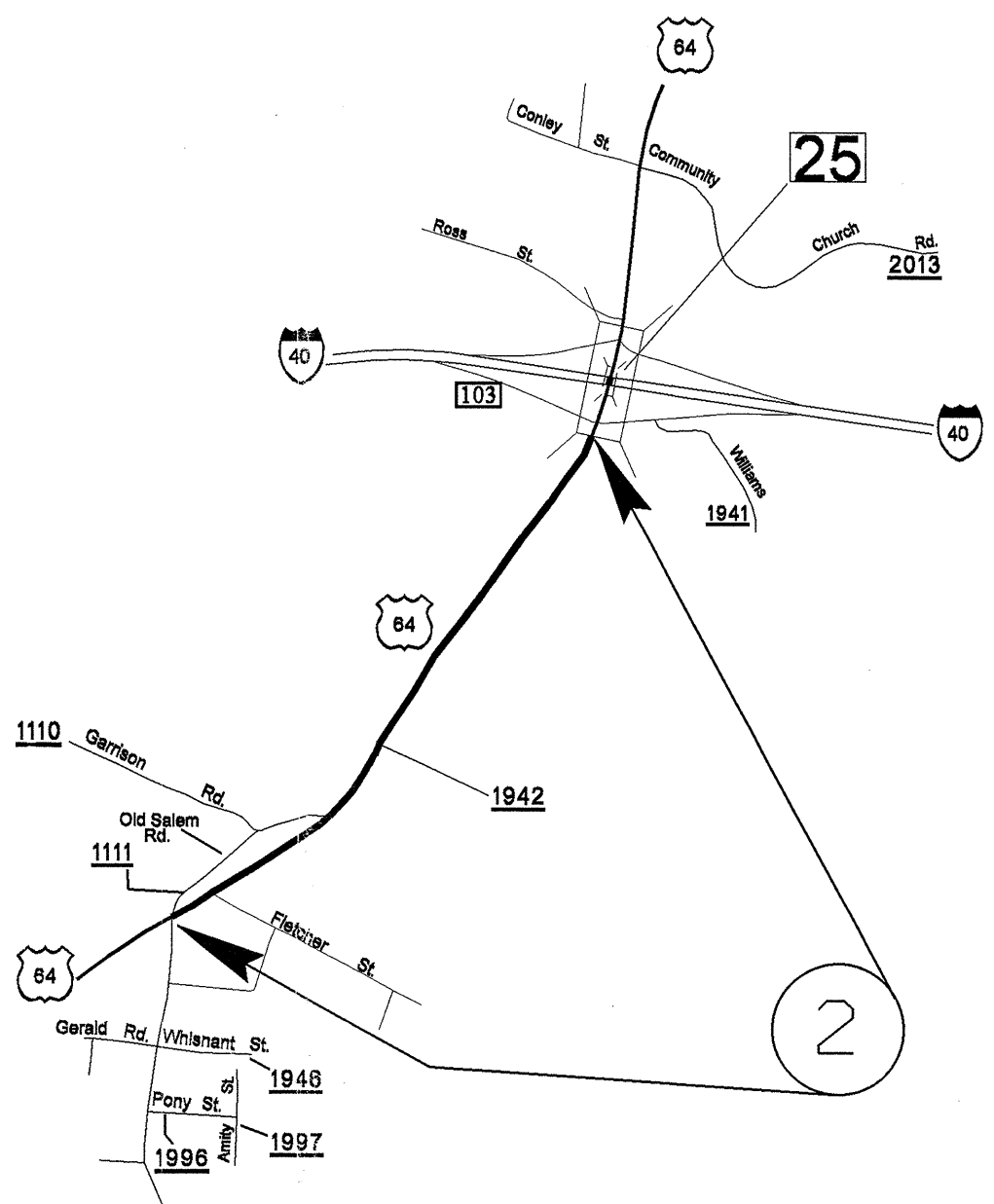
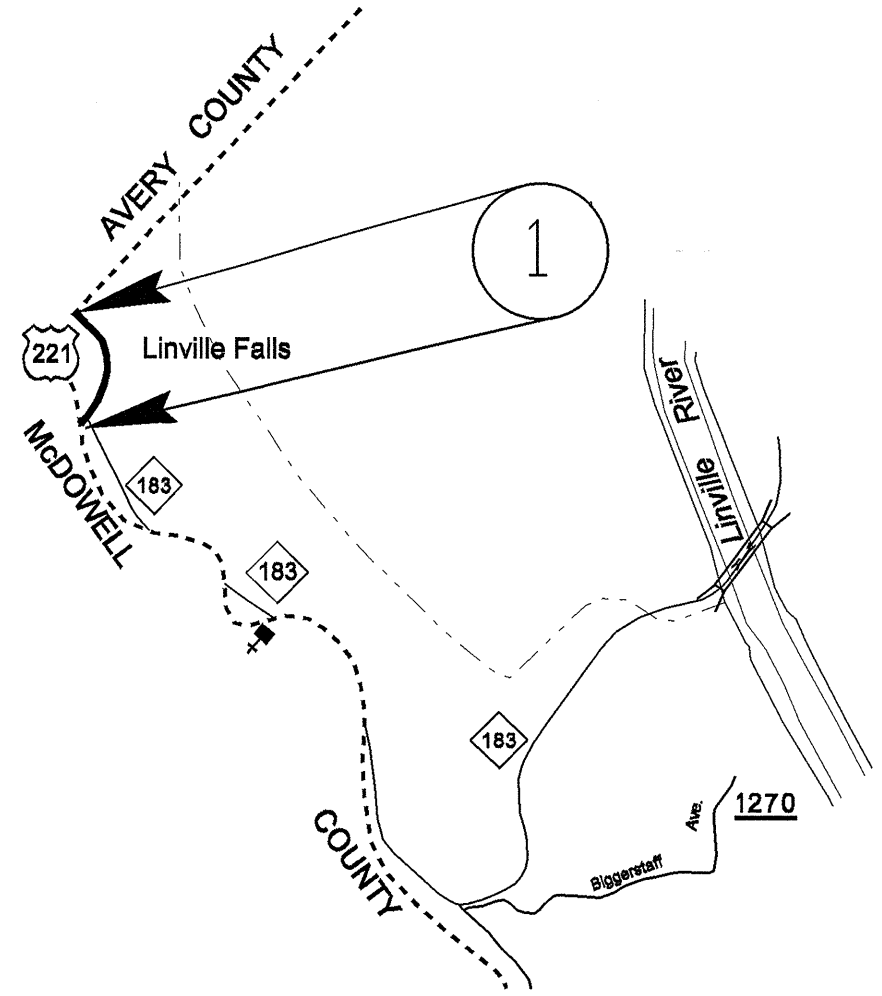
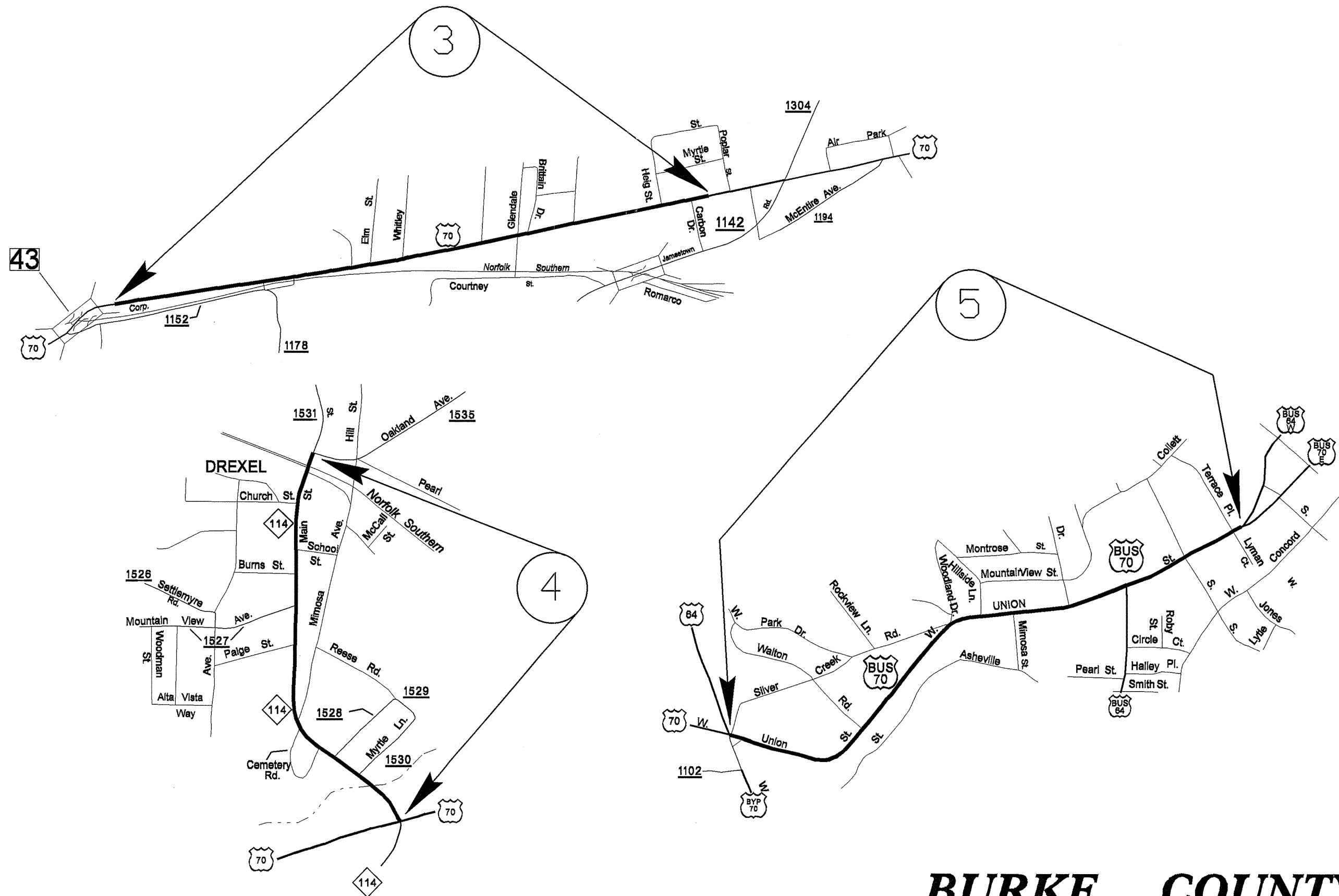


