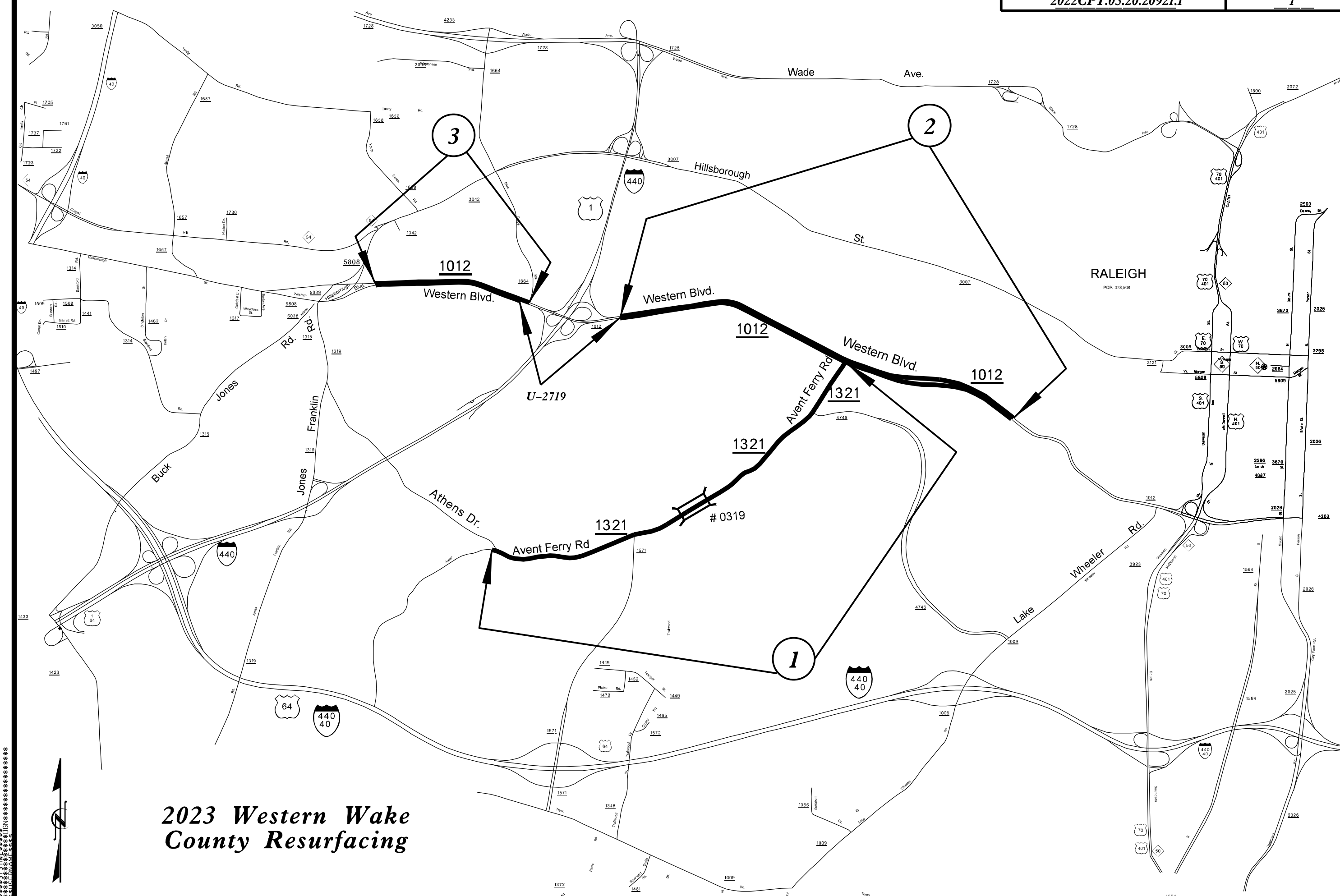


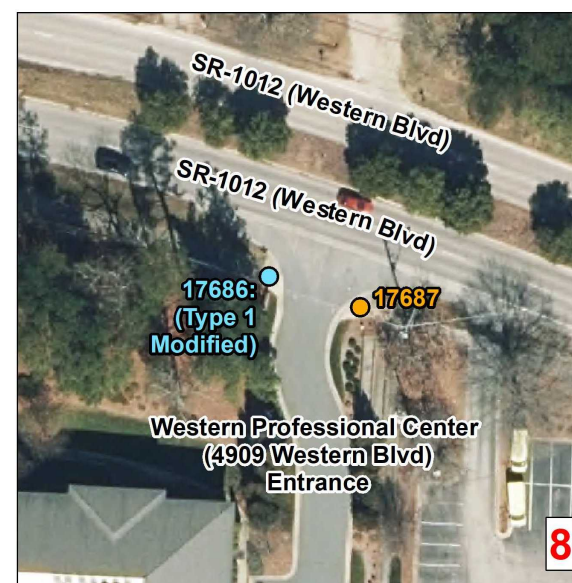
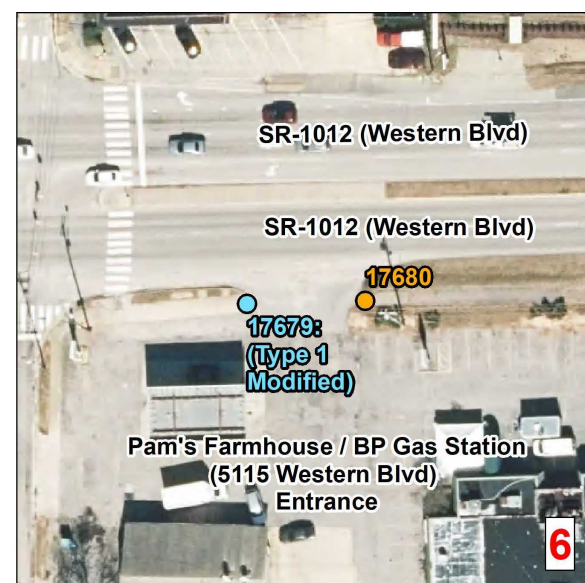
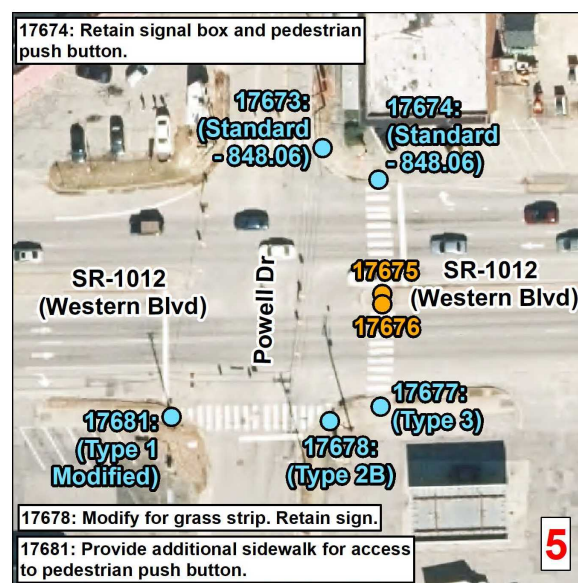
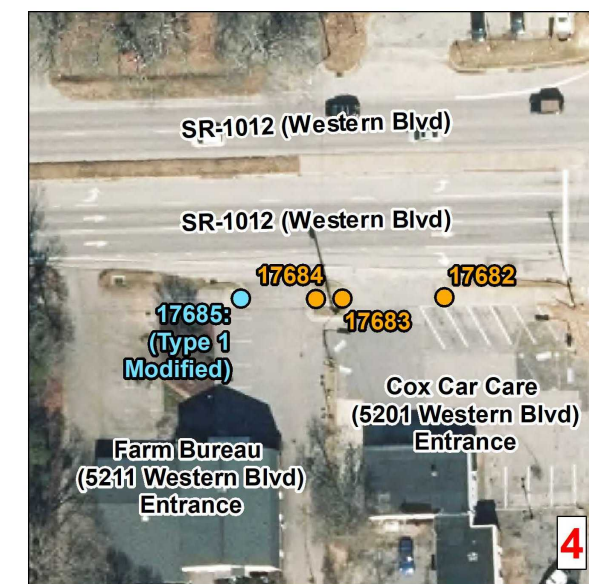
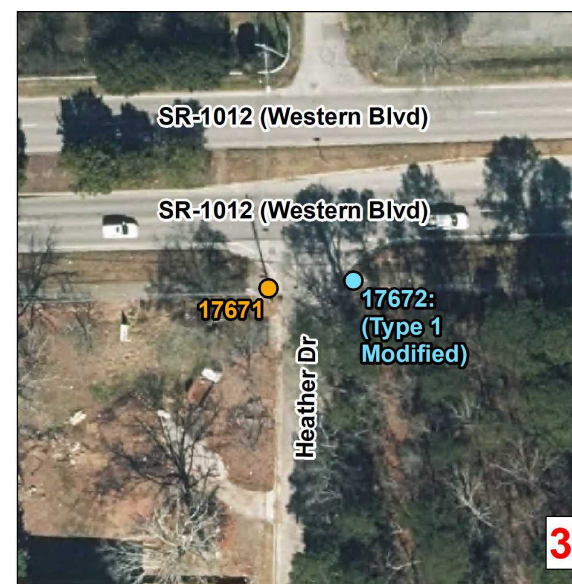
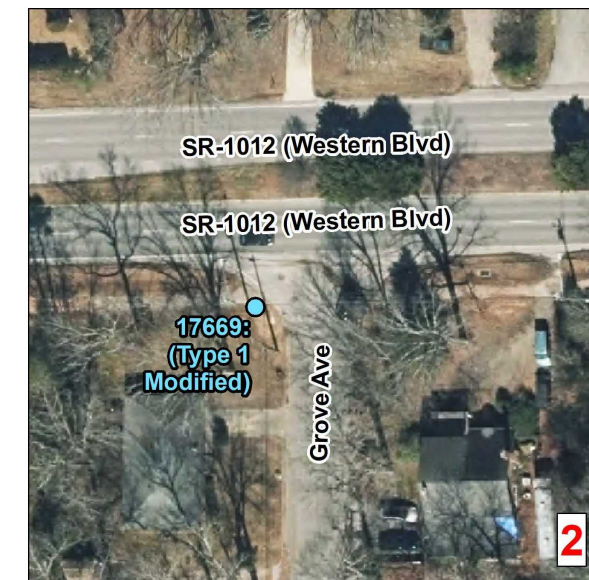
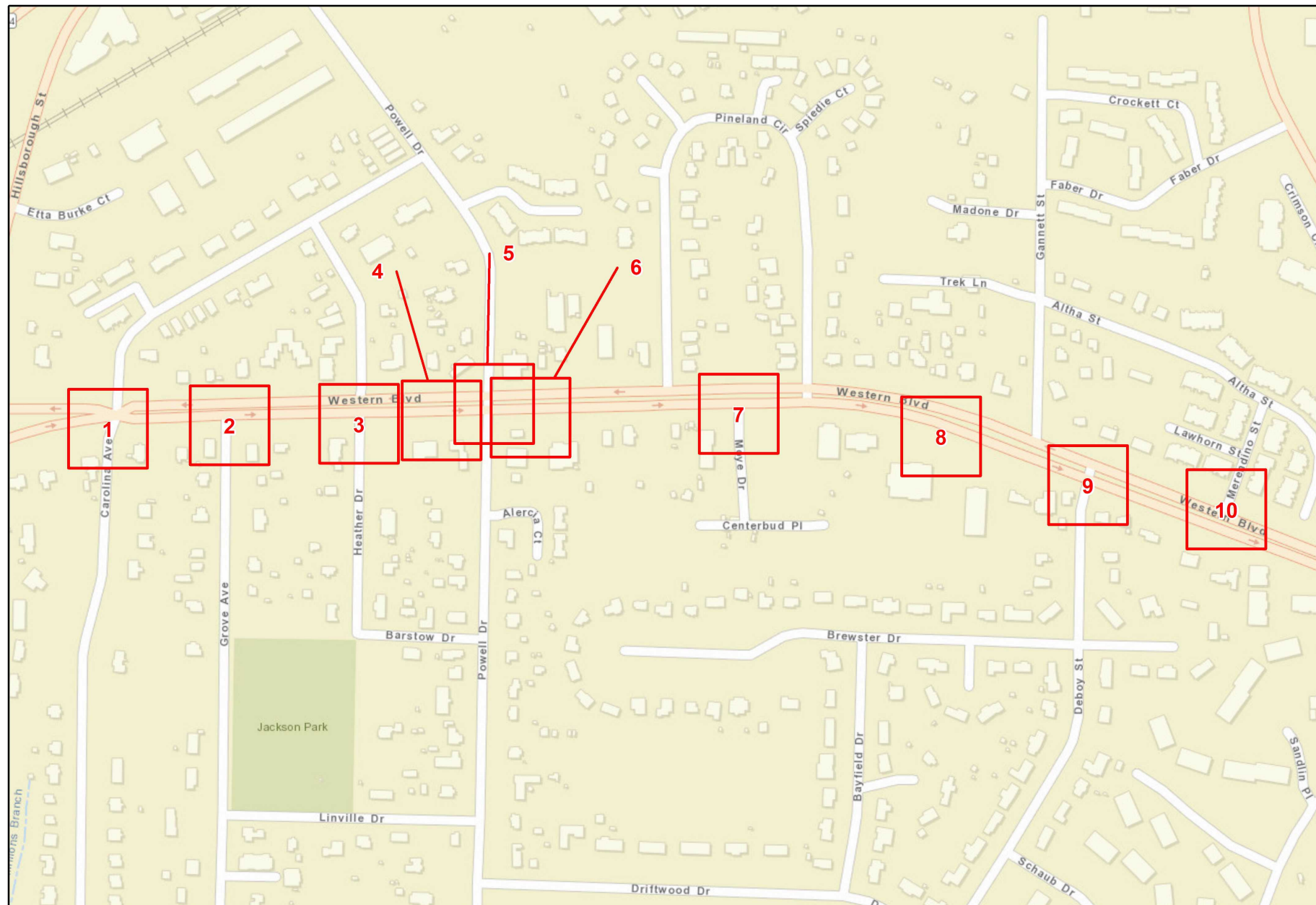
5/14/99



**2023 Western Wake
County Resurfacing**



DATE PLOTTED: 05/14/2022 10:00 AM
 PLOT SCALE: 1" = 1000'
 PLOT SHEET: 1 OF 1
 PLOT TITLE: 2023 Western Wake County Resurfacing



Curb Ramps To Be Repaired

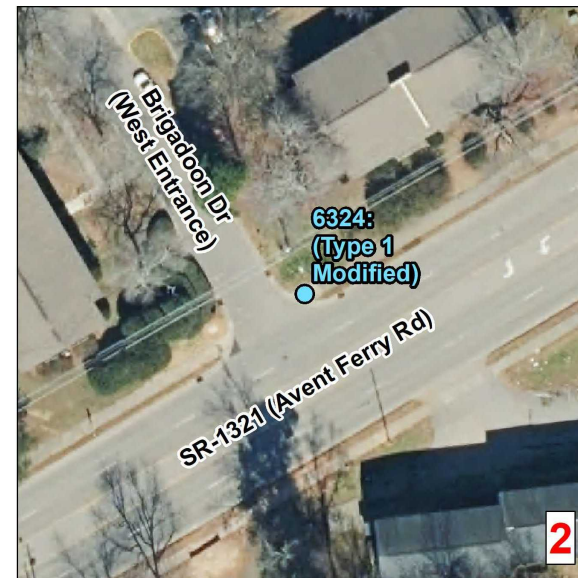
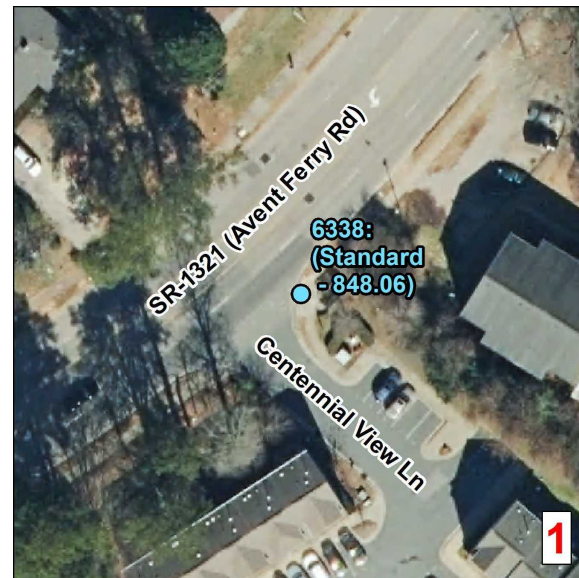
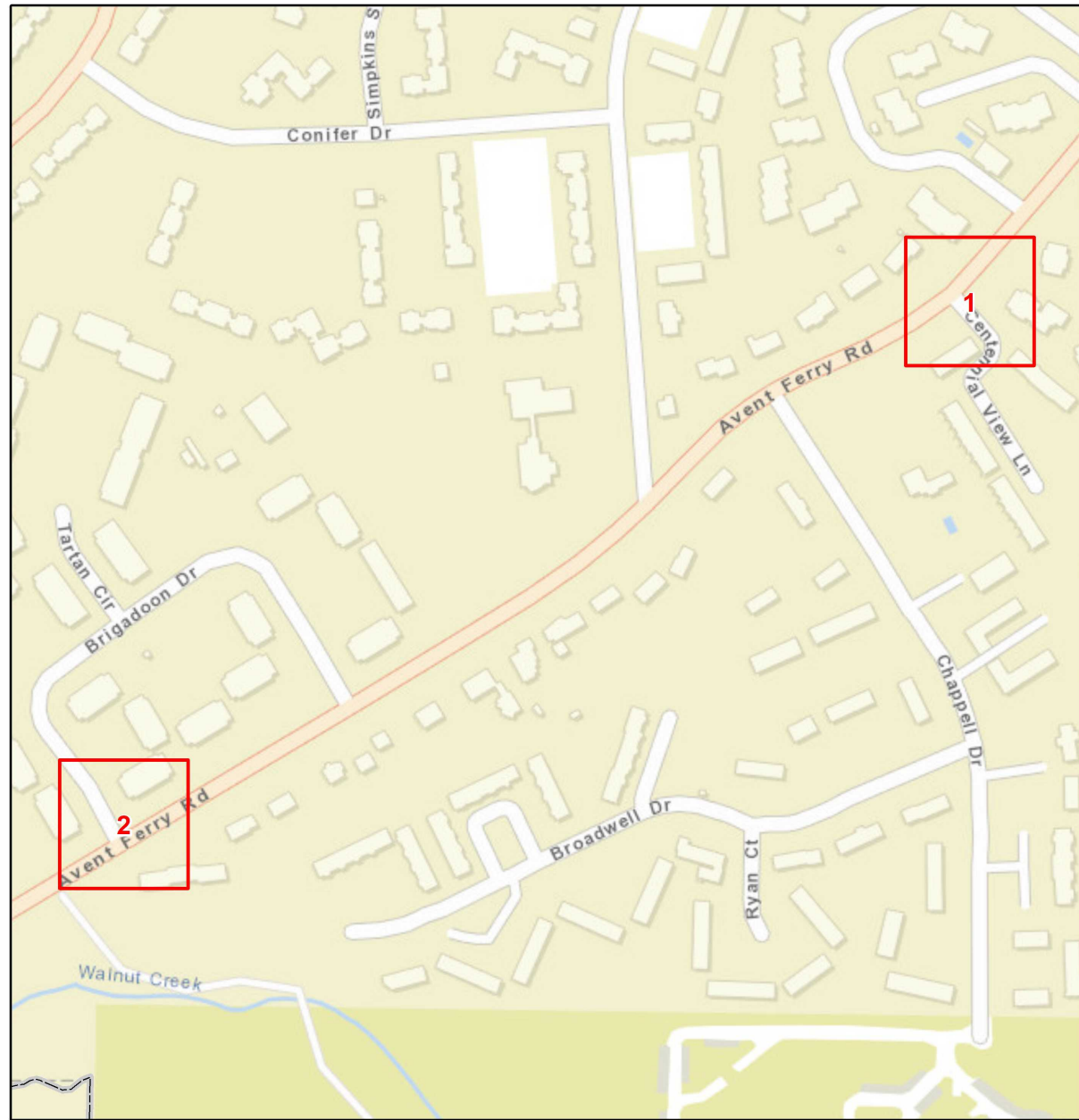
- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp

Municipal Boundary
 NCHPO Historic Boundary (NR and LHD)

