

PROJECT NO.	SHEET NO.
RD-281-4(1015)	1
▲ CONTROL NO.	80949
▲ CONTROL NO.	
■ CONTROL NO.	

INDEX OF SHEETS

- SHEET NO.
- 1 TITLE PAGE
 - 2-5 SUMMARY OF QUANTITIES & TYPICAL CROSS SECTION
 - 3 TEMPORARY PAVEMENT MARKING PLAN
 - 4 TYPICAL PAVEMENT MARKING PLAN--5" PAVEMENT MARKING
 - 5 PAVEMENT MARKING PLAN--VEHICLE SIGNING FOR PAINT STRIPING

STANDARD PLANS

- 920-R5 (2 SHEETS) TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE
- 922-R8 (2 SHEETS) TRAFFIC CONTROL FOR ASPHALT SURFACING

**STATE OF NEBRASKA
DEPARTMENT OF ROADS**

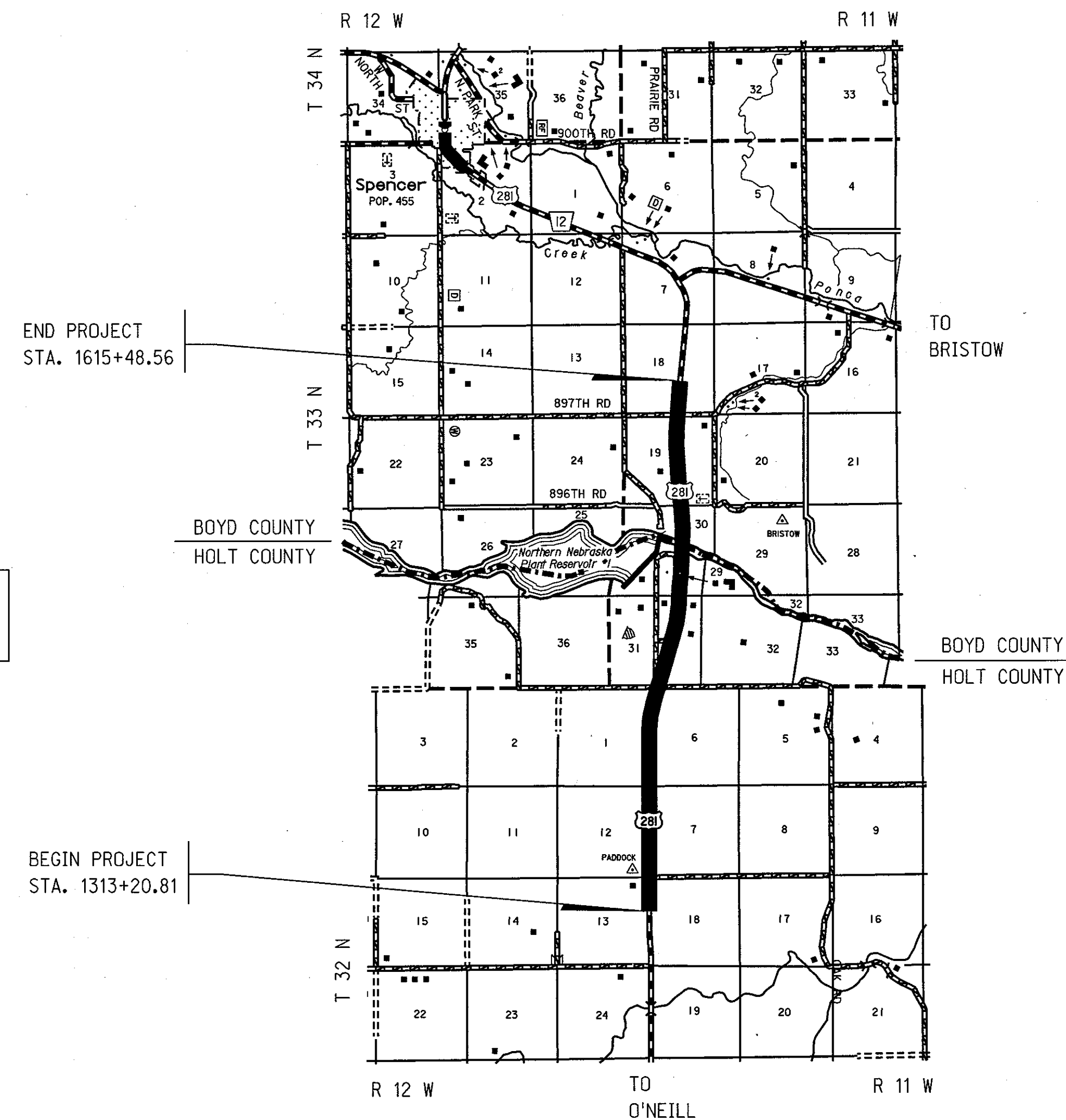
**PLANS FOR CONSTRUCTION
NIOBRARA RIVER
NORTH & SOUTH
BOYD & HOLT COUNTIES**

THE 2007 EDITION OF THE NEBRASKA STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS APPLY TO THIS PROJECT.

THE WORK ON THIS PROJECT CONSISTS OF GROUPS

9-BITUMINOUS
▲ GROUPS <u>9</u> ARE INCLUDED IN THE LETTING OF <u>FEBRUARY 6, 2014</u>
▲ GROUPS _____ ARE INCLUDED IN THE LETTING OF _____
■ GROUPS _____ ARE INCLUDED IN THE LETTING OF _____

DESIGN DESIGNATION
MAINTENANCE
TRAFFIC
YEAR: 2014
ADT: 1,250



EQUATION
STA. 1513+53.44 BK = STA. 1513+46.46 AH

CONVENTIONAL SIGNS

- FENCE R.O.W. OR WIRE
- GUARDRAIL
- TRAVELED WAY
- DIKE
- CULVERT
- POWER POLE
- TELEPHONE POLE
- MAILBOX
- RAILROAD TRACKS
- MARSH
- TREE - CONIFEROUS
- TREE - DECIDUOUS

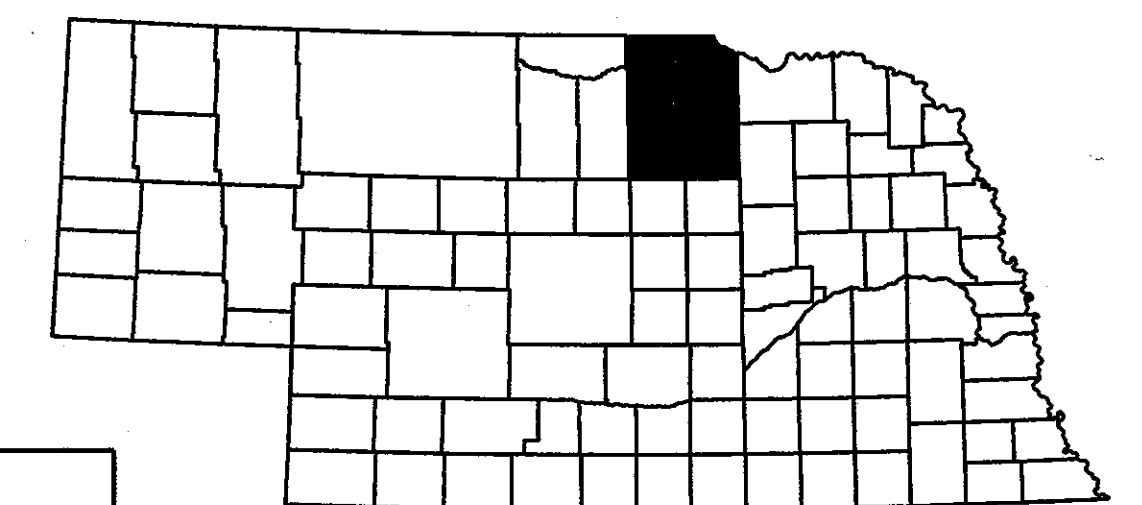
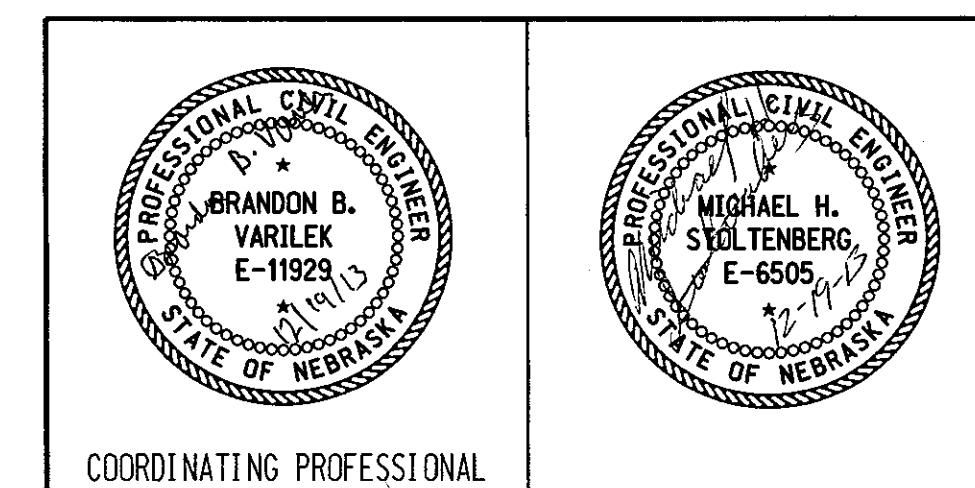
R.O.W. LEGEND

- NEW CONTROLLED ACCESS
- PREVIOUS CONTROLLED ACCESS
- LIMITS OF CONSTRUCTION
- PREVIOUS R.O.W.
- NEW R.O.W.
- EXISTING PERMANENT EASEMENT
- TEMPORARY EASEMENT
- EXCESS TAKING
- PERMANENT EASEMENT
- EXISTING RAILROAD EASEMENT
- NEW RAILROAD PERMANENT EASEMENT
- NEW RAILROAD TEMPORARY EASEMENT

REFERENCE POST NO. 204+09 TO REFERENCE POST NO. 209+81

BRIDGE EXCEPTION: FROM STA. 1516+57.59 TO STA. 1524+07.36

TOTAL NET LENGTH OF PROJECT: 29,484.96 FEET 5.584 MILES



CONSTRUCTION DIVISION

Computer: DRCONSTRUCT10

User: dbr17005

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PROJECT NO.	SHEET NO.
281-4(1015)	2-5

