11-04-2016 LETTING ITEM 053

*74 + 1 = 75 TOTAL SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	1
	ILLINOIS	CONTRACT NO. 70B15		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

F.A.I. ROUTE 74 (I-74)
SECTION (10-4,10-5)I
PROJECT ACNHPP-0074(319)
THIN CONCRETE OVERLAY, BRIDGE JOINT REPAIR, BRIDGE DECK REPAIR
CHAMPAIGN COUNTY

C-95-007-15

FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 4-6

D-95-007-15

LOCATION OF SECTION INDICATED THUS: -

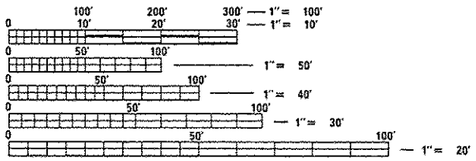
CURRENT TRAFFIC DATA

F.A.I. ROUTE 74

	LEG "A"	LEG "B"	LEG "C"
2013 ADT =	21,800	27,800	27,500
PV % =	67.6	73.5	75.3
SU % =	4.6	3.5	3.6
MU % =	27.8	23.0	21.1

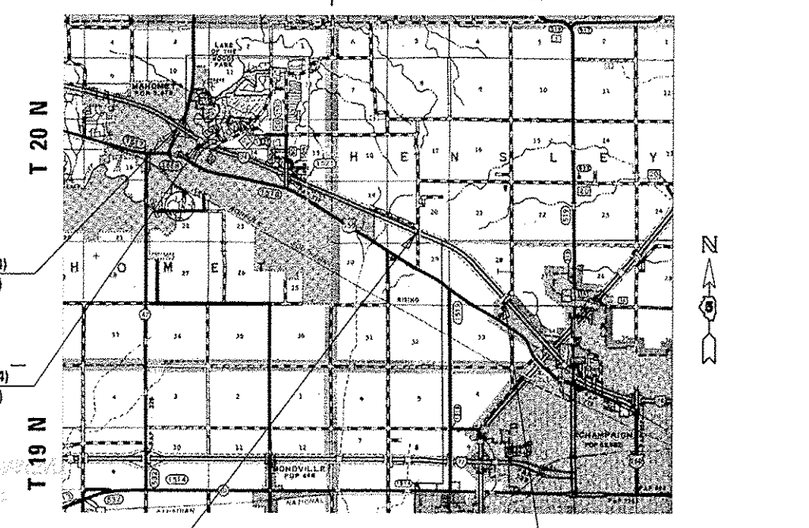
TRAFFIC DATA LOCATIONS
LEG "A" = 0.5 MILES WEST OF IL 47 TO IL 47
LEG "B" = IL 47 TO PRAIRIE VIEW RD
LEG "C" = PRAIRIE VIEW RD TO 0.5 MILES WEST OF I-57

DESIGN DESIGNATION
INTERSTATE



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



GROSS LENGTH = 711.830 FT. = 0.135 MILE
NET LENGTH = 711.830 FT. = 0.135 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED August 9 20 16
Dana A. Warren
DEPUTY DIRECTOR OF HIGHWAYS, REGION 3 ENGINEER
Sept 30 20 16
Maureen M. Addis, P.E. for
ENGINEER OF DESIGN AND ENVIRONMENT
Sept 30 20 16
Omer Osman, P.E. for
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PROJECT ENGINEER: TIM BRANDENBURG
SQUAD LEADER: JEFF M. SHERER
217-465-4181

CONTRACT NO. 70B15

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

INDEX OF SHEETS

SHEET NO.	ITEM
1	COVER SHEET
2	INDEX OF SHEETS/ HIGHWAY STANDARDS
3	GENERAL NOTES
4-6	SUMMARY OF QUANTITIES
* 7-39	REPAIR PLANS S. N. 010-0014 & S. N. 010-0015
40-46	REPAIR PLANS S. N. 010-0016 & S. N. 010-0017
47-56	REPAIR PLANS S. N. 010-0167
57-68	REPAIR PLANS S. N. 010-0169
69-74	DESIGN DETAILS

* INCLUDES SHEET 30A.

LIST OF STANDARDS

STANDARD NO.	DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
630001-10	STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE 1 GUARDRAIL TERMINALS
701400-08	APPROACH TO LANE CLOSURE - FREEWAY/ EXPRESSWAY
701401-09	LANE CLOSURE FREEWAY/ EXPRESSWAY
701402-11	LANE CLOSURE FREEWAY/ EXPRESSWAY PLUS BARRIER
701411-09	LANE CLOSURE MULTILANE - ENTRANCE OR EXIT RAMPS 45 MPH PLUS
701901-05	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
725001	OBJECT AND TERMINAL MARKERS
782006	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
701101-05	OFF-RD OPERATIONS, MULTILANE, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE

FILE NAME =	USER NAME = sherarjm	DESIGNED -	REVISED -
pw:\\IL884EBIOINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\057[illegible]Data\Structures\057[illegible]-sht-index.dgn		DRAWN -	REVISED -
	PLOT SCALE = 40.2000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS &
HIGHWAY STANDARDS

SCALE: | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	2
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

GENERAL NOTES

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. -105.09A

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

G. N. -406

THE QUANTITIES INCLUDED IN THE PLANS FOR HOT-MIX ASPHALT RESURFACING ARE INTENDED TO GIVE THE COVERAGE SHOWN ON THE TYPICAL CROSS SECTIONS. IT IS NOT INTENDED TO INCREASE THE THICKNESS OF THE HOT-MIX ASPHALT MIXTURE IN ORDER TO USE ALL OF THE QUANTITIES INCLUDED IN THE CONTRACT.

GN 406H Mixture Requirements

Location	TR 126 over I-74	I-74
Mixture Use	Surface	Surface
AC/PG	PG 64-22	SBS PG 70-22
Design Air Voids	4.0% @ Ndes=50	4.0% @ Ndes=90
Mix Comp(Gradation)	IL 9.5	IL 9.5
Friction Aggregate	Mix C	Mix D
Mixture Weight	112	112
Quality Management Program	QC/QA	QC/QA
Sublot Size	N.A.	N.A.

G. N. -442B -- PATCHING SCHEDULES

THE PATCHING SCHEDULES INCLUDED IN THE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AT THE TIME OF COMPLETION OF THE PLANS FOR LETTING. VARIATIONS IN LOCATION AND SIZES OF BOTH FULL-DEPTH AND PARTIAL-DEPTH PATCHES MAY OCCUR.

G. N. -501A

THE EXISTING STRUCTURAL STEEL COATING CONTAINS LEAD. THE CONTRACTOR SHOULD FOLLOW THE GUIDE BRIDGE SPECIAL PROVISIONS FOR CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES TO DEAL WITH THE PRESENCE OF LEAD ON THIS PROJECT.

G. N. -609

PRIOR TO ROUTING TRAFFIC ONTO THE SHOULDERS AS SHOWN IN THE STAGING PLANS, THE CONTRACTOR SHALL SECURE THE GRATINGS ON SHOULDER INLETS AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.

G. N. -631

IF THE CONTRACTOR ELECTS TO USE THE ALTERNATE MOUNTING METHOD OF THRU DRILLING THE MOUNTING HOLES FOR THE TRAFFIC BARRIER TERMINALS, TYPE 6, THE HOLES SHALL BE DRILLED USING A CORE DRILL. A HAMMER DRILL WILL NOT BE ALLOWED.

THERE ARE NO COMMITMENTS ASSOCIATED WITH THIS PROJECT

PLAN NOTES:

QUANTITIES FOR SHOULDER WIDENING AT THE LOCATIONS OF THE TYPE ONE TERMINALS HAVE BEEN ESTIMATED AND ARE REPRESENTATIVE OF THE BEST INFORMATION AVAILABLE AT THE TIME OF THE COMPLETION OF THE PLANS FOR LETTING. THE AREAS SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.

EARTHWORK REQUIRED FOR WDENING AT TYPE I TERMINAL LOCATIONS:

NW QUAD	8.0	CU YD
NE QUAD	8.0	CU YD
SW QUAD	8.0	CU YD
SE QUAD	8.0	CU YD
TOTAL =	32.0	CU YD

THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST FOR TRAFFIC BARRIER TERMINAL TYPE 1 (TANGENT).

63000001 STEEL PLATE BEAM GUARDRAIL, TYPE A, 6' POSTS

S.N. 010-0167	FOOT
NW QUAD	137.5
NE QUAD	137.5
SW QUAD	300.0
SE QUAD	312.5
TOTAL =	887.5

63100087 TRAFFIC BARRIER TERMINAL TYPE 6A

S.N. 010-0167	EACH
NW QUAD	1.0
NE QUAD	1.0
SW QUAD	1.0
SE QUAD	1.0

S.N. 010-0169	
NW QUAD	1.0
NE QUAD	1.0
SW QUAD	1.0
SE QUAD	1.0
TOTAL =	8.0

63301210 REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A

S.N. 010-0169	
NW QUAD	12.5
NE QUAD	12.5
SW QUAD	12.5
SE QUAD	12.5
TOTAL =	50.0

63200310 GUARDRAIL REMOVAL

S.N. 010-0167	FOOT
NW QUAD	215.0
NE QUAD	253.0
SW QUAD	383.5
SE QUAD	365.0

S.N. 010-0169	
NW QUAD	64.0
NE QUAD	64.0
SW QUAD	64.0
SE QUAD	64.0

S.N. 010-0014	
NE QUAD	75.0
SE QUAD	75.0

S.N. 010-0015	
NW QUAD	75.0
SW QUAD	75.0
TOTAL =	1772.5
USE =	1773.0

63100085 TRAFFIC BARRIER TERMINAL TYPE 6

S.N. 010-0014	
NE QUAD	1.0
SE QUAD	1.0

S.N. 010-0015	
NW QUAD	1.0
SW QUAD	1.0
TOTAL =	4.0

63100167 TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT)

S.N. 010-0167	EACH
NW QUAD	1.0
NE QUAD	1.0
SW QUAD	1.0
SE QUAD	1.0
TOTAL =	4.0

725001000 TERMINAL MARKER DIRECT APPLIED

S.N. 010-0167	EACH
NW QUAD	1.0
NE QUAD	1.0
SW QUAD	1.0
SE QUAD	1.0
TOTAL =	4.0

78200005 GUARDRAIL REFLECTORS, TYPE A

S.N. 010-0167	EACH
NW QUAD	2.0
NE QUAD	2.0
SW QUAD	4.0
SE QUAD	4.0
TOTAL =	12.0

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\05708015\Design Data\Structures\05708015-sht-index.dgn	USER NAME = sherer.jm	DESIGNED -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SCALE: | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	3
		CONTRACT NO. 70815		
	ILLINOIS FED. AID PROJECT			

				90% FEDERAL / 10% STATE			
				CONSTRUCTION CODE			
			URBAN	S.N. 010-0014 STA. 1518+66.10 S.N. 010-0015 STA. 1518+84.25 FAI-74 100% STATE	S.N. 010-0016 S.N. 010-0017 STA. 1539+94.80 FAI-74 100% STATE	S.N. 010-0167 STA. 50+00.00 T.R. 104 100% STATE	S.N. 010-0169 STA. 89+80.58 T.R. 126 100% STATE
				BRIDGE REHAB	BRIDGE REHAB	BRIDGE REHAB	BRIDGE REHAB
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0014	0014	0014	0014
40600290	BITUMINOUS MATERIALS TACK COAT	POUND	374.0	329.0	0.0	0.0	45.0
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	10.0	0.0	0.0	0.0	10.0
40603545	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90	TON	62.0	62.0	0.0	0.0	0.0
50102400	CONCRETE REMOVAL	CU YD	19.7	19.7	0.0	0.0	0.0
50157300	PROTECTIVE SHIELD	SQ YD	849.0	410.0	0.0	175.0	264.0
50300100	FLOOR DRAINS	EACH	36.0	16.0	0.0	10.0	10.0
50300255	CONCRETE SUPERSTRUCTURE	CU YD	31.8	31.8	0.0	0.0	0.0
50300260	BRIDGE DECK GROOVING	SQ YD	1,791.0	1,286.0	0.0	0.0	505.0
50300300	PROTECTIVE COAT	SQ YD	140.0	140.0	0.0	0.0	0.0
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	4,210.0	4,210.0	0.0	0.0	0.0
50500505	STUD SHEAR CONNECTORS	EACH	224.0	224.0	0.0	0.0	0.0
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	4,910.0	4,910.0	0.0	0.0	0.0
50800515	BAR SPLICERS	EACH	64.0	64.0	0.0	0.0	0.0
50900200	STEEL RAILING, TYPE 2399	FOOT	911.0	0.0	0.0	491.0	420.0
52000110	PREFORMED JOINT STRIP SEAL	FOOT	180.0	180.0	0.0	0.0	0.0
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	28.0	28.0	0.0	0.0	0.0
52100520	ANCHOR BOLTS, 1"	EACH	56.0	56.0	0.0	0.0	0.0

17

* SPECIALTY ITEM

FILE NAME = pw:\\IL884EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815-sht-S00.dgn Default	USER NAME = sherarjm	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.8000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/9/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: | SHEET 1 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	4
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

90% FEDERAL / 10% STATE

					CONSTRUCTION CODE			
					S.N. 010-0014 STA. 1518+66.10 S.N. 010-0015 STA. 1518+84.25 FAI-74 100% STATE	S.N. 010-0016 S.N. 010-0017 STA. 1539+94.80 FAI-74 100% STATE	S.N. 010-0167 STA. 50+00.00 T.R. 104 100% STATE	S.N. 010-0169 STA. 89+80.58 T.R. 126 100% STATE
				URBAN	BRIDGE REHAB	BRIDGE REHAB	BRIDGE REHAB	BRIDGE REHAB
	CODE			TOTAL	0014	0014	0014	0014
	NO.	ITEM	UNIT	QUANTITY				
*	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	887.5	0.0	0.0	887.5	0.0
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4.0	4.0	0.0	0.0	0.0
*	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	8.0	0.0	0.0	4.0	4.0
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4.0	0.0	0.0	4.0	0.0
	63200310	GUARDRAIL REMOVAL	FOOT	1,773.0	300.0	0.0	1,217.0	256.0
*	63301210	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	50.0	0.0	0.0	0.0	50.0
	67000400	ENGINEER FIELD OFFICE, TYPE A	CAL MO	8.0	2.0	2.0	2.0	2.0
	67100100	MOBILIZATION	LSUM	1.0	0.3	0.3	0.4	0.0
	70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	2.0	2.0	0.0	0.0	0.0
	70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	4.0	4.0	0.0	0.0	0.0
	70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1.0	0.5	0.5	0.0	0.0
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	1,050.0	1,050.0	0.0	0.0	0.0
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1,050.0	1,050.0	0.0	0.0	0.0
	70600250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2.0	2.0	0.0	0.0	0.0
	70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2.0	2.0	0.0	0.0	0.0
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4.0	0.0	0.0	4.0	0.0
17 *	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	9,120.0	9,120.0	0.0	0.0	0.0

* SPECIALTY ITEM

FILE NAME = pw:\\IL084EBIOINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\ENGR\Data\Structures\D570815-eht-S00.dgn	USER NAME = sharonja	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -		SCALE: SHEET 2 OF 3 SHEETS STA. TO STA.
Default	PLOT DATE = 8/9/2016	DATE -	REVISED -		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	5
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

90% FEDERAL / 10% STATE

URBAN

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE: S.N. 010-0014 STA. 1518+66.10 S.N. 010-0015 STA. 1518+84.25 FAI-74 100% STATE BRIDGE REHAB 0014	CONSTRUCTION CODE: S.N. 010-0016 S.N. 010-0017 STA. 1539+94.80 FAI-74 100% STATE BRIDGE REHAB 0014	CONSTRUCTION CODE: S.N. 010-0167 STA. 50+00.00 T.R. 104 100% STATE BRIDGE REHAB 0014	CONSTRUCTION CODE: S.N. 010-0169 STA. 89+80.58 T.R. 126 100% STATE BRIDGE REHAB 0014
*	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	12.0	0.0	0.0	12.0	0.0
	X0325743	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES), SPECIAL	SQ FT	138.0	138.0	0.0	0.0	0.0
	X7010410	SPEED DISPLAY TRAILER	CAL MO	2.0	1.5	0.5	0.0	0.0
	X7200201	WIDTH RESTRICTION SIGNING	L SUM	1.0	1.0	0.0	0.0	0.0
	Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	28.0	28.0	0.0	0.0	0.0
	Z0004556	HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SQ YD	2,100.0	2,100.0	0.0	0.0	0.0
	Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	1,853.0	1,302.0	0.0	0.0	551.0
	Z0006012	BRIDGE DECK LATEX CONCRETE OVERLAY 2 1/4"	SQ YD	1,830.0	1,279.0	0.0	0.0	551.0
	Z0015802	PLUG EXISTING DECK DRAINS	EACH	16.0	16.0	0.0	0.0	0.0
	Z0016001	DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	24.8	10.8	0.0	4.0	10.0
	Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	80.3	62.3	0.0	18.0	0.0
	Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	14.2	0.0	0.0	14.2	0.0
	Z0021916	SILICONE JOINT SEALER, 3"	FOOT	89.0	0.0	89.0	0.0	0.0
	Z0041895	POLYMER CONCRETE	CU FT	16.7	6.6	8.0	0.0	2.1
	Z0073300	TEMPORARY SHORING AND CRIBBING	L SUM	4.0	4.0	0.0	0.0	0.0

* SPECIALTY ITEM

FILE NAME = pw:\\IL084EBIOINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\057[illegible]\Structures\057[illegible]-sht-S00.dgn	USER NAME = shererjn	DESIGNED -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/9/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

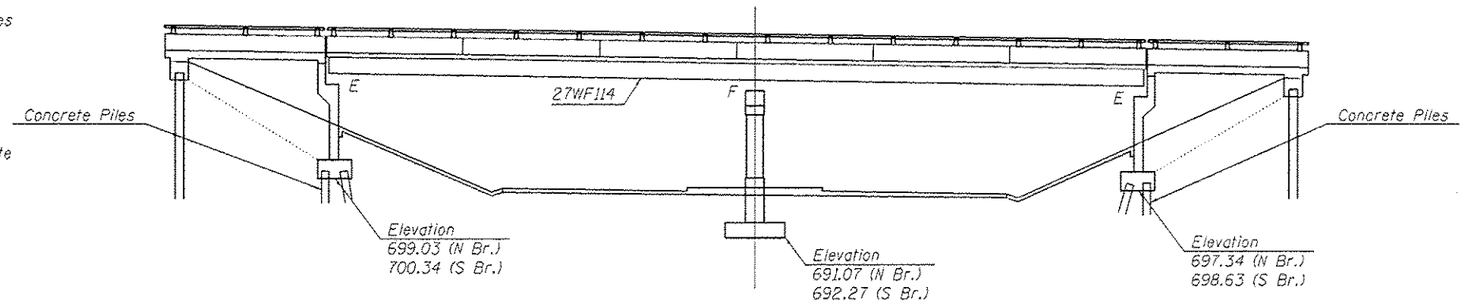
SCALE: | SHEET 3 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	6
		CONTRACT NO. 70B15		
	ILLINOIS	FED. AID PROJECT		

Structures 010-0014 & 010-0015 were built in 1966 as FAI route 74, Section 10-4HB at station 1518+75.19 by the State of Illinois in Champaign County. In 1975, the structures received a waterproofing mebrane with a Bitumious Concrete wearing surface as Section District 5 Waterproofing 1975-3.

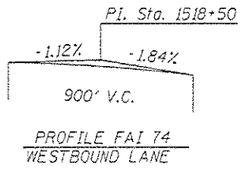
The existing structures are two-span structures with back-to-back of abutment length of 113'-4". The structures measure 40'-0" from face-to-face of parapets and has an out-to-out width of 42'-0". The structures were built on a 10°-57' right-forward skew. The superstructures consist of seven WF steel girders supporting a 7" reinforced concrete deck. The superstructure is supported by two pile bent vaulted abutments and a pier on a spread footing. The slopes are protected with concrete slope walls.

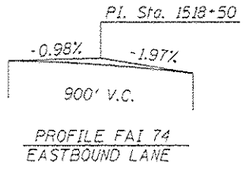
Method of Construction: STAGE CONSTRUCTION

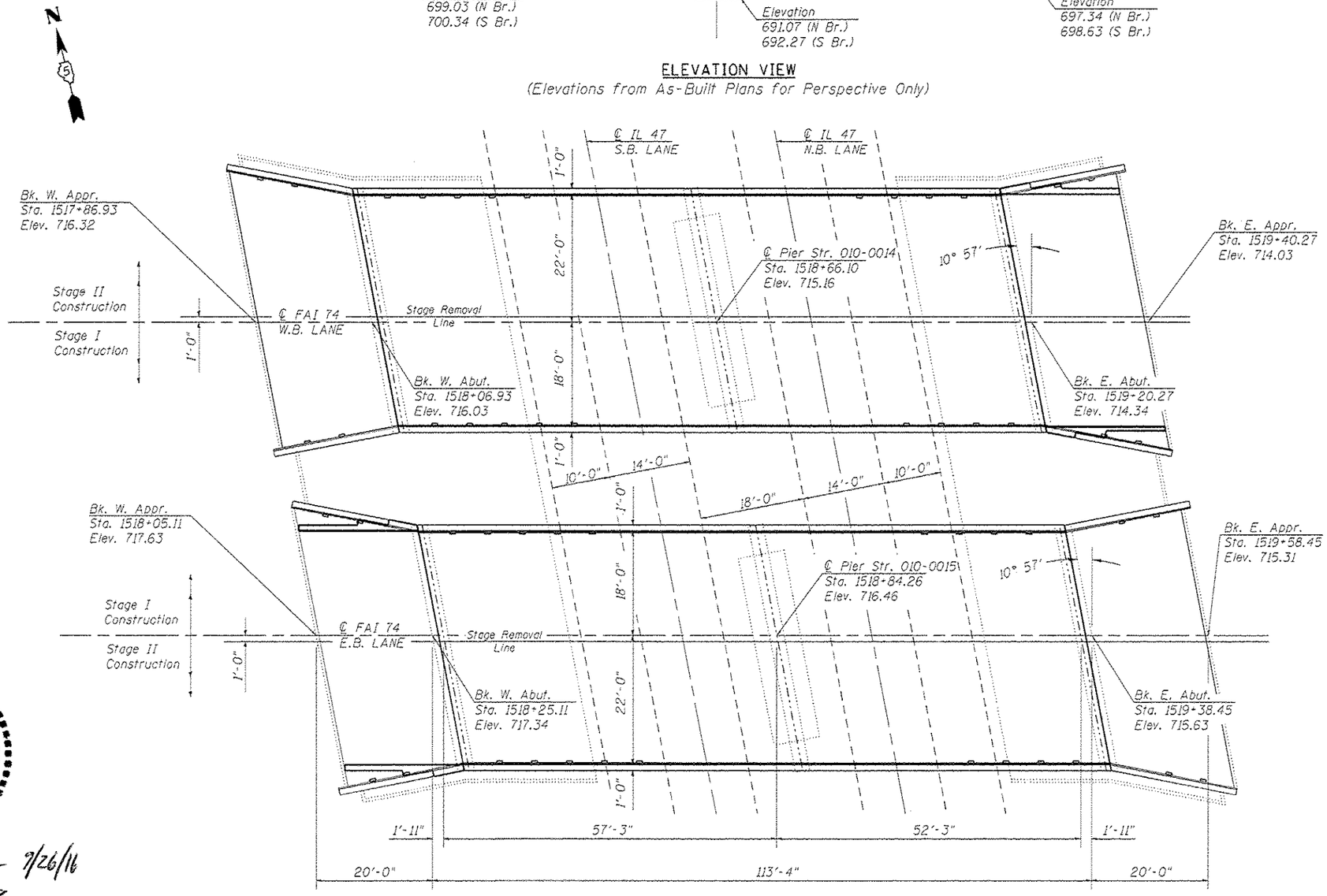


ELEVATION VIEW

(Elevations from As-Built Plans for Perspective Only)







PLAN VIEW

LICENSED STRUCTURAL ENGINEER
DAVID CARL PUZEY
081-005470
SPRINGFIELD ILLINOIS
STATE OF ILLINOIS

Da Carl Puzey 9/26/16
Expires 11/30/18

FILE NAME = p:\\IL084SBIDNTEG.illinois.gov\P\IDOT\Documents\IDOT Offices\Districts 3\Projects\05708\DRAWINGS\Structures\ESS\05708;5-sht-Repair	USER NAME = sheneryn	DESIGNED - ESS	REVISED -
	PLOT SCALE = 48.0000 ' / in.	DRAWN - ESS	REVISED -
Default	PLOT DATE = 9/9/2016	CHECKED - DTH	REVISED -
		DATE - 11/7/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
S.N. 010-0014 (WB) & S.N. 010-0015 (EB)

SCALE: | SHEET 1 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	7
		CONTRACT NO. 70B15		
		ILLINOIS FED. AID PROJECT		

PROPOSED WORK

1. Remove and Replace Stage I H.M.A. Wearing Surface Prior to Stage I Traffic.
2. Remove Existing Waterproofing Membrane System and H.M.A. Wearing Surface from Bridge Deck.
3. Remove Existing Waterproofing Membrane System and H.M.A. Wearing Surface from Approach Slabs.
4. Perform Bridge Deck Scarification on Bridge Deck and Approach Slabs.
5. Partial Removal of Deck Ends, Parapets, and Removal of Hatch Block.
6. Removal of Existing Joints.
7. Perform Full-Depth Patching.
8. Replace Existing Bearings with Elastomeric Bearings at Abutments.
9. Place Reinforcement Bars, Locking Edge Rail, and Studs.
10. Pour Deck Ends and Hatch Block.
11. Insert Rubber Strip Seal into Locking Edge Rails.
12. Pour Parapet Ends and Approach Bridge Rail Extensions.
13. Place Latex Concrete Overlay on Bridge Deck and Approach Slabs.
14. Repair Substructure Units-Abutments. Place Traffic Barrier Terminal, Type 6.

TOTAL BILL OF MATERIALS S.N. 010-0014 & S.N. 010-0015

ITEM	UNIT	QUANTITY
BITUMINOUS MATERIAL (TACK COAT)	POUND	329.0
H.M.A. SURFACE COURSE MIX "D", N90	TON	62.0
HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SQ YD	2100.0
CONCRETE REMOVAL	CU YD	19.7
PROTECTIVE SHIELD	SQ YD	410.0
FLOOR DRAINS	EACH	16.0
CONCRETE SUPERSTRUCTURE	CU YD	31.8
BRIDGE DECK GROOVING	SQ YD	1286.0
PROTECTIVE COAT	SQ YD	140.0
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	4210.0
STUD SHEAR CONNECTORS	EACH	224.0
REINFORCEMENT BARS, EPOXY COATED	POUND	4910.0
BAR SPLICERS	EACH	64.0
PREFORMED JOINT STRIP SEAL	FOOT	180.0
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	28.0
ANCHOR BOLTS, 1"	EACH	56.0
TEMPORARY CONCRETE BARRIER	FOOT	1050.0
RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1050.0
IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2.0
IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2.0
PAINT PAVEMENT MARKING - LINE 4 "	FOOT	9120.0
WIDTH RESTRICTION SIGNING	L SUM	1.0
JACK AND REMOVE EXISTING BEARINGS	EACH	28.0
BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/4 INCHES	SQ YD	1279.0
BRIDGE DECK SCARIFICATION 3/4 INCHES	SQ YD	1302.0
STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES	SQ FT	138.0
DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	10.8
DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	62.3
POLYMER CONCRETE	CU FT	6.6
PLUG EXISTING DECK DRAINS	EACH	16.0
TEMPORARY SHORING AND CRIBBING	EACH	4.0

GENERAL NOTES

The deck ends and hatch blocks shall have its final surface tined according to Article 420.09 (e) (1) of the Standard Specifications. Cost to be included with concrete superstructures.

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 work. However, the Contractor will be paid for the quantity actually furnished at the unit price for the work.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

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

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

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.

Joint openings shall be adjusted according to article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50°F.

If the analysis submitted to the contractor for jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hard wood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.

S.N. 010-0014 & 0015 have been determined, through testing, not to involve asbestos in a bituminous bridge deck wearing surface or waterproofing membrane. As certified with BBS Form 2536, Janurary 3, 2003.

Fibers are included in Bridge Deck Latex Concrete overlays.

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D5708[illegible]\Data\Structures\D570815-sht-Repair	USER NAME = sherer.jm	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE -	REVISED -

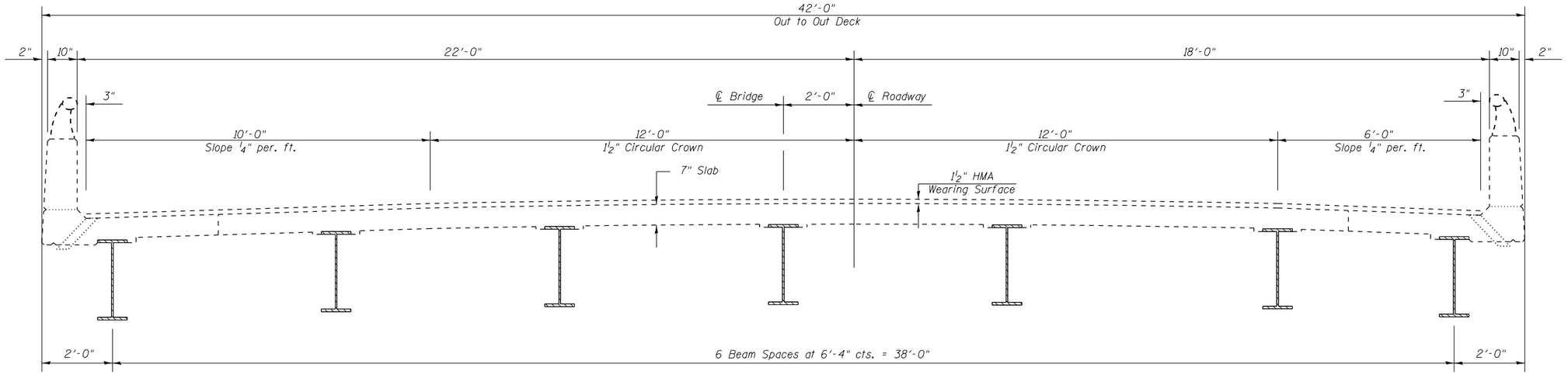
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
S.N. 010-0014 (WB) & S.N. 010-0015 (EB)

SCALE: | SHEET 2 OF 33 SHEETS | STA. | TO STA.

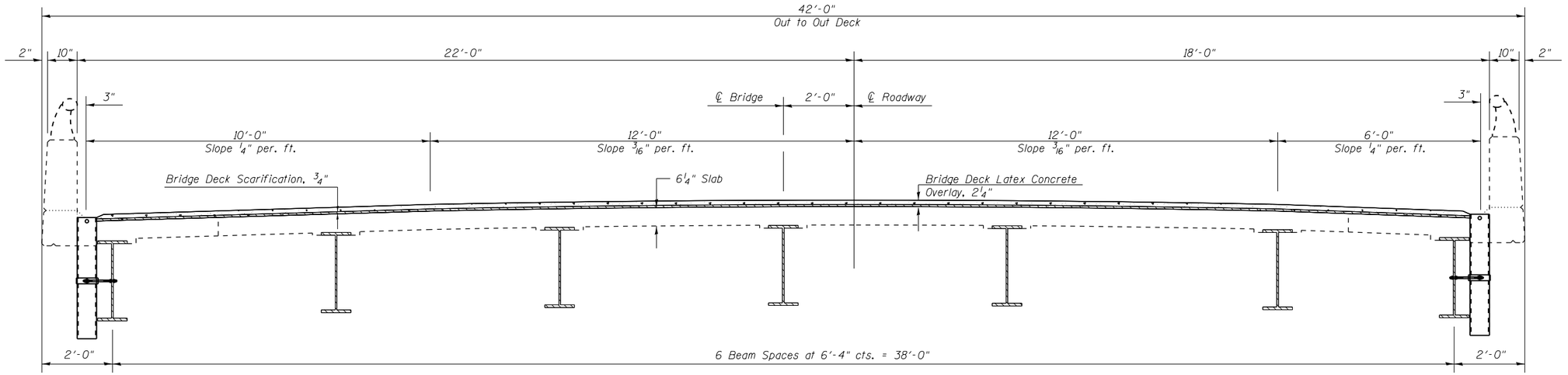
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	8
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

EXISTING DECK CROSS SECTION



Looking East Str. 010-0014
Looking West Str. 010-0015

PROPOSED DECK CROSS SECTION



Looking East Str. 010-0014
Looking West Str. 010-0015

FIBER IS REQUIRED FOR BIRDGE DECK LATEX CONCRETE OVERLAY, 2 1/2"

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structure\D570B15-sht-Repair-Details.dgn	USER NAME = sherer,jm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE - 11/12/2013	REVISED -

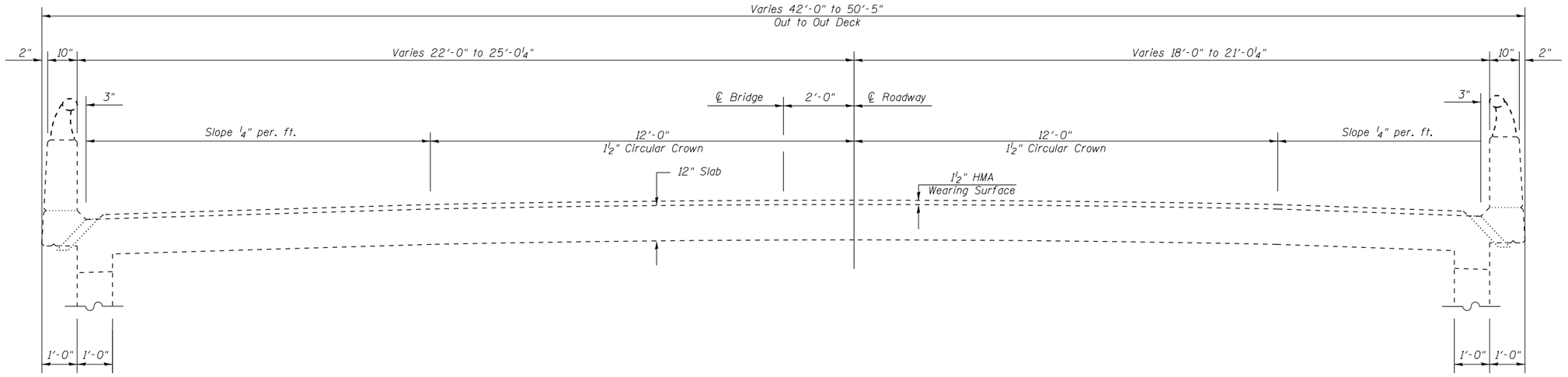
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL DECK CROSS SECTION
S.N. 010-0014 (WB) & 010-0015 (EB)

SCALE: | SHEET 3 OF 33 SHEETS | STA. | TO STA.

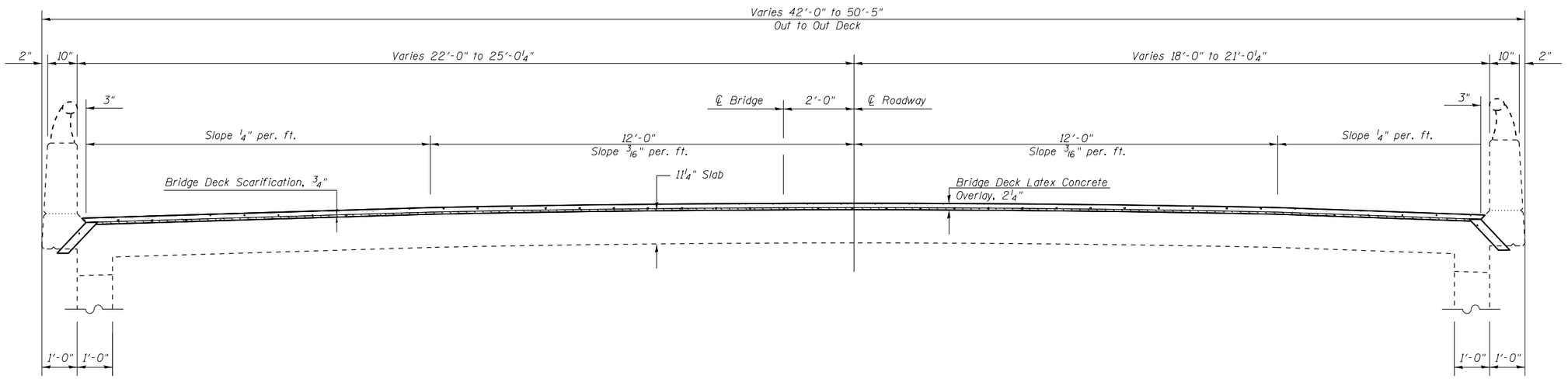
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	9
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

EXISTING APPROACH CROSS SECTION



Looking East Str. 010-0014
Looking West Str. 010-0015

PROPOSED APPROACH CROSS SECTION



Looking East (Departure End) Str. 010-0014
Looking West (Departure End) Str. 010-0015

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DRAWINGData\Structures\D570B15-sht-Repair-Rehab	USER NAME = sherer.jm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE - 11/12/2013	REVISED -

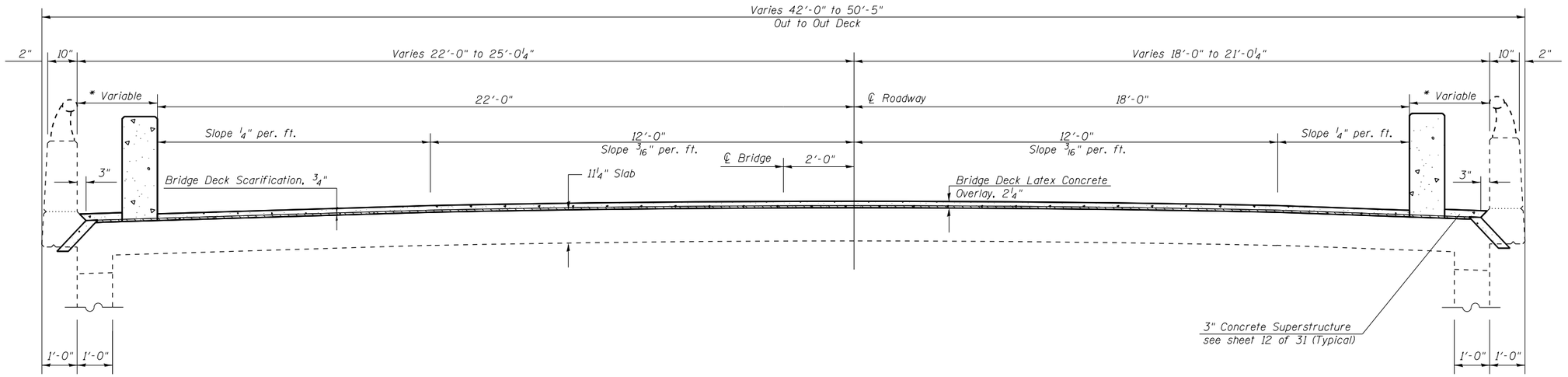
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL APPROACH CROSS SECTION
S.N. 010-0014 (WB) & 010-0015 (EB)

SCALE: | SHEET 4 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	10
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

PROPOSED APPROACH CROSS SECTION



Looking East (Approach End) Str. 010-0014
Looking West (Approach End) Str. 010-0015

NOTE:

- SEE APPROACH PARAPET EXTENSION SHEET 13.

