

04-26-13 LETTING ITEM 071

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

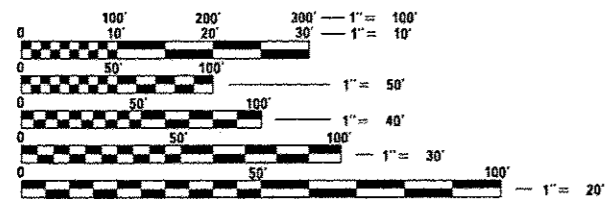
DIVISION OF HIGHWAYS
**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 840 (IL 49)
SECTION 120BR-1
PROJECT BHF-0840(067)
VERMILION COUNTY
SUPERSTRUCTURE REPLACEMENT
TRIBUTARY TO STONY CREEK 3 MI. NW
OF FITHIAN

FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

MINOR ARTERIAL
ADT = 1,300 (2010)
SU = 5.9%, MU = 6.6%
PC = 87.5%

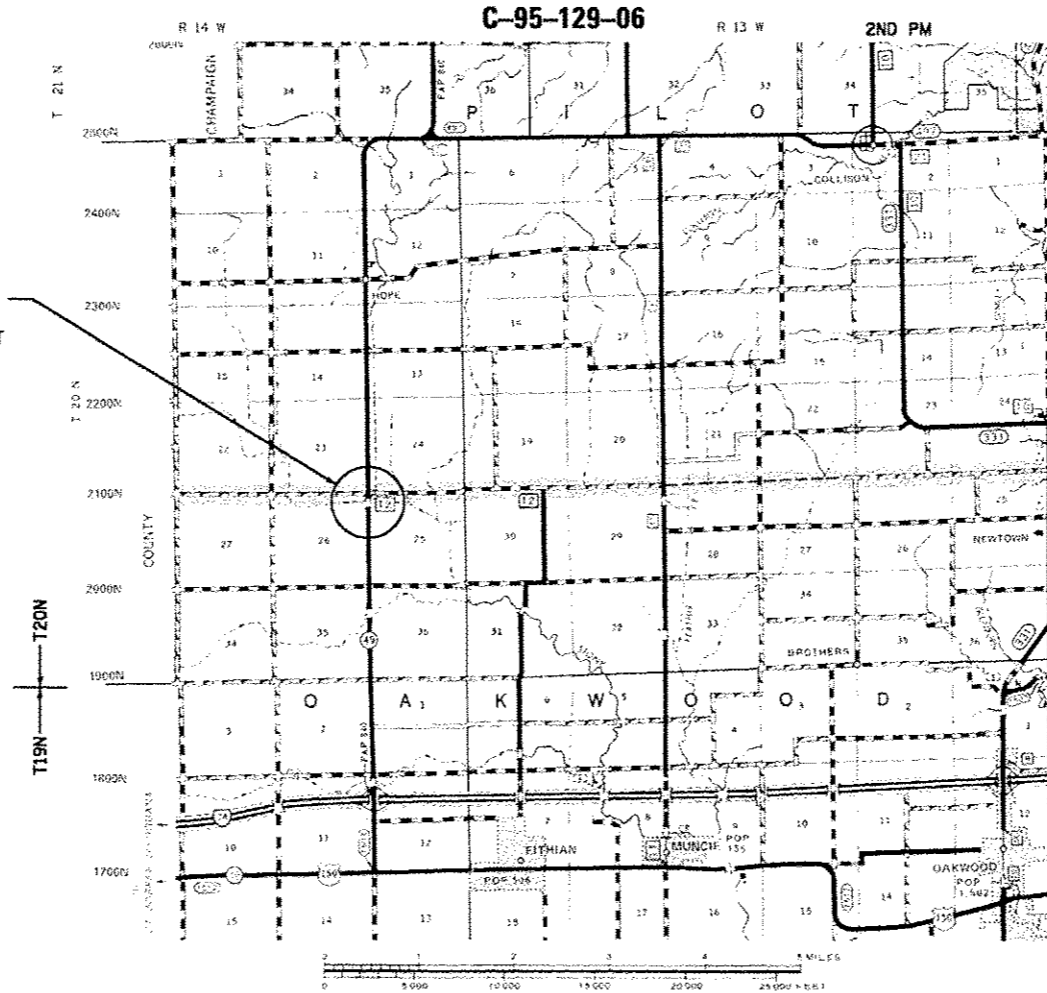
PROJECT LOCATION
SN 092-0171 - STA 211+11.00
BRIDGE SUPERSTRUCTURE REPLACEMENT
OVER TRIBUTARY TO STONY CREEK
BEGIN IMPROVEMENT STA 209+07.70
END IMPROVEMENT STA 212+85.71



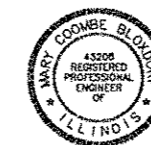
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811 (OAKWOOD & PILOT TOWNSHIPS)

PROJECT ENGINEER: JASON STULTS
CONSULTANT LIAISON: RUSTIN KEYS
DISTRICT 5 PHONE NUMBER: (217) 465-4181
CONTRACT NO. 70615



GROSS LENGTH = 378.01 FT. = 0.072 MILE
NET LENGTH = 378.01 FT. = 0.072 MILE

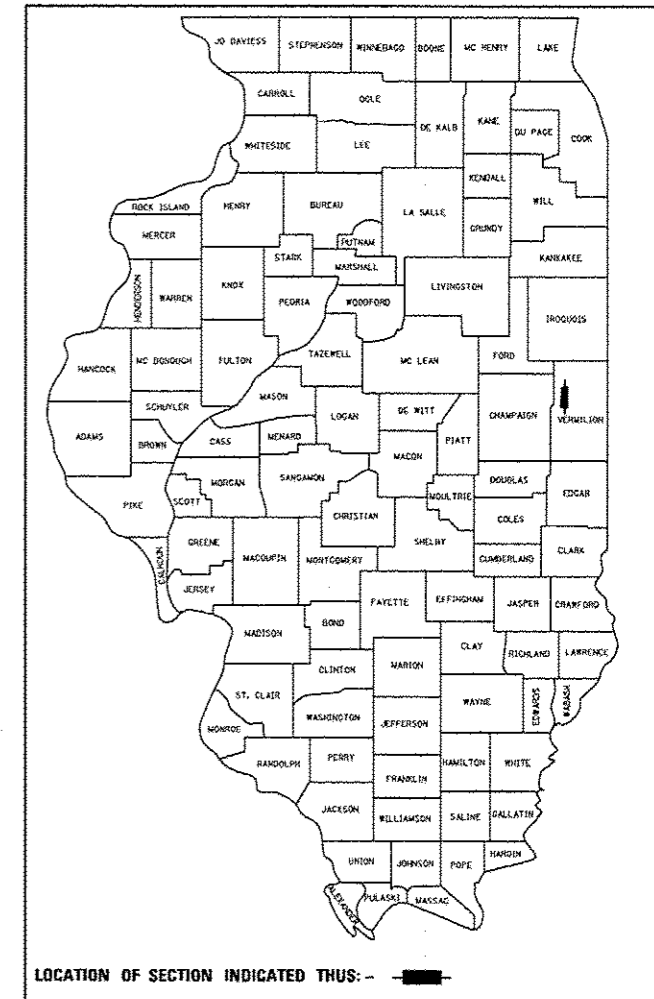


Mary Coombe Bloxdorf
ILLINOIS PROFESSIONAL ENGINEER NO. 43308
EXPIRES 11-30-11
DATE: 06-14-11

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	1
		ILLINOIS	CONTRACT NO. 70615	

44 + 2 = 46

D-95-129-06



LOCATION OF SECTION INDICATED THIS: - [black rectangle] -

CB Coombe-Bloxdorf P.C.
- CIVIL ENGINEERS -
- STRUCTURAL ENGINEERS -
- LAND SURVEYORS -
Design Firm License No. 184-002703

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SUBMITTED October 13 20 11
Joseph E. Crowe (SEAD)
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
March 22 20 13
John D. Baranzelli, PE *ja*
acting ENGINEER OF DESIGN AND ENVIRONMENT
March 22 20 13
Chris Oshan, PE *ja*
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GENERAL NOTES

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX OF SHEETS/HIGHWAY STANDARDS/GENERAL NOTES
- 3 SUMMARY OF QUANTITIES
- 4 EXISTING & PROPOSED ROADWAY TYPICAL SECTIONS
- 5-6 SCHEDULE OF QUANTITIES
- 7 ALIGNMENT, TIES, AND BENCHMARKS SHEET
- 8 PLAN SHEET
- 9 PROFILE SHEET
- 10 STREAM PLAN & PROFILE SHEET
- 11 TRAFFIC CONTROL - STAGE I
- 12 TRAFFIC CONTROL - STAGE II
- 13-28 BRIDGE PLANS
- 29-30 WIDTH RESTRICTION SIGNING DETAIL
- 31 ROAD & SIDEROAD/STREET CLOSURE DETAIL
- 32-35 PAVEMENT MARKING & MARKERS DETAIL
- 36 FIELD TILE SYSTEMS (TREATMENT OF EXISTING)
- 37-39 CROSS SECTIONS - IL 49
- 40-42 CROSS SECTIONS - TR 2100N
- 43-44 CROSS SECTIONS - STREAM

HIGHWAY STANDARDS

- 000001-06 - STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-02 - AREAS OF REINFORCEMENT BARS
- 001006 - DECIMAL OF AN INCH AND OF A FOOT
- 280001-07 - TEMPORARY EROSION CONTROL SYSTEMS
- 420001-07 - PAVEMENT JOINTS
- 420401-09 - BRIDGE APPROACH PAVEMENT CONNECTOR
- 515001-03 - NAME PLATE FOR BRIDGES
- 630001-10 - STEEL PLATE BEAM GUARDRAIL
- 630101-09 - GUARDRAIL MOUNTED ON EXISTING CULVERTS
- 630301-06 - SHOULDER WIDENING FOR TYPE I (SPECIAL) GUARDRAIL TERMINALS
- 631011-04 - TRAFFIC BARRIER TERMINAL, TYPE 2
- 631032-08 - TRAFFIC BARRIER TERMINAL, TYPE 6A
- 635006-03 - REFLECTOR AND TERMINAL MARKER PLACEMENT
- 635011-02 - REFLECTOR MARKER AND MOUNTING DETAILS
- 667101-02 - PERMANENT SURVEY MARKERS
- 701001-02 - OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
- 701006-04 - OFF-RD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
- 701201-04 - LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
- 701301-04 - LANE CLOSURE, 2L, 2W, SHORT TERM OPERATIONS
- 701311-03 - LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
- 701321-13 - LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
- 701901-02 - TRAFFIC CONTROL DEVICES
- 704001-07 - TEMPORARY CONCRETE BARRIER
- 780001-03 - TYPICAL PAVEMENT MARKINGS
- 781001-03 - TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
- 886001-01 - DETECTOR LOOP INSTALLATIONS
- 886006-01 - TYPICAL LAYOUTS FOR DETECTION LOOPS

COMMITMENTS

NONE.

G.N.-100
ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERSEDE ANY METRIC UNITS SHOWN IN THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G.N.-100A
ELECTRONIC FILES AND/OR ELECTRONIC SURVEY INFORMATION INCLUDING CADD FILES WILL NOT BE AVAILABLE TO THE CONTRACTOR.

G.N.-105.09A
ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. (NAVD 88)

G.N.-107.37
UTILITY LINES WERE PLOTTED FROM INFORMATION FURNISHED BY THE VARIOUS UTILITY COMPANIES INVOLVED (QUALITY LEVEL C &/OR QUALITY LEVEL D) AND THE ACCURACY SHOULD BE CONSIDERED APPROXIMATE ONLY.

UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THESE ADJUSTMENTS ARE BEING PERFORMED.
J.U.L.I.E. - JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS SYSTEM (800)892-0123 OR 811.

G.N.-280
TEMPORARY EROSION CONTROL SEEDING IS INCLUDED IN THIS CONTRACT TO SEED DISTURBED EARTH DURING TIME PERIODS WHEN PERMANENT SEEDING IS NOT ALLOWED. SOME OR ALL OF THE TEMPORARY EROSION CONTROL SEEDING WILL BE DELETED IF IT IS POSSIBLE TO PLACE PERMANENT SEEDING ON EARTH AT THE TIME OF THEIR COMPLETION.

G.N. -406H

MIXTURE REQUIREMENTS

The following mixture requirements are applicable for this project:

Location(s):	IL 49
Mixture Use(s):	Base Cse Option & Flex Conn
AC/PG:	PG 64-22
RAP %: (Max)	25
Design Air Voids:	4.0% @ Ndes=50
Mixture Composition: (Gradation Mixture)	IL 19.0
Friction	N.A.
Aggregate:	

G.N.-703A
SHORT TERM PAVEMENT MARKING SHALL BE APPLIED TO THE PAVEMENT AFTER ANY OF THE FOLLOWING: COLD MILLING AND/OR PLACING BITUMINOUS MATERIALS (PRIME COAT), LEVELING BINDER (MACHINE METHOD), BINDER AND SURFACE COURSES. SHORT TERM PAVEMENT MARKING PLACED ON THE SURFACE, SHALL COINCIDE WITH THE FINAL PAVEMENT STRIPING. SHORT TERM PAVEMENT MARKING PLACED PRIOR TO THE SURFACE SHALL COINCIDE WITH THE EXISTING PAVEMENT MARKINGS. USE 4 FEET PER 40 FEET (OR 10% PER STATION).

G.N.-781
RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED IN ACCORDANCE WITH STANDARD 781001, AND THE DETAILS SHOWN IN THE PLANS. IF THERE IS ANY DISCREPANCY BETWEEN THE STANDARD AND THE DETAILS IN THE PLANS, THE DETAILS IN THE PLANS SHALL GOVERN. THE FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING THE RAISED REFLECTIVE PAVEMENT MARKERS AND THE RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED MIDWAY IN THE 30 FOOT (9 m) SPACE BETWEEN THE DASHED CENTERLINE STRIPES (WHEN APPLICABLE).

G.N.-1004.01
COARSE AGGREGATE GRADATION CA-10 MAY BE USED WHENEVER COARSE AGGREGATE CA-6 IS SPECIFIED IN THE STANDARD SPECIFICATIONS.

G.N.-20038
AN ALUMINUM TABLET OF THE TYPE SHOWN ON STANDARD 667101 SHALL BE PLACED ON THE PROPOSED STRUCTURE AS DIRECTED BY THE ENGINEER. THE BENCH MARK ELEVATION WILL BE ESTABLISHED AND MARKED BY THE DEPARTMENT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR PERMANENT BENCH MARKS.

CB Coombe-Bloxdorf P.C.
- CIVIL ENGINEERS -
- STRUCTURAL ENGINEERS -
- LAND SURVEYORS -
Design Firm License No. 184-002703

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	2
			CONTRACT NO. 70615	
ILLINOIS FED. AID PROJECT				

FILE NAME *	USER NAME * dawsonkb	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, HIGHWAY STANDARDS & GENERAL NOTES	SCALE:	SHEET NO. OF SHEETS	STA. TO STA.
c:\pwork\pwork\dawsonkb\0120444\057	0615-shr-gonrate.dgn	DRAWN -	REVISED -					
	PLOT SCALE * 1/8" = 1' / in.	CHECKED -	REVISED -					
CD PROJECT NO 05827-7	PLOT DATE * 9/27/2011	DATE - / /	REVISED -					

SUMMARY OF QUANTITIES

LOCATION OF WORK: FAP ROUTE 840 (IL 49)
VERMILION COUNTY
S.N. 092-0171 - STA 211+11.00
STA. 209+07.70 to 212+85.71
RURAL
FUNDING BREAKOUT: 80% FEDERAL
20% STATE
CONSTRUCTION TYPE CODE: **M233**
0014

LOCATION OF WORK: FAP ROUTE 840 (IL 49)
VERMILION COUNTY
S.N. 092-0171 - STA 211+11.00
STA. 209+07.70 to 212+85.71
RURAL
FUNDING BREAKOUT: 80% FEDERAL
20% STATE
CONSTRUCTION TYPE CODE: **M233**
0014

CODE NO	ITEM	UNIT	TOTAL QUANTITY
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	162.5
* 63000025	STEEL PLATE BEAM GUARDRAIL, ATTACHED TO STRUCTURES	FOOT	50
* 63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2
* 63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	2
63200310	GUARDRAIL REMOVAL	FOOT	891
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	3
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	96
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	2045

CODE NO	ITEM	UNIT	TOTAL QUANTITY
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	856
70400100	TEMPORARY CONCRETE BARRIER	FOOT	437.5
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	437.5
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
70600350	IMPACT ATTENUATORS, RELOCATE (NON-DIRECTIVE), TEST LEVEL 3	EACH	2
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2045
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	12
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	1
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	15
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
78300100	PAVEMENT MARKING REMOVAL	SQ FT	325
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	12
X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	334
* X6330725	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	FOOT	150

*SPECIALTY ITEM

FILE NAME : c:\p\work\p\dot\grazianoja\0129444\070615-shr-sog.dgn	USER NAME : grazianoja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.P. RTE. 840	SECTION 120BR-1	COUNTY VERMILION	TOTAL SHEETS 3A	SHEET NO. 3A		
PLOT SCALE : 40.0000 / 1 in.	CHECKED -	REVISOR -	SCALE:			SHEET NO. 2 OF 3 SHEETS	STA.	TO STA.	CONTRACT NO. 70615			
PLOT DATE : 11/9/2012	DATE : 09-24-12	REVISIONS -	ILLINOIS FED. AID PROJECT									

SUMMARY OF QUANTITIES

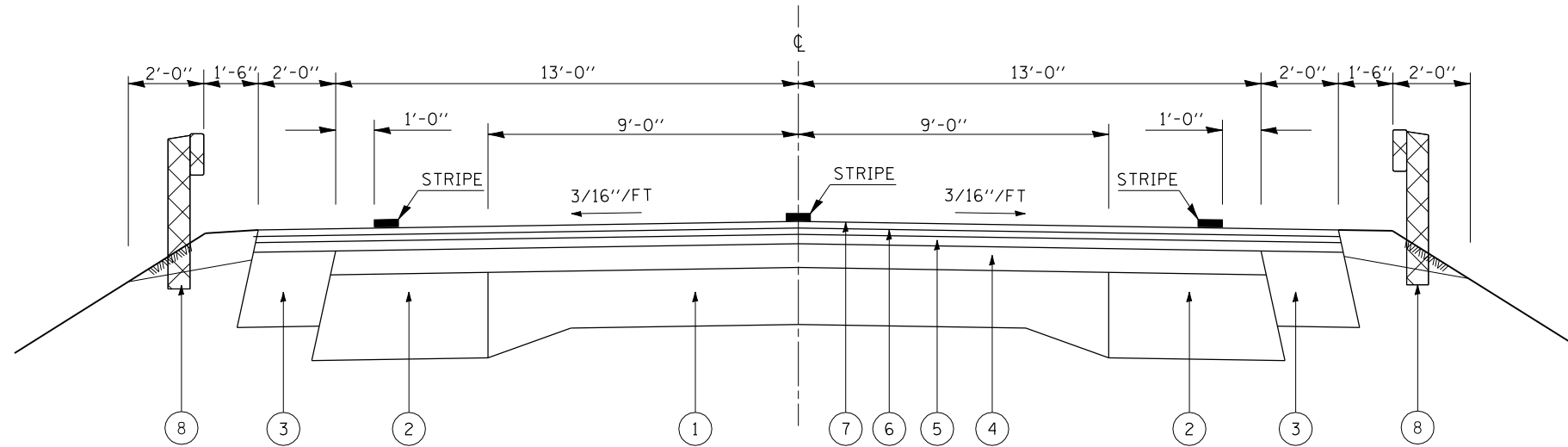
LOCATION OF WORK: FAP ROUTE 840 (IL 49)
 VERMILION COUNTY
 S.N. 092-0171 - STA 211+11.00
 STA. 209+07.70 to 212+85.71
 FUNDING BREAKOUT: RURAL
 80% FEDERAL
 20% STATE
 CONSTRUCTION TYPE CODE: **M233**
 0014

CODE NO	ITEM	UNIT	TOTAL QUANTITY
*	X7200201	WIDTH RESTRICTION SIGNING	L SUM 1
	Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH 44
	Z0002900	BASE COURSE (OPTION)	SQ YD 93
	Z0004552	APPROACH SLAB REMOVAL	SQ YD 130
	Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT 106
	Z0029090	DIAMOND GRINDING (BRIDGE SECTION)	SQ YD 554
	Z0038700	PERMANENT BENCH MARKS	EACH 1
^			

* SPECIALTY ITEMS

EXISTING ROADWAY TYPICAL SECTION

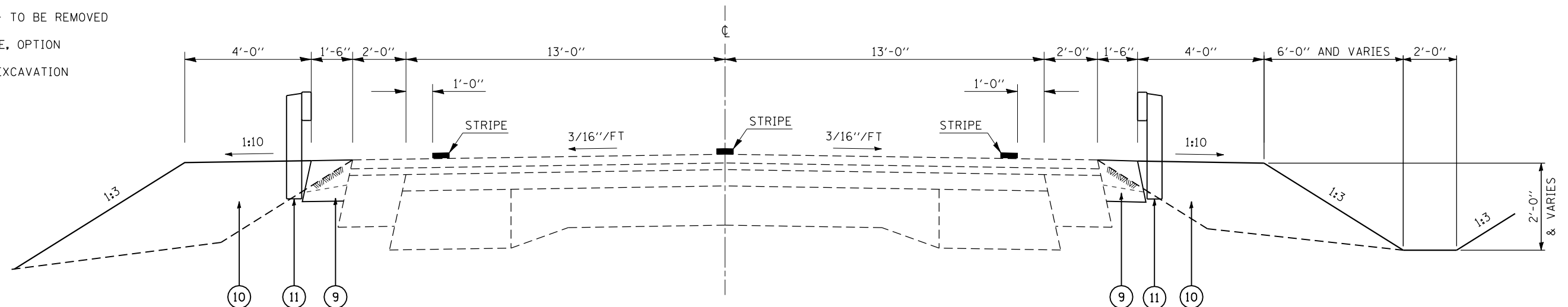
STA 209+32.00 TO STA 210+40.16
 STA 210+40.16 TO STA 210+64.53 BRIDGE APPROACH PAVEMENT
 STA 210+64.53 TO STA 211+57.47 BRIDGE OMISSION
 STA 211+57.47 TO STA 211+81.84 BRIDGE APPROACH PAVEMENT
 STA 211+81.84 TO STA 214+08.00



PROPOSED ROADWAY TYPICAL SECTION

STA 209+32.00 TO STA 210+29.36
 STA 210+29.36 TO STA 210+35.36 BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)
 STA 210+35.36 TO STA 210+65.36 BRIDGE APPROACH SLAB
 STA 210+65.36 TO STA 211+56.64 BRIDGE OMISSION
 STA 211+56.64 TO STA 211+86.64 BRIDGE APPROACH SLAB
 STA 211+86.64 TO STA 211+92.64 BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)
 STA 211+92.64 TO STA 214+08.00

- ① EX 9-6-9 PCC PAVEMENT
- ② EX HMA BASE COURSE WIDENING, 9"
- ③ EX CONC BASE COURSE WIDENING, 8"
- ④ EX HMA OVERLAYS 3 1/4"
- ⑤ EX HMA SURFACE SOURCE, 1 1/2"
- ⑥ EX LEVELING BINDER (VARIES 1" TO 2")
- ⑦ EX HMA SURFACE COURSE 1 1/2"
- ⑧ EX GUARDRAIL - TO BE REMOVED
- ⑨ PR BASE COURSE, OPTION
- ⑩ PR FURNISHED EXCAVATION
- ⑪ PR GUARDRAIL



FILE NAME = ...v8-ns\0570615-shr-typical.dgn	USER NAME = CFC...	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING TYPICAL SECTION PROPOSED TYPICAL SECTION	F.A.P. RTE. 840	SECTION 120BR-1	COUNTY VERMILION	TOTAL SHEETS 44	SHEET NO. 4
PLOT SCALE = 40.0000' / IN.		CHECKED -	REVISED -	SCALE: SHEET NO. OF SHEETS STA. TO STA.		CONTRACT NO. 70615				
PLOT DATE = 6/14/2011		DATE -	REVISED -	ILLINOIS FED. AID PROJECT						

PAINT PAVEMENT MARKING SCHEDULE				
LOCATION (STATION TO STATION)	LENGTH	4" YELLOW LN SKIP-DASH	4" WHITE LN SOLID	4" TEMP PVT MARKING LN
	FT	FT	FT	FT
STA 206+26 TO STA 215+86.5	960.5	240.125	1805	2045.125
TOTAL		2045		2045

NOTE: NO EDGE LINES THROUGH INTERSECTION.

PAVEMENT MARKING REMOVAL SCHEDULE		
LOCATION STATION TO STATION	LENGTH FT	REMOVAL SQ FT
STA 206+26 TO STA 215+86.5	960.5	325.33
TOTAL		325

RAISED REFLECTIVE PAVEMENT MARKER SCHEDULE				
LOCATION (STATION TO STATION)	LENGTH	R.R.P.M. CRYSTAL	R.R.P.M. BRIDGE	R.R.P.M. REMOVAL
	FT	EACH		EACH
STA 206+26 TO STA 210+65.36	439.36	6		6
PR SN 092-0171			1	
STA 211+56.64 TO STA 215+86.5	429.86	6		6
TOTAL		12	1	12

WORK ZONE PAVEMENT MARKING REMOVAL SCHEDULE			
LOCATION STATION TO STATION	LENGTH (FT)	REMOVAL (SQ FT)	
SHORT-TERM PM STA 206+26 TO STA 215+86.5	96	32.00	
TEMPORARY PAVEMENT MARKING - STAGE I	1238.82	412.94	
TEMPORARY PAVEMENT MARKING - STAGE II	1232.9	410.97	
TOTAL		856	

SHORT TERM PAVEMENT MARKING SCHEDULE		
LOCATION STATION TO STATION	LENGTH FT	SHORT TERM (1 APP) FT
4" SKIP-DASH CENTERLINE STA 206+26 TO STA 215+86.5	960.5	96.05
TOTAL		96

GUARDRAIL SCHEDULE								
LOCATION	S.P.B.G.R ATTACHED TO STRUCTURES	S.P.B.G.R TYPE A	TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT	TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) FLARED	TRAFFIC BARRIER TERMINAL TYPE 6A	TRAFFIC BARRIER TERMINAL TYPE 2	S.P.B.G.R. SHORT RADIUS	TERMINAL MARKER - DIRECT APPLIED
	FT	FT	EACH	EACH	EACH	EACH	FT	EACH
LT 209+62.56 TO 210+12.57				1				1
LT 210+12.57 TO 210+59.19					1			
RT 209+00.70 TO 209+50.70				1				1
RT 209+50.70 TO 210+00.70		50						
RT 210+00.70 TO 210+47.32					1			
LT 211+74.71 TO 212+21.33					1			
LT 212+21.33 TO 212+71.33		50						
LT 212+71.33 TO TR 2100N RT 14+60.22							37.5	
RT TR 2100N STA 14+10.25 TO 14+60.22			1					1
RT 211+62.84 TO 212+09.46					1			
RT 212+09.46 TO 212+65.31		55.85*						
RT 212+65.31 TO TR 2100N 15+43.15							37.5	
RT TR 2100N STA 15+43.15 TO 15+68.15	25							
RT TR 2100N STA 15+68.15 TO 15+79.67							12.5	
RT TR 2100N STA 15+79.67 TO 15+85.48						1		
LT TR 2100N 15+85.15 TO 15+79.58						1		
LT TR 2100N 15+79.58 TO 15+68.15							12.5	
LT TR 2100N 15+68.15 TO 15+43.15	25							
LT TR 2100N 15+43.15 TO 213+57.46							50	
RT 213+57.46 TO 214+07.48			1					1
TOTAL	50	156	2	2	4	2	150	4

* Cut 12.5' section to specified length needed in field.

BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) SCHEDULE		
LOCATION STA TO STA	WIDTH	BR APPR PVT CONN (FLEX)
	FT	SQ. YD
210+29.36 TO 210+35.36	33	22
211+86.64 TO 211+92.64	33	22
TOTAL		44

GUARDRAIL MARKERS - TYPE A SCHEDULE	
LOCATION	EACH
RT 209+80.69	1
RT210+60.69	1
RT 211+40.69	1
RT 212+20.69	1
TR 2100N RT & LT 15+26.15	2
TR 2100N RT & LT 15+55.65	2
TR 2100N RT & LT 15+79.63	2
TR 2100N RT 14+75.12	1
LT 212+12.49	1
LT 211+32.49	1
LT 210+52.49	1
LT 209+72.49	1
TOTAL	15

BITUMINOUS MATERIALS (PRIME COAT) SCHEDULE		
LOCATION STA TO STA	WIDTH	BIT MATL PR COAT
	FT	GALLON
210+29.36 TO 210+35.36	33	2.2
211+86.64 TO 211+92.64	33	2.2
TOTAL		4.4

SUMMARY OF EARTHWORK - IL 49				
LOCATION	CUT	ADJUSTED CUT (25% SHRINKAGE)	FILL	FURNISHED EXCAVATION
	CU YD	CU YD	CU YD	CU YD
STAGE I - STA 208+50 TO STA 210+50	5.6	4.2	58.3	54
STAGE I - STA 212+00 TO STA 214+00	2.8	2.1	4.6	3
STAGE II - STA 208+50 TO STA 210+50	27.8	20.9	70.4	50
STAGE II - STA 212+00 TO STA 214+00	21.3	16.0	27.8	12
TR 2100N STA 14+00 TO 15+00	0.0	0.0	7.0	7
EARTHWORK TOTALS	58	43	168	125

SEEDING SCHEDULE							
LOCATION	SEEDING CLASS 2A	NITROGEN FERTILIZER NUTRIENT	PHOSPHOROUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	MULCH METHOD 2	EROSION CONTROL BLANKET	TEMPORARY EROSION CONTROL SEEDING
	ACRE	LB	LB	LB	ACRE	SQ YD	LB
STA 208+50 TO STA 210+50	0.22	19.98	19.98	19.98	0.05	841.13	22
STA 212+00 TO STA 214+00	0.06	5.58	5.58	5.58	0.02	199.39	6
TR 2100N STA 14+00 TO STA 15+00	0.02	1.71	1.71	1.71	0.01	42.94	2
TOTALS	0.250	27	27	27	0.250	1083	30

NOTE: PAY ITEMS CALCULATED IN ACRES ROUNDED TO THE NEAREST 0.25 Ac.

NOTE: MULCH METHOD 2 IS TO BE USED FOR SLOPES FLATTER THAN 1:3. FOR SLOPES 1:3 AND STEEPER, EROSION CONTROL BLANKET IS TO BE USED.

APPROACH SLAB REMOVAL SCHEDULE			
APPROXIMATE STATION	WIDTH	APPROXIMATE LOCATION	APPROACH SLAB REMOVAL
	FT		SQ. YD
210+40.16 TO 210+64.53	24	EX SN 092-0171	64.99
211+57.47 TO 211+81.84	24	EX SN 092-0171	64.99
TOTAL			130

GUARDRAIL REMOVAL SCHEDULE	
LOCATION	GUARDRAIL REMOVAL (FOOT)
SOUTHWEST OF SN 092-0171	115
SOUTHEAST OF SN 092-0171	203
NORTHWEST OF SN 092-0171	216
NORTHEAST OF SN 092-0171	357
TOTAL	891

BASE COURSE (OPTION)	
LOCATION STATION TO STATION	BASE COURSE (OPTION) SQ YD
LT STA 209+07.70 TO STA 210+71.37	27.30
RT STA 209+07.70 TO STA 210+59.36	25.35
LT STA 211+62.64 TO STA 212+85.71	20.48
RT STA 211+50.63 TO STA 212+69.91	19.77
TOTALS	93

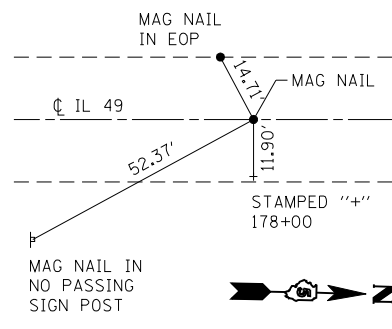
STONE RIPRAP SCHEDULE			
APPROXIMATE STATION	LT/RT	STONE RIPRAP, CL A5	FILTER FABRIC
		SQ YD	SQ YD
210+52.5 TO 211+62.2	RT	267	267
TOTAL		267	267

*RIPRAP WITHIN 10' OF EDGES OF STRUCTURE QUANTIFIED IN STRUCTURE PLANS.

