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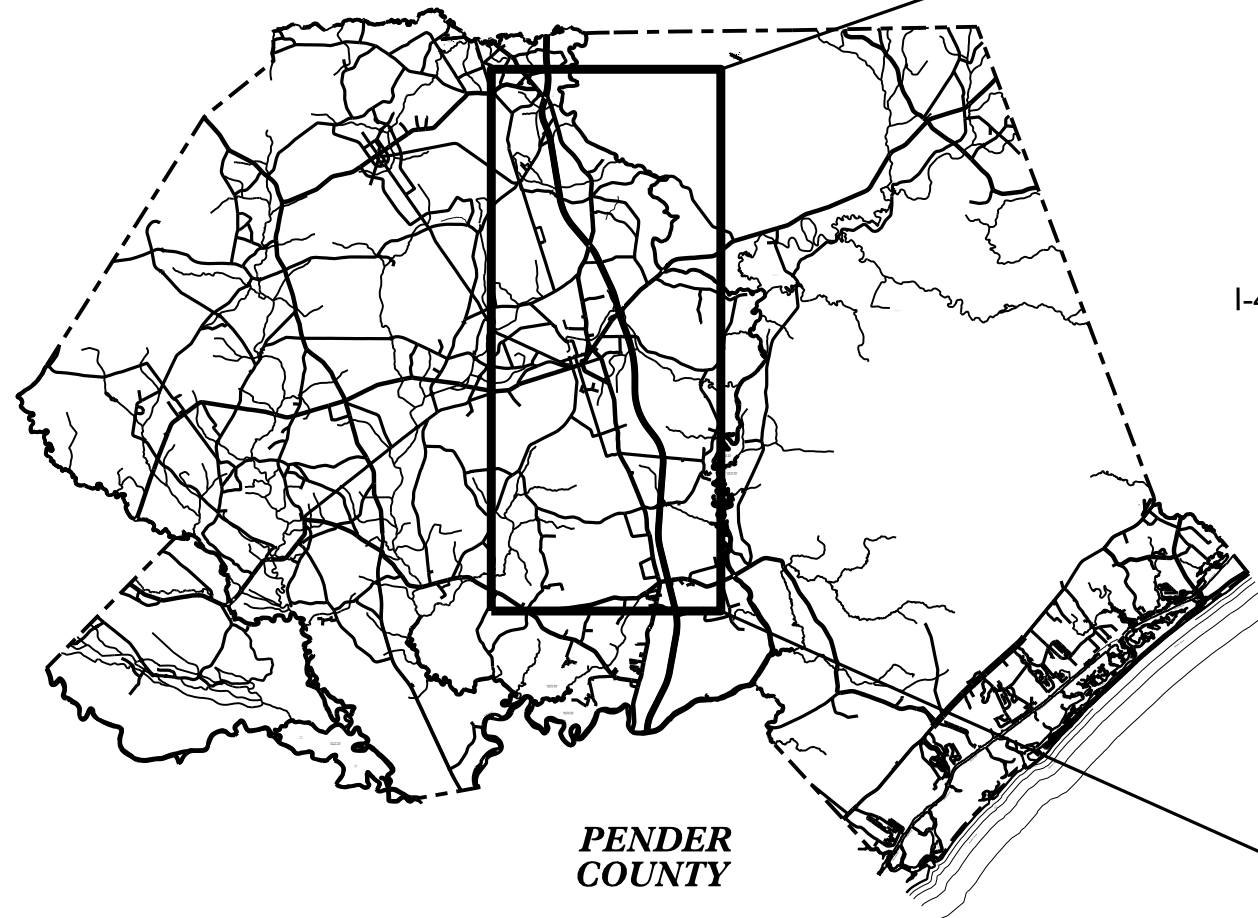
**CONTRACT: C203813** **TIP PROJECT: I-5722**

