PROJECT REFERENCE NO.	SHEET NO.
2027CPT.05.07.20921	1

1. DAVIS DR.

WAKE COUNTY

DURHAM COUNTY
WAKE COUNTY
CHATHAM COUNTY
WAKE COUNTY

END RESURFACING TIE TO PROJECT U-5747A/B

BEGIN RESURFACING TIE TO PROJECT U-5747A/B

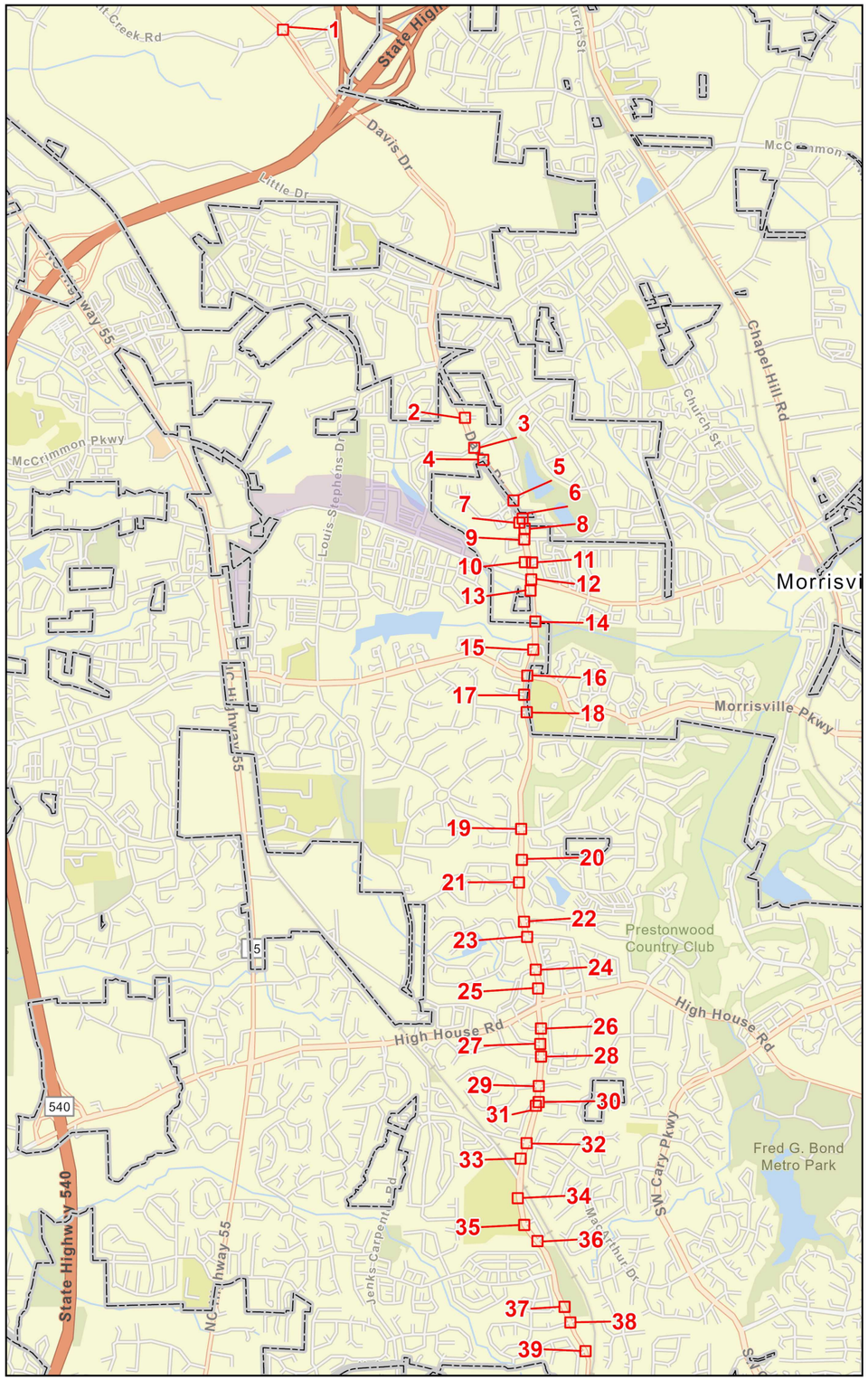
END RESURFACING TIE TO HIGH HOUSE RD. PAVING LIMITS

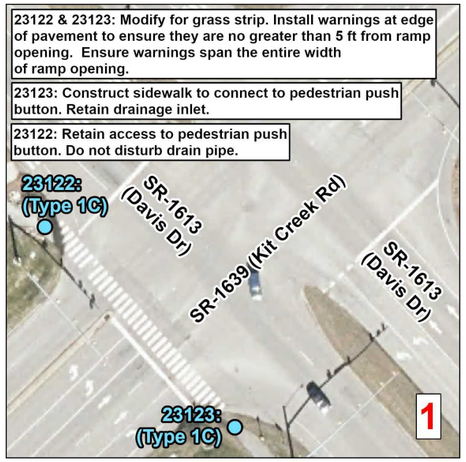
BEGIN RESURFACING TIE TO HIGH HOUSE RD. PAVING LIMITS

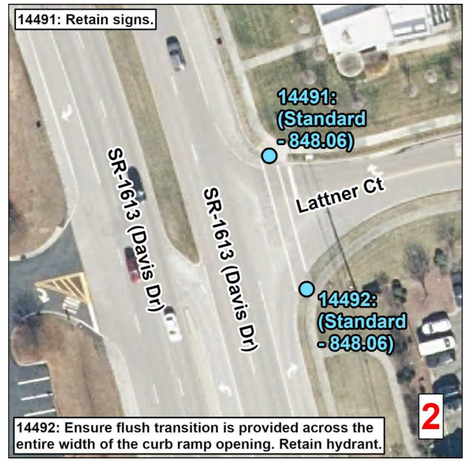
END RESURFACING TIE TO PAVEMENT JOINT 1,385 FT. NORTH OF SR 3111, FARM POND RD.

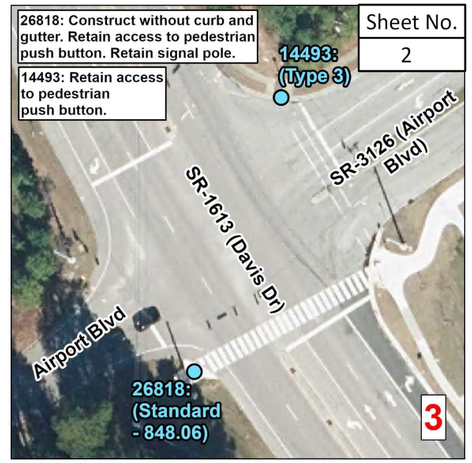
Davis Dr.
Development Dr.
Kitts Creek Rd
McCrimmon Pkwy.
Morrisville Carpenter Rd.
Crosstimbers Pkwy
High House Rd.
Collins Rd.
Farm Pond Rd.
Green Level Church Rd.
Green Hope School Rd.
Chapel Hill Rd.
Aviation Pkwy
Evans Rd.
Shirrup Iron Creek
SOUTHERN RAILROAD
RAILROAD
Morrisville pop. 14,956
CARY pop. 141,269
LAKE CRABTREE
WILLIAM B. UMSTEAD STATE PARK
NOTE: RALEIGH CORP. LIMITS INCLUDE WILLIAM B. UMSTEAD STATE PARK
REEDY CREEK SECTION
Asbury
Morrisville Elementary Sch.
Weatherstone Sch.
Northwoods Elem.
Kingswood Elementary
Adams Elementary Sch.
East Cary Middle Sch.
Parker Creek
Turkey Creek
Green Level
Upchurch
Beaverdam Creek
Wimberly Rd.
White Oak Rd.
Church Rd.
Maynard Rd.
Airport Blvd.
Davis Dr. SYSTEM

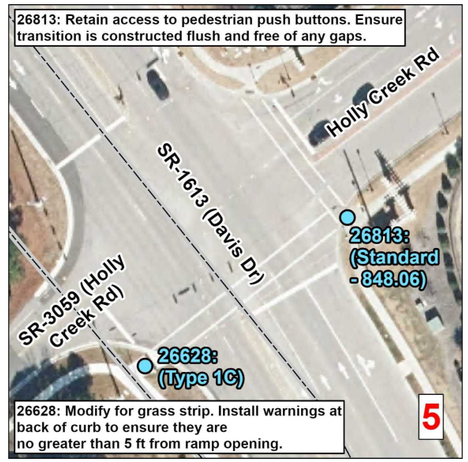
NOTE:
FOR THE PROPOSED PROJECT LIMITS OF U-5747A/B, CONTRACTOR SHALL COORDINATE WITH NCDOT PROJECT MANAGER JOHN BRAXTON, 919-707-6219, jwbraxton@ncdot.gov TO VERIFY THE MOST CURRENT PROJECT LIMITS PRIOR TO RESURFACING.

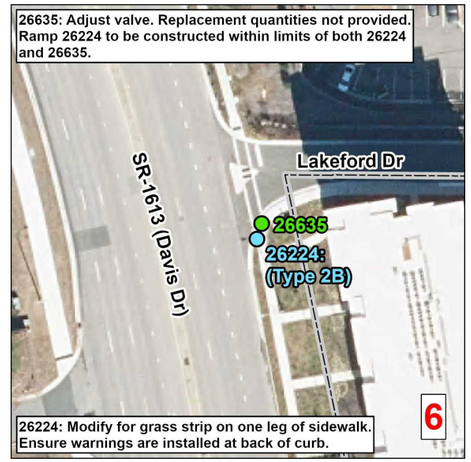


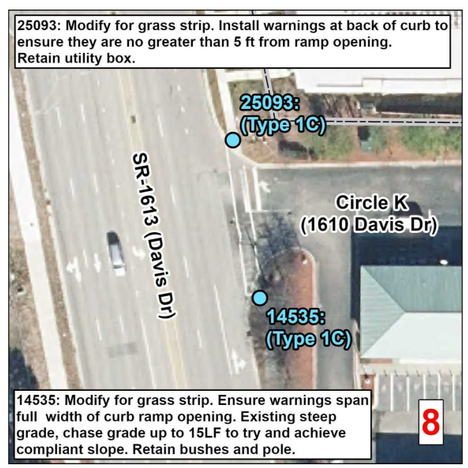












Curb Ramps To Be Repaired

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

Municipal Boundary

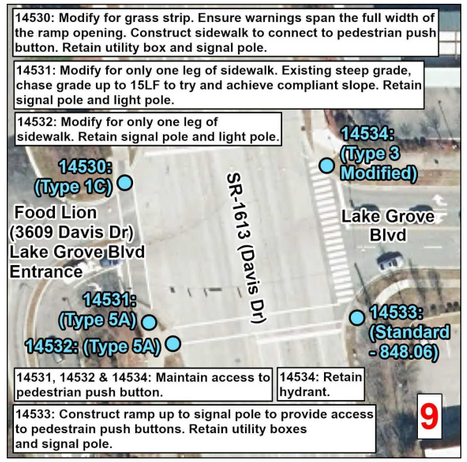
NCHPO Historic Boundary (NR and LHD)

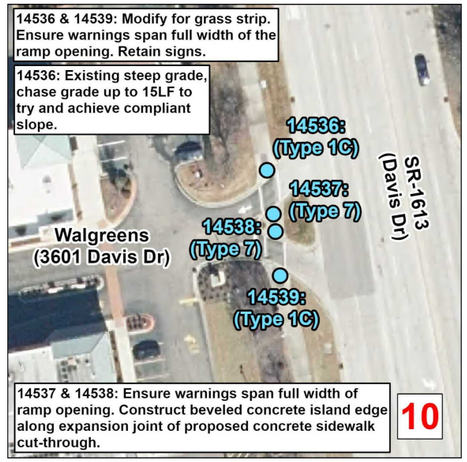
Davis Dr
WBS Number: 2027CPT.05.07.20921

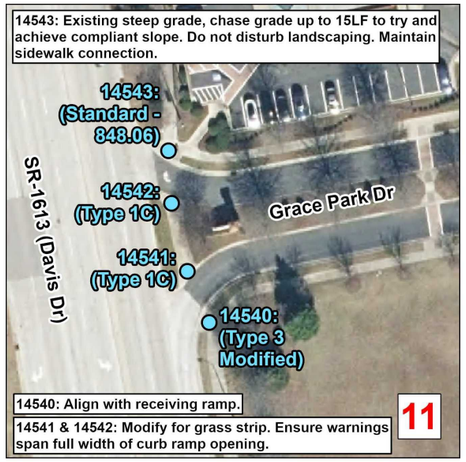
Davis Dr From
Durham County Line To Pavement Joint

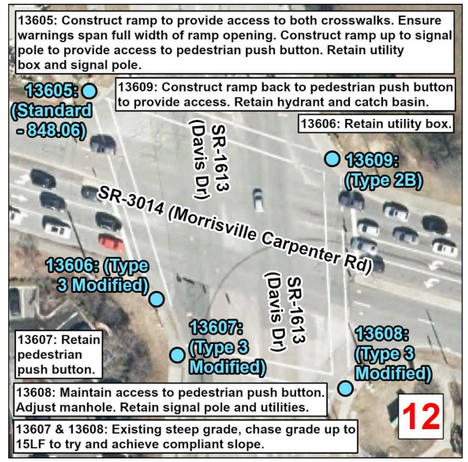
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 5

