

09/08/19

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

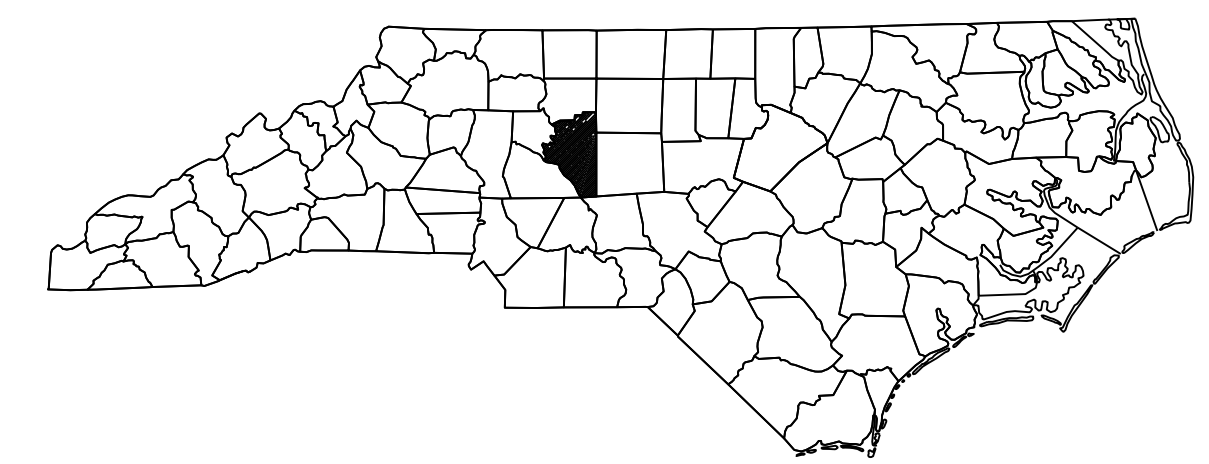
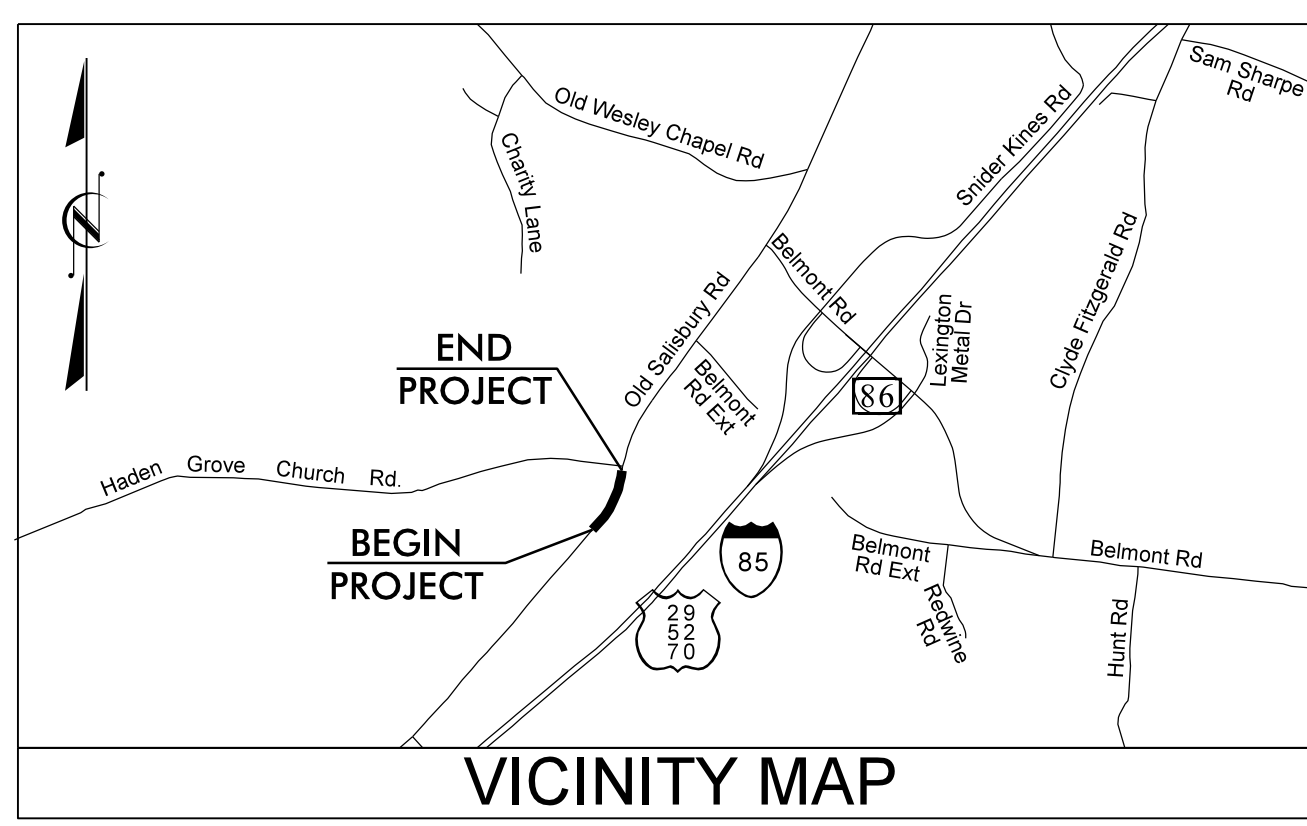
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DAVIDSON COUNTY

