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**STATE OF NEBRASKA
DEPARTMENT OF ROADS
PLANS FOR CONSTRUCTION
AYR SOUTHEAST
ADAMS COUNTY**

PROJECT NO.	SHEET NO.
STPE-2175(9)	1
▲ CONTROL NO. 41952	
▲ CONTROL NO.	
■ CONTROL NO.	

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

THE WORK ON THIS PROJECT CONSISTS OF GROUPS

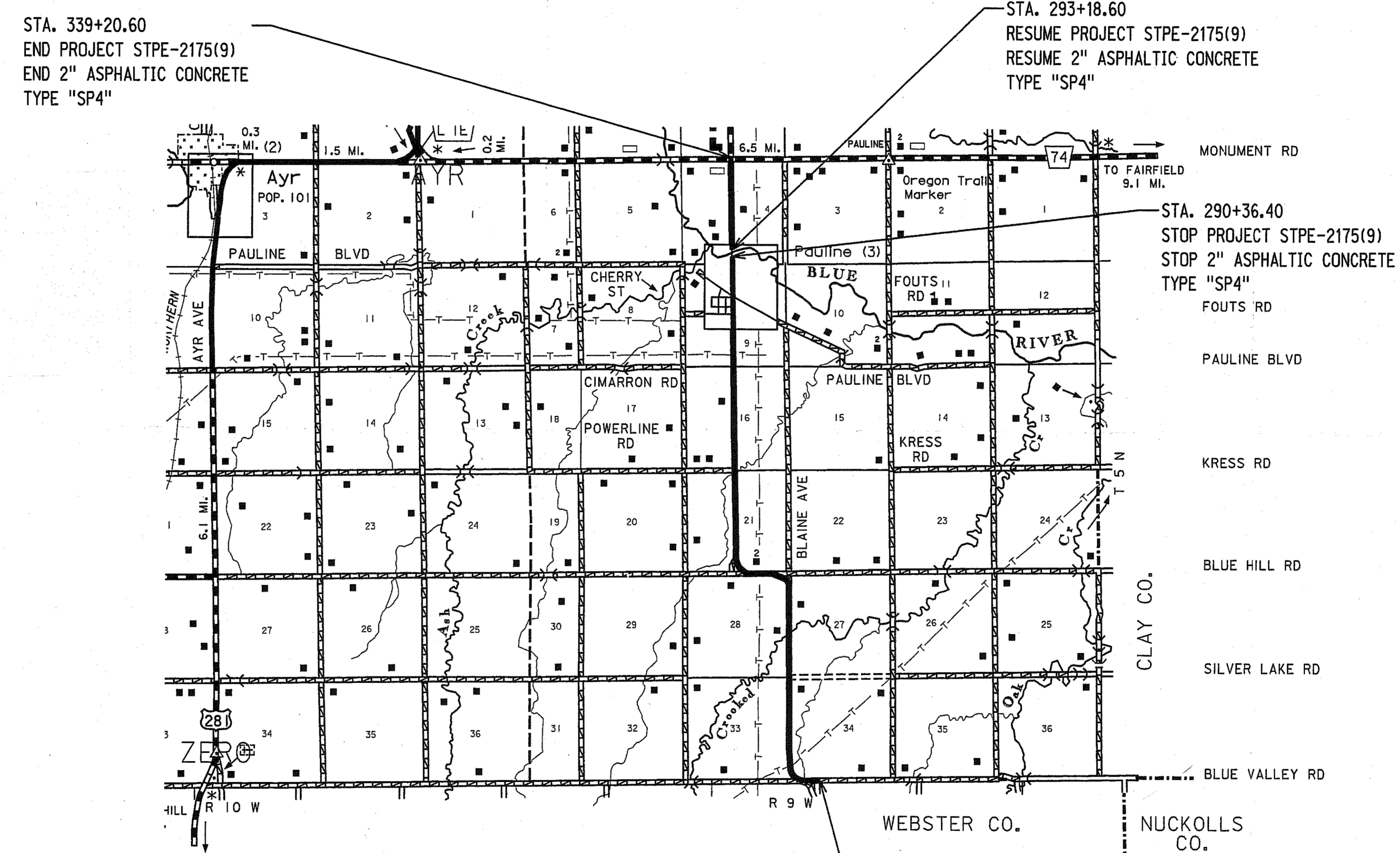
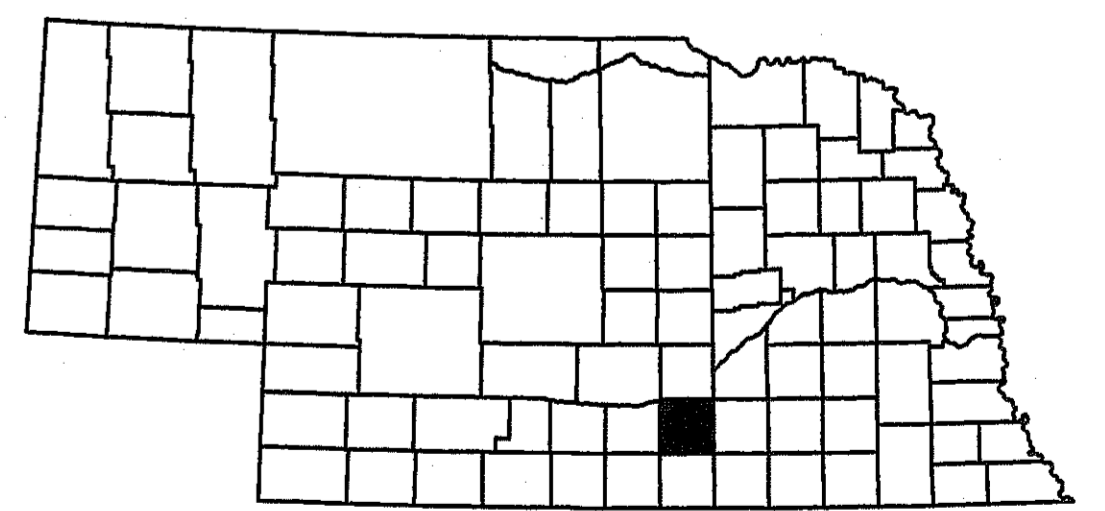
9-BITUMINOUS & 10-GENERAL

▲ GROUPS 9 & 10	ARE INCLUDED
IN THE LETTING OF	JULY 22, 2010
▲ GROUPS	ARE INCLUDED
IN THE LETTING OF	
■ GROUPS	ARE INCLUDED
IN THE LETTING OF	

DESIGN DESIGNATION

YEAR:	2010	2030
ADT:	830	950
DHV:	95	105
T=	10 %	
D=		
DESIGN NO.	RC1	
N.F.C.	RURAL MAJOR COLLECTOR	

Plans by:
**Mainelli
Wagner &
Associates, Inc.**



MEETS OR EXCEEDS MINIMUM DESIGN STANDARDS OF THE BOARD OF PUBLIC ROADS CLASSIFICATION AND STANDARDS. EXCEPT FOR AN APPROVED RELAXATION OF STANDARDS.

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	

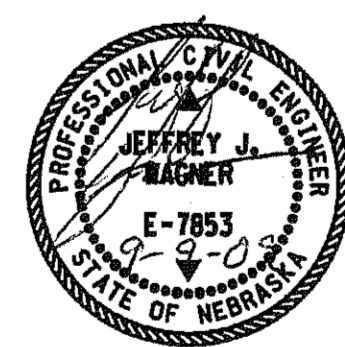
R.O.W. LEGEND

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. TO REFERENCE POST NO.

EXCEPTIONS: FROM STA. TO STA.

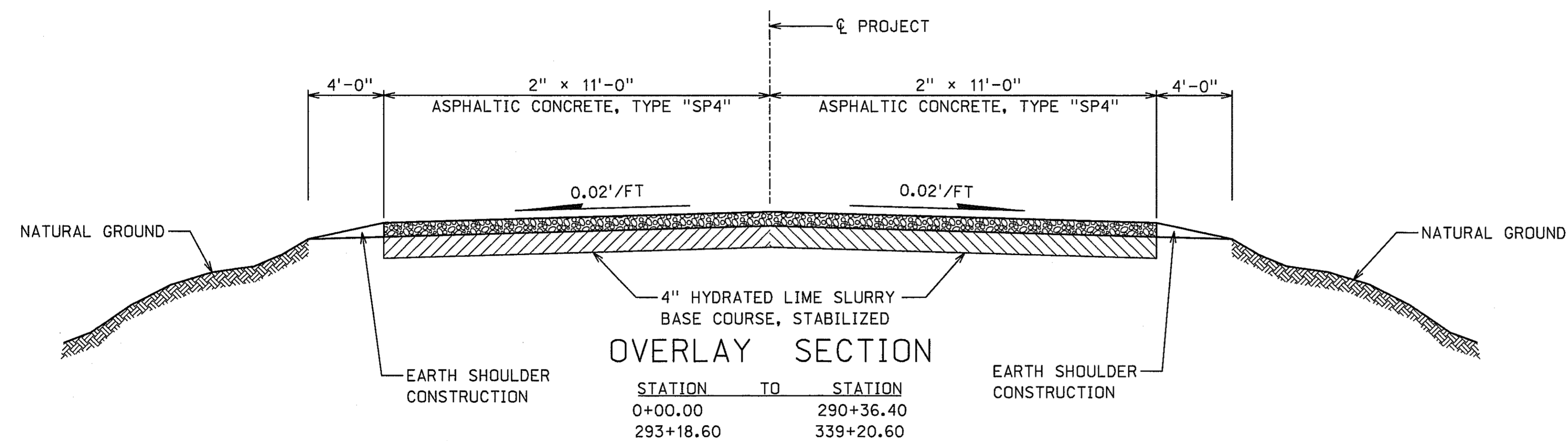
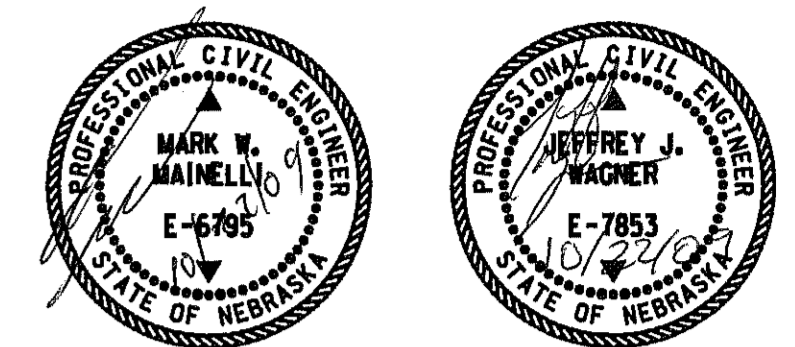
TOTAL NET LENGTH OF PROJECT: 33,638.40 FEET 6.371 MILES



ADAMS COUNTY

APPROVED: *Larry Woodman* 9-15-09 DATE
CHAIRMAN OF BOARD

TYPICAL CROSS SECTION OF IMPROVEMENT



THE CONTRACTOR SHALL FURNISH THE COHESIVE MATERIAL REQUIRED TO CONSTRUCT THE EARTH PORTION OF THE SHOULDER. THE MATERIAL WILL BE FURNISHED FROM SOURCES OTHER THAN ROAD RIGHT OF WAY.

AS INDICATED BY THE TYPICAL SECTION APPROXIMATELY 3,740 CU. YDS. OF EMBANKMENT WILL BE REQUIRED TO CONSTRUCT THE EARTH PORTION OF THE SHOULDER.

ASPHALTIC CONCRETE FOR PATCHING MAY BE ANY OF THE TYPES SHOWN IN THE SUMMARY OF QUANTITIES.

THE LOCATIONS OF ALL AERIAL AND UNDERGROUND UTILITY FACILITIES MAY NOT BE INDICATED IN THESE PLANS. UNDERGROUND UTILITIES, WHETHER INDICATED OR NOT WILL BE LOCATED AND FLAGGED BY THE UTILITIES AT THE REQUEST OF THE CONTRACTOR.

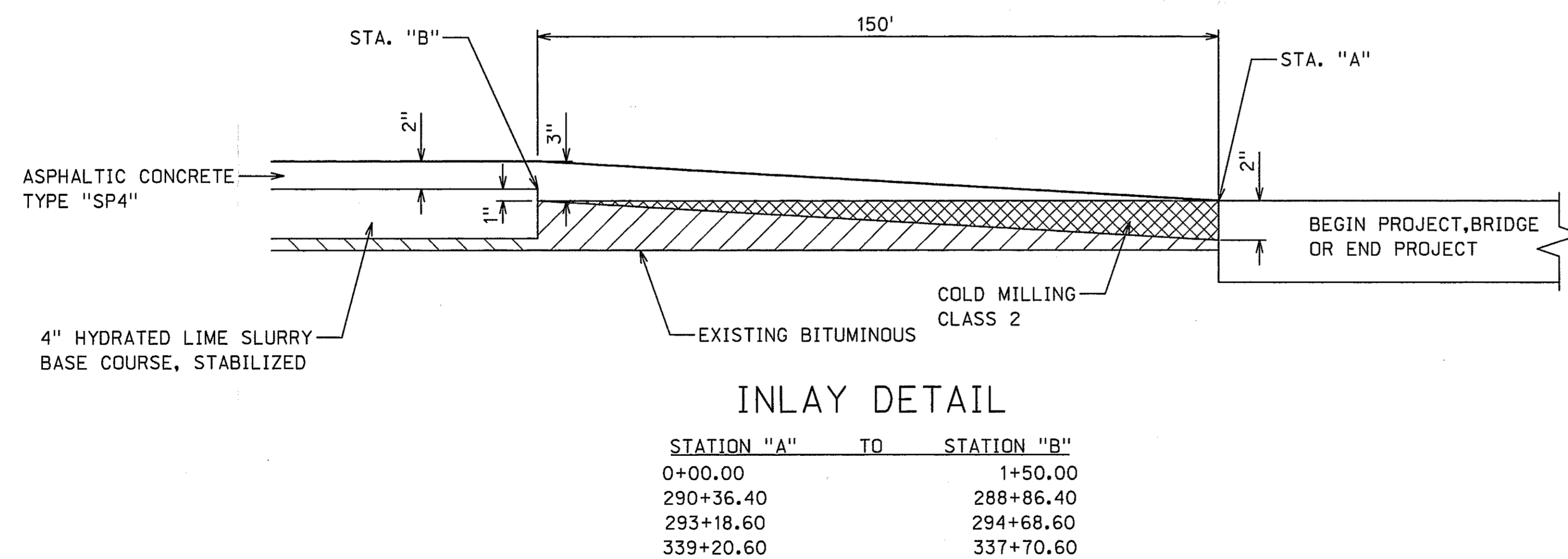
NO EXCAVATION WILL BE PERMITTED IN THE AREA OF THE UNDERGROUND UTILITY FACILITIES UNTIL ALL SUCH FACILITIES HAVE BEEN LOCATED AND IDENTIFIED TO THE SATISFACTION OF ALL PARTIES. THE EXCAVATION MUST BE ACCOMPLISHED WITH EXTREME CARE IN ORDER TO AVOID ANY POSSIBILITY OF DAMAGE TO THE UTILITY FACILITY.

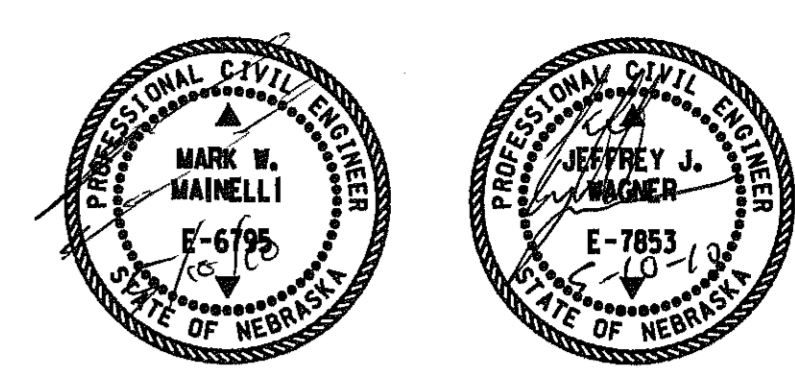
UPON COMPLETION OF THE SHOULDERING OPERATIONS PERMANENT SEEDING OF THE DISTURBED AREAS CREATED BY THE SHOULDERING OPERATIONS WILL BE PERFORMED BY THE CONTRACTOR AS DIRECTED BY THE PROJECT MANAGER.

ALL SIGNING AND PAVEMENT MARKING DURING CONSTRUCTION SHALL BE DONE BY THE CONTRACTOR IN CONFORMANCE WITH THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

WHEN THE CONTRACTOR HAS COMPLETED THEIR OPERATIONS, THE CONTRACTOR SHALL COMPLETE PERMANENT PAVEMENT MARKINGS.

PERMANENT SIGNING WILL BECOME THE COUNTY'S RESPONSIBILITY.

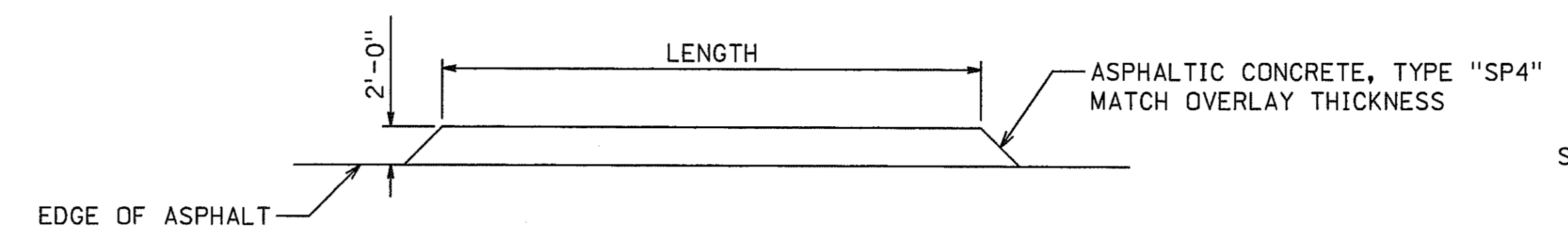




COMPACTION REQUIREMENTS
CLASS III
(SEE SPECIFICATIONS)

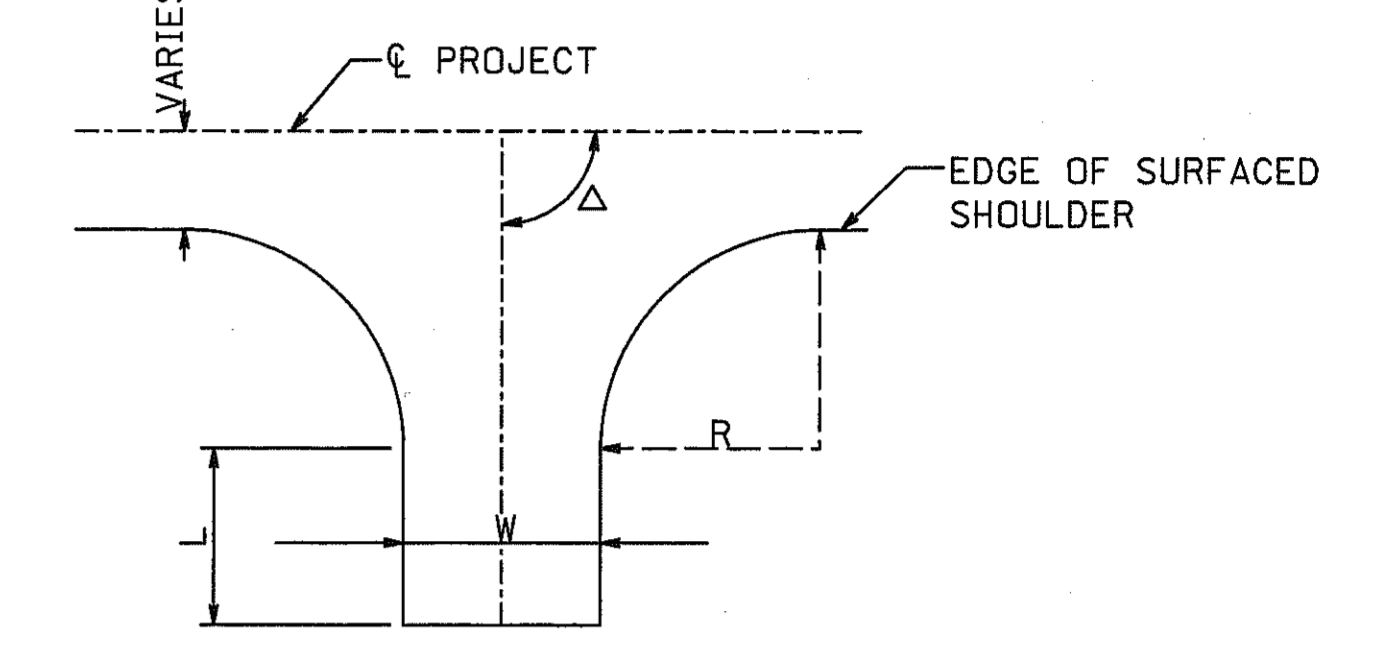
	Soil Type	Depth Below Finish Subgrade	Percent Density	Moisture Requirement	
				Min.	Max.
Embankment/Roadway Grading, including driveways, to receive concrete pavement.	Silt-Clay	Upper 3 Feet at Depths Greater than 3 Feet	98 Min.	Opt. -3%	Opt. +2%
	Granular	All Depths	96 Min.	Opt. -3%	Opt. +2%
Embankment/Roadway Grading, including driveways, to receive bituminous pavement.	Silt-Clay	Upper 3 Feet at Depths Greater than 3 Feet	100 Min.	Opt. -2%	Opt. +1%
	Granular	All Depths	95 Min.	Opt. -3%	Opt. +2%
Embankment/Roadway Grading not to be Surfaced	All	All Depths	95 Min.	Opt. -3%	Opt. +2%
Subgrade Preparation, Shoulder Subgrade Preparation (Concrete Pavement)	Silt-Clay	The upper 6" Subgrade Soil	98 Min.	Opt. -3%	Opt. +2%
	Granular	The upper 6" Subgrade Soil	100 Min.	Opt. -2%	Opt. +1%
Subgrade Preparation, Shoulder Subgrade Preparation (Bituminous Pavement)	Silt-Clay	The upper 6" Subgrade Soil	100 Min.	Opt. -2%	Opt. +1%
	Granular	The upper 6" Subgrade Soil	100 Min.	Opt. -2%	Opt. +1%
Embankment of Driveways not Surfaced.	All	All Depths	Class I	(See Specifications)	
Bituminous Pavement Patching	All	Underlying Material	100 Min.	(See Specifications)	
Foundation Course/ Subgrade Stabilization	---	---	100 Min.	(See Specifications)	

SUMMARY OF QUANTITIES AND LOCATIONS OF ASPHALTIC CONCRETE LUGS.



STATION	SIDE	LENGTH	DEPTH	VOLUME CU. FT.	TONS
24+87.9	Lt.	40.00'	3"	21	
44+13.7	Lt.	40.00'	3"	21	
79+69.2	Lt.	40.00'	3"	21	
83+71.1	Rt.	40.00'	3"	21	
83+95.3	Lt.	40.00'	3"	21	
96+57.8	Lt.	40.00'	3"	21	
97+70.3	Rt.	40.00'	3"	21	
98+95.0	Lt.	40.00'	3"	21	
116+33.9	Rt.	40.00'	3"	21	
117+84.8	Lt.	40.00'	3"	21	
124+59.0	Rt.	40.00'	3"	21	
154+56.0	Rt.	40.00'	3"	21	
167+94.6	Lt.	40.00'	3"	21	
167+94.6	Rt.	40.00'	3"	21	
184+49.5	Rt.	40.00'	3"	21	
194+17.1	Rt.	40.00'	3"	21	
207+40.5	Rt.	40.00'	3"	21	
213+80.2	Rt.	40.00'	3"	21	
225+62.3	Lt.	40.00'	3"	21	
230+14.1	Rt.	40.00'	3"	21	
234+05.5	Lt.	40.00'	3"	21	
234+64.6	Rt.	40.00'	3"	21	
246+62.1	Lt.	40.00'	3"	21	
259+23.6	Rt.	40.00'	3"	21	
265+95.5	Lt.	40.00'	3"	21	
267+86.4	Rt.	128.00'	3"	65	
272+34.3	Lt.	40.00'	3"	21	
285+55.7	Rt.	40.00'	3"	21	
288+30.7	Lt.	40.00'	3"	21	
326+09.6	Lt.	40.00'	3"	21	
TOTAL				674	49

SUMMARY OF QUANTITIES AND LOCATIONS OF SURFACED DRIVEWAYS



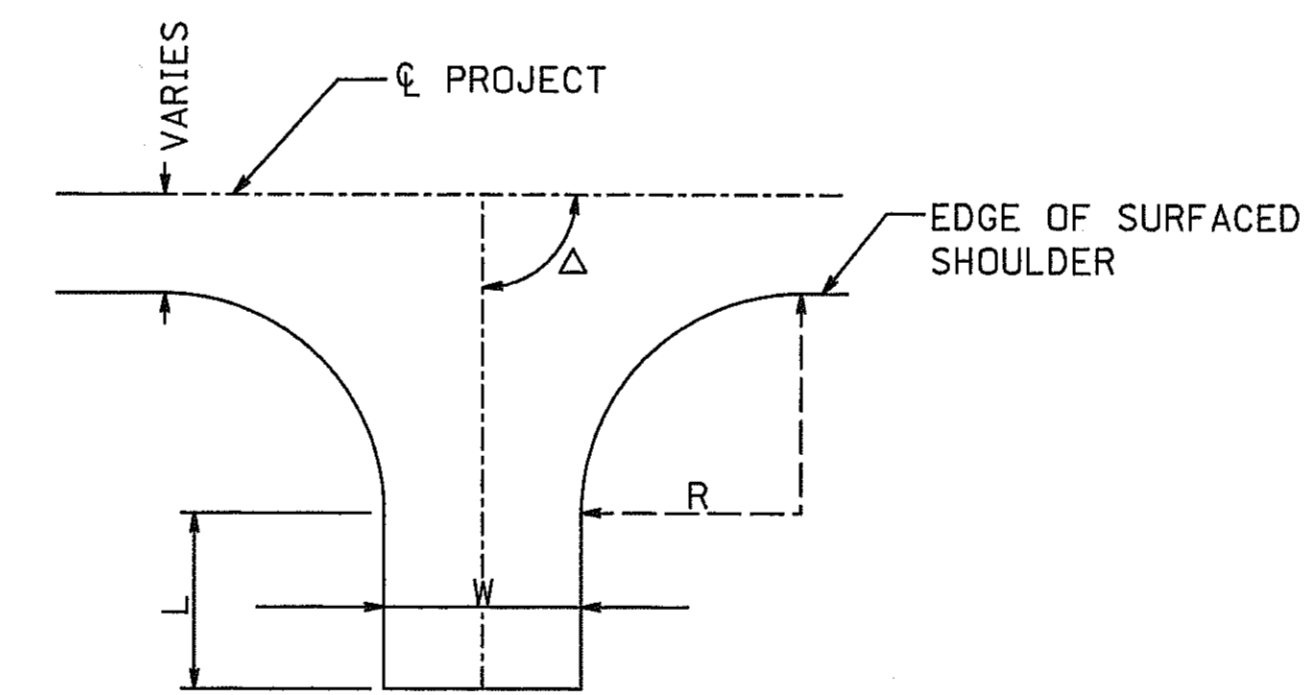
3" ASPHALTIC CONCRETE, TYPE "SP4" ON EXISTING BITUMINOUS SURFACE

STATION	SIDE	R FEET	W FEET	L FEET	Δ DEGREE	AREA SQ. YDS.	VOLUME CU. FT.	TONS
52+81.17	Rt.	20	12	15.0'	90	66	74	5
81+12.9	Lt.	20	22	14.0'	90	102	115	8
94+08.8	Rt.	30	22	12.0'	90	146	164	12
100+09.8	Lt.	20	18	11.0'	90	81	91	7
119+81.6	Rt.	20	18	8.0'	90	75	84	6
213+64.8	Lt.	30	18	0.0'	90	103	116	8
262+03.7	Lt.	20	10	17.0'	90	60	68	5
262+41.1	Lt.	10	12	17.0'	90	41	46	3
264+96.1	Lt.	10	18	23.0'	90	71	80	6
266+58.5	Lt.	14	12	22.0'	90	57	65	5
276+62.7	Lt.	20	10	21.0'	90	65	73	5
278+69.1	Lt.	18	10	21.0'	90	59	66	5
303+82.9	Lt.	20	20	15.0'	90	97	109	8
315+98.6	Rt.	22	22	5.0'	90	89	100	7
TOTAL						1,112	1,251	90

* MATCH EXISTING DRIVE DIMENSIONS. FEATHER DRIVEWAY OVERLAY DEPTH FROM 3" AT SHOULDER TO 0" AT THE END OF DRIVEWAY.

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

SUMMARY OF QUANTITIES AND LOCATIONS OF SURFACED INTERSECTIONS



3" ASPHALTIC CONCRETE TYPE "SP4" ON EXISTING BITUMINOUS SURFACE

STATION	SIDE	R FEET	W FEET	L FEET	Δ DEGREE	AREA SQ. YDS.	VOLUME CU. FT.	TONS
2+65.7	Lt.	40	26	5.0'	90	206	232	17
57+55.3	Rt.	40	26	10.0'	90	221	248	18
104+79.3	Rt.	50	24	0.0'	90	253	284	21
111+30.6	Rt.	40	26	9.0'	90	218	245	18
127+42.5	Lt.	40	26	13.0'	90	229	258	19
133+29.4	Lt.	60	24	100.0'	90	598	673	49
180+99.7	Lt.	40	22	50.0'	90	296	333	24
260+17.1	Lt.	25	22	4.0'	90	101	113	8
263+76.6	Lt.	20	22	12.0'	90	97	110	8
TOTAL						2,219	2,496	182

* MATCH EXISTING INTERSECTION DIMENSIONS. FEATHER INTERSECTION OVERLAY DEPTH FROM 3" AT SHOULDER TO 0" AT THE END OF INTERSECTION.

SPECIAL SURFACE COURSE FOR MAILBOX TURNOUT, STANDARD PLAN NO. 308-R1

MAILBOX SUPPORT POST, STANDARD PLAN 309

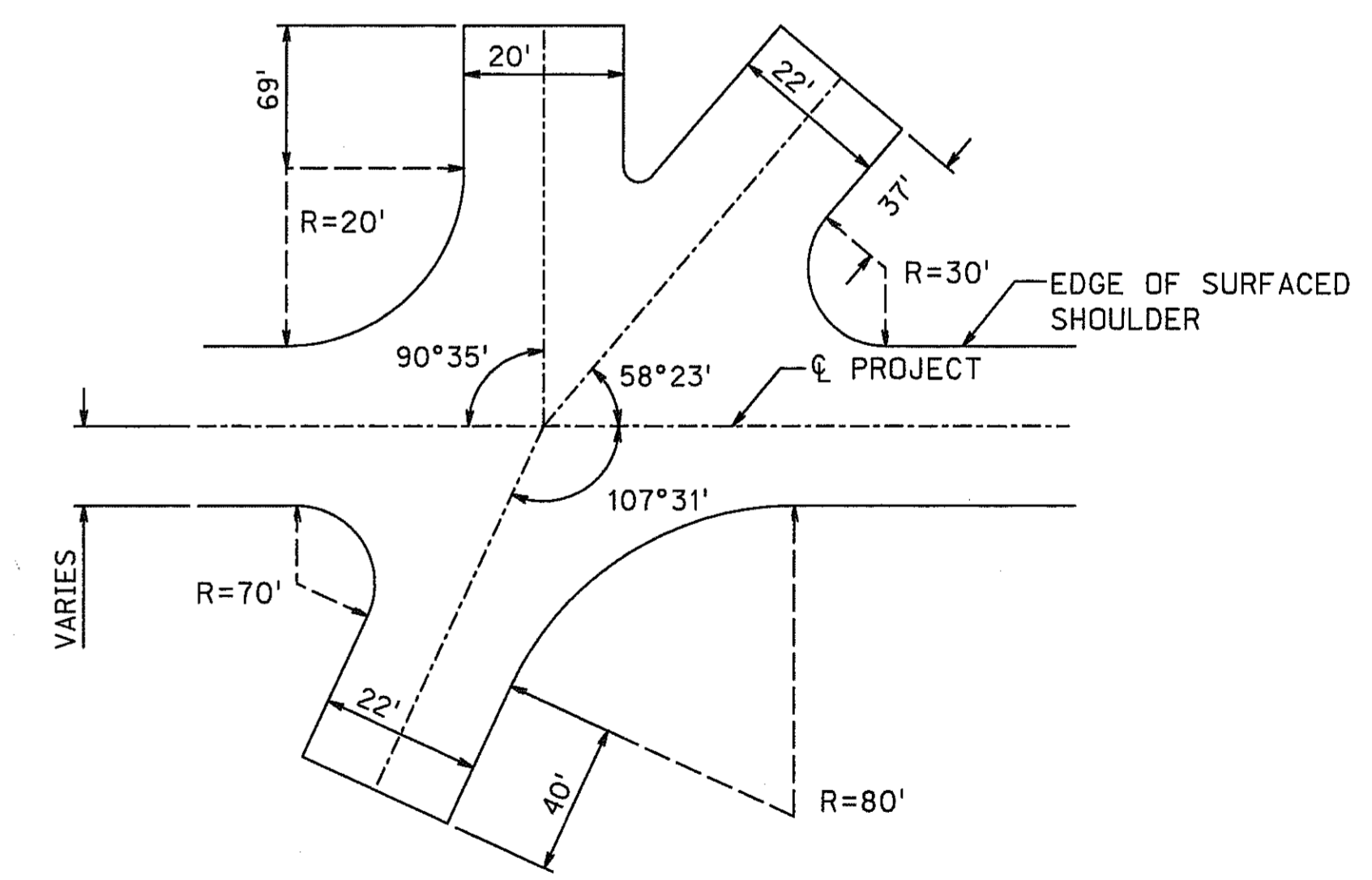
STATION	SIDE	AREA (SQ. YDS.)
81+52.6	Lt.	28
99+74.4	Lt.	28
213+37.6	Rt.	44
262+85.1	Lt.	44
265+69.2	Lt.	28
276+77.2	Lt.	28
278+42.8	Lt.	28
279+03.5	Lt.	28
303+58.6	Lt.	28
314+04.5	Lt.	44
TOTAL		328

STATION	SIDE	QUANTITY (EACH)
81+52.6	Lt.	1
99+74.4	Lt.	1
213+37.6	Rt.	1
262+85.1	Lt.	1
265+69.2	Lt.	1
276+77.2	Lt.	1
278+42.8	Lt.	1
279+03.5	Lt.	1
303+58.6	Lt.	1
314+04.5	Lt.	1
TOTAL		10

EMBANKMENT REQUIRED TO CONSTRUCT MAILBOX TURNOUT SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM "SPECIAL SURFACE COURSE FOR MAILBOX TURNOUT".

THE SPECIAL SURFACE COURSE SHALL BE 6" ASPHALTIC CONCRETE, TYPE "SP4" AND SHALL EXTEND 8' FROM THE EDGE OF PAVEMENT.

SUMMARY OF QUANTITIES AND LOCATION OF SURFACED 5-WAY INTERSECTIONS



3" ASPHALTIC CONCRETE INTERSECTION OVERLAY, TYPE "SP4" ON EXISTING BITUMINOUS SURFACE

STATION	R FEET	W FEET	L FEET	Δ DEGREE	AREA SQ. YDS.	VOLUME CU. FT.	TONS
268+94	*	*	*	*	1,011	1,137	82

* MATCH ALL EXISTING INTERSECTION DIMENSIONS. FEATHER INTERSECTION OVERLAY DEPTH FROM 3" AT SHOULDER TO 0" AT THE END OF INTERSECTION.

SUMMARY OF QUANTITIES

PROJECT NO.

SHEET NO.

