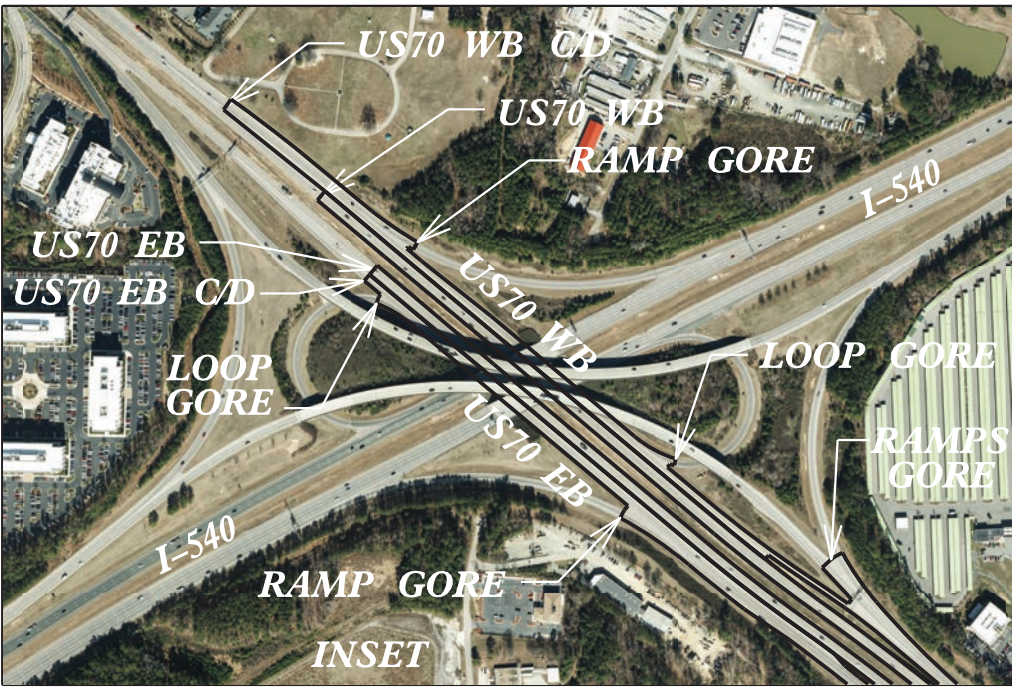
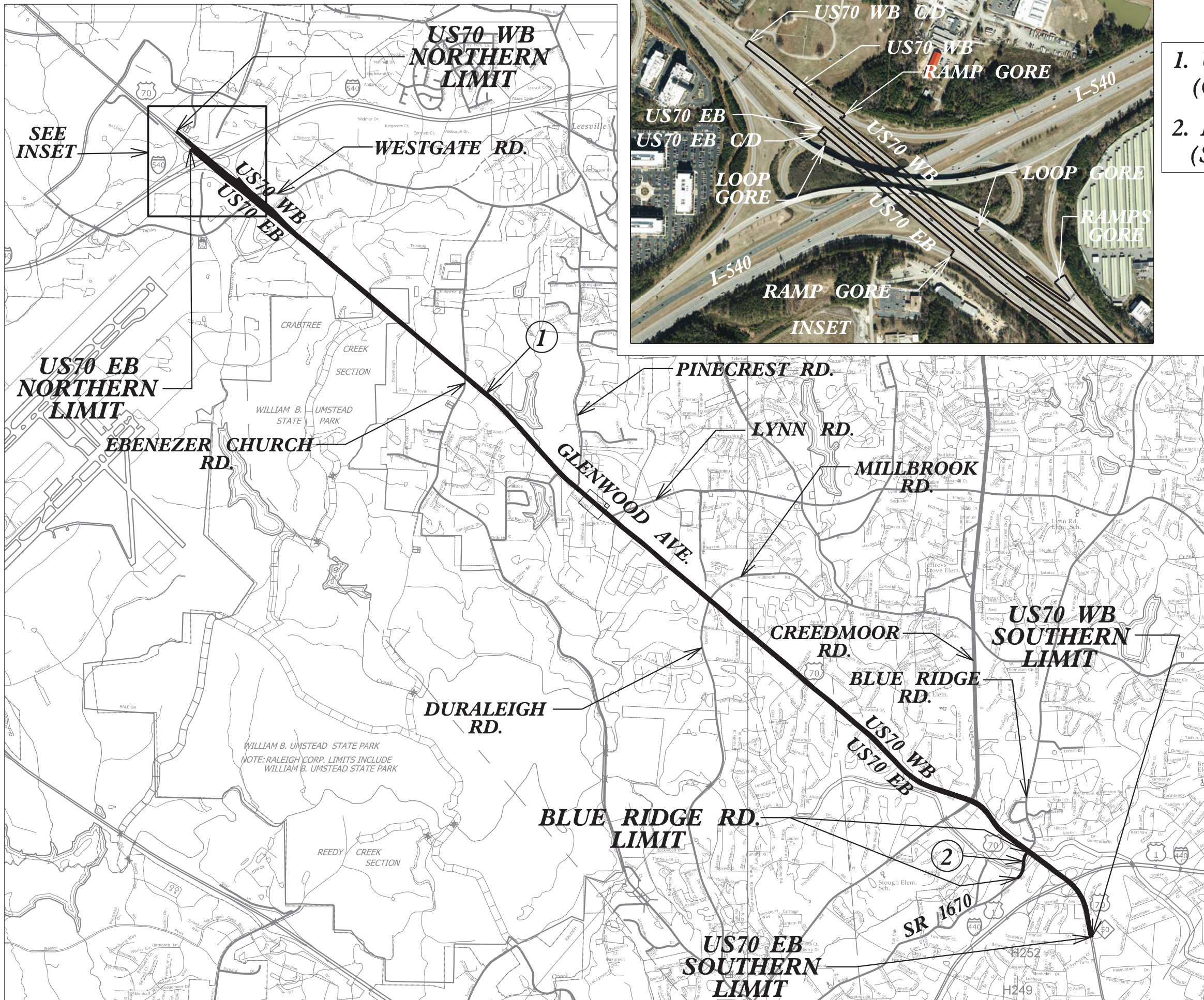


8/17/99

REVISIONS

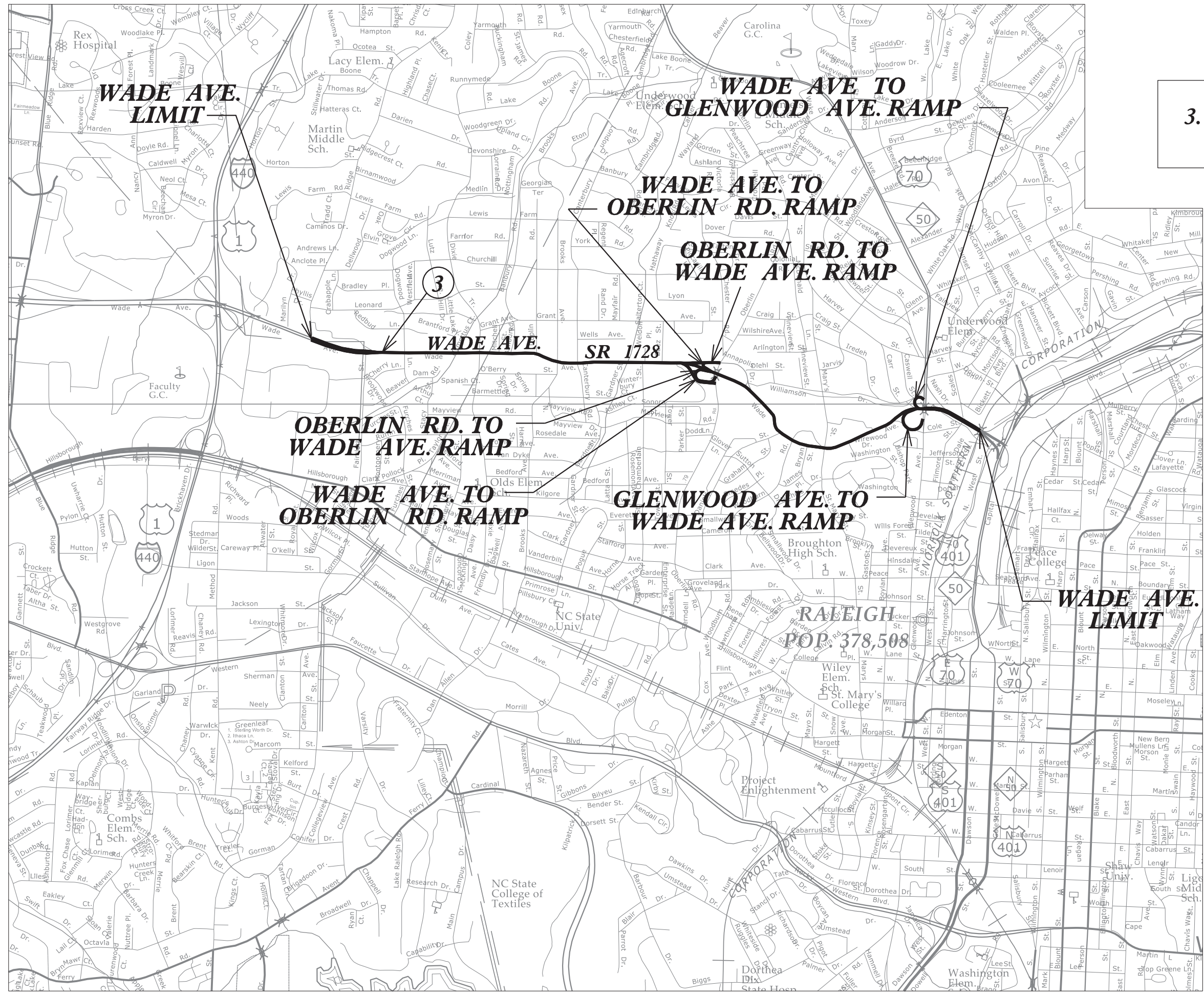


1. US70 (GLENWOOD AVE.)
2. BLUE RIDGE RD. (SR 1670)



2/10/2021  
 Pro: US70\_Rdy-TSH 01 .dgn  
 User: ERSkennedi

2021  
 US 70  
 RESURFACING



**3. WADE AVENUE  
(SR 1728)**



**2021  
US 70  
RESURFACING**

REVISIONS

8/17/99

2/9/2021  
US70\_Rdy-TSH 02 .dgn  
JSE/RSK/med



**Curb Ramps To Be Repaired**

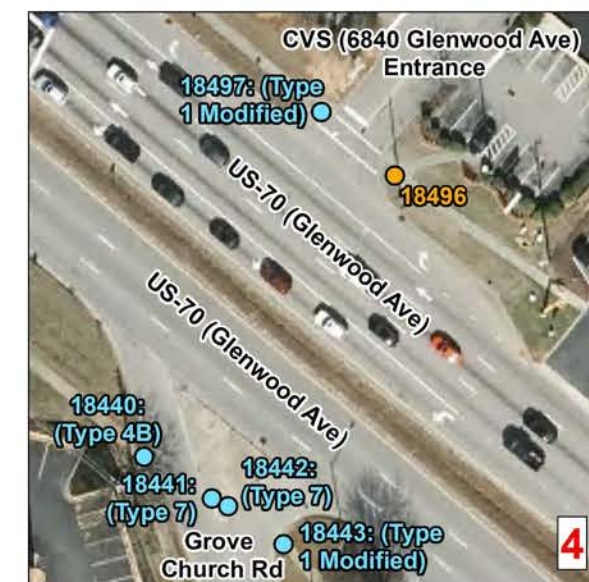
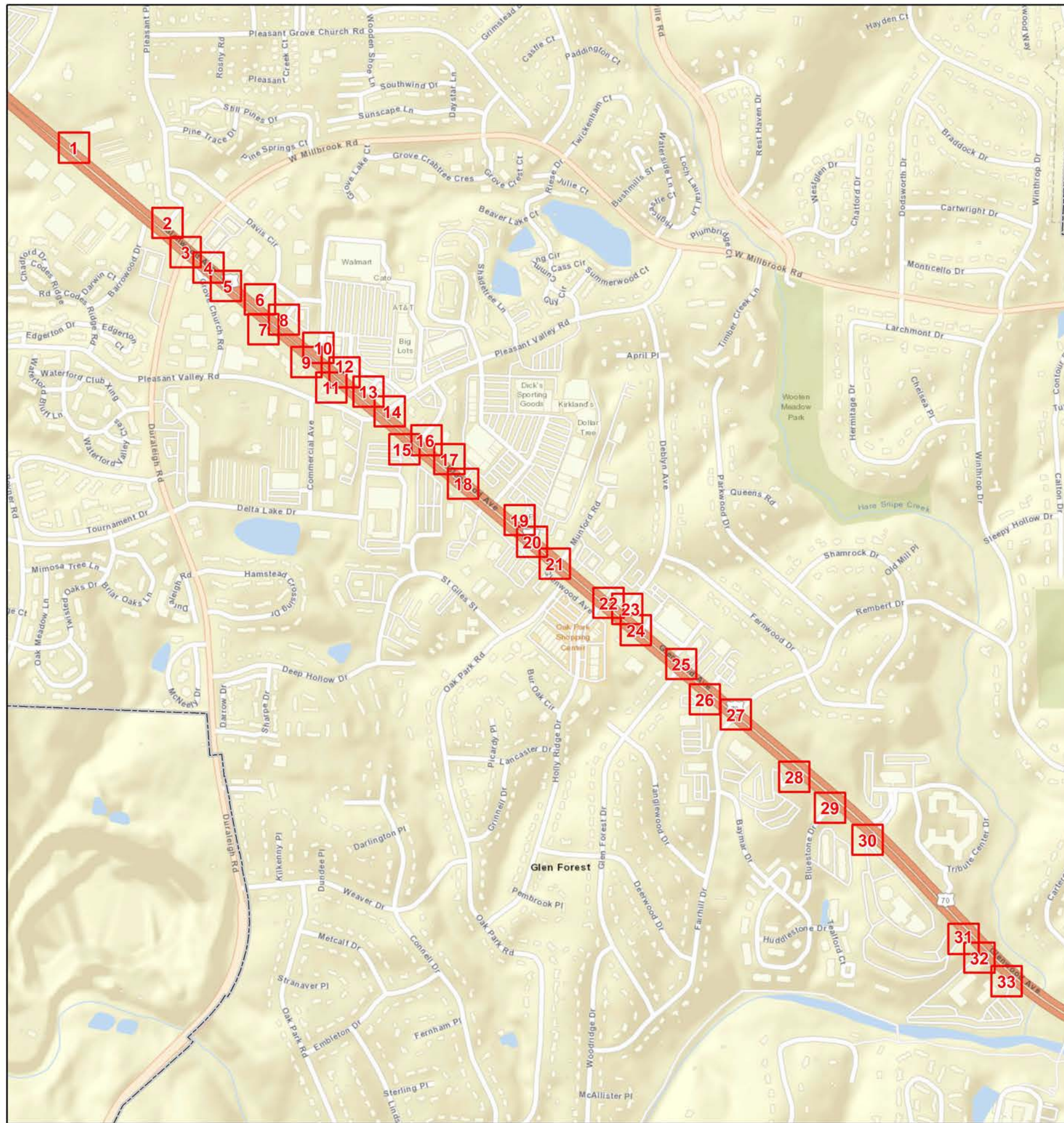
- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp

Municipal Boundary  
 NCHPO Historic Boundary (NR and LHD)

**2022 Wake 70**  
**WBS: 2021CPT.05.19.10921.1**  
**US 70 EB/WB**  
**From/To U-5518 Eastern Limit**  
**To/From Glenwood Forest Dr/Hilburn Dr**

NORTH CAROLINA DEPARTMENT  
 OF TRANSPORTATION  
 DIVISION 5

Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO



**Curb Ramps To Be Repaired**

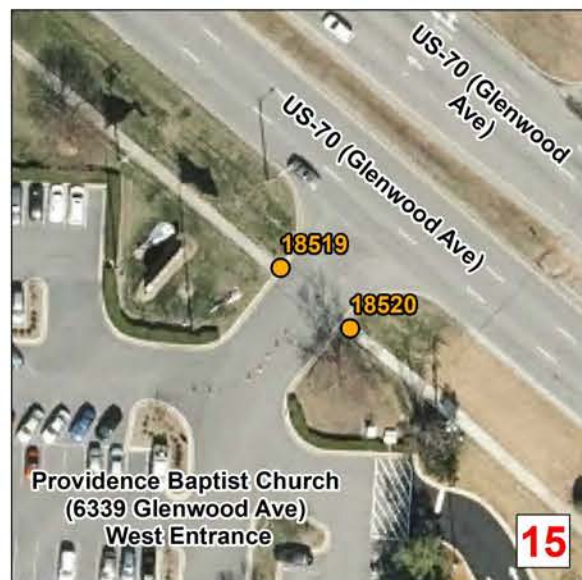
- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp

Municipal Boundary  
 NCHPO Historic Boundary (NR and LHD)

**2022 Wake 70**  
**WBS: 2021CPT.05.19.10921.1**  
**US 70 EB/WB**  
**From/To Glenwood Forest Dr/Hilburn Dr**  
**To/From .4 Mi E of NC 50**

**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**  
**DIVISION 5**

Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO



**Curb Ramps To Be Repaired**

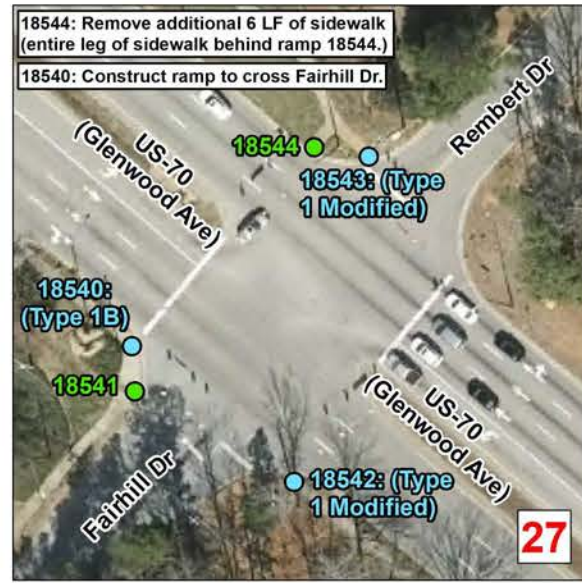
- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp

Municipal Boundary  
 NCHPO Historic Boundary (NR and LHD)

**2022 Wake 70**  
**WBS: 2021CPT.05.19.10921.1**  
**US 70 EB/WB**  
**From/To Glenwood Forest Dr/Hilburn Dr**  
**To/From .4 Mi E of NC 50**

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 DIVISION 5

Source: CALYX Engineers and Consultants, 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)

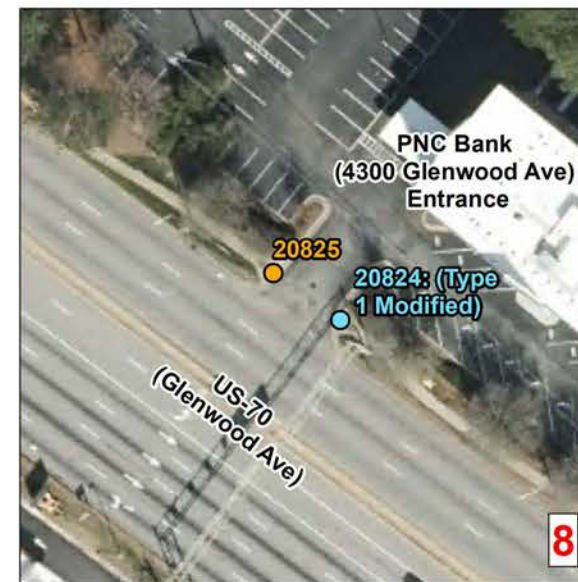
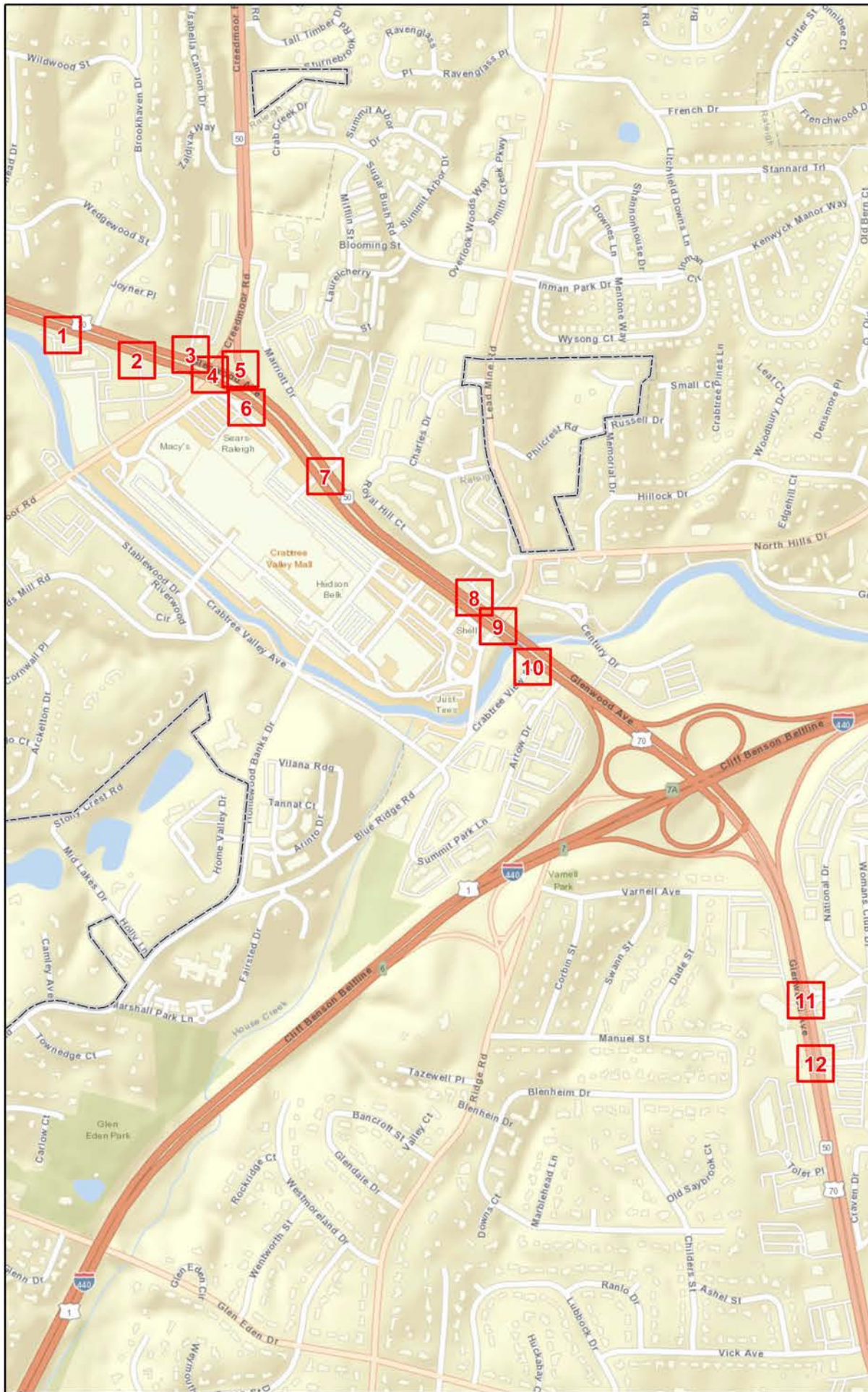
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**2022 Wake 70**  
**WBS: 2021CPT.05.19.10921.1**  
**US 70 EB/WB**  
**From/To Glenwood Forest Dr/Hilburn Dr**  
**To/From .4 Mi E of NC 50**

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 DIVISION 5

Source: CALYX Engineers and Consultants, 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)

**2022 Wake 70**  
**WBS: 2021CPT.05.19.10921.1**  
**US 70 EB/WB**  
**From/To East of Morehead Dr**  
**To/From Womens Club Dr**


**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**  
**DIVISION 5**

Source: CALYX Engineers and Consultants, 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)



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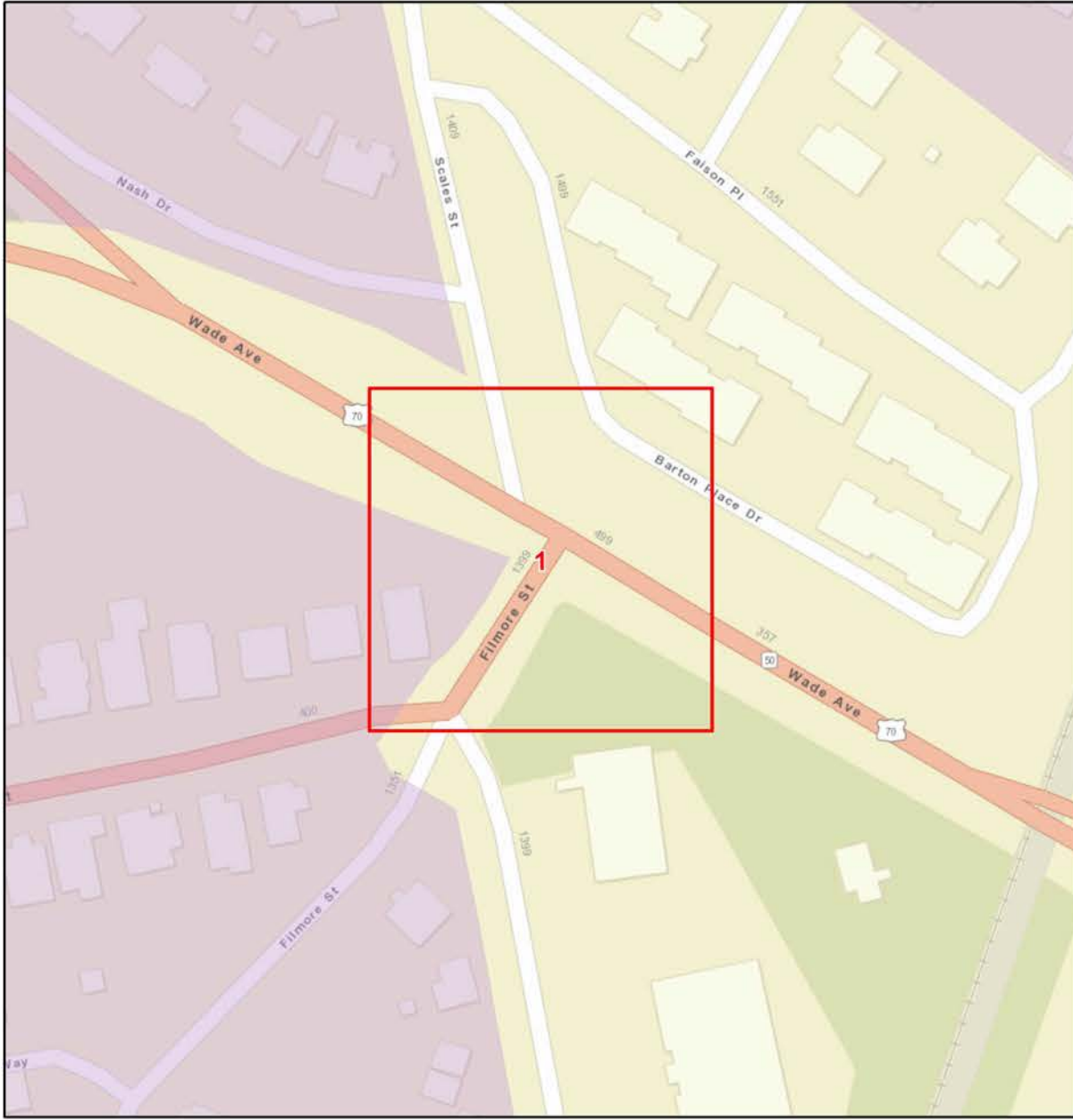
**2022 Wake 70**  
**WBS: 2021CPT.05.19.10921.1**  
**US 70 EB/WB**  
**From/To East of Morehead Dr**  
**To/From Womens Club Dr**

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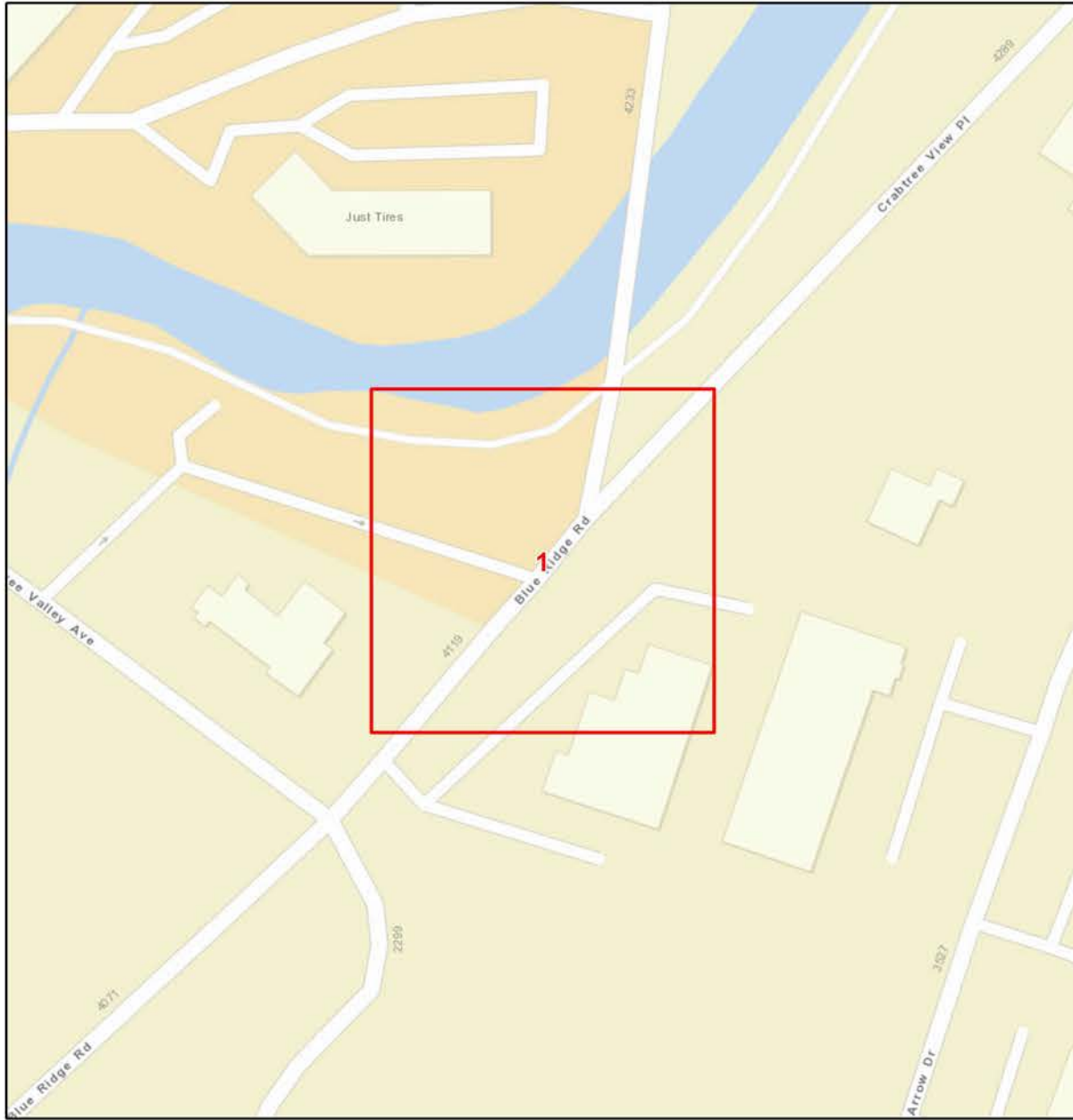
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DIVISION 5

Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO

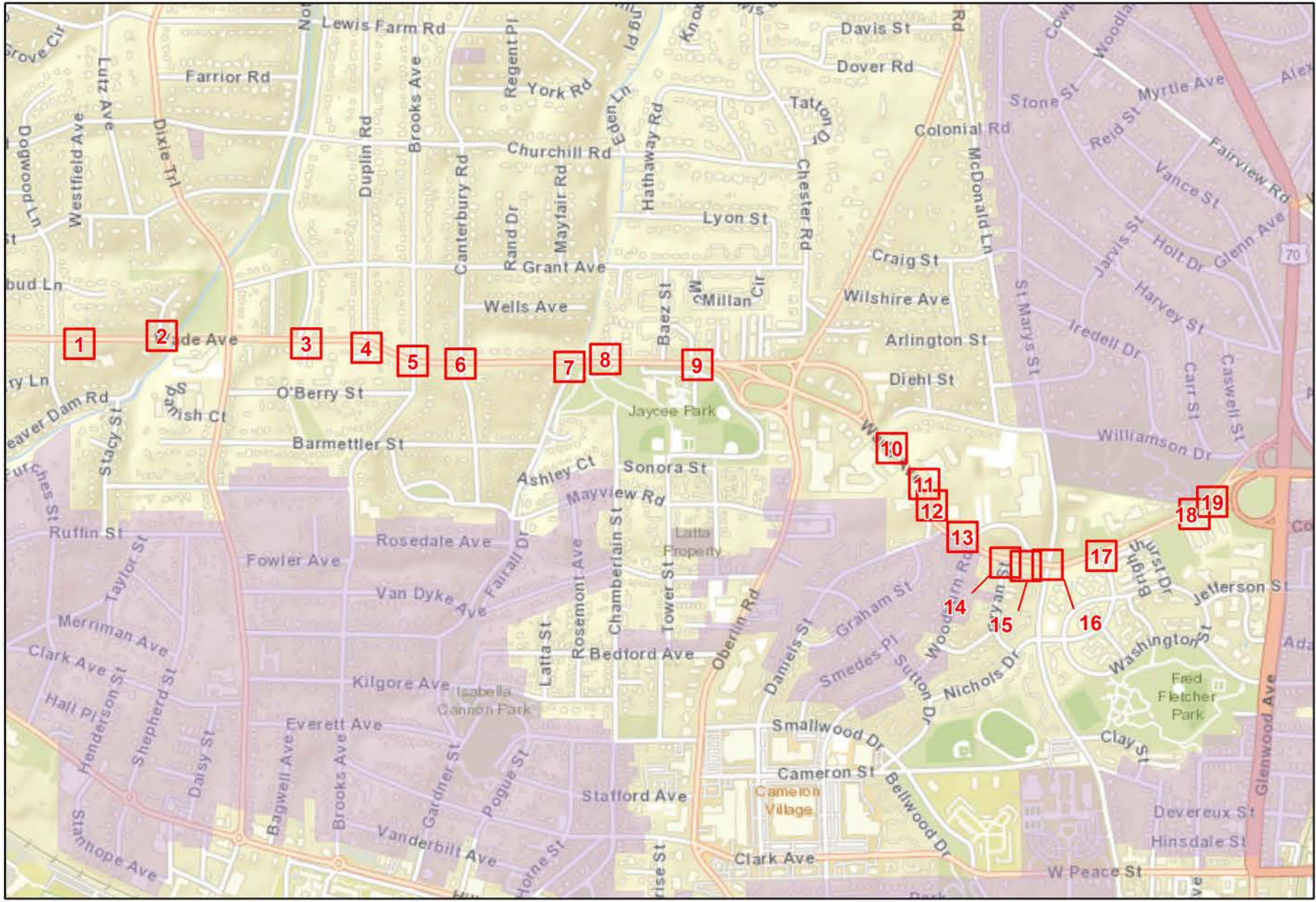




<b>Curb Ramps To Be Repaired</b>		
	Retrofit	
	Remove and Replace	
	New Curb Ramp	
	Remove Ramp	
	Municipal Boundary	
	NCHPO Historic Boundary (NR and LHD)	
<b>2022 Wake 70</b>		
<b>WBS: 2021CPT.05.19.10921.1</b>		
<b>US 70 EB/WB</b>		
<b>From/To SR 1728</b>		
<b>To/From RR Bridge</b>		
	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 5	
<small>Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO</small>		



<b>Curb Ramps To Be Repaired</b>		
	Retrofit	
	Remove and Replace	
	New Curb Ramp	
	Remove Ramp	
	Municipal Boundary	
	NCHPO Historic Boundary (NR and LHD)	
<b>2022 Wake 70</b> <b>WBS: 2021CPT.05.19.20921.1</b> <b>Blue Ridge Rd</b> <b>From US 70</b> <b>To Crabtree Valley Ave</b>		
	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 5	
<small>Source: CALYX Engineers and Consultants, 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)

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**2022 Wake 70**  
WBS: 2021CPT.05.19.20921.1

**Wade Ave**  
From US 70  
To Ridge Rd

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NORTH CAROLINA DEPARTMENT  
OF TRANSPORTATION  
DIVISION 5

Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO



**Curb Ramps To Be Repaired**

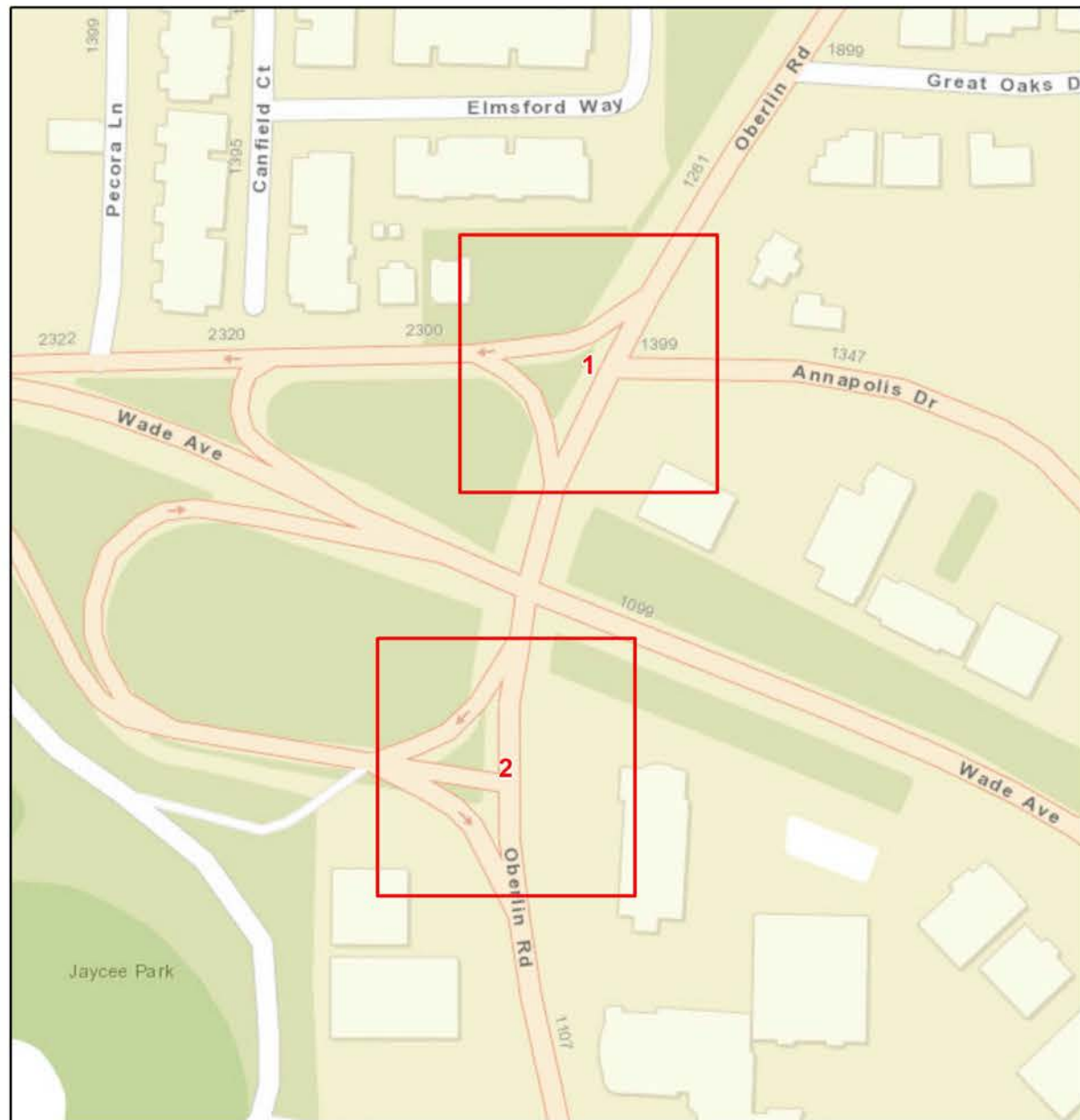
- Retrofit
- Remove and Replace
- New Curb Ramp
- Remove Ramp

Municipal Boundary  
 NCHPO Historic Boundary (NR and LHD)

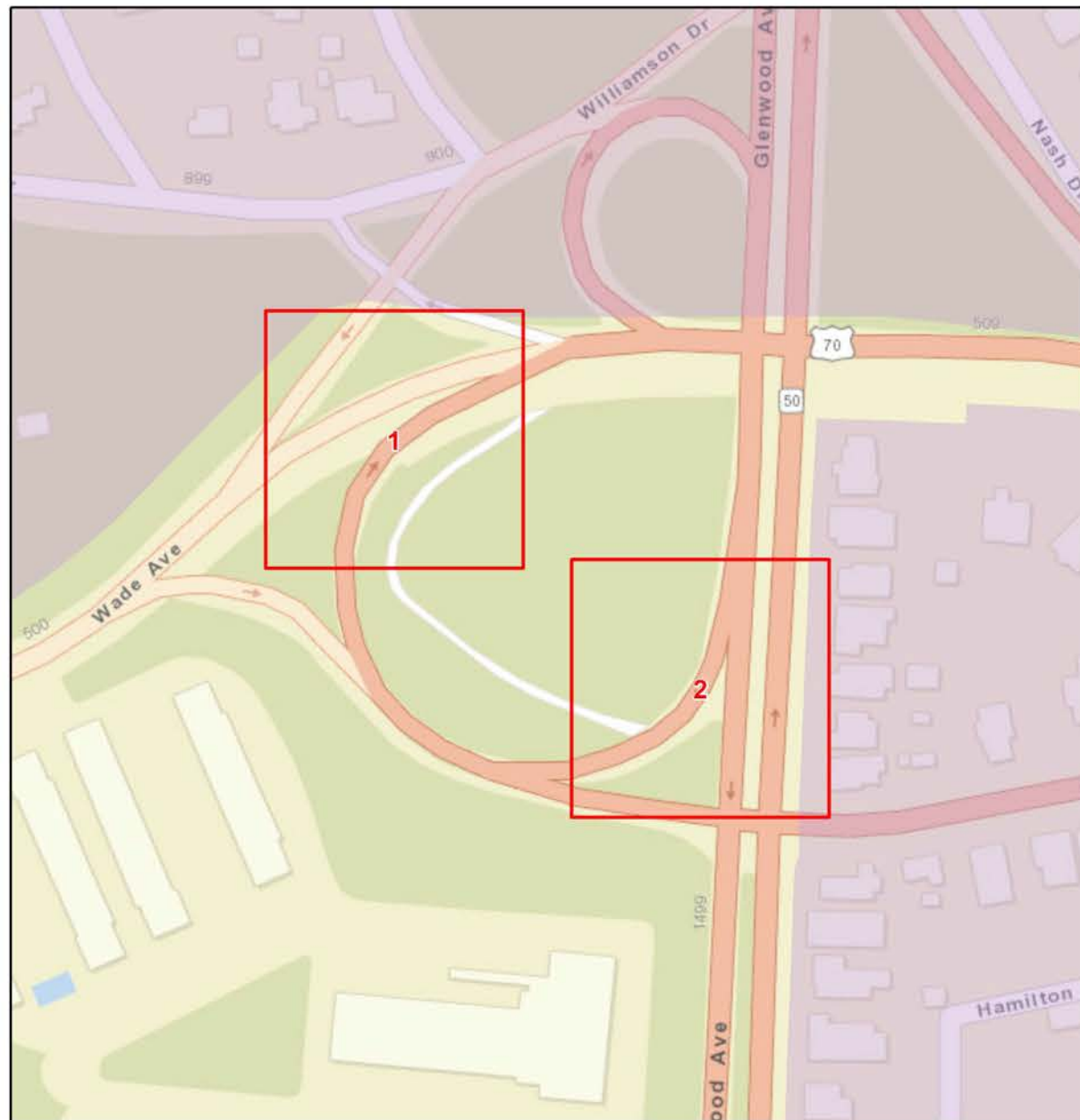
**2022 Wake 70**  
**WBS: 2021CPT.05.19.20921.1**  
**Wade Ave**  
**From US 70**  
**To Ridge Rd**

NORTH CAROLINA DEPARTMENT  
 OF TRANSPORTATION  
 DIVISION 5

Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO



<b>Curb Ramps To Be Repaired</b>		
	Retrofit	
	Remove and Replace	
	New Curb Ramp	
	Remove Ramp	
	Municipal Boundary	
	NCHPO Historic Boundary (NR and LHD)	
<b>2022 Wake 70</b>		
<b>WBS: 2021CPT.05.19.20921.1</b>		
<b>Oberlin to Wade Ramp From Oberlin Rd To SR 1728</b>		
	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 5	
<small>Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO</small>		



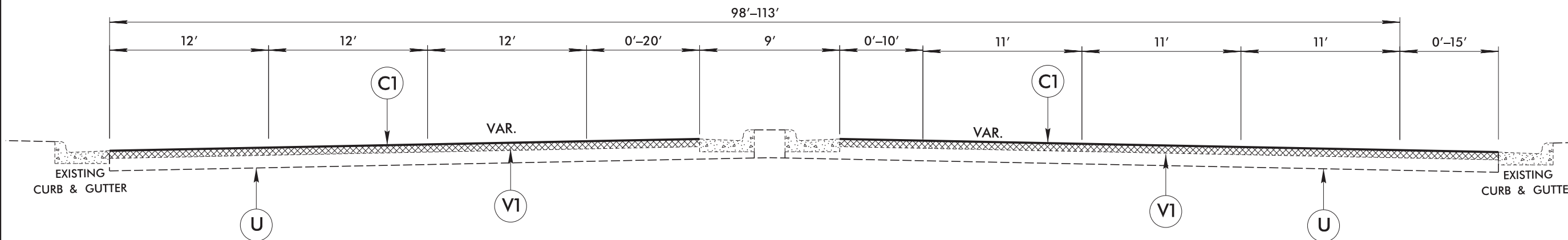
<b>Curb Ramps To Be Repaired</b>		
	Retrofit	
	Remove and Replace	
	New Curb Ramp	
	Remove Ramp	
	Municipal Boundary	
	NCHPO Historic Boundary (NR and LHD)	
<b>2022 Wake 70</b>		
<b>WBS: 2021CPT.05.19.20921.1</b>		
<b>Glenwood to Wade Ramp From Glenwood Ave To SR 1728</b>		
	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 5	
<small>Source: CALYX Engineers and Consultants, ESRI, NC OneMap, NCDOT, NCHPO</small>		

8/17/99

\* "PATCHING EXISTING PAVEMENT" HAS BEEN INCLUDED AS A PAY ITEM ON MAPS  
 PATCHING MAY OR MAY NOT BE NEEDED, DEPENDING ON THE CONDITION OF THE  
 MAP SURFACE AT THE TIME PAVING SESSION BEGINS. AREAS TO BE DELINEATED BY THE ENGINEER.

PROJECT REFERENCE NO.	SHEET NO.
2021CPT.05J9J0921J, etc.	15

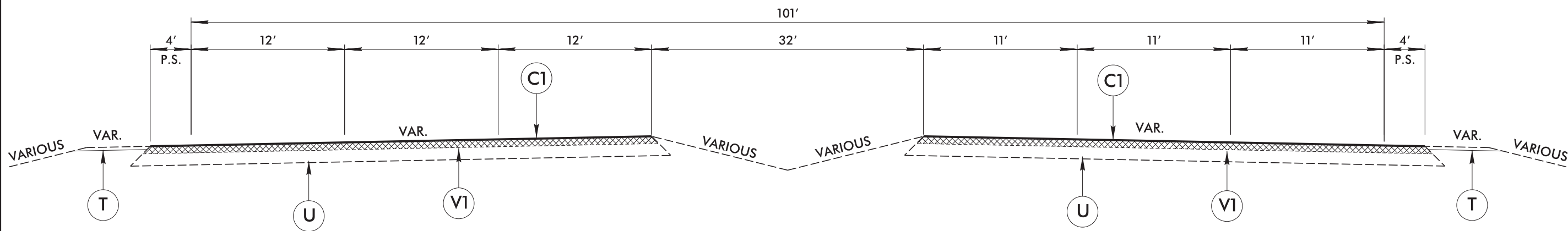
\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



### TYPICAL SECTION NO. 1

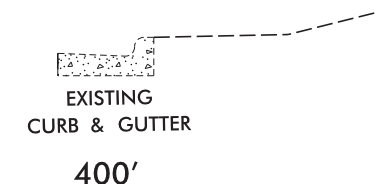
MAP 1 - US 70 FROM WOMAN'S CLUB DR. TO ROUNDABOUT ACCESS - 430'

\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



### TYPICAL SECTION NO. 2

MAP 1 - US 70 FROM ROUNDABOUT ACCESS TO  
 I-440 EB OFF RAMP - 850'



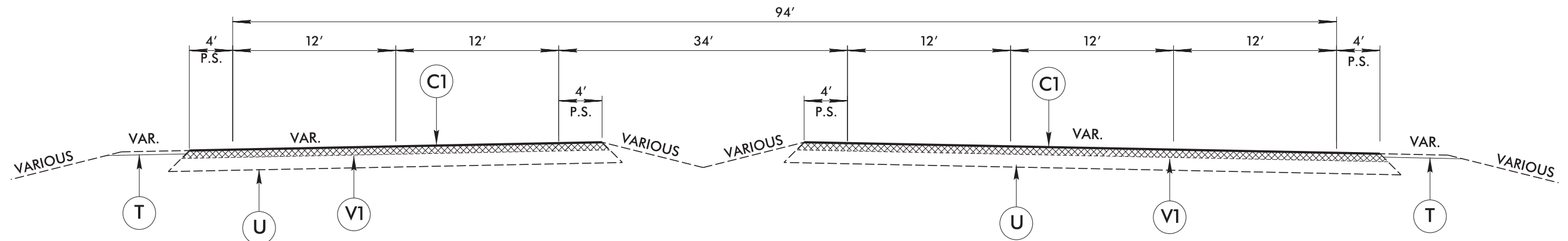
NOTES: SEE SHEET 17 FOR DETAILS OF:

- PATCHING EXISTING PAVEMENT
- UTILIZE INCIDENTAL MILLING TO MAKE PAVEMENT TIE-INS
- DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES
- DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

PAVEMENT SCHEDULE			
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	U	EXISTING PAVEMENT
T	SHOULDER GRADING	V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"

\* "PATCHING EXISTING PAVEMENT" HAS BEEN INCLUDED AS A PAY ITEM ON MAPS  
 PATCHING MAY OR MAY NOT BE NEEDED, DEPENDING ON THE CONDITION OF THE  
 MAP SURFACE AT THE TIME PAVING SESSION BEGINS. AREAS TO BE DELINEATED BY THE ENGINEER.

\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



### TYPICAL SECTION NO. 3

MAP 1 - US 70 FROM I-440 EB OFF RAMP TO I-440 WB ON RAMP - 700'

NOTES: SEE SHEET 17 FOR DETAILS OF:

- PATCHING EXISTING PAVEMENT
- UTILIZE INCIDENTAL MILLING TO MAKE PAVEMENT TIE-INS
- DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES
- DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"

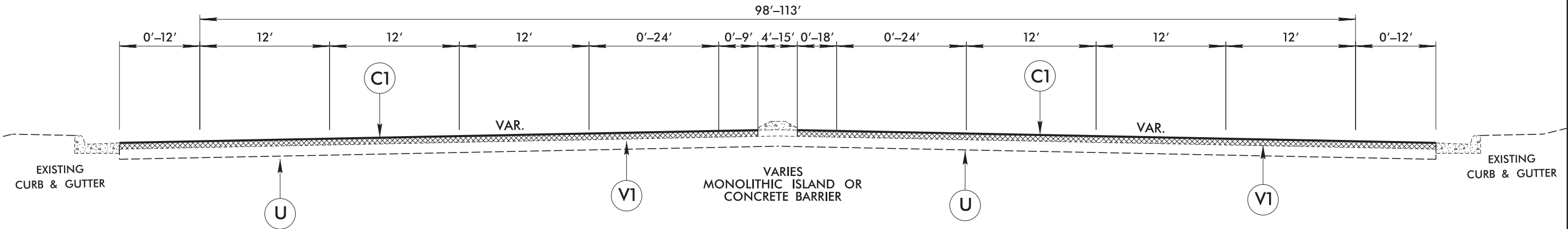


8/17/99

\* "PATCHING EXISTING PAVEMENT" HAS BEEN INCLUDED AS A PAY ITEM ON MAPS  
 PATCHING MAY OR MAY NOT BE NEEDED, DEPENDING ON THE CONDITION OF THE  
 MAP SURFACE AT THE TIME PAVING SESSION BEGINS. AREAS TO BE DELINEATED BY THE ENGINEER.

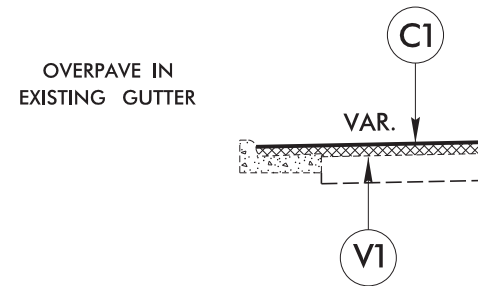
PROJECT REFERENCE NO.	SHEET NO.
2021CPT.05.19.10921I, etc.	17

\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



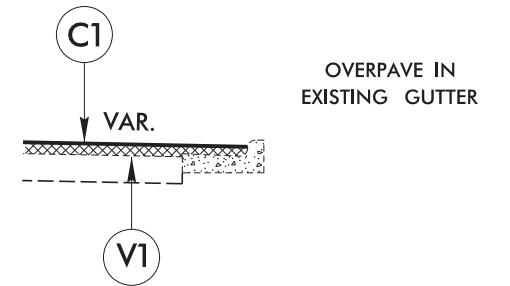
### TYPICAL SECTION NO. 4

MAP 1 - US 70 FROM I-440 W ON RAMP TO  
 2,250' WEST OF CREEDMOOR RD. - 5,750'



#### OVERPAVE AREAS

FROM BLUE RIDGE RD.  
 TO CREEDMOOR RD.  
 2,570'



#### OVERPAVE AREAS

FROM LEADMINE RD.  
 TO CREEDMOOR RD.  
 2,570'

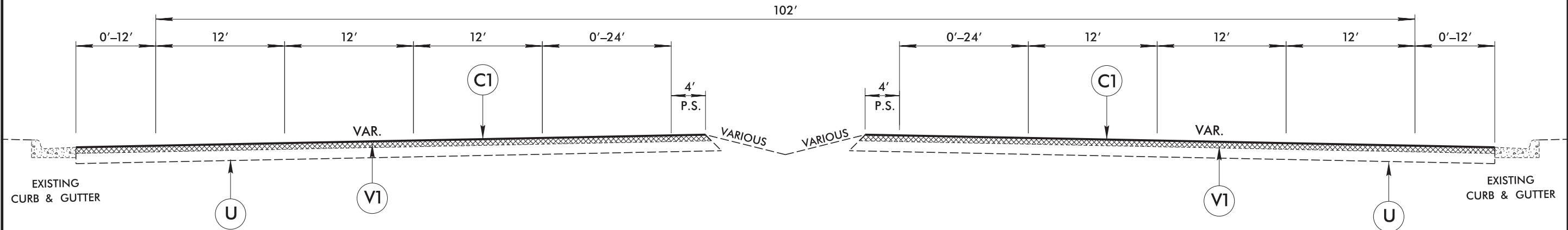
NOTES: SEE SHEET 17 FOR DETAILS OF:

- PATCHING EXISTING PAVEMENT
- UTILIZE INCIDENTAL MILLING TO MAKE PAVEMENT TIE-INS
- DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES
- DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"

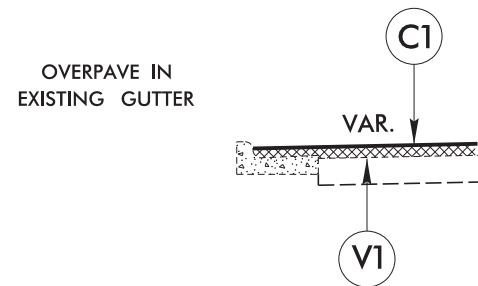
\* "PATCHING EXISTING PAVEMENT" HAS BEEN INCLUDED AS A PAY ITEM ON MAPS  
 PATCHING MAY OR MAY NOT BE NEEDED, DEPENDING ON THE CONDITION OF THE  
 MAP SURFACE AT THE TIME PAVING SESSION BEGINS. AREAS TO BE DELINEATED BY THE ENGINEER.

\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



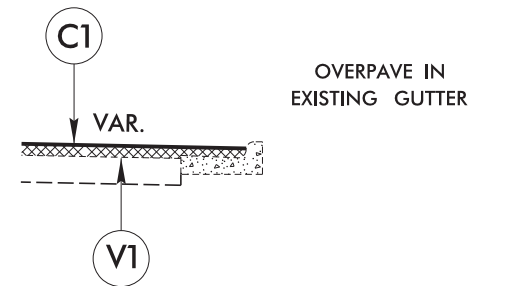
### TYPICAL SECTION NO. 5

MAP 1 - US 70 FROM 2,250' WEST OF CREEDMOOR RD.  
 TO 800' WEST OF HILBURN RD. - 12,150'



#### OVERPAVE AREAS

FROM DURALEIGH RD.  
 TO GLENWOOD FOREST RD.  
 2,715'



#### OVERPAVE AREAS

FROM 245' WEST OF MILLBROOK RD.  
 TO 800' WEST OF HILBURN RD.  
 2,485'

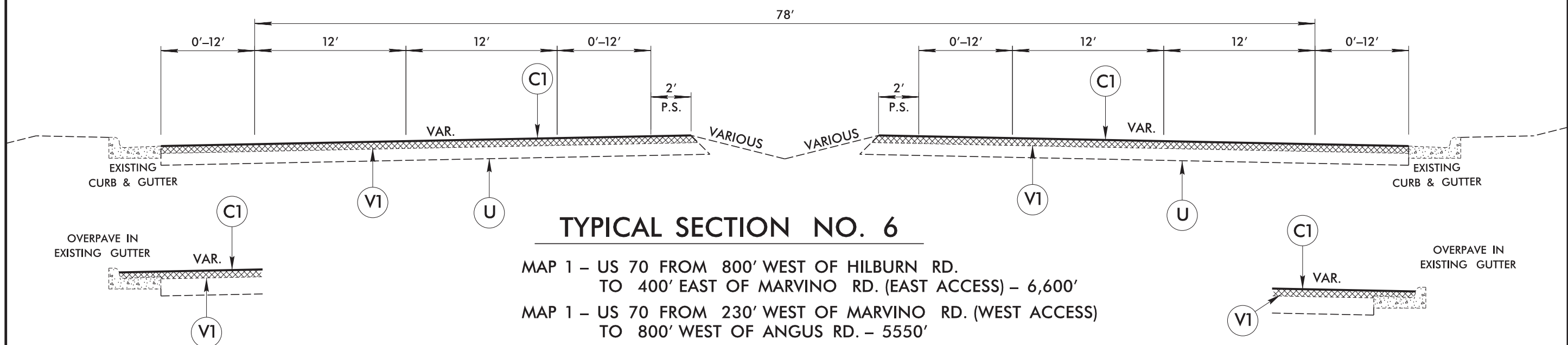
NOTES: SEE SHEET 17 FOR DETAILS OF:

- PATCHING EXISTING PAVEMENT
- UTILIZE INCIDENTAL MILLING TO MAKE PAVEMENT TIE-INS
- DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES
- DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"

\* "PATCHING EXISTING PAVEMENT" HAS BEEN INCLUDED AS A PAY ITEM ON MAPS  
 PATCHING MAY OR MAY NOT BE NEEDED, DEPENDING ON THE CONDITION OF THE  
 MAP SURFACE AT THE TIME PAVING SESSION BEGINS. AREAS TO BE DELINEATED BY THE ENGINEER.

\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



### TYPICAL SECTION NO. 6

- MAP 1 – US 70 FROM 800' WEST OF HILBURN RD. TO 400' EAST OF MARVINO RD. (EAST ACCESS) – 6,600'
- MAP 1 – US 70 FROM 230' WEST OF MARVINO RD. (WEST ACCESS) TO 800' WEST OF ANGUS RD. – 5550'
- MAP 1 – US 70 FROM 400' EAST OF MARVINO RD. (EAST ACCESS) TO 230' WEST OF MARVINO RD. (WEST ACCESS) – 4350'

OVERPAVE AREAS  
 AT PAULA ANN RD.  
 280'

AT BASSETT HOME FURNISHINGS  
 WEST OF LAKE ANN RD.  
 150'

FROM 850' WEST OF EBENEZER CHURCH RD.  
 200'

FROM JUST EAST OF EBENEZER CHURCH RD.  
 650'

4' PAVED SHOULDER AREAS (T)  
 4682'

CONCRETE VALLEY GUTTER  
 720'

OVERPAVE AREAS  
 FROM 545' EAST OF TOSCANA RD.  
 545'

CURB & GUTTER AREAS  
 FROM 800' WEST OF AGNUS  
 TO TOYOTA DR.  
 1,670'

FROM 410' EAST OF MARVINO RD.  
 (EAST ACCESS) TO COUNTRY LANE  
 1,550'

AT SALTWOOD RD. 530'

(T) 4' PAVED SHOULDER AREAS  
 7245'

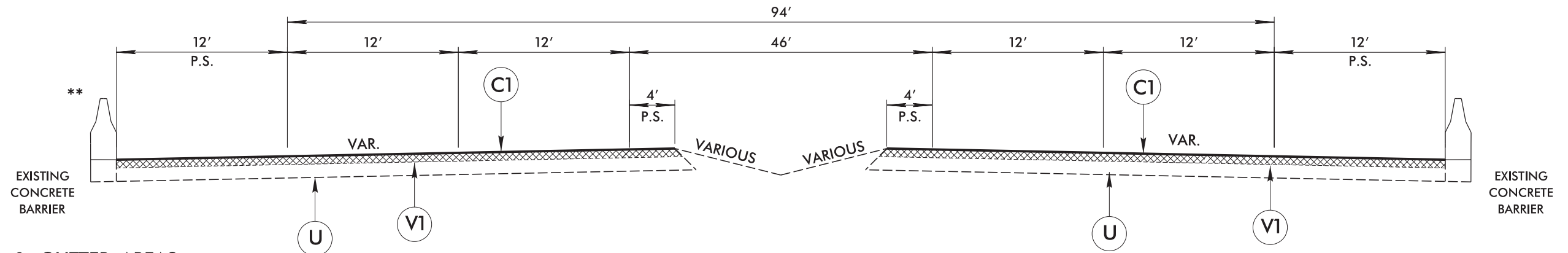
NOTES: SEE SHEET 29 FOR DETAILS OF:

- PATCHING EXISTING PAVEMENT
- UTILIZE INCIDENTAL MILLING TO MAKE PAVEMENT TIE-INS
- DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES
- DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"

\* "PATCHING EXISTING PAVEMENT" HAS BEEN INCLUDED AS A PAY ITEM ON MAPS  
 PATCHING MAY OR MAY NOT BE NEEDED, DEPENDING ON THE CONDITION OF THE  
 MAP SURFACE AT THE TIME PAVING SESSION BEGINS. AREAS TO BE DELINEATED BY THE ENGINEER.