LOCATION: OLD SALISBURY ROAD AT HADEN GROVE CHURCH ROAD

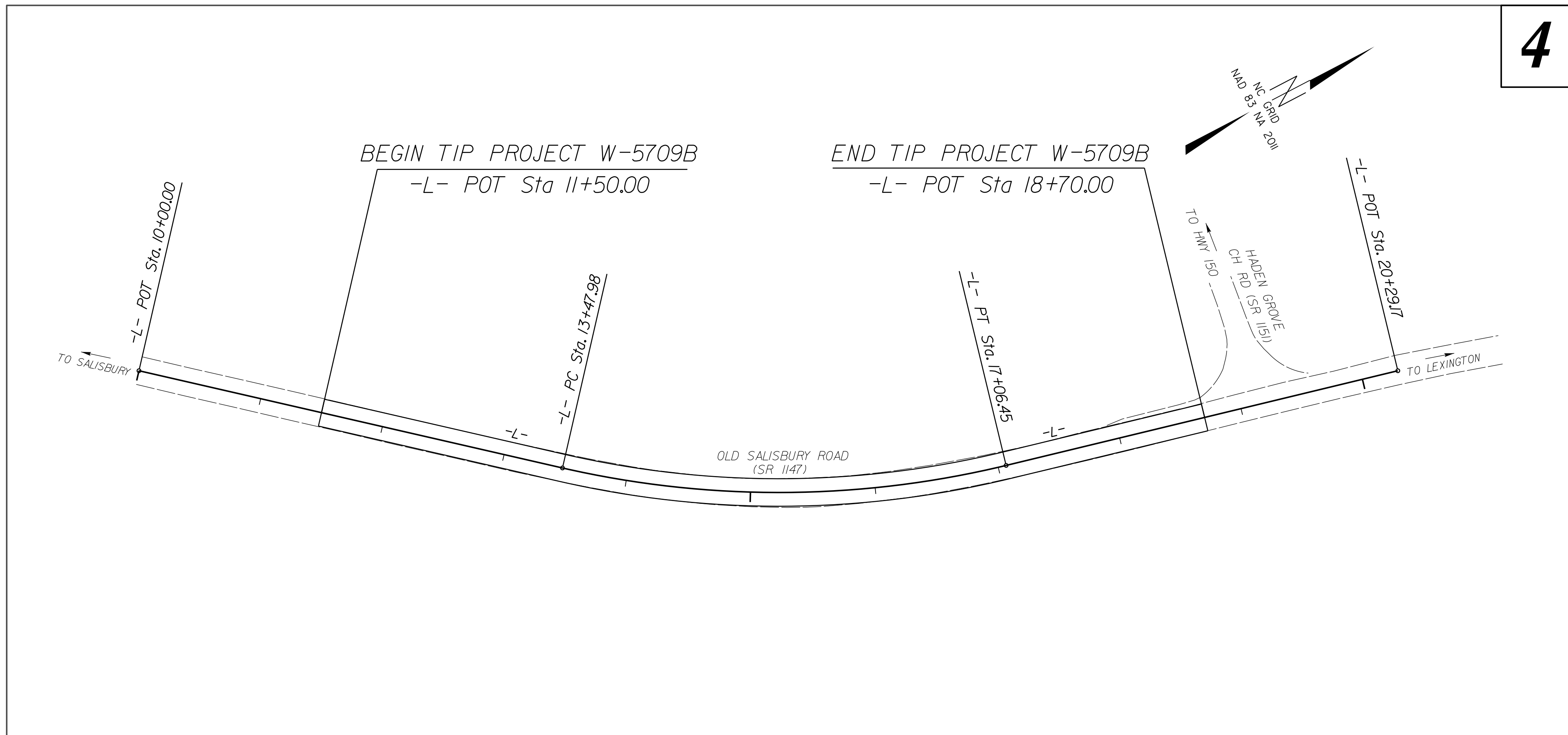
TYPE OF WORK: PAVING, GRADING, AND PAVEMENT MARKINGS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5709B	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
44855.1.2		PE	
44855.2.2		RWUTILS	
44855.3.2		CONST	



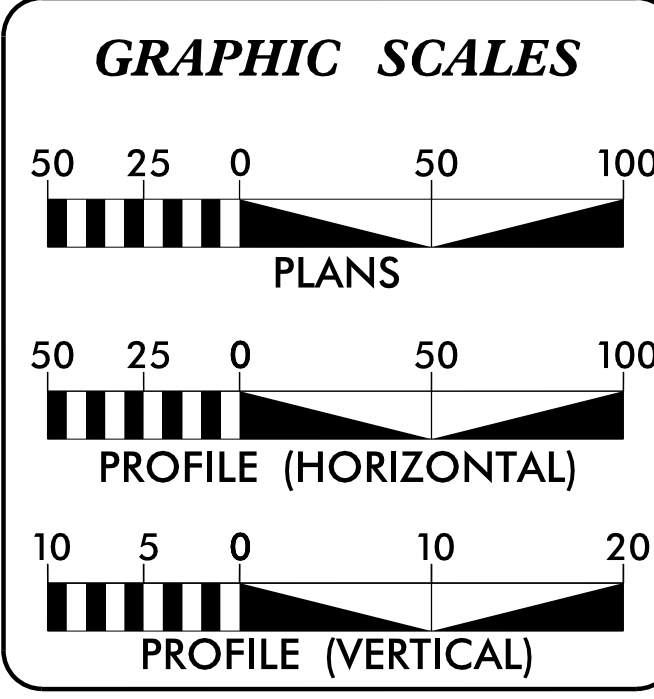
TIP PROJECT: W-5709B

CONTRACT: DI00179



4

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



DESIGN DATA
ADT 2015 = 2900
V = 60 MPH
FUNC CLASS = MINOR ARTERIAL

PROJECT LENGTH
LENGTH ROADWAY TIP PROJECT W-5709B = 0.136 MILE
TOTAL LENGTH TIP PROJECT W-5709B = 0.136 MILE

Prepared in the Office of:
DIVISION OF HIGHWAYS
NINTH DIVISION DESIGN/CONSTRUCT
375 SILAS CREEK PARKWAY WINSTON-SALEM, N.C. 27127
2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
N/A

LETTING DATE:
DECEMBER 13, 2017

SCOTT A. JONES, PE
PROJECT ENGINEER

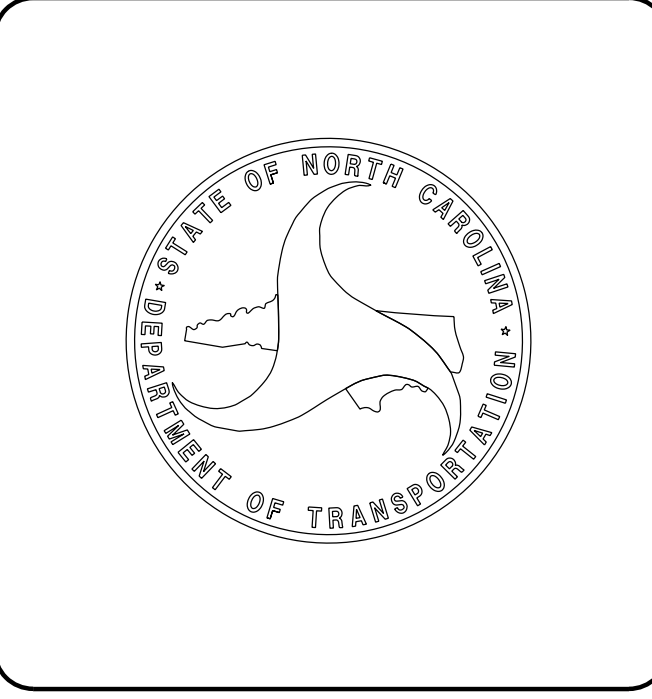
W. AL BLANTON, PE, PLS
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER


SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



18-OCT-2017 11:00 S:\Project_Development\TIP_Projects_W-5709B_Haden Grove Church Rd\Roadway\W-5709B_ddc_tsh.dgn jlkedton AT DW9-294550

PROJECT REFERENCE NO.	SHEET NO.
W-5709B	1A
ROADWAY DESIGN ENGINEER	
	

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

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C	SURVEY CONTROL SHEET AND CENTERLINE COORDINATE LIST
2A-1	PAVEMENT SCHEDULE, TYPICAL SECTIONS AND EARTHWORK QUANTITIES
2A-2	EROSION CONTROL DETAILS
2A-3	SHOULDER WEDGING DETAILS
4	PLAN AND PROFILE SHEET
X-1 THRU X-3	CROSS-SECTIONS

GENERAL NOTES:

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

EFF. 01-17-2012
REV. 02-29-2016

2012 ROADWAY ENGLISH STANDARD DRAWINGS

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

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 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 WINDSTREAM COMMUNICATIONS, DUKE ENERGY, DAVIDSON WATER, INC., LEVEL 3 COMMUNICATIONS, SURRY TELEPHONE MEMBERSHIP, TIME WARNER CABLE-CHARTER
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

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	
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method I
DIVISION 11 - WORK ZONE TRAFFIC CONTROL	
1101.01	Work Zone Advance Warning Signs
1101.02	Temporary Lane Closure (2-Lane, 2-Way Roadway - 1 Lane Closed)
1101.04	Temporary Shoulder Closures
1101.11	Traffic Control Design Tables
1150.01	Flagging Devices
1165.01	Work Vehicle Lighting Systems and TMA Delineation
DIVISION 12 - PAVEMENT MARKINGS, MARKERS AND DELINEATION	
1205.02	Pavement Markings - Two-Lane and Multi-Lane Roadways

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

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

04/06/15

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	○ S
Well	○ W
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□
Building	□
School	□
Church	□
Dam	□

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	-JS-
Buffer Zone 1	-BZ 1-
Buffer Zone 2	-BZ 2-
Flow Arrow	←
Disappearing Stream	→
Spring	○
Wetland	↓
Proposed Lateral, Tail, Head Ditch	→
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	○ RW
Proposed Right of Way Line with Iron Pin and Cap Marker	○ RW ▲
Proposed Right of Way Line with Concrete or Granite RW Marker	▲ RW
Proposed Control of Access Line with Concrete C/A Marker	○ C/A
Existing Control of Access	○ C/A
Proposed Control of Access	○ C/A
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	-T-T-T-
Proposed Guardrail	-T-T-T-
Existing Cable Guiderail	-P-P-P-
Proposed Cable Guiderail	-P-P-P-
Equality Symbol	⊕
Pavement Removal	□

VEGETATION:

Single Tree	☀
Single Shrub	☀
Hedge	~~~~~
Woods Line	~~~~~

Orchard	☀ ☀ ☀ ☀
Vineyard	□ Vineyard

EXISTING STRUCTURES:

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

UTILITIES:

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

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	○ T
Telephone Pedestal	□
Telephone Cell Tower	□
U/G Telephone Cable Hand Hole	○ TH
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.*)	-----TFD-----
U/G Fiber Optics Cable LOS C (S.U.E.*)	-----TFD-----
U/G Fiber Optics Cable LOS D (S.U.E.*)	-----TFD-----

WATER:

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

TV:

TV Pedestal	□
TV Tower	⊗
U/G TV Cable Hand Hole	○ TH
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:

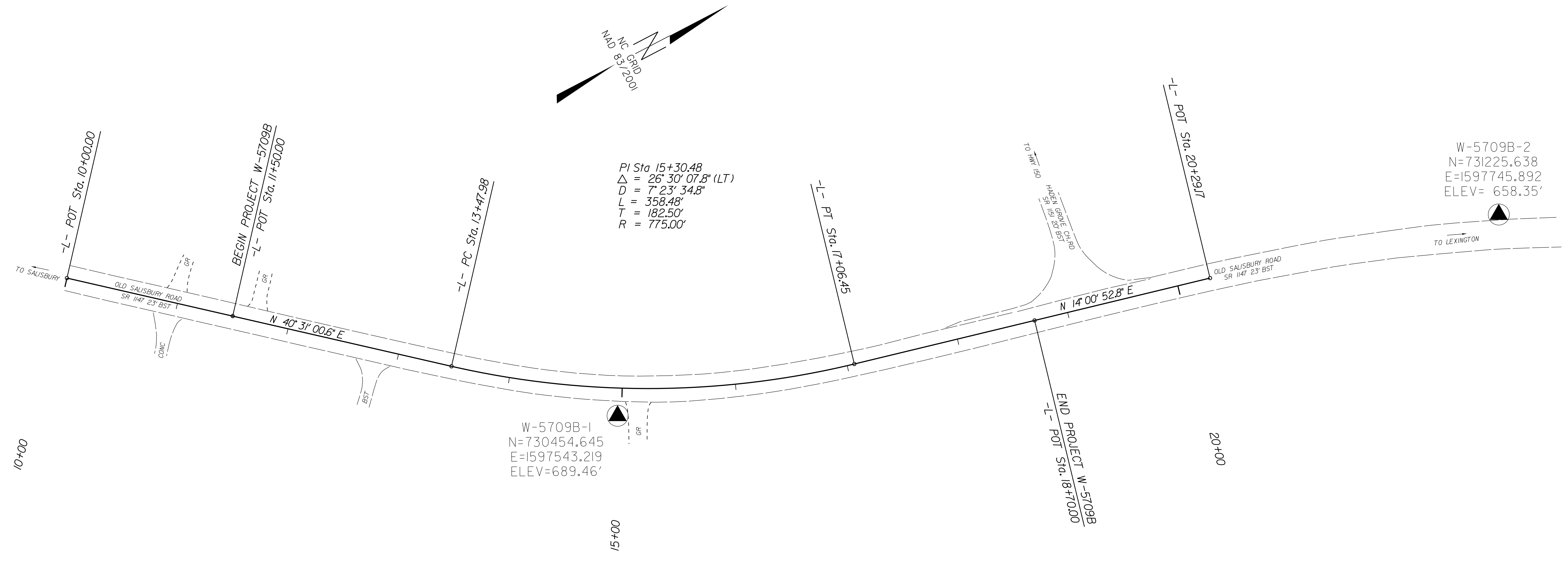
Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	-----SS-----
Above Ground Sanitary Sewer	-----A/G Sanitary Sewer-----
SS Forced Main Line LOS B (S.U.E.*)	-----FSS-----
SS Forced Main Line LOS C (S.U.E.*)	-----FSS-----
SS Forced Main Line LOS D (S.U.E.*)	-----FSS-----

