8- STA. 11+53.00 TO STA. 11+83.92

-Y9- STA. 11+55.00 TO STA. 11+83.98

-Y10- STA. 11+55.00 TO STA. 11+83.97

-Y11- STA. 11+10.00 TO STA. 11+81.95

-Y12- STA. 10+18.00 TO STA. 10+47.09

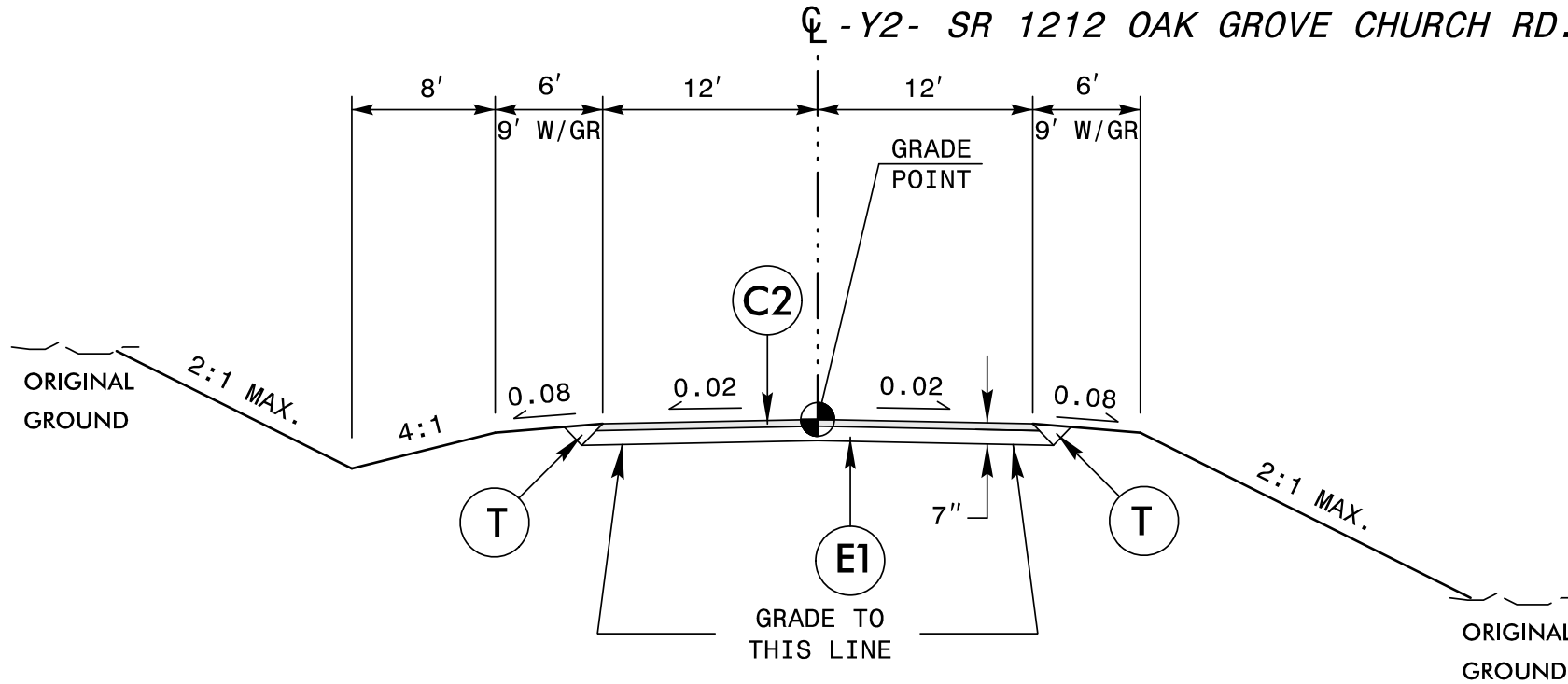


TYPICAL SECTION NO. 4

USE TYPICAL SECTION NO. 4

-Y- STA. 10+17.36 TO STA. 12+00.00

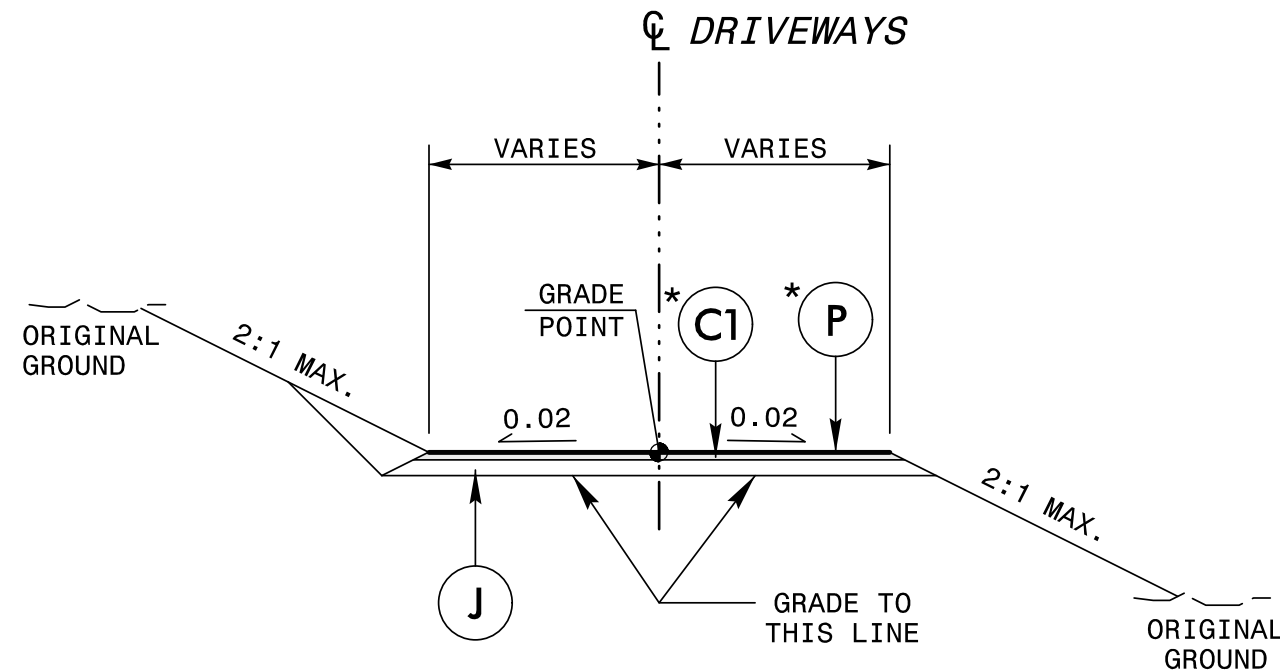
-Y1- STA. 10+22.00 TO STA. 12+00.00



TYPICAL SECTION NO. 6

USE TYPICAL SECTION NO. 6

-Y2- STA. 15+94.12 TO STA. 19+98.50



* REFER TO PROPOSED DRIVEWAY DESIGN TABLE FOR PAVEMENT DESIGN BASED ON THE EXISTING DRIVEWAY TYPE.

TYPICAL SECTION NO. 8

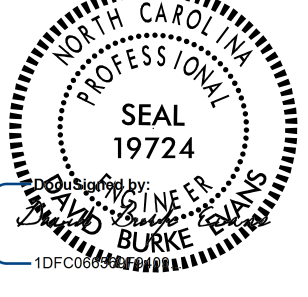
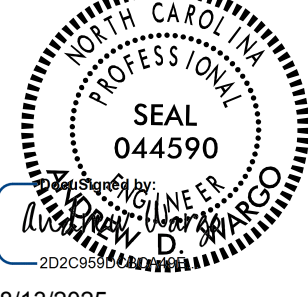
USE TYPICAL SECTION NO. 8

FOR DRIVEWAYS

TYPICAL SECTION NO. 7 NOTES:
* FOR -Y4- USE (J) IN LIEU OF ASPHALT DESIGN FROM STA. 10+95.00 TO STA. 11+60.00.

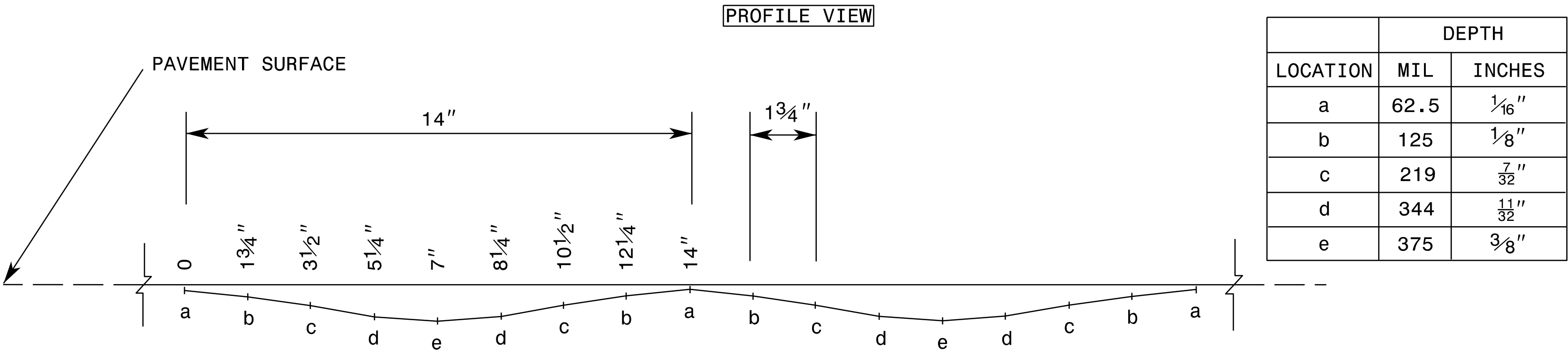
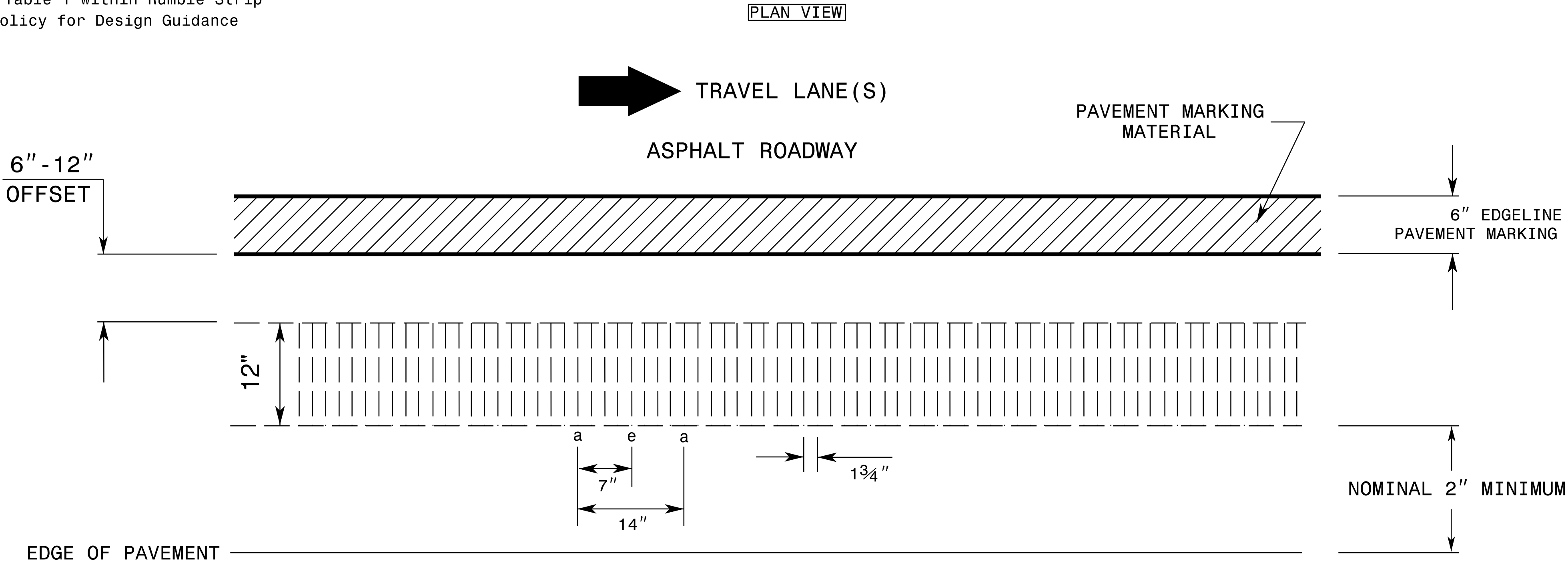
		* PROPOSED DRIVEWAY DESIGN			PAVEMENT DEPTH
		C	J	P	
EX. DRW TYPE	GRAVEL	-	J	-	6"
	ASPHALT	C1	J	P	8"

DRIVEWAY PAVEMENT TYPE TO BE REPLACED IN LIKE MATERIAL AS DIRECTED BY THE ENGINEER.
* GRAVEL DRIVEWAYS WITH >7% GRADES ARE TO BE PAVED WITH ASPHALT.

PROJECT REFERENCE NO.	SHEET NO.
R-5739	2A-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

TGS ENGINEERS
706 HILLSBOROUGH ST.
SUITE 200 RALEIGH, NC 27603
(919) 733-8887 | tgsengineers.com
CORP. LICENSE NO.: C-0275

See Table 1 within Rumble Strip
Policy for Design Guidance



REFERENCE DRAWING ID: Sin.Strip

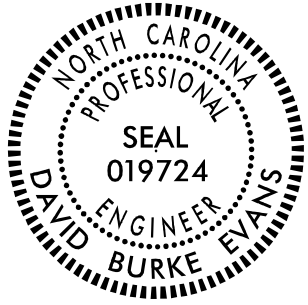
NOTES:

1) Specification in table taken from MNDOT Research Project Final Report 2016-23: *Sinusoidal Rumble Strip Design Optimization Study By: Terhaar et. al, June 2016*

STATE OF
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RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
RUMBLE STRIPS / STRIPES
SINUSOIDAL SHOULDER RUMBLE STRIP

SHEET 2 OF 9



DocuSigned by:
David Burke Evans
1D5FC0B6589F9403...
8/13/2025

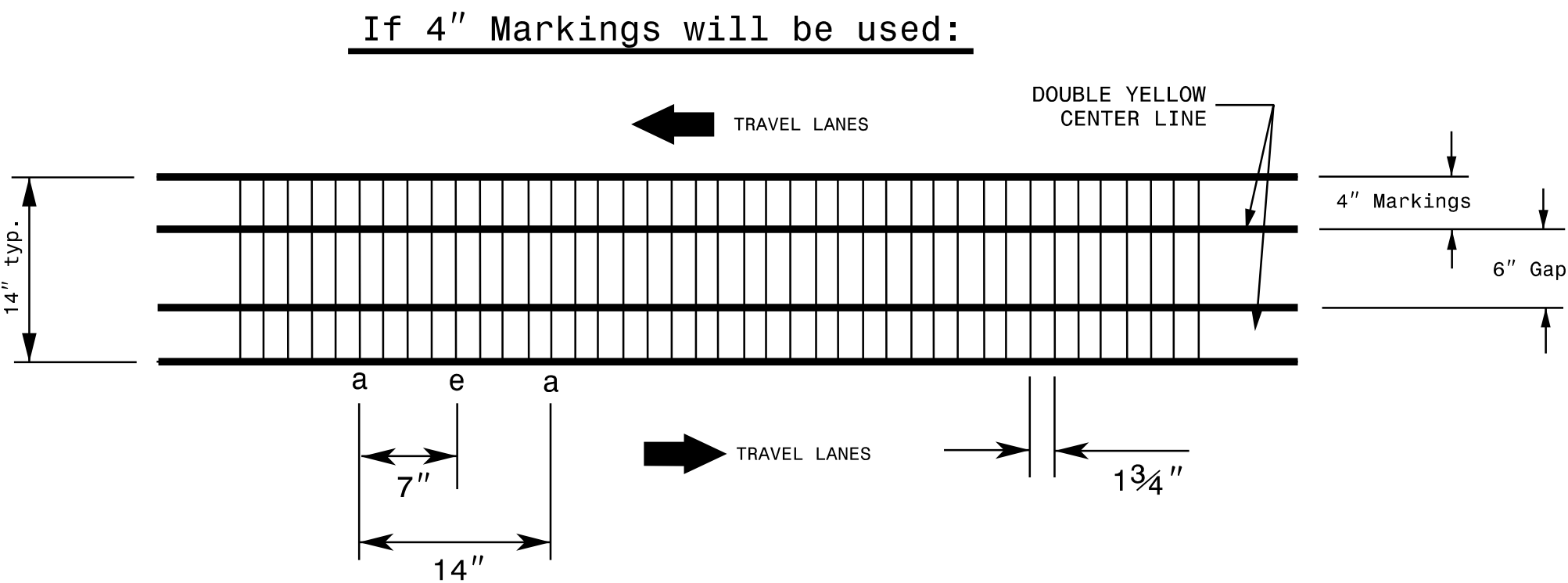
CONTRACTS STANDARDS
AND DEVELOPMENT UNIT
Office 919-707-8950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: C. SIMPSON DATE: 04-24-2025
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.:

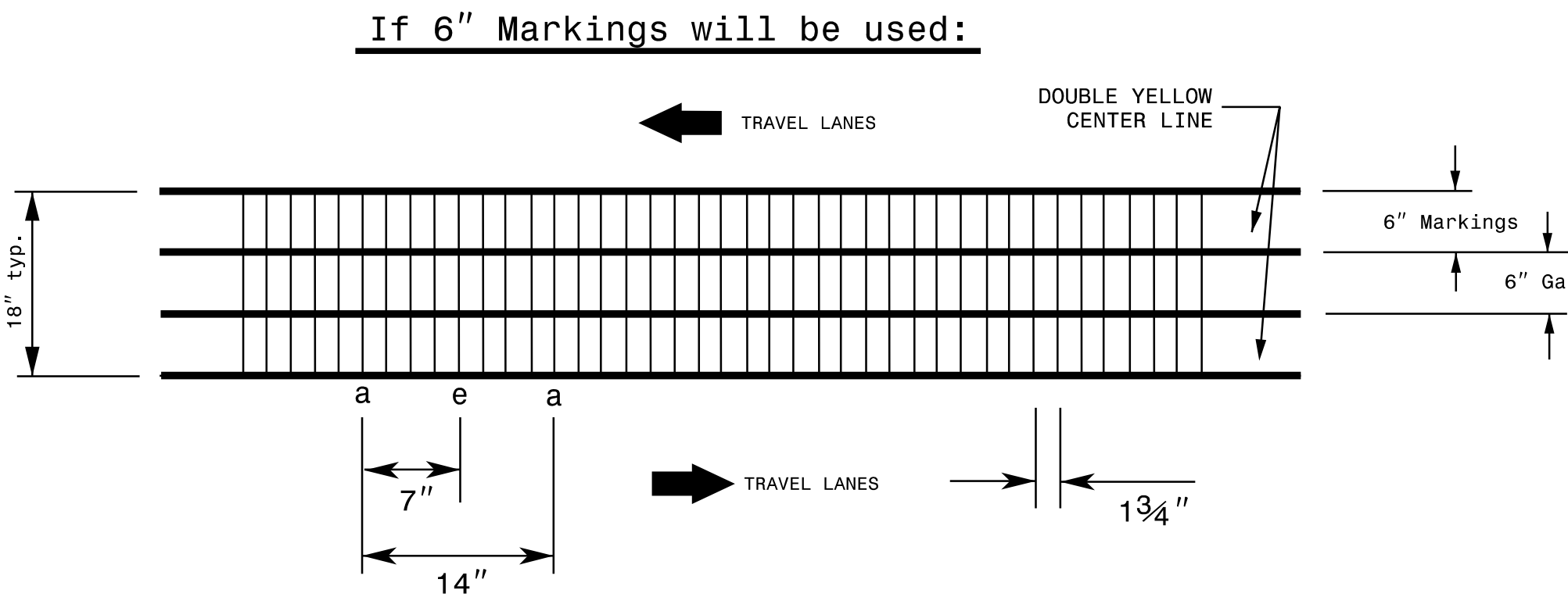
See Table 2 within Rumble Strip
Policy for Design Guidance

Rumble Dimensions



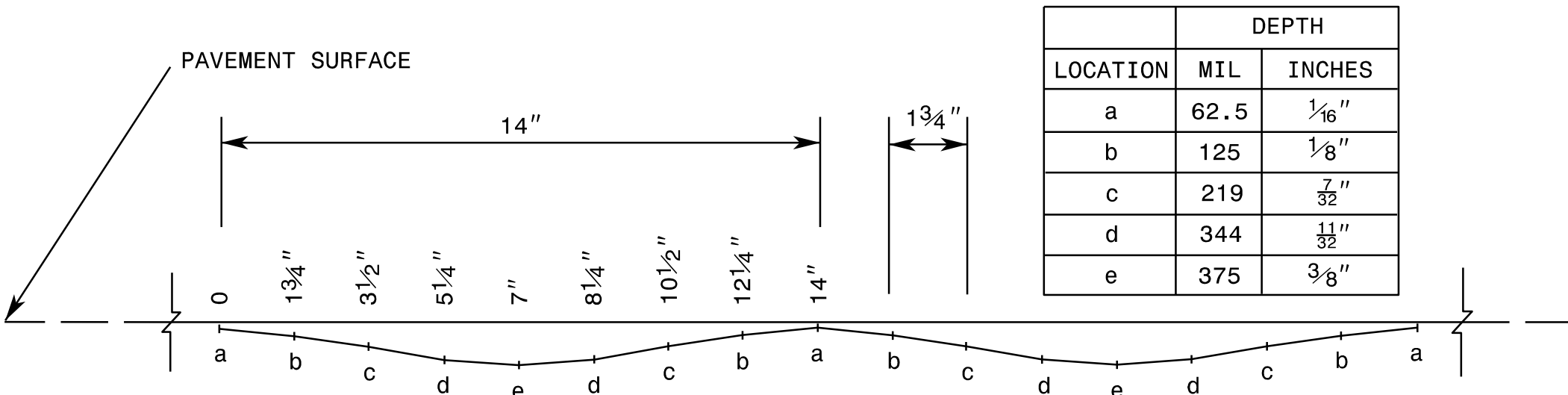
Markings Dimensions

Rumble Dimensions



Markings Dimensions

PROFILE:



REFERENCE DRAWING ID: Sin.CL

NOTES:

- 1) Specification in table taken from MNDOT Research Project Final Report 2016-23: *Sinusoidal Rumble Strip Design Optimization Study By: Terhaar et. al, June 2016*
- 2) USING A VACUUM, REMOVE ALL DEBRIS FROM THE MILLINGS JUST PRIOR TO PLACING ANY PAVEMENT MARKINGS.
- 3) ENSURE GLASS BEADS ARE SPREAD UNIFORMLY OVER THE ENTIRE SURFACE OF THE PAVEMENT MARKING MATERIAL.