\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



**CURB & GUTTER AREAS**

FROM 550' FROM WEST OF  
 FRED ANDERSON DRIVEWAY  
 (800' WEST OF ANGUS DR.)

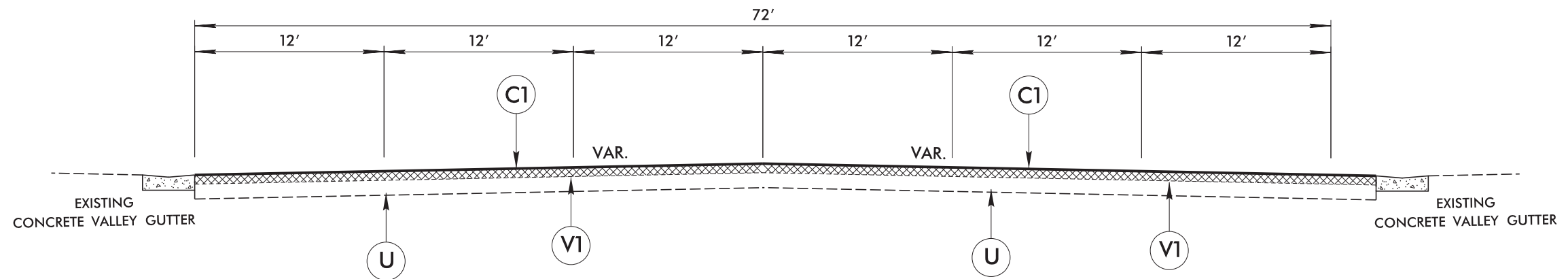
**TYPICAL SECTION NO. 7**

MAP 1 – US 70 FROM 850' EAST OF WESTGATE RD. TO 315' WEST  
 OF I-540 WESTBOUND OFF RAMP GORE – 4,000'

**NOTE**

\*\* EXISTING CONCRETE BARRIER LEFT  
 STOPS AT 75' WEST OF I-540 WEST  
 BOUND OFF RAMP GORE

\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



**TYPICAL SECTION NO. 8**

MAP 1 – WESTGATE RD. – 150' (US 70 UNDER BRIDGE)

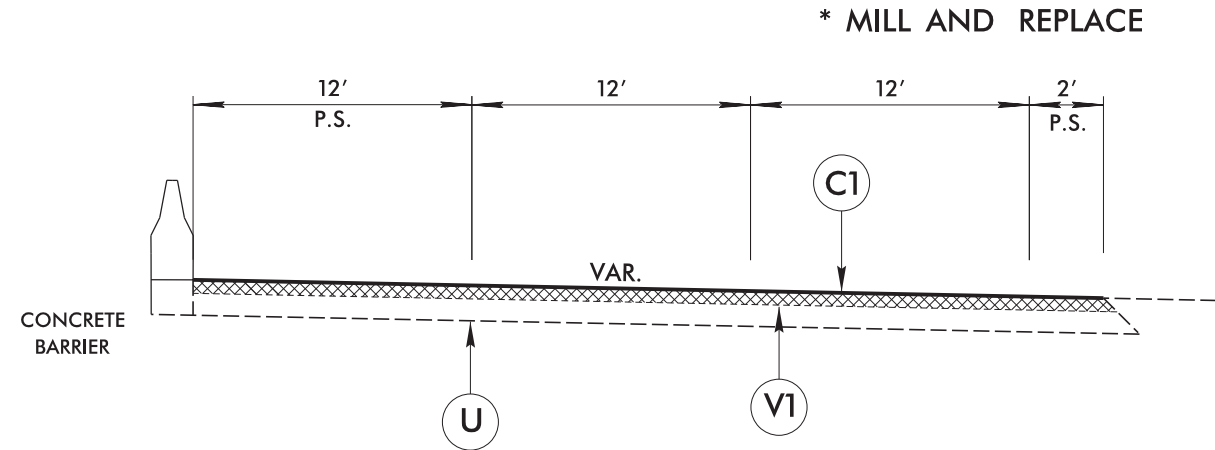
NOTES: SEE SHEET 17 FOR DETAILS OF:

- PATCHING EXISTING PAVEMENT
- UTILIZE INCIDENTAL MILLING TO MAKE PAVEMENT TIE-INS
- DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES
- DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

**PAVEMENT SCHEDULE**

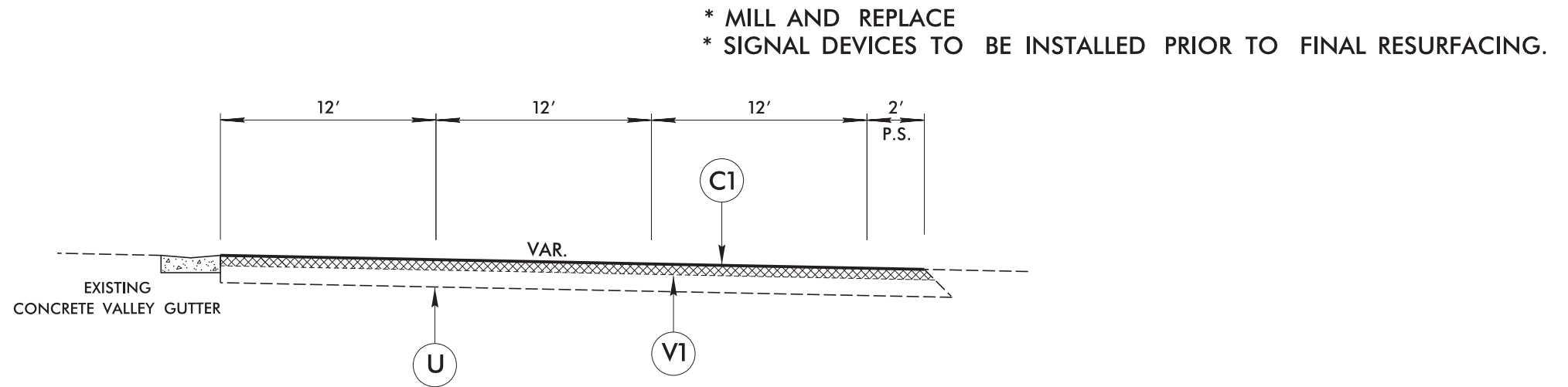
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"

\* "PATCHING EXISTING PAVEMENT" HAS BEEN INCLUDED AS A PAY ITEM ON MAPS  
 PATCHING MAY OR MAY NOT BE NEEDED, DEPENDING ON THE CONDITION OF THE  
 MAP SURFACE AT THE TIME PAVING SESSION BEGINS. AREAS TO BE DELINEATED BY THE ENGINEER.



**TYPICAL SECTION NO. 9**

MAP 1 – US 70 EASTBOUND /WESTBOUND COLLECTOR /DISTRIBUTOR LANE /RAMP



**TYPICAL SECTION NO. 10**

MAP 1 – US 70 EASTBOUND /WESTBOUND COLLECTOR /DISTRIBUTOR RAMPS AT WESTGATE RD.  
 MAP 1 – US 70 EASTBOUND /WESTBOUND COLLECTOR /DISTRIBUTOR RAMPS AT LUMLEY RD.

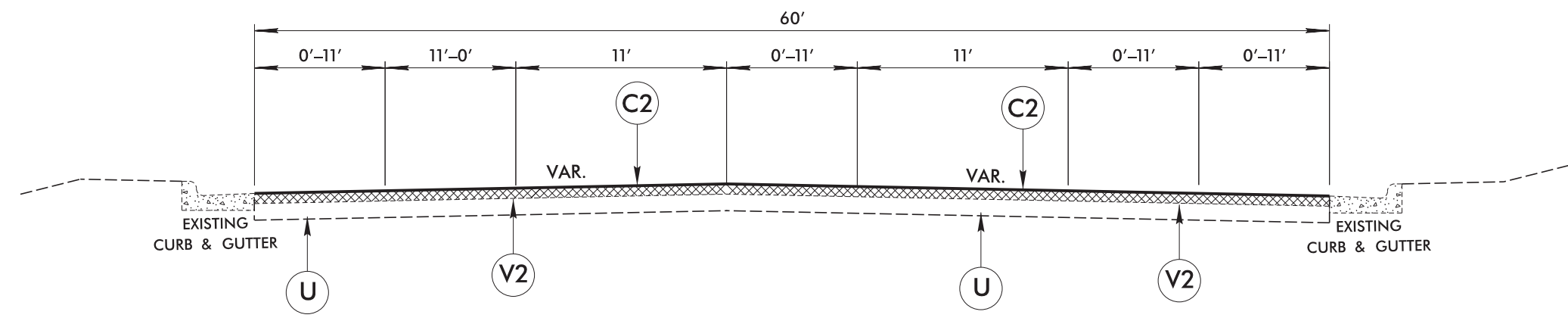
NOTES: SEE SHEET 17 FOR DETAILS OF:

- PATCHING EXISTING PAVEMENT
- UTILIZE INCIDENTAL MILLING TO MAKE PAVEMENT TIE-INS
- DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES
- DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"

\* "PATCHING EXISTING PAVEMENT" HAS BEEN INCLUDED AS A PAY ITEM ON MAPS  
 PATCHING MAY OR MAY NOT BE NEEDED, DEPENDING ON THE CONDITION OF THE  
 MAP SURFACE AT THE TIME PAVING SESSION BEGINS. AREAS TO BE DELINEATED BY THE ENGINEER.

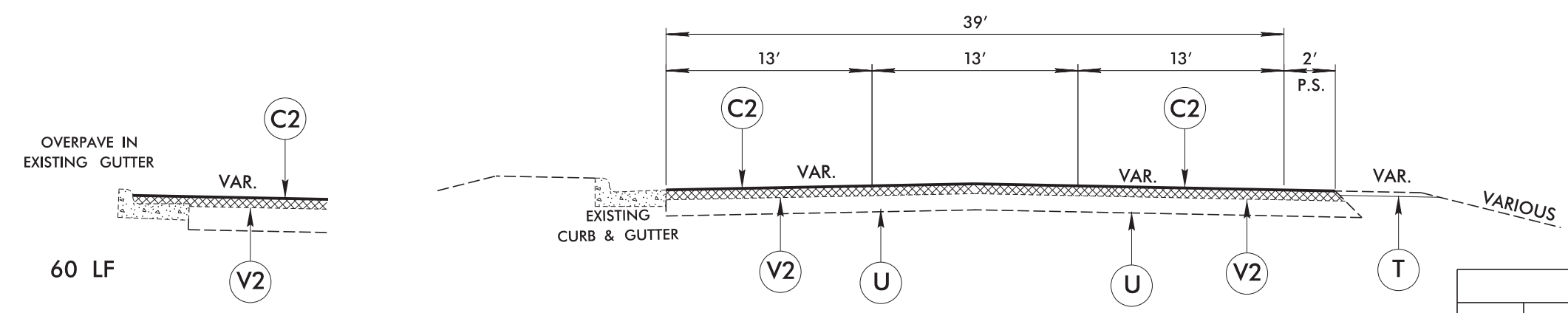
\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



### TYPICAL SECTION NO. 11

MAP 2 – BLUE RIDGE RD. FROM US 70 TO TRANSITION ON BRIDGE

\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



### TYPICAL SECTION NO. 12

MAP 2 – BLUE RIDGE RD. FROM TRANSITION ON BRIDGE  
 TO CRABTREE VALLEY AVE.

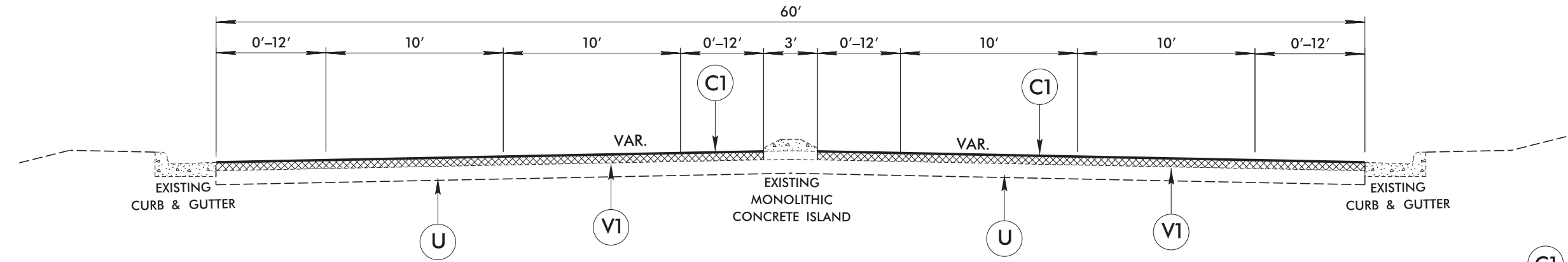
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"
V2	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 2"

NOTES: SEE SHEET 17 FOR DETAILS OF:

- PATCHING EXISTING PAVEMENT
- UTILIZE INCIDENTAL MILLING TO MAKE PAVEMENT TIE-INS
- DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES
- DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

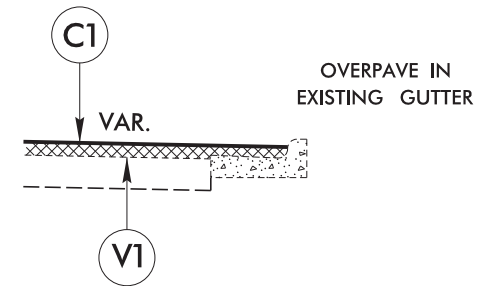
\* "PATCHING EXISTING PAVEMENT" HAS BEEN INCLUDED AS A PAY ITEM ON MAPS  
 PATCHING MAY OR MAY NOT BE NEEDED, DEPENDING ON THE CONDITION OF THE  
 MAP SURFACE AT THE TIME PAVING SESSION BEGINS. AREAS TO BE DELINEATED BY THE ENGINEER.

\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



### TYPICAL SECTION NO. 13

MAP 3 - WADE AVE. FROM EAST OF R.R. BRIDGE  
 TO 1140' EAST OF ST. MARY'S - 2240'



#### OVERPAVE AREAS

AT GORE FOR WADE AVE. EB  
 ON LOOP AT GLENWOOD AVE.  
 100'

FROM END OF MERGE TAPER OF  
 WADE AVE. EAST BOUND ON  
 LOOP AT GLENWOOD AVE.  
 TO EAST OF R.R. BRIDGE RD.  
 920'

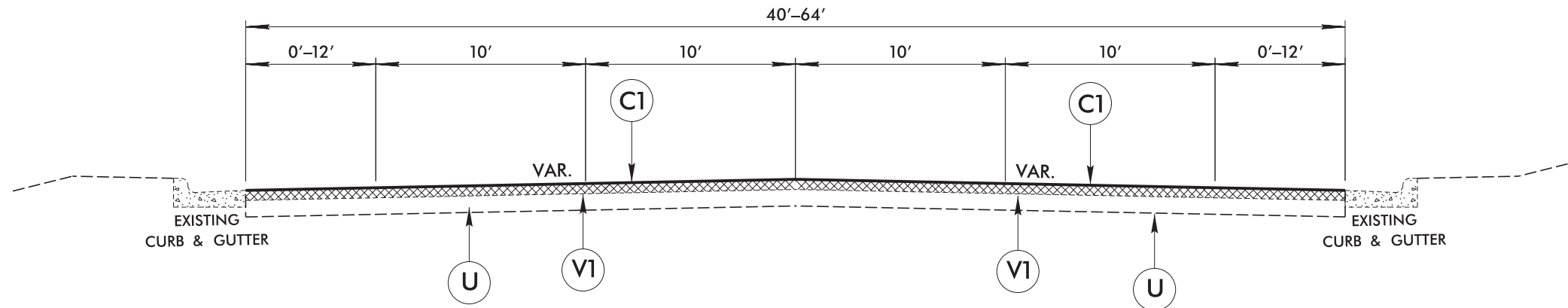
#### NOTES: SEE SHEET 17 FOR DETAILS OF:

- PATCHING EXISTING PAVEMENT
- UTILIZE INCIDENTAL MILLING TO MAKE PAVEMENT TIE-INS
- DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES
- DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"

\* "PATCHING EXISTING PAVEMENT" HAS BEEN INCLUDED AS A PAY ITEM ON MAPS  
 PATCHING MAY OR MAY NOT BE NEEDED, DEPENDING ON THE CONDITION OF THE  
 MAP SURFACE AT THE TIME PAVING SESSION BEGINS. AREAS TO BE DELINEATED BY THE ENGINEER.

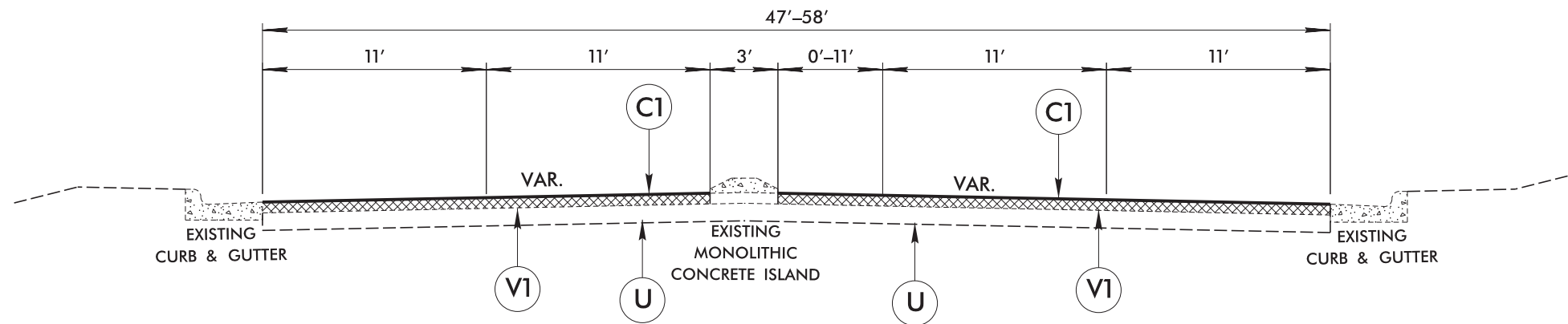
\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



**TYPICAL SECTION NO. 14**

MAP 3 – WADE AVE. FROM  
 1140' EAST OF ST. MARY'S TO 500' WEST OF ST. MARY'S – 640'  
 300' EAST OF OBERLIN RD. TO 225' WEST OF OBERLIN RD. – 525'

\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



**TYPICAL SECTION NO. 15**

MAP 3 – WADE AVE. FROM  
 500' WEST OF ST. MARY'S ST. TO ST. MARY'S – 500'  
 225' WEST OF OBERLIN RD. TO 580' WEST OF OBERLIN RD. – 355'

NOTES: SEE SHEET 17 FOR DETAILS OF:

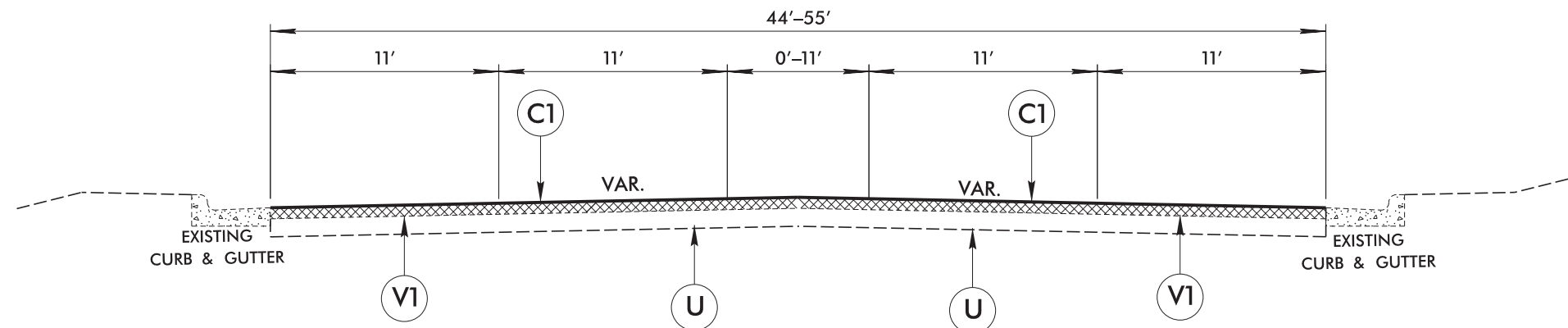
- PATCHING EXISTING PAVEMENT
- UTILIZE INCIDENTAL MILLING TO MAKE PAVEMENT TIE-INS
- DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES
- DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"



\* "PATCHING EXISTING PAVEMENT" HAS BEEN INCLUDED AS A PAY ITEM ON MAPS  
 PATCHING MAY OR MAY NOT BE NEEDED, DEPENDING ON THE CONDITION OF THE  
 MAP SURFACE AT THE TIME PAVING SESSION BEGINS. AREAS TO BE DELINEATED BY THE ENGINEER.

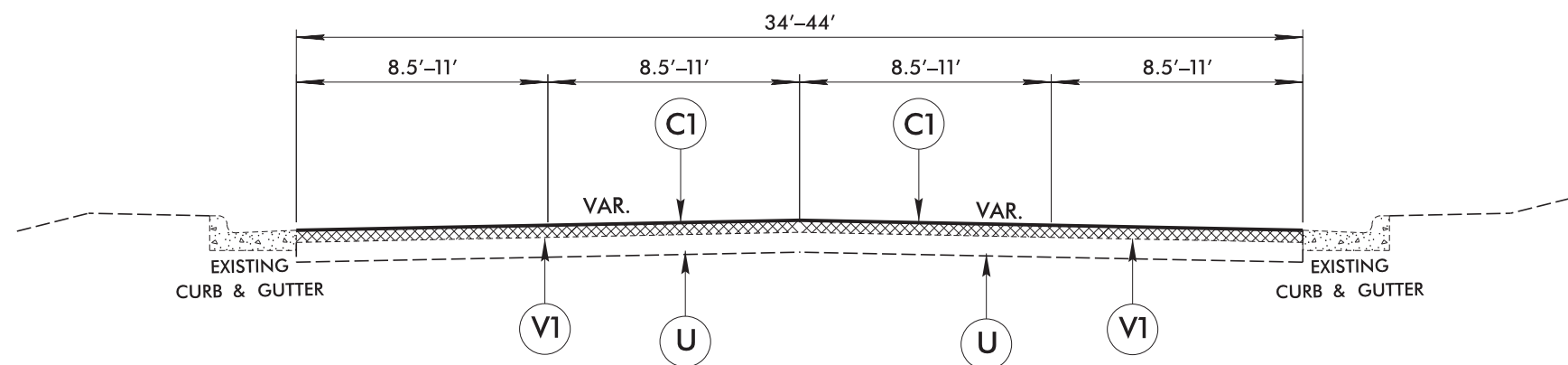
\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



### TYPICAL SECTION NO. 16

MAP 3 – WADE AVE. FROM ST. MARY'S ST. TO 300' WEST ST. MARY'S ST. – 300'

\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



### TYPICAL SECTION NO. 17

MAP 3 – WADE AVE. FROM  
 300' WEST OF ST. MARY'S ST. TO 140' EAST OF DANIEL'S ST. – 460'

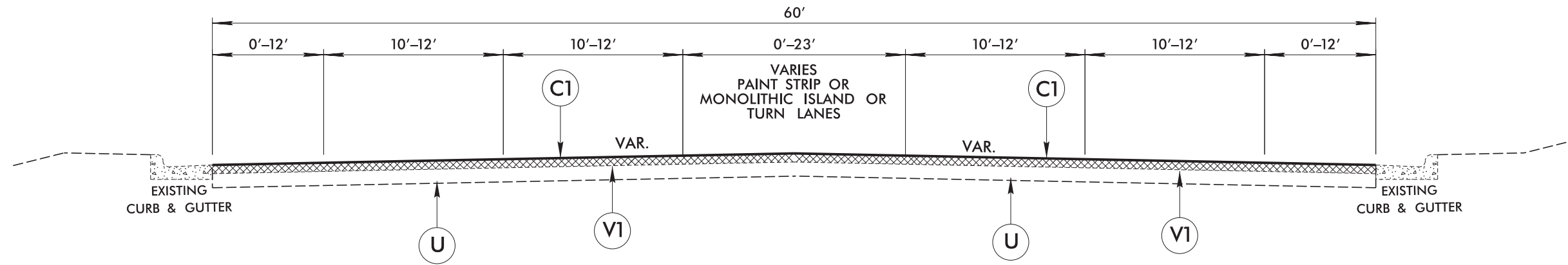
NOTES: SEE SHEET 17 FOR DETAILS OF:

- PATCHING EXISTING PAVEMENT
- UTILIZE INCIDENTAL MILLING TO MAKE PAVEMENT TIE-INS
- DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES
- DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"

\* "PATCHING EXISTING PAVEMENT" HAS BEEN INCLUDED AS A PAY ITEM ON MAPS  
 PATCHING MAY OR MAY NOT BE NEEDED, DEPENDING ON THE CONDITION OF THE  
 MAP SURFACE AT THE TIME PAVING SESSION BEGINS. AREAS TO BE DELINEATED BY THE ENGINEER.

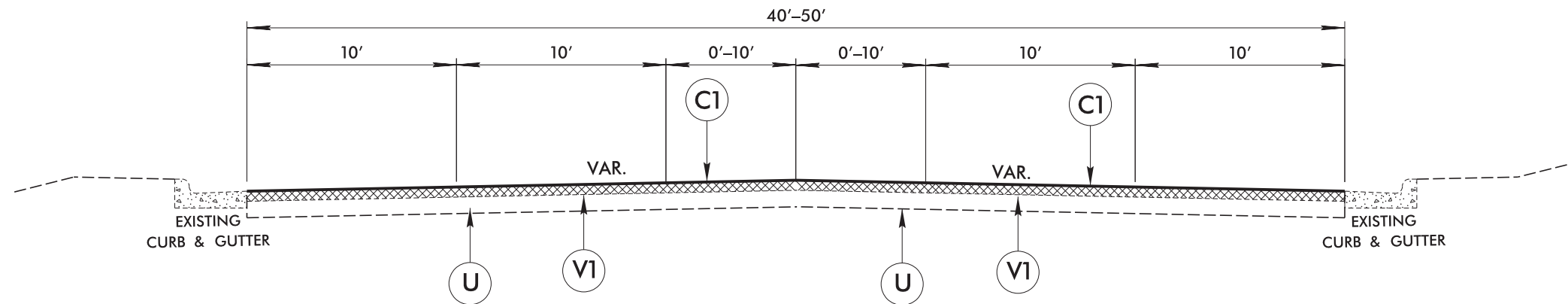
\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



### TYPICAL SECTION NO. 18

MAP 3 – WADE AVE. FROM  
 140' EAST OF DANIEL'S ST. TO 300' EAST OF OBERLIN RD. – 1630'  
 450' EAST OF FAIRCLOTH ST. TO RIDGE RD. – 1590'

\* MILL AND REPLACE  
 \* SIGNAL DEVICES TO BE INSTALLED PRIOR TO FINAL RESURFACING.



### TYPICAL SECTION NO. 19

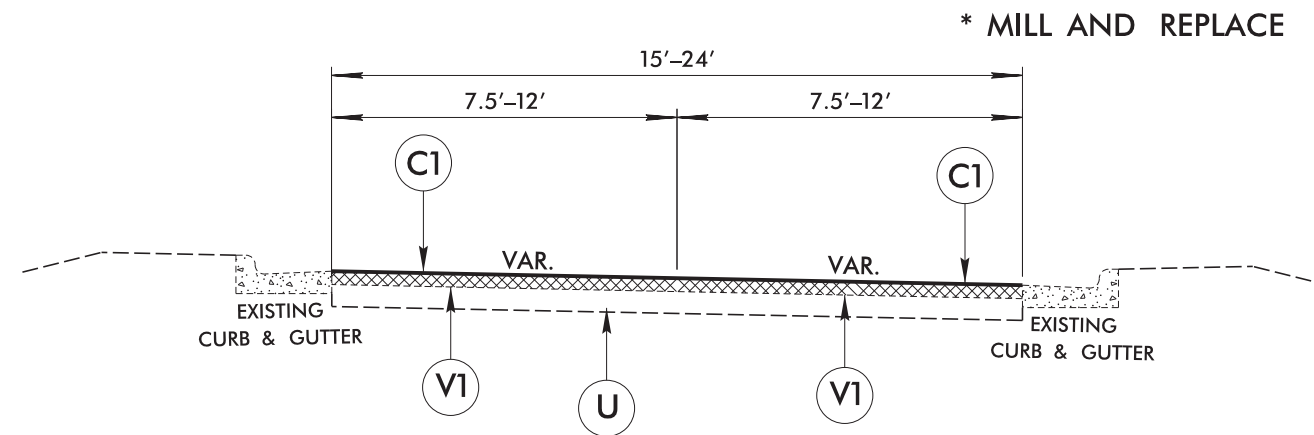
MAP 3 – WADE AVE. FROM  
 580' WEST OF OBERLIN RD. TO 450' EAST OF FAIRCLOTH ST. – 5965'

NOTES: SEE SHEET 17 FOR DETAILS OF:

- PATCHING EXISTING PAVEMENT
- UTILIZE INCIDENTAL MILLING TO MAKE PAVEMENT TIE-INS
- DETAIL OF PROJECT LIMITS AT SIGNALIZED Y LINES
- DETAIL OF PROJECT LIMITS AT UNSIGNALIZED Y LINES

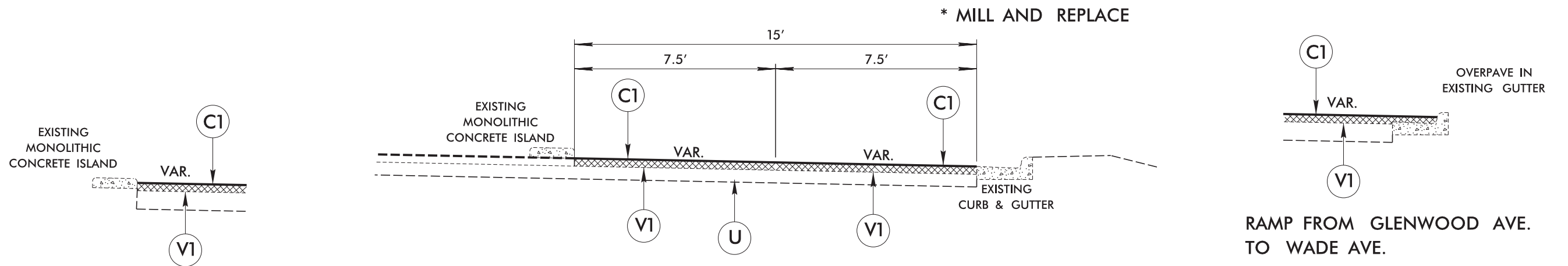
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"

\* "PATCHING EXISTING PAVEMENT" HAS BEEN INCLUDED AS A PAY ITEM ON MAPS  
 PATCHING MAY OR MAY NOT BE NEEDED, DEPENDING ON THE CONDITION OF THE  
 MAP SURFACE AT THE TIME PAVING SESSION BEGINS. AREAS TO BE DELINEATED BY THE ENGINEER.



### TYPICAL SECTION NO. 20

- MAP 3 - RAMP FROM OBERLIN RD. TO WADE AVE.
- MAP 3 - RAMP FROM WADE AVE. TO OBERLIN RD.
- MAP 3 - RAMP FROM OBERLIN RD. TO WADE AVE.
- MAP 3 - RAMP FROM WADE AVE. TO GLENWOOD AVE.



RAMP FROM GLENWOOD AVE. TO WADE AVE.

### TYPICAL SECTION NO. 21

- MAP 3 - RAMP FROM WADE AVE. TO OBERLIN RD.
- MAP 3 - RAMP FROM GLENWOOD AVE. TO WADE AVE.