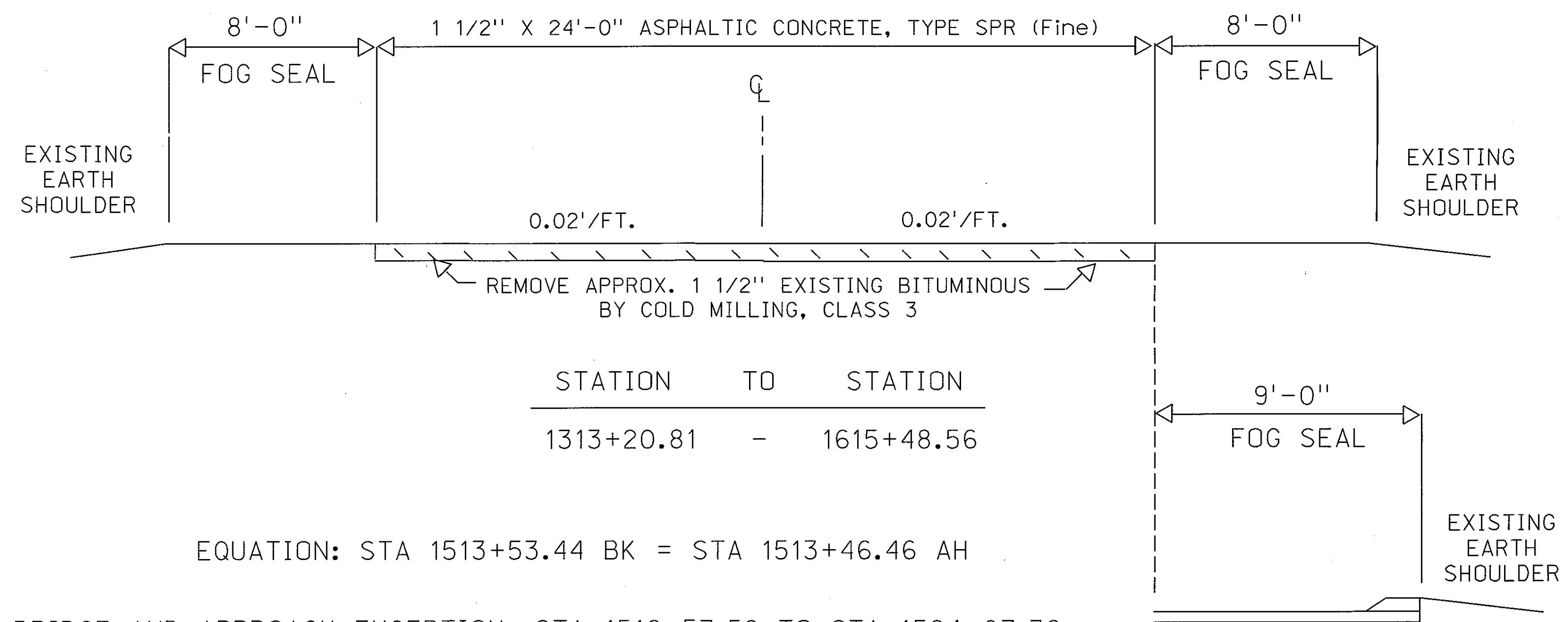
C.N. 80949

SUMMARY OF QUANTITIES

TYPICAL CROSS SECTION

BITUMINOUS SURFACING ITEMS GROUP 9

ITEM	QUANTITY	UNITS
BARRICADE, TYPE II	3,000.000	BDAY
BARRICADE, TYPE III	136.000	BDAY
TEMPORARY SIGN DAY	210.000	EACH
SIGN DAY	2,169.000	EACH
OVERLAY BROKEN LINES	590.000	STA
OVERLAY SOLID LINES	1,180.000	STA
PERMANENT PAVEMENT MARKING, PAINT	78,500.000	LF
FLAGGING	30.000	DAY
FURNISHING AND OPERATING PILOT VEHICLE	15.000	DAY
MOBILIZATION	1.000	LS
HYDRATED LIME/WARM MIX ASPHALT FOR STATE MAINTENANCE PATCHING	200.000	EACH
HYDRATED LIME/WARM MIX ASPHALT	6,730.000	EACH
ASPHALTIC CONCRETE FOR STATE MAINTENANCE PATCHING, TYPE SPR (FINE)	200.000	TON
ASPHALTIC CONCRETE, TYPE SPR (FINE)	6,430.000	TON
ASPHALTIC CONCRETE FOR PATCHING, TYPE SPR (FINE)	300.000	TON
PERFORMANCE GRADED BINDER (64-34) FOR STATE MAINTENANCE PATCHING	6.800	TON
PERFORMANCE GRADED BINDER (64-34)	228.820	TON
TACK COAT	11,790.000	GAL
FOG SEAL	6,460.000	GAL
RENTAL OF LOADER, FULLY OPERATED	50.000	HOUR
RENTAL OF MOTOR GRADER, FULLY OPERATED	50.000	HOUR
RENTAL OF DUMP TRUCK, FULLY OPERATED	50.000	HOUR
RENTAL OF SKID LOADER, FULLY OPERATED	50.000	HOUR
COLD MILLING, CLASS 3	294.849	STA
RAP INCENTIVE PAYMENT FOR STATE MAINTENANCE PATCHING	340.000	EACH
RAP INCENTIVE PAYMENT	11,441.000	EACH
ASPHALT PAVEMENT SMOOTHNESS TESTING I/D	1.000	LS



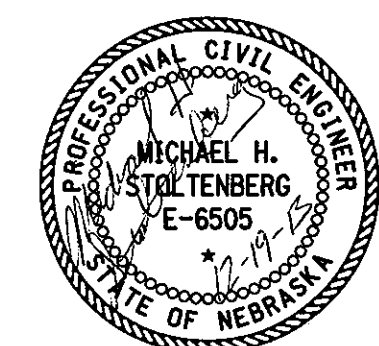
STATION	TO	STATION
1313+20.81	-	1615+48.56

EQUATION: STA 1513+53.44 BK = STA 1513+46.46 AH

BRIDGE AND APPROACH EXCEPTION: STA 1516+57.59 TO STA 1524+07.36

SURFACED SHOULDER W/CURB VARIOUS LOCATIONS LT. & RT. APPROX. 11,230 FT.

TYPES OF ASPHALTIC OIL TO BE USED
TACK COAT: SS-1, SS-1H, CSS-1, OR CSS-1H
FOG SEAL: SS-1, SS-1H
PERFORMANCE GRADED BINDER
AASHTO DESIGNATION M320



CONSTRUCTION DIVISION

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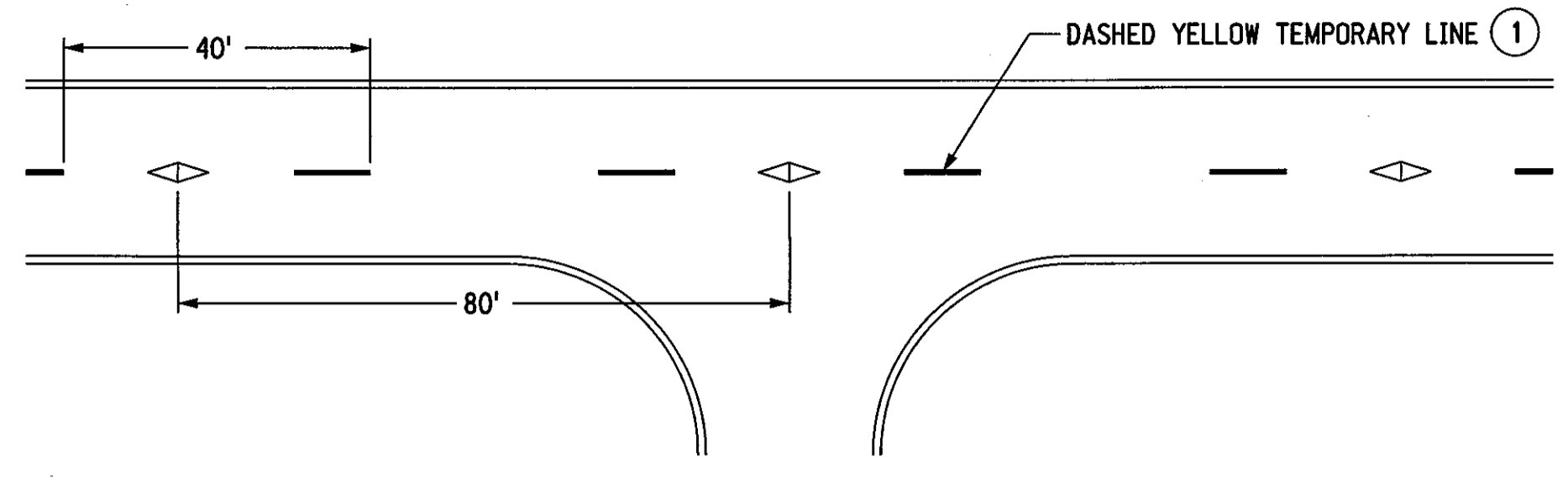
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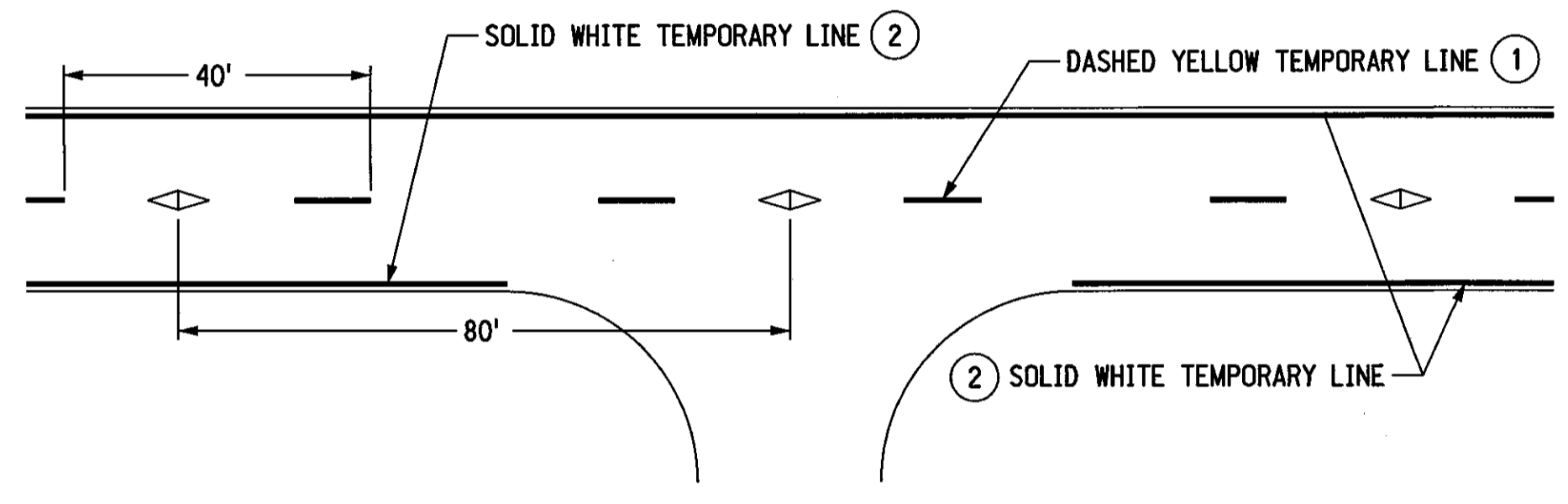
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2 LANE ROADWAYS