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structure\D570B15-sht-RepairPlan.dgn	USER NAME = sherer.jm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE - 12/27/2013	REVISED -

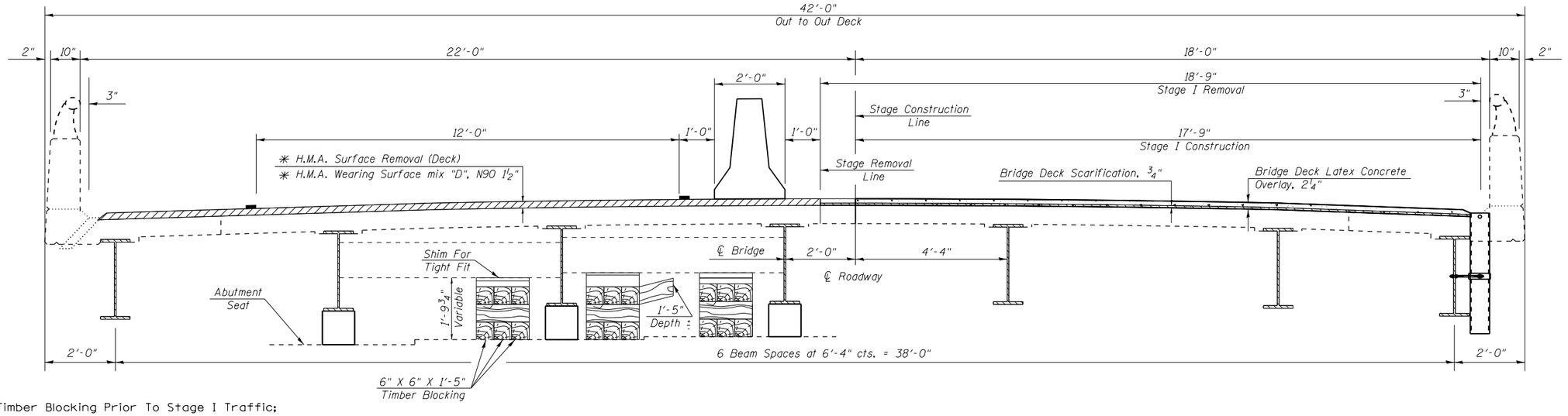
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL APPROACH CROSS SECTION
S.N. 010-0014 (WB) & S.N. 010-0015 (EB)

SCALE: | SHEET 5 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	11
		CONTRACT NO. 70B15		
	ILLINOIS	FED. AID PROJECT		

STAGE I CONSTRUCTION DETAILS
S.N. 010–0014 (WB) & S.N. 010–0015 (EB)



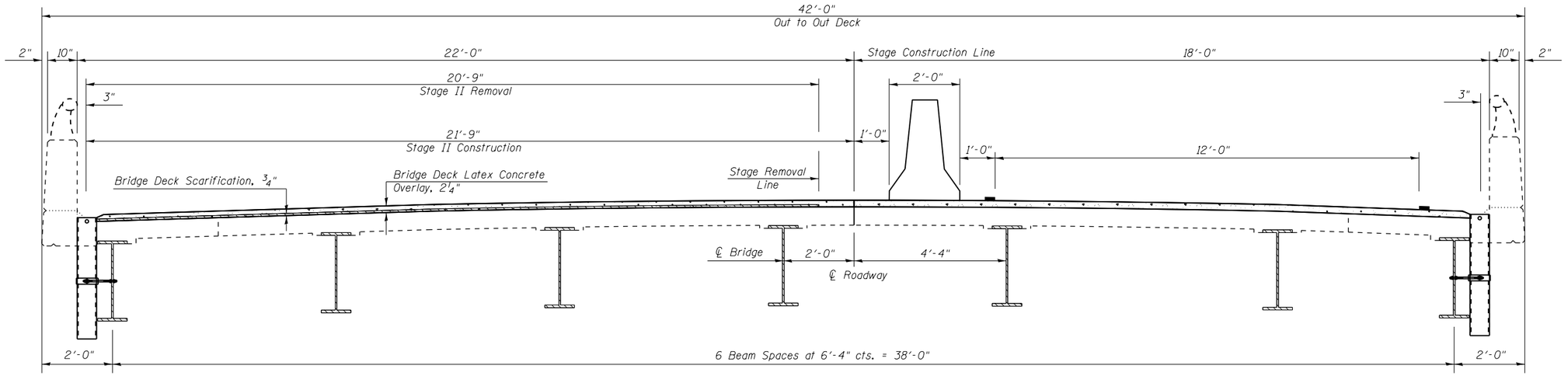
NOTES:

Complete Timber Blocking Prior To Stage I Traffic;
S.N. 010-0015 At West Abutment Only Included With
The Cost Of Furnishing And Erecting Structural Steel.

* H.M.A. Wearing Surface Shall Be Inlayed Prior To Stage I Traffic.

Looking East Str. 010-0014
Looking West Str. 010-0015

STAGE II CONSTRUCTION DETAILS
S.N. 010–0014 (WB) & S.N. 010–0015 (EB)



Looking East Str. 010-0014
Looking West Str. 010-0015

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structure\D570B15-sht-Repair-Revised.dgn	USER NAME = sherer,jm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE - 12/5/2013	REVISED -

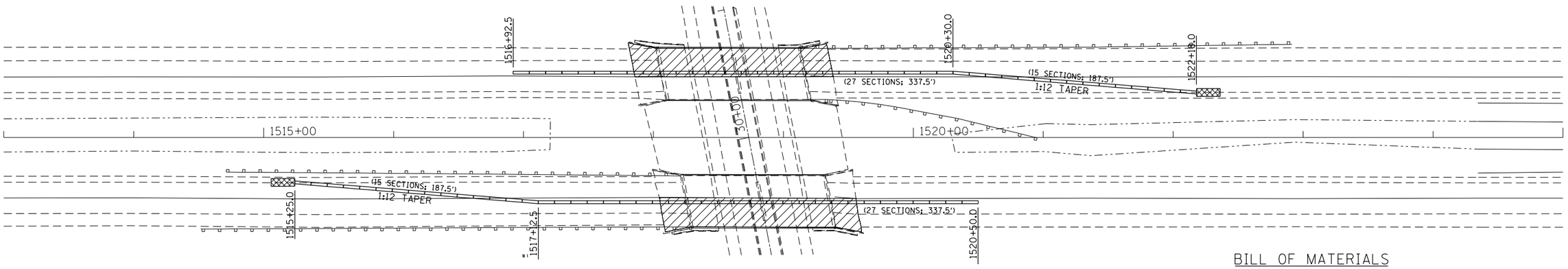
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAIL
S.N. 010–0014 (WB) & S.N. 010–0015 (EB)

SCALE: | SHEET 6 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	12
		CONTRACT NO. 70B15		
	ILLINOIS	FED. AID PROJECT		

TEMPORARY CONCRETE BARRIER LAYOUT–STAGE I
S.N. 010–0014 (WB) & S.N. 010–0015 (EB)



PLAN NOTES:

ALL STAGING DETAILS SHALL BE IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION STANDARDS 701400 AND 701402 AND PAID FOR AT THE CONTRACT UNIT PRICE PER EACH LOCATION.

ALL WORK WITHOUT TEMPORARY CONCRETE BARRIER IN PLACE SHALL BE IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION STANDARDS 701400 AND 701401.

FOR ADDITIONAL DETAILS ASSOCIATED WITH TEMPORARY CONCRETE BARRIER, SEE TRAFFIC CONTROL AND PROTECTION STANDARD 704001.

VERTICAL PANELS WITH LIGHTS AND REFLECTORS SHALL BE ATTACHED AT 25 FOOT CENTERS TO THE BARRIER WALL AND GUARDRAIL. COST INCLUDED WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701402.

REFLECTORIZED TEMPORARY MARKING TAPE SHALL BE PLACED THROUGHOUT THE TAPER, AND ALONGSIDE BOTH SIDES OF THE WORK AREA. EXISTING MARKINGS THAT CONFLICT WITH THE STAGED TRAFFIC MARKINGS SHALL BE REMOVED. COST TO REMOVE EXISTING MARKINGS AND FOR THE PLACEMENT AND REMOVAL OF TEMPORARY MARKINGS SHALL BE INCLUDED WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701402.

PRIOR TO ROUTING TRAFFIC ONTO THE SHOULDERS, THE CONTRACTOR SHALL SECURE ANY GRATES ON SHOULDER INLETS AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE PAID FOR ACCORDING TO ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

PORTABLE CHANGEABLE MESSAGE SIGNS ARE REQUIRED TWO WEEKS PRIOR TO CONSTRUCTION. THE RESIDENT ENGINEER OR TRAFFIC CONTROL SUPERVISOR SHALL PROVIDE AN APPROPRIATE MESSAGE.

BILL OF MATERIALS

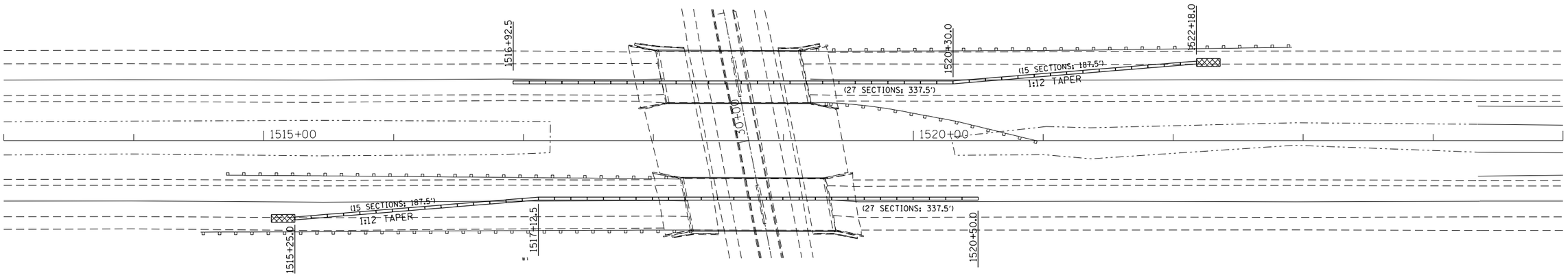
ITEM	UNIT	TOTAL
H.M.A. SURFACE REMOVAL (DECK)	SQ YD	729.0
BITUMINOUS MATERIAL (TACK COAT)	POUND	329.0
HOT-MIX ASPHALT SURFACE COURSE MIX "D", N90	TON	62.0

▨ COMPLETE PRIOR TO STAGE ONE H.M.A. SURFACE REMOVAL (DECK) & H.M.A. SURFACE COURSE MIX "D", N90 1½"

SYMBOLS

- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR

TEMPORARY CONCRETE BARRIER LAYOUT–STAGE II
S.N. 010–0014 (WB) & S.N. 010–0015 (EB)



FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\DRAWINGS\Structure Data\Structure\D570815-sht-Repair-Rehab.dgn	USER NAME = sherer.jm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE - 8-12-2014	REVISED -

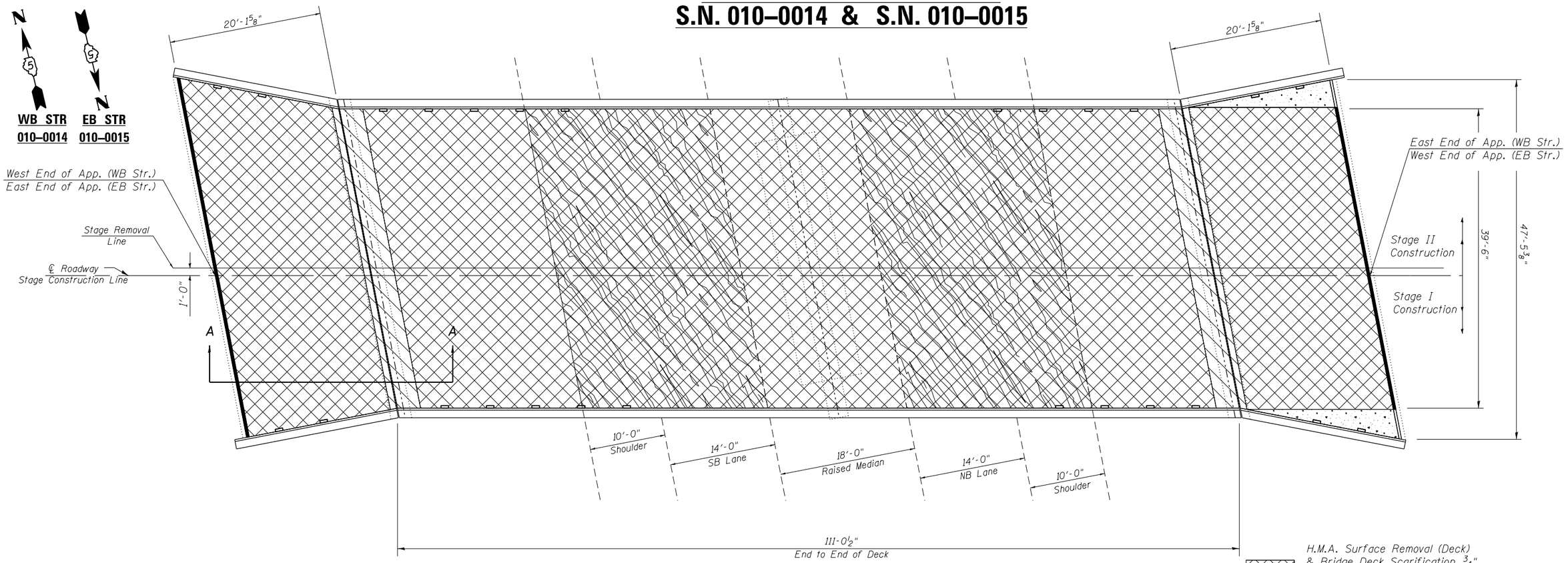
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

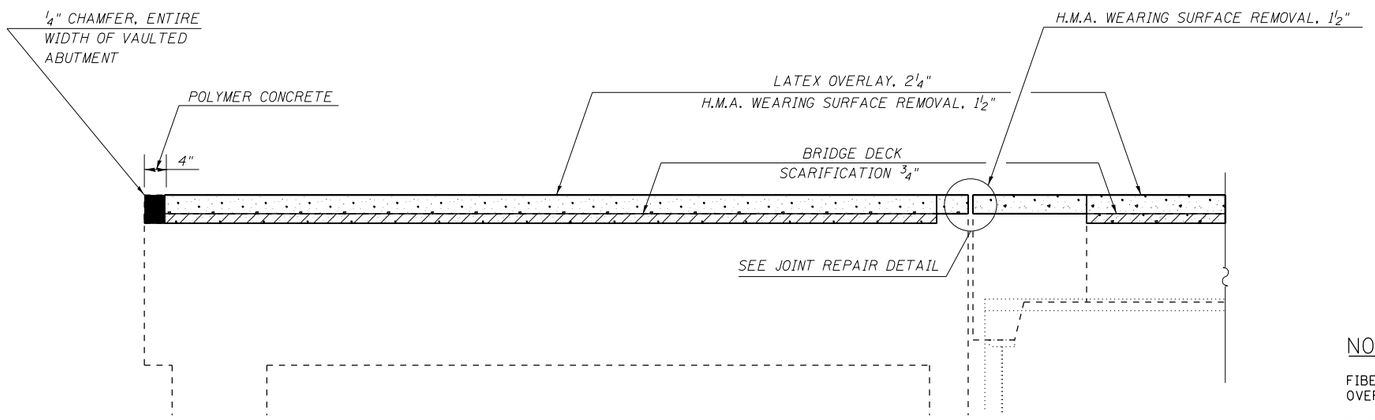
TEMPORARY CONCRETE BARRIER
S.N. 010–0014 & S.N. 010–0015

SCALE: | SHEET 7 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	13
		CONTRACT NO. 70B15		
	ILLINOIS	FED. AID PROJECT		

WEARING SURFACE PLAN
S.N. 010–0014 & S.N. 010–0015





SECTION A-A

H.M.A. Surface Removal (Deck) & Bridge Deck Scarification 3/4" & Bridge Deck Latex Concrete Overlay

H.M.A. Surface Removal (Deck) & Concrete Superstructure

H.M.A. Surface Removal (Deck) Bridge Deck Scarification 3/4" & Concrete Superstructure

Protective Shield

Polymer Concrete

NOTE:

FIBER IS REQUIRED FOR BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/2"

BRIDGE DECK GROOVING SHALL BE DISCONTINUED AT 1'-0" FROM EACH PARAPET. SEE STANDARD SPECIFICATIONS SECTION 503.16 (a)(3)b.

BILL OF MATERIALS

ITEM	UNIT	TOTAL
PROTECTIVE SHIELD	SQ YD	410.0
H.M.A. SURFACE REMOVAL (DECK)	SQ YD	1371.0
BRIDGE DECK GROOVING	SQ YD	1286.0
BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/2"	SQ YD	1279.0
BRIDGE DECK SCARIFICATION 3/4"	SQ YD	1302.0
POLYMER CONCRETE	CU FT	6.6

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DRAWINGS\Structures\D570B15-sht-Repair-Rehab.dgn	USER NAME = shererjm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE - 11/14/2013	REVISED -

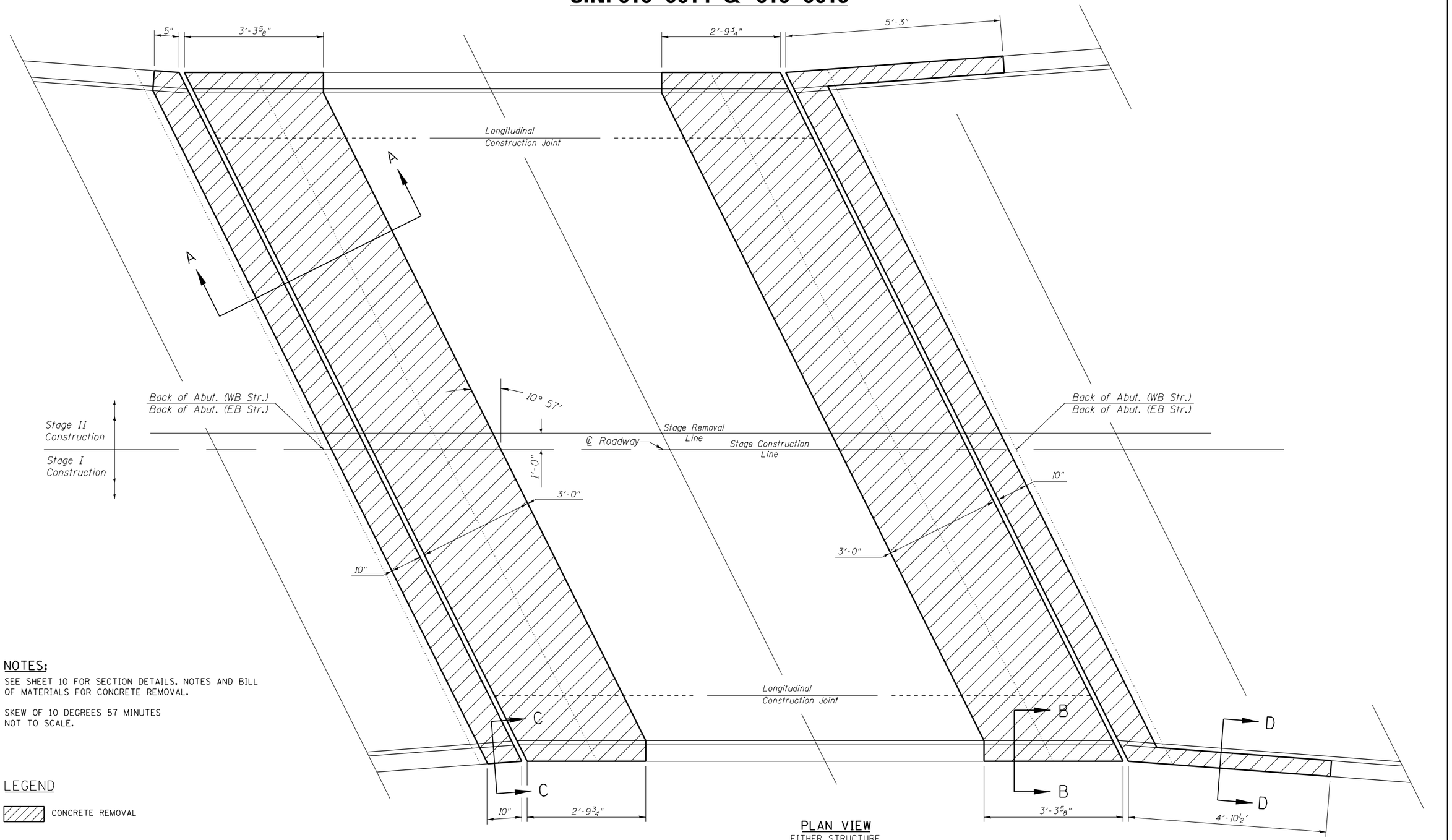
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEARING SURFACE DETAILS
S.N. 010–0014 (WB) & S.N. 010–0015 (EB)

SCALE: | SHEET 8 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	14
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

CONCRETE REMOVAL PLAN
S.N. 010–0014 & 010–0015



PLAN VIEW
EITHER STRUCTURE

NOTES:

SEE SHEET 10 FOR SECTION DETAILS, NOTES AND BILL OF MATERIALS FOR CONCRETE REMOVAL.

SKEW OF 10 DEGREES 57 MINUTES
NOT TO SCALE.

LEGEND

CONCRETE REMOVAL

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DRAWINGS\Structure\D570B15-sht-Repair-PRE.dgn	USER NAME = sherer.jm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE - 12/4/2013	REVISED -

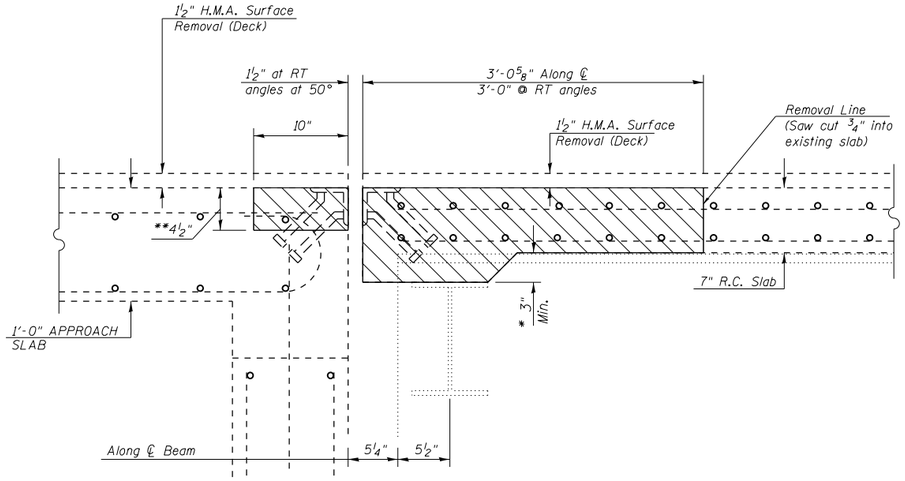
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE PLAN – CONCRETE REMOVAL
S.N. 010–0014 (WB) & S.N. 010–0015 (EB)

SCALE: | SHEET 9 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	15
		CONTRACT NO. 70B15		
	ILLINOIS	FED. AID PROJECT		

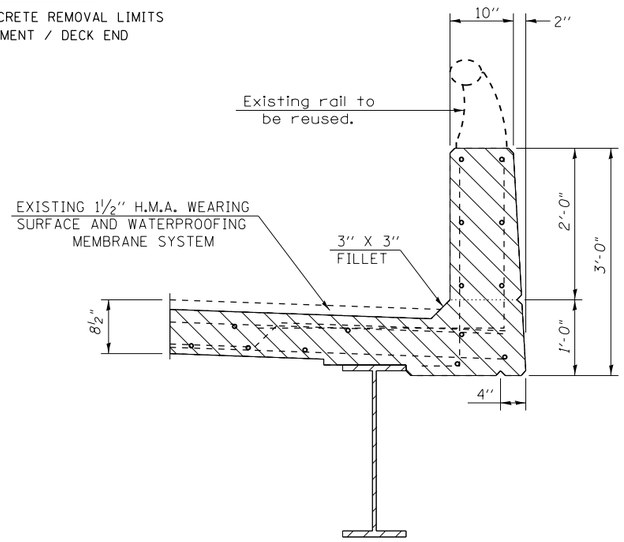
CONCRETE REMOVAL DETAILS
S.N. 010–0014 & S.N. 010–0015



• MINIMUM AT EDGE OF DECK/SLAB
(INCREASES WITH CROSS SLOPE TOWARDS ℄ BRIDGE)
•• EXISTING STEEL ¾" Ø × 8" @ 1'-0" CTS. STUDS SHALL BE CUT OFF AT THE CONCRETE REMOVAL LINE.

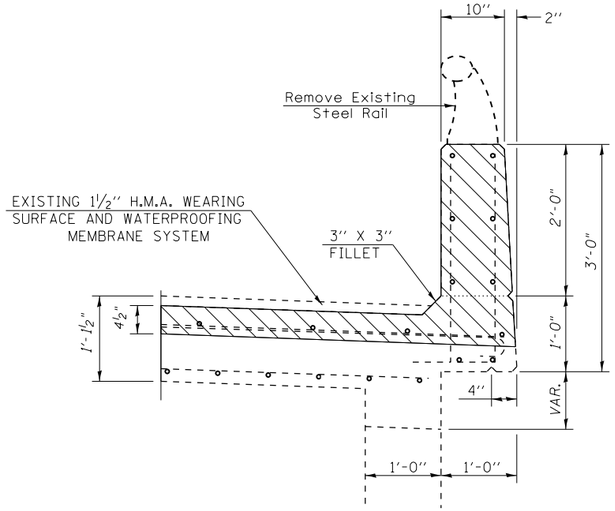
SECTION A-A

SHOWING CONCRETE REMOVAL LIMITS
AT ABUTMENT / DECK END



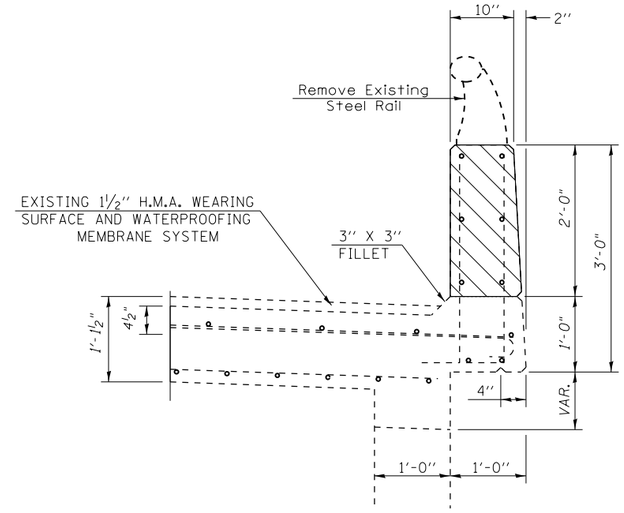
SECTION B-B

DECK CONCRETE REMOVAL
LIMITS AT PARAPET



SECTION C-C

APPROACH CONCRETE REMOVAL
LIMITS AT PARAPET



SECTION D-D

APPROACH CONCRETE REMOVAL
LIMITS AT PARAPET

NOTES:

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.

THE EXISTING EXPANSION JOINT SYSTEMS SHALL BE REMOVED COMPLETELY, AS WELL AS ANY FOREIGN MATERIAL THAT HAS ACCUMULATED OR BEEN PLACED IN THE JOINT OPENINGS. THE COST FOR THIS WORK IS INCLUDED IN CONCRETE REMOVAL AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

THE COST OF CUTTING THE EXISTING STEEL ¾" Ø × 8" STUDS AT THE CONCRETE REMOVAL LINE SHALL BE INCLUDED IN THE COST OF CONCRETE REMOVAL AND NO ADDITIONAL COMPENSTATION WILL BE ALLOWED.

THE RAIL POSTS WITHIN THE PARAPET REPAIR AND REMOVAL AND REPLACEMENT LIMITS SHALL BE REMOVED TO ALLOW FOR THE REPAIR WORK TO BE COMPLETED. FOLLOWING COMPLETION OF THE PARAPET ENDS, THE CONTRACTOR TO EITHER SAVE AND REUSE THE EXISTING CAST-IN-PLACE ANCHOR SYSTEM OR USE EPOXY-GROUTED THREADED RODS. THE COST OF THIS WORK SHALL BE INCLUDED IN CONCRETE SUPERSTRUCTURES. SEE AS-BUILT PLANS FOR ALUMINUM RAILING DETAL.

BILL OF MATERIALS

ITEM	UNIT	TOTAL
CONCRETE REMOVAL	CU YD	19.7

Concrete Removal

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\DrawingData\Structure\D570815-sht-Repair-Revised.dgn	USER NAME = sherer.jm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE - 11/19/2013	REVISED -

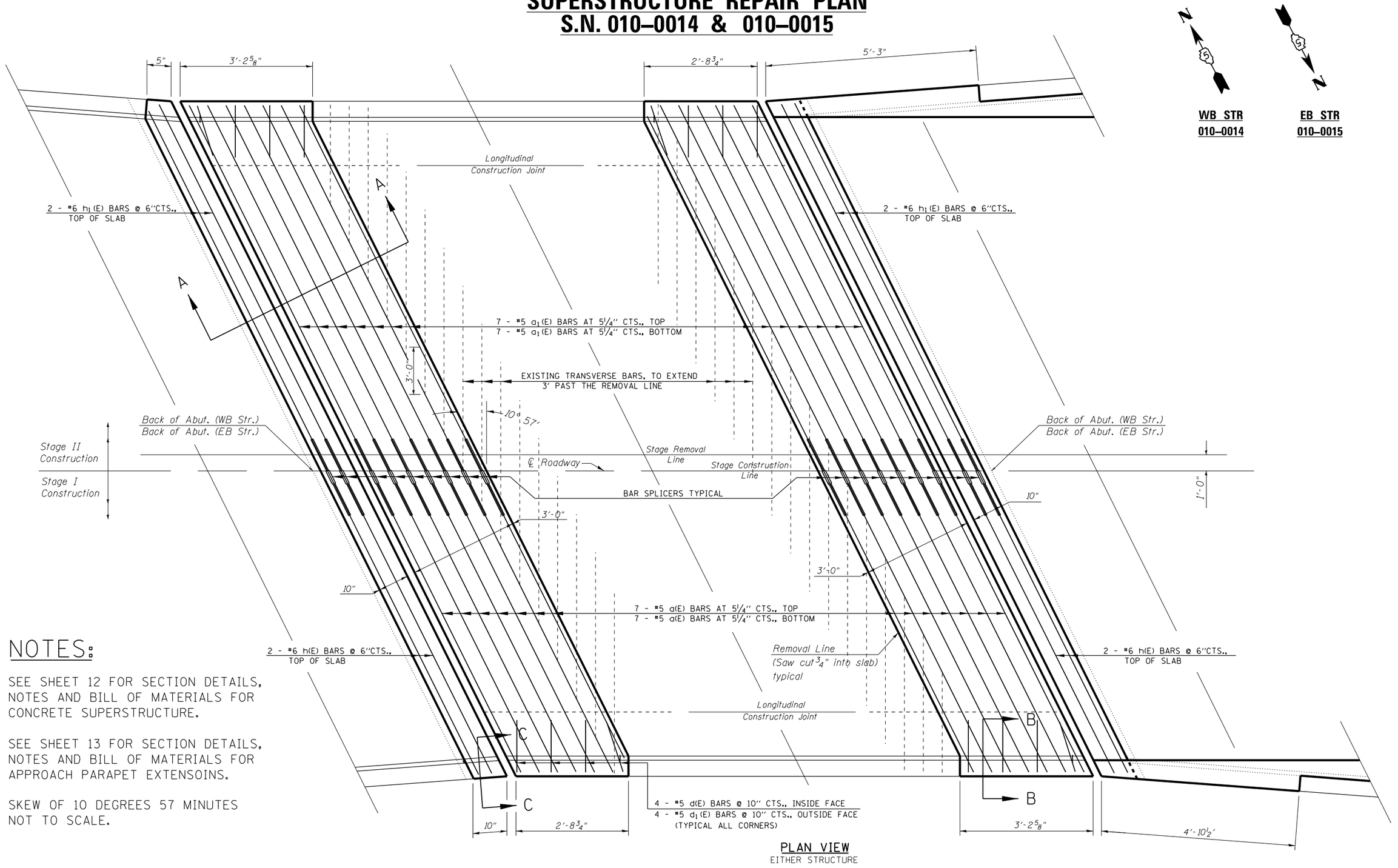
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONCRETE REMOVAL DETAILS
S.N. 010–0014 (WB) & S.N. 010–0015 (EB)

SCALE: | SHEET 10 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	16
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

SUPERSTRUCTURE REPAIR PLAN
S.N. 010–0014 & 010–0015



NOTES:

SEE SHEET 12 FOR SECTION DETAILS, NOTES AND BILL OF MATERIALS FOR CONCRETE SUPERSTRUCTURE.

SEE SHEET 13 FOR SECTION DETAILS, NOTES AND BILL OF MATERIALS FOR APPROACH PARAPET EXTENSOINS.

SKEW OF 10 DEGREES 57 MINUTES
NOT TO SCALE.

PLAN VIEW
EITHER STRUCTURE

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DRAWINGS\Data\Structure\D570B15-sht-Repair-Plan.dgn	USER NAME = shererjm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
Default	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE - 12/6/2013	REVISED -

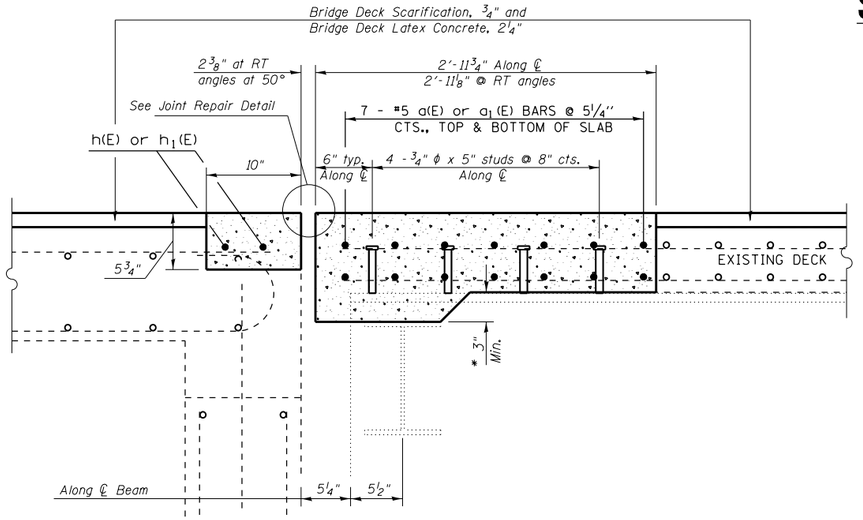
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE REPAIR PLAN
S.N. 010–0014 & S.N. 010–0015

SCALE: | SHEET 11 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	17
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

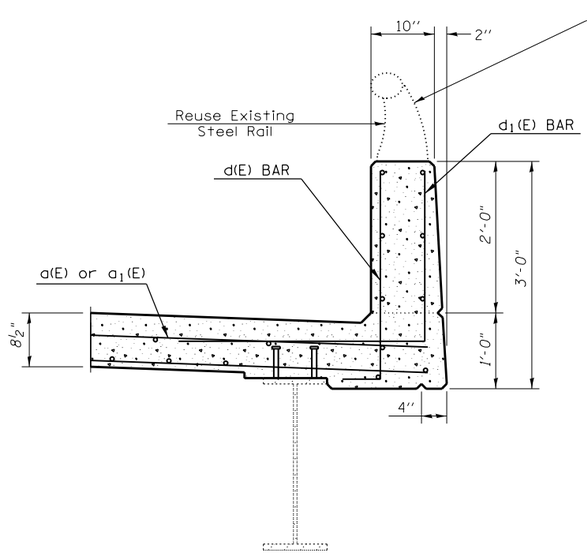
SUPERSTRUCTURE REPAIR DETAILS
S.N. 010–0014 & S.N. 010–0015



• MINIMUM AT EDGE OF DECK/SLAB
(INCREASES WITH CROSS SLOPE TOWARDS ℄ BRIDGE)

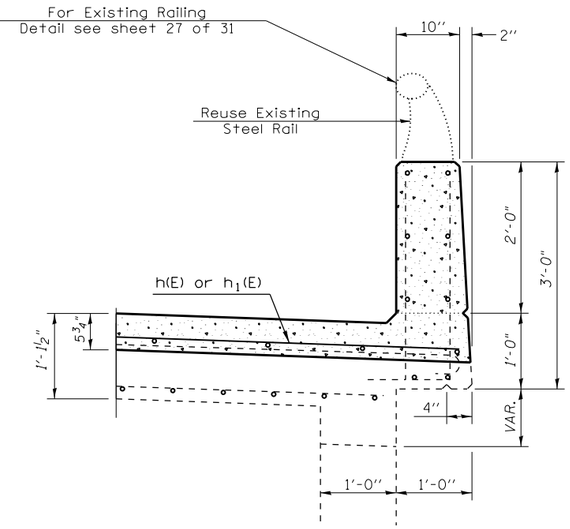
SECTION A-A

SHOWING CONCRETE REMOVAL LIMITS
AT ABUTMENT / DECK END



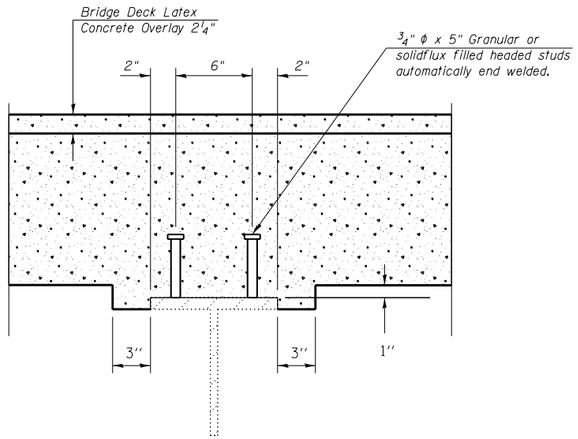
SECTION B-B

DECK CONCRETE REMOVAL
LIMITS AT PARAPET



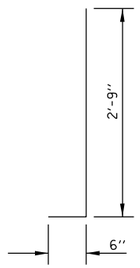
SECTION C-C

APPROACH CONCRETE REMOVAL
LIMITS AT PARAPET

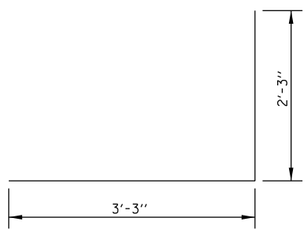


SECTION AT BEAM END

(ALL BEAMS 27WF-114)



BAR d(E)



BAR d1(E)

NOTES

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.

COST OF RE-ATTACHMENT OF EXISTING RAIL INCLUDED WITH CONCRETE SUPERSTRUCTURE.

