1-18-08 Letting, Item 104

CONTRACT NO. 68744

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
687	(122VB)I-1	McDONOUGH	20	1

+2
22

DESIGNER: CLARK JONES
PHONE: (309)671-3452

PROJECT ENGINEER: JIM MILLER
PHONE: (309)671-3451

INDEX OF SHEETS:

STANDARDS:

701001–01	701321–09	704001–04
701006–02	701326–02	780001–01
701201–02	701901	

100' 200' 300' — 1"= 100'
10' 20' 30' — 1"= 10'
50' 100' — 1"= 50'
50' 100' — 1"= 40'
50' 100' — 1"= 30'
50' 100' — 1"= 20'

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.

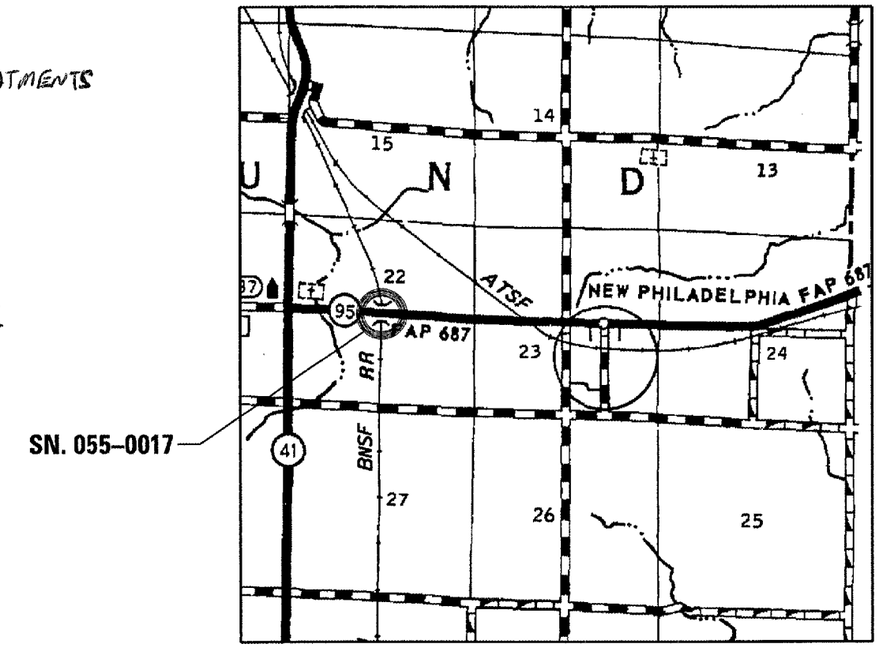
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1–800–892–0123

CONTRACT NO. 68744 CAT. NO. 033559–00D

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

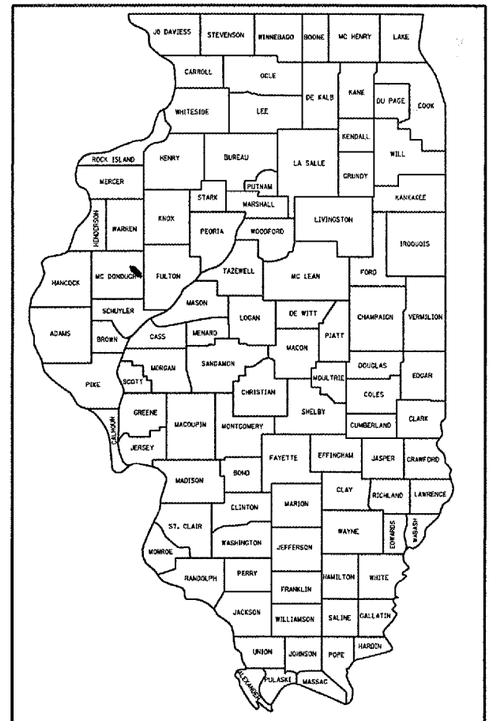
PROPOSED HIGHWAY PLANS

FAP 687 (IL 95)
SECTION (122VB)I–1
McDONOUGH COUNTY
C–94–128–07



LOCATION MAP

D–94–076–07



LOCATION OF SECTION INDICATED THUS: –

PROJECT CONSISTS OF EMERGENCY BEAM REPLACEMENT & BRACING (PPC DECK BEAMS) ON STRUCTURE CARRYING IL. 95 OVER BNSF RR (SN.055-0017) ½ MILE EAST OF IL. 41.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED October 29 20 07

DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 7 2007
Eric E. Harm
ENGINEER OF DESIGN AND ENVIRONMENT

Interim
December 7 2007
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

CONTRACT NO. 6874[illegible]

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
687	(122VB)I-1	McDONOUGH	21	2
STA. 26+31.00 TO STA. 27+49.00				
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

COMMITMENTS

No commitments have been made for this project.

GENERAL NOTES

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

All railroad flagger costs shall be paid according to article 109.05 of the Standard Specifications for Road and Bridge Construction.

The Contractor shall be required to enter into a "Right-of-Entry" agreement with the BNSF Railway Company adhering to all requirements contained within that document.

SN.055-0017 IL.95
over BNSF RR.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SCALE: VERT. HORIZ.
DATE 06-14-2007
DRAWN BY CEJ
CHECKED BY

PLOT DATE =
FILE NAME DATE 06-13-07 ...\STD&PLNS\SQUAD14\BridgeReprContracts\EmergencyPPCBeamRepairs\68744 SN055-0017IL95overBNSF RR.dgn
PLOT SCALE LEVELS GENDRAFT
REFERENCE SCALES
REF

CONTRACT NO. 68744

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
687	(122VB)1-1	McDONOUGH	20	3
STA. 26+31.00	TO STA. 27+49.00			
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

		100% STATE SAFETY - 2A McDONOUGH		
CODE NO.	ITEM	UNIT	RURAL	TOTAL
20200100	EARTH EXCAVATION	CUYD	40	40
20201450	SUB-BASE GRANULAR MATERIAL, TYPE A	CUYD	7.5	7.5
20400800	FURNISHED EXCAVATION	CUYD	34	34
20700420	POUROUS GRANULAR EMBANKMENT, SUBGRADE	CUYD	14.4	14.4
35600716	HOT-MIX ASPHALT BASE COURSE WIDENING, 10"	SQYD	277	277
44001005	HOT-MIX ASPHALT SURFACE REMOVAL	SQYD	22.7	22.7
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	8.6	8.6
42001300	PROTECTIVE COAT	SQYD	23	23
44000920	BITUMINOUS CONCRETE SHOULDER REMOVAL	SQYD	277	277
50300255	CONCRETE SUPERSTRUCTURE	CUYD	2.5	2.5
50400305	DECK BEAMS (17" DEPTH)	SQFT	621	621
	PRECAST PRESTRESSED CONCRETE			
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	26,970	26,970

REVISIONS	
NAME	DATE
CEJ	06/08/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: VERT. HORIZ.
DATE 06-18-2007
DRAWN BY CEJ
CHECKED BY

#DATE#-12-07
#FILE#\\GEMXDRAFT\STDPLNS\SQUAD1A\Bridge Repr Concrete\Emergency PPCBeam Repairs\68744 SM855-08171L P5.dgn #USER#SNSF RR.dgn
#SCALE#
#REF#

CONTRACT NO. 68744

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
687	(122VB)I-1	McDONOUGH	20	4
STA. 26+31.00	TO STA. 27+49.00			
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	100% STATE SAFETY - 2A McDONOUGH UNIT	RURAL	TOTAL
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	50	50
	50900905	REMOVING AND RE-ERECTING EXISTING RAILING	FOOT	74	74
	58100200	WATERPROOFING MEMBRANE SYSTEM	SQYD	84	84
	58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	258	258
*	63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	50	50
	63200305	STEEL PLATE BEAM GUARDRAIL REMOVAL	FOOT	50	50
	67100100	MOBILIZATION	LSUM	1	1
	70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1
	70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	LSUM	1	1
	70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	LSUM	1	1
	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
	70300520	PAVEMENT MARKING TAPE, TYPE III, 4"	FOOT	2175	2175
	70301000	WORKZONE PAVEMENT MARKING REMOVAL	SQFT	725	725

*SPECIALTY ITEM

REVISIONS NAME	DATE
CEJ	06/08/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: VERT.
HORIZ.
DATE 06-18-2007

DRAWN BY CEJ
CHECKED BY

CONTRACT NO. 68744

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
687	(122VB)1-1	McDONOUGH	20	5
STA. 26+31.00 TO STA. 27+49.00				
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

100% STATE SAFETY - 2A
McDONOUGH

	CODE NO.	ITEM	UNIT	RURAL	TOTAL
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	420	420
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	420	420
*	78005110	EPOXY PAVEMENT MARKING-LINE 4''	FOOT	1800	1800
	78300100	PAVEMENT MARKING REMOVAL	SQFT	772	772
	X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQFT	627	627
*	X7200201	WIDTH RESTRICTION SIGNING	LSUM	1	1
	Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	18	18
	Z0020800	EROSION CONTROL CURB	FOOT	622	622
	Z0030250	IMPACT ATTENUATORS, TEMPORARY(NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2
	Z0030350	IMPACT ATTENUATORS, RELOCATE(NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2
	Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	LSUM	1	1

*SPECIALTY ITEM

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

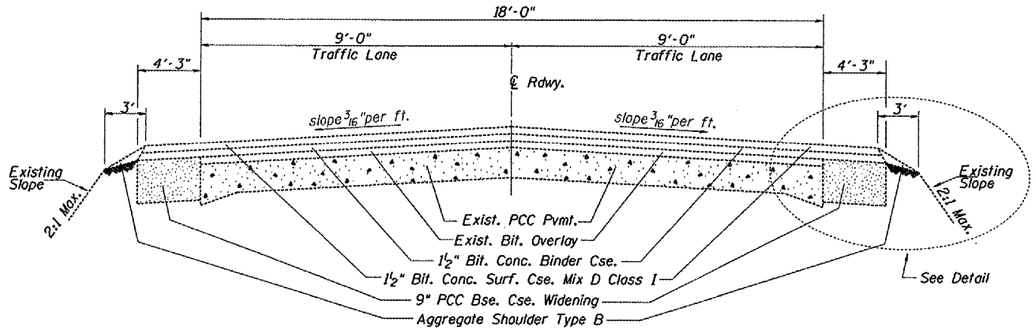
SCALE: VERT. HORIZ.
DATE 06-18-2007

DRAWN BY CEJ
CHECKED BY

#DATE#6-13-07
#FILE#S:\ENGDRAFT\STDAPLNS\SQUAD141\BridgeRepConstructEmergency\PCBeamRepairs\68744 SN055-0017L-95cover-BMSF RR.dgn
#SCALE#
#REF#

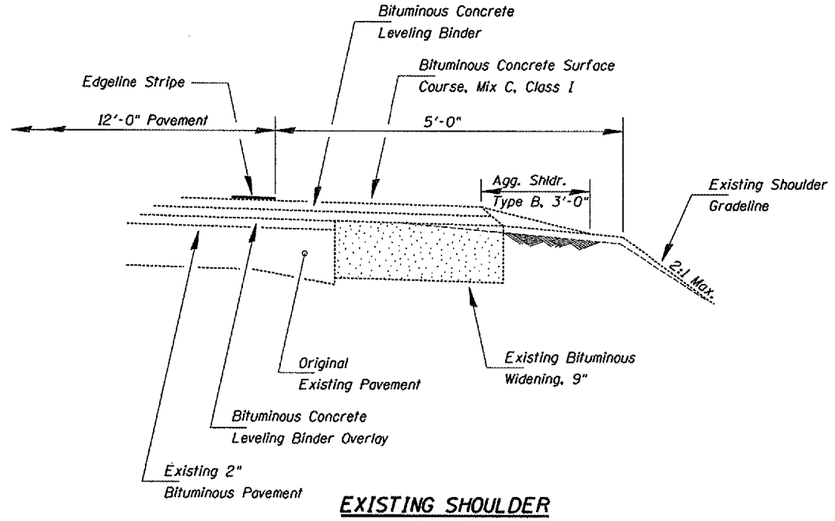
CONTRACT NO. 68744

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
687	(122VB)1-1	McDONOUGH	20	6
STA. 26+31.00	TO STA. 27+49.00			
FED. ROAD DIST. NO. 4	ILLINOIS FED. AID PROJECT			

