

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RTE.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
730	57-4(1)CR	MCLEAN	38	1
		ILLINOIS CONTRACT NO. 70907		

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES & COMMITMENTS
3-6	SUMMARY OF QUANTITIES
7-8	SCHEDULE OF QUANTITIES
9	TYPICAL SECTIONS
10	PLAN AND PROFILE
11	CLASS B PATCH DETAILS
12-13	DRAINAGE DETAILS
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20	ROADWAY STAGING TYPICAL SECTIONS
21-30	STRUCTURE PLANS
31-33	CROSS SECTIONS
34-37	D-5 PAVEMENT MARKING AND MARKERS DETAIL
38	D-5 WIDTH RESTRICTION SIGNING DETAIL

FOR ILLINOIS DOT HIGHWAY STANDARDS SEE SHEET NO. 2

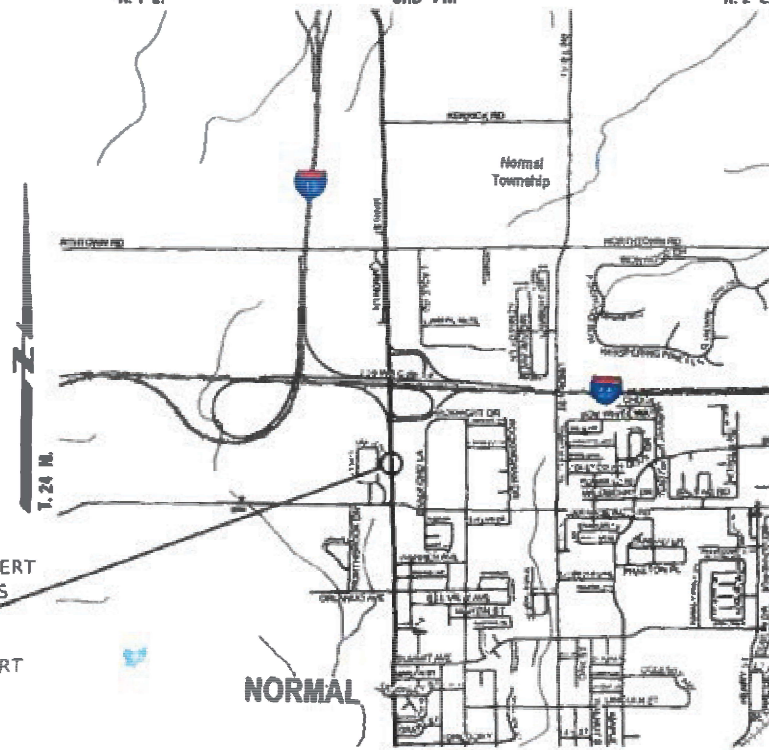
PROPOSED HIGHWAY PLANS

F.A.P. ROUTE 730 (U.S. 51 BUS)
SECTION 57-4(1)CR
PROJECT NHPP - EF64(538)
CULVERT REPLACEMENT
MCLEAN COUNTY

C-95-056-20

DITCH 0.1 MILE N OF RAAB ROAD IN NORMAL

R.1 E. 3RD PM R.2 E.



0 1 2
SCALE: 1" = 1 MILE

GROSS LENGTH = 32.00 FT. = 0.006 MILE
NET LENGTH = 32.00 FT. = 0.006 MILE

CURRENT TRAFFIC DATA FOR F.A.P. 730
2022 ADT = 13,700
P.U. = 91.0%
S.U. = 5.7%
M.U. = 3.3%

DESIGN DESIGNATION: N/A



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
1-800-492-0123
OR 811

EX. SN 057-8194 TO BE REMOVED
6' X 3' X 124' PRECAST CONCRETE BOX CULVERT
WITH CAST IN PLACE TAPERED END SECTIONS
STA. 32+57; NO SKEW
PROP. SN 057-8236 @ STA. 32+57
7' X 5' X 78' PRECAST CONCRETE BOX CULVERT
WITH 28'-6" LONG PRECAST TAPERED END
SECTIONS
STA. 32+57; NO SKEW

PROJECT ENGINEER: RYAN CARROLL
PROJECT MANAGER: SAM MEGLI
PHONE: 217-466-7223

CONTRACT NO. 70907



Veenstra & Kimm, Inc.
Springfield, IL. Phone: (217)544-9033
IL Design Firm No. 184-001939

CHRISTOPHER P. KOHLER
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
EXPIRATION: 11/30/2023



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 12/13 20 22
Kensil A. Manattswan
REGIONAL ENGINEER

February 3, 2023
[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

February 3, 2023
[Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

GENERAL NOTES

G.N. - 100A

ELECTRONIC FILES AND/OR ELECTRONIC SURVEY INFORMATION INCLUDING CADD FILES WILL NOT BE AVAILABLE TO THE CONTRACTOR.

G.N. - 105.09A

ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. (NAVD 88)

G.N. - 440B

THE EXISTING TIE BARS BETWEEN THE EXISTING PAVEMENT AND EXISTING MEDIANS, GUTTERS AND/OR COMBINATION CURB AND GUTTERS THAT ARE FOUND SUITABLE FOR REUSE SHALL BE CLEANED, STRAIGHTENED AND INCORPORATED INTO THE NEW CONSTRUCTION. ANY EXISTING TIE BARS THAT ARE FOUND UNSUITABLE TO BE INCORPORATED INTO THE PROPOSED CONSTRUCTION DUE TO EXCESSIVE RUSTING OR DISTRESS SHALL BE REMOVED FLUSH WITH THE FACE OF THE EXISTING CONCRETE AND DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS.

THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE VARIOUS REMOVAL PAY ITEMS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

G.N. - 542.07

AT LOCATIONS WHERE END SECTIONS ARE SPECIFIED, CAST-IN-PLACE CONCRETE HEADWALLS WILL NOT BE ALLOWED.

COMMITMENTS

NO COMMITMENTS

VERTICAL AND HORIZONTAL CONTROL

BENCHMARKS:

BM #5054-2 - CHISELED SQUARE ON TOP OF 15" PCC PIPE CULVERT LOCATED DIRECTLY EAST OF STR. NO. 057-8194
ELEV. 834.202, STA. 32+57.14, 84.49' RT.
N: 1,409,077.649, E: 800,194.043

POINT NO. 1 - MAG NAIL IN THE CENTERLINE OF US 51B SOUTH OF THE PROJECT
STA. 23+31.63 @ CL
N: 1,408,149.303, E: 800,143.399

POINT NO. 2 - MAG NAIL IN THE CENTERLINE OF US 51B SOUTH OF THE PROJECT
STA. 29+82.72 @ CL
N: 1,408,799.998, E: 800,120.877

STANDARDS

- 000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001006 DECIMAL OF AN INCH AND A FOOT
- 001001-02 AREAS OF REINFORCEMENT
- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 285001-02 FABRIC FORMED CONCRETE REVETMENT MATS
- 420001-10 PAVEMENT JOINTS
- 420101-07 24' (7.2M) JOINTED PCC PAVEMENT
- 420701-03 PAVEMENT WELDED WIRE FABRIC
- 442101-09 CLASS B PATCHES
- 515001-04 NAME PLATE FOR BRIDGES
- 601001-05 PIPE UNDERDRAINS
- 602306-03 INLET, TYPE B
- 604091-05 FRAME AND GRATE, TYPE 24
- 701101-05 OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
- 701106-02 OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5m) AWAY
- 701601-09 URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
- 701901-08 TRAFFIC CONTROL DEVICES
- 704001-08 TEMPORARY CONCRETE BARRIER
- 780001-05 TYPICAL PAVEMENT MARKINGS

MODEL & MODEL NAMES
FILE NAMES: SHEETS



USER NAME = \$USERS	DESIGNED - _____	REVISED - _____
	DRAWN - _____	REVISED - _____
PLOT SCALE = \$SCALE\$	CHECKED - _____	REVISED - _____
PLOT DATE = \$DATE\$	DATE - _____	REVISED - _____

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES & COMMITMENTS

SCALE: _____ SHEET ____ OF ____ SHEETS STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	2
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				

URBAN
 F.A.P. 730 (US 51B)
 MAIN STREET
 OTHER PRINCIPAL ARTERIAL
 S.N. 057-8236
 STA. 32+41 TO STA. 32+73
 MCLEAN COUNTY
 FUNDING BREAKOUT: 80% FEDERAL/20% STATE
 CONSTRUCTION TYPE CODE: 0004

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
20200100	EARTH EXCAVATION	CU YD	23
20700220	POROUS GRANULAR EMBANKMENT	CU YD	416
25000210	SEEDING, CLASS 2A	ACRE	0.5
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	45
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	45
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45
28000400	PERIMETER EROSION BARRIER	FOOT	181
28000500	INLET AND PIPE PROTECTION	EACH	1
28100201	STONE RIPRAP, CLASS A1	TON	107
28500100	FABRIC FORMED CONCRETE REVETMENT MAT	SQ YD	245
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	64
44200050	WELDED WIRE REINFORCEMENT	SQ YD	239
44200977	CLASS B PATCHES, TYPE IV, 10 1/2 INCH	SQ YD	239
44201299	DOWEL BARS 1 1/2"	EACH	213



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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: _____ SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	3
CONTRACT NO. 70907			ILLINOIS FED. AID PROJECT	

URBAN
 F.A.P. 730 (US 51B)
 MAIN STREET
 OTHER PRINCIPAL ARTERIAL
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CODE NO.	ITEM	UNIT	TOTAL QUANTITY
44213200	SAW CUTS	FOOT	139
44213208	TIE BARS 1 1/4"	EACH	180
48101200	AGGREGATE SHOULDERS, TYPE B	TON	6
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
51500100	NAME PLATES	EACH	1
52200020	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	331
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	2
54010705	PRECAST CONCRETE BOX CULVERTS 7' X 5'	FOOT	78
54260315	TRAVERSABLE PIPE GRATE FOR CONCRETE END SECTION	FOOT	136
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	95
60108104	PIPE UNDERDRAINS, TYPE 1, 4"	FOOT	64
60404950	FRAMES AND GRATES, TYPE 24	EACH	2
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	47
60605300	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (MODIFIED)	FOOT	17



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: _____ SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	4
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				

URBAN
 F.A.P. 730 (US 51B)
 MAIN STREET
 OTHER PRINCIPAL ARTERIAL
 S.N. 057-8236
 STA. 32+41 TO STA. 32+73
 MCLEAN COUNTY
 FUNDING BREAKOUT: 80% FEDERAL/20% STATE
 CONSTRUCTION TYPE CODE: 0004

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
60617900	PAVED FLUME	SQ YD	21
63500310	REMOVE AND REINSTALL DELINEATORS	EACH	2
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	2
67100100	MOBILIZATION	L SUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	10
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	150
70307120	TEMPORARY PAVEMENT MARKING - LINE 4" - TYPE IV TAPE	FOOT	3220
70400100	TEMPORARY CONCRETE BARRIER	FOOT	512.5
70400125	PINNING TEMPORARY CONCRETE BARRIER	EACH	72
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	562.5
70600255	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	2
70600322	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	2
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	148
K0013010	PERENNIAL PLANTS, PRAIRIE TYPE, QUART POT	UNIT	1

*= SPECIALTY ITEM



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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: _____ SHEET NO. ___ OF ___ SHEETS STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	5
ILLINOIS FED. AID PROJECT			CONTRACT NO. 70907	

URBAN
 F.A.P. 730 (US 51B)
 MAIN STREET
 OTHER PRINCIPAL ARTERIAL
 S.N. 057-8236
 STA. 32+41 TO STA. 32+73
 MCLEAN COUNTY
 FUNDING BREAKOUT: 80% FEDERAL/20% STATE
 CONSTRUCTION TYPE CODE: 0004

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
X2850001	REVTMENT MAT REMOVAL	SQ YD	175
X0900064	MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES	SQ YD	95
X6011905	PIPE DRAINS 10" (SPECIAL)	FOOT	10
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
X7200201	WIDTH RESTRICTION SIGNING	L SUM	1
Z0013798	CONSTRUCTION LAYOUT	L SUM	1
Z0038700	PERMANENT BENCH MARKS	EACH	1

PERMANENT SEEDING					
LOCATION	25000310	K0013010	25000400	25000500	25000600
	SEEDING, CLASS 2A	PERENNIAL PLANTS, PRAIRIE TYPE, QUART POT	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT
	ACRE	UNIT	POUND	POUND	POUND
STA. 31+70 TO STA. 35+45 LT.	0.26		23	23	23
STA. 32+41 TO STA. 32+73 MEDIAN		0.64	3	3	3
STA. 29+50 TO STA. 33+25 RT.	0.17		15	15	15
TOTAL	0.43	0.64	41	41	41
	SAY 0.5 ACRE	1 UNIT	SAY 45 LBS	SAY 45 LBS	SAY 45 LBS

PIPE DRAINS AND UNDERDRAINS		
LOCATION	60108204	X6011905
	PIPE UNDERDRAINS, TYPE 2, 4"	PIPE DRAINS 10" (SPECIAL)
	FOOT	FOOT
STA. 32+41 TO STA. 32+73 LT.	32	
STA. 32+41 TO STA. 32+73 RT.	32	
STA. 32+57 56' RT. TO 66' RT. (ESTIMATED QUANTITY UNDERNEATH STRUCTURE)		10
TOTAL	64	10

COMBINATION CONCRETE CURB AND GUTTER			
LOCATION	44000500	60605000	60605300
	COMBINATION CONCRETE CURB & GUTTER REMOVAL	COMBINATION CONCRETE CURB & GUTTER TYPE B-6.24	COMBINATION CONCRETE CURB & GUTTER TYPE B-6.24 (MODIFIED)
	FOOT	FOOT	FOOT
STA. 32+41 TO STA. 32+73 LT.	32		
STA. 32+41 TO STA. 32+73 RT.	32		
STA. 32+41 TO STA. 32+52.8 LT.		11.8	
STA. 32+61.2 TO STA. 32+73 LT.		11.8	
STA. 32+41 TO STA. 32+52.8 RT.		11.8	
STA. 32+61.2 TO STA. 32+73 RT.		11.8	
STA. 32+52.8 TO STA. 32+61.2 LT.			8.4
STA. 32+52.8 TO STA. 32+61.2 RT.			8.4
TOTAL	64	47	17

60404950 - FRAMES AND GRATES, TYPE 24	
LOCATION	QUANTITY
	EACH
STA. 32+57 6.5' LT.	1
STA. 32+57 6.5' RT.	1
TOTAL	2

28500100 - FABRIC FORMED CONCRETE REVETMENT MAT	
LOCATION	QUANTITY
	SQ YD
STA. 32+00 TO STA. 33+00 RT.	245
TOTAL	245

44213200 - SAW CUTS	
LOCATION	QUANTITY
	FOOT
STA. 32+51 LT.	37
STA. 32+63 LT.	38
STA. 32+51 RT.	32
STA. 32+63 RT.	32
TOTAL	139

44200050 - WELDED WIRE REINFORCEMENT	
LOCATION	QUANTITY
	SQ YD
STA. 32+41 TO STA. 32+73 LT.	124
STA. 32+41 TO STA. 32+73 RT.	115
TOTAL	239

44213208 - TIE BARS 1 1/4"	
LOCATION	QUANTITY
	EACH
STA. 32+41 TO STA. 32+73 LT. (LT EOP)	30
STA. 32+41 TO STA. 32+73 LT. (STAGE LINE)	30
STA. 32+41 TO STA. 32+73 LT. (RT EOP)	30
STA. 32+41 TO STA. 32+73 RT. (LT EOP)	30
STA. 32+41 TO STA. 32+73 RT. (STAGE LINE)	30
STA. 32+41 TO STA. 32+73 RT. (RT EOP)	30
TOTAL	180

70400125 - PINNING TEMPORARY CONCRETE BARRIER	
LOCATION	QUANTITY
	EACH
STAGE I	
STA. 32+06.9 TO STA. 32+19.4 LT.	1
STA. 32+19.4 TO STA. 32+31.9 LT.	2
STA. 32+31.9 TO STA. 32+81.9 LT.	12
STA. 32+81.9 TO STA. 32+94.4	2
STA. 32+94.4 TO STA. 33+06.9	1
STAGE II	
STA. 32+06.9 TO STA. 32+19.4 LT.	1
STA. 32+19.4 TO STA. 32+31.9 LT.	2
STA. 32+31.9 TO STA. 32+81.9 LT.	12
STA. 32+81.9 TO STA. 32+94.4	2
STA. 32+94.4 TO STA. 33+06.9	1
STAGE III	
STA. 32+00.6 TO STA. 32+13.1 RT.	1
STA. 32+13.1 TO STA. 32+25.6 RT.	2
STA. 32+25.6 TO STA. 32+75.6 RT.	12
STA. 32+75.6 TO STA. 32+88.1 RT.	2
STA. 32+88.1 TO STA. 33+00.6 RT.	1
TOTAL	72

44200977 - CLASS B PATCHES, TYPE IV, 10 1/2 INCH	
LOCATION	QUANTITY
	SQ YD
STA. 32+41 TO STA. 32+73 LT. STAGE I	64
STA. 32+41 TO STA. 32+73 LT. STAGE II	60
STA. 32+41 TO STA. 32+73 RT. STAGE II	57
STA. 32+41 TO STA. 32+73 RT. STAGE III	58
TOTAL	239

48101200 - AGGREGATE SHOULDERS, TYPE B	
LOCATION	QUANTITY
	TON
STA. 32+41 TO STA. 32+73 LT.	3
STA. 32+41 TO STA. 32+73 RT.	3
TOTAL	6

44201299 - DOWEL BARS 1 1/2"	
LOCATION	QUANTITY
	EACH
STA. 32+41 LT.	27
STA. 32+51 LT.	27
STA. 32+63 LT.	27
STA. 32+73 LT.	28
STA. 32+41 RT.	26
STA. 32+51 RT.	26
STA. 32+63 RT.	26
STA. 32+73 RT.	26
TOTAL	213

54260315 - TRAVERSABLE PIPE GRATE FOR CONCRETE END SECTION	
LOCATION	QUANTITY
	FOOT
STA 32+57 LT. (2 PIPES @ 24'-1", 3 PIPES @ 6'-7")	68
STA 32+57 RT. (2 PIPES @ 24'-1", 3 PIPES @ 6'-7")	68
TOTAL	136

70307120 - TEMPORARY PAVEMENT MARKING - LINE 4" - TYPE IV TAPE	
LOCATION	QUANTITY
	FOOT
STA. 31+69.4 TO STA. 39+45.0 LT (STAGE I)	777
STA. 31+69.4 TO STA. 33+45.0 LT (STAGE I)	176
STA. 30+73 TO STA. 33+87.3 LT. (STAGE II)	314
STA. 31+69.4 TO STA. 39+45.0 LT (STAGE II)	777
STA. 29+00.0 TO STA. 33+25.6 RT. (STAGE II)	427
STA. 30+52.0 TO STA. 34+23 RT. (STAGE II)	373
STA. 29+50.0 TO STA. 33+25.6 RT. (STAGE III)	376
TOTAL	3220



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

QUANTITY SCHEDULES		
SCALE: _____	SHEET NO. 1 OF 2 SHEETS	STA. _____ TO STA. _____

F.A. RTE. 730	SECTION 57-411CR	COUNTY MCLEAN	TOTAL SHEETS 38	SHEET NO. 7
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				

EARTHWORK								
LOCATION	20200100 EARTH EXCAVATION	ADJUSTED SHRINKAGE FACTOR	EARTH EXCAVATION (ADJUSTED)	EMBANKMENT	EARTHWORK BALANCE		20400800 FURNISHED EXCAVATION	REMARKS
	CU. YD.	%	CU. YD.	CU. YD.	EXCAVATION REQUIRED TO COMPLETE	EXCESS EXCAVATION	CU. YD.	
STA. 32+25 TO STA. 32+53	23	25	17	0	17	0	0	
STA. 32+61 TO STA. 32+75	0		0		0			
TOTAL	23		17	0	17	0	0	

NO FURNISHED EXCAVATION IS REQUIRED. COST OF REMOVING EXCESS EARTH EXCAVATION WILL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

TEMPORARY CONCRETE BARRIER AND IMPACT ATTENUATORS				
LOCATION	70600255 IMPACT ATTENUATORS, TEMPORARY (FULLY REDERECTIVE, NARROW), TEST LEVEL 2	70400100 TEMPORARY CONCRETE BARRIER	70400200 RELOCATE TEMPORARY CONCRETE BARRIER	70600322 IMPACT ATTENUATORS, RELOCATE (FULLY REDERECTIVE, NARROW), TEST LEVEL 3
	EACH	FOOT	FOOT	EACH
STA. 34+56.5 TO STA. 34+82.1 LT. (STAGE I)	1			
STA. 29+88.0 TO STA. 30+13.6 RT. (STAGE II)	1			
STA. 31+69.4 TO STA. 34+56.5 LT. (STAGE I)		287.5		
STA. 31+69.4 TO STA. 33+69.3 LT. (STAGE II)		200		
STA. 30+13.6 TO STA. 30+38.6 LT. (STAGE II)		25		
STA. 30+38.6 TO STA. 33+25.6 RT. (STAGE II)			287.5	
STA. 30+51.0 TO STA. 33+25.6 RT. (STAGE III)			275	
STA. 33+69.3 TO STA. 33+94.9 LT. (STAGE II)				1
STA. 30+25.4 TO STA. 30+51.0 RT. (STAGE III)				1
TOTAL	2	512.5	562.5	2

78001110 - PAINT PAVEMENT MARKING - LINE 4"			
LOCATION	SOLID WHITE	SOLID YELLOW	WHITE SKIP-DASH
	FOOT	FOOT	FOOT
STA 32+41.0 TO STA. 32+73.0 LT. (LEFT EOP)	32		
STA 32+41.0 TO STA. 32+73.0 LT. (LANE LINE)			10
STA 32+41.0 TO STA. 32+73.0 LT. (RIGHT EOP)		32	
STA 32+41.0 TO STA. 32+73.0 RT. (LEFT EOP)		32	
STA 32+41.0 TO STA. 32+73.0 RT. (LANE LINE)			10
STA 32+41.0 TO STA. 32+73.0 RT. (RIGHT EOP)	32		
SUB-TOTAL	64	64	20
TOTAL		148	

28000400 - PERIMETER EROSION BARRIER	
LOCATION	QUANTITY
	FOOT
STA. 32+00 TO STA. 33+00 RT.	100
STA. 32+00 TO STA. 32+48 LT.	48
STA. 32+67 TO STA. 33+00 LT.	33
TOTAL	181

X2850001 - REVETMENT MAT REMOVAL	
LOCATION	QUANTITY
	SQ YD
STA. 32+17 TO STA. 32+93 RT.	155
STA. 32+48 TO STA. 32+65 LT.	20
TOTAL	175

63500310 REMOVE AND REINSTALL DELINEATORS	
LOCATION	QUANTITY
	EACH
STA. 32+53 42' RT. NB	1
STA. 32+61 42' RT. SB	1
TOTAL	2