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	56	#5	19'-2"	——
a1(E)	56	#5	23'-3"	——
h(E)	8	#6	19'-2"	——
h1(E)	8	#6	23'-3"	——
d(E)	32	#5	3'-3"	⌋
d1(E)	32	#5	5'-6"	⌋

REINFORCEMENT BARS (EPOXY COATED)	POUND	3280.0
CONCRETE SUPERSTRUCTURE	CU YD	19.7
PROTECTIVE COAT	SQ YD	76.0
BAR SPLICERS	EACH	64.0

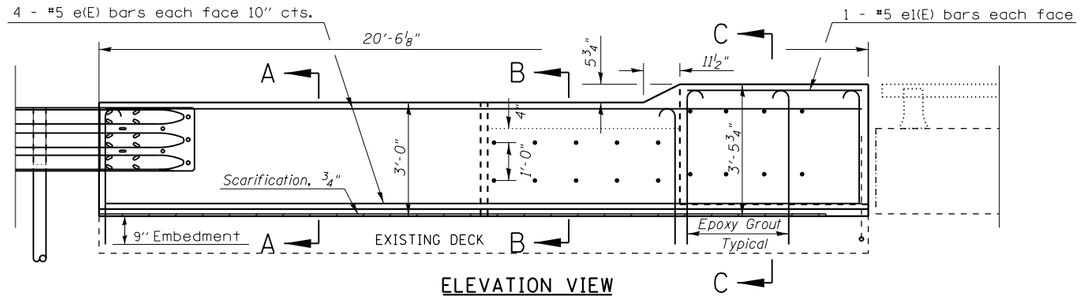
FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\DrawingData\Structure\D570815-sht-Repair-Details.dgn	USER NAME = shererjm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE - 12/6/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE REPAIR DETAILS
S.N. 010–0014 & S.N. 010–0015

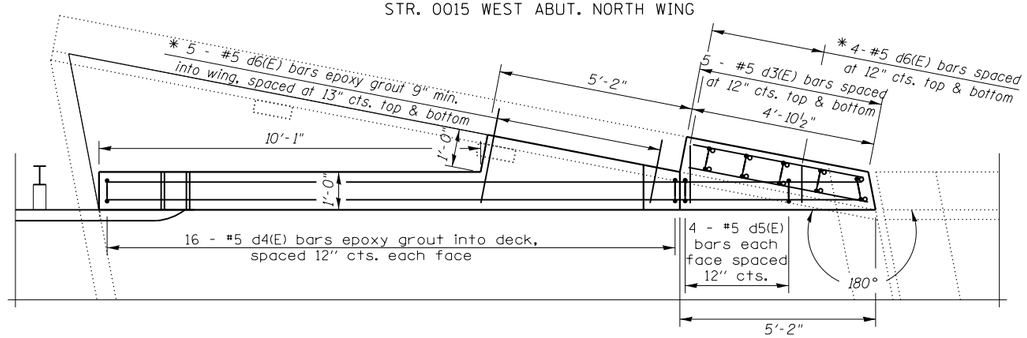
SCALE: | SHEET 12 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	18
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			



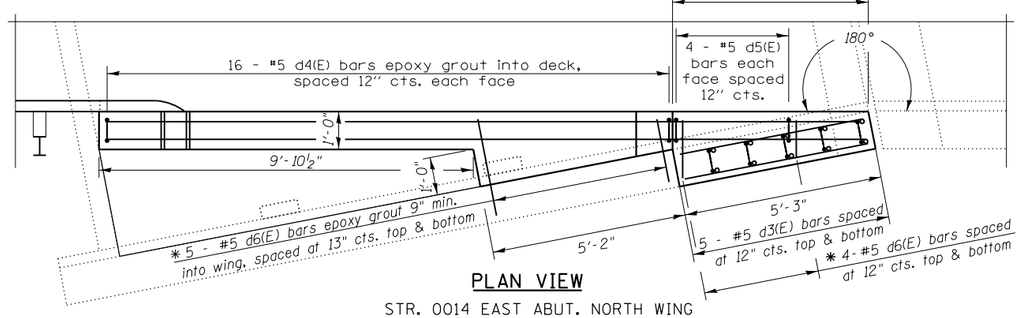
ELEVATION VIEW

STR. 0014 EAST ABUT. SOUTH WING
STR. 0015 WEST ABUT. NORTH WING



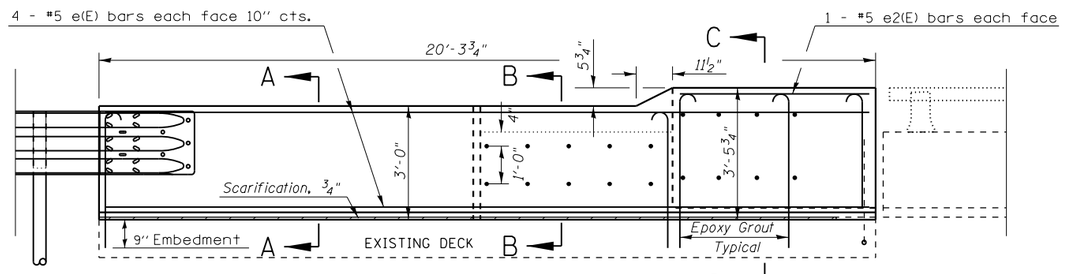
PLAN VIEW

STR. 0014 EAST ABUT. SOUTH WING
STR. 0015 WEST ABUT. NORTH WING



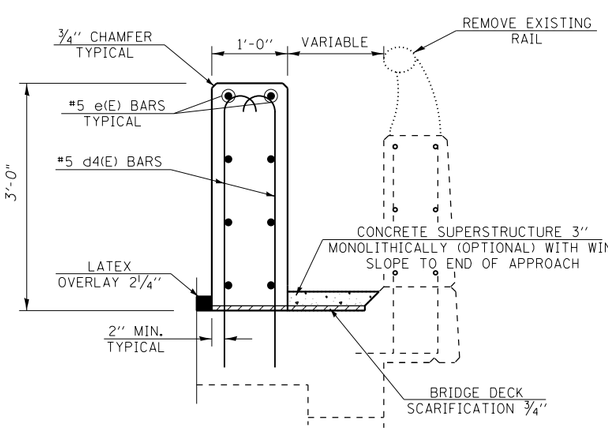
PLAN VIEW

STR. 0014 EAST ABUT. NORTH WING
STR. 0015 WEST ABUT. SOUTH WING

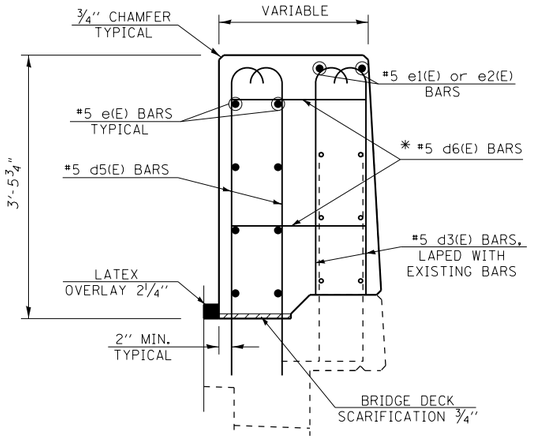


ELEVATION VIEW

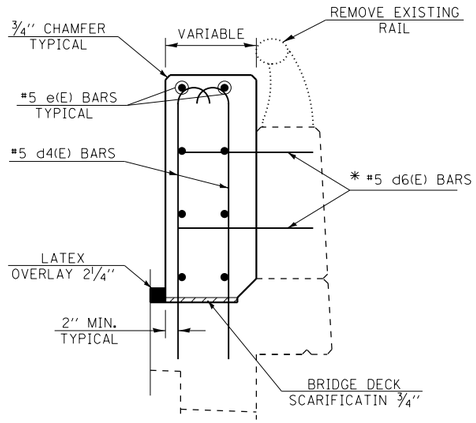
STR. 0014 EAST ABUT. NORTH WING
STR. 0015 WEST ABUT. SOUTH WING



SECTION A-A



SECTION C-C



SECTION B-B

NOTES

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 WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

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.

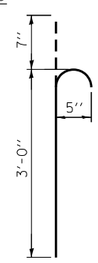
d4(E), d5(E) and d6(E) BARS TO BE DRILLED AND EPOXY GROUTED PER ARTICLE 584 OF THE STANDARD SPECIFICATIONS IF REQUIRED. COST INCLUDED WITH REINFORCEMENT BARS. EPOXY COATED.

* ORDER d6(E) BARS IN THIS AREA 3'-7". USE CUT DIAGRAM TO ESTABLISH BOTH ROWS OF BARS.

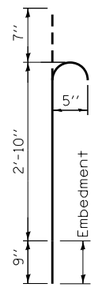
REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

BILL OF MATERIAL

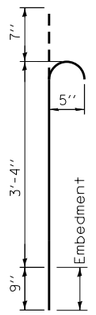
BAR	NO.	SIZE	LENGTH	SHAPE
e(E)	32	#5	20'-0''	——
e1(E)	4	#5	4'-6''	——
e2(E)	4	#5	4'-11''	——
d3(E)	40	#5	3'-7''	⌒
d4(E)	128	#5	4'-2''	⌒
d5(E)	16	#5	4'-8''	⌒
d6(E)	36	#5	3'-7''	——
REINFORCEMENT BARS (EPOXY COATED)	POUND		1630.0	
CONCRETE SUPERSTRUCTURE	CU YD		12.1	
PROTECTIVE COAT	SQ YD		48.0	



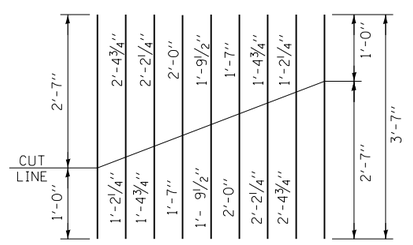
BAR d3(E)



BAR d4(E)



BAR d5(E)



* CUT DIAGRAM
BAR d6(E)

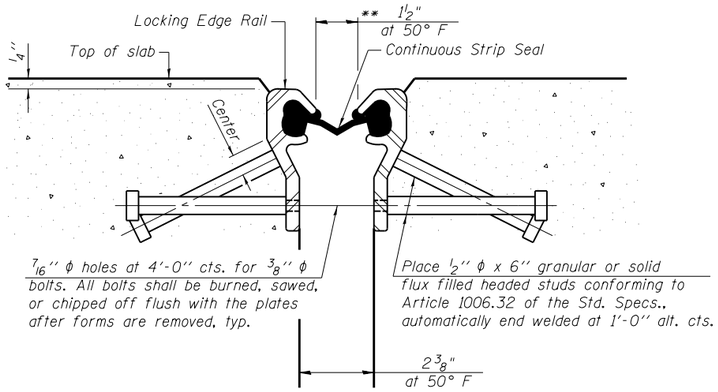
FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D5708\DRAWINGS\Data\Structure\D570815-sht-Repair	USER NAME = sherer.jm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 '/ in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE - 12/18/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

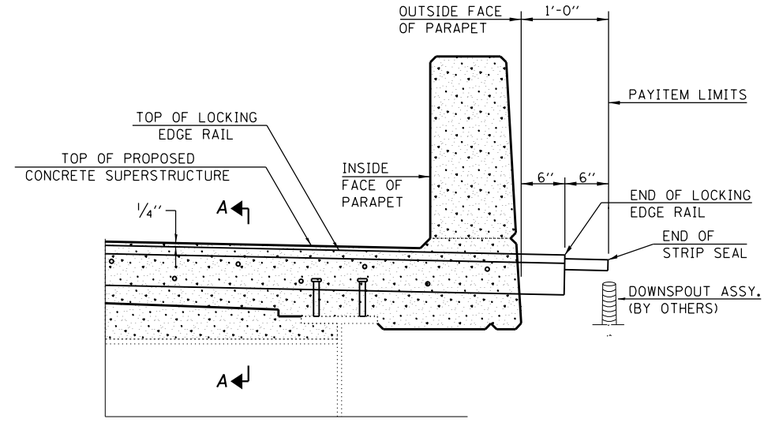
APPROACH PARAPET EXTENSIONS
S.N. 010-0014 & S.N. 010-0015

SCALE: | SHEET 13 OF 331 SHEETS | STA. | TO STA.

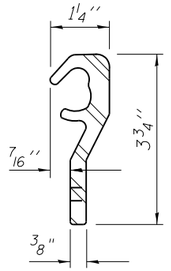
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	19
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			



SECTION THRU EXPANSION STRIP SEAL JOINT



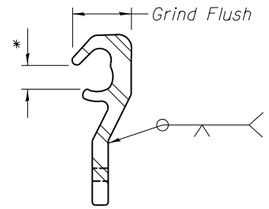
SECTION THRU PARAPET



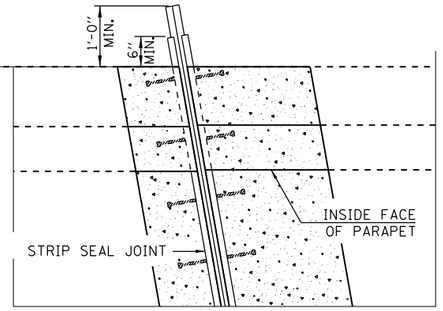
ROLLED (EXTRUDED) RAIL

* OMIT WELD AT SEAL OPENING.

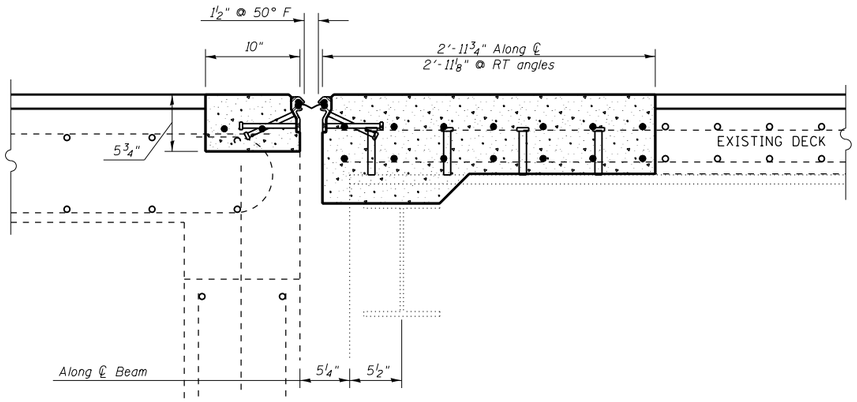
** THE MINIMUM DIMENSION SHALL BE 1½" FOR INSTALLATION PURPOSES.



LOCKING EDGE RAIL SPLICE



PLAN VIEW AT PARAPET



SECTION A-A

NOTES:

THE STRIP SEAL SHALL BE MADE CONTINUOUS AND SHALL HAVE A MINIMUM THICKNESS OF ¼". THE CONFIGURATION OF THE STRIP SEAL SHALL MATCH THE CONFIGURATION OF THE LOCKING EDGE RAILS.

THE LOCKING EDGE RAILS DEPICTED ARE CONCEPTUAL ONLY, EXCEPT FOR THE MINIMUM DIMENSIONS SHOWN. 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. LOCKING EDGE RAILS MAY BE SPLICED AT SLOPE DISCONTINUITIES AND STAGE CONSTRUCTION JOINTS. THE INSIDE OF THE LOCKING EDGE RAIL GROVE SHALL BE FREE OF WELD RESIDUE.

THE MANUFACTURER'S RECOMMENDED INSTALLATION METHODS SHALL BE FOLLOWED.

ALL STEEL COMPONENTS SHALL BE GALVANIZED AFTER FABRICATION ACCORDING TO ARTICLE 520.03 OF THE STANDARD SPECIFICATIONS.

MAXIMUM SPACE BETWEEN RAIL SEGMENTS AT STAGE LINES SHALL BE 3/16", SEALED WITH A SUITABLE SEALANT. JOINTS IN RAILS WITHIN 10 FT. OF CURBS SHALL BE WELDED.

LOCKING EDGE RAILS ARE TO BE PLACED ¼" BELOW THE DECK ELEVATION THROUGH THE MEDIAN. STOP RAISED MEDIAN 3" SHORT OF DECK ENDS AND 3" SHORT OF FACE OF ABUTMENTS.

SEE SUPERSTRUCTURE REPAIR DETAILS FOR REINFORCEMENT REQUIRED.

BILL OF MATERIALS

ITEM	UNIT	TOTAL
PREFORMED JOINT STRIP SEAL	FOOT	180.0

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\DRAWING Data\Structures\D570815-sht-Repair Details	USER NAME = sherer.jm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE - 12/26/2013	REVISED -

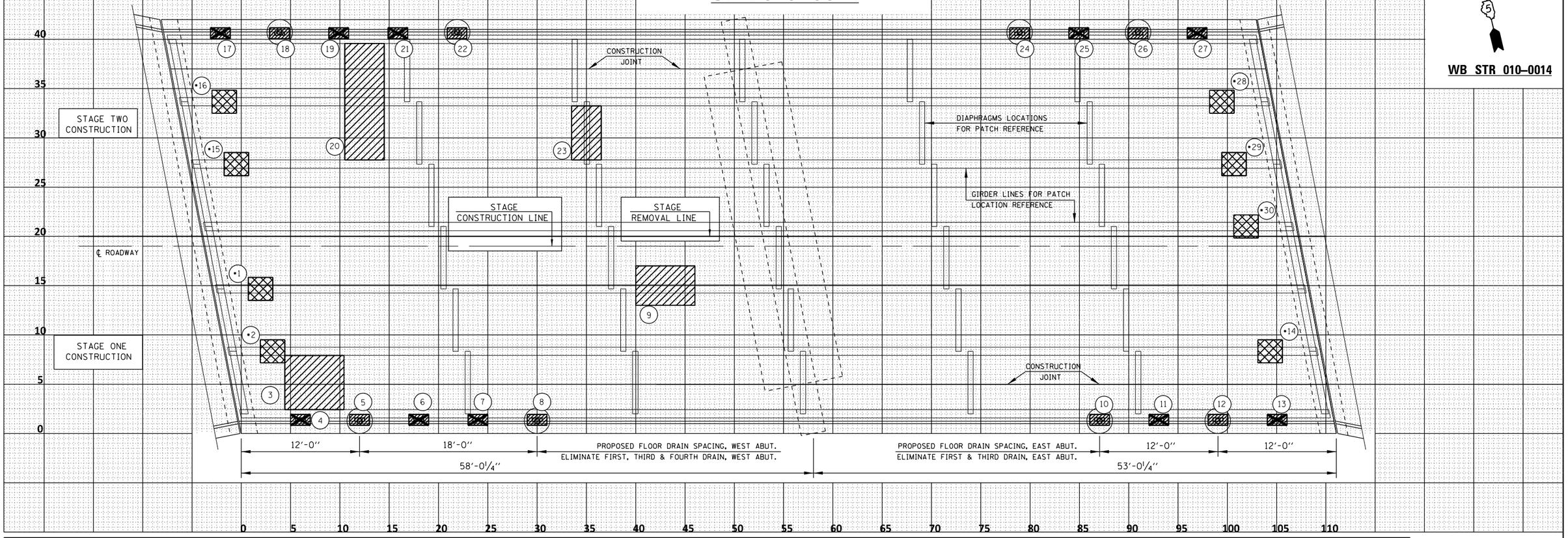
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL DETAILS
S.N. 010-0014 & S.N. 010-0015

SCALE: | SHEET 14 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	20
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

BRIDGE DECK PATCHING
S.N. 010–0014



PATCH NO.	SIZE		DECK SLAB REPAIR (PARTIAL DEPTH)	DECK SLAB REPAIR (FULL DEPTH T1)	DECK SLAB REPAIR (FULL DEPTH T2)
	LENGTH (FT)	WIDTH (FT)	SQ YD	SQ YD	SQ YD
•1	2.50	2.33			0.6
•2	2.50	2.33			0.6
3	6.00	5.50			3.7
4	2.00	1.20		0.3	
5	2.00	1.20		0.3	
6	2.00	1.20		0.3	
7	2.00	1.20		0.3	
8	2.00	1.20		0.3	
9	6.00	6.00			4.0
10	2.00	1.20		0.3	
11	2.00	1.20		0.3	
12	2.00	1.20		0.3	
13	2.00	1.20		0.3	
•14	2.50	2.33			0.6

PATCH NO.	SIZE		DECK SLAB REPAIR (PARTIAL DEPTH)	DECK SLAB REPAIR (FULL DEPTH T1)	DECK SLAB REPAIR (FULL DEPTH T2)
	LENGTH (FT)	WIDTH (FT)	SQ YD	SQ YD	SQ YD
•15	2.50	2.33			0.6
•16	2.50	2.33			0.6
17	2.00	1.20		0.3	
18	2.00	1.20		0.3	
19	2.00	1.20		0.3	
20	4.00	11.80			5.2
21	2.00	1.20		0.3	
22	2.00	1.20		0.3	
23	3.00	5.50			1.8
24	2.00	1.20		0.3	
25	2.00	1.20		0.3	
26	2.00	1.20		0.3	
27	2.00	1.20		0.3	
•28	2.50	2.33			0.6
•29	2.50	2.33			0.6
•30	2.50	2.33			0.6

NOTES:

- PATCH SIZE TO REMOVE TIE DOWNS TO BE DETERMINED BY FIELD CONDITIONS.

BILL OF MATERIALS

ITEM	UNIT	TOTAL
DECK SLAB REPAIR (FULL DEPTH, TY I)	SQ YD	5.4
DECK SLAB REPAIR (FULL DEPTH, TY II)	SQ YD	19.5

LEGEND

- DECK SLAB REPAIR (FULL-DEPTH)
- REMOVE DECK TIE DOWNS; DECK SLAB REPAIR (FULL-DEPTH)
- EXISTING DECK DRAINS (TO BE ELIMINATED)
- EXISTING DECK DRAINS (TO BE REPLACED WITH FLOOR DRAINS)

DECK SURVEY PERFORMED ON NOVEMBER 21, 2013. IF MORE THAN ONE WINTER FREEZE-THAW CYCLE OCCURS BETWEEN THE INITIAL INSPECTION AND THE COMMENCEMENT OF WORK, THE FINAL PLAN QUANTITIES FOR DECK REPAIRS MUST BE BASED ON A NEW INSPECTION OF THE DECK.

THE LOCATIONS AND SIZES SHOWN GRAPHICALLY ABOVE ARE APPROXIMATE. SEE THIS TABLE FOR ACTUAL SIZES.

METHOD OF SURVEY: VISUAL

BRIDGE DECK PATCHING
CHAMPAIGN COUNTY
FAI 74
OVER IL 47
WESTBOUND LANE

S.N. 010-0014

14

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\Data\Structures\D570B15-sht-RepairPlan.dgn	USER NAME = sherer.jm	DESIGNED - ESS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	DRAWN - ESS	REVISED -
	PLOT DATE = 8/8/2016	CHECKED -	REVISED -
		DATE - 12/5/2013	REVISED -

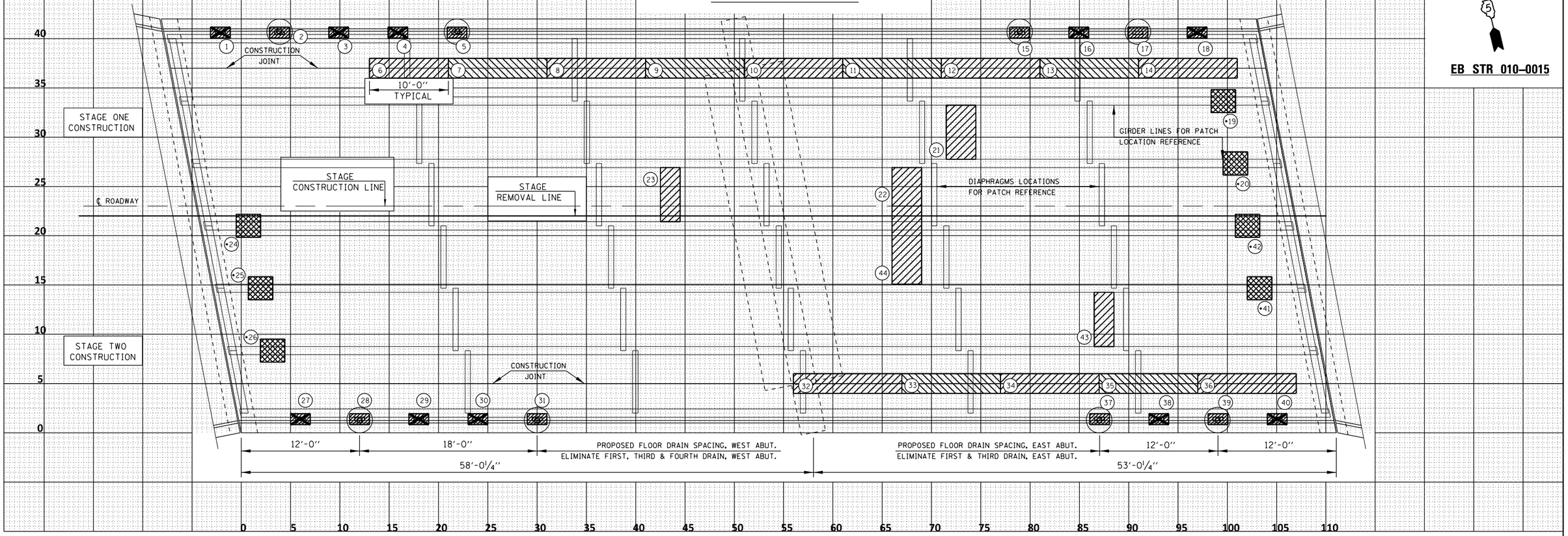
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE DECK PATCHING
S.N. 010–0014

SCALE: | SHEET NO. 15 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	21
		CONTRACT NO. 70B15		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BRIDGE DECK PATCHING
S.N. 010–0015



PATCH NO.	SIZE		DECK SLAB REPAIR (PARTIAL DEPTH)	DECK SLAB REPAIR (FULL DEPTH T1)	DECK SLAB REPAIR (FULL DEPTH T2)
	LENGTH (FT)	WIDTH (FT)	SQ YD	SQ YD	SQ YD
1	2.00	1.20		0.3	
2	2.00	1.20		0.3	
3	2.00	1.20		0.3	
4	2.00	1.20		0.3	
5	2.00	1.20		0.3	
6	10.00	2.00			2.2
7	10.00	2.00			2.2
8	10.00	2.00			2.2
9	10.00	2.00			2.2
10	10.00	2.00			2.2
11	10.00	2.00			2.2
12	10.00	2.00			2.2
13	10.00	2.00			2.2
14	10.00	2.00			2.2
15	2.00	1.20		0.3	
16	2.00	1.20		0.3	
17	2.00	1.20		0.3	

PATCH NO.	SIZE		DECK SLAB REPAIR (PARTIAL DEPTH)	DECK SLAB REPAIR (FULL DEPTH T1)	DECK SLAB REPAIR (FULL DEPTH T2)
	LENGTH (FT)	WIDTH (FT)	SQ YD	SQ YD	SQ YD
18	2.00	1.20		0.3	
•19	2.50	2.33			0.6
•20	2.50	2.33			0.6
21	3.00	5.50			1.8
22	3.00	4.00			1.3
23	2.00	5.50			1.2

PATCH NO.	SIZE		DECK SLAB REPAIR (PARTIAL DEPTH)	DECK SLAB REPAIR (FULL DEPTH T1)	DECK SLAB REPAIR (FULL DEPTH T2)
	LENGTH (FT)	WIDTH (FT)	SQ YD	SQ YD	SQ YD
•24	2.50	2.33			0.6
•25	2.50	2.33			0.6
•26	2.50	2.33			0.6
27	2.00	1.20		0.3	
28	2.00	1.20		0.3	
29	2.00	1.20		0.3	
30	2.00	1.20		0.3	
31	2.00	1.20		0.3	
32	10.00	2.00			2.2
33	10.00	2.00			2.2
34	10.00	2.00			2.2
35	10.00	2.00			2.2
36	10.00	2.00			2.2
37	2.00	1.20		0.3	
38	2.00	1.20		0.3	
39	2.00	1.20		0.3	
40	2.00	1.20		0.3	

PATCH NO.	SIZE		DECK SLAB REPAIR (PARTIAL DEPTH)	DECK SLAB REPAIR (FULL DEPTH T1)	DECK SLAB REPAIR (FULL DEPTH T2)
	LENGTH (FT)	WIDTH (FT)	SQ YD	SQ YD	SQ YD
•41	2.50	2.33			0.6
•42	2.50	2.33			0.6
43	2.00	5.50			1.2
44	3.00	7.00			2.3

NOTES:

- PATCH SIZE TO REMOVE TIE DOWNS TO BE DETERMINED BY FIELD CONDITIONS.

LONGITUDINAL REMOVAL FOR DECK SLAB REPAIR ALONG THE CONSTRUCTION JOINT MUST BE DONE IN ALTERNATING SECTIONS OF NO MORE THAN 10 FEET. ADJACENT SECTIONS MUST NOT BE REMOVED UNTIL BOTH OF THE FOLLOWING REQUIREMENTS ARE MET:

1. AT LEAST 72 HOURS SHALL HAVE ELAPSED FROM THE END OF THE PREVIOUS POUR, AND
2. THE CONCRETE SHALL HAVE ATTAINED A MINIMUM MODULUS OF RUPTURE OF 650 PSI OR A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI.

LEGEND

- DECK SLAB REPAIR (FULL-DEPTH) PHASE I
- DECK SLAB REPAIR (FULL-DEPTH) PHASE II
- REMOVE DECK TIE DOWNS; DECK SLAB REPAIR (FULL-DEPTH)
- EXISTING DECK DRAINS (TO BE ELIMINATED)
- EXISTING DECK DRAINS (TO BE REPLACED WITH FLOOR DRAINS)

DECK SURVEY PERFORMED ON NOVEMBER 21, 2013. IF MORE THAN ONE WINTER FREEZE-THAW CYCLE OCCURS BETWEEN THE INITIAL INSPECTION AND THE COMMENCEMENT OF WORK, THE FINAL PLAN QUANTITIES FOR DECK REPAIRS MUST BE BASED ON A NEW INSPECTION OF THE DECK.

BILL OF MATERIALS

ITEM	UNIT	TOTAL
DECK SLAB REPAIR (FULL DEPTH, TY I)	SQ YD	5.4
DECK SLAB REPAIR (FULL DEPTH, TY II)	SQ YD	42.8

THE LOCATIONS AND SIZES SHOWN GRAPHICALLY ABOVE ARE APPROXIMATE. SEE THIS TABLE FOR ACTUAL SIZES.

METHOD OF SURVEY: VISUAL

BRIDGE DECK PATCHING
CHAMPAIGN COUNTY
FAI 74
OVER IL 47
EASTBOUND LANE

S.N. 010-0015

15

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D5708[illegible]\Data\Structures\D570815-sht-RepairPlan.dgn	USER NAME = sherer.jm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE - 12/10/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

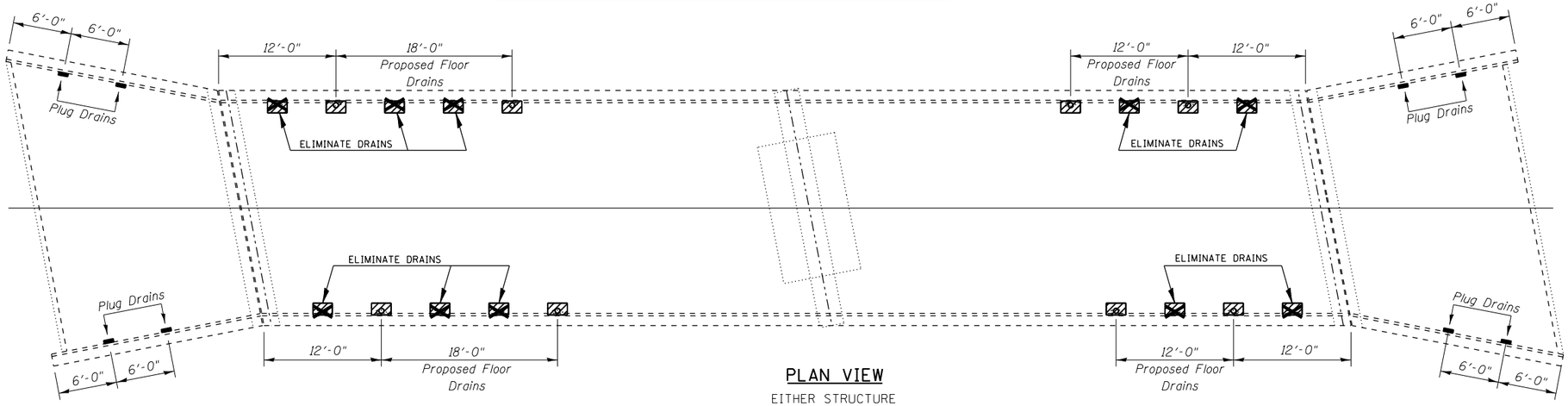
BRIDGE DECK PATCHING
S.N. 010–0015

SCALE: | SHEET NO. 16 OF 33 SHEETS | STA. | TO STA.

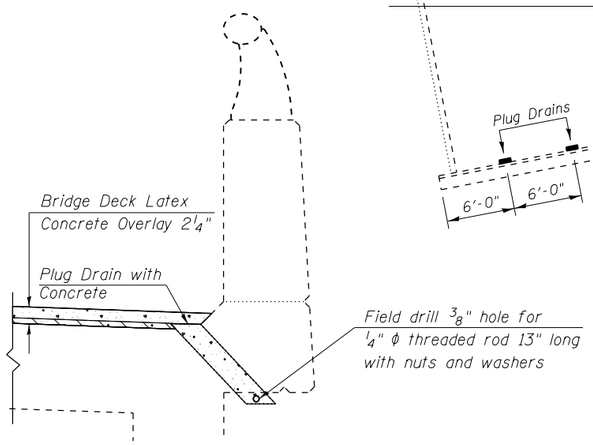
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	22
		CONTRACT NO. 70B15		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUPERSTRUCTURE PLAN – DRAIN DETAIL
S.N. 010–0014 & S.N. 010–0015

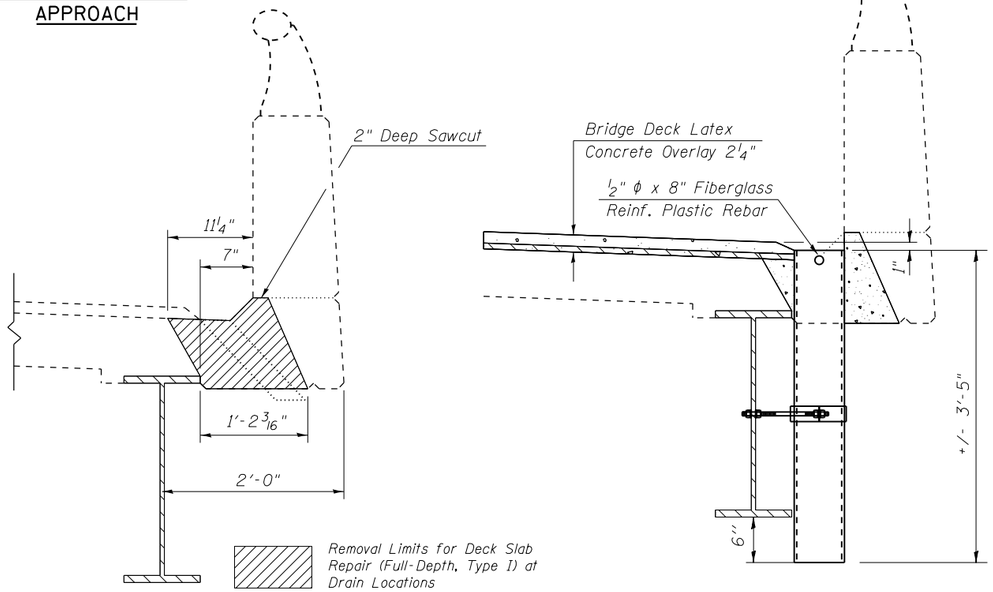
WB STR 010–0014 EB STR 010–0015



PLAN VIEW
EITHER STRUCTURE

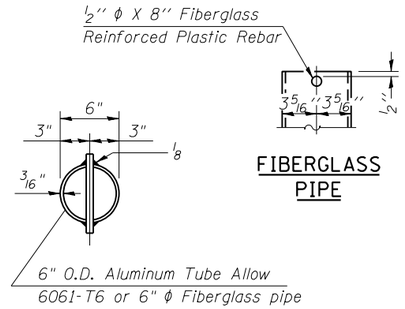


PROPOSED SECTION
APPROACH



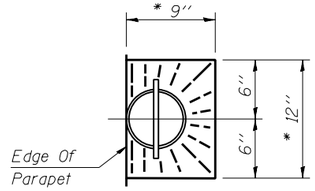
EXISTING SECTION
DECK

PROPOSED SECTION
DECK

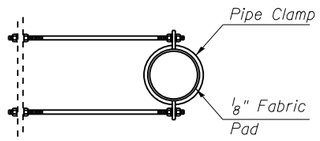


FIBERGLASS
PIPE

TOP PLAN
(Aluminum Tube Shown)



TOP PLAN
* SLOPE TO DRAIN



TOP PLAN
Drain Clamp

LEGEND

- Plug drain with concrete
- Eliminate floor drain
- Proposed floor drain location

NOTES:

Patch sizes shown represent conditions at the time the plans were completed. The actual sizes and locations of patching shall be determined by the engineer. The Engineer shall show the actual locations of the deck repairs on this sheet.

The existing drains shall be removed. Cost included with "Deck Slab Repair (Full Depth, Type I)".

Extreme care must be used when removing concrete near the top flange of the beams. The contractor is responsible for any damage to the beams.

The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Society of Protective Coating's Spec. SSPC-SP1 prior to painting.

Fiberglass Pipe Shall Conform to ASTM D 2996, with Short-Time Rupture Strength Hoop Tensile Stress of 30,000 P.S.I. Minimum.

Galvanized Clamping Device and All Stud Bolts, Washers and Nuts According to AASHTO M232. Cost of clamping device and galvanizing included with floor drain.

All Dimensions Shall be Field Verified by the Contractor Prior to Ordering of Materials.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
FLOOR DRAINS	EACH	16.0
DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	10.8
PLUG EXISTING DECK DRAINS	EACH	16.0

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DRAWING\Data\Structure\D570B15-sht-Repair-Plan.dgn	USER NAME = shererjm	DESIGNED - ESS	REVISED - ESS
Default	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED - ESS
	PLOT DATE = 8/8/2016	DATE - 12/9/2013	REVISED - 3/06/2014

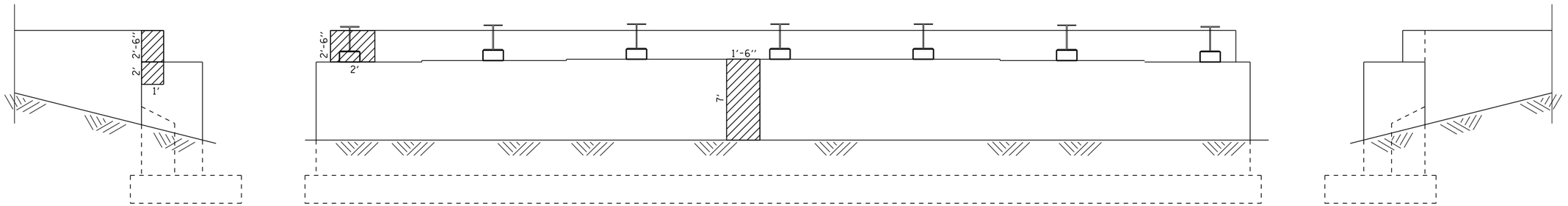
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE PLAN – DRAIN DETAIL
S.N. 010–0014 & S.N. 010–0015

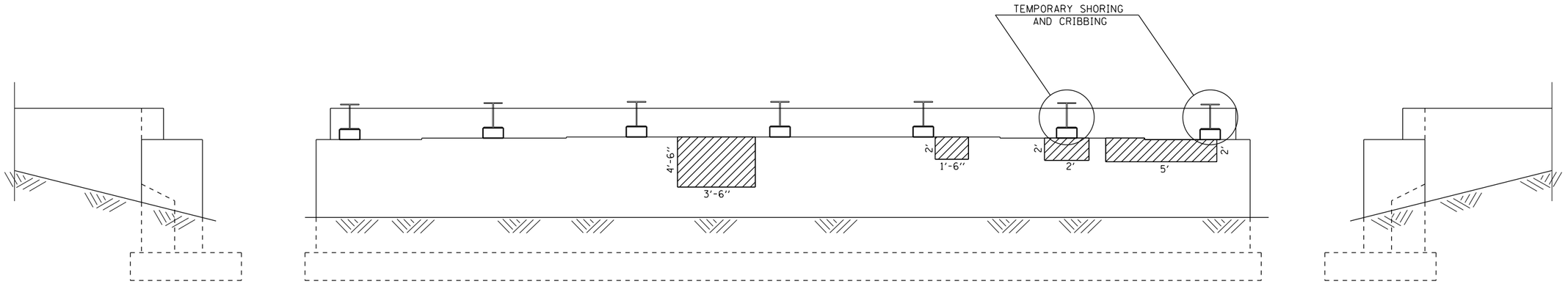
SCALE: | SHEET 17 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	23
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

PLAN FOR STRUCTURAL REPAIR OF CONCRETE ON ABUTMENTS
S.N. 010–0014 (WB)



ELEVATION - WEST ABUTMENT



ELEVATION - EAST ABUTMENT

STRESS TABLE

INTERIOR BEAMS		
REACTIONS = KIPS		
	ABUTMENT	PIER
R_{DL} (K)	19.76	61.09
R_{LL} (K)	42.69	51.33
R_{TOTAL} (K)	62.45	112.42

NOTE:

SEE SPECIAL PROVISION FOR STRUCTURAL REPAIR OF CONCRETE.