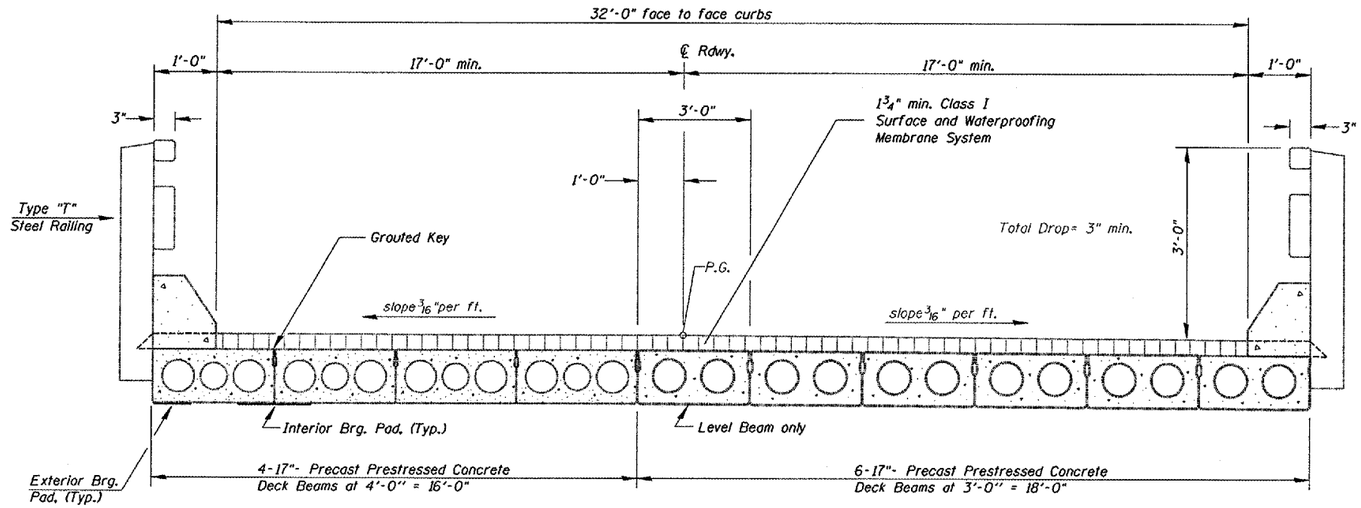


ROADWAY SECTION

Sta. 23+61.49 to Sta. 26+11.49
Sta. 27+68.51 to Sta. 30+18.51

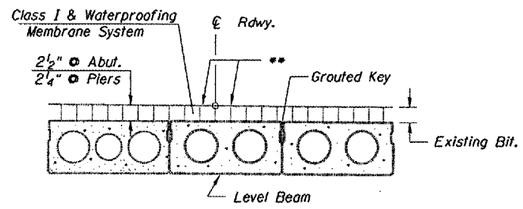


EXISTING SHOULDER DETAIL



BRIDGE CROSS SECTION

(Looking East)



CLASS I DETAIL & WATERPROOFING TREATMENT

(✪ Center Beam)

** Vary slopes over level beam as required to obtain equal thickness at adjacent beams.

SN.055-0017 IL.95
over BNSF RR.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EXISTING TYPICAL SECTIONS

SCALE: VERT.
HORIZ.
DATE 06-29-2007

DRAWN BY CEJ
CHECKED BY

$DATE$ 6-13-07
$FILE$ \\GENDRAFT\STDSPLANS\SQUAD 1\BRIDGE Rep\Contracts\Emergency\PPCBeamRepairs\68744 SN055-0017IL95over BNSF RR.dgn
$CELLSCALE$ 0.0982 m / INL
$USER$

SCHEDULE OF QUANTITIES

PAVEMENT MIX SPECIFICATION

The following mixture requirements are applicable as replacement for the existing HMA Surface Removal quantity on the bridge deck.

MIXTURE USE(S):	SURFACE COURSE	LEVELING BINDER
AC/PG:	PG 64-22	SBR or SBS PG 70-22
RAP% (MAX): **	15% Max	0% Max
Design Air Voids:	4.0% @ N=50	2.5% @ N=50
Mixture Composition: (Graduation Mixture)	IL. 9.5 or 12.5	IL. 4.75
Friction Aggregate:	Mixture D	N/A

** If RAP option is selected, the asphalt cement grade may need to be adjusted by the Materials Engineer.

BITUMINOUS SHOULDER MIX SPECIFICATION

The following mixture requirements are applicable to this project:

MIXTURE USE(S):	SURFACE LIFT	LOWER LIFTS
AC/PG:	PG 64-22	PG 64-22
RAP% (MAX): **	30% Max	2.5% Max
Design Air Voids:	3.0% @ N=30	4.0% @ N=50
Mixture Composition: (Graduation Mixture)	IL. 9.5L	IL 19.0
Friction Aggregate:	Mixture C	N/A

** If RAP option is selected, the asphalt cement grade may need to be adjusted by the Materials Engineer.

SHOULDER REMOVAL/REPLACEMENT

SHOULDER REMOVAL			
LEFT WEST APPROACH	SQ.YD.	LEFT EAST APPROACH	SQ.YD.
Sta. 25+34.40 to Sta. 26+11.48	43.11	Sta. 27+68.52 to Sta. 30+21.00	112.2
RIGHT WEST APPROACH		RIGHT EAST APPROACH	
Sta. 24+17.20 to Sta. 26+11.48	86.31	Sta. 27+68.52 to Sta. 28+47.80	35.2
		TOTAL	277
SHOULDER REPLACEMENT			
LEFT WEST APPROACH	SQ.YD.	LEFT EAST APPROACH	SQ.YD.
Sta. 25+34.40 to Sta. 26+11.48	43.11	Sta. 27+68.52 to Sta. 30+21.00	112.2
RIGHT WEST APPROACH		RIGHT EAST APPROACH	
Sta. 24+17.20 to Sta. 26+11.48	86.31	Sta. 27+68.52 to Sta. 28+47.80	35.2
		TOTAL	277

BITUMINOUS CURB REMOVAL/REPLACEMENT

EROSION CONTROL CURB			
LEFT WEST APPROACH	FOOT	LEFT EAST APPROACH	FOOT
Sta. 25+34.40 to Sta. 26+11.48	97	Sta. 27+68.52 to Sta. 30+21.00	252
RIGHT WEST APPROACH		RIGHT EAST APPROACH	
Sta. 24+17.20 to Sta. 26+11.48	194	Sta. 27+68.52 to Sta. 28+47.80	79
		TOTAL	622

EARTHWORK

EARTH EXCAVATION	
LEFT EAST APPROACH	CU.YD.
Sta. 27+68.52 to Sta. 28+18.00	40
FURNISHED EXCAVATION	
LEFT EAST APPROACH	CU.YD.
Sta. 27+68.52 to Sta. 28+18.00	34

NOTE
Additional pay items that may not be included in the SCHEDULE OF QUANTITIES pertain to the superstructure repair and are designated on the Bridge Office Repair Details. (pages 17-20).

SN.055-0017 IL.95
over BNSF RR.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: VERT. HORIZ.
DATE 06-14-2007
DRAWN BY CEJ
CHECKED BY

CONTRACT NO. 68744

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
687	(122VB)I-1	McDONOUGH	20	8
STA. 26+31.00	TO STA. 27+49.00			
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

PAVEMENT MARKING REMOVAL

LOCATION STA. TO STA.	LENGTH (FOOT)	PVMT. MRKG. REM. WHITE EDGELINE (SQ.FT.)	PVMT. MRKG. REM. YELLOW SKIP DASH (SQ.FT.)	PVMT. MRKG. REM. YELLOW DOUBLE (SQ.FT.)
Sta. 26+31.00 to Sta. 27+49.00 LT. & RT.(Edge)	118			
STAGE I				
Sta. 24+17.20 to Sta. 28+43.00 RT.(Edge)	425.8	142.0		
Sta. 24+29.10 to Sta. 28+18.00 (℄)	388.9		129.6	176
STAGE II				
Sta. 25+34.00 to Sta. 30+20.60 LT.(Edge)	486.6	162.2		
Sta. 25+34.00 to Sta. 30+20.60 (℄)	486.6		162.2	
TOTAL	1906	772		

EARTHWORK

LOCATION STA. TO STA.	EARTH-EX CU.YD.	FURNISHED-EX CU.YD.	SUB-BASE GRANULAR TYPE A CU.YD.	SUBGRADE GRANULAR EMBANKMENT CU.YD.
STAGE I				
Sta. 27+71.00 to Sta. 28+21.00 LT.	40	34	7.5	14.4
±8' Out From Edgeline				

TEMPORARY PAVEMENT MARKING & WORK ZONE PAVEMENT MARKING REMOVAL

LOCATION STA. TO STA.	TEMP. PVMT. MRKG. LINE-4" WHITE (FT.)	TEMP. PVMT. MRKG. LINE-4" YELLOW (FT.)	WORK ZONE PVMT. MRKG. REM. (SQ.FT.)
STAGE I			
Sta. 23+51.20 to Sta. 28+96.00		644.8 (℄)	215
Sta. 24+17.20 to Sta. 28+47.65 RT.	430.4 (Edge)		143.5
STAGE II			
Sta. 25+33.48 to Sta. 30+20.63 LT.		487.1 (Edge)	162.4
Sta. 24+66.50 to Sta. 30+76.60	610.1 (℄)		203.4
SUB-TOTAL	1040.5	1131.9	
TOTAL	2175		725

TRAFFIC CONTROL

LOCATION STA. TO STA.	TEMP. CONC. BARRIER (FT)	RELOC. TEMP. CONC. BARRIER (FT)	IMPACT ATTEN. TEMP. (EACH)	RELOC. IMPACT ATTEN. (EACH)	T.C.&P. STANDARD 701321 (EACH)	WIDTH RESTRICTION SIGNING
STAGE I						
Sta. 24+30.60 to Sta. 28+18.00 LT.	376					1
Sta. 24+45.60 & Sta. 28+33.00 LT.			2			
STAGE II						
Sta. 25+62.50 to Sta. 29+76.60 RT.	+44	420				1
Sta. 25+47.50 & Sta. 29+91.60 RT.				2		
TOTAL	420	420	2	2	1	1

NOTE
Additional pay items that may not be included in the SCHEDULE OF QUANTITIES pertain to the superstructure repair and are designated on the Bridge Office Repair Details. (pages 17-20).

SN.055-0017 IL.95
over BNSF RR.

REVISIONS NAME	DATE

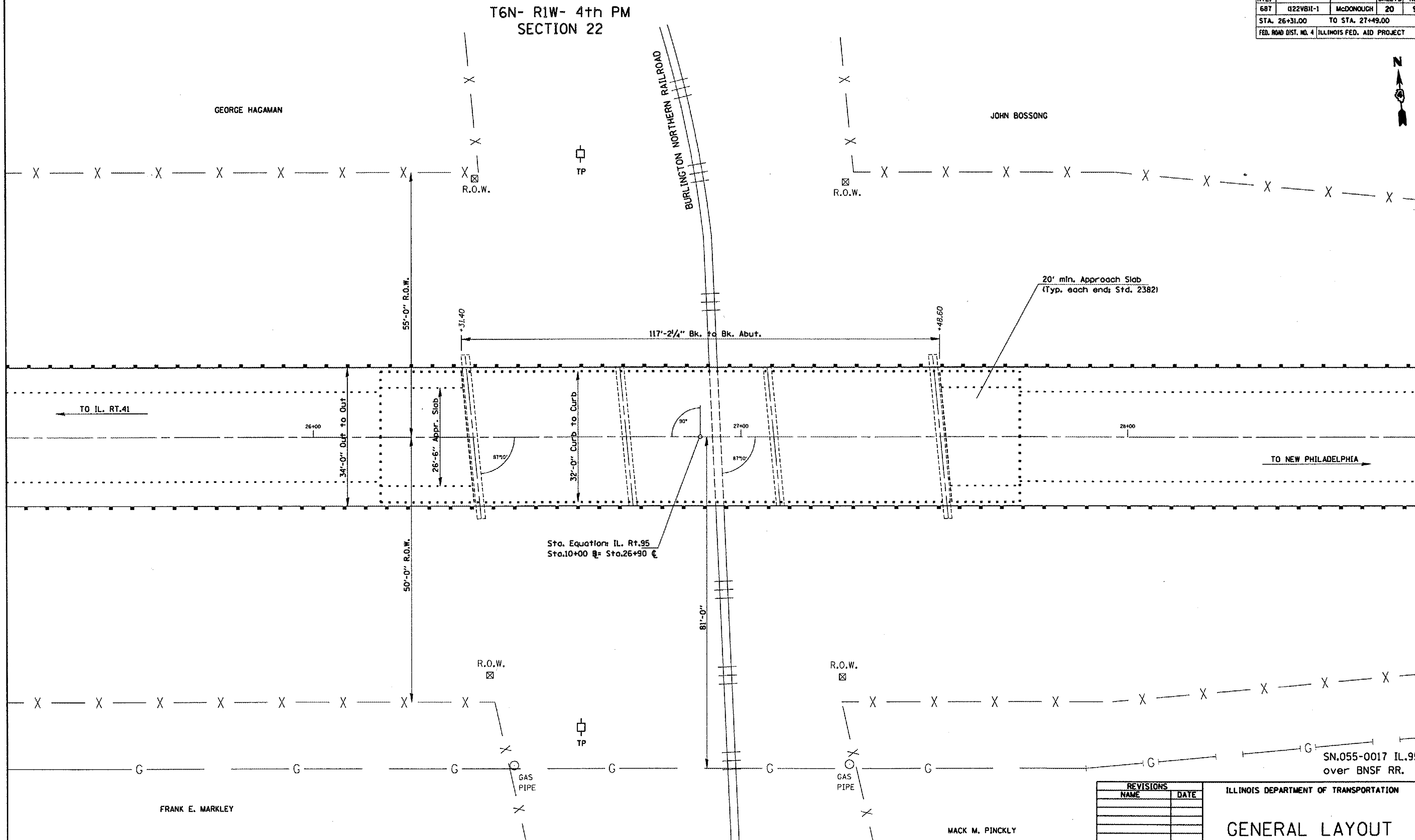
ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: VERT. HORIZ.
DATE 06-14-2007
DRAWN BY CEJ
CHECKED BY

CONTRACT NO. 68744

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
687	(122VB)I-1	McDONOUGH	20	9
STA. 26+31.00	TO STA. 27+49.00			
FED. ROAD DIST. NO. 4	ILLINOIS FED. AID PROJECT			



SN.055-0017 IL.95
over BNSF RR.

