

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	MCHENRY	70	1
CONTRACT NO.			63535	
FED. ROAD DIST. NO.	ILLINOIS	FED AID PROJECT BRS-0028(107)		

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR INDEX OF HIGHWAY STANDARDS, SEE SHEET NO. 2

PROJECT LOCATED IN CHEMUNG TOWNSHIP

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

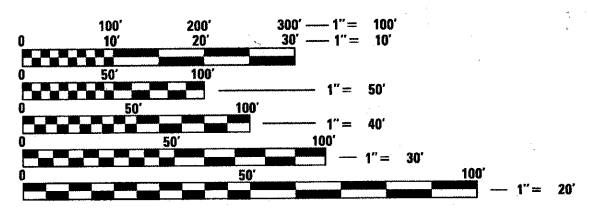
PLANS FOR PROPOSED  
FEDERAL AID HIGHWAY

FAS 0028 LAWRENCE ROAD BRIDGE OVER LAWRENCE CREEK  
SECTION NO: 06-00320-01-BR  
PROJECT NO: BRS-0028(107)  
BRIDGE REPLACEMENT, ROADWAY RECONSTRUCTION AND RESURFACING  
MCHENRY COUNTY  
JOB NO: C-91-139-11



**TRAFFIC DATA**  
LAWRENCE ROAD  
POSTED SPEED LIMIT = 55 MPH  
DESIGN SPEED LIMIT = 60 MPH  
2009 ADT = 390 VPD  
2030 ADT = 490 VPD

**DESIGN DESIGNATION**  
LAWRENCE ROAD: 222(21) COLLECTOR (0.10) (FD-10)



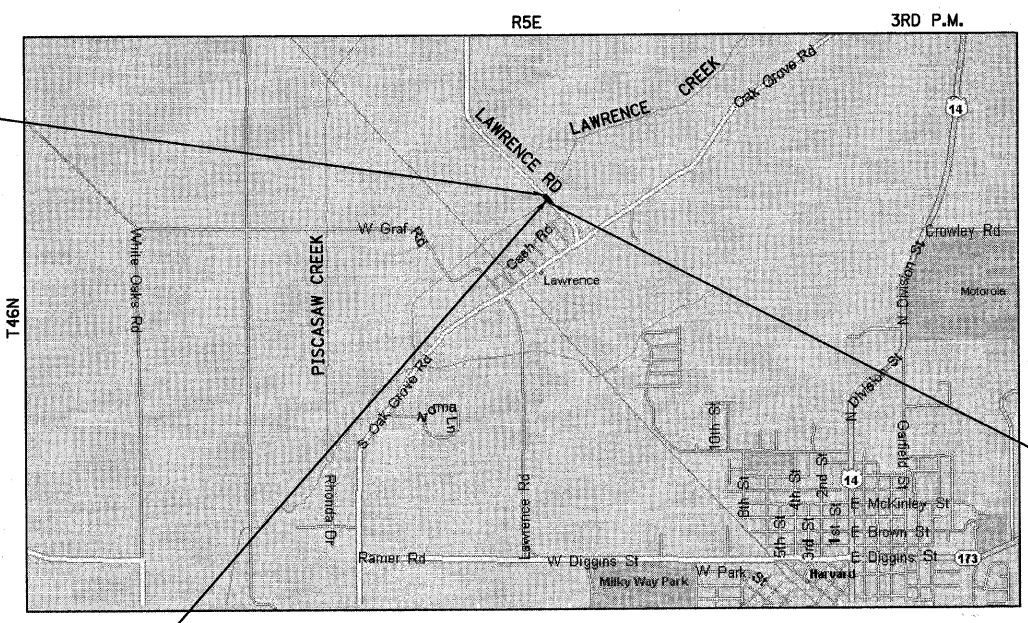
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E. DESIGN STAGE REQUEST  
DIG NO. A1761045



CONTACT JULIE AT 811 OR 800-892-0123 WITH THE FOLLOWING:  
COUNTY = MCHENRY  
CITY-TWNSHP. = CHEMUNG  
SEC. & 1/4 SEC. NO. = 22  
48 HOURS (2 working days) BEFORE YOU DIG

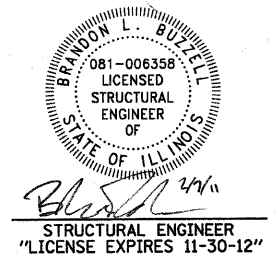
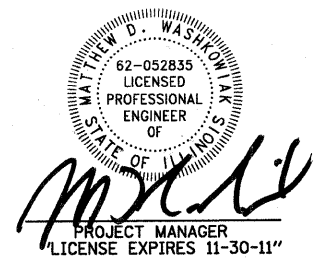
LAWRENCE ROAD IMPROVEMENT ENDS STA. 113 + 50



LAWRENCE ROAD IMPROVEMENT BEGINS STA. 99 + 00

REPLACEMENT OF SN: 056-3011 WITH SN: 056-3181 OVER LAWRENCE CREEK

LOCATION MAP (NOT TO SCALE)  
CHEMUNG TOWNSHIP  
GROSS LENGTH OF IMPROVEMENT = 1,450 LF OR (0.275 MILES)  
NET LENGTH OF IMPROVEMENT = 1,450 LF OR (0.275 MILES)



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

APPROVED FEBRUARY 4, 2011  
Joseph R. Kowalski Jr.  
COUNTY OF MCHENRY, COUNTY ENGINEER

PASSED FEBRUARY 24, 2011  
Charles H. Hedberg  
DISTRICT 1 ENGINEER OF LOCAL ROADS AND STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW FEBRUARY 24, 2011  
Diana M. O'Keefe  
DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

CONTRACT NO. 63535

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 PROGRAM AND OFFICE ENGINEER: CHARLES F. RIDDLE, P.E. (847)705-4406 SCHAUMBURG, IL  
 ANY DOCUMENTS WITH THE FILE NAME: C:\070630\101\BAXTER\0630-01-BR\0630-01-BR\0630-Cover-Lawrence.aht

**HIGHWAY STANDARDS**

000001-06	STANDARD SYMBOLS ABBREVIATIONS AND SYMBOLS
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
406201-01	MAILBOX TURNOUT
420001-07	PAVEMENT JOINTS
420401-08	BRIDGE APPROACH PAVEMENT CONNTECTOR
515001-03	NAME PLATE FOR BRIDGES
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION
542306-02	PRECAST REINFORCED CONCRETE ELLIPTICAL FLARED END SECTION
542311-02	GRATING FOR CONCRETE FLARED END SECTION (FOR 24" (600 mm) THRU 54" (1350 mm) PIPE)
601001-04	SUB-SURFACE DRAINS
601101-01	CONCRETE HEADWALL FOR PIPE DRAINS
602001-02	CATCH BASIN TYPE A
602601-02	PRECAST REINFORCED CONCRETE FLAT TOP SLAB
604091-02	FRAME AND GRATE TYPE 24
606001-04	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
630001-09	STEEL PLATE BEAM GUARDRAIL
630201-06	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-07	TRAFFIC BARRIER TERMINAL, TYPE 2
631032-06	TRAFFIC BARRIER TERMINAL, TYPE 6A
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 4.5m (15') AWAY
701006-03	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 4.5m (15') TO 6.0mm (24") FROM PAVEMENT EDGE
701011-02	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-03	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS >= 45 MPH
701321-11	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720006-02	SIGN PANEL ERECTION DETAILS
720011-01	METAL POSTS (SIGNS, MARKERS AND DELINEATORS)
729001-01	APPLICATION OF TYPE A AND B METAL POSTS
780001-02	TYPICAL PAVEMENT MARKINGS

**DISTRICT ONE STANDARD DETAILS**

BD01	DRIVEWAY DETAIL - DISTANCE BETWEEN R.O.W. AND FACE OF CURB & EDGE OF SHOULDER IS GREATER OR EQUAL TO 15' (4.5 M)
BD02	DRIVEWAY DETAIL - DISTANCE BETWEEN R.O.W. AND FACE OF CURB & EDGE OF SHOULDER IS LESS THAN OR EQUAL TO 15' (4.5 M)
BD32	BUTT JOINT AND HMA TAPER DETAILS
BD34	DETAILS FOR STEEL PLATE BEAM GUARD RAIL ADJACENT TO CURB AND GUTTER AND STABILIZATION AT TBT TY1 SPL
BD51	BENCHING DETAIL FOR EMBANKMENT WIDENING
TC10	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
TC11	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
TC13	DISTRICT ONE TYPICAL PAVEMENT MARKINGS
TC16	PAVEMENT MARKING LETTERS & SYMBOLS FOR TRAFFIC STAGING
TC18	SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS
TC22	ARTERIAL ROAD INFORMATION SIGN

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CONTRACT NO. 06-00320-01-BR  
 SECTION 06-00320-01-BR  
 COUNTY MCHENRY  
 PROJECT LAWRENCE ROAD BRIDGE OVER LAWRENCE CREEK  
 DATE 08/20/10  
 DRAWN BY BCD  
 CHECKED BY MDW  
 DATE 08/20/10  
 FILE 070630-Index&HwyStds.sht



DESIGNED - CAC	REVISED - PER IDOT 10-25-10
DRAWN - BCD	REVISED -
CHECKED - MDW	REVISED -
DATE - 08/20/10	FILE - 070630-Index&HwyStds.sht

**MCHENRY COUNTY DIVISION OF TRANSPORTATION**  
**LAWRENCE ROAD BRIDGE OVER**  
**LAWRENCE CREEK**

**INDEX OF SHEETS, HIGHWAY STANDARDS AND**  
**DISTRICT ONE STANDARD DETAILS**

SCALE: NONE STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	MCHENRY	70	2
JOB NO. C-91-139-11			CONTRACT NO. 63535	
ILLINOIS FED. AID PROJECT			BRS-0028107	



**SUMMARY OF QUANTITIES**

SUMMARY OF QUANTITIES			TOTAL QUANTITY	CONSTRUCTION TYPE CODE	
CODE NUMBER	DESCRIPTION	UNITS		BRIDGE 0011	NON-PARTICIPATING
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	67	67	0
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	38	38	0
20101000	TEMPORARY FENCE	FOOT	96	96	0
20101100	TREE TRUNK PROTECTION	EACH	6	6	0
20101200	TREE ROOT PRUNING	EACH	6	6	0
20101300	TREE PRUNING (1 TO 10 INCH DIAMETER)	EACH	3	3	0
20101350	TREE PRUNING (OVER 10 INCH DIAMETER)	EACH	3	3	0
20200100	EARTH EXCAVATION	CU YD	1,595	1,595	0
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	2,385	2,385	0
20300100	CHANNEL EXCAVATION	CU YD	710	710	0
20400800	FURNISHED EXCAVATION	CU YD	3,135	3,135	0
20800150	TRENCH BACKFILL	CU YD	111	111	0
21001000	GEO TECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	3,665	3,665	0
21101625	TOPSOIL FURNISH AND PLACE, 6"	SQ YD	7,616	7,616	0
25000210	SEEDING, CLASS 2A	ACRE	0.8	0.8	0
25000310	SEEDING, CLASS 4	ACRE	0.6	0.6	0
25000314	SEEDING, CLASS 4B	ACRE	0.2	0.2	0
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	156	156	0
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	156	156	0
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	156	156	0
25100635	HEAVY DUTY EROSION CONTROL BLANKET	SQ YD	6,876	6,876	0
25200110	SODDING, SALT TOLERANT	SQ YD	740	740	0
25200200	SUPPLEMENTAL WATERING	UNIT	12	12	0
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	160	160	0
28000305	TEMPORARY DITCH CHECKS	FOOT	207	207	0
28000400	PERIMETER EROSION BARRIER	FOOT	2,564	2,564	0
28000500	INLET AND PIPE PROTECTION	EACH	5	5	0
28000510	INLET FILTERS	EACH	6	6	0
28100105	STONE RIPRAP, CLASS A3	SQ YD	241	241	0
28100107	STONE RIPRAP, CLASS A4	SQ YD	738	738	0
28200200	FILTER FABRIC	SQ YD	979	979	0
35101600	AGGREGATE BASE COURSE, TYPE B 4"	SQ YD	7	7	0
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	1,914	1,557	357
40600300	AGGREGATE (PRIME COAT)	TON	27	19	8
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	175	94	81
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	165	0	165
40701861	HOT-MIX ASPHALT PAVEMENT (FULL DEPTH), 9"	SQ YD	2,457	2,457	0

• DENOTES SPECIAL ITEMS  
 Δ CONSTRUCTION CODE 0042

SUMMARY OF QUANTITIES			TOTAL QUANTITY	CONSTRUCTION TYPE CODE	
CODE NUMBER	DESCRIPTION	UNITS		BRIDGE 0011	NON-PARTICIPATING
42001300	PROTECTIVE COAT	SQ YD	8	8	0
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	308	308	0
44000100	PAVEMENT REMOVAL	SQ YD	2,054	2,054	0
44000158	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"	SQ YD	1,786	0	1,786
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	100	100	0
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	211	211	0
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	48	0	48
48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SQ YD	610	610	0
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1	0
50105220	PIPE CULVERT REMOVAL	FOOT	70	70	0
50200100	STRUCTURE EXCAVATION	CU YD	355	355	0
50300225	CONCRETE STRUCTURES	CU YD	64.2	64.2	0
50300255	CONCRETE SUPERSTRUCTURE	CU YD	275.0	275.0	0
50300260	BRIDGE DECK GROOVING	SQ YD	644	644	0
50300300	PROTECTIVE COAT	SQ YD	753	753	0
50401005	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 48 IN.	FOOT	747	747	0
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	65,910	65,910	0
50800515	BAR SPLICERS	EACH	617	617	0
51200959	FURNISHING METAL SHELL PILES 14" X 0.312"	FOOT	561	561	0
51202305	DRIVING PILES	FOOT	561	561	0
51203200	TEST PILE METAL SHELLS	EACH	2	2	0
51204650	PILE SHOES	EACH	24	24	0
51500100	NAME PLATES	EACH	1	1	0
542A0220	PIPE CULVERTS, CLASS A, TYPE 1 15"	FOOT	20	20	0
542A0241	PIPE CULVERTS, CLASS A, TYPE 1 36"	FOOT	34	34	0
54213657	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	2	2	0
54213660	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"	EACH	2	2	0
54213681	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 36"	EACH	2	2	0
54247170	GRATING FOR CONCRETE FLARED END SECTION 36"	EACH	2	2	0
550A0340	STORM SEWERS, CLASS A, TYPE 2 12"	FOOT	38	38	0
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	96	96	0
60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	4	4	0
60201340	CATCH BASINS, TYPE A, 4'-DIAMETER, TYPE 24 FRAME AND GRATE	EACH	2	2	0
60605000	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24	FOOT	20	20	0
63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	462.5	462.5	0
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4	0
63200310	GUARDRAIL REMOVAL	FOOT	260	260	0

• DENOTES SPECIAL ITEMS  
 Δ CONSTRUCTION CODE 0042

PROJECT # 201 BY BAXTER & WOODMAN, INC. ...dot for hwy\PDF\2434.dwg  
 STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM  
 LICENSE NO. 184-00011 - EXPIRES 4/30/2011  
 2/16/2011



DESIGNED - CAC	REVISED - PER IDOT 10-25-10
DRAWN - BCD	REVISED - PER IDOT 02-14-11
CHECKED - MDW	REVISED -
DATE - 08/20/10	FILE - 070630-S0001.shp

**MCHENRY COUNTY DIVISION OF TRANSPORTATION  
 LAWRENCE ROAD BRIDGE OVER  
 LAWRENCE CREEK**

**SUMMARY OF QUANTITIES**

SCALE: NONE      STA.      TO STA.

F.A.S. RTE. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 4
CONTRACT NO. 63535			JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BR5-0028(107)	

**SUMMARY OF QUANTITIES (CONT.)**

SUMMARY OF QUANTITIES			TOTAL QUANTITY	CONSTRUCTION TYPE CODE	
CODE NUMBER	DESCRIPTION	UNITS		BRIDGE 0011	NON-PARTICIPATING
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8	8	0
67100100	MOBILIZATION	L SUM	1	1	0
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1	0
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1	0
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	0
70106700	TEMPORARY RUMBLE STRIPS	EACH	12	12	0
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	16	16	0
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	1,480	1,480	0
70300220	TEMPORARY PAVEMENT MARKING- LINE 4"	FOOT	15,870	15,870	0
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	1,009	1,009	0
70300570	PAVEMENT MARKING TAPE, TYPE III 24"	FOOT	240	240	0
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	916	916	0
70400100	TEMPORARY CONCRETE BARRIER	FOOT	605	605	0
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	535	535	0
* 72000100	SIGN PANEL - TYPE 1	SQ FT	52	52	0
* 72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	9	9	0
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	3,517	2,103	1,414
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	15	0	15
* 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	501	501	0
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	8	8	0
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	16	16	0
* 78200530	BARRIER WALL MARKERS, TYPE C	EACH	19	19	0
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	0
78300100	PAVEMENT MARKING REMOVAL	SO FT	586	586	0
* A2007820	TREE, TILIA AMERICANA (AMERICAN LINDEN/ BASSWOOD), 2-1/2" CALIPER, BALLED AND BURLAPPED	EACH	3	3	0
* B2000120	TREE, ACER CAMPESTRE (HEDGE MAPLE), 2-1/2" CALIPER, TREE FORM, BALLED AND BURLAPPED	EACH	3	3	0
* B2001620	TREE, CRATAEGUS CRUSGALLI INERMIS (THORN LESS COCKSPUR HAWTHORN), 2-1/2" CALIPER TREE FORM, BALLED AND BURLAPPED	EACH	3	3	0
Z0001050	AGGREGATE SUBGRADE 12"	SO YD	2,930	2,930	0
Z0004552	APPROACH SLAB REMOVAL	SO YD	208	208	0
* Z0007124	STEEL RAILING (SPECIAL)	FOOT	249	249	0
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	0
Z0019600	DUST CONTROL WATERING	UNIT	42	42	0
Z0022800	FENCE REMOVAL	FOOT	495	495	0
Z0026407	TEMPORARY SHEET PILING	SO FT	1,624	1,624	0

• DENOTES SPECIAL ITEMS  
 Δ CONSTRUCTION CODE 0042

SUMMARY OF QUANTITIES			TOTAL QUANTITY	CONSTRUCTION TYPE CODE	
CODE NUMBER	DESCRIPTION	UNITS		BRIDGE 0011	NON-PARTICIPATING
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2	0
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2	0
Z0030850	TEMPORARY INFORMATION SIGNING	SO FT	52	52	0
Z0042002	POROUS GRANULAR EMBANKMENT, SUBGRADE	CU YD	551	551	0
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	170	170	0
Z0066600	STABILIZED DRIVEWAYS 8"	SO YD	160	160	0
Δ Z0076600	TRAINEES	hour	1,000	1,000	0
X2020110	GRADING AND SHAPING SHOULDERS	UNIT	13	0	13
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	188	188	0
X4023000	TEMPORARY ACCESS (ROAD)	EACH	2	2	0
X4024000	TEMPORARY ACCESS (FIELD ENTRANCE)	EACH	2	2	0
X4060826	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	TON	91	0	91
* X6310088	TRAFFIC BARRIER TERMINAL TYPE 6A (SPECIAL)	EACH	4	4	0
X7010202	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL)	EACH	1	1	0
* X7280105	TELESCOPING STEEL SIGN SUPPORT (SPECIAL)	FOOT	93	93	0
* X7310110	BASE FOR TELESCOPING SIGN SUPPORT, SPECIAL	EACH	5	5	0
* X7810300	RECESSED REFLECTIVE PAVEMENT MARKER	EACH	41	26	15
XX006922	RUMBLE STRIP REMOVAL	EACH	12	12	0

• DENOTES SPECIAL ITEMS  
 Δ CONSTRUCTION CODE 0042

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 2/16/2011 10:28:18 AM



DESIGNED - CAC	REVISED - PER IDOT 10-25-10
DRAWN - BCD	REVISED - PER IDOT 02-14-11
CHECKED - MDW	REVISED -
DATE - 08/20/10	FILE - 070630-S0002.sh+

**MCHENRY COUNTY DIVISION OF TRANSPORTATION  
 LAWRENCE ROAD BRIDGE OVER  
 LAWRENCE CREEK**

**SUMMARY OF QUANTITIES**

SCALE: NONE STA. TO STA.

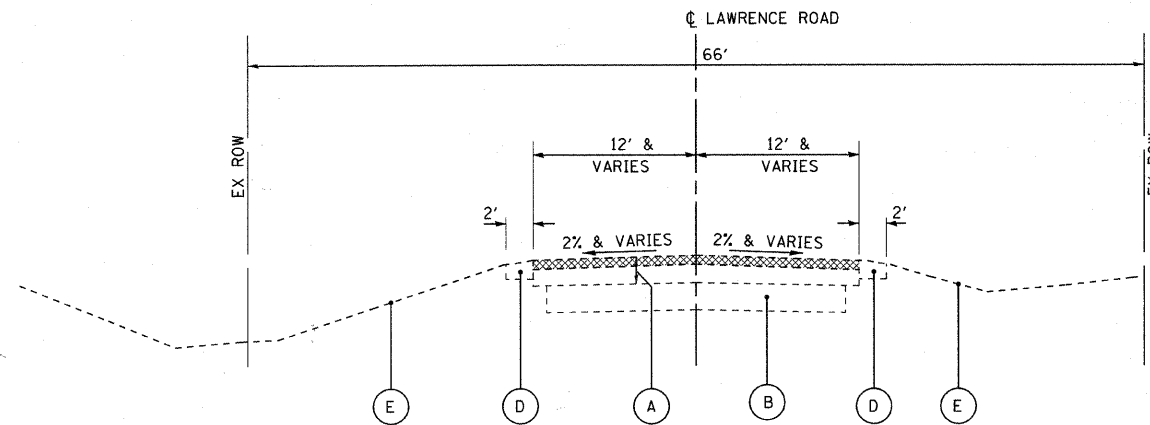
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	MCHENRY	70	5
CONTRACT NO. 63535				
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT				BRS-0028107

**EXISTING LEGEND**

- (A) HOT-MIX ASPHALT SURFACE AND BINDER COURSE (VARIES 9" TO 9 3/4")
- (B) AGGREGATE SUBBASE (VARIES 10 1/2" TO 10 3/4")
- (C) HOT-MIX ASPHALT SHOULDERS
- (D) AGGREGATE SHOULDERS
- (E) EXISTING GROUND
- [Hatched Box] HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"
- [Diagonal Lines Box] PAVEMENT REMOVAL
- [Stippled Box] SHOULDER REMOVAL (INCLUDED IN THE COST OF EARTH EXCAVATION)

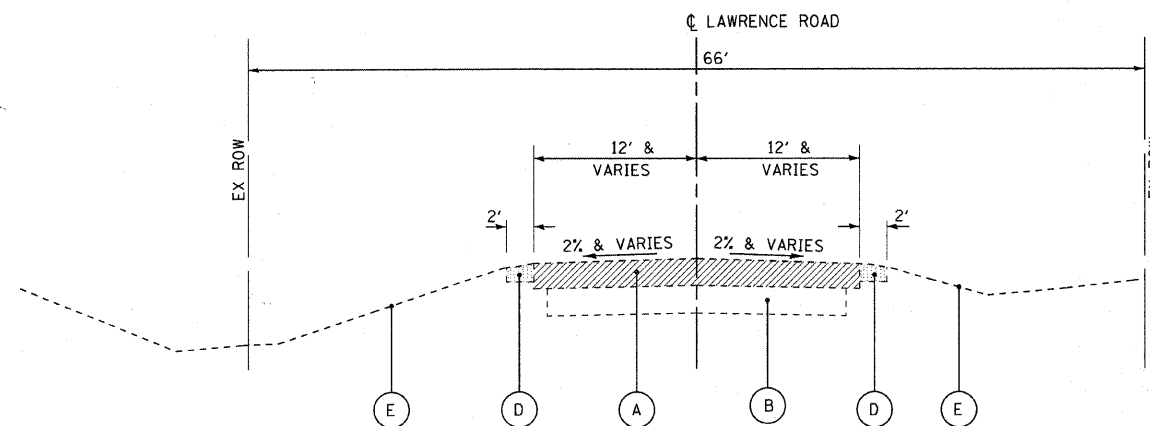
**PROPOSED LEGEND**

- (1) HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50-2"
- (2) HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50-7"
- (3) BITUMINOUS MATERIALS (PRIME COAT)
- (4) AGGREGATE SUBGRADE 12"
- (5) HOT-MIX ASPHALT SHOULDERS, 6"
- (6) PROPOSED STEEL PLATE BEAM GUARDRAIL
- (7) TOPSOIL FURNISH AND PLACE, 6"  
SEEDING, CLASS 2A  
EROSION CONTROL BLANKET
- (8) AGGREGATE SHOULDERS, TYPE B-6"
- (9) REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL  
•• POROUS GRANULAR EMBANKMENT, SUBGRADE
- (10) EMBANKMENT
- (11) GEOTECHNICAL FABRIC FOR GROUND STABILIZATION
- (12) TOPSOIL FURNISH AND PLACE, 6" SODDING, SALT TOLERANT
- (13) HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (IL-9.5mm) - 1 1/2"
- (14) POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50 - 3/4"
- (15) GRADING AND SHAPING SHOULDERS AND AGGREGATE WEDGE SHOULDERS, TYPE B



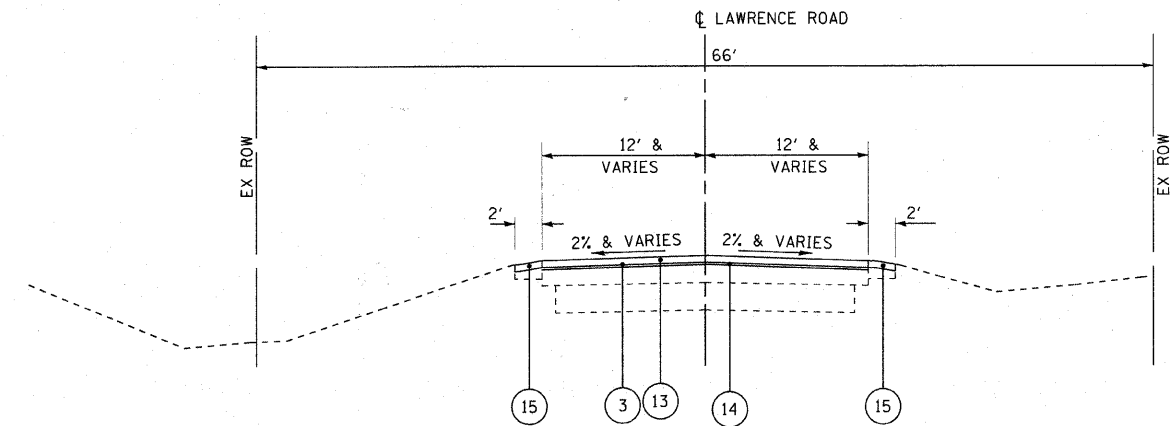
**EXISTING TYPICAL SECTION  
LAWRENCE ROAD**

STA. 99+00 TO STA. 102+00  
STA. 111+00 TO STA. 113+50



**EXISTING TYPICAL SECTION  
LAWRENCE ROAD**

STA. 102+00 TO STA. 111+00



**PROPOSED TYPICAL SECTION  
LAWRENCE ROAD**

STA. 99+00 TO STA. 102+00  
STA. 111+00 TO STA. 113+50

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DESIGNED - CAC	REVISED - PER IDOT 10-25-10
DRAWN - BCD	REVISED -
CHECKED - MDW	REVISED -
DATE - 08/20/10	FILE - 070630-ExTypSec-Lawrence.sht

**MCHENRY COUNTY DIVISION OF TRANSPORTATION  
LAWRENCE ROAD BRIDGE OVER  
LAWRENCE CREEK**

**TYPICAL SECTIONS**

SCALE: NONE

STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	MCHENRY	70	6
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63535	
			BRS-0028(107)	



### HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	AIR VOIDS @ Ndes
<b>FULL DEPTH PAVEMENT, 9"</b>	
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (IL 9.5 mm); 2"	4% @ 50 GYR.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50; 7"	4% @ 50 GYR.
<b>STABILIZED DRIVEWAYS</b>	
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (IL 9.5 mm); 2"	4% @ 50 GYR.
HOT-MIX ASPHALT BASE COURSE (HOT-MIX ASPHALT BINDER IL-19 mm) N50; PE - 6", CE - 8"	4% @ 50 GYR.
<b>SHOULDER RECONSTRUCTION</b>	
HOT-MIX ASPHALT SHOULDERS (HMA BINDER IL-19mm); 6"	2% @ 30 GYR.
<b>BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)</b>	
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (IL 9.5 mm); 2"	4% @ 50 GYR.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50; 7"	4% @ 50 GYR.
<b>ROADWAY RESURFACING</b>	
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (IL 9.5 mm); 1 1/2"	4% @ 50 GYR.
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50; 3/4"	4% @ 50 GYR.

1. THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.

2. THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70-22 AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS." FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

### STRUCTURAL DESIGN DATA

STREET	STRUCTURAL DESIGN TRAFFIC 2021			STREET CLASS	TRAFFIC FACTOR	SSR	TEMP	STRAIN	AC	EAC	REQ'D BIT THICKNESS	MECHANISTIC PAVEMENT DESIGN
	PV	SU	MU									
LAWRENCE ROAD	222	16	16	IV	0.10	POOR	76.1° F	130	PG 64-28	560	9.0 IN	2" HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 7" HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 12" AGGREGATE SUBGRADE

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DATE - 08/20/10	FILE - 070630-TypSecNotes.sht

**MCHENRY COUNTY DIVISION OF TRANSPORTATION  
LAWRENCE ROAD BRIDGE OVER  
LAWRENCE CREEK**

SCALE: NONE

#### TYPICAL SECTIONS

STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	MCHENRY	70	8
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63535	
			BR5-0028(107)	



**EARTHWORK SCHEDULE**

STAGE I											
STATION	SQUARE FEET BY STATION				VOLUMES, IN CUBIC YARDS				TOTALS		
	TOPSOIL EXCAVATION (SQ FT)	EARTH EXCAVATION (SQ FT)	UNDERCUT PGES (SQ FT)	EMBANKMENT (SQ FT)	TOPSOIL EXCAVATION (CU YD)	EARTH EXCAVATION (CU YD)	UNDERCUT PGES (CU YD)	EMBANKMENT (CU YD)	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (CU YD)	EARTH EXCAVATION TO BE USED IN EMBANKMENT (CU YD)	BALANCE WASTE (+) SHORTAGE (-) (CU YD)
102+00.00	12.1	8.8	9.5	4.1							
102+50.00	18.2	26.9	9.5	18.4	29.0	34.0	18.0	21.0	45.0	28.9	7.9
103+00.00	21.7	14.3	9.5	29.2	37.0	39.0	18.0	45.0	53.0	33.2	-11.9
103+50.00	26.1	3.8	9.5	55.4	45.0	17.0	18.0	79.0	61.0	14.5	-64.6
104+00.00	34.0	0.2	9.5	132.1	56.0	4.0	18.0	174.0	72.0	3.4	-170.6
104+50.00	31.1	0.2	9.5	127.9	61.0	1.0	18.0	241.0	77.0	0.9	-240.2
105+00.00	30.8	0.0	9.5	124.7	58.0	1.0	18.0	234.0	74.0	0.9	-233.2
105+50.00	31.5	0.2	9.5	129.4	58.0	1.0	18.0	236.0	74.0	0.9	-235.2
106+00.00	31.7	0.7	23.5	135.7	59.0	1.0	31.0	246.0	89.0	0.9	-245.2
106+50.00	33.7	7.2	23.5	111.1	61.0	8.0	44.0	229.0	105.0	6.8	-222.2
106+57.00	33.7	6.5	23.5	125.6	9.0	8.0	7.0	31.0	16.0	6.8	-24.2
BRIDGE PAVEMENT - STA 106+57 TO 107+49											
107+49.00	65.2	91.1	23.5	121.3							
108+00.00	65.5	133.3	23.5	95.1	124.0	212.0	45.0	205.0	169.0	180.2	-24.8
108+50.00	66.0	130.1	23.5	82.4	122.0	244.0	44.0	165.0	166.0	207.4	42.4
109+00.00	64.8	127.9	9.5	67.1	122.0	239.0	31.0	139.0	152.0	203.2	64.2
109+50.00	65.7	130.2	9.5	71.2	121.0	239.0	18.0	129.0	137.0	203.2	74.2
110+00.00	61.0	9.6	9.5	60.2	118.0	130.0	18.0	122.0	134.0	110.5	-11.5
110+50.00	48.7	62.4	9.5	44.4	102.0	67.0	18.0	97.0	118.0	57.0	-40.1
111+00.00	15.3	8.3	10.5	12.4	60.0	66.0	19.0	53.0	76.0	56.1	3.1
TOTALS:					1,242.0	1,311.0	401.0	2,446.0	1,618.0	1,114.4	-1331.7
ROUNDED TOTALS:						1,315	401		1,620		-1335
					SHRINKAGE FACTOR = 15%						

STAGE II											
STATION	SQUARE FEET BY STATION				VOLUMES, IN CUBIC YARDS				TOTALS		
	TOPSOIL EXCAVATION (SQ FT)	EARTH EXCAVATION (SQ FT)	UNDERCUT PGES (SQ FT)	EMBANKMENT (SQ FT)	TOPSOIL EXCAVATION (CU YD)	EARTH EXCAVATION (CU YD)	UNDERCUT PGES (CU YD)	EMBANKMENT (CU YD)	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (CU YD)	EARTH EXCAVATION TO BE USED IN EMBANKMENT (CU YD)	BALANCE WASTE (+) SHORTAGE (-) (CU YD)
102+00.00	6.7	20.7	4.5	1.2							
102+50.00	20.2	27.7	4.5	12.3	25.0	45.0	9.0	13.0	34.0	38.3	25.3
103+00.00	13.3	8.2	4.5	26.4	32.0	34.0	9.0	36.0	41.0	28.9	-7.1
103+50.00	16.7	1.5	4.5	46.4	28.0	9.0	9.0	68.0	37.0	7.7	-60.4
104+00.00	21.7	0.0	4.5	95.6	36.0	2.0	9.0	132.0	45.0	1.7	-130.3
104+50.00	27.4	0.0	4.5	131.8	46.0	0.0	9.0	211.0	55.0	0.0	-211.0
105+00.00	28.3	0.0	4.5	137.7	52.0	0.0	9.0	250.0	61.0	0.0	-250.0
105+50.00	27.7	0.0	4.5	125.2	52.0	0.0	9.0	244.0	61.0	0.0	-244.0
106+00.00	26.9	0.0	4.5	122.0	51.0	0.0	9.0	229.0	60.0	0.0	-229.0
106+50.00	31.2	0.0	4.5	130.3	54.0	0.0	9.0	234.0	63.0	0.0	-234.0
106+57.00	31.2	0.0	4.5	130.3	9.0	0.0	2.0	34.0	11.0	0.0	-34.0
BRIDGE PAVEMENT - STA 106+57 TO 107+49											
107+49.00	22.3	0.8	4.5	108.8							
108+00.00	22.6	6.2	4.5	94.0	43.0	7.0	9.0	192.0	52.0	6.0	-186.1
108+50.00	20.2	11.4	4.5	65.3	40.0	17.0	9.0	148.0	49.0	14.5	-133.6
109+00.00	16.8	14.9	4.5	47.2	35.0	25.0	9.0	105.0	44.0	21.3	-83.8
109+50.00	18.3	17.8	4.5	25.5	33.0	31.0	9.0	68.0	42.0	26.4	-41.7
110+00.00	18.9	17.6	4.5	10.1	35.0	33.0	9.0	33.0	44.0	28.1	-5.0
110+50.00	12.6	22.6	4.5	13.7	30.0	38.0	9.0	23.0	39.0	32.3	9.3
111+00.00	6.8	17.7	4.5	4.3	18.0	38.0	9.0	17.0	27.0	32.3	15.3
TOTALS:					619.0	279.0	146.0	2,037.0	765.0	237.2	-1,799.9
ROUNDED TOTALS:						280	150		765		-1,800
					SHRINKAGE FACTOR = 15%						

- EARTHWORK TABLE NOTES:**
- 15% SHRINKAGE FACTOR WAS USED
  - ASSUMED 6-INCH TOPSOIL EXCAVATION WITHIN EXISTING ROW AND 12-INCH BETWEEN EXISTING ROW AND PROPOSED ROW
  - ASSUMED 12-INCH DEPTH FOR UNDERCUT AREAS
  - ANY PGES AND REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FOR GROUND STABILIZATION NOT NEEDED AT THE TIME OF CONSTRUCTION SHOULD BE DELETED FROM THE CONTRACT.
  - REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL = TOPSOIL EXCAVATION + UNDERCUT
  - UNDERCUT PGES INCLUDES DITCH UNDERCUT + 6-INCH AVERAGE POTENTIAL ROADWAY UNDERCUT

**EARTHWORK SUMMARY**

SUMMARY			
20200100	20400800	20201200	Z0042002
EARTH EXCAVATION (CU YD)	FURNISHED EXCAVATION (CU YD)	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (CU YD)	POROUS GRANULAR EMBANKMENT, SUBGRADE (CU YD)
STAGE I	1,315	1,335	401
STAGE II	280	1,800	150
TOTAL	1,595	3,135	551

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 LICENSE NO. 184-002014 EXPIRES 7/30/2018  
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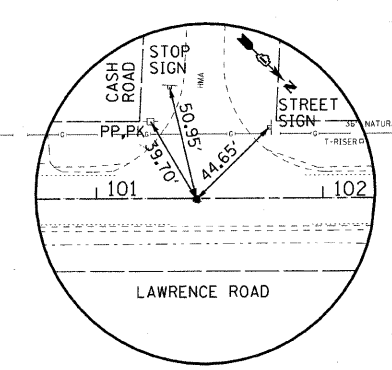
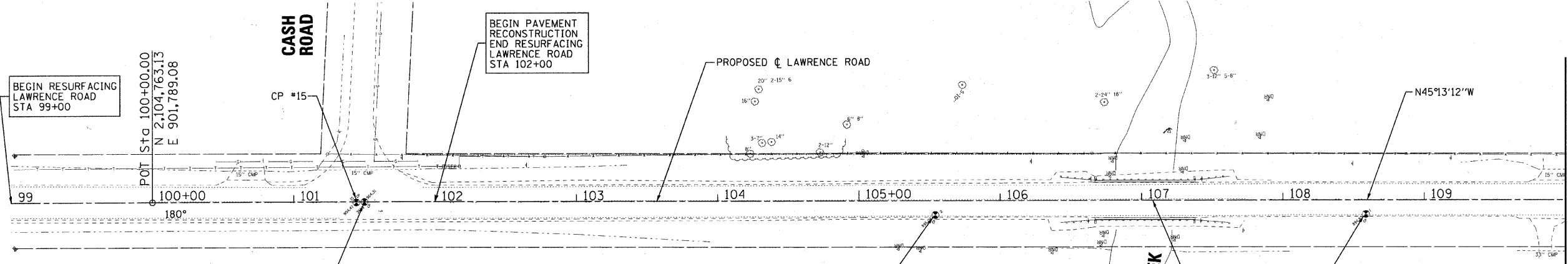


DESIGNED - CAC	REVISED - PER IDOT 10-25-10
DRAWN - BCD	REVISED -
CHECKED - MDW	REVISED -
DATE - 08/20/10	FILE - 070630L-Ear thSch.sht

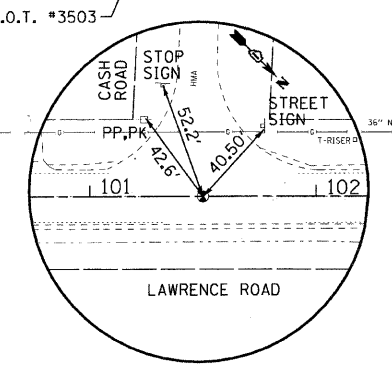
**MCHENRY COUNTY DIVISION OF TRANSPORTATION**  
**LAWRENCE ROAD BRIDGE OVER**  
**LAWRENCE CREEK**

**EARTHWORK SCHEDULE**  
 SCALE: NONE STA. TO STA.

F.A.S. RTE. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 9
CONTRACT NO. 63535			JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028107	

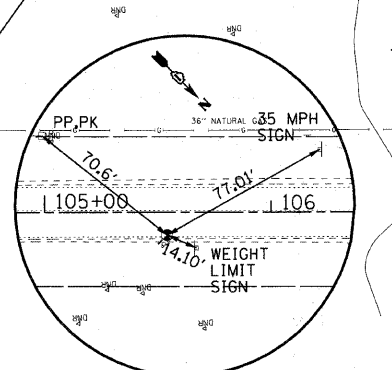


**TIE-POINT**  
 CP #15 STA 101+44.27  
 LAWRENCE ROAD  
 N 2104865.006, E 901686.925

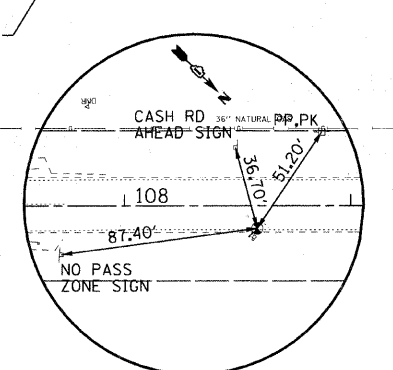


**HORIZONTAL CONTROL**  
 P.O.T. # 3503 STA 101+50  
 LAWRENCE ROAD  
 N 2104868.784, E 901682.605  
 ELEV=904.31

**LAWRENCE ROAD**

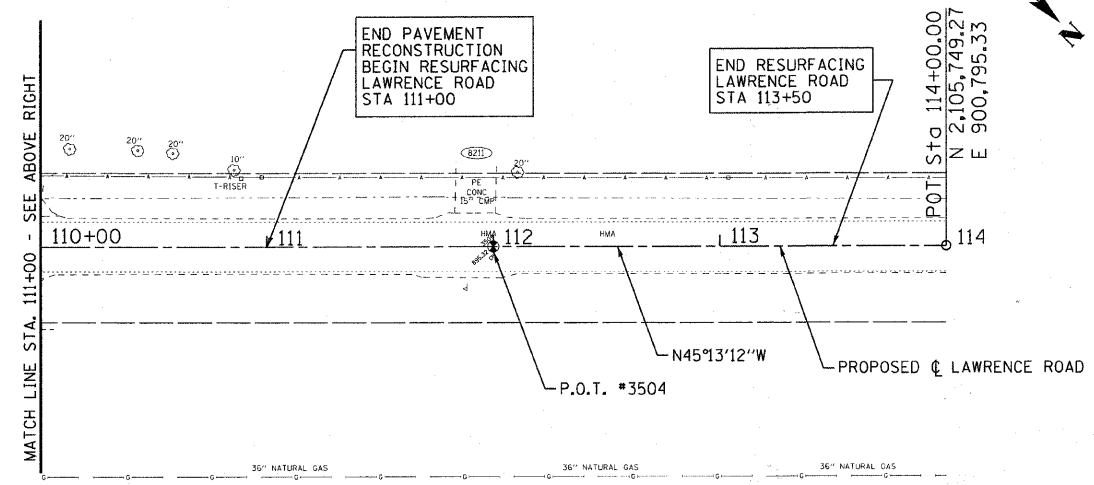


**TIE-POINT**  
 CP #2 STA 105+54.14  
 LAWRENCE ROAD  
 N 2105160.590, E 901402.813

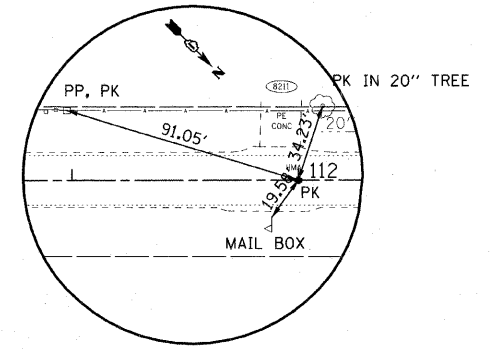


**TIE-POINT**  
 CP #1 STA 108+58.63  
 LAWRENCE ROAD  
 N 2105375.020, E 901186.638

**BENCHMARKS**  
 CP #1 - ELEV=894.83 PK NAIL SET IN HMA. (DATUM NAVD 88)  
 CP #2 - ELEV=895.02 PK NAIL SET IN HMA. (DATUM NAVD 88)  
 CP #15 - ELEV=904.47 PK NAIL SET IN HMA. (DATUM NAVD 88)



**LAWRENCE ROAD**



**HORIZONTAL CONTROL**  
 P.O.T. # 3504 STA 112+00.00  
 LAWRENCE ROAD  
 N 2105608.368, E 900937.289  
 ELEV=895.32

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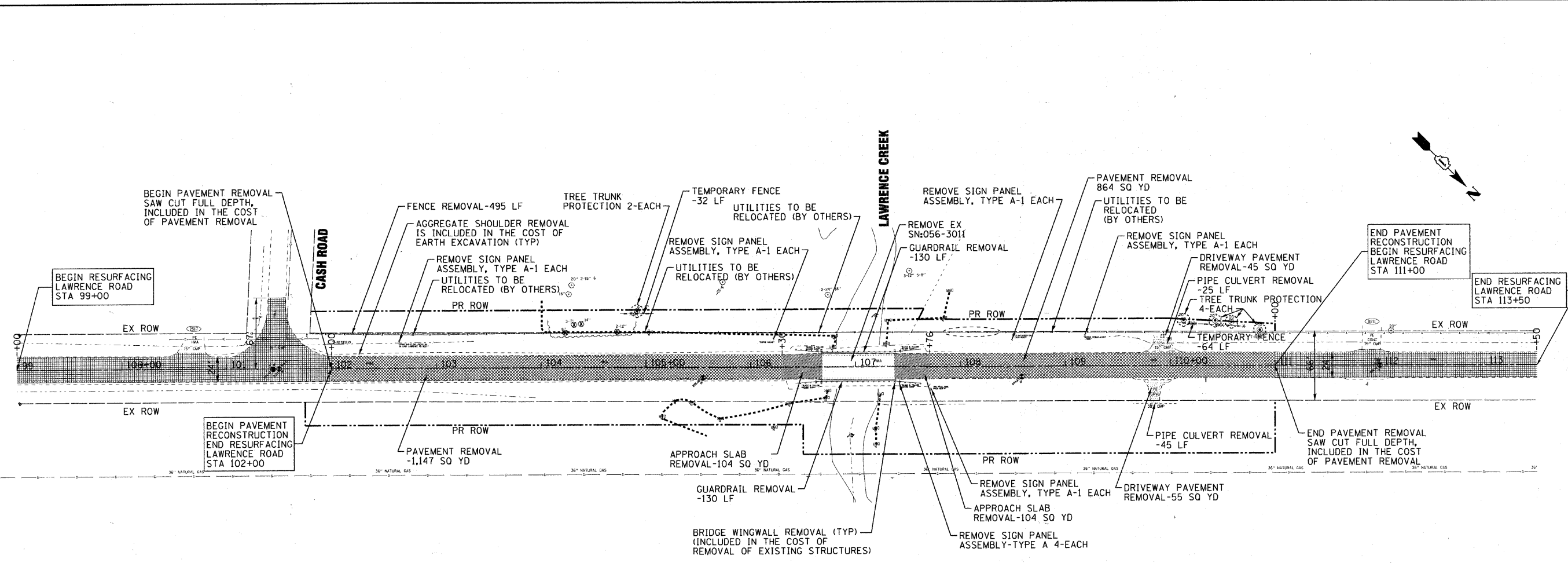
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CHECKED - MDW	REVISED -
DATE - 08/20/10	FILE - 070630-Align&Ties.shx

**MCHENRY COUNTY DIVISION OF TRANSPORTATION  
 LAWRENCE ROAD BRIDGE OVER  
 LAWRENCE CREEK**

<b>ALIGNMENT, TIES AND BENCHMARKS</b>	
SCALE: 1"=40'	STA. TO STA.

