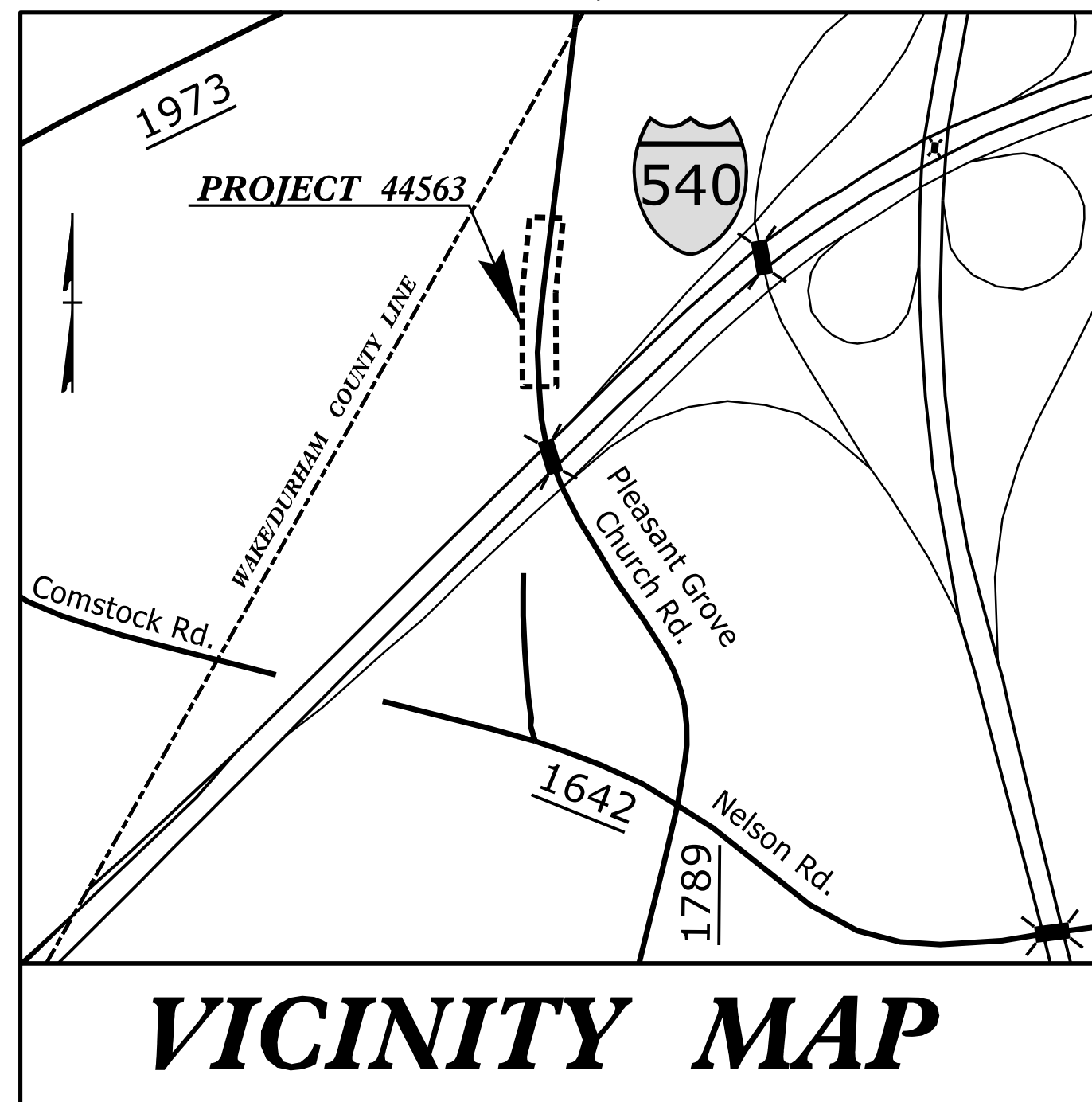


09/08/19

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



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**WAKE COUNTY**

**LOCATION: SR 1789 (PLEASANT GROVE CHURCH ROAD) NORTH OF I-540**

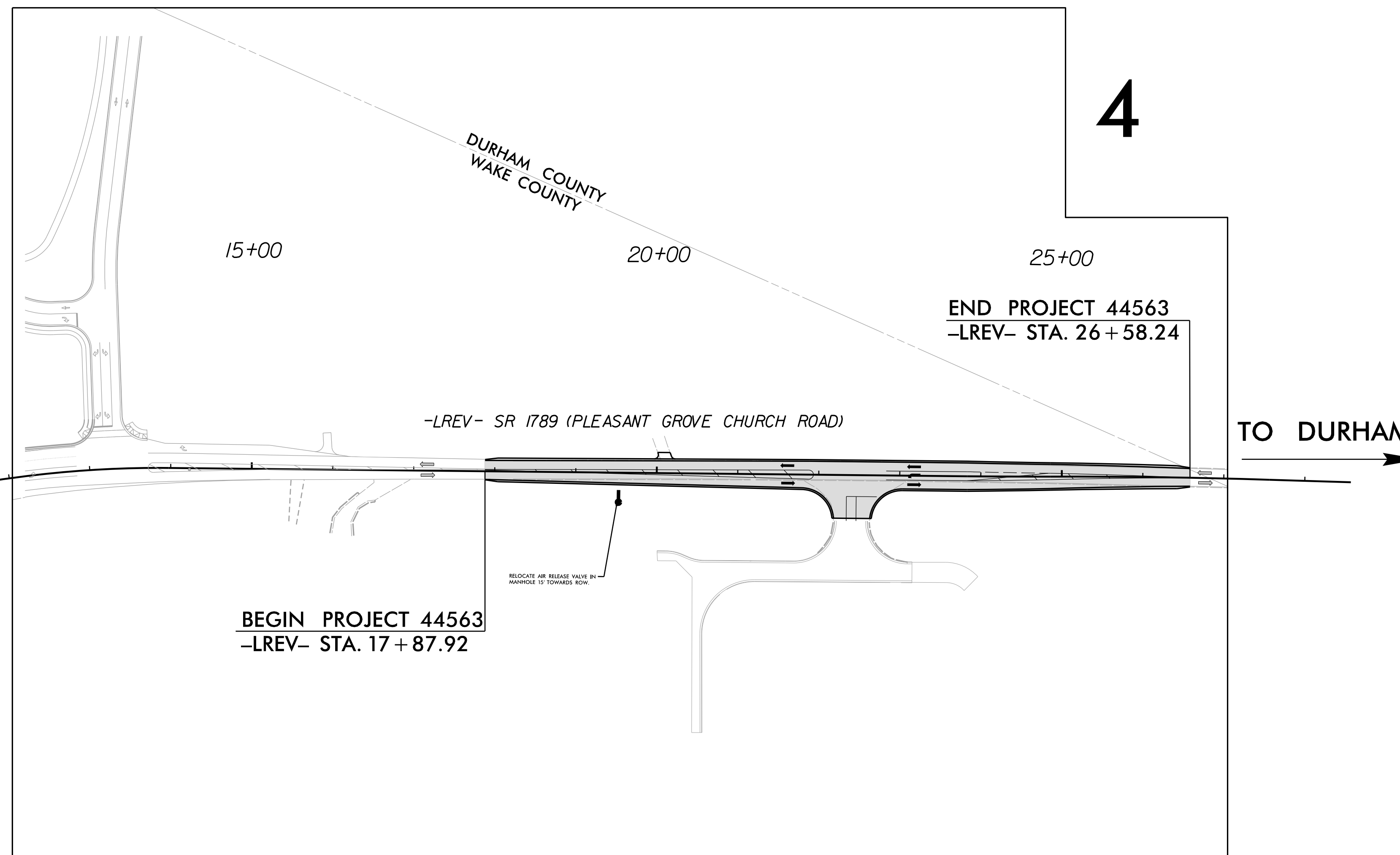
**TYPE OF WORK: GRADING, PAVING & DRAINAGE**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	44563	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44563		PE, RW, UTIL	
44563		CONST	



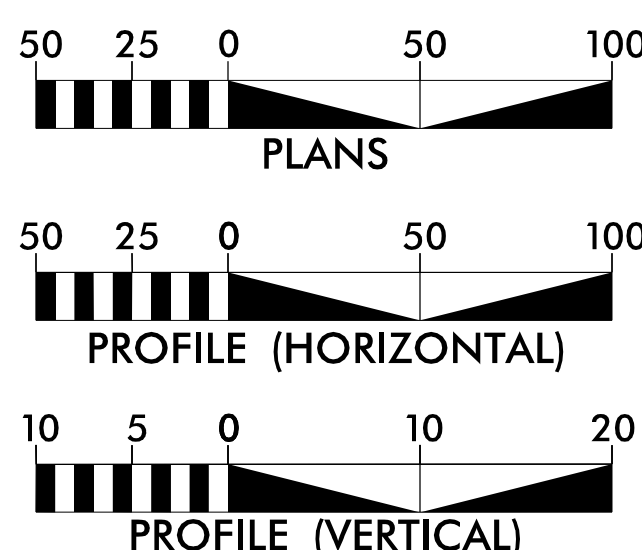
**TIP PROJECT: 44563**

**CONTRACT: DE00202**



**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

**GRAPHIC SCALES**



**DESIGN DATA**

ADT 2013 = 7,300  
ADT 2033 = 13,200  
T = 3% \*  
V = 50 MPH  
\* (TTST 1% + DUAL 2%)  
FUNC. CLASS = LOCAL  
SUBREGIONAL TIER

**PROJECT LENGTH**

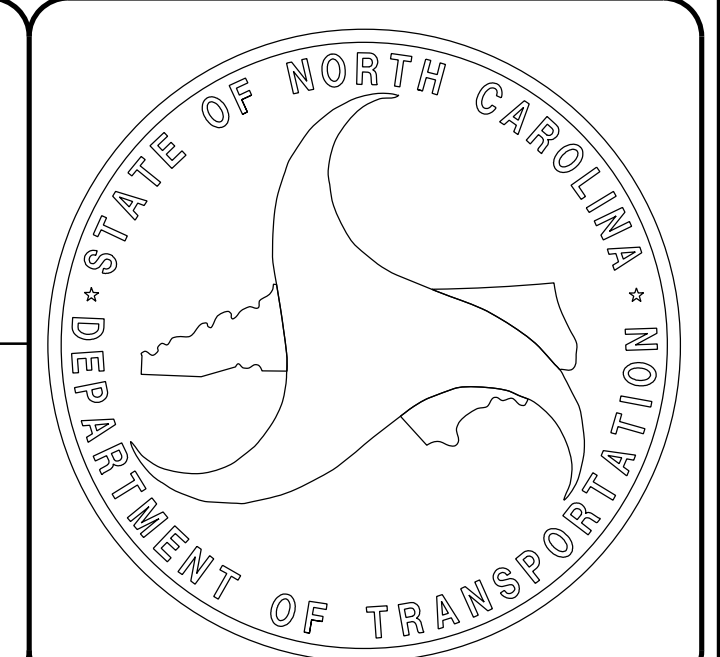
LENGTH ROADWAY PROJECT 44563 = 0.165 MILES

**NCDOT CONTACT:** BEN UPSHAW, PE  
DIVISION DESIGN ENGINEER- DIVISION 5  
PH: 919-220-4600

Prepared In the Office of:  
**RAMEY KEMP ASSOCIATES, INC.**  
Transportation Engineers  
5808 Faringdon Place, Suite 100 - Raleigh, North Carolina 27609  
919-872-5115 Tel. 919-878-5416 Fax. - www.rameykemp.com  
NC License No. C-0910

2012 STANDARD SPECIFICATIONS  
**AUGUST 2016**  
**RIGHT OF WAY DATE:**  
**LETTING DATE:**  
**CLAUDETTE M.K. ROQUE, PE**  
PROJECT ENGINEER  
**KAYLA M. WISE, E.I.**  
PROJECT DESIGNER

**HYDRAULICS ENGINEER**  
  
SIGNATURE: *Claude M.K. Roque*  
**ROADWAY DESIGN ENGINEER**  
  
SIGNATURE: *Kayla M. Wise*



I:\9\2017\SR1789\_Rdy\_tsh.dgn  
User: KWISE

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**INDEX OF SHEETS, LIST OF STANDARD DRAWINGS & GENERAL NOTES**

**INDEX OF SHEETS**

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C-1	SURVEY CONTROL SHEET
1D-1	CENTERLINE COORDINATE LIST
2A-1	PAVEMENT SCHEDULE, TYPICAL SECTIONS, WEDGING AND MILLING DETAILS
2C-1	SHOULDER WEDGE DETAIL
3B-1	SUMMARY OF EARTHWORK, DRAINAGE SUMMARY AND PARCEL INDEX
4 THRU 5	PLAN AND PROFILE SHEETS
TMP-1	TRANSPORTATION MANAGEMENT PLAN
PMP-1	SIGNING AND PAVEMENT MARKING PLAN
EC-1 THRU EC-4	EROSION CONTROL PLANS
X-1A	CROSS-SECTION SUMMARY
X-1 THRU X-7	CROSS-SECTIONS

**2012 ROADWAY ENGLISH STANDARD DRAWINGS**

EFF. 01-17-2012  
REV. 10-30-2012

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" HIGHWAY DESIGN BRANCH - N. C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N. C., DATED JANUARY, 2012 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
225.02	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
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

**GENERAL NOTES:**

**2012 SPECIFICATIONS**

EFFECTIVE: 01-17-2012  
REVISED: 10-31-2014

**GRADE LINE:**

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. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

**CLEARING:**

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

**SUPERELEVATION:**

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

**SHOULDER CONSTRUCTION:**

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

**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:**

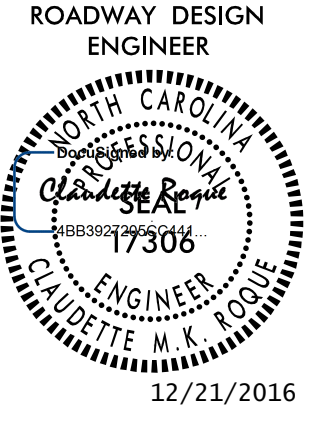

SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.

**SUBSURFACE PLANS:**

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

**UTILITIES:**

UTILITY OWNERS ON THIS PROJECT ARE:  
DUKE ENERGY PROGRESS, PSNC, TOWN OF CARY, AT&T, TIME WARNER CABLE, FRONTIER, LEVEL3, CENTURYLINK, AND WAKE COUNTY PUBLIC SCHOOL SYSTEM.  
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

PROJECT REFERENCE NO. <b>44563</b>	SHEET NO. <b>1A</b>
	ROADWAY DESIGN ENGINEER 
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
 <b>RAMEY KEMP ASSOCIATES, INC.</b> Transportation Engineers 5808 Faringdon Place, Suite 100 Raleigh, North Carolina 27609 919-872-5115 Tel. 919-878-5416 Fax. www.rameykemp.com NC License No. C-0910	

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

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

## BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
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	----- ☠
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	----- 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	○
Switch	□
RR Abandoned	-----
RR Dismantled	-----

## RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----
Proposed Right of Way Line with Concrete or Granite RW Marker	-----
Proposed Control of Access Line with Concrete CA Marker	-----
Existing Control of Access	-----
Proposed Control of Access	-----
Existing Easement Line	----- E
Proposed Temporary Construction Easement	----- E
Proposed Temporary Drainage Easement	----- TDE
Proposed Permanent Drainage Easement	----- PDE
Proposed Permanent Drainage / Utility Easement	----- DUE
Proposed Permanent Utility Easement	----- PUE
Proposed Temporary Utility Easement	----- TUE
Proposed Aerial Utility Easement	----- AUE
Proposed Permanent Easement with Iron Pin and Cap Marker	-----

## ROADS AND RELATED FEATURES:

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

## VEGETATION:

Single Tree	○
Single Shrub	○
Hedge	-----
Woods Line	-----

Orchard	-----
Vineyard	-----

## EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	----- CONC
Bridge Wing Wall, Head Wall and End Wall	----- CONC WW
MINOR:	
Head and End Wall	----- CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	○
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.*)	----- P
U/G Power Line LOS C (S.U.E.*)	----- P
U/G Power Line LOS D (S.U.E.*)	----- P

## TELEPHONE:

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

## WATER:

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

## TV:

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

## GAS:

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

## SANITARY SEWER:

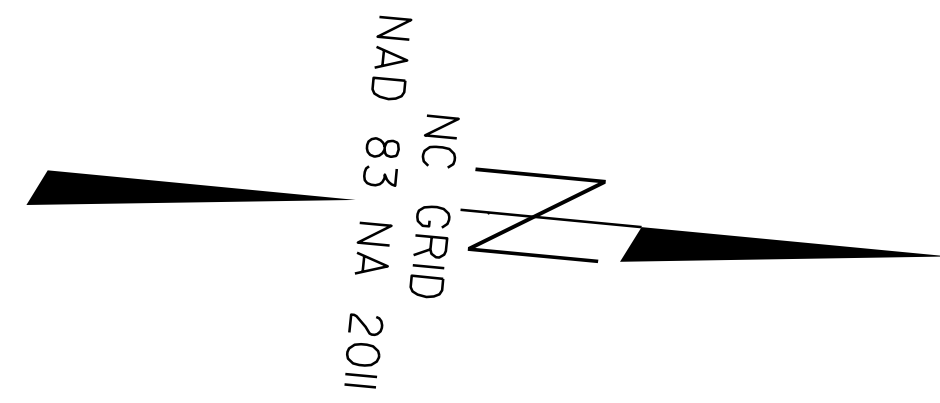
Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	----- SS
Above Ground Sanitary Sewer	----- A/G Sanitary Sewer
SS Forced Main Line LOS B (S.U.E.*)	----- FSS
SS Forced Main Line LOS C (S.U.E.*)	----- FSS
SS Forced Main Line LOS D (S.U.E.*)	----- FSS

## MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	⊠
Utility Unknown U/G Line LOS B (S.U.E.*)	----- TUTL
U/G Tank; Water, Gas, Oil	□
Underground Storage Tank, Approx. Loc.	⊕
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.

