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**CONTRACT: 41153.1.1**      **T.I.P.: I-5000**

**STATE OF NORTH CAROLINA**  
**DEPARTMENT OF TRANSPORTATION**

PLAN PREPARED BY:  
**PROGRESSIVE**  
DESIGN GROUP, INC.  
  
ENGINEERS • CONSULTANTS

|   |                                   |
|---|-----------------------------------|
| <small>TIP NO.</small><br>I-5000  | <small>SHEET NO.</small><br>PMP-1 |
| <small>APPROVED:</small>  |                                   |
| <small>DATE:</small> 12/8/2016  |                                   |
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# PAVEMENT MARKING PLAN

## GASTON COUNTY

**LOCATION: I-85/US 321 GEOMETRIC SAFETY IMPROVEMENTS TO INTERCHANGE**

### GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

| ROAD NAME                            | MARKING                                  | MARKER       |
|--------------------------------------|--|--------------|
| I-85                                 | POLYUREA WITH HIGHLY REFLECTIVE ELEMENTS | SNOWPLOWABLE |
| US 321<br>AND ALL OTHER<br>-Y- LINES | POLYUREA WITH HIGHLY REFLECTIVE ELEMENTS | SNOWPLOWABLE |

EXCEPT DIAGONALS, STOP BARS, CROSWALK LINES, SYMBOLS, AND CHARACTERS USE THERMOPLASTIC MATERIAL (SEE PAVEMENT MARKING SCHEDULE AND NOTE G)

B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

D) PASSING ZONES WILL BE DETERMINED IN THE FIELD AND MUST BE APPROVED BY THE ENGINEER.

E) STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.

F) REMOVE ALL RESIDUE AND SURFACE LAITANCE BY ACCEPTABLE METHODS ON CONCRETE BRIDGE DECKS PRIOR TO PLACING POLYUREA PAVEMENT MARKING MATERIAL.

G) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.

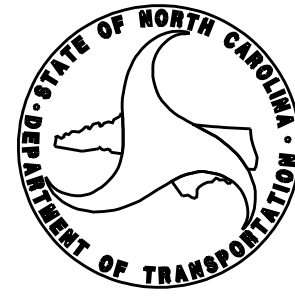
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| PMP-1A             | PAVEMENT MARKING SCHEDULE         |
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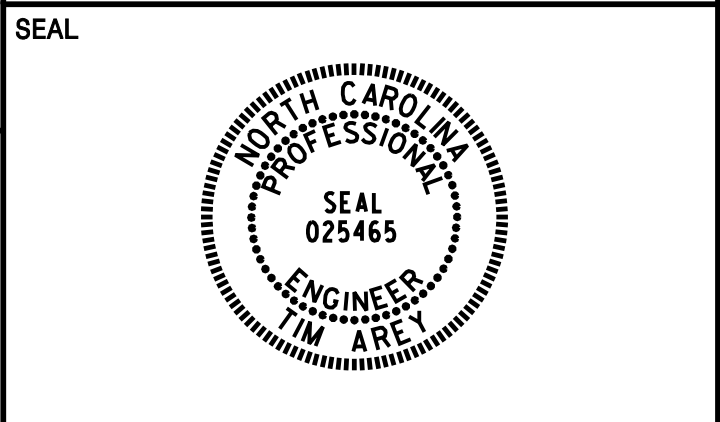
### ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JULY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

| <u>STD. NO.</u> | <u>TITLE</u>   |
|-----------------|--|
| 1205.01         | PAVEMENT MARKINGS - LINE TYPES AND OFFSETS               |
| 1205.02         | PAVEMENT MARKINGS - 2 LANE AND MULTILANE ROADWAYS        |
| 1205.03         | PAVEMENT MARKINGS - EXIT AND ENTRANCE RAMP               |
| 1205.04         | PAVEMENT MARKINGS - INTERSECTIONS                        |
| 1205.05         | PAVEMENT MARKINGS - TURN LANES                           |
| 1205.06         | PAVEMENT MARKINGS - LANE DROPS                           |
| 1205.07         | PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS                |
| 1205.08         | PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES            |
| 1205.09         | PAVEMENT MARKINGS - PAINTED ISLANDS                      |
| 1205.12         | PAVEMENT MARKINGS - BRIDGES                              |
| 1205.13         | PAVEMENT MARKINGS - LANE REDUCTIONS                      |
| 1250.01         | RAISED PAVEMENT MARKERS - INSTALLATION SPACING           |
| 1253.01         | RAISED PAVEMENT MARKERS - SNOWPLOWABLE                   |
| 1261.01         | GUARDRAIL AND BARRIER DELINEATORS - INSTALLATION SPACING |
| 1261.02         | GUARDRAIL AND BARRIER DELINEATORS - TYPES AND MOUNTING   |
| 1262.01         | GUARDRAIL END DELINEATION                                |

|  |   |   |
|--|---|---|
| <b>PLAN REVIEWED BY: N.C.D.O.T. SIGNING AND DELINEATION UNIT</b> |   |  |
| <u>Kelvin Jordan</u>   | SIGNING & DELINEATION REGIONAL ENGINEER       |   |
| <u>Derrick Beard</u>   | SIGNING & DELINEATION PROJECT DESIGN ENGINEER |   |

**FINAL PAVEMENT MARKINGS**

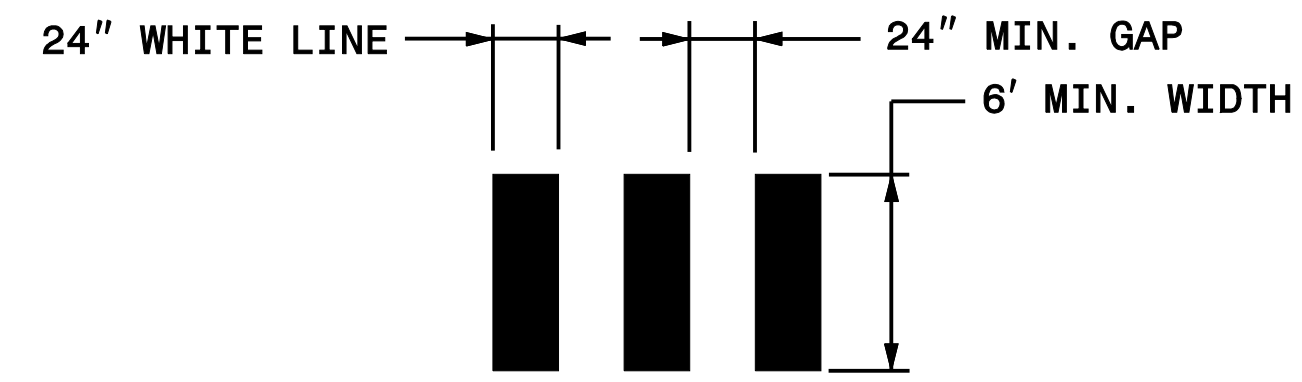


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**PAVEMENT MARKING SCHEDULE**

| Symbol | Description                           | Material      |
|--------|---------------------------------------|---------------|
| T2     | WHITE STOPBAR (24", 120 MIL)          | THERMOPLASTIC |
| T3     | WHITE CROSSWALK LINE (24", 120 MIL)   | THERMOPLASTIC |
| TU     | WHITE DIAGONAL (12", 90 MIL)          | THERMOPLASTIC |
| TV     | YELLOW DIAGONAL (12", 90 MIL)         | THERMOPLASTIC |
| UA     | LEFT TURN ARROW (90 MIL)              | THERMOPLASTIC |
| UB     | RIGHT TURN ARROW (90 MIL)             | THERMOPLASTIC |
| UC     | STRAIGHT ARROW (90 MIL)               | THERMOPLASTIC |
| UD     | COMBO. LEFT/STRAIGHT ARROW (90 MIL)   | THERMOPLASTIC |
| UE     | COMBO. RIGHT/STRAIGHT ARROW (90 MIL)  | THERMOPLASTIC |
| UI     | ALPHANUMERIC CHAR. (120 MIL)          | THERMOPLASTIC |
| UN     | 24" YIELD LINE TRIANGLE (90 MIL)      | THERMOPLASTIC |
| UP     | MERGE ARROW (90 MIL)                  | THERMOPLASTIC |
| UT     | U-TURN ARROW (90 MIL)                 | THERMOPLASTIC |
|        |                                       |               |
| V6     | WHITE EDGELINE (6")                   | POLYUREA      |
| V7     | YELLOW EDGELINE (6")                  | POLYUREA      |
| V8     | 2 FT. - 6 FT./SP WHITE MINISKIP (4")  | POLYUREA      |
| V9     | 2 FT. - 6 FT./SP YELLOW MINISKIP (4") | POLYUREA      |
| V11    | 2 FT. - 6 FT./SP WHITE MINISKIP (6")  | POLYUREA      |
| V13    | 3 FT. - 9 FT./SP WHITE MINISKIP (8")  | POLYUREA      |
| VA     | WHITE EDGELINE (4")                   | POLYUREA      |
| VB     | YELLOW EDGELINE (4")                  | POLYUREA      |
| VC     | 10 FT. WHITE SKIP (4")                | POLYUREA      |
| VD     | 3 FT. - 9 FT./SP WHITE MINISKIP (4")  | POLYUREA      |
| VE     | WHITE SOLID LANE LINE (4")            | POLYUREA      |
| VI     | YELLOW DOUBLE CENTER (4")             | POLYUREA      |
| VJ     | 10 FT. WHITE SKIP (6")                | POLYUREA      |
| VK     | 3 FT. - 9 FT./SP WHITE MINISKIP (6")  | POLYUREA      |
| VL     | WHITE SOLID LANE LINE (6")            | POLYUREA      |
| VN     | WHITE GORELINE (8")                   | POLYUREA      |
| VR     | WHITE SOLID LANE LINE (8")            | POLYUREA      |
| VS     | WHITE GORELINE (12")                  | POLYUREA      |
| VT     | WHITE SOLID LANE LINE (12")           | POLYUREA      |