SEE SPECIAL PROVISION FOR TEMPORARY SHORING AND CRIBBING.

STRUCTURE REPAIR OF CONCRETE TO BE COMPLETED WITH JACK AND REMOVE EXISTING BEARINGS. TEMPORARY SHORING AND CRIBBING IF NECESSARY TO BE DETERMINED BY THE ENGINEER.

LEGEND

STRUCTURAL REPAIR OF CONCRETE, DEPTH EQUAL TO OR LESS THAN 5"

BILL OF MATERIALS

ITEM	UNIT	TOTAL
STRUCTURAL REPAIR OF CONCRETE (DEPTH LESS THAN OR EQUAL TO 5")	SQ FT	52.8
PROTECTIVE COAT	SQ YD	6.0
TEMPORARY SHORING AND CRIBBING	EACH	2.0

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structure\D570B15-sht-Repair-PRELIM	USER NAME = sherer.jm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE - 11-22-2013	REVISED -

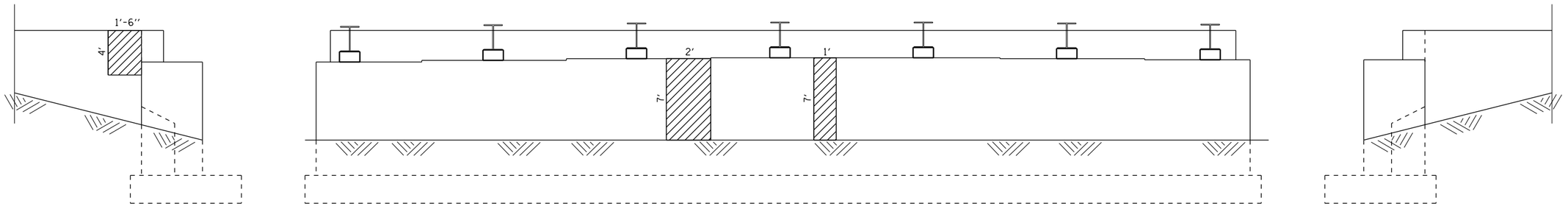
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN FOR STRUCTURAL REPAIR OF CONCRETE ON ABUTMENTS
S.N. 010–0014

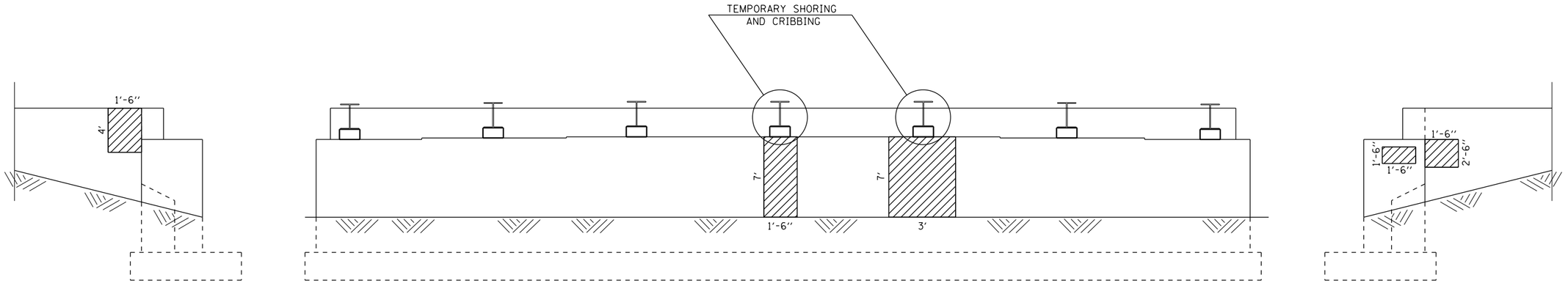
SCALE: | SHEET 18 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	24
		CONTRACT NO. 70B15		
	ILLINOIS	FED. AID PROJECT		

PLAN FOR STRUCTURAL REPAIR OF CONCRETE ON ABUTMENTS
S.N. 010–0015 (EB)



ELEVATION - WEST ABUTMENT



ELEVATION - EAST ABUTMENT

STRESS TABLE

INTERIOR BEAMS		
REACTIONS = KIPS		
	ABUTMENT	PIER
R_{DL} (K)	19.76	61.09
R_{LL} (K)	42.69	51.33
R_{TOTAL} (K)	62.45	112.42

NOTE:

SEE SPECIAL PROVISION FOR STRUCTURAL REPAIR OF CONCRETE.

SEE SPECIAL PROVISION FOR TEMPORARY SHORING AND CRIBBING.

STRUCTURE REPAIR OF CONCRETE TO BE COMPLETED WITH JACK AND REMOVE EXISTING BEARINGS. TEMPORARY SHORING AND CRIBBING IF NECESSARY TO BE DETERMINED BY THE ENGINEER.

LEGEND

STRUCTURAL REPAIR OF CONCRETE, DEPTH EQUAL TO OR LESS THAN 5"

BILL OF MATERIALS

ITEM	UNIT	TOTAL
STRUCTURAL REPAIR OF CONCRETE (DEPTH LESS THAN OR EQUAL TO 5")	SQ FT	70.5
PROTECTIVE COAT	SQ YD	8.0
TEMPORARY SHORING AND CRIBBING	EACH	2.0

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DRAWINGData\Structure\D570B15-sht-Repair-Rev.dgn	USER NAME = shererjm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE - 11-22-2013	REVISED -

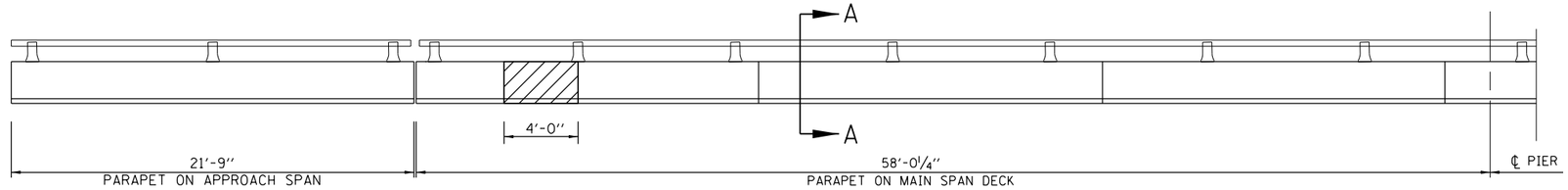
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN FOR STRUCTURAL REPAIR OF CONCRETE ON ABUTMENTS
S.N. 010–0015

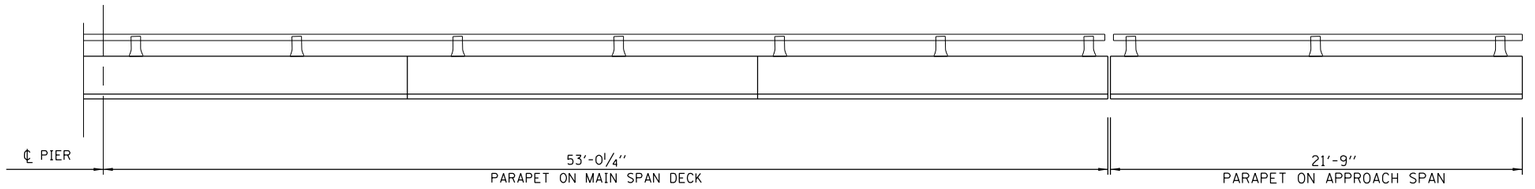
SCALE: | SHEET 19 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	25
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

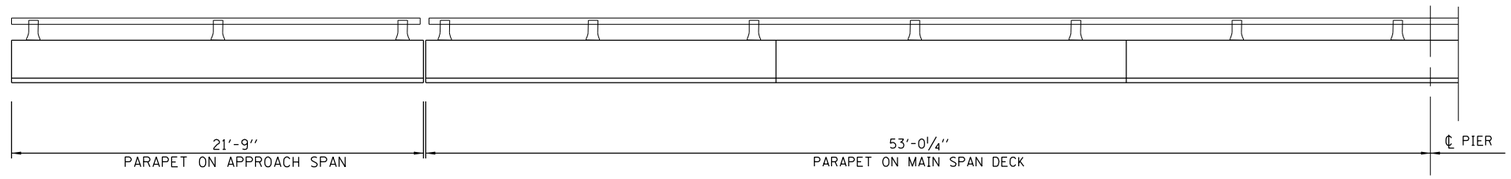
PLAN FOR STRUCTURAL REPAIR OF CONCRETE ON PARAPETS
S.N. 010–0014 (WB)



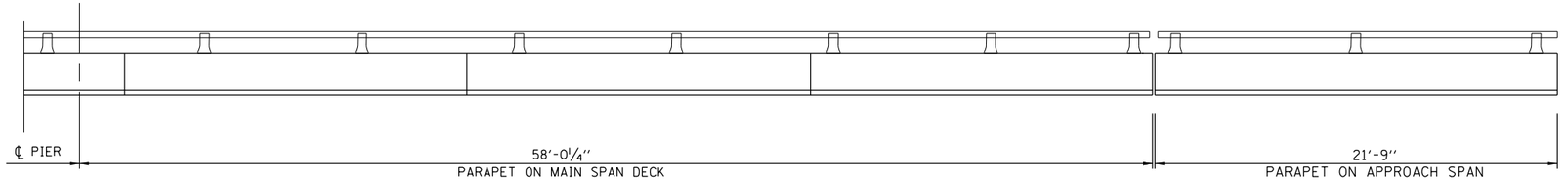
ELEVATION: WEST HALF OF NORTH PARAPET



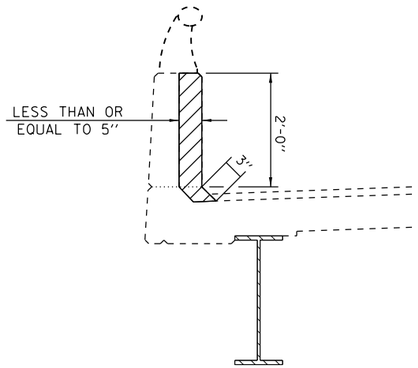
ELEVATION: EAST HALF OF NORTH PARAPET



ELEVATION: EAST HALF OF SOUTH PARAPET

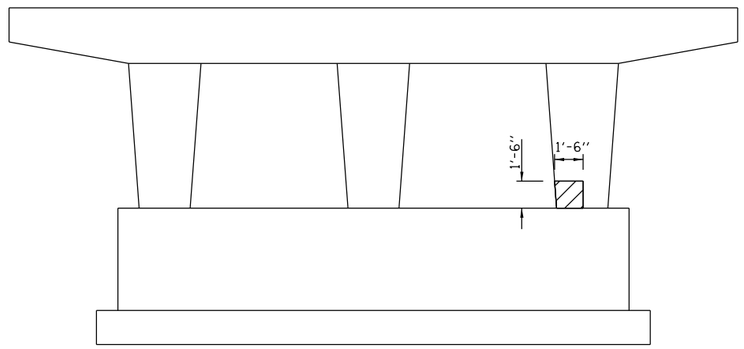


ELEVATION: WEST HALF OF SOUTH PARAPET



SECTION A-A

SHOWING TYPICAL REMOVAL LIMITS FOR
STRUCTURAL REPAIR OF CONCRETE ON PARAPETS



ELEVATION: EAST SIDE OF PIER

NOTE:

SEE SPECIAL PROVISION FOR STRUCTURAL REPAIR OF CONCRETE.

LEGEND

STRUCTURAL REPAIR OF CONCRETE, DEPTH EQUAL TO OR LESS THAN 5″

BILL OF MATERIALS

ITEM	UNIT	TOTAL
STRUCTURAL REPAIR OF CONCRETE (DEPTH LESS THAN OR EQUAL TO 5″)	SQ FT	9.0
PROTECTIVE COAT	SQ YD	1.0

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structure\D570B15-sht-Repair-Revised.dgn	USER NAME = shererjm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE - 11-17-2013	REVISED -

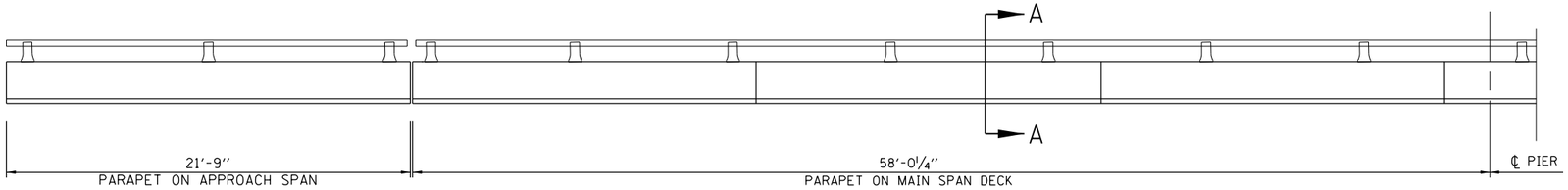
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN FOR STRUCTURAL REPAIR OF CONCRETE ON PARAPETS
S.N. 010–0014

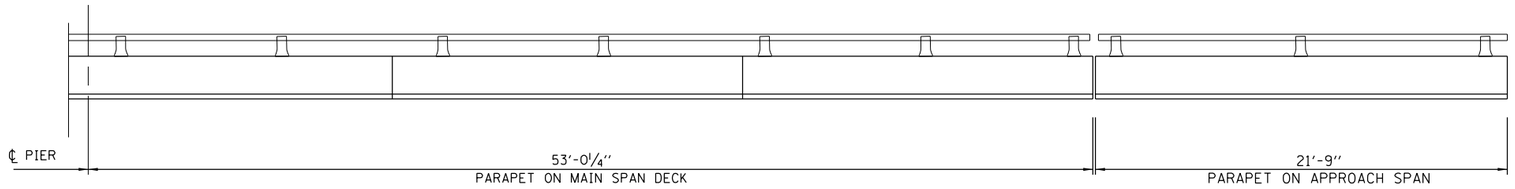
SCALE: | SHEET 20 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	26
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

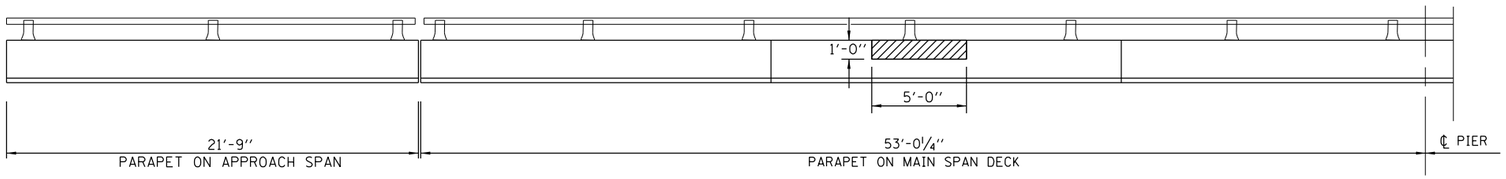
PLAN FOR STRUCTURAL REPAIR OF CONCRETE ON PARAPETS
S.N. 010–0015 (EB)



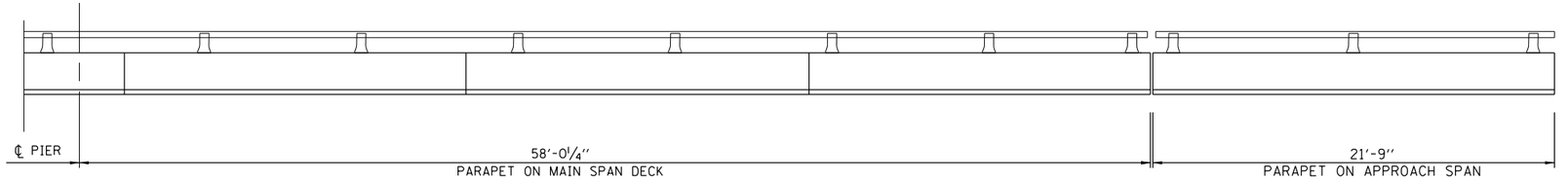
ELEVATION: NORTH PARAPET WEST SPANS



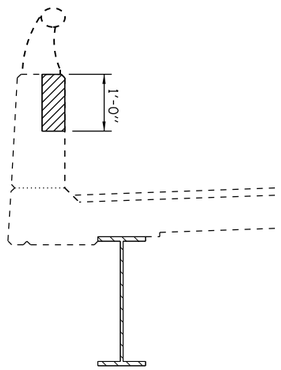
ELEVATION: NORTH PARAPET EAST SPANS



ELEVATION: EAST HALF OF SOUTH PARAPET



ELEVATION: WEST HALF OF SOUTH PARAPET



SECTION A-A

SHOWING TYPICAL REMOVAL LIMITS FOR
STRUCTURAL REPAIR OF CONCRETE ON PARAPETS

NOTE:

SEE SPECIAL PROVISION FOR STRUCTURAL REPAIR OF CONCRETE.

LEGEND

STRUCTURAL REPAIR OF CONCRETE, DEPTH EQUAL TO OR LESS THAN 5″

BILL OF MATERIALS

ITEM	UNIT	TOTAL
STRUCTURAL REPAIR OF CONCRETE (DEPTH LESS THAN OR EQUAL TO 5″)	SQ FT	5.0
PROTECTIVE COAT	SQ YD	1.0

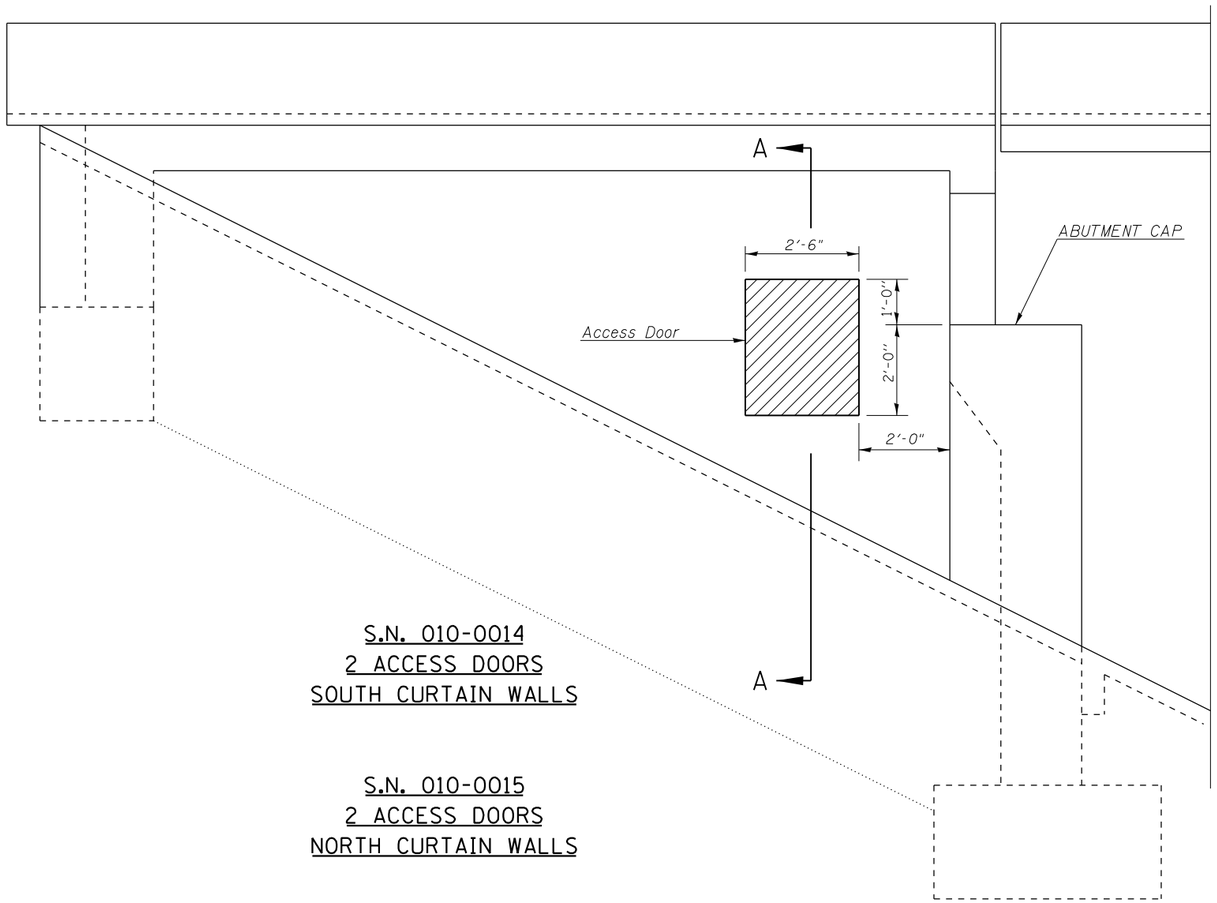
FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structure\D570B15-sht-Repair-Revised.dgn	USER NAME = shererjm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
	PLOT SCALE = 40.0000 ′ / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE - 11-17-2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN FOR STRUCTURAL REPAIR OF CONCRETE ON PARAPETS
S.N. 010–0015

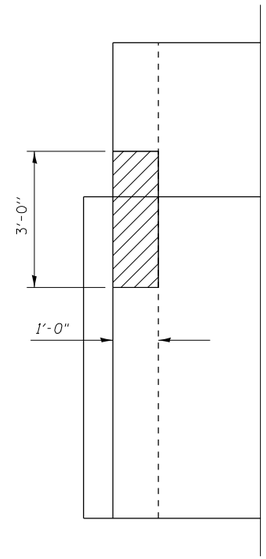
SCALE: | SHEET 21 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	27
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			



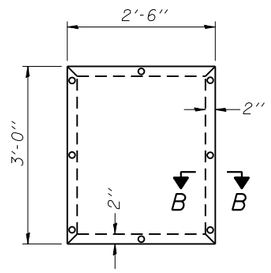
S.N. 010-0014
2 ACCESS DOORS
SOUTH CURTAIN WALLS

S.N. 010-0015
2 ACCESS DOORS
NORTH CURTAIN WALLS

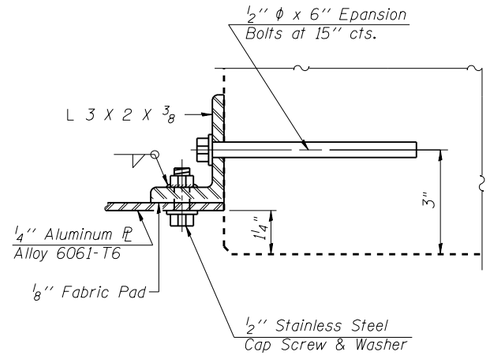


SECTION A-A

Concrete Removal



DOOR ELEVATION



SECTION B-B

NOTES

EXPANSION BOLTS SHALL CONSIST OF SELF DRILLING EXPANSION SHIELDS @ 1/2" DIA. BOLTS. BOLTS SHALL EXTEND A MINIMUM OF 6" INTO EXISTING CONCRETE.

COST OF DOOR AND FRAME ARE INCLUDED WITH FURNISHING & ERECTING STRUCTURAL STEEL.

BILL OF MATERIALS

ITEM	UNIT	TOTAL
CONCRETE REMOVAL	CU YD	1.2
FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	400.0

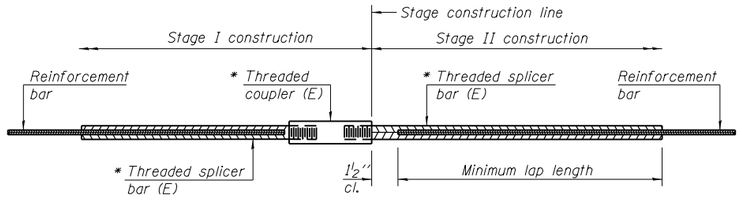
FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DRAWINGData\Structure\D570B15-sht-Repair-Details.dgn	USER NAME = shererjm	DESIGNED - ESS	REVISED -
		DRAWN - ESS	REVISED -
Default	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE - 12/18/2013	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ACCESS DOORS
S.N. 010-0014 & S.N. 010-0015

SCALE: | SHEET 22 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	28
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			



STANDARD BAR SPLICER ASSEMBLY

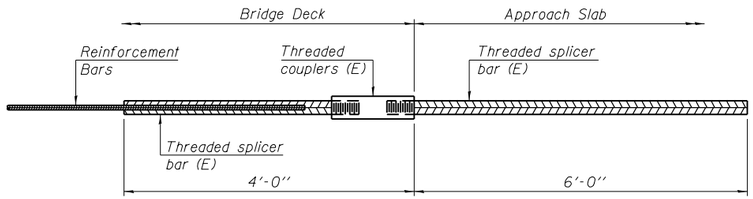
Minimum Lap Lengths						
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

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, Class C
Table 6: Epoxy bar, Top bar top, Class C

Threaded splicer bar length = min. lap length + 1½" + thread length

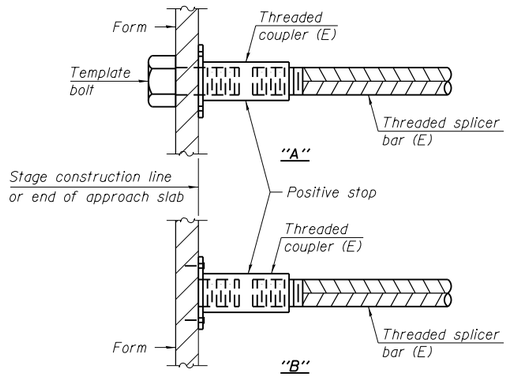
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Structure No.	Location	Bar size	No. assemblies required	Table for minimum lap length
010-0014	HATCH BLOCK	6	4	3
	DECK END	5	28	3
010-0015	HATCH BLOCK	6	4	3
	DECK END	5	28	3



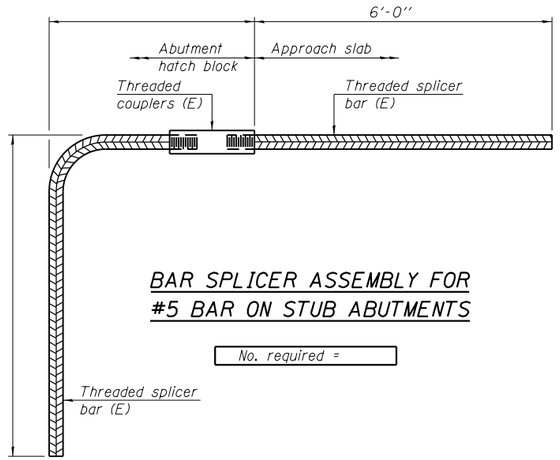
BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required =



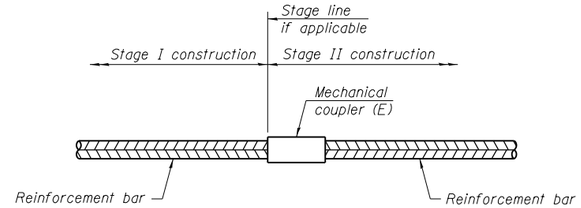
INSTALLATION AND SETTING METHODS

"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.



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies 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 approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 1-27-12

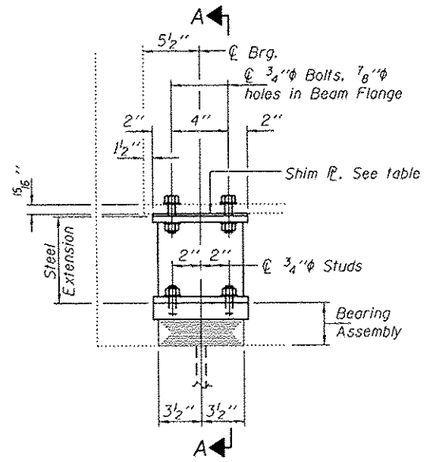
FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structures\D570B15-sht-Repair	USER NAME = sherer.jm	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

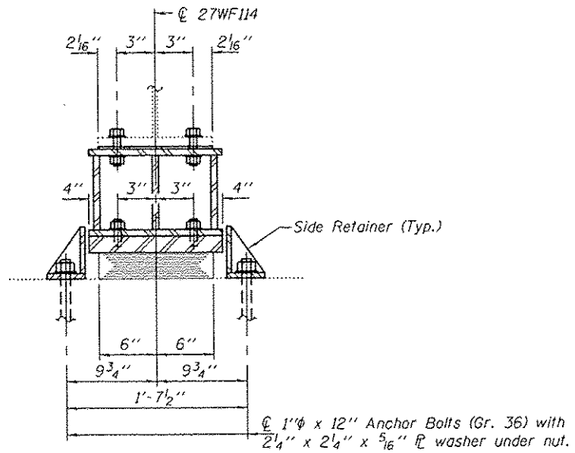
BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
S.N. 010-0014 & 010-0015

SCALE: | SHEET 23 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	29
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			



ELEVATION AT ABUTMENTS



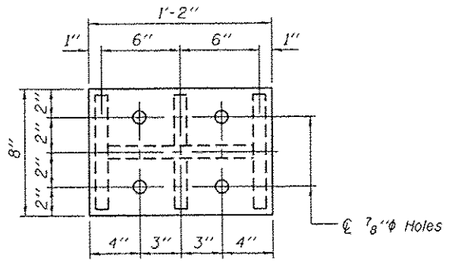
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

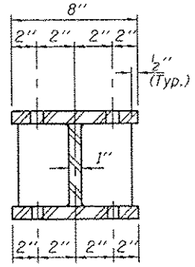
BEAM REACTIONS

R℘	(K)	19.8
R℄	(K)	33.5
Imp.	(K)	9.2
R (Total)	(K)	62.5

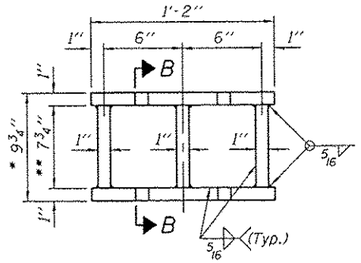
Notes:
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).
Min. jack capacity = 35 Tons.
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi).
The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type I.



PLAN TOP AND BOTTOM PLATE



SECTION B-B



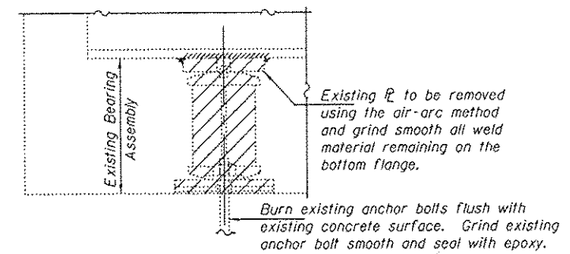
STEEL EXTENSION DETAIL
* 9¼" E. Abut. Beam 7 SN 010-0015
** 7¼" E. Abut. Beam 7 SN 010-0015

SHIM TABLE 010-0014

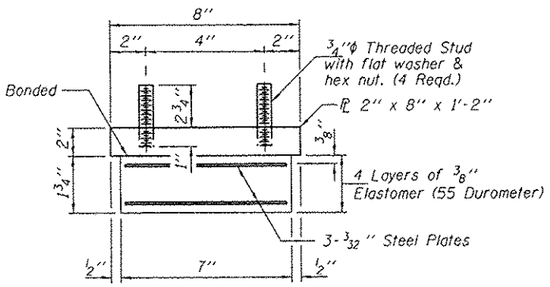
	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7
W. Abut.	3/8"	-	-	1/2"	1/8"	1/8"	-
E. Abut.	3/8"	-	-	1/8"	1/8"	1/8"	-

SHIM TABLE 010-0015

	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6	Beam 7
W. Abut.	-	1/4"	1/8"	-	-	-	-
E. Abut.	-	1/4"	1/8"	-	-	-	-

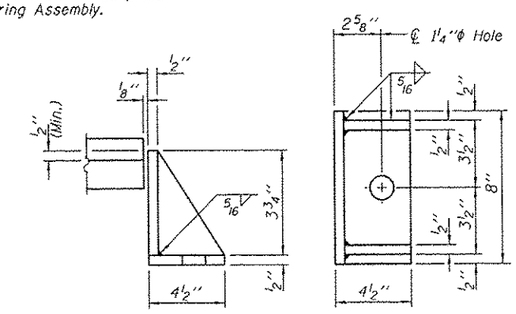


EXISTING BEARING REMOVAL DETAIL
Cost included with Jack and Remove Existing Bearings.

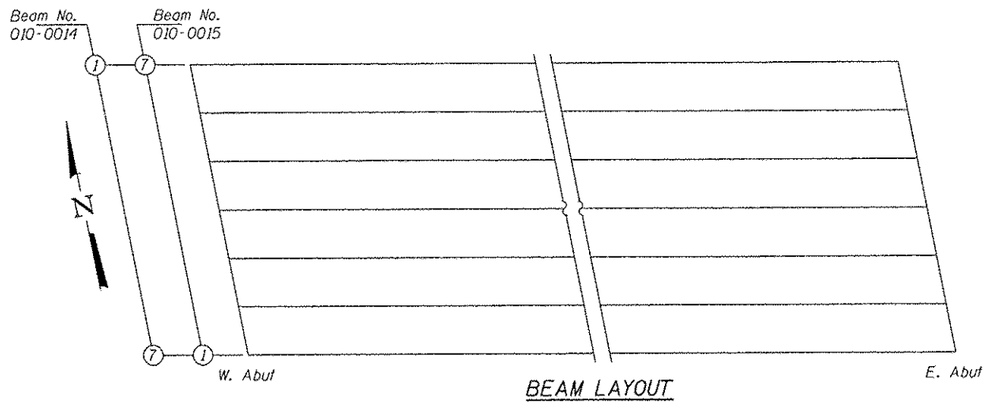


BEARING ASSEMBLY

Note:
Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



BEAM LAYOUT

BILL OF MATERIAL 010-0014

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	14
Jack and Remove Existing Bearings	Each	14
Furnishing and Erecting Structural Steel	Pound	1920
Anchor Bolts 1"ϕ	Each	28

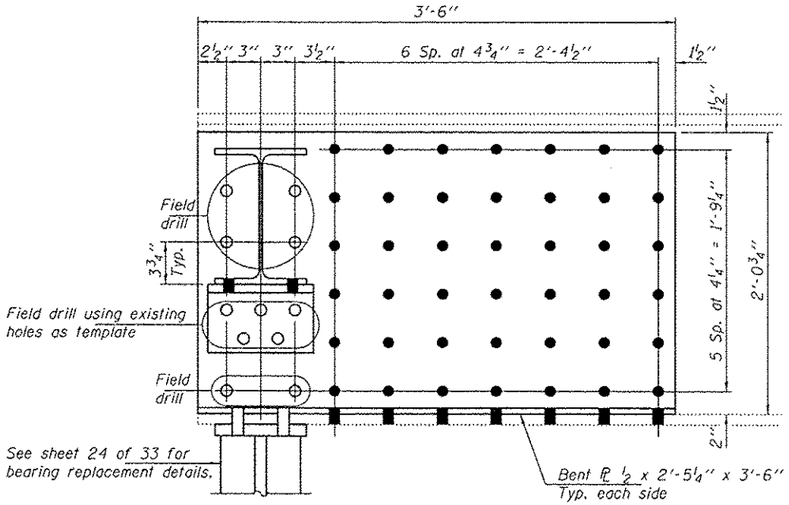
BILL OF MATERIAL 010-0015

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	14
Jack and Remove Existing Bearings	Each	14
Furnishing and Erecting Structural Steel	Pound	1890
Anchor Bolts 1"ϕ	Each	28

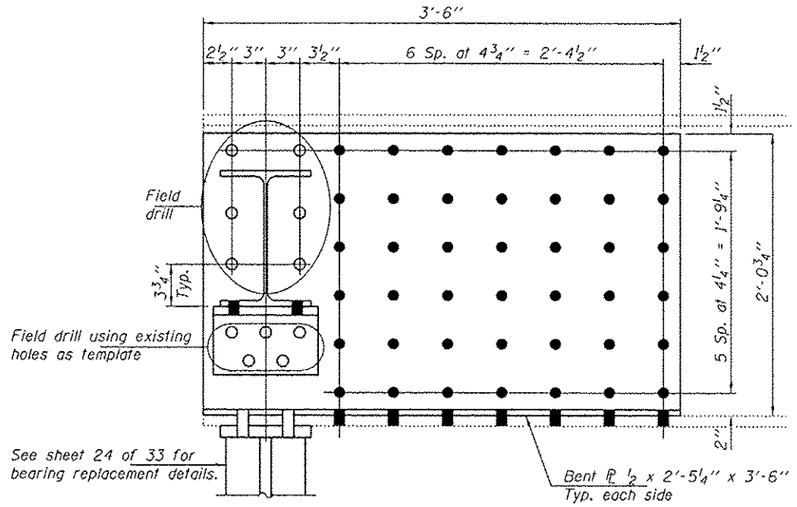
TYI/REPS 12-03-2008

DESIGNED SMR	PASSED	DATE SEPTEMBER 23, 2016	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED DAB	A Carl Puzey	REVISED	ABUTMENT BEARING REPLACEMENT DETAILS SN 010-0014 (WB) & 0015 (EB)
DRAWN baliva	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED	SHEET NO. 24 OF 33 SHEETS
CHECKED SMR DAB			

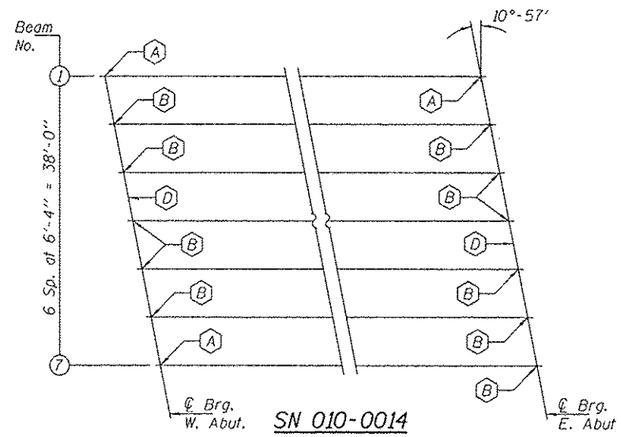
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	30
		CONTRACT NO. 70815		
		ILLINOIS FED. AID PROJECT		



REPAIR A

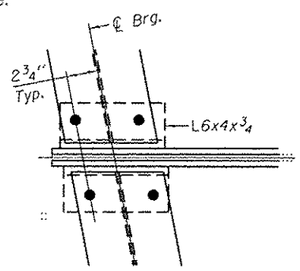


REPAIR B

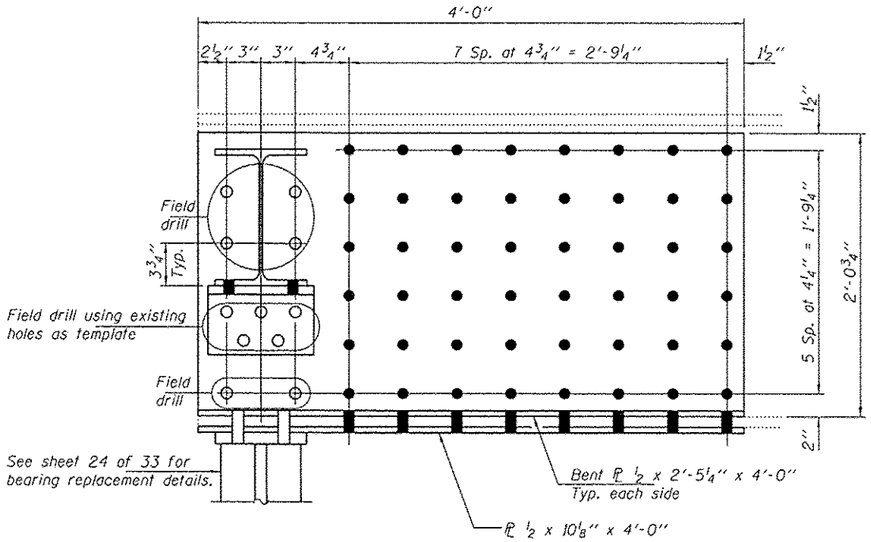


SN 010-0014

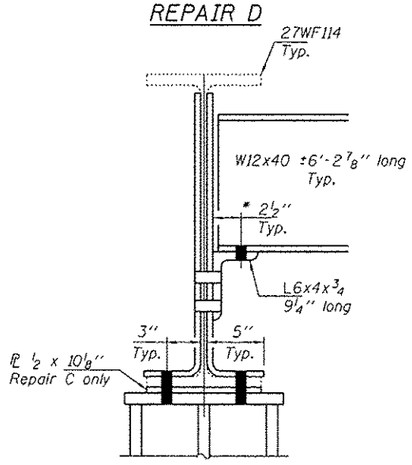
● Field drill holes in existing steel using new steel as template.