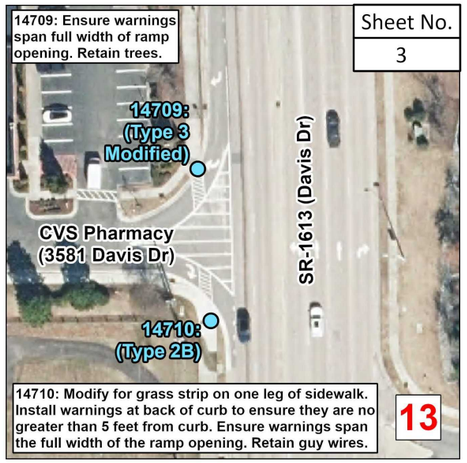
Source: NV5 Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO

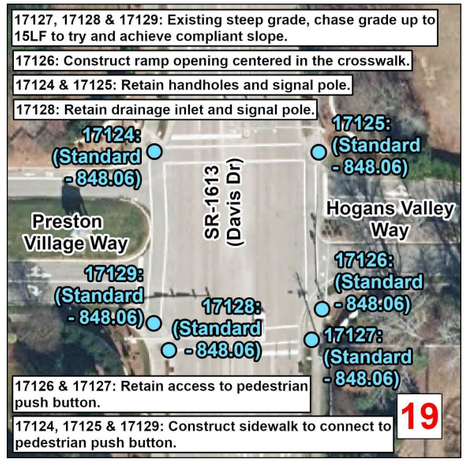


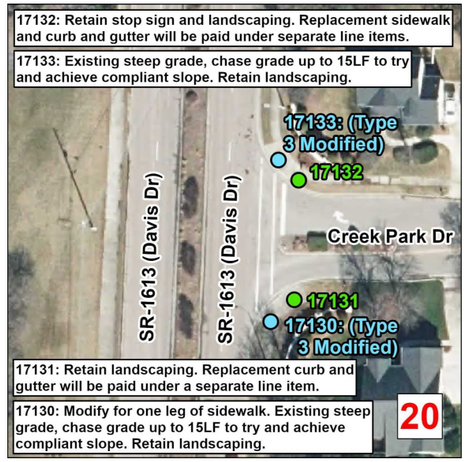


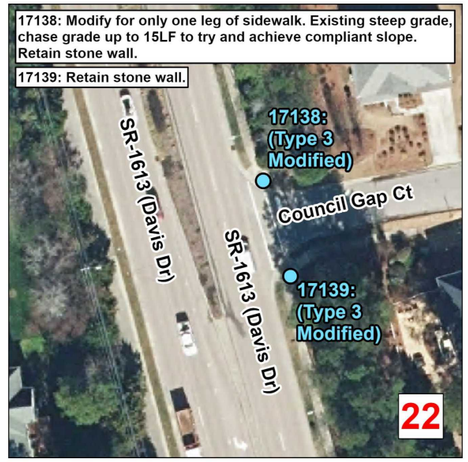












Curb Ramps To Be Repaired

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

Municipal Boundary

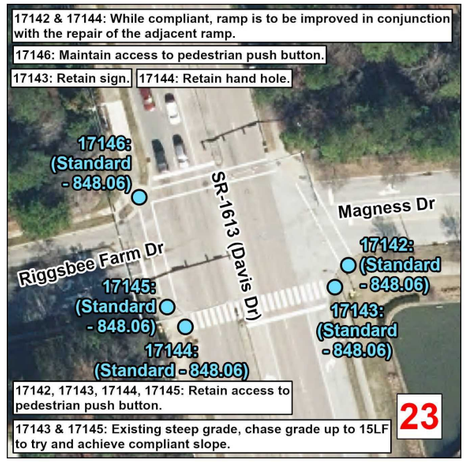
NCHPO Historic Boundary (NR and LHD)

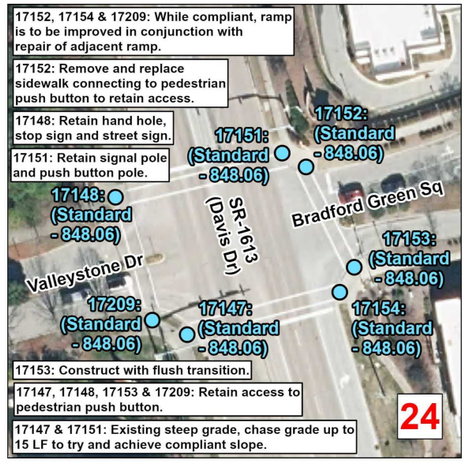
Davis Dr
WBS Number: 2027CPT.05.07.20921

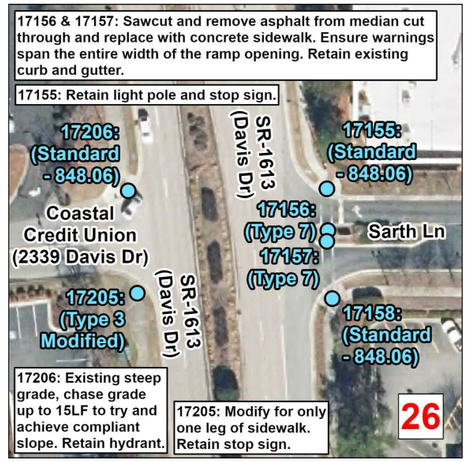
Davis Dr From Durham County Line To Pavement Joint

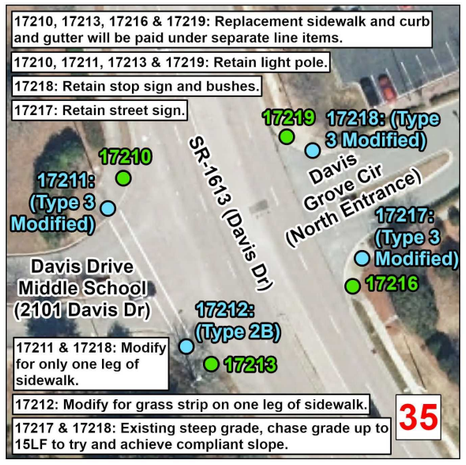
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 5

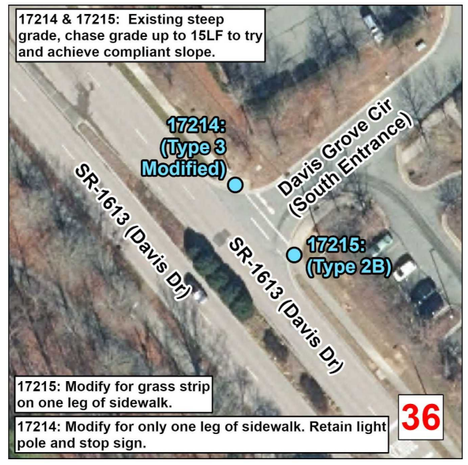
Source: NV5 Engineers and Consultants Inc., ESRI, NC OneMap, NCDOT, NCHPO











Curb Ramps To Be Repaired

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

Municipal Boundary

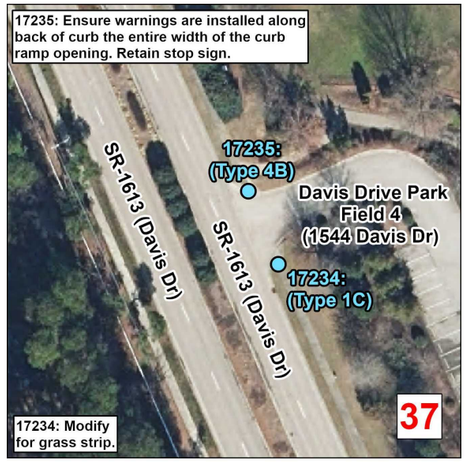
NCHPO Historic Boundary (NR and LHD)

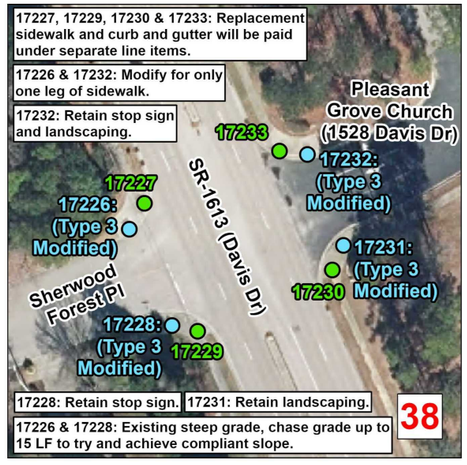
Davis Dr
WBS Number: 2027CPT.05.07.20921

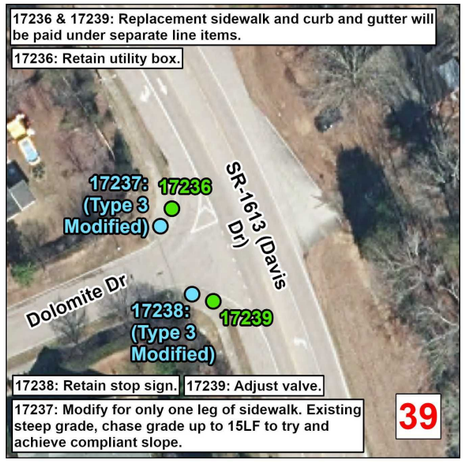
Davis Dr From
Durham County Line To Pavement Joint

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 5

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







Sheet No.
5

Curb Ramps To Be Repaired

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

Municipal Boundary

NCHPO Historic Boundary (NR and LHD)

Davis Dr
WBS Number: 2027CPT.05.07.20921

Davis Dr From
Durham County Line To Pavement Joint

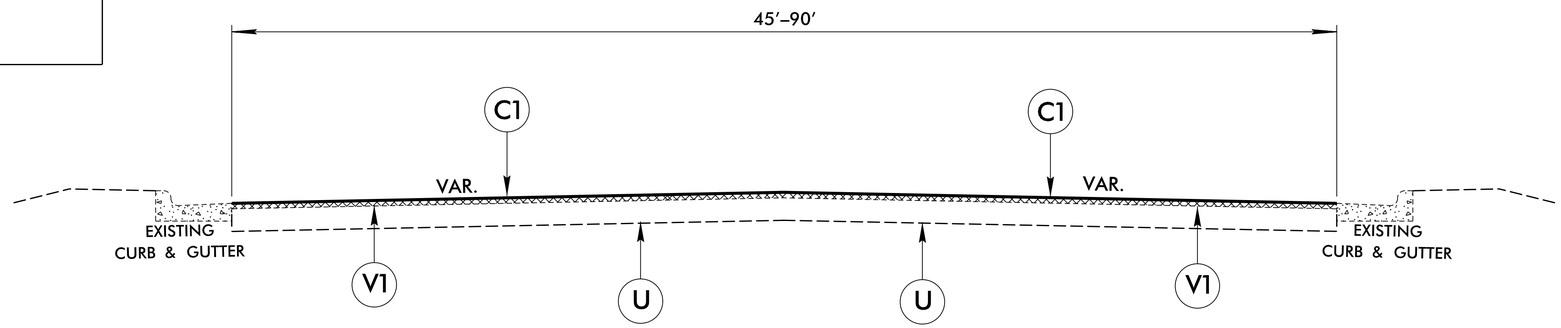
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION 5

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

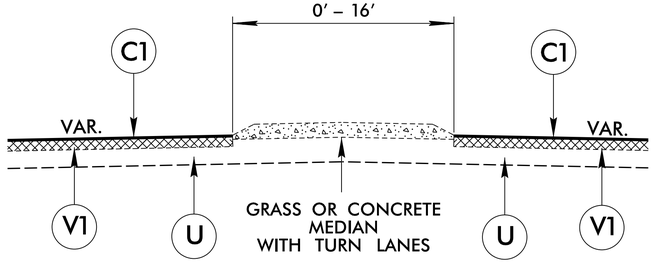
8/17/99

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.05.07.20921	6

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"
T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT

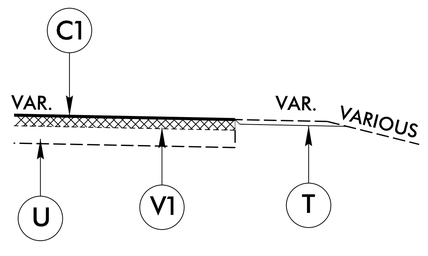


TYPICAL SECTION NO. 1



USE IN CONJUNCTION WITH TYPICAL SECTION NO. 1

USE WITH TYP. 1 25,500' +/–

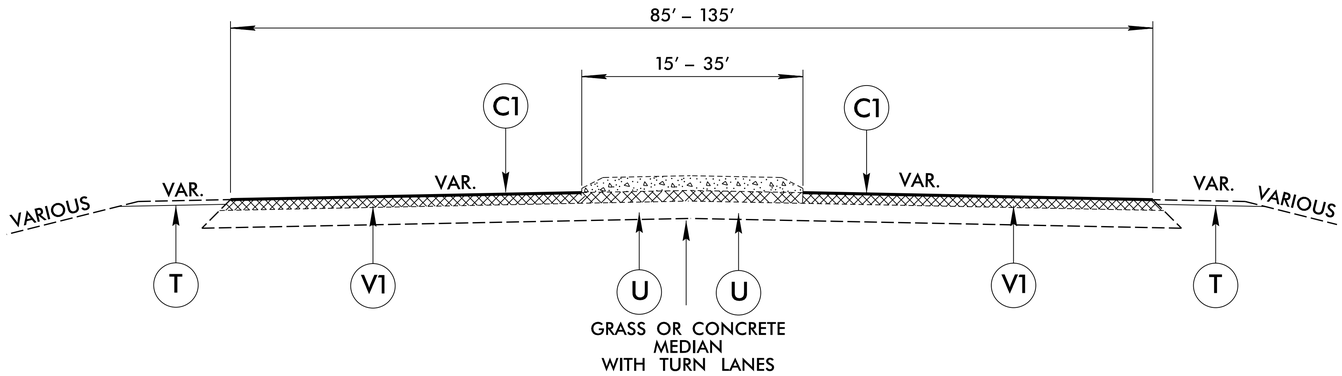


USE IN CONJUNCTION WITH TYPICAL SECTION NO. 1

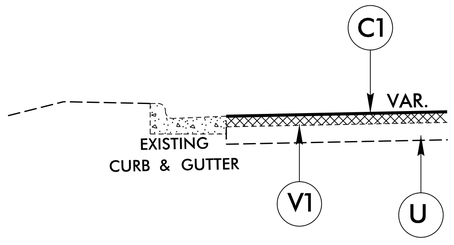
SHOULDER SECTION 350' +/–

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.05.07.20921	7

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"
T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT

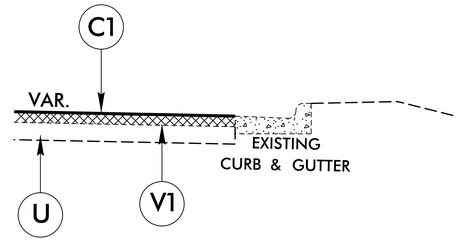


TYPICAL SECTION NO. 2



USE IN CONJUNCTION WITH TYPICAL SECTION NO. 2

C&G SECTION 650′ +/–



USE IN CONJUNCTION WITH TYPICAL SECTION NO. 2

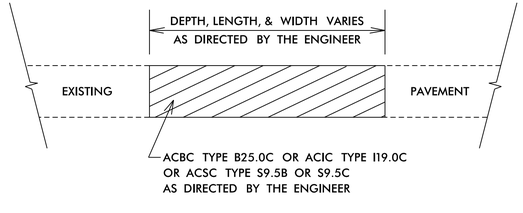
C&G SECTION 900′ +/–

8/17/99

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.05.07.20921	8

NOTES

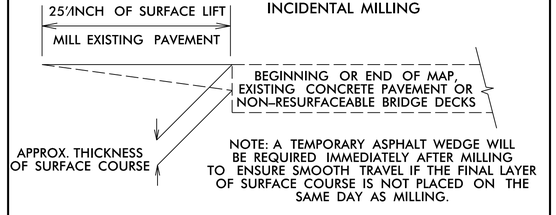
ALL UNPAVED S.R. ROADS TO BE RESURFACED 50' FROM EDGE OF PAVEMENT OF MAIN PROJECT.
ALL PAVED S.R. ROADS TO BE RESURFACED TO THE ENDS OF THE RADII, OR AS DIRECTED BY THE ENGINEER.
EDGES, PAVEMENT WIDENING, INTERSECTIONS AND BRIDGE FLARES ARE INCLUDED IN THE TABLE OF QUANTITIES.
BRIDGES TO BE RESURFACED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



PATCHING EXISTING PAVEMENT
MILLING TO BE PERFORMED PRIOR TO PATCHING

NOTES TO CONTRACTOR

Perform the work in accordance with Section 607 of the January 2024 North Carolina Department of Transportation Standard Specifications for Roads and Structures. Resurfacing will be accomplished at the same time as the milling operation.



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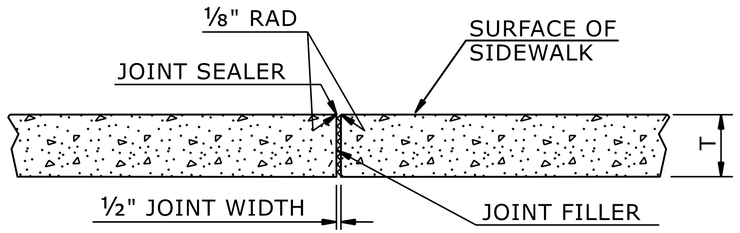
PROJECT REFERENCE NO.	SHEET NO.
2027CPT.05.07.20921	9

NOTES:

CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

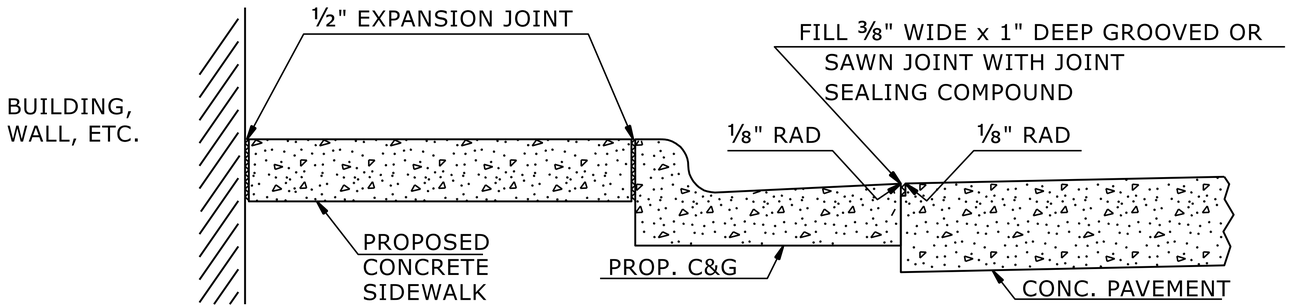
PLACE A GROOVE JOINT 1" DEEP WITH ⅛" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE ½" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A ½" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

SEE STD. DWG. 848.06 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



T = SIDEWALK THICKNESS

TRANSVERSE EXPANSION JOINT IN SIDEWALK



DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

CONCRETE SIDEWALK

SHEET 1 OF 1

848D01

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033144 NICOLE M. HACKLER

Signed by: Nicole M. Hackler 588432D34164C5...

9/14/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

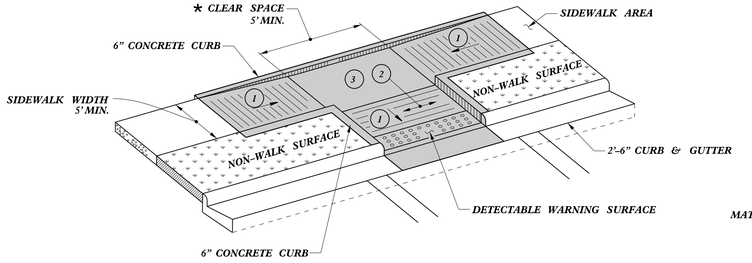
SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: _____

Docusign Envelope ID: D895C85D-73F4-80A9-816A-35ECEDAB939D

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.05.07.20921	10

* – *WHERE CLEAR SPACE IS CONSTRAINED ON TWO OR MORE SIDES, THE CLEAR SPACE SHALL BE 4'MINIMUM X 5'MINIMUM, WITH 5' PROVIDED IN THE DIRECTION OF THE PEDESTRIAN STREET CROSSING.*



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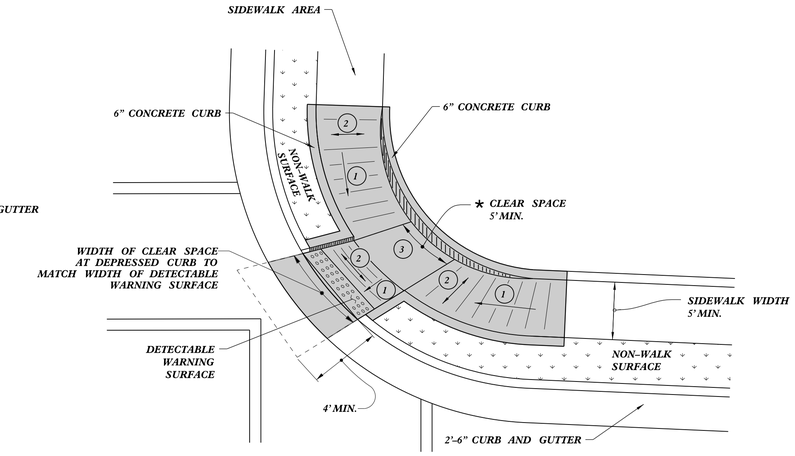
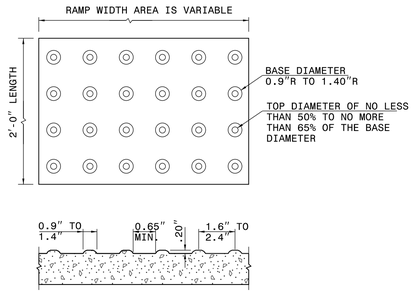


TYPE 3 MODIFIED
INSTALLATION IN A RADIUS

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.

DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE

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

(2) *CROSS SLOPE: 2.00%*

(3) *MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%.*

PAY LIMITS FOR 1 CURB RAMP

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR

CURB RAMP

PARALLEL RAMP

SHEET 9 OF 13

848D06

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 033144 NICOLE M. HACKLER

Signed by: Nicole M. Hackler
5884323D34164C5...

9/14/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SEE TITLE BLOCK

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MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
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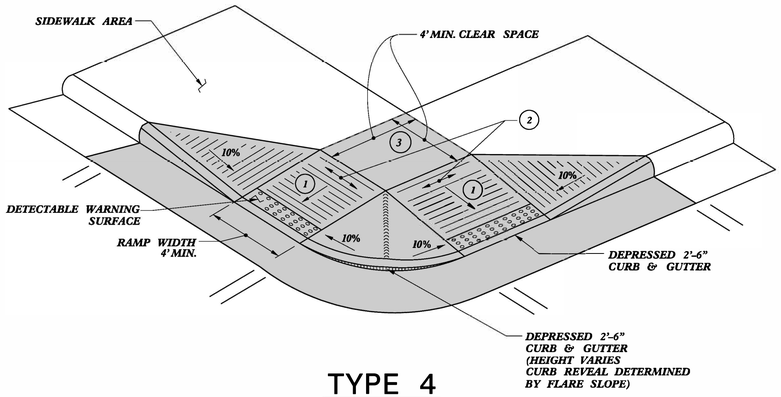
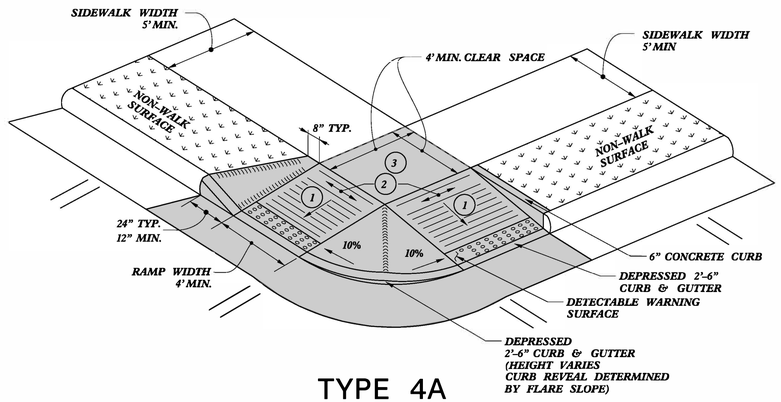
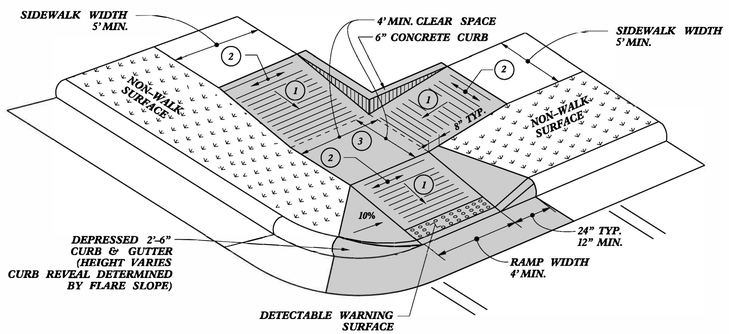
PROJECT REFERENCE NO.	SHEET NO.
2027CPT.05.07.20921	11



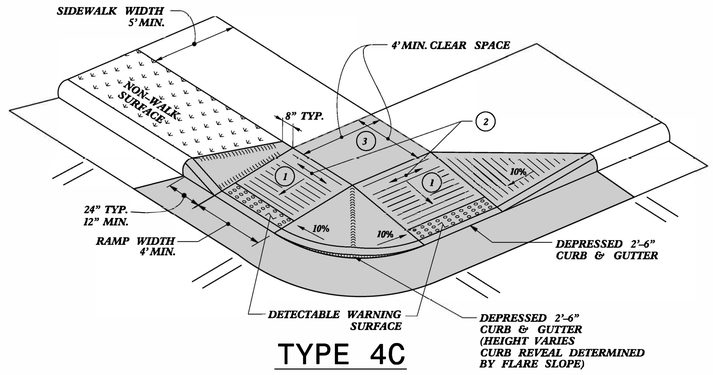
TYPE 4



TYPE 4A



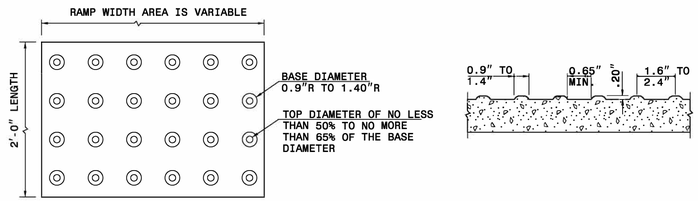
TYPE 4B



TYPE 4C

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.

DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE

1. 8.33% (12:1) MAX RAMP SLOPE
2. CROSS SLOPE: 2.00%
3. MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%.

PAY LIMITS FOR 1 OR 2 CURB RAMPS (CALCULATE BASED ON NUMBER OF SETS OF DETECTABLE WARNING SURFACES

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CURB RAMP
SHARED LANDING

SHEET 10 OF 13

848D06

NORTH CAROLINA PROFESSIONAL SEAL 033144 ENGINEER NICOLE M. HACKLER

Signed by: Nicole M. Hackler
58843230341640...
9/14/2026

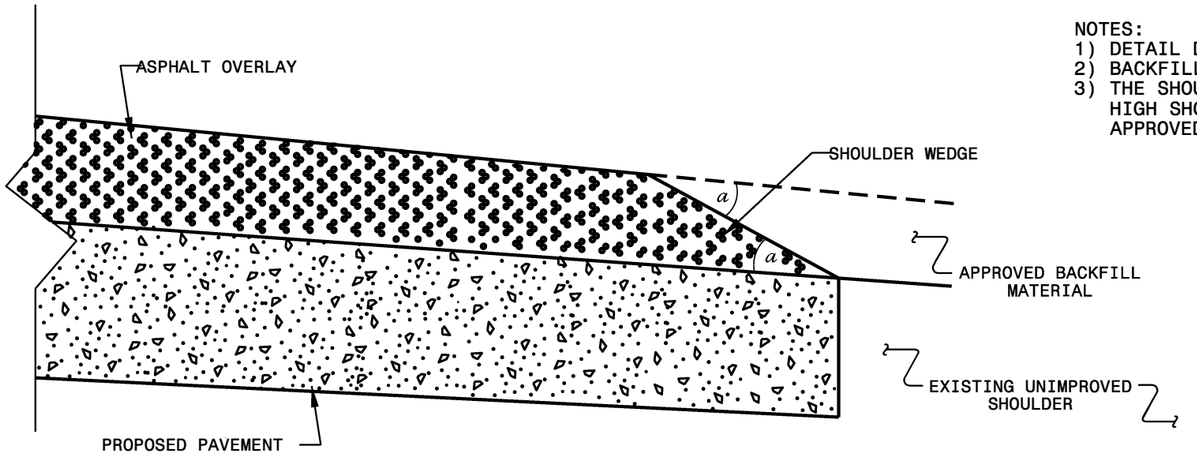
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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

SEE TITLE BLOCK

ORIGINAL BY: S.CALHOUN DATE: 12-22-2023
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: special details\nmhackler\848D0610.dgn

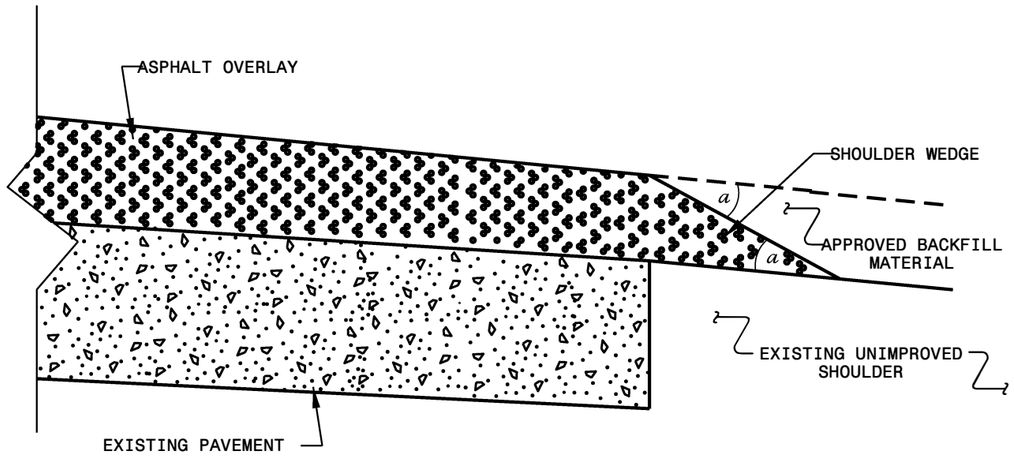
PROJECT REFERENCE NO.	SHEET NO.
2027CPT.05.07.20921	12



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

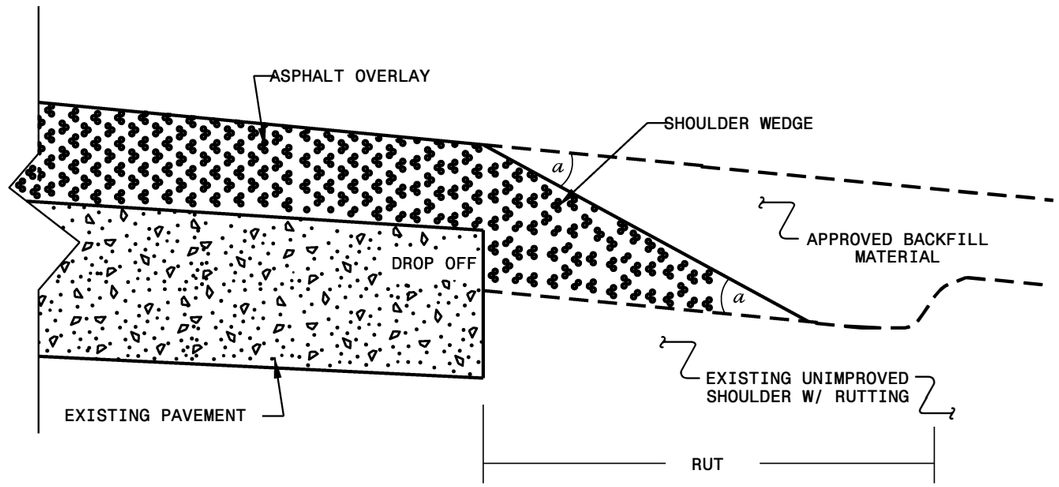
SHOULDER WEDGE DETAIL

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



SHOULDER WEDGE DETAIL

(Resurfacing Projects w/ NO Widening)



SHOULDER WEDGE DETAIL

(Resurfacing Adjacent to Rutted Shoulder)

- SHOULDER WEDGE ANGLE = 30°

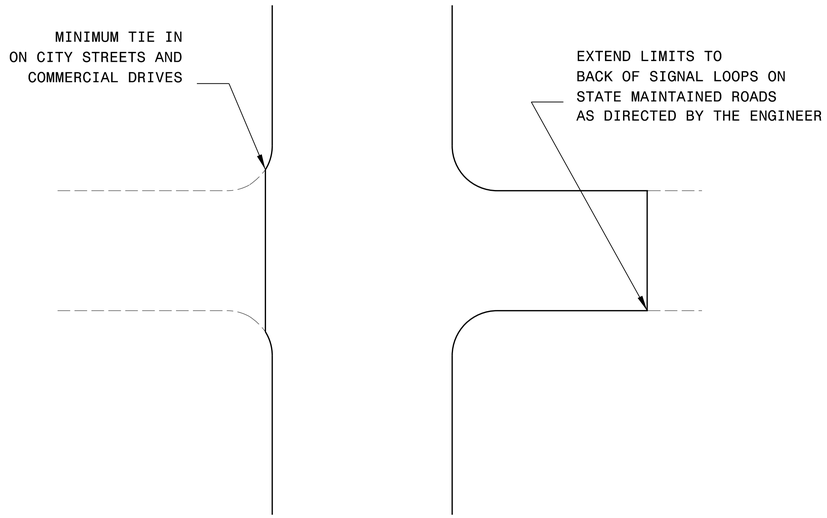
CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SHOULDER WEDGE DETAILS

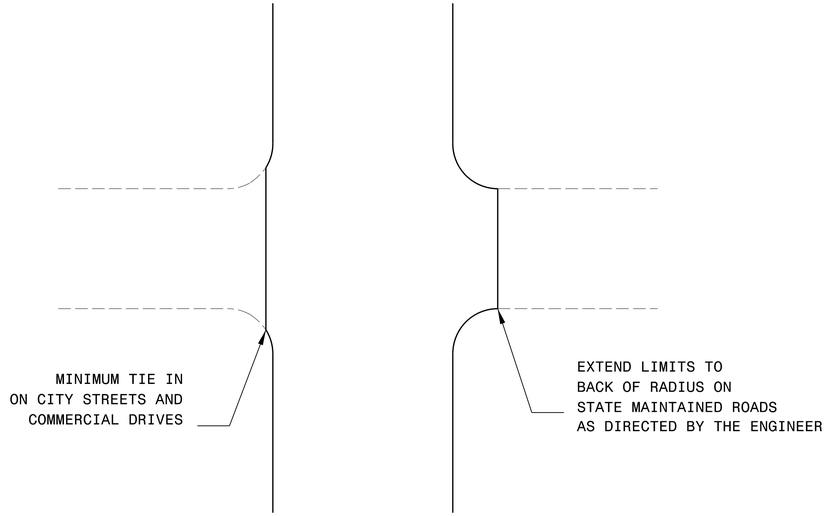
ORIGINAL BY: T.SPELL DATE: 7-19-11
MODIFIED BY: DATE: 2/2/16
CHECKED BY: DATE:
FILE SPEC.: s:\usr\details\stand\shoulderwedgedetail.dgn

22-JAN-2018 09:41
S:\Contracts\CSS_projs\Resurfacing Projects\Division 4\I-5937 Wilson March 2018\Revised Shoulder Wedge Detail.dgn
pjporter At CSS 2620512

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.05.07.20921	13



TYPICAL DETAIL OF PROJECT LIMITS AT
SIGNALIZED Y LINES



TYPICAL DETAIL OF PROJECT LIMITS AT
UNSIGNALIZED Y LINES

ADA SUMMARY OF QUANTITIES - TOTALS

WBS Number:	2027CPT.05.07.20921
County:	Wake

Sheet No.
14

WBS Number	County	Municipality	Resurfacing Route	4447000000-E (LF) Pedestrian Channelizing Devices	4600000000-N (EA) Generic Traffic Control Item - Pedestrian Transport Service (Per Trip)	4600000000-N (EA) Generic Traffic Control Item - Audible Warning Devices	0156000000-E (SY) Removal of Existing Asphalt Pavement	1704000000-E (TON) Patching Existing Pavement	2549000000-E (LF) 2'-6" Concrete Curb & Gutter	2752000000-E (LF) Remove And Replace 2'-6" Concrete Curb & Gutter	2591000000-E (SY) 4" Concrete Sidewalk	2738000000-E (SY) Remove And Replace 4" Concrete Sidewalk	2738000000-E (SY) Remove 4" Concrete Sidewalk	2830000000-N (EA) Adjustment of Manholes	2845000000-N (EA) Adjustment of Meter Boxes or Valve Boxes	2655000000-E (SY) 5" Monolithic Concrete Island (Keyed In)	2612500000-N (EA) Remove and Replace Concrete Curb Ramps	2759000000-N (EA) Remove Concrete Curb Ramps
2027CPT.05.07.20921	Wake	Cary Morrisville Outside Municipality	SR-1613 From Durham County Line To Pavement Joint	160	40	26	8	37	439	500	196	274	25	1	5	4	125	23
GRAND TOTAL				**160**	**40**	**26**	**8**	**37**	**439**	**500**	**196**	**274**	**25**	**1**	**5**	**4**	**125**	**23**

Notes: (1) Construct in accordance with Section 848. Detectable warnings shall be of one of the following materials: engineered plastics, rubber, or composite tile. Additionally, warnings shall be applied directly to the curb ramps by incorporating into the concrete of the curb ramps unless otherwise approved by the Engineer. Surface mounted rubber mats, brick, steel and stamped concrete pavers will not be accepted. (2) In accordance with PROWAG Sections R304.2.1 and R304.3.1, curb ramp running slope is to be constructed to a maximum of 8.33%. Where the curb ramp length must exceed 15 feet to achieve an 8.33% running slope, the curb ramp length shall extend at least 15 feet and may have a running slope greater than 8.33%.