2175(9)

2-S2

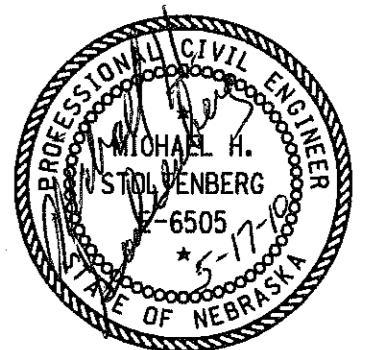
C.N. 41952

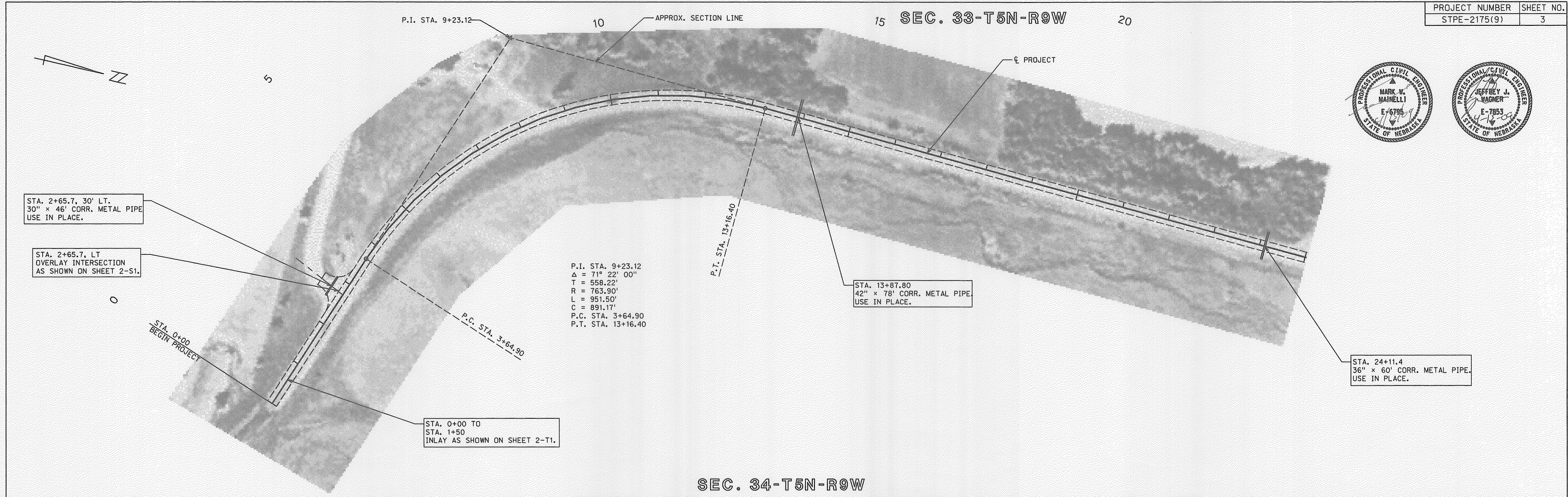
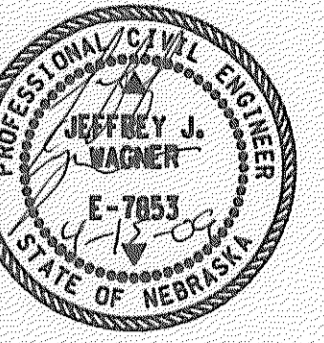
BITUMINOUS SURFACING ITEMS GROUP 9

ITEM	QUANTITY	UNITS
OVERLAY BROKEN LINES	672.770	STA
OVERLAY SOLID LINES	1,345.540	STA
PERMANENT PAVEMENT MARKING, PAINT	101,761.800	LF
MOBILIZATION	1.000	LS
SPECIAL SURFACE COURSE FOR MAILBOX TURNOUTS	328.000	SY
MAILBOX POST	10.000	EACH
HYDRATED LIME	261.334	TON
HYDRATED LIME FOR ASPHALT MIXTURES	100.400	TON
HYDRATED LIME SLURRY STABILIZATION	330.384	STA
ASPHALTIC CONCRETE FOR PATCHING, TYPE SP4(0.375)	480.000	TON
ASPHALTIC CONCRETE, TYPE SP4(0.375)	9,560.000	TON
PLACEMENT OF ASPHALTIC CONCRETE FOR DRIVEWAYS AND INTERSECTIONS	4,342.000	SY
PERFORMANCE GRADED BINDER (64-28)	562.240	TON
EMULSIFIED ASPHALT FOR HYDRATED LIME SLURRY STABILIZATION	74,340.000	GAL
TACK COAT	13,080.000	GAL
FOG SEAL	8,260.000	GAL
WATER	168.192	MGAL
EARTH SHOULDER CONSTRUCTION	672.768	STA
COLD MILLING, CLASS 2	6.000	STA
ASPHALT PAVEMENT SMOOTHNESS TESTING I/D	1.000	LS
SEEDING, TYPE B	8.000	ACRE
MULCH	18.000	TON

GENERAL ITEMS GROUP 10

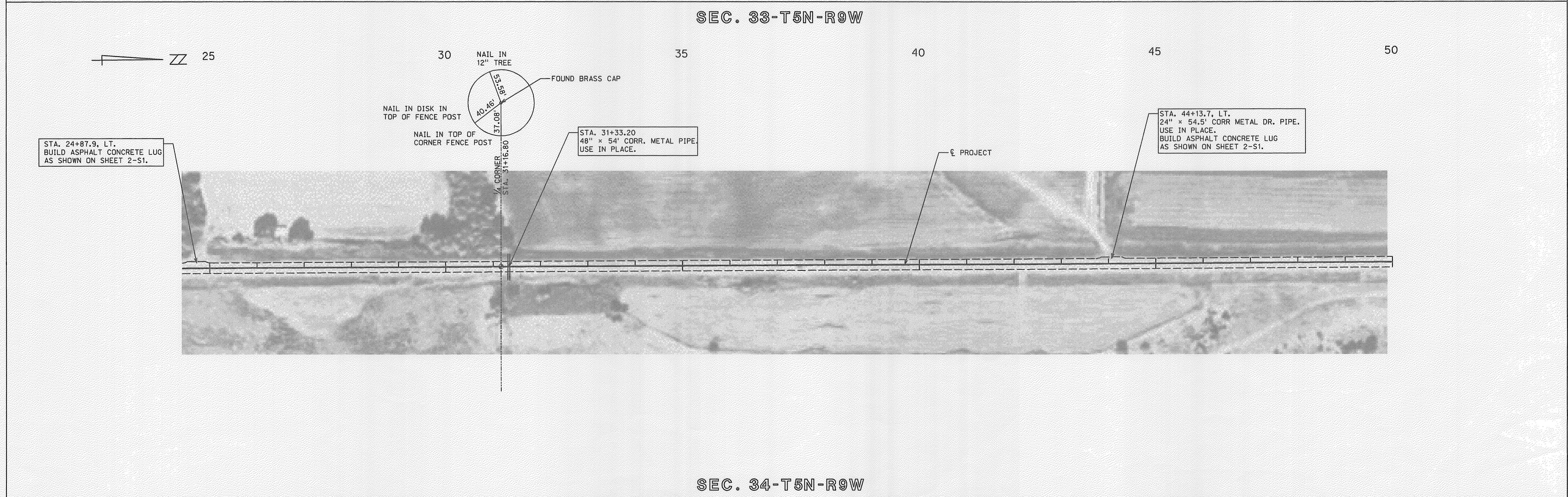
ITEM	QUANTITY	UNITS
BARRICADE, TYPE II	23,040.000	BDAY
BARRICADE, TYPE III	276.000	BDAY
TEMPORARY SIGN DAY	420.000	EACH
SIGN DAY	4,506.000	EACH
FLAGGING	60.000	DAY
FURNISHING AND OPERATING PILOT VEHICLE	30.000	DAY
MOBILIZATION	1.000	LS
RENTAL OF LOADER, FULLY OPERATED	35.000	hour
RENTAL OF MOTOR GRADER, FULLY OPERATED	32.000	hour
RENTAL OF DUMP TRUCK, FULLY OPERATED	35.000	hour
RENTAL OF SKID LOADER, FULLY OPERATED	35.000	hour
RENTAL OF CRAWLER MOUNTED HYDRAULIC EXCAVATOR, FULLY OPERATED	5.000	hour
TEMPORARY SILT FENCE	500.000	LF





SEC. 34-T5N-R9W

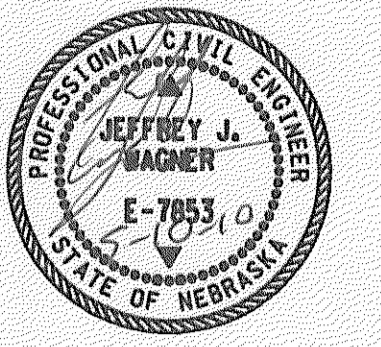
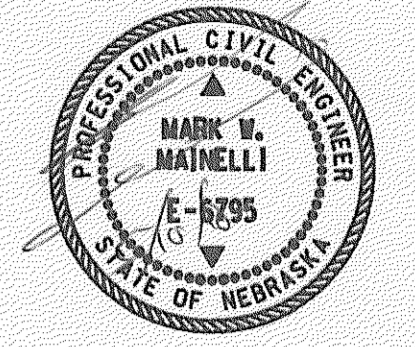
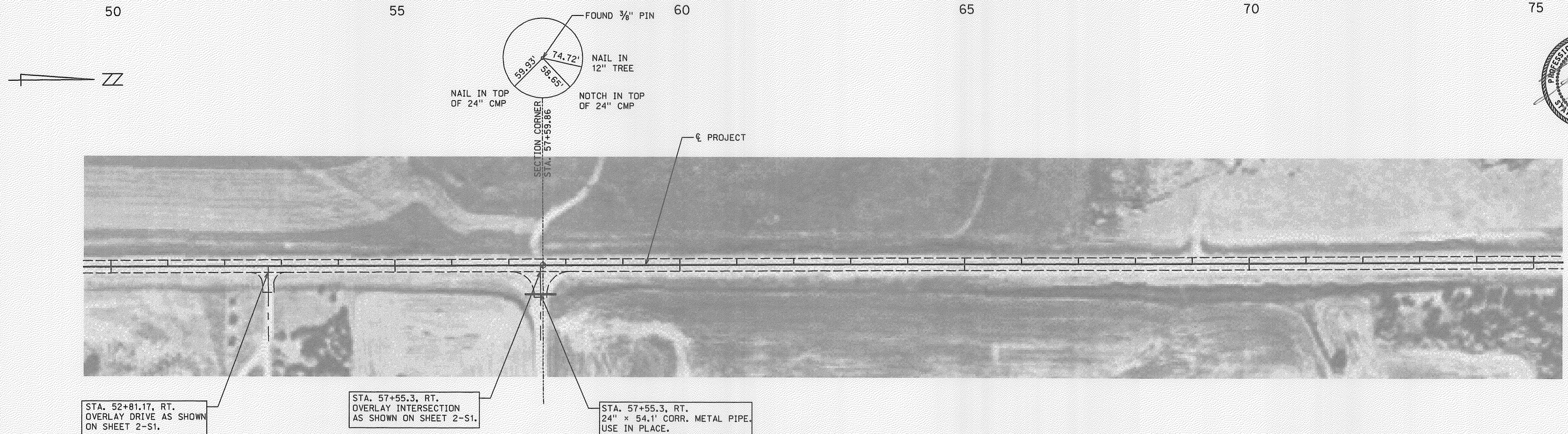
SEC. 33-T5N-R9W



SEC. 34-T5N-R9W

SEC. 33-T5N-R9W

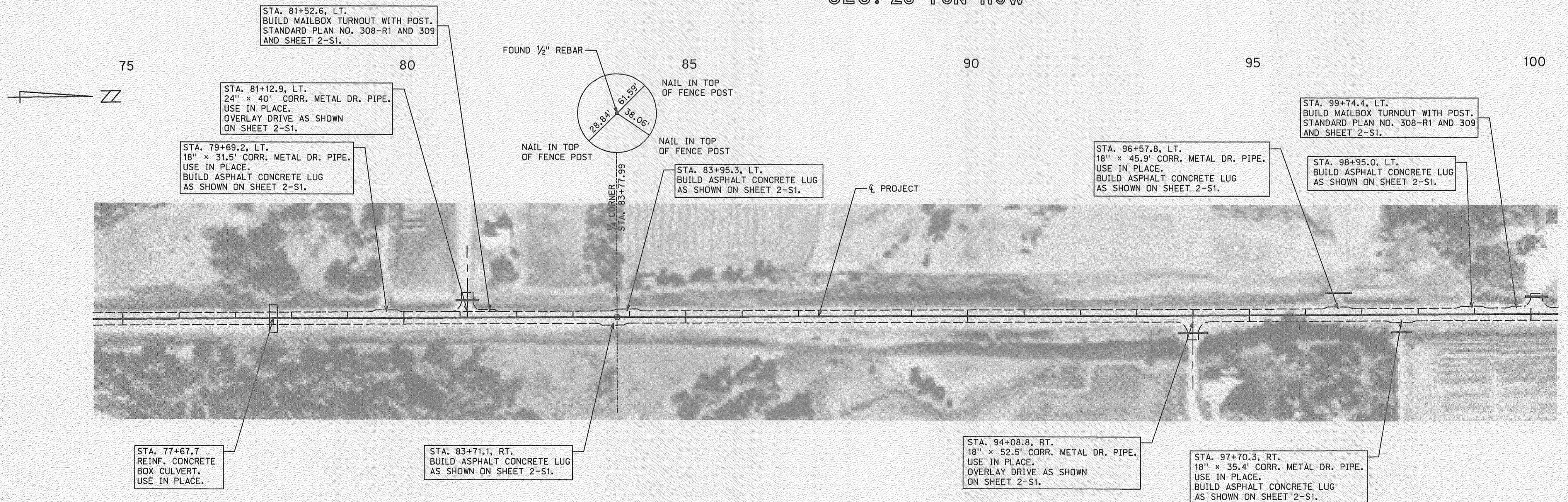
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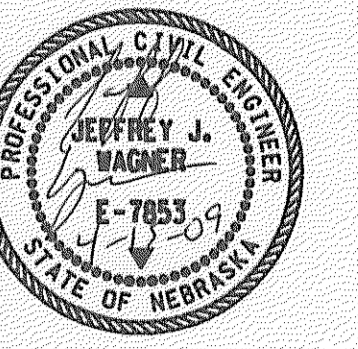
SEC. 34-T5N-R9W

SEC. 27-T5N-R9W

SEC. 28-T5N-R9W



SEC. 27-T5N-R9W



SEC. 28-T5N-R9W

125

120

105

110

115

STA. 100+09.8, LT.
24" x 38.7' CORR. METAL DR. PIPE.
USE IN PLACE.
OVERLAY DRIVE AS SHOWN
ON SHEET 2-S1.

P.C. STA. 100+38.32

STA. 117+84.8, LT.
BUILD ASPHALT CONCRETE LUG
AS SHOWN ON SHEET 2-S1.

P.T. STA. 115+38.55

STA. 124+59.0, RT.
BUILD ASPHALT CONCRETE LUG
AS SHOWN ON SHEET 2-S1.

P.C. STA. 122+81.76

STA. 119+81.6, RT.
18" x 37.7' CORR. METAL DR. PIPE.
USE IN PLACE.
OVERLAY DRIVE AS SHOWN
ON SHEET 2-S1.

STA. 116+33.9, RT.
BUILD ASPHALT CONCRETE LUG
AS SHOWN ON SHEET 2-S1.

STA. 111+30.6, RT.
OVERLAY INTERSECTION
AS SHOWN ON SHEET 2-S1.

P.I. STA. 109+93.50
Δ = 90° 01' 00"
T = 955.18'
R = 954.90'
L = 1500.23'
C = 1350.63'
P.C. STA. 100+38.32
P.T. STA. 115+38.55

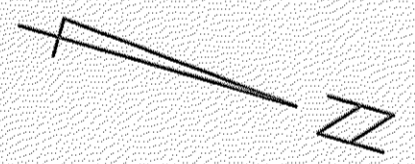
STA. 104+79.3, RT.
OVERLAY INTERSECTION
AS SHOWN ON SHEET 2-S1.

SEC. 27-T5N-R9W

SEC. 21-T5N-R9W

SEC. 28-T5N-R9W

SEC. 21-T5N-R9W



APPROX. 1/4 CORNER

130

STA. 133+29.4, LT.
OVERLAY INTERSECTION
AS SHOWN ON SHEET 2-S1.

135

STA. 133+29.4, LT.
24" x 64.3' ROUND EQUIVALENT
CORR. METAL PIPE.
USE IN PLACE.

140

145

150

STA. 127+42.5, LT.
OVERLAY INTERSECTION
AS SHOWN ON SHEET 2-S1.

APPROX. SECTION LINE

APPROX. 1/4 SECTION LINE

STA. 136+37.8
30" x 102' CORR.
METAL PIPE.
USE IN PLACE.

P.T. STA. 137+84.21

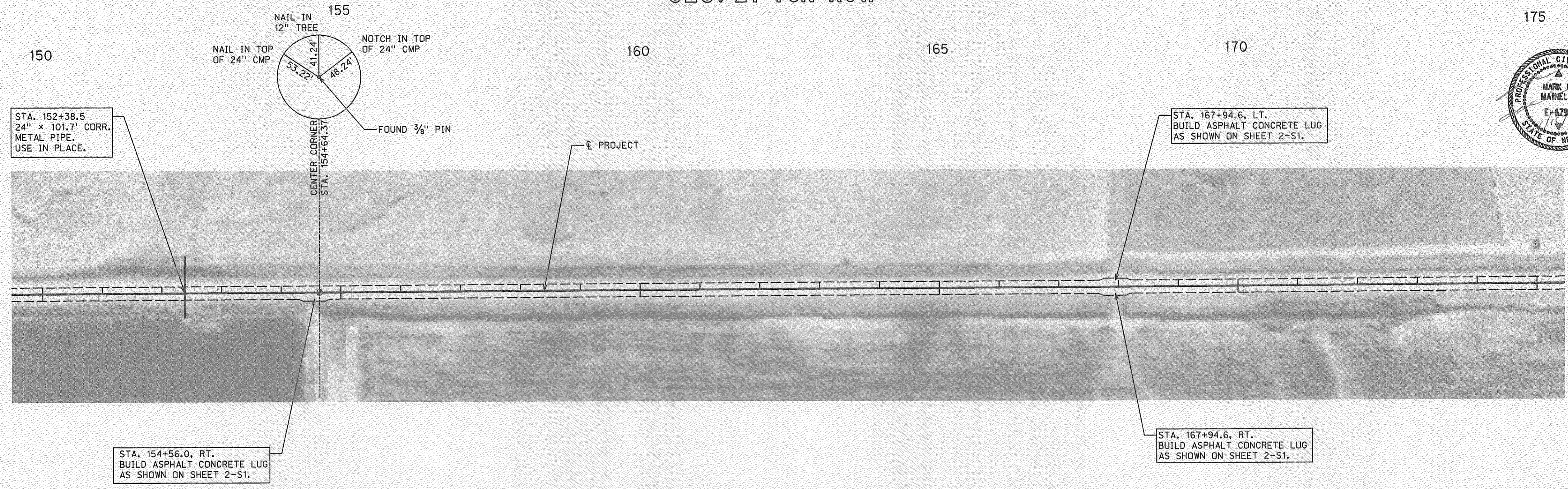
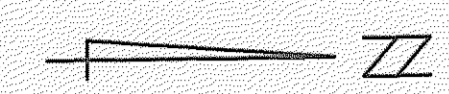
P.I. STA. 132+39.16
Δ = 90° 09' 00"
T = 957.40'
R = 954.90'
L = 1502.45'
C = 1352.20'
P.C. STA. 122+81.76
P.T. STA. 137+84.21

PROJECT

SEC. 21-T5N-R9W

SEC. 21-T5N-R9W

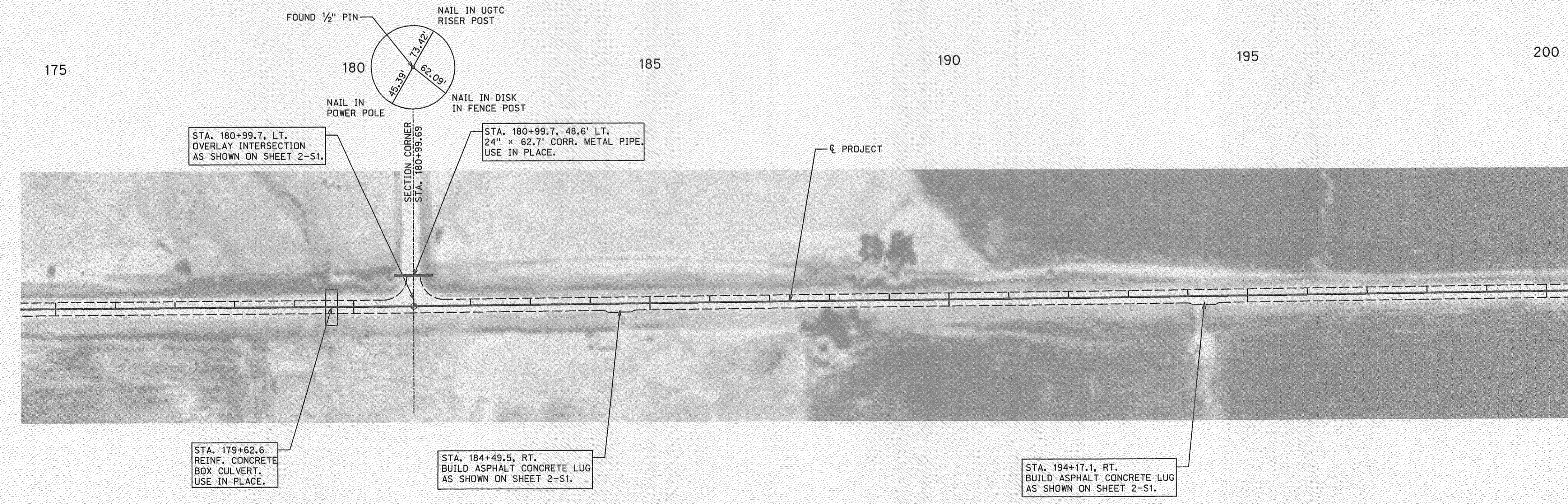
175



SEC. 21-T5N-R9W

SEC. 16-T5N-R9W

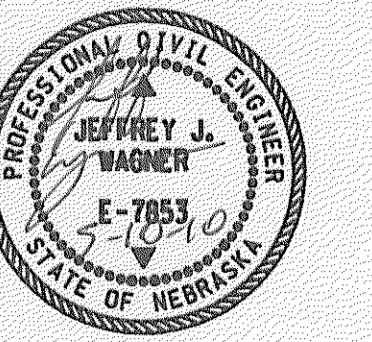
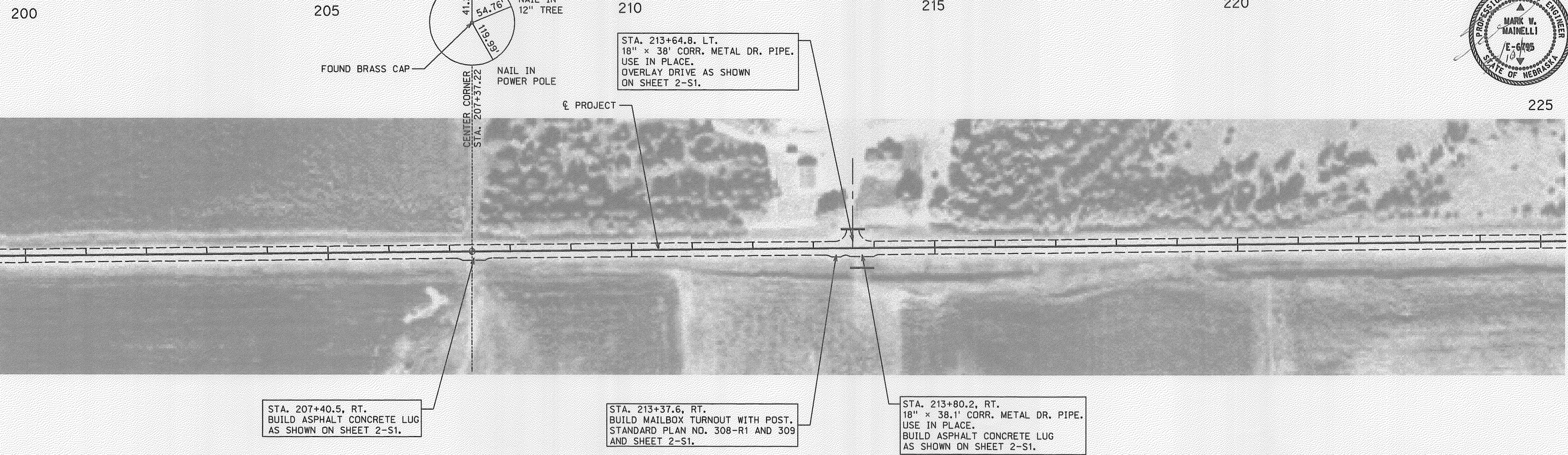
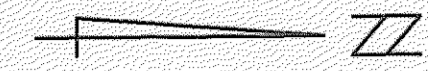
SEC. 21-T5N-R9W



SEC. 21-T5N-R9W

SEC. 16-T5N-R9W

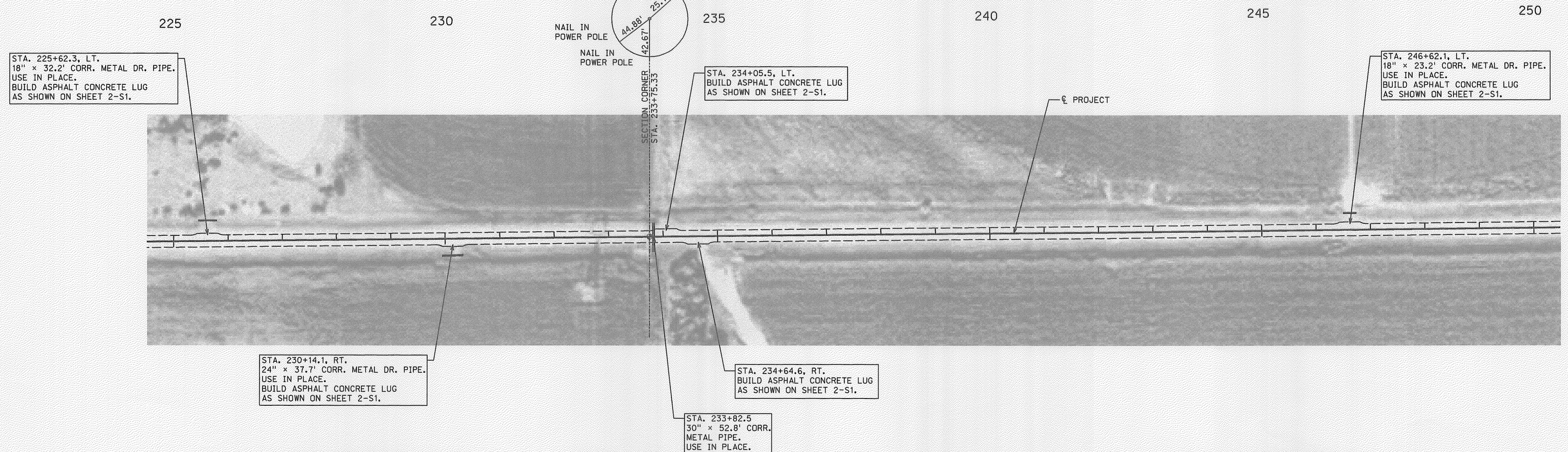
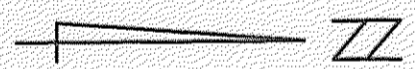
SEC. 16-T5N-R9W



SEC. 16-T5N-R9W

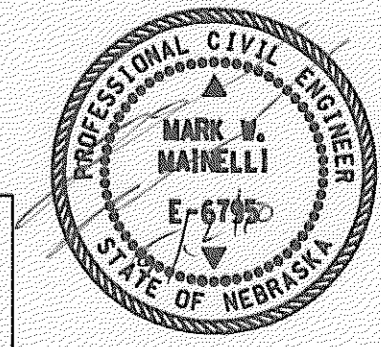
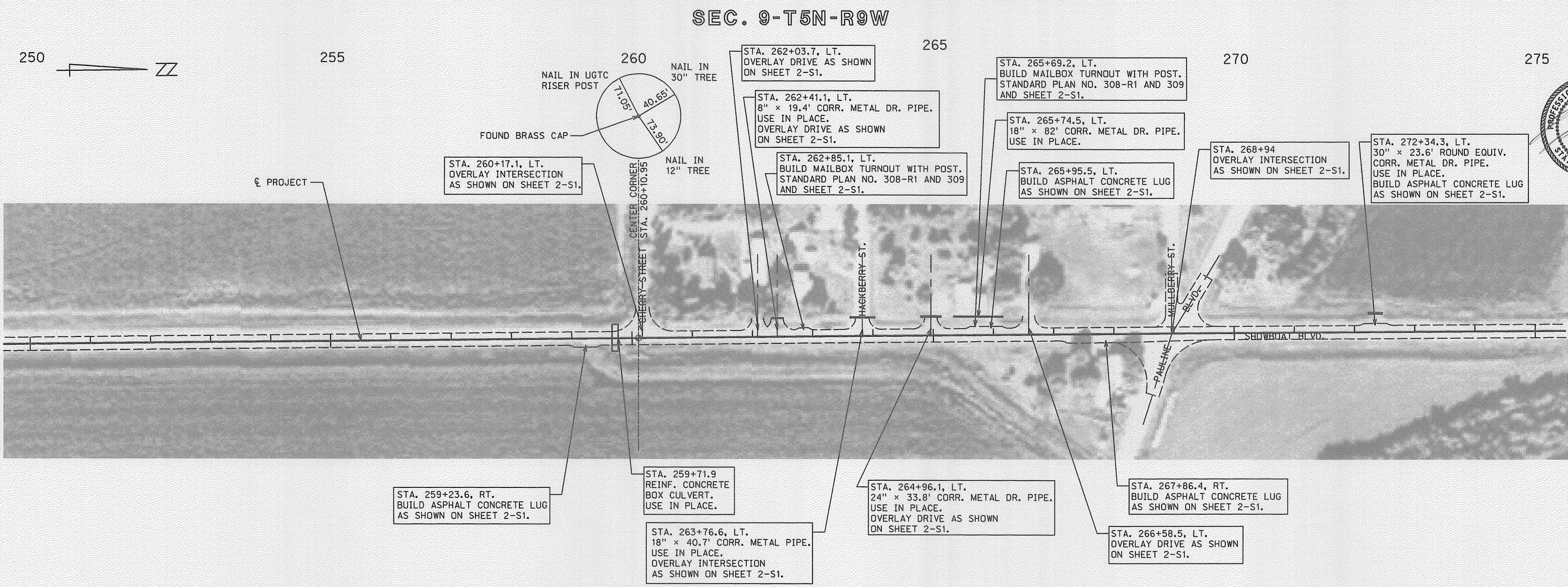
SEC. 16-T5N-R9W

SEC. 9-T5N-R9W

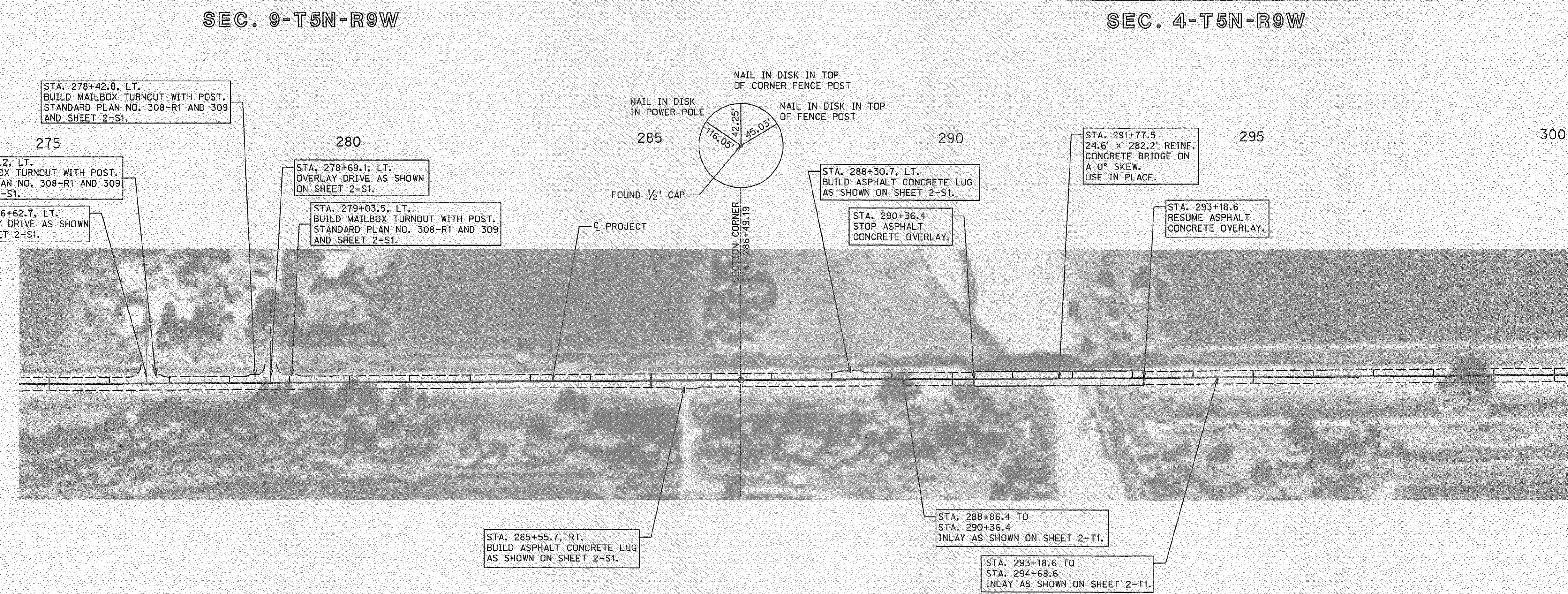


SEC. 16-T5N-R9W

SEC. 9-T5N-R9W



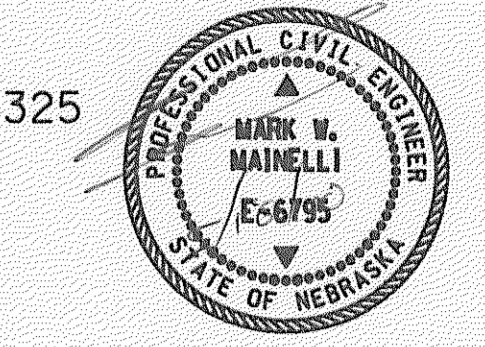
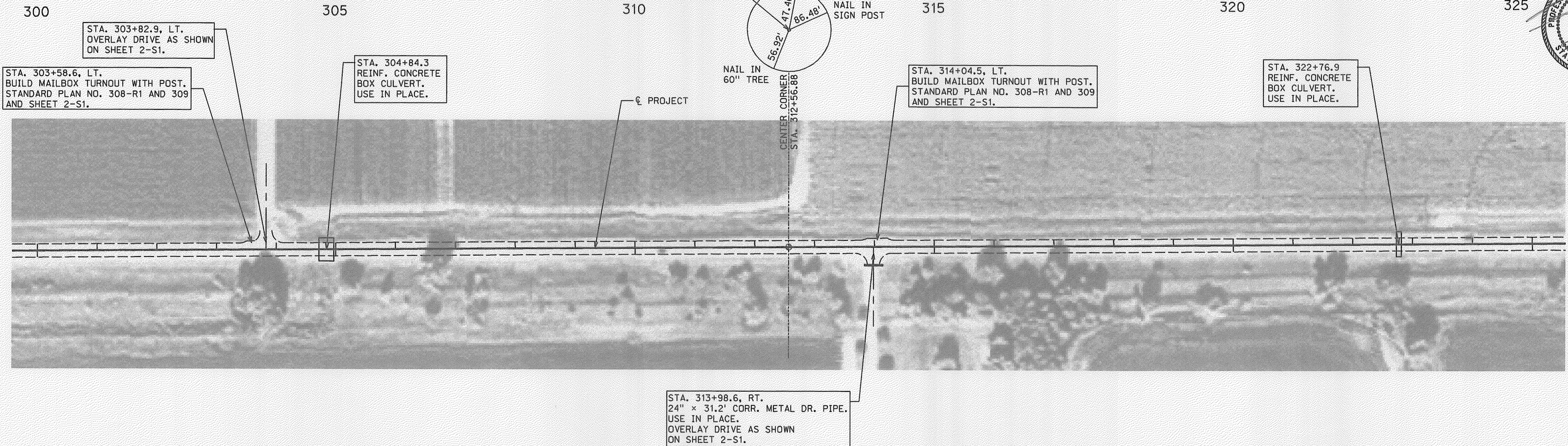
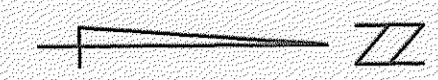
SEC. 9-T5N-R9W



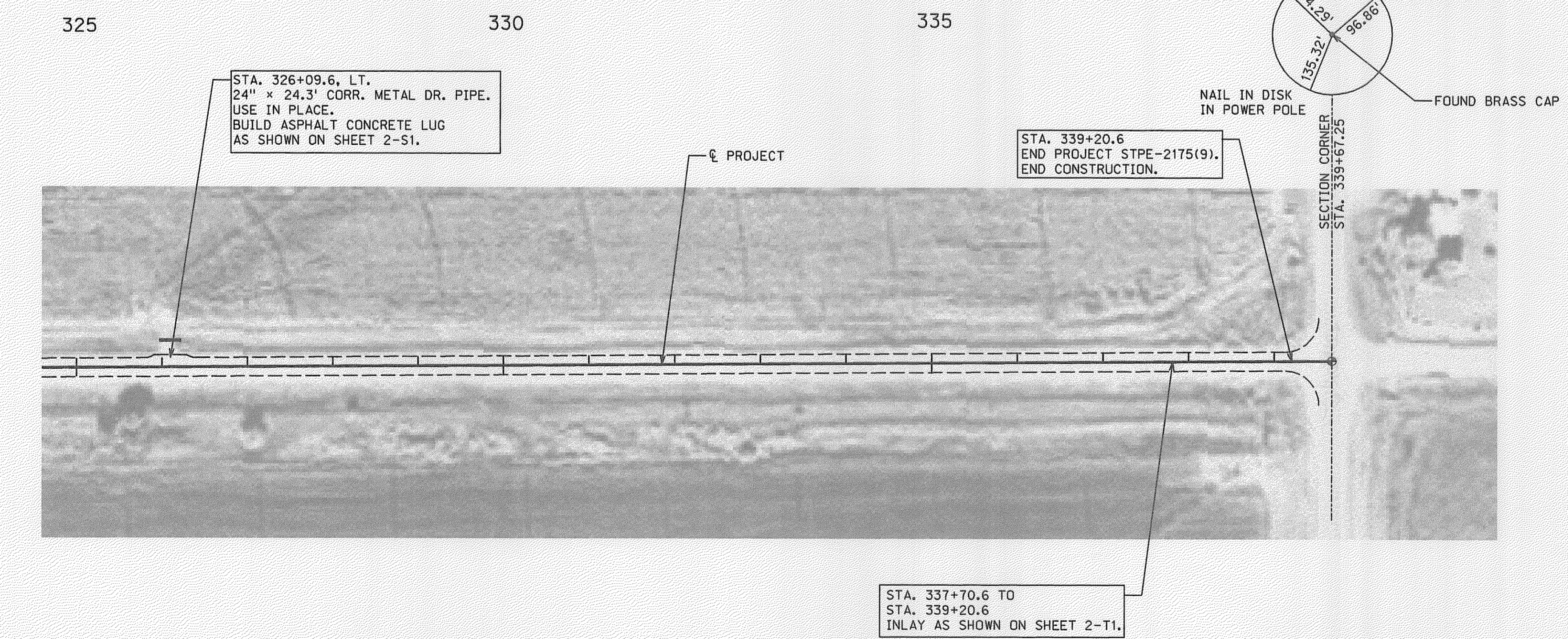
SEC. 9-T5N-R9W

SEC. 4-T5N-R9W

SEC. 4-T5N-R9W

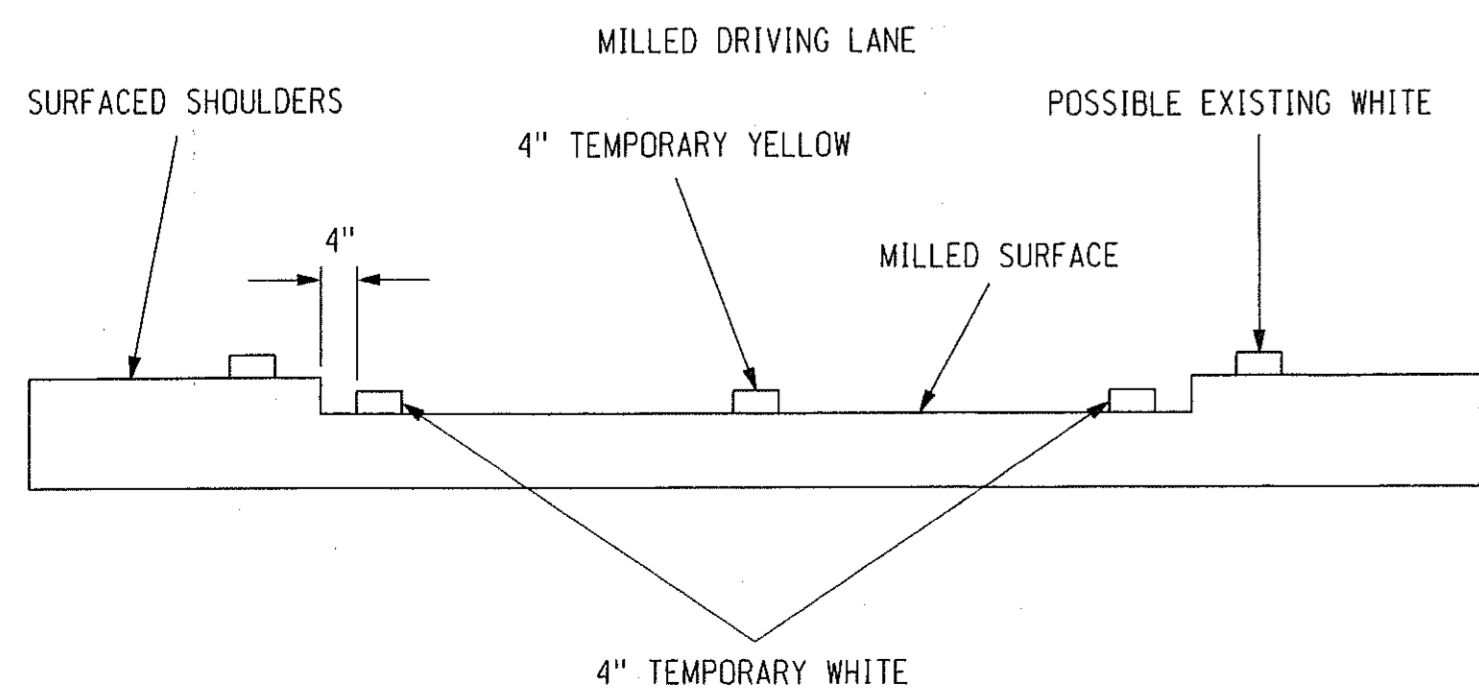
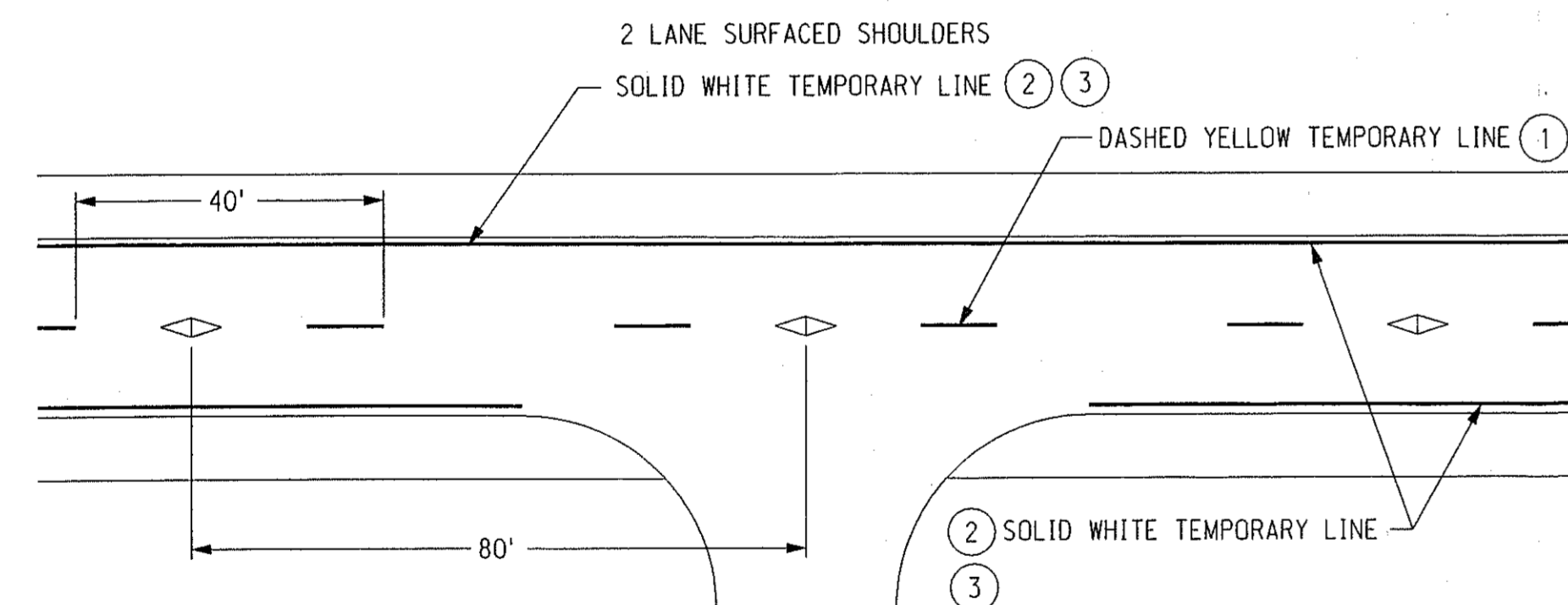
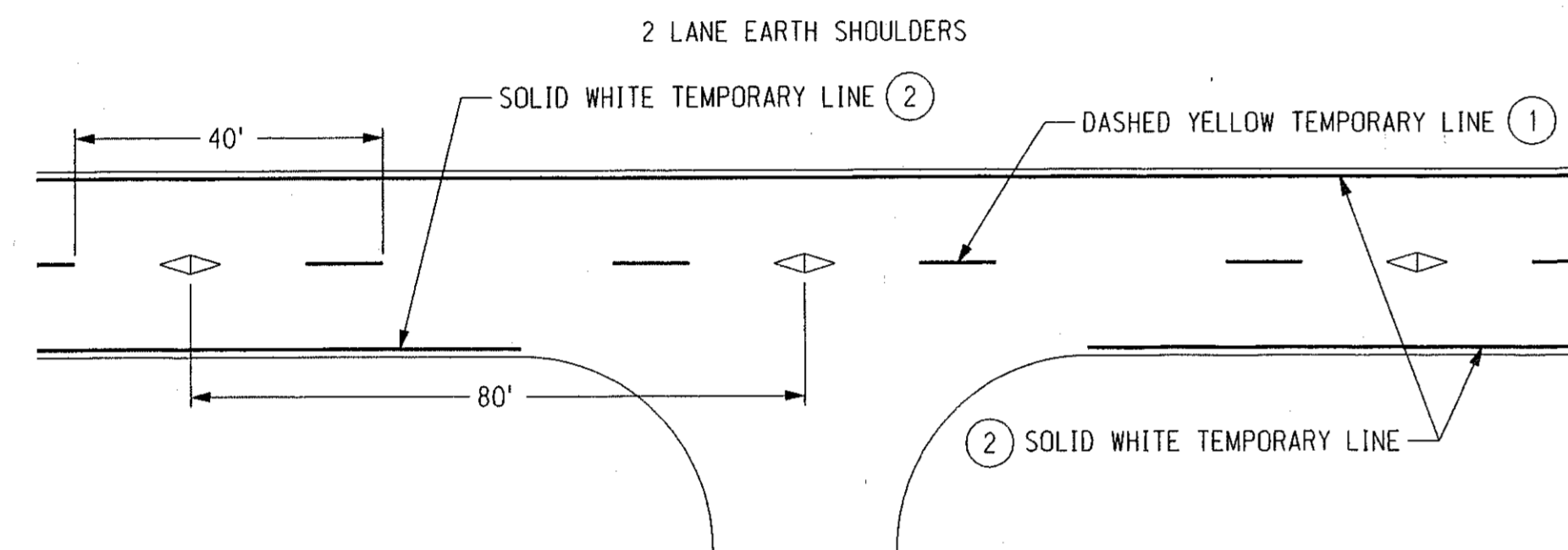
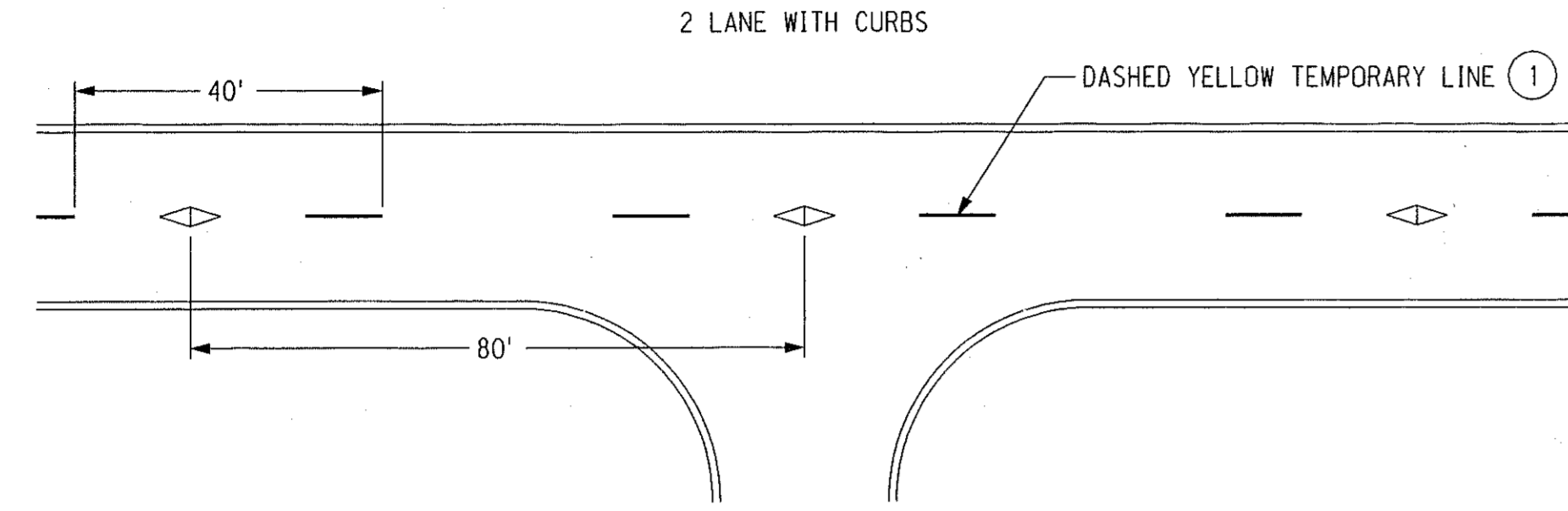