# SURVEY CONTROL SHEET 44563

PROJECT REFERENCE NO.	SHEET NO.
44563	1C-1
Location and Surveys	

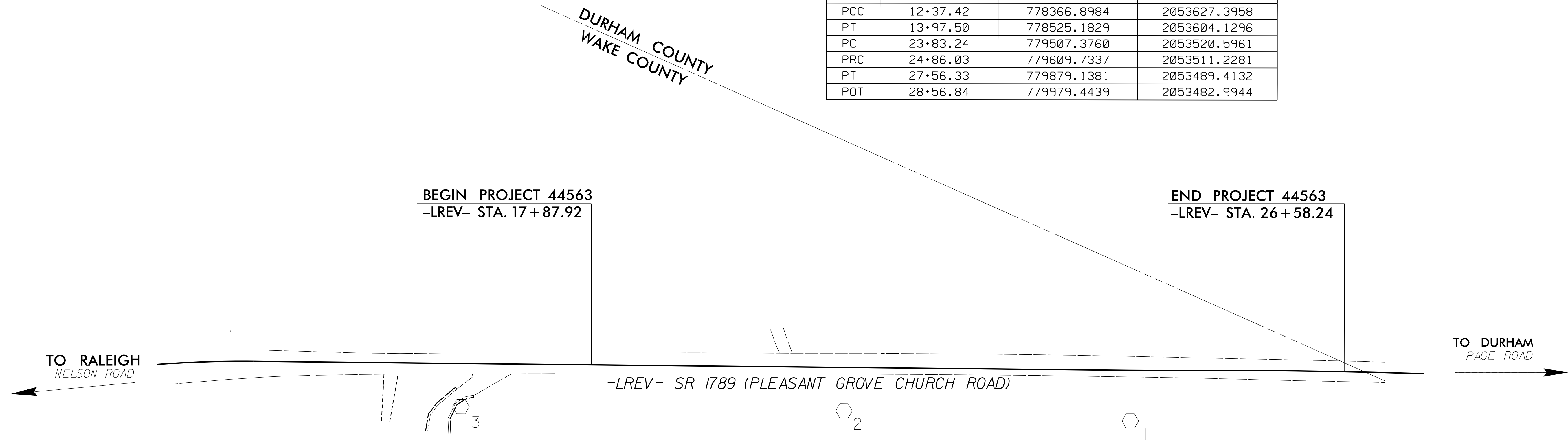


ROW MARKER PERMANENT EASEMENT-E

ALIGN	STATION	OFFSET	NORTH	EAST
LREV	24+45.00	-80.00	779561.4963	2053435.4676
LREV	24+45.00	-30.99	779566.0262	2053484.2666
LREV	24+70.00	-80.00	779586.1367	2053433.1414
LREV	24+70.00	-30.64	779590.8526	2053482.2746

LREV

TYPE	STATION	NORTH	EAST
PC	10+00.00	778139.5951	2053695.0275
PCC	12+37.42	778366.8984	2053627.3958
PT	13+97.50	778525.1829	2053604.1296
PC	23+83.24	779507.3760	2053520.5961
PRC	24+86.03	779609.7337	2053511.2281
PT	27+56.33	779879.1381	2053489.4132
POT	28+56.84	779979.4439	2053482.9944



POINT	NORTH	EAST	ELEVATION	LREV STATION	OFFSET
3	778768.9925	2053633.4118	402.31	16+37.95	49.84 RT
2	779209.7376	2053596.2645	405.87	20+80.26	50.17 RT
1	779540.0980	2053576.4850	406.31	24+10.91	58.51 RT

**DATUM DESCRIPTION**

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY OTHERS FOR MONUMENT "1"

WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 779540.098(ft) EASTING: 2053576.485(ft) ELEVATION: 485.406(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: ACGF = 0.999920429 1/X = 1.00007958

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "1" TO -L- STATION 13+71.42 IS  
S 1°39'25.7" E 1041.316"

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES  
VERTICAL DATUM USED IS NAVD 88

**NOTES:**

1. SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.
- ⬡ INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY OTHERS.
- PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM (VRS).

GEOID G12NC  
NOTE: DRAWING NOT TO SCALE

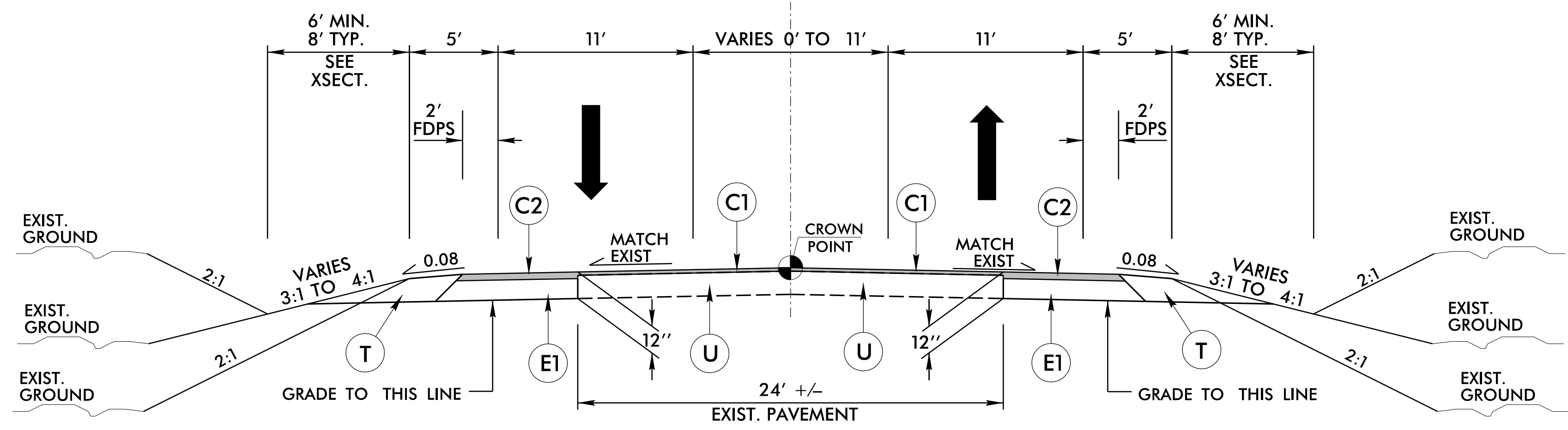


PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C3	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
E1	PROP. APPROX. 9" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E2	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 3" OR GREATER THAN 5.5" IN DEPTH.
T	COMPACTED EARTH MATERIAL
U	EXISTING PAVEMENT
V1	VARIABLE DEPTH MILLING
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD DETAIL ON THIS SHEET)

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

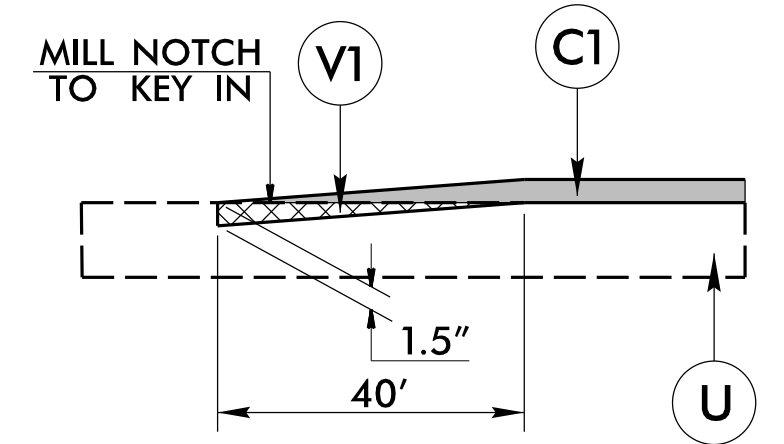
PROJECT REFERENCE NO. <b>44563</b>	SHEET NO. <b>2A-1</b>
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
<b>DOCUMENT NOT CONSIDERED FINAL</b> <b>UNLESS ALL SIGNATURES COMPLETED</b>	
<b>RAMEY KEMP ASSOCIATES, INC.</b> Transportation Engineers 5808 Faringdon Place, Suite 100 Raleigh, North Carolina 27609 919-872-5115 Tel. 919-878-5416 Fax. www.rameykemp.com NC License No. C-0910	

☒ -LREV- (PLEASANT GROVE CHURCH ROAD)



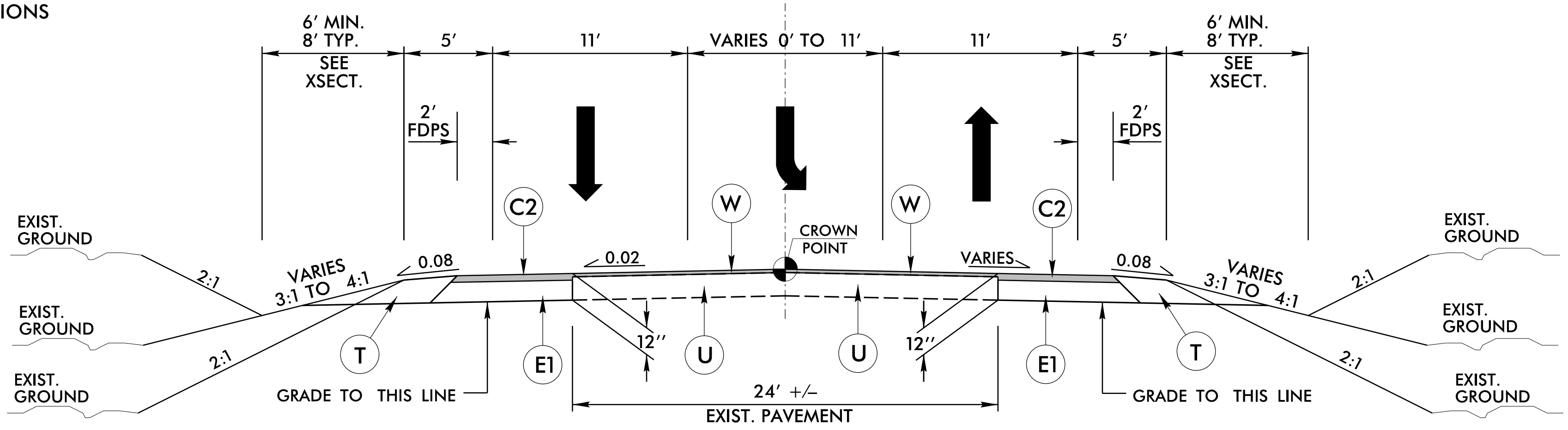
**TYPICAL SECTION NO. 1**

-LREV- STA. 17+87.92 TO -LREV- STA. 23+50.00  
 NOTE: CROWN POINT LOCATION SHIFTS WITHIN THE CENTER TURN LANE



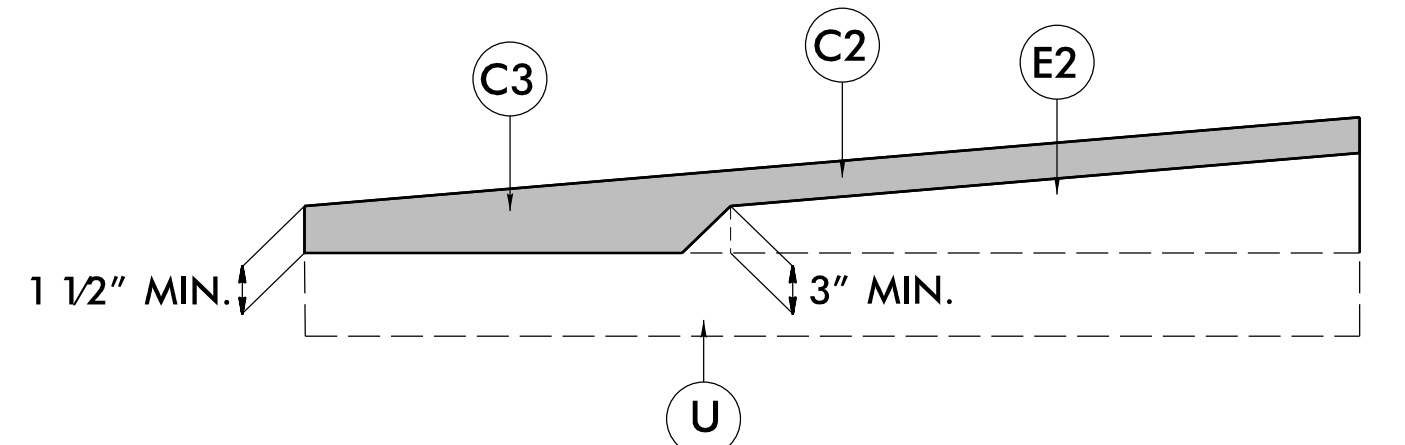
**BUTT MILLING DETAIL**  
 SEE PLANS FOR LIMITS / LOCATIONS

☒ -LREV- (PLEASANT GROVE CHURCH ROAD)