F.A.S. RTE. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 10
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63535	
			BRS-0028(107)	

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## LAWRENCE ROAD

- LEGEND:**
- DRIVEWAY PAVEMENT REMOVAL
  - APPROACH SLAB REMOVAL
  - PAVEMENT REMOVAL
  - TREE REMOVAL
  - WETLAND BOUNDARY
  - HMA SURFACE REMOVAL, 2 1/4"
  - TREE TRUNK PROTECTION
  - - - - - TEMPORARY FENCE



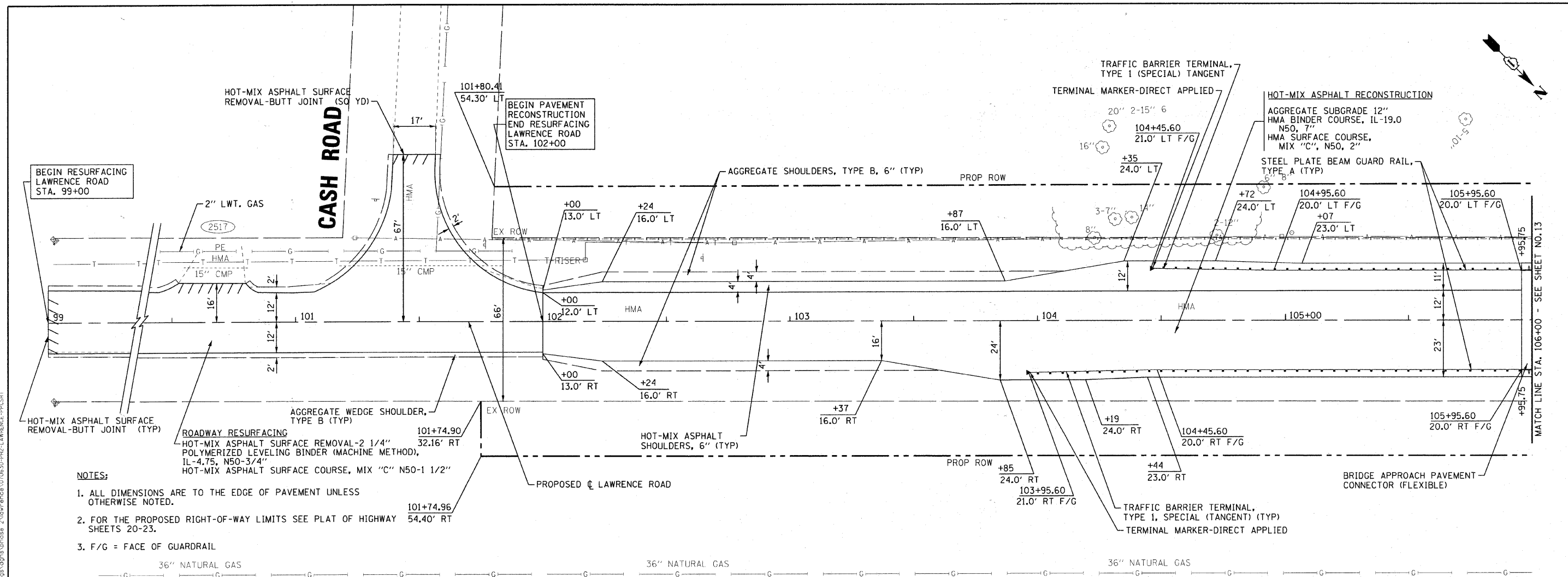
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DRAWN - BCD	REVISED -
CHECKED - MDW	REVISED -
DATE - 08/20/10	FILE - 070630-REMOVAL.SHT

**MCHENRY COUNTY DIVISION OF TRANSPORTATION  
LAWRENCE ROAD BRIDGE OVER  
LAWRENCE CREEK**

**EXISTING CONDITIONS AND REMOVAL PLAN**

SCALE: 1"=50'      STA.100+00 TO STA.113+00

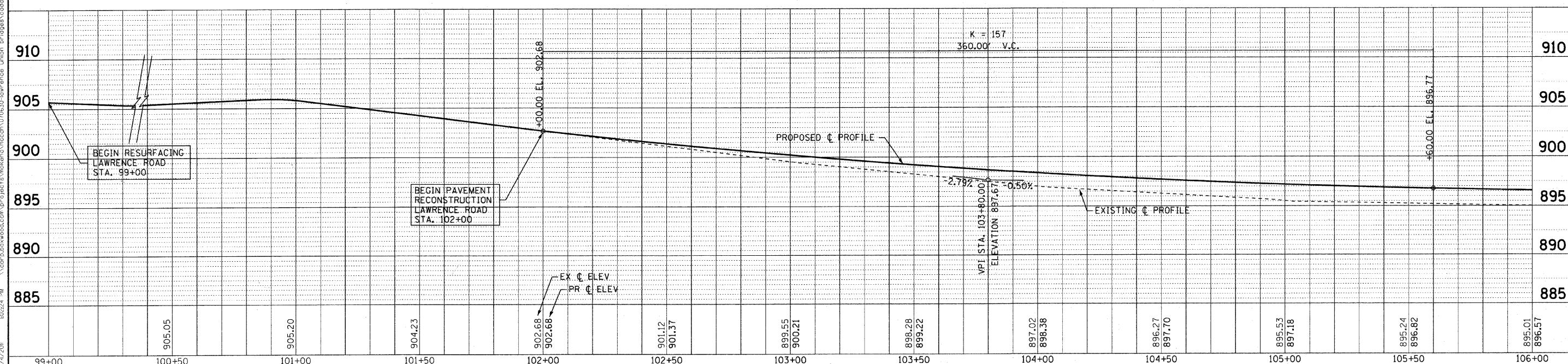
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
002B	06-00320-01-BR	MCHENRY	70	11
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT				CONTRACT NO. 63535
				BRS-0028(107)



**NOTES:**

1. ALL DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
2. FOR THE PROPOSED RIGHT-OF-WAY LIMITS SEE PLAT OF HIGHWAY SHEETS 20-23.
3. F/G = FACE OF GUARDRAIL

**LAWRENCE ROAD**



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 5/6/2010 2/4/2011



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CHECKED - MDW	REVISED -
DATE - 08/20/10	FILE - 070630-PH2-LAWRENCE-PP1.SHT

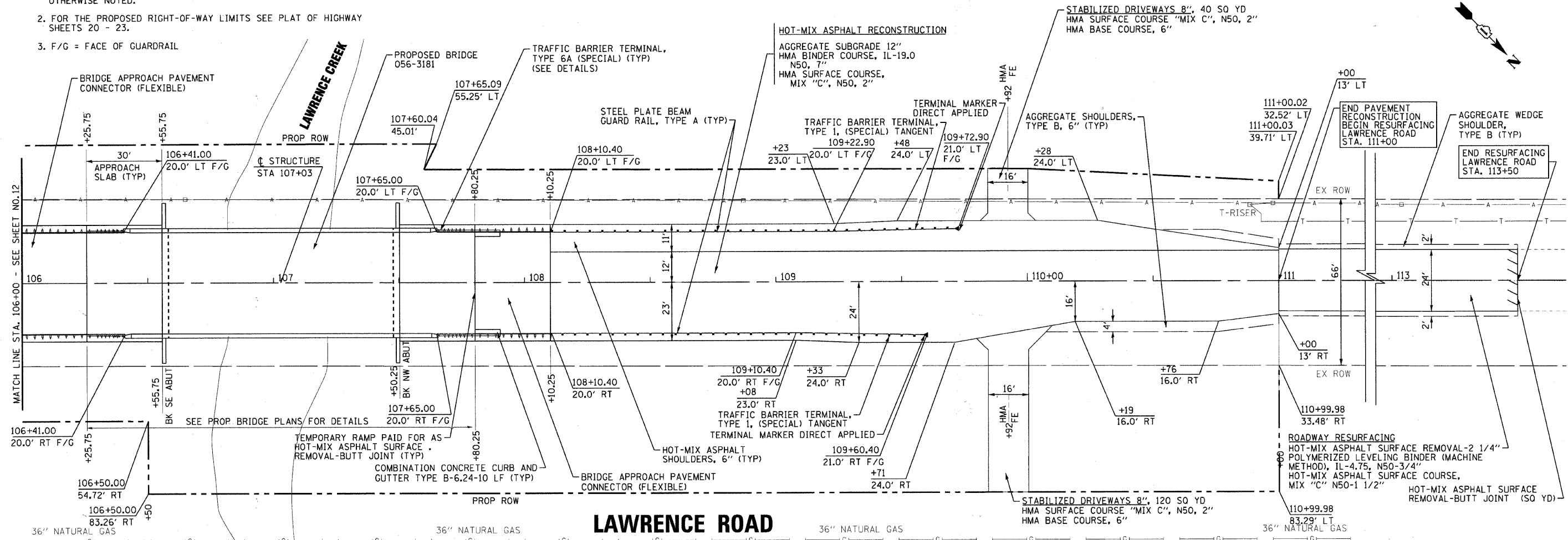
**MCHENRY COUNTY DIVISION OF TRANSPORTATION**  
**LAWRENCE ROAD BRIDGE OVER**  
**LAWRENCE CREEK**

**PLAN AND PROFILE**  
 SCALE: H: 1"=20' V: 1"=5'  
 STA. 101+00 TO STA. 107+00

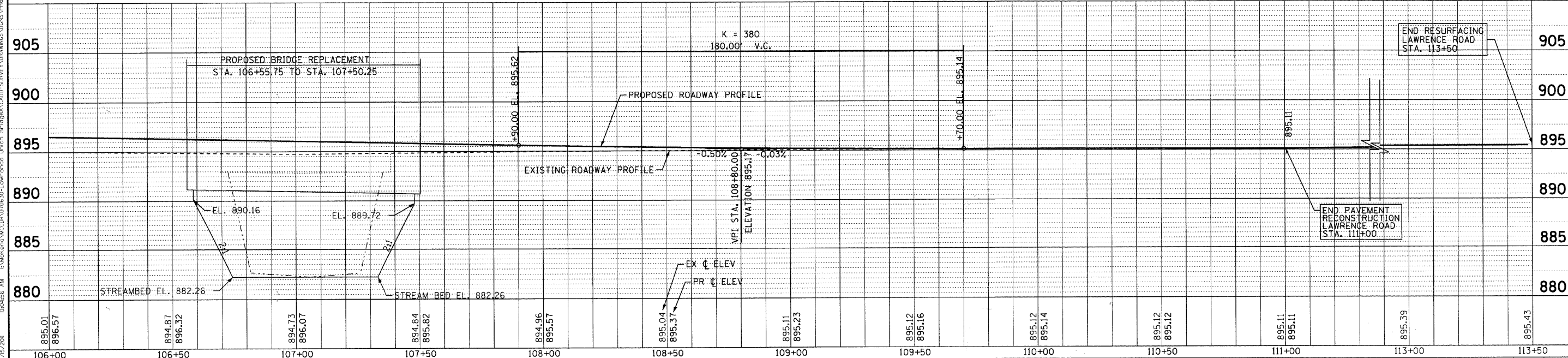
F.A.S. RTE. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS NO. 70	SHEET NO. 12
CONTRACT NO. 63535			JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028107	

**NOTES:**

1. ALL DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
2. FOR THE PROPOSED RIGHT-OF-WAY LIMITS SEE PLAT OF HIGHWAY SHEETS 20 - 23.
3. F/G = FACE OF GUARDRAIL



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 BAXTER & WOODMAN, INC. 1000 W. MONROE STREET, SUITE 100, CHICAGO, IL 60606-1100  
 2/15/2011



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CHECKED - MDW	REVISED
DATE - 08/20/10	FILE -0T0630-PH2-LAWRENCE-PP2.SHT

**MCHENRY COUNTY DIVISION OF TRANSPORTATION**  
**LAWRENCE ROAD BRIDGE OVER**  
**LAWRENCE CREEK**

**PLAN AND PROFILE**

SCALE: H: 1"=20' V: 1"=5'

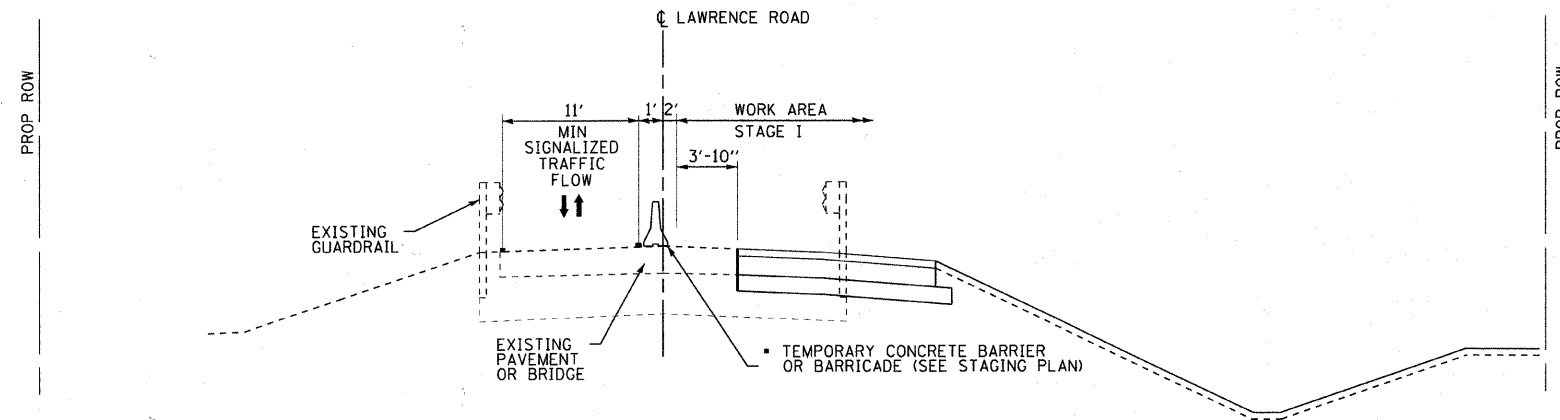
STA. 106+00 TO STA. 113+50

F.A.S. RTE. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 13
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63535	
			BRS-0028(107)	

### CONSTRUCTION STAGING

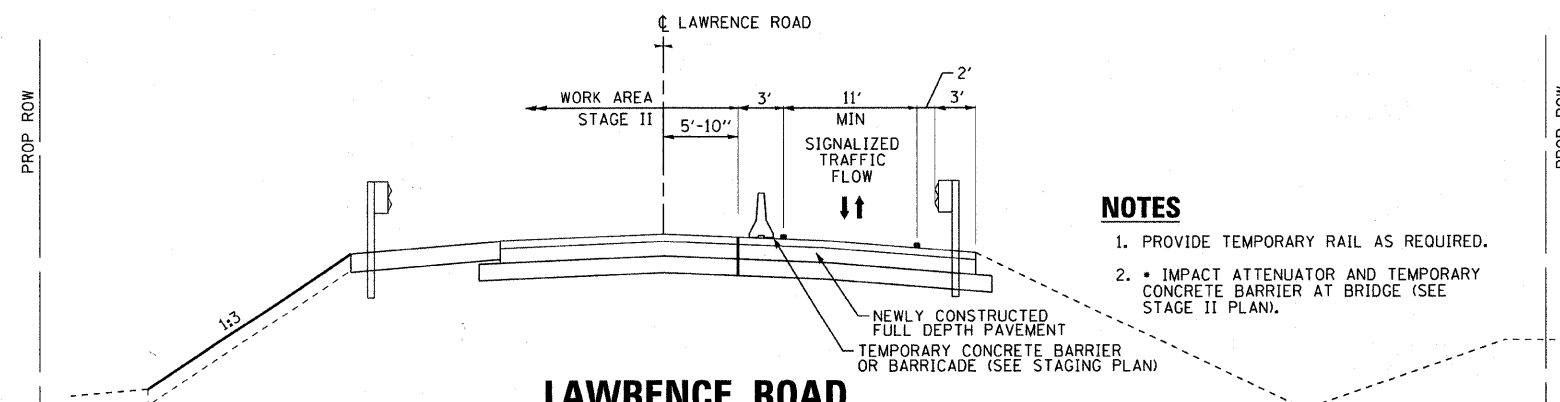
- LEGEND**
- EXISTING PAVEMENT MARKINGS
  - ▬ TEMPORARY PAVEMENT MARKINGS
  - ↑ DIRECTION OF TRAFFIC
  - ▬ TEMPORARY CONCRETE BARRIER
  - ▬ TYPE II BARRICADES OR DRUMS
  - - - - EXISTING ELEMENT
  - PROPOSED ELEMENT
  - ▨ PAVEMENT REMOVAL

- PRIOR TO STAGE I:** PRIOR TO CONSTRUCTION, ESTABLISH EROSION CONTROL MEASURES. STRIP EXISTING VEGETATION TO MINIMUM EXTENT NECESSARY TO COMPLETE IMPROVEMENTS.
- STAGE I:**
1. INSTALL AND MAINTAIN TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNALS PER IDOT HIGHWAY STANDARD 701321-11. ESTABLISH AND MAINTAIN TRAFFIC ON THE WEST SIDE OF LAWRENCE ROAD. A MINIMUM OF 1 - 10' THRU LANE SHALL BE MAINTAINED FOR TRAFFIC FLOW.
  2. REMOVE EXISTING PAVEMENT, GUARDRAIL, AND PIPE CULVERTS ALONG THE EAST SIDE OF LAWRENCE ROAD.
  3. INSTALL TEMPORARY SHEET PILING FOR STAGE I AS SHOWN ON THE BRIDGE PLANS.
  4. REMOVE THE STAGE I PORTIONS OF THE BRIDGE AS SHOWN ON THE BRIDGE PLANS.
  5. CONSTRUCT STAGE I PORTIONS OF THE BRIDGE AS SHOWN ON THE BRIDGE PLANS.
  6. CONSTRUCT PIPE CULVERTS, GUARDRAIL, AND PAVEMENT (THRU BINDER) ON EAST SIDE OF LAWRENCE ROAD. INSPECT, MAINTAIN, AND REPLACE EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY THROUGHOUT CONSTRUCTION. COMPLETE FINAL RESTORATION.
- STAGE II:**
1. INSTALL AND MAINTAIN TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNALS PER IDOT HIGHWAY STANDARD 701321-11. ESTABLISH AND MAINTAIN TRAFFIC ON THE EAST SIDE OF LAWRENCE ROAD. A MINIMUM OF 1 - 10' THRU LANE SHALL BE MAINTAINED FOR TRAFFIC FLOW.
  2. REMOVE EXISTING REMAINING PAVEMENT, GUARDRAIL, AND PIPE CULVERTS ALONG THE WEST SIDE OF LAWRENCE ROAD.
  3. INSTALL TEMPORARY SHEET PILING FOR STAGE II AS SHOWN ON THE BRIDGE PLANS.
  4. REMOVE STAGE II PORTIONS OF THE BRIDGE AS SHOWN ON THE BRIDGE PLANS.
  5. CONSTRUCT STAGE II PORTIONS OF THE BRIDGE AS SHOWN ON THE BRIDGE PLANS.
  6. CONSTRUCT PIPE CULVERTS, GUARDRAIL, AND PAVEMENT (THRU BINDER) ON LAWRENCE ROAD. INSPECT, MAINTAIN, AND REPLACE EROSION AND SEDIMENT CONTROL MEASURES AS NECESSARY THROUGHOUT CONSTRUCTION.
  7. REMOVE TEMPORARY BRIDGE TRAFFIC SIGNALS.
- STAGE III:**
1. MILL LAWRENCE ROAD AND CASH ROAD TO LIMITS SHOWN ON THE PLANS.
  2. COMPLETE POLYMERIZED LEVELING BINDER COURSE.
  3. COMPLETE HOT-MIX ASPHALT SURFACE COURSE, AGGREGATE SHOULDERS, PAVEMENT MARKINGS, RESTORATION, AND PUNCH LIST ITEMS.
  4. REMOVE SOIL AND EROSION MEASURES PRIOR TO PERMANENT STABILIZATION.



### LAWRENCE ROAD STAGE I TYPICAL SECTION

STA. 106+55.75 TO STA. 107+50.25



### LAWRENCE ROAD STAGE II TYPICAL SECTION

STA. 106+55.75 TO STA. 107+50.25

#### NOTES

1. PROVIDE TEMPORARY RAIL AS REQUIRED.
2. IMPACT ATTENUATOR AND TEMPORARY CONCRETE BARRIER AT BRIDGE (SEE STAGE II PLAN).

#### GENERAL NOTES

1. THE CONTRACTOR SHALL MAINTAIN A MINIMUM 10' CLEAR WIDTH LANE FOR ONE-WAY TRAFFIC FLOW FOR ALL STAGES. INGRESS AND EGRESS TO SIDE STREETS SHALL BE MAINTAINED AT ALL TIMES OR AS DETERMINED BY THE ENGINEER.
2. THE ENGINEER SHALL BE INFORMED 48 HOURS IN ADVANCE OF ANY CHANGE IN CONSTRUCTION STAGING.
3. TRAFFIC CONTROL DRUMS AND VERTICAL PANELS SHALL BE EQUIPPED WITH BI-DIRECTIONAL STEADY BURN LIGHTS AND SHALL BE PLACED AT 25' INTERVALS ALONG THE PROPOSED WORK ZONE AND 25' WITHIN TAPERED SECTIONS OR AS DETERMINED BY THE ENGINEER.
4. ALL TEMPORARY PAVEMENT MARKINGS SHOWING DETERIORATION SHALL BE REPLACED BY THE CONTRACTOR IMMEDIATELY OR AS DETERMINED BY THE ENGINEER. SUFFICIENT QUANTITIES TO RE-STRIPE EACH STAGE 3 TIMES HAVE BEEN PROVIDED. ALL MARKINGS REQUIRING REPLACEMENT AFTER THE THIRD PLACEMENT SHALL BE REPLACED BY THE CONTRACTOR AT THEIR OWN EXPENSE.
5. THE FURNISHING, INSTALLING, AND RELOCATION OF ALL TRAFFIC SIGNS SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION. ALL CONFLICTING TRAFFIC SIGNS SHALL BE COVERED OR AS DETERMINED BY THE ENGINEER. THIS SHALL BE INCLUDED IN THE COST FOR TRAFFIC CONTROL AND PROTECTION.
6. ALL SIDE STREETS SHALL BE OPEN TO TRAFFIC DURING CONSTRUCTION.
7. A QUANTITY FOR PAVEMENT MARKING REMOVAL HAS BEEN INCLUDED IN THE CONTRACT. EXISTING PAVEMENT MARKING REMOVAL SHALL BE DETERMINED AND APPROVED BY THE ENGINEER AT THE TIME OF CONSTRUCTION.
8. CONTRACTOR SHALL INSTALL TEMPORARY CONCRETE BARRIERS WITHIN TAPERED SECTIONS AT A RATE OF 12:1.
9. CONTRACTOR SHALL ESTABLISH A 30 MPH CONSTRUCTION ZONE SPEED LIMIT.
10. TEMPORARY STRIPING, DRUMS, BARRICADES, AND CONSTRUCTION SIGNS PLACEMENT SHALL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.

#### SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL

SCALE: NONE STA. TO STA.

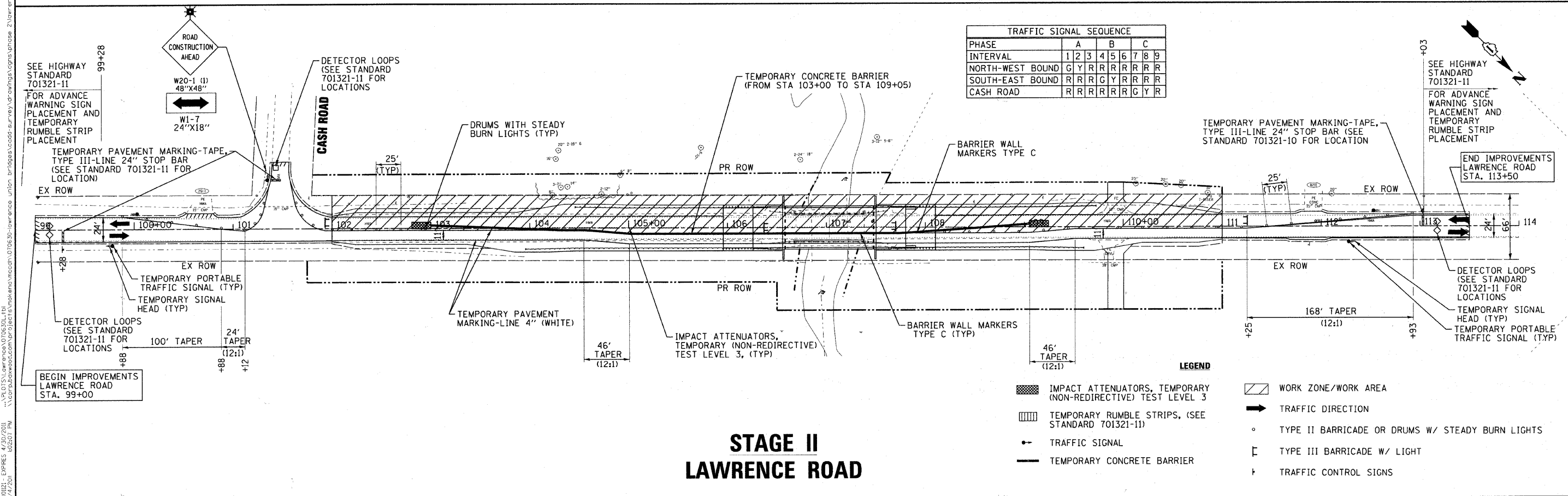
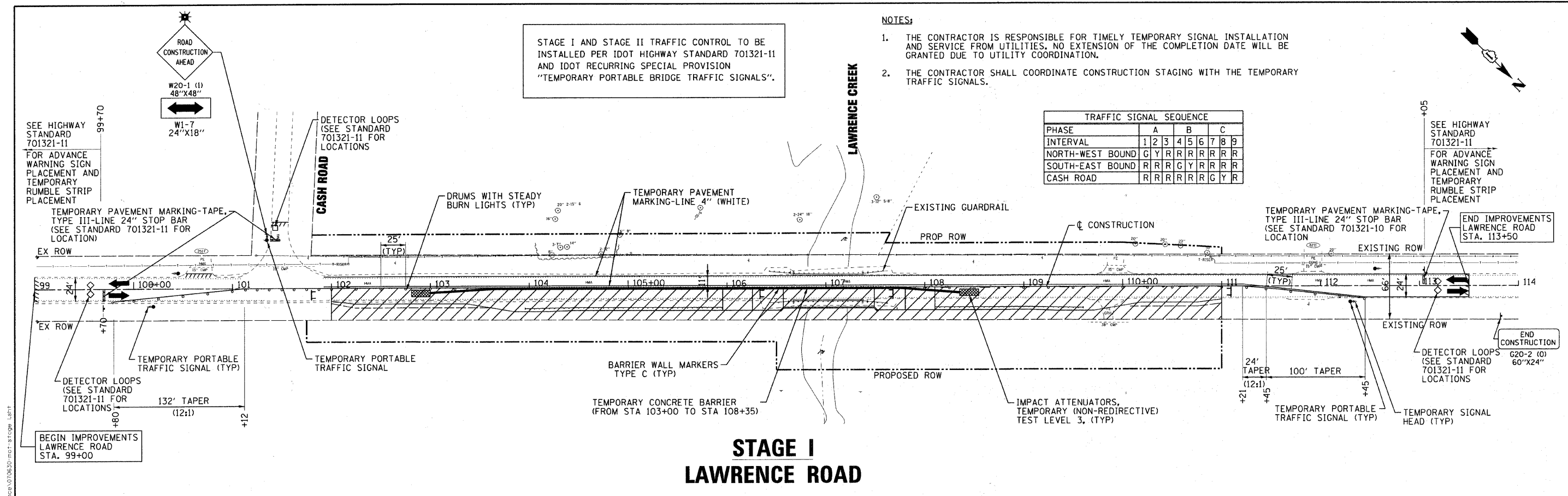
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002B	06-00320-01-BR	MCHENRY	70	14
				CONTRACT NO. 63535
JOB NO. C-91-139-11			ILLINOIS FED. AID PROJECT	
			BRS-0028107	



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DRAWN - BCD	REVISED -
CHECKED - MDW	REVISED -
DATE - 08/20/10	FILE - 070630-lawrence-mot-tydsec.SHT

**MCHENRY COUNTY DIVISION OF TRANSPORTATION  
LAWRENCE ROAD BRIDGE OVER  
LAWRENCE CREEK**

DRAWN BY: BATES & WOODMAN, INC.  
 LICENSE NO. 184-0013 - EXPRES 7/30/2011  
 10224 RM  
 PROJECT: \\corporate\woodco.com\project\makens\mcc\dh070630-lawrence union bridges\coord-survey\lawrings\dgn\phase 2-lawrence\070630-lawrence-mot-tydsec.SHT



STAGE I AND STAGE II TRAFFIC CONTROL TO BE INSTALLED PER IDOT HIGHWAY STANDARD 701321-11 AND IDOT RECURRING SPECIAL PROVISION "TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNALS".

- NOTES:**
1. THE CONTRACTOR IS RESPONSIBLE FOR TIMELY TEMPORARY SIGNAL INSTALLATION AND SERVICE FROM UTILITIES. NO EXTENSION OF THE COMPLETION DATE WILL BE GRANTED DUE TO UTILITY COORDINATION.
  2. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION STAGING WITH THE TEMPORARY TRAFFIC SIGNALS.

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 2/4/2011

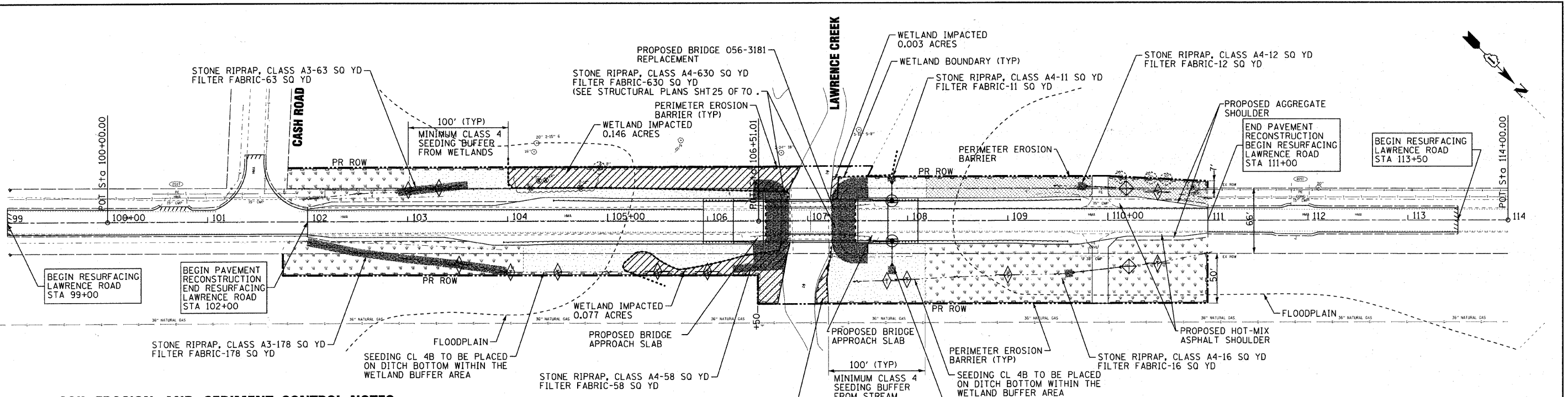
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DATE - 08/20/10	FILE - 070630-mot-stage 1.shd

**MCHENRY COUNTY DIVISION OF TRANSPORTATION  
LAWRENCE ROAD BRIDGE OVER  
LAWRENCE CREEK**

**SUGGESTED STAGES OF CONSTRUCTION  
AND TRAFFIC CONTROL**

SCALE: 1"=50'      STA. 100+00 TO STA. 113+00

F.A.S. RTE. 002B	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 15
CONTRACT NO. 63535			JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)	



**SOIL EROSION AND SEDIMENT CONTROL NOTES:**

- ALL AREAS OF BARE GROUND WILL BE TEMPORARILY SEEDED EVERY 7 DAYS UNTIL PERMANENT EROSION CONTROL IS IN PLACE.
- ALL AREAS WITHIN R.O.W. WILL BE RESTORED WITH 6" TOPSOIL, EROSION CONTROL BLANKET AND SEEDING, CLASS 2A.
- DITCH CHECKS SHALL BE EITHER ROLLED EXCELSIOR OR TRIANGULAR SILT DIKES.
- ENGINEER TO STAKE LOCATIONS FOR PROPOSED TREES, AND SHALL BE APPROVED BY McHENRY COUNTY PRIOR TO INSTALLATION.
- NO WORK SHALL BE PERFORMED IN FLOWING WATER. WORK IN OR NEAR THE CRITICAL AREAS SHOULD BE ISOLATED FROM CONCENTRATED FLOWS OR STREAM FLOW. ONCE WORK IS IN THIS AREA BEGINS, PRIORITY SHALL BE GIVEN TO THE COMPLETION OF THE WORK AND FINAL STABILIZATION OF ALL DISTURBED AREAS.
- SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. AREAS OF THE DEVELOPMENT SITE THAT ARE NOT TO BE GRADED SHALL BE PROTECTED FROM CONSTRUCTION TRAFFIC OR OTHER DISTURBANCE UNTIL FINAL SEEDING IS PERFORMED.
- PROPERTIES AND CHANNELS ADJOINING THE DEVELOPMENT SITE SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION.
- SOIL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.
- DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN (7) CALENDAR DAYS FOLLOWING THE END OF ACTIVE HYDROLOGIC DISTURBANCE.
- ALL STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.
- IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH AND EFFECTIVE SEDIMENT CONTROL MEASURE (E.G., SEDIMENT TRAP, SEDIMENT BASIN, OR OTHER APPROPRIATE MEASURES).
- ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS SHALL BE PERMANENTLY STABILIZED.
- SOIL STOCKPILES SHALL NOT BE LOCATED IN A FLOOD-PRONE AREA OR A DESIGNATED BUFFER PROTECTING WATERS OF THE UNTIED STATES OR ISOLATED WATERS OF McHENRY COUNTY.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE RECEPTACLES FOR THE DEPOSITION OF ALL CONSTRUCTION MATERIAL DEBRIS GENERATED DURING THE DEVELOPMENT PROCESS. THE CONTRACTOR SHALL NOT CAUSE OR PERMIT THE DUMPING, DEPOSITING, DROPPING, THROWING, DISCARDING OR LEAVING OF CONSTRUCTION MATERIAL DEBRIS UPON OR INTO ANY DEVELOPMENT SITE, CHANNEL, WATERS OF THE U.S. OR ISOLATED WATERS OF McHENRY COUNTY. THE CONTRACTOR SHALL MAINTAIN THE DEVELOPMENT SITE FREE OF CONSTRUCTION MATERIAL DEBRIS.
- ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN AN EFFECTIVE WORKING CONDITION.
- HEAVY DUTY EROSION CONTROL BLANKET SHALL BE USED AND SHALL BE IN ACCORDANCE WITH THE "ILLINOIS URBAN MANUAL", LATEST EDITION, AND "DOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SECTION", LATEST EDITION ARTICLE 251.04.
- THE DITCH BOTTOMS SHALL BE SEEDED WITH SEEDING CLASS 4B WITHIN THE WETLAND BUFFER AREAS.
- ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE "ILLINOIS URBAN MANUAL", LATEST EDITION, WHERE NOT ALREADY PROVIDED FOR WITHIN THE PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS.
- ESTABLISH PERMANENT STABILIZATION WITHIN 14 DAYS OF FINAL GRADING OR WHEN DISTURBED AREA IS LEFT IDLE FOR MORE THAN 14 DAYS.

**LAWRENCE ROAD**

**MAINTENANCE SCHEDULE**

- SILT FENCE - AT A MINIMUM, THE CONTRACTOR SHALL INSPECT ALL SILT FENCE WEEKLY OR AFTER EACH ONE-HALF INCH OR GREATER RAINFALL EVENT. ANY REQUIRED REPAIRS SHALL BE MADE BY THE CONTRACTOR TO KEEP THE SILT FENCE FUNCTIONAL AS DESIGNED.
- HEAVY DUTY EROSION BLANKET - AT A MINIMUM, THE CONTRACTOR SHALL INSPECT ALL EROSION BLANKET WEEKLY OR AFTER EACH ONE-HALF INCH OR GREATER RAINFALL EVENT. ANY REQUIRED REPAIRS SHALL BE MADE BY THE CONTRACTOR TO KEEP THE EROSION BLANKET FUNCTIONAL AS DESIGNED.
- INLET AND PROTECTION - AT A MINIMUM, THE CONTRACTOR SHALL INSPECT ALL INLET AND PIPE PROTECTION WEEKLY OR AFTER EACH ONE-HALF INCH OR GREATER RAINFALL EVENT. ANY REQUIRED REPAIRS SHALL BE MADE BY THE CONTRACTOR TO KEEP THE INLET AND PIPE PROTECTION FUNCTIONAL AS DESIGNED.
- TEMPORARY DITCH CHECKS - AT A MINIMUM, THE CONTRACTOR SHALL INSPECT ALL TEMPORARY DITCH CHECKS WEEKLY OR AFTER EACH ONE-HALF INCH OR GREATER RAINFALL EVENT. ANY REQUIRED REPAIRS SHALL BE MADE BY THE CONTRACTOR TO KEEP THE TEMPORARY DITCH CHECKS FUNCTIONAL AS DESIGNED.
- INLET FILTERS - AT A MINIMUM, THE CONTRACTOR SHALL INSPECT ALL INLET FILTERS WEEKLY OR AFTER EACH ONE-HALF INCH OR GREATER RAINFALL EVENT. ANY REQUIRED REPAIRS SHALL BE MADE BY THE CONTRACTOR TO KEEP THE INLET FILTERS FUNCTIONAL AS DESIGNED.
- THE EROSION CONTROL QUANTITIES PROVIDED IN THE PLANS ARE APPROXIMATE. THE ACTUAL NEED FOR QUANTITIES WILL BE DETERMINED IN THE FIELD BY THE ENGINEER AT THE TIME OF CONSTRUCTION.

**CONSTRUCTION SEQUENCING**

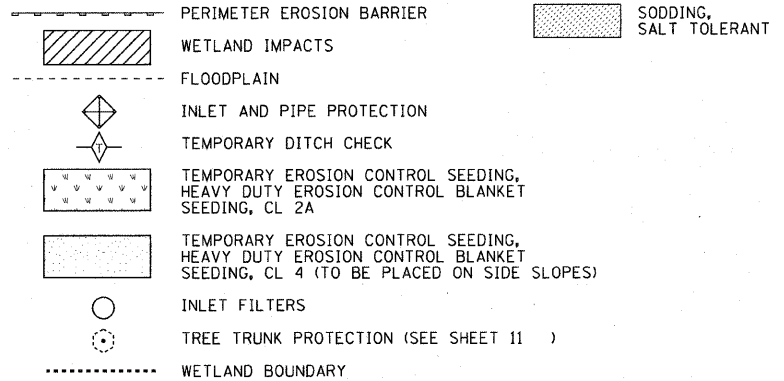
- INSTALL SEDIMENT AND EROSION CONTROL SYSTEMS
- COMPLETE TREE REMOVAL, CLEARING, AND GRUBBING
- STRIP AND STOCKPILE TOPSOIL AND BEGIN MASS GRADING. TEMPORARY SEED AS REQUIRED.
- DEMOLISH EXISTING STRUCTURE WITHOUT IMPACT OR DEBRIS ENTERING THE EXISTING WATERWAY.
- CONSTRUCT UNDERWATER STRUCTURE EXCAVATION PROTECTION AND INSTALL PILES AND STRUCTURE.
- COMPLETE ROADWAY REPLACEMENT THRU BINDER AND GRADING.
- COMPLETE FINAL SURFACE, PAVEMENT MARKINGS, AND RESTORATION.
- REMOVE EROSION CONTROL MEASURES AND RESTORE.

**IDNR NOTES-BLANDINGS TURTLE**

THE IDNR NATURAL HERITAGE DATABASE CONCLUDED THAT THIS PROJECT HAS POTENTIAL FOR IMPACTS TO THE BLANDING'S TURTLE AT THE LAWRENCE ROAD BRIDGE OVER LAWRENCE CREEK. TO AVOID ADVERSE IMPACTS TO THE TURTLE THE IDNR WILL REQUIRE THE FOLLOWING:

- PROVIDE INFORMATION ABOUT BLANDING'S TURTLES, INCLUDING COLOR PHOTOGRAPHS OF JUVENILE AND ADULT TURTLES TO EVERYONE WORKING ON THE PROJECT. THE INFORMATION SHOULD INCLUDE DETAILS ABOUT THEIR APPEARANCE, BREEDING, NESTING AND HIBERNATION TIMEFRAMES, WHAT TO DO IF ONE IS ENCOUNTERED (SEE NOTE 3), AND THE DEFINITION AND LEGAL RAMIFICATIONS OF AN (INCIDENTAL) TAKE. THIS INFORMATION IS PROVIDED IN THE SPECIFICATIONS.
- TO PREVENT TURTLES FROM ENTERING CONSTRUCTION AREAS, EXCLUSIONARY FENCING SHALL BE IN PLACE FROM THE END OF MARCH AND REMAIN UNTIL OCTOBER. DAILY INSPECTIONS SHOULD OCCUR FOR THE FIRST TWO WEEKS AND THEN BE MAINTAINED WEEKLY THROUGHOUT THE CONSTRUCTION PERIOD TO ENSURE THE EXCLUSIONARY FENCING HAS BEEN PROPERLY INSTALLED (DUG INTO THE GROUND) AND TO CHECK IF ANY TURTLES ARE PRESENT. ALL TRENCHES AND EXCAVATIONS SHOULD BE SECURELY COVERED AT THE END OF EACH DAY'S WORK. TRENCHES, EXCAVATIONS, AND FENCING WILL NEED TO BE INSPECTED EACH MORNING BY TRAINED PERSONNEL, PRIOR TO WORK COMMENCING, TO ENSURE THAT REPTILES AND AMPHIBIANS ARE NOT PRESENT OR TRAPPED. PERIMETER EROSION BARRIER ALONG THE PROJECT IS PROVIDED TO SATISFY THIS REQUIREMENT.
- IF A BLANDING'S TURTLE IS ENCOUNTERED NEAR, OR WITHIN THE PROJECT AREA DURING CONSTRUCTION, PROJECT WORK NEEDS TO HALT IMMEDIATELY AND THE IDNR DISTRICT HERITAGE BIOLOGIST SHOULD BE NOTIFIED (BRAD SEMEL CAN BE REACHED AT 815-675-2386 EXT. 317) AND McHENRY COUNTY CONSERVATION DISTRICT (MCCD) SHOULD ALSO BE NOTIFIED (GABRIEL POWERS, RESTORATION ECOLOGIST, CAN BE REACHED AT 815-653-2297). DO NOT PICK UP A BLANDING'S TURTLE AS THIS CAN BE CONSIDERED TAKE. A STAKE OR FLAG SHOULD BE PUT INTO THE SPOT THE TURTLE WAS LAST SEEN. THE SAME SHOULD BE EMPLOYED IF A TURTLE IS DISCOVERED ONCE THE FACILITY IS BUILT. INCIDENTAL TAKE AUTHORIZATION FROM THE OFFICE OF RESOURCE CONSERVATION MAY BE NECESSARY IF THIS SPECIES IS ENCOUNTERED WITHIN THE PROJECT AREA.

**LEGEND**



DESIGNED - CAC	REVISED - PER IDOT 10-25-10
DRAWN - BCD	REVISED -
CHECKED - MDW	REVISED -
DATE - 08/20/10	FILE - 070630-EROS-LAWRENCE-501SHT

**McHENRY COUNTY DIVISION OF TRANSPORTATION**  
**LAWRENCE ROAD BRIDGE OVER**  
**LAWRENCE CREEK**

**EROSION CONTROL PLAN**

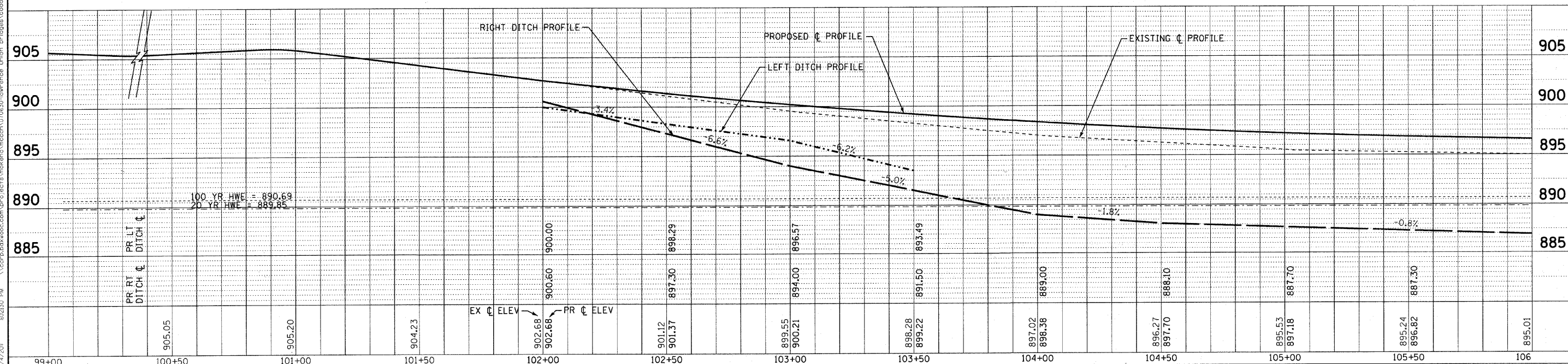
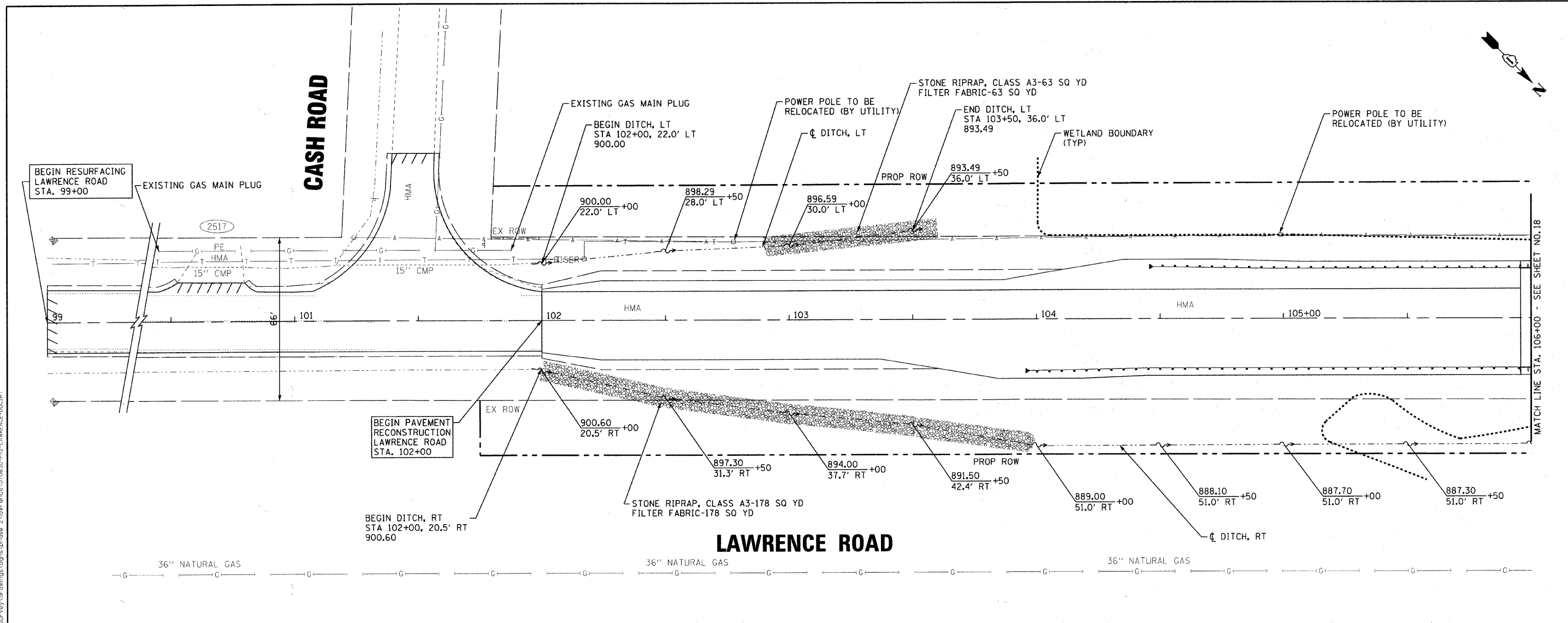
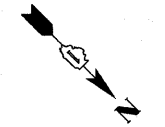
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STA. 100+00 TO STA. 113+00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	McHENRY	70	16
CONTRACT NO. 63535			BRS-0028107	
JOB NO. C-91-139-11		ILLINOIS FED. AID PROJECT		

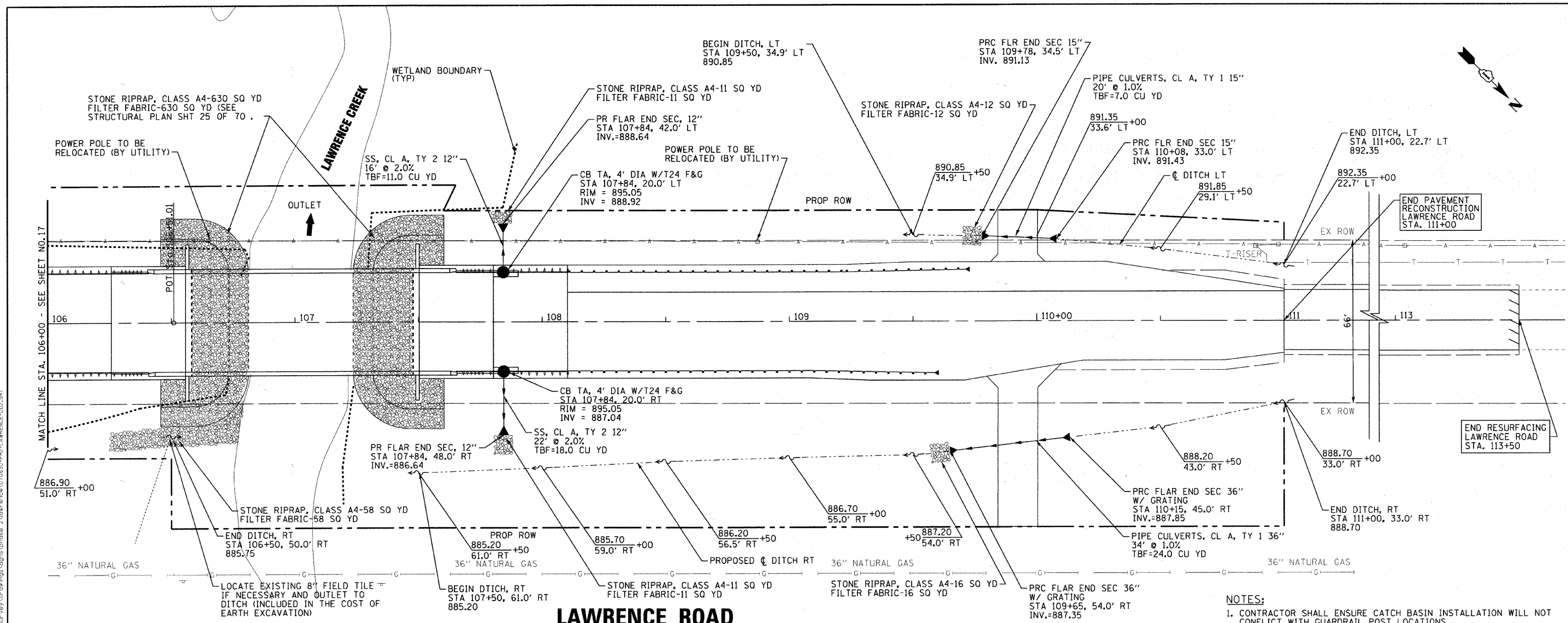
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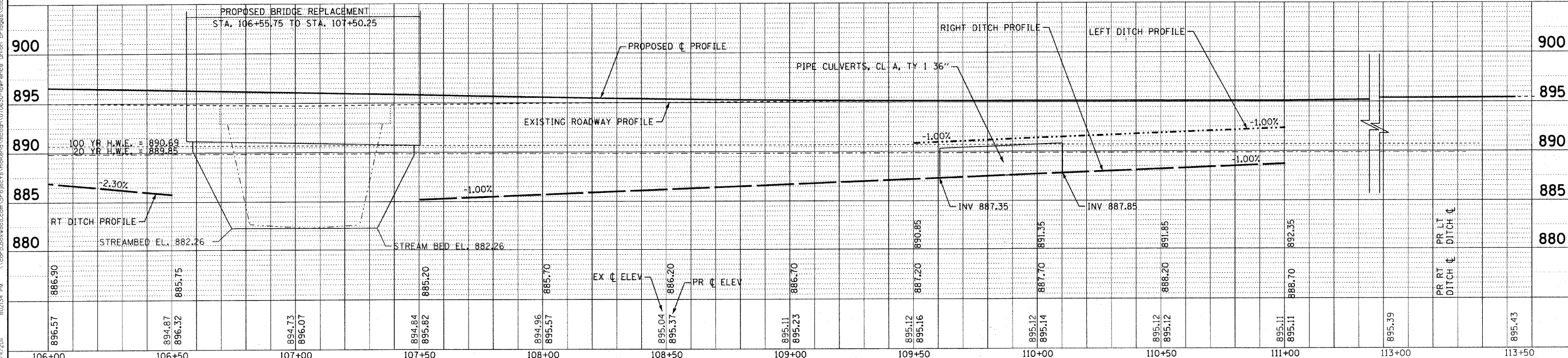
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	DESIGNED - CAC	REVISED - PER IDOT 10-25-10	<b>MCHENRY COUNTY DIVISION OF TRANSPORTATION</b> <b>LAWRENCE ROAD BRIDGE OVER</b> <b>LAWRENCE CREEK</b>	<b>DRAINAGE &amp; UTILITY PLAN</b>		F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN - BCD	REVISED -				0028	06-00320-01-BR	MCHENRY	70	17
	CHECKED - MDW	REVISED -				CONTRACT NO. 63535				
DATE - 08/20/10	FILE - 070630-PH2-LAWRENCE-DUI-SHT	SCALE: H: 1"=20' V: 1"=5'		STA. 101+00 TO STA. 107+00		JOB NO. C-91-139-11		ILLINOIS FED. AID PROJECT		BRS-0028107



**LAWRENCE ROAD**

**NOTES:**  
 1. CONTRACTOR SHALL ENSURE CATCH BASIN INSTALLATION WILL NOT CONFLICT WITH GUARDRAIL POST LOCATIONS.



896.57	894.87	896.32	894.73	896.07	894.84	895.82	894.96	895.57	895.04	895.37	895.11	895.23	895.12	895.16	895.12	895.14	895.12	895.12	895.11	895.11	895.39	895.43
106+00	106+50	107+00	107+50	108+00	108+50	109+00	109+50	110+00	110+50	111+00	111+50	112+00	112+50	113+00	113+00	113+00	113+00	113+00	113+00	113+00	113+00	113+00



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DRAWN - BCD	REVISED -
CHECKED - MDW	REVISED -
DATE - 08/20/10	FILE - 070630-PH2-LAWRENCE-DU2.SHT

**MCHENRY COUNTY DIVISION OF TRANSPORTATION**  
**LAWRENCE ROAD BRIDGE OVER**  
**LAWRENCE CREEK**

**DRAINAGE & UTILITY PLAN**

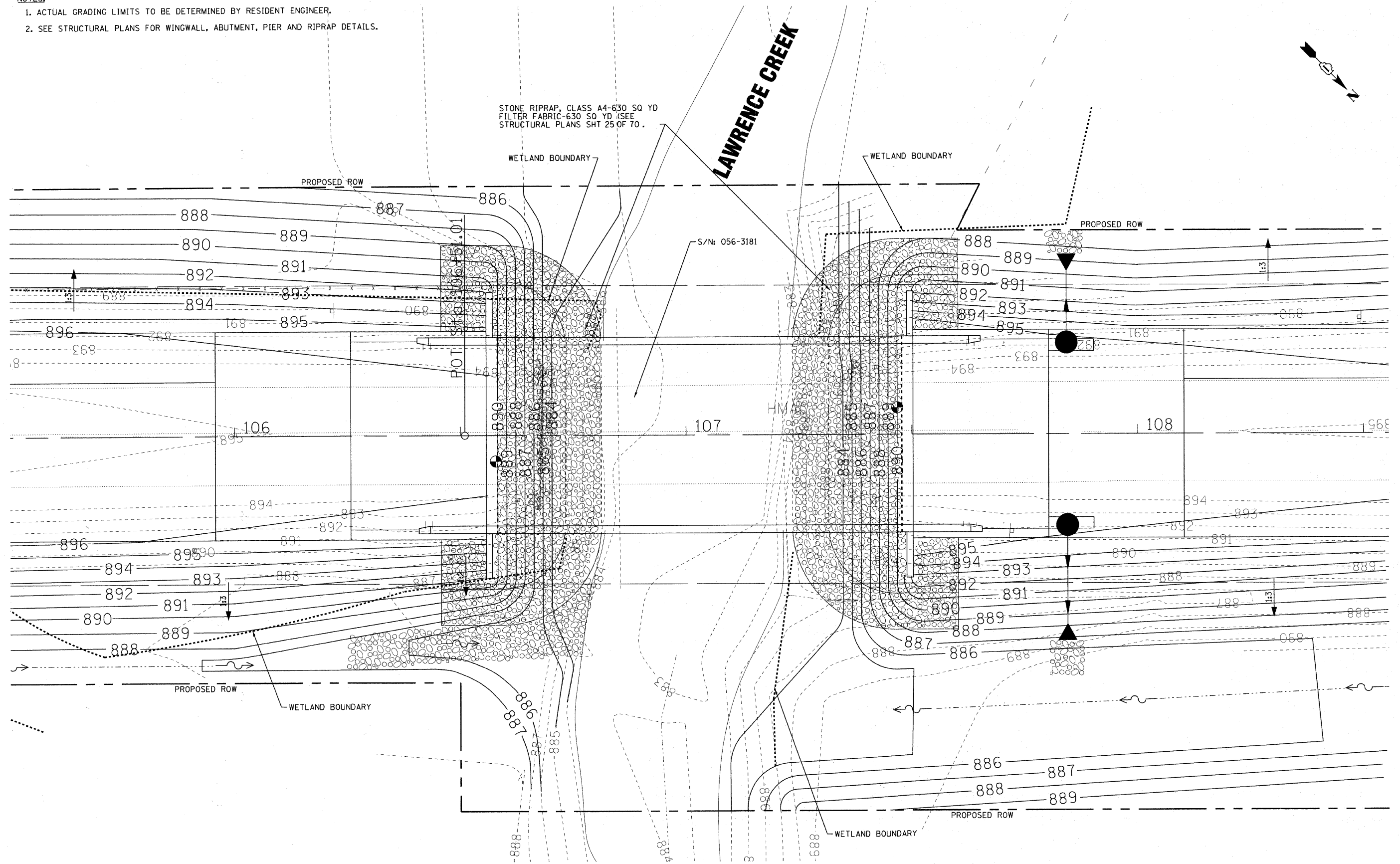
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F.A.S. RTE. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 18
CONTRACT NO. 63535			JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-00281107	

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 PROJECT: LAWRENCE ROAD BRIDGE OVER LAWRENCE CREEK  
 SHEET: 18 OF 70  
 DATE: 08/20/10

**NOTES:**

1. ACTUAL GRADING LIMITS TO BE DETERMINED BY RESIDENT ENGINEER.
2. SEE STRUCTURAL PLANS FOR WINGWALL, ABUTMENT, PIER AND RIPRAP DETAILS.