MISCELLANEOUS:

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

SURVEY CONTROL SHEET W-5709B

6/2/99



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "W5709-1"

WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF
 NORTHING: 730454.645(ft) EASTING: 1597543.219(ft)
 ELEVATION: 689.46(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99996705

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "W5709-1" TO -L- STATION 10+00.00 IS
 $S 41^{\circ}37'57'' W \quad 500.59'$

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

TYPE	STATION	NORTH	EAST
POT	10+00.00	730080.4940	1597210.6530
PC	13+47.98	730345.0312	1597436.7235
PT	17+06.45	730660.8445	1597599.4879
POT	20+29.17	730973.9573	1597677.6408

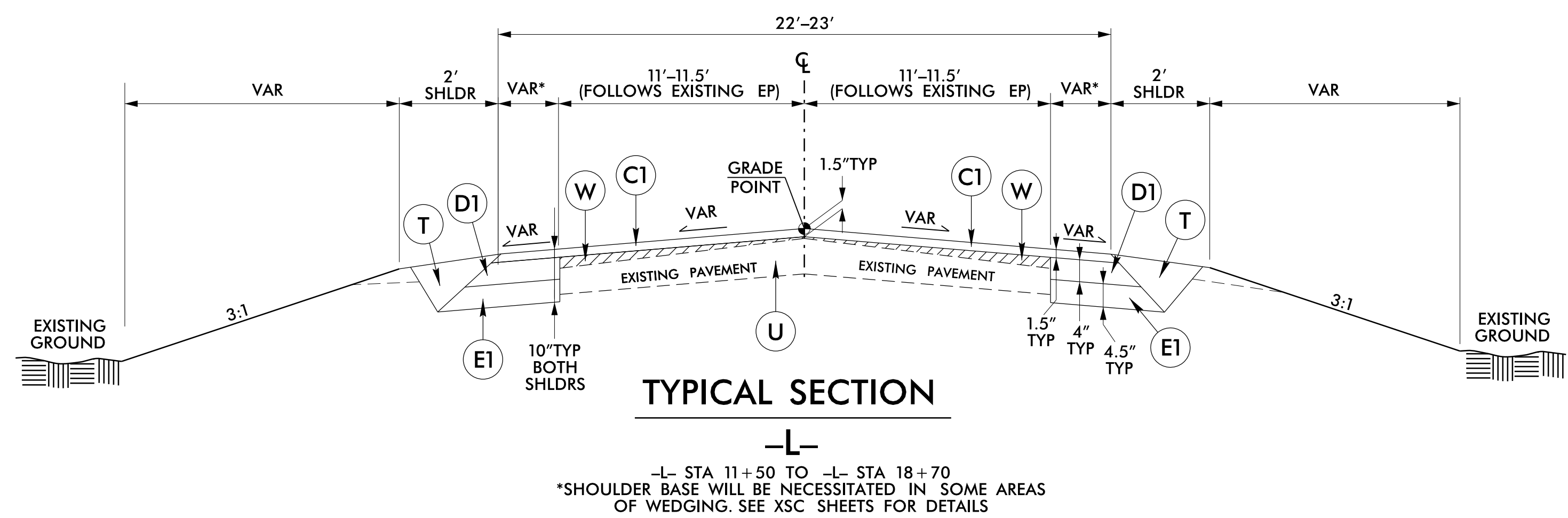
BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
1		W-5709B	730454.6450	1597543.2190	689.46	14+96.74	24.43 RT
2		W-5709B	731225.6380	1597745.8920	658.35		OUTSIDE PROJECT LIMITS

NOTES:

- IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE DIVISION 9 DDC UNIT.
- PROJECT CONTROL WAS ESTABLISHED USING GNSS, THE GLOBAL NAVIGATION SATELLITE SYSTEM.

NOTE: DRAWING NOT TO SCALE

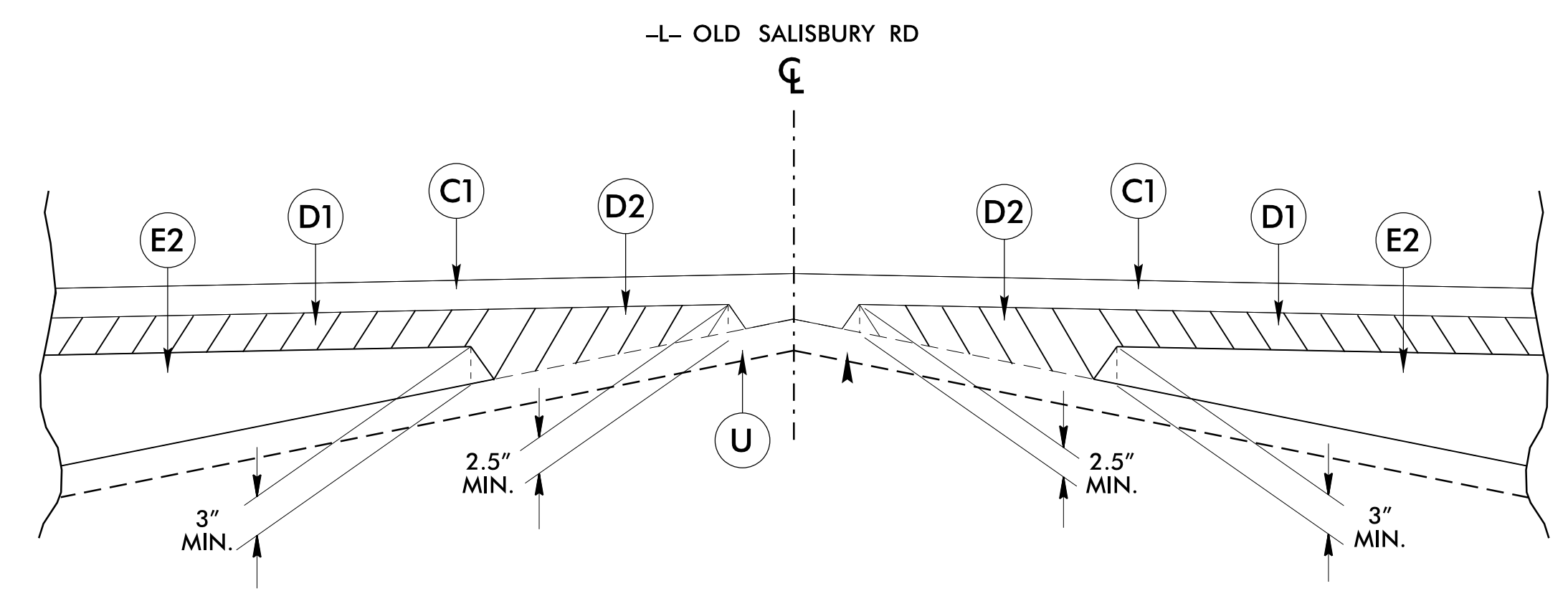
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 jleah