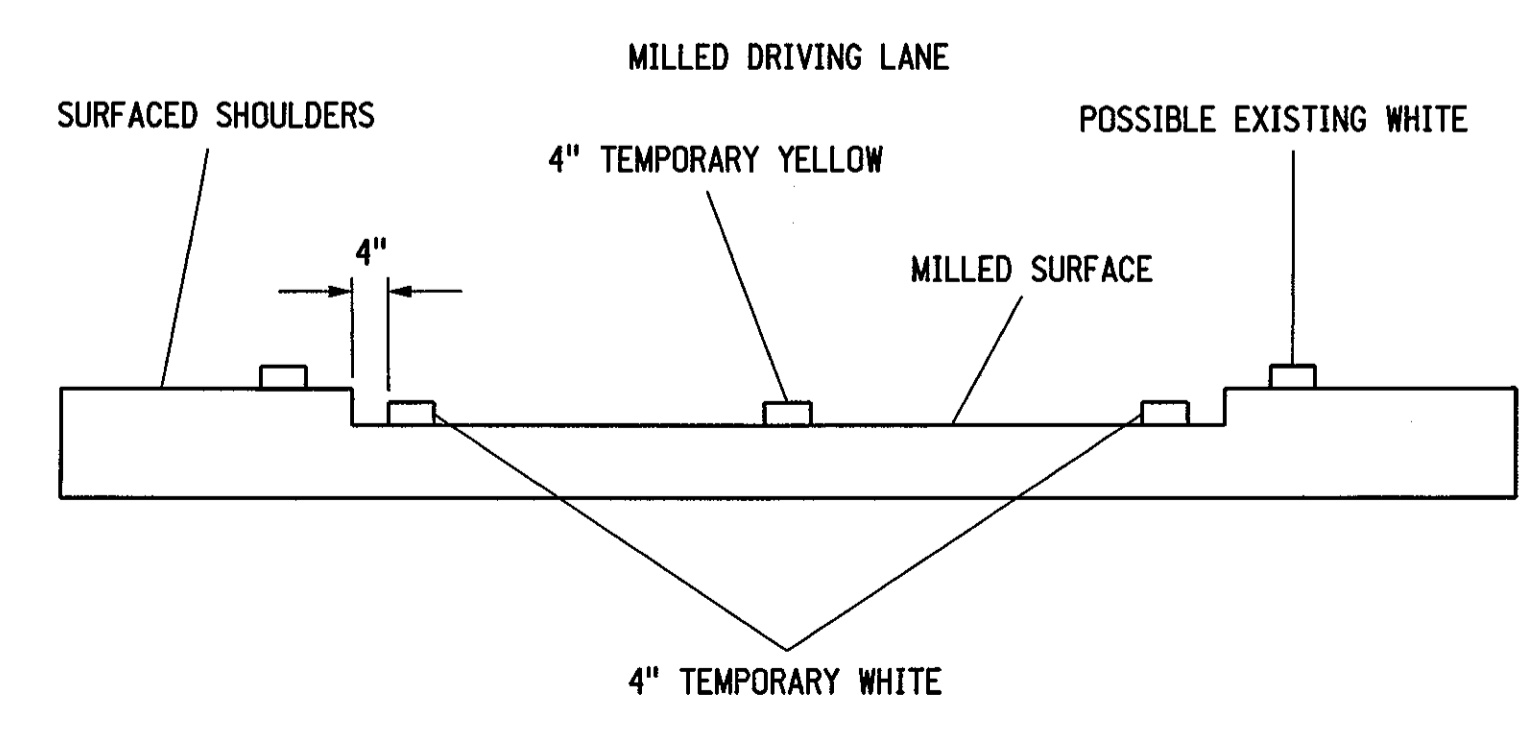
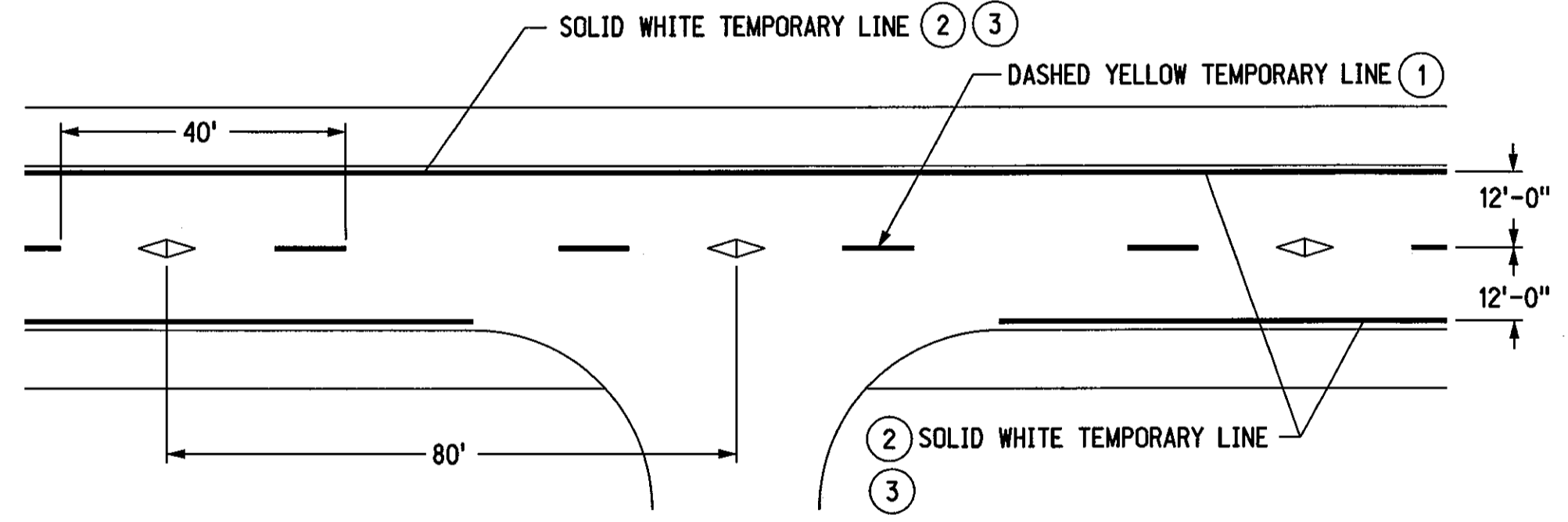
2 LANE WITH CURBS



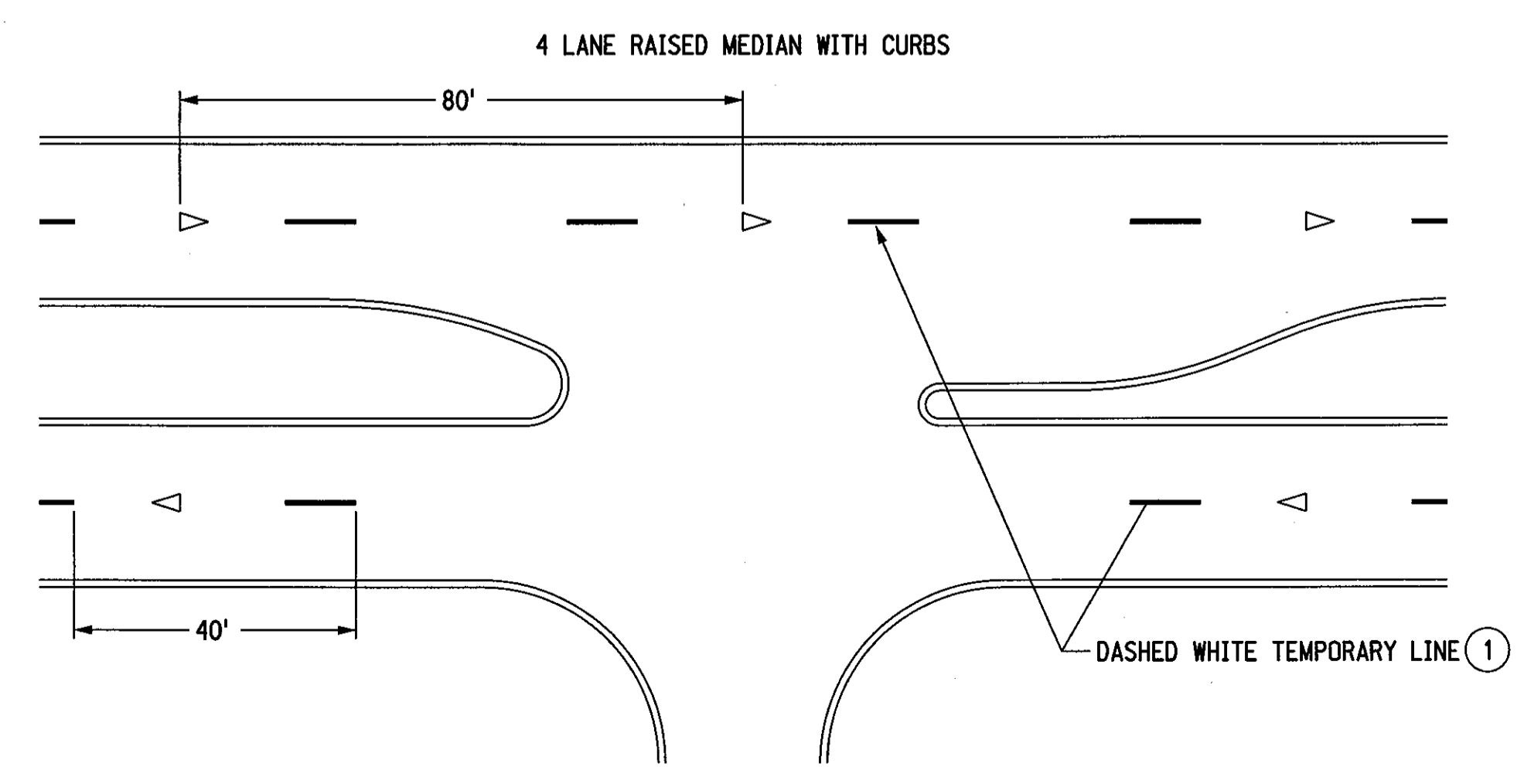
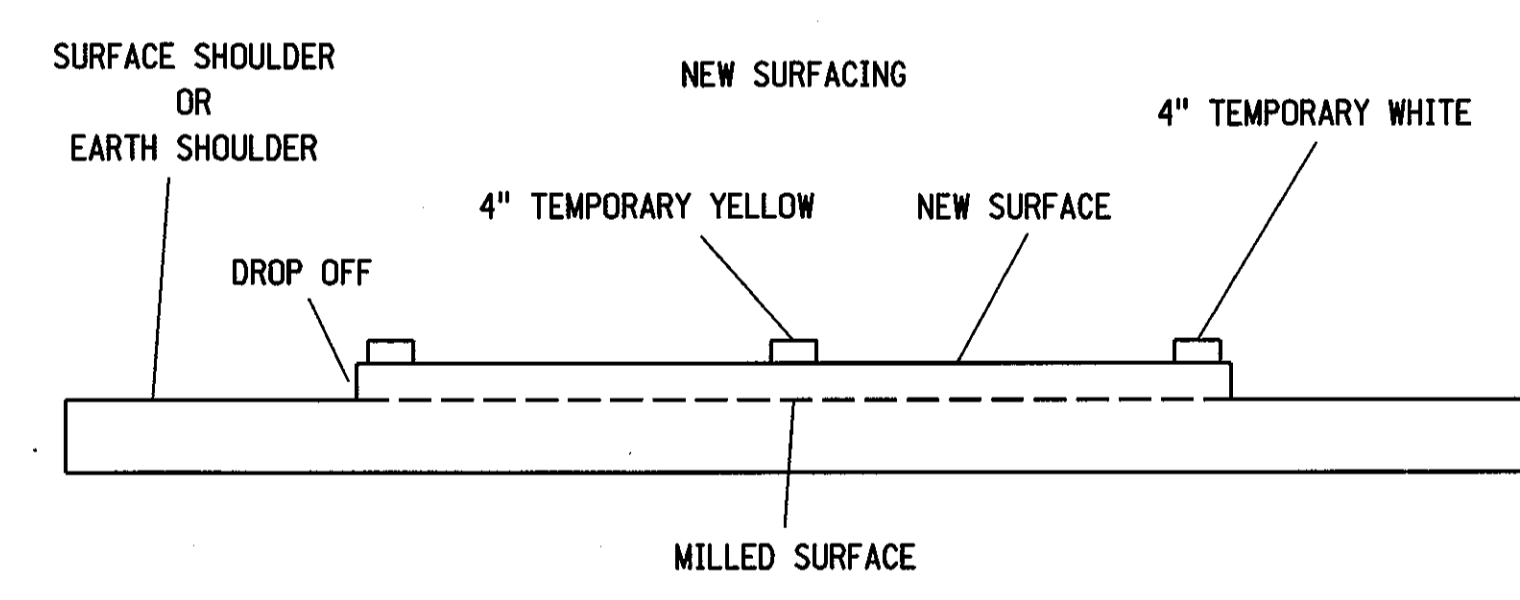
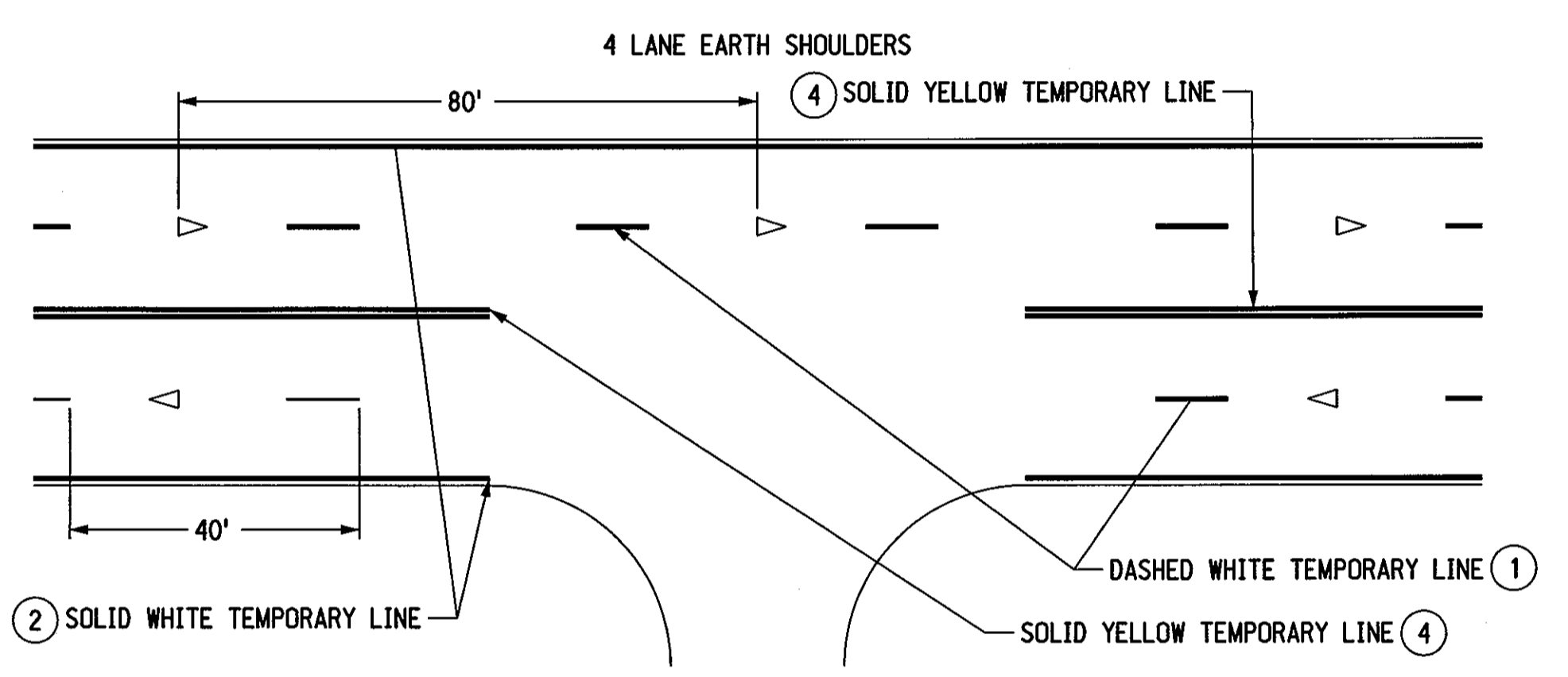
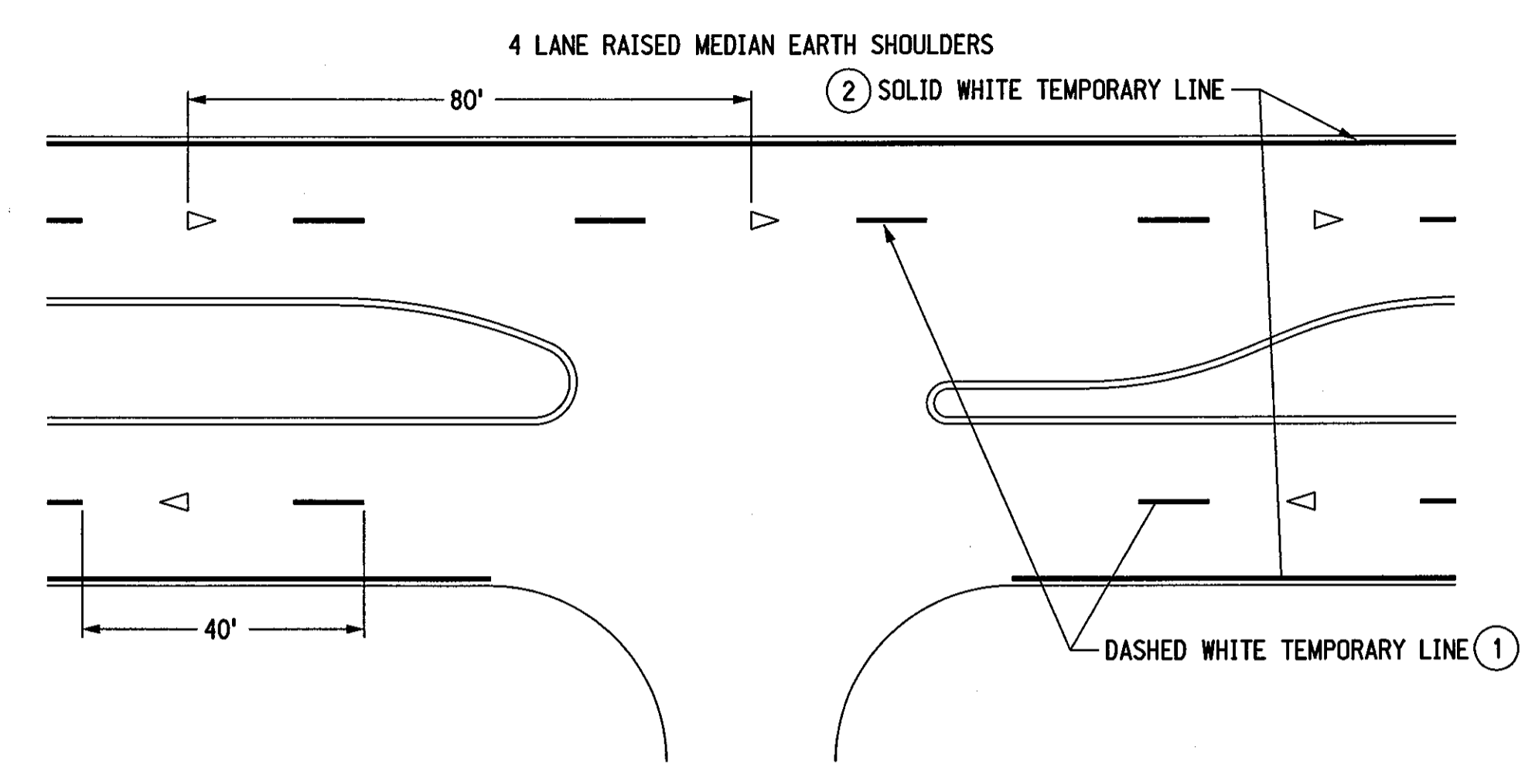
2 LANE EARTH SHOULDERS