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ROADWAY DETAIL DRAWING FOR
RUMBLE STRIPS / STRIPES
SINUSOIDAL CENTERLINE RUMBLE STRIPE

SHEET 6 OF 9

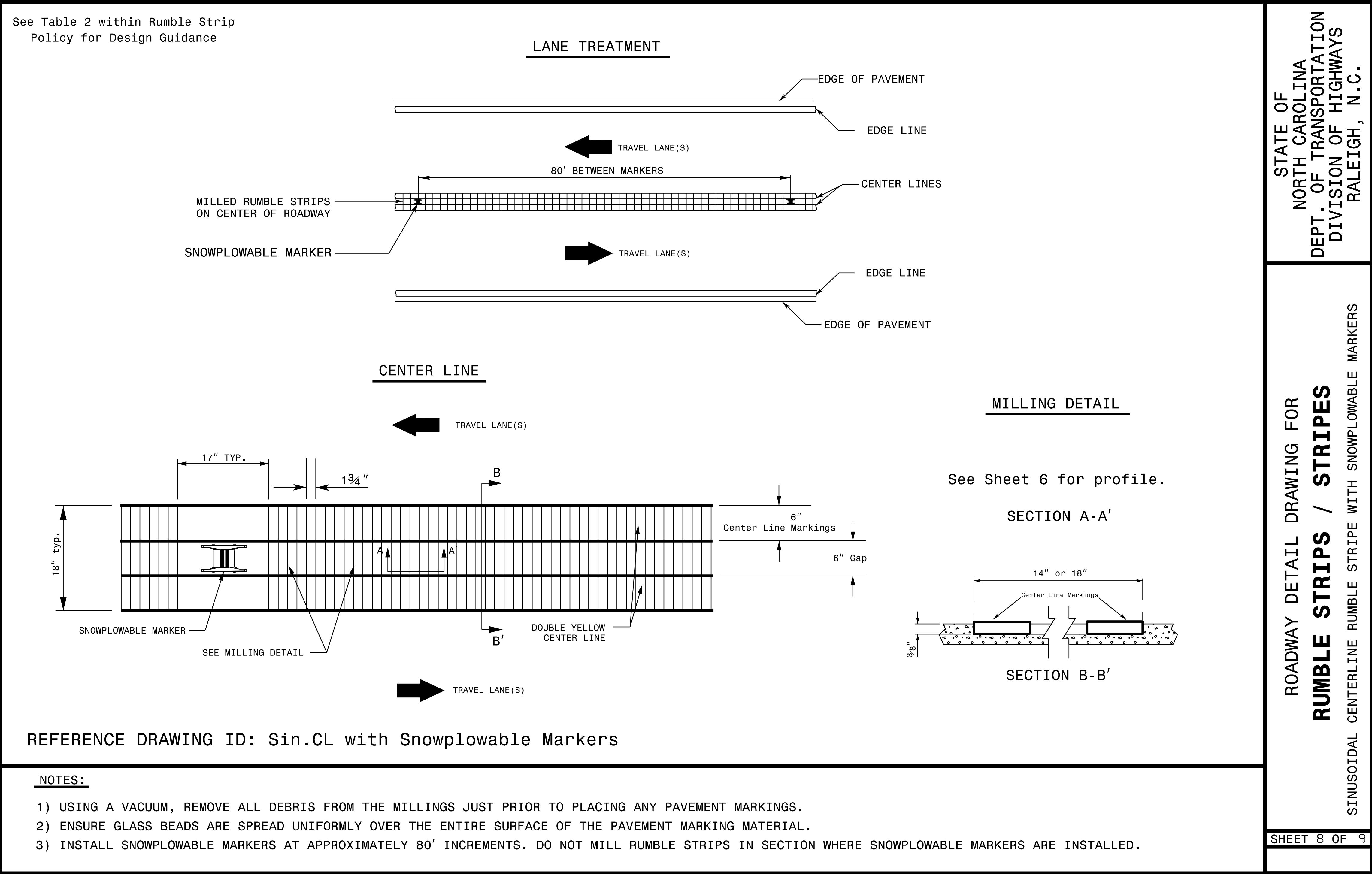


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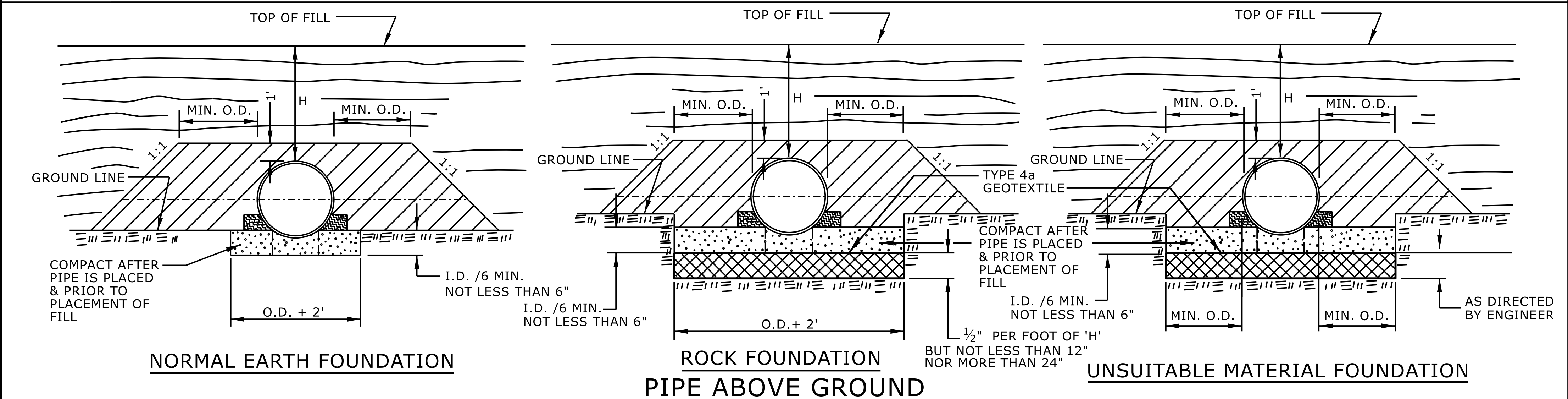
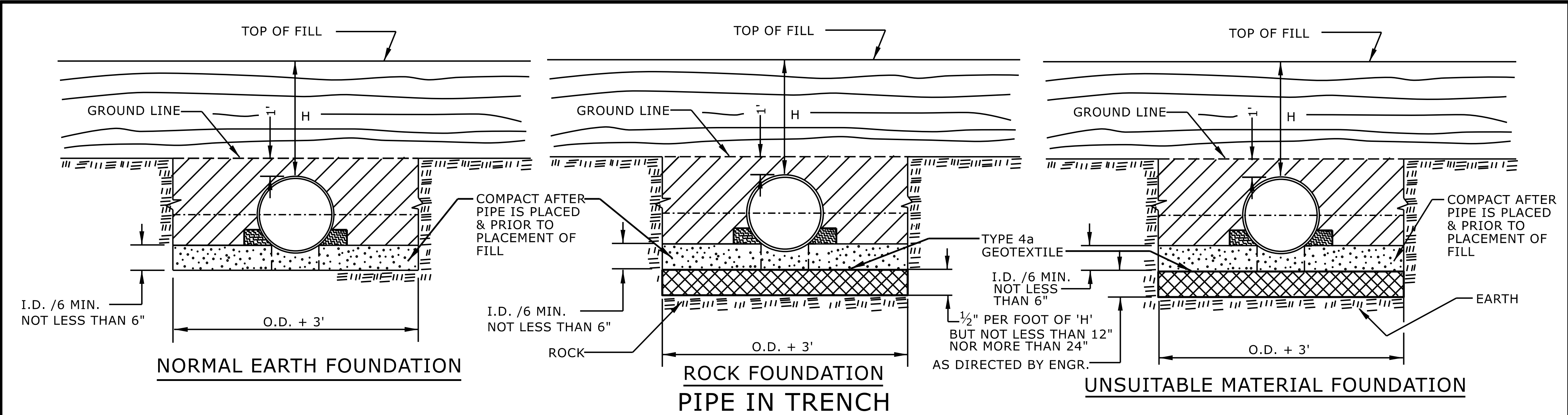
SEE TITLE BLOCK

ORIGINAL BY: **C. SIMPSON** DATE: **04-24-2025**
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FILE SPEC.:



DocuSigned by:
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MODIFIED BY: _____	DATE: _____
CHECKED BY: _____	DATE: _____
FILE SPEC.: _____	



GENERAL NOTES:

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

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

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

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

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

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

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

SPRINGLINE OF PIPE

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

UNDISTURBED EARTH MATERIAL

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

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ROADWAY DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
FLEXIBLE PIPE



Signed by:
Nicole M. Hacker
5884323034164C5...
8/13/2025

SHEET 1 OF 2
300.01

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UNLESS ALL SIGNATURES COMPLETED

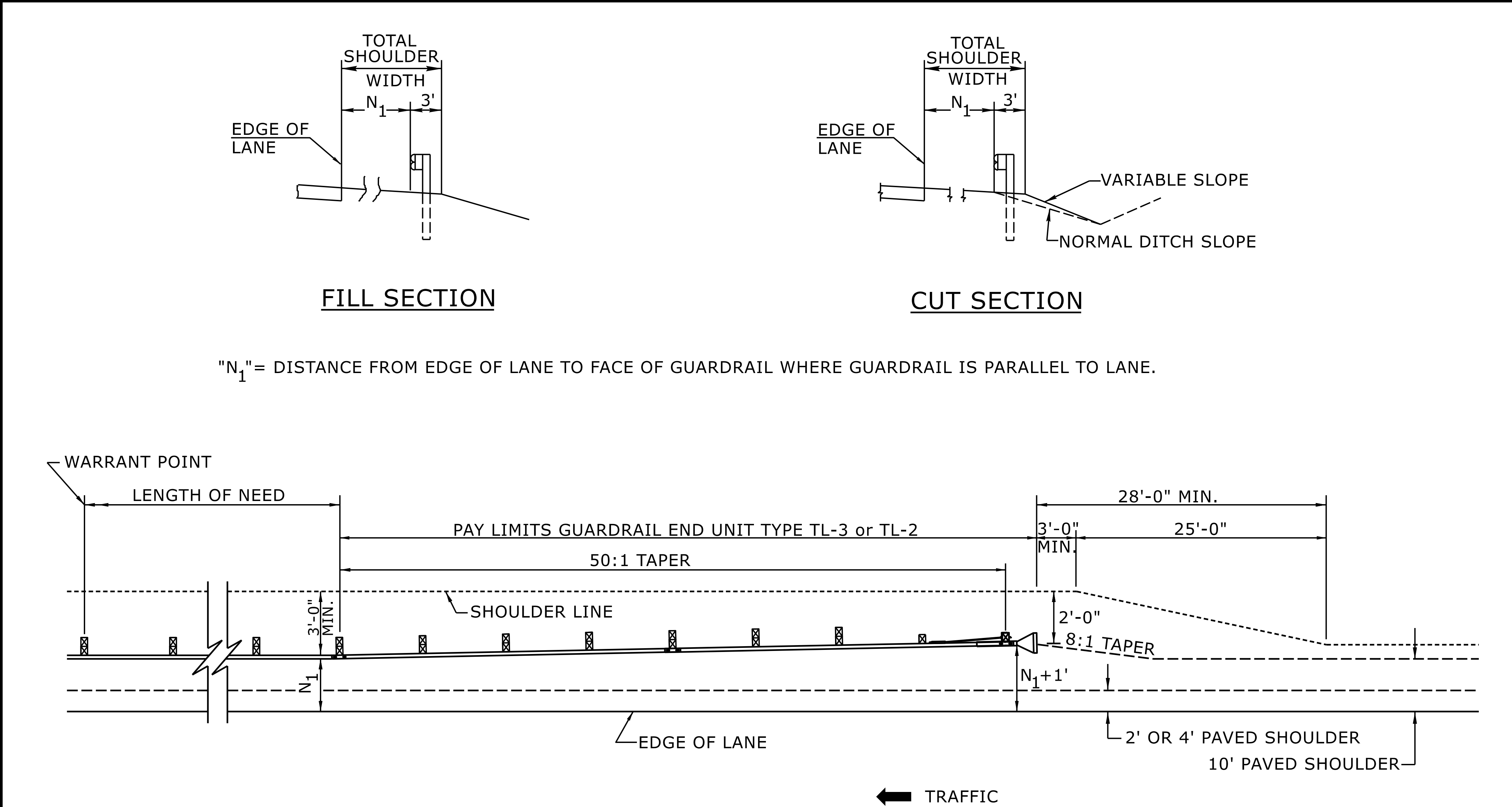
**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

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

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

PROJECT REFERENCE NO.	SHEET NO.
R-5739	2C-3



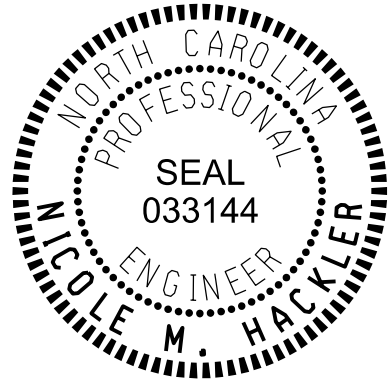
" N_1 " = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL WHERE GUARDRAIL IS PARALLEL TO LANE.

FOR POSTED SPEEDS $\geq$ 45mph USE GREU TYPE TL-3
FOR POSTED SPEEDS $<$ 45mph USE GREU TYPE TL-2

DETAIL OF BEGINNING OF GUARDRAIL IN CUT OR FILL SECTION

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

ROADWAY DETAIL DRAWING FOR
GUARDRAIL PLACEMENT



Signed by:
Nicole M. Hacker
588432034164CS...
8/13/2025

SHEET 6 OF 15
862D01

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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.: DATE:

5/14/99

STATE OF
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DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
SPLIT RAIL FENCE

SHEET 1 OF 1
SRFENCE

3 RAIL ELEVATION

2 RAIL ELEVATION

	FACE	THICKNESS	LENGTH
RAILS:	3" TO 6"	3" TO 6"	10' + *
POSTS:	4" TO 7"	2 3/4" TO 4 1/2"	6'-8" MIN-3 RAIL 6'-2" MIN-2 RAIL

* RAIL LENGTH MAY VARY, BUT MUST BE LONG ENOUGH FOR 10' SPACING.

GENERAL NOTES:
SPLIT RAIL FENCE TO BE CONSTRUCTED FROM TREATED LUMBER
IN ACCORDANCE WITH DETAILS AS SHOWN IN PLANS OR AS DIRECTED
BY THE ENGINEER.

SEE SPECIAL PROVISIONS WITH REGARDS TO UNIT BID.

THE SPLIT RAIL SIZES MAY VARY IN CONFIGURATION BY THE
MANUFACTURER.

THE CONTRACTOR SHALL CONFORM TO THESE SECTIONS OF THE
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD
SPECIFICATIONS FOR ROADS AND STRUCTURES: TREATED TIMBER
AND LUMBER (1082-3), PRESERVATIVE TREATMENT (1082-3).

**EXCAVATION OR
EMBANKMENT DETAIL**

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

ENGLISH DETAIL DRAWING FOR
SPLIT RAIL FENCE

SHEET 1 OF 1
SRFENCE

PROJECT REFERENCE NO.	SHEET NO.
R-5739	2C-4

Signed by:
Nicole M. Heckler
3884323D3416AC5...
8/13/2025

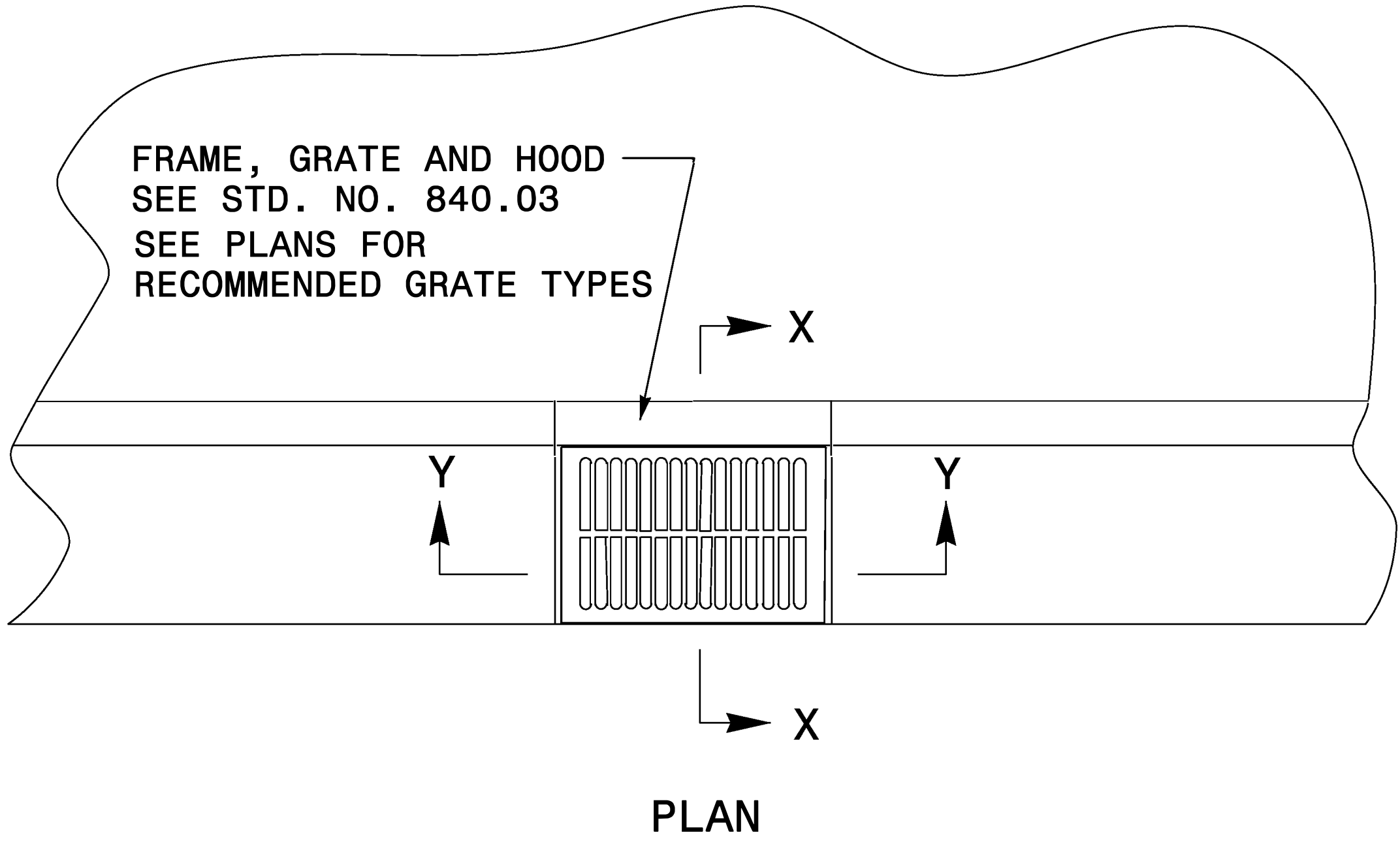
SEAL
33144
ENGINEER
NICOLE M. HECKLER
NORTH CAROLINA

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

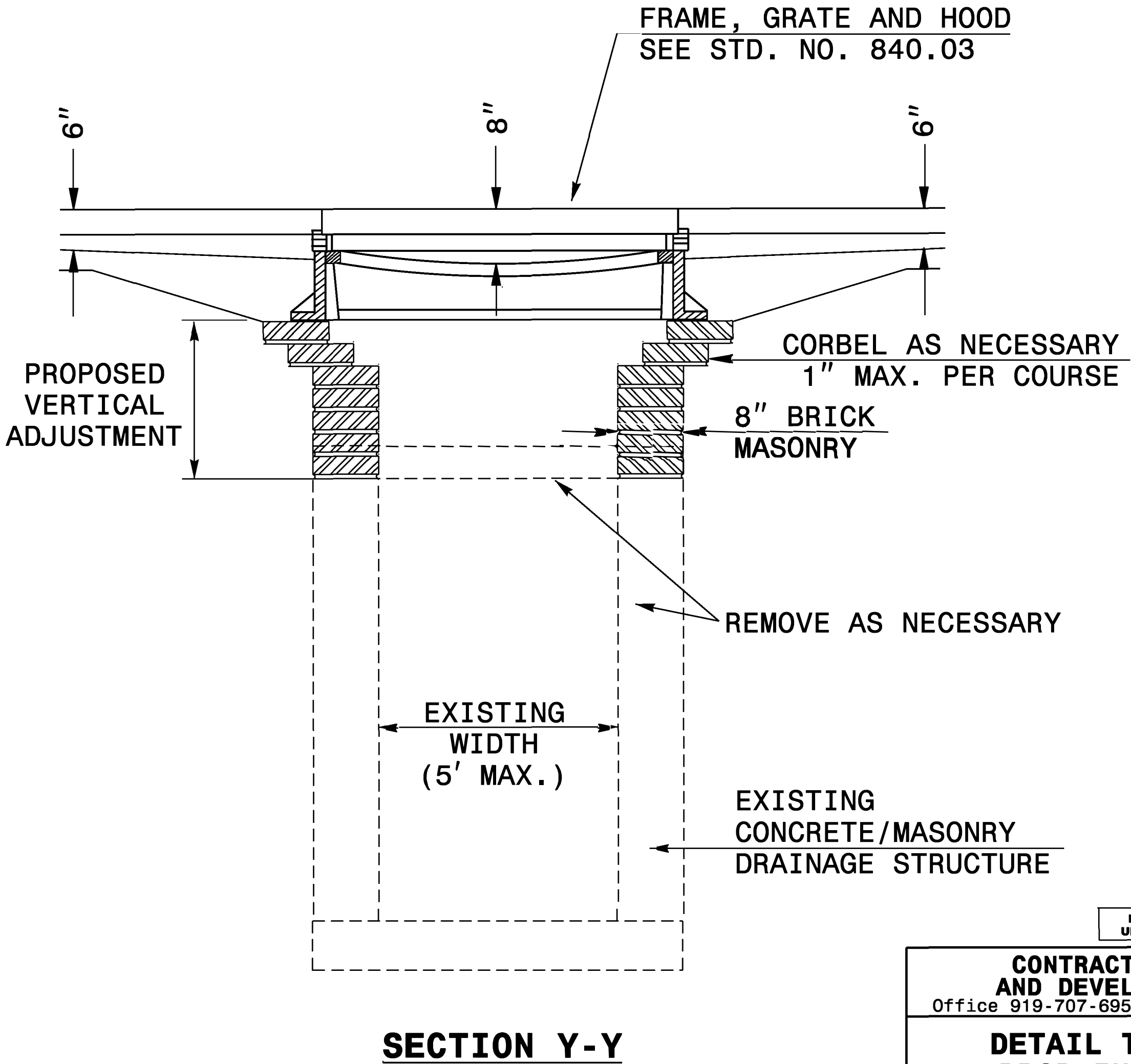
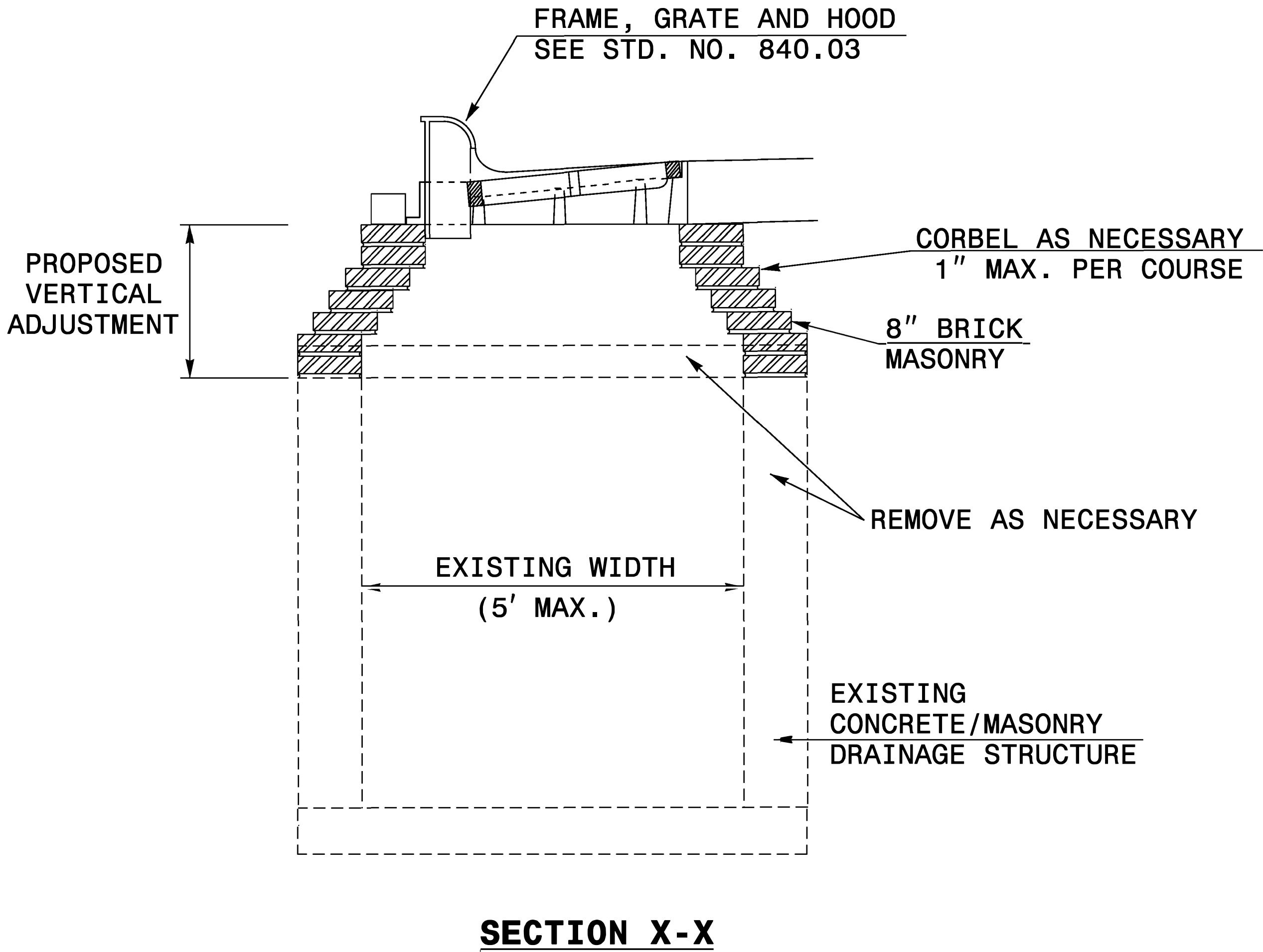
SEE PLATE FOR TITLE

ORIGINAL BY:	T.Spell	DATE:	OCT.2001
MODIFIED BY:	rnbritt	DATE:	01-14-05
CHECKED BY:		DATE:	
FILE SPEC.:	details/nbritt/english/splitrailfence.dgn		



GENERAL NOTES:

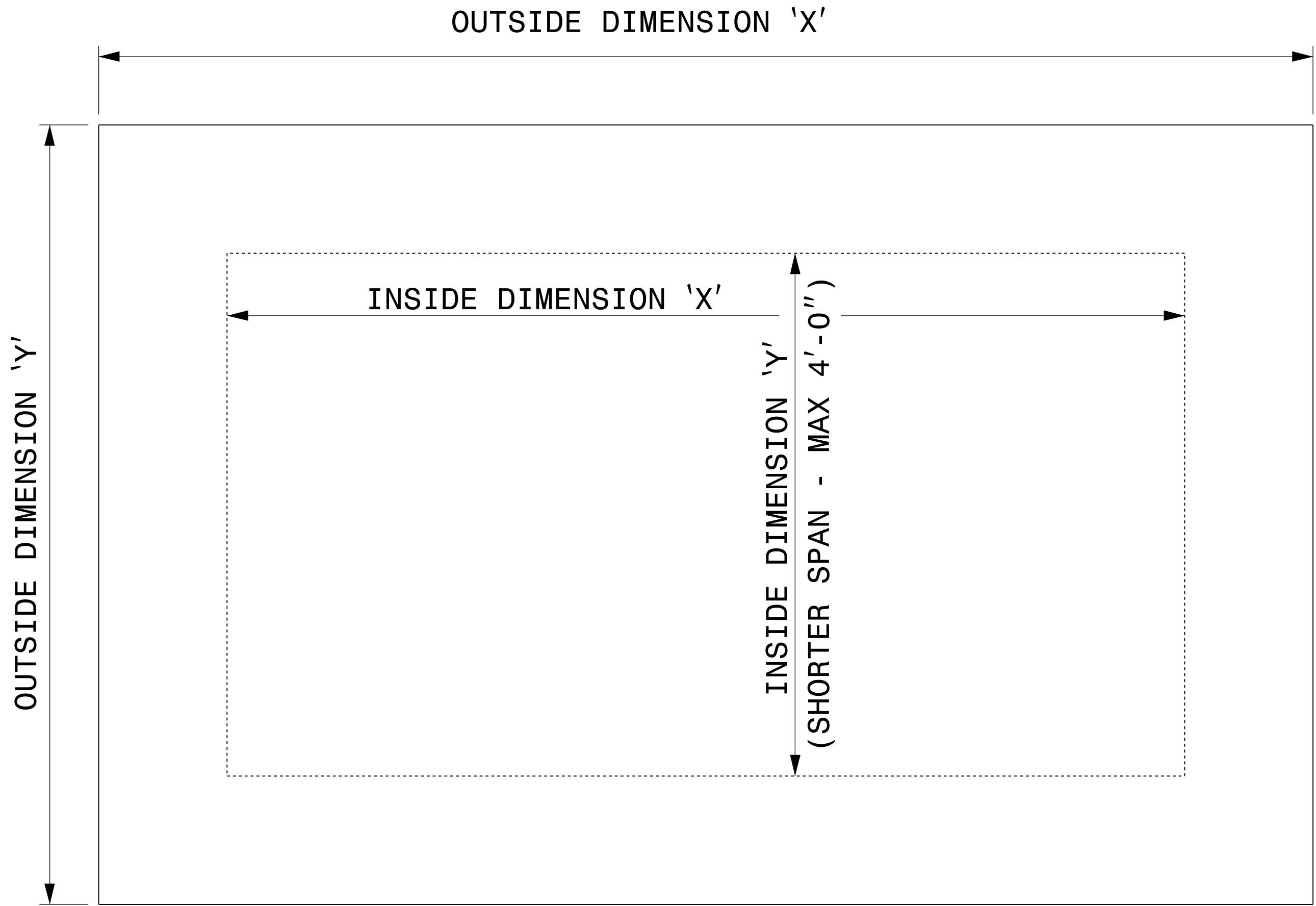
- THE ROADWAY PLANS INDICATE STRUCTURES TO BE CONVERTED.
- AFTER REMOVAL, STORE GRATES AND FRAMES AS DIRECTED BY THE ENGINEER.
- 4" SOLID CLAY BRICK, JUMBO BRICK, CONCRETE, OR 4" SOLID CONCRETE BLOCK MAY BE USED FOR VERTICAL ADJUSTMENT OF THE STRUCTURE.
- CONVERT IN ACCORDANCE WITH SECTION 859 OF THE STANDARD SPECIFICATIONS.