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

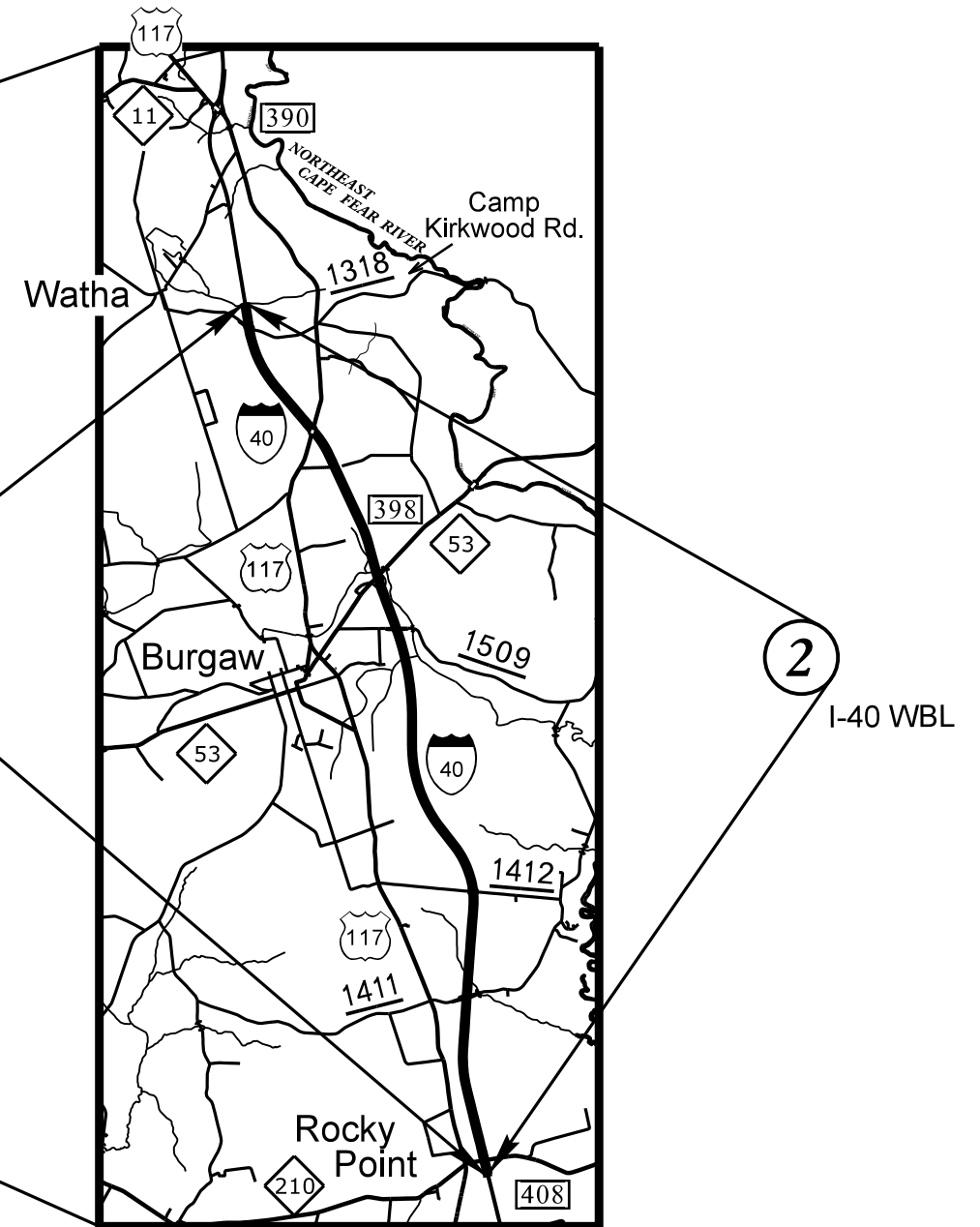
**PENDER COUNTY**

LOCATION: I-40 FROM WEST OF SR 1318 (CAMP KIRKWOOD RD.)  
MILEPOST 393 TO EAST OF NC 210 MILEPOST 408.2

TYPE OF WORK: PAVEMENT REHABILITATION AND DRAINAGE



MAPS N.T.S.



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5722	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
53003.1.1	NHPP-0040(019)393	P.E.	
53003.3.1	NHPP-0040(019)393	CONST.	

**PROJECT LENGTH**

MAP NO. 1 - I-40 (E.B.L.) &  
MAP NO. 2 - I-40 (W.B.L.) = 15.2 MI.  
TOTAL LENGTH OF PROJECT = 15.2 MI.

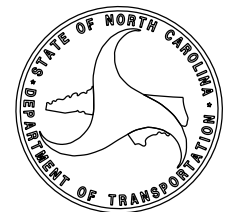
Prepared In the Office of:  
**DIVISION OF HIGHWAYS**  
5501 Barbados Blvd., Castle Hayne, NC, 28429

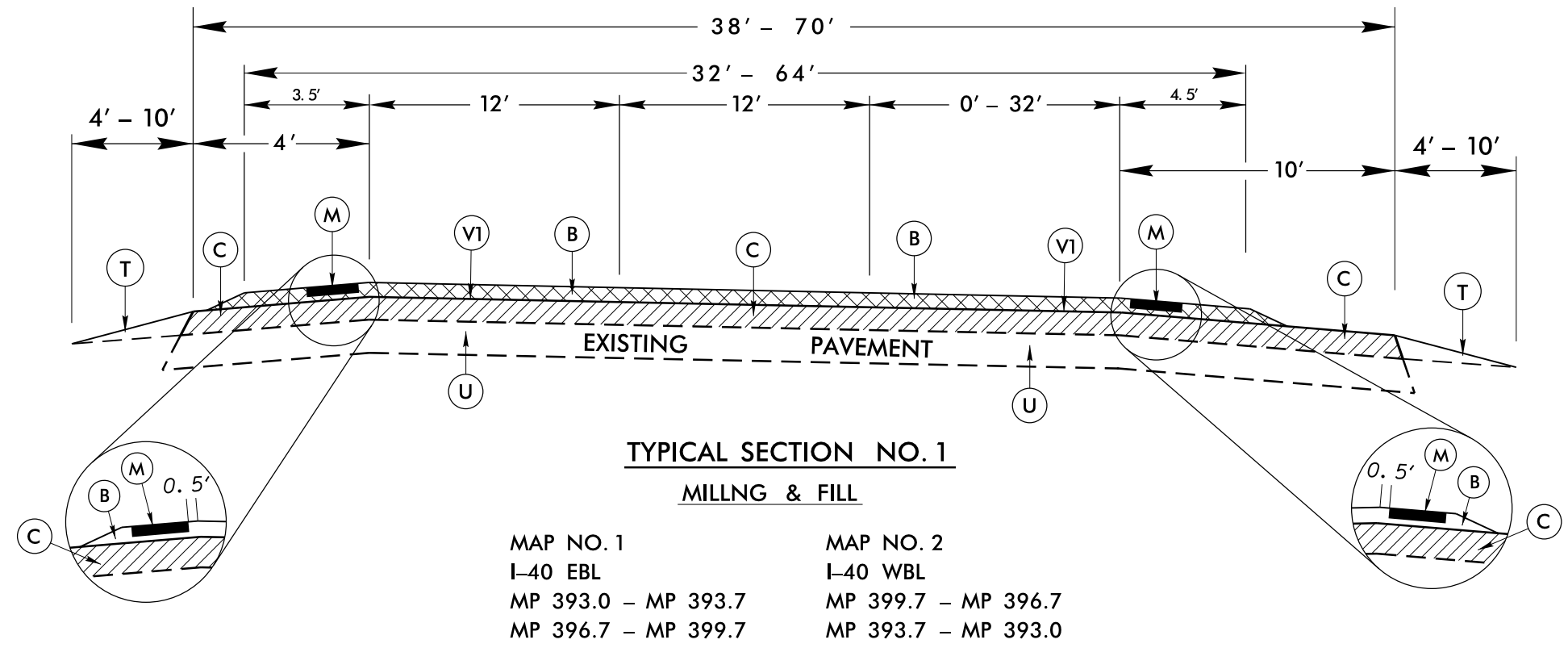
2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:

LETTING DATE:  
FEBRUARY 16, 2016

SCOTT E. COOKE, PE  
PROJECT ENGINEER  
MARY KIMMEL  
PROJECT DESIGN TECHNICIAN  
NICK DREES  
PROJECT DESIGN TECHNICIAN





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
<b>DIVISION 3 - PIPE CULVERTS</b>	
300.01	Method of Pipe Installation
<b>DIVISION 6 - ASPHALT BASES AND PAVEMENTS</b>	
665.01	Asphalt Shoulders - Milled Rumble Strips
<b>DIVISION 8 - INCIDENTALS</b>	
840.18	Concrete Grated Drop Inlet Type B - 12" thru 36" Pipe
840.20	Frames and Wide Slot Flat Grates
840.45	Precast Drainage Structure
846.01	Concrete Curb, Gutter and Curb & Gutter
846.04	Drop Inlet Installation in Shoulder Berm Gutter
850.01	Concrete Paved Ditches
862.01	Guardrail Placement
862.02	Guardrail Installation
876.02	Guide for Rip Rap at Pipe Outlets