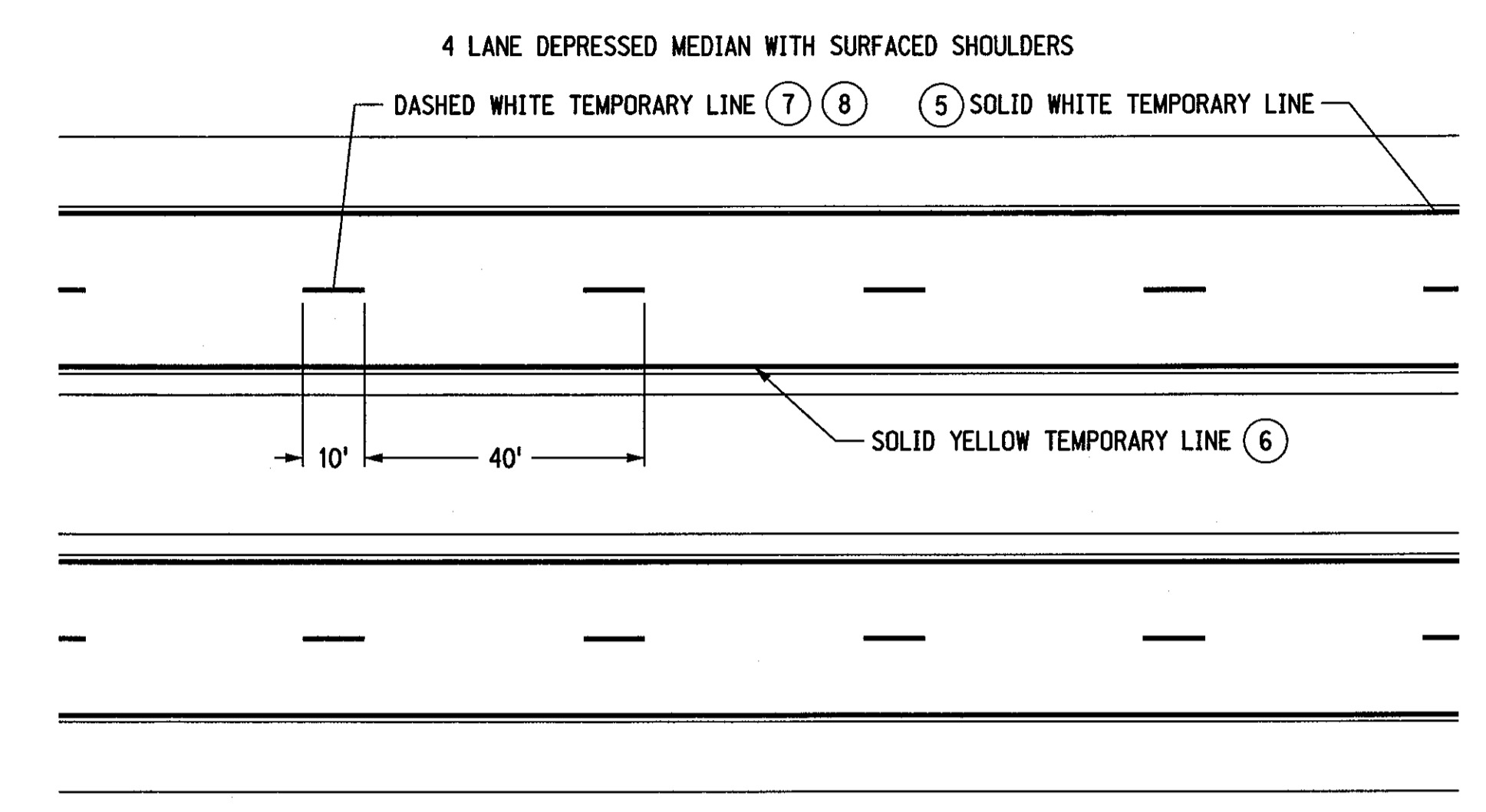
2 LANE SURFACED SHOULDERS



4 LANE ROADWAYS



FREEWAY/RURAL EXPRESSWAY



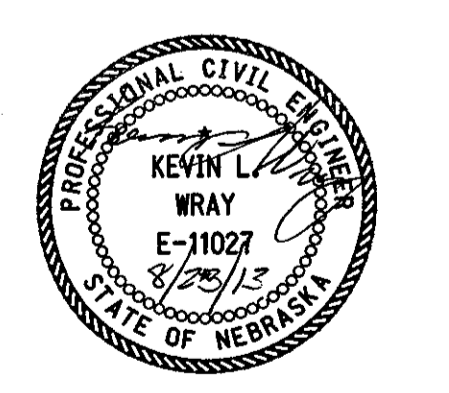
NOTES

- ① LOWER LAYERS: TEMPORARY DASHED LINE SHALL BE 4" X 10' PAINTED LINE AT 40' INTERVALS OR 4" X 4' TYPE I TAPE LINE AT 40' INTERVALS. TAPE OR PAINT WILL BE SUPPLEMENTED WITH AN OVERLAY MARKER EVERY 80 FEET.
 - OVERLAY MARKERS ARE NOT REQUIRED ON MILLED SURFACES, HYDRATED LIME SURFACES AND STABILIZED SURFACES.
- TOP LAYER: BROKEN LINE MARKINGS
 - INSTALL 4" X 4' TAPE AT 40' INTERVALS SUPPLEMENTED WITH AN OVERLAY MARKER EVERY 80 FEET.
 - OR USE NO TAPE, BUT INSTALL 2 RAISED PAVEMENT MARKERS SPACED 5' APART AT 40' INTERVALS.
- SOLID LINE MARKINGS
 - 4" WIDE PAINTED LINE OR PAVEMENT MARKING TAPE. RAISED PAVEMENT MARKERS MAY BE USED IN LIEU OF PAINT OR TAPE, INSTALLED AT 10' INTERVALS.
- ARMOR COATS
FOG SEALS: 2 OVERLAY MARKERS 5' APART, PER 40 FOOT CYCLE (NO PAINT OR TAPE).
- ② TEMPORARY SOLID LINE SHALL BE 4" WIDE PAINTED LINE.
- ③ EDGE LINE SHALL BE PLACED SO THAT THE OUTSIDE EDGE OF PAINT IS THE REQUIRED DISTANCE FROM CENTERLINE ON THE TOP LIFT
- ④ TEMPORARY CENTERLINE SHALL BE TWO 4" PAINTED LINES SPACED 4" APART, CENTERED ABOUT THE JOINT LINE.
- ⑤ EDGELINE SHALL BE 4" PAINTED LINE. PLACED TO THE LEFT OF JOINT LINE.
- ⑥ ALL LAYERS: EDGELINE SHALL BE PLACED 12'-0" FROM THE CENTER JOINT LINE. (RIGHT OF SHOULDER JOINT LINE WHEN APPLICABLE)
- ⑦ MILLED SURFACE OR LOWER LIFTS: THE TEMPORARY WHITE DASH LINE SHALL BE 4" X 10' MINIMUM PAINTED LINE AT 40' INTERVALS, PLACED TO THE LEFT OF THE JOINT LINE.
- ⑧ TOP LIFT: THE TEMPORARY WHITE DASH LINE SHALL BE 4" IN WIDTH X MINIMUM 8' TO MAXIMUM 10' LENGTH, PLACED 2" TO THE LEFT OF THE JOINT LINE. THE INTERVAL (CYCLE) SHALL BE 40' ± 2" TO ALLOW FOR THE PERMANENT PAVEMENT MARKING.
- ⑨ ALL TEMPORARY PAVEMENT MARKING THAT WILL BE COVERED BY PERMANENT PAVEMENT MARKING SHALL COMPLY WITH THE ALIGNMENT AND LOCATION REQUIREMENTS OF THE FINAL PAVEMENT MARKING MATERIAL. TEMPORARY PAVEMENT MARKINGS THAT ARE NOT COVERED BY THE PERMANENT MARKINGS SHALL BE REMOVED AT THE CONTRACTOR'S EXPENSE.