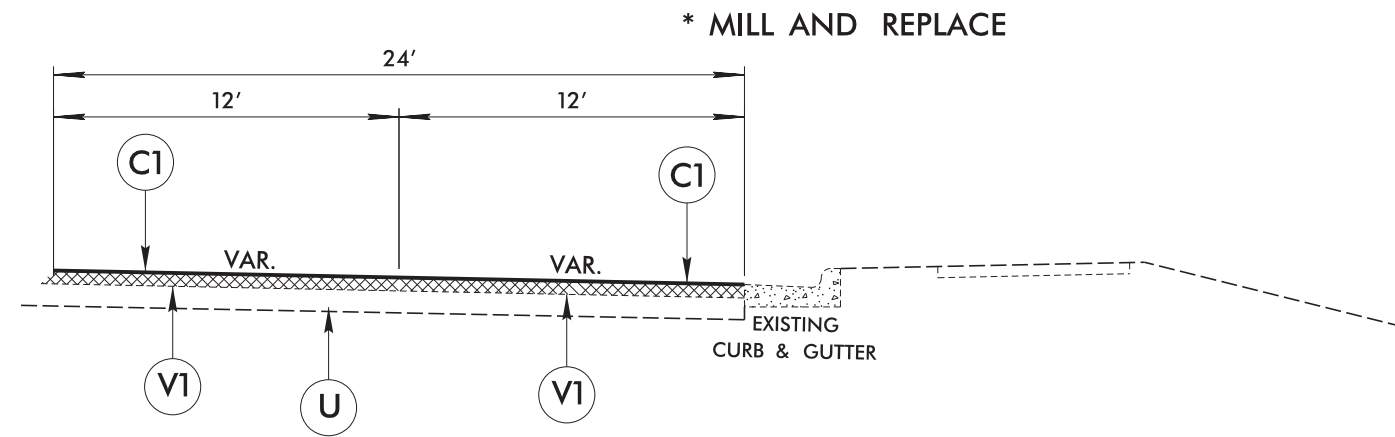
RAMP FROM GLENWOOD AVE. TO WADE AVE.

NOTES: SEE SHEET 17 FOR DETAILS OF:

- PATCHING EXISTING PAVEMENT
- UTILIZE INCIDENTAL MILLING TO MAKE PAVEMENT TIE-INS

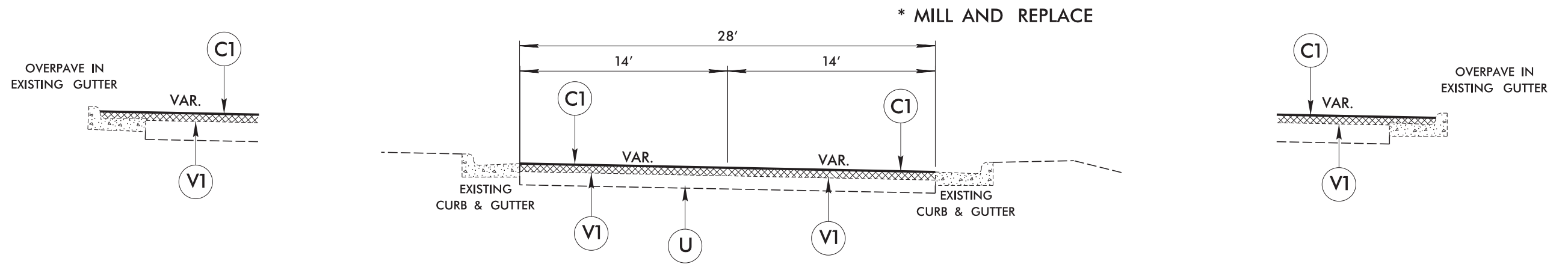
PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"

\* "PATCHING EXISTING PAVEMENT" HAS BEEN INCLUDED AS A PAY ITEM ON MAPS  
 PATCHING MAY OR MAY NOT BE NEEDED, DEPENDING ON THE CONDITION OF THE  
 MAP SURFACE AT THE TIME PAVING SESSION BEGINS. AREAS TO BE DELINEATED BY THE ENGINEER.



**TYPICAL SECTION NO. 22**

MAP 3 – RAMP FROM WADE AVE. TO GLENWOOD AVE.



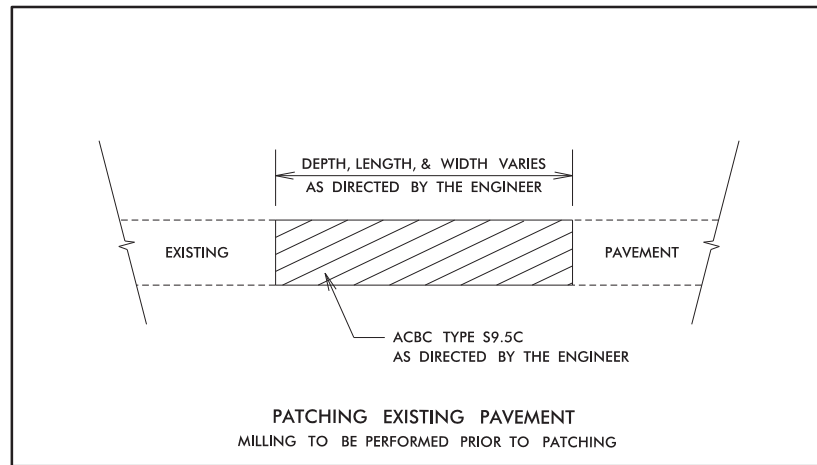
**TYPICAL SECTION NO. 23**

MAP 3 – RAMP FROM GLENWOOD AVE. TO WADE AVE.

NOTES: SEE SHEET 17 FOR DETAILS OF:

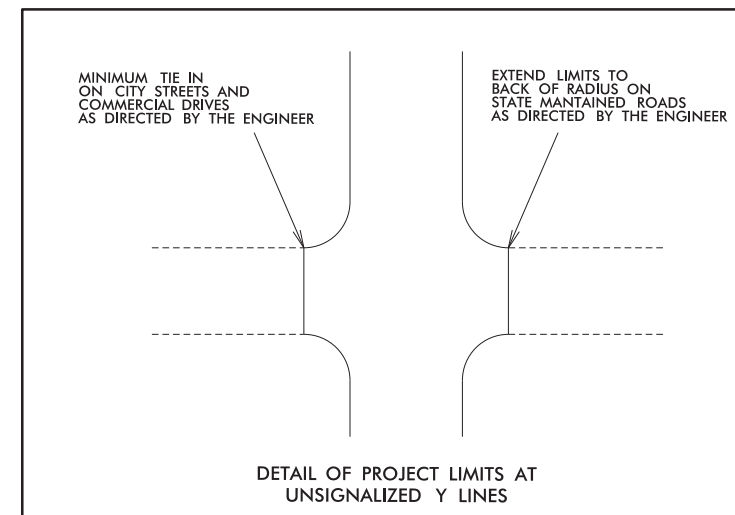
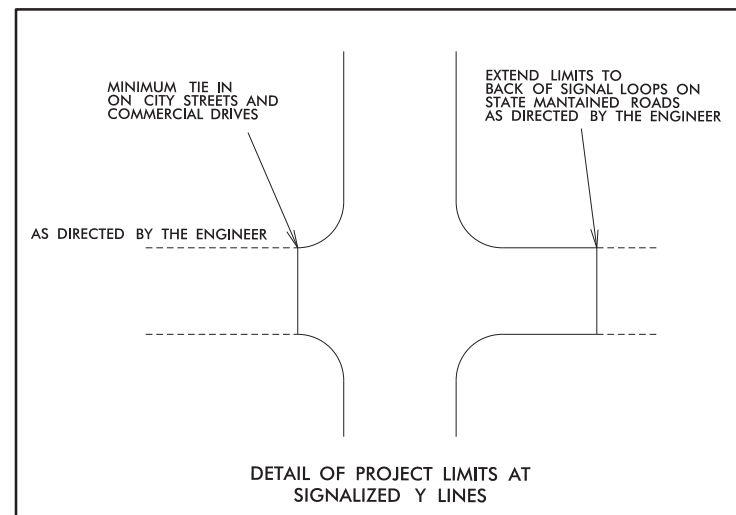
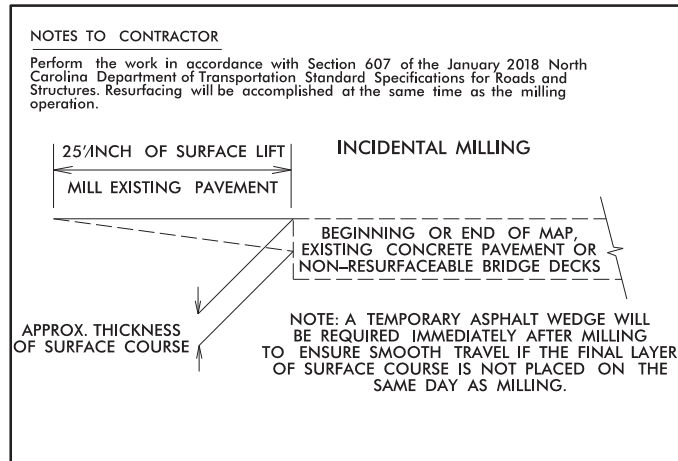
- PATCHING EXISTING PAVEMENT
- UTILIZE INCIDENTAL MILLING TO MAKE PAVEMENT TIE-INS

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
T	SHOULDER GRADING
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"

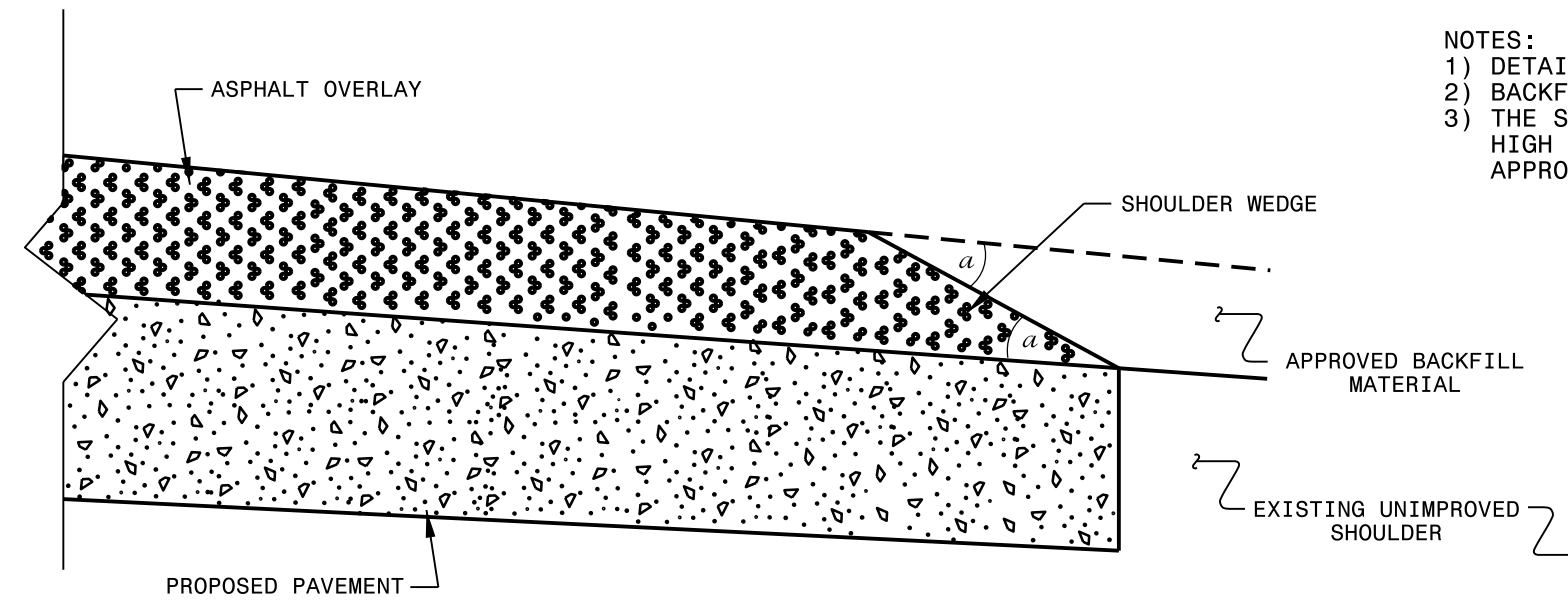


**NOTES**

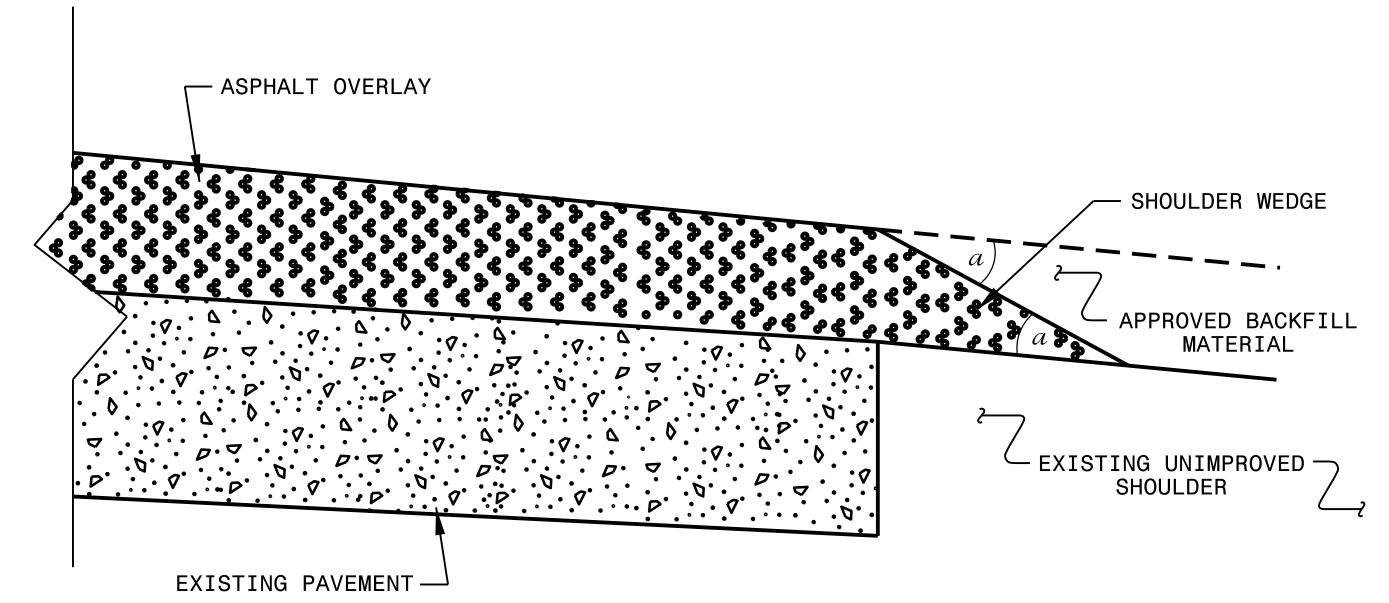
ALL UNPAVED S.R. ROADS TO BE RESURFACED 50' FROM EDGE OF PAVEMENT OF MAIN PROJECT.  
 ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII, OR AS DIRECTED BY THE ENGINEER.  
 EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE TABLE OF QUANTITIES.  
 BRIDGES TO BE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



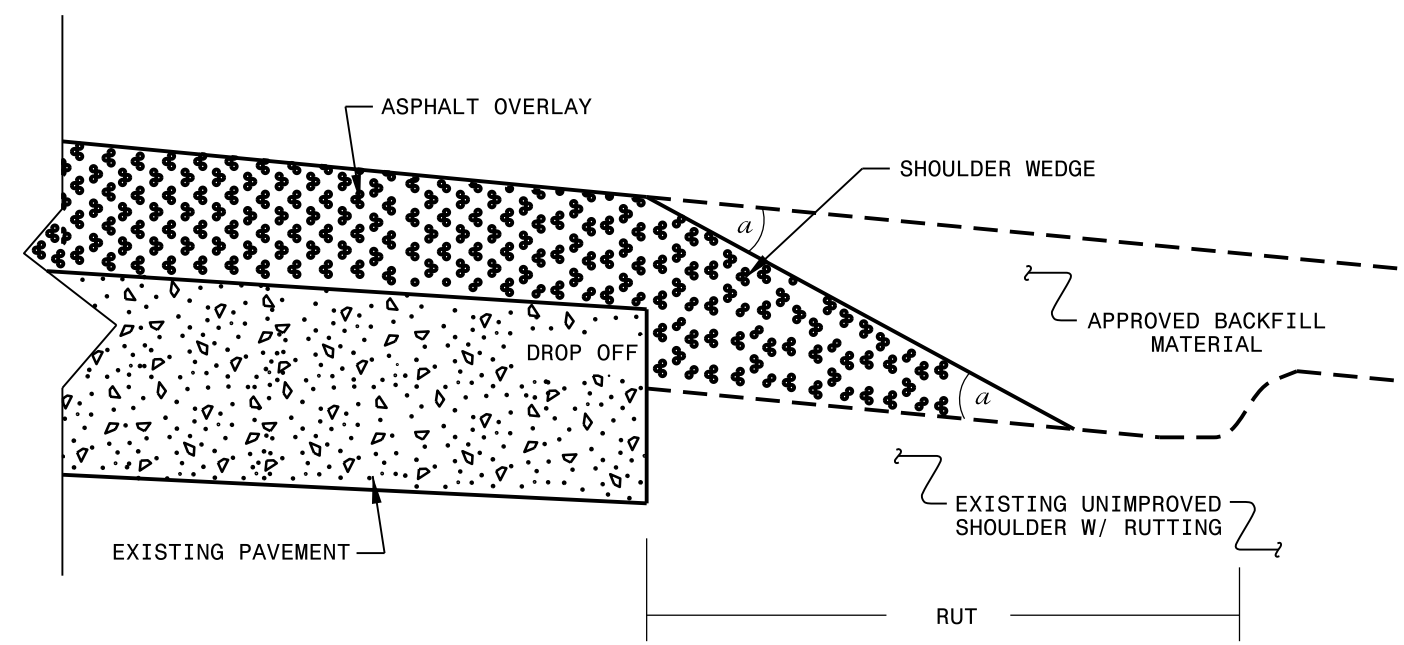
- NOTES:  
 1) DETAIL DOES NOT APPLY TO OGAFB AND ULTRA-THIN BONDED WEARING COURSE.  
 2) BACKFILL SHOULDER WITH APPROVED MATERIAL.  
 3) THE SHOULDER WEDGE DEVICE MAY BE DISENGAGED AT PAVED DRIVEWAYS, SIDE STREETS, HIGH SHOULDERS, AND OTHER LOCATIONS NOT FEASIBLE TO CONSTRUCT AS APPROVED BY THE ENGINEER.



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



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



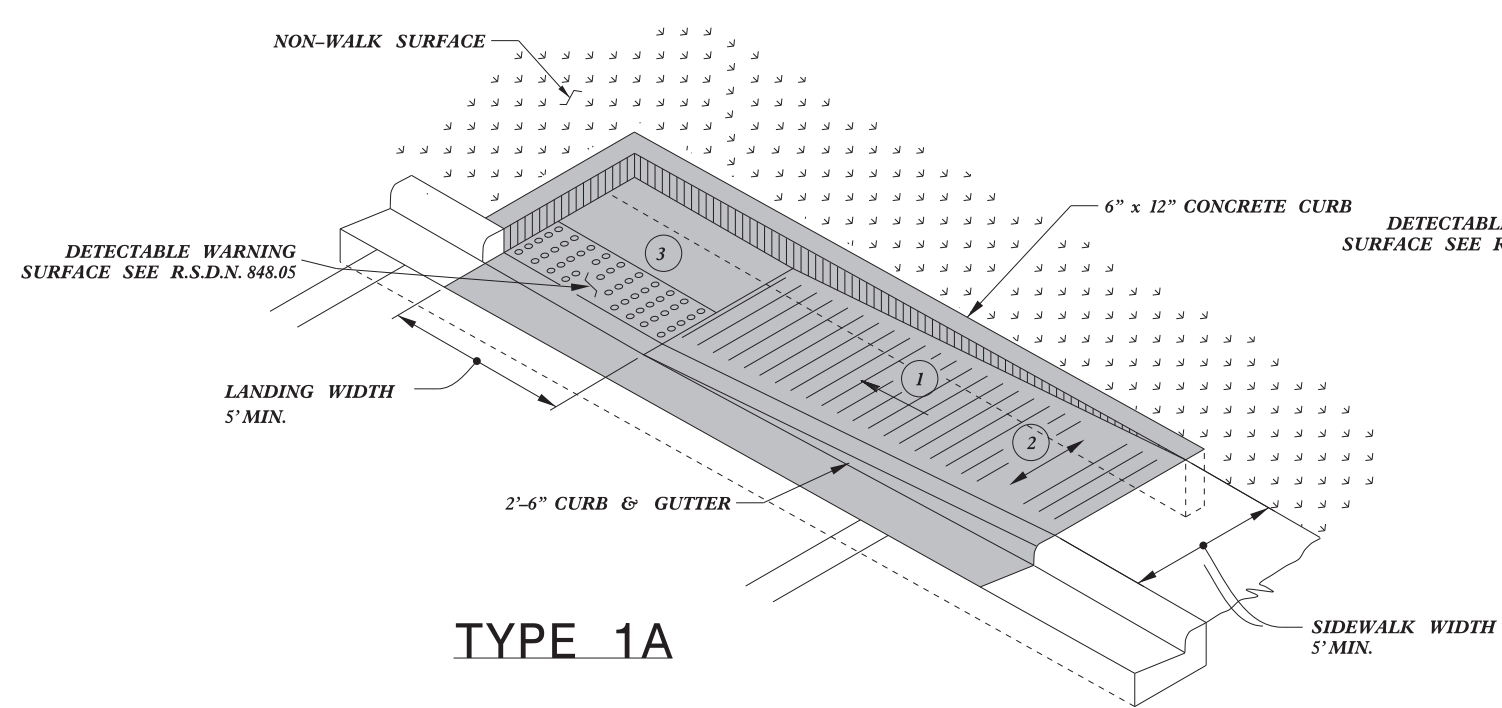
**SHOULDER WEDGE DETAIL**  
 (Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

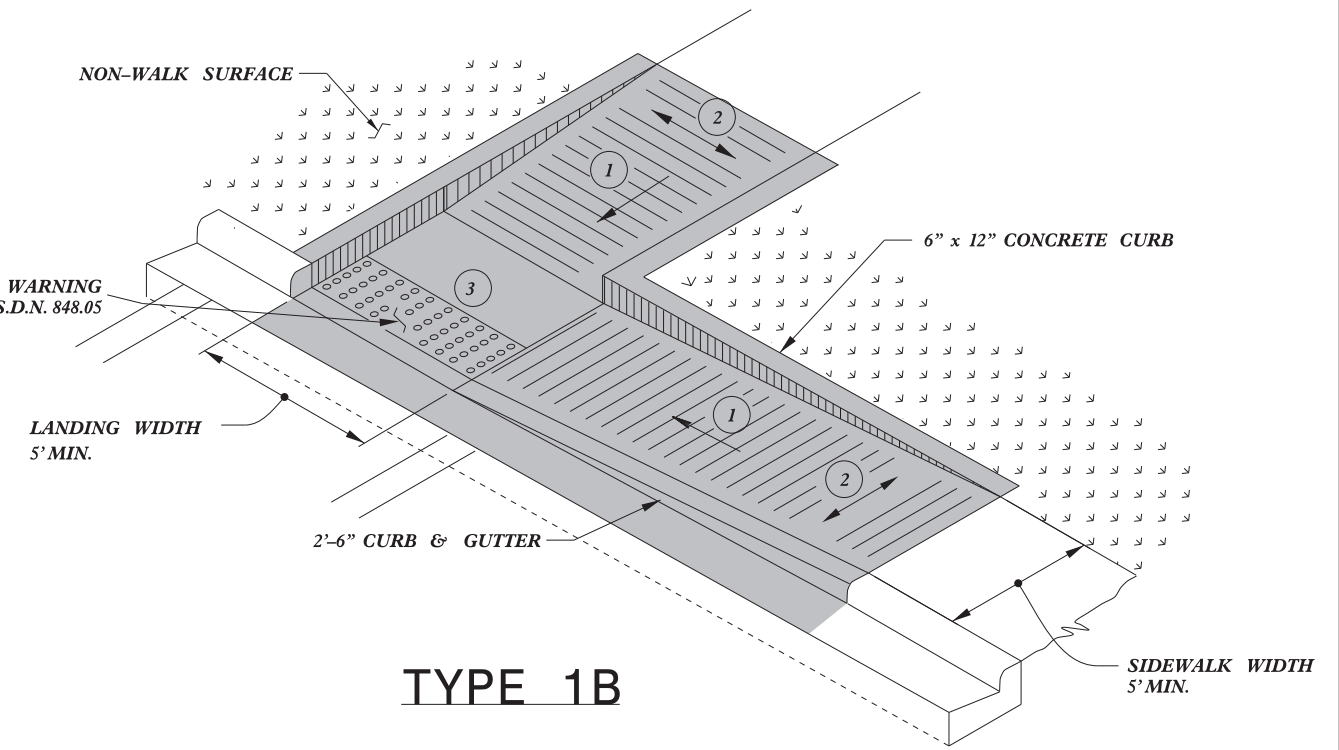
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DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

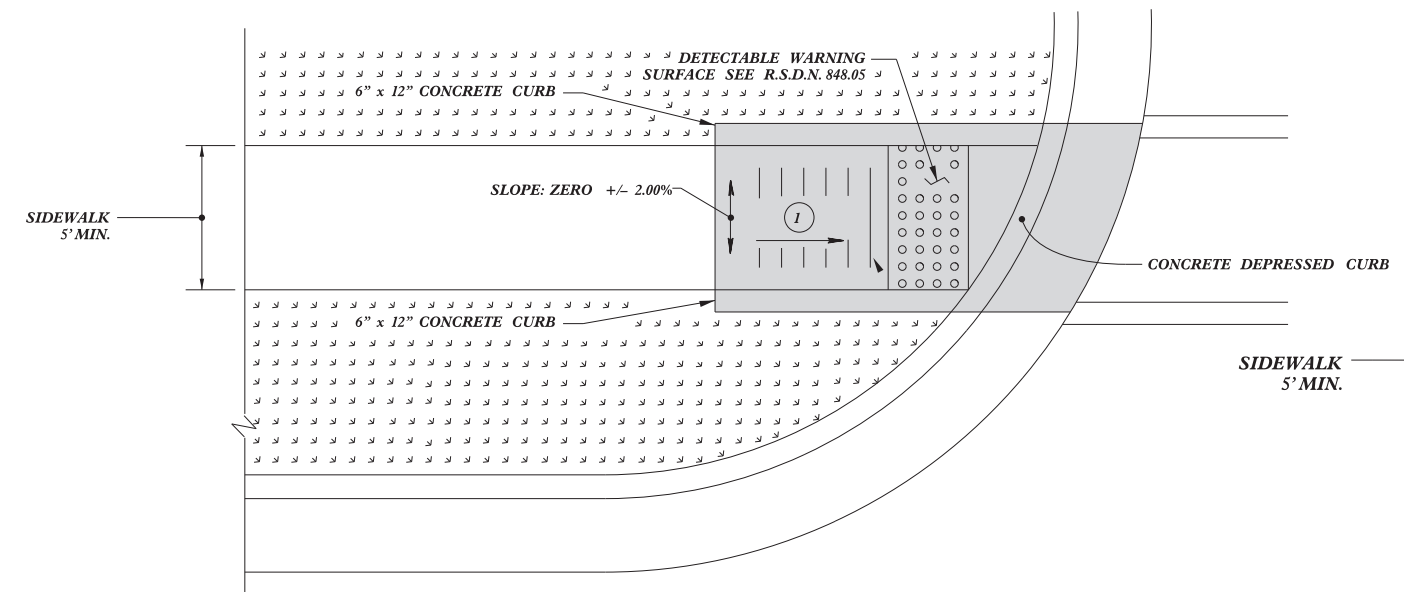
<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950 FAX 919-250-4119	
<b>SHOULDER WEDGE DETAILS</b>	
ORIGINAL BY: T.SPELL	DATE: 7-19-11
MODIFIED BY:	DATE: 2/2/16
CHECKED BY:	DATE:
FILE SPEC.:	s:\usr\det11s\stand\shoulderwedgedeta11.dgn



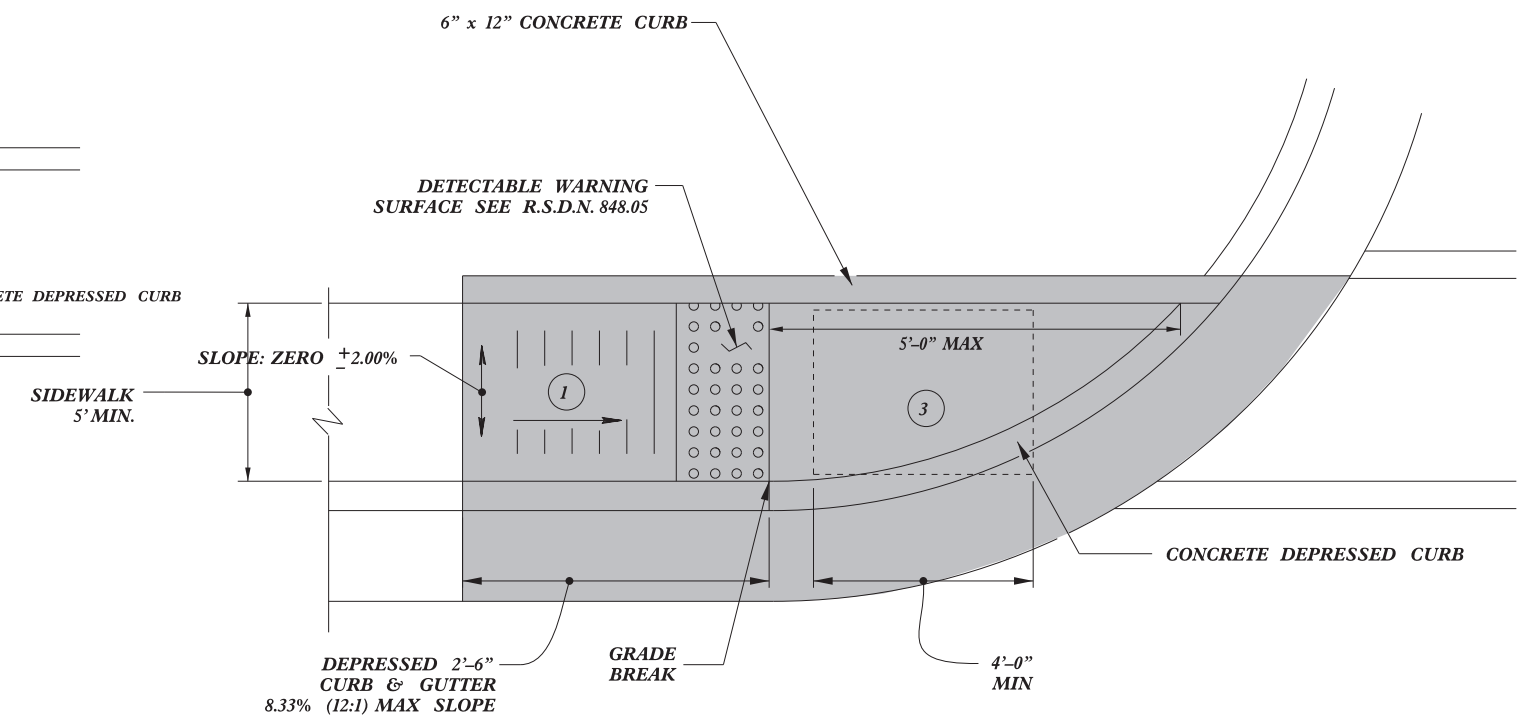
**TYPE 1A**



**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  
 Signed by: *J.S. Howerton*  
 J.S. HOWERTON  
 PROFESSIONAL ENGINEER  
 SEAL 022966  
 NORTH CAROLINA