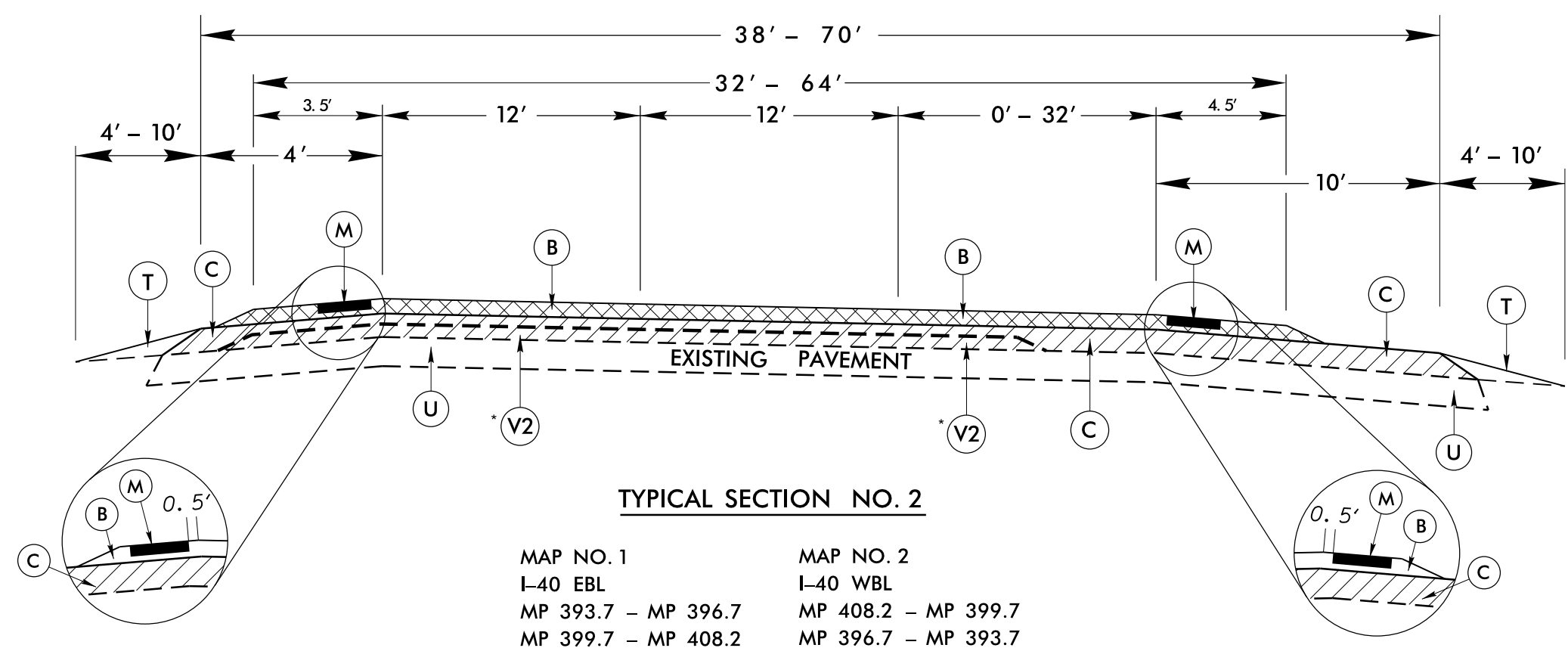
**PAVEMENT SCHEDULE**

B	PROP. APPROX. 7/8" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 90 LBS. PER SQ.YD.
C	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD.
M	MILLED RUMBLE STRIP
T	AGGREGATE SHOULDER BORROW (ASB)
U	EXISTING PAVEMENT
V1	MILLING ASPHALT PAVEMENT 1 1/2" TO 2 1/2" DEPTH
V2	FINE MILLING 7/8" TO 1 1/2" DEPTH

PAVEMENT EDGE SLOPES ARE 1:1, EXCEPT FINAL SURFACE COURSE. SEE SHOULDER WEDGE DETAIL.

SEE STD. DRAWING 1205.01, SHEET 2 OF 2, TABLE 1 FOR EDGE LINE OFFSETS.

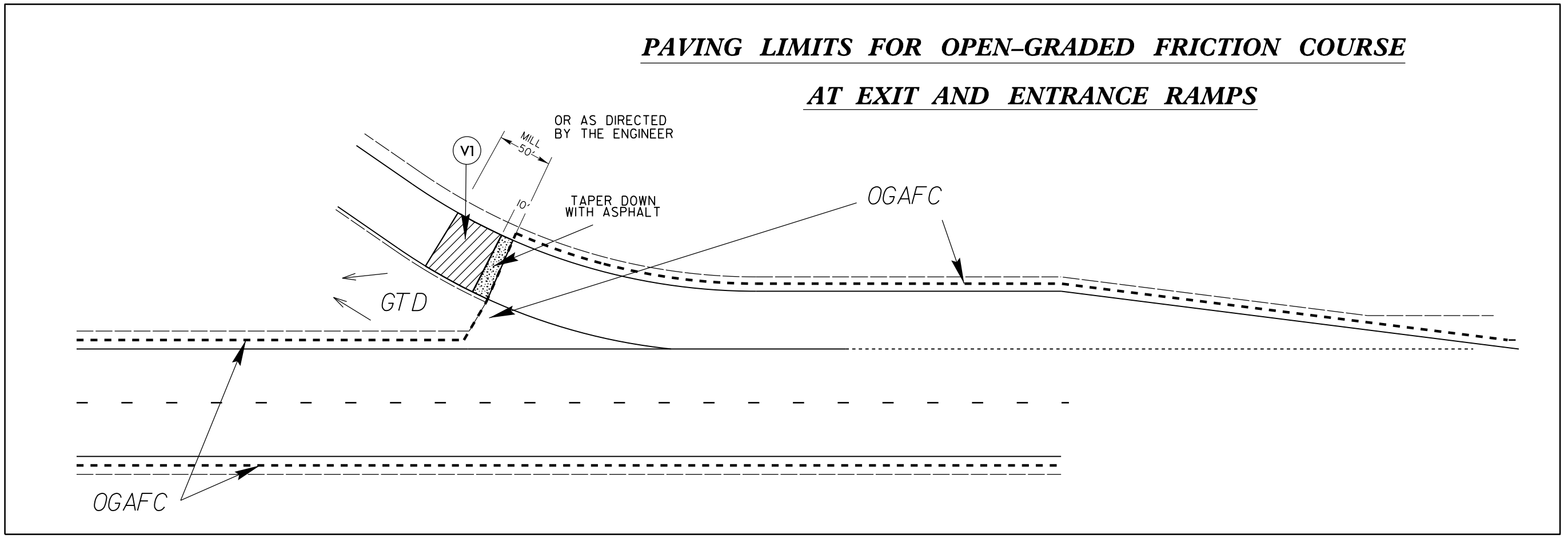
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 S:\Division 3\Resurfacing\Interstate Rehab\2016\I-40\_Resurfacing\Winterstate\_Rehab\2016\I-40\_Resurfacing\I-5722\RALEIGH\_REVISIONS\REV\REV\I-5722\_I-40\_Edy\_Typ\_&\_Details.dgn  
 \$\$\$SUSPENSE\$\$\$



