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ALEXANDER COUNTY

2017CPT.12.16.10021

2017CPT.12.16.20021

ALEXANDER

CALDWELL

1

2

3

4

5

6

N

ALEXANDER COUNTY

12CPT.12.16.10021
12CPT.12.16.20021

ALEXANDER

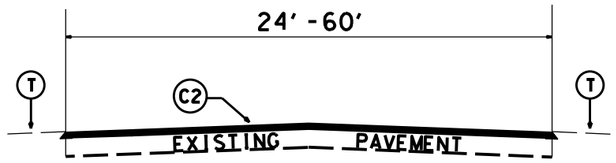
ALEXANDER

ALEXANDER

ALEXANDER

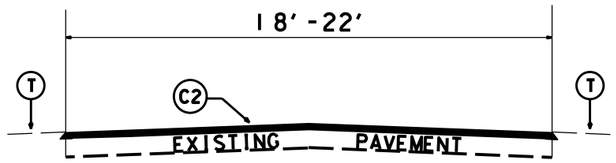
N

PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
ALEXANDER COUNTY	4	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
2017CPT.12.16.10021		PRIMARY RESURFACING
2017CPT.12.16.20021		SECONDARY RESURFACING



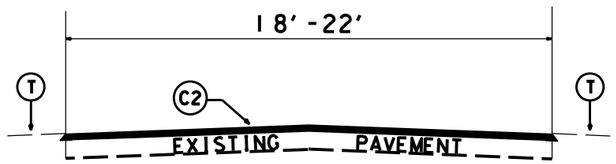
TYPICAL SECTION NO.1

Map 1



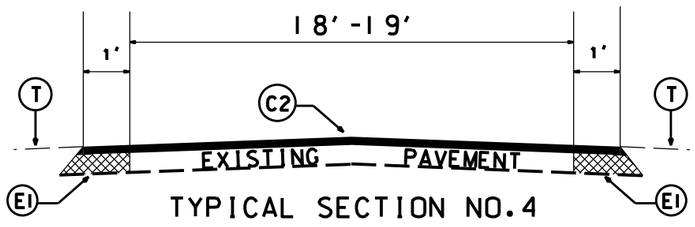
TYPICAL SECTION NO.2

Map 3, 4, 6
Map 7 Sta. 0+00 to 6+39



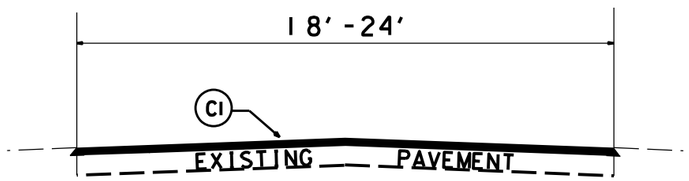
TYPICAL SECTION NO.3

Map 2
•Level Entire Roadway to Re-establish Profile



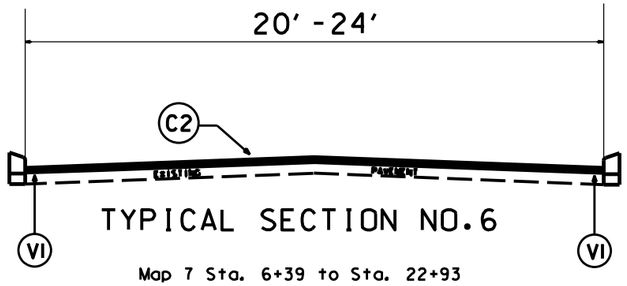
TYPICAL SECTION NO.4

Map 8
•Level Entire Roadway to Re-establish Profile



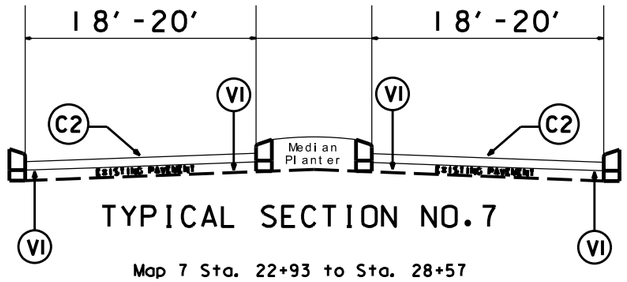
TYPICAL SECTION NO.5

Maps 5, 9, 10, 11, 12, 13, 14, 15, 16



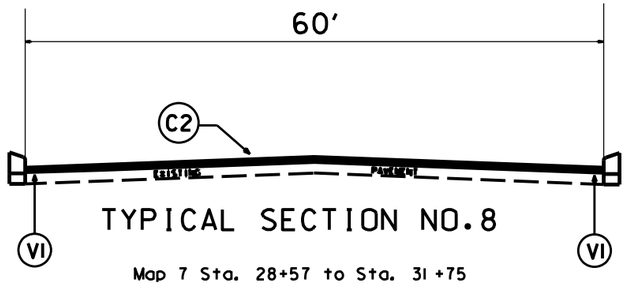
TYPICAL SECTION NO.6

Map 7 Sta. 6+39 to Sta. 22+93



TYPICAL SECTION NO.7

Map 7 Sta. 22+93 to Sta. 28+57



TYPICAL SECTION NO.8

Map 7 Sta. 28+57 to Sta. 31+75

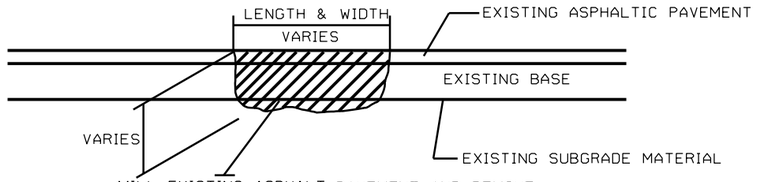
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.0" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
E1	PROP. APPROX. 5.0" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
T	AGGREGATE SHOULDER BORROW (SHOULDER RECONSTRUCTION)
V1	MILL EXISTING ASPHALT PAVEMENT APPROX. 0" TO 1.5" IN DEPTH BEGINNING 5' FROM EDGE OF CURB & GUTTER
V2	MILL EXISTING ASPHALT PAVEMENT APPROX. 1.5" IN DEPTH

2017 - 2018
Resurfacing Program
Typical Sections
Alexander County

PROJ. REFERENCE NO.	SHEET NO.	TOTAL SHEETS
ALEXANDER COUNTY	5	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
2017CPT.12.16.10021		PRIMARY RESURFACING
2017CPT.12.16.20021		SECONDARY RESURFACING

DETAIL A

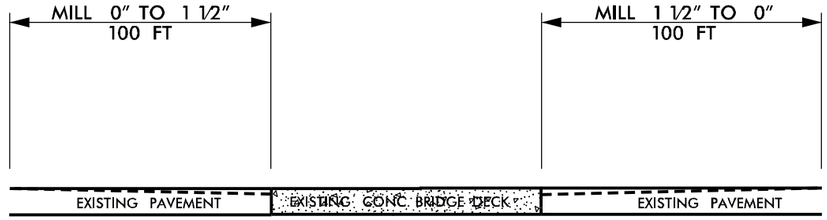
PATCHING EXISTING PAVEMENT



MILL EXISTING ASPHALT PAVEMENT AND REMOVE
EXISTING LOOSE BASE AND/OR SUBGRADE MATERIAL AND REPLACE WITH ACIC TYPE, I19.0X AND ACSC TYPE, S9.5X AS DIRECTED BY THE ENGINEER.

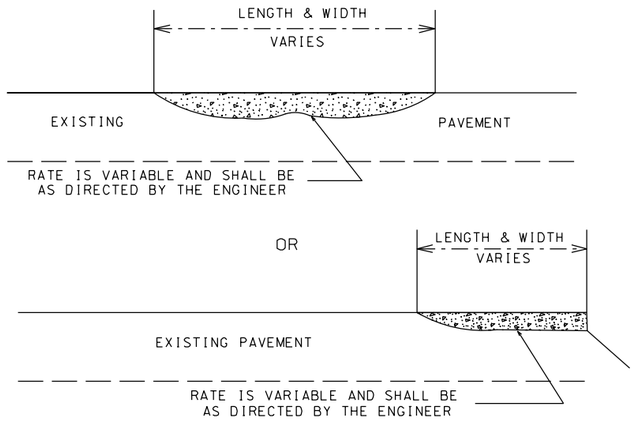
DETAIL C

MILLING BRIDGE APPROACHES

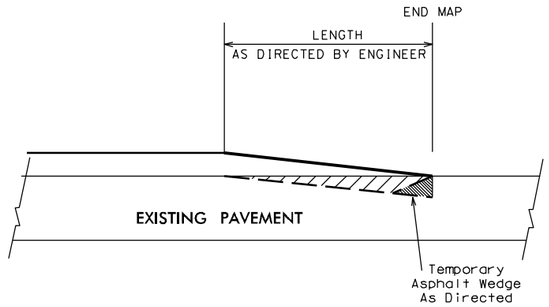


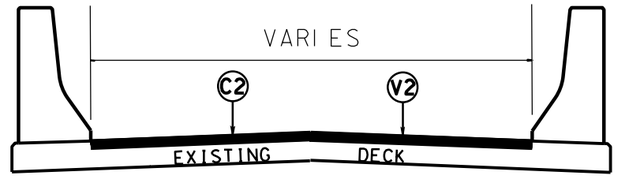
DETAIL B

ASPHALT CONCRETE SURFACE COURSE
TYPE S9.5X (LEVELING COURSE)



TIE-IN (INCIDENTAL) MILLING DETAIL



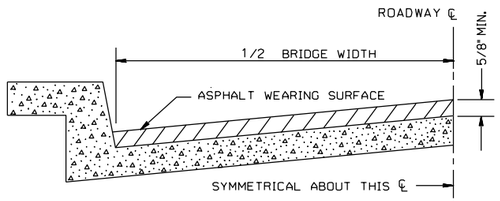


ASPHALT BRIDGE SECTION

Use for all asphalt bridges

DETAIL E

BRIDGE HALF TYPICAL SECTION



FOR BRIDGES WITH FLOOR DRAINS, CARE SHALL BE EXERCISED IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE. ALL DRAINS SHALL BE LEFT OPEN.

THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. A THICKNESS OF NOT LESS THAN 5/8" SHALL BE PROVIDED. THE MAXIMUM THICKNESS SHALL PREFERABLY BE 1-1/2" UNLESS IT IS IMPRACTICAL TO PROVIDE A SMOOTH RIDING SURFACE OTHERWISE.

NOTES

ALL UNPAVED S.R. ROADS TO BE SURFACED 50' FROM EDGE OF PAVEMENT OF MAIN PROJECT.
ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII, OR AS DIRECTED BY THE ENGINEER.
EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE TABLE OF QUANTITIES.
SHOULDERS AND DITCHES ARE TO BE CONSTRUCTED BY OTHERS UNLESS OTHERWISE NOTED.
BRIDGES TO BE RESURFACED AT LOCATIONS AND TO DEPTH AS DIRECTED BY THE ENGINEER.

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.0" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
E1	PROP. APPROX. 5.0" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
T	AGGREGATE SHOULDER BORROW (SHOULDER RECONSTRUCTION)
V1	MILL EXISTING ASPHALT PAVEMENT APPROX. 0" TO 1.5" IN DEPTH BEGINNING 5' FROM EDGE OF CURB & GUTTER
V2	MILL EXISTING ASPHALT PAVEMENT APPROX. 1.5" IN DEPTH

2017 - 2018
Resurfacing Program
Typical Sections
Alexander County

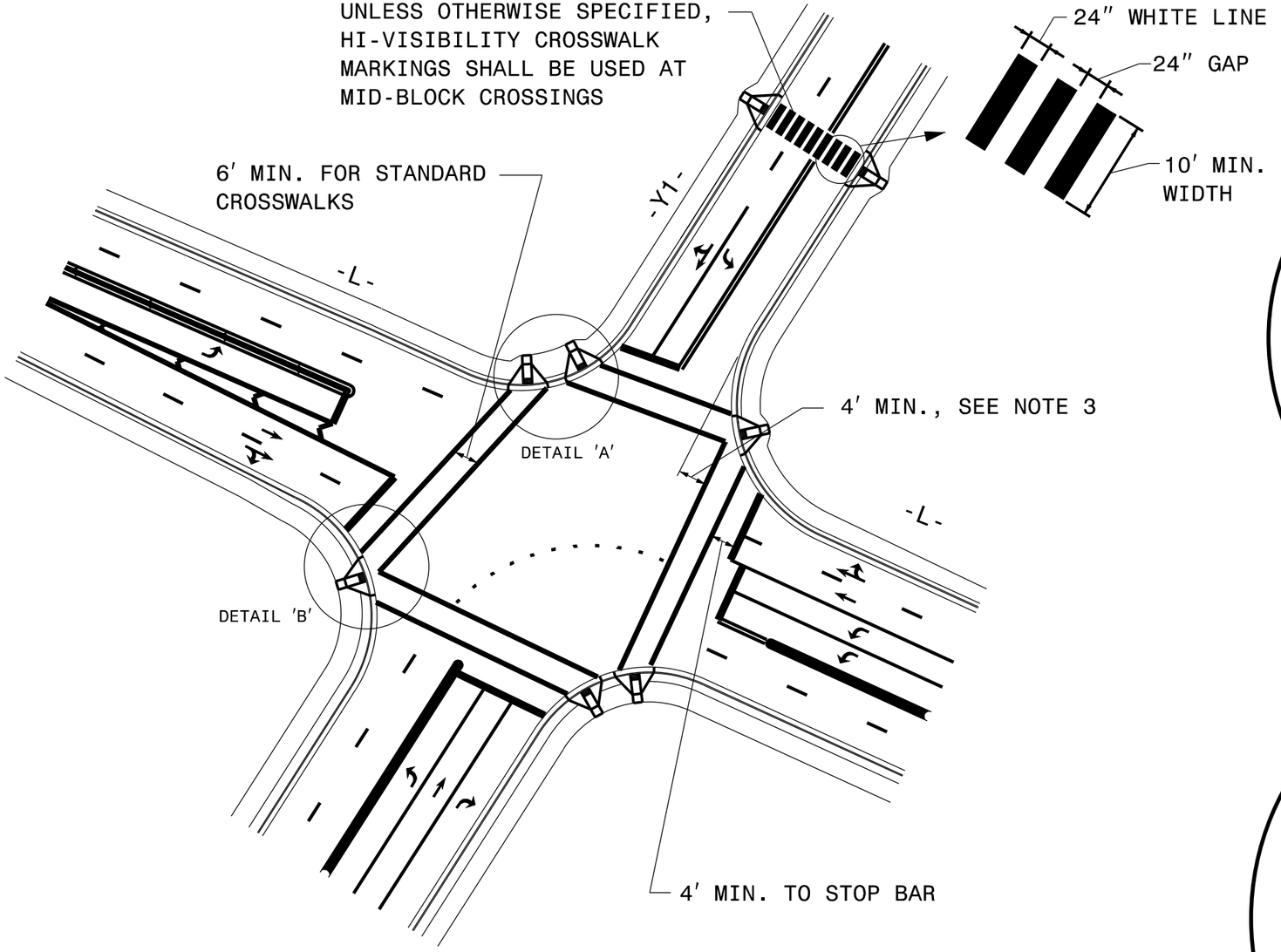
TIP NO.	SHEET NO.
2017CPT.12.16.10021 2017CPT.12.16.20021	6

APPROVED:

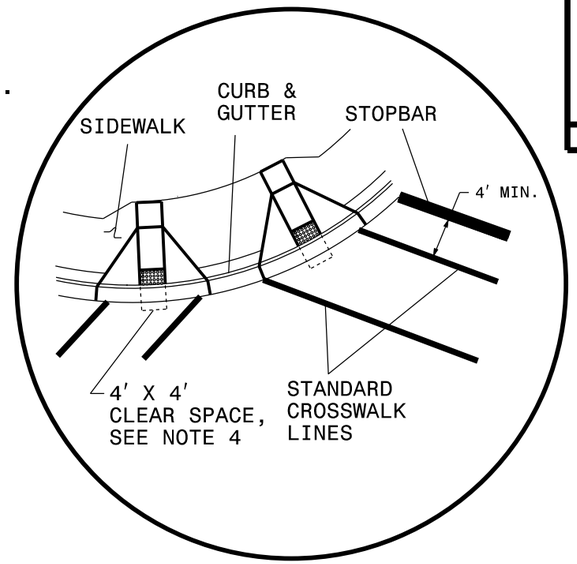
DATE:

SEAL

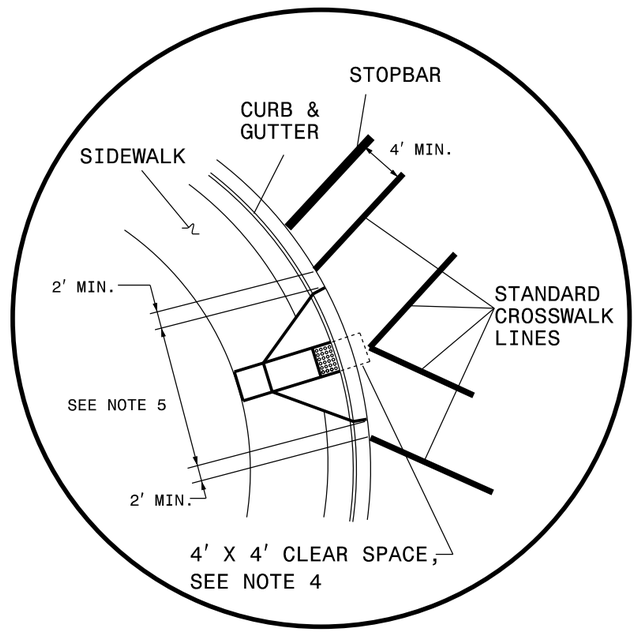
REVISIONS



GUIDANCE DETAIL FOR CROSSWALK MARKINGS



DETAIL 'A'- DUAL CURB RAMPS



DETAIL 'B'- SINGLE DIAGONAL CURB RAMP

NOTES:

1. USE THE DETAILS ABOVE AND THE FOLLOWING NOTES FOR GUIDANCE IN PLACING CROSSWALK MARKINGS NOT STATIONED ON THE DETAIL SHEETS OR WHEN FIELD ADJUSTMENTS REQUIRED MOVING STATIONED MARKINGS AS DIRECTED BY THE ENGINEER. REFER TO NCDOT ROADWAY STANDARD DRAWINGS, MUTCD AND ADA STANDARDS FOR ADDITIONAL GUIDANCE.