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DRAWN - BCD	REVISED -
CHECKED - MDW	REVISED -
DATE - 08/20/10	FILE - 070630-GradingDet.sht

**MCHENRY COUNTY DIVISION OF TRANSPORTATION  
 LAWRENCE ROAD BRIDGE OVER  
 LAWRENCE CREEK**

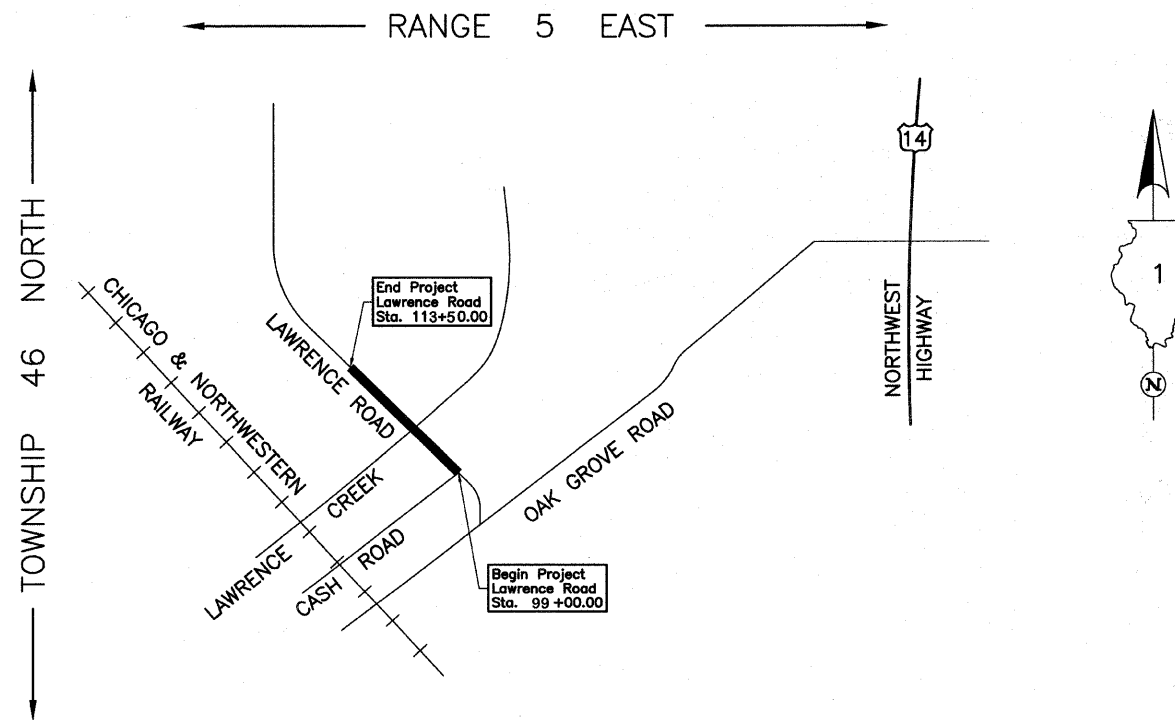
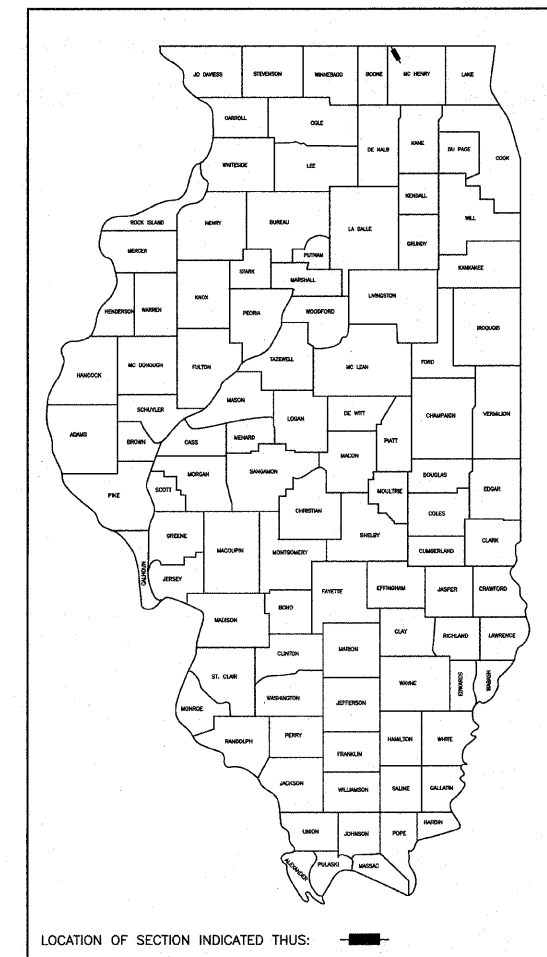
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 STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	MCHENRY	70	19
JOB NO. C-91-139-11				CONTRACT NO. 63535
ILLINOIS FED. AID PROJECT				BRS-0028(107)

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 RIGHT OF WAY PLANS  
 FOR PROPOSED  
 FEDERAL AID HIGHWAY

ROUTE: F.A.S. 28 (LAWRENCE ROAD)  
 BRIDGE STRUCTURE NUMBER: 056-3011  
 SECTION: 06-00320-00-BR  
 PROJECT NO.:  
 JOB NO.: R-55-001-97  
 COUNTY: McHENRY  
 LIMITS: @ LAWRENCE CREEK

F.A.S.RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	McHENRY	70	20
F.H.W.A. REG.		ILLINOIS	PROJECT	



PROJECT LENGTH = 1,400.00 LIN. FT. = 0.265 MILE, LAWRENCE ROAD

APPROVED \_\_\_\_\_ 20 \_\_\_\_\_  
 LOCAL AGENCY OFFICIAL

APPROVED \_\_\_\_\_ 20 \_\_\_\_\_  
 ENGINEER OF LAND ACQUISITION

APPROVED \_\_\_\_\_ 20 \_\_\_\_\_  
 ENGINEER OF LOCAL ROADS & STREETS

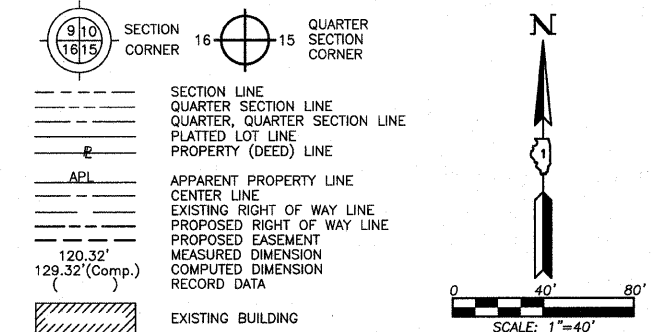
APPROVED \_\_\_\_\_ 20 \_\_\_\_\_  
 DISTRICT ENGINEER

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

PART OF THE SW 1/4 OF SEC. 22, TWP. 46 N., R. 5 E. OF THE 3RD. P.M., IN McHENRY COUNTY, ILLINOIS.

F.A.S.RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	McHENRY	70	21

**LEGEND**



Bearings and Coordinates are referenced to the Illinois Coordinate System NAD 83(2007) East Zone.

- IRON PIPE OR ROD FOUND
- ⊕ "MAG" NAIL SET
- + CUT CROSS FOUND OR SET
- 5/8" REBAR SET
- T1 THESE STAKES REFERENCE FOUND OR SET MONUMENTATION. SET 5/8 INCH IRON ROD FLUSH WITH GROUND TO THE FOUND IRON STAKE. IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
- T2 THESE STAKES, IN CULTIVATED AREAS, REFERENCE FOUND OR SET MONUMENTATION. BURIED 5/8 INCH IRON ROD 20 INCHES BELOW GROUND TO THE FOUND IRON STAKE. IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
- BT1 THESE STAKES, IN CULTIVATED AREAS, REFERENCE FOUND OR SET MONUMENTATION. BURIED 5/8 INCH IRON ROD 20 INCHES BELOW GROUND TO THE FOUND IRON STAKE. IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
- BT2
- BT3
- STAKING OF PROPOSED RIGHT OF WAY. SET DIVISION OF HIGHWAYS SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.
- M STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS. BURIED 5/8 INCH METAL ROD 20 INCHES BELOW GROUND TO MARK FUTURE SURVEY MARKER POSITION IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
- ⊙ PERMANENT SURVEY MARKER, I.D.O.T STD 2135 (TO BE SET BY OTHERS)
- RIGHT OF WAY STAKING PROPOSED TO BE SET.

**COORDINATE TABLE**

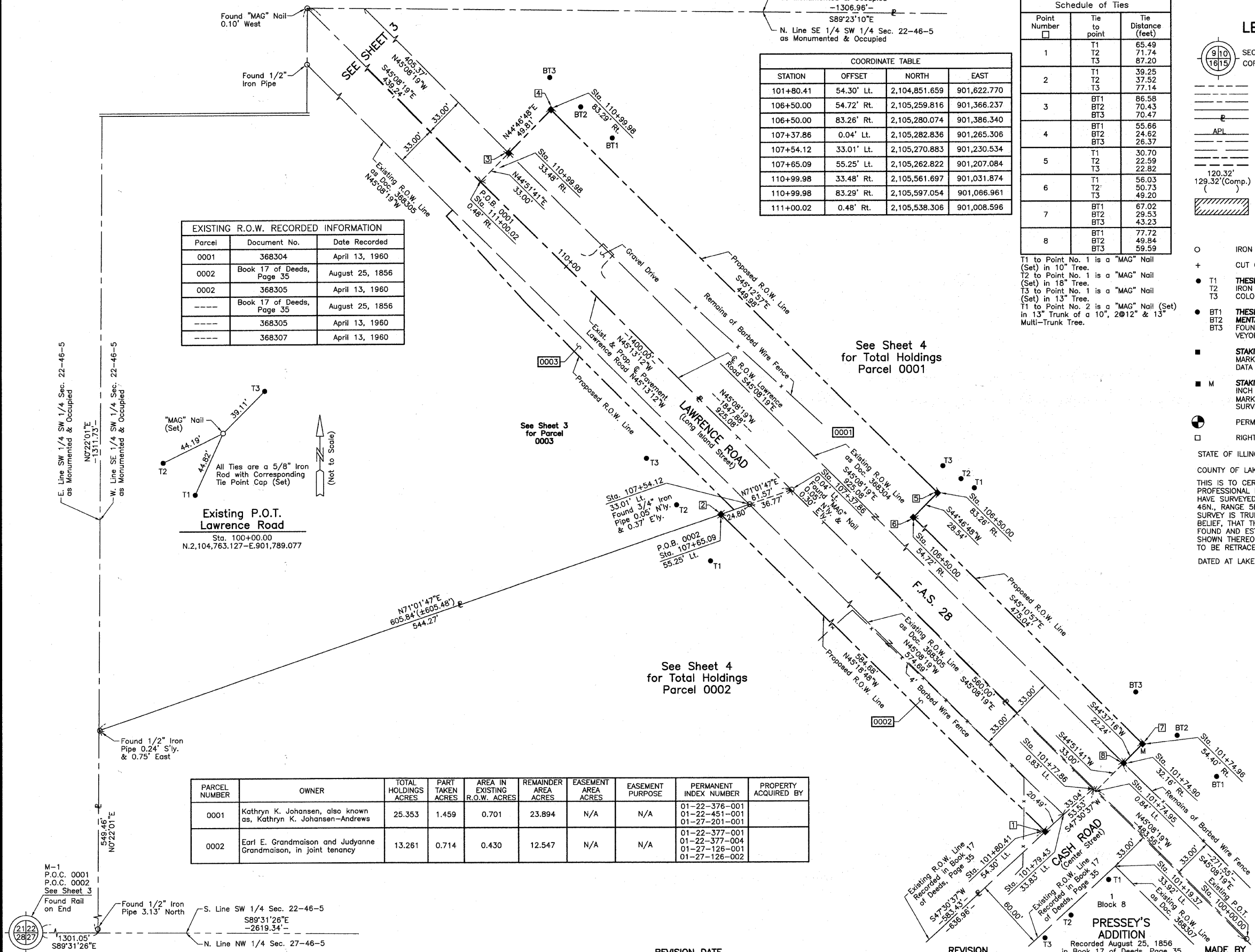
STATION	OFFSET	NORTH	EAST
101+80.41	54.30' Lt.	2,104,851.659	901,622.770
106+50.00	54.72' Rt.	2,105,259.816	901,366.237
106+50.00	83.26' Rt.	2,105,280.074	901,386.340
107+37.86	0.04' Lt.	2,105,282.836	901,265.306
107+54.12	33.01' Lt.	2,105,270.883	901,230.534
107+65.09	55.25' Lt.	2,105,262.822	901,207.084
110+99.98	33.48' Rt.	2,105,561.697	901,031.874
110+99.98	83.29' Rt.	2,105,597.054	901,066.961
111+00.02	0.48' Rt.	2,105,538.306	901,008.596

**Schedule of Ties**

Point Number	Tie to point	Tie Distance (feet)
1	T1	65.49
	T2	71.74
	T3	87.20
2	T1	39.25
	T2	37.52
	T3	77.14
3	BT1	86.58
	BT2	70.43
	BT3	70.47
4	BT1	55.66
	BT2	24.62
	BT3	26.37
5	T1	30.70
	T2	22.59
	T3	22.82
6	T1	56.03
	T2	50.73
	T3	49.20
7	BT1	67.02
	BT2	29.53
	BT3	43.23
8	BT1	77.72
	BT2	49.84
	BT3	59.59

**EXISTING R.O.W. RECORDED INFORMATION**

Parcel	Document No.	Date Recorded
0001	368304	April 13, 1960
0002	Book 17 of Deeds, Page 35	August 25, 1856
0002	368305	April 13, 1960
----	Book 17 of Deeds, Page 35	August 25, 1856
----	368305	April 13, 1960
----	368307	April 13, 1960



PARCEL NUMBER	OWNER	TOTAL HOLDINGS ACRES	PART TAKEN ACRES	AREA IN EXISTING R.O.W. ACRES	REMAINDER AREA ACRES	EASEMENT AREA ACRES	EASEMENT PURPOSE	PERMANENT INDEX NUMBER	PROPERTY ACQUIRED BY
0001	Kathryn K. Johansen, also known as, Kathryn K. Johansen-Andrews	25.353	1.459	0.701	23.894	N/A	N/A	01-22-376-001 01-22-451-001 01-27-201-001	
0002	Earl E. Grandmaison and Judyanne Grandmaison, in joint tenancy	13.261	0.714	0.430	12.547	N/A	N/A	01-22-377-001 01-22-377-004 01-27-126-001 01-27-126-002	

PRESIDENT  
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-2797  
LICENSE EXPIRATION DATE: NOVEMBER 30, 2010  
THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.  
Note: Surface Coordinates are Shown.

**COORDINATE TABLE**

STATION	OFFSET	NORTH	EAST
101+19.37	33.92' Lt.	2,104,823.133	901,680.457
101+74.90	32.16' Rt.	2,104,909.153	901,687.584
101+74.95	0.84' Lt.	2,104,885.762	901,664.306
101+74.96	54.40' Rt.	2,104,924.985	901,703.207
101+77.86	0.83' Lt.	2,104,887.816	901,662.243
101+79.43	33.83' Lt.	2,104,865.502	901,637.882

JORGENSEN & ASSOCIATES, INC.  
120 PARK AVENUE  
LAKE VILLA, ILLINOIS 60046  
(847) 356-3371  
SHEET 1 IS A COVER SHEET AND IS NOT RECORDED.

**PLAT OF HIGHWAYS**  
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
F.A.S. 28 (LAWRENCE ROAD)  
BRIDGE STRUCTURE NUMBER 056-3011  
SECTION 06-00320-00-BR McHENRY COUNTY  
PROJECT JOB NO. R-55-001-97  
STATION 100+00.00 TO STATION 112+00  
SCALE: 1"=40'  
SHEET 2 OF 4

**BUREAU OF LAND ACQUISITION**  
**201 WEST CENTER COURT**  
**SCHAUMBURG, ILLINOIS 60196**

PART OF THE SW 1/4 OF SEC. 22, TWP. 46 N., R. 5 E. OF THE 3RD. P.M., IN McHENRY COUNTY, ILLINOIS.

F.A.S.RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	McHENRY	70	22
F.H.W.A. REG.	ILLINOIS	PROJECT		

PARCEL NUMBER	OWNER	TOTAL HOLDINGS ACRES	PART TAKEN ACRES	AREA IN EXISTING R.O.W. ACRES	REMAINDER AREA ACRES	EASEMENT AREA ACRES	EASEMENT PURPOSE	PERMANENT INDEX NUMBER	PROPERTY ACQUIRED BY
0003	Michael P. Hayden and Susan M. Hayden, husband and wife, as Tenants by the Entirety	5.002	0.358	0.268	4.644	N/A	N/A	01-22-377-003	

Parcel	Document No.	Date Recorded
0003	368305	April 13, 1960
---	368304	April 13, 1960
---	368305	April 13, 1960

Point Number	Tie to point	Tie Distance (feet)
1	T1	46.27
	T2	47.66
	T3	84.06
2	T1	53.01
	T2	21.69
	T3	54.24
3	T1	55.69
	T2	25.20
	T3	29.96
4	T1	59.12
	T2	31.62
	T3	35.16

T1 to Point No. 1 is a "MAG" Nail (Set) in 13" Trunk of a 10", 20"12" & 13" Multi-Trunk Tree.

**LEGEND**

- SECTION CORNER 16
- QUARTER SECTION CORNER
- SECTION LINE
- QUARTER SECTION LINE
- PLATTED LOT LINE
- PROPERTY (DEED) LINE
- APPARENT PROPERTY LINE
- CENTER LINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED RIGHT OF WAY LINE
- PROPOSED EASEMENT
- MEASURED DIMENSION
- COMPUTED DIMENSION
- RECORD DATA
- EXISTING BUILDING
- IRON PIPE OR ROD FOUND
- "MAG" NAIL SET
- CUT CROSS FOUND OR SET
- 5/8" REBAR SET
- THESE STAKES REFERENCE FOUND OR SET MONUMENTATION. SET 5/8 INCH IRON ROD FLUSH WITH GROUND TO TIE FOUND IRON STAKE. IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
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- PERMANENT SURVEY MARKER, I.D.O.T STD 2135 (TO BE SET BY OTHERS)
- RIGHT OF WAY STAKING PROPOSED TO BE SET.

STATE OF ILLINOIS }  
 COUNTY OF LAKE } SS

THIS IS TO CERTIFY THAT WE, JORGENSEN & ASSOCIATES, INC., AN ILLINOIS PROFESSIONAL DESIGN FIRM LAND SURVEYING CORPORATION, NUMBER 184-2771, HAVE SURVEYED THE PLAT OF HIGHWAYS SHOWN HEREON IN SECTION 22, TOWNSHIP 46N., RANGE 5E., OF THE THIRD PRINCIPAL MERIDIAN, McHENRY COUNTY, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED AT LAKE VILLA, ILLINOIS THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 20\_\_ A.D.

PRESIDENT

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-2797  
 LICENSE EXPIRATION DATE: NOVEMBER 30, 2010  
 THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.  
 Note: Surface Coordinates are Shown.

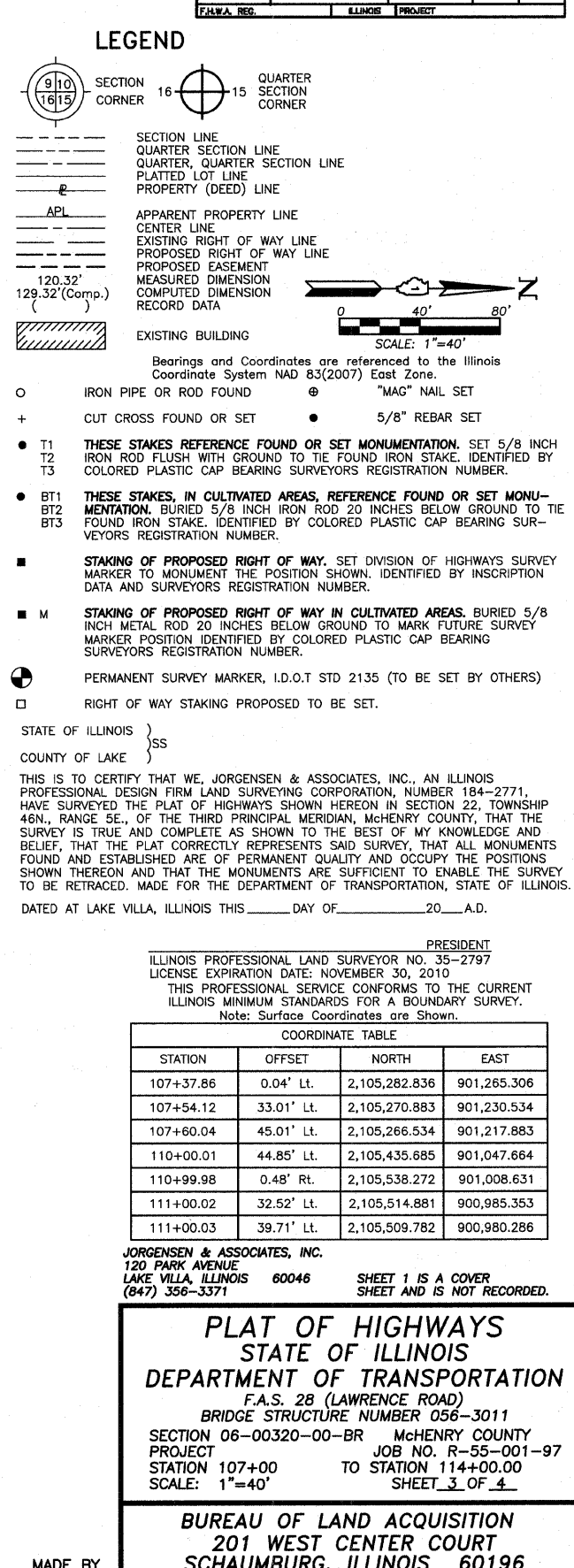
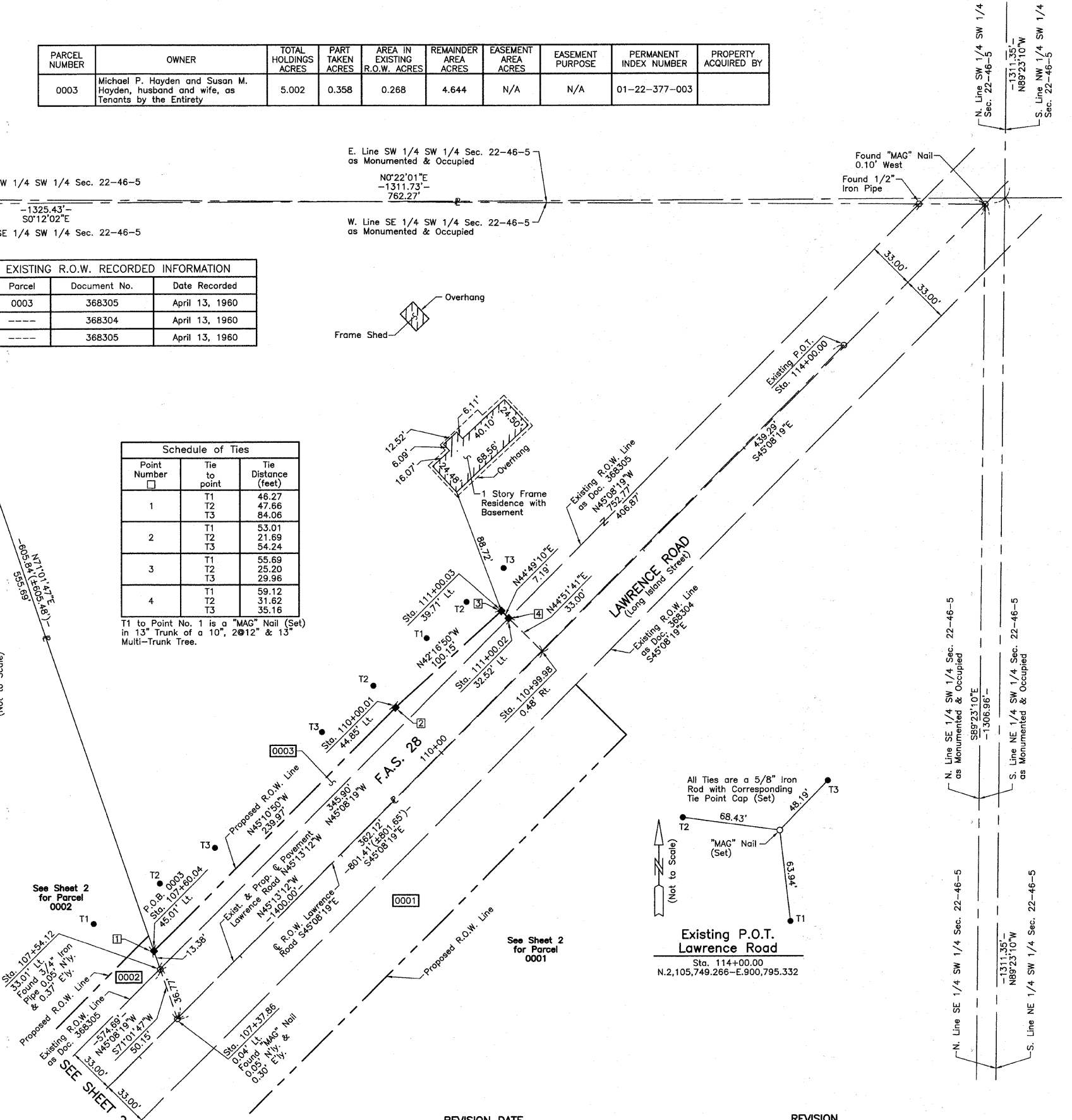
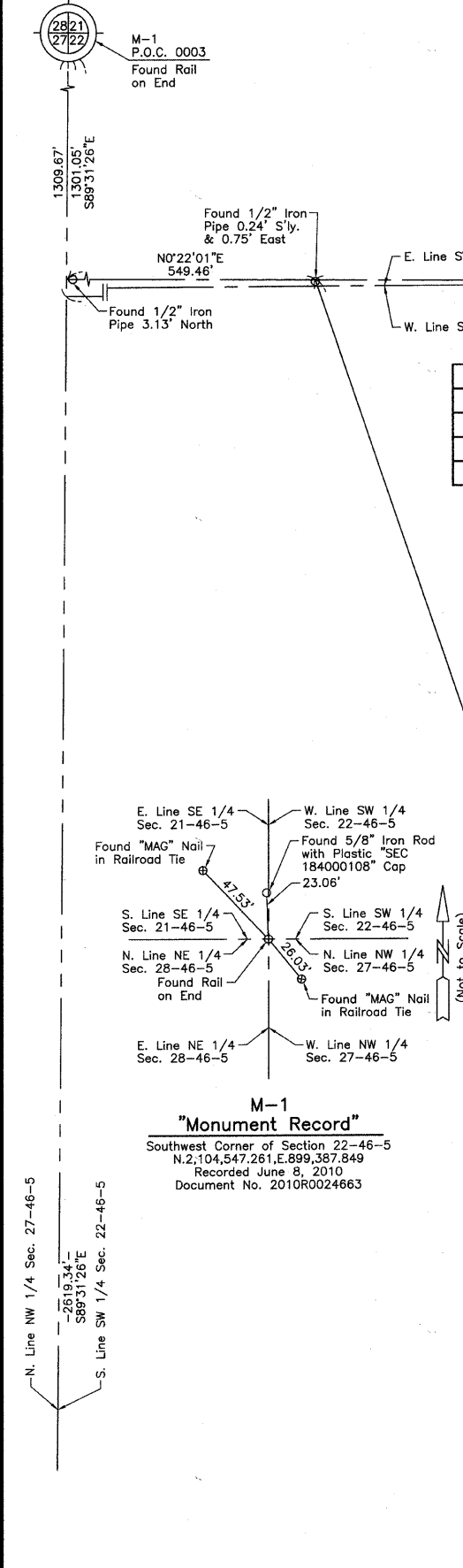
STATION	OFFSET	NORTH	EAST
107+37.86	0.04' Lt.	2,105,282.836	901,265.306
107+54.12	33.01' Lt.	2,105,270.883	901,230.534
107+60.04	45.01' Lt.	2,105,266.534	901,217.883
110+00.01	44.85' Lt.	2,105,435.685	901,047.664
110+99.98	0.48' Rt.	2,105,538.272	901,008.631
111+00.02	32.52' Lt.	2,105,514.881	900,985.353
111+00.03	39.71' Lt.	2,105,509.782	900,980.286

JORGENSEN & ASSOCIATES, INC.  
 120 PARK AVENUE  
 LAKE VILLA, ILLINOIS 60046  
 (847) 356-3371

SHEET 1 IS A COVER SHEET AND IS NOT RECORDED.

**PLAT OF HIGHWAYS**  
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
 F.A.S. 28 (LAWRENCE ROAD)  
 BRIDGE STRUCTURE NUMBER 056-3011  
 SECTION 06-00320-00-BR McHENRY COUNTY  
 PROJECT JOB NO. R-55-001-97  
 STATION 107+00 TO STATION 114+00.00  
 SCALE: 1"=40' SHEET 3 OF 4

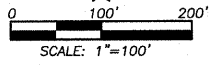
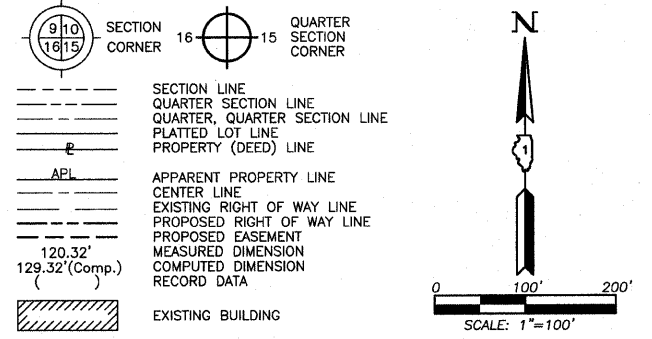
**BUREAU OF LAND ACQUISITION**  
 201 WEST CENTER COURT  
 SCHAUMBURG, ILLINOIS 60196



PART OF THE SOUTH 1/2 OF SEC. 22 AND PART OF THE NORTH 1/2 OF SEC. 27, TWP. 46 N., R. 5 E. OF THE 3RD. P.M., IN McHENRY COUNTY, ILLINOIS.

F.A.S.R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	McHENRY	70	23
FILED REG.	ILLINOIS	PROJECT		

**LEGEND**



Bearings and Coordinates are referenced to the Illinois Coordinate System NAD 83(2007) East Zone.

- IRON PIPE OR ROD FOUND
- ⊕ "MAG" NAIL SET
- + CUT CROSS FOUND OR SET
- 5/8" REBAR SET
- T1 THESE STAKES REFERENCE FOUND OR SET MONUMENTATION. SET 5/8 INCH IRON ROD FLUSH WITH GROUND TO TIE FOUND IRON STAKE. IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
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- BT2
- BT3
- STAKING OF PROPOSED RIGHT OF WAY. SET DIVISION OF HIGHWAYS SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.
- M STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS. BURIED 5/8 INCH METAL ROD 20 INCHES BELOW GROUND TO MARK FUTURE SURVEY MARKER POSITION IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
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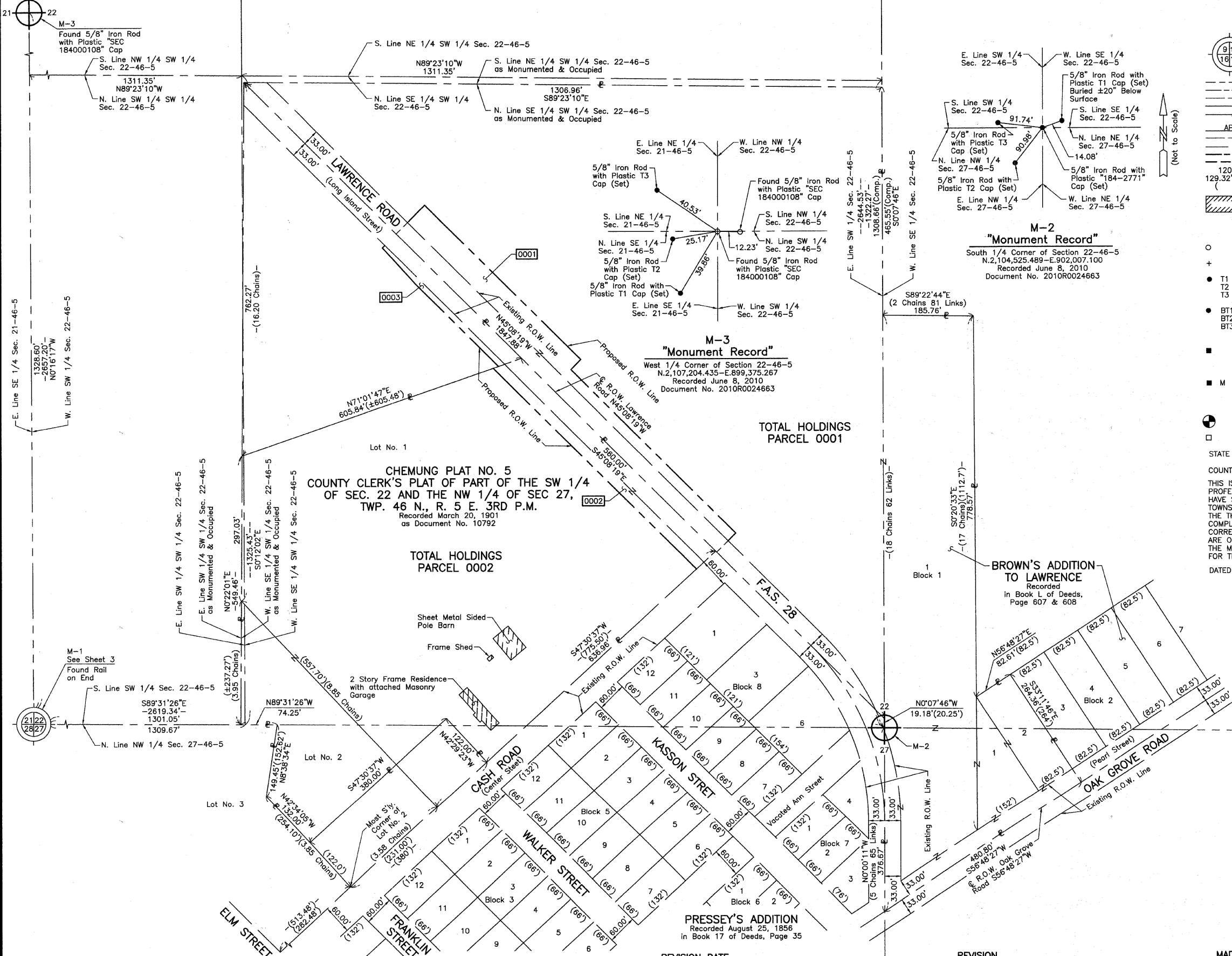
STATE OF ILLINOIS }  
 COUNTY OF LAKE }  
 THIS IS TO CERTIFY THAT WE, JORGENSEN & ASSOCIATES, INC., AN ILLINOIS PROFESSIONAL DESIGN FIRM LAND SURVEYING CORPORATION, NUMBER 184-2771, HAVE SURVEYED THE PLAT OF HIGHWAYS SHOWN HEREON BETWEEN SECTION 22, TOWNSHIP 46N., RANGE 5E. AND SECTION 27, TOWNSHIP 46N., RANGE 5E., OF THE THIRD PRINCIPAL MERIDIAN, McHENRY COUNTY, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.  
 DATED AT LAKE VILLA, ILLINOIS THIS \_\_\_\_\_ DAY OF \_\_\_\_\_ 20\_\_ A.D.

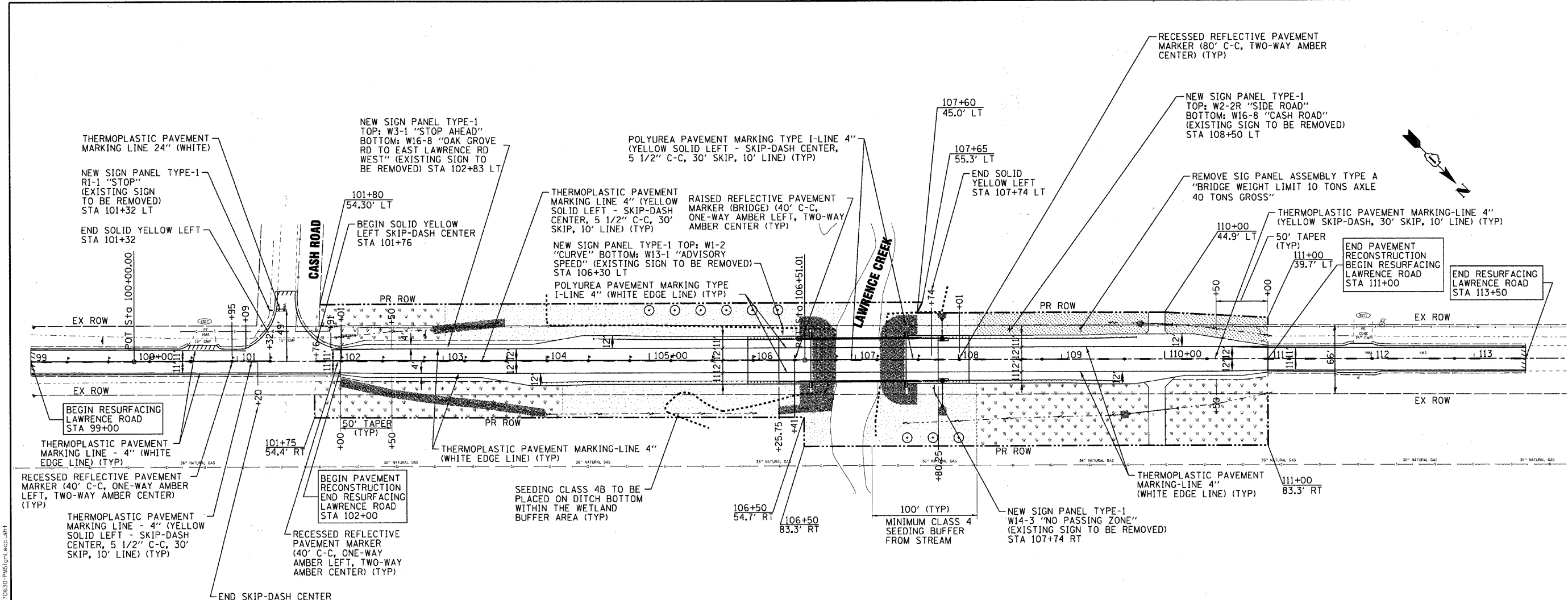
PRESIDENT  
 ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 35-2797  
 LICENSE EXPIRATION DATE: NOVEMBER 30, 2010  
 THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.  
 Note: Surface Coordinates are Shown.

JORGENSEN & ASSOCIATES, INC.  
 120 PARK AVENUE  
 LAKE VILLA, ILLINOIS 60046  
 (847) 356-3371  
 SHEET 1 IS A COVER SHEET AND IS NOT RECORDED.

**PLAT OF HIGHWAYS**  
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**  
 F.A.S. 28 (LAWRENCE ROAD)  
 BRIDGE STRUCTURE NUMBER 056-3011  
 SECTION 06-00320-00-BR McHENRY COUNTY  
 PROJECT JOB NO. R-55-001-97  
 STATION NONE TO STATION  
 SCALE: 1"=100' SHEET 4 OF 4

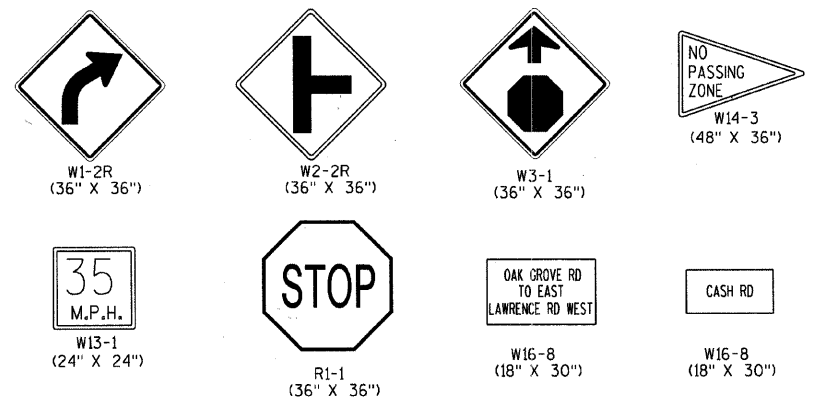
**BUREAU OF LAND ACQUISITION**  
 201 WEST CENTER COURT  
 SCHAUMBURG, ILLINOIS 60196



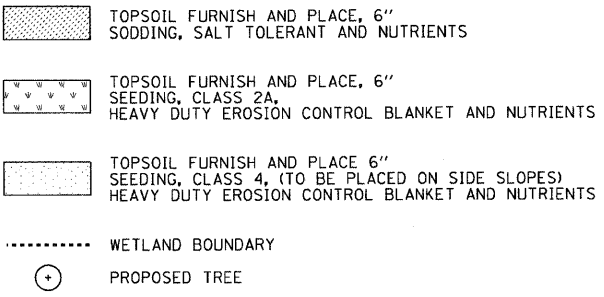


### LAWRENCE ROAD

**LEGEND:**



**LEGEND:**



**TREE, ACER CAMPESTRE (HEDGE MAPLE), 2-1/2" CALIPER, TREE FORM, BALLED AND BURLAPPED**

STATION	OFFSET (FT)	SIDE	QUANTITY (EACH)
LAWRENCE ROAD			
106+00	53.0	LT	1
106+75	53.0	LT	1
108+00	80.0	RT	1
TOTAL = 3			

**TREE, TILIA AMERICANA (AMERICAN LINDEN/ BASSWOOD), 2-1/2" CALIPER, BALLED AND BURLAPPED**

STATION	OFFSET (FT)	SIDE	QUANTITY (EACH)
LAWRENCE ROAD			
105+25	53.0	LT	1
106+00	53.0	LT	1
107+75	80.0	RT	1
TOTAL = 3			

**TREE, CRATAEGUS CRUGALLI INERMIS (THORN LESS COCKSPUR HAWTHORN), 2-1/2" CALIPER TREE FORM, BALLED AND BURLAPPED**

STATION	OFFSET (FT)	SIDE	QUANTITY (EACH)
LAWRENCE ROAD			
105+50	53.0	LT	1
106+25	53.0	LT	1
107+50	80.0	RT	1
TOTAL = 3			

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 STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM  
 LICENSE NO. 184-001978 EXP. 06/30/2011  
 PROJECT NO. 06-00320-01-BR  
 DATE: 08/20/10



DESIGNED - CAC	REVISED - PER IDOT 10-25-10
DRAWN - BCD	REVISED - PER IDOT 2-14-11
CHECKED - MDW	REVISED
DATE - 08/20/10	FILE - 070630-PMSignLscpl1.sht

**MCHENRY COUNTY DIVISION OF TRANSPORTATION  
LAWRENCE ROAD BRIDGE OVER  
LAWRENCE CREEK**

**STRIPING, SIGNING AND LANDSCAPING PLAN**

SCALE: 1"=50'  
STA. 99+00 TO STA. 113+00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	MCHENRY	70	24
CONTRACT NO. 63535				
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-00281077				



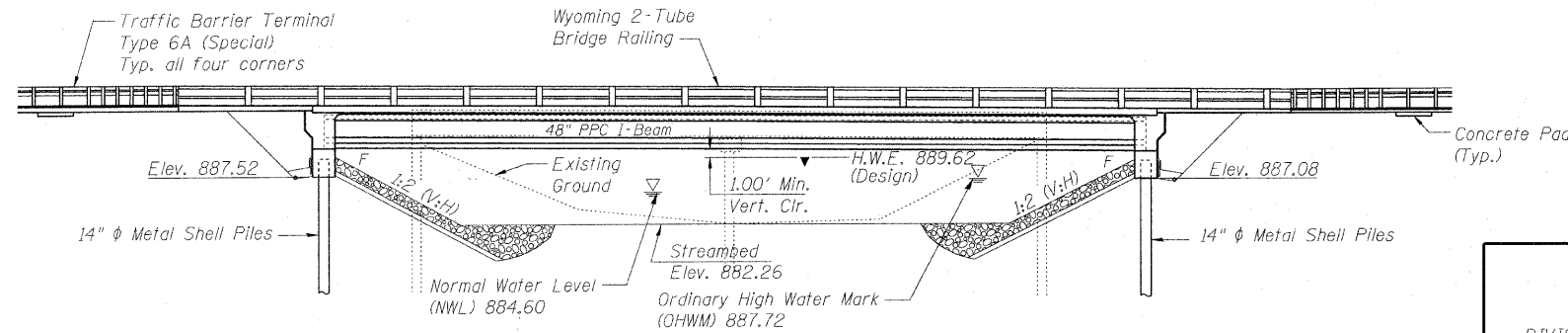
MCHENRY COUNTY  
DIVISION OF TRANSPORTATION

Benchmark: Spike in power pole on southerly side Lawrence Road approx. 300' west of north bridge abutment over Lawrence Creek. Elev. 887.19  
Existing Structure: S.N. 056-3111 was built in 1958 as Sec. 48-B-2-MFT. Two-span superstructure consists of seven 17"x36" PPC Deck Beams with a 5" asphalt overlay, 27'-0" out to out width and 71'-1" back to back of abutments. Substructure consists of timber pile bent abutments and metal shell pile bent pier. Existing structure to be removed and replaced with proposed structure. One lane of traffic to be maintained using staged construction. Existing Name Plate to be salvaged. See Roadway General Notes.

WATERWAY INFORMATION

Drainage Area = 16.67 sq. mi.		Ex. Low Grade Elev. = 894.82 @ Sta. 106+66		Pr. Low Grade Elev. = 895.11 @ Sta. 111+00					
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.		
			Exist.	Prop.	Nat. H.W.E.	Exist.	Prop.	Exist.	Prop.
Design	10	1423	292	515	889.32	0.57	0.09	889.89	889.41
	20	1736	310	541	889.62	0.77	0.23	890.39	889.85
	50	2160	330	571	889.96	1.02	0.39	890.98	890.35
Base	100	2458	344	591	890.18	1.21	0.51	891.39	890.69
Max. Calc.	500	3187	377	638	890.70	1.64	0.92	892.34	891.62

10 year velocity through existing bridge = 4.71 fps  
10 year velocity through proposed bridge = 2.66 fps



ELEVATION

LAWRENCE CREEK  
BUILT 20\_\_ BY  
MCHENRY COUNTY  
DIVISION OF TRANSPORTATION  
SEC. 06-00320-01-BR  
F.A.S. RT. 28 STA. 107+03.00  
STR. NO. 056-3181 LOADING HL-93

NAME PLATE  
See Std. 515001

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	SE Abut. NW Abut.
	887.52 887.08

LOADING LRFD HL-93

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 and 2009 Interims

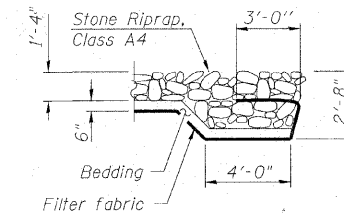
DESIGN STRESSES

FIELD UNITS

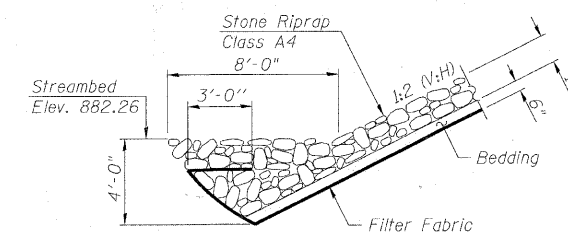
$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
**PRECAST PRESTRESSED UNITS**  
 $f'_c = 7,000$  psi  
 $f'_ci = 6,000$  psi  
 $f_{pu} = 270,000$  psi (1/2" dia. low lax strands)  
 $f_{pbt} = 201,960$  psi (1/2" dia. low lax strands)

SEISMIC DATA

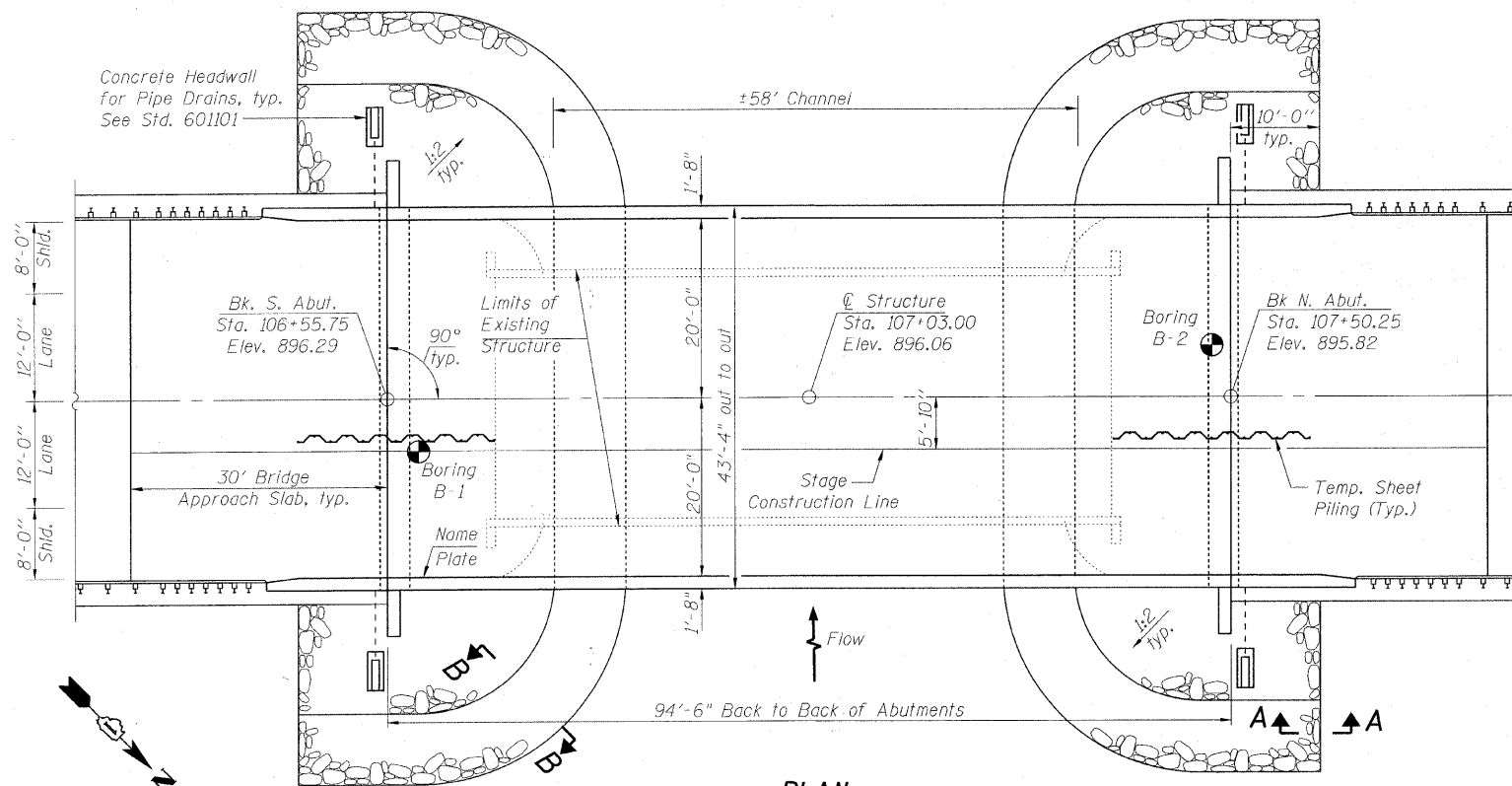
LRFD Seismic Performance Zone (LRFD SPZ) = 1  
Design Spectral Acceleration @ 1.0 sec. (SD1) = 0.15g  
Design Spectral Acceleration @ 2.0 sec. (SDS) = 0.05g  
Soil Site Class - D



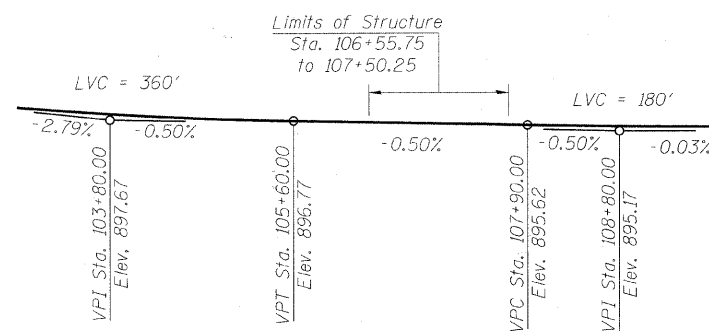
SECTION A-A



SECTION B-B

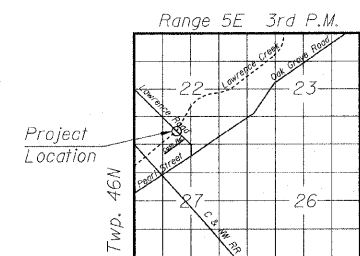


PLAN

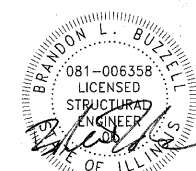


PROFILE GRADE LINE

(along roadway)



LOCATION SKETCH



DATE: 2/7/2011  
LICENSE EXPIRES 11/30/12

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with the requirements of the current AASHTO LRFD Bridge Design Specifications.

GENERAL PLAN  
LAWRENCE ROAD  
OVER LAWRENCE CREEK  
FAS 28 - SEC. 06-00320-01-BR  
MCHENRY COUNTY  
STATION 107+03.00  
STRUCTURE NO. 056-3181

SHEET NO. 1	F.A.S. RTE. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 25
25 SHEETS	CONTRACT NO. 63535				
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)					

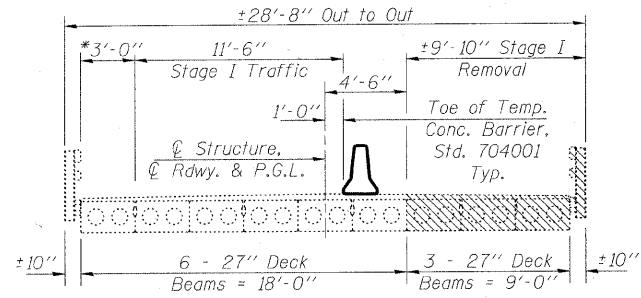
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 LICENSE NO. 184-00121 EXPIRES 7/30/2011  
 2/7/2011 9:00:08 AM



MCHENRY COUNTY  
DIVISION OF TRANSPORTATION

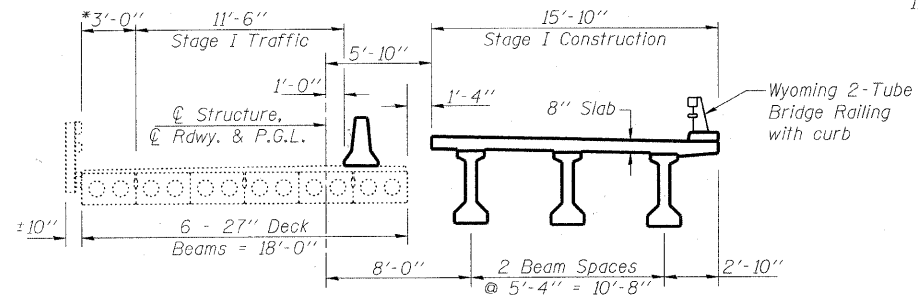
**SEQUENCE OF STAGE REMOVAL  
AND CONSTRUCTION OF  
TEMPORARY SHEET PILING**

1. Install Temporary Sheet Piling for Stage I Construction, up to back of existing abutments.
2. Remove Stage I Superstructure.
3. Sawcut abutments and pier at Stage Removal Line.
4. Remove Stage I portions of piers and abutment pile caps.
5. Install remainder of Temporary Sheet Piling for Stage I.
6. Proceed with Stage I Construction.
7. Adjust Temporary Sheet Piling for Stage II Construction.
8. Remove Stage II Superstructure.
9. Remove Stage II portions of abutments and pier.
10. Proceed with Stage II Construction.
11. Remove Temporary Sheet Piling when Stage II Construction is complete.