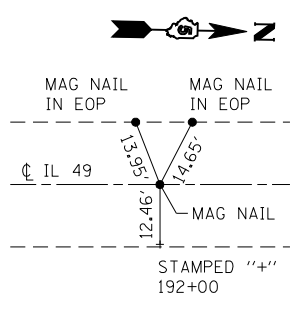
PAVEMENT REMOVAL SCHEDULE		
LOCATION STA TO STA	WIDTH	PVT REM
	FT	SQ. YD
210+29.36 TO 210+40.16	30	36
210+40.16 TO 210+64.53	6*	16.25
211+57.47 TO 211+81.84	6*	16.25
211+81.84 TO 211+92.64	30	36
WIDENING AT PR APPR SLAB	1.5	5
WIDENING AT PR APPR SLAB	1.5	5
TOTAL		114

*3' each side of existing approach slab

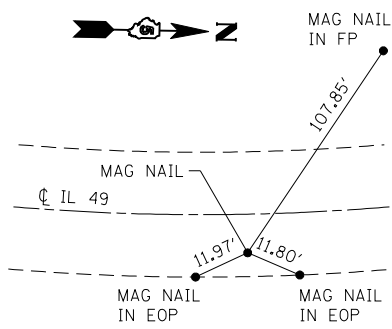
TEMPORARY DITCH CHECKS	
LOCATION STATION/OFFSET	TEMPORARY DITCH CHECKS (FEET)
	FEET
STA 209+50, 42.63 LT	8
STA 210+00, 42.71 LT	8
STA 210+50, 41.24 LT	8
STA 211+62, 38.27 LT	8
STA 212+47, 35.72 LT	8
TOTALS	40



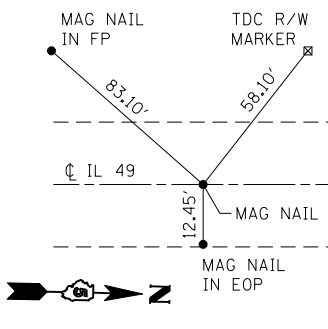
POT STA 177+96.25



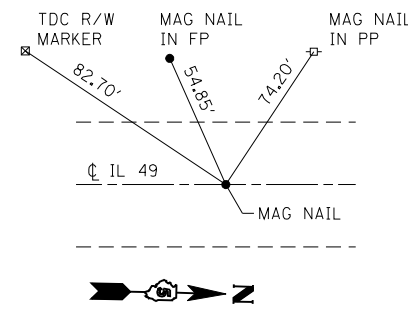
PC STA 191+99.00



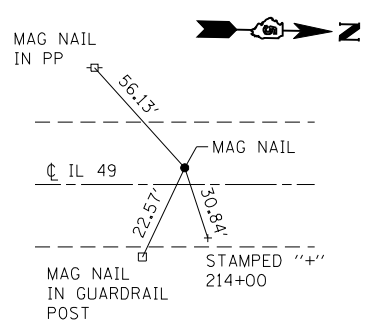
PI STA 198+90.89



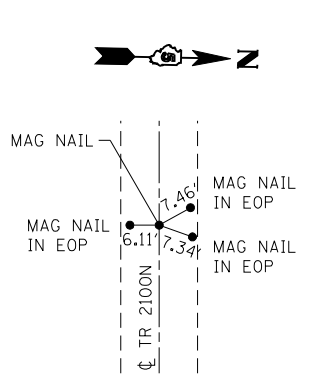
PT STA 205+82.75



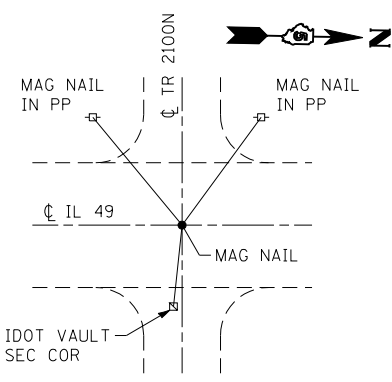
PC STA 206+64.19



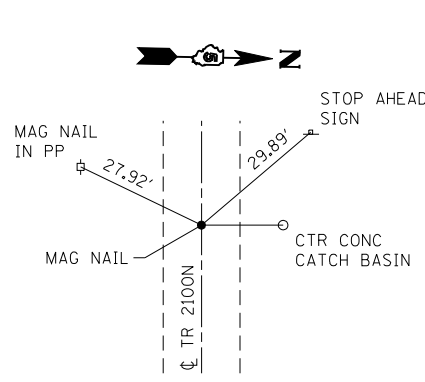
PI STA 213+70.98



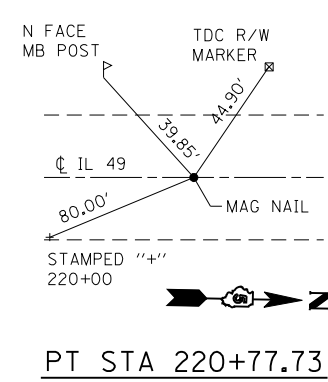
POT STA 4+33.34



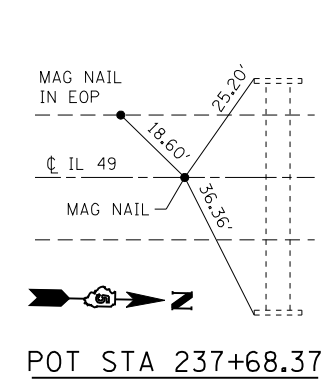
POT STA 15+00.00



POT STA 25+88.99



PT STA 220+77.73



POT STA 237+68.37

EXIST. CURVE 28
 PI STA. = 198+90.89
 $\Delta = 0^\circ 56' 06''$ (LT)
 $D = 0^\circ 04' 03''$
 $R = 84,796.18'$
 $T = 691.89'$
 $L = 1,383.75'$
 $E = 2.82'$
 $e = \text{-----}$
 $T.R. = \text{-----}$
 $S.E. RUN = \text{-----}$
 $P.C. STA. = 191+99.00$
 $P.T. STA. = 205+82.75$

EXIST. CURVE 29
 PI STA. = 213+70.98
 $\Delta = 1^\circ 01' 42''$ (RT)
 $D = 0^\circ 04' 22''$
 $R = 78,748.76'$
 $T = 706.79'$
 $L = 1,413.54'$
 $E = 3.17'$
 $e = \text{-----}$
 $T.R. = \text{-----}$
 $S.E. RUN = \text{-----}$
 $P.C. STA. = 206+64.19$
 $P.T. STA. = 220+77.73$

BENCHMARK: 4829-1 DISK IN TOP OF NORTH HEADWALL OF ACROSS BOX CULVERT ON TR 2100N SN 092+2034 STA 213+23.86, 67.00' RT EL 664.35

ALIGNMENT COORDINATES - IL 49			
STATION	NORTH	EAST	
POT 177+96.25	1273188.8625	1104468.7307	
PC 191+99.00	1274591.3917	1104443.8649	
PI 198+90.89	1275283.1750	1104431.6001	
PT 205+82.75	1275974.6661	1104408.0486	
PC 206+64.19	1276056.0589	1104405.2764	
PI 213+70.98	1276762.4393	1104381.2177	
PT 220+77.73	1277469.1377	1104369.8417	
POT 237+68.37	1279159.5583	1104342.6305	

ALIGNMENT COORDINATES - TR 2100N			
STATION	NORTH	EAST	
POT 4+33.34	1276673.0527	1103319.6655	
POT 15+00.00	1276696.6060	1104386.0689	
POT 25+88.99	1276715.2402	1105474.8959	

FILE NAME = ...v8-ns\d570615-shr\etb.dgn
 CB PROJECT NO 06027-7

USER NAME = CFC...
 PLOT SCALE = 400.000000' / IN.
 PLOT DATE = 6/14/2011

DESIGNED -
 DRAWN - CFC
 CHECKED - CCJ
 DATE - / /

REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES AND BENCHMARK
 SN 092-0171

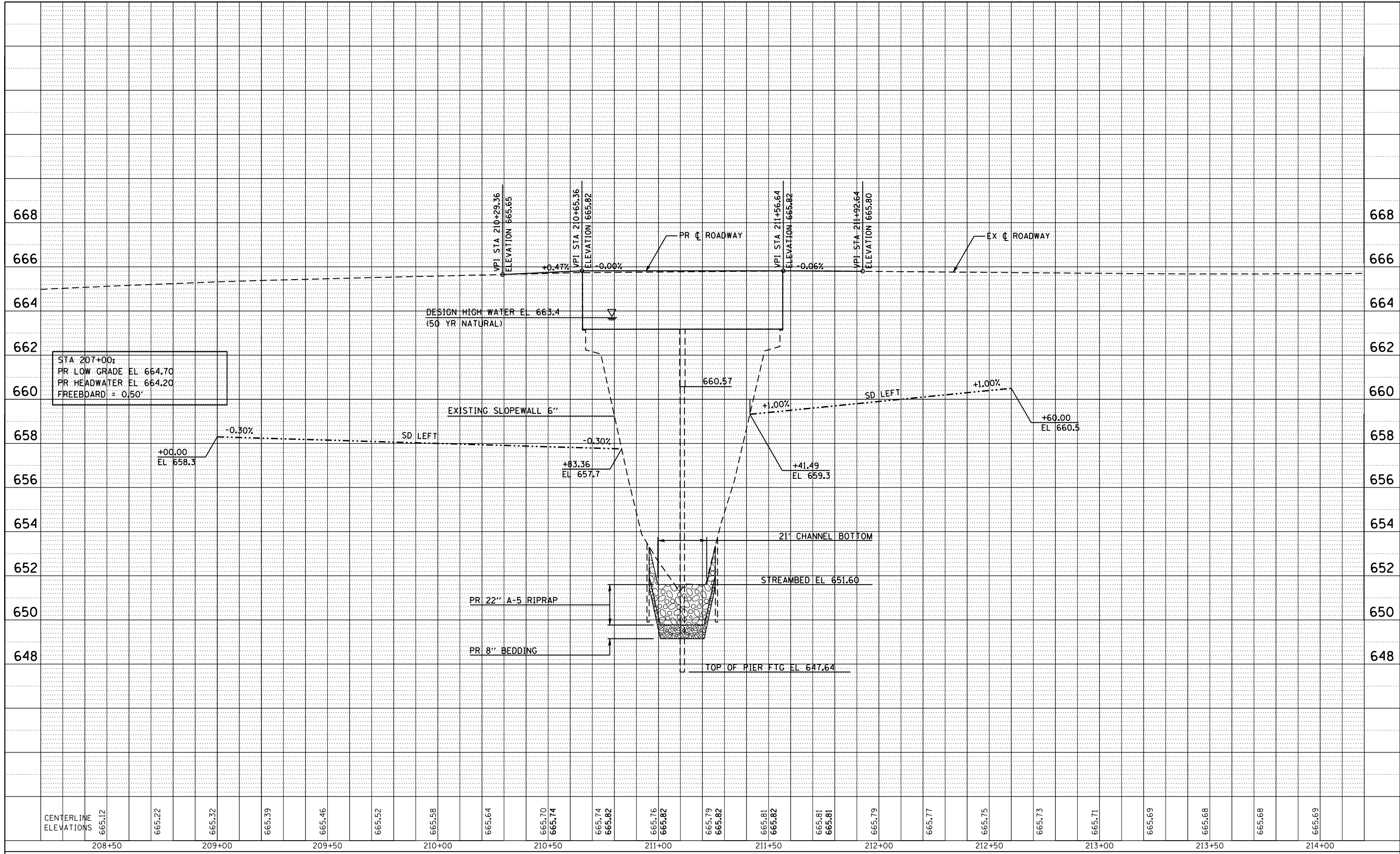
SCALE: SHEET NO. OF SHEETS STA. TO STA.

CB Coombe-Bloxdorf P.C.
 - CIVIL ENGINEERS -
 - STRUCTURAL ENGINEERS -
 - LAND SURVEYORS -
 Design Firm License No. 184-002703

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	7
				CONTRACT NO. 70615
ILLINOIS FED. AID PROJECT				

PLAN	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOT AT THIS CHFD		
	NOTE BOOK NO.		
	CADD FILE NAME		

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOT AT THIS CHFD		
	NOTE BOOK NO.		
	CADD FILE NAME		



FILE NAME = ...\\b-rs\0570615-sht-profile.dgn
 CB PROJECT NO 06027-7

USER NAME = CFC...
 PLOT SCALE = 40.0000' / IN.
 PLOT DATE = 6/14/2011

DESIGNED -	REVISED -
DRAWN -	REVISED -
CHECKED -	REVISED -
DATE - / /	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

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

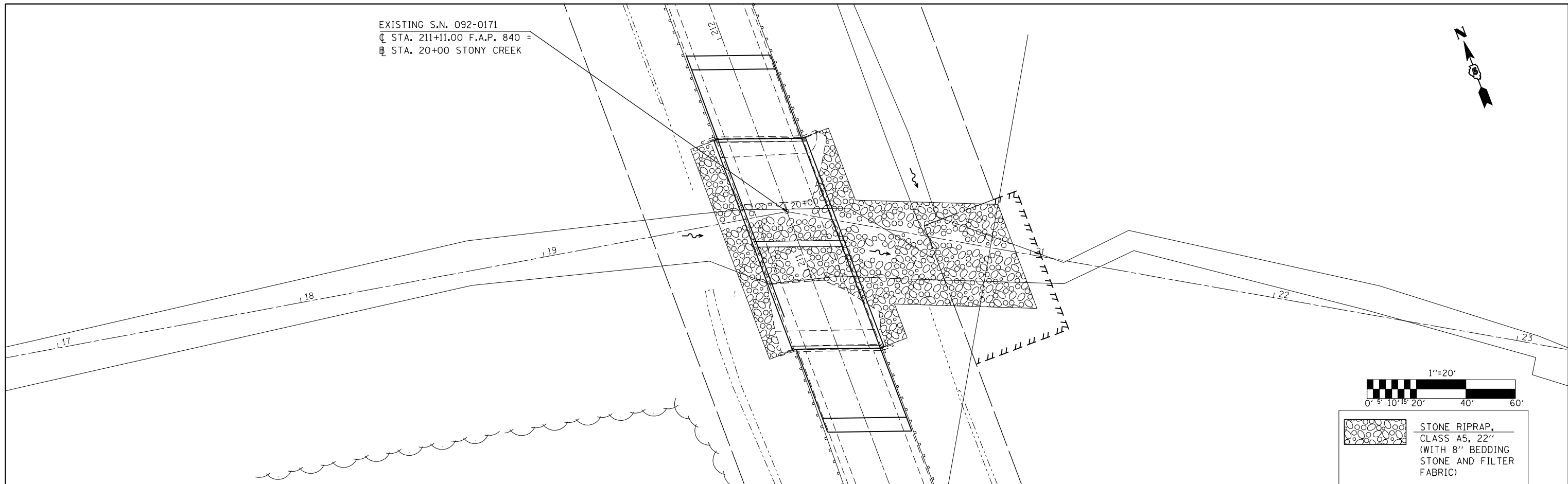
**PROFILE
 S.N. 0920171**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	9
				CONTRACT NO. 70615
ILLINOIS FED. AID PROJECT				

EXISTING S.N. 092-0171
 CL STA. 211+11.00 F.A.P. 840 =
 ST. STA. 20+00 STONY CREEK



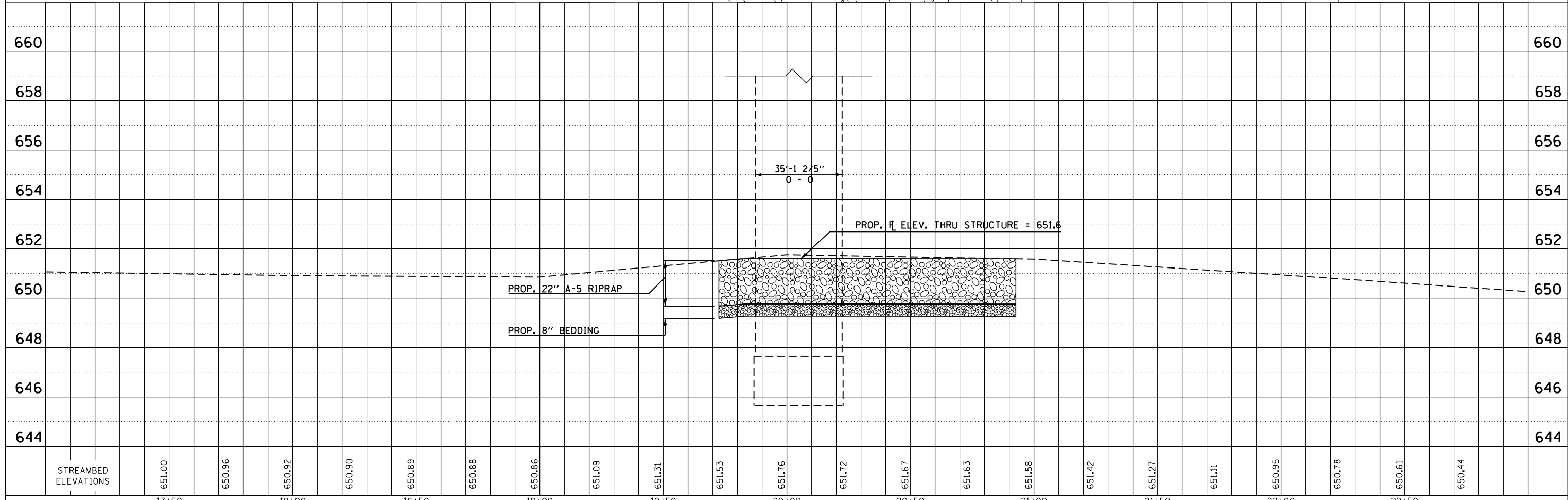
PLAN	SURVEYED	BY	DATE
	PLOTTED		
	CHECKED		
	AT		
	CADD FILE NAME		
	NO.		



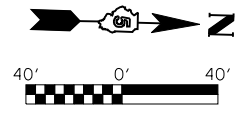
1"=20'

STONE RIPRAP,
 CLASS A5, 22"
 (WITH 8" BEDDING
 STONE AND FILTER
 FABRIC)

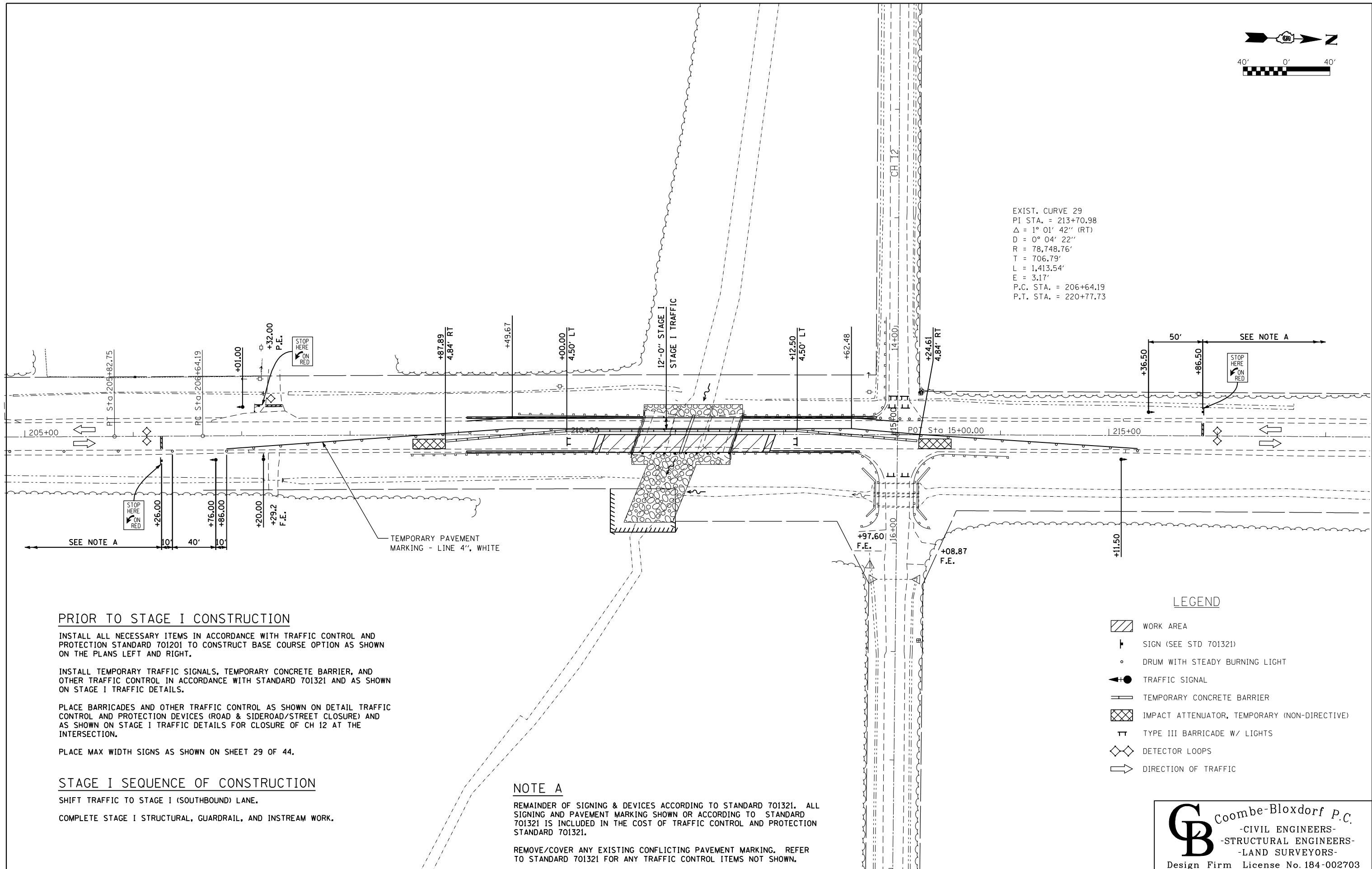
PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	CHECKED		
	AT		
	STRUCTURE NOTATION CHKD		
	NO.		



FILE NAME =	USER NAME = CFC..	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PLAN & PROFILE OF STREAM S.N. 092-0171				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
...\\0570615-sht-plnprf-stream.dgn		DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	VERMILION	44	10
		CHECKED -	REVISED -								CONTRACT NO.	70615	
		DATE -	REVISED -								ILLINOIS FED. AID PROJECT		



EXIST. CURVE 29
 PI STA. = 213+70.98
 Δ = 1° 01' 42" (RT)
 D = 0° 04' 22"
 R = 78,748.76'
 T = 706.79'
 E = 3.17'
 P.C. STA. = 206+64.19
 P.T. STA. = 220+77.73



PRIOR TO STAGE I CONSTRUCTION

- INSTALL ALL NECESSARY ITEMS IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701201 TO CONSTRUCT BASE COURSE OPTION AS SHOWN ON THE PLANS LEFT AND RIGHT.
- INSTALL TEMPORARY TRAFFIC SIGNALS, TEMPORARY CONCRETE BARRIER, AND OTHER TRAFFIC CONTROL IN ACCORDANCE WITH STANDARD 701321 AND AS SHOWN ON STAGE I TRAFFIC DETAILS.
- PLACE BARRICADES AND OTHER TRAFFIC CONTROL AS SHOWN ON DETAIL TRAFFIC CONTROL AND PROTECTION DEVICES (ROAD & SIDEROAD/STREET CLOSURE) AND AS SHOWN ON STAGE I TRAFFIC DETAILS FOR CLOSURE OF CH 12 AT THE INTERSECTION.
- PLACE MAX WIDTH SIGNS AS SHOWN ON SHEET 29 OF 44.

STAGE I SEQUENCE OF CONSTRUCTION

- SHIFT TRAFFIC TO STAGE I (SOUTHBOUND) LANE.
- COMPLETE STAGE I STRUCTURAL, GUARDRAIL, AND INSTREAM WORK.

TEMPORARY PAVEMENT MARKING - LINE 4", WHITE

NOTE A

REMAINDER OF SIGNING & DEVICES ACCORDING TO STANDARD 701321. ALL SIGNING AND PAVEMENT MARKING SHOWN OR ACCORDING TO STANDARD 701321 IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.
 REMOVE/COVER ANY EXISTING CONFLICTING PAVEMENT MARKING. REFER TO STANDARD 701321 FOR ANY TRAFFIC CONTROL ITEMS NOT SHOWN.

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY (NON-DIRECTIVE)
- TYPE III BARRICADE W/ LIGHTS
- DETECTOR LOOPS
- DIRECTION OF TRAFFIC

FILE NAME = ...d570615-sht-staging-stage-1.dgn	USER NAME = CFC...	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
		CHECKED - CCJ	REVISED -
		DATE - / /	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

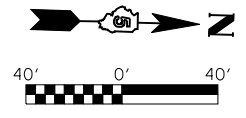
**STAGE I TRAFFIC CONTROL
 SN 092-0171**

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

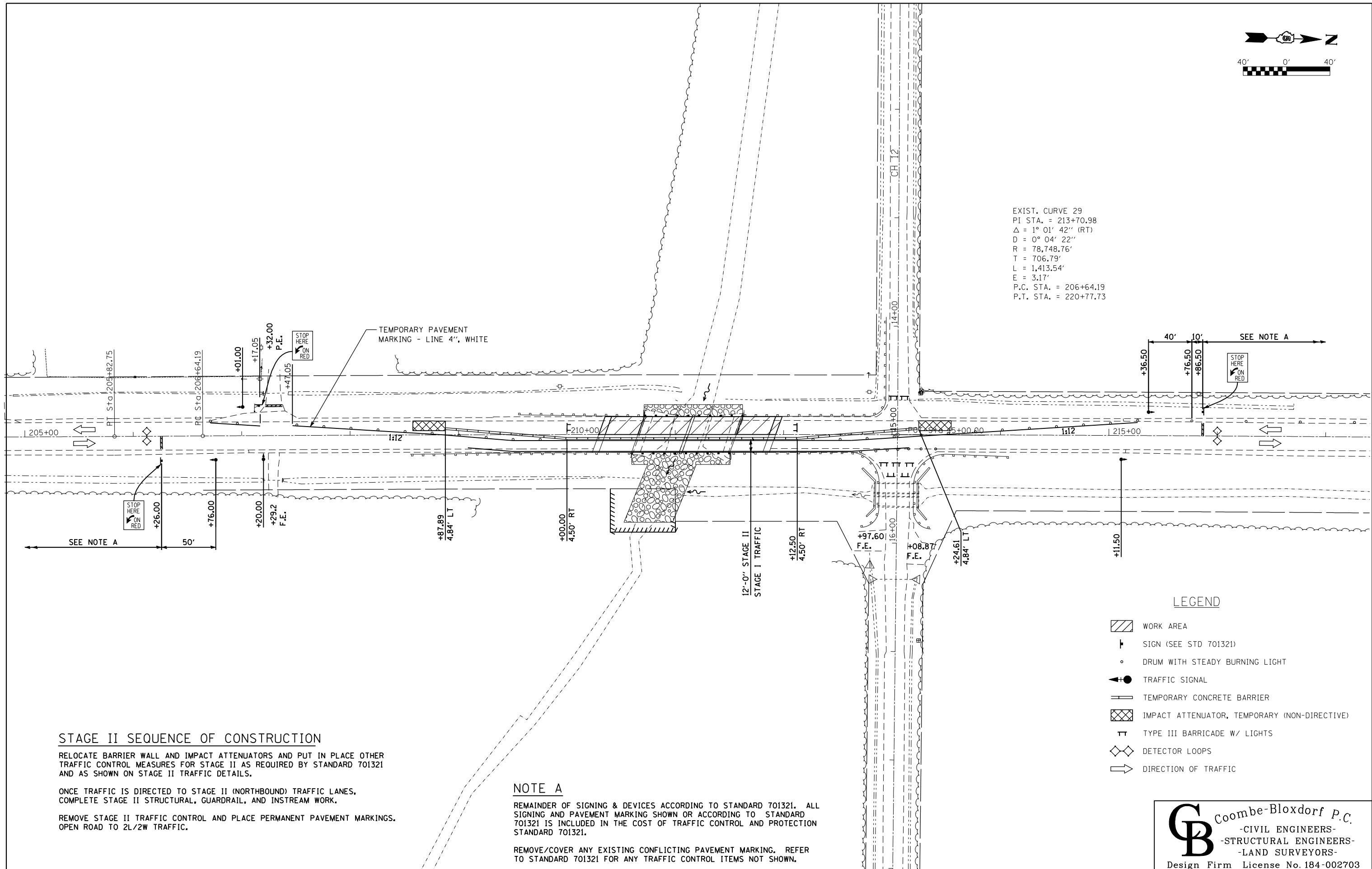
Coombes-Bloxdorf P.C.
 - CIVIL ENGINEERS -
 - STRUCTURAL ENGINEERS -
 - LAND SURVEYORS -
 Design Firm License No. 184-002703

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	11

CONTRACT NO. 70615
 ILLINOIS FED. AID PROJECT



EXIST. CURVE 29
 PI STA. = 213+70.98
 $\Delta = 1^\circ 01' 42''$ (RT)
 $D = 0^\circ 04' 22''$
 $R = 78,748.76'$
 $T = 706.79'$
 $L = 1,413.54'$
 $E = 3.17'$
 P.C. STA. = 206+64.19
 P.T. STA. = 220+77.73



STAGE II SEQUENCE OF CONSTRUCTION

RELOCATE BARRIER WALL AND IMPACT ATTENUATORS AND PUT IN PLACE OTHER TRAFFIC CONTROL MEASURES FOR STAGE II AS REQUIRED BY STANDARD 701321 AND AS SHOWN ON STAGE II TRAFFIC DETAILS.

ONCE TRAFFIC IS DIRECTED TO STAGE II (NORTHBOUND) TRAFFIC LANES, COMPLETE STAGE II STRUCTURAL, GUARDRAIL, AND INSTREAM WORK.

REMOVE STAGE II TRAFFIC CONTROL AND PLACE PERMANENT PAVEMENT MARKINGS. OPEN ROAD TO 2L/2W TRAFFIC.

NOTE A

REMAINDER OF SIGNING & DEVICES ACCORDING TO STANDARD 701321. ALL SIGNING AND PAVEMENT MARKING SHOWN OR ACCORDING TO STANDARD 701321 IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

REMOVE/COVER ANY EXISTING CONFLICTING PAVEMENT MARKING. REFER TO STANDARD 701321 FOR ANY TRAFFIC CONTROL ITEMS NOT SHOWN.

- LEGEND**
- WORK AREA
 - SIGN (SEE STD 701321)
 - DRUM WITH STEADY BURNING LIGHT
 - TRAFFIC SIGNAL
 - TEMPORARY CONCRETE BARRIER
 - IMPACT ATTENUATOR, TEMPORARY (NON-DIRECTIVE)
 - TYPE III BARRICADE W/ LIGHTS
 - DETECTOR LOOPS
 - DIRECTION OF TRAFFIC

FILE NAME = ...d570615-sht-staging-stage-11.dgn	USER NAME = CFC..	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
		CHECKED - CCJ	REVISED -
		DATE - / /	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE II TRAFFIC CONTROL
SN 092-0171**

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

Coombe-Bloxdorf P.C.
 - CIVIL ENGINEERS -
 - STRUCTURAL ENGINEERS -
 - LAND SURVEYORS -
 Design Firm License No. 184-002703

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	12

CONTRACT NO. 70615

ILLINOIS FED. AID PROJECT

Bench Mark: #4829-1 Disk in top of north headwall of SN 092-2034; Sta. 213+23.86; 67.00' Rt.; Elev. 664.35

Existing Structure: SN 092-0171 was built in 1975 as part of SBI Route 49, Sec. 120BR and the HMA WS and a beam were replaced in 2000 as part of FAP 840, Section (119BR, 120BR) I. The existing superstructure consists of two simple spans of PPC deck beams with a 5" concrete wearing surface. The substructure consists of pile bent abutments and a pier supported by a spread footing. The existing structure is 94'-0" back to back of abutments and 33'-0" out to out of deck. The existing superstructure is to be removed and replaced maintaining one lane of traffic by using staged construction.

No Salvage.

LOADING HL 93 (NEW CONST.)
LOADING HS20-44 (EXIST. CONST.)
 Allow 50 #/sq. ft. for future wearing surface

DESIGN SPECIFICATIONS

NEW CONSTRUCTION

2010 AASHTO LRFD Bridge Design Specifications

EXISTING CONSTRUCTION

2002 AASHTO Bridge Design Specifications
 1995 FHWA Seismic Retrofitting Manual for Highway Bridges

DESIGN STRESSES

NEW CONSTRUCTION

FIELD UNITS

$f'_c = 3,500$ psi
 $f'_c = 5,000$ psi (CWS only)
 $f_y = 60,000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_ci = 5,000$ psi
 $f_{pu} = 270,000$ psi (1/2" low lax strands)
 $f_{pbt} = 201,960$ psi (1/2" low lax strands)

EXISTING CONSTRUCTION

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 40,000$ psi (Reinforcement)

SEISMIC DATA

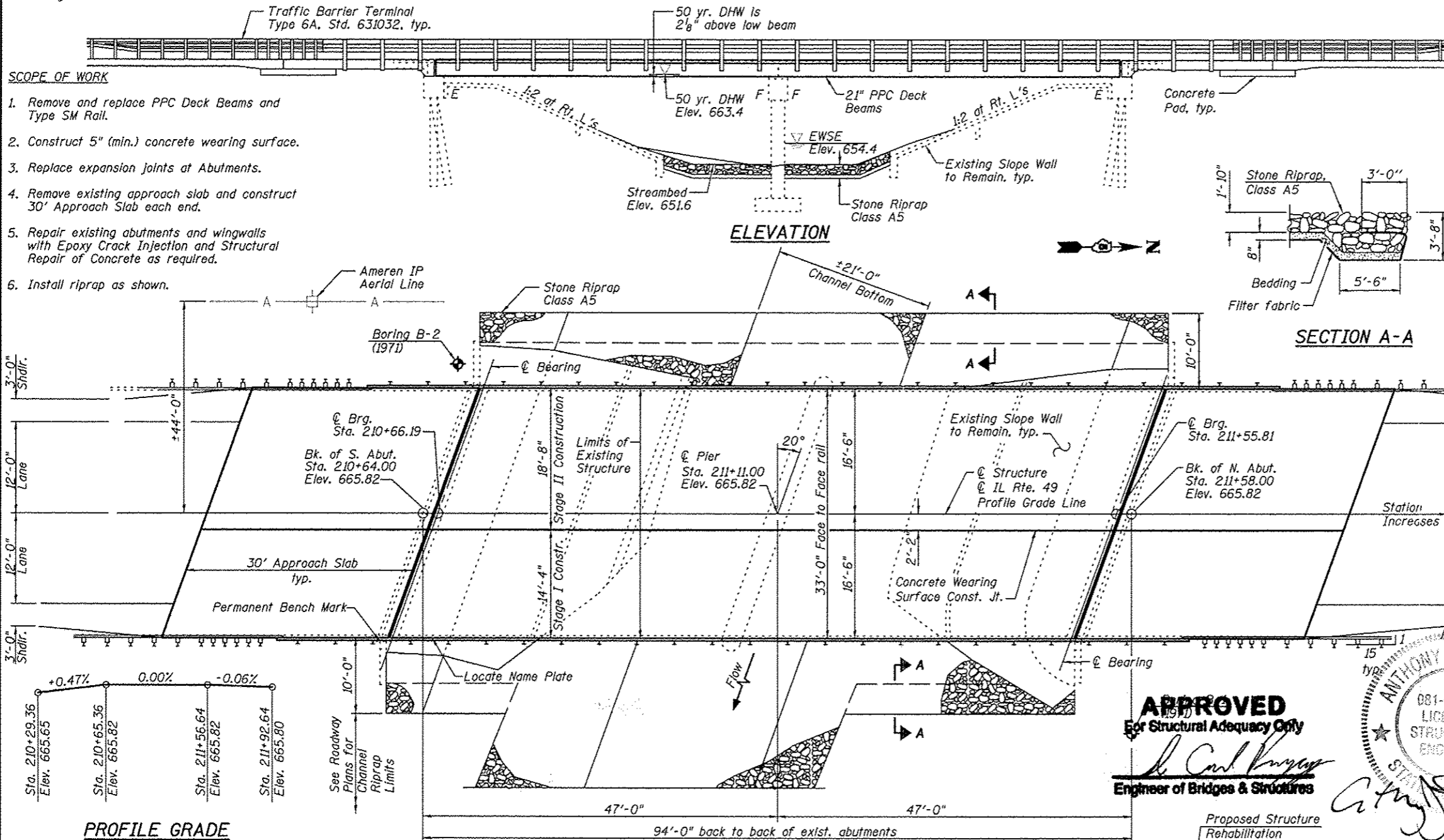
LFD SEISMIC DATA-EXISTING CONSTRUCTION
 Seismic Performance Category (SPC) = A
 Horizontal Bedrock Acceleration Coefficient (A) = 0.047 g
 Site Coefficient (S) = 1.0

LRFD SEISMIC DATA-NEW CONSTRUCTION
 Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.091 g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.17 g
 Soil Site Class = C

INDEX OF SHEETS

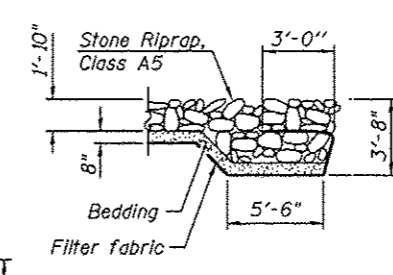
- 1 General Plan and Elevation
- 2 General Details
- 3 Modified Temporary Concrete Barrier
- 4 Top of Approach Slab Elevations
- 5 Superstructure
- 6 Superstructure Details
- 7-8 Bridge Approach Pavement
- 9 Steel Railing
- 10 21" x 36" PPC Deck Beam
- 11 21" x 36" PPC Deck Beam Details
- 12 Abutment Repair and Details
- 13 Pier Repair and Details
- 14 Bar Splicer Assembly and Mechanical Splicer Details
- 15 Soil Boring Log
- 16 Existing General Plan and Elevation

GENERAL PLAN
IL RTE. 49 OVER
TRIBUTARY TO STONY CREEK
F.A.P. RTE. 840 SECTION 120BR-1
VERMILION COUNTY
STATION 211+11.00
STRUCTURE NO. 092-0171



SCOPE OF WORK

1. Remove and replace PPC Deck Beams and Type SM Rail.
2. Construct 5" (min.) concrete wearing surface.
3. Replace expansion joints at Abutments.
4. Remove existing approach slab and construct 30' Approach Slab each end.
5. Repair existing abutments and wingwalls with Epoxy Crack Injection and Structural Repair of Concrete as required.
6. Install riprap as shown.