Signed by:
Nicole M. Hacker
58843203034164C5
8/13/2025

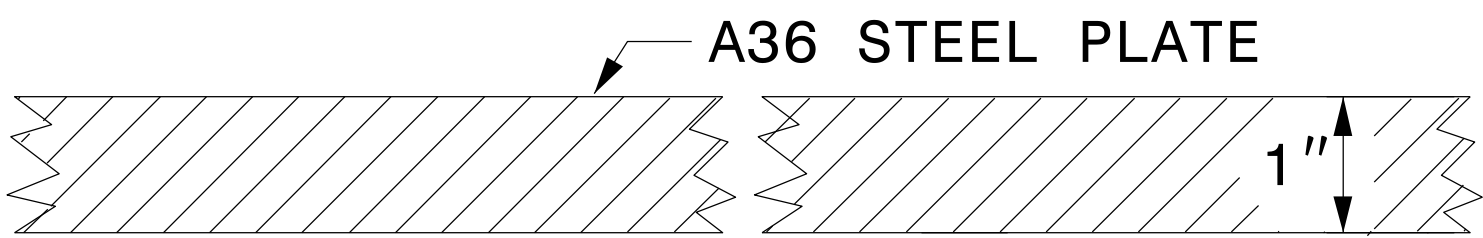
DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT	
Office 919-707-6950	FAX 919-250-4119
DETAIL TO CONVERT DROP INLET OR JB TO CATCH BASIN	
ORIGINAL BY: <u>E.E. WARD</u>	DATE: <u>11-97</u>
MODIFIED BY: _____	DATE: _____
CHECKED BY: _____	DATE: _____
FILE SPEC.: <u>DS37:usr\details\stand\jbtocb.dgn</u>	



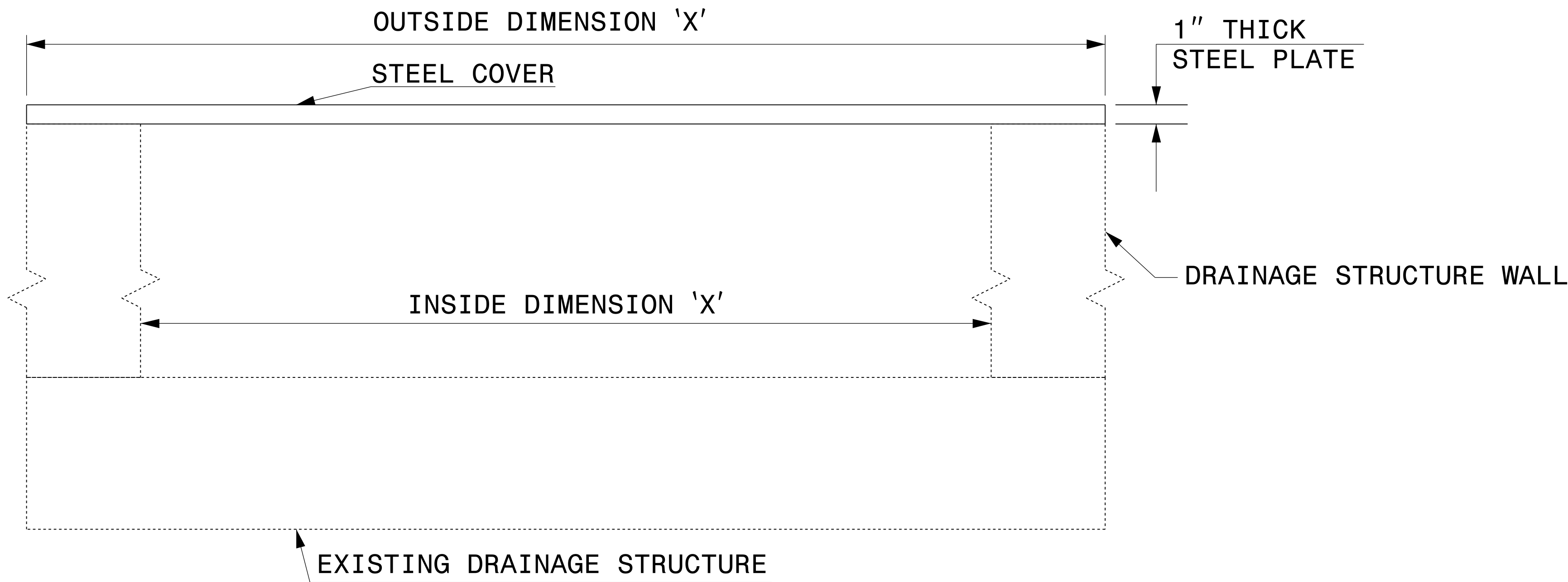
GENERAL NOTES:

- USE GRADE A36 STEEL
- STEEL COVERS ARE FOR TEMPORARY USE DURING PHASE CONSTRUCTION.
- FILL SHALL BE PLACED DIRECTLY OVER THE STEEL PLATES.
- SEE ROADWAY PLANS AND PROVISIONS FOR LOCATIONS
- QUANTITES TO BE PAID FOR AT THE UNIT PRICE BID PER EACH.



SECTION VIEW OF STEEL TOP PLATE

PLAN VIEWS



ELEVATION VIEWS

Signed by:
Nicole M. Hecker
58843203034164C5...
9/10/2025

Professional Engineer Seal
NORTH CAROLINA
PROFESSIONAL
SEAL
33144
ENGINEER
COLE W. H. CUMMINS

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

**DETAIL OF TEMPORARY
1" STEEL COVER
OVER DRAINAGE STRUCTURE**

ORIGINAL BY: E.E. WARD DATE: 2-2-98
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: eric:/usr/details/metric/stand/stlcvr2.dgn

6/21/2020

COMPUTED BY: NGP DATE: 08 / 14 / 2025
CHECKED BY: DBE DATE: 08 / 14 / 2025

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. R-5739
SHEET NO. 3B-1

SUMMARY OF EARTHWORK
IN CUBIC YARDS

STATION	STATION	UNCL. EXCAV.	UNDERCUT EXCAV.	EMBANK. + %	BORROW	WASTE	STATION	STATION	UNCL. EXCAV.	UNDERCUT EXCAV.	EMBANK. + %	BORROW	WASTE	STATION	STATION	UNCL. EXCAV.	UNDERCUT EXCAV.	EMBANK. + %	BORROW	WASTE		
12 + 09.79 -L- LT	42 + 00.00 -L- LT	781		1,430	649		288 + 00.00 -L- LT	318 + 00.00 -L- LT	1,723		1,171		552	TOTAL		26,876		66,272	43,524	4,128		
12 + 09.79 -L- RT	42 + 00.00 -L- RT	603		2,283	1,680		288 + 00.00 -L- RT	318 + 00.00 -L- RT	794		1,063	269		MATERIAL FOR SHOULDER CONSTRUCTION				3,955	3,955			
10 + 17.36 -Y-	12 + 00.00 -Y-	34		30		4	SUBTOTAL		2,517		2,234	269	552	WASTE IN LIEU OF BORROW					-4,128	-4,128		
SUBTOTAL		1,418		3,743	2,329	4																
							318 + 00.00 -L- LT	348 + 00.00 -L- LT	1,541		2,219	678		PROJECT TOTALS		26,876		70,227	43,351			
42 + 00.00 -L- LT	72 + 00.00 -L- LT	630		1,866	1,236		318 + 00.00 -L- RT	348 + 00.00 -L- RT	806		2,849	2,043		EST. 5% TO REPLACE TOP SOIL ON BORROW PIT					2,168			
42 + 00.00 -L- RT	72 + 00.00 -L- RT	667		2,088	1,421		SUBTOTAL		2,347		5,068	2,721										
10 + 22.00 -Y1-	12 + 00.00 -Y1-	74		172	98									GRAND TOTALS		26,876		70,227	45,519			
SUBTOTAL		1,371		4,126	2,755		348 + 00.00 -L- LT	378 + 00.00 -L- LT	469		1,190	721										
							348 + 00.00 -L- RT	378 + 00.00 -L- RT	564		1,366	802		SAY		27,200			46,000			
72 + 00.00 -L- LT	102 + 00.00 -L- LT	154		1,834	1,680		SUBTOTAL		1,033		2,556	1,523		NOTES: 1. EARTHWORK QUANTITIES ARE CALCULATED BY THE ROADWAY DESIGN ENGINEER. THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT. 2. ESTIMATED DDE = 5,220 CY -L- PAVEMENT STRUCTURE VOLUME = 2,971 CY 3. THE FOLLOWING QUANTITIES ARE PER THE "GEOTECHNICAL REPORT - REVISED DESIGN AND CONSTRUCTION RECOMMENDATIONS" LETTER DATED FEBRUARY 4, 2025: ESTIMATED UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FT OF EMBANKMENT OR BACKFILL = 700 CY -L- STA. 154+55 TO 159+75 -Y2- STA. 15+25 TO 20+39 ESTIMATED ADDITIONAL SHALLOW UNDERCUT AS CONTINGENCY TO BE USED AS DIRECTED BY THE ENGINEER = 300 CY TOTAL SHALLOW UNDERCUT = 300 CY ESTIMATED CLASS IV SUBGRADE STABILIZATION TO REPLACE SHALLOW UNDERCUT AS CONTINGENCY TO BE USED AS DIRECTED BY THE ENGINEER = 600 TONS TOTAL CLASS IV SUBGRADE STABILIZATION = 600 TONS ESTIMATED SELECT GRANULAR MATERIAL TO REPLACE UNDERCUT FOR EMBANKMENT STABILITY AS CONTINGENCY TO BE USED AS DIRECTED BY THE ENGINEER = 500 CY TOTAL SELECT GRANULAR MATERIAL = 500 CY								
72 + 00.00 -L- RT	102 + 00.00 -L- RT	487		1,240	753																	
SUBTOTAL		641		3,074	2,433		378 + 00.00 -L- LT	408 + 00.00 -L- LT	696		845	149										
							378 + 00.00 -L- RT	408 + 00.00 -L- RT	385		1,245	860										
102 + 00.00 -L- LT	132 + 00.00 -L- LT	693		1,068	375		SUBTOTAL		1,081		2,090	1,009										
102 + 00.00 -L- RT	132 + 00.00 -L- RT	465		1,179	714									SUBTOTAL		1,158		2,247	1,089			
							408 + 00.00 -L- LT	438 + 00.00 -L- LT	574		1,241	667										
							408 + 00.00 -L- RT	438 + 00.00 -L- RT	326		1,451	1,125										
132 + 00.00 -L- LT	162 + 29.36 -L- LT	371		1,605	1,234		SUBTOTAL		900		2,692	1,792										
132 + 00.00 -L- RT	162 + 29.36 -L- RT	558		1,143	585									SUBTOTAL		1,158		2,247	1,089			
12 + 35.00 -Y2-	19 + 98.50 -Y2-	2,630		249		2,381	438 + 00.00 -L- LT	468 + 00.00 -L- LT	301		1,446	1,145										
20 + 42.89 -Y2-	22 + 90.66 -Y2-	267		91		176	438 + 00.00 -L- RT	468 + 00.00 -L- RT	640		1,203	563										
SUBTOTAL		3,826		3,088	1,819	2,557	10 + 57.00 -Y3-	11 + 83.75 -Y3-	12		315	303										
							SUBTOTAL		953		2,964	2,011										
162 + 29.36 -L-	168 + 86.52 -L-	25		9,842	9,817									SUBTOTAL		25		9,842	9,817			
							468 + 00.00 -L- LT	498 + 00.00 -L- LT	1,462		950	563	512									
							468 + 00.00 -L- RT	498 + 00.00 -L- RT	745		821	76										
168 + 86.52 -L- LT	198 + 00.00 -L- LT	575		1,370	795		10 + 95.00 -Y4-	11 + 84.00 -Y4-	12		7		5									
168 + 86.52 -L- RT	198 + 00.00 -L- RT	170		1,420	1,250		SUBTOTAL		2,219		1,778	76	517									
SUBTOTAL		745		2,790	2,045									SUBTOTAL		498 + 00.00 -L- LT	528 + 00.00 -L- LT	567		1,574	1,007	
							498 + 00.00 -L- RT	528 + 00.00 -L- RT	1,754		1,306		448									
198 + 00.00 -L- LT	228 + 00.00 -L- LT	427		2,518	2,091		10 + 95.00 -Y5-	11 + 83.61 -Y5-	11		55	44										
198 + 00.00 -L- RT	228 + 00.00 -L- RT	1,255		1,511	256		11 + 40.00 -Y6-	11 + 83.73 -Y6-	14		3		11									
SUBTOTAL		1,682		4,029	2,347		SUBTOTAL		2,346		2,938	1,051	459									
							SUBTOTAL		2,346		2,938	1,051	459									
228 + 00.00 -L- LT	258 + 00.00 -L- LT	475		1,636	1,161									SUBTOTAL		228 + 00.00 -L- LT	258 + 00.00 -L- LT	465		1,763	1,298	
228 + 00.00 -L- RT	258 + 00.00 -L- RT	465		1,763	1,298		528 + 00.00 -L- LT	559 + 91.97 -L- LT	331		1,631	1,300										
SUBTOTAL		940		3,399	2,459		528 + 00.00 -L- RT	559 + 91.97 -L- RT	497		1,138	641										
							10 + 16.29 -Y7-	10 + 80.00 -Y7-	1		15	14										
258 + 00.00 -L- LT	288 + 00.00 -L- LT	571		2,026	1,455		11 + 10.00 -Y11-	11 + 81.95 -Y11-	48		9		39									
258 + 00.00 -L- RT	288 + 00.00 -L- RT	226		2,795	2,569		SUBTOTAL		877		2,793	1,955	39									
SUBTOTAL		797		4,821	4,024									TOTAL							3486	
																SAY						3500

SUMMARY OF ASPHALT
PAVEMENT REMOVAL
IN SQUARE YARDS

SURVEY LINE	STATION	STATION	LOCATION LT/CL/RT	SY
-Y1- /-L-	11 + 51	58 + 43	RT/RT	376
-L- /-Y2-	160 + 87	21 + 69	RT/RT	439
-L- /-Y2-	162 + 13	14 + 39	LT/RT	994
-L-	163 + 42	171 + 09	RT	1639
-Y5- /-L-	11 + 41	502 + 14	LT/LT	21
-L-	549 + 60	551 + 95	RT	8
-L-	549 + 87	551 + 35	LT	10
TOTAL				3486
SAY				3500

12/06/07

COMPUTED BY: _____ NGP _____ DATE: 08 / 06 / 2025 _____
CHECKED BY: _____ DBE _____ DATE: 08 / 06 / 2025 _____

PROJECT REFERENCE NO.
R-5739

SHEET NO.
3B-2

TEMPORARY GUARDRAIL SUMMARY

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.

W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W		TEMPORARY ANCHORS						TEMPORARY 25' CLEARSPAN GUARDRAIL SECTIONS	IMPACT ATTENUATOR		SINGLE FACED CONCRETE BARRIER	REMOVE EXISTING GUARDRAIL (LF)	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	TYPE III	B-77	GREU (TL-3)	GREU (TL-2)	CAT-1	AT-1	G	NG						
-L-	280+10	283+81	RT	375.00'			280+78.44	283+00.00	2'	VARIES	50'	50'	1'	1'			2									
-L- /-Y3-	448+10	11+43	LT/RT	406.25'	62.50'		452+11.71	449+00.00	1'-2'	VARIES		50'		1'			1			1	1					
-L-	519+50	523+57	RT	412.50'			520+73.93	523+00.00	1'-2'	VARIES	50'	50'	1'	1'			2									
-L-	528+42	530+91	RT	250.00'			528+41.67	530+00.00	0'	VARIES	50'	50'	1'	1'			2				1					
SUBTOTAL (LF)				1443.75'	62.50'							TOTAL ANCHORS (EA)					7			1	2					
LESS ANCHORS (LF)				456.25'								ANCHOR UNIT LENGTH (LF)		6.25'			50.00'			6.25'	50'					
TOTAL (LF)				987.50'	250.00'							DEDUCTION PER TYPE (LF)		6.25'			350.00'			6.25'	100'					
SAY (LF)				987.50'	250.00'							TOTAL DEDUCTION (LF)		456.25'												

GUARDRAIL SUMMARY

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.

W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W		ANCHORS						25' CLEAR SPAN GUARDRAIL SECTIONS	IMPACT ATTENUATOR		SINGLE FACED CONCRETE BARRIER	REMOVE EXISTING GUARDRAIL (LF)	REMOVE & STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	TYPE III	B-77	GREU (TL-3)	GREU (TL-2)	CAT-1	AT-1	G	NG							
-L-	21+25.00	26+71.09	RT	550.00'			22+00.00	25+85.00	6'	9'	50'	50'	1'	1'			2										
-L-	38+15.00	39+27.50	RT	112.50'			38+69.76	38+78.27	6'	9'	50'	50'	1'	1'			2				1						
-L-	38+17.50	41+17.50	LT	300.00'			38+76.99	38+66.48	6'	9'	50'	50'	1'	1'			2				1						
-L-	62+25.50	64+62.81	RT	237.50'			62+25.00	64+20.00	6'	9'	50'	50'	1'	1'			2										
-Y2- /-L-	19+27.68	168+41.44	LT/LT	487.50'	62.5'		166+90.00	164+30.00	6'	9'	50'	50'	1'	1'			2										
-L-	196+42.66	201+90.00	RT	550.00'			197+25.00	201+10.00	6'	9'	50'	50'	1'	1'			2										
-L-	267+75.00	270+99.63	RT	325.00'			269+05.00	270+15.00	6'	9'	50'	50'	1'	1'			2										
-L-	278+82.45	282+50.00	LT	362.50'			280+94.45	280+80.07	6'	9'	50'	50'	1'	1'			2				1						
-L-	280+10.00	283+81.05	RT	375.00'			280+78.44	283+00.00	6'	9'	50'	50'	1'	1'			2										
-L-	321+62.50	326+50.00	RT	487.50'			324+13.46	324+30.48	6'	9'	50'	50'	1'	1'			2				1						
-L-	322+50.00	328+96.54	LT	650.00'			328+00.00	324+15.78	6'	9'	50'	50'	1'	1'			2				1						
-L-	329+80.26	332+65.00	LT	287.50'			332+65.00	330+45.00	6'	9'	50'	50'	1'	1'			2										
-L-	330+39.50	333+03.79	RT	262.50'			331+30.00	331+00.00	6'	9'	50'	50'	1'	1'			2										
-L- /-Y3-	448+03.27	11+37.29	LT/RT	418.75'	50'		452+11.71	449+00.00	6'	9'		50'		1'			1			1	1						
-L-	449+35.00	454+28.39	RT	487.50'			451+78.30	452+09.95	6'	9'	50'	50'	1'	1'			2				1						
-L-	497+48.91	501+56.57	RT	400.00'			499+47.21	499+83.40	6'	9'	50'	50'	1'	1'			2				1						
-L- /-Y5-	498+50.80	10+99.00	LT/RT	268.75'	100'		499+77.98	499+54.09	6'	9'		50'		1'			1			1	1						
-L- /-Y6-	518+74.43	11+33.64	LT/RT	268.75'	50'		521+50.00	517+47.70	6'	9'		50'		1'			1			1							
-L-	519+50.69	523+69.95	RT	425.00'			520+73.93	523+00.00	6'	9'	50'	50'	1'	1'			2										
-L-	528+26.00	531+01.50	RT	275.00'			528+41.67	530+00.00	6'	9'	50'	50'	1'	1'			2				1						
-L-	528+38.00	530+88.00	LT	250.00'			529+49.29	529+05.57	6'	9'	50'	50'	1'	1'			2				1						
SUBTOTAL (LF)				7781.25'	262.5'							TOTAL ANCHORS (EA)					39			3	11						
LESS ANCHORS (LF)				2518.75'								ANCHOR UNIT LENGTH (LF)					50'			6.25'	50'						
TOTAL (LF)				5262.5'	262.5'		ADDITIONAL GUARDRAIL POSTS: SAY 10 EA					DEDUCTION PER TYPE (LF)					1950'			18.75'	550'						
SAY (LF)				5262.5'	262.5'							TOTAL DEDUCTION (LF)		2518.75'													

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8/20/2025
R-5739-Roadway\Proj\R5739_PSH_03B.dgn
User:evans

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 [8" for ASU(2)]	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Subgrade Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
CONTINGENCY			ASU (1)	12	300	600	900		
			TOTAL CY/TONS/SY:		300	600**	900**	0	0