SEC. 4-T5N-R9W

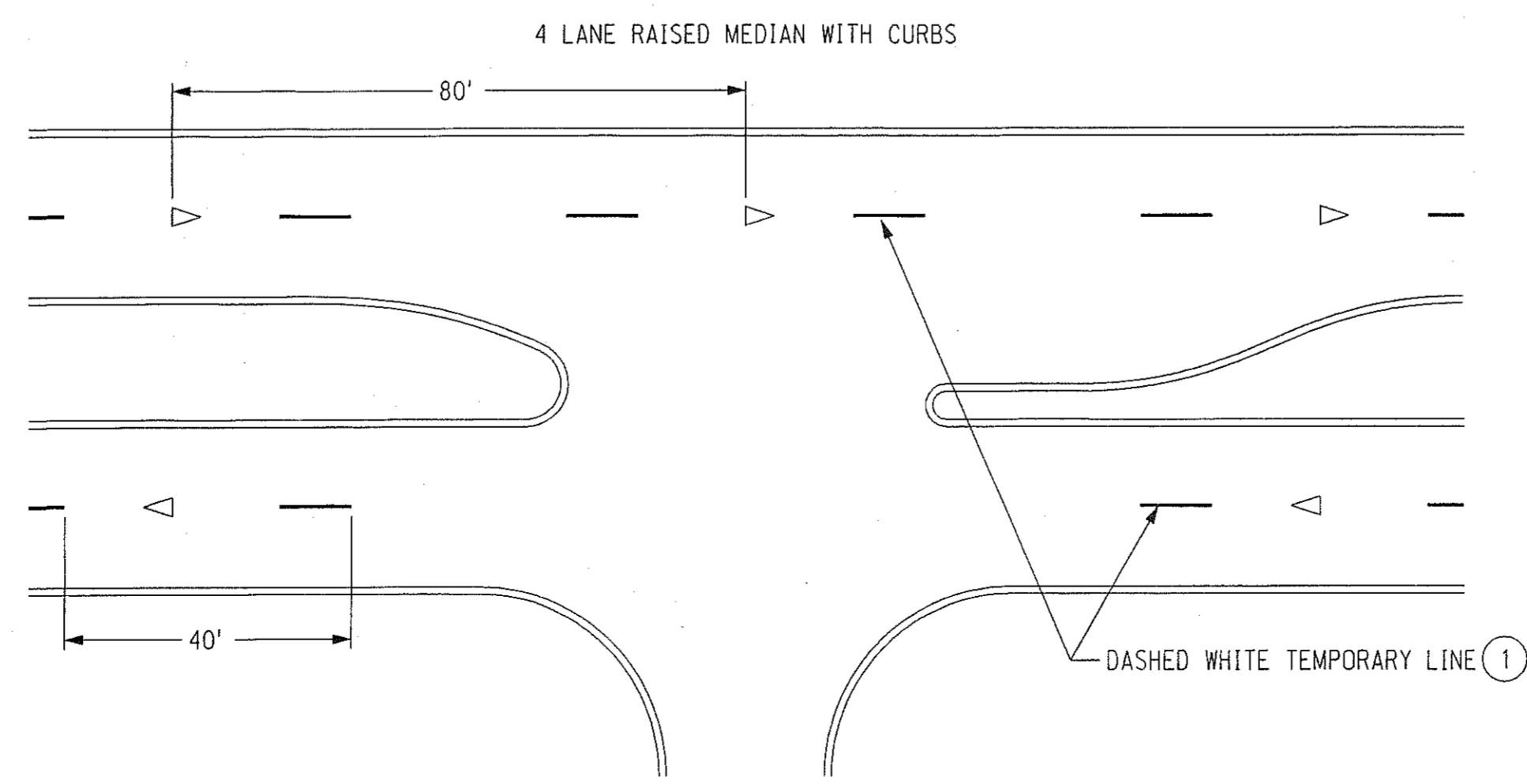
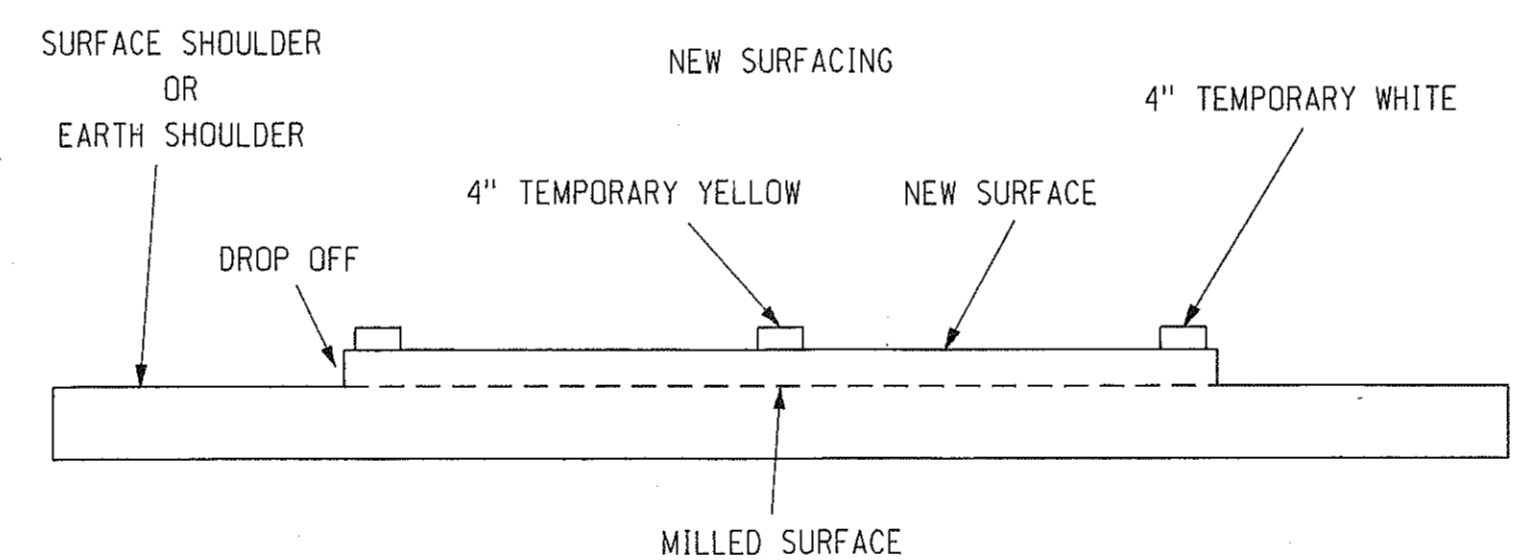
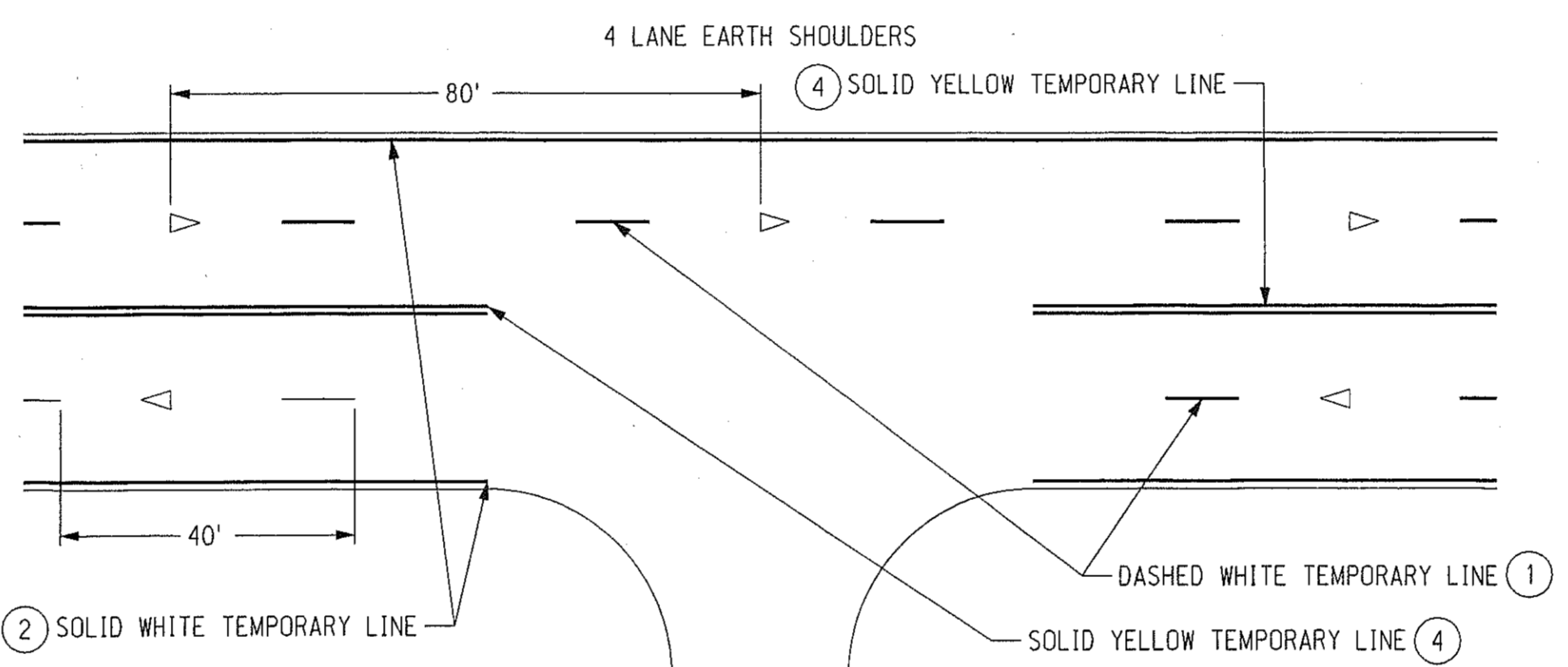
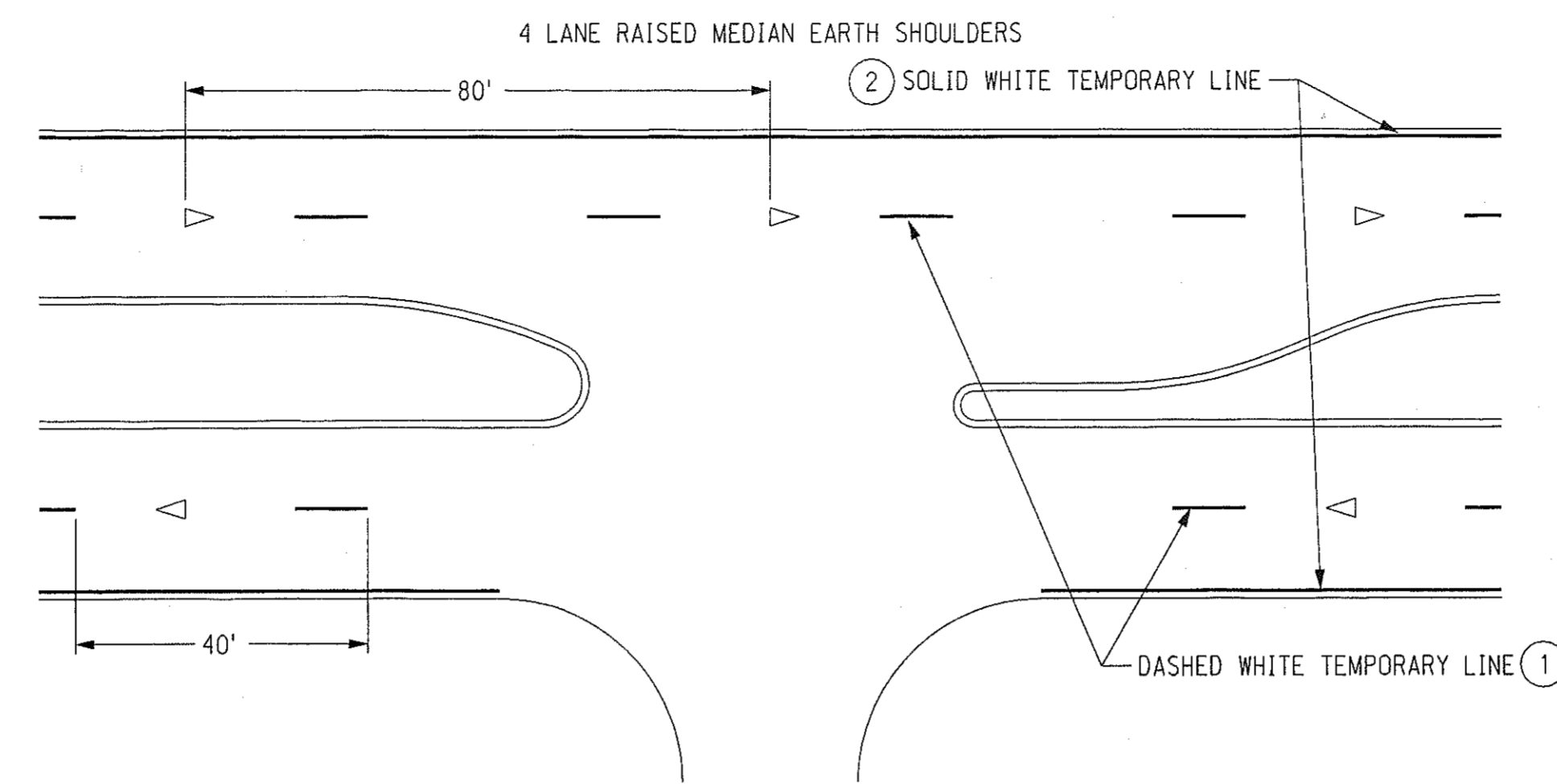


SEC. 4-T5N-R9W

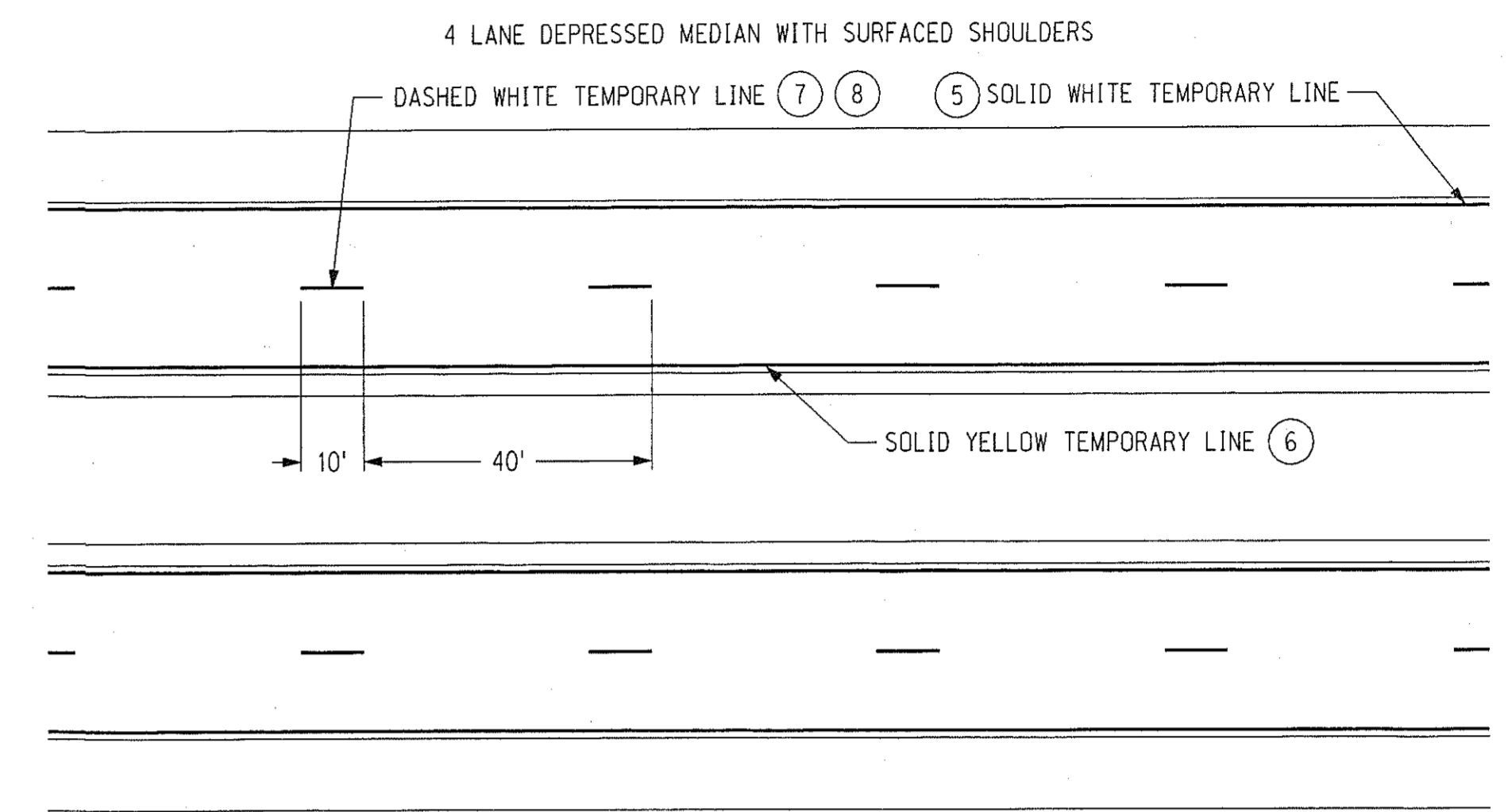
2 LANE ROADWAYS



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 C 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

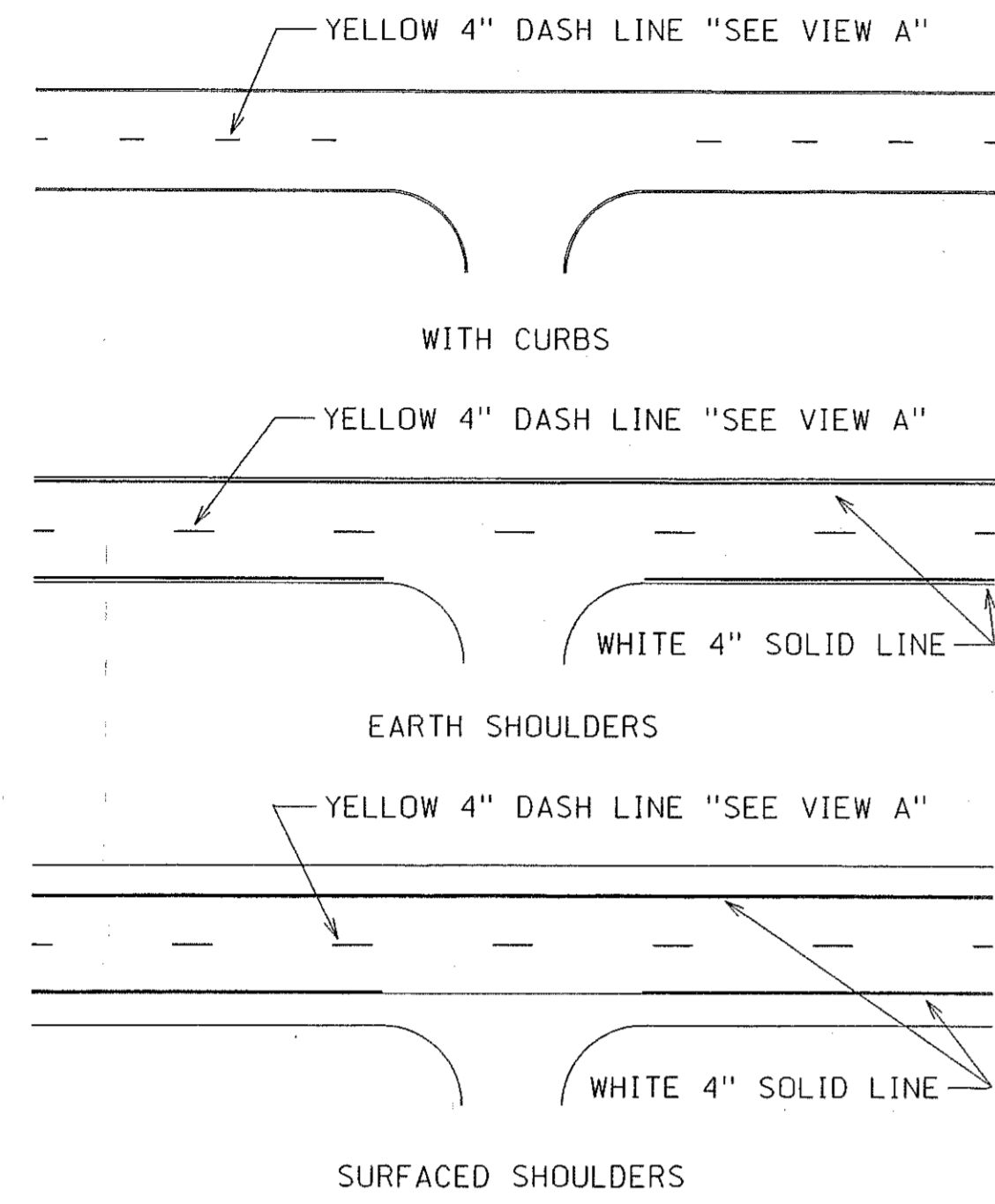
- ◁ OVERLAY MARKER
- ◁ BIDIRECTIONAL OVERLAY MARKER

**NEBRASKA DEPARTMENT OF ROADS
 TRAFFIC ENGINEERING DIVISION**

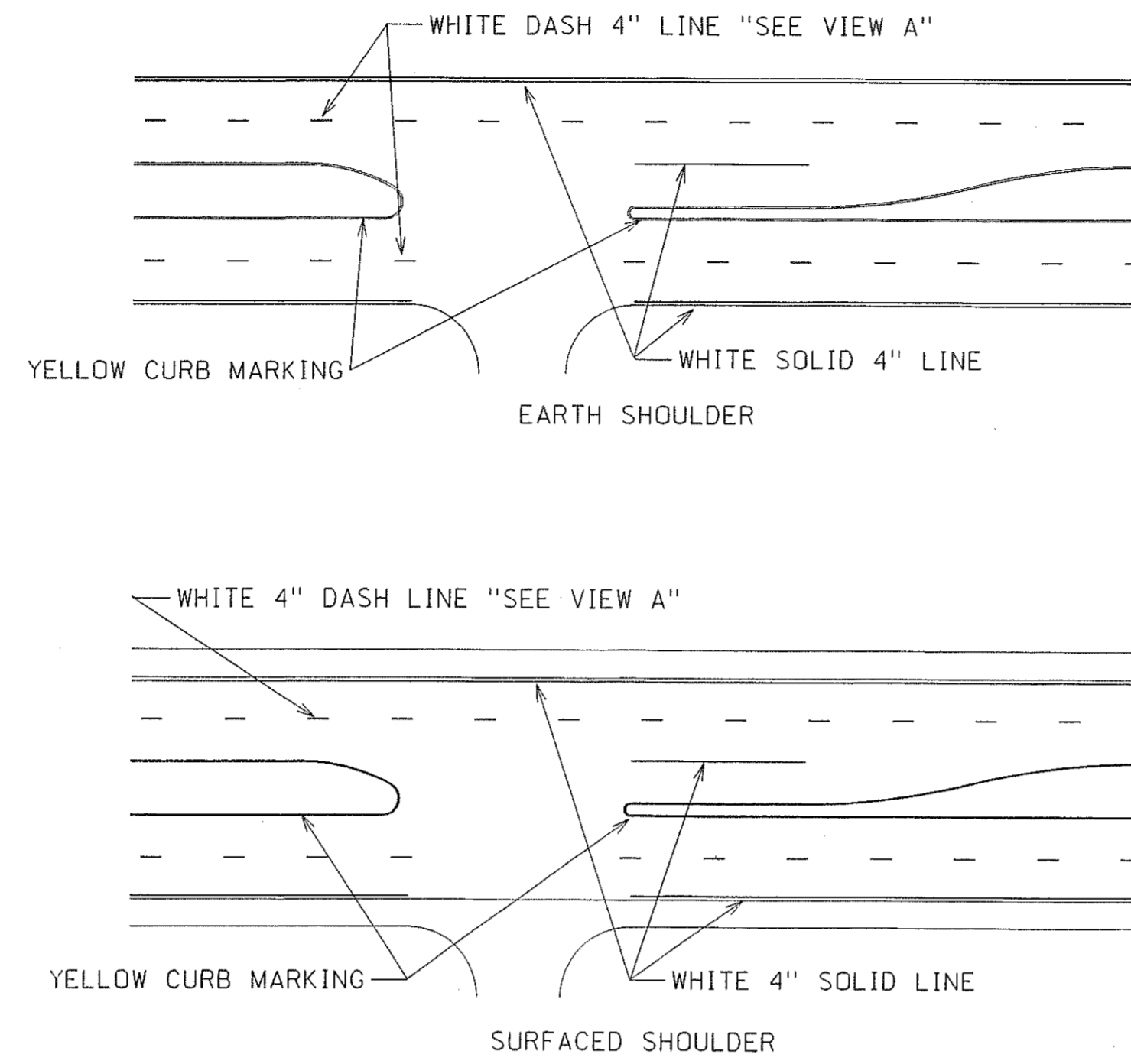
TYPICAL PAVEMENT MARKING

DESIGNED	MAN	TEMPORARY PAVEMENT MARKING PLAN
DRAWN	DV	
APPROVED	TRAFFIC ENGINEER	DATE 8/06

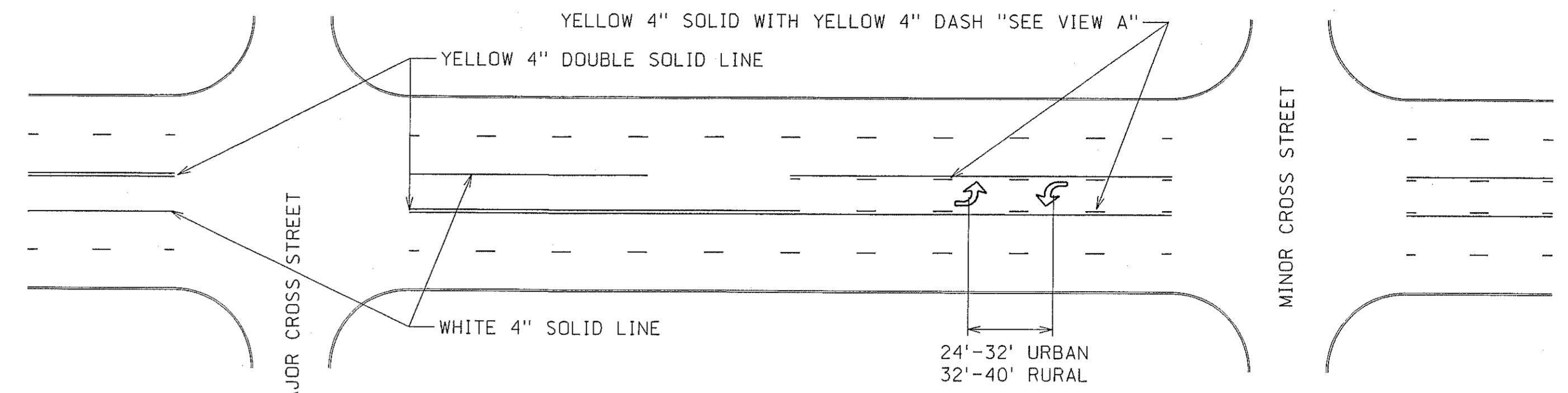
2 LANE ROADWAYS



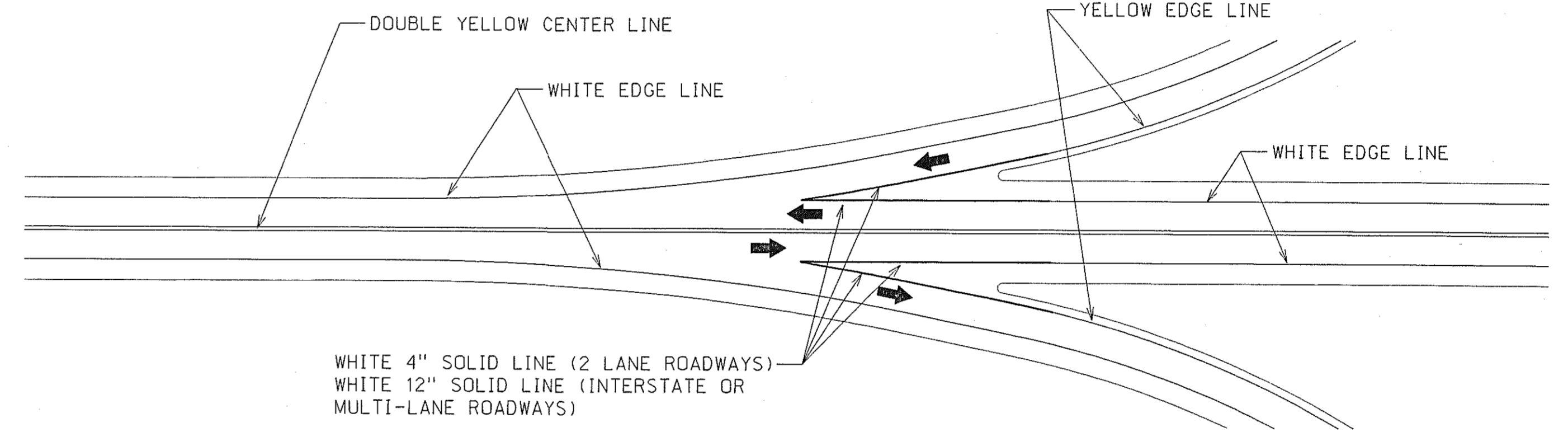
4 LANE DIVIDED ROADWAY



3 OR 5 LANE WITH COMMON LEFT TURN LANE

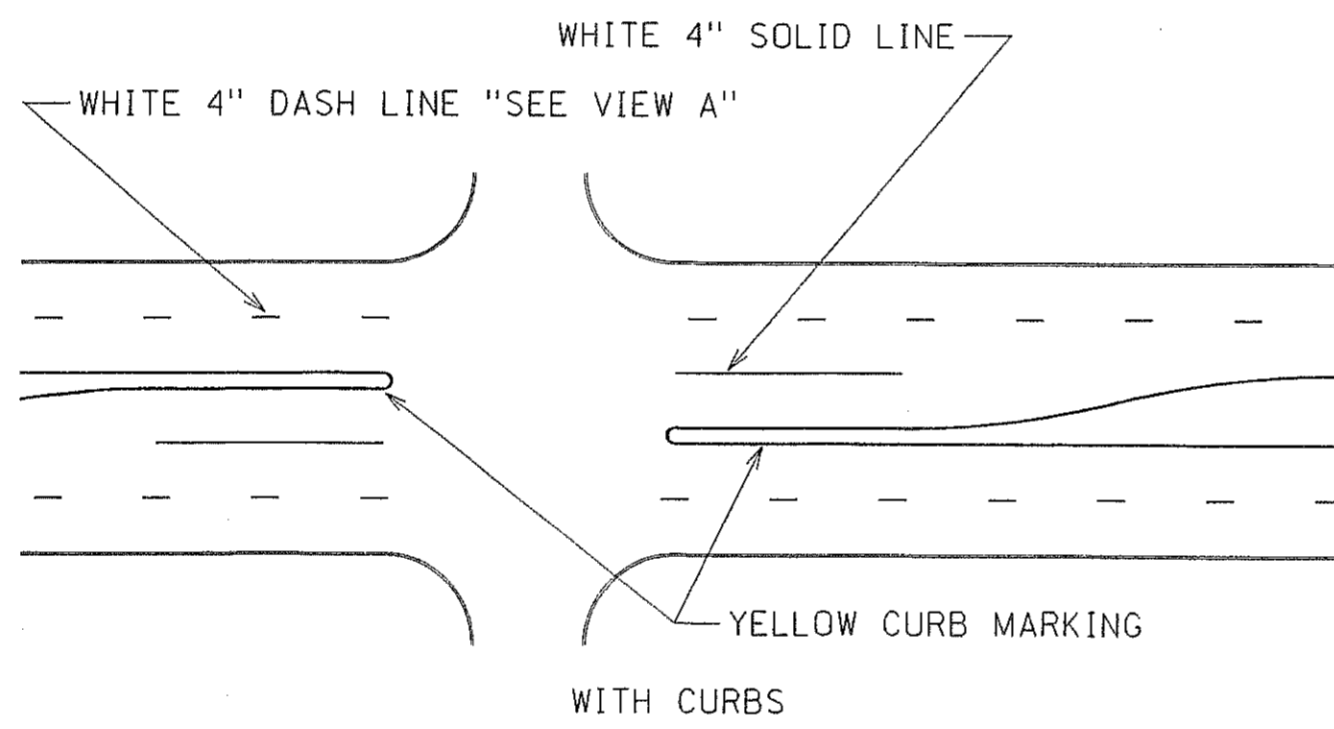


GORE MARKINGS (NON-FREEWAY)

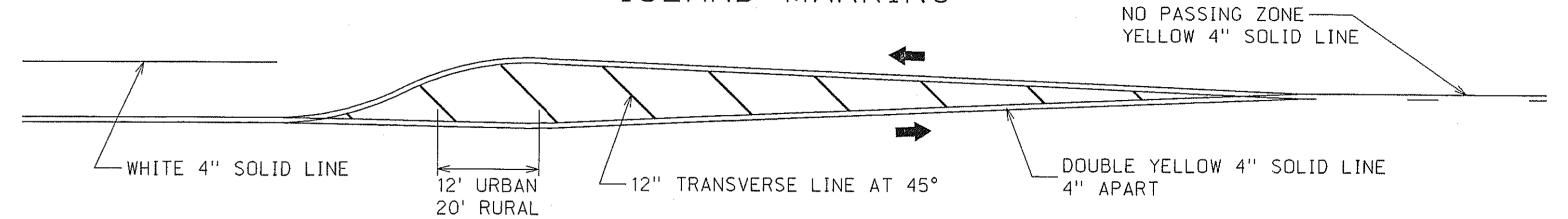


2-LANE ROADWAY REQUIRED LOCATION FOR EDGE LINES		
ROADWAY WIDTH	SHOULDER TYPE	DISTANCE FROM CENTERLINE OF ROADWAY TO OUTSIDE EDGE OF PAVEMENT EDGE LINE
LESS THAN 24 FT	SURFACED	12 FT 0 IN
LESS THAN 24 FT	EARTH	PAVEMENT EDGE
24 FT	EARTH	PAVEMENT EDGE
24 FT	SURFACED	12 FT 0 IN
GREATER THAN 24 FT	EARTH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

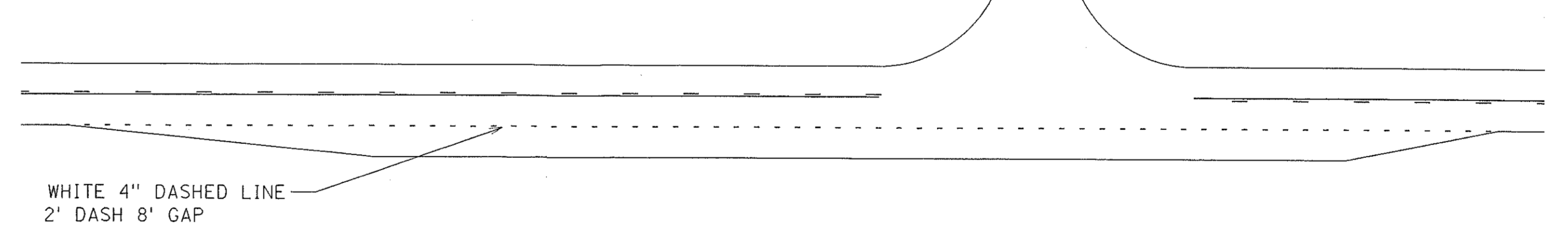
CENTERLINE MARKING SHALL BE PLACED ON THE "SOUTH" SIDE OF THE CENTER JOINT ON EAST-WEST ROADS AND ON THE "EAST" SIDE OF THE CENTER JOINT ON NORTH-SOUTH ROADS



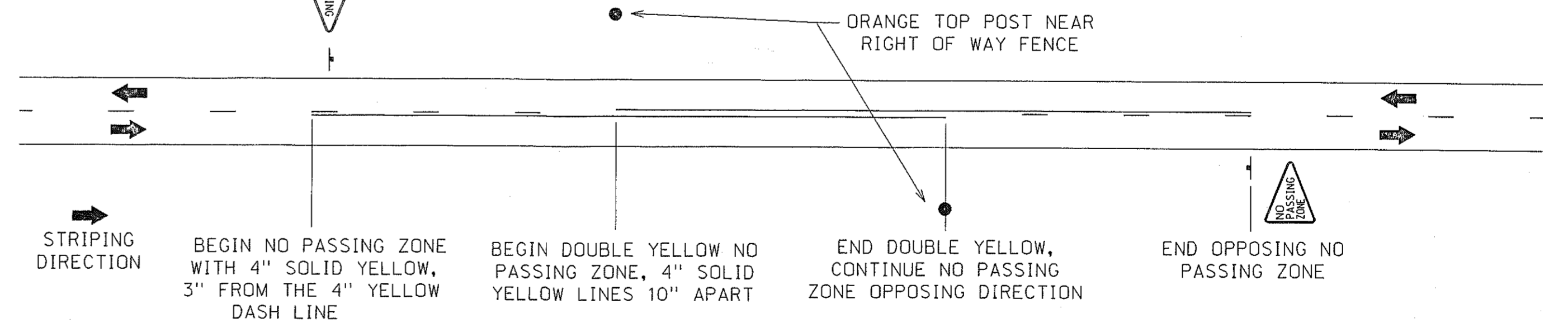
ISLAND MARKING



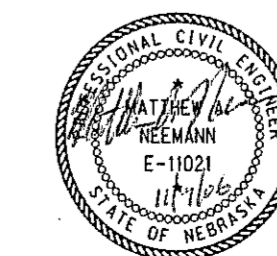
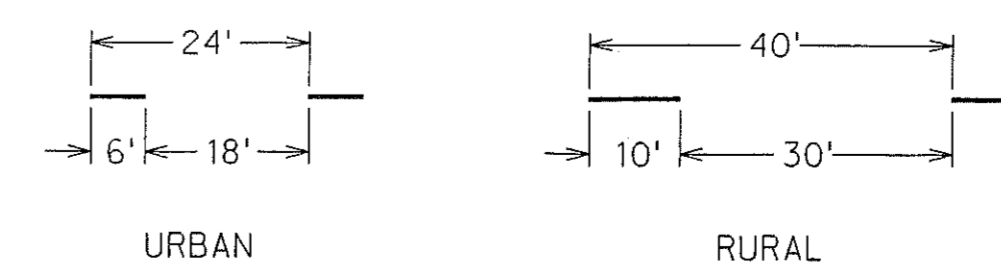
FLY-BY LANE MARKING