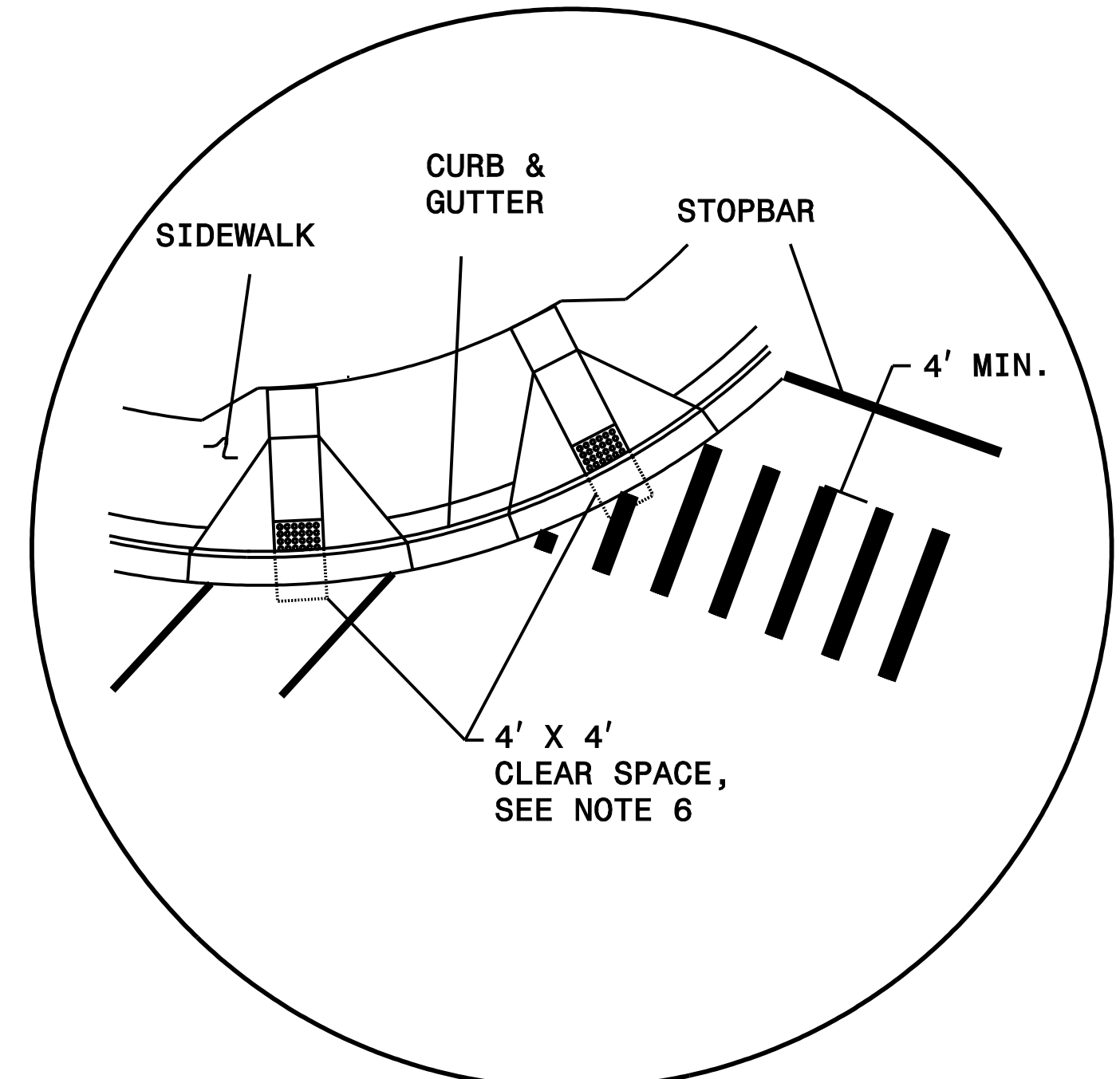
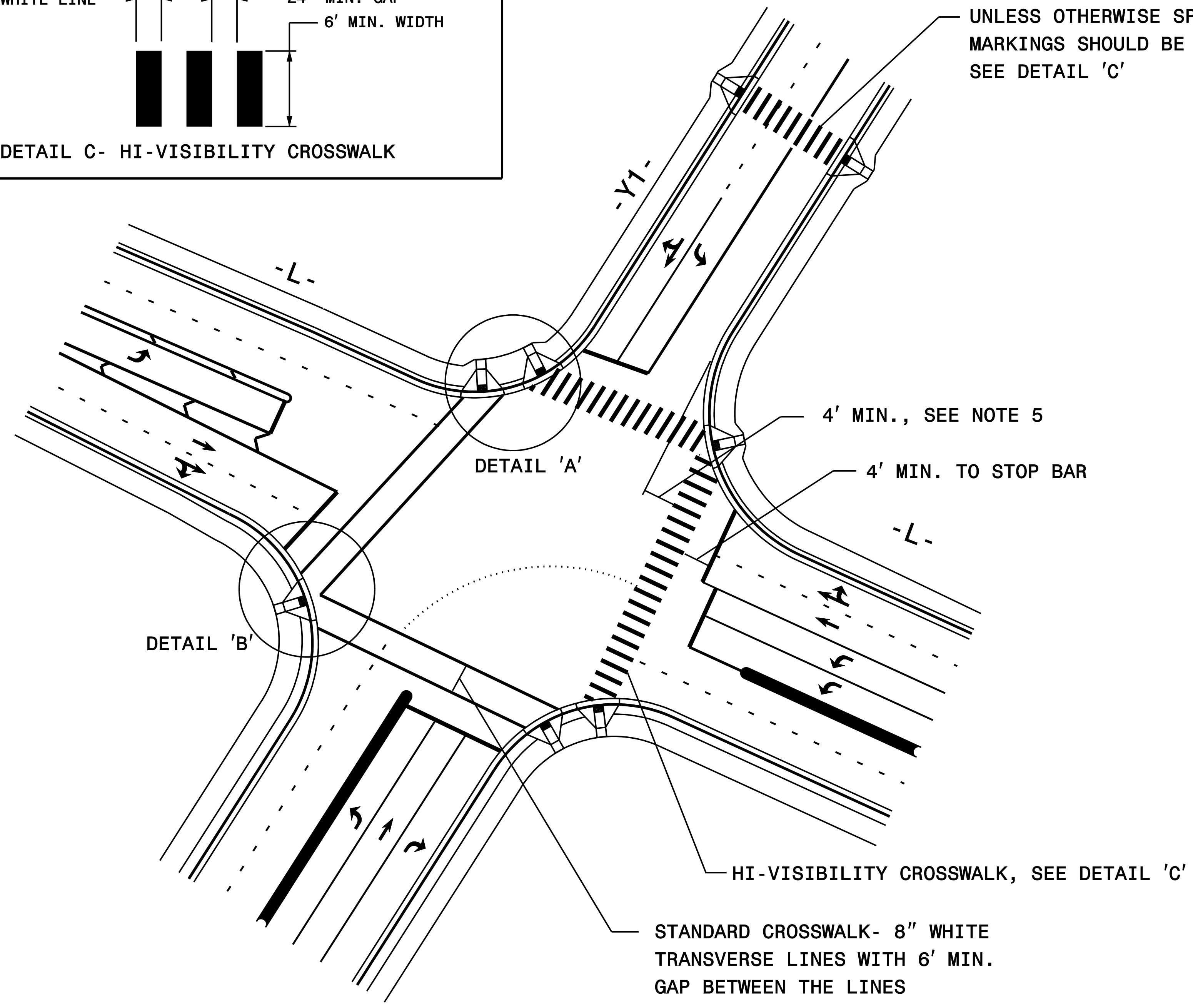
DETAIL C- HI-VISIBILITY CROSSWALK

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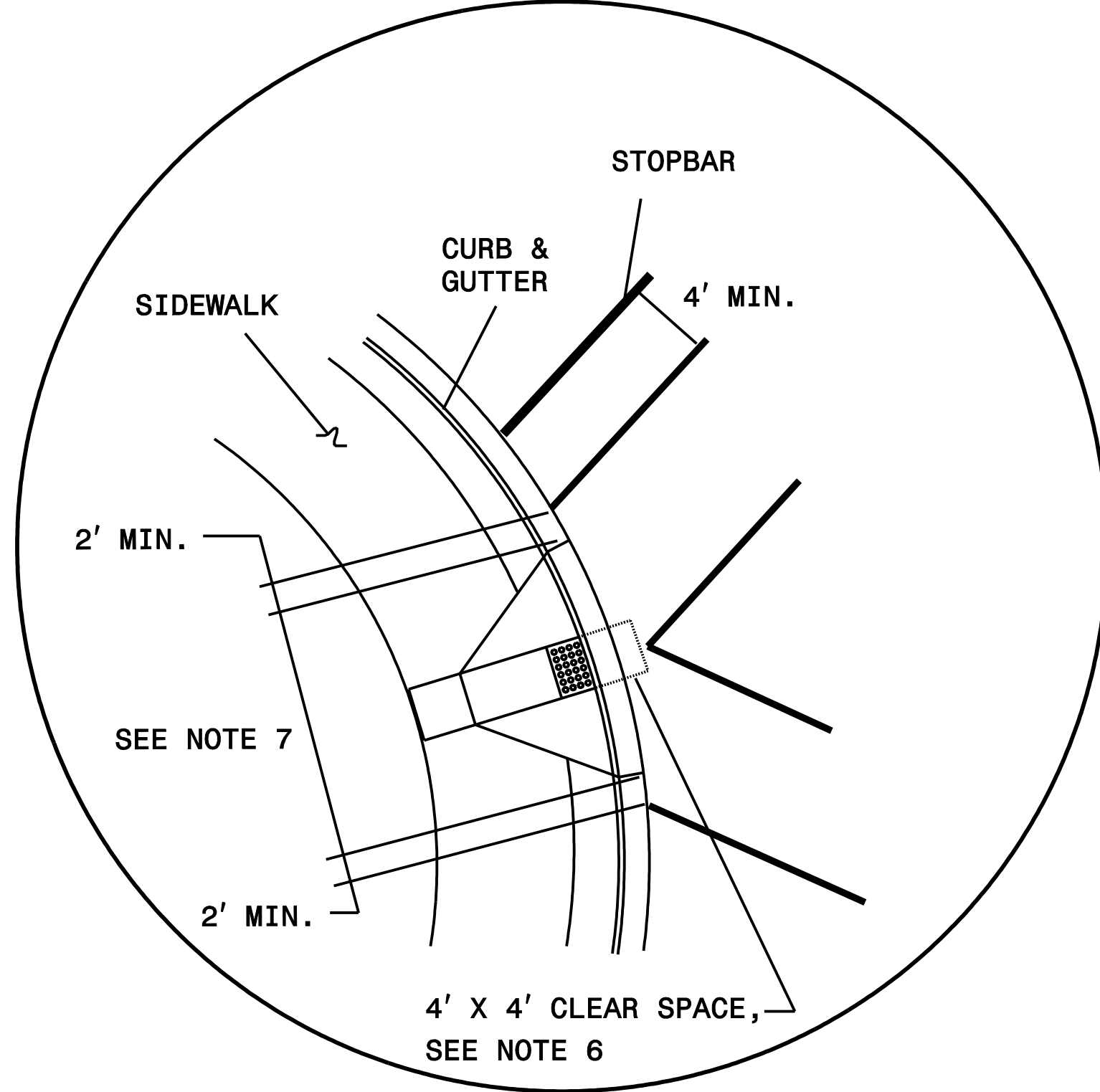
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| TIP NO.<br>I-5000            | SHEET NO.<br>PMP-1B |
| APPROVED: <i>[Signature]</i> |                     |
| DATE: 12/8/2016              |                     |
| SEAL                         |                     |