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

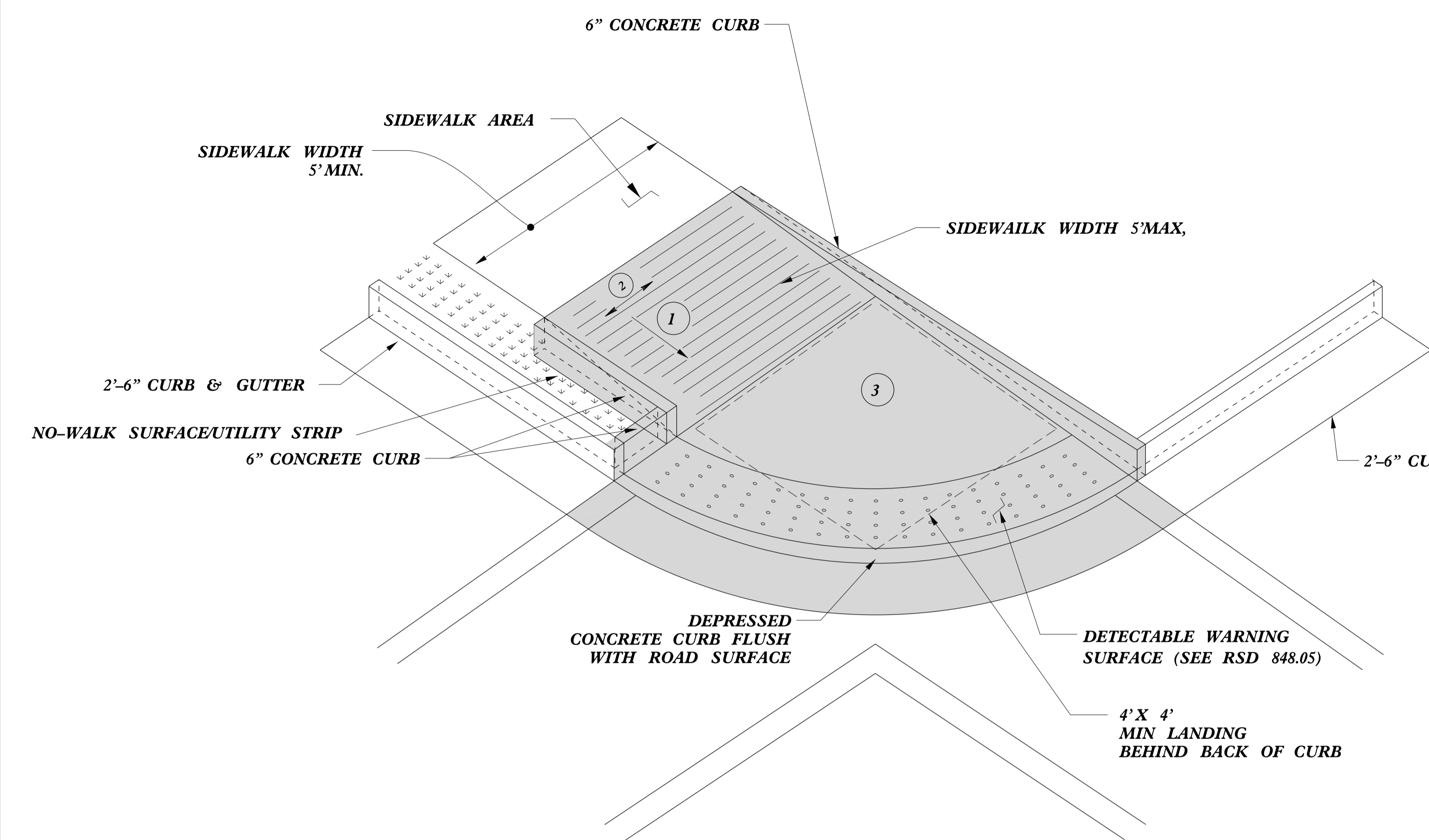
**CONTRACT STANDARDS AND DEVELOPMENT UNIT**  
 Office 919-707-6950 FAX 919-250-4119

**CURB RAMPS**  
 Directional Ramps

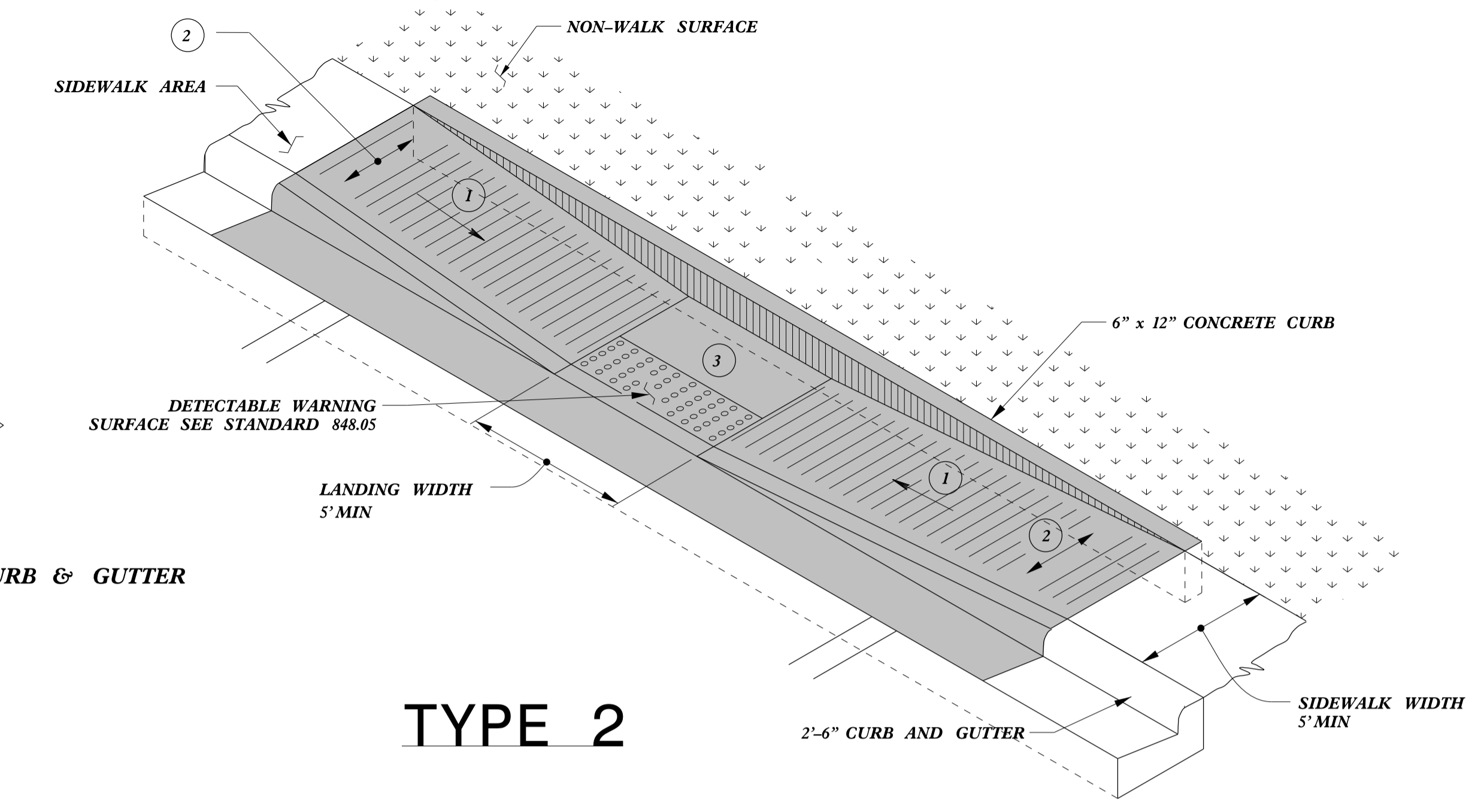
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 CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
 FILE SPEC: sids/2012CurbRamp/CurbRampDetails.dgn

5/14/99  
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 \$\$\$\$DU\$\$\$\$  
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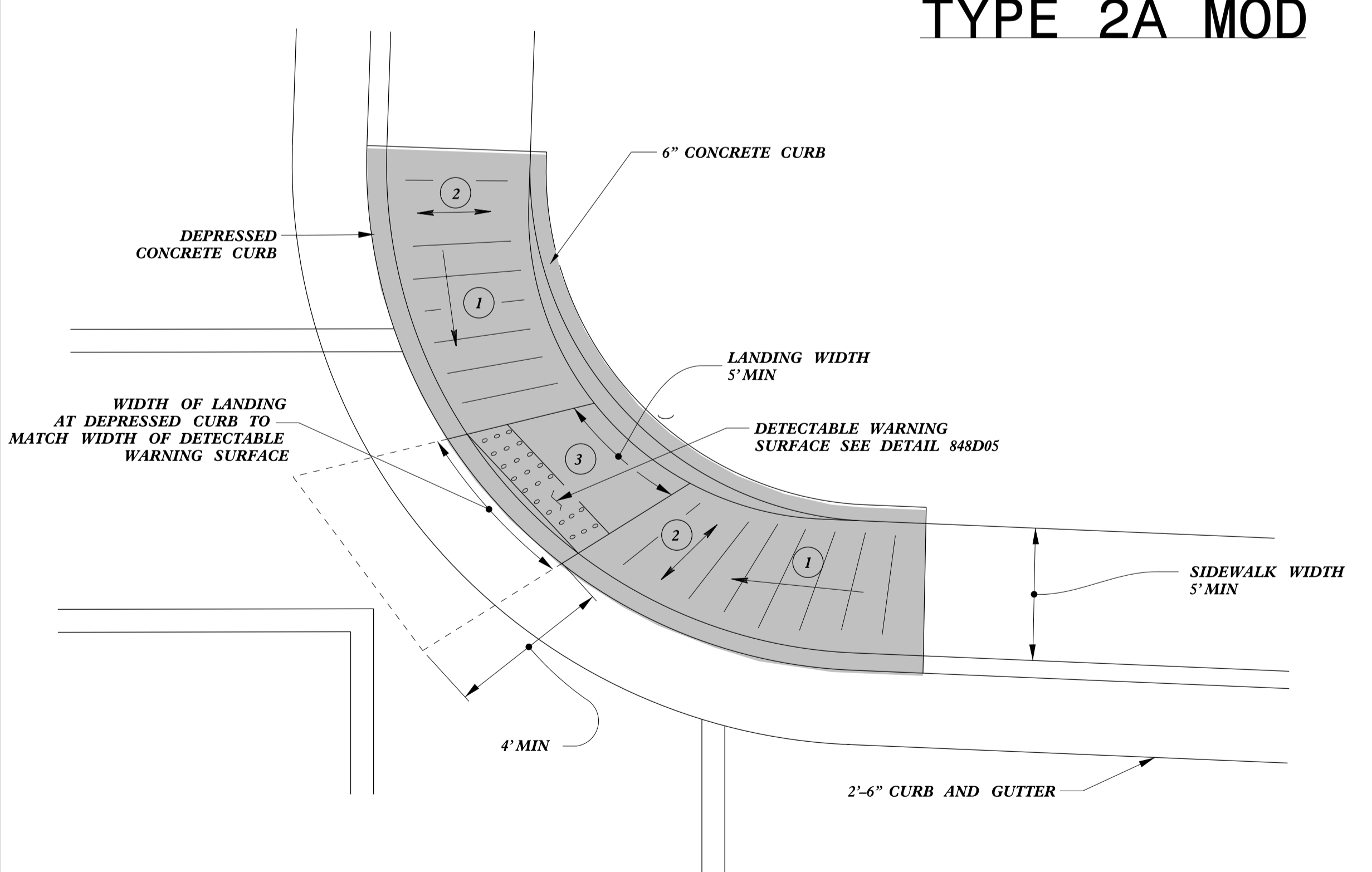
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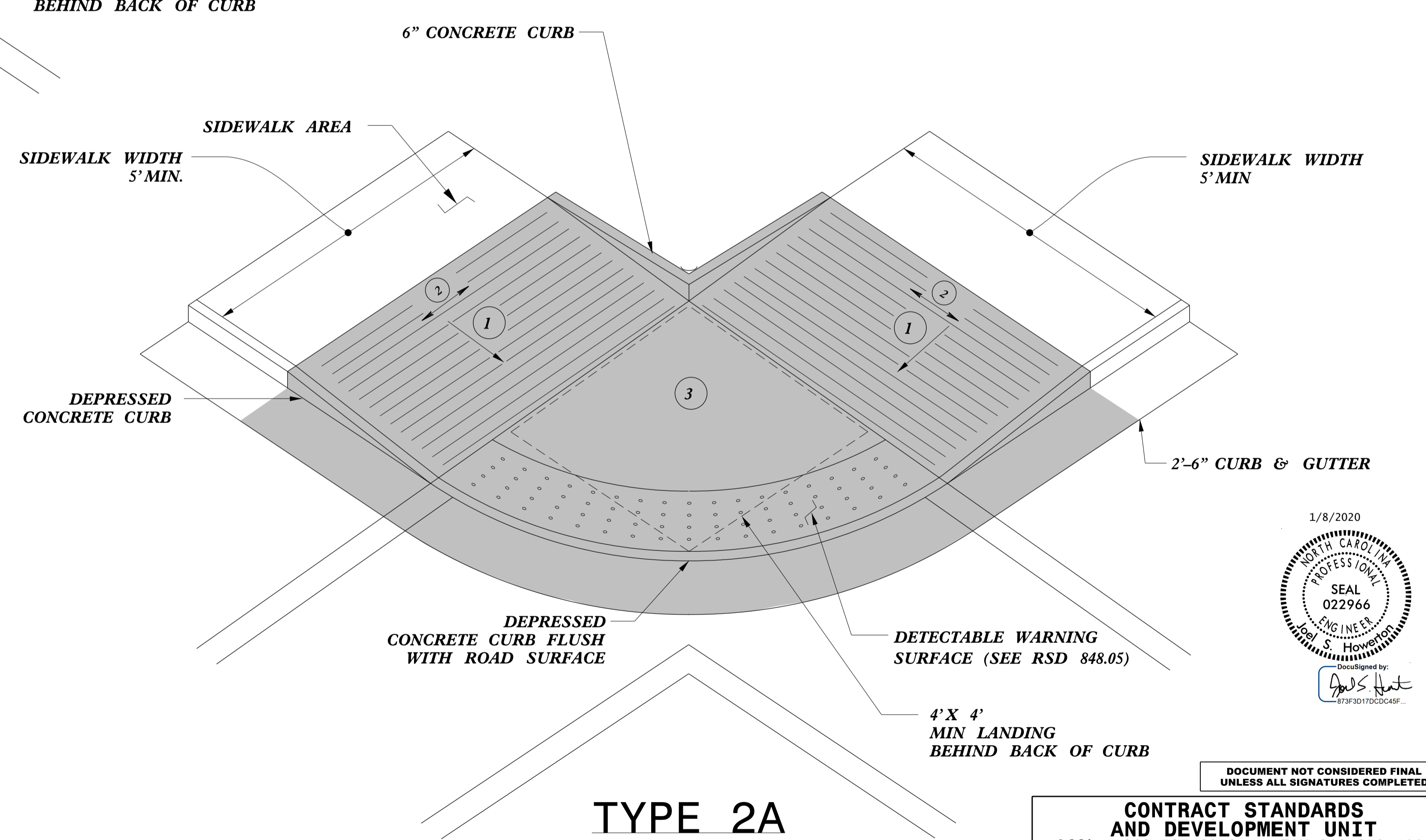
TYPE 2A MOD



TYPE 2



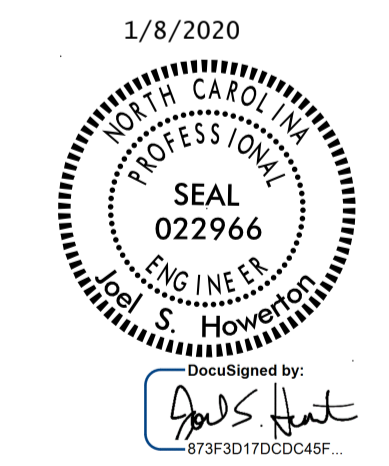
TYPE 2B



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



DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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Office 919-707-6950 FAX 919-250-4119

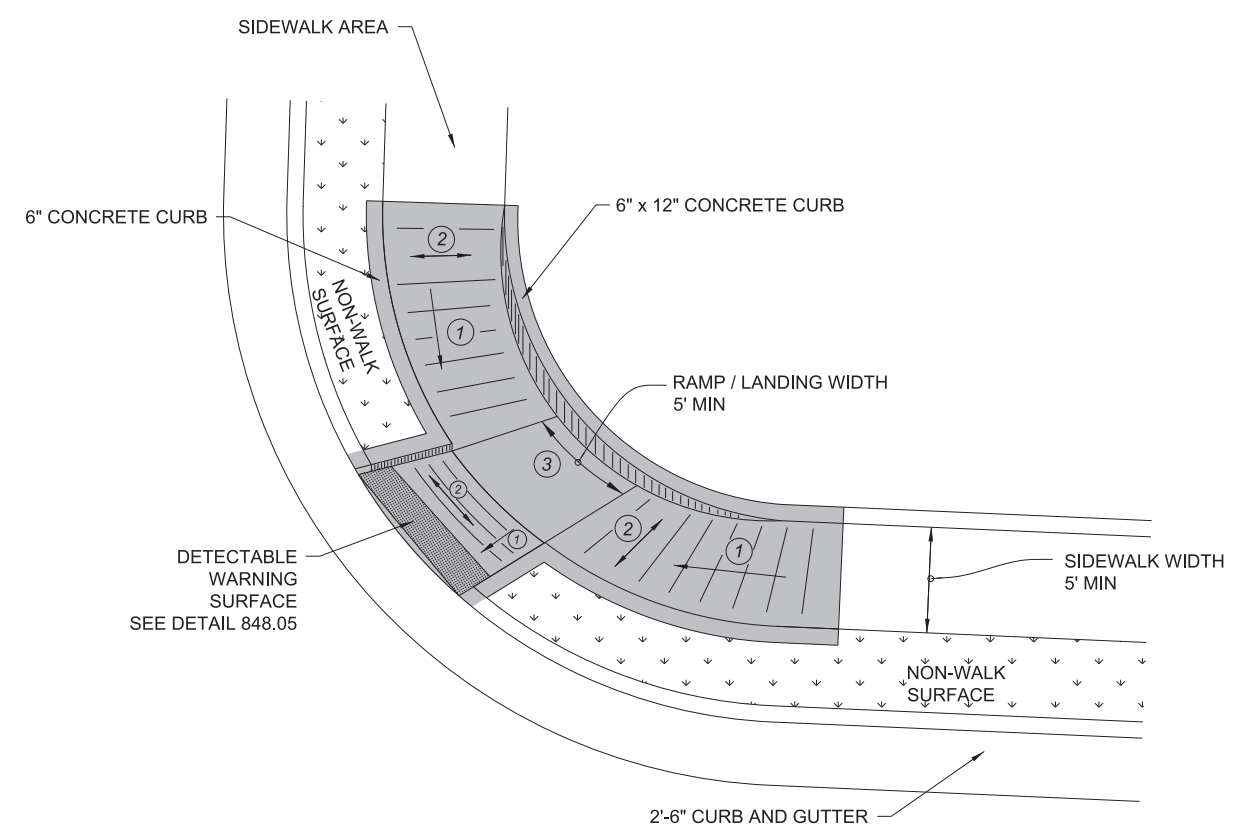
**CURB RAMPS**

ORIGINAL BY: J.S. HOWERTON DATE: 7/7/11  
 MODIFIED BY: DATE:  
 CHECKED BY: DATE:  
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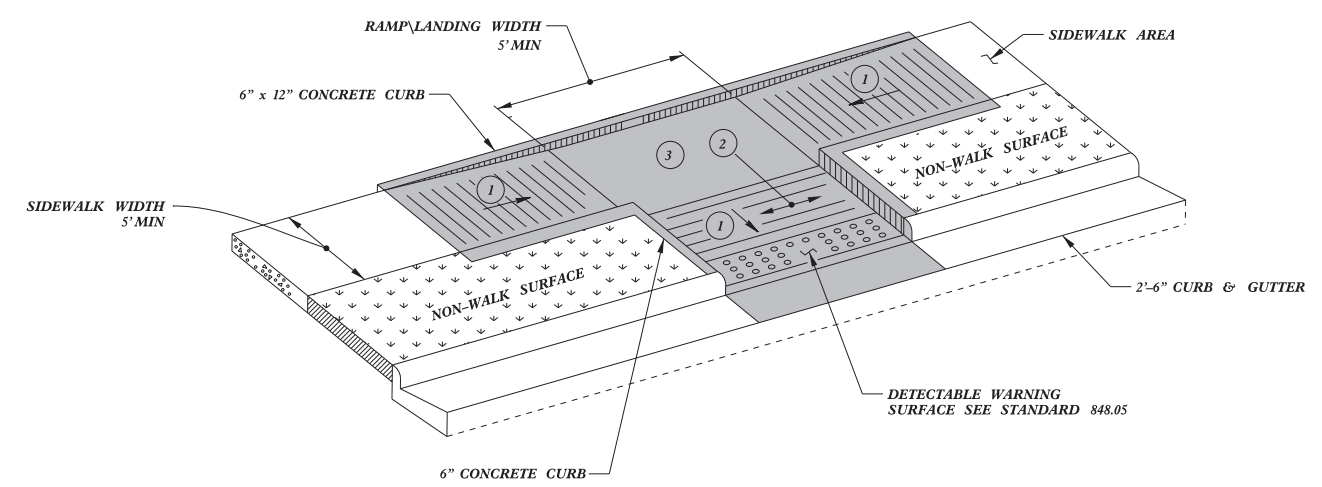
TIME: 11:58 AM 11/14/2020  
 CURB RAMPS.dwg  
 J.S. HOWERTON  
 673F3D170C0C49F



PAY LIMITS FOR 1 CURB RAMP



**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



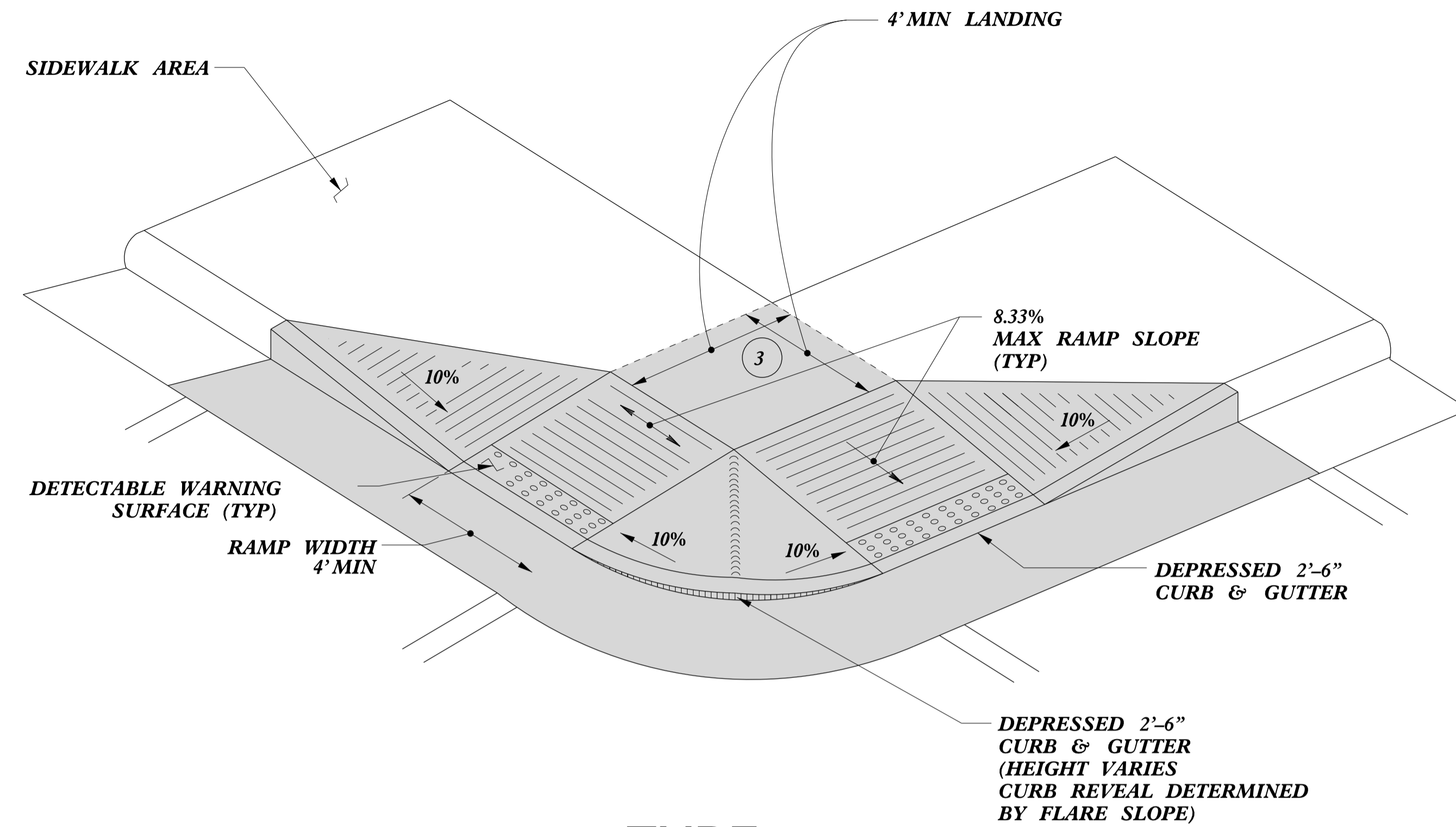
Designed by:  
*J.S. Howerton*  
873F3D17DCDC45F...

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

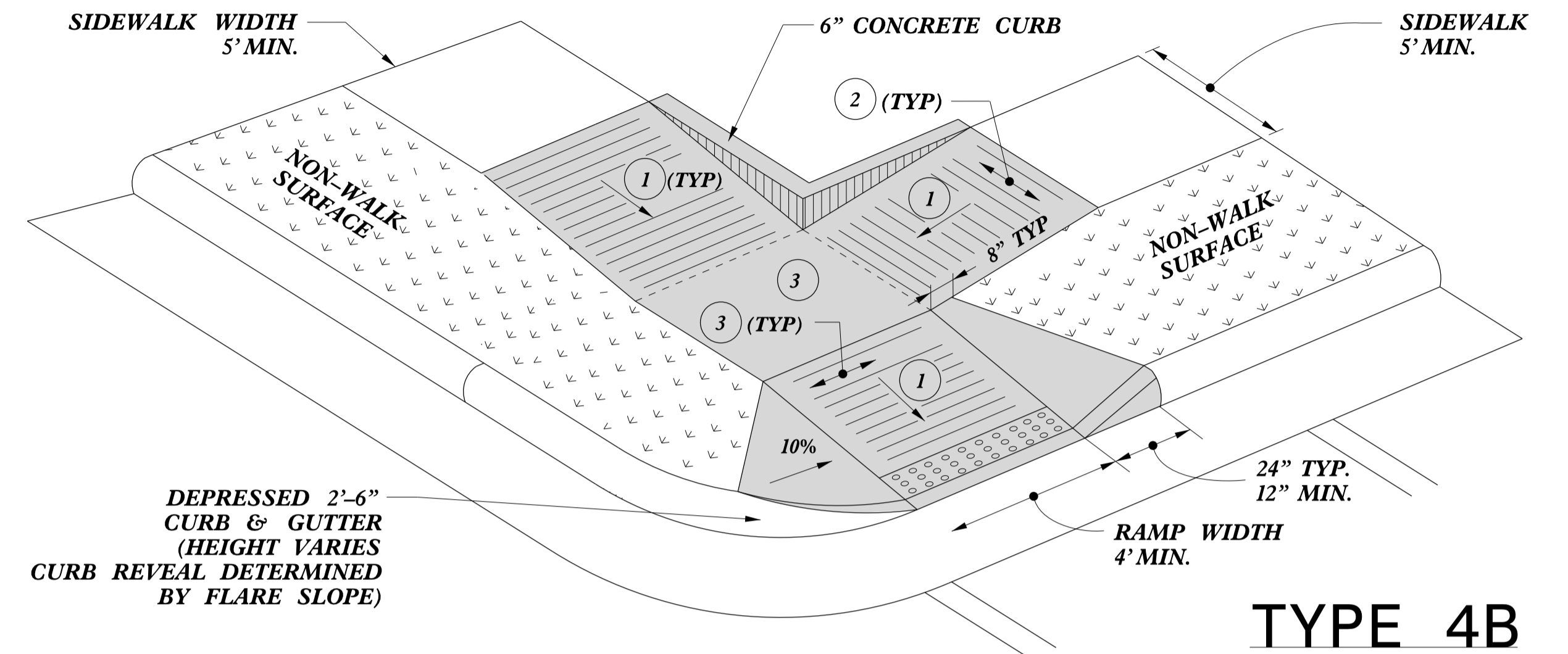
<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>CURB RAMPS</b>	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC. sids/2012CurbRamp/CurbRampDetails.dgn	

5/14/99  
SY-CURB-RAMP-DETAILS.dwg  
J.S. HOWERTON  
1/8/2020

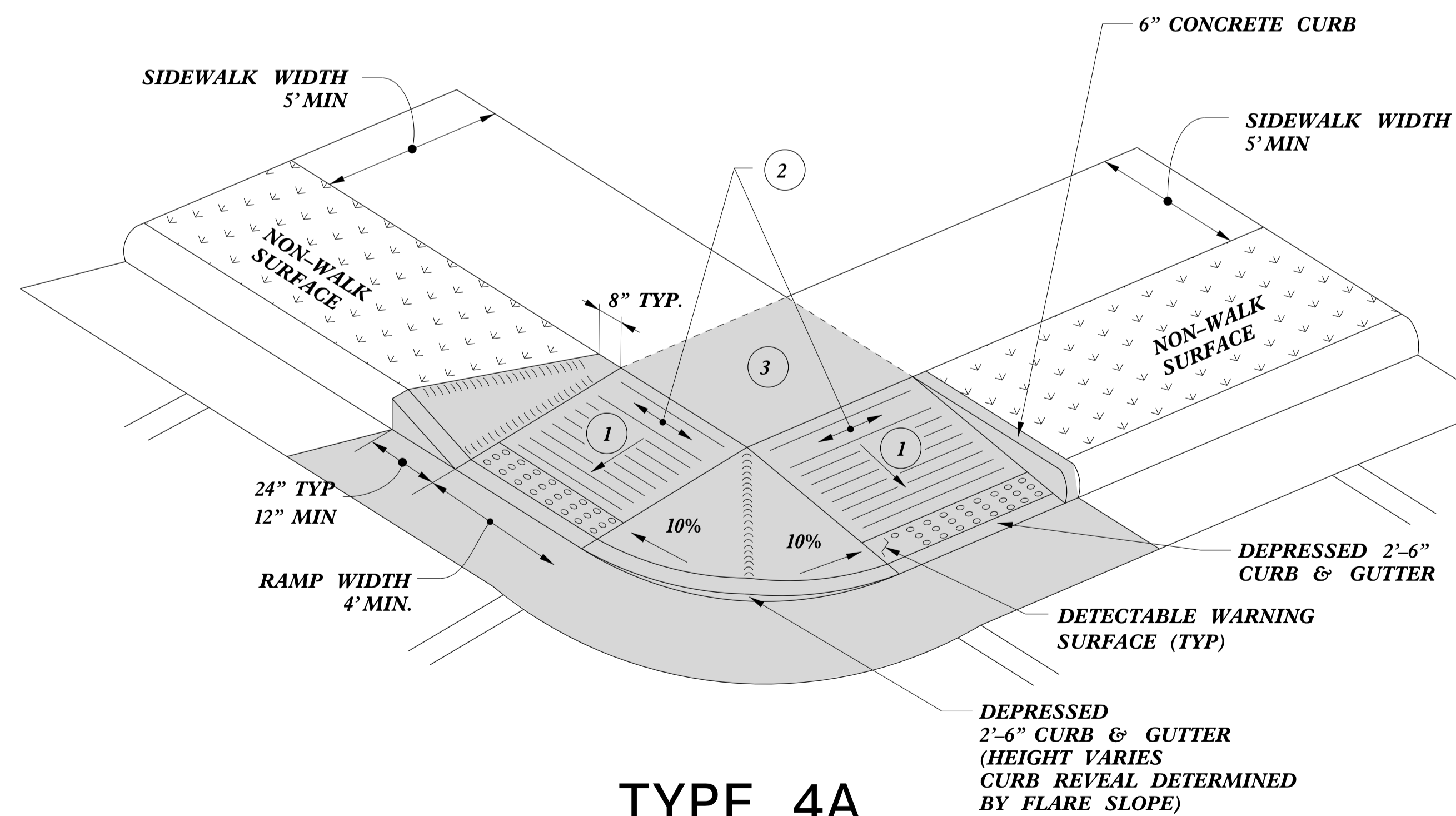
PAY LIMITS FOR 1 OR 2 CURB RAMPS  
(CALCULATE BASED ON NUMBER OF SETS  
OF TRUNCATED DOMES)