PLAN
REPAIR D

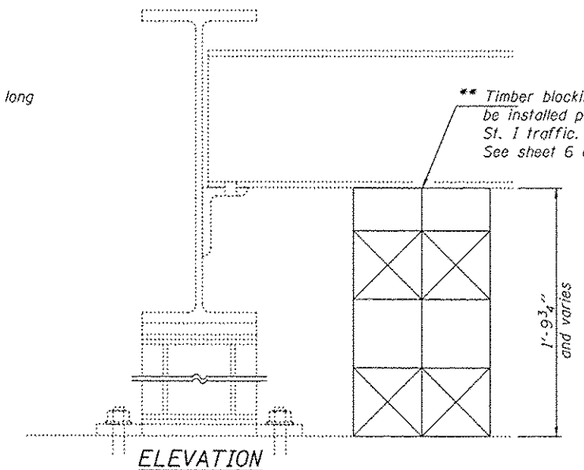


REPAIR C



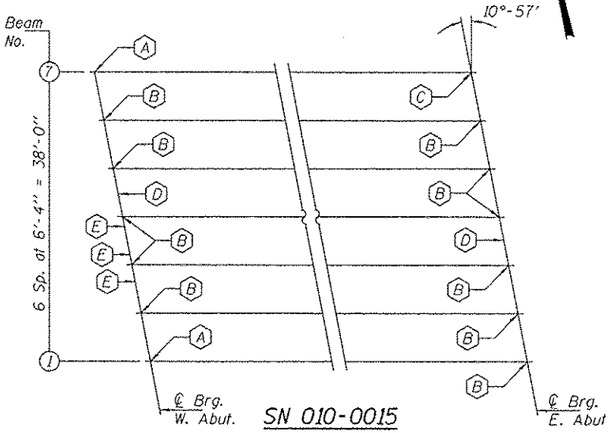
ELEVATION
REPAIR D

* Field drill holes in diaphragm



ELEVATION
REPAIR E

** Cost of Timber blocking to be included with Furnishing and Erecting Structural Steel.



SN 010-0015

REPAIR LOCATION PLAN

- (A) - Beam end repair
- (B) - Beam end repair
- (C) - Beam end repair
- (D) - Diaphragm & clip angle replacement, Typ. all
- (E) - Timber blocking

BILL OF MATERIAL 010-0014

Item	Unit	Total
Structural Steel Removal	Pound	3560
Furnishing and Erecting Structural Steel	Pound	9130

BILL OF MATERIAL 010-0015

Item	Unit	Total
Structural Steel Removal	Pound	3560
Furnishing and Erecting Structural Steel	Pound	9270

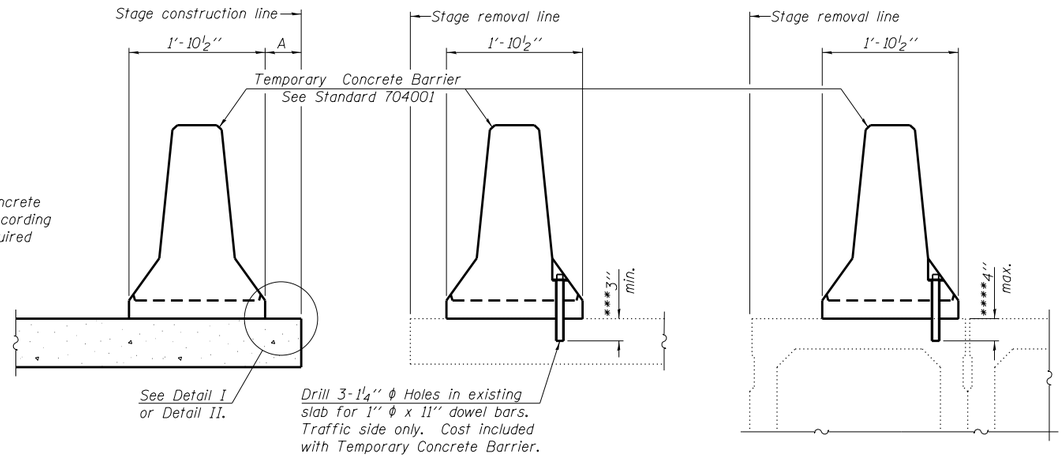
Cleaning & painting of all connections on this sheet shall meet the requirements for Primary Connections as specified in the special provision for "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

Fasteners shall be high strength bolts. Bolts ⅞"ϕ, open holes ¹⁵⁄₁₆"ϕ, unless otherwise noted.

Diaphragm connection holes shall be ¹⁵⁄₁₆"ϕ for ¾"ϕ bolts. Two hardened washers shall be required at diaphragm connections.

DESIGNED DAB	PASSED	DATE SEPTEMBER 23, 2016	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REPAIR DETAILS SN 010-0014 (WB) & 0015 (EB)	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED ATH		REVISED			74	(10-4,10-5)I	CHAMPAIGN	74	30A
DRAWN baliva	ACTING ENGINEER OF BRIDGES AND STRUCTURES	REVISED		SHEET NO. 24A OF 33 SHEETS			CONTRACT NO. 70815		
CHECKED DAB ATH							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".



NEW SLAB | EXISTING SLAB | EXISTING 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 2-⅝" ϕ bolts screwed to coupler at approximate ℄ 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 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

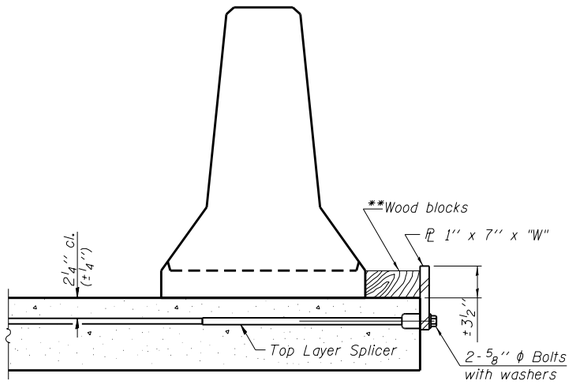
Cost of anchorage is included with Temporary Concrete Barrier.

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.

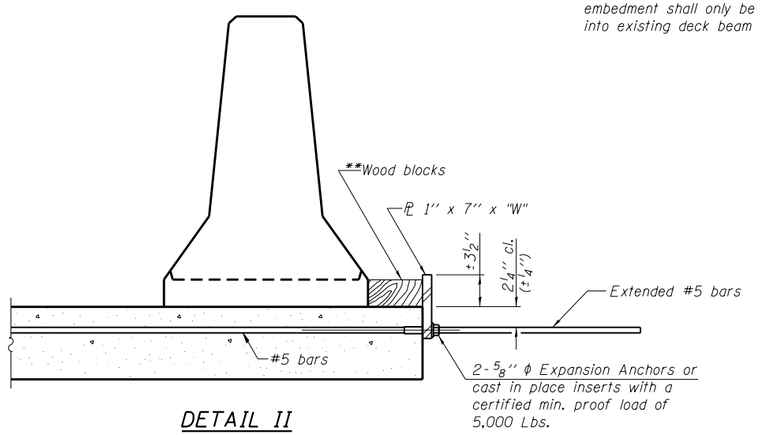
SECTIONS THRU SLAB OR DECK BEAM

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

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



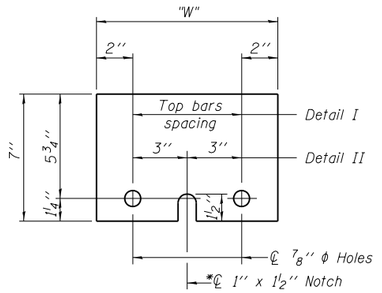
DETAIL I



DETAIL II

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

"W" = Top bars spacing + 4"



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

* Required only with Detail II

R-27

7-1-10

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DRAWINGData\Structures\D570B15-sht-Repair	USER NAME = sherer.jm	DESIGNED -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	DRAWN -	REVISED -
	PLOT DATE = 8/8/2016	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE REPAIR DETAIL
S.N. 010-0014 & 010-0015

SCALE: | SHEET 25 OF 33 SHEETS | STA. | TO STA.

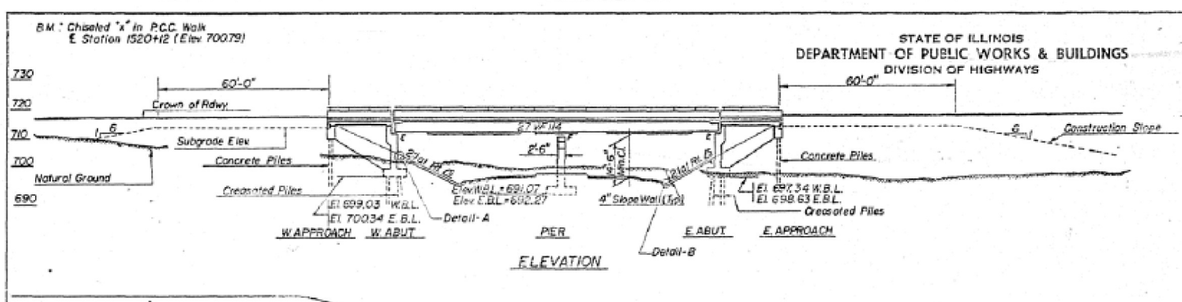
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	31
		CONTRACT NO. 70B15		
	ILLINOIS	FED. AID PROJECT		

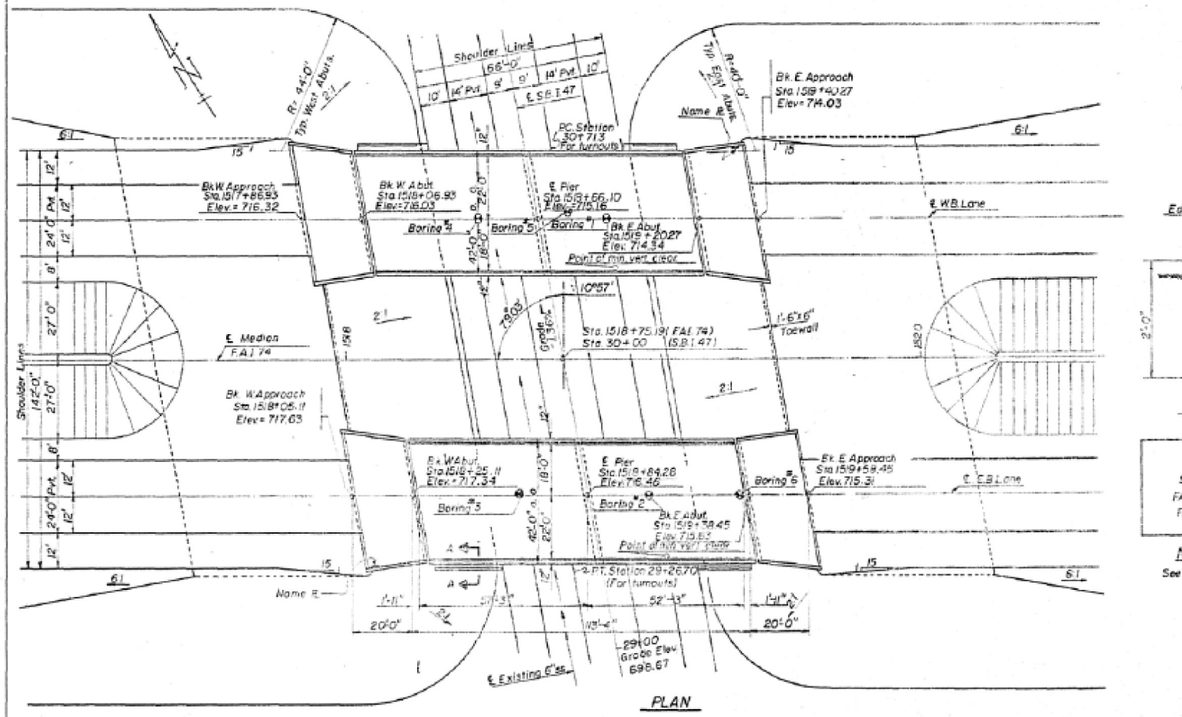
AS–BUILT PLANS
FOR INFORMATION ONLY

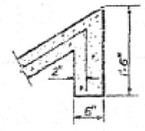
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

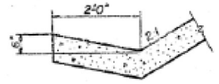
F.A.I. RTE. 74	SECTION 10-4HB	COUNTY CHAMPAIGN	TOTAL SHEETS 42	SHEET NO. 13
				12 SHEETS

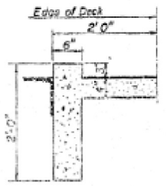
B.M.: Chiseled "x" in P.C.C. Walk
℄ Station 1520+12 (Elev. 700.79)











STATION 1518+75.19
BUILT 196 BY
STATE OF ILLINOIS
FAI RT. 74 SECTION 10-4HB
F.A. PROJECT 1-74-5 (38)
LOADING HS 20 & ALT.

NAME PLATE
See Std. 2103-1

GENERAL NOTES

Coarse aggregate to be used in parapet handrails and wingwalls must be absolutely free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Article 5.19 of the Standard Specifications.

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

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

All Structural Steel shall conform to ASTM specifications for Structural Steel designation A-36.

Rivets $\frac{3}{4}$" ø open holes $\frac{13}{16}$" unless otherwise noted.

Anchor bolts shall be set before riveting diaphragms over supports.

All rockers, bolsters, bearing plates, lead plates, pintles and anchor bolts shall be fabricated and set in accordance with Article 5.11.5 of the Standard Specifications and are included in quantity of Structural Steel. Estimated weight= 9770 lbs.

The exposed surfaces of the expansion guard shall be given two shop coats of red lead paint, the contact surfaces shall be given one coat of red lead paint. Anchor studs shall not be painted.

Expansion guards are included in the quantity of Structural Steel. Estimated weight= 4530 lbs.

Except as otherwise provided, all Structural Steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Article 56.1 to 56.5 inclusive of Standard Specifications.

The Contractor shall drive two concrete test piles, one at the West Approach, West Bound Lanes and another at the East Approach, East Bound Lanes; two timber test piles one in the vicinity of the West Abutment, West Bound Lanes and another in the vicinity of the East Abutment, East Bound Lanes. All test piles shall be driven as directed by the Engineer and before ordering the remainder of piles.

Excavations for portions of structures in the embankments shall not be classified.

Permanent forms will not be permitted in forming the concrete deck.

STRESS TABLE (Int. Bm.)

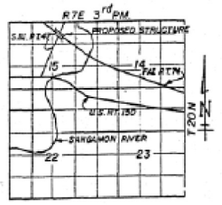
	MOMENTS= ft kips.		REACTIONS= kips	
	.4 Span	Pier	Abut.	Pier
D.L.	218.32	333.25	19.76	61.09
L.L.+Imp.	447.12	313.65	42.69	51.33
Total	665.44	646.90	62.45	112.42

I of 27 WF 114 = 4080.5 in⁴
Cover Plates 9"x⅞" Top & Bottom at Midspans & Pier

TOTAL BILL OF MATERIAL

	Item	Unit	Super	Sub	Total
*	Class "A" Excavation for Structures.	Cu. Yds.		830	830
	Structural Steel	Lbs.	260650		260650
	Class "S" Concrete	Cu. Yds.	408.8	410.3	819.1
	Aluminum Handrail	Lin. Ft.	619		619
	Reinforcement Bars	Lbs.	102720	36080	138810
	Creosoted Piles	Lin. Ft.		1995	1995
	Test Piles Timber	Each		2	2
	Concrete Piles	Lin. Ft.		951	951
	Test Piles, Concrete	Each		2	2
	Name Plates	Each	2		2
	Slope Wall	Sq. Yds.		1150	1150
	Protective Coat	Sq. Yds.	1620		1620
†	Bridge Seat Sealant	Lump Sum	L.S.		L.S.

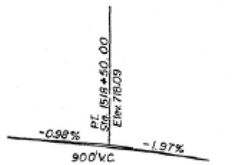
* Includes excavation for Slopewalls.
† Bridge seat sealant applied at Abutments only.



LOCATION SKETCH

DESIGN STRESSES
fc= 1400 psi. Super & Sub.
75 psi = Footing
fs= 20,000 psi. Reinf.
fs= 20,000 psi. Struct. (A36)
n= 10
Δ Deflection= Span / 1000

LOADING HS 20-44 & ALTERNATE



PROPOSED PROFILE E.B. LANE

PROPOSED PROFILE W.B. LANE

DESIGNED	C. Caldwell	
CHECKED	I. Kassar	
DRAWN	R. Ferrando	
CHECKED	J.K.	
EXAMINED	Paul E. Trummel	July 28 1965
PASSED		
APPROVED		

GENERAL PLAN & ELEVATION
PROJECT I-74-5(38)174
F.A.I. RT. 74 – SECTION 10-4HB
CHAMPAIGN COUNTY
STATION 1518+75.19 (F.A.I. 74)
STATION 30+00 (S.B.I. 47)

FILE NAME =	USER NAME = sherer.jm	DESIGNED -	REVISED -
pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15-sht-Repair Data\Structures\D570B15-sht-Repair		DRAWN	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS–BUILT PLANS
FOR INFORMATION ONLY

SCALE: | SHEET 26 OF 33 SHEETS | STA. | TO STA.

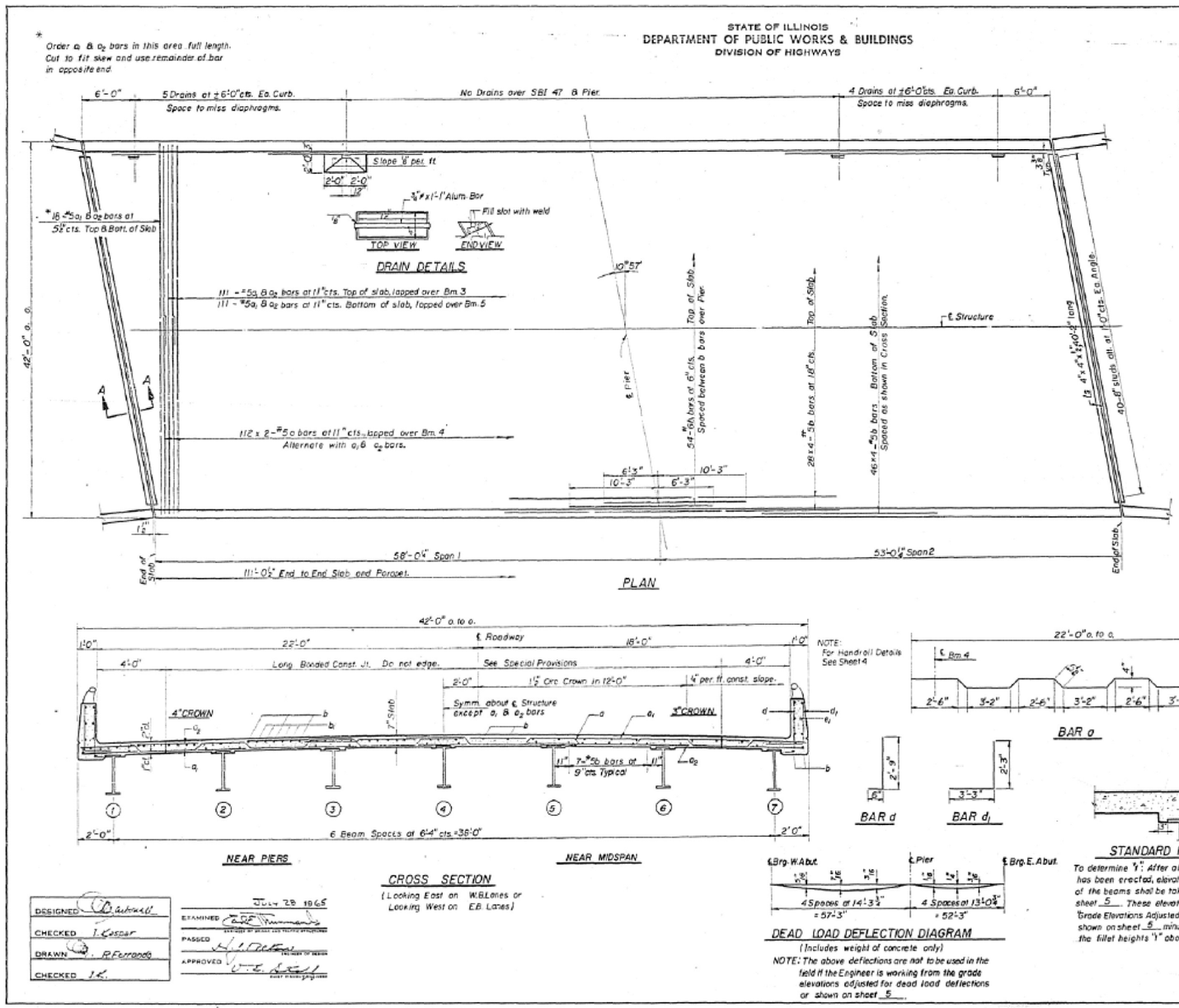
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	32
			CONTRACT NO. 70B15	
		ILLINOIS	FED. AID PROJECT	

AS–BUILT PLANS
FOR INFORMATION ONLY

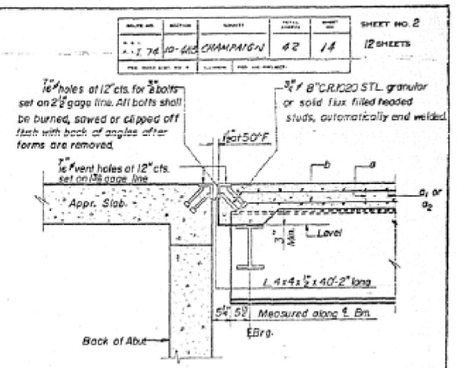
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

					SHEET NO. 2
I 74	10-4HB	CHAMPAIGN	42	14	12 SHEETS

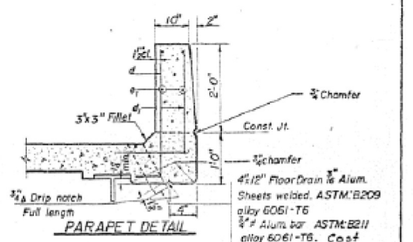
* Order a_1 & a_2 bars in this area full length. Cut to fit skew and use remainder of bar in opposite end.



PLAN



SECTION A-A



PARAPET DETAIL

NEAR PIERS NEAR MIDSPAN

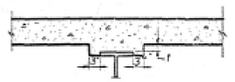
CROSS SECTION
(Looking East on W.B. Lanes or Looking West on E.B. Lanes)

NOTE: For Handrail Details See Sheet 14

BAR a

BAR d

BAR d_1



STANDARD FILLET DETAIL

To determine 'f': After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 5. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 5 minus slab thickness, equals the fillet heights 'f' above top of beams.

DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only)
NOTE: The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections or shown on sheet 5.

BILL OF MATERIAL
(TWO STRUCTURES)

Bar	No.	Size	Length	Shape
a	448	#5	22'-0"	
a_1	476	#5	25'-6"	
a_2	476	#5	15'-6"	
b	532	#5	28'-8"	
b_2	108	#6	15'-6"	
d	560	#5	3'-3"	L
d_1	448	#5	5'-6"	L
a_0	144	#5	18'-3"	
Class X Concrete			Cu Yds.	2476
Reinforcement Bars			Lbs.	59960
Structural Steel			Lbs.	260650

* Includes weight of bearing assemblies with lead plates and anchor bolts and weight of expansion device.

SUPERSTRUCTURE
MAIN SPANS
F.A.I. RT. 74 SECTION 10-4HB
CHAMPAIGN COUNTY
STATION 1518+75.19

DESIGNED	D. Ashwell	JULY 28 1965
CHECKED	T. Cosgar	EXAMINED
DRAWN	R. Ferrando	PASSED
CHECKED	T.C.	APPROVED

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815-sht-Repair-Pier-Slab	USER NAME = sherer.jm	DESIGNED -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	DRAWN -	REVISED -
Default	PLOT DATE = 8/8/2016	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS–BUILT PLANS
FOR INFORMATION ONLY

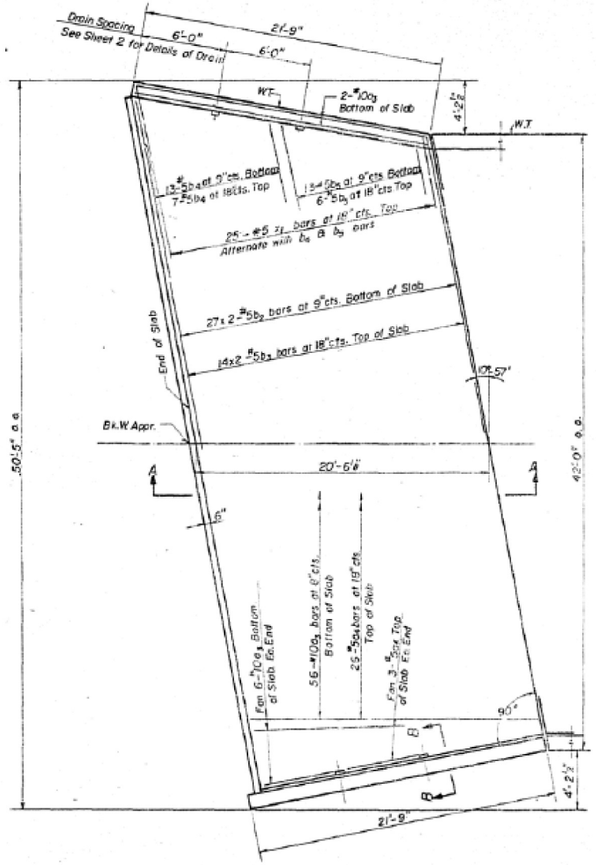
SCALE: | SHEET 27 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	33
		CONTRACT NO. 70815		
	ILLINOIS	FED. AID PROJECT		

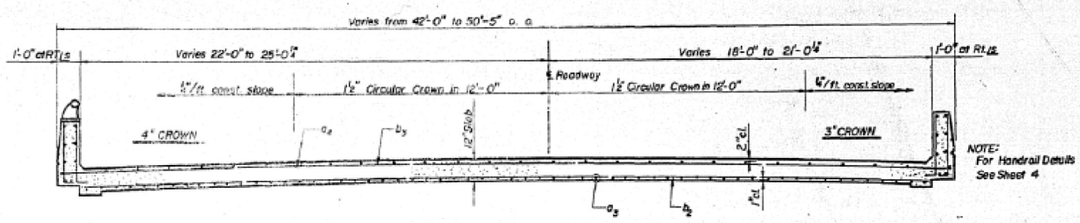
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

	74	(10-4,10-5)HB	CHAMPAIGN	42 / 15

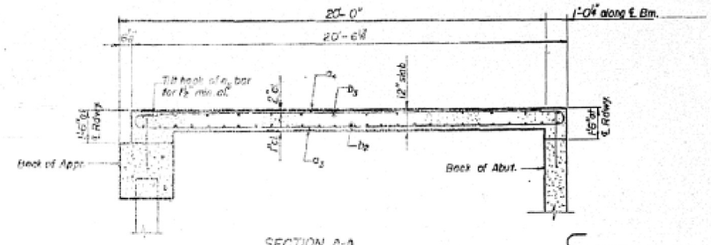
SHEET NO. 3
12 SHEETS



PLAN

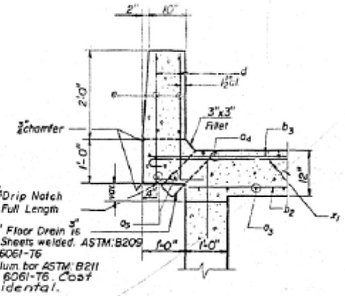


CROSS SECTION
(Looking East on W.B. Lanes or
Looking West on E.B. Lanes)

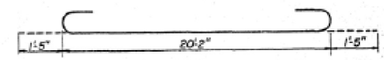


SECTION A-A

BAR x_1

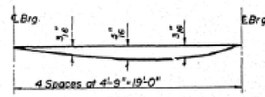


SECTION B-B



BAR a_3

NOTE: For details of bar d see sheet 2



DEAD LOAD DEFLECTION DIAGRAM
(Includes weight of concrete only)

NOTE: The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 5.

BILL OF MATERIALS
4 – APPROACH SPANS

BAR	NO.	SIZE	LENGTH	SHAPE
a_3	288	#10	23'-0"	
a_4	128	#5	20'-3"	
b_2	216	#5	21'-0"	
b_3	112	#5	22'-0"	
b_4	80	#5	9'-6"	
b_5	76	#5	5'-6"	
d	400	#5	3'-3"	L
e	48	#5	2'-6"	
x_1	100	#5	5'-3"	
Class X Concrete			Cu.Yds.	161.2
Reinforcement Bars			L.bs.	42770

SUPERSTRUCTURE
APPROACH SPANS
FAI RT. 74 SECTION 10-4HB
CHAMPAIGN COUNTY
STATION 1518+75.19

DESIGNED	J. Gutwald		
CHECKED	J. Kasper		
DRAWN	D. FERRANCE		
CHECKED	J.K.		

EXAMINED		July 29, 1965
PASSED		
APPROVED		

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structures\D570B15-sht-Repair	USER NAME = sherer.jm	DESIGNED -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS–BUILT PLANS
FOR INFORMATION ONLY

SCALE: | SHEET 28 OF 33 SHEETS | STA. | TO STA.

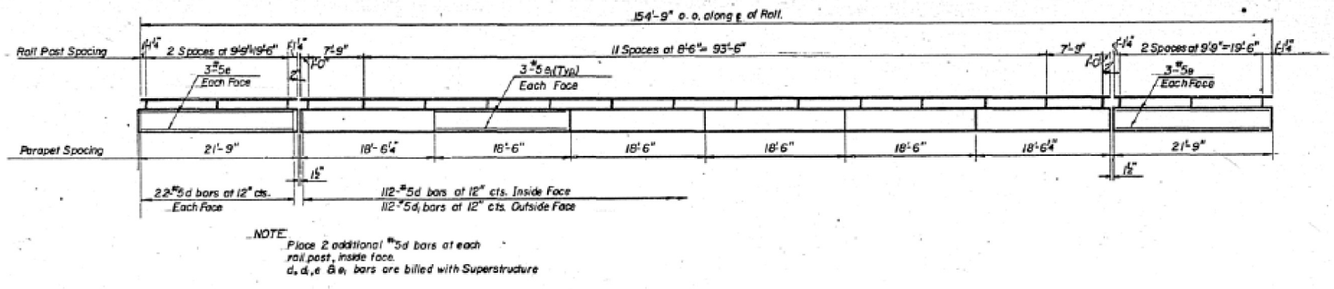
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	34
		CONTRACT NO. 70B15		
	ILLINOIS	FED. AID PROJECT		

AS–BUILT PLANS
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

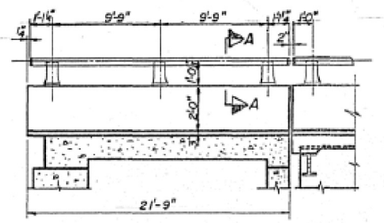
F.A.I. I-74	10-4H,B	CHAMPAIGN	42	16

SHEET NO. 4
12 SHEETS

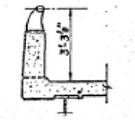


NOTE:
Place 2 additional #5d bars at each rail post, inside face.
d_1, d_2, e & e_1 bars are billed with Superstructure

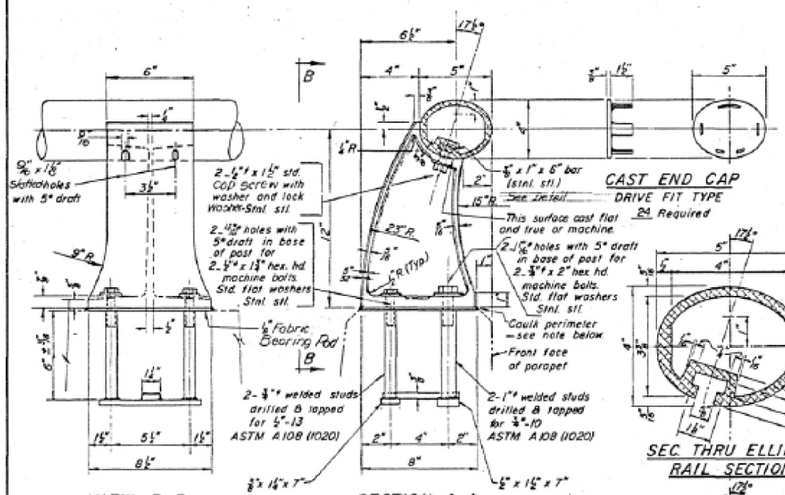
ELEVATION



INSIDE ELEVATION
APPROACH RAIL



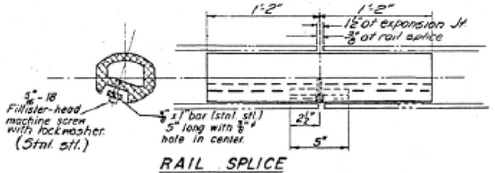
SEC. THRU CURB



VIEW B-B. SECTION A-A

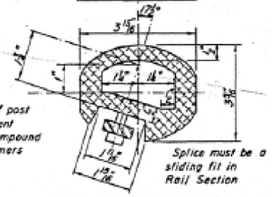
RAIL POST DETAILS

CAST END CAP
DRIVE FIT TYPE
24 Required



RAIL SPLICE
Notch top of slot in rails to clear ⅝" screw.

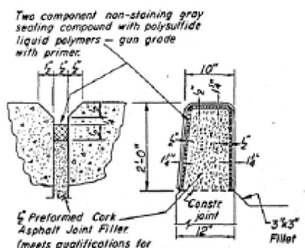
SEC. THRU ELLIPTICAL RAIL SECTION



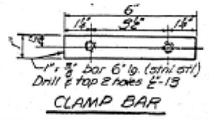
SEC. THRU SPLICE

Splice must be a sliding fit in Rail Section

Note:
Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers —gun grade with primer.



PARAPET JOINT DETAIL



CLAMP BAR

NOTES:

All Posts shall be normal to parapet.

All Aluminum Alloy Extruded Rail shall conform to ASTM specification B-221 alloy 6061-T6, and shall extend a minimum of 2 panel lengths (attached to minimum of 3 posts) except at ends or at open joints where a minimum of 1 panel length is required. All joints in railing must be spliced per detail.

See Special Provisions for following Material Specifications:

Cast Aluminum Alloy Bridge Post— AlloyA 344-T4
Stainless Steel Welded Stud Bolts, Washers, and Locknuts
Fabric bearing Pad

METHOD of MEASUREMENT: Aluminum handrail shall be measured in lineal feet. The length paid for shall be the over all length along the top longitudinal railing member thru all posts and gaps.

BASIS of PAYMENT: Aluminum handrail shall be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.

Cost of rail splice, end caps, and hardware to be incidental to item ALUMINUM HANDRAIL.

Provide 1–⅛" and 2–1/16" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade — high spots shall be ground, and low spots shimmed.

BILL OF MATERIAL

Item	Unit	Quantity
ALUMINUM HANDRAIL	Lin. Ft.	619.