60617900 - PAVED FLUME	
LOCATION	QUANTITY
	SQ. YD.
STA. 32+47.5 TO STA. 32+66.5 LT.	21
TOTAL	21

28000500 - INLET AND PIPE PROTECTION	
LOCATION	QUANTITY
	EACH
STA. 32+57 90' LT.	1
TOTAL	1



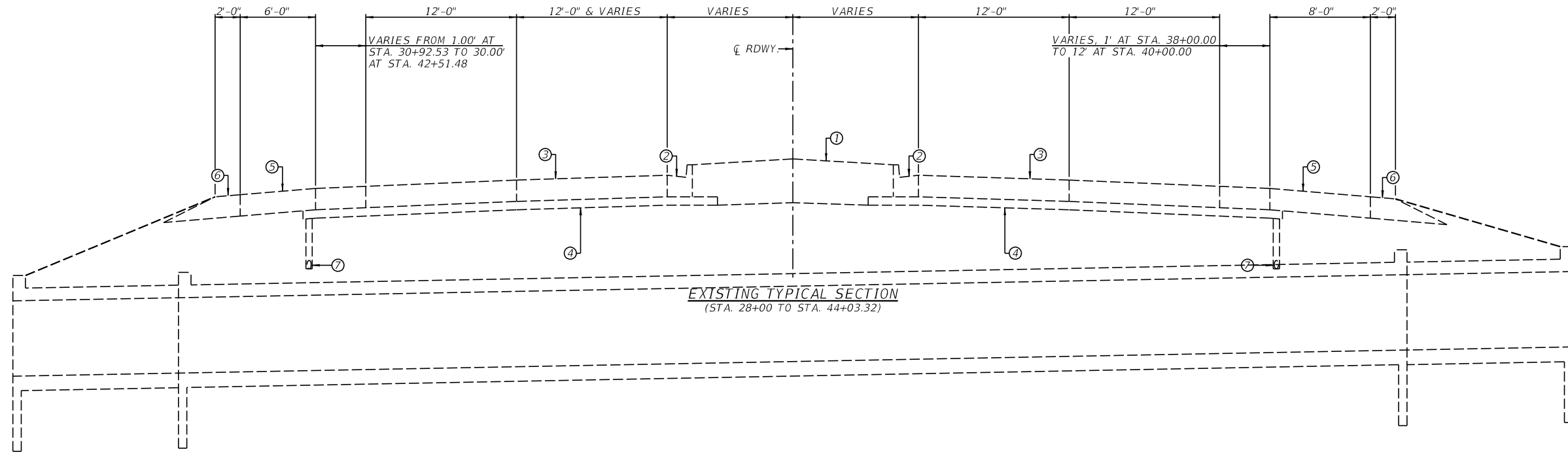
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

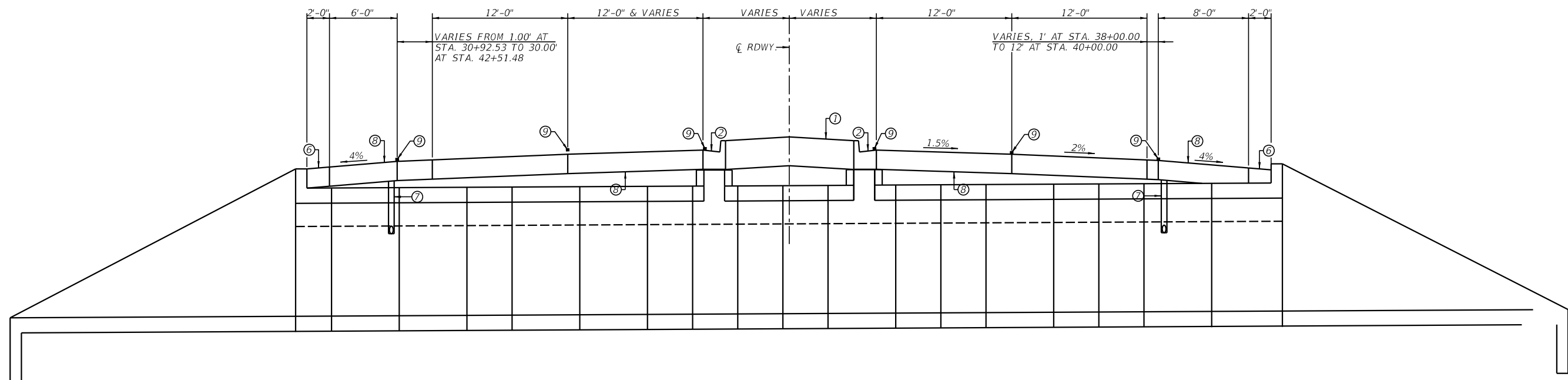
QUANTITY SCHEDULES

SCALE: _____ SHEET NO. 2 OF 2 SHEETS STA. _____ TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	8
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				



EXISTING TYPICAL SECTION
(STA. 28+00 TO STA. 44+03.32)



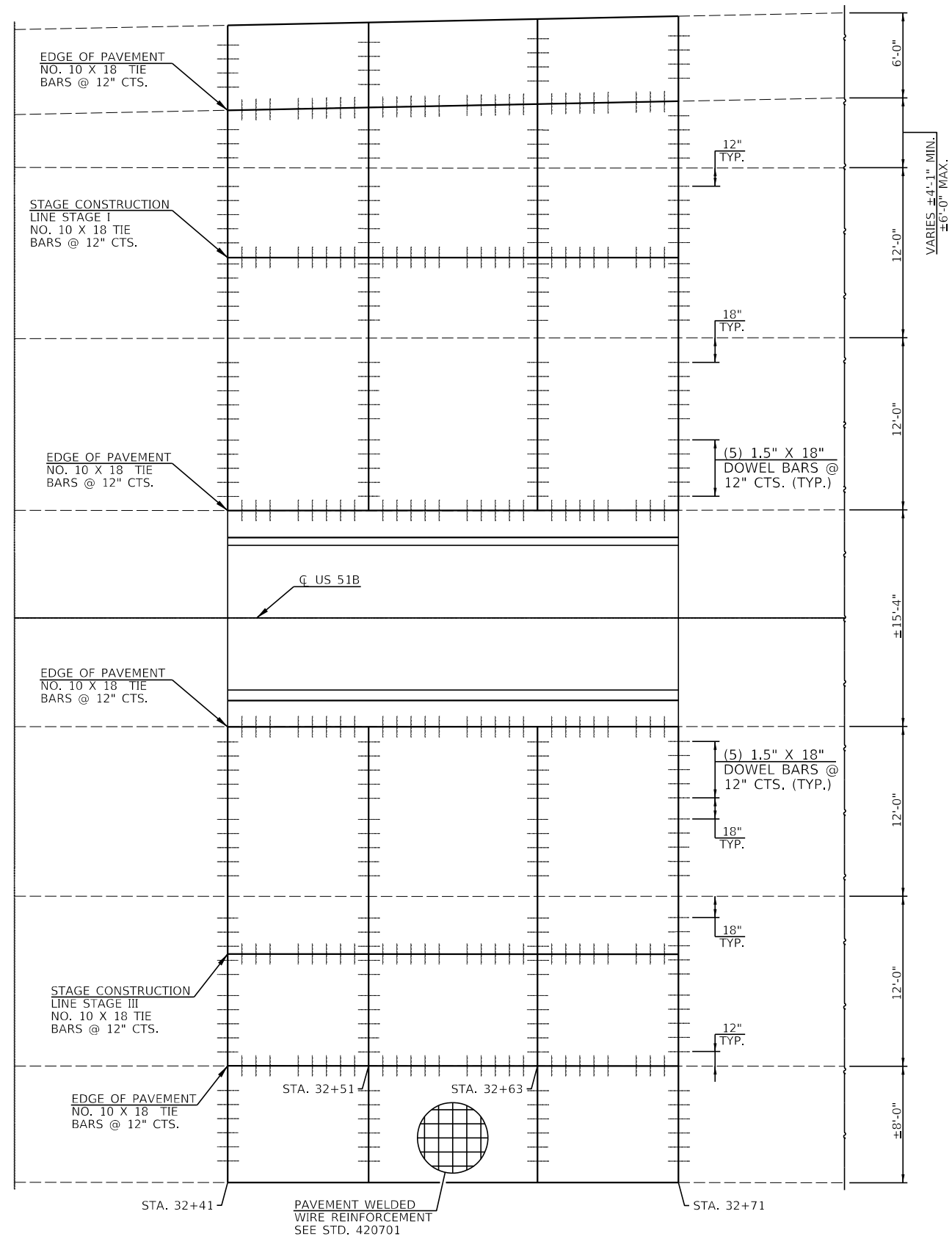
PROPOSED TYPICAL SECTION
(STA. 32+41 TO STA. 32+73)

PAVEMENT LEGEND

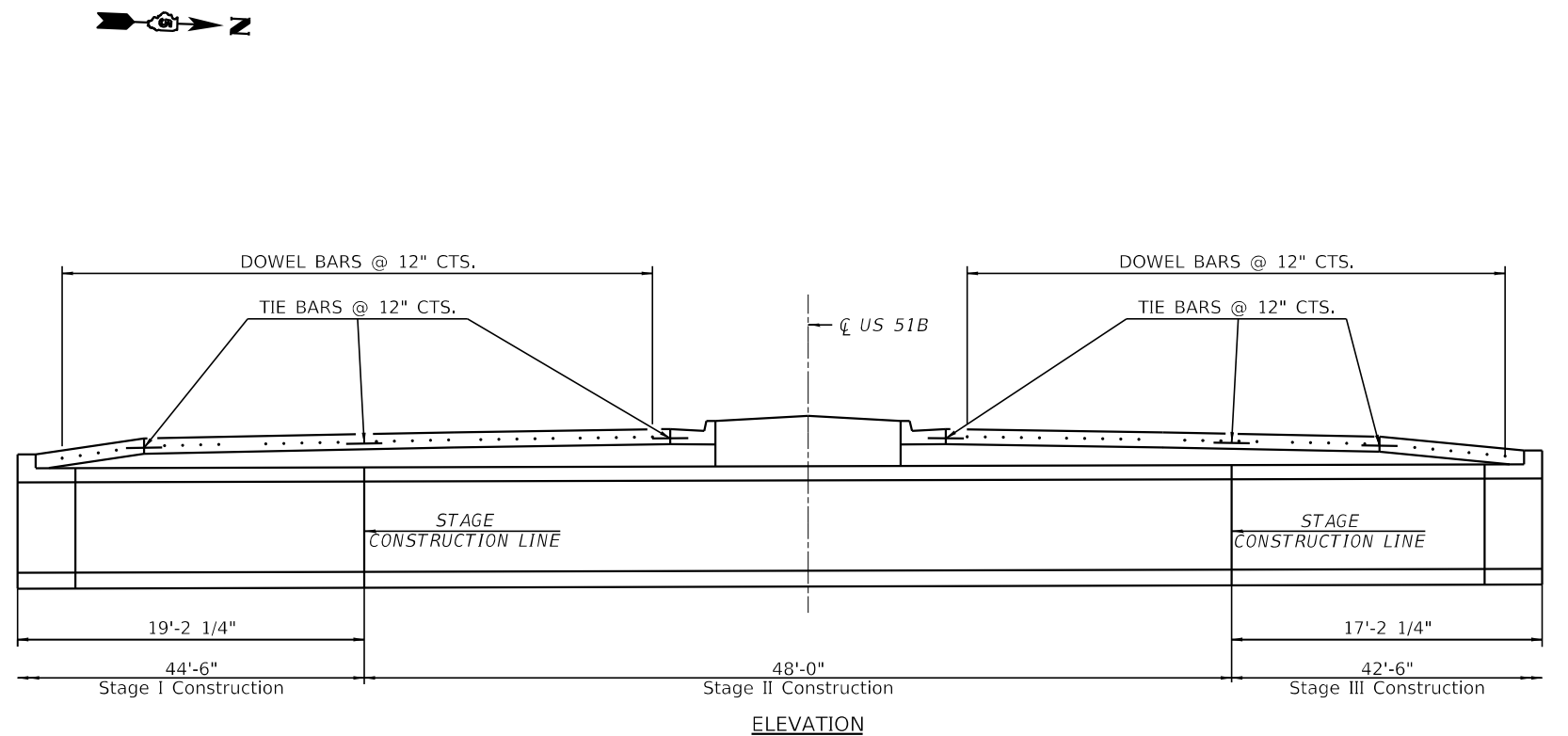
- ① EX & PR EARTH FILL WITH DECORATIVE GRASS
- ② EX & PR COMBINATION CURB AND GUTTER, TYPE B-6.24
- ③ EX PCC PAVEMENT 10 $\frac{1}{4}$ "
- ④ EX STABILIZED SUB-BASE 4"
- ⑤ EX PCC SHOULDERS 10 $\frac{1}{4}$ "
- ⑥ EX & PR AGGREGATE SHOULDERS, TYPE B
- ⑦ EX & PR PIPE UNDERDRAINS 4"
- ⑧ PR CLASS B PATCHES, TYPE IV, 10 $\frac{1}{2}$ " (TO BE TINED)
- ⑨ PR PAINT PAVEMENT MARKING - LINE 4"

USER NAME =	DESIGNED -	REVISED -
CHECKED -	REVISED -	
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	9
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				

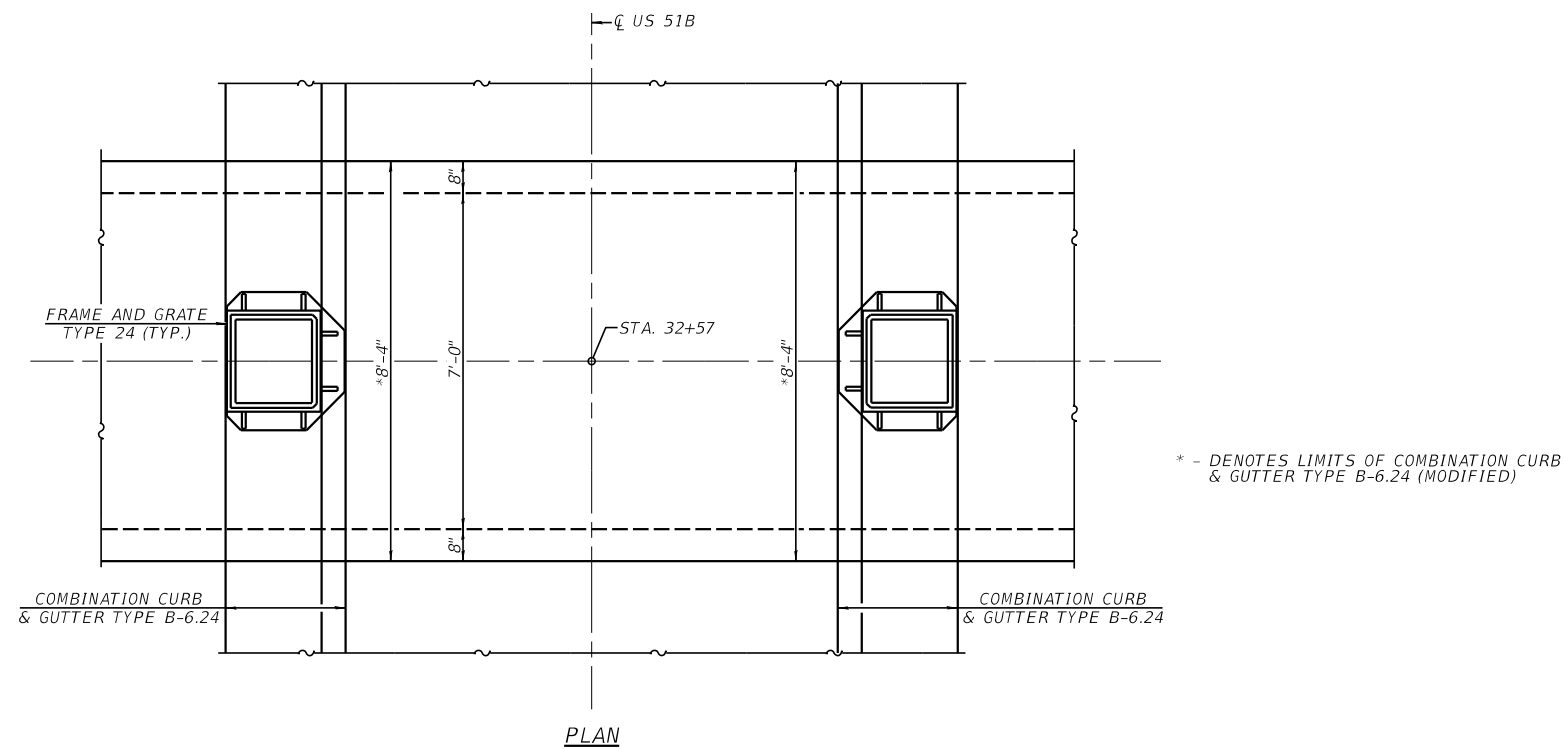
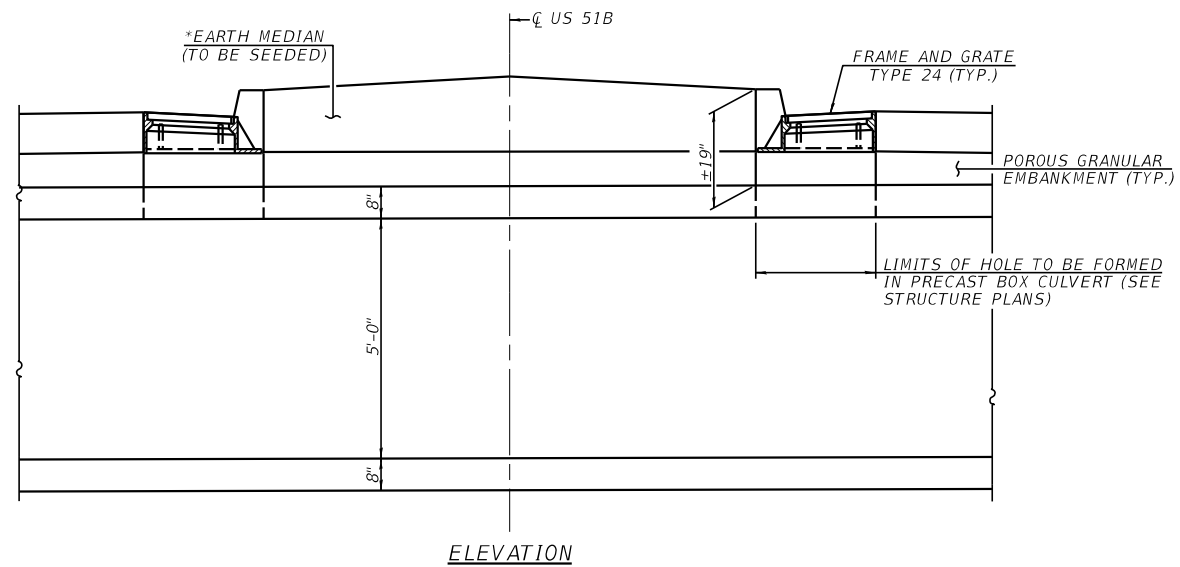


TYPE B PATCH PLAN



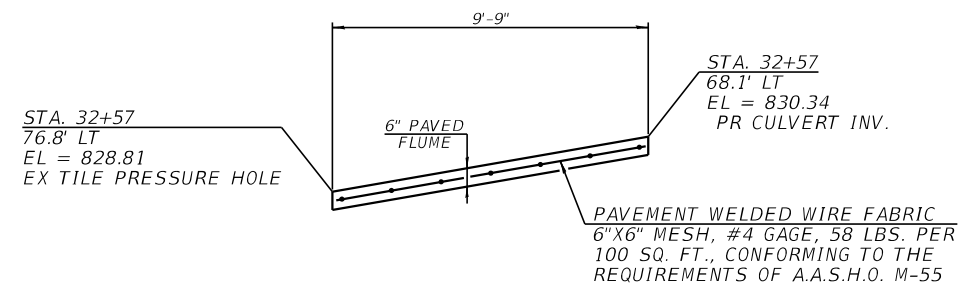
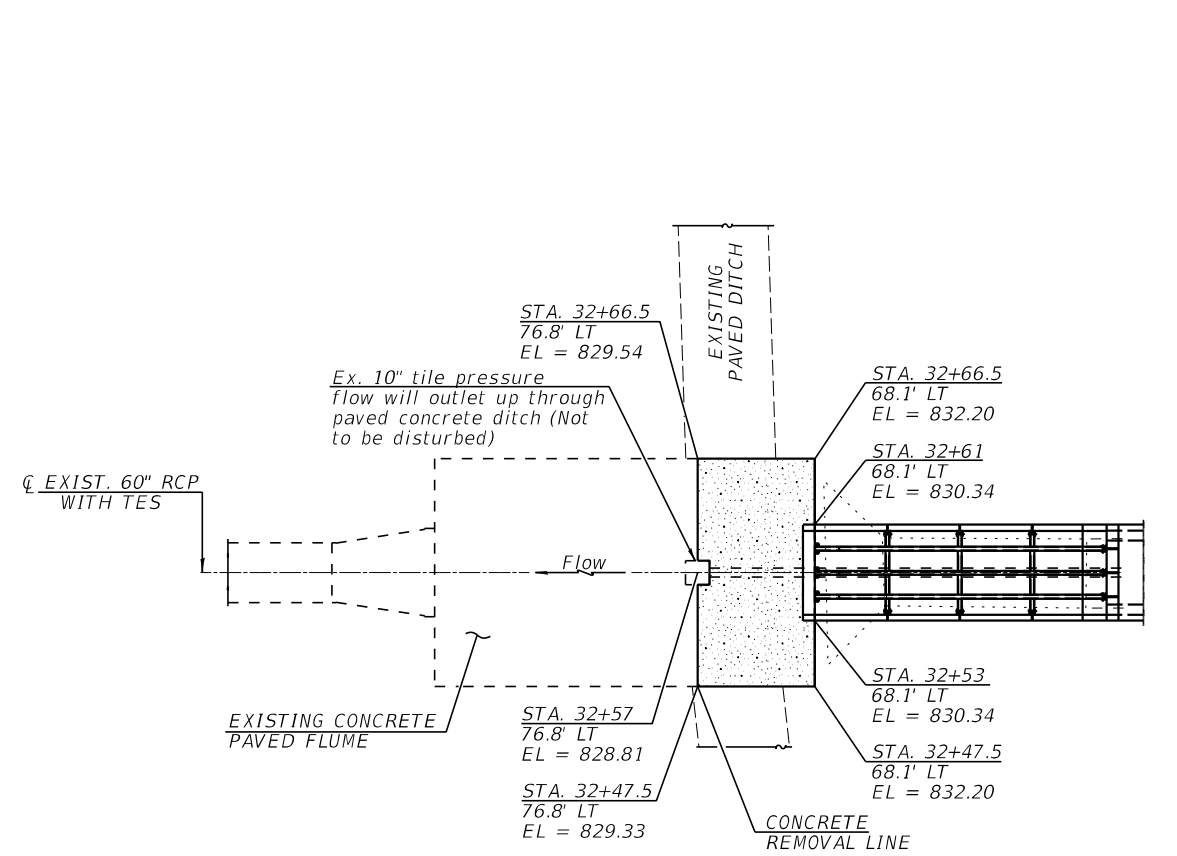
NOTE: CLASS B PATCH SHALL BE TINED. COST INCLUDED IN THE CONTRACT UNIT PRICE FOR CLASS B PATCHES, TYPE IV, 10 1/2 INCH.

USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DRAWN -	REVISED -
	CHECKED -	REVISED -

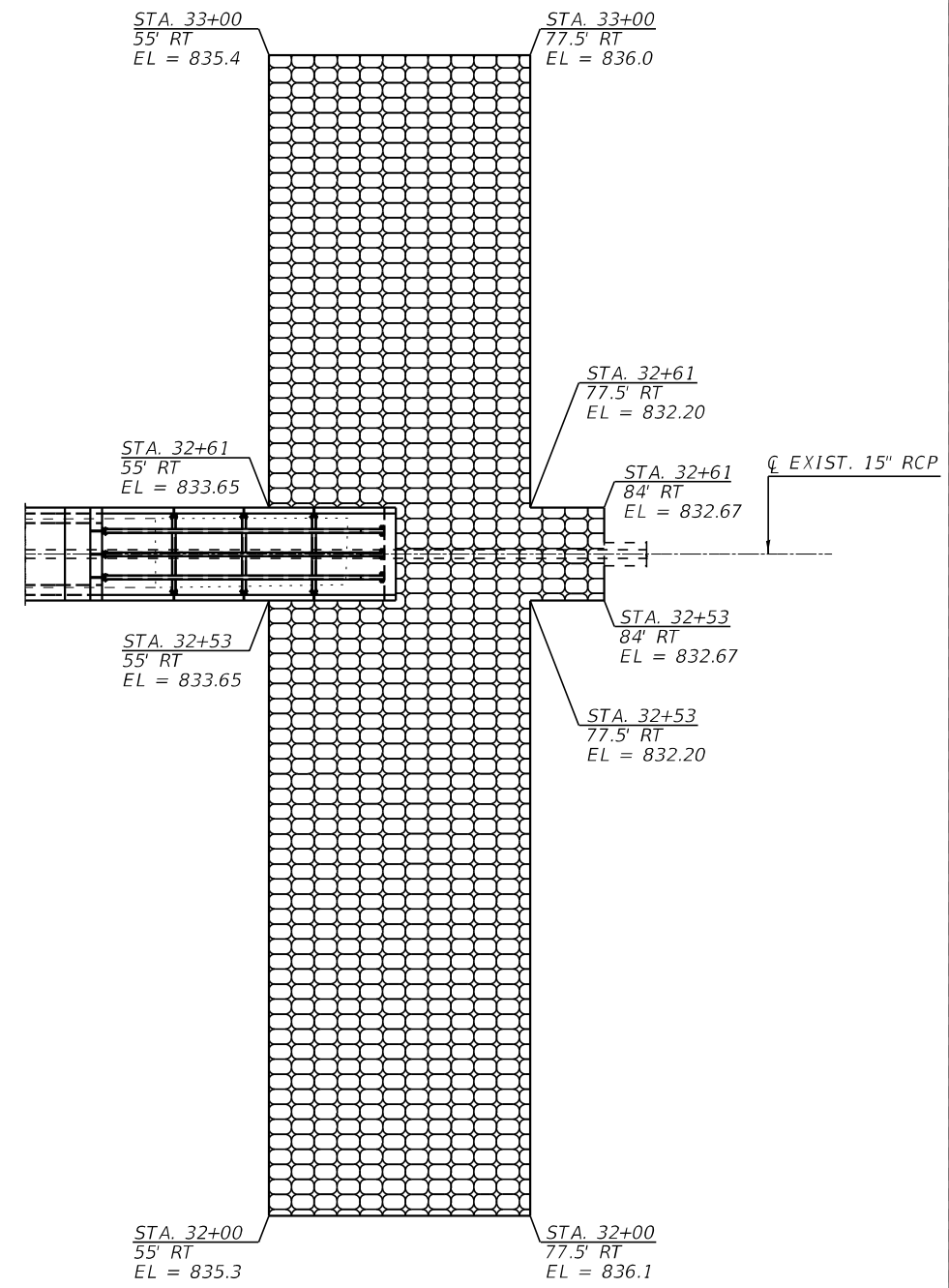


USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	12
				CONTRACT NO. 70907
ILLINOIS FED. AID PROJECT				



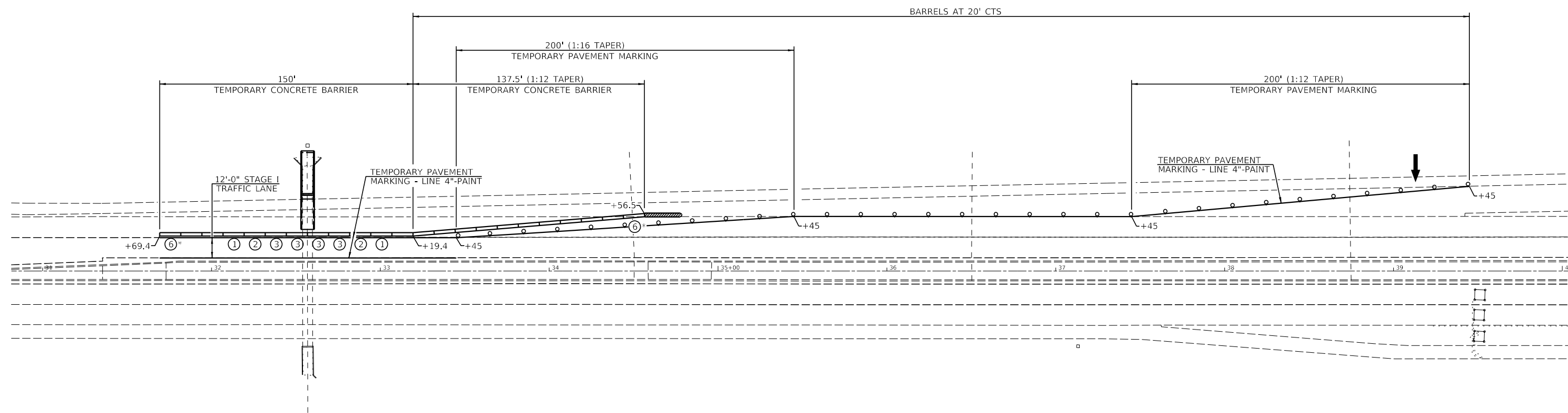
PAVED FLUME DETAILS



FABRIC FORMED CONCRETE REVETMENT MAT DETAILS (SEE STD. 285001)

USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DRAWN -	REVISED -
	CHECKED -	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-41(CR)	MCLEAN	38	13
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				



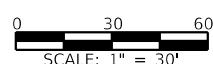
STAGE I STAGING PLAN

* QUANTITY INCLUDED IN THE CONTRACT UNIT PRICE PER FOOT FOR TEMPORARY CONCRETE BARRIER

REFER TO STANDARD 701601 FOR ADVANCE WARNING SIGNS

SYMBOLS

- ↑ ARROW BOARD
- ⊥ SIGN
- DRUM WITH STEADY BURNING LIGHT
- ▬ TEMPORARY CONCRETE BARRIER
- ▬ IMPACT ATTENUATOR



VK VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

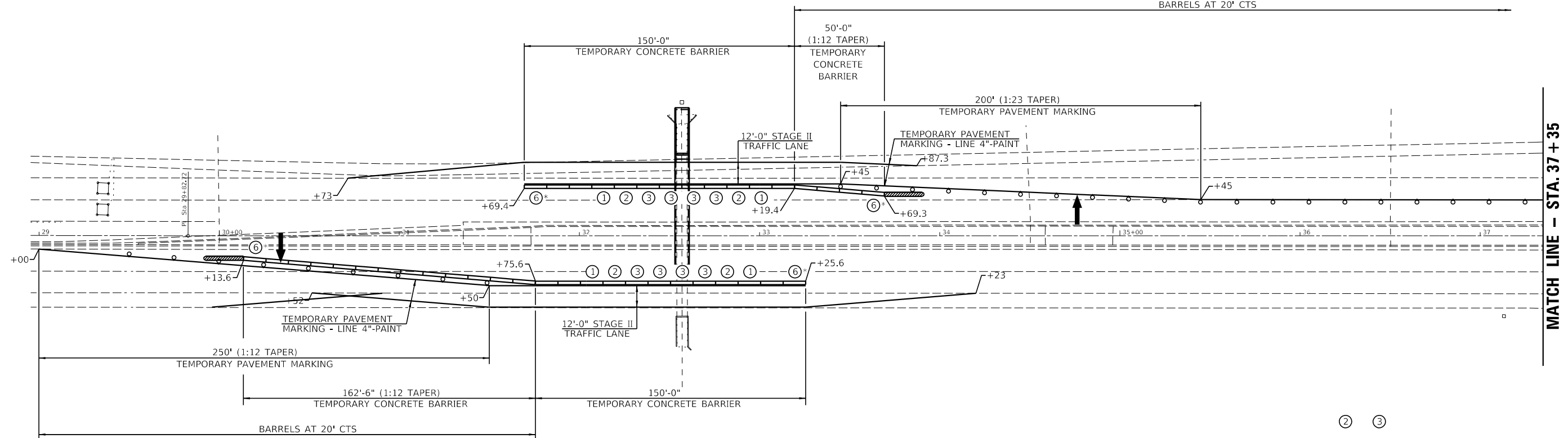
USER NAME =	DESIGNED -	REVISED -
CHECKED -	REVISIED -	
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE I STAGING PLAN		
SCALE: 1"=30'	SHEET NO. ___ OF ___ SHEETS	STA. _____ TO STA. _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	14
CONTRACT NO. 70907				
<small>ILLINOIS FED. AID PROJECT</small>				

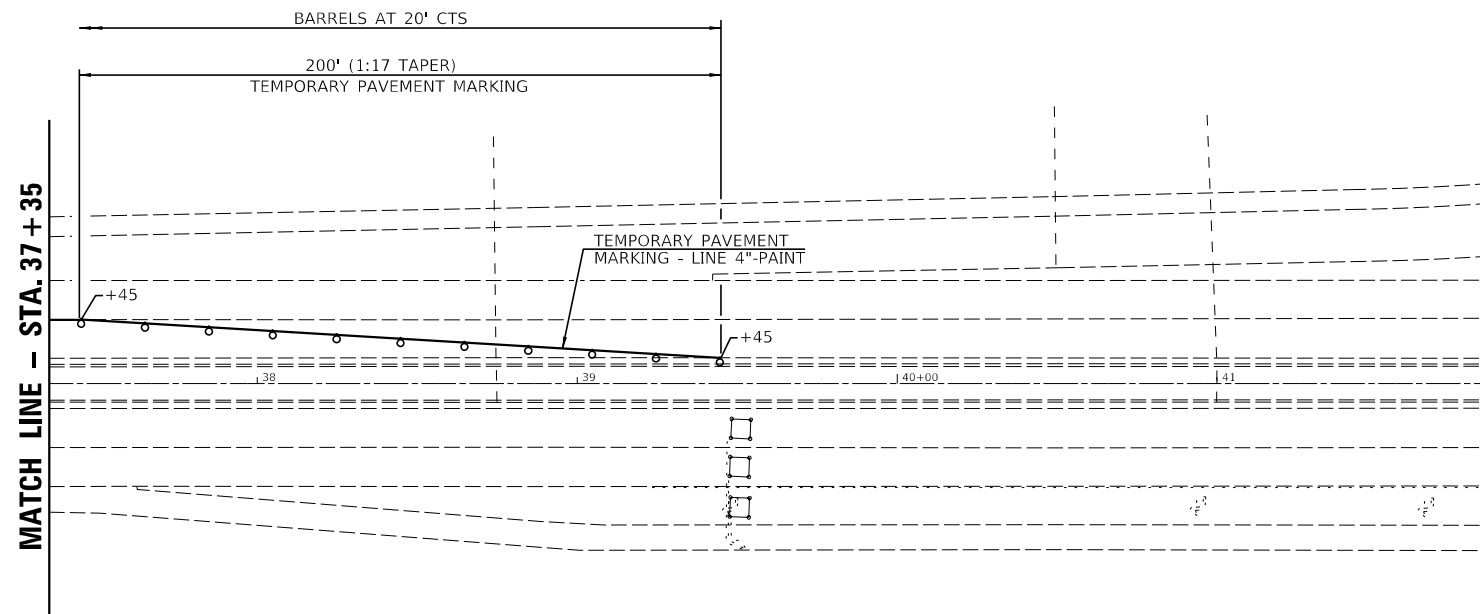
BARRELS AT 20' CTS



STAGE II STAGING PLAN



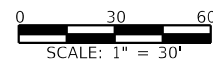
* QUANTITY INCLUDED IN THE CONTRACT UNIT PRICE PER FOOT FOR TEMPORARY CONCRETE BARRIER



REFER TO STANDARD 701601 FOR ADVANCE WARNING SIGNS

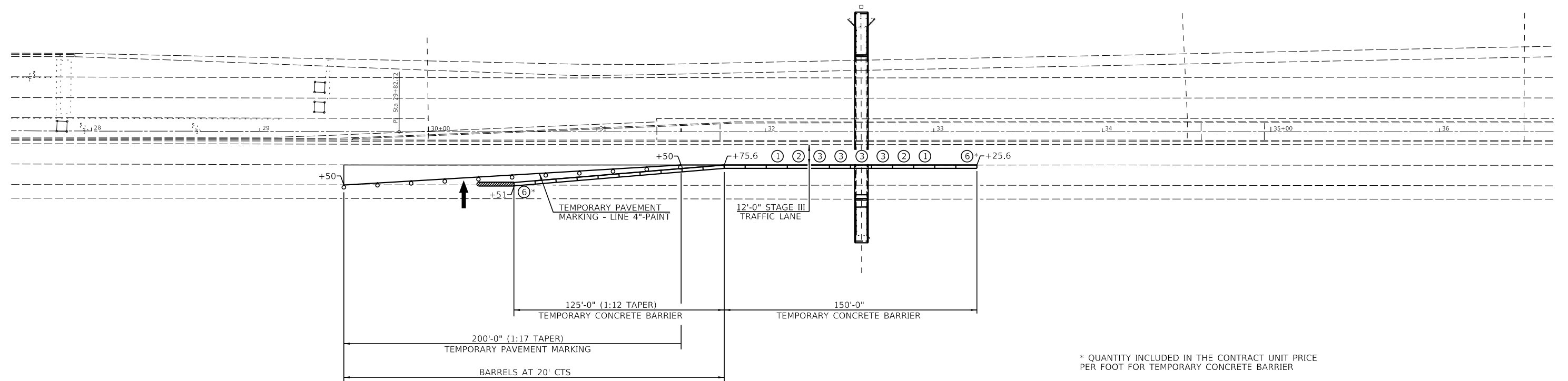
SYMBOLS

- ↑ ARROW BOARD
- ⊥ SIGN
- ⊙ DRUM WITH STEADY BURNING LIGHT
- ▬ TEMPORARY CONCRETE BARRIER
- ▬ IMPACT ATTENUATOR



USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DRAWN -	REVISED -
	CHECKED -	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	15
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				

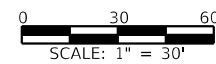


STAGE III STAGING PLAN

REFER TO STANDARD 701601 FOR ADVANCE WARNING SIGNS

SYMBOLS

- ↑ ARROW BOARD
- ⊥ SIGN
- ⊙ DRUM WITH STEADY BURNING LIGHT
- ▬ TEMPORARY CONCRETE BARRIER
- ▬ IMPACT ATTENUATOR

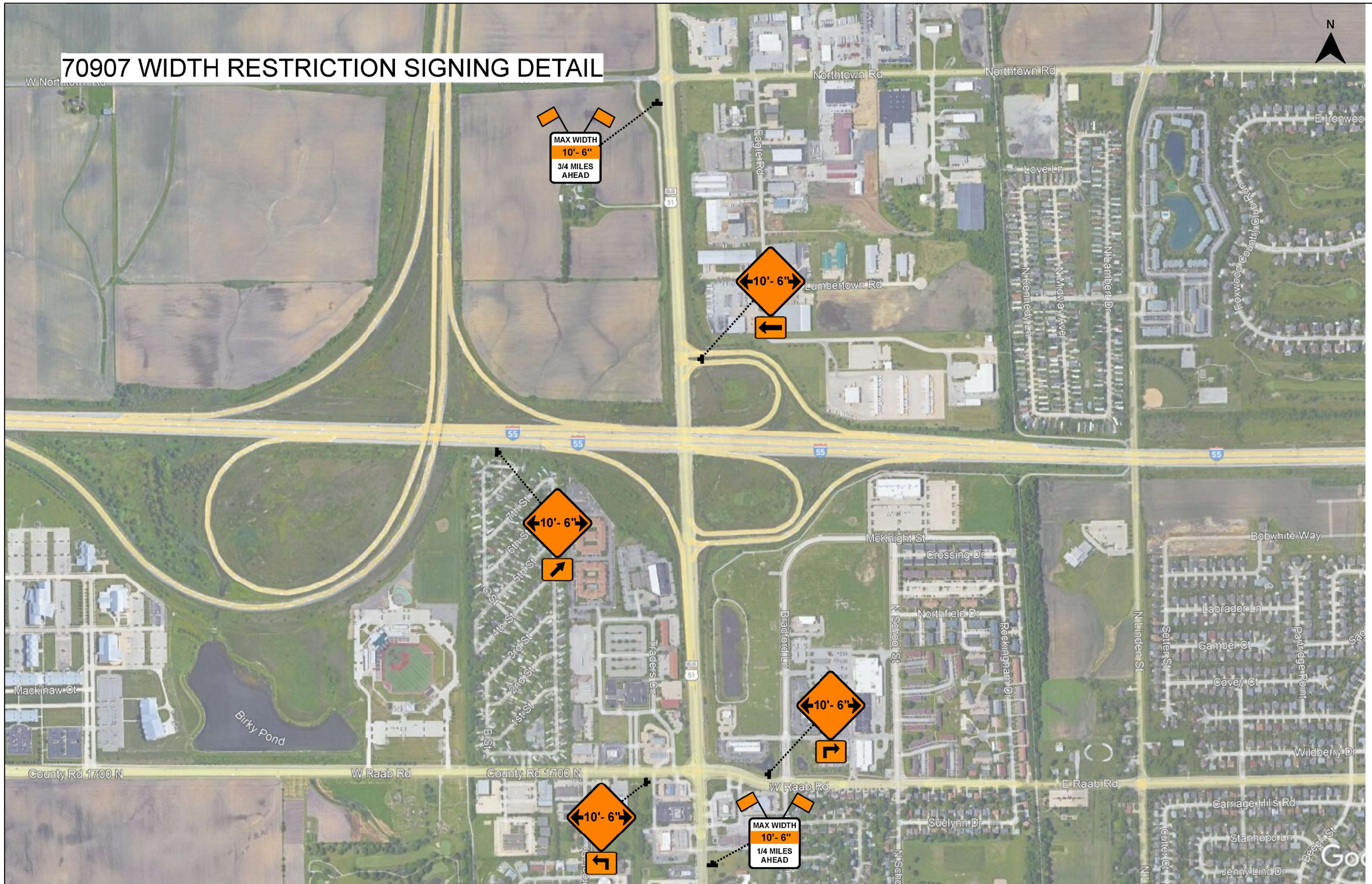


USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

STAGE III STAGING PLAN			
SCALE: 1"=30'	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	16
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				

70907 WIDTH RESTRICTION SIGNING DETAIL



VEENSTRA & KIMM INC.
 Springfield, IL. Phone: (217)544-8033
 IL. Design Firm No. 184-001939

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PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DRAWN -	REVISED -
	CHECKED -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

WIDTH RESTRICTION SIGNING

SCALE: SHEET NO. 2 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	17
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				

70907 WIDTH RESTRICTION SIGNING DETAIL



VEENSTRA & KIMM INC.
 Springfield, IL. Phone: (217)544-8033
 IL. Design Firm No. 184-001939

USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DRAWN -	REVISED -
	CHECKED -	REVISED -

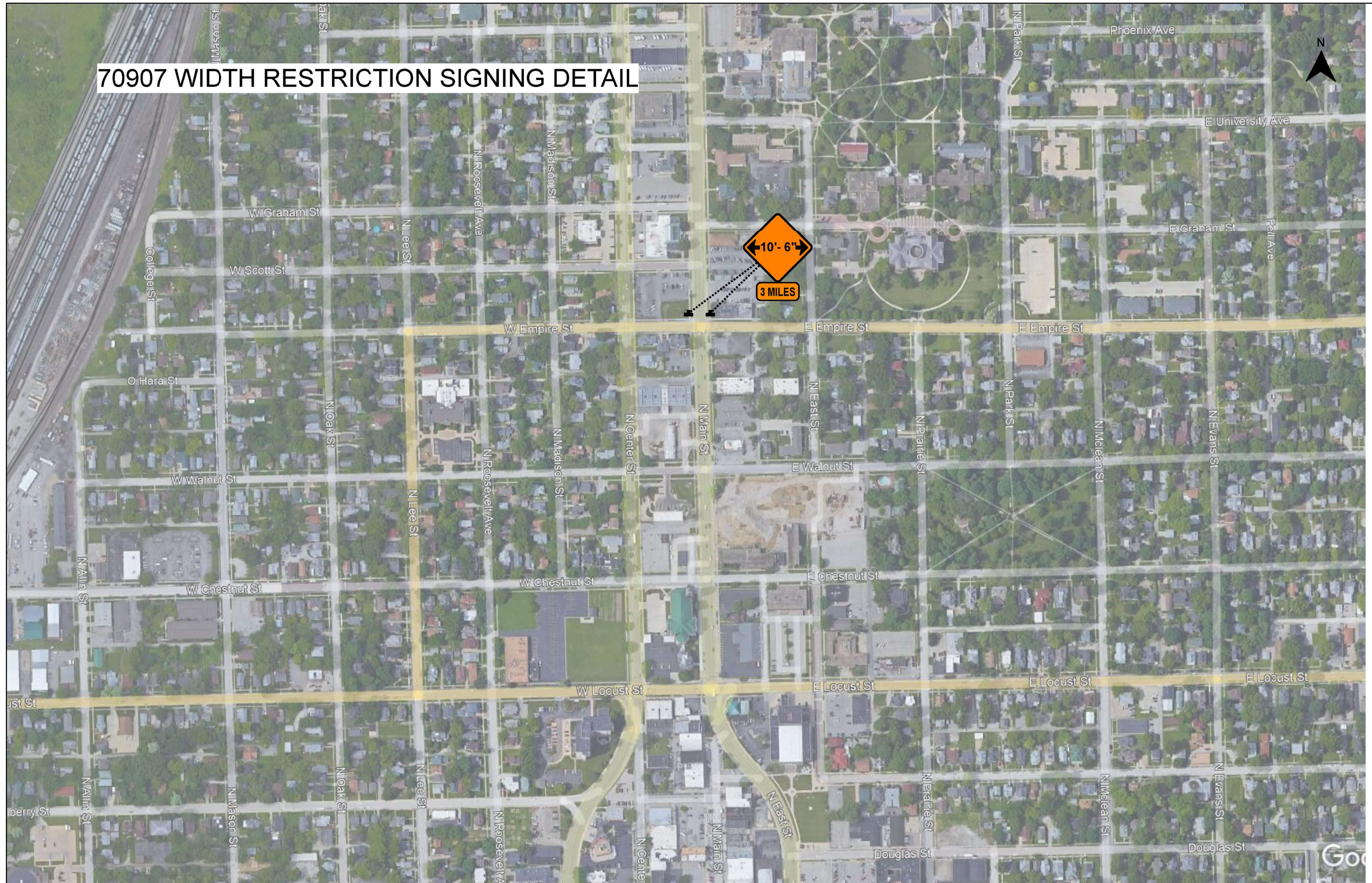
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

WIDTH RESTRICTION SIGNING

SCALE: SHEET NO. 3 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	18
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				

70907 WIDTH RESTRICTION SIGNING DETAIL



VEENSTRA & KIMM INC.
 Springfield, IL. Phone: (217)544-8033
 IL. Design Firm No. 184-001939