2 LANE ROADWAY REQUIRED LOCATION FOR PAINTED LINES, IF USED ON THE TOP LAYER		
ROADWAY WIDTH	SHOULDER TYPE	DISTANCE FROM 1/2 OF ROADWAY TO OUTSIDE EDGE OF PAVEMENT
LESS THAN 24'	SURFACED	EDGE OF LANE
LESS THAN 24'	EARTH	PAVEMENT EDGE
24'	EARTH	PAVEMENT EDGE
24'	SURFACED	12'-0" *
24' TO 28'	EARTH	12'-0" *

* SEE NOTE 3
CENTERLINE MARKING SHALL BE PLACED ON THE "SOUTH" SIDE OF THE CENTER JOINT ON EAST-WEST ROADS AND ON THE "EAST" SIDE OF THE CENTER JOINT ON NORTH-SOUTH ROADS

- LEGEND
- ◁ OVERLAY MARKER
 - ◁ BIDIRECTIONAL OVERLAY MARKER



NEBRASKA DEPARTMENT OF ROADS TRAFFIC ENGINEERING DIVISION

TYPICAL PAVEMENT MARKING			
DESIGNED	DV	TEMPORARY PAVEMENT MARKING PLAN	1/1
REVIEWED	MAN		
DATE DRAWN	8/06	TRAFFIC ENGINEER	DATE

TRAFFIC ENGINEERING DIVISION

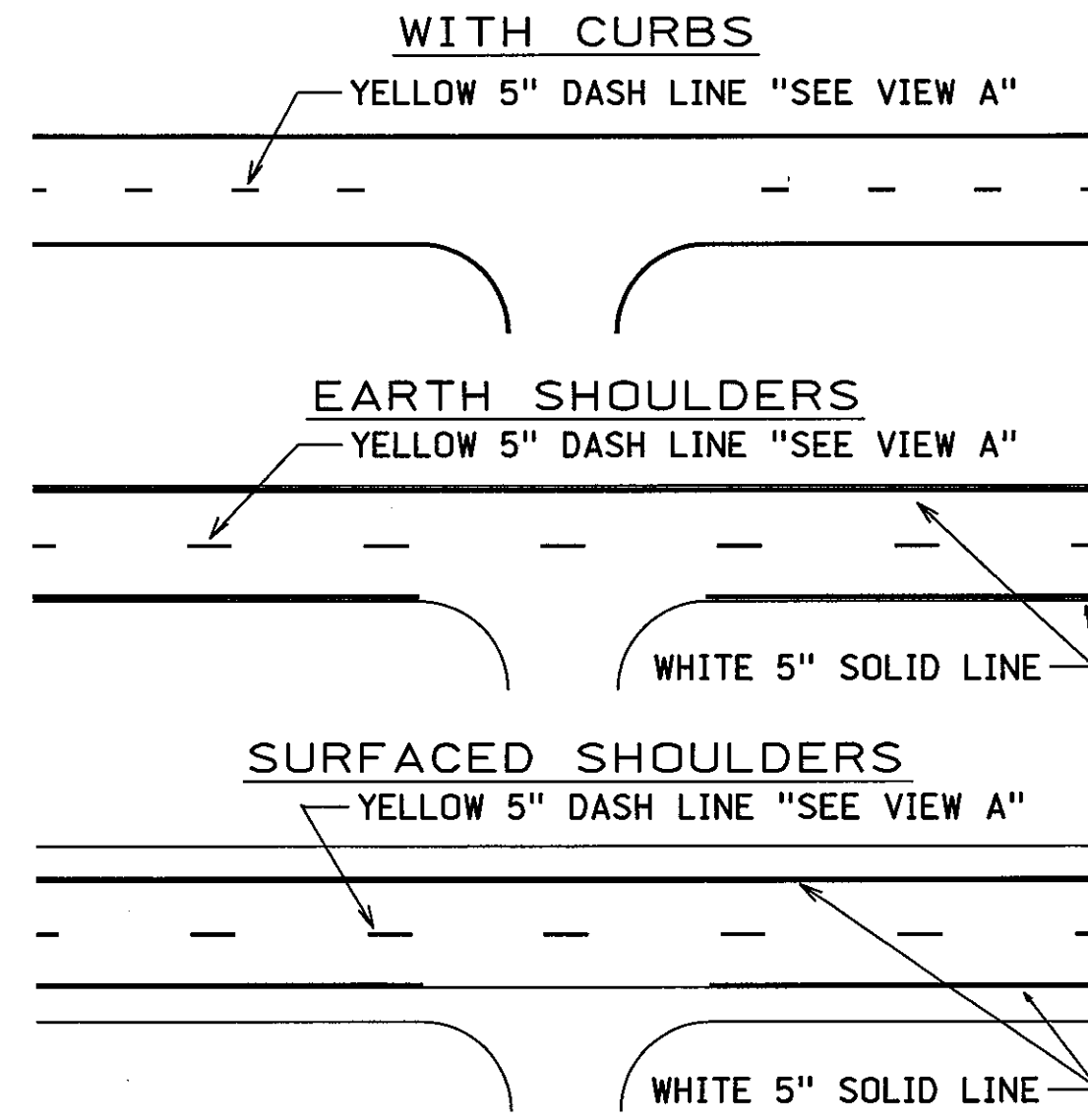
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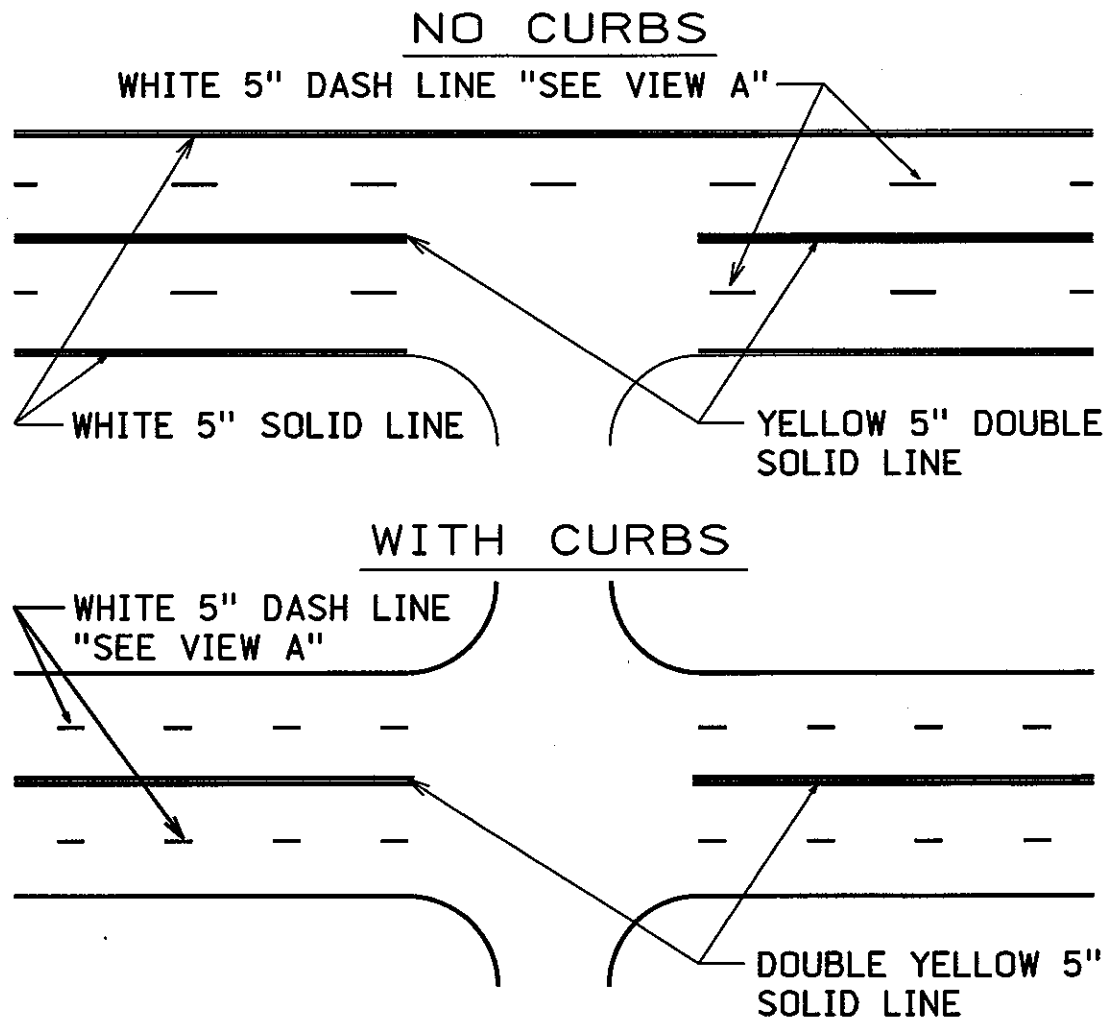
2 LANE ROADWAYS



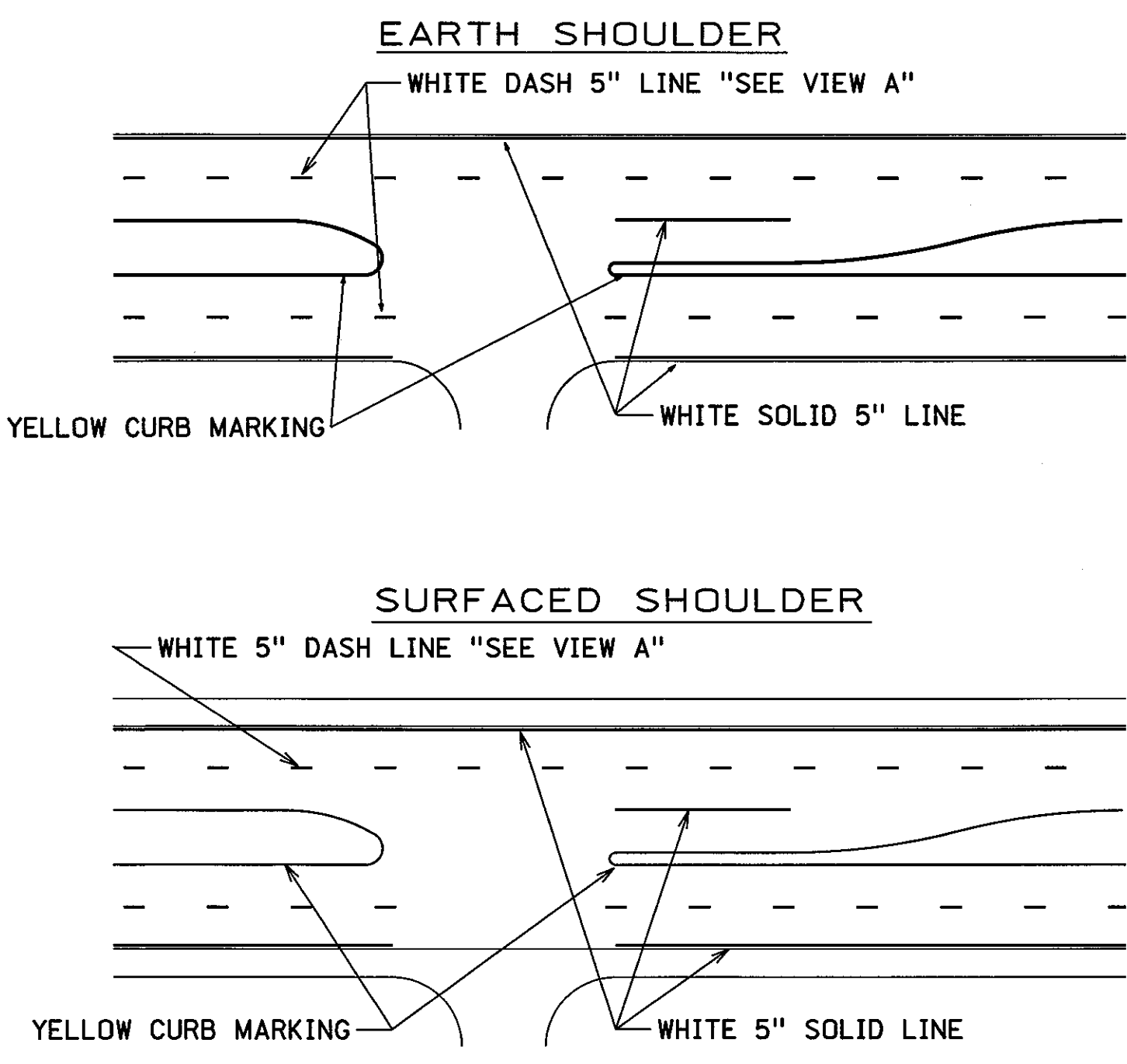
2-LANE ROADWAY REQUIRED LOCATION FOR EDGE LINES		
ROADWAY WIDTH	SHOULDER TYPE	DISTANCE FROM CENTERLINE OF ROADWAY TO OUTSIDE EDGE OF PAVEMENT EDGE LINE
LESS THAN 24 FT	SURFACED	12 FT 0 IN
LESS THAN 24 FT	EARTH	PAVEMENT EDGE
24 FT	EARTH	PAVEMENT EDGE
24 FT	SURFACED	12 FT 0 IN
GREATER THAN 24 FT	EARTH	12 FT 0 IN