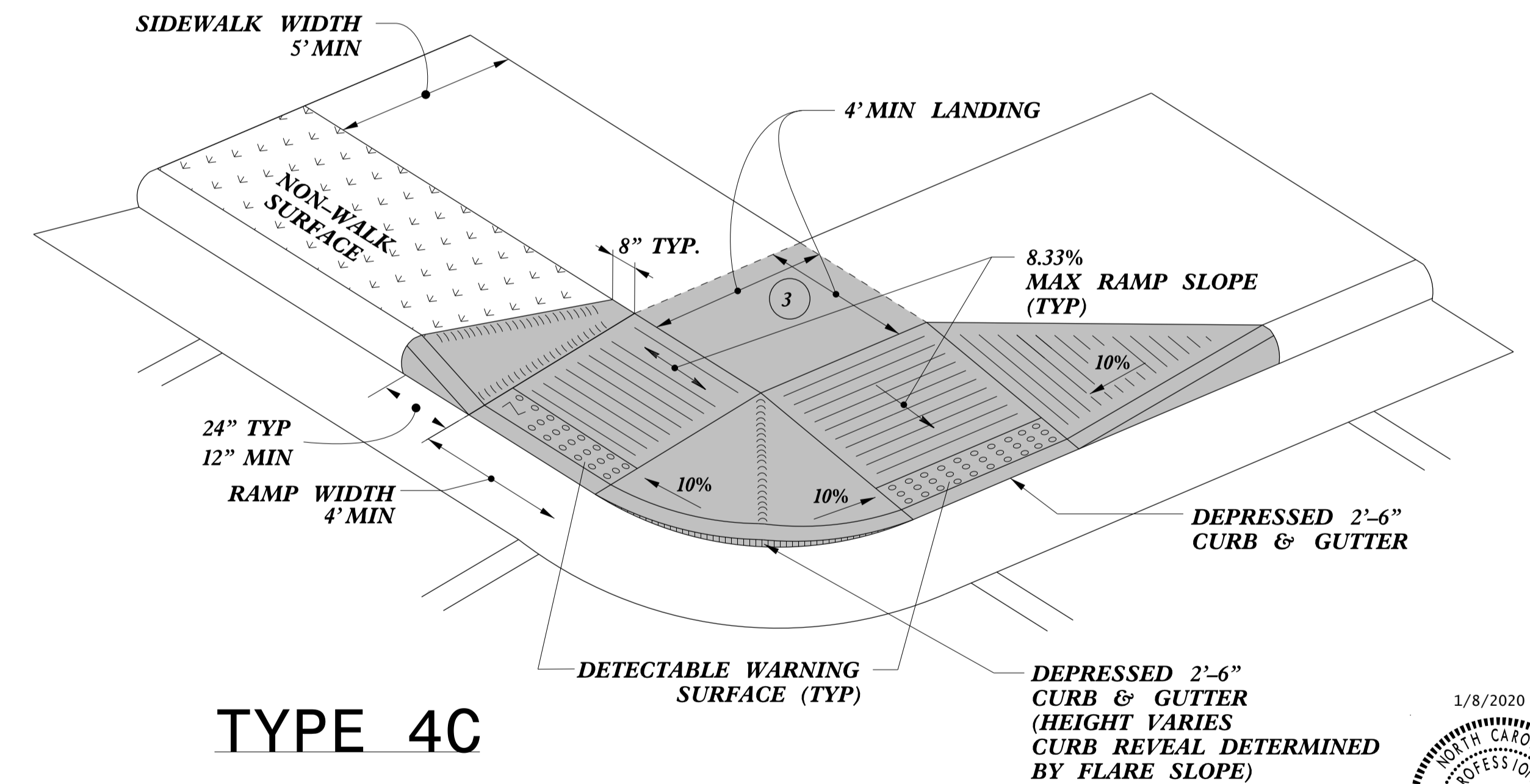
**TYPE 4**



**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

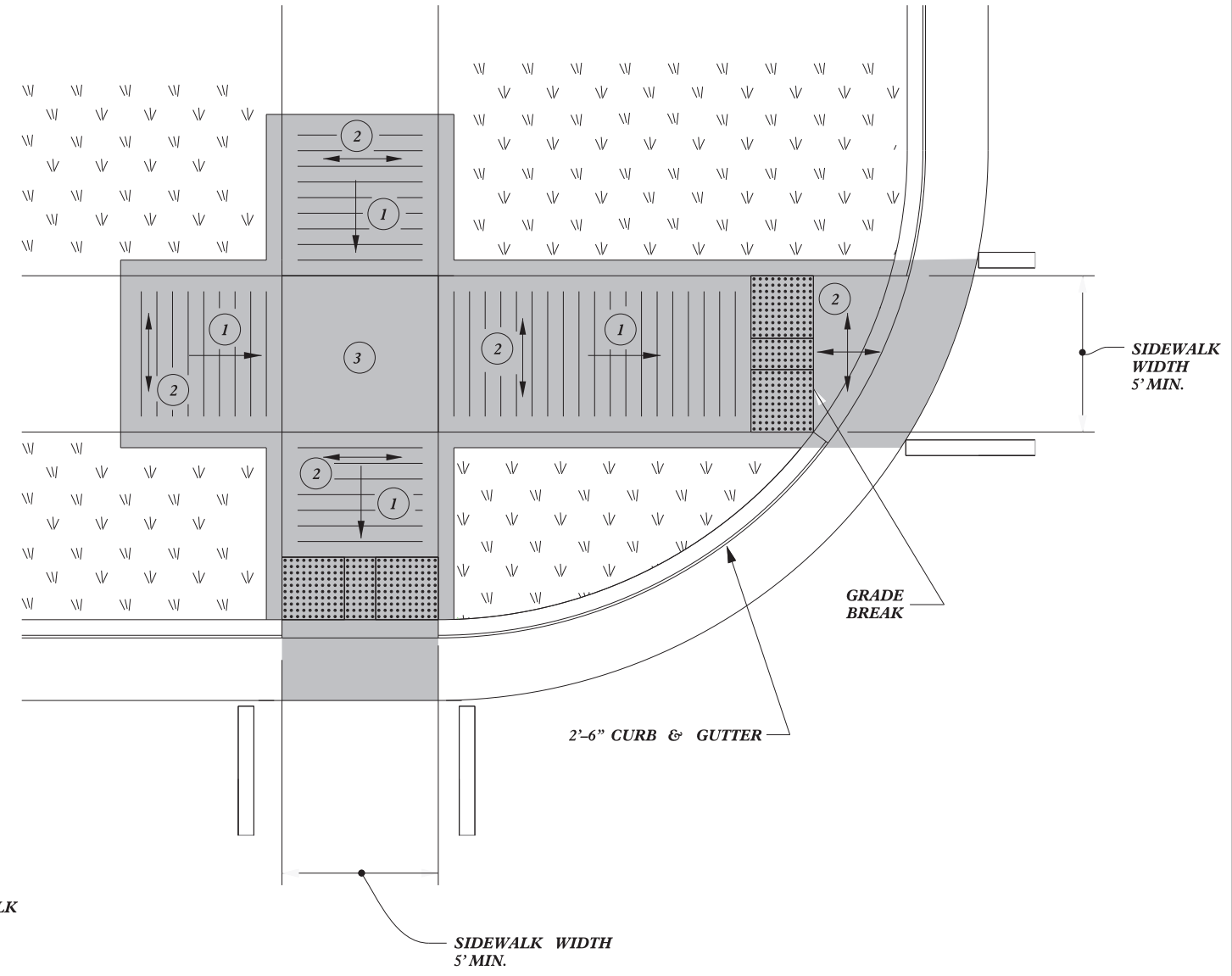
**CURB RAMPS**

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

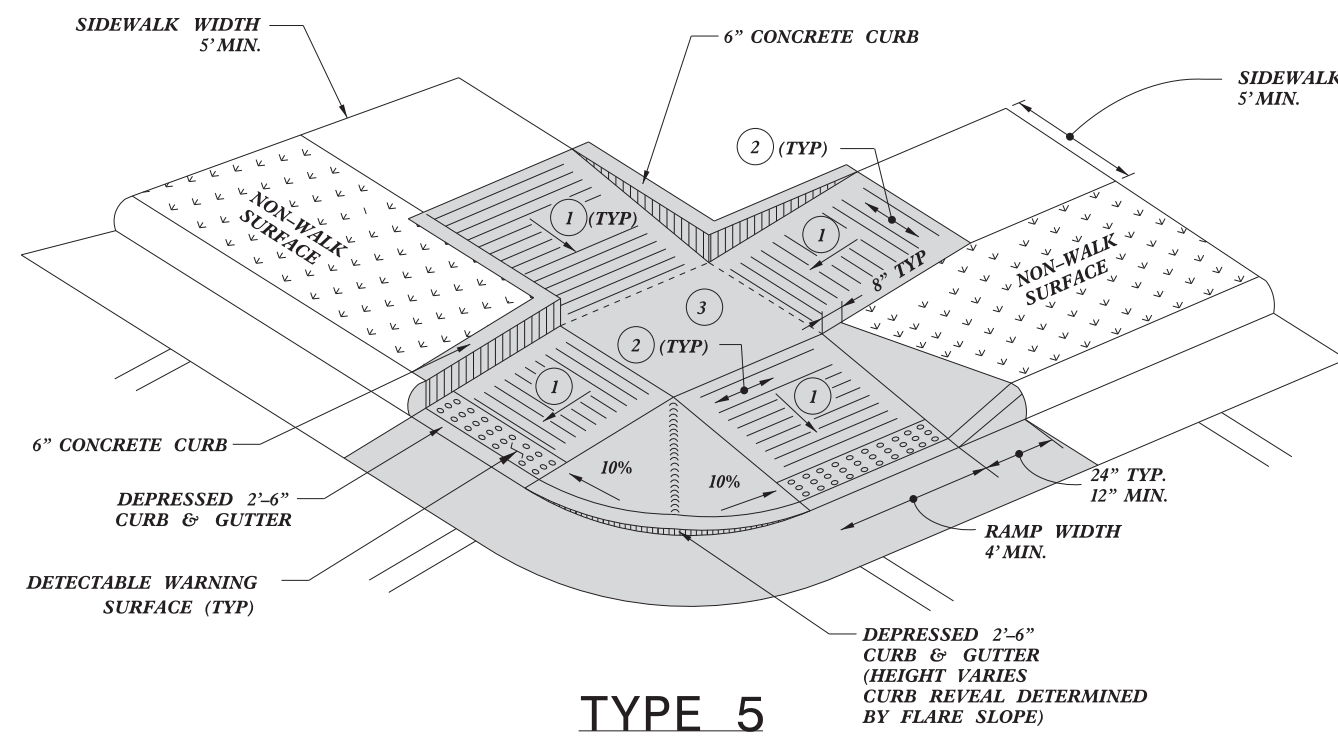
REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

5/14/99

**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: *J. S. Howerton*  
873F3D17DCDC45F...

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

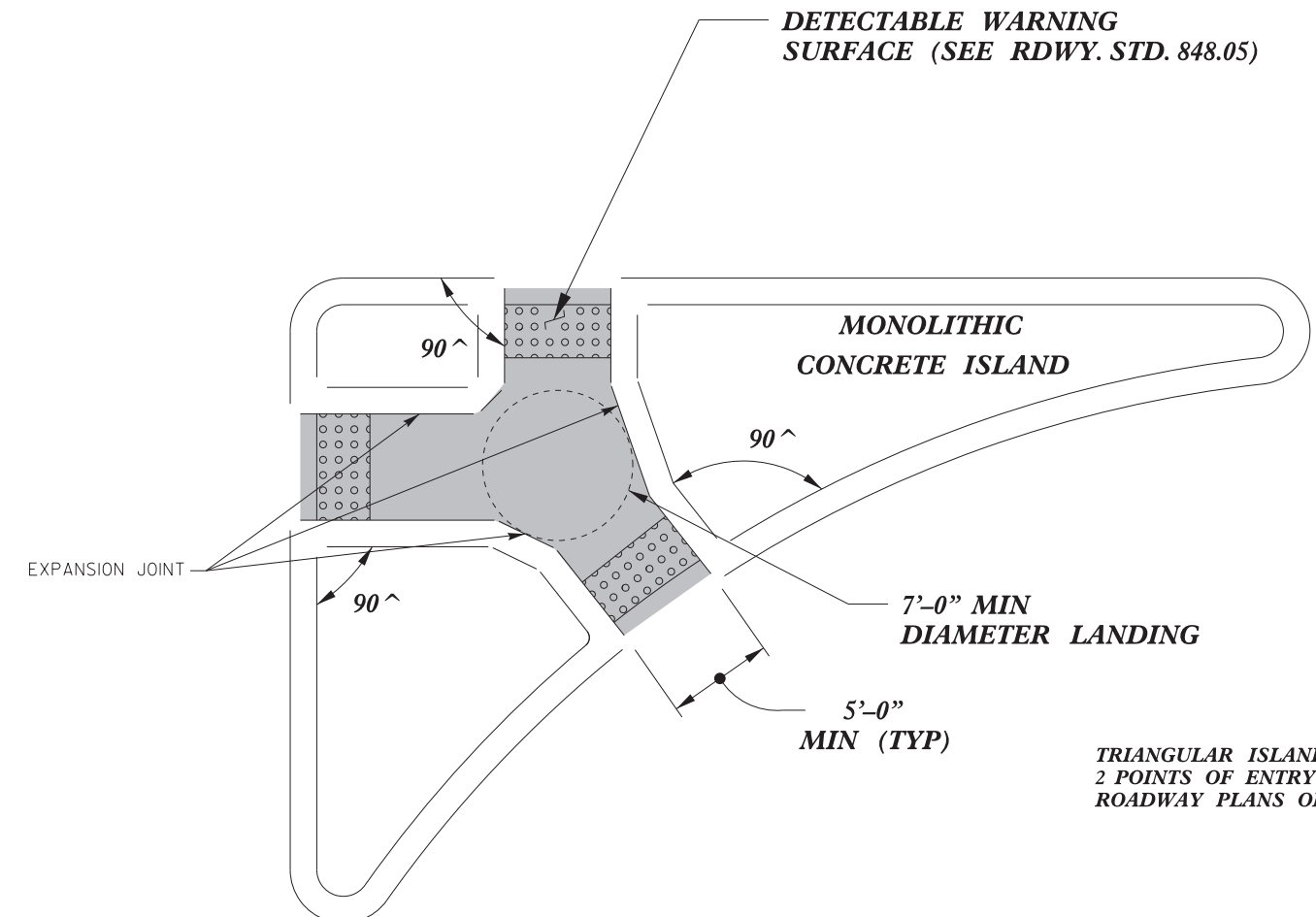
**CURB RAMPS**

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

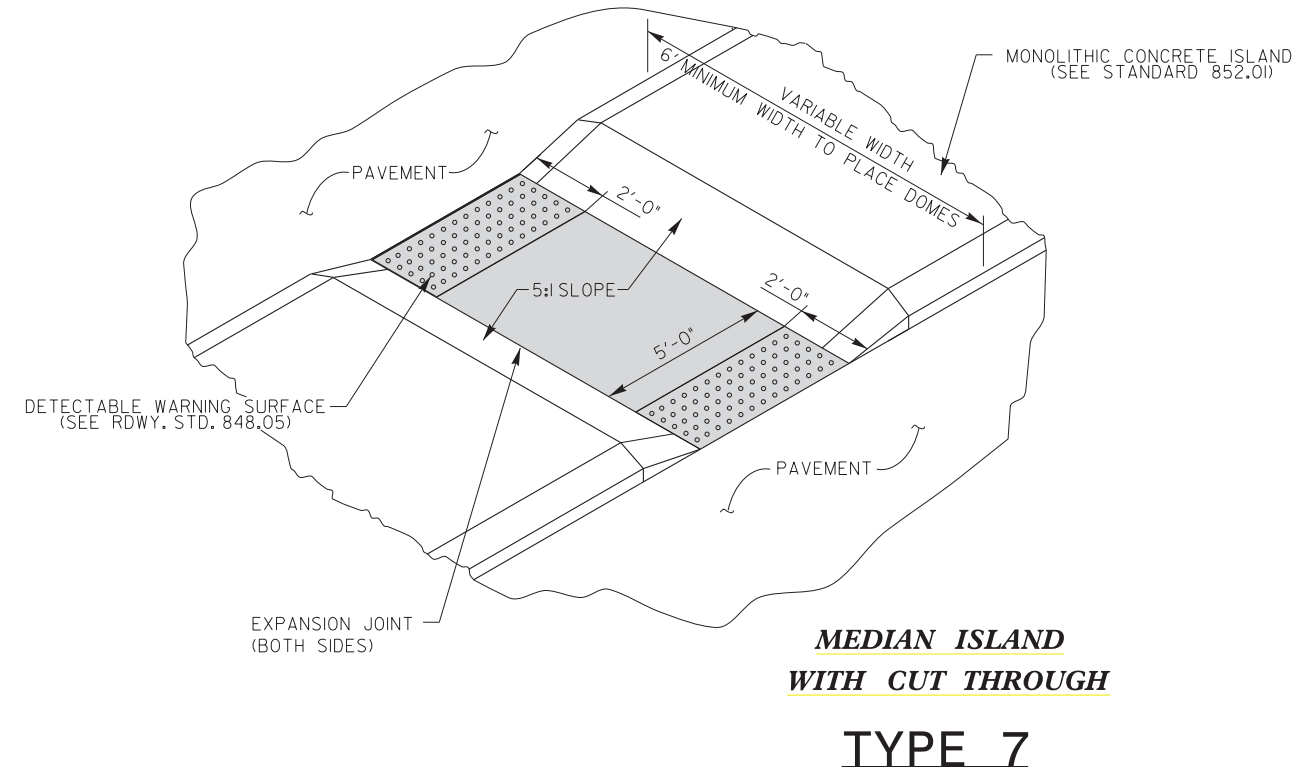
REFER TO ROADWAY STANDARD DRAWING NUMBER 848.05 SHEET 3 OF 3 FOR ALL RAMP NOTES

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

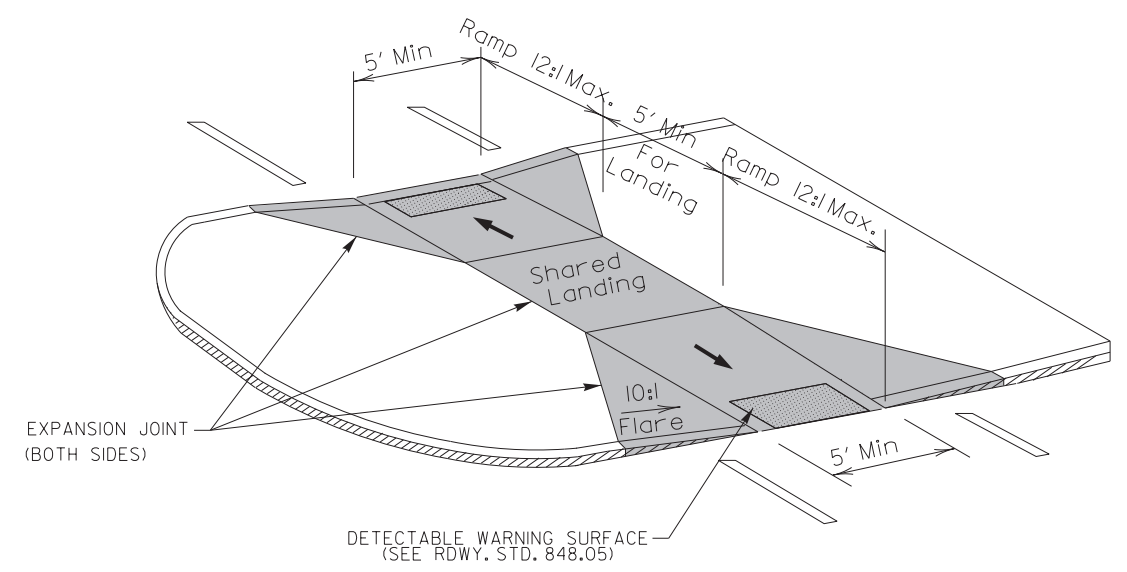
PAY LIMITS FOR 2 OR 3 CURB RAMPS  
(CALCULATE BASED ON NUMBER OF  
SETS OF TRUNCATED DOMES)



**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

<b>CONTRACT STANDARDS AND DEVELOPMENT UNIT</b>	
Office 919-707-6950	FAX 919-250-4119
<b>CURB RAMPS</b>	
Median or Turn Lane Islands	
ORIGINAL BY: J.S. HOWERTON	DATE: 7/7/11
MODIFIED BY:	DATE:
CHECKED BY:	DATE:
FILE SPEC. sids/2012CurbRamp/CurbRampDetails.dgn	

Seal of a Professional Engineer, State of North Carolina, License No. 022966. The seal is circular with the text 'NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 022966'. Below the seal is a signature and the text '873F3D17DCDC45F...'.

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

SUMMARY OF QUANTITIES

Project Number:	2022 Wake 70
WBS Number:	2021CPT.05.19.10921.1 2021CPT.05.19.20921.1
County:	Wake

Project Number	County	Municipality	Resurfacing Route	254900000-E	259100000-E	284500000-N	260000000-N	261300000-N	260500000-N	SP1
				2'-6" Concrete Curb & Gutter	4" Concrete Sidewalk	Adjustment of Meter Boxes or Valve Boxes	Retrofit Existing Curb Ramps	Remove and Replace Curb Ramps	Concrete Curb Ramps	Remove Curb Ramps
				LF	SY	EA	EA	EA	EA	EA
2020 Wake 70	Wake	Raleigh	US 70 EB/WB From/To U-5518 Eastern Limit To/From Glenwood Forest Dr/Hilburn Dr	72	29	0	1	2	0	6
2020 Wake 70	Wake	Raleigh	US 70 EB/WB From/To Glenwood Forest Dr/Hilburn Dr To/From .4 Mi E of NC 50	102	25	1	48	57	1	8
2020 Wake 70	Wake	Raleigh	US 70 EB/WB From/To East of Morehead Dr To/From Womens Club Dr	78	12	0	13	18	2	4
2020 Wake 70	Wake	Raleigh	US 70 EB/WB From/To SR 1728 To/From RR Bridge	0	0	0	1	1	0	0
2020 Wake 70	Wake	Raleigh	Blue Ridge Rd From US 70 To Crabtree Valley Ave	5	0	0	0	4	0	1
2020 Wake 70	Wake	Raleigh	Wade Ave From US 70 To Ridge Rd	59	42	0	13	25	4	4
2020 Wake 70	Wake	Raleigh	Oberlin to Wade Ramp From Oberlin Rd To SR 1728	0	0	0	6	7	0	0
2020 Wake 70	Wake	Raleigh	Glenwood to Wade Ramp From Glenwood Ave To SR 1728	0	0	0	0	1	2	0
<b>GRAND TOTAL</b>				<b>316</b>	<b>108</b>	<b>1</b>	<b>82</b>	<b>115</b>	<b>9</b>	<b>23</b>

SUMMARY OF QUANTITIES – US 70 EB/WB FROM/TO U-5518 EASTERN LIMIT TO/FROM GLENWOOD FOREST DR/HILBURN DR

Municipality:	Raleigh
Project Number:	2022 Wake 70
WBS Number:	2021CPT.05.19.10921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	254900000-E	259100000-E	284500000-N	260000000-N	261300000-N	260500000-N	SP1	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Adjustment of Meter Boxes or Valve Boxes EA	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
15243	1	US-70 (Glenwood Ave)	Marvino In		6					1	Remove Ramp
15244	1	US-70 (Glenwood Ave)	Marvino In		6					1	Remove Ramp
15241	2	US-70 (Glenwood Ave)	Bojangles (8680 Glenwood Ave) Entrance				1				RetrofitWarnings
15242	2	US-70 (Glenwood Ave)	Bojangles (8680 Glenwood Ave) Entrance					1			Type1Modified
15232	3	US-70 (Glenwood Ave)	SR-1647 (Ebenezer Church Rd)	18	5					1	Remove Ramp
15233	3	US-70 (Glenwood Ave)	SR-1647 (Ebenezer Church Rd)	17	5					1	Remove Ramp
24088	4	US-70 (Glenwood Ave)	Hertz Dr					1			Type1A
18430	5	US-70 (Glenwood Ave)	Glenwood Forest Dr	19						1	Remove Ramp
18436	5	US-70 (Glenwood Ave)	Hilburn Dr	18	7					1	Remove Ramp
<b>Sub-Total for US 70 EB/WB From/To U-5518 Eastern Limit To/From Glenwood Forest Dr/Hilburn Dr</b>				<b>72</b>	<b>29</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>6</b>	

SUMMARY OF QUANTITIES – US 70 EB/WB FROM/TO GLENWOOD FOREST DR/HILBURN DR TO/FROM .4 MI E OF NC 50

Municipality:	Raleigh
Project Number:	2022 Wake 70
WBS Number:	2021CPT.05.19.10921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	254900000-E	259100000-E	284500000-N	260000000-N	261300000-N	260500000-N	SP1	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Adjustment of Meter Boxes or Valve Boxes EA	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
18438	1	US-70 (Glenwood Ave)	7016 Glenwood Ave (Abra Auto Body Repair) Entrance					1			Type1B
18439	1	US-70 (Glenwood Ave)	7016 Glenwood Ave (Abra Auto Body Repair) Entrance					1			Type1Modified
18503	2	US-70 (Glenwood Ave)	McDonald's (3508 W Millbrook Rd) Glenwood Ave Entrance					1			Type1Modified
18502	2	US-70 (Glenwood Ave)	McDonald's (3508 W Millbrook Rd) Glenwood Ave Entrance					1			Type1Modified
18512	3	US-70 (Glenwood Ave)	SR-1664 (Duraleigh Rd)				1				RetrofitWarnings
18511	3	US-70 (Glenwood Ave)	SR-3466 (W Millbrook Rd)				1				RetrofitWarnings
18510	3	US-70 (Glenwood Ave)	SR-1664 (Duraleigh Rd)				1				RetrofitWarnings
18509	3	US-70 (Glenwood Ave)	SR-1664 (Duraleigh Rd)				1				RetrofitWarnings
18508	3	US-70 (Glenwood Ave)	SR-1664 (Duraleigh Rd)				1				RetrofitWarnings
18507	3	US-70 (Glenwood Ave)	SR-1664 (Duraleigh Rd)	17	10					1	Remove Ramp
18501	3	US-70 (Glenwood Ave)	SR-3466 (W Millbrook Rd)	14						1	Remove Ramp
18499	3	US-70 (Glenwood Ave)	SR-3466 (W Millbrook Rd)				1				RetrofitWarnings
18500	3	US-70 (Glenwood Ave)	SR-3466 (W Millbrook Rd)					1			Standard - 848.06
18498	3	US-70 (Glenwood Ave)	SR-3466 (W Millbrook Rd)				1				RetrofitWarnings
18440	4	US-70 (Glenwood Ave)	Grove Church Rd					1			Type4B
18441	4	US-70 (Glenwood Ave)	Grove Church Rd					1			Type7
18442	4	US-70 (Glenwood Ave)	Grove Church Rd					1			Type7
18443	4	US-70 (Glenwood Ave)	Grove Church Rd					1			Type1Modified
18497	4	US-70 (Glenwood Ave)	CVS (6840 Glenwood Ave) Entrance					1			Type1Modified
18496	4	US-70 (Glenwood Ave)	CVS (6840 Glenwood Ave) Entrance				1				RetrofitWarnings
18444	5	US-70 (Glenwood Ave)	Shell Gas Station (6801 Glenwood Ave) Entrance				1				RetrofitWarnings
18446	5	US-70 (Glenwood Ave)	Shell Gas Station (6801 Glenwood Ave) Entrance				1				RetrofitWarnings
18447	5	US-70 (Glenwood Ave)	Shell Gas Station (6801 Glenwood Ave) Entrance				1				RetrofitWarnings
18493	5	US-70 (Glenwood Ave)	AutoMan (6806 Glenwood Ave) Entrance				1				RetrofitWarnings
18492	5	US-70 (Glenwood Ave)	AutoMan (6806 Glenwood Ave) Entrance				1				RetrofitWarnings
18487	6	US-70 (Glenwood Ave)	Davis Cir					1			Type1Modified
18448	7	US-70 (Glenwood Ave)	Havertys Furniture (6701 Glenwood Ave) Entrance				1				RetrofitWarnings
18449	7	US-70 (Glenwood Ave)	Havertys Furniture (6701 Glenwood Ave) Entrance					1			Type7
18450	7	US-70 (Glenwood Ave)	Havertys Furniture (6701 Glenwood Ave) Entrance					1			Type7
18451	7	US-70 (Glenwood Ave)	Havertys Furniture (6701 Glenwood Ave) Entrance					1			Type1Modified
18452	7	US-70 (Glenwood Ave)	Days Inn (6619 Glenwood Ave) West Entrance				1				RetrofitWarnings
18453	7	US-70 (Glenwood Ave)	Days Inn (6619 Glenwood Ave) West Entrance				1				RetrofitWarnings
18483	8	US-70 (Glenwood Ave)	Chick-fil-A (6612 Glenwood Ave) Entrance					1			Type1Modified
18482	8	US-70 (Glenwood Ave)	Chick-fil-A (6612 Glenwood Ave) Entrance					1			Type1B
18454	9	US-70 (Glenwood Ave)	Days Inn (6619 Glenwood Ave) East Entrance					1			Type1Modified
18459	9	US-70 (Glenwood Ave)	Wendy's (6611 Glenwood Ave) Entrance					1			Type1Modified
18458	9	US-70 (Glenwood Ave)	Wendy's (6611 Glenwood Ave) Entrance					1			Type1Modified
18457	9	US-70 (Glenwood Ave)	Wendy's (6611 Glenwood Ave) Entrance					1			Type1Modified
18456	9	US-70 (Glenwood Ave)	Wendy's (6611 Glenwood Ave) Entrance				1				RetrofitWarnings
18455	9	US-70 (Glenwood Ave)	Days Inn (6619 Glenwood Ave) East Entrance					1			Type1Modified
18481	10	US-70 (Glenwood Ave)	The Bull Chute Western Wear (6606 Glenwood Ave) Entrance					1			Type1Modified
18480	10	US-70 (Glenwood Ave)	The Bull Chute Western Wear (6606 Glenwood Ave) Entrance				1				RetrofitWarnings
18463	11	US-70 (Glenwood Ave)	Valero (6501 Glenwood Ave) Entrance					1			Type1Modified
18462	11	US-70 (Glenwood Ave)	Valero (6501 Glenwood Ave) Entrance					1			Type1Modified
18461	11	US-70 (Glenwood Ave)	Valero (6501 Glenwood Ave) Entrance					1			Type1Modified
18460	11	US-70 (Glenwood Ave)	Valero (6501 Glenwood Ave) Entrance					1			Type1Modified
18479	12	US-70 (Glenwood Ave)	Townridge Shopping Center (6578 Glenwood Ave) Entrance					1			Type1Modified
18478	12	US-70 (Glenwood Ave)	Townridge Shopping Center (6578 Glenwood Ave) Entrance				1				RetrofitWarnings
18477	13	US-70 (Glenwood Ave)	Burger King (6500 Glenwood Ave) Entrance				1				RetrofitWarnings
18476	13	US-70 (Glenwood Ave)	Burger King (6500 Glenwood Ave) Entrance				1				RetrofitWarnings
18474	14	US-70 (Glenwood Ave)	Pleasant Valley Rd				1				RetrofitWarnings
18475	14	US-70 (Glenwood Ave)	Pleasant Valley Rd				1				RetrofitWarnings
18519	15	US-70 (Glenwood Ave)	Providence Baptist Church (6339 Glenwood Ave) West Entrance				1				RetrofitWarnings
18520	15	US-70 (Glenwood Ave)	Providence Baptist Church (6339 Glenwood Ave) West Entrance				1				RetrofitWarnings
18588	16	US-70 (Glenwood Ave)	Taco Bell (6404 Glenwood Ave) Entrance				1				RetrofitWarnings
18589	16	US-70 (Glenwood Ave)	Taco Bell (6404 Glenwood Ave) Entrance				1				RetrofitWarnings
18586	16	US-70 (Glenwood Ave)	Chili's (6324 Glenwood Ave) West Entrance					1			Type1B
18587	16	US-70 (Glenwood Ave)	Chili's (6324 Glenwood Ave) West Entrance					1			Type1Modified
18584	17	US-70 (Glenwood Ave)	Chili's (6324 Glenwood Ave) East Entrance					1			Type1Modified
18585	17	US-70 (Glenwood Ave)	Chili's (6324 Glenwood Ave) East Entrance				1				RetrofitWarnings
18513	18	US-70 (Glenwood Ave)	Cherry Pie (6311 Glenwood Ave) Entrance				1				RetrofitWarnings
18514	18	US-70 (Glenwood Ave)	Cherry Pie (6311 Glenwood Ave) Entrance					1			Type1Modified
18581	18	US-70 (Glenwood Ave)	Jimmy Johns (6286 Glenwood Ave) Entrance	12						1	Remove Ramp
18582	18	US-70 (Glenwood Ave)	Jimmy Johns (6286 Glenwood Ave) Entrance	12						1	Remove Ramp
18583	18	US-70 (Glenwood Ave)	Jimmy Johns (6286 Glenwood Ave) Entrance					1			Type1Modified
<b>Sub-Total</b>				<b>55</b>	<b>10</b>	<b>0</b>	<b>29</b>	<b>32</b>	<b>0</b>	<b>4</b>	