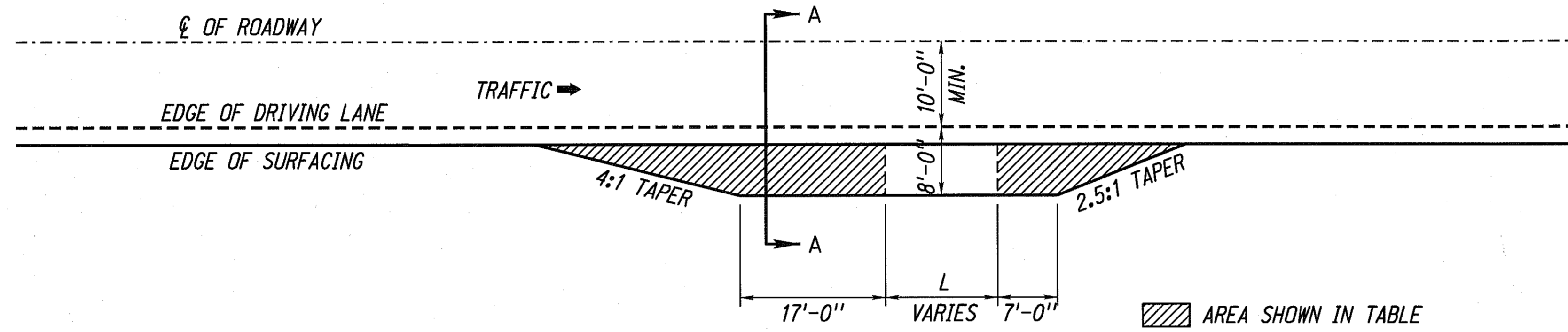
TYPICAL NO PASSING ZONE MARKINGS



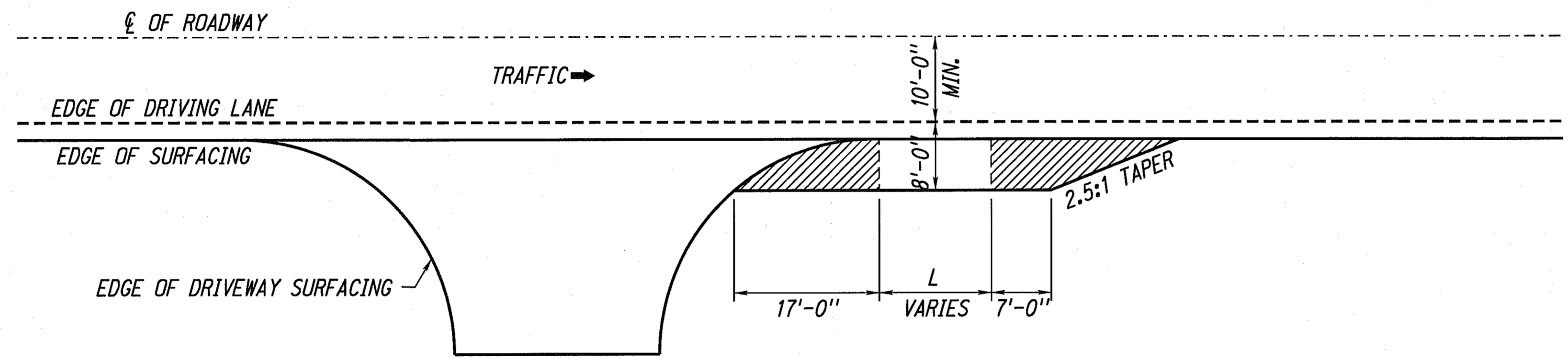
VIEW A



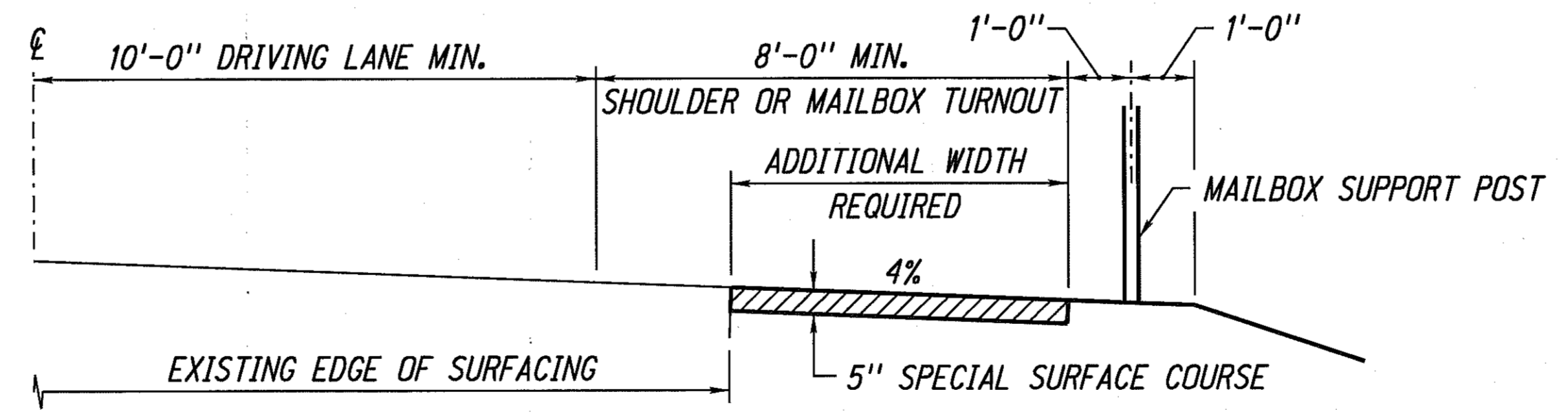
NEBRASKA DEPARTMENT OF ROADS TRAFFIC ENGINEERING DIVISION			
TYPICAL PAVEMENT MARKING PLAN			
DESIGNED	DESCRIPTION		
REVIEWED	4" PAVEMENT MARKING		
APPROVED	DATE DRAWN	TRAFFIC ENGINEER	DATE



PLAN
MAILBOX TURNOUT



PLAN
MAILBOX TURNOUT AT DRIVEWAY



SECTION A-A

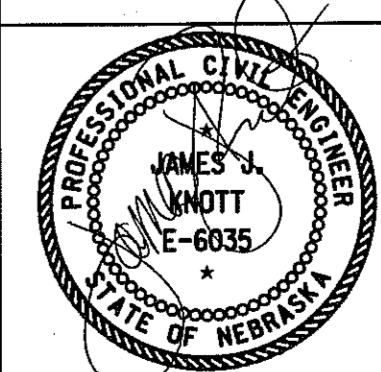
FOR SPECIAL MAILBOX SURFACING		
ADDED WIDTH FOR 8' TURNOUT	WITHOUT DRIVEWAY (SQ. YDS.)	WITH DRIVEWAY (SQ. YDS.)
2'	7	5
3'	11	8
4'	16	11
5'	22	14
6'	29	18
7'	36	22
8'	44	25

NOTE:
QUANTITIES ARE BASED ON DRIVEWAY WITH 24' WIDTH AND 25' RADII.

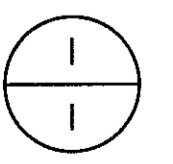
NOTE:
 $L = (\text{NUMBER OF SUPPORT POSTS} - 1) \times 3'-6"$

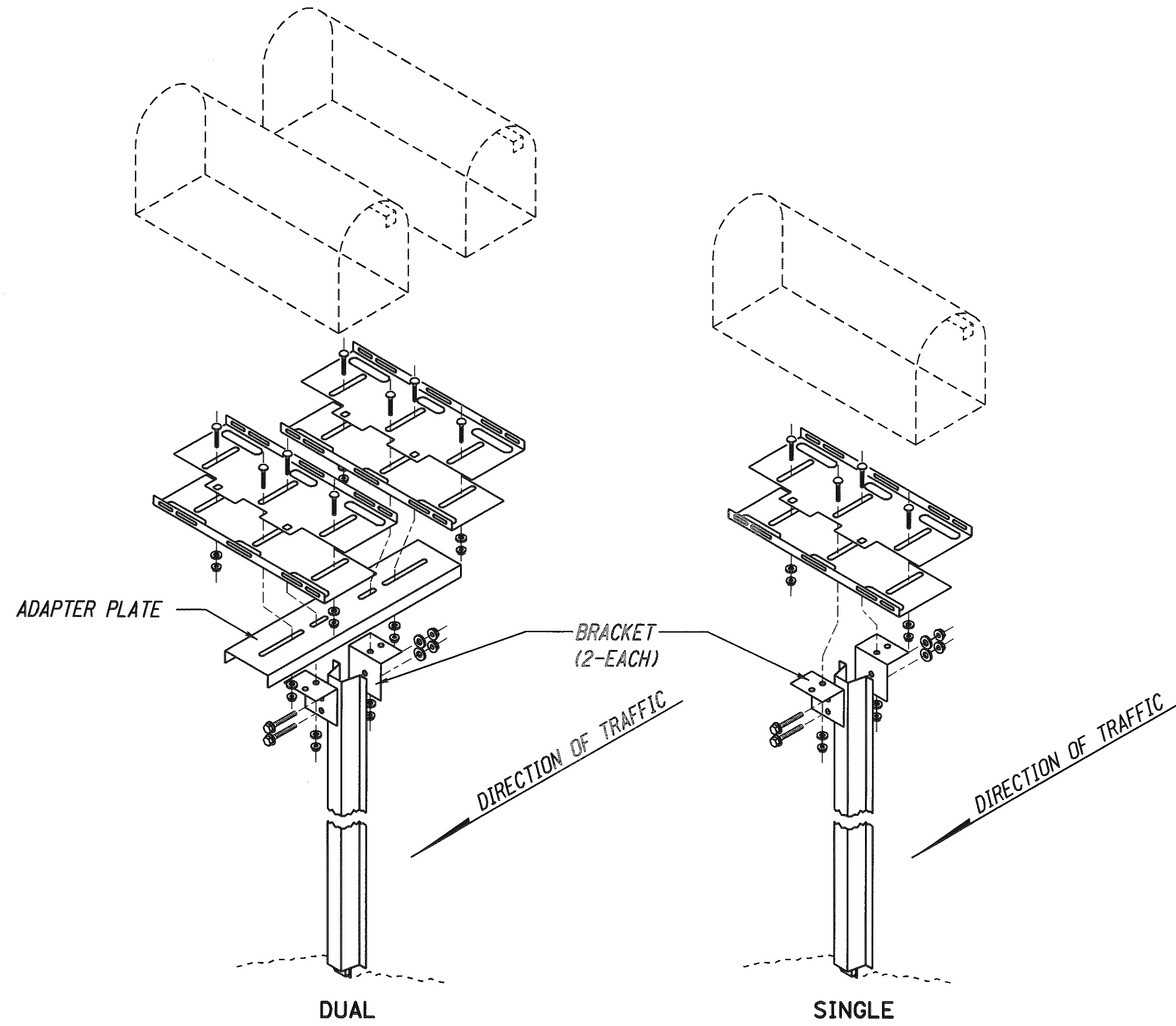
REV. NO.	DATE	DESCRIPTION OF REVISION
RI	FEB. 09	CHANGE 0.04'/FT TO 4%

NEBRASKA DEPARTMENT OF ROADS
STANDARD PLAN NO. 308-R1
**LOCAL ROADS
MAILBOX TURNOUT**

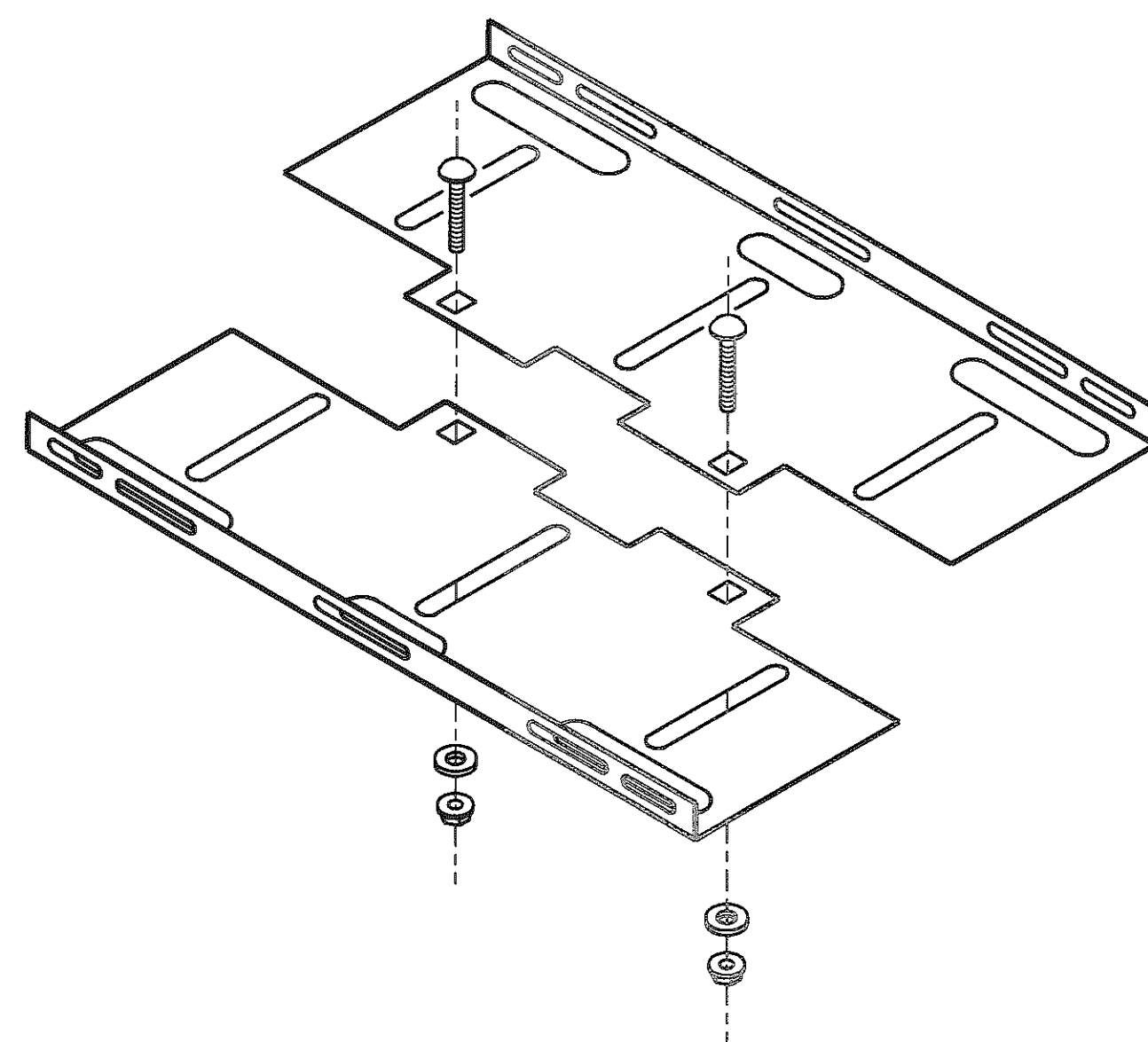


ORIGINAL:
JANUARY 23, 2008
DATE

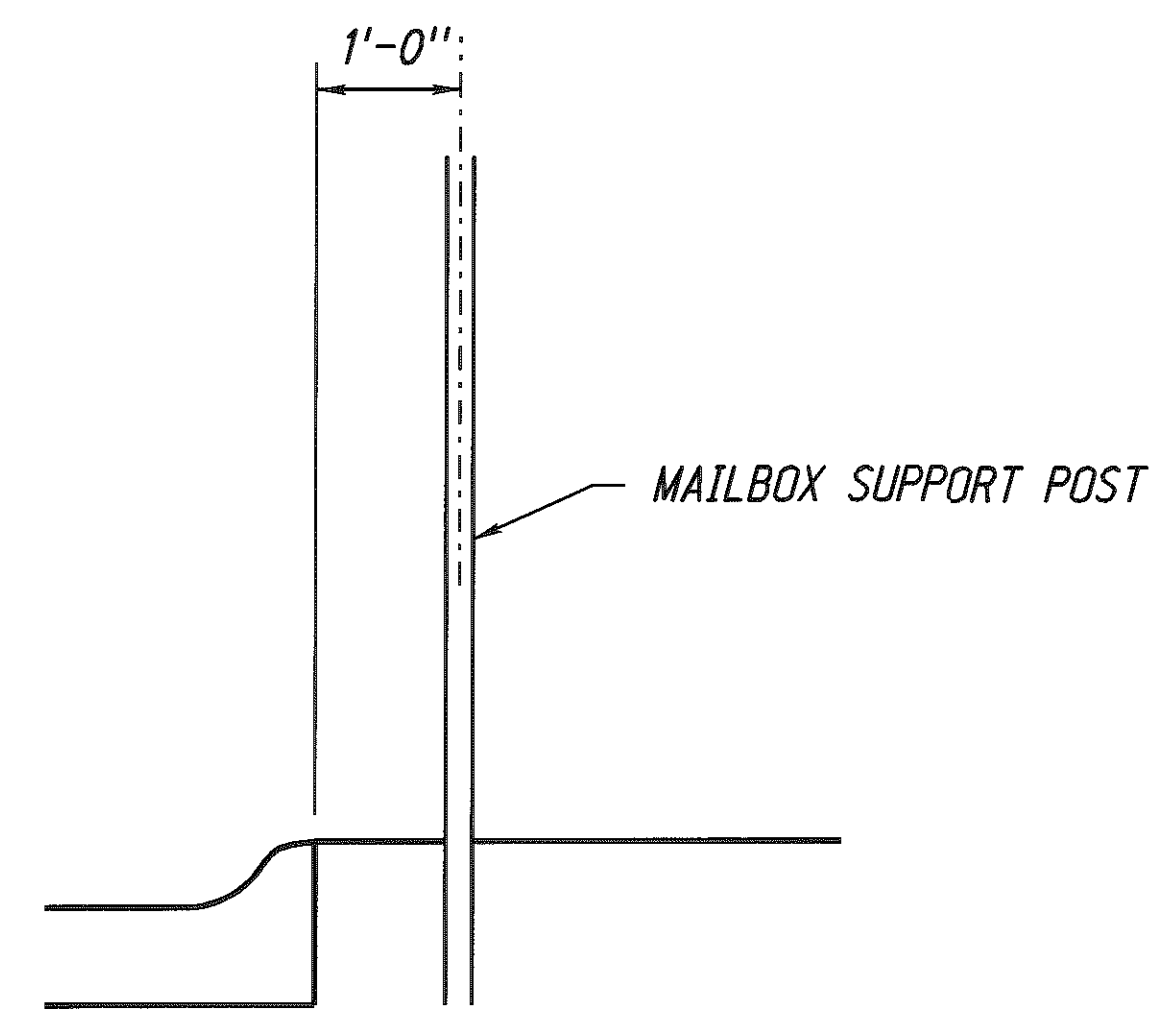




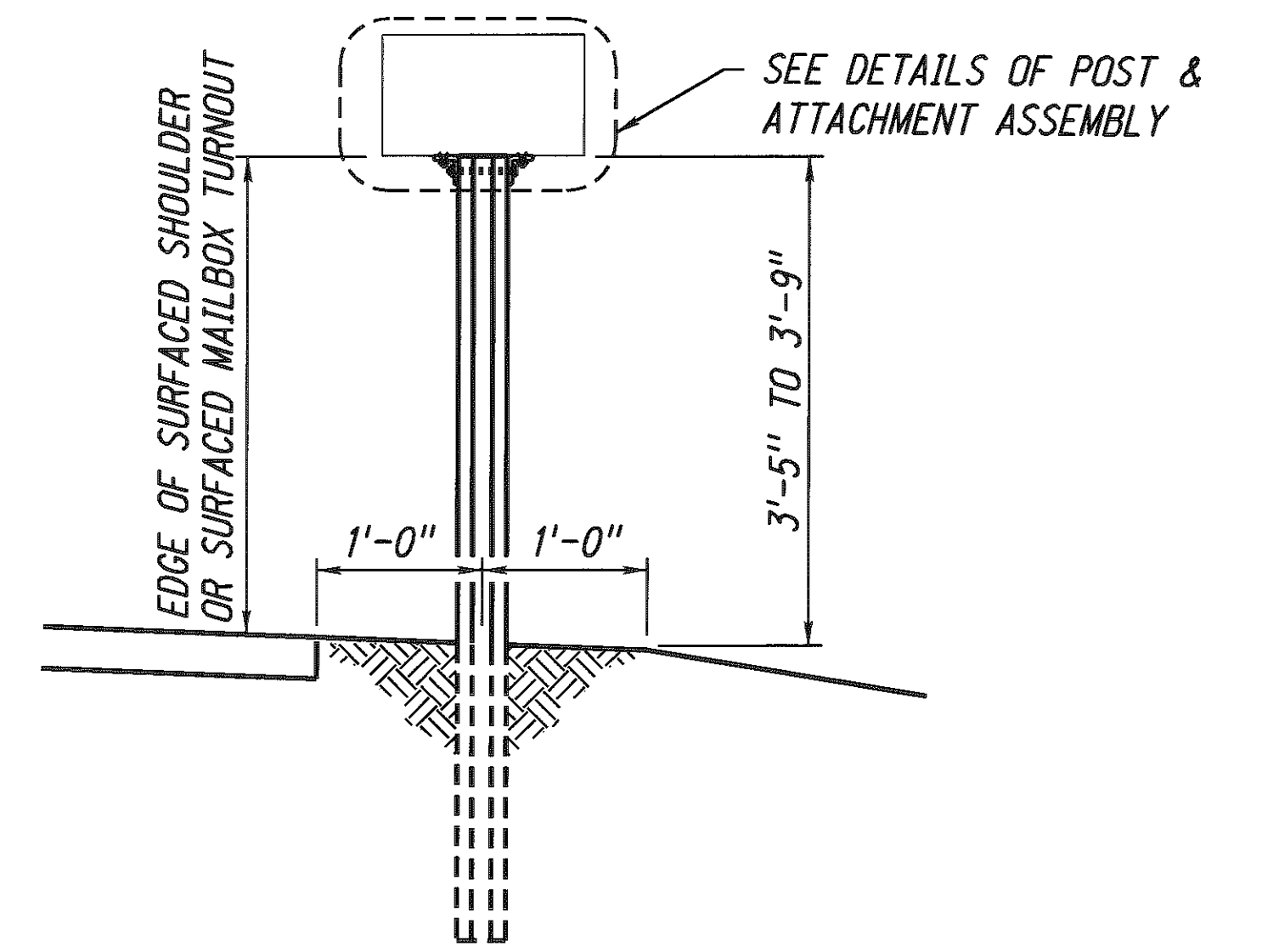
DETAILS OF POST AND ATTACHMENT ASSEMBLY



DETAILS OF PLATFORM ASSEMBLY FOR 12" MAILBOX



CURBED SECTION DETAIL



MAILBOX SUPPORT DETAIL

NOTES:

MAILBOXES SHALL BE LOCATED SO THAT THEY ARE ON THE RIGHT-HAND SIDE OF THE ROADWAY AS DETERMINED BY THE DIRECTION OF TRAVEL AS DESIGNATED BY THE LOCAL POSTMASTER FOR EACH DELIVERY ROUTE. ON ONE WAY STREETS MAILBOXES MAY BE ON THE LEFT SIDE IF DESIGNATED BY THE LOCAL POSTMASTER.

WHERE A MAILBOX IS LOCATED AT A DRIVEWAY, IT SHALL BE PLACED ON THE FAR SIDE OF THE DRIVEWAY AS DETERMINED BY THE DIRECTION OF TRAVEL AS DESIGNATED BY THE LOCAL POSTMASTER FOR EACH DELIVERY ROUTE.

NO MORE THAN TWO MAILBOXES MAY BE MOUNTED ON A SUPPORT STRUCTURE.

MOUNTING INSTRUCTIONS:

MOUNT BRACKETS TO POST WITH 2- $\frac{5}{16}$ " x 2 $\frac{1}{4}$ " HEX BOLTS AND LOCK WASHERS.

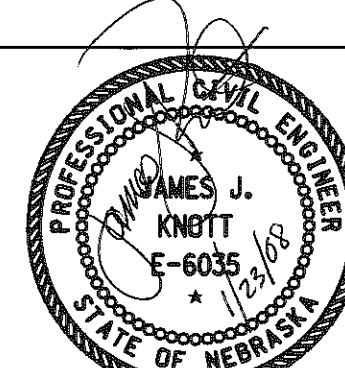
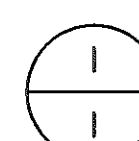
FASTEN PLATFORM TOGETHER WITH 2- $\frac{3}{8}$ " CARRIAGE BOLTS, FLAT WASHERS AND LOCK WASHERS THROUGH PLATFORM END SLOTS.

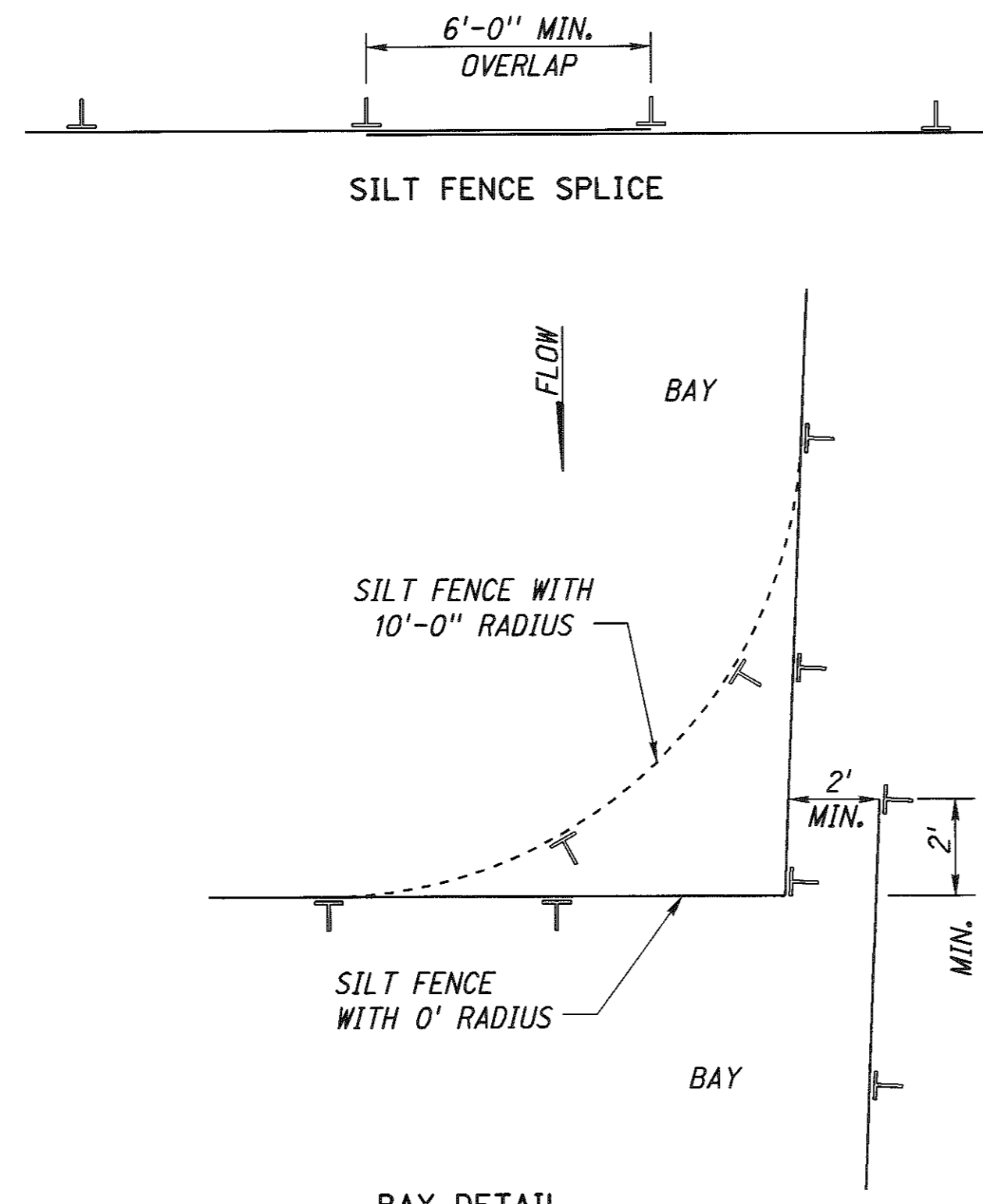
FASTEN PLATFORM TO BRACKETS WITH 2- $\frac{3}{8}$ " CARRIAGE BOLTS, FLAT WASHERS AND LOCK WASHERS THROUGH PLATFORM CENTER SLOTS.

FOR DUAL MAILBOX INSTALLATIONS, FASTEN PLATFORMS AND ADAPTER PLATES TO BRACKETS WITH 4- $\frac{3}{8}$ " CARRIAGE BOLTS, FLAT WASHERS AND LOCK WASHERS THROUGH PLATFORM CENTER SLOTS.

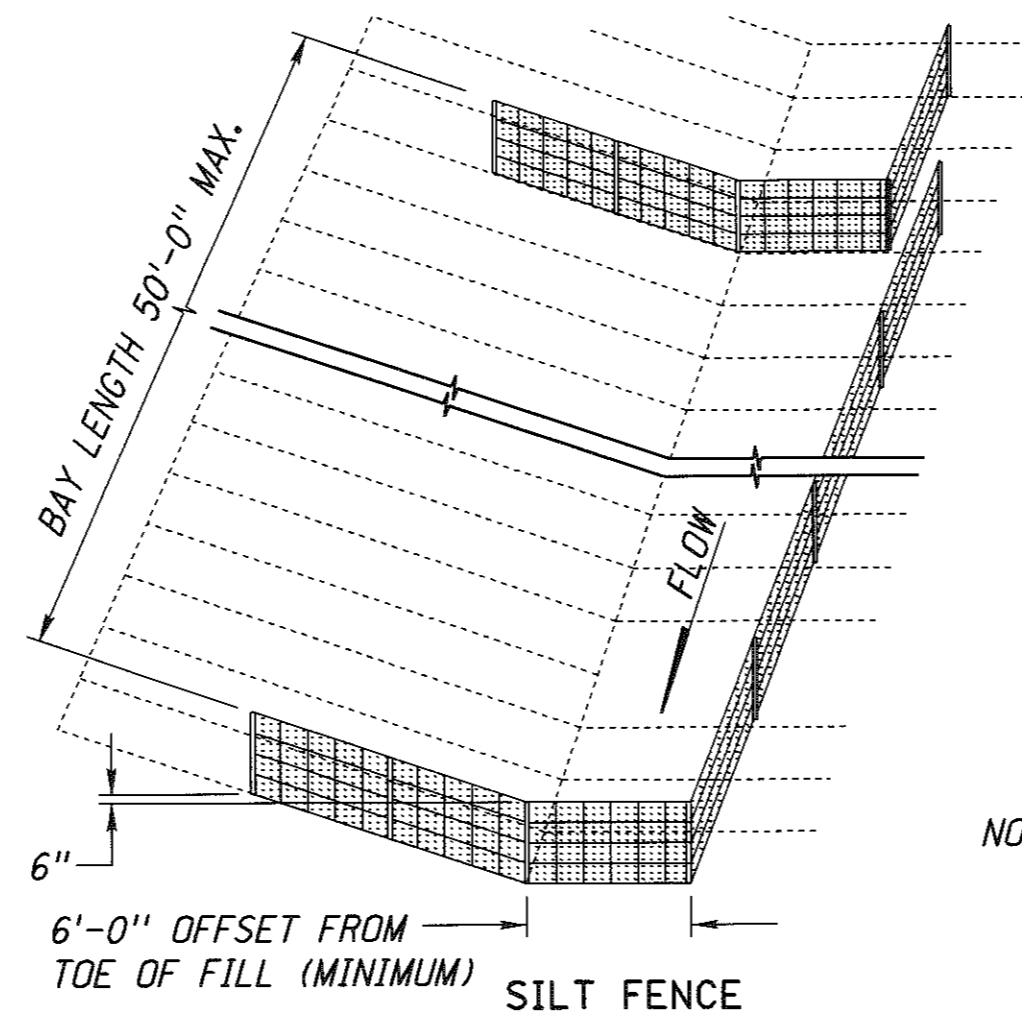
TO FASTEN MAILBOX TO PLATFORM:

- TYPE 1: USE 4- $\frac{1}{4}$ " x $\frac{3}{4}$ " HEX BOLTS WITH FLAT WASHERS AND LOCK WASHERS
- TYPE 1A: USE 6- $\frac{1}{4}$ " x $\frac{3}{4}$ " HEX BOLTS WITH FLAT WASHERS AND LOCK WASHERS
- TYPE 2: USE 6- $\frac{1}{4}$ " x $\frac{3}{4}$ " HEX BOLTS WITH FLAT WASHERS AND LOCK WASHERS

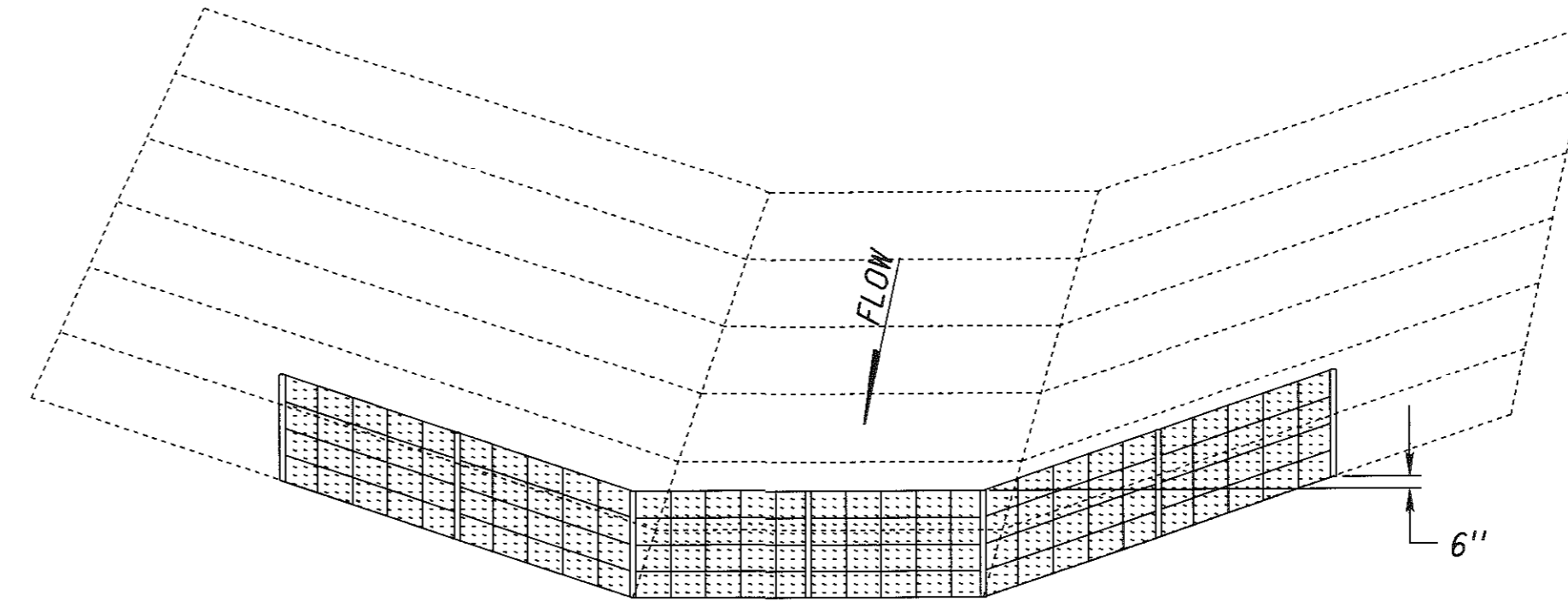
REV. NO.	DATE	DESCRIPTION OF REVISION
NEBRASKA DEPARTMENT OF ROADS STANDARD PLAN NO. 309		
MAILBOX SUPPORT POST		
		ORIGINAL: JANUARY 23, 2008 DATE
		



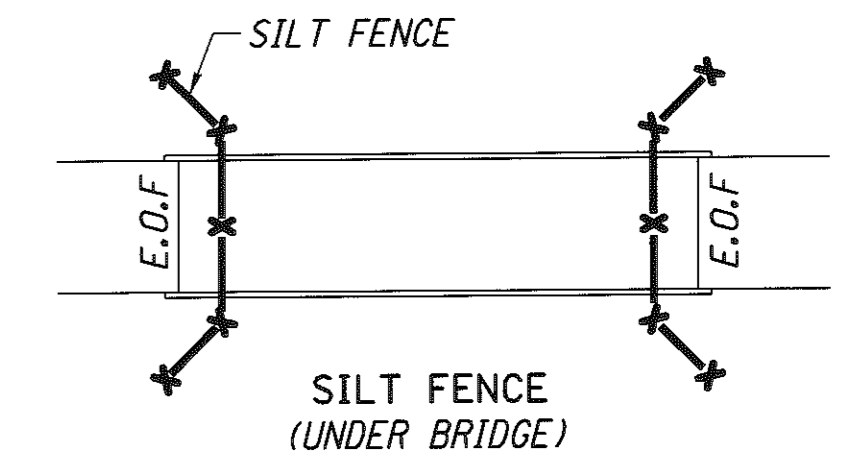
BAY DETAIL
NOTE: SILT FENCE AT CORNERS SHALL HAVE A RADIUS OF 0' MIN. TO 10'-0" MAX.