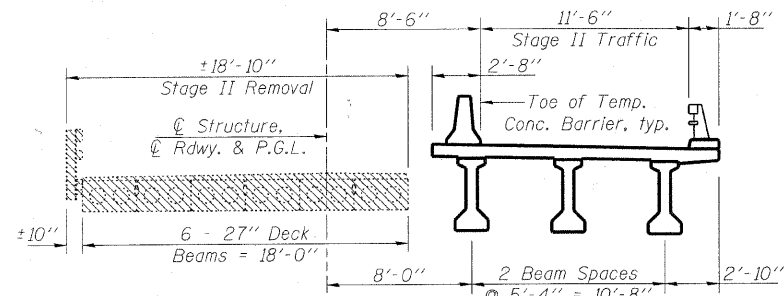


**STAGE I REMOVAL**  
(Looking North)

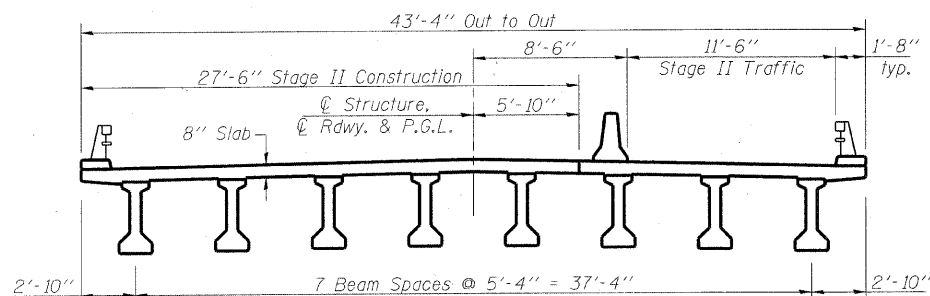
\* Maintain existing Roadway Delineators throughout Stage I Construction to keep traffic off outside beam



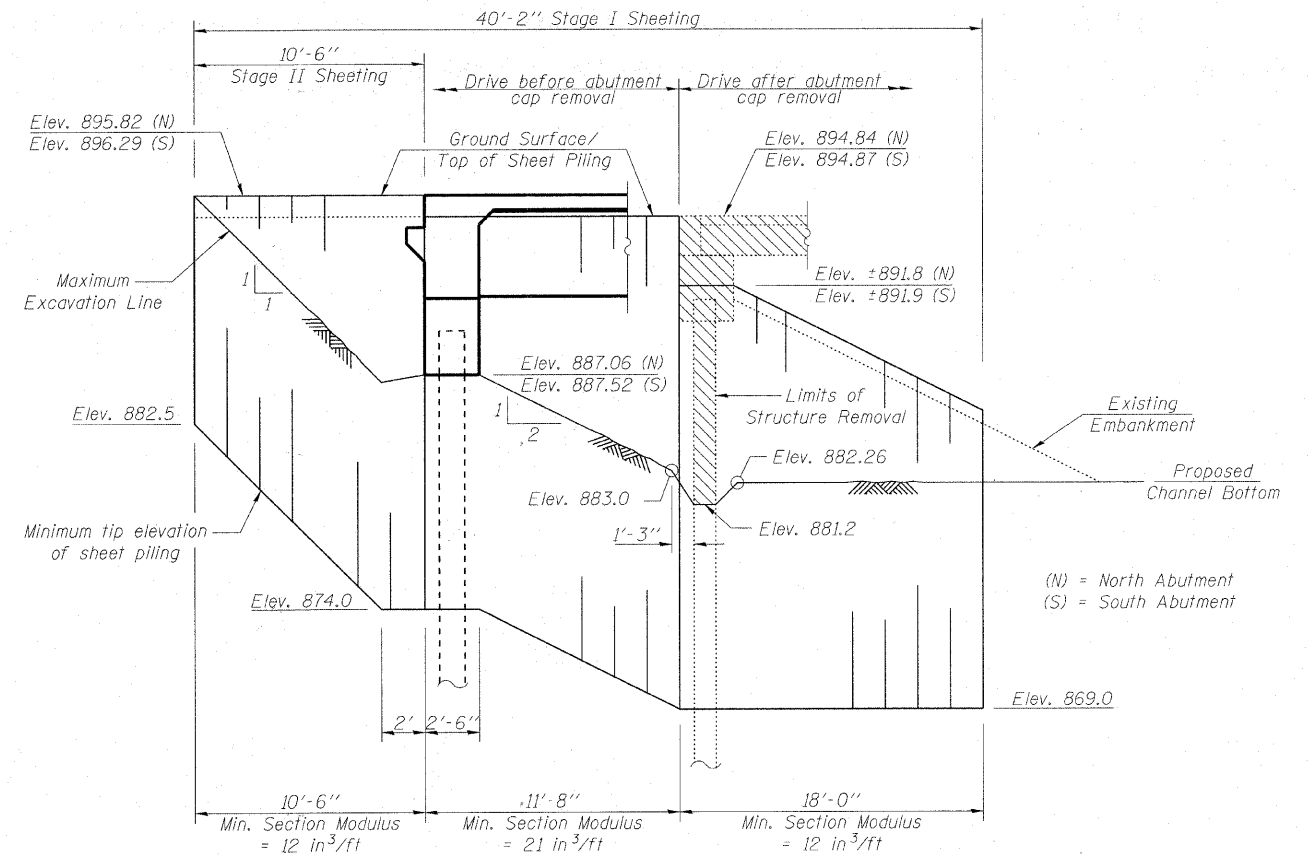
**STAGE I CONSTRUCTION**  
(Looking North)



**STAGE II REMOVAL**  
(Looking North)



**STAGE II CONSTRUCTION**  
(Looking North)



**LEGEND**

Removal of Existing Structures

**BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Temporary Sheet Piling	Sq. Ft.	1624
Removal of Existing Structures	Each	1

**TEMPORARY SHEET PILING**

South Abutment shown, looking West.  
North Abutment similar but opposite hand.

**NOTES**

Removal of the existing Bituminous Wearing Surface and Bridge Railing is included with Removal of Existing Structures.  
See Sheet 4 of 25 for Temporary Concrete Barrier Details.  
Pay Item for Temporary Concrete Barrier is included with Roadway plans.  
If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

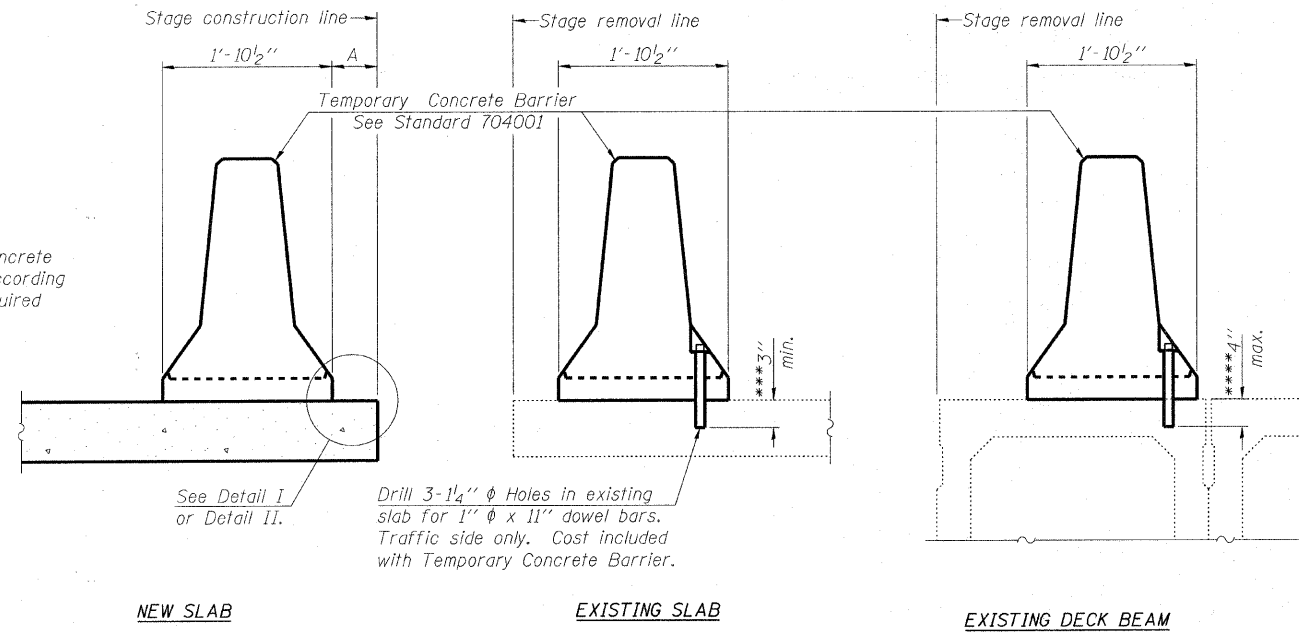
**STAGE CONSTRUCTION DETAILS  
STRUCTURE NO. 056-3181**

SHEET NO. 3 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	27
CONTRACT NO. 63535					
JOB NO. C-91-139-11		ILLINOIS	FED. AID PROJECT	BRS-0028(107)	

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



Drill 3-1/4"  $\phi$  Holes in existing slab for 1"  $\phi$  x 11" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier.

**NOTES**

Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1"x7"x10" steel  $\bar{P}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.

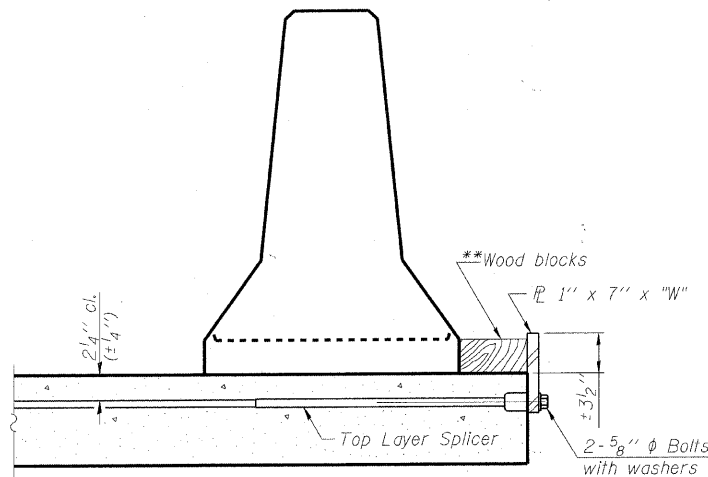
Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1"x7"x10" steel  $\bar{P}$  to the concrete slab or concrete wearing surface with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

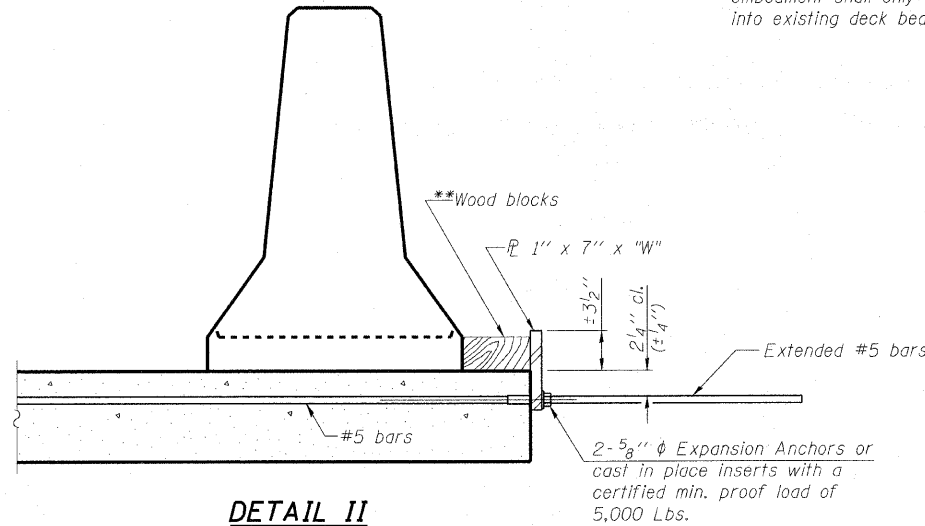
**SECTIONS THRU SLAB OR DECK BEAM**

\*\*\* Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



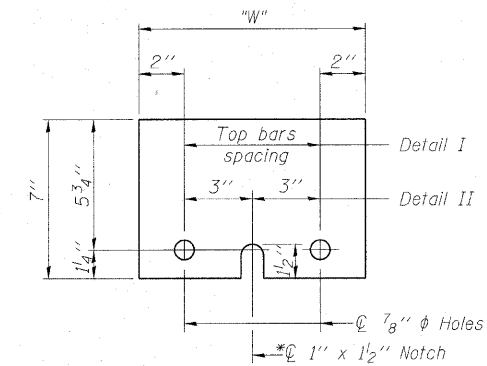
**DETAIL I**



**DETAIL II**

\*\* Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"



**STEEL RETAINER  $\bar{P}$  1" x 7" x 10"**

\* Required only with Detail II

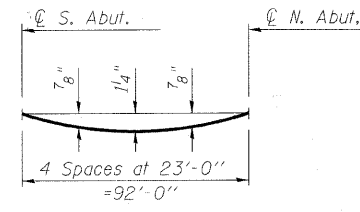
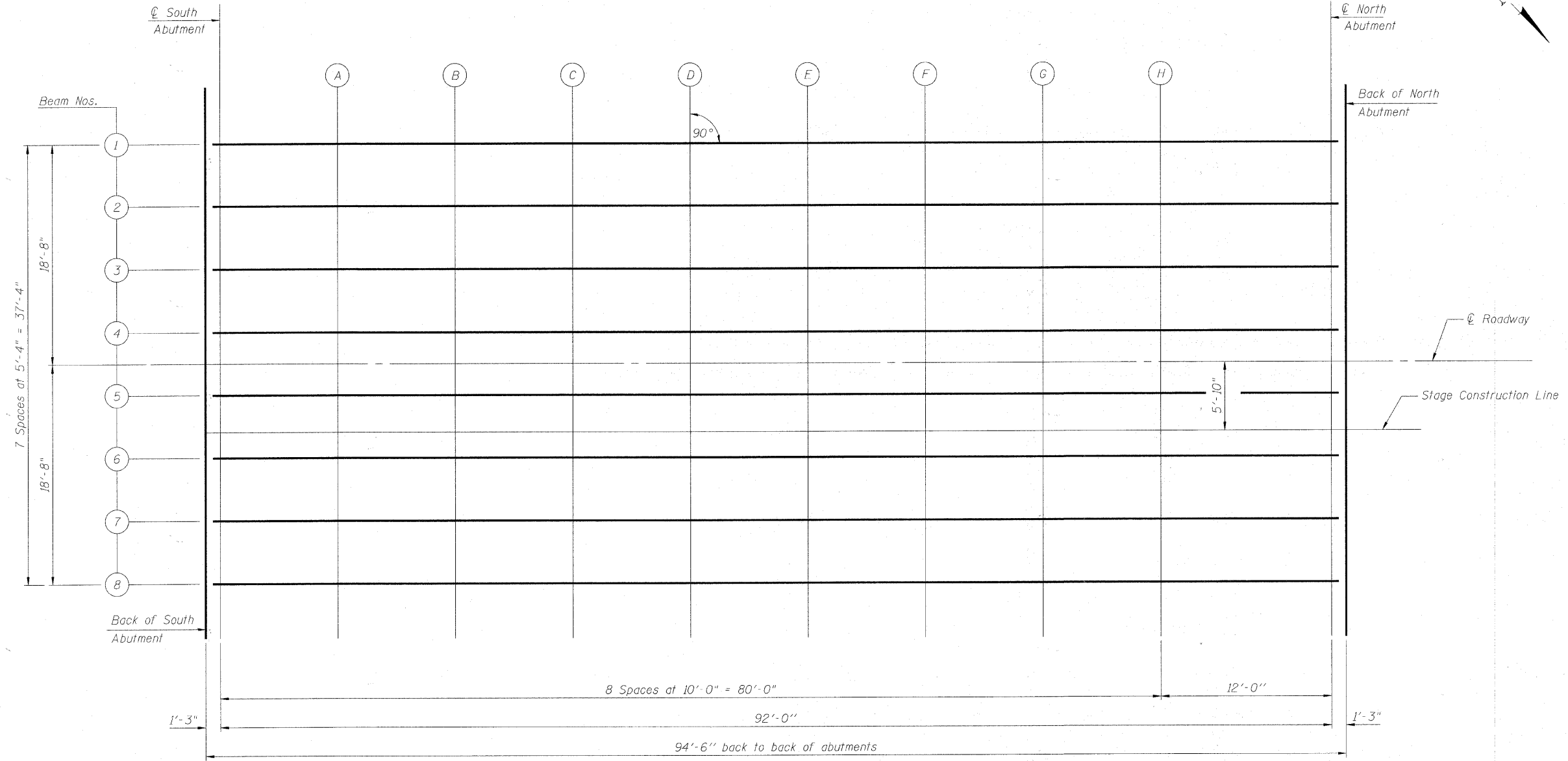
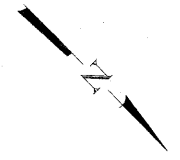
**TEMPORARY CONCRETE BARRIER  
FOR STAGE CONSTRUCTION  
STRUCTURE NO. 056-3181**

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

SHEET NO. 4 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	28
JOB NO. C-91-139-11			ILLINOIS	FED. AID PROJECT	BRS-0028(107)

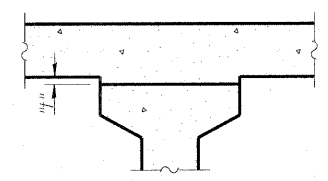
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 LICENSE NO. 184-00121-133982 4/30/2011  
 5/10/2011 9:00:02 AM

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION

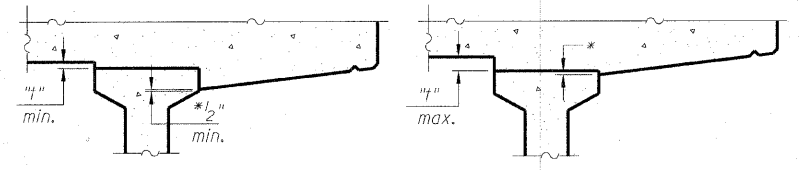


**DEAD LOAD DEFLECTION DIAGRAM**  
(Includes weight of concrete, excluding beams).

Note:  
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown in the plans.



**INTERIOR BEAMS**



\* Variable (not less than 1/2")  
At Minimum Fillet      At Maximum Fillet

**EXTERIOR BEAMS**

**FILLET HEIGHTS**

To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown in the plans, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

**TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 056-3181**

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

SHEET NO. 5 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	29
CONTRACT NO. 63535					
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)					

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 LICENSE NO. 184-000017 EXPIRES 4/30/2010  
 ILLINOIS PROFESSIONAL ENGINEERING BOARD REGISTRATION NO. 070650120  
 ILLINOIS PROFESSIONAL ENGINEERING BOARD REGISTRATION NO. 070650120

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION

**BEAM 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut.	106+55.75	-18.67	895.90	895.90
☉ S. Abut.	106+57.00	-18.67	895.90	895.90
A	106+67.00	-18.67	895.85	895.88
B	106+77.00	-18.67	895.80	895.86
C	106+87.00	-18.67	895.75	895.83
D	106+97.00	-18.67	895.70	895.79
E	107+07.00	-18.67	895.65	895.75
F	107+17.00	-18.67	895.60	895.68
G	107+27.00	-18.67	895.55	895.62
H	107+37.00	-18.67	895.50	895.54
☉ N. Abut.	107+49.00	-18.67	895.44	895.44
Back N. Abut.	107+50.25	-18.67	895.43	895.43

**BEAM 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut.	106+55.75	-13.33	896.01	896.01
☉ S. Abut.	106+57.00	-13.33	896.01	896.01
A	106+67.00	-13.33	895.96	895.99
B	106+77.00	-13.33	895.91	895.97
C	106+87.00	-13.33	895.86	895.94
D	106+97.00	-13.33	895.81	895.90
E	107+07.00	-13.33	895.76	895.86
F	107+17.00	-13.33	895.71	895.79
G	107+27.00	-13.33	895.66	895.73
H	107+37.00	-13.33	895.61	895.65
☉ N. Abut.	107+49.00	-13.33	895.55	895.55
Back N. Abut.	107+50.25	-13.33	895.54	895.54

**BEAM 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut.	106+55.75	-8.00	896.12	896.12
☉ S. Abut.	106+57.00	-8.00	896.12	896.12
A	106+67.00	-8.00	896.07	896.10
B	106+77.00	-8.00	896.02	896.08
C	106+87.00	-8.00	895.97	896.05
D	106+97.00	-8.00	895.92	896.02
E	107+07.00	-8.00	895.87	895.97
F	107+17.00	-8.00	895.82	895.91
G	107+27.00	-8.00	895.77	895.84
H	107+37.00	-8.00	895.72	895.76
☉ N. Abut.	107+49.00	-8.00	895.66	895.66
Back N. Abut.	107+50.25	-8.00	895.65	895.65

**BEAM 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut.	106+55.75	-2.67	896.24	896.24
☉ S. Abut.	106+57.00	-2.67	896.23	896.23
A	106+67.00	-2.67	896.18	896.21
B	106+77.00	-2.67	896.13	896.19
C	106+87.00	-2.67	896.08	896.16
D	106+97.00	-2.67	896.03	896.13
E	107+07.00	-2.67	895.98	896.08
F	107+17.00	-2.67	895.93	896.02
G	107+27.00	-2.67	895.88	895.95
H	107+37.00	-2.67	895.83	895.87
☉ N. Abut.	107+49.00	-2.67	895.77	895.77
Back N. Abut.	107+50.25	-2.67	895.76	895.76

**☉ & PGL**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut.	106+55.75	0.00	896.29	896.29
☉ S. Abut.	106+57.00	0.00	896.29	896.29
A	106+67.00	0.00	896.24	896.27
B	106+77.00	0.00	896.19	896.25
C	106+87.00	0.00	896.14	896.22
D	106+97.00	0.00	896.09	896.18
E	107+07.00	0.00	896.04	896.13
F	107+17.00	0.00	895.99	896.07
G	107+27.00	0.00	895.94	896.01
H	107+37.00	0.00	895.89	895.92
☉ N. Abut.	107+49.00	0.00	895.83	895.83
Back N. Abut.	107+50.25	0.00	895.82	895.82

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

**TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 056-3181**

SHEET NO. 6 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	30
CONTRACT NO. 63535					
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)					

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 568858

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION

**BEAM 5**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut.	106+55.75	2.67	896.24	896.24
☉ S. Abut.	106+57.00	2.67	896.23	896.23
A	106+67.00	2.67	896.18	896.21
B	106+77.00	2.67	896.13	896.19
C	106+87.00	2.67	896.08	896.16
D	106+97.00	2.67	896.03	896.13
E	107+07.00	2.67	895.98	896.08
F	107+17.00	2.67	895.93	896.02
G	107+27.00	2.67	895.88	895.95
H	107+37.00	2.67	895.83	895.87
☉ N. Abut.	107+49.00	2.67	895.77	895.77
Back N. Abut.	107+50.25	2.67	895.76	895.76

**STAGE CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut.	106+55.75	5.83	896.17	896.17
☉ S. Abut.	106+57.00	5.83	896.16	896.16
A	106+67.00	5.83	896.11	896.15
B	106+77.00	5.83	896.06	896.13
C	106+87.00	5.83	896.01	896.10
D	106+97.00	5.83	895.96	896.06
E	107+07.00	5.83	895.91	896.01
F	107+17.00	5.83	895.86	895.95
G	107+27.00	5.83	895.81	895.89
H	107+37.00	5.83	895.76	895.80
☉ N. Abut.	107+49.00	5.83	895.70	895.70
Back N. Abut.	107+50.25	5.83	895.70	895.70

**BEAM 6**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut.	106+55.75	8.00	896.12	896.12
☉ S. Abut.	106+57.00	8.00	896.12	896.12
A	106+67.00	8.00	896.07	896.10
B	106+77.00	8.00	896.02	896.08
C	106+87.00	8.00	895.97	896.05
D	106+97.00	8.00	895.92	896.02
E	107+07.00	8.00	895.87	895.97
F	107+17.00	8.00	895.82	895.91
G	107+27.00	8.00	895.77	895.84
H	107+37.00	8.00	895.72	895.76
☉ N. Abut.	107+49.00	8.00	895.66	895.66
Back N. Abut.	107+50.25	8.00	895.65	895.65

**BEAM 7**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut.	106+55.75	13.33	896.01	896.01
☉ S. Abut.	106+57.00	13.33	896.01	896.01
A	106+67.00	13.33	895.96	895.99
B	106+77.00	13.33	895.91	895.97
C	106+87.00	13.33	895.86	895.94
D	106+97.00	13.33	895.81	895.90
E	107+07.00	13.33	895.76	895.86
F	107+17.00	13.33	895.71	895.79
G	107+27.00	13.33	895.66	895.73
H	107+37.00	13.33	895.61	895.65
☉ N. Abut.	107+49.00	13.33	895.55	895.55
Back N. Abut.	107+50.25	13.33	895.54	895.54

**BEAM 8**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back S. Abut.	106+55.75	18.67	895.90	895.90
☉ S. Abut.	106+57.00	18.67	895.90	895.90
A	106+67.00	18.67	895.85	895.88
B	106+77.00	18.67	895.80	895.86
C	106+87.00	18.67	895.75	895.83
D	106+97.00	18.67	895.70	895.79
E	107+07.00	18.67	895.65	895.75
F	107+17.00	18.67	895.60	895.68
G	107+27.00	18.67	895.55	895.62
H	107+37.00	18.67	895.50	895.54
☉ N. Abut.	107+49.00	18.67	895.44	895.44
Back N. Abut.	107+50.25	18.67	895.43	895.43

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

**TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 056-3181**

SHEET NO. 7 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	31
CONTRACT NO. 63535					
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)					

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 ILLINOIS PROFESSIONAL LAND SURVEYING LICENSE NO. 0101050000  
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 ILLINOIS PROFESSIONAL AGRICULTURAL ENGINEERING LICENSE NO. 0101050000  
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 ILLINOIS PROFESSIONAL NUCLEAR ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL POLYMER ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL TRANSPORTATION ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL ENVIRONMENTAL ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL FOOD ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL TEXTILE ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL FIBER ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL PAPER ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL PETROLEUM ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL METALS ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL CERAMICS ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL COMPOSITES ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL POLYMER ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL PLASTICS ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL RUBBER ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL GLASS ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL CERAMICS ENGINEERING LICENSE NO. 0101050000  
 ILLINOIS PROFESSIONAL COMPOSITES ENGINEERING LICENSE NO. 0101050000

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	106+25.75	-20.00	896.02
A1	106+35.75	-20.00	895.97
A2	106+45.75	-20.00	895.92
N. End S. Appr. Slab	106+55.75	-20.00	895.87

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	106+25.75	-12.00	896.19
A1	106+35.75	-12.00	896.14
A2	106+45.75	-12.00	896.09
N. End S. Appr. Slab	106+55.75	-12.00	896.04

☉ ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	106+25.75	0.00	896.44
A1	106+35.75	0.00	896.39
A2	106+45.75	0.00	896.34
N. End S. Appr. Slab	106+55.75	0.00	896.29

STAGE CONSTRUCTION LINE

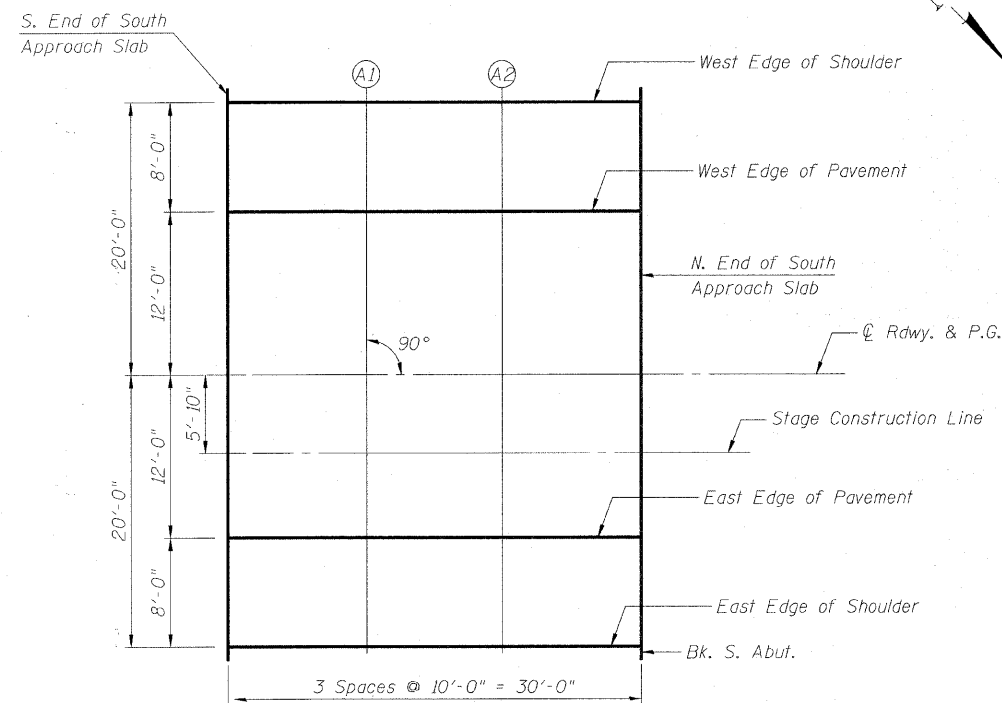
Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	106+25.75	5.83	896.32
A1	106+35.75	5.83	896.27
A2	106+45.75	5.83	896.22
N. End S. Appr. Slab	106+55.75	5.83	896.17

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	106+25.75	12.00	896.19
A1	106+35.75	12.00	896.14
A2	106+45.75	12.00	896.09
N. End S. Appr. Slab	106+55.75	12.00	896.04

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End S. Appr. Slab	106+25.75	20.00	896.02
A1	106+35.75	20.00	895.97
A2	106+45.75	20.00	895.92
N. End S. Appr. Slab	106+55.75	20.00	895.87



**PLAN**  
South Approach

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

**TOP OF SOUTH APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 056-3181**

SHEET NO. 8	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25 SHEETS	0028	06-00320-01-BR	MCHENRY	70	32
CONTRACT NO. 63535					
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)					

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 9/20/2011 9:00:33 AM



MCHENRY COUNTY  
DIVISION OF TRANSPORTATION

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	107+50.25	-20.00	895.40
A3	107+60.25	-20.00	895.35
A4	107+70.25	-20.00	895.30
N. End N. Appr. Slab	107+80.25	-20.00	895.25

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	107+50.25	-12.00	895.57
A3	107+60.25	-12.00	895.52
A4	107+70.25	-12.00	895.47
N. End N. Appr. Slab	107+80.25	-12.00	895.42

☉ ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	107+50.25	0.00	895.82
A3	107+60.25	0.00	895.77
A4	107+70.25	0.00	895.72
N. End N. Appr. Slab	107+80.25	0.00	895.67

STAGE CONSTRUCTION LINE

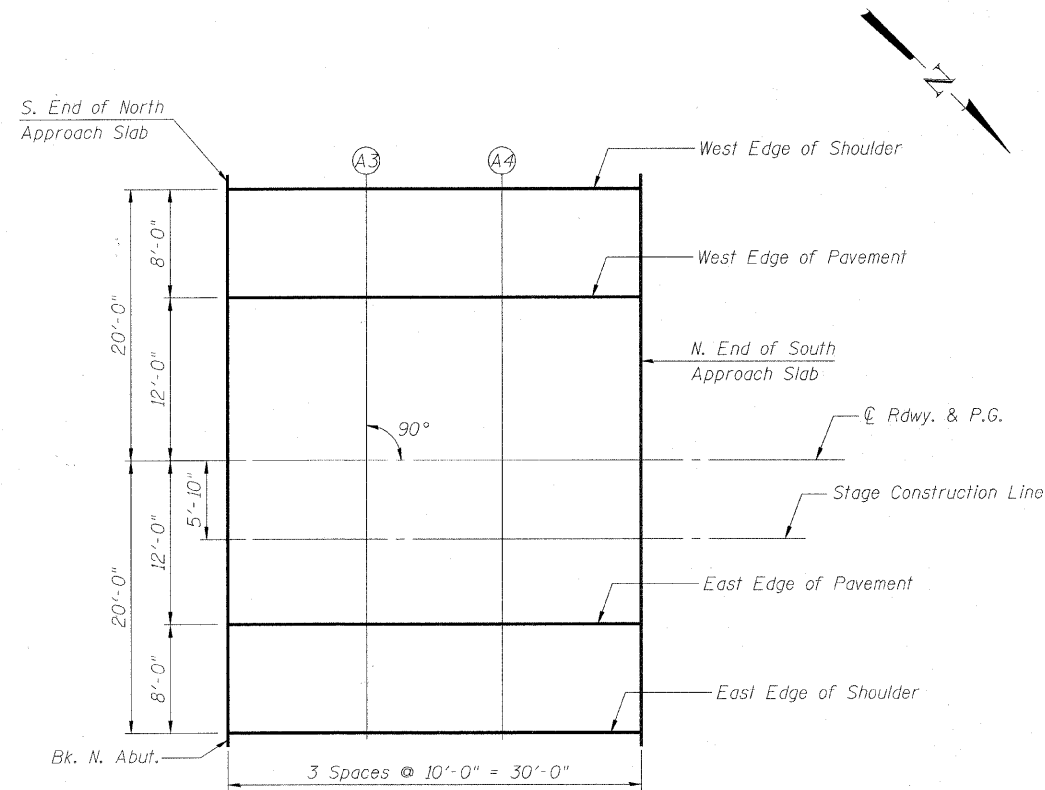
Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	107+50.25	5.83	895.70
A3	107+60.25	5.83	895.65
A4	107+70.25	5.83	895.60
N. End N. Appr. Slab	107+80.25	5.83	895.55

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	107+50.25	12.00	895.57
A3	107+60.25	12.00	895.52
A4	107+70.25	12.00	895.47
N. End N. Appr. Slab	107+80.25	12.00	895.42

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
S. End N. Appr. Slab	107+50.25	20.00	895.40
A3	107+60.25	20.00	895.35
A4	107+70.25	20.00	895.30
N. End N. Appr. Slab	107+80.25	20.00	895.25



**PLAN**  
North Approach

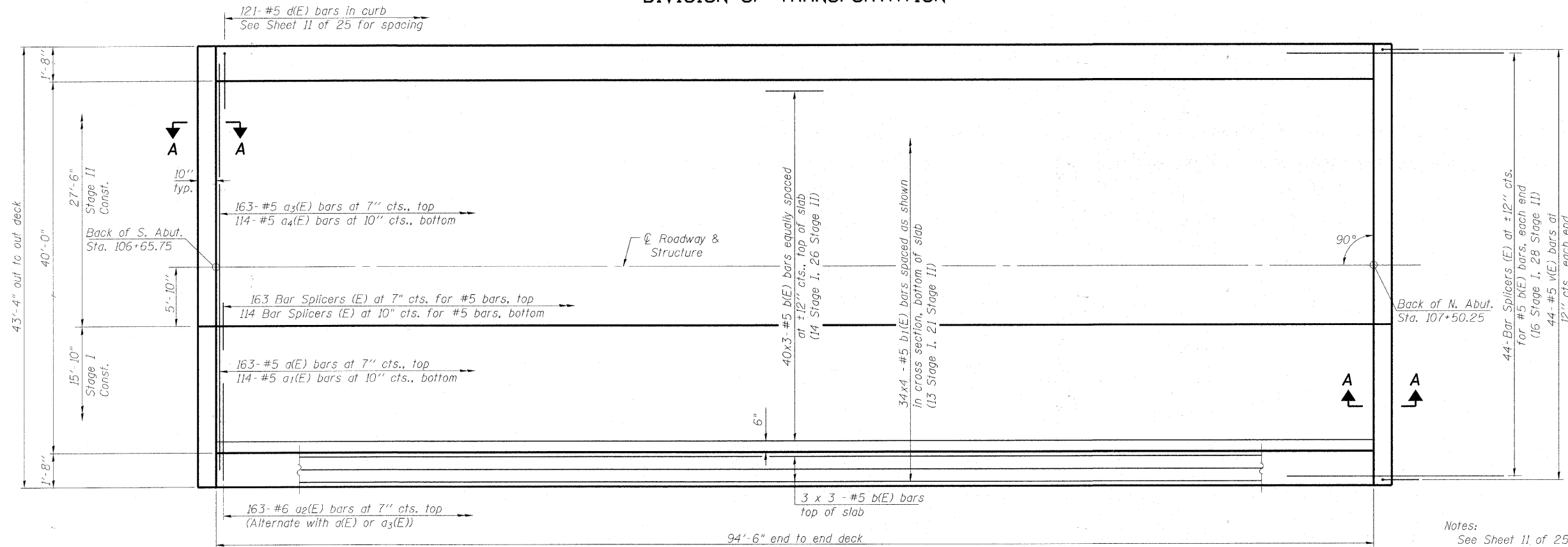
DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

**TOP OF NORTH APPROACH SLAB ELEVATIONS  
STRUCTURE NO. 056-3181**

SHEET NO. 9	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25 SHEETS	0028	06-00320-01-BR	MCHENRY	70	33
CONTRACT NO. 63535					
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)					

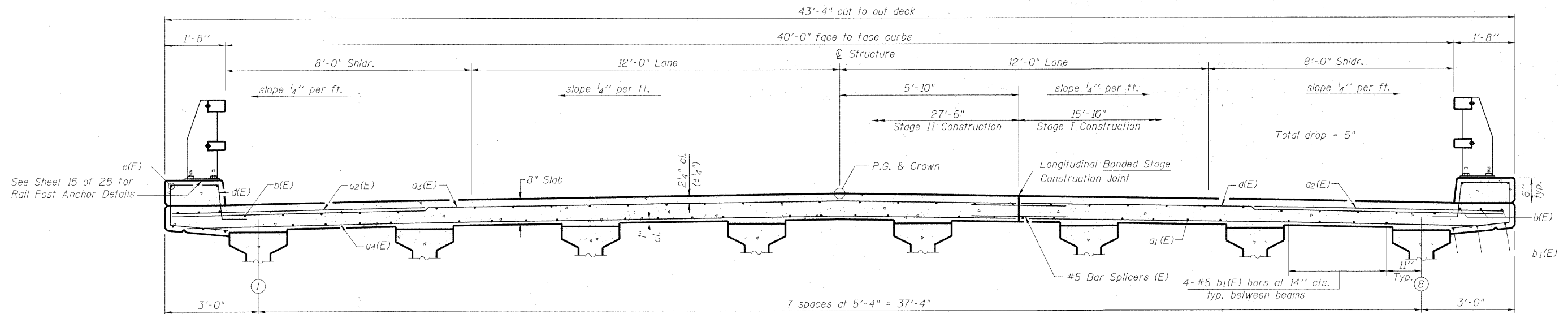
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 9100342-001

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION



PLAN

Notes:  
See Sheet 11 of 25 for superstructure details and Bill of Material.  
Bars indicated thus 20 x 3- #5 etc. indicates 20 lines of bars with 3 lengths per line.  
See Sheet 11 of 25 for curb reinforcement.  
See Sheet 12 of 25 for Section A-A.



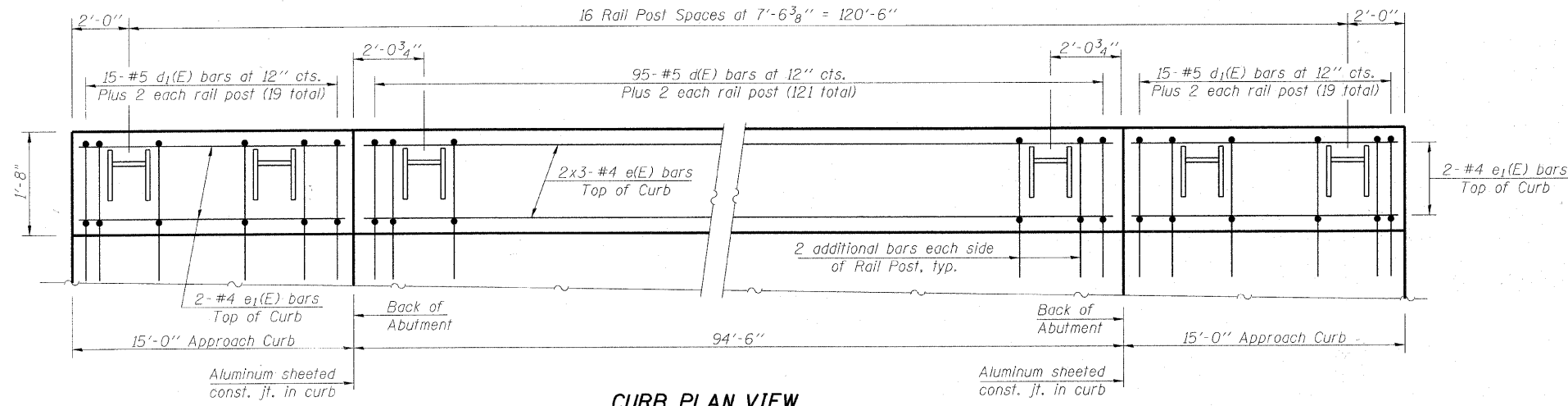
CROSS SECTION  
(Looking North)

SUPERSTRUCTURE  
STRUCTURE NO. 056-3181

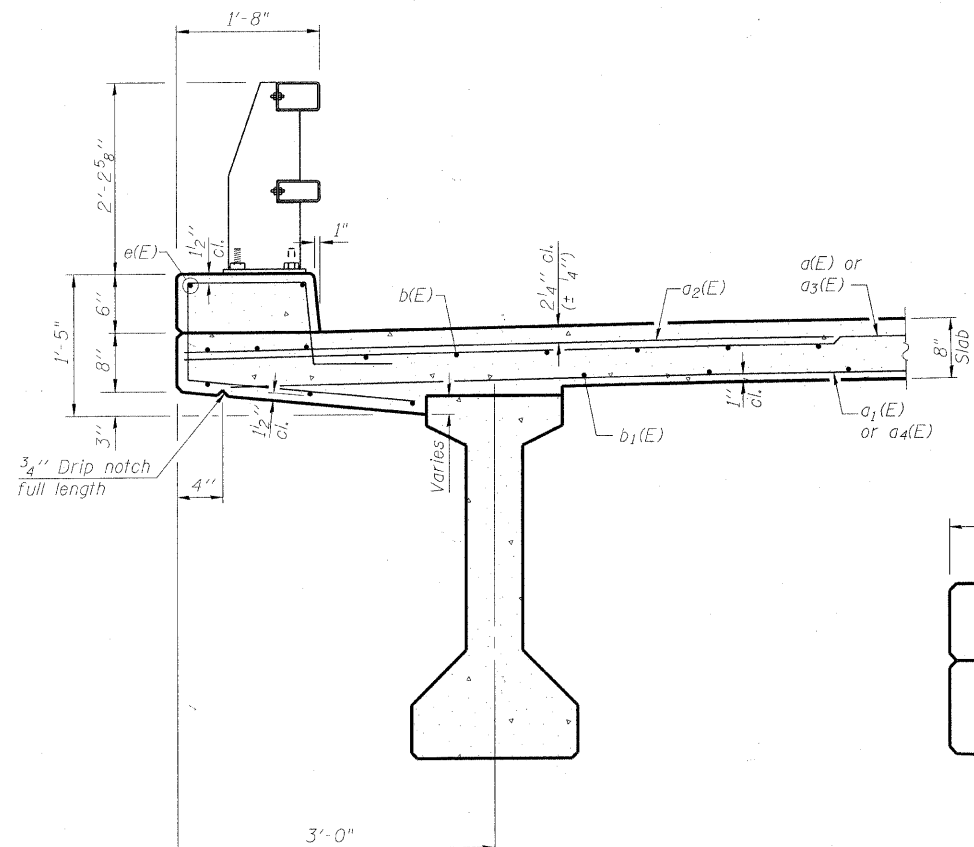
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CHECKED	AS
DRAWN	BCD
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SHEET NO. 10 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	34
CONTRACT NO. 63535					
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)					

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION



**CURB PLAN VIEW**

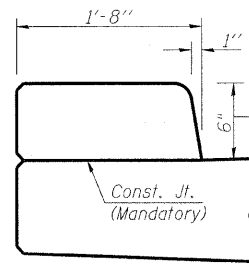


**SECTION THRU CURB**

See Sheet 15 of 25 for  
Rail Post Anchor Details

**MINIMUM BAR LAP**

#4 bar = 2'-0"



**CURB JOINT DETAILS**

Const. Jts. at Abutments. 3/8" Aluminum sheet  
ASTM B 209 alloy 3003-H14 coated to  
minimize reaction with wet concrete. Cost  
included with Concrete Superstructure

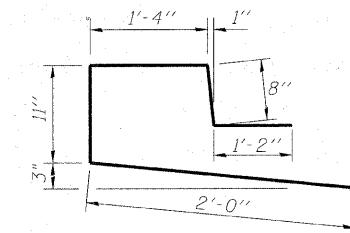
**NOTES:**

See Sheets 15 and 16 for Railing Details.

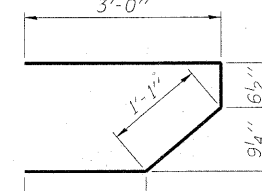
**SUPERSTRUCTURE  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a1(E)	163	#5	15'-7"	—
a2(E)	114	#5	15'-3"	—
a3(E)	326	#6	6'-6"	—
a4(E)	163	#5	27'-3"	—
a5(E)	114	#5	26'-11"	—
b(E)	138	#5	33'-2"	—
b1(E)	136	#5	25'-6"	—
d(E)	242	#5	6'-1"	⊏
e(E)	12	#4	32'-10"	—
m(E)	10	#6	15'-7"	—
m1(E)	12	#6	7'-5"	—
m2(E)	12	#6	3'-3"	—
m3(E)	8	#6	1'-10"	—
m4(E)	10	#6	27'-3"	—
m5(E)	20	#6	8'-2"	—
s(E)	82	#5	6'-10"	⊏
s1(E)	68	#4	12'-0"	⊏
v(E)	88	#5	3'-9"	⊏
Reinforcement Bars, Epoxy Coated			Pound	28250
Concrete Superstructure			Cu. Yd.	146.5
Bar Splacers			Each	379
Bridge Deck Grooving			Sq. Yd.	416
Protective Coat			Sq. Yd.	466

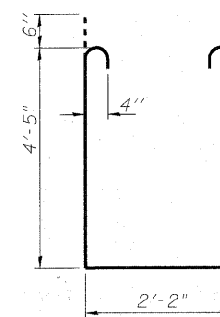
Bars indicated thus 2 x 3 - #4 etc. indicates  
2 line of bars with 3 lengths per line.  
See Sheet 14 of 25 for Approach Slab bars.



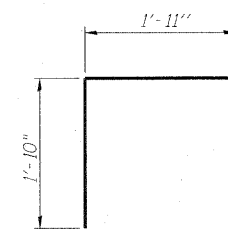
**BAR d(E)**



**BAR s(E)**



**BAR s1(E)**



**BAR v(E)**

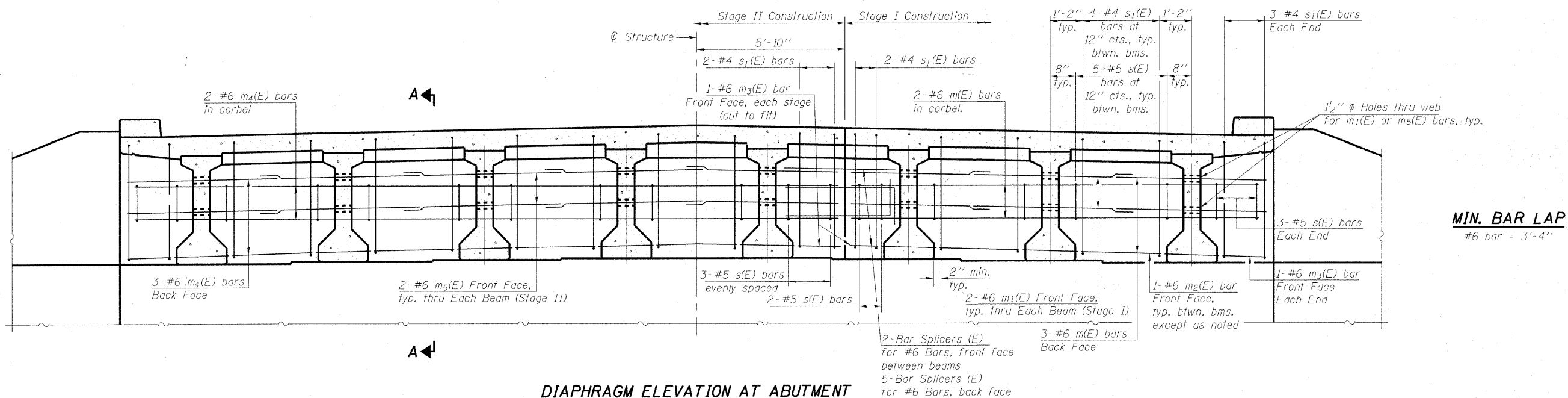
**SUPERSTRUCTURE DETAILS  
STRUCTURE NO. 056-3181**

SHEET NO. 11 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	35
CONTRACT NO. 63535					
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)					

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

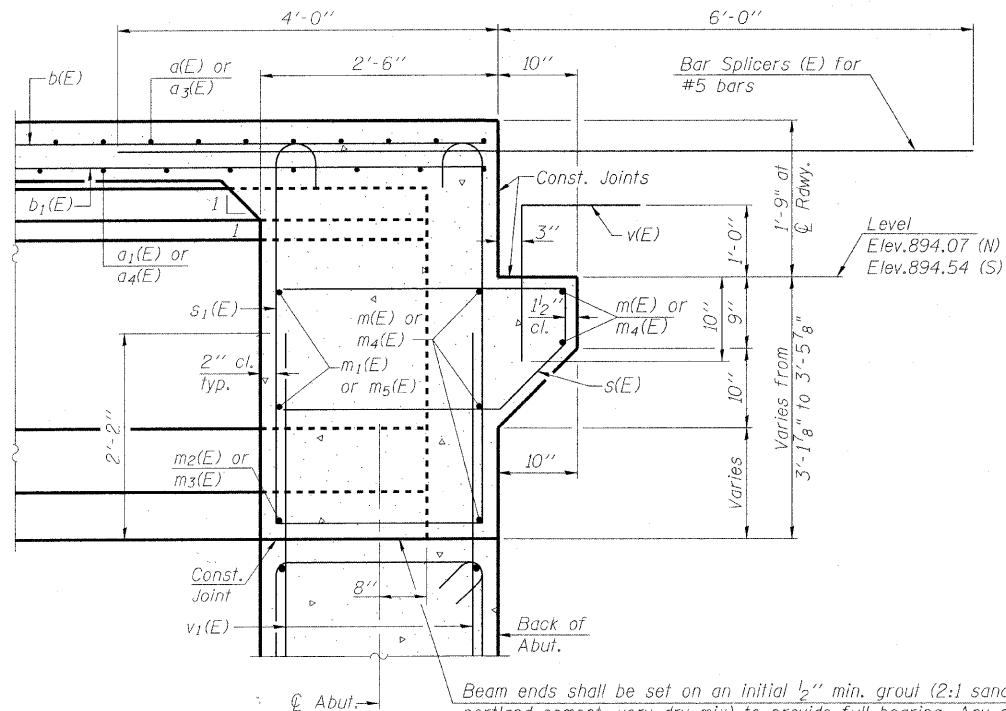
STATE OF ILLINOIS PROFESSIONAL DESIGNERS BOARD  
 DESIGNER'S SEAL NO. 100727248-0000047  
 EXPIRES 12/31/2024

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION



**DIAPHRAGM ELEVATION AT ABUTMENT**

North Abutment shown, looking north.  
South Abutment similar but opposite hand.



**SECTION A-A**

Notes:  
Reinforcement bars in diaphragm are billed with superstructure on sheet 11 of 25.  
Concrete in diaphragm is included with Concrete Superstructure on sheet 11 of 25.  
For details of bars s(E) and s1(E) see sheet 11 of 25.