The profile grade shows the final elevations after grinding.

WATERWAY INFORMATION

Drainage Area = 12.9 sq. mi. Low Grade Elev. 664.7 ft. @ Sta. 207+00

Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
		Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
10	1590	512	512	662.8	0.9	0.9	663.7	663.7
Design	50	2594	522	663.4	0.8	0.8	664.2	664.2
Base	100	3045	522	663.6	1.2	1.2	664.8	664.8
Max. Calc.	500	4156	522	664.0	1.4	1.4	665.4	665.4

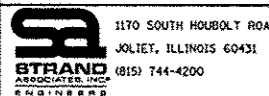
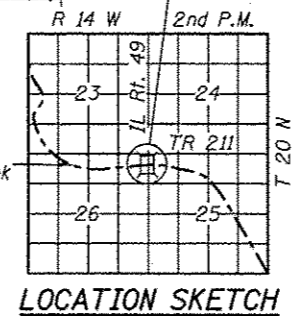
10 Yr. Vel. through Exist. Bridge = 3.1 FPS 10 Yr. Vel. through Prop. Bridge = 3.1 FPS

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abut.	Pier	N. Abut.
	660.3	646.64	660.3

CURVE DATA

$\Delta = 1^{\circ}01'42''$ (Rt.)
 $D = 0^{\circ}04'22''$
 $T = 706.79'$
 $L = 1413.54'$
 $E = 3.17'$
 $R = 78,748.76'$
 $P.C. = Sta. 206+64.19$
 $P.T. = Sta. 220+77.73$
 $P.I. = Sta. 213+70.98$



USER NAME	DESIGNED	REVISIONS
ryand	RRD	-
	AJS	-
	BJF	-
	AJS	-

DESIGNED	CHECKED	REVISIONS
RRD	AJS	-
BJF	AJS	-
AJS	AJS	-

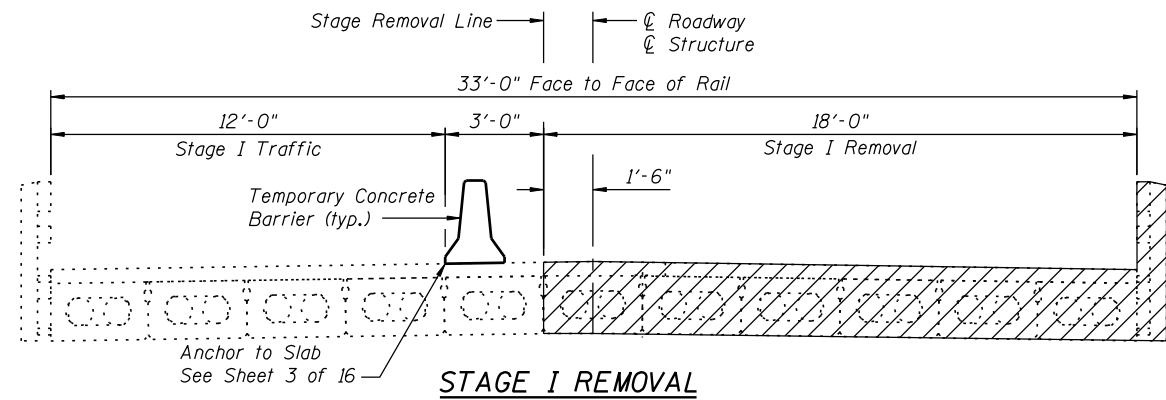
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 092-0171
 SHEET NO. 1 OF 16 SHEETS

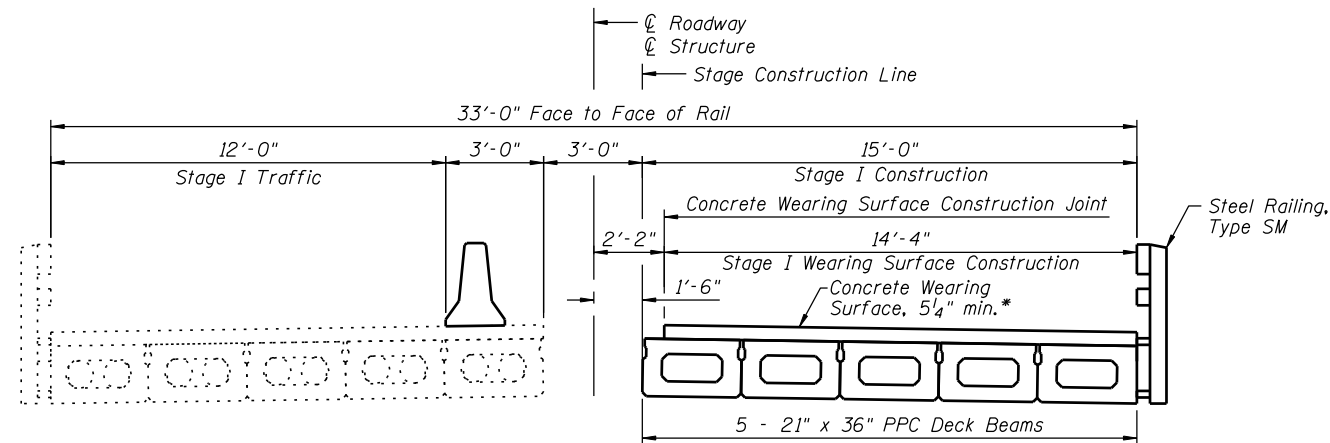
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	13

CONTRACT NO. 70615
 [ILLINOIS] FED. AID PROJECT

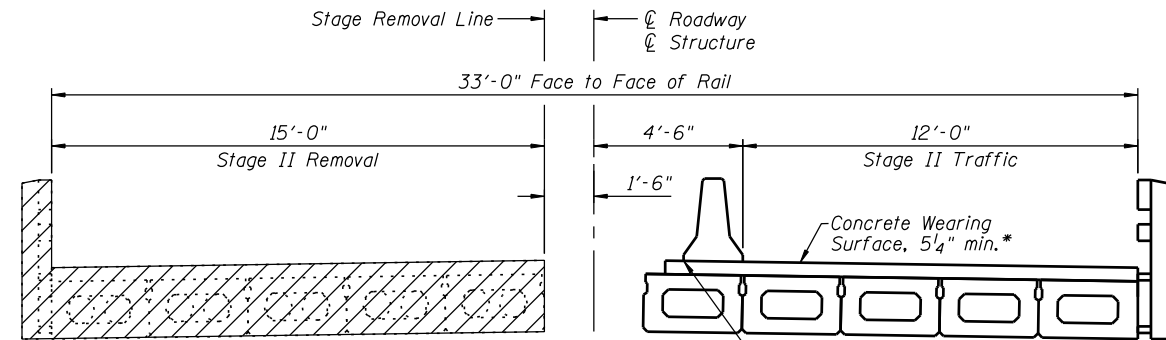
FILE NAME: G:\Prestress\Sub\Pages\Structural\0920171-78615-01-01-01.dgn



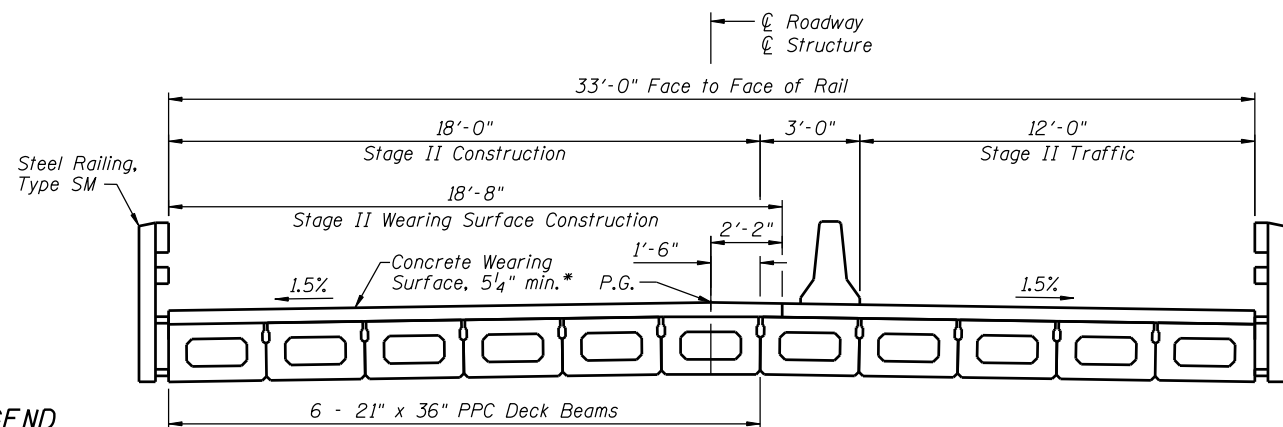
STAGE I REMOVAL



STAGE I CONSTRUCTION



STAGE II REMOVAL



STAGE II CONSTRUCTION

*Prior to grinding

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.

Reinforcement bars designated (E) shall be epoxy coated.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

If the Contractor's procedure for existing beam removal and placement of new beams involves placement of cranes or other heavy equipment on existing or new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the existing or new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. Prior to placement of the timber mats on new beams, the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq Yd	0	342	342
Filter Fabric	Sq Yd	0	342	342
Removal Of Existing Superstructures	Each	1	0	1
Concrete Removal	Cu Yd	0	4	4
Concrete Structures	Cu Yd	0	22	22
Concrete Superstructure	Cu Yd	103	0	103
Bridge Deck Grooving	Sq Yd	554	0	554
Protective Coat	Sq Yd	554	0	554
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq Ft	2,996	0	2,996
Reinforcement Bars, Epoxy Coated	Pound	17,050	3,840	20,890
Bar Splicers	Each	234	80	314
Steel Railing, Type Sm	Foot	242	0	242
Name Plates	Each	1	0	1
Preformed Joint Strip Seal	Foot	71	0	71
Epoxy Crack Injection	Foot	0	25	25
Concrete Wearing Surface, 5"	Sq Yd	334	0	334
Asbestos Bearing Pad Removal	Each	0	44	44
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	Sq Ft	0	106	106
Diamond Grinding (Bridge Section)	Sq Yd	554	0	554
Permanent Bench Marks	Each	0	1	1

Quantity limits for Stone Riprap, Class A5 and Filter Fabric are shown on Sheet 1 of 16. See Roadway Plans Approach Slab Removal Quantity.

Notes:

- All cross sections are looking north.
- See Roadway Plans for quantity of temporary concrete barrier.
- Removal of existing bridge railing existing wearing surface, existing expansive materials, and existing abandoned utility line are included in Removal of Existing Superstructures.
- See Recurring Special Provisions Check Sheet #32 for asbestos bearing pad removal.

LEGEND

- Removal of Existing Structures
- Proposed Work

FILE NAME = H:\0920171-014.dgn

STRAND ENGINEERS
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = rjgend	DESIGNED RRD	REVISED -
CHECKED AJS	CHECKED AJS	REVISED -
PLOT SCALE =	DRAWN BJF	REVISED -
PLOT DATE = 2/27/2013	CHECKED AJS	REVISED -

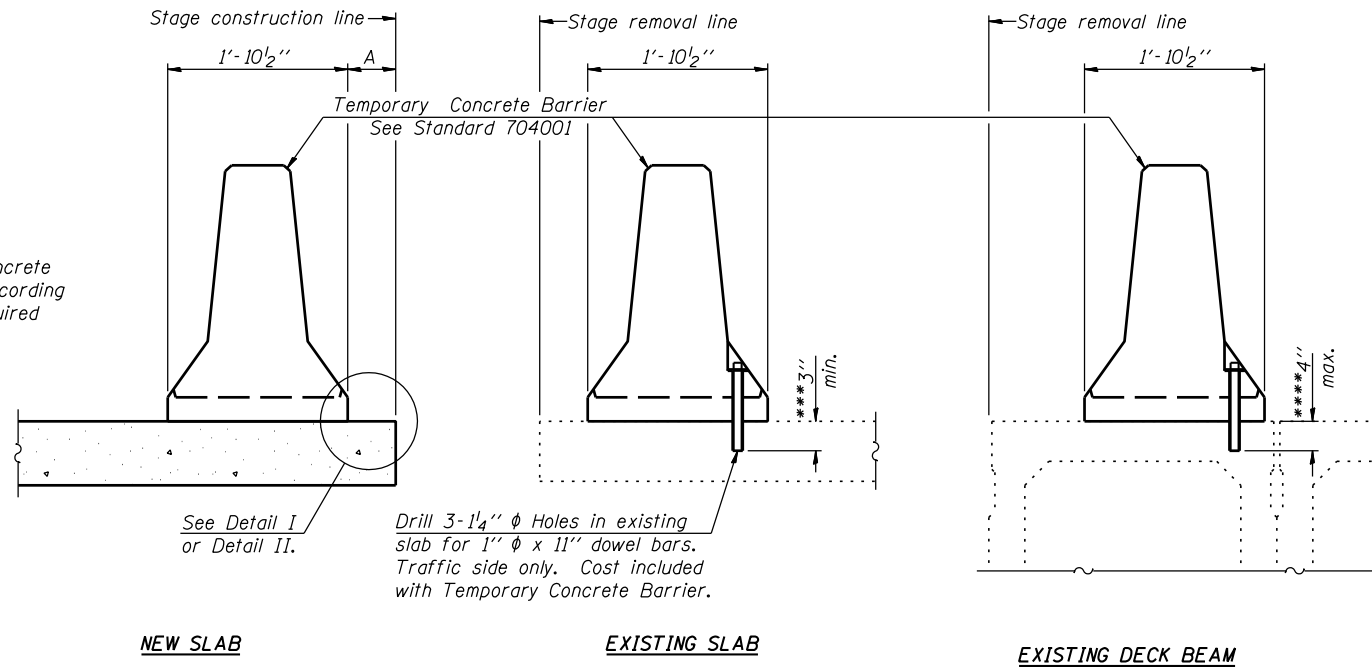
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**GENERAL DETAILS
 STRUCTURE NO. 092-0171**

SHEET NO. 2 OF 16 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	14
CONTRACT NO. 70615				
ILLINOIS FED. AID PROJECT				

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".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

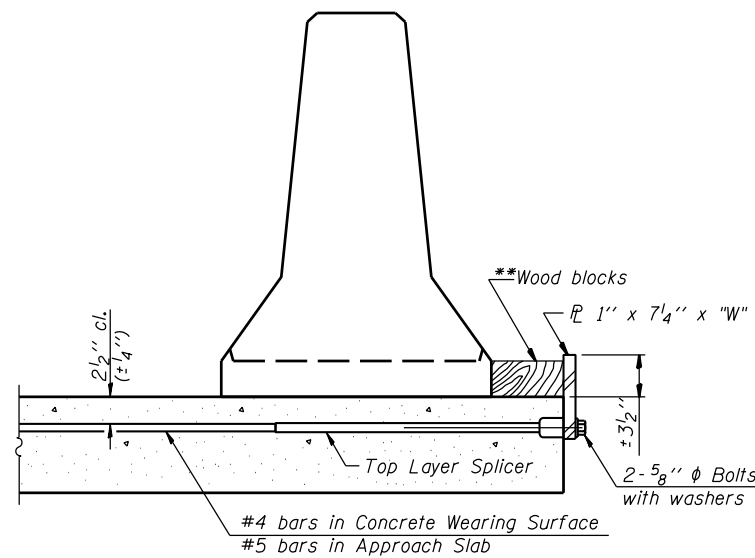
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x "W" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x "W" steel PL to the concrete slab or concrete wearing surface with 2-5/8" φ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate C of each barrier panel.

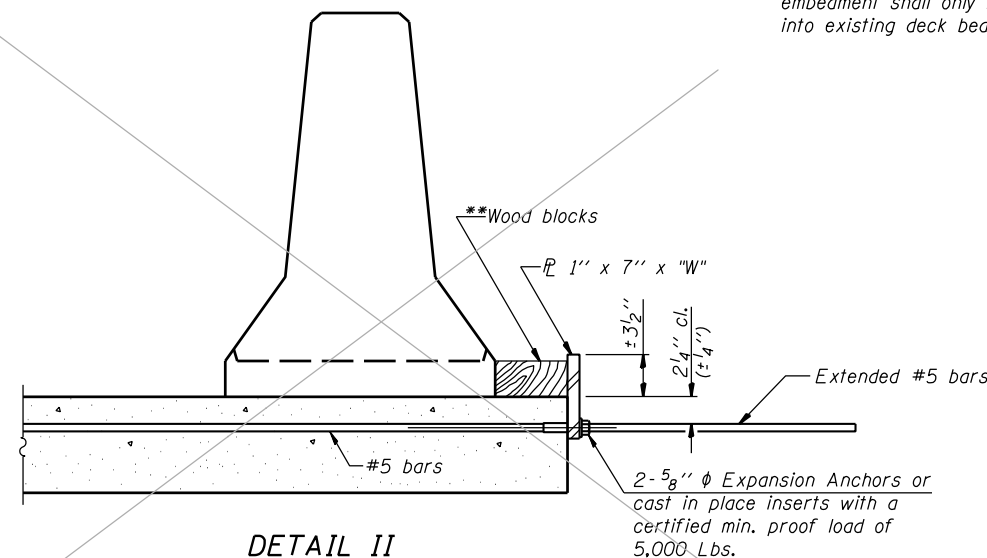
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

*** 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.

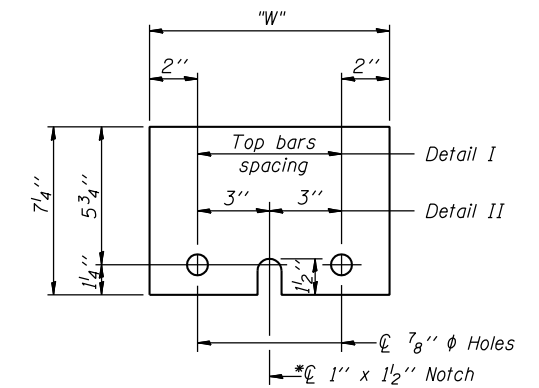
**** If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER PL 1" x 7" x "W"

* Required only with 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"

FILE NAME = S:\JOL 6300-6399\6346 024\Microso\Finals Plans\Structural\0920171-70615-003-TCB.dgn



USER NAME = rjgnd	DESIGNED RRD	REVISED -
	CHECKED AJS	REVISED -
PLOT SCALE =	DRAWN BJF	REVISED -
PLOT DATE = 8/3/2011	CHECKED AJS	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MODIFIED TEMPORARY CONCRETE BARRIER
STRUCTURE NO. 092-0171**

SHEET NO. 3 OF 16 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	15
			CONTRACT NO. 70615	

ILLINOIS FED. AID PROJECT

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
N. End North Appr. Pav't.	211+92.43	16.50	665.55	665.57
A4	211+82.43	16.50	665.56	665.58
A3	211+72.43	16.50	665.56	665.58
S. End North Appr. Pav't.	211+62.43	16.50	665.57	665.59
N. End South Appr. Pav't.	210+71.58	16.50	665.60	665.62
A2	210+61.58	16.50	665.55	665.58
A1	210+51.58	16.50	665.51	665.53
S. End South Appr. Pav't.	210+41.58	16.50	665.46	665.48

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
N. End North Appr. Pav't.	211+90.79	12.00	665.62	665.64
A4	211+80.79	12.00	665.63	665.65
A3	211+70.79	12.00	665.63	665.65
S. End North Appr. Pav't.	211+60.79	12.00	665.64	665.66
N. End South Appr. Pav't.	210+69.94	12.00	665.66	665.68
A2	210+59.94	12.00	665.61	665.64
A1	210+49.94	12.00	665.57	665.59
S. End South Appr. Pav't.	210+39.94	12.00	665.52	665.54

☉ STRUCTURE/☉ ROADWAY/ PROFILE GRADE LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
N. End North Appr. Pav't.	211+86.43	0.00	665.80	665.82
A4	211+76.43	0.00	665.81	665.83
A3	211+66.43	0.00	665.81	665.84
S. End North Appr. Pav't.	211+56.43	0.00	665.82	665.84
N. End South Appr. Pav't.	210+65.57	0.00	665.82	665.84
A2	210+55.57	0.00	665.77	665.79
A1	210+45.57	0.00	665.73	665.75
S. End South Appr. Pav't.	210+35.57	0.00	665.68	665.70

EAST EDGE OF PAVEMENT

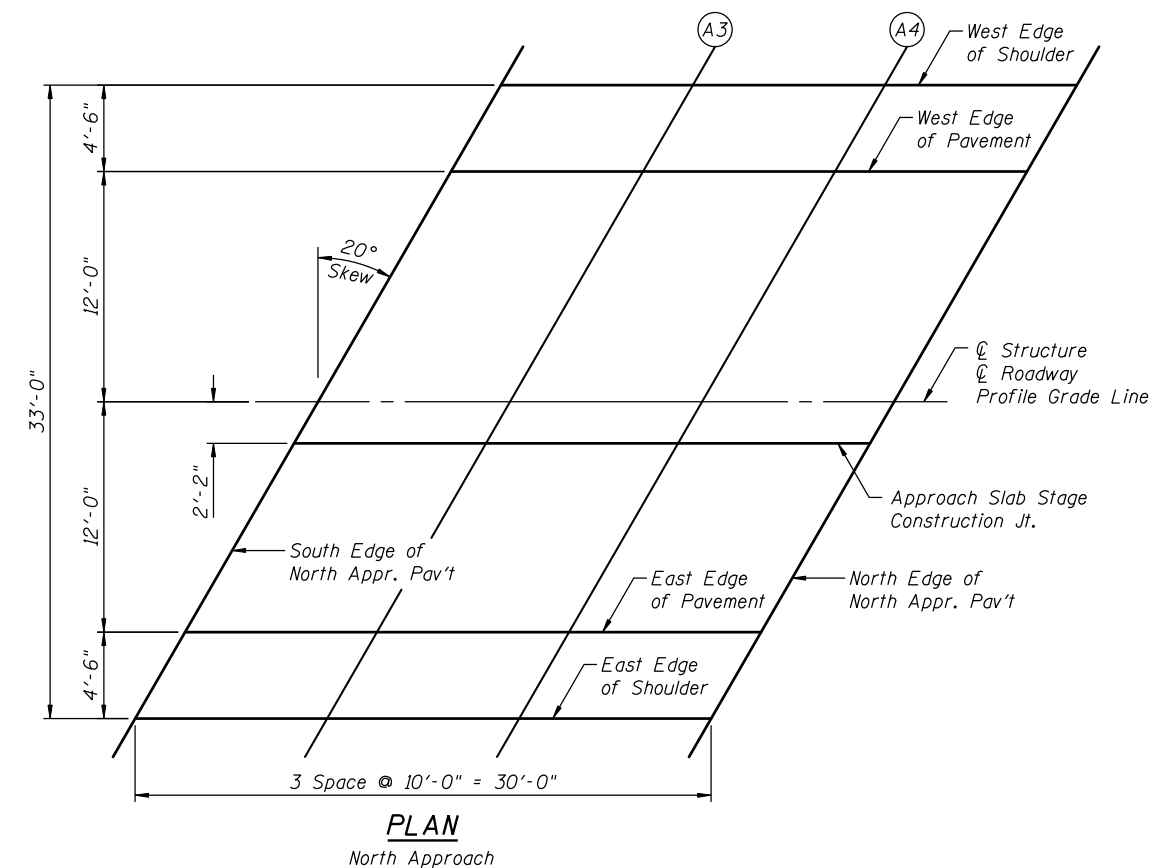
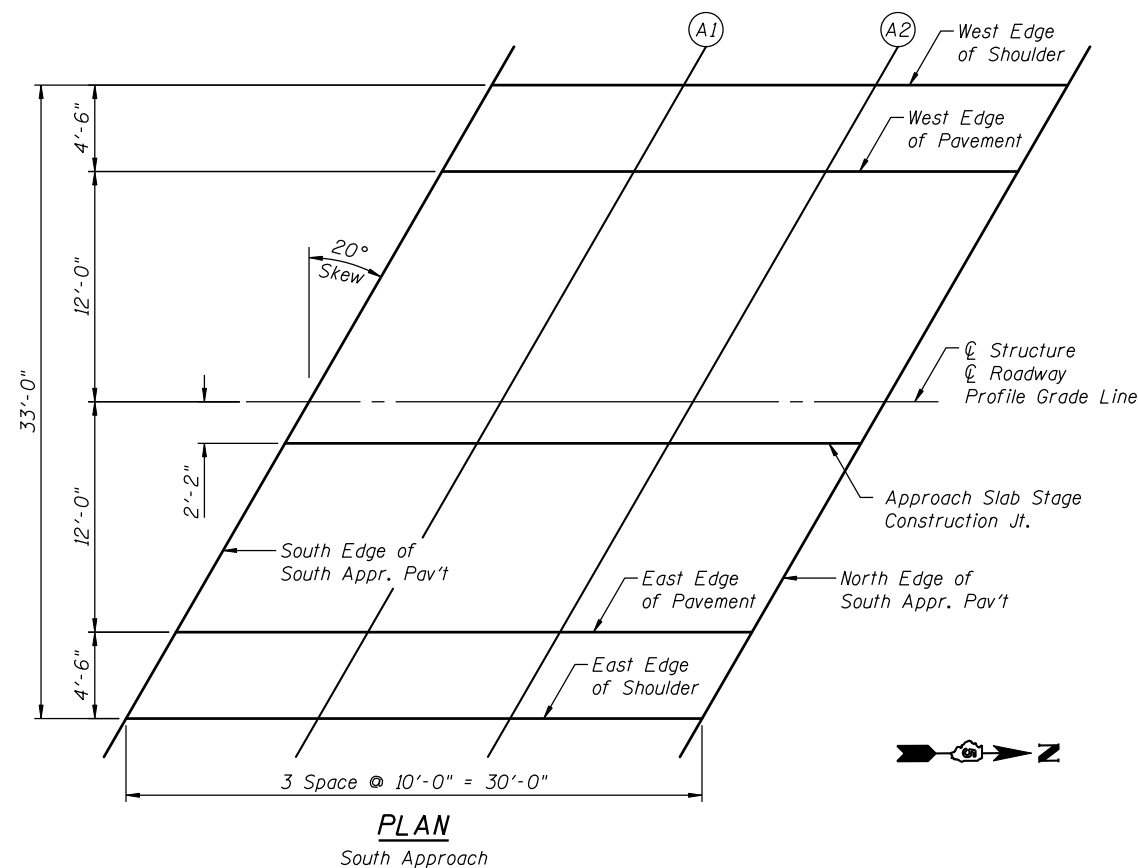
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
N. End North Appr. Pav't.	211+82.06	-12.00	665.63	665.65
A4	211+72.06	-12.00	665.63	665.65
A3	211+62.06	-12.00	665.64	665.66
S. End North Appr. Pav't.	211+52.06	-12.00	665.64	665.66
N. End South Appr. Pav't.	210+61.21	-12.00	665.62	665.64
A2	210+51.21	-12.00	665.57	665.59
A1	210+41.21	-12.00	665.53	665.55
S. End South Appr. Pav't.	210+31.21	-12.00	665.48	665.50

EAST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
N. End North Appr. Pav't.	211+80.42	-16.50	665.56	665.58
A4	211+70.42	-16.50	665.56	665.59
A3	211+60.42	-16.50	665.57	665.59
S. End North Appr. Pav't.	211+50.42	-16.50	665.58	665.60
N. End South Appr. Pav't.	210+59.57	-16.50	665.55	665.57
A2	210+49.57	-16.50	665.50	665.52
A1	210+39.57	-16.50	665.45	665.47
S. End South Appr. Pav't.	210+29.57	-16.50	665.40	665.42

APPROACH SLAB STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Grinding
N. End North Appr. Pav't.	211+85.64	-2.17	665.77	665.79
A4	211+75.64	-2.17	665.78	665.80
A3	211+65.64	-2.17	665.78	665.80
S. End North Appr. Pav't.	211+55.64	-2.17	665.79	665.81
N. End South Appr. Pav't.	210+64.79	-2.17	665.78	665.81
A2	210+54.79	-2.17	665.74	665.76
A1	210+44.79	-2.17	665.69	665.71
S. End South Appr. Pav't.	210+34.79	-2.17	665.64	665.66



Note:
Approach Slab Stage Construction Joint is aligned with the Concrete Wearing Surface Construction Joint.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF APPROACH SLAB ELEVATIONS
STRUCTURE NO. 092-0171

SHEET NO. 4 OF 16 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	16
CONTRACT NO. 70615				

ILLINOIS FED. AID PROJECT

FILE NAME = s:\p1\6380--6395\6346\024\microa\finds\plans\structural\004-T00.dgn

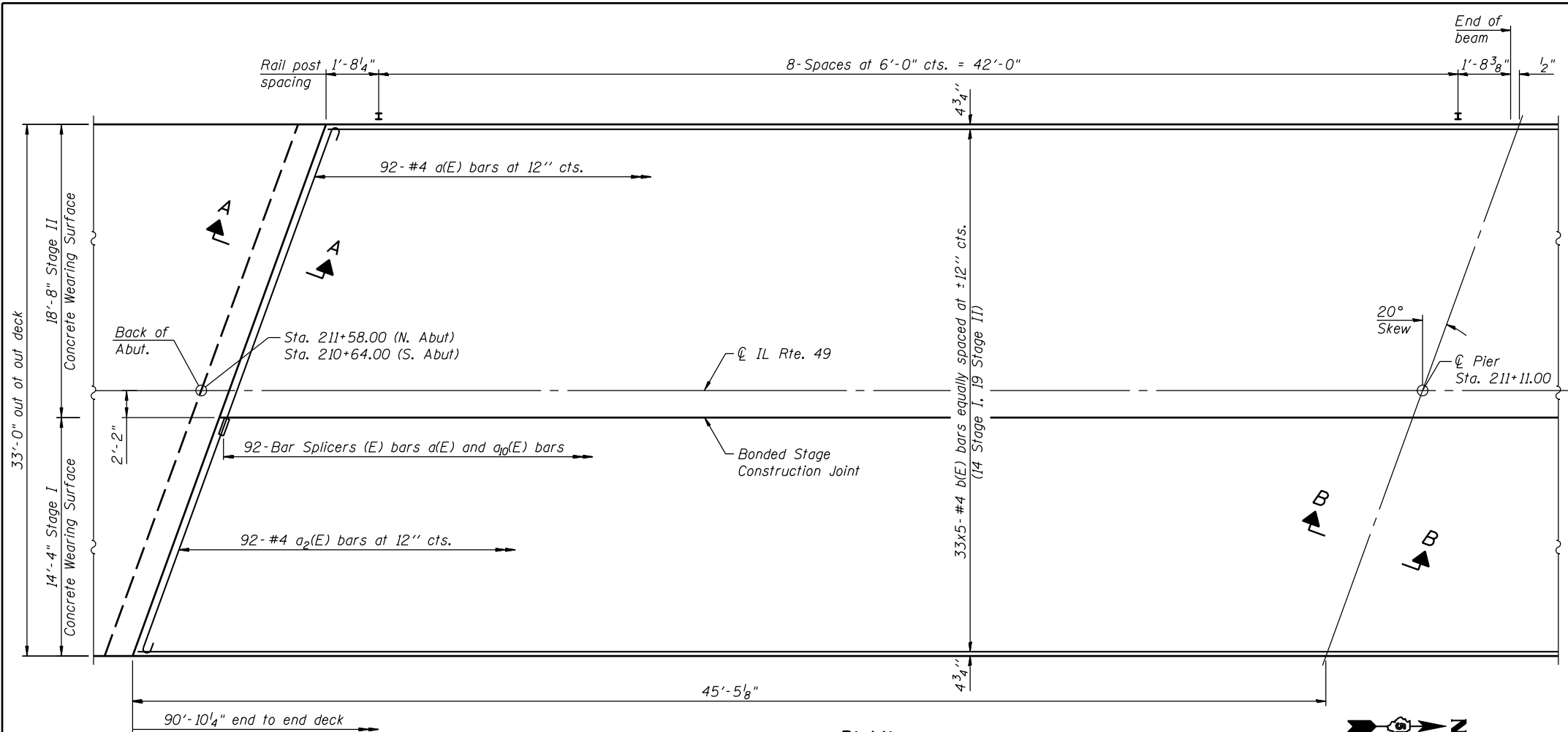
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = rjgnd
DESIGNED RRD
CHECKED AJS
DRAWN BJF
PLOT SCALE =
PLOT DATE = 6/24/2011

DESIGNED RRD
CHECKED AJS
DRAWN BJF
CHECKED AJS

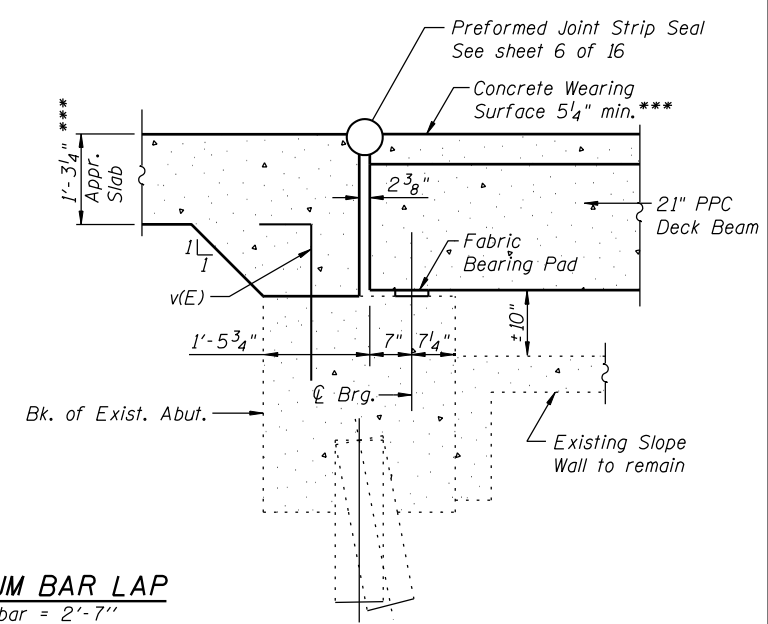
REVISED -
REVISED -
REVISED -
REVISED -





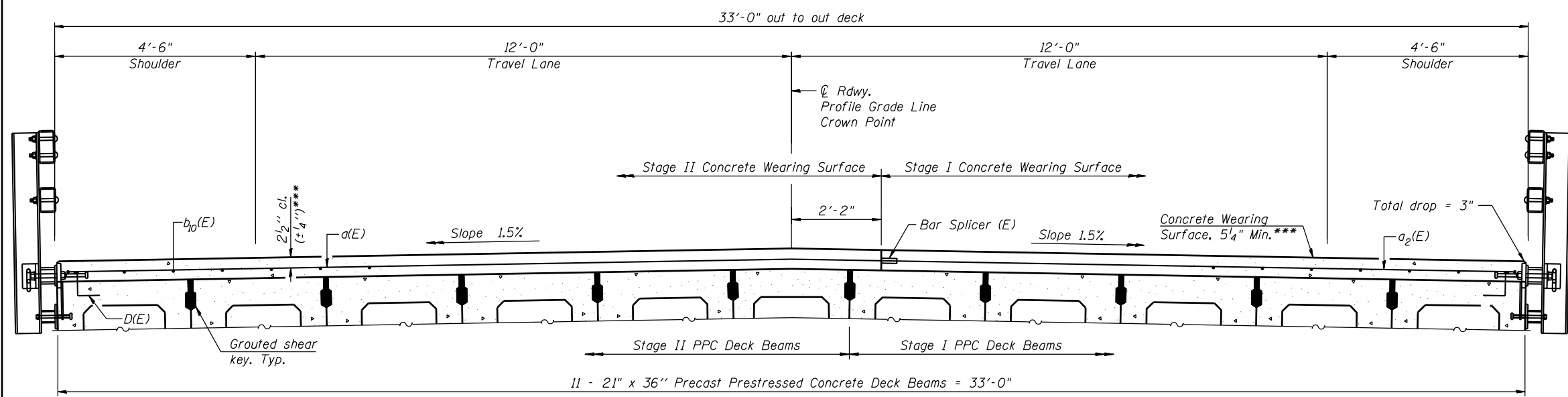
PLAN

MINIMUM BAR LAP
#4 bar = 2'-7"

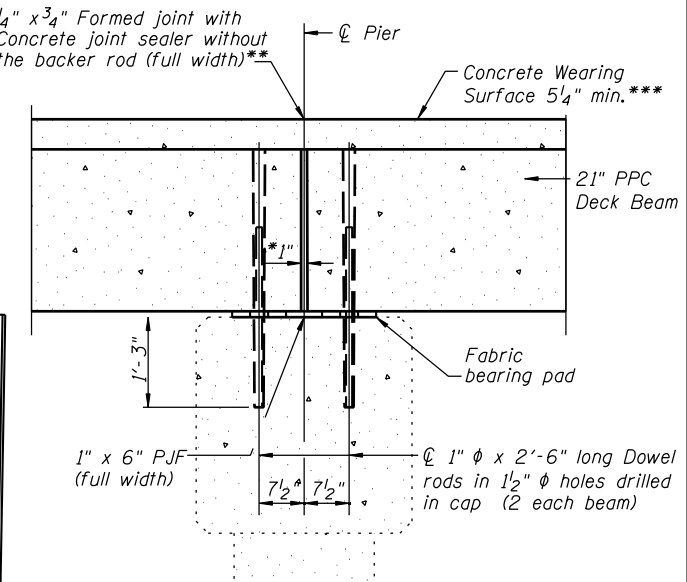


SECTION A-A

(Dimensions are at Rt. L's)
Notes:
All concrete wearing surfaces shall be placed prior to casting a backwall and/or approach slab.
See sheet 11 of 16 for fabric bearing pad details.
See sheet 12 of 16 for v(E) bar details.