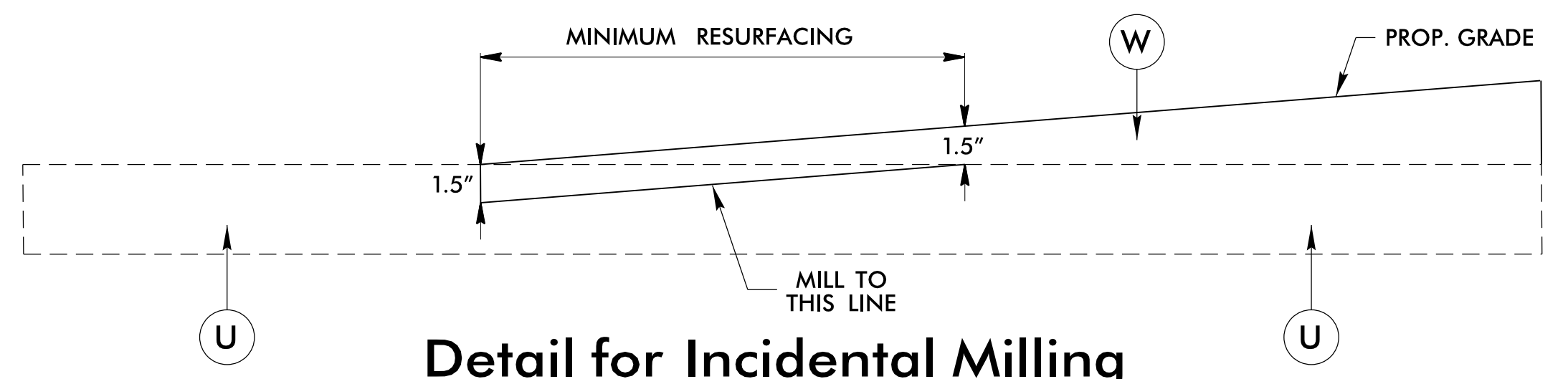
SUMMARY OF EARTHWORK

STATION	STATION	UNCL. EXCAV.	EMBANK. +20%	BORROW	WASTE
11+50 -L-	18+70	52	156	104	0
SUBTOTALS:		52	156	104	0
SAY		55	165	110	0

NOTE:
 1) EARTHWORK QUANTITIES ARE CALCULATED BY DDC UNIT.
 2) APPROXIMATE QUANTITIES ONLY, UNCLASSIFIED EXCAVATION, SHOULDER BORROW, FINE GRADING, CLEARING AND GRUBBING, BREAKING OF EXISTING ASPHALT, AND REMOVAL OF EXISTING ASPHALT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING".



Detail Showing Method of Wedging



Detail for Incidental Milling of Existing Pavement

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I9.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD.
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" IN DEPTH OR GREATER THAN 5.5" IN DEPTH.
T	EARTH MATERIAL
U	EXISTING PAVEMENT
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

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

6/2/99
 18 OCT 2017 10:01 AM
 C:\Users\jacob\AppData\Local\Temp\Projects\W-5709B\Haden Grove Church Rd\Roadway\W-5709B.ddc_2A-1.dgn
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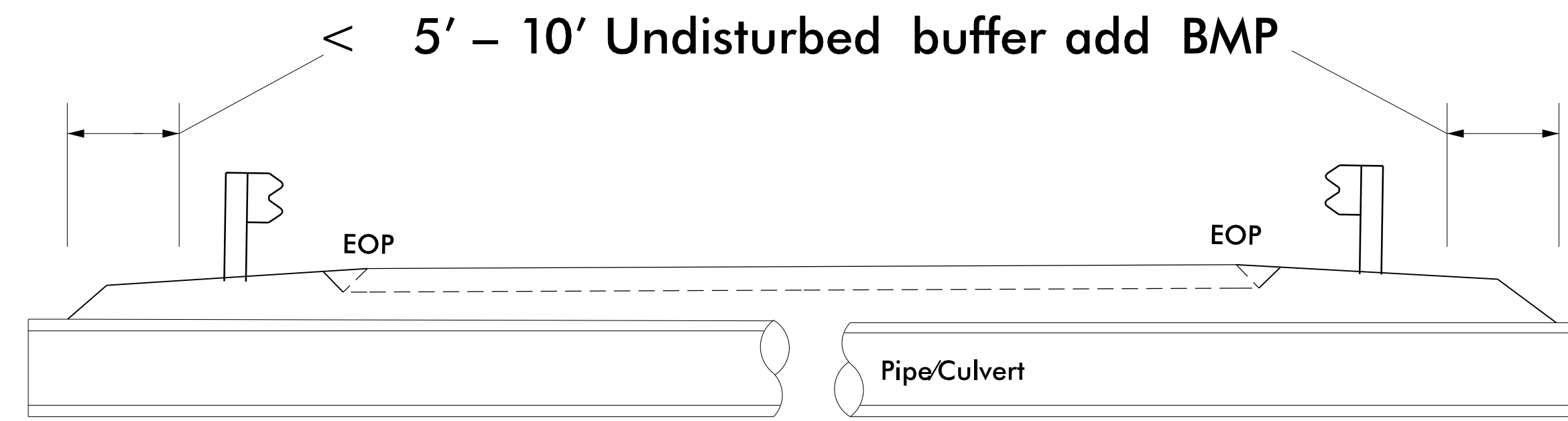
6/2/09

PROJECT REFERENCE NO. W-5709B	SHEET NO. 2A-2
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