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PARCEL INDEX SHEET

PROJ. REFERENCE NO.	SHEET NO.
R-5739	3P-1

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
1	4 & 5	MILDRED D. MOSES
2	4 & 5	WILLIE MOSES
3	5	KAREN G. HARPER, ET AL
4	5	HEATHER L. OLESNEVICH
5	5 & 6	BETTY SHEARIN HARLOW, ET VIR
6	5 & 6	WILLIAM A. BRADLEY,JR. ET UX
7	6	EDWARD J. BRADLEY,ET UX
8	6	ROBERT A. SHEARIN, ET UX
9	6	RALPH R. BRADLEY
10	6	BONNIE SHEARIN OVERTON, ET VIR
11	6 & 7	REGINA SHEARIN BARNES
12	6	LAWRENCE R. BRADLEY, SR
13	6 & 7	ROBERT A. SHEARIN, ET UX
14	6 & 7	JOSEPH LUKE JORDAN,IV
15	7	KATIE GARNER GREEN
16	7	WILLIAM SHEARIN, ET UX
17	7	ROY NEAL SHEARIN, ET UX
18	7	FRED H. VAUGHAN JR., ET UX
19	7	DONNIE RAY VAUGHAN, ET AL
20	7	FRED H. VAUGHAN, ET UX
21	7	GASTON DG LLC
22	7 & 8	JOHN W. OWENS, ET UX
23	7 & 8	LAKE GASTON COMMUNITY CENTER,INC
24	8	SELENA EDMONDS, HEIRS
25	8	GEORGE R. OWENS, ET UX
26	8	DEBORAH M. PATILLO
27	8	TENISHA PATILLO
28	8	LOUIS POWELL HEIRS
29	8	DOROTHY TRAVIS AVON, HEIRS
30	8	SHIELDA D. ARRINGTON
31	8	JEANNE I. DICKENS, TRUSTEE
32	8	DELORES ROBERTS
33	8	TAMMY VINCENT
34	8	CHERYL D. VINCENT
35	8	GEORGE R. OWENS, ET UX
36	8	RUBY VINCENT WARD
37	8	GEORGE R. OWENS, ET UX
38	8	CHESTER L. ALEXANDER, HEIRS
39	8 & 9	LLOYD PATILLO
40	8 & 9	JULIA M. VINCENT, ET VIR
41	9	ELASTER MOORE POWELL, ET UX
42	9	EDNA BRANCH, HEIRS
43	9	DONNIE CLAYTON
44	9	MOSES VINCENT, SR ET AL
45	9	SANDRA MONTGOMERY
46	9	BEATRICE SQUIRE
47	9	FANNIE L. GREEN, TRUSTEE
48	9	EVETTE WILKINS McGUIRE
49	9 & 10	MARSHALL WILKINS, ET AL
50	9	LLOYD PATILLO
51	9 & 10	THERMON L. PATILLO, ET UX
52	10-12	LEWIS BELMONT PROPERTIES, LLC
53	10	EVOLIA TERESA PINCKNEY, ET VIR
54	10	FANNIE L. GREEN, TRUSTEE
55	10&11	THE T. VINCENT FAMILY LIMITED PARTNERSHIP

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
56	11	NEVA S. MELTON
57	11	CARLTON H. JARRETT, SR
58	11&12	VL GROUP A, LLC
59	11	WILLIE S. RUFFIN, ET AL
60	11&12	PECM,LLC
61	12	DEBORAH VINCENT ARTIS
62	12	ROBERT LEE VINCENT, HEIRS
63	12	ROVERT AVON, JR
64	12	LORETTA LYNN AVON HARRIS
65	12	BOBBIE L. AVON
66	12	ROBERT AVON, JR ET UX
66A	12	OSCAR JAMES SMITH
67	12&13	BETTIE WILKINS, HEIRS
68	13&14	L. THOMAS BAIRD, ET UX
69	13-15	LEON THOMAS BAIRD
70	14&15	BETTIE WILKINS, HEIRS
71	15	DEBORAH G. LARSEN
72	15	DOROTHY J. BENJAMIN, ET AL
73	15&16	FRANK ROSE
74	15&16	GUY R. BLAKE
75	16	WILLIAM LEE BELFIELD
76	16-19	DEBORAH G. LARSEN
77	17&19	MASON J. PRICE
78	18	RICHARD BARNES HEIRS
79	19-23	THE THOMAS & JEAN VINCENT FAMILY REAL ESTATE HOLDINGS,LLC
79A	21	DAVID EARL ROBINSON
80	19-21	HIATT & HIATT, LLC
81	21	THE THOMAS & JEAN VINCENT FAMILY REAL ESTATE HOLDINGS,LLC
82	21&22	SETH D. GEHMAN
83	22&23	HAROLD W. WRAY, ET AL
84	23	DWIGHT BRONSON CUMMINGS, ET AL
85	23	ROBERT LOUISE SQUIRE
86	23	LEVON KING, ET UX
87	23	LARRY D. CLAYTON
88	23	TARZAN CORNELIUS HERBERT
89	23	MARCUS LEE BANKS TAMMY BANKS
90	23	ALVIN SQUIRE, HEIRS
91	23	BETTY M. CRUSE, ET AL
92	23	YVONNE T. PATILLO
93	23&24	JACQUELINE FORD
94	23&24	DAVID R. TURNER
95	24	STANLEY L. WEAVER
96	24	THERMAN GARNER, ET AL
97	24	CLYDE C. MASON, ET AL
98	24	WENDY MASON
99	24	WILLIE R. MASON JR
100	24	JAMES E. PRINCE JR., ET AL
101	24-26	MICHAEL WRAY
102	25-26	JAMES BRADLEY WADE
103	26	NORTHAMPTON COUNTY UTILITIES
104	26&27	RONNIE M. GIBBS
105	26&27	EDWARD E. LEE
106	27	JOSHUA LANE PAIR, ET AL
107	27	WILLIAM WESLEY PALMER, JR.
108	27	CATHERINE DELBRIDGE
109	27&28	TERRY DELBRIDGE
110	27	REGINALD C. ROBINSON, ET AL

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

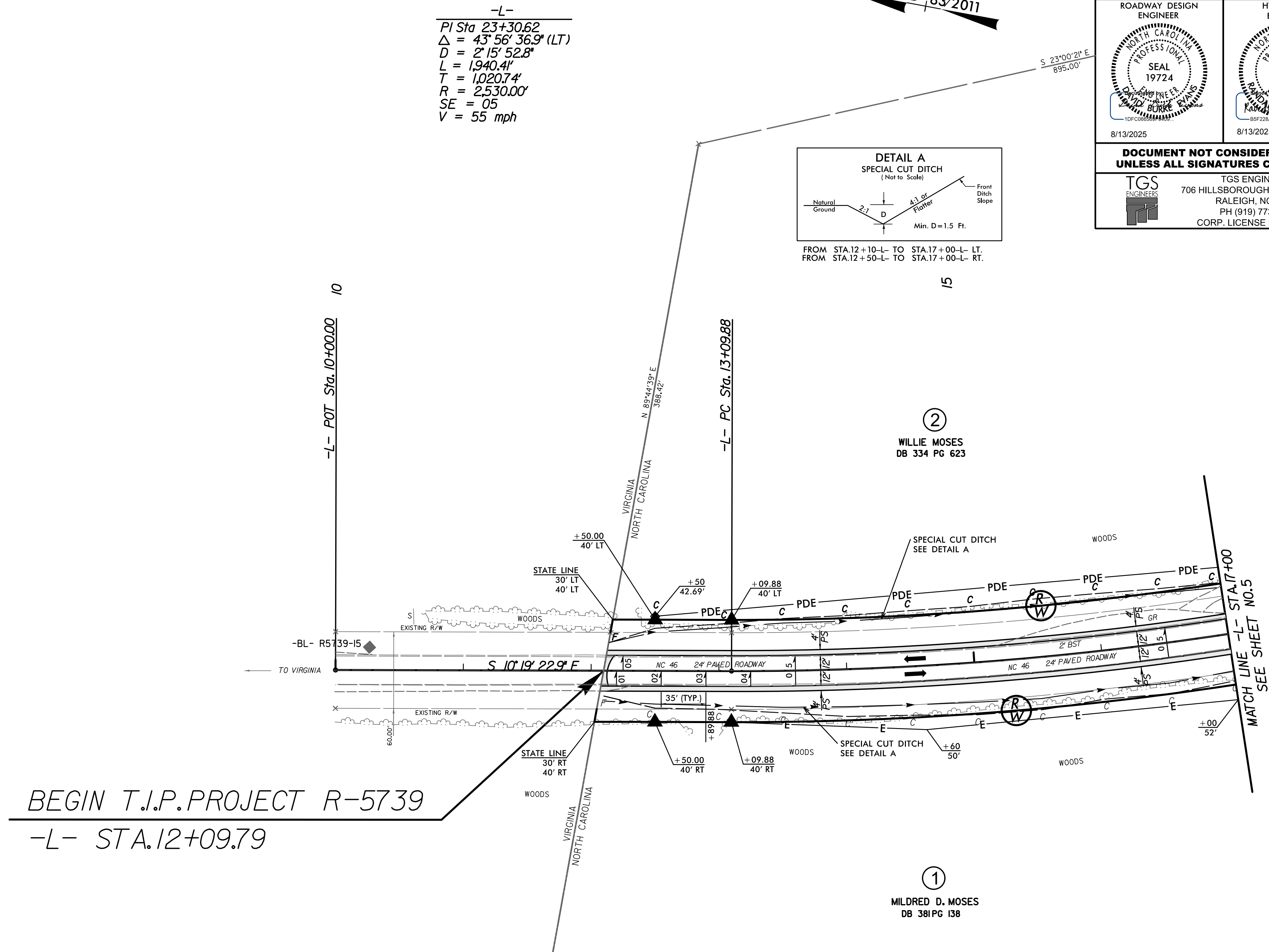
PARCEL INDEX SHEET

PROJ. REFERENCE NO.	SHEET NO.
R-5739	3P-2

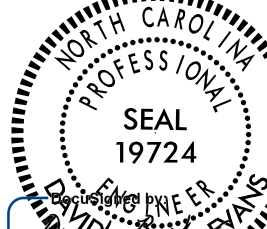
PARCEL No.	SHEET No.	PROPERTY OWNER NAME
111	27	CAROL SIMMONS, ET AL
112	27&28	ALVONIA SIMMONS, ET AL
113	28	MELTON POWELL, ET AL
114	28	HAROLD W. WRAY
115	28	EUGENE MURCHINSON
116	28	GEORGE OWENS, HEIRS
117	28	WILLIAM H. SCOTT
118	28	CAROLINA TELEPHONE AND TELEGRAPH COMPANY
119	28&29	THOMAS MALONE MOORE, ET AL
120	28	JOHNNIE J. INGRAM, ET AL
121	28	GLORIA N. WHITAKER
122	28	MATTIE K. MOORE
123	28	SANTEE INGRAM
124	28	EDWARD S. BROWN, ET AL
125	28	RENE SHORTER, ET AL
126	28&29	ALMETA V. MORGAN
127	28&29	ISAAC PETERSON
128	29	BETTY STEGALL
129	29	ALEXANDER SQUIRE
130	29	RONNIE M. GIBBS
131	29-31	DALE W. EARLS
132	29	MABLE M. SQUIRE
133	29	ROBERT L. SQUIRE
134	29	CONNIE LAVERN WEAVER
135	29	RUDOLPH BOONE JR.
136	29	JAMES E. KERR II
137	29&30	JP MOODY HEIRS
138	30	HUMBERTO TAMAYO GARCIA
139	30	KATHY S. HARRIS, ET AL
140	30	MARY M. HEWITT, ET AL
141	30	JEWEL T. WEAVER
142	30	CLIFTON JEROME MOODY
143	30	RENA MOODY, HEIRS
144	30	INELL SQUIRE
145	30	GRADY JOHNSON, ET AL
146	30	BALLARD T. OWENS JR
146A	30	LORANDY LEE BROADY
146B	30	TOM & SUSIE BUTCHER HEIRS
146C	30&31	JILL BUTCHER
147	31	TONY BUTCHER
148	31	TIMOTHY W. PHELPS
149	31	CYNTHIA MASON
150	31	CYNTHIA DENISE HIGH, ET AL
151	31&32	MICHAEL WRAY
152	31	LARRY ROBINSON
153	31	WILLIE M. WEAVER
154	31	WILSON MILES JR.
155	31&32	ALBERT MILES
156	32	CALVIN FLOYD
157	32&33	CALVIN MOORE FLOYD
158	32	CHRISTIE BRANTLEY
159	33-36	MICHAEL WRAY
159A	34	MICHAEL WRAY
160	33	JEAN FLOYD PEARSON
161	33	JULIUS BROADY, ET UX
162	34&35	WILLIAM R. MASSEY JR.
163	35&36	WILLIAM LEE CARROLL JR.
164	36	MARY W. QUALLS
165	36	CALVIN M. FLOYD, HEIRS

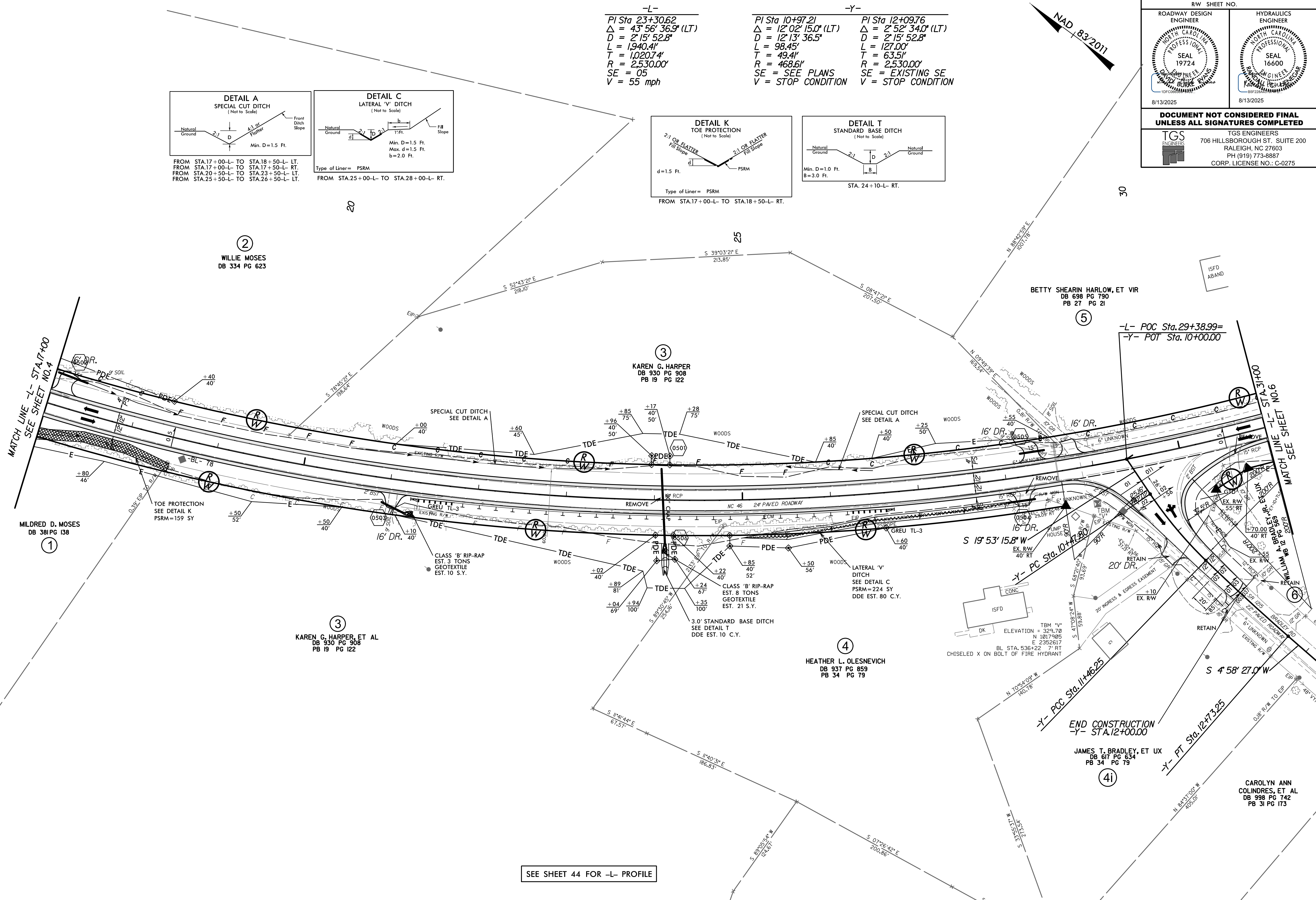
PARCEL No.	SHEET No.	PROPERTY OWNER NAME
166	36	C. M. FLOYD
167	36	BLACK DUCK FARMS, LLC
168	36	CALVIN MOORE FLOYD, JR
169	36	MATTIE LEE TURNER, ET AL
170	36&37	M. F. VINCENT
171	36&37	CYNTHIA A. MALLORY
172	37	MICHAEL WRAY
173	37	LAWRENCE J. MOODY, ET AL
174	37	ALICE SQUIRE WILKINS
175	37	LAWRENCE J. MOODY
176	37	KELVIN LAMONT MILLS, ET UX
177	37&38	LAWRENCE J. MOODY
178	37	JAHMEL AHAMED DIMSON
179	37&38	GREGORY JOHNSON
180	37	WILLIE CLINTON VINSON,ET AL WILLIE CLINTON VINSON, ET AL
181	37&38	DON L. JONES, ET AL
182	38	LARRY L. SIMMS
183	38	JIMMY REAVES
184	38	EDWARD EARL WEBB
185	38	DENISE GOLSBY
186	38	THERMAN WAYNE MOODY
187	38	JOAN PETERS
188	38	JASPER W. JONES, ET UX
189	38	JOYCE ELAINE MANNING
190	38	LAMONT PETERS
191	38	CLARENCE W. MILES
192	38	MATILDA PETERS
193	38	HERMAN BLOUNT, SR.
194	38	VERNARD WEAVER, ET AL
195	38	MARGARET GRETA NICHOLSON
196	38	LOUISE BOONE
197	38&39	NORTHAMPTON COUNTY BOARD OF EDUCATION
198	38	JURAN SYKES SQUIRE
199	38&39	ELDRIDGE KEITH GARNER
200	39	WILLIE B. INGRAM
201	39	DAVID KEITH LANE
202	39	BUILDING FAITH CHRISTIAN CENTER
203	39	NORTHAMPTON COUNTY BOARD OF EDUCATION
204	39	NORTHAMPTON REALTY&INSURANCE
205	39	ANNIE INGRAM
206	39	BETTYE W. UNDERDUE
207	39-41	TIMOTHY W. PHELPS
208	39	GUS SMITH, HEIRS
209	39&40	RONALD WAYNE SMITH
210	40	HAROLD W. WRAY
211	40	THOMAS C. PHELPS, ET AL
212	40&41	JAMES MOODY
213	41	BURLIE SLEDGE, HEIRS
214	41	ALEASE W. FIKES
215	41	MONICA RANSOM
216	41	GUS SMITH, HEIRS
217	41	CLEOPHUS LEE HIGH JR.
218	41	JAMES MILLARD
219	41	MICHAEL LEE JAMES
220	41	MICHAEL LEE JAMES

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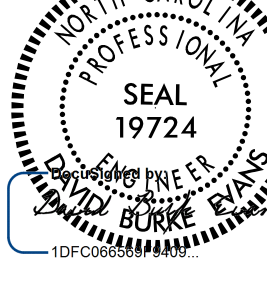
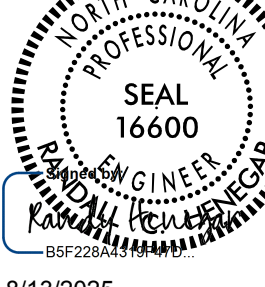


SEE SHEET 44 FOR -L- PROFILE

PROJECT REFERENCE NO.		SHEET NO.	
R-5739		5	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER 		HYDRAULICS ENGINEER 	
8/31/2025		8/31/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

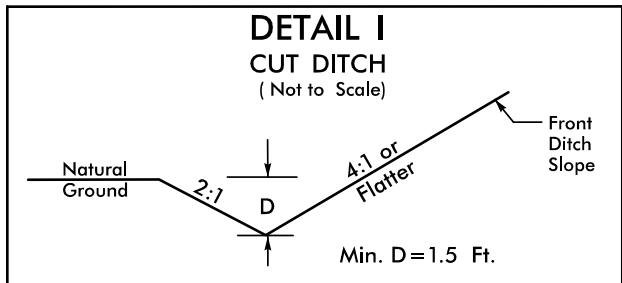




PROJECT REFERENCE NO.		SHEET NO.	
R-5739		6	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER 		HYDRAULICS ENGINEER 	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED  TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275			

8/17/09

8/7/2025
N:\eng000\5739\Roadway\Proo\RE739_RDY_PSH_07.dgn
R:\eng000\5739\Roadway\Proo\RE739_RDY_PSH_07.dgn



FROM STA.51+67-L TO STA.53+00-L LT.
FROM STA.55+50-L TO STA.56+50-L LT.
FROM STA.55+00-L TO STA.56+00-L RT.

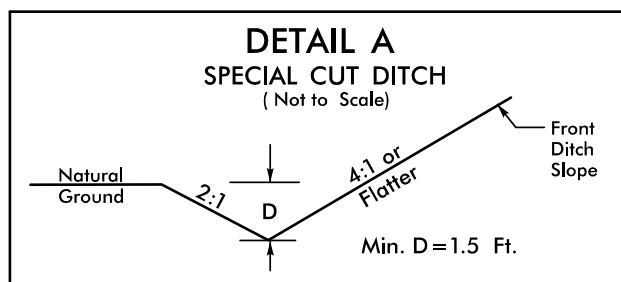
PI Sta 50+28.95
 $\Delta = 0^{\circ}08'13.2''$ (RT)
 $D = 0^{\circ}22'55.1''$
 $L = 35.87'$
 $T = 17.93'$
 $R = 15,000.00'$
 $SE = NC$
 $V = 45$ mph

PI Sta 53+27.56
 $\Delta = 0^{\circ}21'23.7''$ (LT)
 $D = 0^{\circ}42'58.3''$
 $L = 49.79'$
 $T = 24.89'$
 $R = 8,000.00'$
 $SE = NC$
 $V = 45$ mph

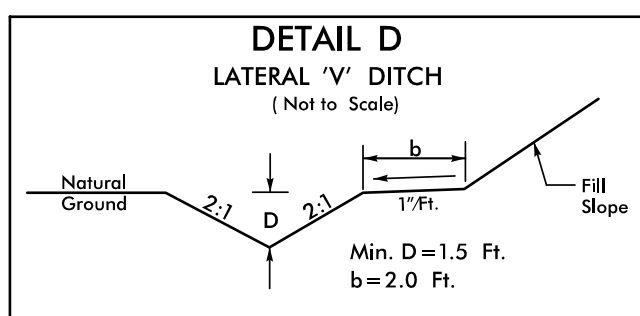
PI Sta 54+94.61
 $\Delta = 0^{\circ}14'27.4''$ (RT)
 $D = 0^{\circ}42'58.3''$
 $L = 33.64'$
 $T = 16.82'$
 $R = 8,000.00'$
 $SE = NC$
 $V = 45$ mph

MATCH LINE -L- STA 45+00
SEE SHEET NO.6

MATCH LINE -L- STA 59+00
SEE SHEET NO.8



FROM STA.48+50-L TO STA.50+00-L RT.
FROM STA.53+00-L TO STA.55+50-L LT.
FROM STA.56+50-L TO STA.58+00-L LT.
FROM STA.55+50-L TO STA.57+00-L RT.
FROM STA.58+50-L TO STA.59+00-L RT.



FROM STA.11+52-YI TO STA.12+50-YI- LT.