ADA SUMMARY OF QUANTITIES - SR-1613 FROM DURHAM COUNTY LINE TO PAVEMENT JOINT

Municipality:	**Cary** **Morrisville** **Outside Municipality**
WBS Number:	**2027CPT.05.07.20921**
County:	**Wake**

Sheet No.
15

Ramp ID	Inset Map Number	Route 1	Route 2	0156000000-E (SY) Removal of Existing Asphalt Pavement	1704000000-E (TON) Patching Existing Pavement	2549000000-E (LF) 2'-6" Concrete Curb & Gutter	2752000000-E (LF) Remove And Replace 2'-6" Concrete Curb & Gutter	2591000000-E (SY) 4" Concrete Sidewalk	2738000000-E (SY) Remove And Replace 4" Concrete Sidewalk	2738000000-E (SY) Remove 4" Concrete Sidewalk	2830000000-N (EA) Adjustment of Manholes	2845000000-N (EA) Adjustment of Meter Boxes or Valve Boxes	2655000000-E (SY) 5" Monolithic Concrete Island (Keyed In)	2612500000-N (EA) Remove and Replace Concrete Curb Ramps	2759000000-N (EA) Remove Concrete Curb Ramps	Improvement Type
23122	1	SR-1639 (Kit Creek Rd)	SR-1613 (Davis Dr)											1		Type 1C - 848.06
23123	1	SR-1639 (Kit Creek Rd)	SR-1613 (Davis Dr)					2						1		Type 1C - 848.06
14491**	2	SR-1613 (Davis Dr)	Lattner Ct											1		Standard - 848.06
14492	2	SR-1613 (Davis Dr)	Lattner Ct											1		Standard - 848.06
14493	3	SR-1613 (Davis Dr)	SR-3126 (Airport Blvd)											1		Type 3 - 848D0609
26818	3	SR-1613 (Davis Dr)	SR-3126 (Airport Blvd)											1		Standard - 848.06
26817	4	SR-1613 (Davis Dr)	First National Bank Right In (3714 Davis Dr)											1		Type 1C - 848.06
26628	5	SR-1613 (Davis Dr)	Holly Creek Rd											1		Standard - 848.06
26813	5	SR-1613 (Davis Dr)	SR-3059 (Holly Creek Rd)											1		Type 1C - 848.06
26224	6	SR-1613 (Davis Dr)	Lakeford Dr											1		Type 2B - 848.06
26635	6	SR-1613 (Davis Dr)	Lakeford Dr									1			1	Remove Ramp
26221	7	SR-1613 (Davis Dr)	Lot Entrance (3611 Davis Dr)											1		Type 1C - 848.06
26222	7	SR-1613 (Davis Dr)	Lot Entrance (3611 Davis Dr)											1		Type 1C - 848.06
14535	8	SR-1613 (Davis Dr)	Circle K (1610 Davis Dr)											1		Type 1C - 848.06
25093	8	SR-1613 (Davis Dr)	Circle K (1610 Davis Dr)											1		Type 1C - 848.06
14530	9	SR-1613 (Davis Dr)	Food Lion (3609 Davis Dr) Lake Grove Blvd Entrance						3					1		Type 1C - 848.06
14531	9	SR-1613 (Davis Dr)	Food Lion (3609 Davis Dr) Lake Grove Blvd Entrance											1		Type 5A - 848.06
14532	9	SR-1613 (Davis Dr)	Food Lion (3609 Davis Dr) Lake Grove Blvd Entrance											1		Type 5A - 848.06
14533	9	SR-1613 (Davis Dr)	Lake Grove Blvd											1		Standard - 848.06
14534	9	SR-1613 (Davis Dr)	Lake Grove Blvd											1		Type 3 Modified - 848D0609
14536	10	SR-1613 (Davis Dr)	Walgreens (3601 Davis Dr)											1		Type 1C - 848.06
14537	10	SR-1613 (Davis Dr)	Walgreens (3601 Davis Dr)										2	1		Type 7 - 848.06
14538	10	SR-1613 (Davis Dr)	Walgreens (3601 Davis Dr)										2	1		Type 7 - 848.06
14539	10	SR-1613 (Davis Dr)	Walgreens (3601 Davis Dr)											1		Type 1C - 848.06
Sub-Total				**0**	**0**	**0**	**0**	**2**	**3**	**0**	**0**	**1**	**4**	**23**	**1**	

*Contingency line item amount provided for additional adjustments outside of curb ramp pay limits, as needed.

**While ramp is compliant upon initial inspection, it is to be improved in order to create a more resilient curb ramp.

Notes: (1) ADA quantity totals are provided on the project 'ADA SUMMARY OF QUANTITIES - TOTALS' page. (2) Construct in accordance with Section 848. Detectable warnings shall be of one of the following materials: engineered plastics, rubber, or composite tile. Additionally, warnings shall be applied directly to the curb ramps by incorporating into the concrete of the curb ramps unless otherwise approved by the Engineer. Surface mounted rubber mats, brick, steel and stamped concrete pavers will not be accepted. (3) In accordance with PROWAG Sections R304.2.1 and R304.3.1, curb ramp running slope is to be constructed to a maximum of 8.33%. Where the curb ramp length must exceed 15 feet to achieve an 8.33% running slope, the curb ramp length shall extend at least 15 feet and may have a running slope greater than 8.33%.

ADA SUMMARY OF QUANTITIES - SR-1613 FROM DURHAM COUNTY LINE TO PAVEMENT JOINT

Municipality:	**Cary** **Morrisville** **Outside Municipality**
WBS Number:	**2027CPT.05.07.20921**
County:	**Wake**

Sheet No.
16

Ramp ID	Inset Map Number	Route 1	Route 2	0156000000-E (SY) Removal of Existing Asphalt Pavement	1704000000-E (TON) Patching Existing Pavement	2549000000-E (LF) 2'-6" Concrete Curb & Gutter	2752000000-E (LF) Remove And Replace 2'-6" Concrete Curb & Gutter	2591000000-E (SY) 4" Concrete Sidewalk	2738000000-E (SY) Remove And Replace 4" Concrete Sidewalk	2738000000-E (SY) Remove 4" Concrete Sidewalk	2830000000-N (EA) Adjustment of Manholes	2845000000-N (EA) Adjustment of Meter Boxes or Valve Boxes	2655000000-E (SY) 5" Monolithic Concrete Island (Keyed In)	2612500000-N (EA) Remove and Replace Concrete Curb Ramps	2759000000-N (EA) Remove Concrete Curb Ramps	Improvement Type
14540	11	SR-1613 (Davis Dr)	Grace Park Dr											1		Type 3 Modified - 848D0609
14541	11	SR-1613 (Davis Dr)	Grace Park Dr											1		Type 1C - 848.06
14542	11	SR-1613 (Davis Dr)	Grace Park Dr											1		Type 1C - 848.06
14543	11	SR-1613 (Davis Dr)	Grace Park Dr						4					1		Standard - 848.06
13605	12	SR-1613 (Davis Dr)	SR-3014 (Morrisville Carpenter Rd)											1		Standard - 848.06
13606	12	SR-1613 (Davis Dr)	SR-3014 (Morrisville Carpenter Rd)											1		Type 3 Modified - 848D0609
13607	12	SR-1613 (Davis Dr)	SR-3014 (Morrisville Carpenter Rd)											1		Type 3 Modified - 848D0609
13608	12	SR-1613 (Davis Dr)	SR-3014 (Morrisville Carpenter Rd)								1			1		Type 3 Modified - 848D0609
13609	12	SR-1613 (Davis Dr)	SR-3014 (Morrisville Carpenter Rd)											1		Type 2B - 848.06
14709	13	SR-1613 (Davis Dr)	CVS Pharmacy (3581 Davis Dr)											1		Type 3 Modified - 848D0609
14710	13	SR-1613 (Davis Dr)	CVS Pharmacy (3581 Davis Dr)											1		Type 2B - 848.06
14715	14	SR-1613 (Davis Dr)	Walmart Neighborhood Market (3560 Davis Dr) South Entrance											1		Standard - 848.06
14716	14	SR-1613 (Davis Dr)	Walmart Neighborhood Market (3560 Davis Dr) South Entrance											1		Standard - 848.06
14711	15	SR-1613 (Davis Dr)	Kingston Grove Dr											1		Type 3 Modified - 848D0609
14712	15	SR-1613 (Davis Dr)	Kingston Grove Dr											1		Standard - 848.06
9684	16	SR-3060 (Morrisville Pkwy)	SR-1613 (Davis Dr)						10					1		Standard - 848.06
9685	16	SR-3060 (Morrisville Pkwy)	SR-1613 (Davis Dr)						8					1		Standard - 848.06
9686**	16	SR-3060 (Morrisville Pkwy)	SR-1613 (Davis Dr)						5					1		Standard - 848.06
9687**	16	SR-3060 (Morrisville Pkwy)	SR-1613 (Davis Dr)						11					1		Standard - 848.06
9688	16	SR-3060 (Morrisville Pkwy)	SR-1613 (Davis Dr)											1		Type 2B - 848.06
9689	16	SR-3060 (Morrisville Pkwy)	SR-1613 (Davis Dr)											1		Type 2B - 848.06
9690**	16	SR-3060 (Morrisville Pkwy)	SR-1613 (Davis Dr)											1		Standard - 848.06
Sub-Total				**0**	**0**	**0**	**0**	**0**	**38**	**0**	**1**	**0**	**0**	**22**	**0**	

*Contingency line item amount provided for additional adjustments outside of curb ramp pay limits, as needed.

**While ramp is compliant upon initial inspection, it is to be improved in order to create a more resilient curb ramp.

Notes: (1) ADA quantity totals are provided on the project 'ADA SUMMARY OF QUANTITIES - TOTALS' page. (2) Construct in accordance with Section 848. Detectable warnings shall be of one of the following materials: engineered plastics, rubber, or composite tile. Additionally, warnings shall be applied directly to the curb ramps by incorporating into the concrete of the curb ramps unless otherwise approved by the Engineer. Surface mounted rubber mats, brick, steel and stamped concrete pavers will not be accepted. (3) In accordance with PROWAG Sections R304.2.1 and R304.3.1, curb ramp running slope is to be constructed to a maximum of 8.33%. Where the curb ramp length must exceed 15 feet to achieve an 8.33% running slope, the curb ramp length shall extend at least 15 feet and may have a running slope greater than 8.33%.

ADA SUMMARY OF QUANTITIES - SR-1613 FROM DURHAM COUNTY LINE TO PAVEMENT JOINT

Municipality:	**Cary** **Morrisville** **Outside Municipality**
WBS Number:	**2027CPT.05.07.20921**
County:	**Wake**

Sheet No.
17

Ramp ID	Inset Map Number	Route 1	Route 2	0156000000-E (SY) Removal of Existing Asphalt Pavement	1704000000-E (TON) Patching Existing Pavement	2549000000-E (LF) 2'-6" Concrete Curb & Gutter	2752000000-E (LF) Remove And Replace 2'-6" Concrete Curb & Gutter	2591000000-E (SY) 4" Concrete Sidewalk	2738000000-E (SY) Remove And Replace 4" Concrete Sidewalk	2738000000-E (SY) Remove 4" Concrete Sidewalk	2830000000-N (EA) Adjustment of Manholes	2845000000-N (EA) Adjustment of Meter Boxes or Valve Boxes	2655000000-E (SY) 5" Monolithic Concrete Island (Keyed In)	2612500000-N (EA) Remove and Replace Concrete Curb Ramps	2759000000-N (EA) Remove Concrete Curb Ramps	Improvement Type
9691**	16	SR-3060 (Morrisville Pkwy)	SR-1613 (Davis Dr)											1		Standard - 848.06
17118	17	SR-1613 (Davis Dr)	Charleville Ct											1		Type 3 Modified - 848D0609
17119	17	SR-1613 (Davis Dr)	Charleville Ct											1		Type 1C - 848.06
17120**	18	SR-1613 (Davis Dr)	Caviston Way											1		Standard - 848.06
17121**	18	SR-1613 (Davis Dr)	Caviston Way											1		Standard - 848.06
17122	18	SR-1613 (Davis Dr)	Caviston Way			20		13	34						1	Remove Ramp
17123	18	SR-1613 (Davis Dr)	Caviston Way			17									1	Remove Ramp
17124**	19	SR-1613 (Davis Dr)	Preston Village Way					2						1		Standard - 848.06
17125**	19	SR-1613 (Davis Dr)	Hogans Valley Way					2						1		Standard - 848.06
17126**	19	SR-1613 (Davis Dr)	Hogans Valley Way											1		Standard - 848.06
17127	19	SR-1613 (Davis Dr)	Hogans Valley Way											1		Standard - 848.06
17128	19	SR-1613 (Davis Dr)	Preston Village Way											1		Standard - 848.06
17129	19	SR-1613 (Davis Dr)	Preston Village Way					3						1		Standard - 848.06
17130	20	SR-1613 (Davis Dr)	Creek Park Dr											1		Type 3 Modified - 848D0609
17131	20	SR-1613 (Davis Dr)	Creek Park Dr			16									1	Remove Ramp
17132	20	SR-1613 (Davis Dr)	Creek Park Dr			18		7							1	Remove Ramp
17133	20	SR-1613 (Davis Dr)	Creek Park Dr											1		Type 3 Modified - 848D0609
17134	21	SR-1613 (Davis Dr)	Carramore Ave											1		Type 3 Modified - 848D0609
17135	21	SR-1613 (Davis Dr)	Carramore Ave			24		15							1	Remove Ramp
17136	21	SR-1613 (Davis Dr)	Carramore Ave											1		Type 3 Modified - 848D0609
17137**	21	SR-1613 (Davis Dr)	Carramore Ave			22		13							1	Remove Ramp
17138	22	SR-1613 (Davis Dr)	Council Gap Ct											1		Type 3 Modified - 848D0609
17139**	22	SR-1613 (Davis Dr)	Council Gap Ct											1		Type 3 Modified - 848D0609
17142**	23	SR-1613 (Davis Dr)	Magness Dr											1		Standard - 848.06
Sub-Total				**0**	**0**	**117**	**0**	**55**	**34**	**0**	**0**	**0**	**0**	**18**	**6**	

*Contingency line item amount provided for additional adjustments outside of curb ramp pay limits, as needed.