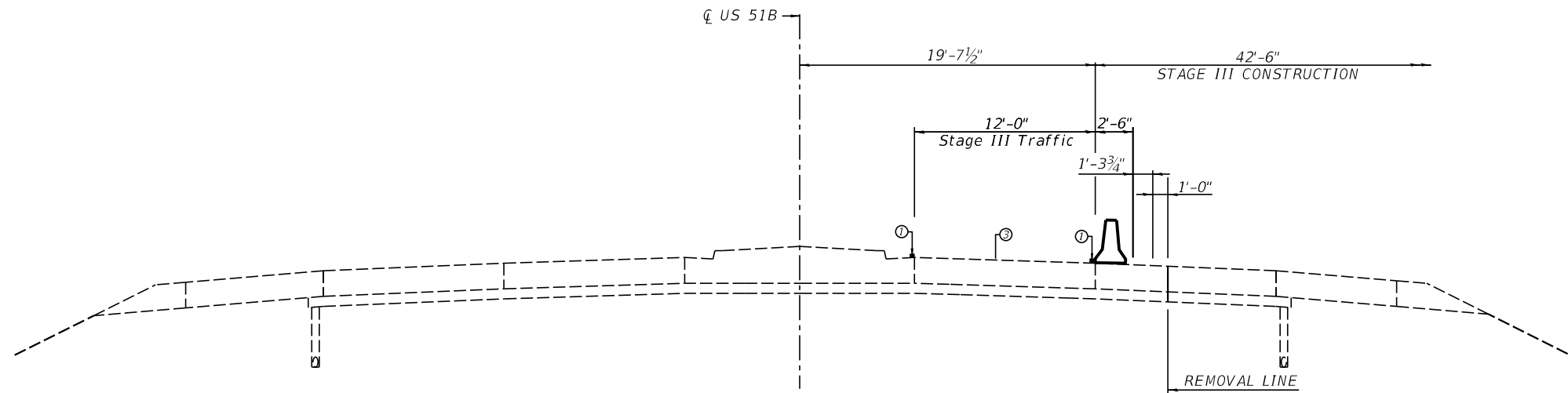
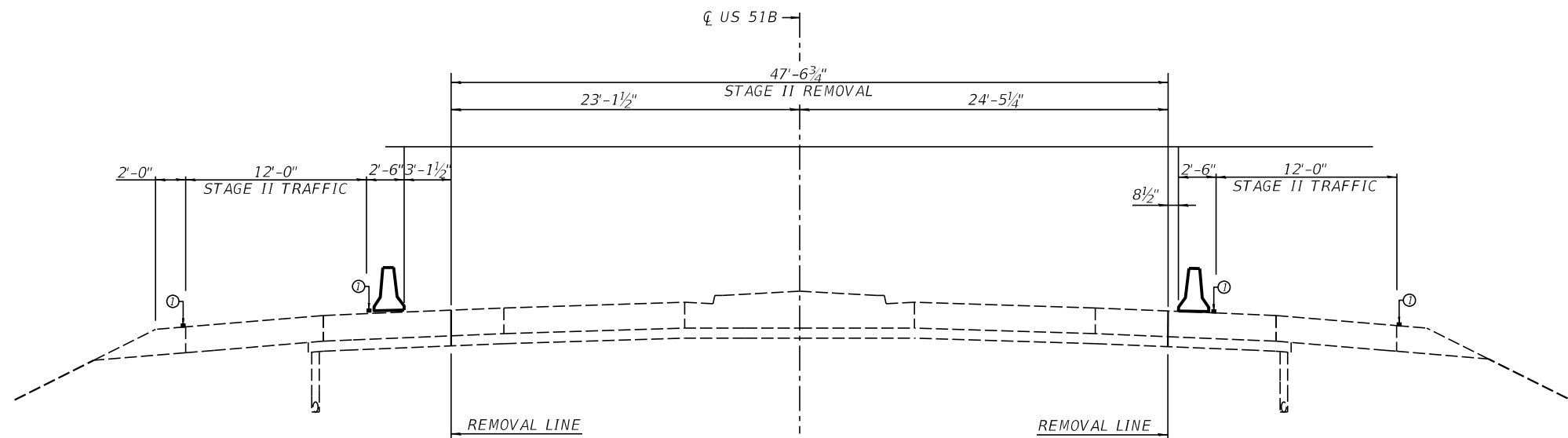
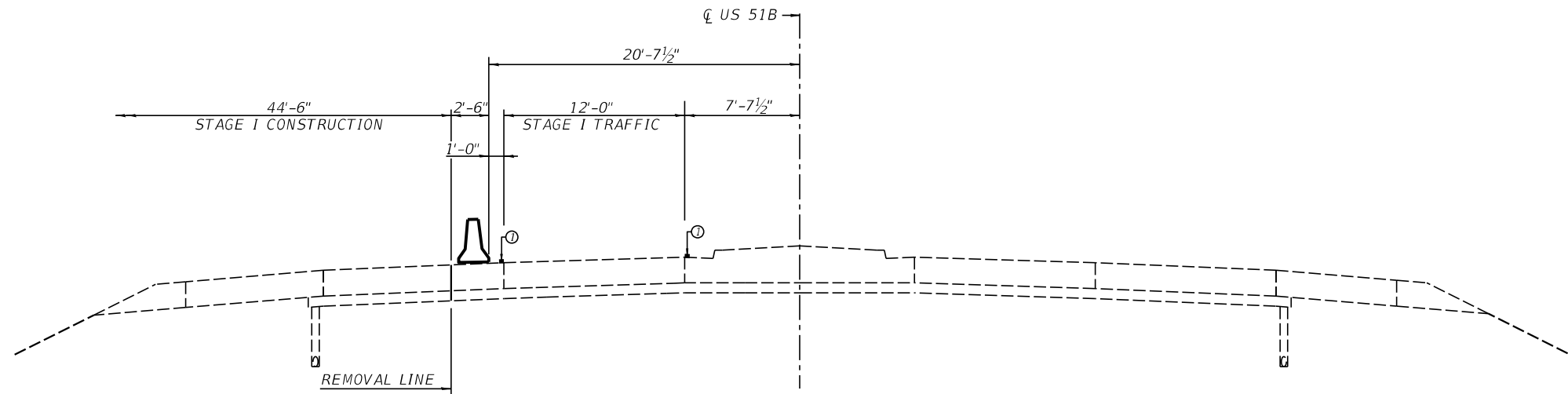
USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

WIDTH RESTRICTION SIGNING

SCALE: SHEET NO. 4 OF 4 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	19
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				



USER NAME =	DESIGNED -	REVISED -
CHECKED -	REVISIED -	
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	20
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				

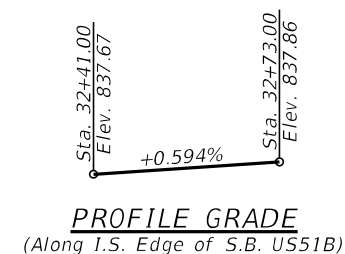
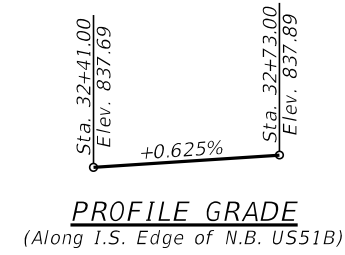
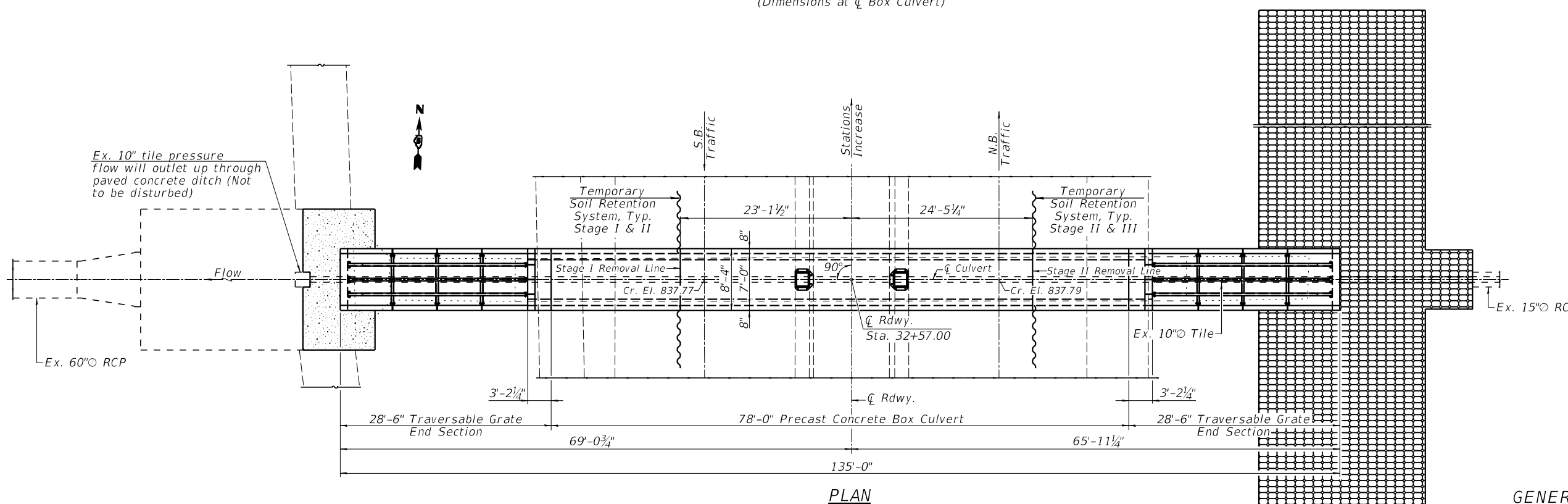
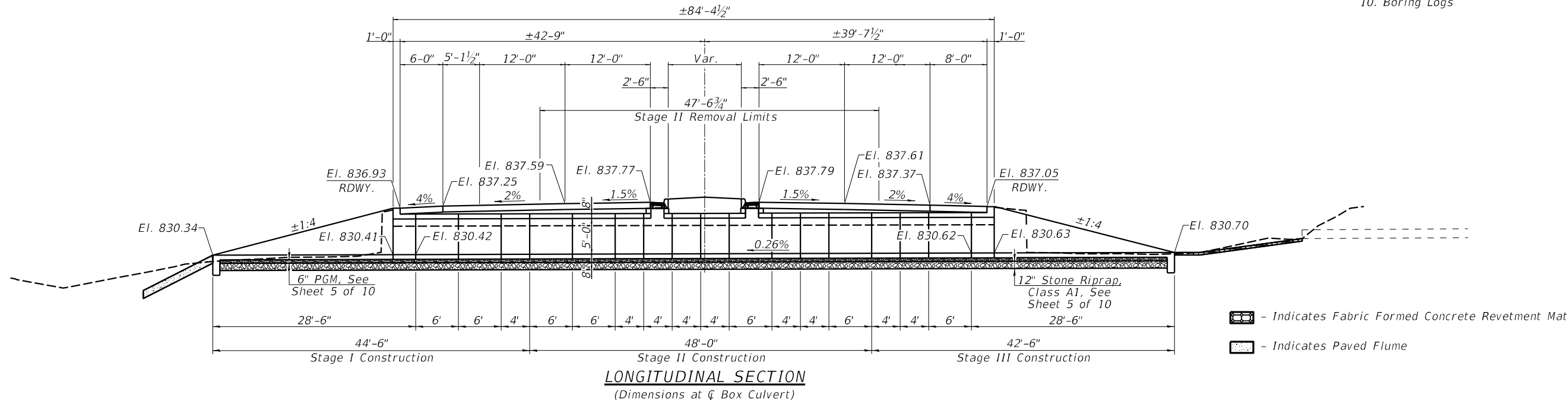
BM 5054-2: Chiseled square on top of 15" PCC pipe culvert located directly east of SN 057-8194. El. 834.202

Existing Structure: SN 057-8194 originally built under Section 57-4(1) in 1964. The structure is a single barrel reinforced concrete box culvert (6'-0"W x 3'-0"H) originally 97'-10" out-to-out of headwalls. 0° skew. In 1990 a special reinforced concrete spillway was added as was a fabric formed concrete revetment mat and two new Type B inlets were installed. In 2011 a 7" R.C. Slab Over was constructed for posting mitigation. The structure will be replaced using stage construction. \bar{c} structure Sta. 32+57.

No salvage.

INDEX OF SHEETS

1. General Plan & Elevation
2. General Data
- 3-4. Stage Construction
5. Porous Granular Embankment
6. Drainage Details
- 7-8. Tapered End Sections
9. Traversable Pipe Grate for Box Culverts
10. Boring Logs



**GENERAL PLAN & ELEVATION
US ROUTE 51B OVER DRAINAGE DITCH
SECTION 57-4(1)CR
MCLEAN COUNTY
STATION 32+57
STRUCTURE NO. 057-8236**

VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

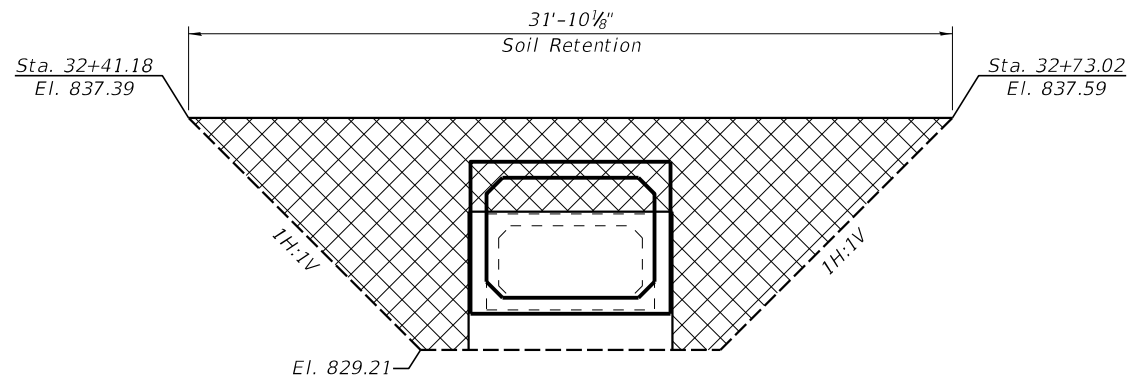
USER NAME =	DESIGNED - TRC	REVISED -
PLOT SCALE =	CHECKED - KES	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

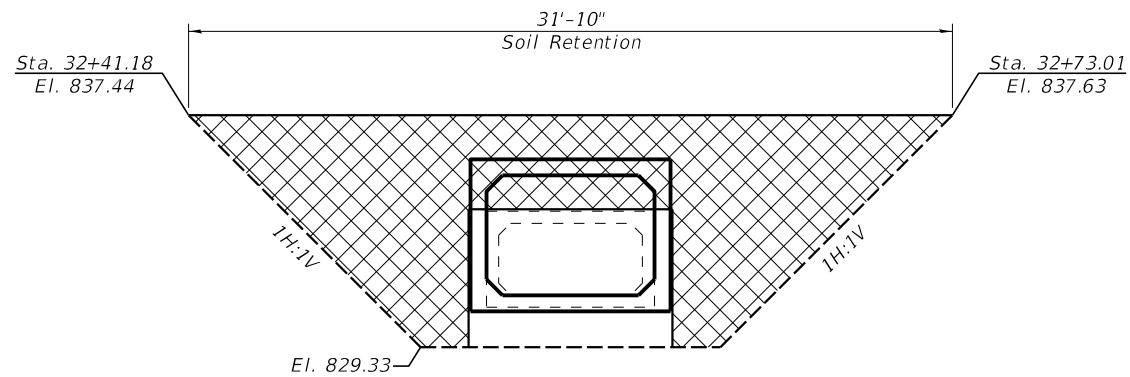
**GENERAL PLAN & ELEVATION
STRUCTURE NO. 057-8236**

SHEET NO. 1 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	21
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				



Stage I Soil Retention System
(Looking West)
(Dimensions along Stage Construction Line)



Stage II Soil Retention System
(Looking West)
(Dimensions along Stage Construction Line)

TOTAL BILL OF MATERIAL

Item	Unit	Total
Porous Granular Embankment	Cu. Yd.	416
Stone Riprap, Class A1	Ton	107
Removal of Existing Structures	Each	1
Name Plates	Each	1
Temporary Soil Retention System	Sq. Ft.	331
Box Culvert End Sections, Culvert No. 1	Each	2
Precast Concrete Box Culverts 7'x5'	Foot	78
Traversable Pipe Grate For Concrete End Section	Foot	136
Geocomposite Wall Drain	Sq. Yd.	95
Membrane Waterproofing System for Buried Structures	Sq. Yd.	95

GENERAL NOTES

The design fill height for this box culvert is < 2 feet.
The precast box sections shall conform to the requirements of ASTM C 1577.
Weep holes shall be provided on exterior culvert walls for each precast box segment with a clear rise greater than 3 feet and one in each of the wingwalls. The weep holes shall be located within 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specifications.
Precast concrete box culverts and box culvert end sections shall be backfilled with Porous Granular Embankment in the required excavation area on the sides of the box culvert from the top of the box culvert to the bottom of the box culvert. This area of PGE is included in the Porous Granular Embankment pay item. The 6-inch thick layer of porous granular material under the precast box culvert, according the Section 540.06 of the Standard Specifications, shall also apply to the end sections. Cost of the porous granular material will not be paid for separately but shall be included in the unit price of the work for which it is required.
Reinforcement bars designated (E) shall be epoxy coated.
The horizontal limits of Removal and Disposal of Unsuitable Material for Structures shall extend to 3 feet beyond the entire footprint of the proposed culvert.

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications,
9th Edition

LOADING HL-93

DESIGN STRESSES

PRECAST UNITS

$f'_c = 5,000$ psi
 $f_y = 65,000$ psi (Welded Wire Fabric)
 $f_y = 60,000$ psi (Reinforcement)

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

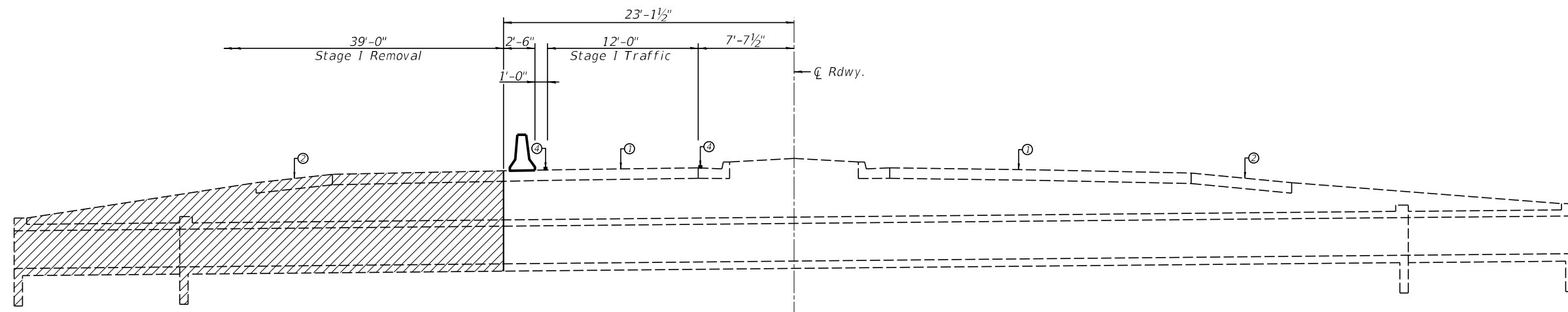
WATERWAY INFORMATION

Drainage Area =		Exist. Low Grade Elev. 837.2 @ Sta. 32+18.00									
87.4 Sq. Mi.		Prop. Low Grade Elev. 837.2 @ Sta. 32+18.00									
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.			
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.		
	10	104.8	9	23	834.0	2.2	0.6	836.2	834.6		
Design	50	148.0	11	26	834.4	2.0	0.9	836.5	835.3		
Base	100	171.3	12	27	834.5	2.0	1.1	836.5	835.6		
Overtop Prop.	500	239.8	14	30	834.9	1.8	1.4	836.7	836.3		

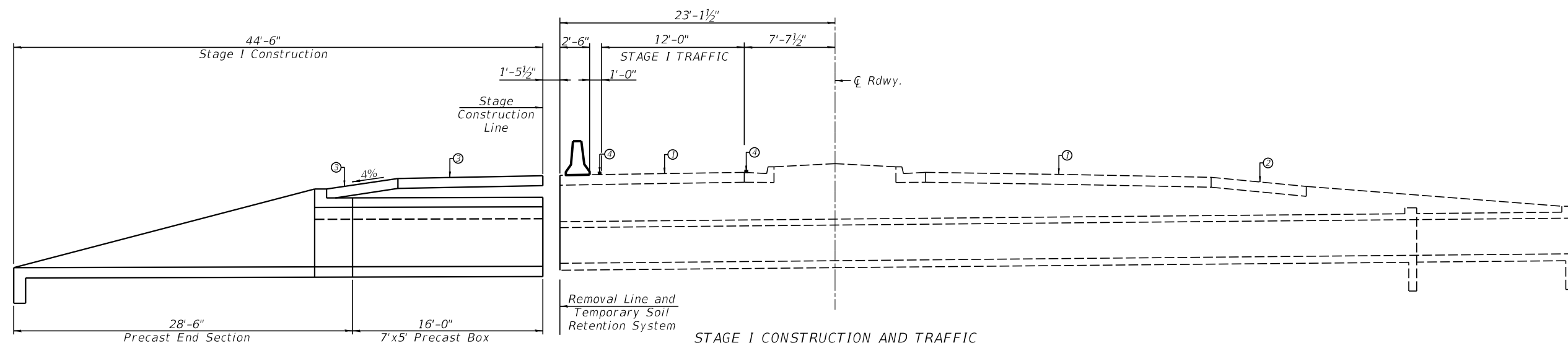
10 Yr. Outlet Velocity through Exist. Structure = 8.01 ft/s
10 Yr. Outlet Velocity through Prop. Structure = 4.12 ft/s

STA. 32+57.00
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. ROUTE 730
SECTION 57-4(1)CR
LOADING HL 93
STR. NO. 057-8236

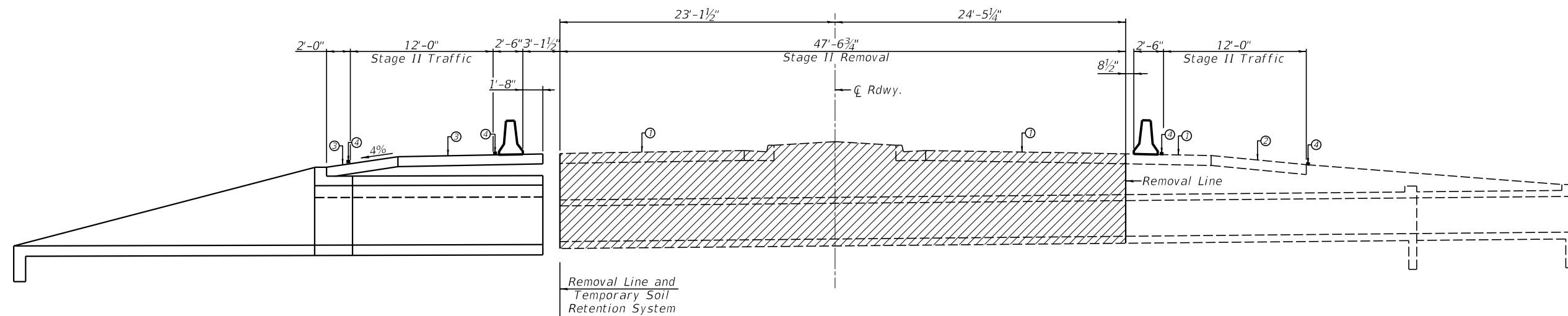
NAME PLATE
(Standard 515001)