2023 Western
WBS: 2022CPT.05.20.20921.1
Western Blvd
From/To Pvmt Joint East of SR 5808
To/From U-2719 Limits

NORTH CAROLINA DEPARTMENT
 OF TRANSPORTATION
 DIVISION 5

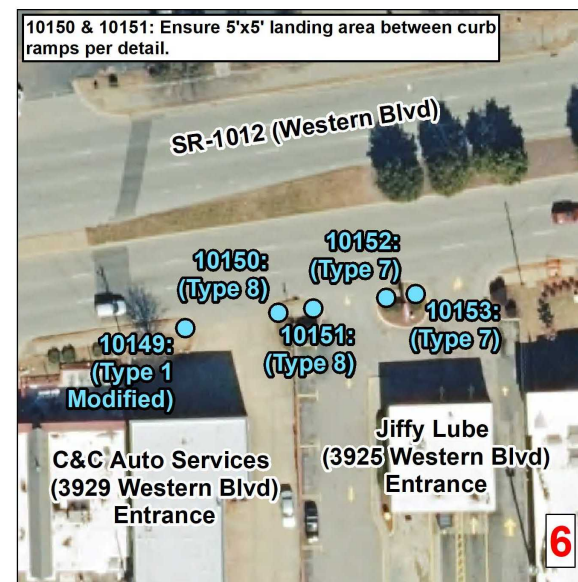
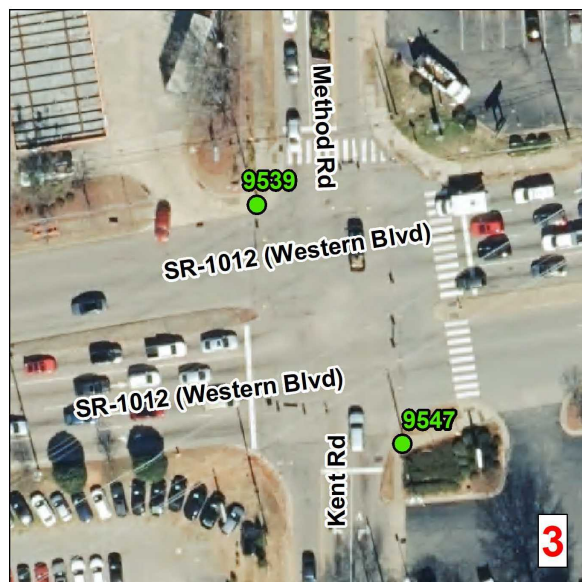
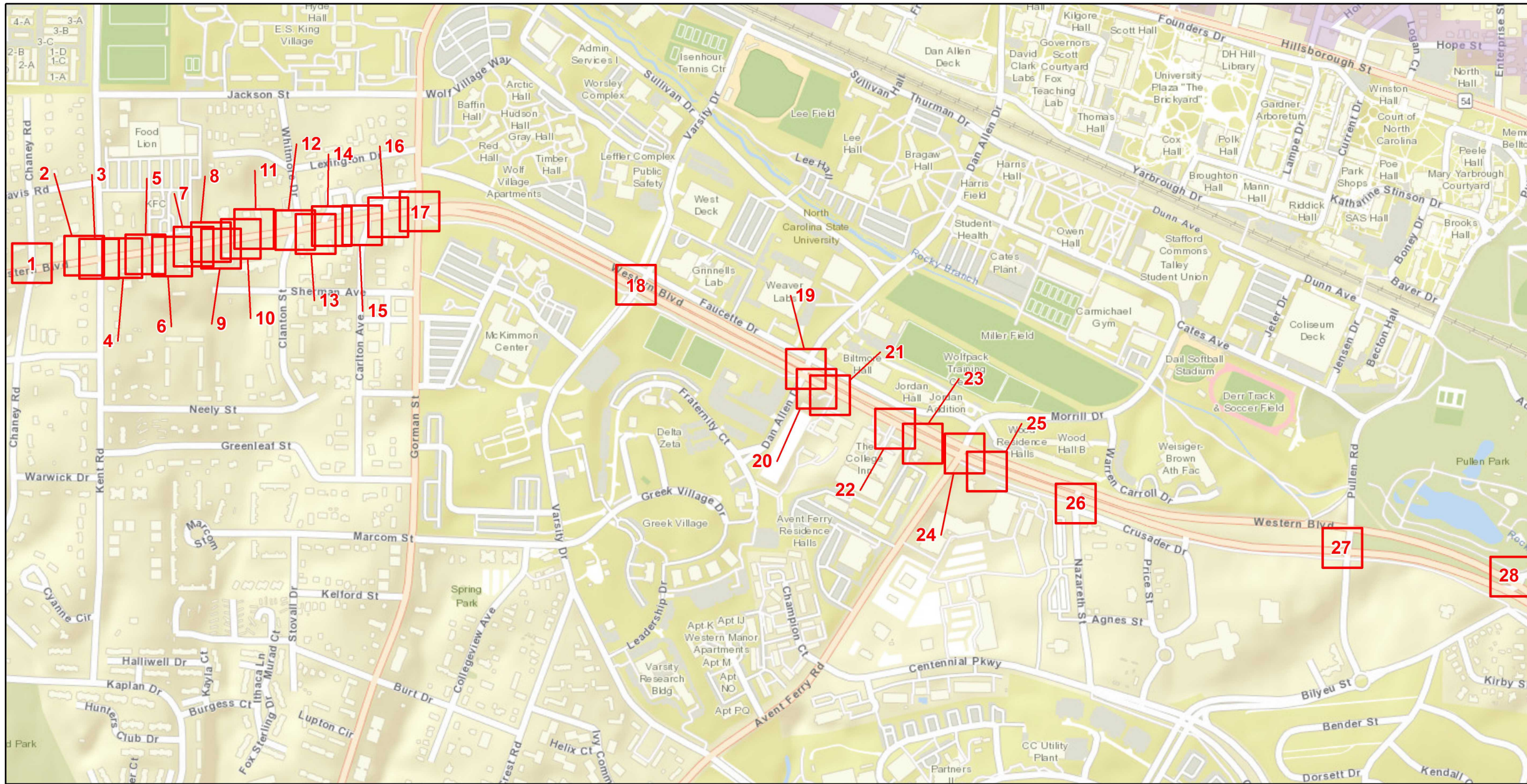
Source: NV5 Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO



Curb Ramps To Be Repaired		
	Retrofit	
	Remove and Replace	
	New Curb Ramp	
	Remove Ramp	
	Municipal Boundary	
	NCHPO Historic Boundary (NR and LHD)	
2023 Western		
WBS: 2022CPT.05.20.20921.1		
Aventura Ferry Rd		
From SR 1012 To Athens Dr		
	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 5	
<small>Source: NV5 Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO</small>		





Curb Ramps To Be Repaired		
	Retrofit	
	Remove and Replace	
	New Curb Ramp	
	Remove Ramp	
	Municipal Boundary	
	NCHPO Historic Boundary (NR and LHD)	
2023 Western WBS: 2022CPT.05.20.20921.1 Western Blvd From/To Pvmt Joint East of SR 5808 To/From U-2719 Limits		
		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 5
Source: NV5 Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO		




Curb Ramps To Be Repaired

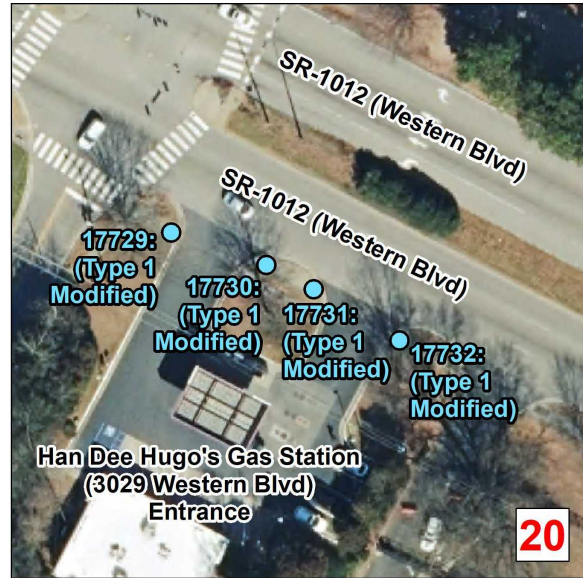
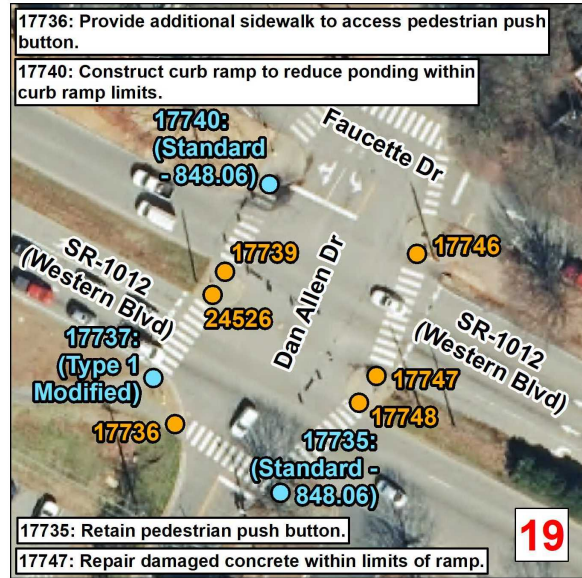
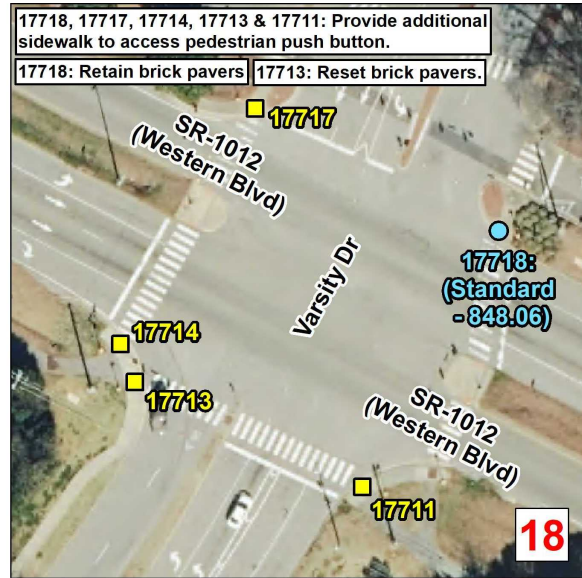
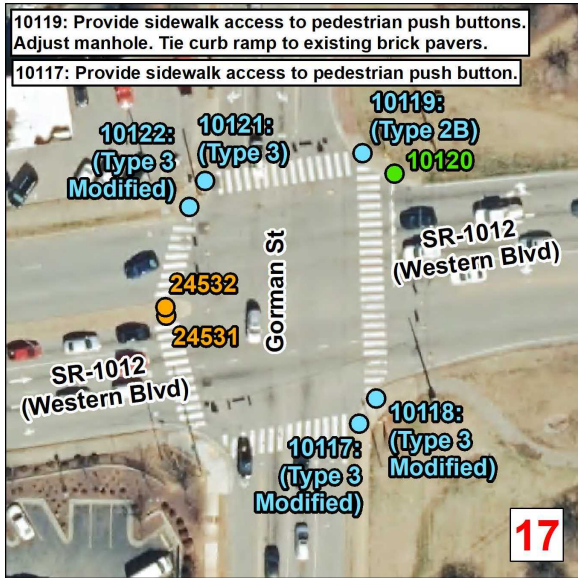
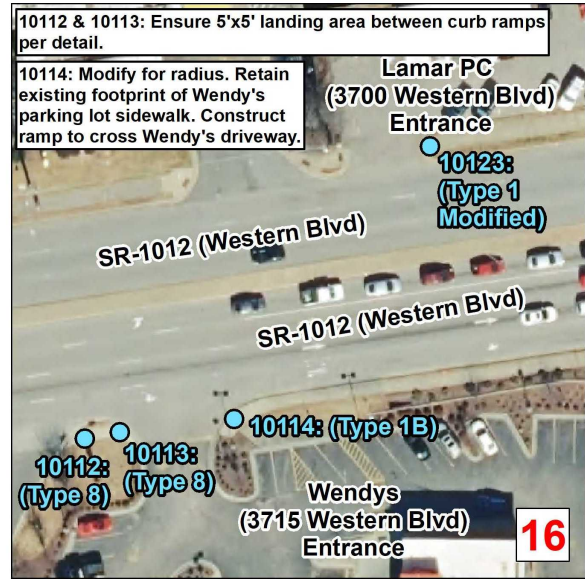
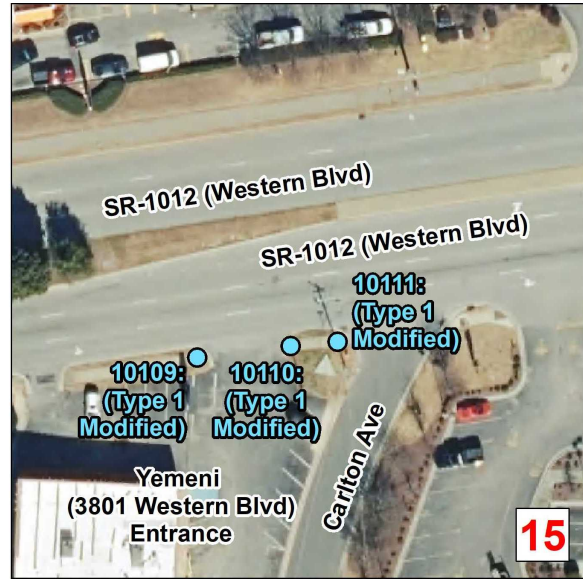
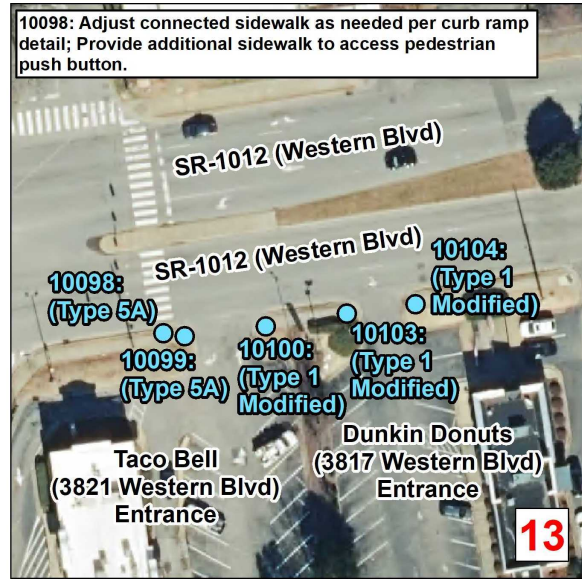
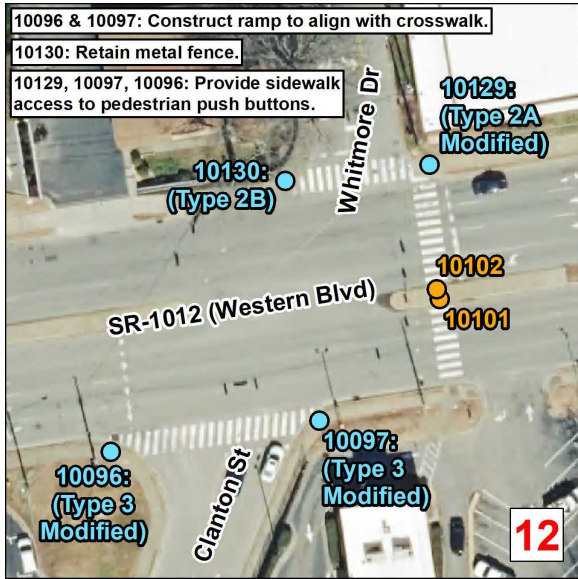
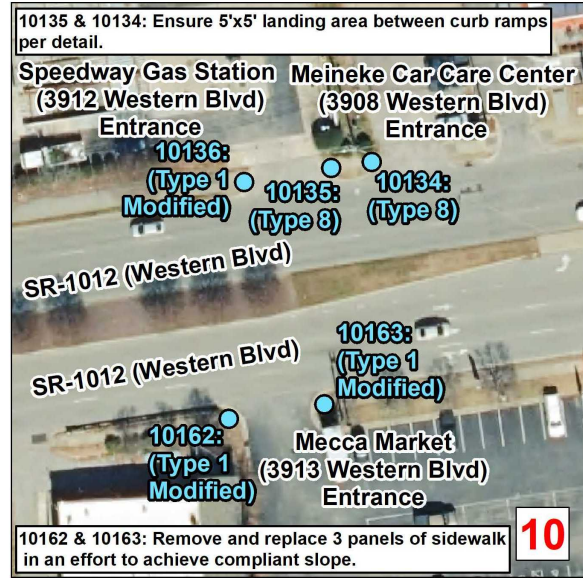
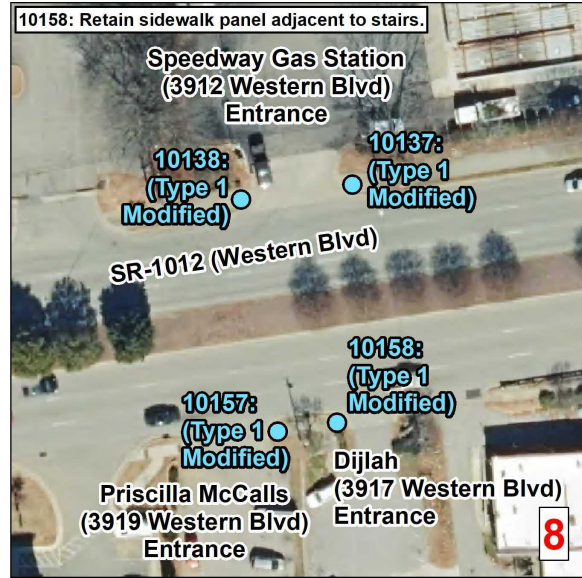
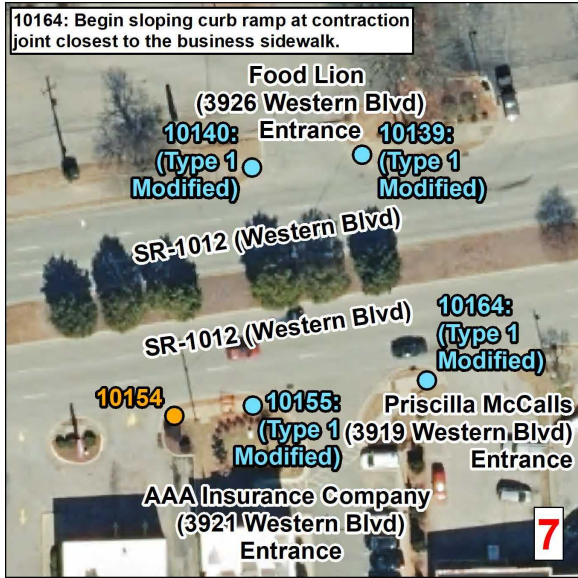
- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp
- Other

 Municipal Boundary
 NCHPO Historic Boundary (NR and LHD)

2023 Western
WBS: 2022CPT.05.20.20921.1
Western Blvd
From/To U-2719 Limits
To/From Pvmnt Joint/Begin C&G

 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
 DIVISION 5

Source: NVS Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO



Curb Ramps To Be Repaired

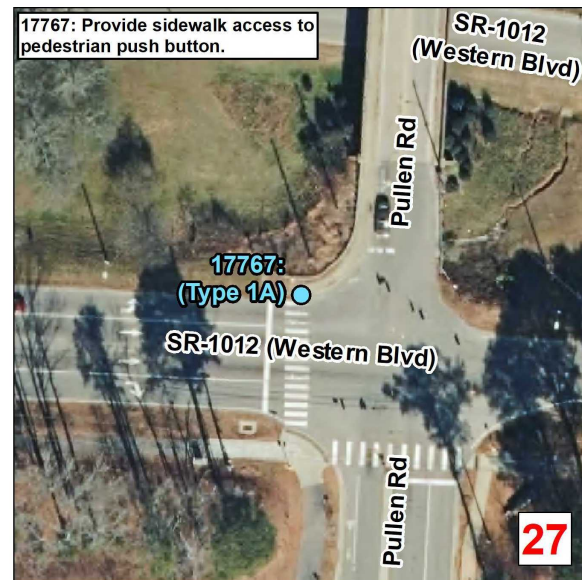
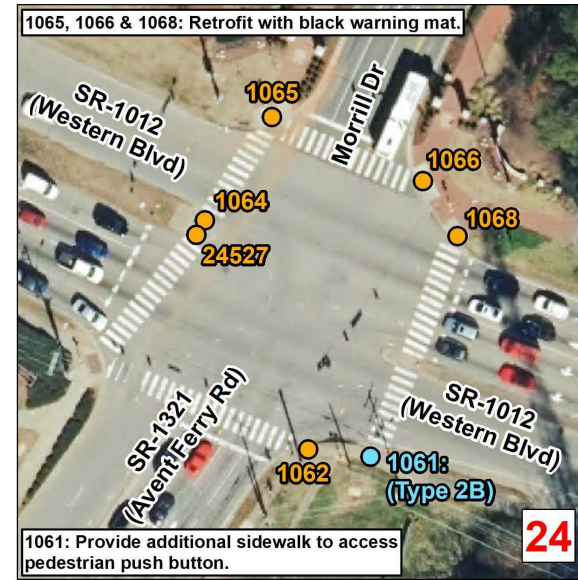
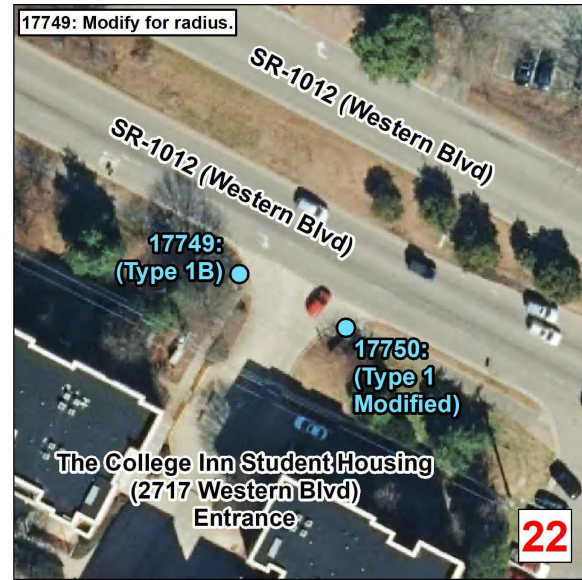
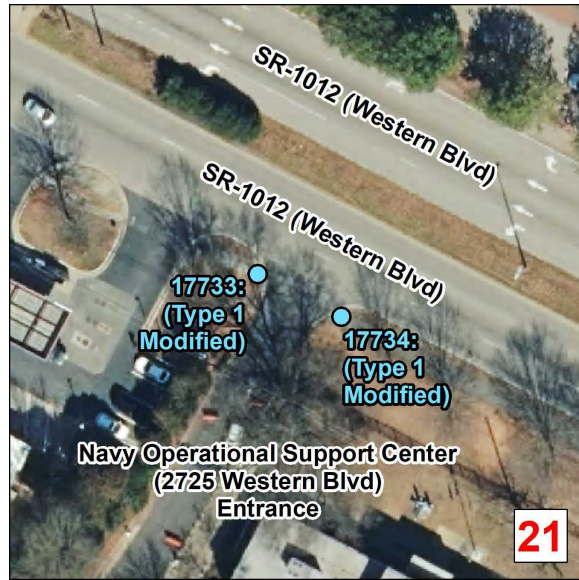
- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp
- Other

□ Municipal Boundary
□ NCHPO Historic Boundary (NR and LHD)

2023 Western
WBS: 2022CPT.05.20.20921.1
Western Blvd
From/To U-2719 Limits
To/From Pvmnt Joint/Begin C&G

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 5

Source: NV5 Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO




Curb Ramps To Be Repaired


- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp
- Other

Municipal Boundary

NCHPO Historic Boundary (NR and LHD)



2023 Western
WBS: 2022CPT.05.20.20921.1
Western Blvd
From/To U-2719 Limits
To/From Pvmt Joint/Begin C&G

 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 5

Source: NV5 Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO

PAVEMENT SCHEDULE

C1 AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C,

S SHOULDER GRADING
ASB REQUIRED (EXCEPT AT RESIDENTIAL AREAS)

U EXISTING PAVEMENT

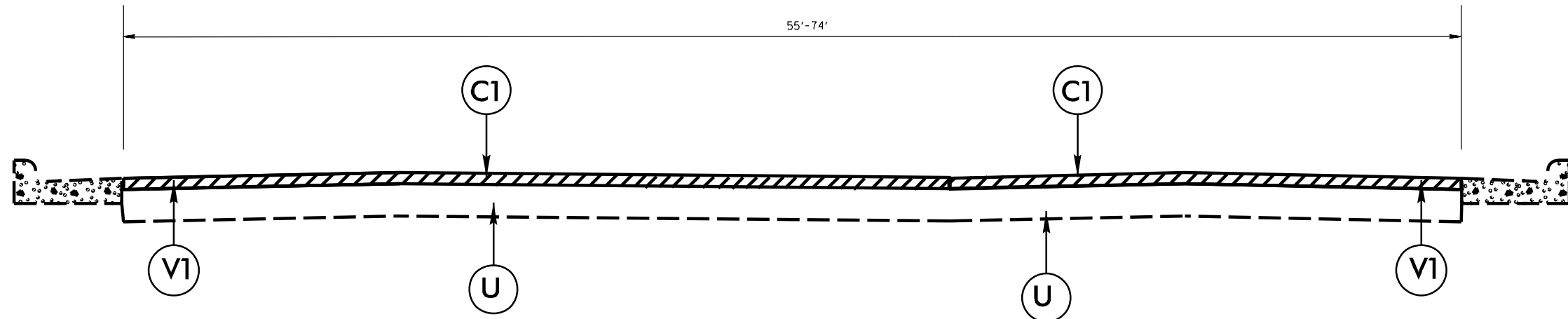
V1 2" MILLING

PROJECT REFERENCE NO.