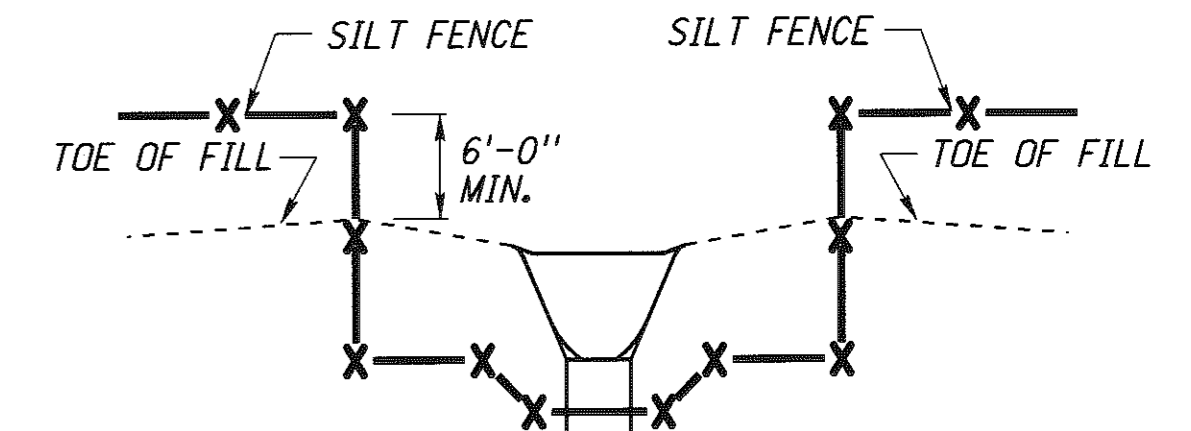
NOTE: POST SPACING 6'-0" MAX. MULTIPLE BAYS MAY BE USED



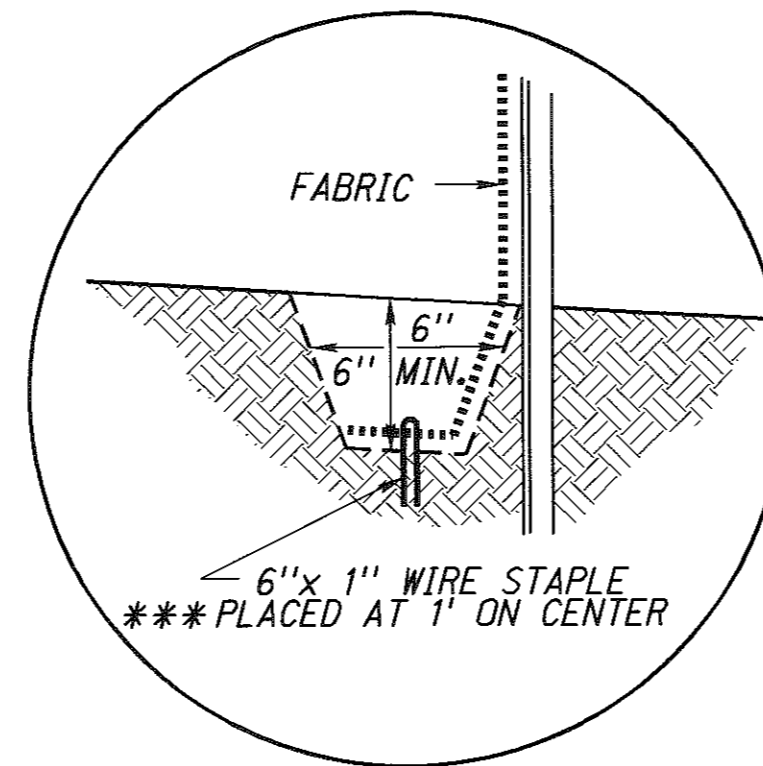
HIGH POROSITY SILT FENCE (ACROSS DITCH)



SILT FENCE (UNDER BRIDGE)

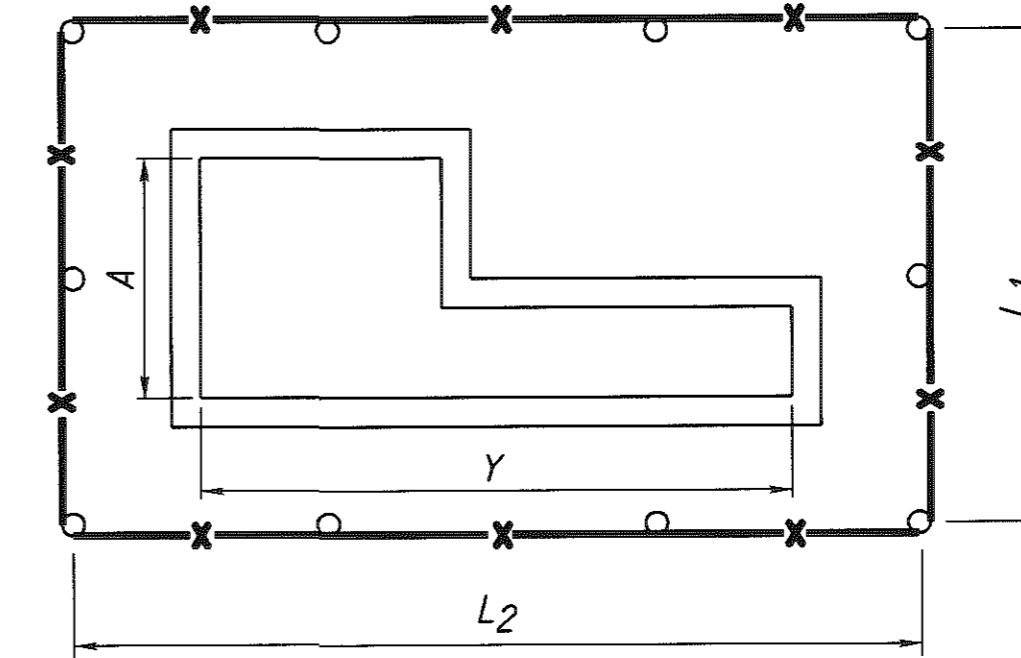


SILT FENCE (AT DRAINAGE STRUCTURE)

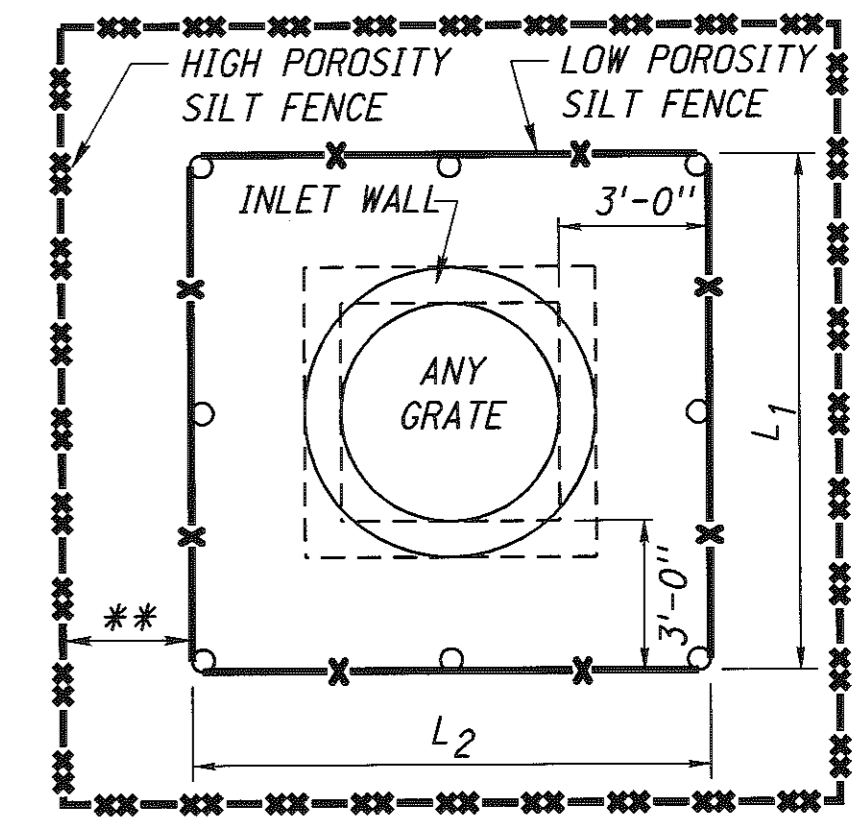


TRENCH DETAIL

*** SILT FENCE MAY ALSO BE INSTALLED WITH A SILT FENCE FLOW. NO STAPLING IS REQUIRED WHEN THE SILT FENCE FLOW IS USED.



$L_1 = A + 6'-0"$
 $L_2 = Y + 6'-0"$
CURB INLET

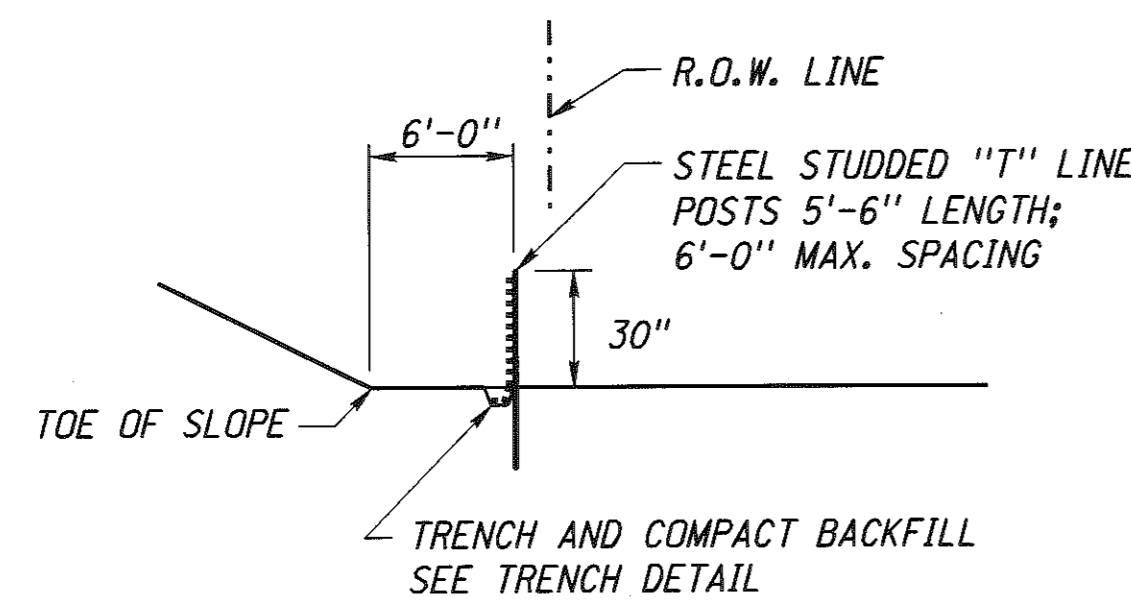


$L_1 & L_2 = \text{FACE OF INSIDE WALL} + 6'-0"$

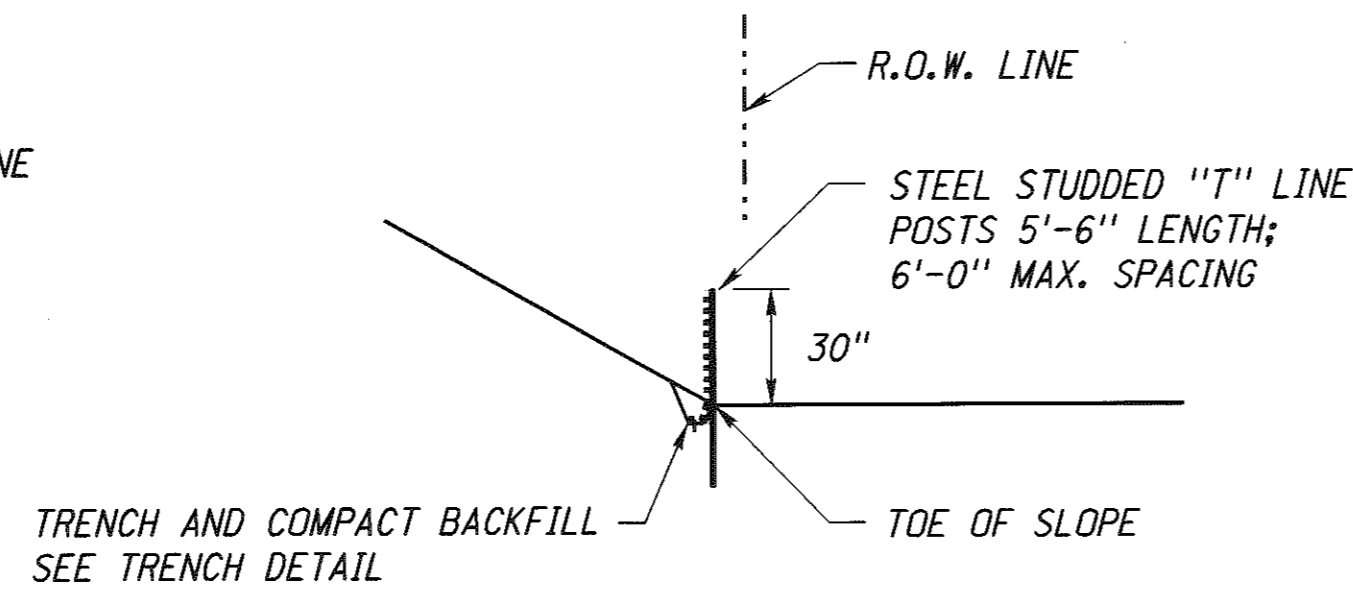
GRATE, AREA, MEDIAN INLETS OR JUNCTION BOXES

NOTE: ** 3'-0" IF POSSIBLE (MAY VARY)
SILT FENCE SHOULD BE 30" ABOVE GRADE (MAY VARY)
SILT FENCE MINIMUM ROLL WIDTH:
LOW POROSITY = 42"
HIGH POROSITY = 42"
LOW PROFILE = 36"
COIR SILT FENCE = 36"

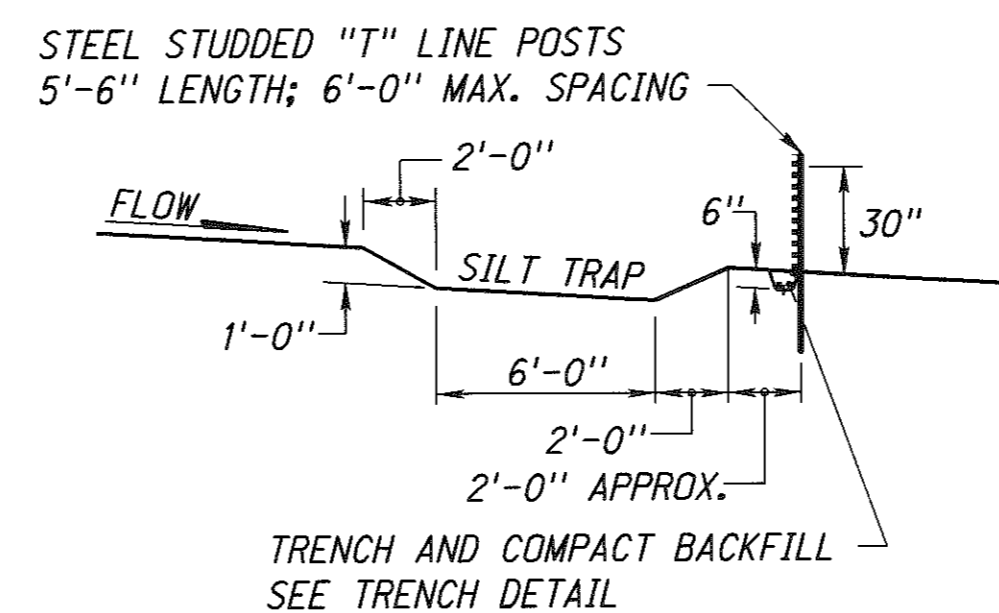
FOR EACH STEEL STUDDED "T" LINE POST, 3 PLASTIC CABLE TIES ARE REQUIRED.



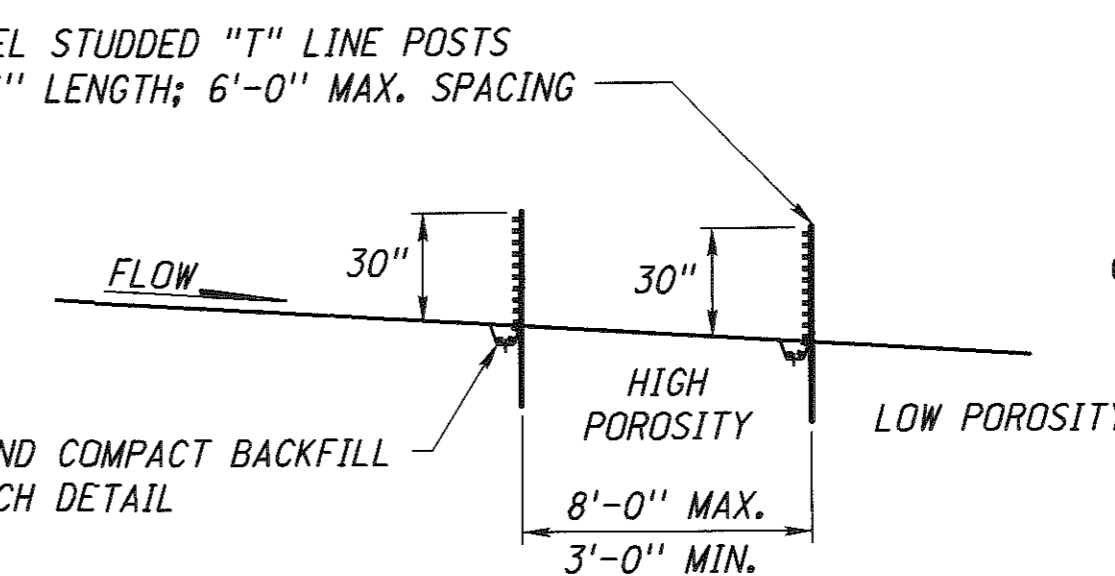
OPTION ONE (PREFERRED) SILT FENCE
(6'-0" OFFSET FROM TOE OF FILL)



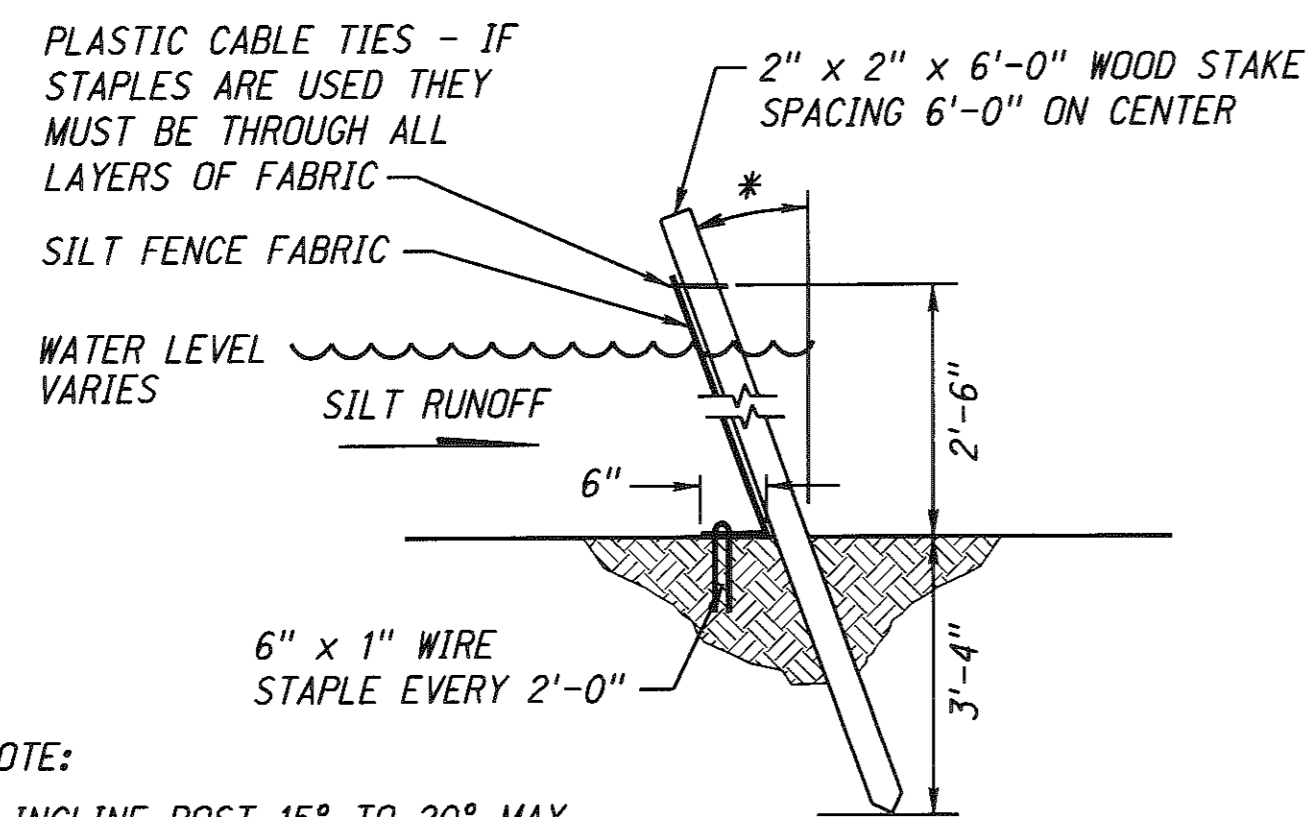
OPTION TWO (WITH LIMITED R.O.W.) SILT FENCE
(AT TOE OF FILL)



SILT FENCE WITH SILT TRAP (ACROSS DITCH)

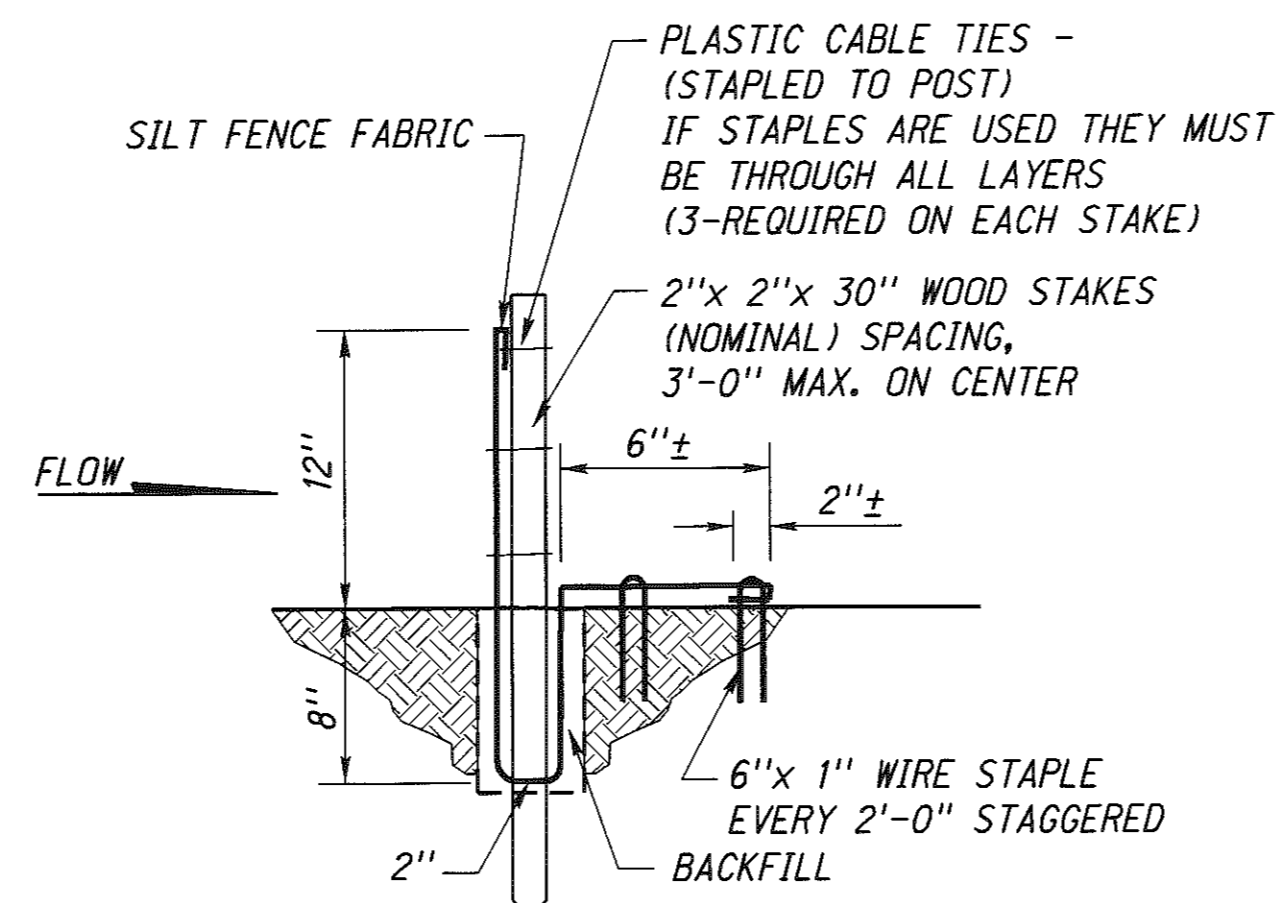


SILT FENCE (ACROSS DITCH)

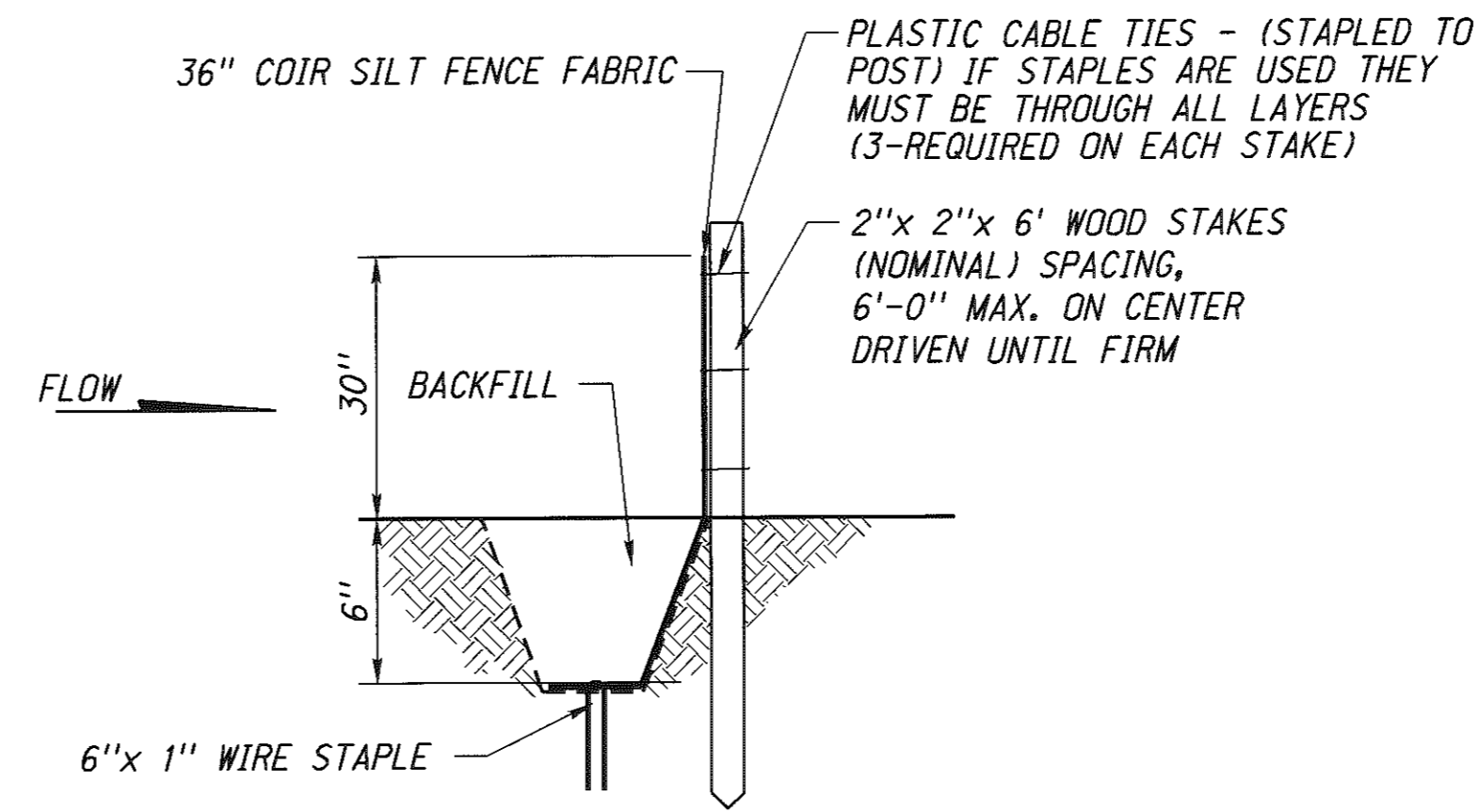


NOTE: * INCLINE POST 15° TO 20° MAX. FROM VERTICAL, TOWARD FLOW.

SILT FENCE (WET & BELOW WATER INSTALLATION)



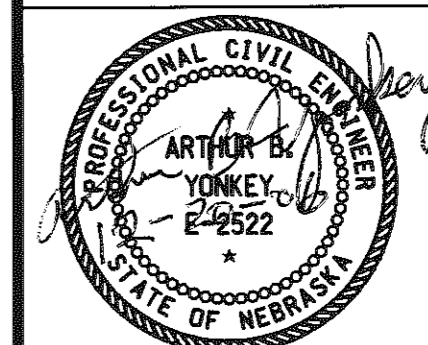
SILT FENCE - LOW PROFILE (LOW AND/OR HIGH POROSITY)



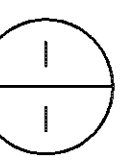
COIR SILT FENCE - ON WOOD POSTS - DRY INSTALLATION

REV. NO.	DATE	DESCRIPTION OF REVISION

NEBRASKA DEPARTMENT OF ROADS
STANDARD PLAN NO. 502
SILT FENCE DETAILS



APPROVED:
DECEMBER 18, 2006
DATE



CHANNELIZATION DEVICES

THE FUNCTION OF CHANNELIZATION DEVICES IS TO WARN DRIVERS OF CONDITIONS CREATED BY WORK ACTIVITIES IN OR NEAR THE TRAVELED WAY, TO PROTECT WORKERS IN THE TEMPORARY TRAFFIC CONTROL ZONE, AND TO GUIDE DRIVERS AND PEDESTRIANS SAFELY. CHANNELIZING DEVICES INCLUDE BUT ARE NOT LIMITED TO CONES, TUBULAR MARKERS, VERTICAL PANELS, DRUMS, BARRICADES, TEMPORARY RAISED ISLANDS, AND BARRIERS.

DEVICES USED FOR CHANNELIZATION SHOULD PROVIDE FOR SMOOTH AND GRADUAL TRAFFIC MOVEMENT FROM ONE LANE TO ANOTHER, ONTO A BYPASS OR DETOUR, OR TO REDUCE THE WIDTH OF THE TRAVELED WAY. THEY MAY ALSO BE USED TO SEPARATE TRAFFIC FROM THE WORK SPACE, PAVEMENT DROP-OFFS, PEDESTRIAN PATHS, OR OPPOSING DIRECTIONS OF TRAFFIC.

CHANNELIZING DEVICES SHOULD BE CONSTRUCTED AND BALLASTED TO PERFORM IN A PREDICTABLE MANNER WHEN INADVERTENTLY STRUCK BY A VEHICLE. IF STRUCK, THE DEVICE SHOULD YIELD OR BREAK AWAY, AND FRAGMENTS OR OTHER DEBRIS FROM THE DEVICE SHOULD NOT PENETRATE THE PASSENGER COMPARTMENT OF THE VEHICLE OR BE A POTENTIAL HAZARD TO WORKERS OR PEDESTRIANS IN THE IMMEDIATE AREA.

SPACING OF CHANNELIZING DEVICES SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO THE SPEED WHEN USED FOR THE TAPER CHANNELIZATION, AND A DISTANCE IN FEET OF TWICE THE SPEED WHEN USED FOR TANGENT CHANNELIZATION.

SPACING OF CHANNELIZATION DEVICES		
SPEED (MPH)	SPACING OF DEVICES IN FEET	
	TAPER	TANGENT
25	25 FT	50 FT
35	35 FT	70 FT
45	45 FT	90 FT
55	55 FT	110 FT
65	65 FT	130 FT
70	70 FT	140 FT
75	75 FT	150 FT

WARNING LIGHTS ON CHANNELIZING DEVICES. CONSIDERATION SHOULD BE GIVEN TO FOG OR SNOW AREAS, SEVERE ROADWAY CURVATURE, AND USUALLY CLUTTERED ENVIRONMENTS. FLASHING WARNING LIGHTS SHALL BE PLACED ON CHANNELIZING DEVICES USED SINGLY OR IN GROUPS TO MARK A SPOT CONDITION. STEADY-BURN WARNING LIGHTS MAY BE USED ON CHANNELIZING DEVICES USED IN A SERIES.

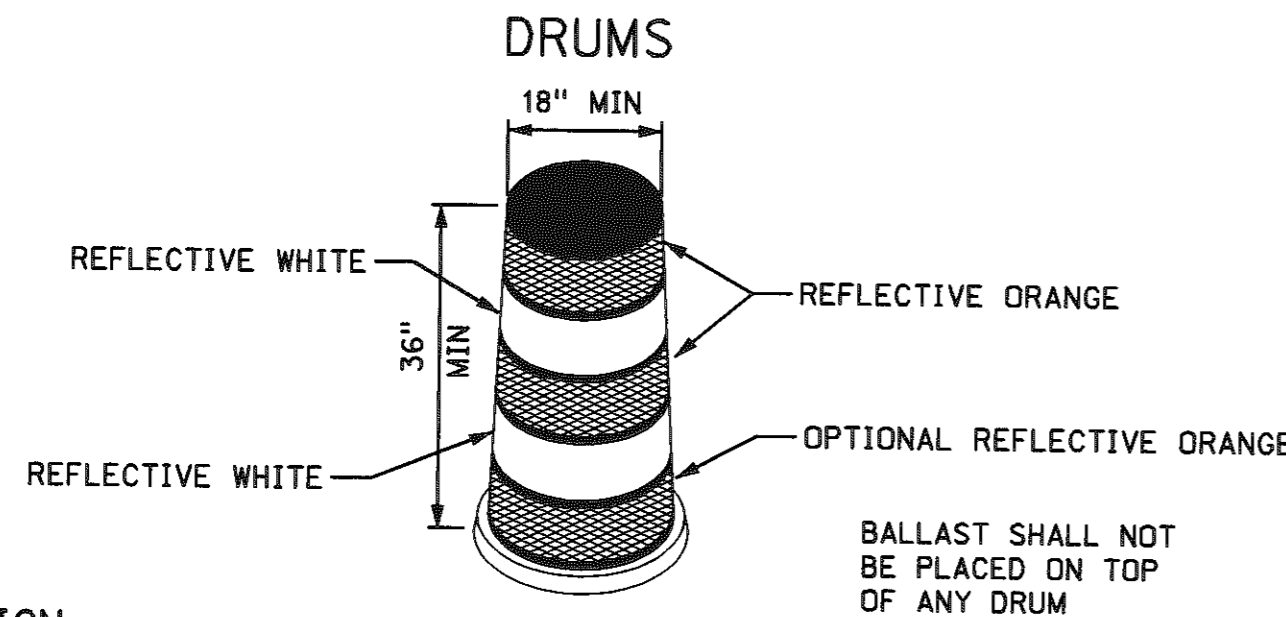
THE RETROREFLECTIVE MATERIAL USED ON CHANNELIZING DEVICES SHALL HAVE A SMOOTH, SEALED OUTER SURFACE, MEETING THE REQUIREMENTS OF THE ASTM SPECIFICATION: D4956, FOR TYPE III SHEETING. THE COEFFICIENT OF RETROREFLECTION OF CHANNELIZING DEVICES SHALL HAVE THE FOLLOWING MINIMUM BRIGHTNESS VALUES MEASURED AT 0.2° OBSERVATION ANGLE AND -4° ENTRANCE ANGLE. CANDELAS PER LUX PER SQUARE METER.

COEFFICIENT OF RETROREFLECTION			
WHITE	ORANGE	RED	YELLOW
125	50	22.5	85

IN ADDITION TO THE MINIMUM COEFFICIENT OF RETROREFLECTION, THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) "QUALITY STANDARD FOR WORK ZONE TRAFFIC CONTROL DEVICES" MAY BE USED AS A VISUAL GUIDE FOR DETERMINING IF A TRAFFIC CONTROL DEVICE IS ACCEPTABLE, MARGINAL OR UNACCEPTABLE.

THE NAME AND TELEPHONE NUMBER OF THE AGENCY, CONTRACTOR, OR SUPPLIER MAY BE SHOWN ON THE CHANNELIZING DEVICE BACK OR SUPPORT, BUT NOT ON THE DEVICES FACE. THE LETTERS AND NUMBERS SHALL BE A NON-REFLECTIVE COLOR AND NOT OVER 100 SQUARE CENTIMETERS IN TOTAL AREA.

PARTICULAR ATTENTION SHOULD BE GIVEN TO ASSURING THAT CHANNELIZING DEVICES ARE MAINTAINED AND KEPT CLEAN, VISIBLE, AND PROPERLY POSITIONED AT ALL TIMES. DEVICES SHALL BE REPLACED THAT ARE DAMAGED AND HAVE LOST A SIGNIFICANT AMOUNT OF THEIR RETROREFLECTIVITY AND EFFECTIVENESS.



DESIGN

DRUMS USED FOR TRAFFIC WARNING OR CHANNELIZATION SHALL BE CONSTRUCTED OF LIGHT-WEIGHT, FLEXIBLE, AND DEFORMABLE MATERIALS AND BE A MINIMUM OF 36 INCHES IN HEIGHT AND HAVE AT LEAST A 18 INCHES MINIMUM WIDTH, REGARDLESS OF ORIENTATION. THE PREDOMINANT COLOR OF THE DRUM SHALL BE ORANGE. STEEL DRUMS SHALL NOT BE USED. THE MARKINGS ON DRUMS SHALL BE HORIZONTAL, CIRCUMFERENTIAL, ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES 6 INCHES TO 8 INCHES WIDE. EACH DRUM SHALL HAVE A MINIMUM OF TWO ORANGE AND TWO WHITE STRIPES. ANY NON-RETROREFLECTIVE SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES, SHALL NOT EXCEED 2 INCHES WIDE. DRUMS SHALL HAVE CLOSED TOPS THAT WILL NOT ALLOW COLLECTION OF ROADWORK OR OTHER DEBRIS.

APPLICATION

DRUMS ARE MOST COMMONLY USED TO CHANNELIZE OR DELINEATE TRAFFIC FLOW BUT MAY ALSO BE USED SINGLY OR IN GROUPS TO MARK SPECIFIC LOCATIONS. DRUMS ARE HIGHLY VISIBLE AND HAVE GOOD TARGET VALUE, GIVEN THE APPEARANCE OF BEING FORMIDABLE OBSTACLES AND, THEREFORE, COMMAND THE RESPECT OF DRIVERS.

DRUMS SHOULD NOT BE WEIGHTED WITH SAND, WATER, OR ANY MATERIAL TO AN EXTENT THAT WOULD MAKE THEM HAZARDOUS TO MOTORISTS, PEDESTRIANS, OR WORKERS. WHEN THEY ARE USED IN REGIONS SUSCEPTIBLE TO FREEZING, THEY SHOULD HAVE DRAINAGE HOLES IN THE BOTTOM SO WATER WILL NOT ACCUMULATE AND FREEZE, CAUSING A HAZARD IF STRUCK BY A MOTORIST. BALLAST SHALL NOT BE PLACED ON TOP OF THE DRUM.

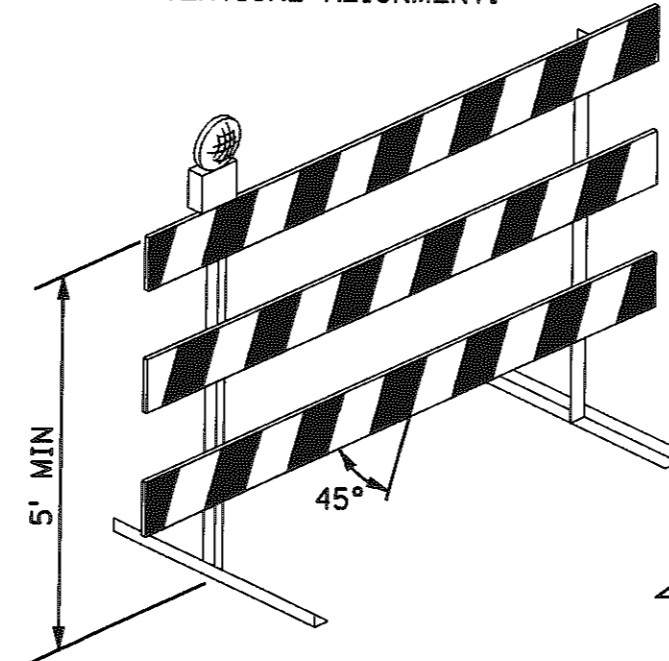
BARRICADES

BARRICADE TYPE	TYPE II	TYPE III
WIDTH OF RAIL *	8 INCHES MIN - 12 INCHES MAX	8 INCHES MIN - 12 INCHES MAX
LENGTH OF RAIL	36 INCHES	8 FEET **
WIDTH OF STRIPES	6 INCHES	6 INCHES
HEIGHT	36 INCHES	5 FEET
REFLECTIVE SHEETING	TYPE III	TYPE III
NUMBER OF REFLECTORIZED RAIL FACES	4 (TWO EACH DIRECTION)	6 (THREE EACH DIRECTION)

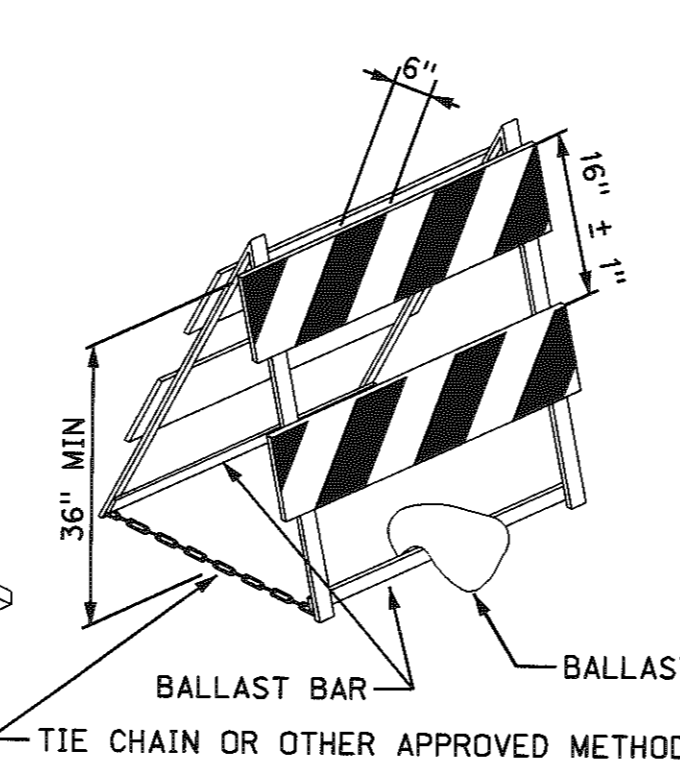
* NOMINAL DIMENSIONS ARE PERMISSIBLE WHEN CONSTRUCTED FROM LUMBER.
** WHEN LATERAL SPACE IS LIMITED, SOME TYPE III BARRICADES WITH A 4 FOOT LENGTH OF RAIL, MAY BE ALLOWED WHEN APPROVED BY THE ENGINEER.

TYPE III BARRICADE

TYPICAL MOUNTING OF FLASHING WARNING LIGHTS. LIGHTS SHALL ALWAYS BE IN VERTICAL ALIGNMENT.



TYPE II BARRICADE



DESIGN

A BARRICADE IS A PORTABLE OR FIXED DEVICE HAVING TWO OR THREE RAILS WITH APPROPRIATE MARKINGS. IT IS USED TO CONTROL TRAFFIC BY CLOSING, RESTRICTING, OR DELINEATING ALL OR A PORTION OF THE RIGHT-OF-WAY.

BARRICADES SHALL BE ONE OF TWO TYPES: TYPE II, OR TYPE III.

STRIPES ON BARRICADE RAILS SHALL BE ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES (SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION TRAFFIC IS TO PASS). THE STRIPES SHALL BE 6 INCHES WIDE. THE MINIMUM RAIL LENGTH IS 36 INCHES.

WHERE A BARRICADE EXTENDS ENTIRELY ACROSS A ROADWAY, THE STRIPES SHOULD SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH TRAFFIC MUST TURN. WHERE BOTH RIGHT AND LEFT TURNS ARE PROVIDED, THE STRIPES MAY SLOPE DOWNWARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE OR BARRICADES. WHERE NO TURNS ARE INTENDED, THE STRIPES SHOULD SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES.

BARRICADE RAILS SHOULD BE SUPPORTED IN A MANNER THAT WILL ALLOW THEM TO BE SEEN BY THE MOTORIST AND PROVIDE A STABLE SUPPORT NOT EASILY BLOWN OVER BY THE WIND OR TRAFFIC.

BARRICADES ARE LOCATED ADJACENT TO TRAFFIC AND ARE THEREFORE SUBJECT TO IMPACT BY ERRANT VEHICLES. BECAUSE OF THEIR VULNERABLE POSITION AND THE HAZARD THEY CREATE, THEY SHOULD BE CONSTRUCTED OF LIGHTWEIGHT MATERIALS AND HAVE NO RIGID STAY BRACING FOR A-FRAME DESIGNS. TYPE II BARRICADES SHALL BE BUILT WITH LEGS OR SUPPORTS THAT WILL COLLAPSE WHEN THE BARRICADE IS TIPPED OVER OR HAS BEEN LAID DOWN.