SUMMARY OF QUANTITIES – US 70 EB/WB FROM/TO GLENWOOD FOREST DR/HILBURN DR TO/FROM .4 MI E OF NC 50

Municipality:	Raleigh
Project Number:	2022 Wake 70
WBS Number:	2021CPT.05.19.10921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	254900000-E	259100000-E	284500000-N	260000000-N	261300000-N	260500000-N	SP1	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Adjustment of Meter Boxes or Valve Boxes EA	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
18580	18	US-70 (Glenwood Ave)	Jimmy Johns (6286 Glenwood Ave) Entrance					1			Type1Modified
24017	19	US-70 (Glenwood Ave)	Valero (6200 Glenwood Ave) West Entrance						1		Type1Modified
18572	19	US-70 (Glenwood Ave)	Valero (6200 Glenwood Ave) West Entrance					1			Type1Modified
18573	19	US-70 (Glenwood Ave)	Valero (6200 Glenwood Ave) West Entrance	5						1	Remove Ramp
18571	20	US-70 (Glenwood Ave)	Valero (6200 Glenwood Ave) East Entrance					1			Type1Modified
18524	20	US-70 (Glenwood Ave)	Golden Corral / First Watch (6109 Glenwood Ave) Entrance					1			Type1Modified
18570	20	US-70 (Glenwood Ave)	Valero (6200 Glenwood Ave) East Entrance		5			1			Type1Modified
18526	21	US-70 (Glenwood Ave)	Glenwood Ave Service Rd				1				RetrofitWarnings
18527	21	US-70 (Glenwood Ave)	Glenwood Ave Service Rd				1				RetrofitWarnings
18569	21	US-70 (Glenwood Ave)	Munford Rd					1			Type1Modified
18567	21	US-70 (Glenwood Ave)	Munford Rd	19						1	Remove Ramp
18529	22	US-70 (Glenwood Ave)	Hollyridge Dr				1				RetrofitWarnings
18528	22	US-70 (Glenwood Ave)	Hollyridge Dr					1			Type1Modified
18561	22	US-70 (Glenwood Ave)	Firestone (6000 Glenwood Ave) Entrance			1		1			Type1Modified
18562	22	US-70 (Glenwood Ave)	Firestone (6000 Glenwood Ave) Entrance				1				RetrofitWarnings
18563	22	US-70 (Glenwood Ave)	La-Z-Boy (6008 Glenwood Ave) Entrance				1				RetrofitWarnings
18559	23	US-70 (Glenwood Ave)	Deblyn Ave				1				RetrofitWarnings
18560	23	US-70 (Glenwood Ave)	Deblyn Ave				1				RetrofitWarnings
18558	24	US-70 (Glenwood Ave)	Jiffy Lube (5390 Glenwood Ave) Entrance				1				RetrofitWarnings
18533	24	US-70 (Glenwood Ave)	Jiffy Lube (5929 Glenwood Ave) Entrance					1			Type1Modified
18532	24	US-70 (Glenwood Ave)	Jiffy Lube (5929 Glenwood Ave) Entrance					1			Type1Modified
18531	24	US-70 (Glenwood Ave)	Jiffy Lube (5929 Glenwood Ave) Entrance					1			Type1Modified
18557	24	US-70 (Glenwood Ave)	Jiffy Lube (5390 Glenwood Ave) Entrance					1			Type1Modified
18530	24	US-70 (Glenwood Ave)	Jiffy Lube (5929 Glenwood Ave) Entrance					1			Type1Modified
18553	25	US-70 (Glenwood Ave)	Rooms To Go (5900 Glenwood Ave) East Entrance				1				RetrofitWarnings
18554	25	US-70 (Glenwood Ave)	Rooms To Go (5900 Glenwood Ave) East Entrance					1			Type1B
18551	25	US-70 (Glenwood Ave)	Mattress Firm (5816 Glenwood Ave) Entrance				1				RetrofitWarnings
18534	25	US-70 (Glenwood Ave)	Glen Forest Dr				1				RetrofitWarnings
18535	25	US-70 (Glenwood Ave)	Glen Forest Dr					1			Type1Modified
18552	25	US-70 (Glenwood Ave)	Mattress Firm (5816 Glenwood Ave) Entrance				1				RetrofitWarnings
18536	26	US-70 (Glenwood Ave)	Booth & Associates, LLC (5811 Glenwood Ave) Entrance				1				RetrofitWarnings
18537	26	US-70 (Glenwood Ave)	Booth & Associates, LLC (5811 Glenwood Ave) Entrance				1				RetrofitWarnings
18542	27	US-70 (Glenwood Ave)	Fairhill Dr					1			Type1Modified
18540	27	US-70 (Glenwood Ave)	Fairhill Dr					1			Type1B
18544	27	US-70 (Glenwood Ave)	Rembert Dr	5						1	Remove Ramp
18541	27	US-70 (Glenwood Ave)	Fairhill Dr	18	10					1	Remove Ramp
18543	27	US-70 (Glenwood Ave)	Rembert Dr					1			Type1Modified
18595	28	US-70 (Glenwood Ave)	AT&T Corporate (5715 Glenwood Ave) Entrance				1				RetrofitWarnings
18596	28	US-70 (Glenwood Ave)	AT&T Corporate (5715 Glenwood Ave) Entrance				1				RetrofitWarnings
18590	29	US-70 (Glenwood Ave)	Bluestone Dr				1				RetrofitWarnings
18591	29	US-70 (Glenwood Ave)	Bluestone Dr					1			Type2B
18593	30	US-70 (Glenwood Ave)	North Carolina Farm Bureau (5301 Glenwood Ave) West Entrance					1			Type1Modified
18592	30	US-70 (Glenwood Ave)	North Carolina Farm Bureau (5301 Glenwood Ave) West Entrance					1			Type1Modified
18597	31	US-70 (Glenwood Ave)	North Carolina Farm Bureau (5301 Glenwood Ave) East Entrance					1			Type1Modified
18598	31	US-70 (Glenwood Ave)	North Carolina Farm Bureau (5301 Glenwood Ave) East Entrance					1			Type1Modified
18599	32	US-70 (Glenwood Ave)	The Beta Center Office Park (5171 Glenwood Ave) West Entrance					1			Type1Modified
18600	32	US-70 (Glenwood Ave)	The Beta Center Office Park (5171 Glenwood Ave) West Entrance				1				RetrofitWarnings
18601	33	US-70 (Glenwood Ave)	Golden Corral Corporate (5151 Glenwood Ave) Entrance					1			Type1Modified
18602	33	US-70 (Glenwood Ave)	Golden Corral Corporate (5151 Glenwood Ave) Entrance				1				RetrofitWarnings
<b>Sub-Total</b>				<b>47</b>	<b>15</b>	<b>1</b>	<b>19</b>	<b>25</b>	<b>1</b>	<b>4</b>	
<b>Sub-Total for US 70 EB/WB From/To Glenwood Forest Dr/Hilburn Dr To/From .4 Mi E of NC 50</b>				<b>102</b>	<b>25</b>	<b>1</b>	<b>48</b>	<b>57</b>	<b>1</b>	<b>8</b>	



SUMMARY OF QUANTITIES – US 70 EB/WB FROM/TO EAST OF MOREHEAD DR TO/FROM WOMENS CLUB DR

Municipality:	Raleigh
Project Number:	2022 Wake 70
WBS Number:	2021CPT.05.19.10921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	254900000-E	259100000-E	284500000-N	260000000-N	261300000-N	260500000-N	SP1	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Adjustment of Meter Boxes or Valve Boxes EA	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
18603	1	US-70 (Glenwood Ave)	Business Center (4901 Glenwood Ave) Entrance					1			Type1Modified
18604	1	US-70 (Glenwood Ave)	Business Center (4901 Glenwood Ave) Entrance					1			Type1Modified
18605	2	US-70 (Glenwood Ave)	Business Center (4801 Glenwood Ave) Entrance				1				RetrofitWarnings
20561	3	US-70 (Glenwood Ave)	Fidelity Investments (4800 Glenwood Ave) Entrance					1			Type4B
20562	3	US-70 (Glenwood Ave)	Fidelity Investments (4800 Glenwood Ave) Entrance					1			Type1Modified
20568	4	US-70 (Glenwood Ave)	NC-50 (Creedmoor Rd)				1				RetrofitWarnings
20567	4	US-70 (Glenwood Ave)	NC-50 (Creedmoor Rd)				1				RetrofitWarnings
20558	4	US-70 (Glenwood Ave)	NC-50 (Creedmoor Rd)					1			Type2AModified
20559	4	US-70 (Glenwood Ave)	NC-50 (Creedmoor Rd)				1				RetrofitWarnings
20560	4	US-70 (Glenwood Ave)	NC-50 (Creedmoor Rd)					1			Type1Modified
20563	4	US-70 (Glenwood Ave)	NC-50 (Creedmoor Rd)					1			Type2AModified
20556	5	US-70 (Glenwood Ave)	RMP-8 (US-70 to NC-50)				1				RetrofitWarnings
20557	5	US-70 (Glenwood Ave)	RMP-8 (US-70 to NC-50)				1				RetrofitWarnings
20564	6	US-70 (Glenwood Ave)	Sears (4601 Glenwood Ave) Entrance	10						1	Remove Ramp
20566	6	US-70 (Glenwood Ave)	Sears (4601 Glenwood Ave) Entrance				1				RetrofitWarnings
20565	6	US-70 (Glenwood Ave)	Sears (4601 Glenwood Ave) Entrance					1			Type1A
20570	7	US-70 (Glenwood Ave)	Marriott Dr				1				RetrofitWarnings
20569	7	US-70 (Glenwood Ave)	Marriott Dr				1				RetrofitWarnings
20555	7	US-70 (Glenwood Ave)	Crabtree Valley Mall (4325 Glenwood Ave) Entrance				1				RetrofitWarnings
20571	7	US-70 (Glenwood Ave)	Marriott Dr				1				RetrofitWarnings
20573	7	US-70 (Glenwood Ave)	Crabtree Valley Mall (4325 Glenwood Ave) Entrance					1			Type2A
20824	8	US-70 (Glenwood Ave)	PNC Bank (4300 Glenwood Ave) Entrance					1			Type1Modified
20825	8	US-70 (Glenwood Ave)	PNC Bank (4300 Glenwood Ave) Entrance				1				RetrofitWarnings
20576	9	US-70 (Glenwood Ave)	SR-1670 (Blue Ridge Rd)	12						1	Remove Ramp
20585	9	US-70 (Glenwood Ave)	SR-1670 (Blue Ridge Rd)	12				1			Type2B
20822	9	US-70 (Glenwood Ave)	SR-1820 (Lead Mine Rd)				1				RetrofitWarnings
20823	9	US-70 (Glenwood Ave)	SR-1820 (Lead Mine Rd)	16						1	Remove Ramp
20828	9	US-70 (Glenwood Ave)	SR-1820 (Lead Mine Rd)	16	7					1	Remove Ramp
20829	9	US-70 (Glenwood Ave)	SR-1820 (Lead Mine Rd)					1			Type2B
20584	10	US-70 (Glenwood Ave)	Crabtree View Pl	12	5			1			Type2B
24036	10	US-70 (Glenwood Ave)	Crabtree View Pl					1			Type1
17999	11	US-70 (Glenwood Ave)	Glenwood Ave Business Center (3737 Glenwood Ave) Entrance					1			Type1Modified
18008	11	US-70 (Glenwood Ave)	National Dr					1			Standard - 848.06
18001	11	US-70 (Glenwood Ave)	Glenwood Ave Business Center (3737 Glenwood Ave) Entrance						1		Type7
18000	11	US-70 (Glenwood Ave)	Glenwood Ave Business Center (3737 Glenwood Ave) Entrance						1		Type7
17998	11	US-70 (Glenwood Ave)	Glenwood Ave Business Center (3737 Glenwood Ave) Entrance					1			Type1A
18002	12	US-70 (Glenwood Ave)	Parking Deck (3737 Glenwood Ave) Entrance					1			Type1A
<b>Sub-Total for US 70 EB/WB From/To East of Morehead Dr To/From Womens Club Dr</b>				<b>78</b>	<b>12</b>	<b>0</b>	<b>13</b>	<b>18</b>	<b>2</b>	<b>4</b>	

SUMMARY OF QUANTITIES – US 70 EB/WB FROM/TO SR 1728 TO/FROM RR BRIDGE

Municipality:	Raleigh
Project Number:	2022 Wake 70
WBS Number:	2021CPT.05.19.10921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	254900000-E	259100000-E	284500000-N	260000000-N	261300000-N	260500000-N	SP1	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Adjustment of Meter Boxes or Valve Boxes EA	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
18118	1	US-70 (Wade Ave)	Filmore St				1				RetrofitWarnings
18119	1	US-70 (Wade Ave)	Filmore St					1			Type1Modified
<b>Sub-Total for US 70 EB/WB From/To SR 1728 To/From RR Bridge</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	

SUMMARY OF QUANTITIES – BLUE RIDGE RD FROM US 70 TO CRABTREE VALLEY AVE

Municipality:	Raleigh
Project Number:	2022 Wake 70
WBS Number:	2021CPT.05.19.20921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	254900000-E	259100000-E	284500000-N	260000000-N	261300000-N	260500000-N	SP1	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Adjustment of Meter Boxes or Valve Boxes EA	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
20930	1	SR-1670 (Blue Ridge Rd)	Crabtree View Pl	5						1	Remove Ramp
20931	1	SR-1670 (Blue Ridge Rd)	McDonald's (4121 Blue Ridge Rd) Entrance					1			Type1Modified
20932	1	SR-1670 (Blue Ridge Rd)	McDonald's (4121 Blue Ridge Rd) Entrance					1			Type8
20933	1	SR-1670 (Blue Ridge Rd)	McDonald's (4121 Blue Ridge Rd) Entrance					1			Type8
20934	1	SR-1670 (Blue Ridge Rd)	McDonald's (4121 Blue Ridge Rd) Entrance					1			Type1Modified
<b>Sub-Total for Blue Ridge Rd From US 70 To Crabtree Valley Ave</b>				<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>1</b>	

SUMMARY OF QUANTITIES – WADE AVE FROM US 70 TO RIDGE RD

Municipality:	Raleigh
Project Number:	2022 Wake 70
WBS Number:	2021CPT.05.19.20921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	254900000-E	259100000-E	284500000-N	260000000-N	261300000-N	260500000-N	SP1	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Adjustment of Meter Boxes or Valve Boxes EA	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
17950	1	SR-1728 (Wade Ave)	Unitarian Universalist Fellowship (3133 Wade Ave) Entrance					1			Type1Modified
17951	1	SR-1728 (Wade Ave)	Unitarian Universalist Fellowship (3133 Wade Ave) Entrance						1		Type7
17952	1	SR-1728 (Wade Ave)	Unitarian Universalist Fellowship (3133 Wade Ave) Entrance						1		Type7
17953	1	SR-1728 (Wade Ave)	Unitarian Universalist Fellowship (3133 Wade Ave) Entrance					1			Type1Modified
17958	2	SR-1728 (Wade Ave)	Hymettus Ct					1			Type1Modified
17959	2	SR-1728 (Wade Ave)	Hymettus Ct					1			Type1Modified
17966	3	SR-1728 (Wade Ave)	Banbury Woods Pl				1				RetrofitWarnings
17967	3	SR-1728 (Wade Ave)	Banbury Woods Pl				1				RetrofitWarnings
17968	4	SR-1728 (Wade Ave)	Plumfield Pl				1				RetrofitWarnings
17969	4	SR-1728 (Wade Ave)	Plumfield Pl				1				RetrofitWarnings
17972	5	SR-1728 (Wade Ave)	Brooks Ave					1			Type1Modified
24243	5	SR-1728 (Wade Ave)	Brooks Ave		21				1		Type1Modified
17974	6	SR-1728 (Wade Ave)	Canterbury Rd					1			Type1Modified
17975	6	SR-1728 (Wade Ave)	Canterbury Rd					1			Type1Modified
17976	7	SR-1728 (Wade Ave)	Gardner St					1			Type1Modified
17977	7	SR-1728 (Wade Ave)	Gardner St					1			Type1Modified
17978	8	SR-1728 (Wade Ave)	Hobson Ct				1				RetrofitWarnings
17979	8	SR-1728 (Wade Ave)	Hobson Ct	16						1	Remove Ramp
17984	9	SR-1728 (Wade Ave)	Jaycee Park (2405 Wade Ave) East Entrance				1				RetrofitWarnings
17985	9	SR-1728 (Wade Ave)	Jaycee Park (2405 Wade Ave) East Entrance				1				RetrofitWarnings
17997	10	SR-1728 (Wade Ave)	State Employees Credit Union (1000 Wade Ave) Parking Entrance					1			Type1
17996	10	SR-1728 (Wade Ave)	State Employees Credit Union (1000 Wade Ave) Parking Entrance					1			Type1
17989	11	SR-1728 (Wade Ave)	State Employees Credit Union (1000 Wade Ave) Main Entrance					1			Type1
17990	11	SR-1728 (Wade Ave)	State Employees Credit Union (1000 Wade Ave) Main Entrance					1			Type2B
17991	11	SR-1728 (Wade Ave)	State Employees Credit Union (1000 Wade Ave) Main Entrance						1		Type2
17988	12	SR-1728 (Wade Ave)	State Employees Credit Union (900 Wade Ave ) Operations Center Entrance					1			Type1
17987	12	SR-1728 (Wade Ave)	State Employees Credit Union (900 Wade Ave ) Operations Center Entrance					1			Type1
17986	13	SR-1728 (Wade Ave)	State Employees Credit Union (900 Wade Ave ) Operations Center South Entrance					1			Type1
18098	14	SR-1728 (Wade Ave)	Bryan St				1				RetrofitWarnings
18099	14	SR-1728 (Wade Ave)	Bryan St				1				RetrofitWarnings
18096	15	SR-1728 (Wade Ave)	Apartment Building (707 Wade Ave) Entrance					1			Type1B
18097	15	SR-1728 (Wade Ave)	Apartment Building (707 Wade Ave) Entrance					1			Type1Modified
18100	16	SR-1728 (Wade Ave)	St Marys St					1			Standard - 848.06
18101	16	SR-1728 (Wade Ave)	St Marys St					1			Type3Modified
18102	16	SR-1728 (Wade Ave)	St Marys St	12	7					1	Remove Ramp
18105	16	SR-1728 (Wade Ave)	St Marys St				1				RetrofitWarnings
18107	17	SR-1728 (Wade Ave)	Wirewood Dr	16	7					1	Remove Ramp
18108	17	SR-1728 (Wade Ave)	Wirewood Dr	15	7					1	Remove Ramp
18109	17	SR-1728 (Wade Ave)	Wirewood Dr					1			Type3Modified
18106	17	SR-1728 (Wade Ave)	Wirewood Dr					1			Type3Modified
18110	18	SR-1728 (Wade Ave)	The Townes at Bishop Park (519-525 Wade Ave) Entrance					1			Type1Modified
18112	18	SR-1728 (Wade Ave)	The Townes at Bishop Park (519-525 Wade Ave) Entrance				1				RetrofitWarnings
18113	18	SR-1728 (Wade Ave)	The Townes at Bishop Park (519-525 Wade Ave) Entrance				1				RetrofitWarnings
18111	18	SR-1728 (Wade Ave)	The Townes at Bishop Park (519-525 Wade Ave) Entrance				1				RetrofitWarnings
18114	19	SR-1728 (Wade Ave)	Wade Ave To Glenwood Ave Ramp SB					1			Type1Modified
18115	19	SR-1728 (Wade Ave)	Wade Ave To Glenwood Ave Ramp SB					1			Type1Modified
<b>Sub-Total for Wade Ave From US 70 To Ridge Rd</b>				<b>59</b>	<b>42</b>	<b>0</b>	<b>13</b>	<b>25</b>	<b>4</b>	<b>4</b>	

SUMMARY OF QUANTITIES – OBERLIN TO WADE RAMP FROM OBERLIN RD TO SR 1728

Municipality:	Raleigh
Project Number:	2022 Wake 70
WBS Number:	2021CPT.05.19.20921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	254900000-E	259100000-E	284500000-N	260000000-N	261300000-N	260500000-N	SP1	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Adjustment of Meter Boxes or Valve Boxes EA	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
24251	1	RMP-9 (Oberlin Rd To Wade Ave Ramp EB)	Oberlin Rd					1			Type2B
24252	1	RMP-9 (Oberlin Rd To Wade Ave Ramp EB)	Oberlin Rd					1			Standard - 848.06
24253	1	RMP-9 (Oberlin Rd To Wade Ave Ramp EB)	Oberlin Rd					1			Standard - 848.06
24254	1	RMP-9 (Oberlin Rd To Wade Ave Ramp EB)	Oberlin Rd					1			Type3Modified
24247	2	RMP-987 (Wade Ave To Oberlin Rd Ramp)	Oberlin Rd					1			Type2B
24248	2	RMP-987 (Wade Ave To Oberlin Rd Ramp)	Oberlin Rd					1			Standard - 848.06
24249	2	RMP-987 (Wade Ave To Oberlin Rd Ramp)	Oberlin Rd				1				RetrofitWarnings
24250	2	RMP-987 (Wade Ave To Oberlin Rd Ramp)	Oberlin Rd				1				RetrofitWarnings
24255	2	RMP-987 (Wade Ave To Oberlin Rd Ramp)	Oberlin Rd				1				RetrofitWarnings
24256	2	RMP-987 (Wade Ave To Oberlin Rd Ramp)	Oberlin Rd				1				RetrofitWarnings
24259	2	RMP-987 (Wade Ave To Oberlin Rd Ramp)	Oberlin Rd				1				RetrofitWarnings
24257	2	RMP-987 (Wade Ave To Oberlin Rd Ramp)	Oberlin Rd					1			Type2AModified
24258	2	RMP-987 (Wade Ave To Oberlin Rd Ramp)	Oberlin Rd				1				RetrofitWarnings
<b>Sub-Total for Oberlin to Wade Ramp From Oberlin Rd To SR 1728</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>7</b>	<b>0</b>	<b>0</b>	

SUMMARY OF QUANTITIES – GLENWOOD TO WADE RAMP FROM GLENWOOD AVE TO SR 1728

Municipality:	Raleigh
Project Number:	2022 Wake 70
WBS Number:	2021CPT.05.19.20921.1
County:	Wake

Ramp ID	Inset Map Number	Route 1	Route 2	254900000-E	259100000-E	284500000-N	260000000-N	261300000-N	260500000-N	SP1	Improvement Type
				2'-6" Concrete Curb & Gutter LF	4" Concrete Sidewalk SY	Adjustment of Meter Boxes or Valve Boxes EA	Retrofit Existing Curb Ramps EA	Remove and Replace Curb Ramps EA	Concrete Curb Ramps EA	Remove Curb Ramps EA	
18116	1	SR-1728 (Wade Ave)	RMP-994 (Glenwood Ave To Wade Ave Ramp EB)						1		Type1Modified
18117	1	SR-1728 (Wade Ave)	RMP-994 (Glenwood Ave To Wade Ave Ramp EB)						1		Type3Modified
24244	2	RMP-994 (Glenwood Ave To Wade Ave Ramp EB)	Glenwood Ave					1			Standard - 848.06
<b>Sub-Total for Glenwood to Wade Ramp From Glenwood Ave To SR 1728</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	

PROJECT NO.	TOTAL NO.
2021CPT.05.19.10921.1, etc.	47

## SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH	WIDTH	SHOULDER GRADING	INC. STONE BASE	ASB	1½" MILLING	2" MILLING	INC. MILLING	S9.5C	AS-PHALT BINDER FOR PLANT MIX	PATCH-ING EXI. PAVEMENT	2'-6" CURB & GUTTER	4" CONC SIDE-WALK	RETRO-FIT EXI. CURB RAMP	CONC CURB RAMP	REMOVE AND REPLACE CURB RAMPS	5" CONC ISLANDS (KEYED-IN)	REMOVE AND REPLACE DRIVE-WAY APRON	REMOVE CURB RAMPS	ADJ. OF MAN-HOLE S	ADJ. OF METER OR VALVE BOX	PEDES-TRIAN TRANSPORT SERVICE	AUDIBLE WARN-ING DEVICE	INDUC-TIVE LOOP SAWCU T	
																																	MI
2021CPT.05.19.10921.1	Wake	1	US 70 (GLEN-WOOD AVE.)	FROM WOMAN'S CLUB DR. TO I-540	1 to 10	MD	NO	NO	8.20	38'-171'	6.00	30	950	468,854		3,380	41,651	2,499	1,040	252	66	63	3	78			1	18	4	5	66	9	31,875
<b>TOTAL FOR PROJ NO. 2021CPT.05.19.10921.1</b>									<b>8.20</b>		<b>6.00</b>	<b>30</b>	<b>950</b>	<b>468,854</b>		<b>3,380</b>	<b>41,651</b>	<b>2,499</b>	<b>1,040</b>	<b>252</b>	<b>66</b>	<b>63</b>	<b>3</b>	<b>78</b>			<b>1</b>	<b>18</b>	<b>4</b>	<b>5</b>	<b>66</b>	<b>9</b>	<b>31,875</b>
2021CPT.05.19.20921.1	Wake	2	BLUE RIDGE RD. (SR 1670)	FROM US 70 TO CRABTREE VALLEY AVE.	11 to 12	MU	NO	NO	0.18	39'-60'	0.05				2,984	1,383	514	31	31	5				4			1			1	1	350	
		3	WADE AVE. (SR 1728)	FROM R.R. BRIDGE TO RIDGE RD.	13 to 23	MU	NO	NO	3.30	15'-64'				82,384		1,005	7,356	441	185	699	42	19	6	33	180		4	5	4	33	2	7,000	
<b>TOTAL FOR PROJ NO. 2021CPT.05.19.20921.1</b>									<b>3.48</b>		<b>0.05</b>			<b>82,384</b>	<b>2,984</b>	<b>2,388</b>	<b>7,870</b>	<b>472</b>	<b>216</b>	<b>704</b>	<b>42</b>	<b>19</b>	<b>6</b>	<b>37</b>	<b>180</b>		<b>5</b>	<b>5</b>	<b>4</b>	<b>34</b>	<b>3</b>	<b>7,350</b>	
<b>GRAND TOTAL</b>									<b>11.68</b>		<b>6.05</b>	<b>30</b>	<b>950</b>	<b>551,238</b>	<b>2,984</b>	<b>5,768</b>	<b>49,521</b>	<b>2,971</b>	<b>1,256</b>	<b>956</b>	<b>108</b>	<b>82</b>	<b>9</b>	<b>115</b>	<b>180</b>	<b>1</b>	<b>23</b>	<b>9</b>	<b>9</b>	<b>100</b>	<b>12</b>	<b>39,225</b>	

PROJECT NO.	SHEET NO.
2021CPT.05.19.10921.1, etc.	48

### THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANE TYPE	LENG TH	WID TH	4413000	4447000	4457000	4510000	4685000000-E		4695000000-E		4700000000-E		47200	4725000000-E								4795000	48000	4805000000-N				4850000	48700	4875000	4891000	4890000	4895...-N
									WZ ADV/ GEN WARN. SIGNING	PED. CHANN ELIZING DEVICE S	TEMP. TRAF- FIC CONT ROL	LAW ENFOR CEMEN T	4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	8" X 90 M WHITE THERMO	8" X 90 M YELLO W THERMO	12" X 90 M WHIT E THERMO	12" X 90 M YELLO W THERMO	THER MO MSG ONLY	THER MO STR ARRO W 90 M	THER MO LT ARR OW 90 M	THER MO RT ARRO W 90 M	THERM O MERGE ARROW	THER MO STR & RT ARRO W 90 M	THER MO STR & LT ARRO W 90 M	THERM O YIELD TRIAN GLE 90M	24" WHITE COLD APPL PLAS, TYPE II	COLD APPL MSG ONLY TYPE II	COLD APPL PLAS. LEFT AR- ROW, TYPE II	COLD APPL PLAS. STR AR- ROW, TYPE II	COLD APPL PLAS. RT AR- ROW, TYPE II	4" LINE REMO VAL	24" LINE REM OVA L	REM OF PM SYMB & CHAR	24" X 90 M WHITE THERM O LINES,4 ",50MILS	HOT SRAY THERM O	NON- CAST IRON SNOW- PAV. MARKER		
							MI	FT	SF	LF	LS	HR	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA			
2021CPT.05.19.10921.1	Wake	1	US 70 (GLEN- WOOD AVE.)	FROM WOMAN'S CLUB DR.TO I-540	1 to 10	MD	8.20	38' - 171'	320	70	*	680	133,540	88,550	12,980	400	1,330	92	175	163	123	22	25			8	2	3	4	2,650			5,510	2,650	5,360				
<b>TOTAL FOR PROJ NO. 2021CPT.05.19.10921.1</b>							<b>8.20</b>		<b>320</b>	<b>70</b>		<b>680</b>	<b>133,540</b>	<b>88,550</b>	<b>12,980</b>	<b>400</b>	<b>1,330</b>	<b>92</b>	<b>175</b>	<b>163</b>	<b>123</b>	<b>22</b>	<b>25</b>			<b>8</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>2,650</b>			<b>5,510</b>	<b>2,650</b>	<b>5,360</b>				
													<b>222,090</b>		<b>12,980</b>		<b>1,730</b>		<b>508</b>								<b>9</b>												
2021CPT.05.19.20921.1	Wake	2	BLUE RIDGE RD. (SR 1670)	FROM US 70 TO CRABTREE VALLEY AVE.	11 to 12	MU	0.18	39' - 60'	126	10	*	120	750	1,290	100			4	6	1	7				1	35			3		560	35	3	15	560	70			
		3	WADE AVE. (SR 1728)	FROM R.R. BRIDGE TO RIDGE RD.	13 to 23	MU	3.30	15' - 64'	286	40	*	280	10,460	33,250	1,850	260			28	15	7	4	17	4	11								640		860				
<b>TOTAL FOR PROJ NO. 2021CPT.05.19.20921.1</b>							<b>3.48</b>		<b>412</b>	<b>50</b>		<b>400</b>	<b>11,210</b>	<b>34,540</b>	<b>1,950</b>	<b>260</b>			<b>4</b>	<b>34</b>	<b>16</b>	<b>14</b>	<b>4</b>	<b>17</b>	<b>5</b>	<b>11</b>	<b>35</b>			<b>3</b>	<b>560</b>	<b>35</b>	<b>3</b>	<b>655</b>	<b>560</b>	<b>930</b>			
													<b>45,750</b>		<b>2,210</b>		<b>101</b>								<b>3</b>														
<b>GRAND TOTAL</b>							<b>11.68</b>		<b>732</b>	<b>120</b>	<b>1</b>	<b>1,080</b>	<b>144,750</b>	<b>123,090</b>	<b>14,930</b>	<b>260</b>	<b>400</b>	<b>1,330</b>	<b>96</b>	<b>209</b>	<b>179</b>	<b>137</b>	<b>26</b>	<b>42</b>	<b>5</b>	<b>11</b>	<b>35</b>	<b>8</b>	<b>2</b>	<b>6</b>	<b>4</b>	<b>3,210</b>	<b>35</b>	<b>3</b>	<b>6,165</b>	<b>3,210</b>	<b>6,290</b>		
													<b>267,840</b>		<b>15,190</b>		<b>1,730</b>		<b>609</b>								<b>12</b>												



# DIVIDED MEDIANS WITH WIDTHS 46' OR GREATER

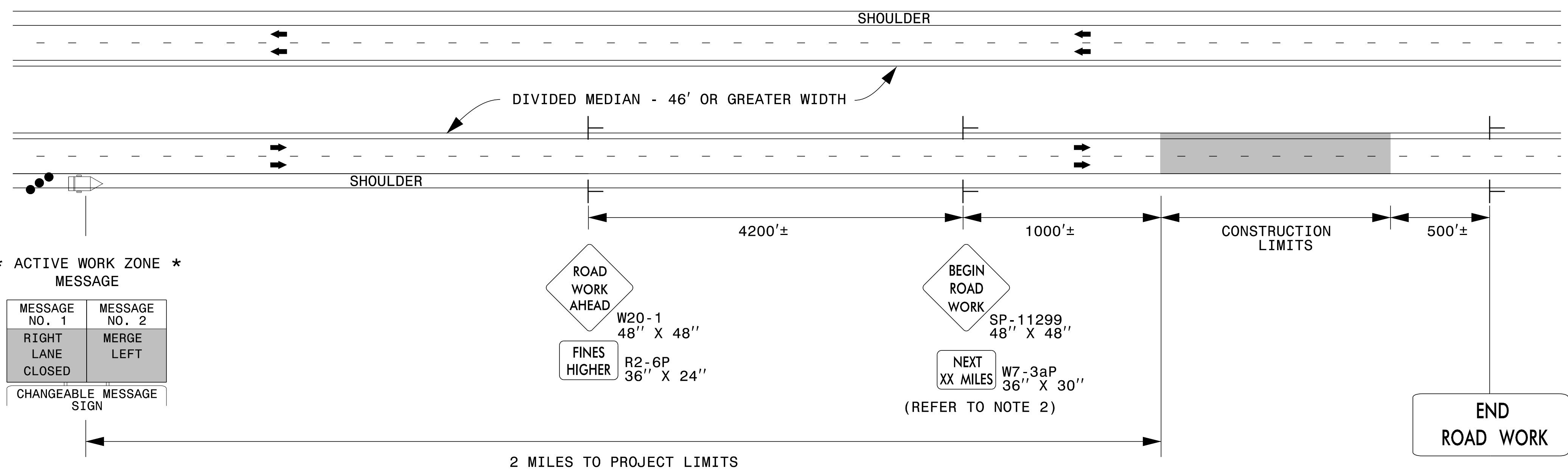
\* NOTE: ADVANCE THIS CMS CONTINUOUSLY AS WORK OPERATIONS PROGRESS.