PROJECT NO.	SHEET NO.	TOTAL SHEETS
13CR.10121.9	1	12
13CR.20121.9		



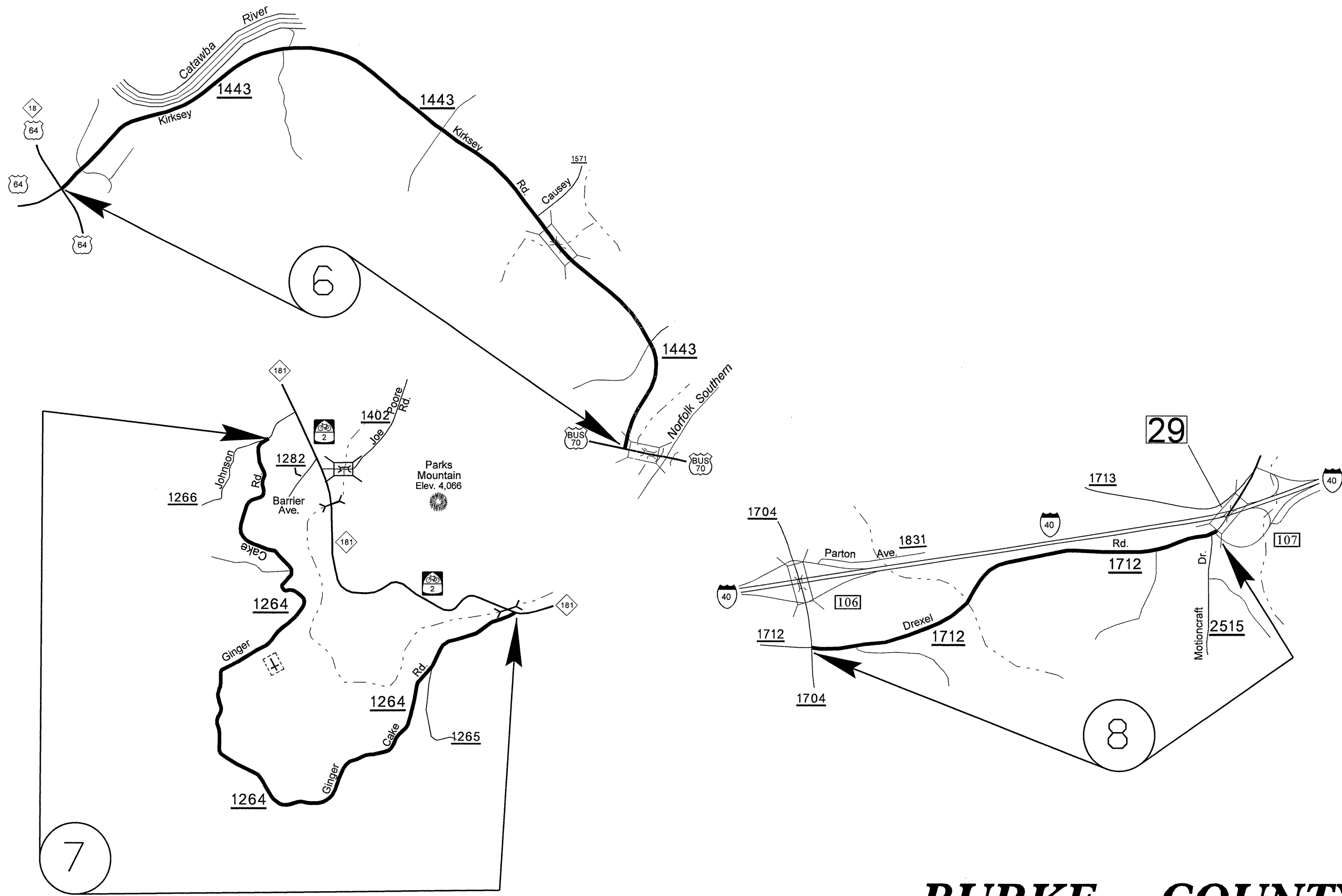
**BURKE COUNTY**

PROJECT NO.	SHEET NO.	TOTAL SHEETS
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13CR.20121.9		



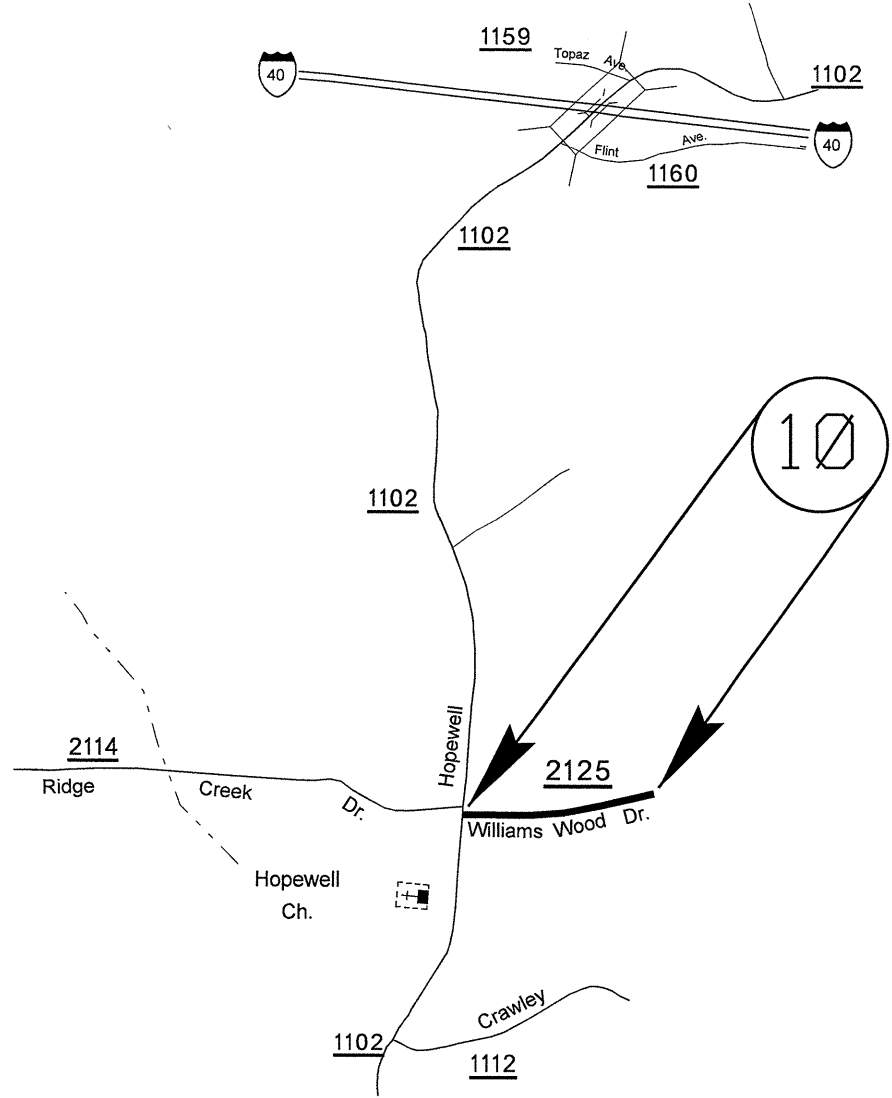
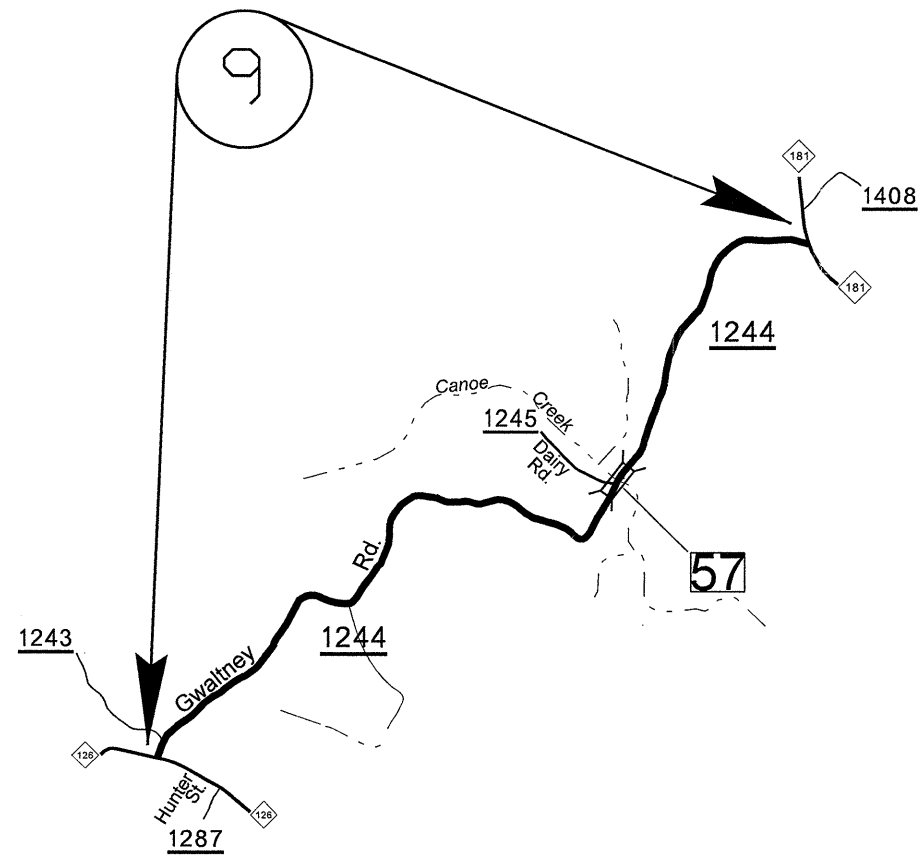
# BURKE COUNTY

PROJECT NO.	SHEET NO.	TOTAL SHEETS
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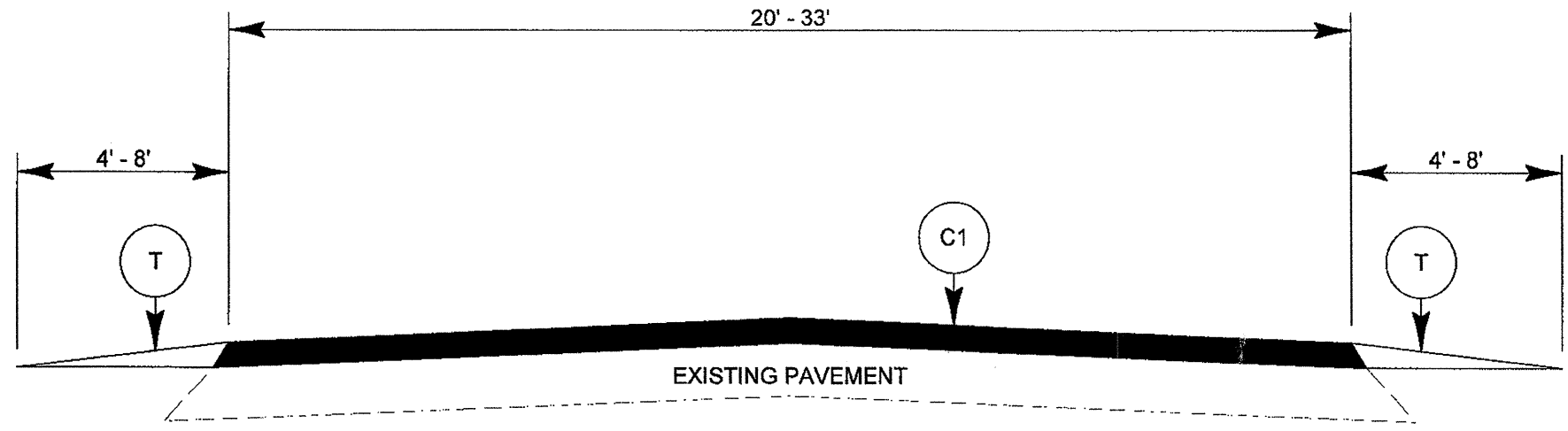
# BURKE COUNTY