ALUMINUM HANDRAIL
F.A.I. RT. 74 SECTION 10-4H,B
CHAMPAIGN COUNTY
STATION 1518+75.19

DESIGNED	J. Schmidt		
CHECKED	J. Kasper		
	R. FERRANDO		
DRAWN	Wm. M. Best		
CHECKED	J.K.		
EXAMINED	June 28, 1965		
PASSED			
APPROVED			

R-17 Dgn. 5-28-64 Rev. 1-20-65

AS-BUILT PLANS
FOR INFORMATION ONLY

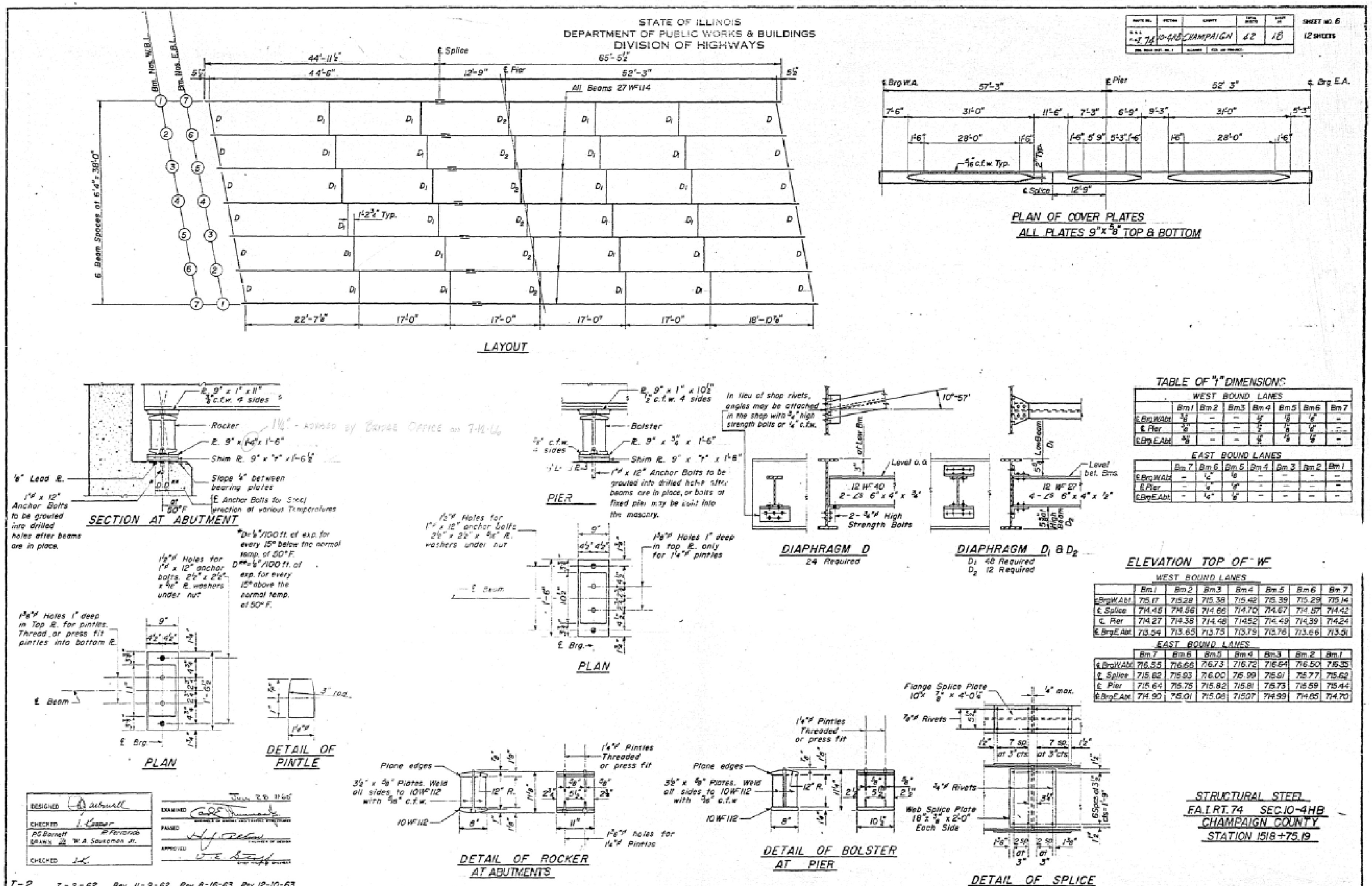


TABLE OF "t" DIMENSIONS

WEST BOUND LANES

	Bm 1	Bm 2	Bm 3	Bm 4	Bm 5	Bm 6	Bm 7
℄ Brg. W. Abt.	3/8"	–	–	1/2"	1/8"	1/8"	–
℄ Pier	5/8"	–	–	1/2"	1/8"	1/8"	–
℄ Brg. E. Abt.	3/8"	–	–	1/2"	1/8"	1/8"	–

EAST BOUND LANES

	Bm 7	Bm 6	Bm 5	Bm 4	Bm 3	Bm 2	Bm 1
℄ Brg. W. Abt.	–	1/2"	1/8"	–	–	–	–
℄ Pier	–	1/4"	1/8"	–	–	–	–
℄ Brg. E. Abt.	–	1/4"	1/8"	–	–	–	–

ELEVATION TOP OF WF

WEST BOUND LANES

	Bm 1	Bm 2	Bm 3	Bm 4	Bm 5	Bm 6	Bm 7
℄ Brg. W. Abt.	715.17	715.28	715.38	715.42	715.39	715.29	715.14
℄ Splice	714.45	714.56	714.66	714.70	714.67	714.57	714.42
℄ Pier	714.27	714.38	714.48	714.52	714.49	714.39	714.24
℄ Brg. E. Abt.	713.54	713.65	713.75	713.79	713.76	713.66	713.51

EAST BOUND LANES

	Bm 7	Bm 6	Bm 5	Bm 4	Bm 3	Bm 2	Bm 1
℄ Brg. W. Abt.	716.55	716.66	716.73	716.72	716.64	716.50	716.35
℄ Splice	715.82	715.93	716.00	716.99	715.91	715.77	715.62
℄ Pier	715.64	715.75	715.82	715.81	715.73	715.59	715.44
℄ Brg. E. Abt.	714.90	715.01	715.08	715.07	714.99	714.85	714.70

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\CADData\Structures\D570B15-sht-Repair.dgn	USER NAME = sharerjm	DESIGNED -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	DRAWN -	REVISED -
Default	PLOT DATE = 8/8/2016	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS-BUILT PLANS
FOR INFORMATION ONLY

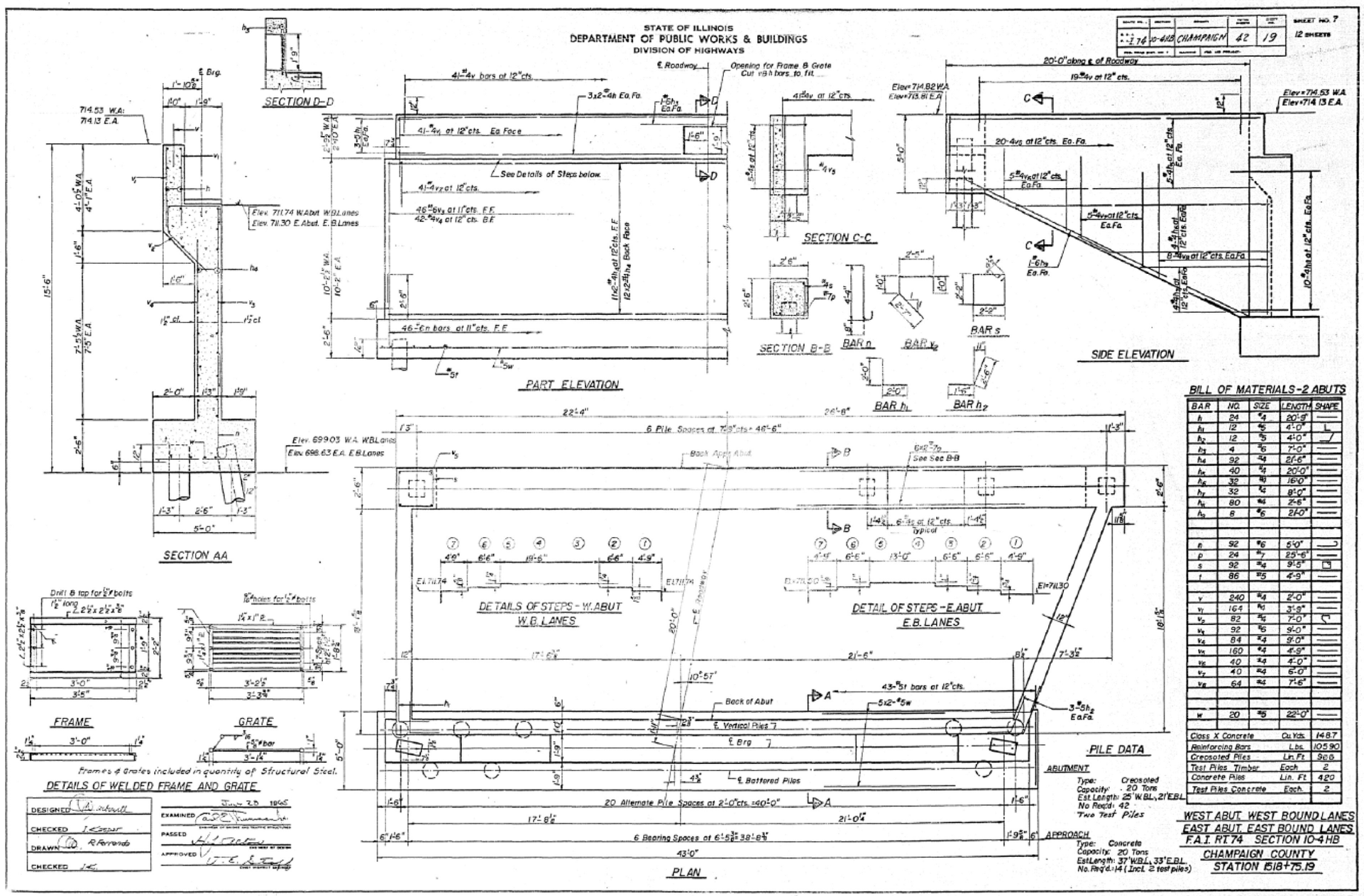
SCALE: SHEET 30 OF 33 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	36

CONTRACT NO. 70B15

ILLINOIS FED. AID PROJECT

AS–BUILT PLANS
FOR INFORMATION ONLY



BAR	NO.	SIZE	LENGTH	SHAPE
h	84	#4	20'-8"	
h_1	12	#6	4'-0"	
h_2	12	#5	4'-0"	
h_3	4	#6	7'-0"	
h_4	32	#4	21'-6"	
h_5	40	#4	20'-0"	
h_6	32	#6	16'-0"	
h_7	32	#4	8'-0"	
h_8	80	#4	2'-6"	
h_9	8	#6	21'-0"	
n	92	#6	5'-0"	
p	24	#7	25'-6"	
s	92	#4	9'-5"	
t	86	#5	4'-9"	
v	240	#4	2'-0"	
v_1	164	#3	3'-9"	
v_2	82	#5	7'-0"	
v_3	92	#6	9'-0"	
v_4	84	#4	9'-0"	
v_5	160	#4	4'-9"	
v_6	40	#4	4'-0"	
v_7	40	#4	6'-0"	
v_8	64	#4	7'-6"	
w	20	#5	22'-0"	

Class X Concrete	Cu Yds.	1487
Reinforcing Bars	Lbs.	10590
Creosoted Piles	Lin. Ft	966
Test Piles Timber	Each	2
Concrete Piles	Lin. Ft	420
Test Piles Concrete	Each.	2

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DRAWINGS\Data\Structures\D570B15-sht-Repair-Revised	USER NAME = sherer.jm	DESIGNED -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS–BUILT PLANS
FOR INFORMATION ONLY

SCALE: | SHEET 31 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	37
		CONTRACT NO. 70B15		
		ILLINOIS FED. AID PROJECT		

AS–BUILT PLANS
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RTE. 74 & US-45	10-4,10-5)I	CHAMPAIGN	42	20

SHEET NO. 8
12 SHEETS

SECTION D-D

SECTION A-A

PART ELEVATION

SECTION C-C

SECTION B-B

BAR n

BAR v_2

BAR s

BAR h

BAR h_2

SIDE ELEVATION

PLAN

DETAIL OF STEPS E.ABUT W.B.LANES

DETAILS OF STEPS W.ABUT E.B.LANES

FRAME

GRATE

DETAILS OF WELDED FRAME AND GRATE

PILE DATA

ABUTMENT
Type: Creosoted
Capacity: 20 Tons
Est. Length: 26'W.BL. 23'E.BL.
No. Reqd: 42

APPROACH
Type: Concrete
Capacity: 20 Tons
Est. Length: 38'W.BL. 35'E.BL.
No. Reqd: 14

BILL OF MATERIAL 2-ABUTS.

BAR	NO	SIZE	LENGTH	SHAPE
h	24	#9	20'-0"	
h_1	12	#5	4'-0"	
h_2	12	#5	4'-0"	
h_3	4	#6	7'-0"	
h_4	92	#4	2'-6"	
h_5	40	#4	20'-0"	
h_6	32	#4	16'-0"	
h_7	32	#4	8'-0"	
h_8	80	#4	2'-6"	
h_9	8	#6	21'-0"	
n	92	#6	5'-0"	
p	24	#7	25'-6"	
s	92	#4	9'-5"	
t	86	#5	4'-9"	
v	240	#4	2'-0"	
v_1	164	#4	3'-9"	
v_2	82	#4	7'-0"	
v_3	92	#6	9'-0"	
v_4	84	#4	9'-0"	
v_5	160	#4	4'-9"	
v_6	40	#4	4'-0"	
v_7	40	#4	6'-0"	
v_8	64	#4	7'-6"	
w	20	#5	22'-0"	

Class X Concrete	Cu. Yds.	1487
Reinforcement Bars	Lbs.	10590
Creosoted Piles	Lin.Ft.	1029
Concrete Piles	Lin.Ft.	511

EAST ABUT. WEST BOUND LANES
WEST ABUT. EAST BOUND LANES
F.A.I. RT. 74 SECTION 10-4HB
CHAMPAIGN COUNTY
STATION 1518+75.19

DESIGNED
CHECKED
DRAWN
CHECKED
EXAMINED
PASSED
APPROVED
JULY 23 1965

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\DrawingData\Structures\D570815-sht-Repair	USER NAME = sherer.jm	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS–BUILT PLANS
FOR INFORMATION ONLY

SCALE: | SHEET 32 OF 33 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	38
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

AS–BUILT PLANS
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	W-4 HB	CHAMPAIGN	42	21

SHEET NO. 9
12 SHEETS

WEST BOUND LANES

EAST BOUND LANES

DETAIL OF STEPS

TOP PLAN

6 Brg Spaces at 6'-5⅜" ℄ = 38'-6¾"

Note:
Space reinforcement in cap to miss anchor bolts.
Min. bar laps = 20 dia. unless otherwise noted.
All edges shall have standard ¾" chamfers except as noted.
Pour steps monolithically with cap.

SECTION A-A

SECTION B-B

Elev. 710.82 W.B. Lanes
Elev. 712.02 E.B. Lanes

See Detail of Steps

Symm. about ℄ Pier

29-#5 bars s_1 at 12" cts.

7-#11 bars p_1 (Top of Cap)

2-#10$_4$

2 x 2-#5 bars h_{10} (Each Face)

5-#6 bars f_2 Bottom of Cap

2-#6 bars p_3 Bottom of Cap

14-#9 bars f_3 See Sec. B-B

9-pairs #4 bars at 12" cts. Each Column

6-#5 bars h_{11}

14-#9 bars f_3 Each Column

30-#5 bars s_9 at 12" cts.

30-#5 bars s_9 at 12" cts.

6-#4 bars s_{11} at 12" cts. Each End

DIMENSIONS

REINFORCEMENT

ELEVATION

Elev. 691.07 W.B. Lanes
Elev. 692.27 E.B. Lanes

END VIEW

Maximum Soil Pressure
1.7 TONS/□'

Symm. about ℄ Pier

33-#6 bars t_1 at 12" cts. (Bottom)

7-#5 bars w_1 Bottom

DIMENSIONS

REINFORCEMENT

FOOTING PLAN

BARS s_2 to s_9

A & B DIMENSIONS

Bar	A	B
s_2	2'-2"	2'-5"
s_3	2'-2"	2'-1"
s_4	2'-2"	1'-9"
s_5	1'-11"	2'-6"
s_6	1'-11"	2'-1"
s_7	2'-2"	2'-1"
s_8	2'-2"	5'-2"
s_9	2'-2"	3'-11"

BAR s_1

BAR u

2 PIERS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_{10}	16	#5	22'-0"	
h_{11}	12	#5	27'-6"	
h_{12}	20	#4	27'-6"	
n_1	84	#9	6'-0"	
p_1	14	#11	42'-6"	
p_2	10	#6	28'-0"	
p_3	8	#6	7'-9"	
p_4	8	#11	16'-0"	
s_1	58	#5	11'-0"	
s_2	32	#5	7'-0"	
s_3	32	#5	6'-4"	
s_4	32	#5	5'-8"	
s_5	60	#4	6'-11"	
s_6	48	#4	6'-1"	
s_7	24	#4	6'-4"	
s_8	60	#5	12'-6"	
s_9	60	#5	10'-0"	
t_1	66	#6	8'-3"	
u	12	#6	10'-0"	
v_3	84	#9	10'-6"	
w_1	14	#5	32'-3"	
Class X Concrete			Cu. Yds.	112.9
Reinforcement Bars			Lbs.	14900

DESIGNED	J. Ostmann		
CHECKED	J. Kasper		
DRAWN	R. Ferrando / W. E. Sassaman Jr.	EXAMINED	July 28 1965
CHECKED	J.K.	PASSED	
		APPROVED	

P-5 7-2-62

PIER
FA1 RT 74 SEC. 10-4HB
CHAMPAIGN COUNTY
STATION 1518+75.19

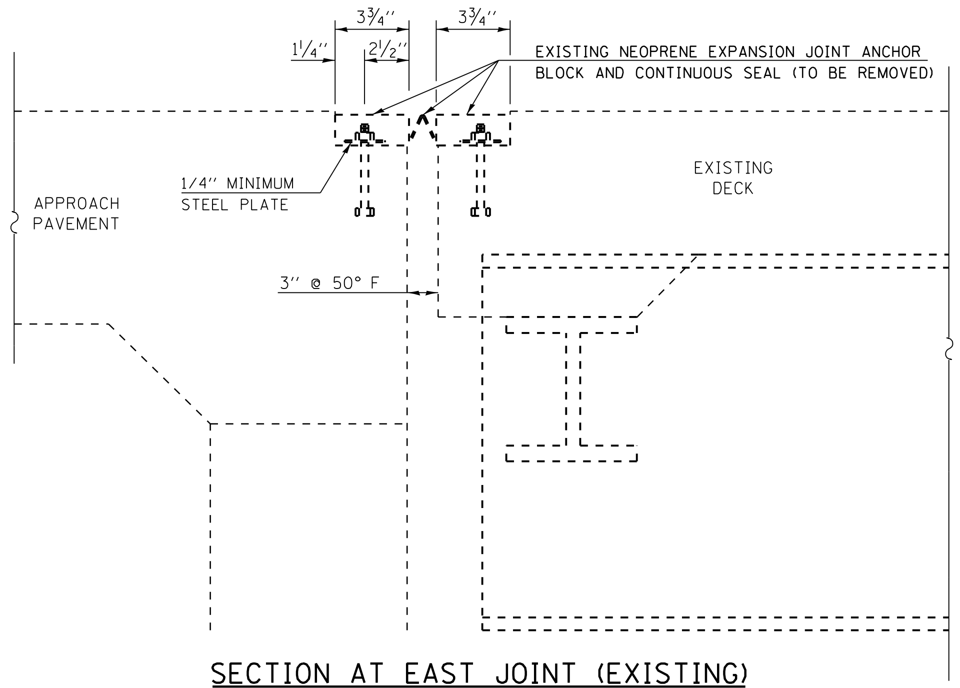
FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DRAWINGData\Structures\D570B15-sht-Repair-Pier-1.dgn	USER NAME = shererjm	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

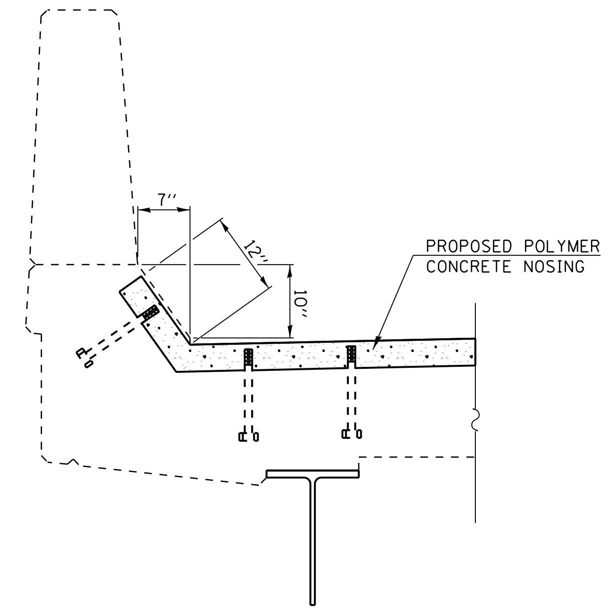
AS–BUILT PLANS
FOR INFORMATION ONLY

SCALE: | SHEET 33 OF 33 SHEETS | STA. | TO STA.

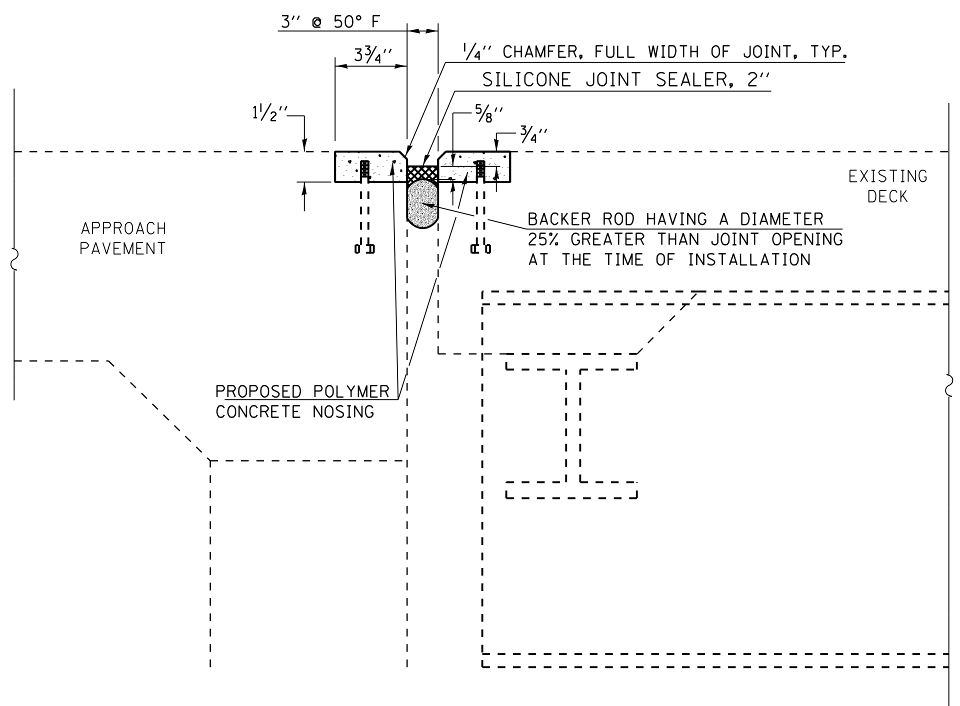
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	39
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			



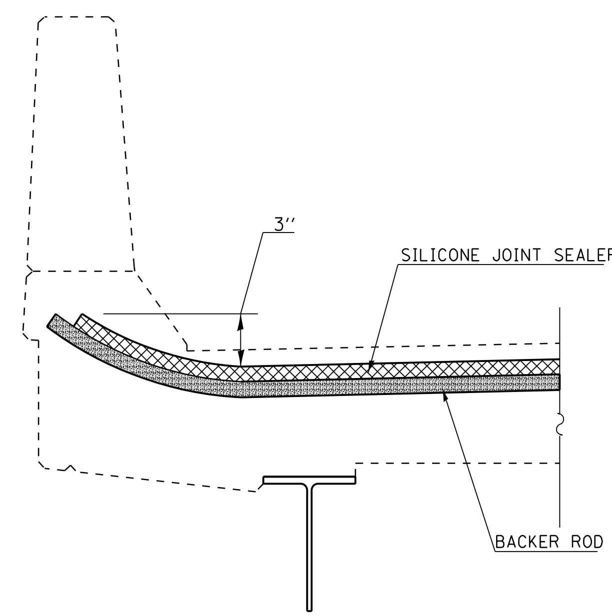
SECTION AT EAST JOINT (EXISTING)



SECTION AT PARAPET
POLYMER CONCRETE NOSING



SECTION AT EAST JOINT (PROPOSED)



SECTION AT PARAPET
SILICONE JOINT SEALER

General Notes

Plan dimensions and details relative to existing plans are subject to nominal construction vatiations. 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 bid price for the work.

Removal of the existing Neoprene Expansion Joint shall be included with the cost of SILICONE JOINT SEALER and POLYMER CONCRETE.

Proprosed Improvements

1. *Remove existing Neoprene Expansion Joint*
2. *Place Polymer Concrete Nosing*
3. *Place Backer Rod*
4. *Place Silicone Joint Sealer*

TOTAL BILL OF MATERIALS
S.N. 010-0016 & S.N. 010-0017

Item	Unit	Total
Silicone Joint Sealer, 3"	Foot	89.0
Polymer Concrete	Cu. Ft.	8.0

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\CAD Data\Structures\...5-sht-RepairPlans.dgn	USER NAME = sharerjm	DESIGNED - R. CARROLL	REVISED - JMS 081314
		DRAWN - R. CARROLL	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

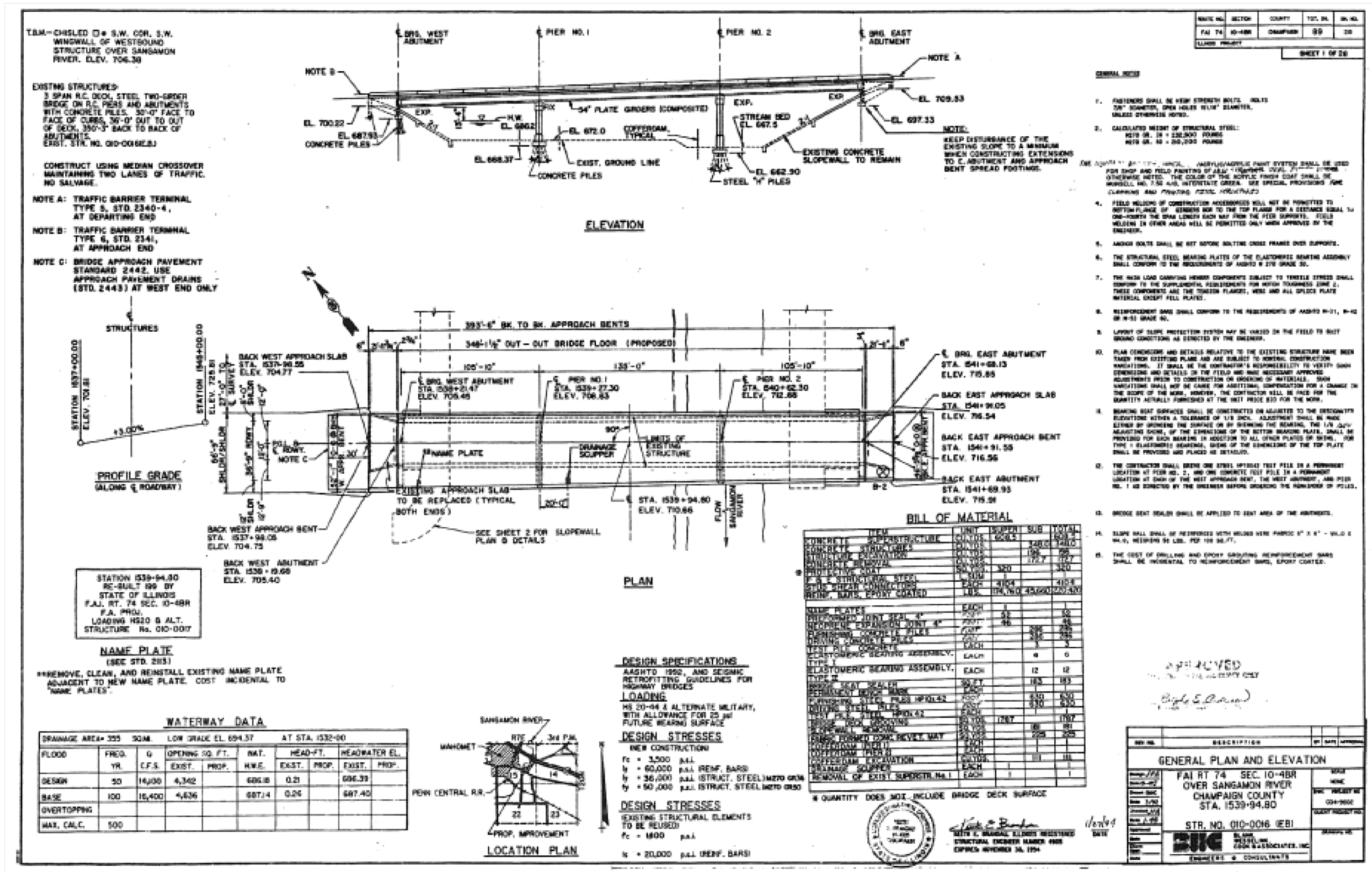
EAST JOINT REPAIR DETAILS
S.N. 010–0016 & 010–0017

SCALE: | SHEET NO. 1 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	40

CONTRACT NO. 70B15

ILLINOIS FED. AID PROJECT



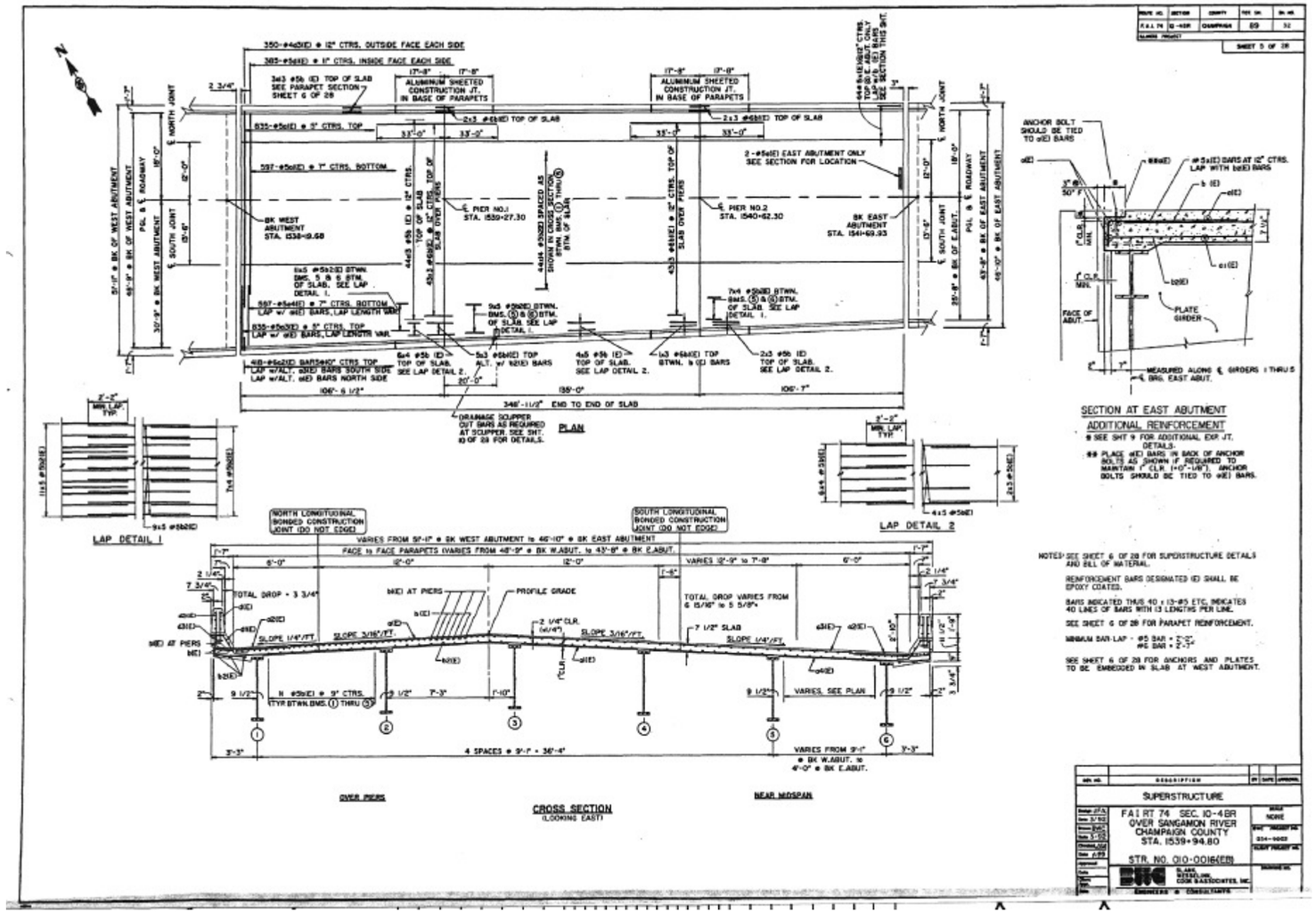
FILE NAME =	USER NAME = shererjm	DESIGNED - R. CARROLL	REVISED - JMS 081314
pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D57...		DRAWN - R. CARROLL	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

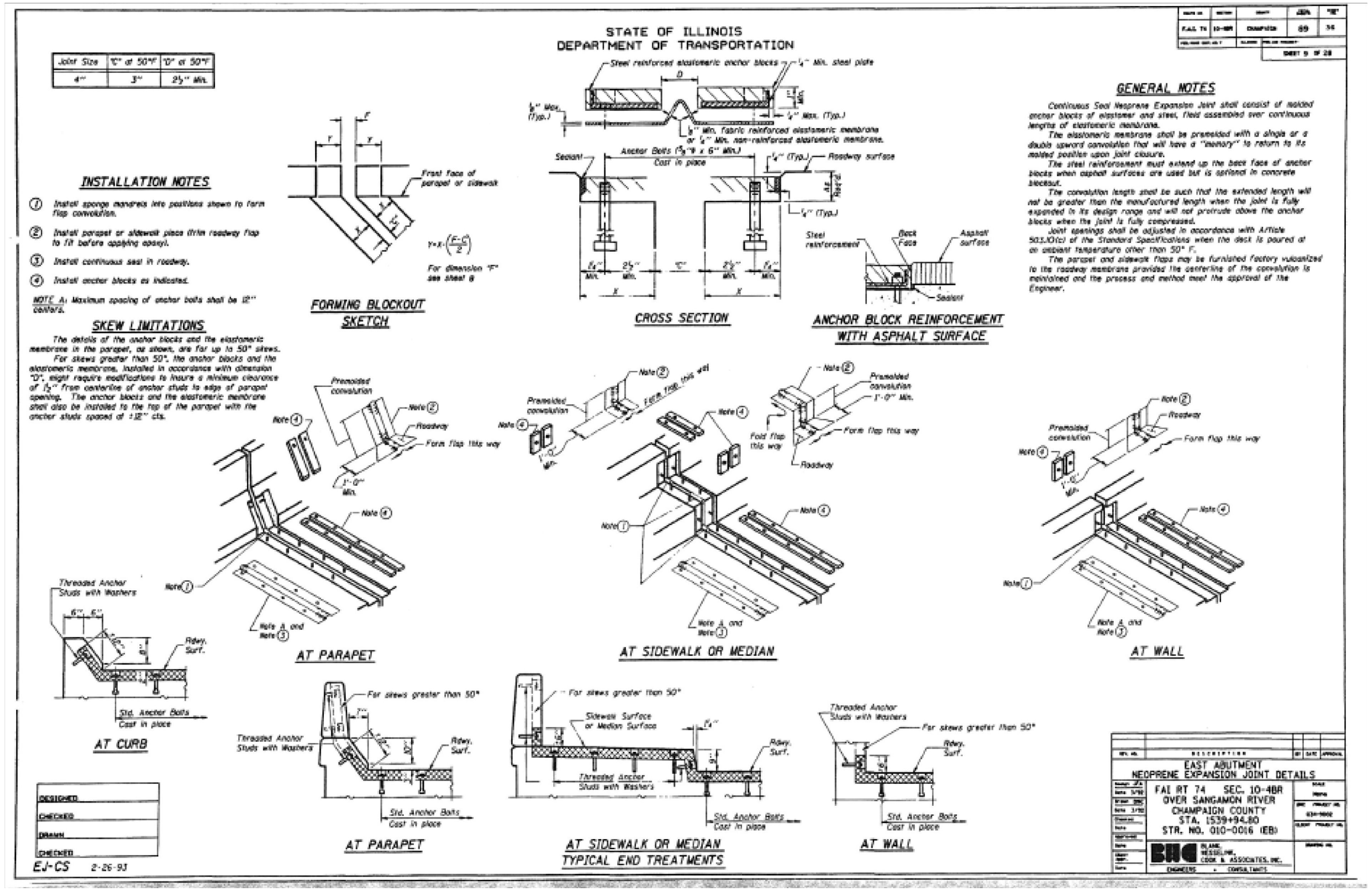
AS-BUILTS
S.N. 010-0016 & 010-0017

SCALE: | SHEET NO. 2 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	41
		CONTRACT NO. 70B15		
		ILLINOIS FED. AID PROJECT		



FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D5708\DRAWINGS\Structure\CARROLL5-sht-Repair	USER NAME = shererjm	DESIGNED - R. CARROLL	REVISED - JMS 081314	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	AS-BUILTS S.N. 010-0016 & 010-0017			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 40.0000 ' / in.	DRAWN - R. CARROLL	REVISED -					74	(10-4,10-5)I	CHAMPAIGN	74	42
	PLOT DATE = 8/8/2016	CHECKED -	REVISED -							CONTRACT NO. 70B15		
		DATE -	REVISED -		SCALE:	SHEET NO. 3 OF 7 SHEETS	STA. TO STA.		ILLINOIS	FED. AID PROJECT		



FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D57...	USER NAME = sharerjm	DESIGNED - R. CARROLL	REVISED - JMS 081314	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	AS-BUILTS S.N. 010-0016 & 010-0017	
		DRAWN - R. CARROLL	REVISED -			
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -			
	PLOT DATE = 8/8/2016	DATE -	REVISED -		SCALE:	SHEET NO. 4 OF 7 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	43
		CONTRACT NO. 70B15		
		ILLINOIS FED. AID PROJECT		

ROUTE NO.	SECTION	COUNTY	TOT. SH.	SH. NO.
FAI 74	10-48R	CHAMPAIGN	89	14

ILLINOIS PROJECT

SHEET 1 OF 23

T.B.M.—CHISLED □ ⊕ S.W. COR. S.W. WINGWALL OF WESTBOUND STRUCTURE OVER SANGAMON RIVER. ELEV. 706.38

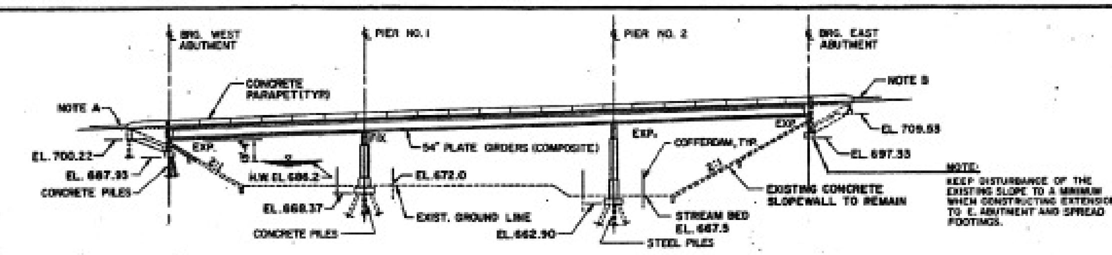
EXISTING STRUCTURES:
3 SPAN R.C. DECK, STEEL TWO-GIRDER BRIDGE ON R.C. PIERS AND ABUTMENTS WITH CONCRETE PILES. 30'-0" FACE TO FACE OF CURBS, 36'-0" OUT TO OUT OF DECK, 350'-3" BACK TO BACK OF ABUTMENTS.
EXIST. STR. NO. 010-0017(WB)

CONSTRUCT USING MEDIAN CROSSOVER MAINTAINING TWO LANES OF TRAFFIC. NO SALVAGE.

NOTE A: TRAFFIC BARRIER TERMINAL TYPE 5, STD. 2340-4, AT DEPARTING END

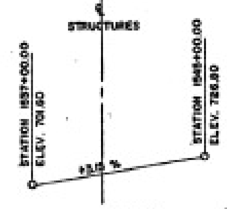
NOTE B: TRAFFIC BARRIER TERMINAL TYPE 6, STD. 2341, AT APPROACH END

NOTE C: BRIDGE APPROACH PAVEMENT STANDARD 2442. USE APPROACH PAVEMENT DRAINS (STD. 2443) AT WEST END ONLY

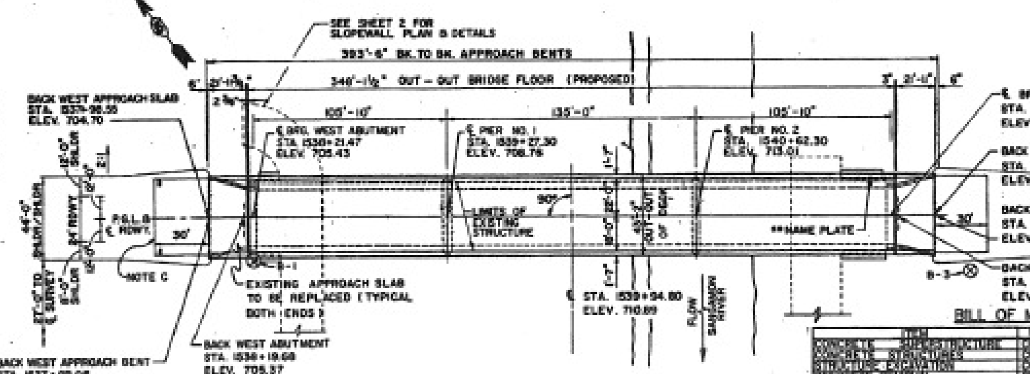


NOTE: KEEP DISTURBANCE OF THE EXISTING SLOPE TO A MINIMUM WHEN CONSTRUCTING EXTENSIONS TO E. ABUTMENT AND SPREAD FOOTINGS.

ELEVATION
WESTBOUND LANES



PROFILE GRADE
(ALONG ℄ ROADWAY)



PLAN

STATION 1539+94.80
RE-BUILT 199 BY
STATE OF ILLINOIS
F.A.I. RT. 74 SEC. 10-48R
F.A. PROJ.
LOADING HS20 & ALT.
STRUCTURE No. 010-0017

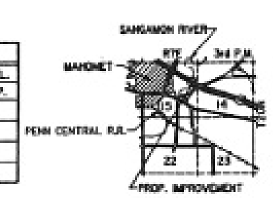
NAME PLATE
(SEE STD. 2113)

**REMOVE, CLEAN, AND REINSTALL EXISTING NAME PLATE ADJACENT TO NEW NAME PLATE. COST INCIDENTAL TO "NAME PLATES".

WATERWAY DATA

DRAINAGE AREA= 355 SQ.MI. LOW GRADE EL. 694.37 AT STA. 1532+00

FLOOD	FREQ. YR.	Q C.F.S.	OPENING SQ. FT. EXIST.	OPENING SQ. FT. PROP.	NAT. H.W.E.	HEAD-FT. EXIST.	HEAD-FT. PROP.	HEADWATER EL. EXIST.	HEADWATER EL. PROP.
DESIGN	50	14,100	4,342		686.18	0.21		686.39	
BASE	100	16,400	4,636		687.14	0.26		687.40	
OVERTOPPING									
MAX. CALC.	500								



LOCATION PLAN

DESIGN SPECIFICATIONS
AASHTO 1992 AND SEISMIC RETROFITTING GUIDELINES FOR HIGHWAY BRIDGES.