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DETAIL 'A'- DUAL CURB RAMPS



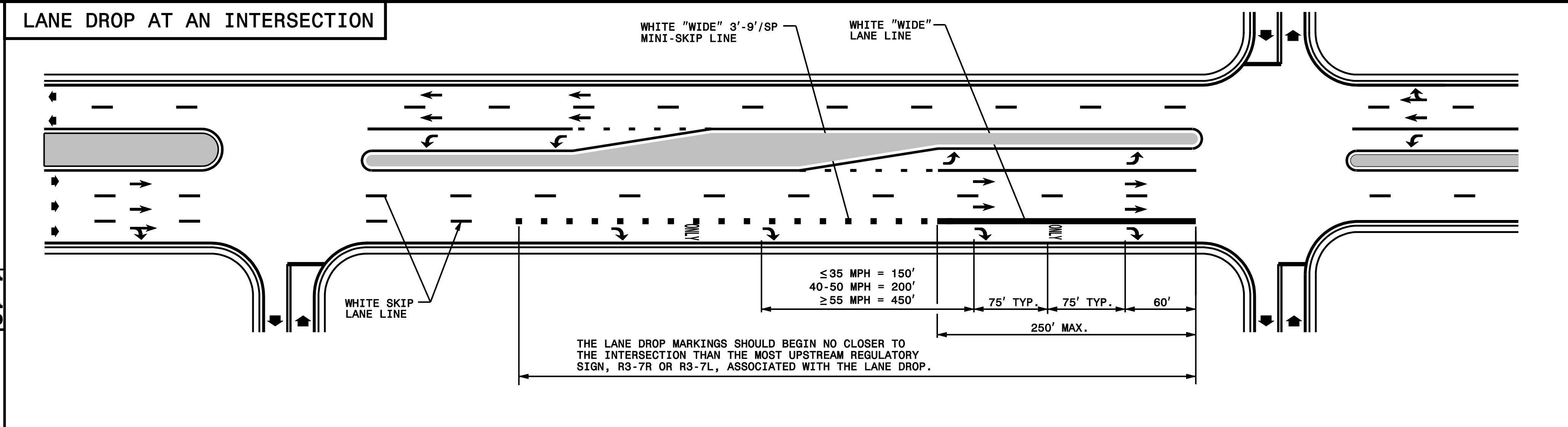
DETAIL 'B'- SINGLE DIAGONAL CURB RAMP

- NOTES:
- USE THE DETAILS ABOVE AND THE FOLLOWING NOTES FOR GUIDANCE IN PLACING CROSSWALK MARKINGS. REFER TO NCDOT ROADWAY STANDARD DRAWINGS, MUTCD AND ADA STANDARDS FOR ADDITIONAL GUIDANCE.
  - THE LOCATION AND TYPE OF CROSSWALK MARKINGS SHOWN ON THE ABOVE DETAILS ARE FOR REFERENCE ONLY. LOCATE CROSSWALK MARKINGS AS SHOWN ON THE PROJECT DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER. THE CROSSWALK MARKING TYPE, STANDARD OR HI-VISIBILITY, SHALL BE INSTALLED AS SPECIFIED ON THE PROJECT DETAIL SHEETS OR AS DIRECTED BY THE ENGINEER.
  - THE STANDARD CROSSWALK IS TWO WHITE 8" TRANSVERSE LINES WITH A 6' MINIMUM GAP BETWEEN THE LINES. THE HI-VISIBILITY CROSSWALK IS WHITE 24" WIDE LONGITUDINAL LINES WITH 24" MINIMUM GAPS BETWEEN LINES, SEE DETAIL 'C'. HI-VISIBILITY CROSSWALKS SHOULD BE A MINIMUM OF 6' WIDE.
  - STOP BARS SHOULD BE PLACED A MINIMUM OF 4' IN ADVANCE OF NEAREST CROSSWALK LINE.
  - SET BACK DISTANCE FROM INSIDE CROSSWALK MARKING TO NEAREST EDGE OF TRAVEL IS 4' MIN.
  - BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE OF 4' X 4' MINIMUM SHALL BE PROVIDED WITHIN THE MARKINGS.
  - SINGLE DIAGONAL CURB RAMPS WITH FLARED SIDES SHALL HAVE A SEGMENT OF CURB 2 FEET LONG MINIMUM LOCATED ON EACH SIDE OF THE CURB RAMP AND WITHIN THE MARKED CROSSING, SEE DETAIL 'B'.
  - CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE TO THE LATEST NCDOT ROADWAY STANDARD DRAWINGS.

**FINAL PAVEMENT MARKINGS**  
**CROSSWALK PAVEMENT MARKING**  
**GUIDANCE DETAIL**

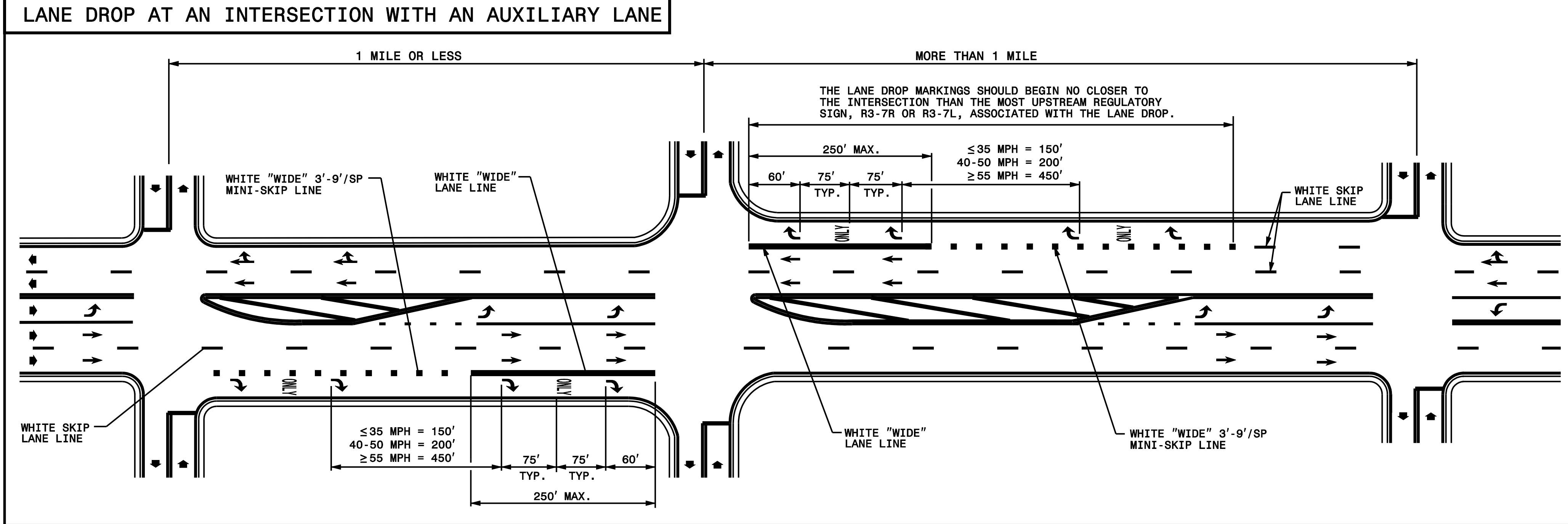
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 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.  
 1-12



STATE OF NORTH CAROLINA  
 DEPT. OF TRANSPORTATION  
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 1-12

ENGLISH DETAIL DRAWING FOR  
**PAVEMENT MARKINGS**  
 LANE DROPS



ENGLISH DETAIL DRAWING FOR  
**PAVEMENT MARKINGS**  
 LANE DROPS

- GENERAL NOTES:
- USE THE GUIDANCE SHOWN ON THE ABOVE DETAILS IN CONJUNCTION WITH INTERSECTION GUIDANCE SHOWN ON ROADWAY STANDARD DRAWING 1205.04.
  - LANE LINES INDICATED AS "WIDE" SHALL BE AT LEAST TWICE THE WIDTH OF THE NORMAL LINE.