PROJECT NO.	SHEET NO.	TOTAL SHEETS
13CR.10121.9 13CR.20121.9	4	12

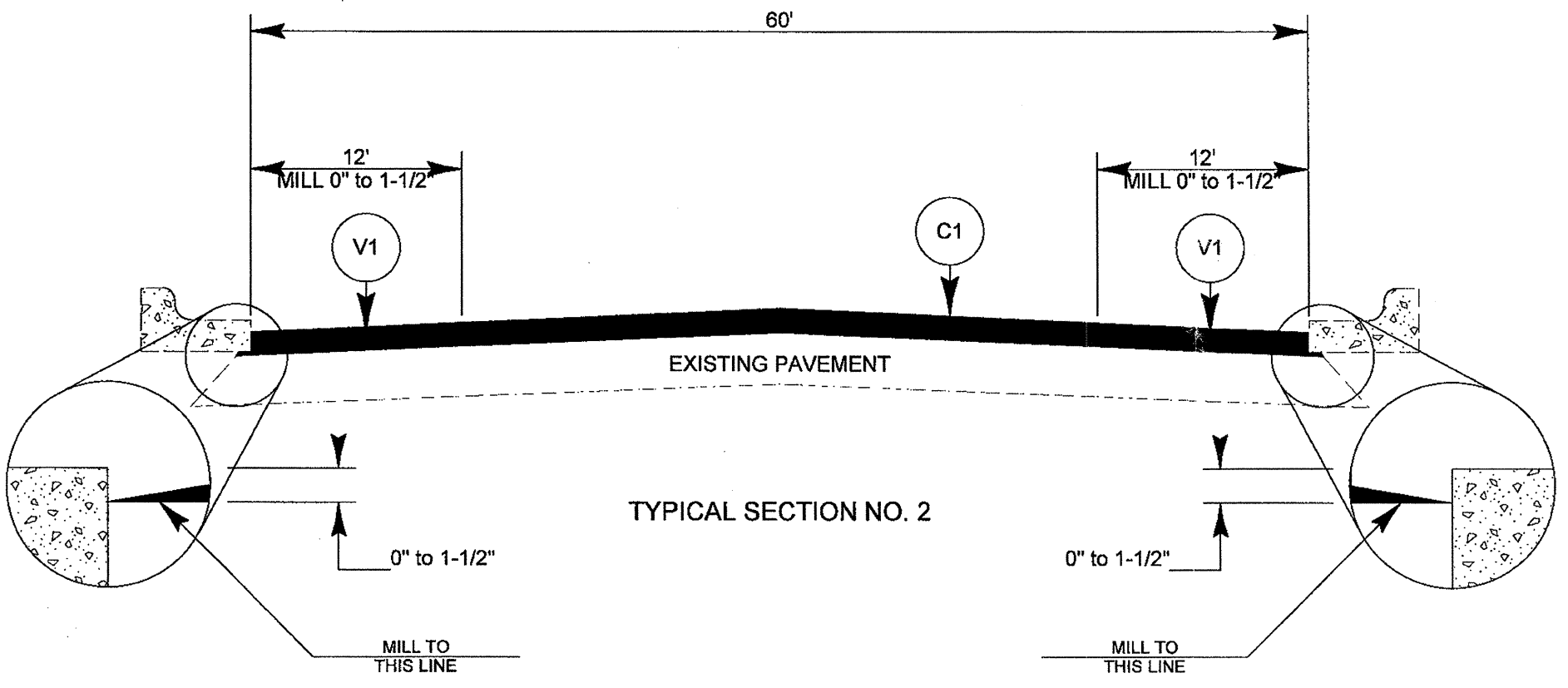
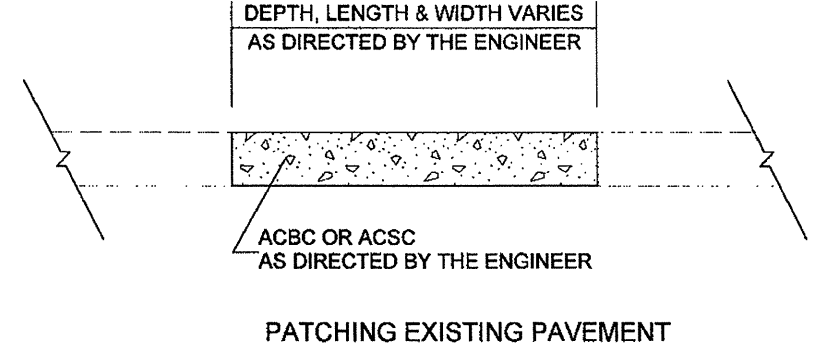


**BURKE COUNTY**

PROJECT NO. 13CR.10121.9, 13CR.20121.9	SHEET NO. 5	TOTAL SHEETS 12
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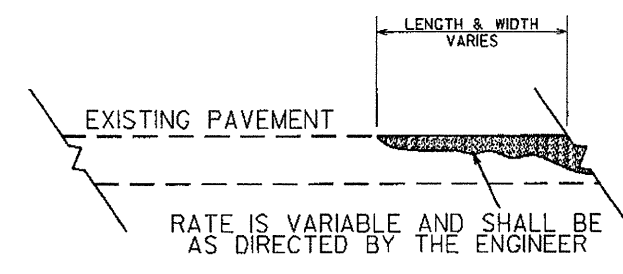
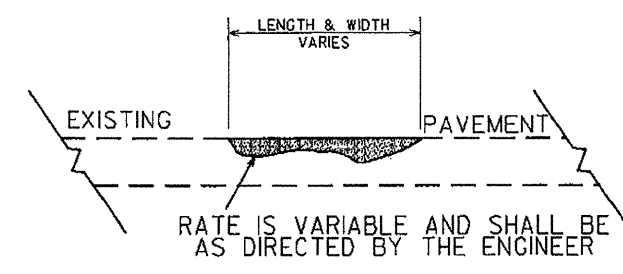
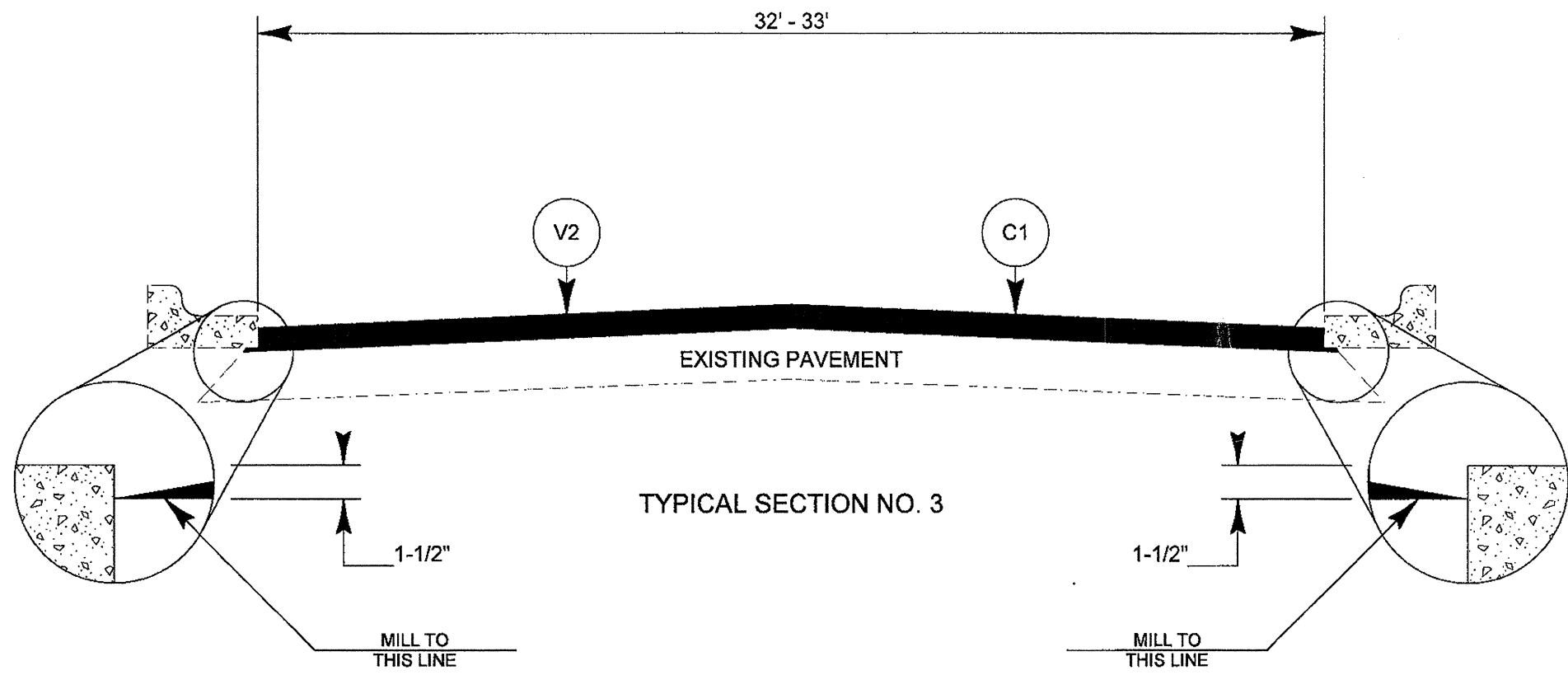
TYPICAL SECTION NO. 1



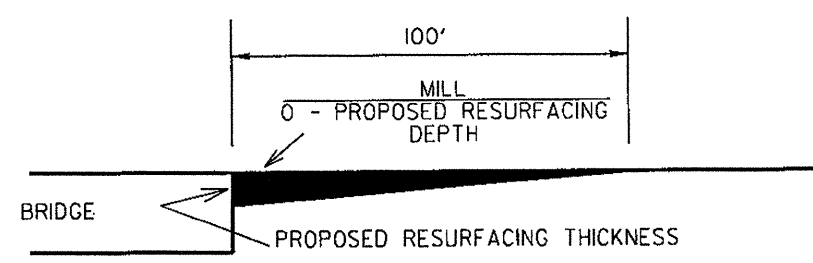
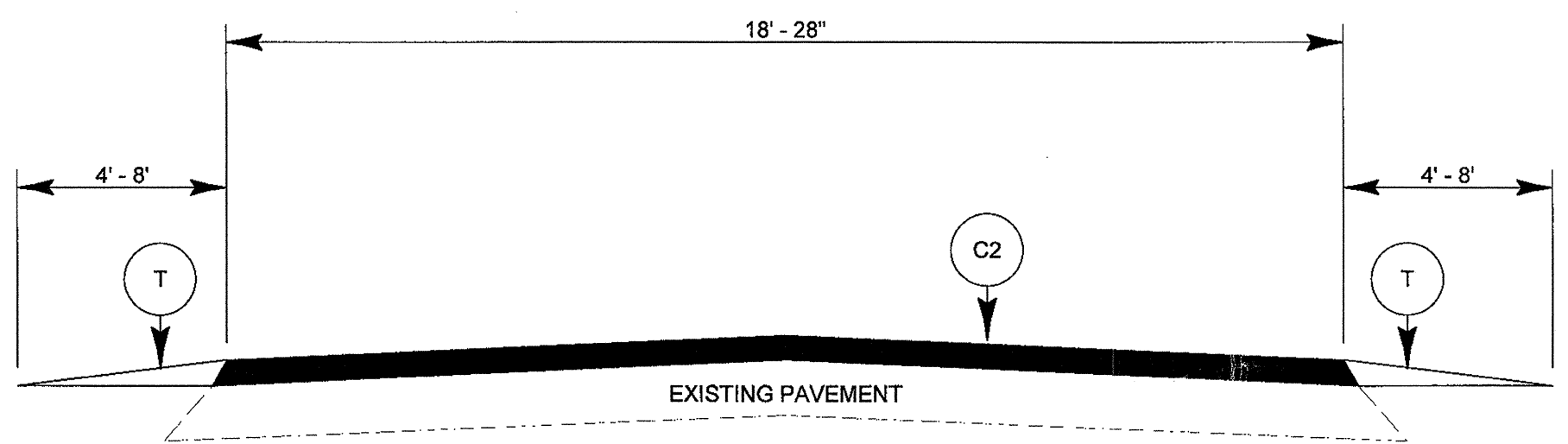
TYPICAL SECTION NO. 2