CROSS SECTION
(Looking North)



SECTION B-B

(Dimensions are at Rt. L's)
*1" Jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.
**Cost included in Concrete Wearing Surface.
***Prior to grinding

Notes:
See sheet 6 of 16 for Superstructure Details and Bill of Material.
Bars indicated thus 20 x 2-#4 etc. indicates 20 lines of bars with 2 lengths per line.
Spacing of a(E) and a2(E) bars shall be measured along the ϕ of structure.

FILE NAME = S:\JOL\63300-6399\6346\024\Microa\F.incls\Plans\Structural\0920171-70615-005-SUPER.dgn

PDS-M-R34-L 7-1-10



USER NAME = rjgnd	DESIGNED RRD	REVISED -
CHECKED AJS	REVISOR AJS	REVISED -
PLOT SCALE =	DRAWN BJF	REVISED -
PLOT DATE = 8/3/2011	CHECKED AJS	REVISED -

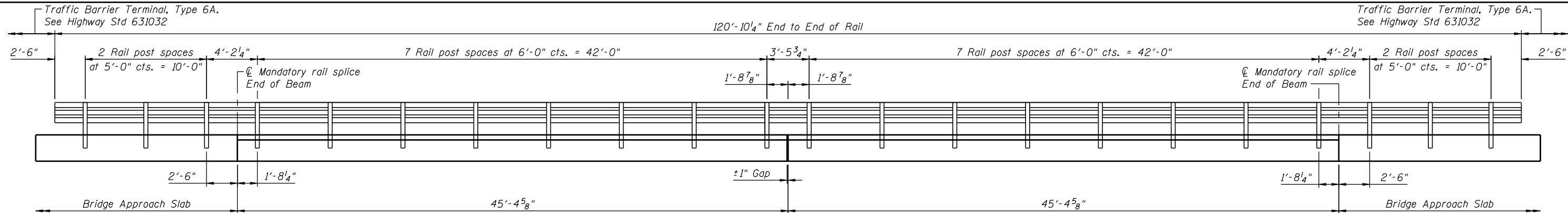
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 092-071

SHEET NO. 5 OF 16 SHEETS

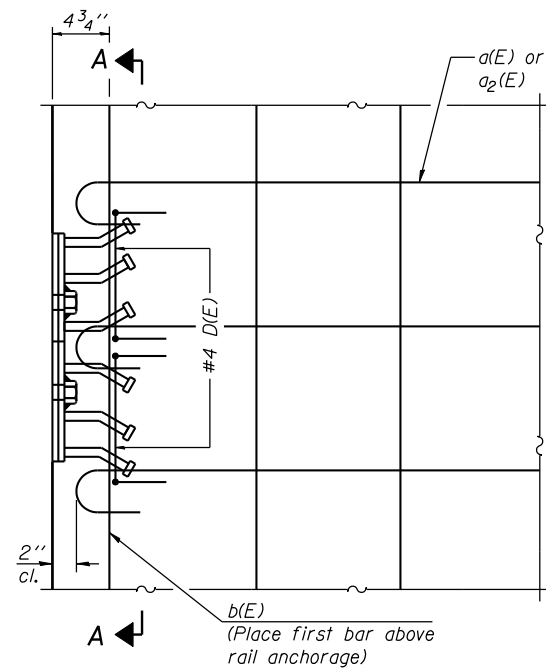
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	17
CONTRACT NO. 70615				

ILLINOIS FED. AID PROJECT



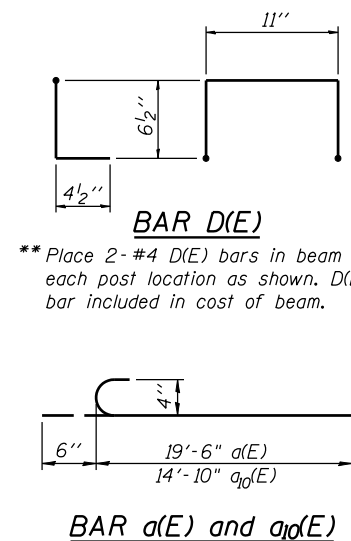
ELEVATION

Notes:
See sheet 9 of 16 for railing details.

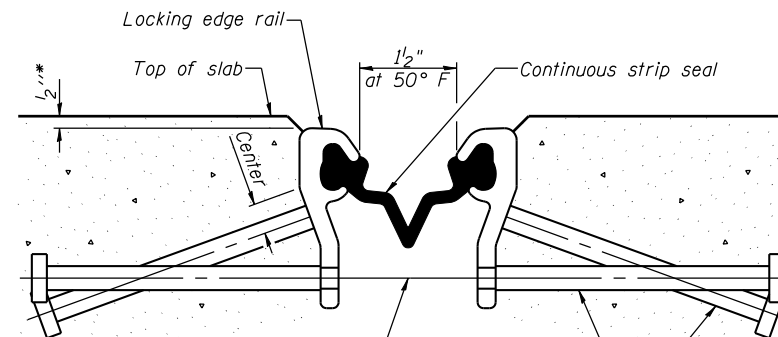


PLAN

Notes:
Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam.

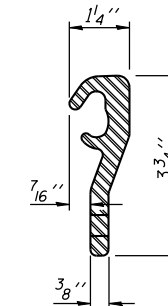


***Omit weld at seal opening.

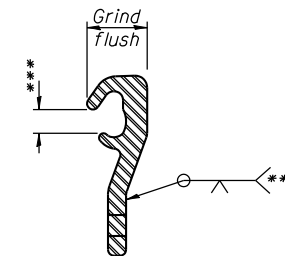


SECTION THRU STRIP SEAL JOINT FOR OVERLAY OVER DECK BEAMS

Place 1/2" φ x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts.

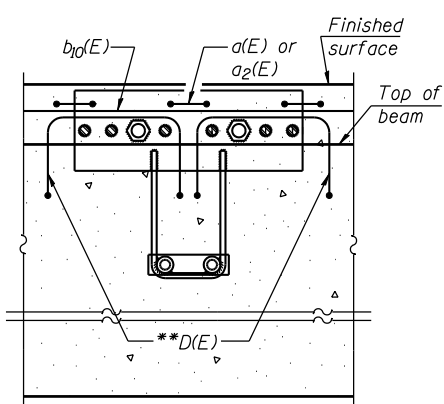


LOCKING EDGE RAIL

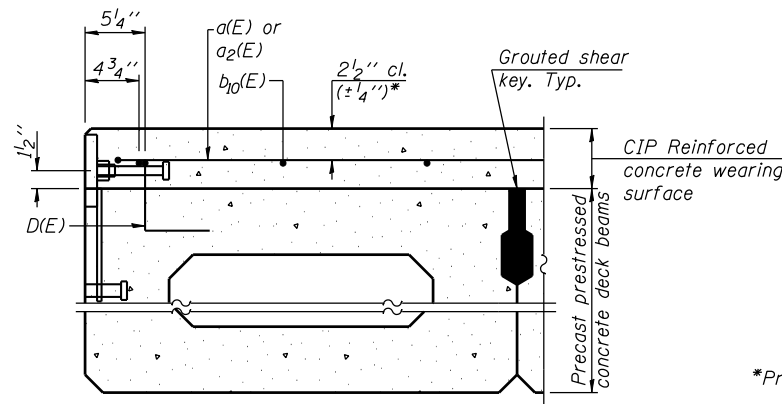


LOCKING EDGE RAIL SPLICE

Notes:
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.
The inside of the Locking Edge Rail groove shall be free of weld residue.
Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.
The manufacturer's recommended installation methods shall be followed.



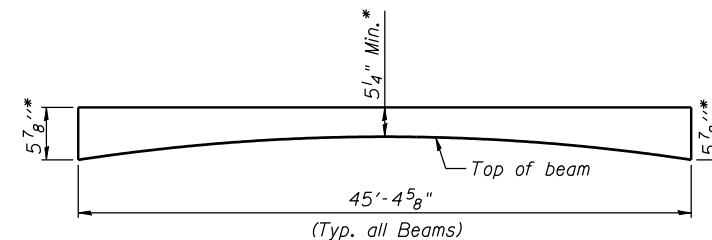
SECTION A-A



SECTION THRU FASCIA BEAM

*Prior to grinding

MINIMUM BAR LAP
#4 bar = 2'-7"



ANTICIPATED CONCRETE WEARING SURFACE PROFILE
(For information only)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	92	#4	20'-0"	C
a2(E)	92	#4	15'-4"	C
b10(E)	165	#4	20'-3"	—
Reinforcement Bars, Epoxy Coated		Pound		4,410
Concrete Wearing Surface, 5"		Sq. Yd.		334
Preformed Joint Strip Seal		Foot		71

FILE NAME = H:\0920171-018.dgn

STRAND ENGINEERS
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = rjgand
DESIGNED RRD
CHECKED AJS
DRAWN BJF
CHECKED AJS
PLOT SCALE =
PLOT DATE = 2/27/2013

DESIGNED RRD
CHECKED AJS
DRAWN BJF
CHECKED AJS
REVISED -
REVISED -
REVISED -
REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

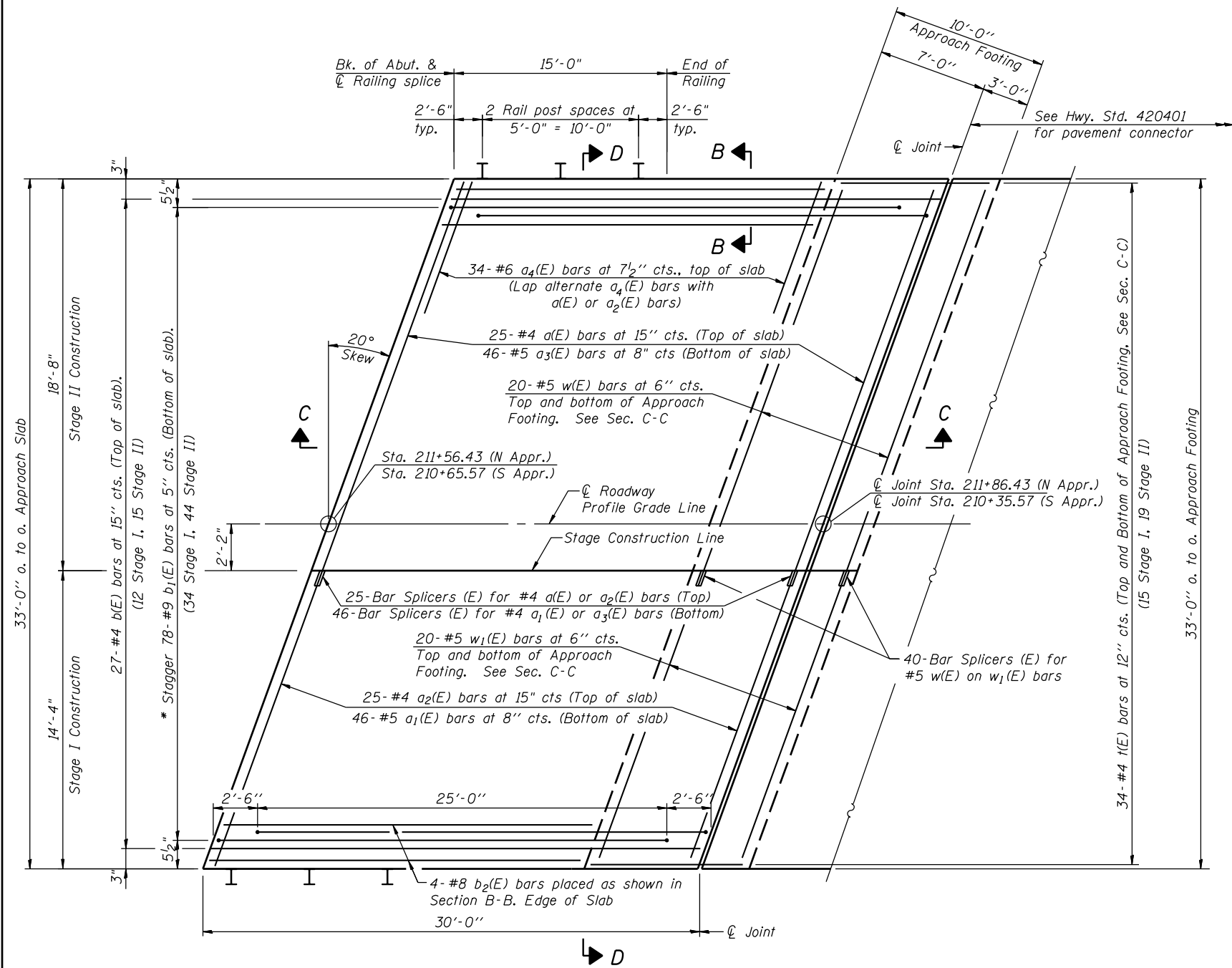
SUPERSTRUCTURE DETAILS
STRUCTURE NO. 092-0171

SHEET NO. 6 OF 16 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	18
CONTRACT NO. 70615				

ILLINOIS FED. AID PROJECT

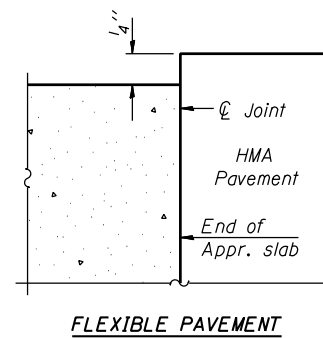
Notes:
See sheet 8 of 16 for Sections C-C and D-D.
a(E) and a₁(E) bar spacings measured along \hat{C} Rdwy.



PLAN

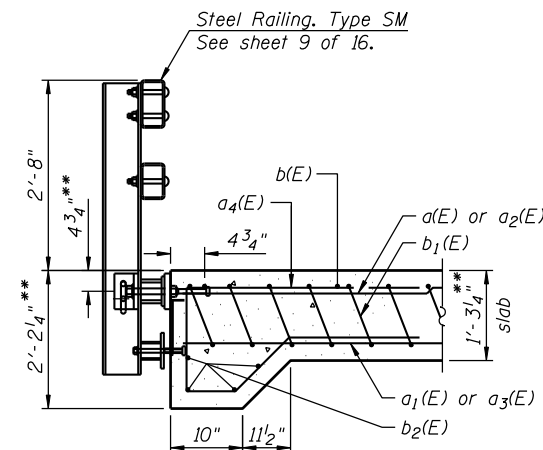
(North Approach Shown, South Approach Similar)

*Tilt #9 b₁(E) bars as required to maintain clearance.



FLEXIBLE PAVEMENT

DETAIL A



SECTION B-B

**Prior to grinding

FILE NAME = S:\JOL\63300-6399\6346\024\Microso\Files\Plans\Structural\0920171-70615-007-BAP.dgn

STRAND ENGINEERS
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = rjgend	DESIGNED <i>RRD</i>	REVISED -
	CHECKED <i>AJS</i>	REVISED -
PLOT SCALE =	DRAWN <i>BJF</i>	REVISED -
PLOT DATE = 8/3/2011	CHECKED <i>AJS</i>	REVISED -

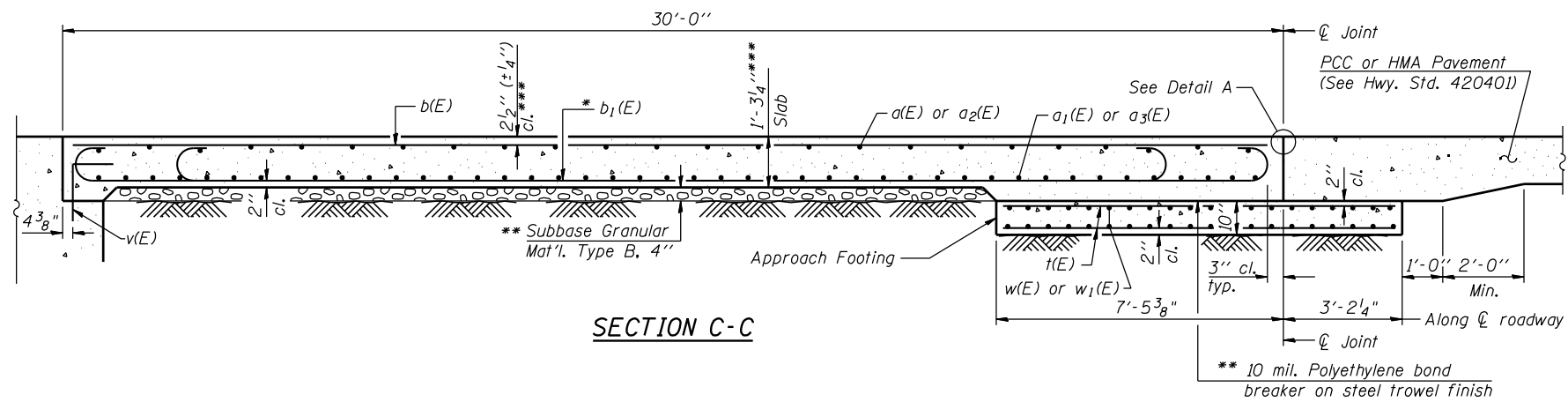
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BRIDGE APPROACH PAVEMENT (1 OF 2)
STRUCTURE NO. 092-0171**

SHEET NO. 7 OF 16 SHEETS

F.A.P. RTE. 840	SECTION 120BR-1	COUNTY VERMILION	TOTAL SHEETS 44	SHEET NO. 19
CONTRACT NO. 70615				

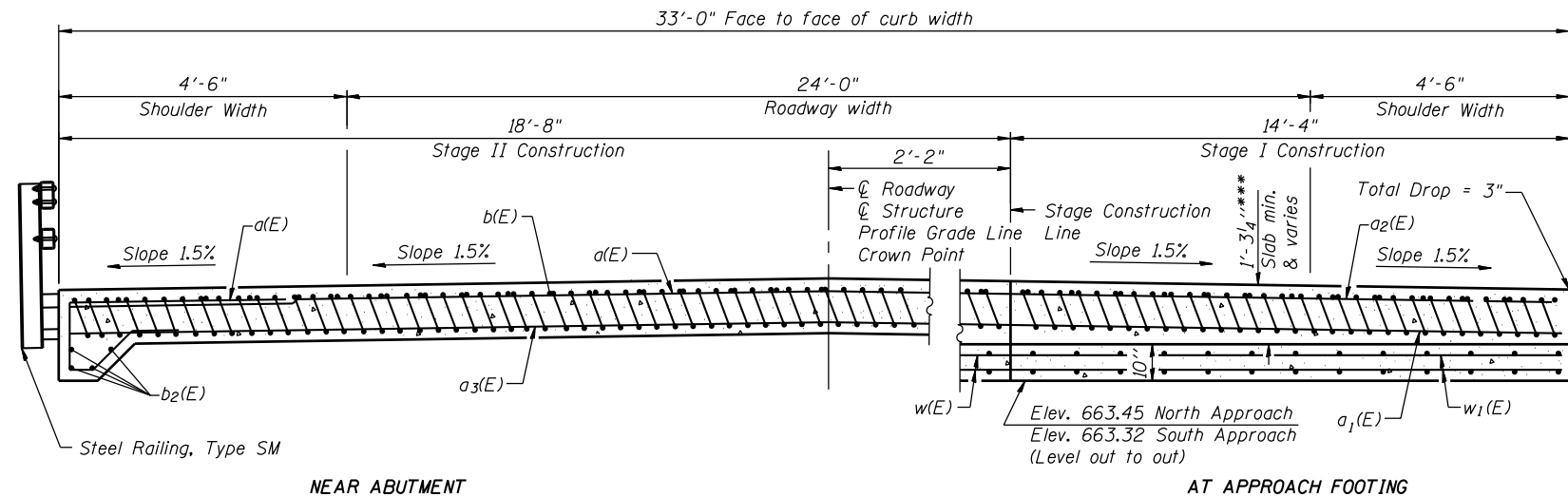
ILLINOIS FED. AID PROJECT



SECTION C-C

Notes:

See sheet 7 of 16 for Detail A.
 Approach slab 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 16.
 The approach footing maximum applied service bearing pressure (Omax) = 2.0 ksf.
 For bar splicer details, see sheet 14 of 16.
 Cost of excavation for approach footing included with Concrete Structures.
 For additional railing details, see sheet 9 of 16.



NEAR ABUTMENT

AT APPROACH FOOTING

SECTION D-D

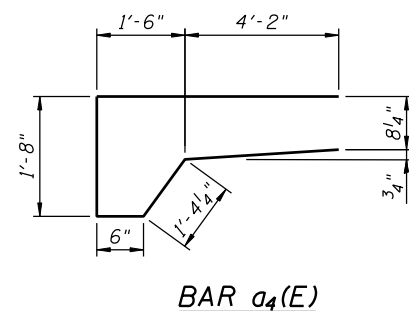
(See Plan for dimensions not shown)

*Tilt #9 b(E) bars as required to maintain clearance.
 **Cost included with Concrete Superstructures.
 ***Prior to grinding.

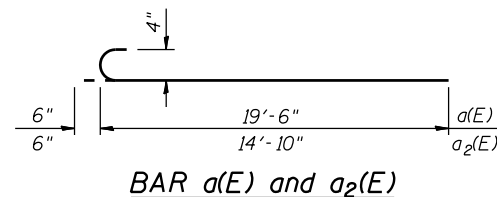
TWO APPROACHES
 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	50	#4	20'-0"	—
a1(E)	92	#5	14'-10"	—
a2(E)	50	#4	15'-4"	—
a3(E)	92	#5	19'-6"	—
a4(E)	136	#6	13'-5"	—
b(E)	54	#4	29'-8"	—
b1(E)	156	#9	29'-9"	—
b2(E)	16	#8	20'-8"	—
t(E)	136	#4	10'-3"	—
w(E)	80	#5	16'-9"	—
w1(E)	80	#5	14'-10"	—
Concrete Superstructure			Cu. Yd.	103
Concrete Structures			Cu. Yd.	22
Reinforcement Bars, Epoxy Coated			Pound	12,640 *****
Reinforcement Bars, Epoxy Coated			Pound	3,570 *****

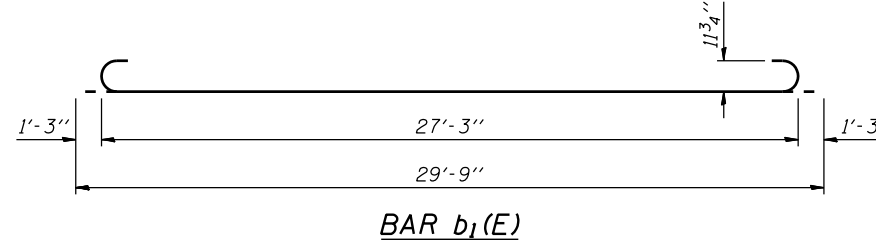
*****Included in Superstructure Quantity
 *****Included in Substructure Quantity



BAR a4(E)



BAR a(E) and a2(E)



BAR b1(E)

FILE NAME = S:\JOL\63200-63999\6346\024\Micro\Structural\0920171-70615-007-BAP.dgn



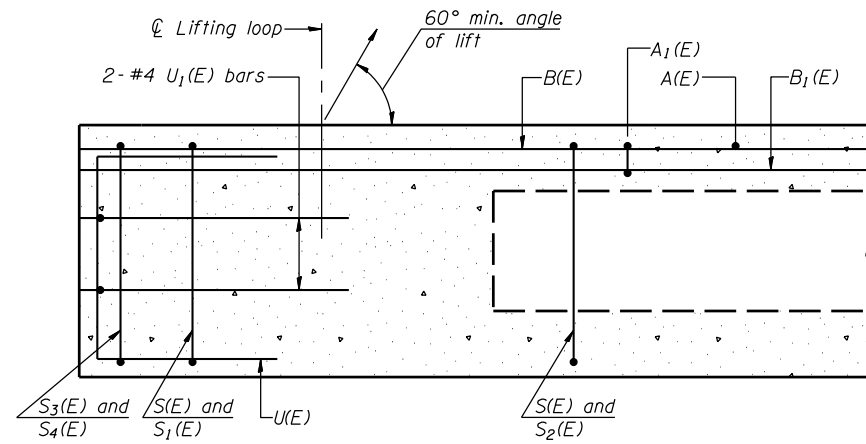
1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200	USER NAME = rjgond	DESIGNED RRD	REVISED -
		CHECKED AJS	REVISED -
	PLOT SCALE =	DRAWN BJF	REVISED -
	PLOT DATE = 8/3/2011	CHECKED AJS	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

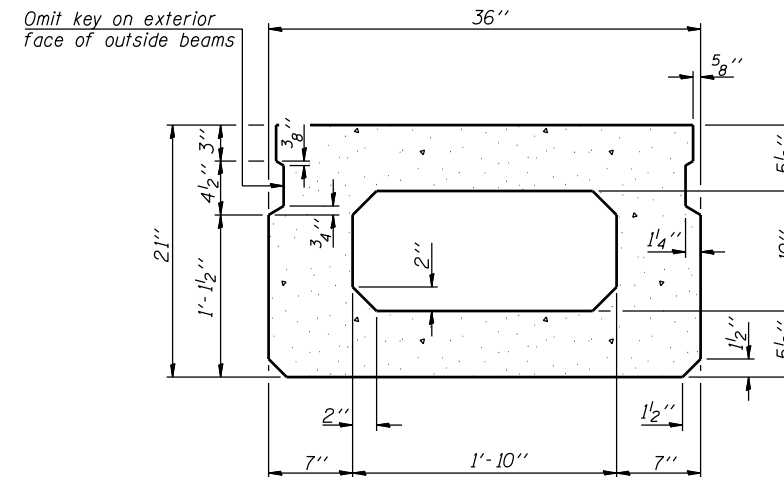
BRIDGE APPROACH PAVEMENT (2 OF 2)
 STRUCTURE NO. 092-0171

SHEET NO. 8 OF 16 SHEETS

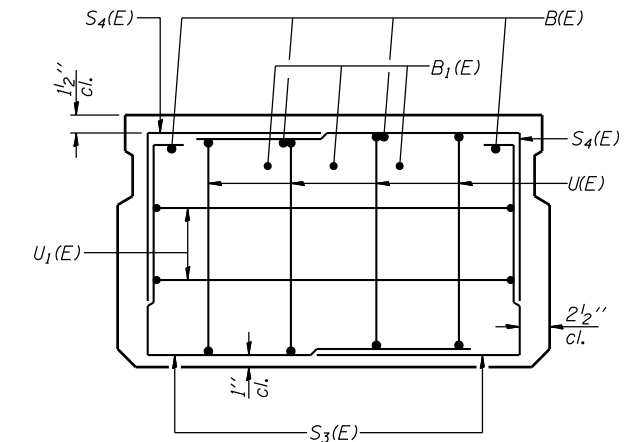
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	20
CONTRACT NO. 70615				
ILLINOIS FED. AID PROJECT				



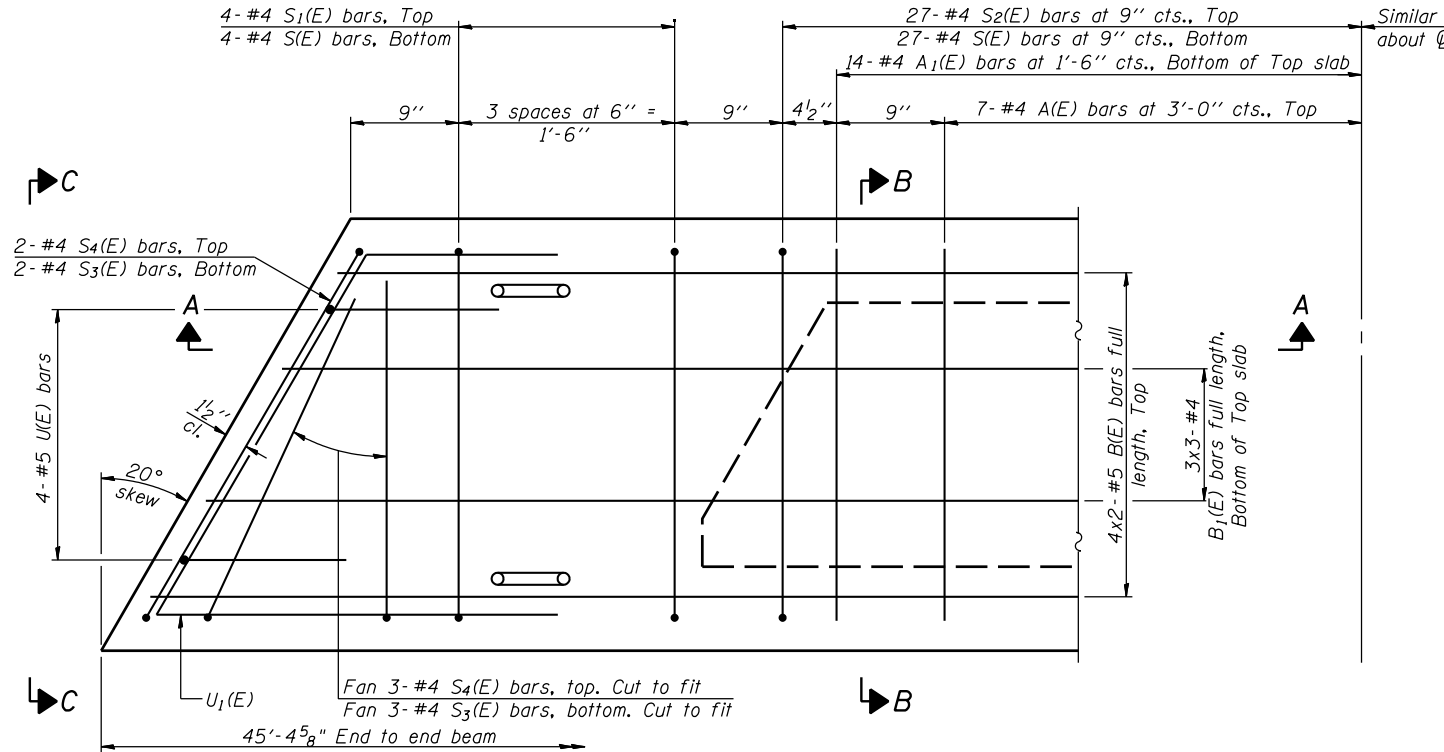
SECTION A-A



SECTION B-B
(Showing dimensions)

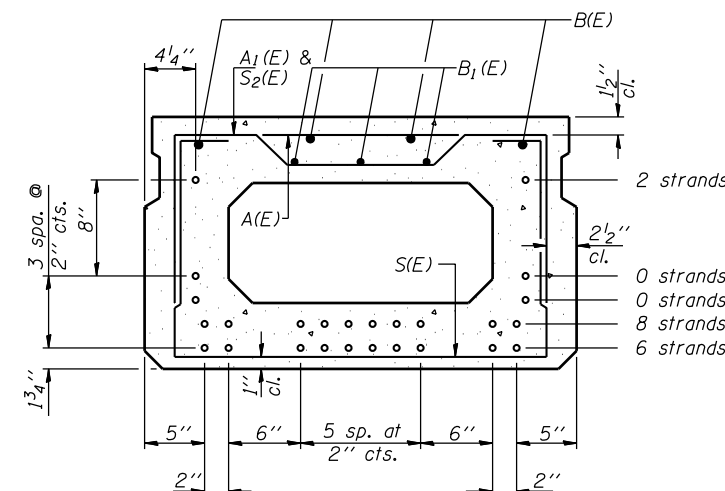


VIEW C-C



PLAN VIEW

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



SECTION B-B

(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

DESIGN STRESSES

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pu} = 270,000$ psi (1/2" low lax strands)
 $f_{pbt} = 201,960$ psi (1/2" low lax strands)

BAR LIST
ONE BEAM ONLY

(For information only)

Bar	No.	Size	Length	Shape
A(E)	14	#4	2'-7"	—
A1(E)	28	#4	2'-10"	~
B(E)	8	#5	24'-0"	—
B1(E)	9	#4	16'-6"	—
S(E)	62	#4	6'-5"	U
S1(E)	8	#4	4'-11"	U
S2(E)	54	#4	5'-2"	U
S3(E)	10	#4	4'-8"	U
S4(E)	10	#4	3'-10"	U
U(E)	8	#5	4'-0"	U
U1(E)	4	#4	6'-1"	U

Note: See sheet 11 of 16 for additional details and Bill of Material.
 Bars indicated thus 4x3-#5 etc. indicates 4 lines of bars with 3 lengths per line.