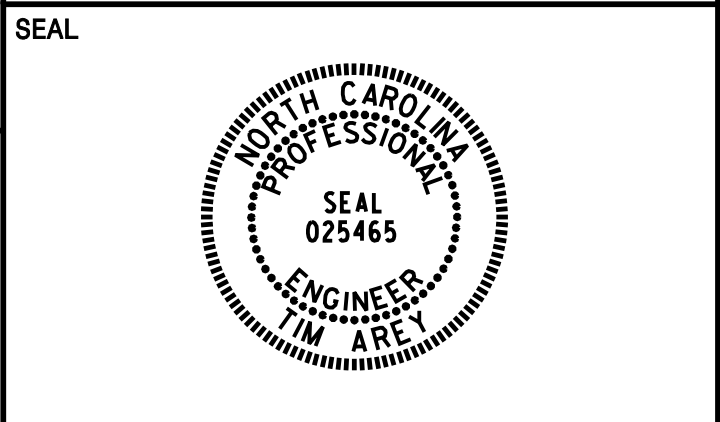
| LEGEND                      |  |
|-----------------------------|--|
| W = WIDTH OF TRAVEL LANE    | ONLY PAVEMENT MARKING SYMBOLS & CHARACTERS |
| ➔ DIRECTION OF TRAFFIC FLOW |  |

SHEET 1 OF 3  
**1205D06**

SHEET 1 OF 3  
**1205D06**

**FINAL PAVEMENT MARKINGS**  
 REVISED PAVEMENT MARKING  
 ROADWAY STANDARD DRAWING





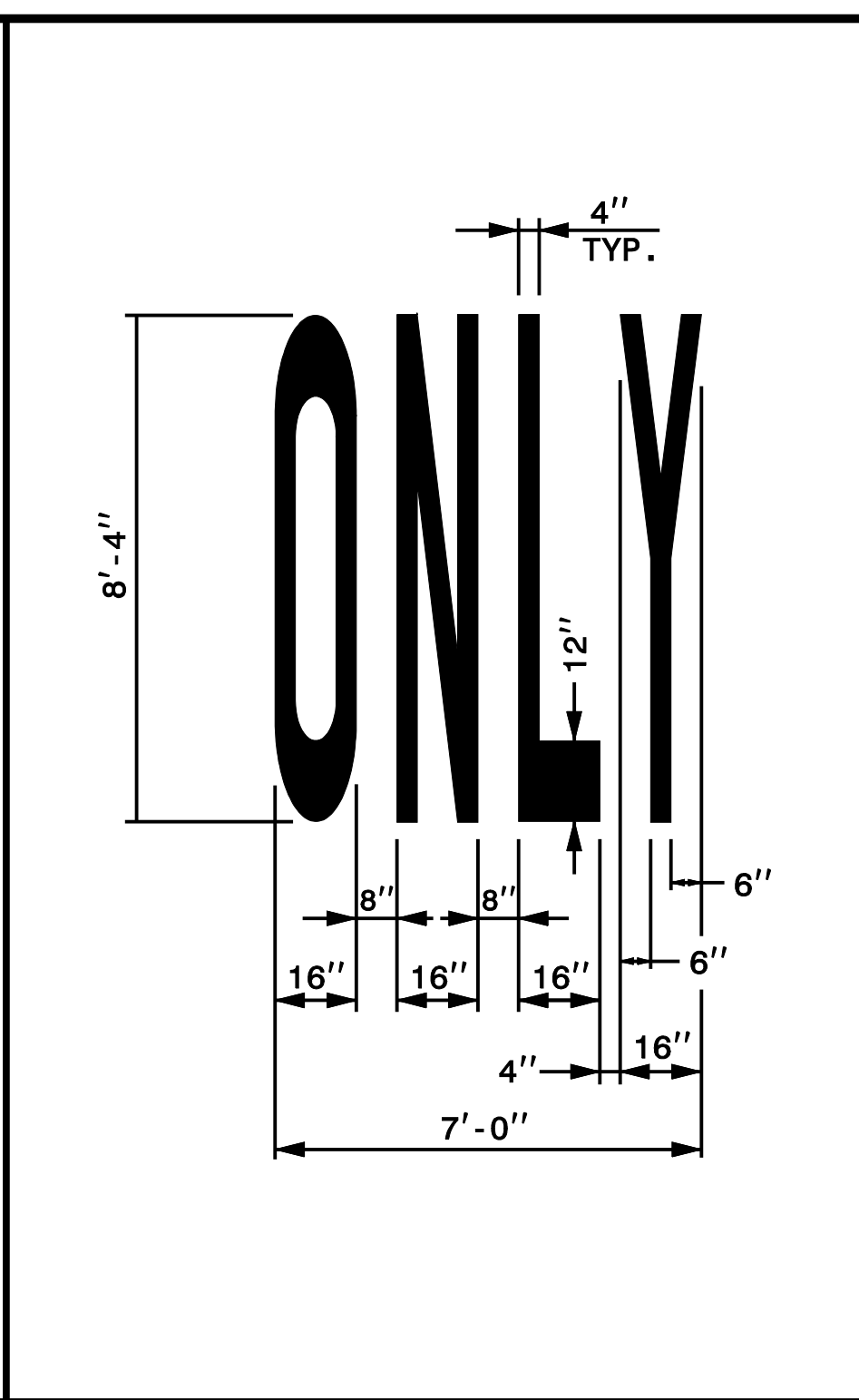
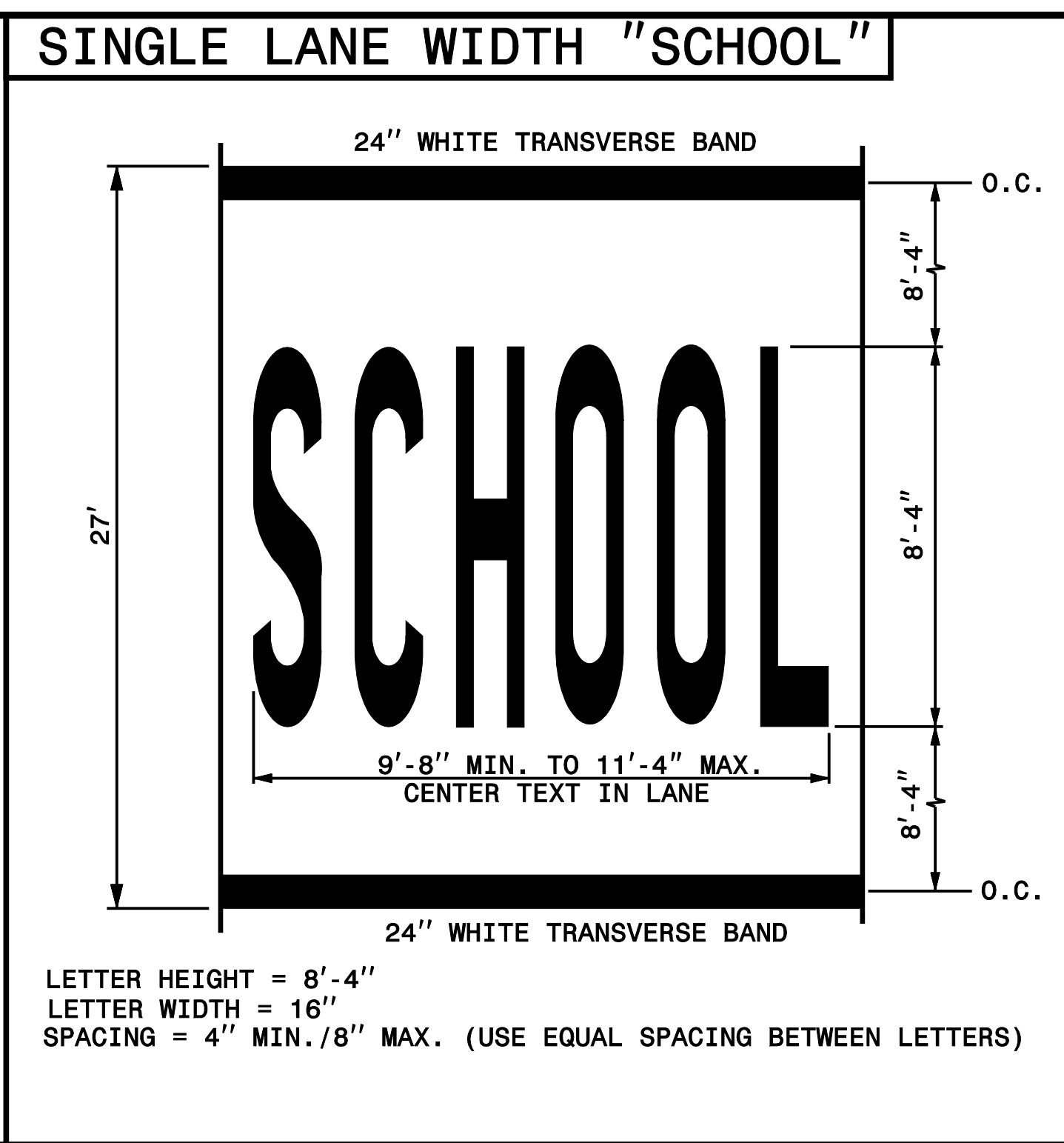
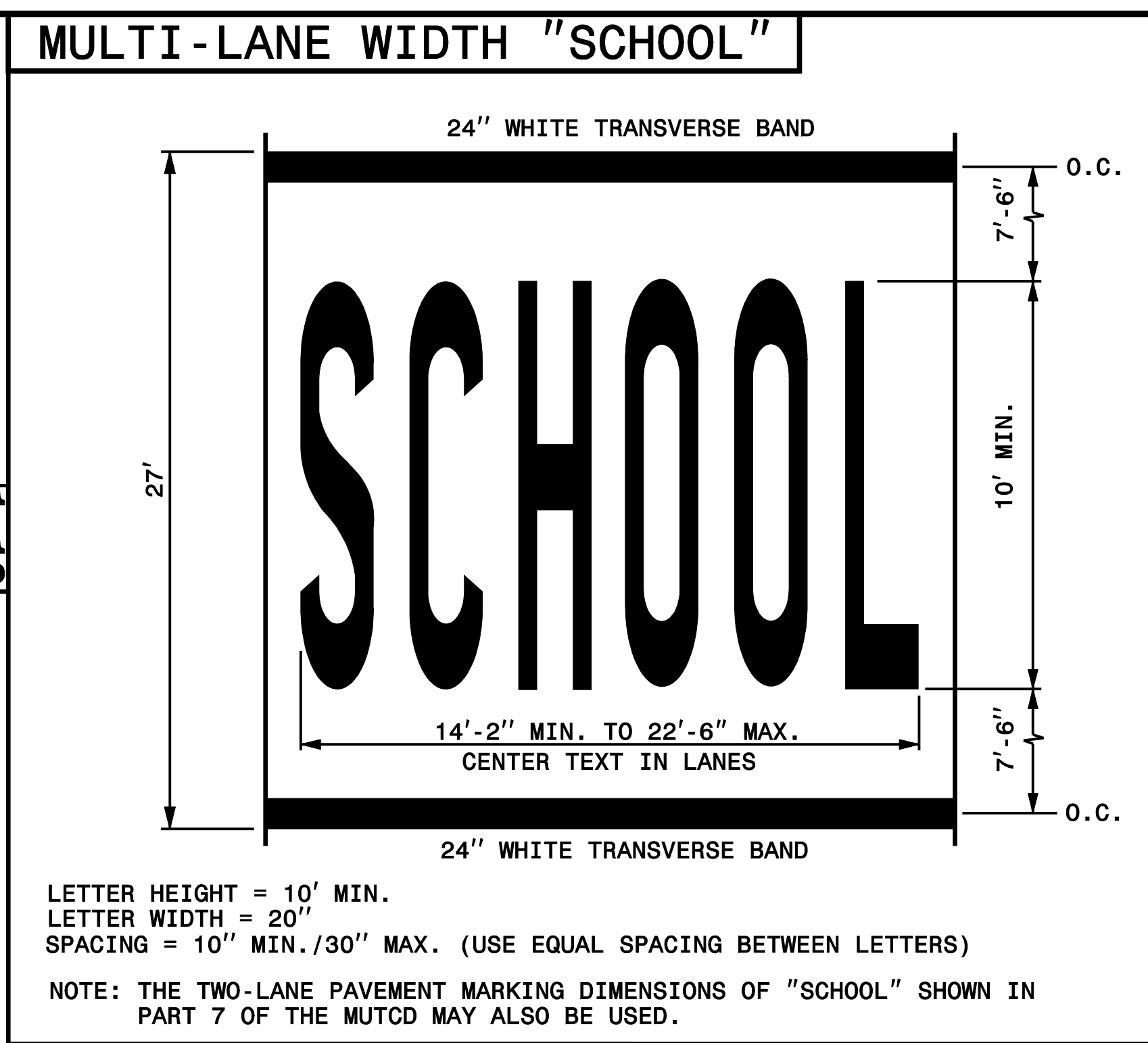
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1-12