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YARD
C2	PROP. APPROX. 1-1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YARD
T	SHOULDER RECONSTRUCTION
V1	MILLING ASPHALT PAVEMENT, 0" TO 1-1/2" DEPTH
V2	MILLING ASPHALT PAVEMENT, 1-1/2" DEPTH

PROJECT NO.	SHEET NO.	TOTAL SHEETS
13CR.10121.9, 13CR.20121.9	6	12



**DETAIL SHOWING METHOD OF WEDGING**



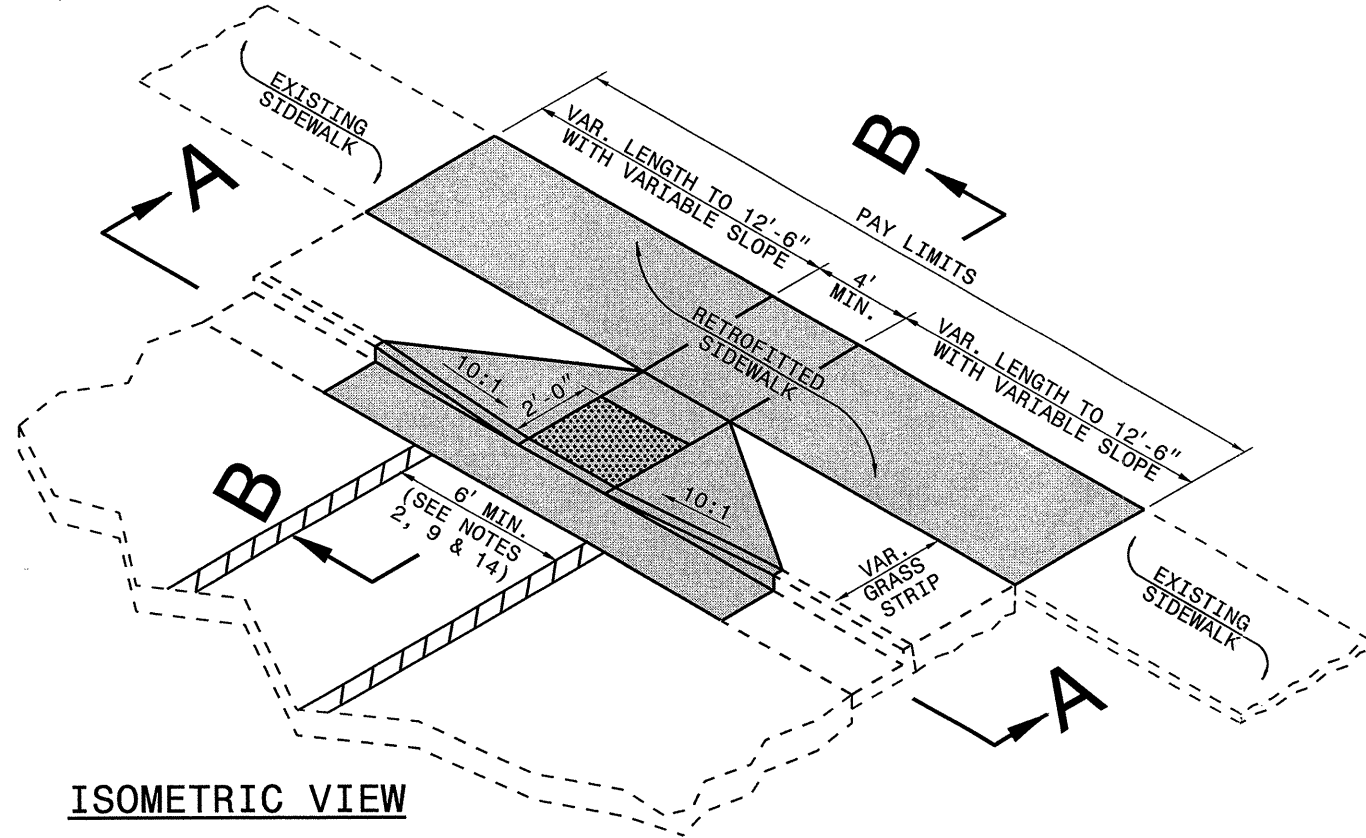
**MILLING DETAIL AT BRIDGE APPROACHES**

WHERE BRIDGES WILL NOT BE RESURFACED  
COST OF MILLING IS INCIDENTAL TO OTHER ITEMS

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

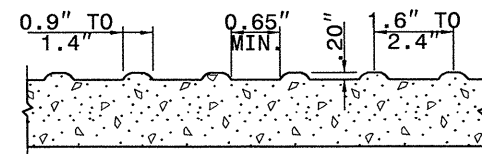
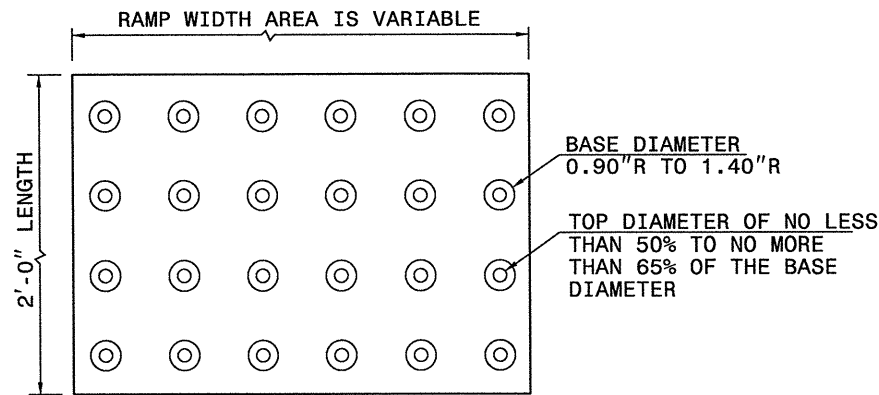
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

### CURB RAMP AND EXISTING SIDEWALK WITH GRASS STRIP



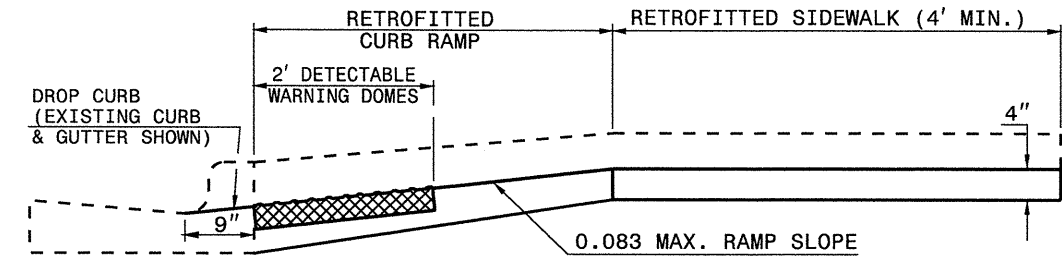
ISOMETRIC VIEW

PAY LIMITS OF RETROFIT CURB RAMP

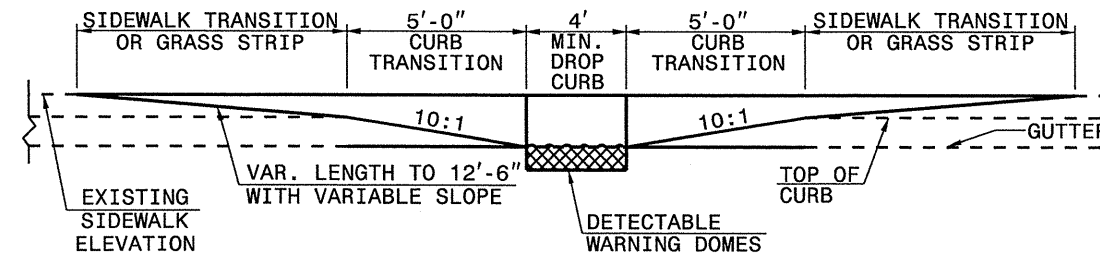


DETECTABLE WARNING DOMES

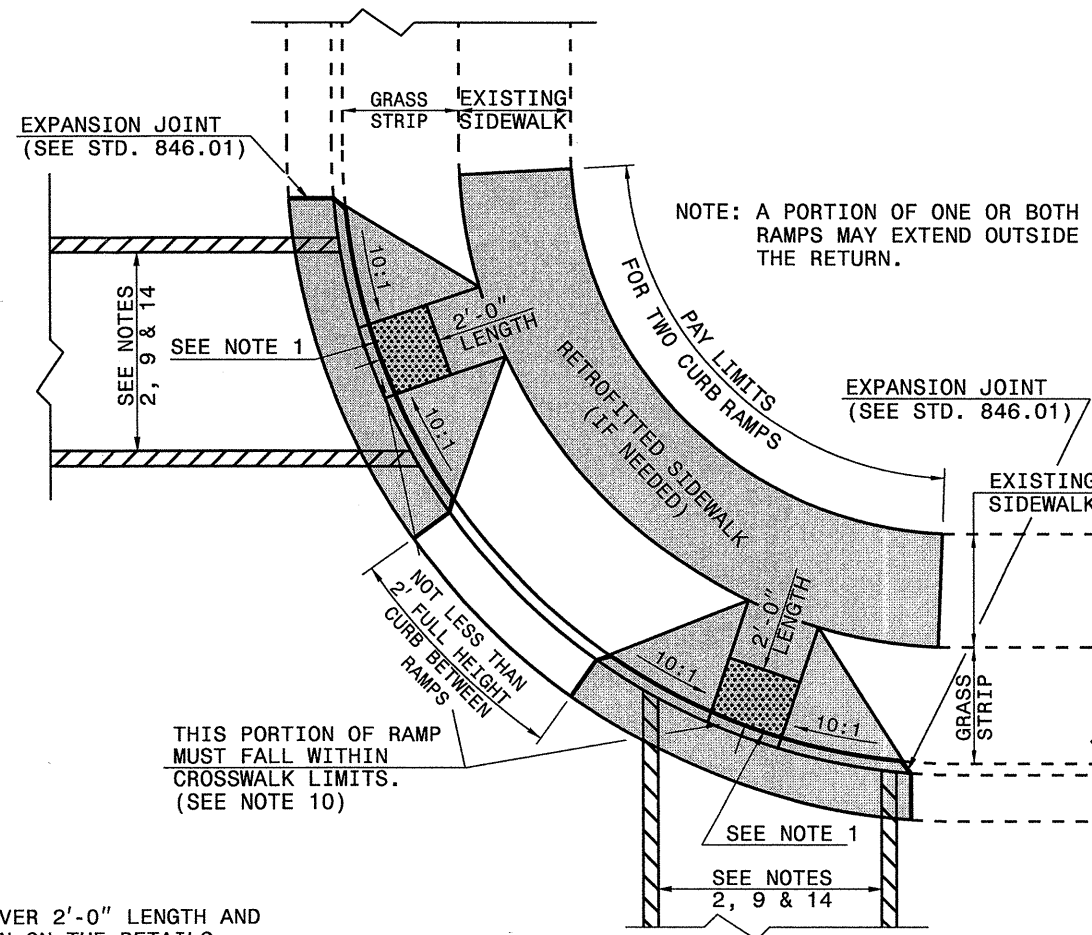
- NOTES:
1. PLACE DETECTABLE WARNING DOMES TO COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
  2. OBTAIN VISIBLE CONTRAST WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