NOTE
Shoulder removal and replacement work shall be completed prior to shifting traffic lanes for bridge deck staging.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

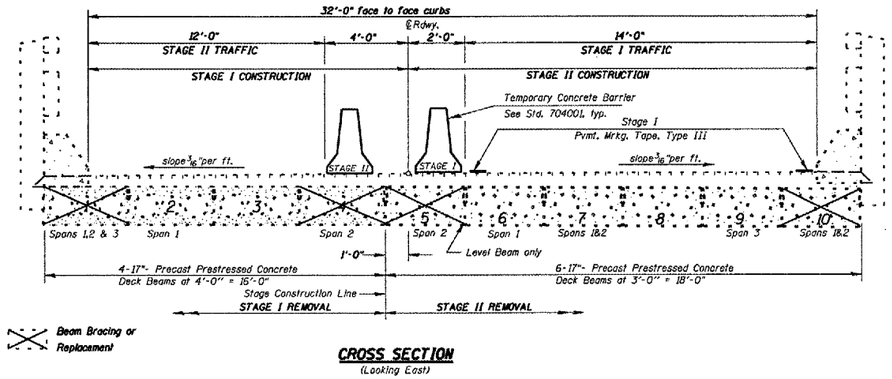
GENERAL LAYOUT

SCALE: VERT.
HORIZ.
DATE 06-18-2007

DRAWN BY CEJ
CHECKED BY

CONTRACT NO. 68744

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
687	(122VBII-1	McDONOUGH	20	10
STA. 26+31.00		TO STA. 27+49.00		
FED. ROAD DIST. NO. 4		ILLINOIS FED. AID PROJECT		



CROSS SECTION
(Looking East)

WIDTH RESTRICTION SIGNING

1. Stage I - Post @ 12'-6".
   Stage II -Post @ 10'-6"

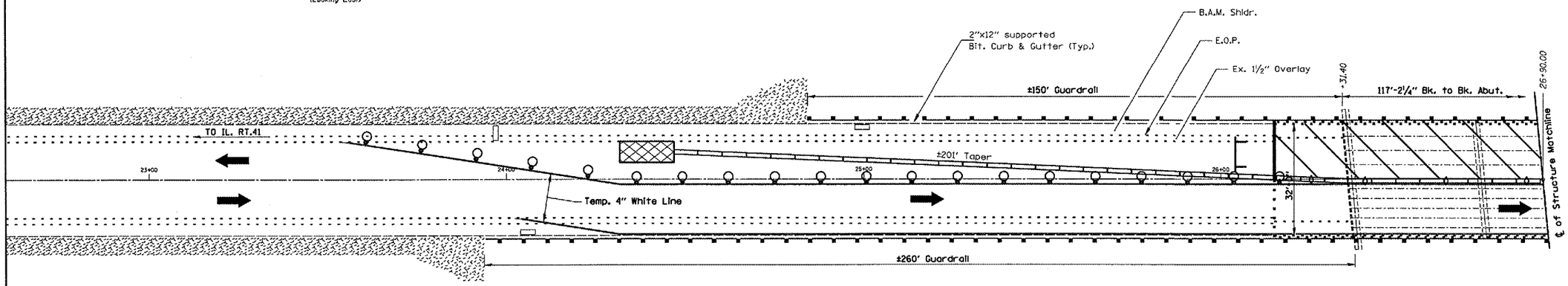
AS PER SPECIAL PROVISIONS:

2. W/2 - I103 shall be placed 500' North and South of IL. 95 & IL. 97 Junction.

3. W2/I103 shall be placed 500' North and South of IL. 41 & IL. 95 intersection.

4. W12-I102 & W12-I101 shall be placed 200' West of Smithfield Rd. and 5 miles East of Jobsite on IL. 95. Signs shall be inclusive of both stages.

N



STAGE I
PLAN

SYMBOLS

- Work Area
- Sign on Portable Support
- Type II Barricade
- Drum w/steady burning light
- Type C bidirectional reflector
- Temporary Concrete Barrier
- Impact Attenuator NRD TL3
- Sign Incidental to Standard 701321 (W12-I102)

NOTE
Refer to Highway Standard 701321 in conjunction with this sheet for exact placement of traffic management devices and other clarifications as construction staging symbols and dimensioning were duplicated off of this standard. Traffic staging sequence shown as recommended by the Bridge Office.
Traffic Control & Protection shall be mirrored about Stage Construction Line as Cross Section view indicates.

SN.055-0017 IL.95
over BNSF RR.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

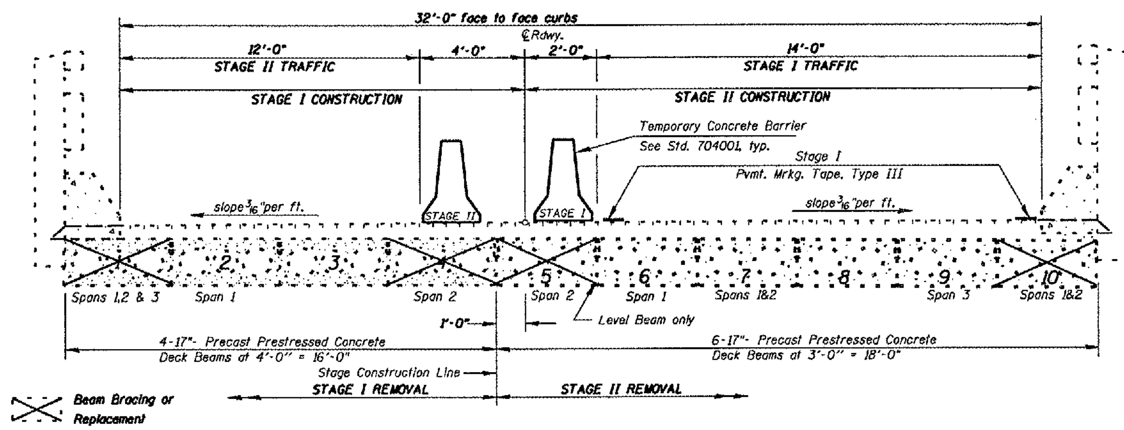
TRAFFIC CONTROL PLAN

SCALE: VERT.
HORIZ.
DATE 06-25-2007
DRAWN BY CEJ
CHECKED BY

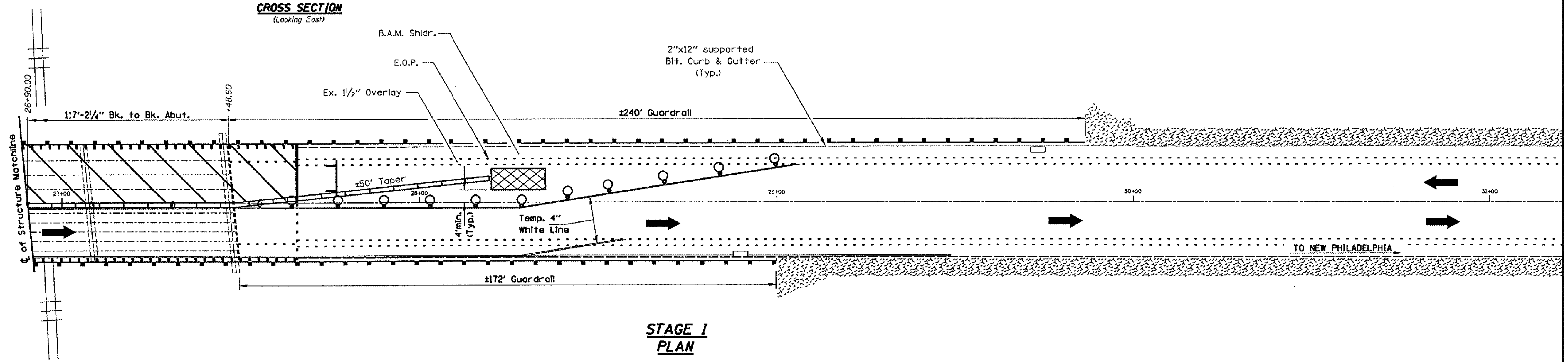
#DATE#6-27-07
#FILE1#S\GENDRAFT\STDSPLNS\SGUA014\Bridge Repair Contracts\Emergency Beam Repair\68744 SN055-0017IL95over BNSF RR.dgn
#SCALE#
#RDT#

CONTRACT NO. 68744

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
687	(122VB)I-1	McDONOUGH	20	11
STA. 26+31.00		TO STA. 27+49.00		
FED. ROAD DIST. NO. 4		ILLINOIS FED. AID PROJECT		



CROSS SECTION
(Looking East)



STAGE I PLAN

SYMBOLS

- Work Area
- Sign on Portable Support
- Type II Barricade
- Drum w/steady burning light
- Type C bidirectional reflector
- Temporary Concrete Barrier
- Impact Attenuator NRD TL3
- Sign incidental to Standard 701321 (W12-I102)

NOTE

Refer to Highway Standard 701321 in conjunction with this sheet for exact placement of traffic management devices and other clarifications as construction staging symbols and dimensioning were duplicated off of this standard. Traffic staging sequence shown as recommended by the Bridge Office.

Traffic Control & Protection shall be mirrored about Stage Construction Line as Cross Section view indicates.

SN.055-0017 IL.95
over BNSF RR.

REVISIONS	
NAME	DATE

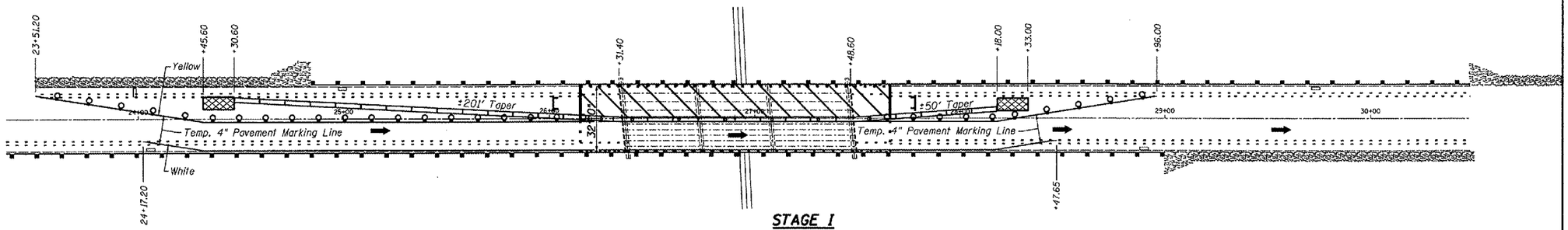
ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

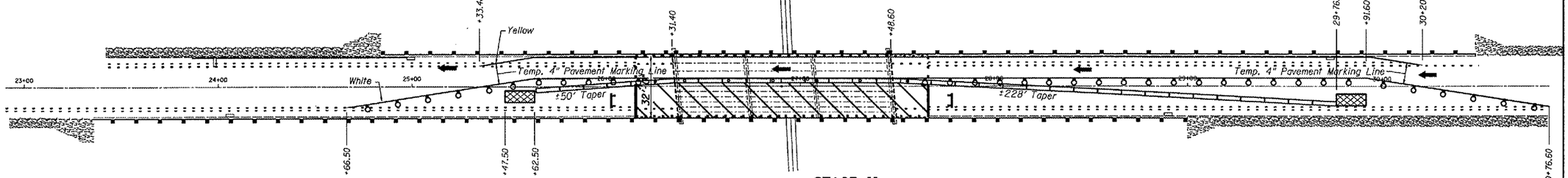
SCALE: VERT. HORIZ.
DATE 06-25-2007
DRAWN BY CEJ
CHECKED BY

CONTRACT NO. 68744

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
687	C122VBIE-1	McDONOUGH	20	12
STA. 26+31.00	TO STA. 27+49.00			
FED. ROAD DIST. NO. 4	ILLINOIS FED. AID PROJECT			



STAGE I
PLAN



STAGE II
PLAN

SN.055-0017 IL.95
over BNSF RR.