2022CPT.05.20.20921.1

SHEET NO.

08



TYPICAL SECTION NO. 1

PAVEMENT SCHEDULE

PROJECT REFERENCE NO.

SHEET NO.

2022CPT.05.20.20921.1

9

C1

2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C,
AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.

S

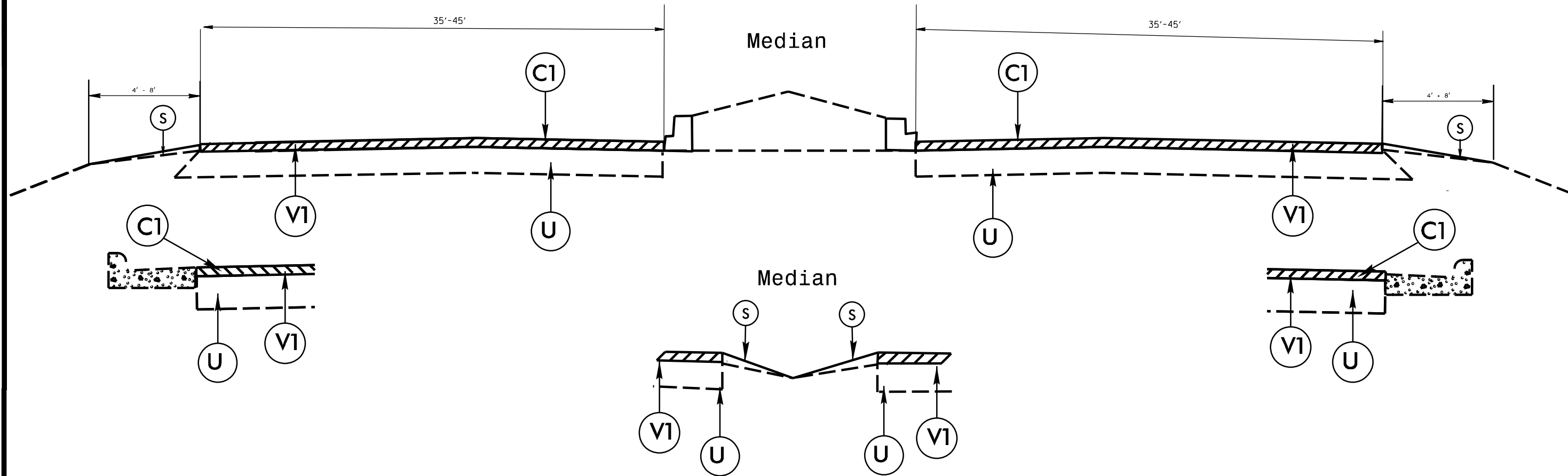
SHOULDER GRADING
ASB REQUIRED (EXCEPT AT RESIDENTIAL AREAS)

U

EXISTING PAVEMENT

V1

2" MILLING



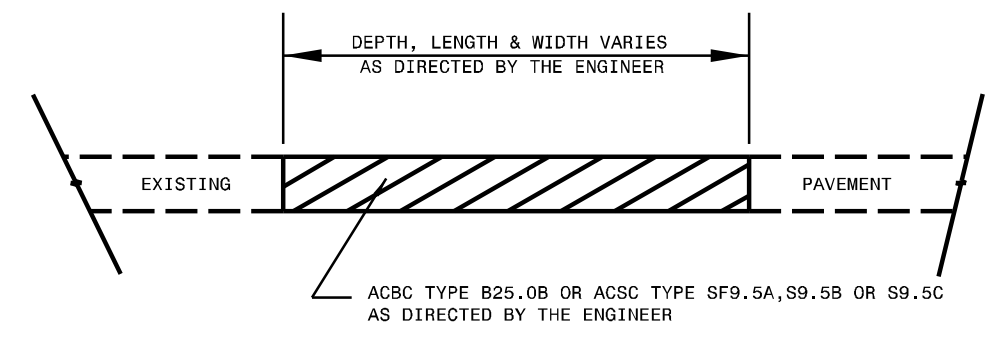
TYPICAL SECTION NO. 2

* Remove and replace 935 SY of concrete island on map #2

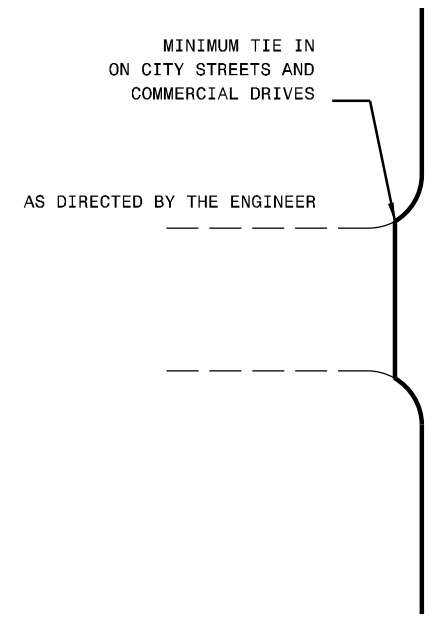
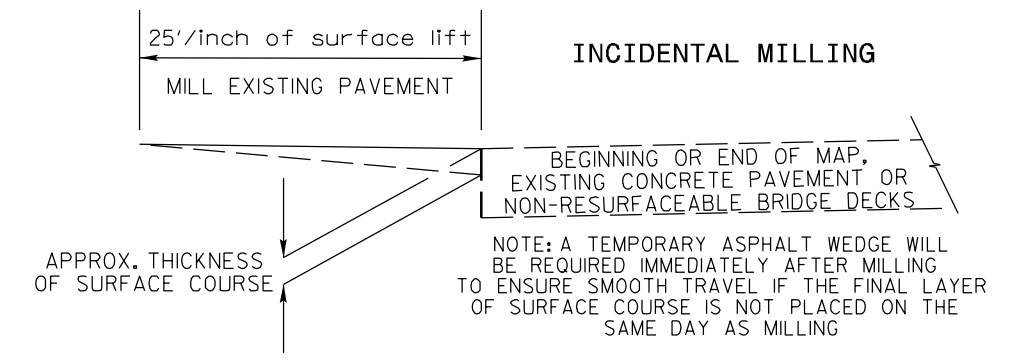
PAVEMENT SCHEDULE

PROJECT REFERENCE NO.	SHEET NO.
2022CPT.05.20.20921.1	10

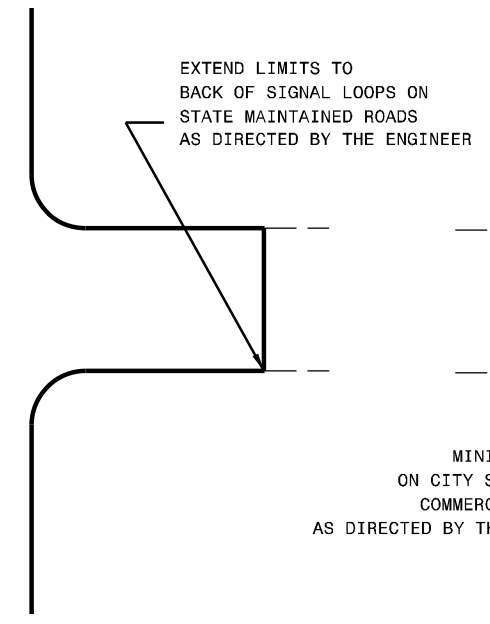
	S	SHOULDER GRADING ASB REQUIRED (EXCEPT AT RESIDENTIAL AREAS)
C1	U	EXISTING PAVEMENT
	V1	2" MILLING



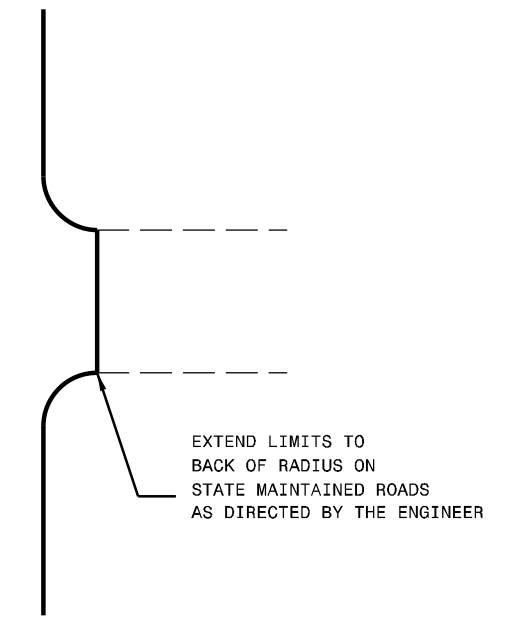
PATCHING EXISTING PAVEMENT
MILLING TO BE PERFORMED PRIOR TO PATCHING

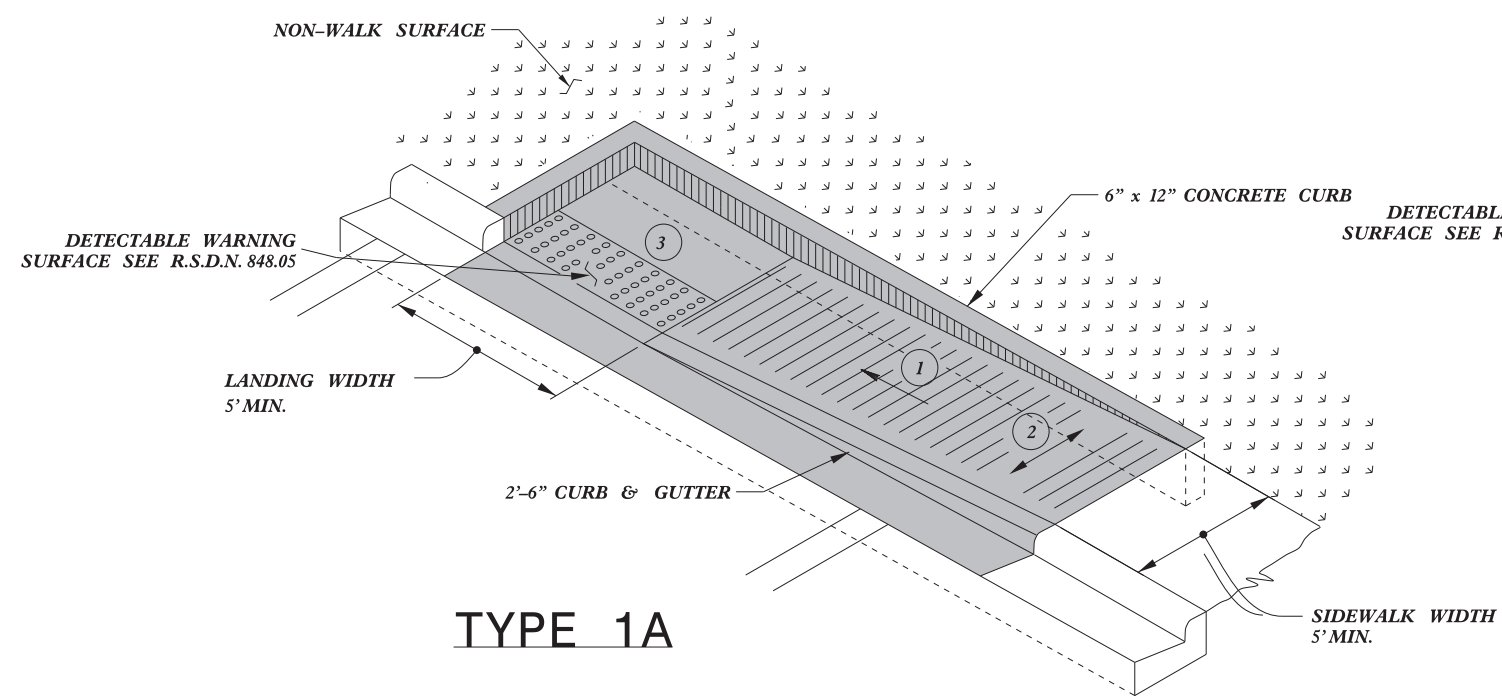


DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES

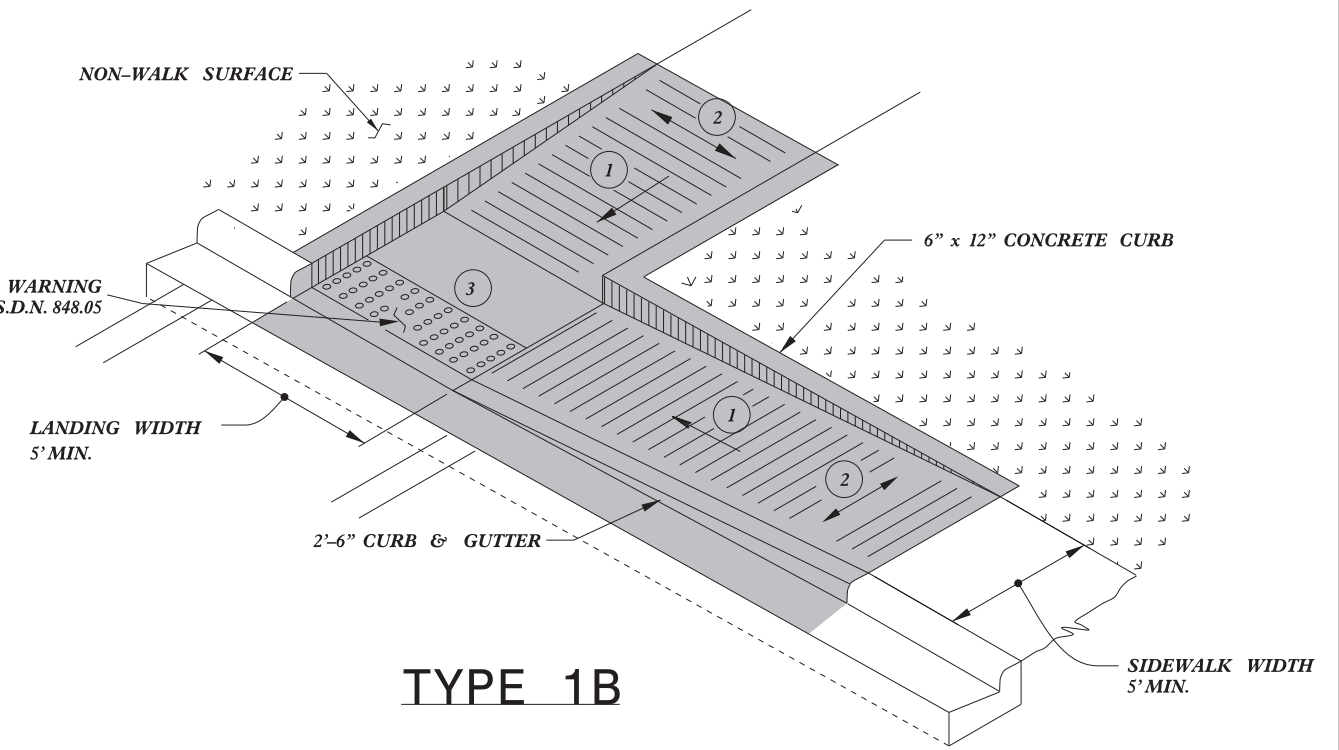


DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

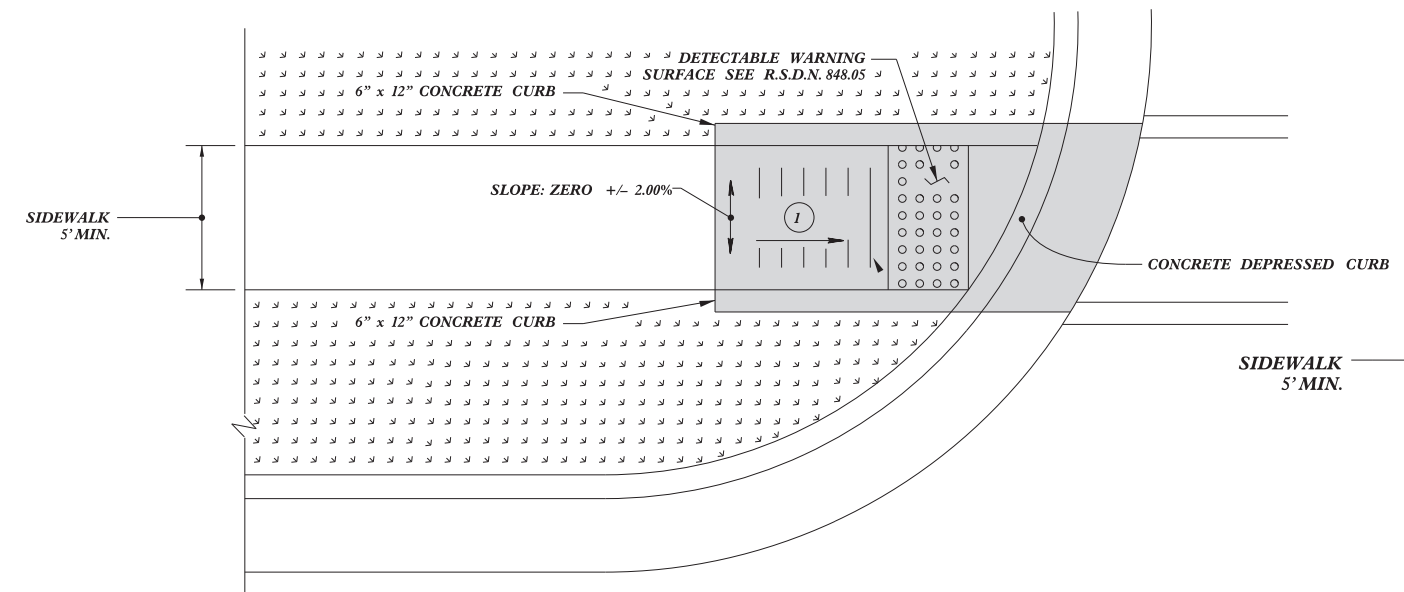




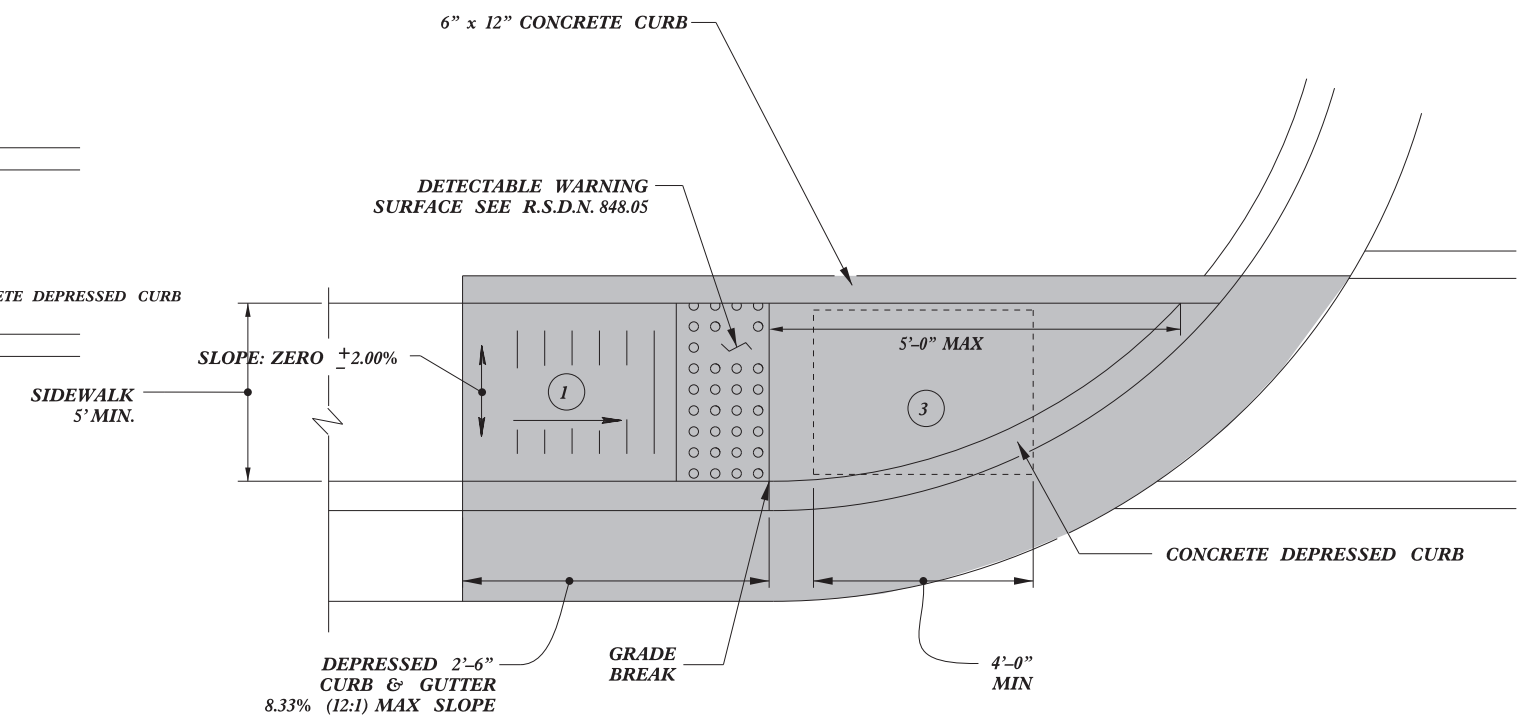
TYPE 1A



TYPE 1B



TYPE 1 Modified



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.