ENGLISH DETAIL DRAWING FOR  
**PAVEMENT MARKINGS**  
 SYMBOLS AND WORD MESSAGES

SHEET 3 OF 8  
**1205D08**

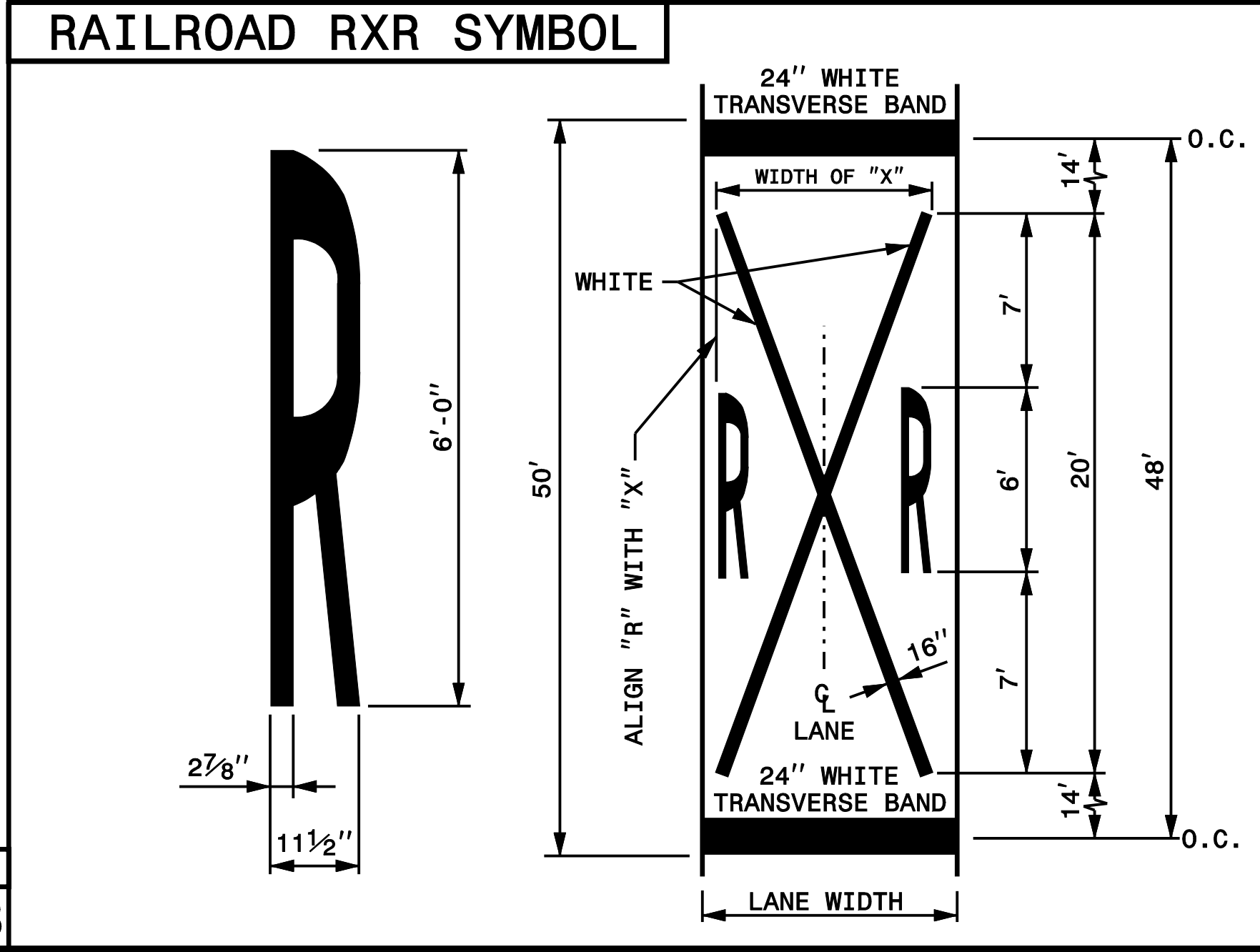


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1-12

ENGLISH DETAIL DRAWING FOR  
**PAVEMENT MARKINGS**  
 SYMBOLS AND WORD MESSAGES

SHEET 3 OF 8  
**1205D08**

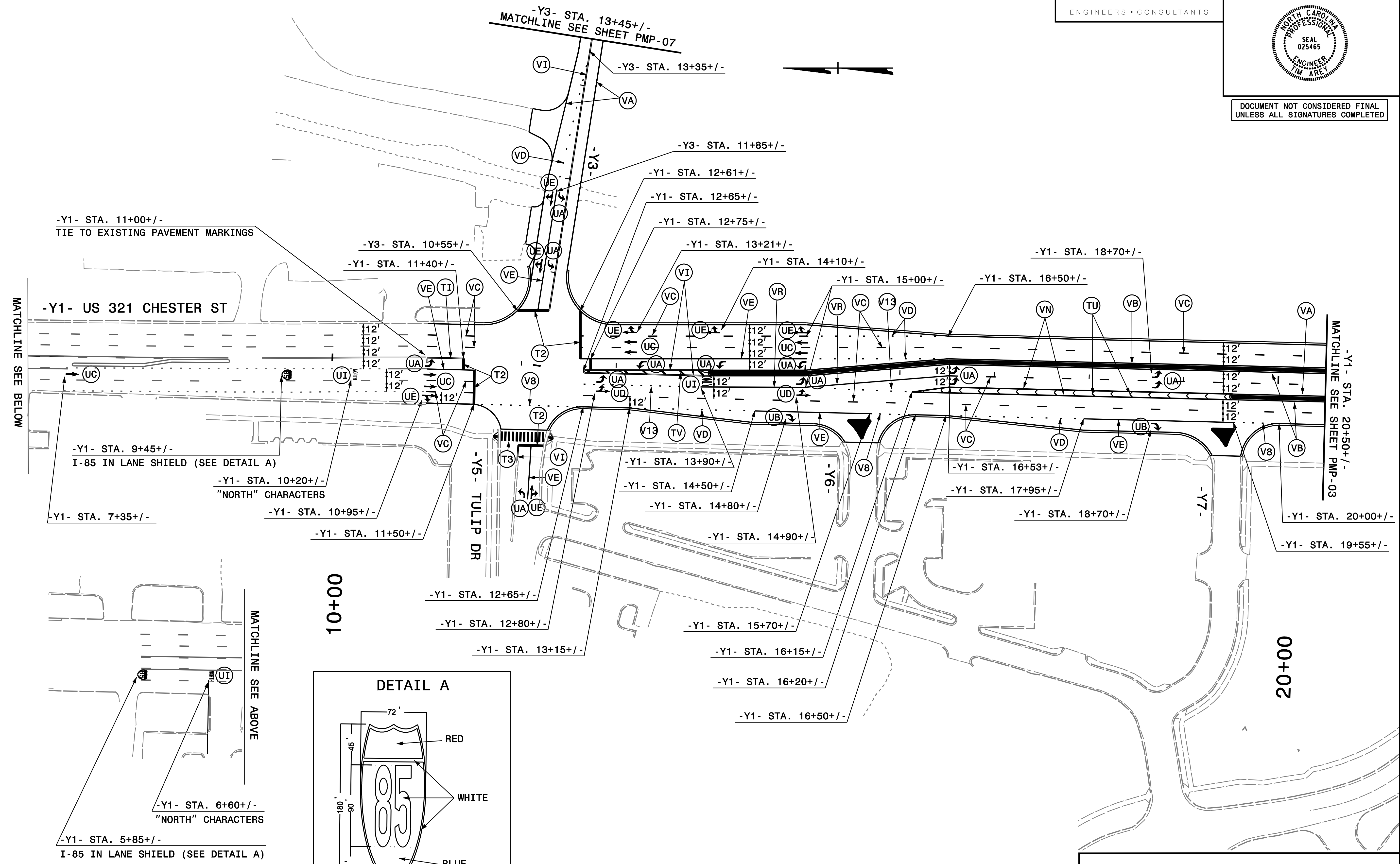


| LANE WIDTH (FEET) | WIDTH OF "X" (FEET) |
|-------------------|---------------------|
| 8' ≤ W ≤ 9'       | 7'                  |
| 9' < W ≤ 12'      | 8'                  |
| W > 12'           | 10'                 |