SECTION B-B



SECTION A-A



PLAN VIEW

DUAL RAMPS  
ANY RADII  
(40" MIN. FLOOR WIDTH)

ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

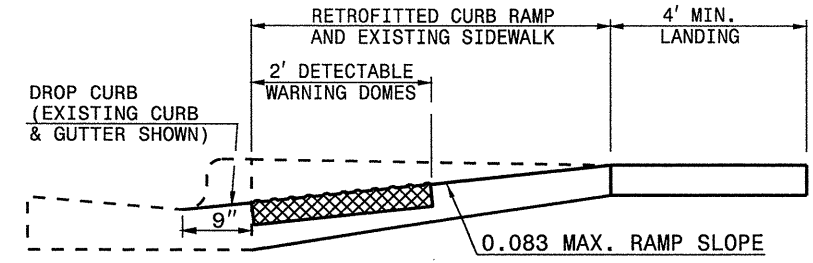
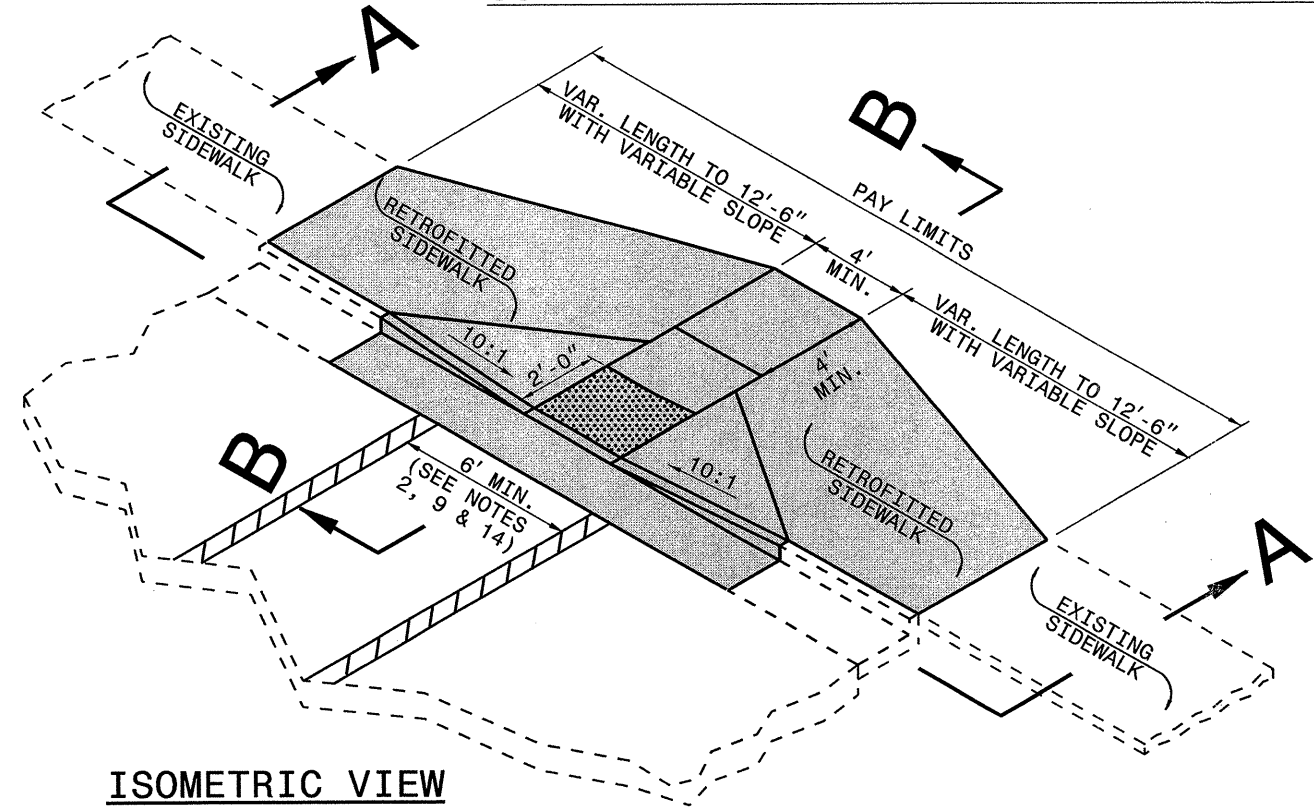
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

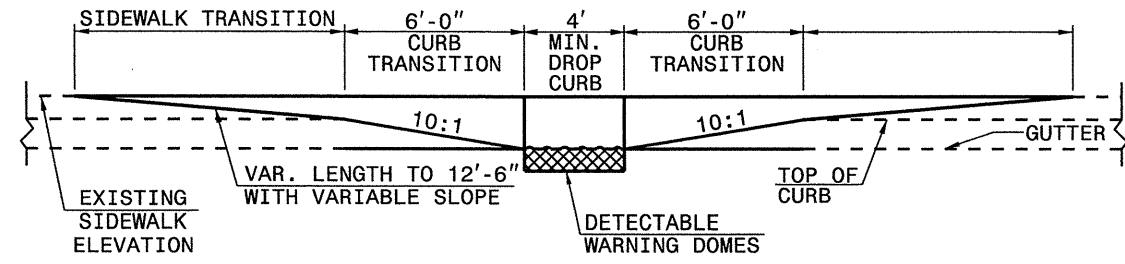
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DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

**CURB RAMPS AND EXISTING SIDEWALK ADJACENT TO CURB**



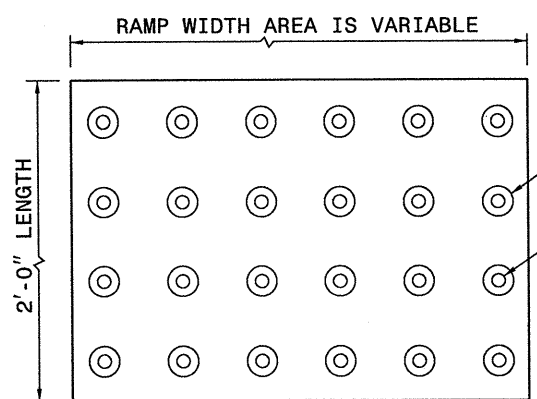
**SECTION B-B**



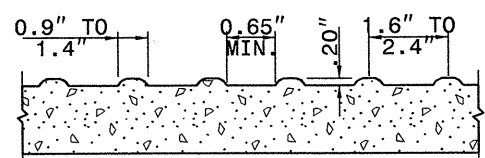
**SECTION A-A**

**ISOMETRIC VIEW**

PAY LIMITS OF CURB RAMP

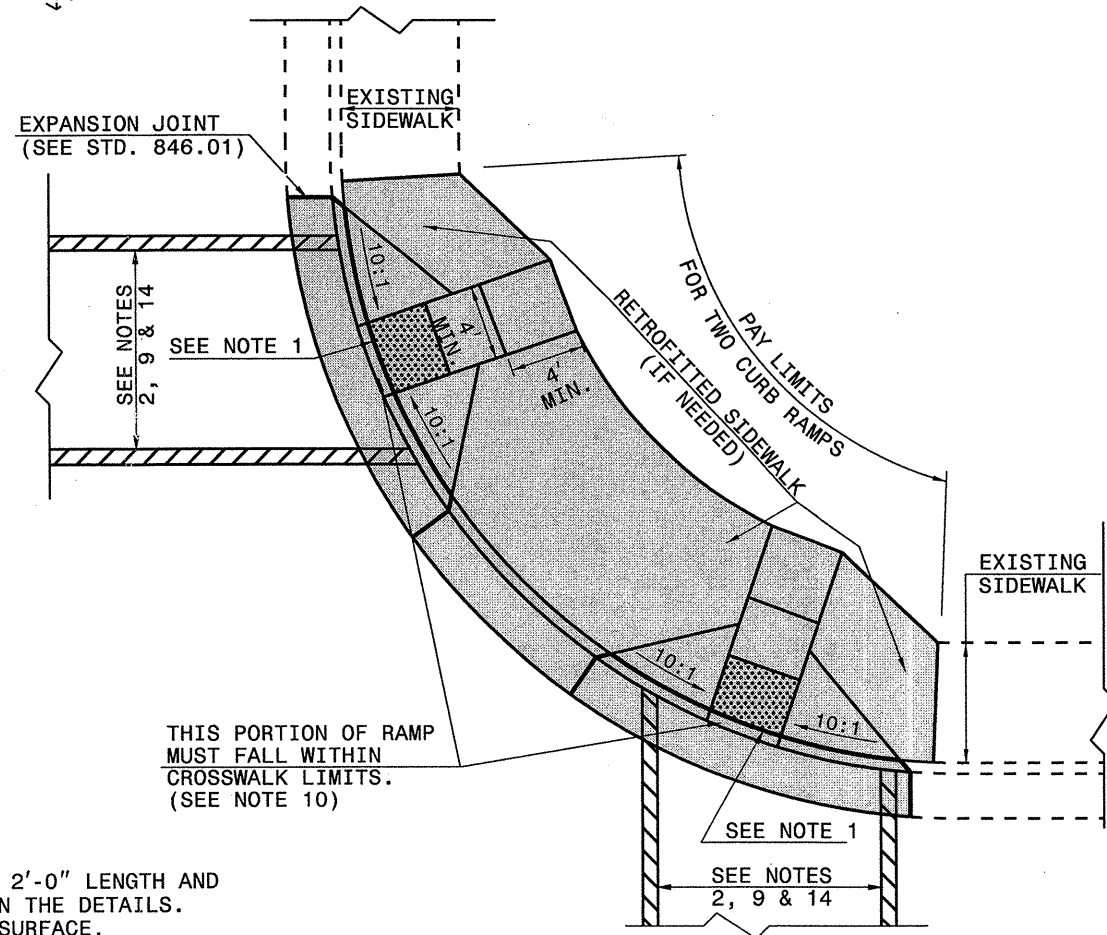


BASE DIAMETER  
0.90"R TO 1.40"R  
TOP DIAMETER OF NO LESS  
THAN 50% TO NO MORE  
THAN 65% OF THE BASE  
DIAMETER



**DETECTABLE WARNING DOMES**

- NOTES:
1. PLACE DETECTABLE WARNING DOMES TO COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
  2. OBTAIN VISIBLE CONTRAST WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



**PLAN VIEW**

DUAL RAMPS  
ANY RADII  
(40" MIN. FLOOR WIDTH)