STAGE I REMOVAL



STAGE I CONSTRUCTION AND TRAFFIC



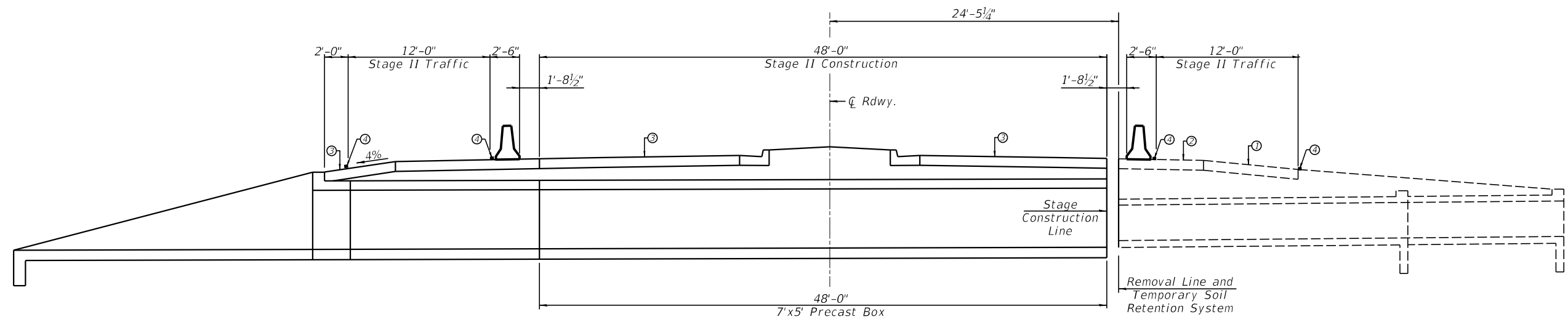
STAGE II REMOVAL AND TRAFFIC

PAVEMENT LEGEND

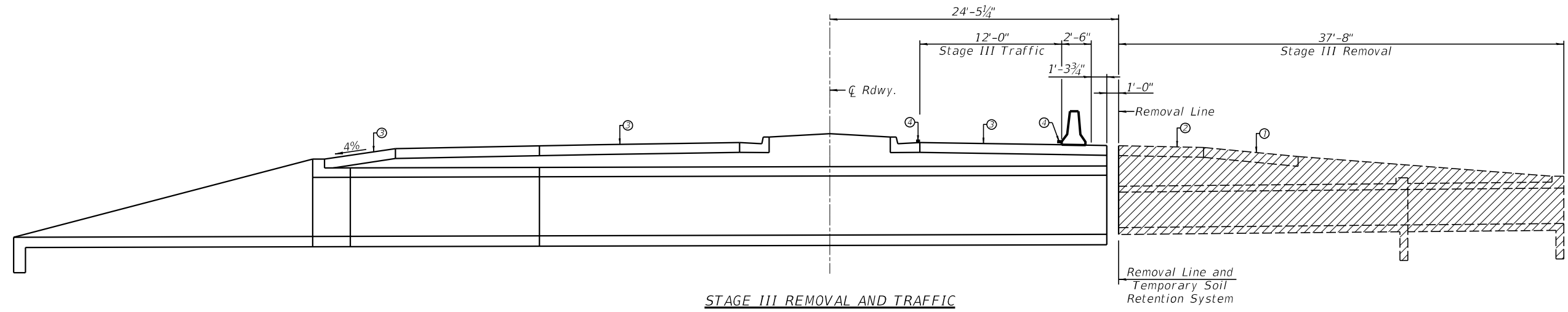
- ① EX PCC PAVEMENT 10 1/4"
- ② EX PCC SHOULDERS 10 1/4"
- ③ PR CLASS B PATCH, TYPE IV, 10 1/2" (TO BE TINED)
- ④ PR TEMP PAVEMENT MARKING - LINE 4" - TYPE IV TAPE

USER NAME =	DESIGNED - TRC	REVISED -
CHECKED - KES	REVISED -	
PLOT SCALE =	DRAWN - JRP	REVISED -
PLOT DATE =	CHECKED -	REVISED -

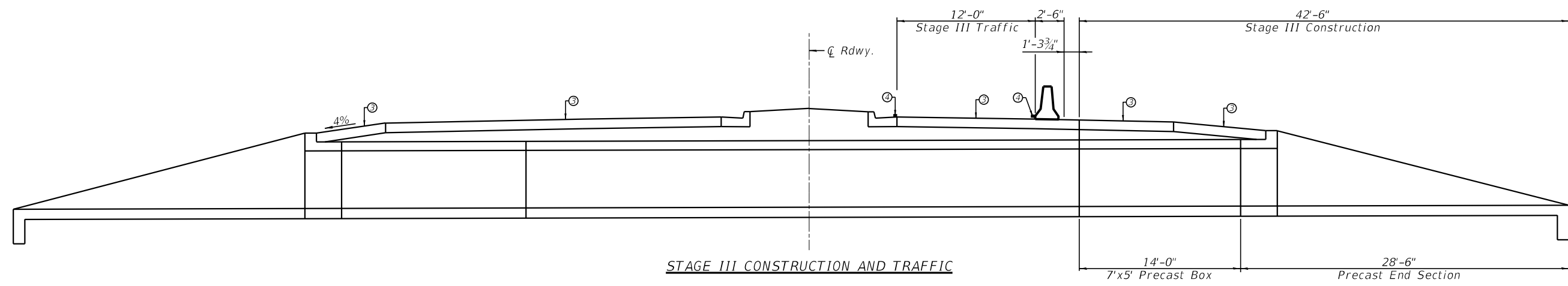
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	23
CONTRACT NO. 70907				
<small>ILLINOIS FED. AID PROJECT</small>				



STAGE II CONSTRUCTION AND TRAFFIC



STAGE III REMOVAL AND TRAFFIC



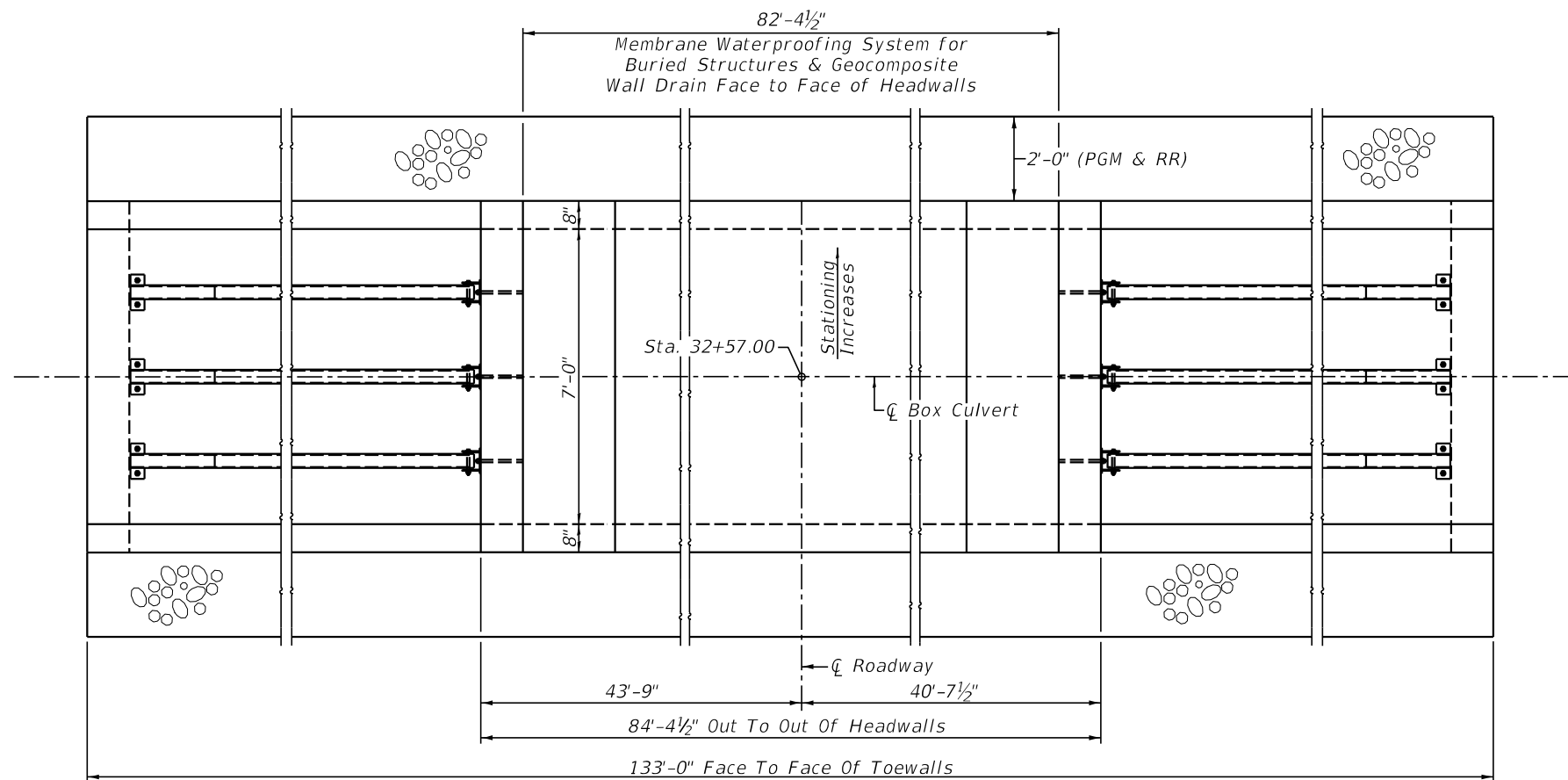
STAGE III CONSTRUCTION AND TRAFFIC

PAVEMENT LEGEND

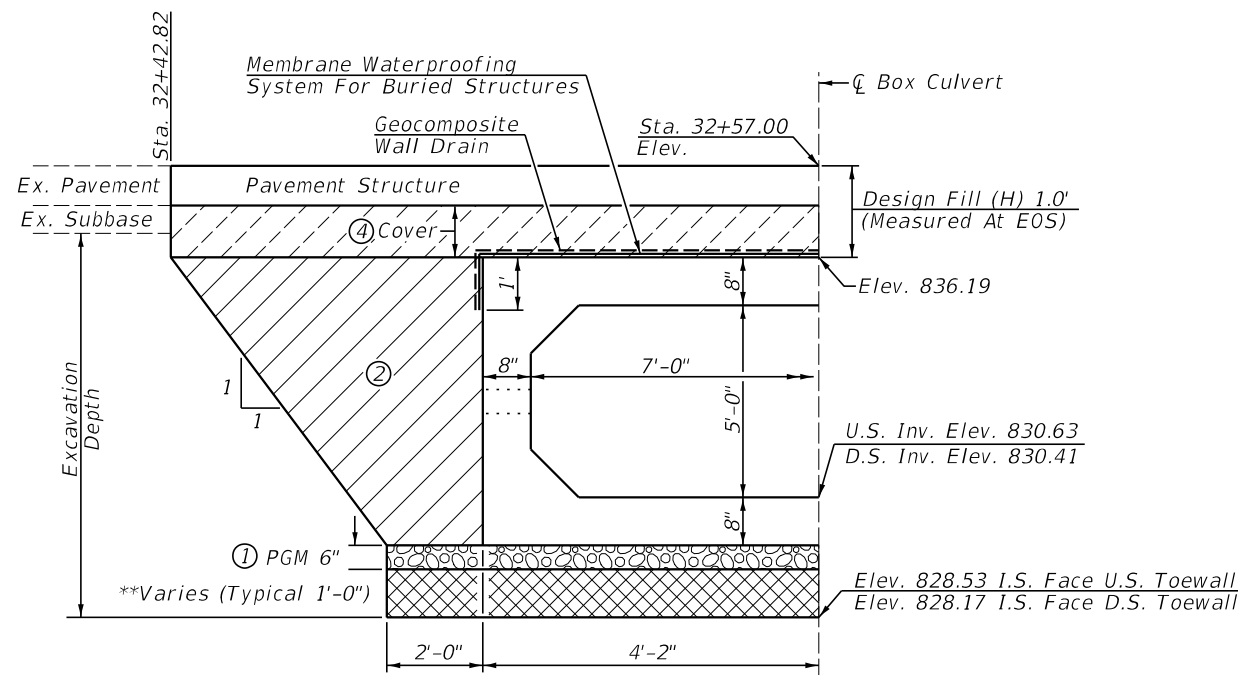
- ① EX PCC PAVEMENT 10 1/4"
- ② EX PCC SHOULDERS 10 1/4"
- ③ PR CLASS B PATCH, TYPE IV, 10 1/2" (TO BE TINED)
- ④ PR TEMP PAVEMENT MARKING - LINE 4" - TYPE IV TAPE

USER NAME =	DESIGNED - TRC	REVISED -
	CHECKED - KES	REVISED -
PLOT SCALE =	DRAWN - JRP	REVISED -
PLOT DATE =	CHECKED -	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	24
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				



PLAN



Half Section Shown; See Excavation Depths Table

① Porous Granular Material (PGM) (CA-7) (Cost included with PCBC per Article 540.06)	② Porous Granular Embankment (PGE) See ABD 21.1.
Stone Riprap, Class A1	④ Min. 6" cover under flexible pavement. Fill heights <= 3' PGE req. Fill heights > 3' PGE not req. No cover required under rigid pavement. When rigid pavement placed on top of PCBC the WMS and GWD are not req. See ABD 21.1.

Revised per all bridge designers memorandums (ABD) 19.2 and 21.1.

****STONE RIPRAP, CLASS A1 (IF REQUIRED)**

Stone Riprap, Class A1 Shall Be Used To Address Unstable Soil Conditions As Determined By The Geotechnical Engineer.

The Work Shall Be Performed Per Applicable Portions Of Section 281.

This Work Shall Be Paid For At The Contract Unit Price Per Ton For Stone Riprap, Class A1.

The Excavation And Disposal Of Unsuitable Material Shall Not Be Measured For Payment, Cost Included With Stone Riprap, Class A1.

POROUS GRANULAR EMBANKMENT (PGE)

Porous Granular Embankment Shall Extend 2 Ft. Beyond The Aggregate Shoulder.

The Work Shall Be Performed Per Applicable Portions Of Sections 207 And 540.

The Coarse Aggregate Quality Shall Be Class D Or Better And The Gradation Shall Be CA-6 Or CA-10.

Porous Granular Embankment Will Be Measured For Payment In Cu. Yds. In Place As Shown. If The Contractor Chooses To Excavate Beyond The Limits Shown, Additional Quantities Of Porous Granular Embankment Will Be At Their Expense.

The Area To Be Excavated For The Proposed Box Culvert And End Sections Shall Not Be Measured For Payment. Cost Included With Precast Concrete Box Culverts.

MEMBRANE WATERPROOFING SYSTEM FOR BURIED STRUCTURES (MWS)

SEE SPECIAL PROVISIONS
GEOCOMPOSITE WALL DRAIN (GWD)

PER SECTION 591, EXCEPT CONCRETE NAILS NOT USED WHERE MWS & GWD OVERLAP

FILL HEIGHTS <= 3': MWS & GWD REQ.
FILL HEIGHTS > 3': MWS & GWD NOT REQ.
SEE ABD 19.2.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Porous Granular Embankment	Cu Yd	416
Stone Riprap, Class A1	Ton	107
Membrane Waterproofing System For Buried Structures	Sq Yd	95
Geocomposite Wall Drain	Sq Yd	95

Excavation Depths	* Slopes
5'-0" < Excavation Depth <= 8'-0"	3/4 : 1'
8'-0" < Excavation Depth <= 12'-0"	1' : 1'
12'-0" < Excavation Depth <= 20'-0"	1' : 1'

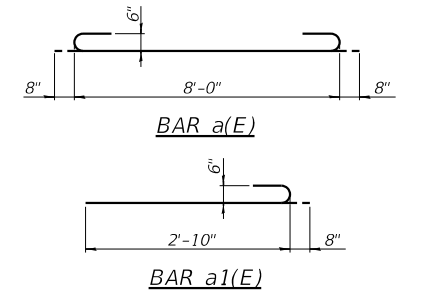
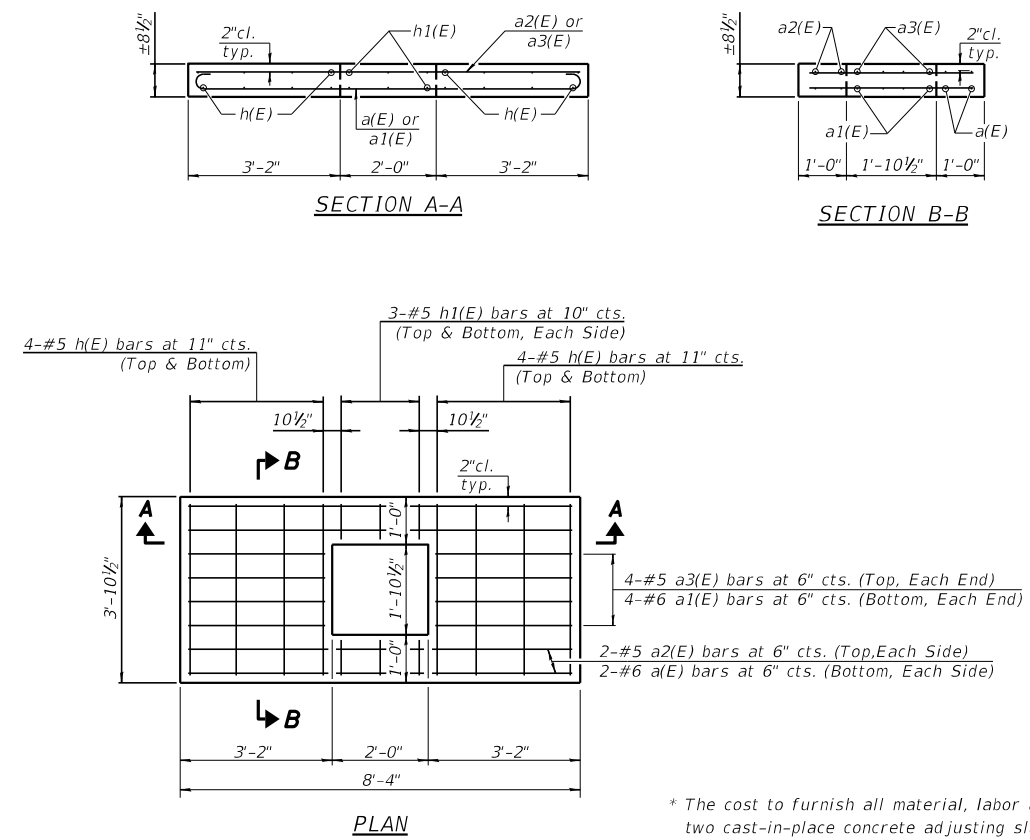
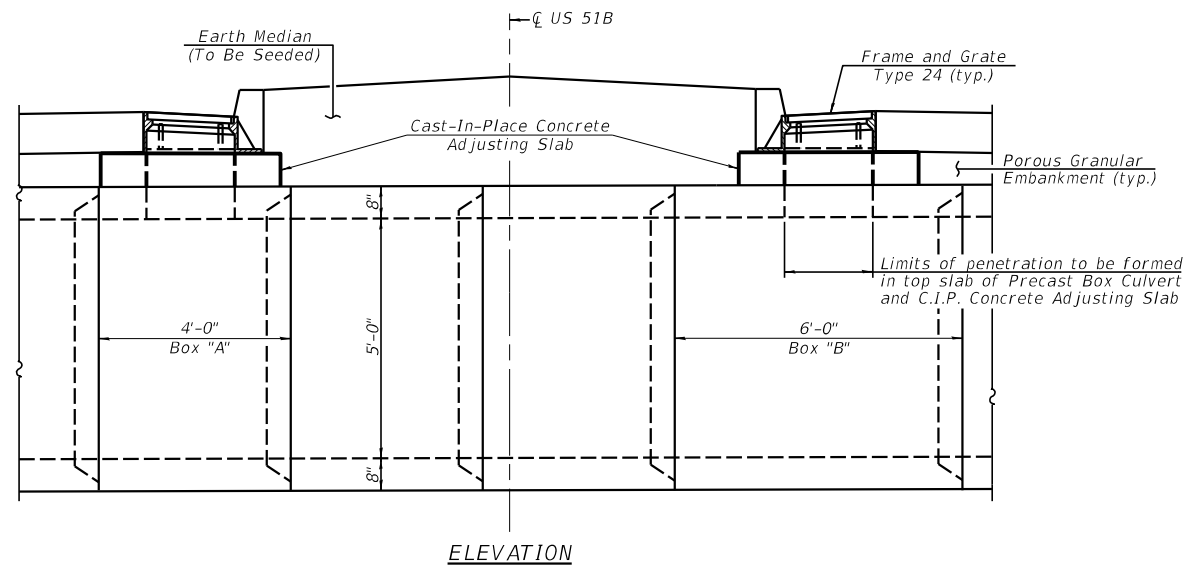
Must Be Sloped From Excavation Bottom Or Special Design By S.E. See Article 522.07 For Temporary Soil Retention System

*Sloped Excavation in Type A Soil Shown Per Appendix B Of OSHA CFR Labor 29 Part 1926 Subpart P - Excavations.

Optional Configurations May Be Constructed In Accordance With OSHA Requirements Contained In The Code Of Federal Regulations Labor 29 Part 1926 Subpart P - Excavations.