NOTE
Refer to Highway Standard 701321 in conjunction with this sheet for exact placement of traffic management devices and other clarifications as construction staging symbols and dimensioning were duplicated off of this standard. Traffic staging sequence shown as recommended by the Bridge Office.
Traffic Control & Protection shall be mirrored about Stage Construction Line as Cross Section view (p.9 & 10) indicates.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLAN

SCALE: VERT.
HORIZ.
DATE 09-25-2007
DRAWN BY CEJ
CHECKED BY

&DATE=6-27-07
&FILELOC=\\IDEX\DOR\FT\STOR\PLNS\SOLA01\Bridge Rep-Contracts\Emergency Bear Repair\68744 SN055-0017IL95over BNSF RR.dgn
&SCALE=1
&MODE=

CONTRACT NO. 68744

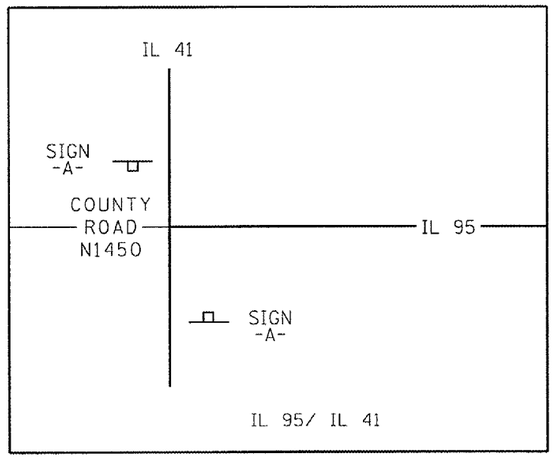
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
687	(122VBII-1	McDONOUGH	20	13
STA. 26+31.00		TO STA. 27+49.00		
FED. ROAD DIST. NO. 4	ILLINOIS FED. AID PROJECT			

TRAFFIC CONTROL PLAN

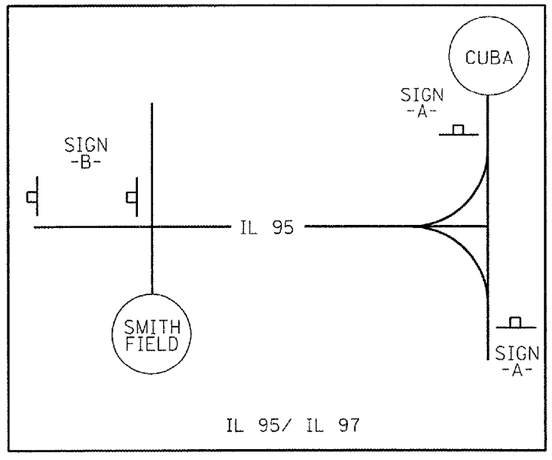
1. For each 701321 Standard, one "45 mph" (W13-1) shall be placed on each "One Lane Road Ahead" sign. Cost shall be incidental to Traffic Control and Protection Standard 701321.

2. For each 701321 Standard, one W12-1102 sign shall be placed, at each approach, 500' after the "Road Construction Ahead" sign, but located 500' prior to the "Signal" sign. Cost shall be incidental to Traffic Control and Protection Standard 701321.

LOCATION 1



LOCATION 2



055-0017
SIGNING DISTANCES

	SIGN -A-	SIGN -B-
LOCATION 1	0.5 MILES	NA
LOCATION 2	16.5 MILES	11.2 MILES 5.0 MILES
LOCATION 3		
LOCATION 4		

SEE SPECIAL PROVISIONS FOR SIGNING DETAILS.

SN.055-0017 IL.95
over BNSF RR.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

WIDTH RESTRICTION SIGNING

SCALE: VERT.
HORIZ.
DATE 09-17-2007

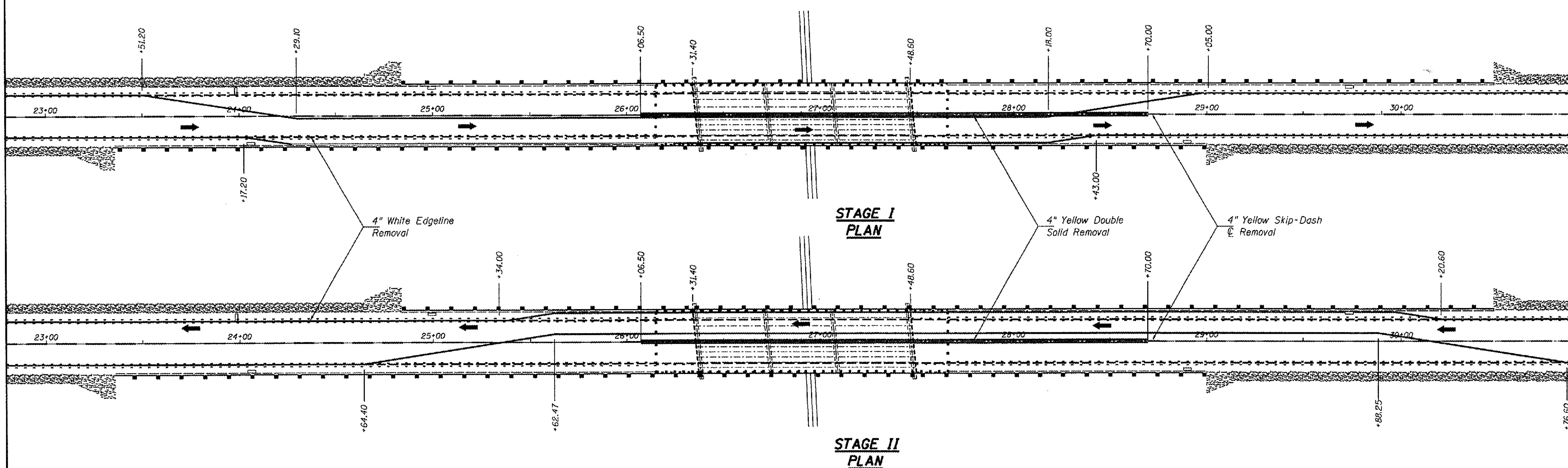
DRAWN BY CEJ
CHECKED BY

$DATE$=18:37
$FILE$=\GEN\DRAFT\STDPLNS\SGDIAG 14\BRIDGE Contracts\Emergency PPC IEem Repairs\68744 SN055-0017\SN055-0017IL.over BN RR.dgn
$SCALE$
$USER$

CONTRACT NO. 68744

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
687	(122VB)I-1	McDONOUGH	20	14
STA. 26+31.00	TO STA. 27+49.00			
FED. ROAD DIST. NO. 4	ILLINOIS FED. AID PROJECT			

N



SYMBOLS

Symbol	Description
═══	Yellow Double ℄
- —	Yellow Skipdash ℄
➡	Traffic Lane Direction
▒	Existing RipRap

SN.055-0017 IL.95
over BNSF RR.

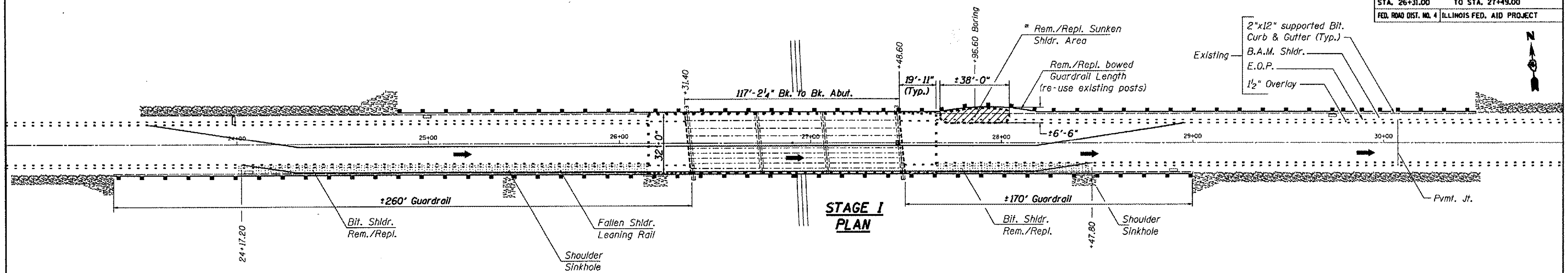
REVISIONS NAME	DATE

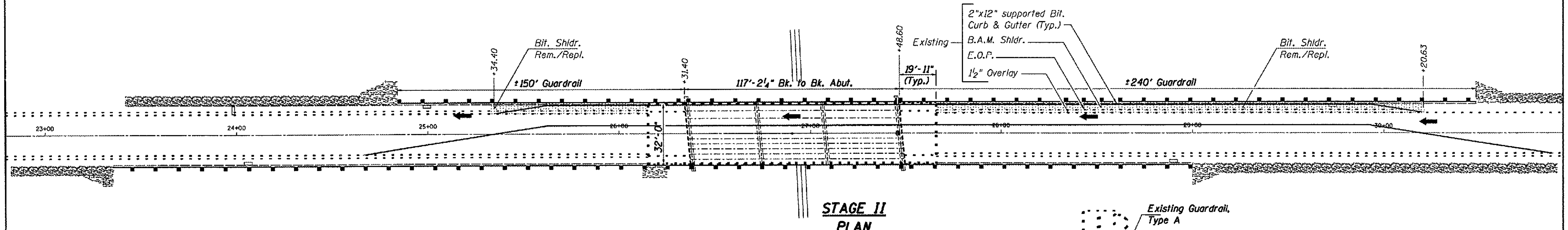
ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING REMOVAL

SCALE: VERT. HORIZ.
DATE 10-05-2007
DRAWN BY CEJ
CHECKED BY

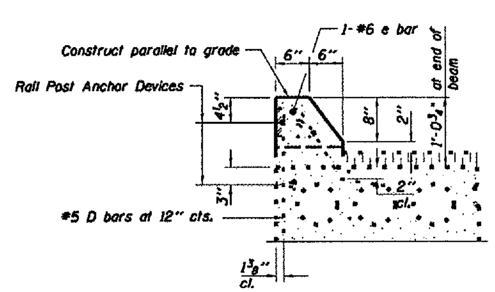
CONTRACT NO. 68744				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
687	(122VB)I-I	McDONOUGH	20	15
STA. 26+31.00	TO STA. 27+49.00			
FED. ROAD DIST. NO. 4	ILLINOIS FED. AID PROJECT			





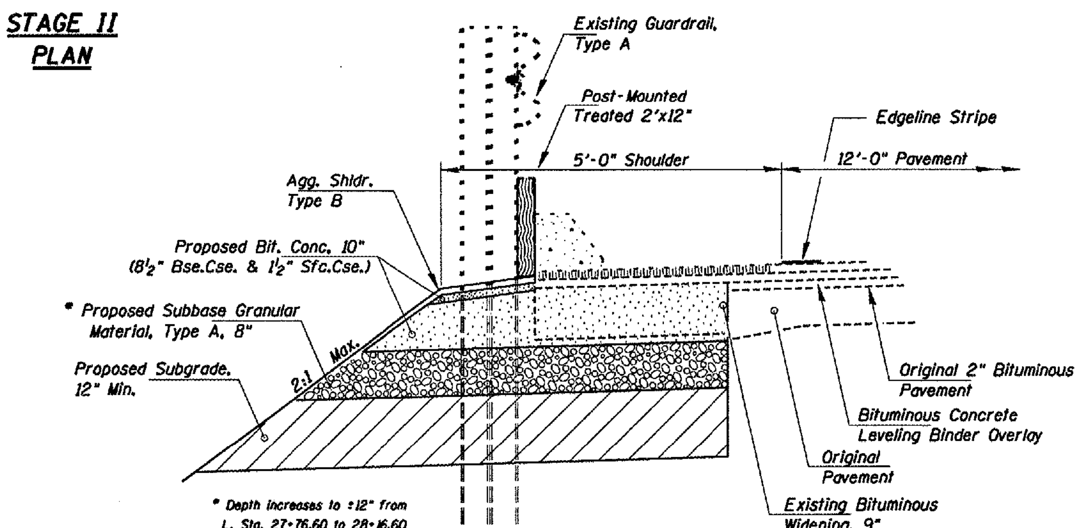
SYMBOLS

- Remove/Replace Shoulder
- Traffic Lane Direction
- Existing RipRap



SECTION THRU CURB

Bituminous Curb shall be formed in the field.



PROPOSED SHOULDER REPAIR DETAIL

SN.055-0017 IL.95 over BNSF RR.