PAVEMENT SCHEDULE	
B	7/8" OGAFC, TYPE FC-2
C	1 1/2" S9.5C
M	MILLED RUMBLE STRIP
T	AGGREGATE SHOULDER BORROW
U	EXISTING PAVEMENT
V1	MILLING ASPHALT PVMT 1 1/2" TO 2 1/2"
V2	FINE MILLING 7/8" TO 1 1/2"

\* NOTE: MILL 7/8" TO 1 1/2" TO REMOVE EXISTING OGAFC

### PAVING LIMITS FOR OPEN-GRADED FRICTION COURSE AT EXIT AND ENTRANCE RAMP

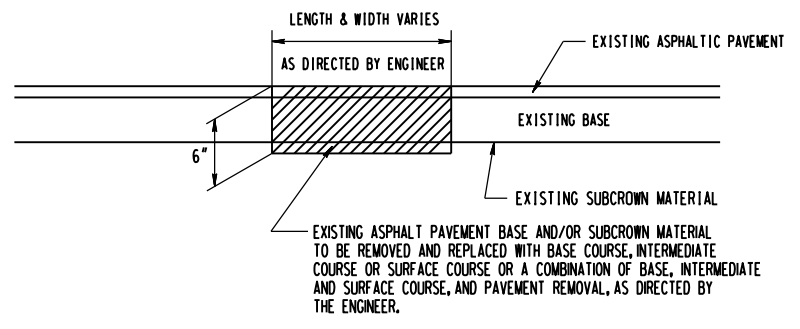


8/17/99  
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 I-40 Resurfacing I-5722\RALEIGH REVISIONS\REV\121615\I-5722\_I-40\_Bdy\_Typ\_&\_Details.dgn  
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 \$\$\$SUBMITTED\$\$\$

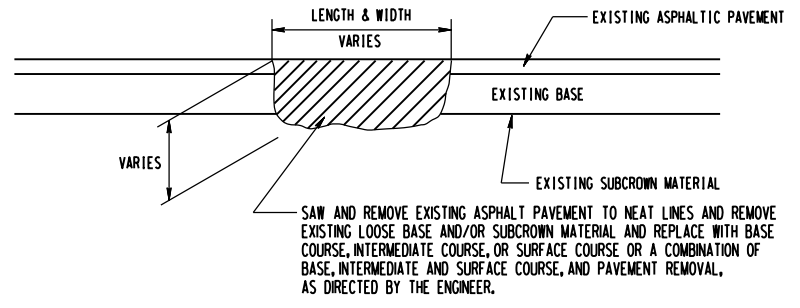
### SHOULDER BERM GUTTER SUMMARY

EBL /WBL	MILEPOST	MILEPOST	LENGTH
MAP 1 – EBL	393.27	393.39	550
EBL	397.08	397.15	337.5
EBL	398.19	398.31	637.5
EBL	398.74	398.75	87.5
EBL	404.96	405.19	1187.5
EBL	405.63	405.68	225
EBL	407.16	407.25	250
MAP 2 – WBL	407.21	407.16	150
WBL	405.68	405.62	225
WBL	405.18	404.97	1025
WBL	398.72	398.70	75
WBL	398.23	398.14	400
WBL	397.15	397.08	325
WBL	395.64	395.62	50
WBL	393.38	393.29	450
		<b>TOTAL:</b>	<b>5,975</b>
		<b>SAY:</b>	<b>5,975</b>

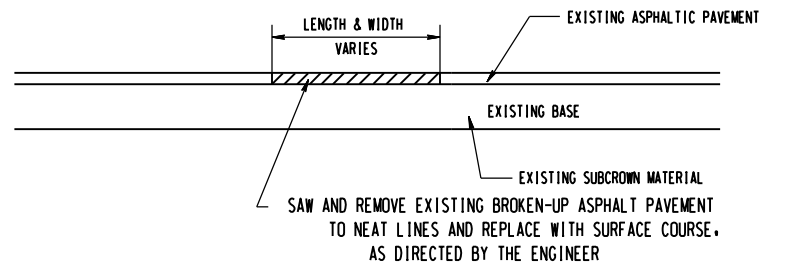
### DETAILS OF REPAIRING EXISTING PAVEMENT PRIOR TO RESURFACING FOR FULL DEPTH AND MILLING