2. THE CROSSWALK MARKINGS SHOWN ON THE ABOVE DETAILS ARE FOR REFERENCE ONLY. ONLY INSTALL CROSSWALK MARKINGS WHERE SHOWN ON THE DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER. THE CROSSWALK MARKING TYPE, STANDARD OR HI-VISIBILITY, SHALL BE INSTALL AS SPECIFIED ON THE DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER.

3. SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL IS 4' MIN.

4. BEYOND THE BOTTOM GRADE BRAKE, A CLEAR SPACE OF 4' X 4' MINIMUM SHALL BE PROVIDED WITHIN THE MARKINGS.

5. SINGLE DIAGONAL CURB RAMPS WITH FLARED SIDES SHALL HAVE A SEGMENT OF CURB 2 FEET LONG MINIMUM LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING, SEE DETAIL 'B'.

6. CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE LATEST NCDOT ROADWAY STANDARD DRAWINGS.

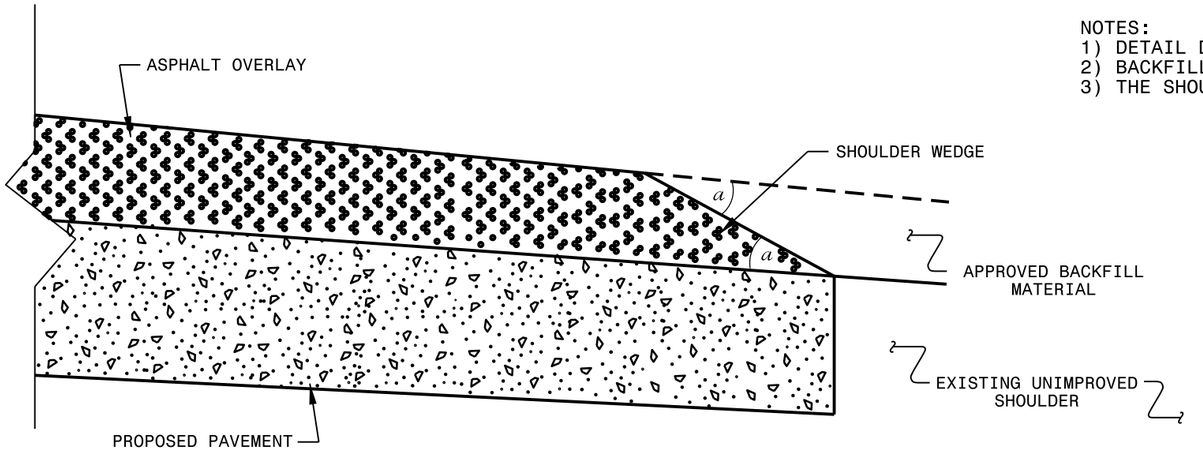
CROSSWALK PAVEMENT MARKING GUIDANCE DETAIL

$$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

6/7/13

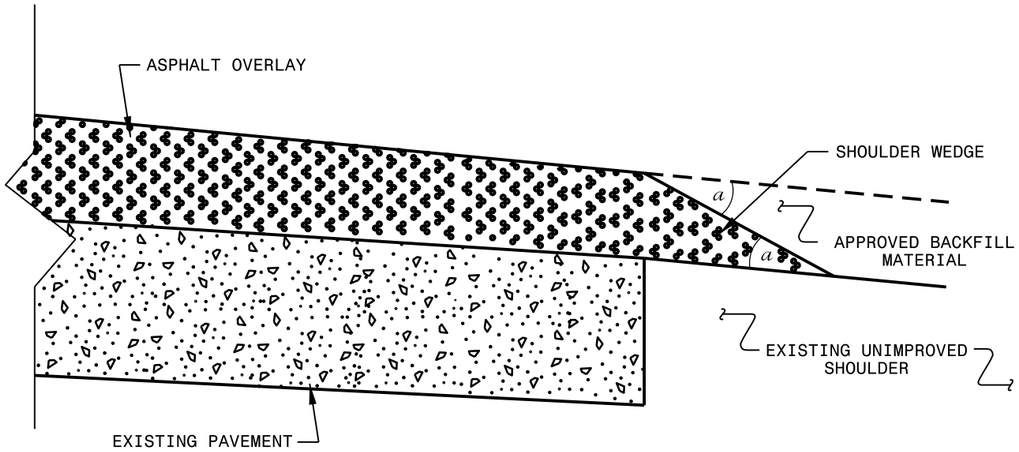
PROJECT REFERENCE NO.	SHEET NO.
2017CPT.12.16.10021	7

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.



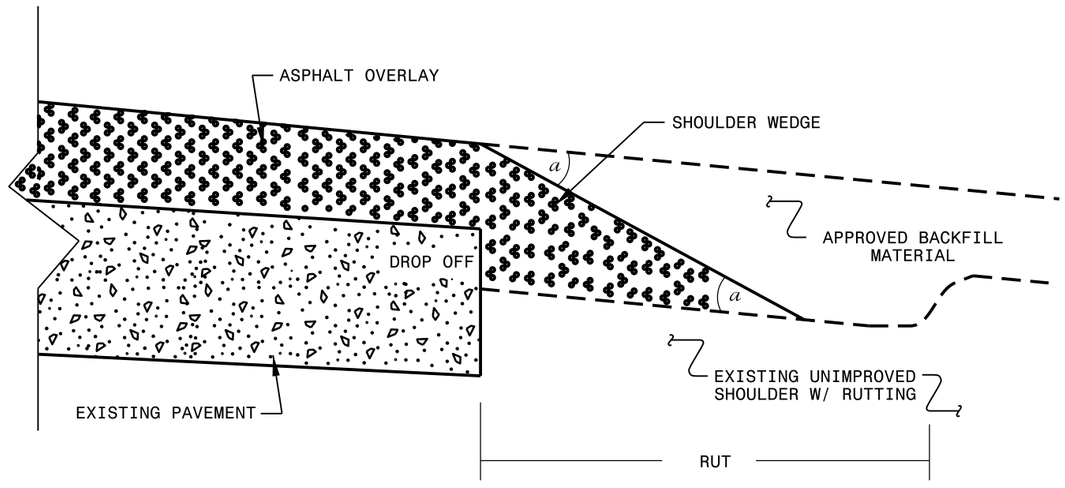
SHOULDER WEDGE DETAIL

(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°

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

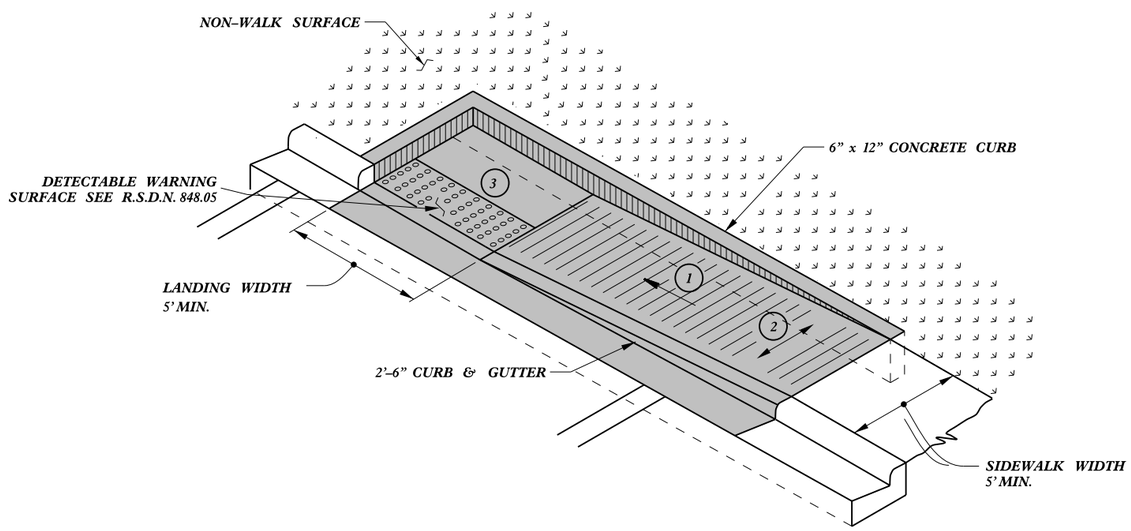
SHOULDER WEDGE DETAILS

ORIGINAL BY: T.SPELL DATE: 7-19-11
MODIFIED BY: _____ DATE: 10/16/12
CHECKED BY: _____ DATE: _____
FILE SPEC.: $:usr/details/stand/shoulderwedgedetail.dgn