PAY LIMITS FOR 1 CURB RAMP

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

1/8/2020
 NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER
 Signed by: *J.S. Howerton*

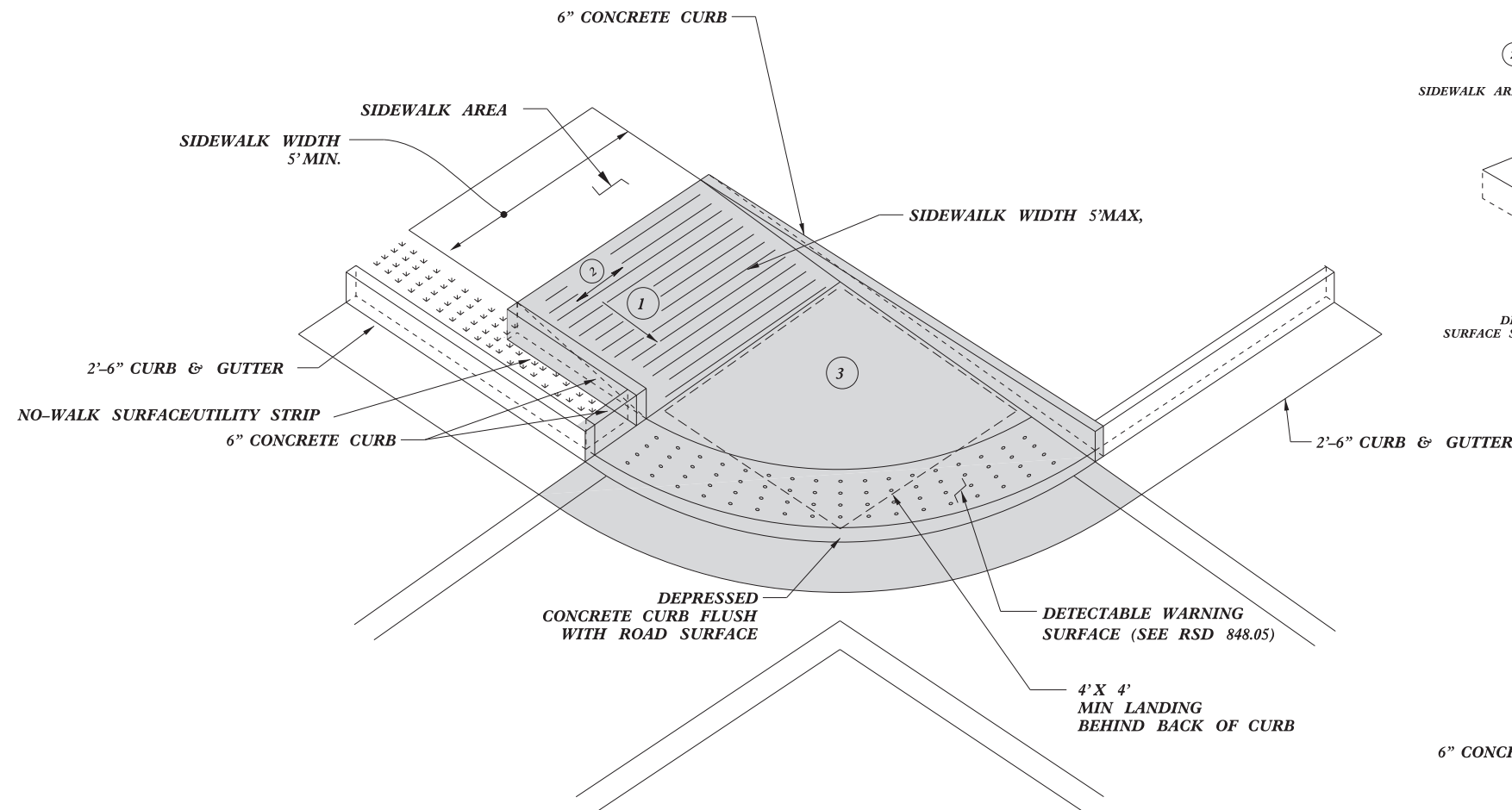
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

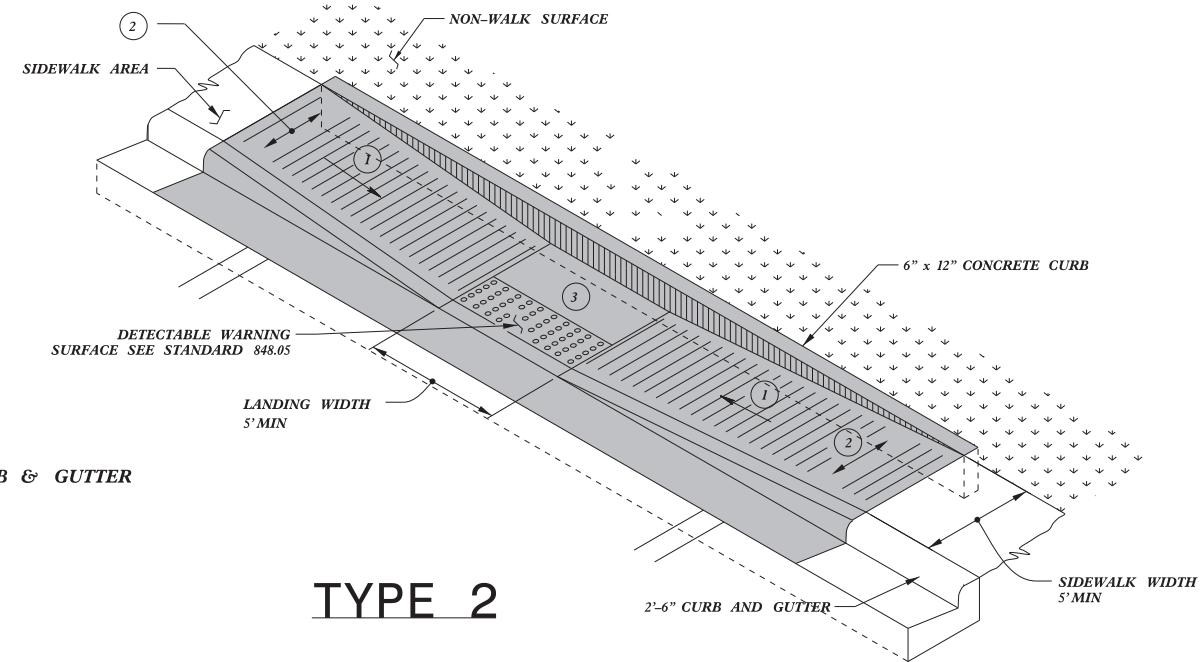
CURB RAMPS
 Directional Ramps

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

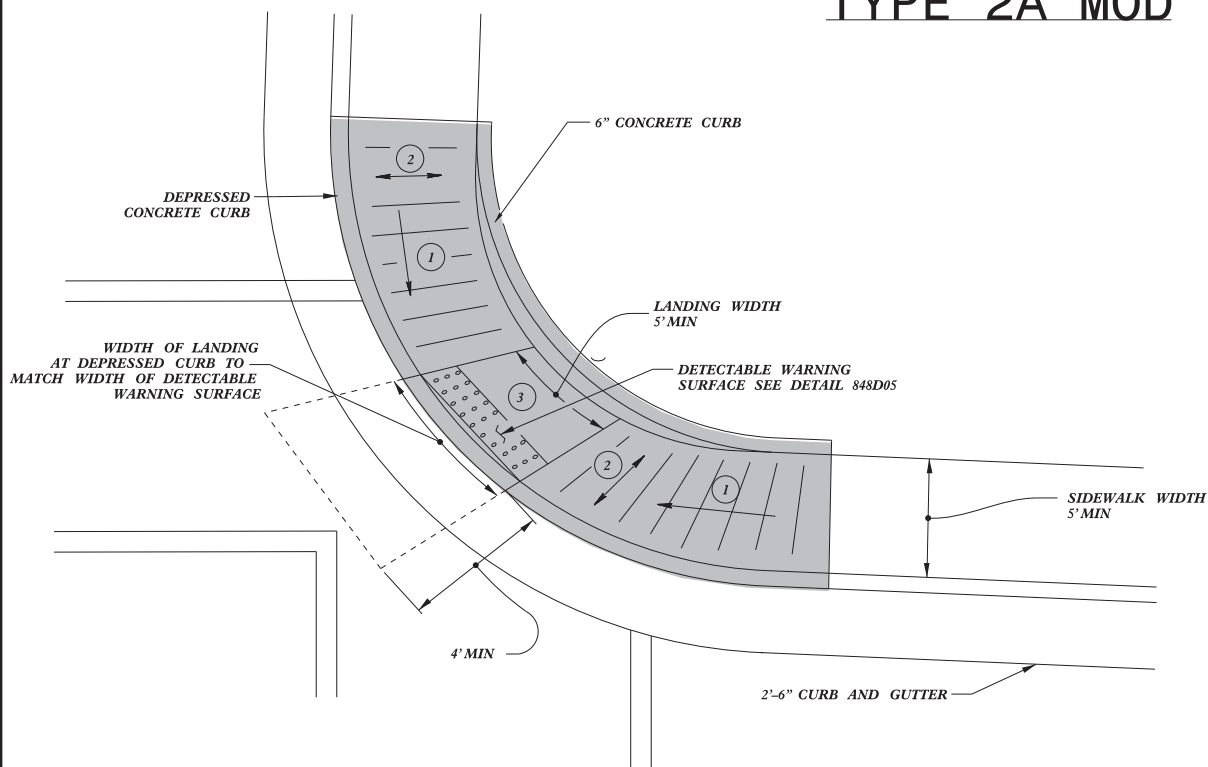
5/14/99
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 \$\$\$\$SERNAME\$\$\$\$



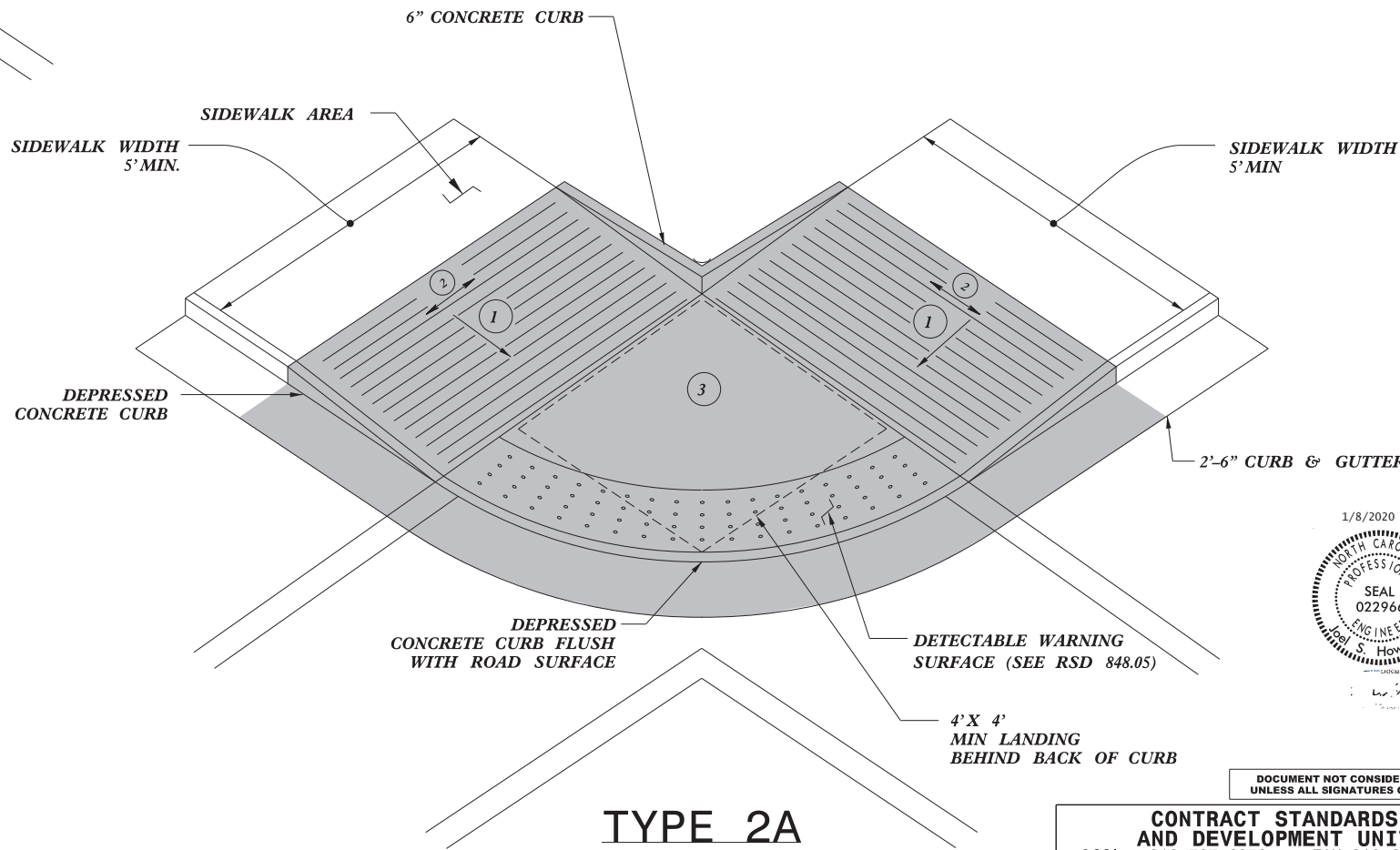
TYPE 2A MOD



TYPE 2



TYPE 2B

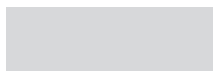


TYPE 2A

1 8.33% (12:1) MAX RAMP SLOPE

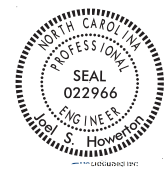
2 CROSS SLOPE: 2.00%

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.



PAY LIMITS FOR 1 CURB RAMP

1/8/2020



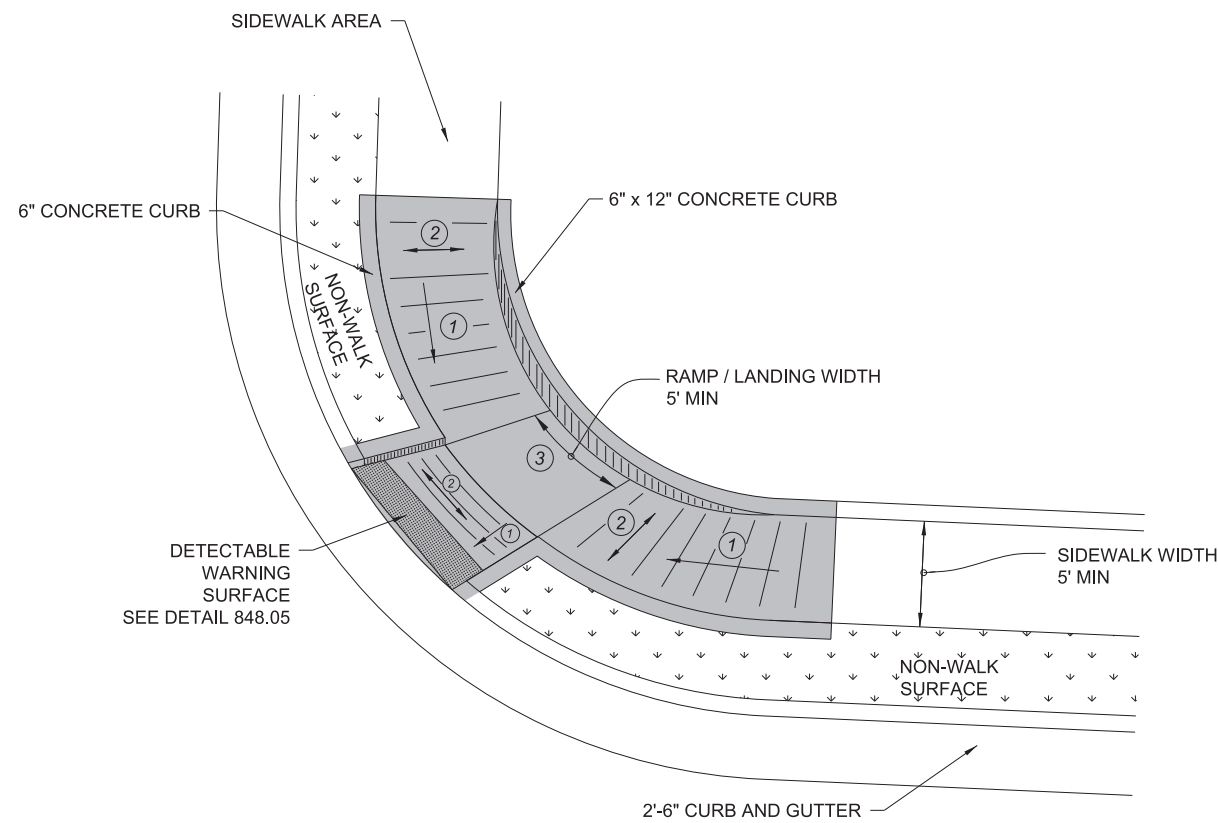
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CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

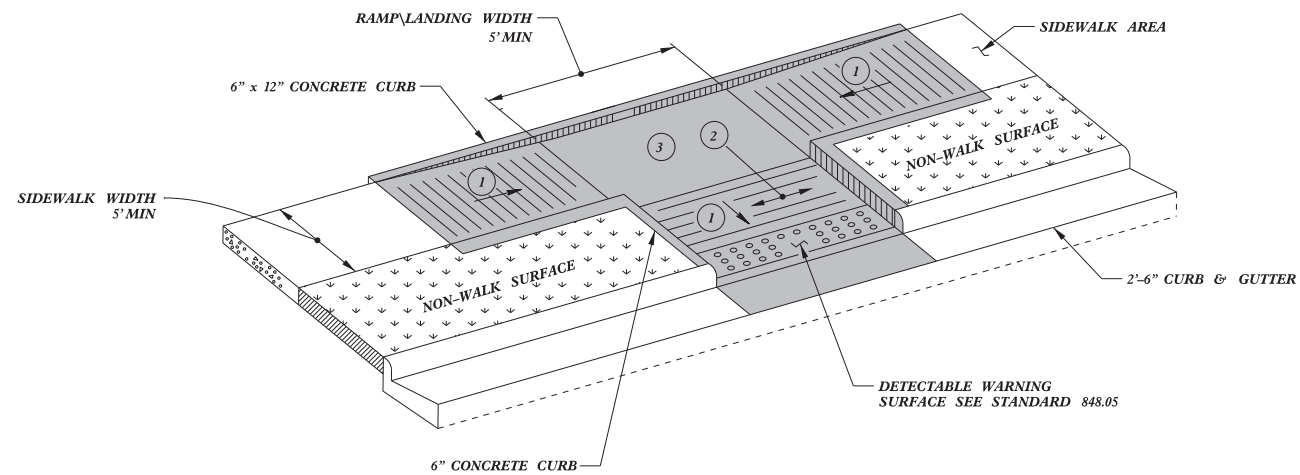
CURB RAMPS

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

5/14/99
\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$CONJUN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$
\$\$\$\$\$\$\$\$\$\$



**TYPE 3 MODIFIED
INSTALLATION IN A RADIUS**



TYPE 3

- 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.