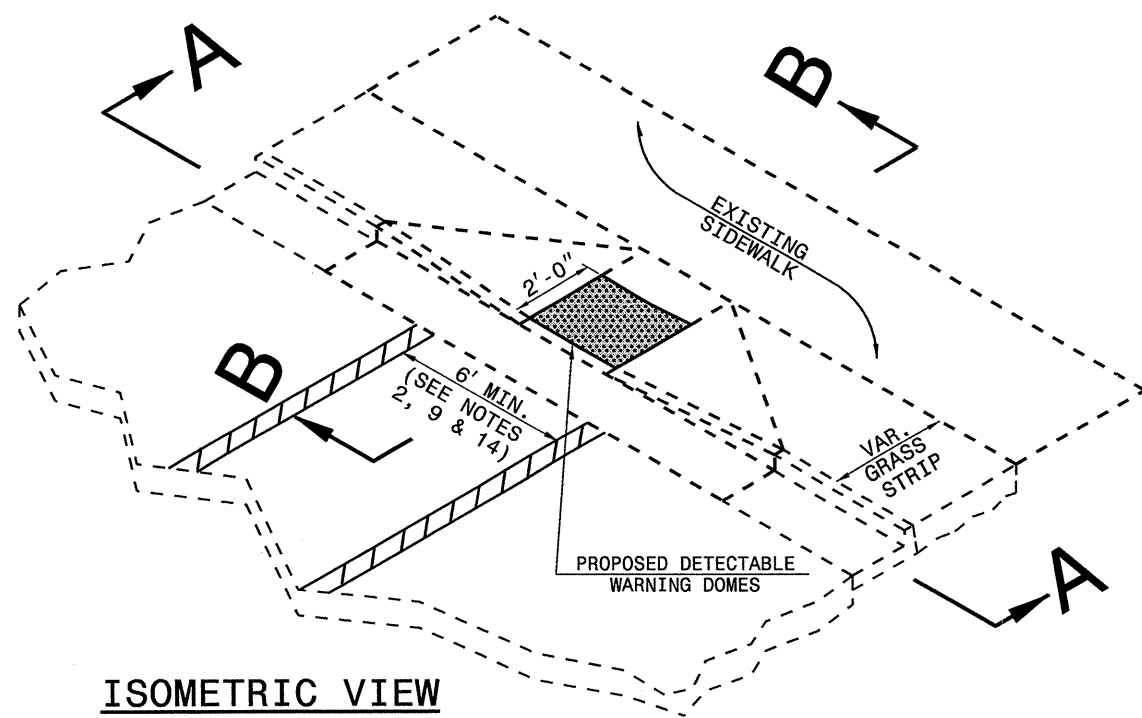
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DIVISION OF HIGHWAYS  
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ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

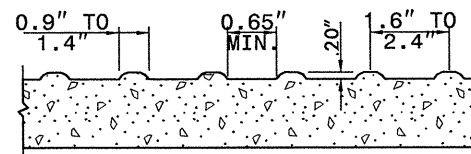
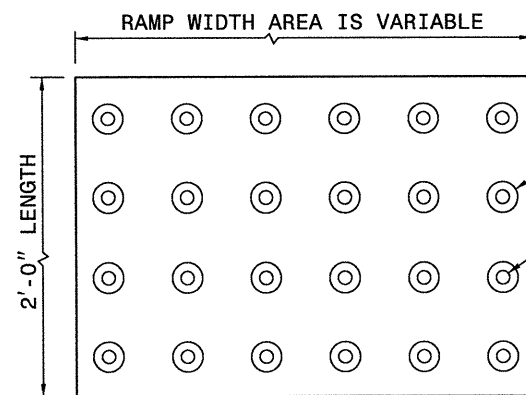
ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

**RETROFITTING DETECTABLE WARNING DOMES ONTO EXISTING CURB RAMP**



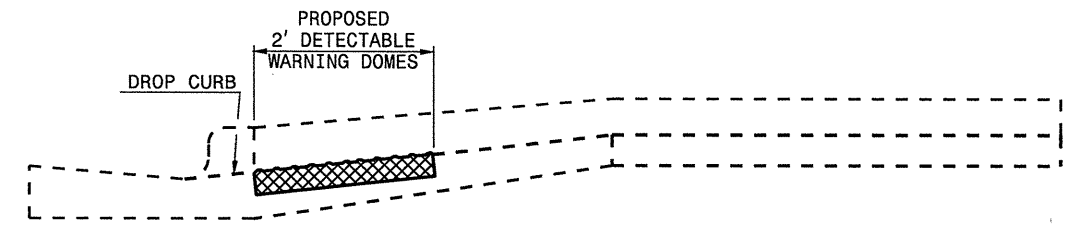
**ISOMETRIC VIEW**

PAY LIMITS OF RETROFIT CURB RAMP

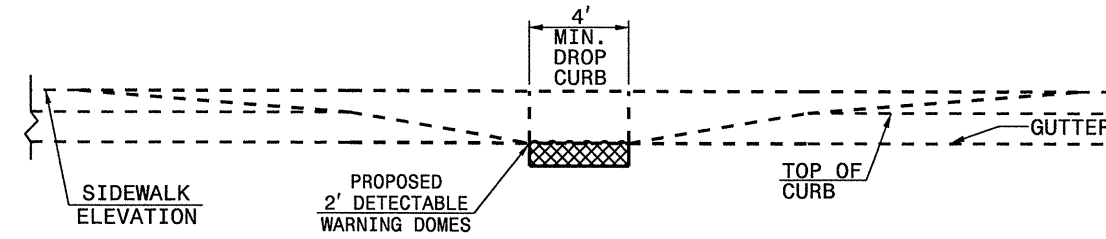


- NOTES:**
1. PLACE DETECTABLE WARNING DOMES TO COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.
  2. OBTAIN VISIBLE CONTRAST WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.

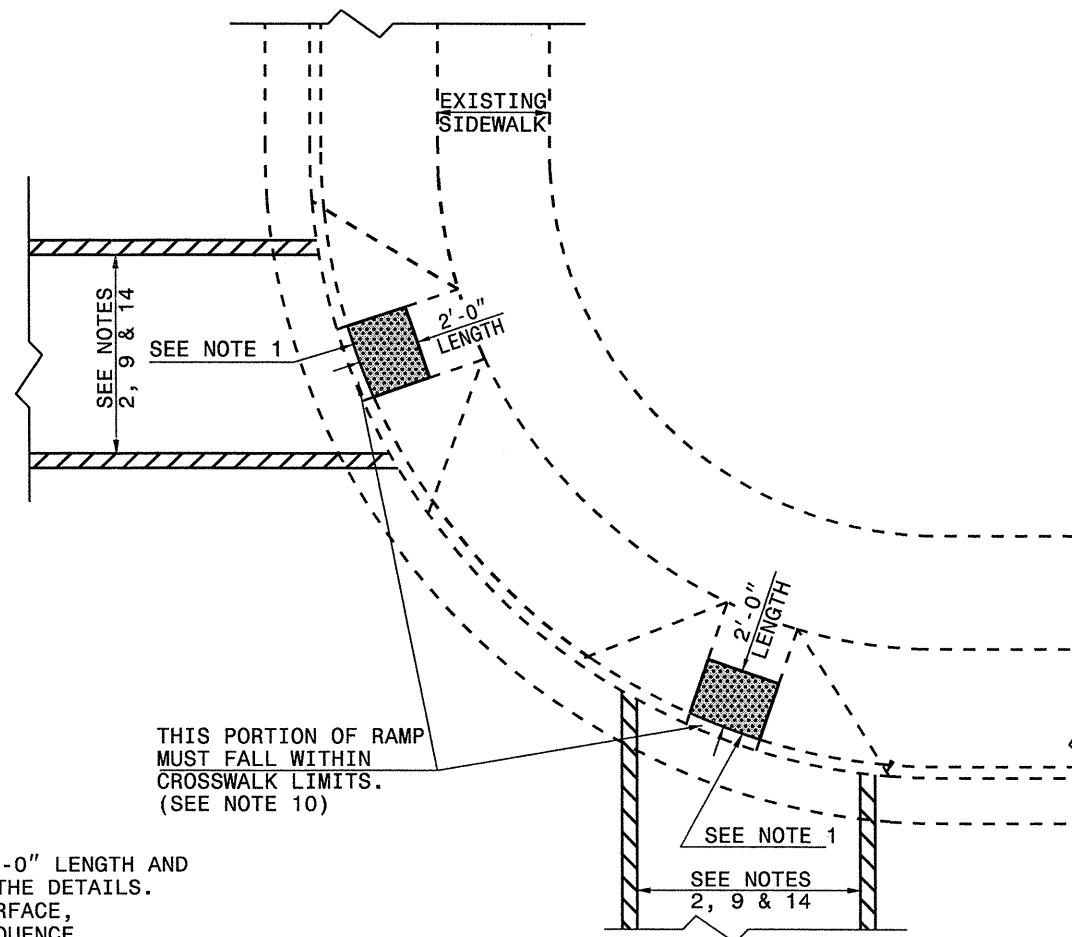
**DETECTABLE WARNING DOMES**



**SECTION B-B**



**SECTION A-A**



**PLAN VIEW**

DUAL RAMPS  
ANY RADII  
(40" MIN. FLOOR WIDTH)

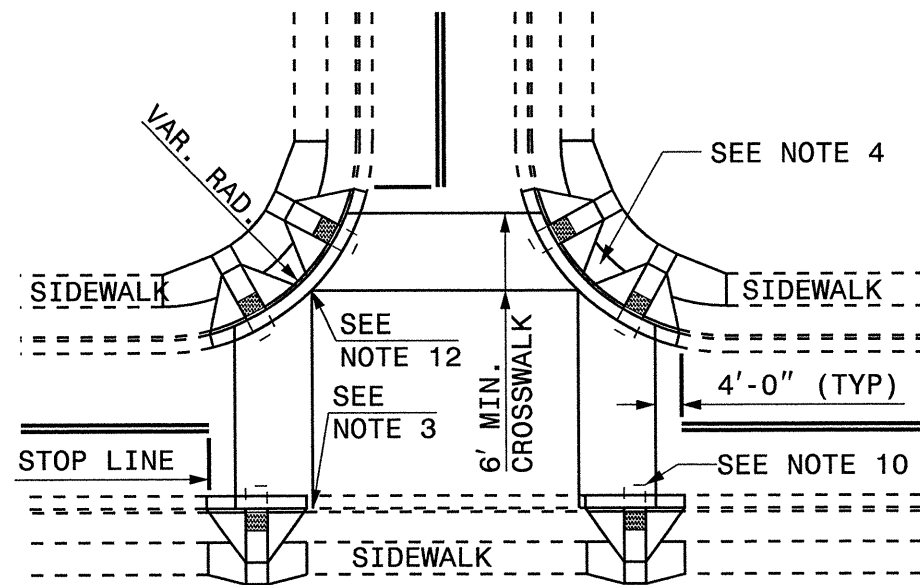
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DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