LOADING
HS 20-44 & ALTERNATE MILITARY, WITH ALLOWANCE FOR 25 psf FUTURE WEARING SURFACE

DESIGN STRESSES
(NEW CONSTRUCTION)
f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (REINF. BARS)
fy = 36,000 p.s.i. (STRUCT. STEEL) M270 GR36
fy = 50,000 p.s.i. (STRUCT. STEEL) M270 GR50

DESIGN STRESSES
(EXISTING STRUCTURAL ELEMENTS TO BE REUSED)
f'c = 1,400 p.s.i.
fs = 20,000 p.s.i. (REINF. BARS)

BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
CONCRETE SUPERSTRUCTURE	CU YDS	544.3		544.3
CONCRETE STRUCTURES	CU YDS		276.1	276.1
STRUCTURE EXCAVATION	CU YDS		115	115
CONCRETE REMOVAL	CU YDS		168.4	168.4
* PROTECTIVE COAT	SQ YDS	320		320
F & E STRUCTURAL STEEL	L SUM	1		1
STUD SHEAR CONNECTORS	EACH	3936		3936
REINF. BARS, EPOXY COATED	LBS.	132,650	34,900	167,550
NAME PLATES	EACH	1		1
PREFORMED JOINT SEAL 4"	FOOT	43		43
NEOPRENE EXPANSION JOINT 4"	FOOT	42		42
FURNISHING CONCRETE PILES	FOOT		62	62
DRIVING CONCRETE PILES	FOOT		62	62
TEST PILE CONCRETE	EACH		2	2
ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH		6	6
ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH		12	12
REMOVAL OF EXISTING SUPERSTRUCTURE No. 2	EACH	1		1
BRIDGE SEAT SEALER	SQ. FT.		158	158
PERMANENT BENCH MARK	EACH		1	1
FURNISHING STEEL PILES HP 10x42	FOOT		360	360
DRIVING STEEL PILES	FOOT		360	360
TEST PILE STEEL HP 10x42	EACH		1	1
BRIDGE DECK GROOVING	SQ YDS	1547		1547
SLOPEWALL REMOVAL	SQ YDS		182	182
FABRIC FORMED CONC. REVET. MAT	SQ YDS		205	205
COFFERDAM (PIER 1)	EACH		1	1
COFFERDAM (PIER 2)	EACH		1	1
COFFERDAM EXCAVATION	CU YDS		89	89

* QUANTITY DOES NOT INCLUDE BRIDGE DECK SURFACE.

GENERAL NOTES

1. FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 7/8" DIAMETER, OPEN HOLES 15/16" DIAMETER, UNLESS OTHERWISE NOTED.
2. CALCULATED WEIGHT OF STRUCTURAL STEEL:
   M270 GR. 36 = 227,150 POUNDS
   M270 GR. 50 = 165,100 POUNDS
3. [illegible] ACRYLIC/ACRYLIC PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF NEW STRUCTURAL STEEL EXCEPT WHERE OTHERWISE NOTED. THE COLOR OF THE ACRYLIC FINISH COAT SHALL BE MUNSELL NO. 7.5G 4/8, INTERSTATE GREEN. SEE SPECIAL PROVISIONS.
4. FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO BOTTOM FLANGE OF GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.
5. ANCHOR BOLTS SHALL BE SET BEFORE BOLTING CROSS FRAMES OVER SUPPORTS.
6. THE STRUCTURAL STEEL BEARING PLATES OF THE ELASTOMERIC BEARING ASSEMBLY SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 270 GRADE 50.
7. THE MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS SHALL CONFORM TO THE SUPPLEMENTAL REQUIREMENTS FOR NOTCH TOUGHNESS ZONE 2. THESE COMPONENTS ARE THE TENSION FLANGES, WEBS AND ALL SPLICE PLATE MATERIAL EXCEPT FILL PLATES.
8. REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.
9. LAYOUT OF SLOPE PROTECTION SYSTEM MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.
10. PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NORMAL 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.
11. BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS. FOR TYPE I ELASTOMERIC BEARINGS, SHIMS OF THE DIMENSIONS OF THE TOP PLATE SHALL BE PROVIDED AND PLACED AS DETAILED.
12. THE CONTRACTOR SHALL DRIVE ONE STEEL HP10X42 TEST PILE IN A PERMANENT LOCATION AT PIER NO. 2, AND ONE CONCRETE TEST PILE IN A PERMANENT LOCATION AT EACH OF THE WEST ABUTMENT AND PIER NO. 1 AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.
13. BRIDGE SEAT SEALER SHALL BE APPLIED TO SEAT AREA OF THE ABUTMENTS.
14. SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6" X 6" - W4.0 X W4.0, WEIGHING 58 LBS. PER 100 SQ.FT.
15. THE COST OF DRILLING AND EPOXY GROUTING REINFORCEMENT BARS SHALL BE INCIDENTAL TO REINFORCEMENT BARS, EPOXY COATED.

APPROVED

KEITH E. BRANDAU, ILLINOIS REGISTERED STRUCTURAL ENGINEER NUMBER 4900
EXPIRES: NOVEMBER 30, 1994

REV. NO.	DESCRIPTION	BY	DATE	APPROVAL

GENERAL PLAN AND ELEVATION
FAI RT 74 SEC. 10-48R
OVER SANGAMON RIVER
CHAMPAIGN COUNTY
STA. 1539+94.80
STR. NO. 010-0017 (WB)

SCALE NONE

BLAND, WESSELINK, COOK & ASSOCIATES, INC.
ENGINEERS & CONSULTANTS

FILE NAME =	USER NAME = sherer jm	DESIGNED - R. CARROLL	REVISED - JMS 081314
pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D57...		DRAWN - R. CARROLL	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

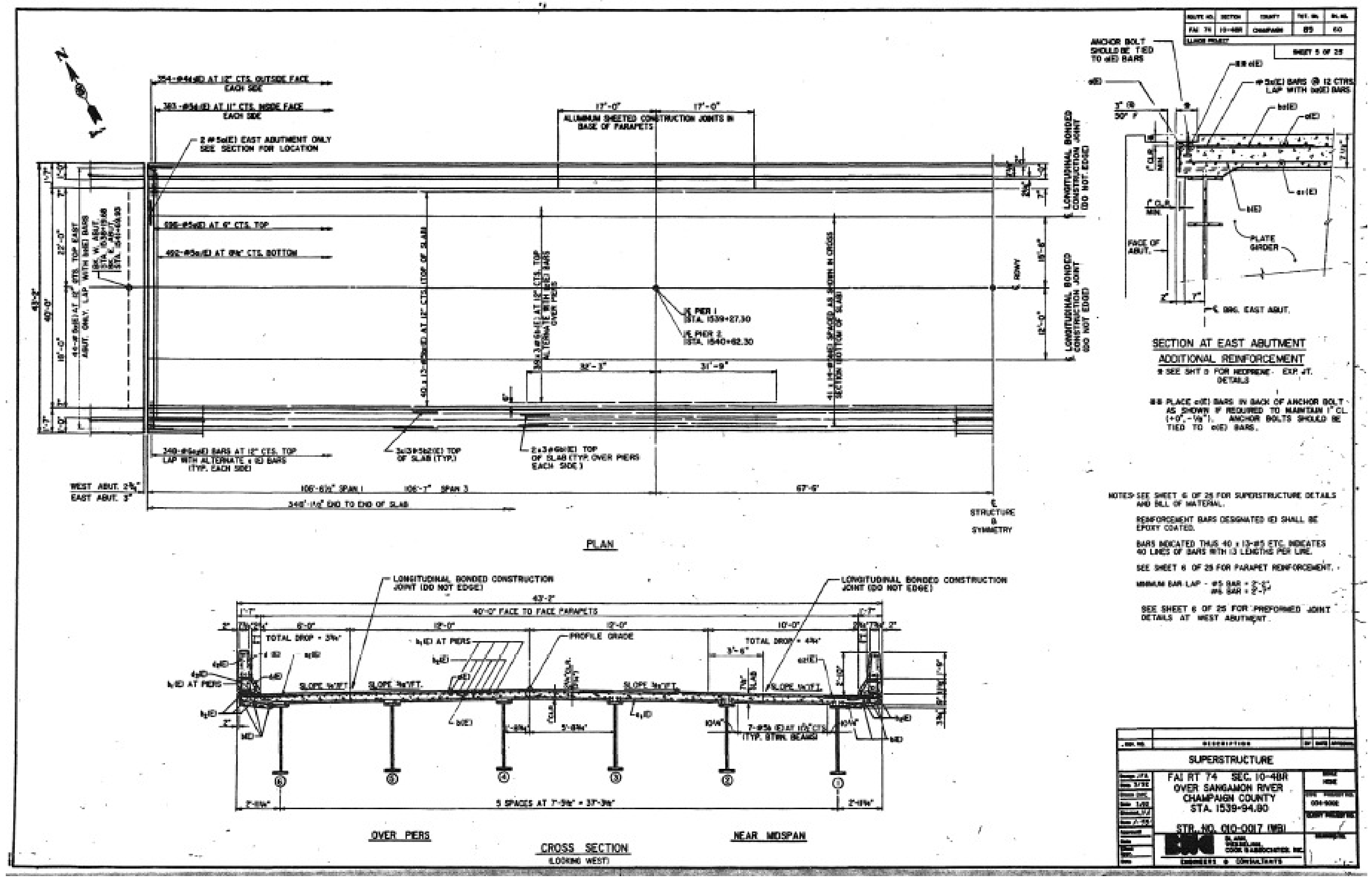
AS-BUILTS
S.N. 010-0016 & 010-0017

SCALE: | SHEET NO. 5 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	44

CONTRACT NO. 70B15

ILLINOIS FED. AID PROJECT



FILE NAME =	USER NAME = shererjm	DESIGNED - R. CARROLL	REVISED - JMS 081314
pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D57...		DRAWN - R. CARROLL	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS-BUILTS
S.N. 010-0016 & 010-0017

SCALE: | SHEET NO. 6 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	45
		CONTRACT NO. 70B15		
		ILLINOIS FED. AID PROJECT		

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	10-4BR	CHAMPAIGN	89	64

SHEET 9 OF 25

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Joint Size	"C" at 50°F	"D" at 50°F
4"	3"	2½" Min.

INSTALLATION NOTES

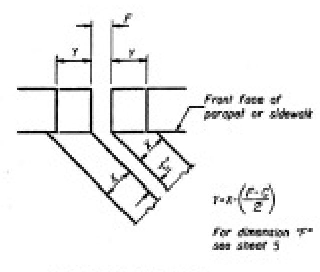
1. Install sponge mandrels into positions shown to form flap convolution.
2. Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
3. Install continuous seal in roadway.
4. Install anchor blocks as indicated.

NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

SKEW LIMITATIONS

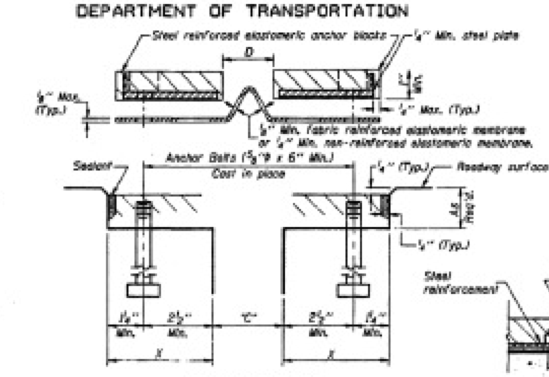
The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews.

For skews greater than 50°, the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D", might require modifications to insure a minimum clearance of 1½" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.

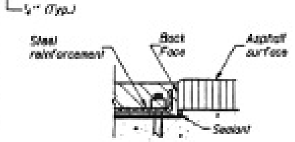


$$Y = X\left(\frac{F-C}{2}\right)$$

FORMING BLOCKOUT SKETCH



CROSS SECTION



ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE

GENERAL NOTES

Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane.

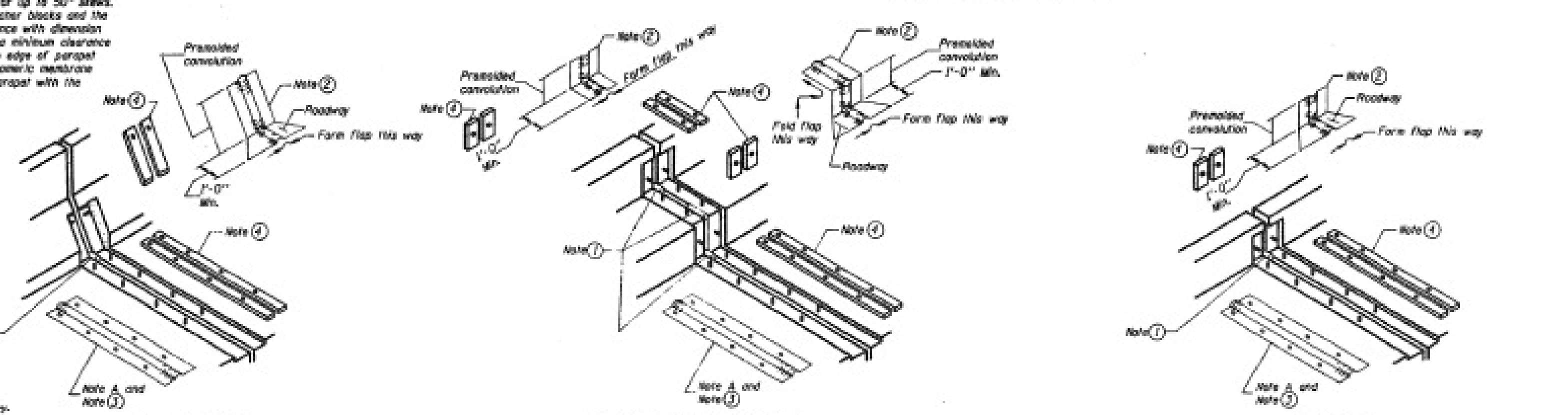
The elastomeric membrane shall be premolded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.

The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.

The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.

Joint openings shall be adjusted in accordance with Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.

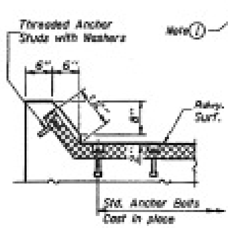
The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.



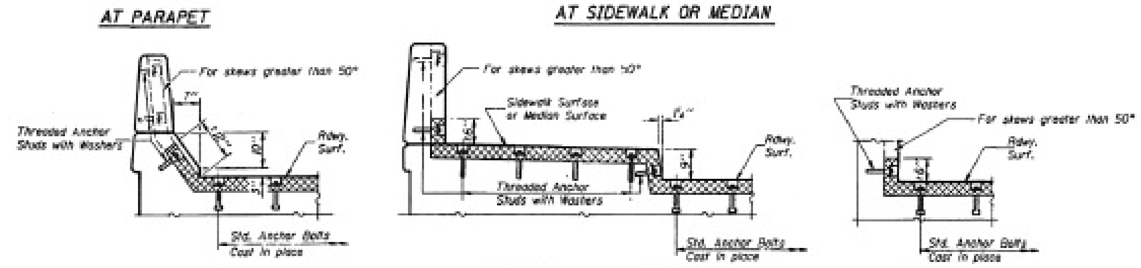
AT PARAPET

AT SIDEWALK OR MEDIAN

AT WALL



AT CURB



AT PARAPET

AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS

AT WALL

DESIGNED
CHECKED
DRAWN
CHECKED

EJ-CS 2-26-93

EAST ABUTMENT
NEOPRENE EXPANSION JOINT DETAILS

FAI RT 74 SEC. 10-4BR
OVER SANGAMON RIVER
CHAMPAIGN COUNTY
STA. 1539+94.80
STR. NO. 010-001T (WB)

BLANK, WESSELINK, COOK & ASSOCIATES, INC.
ENGINEERS - CONSULTANTS

FILE NAME =	USER NAME = sharerjm	DESIGNED - R. CARROLL	REVISED - JMS 081314
pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D57...		DRAWN - R. CARROLL	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS-BUILTS
S.N. 010-0016 & 010-0017

SCALE: | SHEET NO. 7 OF 7 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	46

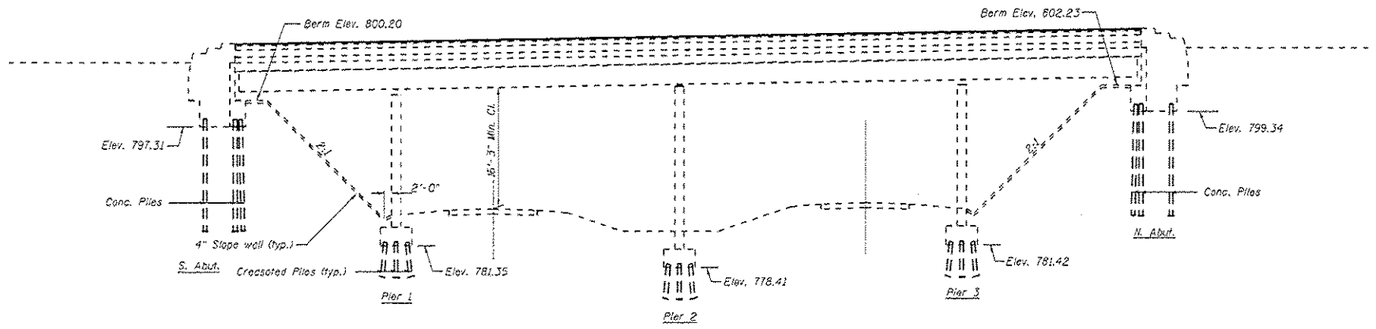
CONTRACT NO. 70B15

ILLINOIS FED. AID PROJECT

STRUCTURE 010-0167 WAS ORIGINALLY BUILT IN 1966 AS FAI ROUTE 74, SECTION 10-5HB AT STATION 1742+74.26 BY THE STATE OF ILLINOIS.

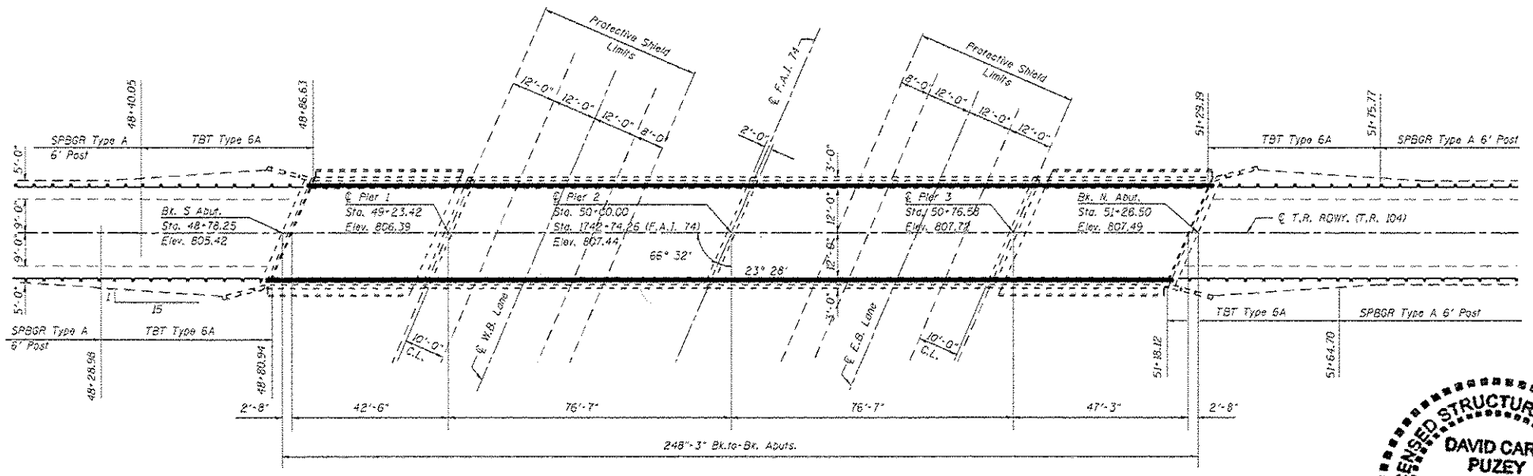
THE EXISTING STRUCTURE IS A FOUR SPAN STRUCTURE WITH A BACK-TO-BACK OF ABUTMENT LENGTH OF 248'-3". THE STRUCTURE MEASURES 24'-0" FROM FACE-TO-FACE OF SAFETY WALK AND HAS AN OUT-TO-OUT WIDTH OF 30'-0". THE STRUCTURE WAS BUILT ON A 23° 28' LEFT-FORWARD SKEW. THE SUPERSTRUCTURE CONSISTS OF FIVE STEEL GIRDERS SUPPORTING A 6½" REINFORCED CONCRETE DECK. THE SUPERSTRUCTURE IS SUPPORTED BY PILE ABUTMENTS AND PIERS. THE SLOPES ARE PROTECTED WITH CONCRETE SLOPE WALLS.

METHOD OF CONSTRUCTION: ROAD CLOSURE



ELEVATION

• ELEVATIONS TAKEN FROM AS-BUILT PLANS AND ARE SHOWN FOR PERSPECTIVE ONLY.



PLAN VIEW

GENERAL NOTES

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 work. However, the Contractor will be paid for the quantity actually furnished at the unit price for the work.

Reinforcement bars designated (E) shall be epoxy coated.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

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

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

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.

See Special Provision "Deck Slab Repair" for additional requirements pertaining to Deck Slab Repair.

Areas of Deck Slab Repairs shown are estimated. The Engineer shall show actual locations of the deck repairs on As-Built plans.

PROPOSED WORK

1. *Remove and replace select deck drains.*
2. *Partial depth patching on existing deck.*
3. *Place Steel Railing, Type 2399*
4. *Remove and replace existing guardrail and terminals.*

TOTAL BILL OF MATERIAL S.N. 010-0167

ITEM	UNIT	TOTAL
Protective Shield	Sq Yd.	175.0
Deck Slab Repair Partial Depth	Sq Yd	15.0
Deck Slab Repair (Full-Depth, Type I)	Sq Yd.	4.0
Deck Slab Repair (Full-Depth, Type II)	Sq. Yd.	18.0
Floor Drains	Each	10.0
Steel Rail Type 2399	Foot	491.0
Guardrail Removal	Foor	1217.0
Steel Plate Beam guardrail, TA, 6' Posts	Foot	887.5
Traffic Barrier Terminal Type 6A	Each	4.0
Traffic Barrier Terminal T1 Sp (Tangent)	Each	4.0
Terminal Marker Direct Applied	Each	4.0
Guardrail Marker, Type A	Each	12.0

LICENSED STRUCTURAL ENGINEER
DAVID CARL PUZEY
081-005470
SPRINGFIELD ILLINOIS
STATE OF ILLINOIS

9/26/16
Expires 11/30/18

FILE NAME =	USER NAME = sheneryn	DESIGNED - JMS	REVISED -
pw:\\JL884E8IDINTED.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\0572815\DRAWDataS\Structures\0572815-sht-Repair		DRAWN	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED - ATH	REVISED -
	PLOT DATE = 9/8/2016	DATE -	REVISED -

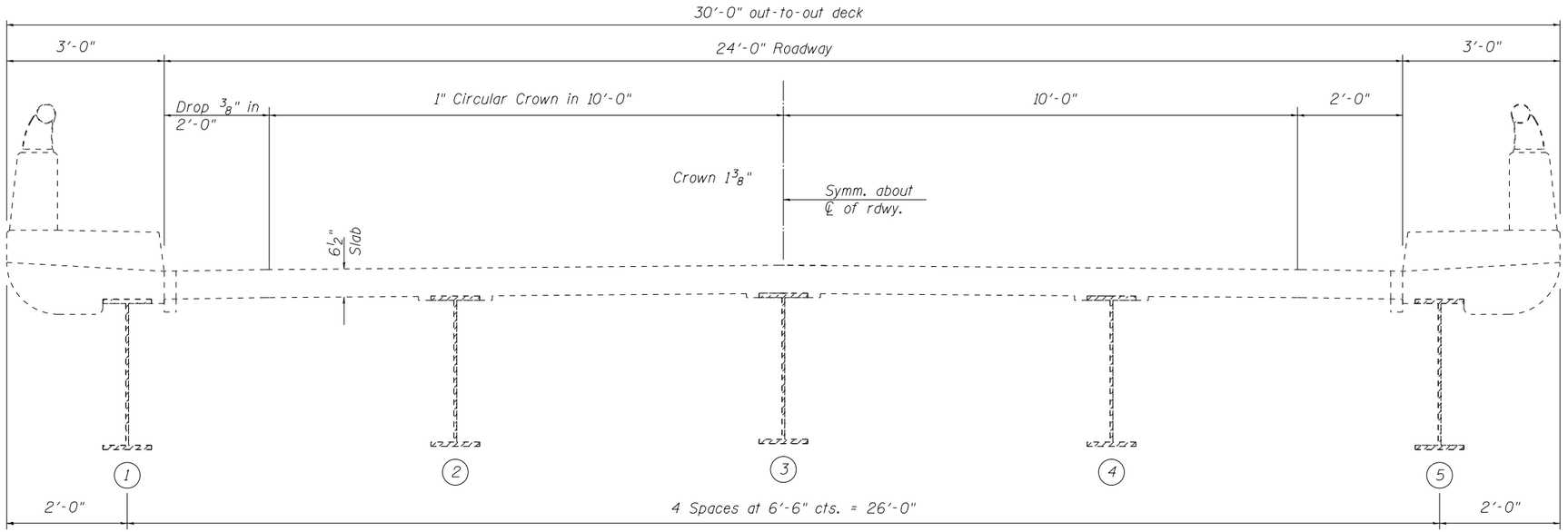
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
S.N. 010-0167

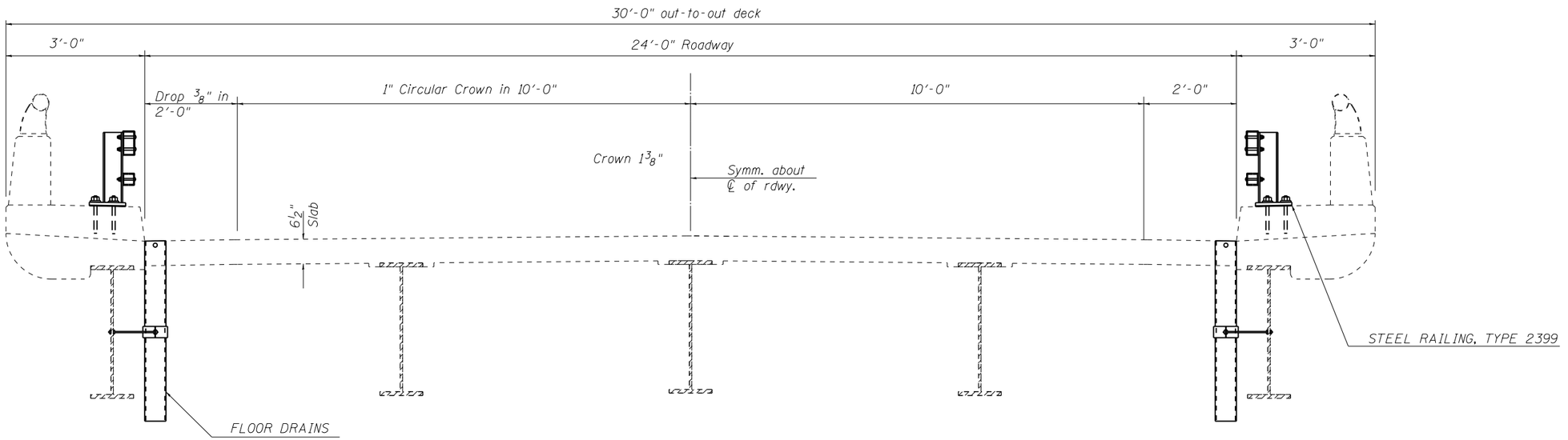
SCALE: 1" = 20' | SHEET NO. 1 OF 10 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5H)	CHAMPAIGN	74	47
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

EXISTING TYPICAL CROSS SECTION
S.N. 010–0167



PROPOSED TYPICAL CROSS SECTION
S.N. 010–0167



FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\DrawingData\Structures\D570815-sht-Repair-Details	USER NAME = sherer.jm	DESIGNED - JMS	REVISED -
		DRAWN - JMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

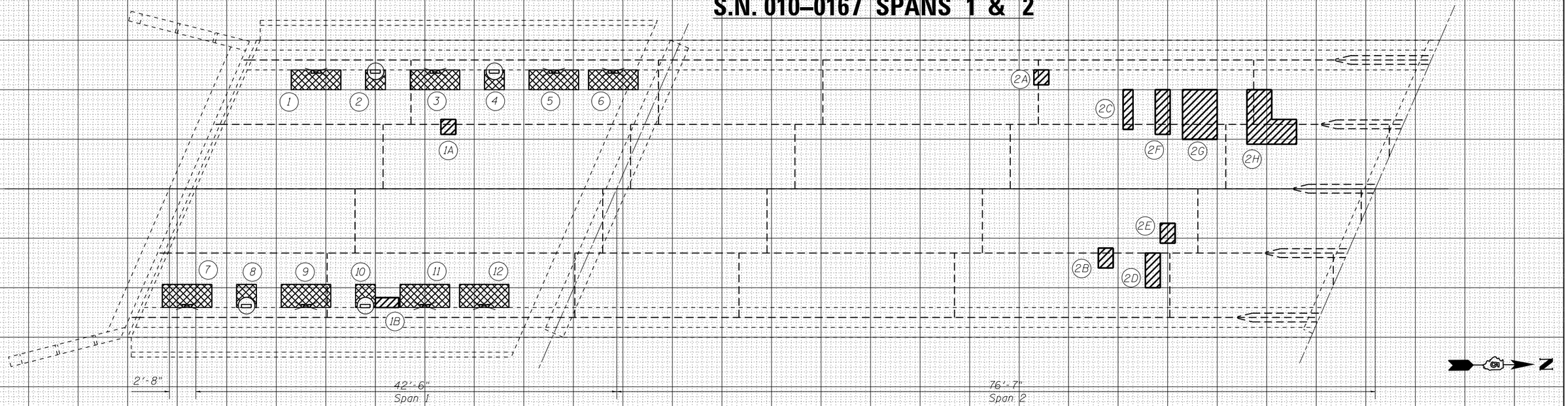
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL CROSS–SECTIONS
S.N. 010–0167

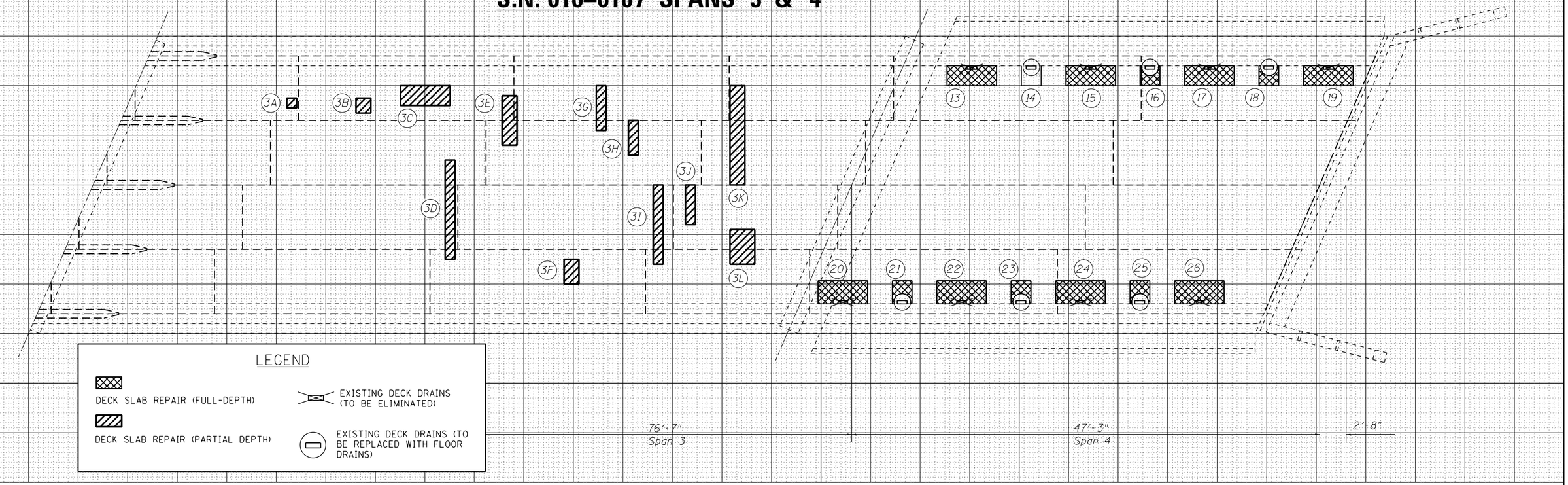
SCALE: | SHEET NO. 2 OF 10 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	48
		CONTRACT NO. 70B15		
	ILLINOIS	FED. AID PROJECT		

S.N. 010–0167 SPANS 1 & 2



S.N. 010–0167 SPANS 3 & 4



LEGEND

- DECK SLAB REPAIR (FULL-DEPTH)
- DECK SLAB REPAIR (PARTIAL DEPTH)
- EXISTING DECK DRAINS (TO BE ELIMINATED)
- EXISTING DECK DRAINS (TO BE REPLACED WITH FLOOR DRAINS)

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 = p:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\CAD\Drawings\Structures\D570B15-sht-RepairPlans.dgn	USER NAME = sherer.jm	DESIGNED - JMS	REVISED -
		DRAWN - JMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN OF BRIDGE DECK PATCHING
S.N. 010–0167

SCALE: 1" = 5' | SHEET 3 OF 10 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	49
		CONTRACT NO. 70B15		
		ILLINOIS FED. AID PROJECT		

PATCH NO.	SIZE		DECK SLAB REPAIR (PARTIAL DEPTH)
	LENGTH (FT)	WIDTH (FT)	SQ YD
1A	1.5	1.5	0.3
1B	2.5	1	0.3
2A	1.5	1.5	0.3
2B	1.5	2	0.3
2C	1	4	0.4
2D	1.5	3.5	0.6
2E	1.5	2	0.3
2F	1.5	4.5	0.8
2G	2.5	3	0.8
2G	2.5	5	1.4
3A	1	1	0.1
3B	1.5	1.5	0.3
3C	5	2	1.1
3D	1	10	1.1
3E	1.5	5	0.8
3G	1	4.5	0.5
3F	1.5	2.5	0.4
		SUB-TOTAL =	9.8

PATCH NO.	SIZE		DECK SLAB REPAIR (PARTIAL DEPTH)
	LENGTH (FT)	WIDTH (FT)	SQ YD
3H	1	3.5	0.4
3I	1	8	0.9
3J	1	4	0.4
3K	1.5	10	1.7
3L	2.5	3.5	1.0
		SUB-TOTAL =	4.4
		TOTAL =	14.2
		USE =	15.0

PATCH NO.	SIZE		DECK SLAB REPAIR (FULL DEPTH T1)	DECK SLAB REPAIR (FULL DEPTH T2)
	LENGTH (FT)	WIDTH (FT)	SQ YD	SQ YD
1	5	2		1.1
2	2	2	0.4	
3	5	2		1.1
4	2	2	0.4	
5	5	2		1.1
6	5	2		1.1
7	5	2		1.1
8	2	2	0.4	
9	5	2		1.1
10	2	2	0.4	
11	5	2		1.1
12	5	2		1.1
13	5	2		1.1
14	2	2	0.4	
15	5	2		1.1
16	2	2	0.4	
17	5	2		1.1
		SUB-TOTAL =	2.4	12.1

PATCH NO.	SIZE		DECK SLAB REPAIR (FULL DEPTH T1)	DECK SLAB REPAIR (FULL DEPTH T2)
	LENGTH (FT)	WIDTH (FT)	SQ YD	SQ YD
18	2	2	0.4	
19	5	2		1.1
20	5	2		1.1
21	2	2	0.4	
22	5	2		1.1
23	2	2	0.4	
24	5	2		1.1
25	2	2	0.4	
26	5	2		1.1
		SUB-TOTAL =	1.6	5.5
		TOTAL =	4.0	17.6
		USE =	4.0	18.0

SCHEDULE NOTE:

DECK SURVEY PERFORMED ON AUGUST 6, 2013.
IF MORE THAT ONE WITHER FREEZE-THAW CYCLE OCCURS BETWEEN THE INITIAL INSPECTION AND THE COMMENCEMENT OF WORK, THE FINAL PLAN QUANTITIES FOR DECK REPAIRS MUST BE BASED ON NEW INSPECTION OF THE DECK.

BILL OF MATERIALS

ITEM	UNIT	TOTAL
DECK SLAB REPAIR (PARTIAL)	SQ YD	15.0
DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	4.0
DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	18.0

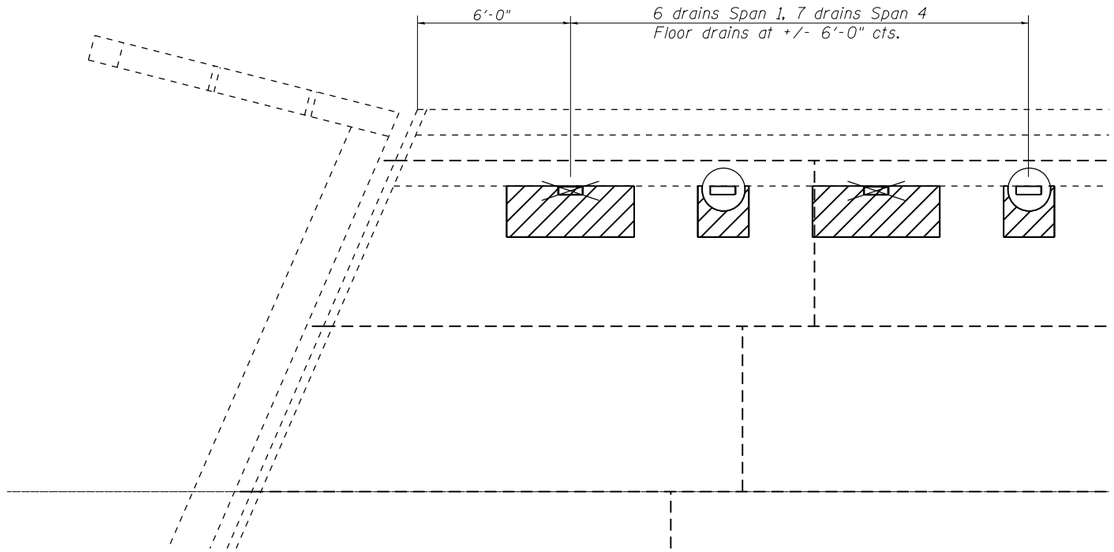
FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structure\JMS\D570B15-sht-Repair-Plan.dgn	USER NAME = sherer.jm	DESIGNED - JMS	REVISED -
		DRAWN - JMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

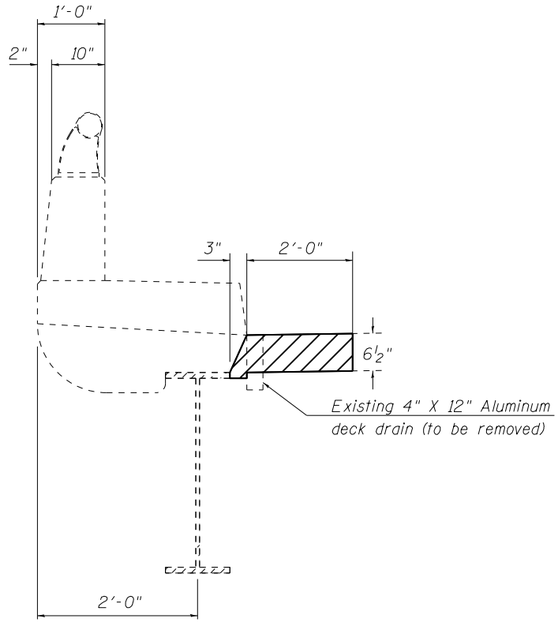
SCHEDULES OF BRIDGE DECK PATCHING
S.N. 010-0167

SCALE: | SHEET 4 OF 10 SHEETS | STA. | TO STA.