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ADA SUMMARY OF QUANTITIES - SR-1613 FROM DURHAM COUNTY LINE TO PAVEMENT JOINT

Municipality:	**Cary** **Morrisville** **Outside Municipality**
WBS Number:	**2027CPT.05.07.20921**
County:	**Wake**

Sheet No.
18

Ramp ID	Inset Map Number	Route 1	Route 2	0156000000-E (SY) Removal of Existing Asphalt Pavement	1704000000-E (TON) Patching Existing Pavement	2549000000-E (LF) 2'-6" Concrete Curb & Gutter	2752000000-E (LF) Remove And Replace 2'-6" Concrete Curb & Gutter	2591000000-E (SY) 4" Concrete Sidewalk	2738000000-E (SY) Remove And Replace 4" Concrete Sidewalk	2738000000-E (SY) Remove 4" Concrete Sidewalk	2830000000-N (EA) Adjustment of Manholes	2845000000-N (EA) Adjustment of Meter Boxes or Valve Boxes	2655000000-E (SY) 5" Monolithic Concrete Island (Keyed In)	2612500000-N (EA) Remove and Replace Concrete Curb Ramps	2759000000-N (EA) Remove Concrete Curb Ramps	Improvement Type
17143	23	SR-1613 (Davis Dr)	Magness Dr											1		Standard - 848.06
17144**	23	SR-1613 (Davis Dr)	Riggsbee Farm Dr											1		Standard - 848.06
17145	23	SR-1613 (Davis Dr)	Riggsbee Farm Dr											1		Standard - 848.06
17146**	23	SR-1613 (Davis Dr)	Riggsbee Farm Dr											1		Standard - 848.06
17147	24	SR-1613 (Davis Dr)	Valleystone Dr											1		Standard - 848.06
17148	24	SR-1613 (Davis Dr)	Valleystone Dr											1		Standard - 848.06
17151	24	SR-1613 (Davis Dr)	Bradford Green Sq											1		Standard - 848.06
17152**	24	SR-1613 (Davis Dr)	Bradford Green Sq						1					1		Standard - 848.06
17153	24	SR-1613 (Davis Dr)	Bradford Green Sq											1		Standard - 848.06
17154**	24	SR-1613 (Davis Dr)	Bradford Green Sq											1		Standard - 848.06
17209**	24	SR-1613 (Davis Dr)	Valleystone Dr											1		Standard - 848.06
17207	25	SR-1613 (Davis Dr)	Boulderstone Way											1		Standard - 848.06
17208**	25	SR-1613 (Davis Dr)	Boulderstone Way											1		Standard - 848.06
17155	26	SR-1613 (Davis Dr)	Sarth Ln											1		Standard - 848.06
17156	26	SR-1613 (Davis Dr)	Sarth Ln	4										1		Type 7 - 848.06
17157	26	SR-1613 (Davis Dr)	Sarth Ln	4										1		Type 7 - 848.06
17158	26	SR-1613 (Davis Dr)	Sarth Ln											1		Standard - 848.06
17205	26	SR-1613 (Davis Dr)	Coastal Credit Union (2339 Davis Dr)											1		Type 3 Modified - 848D0609
17206	26	SR-1613 (Davis Dr)	Coastal Credit Union (2339 Davis Dr)											1		Standard - 848.06
17203**	27	SR-1613 (Davis Dr)	A Cleaner World (2321 Davis Dr)											1		Standard - 848.06
17204	27	SR-1613 (Davis Dr)	A Cleaner World (2321 Davis Dr)											1		Standard - 848.06
17159	28	SR-1613 (Davis Dr)	Searstone Dr											1		Type 3 Modified - 848D0609
17160	28	SR-1613 (Davis Dr)	Searstone Dr											1		Type 3 Modified - 848D0609
17161	28	SR-1613 (Davis Dr)	Searstone Dr									1		1		Type 3 Modified - 848D0609
Sub-Total				**8**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**	**0**	**24**	**0**	

*Contingency line item amount provided for additional adjustments outside of curb ramp pay limits, as needed.

**While ramp is compliant upon initial inspection, it is to be improved in order to create a more resilient curb ramp.

Notes: (1) ADA quantity totals are provided on the project 'ADA SUMMARY OF QUANTITIES - TOTALS' page. (2) Construct in accordance with Section 848. Detectable warnings shall be of one of the following materials: engineered plastics, rubber, or composite tile. Additionally, warnings shall be applied directly to the curb ramps by incorporating into the concrete of the curb ramps unless otherwise approved by the Engineer. Surface mounted rubber mats, brick, steel and stamped concrete pavers will not be accepted. (3) In accordance with PROWAG Sections R304.2.1 and R304.3.1, curb ramp running slope is to be constructed to a maximum of 8.33%. Where the curb ramp length must exceed 15 feet to achieve an 8.33% running slope, the curb ramp length shall extend at least 15 feet and may have a running slope greater than 8.33%.

ADA SUMMARY OF QUANTITIES - SR-1613 FROM DURHAM COUNTY LINE TO PAVEMENT JOINT

Municipality:	**Cary** **Morrisville** **Outside Municipality**
WBS Number:	**2027CPT.05.07.20921**
County:	**Wake**

Sheet No.
19

Ramp ID	Inset Map Number	Route 1	Route 2	0156000000-E (SY) Removal of Existing Asphalt Pavement	1704000000-E (TON) Patching Existing Pavement	2549000000-E (LF) 2'-6" Concrete Curb & Gutter	2752000000-E (LF) Remove And Replace 2'-6" Concrete Curb & Gutter	2591000000-E (SY) 4" Concrete Sidewalk	2738000000-E (SY) Remove And Replace 4" Concrete Sidewalk	2738000000-E (SY) Remove 4" Concrete Sidewalk	2830000000-N (EA) Adjustment of Manholes	2845000000-N (EA) Adjustment of Meter Boxes or Valve Boxes	2655000000-E (SY) 5" Monolithic Concrete Island (Keyed In)	2612500000-N (EA) Remove and Replace Concrete Curb Ramps	2759000000-N (EA) Remove Concrete Curb Ramps	Improvement Type
17162	28	SR-1613 (Davis Dr)	Searstone Dr											1		Type 3 Modified - 848D0609
17200**	28	SR-1613 (Davis Dr)	Cornerstone Dr											1		Type 3 Modified - 848D0609
17201	28	SR-1613 (Davis Dr)	Cornerstone Dr											1		Type 3 Modified - 848D0609
17202	28	SR-1613 (Davis Dr)	Cornerstone Dr											1		Type 3 Modified - 848D0609
17163	29	SR-1613 (Davis Dr)	Hidden Rock Ct												1	Remove Ramp
17164	29	SR-1613 (Davis Dr)	Hidden Rock Ct											1		Type 3 Modified - 848D0609
17165**	29	SR-1613 (Davis Dr)	Hidden Rock Ct											1		Type 3 Modified - 848D0609
17166	29	SR-1613 (Davis Dr)	Hidden Rock Ct			20		9							1	Remove Ramp
17196**	29	SR-1613 (Davis Dr)	Whitebridge Dr											1		Type 3 Modified - 848D0609
17197**	29	SR-1613 (Davis Dr)	Whitebridge Dr			20		9							1	Remove Ramp
17198	29	SR-1613 (Davis Dr)	Whitebridge Dr			19		10							1	Remove Ramp
17199**	29	SR-1613 (Davis Dr)	Whitebridge Dr											1		Type 3 Modified - 848D0609
17167**	30	SR-1613 (Davis Dr)	Yorkhill Dr			20		7							1	Remove Ramp
17168	30	SR-1613 (Davis Dr)	Yorkhill Dr											1		Type 3 Modified - 848D0609
17169	30	SR-1613 (Davis Dr)	Yorkhill Dr											1		Type 3 Modified - 848D0609
17170	30	SR-1613 (Davis Dr)	Yorkhill Dr			20		8							1	Remove Ramp
17194	31	SR-1613 (Davis Dr)	Daymire Glen Lane											1		Type 2A - 848.06
17195	31	SR-1613 (Davis Dr)	Daymire Glen Lane											1		Type 2A - 848.06
17171	32	SR-1613 (Davis Dr)	Waldo Rood Blvd									1		1		Type 3 Modified - 848D0609
17172	32	SR-1613 (Davis Dr)	Waldo Rood Blvd											1		Type 3 Modified - 848D0609
17173	32	SR-1613 (Davis Dr)	Waldo Rood Blvd									1		1		Type 3 Modified - 848D0609
17174	32	SR-1613 (Davis Dr)	Waldo Rood Blvd											1		Type 3 Modified - 848D0609
17175	32	SR-1613 (Davis Dr)	SR-1619 (Waldo Rood Blvd)											1		Type 3 Modified - 848D0609
17176**	32	SR-1613 (Davis Dr)	SR-1619 (Waldo Rood Blvd)											1		Type 3 Modified - 848D0609
Sub-Total				**0**	**0**	**99**	**0**	**43**	**0**	**0**	**0**	**2**	**0**	**18**	**6**	

*Contingency line item amount provided for additional adjustments outside of curb ramp pay limits, as needed.

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Notes: (1) ADA quantity totals are provided on the project 'ADA SUMMARY OF QUANTITIES - TOTALS' page. (2) Construct in accordance with Section 848. Detectable warnings shall be of one of the following materials: engineered plastics, rubber, or composite tile. Additionally, warnings shall be applied directly to the curb ramps by incorporating into the concrete of the curb ramps unless otherwise approved by the Engineer. Surface mounted rubber mats, brick, steel and stamped concrete pavers will not be accepted. (3) In accordance with PROWAG Sections R304.2.1 and R304.3.1, curb ramp running slope is to be constructed to a maximum of 8.33%. Where the curb ramp length must exceed 15 feet to achieve an 8.33% running slope, the curb ramp length shall extend at least 15 feet and may have a running slope greater than 8.33%.

ADA SUMMARY OF QUANTITIES - SR-1613 FROM DURHAM COUNTY LINE TO PAVEMENT JOINT

Municipality:	**Cary** **Morrisville** **Outside Municipality**
WBS Number:	**2027CPT.05.07.20921**
County:	**Wake**

Sheet No.
20

Ramp ID	Inset Map Number	Route 1	Route 2	0156000000-E (SY) Removal of Existing Asphalt Pavement	1704000000-E (TON) Patching Existing Pavement	2549000000-E (LF) 2'-6" Concrete Curb & Gutter	2752000000-E (LF) Remove And Replace 2'-6" Concrete Curb & Gutter	2591000000-E (SY) 4" Concrete Sidewalk	2738000000-E (SY) Remove And Replace 4" Concrete Sidewalk	2738000000-E (SY) Remove 4" Concrete Sidewalk	2830000000-N (EA) Adjustment of Manholes	2845000000-N (EA) Adjustment of Meter Boxes or Valve Boxes	2655000000-E (SY) 5" Monolithic Concrete Island (Keyed In)	2612500000-N (EA) Remove and Replace Concrete Curb Ramps	2759000000-N (EA) Remove Concrete Curb Ramps	Improvement Type
17181**	32	SR-1613 (Davis Dr)	SR-1619 (Waldo Rood Blvd)											1		Type 3 Modified - 848D0609
17182**	32	SR-1613 (Davis Dr)	SR-1619 (Waldo Rood Blvd)											1		Type 3 Modified - 848D0609
17183	33	SR-1613 (Davis Dr)	The Learning Experience (2185 Davis Dr)											1		Type 1C - 848.06
17184**	33	SR-1613 (Davis Dr)	The Learning Experience (2185 Davis Dr)											1		Type 1C - 848.06
17189	34	SR-1613 (Davis Dr)	Davis Dr Elementary School (2151 Davis Dr)											1		Standard - 848.06
17190**	34	SR-1613 (Davis Dr)	Davis Dr Elementary School (2151 Davis Dr)											1		Standard - 848.06
17210**	35	SR-1613 (Davis Dr)	Davis Drive Middle School (2101 Davis Dr)			20		16							1	Remove Ramp
17211	35	SR-1613 (Davis Dr)	Davis Drive Middle School (2101 Davis Dr)											1		Type 3 Modified - 848D0609
17212	35	SR-1613 (Davis Dr)	Davis Drive Middle School (2101 Davis Dr)											1		Type 2B - 848.06
17213	35	SR-1613 (Davis Dr)	Davis Drive Middle School (2101 Davis Dr)			20		18							1	Remove Ramp
17216	35	SR-1613 (Davis Dr)	Davis Grove Cir (North Entrance)			26		9							1	Remove Ramp
17217	35	SR-1613 (Davis Dr)	Davis Grove Cir (North Entrance)											1		Type 3 Modified - 848D0609
17218	35	SR-1613 (Davis Dr)	Davis Grove Cir (North Entrance)											1		Type 3 Modified - 848D0609
17219**	35	SR-1613 (Davis Dr)	Davis Grove Cir (North Entrance)			20		9							1	Remove Ramp
17214	36	SR-1613 (Davis Dr)	Davis Grove Cir (South Entrance)											1		Type 3 Modified - 848D0609
17215	36	SR-1613 (Davis Dr)	Davis Grove Cir (South Entrance)											1		Type 2B - 848.06
17234	37	SR-1613 (Davis Dr)	Davis Drive Park Field 4 (1544 Davis Dr)											1		Type 1C - 848.06
17235	37	SR-1613 (Davis Dr)	Davis Drive Park Field 4 (1544 Davis Dr)											1		Type 4B - 848D0610
17226	38	SR-1613 (Davis Dr)	Sherwood Forest Pl											1		Type 3 Modified - 848D0609
17227**	38	SR-1613 (Davis Dr)	Sherwood Forest Pl			20		7							1	Remove Ramp
17228	38	SR-1613 (Davis Dr)	Sherwood Forest Pl											1		Type 3 Modified - 848D0609
17229	38	SR-1613 (Davis Dr)	Sherwood Forest Pl			20		7							1	Remove Ramp
17230	38	SR-1613 (Davis Dr)	Pleasant Grove Church (1528 Davis Dr)			27		8							1	Remove Ramp
17231	38	SR-1613 (Davis Dr)	Pleasant Grove Church (1528 Davis Dr)											1		Type 3 Modified - 848D0609
Sub-Total				**0**	**0**	**153**	**0**	**74**	**0**	**0**	**0**	**0**	**0**	**17**	**7**	