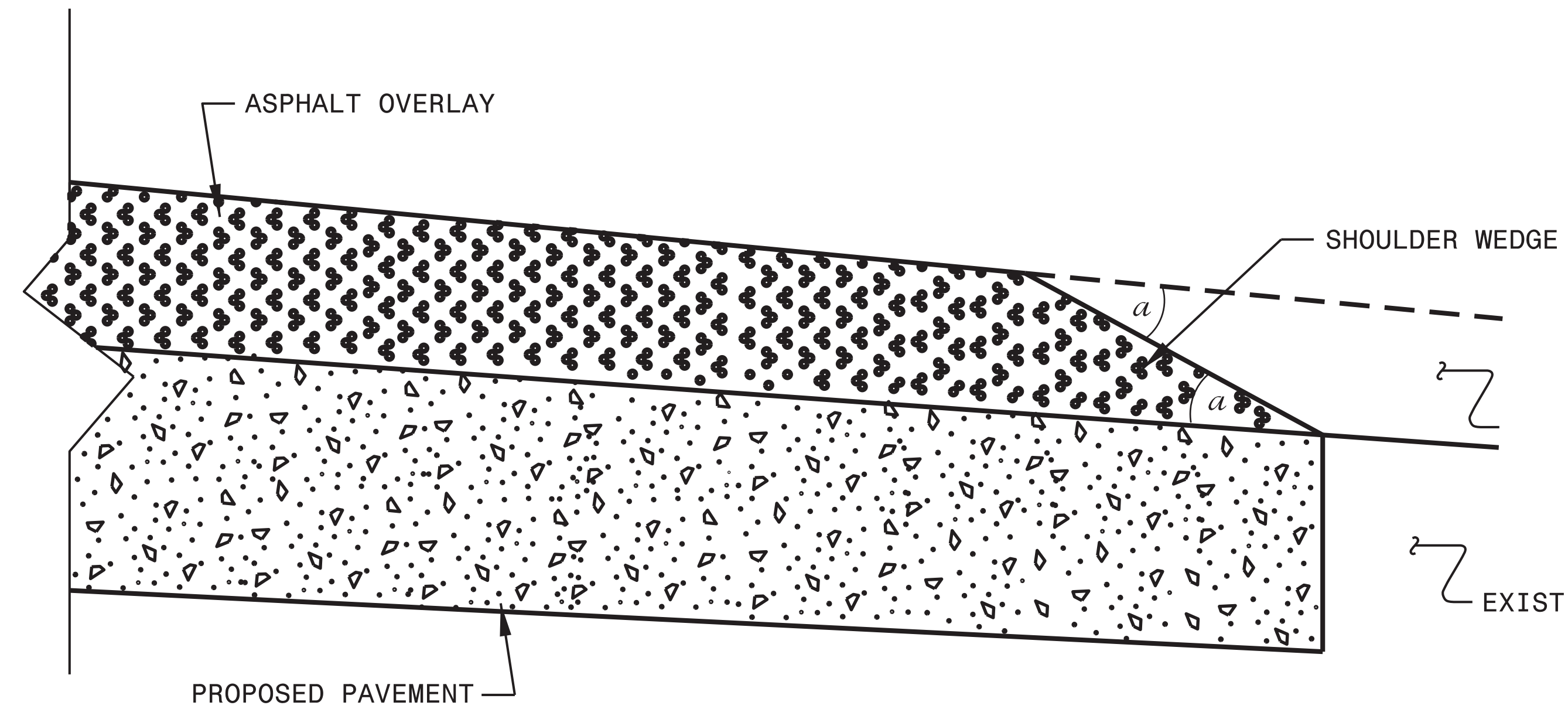
**TYPICAL SECTION NO. 2**

-LREV- STA. 23+50.00 TO -LREV- STA. 26+58.24  
 NOTE: CROWN POINT LOCATION SHIFTS WITHIN THE CENTER TURN LANE

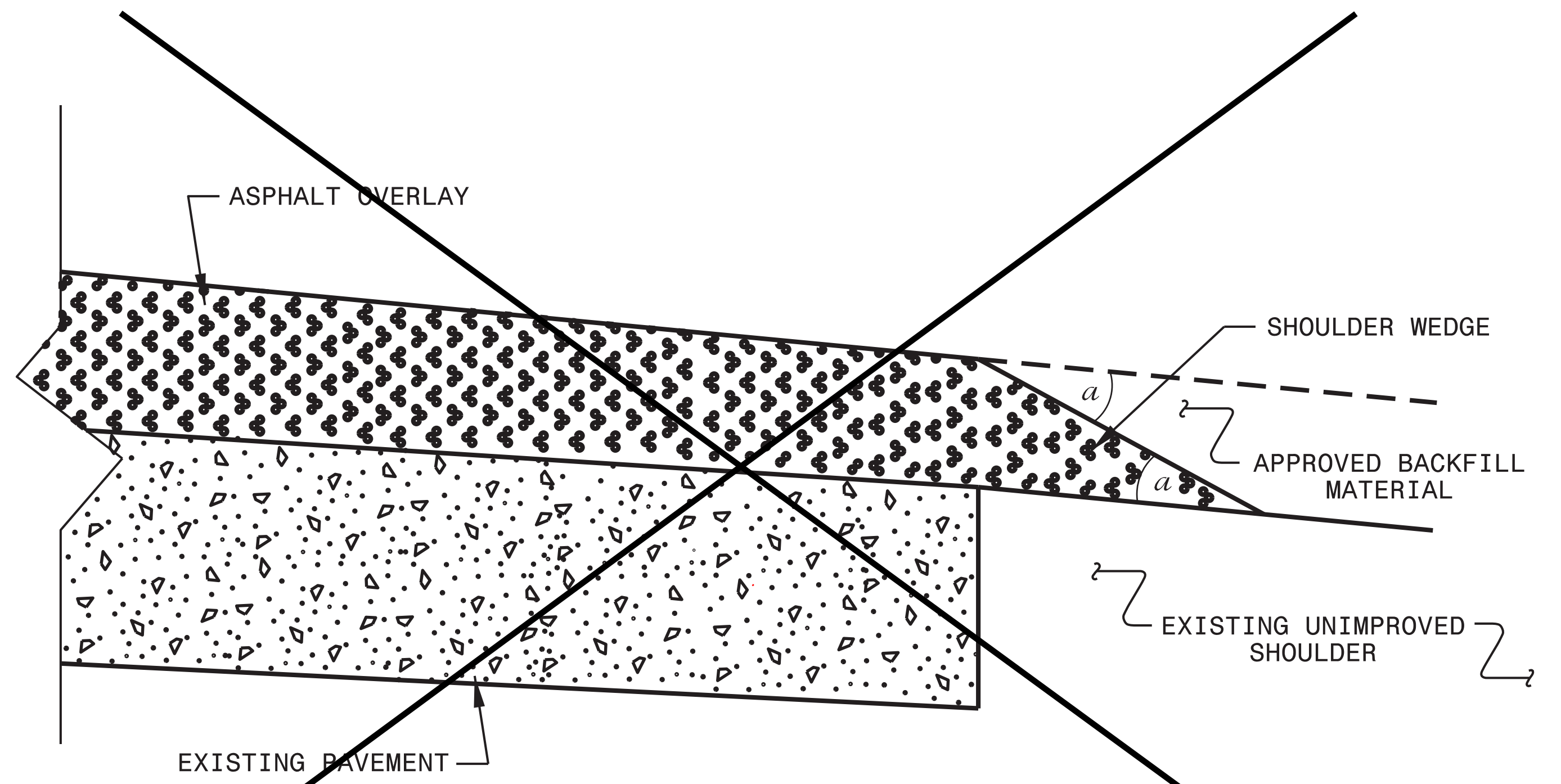


**WEDGING DETAIL FOR RESURFACING**  
 USE IN CONJUNCTION WITH  
 TYPICAL SECTION NO. 2

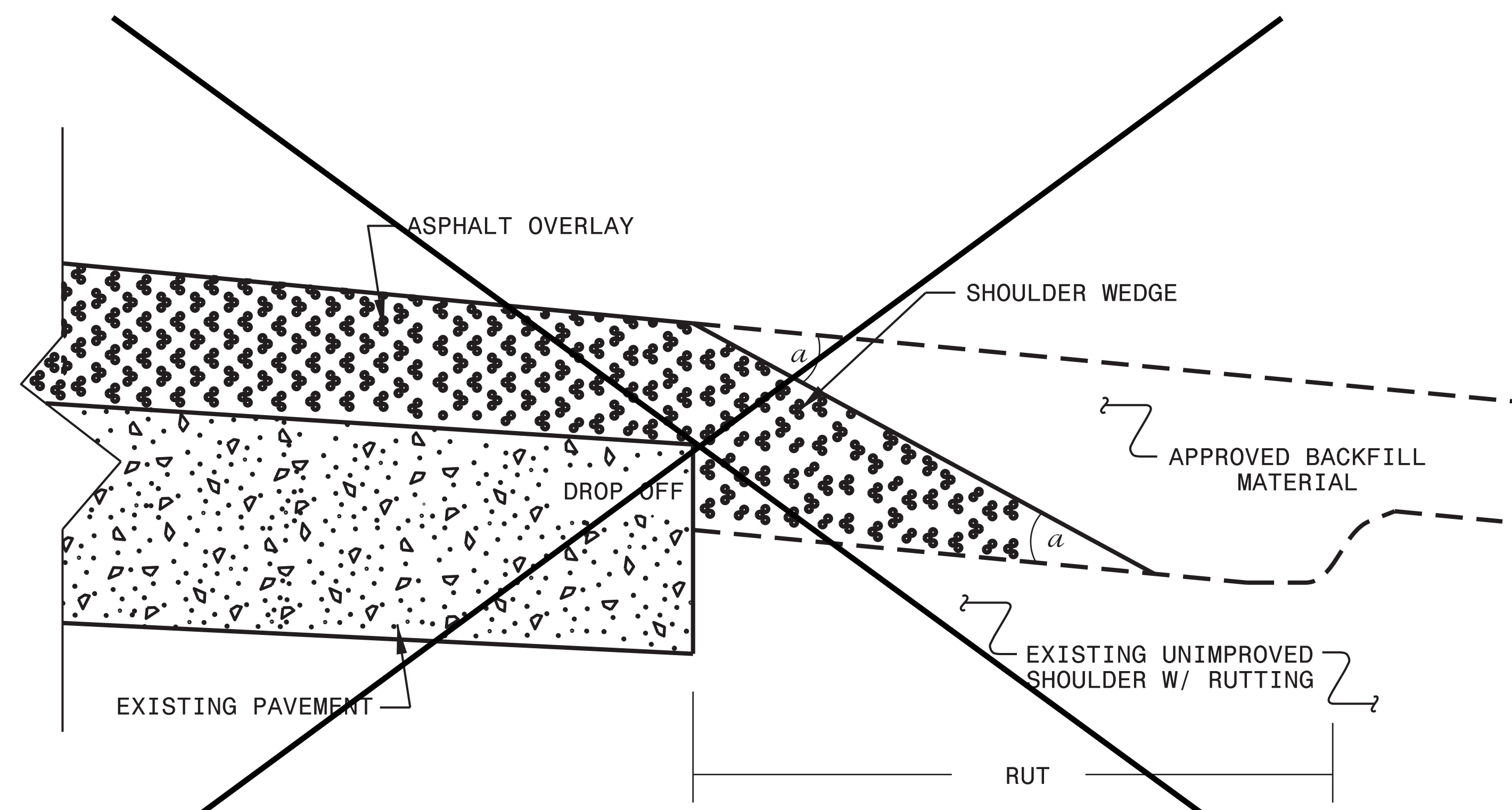
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFD AND ULTRA-THIN BONDED WEARING COURSE.
  - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
  - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



**SHOULDER WEDGE DETAIL**  
(Resurfacing Projects w/ Widening or  
with Existing Paved Shoulder having no dropoffs)



**SHOULDER WEDGE DETAIL**  
(Resurfacing Projects w/ NO Widening)



**SHOULDER WEDGE DETAIL**  
(Resurfacing Adjacent to  
Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>SHOULDER WEDGE DETAILS</b>	
ORIGINAL BY: T.SPELL	DATE: 7-19-11
MODIFIED BY:	DATE: 2/2/16
CHECKED BY:	DATE:
FILE SPEC.: s-usr/details/stand/shoulderwedgedetail.dgn	

11/15/11 10:58 AM  
 C:\Users\TSpell\Documents\2011\44563\2C-1\SHOULDER WEDGE DETAILS.dwg  
 T.SPELL  
 2/2/16



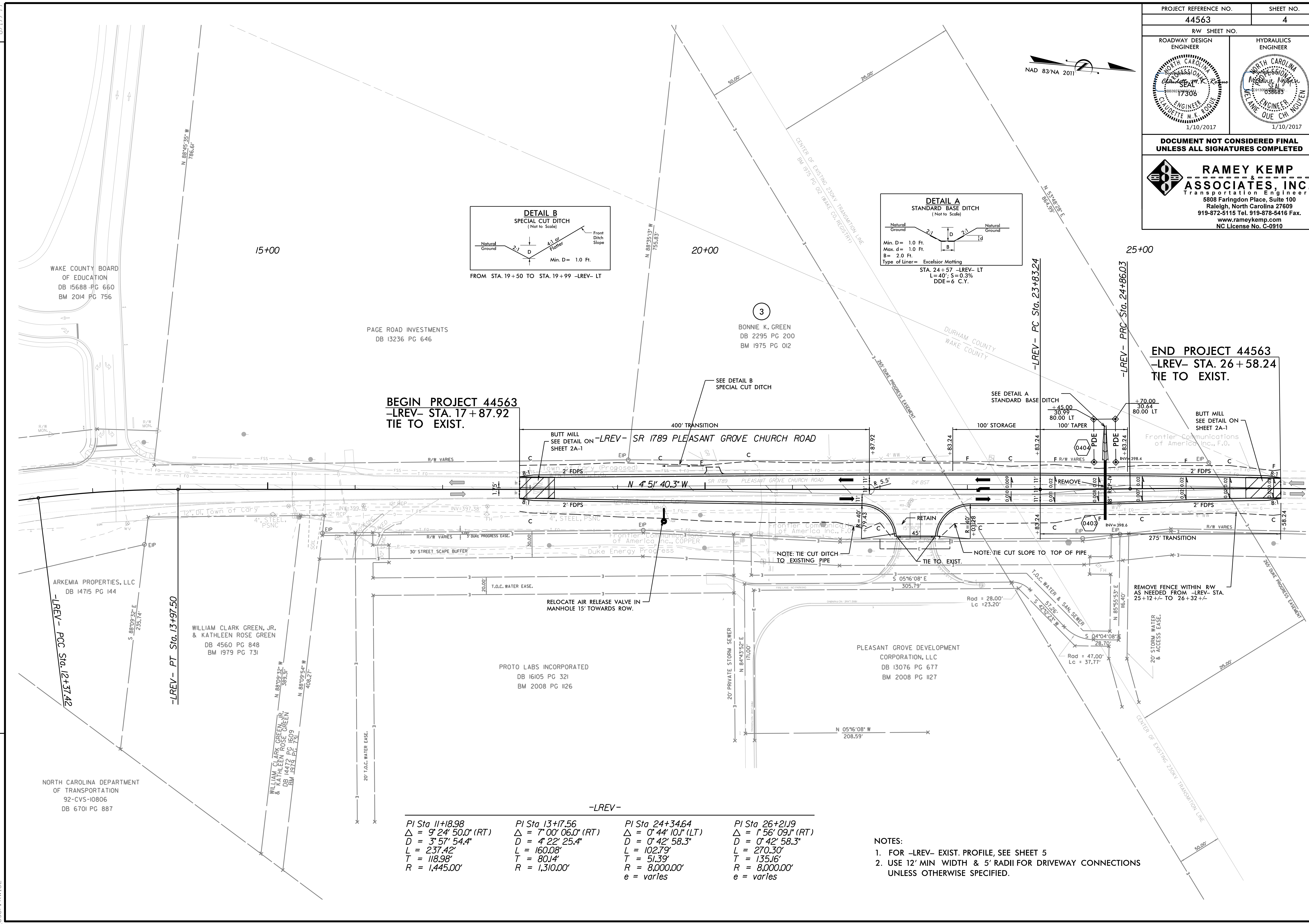
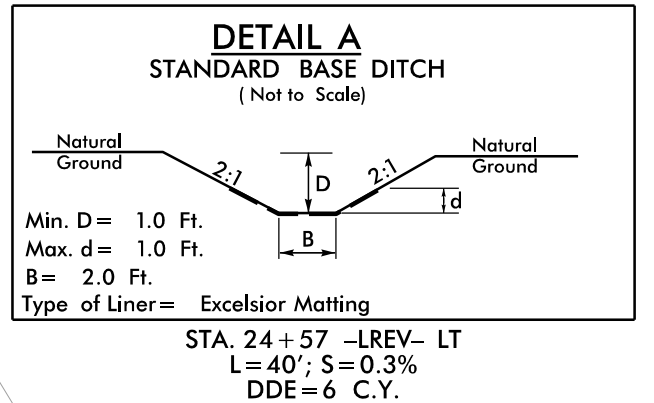
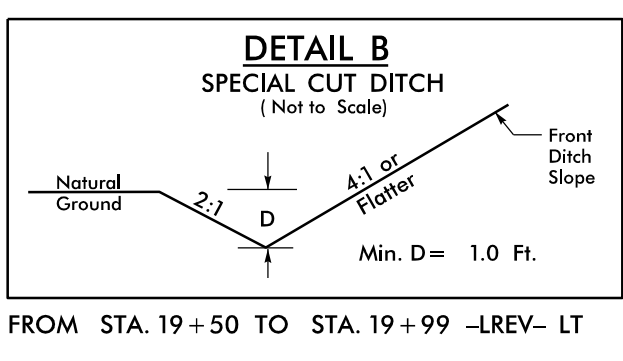


8/17/99

PROJECT REFERENCE NO. <b>44563</b>	SHEET NO. <b>4</b>
RW SHEET NO.	
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

**RAMEY KEMP ASSOCIATES, INC.**  
Transportation Engineers  
5808 Faringdon Place, Suite 100  
Raleigh, North Carolina 27609  
919-872-5115 Tel. 919-878-5416 Fax.  
www.rameykemp.com  
NC License No. C-0910



**BEGIN PROJECT 44563**  
-LREV- STA. 17+87.92  
TIE TO EXIST.

**END PROJECT 44563**  
-LREV- STA. 26+58.24  
TIE TO EXIST.

-LREV-

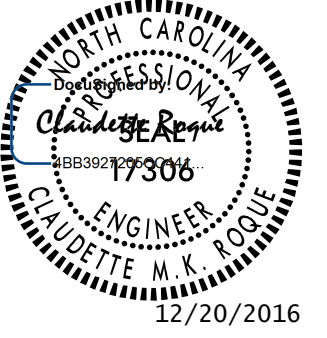


PI Sta 11+18.98 Δ = 9° 24' 50.0" (RT) D = 3° 57' 54.4" L = 237.42' T = 118.98' R = 1,445.00'	PI Sta 13+17.56 Δ = 7° 00' 06.0" (RT) D = 4° 22' 25.4" L = 160.08' T = 80.14' R = 1,310.00'	PI Sta 24+34.64 Δ = 0° 44' 10.1" (LT) D = 0° 42' 58.3" L = 102.79' T = 51.39' R = 8,000.00' e = varies	PI Sta 26+21.19 Δ = 1° 56' 09.1" (RT) D = 0° 42' 58.3" L = 270.30' T = 135.16' R = 8,000.00' e = varies
---	--	--	---