1/8/2020



Designed by:
J.S. Howerton
873F3D17DCDC45F...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

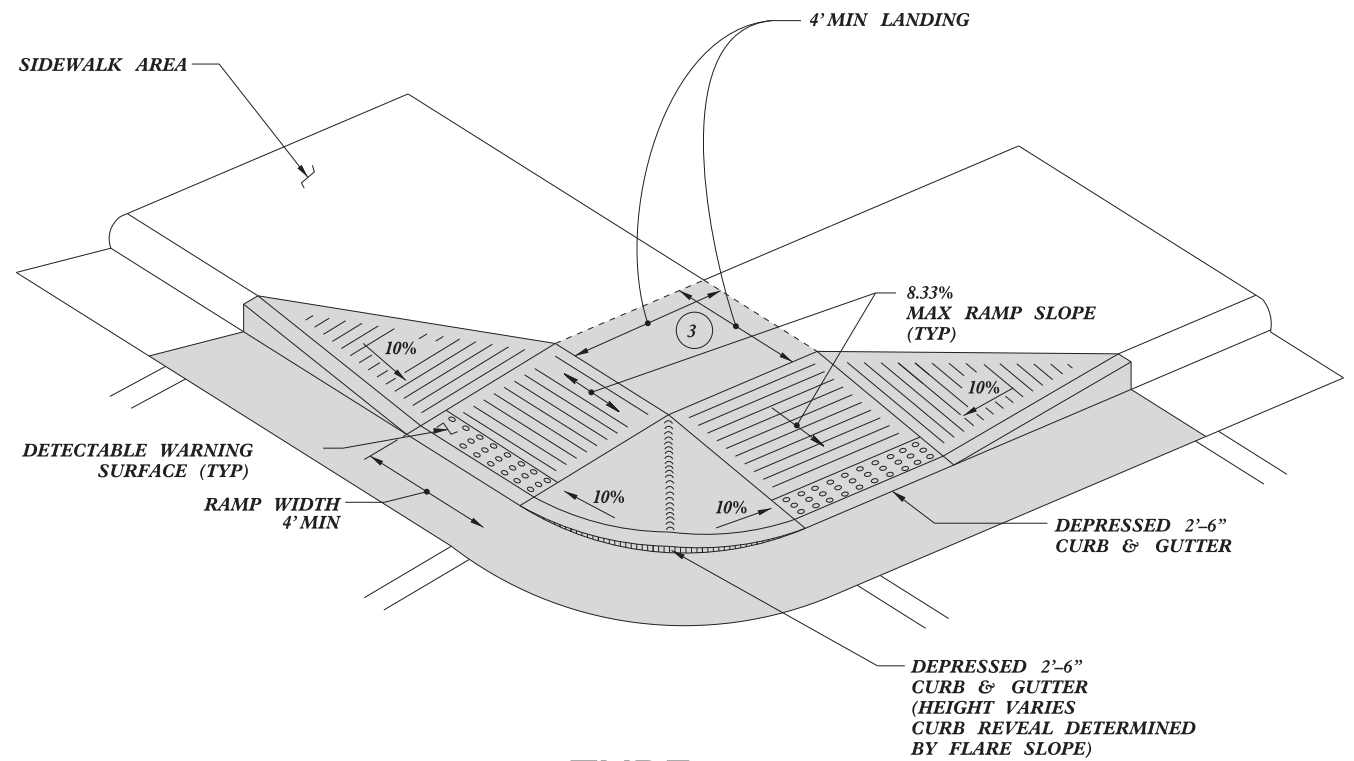
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ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC: sids/2012CurbRamp/CurbRampDetails.dgn

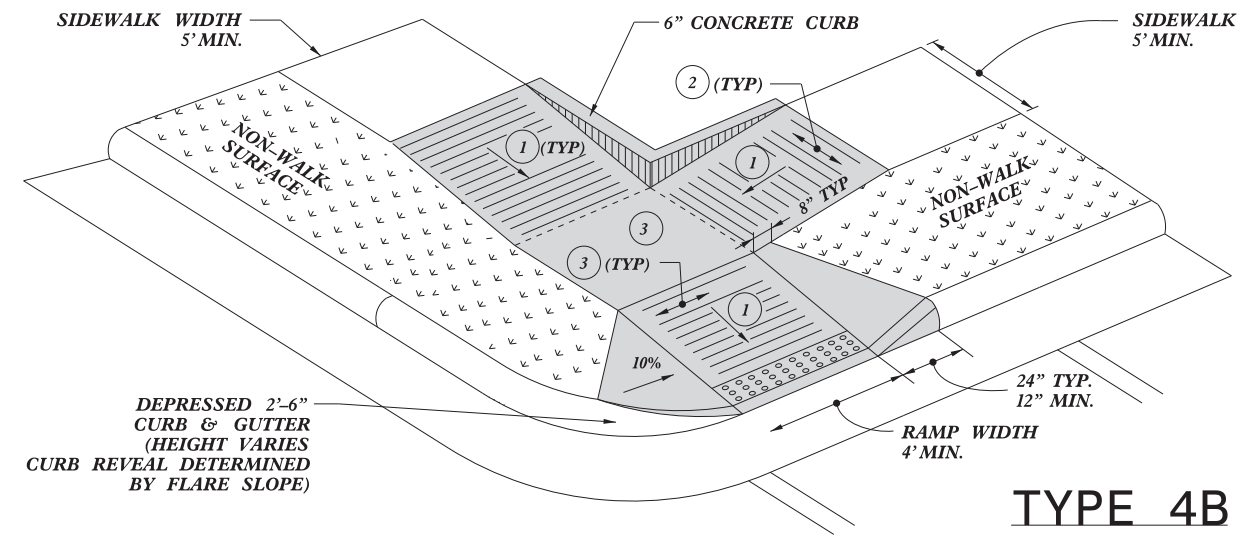
5/14/99
SY-CURB RAMPS
DATE: 5/14/99
DRAWN BY: J.S. HOWERTON
CHECKED BY: J.S. HOWERTON
DATE: 5/14/99
FILE: S:\CADD\2012\2012CurbRamp\CurbRampDetails.dgn

5/14/99

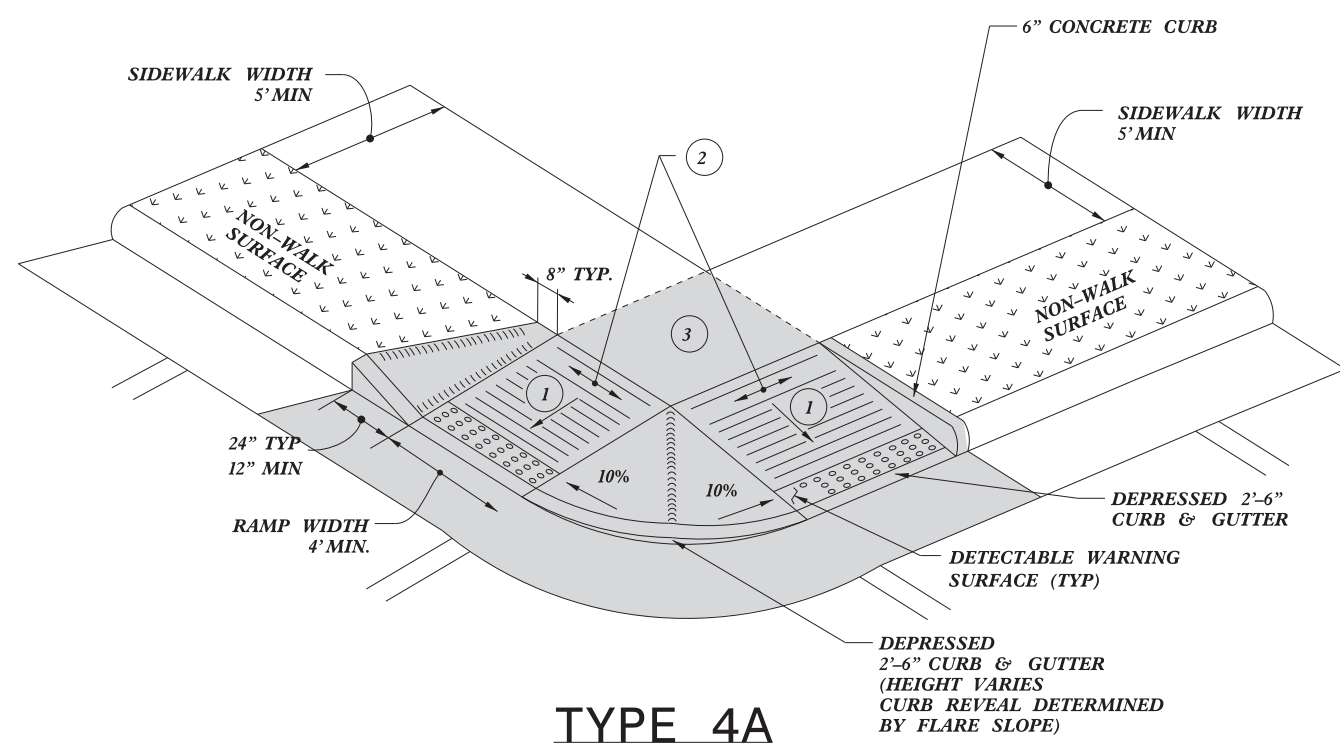
PAY LIMITS FOR 1 OR 2 CURB RAMP (CALCULATE BASED ON NUMBER OF SETS OF TRUNCATED DOMES)



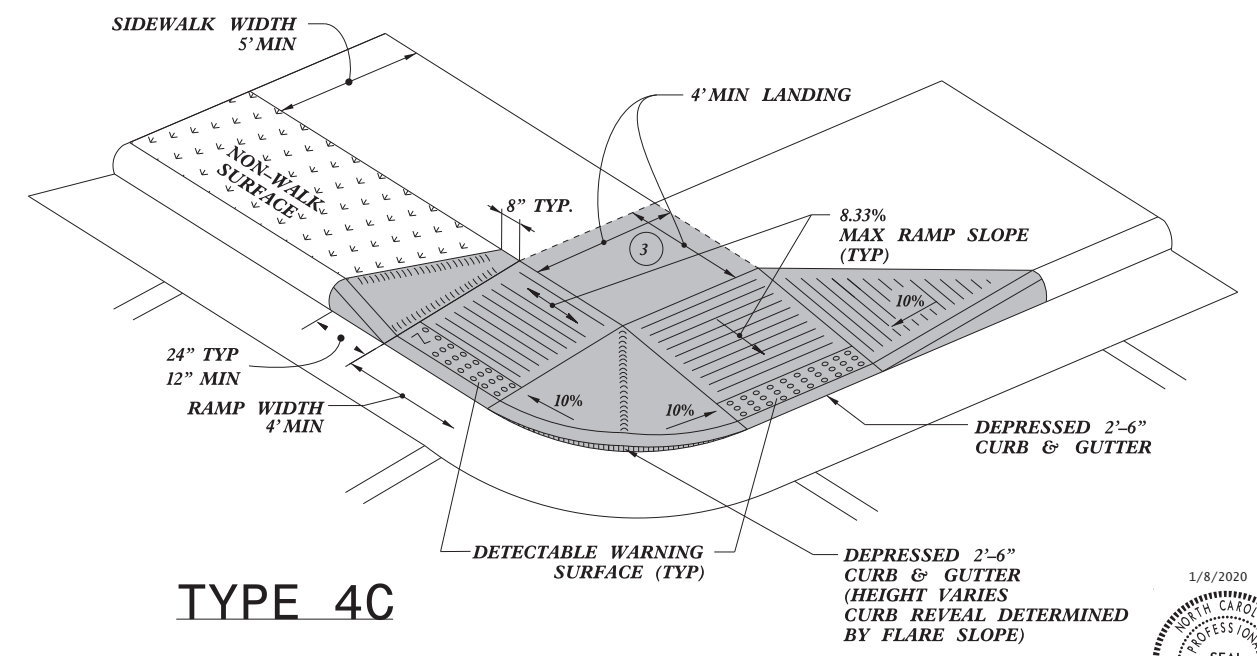
TYPE 4



TYPE 4B

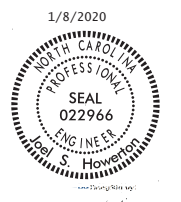


TYPE 4A



TYPE 4C

- 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.



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

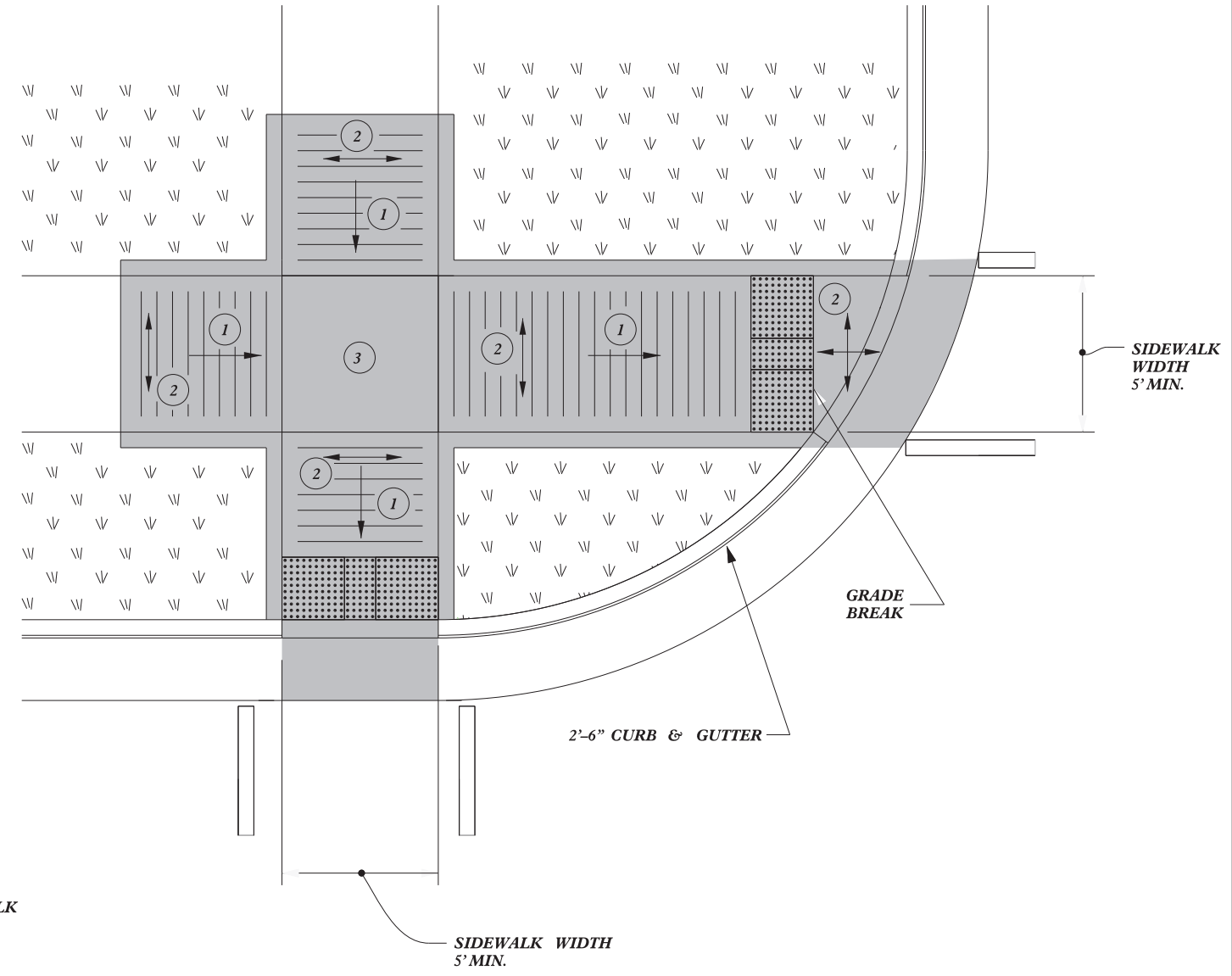
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ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
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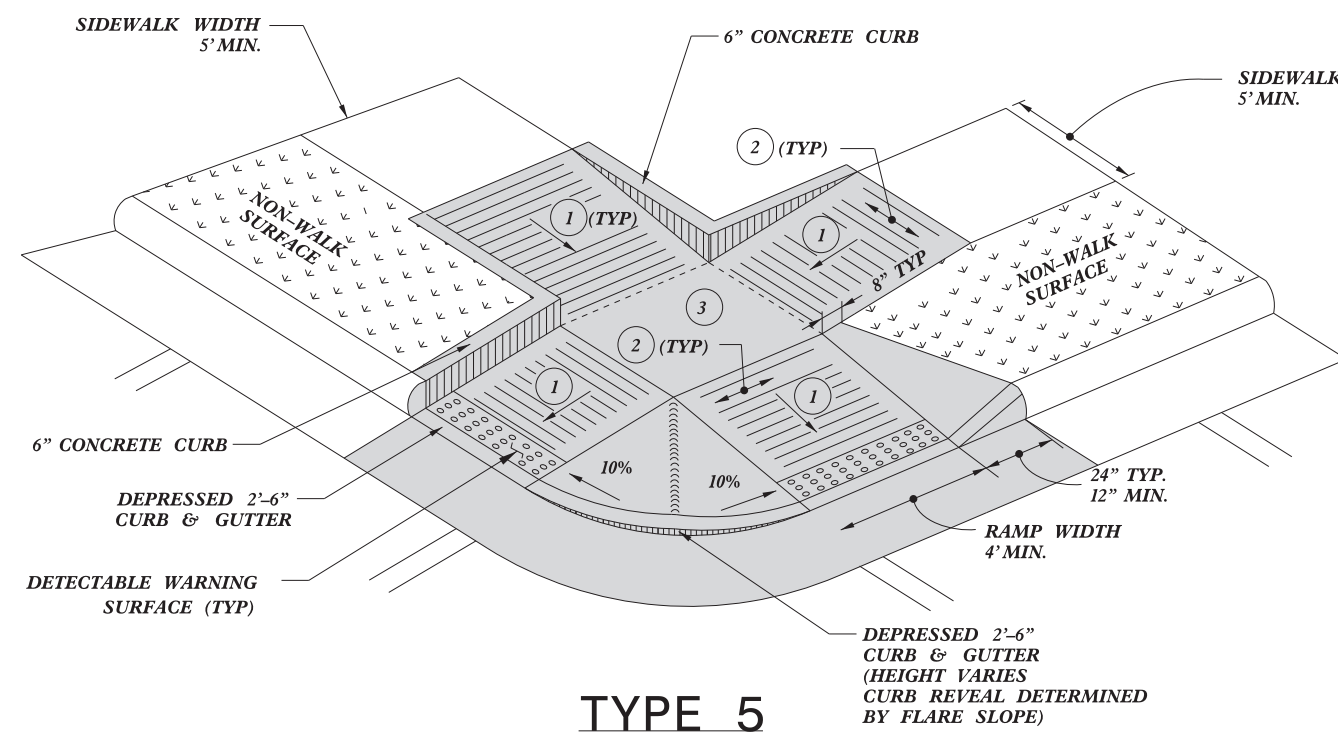
REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

SYTIME: 5/14/99 10:58:58 AM

PAY LIMITS FOR 1 OR 2 CURB RAMPS
(CALCULATE BASED ON NUMBER OF SETS
OF TRUNCATED DOMES)



TYPE 5A



TYPE 5

- 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.

1/8/2020



Signed by:

 873F3D17DCDC45F...

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

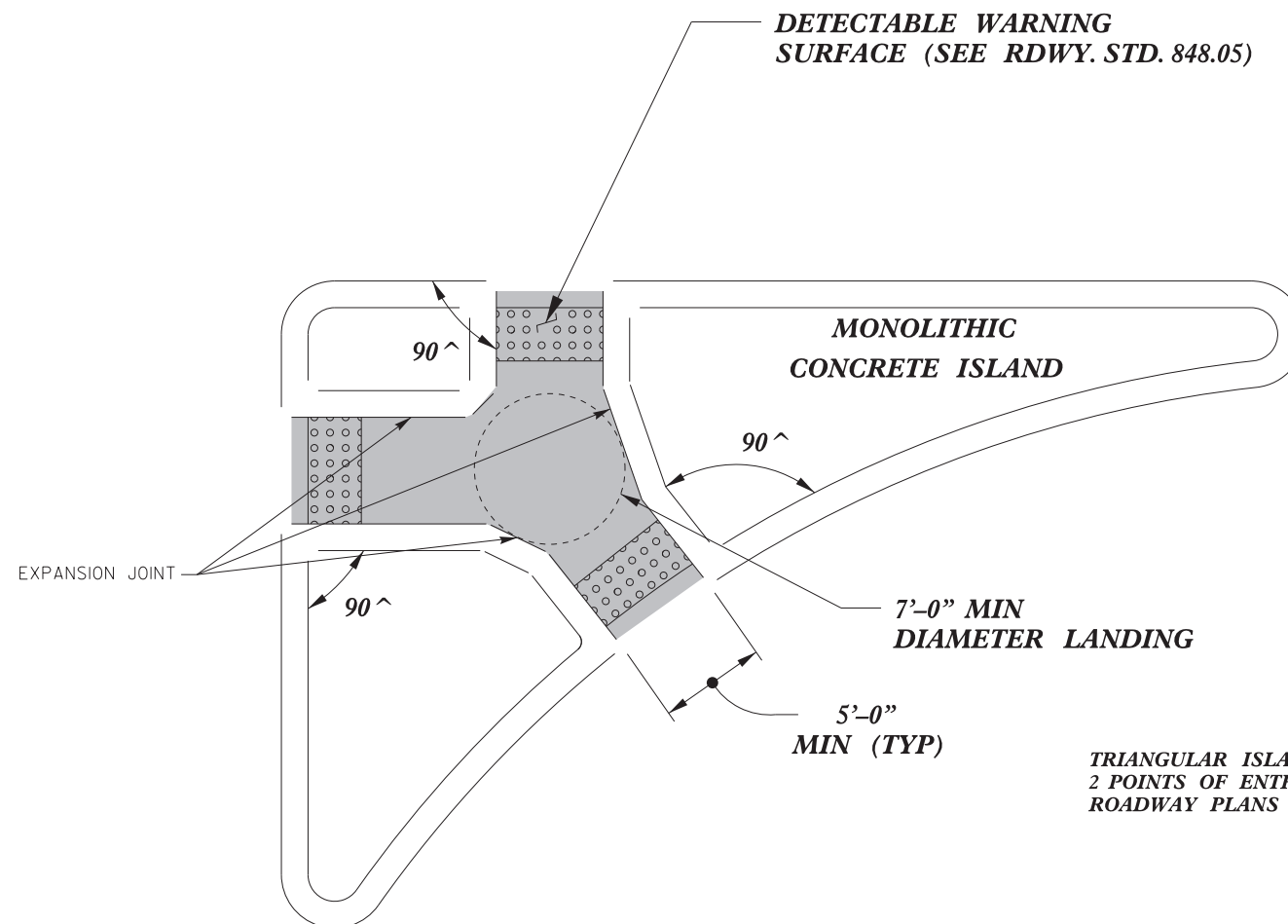
CURB RAMPS

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11
 MODIFIED BY: DATE:
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REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

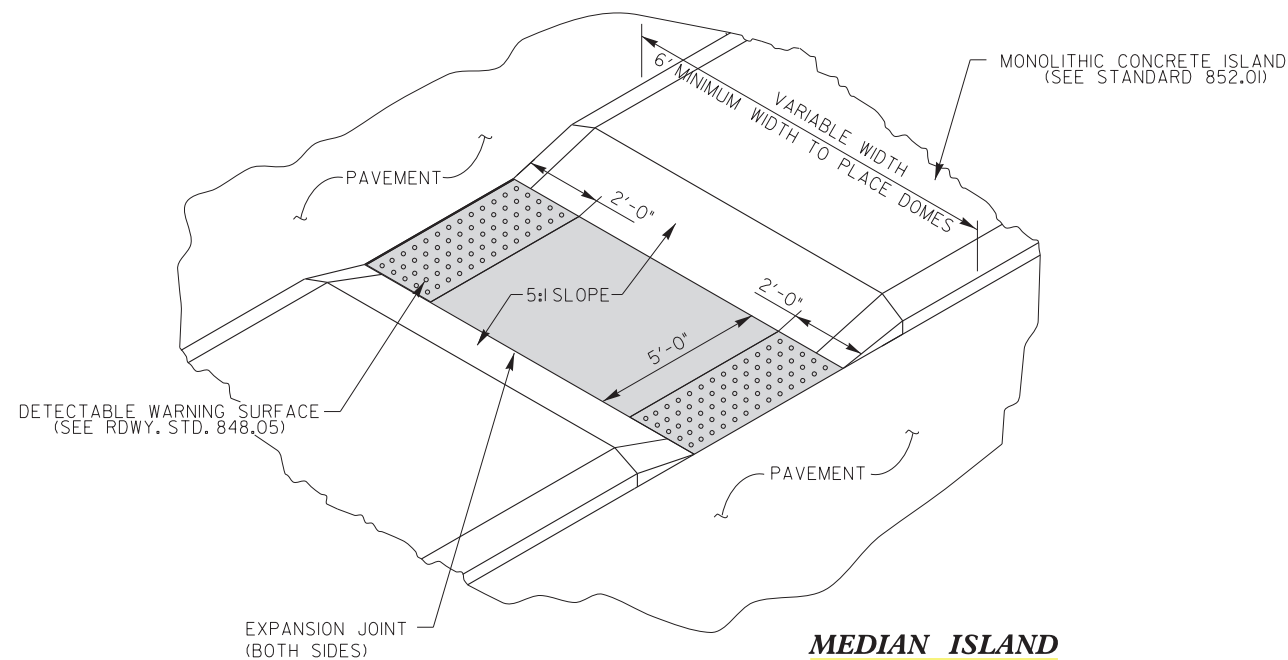
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 \$\$\$\$\$\$CON\$\$\$\$\$
 \$\$\$\$\$\$SERNAME\$\$\$\$\$
 \$\$\$\$\$\$