See Article 107.28 For Contractor Safety Responsibility.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

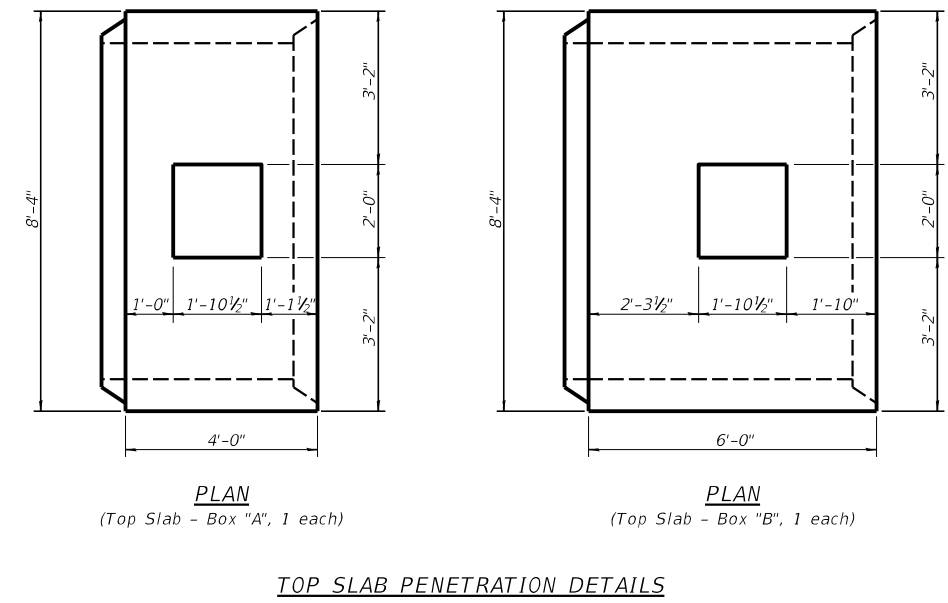
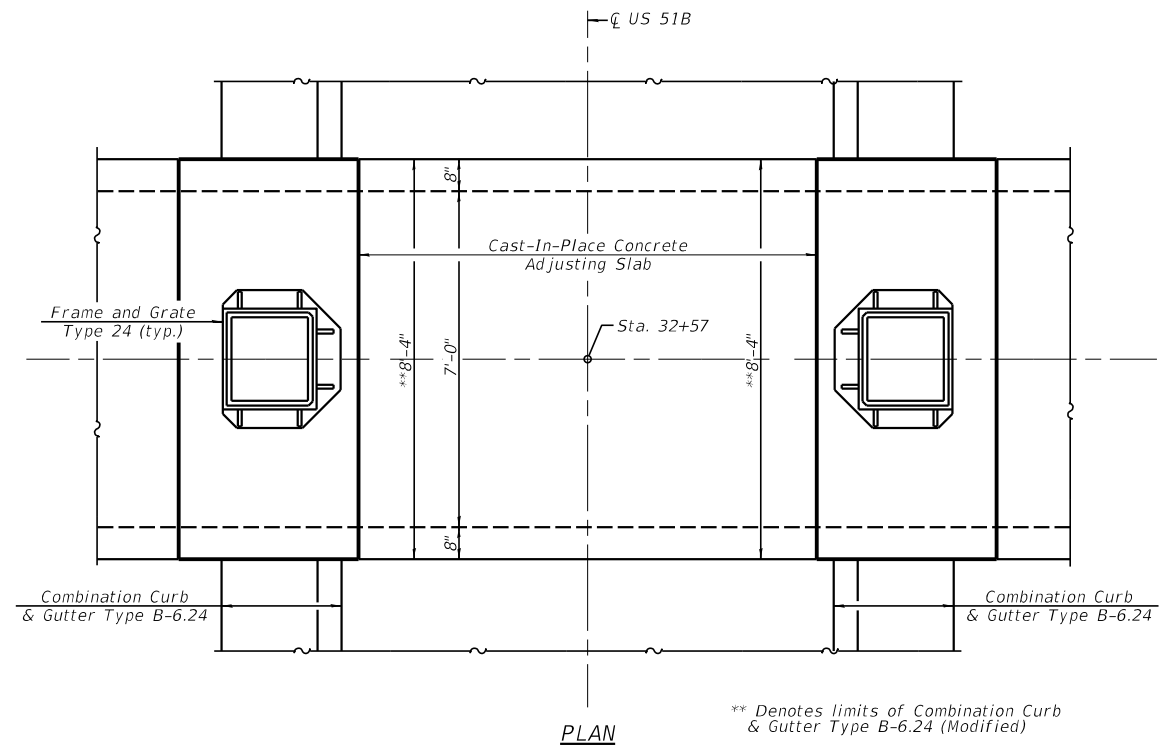


BILL OF MATERIAL
TWO ADJUSTING SLABS
(*For Information Only)

Bar	No.	Size	Length	Shape
a(E)	8	#6	9'-4"	U
a1(E)	16	#6	3'-6"	U
a2(E)	8	#5	8'-0"	—
a3(E)	16	#5	8'-0"	—
h(E)	32	#5	3'-6"	—
h1(E)	24	#5	8"	—
Concrete Box Culverts			Cu. Yd.	1.5
Reinforcement Bars, Epoxy Coated			Pound	720

* The cost to furnish all material, labor and equipment necessary for the construction of the two cast-in-place concrete adjusting slabs shall be included in the contract price per foot of COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (MODIFIED).

CAST-IN-PLACE CONCRETE ADJUSTING SLAB DETAILS
(No. required = 2 each)



Note: Precast Box Culvert shop drawings shall include detail for reinforcement around top slab penetrations.

GENERAL NOTES

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. This work will be measured for payment as each, with each end of each culvert being one each. End sections will be paid for at the contract unit price per each for Box Culvert End Sections of the culvert number specified.

Typical box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements of ASTM C 1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

Number of segments shown in Elevation is for example only. Length and number of precast box sections required to construct Box Culvert End Sections shall be determined by the Contractor.

See roadway plans for embankment slope (V:H). 1" anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105.

Structural steel for tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable.

2 1/4" x 2 1/4" x 5/16" plate washers shall be provided under each nut required for the anchor rods.

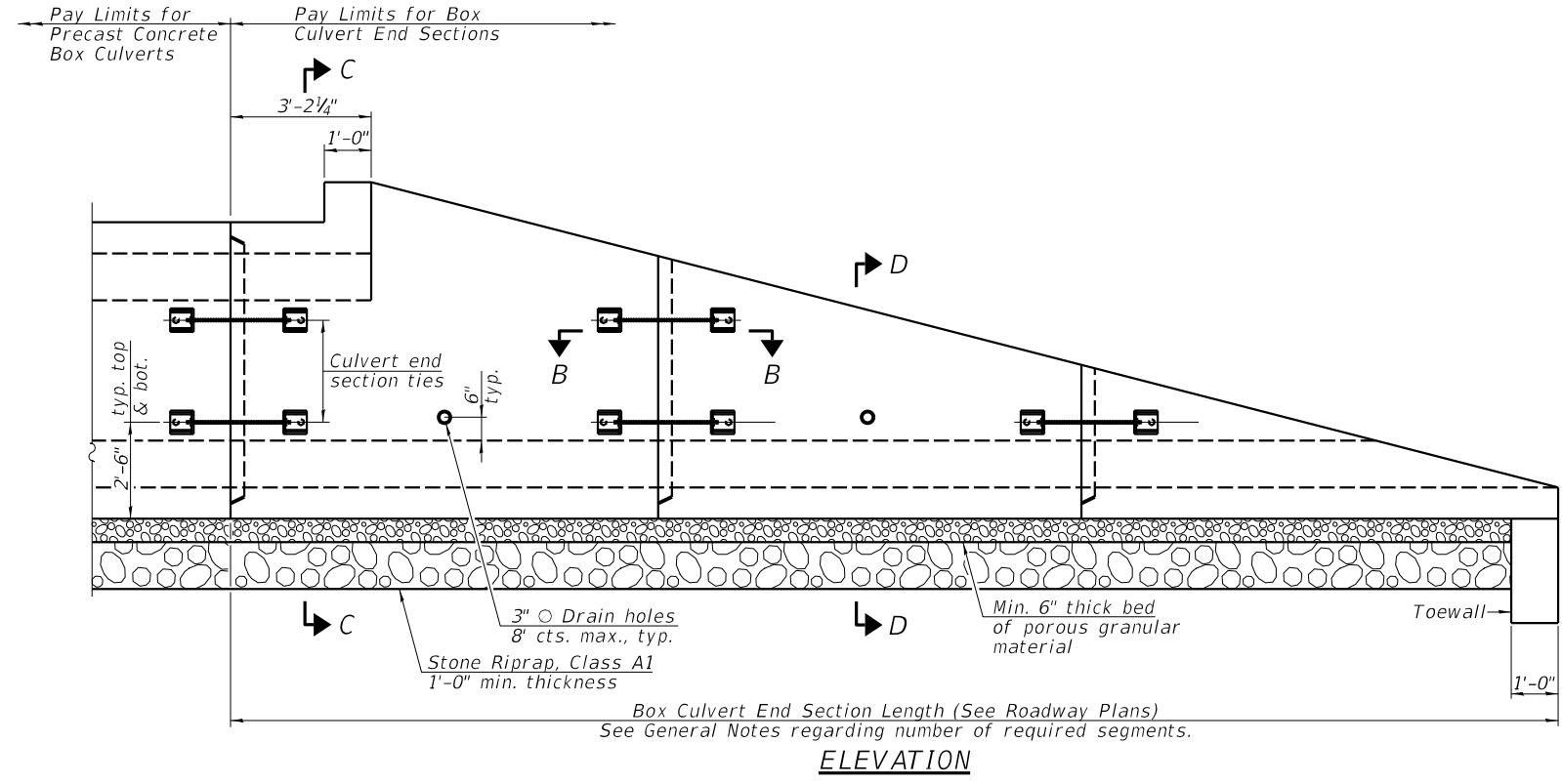
Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 1/2 turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

All costs associated with furnishing and installing or constructing the toewall and culvert ties will not be measured for payment but shall be included in the contract unit price for Box Culvert End Sections of the culvert number specified.

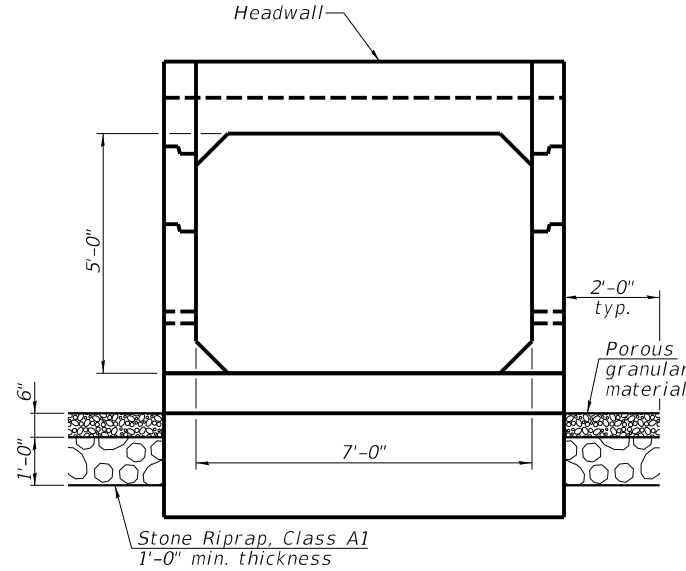
Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications unless noted otherwise.

Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01. The minimum weight of the fabric shall be 6 oz. / sq. yd..

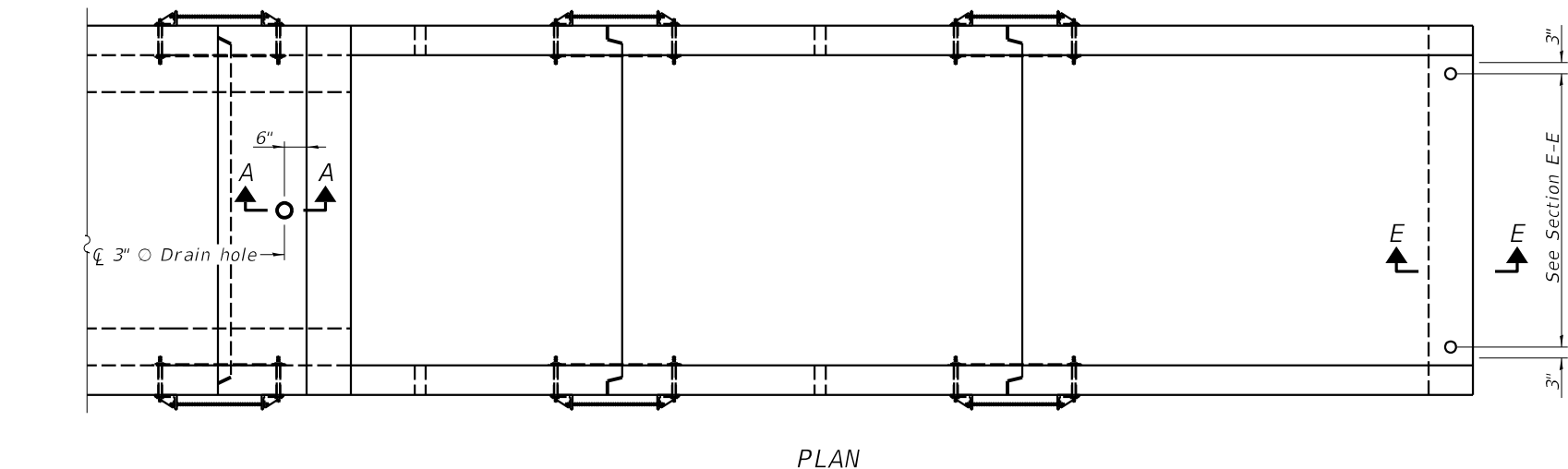
For end sections with traversable pipe grate systems, see grate detail sheet for required modifications.



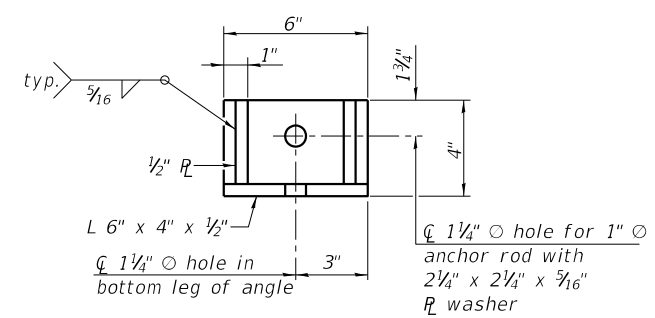
ELEVATION



END VIEW



PLAN



RESTRAINT ANGLE DETAIL

12" x 12" x 6" block of CA5, CA7, or CA11 coarse aggregate placed over drain opening. Block of aggregate shall be completely wrapped in nonwoven geotextile fabric.

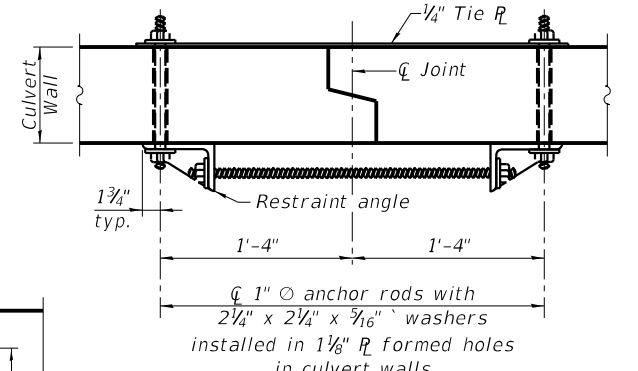
Provide a double layer of 12" x 12" nonwoven geotextile fabric centered over the drain hole. Fabric shall be sealed to the concrete with mastic.

3" PVC drain cast with the concrete (Adjust location to clear reinforcement).

1/2" Square foam blockout around PVC drain (to be removed with formwork)

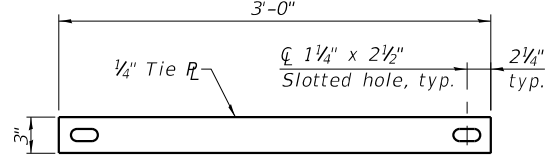
SECTION A-A

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)



SECTION B-B

(Showing end section tie details)



TIE PLATE DETAIL



USER NAME =	DESIGNED - TRC	REVISED -
CHECKED - KES	REVISOR -	
PLOT SCALE =	DRAWN - JRP	REVISED -
PLOT DATE =	CHECKED -	REVISED -

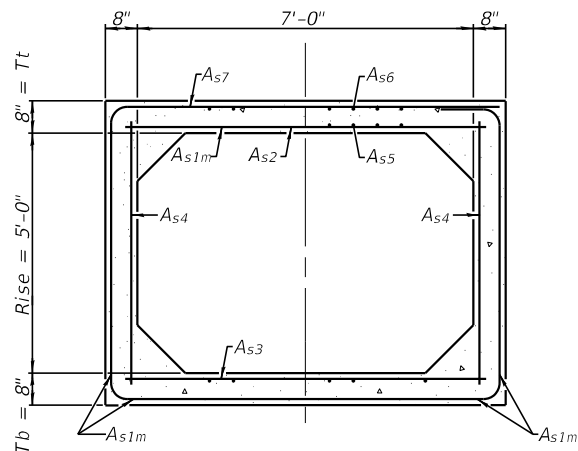
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SINGLE CELL PRECAST BOX CULVERT TAPERED END SECTIONS
STRUCTURE NO. 057-8236**

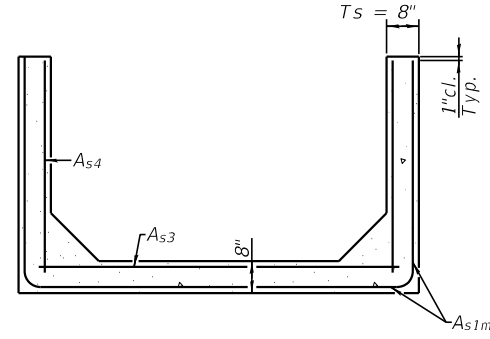
SHEET NO. 7 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-41(CR)	MCLEAN	38	27
CONTRACT NO. 70907				

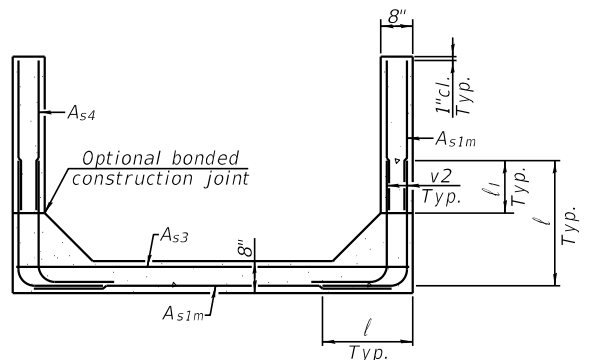
ILLINOIS FED. AID PROJECT



SECTION C-C



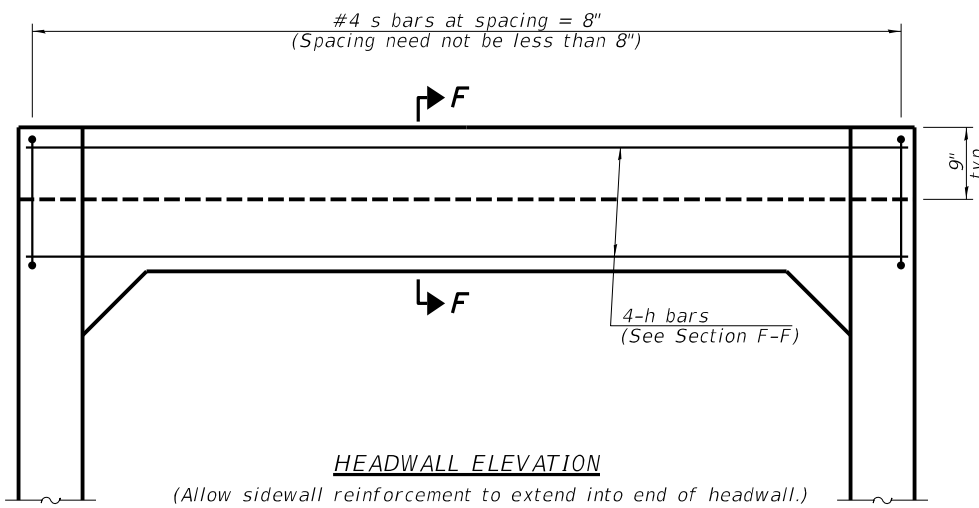
SECTION D-D



ALTERNATE SECTION D-D

As1m REINFORCEMENT (in ² /ft)											
Rise (ft)	2	3	4	5	6	7	8	9	10	11	12
4	0.19	0.17									
5	0.26	0.21	0.18								
6	0.22	0.26	0.23	0.22							
7	0.25	0.33	0.59	0.27	0.28						
8	0.40	0.35	0.43	0.39	0.36	0.34	0.40				
9	0.44	0.39	0.35	0.43	0.40	0.37	0.36	0.48			
10	0.48	0.42	0.38	0.47	0.44	0.41	0.38	0.42	0.56		
11	0.52	0.45	0.54	0.50	0.46	0.44	0.41	0.46	0.50	0.65	
12	0.55	0.49	0.58	0.54	0.50	0.48	0.45	0.46	0.46	0.61	0.75

(As1m reinforcement based upon welded wire reinforcement conforming to AASHTO M 55 or M 221).

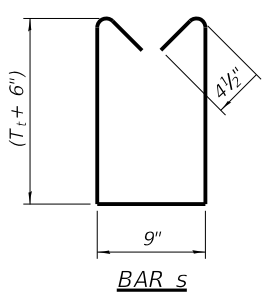


HEADWALL ELEVATION

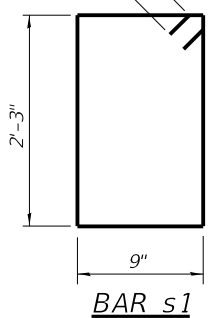
l DIMENSION

- #3 bar = 2'-0"
- #4 bar = 2'-8"
- #5 bar = 3'-4"
- #6 bar = 3'-11"

Notes:
 Alternate Section D-D is provided to allow the Contractor the option of casting the bottom slab of the end section first followed by construction of the sidewalls using conventional forming methods. Shop drawings that detail slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval when using Alternate Section D-D.
 The size and spacing of the v2 bars shall provide a minimum reinforcement area along each face of the walls (in²/ft.) equal to 1.10*(As1m). v2 bars may consist of #3 thru #6 size reinforcement bars and the longitudinal spacing shall not exceed the lesser of the wall thickness or 8 inches.
 Bonded construction joints shall be prepared according to Article 503.09 of the Standard Specifications.



BAR s



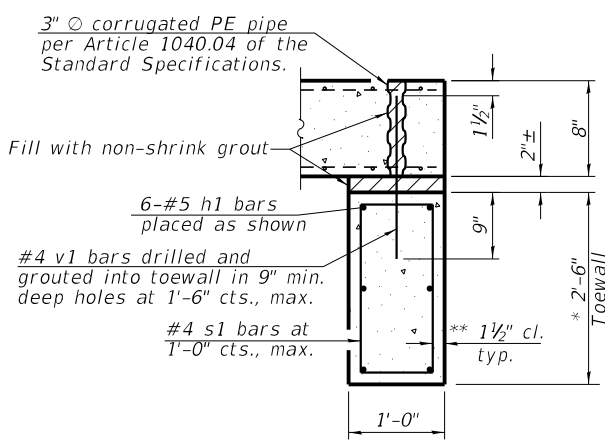
BAR s1

TOEWALL CONSTRUCTION SEQUENCE

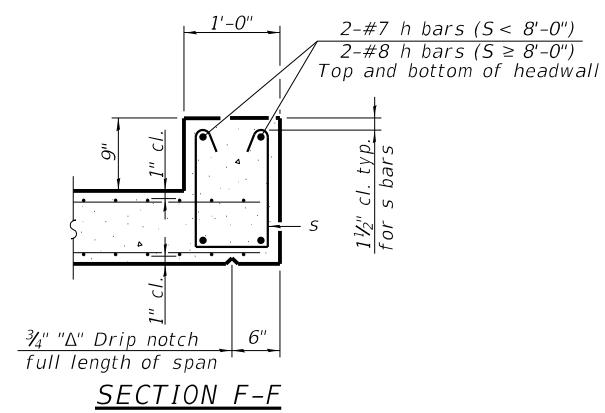
1. Perform excavation and construct toewall.
2. Backfill according to the applicable paragraphs of Article 502.10 of the Standard Specifications and place bedding for precast box culvert end sections.
3. Set precast box culvert end section.
4. Drill and epoxy grout reinforcement in toewall in accordance with Section 584 of the Standard Specifications.
5. Pressure grout voids using non-shrink grout conforming to Section 1024 of the Standard Specifications.