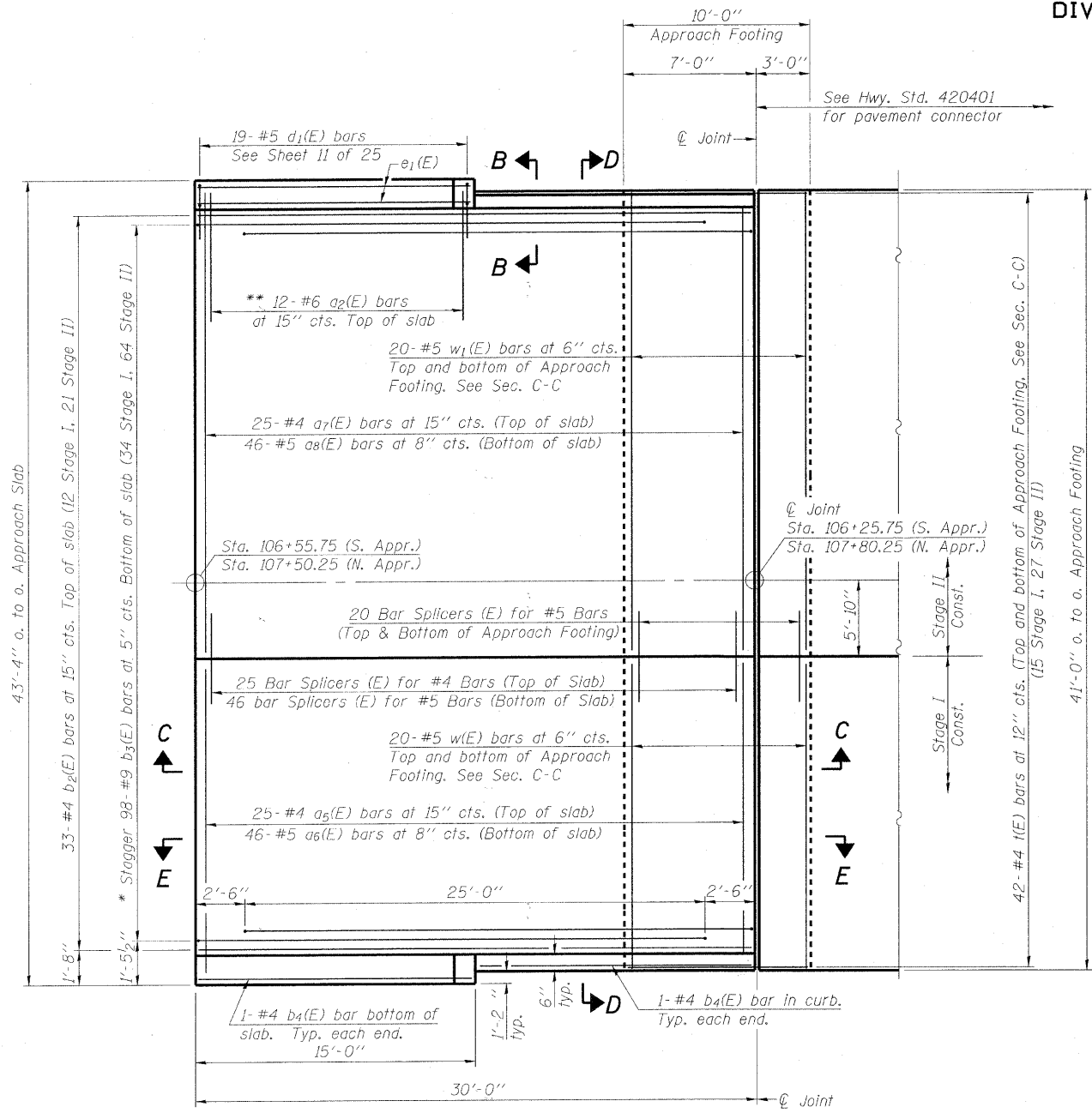
DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

**DIAPHRAGM DETAILS  
STRUCTURE NO. 056-3181**

SHEET NO. 12  25 SHEETS	F.A.S. RTE. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 36
	CONTRACT NO. 63535				
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)					

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION

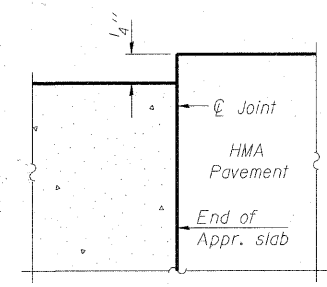
Notes:  
See sheet 14 of 25 for Sections C-C & D-D and View E-E.  
See sheet 11 of 25 for Approach Curb Details.  
a<sub>5</sub>(E) thru a<sub>8</sub>(E) bar spacings measured along C. Rdwy.  
See sheet 14 of 25 for location of Detail A.  
See sheets 15 and 16 of 25 for Railing Details.



**PLAN**

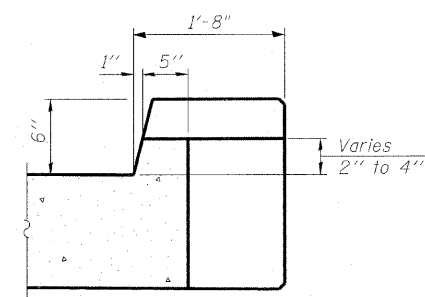
North Approach Slab shown.  
South Approach similar but opposite hand.

\* Tilt #9 b<sub>3</sub>(E) bars as required to maintain clearance.  
\*\* Space between a<sub>5</sub>(E) or a<sub>7</sub>(E) bars, typ. ea. curb.



**FLEXIBLE PAVEMENT**

**DETAIL A**



**VIEW B-B**

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

(Sheet 1 of 2)  
**BRIDGE APPROACH SLAB DETAILS**  
**STRUCTURE NO. 056-3181**

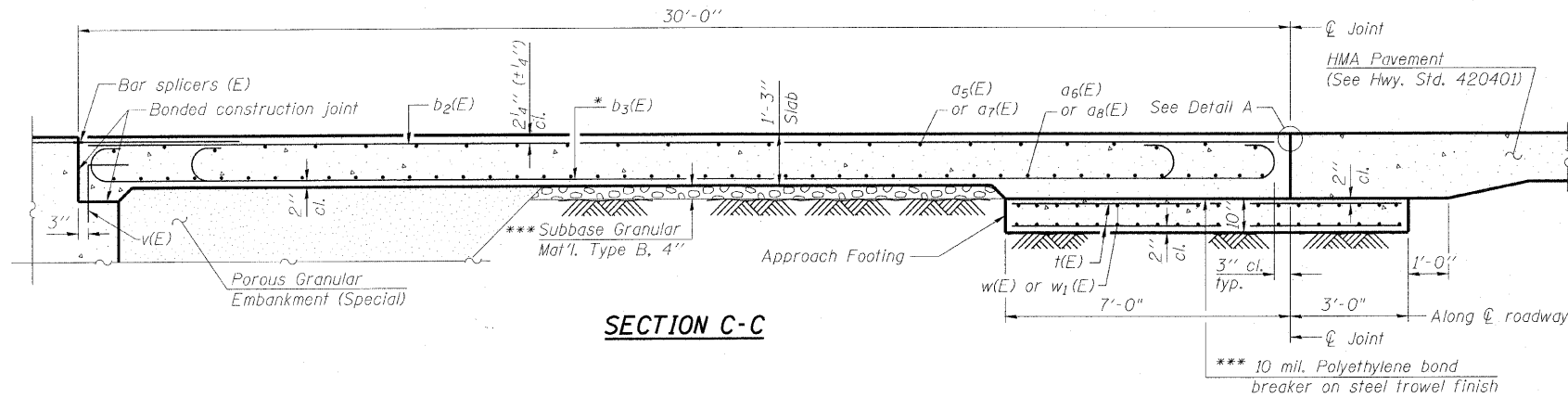
SHEET NO. 13  25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	37
CONTRACT NO. 63535					
JOB NO. C-91-139-11   ILLINOIS   FED. AID PROJECT BRS-0028(107)					

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 PROJECT NO. 056-3181-01  
 DATE 2/2/2011 9:00:45 AM

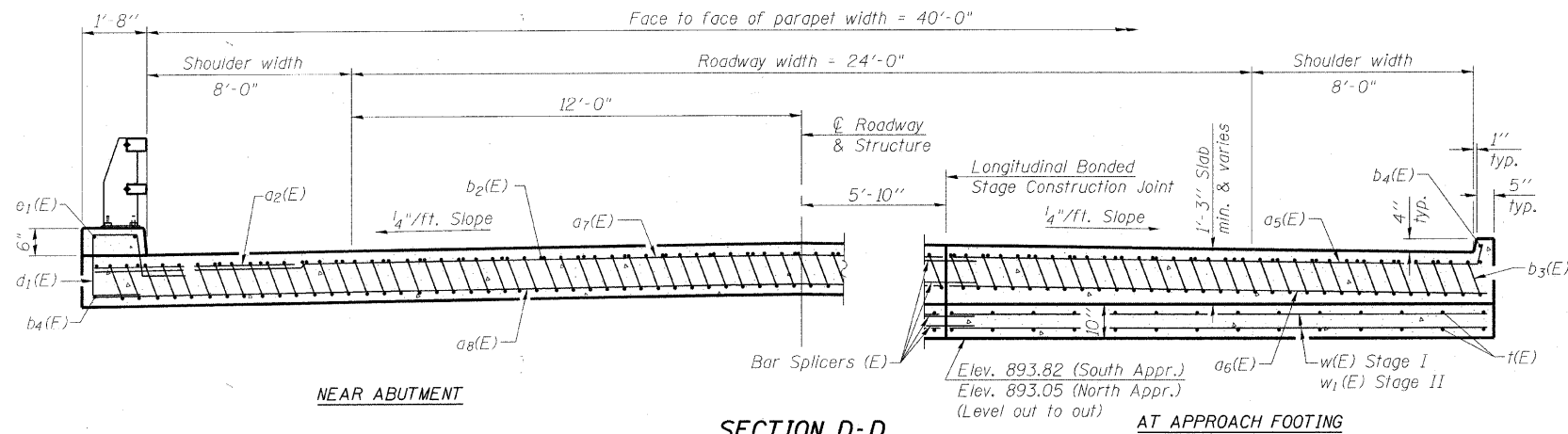
MCHENRY COUNTY  
DIVISION OF TRANSPORTATION

Notes:

See sheet 13 of 25 for Detail A and View B-B.  
Approach slab and curb concrete shall be paid for as Concrete Superstructure.  
Approach footing concrete shall be paid for as Concrete Structures.  
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
For v(E) bar details, see sheet 12 of 25.  
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.  
For bar splicer details, see sheet 23 of 25.  
Cost of excavation for approach footing included with Concrete Structures.  
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 25.  
For additional curb details, see sheet 11 of 25.



SECTION C-C



NEAR ABUTMENT

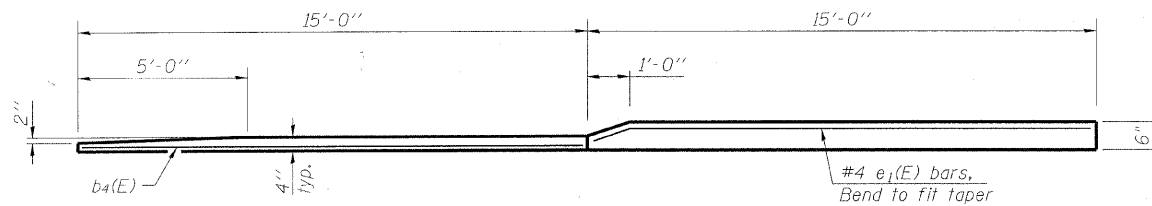
SECTION D-D

(See Plan for dimensions not shown)

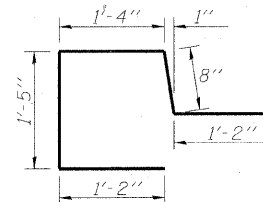
AT APPROACH FOOTING

\* Tilt #9 b3(E) bars as required to maintain clearance.

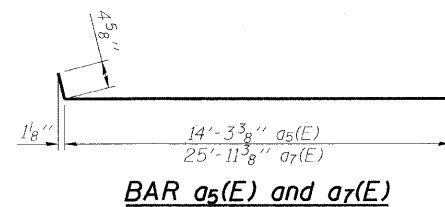
\*\*\* Cost included with Concrete Superstructure.



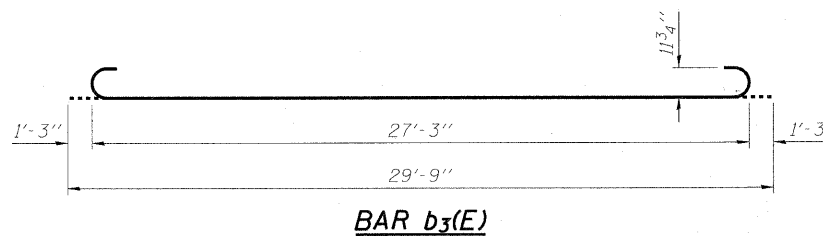
VIEW E-E



BAR d1(E)



BAR a5(E) and a7(E)



BAR b3(E)

TWO APPROACHES  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a2(E)	48	#6	6'-6"	—
a5(E)	50	#4	14'-8"	—
a6(E)	92	#5	14'-4"	—
a7(E)	50	#4	26'-4"	—
a8(E)	92	#5	26'-0"	—
b2(E)	66	#4	29'-8"	—
b3(E)	190	#9	29'-9"	—
b4(E)	8	#4	14'-8"	—
d1(E)	76	#5	5'-9"	U
e1(E)	8	#4	14'-8"	—
t(E)	168	#4	9'-8"	—
w(E)	80	#5	14'-4"	—
w1(E)	80	#5	26'-0"	—
Concrete Superstructure		Cu. Yd.	130.8	
Concrete Structures		Cu. Yd.	25.3	
Reinforcement Bars, Epoxy Coated		Pound	31300	
Bar Splicers		Each	222	
Bridge Deck Grooving		Sq. Yd.	266	
Protective Coat		Sq. Yd.	296	

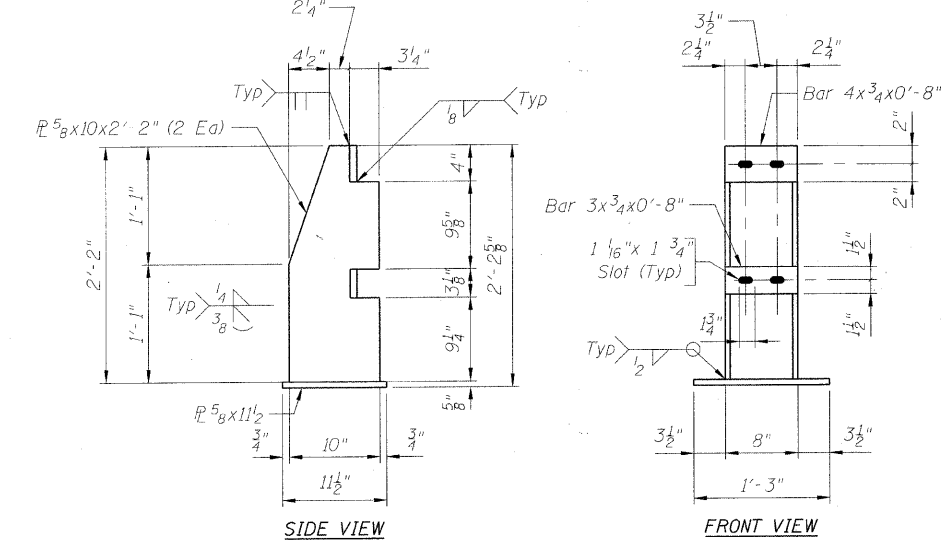
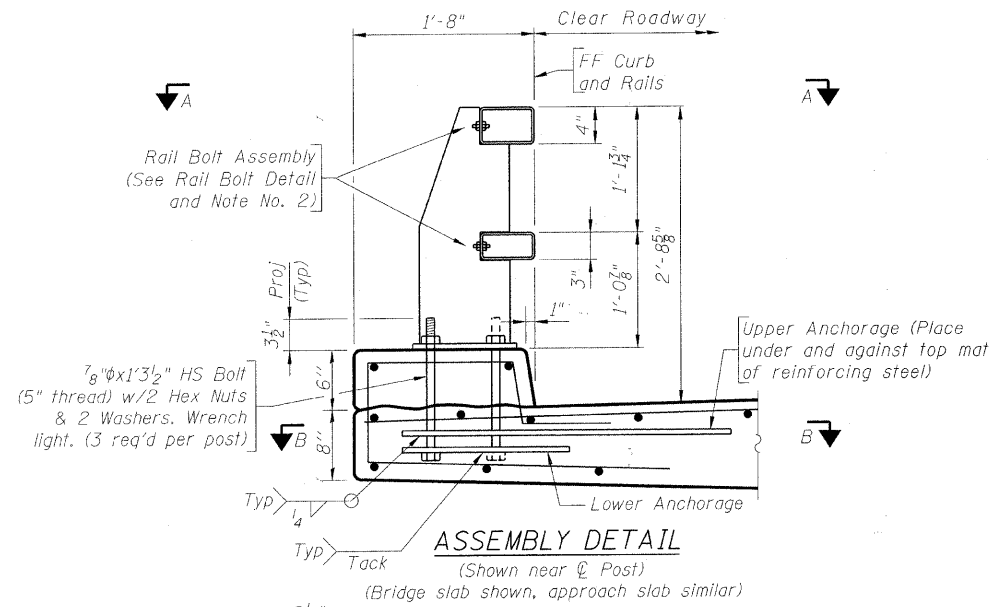
(Sheet 2 of 2)

BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 056-3181

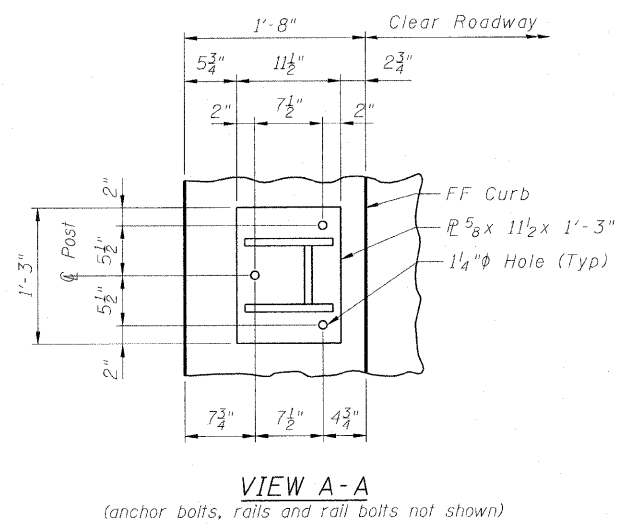
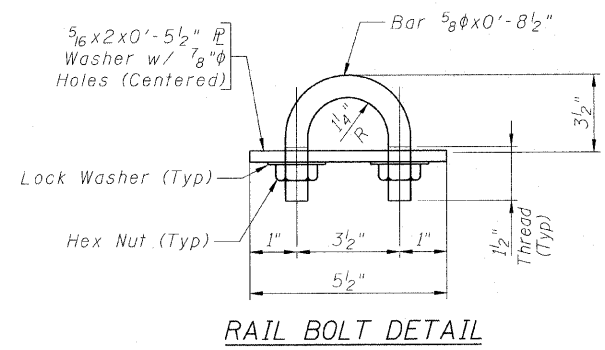
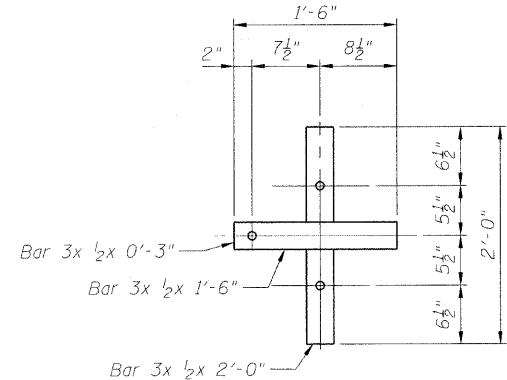
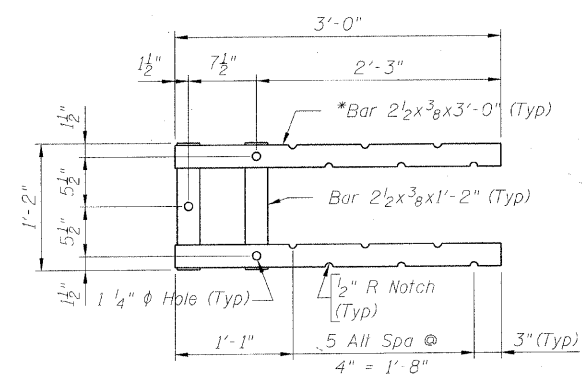
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DRAWN	BCD
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SHEET NO. 14 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0034	06-00320-02-BR	MCHENRY	70	38
			CONTRACT NO. 63535		
JOB NO. C-91-139-11		ILLINOIS	FED. AID PROJECT BRS-0028(107)		

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION



**POST DETAILS**  
(See View A-A for anchor bolt hole spacing)



**BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Steel Railing (Special)	Foot	249

- Note:**
- 1) Anchor bolts may be tack welded to lower anchorage (Shop or field).
  - 2) At post locations, drill two 1/16"  $\phi$  holes in the rails to receive rail bolts (Shop of field). See Post Details for hole spacing
  - 3) Before installing rails, paint all cut, drilled or otherwise damaged surface areas of the railing components with two coats of zinc rich paint conforming to the requirements of ASTM A 780
  - 4) After installing the rails, paint all exposed bolt threads with two coats of zinc rich paint conforming to the requirements of ASTM A 780.
  - 5) All steel components shall be galvanized according to AASHTO M111 unless noted otherwise.
  - 6) Shim Plates shall be provided in accordance with Article 509.05(a) of the Standard Specifications.

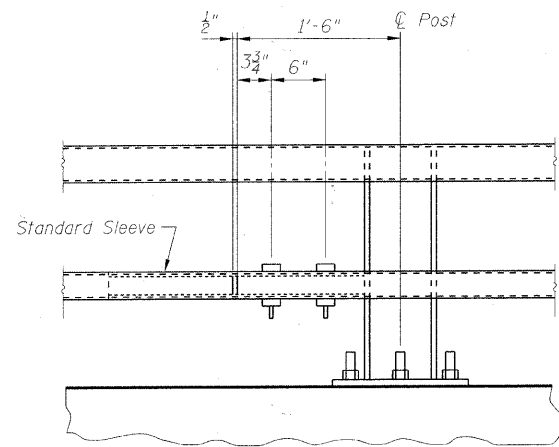
**WYOMING 2-TUBE  
BRIDGE RAILING DETAILS  
STRUCTURE NO. 056-3181**

SHEET NO.	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
15	0028	06-00320-01-BR	MCHENRY	70	39
25 SHEETS		CONTRACT NO. 63535			
JOB NO. C-91-139-11		ILLINOIS FED. AID PROJECT BRS-0028(107)			

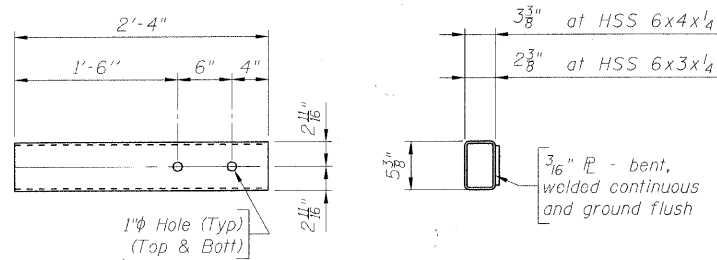
DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BI B

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 9/20/10 4:11 AM

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION



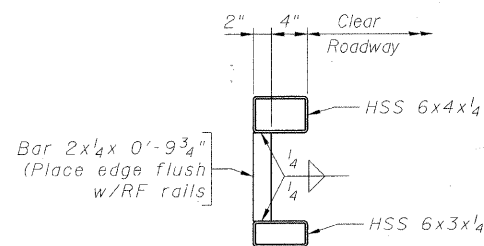
**STANDARD SPLICE DETAIL**  
(Top or bottom rail)



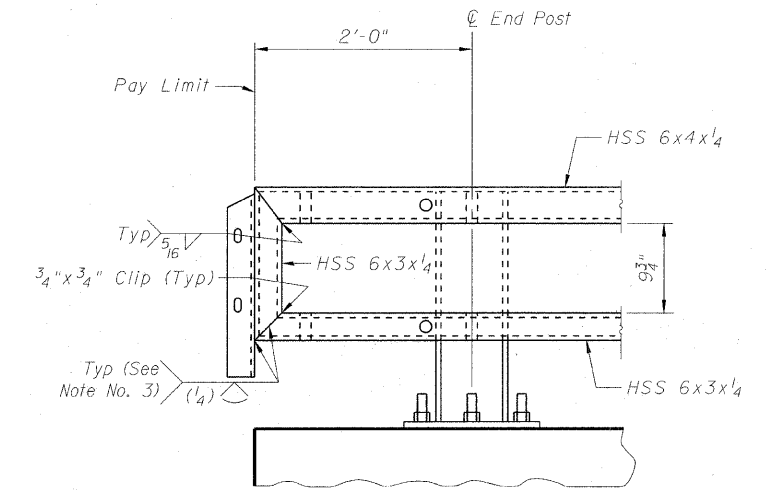
TOP VIEW

END VIEW

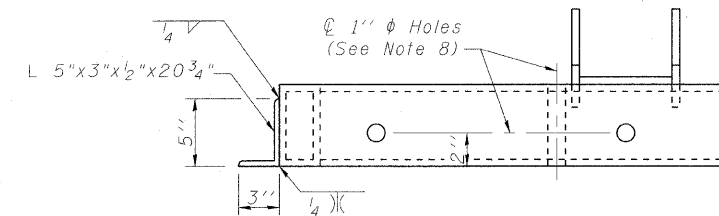
**STANDARD SLEEVE DETAILS**



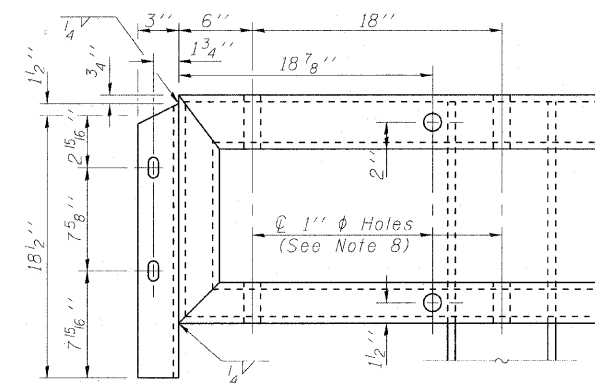
**BRACE BAR DETAIL**  
(See Note No. 4)



**ELEVATION AT TERMINAL TYPE 6A (SPECIAL)**



TOP VIEW



FRONT VIEW

END OF RAIL

**BRIDGE RAILING DETAILS**  
**STRUCTURE NO. 056-3181**

**NOTES**

- 1) Either top or bottom rail in terminal section may be the longer rail.
- 2) Ensure each rail length is continuous over a minimum of two posts. Railing that is part of a type 6A terminal is continuous if either the top or bottom rail in the terminal is continuous over a minimum of two posts.
- 3) Ensure the fabricator prepares a sample of the indicated joint and it is macroetched to demonstrate that the required effective throat is achieved.
- 4) Ensure a Brace Bar is placed 2'-0" from the splice end of the shorter tube at Traffic Barrier Terminals.
- 5) Splices may be located on either side of post.
- 6) Not more than one splice is permitted per side of post.
- 7) Do not shop splice rails.
- 8) Holes in Steel Railings may be field drilled for connection to Traffic Barrier Terminal. Any galvanized steel exposed or damaged by drilling operation shall be painted with two coats of a zinc-rich paint conforming to ASTM A 780.

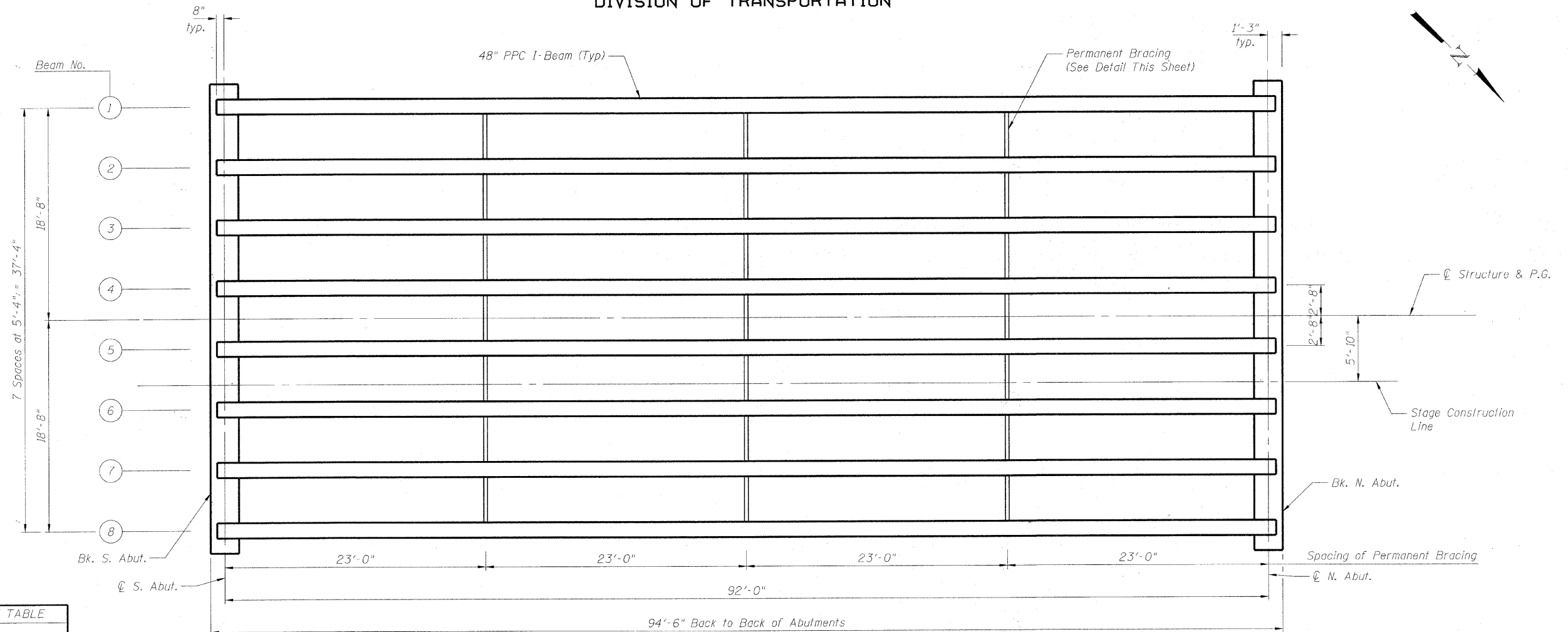
DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

SHEET NO. 16 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	40
CONTRACT NO. 63535					
JOB NO. C-91-139-11   ILLINOIS FED. AID PROJECT BRS-0028(107)					

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 PROJECT NO. 056-3181-01-BR SHEET NO. 16 OF 70  
 DATE: 2/27/2018



MCHENRY COUNTY  
DIVISION OF TRANSPORTATION



FRAMING PLAN

INTERIOR BEAM MOMENT TABLE		
0.5 Span		
$I$	(in <sup>4</sup> )	144117
$I'$	(in <sup>4</sup> )	357559
$S_b$	(in <sup>3</sup> )	6834
$S_b'$	(in <sup>3</sup> )	10803
$S_t$	(in <sup>3</sup> )	5355
$S_t'$	(in <sup>3</sup> )	23996
$DC1$	(k/ft)	1.166
$M_{DC1}$	(k)	12.34
$DC2$	(k/ft)	0.037
$M_{DC2}$	(k)	39
$DW$	(k/ft)	0.267
$M_{DW}$	(k)	283
$M_L + IM$	(k)	1291

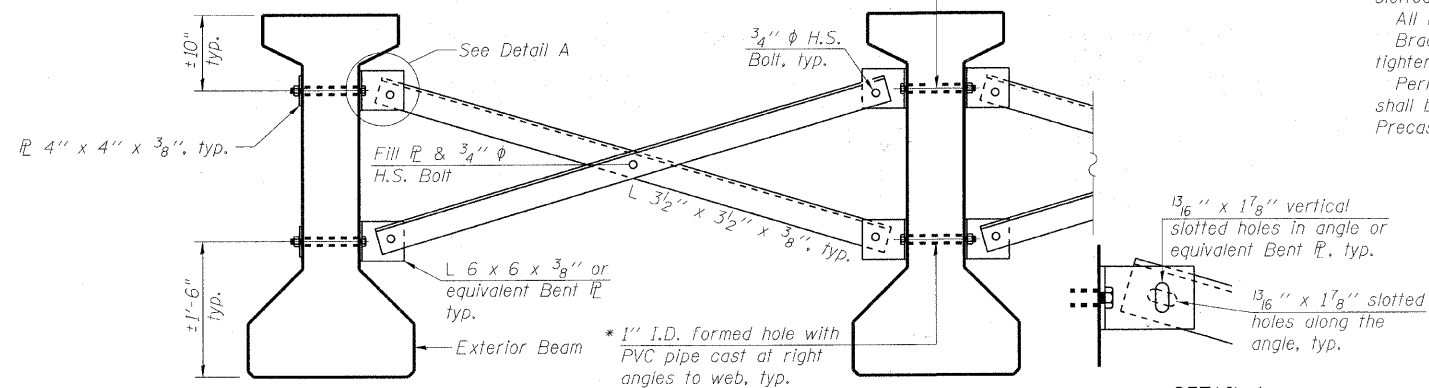
INTERIOR BEAM REACTION TABLE		
Abut.		
$R_{DC1}$	(k)	53.6
$R_{DC2}$	(k)	1.7
$R_{DW}$	(k)	12.2
$R_L + IM$	(k)	58.9
$R_{Total}$	(k)	126.4

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

- $I$ : Non-composite moment of inertia of beam section (in<sup>4</sup>).  
 $I'$ : Composite moment of inertia of beam section (in<sup>4</sup>).  
 $S_b$ : Non-composite section modulus for the bottom fiber of the prestressed beam (in<sup>3</sup>).  
 $S_b'$ : Composite section modulus for the bottom fiber of the prestressed beam (in<sup>3</sup>).  
 $S_t$ : Non-composite section modulus for the top fiber of the prestressed beam (in<sup>3</sup>).  
 $S_t'$ : Composite section modulus for the top fiber of the prestressed beam (in<sup>3</sup>).  
 $DC1$ : Un-factored non-composite dead load (kips/ft.).  
 $M_{DC1}$ : Un-factored moment due to non-composite dead load (kip-ft.).  
 $DC2$ : Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).  
 $M_{DC2}$ : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).  
 $DW$ : Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).  
 $M_{DW}$ : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).  
 $M_L + IM$ : Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

\* Fabricator shall locate to miss strands within permissible tolerances.

$\frac{3}{4}$ "  $\phi$  A307 Bolts with lock nuts., typ.  
Bolts through the concrete web shall be tightened to snug tight only.



PERMANENT BRACING DETAILS FOR  
48" PPC I-BEAMS

DETAIL A

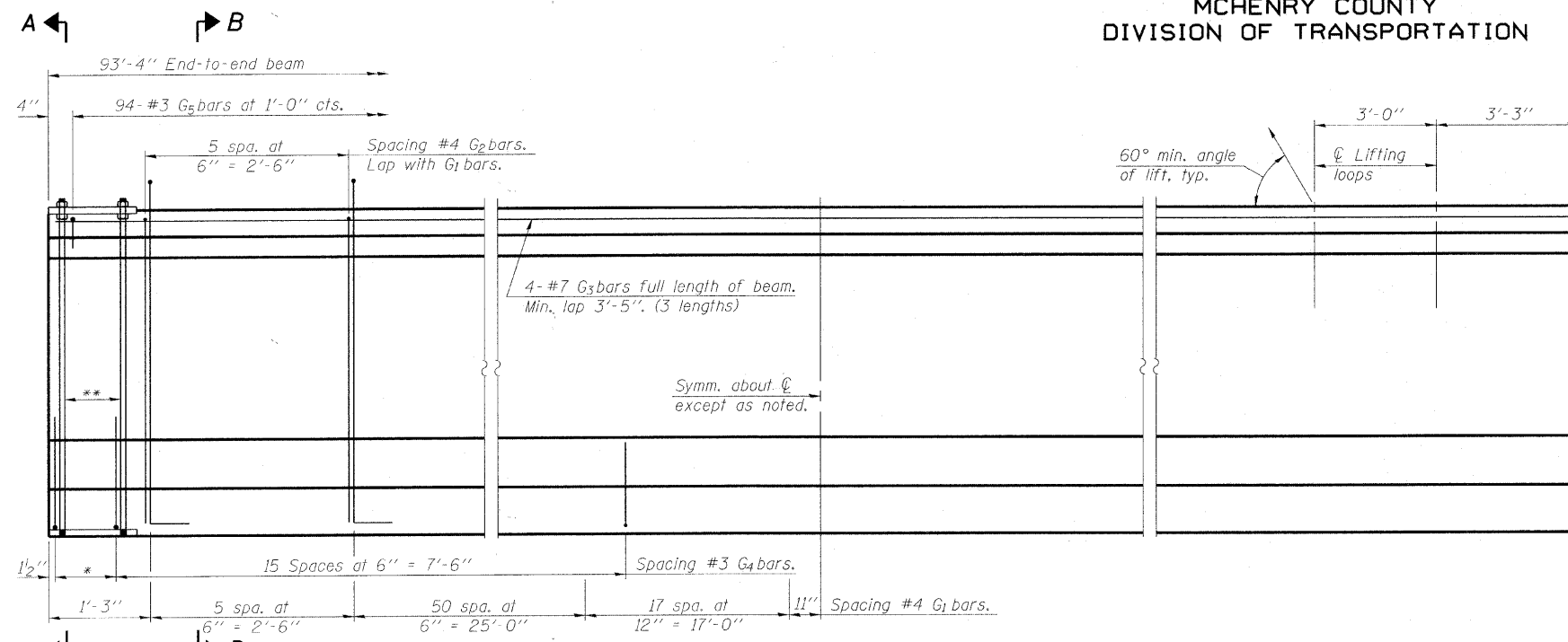
Notes:

- All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.  
 Two hardened washers are required for each set of oversized holes.  
 All holes shall be  $\frac{15}{16}$ "  $\phi$  unless otherwise noted.  
 $\frac{5}{16}$ " x 3" x 3" plate washers are required over all slotted holes.  
 All bolts shall be galvanized according to AASHTO M232. Bracing shall be installed as beams are erected and tightened as soon as possible during erection.  
 Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete I-Beams.

FRAMING PLAN  
STRUCTURE NO. 056-3181

SHEET NO. 17	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25 SHEETS	0028	06-00320-01-BR	MCHENRY	70	41
CONTRACT NO. 63535					
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)					

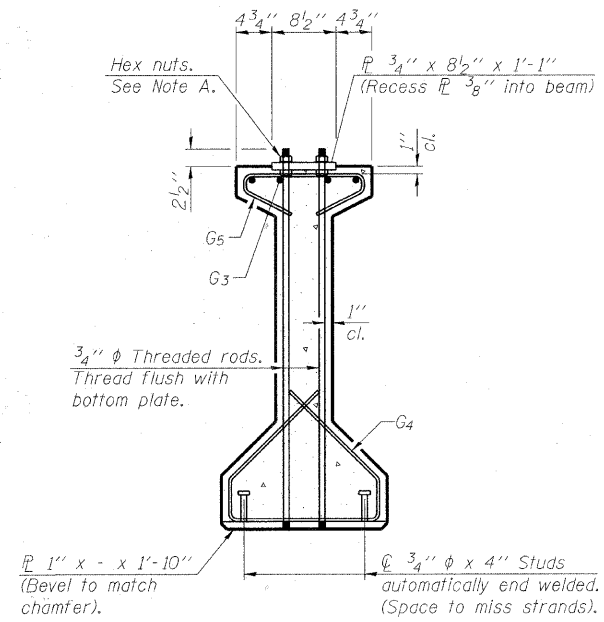
MCHENRY COUNTY  
DIVISION OF TRANSPORTATION



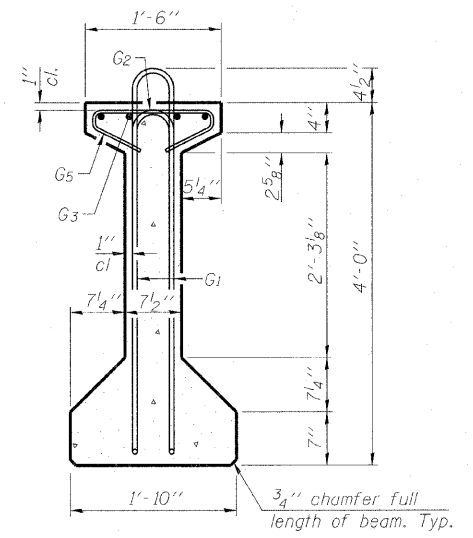
**ELEVATION OF BEAM**  
(Showing reinforcement & dimensions)

\* 3 spaces at 3" = 9"  
\*\* 4- 3/4" φ threaded dowel rods at 3" cts., Each Face.

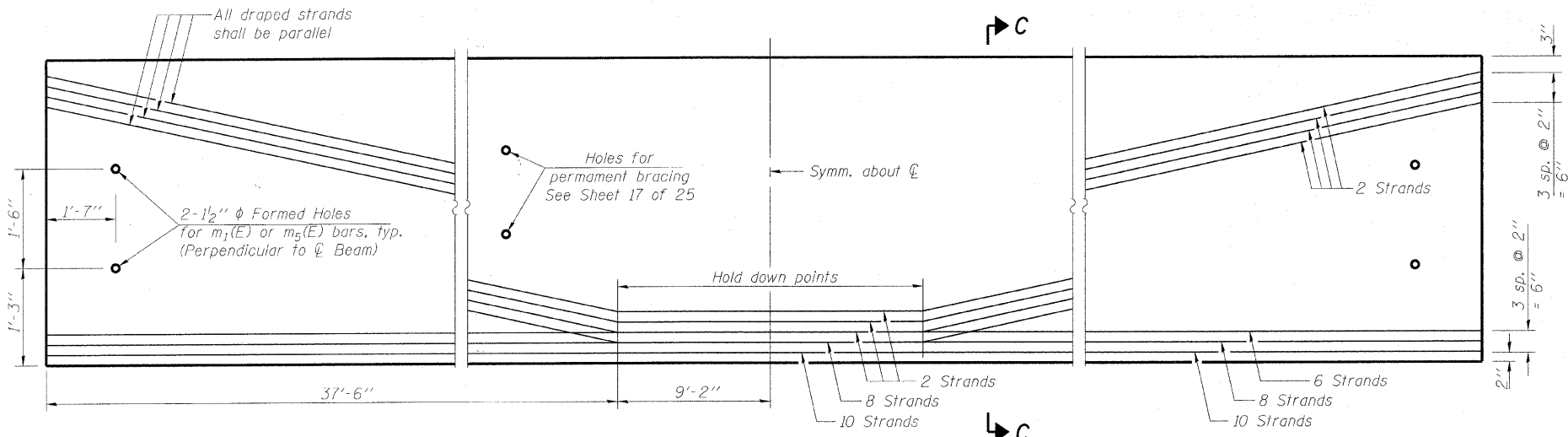
Note A:  
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



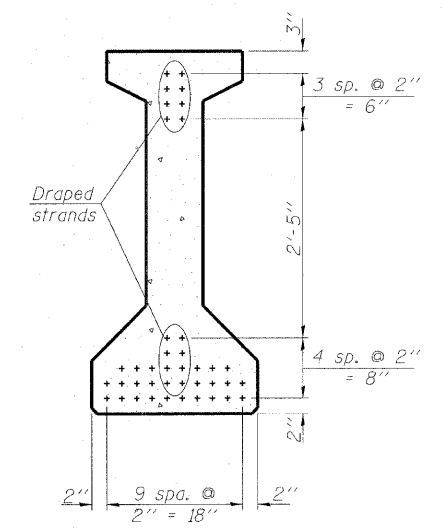
**SECTION A-A**



**SECTION B-B**



**ELEVATION OF BEAM**  
(Showing prestressing steel)



**SECTION C-C**

**\*\*\*BAR LIST  
ONE BEAM ONLY**

Bar	No.	Size	Length	Shape
G1	147	#4	9'-6"	∩ L
G2	12	#4	7'-11"	∩
G3	12	#7	33'-5"	—
G4	38	#3	5'-3"	∩
G5	94	#3	2'-9"	∩

\*\*\*For information only

Notes:  
See sheet 19 of 25 for additional details and Bill of Material.  
Required release strength, f'ci, shall be 6,000 psi.

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

**48" PPC I-BEAM  
STRUCTURE NO. 056-3181**

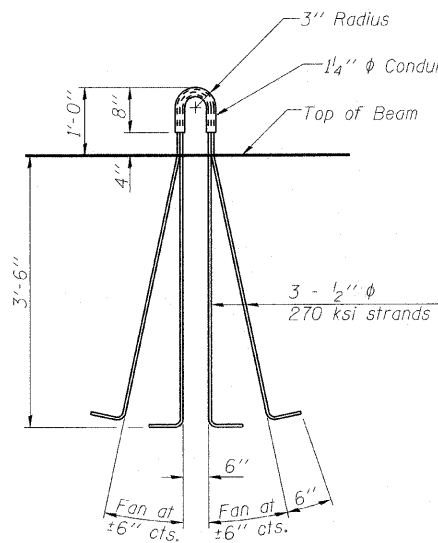
SHEET NO. 18 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	42
JOB NO. C-91-139-11			ILLINOIS FED. AID PROJECT BRS-0028(107)		

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 LICENSE NO. 184-00023 - EXPIRES 4/30/2001  
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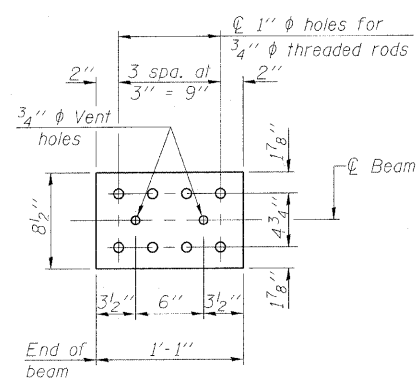
MCHENRY COUNTY  
DIVISION OF TRANSPORTATION

**NOTES**

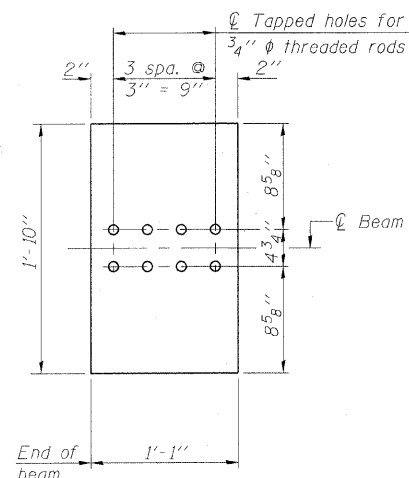
Inserts for  $\frac{3}{4}$ "  $\phi$  threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.  
 Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be  $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in.  
 Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions). A minimum  $2\frac{1}{2}$ "  $\phi$  lifting pin shall be used to engage the lifting loops during handling.  
 The top and bottom plates shall be AASHTO M270 Grade 50.  
 The bottom plates and studs shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized.  
 Threaded rods shall be ASTM F 1554 Grade 55.



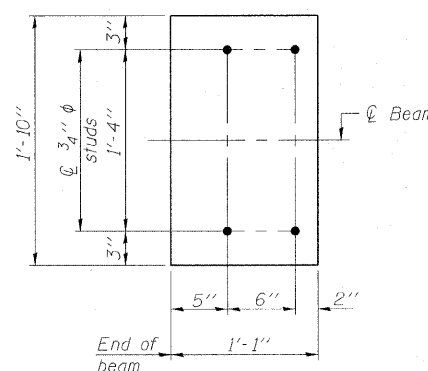
**LIFTING LOOP DETAIL**



**TOP PLATE**

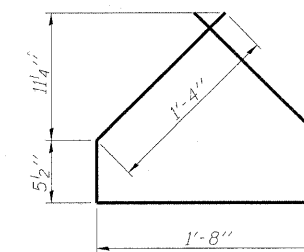


**BOTTOM PLATE**  
(Showing threaded rods)

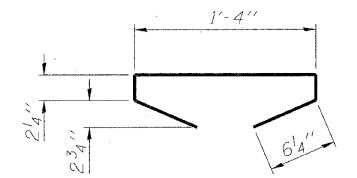


**BOTTOM PLATE**  
(Showing studs)

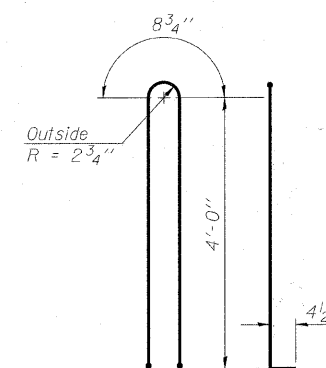
See bearing details for pintle hole locations when required.



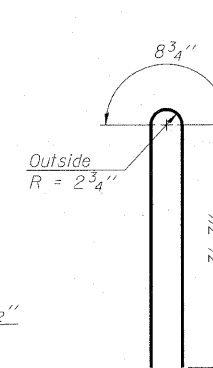
**BAR G4**



**BAR G5**



**BAR G1**



**BAR G2**

**BILL OF MATERIAL**

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48"	Foot	747

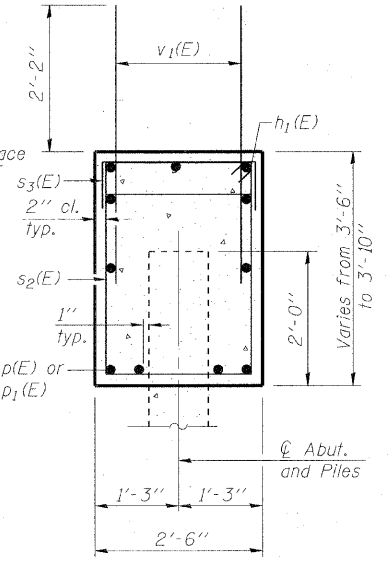
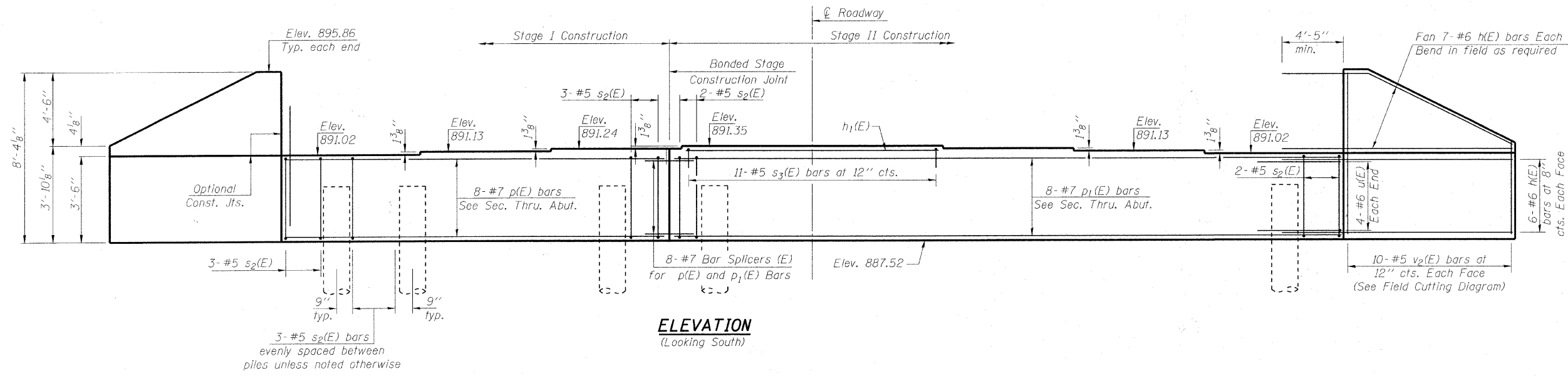
**48" PPC I-BEAM DETAILS  
STRUCTURE NO. 056-3181**

SHEET NO.	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19	0028	06-00320-01-BR	MCHENRY	70	43
25 SHEETS CONTRACT NO. 63535					
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)					

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION

Notes:  
Four steps monolithically with cap.



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	52	#6	15'-3"	—
h <sub>1</sub> (E)	3	#5	10'-4"	—
p(E)	8	#7	15'-6"	—
p <sub>1</sub> (E)	8	#7	27'-2"	—
s <sub>2</sub> (E)	40	#5	11'-7"	□
s <sub>3</sub> (E)	11	#5	4'-2"	□
u(E)	8	#6	11'-0"	□
v <sub>1</sub> (E)	78	#5	4'-4"	—
v <sub>2</sub> (E)	20	#5	11'-6"	—
Structure Excavation	Cu. Yd.		199	
Concrete Structures	Cu. Yd.		18.6	
Reinforcement Bars, Epoxy Coated	Pound		3180	
Furnishing Metal Shell Piles 14"x0.312"	Foot		253	
Driving Piles	Foot		253	
Test Pile Metal Shells	Each		1	
Pile Shoes	Each		12	

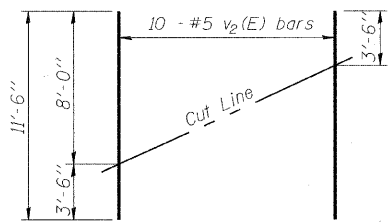
For details of Bar Splicers, see sheet 23 of 25.  
For details of piles and Concrete Encasement, see sheet 22 of 25.

**PILE DATA**

Type: 14"  $\phi$  Metal Shells w/ 0.312" walls with Pile Shoes  
Nominal Required Bearing: 320 Kips  
Factored Resistance Available: 160 Kips  
Est. Length: 23'  
No. Production Piles: 11  
No. Test Piles: 1

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

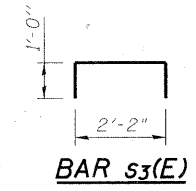
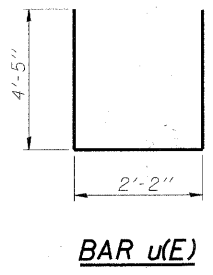
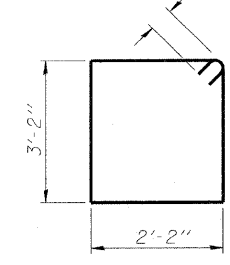
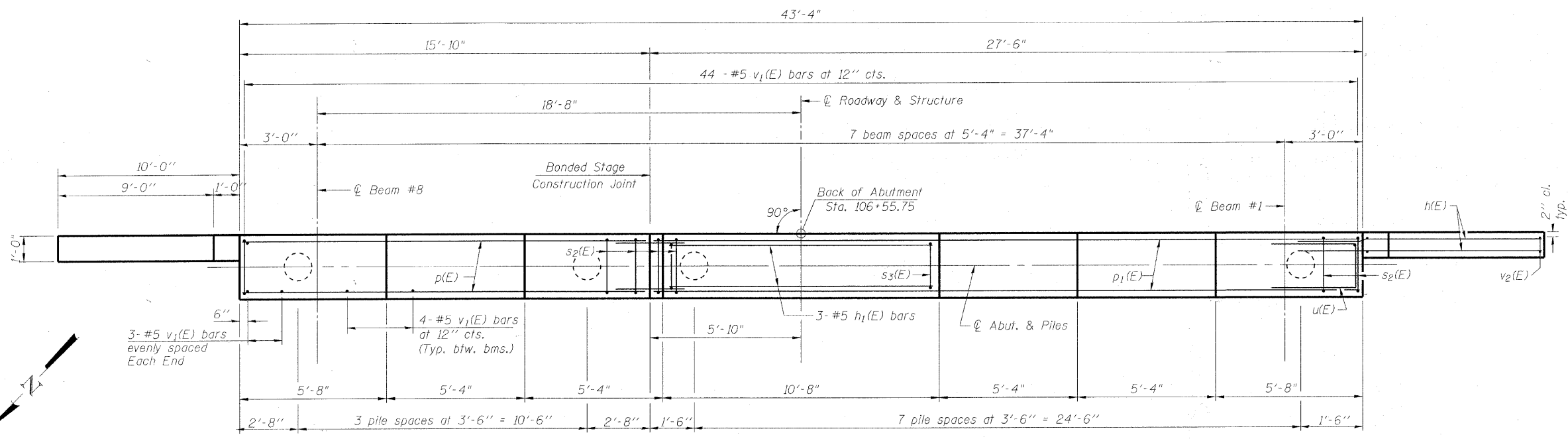
NOTE:  
Contractor shall drive one test pile in a permanent location as directed by the Engineer prior to ordering the remainder of piles.