NOTE

* NE location sunken shoulder/guardrail repair shall be done simultaneously with Stage I bridge deck repairs. The Geotechnical Engineer shall be notified at least 2 days in advance to be present at shoulder /removal site for determination of depth to be removed/replaced.
Existing guardrail shall be replaced with new sections and posts re-used. All work shall be accomplished behind the Temporary Concrete Barrier protection.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

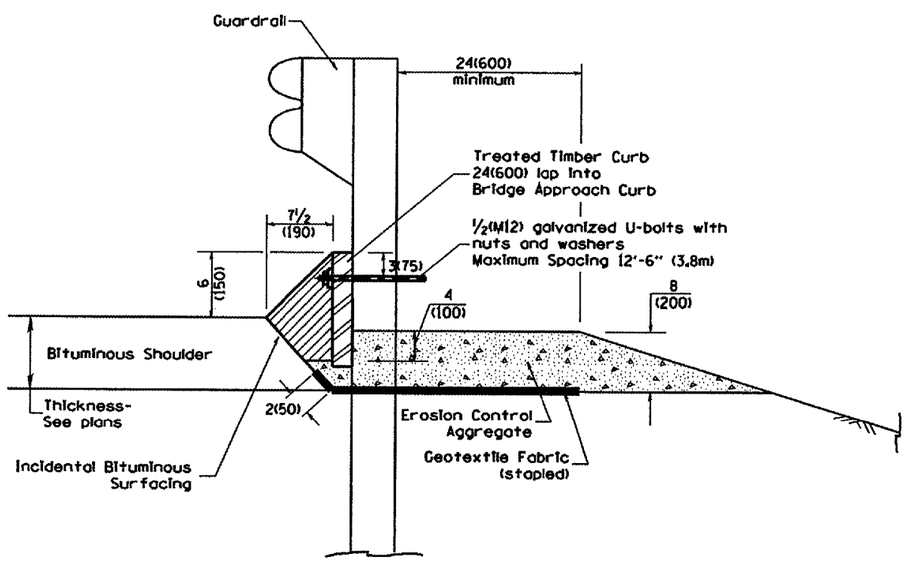
SHOULDER REM./ REPL.

SCALE: VERT. HORIZ.
DATE 09-27-2007
DRAWN BY CEJ
CHECKED BY

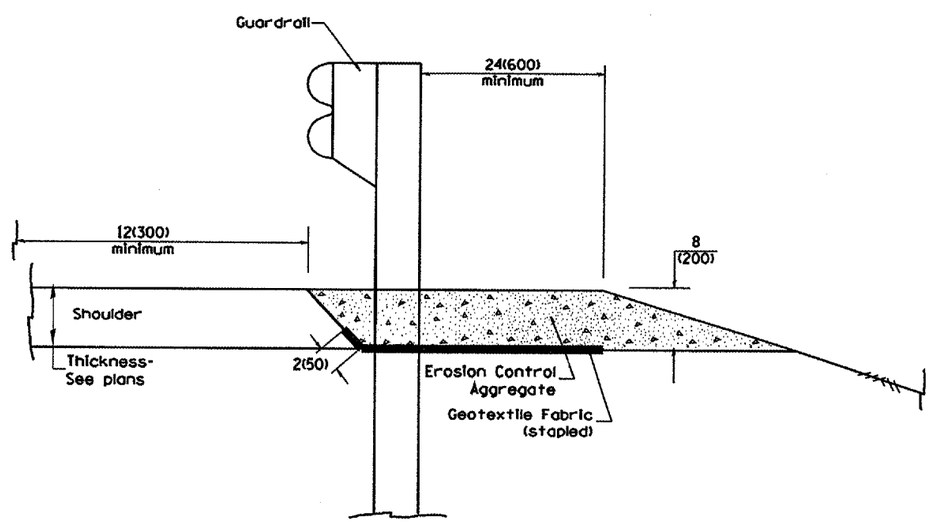
CONTRACT NO. 68744

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
652	(122VBI)-1	McDonough	----	45A
STA. ----------	TO STA. ----------			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

DESIGNER NOTE:
1. Use EROSION CONTROL CURB at guardrail installations where grades are equal to or greater than 1% and at inlets. [Include District Special Provision]
2. Use GUARDRAIL AGGREGATE EROSION CONTROL at guardrail installations where grades are less than 1% (include District Special Provision)
3. Include State Standards 609001, 609006 or 610001 if applicable.
4. Include the following District Cadd Standards as needed: Slope Drains for Exposed Pipes; Slope Drains for Buried Pipes; Seepage Collars for Exposed Pipes; Concrete Thrust Blocks and Pipe Elbow.
5. Include District Special Provision -"Aggregate Quality" for projects located in the Western Area of the District - approx. dividing line is IL 97.



TYPICAL SECTION WITH EROSION CONTROL CURB



TYPICAL SECTION WITHOUT EROSION CONTROL CURB

GENERAL NOTES: EROSION CONTROL CURB

1. This work shall consist of grading as needed, installing hardware and treated timber boards, furnishing and placing mastic material and incidental bituminous surfacing in front of Steel Plate Beam Guardrail in accordance with Plan Details.

2. Timber shall be treated in accordance with Article 1007.12. All preservatives specified in the article will be allowed. Waterborne preservatives "asa" and "cca" shall have a minimum retention of 0.40 lbs./cu. ft. (6.4 kg/m³)

GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

1. This work shall consist of grading as needed, furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.

2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.

3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 12(300) minimum overlap. A knife cut for guardrail post installation is necessary.

4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.

5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.

6. Materials shall meet the following requirements:

A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.

B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.

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

DATE	REVISIONS	BY
1-1-97	RENUM. C-22.01, NEW REVISION BOX	T.P.
5-1-97	CORRECT STD. NUMBERS IN NOTES PG. 2	J.A.
11-3-00	CORRECTION TO NOTES	M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

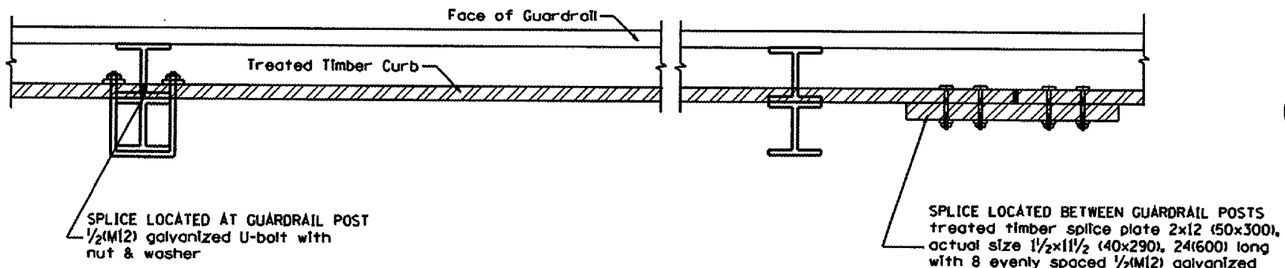
GUARDRAIL EROSION CONTROL TREATMENTS

CADD STD NO. 630101-D4(1)
SCALE: NOT DRAWN TO SCALE
SHEET 1 OF 2
DRAWN BY CADD
CHECKED BY

630101-D4(1)

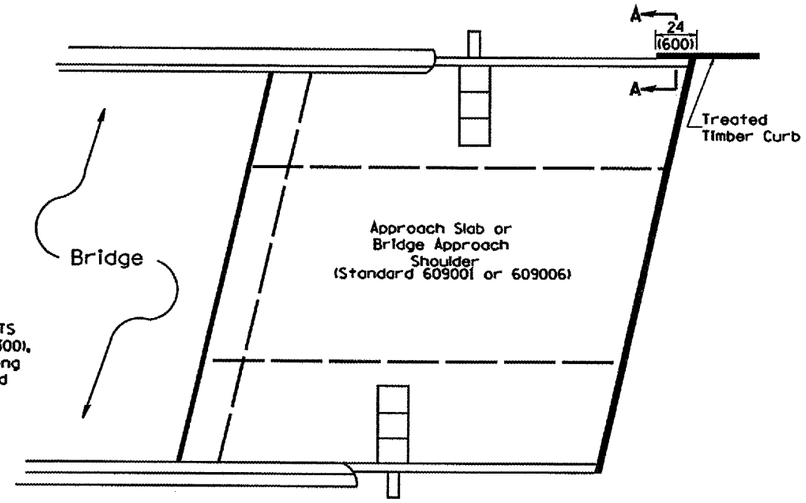
CONTRACT NO. 68744

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
652	(122V6)S-L	Mcdonough	----	158
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



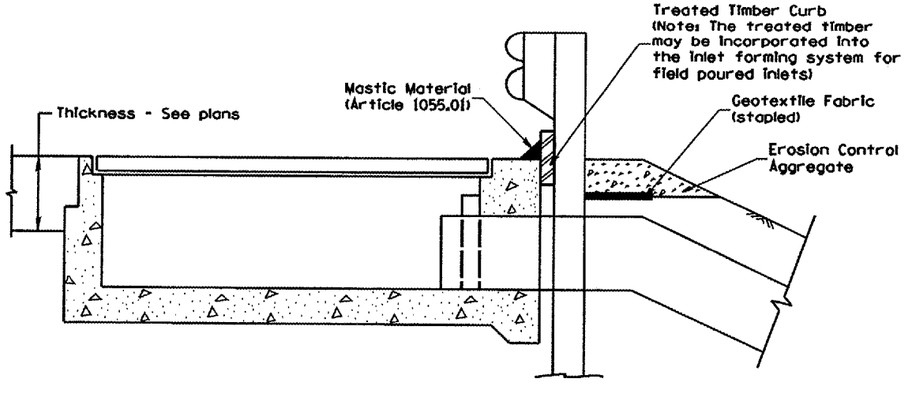
DETAIL A

(Typical Treated Timber Splices)

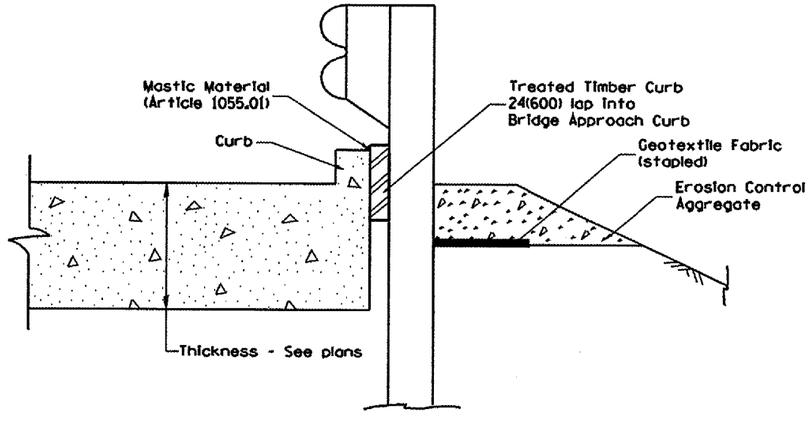


PLAN VIEW

APPROACH SLAB OR BRIDGE APPROACH SHOULDER
(STANDARD 609001 or 609006)



TYPICAL SECTION WITH EROSION CONTROL CURB AT INLETS TYPE E & F (STANDARD 610001)



SECTION A-A

TYPICAL SECTION WITH EROSION CONTROL CURB
AT BRIDGE APPROACH CURB
(STANDARD 609001 OR 609006)

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

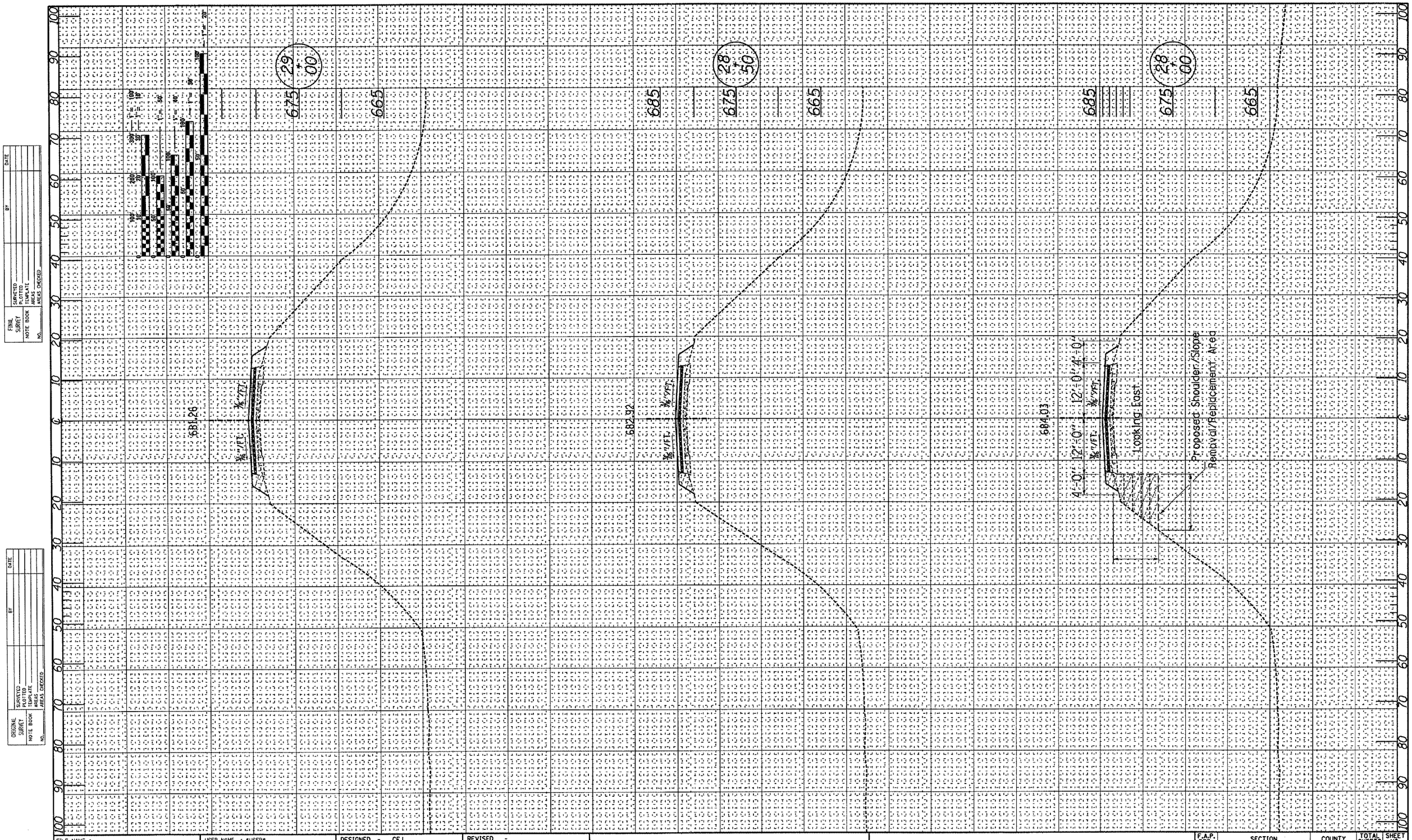
DISTRICT CADD STANDARD

GUARDRAIL EROSION CONTROL TREATMENTS

CADD STD NO. 630101-D4(2)
SCALE: NOT DRAWN TO SCALE

SHEET 2 OF 2
DRAWN BY CADD
CHECKED BY

630101-D4(2)



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

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

FILE NAME = $FILE$ SN.055-0017 IL.95 over BNSF RR.