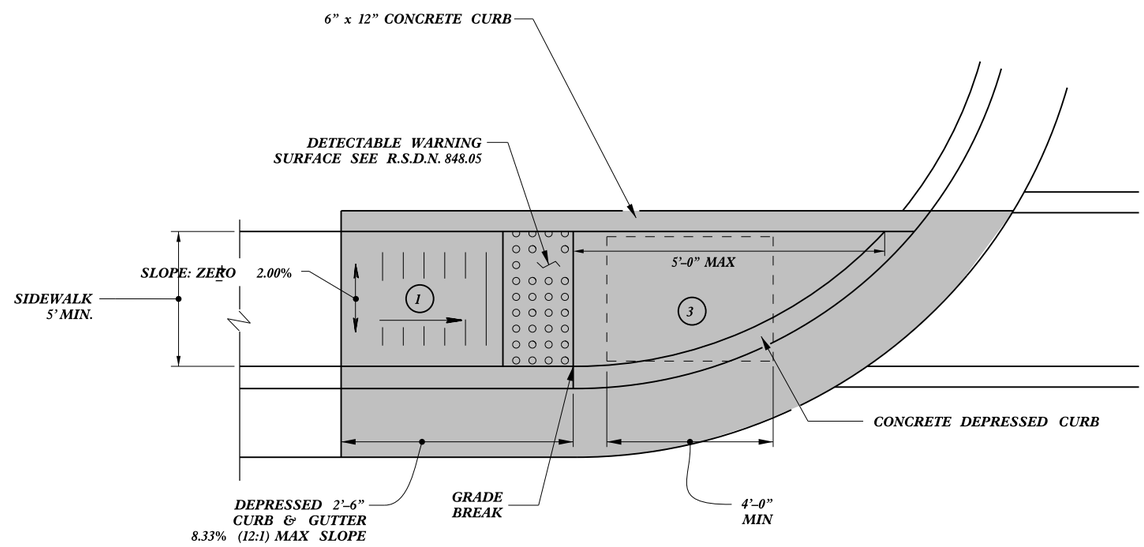
$$$$$$SYSTIME$$$$$$
$$$$$$USERNAME$$$$$$

PROJECT REFERENCE NO.	SHEET NO.
2017CPT.12.16.10021	8

PAY LIMITS FOR CURB RAMP



TYPE 1A



TYPE 1

(1) *8.33% (12:1) MAX RAMP SLOPE*

(2) *CROSS SLOPE: 2.00%*

(3) *CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.*

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

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

CURB RAMPS

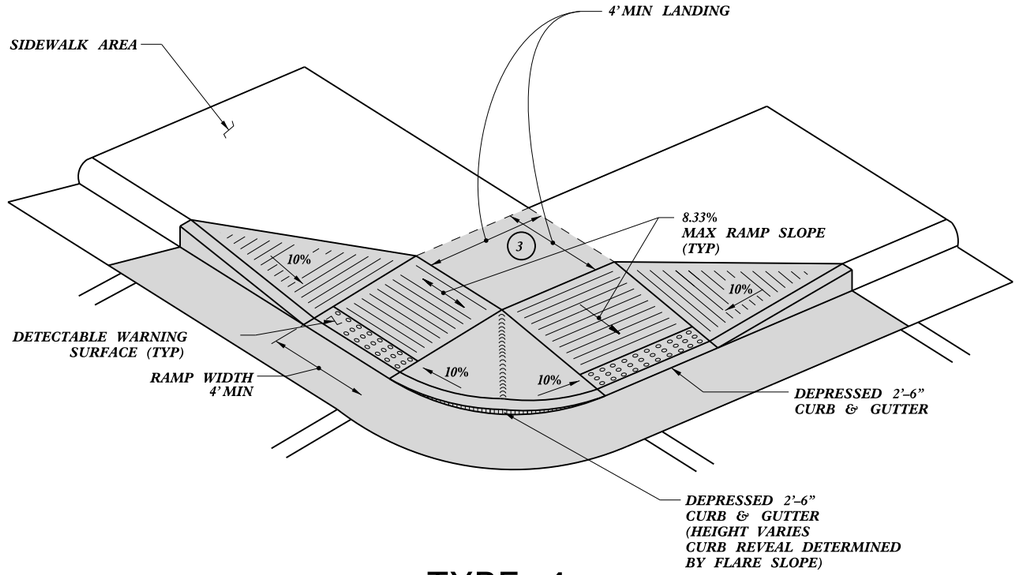
Directional Ramps

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.dgn

5/14/99

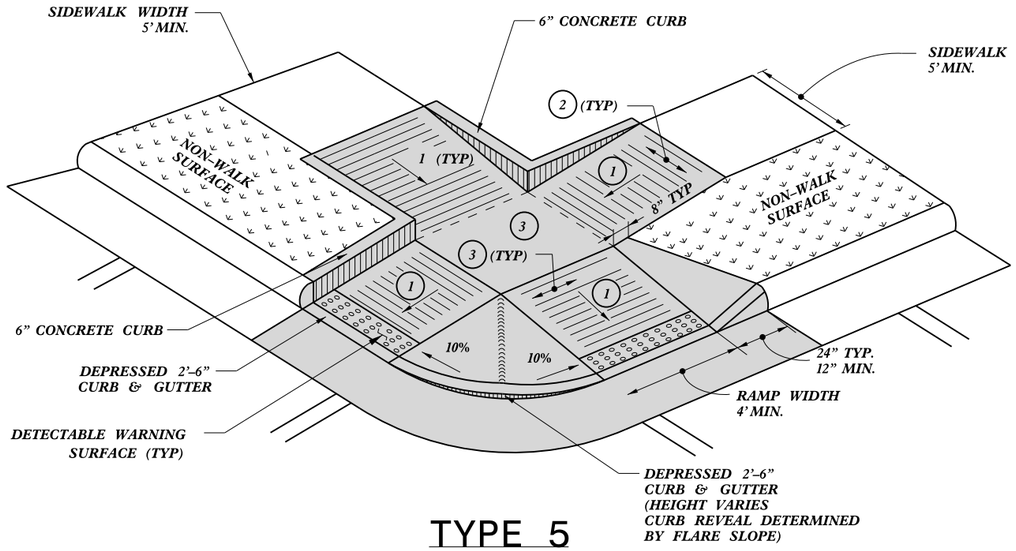
22-MAR-2012 15:06
$$Contracts\Special Details\jhowerton\Standard Drawings\2012 Standard Drawings\2012 Curb Ramp Special Details\Curb Ramp Details.dgn
jhowerton
AT CSD23760

PROJECT REFERENCE NO.	SHEET NO.
2017CPT.12.16.10021	9

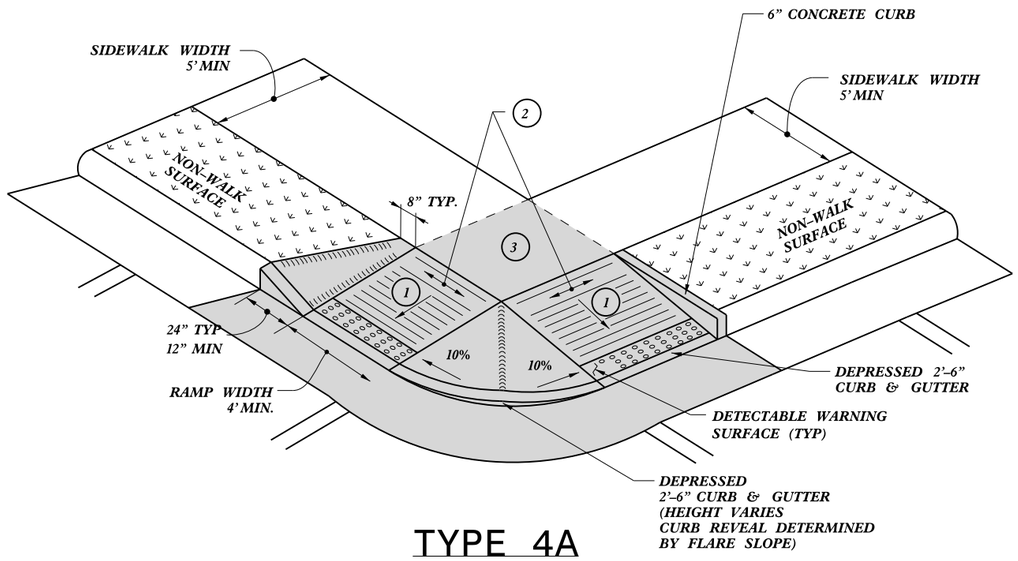


TYPE 4

PAY LIMITS FOR CURB RAMP



TYPE 5



TYPE 4A

1. *8.33% (12:1) MAX RAMP SLOPE*
2. *CROSS SLOPE: 2.00%*
3. *CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.*