**FIELD CUTTING DIAGRAM**

Order v<sub>2</sub>(E) full length. Cut as shown and use remainder of bars in opposite face.

**PLAN**



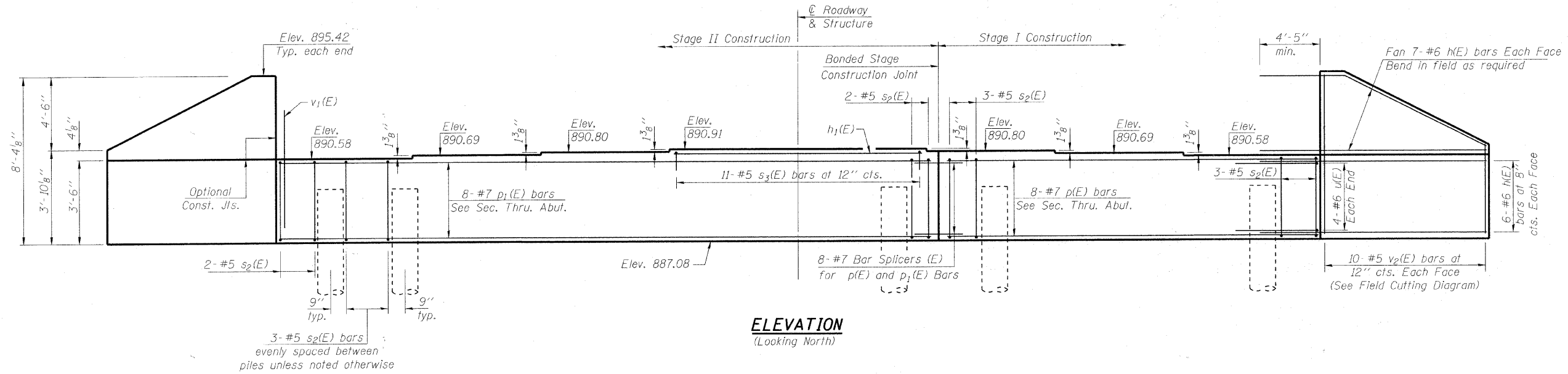
**SOUTH ABUTMENT  
STRUCTURE NO. 056-3181**

SHEET NO. 20 25 SHEETS	F.A.S. RTE. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 44
	CONTRACT NO. 63535				
JOB NO. C-91-139-11   ILLINOIS FED. AID PROJECT BRS-0028(107)					

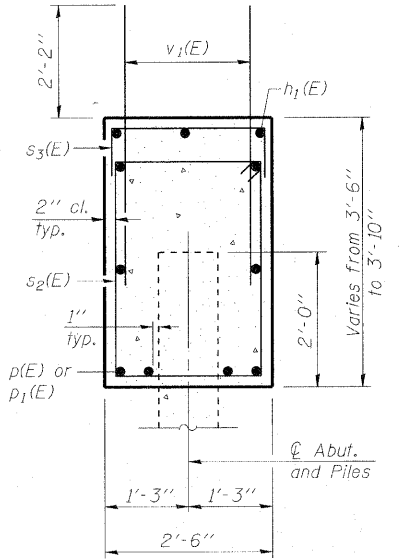
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 LICENSE NO. 184-00021 - EXPIRES 6/30/2011  
 2/4/2011 9:50:50 AM

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION

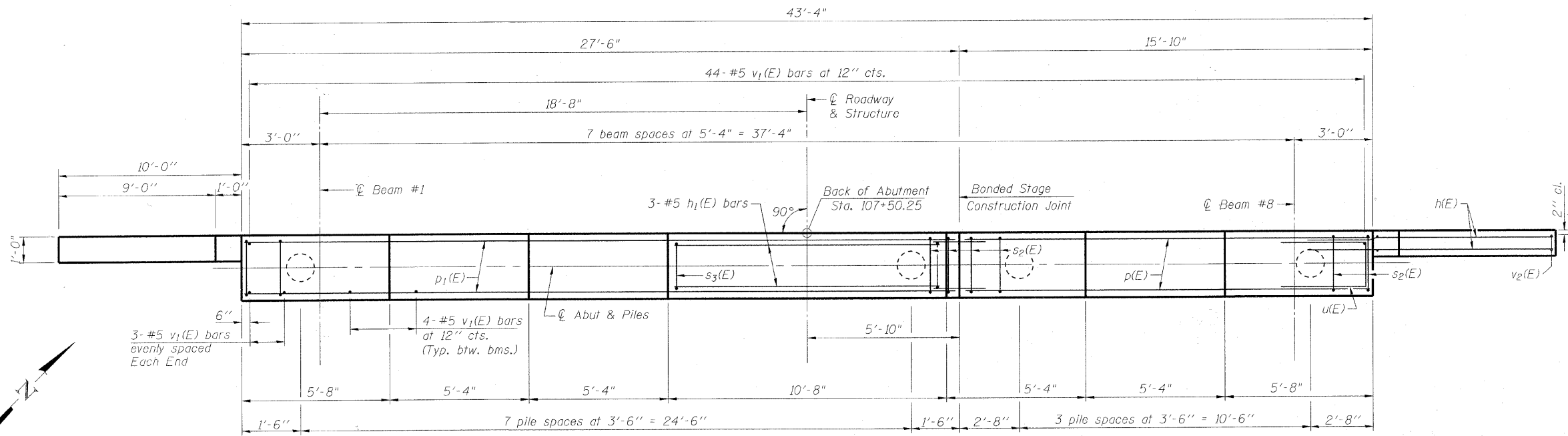
Notes:  
Pour steps monolithically with cap.



ELEVATION  
(Looking North)



SEC. THRU ABUT.



PLAN

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	52	#6	15'-3"	—
h1(E)	3	#5	10'-4"	—
p(E)	8	#7	15'-6"	—
p1(E)	8	#7	27'-2"	—
s2(E)	40	#5	11'-7"	□
s3(E)	11	#5	4'-2"	□
u(E)	8	#6	11'-0"	□
v1(E)	78	#5	4'-4"	—
v2(E)	20	#5	11'-6"	—
Structure Excavation		Cu. Yd.	199	
Concrete Structures		Cu. Yd.	18.6	
Reinforcement Bars, Epoxy Coated		Pound	3180	
Furnishing Metal Shell Piles 14" x 0.312"		Foot	308	
Driving Piles		Foot	308	
Test Pile Metal Shells		Each	1	
Pile Shoes		Each	12	

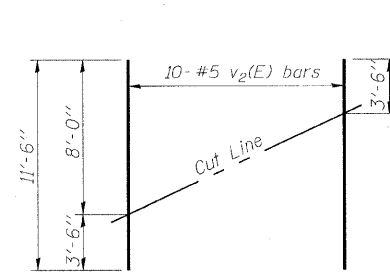
For details of Bar Splicers, see sheet 23 of 25.  
For details of piles and Concrete Encasement, see sheet 22 of 25.

PILE DATA

Type: 14"  $\phi$  Metal Shells w/ 0.312" walls with Pile Shoes  
Nominal Required Bearing: 320 Kips  
Factored Resistance Available: 160 Kips  
Est. Length: 28'  
No. Production Piles: 11  
No. Test Piles: 1

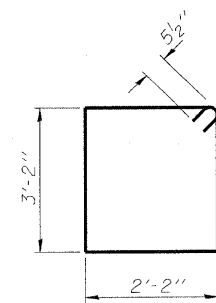
DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

NOTE:  
Contractor shall drive one test pile in a permanent location as directed by the Engineer prior to ordering the remainder of piles.

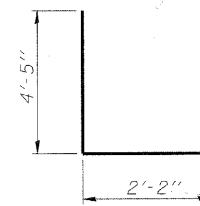


FIELD CUTTING DIAGRAM

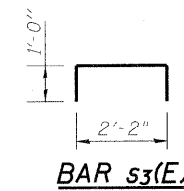
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s2(E)



BAR u(E)



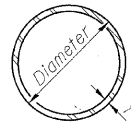
BAR s3(E)

NORTH ABUTMENT  
STRUCTURE NO. 056-3181

SHEET NO. 21 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	45
CONTRACT NO. 63535					
JOB NO. C-91-139-11   ILLINOIS FED. AID PROJECT BRS-0028(107)					

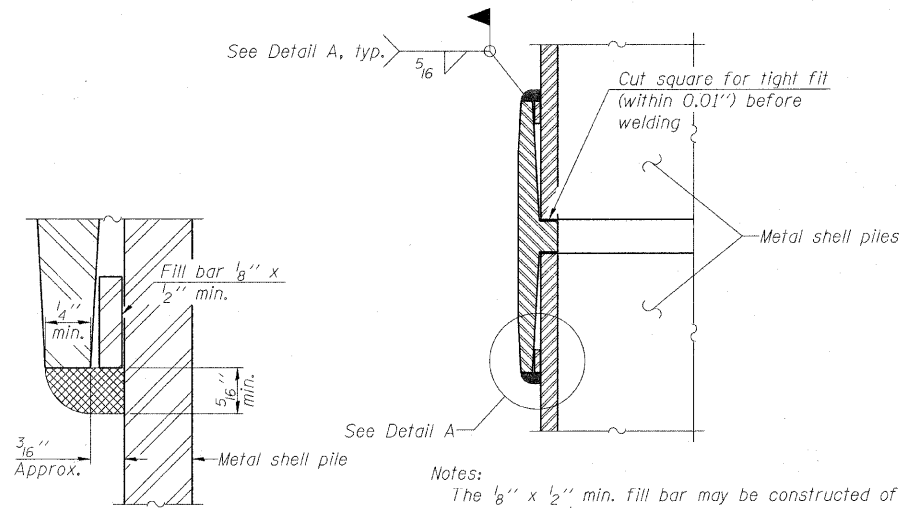
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 DRAWING NO. BR-0028-01-BR  
 DATE: 07/10/10  
 PROJECT: ILLINOIS FED. AID PROJECT BRS-0028(107)

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION



**METAL SHELL PILE TABLE**

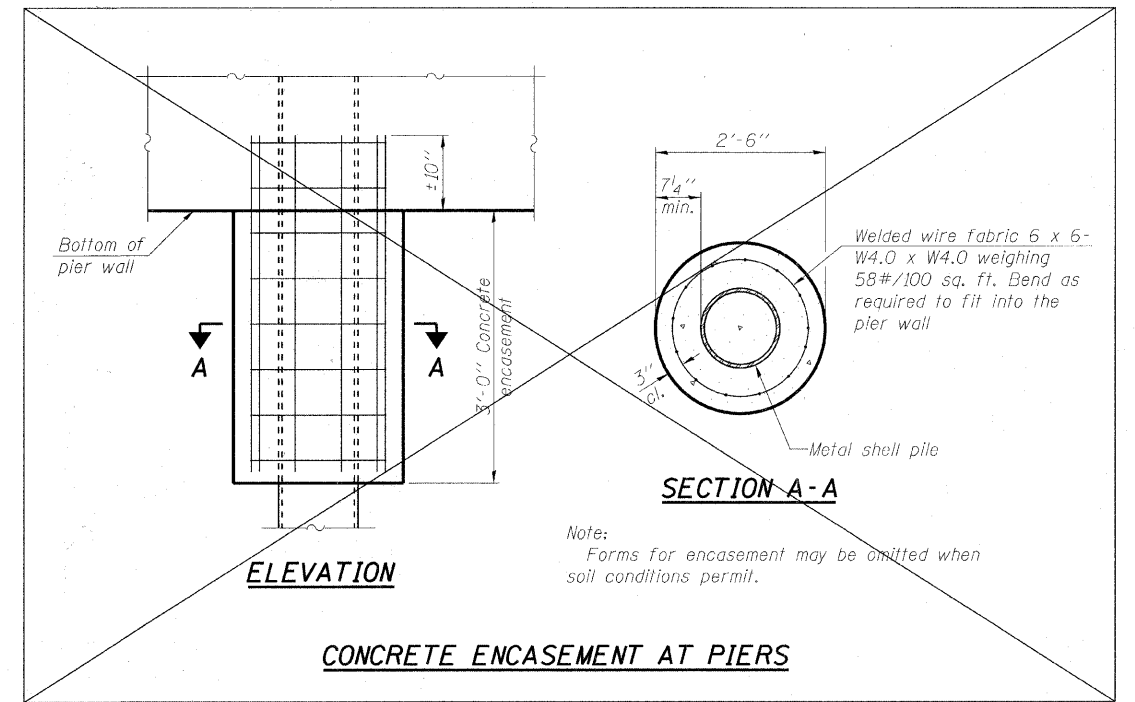
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. <sup>3</sup> /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



**DETAIL A**

**WELDED COMMERCIAL SPLICE**

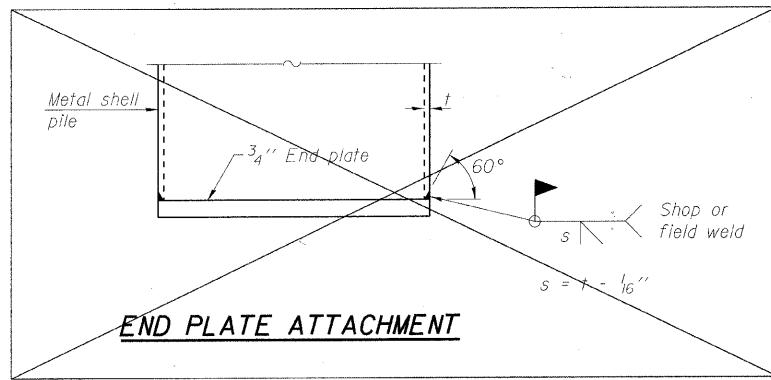
Notes:  
The  $\frac{1}{8}$ " x  $\frac{1}{2}$ " min. fill bar may be constructed of 2 bars with a  $\frac{1}{8}$ " max. gap between them.  
Pile segments shall be driven to solid contact with splicer before welding.



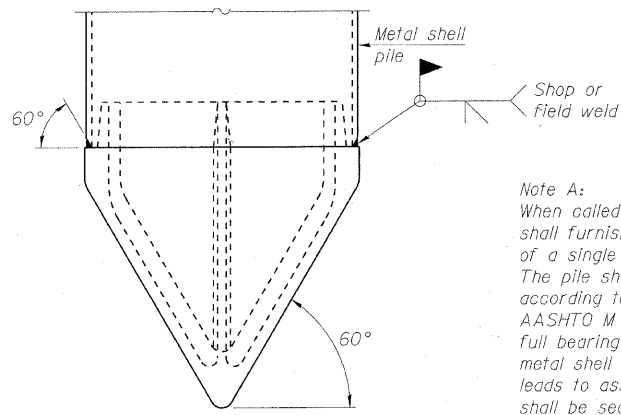
**SECTION A-A**

**CONCRETE ENCASEMENT AT PIERS**

Note:  
Forms for encasement may be omitted when soil conditions permit.



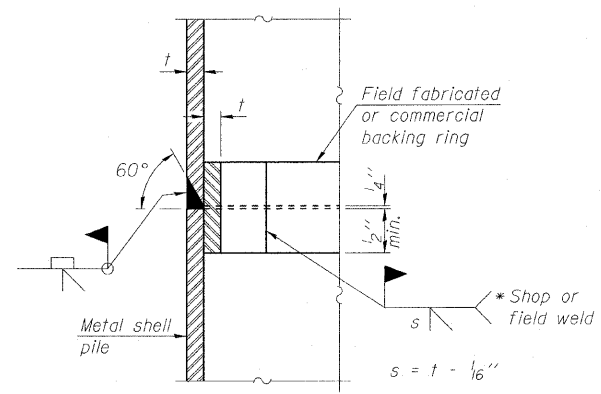
**END PLATE ATTACHMENT**



**METAL SHELL PILE SHOE ATTACHMENT**

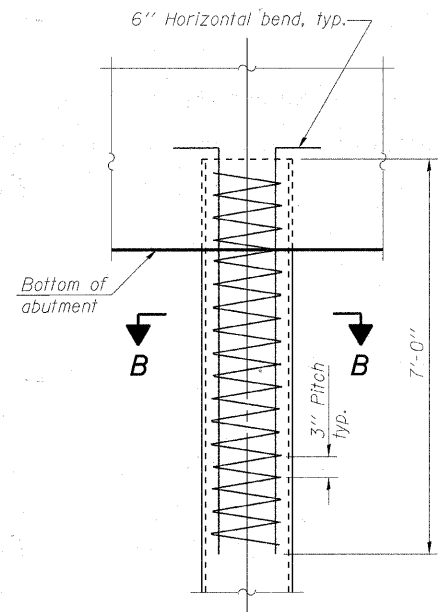
(See Note A)

Note A:  
When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.



**COMPLETE PENETRATION WELD SPLICE**

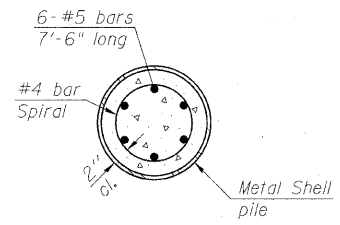
\* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



**ELEVATION**

**METAL SHELL REINFORCEMENT AT ABUTMENTS**

Pile Reinforcement at Abutments Included with the cost of Furnishing Metal Shell Piles.



**SECTION B-B**

**METAL SHELL PILE DETAILS  
STRUCTURE NO. 056-3181**

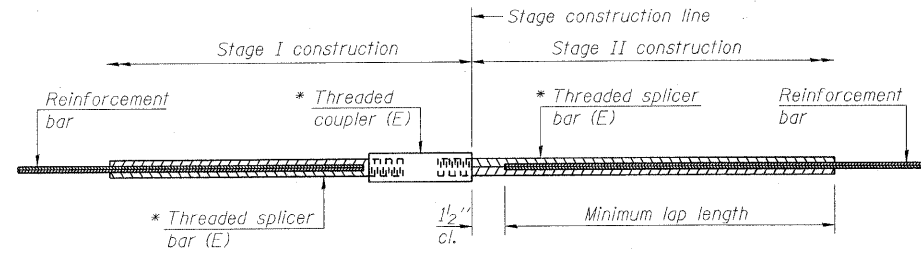
SHEET NO. 22	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25 SHEETS	0028	06-00320-01-BR	MCHENRY	70	46
CONTRACT NO. 63535					
JOB NO. C-91-139-11		ILLINOIS	FED. AID PROJECT	BRS-0028(107)	

Note:  
The metal shell piles shall be according to ASTM A 252 Grade 3.

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 STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM  
 No. 06-00320-01-BR  
 2/27/01  
 9:40:05 AM  
 I:\Projects\06-00320-01-BR\Drawings\06-00320-01-BR-Details.dwg

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION



**STANDARD BAR SPLICER ASSEMBLY**

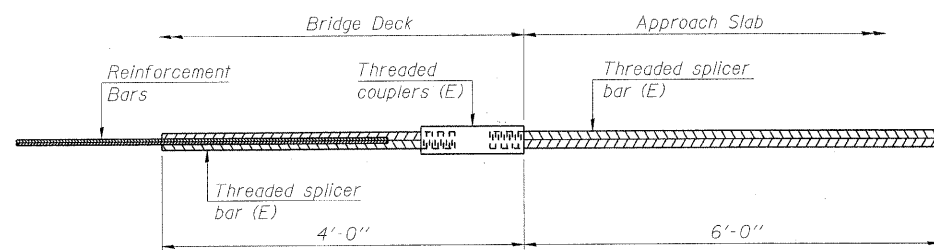
Bar size to be spliced	Minimum Lap Lengths			
	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-1"	6'-5"	6'-10"	7'-9"

Table 1: Black bar, 0.8 Class C  
 Table 2: Black bar, Top bar lap, 0.8 Class C  
 Table 3: Epoxy bar, 0.8 Class C  
 Table 4: Epoxy bar, Top bar lap, 0.8 Class C

Threaded splicer bar length = min. lap length + 1/2" + thread length

\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

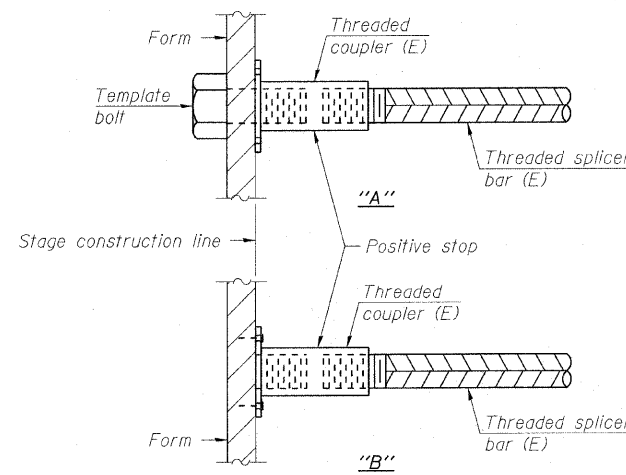
Location	Bar size	No. assemblies required	Table for minimum lap length
Bridge Deck	#5	277	3
Diaphragms	#6	10	4
Abutments	#7	16	4
Approach Slabs	#4	50	3
Approach Footings	#5	80	3
Approach Slabs	#5	92	3



**BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

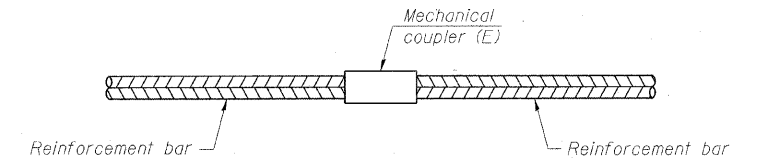
No. required = 88

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB



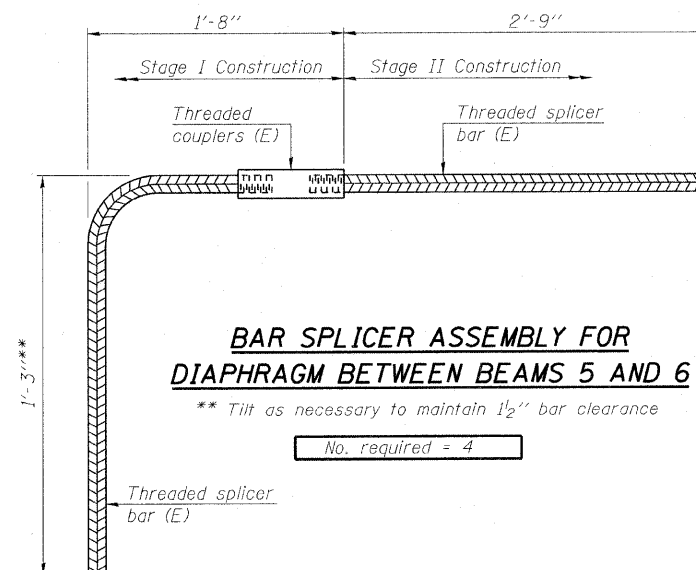
**INSTALLATION AND SETTING METHODS**

"A" : Set bar splicer assembly by means of a template bolt.  
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.  
 (E) : Indicates epoxy coating.



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



**BAR SPLICER ASSEMBLY FOR DIAPHRAGM BETWEEN BEAMS 5 AND 6**

\*\*\* Tilt as necessary to maintain 1/2" bar clearance

No. required = 4

**NOTES**

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
 All reinforcement shall be lapped and tied to the splicer bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
STRUCTURE NO. 056-3181**

SHEET NO. 23 25 SHEETS	F.A.S. RTE. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 47
	CONTRACT NO. 63535				
JOB NO. C-91-139-11		ILLINOIS	FED. AID PROJECT BRS-0028(107)		

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 LICENSE NO. 188-00121-EXPRES-4/20/2011  
 EXPIRES 2/2/2011

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION

File No. 19457 BORING LOG 1  
Client: Baxter & Woodman, Inc. Sheet 1 of 4  
Project: Lawrence Rd. over Lawrence Creek Date: 9/25/08  
Structural #056-3011  
Location: McHenry County, IL Drilled By: AC  
Equipment:  CME 45B  H.A.  Other Logged By: DA

Elev. ft.	Description	Depth, ft.	S	T	R	B	N	Pen.	W	Uw	Qu
99.5'	Bituminous concrete - 10.5"										
	Base - brown sand & gravel, damp, medium dense	1	SS	13"	5	32		3.5			
	Dark brown-black-brown silt, some sand & clay, trace gravel, very damp, very loose - Fill	2	SS	6"	2	4		13.8			
	Brown silt, some sand, trace clay & gravel, very damp, very loose	3	SS	16"	1	1		18.0			
	Brown-gray silt, some clay, trace fine sand & roots, very damp, loose	4	SS	15"	4	9		25.9			
	Gray silt, some clay, trace sand & roots, very damp, loose	5	SS	15"	11	15		19.7			
	Gray fine-medium sand & gravel, some coarse sand, very damp, saturated, medium dense to dense	6	SS	14"	13	22		10.5			
	(fuel odor at 18.0')	7	SS	18"	22	41		9.5			
		8	SS	18"	19	35		6.9			
		9	SS	18"	19	35					

Water Level - depth, ft. elev., ft.  
- while drilling: 10.0  
- after drilling: 11.0  
hrs. after drilling: \_\_\_\_\_  
S - sample T - type: J(M), SS(spl-spoon), ST (shotby tube) R - recovery length, in.  
B - Standard Penetration Test (SPT), blow/ft interval. W - water content, %  
N - SPT, blow/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30".  
Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs./cu. ft.  
Cu - unconfined compressive strength, tons/sq. ft.

File No. 19457 BORING LOG 1  
Client: Baxter & Woodman, Inc. Sheet 2 of 4  
Project: Lawrence Rd. over Lawrence Creek Date: 9/25/08  
Structural #056-3011  
Location: McHenry County, IL Drilled By: AC  
Equipment:  CME 45B  H.A.  Other Logged By: DA

Elev. ft.	Description	Depth, ft.	S	T	R	B	N	Pen.	W	Uw	Qu
	Gray fine-medium sand, some coarse sand & gravel, very damp-saturated dense	10	SS	18"	19	36		8.6			
	Gray sand, some silt, trace gravel damp, dense	11	SS	18"	27	42		8.5			
	Gray fine sand, very damp, very dense	12	SS	14"	33	57		16.6			
	Gray silt, some sand & clay, damp, very dense	14	SS	18"	39	62		9.7			
	Gray sand & silt, trace clay & gravel, damp, very dense	15	SS	18"	36	60		11.4			
	Gray silt, some clay, trace sand & gravel, damp, very dense	16	SS	18"	35	61		10.4			
	Gray clay & silt, trace sand & gravel, damp, very hard	17	SS	18"	27	45		8.7	140.9	10.0+	

Water Level - depth, ft. elev., ft.  
- while drilling: \_\_\_\_\_  
- after drilling: \_\_\_\_\_  
hrs. after drilling: \_\_\_\_\_  
S - sample T - type: J(M), SS(spl-spoon), ST (shotby tube) R - recovery length, in.  
B - Standard Penetration Test (SPT), blow/ft interval. W - water content, %  
N - SPT, blow/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30".  
Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs./cu. ft.  
Cu - unconfined compressive strength, tons/sq. ft.

File No. 19457 BORING LOG 1  
Client: Baxter & Woodman, Inc. Sheet 3 of 4  
Project: Lawrence Rd. over Lawrence Creek Date: 9/25/08  
Structural #056-3011  
Location: McHenry County, IL Drilled By: AC  
Equipment:  CME 45B  H.A.  Other Logged By: DA

Elev. ft.	Description	Depth, ft.	S	T	R	B	N	Pen.	W	Uw	Qu
	Gray clay & silt, trace sand & gravel, damp, very hard	18	SS	18"	27	49	4.5+	8.4	140.5	10.0+	
	Gray medium-coarse sand & gravel, some fine sand, very damp-saturated very dense	19	SS	18"	31	51	4.5+	8.0	136.3	9.8	
	Gray clay & silt, trace sand & gravel, damp, very dense	20	SS	18"	27	48	4.5+	7.5	132.9	8.8	
	Gray fine sand, very damp, dense	21	SS	18"	34	61	4.5+	8.0	125.3	8.2	
	Gray silt, some clay, trace sand & gravel, damp, dense	22	SS	18"	26	45		14.0			
	Gray silt, some clay, trace sand & gravel, damp, dense	23	SS	18"	25	45		8.0			

Water Level - depth, ft. elev., ft.  
- while drilling: \_\_\_\_\_  
- after drilling: \_\_\_\_\_  
hrs. after drilling: \_\_\_\_\_  
S - sample T - type: J(M), SS(spl-spoon), ST (shotby tube) R - recovery length, in.  
B - Standard Penetration Test (SPT), blow/ft interval. W - water content, %  
N - SPT, blow/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30".  
Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs./cu. ft.  
Cu - unconfined compressive strength, tons/sq. ft.

File No. 19457 BORING LOG 1  
Client: Baxter & Woodman, Inc. Sheet 4 of 4  
Project: Lawrence Rd. over Lawrence Creek Date: 9/25/08  
Structural #056-3011  
Location: McHenry County, IL Drilled By: AC  
Equipment:  CME 45B  H.A.  Other Logged By: DA

Elev. ft.	Description	Depth, ft.	S	T	R	B	N	Pen.	W	Uw	Qu
	Gray silt, some clay, trace sand & gravel, damp, dense	24	SS	18"	24	41		8.8			
	Gray medium-coarse sand & gravel, some fine sand, very damp-saturated very dense	25	SS	18"	30	50		8.8			
	Gray clay & silt, trace sand & gravel, damp, very dense	26	SS	18"	32	55		7.8			
	End of Boring	27									

Water Level - depth, ft. elev., ft.  
- while drilling: \_\_\_\_\_  
- after drilling: \_\_\_\_\_  
hrs. after drilling: \_\_\_\_\_  
S - sample T - type: J(M), SS(spl-spoon), ST (shotby tube) R - recovery length, in.  
B - Standard Penetration Test (SPT), blow/ft interval. W - water content, %  
N - SPT, blow/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30".  
Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs./cu. ft.  
Cu - unconfined compressive strength, tons/sq. ft.

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DESIGNED *BLB*  
CHECKED *AS*  
DRAWN *BCD*  
CHECKED *BLB*

SOIL BORINGS  
STRUCTURE NO. 056-3181

SHEET NO. 24 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	48
JOB NO. C-91-139-11			ILLINOIS FED. AID PROJECT BRS-0028(107)		



MCHENRY COUNTY  
DIVISION OF TRANSPORTATION

**SOIL AND MATERIAL CONSULTANTS, INC.** File No. 19457 **BORING LOG 2**  
 Client: Baxter & Woodman, Inc. Sheet 2 of 4  
 Project: Lawrence Rd. over Lawrence Creek Date 9/17/08  
 Structural #056-3011  
 Location: McHenry County, IL Drilled By AC  
 Equipment:  CME 45B  H.A.  Other Logged By DA

Elev., ft.	Description	Depth, ft.	O	S	T	R	B	N	Pen.	W	Uw	Qu
99.5'	Bituminous concrete											
	Base - brown sand & gravel, damp, loose	1	SS	12"					6.0			
	Dark brown silt, some clay, trace sand, very damp, loose (zone #1)	2	SS	16"					14.0			
	Brown silt, some clay, trace sand, very damp, very loose	3	SS	16"				4	22.3			
		4	SS	18"				3	25.5			
	Brown fine-medium sand, some coarse sand & gravel, damp-saturated, medium dense to dense	5	SS	19"				3.8	7.7			
		6	SS	16"				1.8	10.1			
		7	SS	18"				3.1	5.5			
		8	SS	15"				3.1	4.2			
	Brown fine-med. sand, some coarse sand & gravel, damp-saturated, medium dense	9	SS	18"				1.1	6.3			

Water Level - depth, ft. elev., ft.  
 - while drilling: 9.2  
 - after drilling: 9.0  
 hrs. after drilling: \_\_\_\_\_

S - sample T - type: J(M), SS(spl-spoon), ST(slabby tube) R - recovery length, in.  
 B - Standard Penetration Test (SPT), blow/ft interval W - water content, %  
 N - SPT, blow/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"  
 Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs./cu.ft.  
 Qu - unconfined compressive strength, tons/sq. ft.

F-111b

**SOIL AND MATERIAL CONSULTANTS, INC.** File No. 19457 **BORING LOG 2**  
 Client: Baxter & Woodman, Inc. Sheet 2 of 4  
 Project: Lawrence Rd. over Lawrence Creek Date 9/17/08  
 Structural #056-3011  
 Location: McHenry County, IL Drilled By AC  
 Equipment:  CME 45B  H.A.  Other Logged By DA

Elev., ft.	Description	Depth, ft.	O	S	T	R	B	N	Pen.	W	Uw	Qu
	Gray fine-medium sand, some coarse sand & gravel, very damp-saturated medium dense	10	SS	13"					12.5			
		11	SS	15"				1.5	6.3			
		12	SS	16"				1.0	6.2			
	Gray fine sand, trace medium-coarse sand & gravel, very damp-saturated, dense	13	SS	18"				1.8	10.6			
		14	SS	18"				1.8	9.4			
	Gray fine sand, trace medium-coarse sand, gravel & silt, very damp, very dense	15	SS	18"				3.2	9.6			
		16	SS	18"				3.7	9.8			
		17	SS	18"				4.5	9.3			

Water Level - depth, ft. elev., ft.  
 - while drilling: \_\_\_\_\_  
 - after drilling: \_\_\_\_\_  
 hrs. after drilling: \_\_\_\_\_

S - sample T - type: J(M), SS(spl-spoon), ST(slabby tube) R - recovery length, in.  
 B - Standard Penetration Test (SPT), blow/ft interval W - water content, %  
 N - SPT, blow/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"  
 Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs./cu.ft.  
 Qu - unconfined compressive strength, tons/sq. ft.

F-111b

**SOIL AND MATERIAL CONSULTANTS, INC.** File No. 19457 **BORING LOG 2**  
 Client: Baxter & Woodman, Inc. Sheet 8 of 4  
 Project: Lawrence Rd. over Lawrence Creek Date 9/17/08  
 Structural #056-3011  
 Location: McHenry County, IL Drilled By AC  
 Equipment:  CME 45B  H.A.  Other Logged By DA

Elev., ft.	Description	Depth, ft.	O	S	T	R	B	N	Pen.	W	Uw	Qu
	Gray fine sand, trace medium-coarse sand, gravel & silt, very damp, very dense	18	SS	18"				3.1	8.4			
	Gray fine sand, trace medium-coarse sand & gravel, very damp, dense	19	SS	18"				3.1	14.3			
	Gray fine sand, very damp, dense	20	SS	18"				2.1	12.8			
	Gray silt, some clay, trace sand & gravel, damp, dense to very dense	21	SS	18"				2.6	8.4			
		22	SS	18"				3.3	8.8			
	Gray fine-medium sand, some coarse sand & gravel, very damp-saturated dense	23	SS	14"				2.5	10.3			

Water Level - depth, ft. elev., ft.  
 - while drilling: \_\_\_\_\_  
 - after drilling: \_\_\_\_\_  
 hrs. after drilling: \_\_\_\_\_

S - sample T - type: J(M), SS(spl-spoon), ST(slabby tube) R - recovery length, in.  
 B - Standard Penetration Test (SPT), blow/ft interval W - water content, %  
 N - SPT, blow/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"  
 Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs./cu.ft.  
 Qu - unconfined compressive strength, tons/sq. ft.

F-111b

**SOIL AND MATERIAL CONSULTANTS, INC.** File No. 19457 **BORING LOG 2**  
 Client: Baxter & Woodman, Inc. Sheet 4 of 4  
 Project: Lawrence Rd. over Lawrence Creek Date 9/17/08  
 Structural #056-3011  
 Location: McHenry County, IL Drilled By AC  
 Equipment:  CME 45B  H.A.  Other Logged By DA

Elev., ft.	Description	Depth, ft.	O	S	T	R	B	N	Pen.	W	Uw	Qu
	Gray fine-medium sand, some coarse sand & gravel, very damp-saturated dense to very dense	24	SS	18"				2.3	9.2			
		25	SS	12"				2.7	8.1			
	Gray limestone, very dense	26	SS	-				-	Refusal			
		27	SS	-				-	Refusal			

Water Level - End of Boring depth, ft. elev., ft.  
 - while drilling: \_\_\_\_\_  
 - after drilling: \_\_\_\_\_  
 hrs. after drilling: \_\_\_\_\_

S - sample T - type: J(M), SS(spl-spoon), ST(slabby tube) R - recovery length, in.  
 B - Standard Penetration Test (SPT), blow/ft interval W - water content, %  
 N - SPT, blow/foot to drive 2" O.D. split-spoon sampler with 140 lb. hammer falling 30"  
 Pen. - pocket penetrometer reading, tons/sq. ft. Uw - dry unit weight of soil, lbs./cu.ft.  
 Qu - unconfined compressive strength, tons/sq. ft.

F-111b

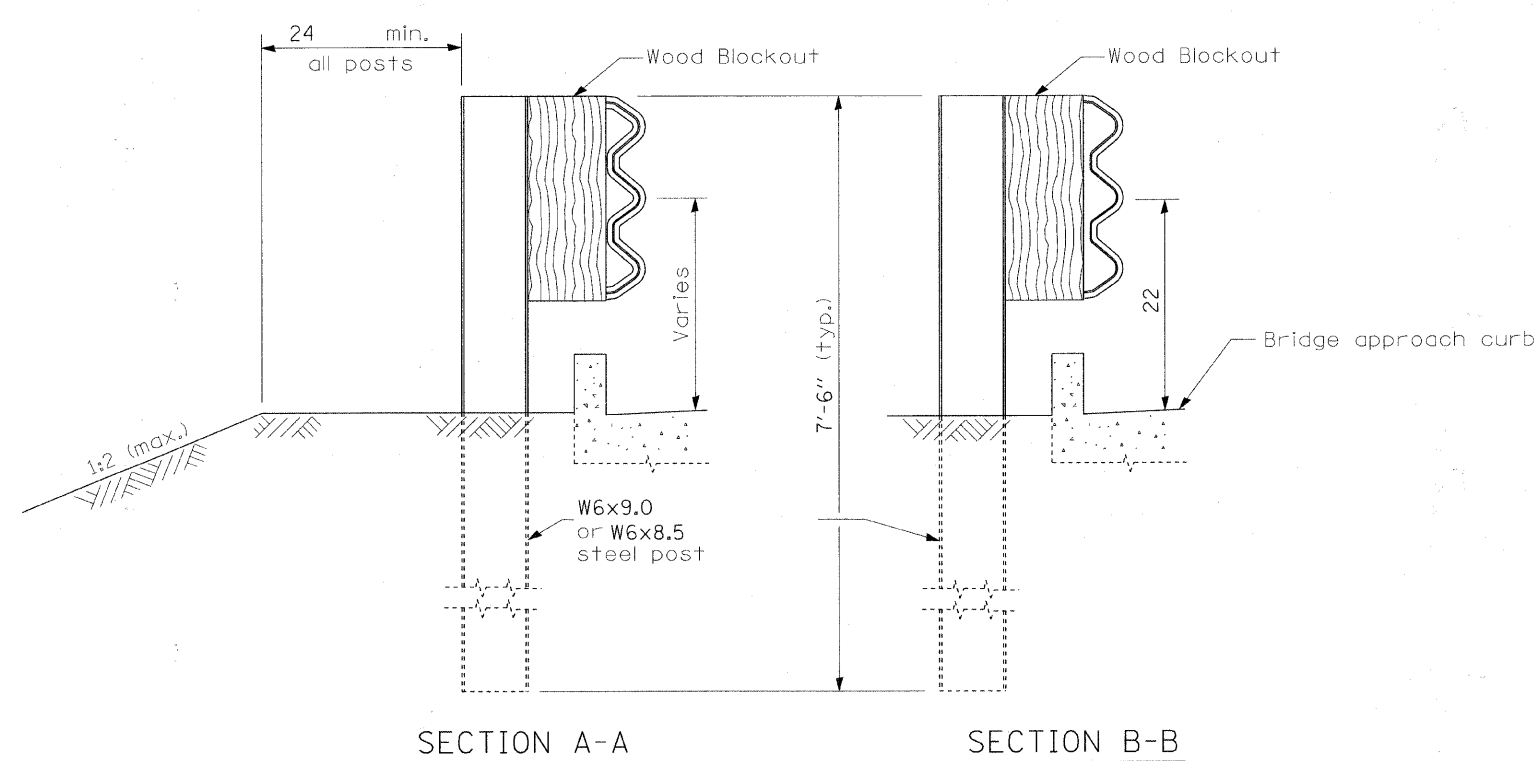
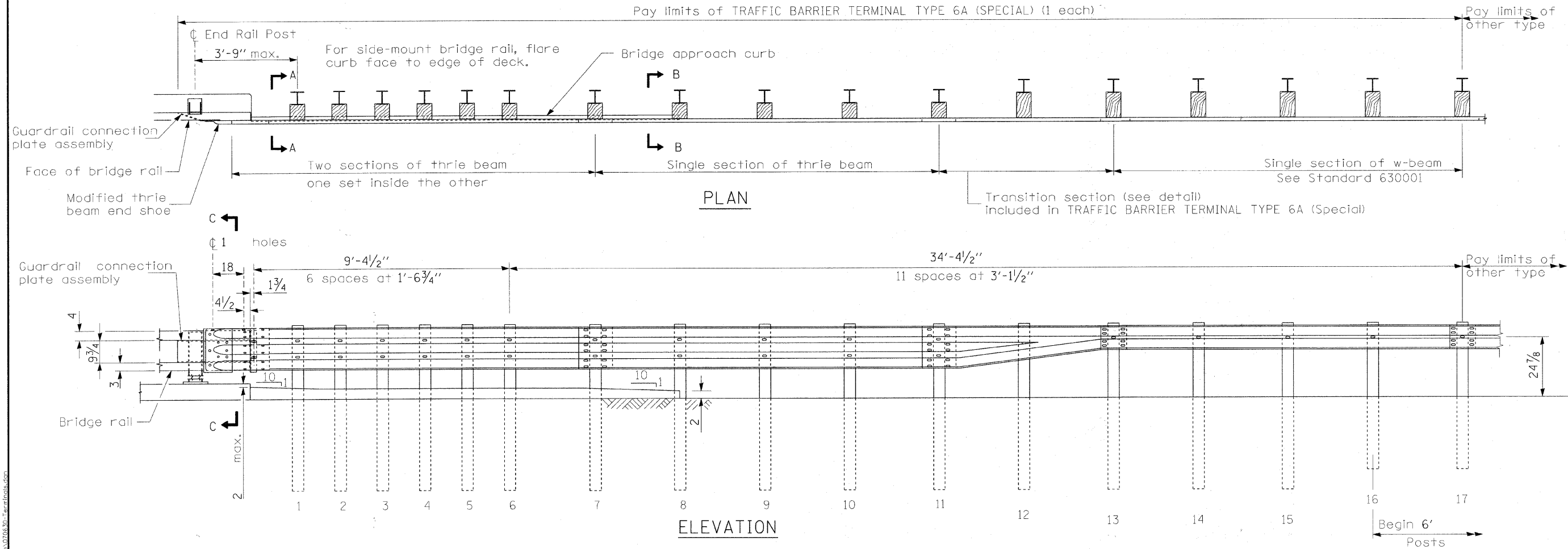
DESIGNED BLB  
 CHECKED AS  
 DRAWN BCD  
 CHECKED BLB

**SOIL BORINGS  
STRUCTURE NO. 056-3181**

SHEET NO. 25 25 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	49
CONTRACT NO. 63535					
JOB NO. C-91-139-11		ILLINOIS	FED. AID PROJECT	BRS-0028(107)	

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 No. 39-002101-0001  
 2/2/2001

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION



GENERAL NOTES

- See Standard 630001 for details of guardrail not shown.
- Thrie beam rail shall be bolted to block-out at all posts.
- All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).
- All dimensions are in inches unless otherwise shown.

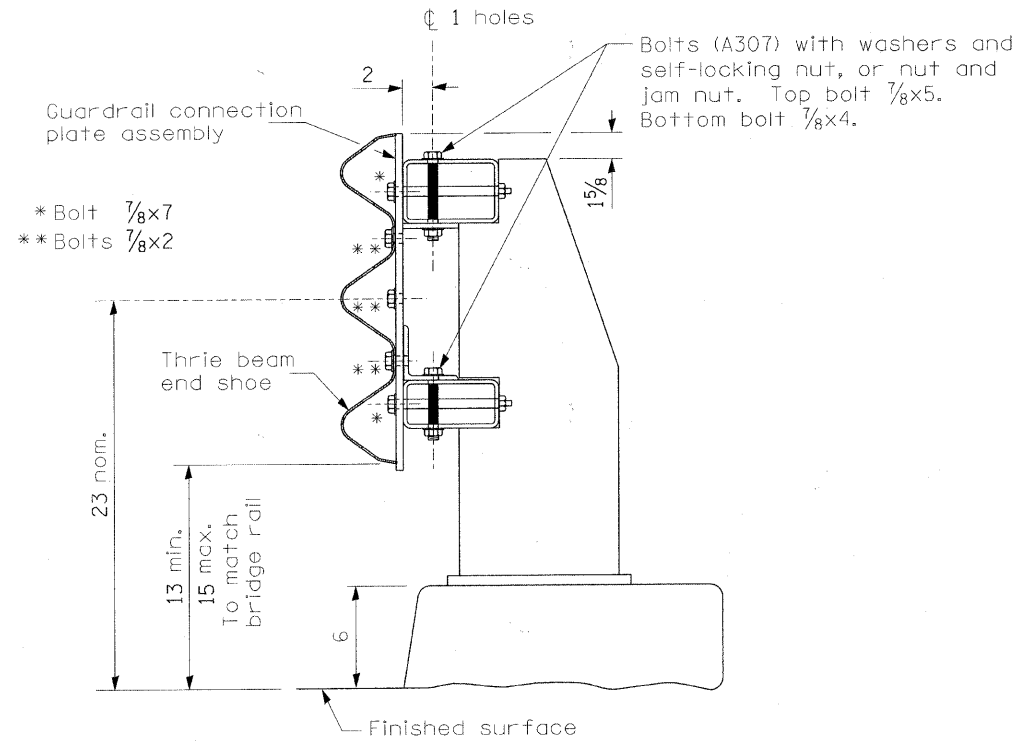
**TRAFFIC BARRIER TERMINAL  
TYPE 6A (SPECIAL)  
STRUCTURE NO. 056-3181**

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

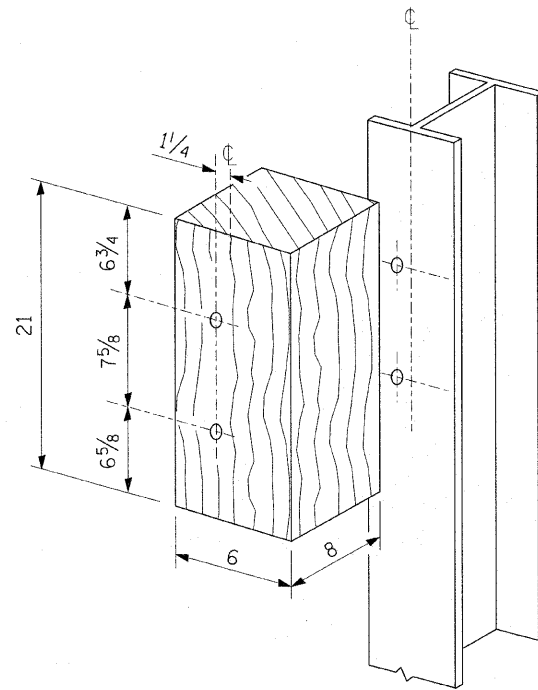
SHEET NO. 1 3 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	50
CONTRACT NO. 63535					
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)					

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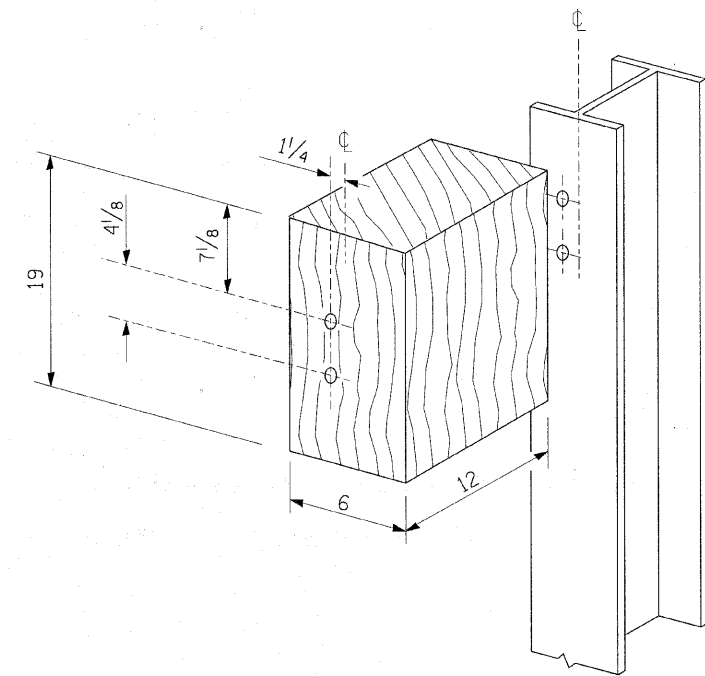
MCHENRY COUNTY  
DIVISION OF TRANSPORTATION



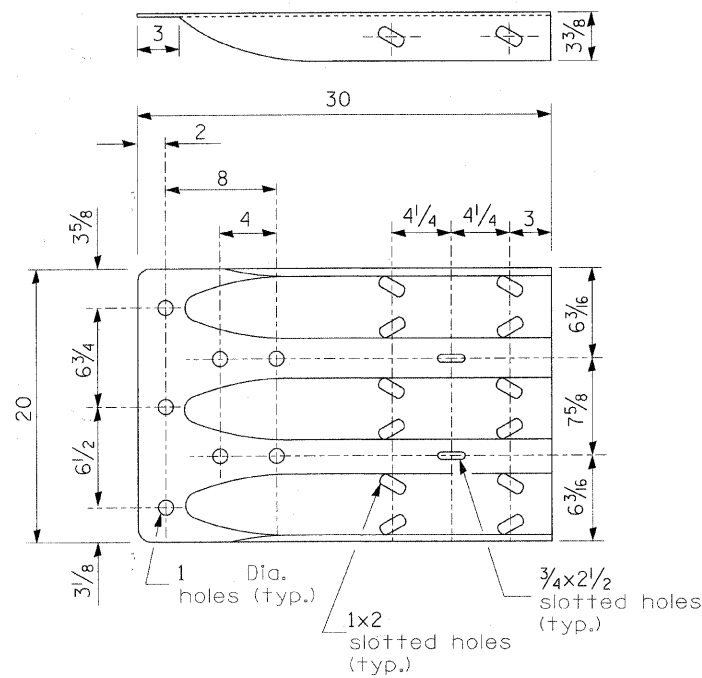
SECTION C-C



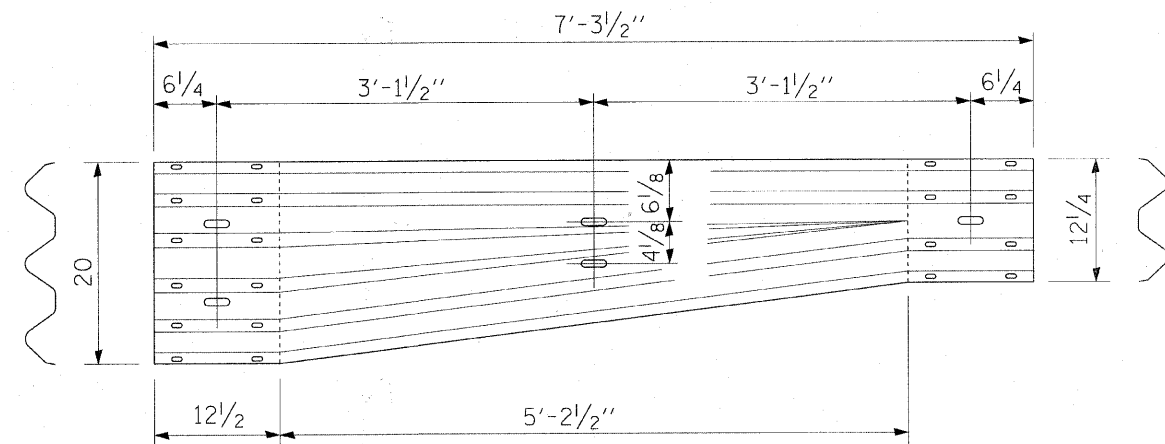
POSTS 1-11 WOOD BLOCKOUT DETAIL



POST 12 WOOD BLOCKOUT DETAIL  
(See Standard 630001 for post 13-17 blockouts.)