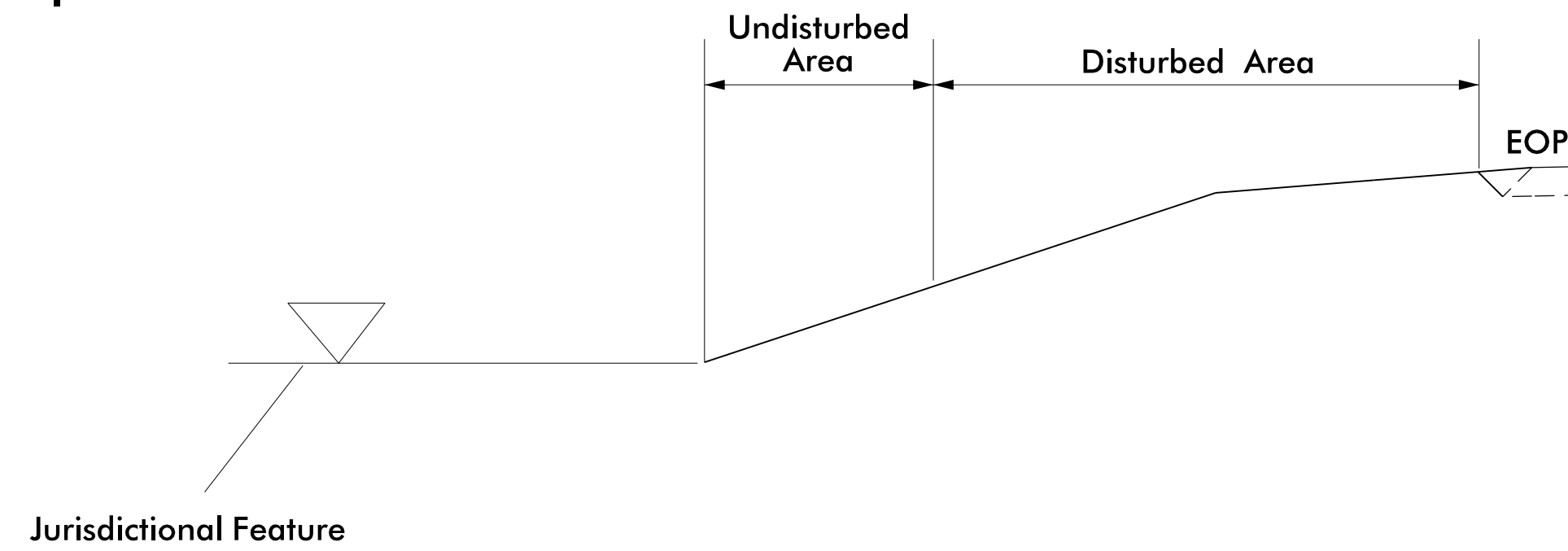
EROSION CONTROL DETAIL

NOTES:
Less than 5' – 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle or Silt Fence

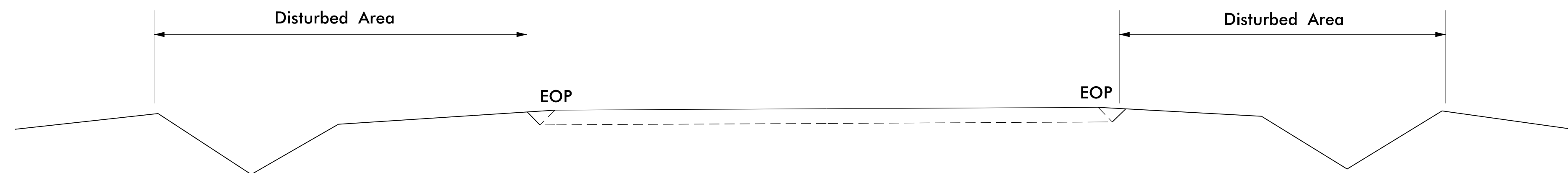


< 5' – 10' Undisturbed buffer from jurisdictional feature add BMP

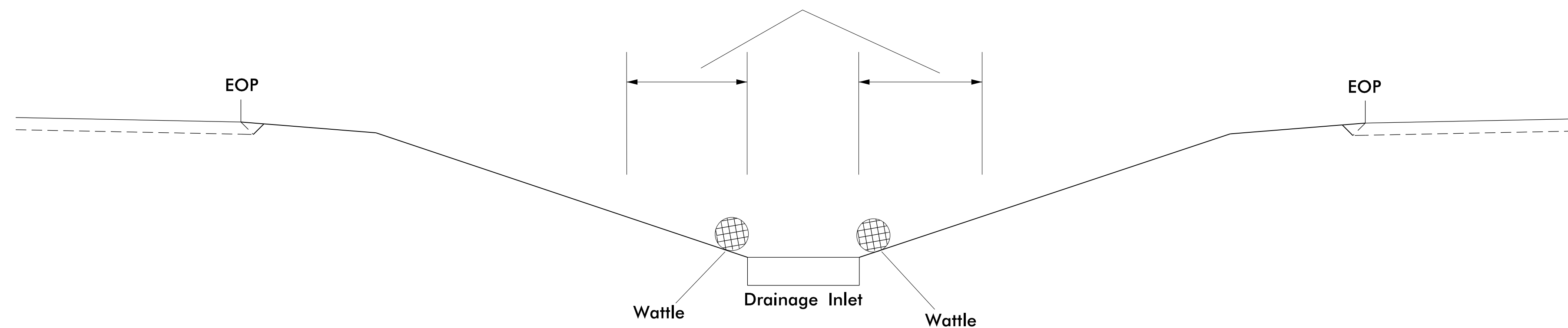


< 5' – 10' Undisturbed buffer from ditchline, add BMP

Use BMP's if shoulders and/or frontslopes and/or ditchline and/or backslopes are disturbed