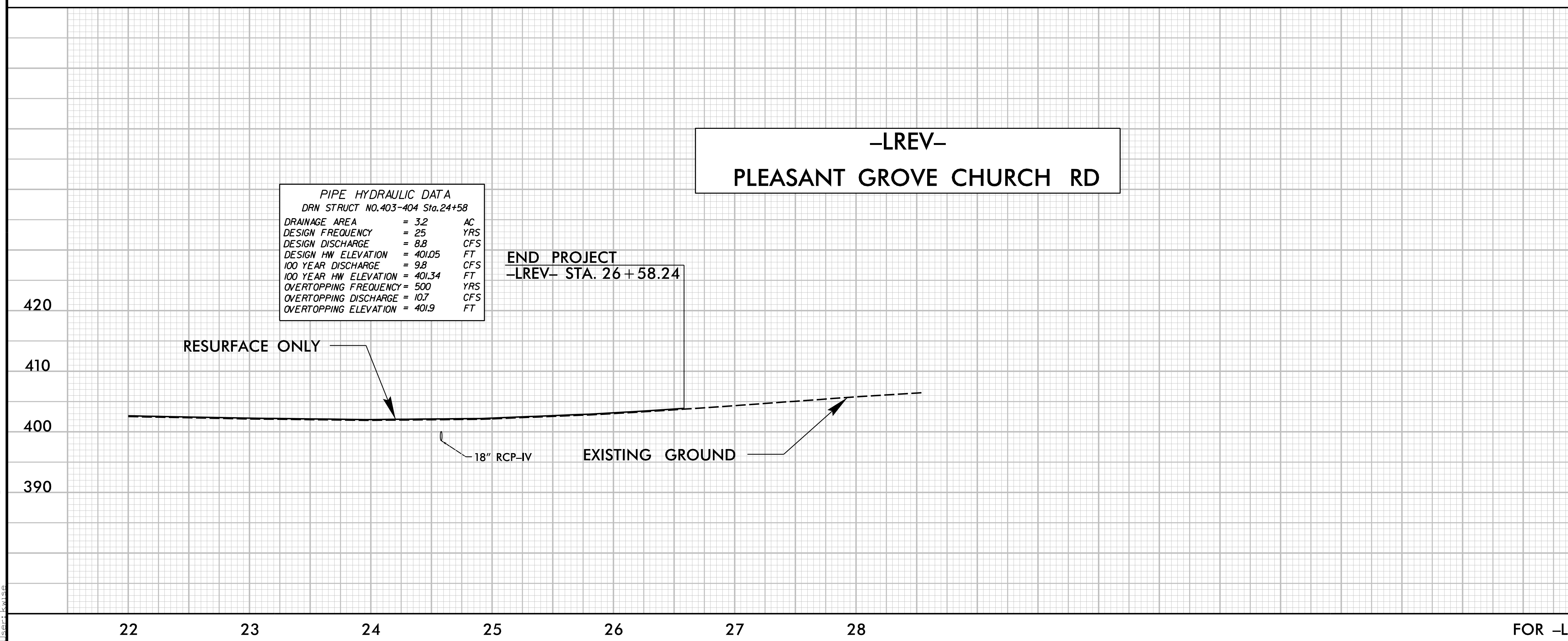
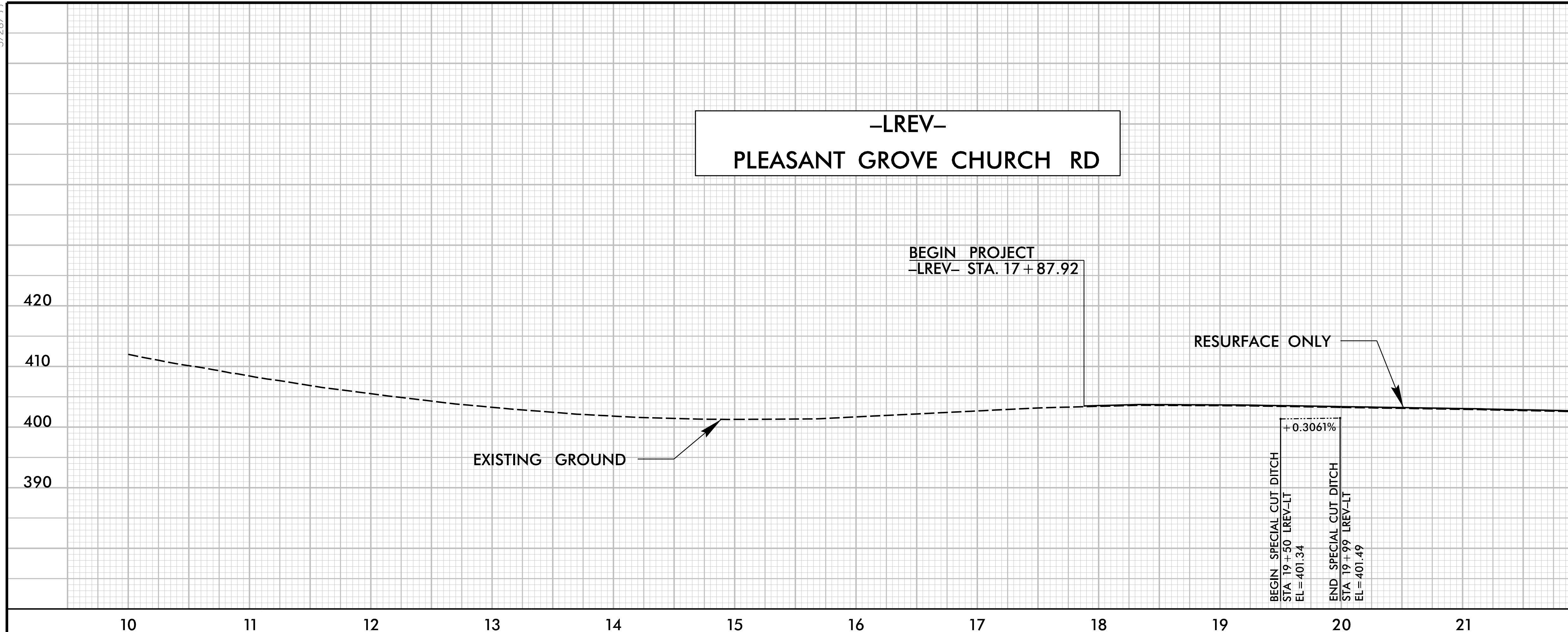
- NOTES:
- FOR -LREV- EXIST. PROFILE, SEE SHEET 5
  - USE 12" MIN WIDTH & 5' RADII FOR DRIVEWAY CONNECTIONS UNLESS OTHERWISE SPECIFIED.

REVISIONS

1/9/2017  
S:\Projects\SR1789\_RdJ\_psh04.dgn  
User: KM/ISE

5/28/99

PROJECT REFERENCE NO. <b>44563</b>	SHEET NO. <b>5</b>
ROADWAY DESIGN ENGINEER 	HYDRAULICS ENGINEER 
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	
 <b>RAMEY KEMP &amp; ASSOCIATES, INC.</b> Transportation Engineers 5808 Faringdon Place, Suite 100 Raleigh, North Carolina 27609 919-872-5115 Tel. 919-878-5416 Fax. www.rameykemp.com NC License No. C-0910	

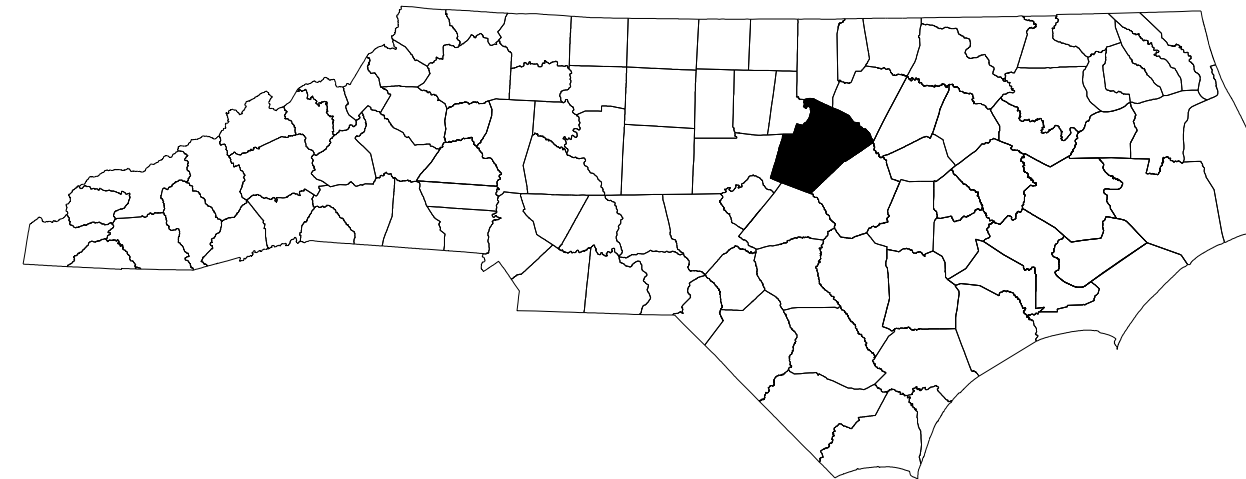


12/20/2016 1789\_Rdy\_psh05.dgn

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**TRANSPORTATION MANAGEMENT PLAN**

**WAKE COUNTY**



**GENERAL NOTES**

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

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
-LREV- PLEASANT GROVE CHURCH ROAD	MONDAY- FRIDAY 6:00 AM - 9:00 AM 4:00 PM - 7:00 PM

LANE AND SHOULDER CLOSURE REQUIREMENTS

- B) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- C) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.
- D) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.  
  
WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- F) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

- G) DO NOT INSTALL MORE THAN ONE LANE CLOSURE IN ANY ONE DIRECTION ON SR 1789 (PLEASANT GROVE CHURCH RD).
  - H) PROVIDE TRAFFIC CONTROL FOR APPROPRIATE LANE CLOSURES FOR SURVEYING DONE BY THE DEPARTMENT.
- PAVEMENT EDGE DROP OFF REQUIREMENTS
- I) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:  
  
BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.  
  
BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.  
  
BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.
  - J) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (W8-11) 200 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

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

SIGNING

- L) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- M) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.
- N) INSTALL BLACK ON ORANGE "DIP" SIGNS (W8-2) AND/OR "BUMP" SIGNS (W8-1) 200 FT IN ADVANCE OF THE UNEVEN AREA, OR AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL DEVICES

- O) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1180 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- P) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES DRUMS PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

PAVEMENT MARKINGS AND MARKERS

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

ROAD NAME	MARKING	MARKER
-LREV- PLEASANT GROVE CHURCH ROAD	PAINT	NONE

- R) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX(6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- S) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- T) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

**ROADWAY STANDARD DRAWINGS**

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE ADVANCE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1130.01	DRUM
1135.01	CONES
1150.01	FLAGGING DEVICES
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS

**PHASING NOTES**

THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE EXISTING DRIVEWAYS AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR MUST RETURN TRAFFIC TO THE EXISTING PATTERN AT THE END OF EACH WORK DAY UNLESS OTHERWISE NOTED IN THE PHASING BELOW OR DIRECTED BY THE ENGINEER.

STEP 1: INSTALL WORK ZONE ADVANCE WARNING SIGNS (SEE RSD 1101.01)

STEP 2: USING RSD 1101.02 (SHEET 1 OF 15), CONSTRUCT ROADWAY IMPROVEMENTS INCLUDING MILLING, WIDENING AND DRAINAGE UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE. APPLY TEMPORARY EDGE LINE PAVEMENT MARKINGS.

STEP 3: USING RSD 1101.02 (SHEET 1 OF 15), PLACE FINAL LAYER OF SURFACE COURSE INCLUDING RESURFACING OF EXISTING ROADWAY. APPLY TEMPORARY PAVEMENT MARKINGS (SEE PMP-1 FOR LAYOUT).

STEP 4: USING RSD 1101.02 (SHEET 1 OF 15), INSTALL FINAL PAVEMENT MARKINGS (SEE PMP-1).

STEP 5: REMOVE ALL REMAINING TRAFFIC CONTROL DEVICES AND WORK ZONE SIGNS.

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

CLAUDETTE M.K ROQUE, P.E.  
PROJECT ENGINEER  
KAYLA M. WISE, E.I.  
PROJECT DESIGN ENGINEER

Prepared in the Office of:

**RAMEY KEMP ASSOCIATES, INC.**  
Transportation Engineers  
5808 Faringdon Place, Suite 100  
Raleigh, North Carolina 27609  
919-872-5115 Tel. 919-878-5416 Fax.  
www.rameykemp.com  
NC License No. C-0910

APPROVED:

DATE: 12/20/2016

SEAL

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

**N.C.D.O.T. WORK ZONE TRAFFIC CONTROL**  
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561  
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)  
PHONE: (919) 773-2800 FAX: (919) 771-2745

STATE TRAFFIC MANAGEMENT ENGINEER  
TRAFFIC CONTROL PROJECT ENGINEER  
TRAFFIC CONTROL PROJECT DESIGN ENGINEER  
TRAFFIC CONTROL DESIGN ENGINEER


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

**PROJECT: 44563**

**STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION**

**SIGNING AND PAVEMENT MARKING PLAN  
WAKE COUNTY**

**LOCATION: PLEASANT GROVE CHURCH ROAD (SR 1789)**

TIP NO. <b>44563</b>	SHEET NO. <b>PMP - 1</b>
APPROVED: <i>Claudette Roque</i> 12/21/2016	
	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>	

**ROADWAY STANDARD DRAWING**

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1205.10	PAVEMENT MARKINGS - SCHOOL AREAS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY

**PAVEMENT MARKING GENERAL NOTES**

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

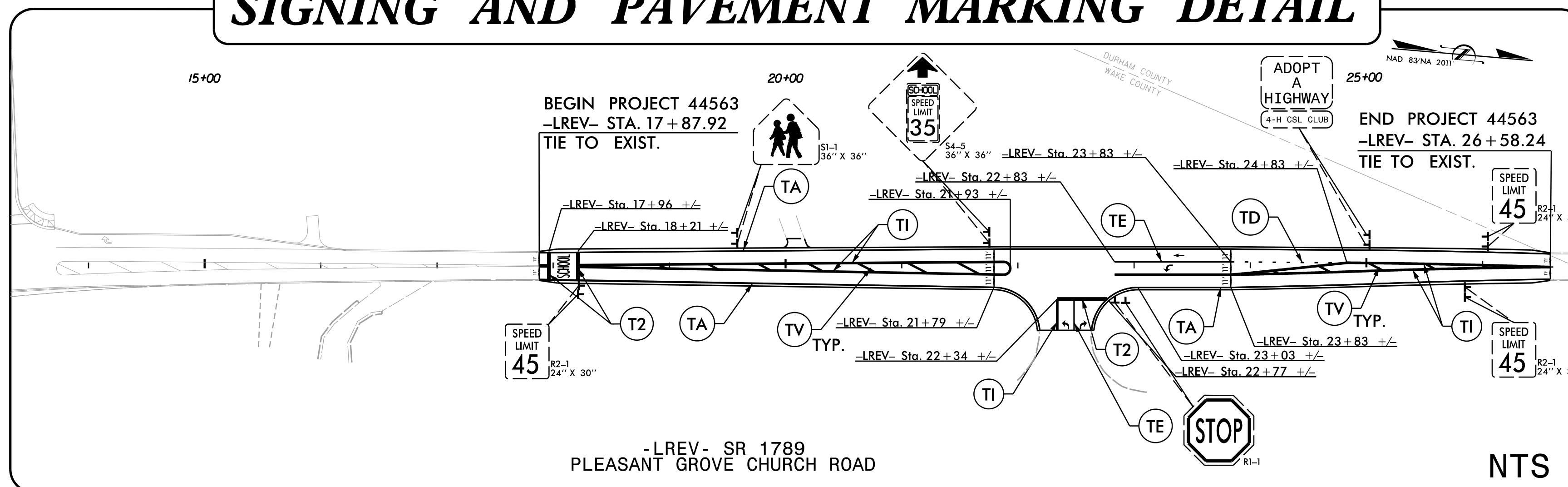
- A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:
 

ROAD NAME	MARKING	MARKER
ALL ROADS	THERMOPLASTIC	RAISED
- B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.
- D) STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.
- E) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.