USER NAME = $USER$ — PLOT SCALE = $SCALE$ — PLOT DATE = $DATE$

DESIGNED - CEJ — DRAWN - CEJ — CHECKED - ___ — DATE - 09/28/2007

REVISED - ___ — REVISED - ___ — REVISED - ___ — REVISED - ___

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS-SECTION (NORTH-EAST SHOULDER)

SCALE: 1"=10' | SHEET NO. __ OF ___ SHEETS | STA. _____ TO STA. _____

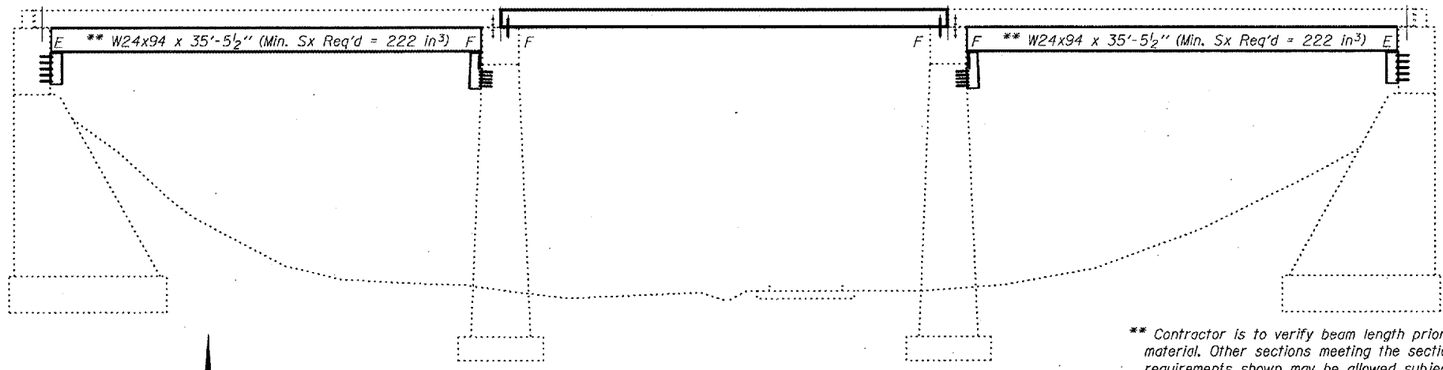
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
687	(122VB)1-1	McDONOUGH	20	16
		CONTRACT 68744		
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 687		MC DONOUGH	20	17
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

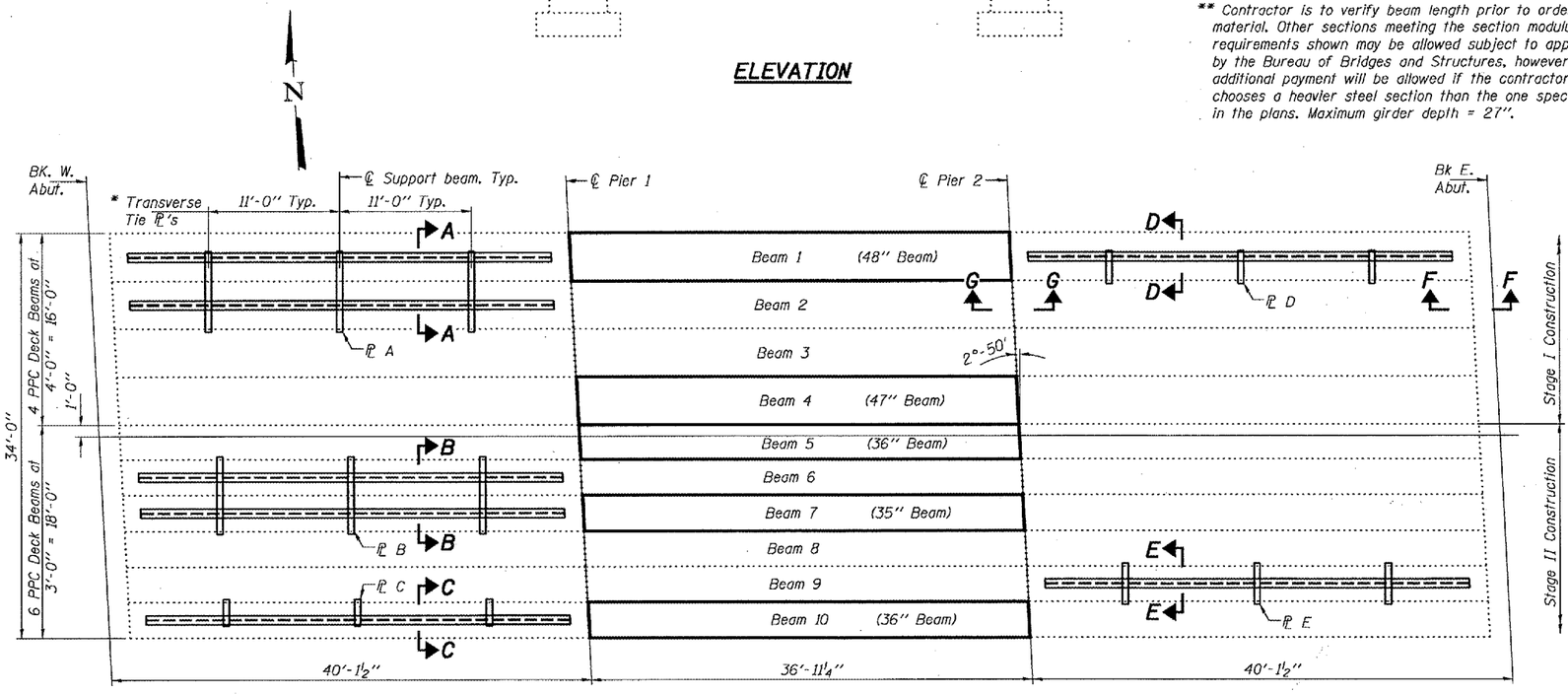
SHEET NO. 1
4 SHEETS

Contract Number: 68744



ELEVATION

** Contractor is to verify beam length prior to ordering material. Other sections meeting the section modulus requirements shown may be allowed subject to approval by the Bureau of Bridges and Structures, however, no additional payment will be allowed if the contractor chooses a heavier steel section than the one specified in the plans. Maximum girder depth = 27".



* ℄ Transverse tie ℄'s (3 per span). Place additional shims at midpoints between tie ℄'s. Securely weld shims to top flange of support beam. Min. shim size is 6" x flange width.

PLAN

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Plan dimensions and details relative to existing plans are subject to routine 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 based upon the unit price bid for the work.

The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractors responsibility to account for the condition of the beams when developing construction procedures.

See Section 584 of the Standard Specifications for Epoxy Grouting of Threaded Rods; Minimum embedment 9".

The cost of epoxy grouting threaded rods on the pier cap and beams shall be included with Furnishing and Erecting Structural Steel.

If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on the bridge, 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 new or existing beams. To distribute load to multiple beams and protect the existing surface, 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. If heavy equipment will be placed on new PPC deck beams, the following shall be done prior to placement of the timber mats: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys.

The cost of any excavation required shall be included with Furnishing and Erecting Structural Steel.

The Contractor has the option of using used steel. See Special Provisions.

Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of Removal of Existing PPC Deck Beams.

The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Temporary concrete barrier shall only be anchored into the overlay and not into the PPC Deck Beams.

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS
f'c = 5,000 psi
f'ci = 4,000 psi
f's = 270,000 psi (½"ϕ low lax strands)
f'si = 201,960 psi (½"ϕ low lax strands)

TOTAL BILL OF MATERIAL

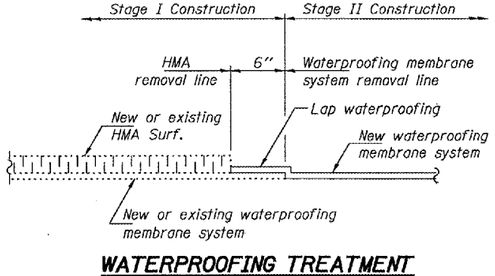
ITEM	UNIT	QUANTITY
Removal of Existing PPC Deck Beams	Sq. Ft.	627
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	621
Hot-Mix Asphalt Surface Removal	Sq. Yd.	22.7
HMA Surface Course Mix "D" N50	Tons	8.6
Concrete Superstructure	Cu. Yd.	2.5
Reinforcement Bars Epoxy Coated	Pound	50
Protective Coat	Sq. Yd.	23
Furnishing and Erecting Structural Steel	Pound	26970
PC Mortar Fairing Course	Foot	258
Removing and Re-erecting Existing Railing	Foot	74
Asbestos Bearing Pad Removal	Each	18
Waterproofing Membrane System	Sq. Yd.	84

DESIGNED	Adrian T. Holloway
CHECKED	
DRAWN	baliva
CHECKED	AJH AJB

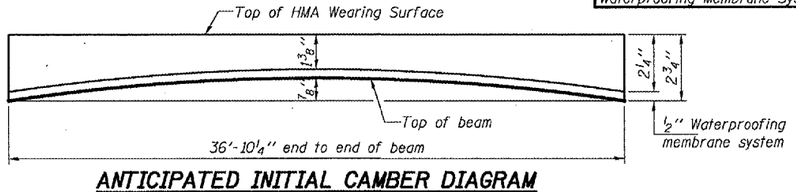
NOVEMBER 7, 2007
EXAMINED
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
RALPH E. ANDERSON
081-004625
SPRINGFIELD
LICENSED STRUCTURAL ENGINEER

Expires: November 30, 2008



WATERPROOFING TREATMENT



ANTICIPATED INITIAL CAMBER DIAGRAM

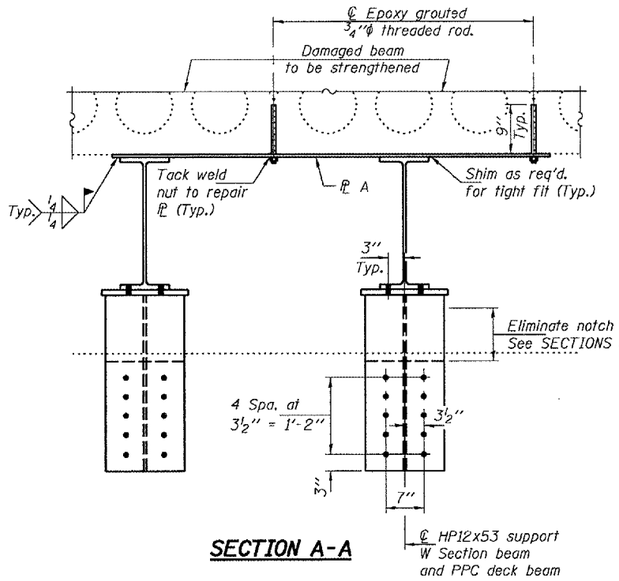
PLAN AND ELEVATION
FAP 687
MC DONOUGH COUNTY
SN 055-0017

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

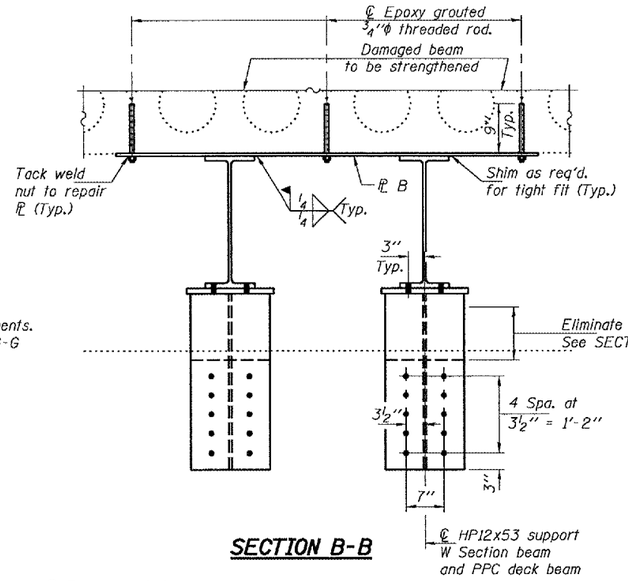
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 687		MC DONOUGH	20	18
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 2
4 SHEETS