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

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

CURB RAMPS

Shared Landing

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.dgn

5/14/99
22-MAR-2012 15:08
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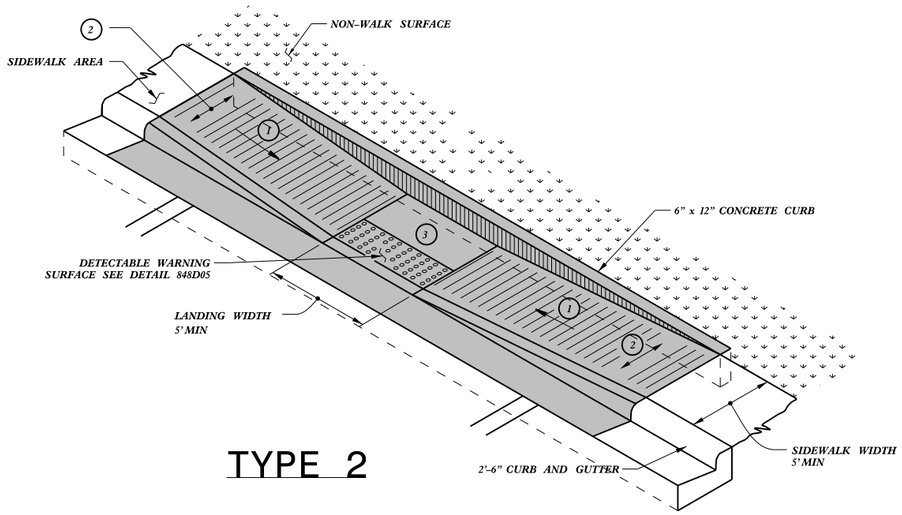
jhowerton
AT CSD0237601

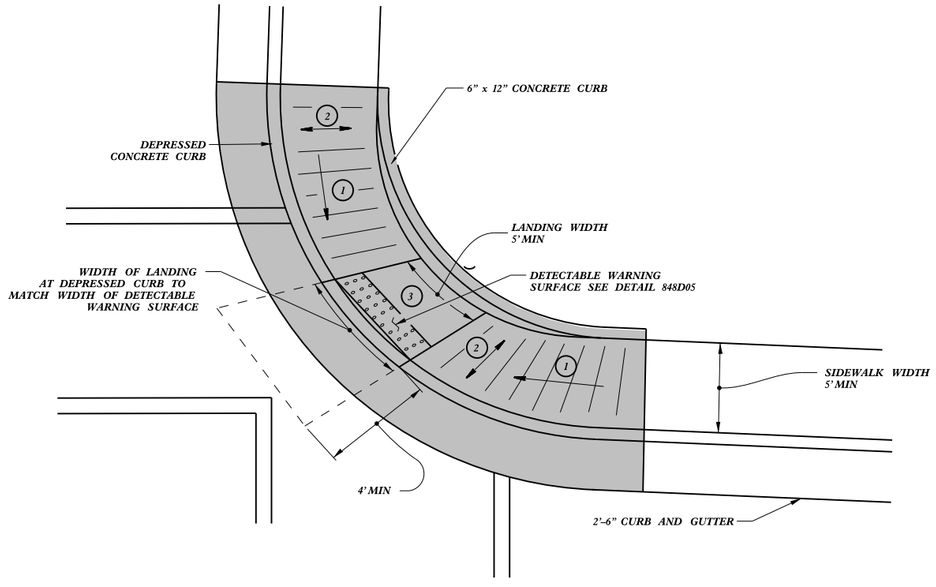
PROJECT REFERENCE NO.	SHEET NO.
2017CPT.12.16.10021	10



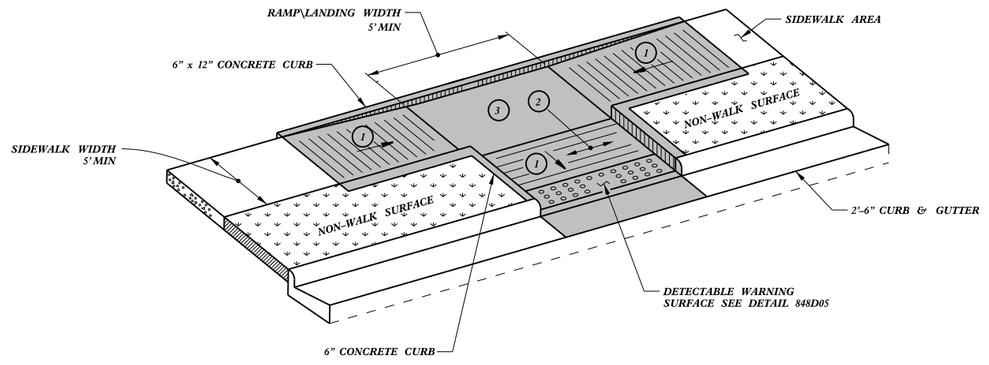
TYPE 2

PAY LIMITS FOR CURB RAMP

1. *8.33% (12:1) MAX RAMP SLOPE*
2. *CROSS SLOPE: 2.00%*
3. *CURB RAMPS REQUIRE A (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SLOPE TO DRAIN TO CURB.*



TYPE 2A



TYPE 3

REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

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

CURB RAMPS

Parallel Ramps

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: stds/2012CurbRamp/CurbRampDetails.dgn

5/14/99

22-MAR-2012 15:07
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jhowerton
AT CSD0237501

PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.12.16.10021	11	
2017CPT.12.16.20021		