CENTERLINE MARKING SHALL BE PLACED ON THE "SOUTH" SIDE OF THE CENTER JOINT ON EAST-WEST ROADS AND ON THE "EAST" SIDE OF THE CENTER JOINT ON NORTH-SOUTH ROADS

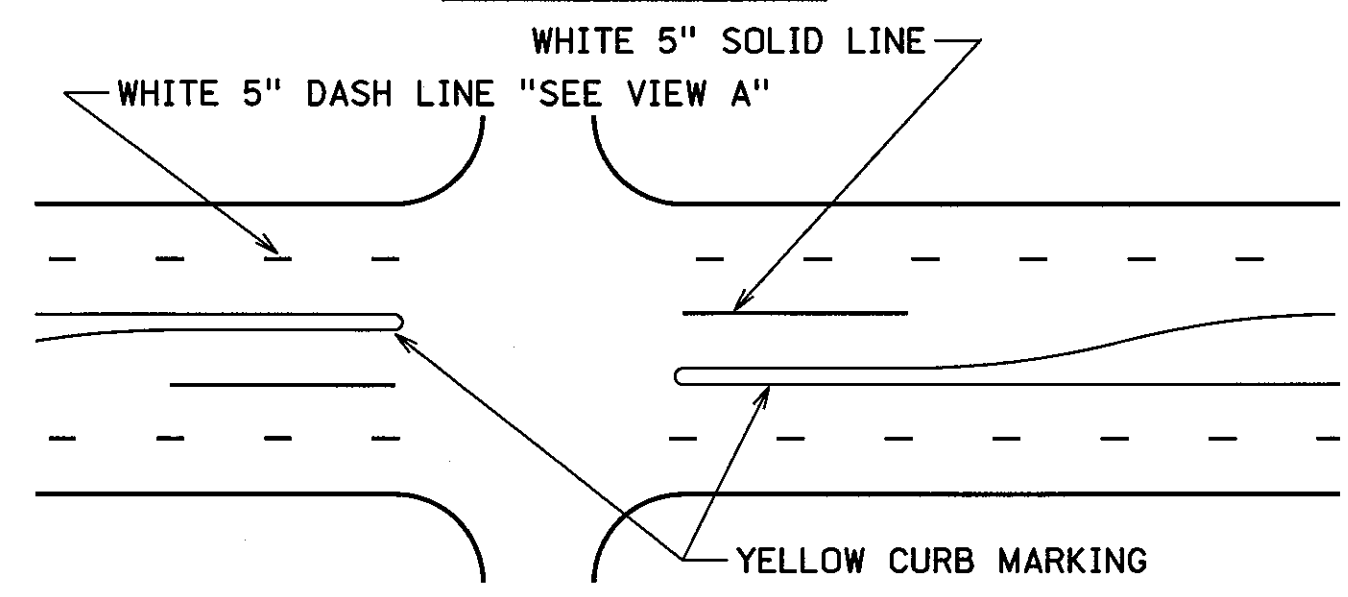
4 LANE ROADWAYS



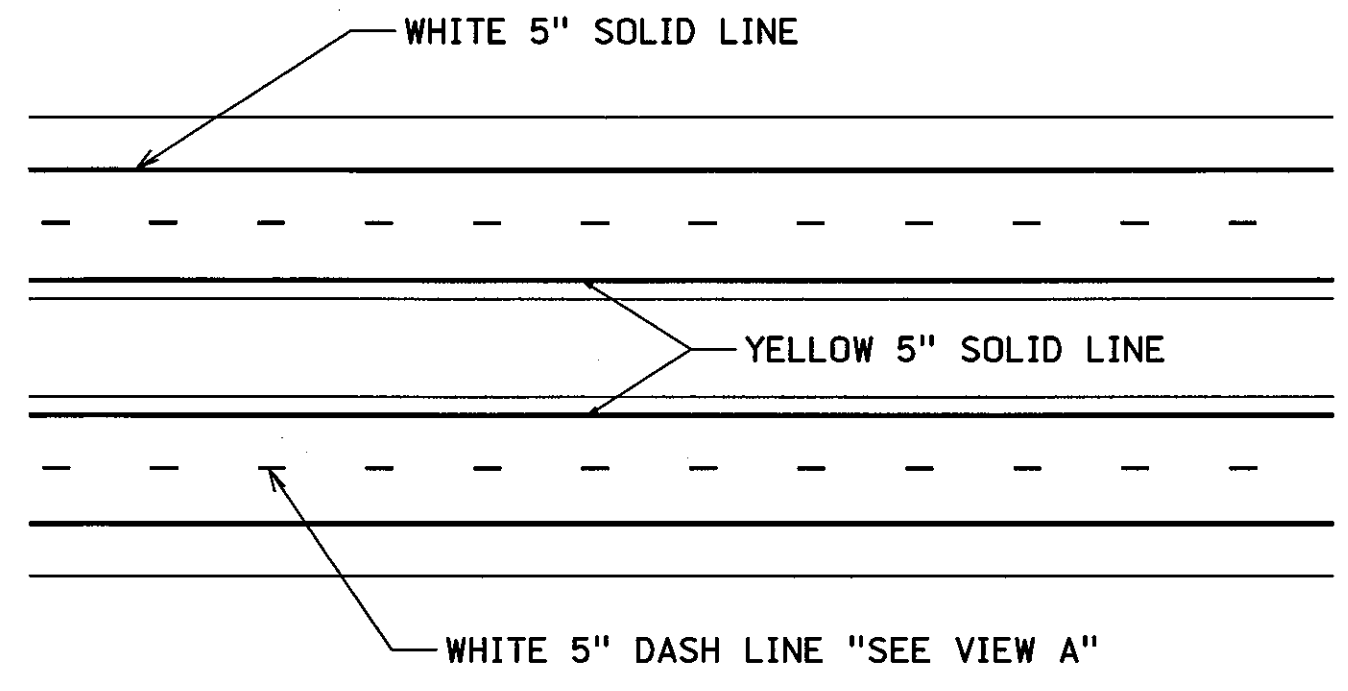
4 LANE DIVIDED ROADWAY



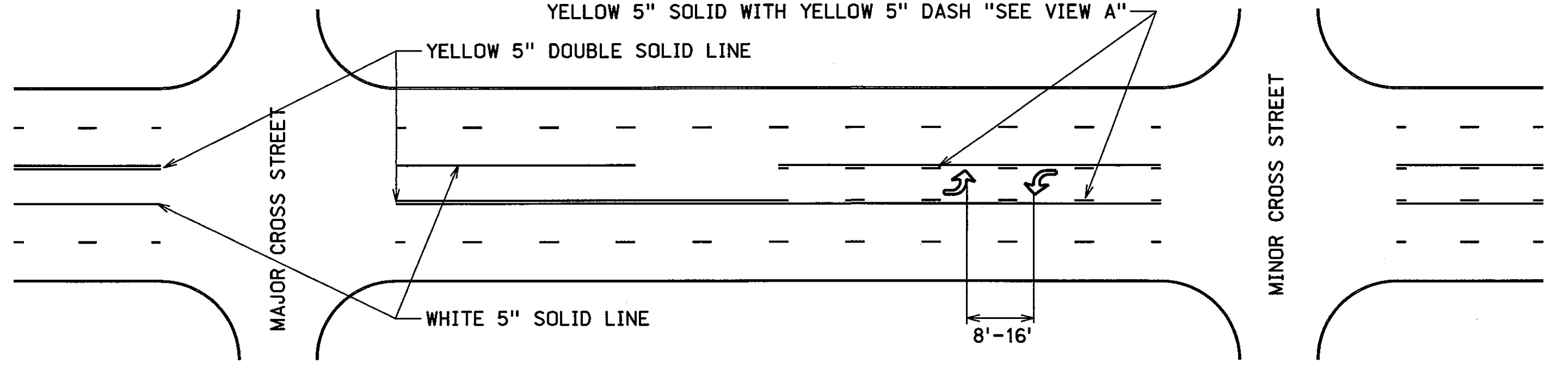
WITH CURBS



DEPRESSED MEDIAN



3 OR 5 LANE WITH COMMON LEFT TURN LANE

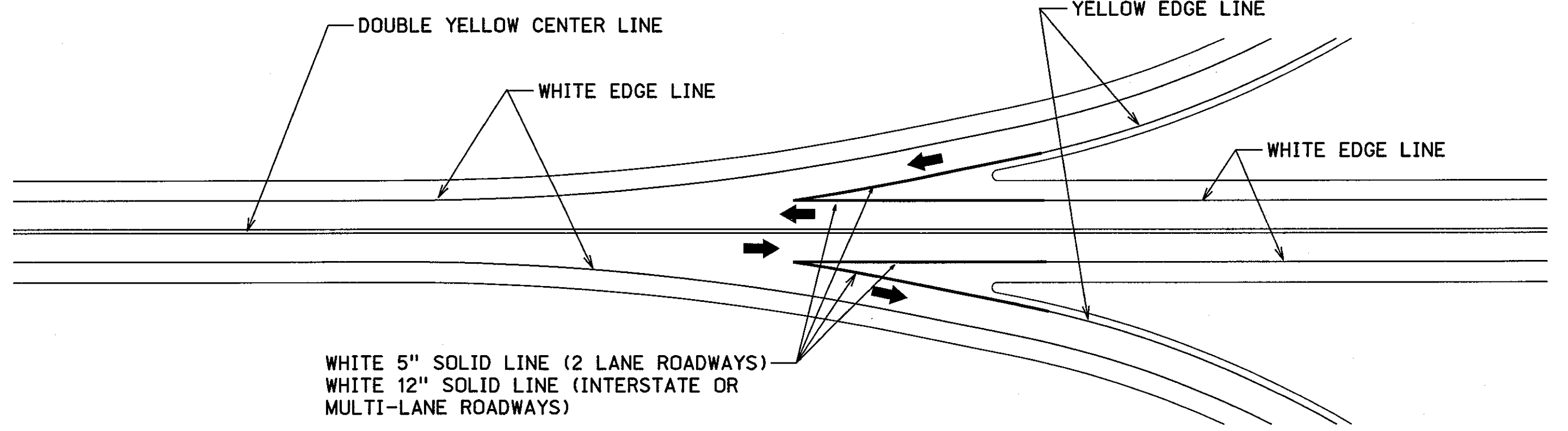


8'-16'