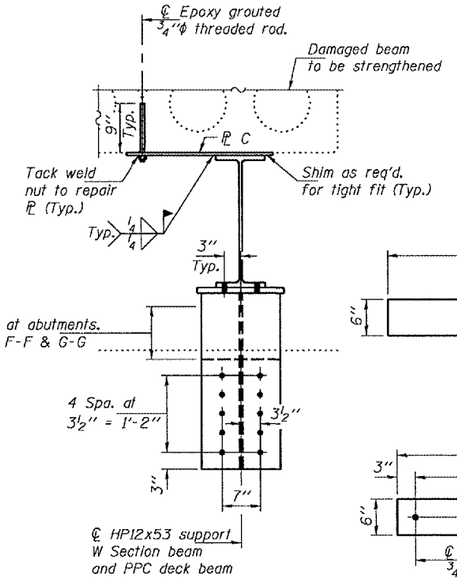
Contract Number: 68744



SECTION A-A



SECTION B-B



SECTION C-C

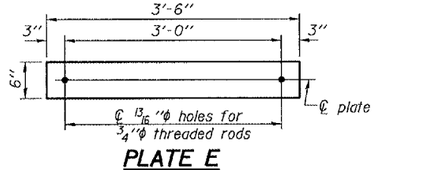


PLATE E

ℙ ½" x 6" x 3'-6"

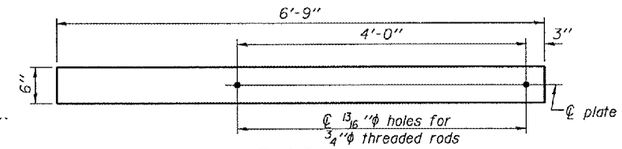


PLATE A

ℙ ½" x 6" x 6'-9"

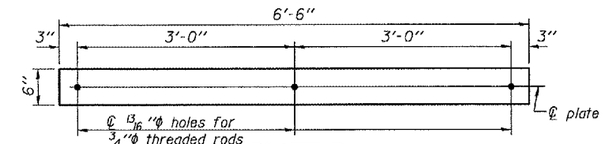
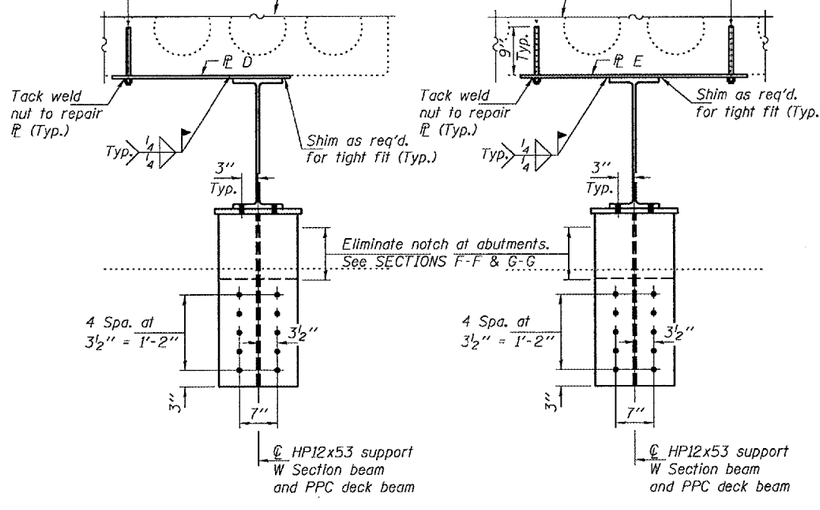


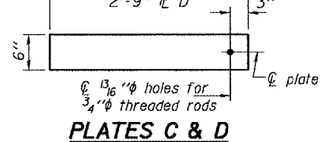
PLATE B

ℙ ½" x 6" x 6'-6"



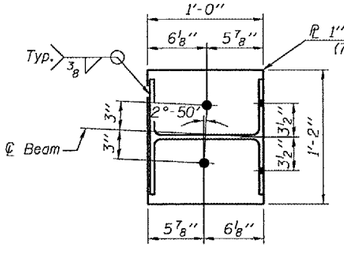
SECTION D-D

SECTION E-E

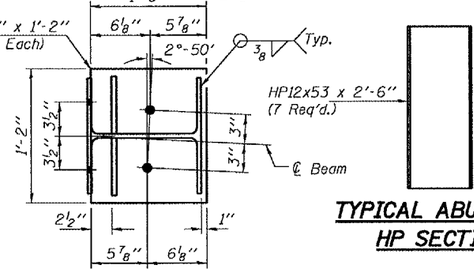


PLATES C & D

ℙ C ½" x 6" x 2'-3"
ℙ D ½" x 6" x 2'-9"

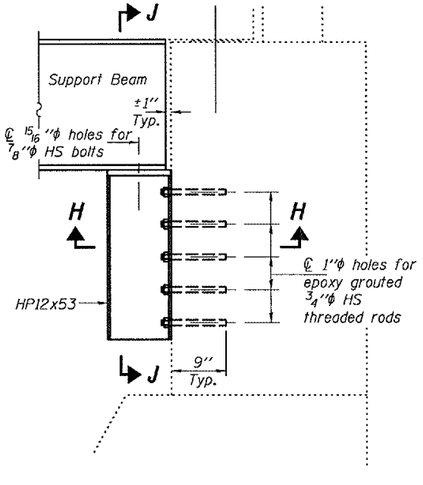


SECTION H-H

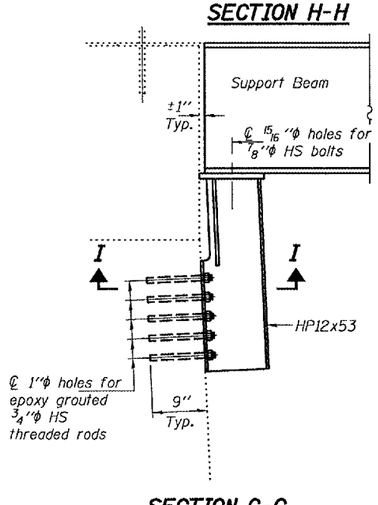


SECTION I-I

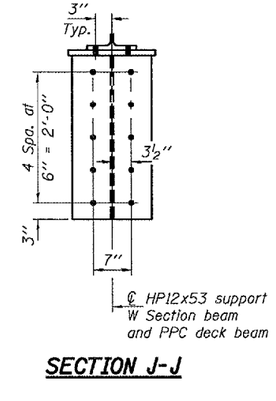
TYPICAL ABUTMENT HP SECTION



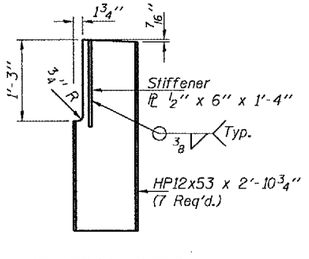
SECTION F-F



SECTION G-G



SECTION J-J



TYPICAL PIER HP SECTION

DESIGNED	ATH
CHECKED	AJB
DRAWN	boliva
CHECKED	ATH AJB

NOVEMBER 7, 2007
EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — ENGINEER OF BRIDGES AND STRUCTURES

REPAIR DETAILS
FAP 687
MC DONOUGH COUNTY
SN 055-0017

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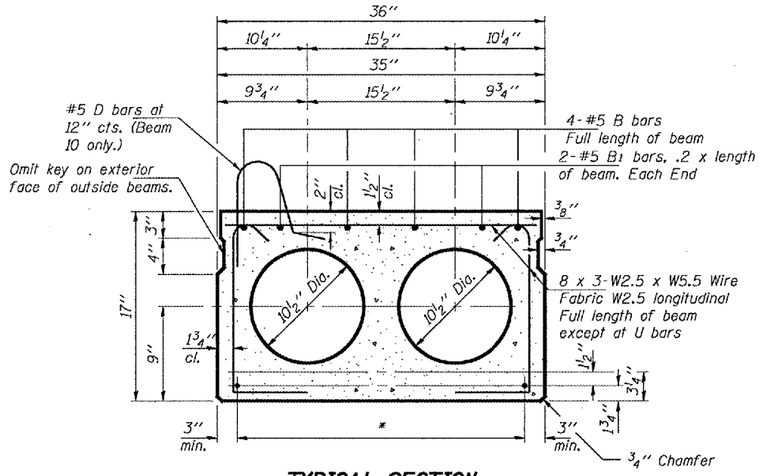
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 687		MC DONOUGH	20	19
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 3
4 SHEETS

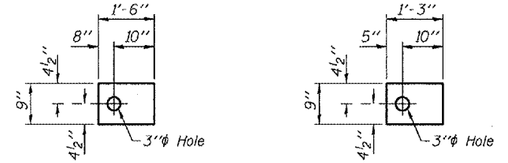
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Contract Number: 68744



TYPICAL SECTION

½" ϕ Strands, Each Strand Stressed to 30,900 Lbs.
10-Strands 1¾" up, 2-Strands 12" up

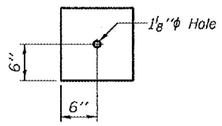


FABRIC BEARING PAD

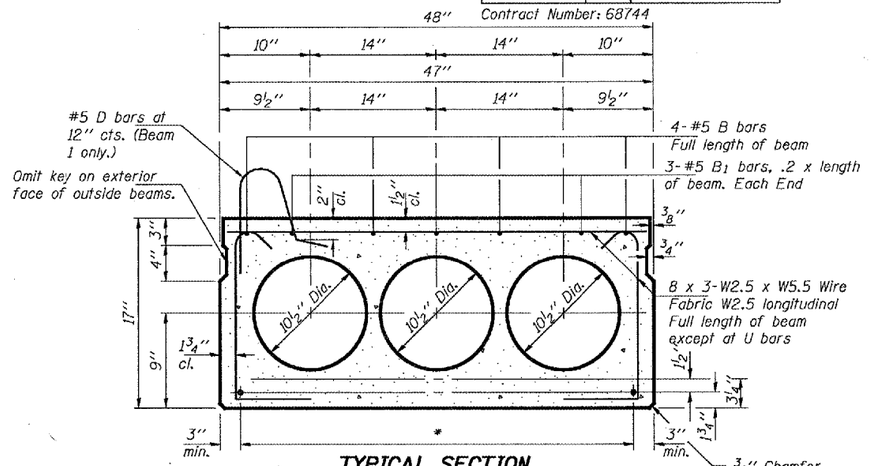
(47" & 48" beam)
(8 Req'd)

FABRIC BEARING PAD

(35" & 36" beam)
(12 Req'd)



CLAMPING ℙ



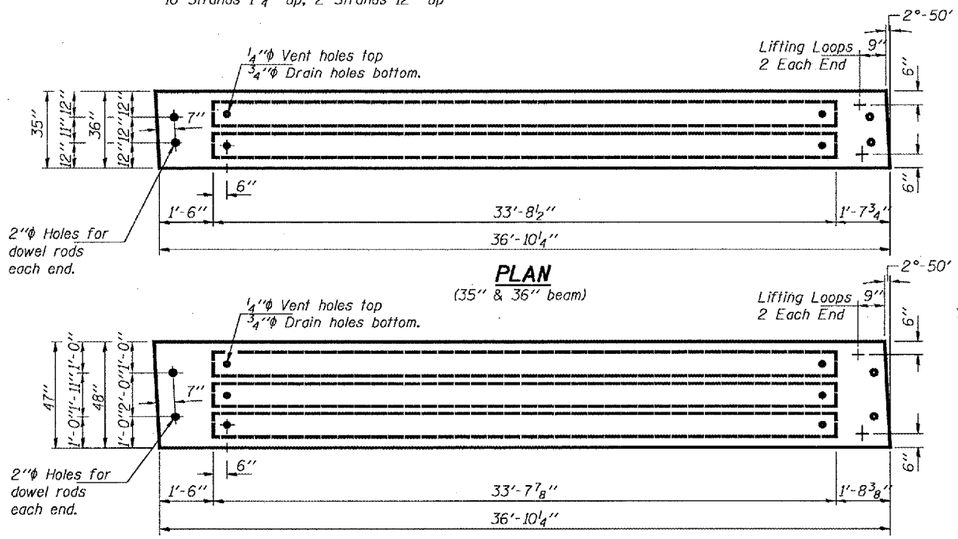
TYPICAL SECTION

½"ϕ Strands, Each Strand Stressed to 30,900 Lbs.
6-Strands 1¾" up, 8-Strands 3¼" up

* TRANSVERSE PLACEMENT GUIDELINES

1. Place strands symmetrically about centerline of beam.
2. The minimum distance from center to center of strands in all directions shall be 2".
3. The minimum clearance from strand to dowel hole shall be ½".
4. The minimum clearance from strand to void shall be 1½".