GENERAL NOTES:

- 1- THE SCHOOL PAVEMENT MARKING CONSISTS OF SIX (6) CHARACTERS. THE TWO (2) 24" TRANSVERSE BANDS WILL BE PAID FOR UNDER A SEPARATE PAY ITEM. REFER TO ROADWAY STANDARD DRAWING 1205.10 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.
- 2- PAVEMENT MARKING IN ADVANCE OF A HIGHWAY-RAIL CROSSING SHALL CONSIST OF TWO (2) CHARACTERS AND TWO (2) 16" LINES (FORMING AN X) WHICH ARE PAID FOR UNDER TWO SEPARATE PAY ITEMS. THE TWO (2) 24" TRANSVERSE BANDS WILL BE PAID FOR UNDER A SEPARATE PAY ITEM. REFER TO ROADWAY STANDARD DRAWING 1205.11 FOR ADDITIONAL PAVEMENT MARKING GUIDANCE.

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-Y1- STA. 11+00+/-  
 TIE TO EXISTING PAVEMENT MARKINGS

MATCHLINE SEE BELOW

-Y1- US 321 CHESTER ST

-Y1- STA. 9+45+/-  
 I-85 IN LANE SHIELD (SEE DETAIL A)

-Y1- STA. 10+20+/-  
 "NORTH" CHARACTERS

-Y1- STA. 7+35+/-

-Y1- STA. 10+95+/-

-Y1- STA. 11+50+/-

-Y5- TULIP DR

-Y1- STA. 12+65+/-

-Y1- STA. 12+80+/-

-Y1- STA. 13+15+/-

-Y1- STA. 13+90+/-

-Y1- STA. 14+50+/-

-Y1- STA. 14+80+/-

-Y1- STA. 14+90+/-

-Y1- STA. 15+70+/-

-Y1- STA. 16+15+/-

-Y1- STA. 16+20+/-

-Y1- STA. 16+50+/-

-Y1- STA. 16+53+/-

-Y1- STA. 17+95+/-

-Y1- STA. 18+70+/-

-Y1- STA. 18+70+/-

-Y1- STA. 16+50+/-

MATCHLINE SEE SHEET PMP-03

-Y1- STA. 20+50+/-

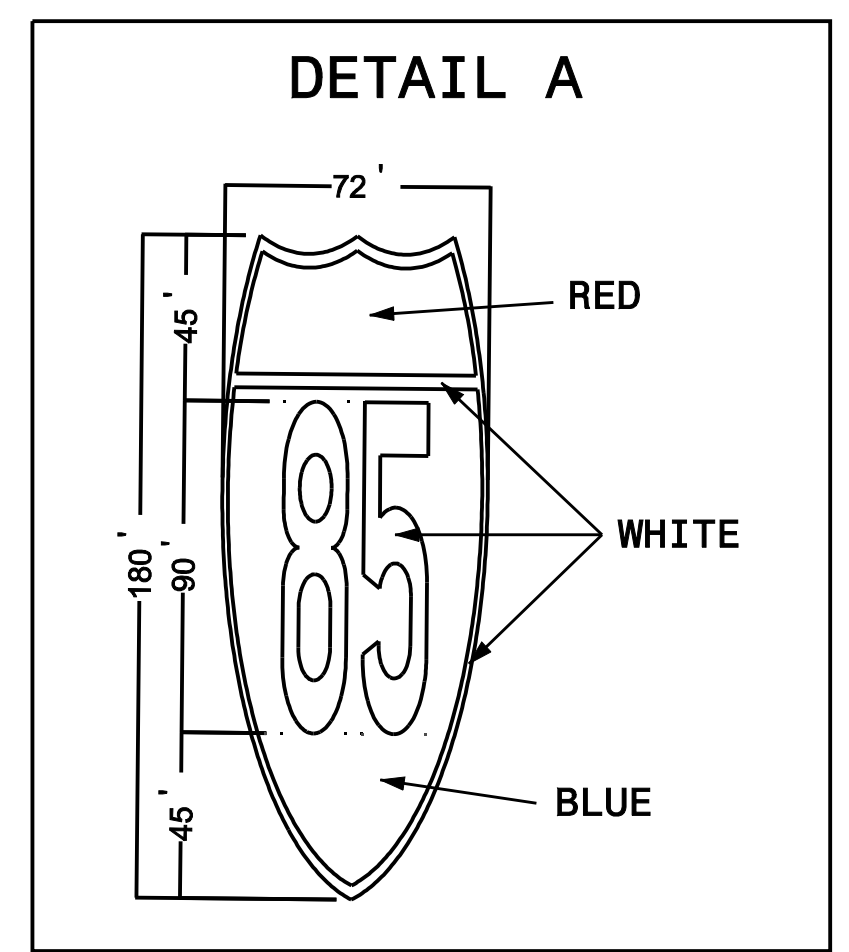
-Y1- STA. 20+00+/-

-Y1- STA. 19+55+/-

-Y1- STA. 6+60+/-  
 "NORTH" CHARACTERS

-Y1- STA. 5+85+/-  
 I-85 IN LANE SHIELD (SEE DETAIL A)