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	AGGREGATE SHOULDER BORROW TON	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	0" TO 1.5" MILLING SY	INCIDENTAL MILLING SY	BASE COURSE, B25.0B TONS	SURFACE COURSE, S9.5B TONS	LEVELING COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TONS	LEVELING COURSE, SF9.5A TON	ASPHALT BINDER FOR PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	RETROFIT EXISTING CURB RAMP EA	CONCRETE CURB RAMP EA	ADJ. OF CATCH BASIN EA	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA
2017CPT.12.16.10021	Alexander	1	US 64	FROM BRIDGE #2 (DUCK CREEK) TO NC 90	1	2		NO	NO	6.26	24-60	1,100	350	12.52	1,000	4,400		11,750	125			713	250					
TOTAL FOR MAP NO. 1										**6.26**		**1,100**	**350**	**12.52**	**1,000**	**4,400**		**11,750**	**125**			**713**	**250**					
TOTAL FOR PROJ NO. 2017CPT.12.16.10021										**6.26**		**1,100**	**350**	**12.52**	**1,000**	**4,400**		**11,750**	**125**			**713**	**250**					
2017CPT.12.16.20021	Alexander	2	SR 1156 (RICHEY RD.)	FROM SR 1157 (SAM HEFNER RD.) TO SR 1144 (ICARD RIDGE RD.)	3	2		NO	NO	0.98	18-22	175	50	1.97		700		1,000	625			101	50					
TOTAL FOR MAP NO. 2										**0.98**		**175**	**50**	**1.97**		**700**		**1,000**	**625**			**101**	**50**					
2017CPT.12.16.20021	Alexander	3	SR 1223 (LAIL LN)	FROM SR 1157 (SAM HEFNER RD.) TO DEAD END	2	2		NO	NO	0.48	18-22	100	25	0.97		100		550	5			33	10					
TOTAL FOR MAP NO. 3										**0.48**		**100**	**25**	**0.97**		**100**		**550**	**5**			**33**	**10**					
2017CPT.12.16.20021	Alexander	4	SR 1171 (CARL HEFNER LN)	FROM NC 16 TO DEAD END	2	2		NO	NO	0.15	18-22	35	10	0.30		100		150	5			9	10					
TOTAL FOR MAP NO. 4										**0.15**		**35**	**10**	**0.30**		**100**		**150**	**5**			**9**	**10**					
2017CPT.12.16.20021	Alexander	5	SR 1174 (MILLERSVILLE CHURCH RD.)	FROM NC 16 TO DEAD END	5	2		NO	NO	0.19	18-24		10			100				200	5	12	10					
TOTAL FOR MAP NO. 5										**0.19**			**10**			**100**				**200**	**5**	**12**	**10**					
2017CPT.12.16.20021	Alexander	6	SR 1179 (PAUL BOWMAN LN)	FROM NC 16 TO DEAD END	2	2		NO	NO	0.12	18-22	25	10	0.24		100		125	5			8	10					
TOTAL FOR MAP NO. 6										**0.12**		**25**	**10**	**0.24**		**100**		**125**	**5**			**8**	**10**					
2017CPT.12.16.20021	Alexander	7	SR 1605 (PAUL PAYNE STORE RD.)	FROM SR 1600 (POP DAVIS RD.) TO NC 90	2 6 7 8	2		NO	NO	0.61	18-60	25	50	0.28	9,150	2,500		1,000	10			61	25	15	2	3	10	3
TOTAL FOR MAP NO. 7										**0.61**		**25**	**50**	**0.28**	**9,150**	**2,500**		**1,000**	**10**			**61**	**25**	**15**	**2**	**3**	**10**	**3**
2017CPT.12.16.20021	Alexander	8	SR 1311 (GILL CHILDRESS RD.)	FROM SR 1313 (THREE FORKS CHURCH RD.) TO PVMT. JOINT APPROX. 730' N. of SR 1308 (WALT RUSSELL RD.)	4	2		NO	NO	1.56	20-21	275	100	3.12		500	450	1,700	15			123	50					
TOTAL FOR MAP NO. 8										**1.56**		**275**	**100**	**3.12**		**500**	**450**	**1,700**	**15**			**123**	**50**					
2017CPT.12.16.20021	Alexander	9	SR 1538 (CRICKET CT.)	FROM SR 1539 (WALLACE LN) TO SR 1500 (WAYFOUND CHURCH RD.)	5	2		NO	NO	0.09	18-24		10			100				100	5	7	10					
TOTAL FOR MAP NO. 9										**0.09**			**10**			**100**				**100**	**5**	**7**	**10**					
2017CPT.12.16.20021	Alexander	10	SR 1539 (WALLACE LN)	FROM DEAD END TO DEAD END	5	2		NO	NO	0.11	18-24		10			100				125	5	9	10					
TOTAL FOR MAP NO. 10										**0.11**			**10**			**100**				**125**	**5**	**9**	**10**					
2017CPT.12.16.20021	Alexander	11	SR 1505 (MILLER RD.)	FROM SR 1503 (HIDDENITE CHURCH RD.) TO SR 1001 (SULPHUR SPRINGS RD.)	5	2		NO	NO	0.07	18-24		10			100				75	5	5	10					
TOTAL FOR MAP NO. 11										**0.07**			**10**			**100**				**75**	**5**	**5**	**10**					
2017CPT.12.16.20021	Alexander	12	SR 1506 (LEACH RD.)	FROM SR 1503 (HIDDENITE CHURCH RD.) TO SR 1001 (SULPHUR SPRINGS RD.)	5	2		NO	NO	0.07	18-24		10			100				100	5	7	10					
TOTAL FOR MAP NO. 12										**0.07**			**10**			**100**				**100**	**5**	**7**	**10**					
2017CPT.12.16.20021	Alexander	13	SR 1507 (FIRE DEPT. CT.)	FROM SR 1503 (HIDDENITE CHURCH RD.) TO DEAD END	5	2		NO	NO	0.15	18-24		10		1,025	100				200	5	14	10					1
TOTAL FOR MAP NO. 13										**0.15**			**10**		**1,025**	**100**				**200**	**5**	**14**	**10**					**1**
2017CPT.12.16.20021	Alexander	14	SR 1508 (EMERALD LN.)	FROM SR 1510 (SHARPE LN) TO END OF PVMT.	5	2		NO	NO	0.4	18-24		20			100				400	5	27	10					1
TOTAL FOR MAP NO. 14										**0.4**			**20**			**100**				**400**	**5**	**27**	**10**					**1**
2017CPT.12.16.20021	Alexander	15	SR 1509 (EARP LN.)	FROM SR 1508 (EMERALD LN.) TO DEAD END	5	2		NO	NO	0.17	18-24		10			100				200	5	14	10					
TOTAL FOR MAP NO. 15										**0.17**			**10**			**100**				**200**	**5**	**14**	**10**					
2017CPT.12.16.20021	Alexander	16	SR 1523 (MARSH PATTERSON LN)	FROM NC 90 TO DEAD END	5	2		NO	NO	0.16	18-24		10			100				160	5	11	10					
TOTAL FOR MAP NO. 16										**0.16**			**10**			**100**				**160**	**5**	**11**	**10**					
TOTAL FOR PROJ NO. 2017CPT.12.16.20021										**5.31**		**635**	**345**	**6.88**	**10,175**	**4,900**	**450**	**4,525**	**665**	**1,560**	**45**	**441**	**245**	**15**	**2**	**3**	**10**	**5**
GRAND TOTAL										**11.57**		**1,735**	**695**	**19.40**	**11,175**	**9,300**	**450**	**16,275**	**790**	**1,560**	**45**	**1,154**	**495**	**15**	**2**	**3**	**10**	**5**

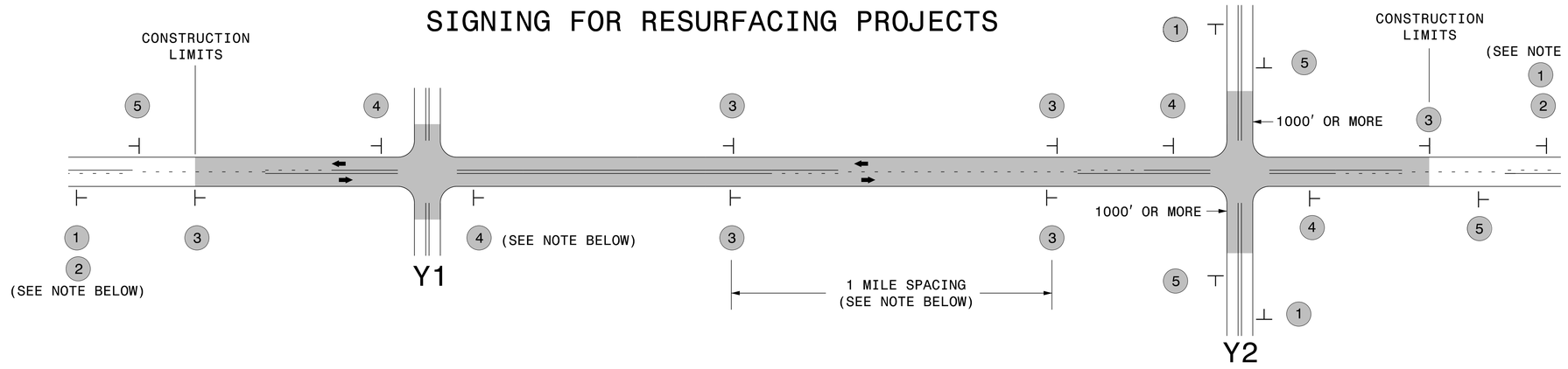
PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.12.16.10021	12	
2017CPT.12.16.20021		