Vertical placement of strands shall not be adjusted to satisfy the above guidelines.

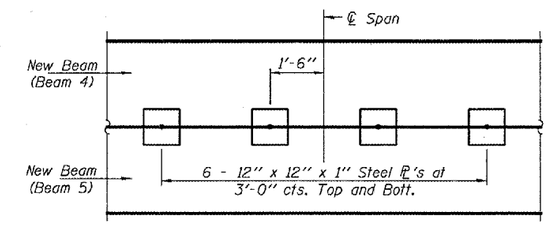


PLAN

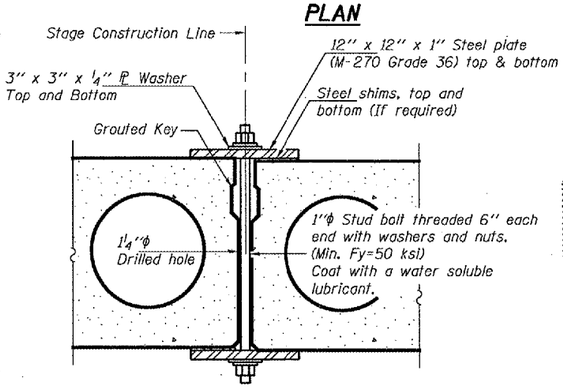
(35" & 36" beam)

PLAN

(47" & 48" beam)

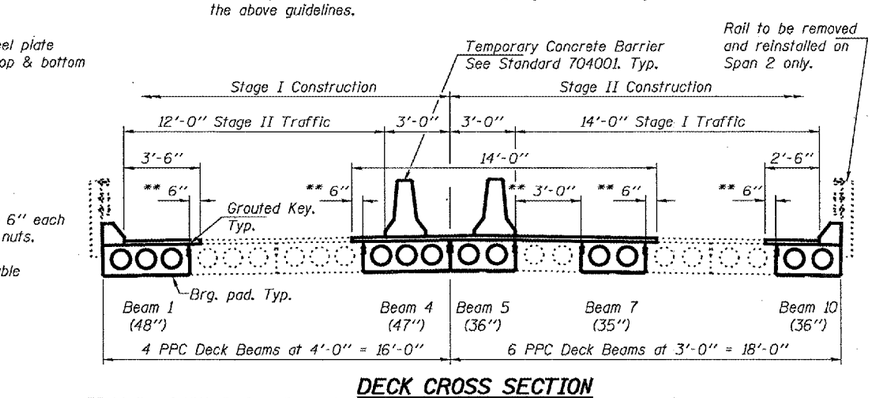


PLAN



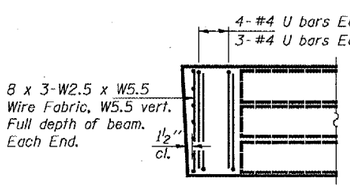
SECTION
SHEAR KEY CLAMPING DEVICE

Cost included with Precast Prestressed Concrete Deck Beams (17" Depth)
(6 Required)

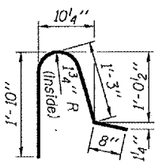


DECK CROSS SECTION

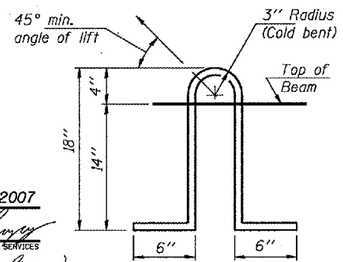
** Limits of HMA Surface Removal. Existing waterproofing to remain. Lap new waterproofing 6" over existing.



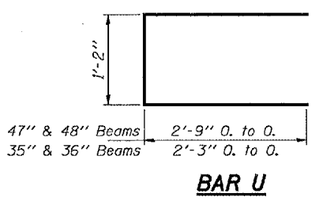
END PLAN



BAR D



LIFTING LOOP DETAIL



BAR U

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.
The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.
Lifting loops shall be 2 - ½"ϕ-270 ksi strands, as shown.
Non prestressing steel shall conform to ASTM A 706 (IL MOD), Grade 60.
The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two ⅛" fabric adjusting shims of the dimensions of the bearing pads shall be provided for each bearing.
Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.
Corrosion Inhibitor, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
Required Release Strength, f'ci, shall be 4000 p.s.i.

BILL OF MATERIAL

Item	Unit	Total
Precast Prestressed Concrete Deck Bms. 17" Depth	Sq. Ft.	621

DESIGNED	ATH
CHECKED	AJB
DRAWN	baliva
CHECKED	ATH AJB

NOVEMBER 7, 2007
EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — ENGINEER OF BRIDGES AND STRUCTURES

REPAIR DETAILS
FAP 687
MC DONOUGH COUNTY
SN 055-0017

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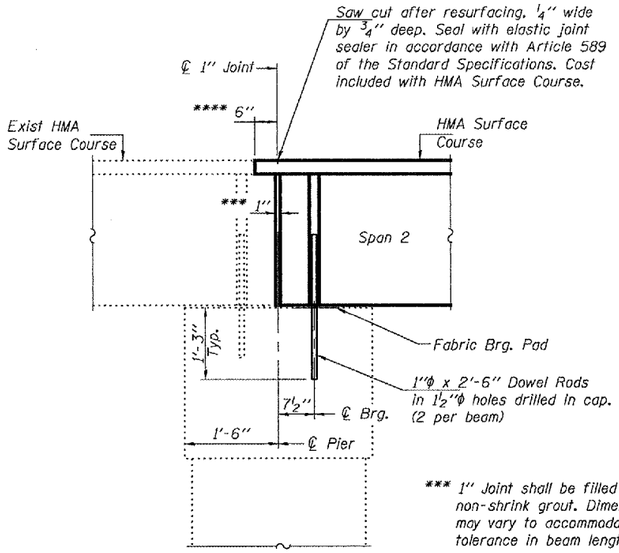
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 687		MC DONOUGH	20	20
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 4
4 SHEETS

Contract Number: 68744

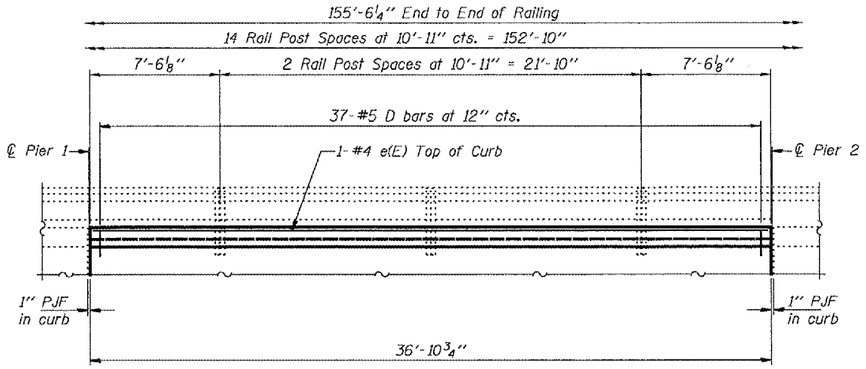


*** 1" Joint shall be filled with non-shrink grout. Dimension may vary to accommodate tolerance in beam lengths.

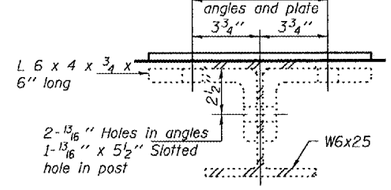
TYPICAL SECTION AT PIERS

Note:
Existing dowel rods are to be burned off, ground flush, and sealed with epoxy prior to placement of new beams. Cost included in Removal of Existing PPC Deck Beams. After beams have been erected holes shall be drilled into cap and dowel rods placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure a minimum of 24 hours prior to grouting the shear keys.

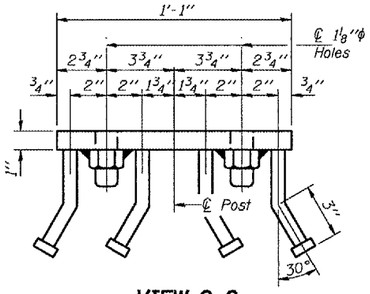
**** Limits of HMA surface removal. Existing waterproofing to remain. Lap new waterproofing 6" over existing.



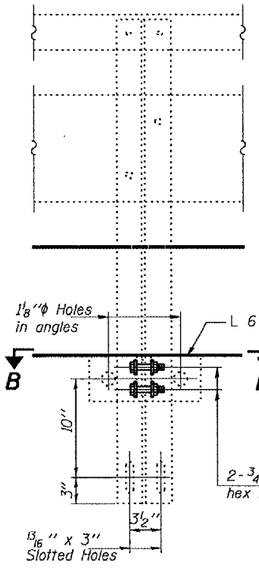
SPAN 2 CURB ELEVATION



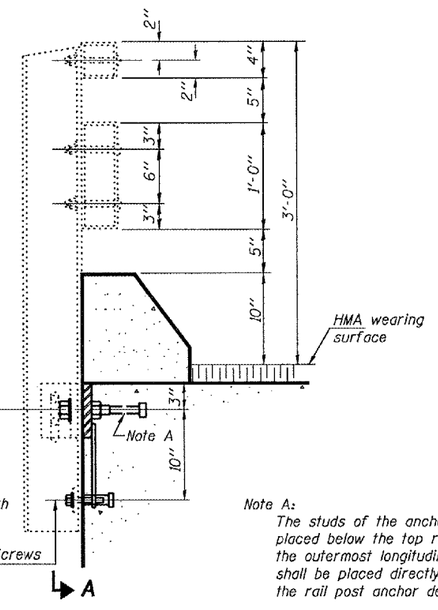
SECTION B-B



VIEW C-C

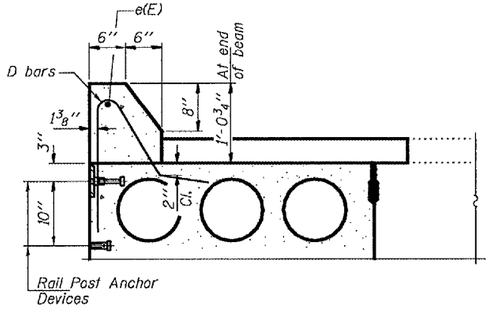


SECTION A-A



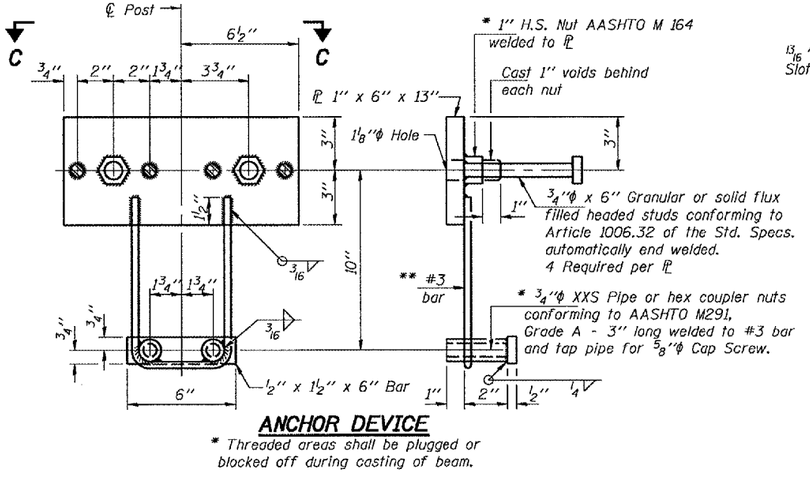
SECTION AT RAIL POST

Note A:
The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



TYPICAL SECTION THRU CURB

** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam.

Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.

For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Removing and Re-erecting Existing Railing.

All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

Removal and re-erection of the existing railing shall be accomplished in a manner that will avoid scratching, denting or other damage that may affect the durability or appearance of the railing.

The length paid for will be overall length along the rail from end to end, in place, at the location of re-erection.

This work will be paid for at the contract unit price per foot for Removing and Re-erecting Existing Railing, which price shall include removal, temporary storage, re-erection, asphalt paint or new bearing pads, shims and all new hardware required to satisfactorily complete the work.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
e(E)	2	#4	36'-7"	
Concrete Superstructure			Cu. Yd.	2.5
Reinforcement Bars, Epoxy Coated			Lbs.	50

DESIGNED	ATH
CHECKED	AJB
DRAWN	baliva
CHECKED	ATH AJB

NOVEMBER 7, 2007
EXAMINED — ENGINEER OF STRUCTURAL SERVICES
PASSED — Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES

REPAIR DETAILS
FAP 687
MC DONOUGH COUNTY
SN 055-0017