**PAVEMENT MARKING SCHEDULE**

SYMBOL	DESCRIPTION
THERMOPLASTIC(4", 90 MILS) TA	WHITE EDGELINE
THERMOPLASTIC(4", 120 MILS) TD	3 FT. - 9 FT./SP WHITE MINISKIP
TE	WHITE SOLID LANE LINE
TI	YELLOW DOUBLE CENTER
THERMOPLASTIC(12", 90 MILS) TV	YELLOW DIAGONAL
THERMOPLASTIC(24", 120 MILS) T2	WHITE STOP OR TRANSVERSE BAR
THERMOPLASTIC PAVEMENT MARKING SYMBOLS (90 MILS) UA	LEFT TURN ARROW
UB	RIGHT TURN ARROW
UC	STRAIGHT ARROW
THERMOPLASTIC PAVEMENT MARKING SYMBOLS (120 MILS) UI	ALPHANUMERIC CHARACTER

**SIGNING AND PAVEMENT MARKING DETAIL**

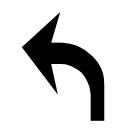
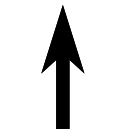
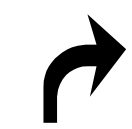
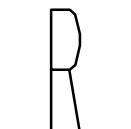


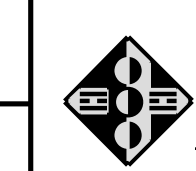
**SIGNING GENERAL NOTES**

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

- A) SIGNS FURNISHED BY STATE.
- B) SIGNING PLANS DO NOT INCLUDE TEMPORARY CONSTRUCTION SIGNING OR PAVEMENT MARKINGS.
- C) WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' AND 'F' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER.
- D) WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.
- E) ALL EXISTING SIGNS ON "U" CHANNEL POST WITHIN THE PROJECT LIMITS SHALL BE REMOVED AND DISPOSED OF UNLESS OTHERWISE NOTED ON PLANS.
- F) THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
- G) MAINTAIN CURRENT OFFSET FROM EOP OR 6' MINIMUM TO NEAR EDGE OF SIGN, WHICHEVER IS GREATER, WHEN REPLACING/RELOCATING EXISTING SIGNS.

SYMBOL LEGEND

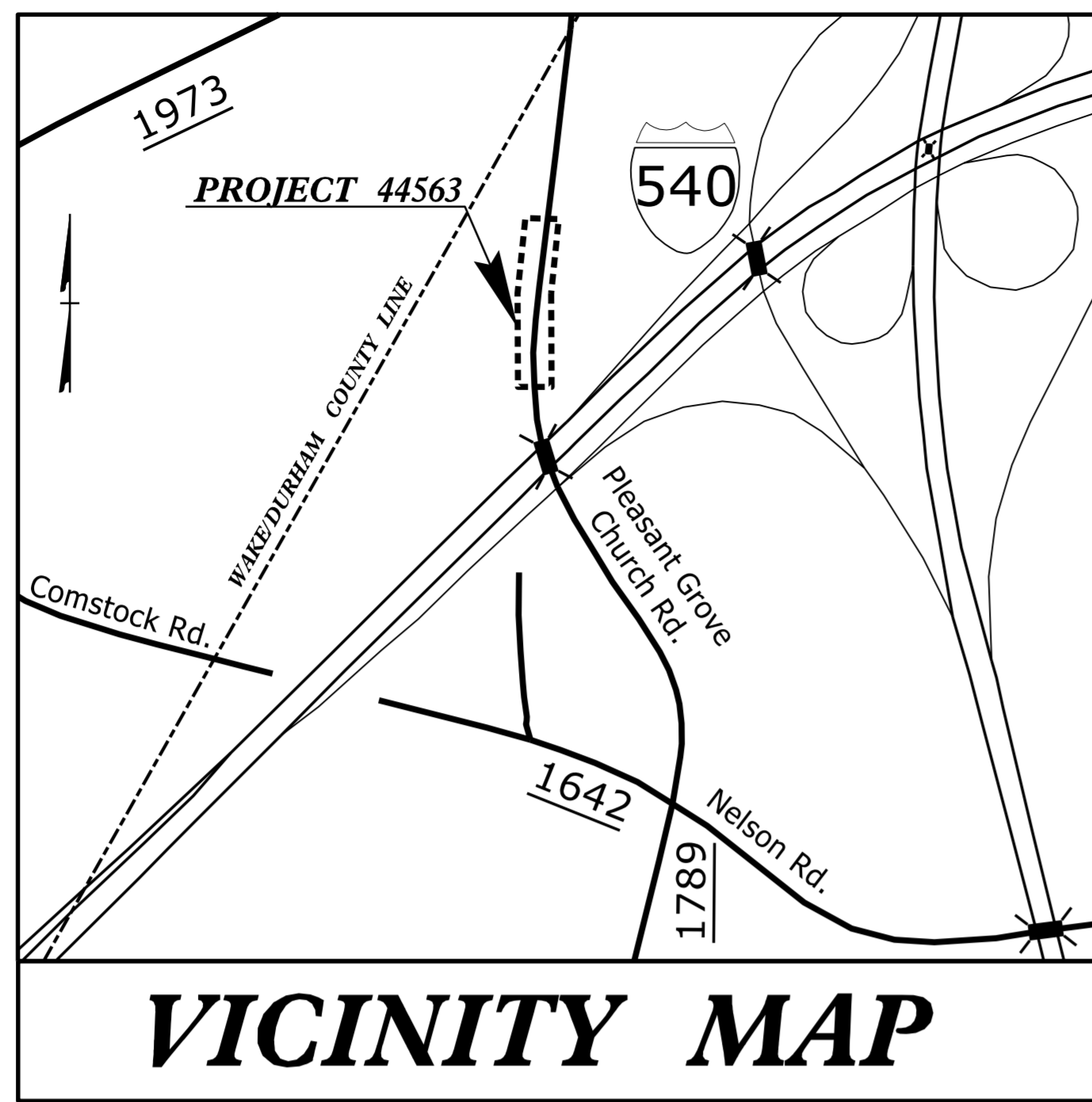
	(UA)	LEFT ARROW		(UC)	STRAIGHT ARROW
	(UB)	RIGHT ARROW		(UI)	ALPHANUMERIC CHARACTER

<b>PLANS PREPARED BY: Ramey Kemp &amp; Associates</b>		 <p><b>RAMEY KEMP &amp; ASSOCIATES, INC.</b> TRANSPORTATION ENGINEERS 5808 Faringdon Place, Suite 100 Raleigh, North Carolina 27609 919-872-5115 Tel. 919-872-5416 Fax. www.rameykemp.com NC License No. C-0910</p>
<b>CLAUDETTE M.K. ROQUE, P.E.</b>	PROJECT MANAGER	
<b>KAYLA M. WISE, E.I.</b>	PROJECT ENGINEER	

**SIGNING PROJECT NOTES**

1. RELOCATE SIGN, TYPE E.
2. DISPOSE OF SUPPORT, U-CHANNEL.
3. SIGN ERECTION, RELOCATE, TYPE E.

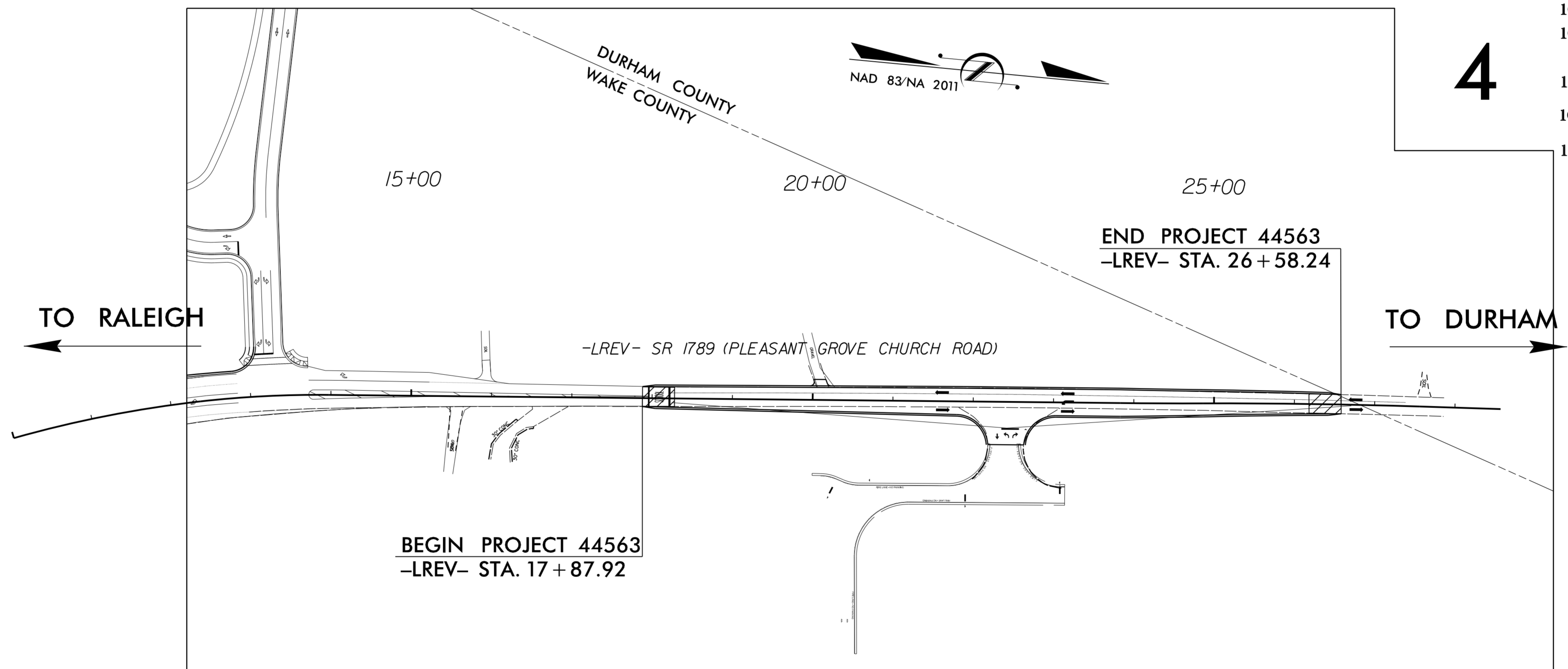
**TIP PROJECT: 44563**



**VICINITY MAP**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
PLAN FOR PROPOSED  
HIGHWAY EROSION CONTROL  
**WAKE COUNTY**

**LOCATION: SR 1789 (PLEASANT GROVE CHURCH ROAD) NORTH OF I-540**  
**TYPE OF WORK: GRADING, PAVING & DRAINAGE**

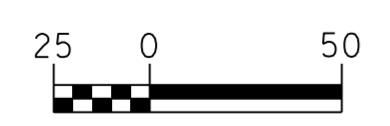


STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	44563	EC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44563		PE, RW, UTIL.	

**EROSION AND SEDIMENT CONTROL MEASURES**

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	III III III
1606.01	Special Sediment Control Fence	X X X X X
1622.01	Temporary Berms and Slope Drains	TD
1630.02	Silt Basin Type B	SB
1633.01	Temporary Rock Silt Check Type-A	RS
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	RS
1633.02	Temporary Rock Silt Check Type-B	RS
	Wattle/Coir Fiber Wattle	W
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	W
1634.01	Temporary Rock Sediment Dam Type-A	RD
1634.02	Temporary Rock Sediment Dam Type-B	RD
1635.01	Rock Pipe Inlet Sediment Trap Type-A	RPI
1635.02	Rock Pipe Inlet Sediment Trap Type-B	RPI
1630.04	Stilling Basin	SB
1630.06	Special Stilling Basin	SB
	Rock Inlet Sediment Trap:	
1632.01	Type A	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	SK
	Tiered Skimmer Basin	SK
	Infiltration Basin	IB

**GRAPHIC SCALE**



PLANS

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 AND ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER RESOURCES.

Prepared in the Office of:

**CH Engineering**  
3220 Glen Royal Road  
Raleigh, NC 27617

Designed by:

**Brian Wiles** 3759  
NAME LEVEL III CERTIFICATION NO.

Reviewed in the Office of:

**ROADSIDE ENVIRONMENTAL UNIT**  
1425 Rock Quarry Road  
Raleigh, NC 27610

Reviewed by:

**Aaron Harper**

**Roadway Standard Drawings**

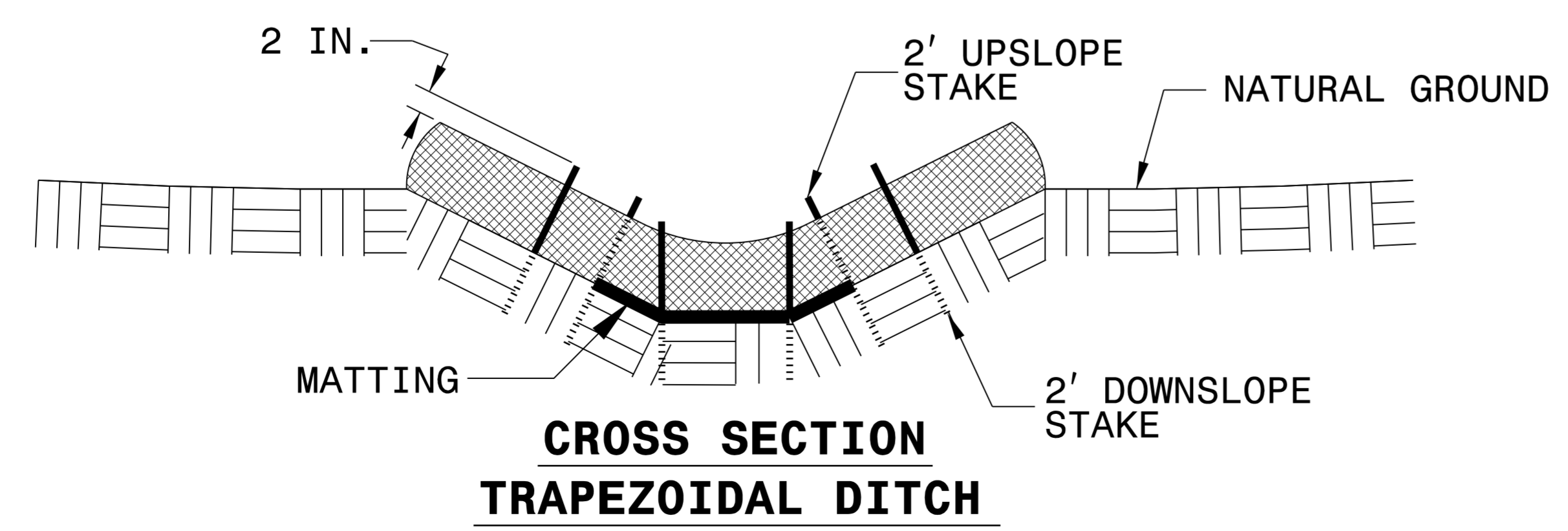
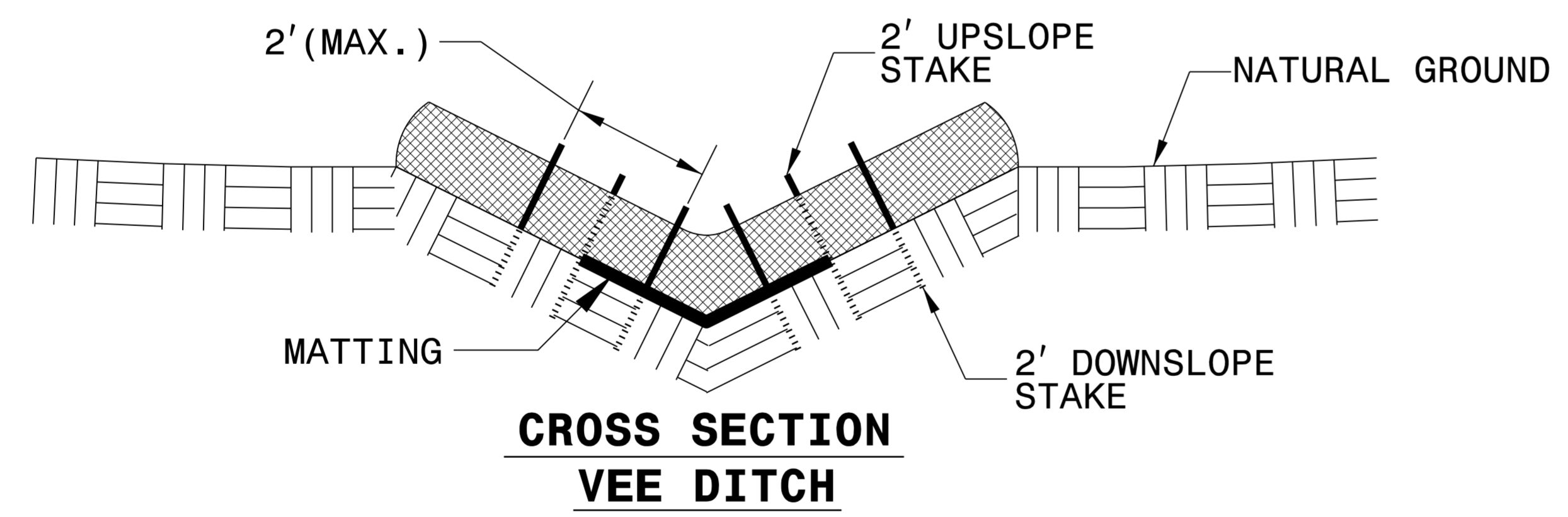
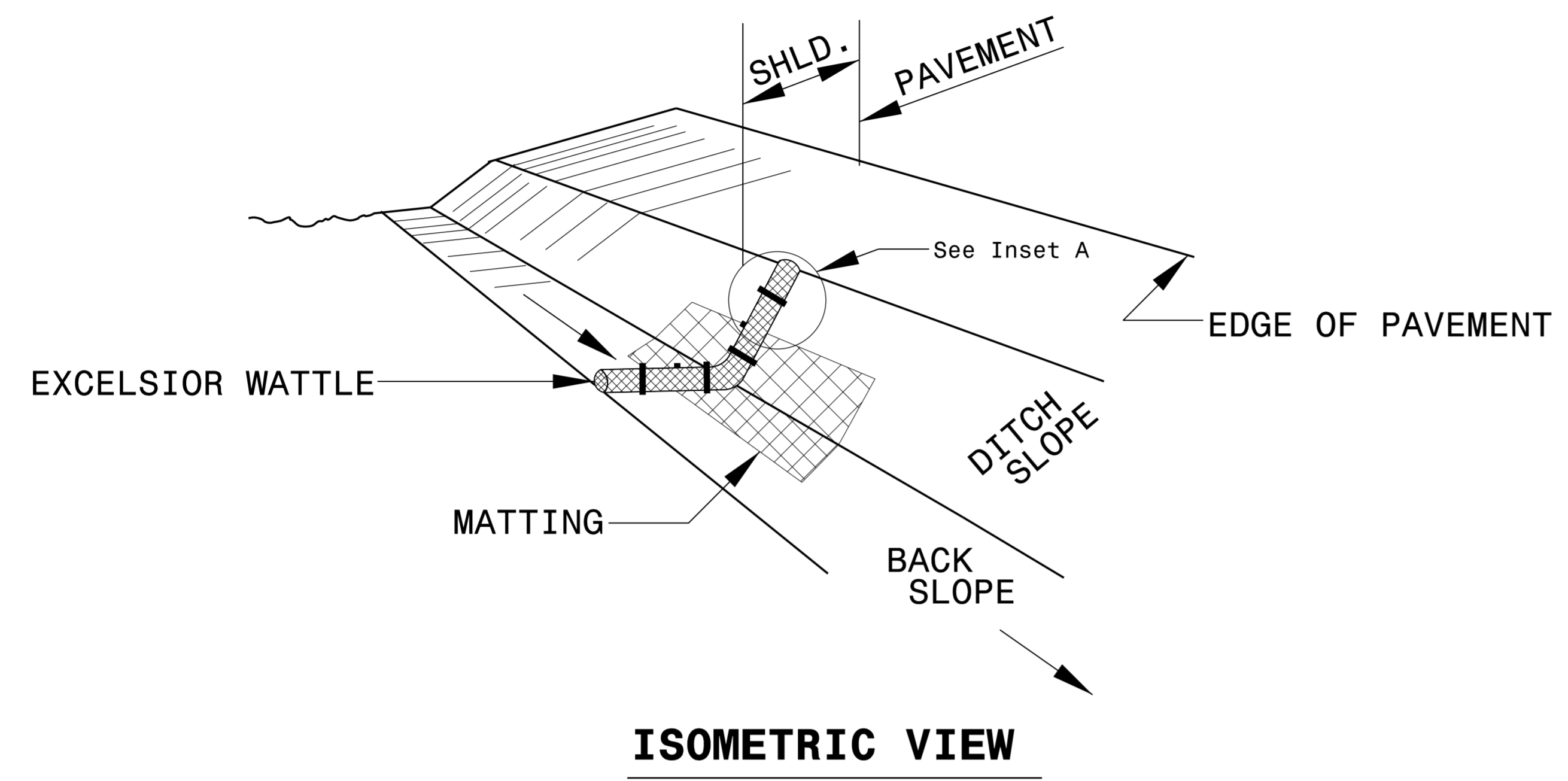
The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01 Railroad Erosion Control Detail	1632.01 Rock Inlet Sediment Trap Type A
1605.01 Temporary Silt Fence	1632.02 Rock Inlet Sediment Trap Type B
1606.01 Special Sediment Control Fence	1632.03 Rock Inlet Sediment Trap Type C
1607.01 Gravel Construction Entrance	1633.01 Temporary Rock Silt Check Type A
1622.01 Temporary Berms and Slope Drains	1633.02 Temporary Rock Silt Check Type B
1630.01 Riser Basin	1634.01 Temporary Rock Sediment Dam Type A
1630.02 Silt Basin Type B	1634.02 Temporary Rock Sediment Dam Type B
1630.03 Temporary Silt Ditch	1635.01 Rock Pipe Inlet Sediment Trap Type A
1630.04 Stilling Basin	1635.02 Rock Pipe Inlet Sediment Trap Type B
1630.05 Temporary Diversion	1640.01 Coir Fiber Baffle
1630.06 Special Stilling Basin	1645.01 Temporary Stream Crossing
1631.01 Matting Installation	

12/20/2016 Plans\SR1789-EC-1ah-dgn

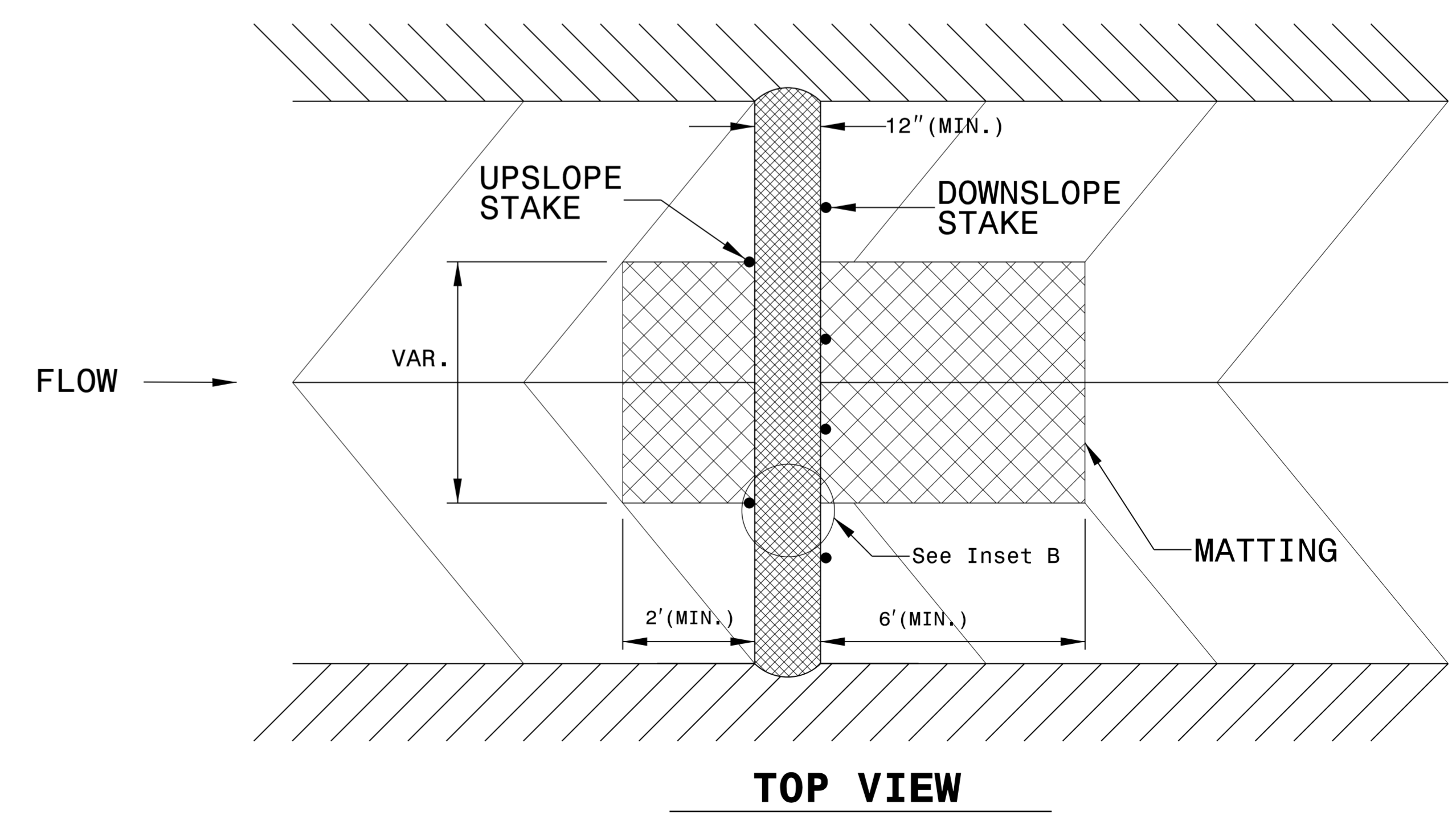
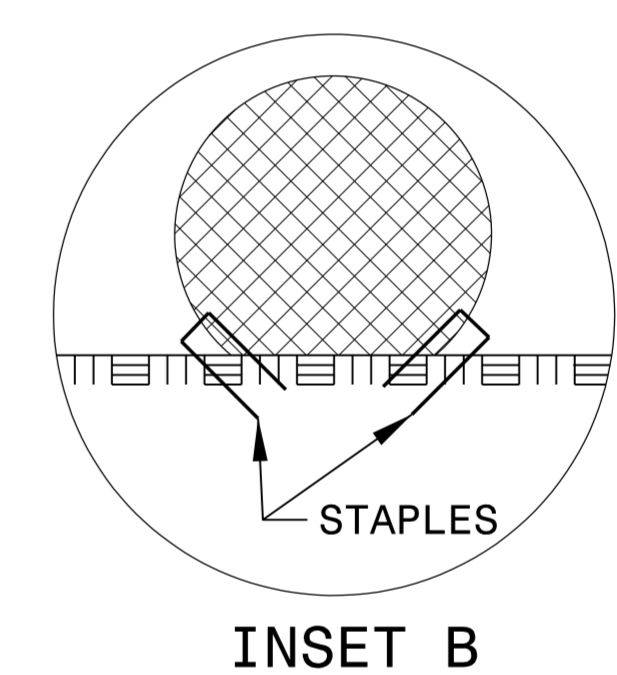
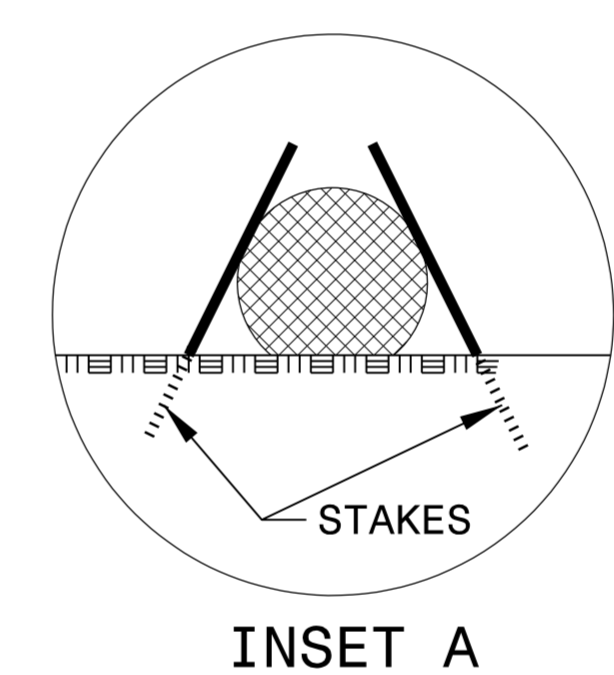
PROJECT REFERENCE NO. 44563	SHEET NO. EC-2
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# WATTLE DETAIL



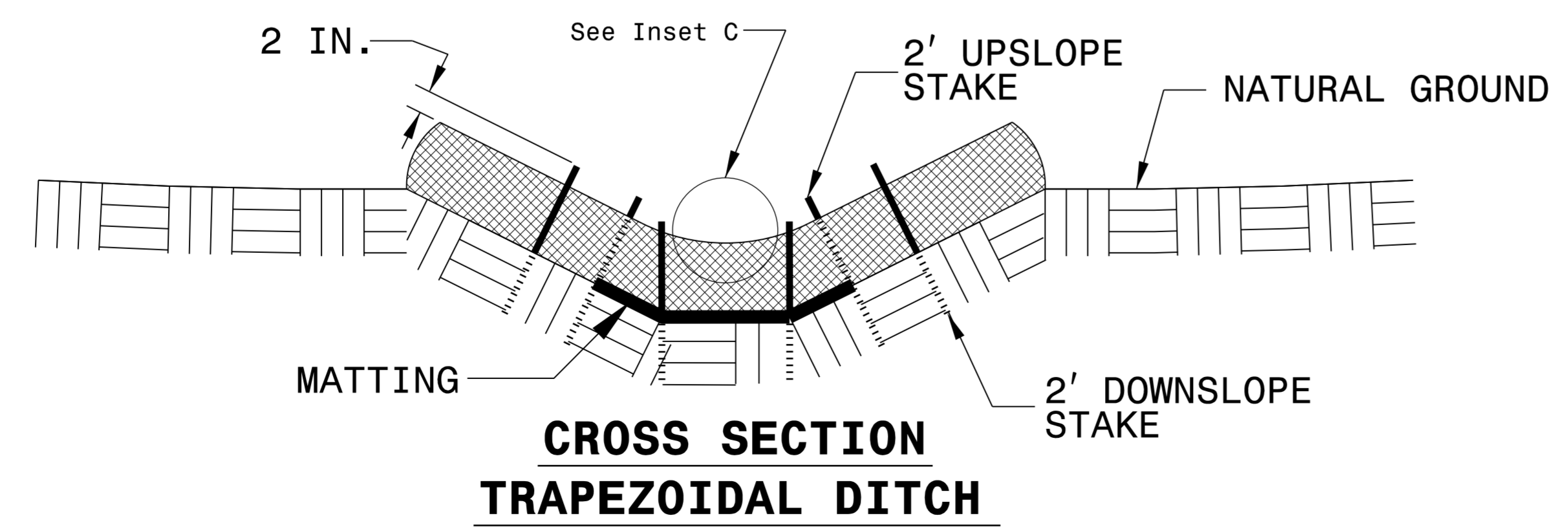
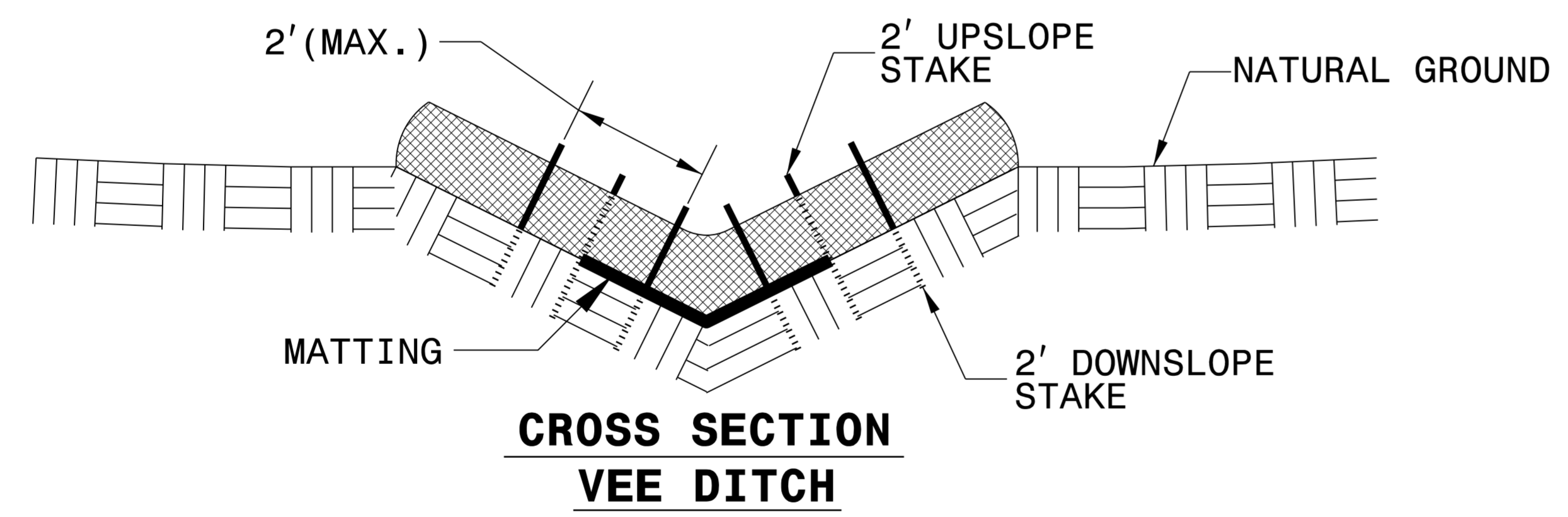
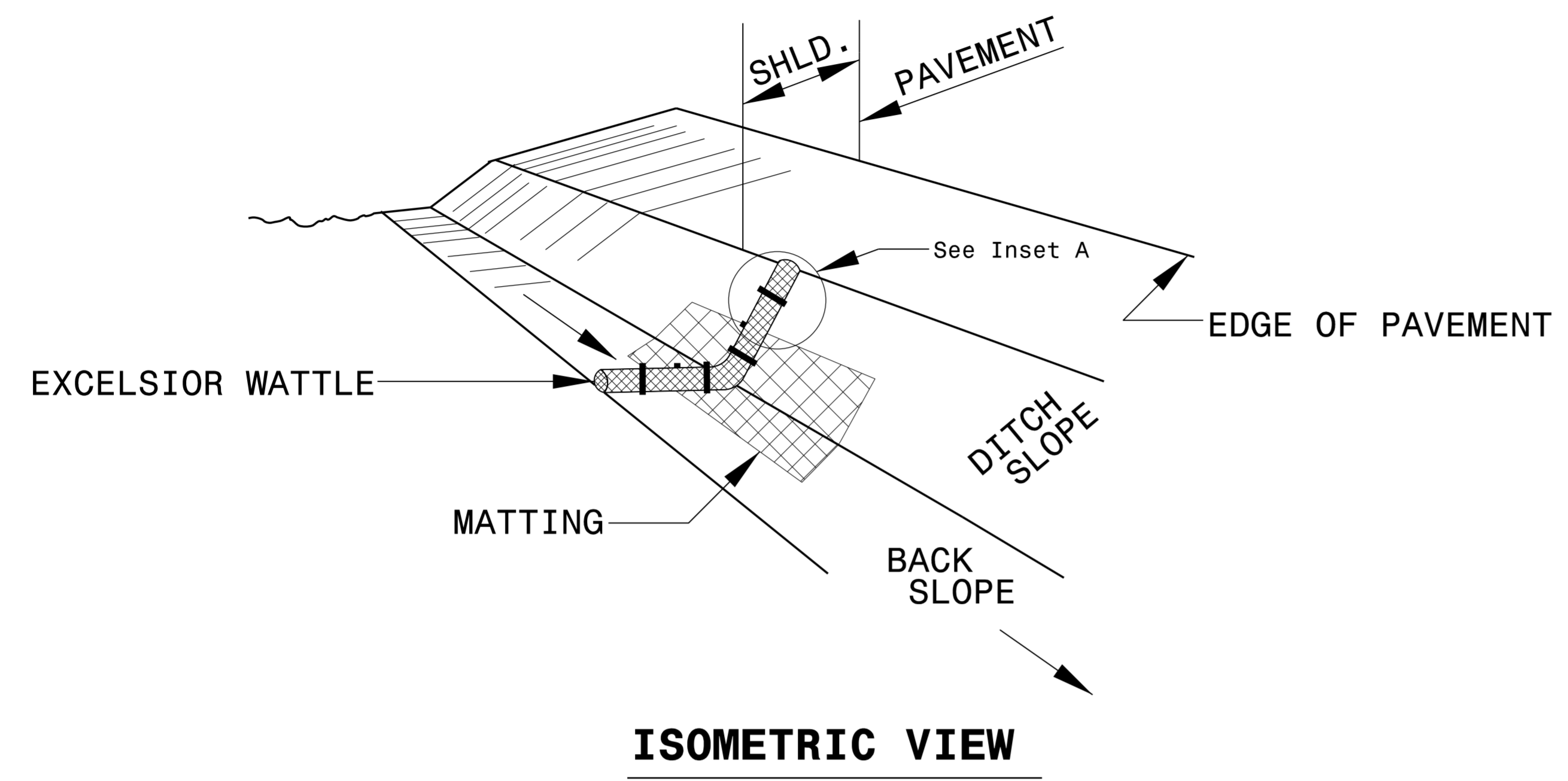
**NOTES:**

- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



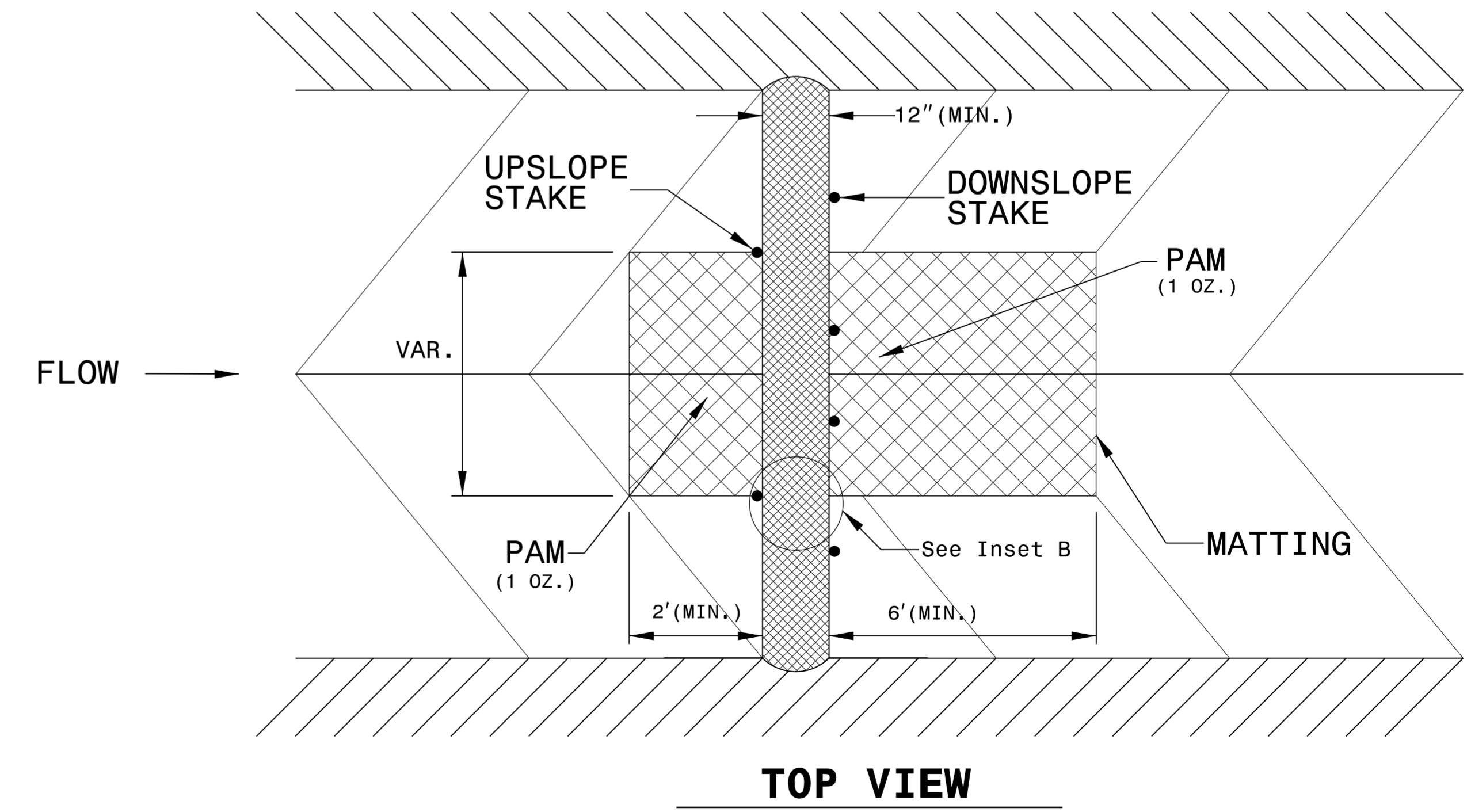
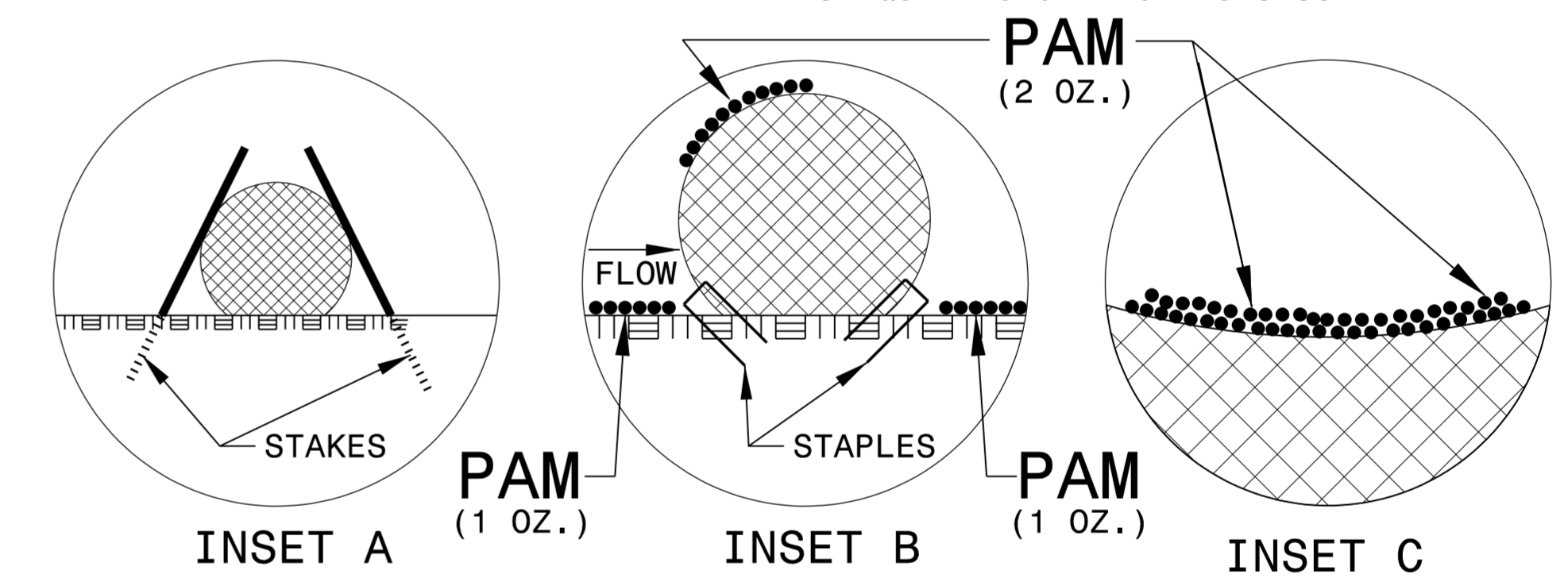
PROJECT REFERENCE NO. 44563	SHEET NO. EC-2A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

# WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



**NOTES:**

- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.
- PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.
- PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.
- INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

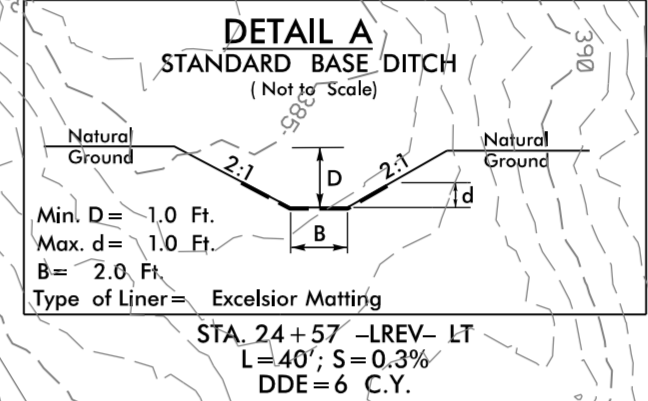
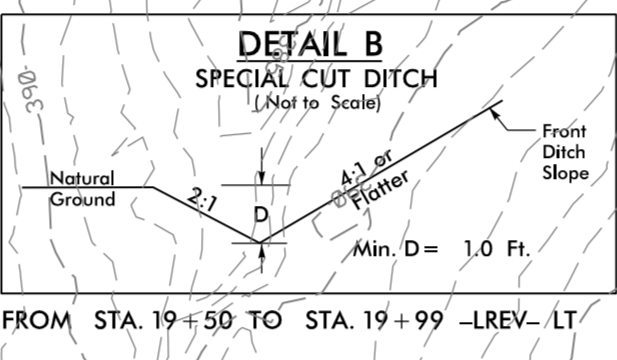








NAD 83/NA 2011



WAKE COUNTY BOARD OF EDUCATION  
DB 15688 PG 660  
BM 2014 PG 756

PAGE ROAD INVESTMENTS  
DB 13236 PG 646

BONNIE K. GREEN  
DB 2295 PG 200  
BM 1975 PG 012

END PROJECT 44563  
-LREV- STA. 26+58.24  
TIE TO EXIST.

BEGIN PROJECT 44563  
-LREV- STA. 17+87.92  
TIE TO EXIST.

SR 1789 PLEASANT GROVE CHURCH ROAD

8 x 4 x 3

NOTE: STATION -L- 18+50 RT TO -L- 24+50 RT MUST PERMANENTLY STABILIZED WITHIN 60 DAYS TIME FROM THE TIME CLEARING AND GRUBBING BEGINS.

PI Sta 11+18.98  
Δ = 9° 24' 50.0" (RT)  
D = 3' 57' 54.4"  
L = 237.42'  
T = 118.98'  
R = 1,445.00'

PI Sta 13+17.56  
Δ = 7° 00' 06.0" (RT)  
D = 4' 22' 25.4"  
L = 160.08'  
T = 80.14'  
R = 1,310.00'

PI Sta 24+34.64  
Δ = 0° 44' 10.1" (LT)  
D = 0° 42' 58.3"  
L = 102.79'  
T = 51.39'  
R = 8,000.00'  
e = varies

PI Sta 26+21.19  
Δ = 1° 56' 09.1" (RT)  
D = 0° 42' 58.3"  
L = 270.30'  
T = 135.16'  
R = 8,000.00'  
e = varies

REVISIONS

8/17/99  
R:\2016\PROJECTS\SR1789\EC.rdy04.ec04.dwg

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
92-CVS-10806  
DB 6701 PG 887