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ADA SUMMARY OF QUANTITIES - SR-1613 FROM DURHAM COUNTY LINE TO PAVEMENT JOINT

Municipality:	**Cary** **Morrisville** **Outside Municipality**
WBS Number:	**2027CPT.05.07.20921**
County:	**Wake**

Sheet No.
21

Ramp ID	Inset Map Number	Route 1	Route 2	0156000000-E (SY) Removal of Existing Asphalt Pavement	1704000000-E (TON) Patching Existing Pavement	2549000000-E (LF) 2'-6" Concrete Curb & Gutter	2752000000-E (LF) Remove And Replace 2'-6" Concrete Curb & Gutter	2591000000-E (SY) 4" Concrete Sidewalk	2738000000-E (SY) Remove And Replace 4" Concrete Sidewalk	2738000000-E (SY) Remove 4" Concrete Sidewalk	2830000000-N (EA) Adjustment of Manholes	2845000000-N (EA) Adjustment of Meter Boxes or Valve Boxes	2655000000-E (SY) 5" Monolithic Concrete Island (Keyed In)	2612500000-N (EA) Remove and Replace Concrete Curb Ramps	2759000000-N (EA) Remove Concrete Curb Ramps	Improvement Type
17232	38	SR-1613 (Davis Dr)	Pleasant Grove Church (1528 Davis Dr)											1		Type 3 Modified - 848D0609
17233**	38	SR-1613 (Davis Dr)	Pleasant Grove Church (1528 Davis Dr)			32		7							1	Remove Ramp
17236	39	SR-1613 (Davis Dr)	Dolomite Dr			18		6							1	Remove Ramp
17237	39	SR-1613 (Davis Dr)	Dolomite Dr											1		Type 3 Modified - 848D0609
17238	39	SR-1613 (Davis Dr)	Dolomite Dr											1		Type 3 Modified - 848D0609
17239	39	SR-1613 (Davis Dr)	Dolomite Dr			20		9				1			1	Remove Ramp
-	-	-	-	-	37*	-	500*	-	198*	*25	-	-	-	-	-	
Sub-Total				**0**	**37**	**70**	**500**	**22**	**198**	**25**	**0**	**1**	**0**	**3**	**3**	
Sub-Total for SR-1613 From Durham County Line To Pavement Joint				**8**	**37**	**439**	**500**	**196**	**274**	**25**	**1**	**5**	**4**	**125**	**23**	

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PROJECT NO.	SHEET NO.	TOTAL NO.
2027CPT.05.07.20921	22	

SUMMARY OF QUANTITIES

												0156000000-E	1220000000-E	1245000000-E	1260000000-E	1297000000-E	1330000000-E	1519000000-E	1575000000-E	1704000000-E	2549000000-E	2591000000-E	2612500000-N	2655000000-E	2738000000-E	2739000000-E	2752000000-E	2759000000-N	2830000000-N	2845000000-N	4600000000-N		7444000000-E
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	REMOVAL OF EXISTING ASPHALT PAVEMENT	INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	AGGREGATE SHOULDER BORROW	1½" MILLING	INCIDENTAL MILLING	SURFACE COURSE, S9.5B	ASPHALT BINDER FOR PLANT MIX	PATCHING EXISTING PAVEMENT	2'-6" CONCRETE CURB & GUTTER	4" CONCRETE SIDEWALK	REMOVE AND REPLACE CONCRETE CURB RAMPS	5" MONOLITHIC CONCRETE ISLANDS(KEYED IN)	REMOVE AND REPLACE 4" CONCRETE SIDEWALK	REMOVE 4" CONCRETE SIDEWALK	REMOVE AND REPLACE 2'-6" CONCRETE CURB & GUTTER	REMOVE CONCRETE CURB RAMP	ADJUST MANHOLES	ADJUST METER OR VALVE BOX	PEDESTRIAN TRANSPORT SERVICE	AUDIBLE WARNING DEVICES	INDUCTIVE LOOP SAWCUT
								MI	FT			SY	TONS	SMI	TON	SY	SY	TONS	TON	TONS	LF	SY	EA	SY	SY	SY	LF	EA	EA	EA	EA	EA	LF
2027CPT.05.07.20921	Wake	1	SR-1613 / DAVIS DR	FROM DURHAM COUNTY LINE TO PAVEMENT JOINT	1,2	4	MD	7.210	45-135	0.000	7.210	8	138	5.50	508	459,361	45,326	45,801	2,980	57	439	196	125	4	274	25	500	23	1	5	40	26	33,000
TOTAL FOR MAP NO. 1								**7.210**				**8**	**138**	**5.50**	**508**	**459,361**	**45,326**	**45,801**	**2,980**	**57**	**439**	**196**	**125**	**4**	**274**	**25**	**500**	**23**	**1**	**5**	**40**	**26**	**33,000**
TOTAL FOR PROJ NO. 2027CPT.05.07.20921								**7.210**				**8**	**138**	**5.50**	**508**	**459,361**	**45,326**	**45,801**	**2,980**	**57**	**439**	**196**	**125**	**4**	**274**	**25**	**500**	**23**	**1**	**5**	**40**	**26**	**33,000**
GRAND TOTAL								**7.210**				**8**	**138**	**5.50**	**508**	**459,361**	**45,326**	**45,801**	**2,980**	**57**	**439**	**196**	**125**	**4**	**274**	**25**	**500**	**23**	**1**	**5**	**40**	**26**	**33,000**

PROJECT NO.	SHEET NO.	TOTAL NO.
2027CPT.05.07.20921	23	

THERMOPLASTIC AND PAINT QUANTITIES

													4413000000-E	4447000000-E	4457000000-N	4510000000-N	4685000000-E		4688000000-E	4695000000-E	4700000000-E		4704000000-E	4709000000-E	4720000000-E					4725000000-E						
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP	WORK ZONE ADVANCE/GENERAL WARNING SIGNING	PEDESTRIAN CHANNELIZING DE- VICES	TEMPORARY TRAFFIC CONTROL	LAW ENFORCEMENT	4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	6" X 90 M WHITE THERMO	8" X 90 M WHITE THERMO	12" X 90 M WHITE THERMO	12" X 90 M YELLOW THERMO	16" X 90 M WHITE THERMO	24" X 90 M WHITE THERMO	THERMO MSG ONLY 90 M	THERMO MSG BUS 90 M	THERMO MSG RXR 90 M	THERMO MSG SCHOOL 90 M	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	THERMO STR ARROW 90 M	THERMO STR & LT ARROW 90 M	THERMO STR & RT ARROW 90 M	THERMO U-TURN 90 M
								MI	FT			SF	LF	LS	HR	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
2027CPT.05.07.20921	Wake	1	SR-1613 / DAVIS DR	FROM DURHAM COUNTY LINE TO PAVEMENT JOINT	1,2	4	MD	7.21	45-135	0	7.21	126	160	1.00	640	73,070	27,970	110	4,110	160	940	200	4,500	60	6	8	36	136	66	106	2	30	1
TOTAL FOR MAP NO. 1								**7.21**				**126**	**160**	**1.00**	**640**	**73,070**	**27,970**	**110**	**4,110**	**160**	**940**	**200**	**4,500**	**60**	**6**	**8**	**36**	**136**	**66**	**106**	**2**	**30**	**1**
TOTAL FOR PROJ NO. 2027CPT.05.07.20921								**7.21**				**126**	**160**	**1.00**	**640**	**73,070**	**27,970**	**110**	**4,110**	**160**	**940**	**200**	**4,500**	**60**	**6**	**8**	**36**	**136**	**66**	**106**	**2**	**30**	**1**
																101,040				**1,100**				**110**				**341**					
GRAND TOTAL								**7.21**				**126**	**160**	**1.00**	**640**	**73,070**	**27,970**	**110**	**4,110**	**160**	**940**	**200**	**4,500**	**60**	**6**	**8**	**36**	**136**	**66**	**106**	**2**	**30**	**1**
																101,040				**1,100**				**110**				**341**					

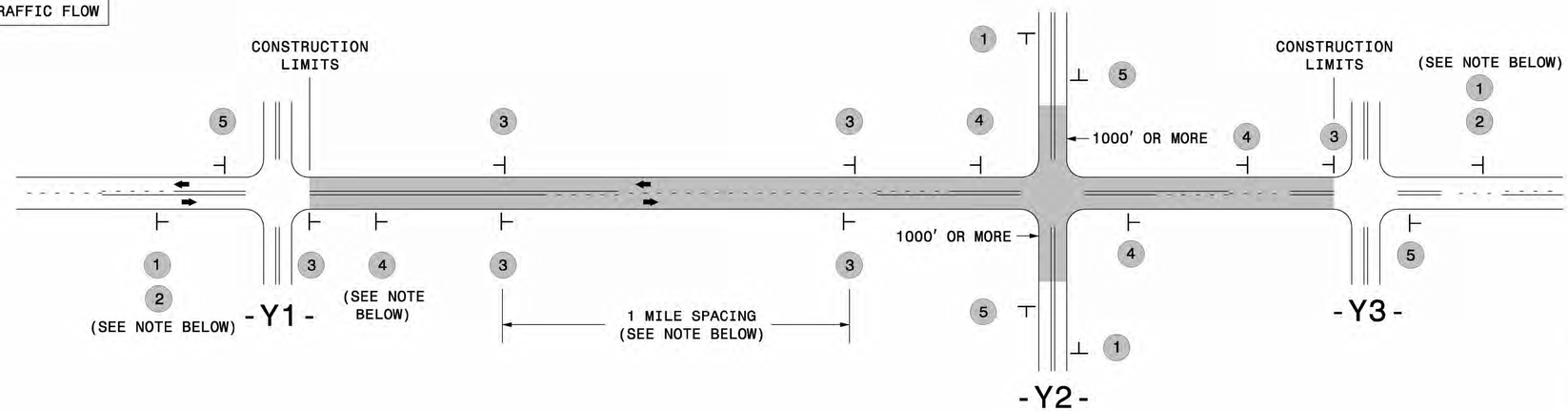
PROJECT NO.	SHEET NO.	TOTAL NO.
2027CPT.05.07.20921	24	

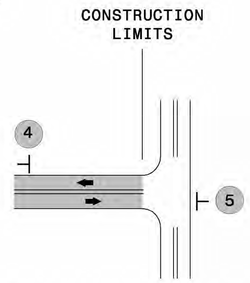
													4810000000-E		4815000000-E	4820000000-E	4825000000-E		4830000000-E	4835000000-E	4840000000-N				4845000000-N					
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LANES	LANE TYPE	LENGTH	WIDTH	BEGIN MP	END MP		4" WHITE PAINT	4" YELLOW PAINT	6" WHITE PAINT	8" WHITE PAINT	12" WHITE PAINT	12" YELLOW PAINT	16" WHITE PAINT	24" WHITE PAINT	PAINT MSG ONLY	PAINT MSG BUS	PAINT MSG RXR	PAINT MSG SCHOOL	PAINT LT ARROW	PAINT RT ARROW	PAINT STR ARROW	PAINT STR & LT ARROW	PAINT STR & RT ARROW	PAINT U-TURN
								MI	FT				LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
2027CPT.05.07.20921	Wake	1	SR-1613 / DAVIS DR	FROM DURHAM COUNTY LINE TO PAVEMENT JOINT	1,2	4	MD	7.21	45-135	0	7.21		73,070	27,970	110	4,110	160	940	200.00	4,500	60	6	8	36	136	66	106	2	30	1
TOTAL FOR MAP NO. 1								**7.21**					**73,070**	**27,970**	**110**	**4,110**	**160**	**940**	**200.00**	**4,500**	**60**	**6**	**8**	**36**	**136**	**66**	**106**	**2**	**30**	**1**
TOTAL FOR PROJ NO. 2027CPT.05.07.20921								**7.21**					**73,070**	**27,970**	**110**	**4,110**	**160**	**940**	**200.00**	**4,500**	**60**	**6**	**8**	**36**	**136**	**66**	**106**	**2**	**30**	**1**
													101,040				**1,100**				**110**				**341**					
GRAND TOTAL								**7.21**					**73,070**	**27,970**	**110**	**4,110**	**160**	**940**	**200.00**	**4,500**	**60**	**6**	**8**	**36**	**136**	**66**	**106**	**2**	**30**	**1**
													101,040				**1,100**				**110**				**341**					

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.05.07.20921	TMP-1

SIGNING FOR RESURFACING PROJECTS

LEGEND
- ⊢ STATIONARY SIGN
- ⬅ DIRECTION OF TRAFFIC FLOW





TEE INTERSECTION

MAINLINE (-L-) SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION

1. ROAD WORK AHEAD W20-1 48" X 48"
2. NEXT XX MILES W7-3aP 24" X 18"

PLACE 1000' PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000' ALONG -Y- LINE.

#2 SIGN ONLY USED WHEN CONSTRUCTION LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER.(NO FRACTIONAL OR DECIMAL NUMBERS)

3. LOW/SOFT SHOULDER SP 13107 48" X 48"

- PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACE 1 MILE APART THEREAFTER.
- AT TEE INTERSECTIONS INSTALL INITIALLY ½ MILE FROM INTERSECTION AND SPACE 1 MILE APART THEREAFTER.