-YI-
PI Sta 11+35.20
 $\Delta = 31^{\circ}37'12.6''$ (RT)
 $D = 22^{\circ}55'05.9''$
 $L = 137.97'$
 $T = 70.79'$
 $R = 250.00'$
 $SE = \text{SEE PLANS}$
 $V = \text{STOP CONDITION}$

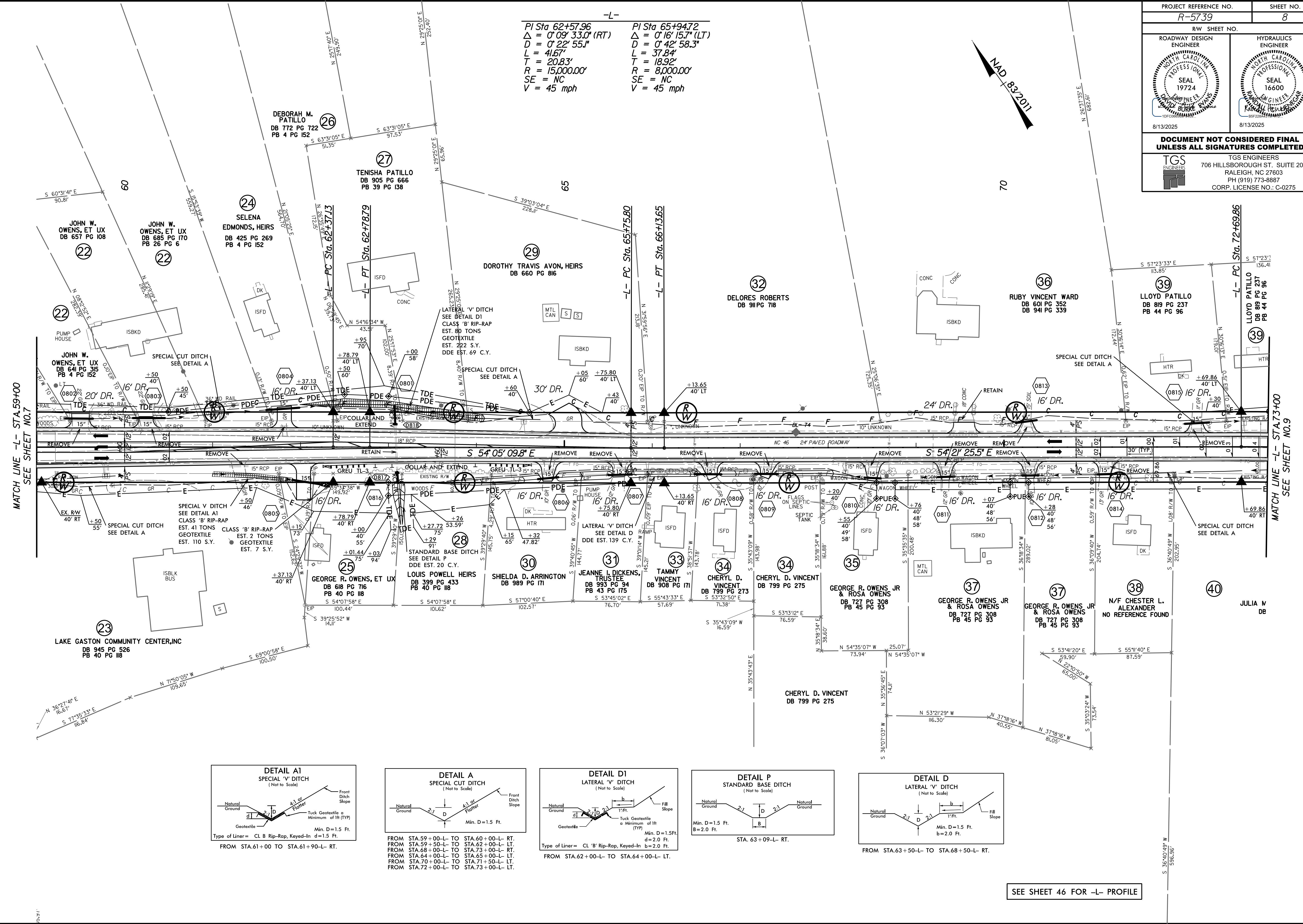
PROJECT REFERENCE NO.		SHEET NO.
R-5739		7
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
8/13/2025		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275		

ROBERT LEE VINCENT, HEIRS
DB 909 PG 432
PB 3 PG 66

SEE SHEET 45 FOR -L- PROFILE

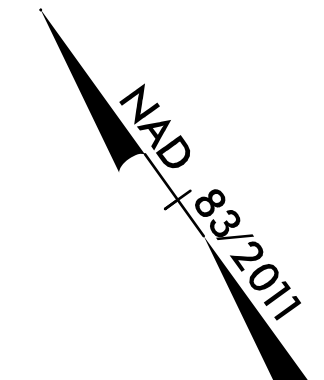
8/17/99

8/7/2025
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User:bevans

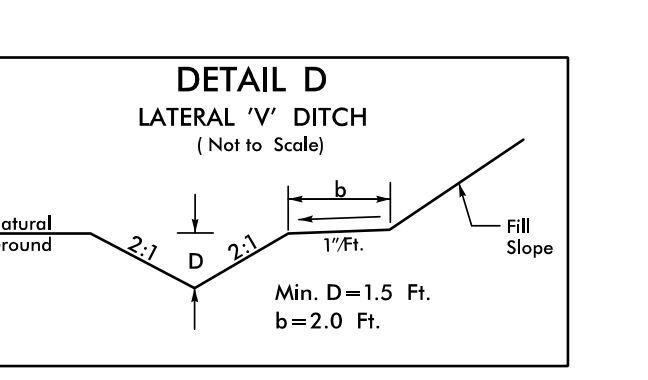
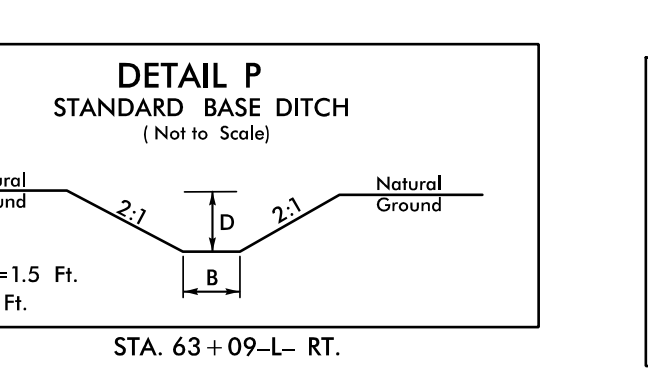
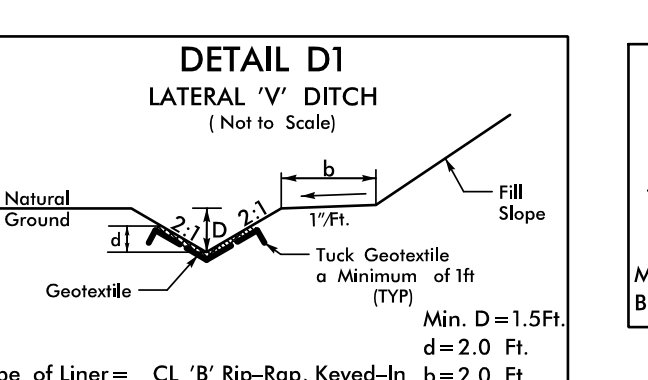
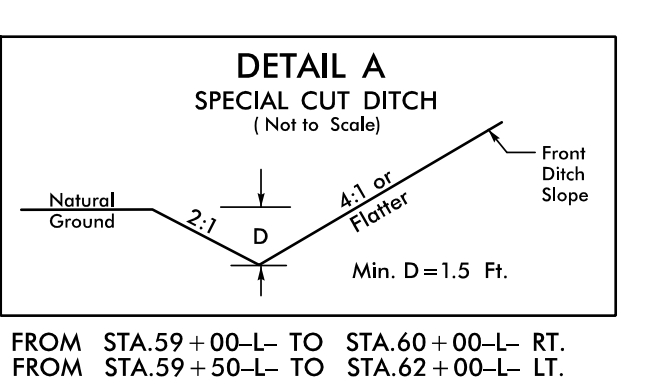
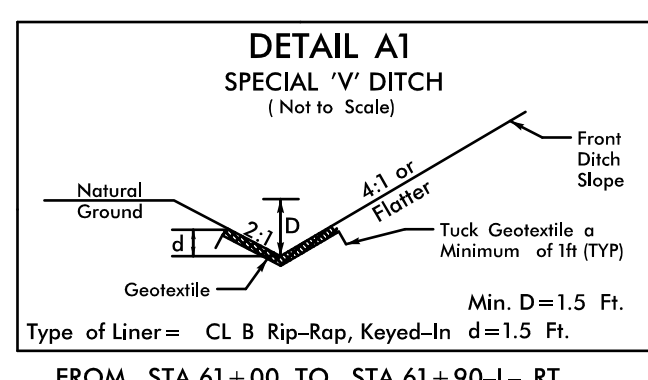


-L-
PI Sta 62+57.96
 $\Delta = 0^{\circ} 09' 33.0''$ (RT)
 $D = 0^{\circ} 22' 55.1''$
 $L = 41.67'$
 $T = 20.83'$
 $R = 15,000.00'$
 $SE = NC$
 $V = 45$ mph

PI Sta 65+94.72
 $\Delta = 0^{\circ} 16' 15.7''$ (LT)
 $D = 0^{\circ} 42' 58.3''$
 $L = 37.84'$
 $T = 18.92'$
 $R = 8,000.00'$
 $SE = NC$
 $V = 45$ mph



PROJECT REFERENCE NO. R-5739		SHEET NO. 8	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER 8/13/2025		HYDRAULICS ENGINEER 8/13/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
 TGS ENGINEERS		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



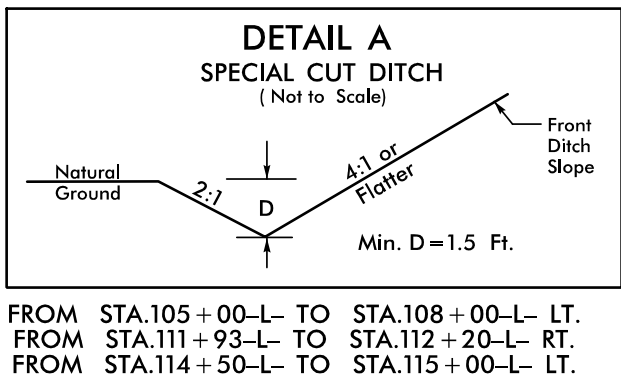
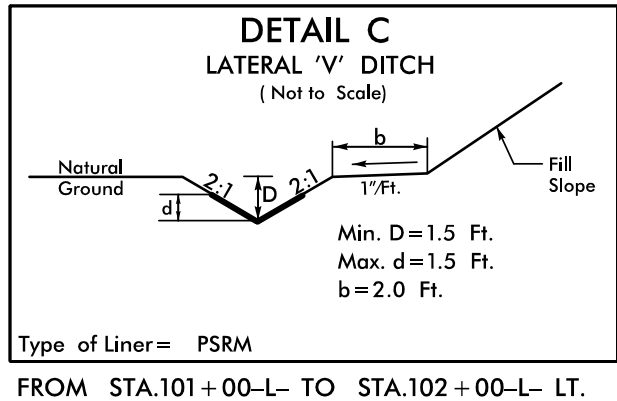
SEE SHEET 46 FOR -L- PROFILE





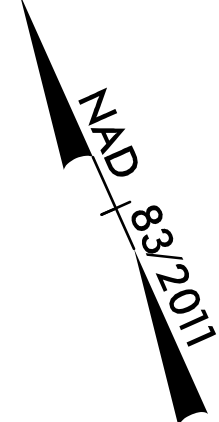
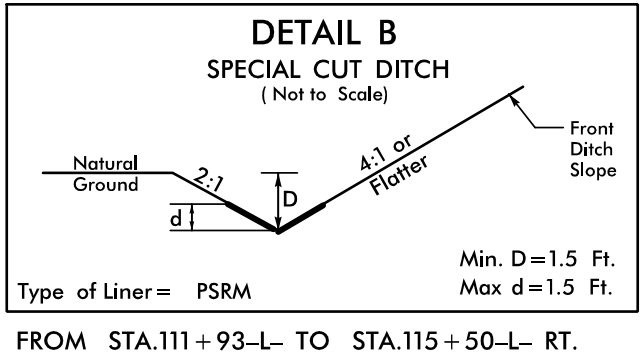
8/17/99

8/7/2025
x:\ncdot\...-5739\Roadway\p-oj\R5739g_RDY_PSH_11.dgn
User:bevans

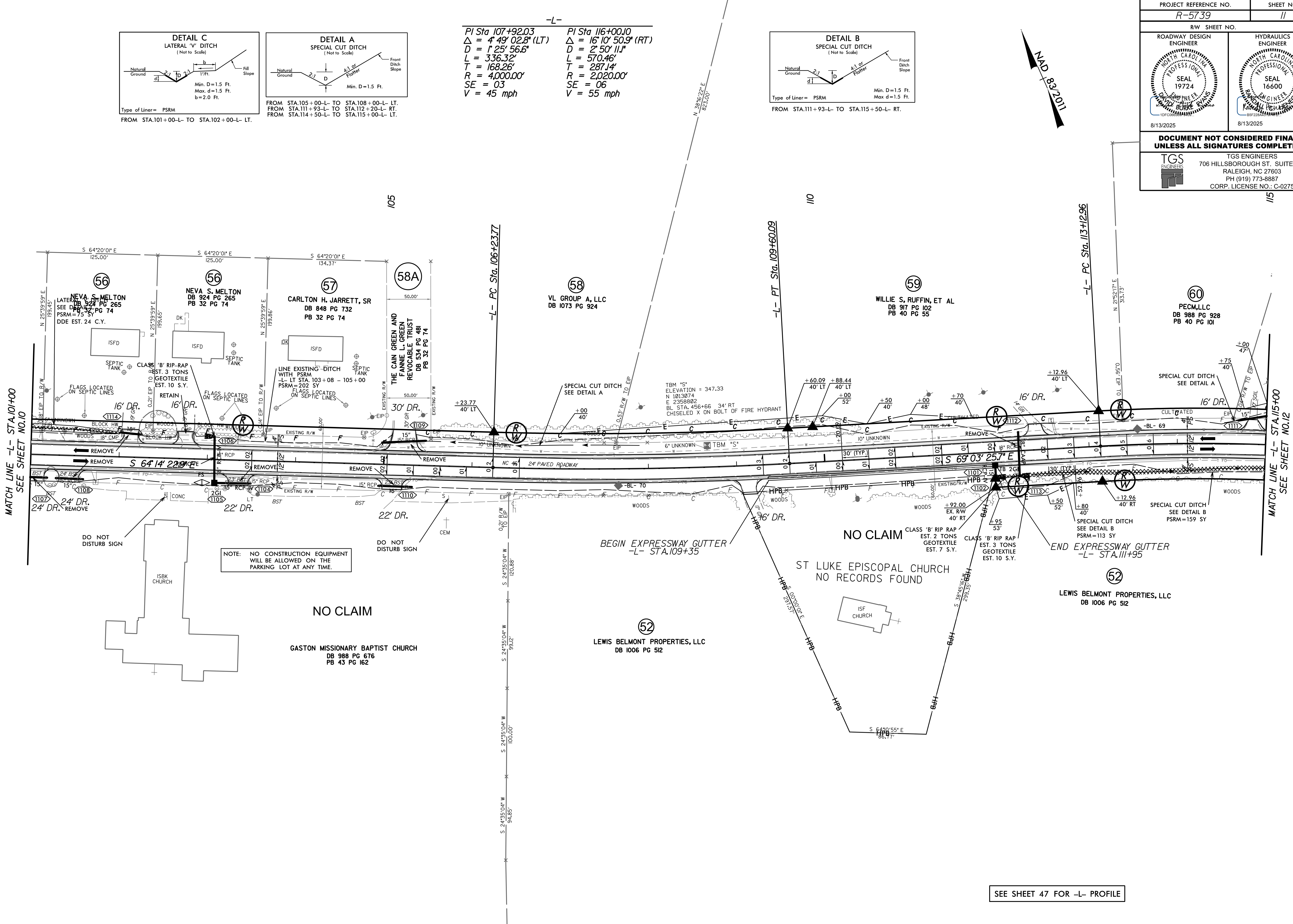


-L-

$PI\ Sta\ 107+92.03$ $\Delta = 4' 49'' 02.8'' (LT)$ $D = 1' 25'' 56.6''$ $L = 336.32'$ $T = 168.26'$ $R = 4,000.00'$ $SE = 03$ $V = 45\ mph$	$PI\ Sta\ 116+00.10$ $\Delta = 16' 10'' 50.9'' (RT)$ $D = 2' 50'' 11.1''$ $L = 570.46'$ $T = 287.14'$ $R = 2,020.00'$ $SE = 06$ $V = 55\ mph$
---	--



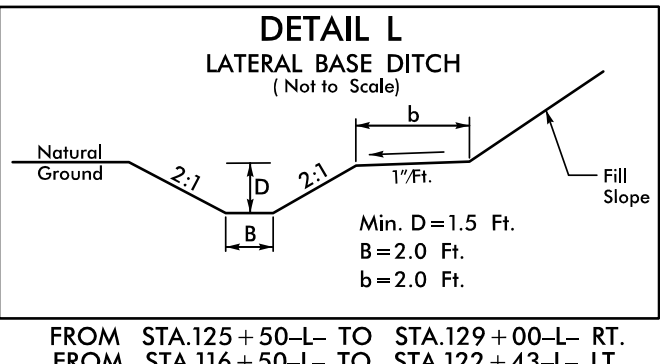
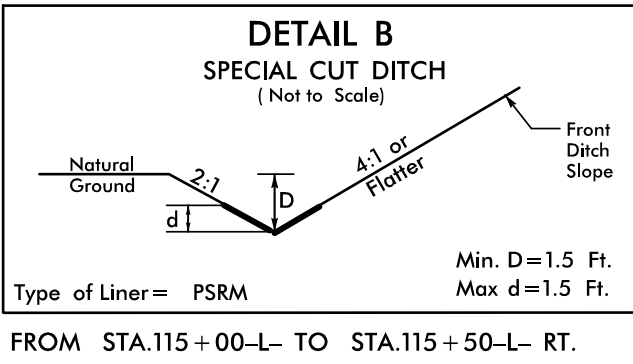
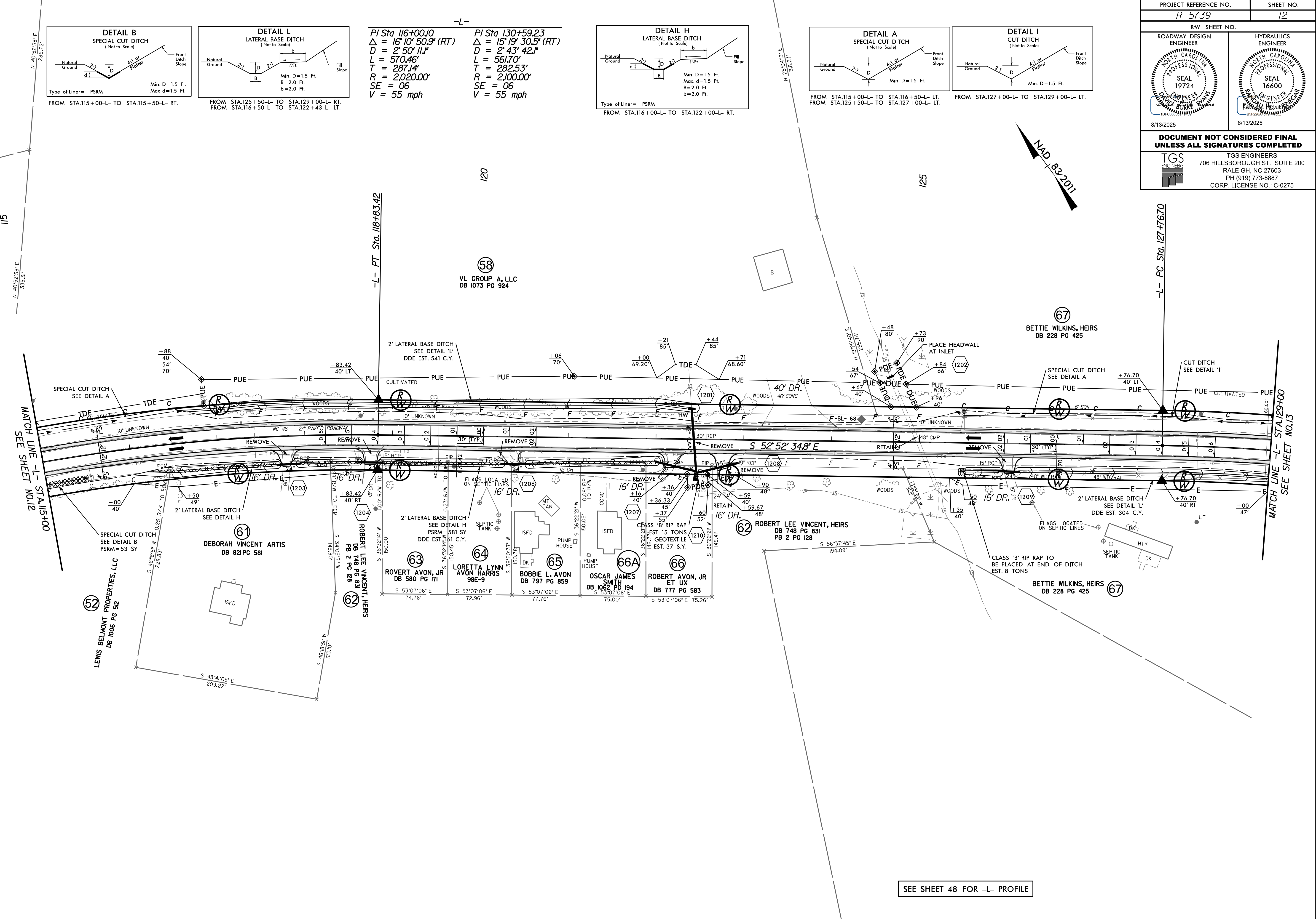
PROJECT REFERENCE NO. R-5739		SHEET NO. 11
R/W SHEET NO.		
ROADWAY DESIGN ENGINEER 8/13/2025	HYDRAULICS ENGINEER 8/13/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275		



SEE SHEET 47 FOR -L- PROFILE

8/17/99

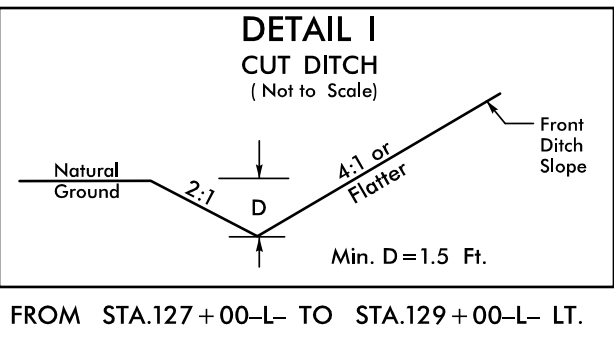
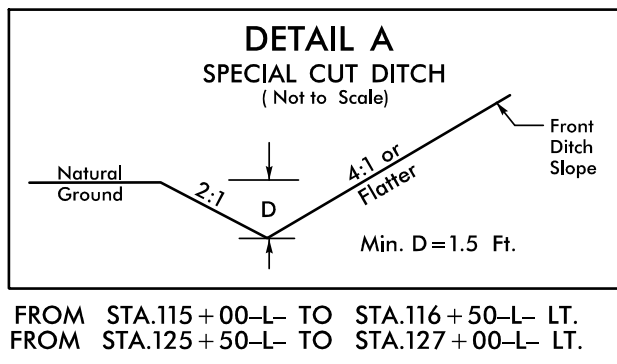
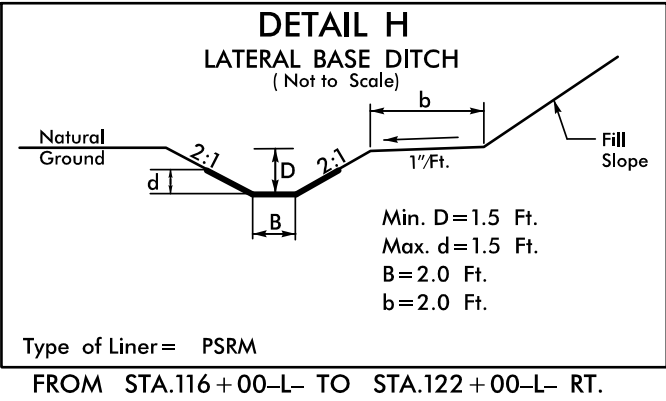
8/7/2025
I:\cadd\05-5739\Roadway\ProJ\RE739_RDY_PSH_12.dgn
12:44:43 PM



-L-

PI Sta 116+00.10
 $\Delta = 16' 10' 50.9''$ (RT)
 $D = 2' 50' 11.1''$
 $L = 570.46'$
 $T = 287.14'$
 $R = 2,020.00'$
 $SE = 06$
 $V = 55$ mph

PI Sta 130+59.23
 $\Delta = 15' 19' 30.5''$ (RT)
 $D = 2' 43' 42.1''$
 $L = 561.70'$
 $T = 282.53'$
 $R = 2,100.00'$
 $SE = 06$
 $V = 55$ mph



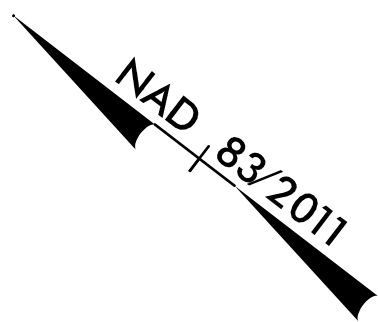
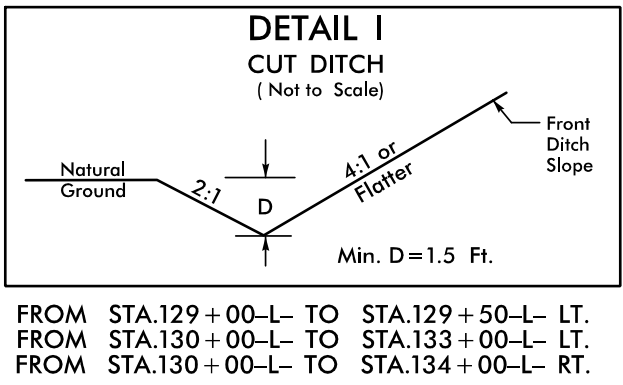
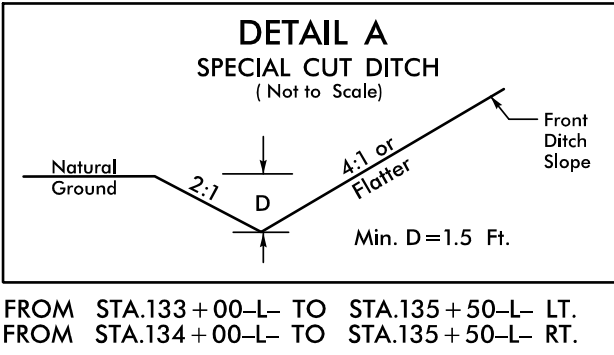
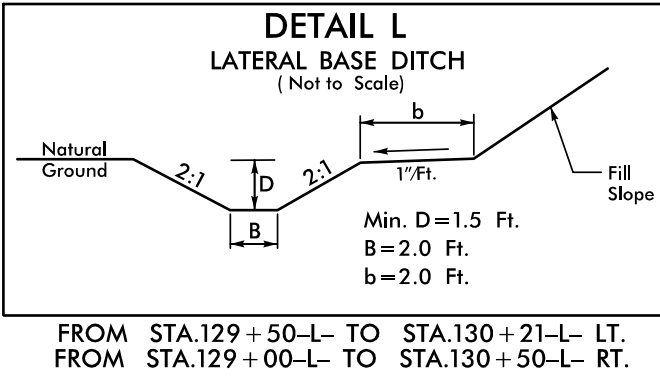
PROJECT REFERENCE NO. R-5739		SHEET NO. 12	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
8/13/2025		8/13/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