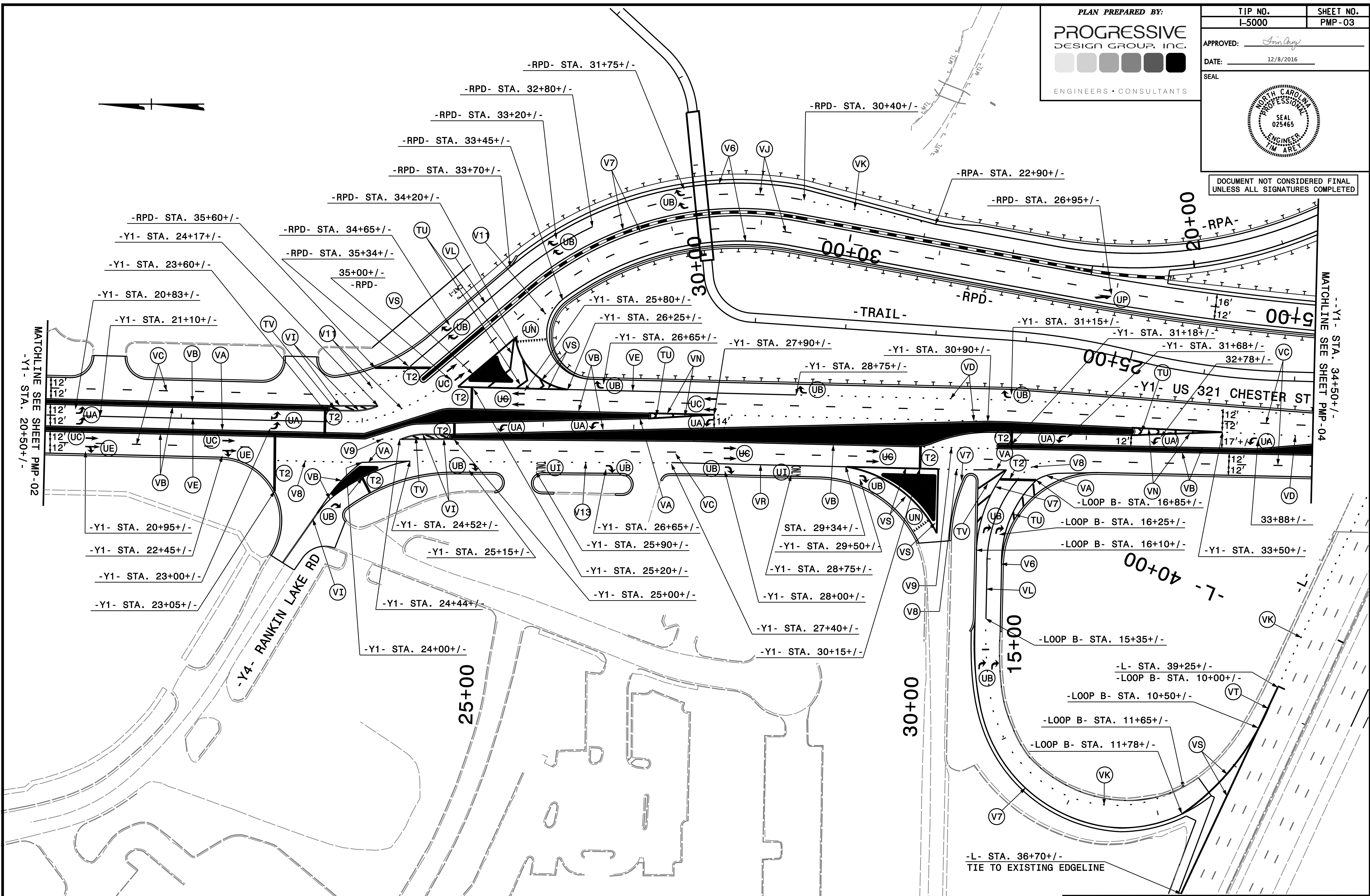
MATCHLINE SEE ABOVE



**FINAL PAVEMENT MARKINGS**



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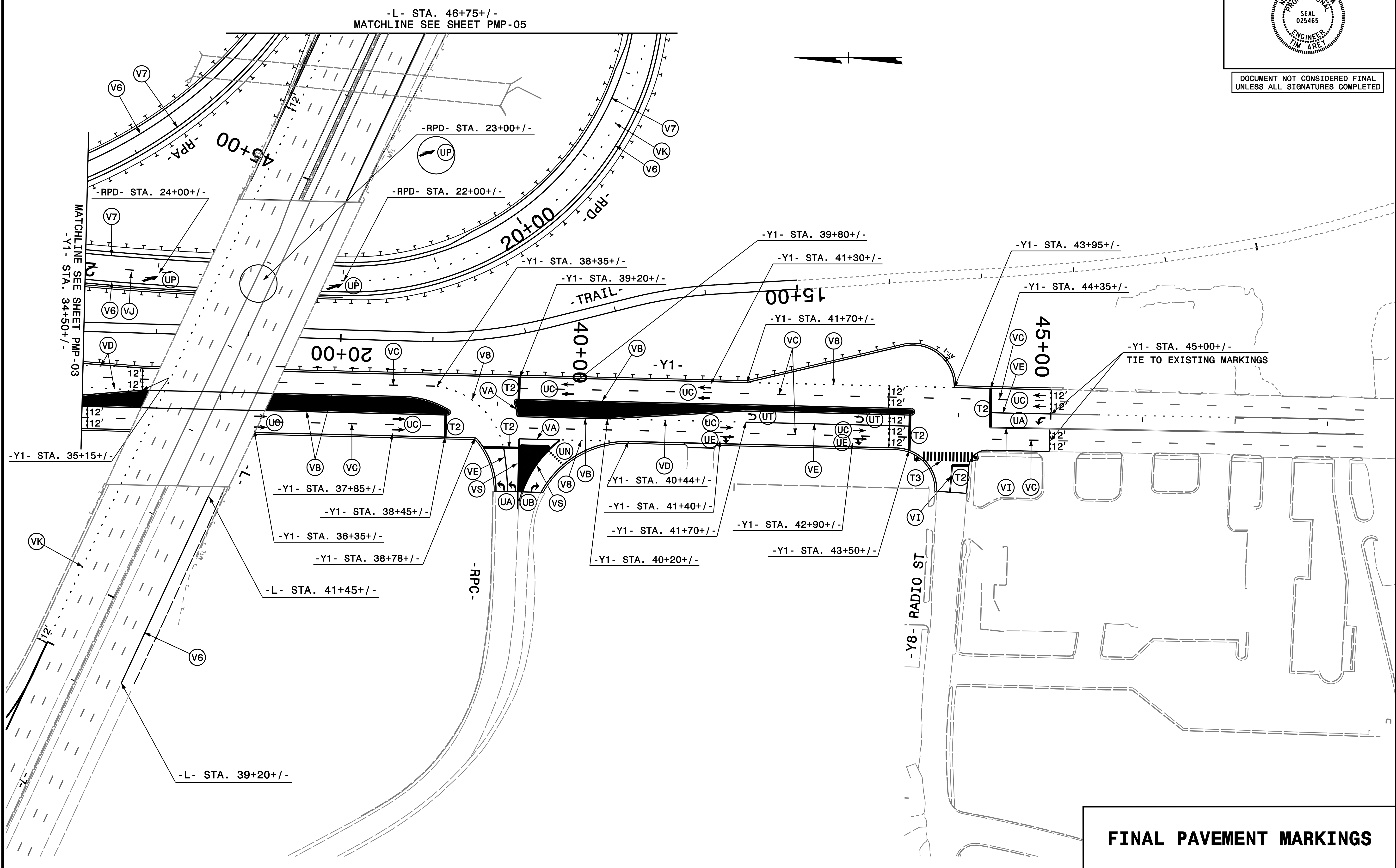
MATCHLINE SEE SHEET PMP-02  
 -Y1- STA. 20+50+/-

MATCHLINE SEE SHEET PMP-04  
 -Y1- STA. 34+50+/-

**FINAL PAVEMENT MARKINGS**



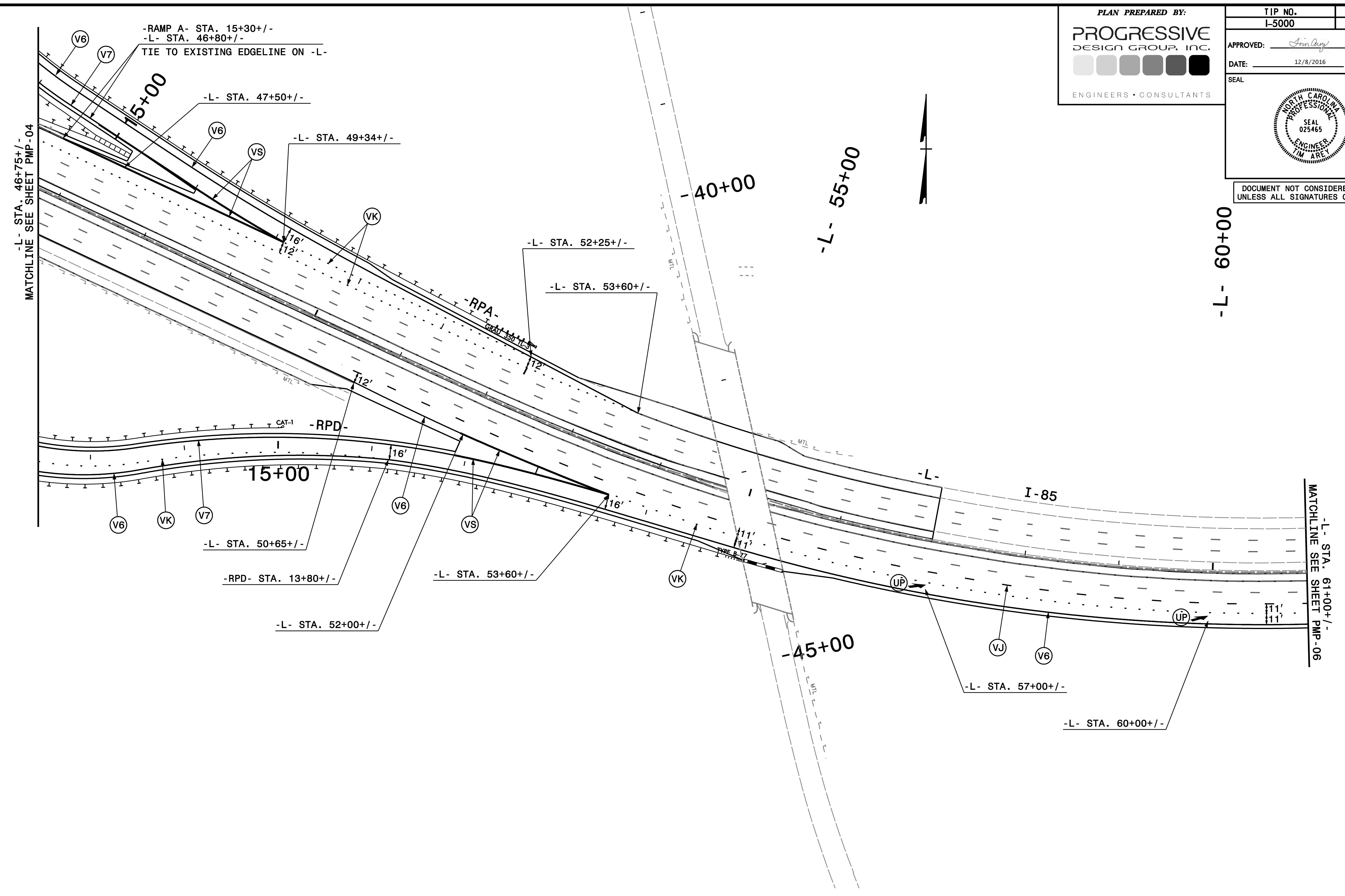
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**FINAL PAVEMENT MARKINGS**