< 5' – 10' Undisturbed buffer from inlet, add wattle



NOT TO SCALE

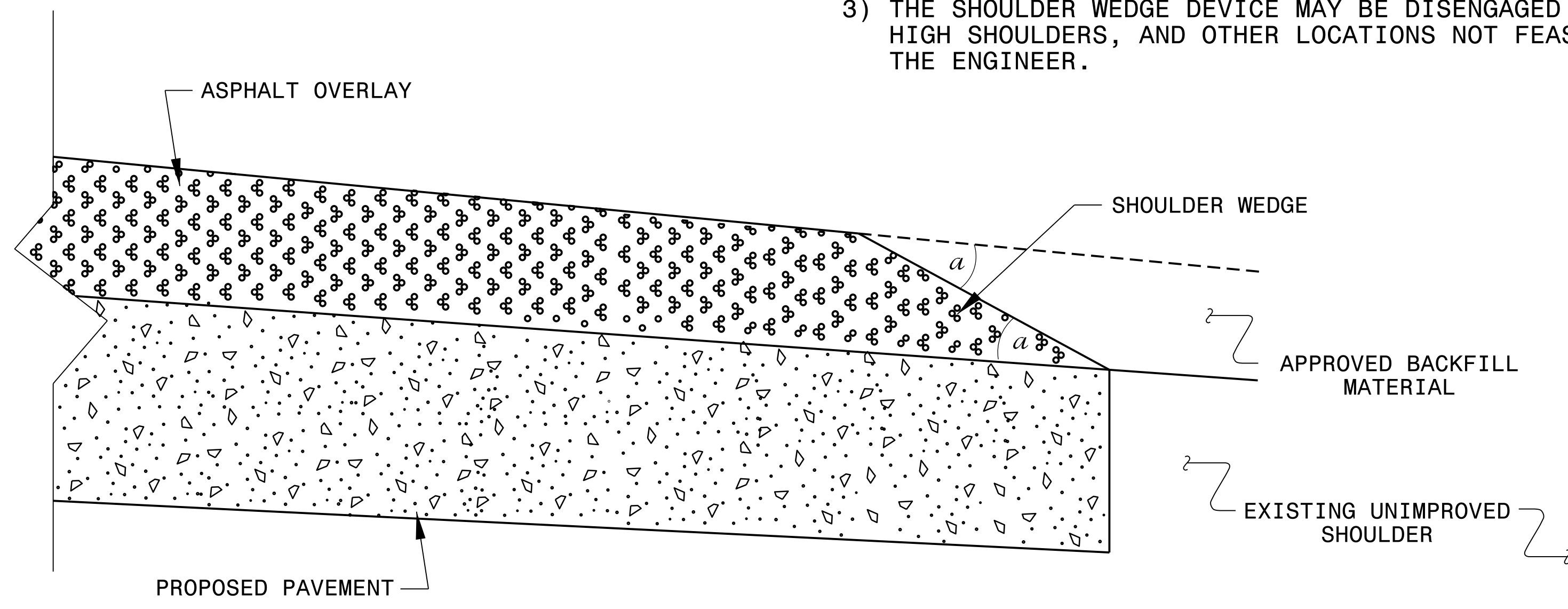
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6/2/99

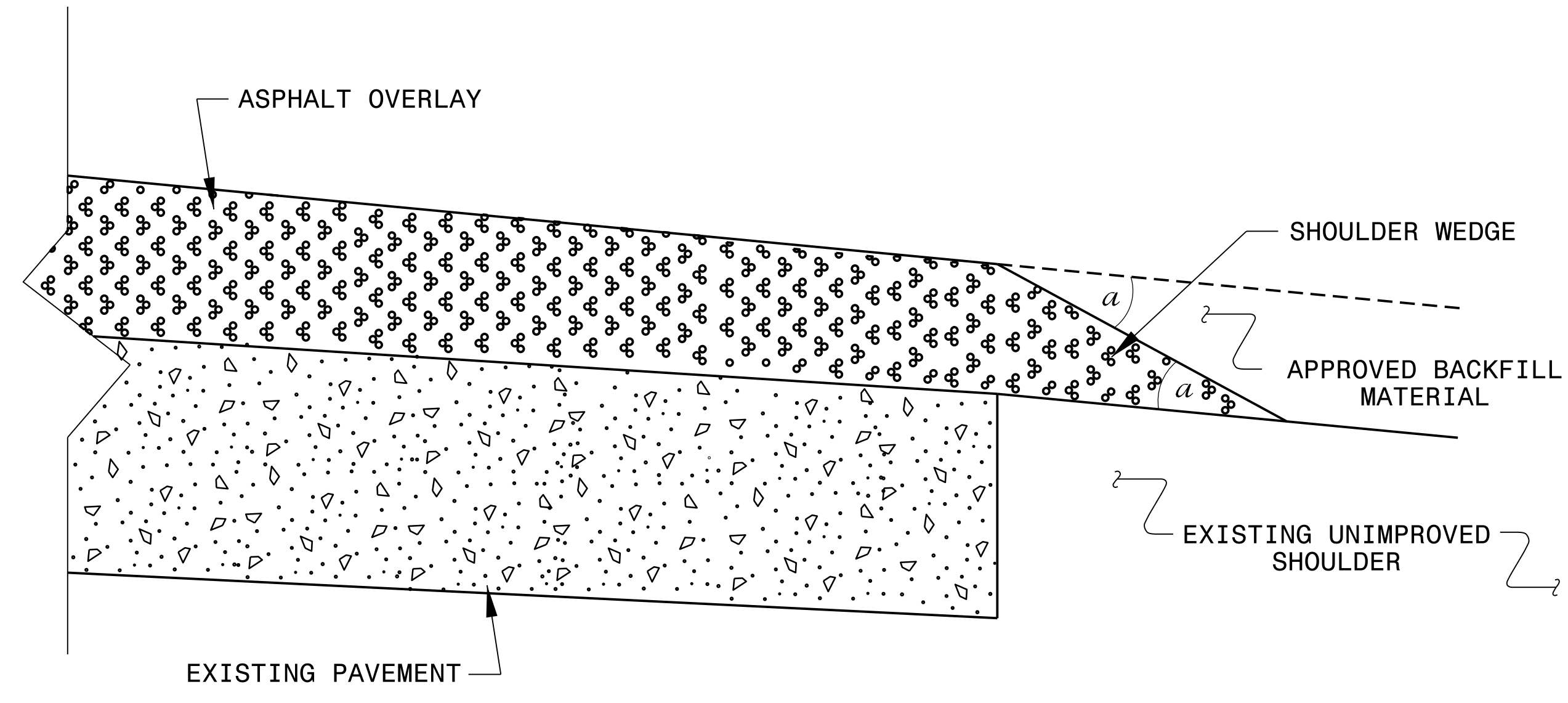
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PROJECT REFERENCE NO. <i>W-5709B</i>	SHEET NO. <i>2A-3</i>
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