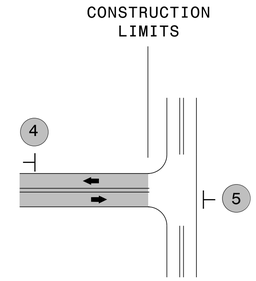
THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	4399000000-N TEMPORARY TRAFFIC CONTROL LS	4400000000-E WORK SONE ADVANCE/GENERAL WARNING SIGNING SF	4510000000-N LAW ENFORCEMENT HR	4695000000-E 8" X 90 M WHITE THERMO LF	4695000000-E 8" X 90 M YELLOW THERMO LF	4705000000-E 16" X 120 M WHITE THERMO LF	4710000000-E 24" X 120 M WHITE THERMO LF	4721000000-E THERMO MSG SCHOOL 120 M EA	4721000000-E THERMO RXR 120 M EA	4725000000-E THERMO LT ARROW 90 M EA	4725000000-E THERMO STR ARROW 90 M EA	4725000000-E THERMO RT ARROW 90 M EA	4725000000-E THERMO STR & LT ARROW 90 M EA	4810000000-E 4" WHITE PAINT LF	4810000000-E 4" YELLOW PAINT LF	4835000000-E 24" WHITE PAINT LF	4845000000-N PAINT LT ARROW EA	4847000000-E 4" WHITE POLYUREA (HIGHLY REFLECTIVE ELEMENTS) LF	4847000000-E 4" YELLOW POLYUREA (HIGHLY REFLECTIVE ELEMENTS) LF	4905000000-N SNOW PLOWABLE MARKERS EA
2017CPT.12.16.10021	Alexander	1	US 64	FROM BRIDGE #2 (DUCK CREEK) TO NC 90	1	2		6.26	24-60	1	800	50	750	470		285	12		15	4	4	2	70,000	70,000	285	25	70,000	70,000	500
TOTAL FOR MAP NO. 1								**6.26**		**1**	**800**	**50**	**750**	**470**		**285**	**12**		**15**	**4**	**4**	**2**	**70,000**	**70,000**	**285**	**25**	**70,000**	**70,000**	**500**
TOTAL FOR PROJ NO. 2017CPT.12.16.10021								**6.26**		**1**	**800**	**50**	**750**	**470**		**285**	**12**		**15**	**4**	**4**	**2**	**70,000**	**70,000**	**285**	**25**	**70,000**	**70,000**	**500**
													1,220				**12**		**25**				**140,000**				**140,000**		
2017CPT.12.16.20021	Alexander	2	SR 1156 (RICHEY RD.)	FROM SR 1157 (SAM HEFNER RD.) TO SR 1144 (ICARD RIDGE RD.)	3	2		0.98	18-22		125												21,000	21,000					
TOTAL FOR MAP NO. 2								**0.98**			**125**												**21,000**	**21,000**					
2017CPT.12.16.20021	Alexander	3	SR 1223 (LAIL LN)	FROM SR 1157 (SAM HEFNER RD.) TO DEAD END	2	2		0.48	18-22		64												10,500	10,500					
TOTAL FOR MAP NO. 3								**0.48**			**64**												**10,500**	**10,500**					
2017CPT.12.16.20021	Alexander	4	SR 1171 (CARL HEFNER LN)	FROM NC 16 TO DEAD END	2	2		0.15	18-22		64																		
TOTAL FOR MAP NO. 4								**0.15**			**64**																		
2017CPT.12.16.20021	Alexander	5	SR 1174 (MILLERSVILLE CHURCH RD.)	FROM NC 16 TO DEAD END	5	2		0.19	18-24		64												2,000	2,000					
TOTAL FOR MAP NO. 5								**0.19**			**64**												**2,000**	**2,000**					
2017CPT.12.16.20021	Alexander	6	SR 1179 (PAUL BOWMAN LN)	FROM NC 16 TO DEAD END	2	2		0.12	18-22		64																		
TOTAL FOR MAP NO. 6								**0.12**			**64**																		
2017CPT.12.16.20021	Alexander	7	SR 1605 (PAUL PAYNE STORE RD.)	FROM SR 1600 (POP DAVIS RD.) TO NC 90	2 6 7 8	2		0.61	18-60		100		1,550	200		40							17,500	17,500					
TOTAL FOR MAP NO. 7								**0.61**			**100**		**1,550**	**200**		**40**							**17,500**	**17,500**					
2017CPT.12.16.20021	Alexander	8	SR 1311 (GILL CHILDRESS RD.)	FROM SR 1313 (THREE FORKS CHURCH RD.) TO PVMT. JOINT APPROX. 730' N. of SR 1308 (WALT RUSSELL RD.)	4	2		1.56	20-21		207												33,750	33,750					
TOTAL FOR MAP NO. 8								**1.56**			**207**												**33,750**	**33,750**					
2017CPT.12.16.20021	Alexander	9	SR 1538 (CRICKET CT.)	FROM SR 1539 (WALLACE LN) TO SR 1500 (WAYFOUND CHURCH RD.)	5	2		0.09	18-24		64																		
TOTAL FOR MAP NO. 9								**0.09**			**64**																		
2017CPT.12.16.20021	Alexander	10	SR 1539 (WALLACE LN)	FROM DEAD END TO DEAD END	5	2		0.11	18-24		64																		
TOTAL FOR MAP NO. 10								**0.11**			**64**																		
2017CPT.12.16.20021	Alexander	11	SR 1505 (MILLER RD.)	FROM SR 1503 (HIDDENITE CHURCH RD.) TO SR 1001 (SULPHUR SPRINGS RD.)	5	2		0.07	18-24		64																		
TOTAL FOR MAP NO. 11								**0.07**			**64**																		
2017CPT.12.16.20021	Alexander	12	SR 1506 (LEACH RD.)	FROM SR 1503 (HIDDENITE CHURCH RD.) TO SR 1001 (SULPHUR SPRINGS RD.)	5	2		0.07	18-24		64																		
TOTAL FOR MAP NO. 12								**0.07**			**64**																		
2017CPT.12.16.20021	Alexander	13	SR 1507 (FIRE DEPT. CT.)	FROM SR 1503 (HIDDENITE CHURCH RD.) TO DEAD END	5	2		0.15	18-24		64												3,300	3,300					
TOTAL FOR MAP NO. 13								**0.15**			**64**												**3,300**	**3,300**					
2017CPT.12.16.20021	Alexander	14	SR 1508 (EMERALD LN.)	FROM SR 1510 (SHARPE LN) TO END OF PVMT.	5	2		0.4	18-24		64					68	6						8,750	8,750					
TOTAL FOR MAP NO. 14								**0.4**			**64**					**68**	**6**						**8,750**	**8,750**					
2017CPT.12.16.20021	Alexander	15	SR 1509 (EARP LN.)	FROM SR 1508 (EMERALD LN.) TO DEAD END	5	2		0.17	18-24		64																		
TOTAL FOR MAP NO. 15								**0.17**			**64**																		
2017CPT.12.16.20021	Alexander	16	SR 1523 (MARSH PATTERSON LN)	FROM NC 90 TO DEAD END	5	2		0.16	18-24		64				70	35		2					3,750	3,750					
TOTAL FOR MAP NO. 16								**0.16**			**64**				**70**	**35**		**2**					**3,750**	**3,750**					
TOTAL FOR PROJ NO. 2017CPT.12.16.20021								**5.31**			**1,200**		**1,550**	**200**	**70**	**143**	**6**	**2**					**100,550**	**100,550**					
													1,750				**8**						**201,100**						
GRAND TOTAL								**11.57**		**1**	**2,000**	**50**	**2,300**	**670**	**70**	**428**	**18**	**2**	**15**	**4**	**4**	**2**	**170,550**	**170,550**	**285**	**25**	**70,000**	**70,000**	**500**
													2,970				**20**		**25**				**341,100**				**140,000**		

PROJ. REFERENCE NO.	SHEET NO.
2017CPT.12.16.10021	13

SIGNING FOR RESURFACING PROJECTS





TEE INTERSECTION

LEGEND
- ⊢ STATIONARY SIGN
- ⬅ DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION

1	ROAD WORK AHEAD W20-1 48″ X 48″	PLACE 1000′ PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000′ ALONG -Y- LINE.
2	NEXT XX MILES W7-3aP 24″ X 18″	#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER.(NO FRACTIONAL OR DECIMAL NUMBERS)
3	LOW/SOFT SHOULDER SP 13107 48″ X 48″	- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 0.5 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.
4	ROAD UNDER CONST SP 13106 48″ X 48″	- THESE ARE FOR -Y- LINES THAT ARE ″THROUGH″ ROADWAYS. - DEAD END AND SUBDIVISION ROADS ARE NOT ″THROUGH″ ROADWAYS. - INSTALL 500′ +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. - FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500′ OF EACH APPROACH. - A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM ″END ROAD WORK″ SIGN. - FOR TEE INTERSECTIONS, INSTALL WITHIN 500′ +/- OF THE INTERSECTION ALONG -L- LINE.
5	END ROAD WORK G20-2 A 48″ X 24″	PLACE 500′ FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.

-Y- LINE SIGNING

NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:

1) LESS THAN 1000′ OF RESURFACING ALONG -Y- LINE
2) SUBDIVISION ROADS
3) DEAD END ROADS

WHEN PAVING/CONSTRUCTION ACTIVITIES PROCEED ACROSS AN UNSIGNED -Y- LINE, ADVANCE WARNING PORTABLE SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.

ROAD WORK AHEAD W20-1 48″ X 48″ — PLACED 500′ IN ADVANCE OF FLAGGER.

W20-7 A 48″ X 48″ — PLACED 250′ IN ADVANCE OF FLAGGER.

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

RESURFACING ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2 LANE ROADWAYS

4/20/2016
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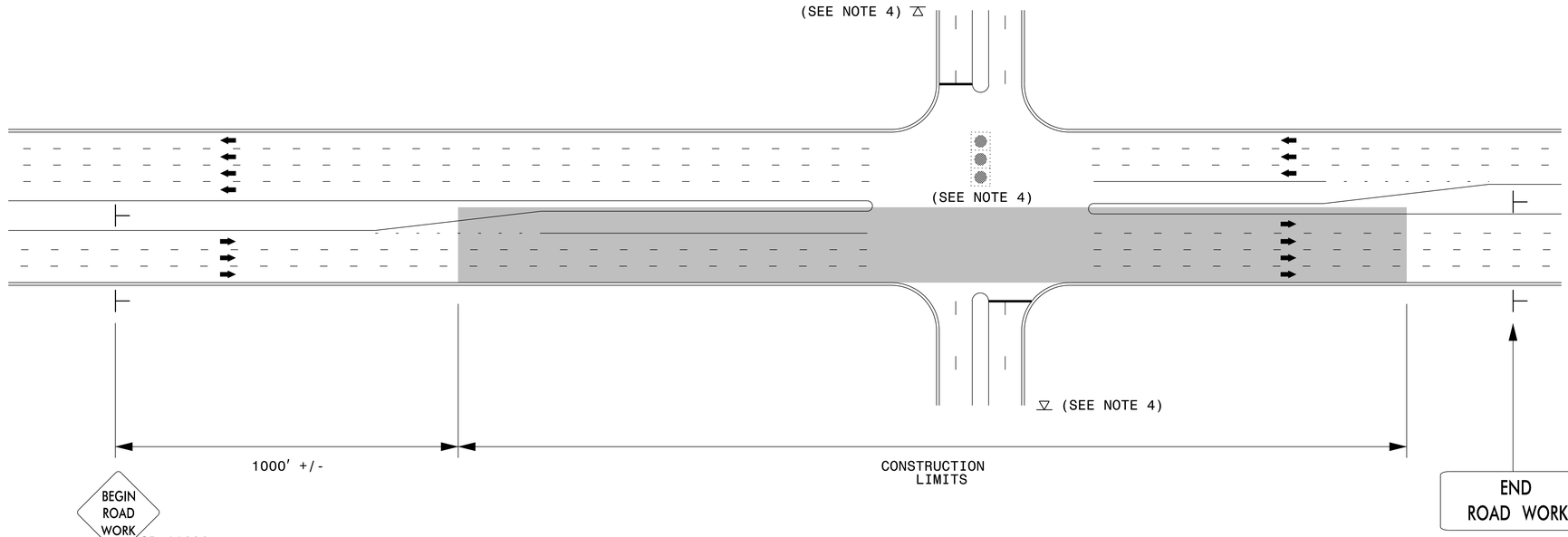
PROJ. REFERENCE NO.	SHEET NO.
2017CPT.12.16.10021	14