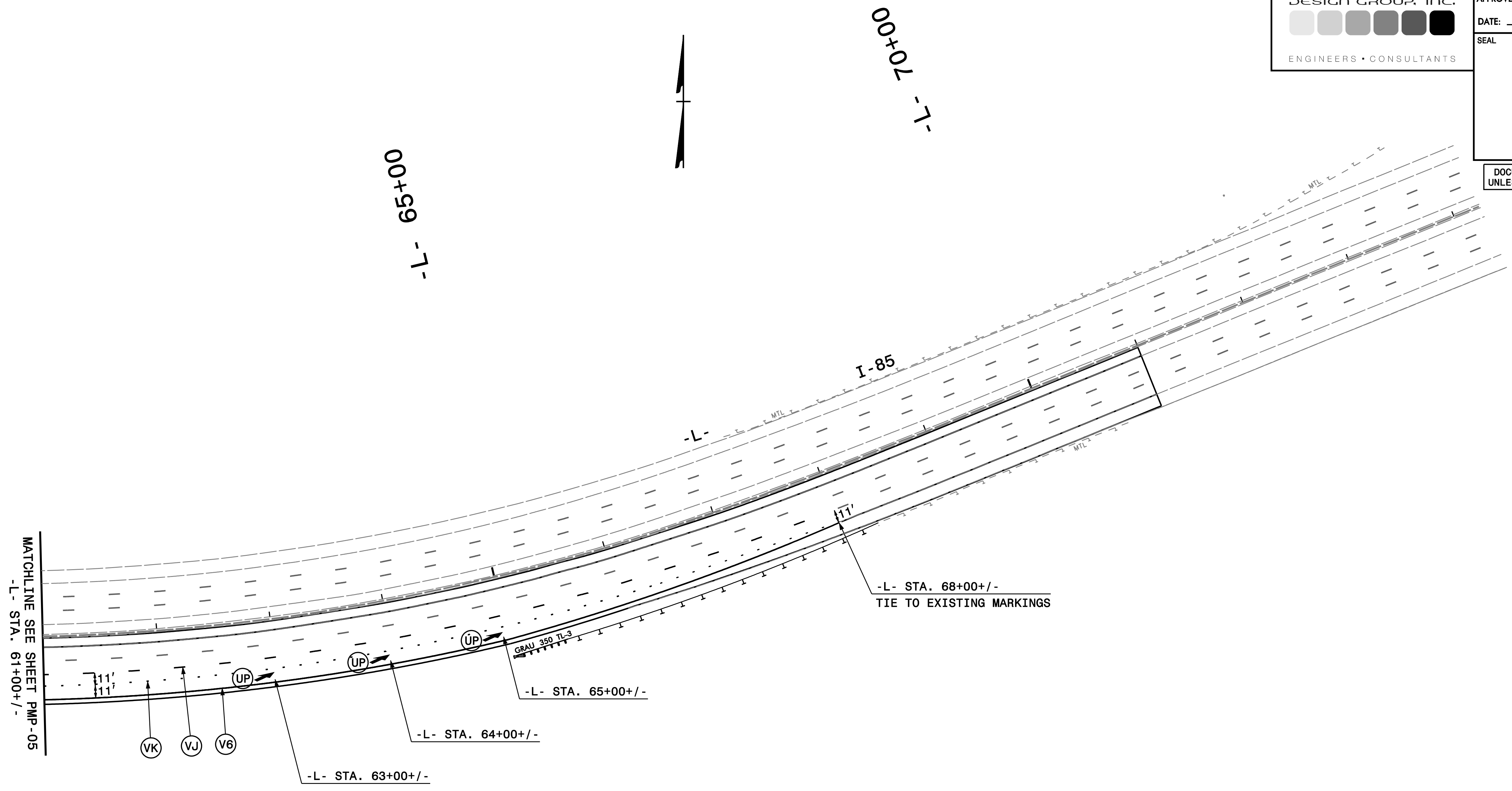


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**FINAL PAVEMENT MARKINGS**



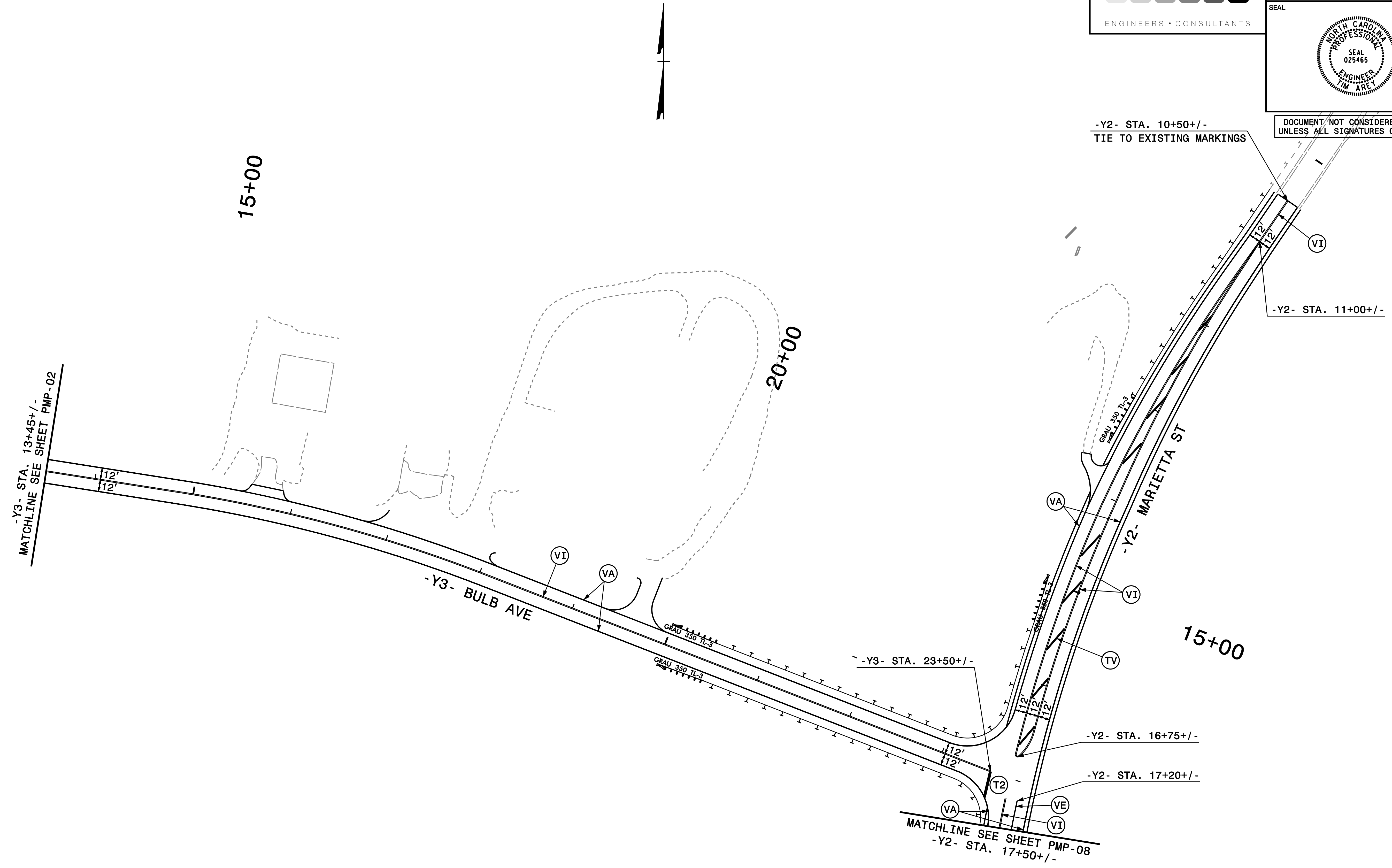


**FINAL PAVEMENT MARKINGS**

PLAN PREPARED BY:  
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|   |                     |
|---|---------------------|
| TIP NO.<br>I-5000   | SHEET NO.<br>PMP-07 |
| APPROVED: <i>Tommy</i>  |                     |
| DATE: 12/8/2016   |                     |
| SEAL  |                     |
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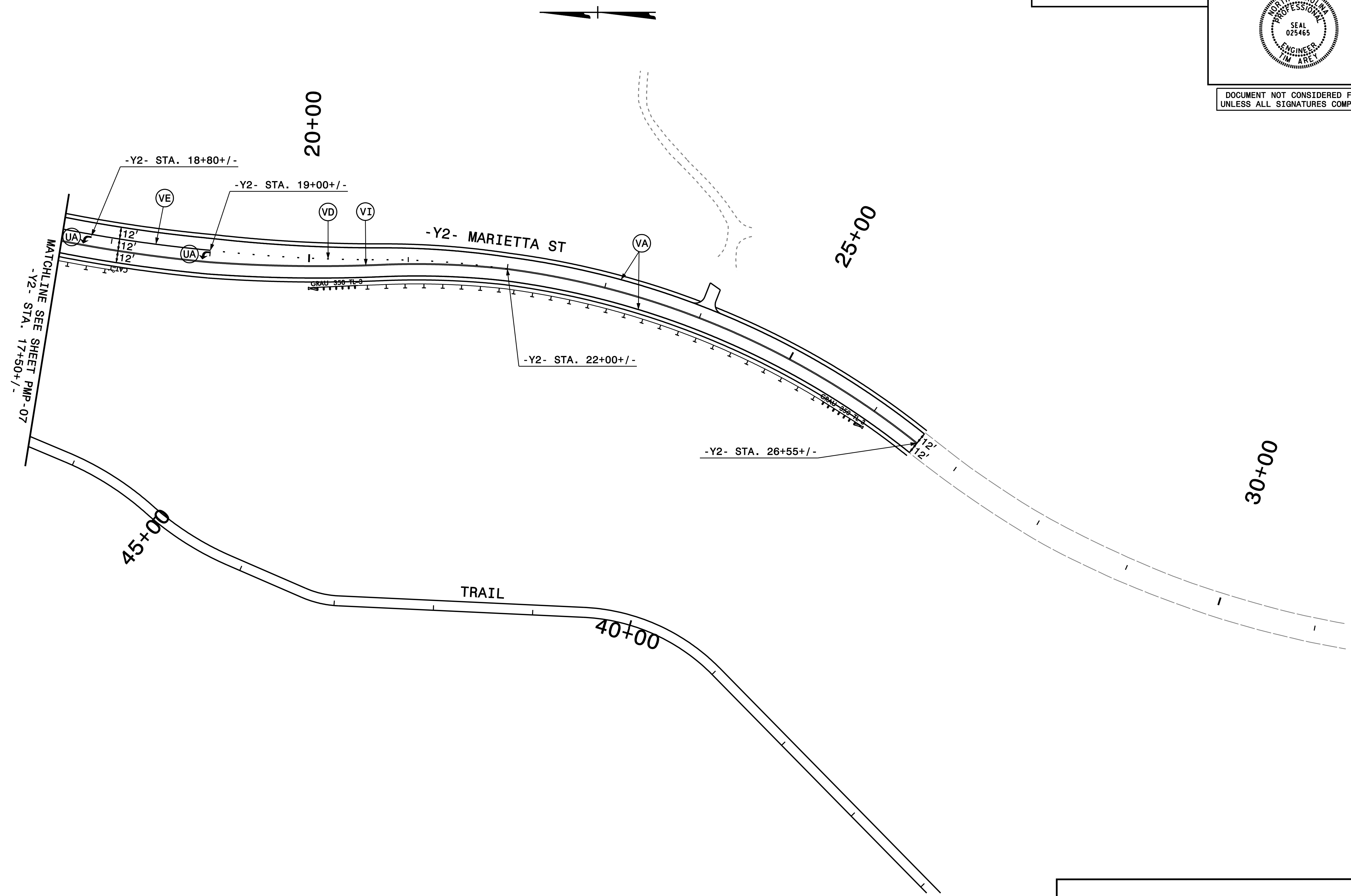
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**FINAL PAVEMENT MARKINGS**



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