* The Contractor may furnish a precast or cast-in-place toewall. The Contractor shall be responsible for the strength and stability of the precast toewall during handling. Additional lifting points may be required depending upon the length of the toewall or the Contractor may need to modify the design of the toewall for the proposed handling method.

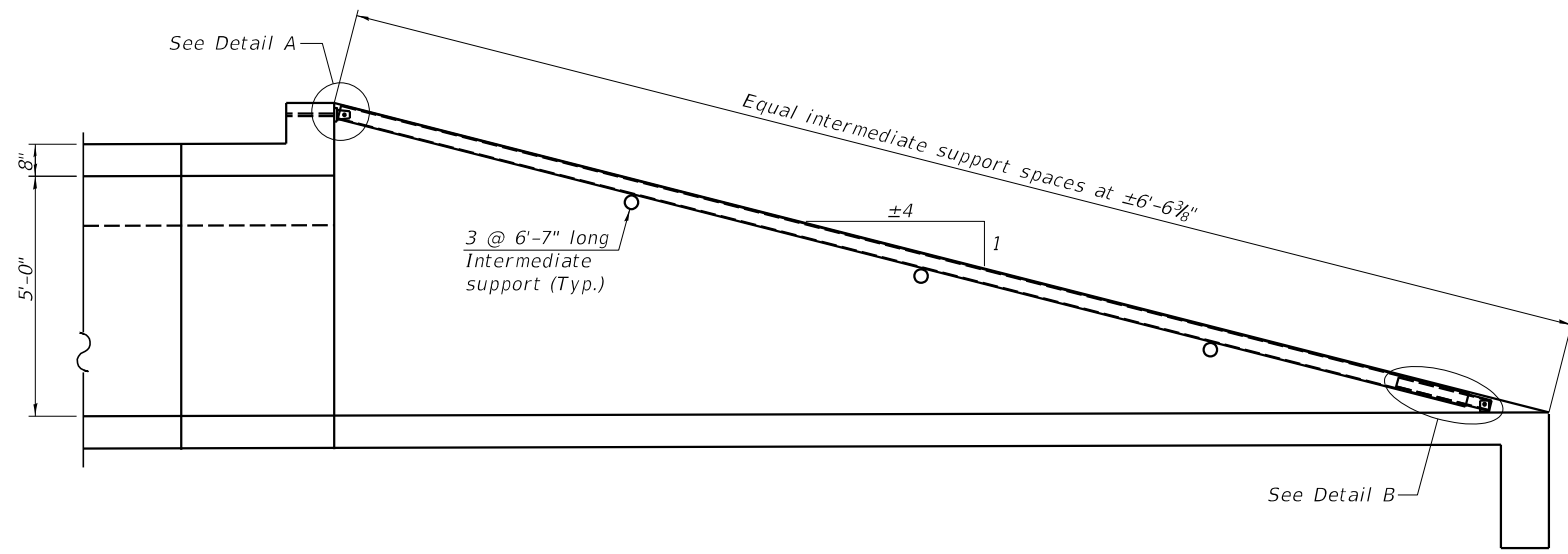
** If soil conditions permit, the sides of the toewall may be poured directly against the soil. The clear cover on the sides of the toewall shall be increased to 3" by increasing the thickness of the toewall.



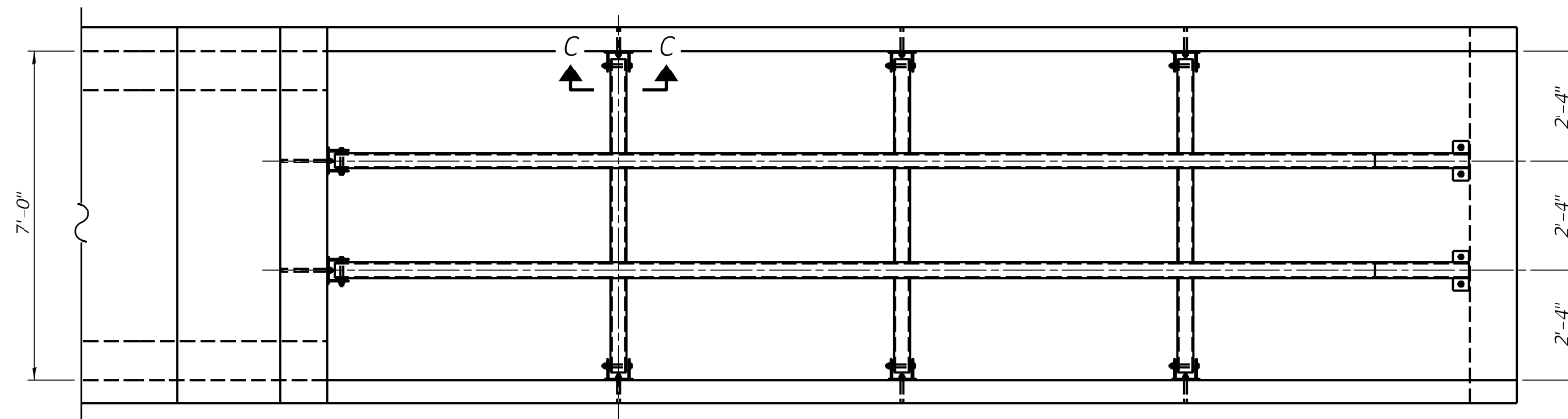
SECTION E-E



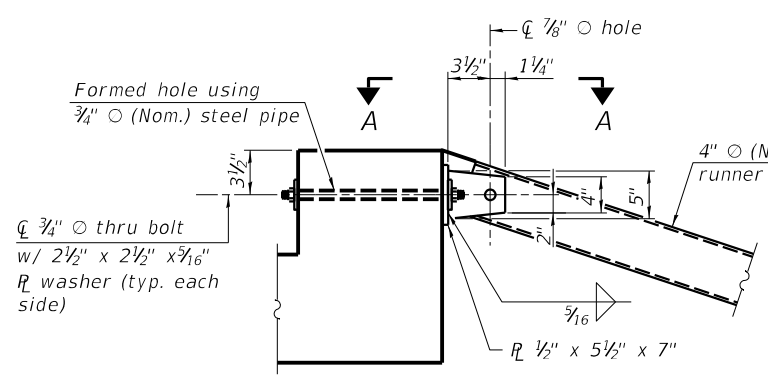
SECTION F-F



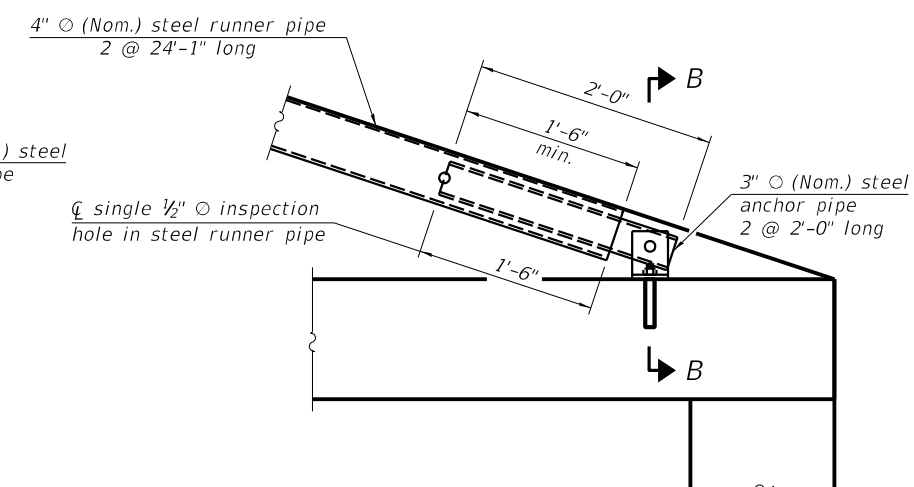
LONGITUDINAL SECTION



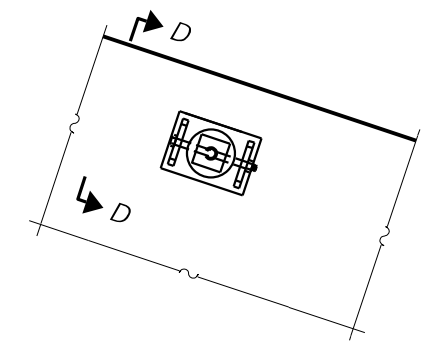
PLAN VIEW



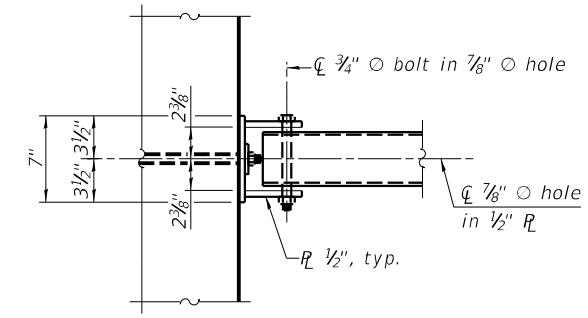
DETAIL A



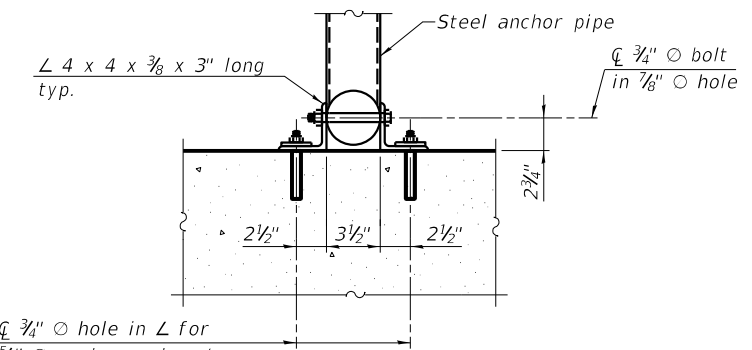
DETAIL B



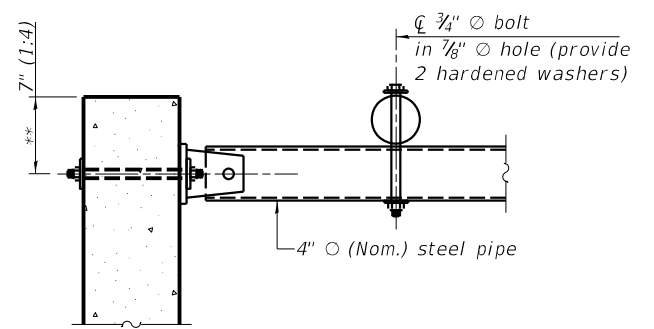
VIEW C-C
(See Detail A for dimensions and details not shown.)



VIEW A-A



SECTION B-B



SECTION D-D

** Measured perpendicular to top of culvert wall. In addition, formed hole shall be located a minimum of 6" measured horizontally from any vertical joints necessary for construction of the culvert end section.

GENERAL NOTES
 The minimum edge distance from the center of a hole to the free edge of a structural shape or plate shall be 1 1/2" unless noted otherwise.
 This standard shall only be used on concrete end sections not skewed more than ±15 degrees with roadway.
 The Contractor may install the thru bolts using drilling and grouting in lieu of providing a formed hole using steel pipe. Installation shall be in accordance with Article 509.06 using a method that results in the annulus surrounding the bolt being completed filled with adhesive. The method of drilling shall not result in spalled concrete at the exit face. Epoxy grouted thru bolts shall be snug tightened followed by an additional 1/3 turn on the interior nut at final installation. Cost included with Traversable Pipe Grate.

USER NAME =	DESIGNED - TRC	REVISED -
PLOT SCALE =	CHECKED - KES	REVISED -
PLOT DATE =	DRAWN - JRP	REVISED -
	CHECKED -	REVISED -

F.A.P. RTE. 730	SECTION 57-411CR	COUNTY MCLEAN	TOTAL SHEETS 38	SHEET NO. 29
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				



USER NAME =	DESIGNED - TRC	REVISED -
	CHECKED - KES	REVISED -
PLOT SCALE =	DRAWN - JRP	REVISED -
PLOT DATE =	CHECKED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

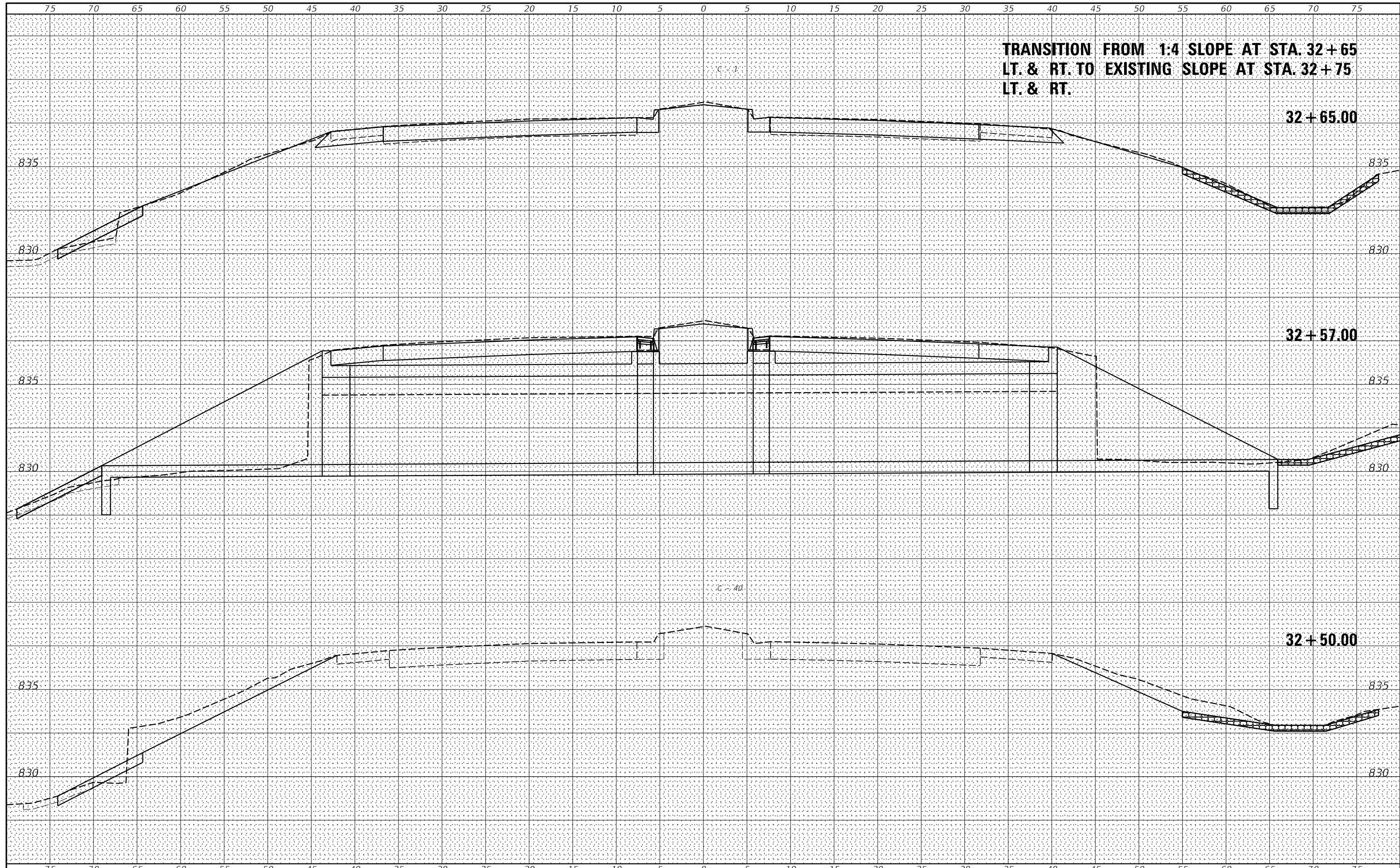
**BORING LOGS
STRUCTURE NO. 057-8236**

SHEET NO. 10 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	30
				CONTRACT NO. 70907
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED
	AREAS CHECKED



**TRANSITION FROM 1:4 SLOPE AT STA. 32+65
LT. & RT. TO EXISTING SLOPE AT STA. 32+75
LT. & RT.**

32+65.00

32+57.00

32+50.00

VK VEENSTRA & KIMM INC.
Springfield, IL. Phone: (217)544-8033
IL. Design Firm No. 184-001939

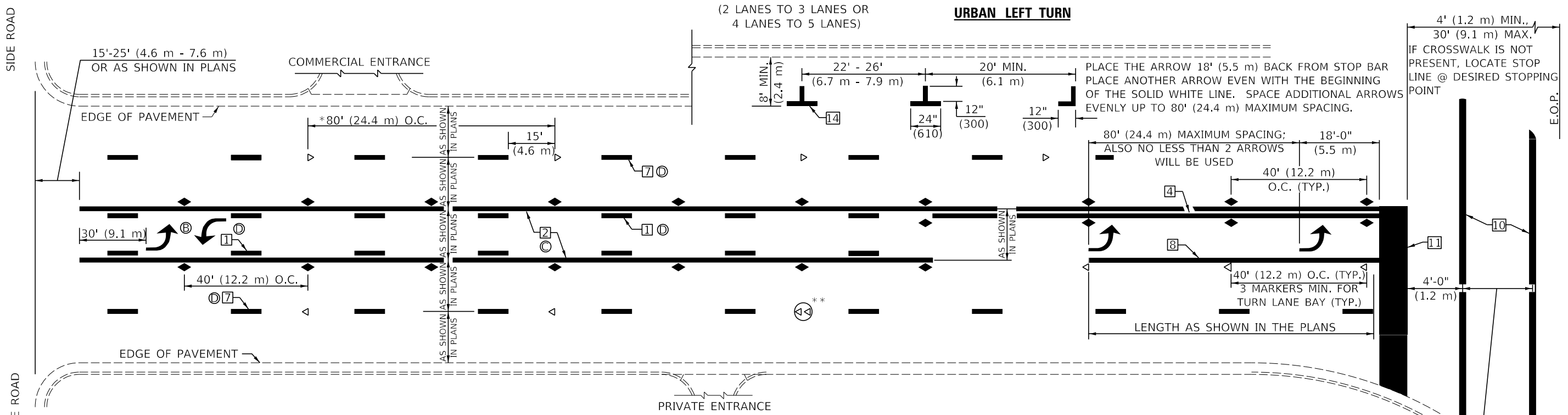
USER NAME = *USER*	DESIGNED -	REVISED -
PLOT SCALE = *SCALE*	DRAWN -	REVISED -
PLOT DATE = *DATE*	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: _____ SHEET NO. ___ OF ___ SHEETS STA. 32+50.00 TO STA. 32+57.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	32
CONTRACT NO. 70907				
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT				

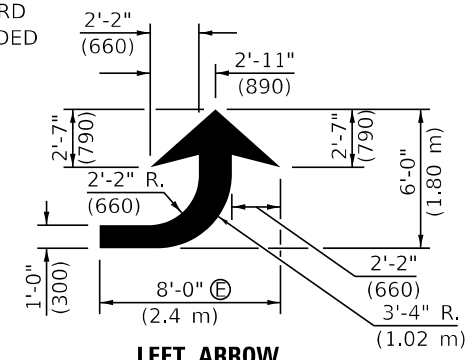


* REDUCE TO 40 FEET (12.2 METERS) ON CENTER ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

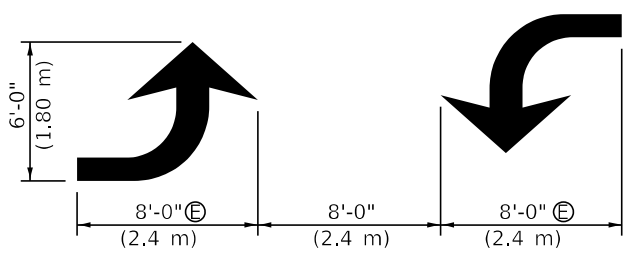
** DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

GENERAL NOTES:

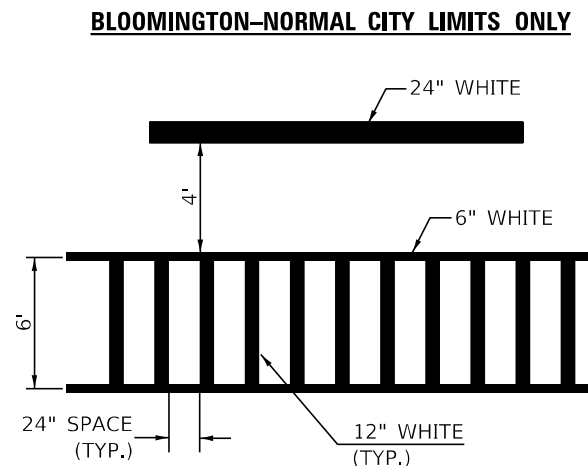
- Ⓟ TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE.
- Ⓞ THE SOLID YELLOW PAVEMENT MARKINGS [2] SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.
- Ⓛ THE SKIP-DASH PAVEMENT MARKINGS [1] OR [7] SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER. SEE EXAMPLE ON SHEET 2 OF 3.
- Ⓢ USE LARGE ARROW SIZE FOR BOTH RURAL AND URBAN LOCATIONS. (SEE LAST PAGE OF SECTION 780x FOR SYMBOLS TABLE)



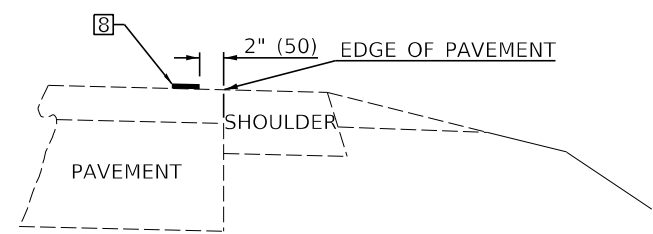
LEFT ARROW
REVERSE FOR RIGHT ARROW
AREA = 15.6 SQ. FT. (1.47 m²)
(WHITE)



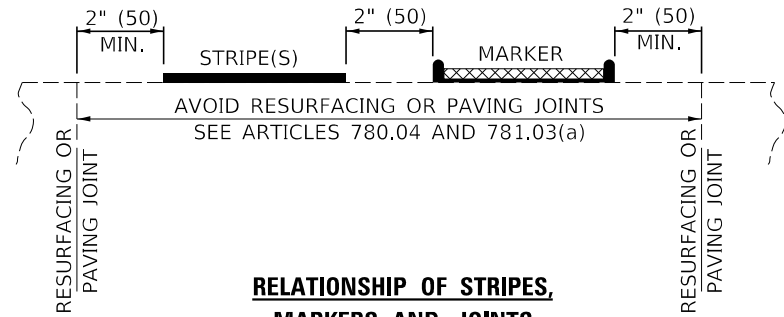
TYPICAL DOUBLE TURN ARROWS (WHITE)