ON HIGH-SPEED ROADWAYS OR IN OTHER SITUATIONS WHERE BARRICADES MAY BE SUSCEPTIBLE TO OVERTURNING IN THE WIND, SANDBAGS SHOULD BE USED FOR BALLASTING. SANDBAGS MAY BE PLACED ON LOWER PARTS OF THE FRAME OR STAYS TO PROVIDE THE REQUIRED BALLAST BUT SHALL NOT BE PLACED ON TOP OF ANY STRIPED RAIL. BARRICADES SHALL NOT BE BALLASTED BY HEAVY OBJECTS SUCH AS ROCKS OR CHUNKS OF CONCRETE.

ON THE INTERSTATE, FREEWAY AND EXPRESSWAY SYSTEM, TYPE II BARRICADES SHALL NOT BE USED FOR CHANNELIZATION.

THE BARRICADE OWNERS NAME, NOT TO EXCEED 15 SQUARE INCHES SHALL BE SHOWN ON THE BARRICADE BACK OR SUPPORT, BUT NOT ON ITS FACE.

APPLICATION

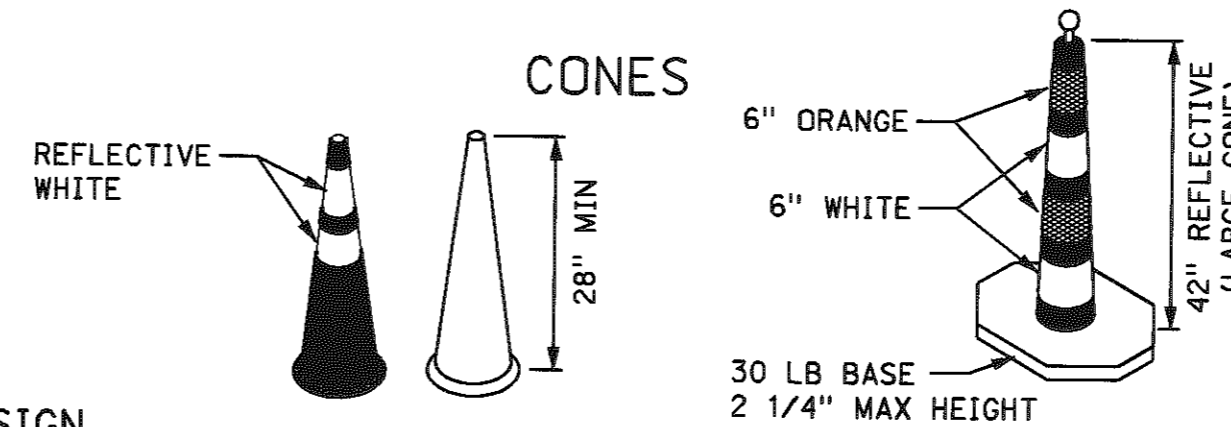
TYPE II BARRICADES ARE INTENDED FOR USE IN SITUATIONS WHERE TRAFFIC IS MAINTAINED THROUGH THE TEMPORARY TRAFFIC CONTROL ZONE. THEY MAY BE USED SINGLY OR IN GROUPS TO MARK A SPECIFIC CONDITION, OR THEY MAY BE USED IN A SERIES FOR CHANNELIZING TRAFFIC. TYPE III BARRICADES SHALL BE SUPPLEMENTED, WITH A LIGHTING DEVICE UNLESS SPECIFICALLY DELETED BY THE ENGINEER TO USE SOME BARRICADES WITHOUT LIGHTS.

TYPE III BARRICADES USED AT A ROAD CLOSURE MAY EXTEND COMPLETELY ACROSS A ROADWAY OR FROM CURB TO CURB. WHERE PROVISION IS MADE FOR ACCESS OF AUTHORIZED EQUIPMENT AND VEHICLES, THE RESPONSIBILITY FOR THE TYPE III BARRICADES SHOULD BE ASSIGNED TO A PERSON TO ENSURE PROPER CLOSURE AT THE END OF EACH WORK DAY.

WHEN A HIGHWAY IS LEGALLY CLOSED BUT ACCESS MUST STILL BE ALLOWED FOR LOCAL TRAFFIC, THE TYPE III BARRICADE SHOULD NOT BE EXTENDED COMPLETELY ACROSS A ROADWAY. A SIGN WITH THE APPROPRIATE LEGEND CONCERNING PERMISSIBLE USE BY LOCAL TRAFFIC SHALL BE MOUNTED.

NORMALLY PERMANENT SIGNS MOUNTED ON BARRICADES SHALL BE ERECTED ABOVE THE BARRICADE. THE SIGNS "ROAD CLOSED", OR "ROAD CONSTRUCTION AHEAD", FOR EXAMPLE CAN EFFECTIVELY BE MOUNTED ABOVE THE BARRICADE THAT CLOSURES THE ROADWAY. TYPE III BARRICADES SHALL BE SUPPLEMENTED WITH A LIGHTING DEVICE UNLESS SPECIFICALLY OMITTED BY THE ENGINEER. DETOUR ARROW AND LARGE WARNING ARROW SIGNS SHOULD BE PLACED ON THE FACE OF BARRICADE.

CONES



DESIGN

CONES SHALL BE PREDOMINANTLY ORANGE, FLOURESCENT RED-ORANGE, OR FLOURESCENT YELLOW/ORANGE, NOT LESS THAN 28 INCHES IN HEIGHT, AND SHALL BE MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING VEHICLES ON IMPACT. CONES WHEN ALLOWED ON THE INTERSTATE, FREEWAY OR EXPRESSWAY SYSTEM SHALL BE A MINIMUM OF 36 INCHES IN HEIGHT.

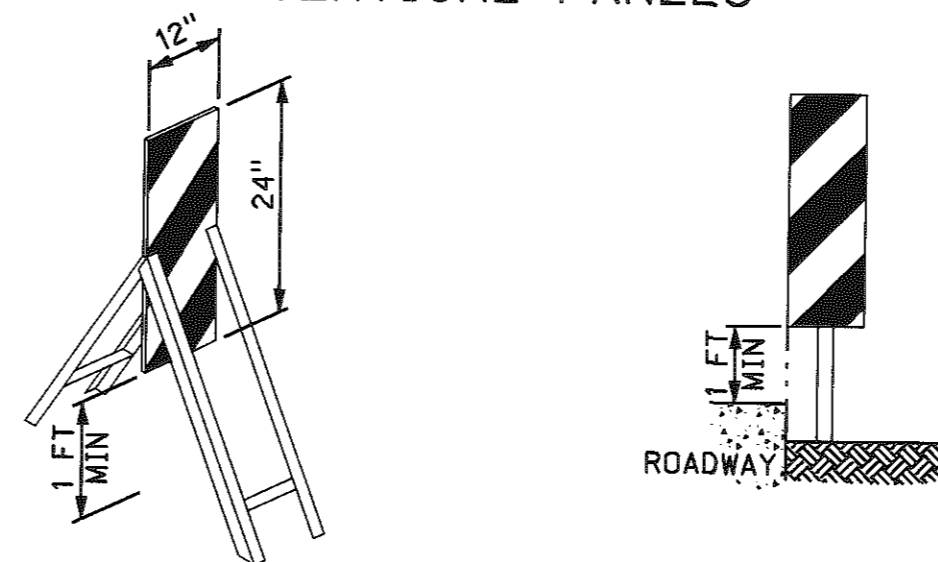
FOR NIGHTTIME USE, CONES SHALL BE RETROREFLECTIVE OR EQUIPPED WITH LIGHTING DEVICES FOR MAXIMUM VISIBILITY. RETROREFLECTION OF 28 INCH OR 36 INCH CONES SHALL BE PROVIDED BY A WHITE BAND 6 INCHES WIDE, NO MORE THAN 3 INCHES TO 4 INCHES FROM THE TOP OF THE CONE, AND AN ADDITIONAL 4 INCHES WIDE WHITE BAND A MINIMUM OF 2 INCHES BELOW THE 6 INCHES BAND. LARGE REFLECTIVE CONES SHALL BE PROVIDED WITH FOUR REFLECTIVE BANDS 6 INCHES EACH, ALTERNATING FROM THE TOP, ORANGE, WHITE, ORANGE, WHITE, WITH A TWO INCH SEPARATION BETWEEN BANDS. WHEN APPROVED BY THE ENGINEER, LARGE CONES MAY BE USED IN PLACE OF VERTICAL PANELS. LARGE CONES SHALL NOT BE USED IN PLACE OF DRUMS OR TYPE II BARRICADES.

APPLICATION

TRAFFIC CONES ARE USED TO CHANNELIZE TRAFFIC, DIVIDE OPPOSING TRAFFIC LANES, DIVIDE TRAFFIC LANES WHEN TWO OR MORE LANES ARE KEPT OPEN IN THE SAME DIRECTION, AND DELINEATE SHORT-DURATION MAINTENANCE AND UTILITY WORK. CONES SHALL NOT BE USED AT NIGHT ON RURAL HIGHWAYS, UNLESS SHOWN ON THE PLANS OR AS APPROVED OR DIRECTED BY THE ENGINEER.

STEPS SHOULD BE TAKEN TO ENSURE THAT CONES WILL NOT BE BLOWN OVER OR DISPLACED BY WIND OR MOVING TRAFFIC. CONES CAN BE DOUBLED UP TO INCREASE THEIR WEIGHT. SOME CONES ARE CONSTRUCTED WITH BASES THAT CAN BE FILLED WITH BALLAST. OTHERS HAVE SPECIAL WEIGHTED BASES, OR WEIGHTS SUCH AS SANDBAG RINGS THAT CAN BE DROPPED OVER THE CONES AND ONTO THE BASE TO PROVIDE ADDED STABILITY. BALLAST, HOWEVER, SHOULD NOT PRESENT A HAZARD IF THE CONES ARE INADVERTENTLY STRUCK.

VERTICAL PANELS



DESIGN

VERTICAL PANELS SHALL BE 12 INCHES WIDE AND AT LEAST 24 INCHES HIGH. THEY SHALL HAVE ORANGE AND WHITE STRIPES, AND BE RETROREFLECTIVE. PANEL STRIPE WIDTHS SHALL BE 6 INCHES, EXCEPT WHERE PANEL HEIGHTS ARE LESS THAN 36 INCHES, THEN 4 INCHES STRIPES MAY BE USED. IF USED FOR TWO-WAY TRAFFIC, BACK-TO-BACK PANELS SHALL BE USED.

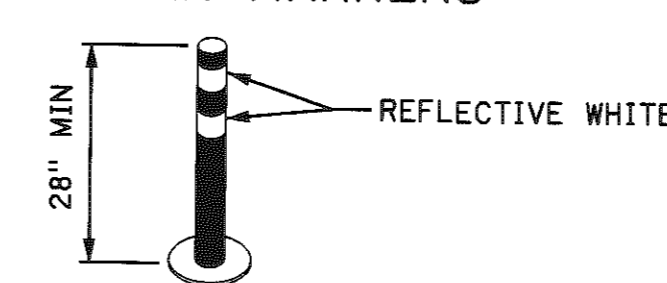
MARKINGS FOR VERTICAL PANELS SHALL BE ALTERNATING ORANGE AND WHITE RETROREFLECTORIZED STRIPES (SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION TRAFFIC IS TO PASS).

VERTICAL PANELS SHALL BE MOUNTED UPRIGHT WITH THE TOP A MINIMUM OF 36 INCHES ABOVE THE ROADWAY. VERTICAL PANELS NOT MOUNTED ABOVE CONCRETE BARRIERS SHALL HAVE LEGS OR SUPPORTS THAT WILL BREAK AWAY UPON IMPACT.

APPLICATION

VERTICAL PANELS MAY BE USED TO CHANNEL TRAFFIC, DIVIDE OPPOSING LANES OF TRAFFIC, DIVIDE TRAFFIC LANES OR IN PLACE OF BARRICADES WHERE SPACE IS LIMITED. WHEN APPROVED BY THE ENGINEER, VERTICAL PANELS MAY BE POST-MOUNTED ALONG THE SIDE OF THE ROADWAY.

TUBULAR MARKERS



DESIGN

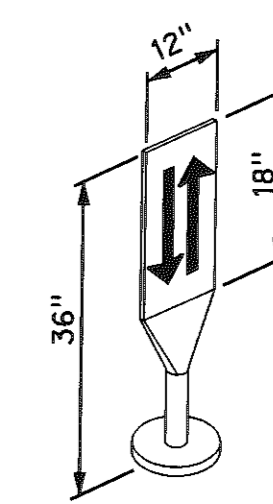
TUBULAR MARKERS SHALL BE PREDOMINANTLY ORANGE, NOT LESS THAN 28 INCHES HIGH, MINIMUM 2 INCHES WIDE WHEN FACING TRAFFIC, AND MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING IMPACTING VEHICLES.

FOR NIGHTTIME USE, TUBULAR MARKERS SHALL BE RETROREFLECTIVE. RETROREFLECTION OF TUBULAR MARKERS SHALL BE PROVIDED BY TWO 3 INCHES WIDE WHITE BANDS PLACED A MAXIMUM OF 2 INCHES FROM THE TOP, WITH A MAXIMUM OF 6 INCHES BETWEEN THE BANDS. THE BASE SHALL NOT BE WIDER THAN 12 INCHES OR HIGHER THAN 2 INCHES.

APPLICATION

TUBULAR MARKERS HAVE LESS VISIBLE AREA THAN OTHER DEVICES AND SHOULD BE USED ONLY WHERE SPACE RESTRICTIONS DO NOT ALLOW FOR THE USE OF OTHER MORE VISIBLE DEVICES. THEY MAY BE USED EFFECTIVELY TO DIVIDE OPPOSING LANES OF TRAFFIC OR TO DIVIDE TRAFFIC LANES WHEN TWO OR MORE LANES ARE KEPT OPEN IN THE SAME DIRECTION. STEPS SHOULD BE TAKEN TO ASSURE THAT TUBULAR MARKERS WILL NOT BE BLOWN OVER OR DISPLACED BY TRAFFIC BY EITHER AFFIXING THEM TO THE PAVEMENT WITH ANCHOR BOLTS OR ADHESIVE, USING WEIGHTED BASES, OR WEIGHTS THAT CAN BE DROPPED OVER THE TUBULAR MARKERS AND ONTO THE BASE TO PROVIDE ADDED STABILITY. BALLAST, HOWEVER, SHOULD NOT BE ALLOWED TO PRESENT A HAZARD IF THE TUBULAR MARKERS ARE INADVERTENTLY STRUCK. IF A NONCYLINDRICAL DEVICE IS USED, AND IT COULD BE DISPLAYED WITH A WIDTH LESS THAN THE MINIMUM FACING TRAFFIC, IT SHALL BE ATTACHED TO THE PAVEMENT TO ENSURE THAT THE WIDTH FACING TRAFFIC MEETS THE MINIMUM REQUIREMENTS.

OPPOSING TRAFFIC LANE DIVIDERS



DESIGN

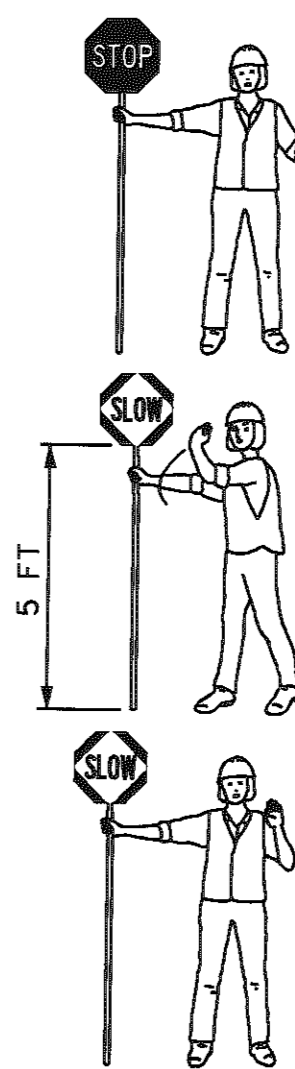
OPPOSING TRAFFIC LANE DIVIDER SHALL BE A TWO SIDED UPRIGHT REFLECTORIZED ORANGE PANEL, WITH A 12 INCHES WIDTH AND 18 INCHES HEIGHT. THE TOP OF THE PANEL SHALL BE 36 INCHES ABOVE THE PAVEMENT. THE SYMBOL ON EACH SIDE SHALL BE TWO OPPOSING BLACK ARROWS. THE LANE DIVIDER SHALL BE MADE OF LIGHTWEIGHT MATERIAL THAT WILL YIELD UPON IMPACT BY A VEHICLE. THE LANE DIVIDER BASE SHALL NOT BE WIDER THAN 12 INCHES OR HIGHER THAN 2 INCHES. THE BASE SHALL BE ATTACHED TO THE EXISTING SURFACE BY EPOXY OR OTHER SUITABLE ADHESIVE, TO ENSURE THAT THE PANEL REMAINS FACING TRAFFIC.

APPLICATION

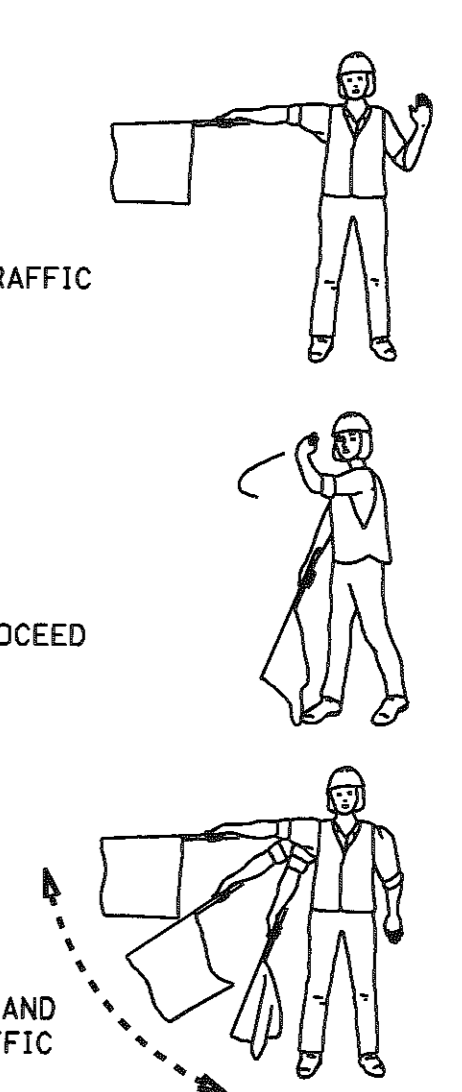
OPPOSING TRAFFIC LANE DIVIDERS ARE DELINEATION DEVICES USED AS CENTER LANE DIVIDERS TO SEPARATE OPPOSING TRAFFIC ON A TWO-LANE, TWO-WAY OPERATION.

FLAGGERS

REQUIRED METHOD



EMERGENCY USE ONLY



FLAGGER PADDLES

FLAGGER PADDLES SHALL BE A MINIMUM 18 INCH WIDE OCTAGON WITH LETTERS AT LEAST 6 INCHES HIGH, WITH A 5 FOOT RIGID HANDLE. FLAGS AND PADDLES SHALL NOT BE USED AT THE SAME TIME. IN EMERGENCIES WHERE THE STANDARD SIGN IS NOT AVAILABLE, A RED FLAG MAY BE USED BY FLAGGERS IN ACCORDANCE WITH THE FLAGGERS HANDBOOK. TO IMPROVE CONSPICUITY, THE STOP/SLOW PADDLES MAY BE SUPPLEMENTED BY ONE OR TWO SYMMETRICALLY POSITIONED FLASHING WHITE HIGH-INTENSITY LAMPS.

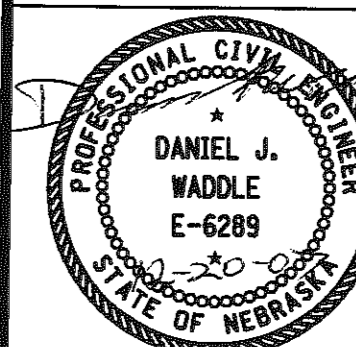
FLAGGERS

A FLAGGER MUST BE DRESSED FOR SAFETY. TO BE EASILY VISIBLE A FLAGGER MUST WEAR A VEST, SHIRT, OR JACKET, AND A CAP OR HARD HAT THAT IS BRIGHT ORANGE, YELLOW, YELLOW GREEN OR FLOURESCENT VERSIONS OF THESE COLORS (FADED OR SOILED GARMENT WILL NOT BE ALLOWED). FOR NIGHTTIME FLAGGING THE GARMENT SHALL BE REFLECTORIZED. FLAGGERS SHALL BE INSTRUCTED IN THE PROPER LOCATION, DUTIES AND PROCEDURES FOR FLAGGERS AS OUTLINED IN THE CURRENT MUTCD AND THE DEPARTMENT OF ROADS FLAGGER'S HANDBOOK. AS REQUIRED BY THE DEPARTMENT OF ROADS, THE FLAGGER SHALL BE CERTIFIED, AND HAVE IN THEIR POSSESSION, A VALID FLAGGER CERTIFICATION CARD.

REV. NO.	DATE	DESCRIPTION OF REVISION
R5	OCT. 98	REVISE CHANNELIZATION DEVICES, TAPER
R4	JAN. 95	REWRITE
R3	AUG. 88	WORDING, REFLECTIVITY

NEBRASKA DEPARTMENT OF ROADS
STANDARD PLAN NO. 920-R5

TRAFFIC CONTROL CONSTRUCTION AND MAINTENANCE



ORIGINAL:
OCTOBER 1998
DATE

1
2

LIGHTING DEVICES

FUNCTION

CONSTRUCTION AND MAINTENANCE ACTIVITIES OFTEN CREATE CONDITIONS ON OR NEAR THE TRAVELED WAY THAT ARE PARTICULARLY HAZARDOUS AT NIGHT. IT IS OFTEN DESIRABLE AND NECESSARY TO SUPPLEMENT THE REFLECTORIZED SIGNS, BARRIERS, AND CHANNELIZING DEVICES WITH LIGHTING DEVICES. STROBE TYPE LIGHTS ARE NOT PERMITTED.

BARRICADE WARNING LIGHTS DESIGN (BATTERY OPERATED)

TYPE "A" LOW INTENSITY FLASHING WARNING LIGHTS ARE MOST COMMONLY MOUNTED ON BARRICADES, OR WITH SIGNS AND ARE INTENDED TO WARN THE DRIVER THAT THEY ARE PROCEEDING IN A HAZARDOUS AREA. THESE LIGHTS SHALL NOT BE USED FOR DELINEATION, AS A SERIES OF FLASHING LIGHTS IN A ROW WOULD TEND TO OBSCURE THE DESIRED PATH.

TYPE "B" HIGH INTENSITY FLASHING WARNING LIGHTS ARE NORMALLY MOUNTED ON THE ADVANCE WARNING SIGNS. EXTREMELY HAZARDOUS SITE CONDITIONS WITHIN THE CONSTRUCTION AREA MAY REQUIRE THAT THE LIGHTS BE MOUNTED ON TYPE III BARRICADES, SIGNS, OR OTHER SUPPORTS. AS THESE LIGHTS ARE EFFECTIVE IN DAYLIGHT, THEY ARE DESIGNED TO OPERATE 24 HOURS PER DAY.

TYPE "C" STEADY BURN LIGHTS AS USED HEREIN, SHALL MEAN A SERIES OF LOW WATTAGE YELLOW ELECTRIC LIGHTS. WHERE LIGHTS ARE NEEDED TO DELINEATE OR MARK THE TRAVELED WAY THROUGH AND AROUND OBSTRUCTIONS IN A CONSTRUCTION MAINTENANCE AREA, THE DELINEATION SHALL BE ACCOMPLISHED BY USE OF STEADY BURNING LIGHTS.

FLASHING ARROW PANEL (DISPLAY)

AN ARROW PANEL IS A SIGN WITH A MATRIX OF ELEMENTS. THE MATRIX, CAPABLE OF EITHER FLASHING OR SEQUENTIAL DISPLAYS, IS INTENDED TO PROVIDE ADDITIONAL WARNING AND DIRECTIONAL INFORMATION TO ASSIST IN MERGING AND CONTROLLING TRAFFIC THROUGH OR AROUND A TEMPORARY TRAFFIC CONTROL ZONE. AN ARROW PANEL SHOULD BE USED IN COMBINATION WITH APPROPRIATE SIGNS, BARRICADES, OR OTHER TRAFFIC CONTROL DEVICES.

DESIGN

ARROW PANELS SHALL MEET THE SIZE AND SPECIFICATIONS OF THE MUTCD FOR TYPE C ARROW DISPLAYS.

FLASHING ARROW PANEL SHALL BE RECTANGULAR, OF SOLID APPEARANCE AND FINISHED IN NONREFLECTIVE BLACK. THE PANEL SHALL BE MOUNTED ON A VEHICLE, TRAILER OR OTHER SUITABLE SUPPORT. MINIMUM MOUNTING HEIGHT SHALL BE 7 FEET FROM THE ROADWAY TO THE BOTTOM OF THE PANEL, EXCEPT ON VEHICLE-MOUNTED PANELS, WHICH SHOULD BE AS HIGH AS PRACTICABLE.

THE FOLLOWING SELECTIONS SHALL BE PROVIDED ON THE ARROW PANEL	
OPERATING MODE	PANEL DISPLAY
FLASHING ARROW	RIGHT SHOWN; LEFT OPPOSITE
SEQUENTIAL ARROW	RIGHT SHOWN; LEFT OPPOSITE
SEQUENTIAL CHEVRON	RIGHT SHOWN; LEFT OPPOSITE
FLASHING DOUBLE ARROW	
FLASHING OR ALTERNATING CAUTION	OR

THE ARROW PANEL SHALL HAVE A MINIMUM SIZE OF 96 INCHES WIDE AND 48 INCHES HIGH. THE MINIMUM LEGIBILITY DISTANCE SHALL BE 1 MILE. THE PANEL SHALL CONTAIN 25 LAMP ELEMENTS. ARROW PANEL ELEMENTS SHALL BE CAPABLE OF A MINIMUM 50 PERCENT DIMMING, AUTOMATICALLY WHEN AMBIENT LIGHT FALLS BELOW 50 LUX.

THE MINIMUM ELEMENT "ON TIME" SHALL BE 50 PERCENT FOR THE FLASHING MODE AND EQUAL INTERVALS OF 25 PERCENT FOR EACH SEQUENTIAL CHEVRON PHASE. THE FLASHING RATE SHALL BE NO FEWER THAN 25 NOR MORE THAN 40 FLASHES PER MINUTE.

APPLICATION

A FLASHING ARROW OR SEQUENTIAL CHEVRON MAY BE USED FOR STATIONARY OR MOVING LANE CLOSURES. AN ARROW DISPLAY IN THE CAUTION MODE SHALL BE USED ONLY FOR SHOULDER WORK, BLOCKING THE SHOULDER, OR ROADSIDE WORK NEAR THE SHOULDER. AN ARROW DISPLAY SHALL NOT BE USED ON A TWO-LANE TWO-WAY ROADWAY FOR TEMPORARY ONE-LANE OPERATION OR LANE SHIFTS. AN ARROW DISPLAY SHALL NOT BE USED ON A MULTILANE ROADWAY TO LATERALLY SHIFT ALL LANES OF TRAFFIC, BECAUSE UNNECESSARY LANE CHANGING MAY RESULT.

TRAFFIC SIGNALS

TRAFFIC SIGNALS MAY BE ALLOWED AT CERTAIN EQUIPMENT CROSSINGS WHERE THE VOLUME OF FILL MATERIAL AND THE NUMBER OF EQUIPMENT CROSSINGS PER HOUR IS HIGH. TRAFFIC SIGNALS MAY BE ALLOWED AT CERTAIN BRIDGE CONSTRUCTION SITES WHERE A COMBINATION OF ONE-WAY TRAFFIC AND HIGH TRAFFIC VOLUMES WOULD BE BEST SERVED WITH THIS TYPE OF TRAFFIC CONTROL.

ALL TRAFFIC SIGNAL REQUESTS AND METHOD OF INSTALLATION ON THE STATE HIGHWAY SYSTEM SHALL BE IN COMPLIANCE WITH THE MUTCD AND MUST BE APPROVED BY THE STATE TRAFFIC ENGINEER.

FLOOD LIGHTS

WHEN NIGHTTIME WORK IS REQUIRED, FLOODLIGHTS SHOULD BE USED TO ILLUMINATE FLAGGER STATIONS, EQUIPMENT CROSSINGS, AND OTHER AREAS WHERE EXISTING LIGHT IS NOT ADEQUATE FOR THE WORK TO BE PERFORMED SAFELY.

IN NO CASE SHALL FLOODLIGHTING BE PERMITTED TO CREATE A DISABLING GLARE FOR DRIVERS. THE ADEQUACY OF THE FLOODLIGHT PLACEMENT AND ELIMINATION OF POTENTIAL GLARE SHOULD BE CHECKED BY DRIVING THROUGH THE PROJECT.

PAVEMENT MARKING

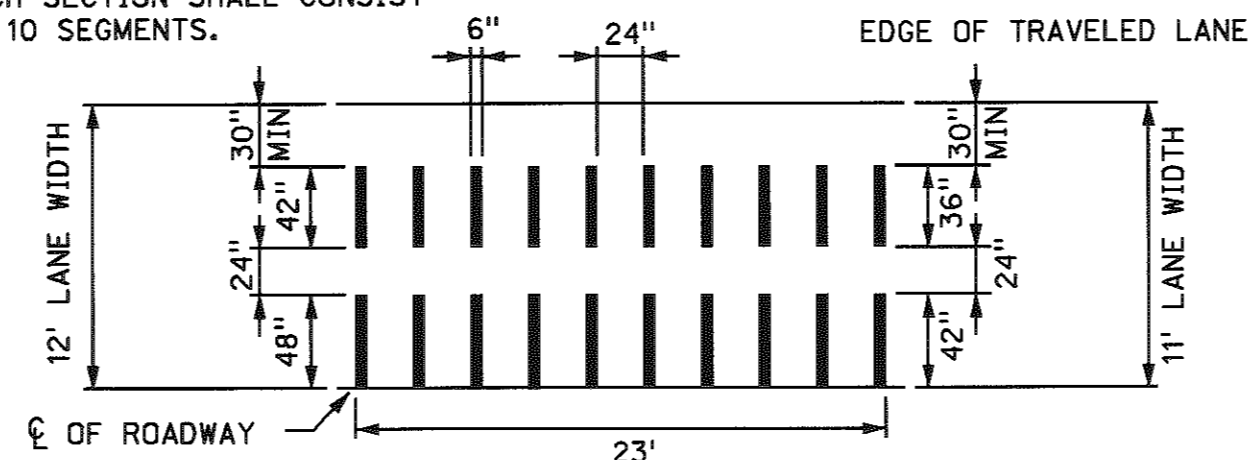
IT IS INTENDED TO THE EXTENT POSSIBLE, THAT MOTORISTS BE PROVIDED MARKINGS WITHIN A WORK AREA COMPARABLE TO THE MARKINGS NORMALLY MAINTAINED ALONG ADJACENT ROADWAYS, PARTICULARLY AT EITHER END OF THE WORK AREA.

ALL MARKINGS AND DEVICES USED TO DELINEATE VEHICLE AND PEDESTRIAN PATHS SHALL BE CAREFULLY REVIEWED DURING DAYTIME AND NIGHTTIME PERIODS TO AVOID INADVERTENTLY LEADING DRIVERS OR PEDESTRIANS FROM THE INTENDED PATH.

PAVEMENT MARKINGS NO LONGER APPLICABLE SHALL BE REMOVED UNLESS OTHERWISE APPROVED BY THE ENGINEER.

RUMBLE STRIPS

EACH SECTION SHALL CONSIST OF 10 SEGMENTS.



DESIGN

RUMBLE STRIPS MAY BE MADE OF ASPHALT PAVING MATERIAL, EPOXY AND AGGREGATE OR OTHER SUITABLE MATERIAL WHICH WILL MAINTAIN A DESIRABLE RUMBLE EFFECT. THE RUMBLE STRIP SHOULD HAVE AN INSTALLED HEIGHT OF 5/8". PREFORMED RUMBLE STRIPS MAY BE USED PROVIDED THEY HAVE A MINIMUM 1/2" HEIGHT.

TAPERS

TAPERS ARE CREATED USING A SERIES OF CHANNELIZING DEVICES OR PAVEMENT MARKINGS PLACED TO MOVE TRAFFIC OUT OF OR INTO ITS NORMAL PATH.

MERGING TAPER

A MERGING TAPER REQUIRES THE LONGEST DISTANCE BECAUSE DRIVERS ARE REQUIRED TO MERGE WITH AN ADJACENT LANE OF TRAFFIC AT THE PREVAILING SPEED. THE TAPER SHOULD BE LONG ENOUGH TO ENABLE MERGING DRIVERS TO ADJUST THEIR SPEEDS AND MERGE INTO A SINGLE LANE BEFORE THE END OF THE TRANSITION.

SHIFTING TAPER

A SHIFTING TAPER IS USED WHEN MERGING IS NOT REQUIRED, BUT A LATERAL SHIFT IS NEEDED. APPROXIMATELY ONE-HALF L HAS BEEN FOUND TO BE ADEQUATE. WHERE MORE SPACE IS AVAILABLE, IT MAY BE BENEFICIAL TO USE LONGER TAPERS. GUIDANCE FOR CHANGES IN ALIGNMENT MAY ALSO BE ACCOMPLISHED BY USING HORIZONTAL CURVES DESIGNED FOR NORMAL HIGHWAY SPEEDS.

SHOULDER TAPERS

A SHOULDER TAPER MAY BE BENEFICIAL ON HIGH-SPEED ROADWAYS WITH IMPROVED SHOULDERS THAT MAY BE MISTAKEN FOR DRIVING LANES (WHEN WORK IS OCCURRING IN THE SHOULDER AREAS). IF USED, SHOULDER TAPERS APPROACHING THE ACTIVITY AREA SHOULD HAVE A LENGTH OF ABOUT ONE-THIRD L.

DOWNSTREAM TAPERS

THE DOWNSTREAM TAPER MAY BE USEFUL IN TERMINATION AREAS TO PROVIDE A VISUAL CUE TO THE DRIVER THAT ACCESS IS AVAILABLE TO THE ORIGINAL LANE/PATH THAT WAS CLOSED. WHEN USED, IT SHOULD HAVE A MINIMUM LENGTH OF ABOUT 100 FEET PER LANE, WITH DEVICES SPACED ABOUT 20 FEET APART.

ONE LANE, TWO WAY TAPER

THE ONE-LANE, TWO-WAY TRAFFIC TAPER IS USED IN ADVANCE OF AN ACTIVITY AREA THAT OCCUPIES PART OF A TWO-WAY ROADWAY IN SUCH A WAY THAT A PORTION OF THE ROAD IS USED ALTERNATELY BY TRAFFIC IN EACH DIRECTION. A SHORT TAPER HAVING A MAXIMUM LENGTH OF 100 FEET WITH CHANNELIZING DEVICES AT APPROXIMATELY 20-FOOT SPACINGS SHOULD BE USED TO GUIDE TRAFFIC INTO THE ONE-WAY SECTION.

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES	
TYPE OF TAPER	TAPER LENGTH (FEET)
MERGING TAPER	L MINIMUM
SHIFTING TAPER	1/2 L MINIMUM
SHOULDER TAPER	1/3 L MINIMUM
TWO-WAY TAPER	100 FEET MAXIMUM

FORMULAS FOR L	
SPEED	FORMULA
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR GREATER	$L = WS$

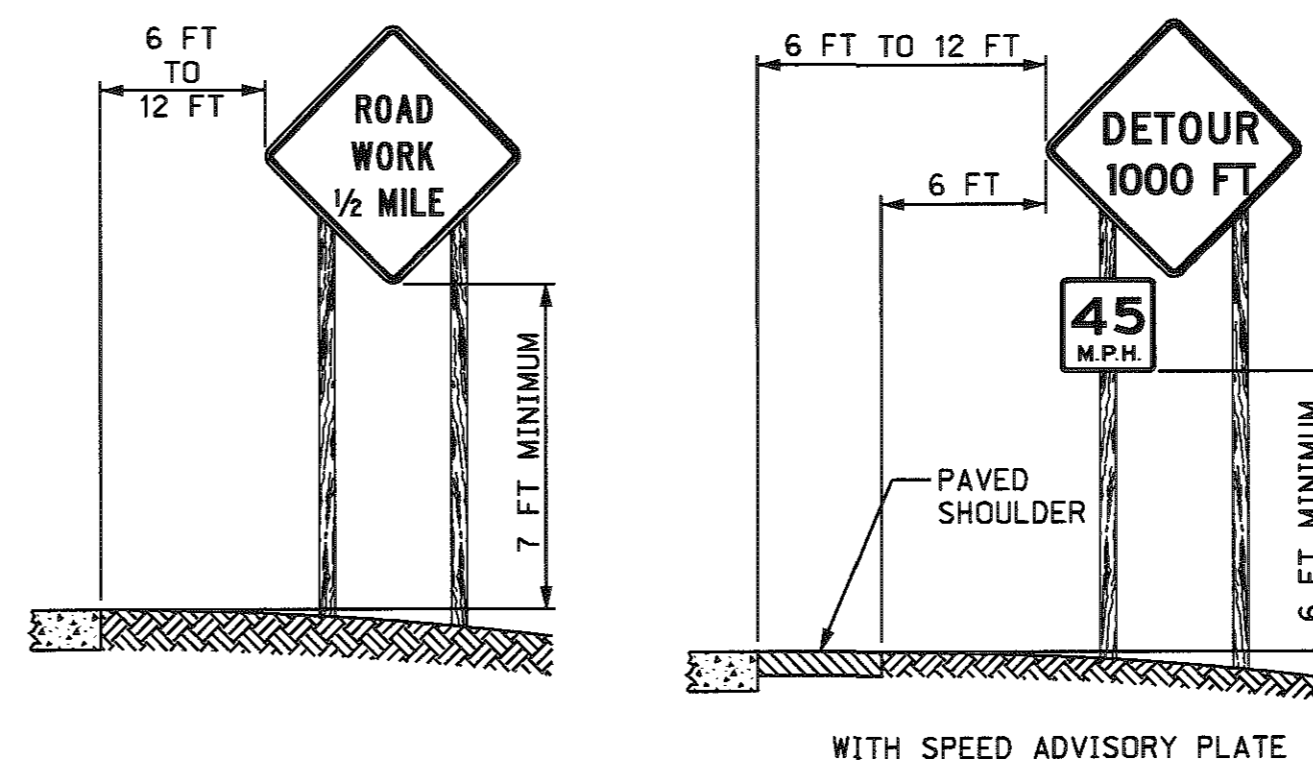
L = TAPER LENGTH IN FEET
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED LIMIT PRIOR TO WORK IN MPH

SPEED (MPH)	LANE WIDTH			
	10 FT	11 FT	12 FT	12 FT
25	105	115	125	
30	150	165	180	
35	205	225	245	
40	270	295	320	
45	450	495	540	
50	500	550	600	
55	550	605	660	
65	650	715	780	
70	700	770	840	
75	750	825	900	