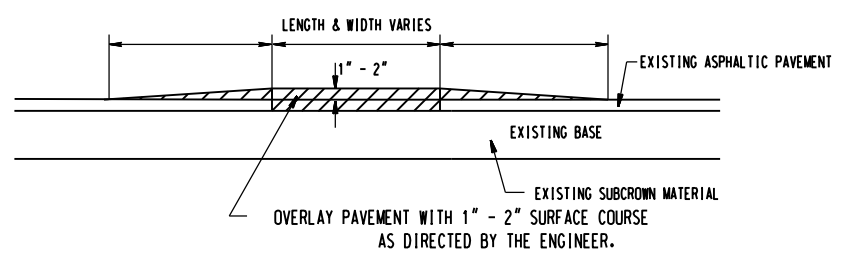
DETAIL NO. 1



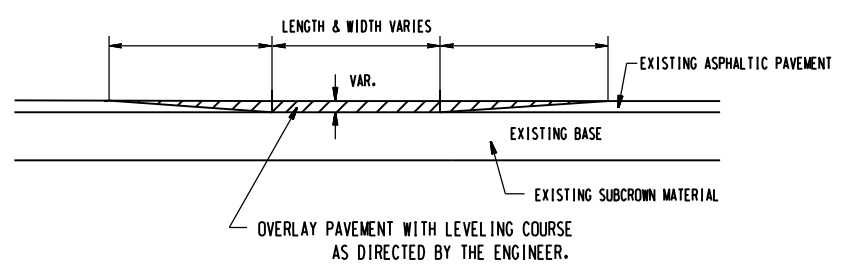
DETAIL NO. 2



DETAIL NO. 3



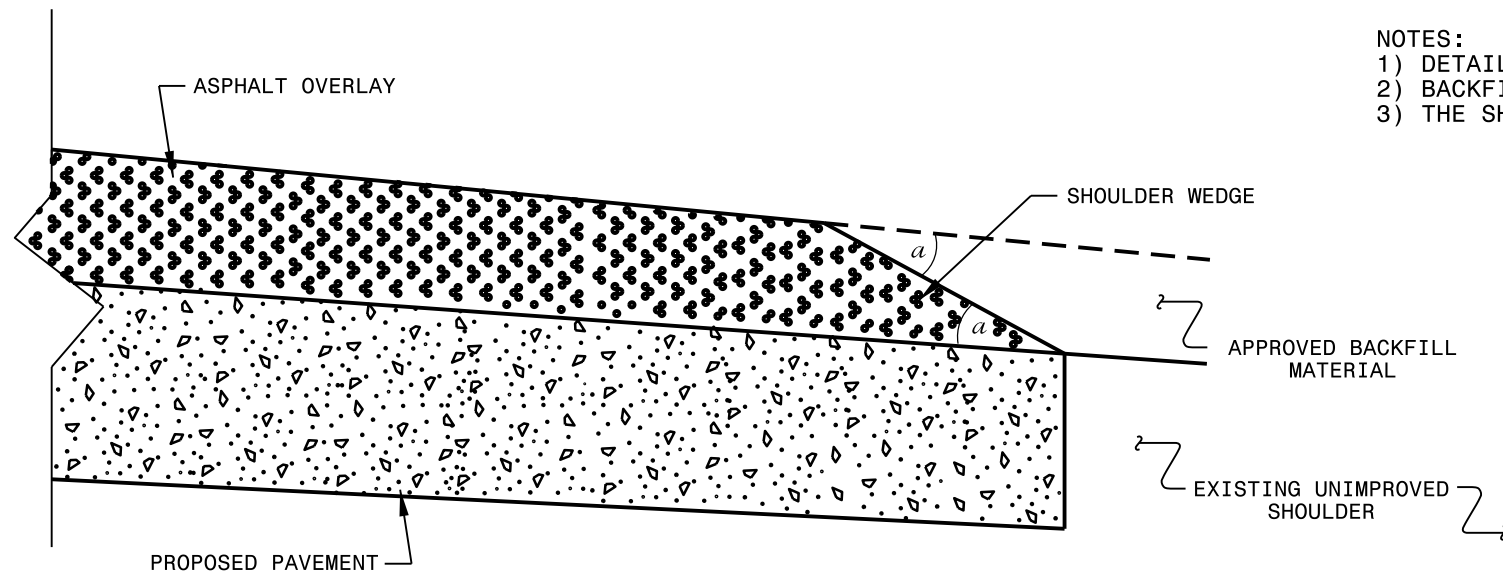
DETAIL NO. 4



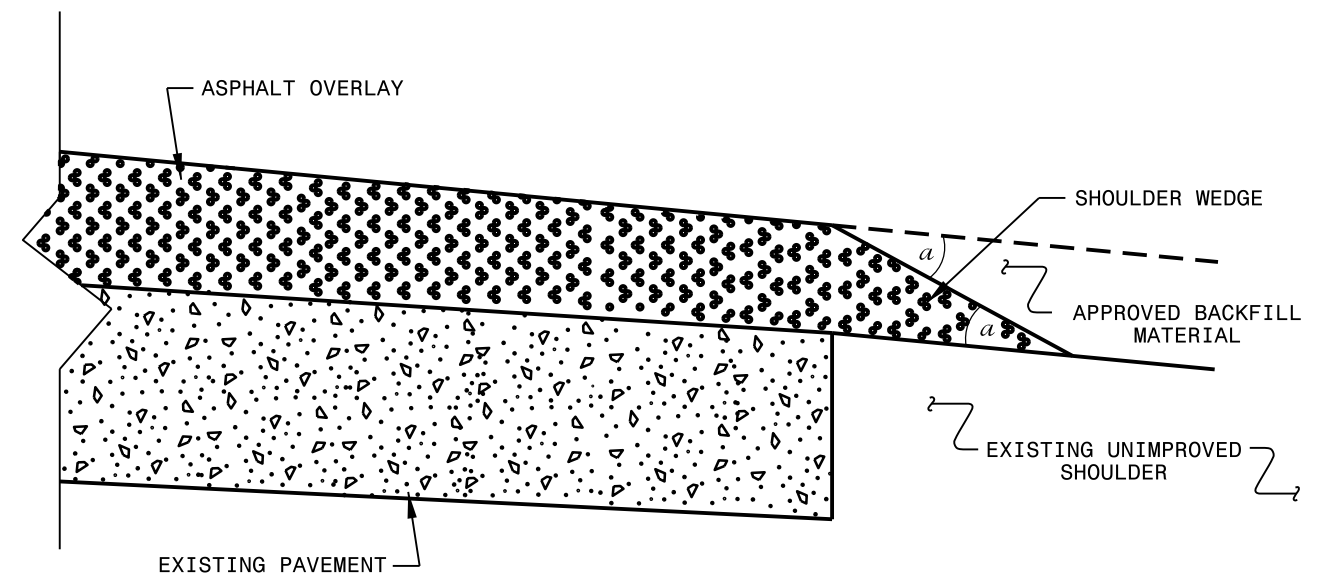
DETAIL NO. 5

REVISIONS  
 16-DEC-2016 16:53  
 S:\DIVISION\Rehab\2016\1-40 Resurfacing\Rehab\2016\1-40 Resurfacing\Revisions\121615\1-5722-1-40.Rdy.Patch & SBB.dgn  
 \$\$\$SUBSTRNAME\$\$\$