TYPICAL SPACING FOR CROSSWALKS & STOP BARS



RELATIONSHIP OF EDGE LINE TO EDGE OF PAVEMENT
(SAFETY SHOULDER OR PAVED SURFACE)
SEE ARTICLE 780.04

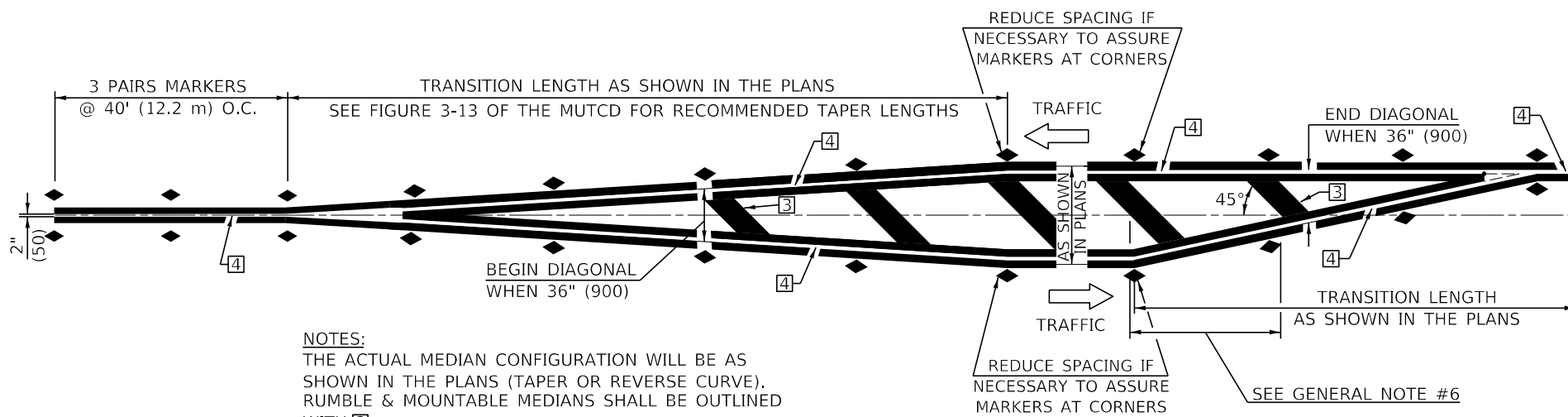


RELATIONSHIP OF STRIPES, MARKERS AND JOINTS

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

USER NAME =	DESIGNED -	REVISED -
PLOT SCALE =	CHECKED -	REVISED -
PLOT DATE =	DRAWN -	REVISED -
	CHECKED -	REVISED -

DISTRICT 5 DETAIL NO. 7800AAAA				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-41(CR)	MCLEAN	38	35
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				

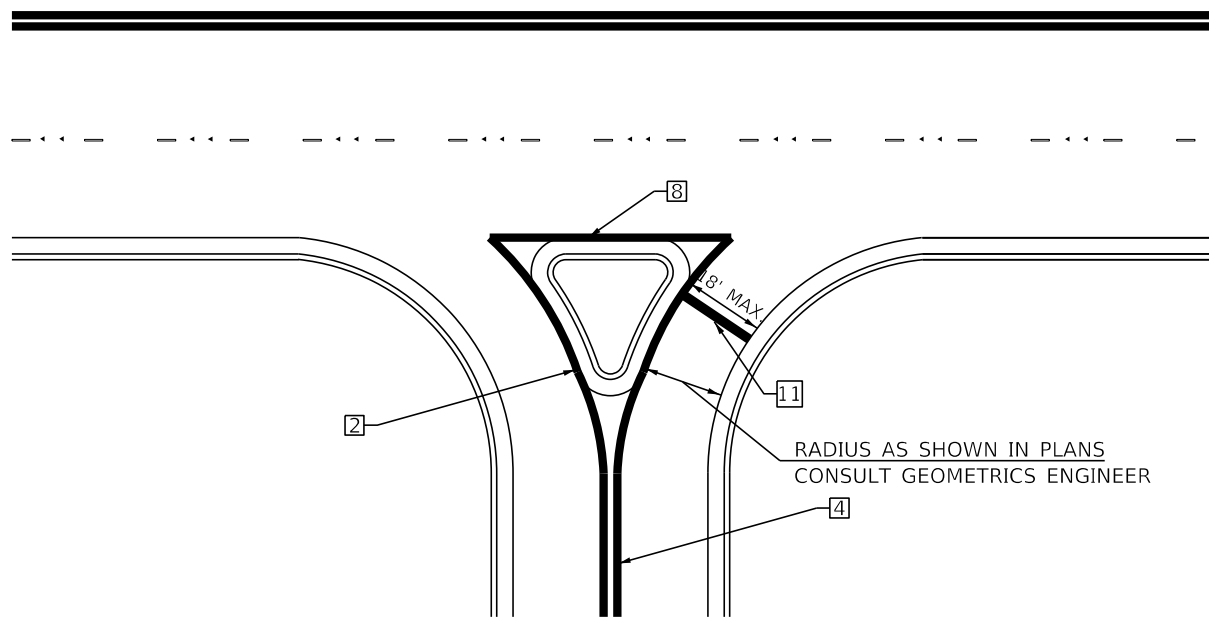


NOTES:
THE ACTUAL MEDIAN CONFIGURATION WILL BE AS SHOWN IN THE PLANS (TAPER OR REVERSE CURVE). RUMBLE & MOUNTABLE MEDIANS SHALL BE OUTLINED WITH [2].

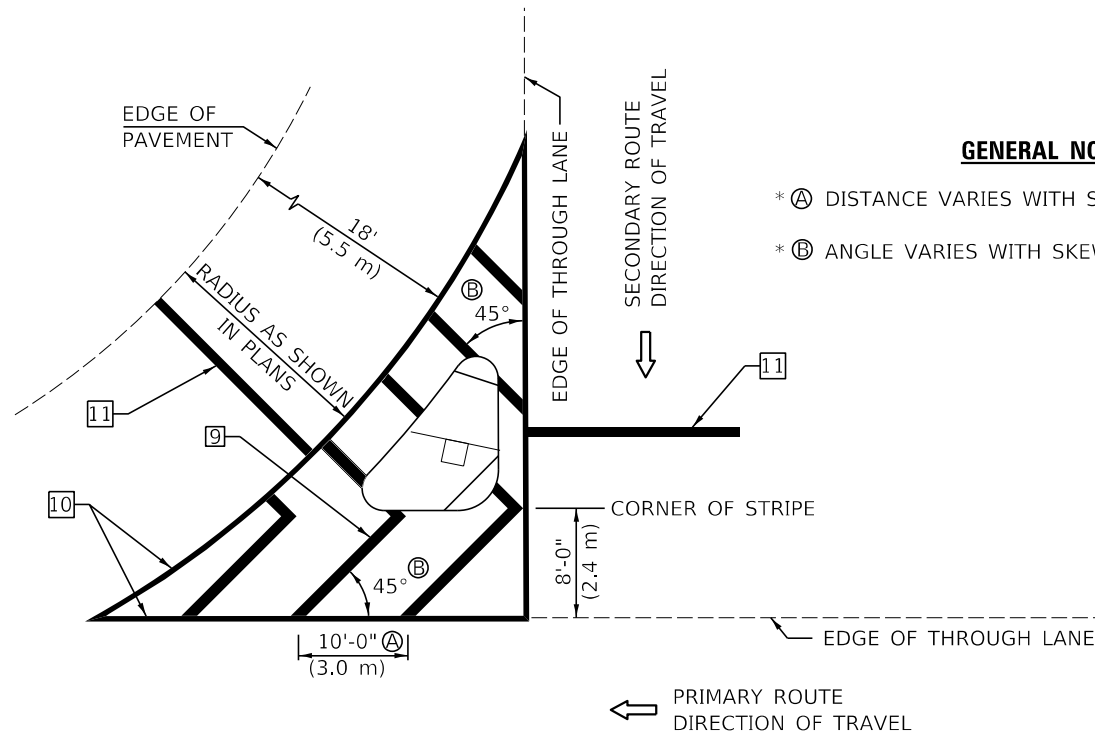
TYPICAL MEDIAN TRANSITIONS

GENERAL NOTES

1. WHEN MEDIANS ARE PRESENT, PAVEMENT MARKINGS ARE TO BE PLACED ADJACENT TO MEDIANS.
2. SOME OF THE INFORMATION INCLUDED WITH THIS DETAIL MAY NOT BE APPLICABLE TO THIS IMPROVEMENT.
3. PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.
4. A STRIPING KEY IS AVAILABLE ELSEWHERE AND SHALL BE SHOWN WHERE THE QUANTITIES ARE LISTED.
5. FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING ANY RAISED REFLECTIVE PAVEMENT MARKERS.
6. THE FOLLOWING CRITERIA SHALL BE USED FOR SELECTING THE DIAGONAL PAVEMENT MARKING SPACING,
<30 MPH USE 15' (<50 km/h USE 4.5 m)
30-45 MPH USE 20' (50-75 km/h USE 6.0 m)
>45 MPH USE 30' (>75 km/h USE 9.0 m)



RIGHT IN - RIGHT OUT ACCESS



ISLAND

GENERAL NOTES

- * A DISTANCE VARIES WITH SKEW OF INTERSECTION.
- * B ANGLE VARIES WITH SKEW OF INTERSECTION.

* FOR RIGHT TURN LANE AND ISLAND STRIPING CONSULT GEOMETRICS ENGINEER.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.



USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

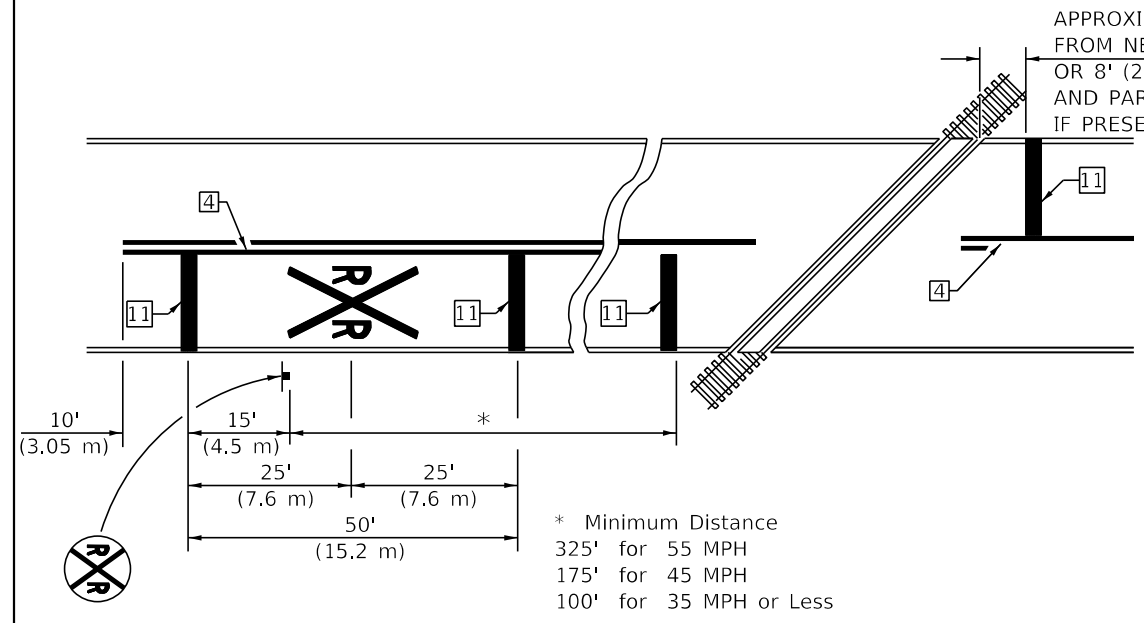
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS
(RURAL & URBAN APPLICATIONS)

SCALE: SHEET NO. 3 OF 4 SHEETS STA. TO STA.

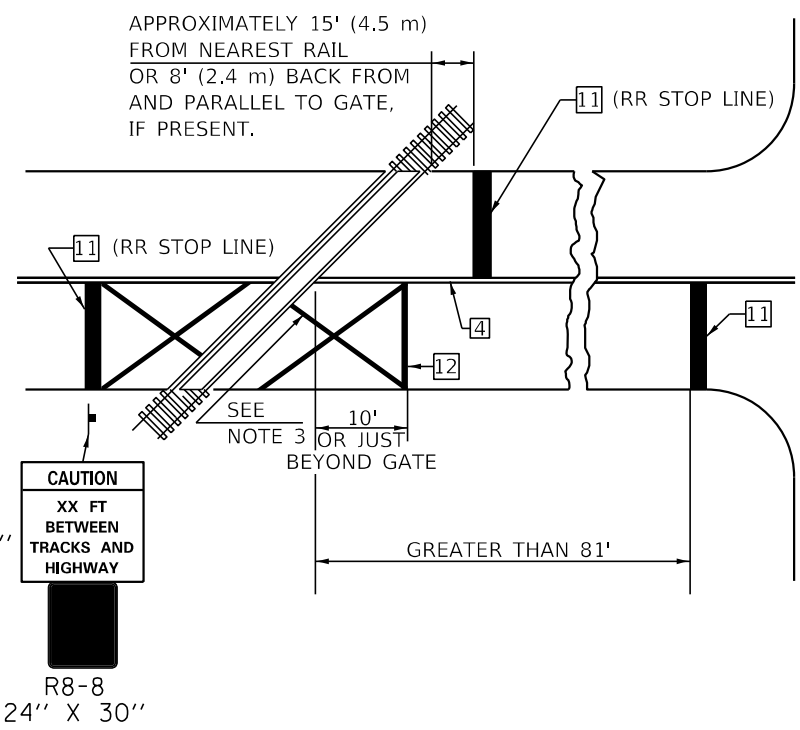
DISTRICT 5 DETAIL NO. 7800AAAA				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	36
CONTRACT NO. 70907				
ILLINOIS FED. AID PROJECT				

DESIGNER NOTE: SEE TABLE 2C-4 OF THE MUTCD FOR ADDITIONAL INFORMATION

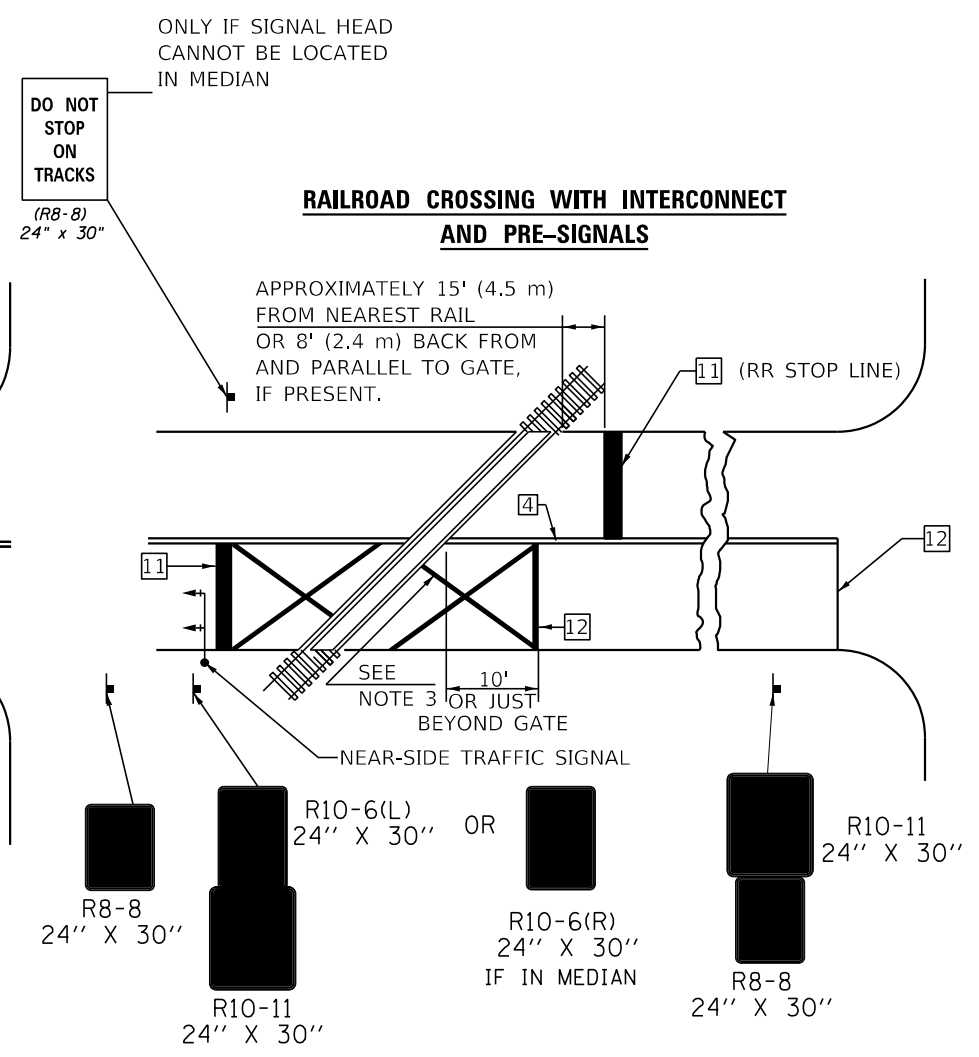


PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING

RAILROAD CROSSING WITH INTERCONNECT ONLY

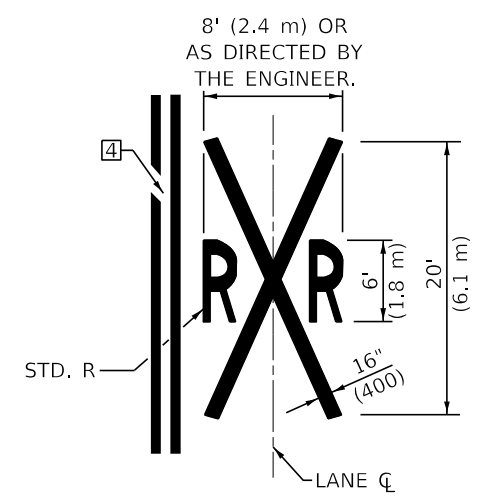


RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



GENERAL NOTES

1. SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
2. EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.
3. 6" WHITE PAVEMENT MARKINGS AT 45° TO PAVEMENT, 8' CENTER TO CENTER.
4. XX DISTANCE TO BE SHOWN ON SIGN MEASURED FROM A POINT 6 FEET FROM THE RAIL CLOSEST TO THE INTERSECTION OR FROM THE CLOSEST POINT ALONG THE EXIT GATE IF PRESENT OVER THE ROADWAY WHEN IN THE LOWERED POSITION TO THE STOP BAR OR CROSSWALK, WHICH EVER IS CLOSEST, ROUNDED DOWN TO NEAREST 5 FEET. WHERE THERE IS NO STOP LINE, MEASURE TO POINT WHERE DRIVER HAS A VIEW OF APPROACHING TRAFFIC.
5. THE CLEARANCE SIGN IS ALSO TO BE USED AS AN INTERIM MEASURE AT LOCATIONS WITH INTERCONNECTED INTERSECTION TRAFFIC SIGNALS WHERE IT IS PLANNED TO CHANGE THEM TO NEAR-SIDE SIGNALS AT A FUTURE TIME. IN THIS CASE, THE DISTANCE TO BE SHOWN ON THE SIGN IS MEASURED FROM THE EDGE OF THE STRIPED-OUT AREA INSTEAD OF 6 FEET FROM THE RAIL. THE SIGN IS TO BE REMOVED WHEN THE NEAR-SIDE SIGNALS ARE INSTALLED AND THE PAVEMENT MARKINGS EXTENDED TO THE INTERSECTION.



SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING



NOTES

THE TRAVERSE SPREAD OF THE "X" MAY VARY ACCORDING TO LANE WIDTH.

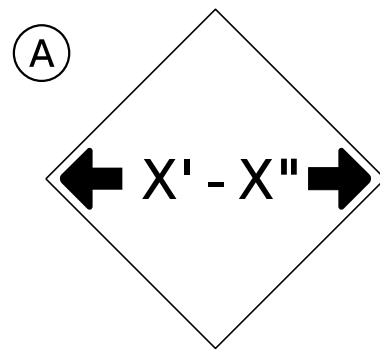
ON MULTI-LANE ROADS, THE STOP LINES SHALL EXTEND ACROSS ALL APPROACH LANES AND SEPARATE RXR SYMBOLS SHALL BE PLACED ADJACENT TO EACH OTHER IN EACH LANE.

WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DESIGNER NOTE: PROVIDE MAP WITH SIGN LOCATIONS (A, B, ETC.) AND COORDINATE WITH TRAFFIC OPERATIONS ENGINEER.

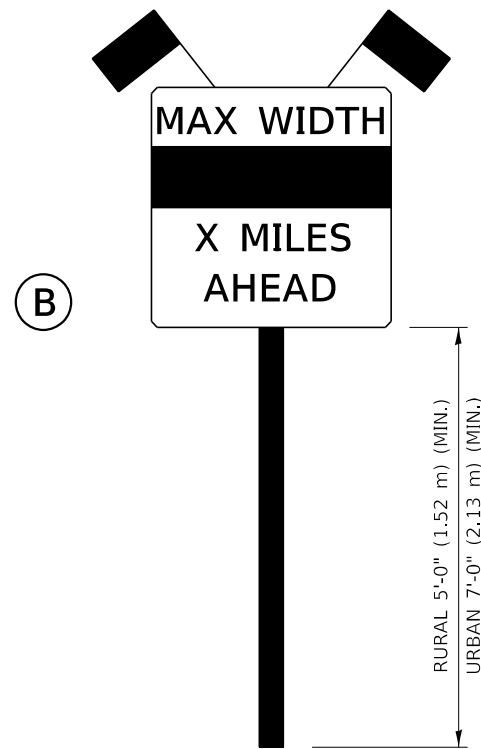
INCLUDE DISTRICT SPECIAL PROVISION - "WIDTH RESTRICTION SIGNING"



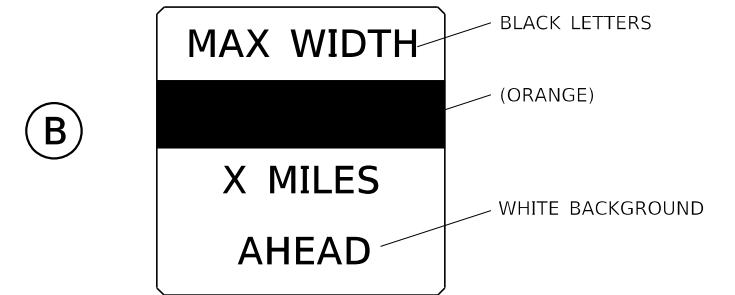
W12-2(O)-48"x48"(1200x1200)

SIGN (A) 2 SIGNS - W12-2(O)-48"x48"(1200x1200) ARE TO BE PLACED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

SIGN (B) 2 SIGNS - (SIGN PANEL, TYPE II) AS SHOWN ARE TO BE PLACED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.



SIGN PANEL, TYPE II



W12-I103(O)-48"x48"(1200x1200)
"D" LETTERS/NUMBERS

GENERAL NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
2. ALL (B) SIGNS SHALL HAVE FLAGS INSTALLED UNLESS OTHERWISE DIRECTED.
3. LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
4. ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR WIDTH RESTRICTION SIGNING.
5. ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE DIRECTED.
6. ALL SIGNS SHOWN ORANGE (O) SHALL BE FLUORESCENT ORANGE.
7. ALL SIGNS SHOWN SHALL CONSIST OF THE CURRENT RETROREFLECTIVE SHEETING REQUIREMENTS AS OUTLINED IN SECTION 1106.01 OF THE STANDARD SPECIFICATIONS BOOK.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

USER NAME =	DESIGNED -	REVISED -
	CHECKED -	REVISED -
PLOT SCALE =	DRAWN -	REVISED -
PLOT DATE =	CHECKED -	REVISED -

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
730	57-4(1)CR	MCLEAN	38	38
			CONTRACT NO. 70907	
ILLINOIS FED. AID PROJECT				