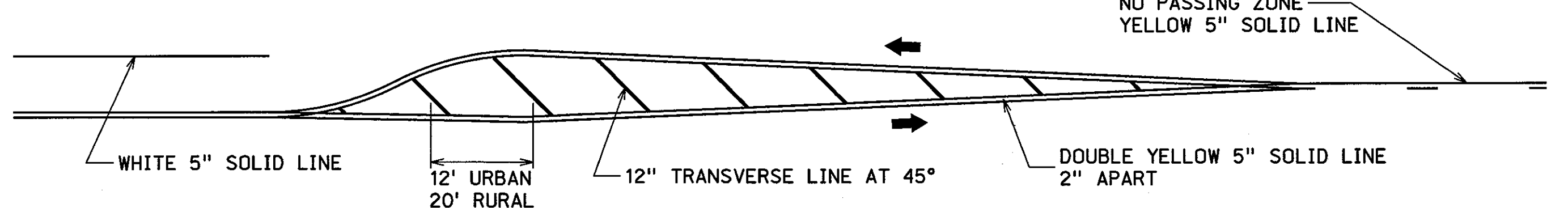
MINOR CROSS STREET

MAJOR CROSS STREET

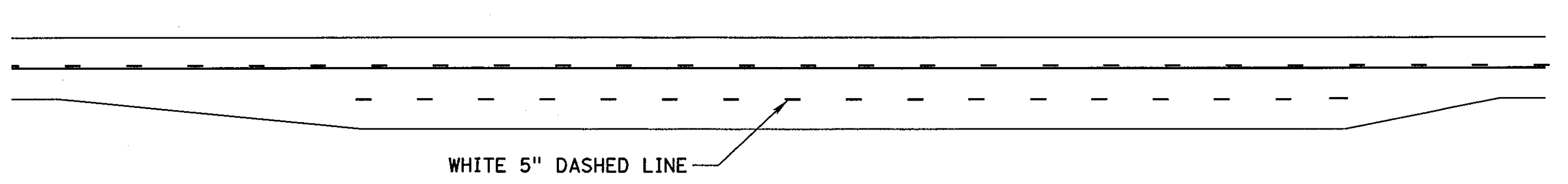
GORE MARKINGS (NON-FREEWAY)



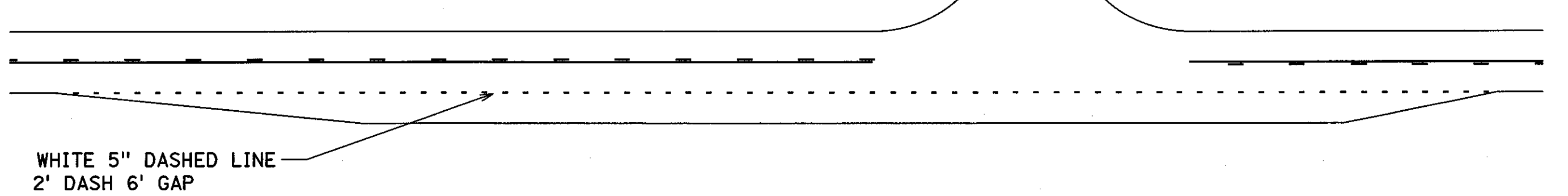
ISLAND MARKING



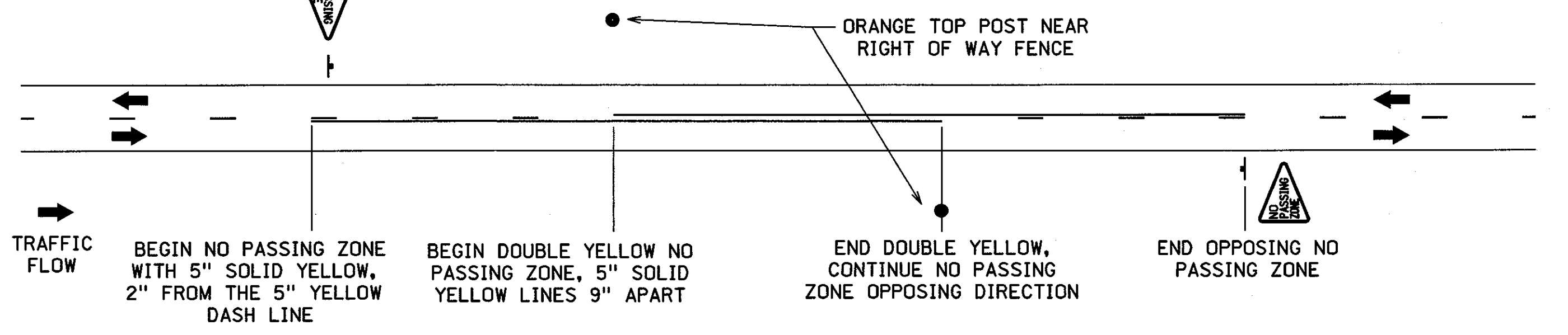
PASSING LANE MARKING



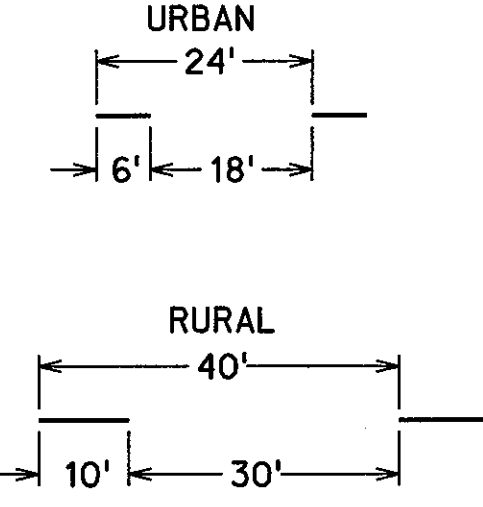
FLY-BY LANE MARKING



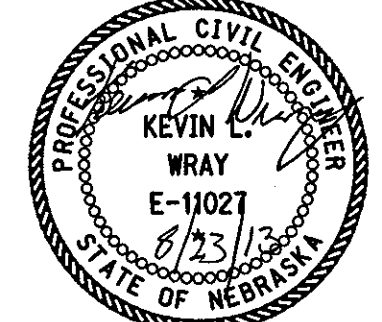
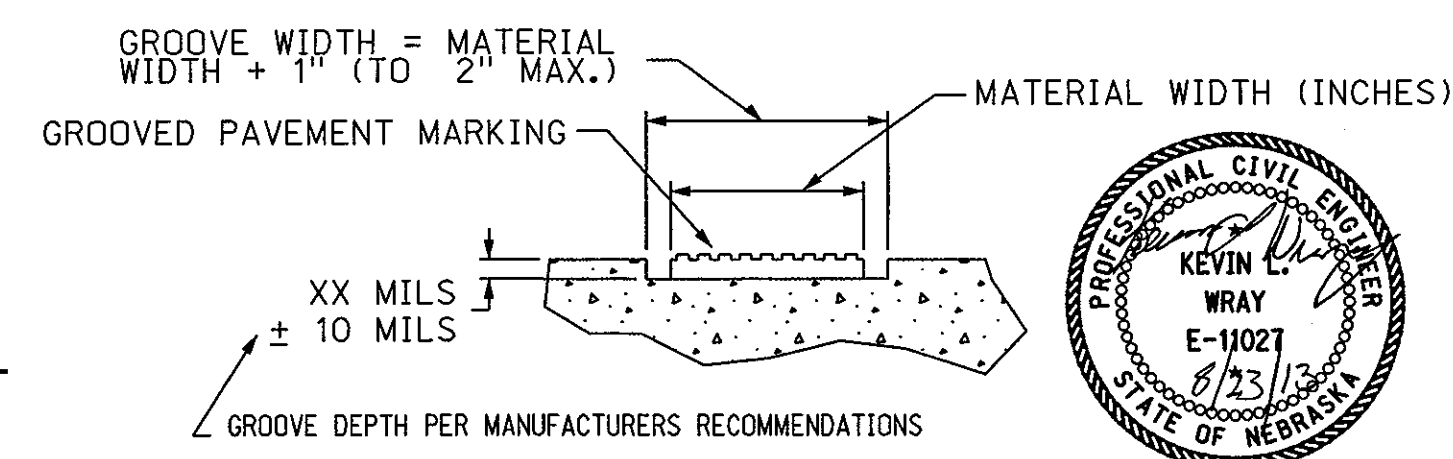
TYPICAL NO PASSING ZONE MARKINGS



VIEW A



PERMANENT PAVEMENT MARKINGS INSTALLED IN GROOVES

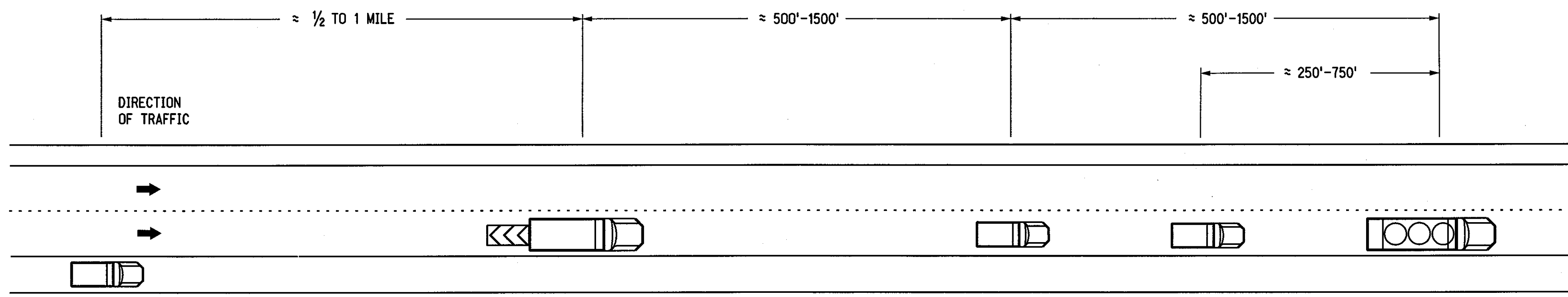
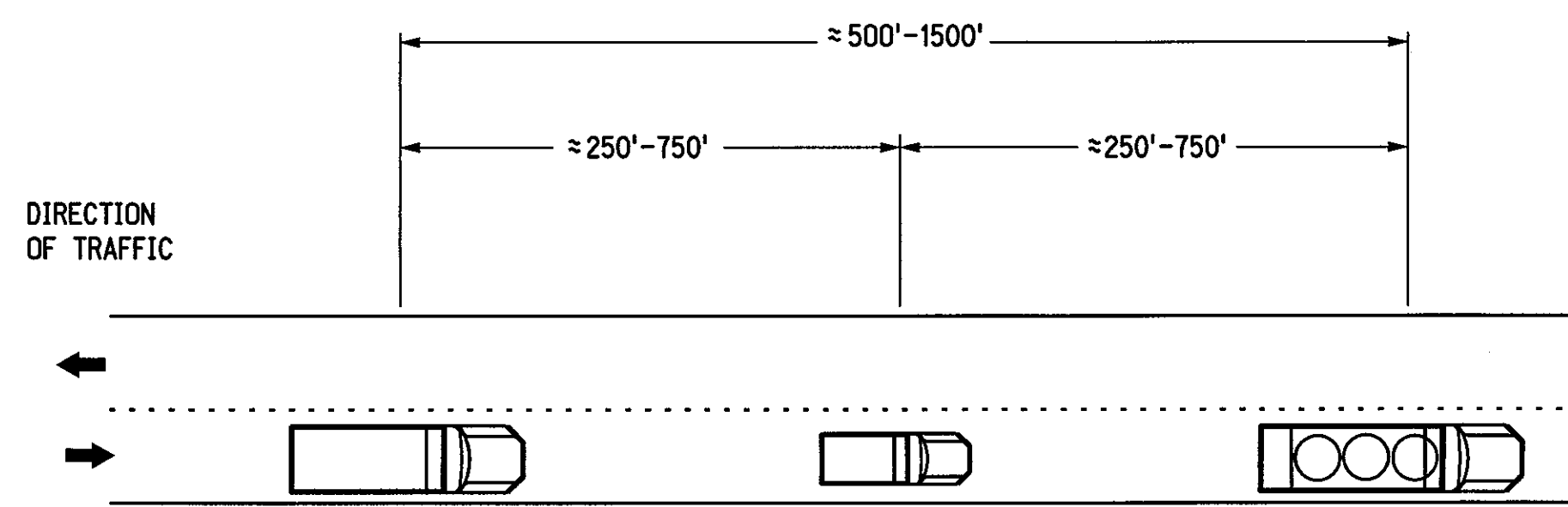