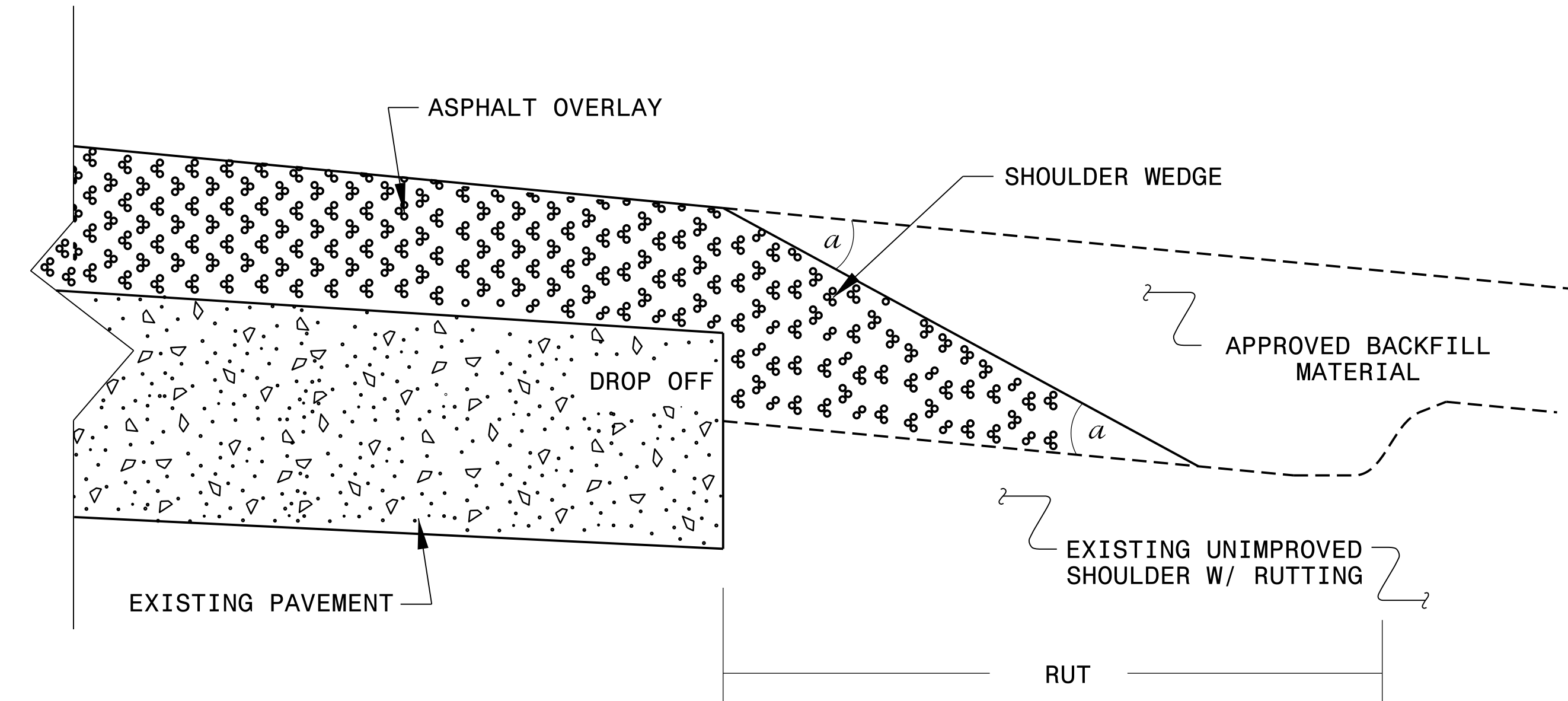
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.
 - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
 - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS DIRECTED BY THE ENGINEER.



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



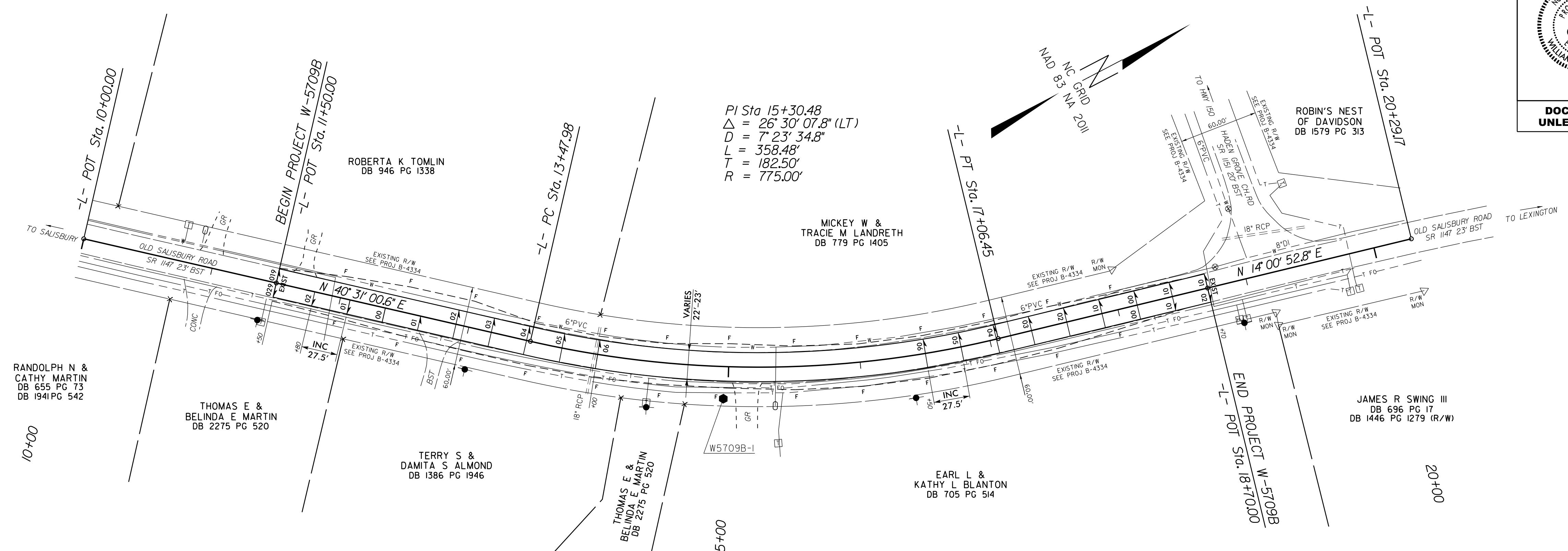
SHOULDER WEDGE DETAIL
(Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL
(Resurfacing Adjacent to
Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

CONTRACT STANDARDS AND DEVELOPMENT UNIT		
Office 919-707-6950		FAX 919-250-4119
SHOULDER WEDGE DETAILS		
ORIGINAL BY: T.SPELL	DATE: 7-19-11	
MODIFIED BY:	DATE: 10/16/12	
CHECKED BY:	DATE:	
FILE SPEC.: s:\usr\details\stand\shoulderwedgedetail.dgn		



$$\begin{aligned}
 PI \text{ Sta } 15+30.48 \\
 \Delta &= 26^\circ 30' 07.8" \text{ (LT)} \\
 D &= 7^\circ 23' 34.8" \\
 L &= 358.48' \\
 T &= 182.50' \\
 R &= 775.00'
 \end{aligned}$$

NOTE: FOLLOWING RE-SURFACING, THE CONTRACTOR SHALL INSTALL NEW THERMOPLASTIC PAVEMENT MARKINGS (SAME AS EXISTING) AND TIE INTO EXISTING PAVEMENT MARKINGS

REVISIONS
 8/17/99