MINIMUM BAR LAP

#4 bar = 2'-0"
 #5 bar = 2'-6"

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

21" x 36" PPC DECK BEAM
STRUCTURE NO. 092-0171

SHEET NO. 10 OF 16 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	22
				CONTRACT NO. 70615

ILLINOIS FED. AID PROJECT

FILE NAME = s:\p1\6380--6395\6346\024\microso\finds\plena\structural\1010-BEAK.dgn

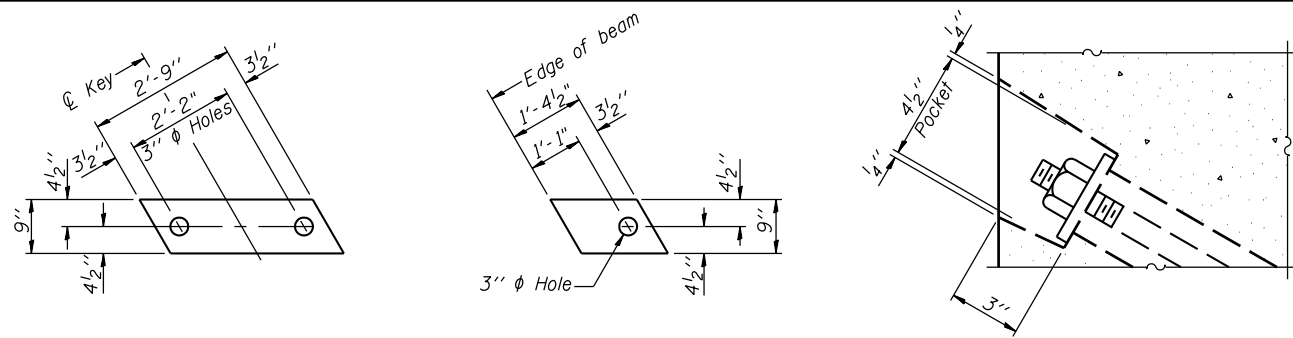
PD-2136-L

7-1-10



1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME	DESIGNED	REVISED
ryond	RRD	-
	AJS	-
PLOT SCALE =	BJF	-
PLOT DATE = 6/24/2011	AJS	-



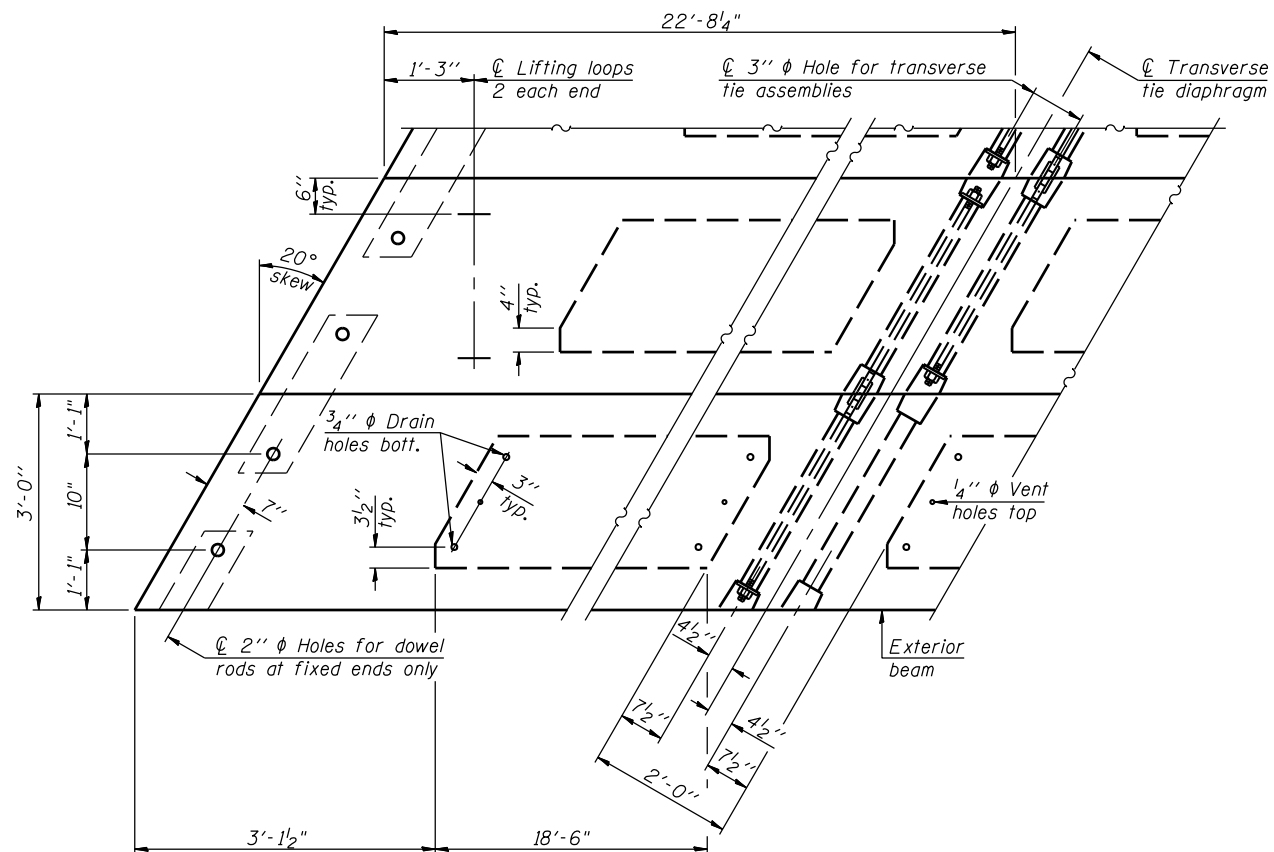
FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

SECTION A-A

FIXED

Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.

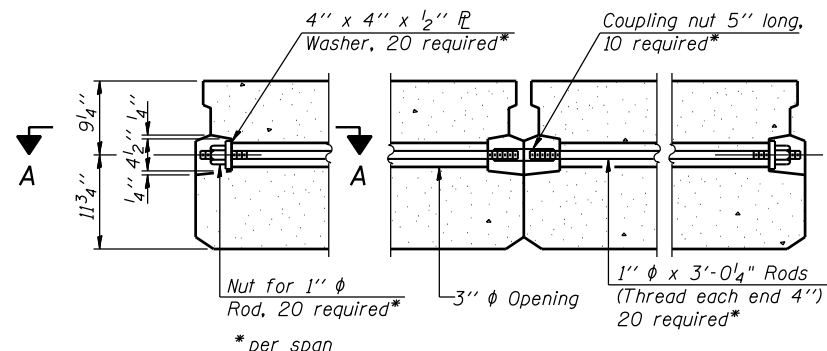


PLAN VIEW

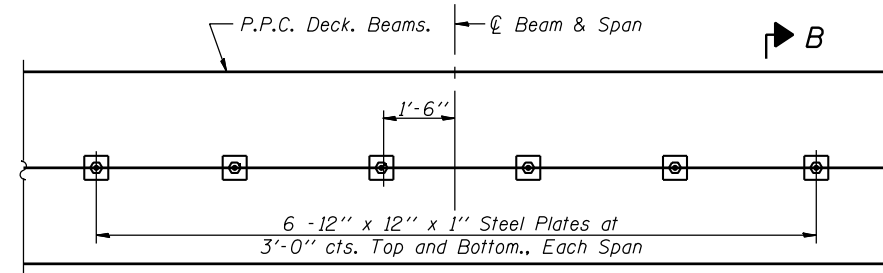
Note:
Connect beams in pairs with the transverse tie configuration shown.

NOTES

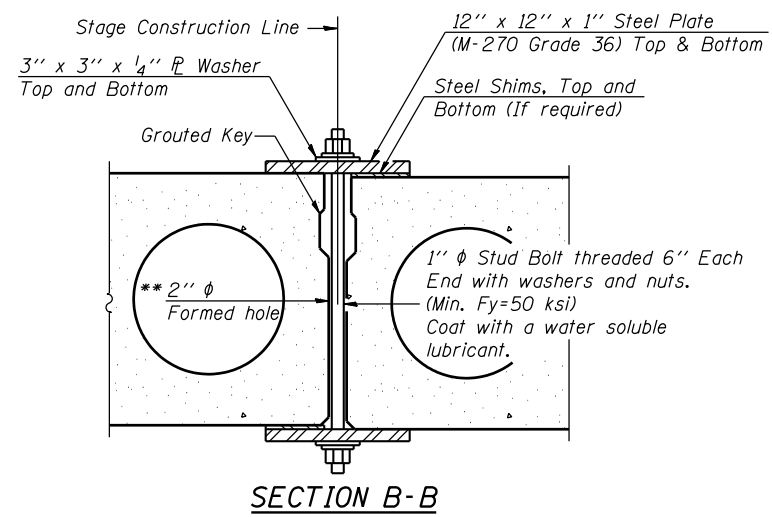
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.



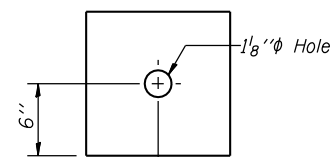
TYPICAL TRANSVERSE TIE ASSEMBLY



PLAN



SECTION B-B

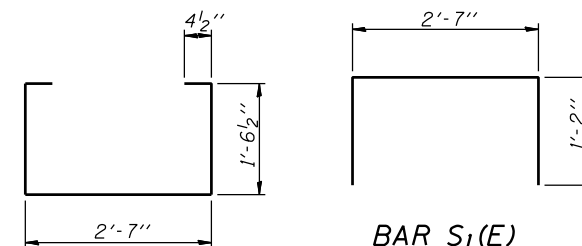


CLAMPING PLATE

SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

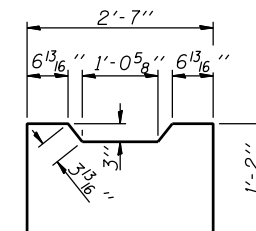
Cost included with Precast Prestressed Concrete Deck Beams.
See Stage Construction Details for traffic lanes.

** Cast semicircular recesses in the sides of each beam adjacent to the stage construction line. These recesses should align to form a hole at the appropriate locations for the clamping device bolts.

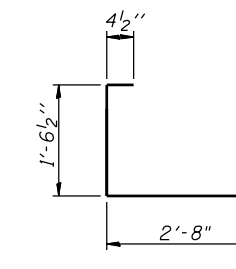


BAR S₁(E)

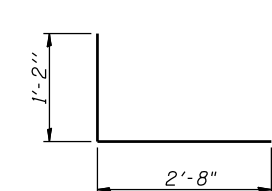
BAR S(E)



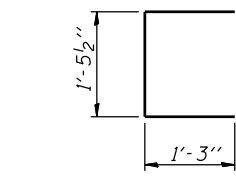
BAR S₂(E)



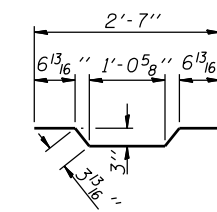
BAR S₃(E)



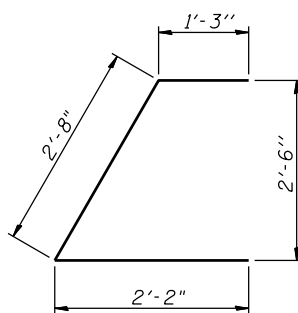
BAR S₄(E)



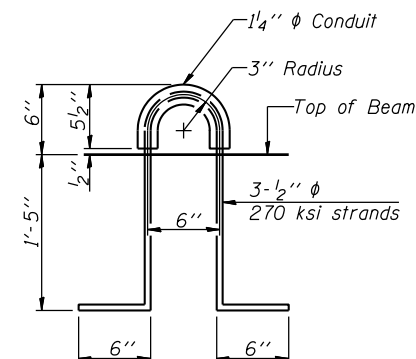
BAR U(E)



BAR A₁(E)



BAR U₁(E)



LIFTING LOOP DETAIL

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (21" depth)	Sq. Ft.	2,996
---	---------	-------

FILE NAME = s:\p\163800-6399\6346\micos\finds\plans\structural\010-DEAM.dgn



1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

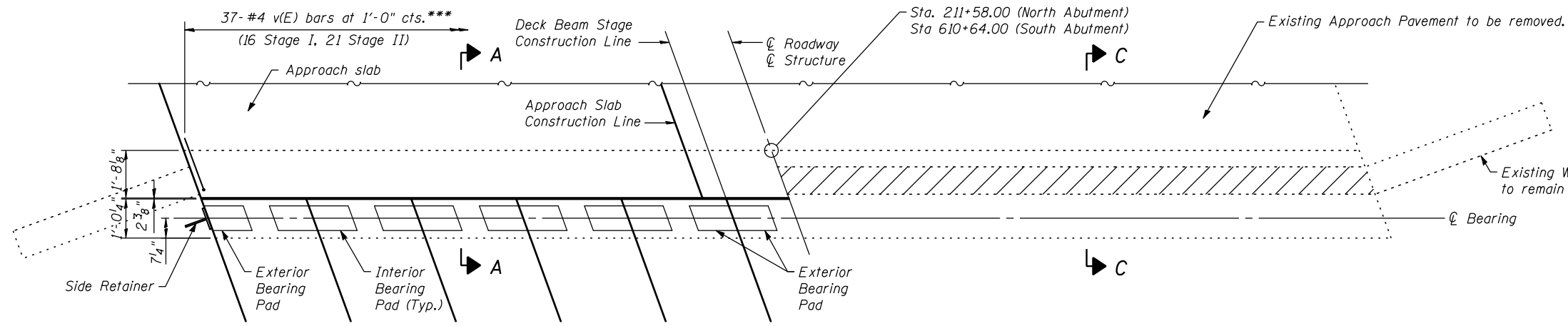
USER NAME = rjgond	DESIGNED RRD	REVISED -
	CHECKED AJS	REVISED -
PLOT SCALE =	DRAWN BJF	REVISED -
PLOT DATE = 6/24/2011	CHECKED AJS	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**21" x 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 092-0171**

SHEET NO. 11 OF 16 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	23
CONTRACT NO. 70615				
ILLINOIS FED. AID PROJECT				

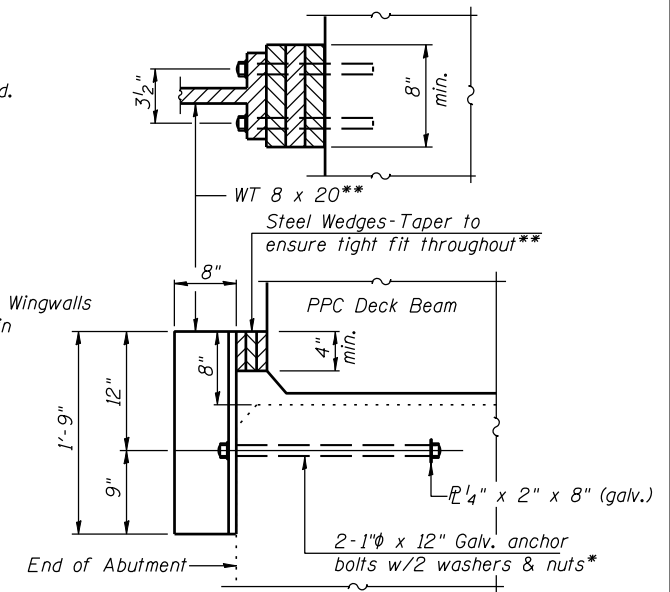


Showing Proposed

*** Place v(E) bars into 9" min. drilled holes in abutment. Epoxy grout according to Section 584 of the Standard Specifications. Cost included with cost of Reinforcement Bars. Epoxy Coated.

PLAN AT ABUTMENT
(Wearing Surface Not Shown)
(South Abutment Shown, North Abutment Similar)

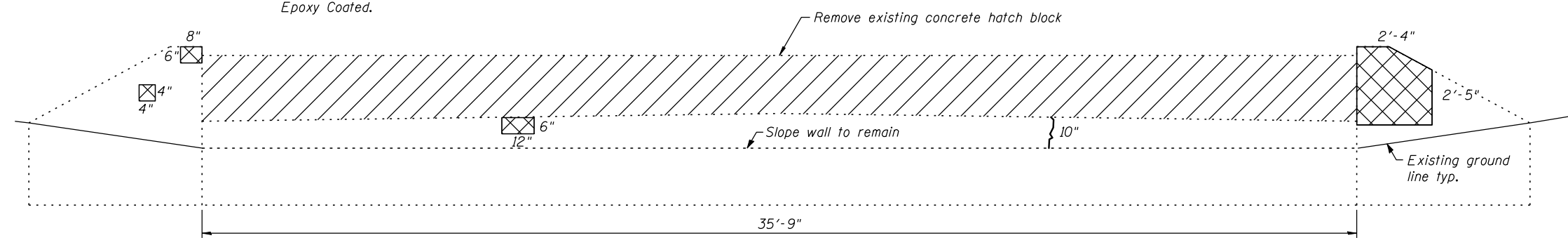
Showing Removal



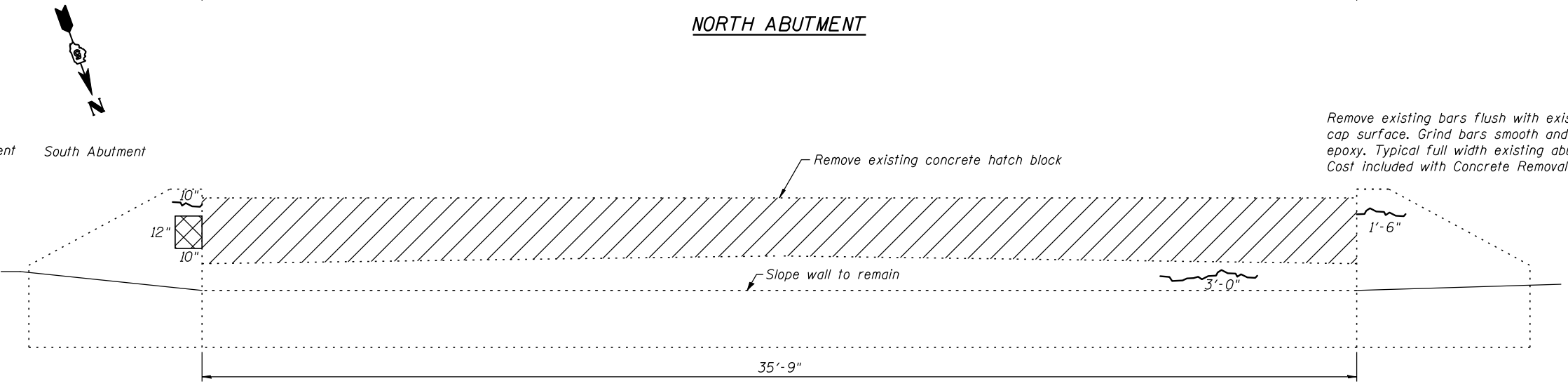
SIDE RETAINER DETAIL

*Anchor bolts shall be approved threaded rods placed in drilled holes and grouted in place. Cost of retainer and accessories are included with Precast Prestressed Concrete Deck Beams (21" Depth).

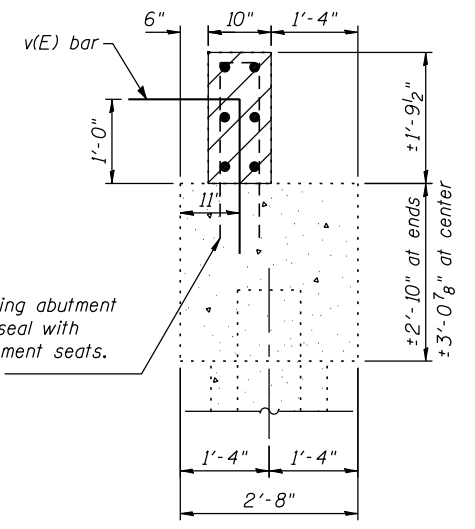
**Galvanize according to AASHTO M 111 and ASTM 385.



NORTH ABUTMENT



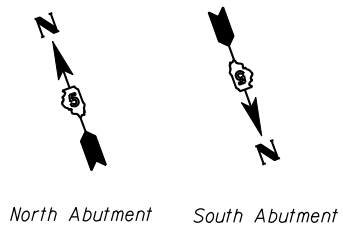
SOUTH ABUTMENT



SECTION C-C

BILL OF MATERIAL

Bar No.	No.	Size	Length	Shape
v(E)	74	#5	3'-5"	└─┘
Concrete Removal		CU YD	4	
Reinforcement Bars, Epoxy Coated		POUND	270	
Epoxy Crack Injection		FOOT	7	
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)		SQ. FT	9	

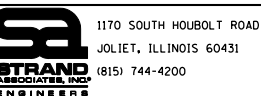
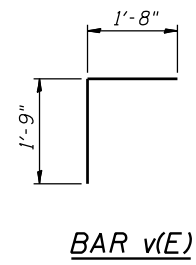


FILE NAME = s:\p1\6380--6395\6346\024\microso\finds\plana\structural\012-ABUT.dgn

LEGEND

- Crack-Epoxy Crack Injection
- Portion of Existing Structure to be Removed
- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)

Notes:
For Section A-A see sheet 5 of 16.
See sheet 11 of 16 for bearing pad details.
Repairs shown are based upon observations performed in 2010 and are for Bidding Purposes only. Actual arrears to be repaired shall be determined by the engineer in the field at the time of construction. Quantities have been adjusted to account for the time difference.



1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = rjgend
DESIGNED RRD
CHECKED AJS
DRAWN BJF
CHECKED AJS

REVISED -
REVISED -
REVISED -
REVISED -

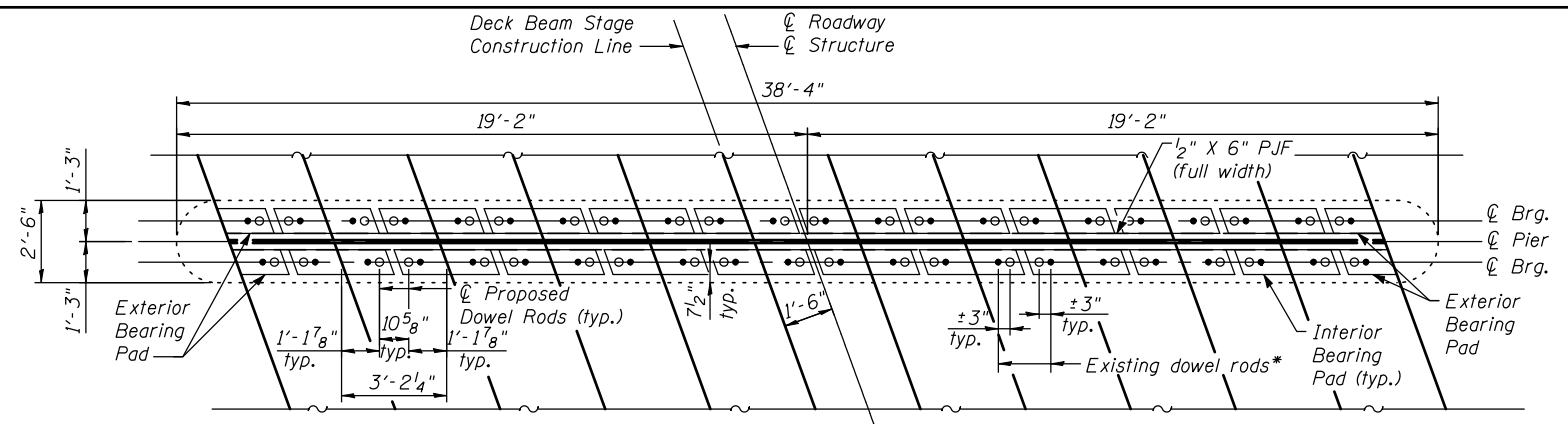
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ABUTMENT REPAIR AND DETAILS
STRUCTURE NO. 092-0171**

SHEET NO. 12 OF 16 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	24
CONTRACT NO. 70615				

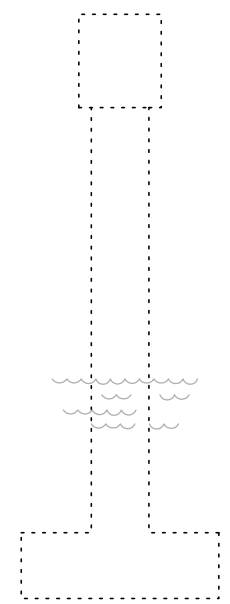
ILLINOIS FED. AID PROJECT



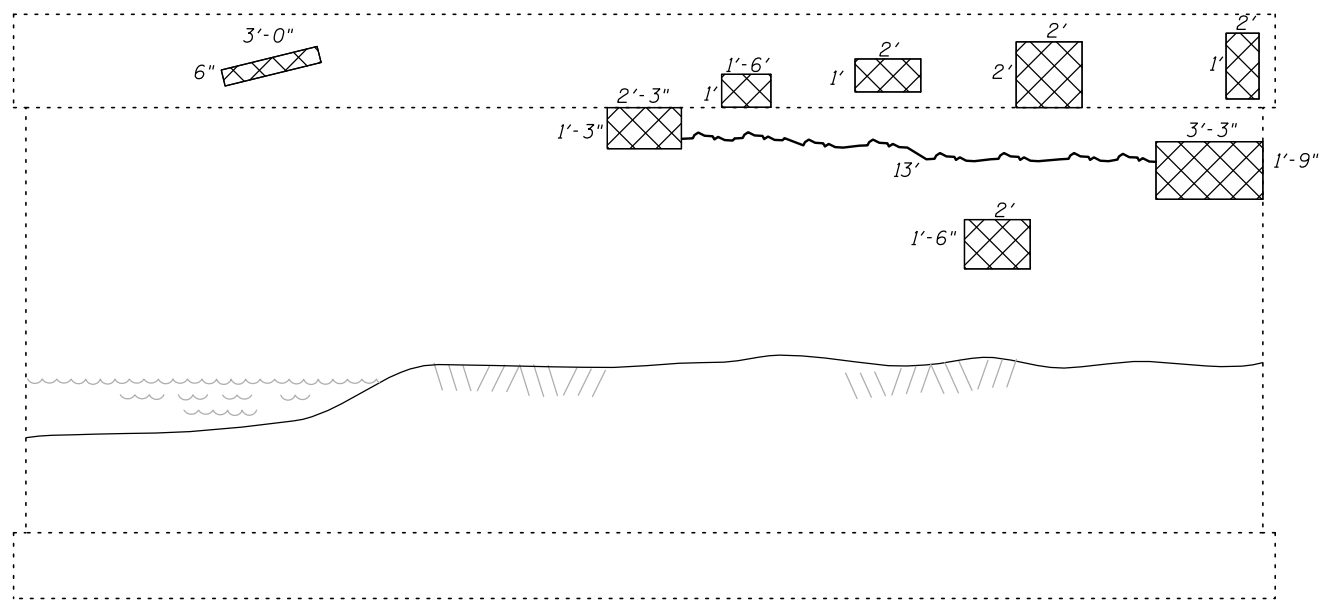
PLAN
(Concrete Wearing Surface not shown)

Notes:
 See sheet 5 of 16 for Section B-B.
 See Sheet 11 of 16 for Bearing Pad Details.
 Cost of P/JF included in Precast Prestressed Concrete Deck Beams (21" Depth).
 Repairs shown are based upon observations performed in 2010 and are for Bidding Purposes only. Actual arrears to be repaired shall be determined by the engineer in the field at the time of construction. Quantities have been adjusted to account for the time difference.

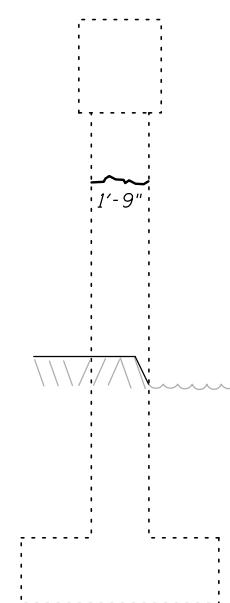
*Existing dowel rods shall be burnt off flush with existing bearing seat. Grind smooth and seal with epoxy. Cost included with Removal of Existing Superstructures. typ.



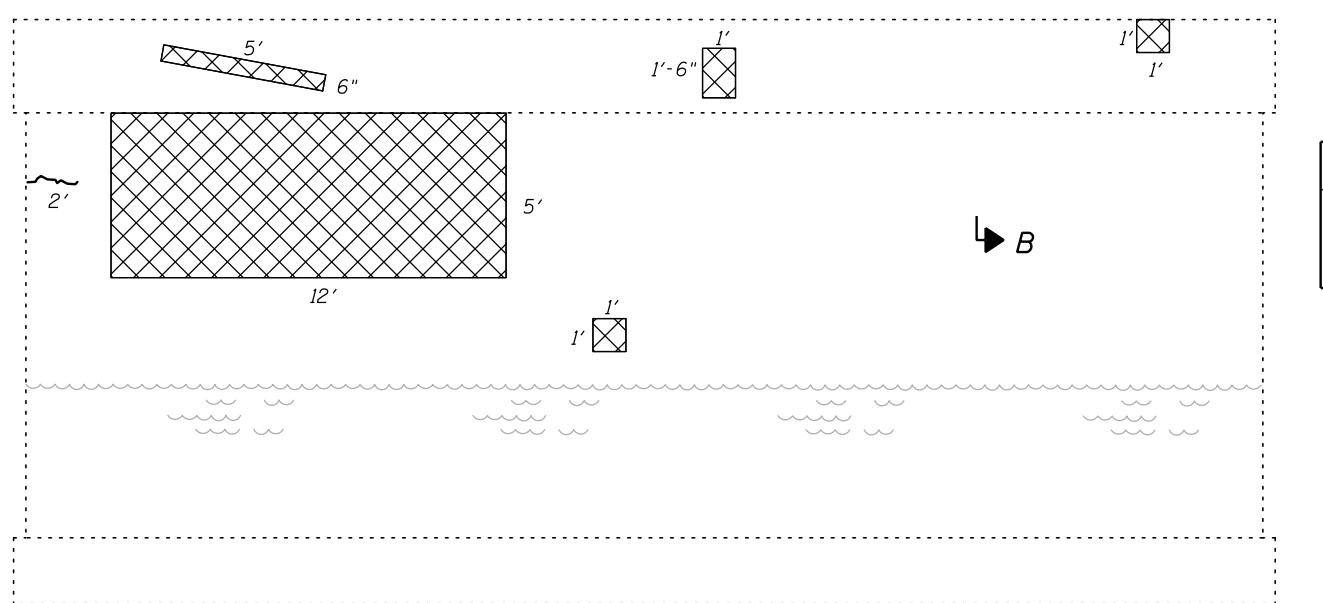
WEST



NORTH FACE



EAST



SOUTH FACE

BILL OF MATERIAL

Epoxy Crack Injection	FOOT	18
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	SQ. FT	97

LEGEND

- Epoxy Crack Injection
- Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)

FILE NAME = s:\p\16380--6399\6346\024\micro\structural\013-PIER.dgn



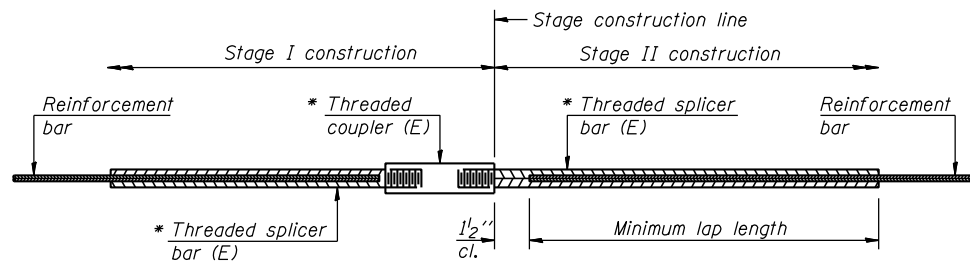
1170 SOUTH HOUBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200	USER NAME = rjgend	DESIGNED RRD	REVISIONS
		CHECKED AJS	REVISIONS
	PLOT SCALE =	DRAWN BJF	REVISIONS
	PLOT DATE = 6/24/2011	CHECKED AJS	REVISIONS

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PIER REPAIR AND DETAILS
STRUCTURE NO. 092-0171**

SHEET NO. 13 OF 16 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	25
CONTRACT NO. 70615				
ILLINOIS FED. AID PROJECT				



STANDARD BAR SPLICER ASSEMBLY

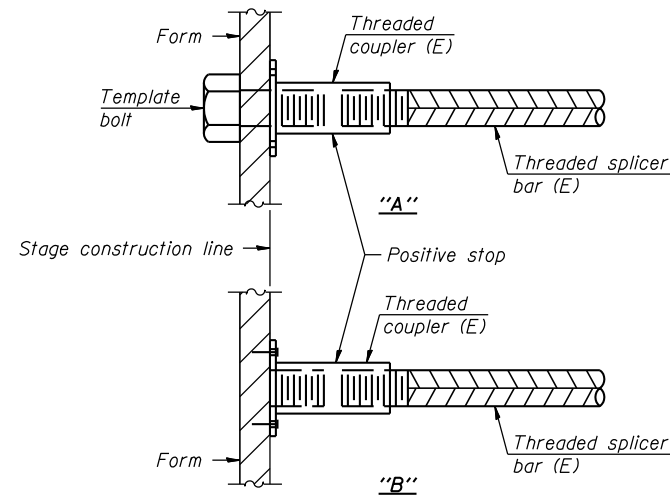
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- 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
- Table 5: Epoxy bar, Top bar lap, Class B

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

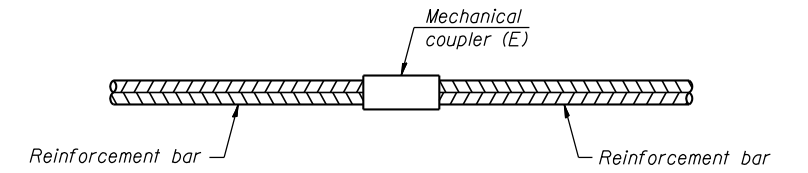
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Wearing Surface	#4	92	3
Appr. Footing	#5	80	3
Appr. Slab Top	#4	50	3
Appr. Slab Bottom	#5	92	3



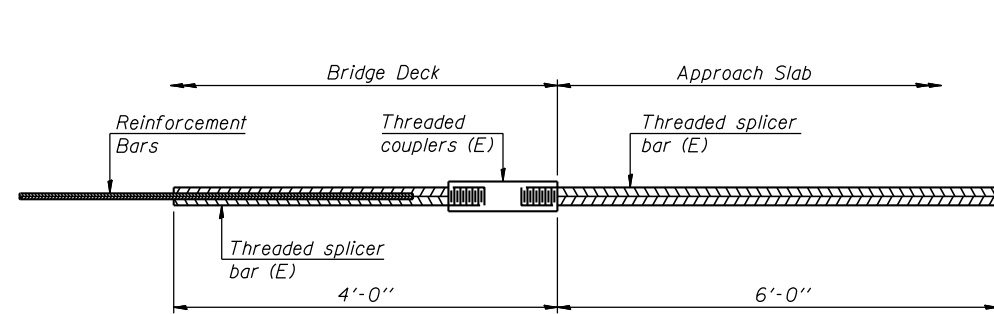
INSTALLATION AND SETTING METHODS

"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.