SEE SHEET 48 FOR -L- PROFILE

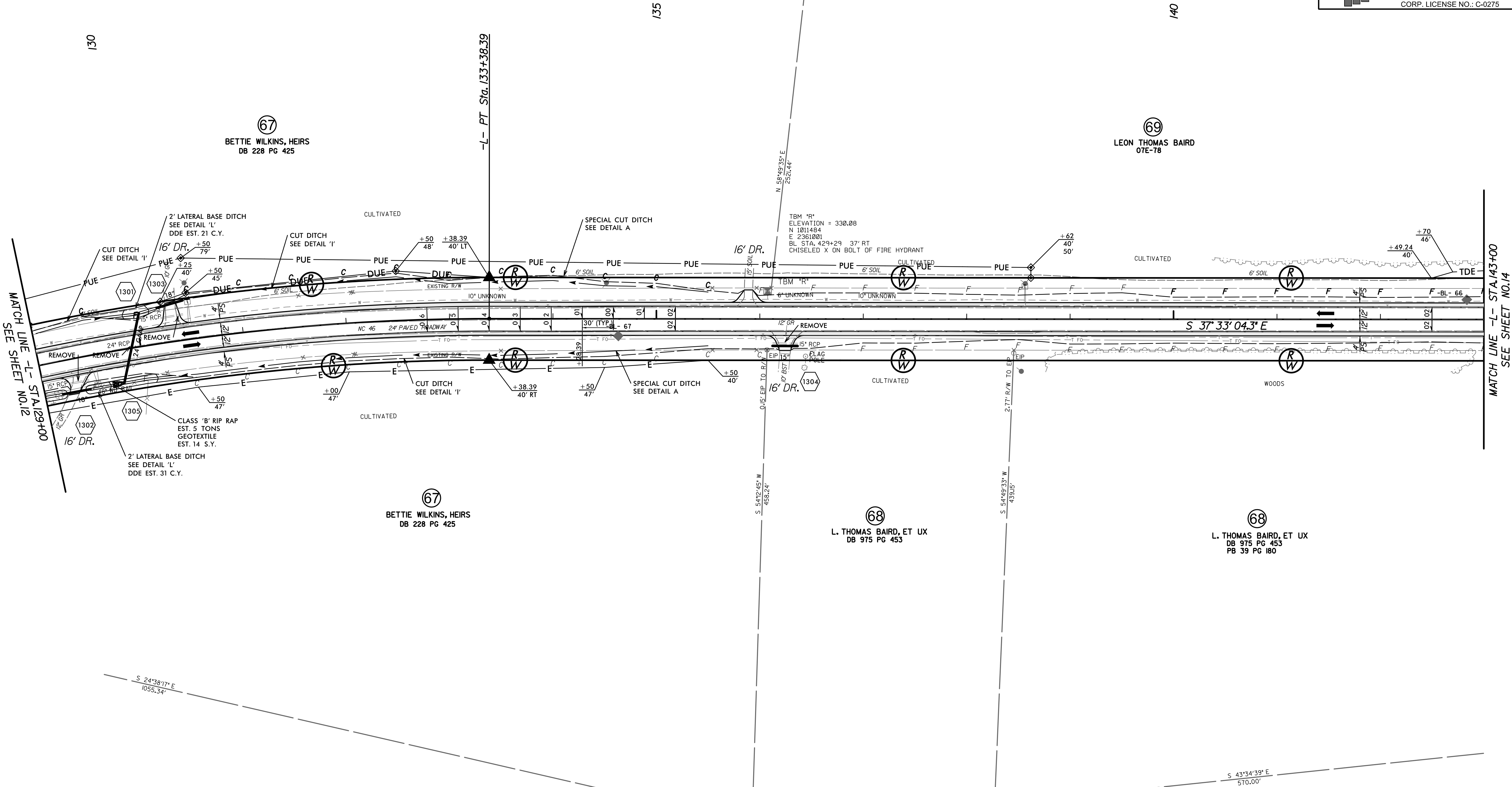
8/17/99

8/7/2025
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13:44:40

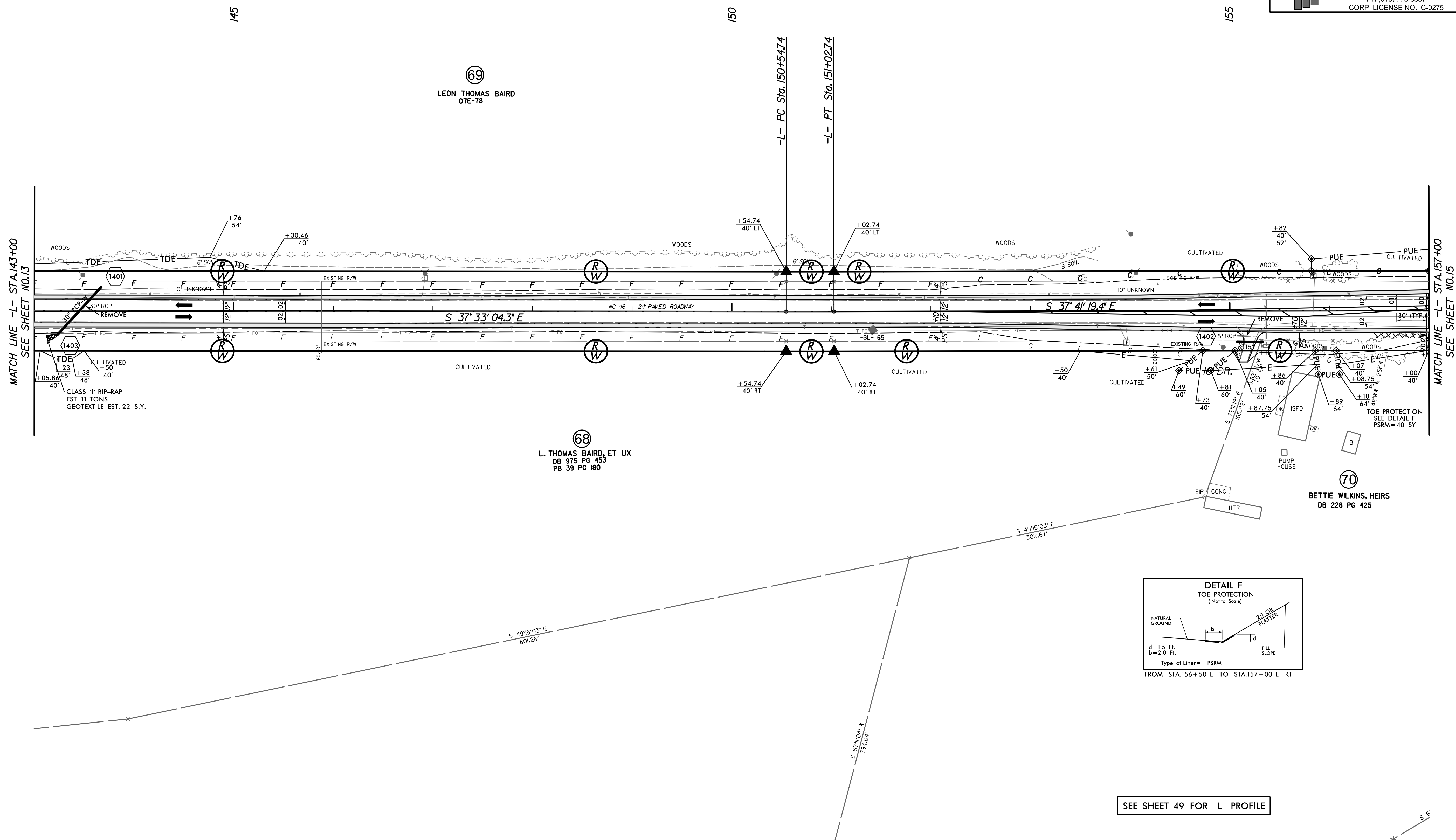
-L-
PI Sta 130+59.23
 $\Delta = 15^{\circ}19'30.5''$ (RT)
 $D = 2'43'.421''$
 $L = 561.70'$
 $T = 282.53'$
 $R = 2100.00'$
 $SE = 06$
 $V = 55$ mph

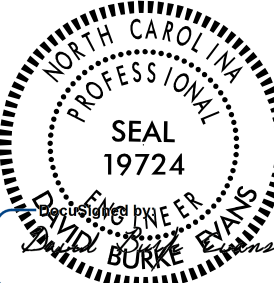


PROJECT REFERENCE NO.		SHEET NO.
R-5739		13
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
8/13/2025	8/13/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
	TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



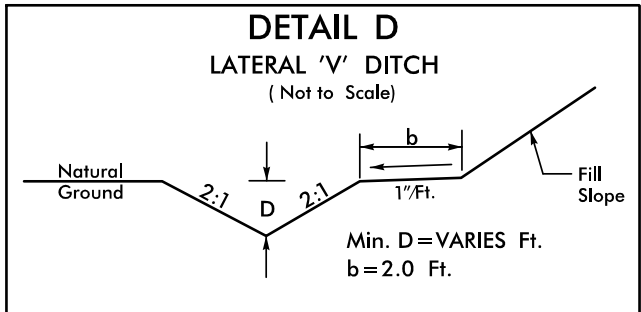
SEE SHEET 48 FOR -L- PROFILE



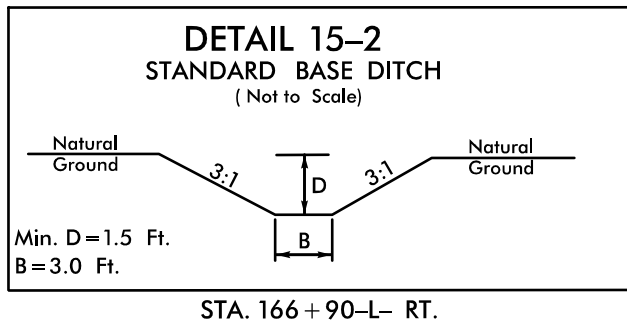
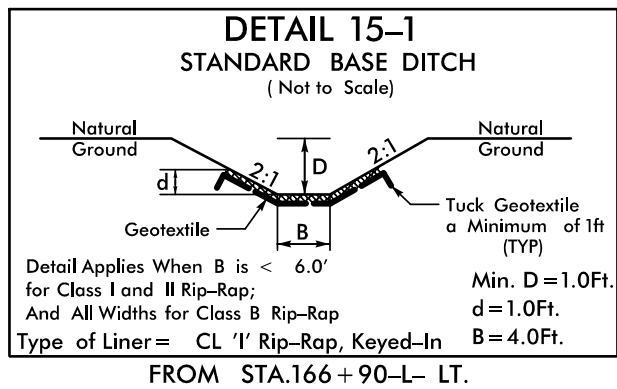
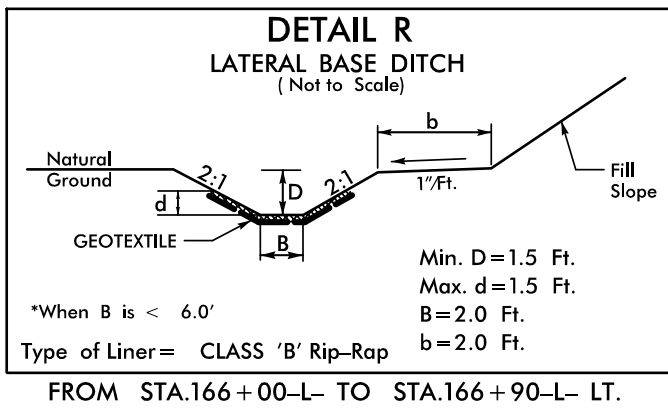
PROJECT REFERENCE NO. <i>R-5739</i>		SHEET NO. <i>14</i>	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER 		HYDRAULICS ENGINEER 	
8/13/2025		8/13/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
TGS ENGINEERS 		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

8/17/99

BEGIN CONSTRUCTION
-Y2- STA.12+35.00



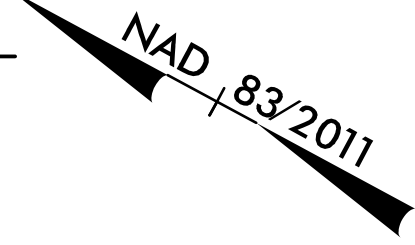
FROM STA.157+00-L- TO STA.158+79-L- LT.
FROM STA.158+79-L- TO STA.161+50-L- LT.
FROM STA.163+66-L- TO STA.166+00-L- LT.



-Y2-
PI Sta 15+20.95
 $\Delta = 15' 42' 44.6''$ (LT)
D = 5' 43' 46.5"
L = 274.23'
T = 137.98'
R = 1,000.00'
SE = 08
V = 55 mph

-Y2-
PI Sta 18+94.28
 $\Delta = 36' 19' 28.9''$ (RT)
D = 19' 05' 54.9"
L = 190.20'
T = 98.42'
R = 300.00'
SE = SEE PLANS
V = STOP CONDITION

-Y2-
PI Sta 21+76.42
 $\Delta = 18' 52' 29.7''$ (LT)
D = 8' 11' 06.4"
L = 230.60'
T = 116.35'
R = 700.00'
SE = SEE PLANS
V = STOP CONDITION



69
LEON THOMAS BAIRD
OTE-78

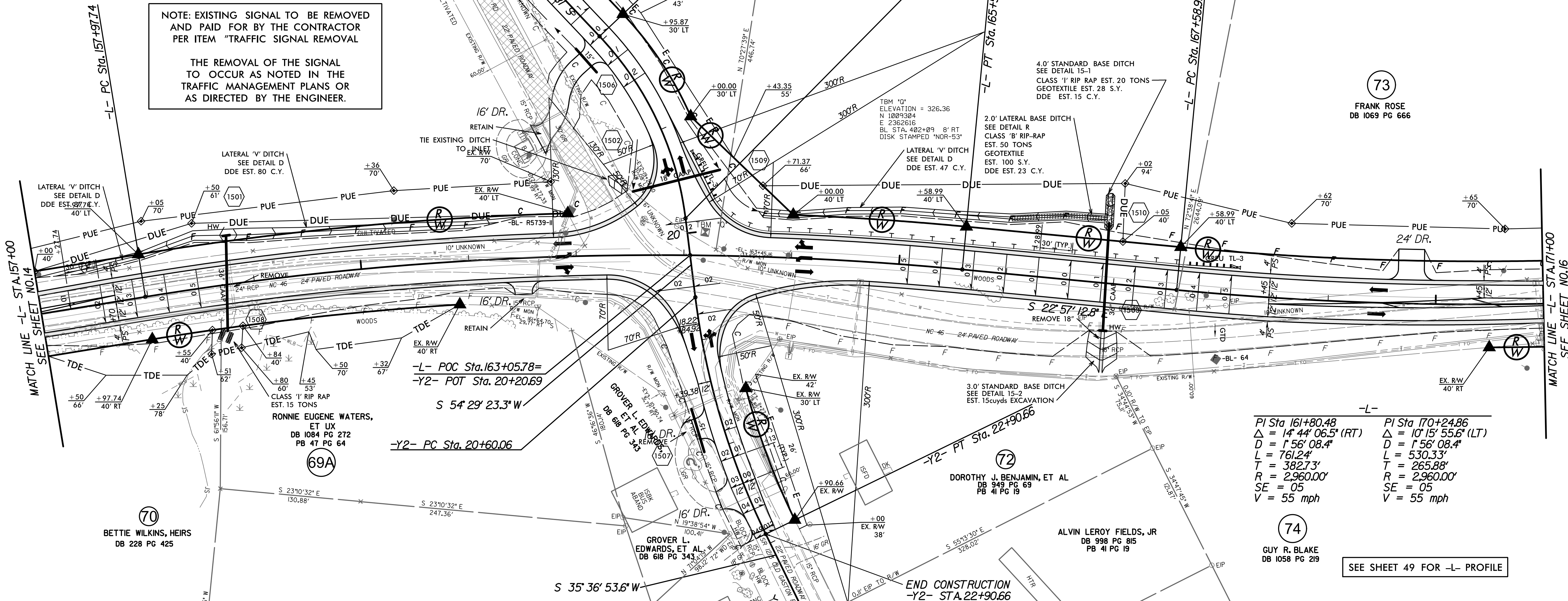
71
DEBORAH G. LARSEN
DB 983 PG 345
DB 978 PG 627
PB 1 PG 141

69
LEON THOMAS BAIRD
OTE-78

73
FRANK ROSE
DB 1069 PG 666

NOTE: EXISTING SIGNAL TO BE REMOVED
AND PAID FOR BY THE CONTRACTOR
PER ITEM "TRAFFIC SIGNAL REMOVAL"

THE REMOVAL OF THE SIGNAL
TO OCCUR AS NOTED IN THE
TRAFFIC MANAGEMENT PLANS OR
AS DIRECTED BY THE ENGINEER.

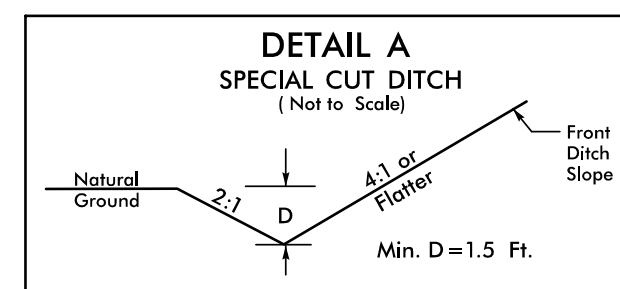


-L-
PI Sta 161+80.48
 $\Delta = 14' 44' 06.5''$ (RT)
D = 1' 56' 08.4"
L = 761.24'
T = 382.73'
R = 2,960.00'
SE = 05
V = 55 mph

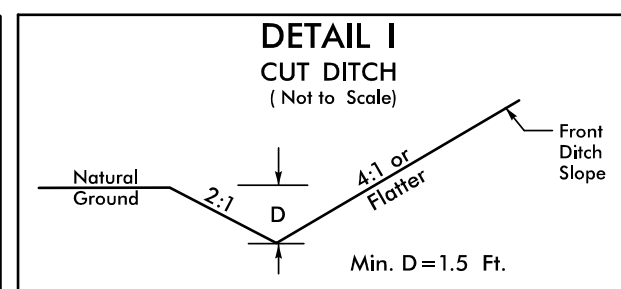
-L-
PI Sta 170+24.86
 $\Delta = 10' 15' 55.6''$ (LT)
D = 1' 56' 08.4"
L = 530.33'
T = 265.88'
R = 2,960.00'
SE = 05
V = 55 mph

74
GUY R. BLAKE
DB 1058 PG 219

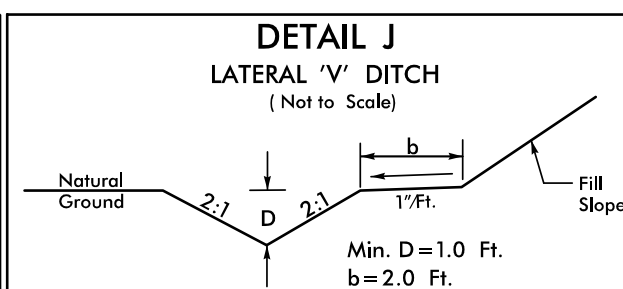
SEE SHEET 49 FOR -L- PROFILE



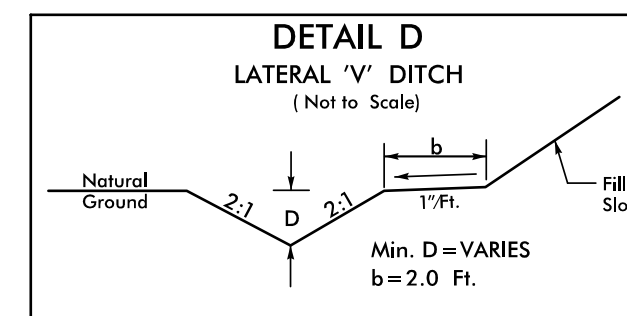
FROM STA.172+00-L- TO STA.174+00-L- LT
FROM STA.175+00-L- TO STA.177+00-L- LT
FROM STA.180+00-L- TO STA.182+00-L- RT.



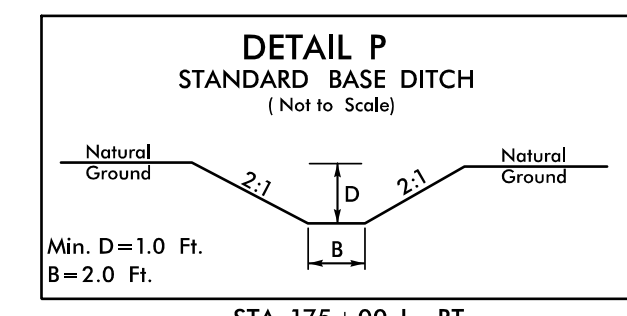
FROM STA.174+00-L- TO STA.175+00-L- LT



FROM STA.175+00-L- TO STA.176+50-L- RT



FROM STA.182+00-L- TO STA.185+00-L- RT



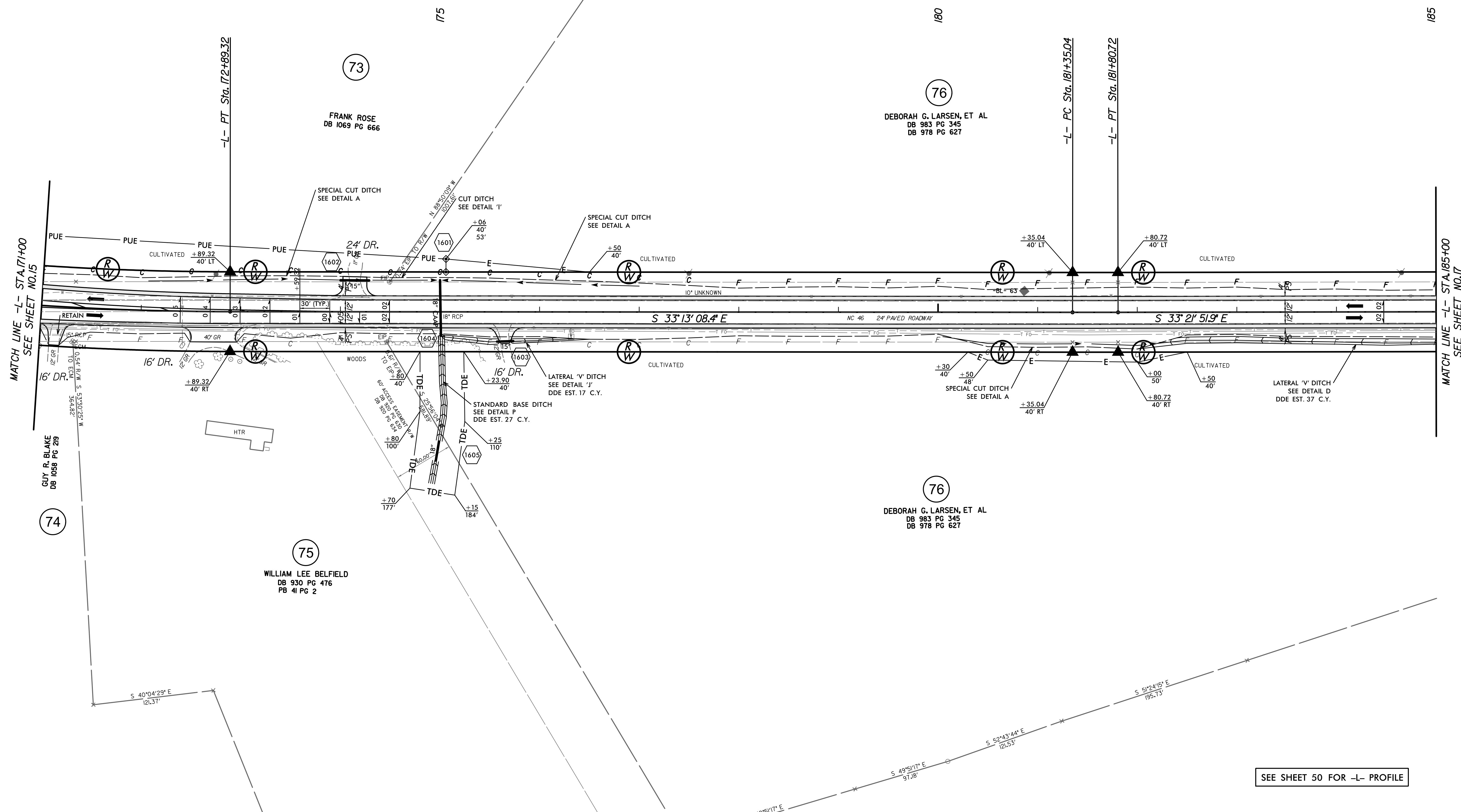
STA. 175+00-L- RI.