NEBRASKA DEPARTMENT OF ROADS			
TRAFFIC ENGINEERING DIVISION			
TYPICAL PAVEMENT MARKING PLAN			
DESIGNED	TJF	5" PAVEMENT MARKING	
REVIEWED			1/1
APPROVED	DATE DRAWN	TRAFFIC ENGINEER	DATE
	12/12		

SIGNING PLAN

STRIPING ON RURAL TWO-LANE TWO-WAY ROADS

STRIPING ON RURAL MULTI-LANE ROADWAY



REAR VEHICLE WITH 2 HIGH INTENSITY FLASHING LIGHTS MOUNTED ON THE REAR AND 2-360° BEACONS OR APPROVED MINI-BAR LIGHT (TMA OPTIONAL)

OPTIONAL VEHICLE WITH 2-360° BEACONS OR APPROVED MINI-BAR LIGHT

STRIPING VEHICLE WITH 4 HIGH INTENSITY FLASHING LIGHTS MOUNTED ON REAR AND 2-360° BEACONS OR APPROVED MINI-BAR LIGHT

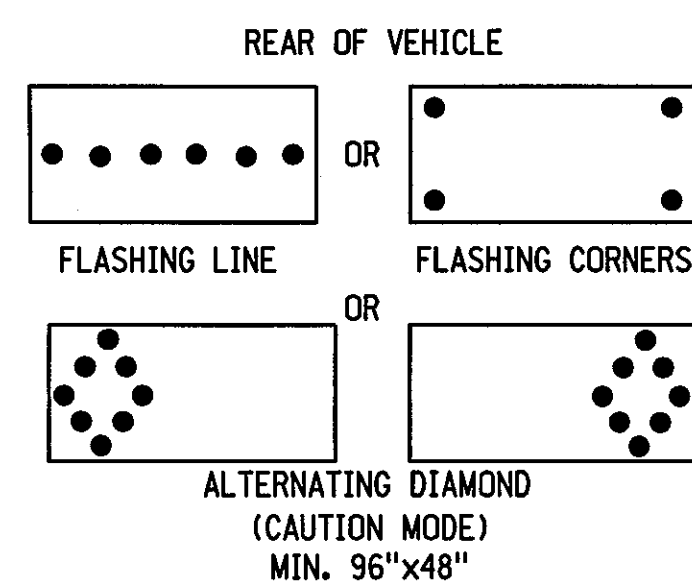
WARNING VEHICLE WITH 2 HIGH INTENSITY FLASHING LIGHTS MOUNTED ON REAR AND 2-360° BEACONS OR APPROVED MINI-BAR LIGHT

REAR VEHICLE W/TMA WITH 2 HIGH INTENSITY FLASHING LIGHTS MOUNTED ON THE REAR AND 2-360° BEACONS OR APPROVED MINI-BAR LIGHT

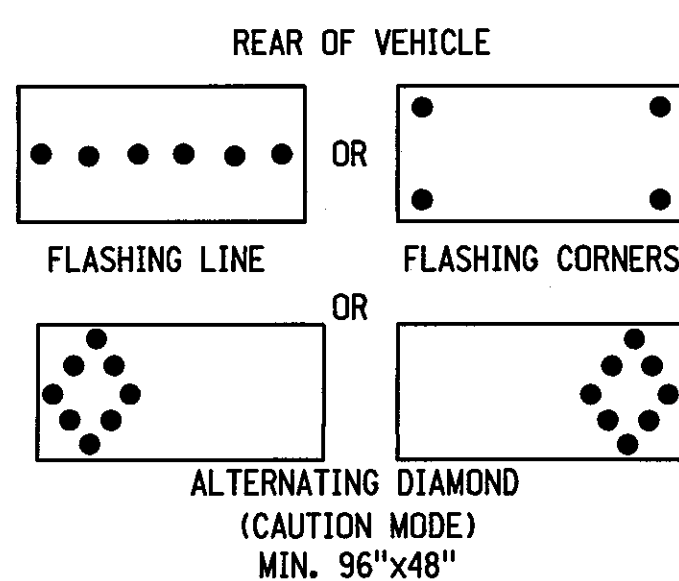
TRAILING VEHICLE WITH 2-360° BEACONS OR APPROVED MINI-BAR LIGHT AND OPTIONAL DRONE RADAR OR CB ALERT WARNING RADIO

OPTIONAL VEHICLE WITH 2-360° BEACONS OR APPROVED MINI-BAR LIGHT

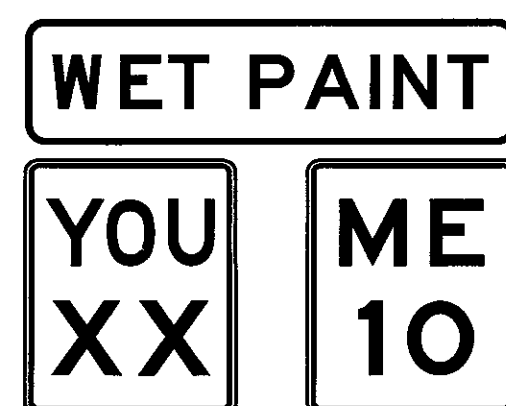
STRIPING VEHICLE WITH 4 HIGH INTENSITY FLASHING LIGHTS MOUNTED ON REAR AND 2-360° BEACONS OR APPROVED MINI-BAR LIGHT



SINGLE STROBE LIGHT ON FRONT OF STRIPER
REAR OF STRIPER ARROW PANEL



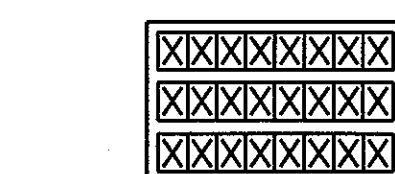
W41-8-54
54" X 34"



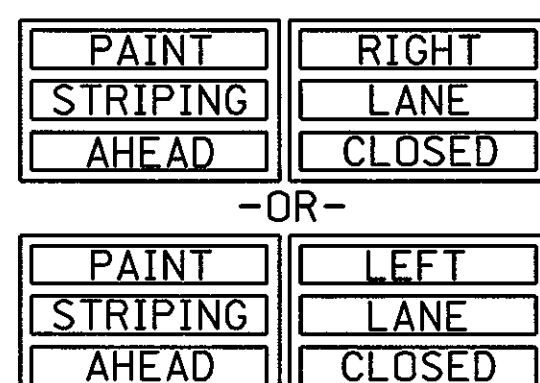
OPTIONAL SPEED DISPLAY UNITS



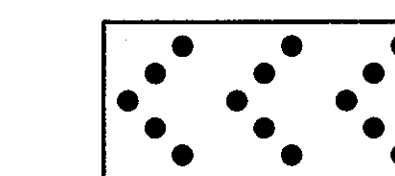
W41-8
SIZE OF SIGN TO BE DETERMINED BY CONSTRAINTS OF STRIPER



PORTABLE DYNAMIC MESSAGE SIGNS



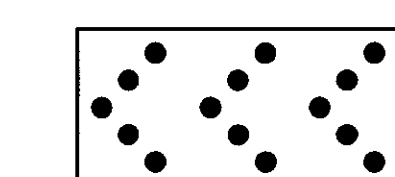
TWO MESSAGES (1.6 - 2.0 SECONDS PER MESSAGE)



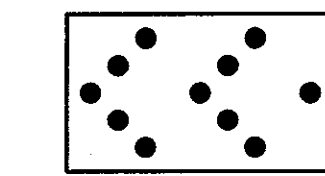
FLASHING ARROW PANEL ON REAR



W41-8-54
54" X 34"



OPTIONAL FLASHING ARROW PANEL



FLASHING ARROW PANEL ON REAR



W41-8
SIZE OF SIGN TO BE DETERMINED BY CONSTRAINTS OF STRIPER

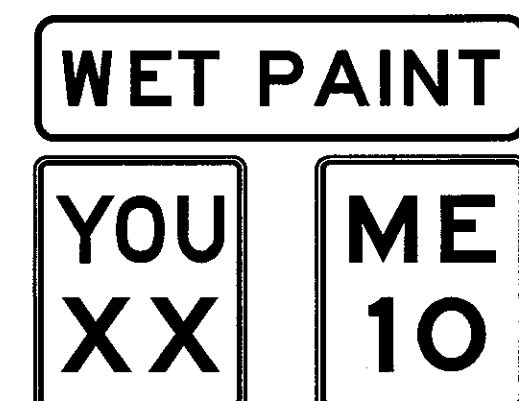
TRUCK MOUNTED ATTENUATOR SYSTEM:

- THE CONTACTOR SHALL FURNISH A FEDERALLY APPROVED TRUCK MOUNTED ATTENUATOR SYSTEM, MOUNTED ON A MINIMUM 16,000 POUND TRUCK. THE TRUCK SHALL BE EQUIPPED WITH 60" X 30" FLASHING ARROW PANEL, SECURELY MOUNTED ON THE TRUCK. THE TMA SYSTEM SHALL BE LOCATED IN THE FIELD AS REQUIRED BY THE MANUFACTURER. A COMPLETE SET OF REPLACEMENT MODULES SHALL BE AVAILABLE NEAR THE PROJECT SITE IN THE EVENT OF DAMAGE TO THE INSTALLED TMA. DAMAGED TMA'S SHALL BE REMOVED FROM THE ROADWAY AND PROJECT WORK STOPPED UNTIL REPAIRS TO THE UNIT HAVE BEEN COMPLETED.
- THE TRUCK MOUNTED ATTENUATOR SHALL BE AN NCHRP 350 OR MASH TEST LEVEL 3 APPROVED TMA FOR 100 km PER HOUR (60 MPH).
- THE TRUCK SHALL BE A 16,000 TO 35,000 POUND (GVW) VEHICLE AS REQUIRED BY THE TMA MANUFACTURER.
- THE FLASHING ARROW PANEL SHALL BE SECURELY MOUNTED AS HIGH AS PRACTICABLE ON THE VEHICLE. THE ARROW PANEL SHALL NOT COME LOOSE UPON IMPACT TO THE TMA.



W41-8-54
54" X 34"

OR



OPTIONAL SPEED DISPLAY UNITS

RURAL MULTI-LANE NOTES:

- WHEN WORKING ON INSIDE (LEFT) LANES VEHICLES SHALL MOVE TO SIMILAR POSITIONS IN THAT LANE.
- WARNING VEHICLE WILL REMAIN ON RIGHT SHOULDER WHEN AN 8' OR WIDER PAVED INSIDE (LEFT) SHOULDER DOES NOT EXIST.
- REAR VEHICLE WITH TMA SHALL NOT BE SUPPLY VEHICLE UNLESS PAINT IS UNLOADED.

GENERAL NOTES:

REAR VEHICLE SHALL BE PLACED IN ADVANCE OF HORIZONTAL OR VERTICAL CURVES TO PROVIDE ADVANCE WARNING FOR WORK OPERATIONS HIDDEN BY CURVES.

VEHICLE SPACING MAY VARY DEPENDING ON RATE OF APPLICATION, SPEED, AND DRYING TIME.

WHEN OPTIONAL CB ALERT WARNING RADIOS ARE USED THE TRANSMITTER MUST REMAIN WITH ONE OF THE VEHICLES IN THE STRIPING TRAIN.

TRAFFIC ENGINEERING DIVISION

Computer: DRTRAFFIC20

User: dor23056

Date: 22-AUG-2013 16:14

File: wetpaint r1.dgn
Scale: 1:100

RURAL TWO-LANE NOTES:

- CAUTION MODE ON STRIPING UNIT AND REAR VEHICLE SHALL BE ALTERNATING DIAMOND OR THE FLASHING 4 CORNER LIGHTS IF THE DIAMOND MODE IS NOT AVAILABLE.

NEBRASKA DEPARTMENT OF ROADS TRAFFIC ENGINEERING DIVISION

PAVEMENT MARKING PLAN

DESIGNED	TJF	VEHICLE SIGNING FOR PAINT STRIPING		1/1
REVIEWED				
APPROVED		DATE DRAWN	TRAFFIC ENGINEER	DATE
		12/12		