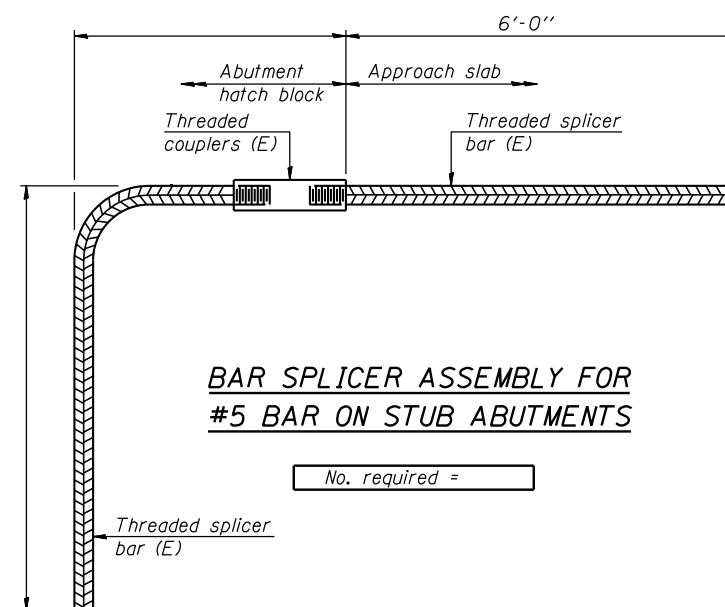
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



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

No. required =



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

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 special provision for Mechanical Splicers.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

FILE NAME = s:\p1\6380--6395\6346\024\microsa\finds\plans\structural\014-SPLICE.dgn

BSD-1

7-1-10



USER NAME = rjgend	DESIGNED RRD	REVISED -
PLOT SCALE =	CHECKED AJS	REVISED -
PLOT DATE = 6/24/2011	DRAWN BJF	REVISED -
	CHECKED AJS	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 092-0171**

SHEET NO. 14 OF 16 SHEETS

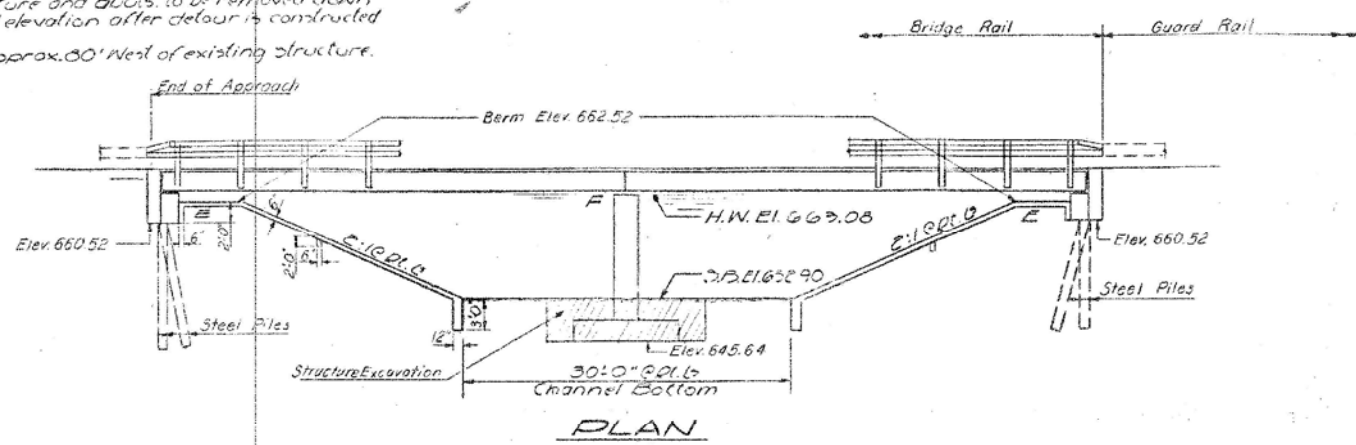
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	26
CONTRACT NO. 70615				

ILLINOIS FED. AID PROJECT

DM - Chiselled 12" N.W. wingwall of bridge
 21.5' Dc Sta 213+17.7 El. 664.66
 Exist. Structure Built in 1928 as SBI Dc. 49, Dec 1208
 Sta. 211+11 Superstructure / Span PC Girder,
 Substructure - PC Chiselled Abut. on Piles.
 Superstructure and abut. to be removed down
 to slope wall elevation after detour is constructed.
 Traffic detour - Approx. 80' West of existing structure.

STATE OF ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
49	120BR	VERMILLION	18	8
SHEET NO. 1				
7 SHEETS				



HORIZ. CURVE DATA
 Pt. Sta. 213+17.6
 $\Delta = 1^\circ 04'$
 $T = 700'$
 $R = 75196.6'$
 $E = 3.25'$
 $D = 0^\circ 04' 35''$
 $L = 1400'$

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

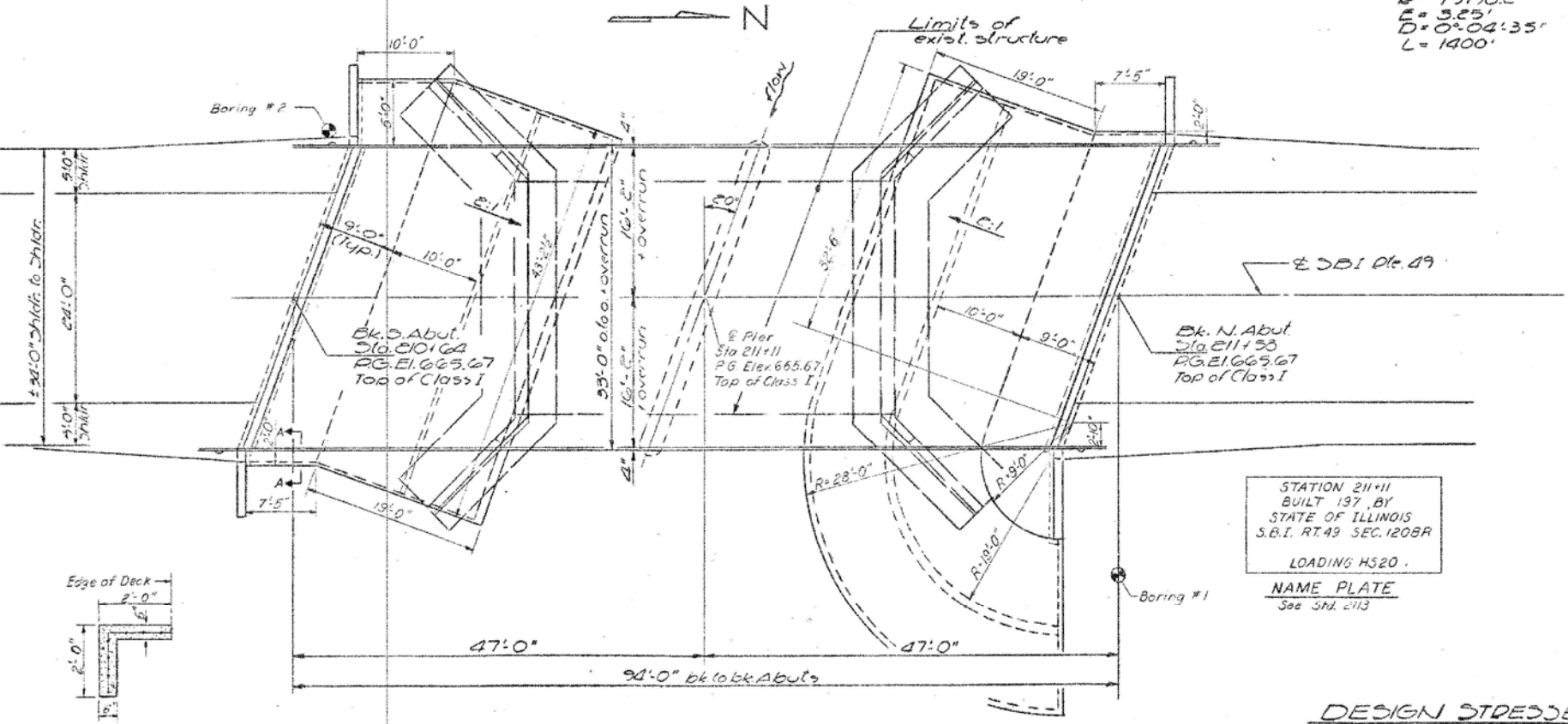
Slope wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58# per 100 sq. ft.

Layout of slope walls may be varied in the field to suit ground conditions as directed by the Engineer.

An alternate strand pattern using Extra High Strength Prestressing strand (270 k.s.i.) is permitted.

The Contractor shall drive one Steel test piles in a permanent location at the N. Abutment as directed by the Engineer before ordering the remainder of piles.

The top surface of the beams shall be finished in accordance with Article 505.06 of the Standard Specs, except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners.



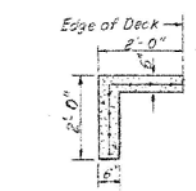
STATION 211+11
 BUILT 197 BY
 STATE OF ILLINOIS
 S.B.I. RT. 49 SEC. 1208B
 LOADING H520
 NAME PLATE
 See Std. 213

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Bituminous Concrete Surface Course Class I	Tons	41		41
Structure Excavation	Cu. Yds.			293
Class X Concrete	Cu. Yds.	1.6	870	88.6
Precast Prestressed Concrete Deck Beams 21"	Sq. Ft.	2995		2995
Structural Steel	Lbs.	4990		4990
Steel Railing Type N	Lin. Ft.	182		182
Reinforcement Bars	Lbs.	220	8060	8280
Steel H Piles HP 36x36	Lin. Ft.		227	227
Test Piles Steel HP 36x36	Each		1	1
Name Plates	Each			1
Slope Wall 6"	Sq. Yds.			416
Waterproofing Membrane System	Sq. Yds.	334		334
Prefabricated Joint Sealer (2")	Lin. Ft.	72		72
Temporary Bridge Complete	Each			1
Removal of Existing Structures	Each			1

* Includes removal of existing abutments down to slope wall and removal of existing pavement between new approach slabs.

SECTION A-A



PLAN

WATERWAY INFORMATION

Drainage Area --- 7150 Acres

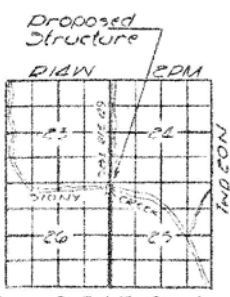
Present Opening --- 272 Sq. Ft.
 Draft Opening --- 487 Sq. Ft.
 Prop. Opening --- 485 Sq. Ft.

Ordinary Water El. 634.0
 Low Water El. 633.5
 Q (max) - 2700 cfs
 Created Head 0.06'

DESIGN STRESSES

FIELD UNITS
 $f_c = 1400 \text{ psi} - \text{Sub}$
 $f_s = 20,000 \text{ psi} - \text{Reinf.}$
 $n = 10$

PRECAST PDESIGNED UNITS
 $f_c = 5000 \text{ psi}$
 $f_s = 4000 \text{ psi}$
 $f'_c = 600,000 \text{ psi} - 7/8" \text{ Strands}$
 $f'_s = 175,000 \text{ psi} - 1/2" \text{ Strands}$
 Allow 2% for future wearing surface
 Design Specifications
 1209 A ASHO as applicable
 LOADING H520/68



LOCATION SKETCH

GENERAL PLAN & ELEVATION

SBI RTE 49 OVER
 STONY CREEK
 SBI ROUTE 49
 SECTION 1208B
 VERMILLION COUNTY
 STATION 211+11

DESIGNED	R. R. D.	EXAMINED	[Signature]
CHECKED	AJS	PASSED	[Signature]
DRAWN	BJF	APPROVED	[Signature]
CHECKED	AJS		

FILE NAME = s:\p1\6380--6395\6346\024\microsoffinds\plans\structural\016-EGPE.dgn

1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = rjand	DESIGNED RRD	REVISED -
PLOT SCALE =	CHECKED AJS	REVISED -
PLOT DATE = 6/24/2011	DRAWN BJF	REVISED -
	CHECKED AJS	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

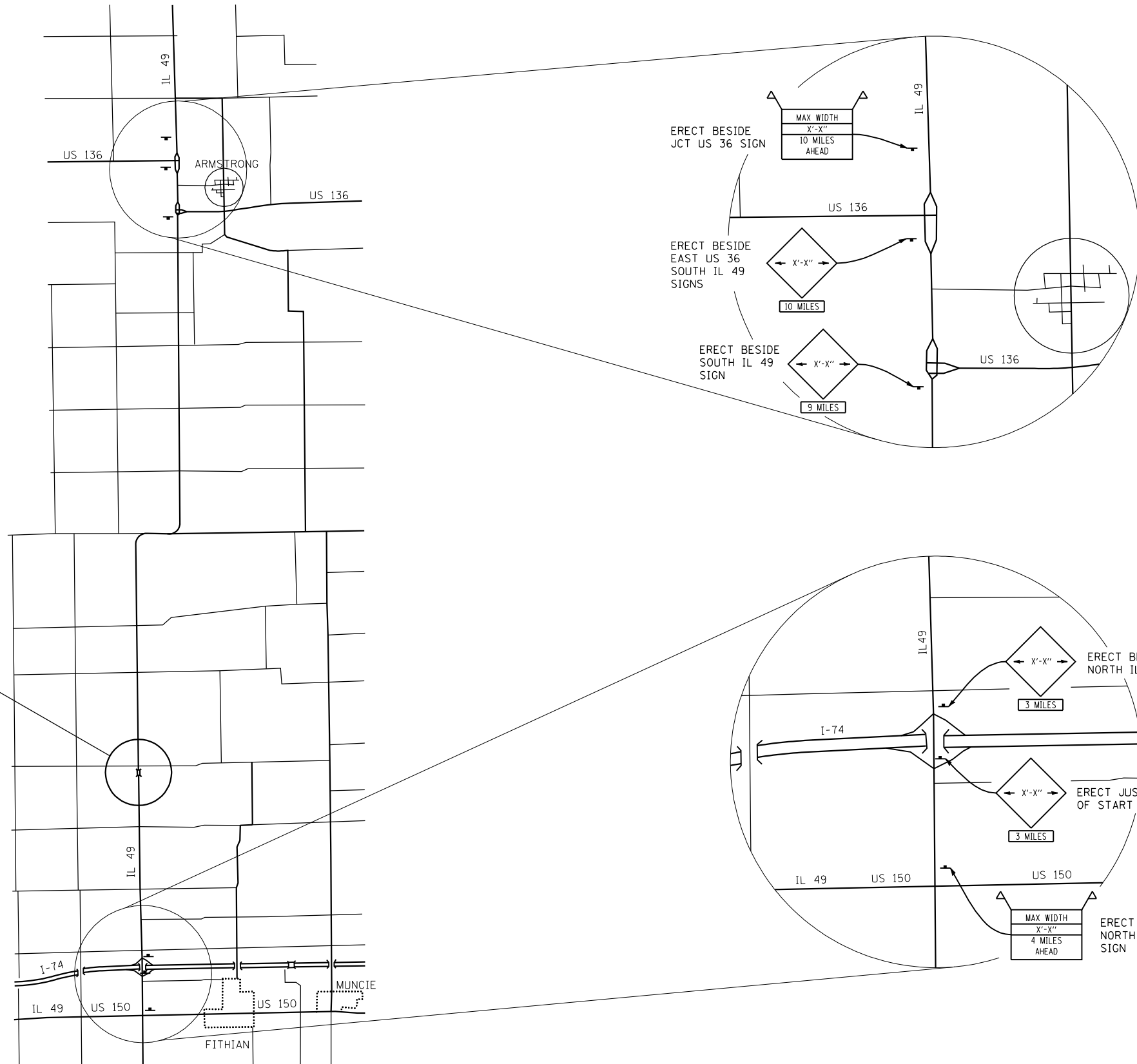
EXISTING GENERAL PLAN AND ELEVATION
 STRUCTURE NO. 092-071
 SHEET NO. 16 OF 16 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILLION	44	28
CONTRACT NO. 70615				
ILLINOIS FED. AID PROJECT				

For Information Only



PROJECT LOCATION
SN 092-0171



X'-X" = 10'-6" STAGES I AND II

SEE SHEET 27 OF 35 FOR ADDITIONAL INFORMATION

CB Coombe-Bloxdorf P.C.
- CIVIL ENGINEERS -
- STRUCTURAL ENGINEERS -
- LAND SURVEYORS -
Design Firm License No. 184-002703

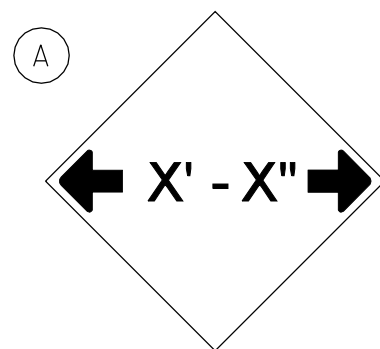
FILE NAME = ...\\v8-ns\d570615-shr-staging.dgn	USER NAME = CFC..	DESIGNED -	REVISED -
		DRAWN - CFC	REVISED -
		CHECKED - CCJ	REVISED -
CB PROJECT NO 06027-7	PLOT DATE = 6/14/2011	DATE - / /	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

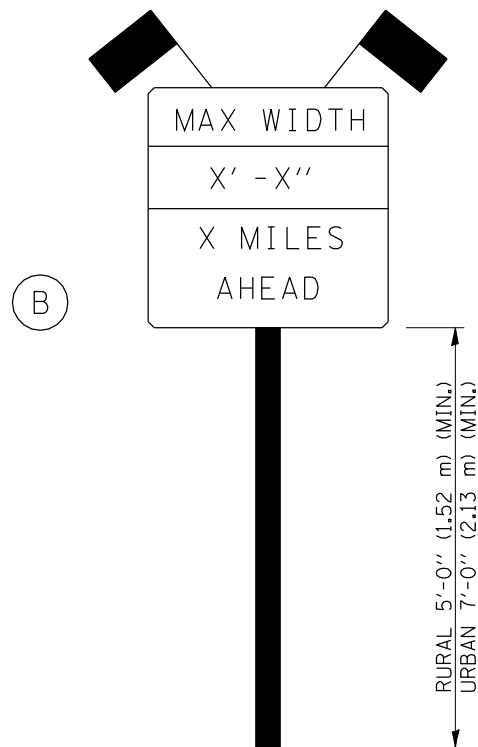
**MAX WIDTH SIGNING
SN 092-0171**

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

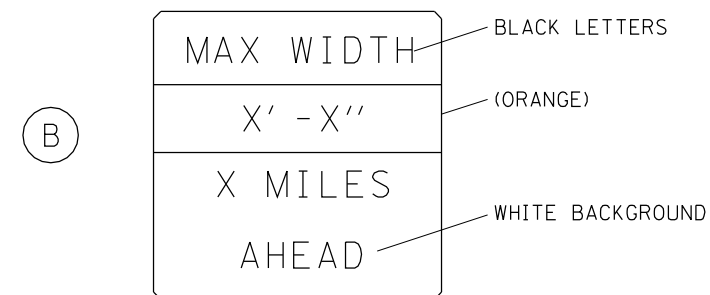
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	29
			CONTRACT NO. 70615	
ILLINOIS FED. AID PROJECT				



W12-2(0) - 48"x48" (1200x1200)



SIGN PANEL, TYPE II



W12-I103(0) - 48"x48" (1200x1200)
"D" LETTERS/NUMBERS

SIGN (A) 2 SIGNS - W12-2(0) - 48"x48" (1200x1200) ARE TO BE PLACED AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

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

X' - X'' = 10' - 6" STAGE I AND II
X MILES SEE SHEET 26 OF 35

GENERAL NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED AND MAINTAINED BY THE CONTRACTOR.
2. ALL (B) SIGNS SHALL HAVE FLAGS INSTALLED UNLESS OTHERWISE DIRECTED.
3. LOCATIONS OF TRAFFIC CONTROL DEVICES MAY BE ADJUSTED BY THE ENGINEER.
4. ALL TRAFFIC CONTROL SHOWN ON THIS SHEET SHALL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR WIDTH RESTRICTION SIGNING.
5. ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE DIRECTED.
6. ALL SIGNS SHOWN ORANGE (O) SHALL BE FLUORESCENT ORANGE.

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

FILE NAME = ...\\v8-ns\0570615-x7200201.dgn	USER NAME = CFC..	DESIGNED -	REVISED - 11/06
		DRAWN -	REVISED - 05/08
	PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED - 10/08 - KJT
	PLOT DATE = 6/14/2011	DATE -	REVISED - 7/09 - KJT

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

WIDTH RESTRICTION SIGNING

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

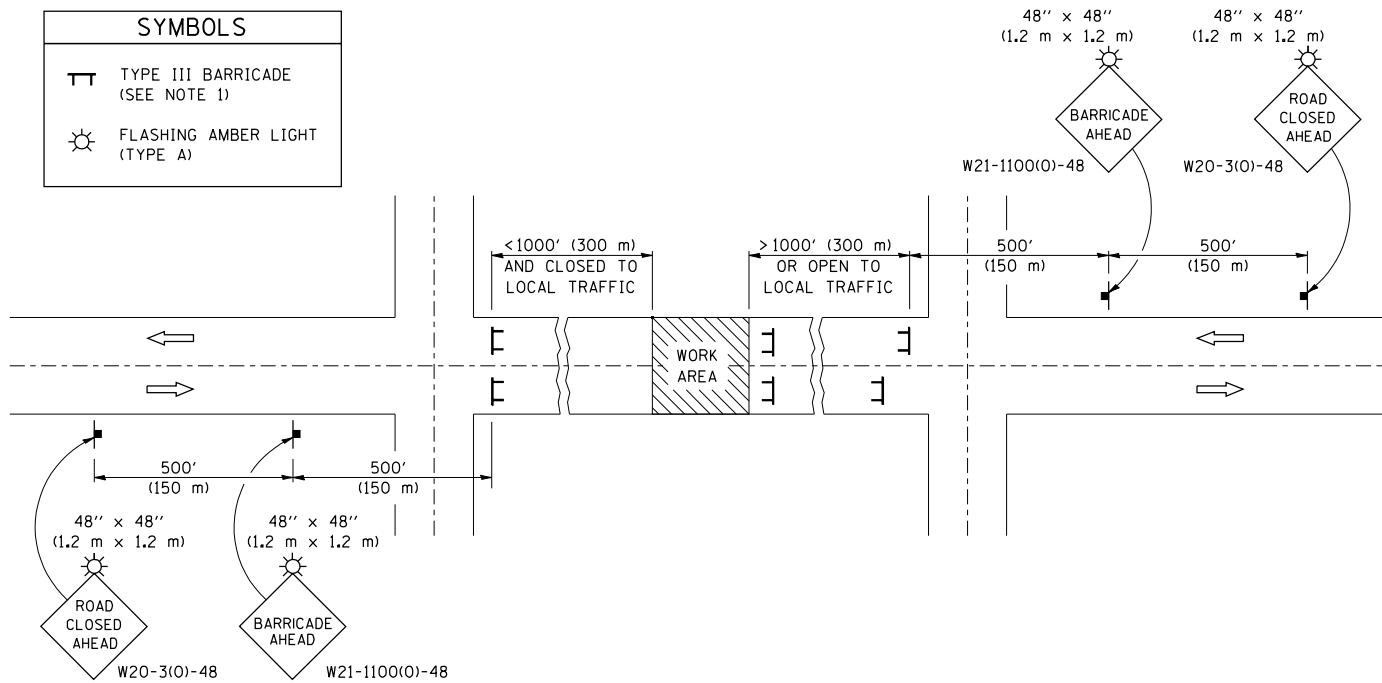
DISTRICT 5 DETAIL NO. X7200201

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	30
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 70615	

ROAD CLOSURE

SIDEROAD / STREET CLOSURE

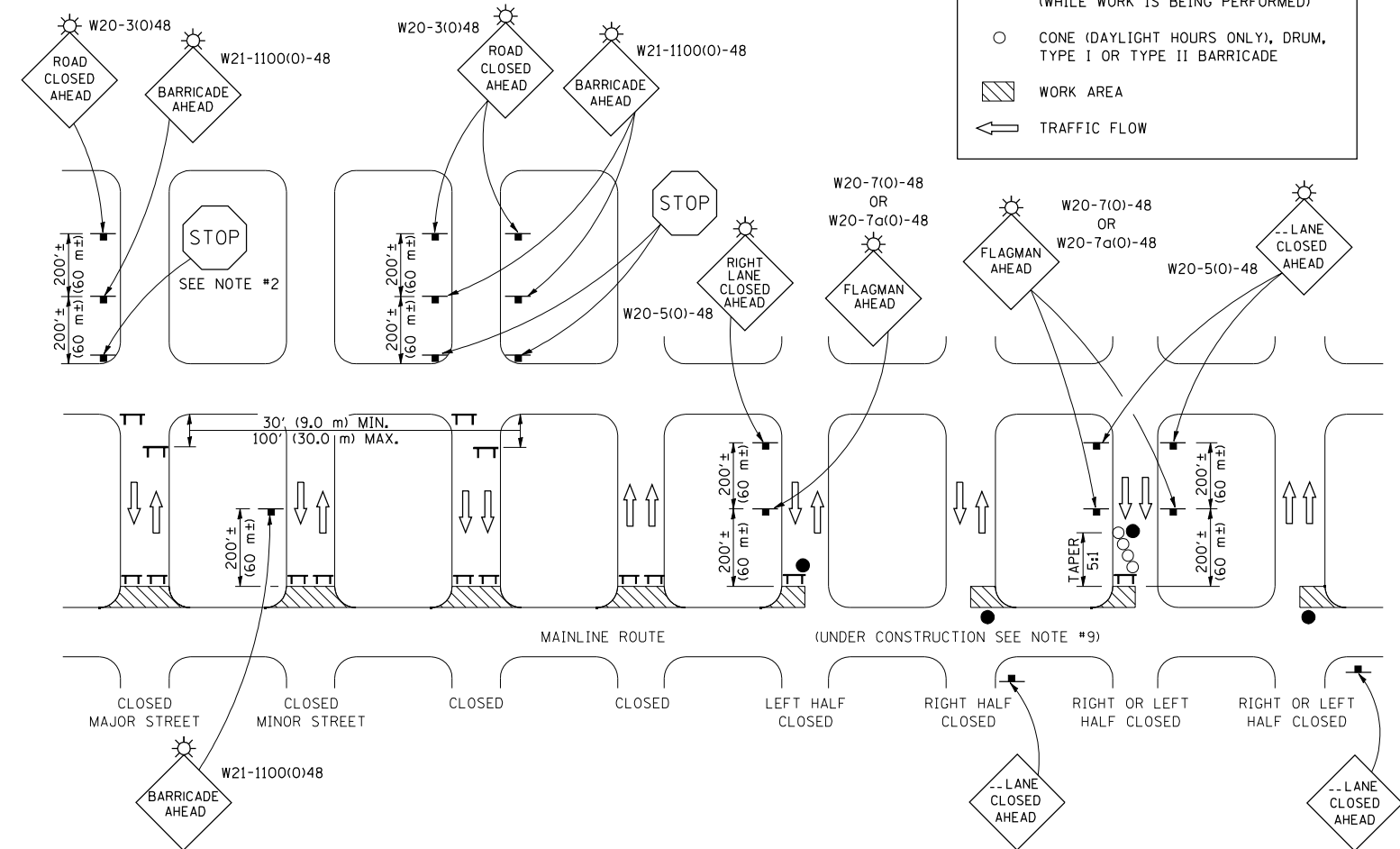
SYMBOLS	
	TYPE III BARRICADE (SEE NOTE 1)
	FLASHING AMBER LIGHT (TYPE A)



GENERAL NOTES

- TYPE III BARRICADES SHALL BE AS SHOWN ON STANDARD 701901 "TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD". EACH TYPE III BARRICADE SHALL HAVE TWO FLASHING AMBER LIGHTS MOUNTED ABOVE IT.
- IF THE ROAD IS OPEN TO LOCAL TRAFFIC OR EXCEEDS 1000' (300 m), ANOTHER SET OF TYPE III BARRICADES, EQUIPPED AS IN NOTE 1 ABOVE, SHALL BE PLACED AT EACH END OF THE WORK AREA.
- WHEN A STOP CONDITION EXISTS, NO SIGNS ARE REQUIRED IN ADVANCE OF THE "STOP" SIGN WHEN THE ROAD IS CLOSED WITHIN 100' (30 m) OF THE INTERSECTION.
- STANDARD 701901 SHALL APPLY FOR THE PLACEMENT & DESIGN OF TYPE III BARRICADES.
- IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 IS NOT AVAILABLE, THE SIGNS MAY BE MOUNTED ON AN NCHRP 350 TEMPORARY SIGN SUPPORT DIRECTLY IN FRONT OF THE BARRICADE.
- REFLECTORIZED STRIPING SHALL APPEAR ON BOTH SIDES OF THE TYPE III BARRICADES IF ROAD IS OPEN TO LOCAL TRAFFIC.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- A MINIMUM OF TWO FLASHING LIGHTS SHALL BE USED AT NIGHT ON EACH APPROACH IN ADVANCE OF THE WORK AREA. FLASHING LIGHTS SHALL BE INSTALLED ABOVE THE FIRST TWO SIGNS IN THE SERIES.
- LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
- FORMS BT. 725 AND BT. 726 ARE REQUIRED.
- WHEN A SIDEROAD INTERSECTS THE HIGHWAY ON WHICH WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC DEVICES SHALL BE ERECTED AND PROVIDED AS DIRECTED BY THE ENGINEER.
- AN ADDITIONAL SIGN MAY BE REQUIRED AT A MAJOR INTERSECTING ROAD IN ADVANCE OF THE CLOSURE. THE ADDITIONAL SIGN SHALL GIVE THE DISTANCE TO THE BARRICADE IN MILES OR FRACTIONS OF A MILE.

SYMBOLS	
	TYPE III BARRICADE (SEE NOTE)
	FLASHING LIGHT
	FLAGGER WITH TRAFFIC CONTROL SIGN (WHILE WORK IS BEING PERFORMED)
	CONES (DAYLIGHT HOURS ONLY), DRUM, TYPE I OR TYPE II BARRICADE
	WORK AREA
	TRAFFIC FLOW



GENERAL NOTES

- TYPE III BARRICADES SHALL BE AS SHOWN ON "TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD". EACH TYPE III BARRICADE SHALL HAVE TWO FLASHING AMBER LIGHTS MOUNTED ABOVE IT.
- WHERE A STOP CONDITION EXISTS, AS SHOWN ABOVE, WARNING SIGNS MAY BE OMITTED IN ADVANCE OF THE "STOP" SIGN.
- STANDARD 701901 SHALL APPLY FOR THE PLACEMENT & MANUFACTURE OF TYPE III BARRICADES.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- ONE FLASHING LIGHT IS REQUIRED ABOVE EACH ADVANCE WARNING SIGN DURING HOURS OF DARKNESS.
- LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
- FORMS BT 725 AND BT 726 ARE REQUIRED.
- THE MAINLINE ROUTE TEMPORARY TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE PLANS, SPECIAL PROVISIONS AND STANDARD SPECIFICATIONS.
- ALL FLAGGERS REQUIRED AT SIDE ROADS AND ENTRANCES REMAINING OPEN TO TRAFFIC AND/OR ADDITIONAL BARRICADES REQUIRED BY THE ENGINEER TO CLOSE SIDE ROADS AND ENTRANCES WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.