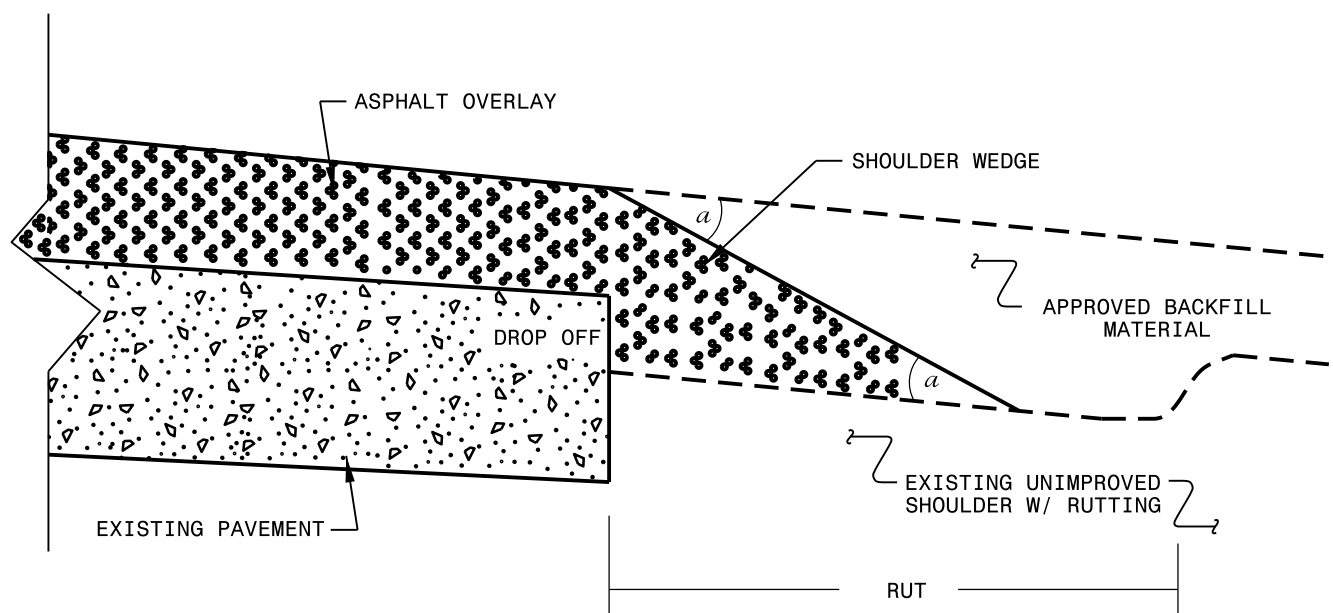
- NOTES:
- 1) DETAIL DOES NOT APPLY TO OGAFc AND ULTRA-THIN BONDED WEARING COURSE.
  - 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.
  - 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS AND SIDE STREETS.



**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)

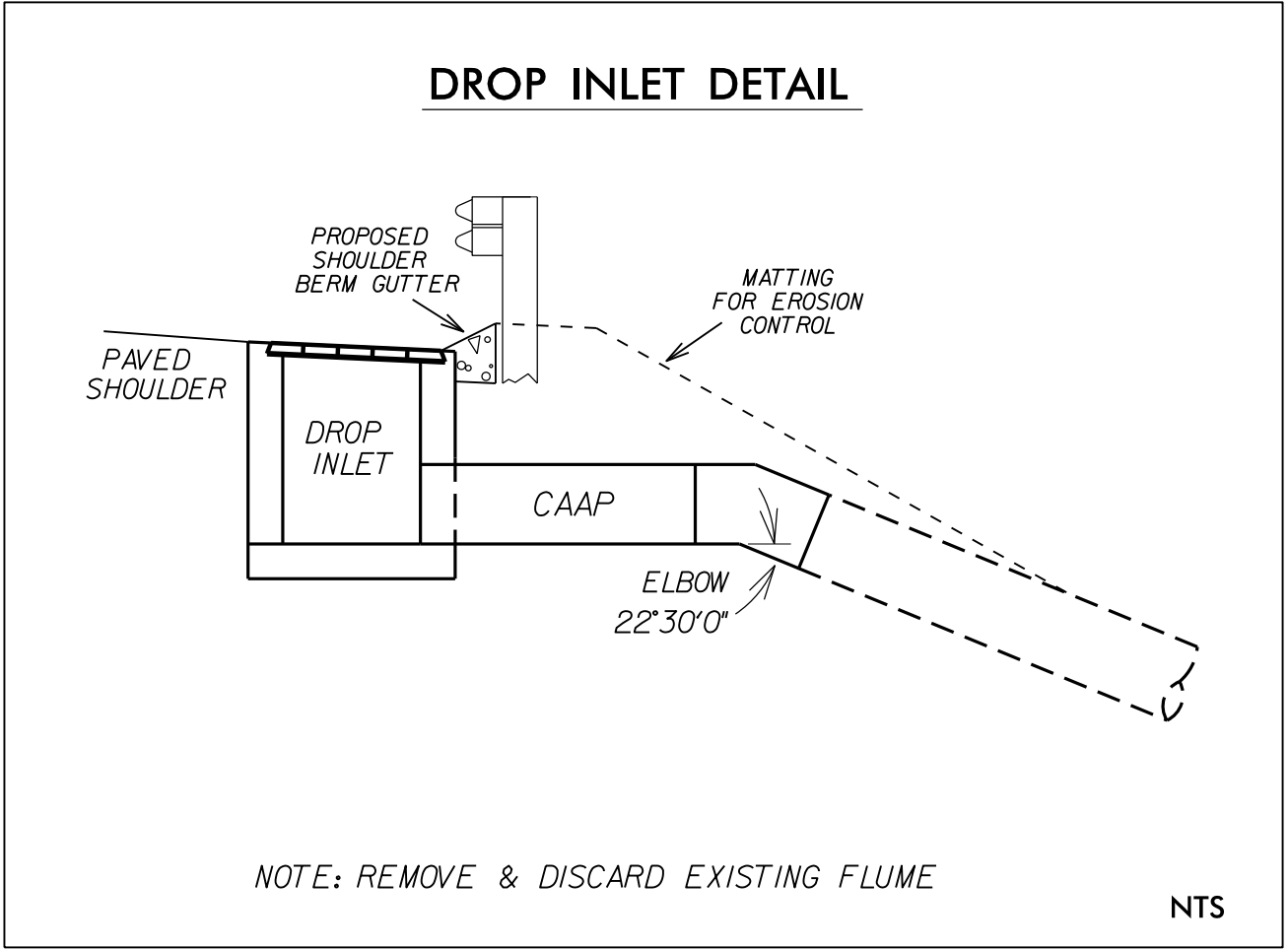
- SHOULDER WEDGE ANGLE = 30°

<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: 10/16/12		
CHECKED BY:	DATE:		
FILE SPEC.: susr/details/stand/shoulderwedgedetail.dgn			