MODIFIED THRIE BEAM END SHOE DETAIL



TRANSITION SECTION  
(10 gauge rail element)

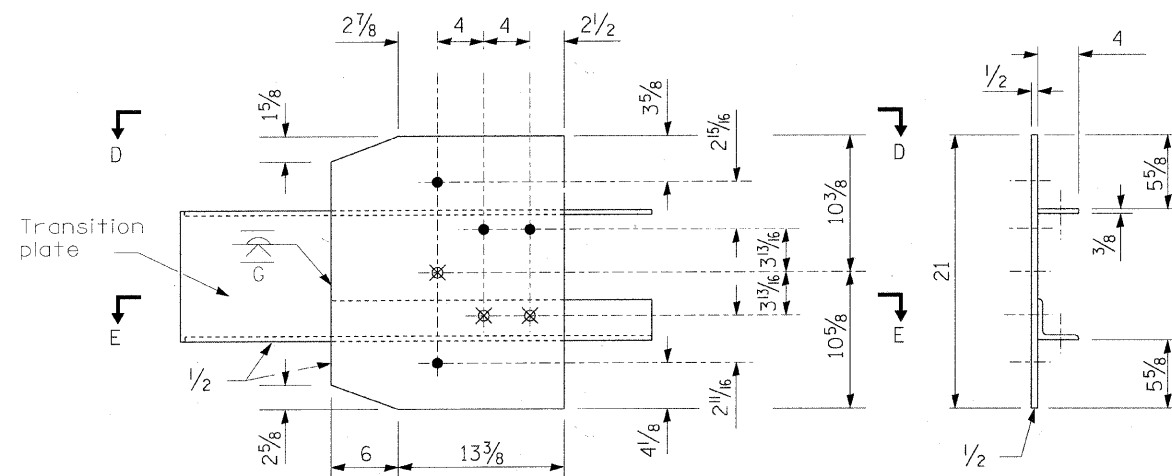
**TRAFFIC BARRIER TERMINAL  
TYPE 6A (SPECIAL)  
STRUCTURE NO. 056-3181**

SHEET NO. 2 3 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	51
CONTRACT NO. 63535					
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)					

DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

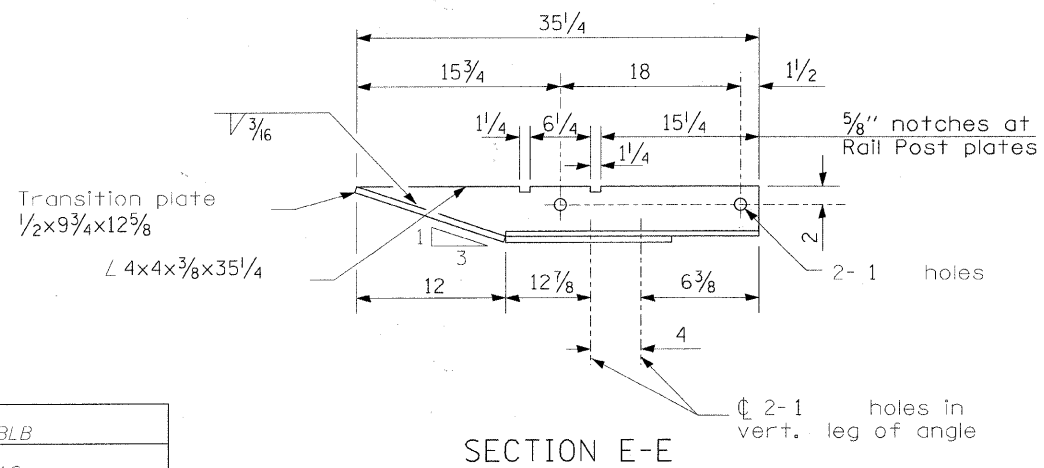
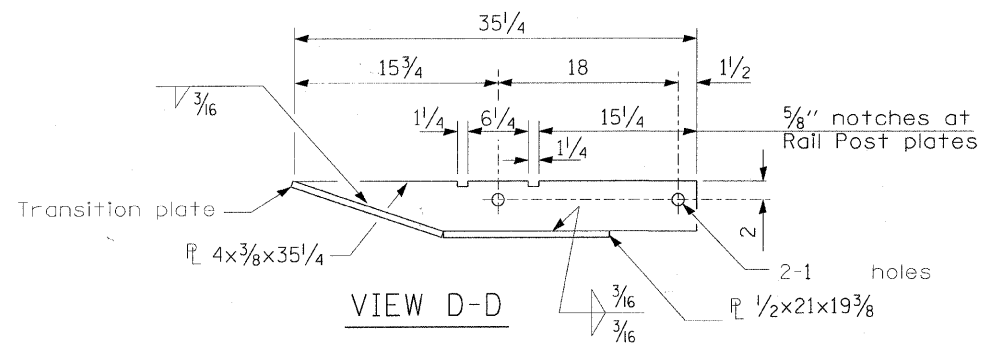
COPYRIGHT © 2003 BY BAYLER & WOODMAN, INC.  
 STATE OF ILLINOIS PROFESSIONAL DESIGN FIRM  
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 111 W. WASHINGTON ST. CHICAGO, IL 60601-1001  
 TEL: 312.467.1701 FAX: 312.467.1701  
 WWW.BAYLERWOODMAN.COM

MCHENRY COUNTY  
DIVISION OF TRANSPORTATION



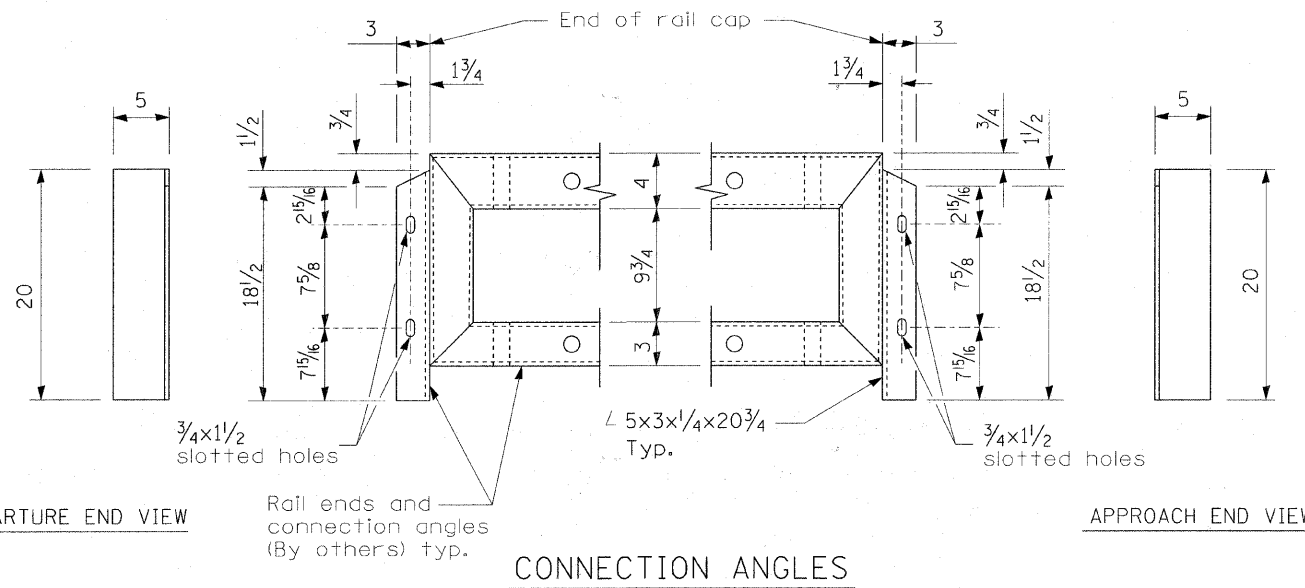
GUARDRAIL CONNECTION PLATE ASSEMBLY DETAILS

(Mirror for opposite end)



- 4-1 holes for 7/8 H.S. bolts and nuts
- ⊗ Drill and tap 3 holes for 7/8 H.S. bolts.

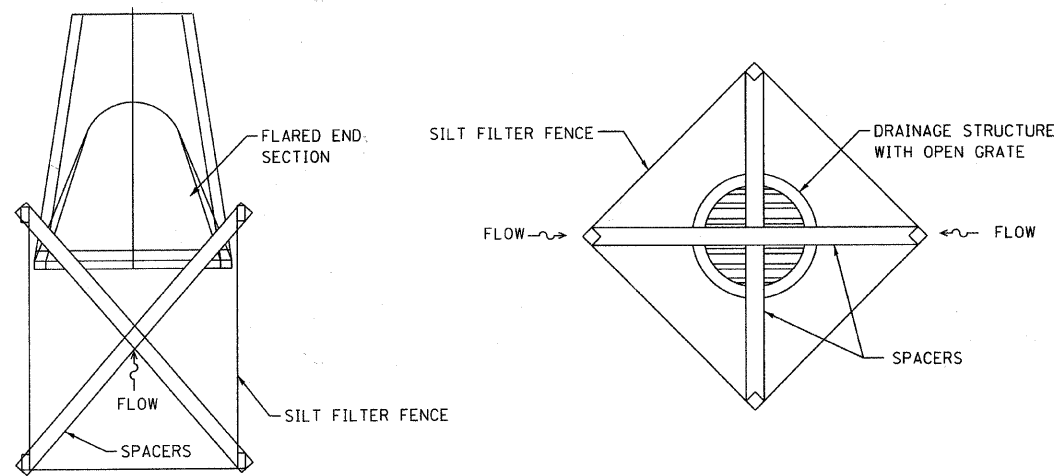
LEGEND



DESIGNED	BLB
CHECKED	AS
DRAWN	BCD
CHECKED	BLB

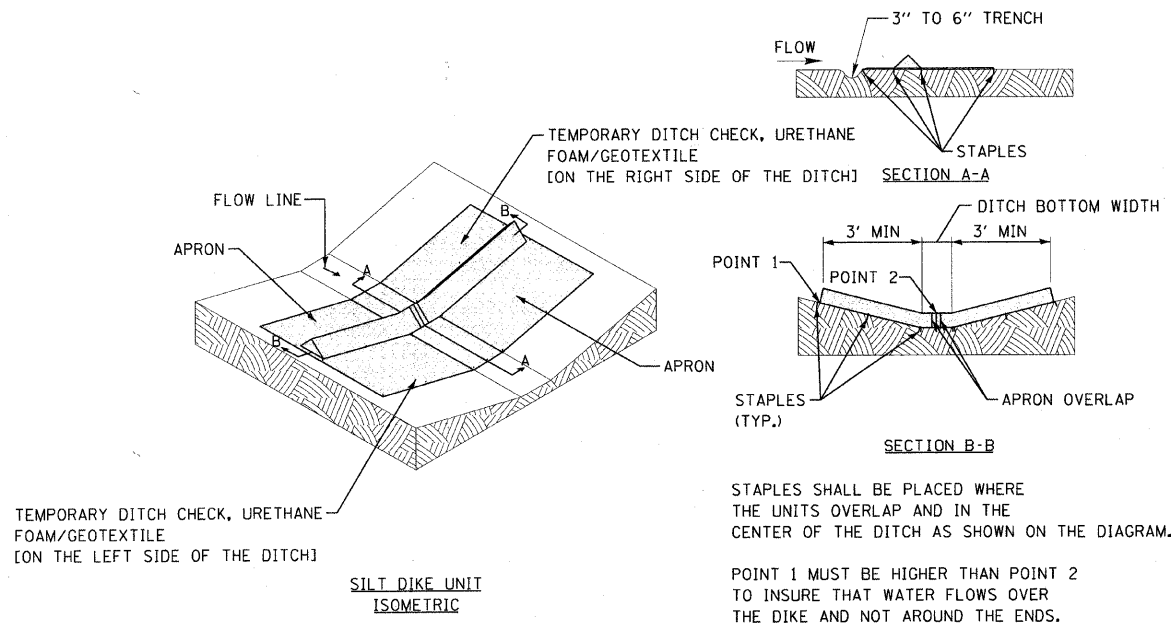
TRAFFIC BARRIER TERMINAL  
TYPE 6A (SPECIAL)  
STRUCTURE NO. 056-3181

SHEET NO. 3 3 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	0028	06-00320-01-BR	MCHENRY	70	52
CONTRACT NO. 63535					
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)					



•INSTALL PER IDOT STANDARD 280001-05

**DRAINAGE PROTECTION**  
NOT TO SCALE

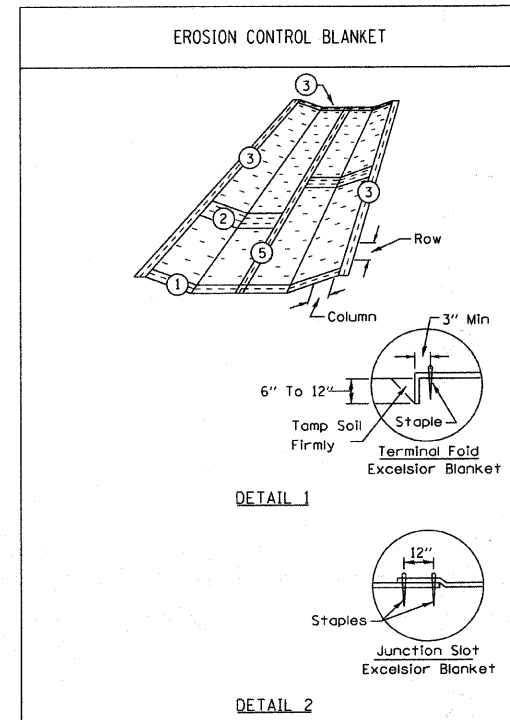


TEMPORARY DITCH CHECK, URETHANE FOAM/GEOTEXTILE (ON THE LEFT SIDE OF THE DITCH)

**SILT DIKE UNIT ISOMETRIC**

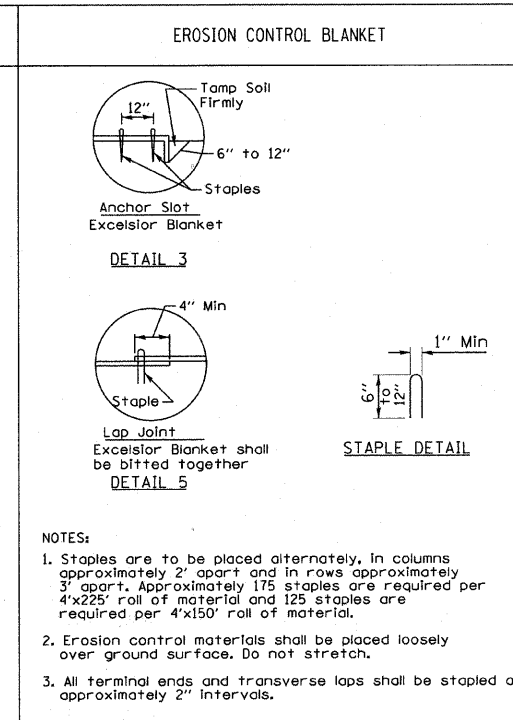
NOTES:  
1. THE INSTALLATION SHOWN ABOVE WILL BE MEASURED FOR PAYMENT IN FEET PERPENDICULAR TO THE FLOW LINE.

**TEMPORARY DITCH CHECK**  
NO SCALE



DETAIL 1

DETAIL 2

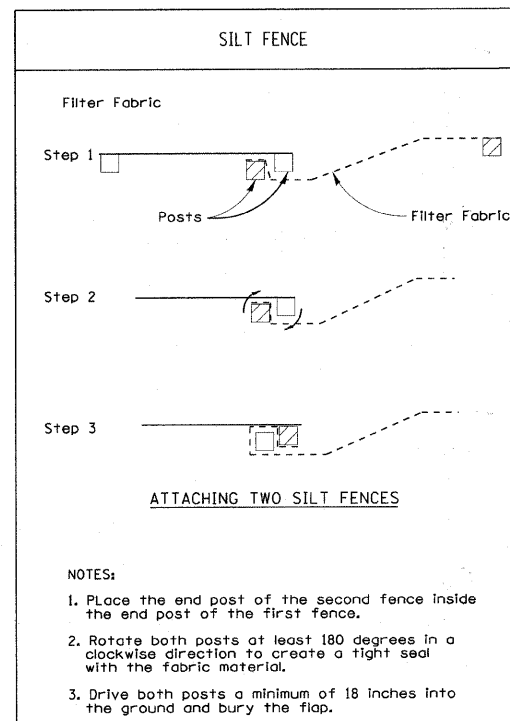


DETAIL 3

DETAIL 4

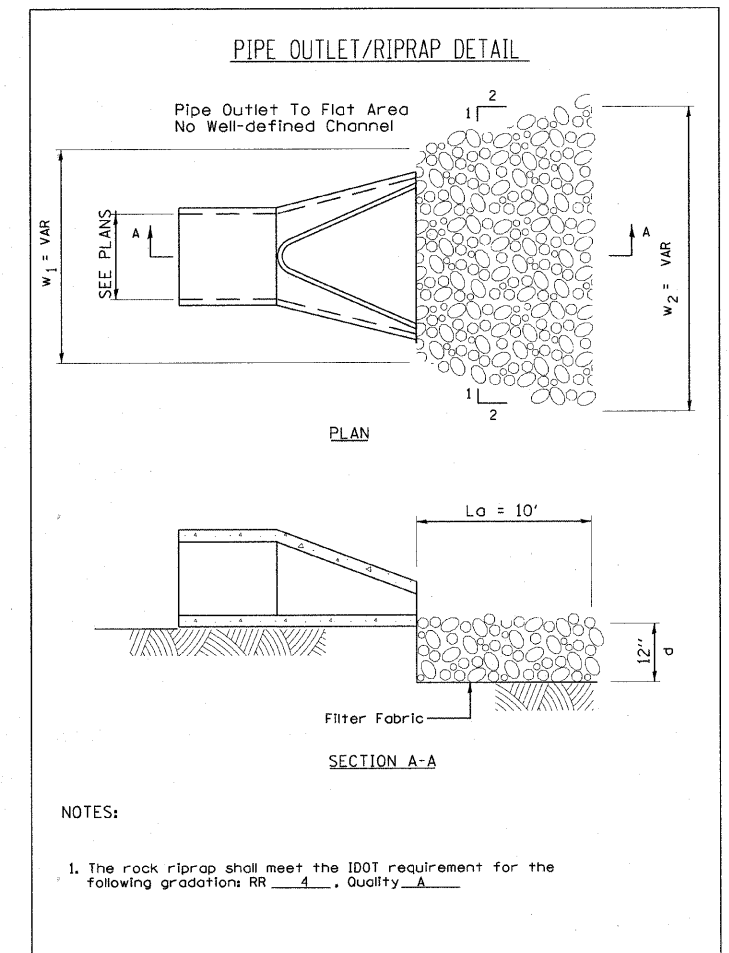
STAPLE DETAIL

NOTES:  
1. Staples are to be placed alternately, in columns approximately 2' apart and in rows approximately 3' apart. Approximately 175 staples are required per 4'x225' roll of material and 125 staples are required per 4'x150' roll of material.  
2. Erosion control materials shall be placed loosely over ground surface. Do not stretch.  
3. All terminal ends and transverse laps shall be stapled at approximately 2' intervals.

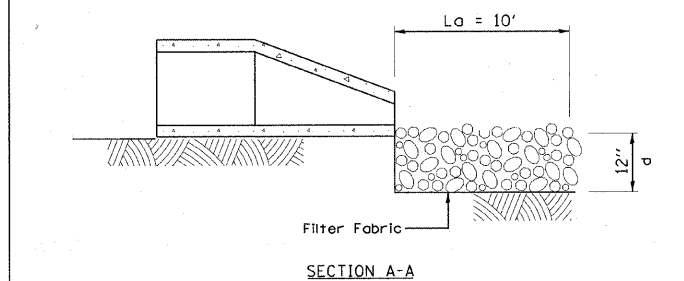
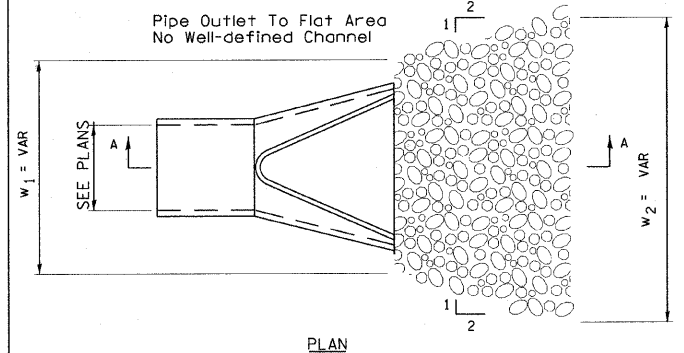


**ATTACHING TWO SILT FENCES**

NOTES:  
1. Place the end post of the second fence inside the end post of the first fence.  
2. Rotate both posts at least 180 degrees in a clockwise direction to create a tight seal with the fabric material.  
3. Drive both posts a minimum of 18 inches into the ground and bury the flap.



**PIPE OUTLET/RIPRAP DETAIL**



NOTES:  
1. The rock riprap shall meet the IDOT requirement for the following gradation: RR 4, Quality A

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 FILED BY BAXTER & WOODMAN, INC. PROJECT NO. 06-00320-01-BR. SHEET NO. 53 OF 53. DATE: 08/20/10.



DESIGNED	- CAC	REVISED	- PER IDOT 10-25-10
DRAWN	- BCD	REVISED	-
CHECKED	- MDW	REVISED	-
DATE	- 08/20/10	FILE	- 070630L-Details.SHT

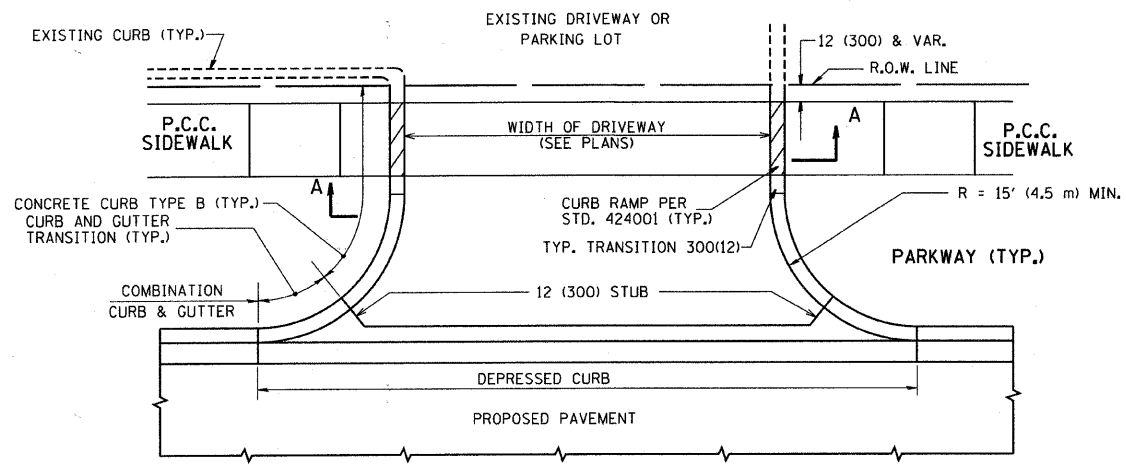
**MCHENRY COUNTY DIVISION OF TRANSPORTATION**  
**LAWRENCE ROAD BRIDGE OVER**  
**LAWRENCE CREEK**

**MISCELLANEOUS DETAILS**

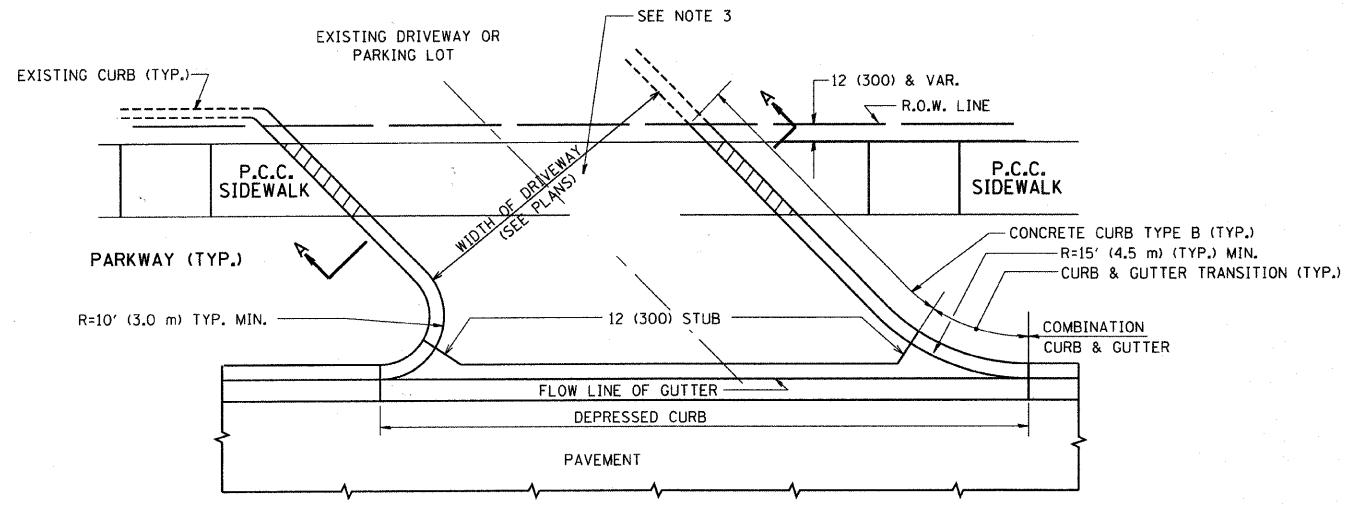
SCALE: NONE

STA. TO STA.

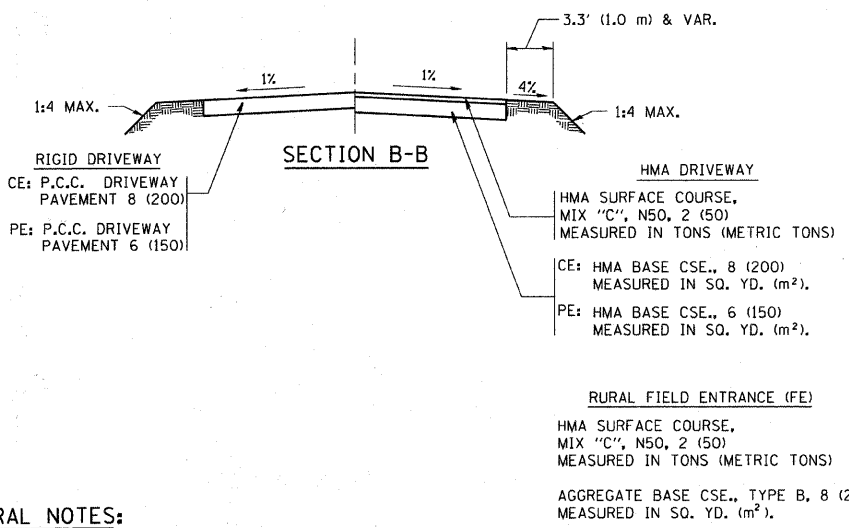
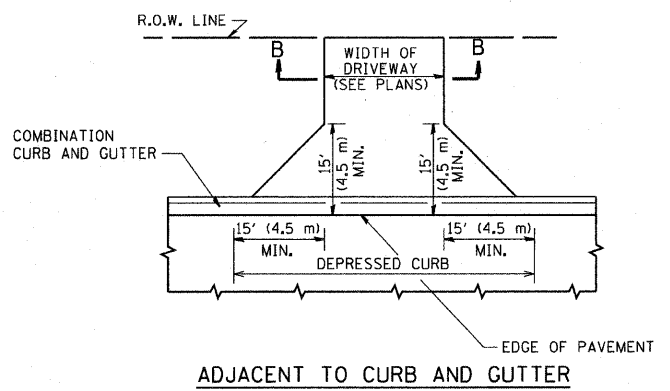
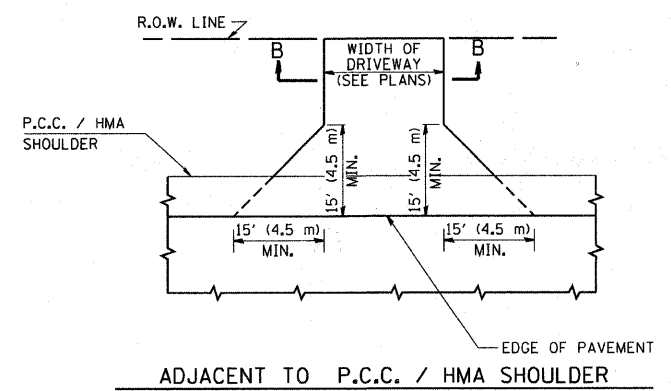
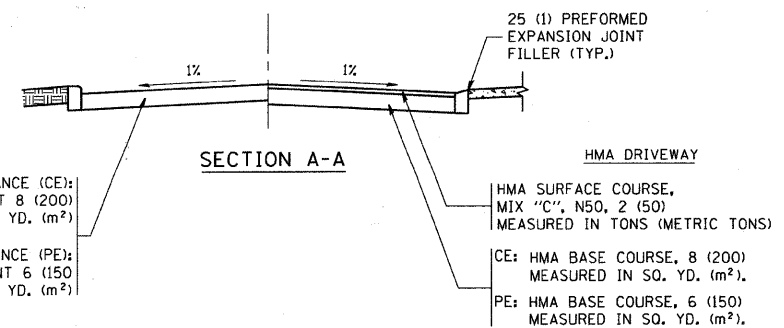
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	MCHENRY	70	53
CONTRACT NO. 63535				
JOB NO. C-91-139-11		ILLINOIS FED. AID PROJECT		BRS-0028(107)



WITH CONCRETE CURB, TYPE B



WITH CONCRETE CURB, TYPE B



**GENERAL NOTES:**

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

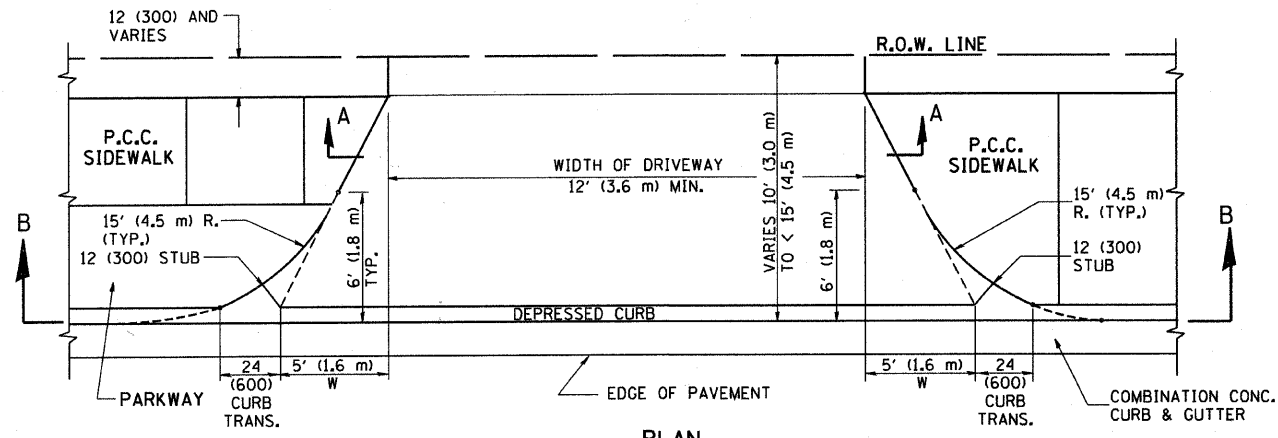
THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

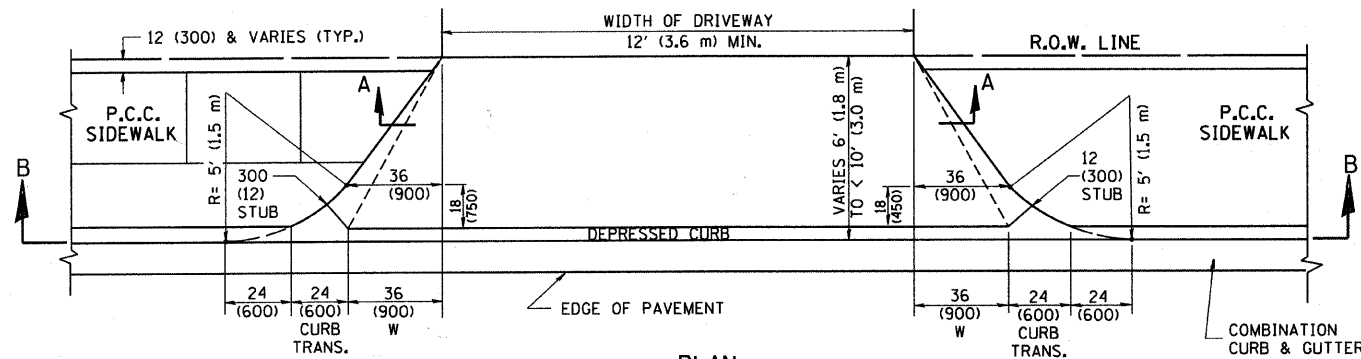
1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

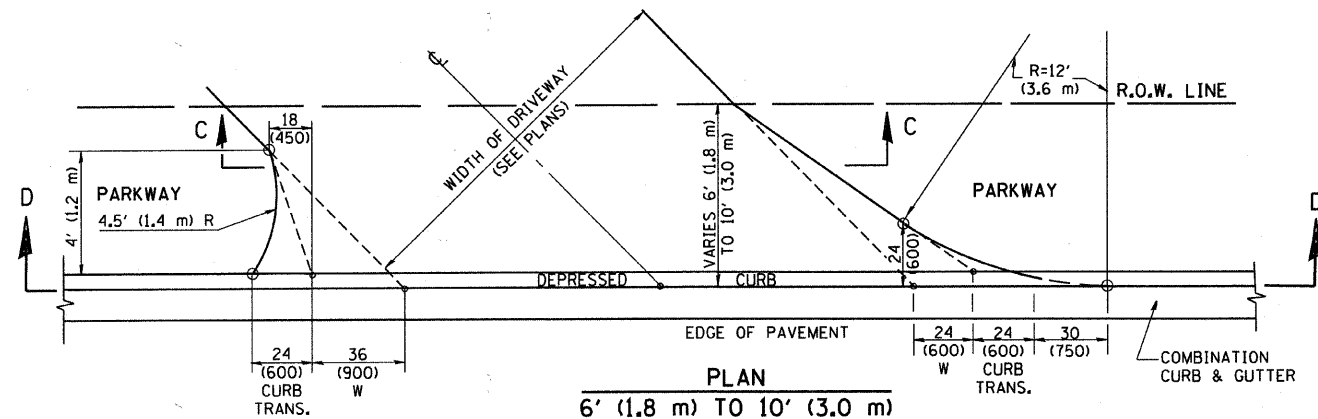
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PLOT SCALE = 49.9999" / IN.	DRAWN - P. LOFLUER 04-15-03	CHECKED - R. BORO 01-01-07	REVISED - P. LOFLUER 04-15-03			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.	<b>BD0156-07 (BD-01)</b>		CONTRACT NO. 63535
PLOT DATE = 6/12/2008	DATE - 11-04-95	REVISED - R. BORO 06-11-08	REVISED - R. BORO 06-11-08					FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		BRS-0028(107)	



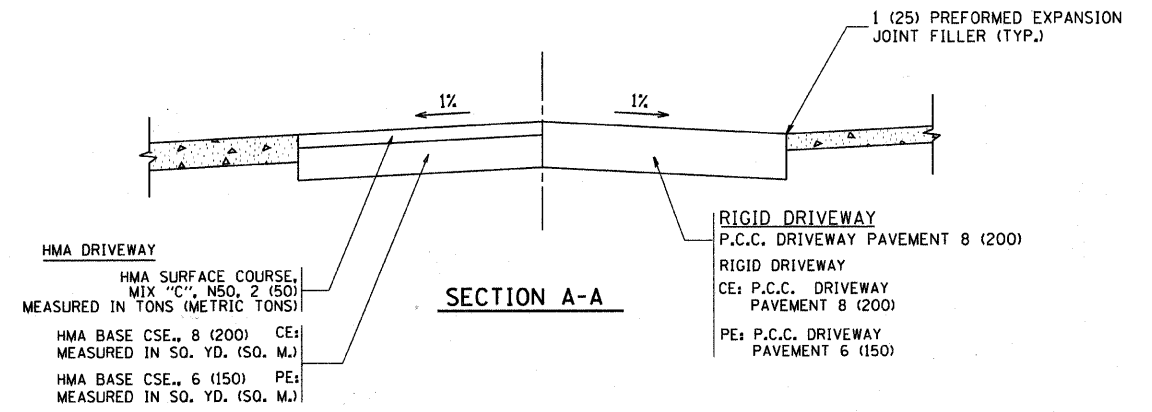
**PLAN**  
10' (3.0 m) TO < 15' (4.5 m)



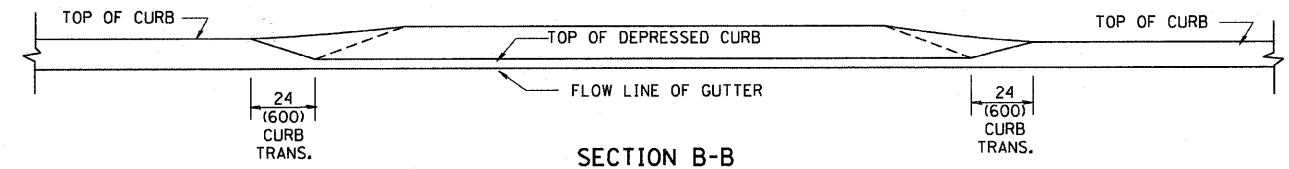
**PLAN**  
6' (1.8 m) TO < 10' (3.0 m)



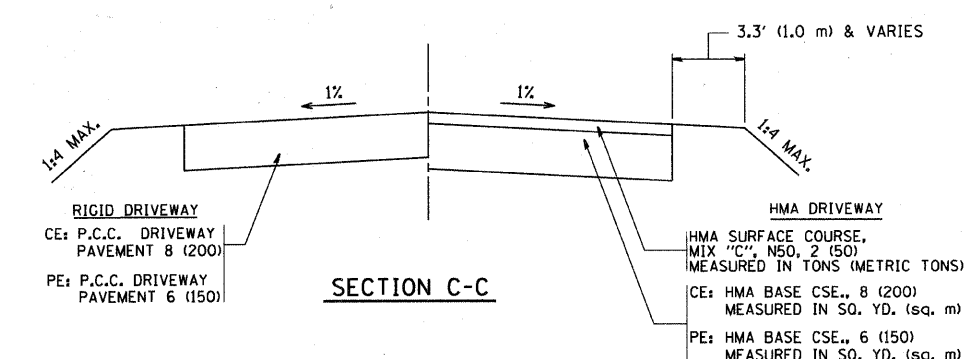
**PLAN**  
6' (1.8 m) TO 10' (3.0 m)



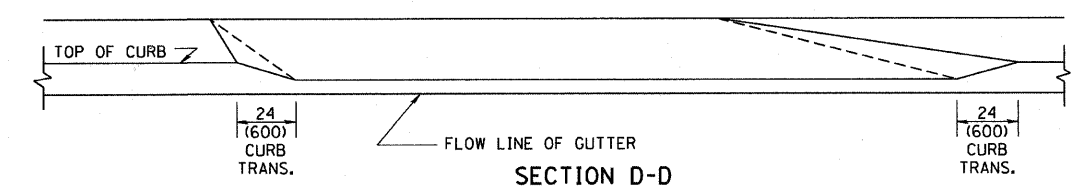
**SECTION A-A**



**SECTION B-B**



**SECTION C-C**



**SECTION D-D**

**GENERAL NOTES**

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATION 10 IN THE PERMIT HANDBOOK. WHERE SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED WITH RIGID PAVEMENT. WHERE NO SIDEWALKS EXIST, DRIVEWAYS SHALL BE REPLACED IN KIND. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

WHEN THE DISTANCE BETWEEN R.O.W. AND THE BACK OF CURB IS EQUAL TO OR LESS THAN 8' (2.4 m), THE P.C.C. SIDEWALK SHALL EXTEND TO THE BACK OF CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS; SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

THE 1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

"W" VARIES FROM 36 (900) TO 5' (1.5 m) PROPORTIONAL TO THE LENGTH (L), FROM 6' (1.8 m) TO 10' (3 m).

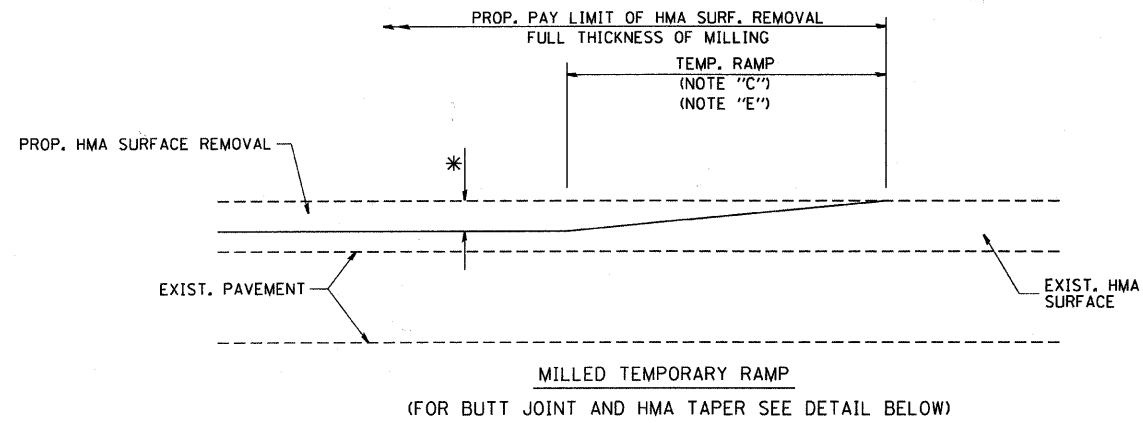
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED.

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		DRAWN -	REVISED - M. GOMEZ 04-06-01
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	PLOT DATE = 1/4/2008	DATE - 11-06-95	REVISED - R. BORO 01-01-07

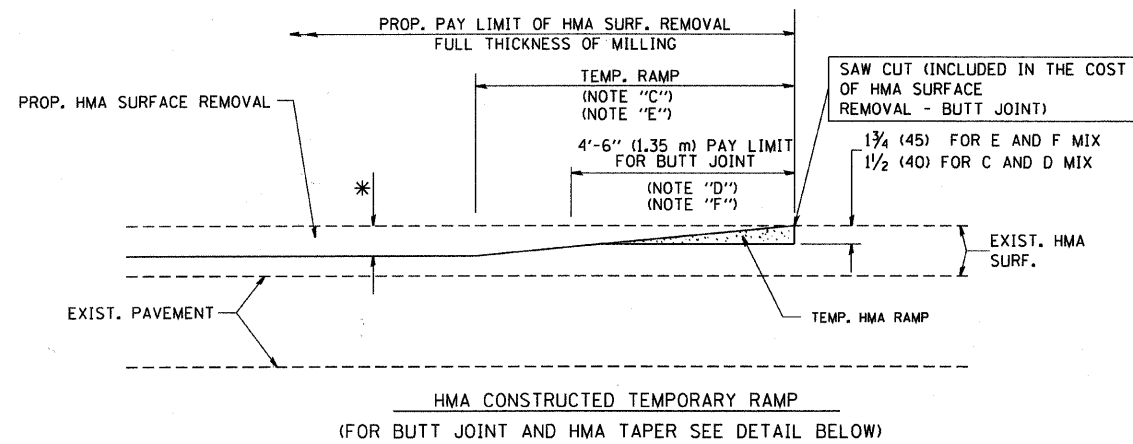
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

DRIVEWAY DETAILS			
DISTANCE BETWEEN ROW AND FACE OF CURB < 15' (4.5 m)			
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	MCHENRY	70	55
BD400-02 (BD-02)			CONTRACT NO. 63535	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT BRS-0028(107)				

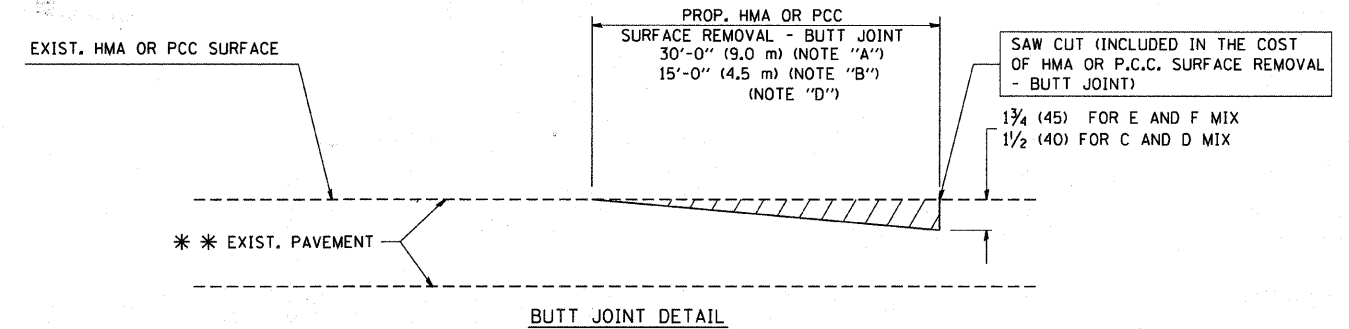


**OPTION 1**

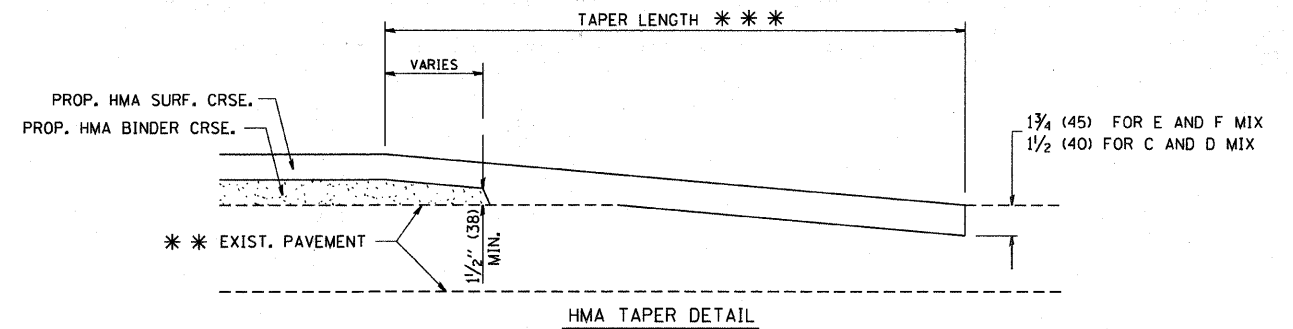


**OPTION 2**

**TYPICAL TEMPORARY RAMP**



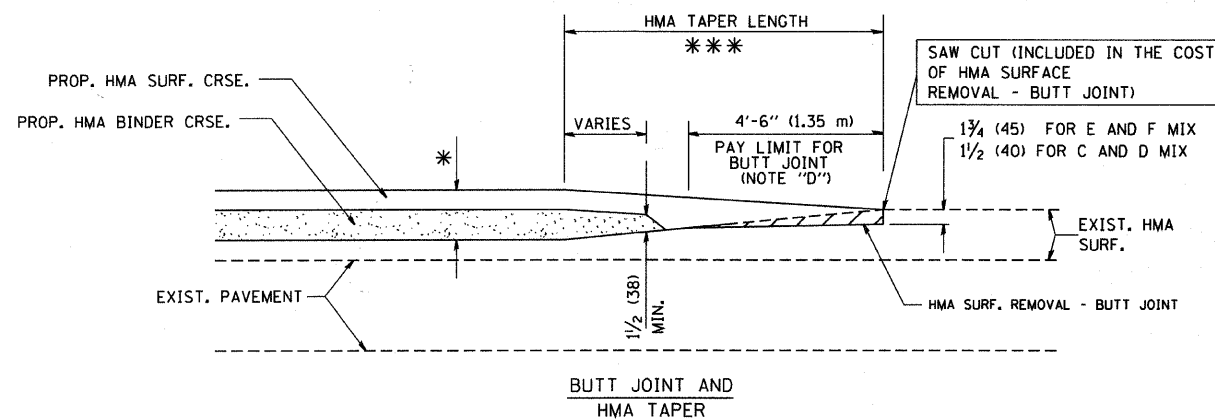
**BUTT JOINT DETAIL**



**HMA TAPER DETAIL**

**TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY**

\*\*\* PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.



**BUTT JOINT AND HMA TAPER**

**TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING**

**NOTES**

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
- B: MINOR SIDE ROADS.
- C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
- D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
- E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
- F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
- G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- \* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- \*\*\* 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")  
10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

**BASIS OF PAYMENT:**

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

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		DRAWN -	REVISED - A. ABBAS 03-21-97
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	PLOT DATE = 1/4/2008	DATE - 06-13-90	REVISED - R. BORO 01-01-07

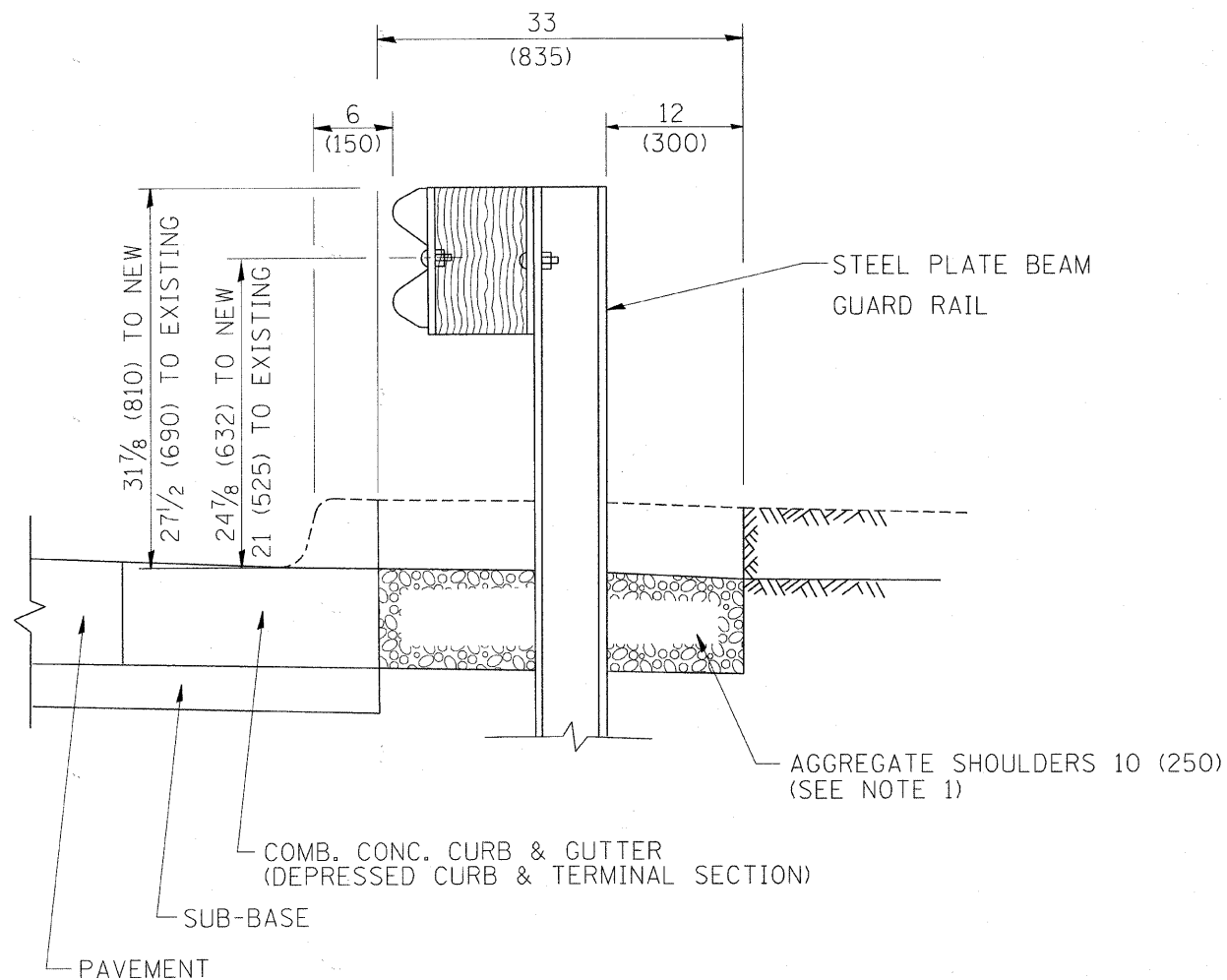
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**BUTT JOINT AND  
HMA TAPER DETAILS**

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.S. RTE. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 56
<b>BD400-05 BD32</b>		<b>CONTRACT NO. 63535</b>		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT BRS-0028(107)				

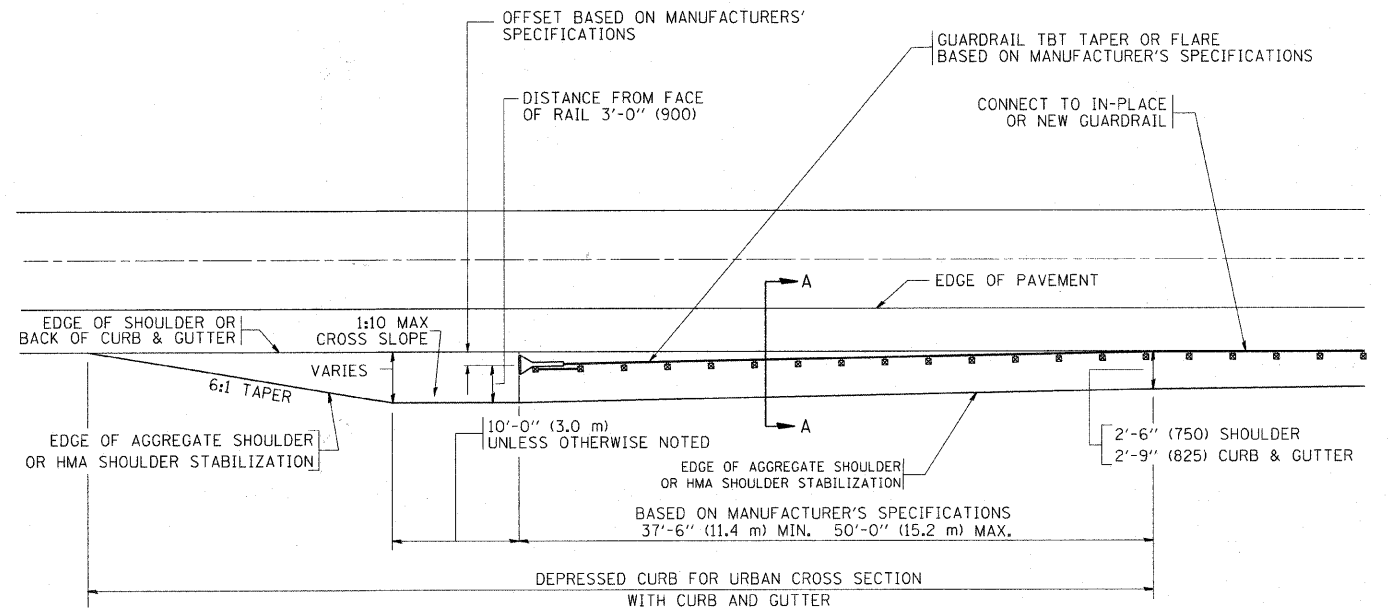




SECTION A-A

- NOTES:
1. THE AGGREGATE SHOULDER, 10" OR HMA SHOULDER, 6" (IF REQUIRED) SHALL EXTEND UNDER THE TRAFFIC BARRIER TERMINAL.
  2. "EXISTING" GUARDRAIL REFERS TO CONNECTING TERMINAL SECTION TO GUARD RAILING PRIOR TO THE MIDWEST GUARDRAIL SYSTEM.
  3. THE CONTRACTOR SHALL VERIFY THE TYPE/HEIGHT OF GUARDRAIL IN-PLACE BEFORE ORDERING THE NEW TERMINAL SECTION. COST INCLUDED WITH THE COST OF THE TERMINAL. THE TERMINAL SECTION HEIGHT TO BE PLACED MUST MATCH THE HEIGHT OF THE IN-PLACE GUARDRAIL.

DETAILS FOR STEEL PLATE BEAM  
GUARD RAIL ADJACENT TO CURB AND GUTTER  
[FOR ROADWAY SPEED 35 MPH (60 kmh) TO 45 MPH (70 kmh)]



DEPRESSED CURB AND GUTTER AND  
SHOULDER TREATMENT AT TBT TY. 1 SPL.