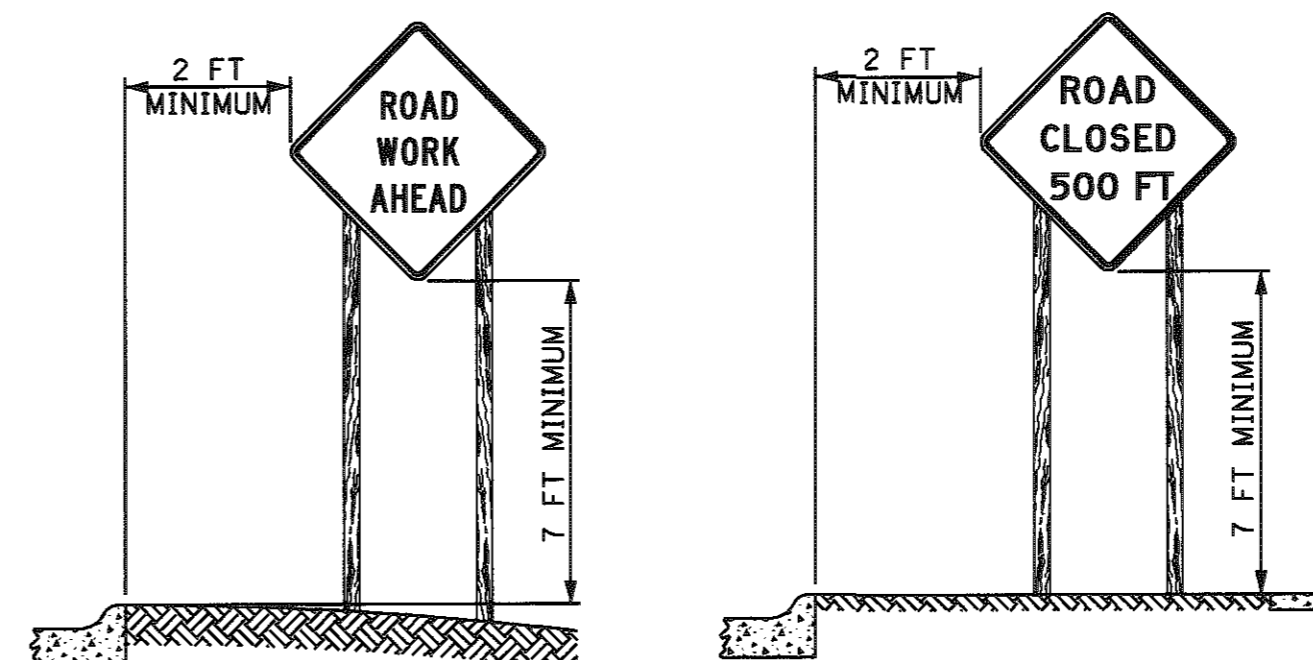
ROADSIDE SIGNS

HEIGHT AND LATERAL LOCATION OF SIGNS

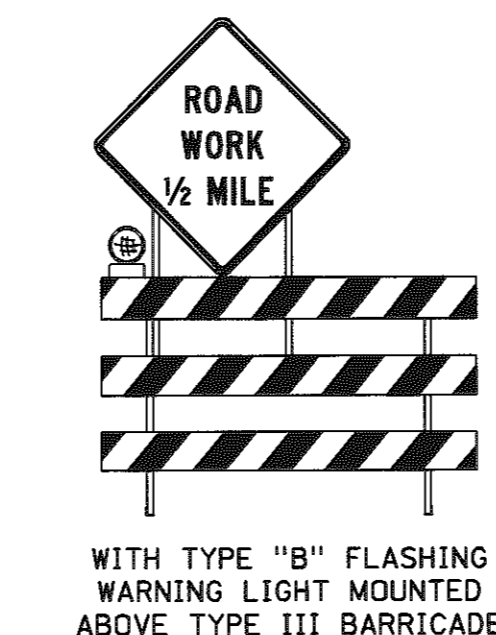
RURAL AREA



URBAN AREA



TYPICAL FIRST SIGN AT CONSTRUCTION SITE



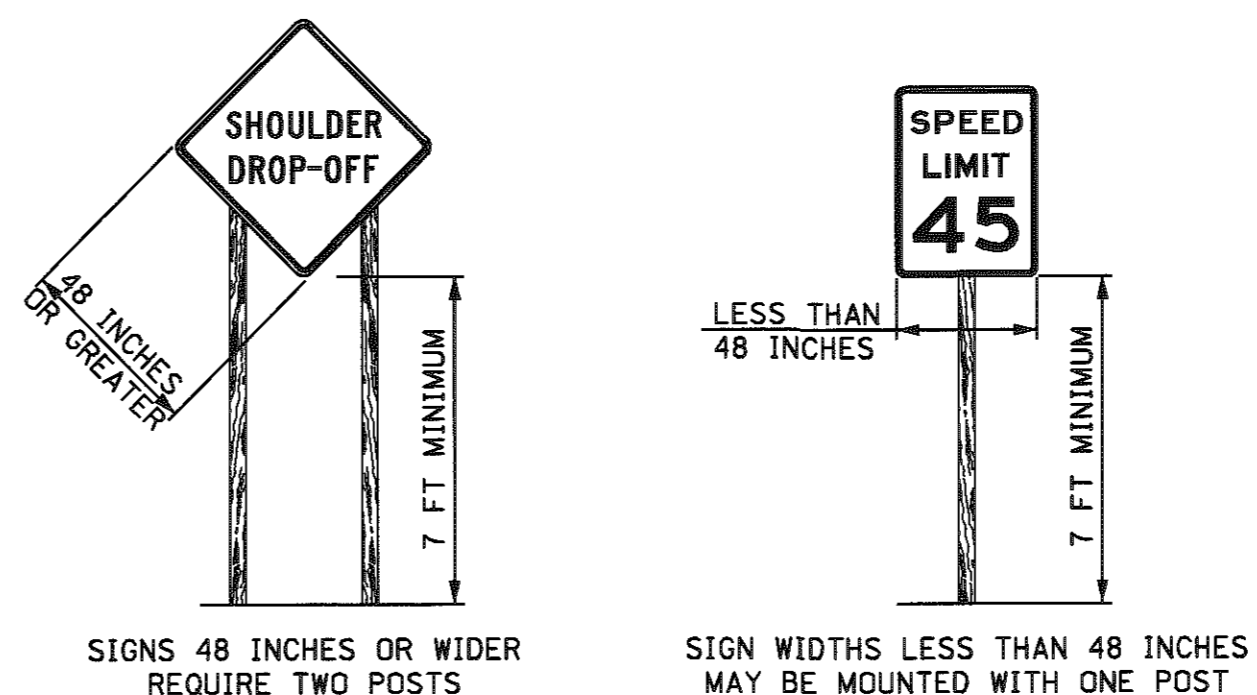
WITH TYPE "B" FLASHING WARNING LIGHT MOUNTED ABOVE TYPE III BARRICADE

PORTABLE AND TEMPORARY MOUNTING

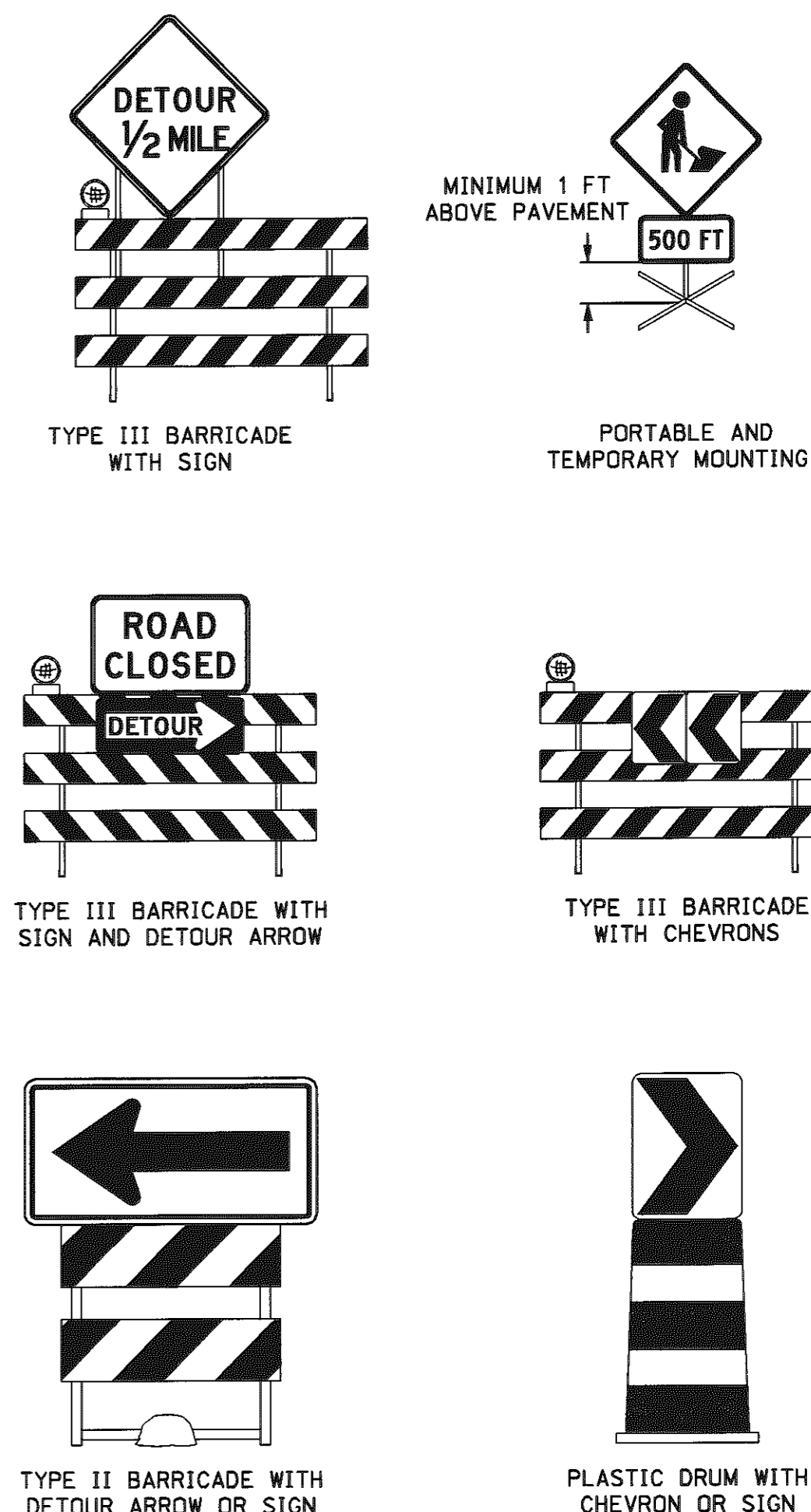


TYPICAL SIGN MOUNTINGS

POST MOUNTED



TYPICAL SIGN MOUNTINGS OTHER THAN POST MOUNTED



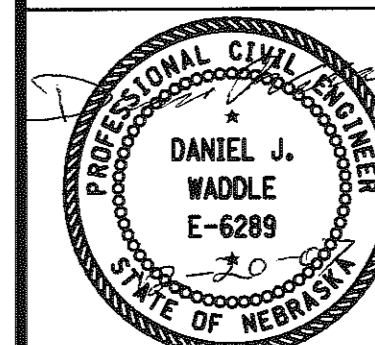
GENERAL NOTES

- ALL TRAFFIC CONTROL DEVICES SHALL MEET THE APPLICABLE STANDARDS AND SPECIFICATIONS PRESCRIBED IN PART VI OF THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD)" AND THE STATE OF NEBRASKA SUPPLEMENT TO THE MUTCD.
- TRAFFIC CONTROL PLANS AND DEVICES SHOULD FOLLOW THE PRINCIPLES SET FORTH, BUT MAY DEVIATE FROM THE TYPICAL DRAWINGS TO ALLOW FOR CONDITIONS AND REQUIREMENTS OF THE PROJECT.
- TRAFFIC CONTROL DEVICES SHALL BE INSTALLED SO AS NOT TO OBSTRUCT THE VIEW OF OTHER TRAFFIC CONTROL DEVICES.
- THE ENGINEER SHALL HAVE THE AUTHORITY TO REQUIRE THE USE, AND APPROVE THE LOCATION OF ANY OF THE DEVICES SHOWN IN THESE PLANS.
- UNPROTECTED TEMPORARY AND POST MOUNTED SIGNS SHOULD BE CRASHWORTHY (REFER TO THE ROADSIDE DESIGN GUIDE, CHAPTER NINE, FOR ADDITIONAL GUIDANCE).

REV. NO.	DATE	DESCRIPTION OF REVISION
R5	OCT.98	REVISE CHANNELIZATION DEVICES, TAPER
R4	JAN.95	REWRITE
R3	AUG.88	WORDING, REFLECTIVITY

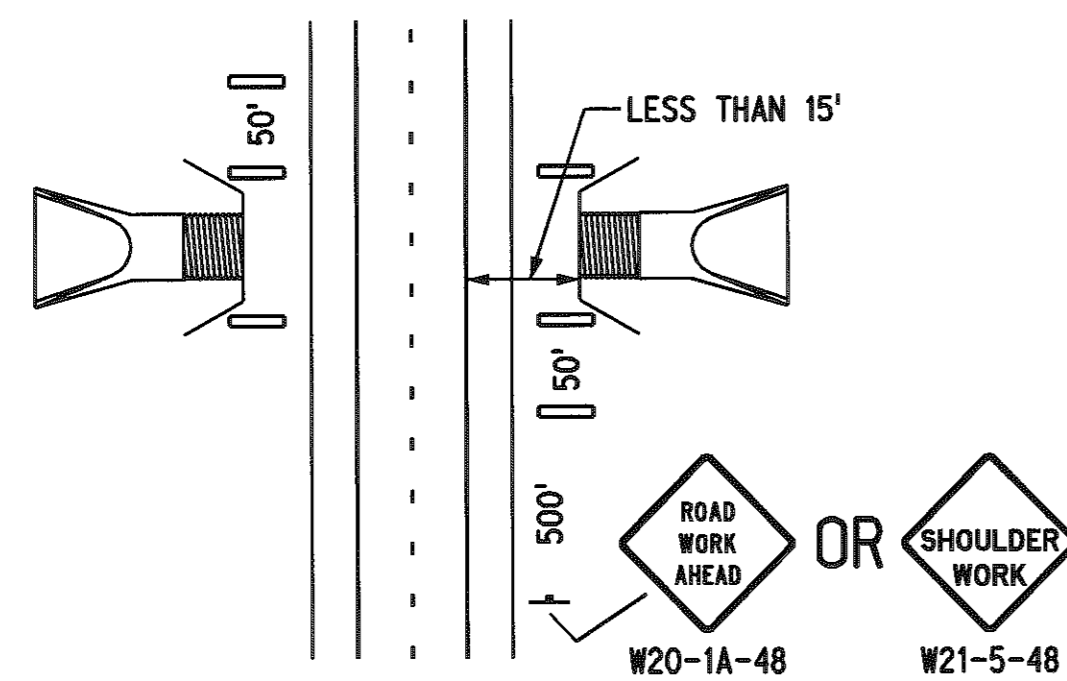
NEBRASKA DEPARTMENT OF ROADS
STANDARD PLAN NO. 920-R5

TRAFFIC CONTROL CONSTRUCTION AND MAINTENANCE

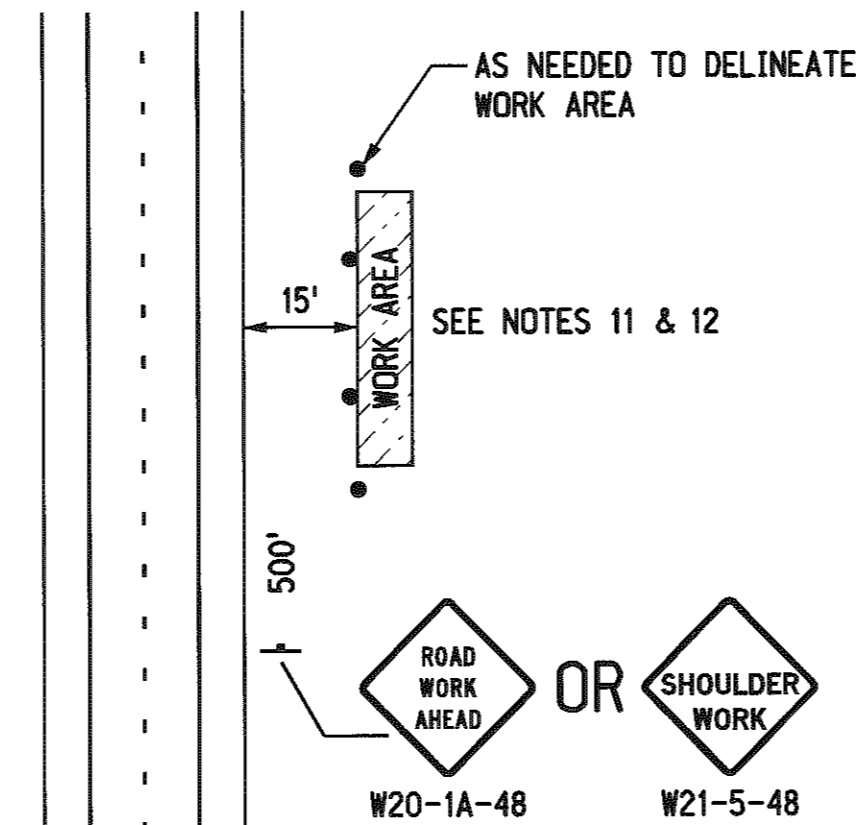


ORIGINAL:
OCTOBER 1998
DATE

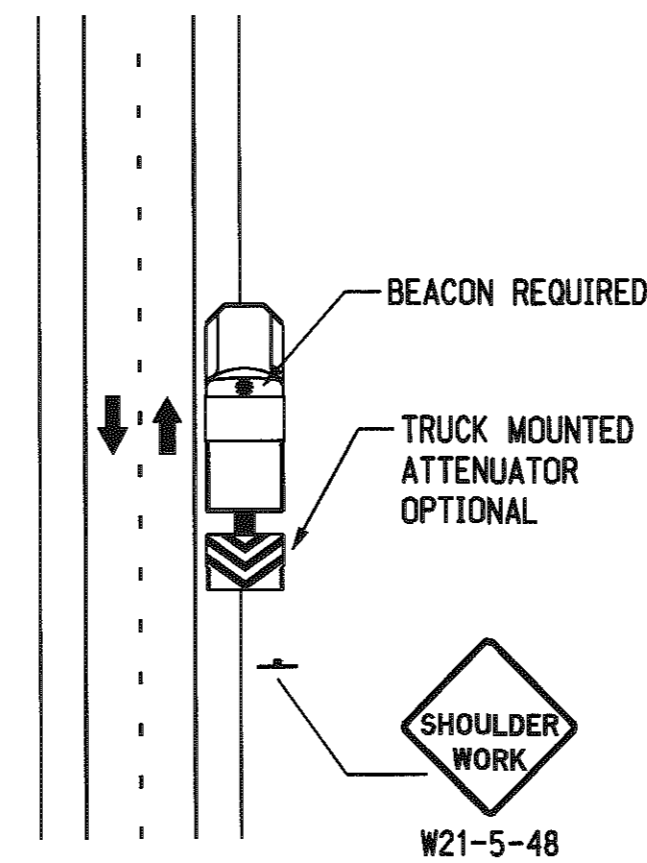
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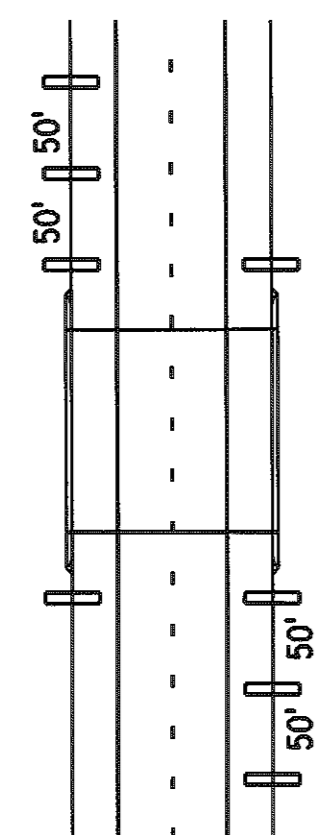
CULVERT PROTECTION
WHEN GUARDRAIL IS REMOVED AND/OR EXCAVATION IS LESS THAN 15 FEET FROM SHOULDER



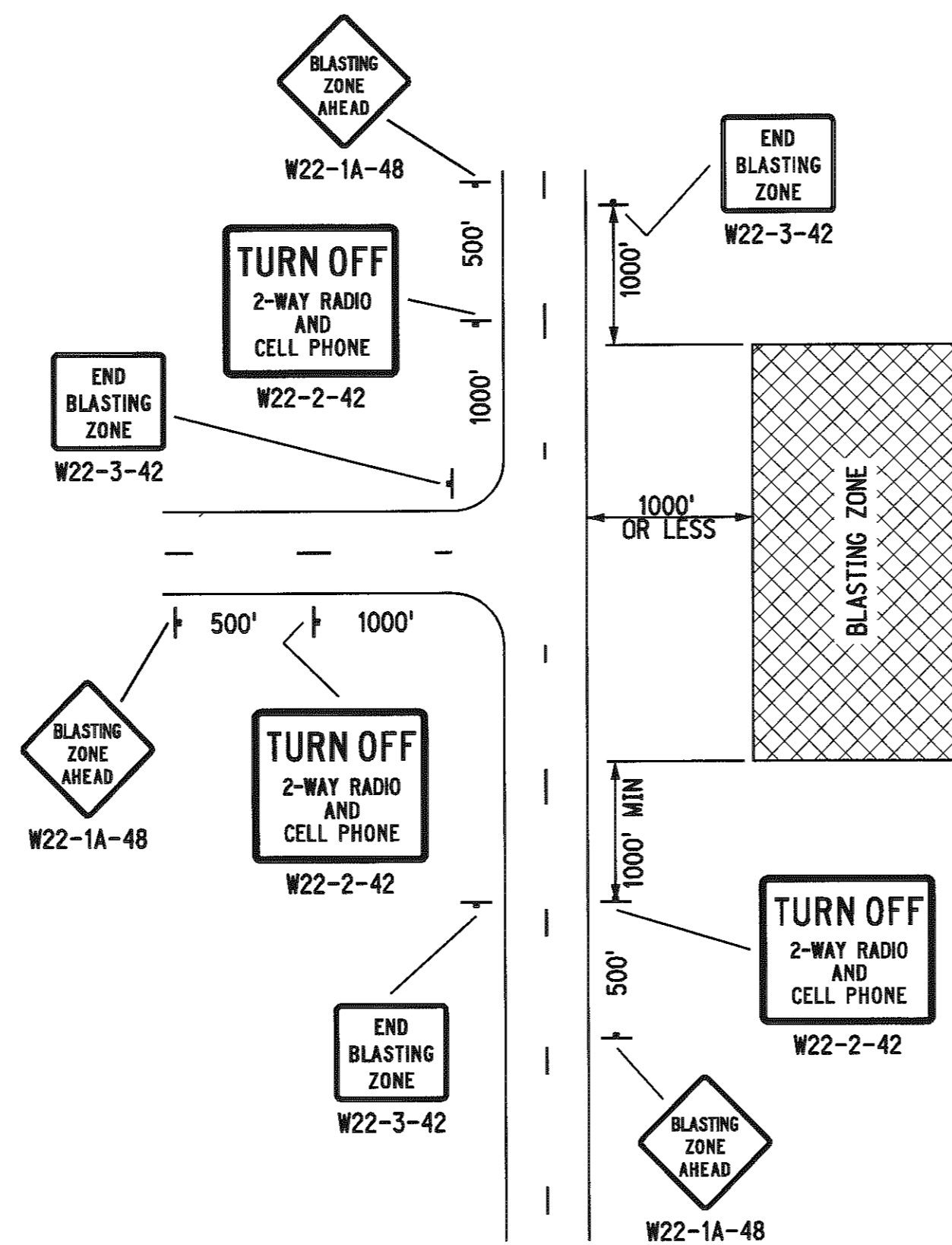
WORK BEYOND THE SHOULDER
TA-1



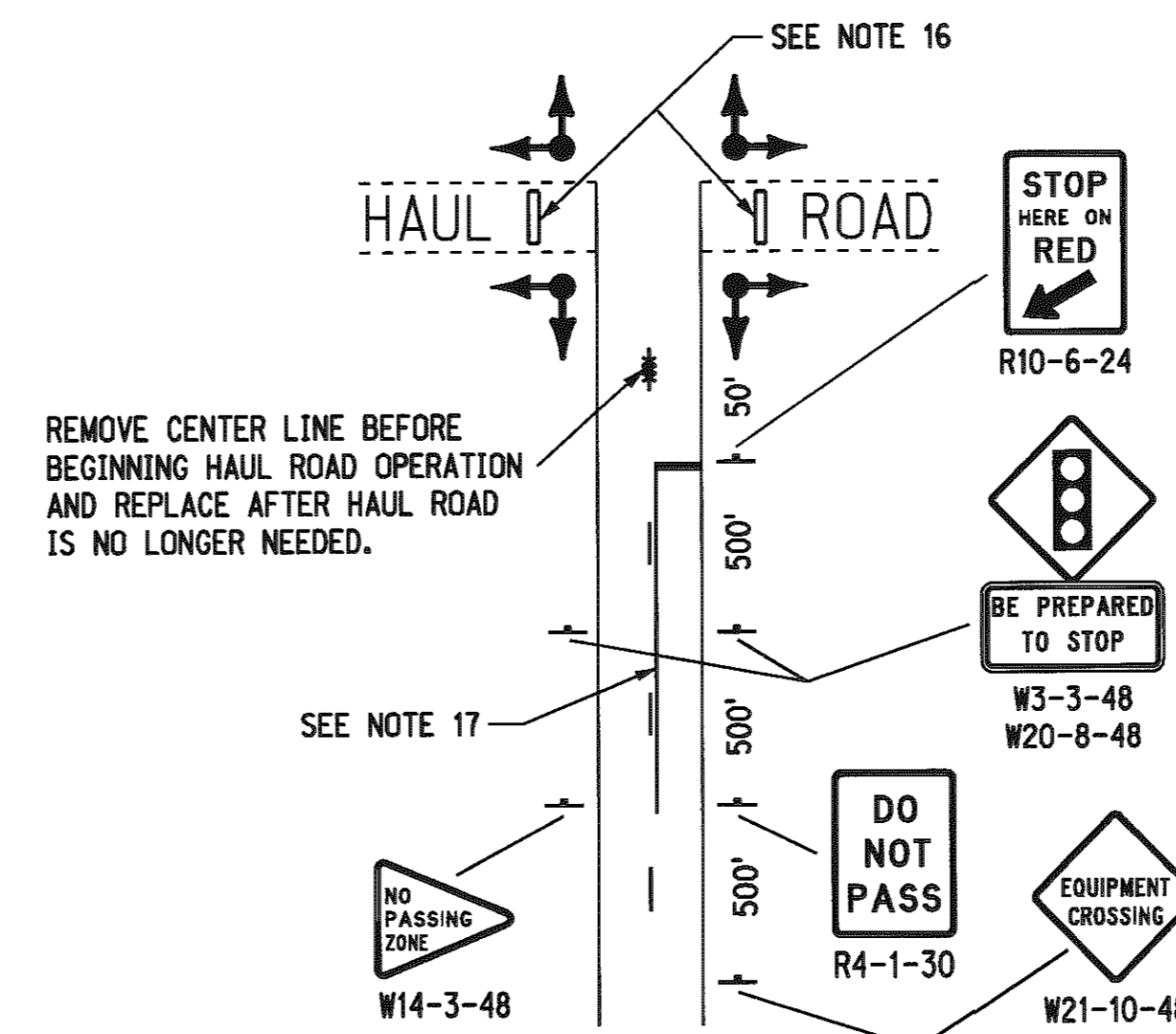
MOBILE OPERATION ON SHOULDER
NO ENCROACHMENT ON TRAVEL LANE
TA-4



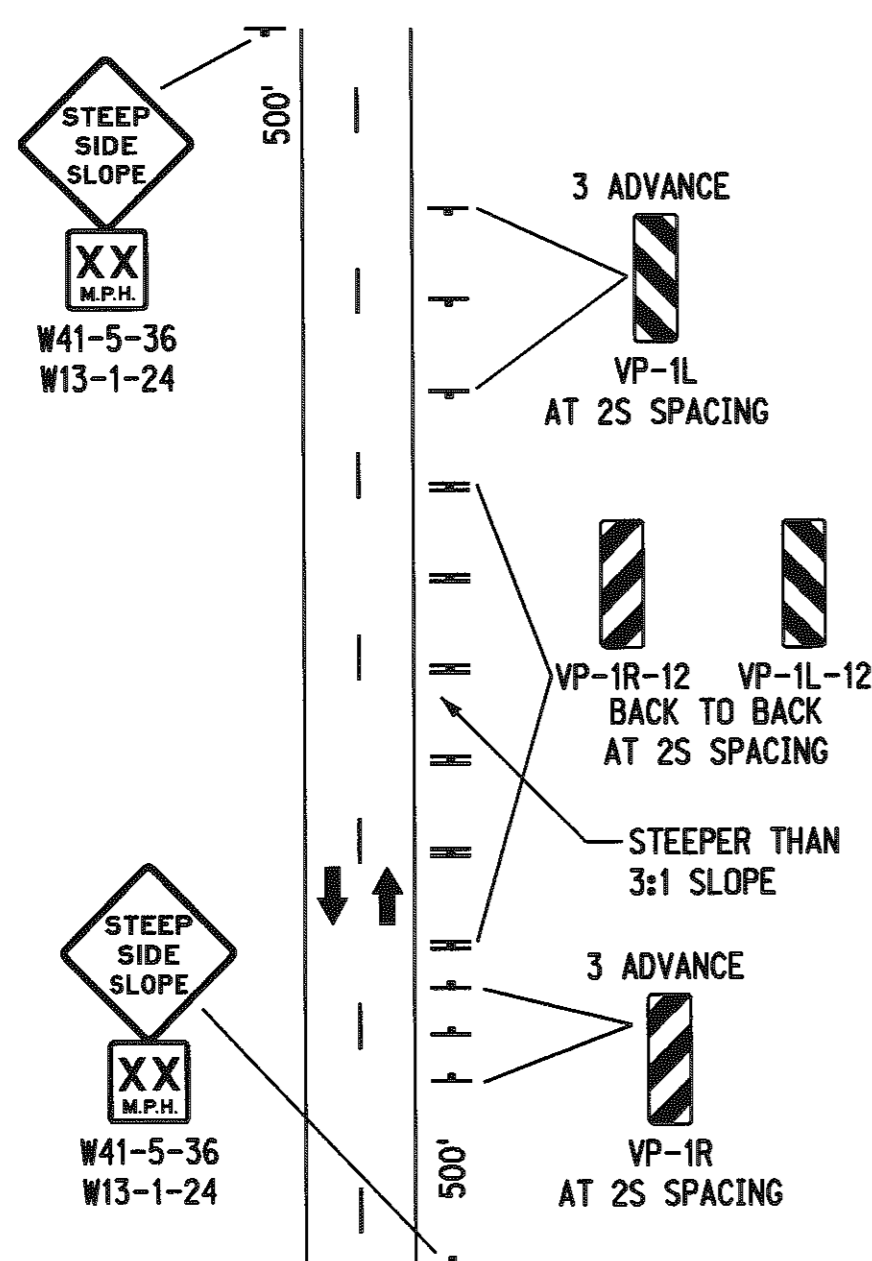
BRIDGE RAIL END PROTECTION
WHEN GUARDRAIL IS REMOVED



BLASTING ZONE
TA-2

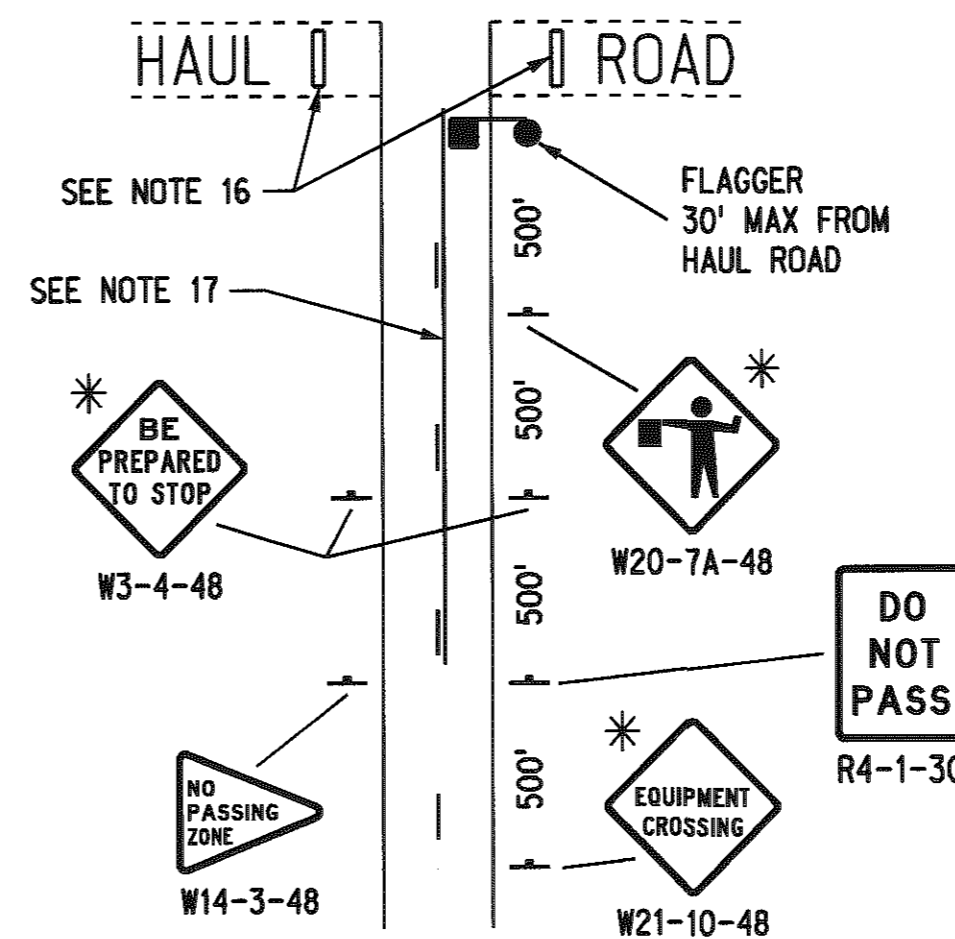


HAUL ROAD CROSSING IN CONSTRUCTION AREA USING TEMPORARY TRAFFIC SIGNAL
TA-14



SLOPE PROTECTION

- LEGEND**
- TYPE III BARRICADE
 - TYPE II BARRICADE OR REFLECTORIZED PLASTIC DRUM
 - ↑ SIGN
 - FLAGGER
 - △ CONE
 - ◻ CMS CHANGEABLE MESSAGE SIGN
 - ↔ TRAFFIC SIGNAL



HAUL ROAD CROSSING IN CONSTRUCTION AREA USING FLAGGERS
TA-14

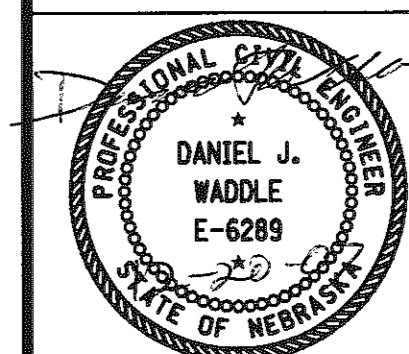
* SIGNS ARE SUBSIDIARY TO THE FLAGGING OPERATION.

NOTES

1. SIGNS SHOWN ARE USUALLY FOR ONE DIRECTION OF TRAVEL ONLY.
2. DESIGNATION OF SPEED SHOWN ON ADVISORY SPEED SIGNS W13-1 SHALL BE DETERMINED BY THE ENGINEER IN ACCORDANCE WITH MUTCD. THE SPEED DESIGNATION SHALL BE AS HIGH AS PRACTICAL AND FEASIBLE.
3. "FLAGGER AHEAD SYMBOL" SIGN (W20-7A) SHALL BE USED WHEN A FLAGGER IS PRESENT, AND REMOVED WHEN NOT APPLICABLE.
4. ALL SIGNS SHALL BE INSTALLED, MAINTAINED IN A CLEAN CONDITION AND REMOVED BY THE CONTRACTOR EXCEPT SIGNS WHICH SHALL BE INSTALLED AND MAINTAINED BY THE DEPARTMENT OF ROADS OR APPROPRIATE GOVERNMENT AGENCY.
5. G20-1 "ROAD WORK NEXT X MILES" SHALL BE USED ON ANY CONSTRUCTION OR MAINTENANCE PROJECT LONGER THAN 2 MILES.
6. WHEN MESSAGE IS NOT PERTINENT, SIGNS SHALL BE TAKEN DOWN, COVERED OR FOLDED. TAPE IS NOT PERMITTED ON THE FACE OF THE SIGN.
7. VEHICLES OR EQUIPMENT SHALL NOT BE PARKED SO AS TO OBSCURE OR DISTRACT FROM TRAFFIC CONTROL DEVICES.
8. ORANGE FLAGS MAY BE USED TO CALL ATTENTION TO WARNING SIGNS.
9. DOUBLE FINE AND REDUCED SPEED ZONE SIGNING NOT REQUIRED FOR SHORT-DURATION WORK LESS THAN 1/2 WORK DAY.
10. CULVERT, BRIDGE AND SLOPE PROTECTION. EXISTING GUARDRAIL SHOULD REMAIN IN PLACE AS LONG AS PRACTICAL FOR THE PROTECTION IT PROVIDES, AND REINSTALLED AS SOON AS PRACTICAL.
11. TA-1 AND CULVERT PROTECTION SIGNING IS NOT REQUIRED IF THE WORK SPACE IS 15 FEET OR MORE BEYOND THE EDGE OF THE SHOULDER.
12. TA-1 AND TA-3 FOR SHORT-DURATION OPERATIONS 60 MINUTES OR LESS, ALL SIGNS AND CHANNELIZING DEVICES MAY BE ELIMINATED IF A VEHICLE WITH AN ACTIVATED HIGH-INTENSITY ROTATING, FLASHING, OSCILLATING OR AMBER STROBE LIGHTS ARE USED, AND THE WORK DOES NOT ENCROACH ONTO THE OPEN TRAVEL LANE.
13. TA-3 WHEN PAVED SHOULDERS HAVING A WIDTH OF 8 FEET OR MORE ARE CLOSED, AT LEAST ONE ADVANCE WARNING SIGN SHALL BE USED. IN ADDITION, CHANNELIZING DEVICES SHALL BE USED TO CLOSE THE SHOULDER IN ADVANCE TO DELINEATE THE BEGINNING OF THE WORK SPACE AND DIRECT VEHICULAR TRAFFIC TO REMAIN WITHIN THE TRAVELED WAY.
14. TA-4 VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S HIGH-INTENSITY ROTATING, FLASHING OR AMBER STROBE LIGHTS.
15. TA-10 IF THE QUEUING OF VEHICLES ACROSS ACTIVE RAILROAD TRACKS CANNOT BE AVOIDED, A FLAGGER SHALL BE PROVIDED AT THE RAILROAD CROSSING TO PREVENT VEHICLES FROM STOPPING WITHIN THE RAILROAD CROSSING EVEN IF AUTOMATIC WARNING DEVICES ARE IN PLACE.
16. TA-14 WHEN THE HAUL ROAD IS NOT IN USE, TYPE III BARRICADES SHALL BE IN PLACE. THE "FLAGGER", "SIGNAL AHEAD", AND "BE PREPARED TO STOP" SIGNS SHALL BE COVERED OR REMOVED, AND THE TRAFFIC SIGNAL SHALL BE PUT INTO FLASH YELLOW ON THE HIGHWAY, RED ON THE HAUL ROAD.
17. TA-14 THE "NO PASSING" SIGNS AND PAVEMENT MARKINGS ARE NOT REQUIRED IF HAULING OPERATION IS IN EFFECT ONLY DURING DAYLIGHT HOURS.
18. A TYPE III BARRICADE IS REQUIRED WHEN THE CHANGEABLE MESSAGE IS WITHIN 15' OF THE SHOULDER.
19. BARRELS ARE REQUIRED WHEN THE CHANGEABLE MESSAGE SIGN IS INSTALLED ON OR NEAR A PAVED SHOULDER.
20. APPLICATIONS SHOWN ARE FOR LOCAL SITUATIONS IN PROPERLY MARKED CONSTRUCTION ZONES AND DO NOT INCLUDE LEAD SIGNS WHICH ARE INSTALLED AT THE BEGINNING OF THE PROJECT.
21. THE LEAD SIGNS ARE NOT NEEDED IF TWO PROJECTS ARE LESS THAN 1 MILE APART. THE "END CONSTRUCTION" SIGN (G20-2B-48) SHOULD NOT BE INSTALLED BETWEEN THE PROJECTS.
22. REFER TO STANDARD PLAN NO. 920 FOR GENERAL INFORMATION NOT SHOWN.