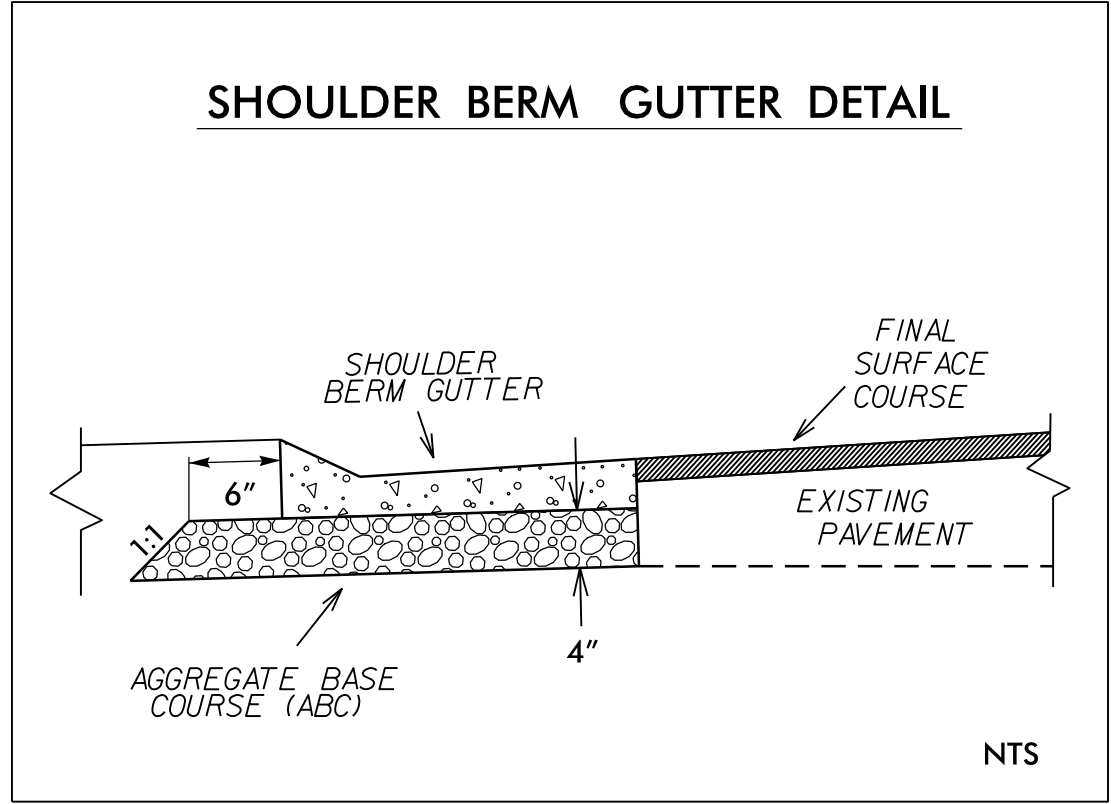
SYSTEMS DESIGN  
 USER NAME

# DRAINAGE & GUTTER DETAILS

## DROP INLET DETAIL



## SHOULDER BERM GUTTER DETAIL



REVISIONS

10-NOV-2016 (62)  
 S:\Division\Resurfacing\Interstate\_Rehab\2016\I-40\_Resurfacing\_I-5722\I-40\_Rdy\_fup.dgn  
 \$\$\$SUSPENSE\$\$\$

PROJECT NO.	SHEET NO.
I-5722	7

**SUMMARY OF QUANTITIES**

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	AGGREGATE SHOULDER BORROW TON	FOUND. COND. MAT., MINOR STRS TON	FOUND. COND. GEOTEXTILE SY	12" CAA PIPE CULVERTS, 0.060" THICK LF	15" CAA PIPE CULVERTS, 0.060" THICK LF	12" CAA PIPE ELBOWS, 0.060" THICK EA	15" CAA PIPE ELBOWS, 0.060" THICK EA	AGGREGATE BASE COURSE TONS	SHOULDER RECONST. SMI	MILLING ASPHALT PAVEMENT, 1 1/2" TO 2 1/2" SY	FINE MILLING 7/8" TO 1 1/2" SY	INC. MILLING SY	LEVELING COURSE, S9.5B TONS	SURFACE COURSE, S9.5C TONS	ASPHALT BINDER FOR PLANT MIX TON	POLYMER MODIFIED ASPHALT BINDER FOR PLANT MIX TON	OGAFC, FC-2 MODIFIED TONS
I-5722	Pender	1	I-40 EBL	FROM WEST OF SR 1318 MP 393 TO EAST OF NC 210 (MP 408.2)	1 & 2	2	MD	YES	NO	15.2	38 - 70	7,024	40	120	335		23		257	30.40	85,185	215,894	524	50	30,904	1,827	997	16,340
I-5722	Pender	2	I-40 WBL	FROM EAST OF NC 210 (MP 408.2) TO WEST OF SR 1318 MP 393	1 & 2	2	MD	YES	NO	15.2	38 - 70	7,024	40	110	330	10	23	1	291	30.40	85,185	215,894	524	50	30,865	1,824	995	16,316
<b>TOTAL FOR PROJ NO. I-5722</b>										<b>30.4</b>		<b>14,048</b>	<b>80</b>	<b>230</b>	<b>665</b>	<b>10</b>	<b>46</b>	<b>1</b>	<b>548</b>	<b>60.80</b>	<b>170,370</b>	<b>431,788</b>	<b>1,048</b>	<b>100</b>	<b>61,769</b>	<b>3,651</b>	<b>1,992</b>	<b>32,656</b>
<b>GRAND TOTAL</b>										<b>30.4</b>		<b>14,048</b>	<b>80</b>	<b>230</b>	<b>665</b>	<b>10</b>	<b>46</b>	<b>1</b>	<b>548</b>	<b>60.80</b>	<b>170,370</b>	<b>431,788</b>	<b>1,048</b>	<b>100</b>	<b>61,769</b>	<b>3,651</b>	<b>1,992</b>	<b>32,656</b>

**SUMMARY OF QUANTITIES**

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	MILLED RUMBLE STRIPS LF	PATCHING EXISTING PAVEMENT (FULL DEPTH) GENERIC TON	PATCHING EXISTING PAVEMENT (MILL) GENERIC TON	MASONRY DRAINAGE STRUCT EA	FRAME WITH TWO GRATES, STD 840.20 EA	REMOVE AND REPLACE CONCRETE APRON FOR DROP INLET (GENERIC) EA	REMOVE & REPLACE CONCRETE PAVED DITCH (GENERIC) SY	SHOULDER BERM GUTTER LF	REPAIR DROP INLET (GENERIC) EA	STEEL BM GR LF	ADD GR POSTS EA	GR ANCHOR UNITS, TYPE CAT-1 EA	GR ANCHOR UNITS, TYPE 350 EA	GR ANCHOR UNITS, TYPE M-350 EA	REMOVE & RESET EXISTING GR (GENERIC) LF
I-5722	Pender	1	I-40 EBL	FROM WEST OF SR 1318 MP 393 TO EAST OF NC 210 (MP 408.2)	1 & 2	2	MD	YES	NO	15.2	38 - 70	160,512	100	1,900	23	23	25	10	2,800	87	100	50	15	8	7	100
I-5722	Pender	2	I-40 WBL	FROM EAST OF NC 210 (MP 408.2) TO WEST OF SR 1318 MP 393	1 & 2	2	MD	YES	NO	15.2	38 - 70	160,512	100	1,900	24	24			3,175		100	50	12	6	7	100
<b>TOTAL FOR PROJ NO. I-5722</b>										<b>30.4</b>		<b>321,024</b>	<b>200</b>	<b>3,800</b>	<b>47</b>	<b>47</b>	<b>25</b>	<b>10</b>	<b>5,975</b>	<b>87</b>	<b>200</b>	<b>100</b>	<b>27</b>	<b>14</b>	<b>14</b>	<b>200</b>
<b>GRAND TOTAL</b>										<b>30.4</b>		<b>321,024</b>	<b>200</b>	<b>3,800</b>	<b>47</b>	<b>47</b>	<b>25</b>	<b>10</b>	<b>5,975</b>	<b>87</b>	<b>200</b>	<b>100</b>	<b>27</b>	<b>14</b>	<b>14</b>	<b>200</b>