BASIS OF PAYMENT: HMA SHOULDERS 6 (150) (IF REQUIRED) WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SHOULDERS 6" (150 mm)".

STEEL PLATE BEAM GUARD RAIL AND TRAFFIC BARRIER TERMINAL, OF THE TYPE SPECIFIED WILL BE PAID FOR SEPARATELY.

TBT = TRAFFIC BARRIER TERMINAL  
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

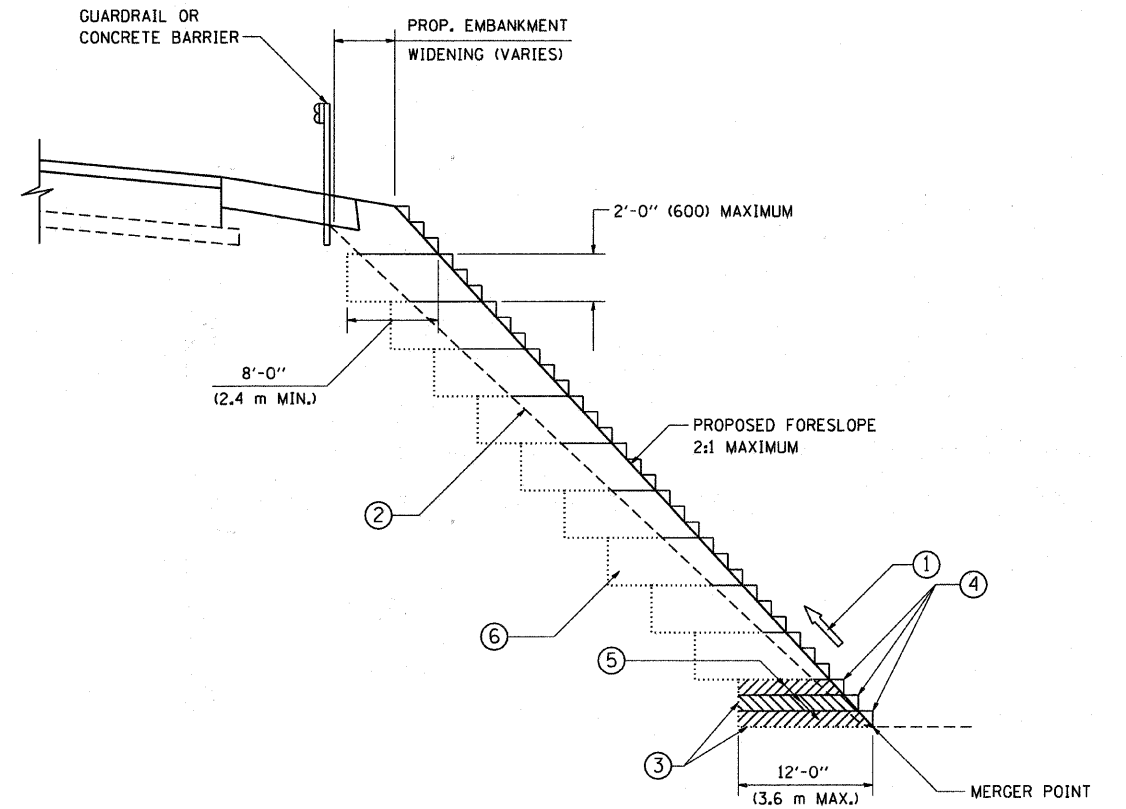
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	PLOT DATE = 9/21/2009	DATE - 09-22-90	REVISED - R. BORO 09-14-2009

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DETAILS FOR DEPRESSED CURB & GUTTER AND  
SHOULDER TREATMENT AT TBT TY 1 SPL.

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.S. RTE. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 57
BD600-10 (BD 34)		CONTRACT NO. 63535	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT BRS-0028(107)	



**TYPICAL BENCHING DETAIL  
FOR EMBANKMENT**

**NOTES:**

- ① CONSTRUCT SUCCEEDING BENCH CUTS AND EMBANKMENT PLACEMENT AND COMPACTION FROM BOTTOM TO TOP IN STAIRSTEP FASHION.
- ② EXISTING FORESLOPE PREPARED IN ACCORDANCE WITH ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.
- ③ BENCH CUT EXISTING SLOPE TYPICAL FOR EACH STEP.
- ④ TRIM TO FINAL SLOPE.
- ⑤ EQUAL 8-INCH (200) LIFTS OF EMBANKMENT COMPACTED IN ACCORDANCE WITH ARTICLE 205.05 OF THE STANDARD SPECIFICATIONS.
- ⑥ EXCAVATION OF BENCH CUTS WITHIN EXISTING EMBANKMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC METER OR CUBIC YARD FOR "EARTH EXCAVATION". THIS PRICE WILL INCLUDE ALL LABOR AND MATERIAL, NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ⑦ SLOPES SHALL BE BENCHED ACCORDING TO THIS DETAIL WHEN THE SLOPE IS STEEPER THAN 4:1 AND THE HEIGHT IS GREATER THAN 5' (1.5 m).

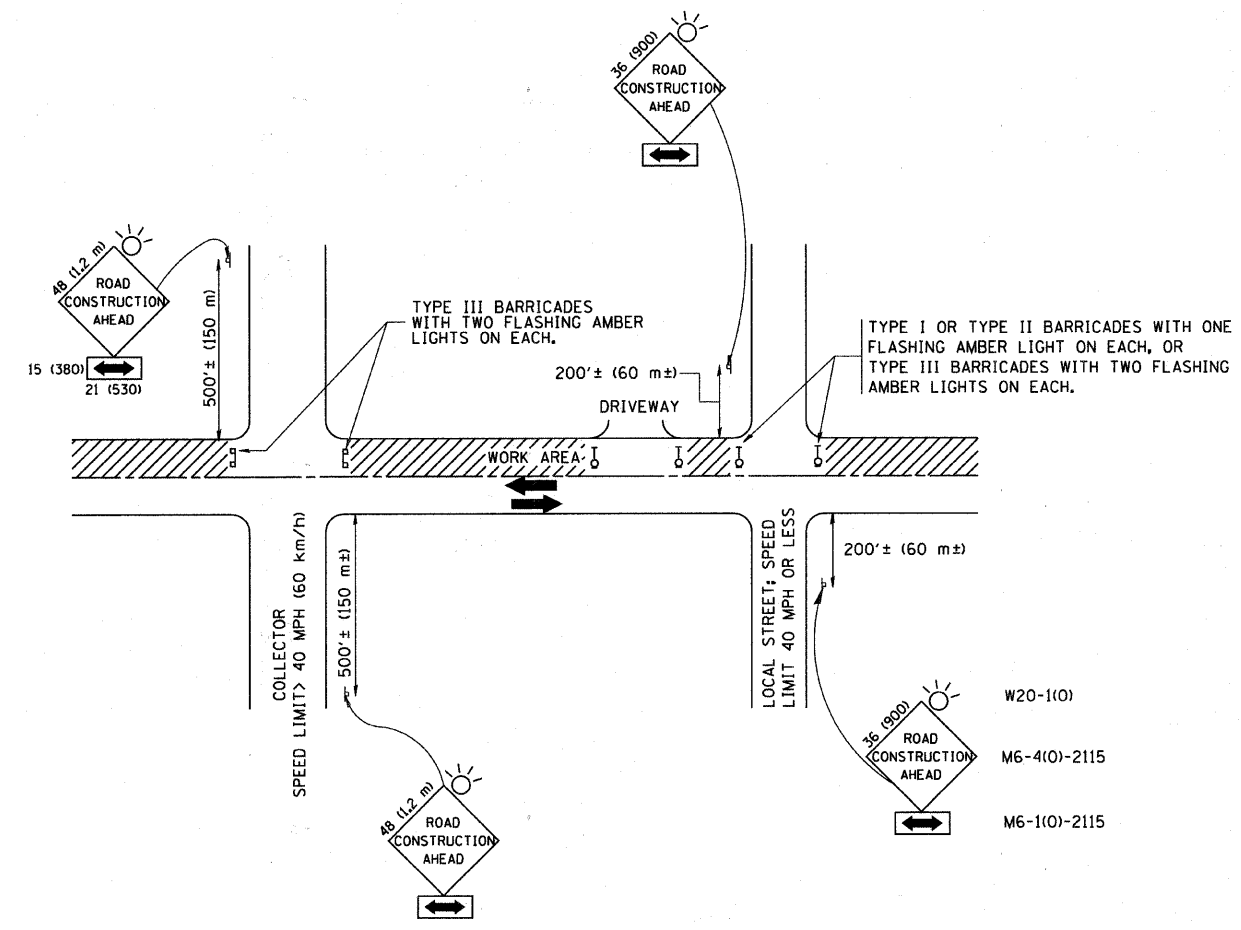
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS)  
UNLESS OTHERWISE SHOWN.

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	PLOT DATE = 1/4/2008	DATE - 06-16-04	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>BENCHING DETAIL FOR EMBANKMENT WIDENING</b>	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS
STA.	TO STA.

F.A.S. RTE. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 58
<b>BD-51</b>			CONTRACT NO. 63535	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT BRS-0028(107)				



**TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS**

**NOTES:**

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
  1. SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - a) ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
    - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
  2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
    - a) ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
    - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
  3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
 

USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

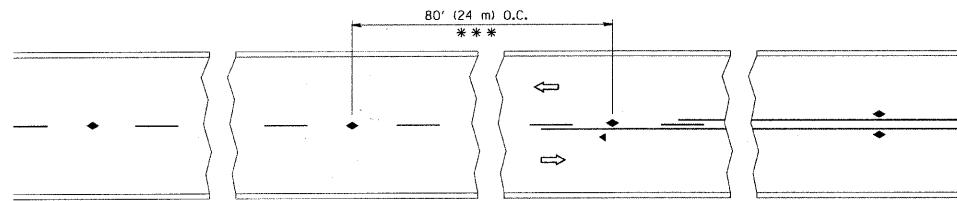
All dimensions are in millimeters (inches) unless otherwise shown.

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	PLOT SCALE = 50.000' / IN.	CHECKED -	REVISED - A. HOUSEH 10-15-96
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

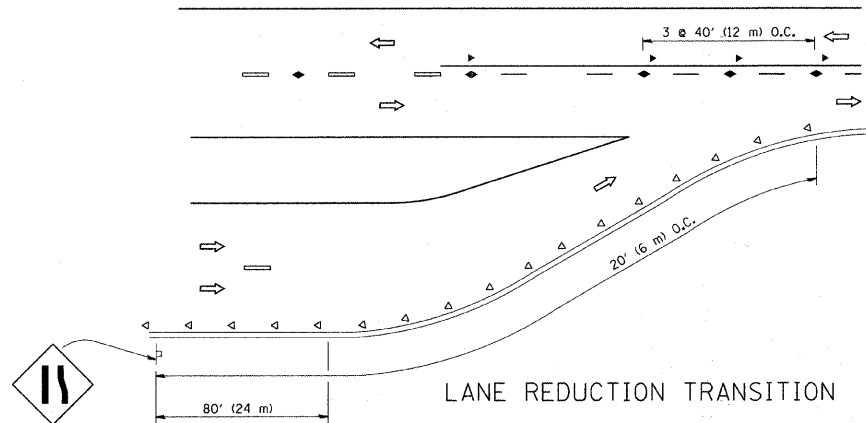
<b>TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS</b>	
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS
STA.	TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	MCHENRY	70	59
TC-10			CONTRACT NO. 63535	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT			BRS-0028(107)	

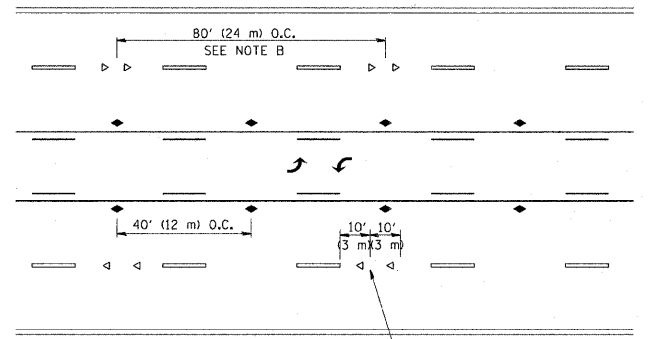


\*\*\* REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

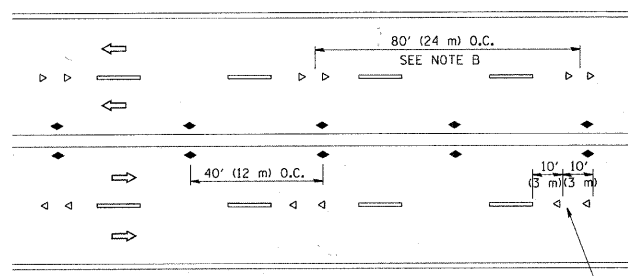
TWO-LANE/TWO-WAY



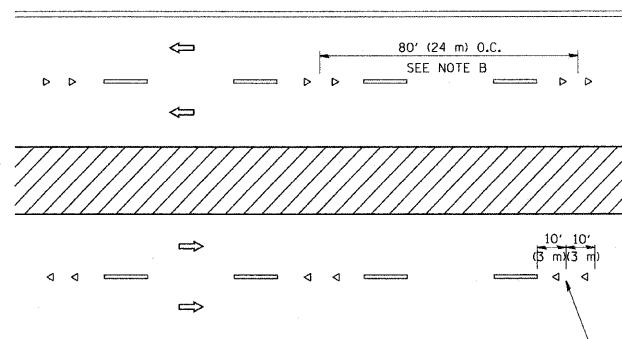
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (150 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

SYMBOLS

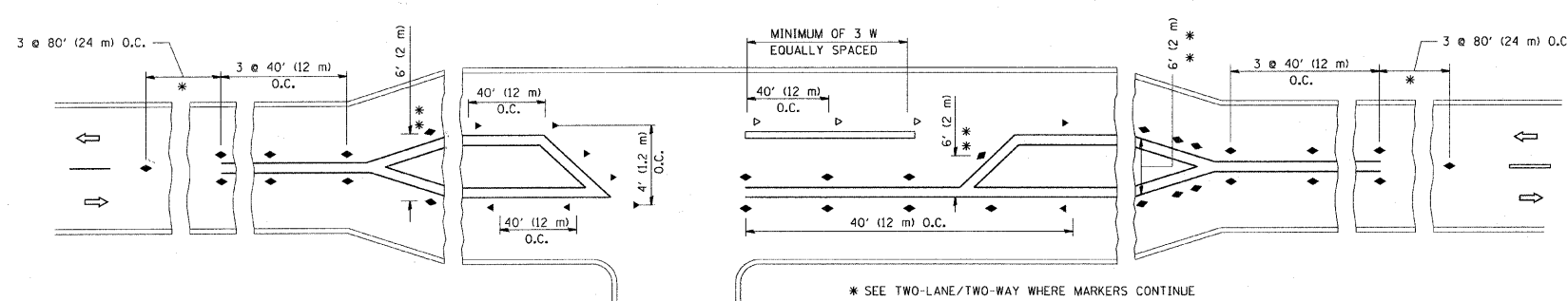
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H. (20 km/h) LOWER THAN POSTED SPEEDS.

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.



LEFT TURN

\* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE  
 \*\* WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

All dimensions are in inches (millimeters) unless otherwise shown.

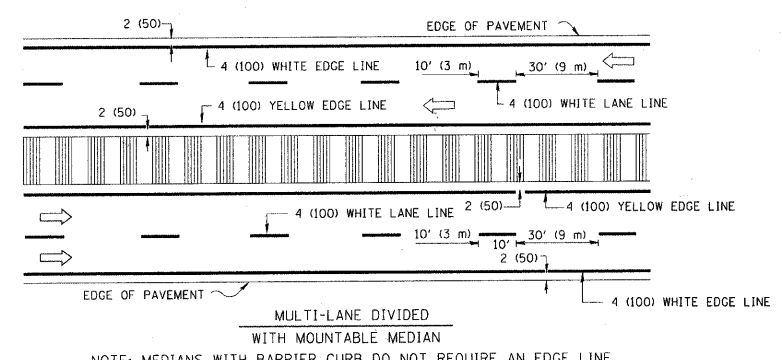
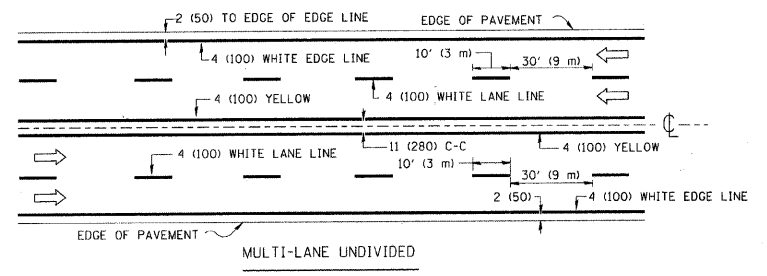
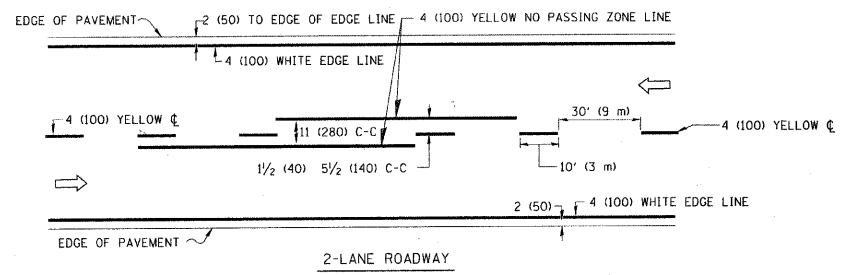
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	PLOT DATE = 9/9/2009	DATE -	REVISED - C. JUCCIUS 09-09-09

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

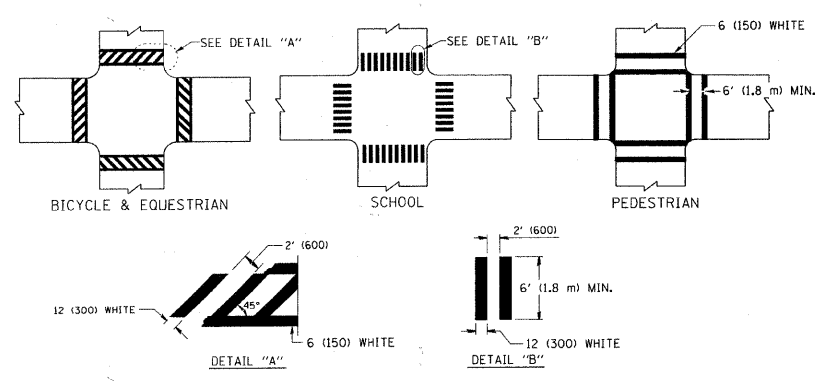
TYPICAL APPLICATIONS  
 RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

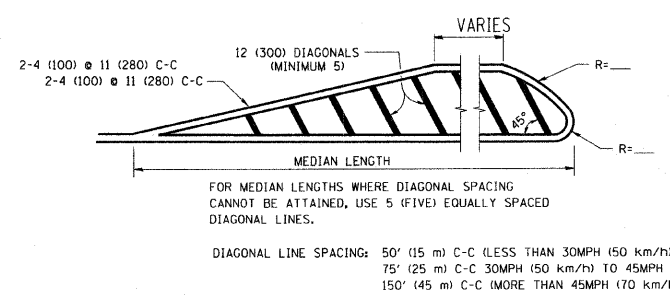
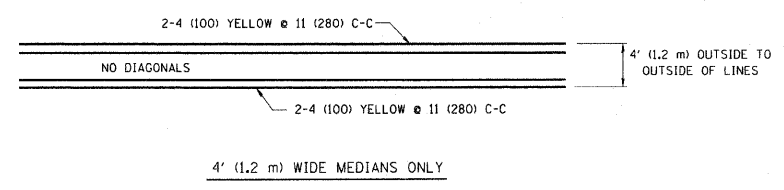
F.A. RTE. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 60
TC-11		CONTRACT NO. 63535	BRS-0028(107)	



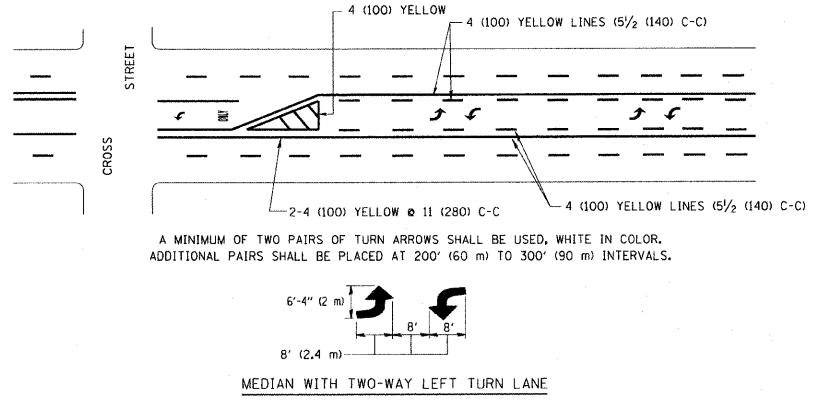
TYPICAL LANE AND EDGE LINE MARKING



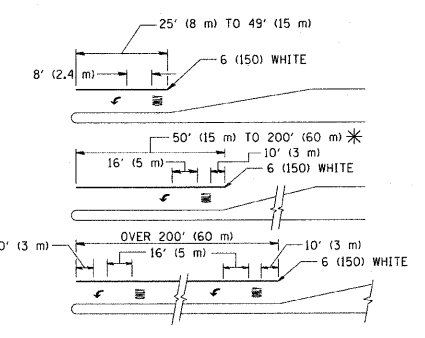
TYPICAL CROSSWALK MARKING



MEDIANS OVER 4' (1.2 m) WIDE



TYPICAL PAINTED MEDIAN MARKING

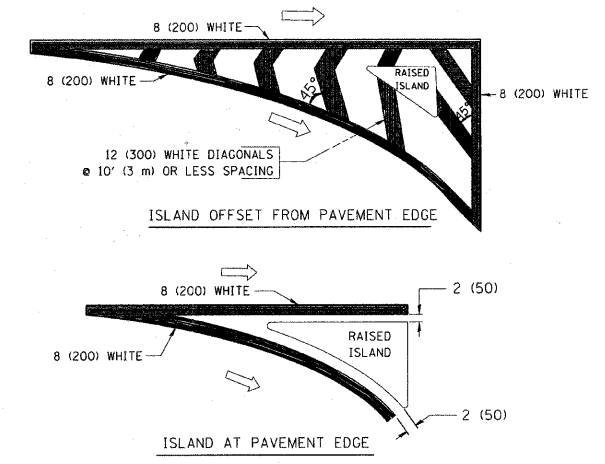


FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED.  
\* AREA = 15.6 SQ. FT. (1.5 m<sup>2</sup>) ONLY AREA = 20.8 SQ. FT. (1.9 m<sup>2</sup>)

\* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES: FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" 15' (4.5 m) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R": 3.6 SQ. FT. (0.33 m <sup>2</sup> ) EACH "X": 54.0 SQ. FT. (5.0 m <sup>2</sup> )
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

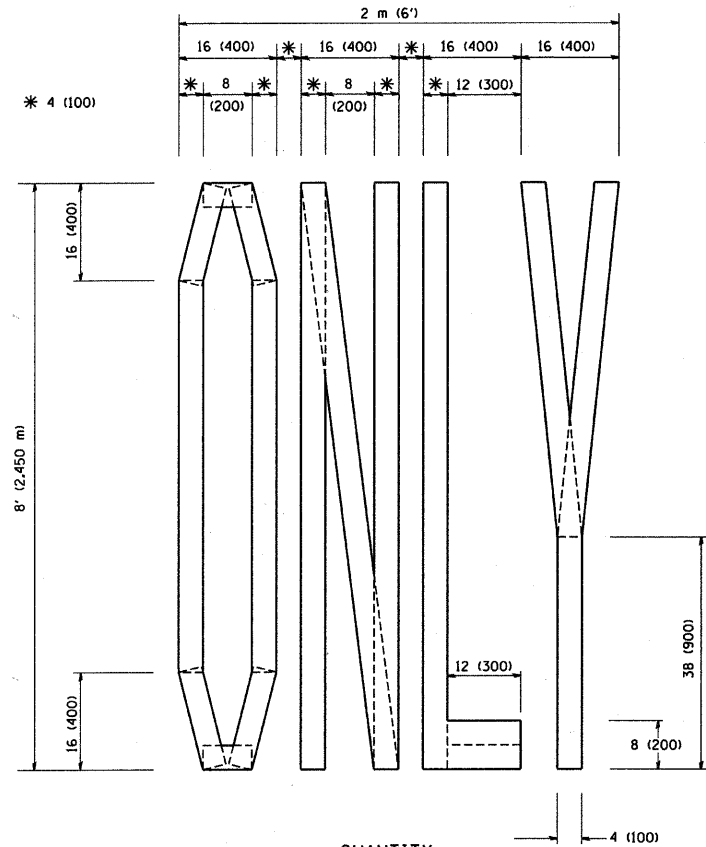
All dimensions are in Inches (millimeters) unless otherwise shown.

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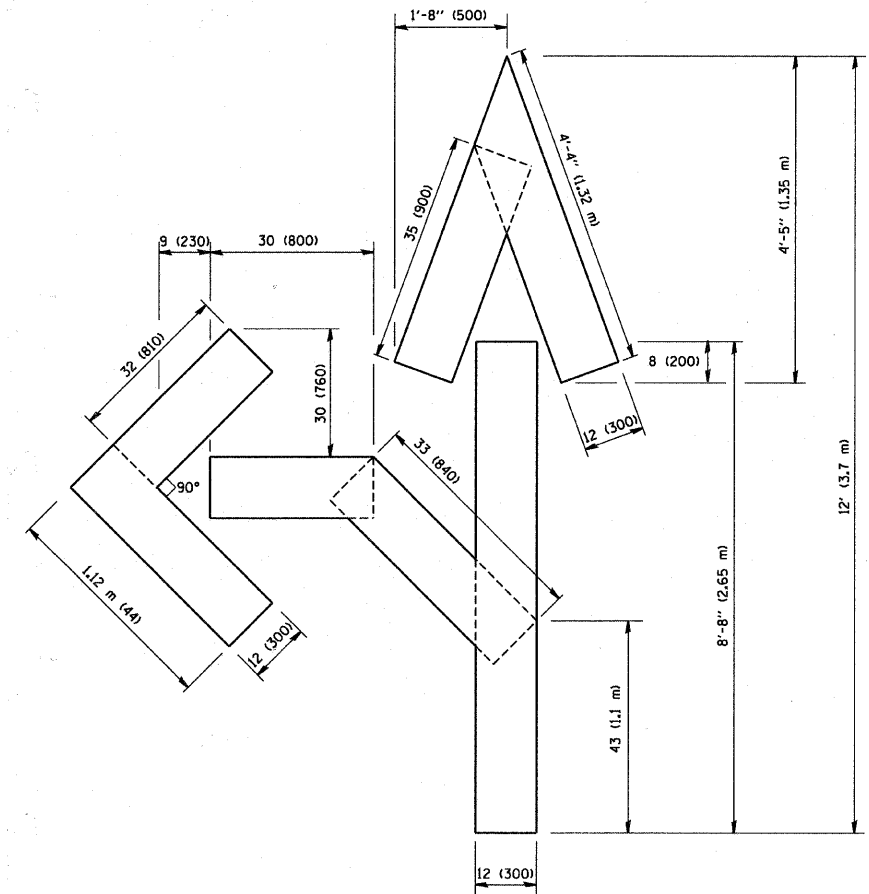
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DISTRICT ONE		F.A.S. R.T.E. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 61
TYPICAL PAVEMENT MARKINGS		TC-13		CONTRACT NO. 63535		
SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.			

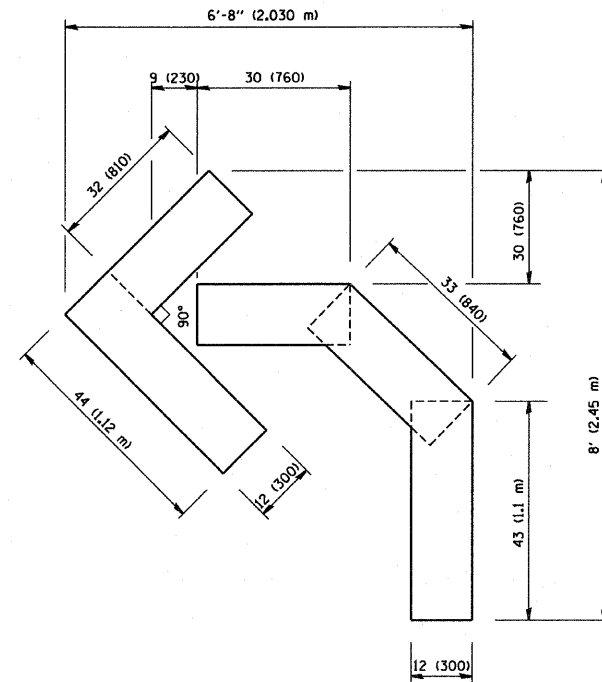
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TC-13		CONTRACT NO. 63535			
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT		BRS-0028(107)			



QUANTITY  
4 (100) LINE = 64.1 ft. (19.7 m)  
21.1 sq. ft. (1.97 sq. m)



QUANTITY  
4 (100) LINE = 82.5 ft. (25.3 m)  
27.5 sq. ft. (2.53 sq. m)



QUANTITY  
4 (100) LINE = 45.5 ft. (13.9 m)  
15.2 sq. ft. (1.39 sq. m)

All dimensions are in inches (millimeters) unless otherwise shown.

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PLOT DATE = 1/4/2008			

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

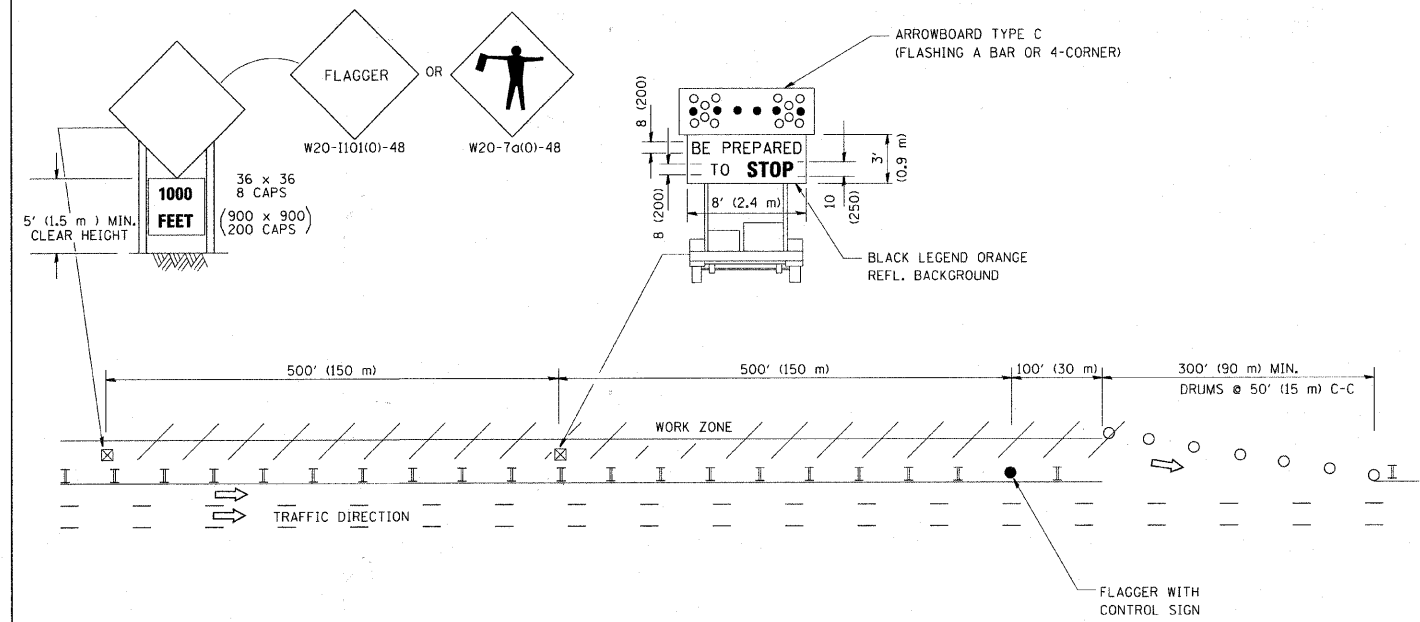
PAVEMENT MARKING LETTERS AND SYMBOLS  
FOR TRAFFIC STAGING

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

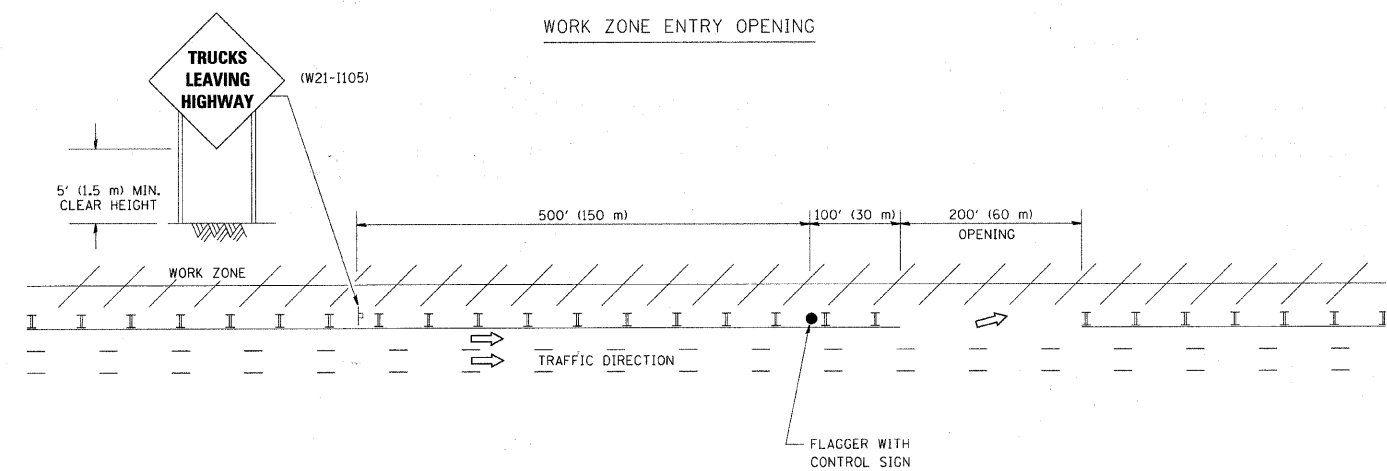
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TC-16		CONTRACT NO. 63535		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT BRS-0028(107)				

SIGNING FOR FLAGGING OPERATIONS AT WORK ZONE OPENINGS

WORK ZONE EXIT OPENING



WORK ZONE ENTRY OPENING



NOTES:

1. THE ARROWBOARD, THE FLAGGER AHEAD SIGN AND THE TRUCKS LEAVING HIGHWAY SIGN SHALL BE REMOVED OR TURNED AWAY FROM TRAFFIC AND THE EXIT AND ENTRY OPENINGS SHALL BE CLOSED WHEN THE FLAGGING OPERATION CEASES. NON OPERATING EQUIPMENT SHALL COMPLY WITH ARTICLE 701.11
2. WORK ZONE EXIT OPENINGS SHOULD BE A MINIMUM OF ONE HALF MILE APART.
3. EXITING THE WORK ZONE AT ANY PLACE OTHER THAN AT A WORK ZONE EXIT OPENING WILL BE PROHIBITED.
4. ALL VEHICLES SHALL ENTER THE WORK ZONE AT ENTRY OPENINGS, USING THEIR TURN SIGNALS TO WARN MOTORISTS

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

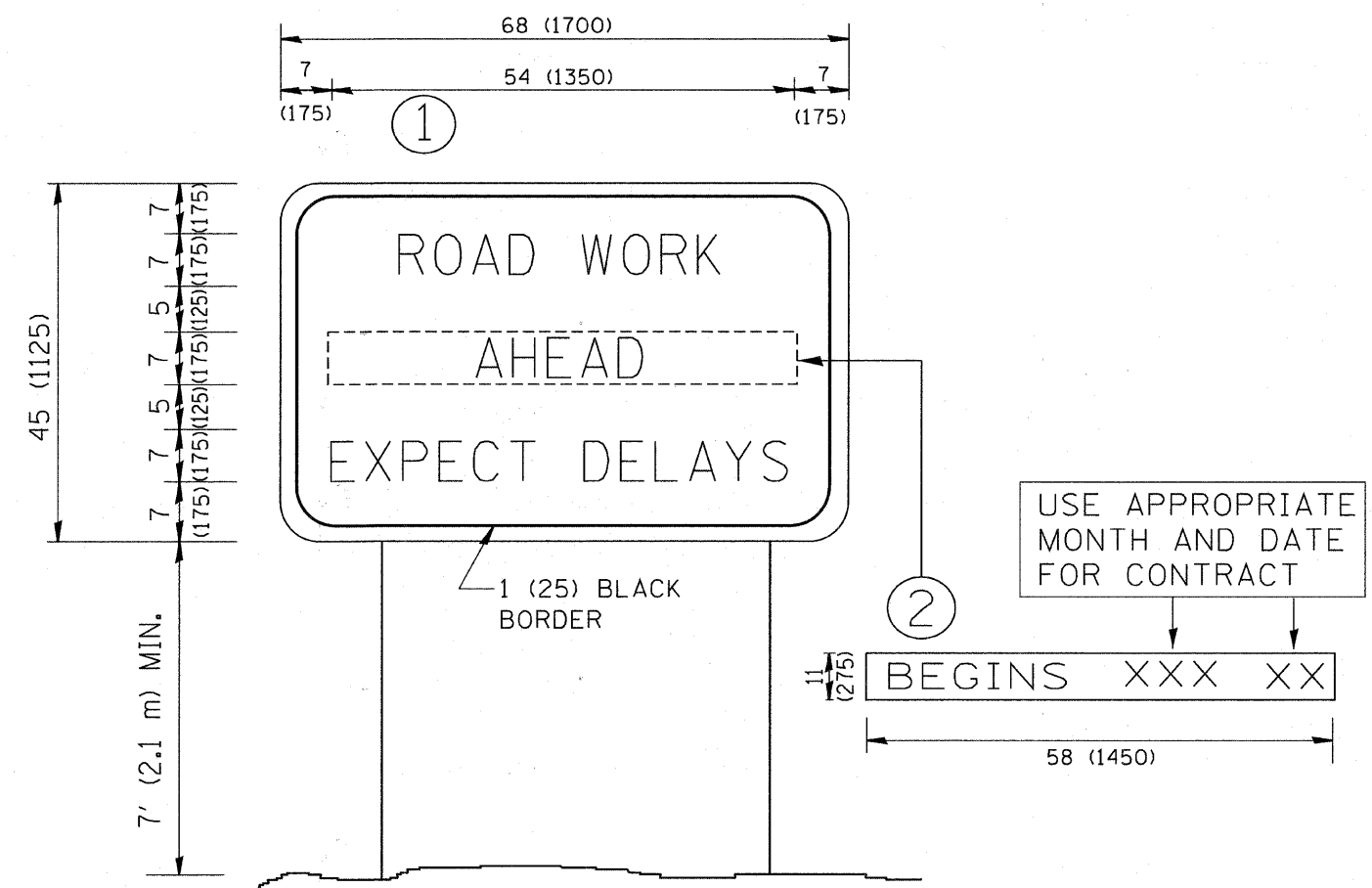
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			REVISED - S.P.B. 01-07
			REVISED - S.P.B. 12-09

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SIGNING FOR FLAGGING OPERATIONS  
AT WORK ZONE OPENINGS

SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	MCHENRY	70	63
TC-18			CONTRACT NO. 63535	
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT BRS-0028(107)				



**NOTES:**

1. USE BLACK LETTERING ON ORANGE BACKGROUND.
2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
4. REMOVE PANEL ② SOON AFTER THE START OF CONSTRUCTION.
5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

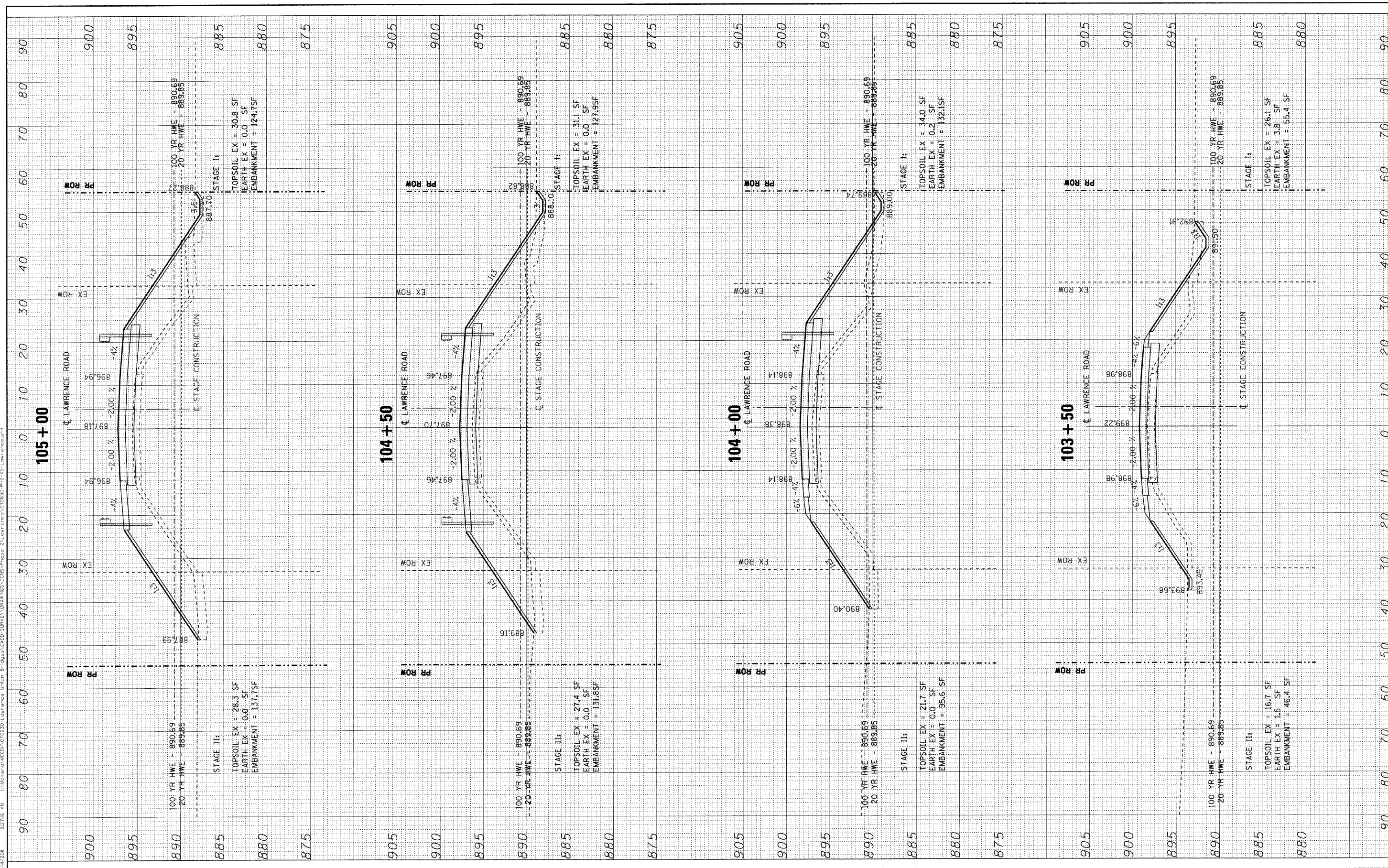
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	PLOT DATE = 1/4/2008	DATE -	REVISED - C. JUCIUS 01-31-07						<b>TC-22</b>		CONTRACT NO. 63535	
									FED. ROAD DIST. NO. 1   ILLINOIS   FED. AID PROJECT		BRS-0028(107)	





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DESIGNED - CAC	REVISED -
DRAWN - BCD	REVISED -
CHECKED - TMS	REVISED -
DATE - 08-20-10	REVISED -

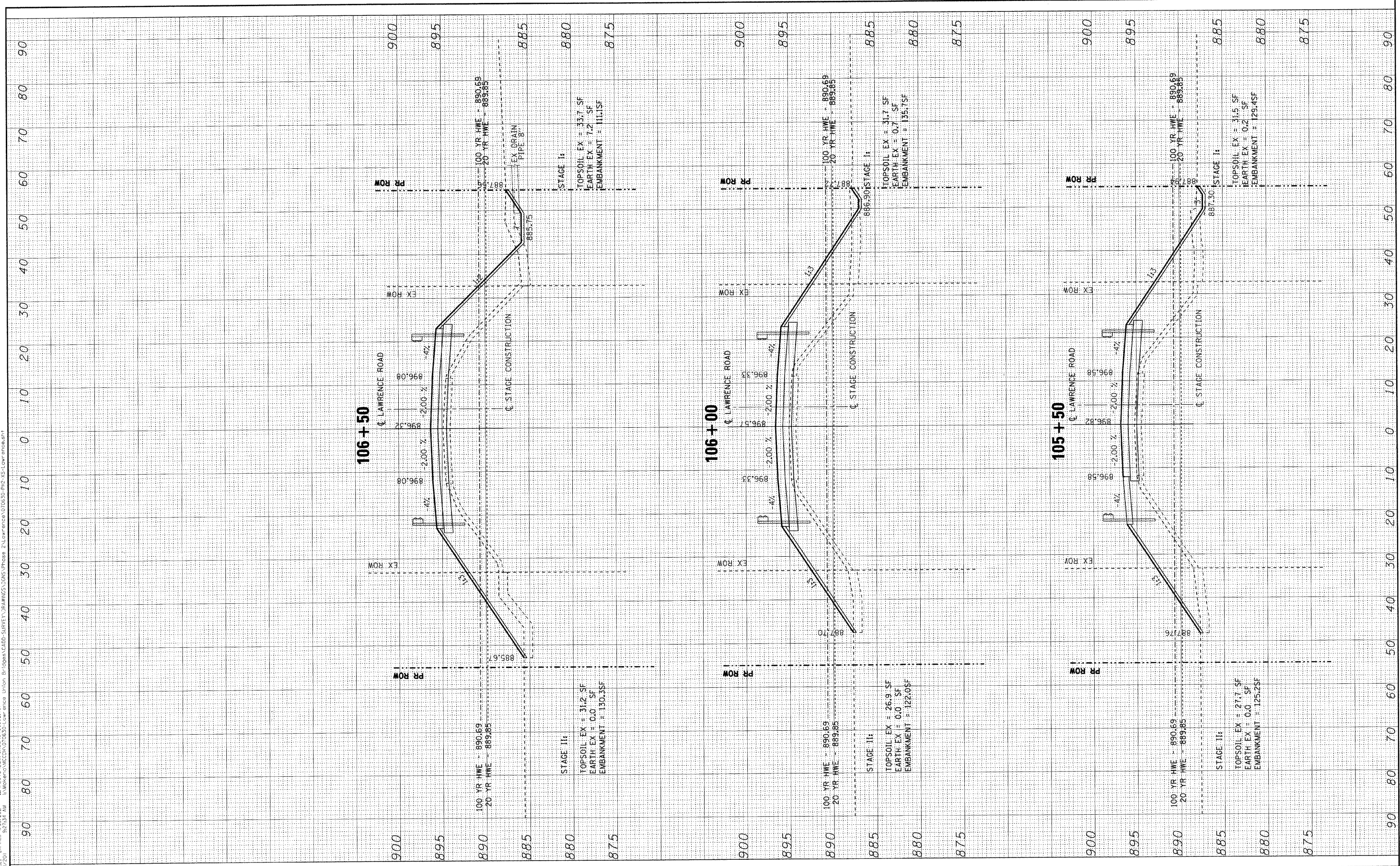
**MCHENRY COUNTY DIVISION OF TRANSPORTATION**  
**LAWRENCE ROAD BRIDGE OVER**  
**LAWRENCE CREEK**

**CROSS SECTIONS**

SCALE: H: 1"=10' V: 1"=5'  
 STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	MCHENRY	70	66
CONTRACT NO. 63535				
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT			BRS-00281071	

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 1100 W. WASHINGTON ST., SUITE 100, CHICAGO, IL 60607  
 312.467.1000 FAX 312.467.1001  
 PROJECT: LAWRENCE ROAD BRIDGE OVER LAWRENCE CREEK  
 DRAWING: LAWRENCE ROAD BRIDGE OVER LAWRENCE CREEK - PHASE 2  
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DESIGNED - CAC	REVISED -
DRAWN - BCD	REVISED -
CHECKED - TMS	REVISED -
DATE - 08-20-10	REVISED -

**MCHENRY COUNTY DIVISION OF TRANSPORTATION  
 LAWRENCE ROAD BRIDGE OVER  
 LAWRENCE CREEK**

**CROSS SECTIONS**

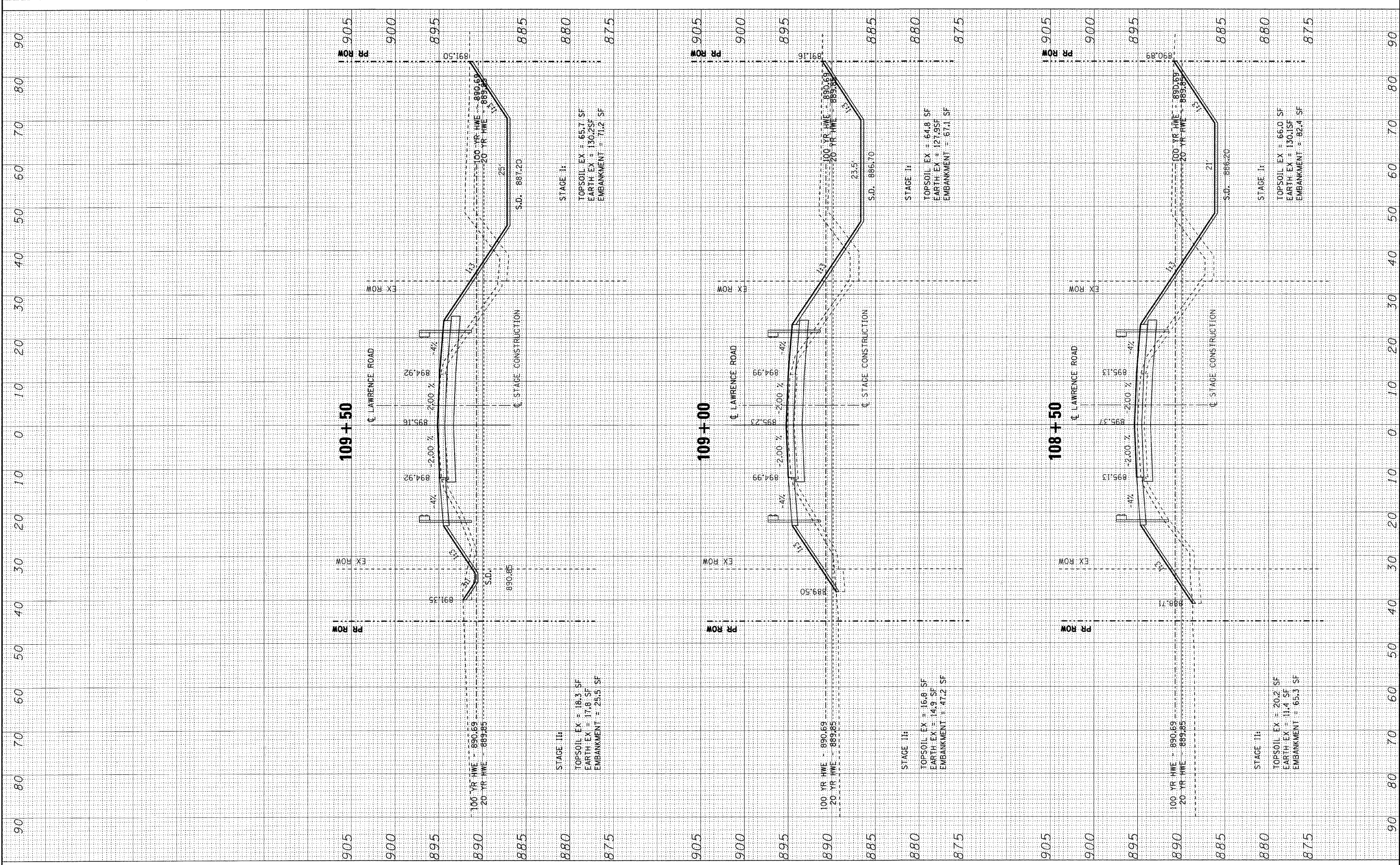
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STA. TO STA.

F.A.S. RTE. 0028	SECTION 06-00320-01-BR	COUNTY MCHENRY	TOTAL SHEETS 70	SHEET NO. 67
JOB NO. C-91-139-11 (ILLINOIS) FED. AID PROJECT			CONTRACT NO. 63535	
			BRS-0028(107)	



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**BAXTER & WOODMAN**  
 Consulting Engineers

DESIGNED	CAC	REVISED	-
DRAWN	BCD	REVISED	-
CHECKED	TMS	REVISED	-
DATE	08-20-10	REVISED	-

**MCHENRY COUNTY DIVISION OF TRANSPORTATION**  
**LAWRENCE ROAD BRIDGE OVER**  
**LAWRENCE CREEK**

**CROSS SECTIONS**  
 SCALE: H: 1"=10' V: 1"=5'  
 STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	MCHENRY	70	69
CONTRACT NO. 63535			JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT BRS-0028(107)	

CONTRACT NO. 2011 BY BAXTER & WOODMAN, INC. ... \p101of\mch\lrcr\2011\2011.dwg  
 STATE OF ILLINOIS - PROFESSIONAL DESIGN FIRM  
 LICENSE NO. 00121 - EXPIRES 12/31/2011  
 2/2/2011 9:42:53 AM  
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DESIGNED	- CAC	REVISED	-
DRAWN	- BCD	REVISED	-
CHECKED	- TMS	REVISED	-
DATE	- 08-20-10	REVISED	-

**MCHENRY COUNTY DIVISION OF TRANSPORTATION  
 LAWRENCE ROAD BRIDGE OVER  
 LAWRENCE CREEK**

SCALE: H: 1"=10' V: 1"=5'

**CROSS SECTIONS**

STA. TO STA.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
0028	06-00320-01-BR	MCHENRY	70	70
JOB NO. C-91-139-11 ILLINOIS FED. AID PROJECT			CONTRACT NO. 63535	
			BRS-0028(107)	