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

DISTRICT 5 DETAIL NO. 7020000

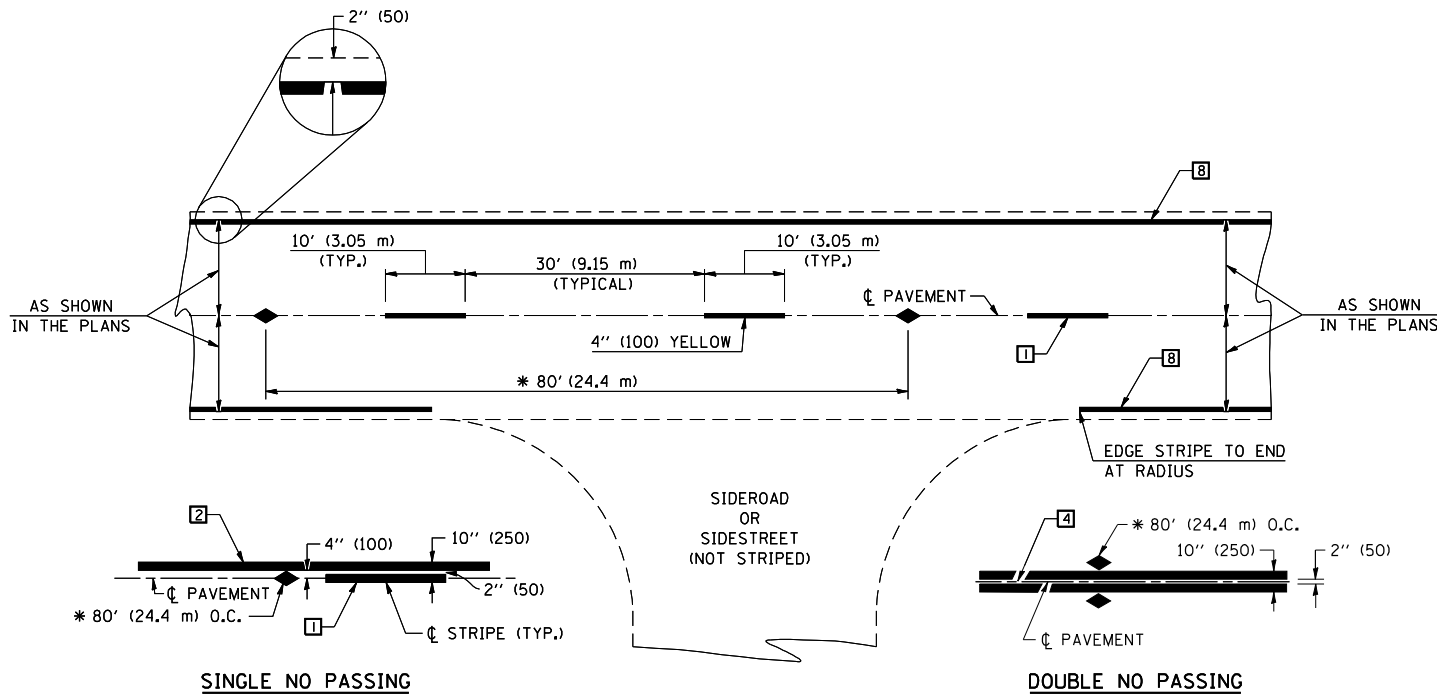
FILE NAME =	USER NAME = CFC..	DESIGNED -	REVISED - 11/06
...v8-ns\0570615-7020000.dgn		DRAWN -	REVISED - 12/07
	PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED - 09/09 - KJT
	PLOT DATE = 6/14/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL & PROTECTION DEVICES
(ROAD & SIDEROAD/STREET CLOSURES)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	31
CONTRACT NO. 70615				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



* REDUCE TO 40' (12.2 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEEDS OF 45 mph (70 km/h) OR LESS.

TWO LANE/TWO WAY

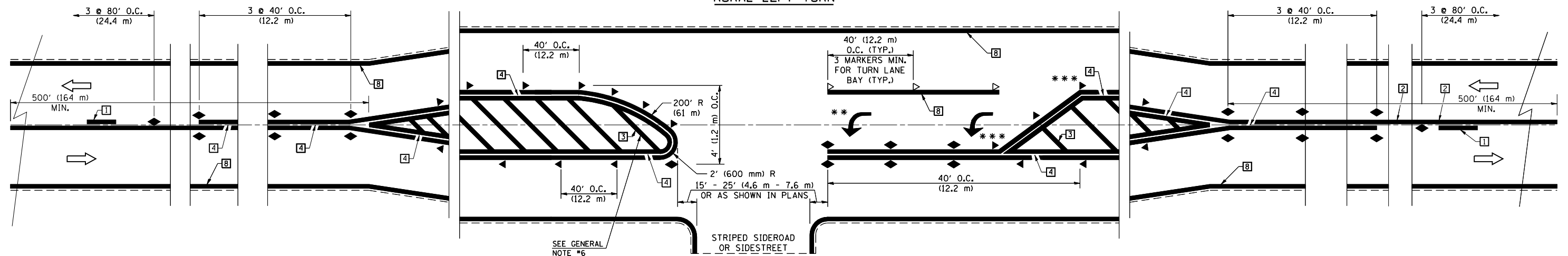
TYPICAL PAVEMENT MARKING LEGEND

- 1 4" (100) SKIP-DASH (YELLOW)
- 2 4" (100) SOLID (YELLOW)
- 3 12" (300) DIAGONAL (YELLOW)
- 4 4" (100) DOUBLE YELLOW (NARROW)
- 5 RESERVED
- 6 RESERVED
- 7 4" (100) SKIP-DASH (WHITE)
- 8 4" (100) SOLID (WHITE)
- 9 12" (300) DIAGONAL (WHITE)
- 10 6" (150) SOLID (WHITE)
- 11 24" (600) STOP BAR (WHITE)
- 12 8" (200) SOLID (WHITE)
- 13 4" (100) LANE LINE EXTENSIONS (WHITE)
- 14 4" (100) PARKING WHITE

TYPICAL PAVEMENT MARKERS LEGEND

- ◆ TWO-WAY AMBER MARKER
- ▶ ONE-WAY AMBER MARKER
- ▷ ONE-WAY CRYSTAL MARKER

RURAL LEFT TURN



*** REDUCE SPACING IF NECESSARY TO ASSURE MARKERS AT CORNER POINTS.

** TURN ARROWS SHALL BE PLACED AS SHOWN ON SHEET #2.

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

DISTRICT 5 DETAIL NO. 7800AAAA

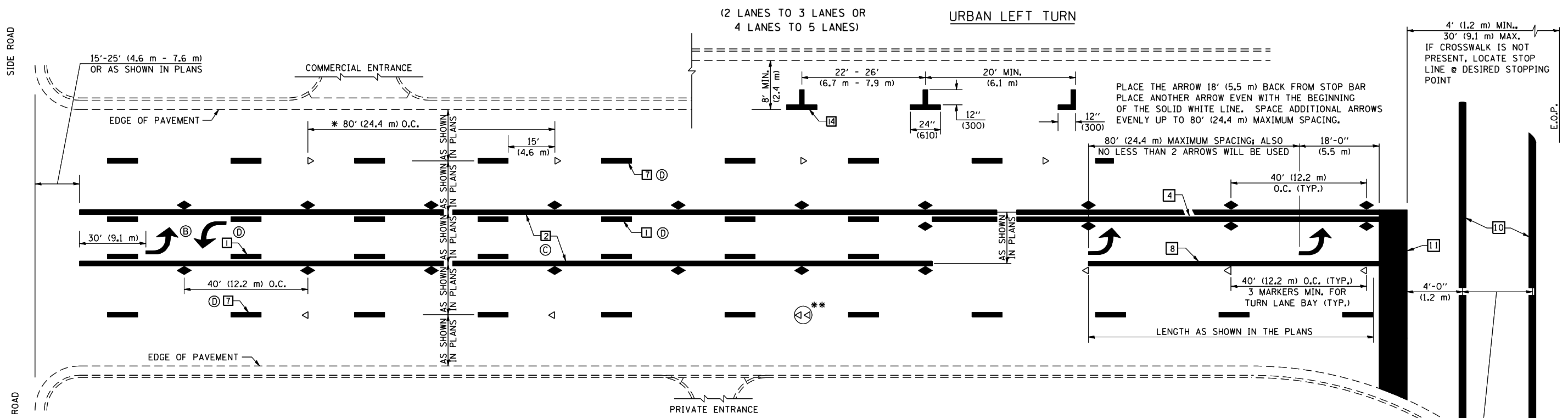
FILE NAME =	USER NAME = CFC..	DESIGNED -	REVISED - 11/06
...v8-rns\0570615-7800aaaa.dgn		DRAWN -	REVISED - 09/2009 - KJT
	PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 6/14/2011	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING AND MARKERS
(RURAL & URBAN APPLICATIONS)**

SCALE: SHEET NO. 1 OF 4 SHEETS STA. TO STA.

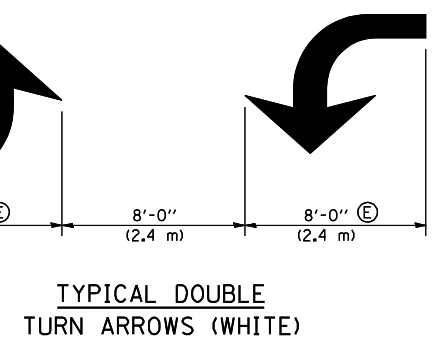
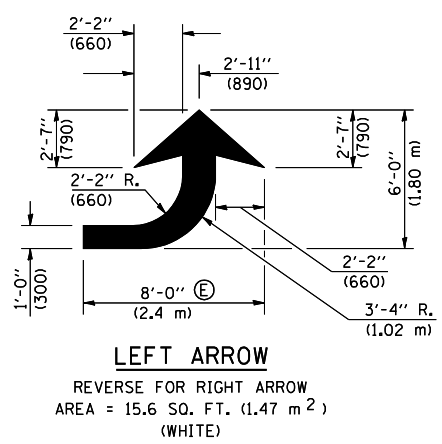
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	32
CONTRACT NO. 70615				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



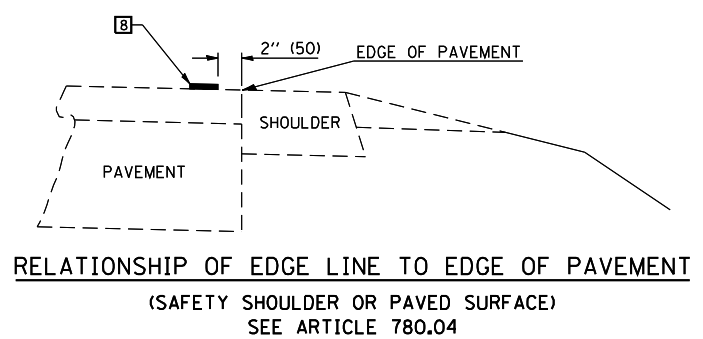
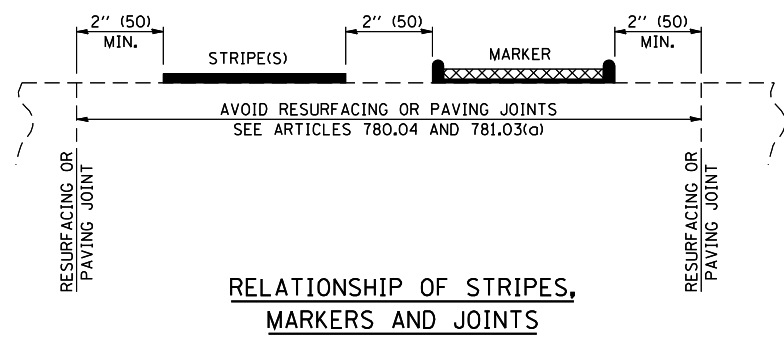
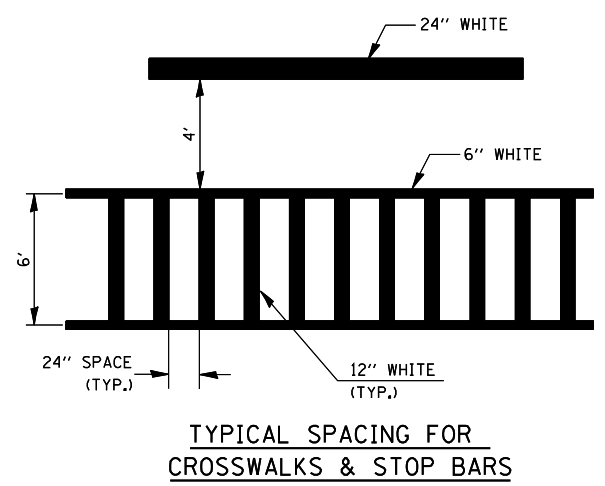
* REDUCE TO 40 FEET (12.2 METERS) ON CENTER ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

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

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



BLOOMINGTON-NORMAL CITY LIMITS ONLY



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

DISTRICT 5 DETAIL NO. 7800AAA

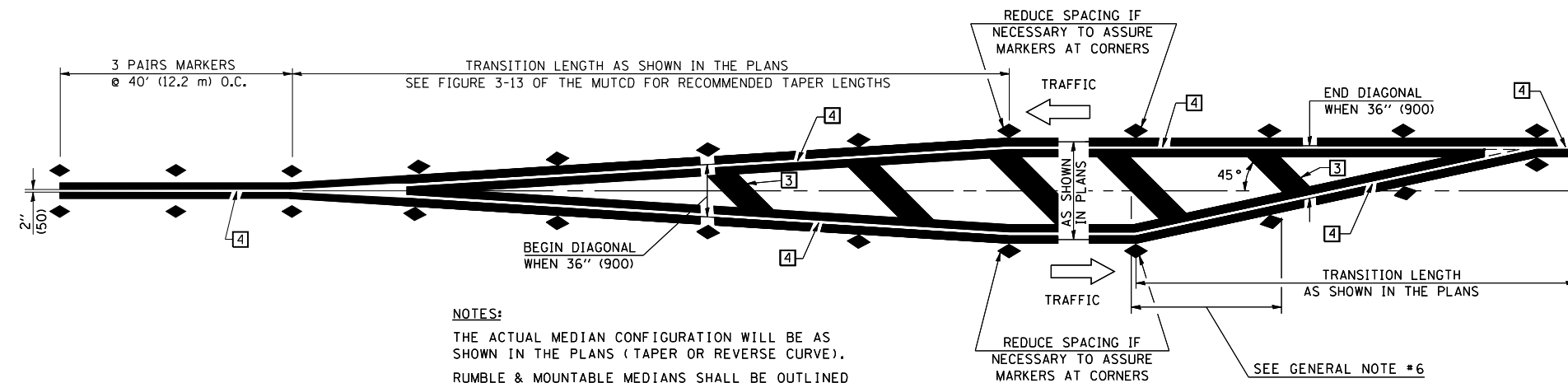
FILE NAME =	USER NAME = CFC..	DESIGNED -	REVISED - 11/06
...\\v8-ns\570615-7800aaa.dgn		DRAWN -	REVISED - 09/2009 - KJT
	PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 6/14/2011	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING AND MARKERS
(RURAL & URBAN APPLICATIONS)**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	33
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 70615	

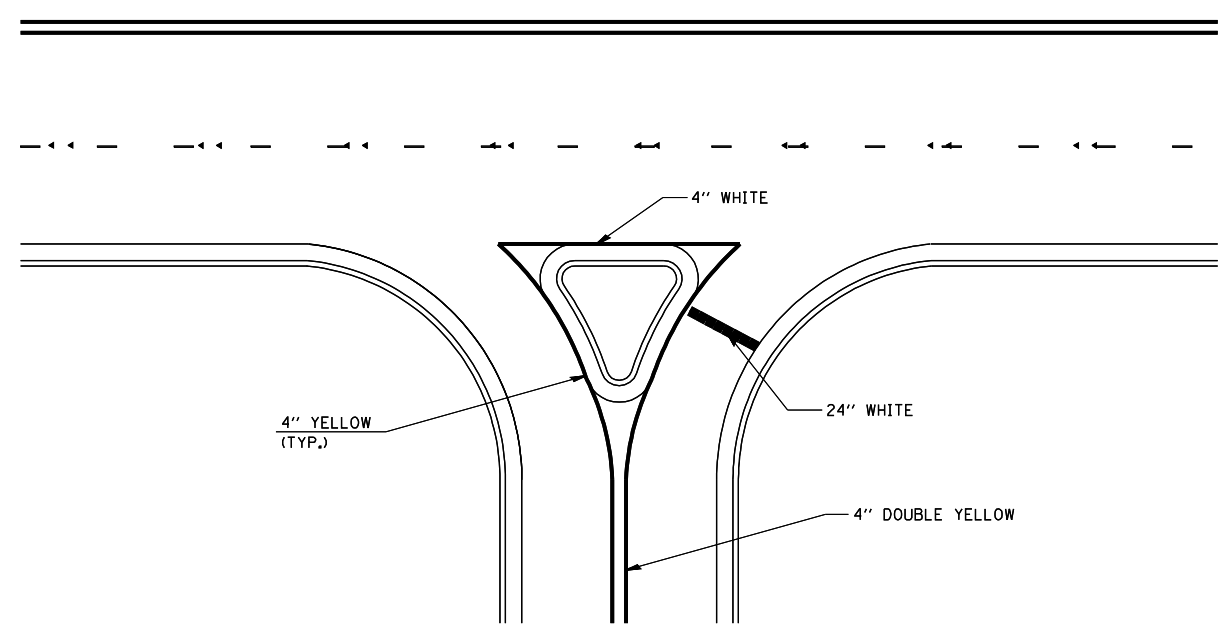


NOTES:
 THE ACTUAL MEDIAN CONFIGURATION WILL BE AS SHOWN IN THE PLANS (TAPER OR REVERSE CURVE).
 RUMBLE & MOUNTABLE MEDIANS SHALL BE OUTLINED WITH [2].

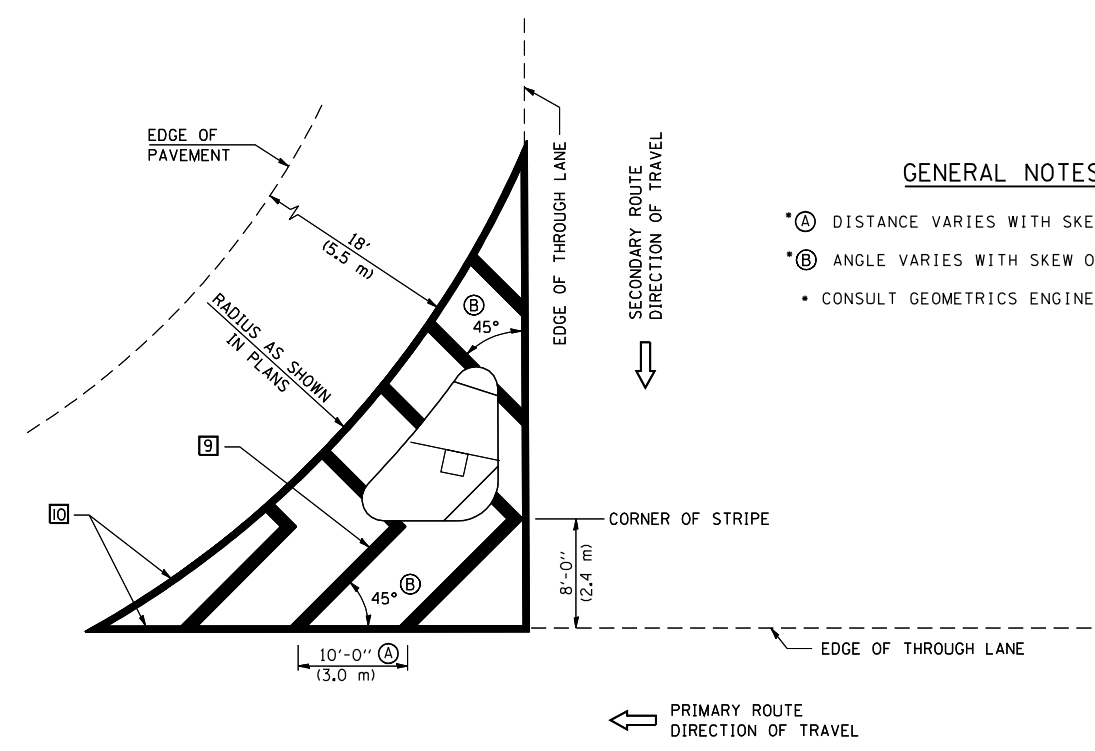
TYPICAL MEDIAN TRANSITIONS

GENERAL NOTES

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



RIGHT IN - RIGHT OUT ACCESS



ISLAND

GENERAL NOTES

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

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

FILE NAME = ...v8-rns\0570615-7800000.dgn	USER NAME = CFC...	DESIGNED -	REVISED - 11/06
		DRAWN -	REVISED - 09/2009 - KJT
	PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 6/14/2011	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING AND MARKERS
 (RURAL & URBAN APPLICATIONS)**

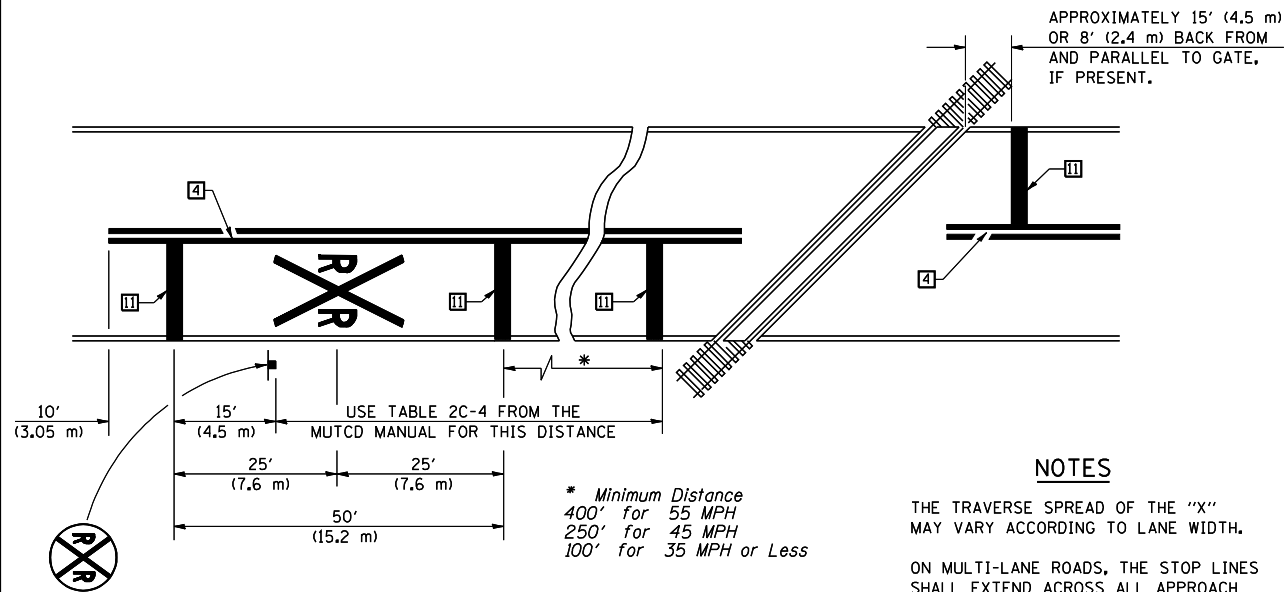
SCALE: SHEET NO. 3 OF 4 SHEETS STA. TO STA.

DISTRICT 5 DETAIL NO. 7800AAAA

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	34
CONTRACT NO. 70615				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

RAILROAD CROSSING WITH INTERCONNECT ONLY

RAILROAD CROSSING WITH INTERCONNECT AND PRE-SIGNALS



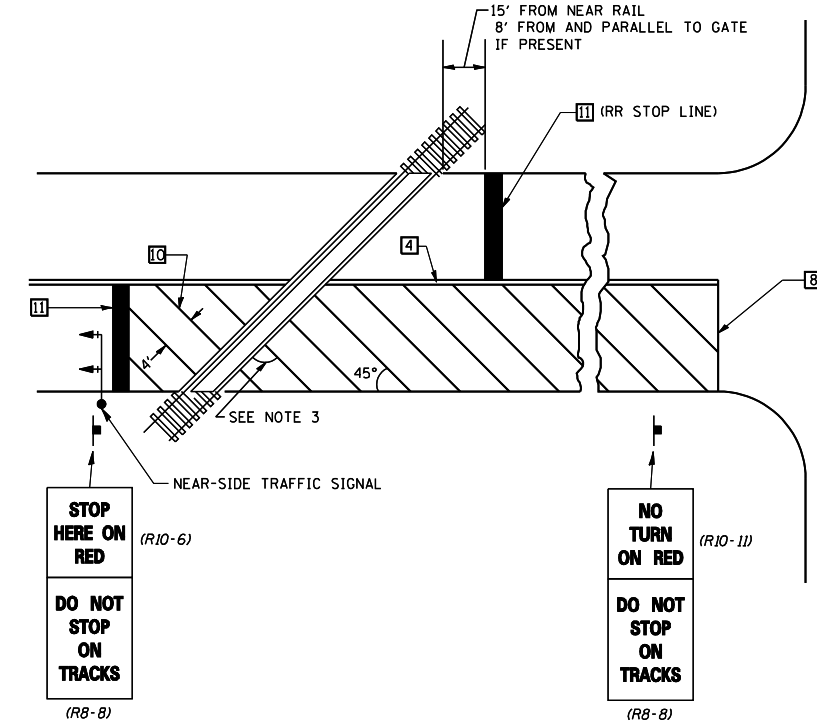
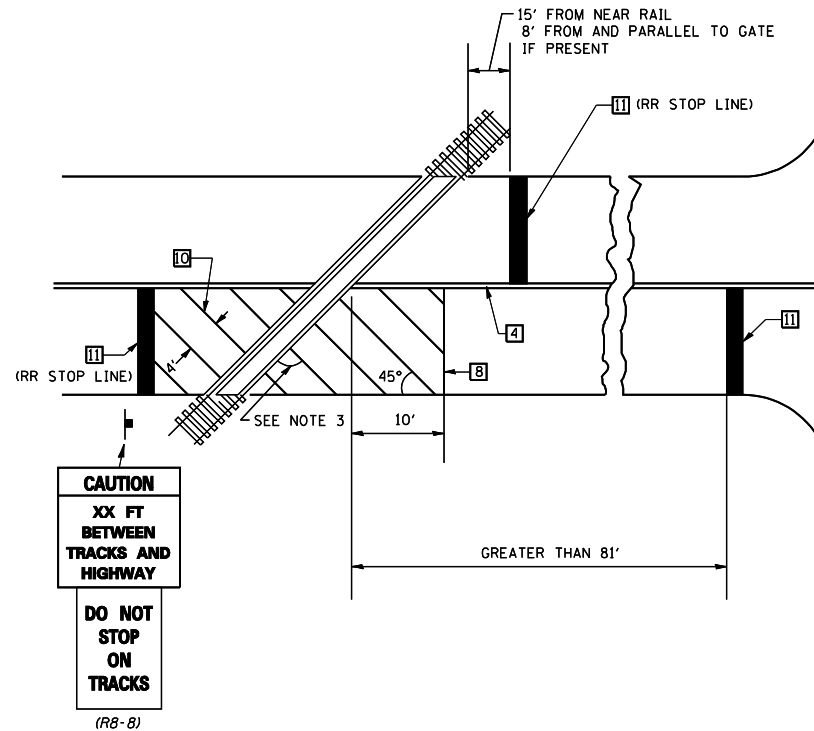
PAVEMENT MARKINGS AT RAILROAD-HIGHWAY GRADE CROSSING

NOTES

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

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

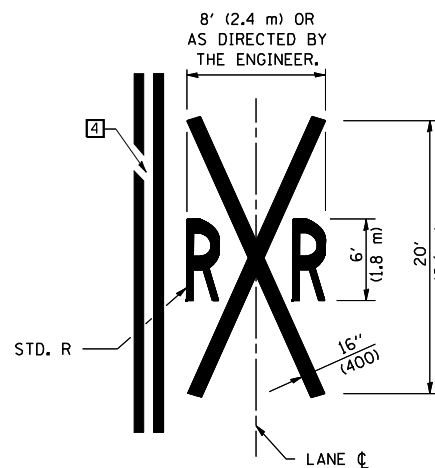
WHEN THE PAVEMENT MARKING SYMBOL IS USED, A PORTION OF THE SYMBOL SHOULD BE LOCATED DIRECTLY ADJACENT TO THE ADVANCE WARNING SIGN (W10-1) AS PLACED BY TABLE II-1, CONDITION B OF THE MUTCD.



SUPPLEMENTAL PAVEMENT MARKING TREATMENT FOR RAILROAD-HIGHWAY GRADE CROSSING

GENERAL NOTES

- SUPPLEMENTAL PAVEMENT MARKINGS TO BE INSTALLED ONLY ON APPROACHES TO INTERSECTIONS CONTROLLED BY TRAFFIC SIGNALS WHICH ARE INTERCONNECTED WITH THE RAILROAD WARNING SIGNALS.
- EXTEND PAVEMENT MARKINGS TO THE INTERSECTION ONLY WHERE NEAR-SIDE TRAFFIC SIGNALS ARE USED.
- WHERE THE ANGLE BETWEEN THE DIAGONAL PAVEMENT MARKINGS AND THE TRACK WOULD BE LESS THAN 20°, THE PAVEMENT MARKINGS SHOULD BE PLACED IN THE OPPOSITE DIRECTION FROM THAT SHOWN.



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

FILE NAME =	USER NAME = CFC..	DESIGNED -	REVISED - 11/06
...\\v8-ns\570615-7800\0000.dgn		DRAWN -	REVISED - 09/2009 - KJT
	PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED -
	PLOT DATE = 6/14/2011	DATE -	REVISED -

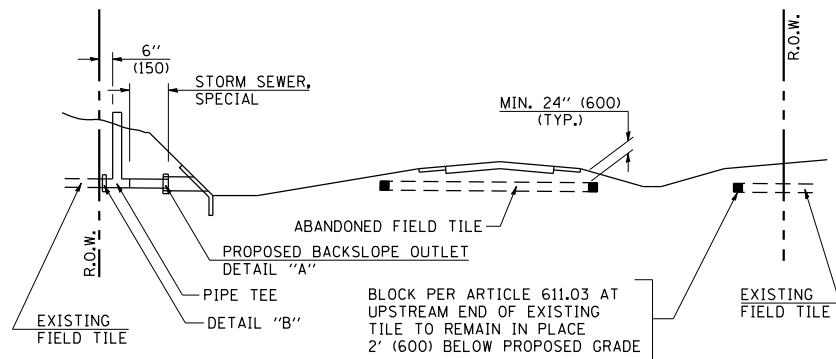
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING AND MARKERS
(RURAL & URBAN APPLICATIONS)

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

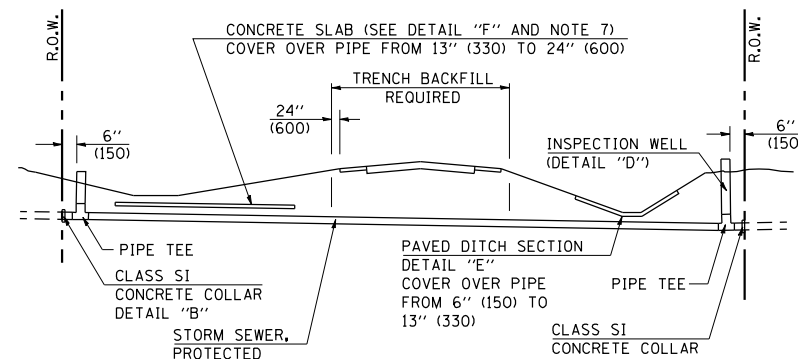
DISTRICT 5 DETAIL NO. 7800AAAA

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	35
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 70615	



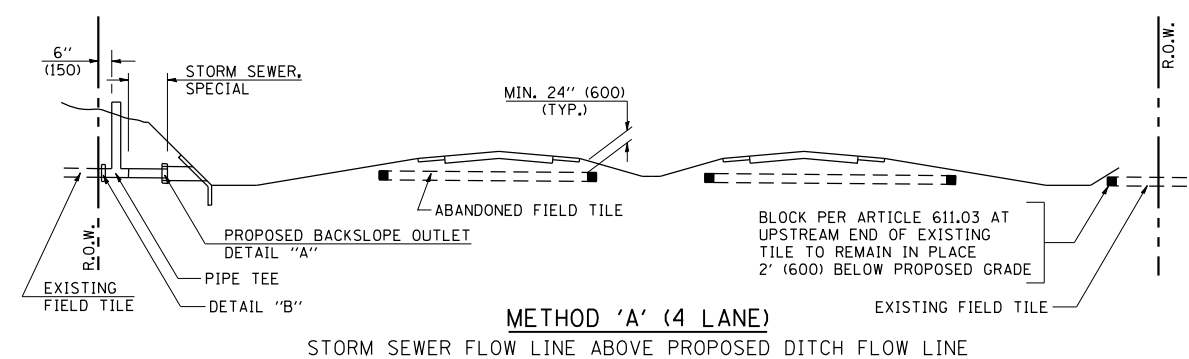
METHOD 'A' (2 LANE)

STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE



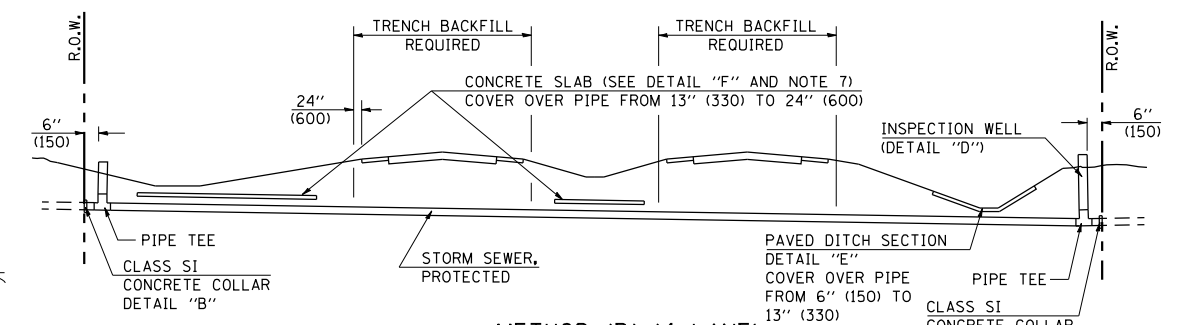
METHOD 'B' (2 LANE)

STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENT AND PAVED DITCH



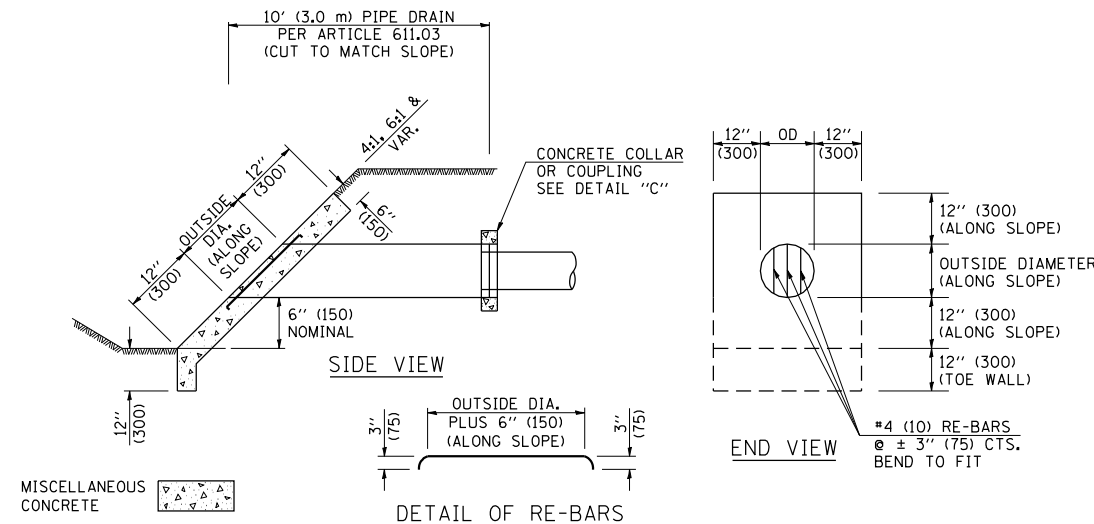
METHOD 'A' (4 LANE)

STORM SEWER FLOW LINE ABOVE PROPOSED DITCH FLOW LINE

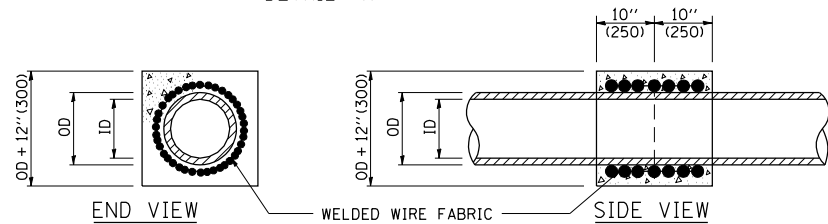


METHOD 'B' (4 LANE)

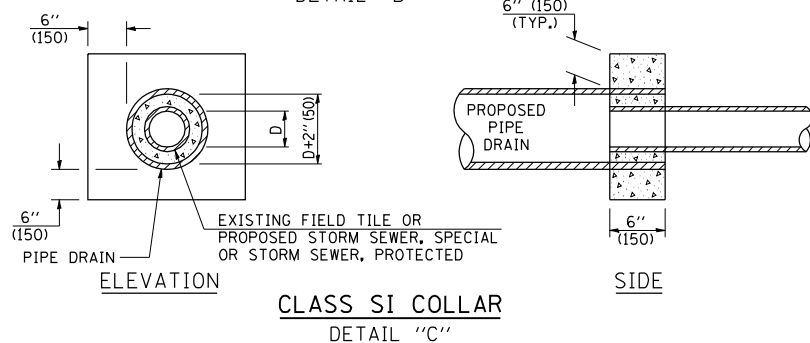
STORM SEWER LESS THAN 2' (600 mm) BELOW DITCH FLOW LINE AND STORM SEWERS CROSSING UNDER PAVEMENTS AND PAVED DITCHES



**HEADWALL FOR BACKSLOPE OUTLET
DETAIL "A"**



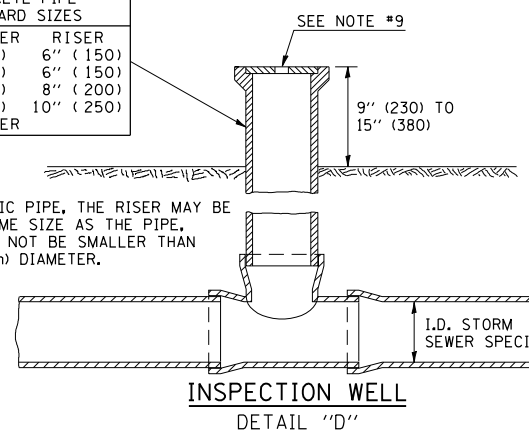
**CONCRETE COLLAR
DETAIL "B"**



**CLASS SI COLLAR
DETAIL "C"**

CONCRETE PIPE STANDARD SIZES	
STORM SEWER	RISER
6" (150)	6" (150)
8" (200)	6" (150)
10" (250)	8" (200)
12" (300)	8" (200)
OR GREATER	10" (250)

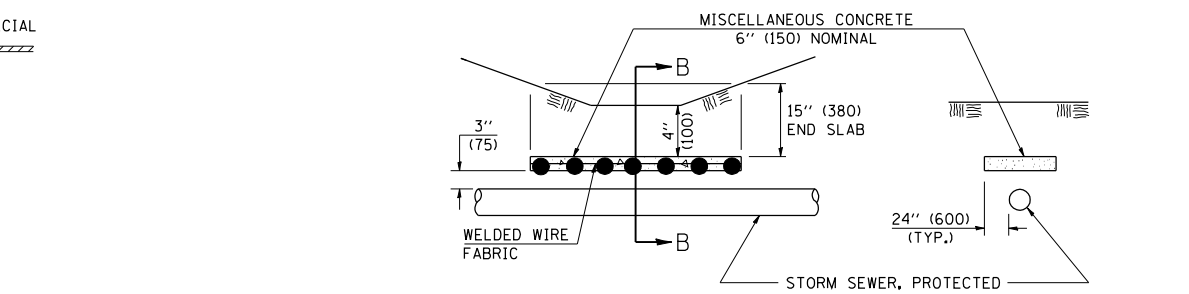
FOR PLASTIC PIPE, THE RISER MAY BE OF THE SAME SIZE AS THE PIPE, BUT SHALL NOT BE SMALLER THAN 4" (100 mm) DIAMETER.



**INSPECTION WELL
DETAIL "D"**

GENERAL NOTES

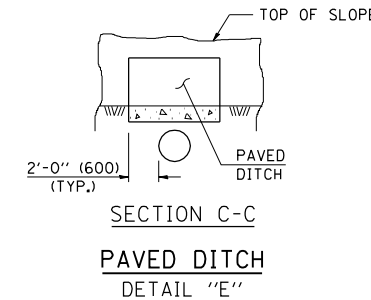
- EXISTING FIELD TILE ENCOUNTERED BY EXPLORATION TRENCH SHALL BE INSPECTED BY THE ENGINEER FOR UNOBSTRUCTED FLOW WITHIN THE LIMITS OF THE RIGHT-OF-WAY.
- ONLY FIELD TILE THAT DOES NOT HAVE SATISFACTORY FLOW AND OR HAS VISIBLE SIGNS OF DETERIORATION (SINK HOLES, ETC.) SHALL BE REPLACED WITHIN THE LIMITS OF THE RIGHT-OF-WAY IN ACCORDANCE WITH METHOD "B".
- INSPECTION WELLS SHALL BE CONSTRUCTED APPROXIMATELY 6" (150 mm) INSIDE OF BOTH RIGHT-OF-WAY LINES AT ALL FIELD TILE LOCATIONS.
- EXISTING FIELD TILE ABANDONED UNDER EXISTING PAVEMENTS OR PAVED SHOULDERS SHALL BE FILLED WITH FLOWABLE GROUT AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.
- NON-CIRCULAR FIELD TILE SHALL BE REPLACED WITH STORM SEWER, SPECIAL OF AT LEAST THE SAME CROSS SECTIONAL AREA. ALL EXISTING FIELD TILE SHALL BE REPLACED WITH STORM SEWER OF THE TYPE REQUIRED FOR THE MINIMUM DEPTH OF COVER.
- THE 6" (150 mm) CONCRETE SLAB OR DITCH LINING SHALL BE POURED THE LENGTH OF THE TRENCH AT ALL DITCH FLOW LINE LOCATIONS WITHIN THE RIGHT-OF-WAY WITH LESS THAN 2' (600 mm) OF EARTH COVER. MISCELLANEOUS CONCRETE SHALL BE USED ACCORDING TO SECTION 611.
- ALL MISCELLANEOUS SLABS, APRONS AND DITCH LININGS SHALL BE REINFORCED WITH WELDED WIRE FABRIC AS SHOWN FOR PAVED DITCH IN STANDARD 606401.
- HEADWALL FOR BACKSLOPE OUTLET MAY BE USED FOR PIPE DRAIN DIAMETERS UP TO 10" (250 mm). SPECIAL DESIGNS WILL BE REQUIRED FOR LARGER SIZES.
- THE INSPECTION WELL LID FOR P.C.C. PIPE SHALL BE CONSTRUCTED OF 3/8" (10 mm) CAST IRON AND PROVIDED WITH A 1" (25 mm) DIAMETER HOLE IN CENTER. THE LID FOR THE OTHER PIPE MATERIALS SHALL BE A GRATE ASSEMBLY PREFABRICATED FOR AND COMPATIBLE WITH THE PIPE SYSTEM.



SLAB ELEVATION

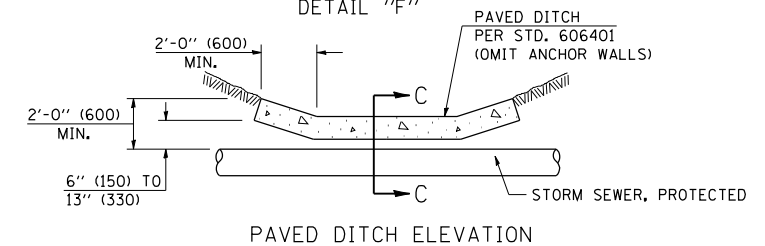
**CONCRETE SLAB
DETAIL "F"**

SECTION B-B



SECTION C-C

**PAVED DITCH
DETAIL "E"**



PAVED DITCH ELEVATION

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

DISTRICT 5 DETAIL NO. 61101011A

FILE NAME =	USER NAME = CFC..	DESIGNED -	REVISED - 11/06
...v8-ns\0570615-61101011.dgn		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

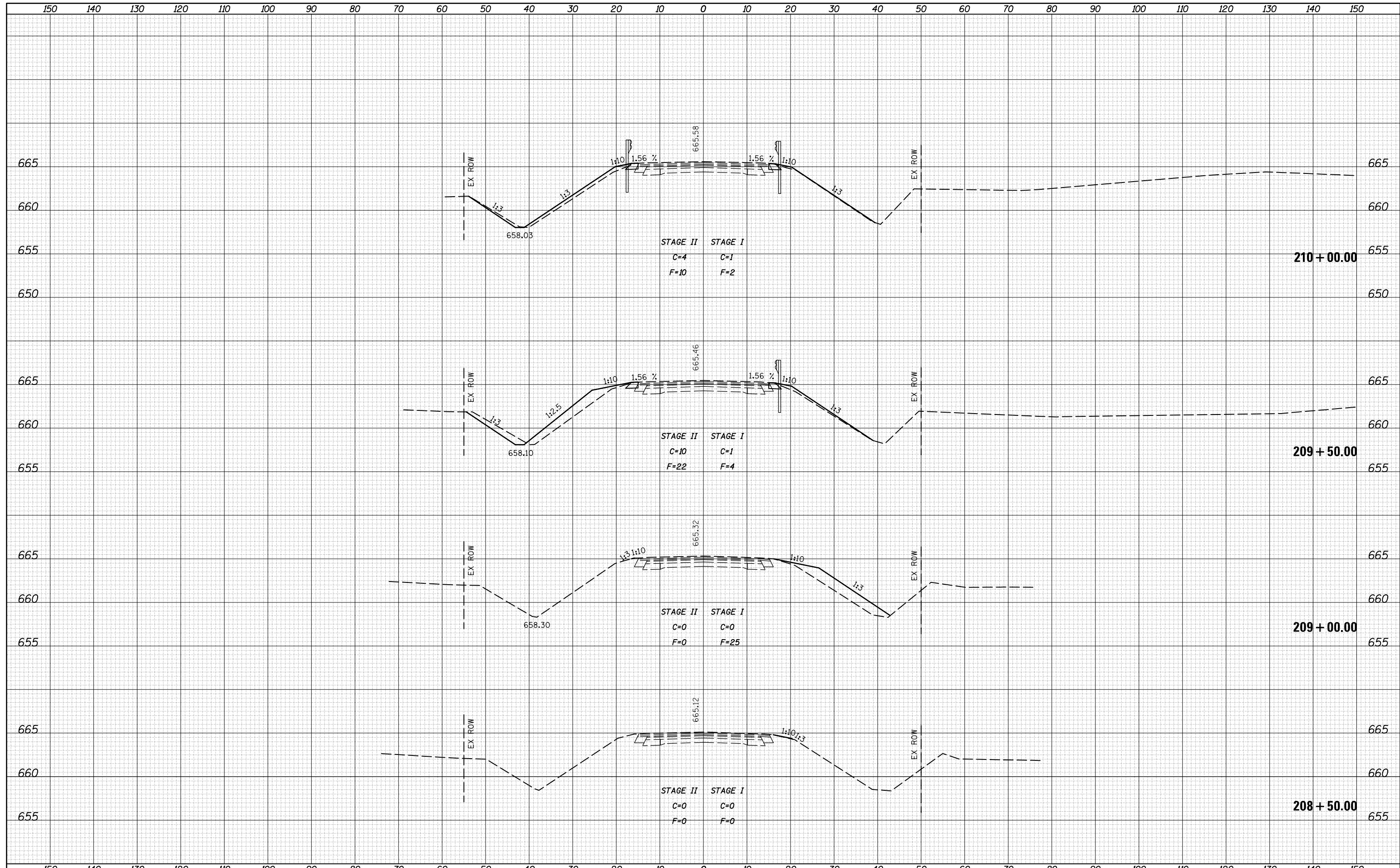
FIELD TILE SYSTEMS (TREATMENT OF EXISTING)

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
840	120BR-1	VERMILION	44	36
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 70615	

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

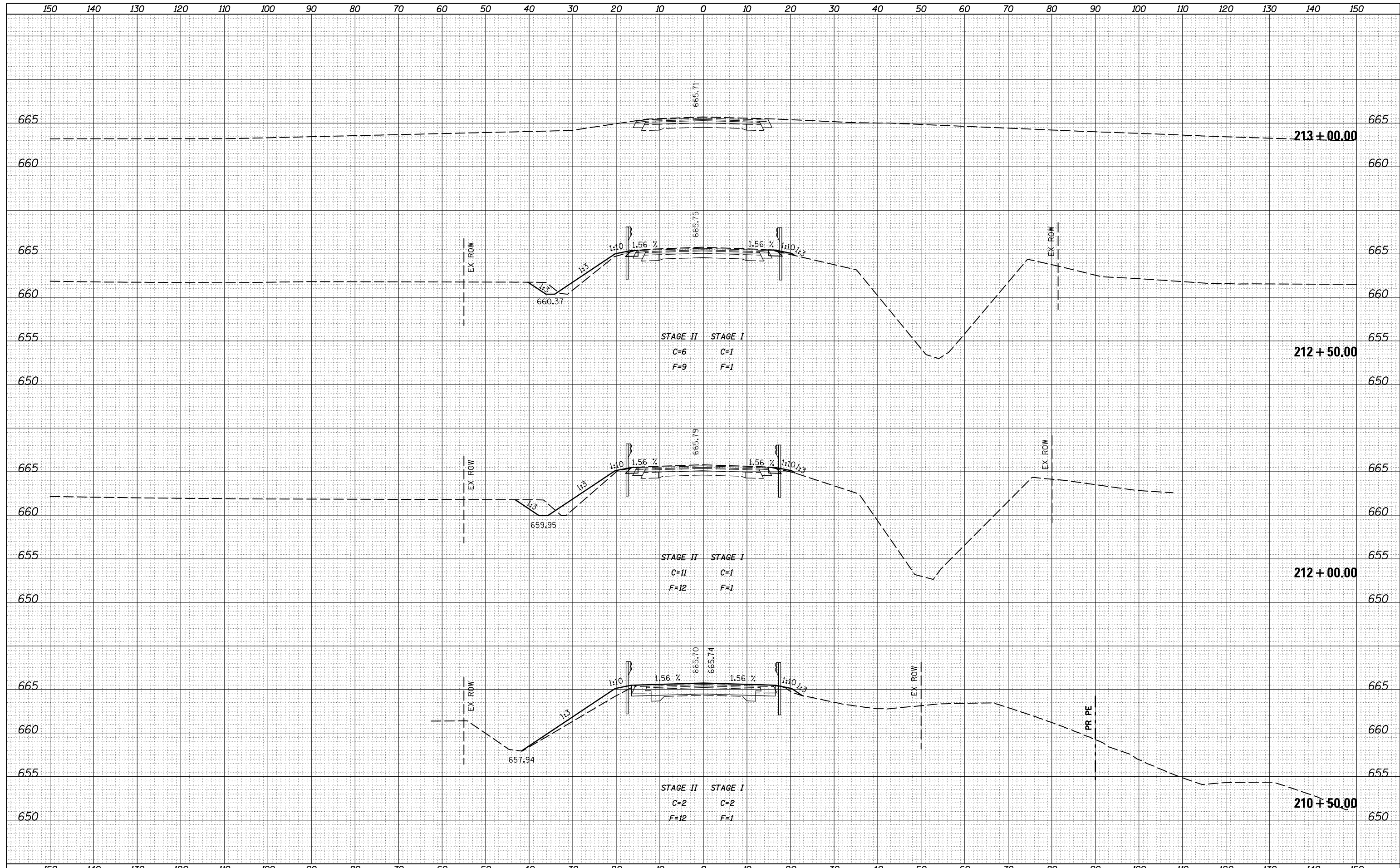
DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
ORIGINAL	
SURVEY	
NOTE BOOK	
NO.	



FILE NAME =	USER NAME = grazianoja	DESIGNED -	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS SN 092-0171	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pw_work\pwidot\grazioja\d0128444\d570615-xssht-rte-49.dgn	DRAWN - CFC	REVISIED -	840			120BR-1	VERMILION	44	37	
PLOT SCALE = 20.000000' / in.	CHECKED - CCJ	REVISIED -	CONTRACT NO. 70615							
PLOT DATE = 10/12/2012	DATE - / /	REVISIED -	ILLINOIS FED. AID PROJECT							
CB PROJECT NO 06027-7				SCALE:	SHEET NO. OF SHEETS	STA. 208+50.00 TO STA. 210+00.00				

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

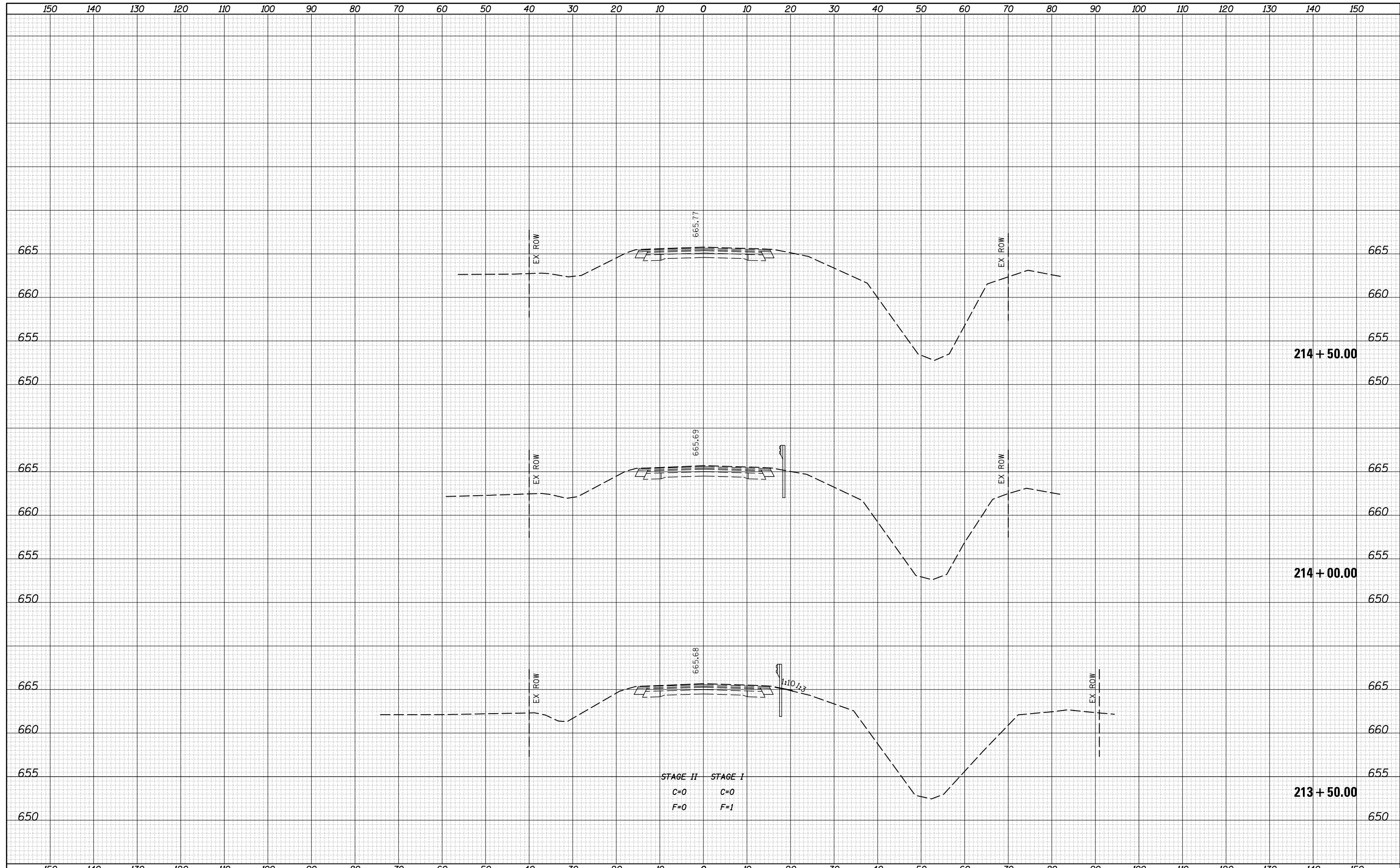
DATE	
BY	
ORIGINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS	
CHECKED	
NO.	



FILE NAME =	USER NAME = grazienoja	DESIGNED -	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS SN 092-0171	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pw_work\pwidot\grazienoja\d0128444\d570615-x\ssht-rte-49.dgn	DRAWN - CFC	REVISIED -	840			120BR-1	VERMILION	44	38	
PLOT SCALE = 20.000000' / in.	CHECKED - CCJ	REVISIED -	CONTRACT NO. 70615							
PLOT DATE = 10/12/2012	DATE - / /	REVISIED -	ILLINOIS FED. AID PROJECT							
CB PROJECT NO 06027-7				SCALE:	SHEET NO. OF SHEETS	STA. 210+50.00 TO STA. 213+00.00				

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

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

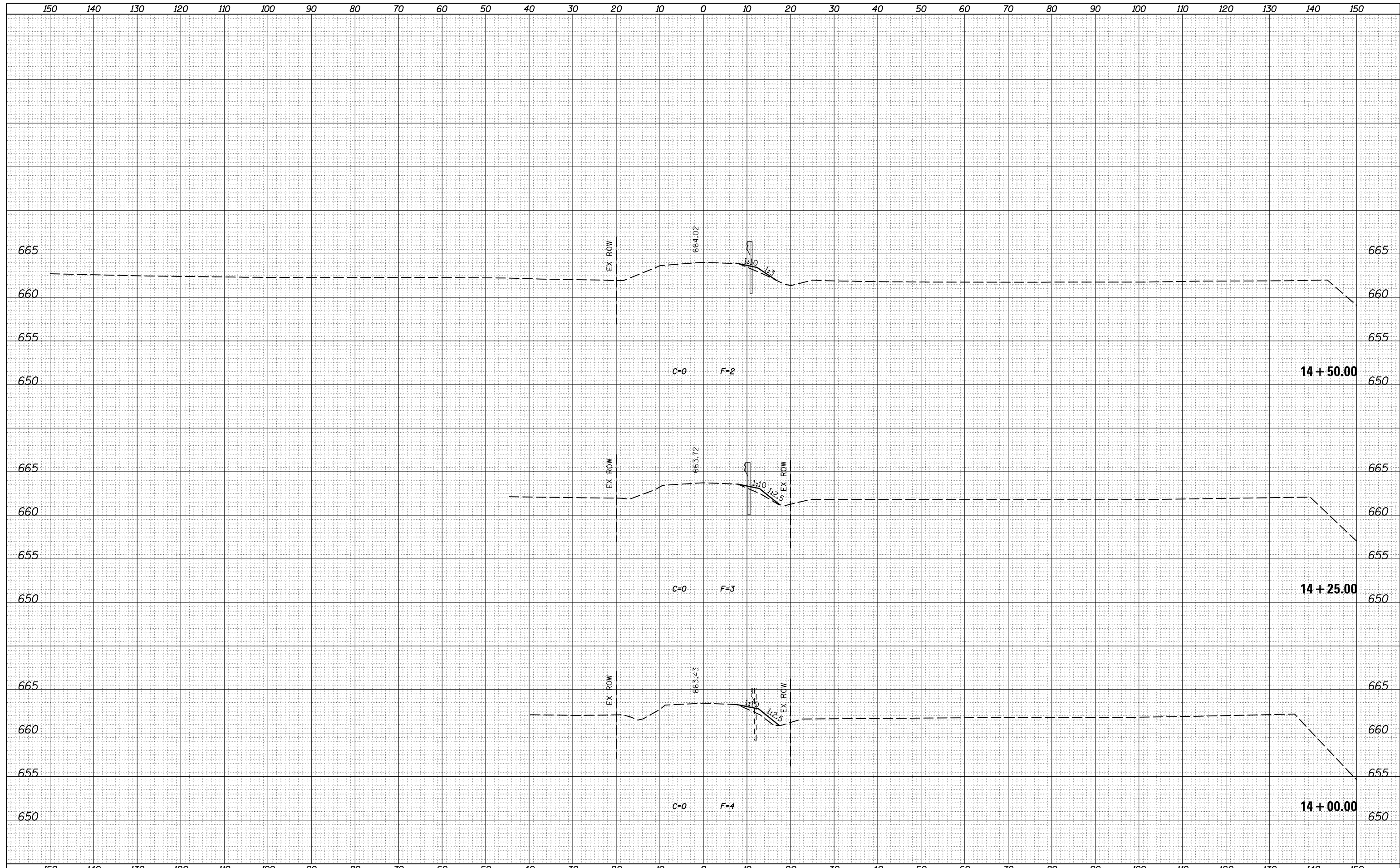


STAGE II STAGE I
 C=0 C=0
 F=0 F=1

FILE NAME =	USER NAME = grazienoja	DESIGNED -	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS SN 092-0171	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pw\work\p\dot\grazienoja\d0128444\d570615-x\ssht-rte-49.dgn	DRAWN - CFC	REVISIED -	840			120BR-1	VERMILION	44	39	
PLOT SCALE = 20.000000' / in.	CHECKED - CCJ	REVISIED -	CONTRACT NO. 70615							
PLOT DATE = 10/12/2012	DATE - / /	REVISIED -	ILLINOIS FED. AID PROJECT							
CB PROJECT NO 06027-7			SCALE:	SHEET NO. OF SHEETS	STA. 213+50.00 TO STA. 214+50.00					

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

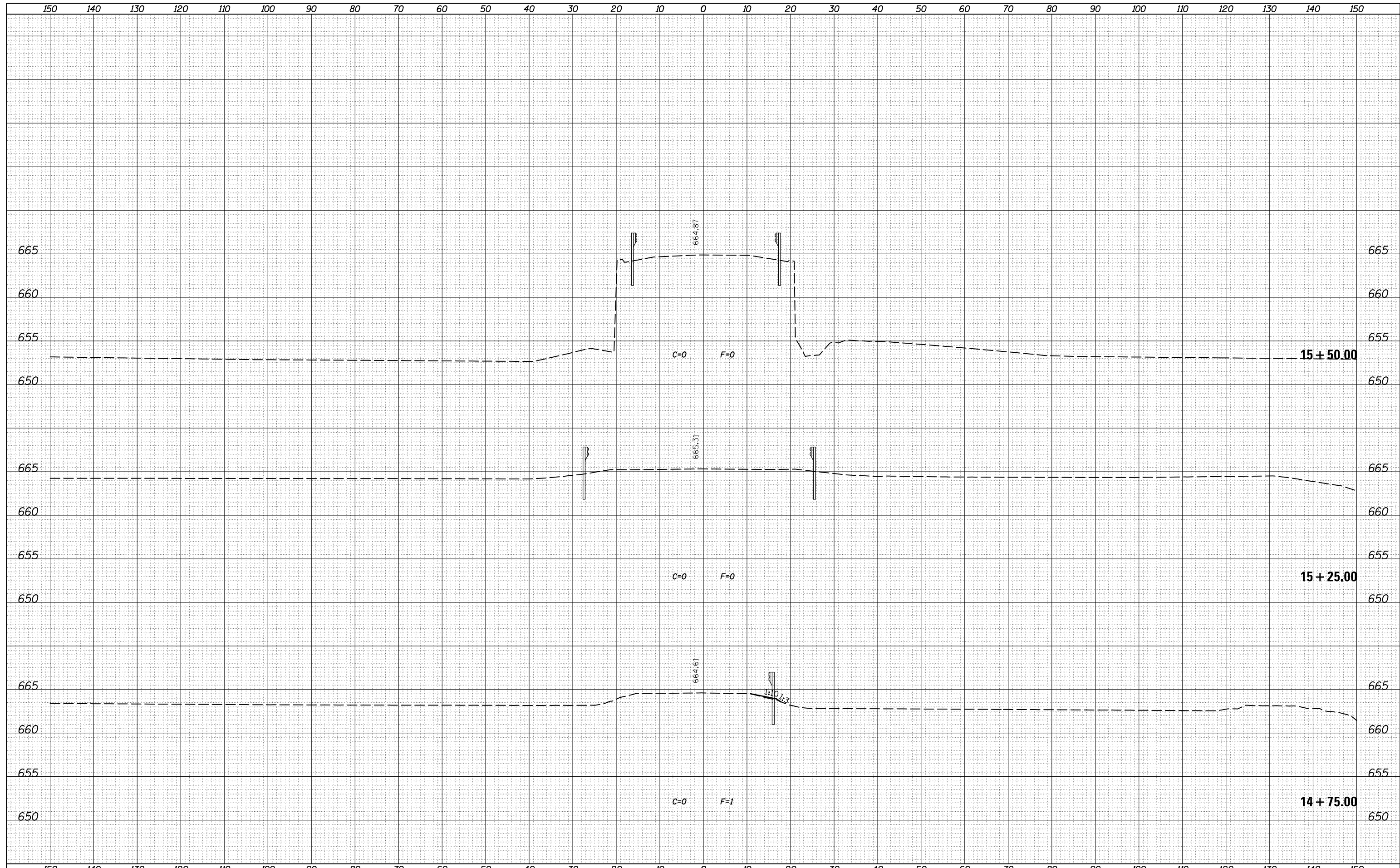
DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



FILE NAME =	USER NAME = grazianoja	DESIGNED -	REVISIED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS TR 2100N	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pw_work\pwidot\grazioja\d0128444\d570615-s-xssht-tr-2100.dgn	DRAWN - CFC	REVISIED -	840			120BR-1	VERMILION	44	40	
PLOT SCALE = 20.000000' / in.	CHECKED - CCJ	REVISIED -	CONTRACT NO. 70615							
PLOT DATE = 10/12/2012	DATE - / /	REVISIED -	SCALE:			SHEET NO. OF SHEETS	STA. 14+00.00 TO STA. 14+50.00	ILLINOIS FED. AID PROJECT		

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

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

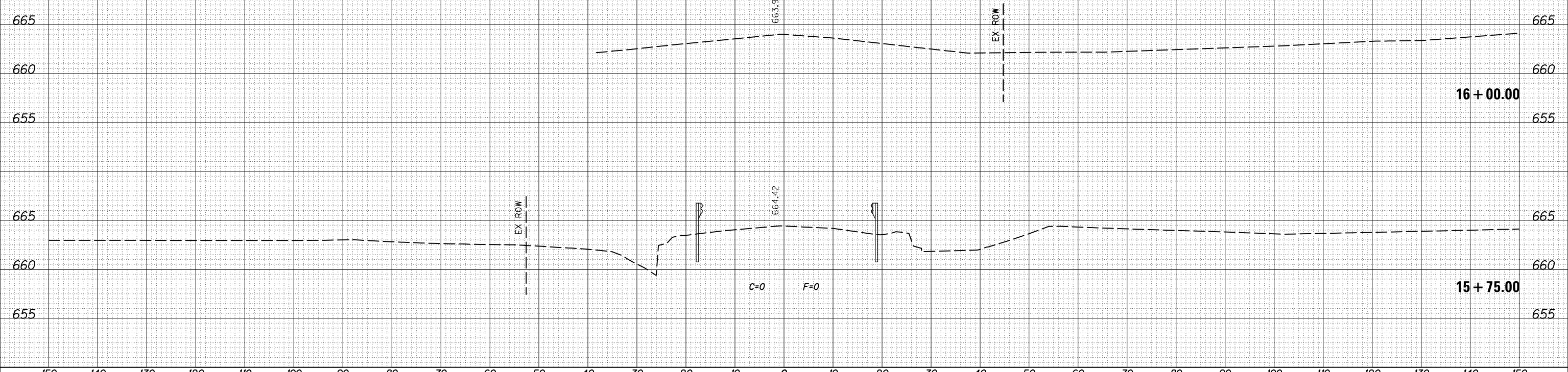


FILE NAME =	USER NAME = grazienoja	DESIGNED -	REVISIED -	CROSS SECTIONS TR 2100N SCALE: SHEET NO. OF SHEETS STA. 14+75.00 TO STA. 15+50.00	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pw_work\pwidot\grazienoja\d0128444\d570615-s-xssht-tr-2100.dgn		DRAWN - CFC	REVISIED -		840	120BR-1	VERMILION	44	41
		CHECKED - CCJ	REVISIED -		CONTRACT NO. 70615				
CB PROJECT NO 06027-7		DATE - / /	REVISIED -		ILLINOIS FED. AID PROJECT				

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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



FILE NAME =	USER NAME = grazienoja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS TR 2100N	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pw_work\pwidot\grazienoja\d0128444\d570615-s-xssht-tr-2100.dgn	DRAWN - CFC	REVISED -	840			120BR-1	VERMILION	44	42	
PLOT SCALE = 20.000000' / in.	CHECKED - CCJ	REVISED -	CONTRACT NO. 70615							
PLOT DATE = 10/12/2012	DATE - / /	REVISED -	SCALE:			SHEET NO. OF SHEETS	STA. 15+75.00 TO STA. 16+00.00	ILLINOIS FED. AID PROJECT		