PAY LIMITS FOR 2 OR 3 CURB RAMPS
(CALCULATE BASED ON NUMBER OF
SETS OF TRUNCATED DOMES)

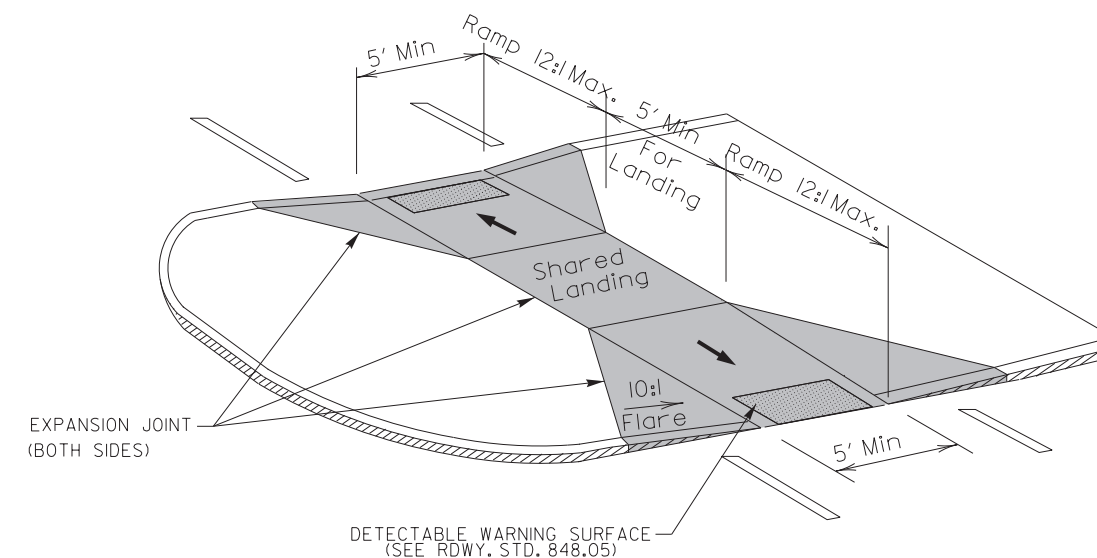


TRIANGULAR ISLANDS MAY BE CONSTRUCTED WITH ONLY
2 POINTS OF ENTRY AND EXIT AS SHOWN IN THE
ROADWAY PLANS OR AS DIRECTED BY THE ENGINEER.

**TRIANGULAR ISLAND
WITH CUT THROUGH
TYPE 6**



**MEDIAN ISLAND
WITH CUT THROUGH
TYPE 7**



**MEDIAN ISLAND
CURB RAMPS
TYPE 8**

1/8/2020

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

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

CURB RAMPS
Median or Turn Lane Islands

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

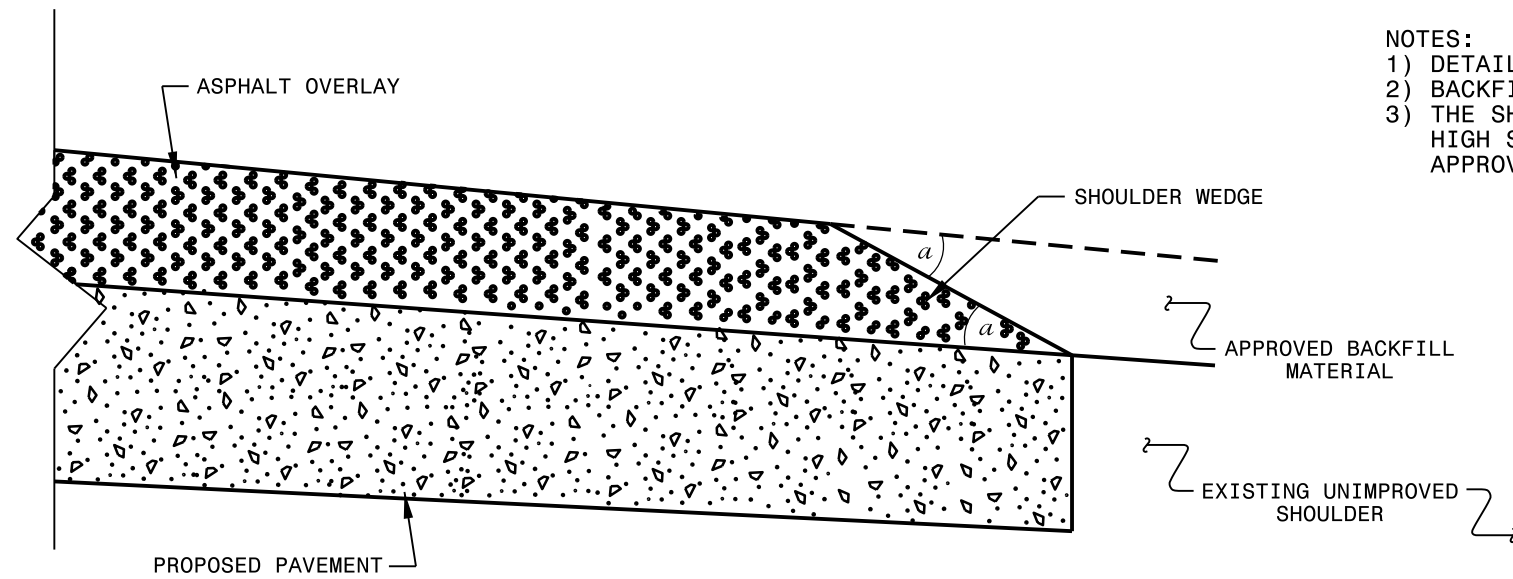


Prepared by:
J.S. Howerton
873F3D17DCDC45F...

5/14/99
\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$CON\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

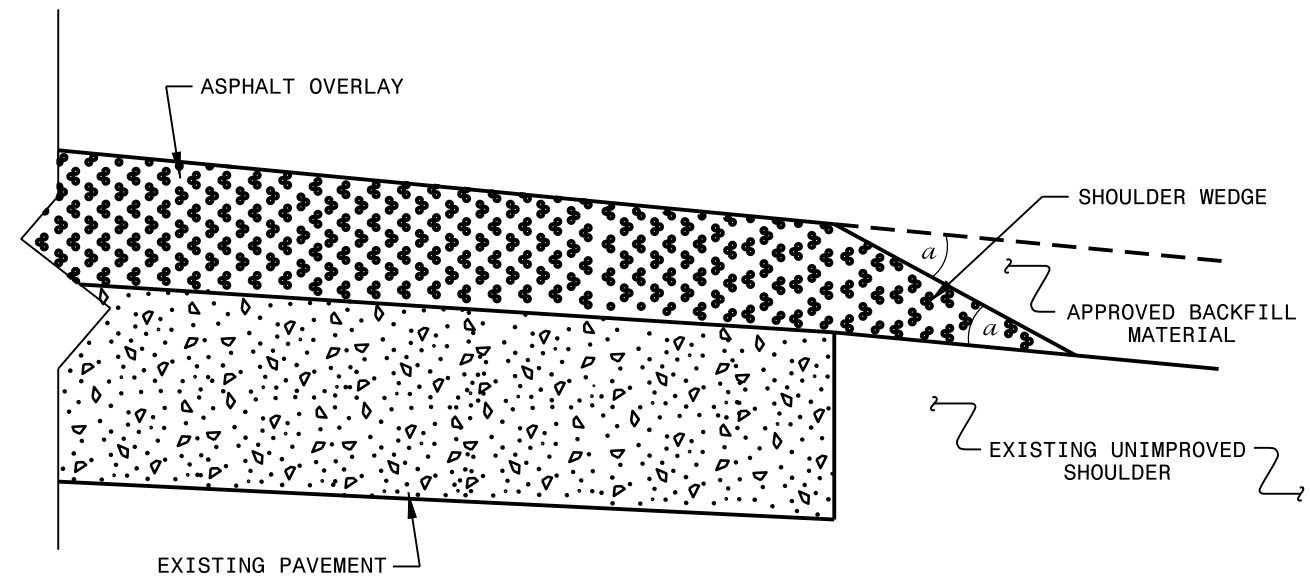
NOTES:

- 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, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



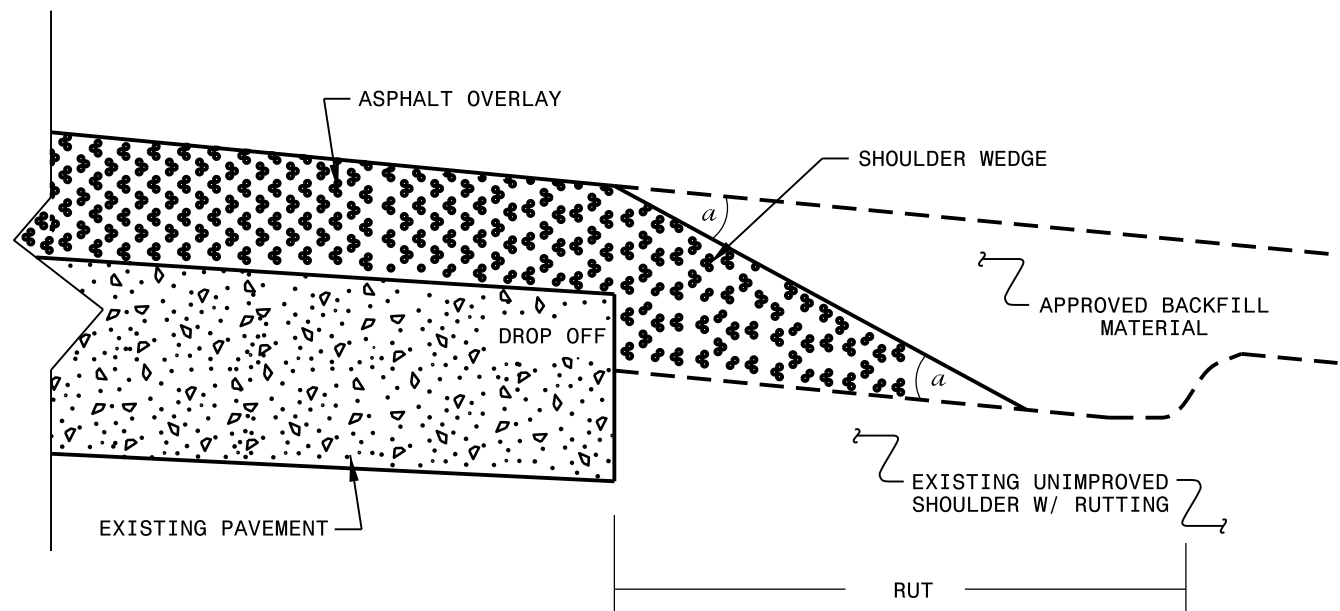
SHOULDER WEDGE DETAIL

(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°

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: 2/2/16	
CHECKED BY:	DATE:	
FILE SPEC.: szusr/details/stand/shoulderwedgedetail.dgn		

PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.05.20.20921.1	19	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	106000000	1264000000	1220000000-E	1260000000-E	297000000	1330000000-E	523000000	750000000	7040000000-E	490000000	4" CONCRETE SIDEWALK	4" CONCRETE SIDEWALK	6000000000-E	6050000000-E	2613000000-N	2738000000-E		7590000000-E	5000000000-E	4000000000-E	4500000000-E	4600000000-N		2550000000-E	6000000000-E	071010000	6084000000-E	1170000000-E	4440000000-E			
											BORROW	SHOULDER GRADING	INCIDENTAL STONE BASE	AGGREGATE SHOULDER BORROW	2" MILLING	INCIDENTAL MILLING	SURFACE COURSE, S9.5C	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	2'-6" CURB & GUTTER	RETROFIT EXISTING CURB RAMP	CONCRETE CURB RAMP	REMOVE AND REPLACE CURB RAMPS	GENERIC PAVING ITEM, REMOVE CONCRETE SIDEWALK	GENERIC PAVING ITEM, REMOVE AND REPLACE 5" MONOLITHIC CONCRETE ISLAND	GENERIC PAVING ITEM, REMOVE CURB RAMPS	ADJUST DROP INLET	ADJUST MANHOLES	ADJUST METER OR VALVE BOX	GENERIC TRAFFIC CONTROL ITEM AUDIBLE WARNING DEVICES	GENERIC TRAFFIC CONTROL ITEM PEDESTRIAN TRANSPORT SERVICE	PORTABLE LIGHTING	TEMPORARY SILT FENCE	WATTLE	SEED & MULCHING	RESPONSE FOR EROSION CONTROL	INDUCTIVE LOOP SAWCUT					
MI	FT	CY	SMI	TONS	TON	SY	SY	TONS	TON	TONS	LF	SY	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
2022CPT.05.20.20921.1	Wake	1	SR 1321 - AVENT FERRY RD	SR 1012 - WESTERN BLVD TO -ATHENS DR	1	4	NO	NO	2.13	55-74					71,796	560	8,534	512	19				1	2						12	22	11	40	0.33							2,212	
		2	SR 1012 - WESTERN BLVD	PVMT JOINT/END C&G TO U-2719 LIMITS	2	6	NO	NO	2.202	70-90	51	2.56	64	142	83,450	954	9,951	597	31	76	126	19			90	30	935	5	1	10	17			0.33	74	190	0.74	1		1,200		
		3	SR 1012- WESTERN BLVD	U-2719 LIMITS TO PVMT JOINT EAST OF SR 5808 HILLSBORO ST	2	6	NO	NO	0.815	70-90	30	2.00	38	84	30,853	379	3,682	221				3	13			13				8	19			0.34	44	110	0.44	1		384		
TOTAL FOR PROJ NO. 2022CPT.05.20.20921.1									5.147		81	4.56	102	226	186,099	1,893	22,167	1,330	50	76	129	32	1	105	30	935	5	1	30	58	11	40	1.00	118	300	1.18	2		3,796			
GRAND TOTAL									5.147		81	4.56	102	226	186,099	1,893	22,167	1,330	50	76	129	32	1	105	30	935	5	1	30	58	11	40	1.00	118	300	1.18	2		3,796			

PROJECT NO.	SHEET NO.	TOTAL NO.
2022CPT.05.20.20921.1	19	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LENGTH	WIDTH	4413000000-E	4470000000-E	4570000000-E	4510000000-N	4685000000-E		4695000000-E		7200000000	4725000000-E					4810000000-E		4820000000-E				3500000000000000	4845000000-N					8900000000	4895000000-N		
									WORK ZONE ADVANCE/GENERAL WARNING SIGNING	PEDESTRIAN CHANNELIZING DEVICES	TEMPORARY TRAFFIC CONTROL	LAW ENFORCEMENT	4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	8" X 90 M WHITE THERMO	8" X 90 M YELLOW THERMO	THERMO MSG ONLY 90 M	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	THERMO STR ARROW 90 M	THERMO STR & RT ARROW 90 M	THERMO MERGE ARROW 90 M	4" WHITE PAINT	4" YELLOW PAINT	8" WHITE PAINT	8" YELLOW PAINT	24" WHITE PAINT	PAINT MSG ONLY	PAINT MERGE ARROW	PAINT LT ARROW	PAINT RT ARROW	PAINT STR & RT ARROW	PAINT STR ARROW	GENERIC MARKING ITEM 24" X 90 M WHITE THERMO	GENERIC PAVEMENT MARKING ITEM NON-CAST IRON SNOW PLOWABLE MARKER			
MI	FT	SF	LF	LS	HR	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA					
2022CPT.05.20.20921.1	Wake	1	SR 1321 - AVENT FERRY RD	SR 1012 - WESTERN BLVD TO - ATHENS DR	1	4	2.13	55-74	239	160	0.39	280	24,100	27,115	1,170	180	4	86	7	20	15	4	24,100	27,115	1,170	180	1,883	4	4	86	7	15	20	1,883				
2022CPT.05.20.20921.1	Wake	2	SR 1012 - WESTERN BLVD	PVMT JOINT/END C&G TO U-2719 LIMITS	2	6	2.202	70-90	126		0.45	320	35,322	24,254	420		12	40	18	47	8	3	35,322	29,068	420		3,480	12	3	40	18	8	47	3,480	220			
2022CPT.05.20.20921.1	Wake	3	SR 1012 - WESTERN BLVD	U-2719 LIMITS TO PVMT JOINT EAST OF SR 5808 HILLSBORO ST	2	6	0.815	70-90	91		0.16	80	11,921				8	16	7	17			11,921				580	8		16	7		17	580	105			
TOTAL FOR PROJ NO. 2022CPT.05.20.20921.1																																						
													122,712	51,369	1,590	180	24	142	32	84	23	7	71,343	56,183	1,590	180	5,943	24	7	142	32	23	84	5,943	325			
													122,712	51,369	1,590	180	24	142	32	84	23	7	71,343	56,183	1,590	180	5,943	24	7	142	32	23	84	5,943	325			
GRAND TOTAL													122,712	51,369	1,590	180	24	142	32	84	23	7	71,343	56,183	1,590	180	5,943	24	7	142	32	23	84	5,943	325			

SUMMARY OF QUANTITIES - WESTERN BLVD FROM/TO PVMT JOINT EAST OF SR 5808 TO/FROM U-2719 LIMITS

Municipality:	Raleigh
Project Number:	2023 Western
WBS Number:	2022CPT.05.20.20921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E	2591000000-E	2738000000-E	2830000000-N	2845000000-N	2600000000-N	2613000000-N	2759000000-N	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Remove Sidewalk SY	Adjustment of Manholes EA	Adjustment of Meter Boxes or Valve Boxes EA	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Remove Curb Ramps EA	
17639	1	SR-1012 (Western Blvd)	Carolina Ave							1		Type1Modified
17640	1	SR-1012 (Western Blvd)	Carolina Ave						1			RetrofitWarnings
17669	2	SR-1012 (Western Blvd)	Grove Ave							1		Type1Modified
17671	3	SR-1012 (Western Blvd)	Heather Dr						1			RetrofitWarnings
17672	3	SR-1012 (Western Blvd)	Heather Dr							1		Type1Modified
17682	4	SR-1012 (Western Blvd)	Cox Car Care (5201 Western Blvd) Entrance						1			RetrofitWarnings
17683	4	SR-1012 (Western Blvd)	Cox Car Care (5201 Western Blvd) Entrance						1			RetrofitWarnings
17684	4	SR-1012 (Western Blvd)	Farm Bureau (5211 Western Blvd) Entrance						1			RetrofitWarnings
17685	4	SR-1012 (Western Blvd)	Farm Bureau (5211 Western Blvd) Entrance							1		Type1Modified
17673	5	SR-1012 (Western Blvd)	Powell Dr							1		Standard - 848.06
17674	5	SR-1012 (Western Blvd)	Powell Dr							1		Standard - 848.06
17675	5	SR-1012 (Western Blvd)	Powell Dr						1			RetrofitWarnings
17676	5	SR-1012 (Western Blvd)	Powell Dr						1			RetrofitWarnings
17677	5	SR-1012 (Western Blvd)	Powell Dr							1		Type3
17678	5	SR-1012 (Western Blvd)	Powell Dr							1		Type2B
17681	5	SR-1012 (Western Blvd)	Powell Dr		3					1		Type1Modified
17679	6	SR-1012 (Western Blvd)	Pam's Farmhouse/BP Gas Station (5115 Western Blvd) Entrance							1		Type1Modified
17680	6	SR-1012 (Western Blvd)	Pam's Farmhouse/BP Gas Station (5115 Western Blvd) Entrance						1			RetrofitWarnings
24518	7	SR-1012 (Western Blvd)	Moye Dr						1			RetrofitWarnings
24519	7	SR-1012 (Western Blvd)	Moye Dr						1			RetrofitWarnings
17686	8	SR-1012 (Western Blvd)	Western Professional Center (4909 Western Blvd) Entrance							1		Type1Modified
17687	8	SR-1012 (Western Blvd)	Western Professional Center (4909 Western Blvd) Entrance						1			RetrofitWarnings
17688	9	SR-1012 (Western Blvd)	Deboy St							1		Type4B
17689	9	SR-1012 (Western Blvd)	Deboy St							1		Type1Modified
17690	10	SR-1012 (Western Blvd)	Merendino St						1			RetrofitWarnings
17691	10	SR-1012 (Western Blvd)	Merendino St						1			RetrofitWarnings
Sub-Total for Western Blvd From/To Pvmnt Joint East of SR 5808 To/From U-2719 Limits				0	3	0	0	0	13	13	0	

SUMMARY OF QUANTITIES - AVENT FERRY RD FROM SR 1012 TO ATHENS DR

Municipality:	Raleigh
Project Number:	2023 Western
WBS Number:	2022CPT.05.20.20921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E	2591000000-E	2738000000-E	2830000000-N	2845000000-N	2600000000-N	2613000000-N	2759000000-N	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Remove Sidewalk SY	Adjustment of Manholes EA	Adjustment of Meter Boxes or Valve Boxes EA	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Remove Curb Ramps EA	
6338	1	SR-1321 (Avent Ferry Rd)	Centennial View Ln							1		Standard - 848.06
6324	2	SR-1321 (Avent Ferry Rd)	Brigadoon Dr (West Entrance)							1		Type1Modified
Sub-Total for Avent Ferry Rd From SR 1012 To Athens Dr				0	0	0	0	0	0	2	0	