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

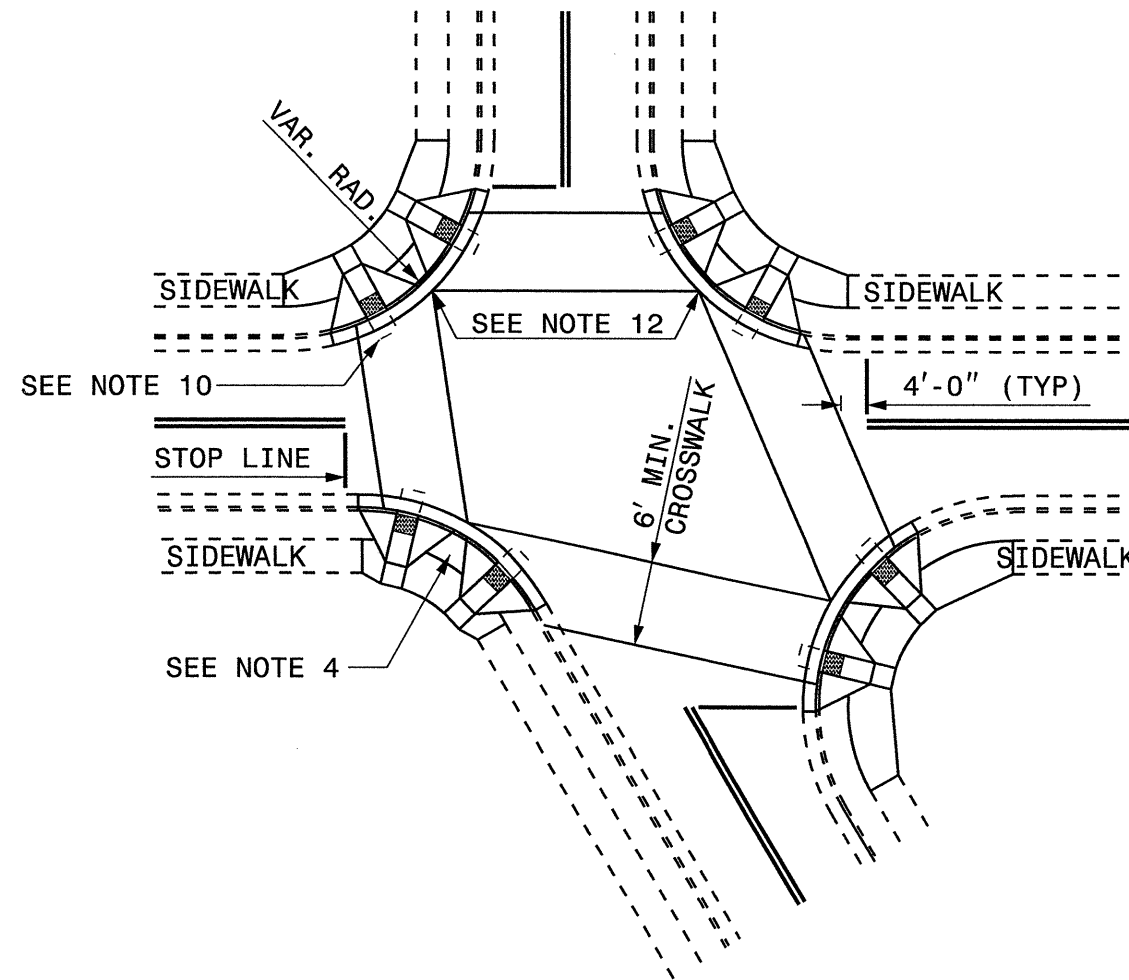
ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

**CURB RAMPS AND EXISTING SIDEWALK**

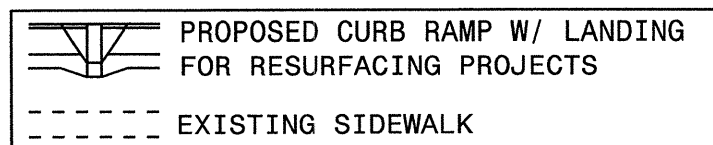


DETAIL SHOWING TYPICAL LOCATION OF CURB RAMPS,  
PEDESTRIAN CROSSWALKS AND STOP LINES FOR TEE INTERSECTIONS



DETAIL SHOWING TYPICAL LOCATION OF CURB  
RAMPS, PEDESTRIAN CROSSWALKS AND STOP LINES

**RESURFACING PROJECTS**



ALLOWABLE LOCATIONS  
-----  
DUAL RAMP RADII.....ANY

**CURB RAMP AND EXISTING SIDEWALK**

NOTES:

1. CONSTRUCT THE RAMP SURFACE TO BE STABLE, FIRM, AND SLIP RESISTANT. CONSTRUCT THE CURB RAMP TYPE AS SHOWN IN THE PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER.
2. LOCATE CURB RAMPS AND PLACE PEDESTRIAN CROSSWALK MARKINGS AS SHOWN IN THE PAVEMENT MARKING PLANS. WHEN FIELD ADJUSTMENTS REQUIRE MOVING CURB RAMPS OR MARKINGS AS SHOWN, CONTACT THE SIGNING AND DELINEATION UNIT OR LOCATE AS DIRECTED BY THE ENGINEER.
3. COORDINATE THE CURB RAMP AND THE PEDESTRIAN CROSSWALK MARKINGS SO A 4'x4' CLEAR SPACE AT THE BASE OF THE CURB RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES.
4. SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL LANE IS 4' MINIMUM.
5. REFER TO THE PAVEMENT MARKING PLANS FOR STOP BAR LOCATIONS AT SIGNALIZED INTERSECTIONS. IF A PAVEMENT MARKING PLAN IS NOT PROVIDED, CONTACT THE SIGNAL DESIGN SECTION FOR THE STOP BAR LOCATIONS OR LOCATE AS DIRECTED BY THE ENGINEER.
6. TERMINATE PARKING A MINIMUM OF 20' BACK OF A PEDESTRIAN CROSSWALK.
7. CONSTRUCT CURB RAMPS A MINIMUM OF 4' WIDE.
8. CONSTRUCT THE RUNNING SLOPE OF THE RAMP 8.33% MAXIMUM.
9. ALLOWABLE CROSS SLOPE ON SIDEWALKS AND CURB RAMPS WILL BE 2% MAXIMUM.
10. CONSTRUCT THE SIDE FLARE SLOPE A MAXIMUM OF 10% MEASURED ALONG THE CURB LINE.
11. CONSTRUCT THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE BASE OF THE CURB RAMP A MAXIMUM OF 5% AND MAINTAIN A SMOOTH TRANSITION.
12. CONSTRUCT LANDINGS FOR SIDEWALK A MINIMUM OF 4'x4' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION. CONSTRUCT LANDINGS FOR MEDIAN ISLANDS A MINIMUM OF 5'x5' WITH A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
13. TO USE A MEDIAN ISLAND AS A PEDESTRIAN REFUGE AREA, MEDIAN ISLANDS WILL BE A MINIMUM OF 6' WIDE. CONSTRUCT MEDIAN ISLANDS TO PROVIDE PASSAGE OVER OR THROUGH THE ISLAND.
14. SMALL CHANNELIZATION ISLANDS THAT CAN NOT PROVIDE A 5'x5' LANDING AT THE TOP OF A RAMPS, WILL BE CUT THROUGH LEVEL WITH THE SURFACE STREET.
15. CURB RAMPS WITH RETURNED CURBS MAY BE USED ONLY WHERE PEDESTRIANS WOULD NOT NORMALLY WALK ACROSS THE RAMP. THE ADJACENT SURFACE IS PLANTING OR OTHER NON-WALKING SURFACE OR THE SIDE APPROACH IS SUBSTANTIALLY OBSTRUCTED.
16. PLACE A 1/2" EXPANSION JOINT WHERE THE CONCRETE CURB RAMP JOINS THE CURB AS SHOWN IN ROADWAY STANDARD DRAWING 848.01
17. PLACE ALL PEDESTRIAN PUSH BUTTON ACTUATORS AND CROSSING SIGNALS AS SHOWN IN THE PLANS OR AS SHOWN IN THE MUTCD.
18. CURB RAMPS THROUGH MEDIAN ISLANDS, SINGLE RAMPS AT DUAL CROSSWALKS OR LIMITED R/W SITUATIONS, WILL BE HANDLED BY SPECIAL DETAILS. CONTACT THE CONTRACT STANDARDS AND DEVELOPMENT UNIT FOR THE DETAILS OR FOR A SPECIAL DESIGN.

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DIVISION OF HIGHWAYS  
RALEIGH, N.C.

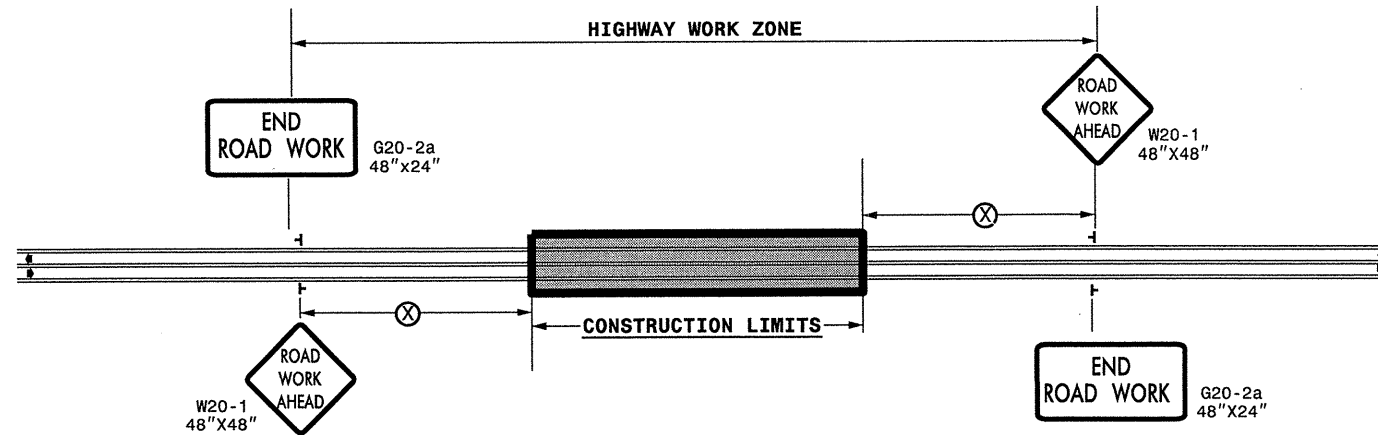
STATE OF  
NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER

ENGLISH DETAIL DRAWING FOR  
**CURB RAMP**  
EXISTING CURB AND GUTTER



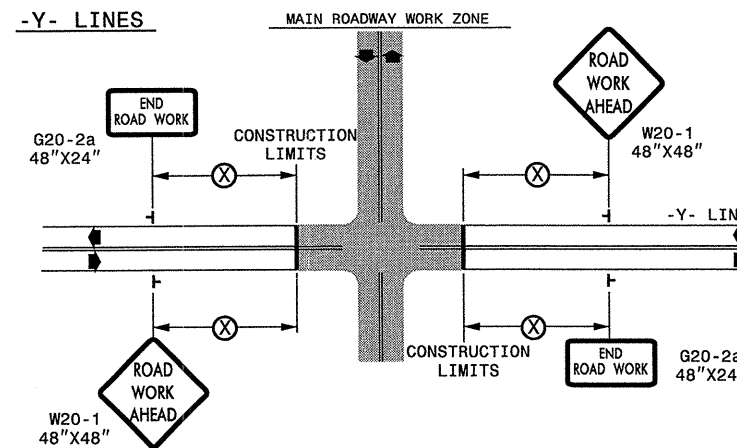
**TWO-WAY UNDIVIDED \*\* (L-LINES)**



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING
≤ 50	⊗ 500'
≥ 55	⊗ 1000'

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**ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)**



**GENERAL NOTES**

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.
- \*\* TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