\* INACTIVE WORK ZONE \* MESSAGE

MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK	2 MILES AHEAD
CHANGEABLE MESSAGE SIGN	

\* ACTIVE WORK ZONE \* MESSAGE

MESSAGE NO. 1	MESSAGE NO. 2
RIGHT LANE CLOSED	MERGE LEFT
CHANGEABLE MESSAGE SIGN	



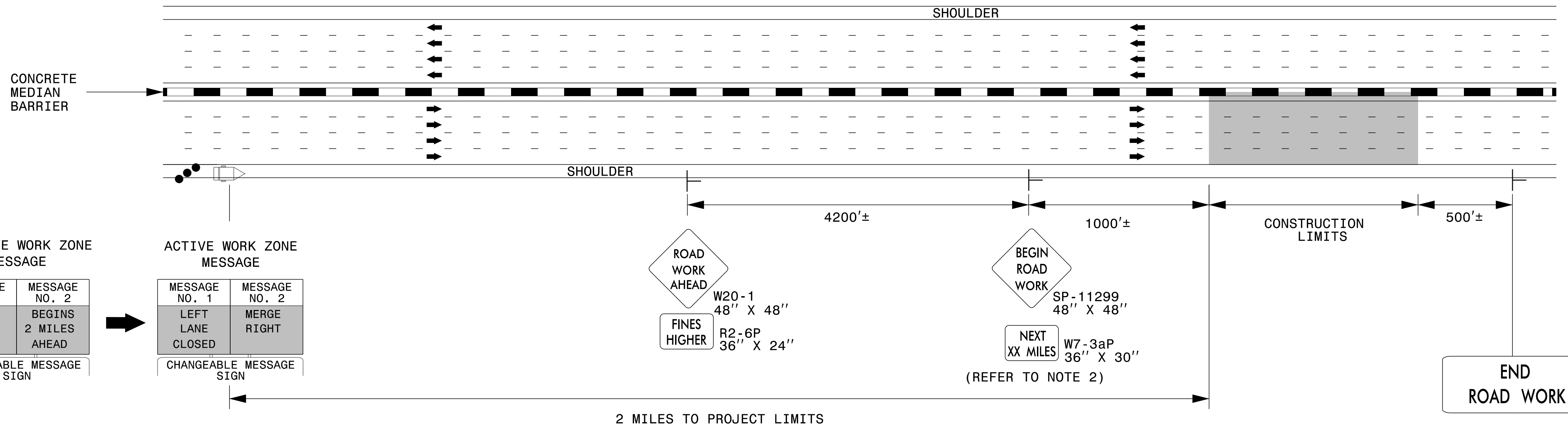
# DIVIDED MEDIANS WITH WIDTHS LESS THAN 46' OR WITH PERMANENT MEDIAN BARRIER

INACTIVE WORK ZONE MESSAGE

MESSAGE NO. 1	MESSAGE NO. 2
ROAD WORK	BEGINS 2 MILES AHEAD
CHANGEABLE MESSAGE SIGN	

ACTIVE WORK ZONE MESSAGE

MESSAGE NO. 1	MESSAGE NO. 2
LEFT LANE CLOSED	MERGE RIGHT
CHANGEABLE MESSAGE SIGN	



## NOTES

1. THIS DRAWING IS TO BE USED IN CONJUNCTION WITH THE WORK ZONE VARIABLE SPEED LIMIT USING DIGITAL SPEED LIMIT SIGNS FOR INTERSTATE/FREEWAY RESURFACING PROJECTS DETAIL.
2. FOR SIGN W7-3aP, ROUND TO THE NEAREST MILE.
3. FOR ENTRANCE AND EXIT RAMP, REFER TO RSD 1101.01, SHEET 1, DETAIL B & C.
4. FOR ADDITIONAL NOTES, REFER TO RSD 1101.01, SHEET 1.

### LEGEND

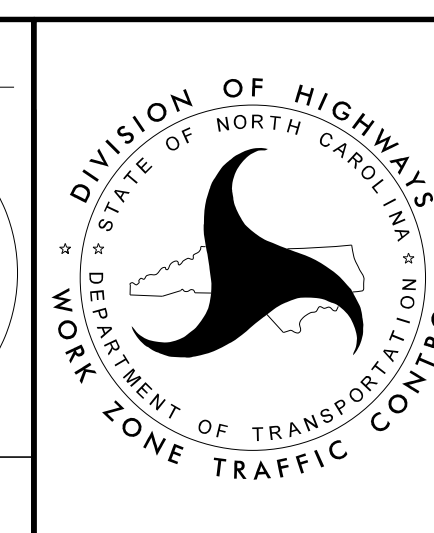
- CHANGEABLE MESSAGE SIGN (CMS)
- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW
- TRAFFIC DRUM

APPROVED:

DATE: 2/23/2017

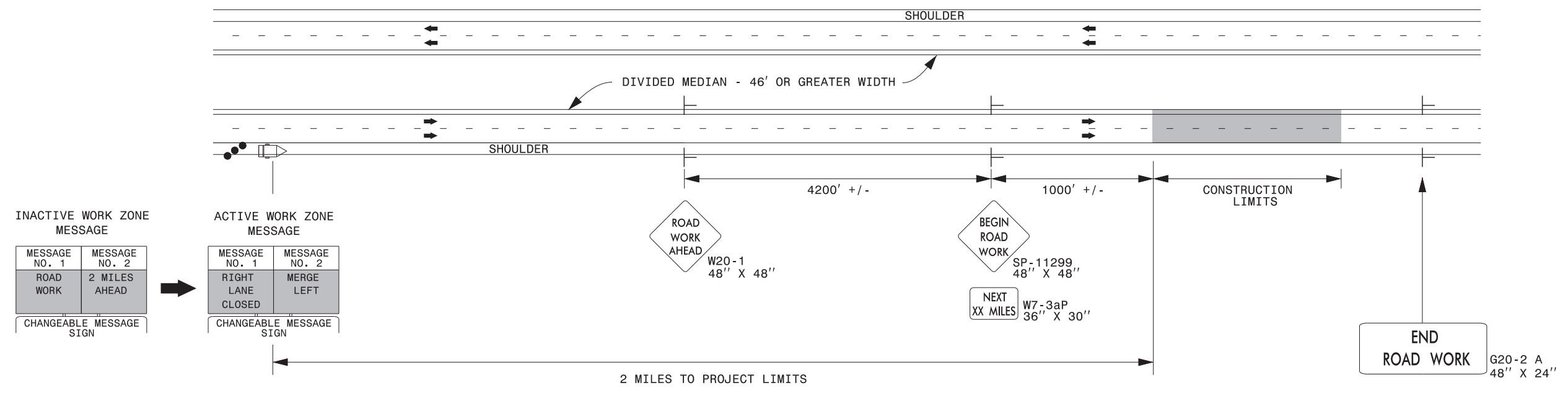
SEAL: JOHN S. KITE, P.E., PROFESSIONAL ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

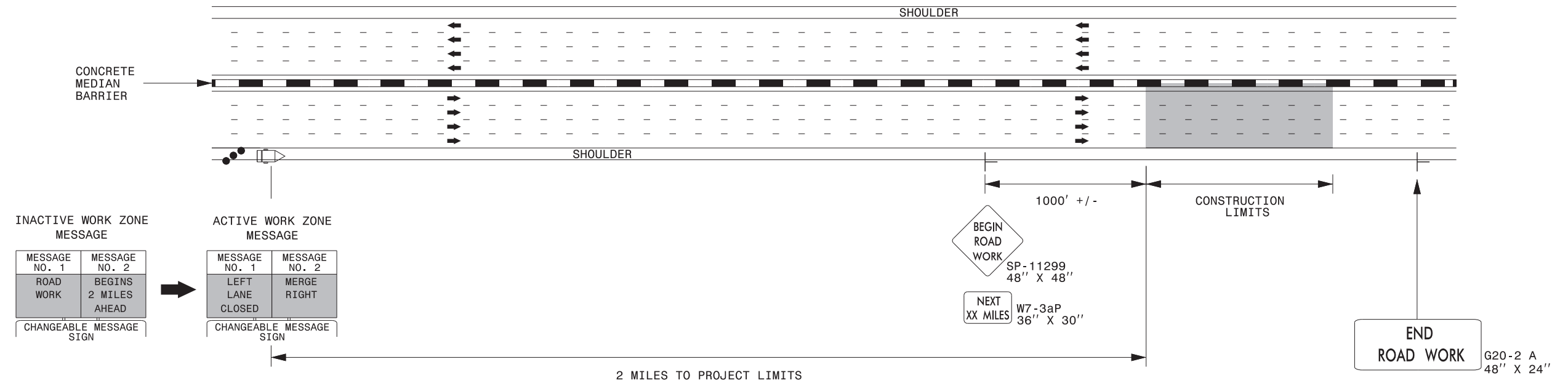


### STATIONARY ADVANCE WARNING SIGNS FOR INTERSTATE/FREEWAY RESURFACING PROJECTS

### DIVIDED MEDIANS WITH WIDTHS 46' OR GREATER



### DIVIDED MEDIANS WITH WIDTHS LESS THAN 46' OR WITH PERMANENT MEDIAN BARRIER

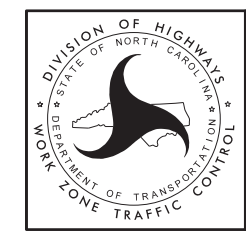


**NOTES:**

- 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 RAMP 500' PRIOR TO RAMP TERMINAL, AND "END ROAD WORK" (G20-2a) AT THE END OF EXIT RAMP 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**

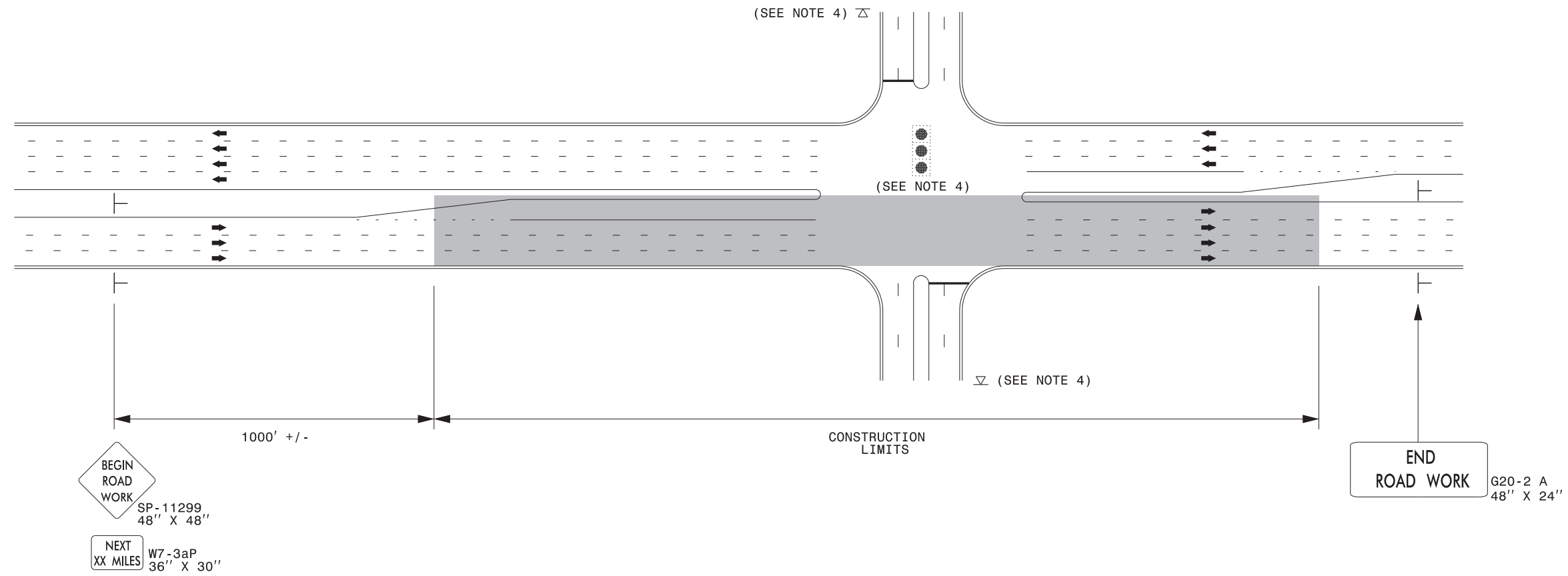
- CHANGEABLE MESSAGE SIGN (CMS)
- STATIONARY SIGN
- DIRECTION OF TRAFFIC FLOW
- TRAFFIC DRUM



**RESURFACING ADVANCE WARNING SIGNS FOR HIGH SPEED FACILITIES ≥ 60 MPH**

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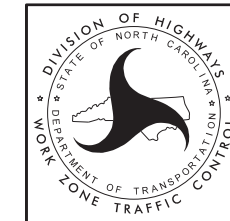
## URBAN / SUBURBAN WORKZONES



### NOTES:

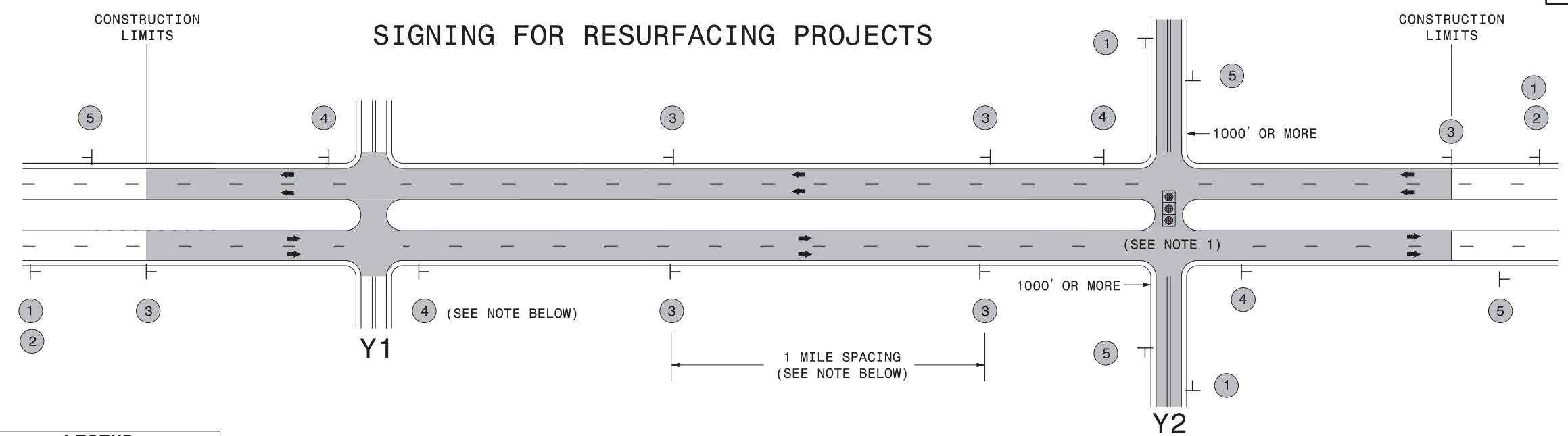
- 1) 48" x 48" SIZED SIGNS (SP- 11299) MAY BE REDUCED TO 36" X 36" ON ROADWAYS WITH SPEED LIMITS OF 40 MPH OR LESS.
- 2) MOUNT SIGNS THAT ARE LARGER THAN 10 SQUARE FEET IN AREA ON TWO OR MORE WOOD OR U-CHANNEL SUPPORTS. PERFORATED SQUARE TUBING SUPPORT SYSTEMS MAY SUPPORT LARGER AREAS ON A SINGLE SUPPORT. 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**

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**LEGEND**  
 ┆ STATIONARY SIGN  
 ← DIRECTION OF TRAFFIC FLOW

**MAINLINE (-L-) SIGNING**

**-Y- LINE SIGNING**

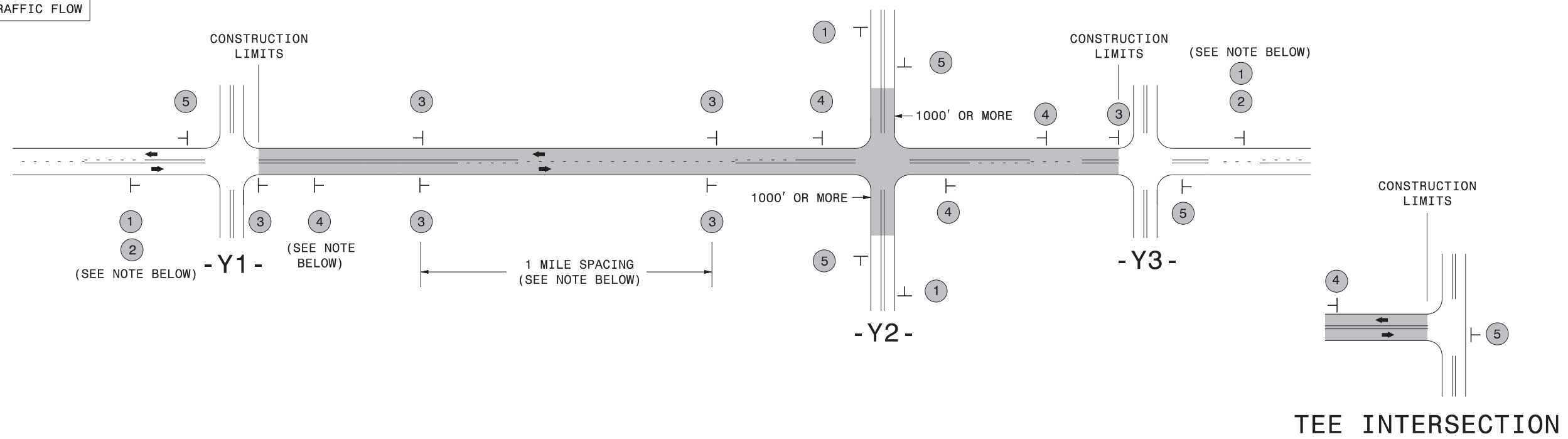
SIGNING NOTES AND PLACEMENT PER DIRECTION	 	<p>PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.</p> <p>#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER. (NO FRACTIONAL OR DECIMAL NUMBERS)</p>	<p><b>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</b></p> <ol style="list-style-type: none"> <li>1) LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>2) SUBDIVISION ROADS</li> <li>3) DEAD END ROADS</li> </ol> <p>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.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">   <small>W20-1 48" X 48"</small> </div> <div style="text-align: center;">   <small>W20-7 A 48" X 48"</small> </div> </div> <p>PLACED 500' IN ADVANCE OF FLAGGER. PLACED 250' IN ADVANCE OF FLAGGER.</p> <p><b>NOTES:</b></p> <ol style="list-style-type: none"> <li>1) 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.</li> </ol>
		<p>PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET 1/2 MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.</p>	
		<p>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.</p>	
		<p>PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS.</p>	

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**RESURFACING  
ADVANCE WARNING SIGNS  
FOR RURAL AND SUBURBAN  
MULTI-LANE ROADWAYS  
W/ SHOULDER SECTIONS**

# SIGNING FOR RESURFACING PROJECTS

**LEGEND**  
 ┆ STATIONARY SIGN  
 ← DIRECTION OF TRAFFIC FLOW



## MAINLINE (-L-) SIGNING

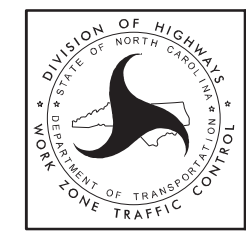
## -Y- LINE SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION	1		PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.	<p>NO REQUIRED STATIONARY SIGNING FOR THE FOLLOWING -Y- LINE CONDITIONS:</p> <ol style="list-style-type: none"> <li>LESS THAN 1000' OF RESURFACING ALONG -Y- LINE</li> <li>SUBDIVISION ROADS</li> <li>DEAD END ROADS</li> </ol> <p>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.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">             W20-1 48" X 48"            PLACED 500' IN ADVANCE OF FLAGGER.         </div> <div style="text-align: center;">             W20-7 A 48" X 48"            PLACED 250' IN ADVANCE OF FLAGGER.         </div> </div>
	2		#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)	
	3		<ul style="list-style-type: none"> <li>PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER.</li> <li>AT TEE INTERSECTIONS INSTALL INITIALLY 1/2 MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.</li> </ul>	
	4		<ul style="list-style-type: none"> <li>THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS.</li> <li>DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS.</li> <li>INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE.</li> <li>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.</li> <li>A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN.</li> <li>FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.</li> </ul>	
	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**

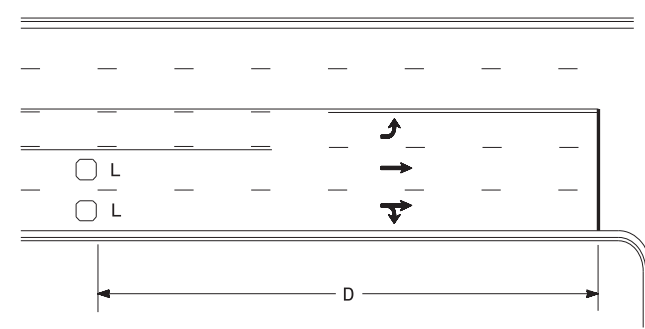
FOR RESURFACING MAPS WITH CONSTRUCTION LIMITS LESS THAN 2 MILES IN LENGTH, NO STATIONARY SIGNS ARE REQUIRED. USE PORTABLE "ROAD UNDER CONSTRUCTION" OR "ROAD WORK AHEAD" SIGNS IN LIEU OF STATIONARY ADVANCE WARNINGS SIGNS.



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

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### High Speed Detection (≥40 mph)

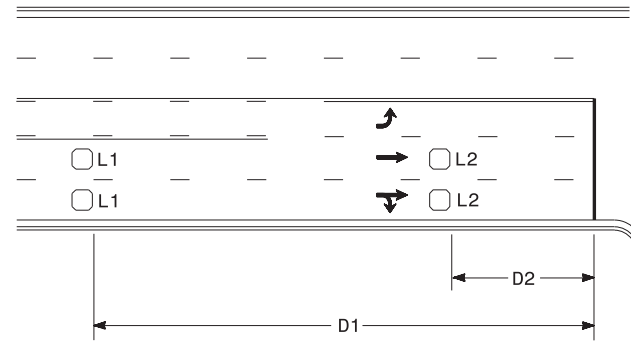


Speed Limit mph	D ft
40	250
45	300
50	355
55	420

L = 6ft X 6ft  
Wired separately

Volume Density Operation

OR

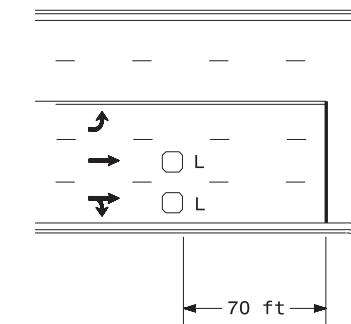


Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110

L1 = 6ft X 6ft  
Wired in series  
L2 = 6ft X 6ft  
Wired in series

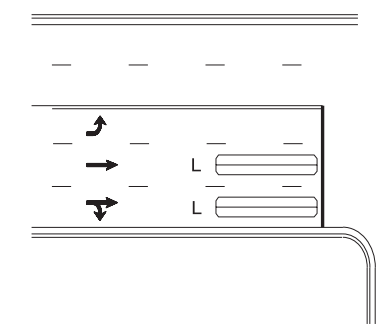
"Stretch" Operation

### Low Speed Detection (≤35 mph)



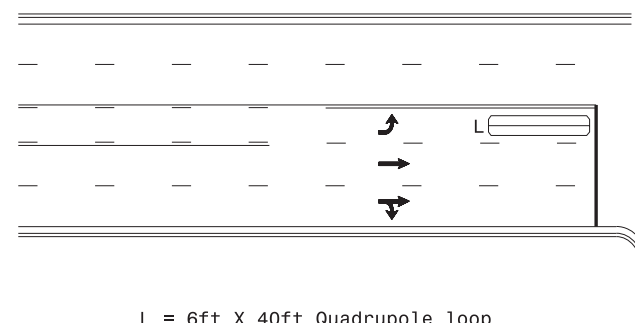
L = 6ft X 6ft  
Wired in series

OR



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

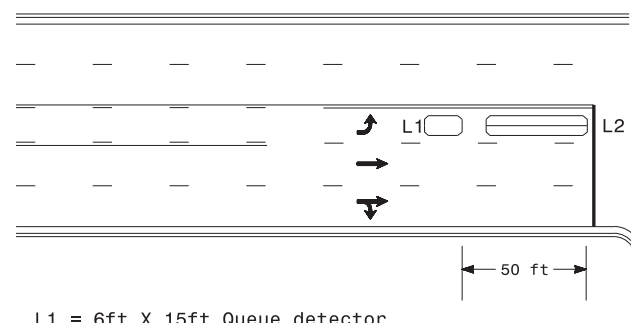
### Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

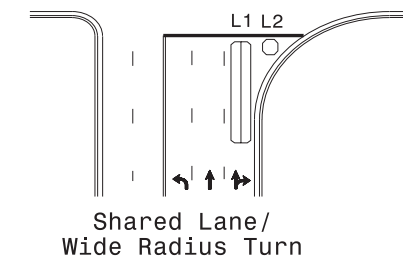
OR



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

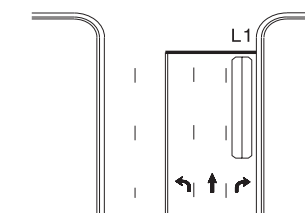
Queue Loop Detection

### Right Turn Lane Detection

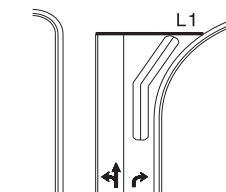


Shared Lane/  
Wide Radius Turn

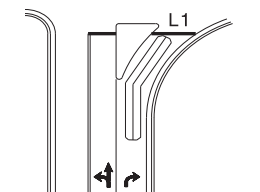
L1 = 6ft X 40ft Quadrupole loop  
L2 = 6ft X 6ft [Minimum] Presence loop  
Wired separately



Standard Turn

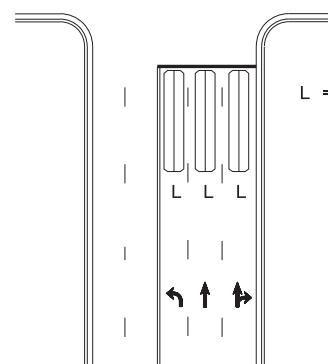


Wide Radius Turn



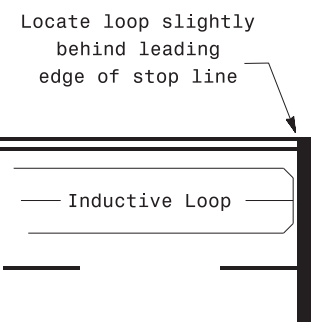
Channelized Turn

### Side Street Detection



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

### Presence Loop Placement at Stop Lines



Locate loop slightly  
behind leading  
edge of stop line

- 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

Prepared in the Offices of:

750 N. Greenfield Pkwy, Garner, NC 27529

SCALE  
N/A

Typical Signal Loop Locations	
PLAN DATE: September 2020	REVIEWED BY: JPG
PREPARED BY: PLA	REVIEWED BY:
REVISIONS	INIT. DATE

SEAL  
NORTH CAROLINA  
PROFESSIONAL ENGINEER  
029904  
P. GALLOWAY

9/8/2020  
DATE

SIG. INVENTORY NO.