SUMMARY OF QUANTITIES - WESTERN BLVD FROM/TO U-2719 LIMITS TO/FROM PVMT JOINT/BEGIN C&G

Municipality:	Raleigh
Project Number:	2023 Western
WBS Number:	2022CPT.05.20.20921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E	2591000000-E	2738000000-E	2830000000-N	2845000000-N	2600000000-N	2613000000-N	2759000000-N	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Remove Sidewalk SY	Adjustment of Manholes EA	Adjustment of Meter Boxes or Valve Boxes EA	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Remove Curb Ramps EA	
17696	1	SR-1012 (Western Blvd)	Chaney Rd								1	Type1Modified
17697	1	SR-1012 (Western Blvd)	Chaney Rd								1	Type1Modified
17694	2	SR-1012 (Western Blvd)	Circle K Gas Station (4100 Western Blvd) Entrance								1	Type1Modified
17693	2	SR-1012 (Western Blvd)	Circle K Gas Station (4100 Western Blvd) Entrance								1	Type1Modified
9540	2	SR-1012 (Western Blvd)	Circle K Gas Station (4100 Western Blvd) Entrance								1	Type1
17695	2	SR-1012 (Western Blvd)	Circle K Gas Station (4100 Western Blvd) Entrance								1	Type1Modified
9539	3	SR-1012 (Western Blvd)	Method Rd	15	9							Remove Ramp
9547	3	SR-1012 (Western Blvd)	Kent Rd	12	9						1	Remove Ramp
9548	4	SR-1012 (Western Blvd)	Exxon Gas station (3945 Western Blvd) Entrance/Exit								1	Type1Modified
9549	4	SR-1012 (Western Blvd)	Exxon Gas station (3945 Western Blvd) Entrance/Exit								1	Type1Modified
10145	4	SR-1012 (Western Blvd)	Subway (3940 Western Blvd) Entrance								1	Type1Modified
10146	4	SR-1012 (Western Blvd)	Subway (3940 Western Blvd) Entrance								1	Type1Modified
9551	5	SR-1012 (Western Blvd)	Triangle Family Services (3937 Western Blvd) Entrance/Exit								1	Type7
10144	5	SR-1012 (Western Blvd)	Cook Out (3930 Western Blvd) Entrance						1			RetrofitWarnings
10142	5	SR-1012 (Western Blvd)	Biscuitville (3912 Western Blvd) Entrance								1	Type1Modified
10143	5	SR-1012 (Western Blvd)	Cook Out (3930 Western Blvd) Entrance								1	Type1Modified
9550	5	SR-1012 (Western Blvd)	Exxon Gas station (3945 Western Blvd) Entrance/Exit								1	Type7
9552	5	SR-1012 (Western Blvd)	Triangle Family Services (3937 Western Blvd) Entrance/Exit								1	Type1Modified
23319	5	SR-1012 (Western Blvd)	Yemen Arab Restaurant (3933 Western Blvd) Entrance						1		1	Type1Modified
23320	5	SR-1012 (Western Blvd)	Yemen Arab Restaurant (3933 Western Blvd) Entrance								1	Type1Modified
10141	5	SR-1012 (Western Blvd)	Biscuitville (3912 Western Blvd) Entrance								1	Type1Modified
10149	6	SR-1012 (Western Blvd)	C&C Auto Services (3929 Western Blvd) Entrance								1	Type1Modified
10151	6	SR-1012 (Western Blvd)	Jiffy Lube (3925 Western Blvd) Entrance								1	Type8
10152	6	SR-1012 (Western Blvd)	Jiffy Lube (3925 Western Blvd) Entrance								1	Type7
10150	6	SR-1012 (Western Blvd)	C&C Auto Services (3929 Western Blvd) Entrance								1	Type8
10153	6	SR-1012 (Western Blvd)	Jiffy Lube (3925 Western Blvd) Entrance								1	Type7
10164	7	SR-1012 (Western Blvd)	Priscilla McCall's (3919 Western Blvd) Entrance		3	3					1	Type1Modified
10154	7	SR-1012 (Western Blvd)	Jiffy Lube (3925 Western Blvd) Entrance						1			RetrofitWarnings
10139	7	SR-1012 (Western Blvd)	Food Lion (3926 Western Blvd) Entrance								1	Type1Modified
10140	7	SR-1012 (Western Blvd)	Food Lion (3926 Western Blvd) Entrance								1	Type1Modified
10155	7	SR-1012 (Western Blvd)	AAA Insurance Company (3921 Western Blvd) Entrance								1	Type1Modified
10138	8	SR-1012 (Western Blvd)	Speedway Gas Station (3912 Western Blvd) Entrance								1	Type1Modified
10158	8	SR-1012 (Western Blvd)	Dijlah (3917 Western Blvd) Entrance								1	Type1Modified
10157	8	SR-1012 (Western Blvd)	Priscilla McCall's (3919 Western Blvd) Entrance								1	Type1Modified
10137	8	SR-1012 (Western Blvd)	Speedway Gas Station (3912 Western Blvd) Entrance								1	Type1Modified
10159	9	SR-1012 (Western Blvd)	Dijlah (3917 Western Blvd) Entrance								1	Type7
10161	9	SR-1012 (Western Blvd)	Fairouz Cafe (3915 Western Blvd) Entrance								1	Type1Modified
10160	9	SR-1012 (Western Blvd)	Fairouz Cafe (3915 Western Blvd) Entrance								1	Type7
10162	10	SR-1012 (Western Blvd)	Mecca Market (3913 Western Blvd) Entrance		9	9					1	Type1Modified
10163	10	SR-1012 (Western Blvd)	Mecca Market (3913 Western Blvd) Entrance		9	9					1	Type1Modified
10134	10	SR-1012 (Western Blvd)	Meineke Car Care Center (3908 Western Blvd) Entrance								1	Type8
10136	10	SR-1012 (Western Blvd)	Speedway Gas Station (3912 Western Blvd) Entrance								1	Type1Modified
10135	10	SR-1012 (Western Blvd)	Speedway Gas Station (3912 Western Blvd) Entrance								1	Type8
10131	11	SR-1012 (Western Blvd)	Popeyes (3904 Western Blvd) Entrance								1	Type4B
10132	11	SR-1012 (Western Blvd)	Popeyes (3904 Western Blvd) Entrance								1	Type1Modified
10133	11	SR-1012 (Western Blvd)	Meineke Car Care Center (3908 Western Blvd) Entrance						1			RetrofitWarnings
10102	12	SR-1012 (Western Blvd)	Whitmore Dr						1			RetrofitWarnings
10097	12	SR-1012 (Western Blvd)	Clanton St		6						1	Type3Modified
10096	12	SR-1012 (Western Blvd)	Clanton St		6						1	Type3Modified
10129	12	SR-1012 (Western Blvd)	Whitmore Dr		3						1	Type2AModified
10130	12	SR-1012 (Western Blvd)	Whitmore Dr								1	Type2B
10101	12	SR-1012 (Western Blvd)	Whitmore Dr						1			RetrofitWarnings
Sub-Total				27	54	21	0	1	5	45	2	

SUMMARY OF QUANTITIES - WESTERN BLVD FROM/TO U-2719 LIMITS TO/FROM PVMT JOINT/BEGIN C&G

Municipality:	Raleigh
Project Number:	2023 Western
WBS Number:	2022CPT.05.20.20921.1
County:	Wake



Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E	2591000000-E	2738000000-E	2830000000-N	2845000000-N	2600000000-N	2613000000-N	2759000000-N	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Remove Sidewalk SY	Adjustment of Manholes EA	Adjustment of Meter Boxes or Valve Boxes EA	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Remove Curb Ramps EA	
10099	13	SR-1012 (Western Blvd)	Taco Bell (3821 Western Blvd) Entrance								1	Type5A
10098	13	SR-1012 (Western Blvd)	Clanton St		3						1	Type5A
10104	13	SR-1012 (Western Blvd)	Dunkin' Donuts (3817 Western Blvd) Entrance								1	Type1Modified
10103	13	SR-1012 (Western Blvd)	Dunkin' Donuts (3817 Western Blvd) Entrance								1	Type1Modified
10100	13	SR-1012 (Western Blvd)	Taco Bell (3821 Western Blvd) Entrance								1	Type1Modified
10128	14	SR-1012 (Western Blvd)	Bojangle's (3808 Western Blvd) Entrance								1	Type1Modified
10108	14	SR-1012 (Western Blvd)	Yemeni (3801 Western Blvd) Entrance								1	Type1Modified
10105	14	SR-1012 (Western Blvd)	Dunkin' Donuts (3817 Western Blvd) Entrance								1	Type1Modified
10106	14	SR-1012 (Western Blvd)	Dunkin' Donuts (3817 Western Blvd) Entrance								1	Type1Modified
10107	14	SR-1012 (Western Blvd)	Yemeni (3801 Western Blvd) Entrance								1	Type1Modified
10127	14	SR-1012 (Western Blvd)	Bojangle's (3808 Western Blvd) Entrance								1	Type1Modified
10111	15	SR-1012 (Western Blvd)	Carlton Ave								1	Type1Modified
10110	15	SR-1012 (Western Blvd)	Yemeni (3801 Western Blvd) Entrance								1	Type1Modified
10109	15	SR-1012 (Western Blvd)	Yemeni (3801 Western Blvd) Entrance								1	Type1Modified
10114	16	SR-1012 (Western Blvd)	Wendy's (3715 Western Blvd) Entrance		3	3					1	Type1B
10113	16	SR-1012 (Western Blvd)	Wendy's (3715 Western Blvd) Entrance								1	Type8
10112	16	SR-1012 (Western Blvd)	Carlton Ave								1	Type8
10123	16	SR-1012 (Western Blvd)	Lamar PC (3700 Western Blvd) Entrance								1	Type1Modified
10118	17	SR-1012 (Western Blvd)	Gorman St								1	Type3Modified
10117	17	SR-1012 (Western Blvd)	Gorman St		3						1	Type3Modified
10119	17	SR-1012 (Western Blvd)	Gorman St		3		1				1	Type2B
24532	17	SR-1012 (Western Blvd)	Gorman St						1			RetrofitWarnings
24531	17	SR-1012 (Western Blvd)	Gorman St						1			RetrofitWarnings
10120	17	SR-1012 (Western Blvd)	Gorman St	15	9						1	Remove Ramp
10122	17	SR-1012 (Western Blvd)	Gorman St								1	Type3Modified
10121	17	SR-1012 (Western Blvd)	Gorman St								1	Type3
17713	18	SR-1012 (Western Blvd)	Varsity Dr		3							Other
17714	18	SR-1012 (Western Blvd)	Varsity Dr		3							Other
17718	18	SR-1012 (Western Blvd)	Varsity Dr		3						1	Standard - 848.06
17711	18	SR-1012 (Western Blvd)	Varsity Dr		3							Other
17717	18	SR-1012 (Western Blvd)	Varsity Dr		3							Other
17736	19	SR-1012 (Western Blvd)	Dan Allen Dr		6				1			RetrofitWarnings
17737	19	SR-1012 (Western Blvd)	Dan Allen Dr								1	Type1Modified
17739	19	SR-1012 (Western Blvd)	Dan Allen Dr						1			RetrofitWarnings
17746	19	SR-1012 (Western Blvd)	Dan Allen Dr						1			RetrofitWarnings
17747	19	SR-1012 (Western Blvd)	Dan Allen Dr	10	6	6			1			RetrofitWarnings
17748	19	SR-1012 (Western Blvd)	Dan Allen Dr						1			RetrofitWarnings
24526	19	SR-1012 (Western Blvd)	Dan Allen Dr						1			RetrofitWarnings
17740	19	SR-1012 (Western Blvd)	Dan Allen Dr								1	Standard - 848.06
17735	19	SR-1012 (Western Blvd)	Dan Allen Dr								1	Standard - 848.06
17731	20	SR-1012 (Western Blvd)	Han Dee Hugo's Gas Station (3029 Western Blvd) Entrance								1	Type1Modified
17732	20	SR-1012 (Western Blvd)	Han Dee Hugo's Gas Station (3029 Western Blvd) Entrance								1	Type1Modified
17730	20	SR-1012 (Western Blvd)	Han Dee Hugo's Gas Station (3029 Western Blvd) Entrance								1	Type1Modified
17729	20	SR-1012 (Western Blvd)	Han Dee Hugo's Gas Station (3029 Western Blvd) Entrance								1	Type1Modified
17734	21	SR-1012 (Western Blvd)	Navy Operational Support Center (2725 Western Blvd) Entrance								1	Type1Modified
17733	21	SR-1012 (Western Blvd)	Navy Operational Support Center (2725 Western Blvd) Entrance								1	Type1Modified
17749	22	SR-1012 (Western Blvd)	The College Inn Student Housing (2717 Western Blvd) Entrance								1	Type1B
Sub-Total				25	48	9	1	0	8	34	1	

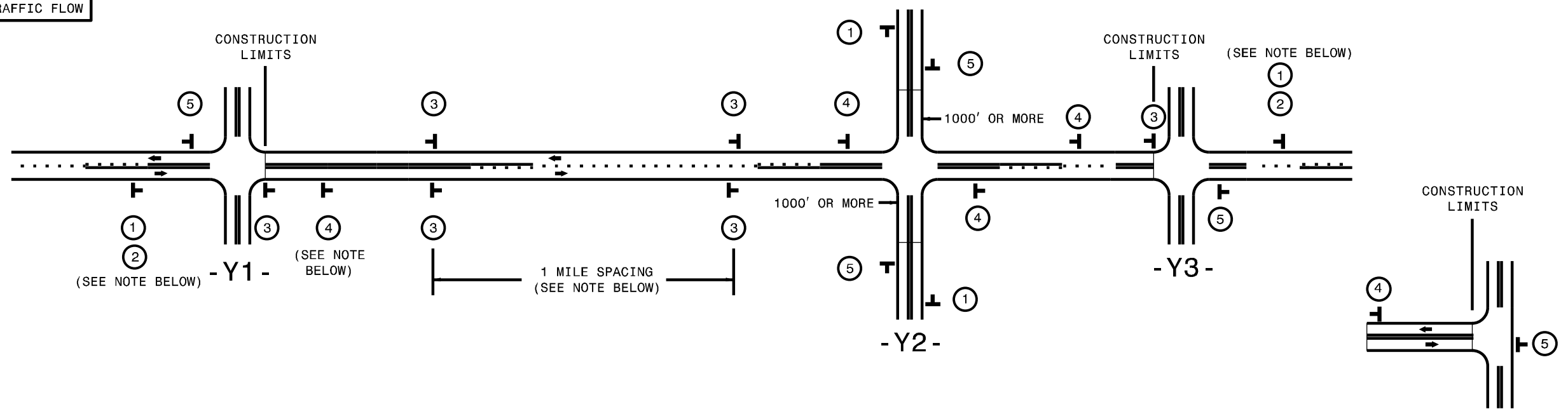
SUMMARY OF QUANTITIES - WESTERN BLVD FROM/TO U-2719 LIMITS TO/FROM PVMT JOINT/BEGIN C&G

Municipality:	Raleigh
Project Number:	2023 Western
WBS Number:	2022CPT.05.20.20921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	2549000000-E	2591000000-E	2738000000-E	2830000000-N	2845000000-N	2600000000-N	2613000000-N	2759000000-N	Improvement Type	
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Remove Sidewalk SY	Adjustment of Manholes EA	Adjustment of Meter Boxes or Valve Boxes EA	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Remove Curb Ramps EA		
17750	22	SR-1012 (Western Blvd)	The College Inn Student Housing (2717 Western Blvd) Entrance								1	Type1Modified	
17752	23	SR-1012 (Western Blvd)	Mission Valley Service Station (2709 Western Blvd) Entrance								1	Type1Modified	
17753	23	SR-1012 (Western Blvd)	Mission Valley Service Station (2709 Western Blvd) Entrance								1	Type1Modified	
17754	23	SR-1012 (Western Blvd)	Mission Valley Service Station (2709 Western Blvd) Entrance								1	Type4B	
17751	23	SR-1012 (Western Blvd)	Mission Valley Service Station (2709 Western Blvd) Entrance								1	Type1Modified	
1061	24	SR-1012 (Western Blvd)	SR-1321 (Avent Ferry Rd)		3						1	Type2B	
1068	24	SR-1012 (Western Blvd)	Morrill Dr						1			RetrofitWarnings	
1066	24	SR-1012 (Western Blvd)	Morrill Dr						1			RetrofitWarnings	
1065	24	SR-1012 (Western Blvd)	Morrill Dr						1			RetrofitWarnings	
1064	24	SR-1012 (Western Blvd)	Morrill Dr						1			RetrofitWarnings	
24527	24	SR-1012 (Western Blvd)	SR-1321 (Avent Ferry Rd)						1			RetrofitWarnings	
1062	24	SR-1012 (Western Blvd)	SR-1321 (Avent Ferry Rd)						1			RetrofitWarnings	
17756	25	SR-1012 (Western Blvd)	WRAL (2619 Western Blvd) Employee Entrance								1	Type1Modified	
17755	25	SR-1012 (Western Blvd)	WRAL (2619 Western Blvd) Employee Entrance								1	Type1Modified	
17757	26	SR-1012 (Western Blvd)	Nazareth St								1	Type1B	
17758	26	SR-1012 (Western Blvd)	Nazareth St								1	Type1Modified	
17767	27	SR-1012 (Western Blvd)	Pullen Rd		3						1	Type1A	
2635	28	SR-1012 (Western Blvd)	Ashe Ave	12	9							1	Remove Ramp
2634	28	SR-1012 (Western Blvd)	Ashe Ave	12	9							1	Remove Ramp
Sub-Total				24	24	0	0	0	6	11	2		
Sub-Total for Western Blvd From U-2719 Limits To Pvmnt Joint/Begin C&G				76	126	30	1	1	19	90	5		







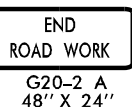
SIGNING FOR RESURFACING PROJECTS

LEGEND
 STATIONARY SIGN
 DIRECTION OF TRAFFIC FLOW



MAINLINE (-L-) SIGNING

-Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	 1  2	PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE. #2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)	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, PORTABLE ADVANCE WARNING SIGNS SHALL BE USED ALONG THE -Y- LINE AS SHOWN BELOW. REMOVE UPON COMPLETION OF WORK.  W20-1 48" X 48" PLACED 500' IN ADVANCE OF FLAGGER.  W20-7 A 48" X 48" PLACED 250' IN ADVANCE OF FLAGGER.
	 3	- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER. - AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.	
	 4	- 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	PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.	

THE ABOVE SIGNS ARE ALL THAT ARE REQUIRED FOR A CONTRACTOR TO BEGIN A RESURFACING CONTRACT. ANY ADDITIONAL SIGNS REQUESTED BY NCDOT DIVISIONS SHALL BE INSTALLED WITHIN 7 BUSINESS DAYS OF THE START OF CONTRACT WORK.

MAPS LESS THAN 2 MILES

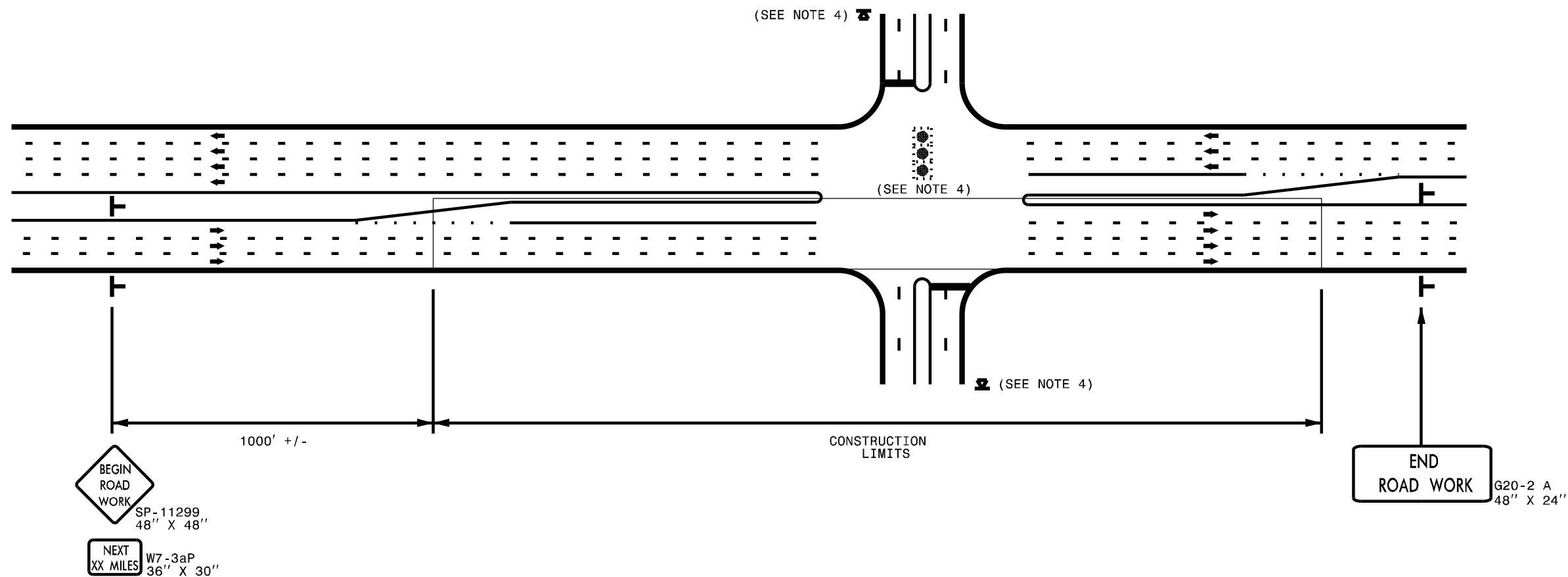
FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.