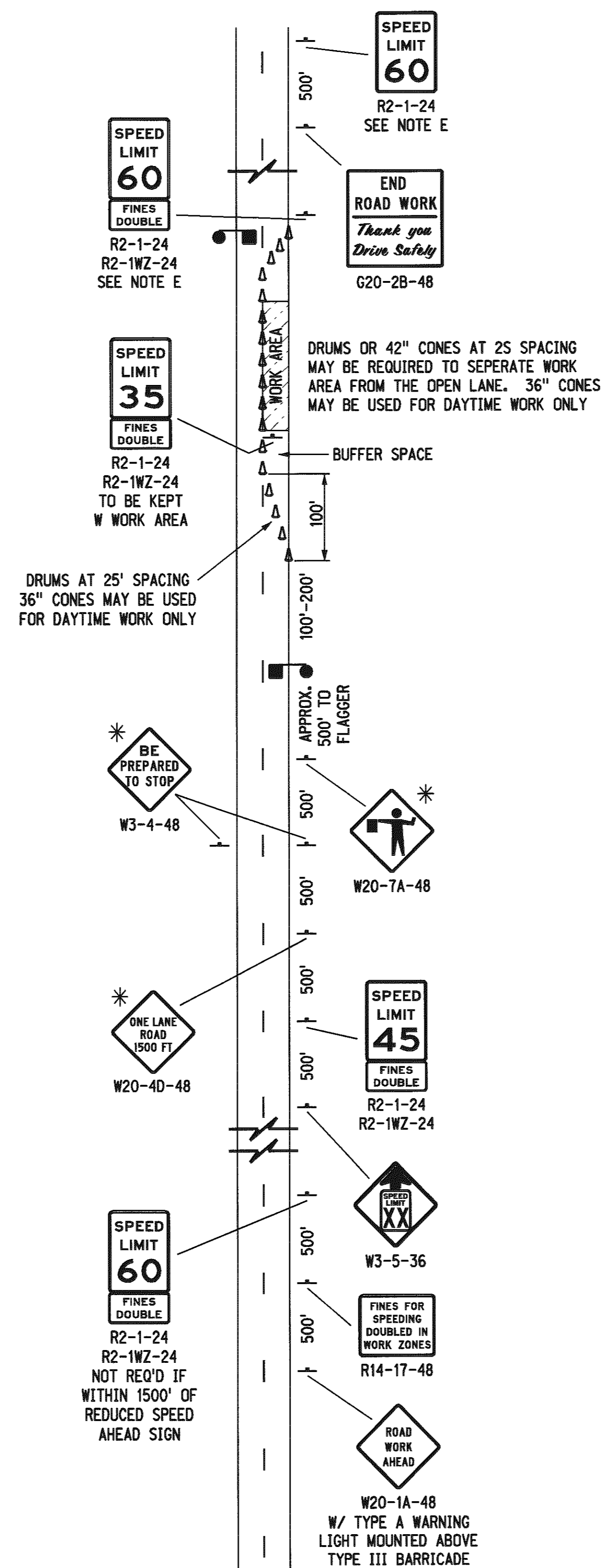
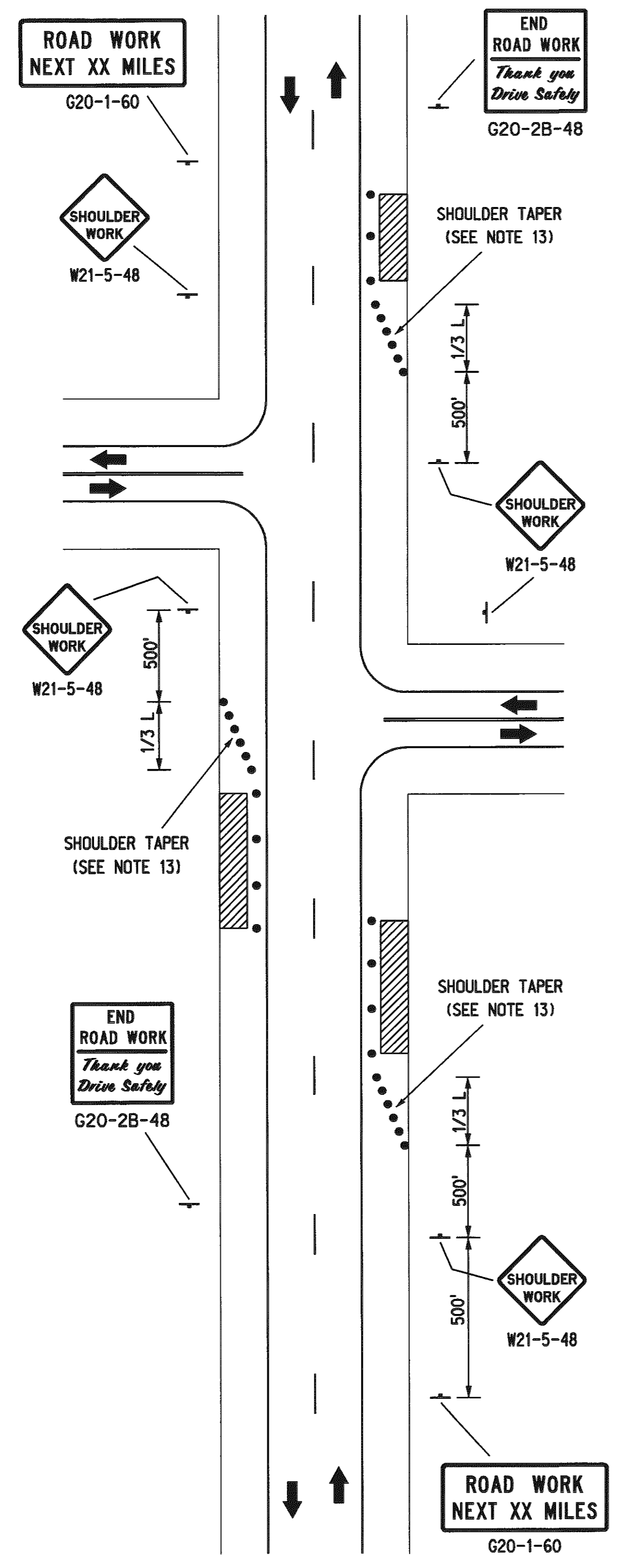
REV. NO.	DATE	DESCRIPTION OF REVISION
R5	DEC.05	2003 MUTCD UPDATE
R4	AUG.98	SIGN CHANGES, ADDITIONS
R3	MAY 83	ADDITIONS

NEBRASKA DEPARTMENT OF ROADS
STANDARD PLAN NO. 921-R5
**TRAFFIC CONTROL,
CONSTRUCTION AND MAINTENANCE**



ORIGINAL:
JUNE 3, 1980
DATE

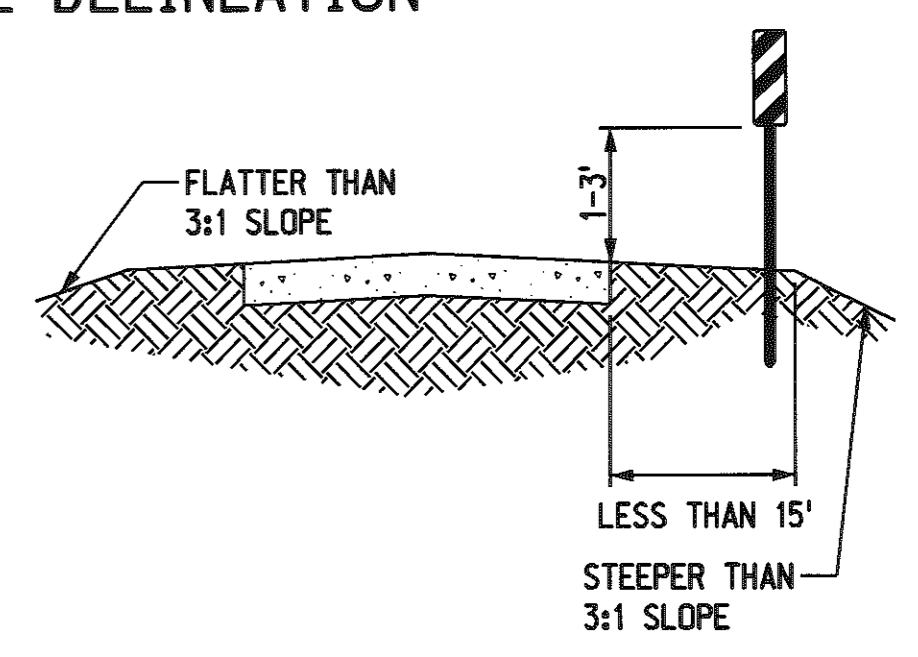
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* SIGNS ARE SUBSIDIARY TO THE FLAGGING OPERATION.

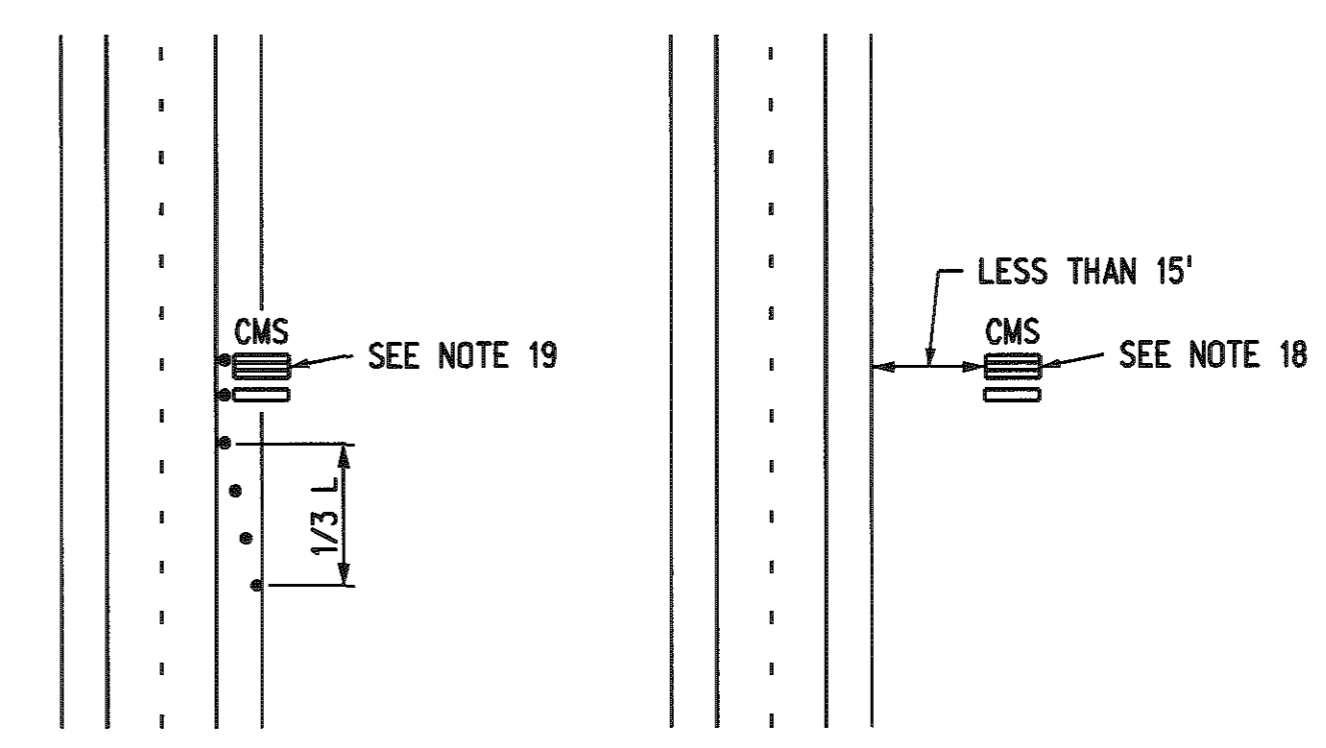
STEEP SLOPE DELINEATION

VERTICAL PANELS SHOULD BE USED FOR AREAS WHERE GUARD RAIL IS REMOVED, OR PROJECT GRADING HAS CREATED A DROP-OFF SLOPE STEEPER THAN 3:1, AND WITHIN 15 FEET OF THE TRAVEL LANE. NOT USED FOR CULVERT OR BRIDGE END PROTECTION. VERTICAL PANEL SPACING MAY BE REDUCED FOR HORIZONTAL CURVES.



WORK ZONE SPEED LIMIT NOTES

- A. WORK ZONE SPEED LIMITS SHALL NOT BE INSTALLED WITHOUT A SPEED ZONE AUTHORIZATION COMPLETED BY THE DEPARTMENT.
- B. REDUCED SPEED LIMITS SHOULD BE USED ONLY IN THE SPECIFIC PORTION OF THE WORK ZONE WHERE CONDITIONS OR RESTRICTIVE FEATURES ARE PRESENT. HOWEVER, FREQUENT CHANGES IN THE SPEED LIMIT SHOULD BE AVOIDED. THE REDUCTION OF SPEED SHOULD BE DESIGNED SO VEHICLES CAN SAFELY TRAVEL THROUGH THE WORK ZONE WITH A SPEED LIMIT REDUCTION OF NO MORE THAN 10 MPH UNLESS OTHERWISE NOTED IN THE PLANS.
- C. WORK ZONE SPEED LIMITS SHOWN ARE TYPICAL APPLICATIONS ONLY AND ARE NOT TO BE ASSUMED AS THE SPEED LIMITS REQUIRED FOR THE WORK.
- D. EXISTING SPEED LIMIT SIGNS SHALL BE REMOVED OR COVERED WHEN A REDUCED WORK ZONE SPEED LIMIT IS IN EFFECT IN THE SAME AREA.
- E. WORK ZONE SPEED LIMIT SIGNS SHALL BE INSTALLED EVERY MILE THROUGH THE WORK AREA WHEN SPEED ZONE IS REDUCED.
- F. A SPEED LIMIT SIGN ENDING THE REDUCED SPEED ZONE SHALL BE INSTALLED AT THE END OF EACH ZONE.



CHANGEABLE MESSAGE SIGN PROTECTION

TAPER FORMULA

$L = S \times W$ FOR SPEEDS OF 45 MPH OR MORE.
 $L = \frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

WHERE:
 L = MINIMUM LENGTH OF TAPER.
 S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.
 W = WIDTH OF OFFSET (LANE WIDTH).

LEGEND

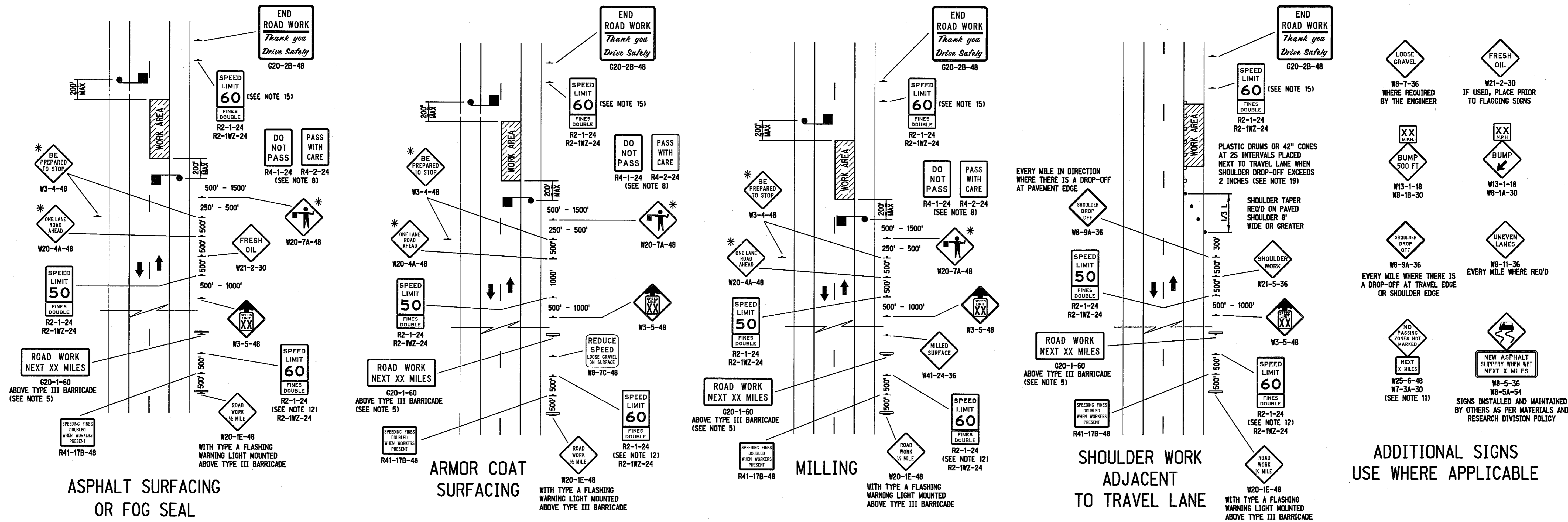
- TYPE III BARRICADE
- TYPE II BARRICADE OR REFLECTORIZED PLASTIC DRUM
- ↑ SIGN
- ⬮ FLAGGER
- △ CONE
- CMS CHANGEABLE MESSAGE SIGN
- ⬆ TRAFFIC SIGNAL

R5	DEC.05	2003 MUTCD UPDATE
R4	AUG.98	SIGN CHANGES, ADDITIONS
R3	MAY 83	ADDITIONS
REV. NO.	DATE	DESCRIPTION OF REVISION

NEBRASKA DEPARTMENT OF ROADS
 STANDARD PLAN NO. 921-R5
**TRAFFIC CONTROL,
 CONSTRUCTION AND MAINTENANCE**

ORIGINAL:
 JUNE 3, 1980
 DATE

2
 2



* SIGNS ARE SUBSIDIARY TO THE FLAGGING OPERATION.

GENERAL NOTES
(SEE SHEET 2 FOR ADDITIONAL NOTES)

- SIGNS SHOWN ARE USUALLY FOR ONE DIRECTION OF TRAVEL ONLY.
- WORK ZONE SPEED LIMITS SHOWN ARE TYPICAL APPLICATIONS ONLY, AND SHOULD ONLY BE USED WHERE CONDITIONS OR RESTRICTIVE FEATURES ARE PRESENT.
- "FLAGGERS AHEAD SYMBOL" SIGN (W20-7A-48) SHALL BE USED WHEN A FLAGGER IS PRESENT, AND REMOVED WHEN NOT APPLICABLE.
- TEMPORARY SIGNS OR SIGNS DESIGNATED BY THE ENGINEER TO BE TEMPORARY OR PORTABLE SHALL BE MOUNTED ON TEMPORARY SIGN STANDS THAT COMPLY WITH NCHRP 350 REQUIREMENTS.
- G20-1-60 "ROAD WORK NEXT XX MILES" SHALL BE USED ON ANY CONSTRUCTION OR MAINTENANCE PROJECT LONGER THAN 2 MILES.
- WHEN MESSAGE IS NOT PERTINENT, SIGNS SHALL BE TAKEN DOWN, COVERED OR FOLDED. TAPE WILL NOT BE PERMITTED ON THE FACE OF THE SIGN.
- ORANGE FLAGS MAY BE USED TO CALL ATTENTION TO THE ADVANCE WARNING SIGNS.
- "DO NOT PASS" AND "PASS WITH CARE" SIGNS WILL BE INSTALLED AT THE BEGINNING AND ENDING OF EACH "NO PASSING" ZONE WHERE PAVEMENT HAS NOT BEEN MARKED. FOR ROADWAYS WITH ADTS OF 2,000 VEHICLES PER DAY OR LESS, THE TIME PERIOD BETWEEN COMPLETION OF THE WORK AND PLACEMENT OF THE PAVEMENT MARKINGS SHALL NOT EXCEED TWO WEEKS. FOR ROADWAYS WITH ADTS GREATER THAN 2,000 VEHICLES PER DAY, THE TIME PERIOD SHALL NOT EXCEED THREE CALENDAR DAYS, CONDITIONS PERMITTING.
- WHERE TRAFFIC QUEUES ARE LONG AND FLAGGER VISIBILITY IS LIMITED, THE ENGINEER MAY REQUIRE AN ADDITIONAL FLAGGER.
- "MILLED SURFACE" SIGN (W41-24-36) IS NOT REQUIRED FOR MILLED SURFACES LESS THAN 1000 FEET IN LENGTH OR FOR MILLED SURFACES THAT ARE NOT BEING OVERLAID WITH THE PROJECT.
- "NO PASSING ZONES NOT MARKED" SIGN (W25-6-48) SHOULD BE INSTALLED AT EACH END OF THE PROJECT WHENEVER THE EXISTING NO PASSING ZONE PAVEMENT MARKINGS HAVE BEEN REMOVED OR COVERED AND NO PASSING ZONE PAVEMENT MARKINGS ARE NOT INCLUDED IN THE PROJECT.
- SPEED LIMIT SIGN IS NOT REQUIRED IF WITHIN 1500 FT OF A REDUCED SPEED AHEAD SIGN.
- WHENEVER FEASIBLE WORK ZONE TRAFFIC CONTROL PLANS SHOULD BE DEVELOPED TO ACCOMMODATE SPEED LIMIT REDUCTIONS NO GREATER THAN 10 MPH BELOW NORMAL CONDITIONS.
- WORK ZONE SPEED LIMITS SHALL NOT BE INSTALLED WITHOUT A SPEED ZONE AUTHORIZATION COMPLETED BY THE DEPARTMENT. SEE WORK ZONE SPEED LIMIT NOTES ON SHEET 2.
- A SPEED LIMIT SIGN ENDING THE REDUCED SPEED ZONE SHALL BE INSTALLED AT THE END OF EACH ZONE.
- IF THE QUEUING OF VEHICLES ACROSS ACTIVE RAILROAD TRACKS CANNOT BE AVOIDED, A FLAGGER SHALL BE PROVIDED AT THE RAILROAD CROSSING TO PREVENT VEHICLES FROM STOPPING WITHIN THE RAILROAD CROSSING EVEN IF AUTOMATIC WARNING DEVICES ARE IN PLACE. AT NO TIME, WILL THE QUEUE FROM A FLAGGING OPERATION EXTEND ACROSS A RAILROAD CROSSING.
- EARLY COORDINATION WITH THE RAILROAD COMPANY SHOULD OCCUR BEFORE WORK STARTS.
- THE "DO NOT STOP ON TRACKS" SIGN IS OPTIONAL. IF USED, THE SIGN SHALL BE USED ON ALL APPROACHES TO A HIGHWAY-RAIL GRADE CROSSING WITHIN THE LIMITS OF A TEMPORARY TRAFFIC CONTROL ZONE.
- PLACE TYPE II BARRICADES, REFLECTORIZED PLASTIC DRUMS, OR 42" CONES ON THE TRAFFIC SIDE OF THE DROP-OFF WHERE SUFFICIENT LATERAL DISTANCE EXISTS BETWEEN THE TRAVEL LANE AND THE DROP-OFF (DROP-OFF DETAIL ON SHEET 2).
- A TYPE III BARRICADE IS REQUIRED WHEN THE CHANGEABLE MESSAGE SIGN IS WITHIN 15 FT. OF THE SHOULDER.
- A SHOULDER TAPER IS REQUIRED WHEN A CHANGEABLE MESSAGE SIGN IS INSTALLED ON A PAVED SHOULDER.
- THE LEAD SIGNS ARE NOT NEEDED IF TWO PROJECTS ARE LESS THAN 1 MILE APART. THE "END CONSTRUCTION" SIGN (G20-2B-48) SHOULD NOT BE INSTALLED BETWEEN THE PROJECTS.
- ON ARMOR COAT SURFACING, A "LOOSE GRAVEL" SIGN (W8-7-36) IS REQUIRED AT THE BEGINNING OF THE DAYS WORK AND SHALL REMAIN IN PLACE UNTIL THE LOOSE GRAVEL HAS BEEN SWEEPED OFF.
- SIGN SIZES SHOWN ARE FOR TYPICAL SITUATIONS- REFER TO NEBRASKA SUPPLEMENT TO THE MUTCD FOR FURTHER SIZE INFORMATION.
- REFER TO STANDARD PLAN NO. 920 FOR GENERAL INFORMATION NOT SHOWN.

LEGEND

- FLAGGER
- REFLECTORIZED PLASTIC DRUM OR TYPE II BARRICADE
- REFLECTORIZED PLASTIC DRUM OR 42" CONE
- TYPE III BARRICADE
- CHANGEABLE MESSAGE SIGN

TAPER FORMULA

$L = S \times W$ FOR SPEEDS OF 45 MPH OR MORE.
 $L = \frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.
 WHERE:
 L = MINIMUM LENGTH OF TAPER.
 S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.
 W = WIDTH OF OFFSET (LANE WIDTH).

ADDITIONAL SIGNS USE WHERE APPLICABLE

- LOOSE GRAVEL (W8-7-36) WHERE REQUIRED BY THE ENGINEER
- FRESH OIL (W21-2-30) IF USED, PLACE PRIOR TO FLAGGING SIGNS
- BUMP 500 FT (W13-1-18) (W8-1A-30)
- BUMP (W13-1-18) (W8-1A-30)
- SHOULDER TAPER REQ'D ON PAVED SHOULDER 8' WIDE OR GREATER (W21-5-36)
- SHOULDER DROP OFF (W8-9A-36)
- UNEVEN LANES (W8-11-36)
- EVERY MILE WHERE THERE IS A DROP-OFF AT TRAVEL EDGE OR SHOULDER EDGE (W8-9A-36)
- EVERY MILE WHERE REQ'D (W8-11-36)
- NO PASSING ZONES NOT MARKED (W25-6-48) (W7-3A-30) (SEE NOTE 11)
- NEW ASPHALT SLIPPERY WHEN WET NEXT X MILES (W8-5-36) (W8-5A-54) SIGNS INSTALLED AND MAINTAINED BY OTHERS AS PER MATERIALS AND RESEARCH DIVISION POLICY

RB	JAN. 10	PILOT CAR SIGN, FINE SIGNS & NOTES 19, 20, 22 & 25
R7	NOV. 05	UPDATE TO 2005 SUPPLEMENT
REV. NO.	DATE	DESCRIPTION OF REVISION

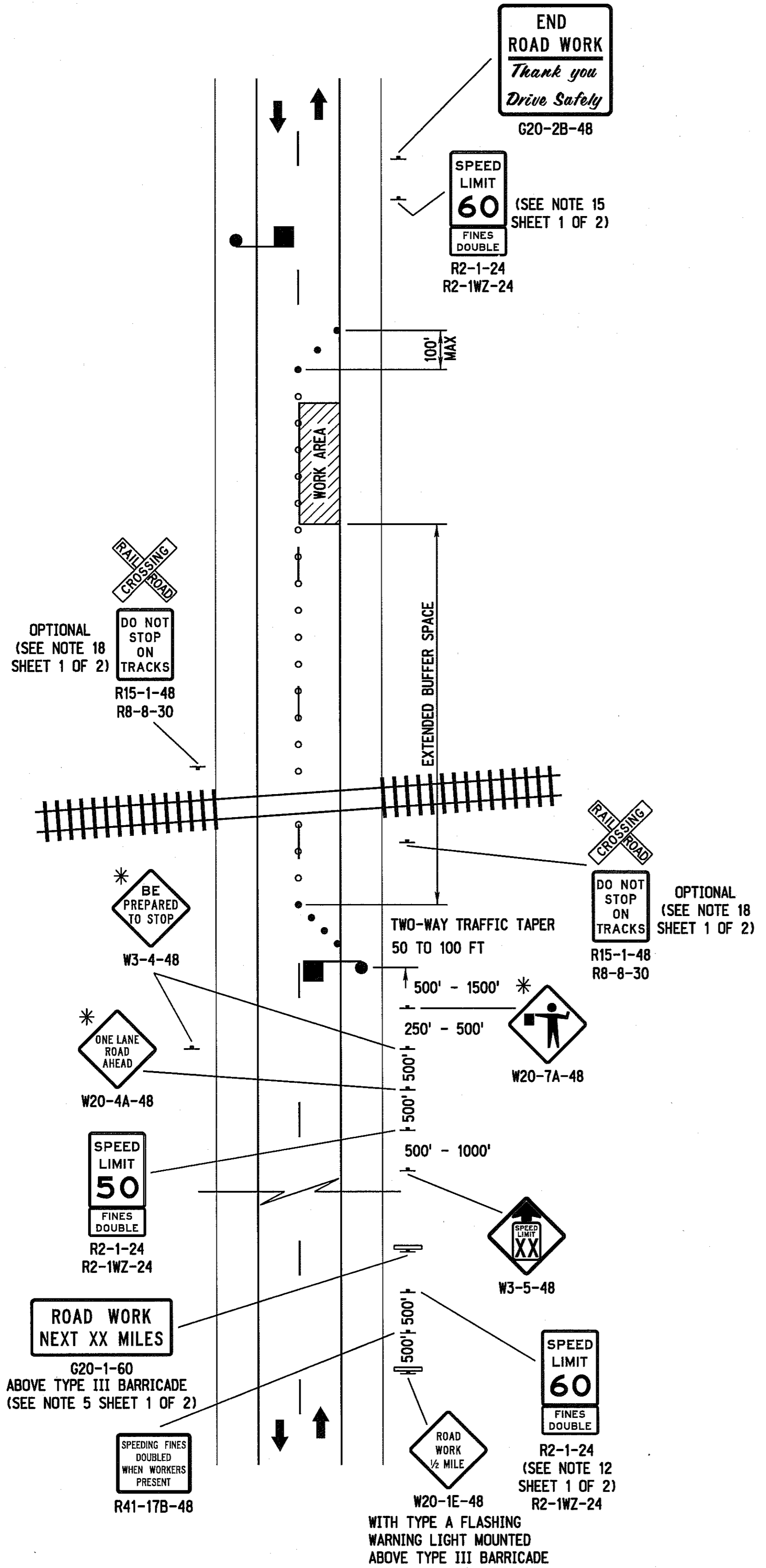
NEBRASKA DEPARTMENT OF ROADS
STANDARD PLAN NO. 922-R8
TRAFFIC CONTROL FOR ASPHALT SURFACING

FHWA APPROVED:

 Aug 13, 09
 DATE

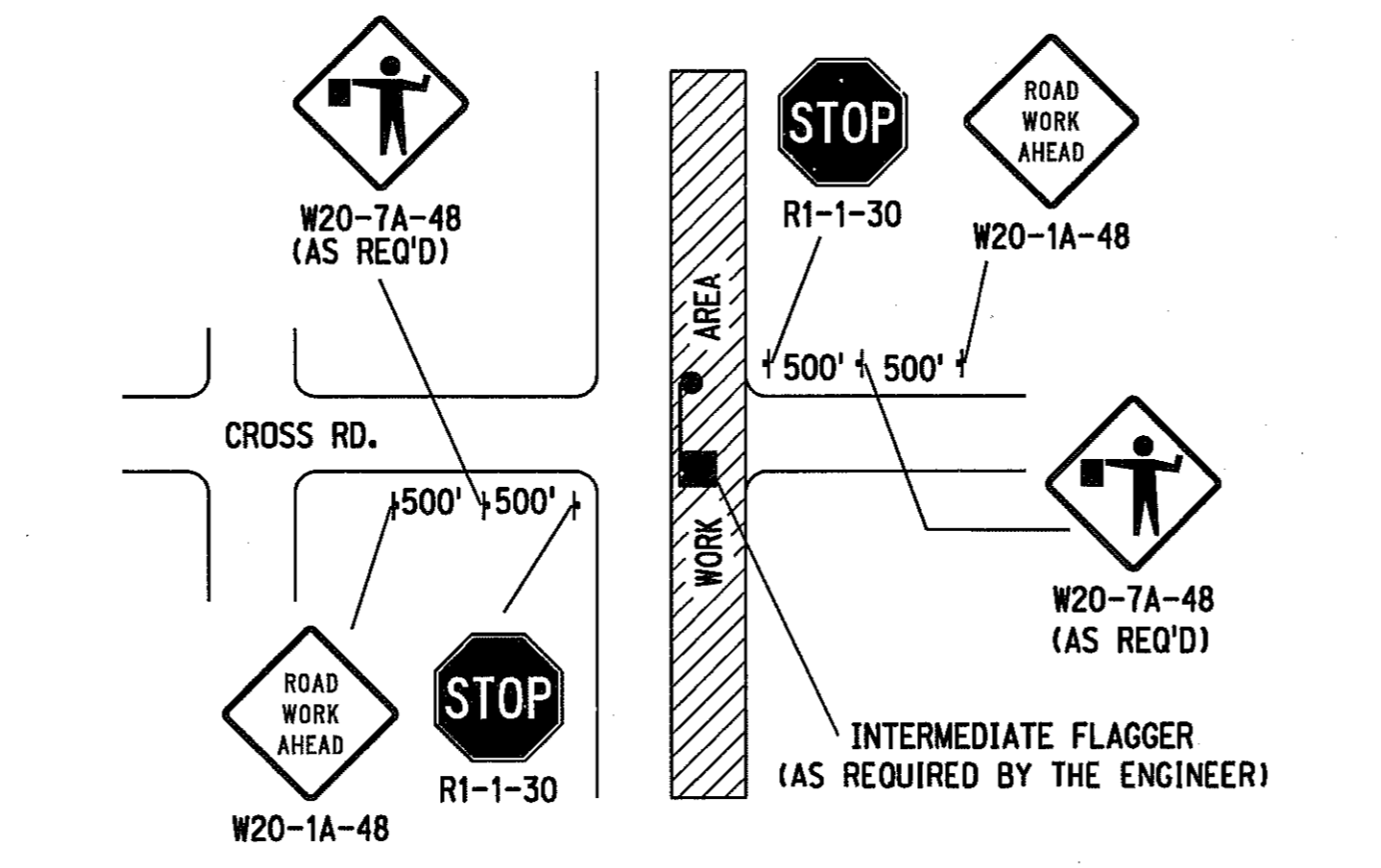
ORIGINAL:
 JUNE 3, 1980
 DATE

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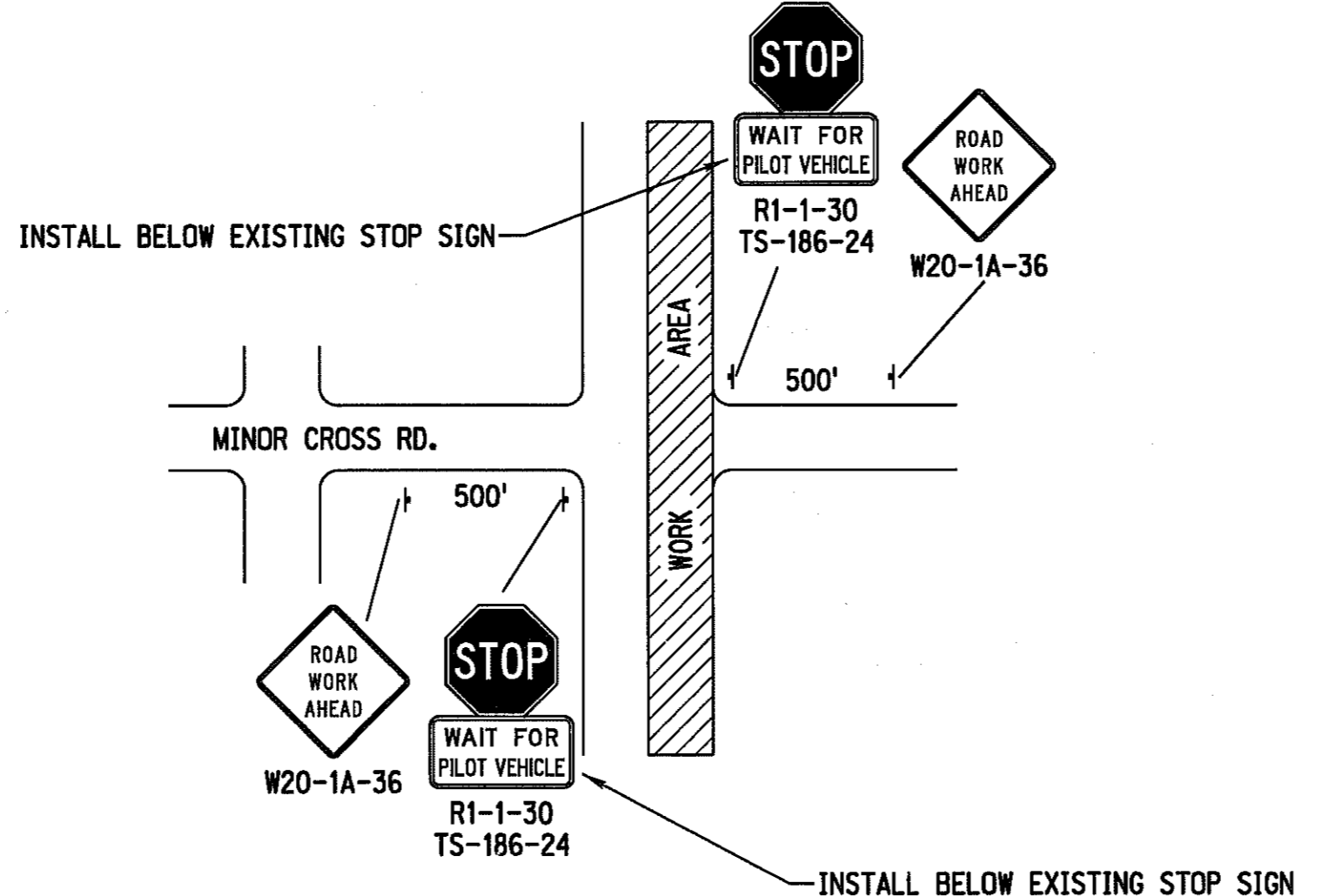


WORK IN VICINITY OF RAILROAD CROSSING

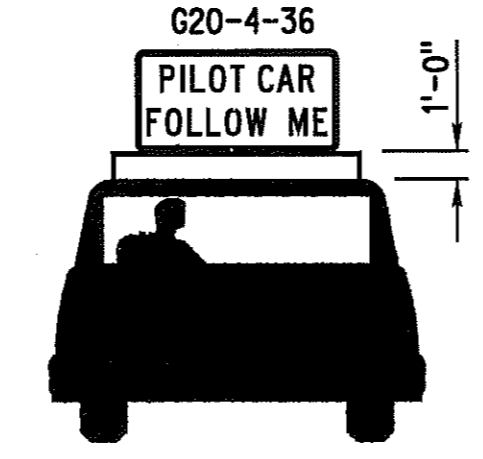
* SIGNS ARE SUBSIDIARY TO THE FLAGGING OPERATION.



MINOR OR MAJOR CROSS ROAD WITH FLAGGER



MINOR CROSS ROAD NO FLAGGER WITH PILOT CAR OPERATION

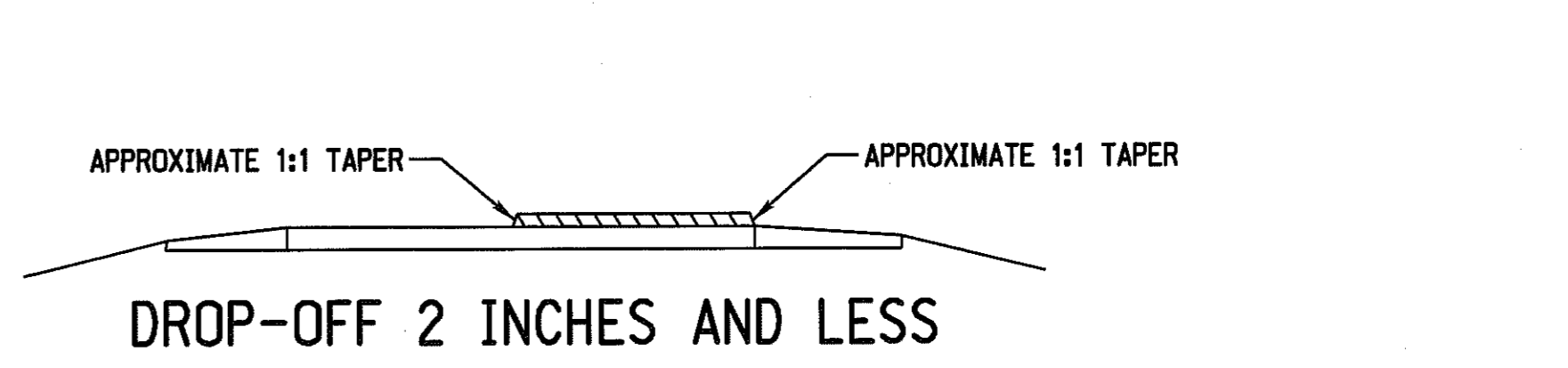
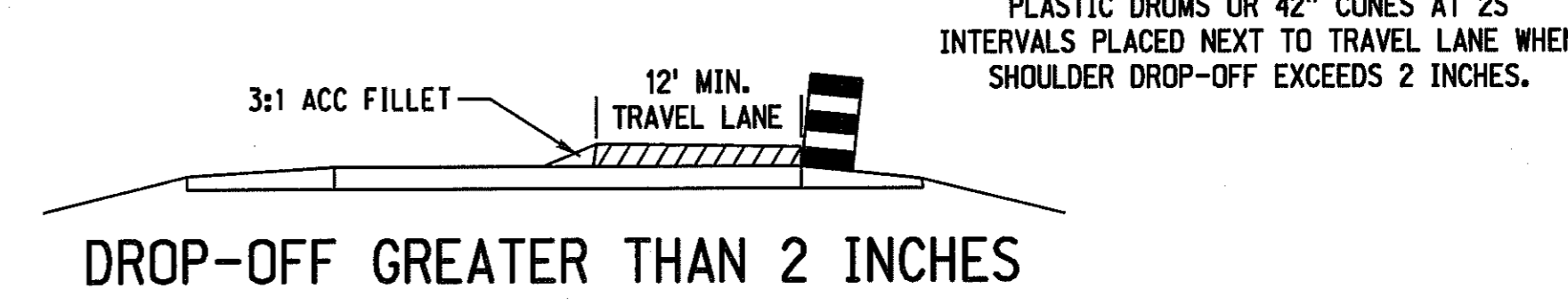
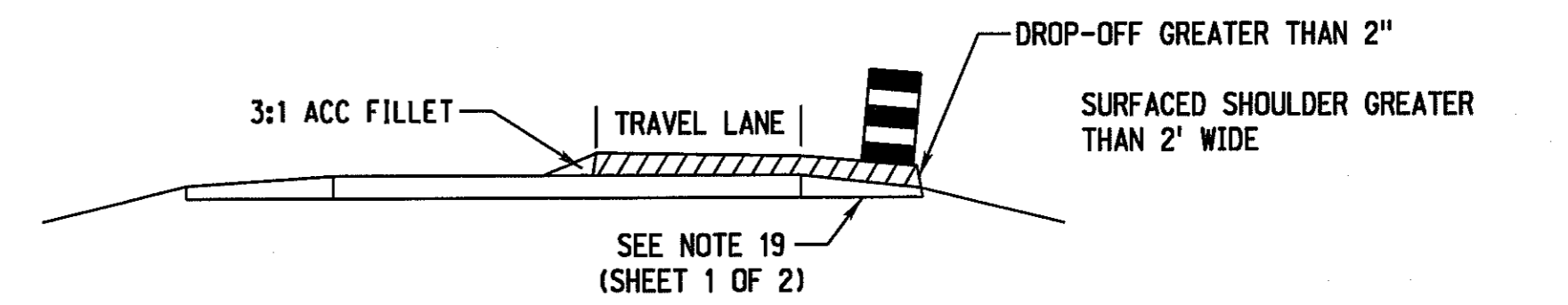


THE BOTTOM OF THE SIGN SHALL BE MOUNTED A MINIMUM OF 1 FOOT ABOVE THE VEHICLE'S ROOF. THE SIGN SHALL BE SECURELY COVERED OR REMOVED WHEN NOT IN USE.

PILOT CAR SIGN

WORK ZONE SPEED LIMIT NOTES

- A. WORK ZONE SPEED LIMITS SHALL NOT BE INSTALLED WITHOUT A SPEED ZONE AUTHORIZATION COMPLETED BY THE DEPARTMENT.
- B. REDUCED SPEED LIMITS SHOULD BE USED ONLY IN THE SPECIFIC PORTION OF THE WORK ZONE WHERE CONDITIONS OR RESTRICTIVE FEATURES ARE PRESENT. HOWEVER, FREQUENT CHANGES IN THE SPEED LIMIT SHOULD BE AVOIDED. THE REDUCTION OF SPEED SHOULD BE DESIGNED SO VEHICLES CAN SAFELY TRAVEL THROUGH THE WORK ZONE WITH A SPEED LIMIT REDUCTION OF NO MORE THAN 10 MPH UNLESS OTHERWISE NOTED IN THE PLANS.
- C. WORK ZONE SPEED LIMITS SHOWN ARE TYPICAL APPLICATIONS ONLY AND ARE NOT TO BE ASSUMED AS THE SPEED LIMITS REQUIRED FOR THE WORK.
- D. EXISTING SPEED LIMIT SIGNS SHALL BE REMOVED OR COVERED WHEN A REDUCED WORK ZONE SPEED LIMIT IS IN EFFECT IN THE SAME AREA.
- E. WORK ZONE SPEED LIMIT SIGNS SHALL BE INSTALLED EVERY MILE THROUGH THE WORK AREA WHEN SPEED ZONE IS REDUCED.
- F. A SPEED LIMIT SIGN ENDING THE REDUCED SPEED ZONE SHALL BE INSTALLED AT THE END OF EACH ZONE.



LEGEND

- FLAGGER
- REFLECTORIZED PLASTIC DRUM OR TYPE II BARRICADE
- REFLECTORIZED PLASTIC DRUM OR 42" CONE
- TYPE III BARRICADE
- ☐ CMS CHANGEABLE MESSAGE SIGN

REV. NO.	DATE	DESCRIPTION OF REVISION
R8	JAN. 10	PILOT CAR SIGN, FINE SIGNS & NOTES 19, 20, 22 & 25
R7	NOV. 05	UPDATE TO 2005 SUPPLEMENT

NEBRASKA DEPARTMENT OF ROADS
STANDARD PLAN NO. 922-R8
TRAFFIC CONTROL FOR ASPHALT SURFACING

FHWA APPROVED: *R. W. Waddle*
DATE: *Aug 13, 09*

DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

ORIGINAL: JUNE 3, 1980
DATE

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