-L-

PI Sta 181+57.88
 $\Delta = 0^\circ 08' 43.5''$ (LT)
 $D = 0^\circ 19' 05.9''$
 $L = 45.68'$
 $T = 22.84'$
 $R = 18,000.00'$
 $SE = NC$
 $V = 55 \text{ mph}$



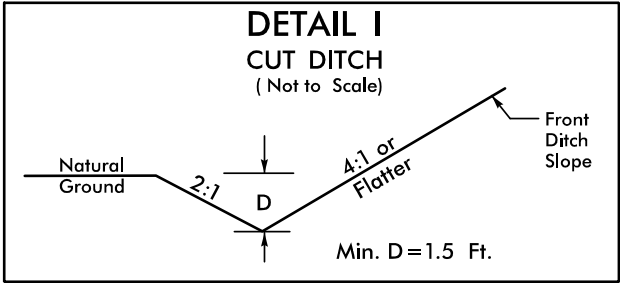
PROJECT REFERENCE NO.	SHEET NO.
R-5739	16
RW SHEDDING NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
8/13/2025	8/13/2025
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



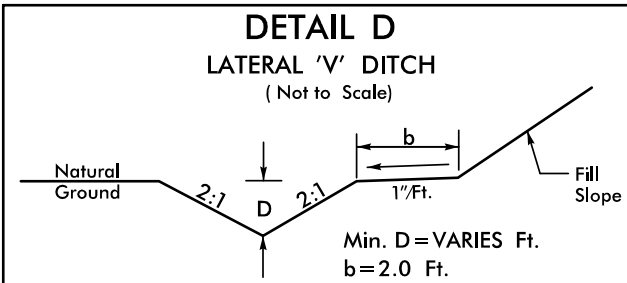
SEE SHEET 50 FOR -L- PROFILE

8/17/99

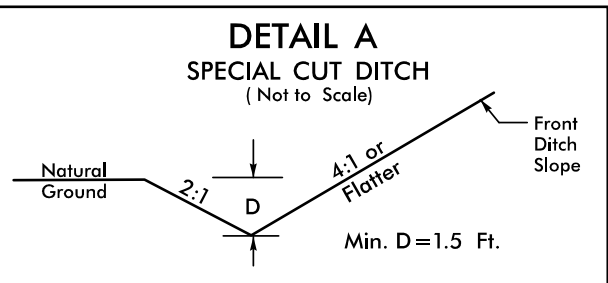
8/7/2025
N:\cadd\5739\Roadway\ProJ\RE739_RDY_PSH_17.dgn
10:44:43 AM



FROM STA.188+00-L- TO STA.191+50-L- LT.



FROM STA.185+00-L- TO STA.187+00-L- RT

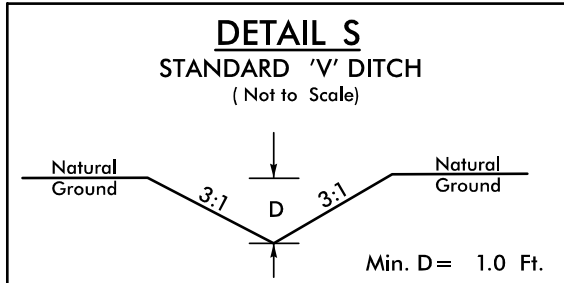


FROM STA.186+50-L- TO STA.187+50-L- RT

FROM STA.191+50-L- TO STA.196+00-L- LT

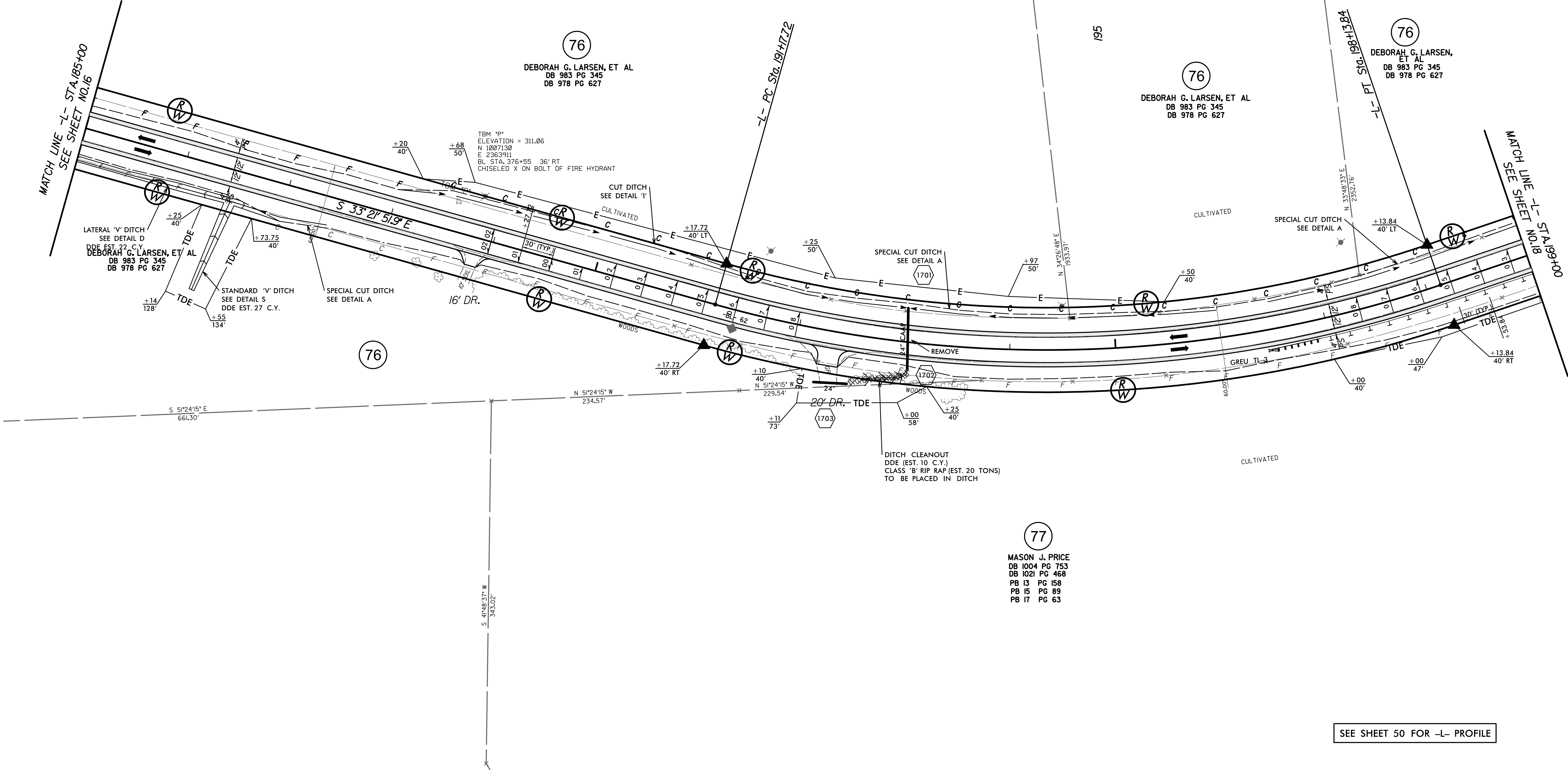
FROM STA.196+50-L- TO STA.199+00-L- LT

-L-
PI Sta 194+76.62
 $\Delta = 34^{\circ} 23' 01.5''$ (LT)
D = 4' 56" 21.4"
L = 696.13'
R = 358.90'
T = 1,160.00'
SE = 08
V = 55 mph



FROM -L- STA. 186+50 RT

NAD 83/2011

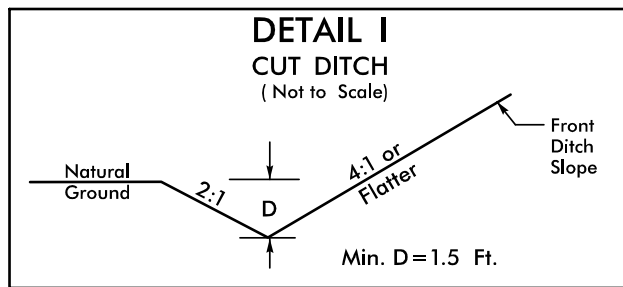


PROJECT REFERENCE NO. R-5739		SHEET NO. 17	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
8/13/2025		8/13/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

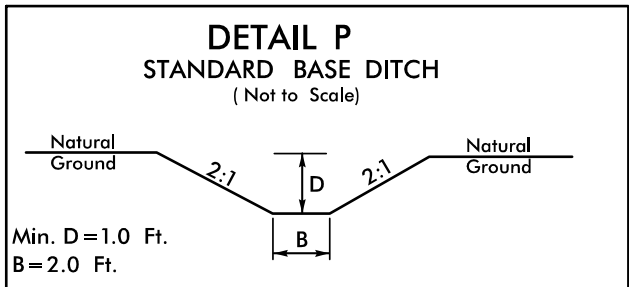
SEE SHEET 50 FOR -L- PROFILE

8/17/99

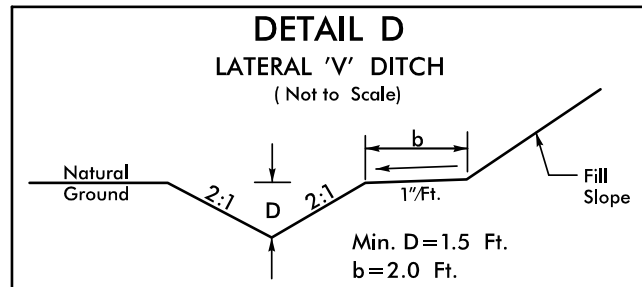
8/7/2025
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18:44:40



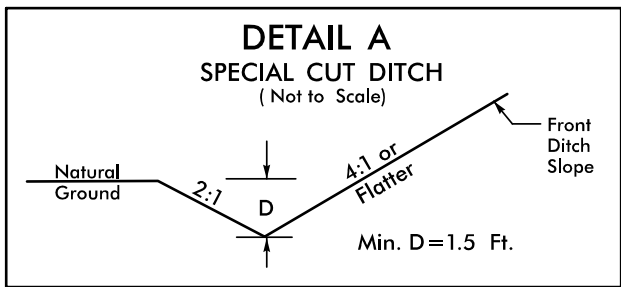
FROM STA.199+00-L- TO STA.200+12-L- LT.
FROM STA.201+50-L- TO STA.202+00-L- RT.



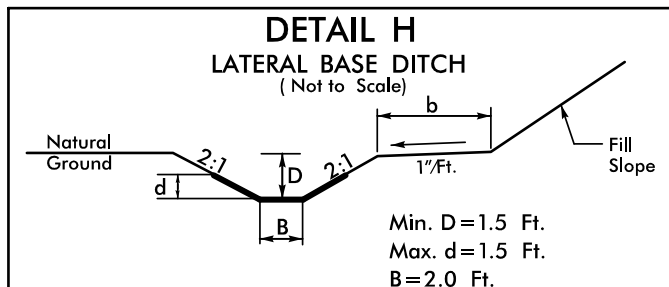
STA. 200+12-L- RT.



FROM STA.207+00-L- TO STA.208+77-L- LT.
FROM STA.210+00-L- TO STA.211+50-L- LT.

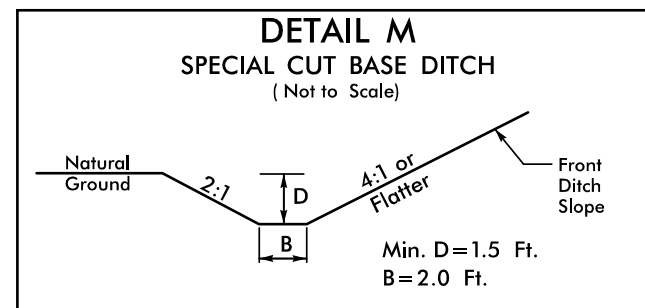


FROM STA.202+00-L- TO STA.204+00-L- RT.
FROM STA.204+00-L- TO STA.204+50-L- LT.
FROM STA.205+50-L- TO STA.207+00-L- RT.
FROM STA.207+50-L- TO STA.209+50-L- RT.
FROM STA.208+50-L- TO STA.210+00-L- LT.

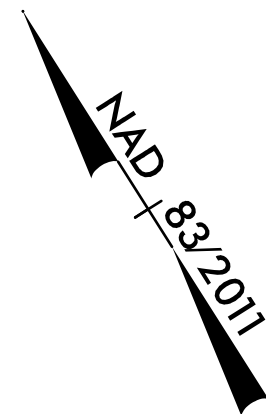


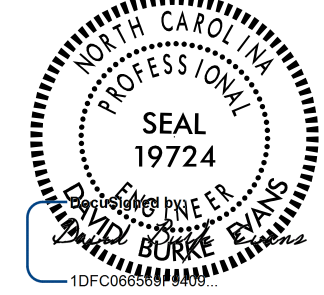
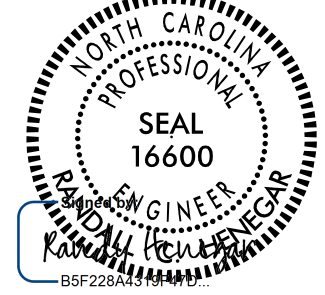
Type of Liner = PSRM

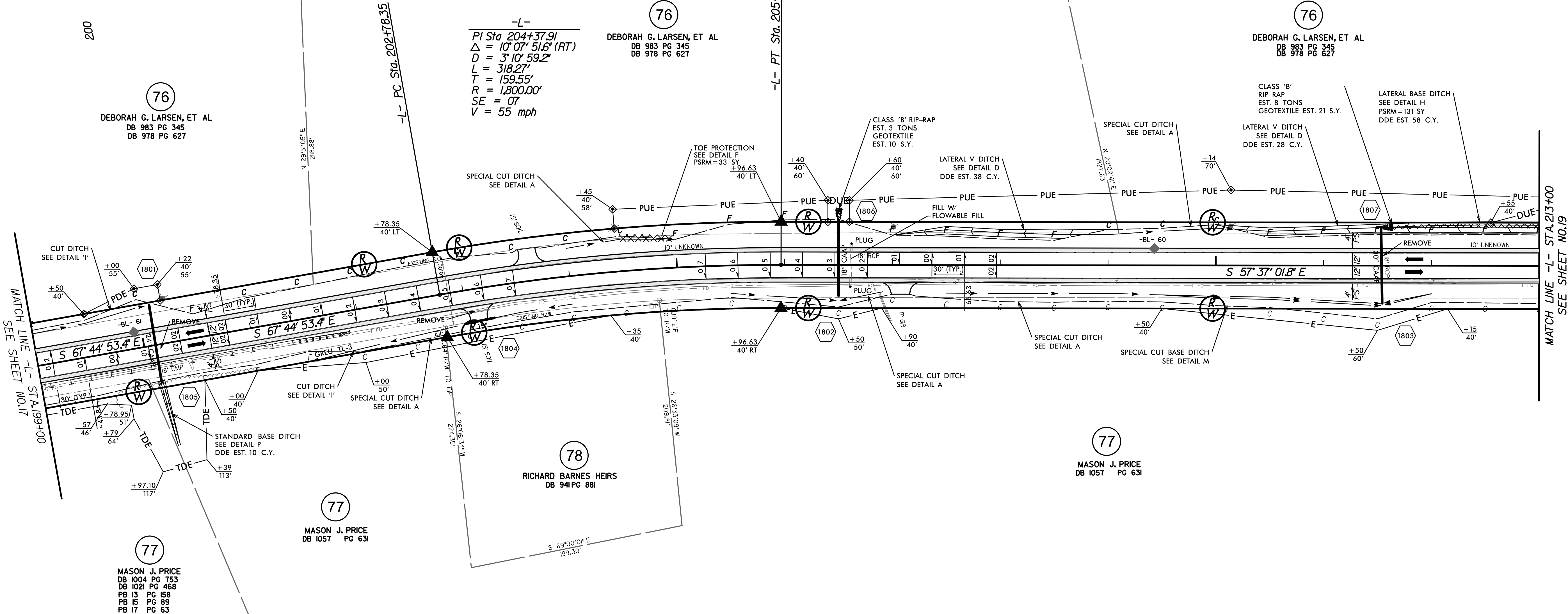
FROM STA.211+50-L- TO STA.213+00-L- LT.



FROM STA.209+50-L- TO STA.211+54-L- RT.



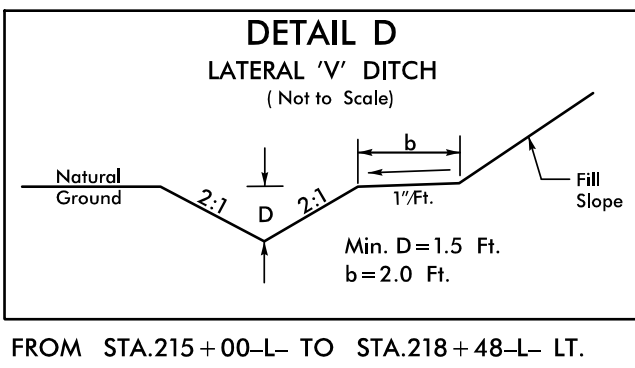
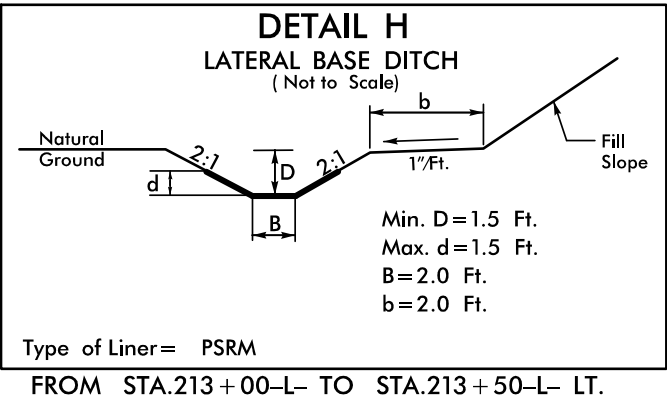
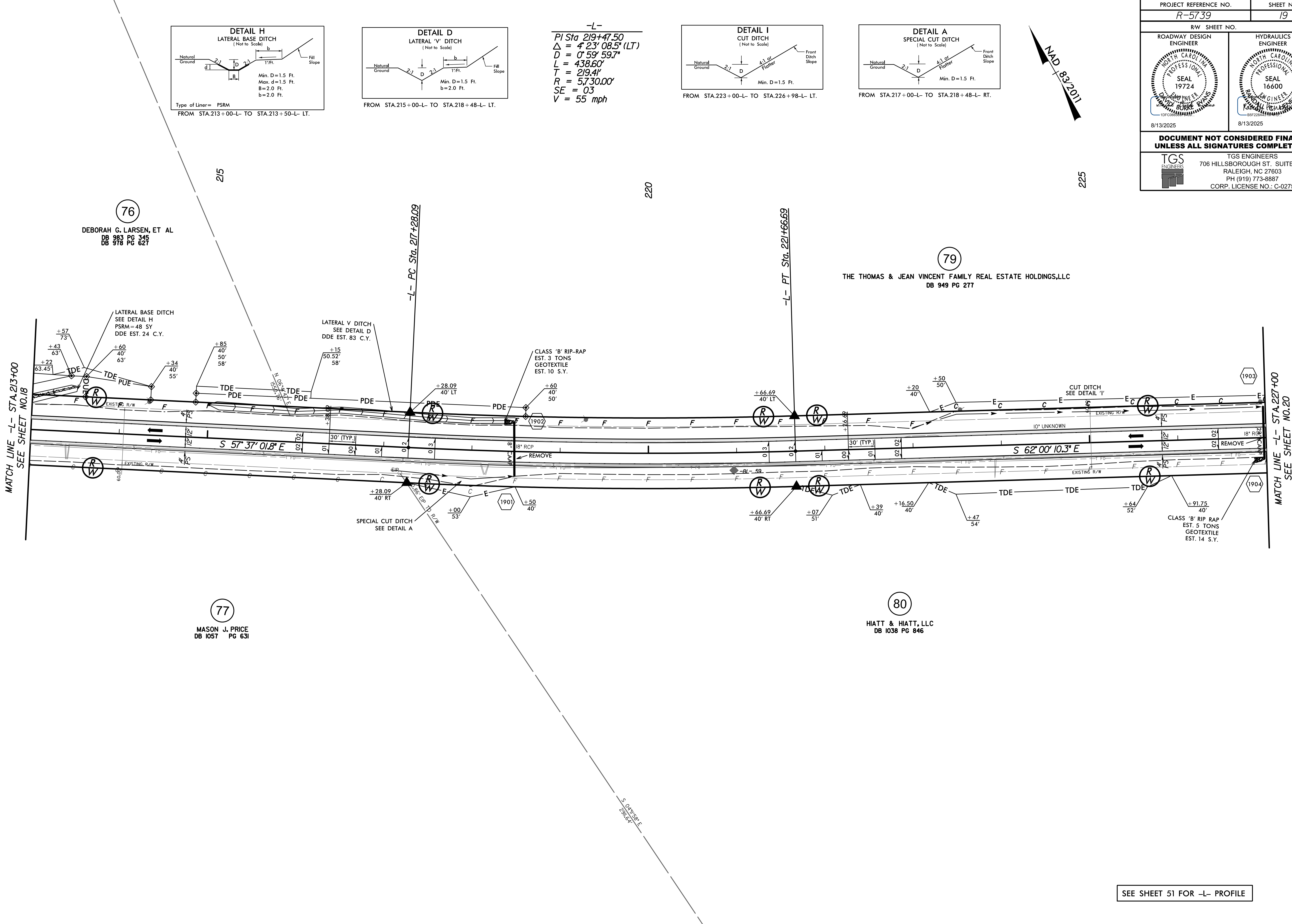
PROJECT REFERENCE NO.		SHEET NO.
R-5739		18
RW SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
		
8/13/2025		
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275



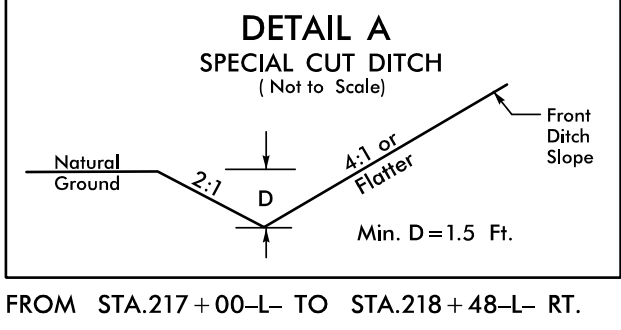
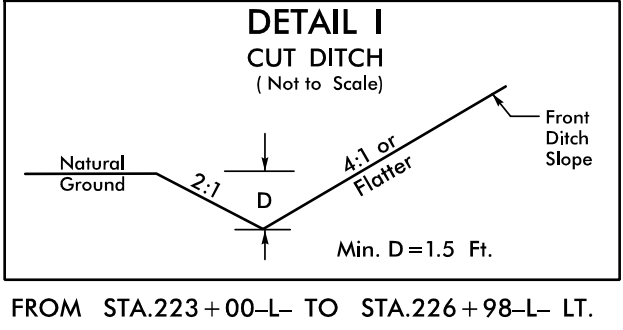
SEE SHEET 51 FOR -L- PROFILE

8/17/99

8/7/2025
N:\cadd\05-5739\Roadway\ProJ\RE739_RDY_PSH_19.dgn
10:44:43 AM



-L-
PI Sta 219+47.50
 $\Delta = 4^{\circ} 23' 08.5" (LT)$
 $D = 0^{\circ} 59' 59.7"$
 $L = 438.60'$
 $T = 219.41'$
 $R = 5,730.00'$
 $SE = 03$
 $V = 55 \text{ mph}$

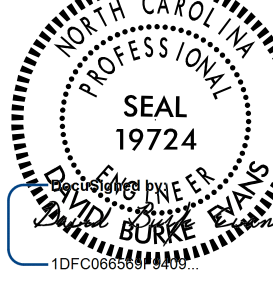
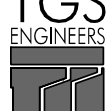