ADVANCE WARNING SIGNS FOR RURAL AND SUBURBAN 2-LANE ROADWAY RESURFACING

\$\$\$\$\$SYTIME\$\$\$\$\$
 \$\$\$DCON\$\$\$\$\$
 \$\$\$USERNAME\$\$\$\$\$

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



RESURFACING ADVANCE
WARNING SIGNS FOR
URBAN / SUBURBAN
FACILITIES

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DCON\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

**DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA**

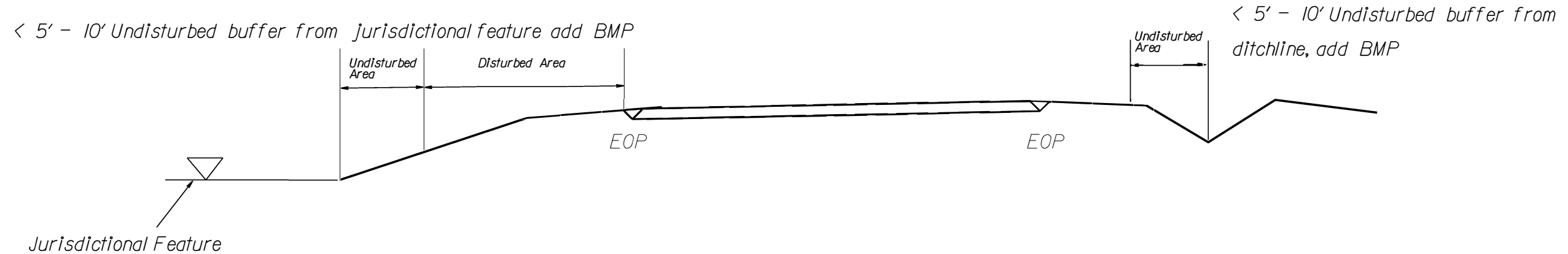
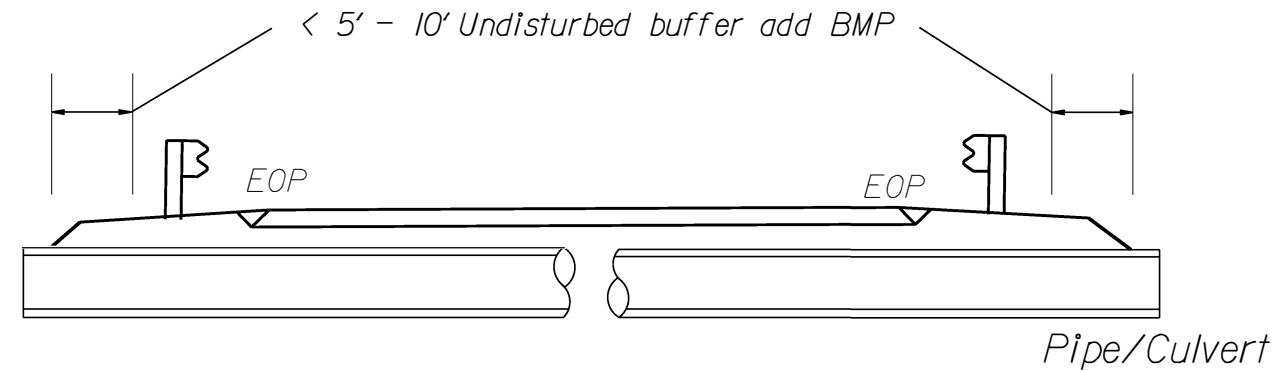
SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HOW ZONES.

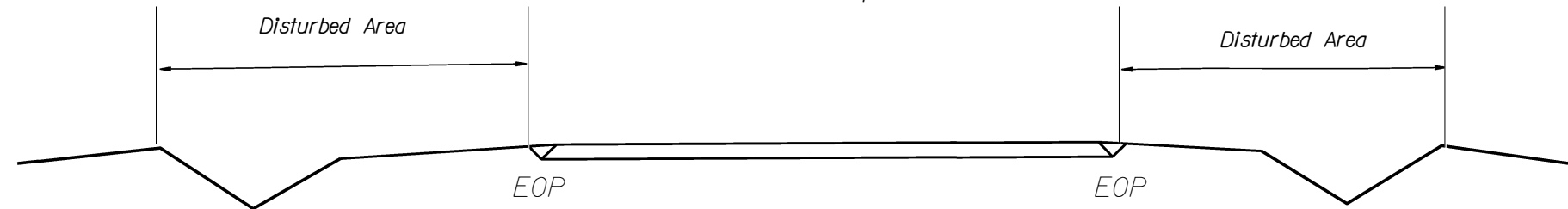
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

BMP Options: Wattle, Silt Fence or Hardened Aggregate.

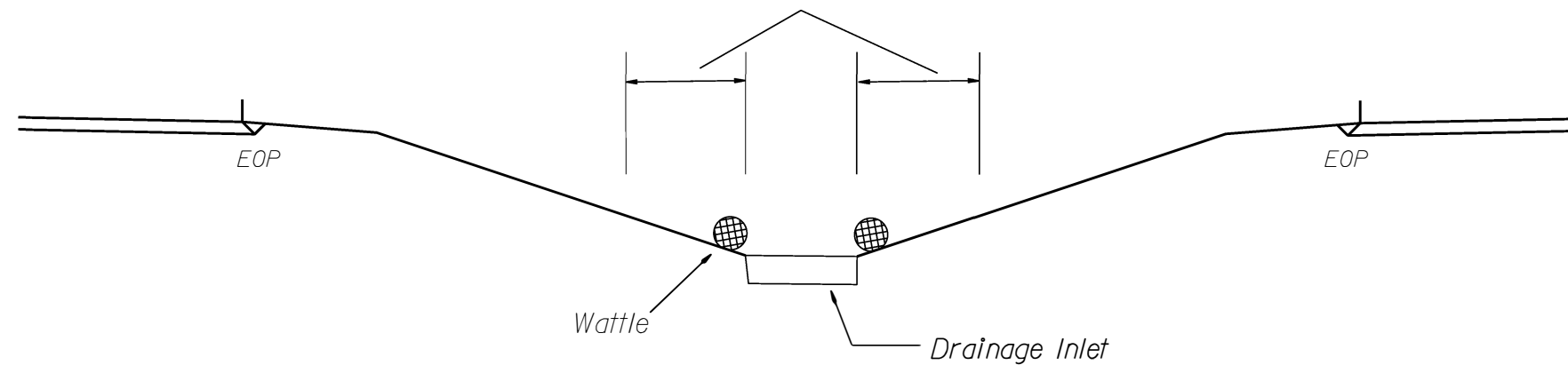
EROSION CONTROL DETAIL



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

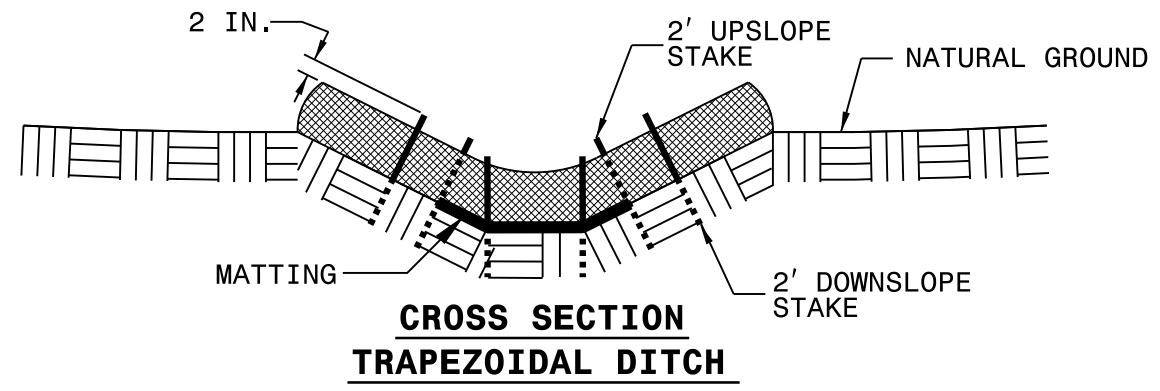
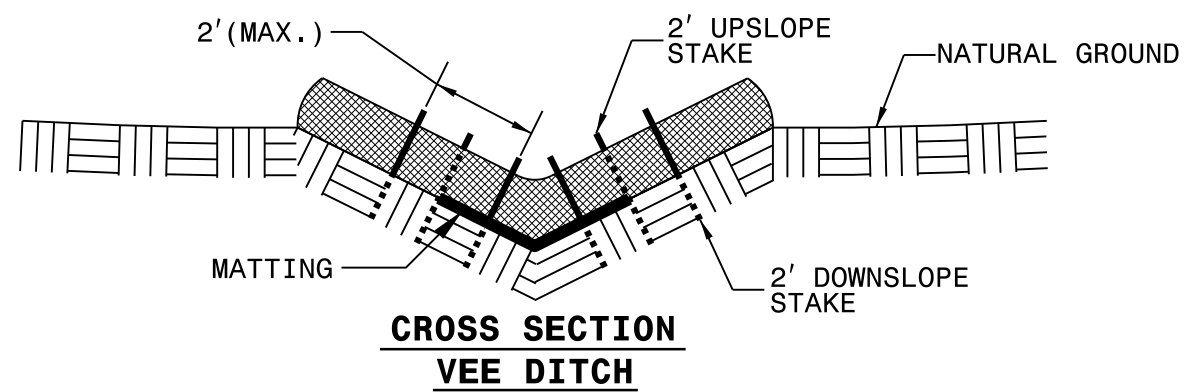
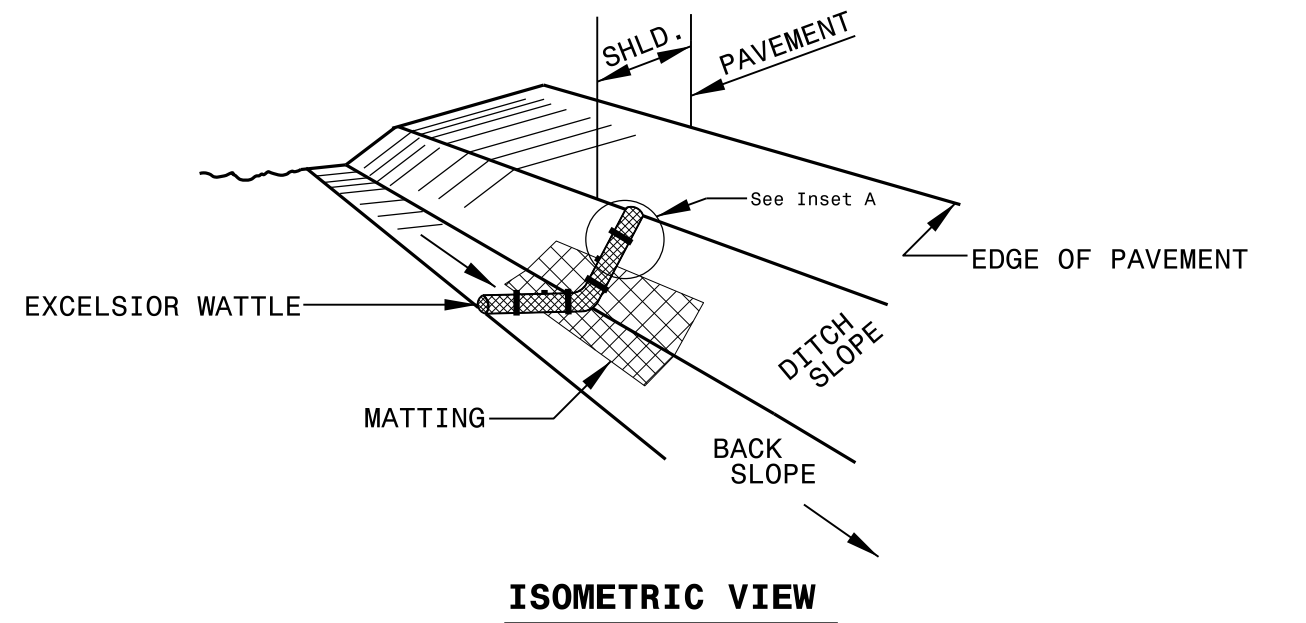


< 5' - 10' Undisturbed buffer from inlet, add wattle



NOT TO SCALE

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.

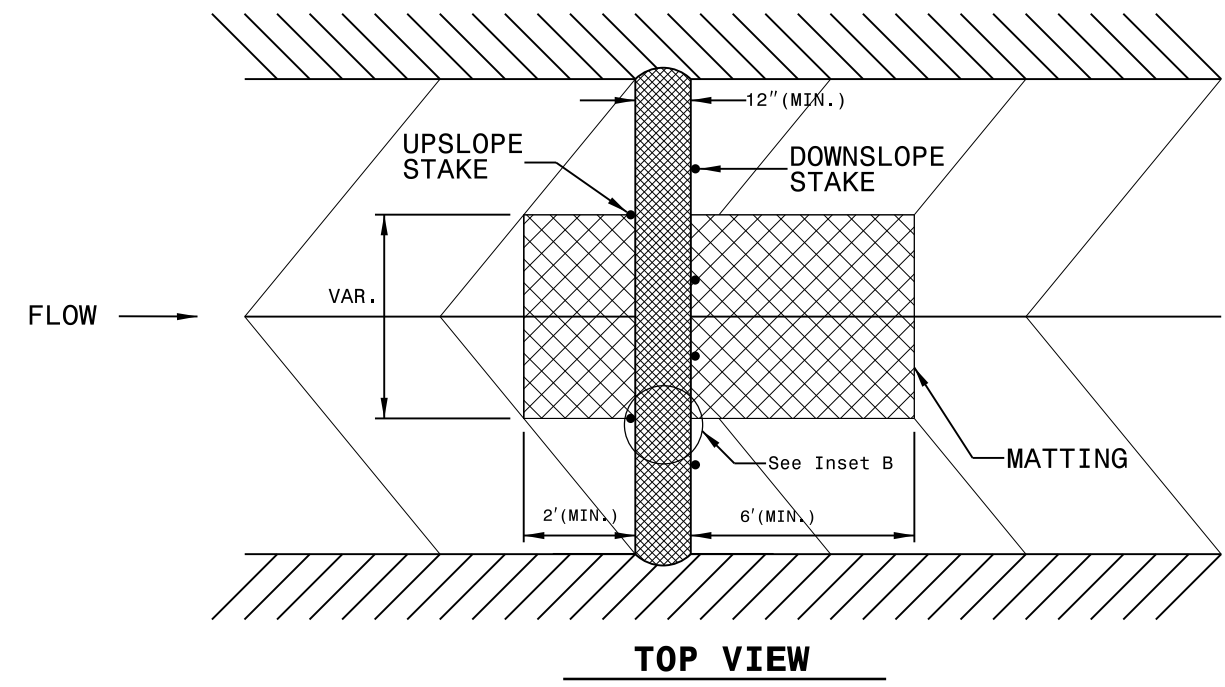
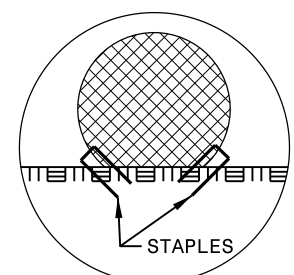
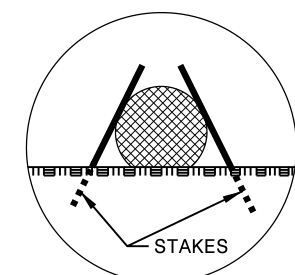
ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

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.

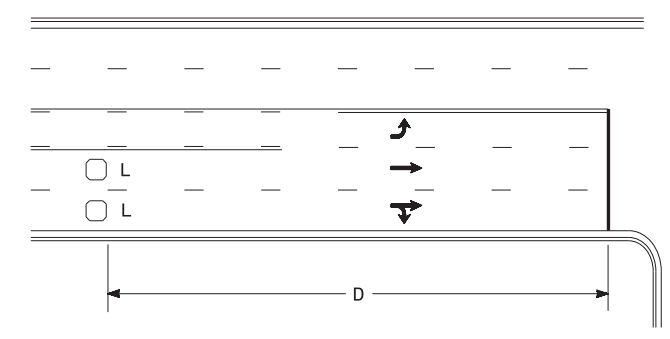
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.



2022CPT.05.20.20921.1

High Speed Detection (≥40 mph)

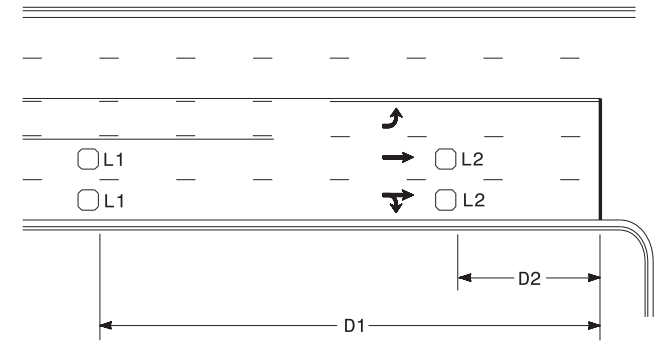


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft
Wired separately

Volume Density Operation

OR



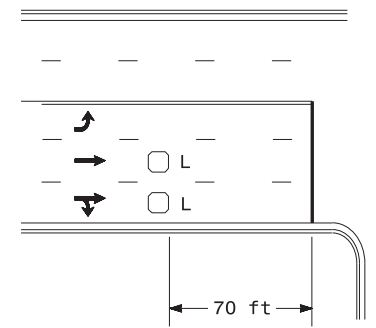
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

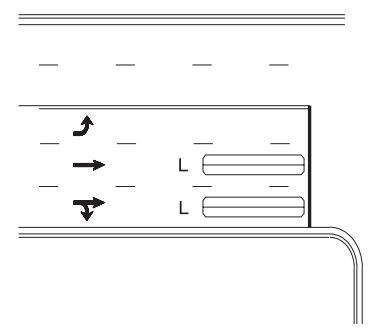
"Stretch" Operation

Low Speed Detection (≤35 mph)



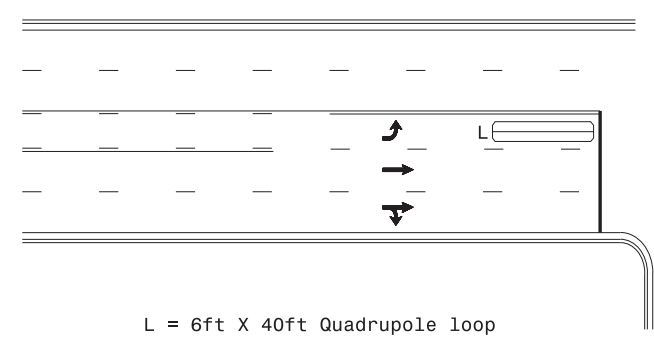
L = 6ft X 6ft
Wired in series

OR



L = 6ft X 40ft
Quadrupole loop, wired separately

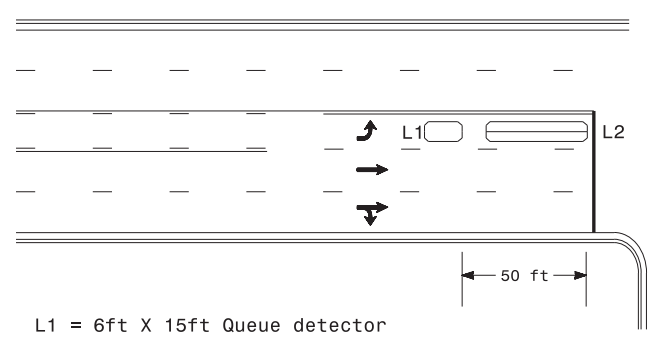
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

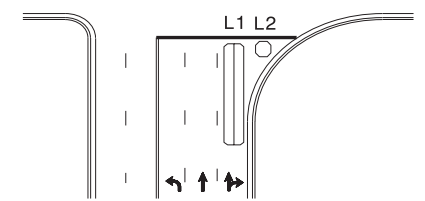
OR



L1 = 6ft X 15ft Queue detector
L2 = 6ft X 40ft Quadrupole loop

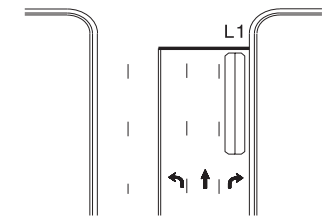
Queue Loop Detection

Right Turn Lane Detection

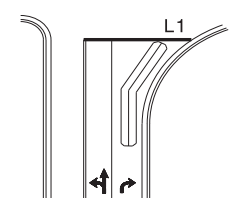


L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately

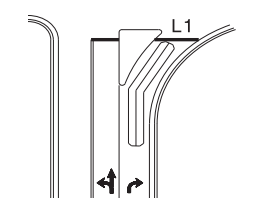
Shared Lane/
Wide Radius Turn



Standard Turn

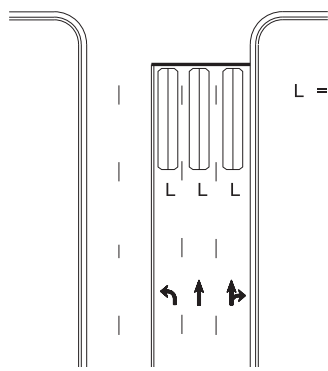


Wide Radius Turn



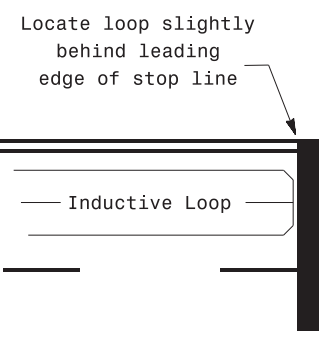
Channelized Turn

Side Street Detection



L = 6ft X 40ft
Quadrupole loop
Wired to separate
detectors/channels

Presence Loop Placement at Stop Lines



Note:
Loop may be located in advance of stop line under any of the following conditions:
1) stop line is greater than 15' from edge of intersecting roadway
2) loop detects a permissive or protected/permissive left turn
3) for an exclusive right turn lane

Recommended Number of Turns

Single 6' X 6' loop
(when wired separately):

Length of Lead-in ft	Number of Turns
< 250	3
250-375	4
375-525	5
> 525	6

Quadrupole loops: Use 2-4-2 turns

6' X 15' Loops:
Lead-in < 150', use 2 turns
Lead-in > 150', use 3 turns

	<p>Typical Signal Loop Locations</p>	
	<p>PLAN DATE: September 2020</p>	<p>REVIEWED BY: JPG</p>
<p>PREPARED BY: PLA</p>	<p>REVIEWED BY:</p>	<p>DATE:</p>
<p>SCALE: N/A</p>	<p>REVISIONS:</p>	<p>INIT. DATE:</p>
<p>750 N. Greenfield Pkwy, Garner, NC 27529</p>	<p>DATE: 9/8/2020</p>	<p>SIG. INVENTORY NO.:</p>