**SUMMARY OF QUANTITIES**

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	REMOVE & REPLACE EXISTING GR (GENERIC) LF	RIP RAP, CLASS B TON	GEO-TEXTILE FOR DRAINAGE SY	TEMP. SILT FENCE LF	STONE FOR EC CLASS B TON	SEDIMENT CONTROL STONE TON	TEMP. MULCHING ACR	SEED FOR TEMPORARY SEEDING LBS	FERTILIZER FOR TEMP. SEEDING TON	SAFETY FENCE LF	MATTING FOR EROSION CONTROL SY	1/4" HARDWARE CLOTH LF	WATTLE LF	SEED & MULCHING AC	SEED FOR REPAIR SEEDING LB	FERTILIZER FOR REPAIR SEEDING TON
I-5722	Pender	1	I-40 EBL	FROM WEST OF SR 1318 MP 393 TO EAST OF NC 210 (MP 408.2)	1 & 2	2	MD	YES	NO	15.2	38 - 70	3,875.00	7	28	1,700	380	380	14.74	760	3.80	210	2,608	760	1,330	11.05	760	3.80
I-5722	Pender	2	I-40 WBL	FROM EAST OF NC 210 (MP 408.2) TO WEST OF SR 1318 MP 393	1 & 2	2	MD	YES	NO	15.2	38 - 70	3,437.50	6	24	1,670	380	380	14.74	760	3.80	120	597	760	470	11.05	760	3.80
<b>TOTAL FOR PROJ NO. I-5722</b>										<b>30.4</b>		<b>7,312.50</b>	<b>13</b>	<b>52</b>	<b>3,370</b>	<b>760</b>	<b>760</b>	<b>29.48</b>	<b>1,520</b>	<b>7.60</b>	<b>330</b>	<b>3,205</b>	<b>1,520</b>	<b>1,800</b>	<b>22.10</b>	<b>1,520</b>	<b>7.60</b>
<b>GRAND TOTAL</b>										<b>30.4</b>		<b>7,312.50</b>	<b>13</b>	<b>52</b>	<b>3,370</b>	<b>760</b>	<b>760</b>	<b>29.48</b>	<b>1,520</b>	<b>7.60</b>	<b>330</b>	<b>3,205</b>	<b>1,520</b>	<b>1,800</b>	<b>22.10</b>	<b>1,520</b>	<b>7.60</b>



PROJECT NO.	SHEET NO.
I-5722	8

**POLYUREA AND PAINT QUANTITIES**

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	LENGTH	WIDTH	4413000000-E	4457000000-N	4507000000-E	4508000000-E	4510000000-N	4815000000-E			4825000000-E			4847100000-E			4847120000-E	4855000000-E	4865000000-E	4905000000-N
										WORK ZONE ADVANCE/GENERAL WARNING SIGNING SF	TEMPORARY TRAFFIC CONTROL LS	WATER FILLED BARRIER LF	RESET WATER FILLED BARRIER LF	LAW ENFORCEMENT HR	6" WHITE PAINT LF	6" YELLOW PAINT LF	12" WHITE PAINT LF	6" WHITE POLYUREA (HIGHLY REFLECTIVE ELEMENTS) LF	6" YELLOW POLYUREA (HIGHLY REFLECTIVE ELEMENTS) LF	12" WHITE POLYUREA (HIGHLY REFLECTIVE ELEMENTS) LF	REMOVAL OF PAVEMENT MARKING LINES (6") LF	REMOVAL OF PAVEMENT MARKING LINES (12") LF	SNOW PLOWABLE MARKERS (C/R) EA				
I-5722	Pender	1	I-40 EBL	FROM WEST OF SR 1318 MP 393 TO EAST OF NC 210 (MP 408.2)	1 & 2	2	MD	15.2	38 - 70	352	1	600	1,800	152	178,203	141,220	3,230	101,960	80,500	2,150	50	50	1,102				
<b>TOTAL FOR MAP NO. 1</b>									<b>352</b>	<b>1</b>	<b>600</b>	<b>1,800</b>	<b>152</b>	<b>178,203</b>	<b>141,220</b>	<b>3,230</b>	<b>101,960</b>	<b>80,500</b>	<b>2,150</b>	<b>50</b>	<b>50</b>	<b>1,102</b>					
I-5722	Pender	2	I-40 WBL	FROM EAST OF NC 210 (MP 408.2) TO WEST OF SR 1318 MP 393	1 & 2	2	MD	15.2	38 - 70	352	1		2,400	152	177,959	141,220	3,515	102,000	80,500	2,600	50	50	1,111				
<b>TOTAL FOR MAP NO. 2</b>									<b>352</b>	<b>1</b>		<b>2,400</b>	<b>152</b>	<b>177,959</b>	<b>141,220</b>	<b>3,515</b>	<b>102,000</b>	<b>80,500</b>	<b>2,600</b>	<b>50</b>	<b>50</b>	<b>1,111</b>					
<b>TOTAL FOR PROJ NO. I-5722</b>									<b>704</b>	<b>1</b>	<b>600</b>	<b>4,200</b>	<b>304</b>	<b>356,162</b>	<b>282,440</b>	<b>6,745</b>	<b>203,960</b>	<b>161,000</b>	<b>4,750</b>	<b>100</b>	<b>100</b>	<b>2,213</b>					
<b>GRAND TOTAL</b>									<b>704</b>	<b>1</b>	<b>600</b>	<b>4,200</b>	<b>304</b>	<b>638,602</b>	<b>282,440</b>	<b>6,745</b>	<b>364,960</b>	<b>161,000</b>	<b>4,750</b>	<b>100</b>	<b>100</b>	<b>2,213</b>					