ARKEMIA PROPERTIES, LLC  
DB 14715 PG 144

WILLIAM CLARK GREEN, JR. & KATHLEEN ROSE GREEN  
DB 4560 PG 848  
BM 1979 PG 731

PROTO LABS INCORPORATED  
DB 16105 PG 321  
BM 2008 PG 1126

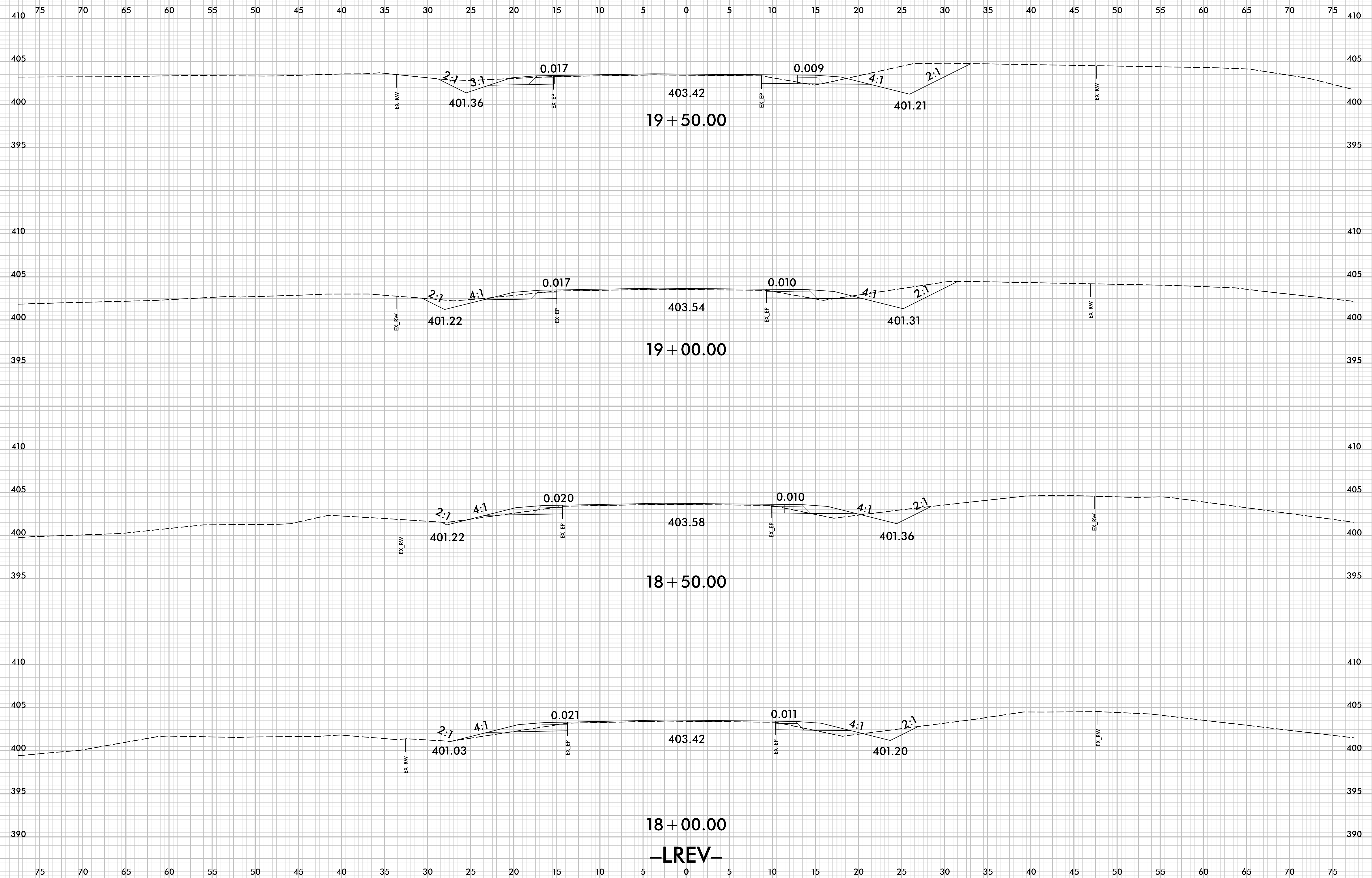
PLEASANT GROVE DEVELOPMENT CORPORATION, LLC  
DB 13076 PG 677  
BM 2008 PG 1127

REMOVE FENCE WITHIN RW AS NEEDED FROM -LREV- STA. 25+12 TO 26+32

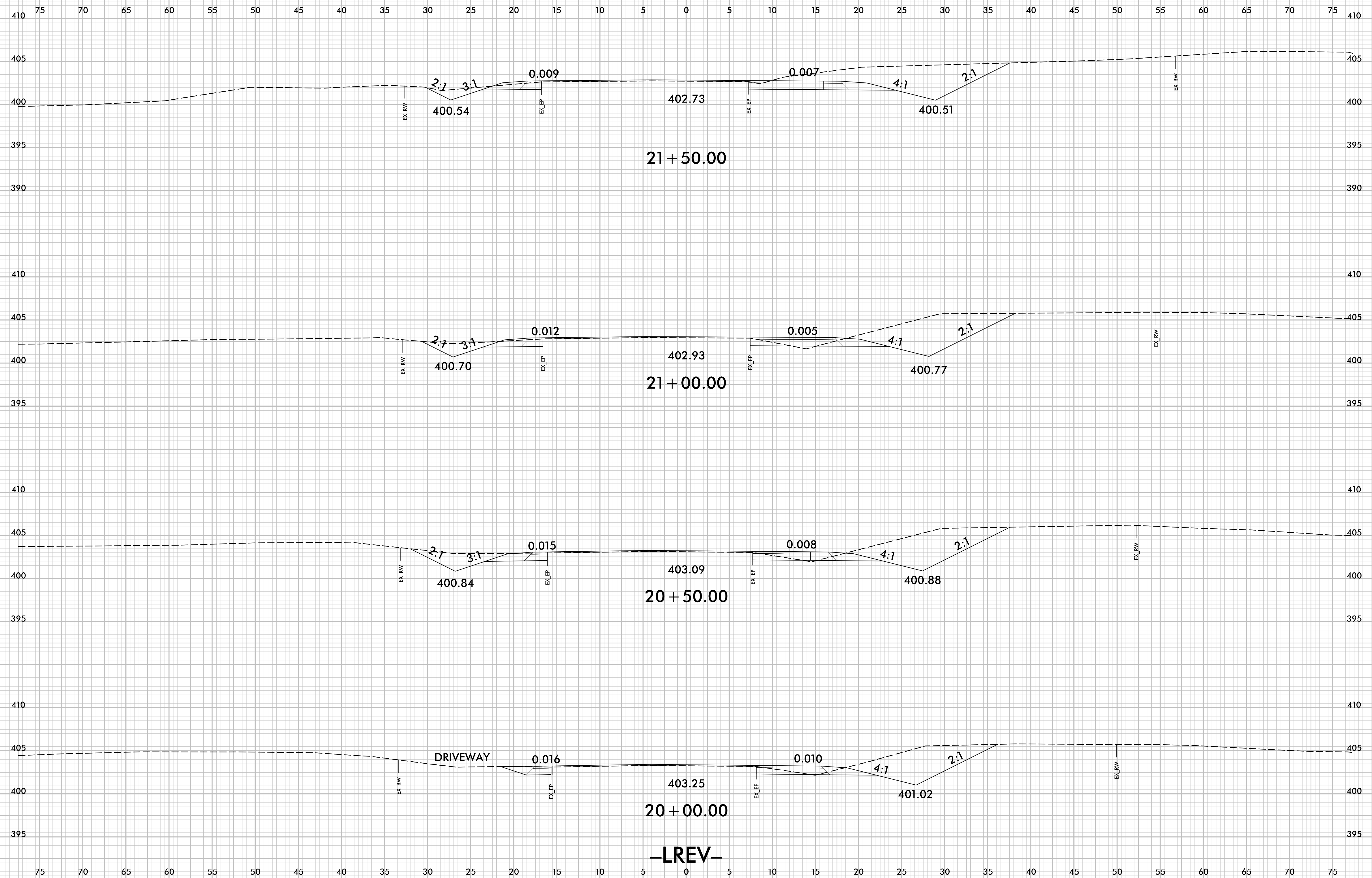
DATE UNKNOWN



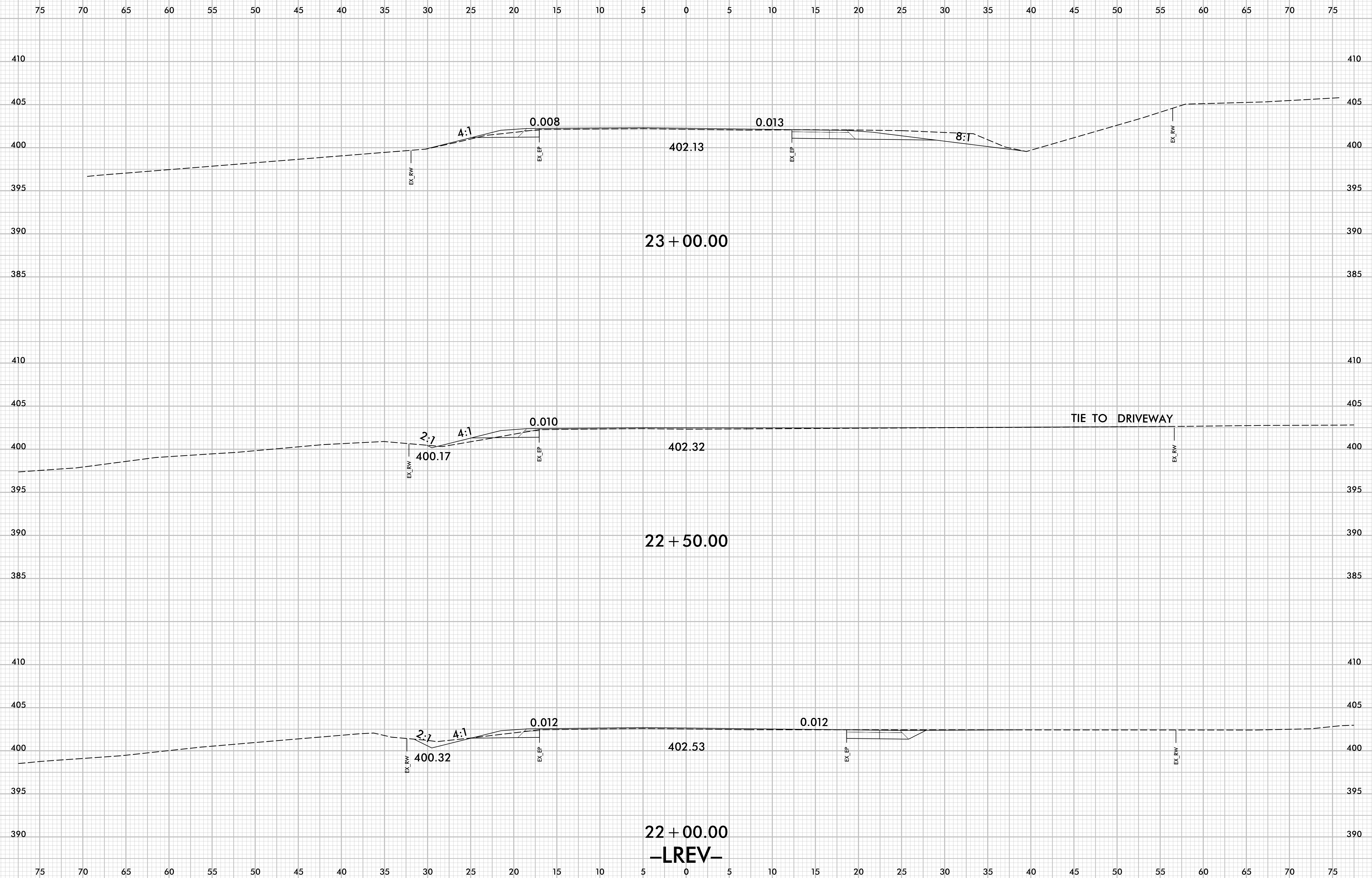




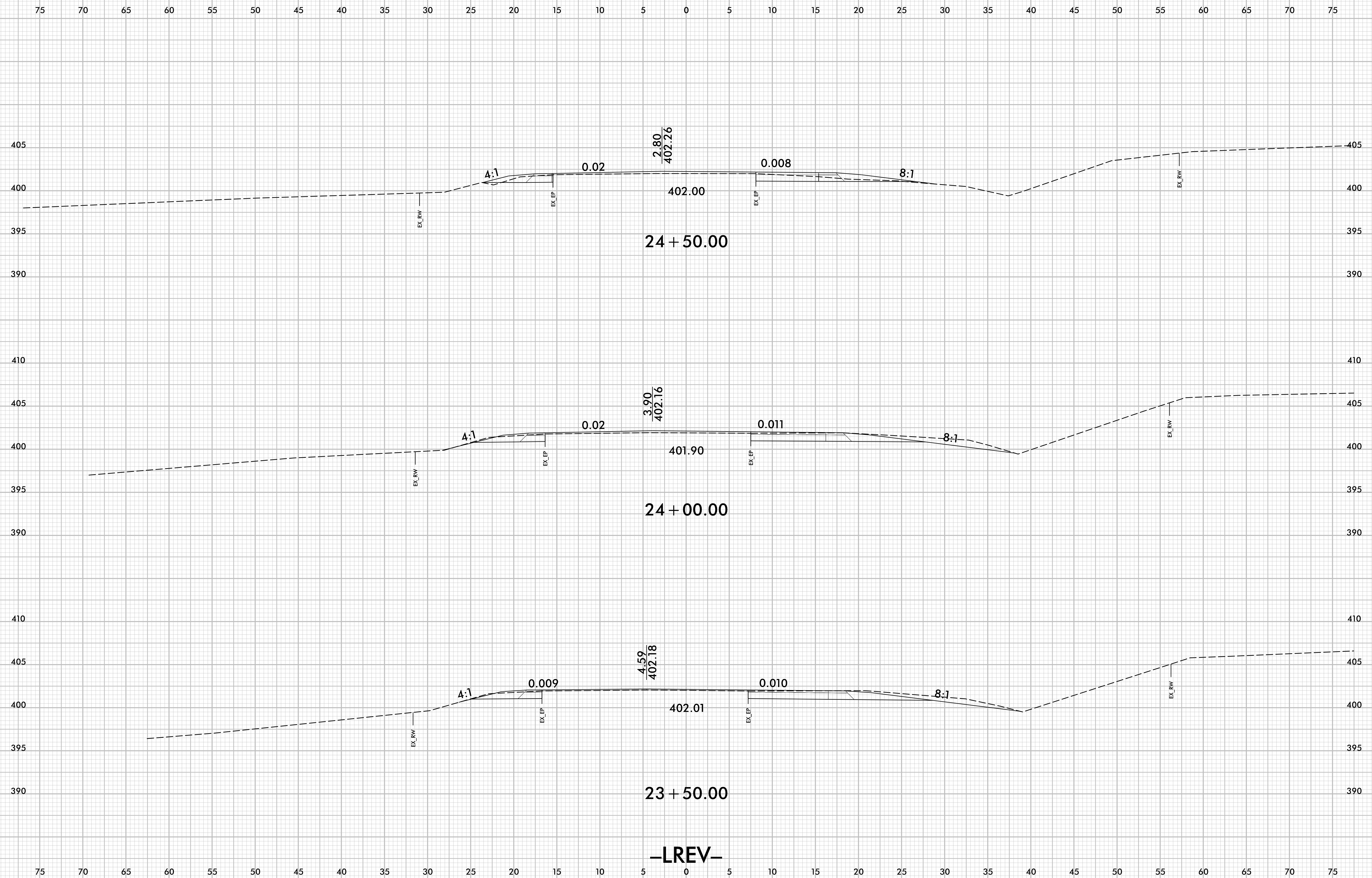
-LREV-



-LREV-



22 + 00.00  
-LREV-

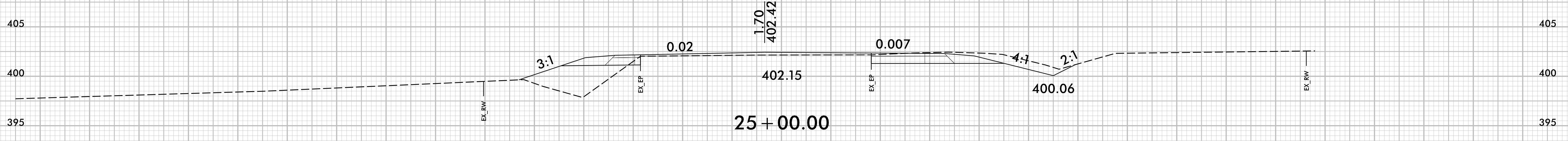
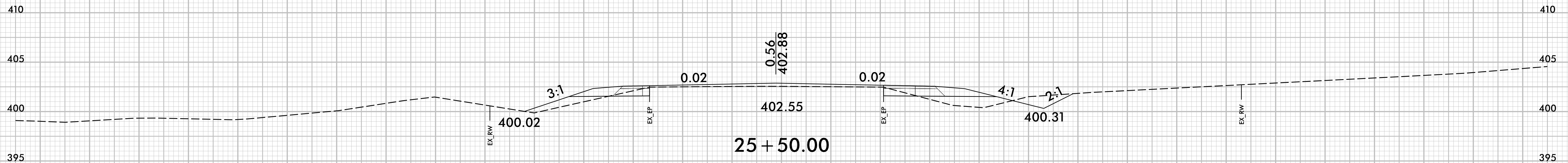
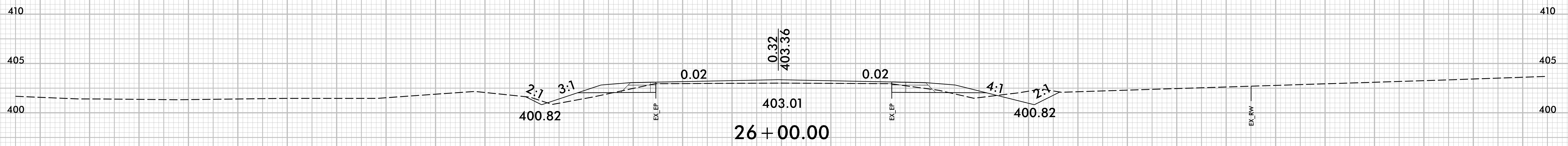
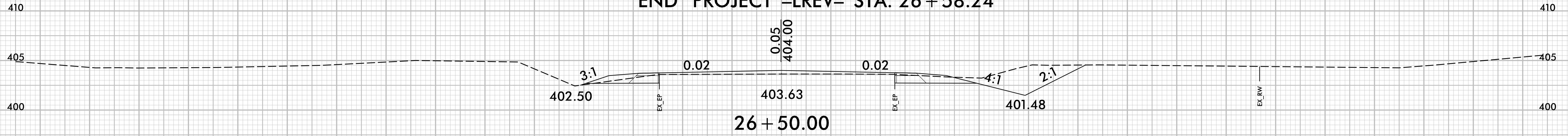


-LREV-



75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

END PROJECT -LREV- STA. 26 + 58.24



-LREV-

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