**LEGEND**

┆ STATIONARY SIGN

◀ DIRECTION OF TRAFFIC FLOW

DETAIL DRAWING FOR  
TWO-WAY UNDIVIDED  
WORK ZONE WARNING SIGNS

SHEET 1 OF 1

APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

SEAL

DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS

SCALE: NONE  
DATE: \_\_\_\_\_  
DWG. BY: \_\_\_\_\_  
DESIGN BY: \_\_\_\_\_  
REVIEWED BY: \_\_\_\_\_



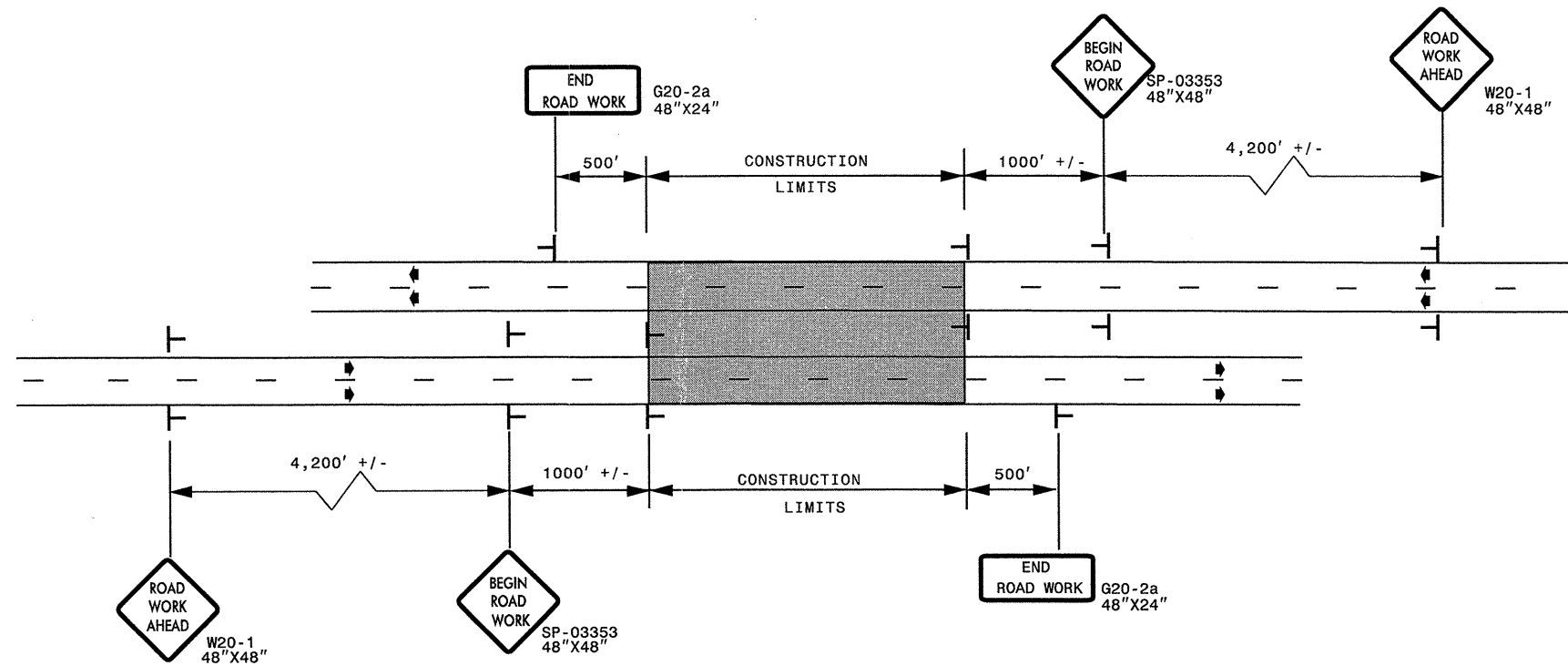
REVISIONS	
7-98	10/01
10-98	03/04
01/01	11/04

27-OCT-2010 08:49  
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sngreen AT 1E247153

ADVANCED WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER)

PROJ. REFERENCE NO.	SHEET NO.
13CR.10121.9	TCP-2
13CR.20121.9	

DETAIL A



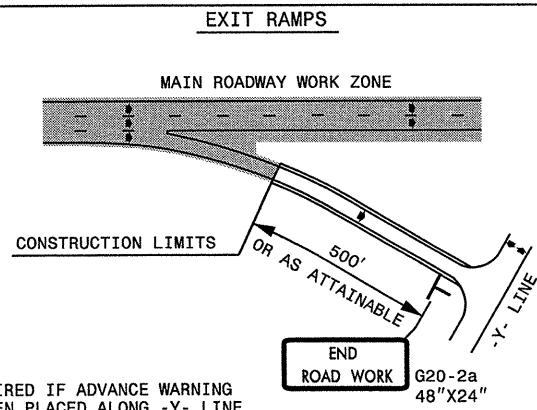
**LEGEND**

— STATIONARY SIGN

◆ DIRECTION OF TRAFFIC FLOW

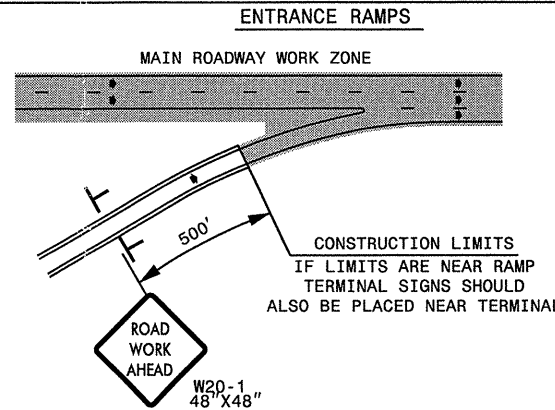
\* USE THE "\$250 SPEEDING PENALTY" SIGN, SPEED LIMIT SIGN, AND ORANGE PANEL; ONLY WHEN A "\$250 SPEEDING PENALTY" ORDINANCE HAS BEEN ISSUED BY THE REGIONAL TRAFFIC ENGINEER.

DETAIL B



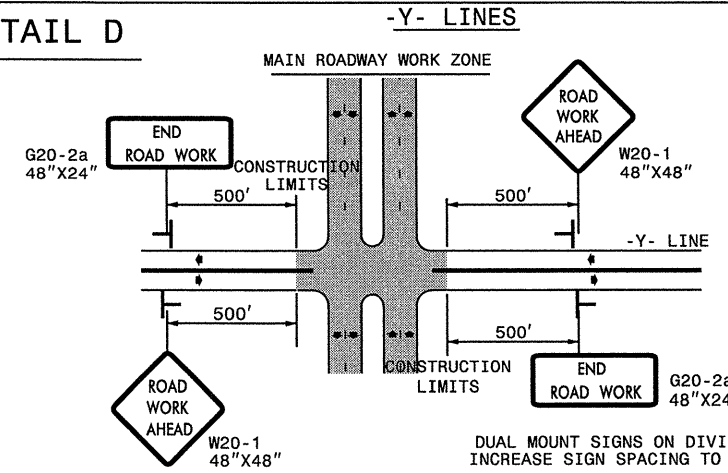
NOTE: SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

DETAIL C



CONSTRUCTION LIMITS IF LIMITS ARE NEAR RAMP TERMINAL SIGNS SHOULD ALSO BE PLACED NEAR TERMINAL

DETAIL D



DUAL MOUNT SIGNS ON DIVIDED HIGHWAYS AND INCREASE SIGN SPACING TO 1000'+/-.

GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

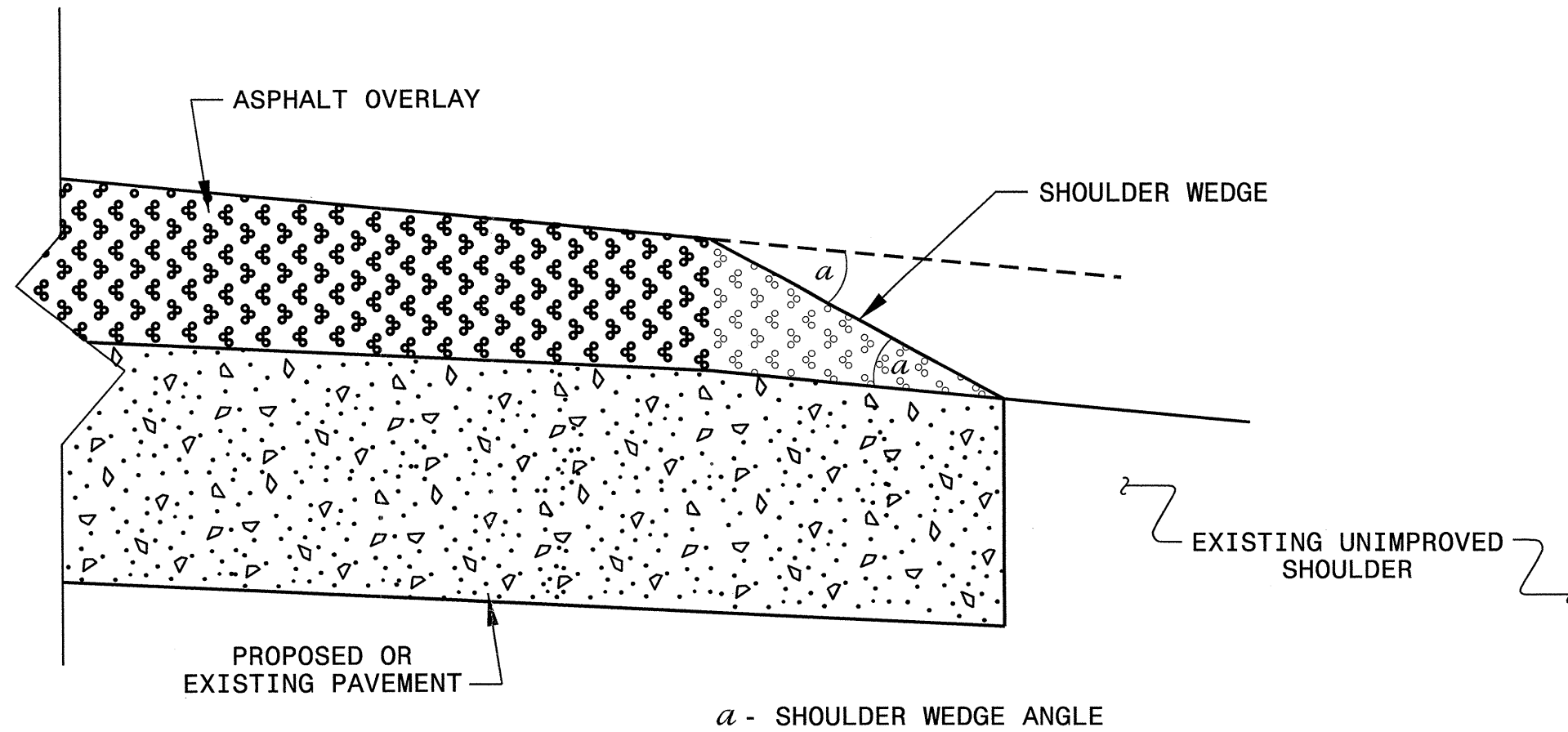
APPROVED: \_\_\_\_\_ DATE: \_\_\_\_\_

SEAL

ADVANCED WORK ZONE WARNING SIGNS FOR FREEWAYS (4 LANES OR GREATER)

SCALE: NONE	REVISIONS
DATE: 8/03	03/04
DWG. BY: JI	
DESIGN BY: JI	
REVIEWED BY:	

27-OCT-2010 08:50 \\D01-ADFSR007\WORKGROUPS-WZTCC\TMU\WZTC\Resurfacing\2010\Western\2010\Div13\C20290A-B\_13CR-10121.9x2\_Burke-US221e1c.sg\C20290A-B\_13CR-10121.9x2\_Burke-Freeways-4lanes-or-greater\_stationary.dgn



## SHOULDER WEDGE DETAIL

C:\ACT-2011\12\contracts\Special Details\howerton\shoulderwedgedetail.dgn  
 \$\$\$USERNAME\$\$\$

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