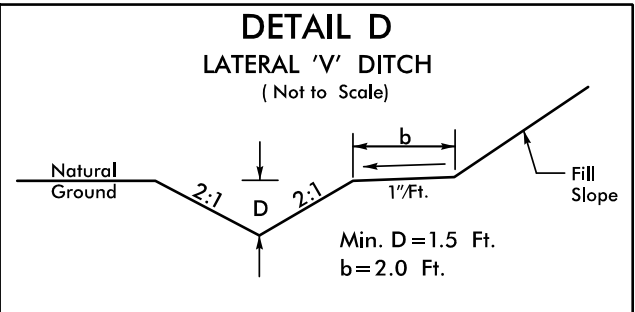
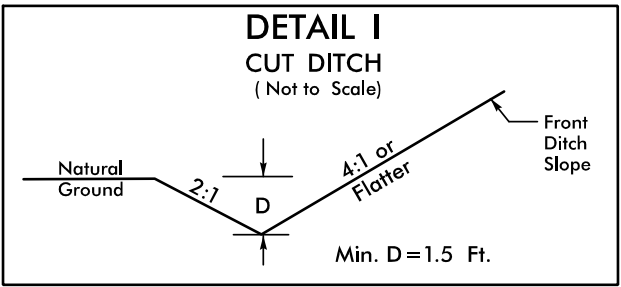
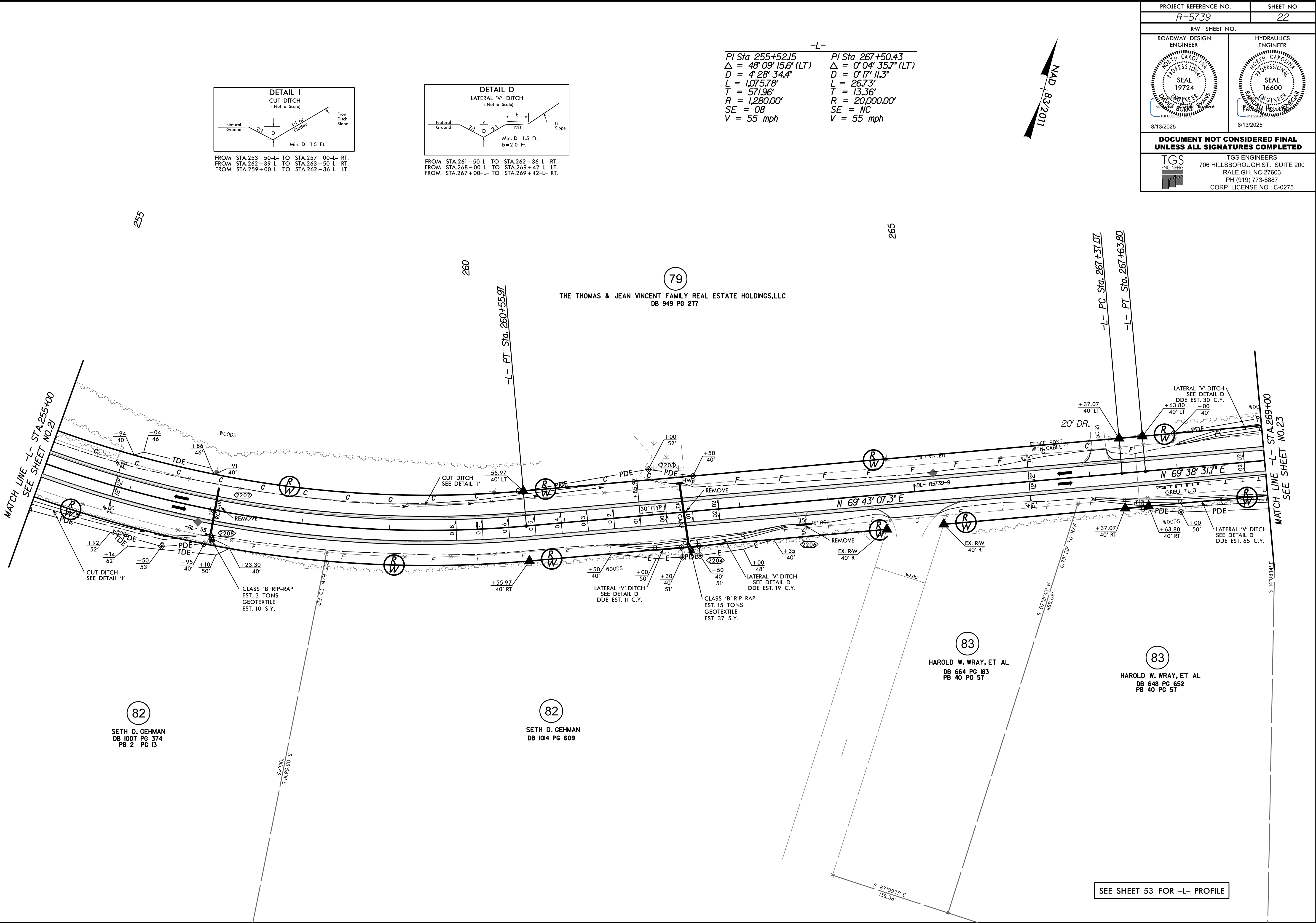
PROJECT REFERENCE NO. R-5739		SHEET NO. 19	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
8/13/2025		8/13/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

SEE SHEET 51 FOR -L- PROFILE

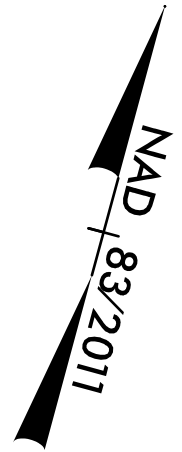




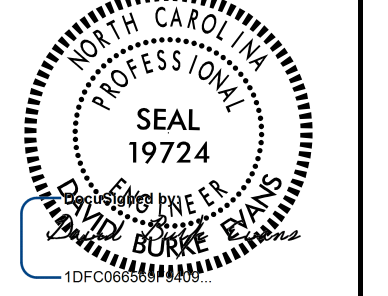
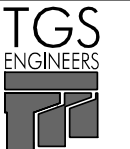
PROJECT REFERENCE NO.		SHEET NO.	
R-5739		21	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER 		HYDRAULICS ENGINEER 	
8/31/2025		8/31/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		TGS ENGINEERS 706 HILLSBOROUGH ST. SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



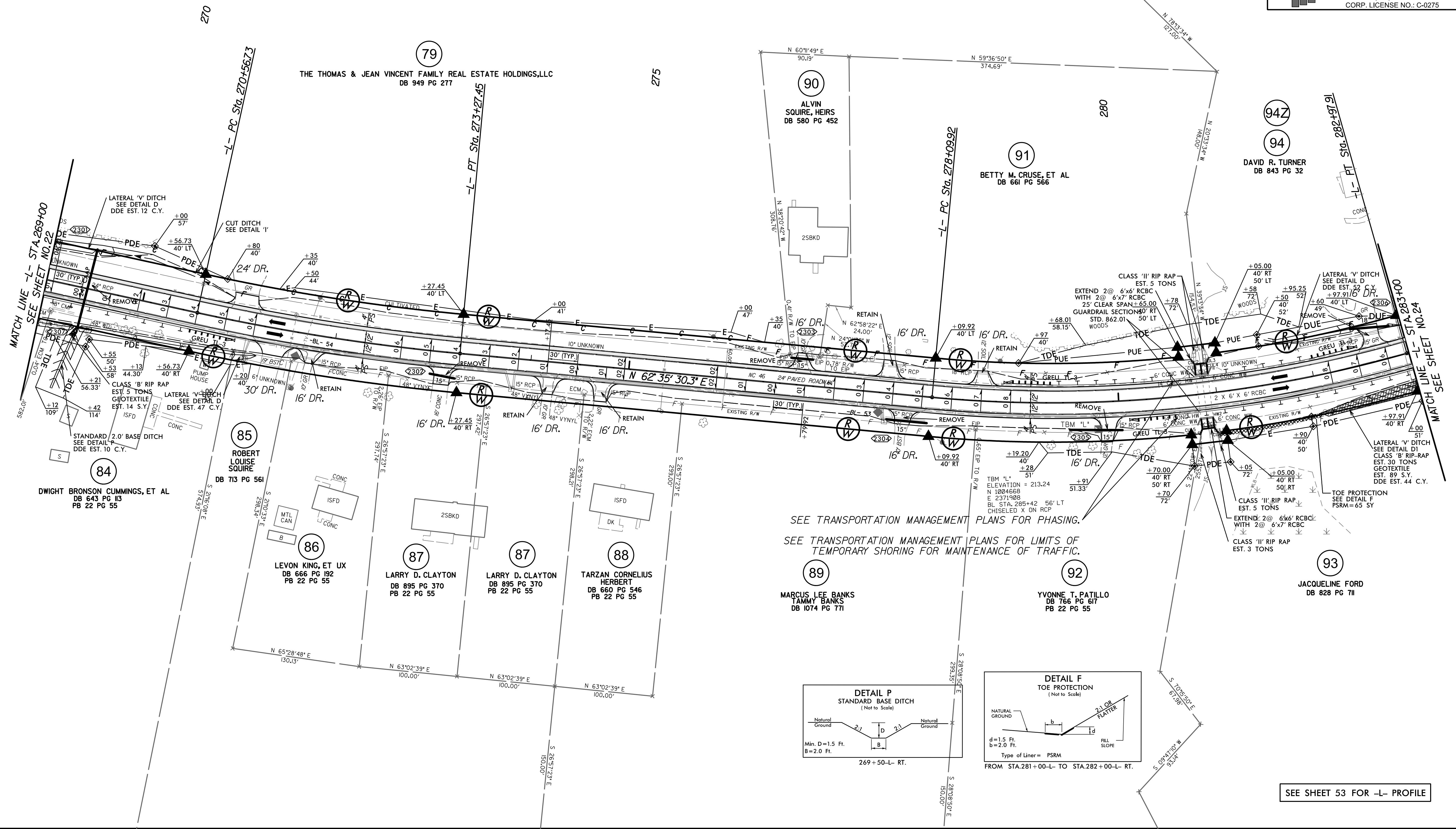
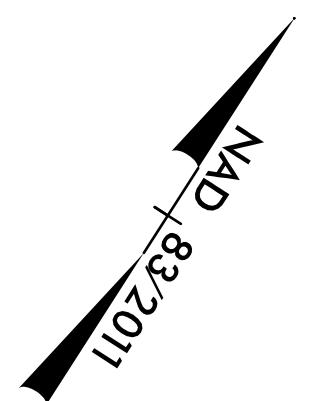
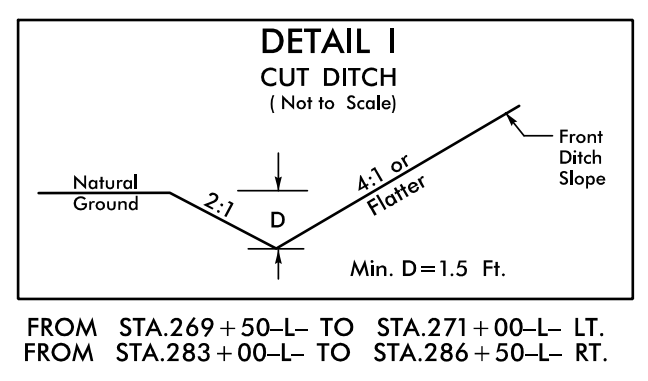
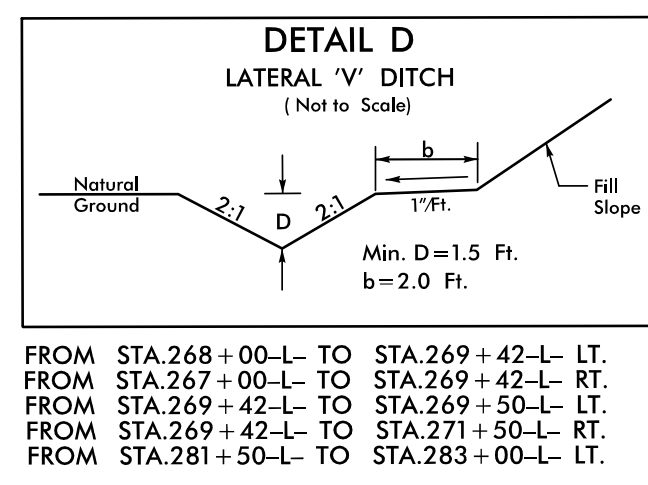
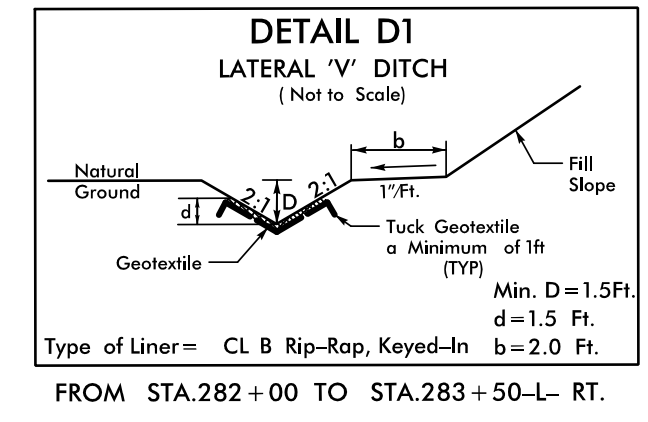
-L-	
PI Sta. 255+52.15	PI Sta. 267+50.43
$\Delta = 48^{\circ} 09' 15.6''$ (LT)	$\Delta = 0^{\circ} 04' 35.7''$ (LT)
$D = 4^{\circ} 28' 34.4''$	$D = 0^{\circ} 17' 11.3''$
$L = 1,075.78'$	$L = 26.73'$
$T = 571.96'$	$T = 13.36'$
$R = 1,280.00'$	$R = 20,000.00'$
$SE = .08$	$SE = NC$
$V = 55$ mph	$V = 55$ mph



PROJECT REFERENCE NO.		SHEET NO.
R-5739		22
R/W SHEET NO.		
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED		
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275

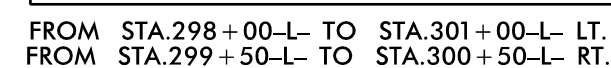
PROJECT REFERENCE NO. R-5739		SHEET NO. 23	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER  8/13/2025		HYDRAULICS ENGINEER  8/13/2025	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
 TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	

-L-
PI Sta 271+92.26
 $\Delta = 7^{\circ}03'01.4" (LT)$
 $D = 2^{\circ}36'15.7"$
 $L = 270.72'$
 $T = 135.53'$
 $R = 2,200.00'$
 $SE = 06$
 $V = 55 \text{ mph}$
PI Sta 280+56.73
 $\Delta = 21^{\circ}10'53.5" (LT)$
 $D = 4^{\circ}20'26.1"$
 $L = 487.99'$
 $T = 246.81'$
 $R = 1,320.00'$
 $SE = 08$
 $V = 55 \text{ mph}$



SEE SHEET 53 FOR -L- PROFILE

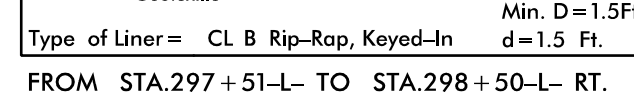
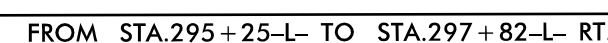
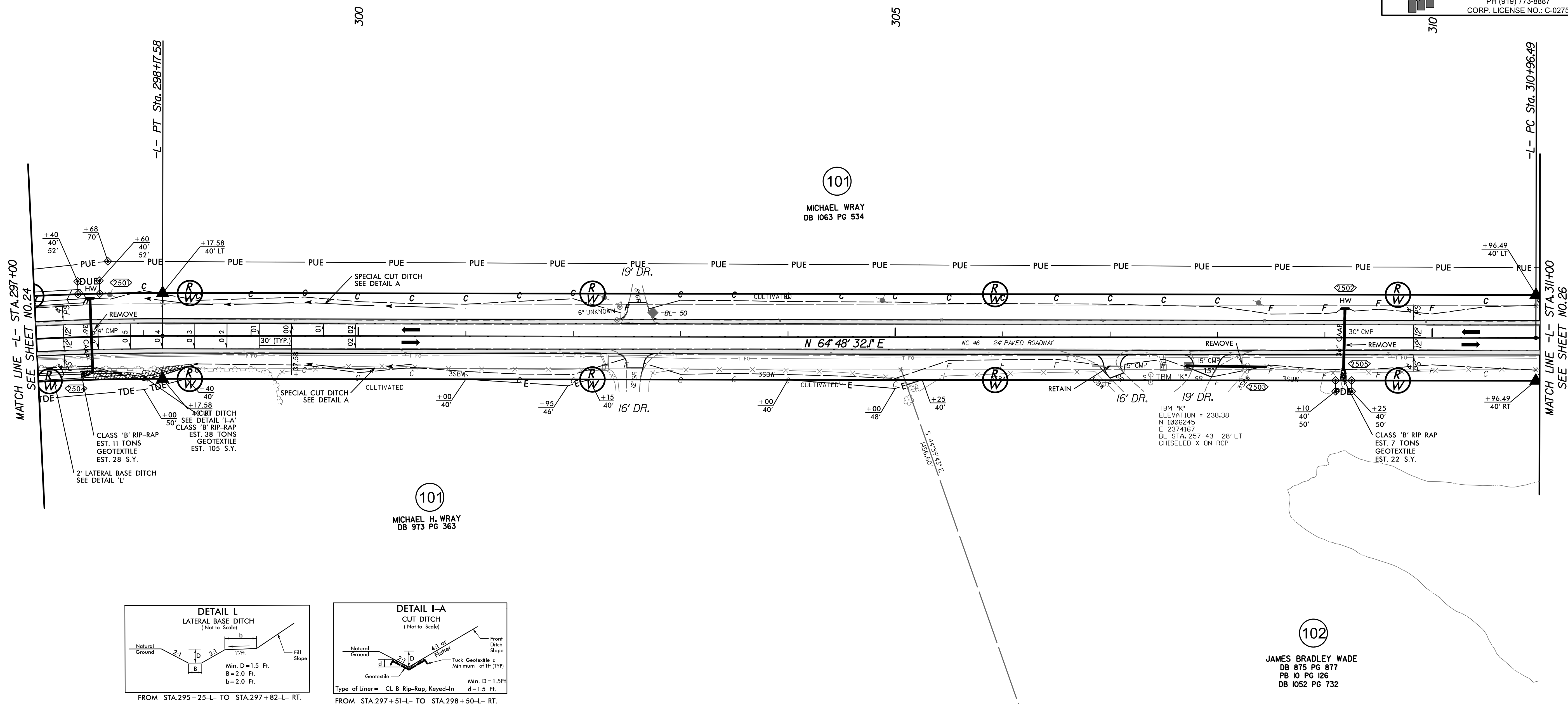




π Sgr 295+61.48
 $\Delta = 12^{\circ} 16' 31.4''$ (RT)
 $D = 2^{\circ} 23' 14.4''$
 $L = 514.19^{\circ}$
 $T = 258.08^{\circ}$
 $R = 2,400.00^{\circ}$
 $SE = 06$
 $V = 55 \text{ mph}$

$-L-$

π Sgr 311+89.87
 $\Delta = 0^{\circ} 53' 30.1''$ (RT)
 $D = 0^{\circ} 28' 38.9''$
 $L = 186.76^{\circ}$
 $T = 93.38^{\circ}$
 $R = 12,000.00^{\circ}$
 $SE = NC$
 $V = 55 \text{ mph}$



JAMES BRADLEY WADE
DB 875 PG 877
PB 10 PG 126
DB 1052 PG 732

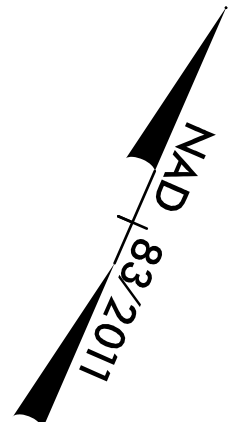
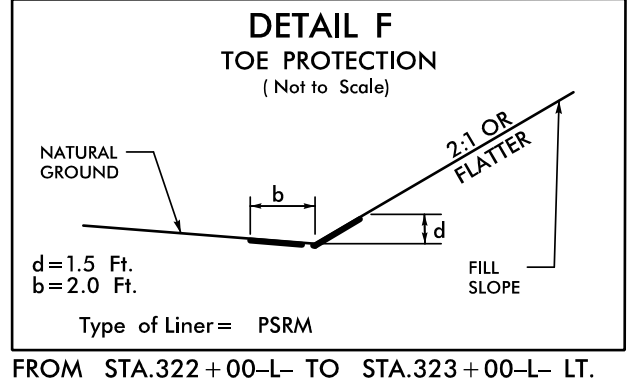
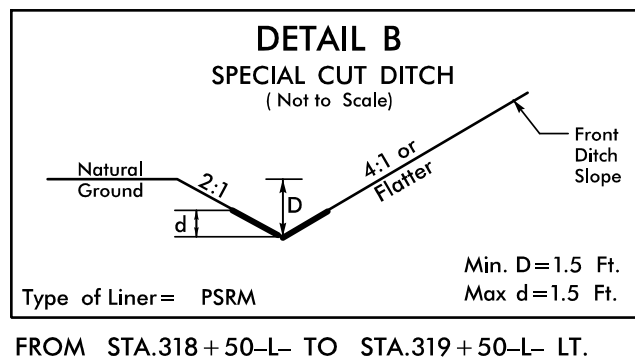
SEE SHEET 54 FOR -L- PROFILE

PROJECT REFERENCE NO.	SHEET NO.
R-5739	25
RW CHISEL NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
8/13/2025	8/13/2025
DOCUMENT NOT SIGNED FINAL UNLESS ALL SIGNATURES COMPLETED	
	TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275

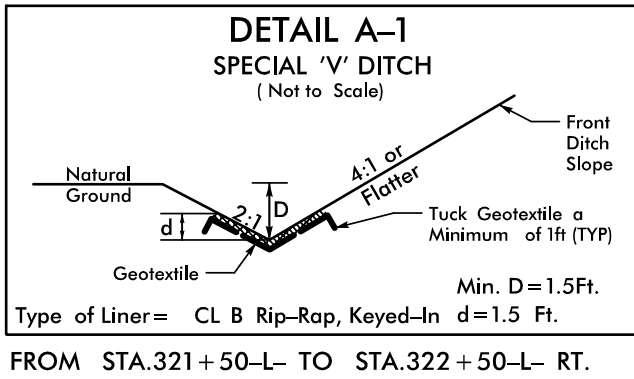
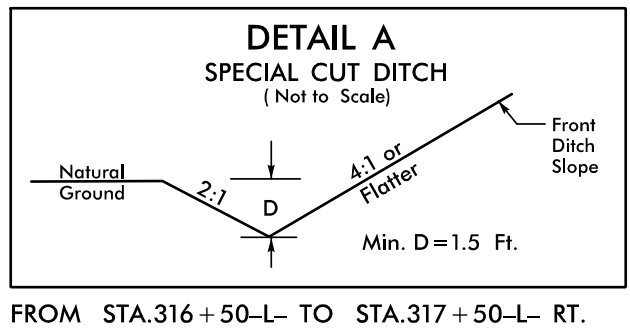
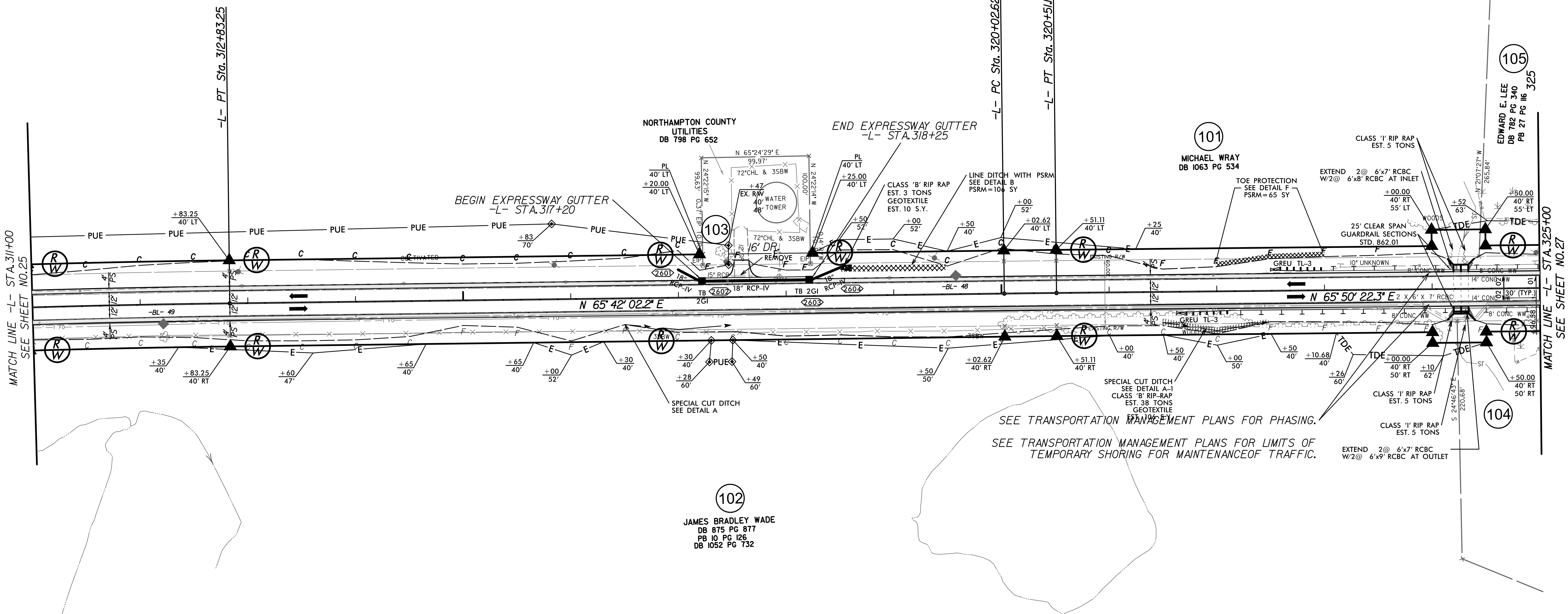
8/17/99

8/7/2025
\\cncdoo1\5739\Roadway\Pro\B739_RDY_PSH_26.dgn
10/24/2025

-L-
PI Sta 311+89.87
 $\Delta = 0^{\circ} 53' 30.1''$ (RT)
D = 0' 28' 38.9"
L = 186.76'
T = 93.38'
R = 12,000.00'
SE = NC
V = 55 mph
PI Sta 320+26.86
 $\Delta = 0^{\circ} 08' 20.1''$ (RT)
D = 0' 17' 11.3"
L = 48.49'
T = 24.24'
R = 20,000.00'
SE = NC
V = 55 mph



PROJECT REFERENCE NO.		SHEET NO.	
R-5739		26	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			
		TGS ENGINEERS 706 HILLSBOROUGH ST., SUITE 200 RALEIGH, NC 27603 PH (919) 773-8887 CORP. LICENSE NO.: C-0275	



SEE SHEET 55 FOR -L- PROFILE