URBAN / SUBURBAN WORKZONES



NOTES:

1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
3) ADVANCE WARNING SIGNS NOT REQUIRED ON NON-SIGNALIZED SIDE STREETS.
4) MAY USE LAW ENFORCEMENT TO CONTROL TRAFFIC AT SIGNALIZED INTERSECTIONS AS DIRECTED BY THE ENGINEER. PROVIDE PORTABLE "ROAD WORK AHEAD" (W20-1) SIGNS 500' IN ADVANCE ALONG BOTH APPROACHES FROM THE SIDE STREETS WHEN PAVING PROCEEDS THROUGH THE INTERSECTION.
5) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 2' AS MEASURED FROM THE EDGE OF PAVEMENT OR THE FACE OF THE CURB. WHEN UNABLE TO OBTAIN THE LATERAL CLEARANCE WITHIN THE MEDIAN AREA USE SHOULDER MOUNTS ONLY.
6) SIGN MOUNT LOCATIONS SHALL NOT BLOCK SIDEWALKS OR DRIVEWAYS.
7) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
8) IF MILLED AREAS ARE NOT PAVED BACK BY THE END OF THE WORK DAY, PORTABLE SIGNS SHALL BE USED TO WARN DRIVERS OF THE PRESENT CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO "ROUGH ROAD" W8-8, "UNEVEN LANES" W8-11, "GROOVED PAVEMENT" W8-15 w/MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DOUBLE INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER WHERE LATERAL CLEARANCE CAN BE OBTAINED WITHIN THE MEDIAN AREAS.THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

LEGEND

- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW

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

RESURFACING ADVANCE WARNING SIGNS FOR URBAN / SUBURBAN FACILITIES

4/8/2015
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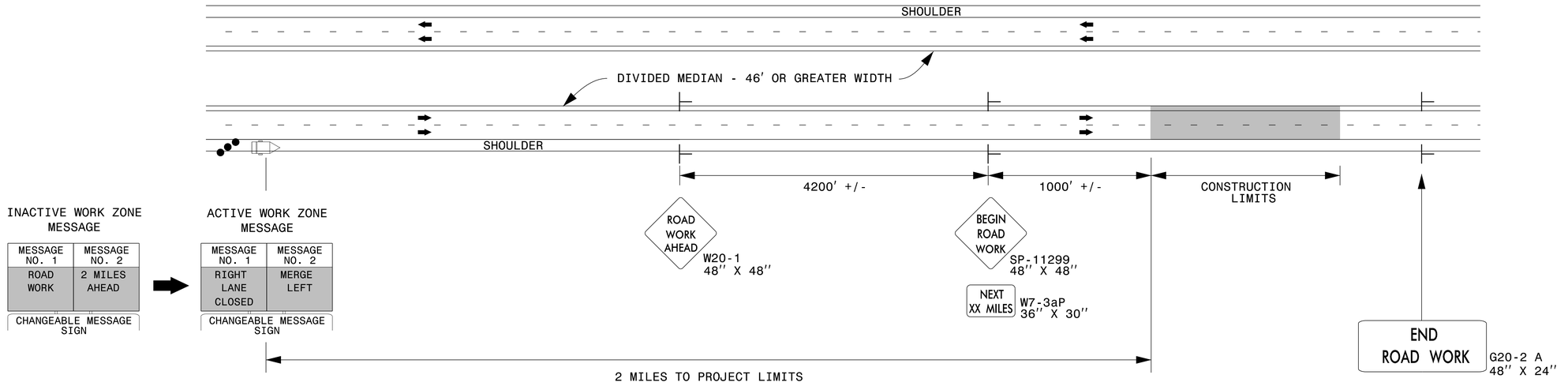
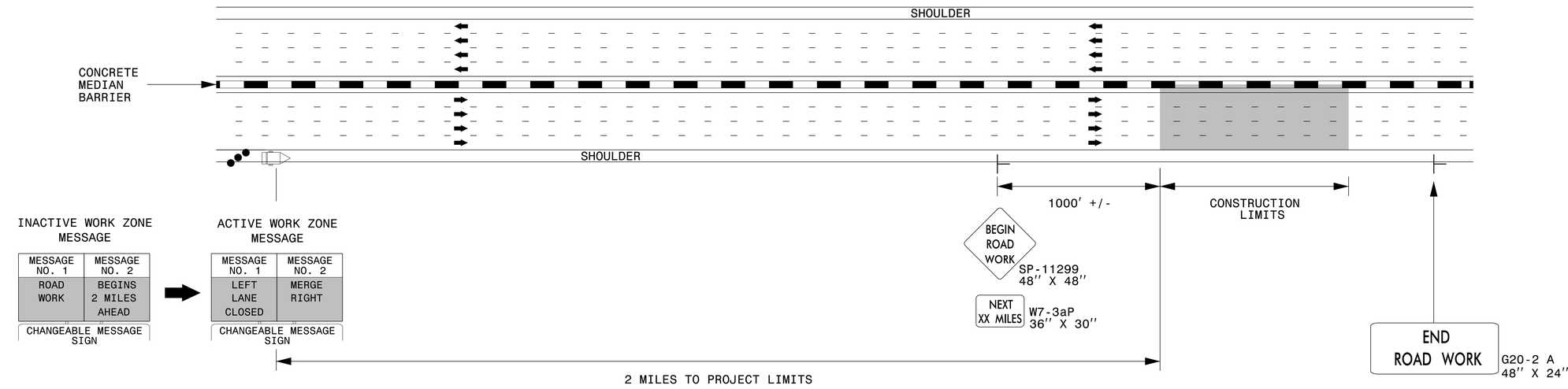
User:rmgarrett

PROJ. REFERENCE NO.	SHEET NO.
2017CPT.12.16.10021	15

DIVIDED MEDIANS WITH WIDTHS 46′ OR GREATER



DIVIDED MEDIANS WITH WIDTHS LESS THAN 46′ OR WITH PERMANENT MEDIAN BARRIER



NOTES:

1) LATERAL CLEARANCE AT ALL SIGN LOCATIONS SHALL BE 6′ AS MEASURED FROM THE EDGE OF PAVEMENT.
2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. FOLLOW MANUFACTURER'S RECOMMENDATIONS. THESE SYSTEMS SHALL BE NCHRP 350 COMPLIANT AND NCDOT APPROVED.
3) FOR MEDIAN WIDTHS LESS THAN 46′ (MEASURED EDGELINE TO EDGELINE) USE THE BOTTOM DRAWING.
4) IF STATIONARY GENERAL WARNING SIGNS ARE USED, THEY WILL BE PAID FOR PER SECTION 104 OF THE NCDOT STANDARD SPECIFICATIONS AS EXTRA WORK.
5) INSTALL "ROAD WORK AHEAD"(W20-1) ALONG ENTRANCE RAMPS 500′ PRIOR TO RAMP TERMINAL, AND "END ROAD WORK" (G20-2a) AT THE END OF EXIT RAMPS WITHIN THE WORK ZONE.
6) IF MILLED AREAS ARE NOT PAVED BACK BY THE END OF THE WORK DAY, PORTABLE SIGNS SHALL BE USED TO WARN DRIVERS OF THE PRESENT CONDITIONS. THESE ARE TO INCLUDE, BUT NOT LIMITED TO "ROUGH ROAD" W8-8, "UNEVEN LANES" W8-11, "GROOVED PAVEMENT" W8-15 w/MOTORCYCLE PLAQUE MOUNTED BELOW. THESE ARE TO BE DOUBLE INDICATED ON MULTI-LANE ROADWAYS WITH SPEED LIMITS 45 MPH AND GREATER AND WITH DIVIDED MEDIANS OF 46′ OR GREATER. THESE PORTABLE SIGNS ARE INCIDENTAL TO THE OTHER ITEMS OF WORK INCLUDED IN THE TEMPORARY TRAFFIC CONTROL (LUMP SUM) PAY ITEM.

LEGEND

- CHANGEABLE MESSAGE SIGN (CMS)
- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW
- TRAFFIC DRUM

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

RESURFACING ADVANCE WARNING SIGNS FOR HIGH SPEED FACILITIES ≥ 60 MPH

3/23/2015
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