4. ROAD UNDER CONST SP 13106 48" X 48"

- THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS.
- DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS.
- INSTALL 500' +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE.
- FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500' OF EACH APPROACH.
- A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN.
- FOR TEE INTERSECTIONS, INSTALL WITHIN 500' +/- OF THE INTERSECTION ALONG -L- LINE.

5. END ROAD WORK G20-2 A 48" X 24"

PLACE 500' FOLLOWING THE END OF CONSTRUCTION LIMITS OR AS SHOWN WHEN WORK ENDS AT A 3-WAY TEE INTERSECTION.

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.

-Y- LINE SIGNING

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

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

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

PLACED 500' IN ADVANCE OF FLAGGER.

PLACED 250' IN ADVANCE OF FLAGGER.

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

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

5/15/2017
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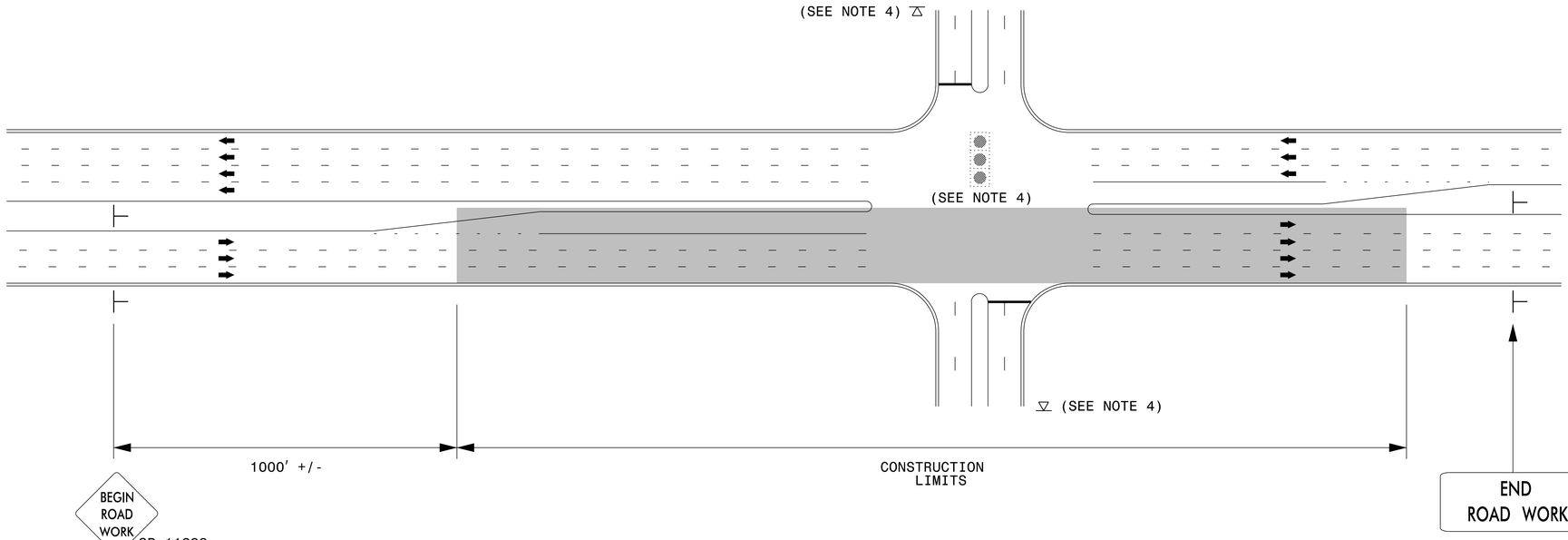
User:kedale

PROJ. REFERENCE NO.	SHEET NO.
2027CPT.05.07.20921	TMP-2

URBAN / SUBURBAN WORKZONES



NOTES:

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

LEGEND

- ⊢ STATIONARY SIGN
- ➡ DIRECTION OF TRAFFIC FLOW

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

RESURFACING ADVANCE WARNING SIGNS FOR URBAN / SUBURBAN FACILITIES

4/8/2015
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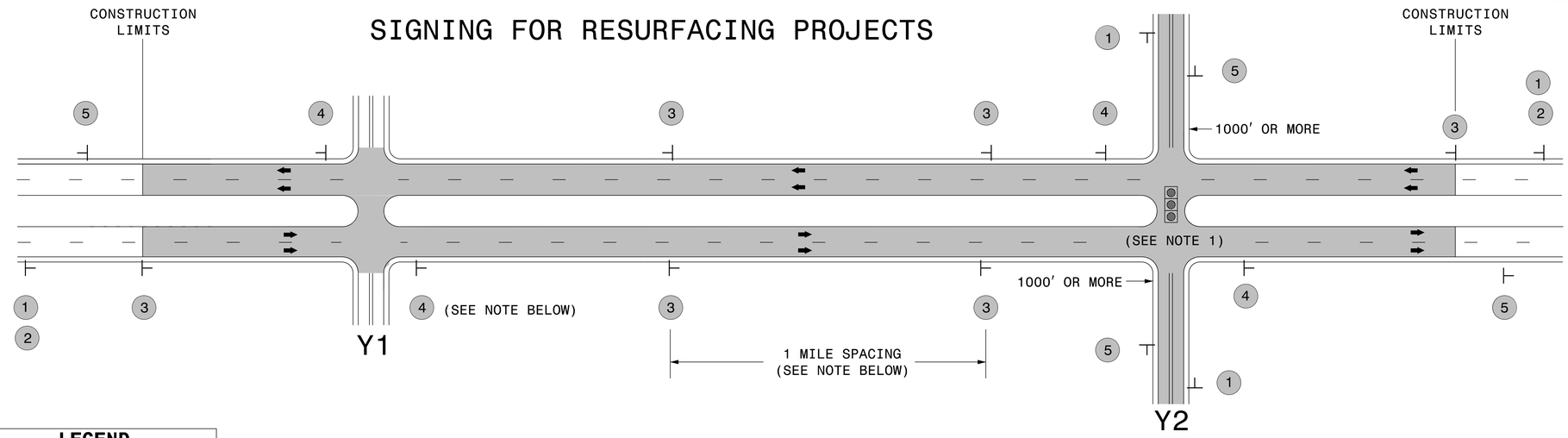
User:rmgarrett

PROJ. REFERENCE NO.	SHEET NO.
2027CPT.05.07.20921	TMP-3

SIGNING FOR RESURFACING PROJECTS



LEGEND
- ⊢ STATIONARY SIGN
- ⬅ DIRECTION OF TRAFFIC FLOW

MAINLINE (-L-) SIGNING

SIGNING NOTES AND PLACEMENT PER DIRECTION

1 — ROAD WORK AHEAD — W20-1 48″ X 48″

PLACE 1000′ PRIOR TO BEGINNING OF CONSTRUCTION LIMITS. ONLY USED ON -Y- LINES IF RESURFACING LIMITS EXTEND 1000′ ALONG -Y- LINE.

2 — NEXT XX MILES — W7-3aP 24″ X 18″

#2 SIGN ONLY USED WHEN RESURFACING LIMITS ARE 2 OR MORE MILES IN LENGTH. ROUND UP TO NEXT WHOLE NUMBER.(NO FRACTIONAL OR DECIMAL NUMBERS)

3 — LOW/SOFT SHOULDER — SP 13107 48″ X 48″

PLACE INITIALLY AT THE CONSTRUCTION LIMITS AND SPACED 1 MILE APART THEREAFTER. IF NO -Y- LINES EXIST, PLACE 2ND SET ½ MILE FROM THE CONSTRUCTION LIMITS AND THEN SPACE 1 MILE THEREAFTER.

4 — ROAD UNDER CONST — SP 13106 48″ X 48″

THESE ARE FOR -Y- LINES THAT ARE "THROUGH" ROADWAYS. DEAD END AND SUBDIVISION ROADS ARE NOT "THROUGH" ROADWAYS. INSTALL 500′ +/- FROM EACH -Y- LINE APPROACH AS SHOWN ABOVE. FOR MULTIPLE -Y- LINES THAT ARE SEPARATED BY 0.25 MILES OR LESS, TREAT AS A SINGLE UNIT AND INSTALL WITHIN 500′ OF EACH APPROACH. A MAXIMUM OF 2 SIGN SETS PER MILE. DO NOT INSTALL WHEN -Y- LINES ARE WITHIN 0.5 MILES FROM "END ROAD WORK" SIGN.

5 — END ROAD WORK — G20-2 A 48″ X 24″

PLACE 500′ FOLLOWING THE END OF CONSTRUCTION LIMITS.

-Y- LINE SIGNING

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

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

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

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

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

NOTES:

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.

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

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

3/23/2015
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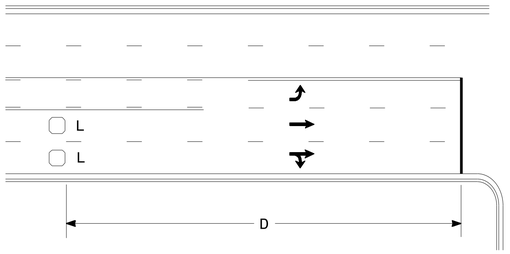
User:rmgarrett

PROJECT REFERENCE NO.	SHEET NO.
2027CPT.05.07.20921	SIG-1

High Speed Detection
(≥35 mph)

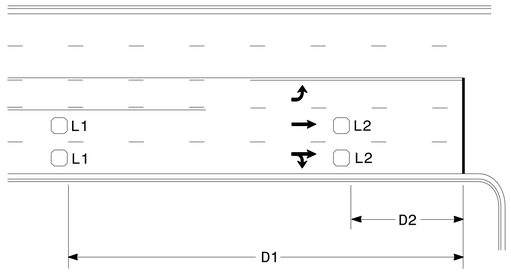


Speed Limit mph	D ft
35	200
40	250
45	300
50	355
55	420
60	475
65	550

L = 6ft X 6ft
Wired separately

Volume Density Operation

OR



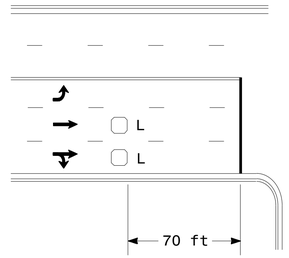
Speed Limit mph	D1 ft	D2 ft
40	250	80
45	300	90
50	355	100
55	420	110
60	475	120
65	550	130

L1 = 6ft X 6ft
Wired in series

L2 = 6ft X 6ft
Wired in series

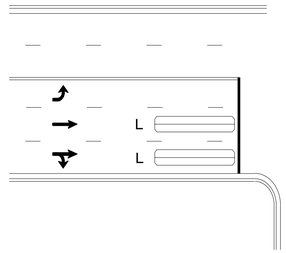
"Stretch" Operation

Low Speed Detection
(≤35 mph)



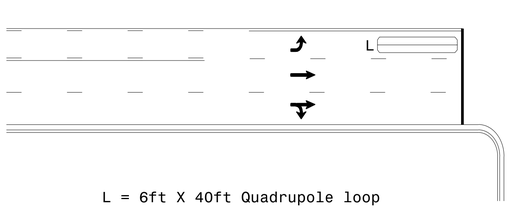
L = 6ft X 6ft
Wired in series

OR



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

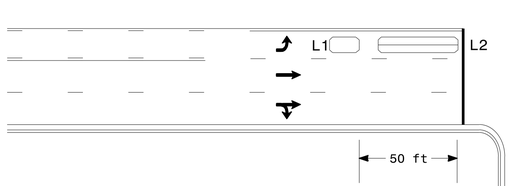
Left Turn Lane Detection



L = 6ft X 40ft Quadrupole loop

Presence Loop Detection

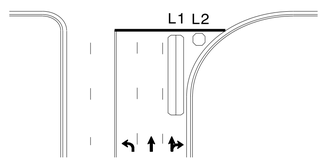
OR



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

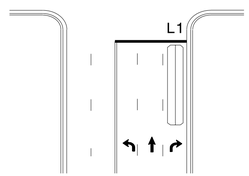
Queue Loop Detection

Right Turn Lane Detection

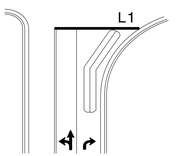


Shared Lane/
Wide Radius Turn

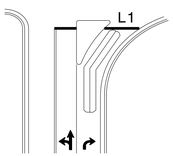
L1 = 6ft X 40ft Quadrupole loop
L2 = 6ft X 6ft [Minimum] Presence loop
Wired separately



Standard Turn

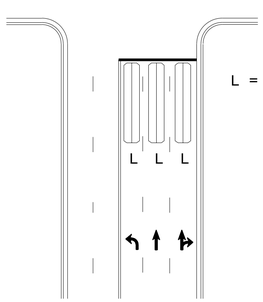


Wide Radius Turn



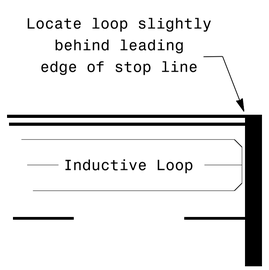
Channelized Turn

Side Street Detection



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

Presence Loop Placement at Stop Lines



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:
Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

Typical Signal Loop Locations

PLAN DATE: September 2025 | REVIEWED BY:
PREPARED BY: J.A. Lohr | REVIEWED BY:

SCALE
N/A

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA
PROFESSIONAL
SEAL
026486
ENGINEER
ROBERT J. ZIEMBA
DocuSigned by:
11/25/2025
DATE

SIG. INVENTORY NO.

17-NOV-2025 07:35
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jalohr