F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	50
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

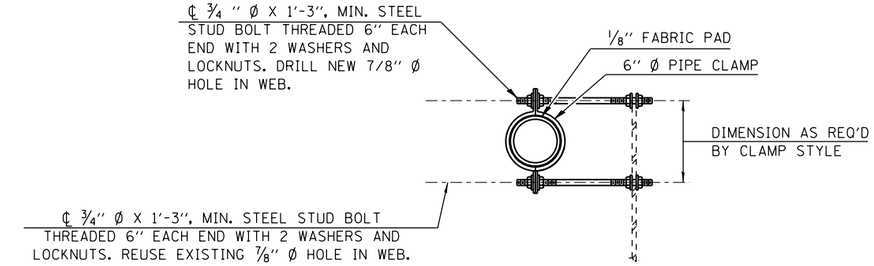


PLAN VIEW OF DRAINS
TYPICAL



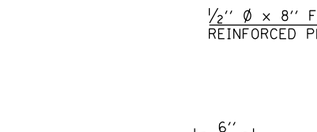
SECTION AT
EXISTING DRAIN

SECTION AT
PROPOSED DRAIN

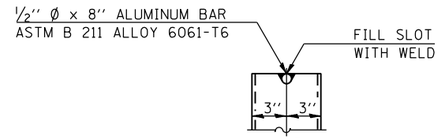


SECTION A-A

SHOWING PIPE CLAMP
ANCHORAGE STYLE

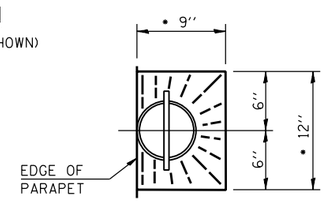


FIBERGLASS
PIPE



ALUMINUM
TUBE

TOP PLAN
(ALUMINUM TUBE SHOWN)



TOP PLAN
• SLOPE TO DRAIN

LEGEND

- EXISTING DECK DRAINS (TO BE REPLACED WITH FLOOR DRAINS)
- EXISTING DECK DRAINS (TO BE ELIMINATED)
- DECK SLAB REPAIR (FULL DEPTH, TYPE I)

NOTES:

FLOOR DRAINS NEED NOT BE PAINTED.

FIBERGLASS PIPE SHALL CONFORM TO ASTM D 2996, WITH SHORT-TIME RUPTURE STRENGTH HOOP TENSILE STRESS OF 30,000 P.S.I. MINIMUM.

GALVANIZE CLAMPING DEVICE AND ALL STUD BOLTS, WASHERS AND NUTS ACCORDING TO AASHTO M232.

ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO ORDERING OF MATERIALS.

BILL OF MATERIALS

ITEM	UNIT	TOTAL
FLOOR DRAINS	EACH	10.0

COST OF REMOVAL OF EXISTING DRAINS IS INCLUDED IN DECK SLAB REPAIR.

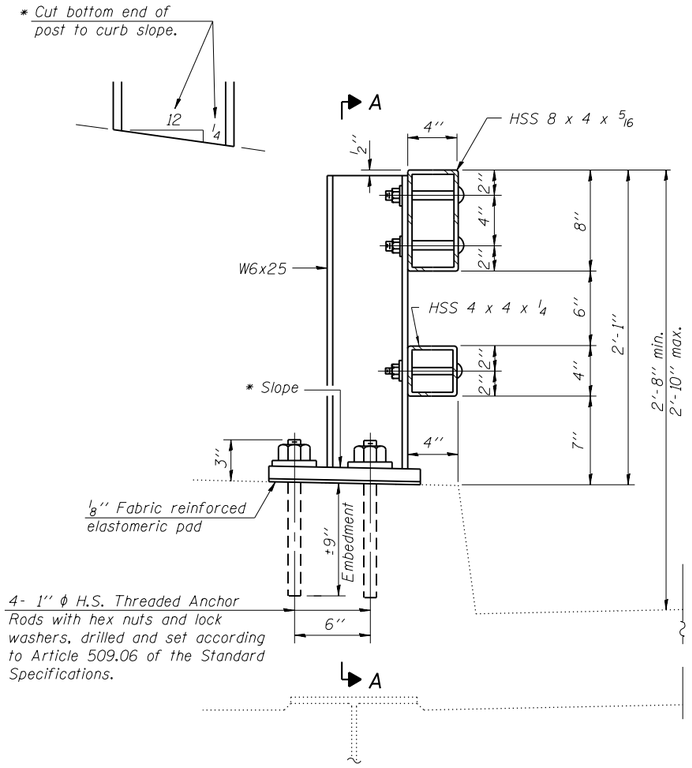
FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DRAWINGS\Structures\D570B15-sht-Repair-Details	USER NAME = shererjm	DESIGNED - JMS	REVISED -
		DRAWN - JMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

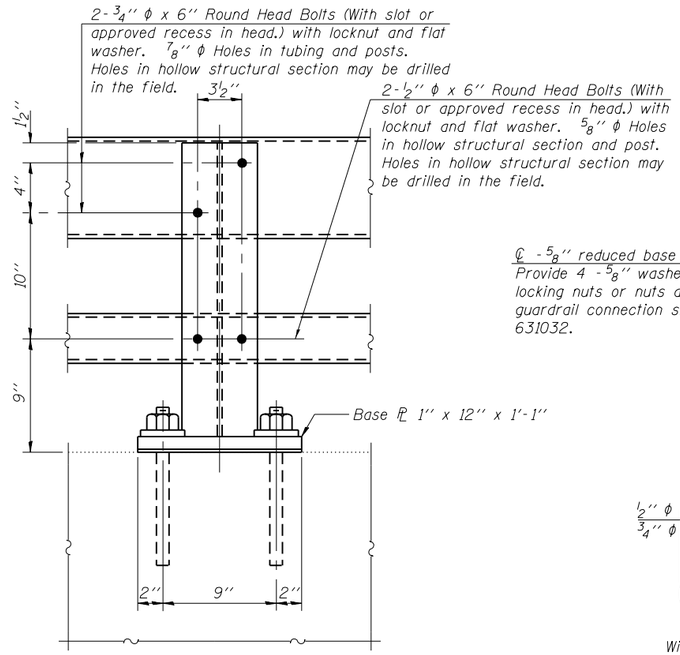
FLOOR DRAIN DETAILS
S.N. 010-0167

SCALE: | SHEET NO. 5 OF 10 SHEETS | STA. | TO STA.

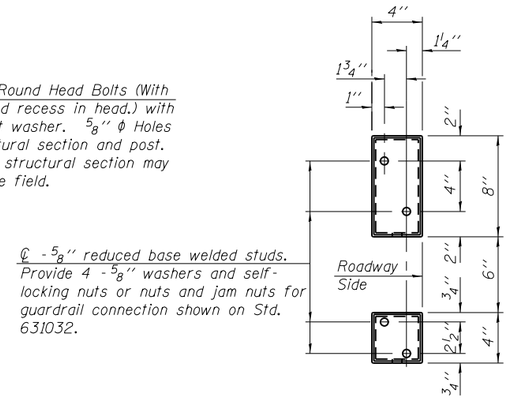
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	51
		CONTRACT NO. 70B15		
		ILLINOIS FED. AID PROJECT		



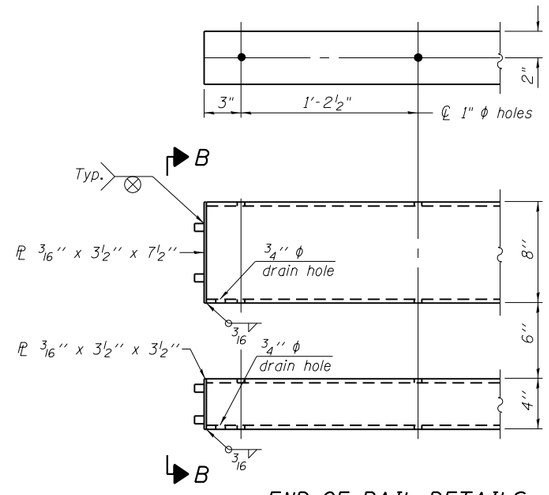
SECTION AT RAIL POST



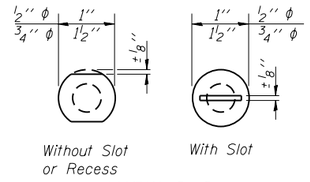
SECTION A-A



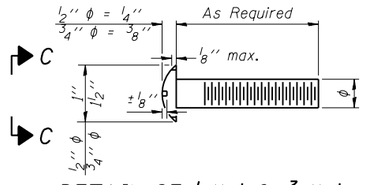
VIEW B-B



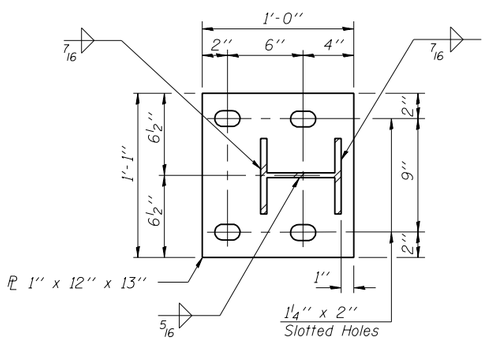
END OF RAIL DETAILS



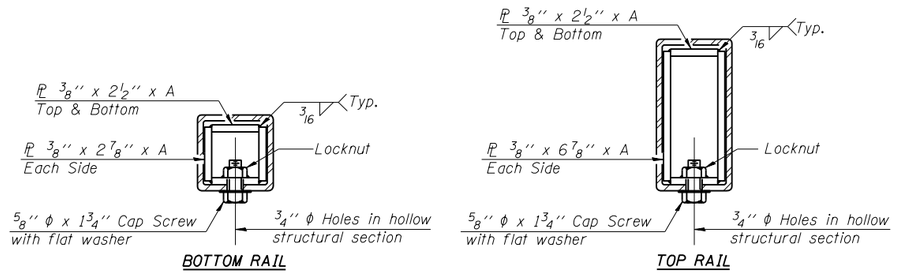
VIEW C-C



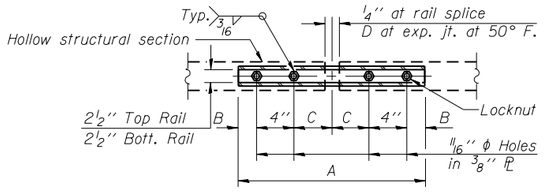
DETAIL OF 1/2" ϕ & 3/4" ϕ ROUND HEAD BOLTS



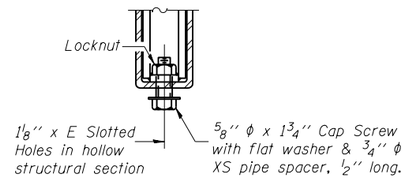
BASE PLATE DETAIL



SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE ℄ TYPICAL



RAIL SPLICE CONNECTION AT EXPANSION JT.

Notes:

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

Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.

Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.

Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.

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

SPLICE DIMENSIONS

T	D	A	B	C	E
≤4"	2 1/2"	1'-8"	2"	4"	2 1/2"
>4"≤6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
>6 1/2"≤9"	5"	2'-4"	3 1/2"	6 1/2"	9"
>9"≤13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	491.0

(6'-3" Maximum Post Spacing)

R-31

7-1-10

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\DrawingData\Structures\D570815-sht-Repair-RE.dgn	USER NAME = sherer.jm	DESIGNED - JMS	REVISED -
		DRAWN - JMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL RAILING, TYPE 2399
S.N. 010-0167

SCALE: | SHEET NO. 6 OF 10 SHEETS | STA. | TO STA.

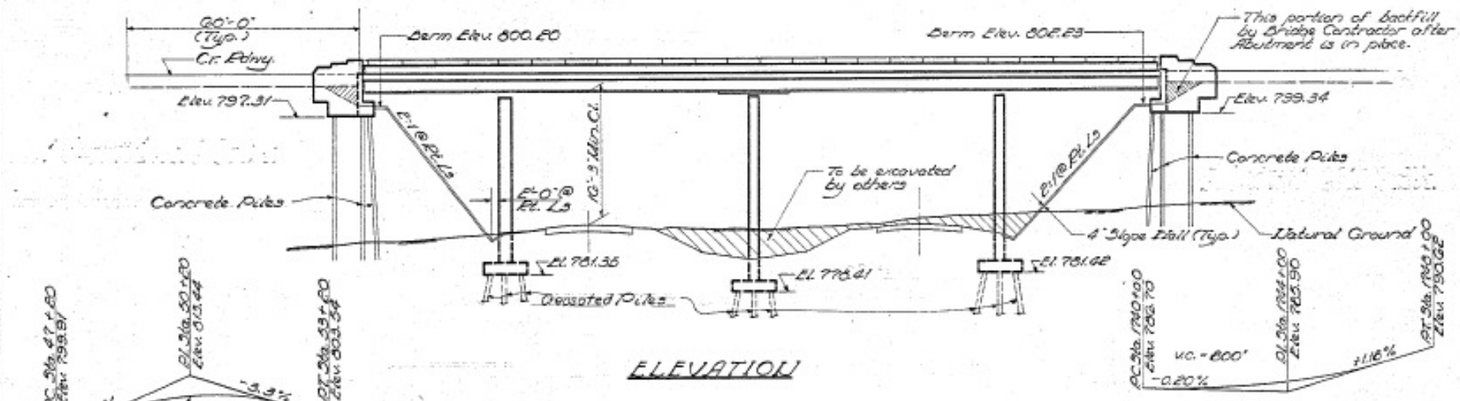
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(10-4.10-5)I	Champaign	74	52
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

B.M.: U.S.C. & G.S. "T-804" On South End of West Wall. of Culvert Sta. 46+258 Elev. = 784.41.

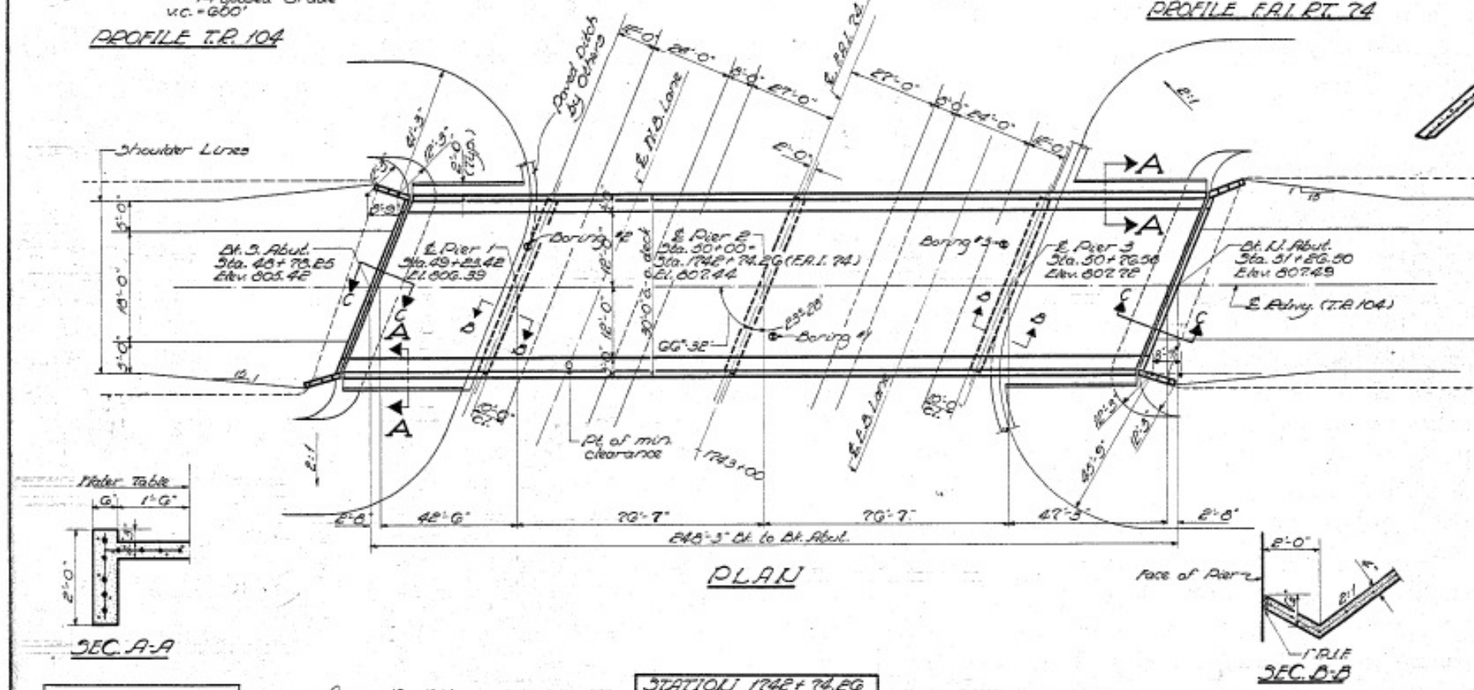
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(10-5HB)	Champaign	25	6

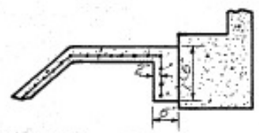
SHEET NO. 1
10 SHEETS

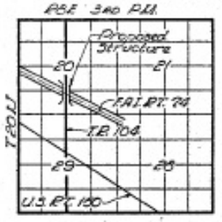


ELEVATION



PLAN





LOCATION PLAN

GENERAL NOTES

Coarse aggregate to be used in parapet handrails and end posts must be free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications.

Slope Wall shall be reinforced with welded wire fabric 6"x 6" mesh, weighing 58 # per 100 sq. Ft..

All reinforcement bars shall be lapped 80 diameters unless otherwise shown.

Rivets to be Open Holes 15/16" unless otherwise noted.

Anchor bolts shall be set before riveting diaphragms over supports.

All Structural Steel shall conform to A.S.T.M. A-36 Specifications.

The exposed surfaces of the expansion guard shall be given two shop coats of red lead paint, the contact surfaces shall be given one shop coat of red lead paint. Anchor studs shall not be painted.

Expansion guards are included in the quantity of Structural Steel. Estimated Weight = 720 lbs..

Except as otherwise provided, all Structural Steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Articles 36.1 to 36.3 inclusive of the Std. Specifications.

The Contractor shall drive one concrete test pile and one timber test pile, for locations see Sheets #6 & # 7, as directed by the Engineer before ordering the remainder of piles.

Embankments to be constructed prior to driving piles at Piers #1 & #3.

Concrete piles at abutments shall be driven in holes precored through the embankment in accordance with Article 60.9 (c) of the Standard Specifications.

Permanent Metal forms will not be permitted for forming the slab.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
* Class A Excav. for Structures	Cu. Yds.		150	150
Class X Concrete	Cu. Yds.	229.2	214.1	443.3
Structural Steel	Lbs.	180 100		180 100
Aluminum Handrail	Lin. Ft.	490		490
Reinforcement Bars	Lbs.	47 300	170 870	63 630
Creosoted Piles (20'-1" to 38')	Lin. Ft.		1910	1910
Test Piles (Timber)	Each		1	1
Concrete Piles	Lin. Ft.		1080	1080
Test Piles (Conc.)	Each		1	1
Name Plates	Each		2	2
Slope Wall (4")	Sq. Yds.			370
Protective Coat	Sq. Yds.	910		910

* Includes excavation for Slope Wall

DESIGNED Alex Henry
CHECKED John W Clark Jr.
DRAWN jacobs
CHECKED John W Clark Jr.

EXAMINED [illegible] Aug 12 1964
PASSED [illegible]
APPROVED U.E. Hall

STATION 1742+74.26 BUILT 19G BY STATE OF ILLINOIS F.A.I. RT. 74-SEC. 10-5HB FA PROJ. 1-74-5(33) LOADING H915

NAME PLATE
See Std. 2113-1

DESIGN STRESSES
f_c = 1 400 p.s.i. Super & Sub.
f_s = 20 000 p.s.i. Reinf.
f_s = 20 000 p.s.i. Struct. (A-36)
V_c = 95 p.s.i. Ftgs.
n = 10
LOADING: H915-44

PROJ. I-74-5(33)177
GENERAL PLAN & ELEVATION
T.R. 104 OVER F.A.I. RT. 74
F.A.I. RT. 74 - SEC. 10-5HB
CHAMPAIGN COUNTY
STA. 1742 + 74.26

FILE NAME =	USER NAME = sherer.jm	DESIGNED - JMS	REVISED -
p:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DRAWINGData\Structures\D570B15-sht-Repair		DRAWN - JMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS-BUILT PLANS
(FOR INFORMATION ONLY)
SCALE: | SHEET NO. 7 OF 10 SHEETS | STA. | TO STA.

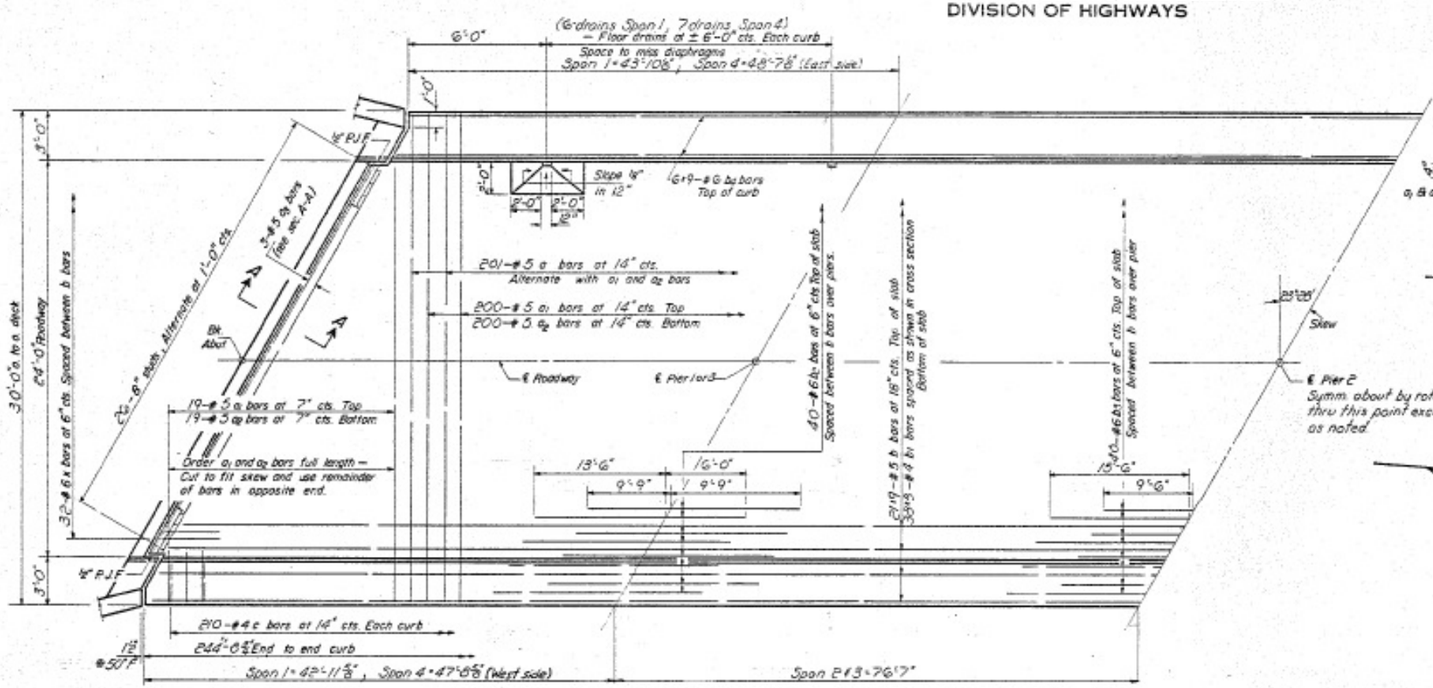
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	53
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

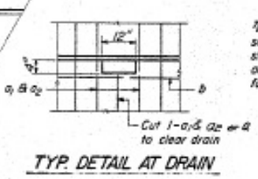
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	10-5HB	Champaign	25	8

SHEET NO. 8 OF 10 SHEETS

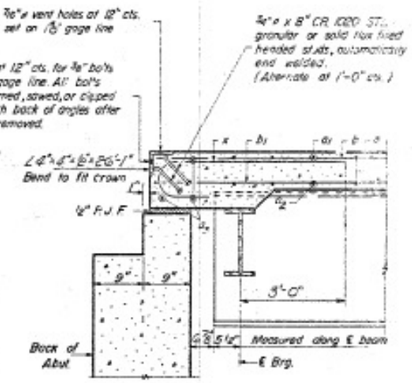
HALF PLAN



TYP. DETAIL AT DRAIN

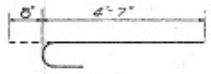


SECTION A-A



** Joint Sealant with horizontal joint see special provisions

BAR x



BILL OF MATERIAL

Bar	No	Size	Length	Shape
a	201	#5	30'-6"	
a1	219	#5	29'-6"	
a2	219	#5	28'-6"	
a3	6	#5	25'-9"	
b	189	#5	28'-6"	
b1	304	#4	31'-6"	
b2	80	#6	19'-6"	
b3	40	#6	25'-0"	
b4	108	#6	28'-6"	
c	420	#4	5'-9"	
x	6+8	#6	5'-3"	
Reinforcement Bars			Lbs.	42410
* Structural Steel			Lbs.	16,120
Class X Concrete			Cu. Yd.	204.7

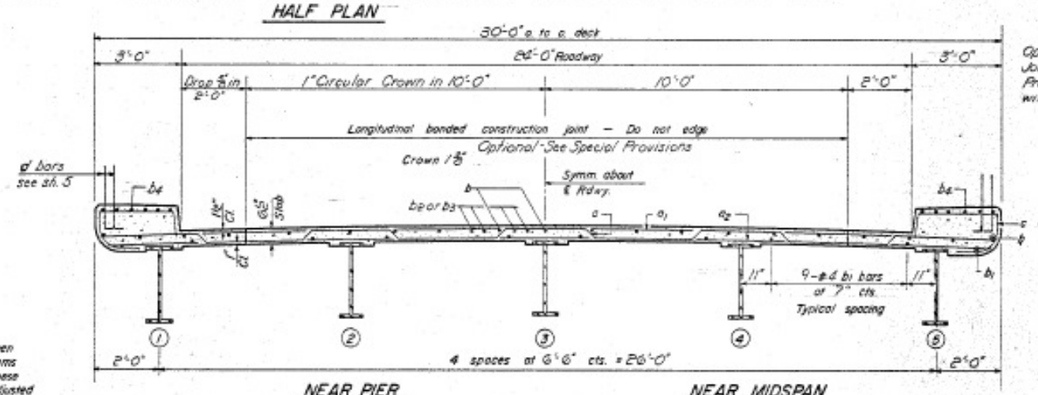
* Weight of bearing assemblies with lead plates, and anchor bolts are included as structural steel. Est Wt = 6870 lbs.

Note:
Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.
Min bar laps = 20 dia.

STANDARD FILLET DETAIL

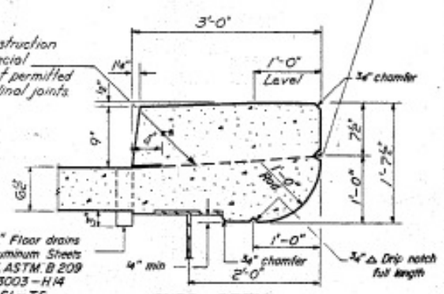
To determine "Y": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 2. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 2, minus slab thickness, equals the fillet heights "Y" above top of beams.

NEAR PIER / NEAR MIDSPAN CROSS SECTION



Optional Construction Joint - See Special Provisions Not permitted with longitudinal joints.

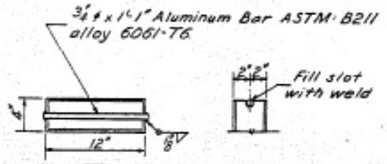
CURB DETAIL



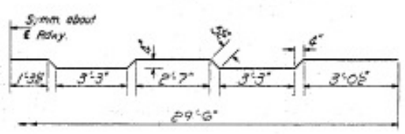
4"x12" Floor drains ⅜" Aluminum Sheets Welded ASTM B 209 alloy 3003 - H14 or 6061 - T6

Cost of Aluminum Drains shall be incidental to Class X Concrete.

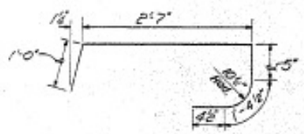
DETAIL - TOP OF DRAIN



BAR a



BAR c



SUPERSTRUCTURE
F.A.I. RT. 74 SEC. 10-5HB
CHAMPAIGN COUNTY
STA. 1742+74.26

DESIGNED	Wm. Hansen
CHECKED	John W. Clark Jr.
DRAWN	W.H. W.E. Dickerson, D.L. Beemer
CHECKED	John W. Clark Jr.

EXAMINED W.E. Peterman — Aug. 12, 1964
PASSED
APPROVED

I-5-L (>15°) 10-10-62

FILE NAME =	USER NAME = sherer.jm	DESIGNED - JMS	REVISED -
pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\Data\Structures\D570815-sht-Repair	PLOT SCALE = 40.0000 ' / in.	DRAWN - JMS	REVISED -
	PLOT DATE = 8/8/2016	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS-BUILT PLANS
(FOR INFORMATION ONLY)

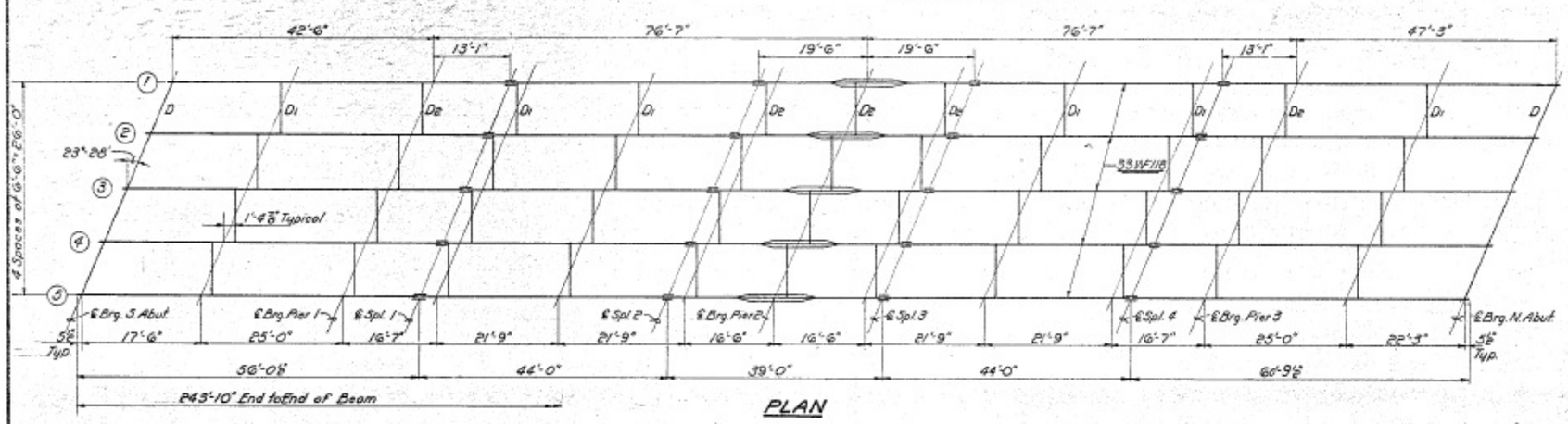
SCALE: | SHEET NO. 8 OF 10 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	54
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

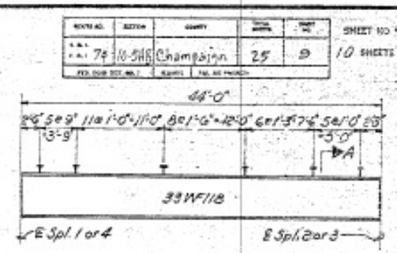
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	10-5HB	Champaign	25	9

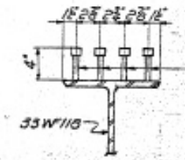
SHEET NO 9
10 SHEETS



PLAN



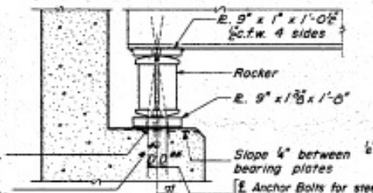
PARTIAL ELEVATION ▸A



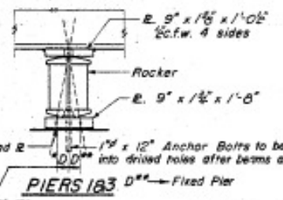
¾"ø x 4" granular or solid Flux Filled headed studs automatically end welded to WF Est. Wt. = 890 lbs. Included in Structural Steel

SECTION A-A

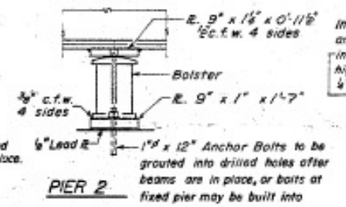
NOTE: Run all diaphragms level



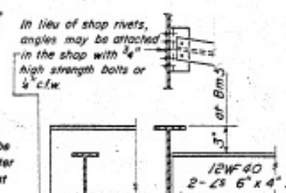
SECTION AT ABUTMENT



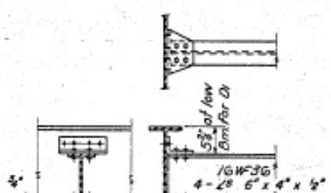
PIERS 1 & 3



PIER 2



DIAPHRAGM D
6 Required



DIAPHRAGM D1 or D2
D1 24; D2 20 Required

PLAN

DETAIL OF PINTLE

PLAN

PLAN

DETAIL OF COVER PLATE

ELEVATION TOP OF WF

	Bm 1	Bm 2	Bm 3	Bm 4	Bm 5
℄ Brg. S. Abut	804.78	804.90	804.96	804.86	804.69
℄ Brg. Pier 1	805.63	805.75	805.81	805.71	805.56
℄ Splice 1	805.89	806.01	806.07	805.97	805.80
℄ Splice 2	806.30	806.42	806.48	806.38	806.21
℄ Brg. Pier 2	806.67	806.79	806.85	806.75	806.58
℄ Splice 3	806.84	806.96	807.02	806.92	806.75
℄ Splice 4	806.99	807.11	807.17	807.07	806.90
℄ Brg. Pier 3	806.95	807.07	807.13	807.03	806.86
℄ Brg. N. Abut	806.81	806.93	806.99	806.89	806.72

DETAIL OF ROCKER AT ABUTS, PIERS 1 & 3

DETAIL OF BOLSTER AT PIER 2

DETAIL OF SPLICE

DESIGNED	W. Hurst
CHECKED	John W. Clark Jr.
P.G. Bonnett	W. E. Dickerson
DRAWN	W. A. Sevsamen Jr.
CHECKED	John W. Clark Jr.

Oct. 12, 1964
EXAMINED W. B. Bowman
PASSED
APPROVED D. E. Cliff
DIRECTOR OF HIGHWAYS

STRUCTURAL STEEL
F.A.I. RT. 74 SEC. 10-5HB
CHAMPAIGN COUNTY
STA. 1742+74.26

I-2-C 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63

FILE NAME =	USER NAME = sherer.jm	DESIGNED - JMS	REVISED -
pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\DrawingData\Structures\D570815-sht-Repair-Pier1.dgn		DRAWN - JMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS-BUILT PLANS
(FOR INFORMATION ONLY)

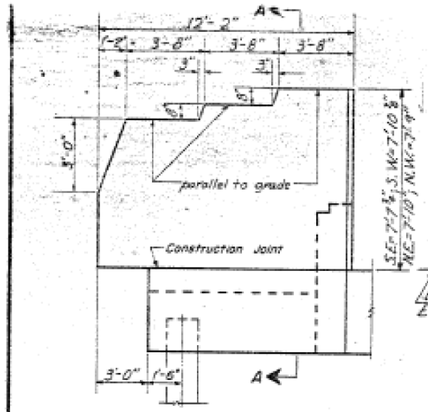
SCALE: | SHEET NO. 9 OF 10 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	55
			CONTRACT NO. 70B15	
		ILLINOIS	FED. AID PROJECT	

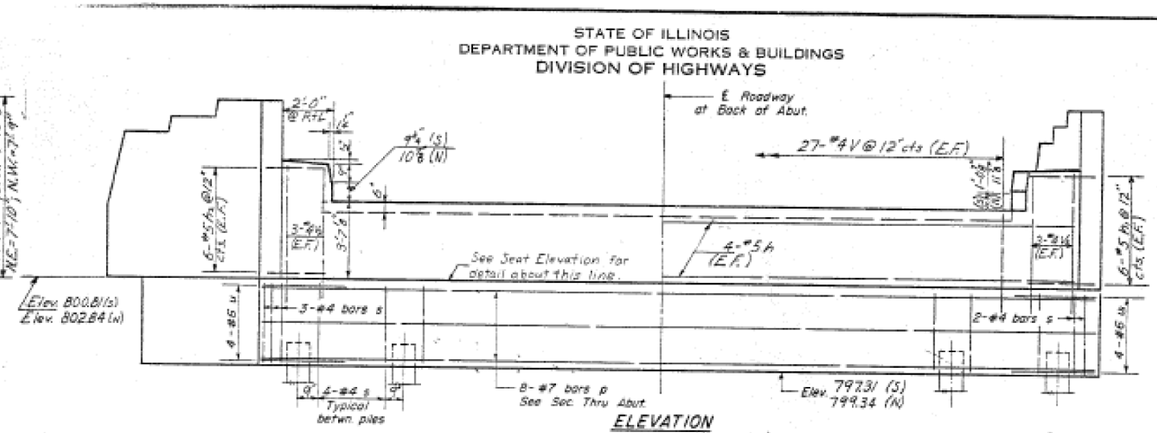
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	(10-5HB)	Champaign	25	12
FED. ROAD DIST. NO. 1	STATE	FED. AID PROJECT		

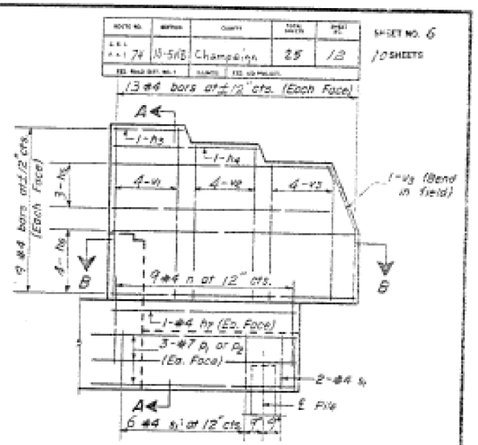
SHEET NO. 6
10 SHEETS



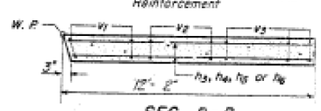
WING WALL ELEVATION
Dimensions



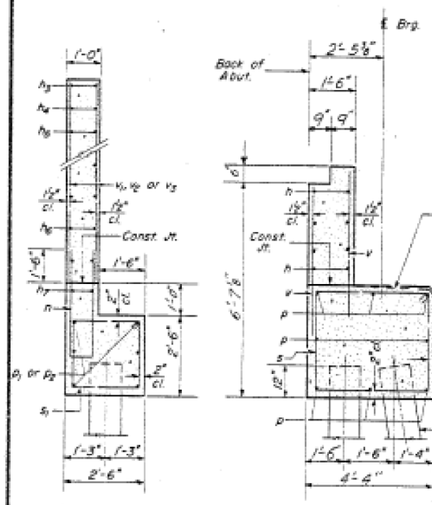
ELEVATION



WING WALL ELEVATION
Reinforcement

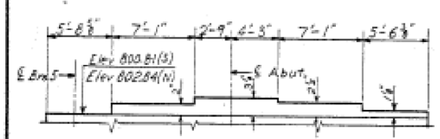


SEC. B-B

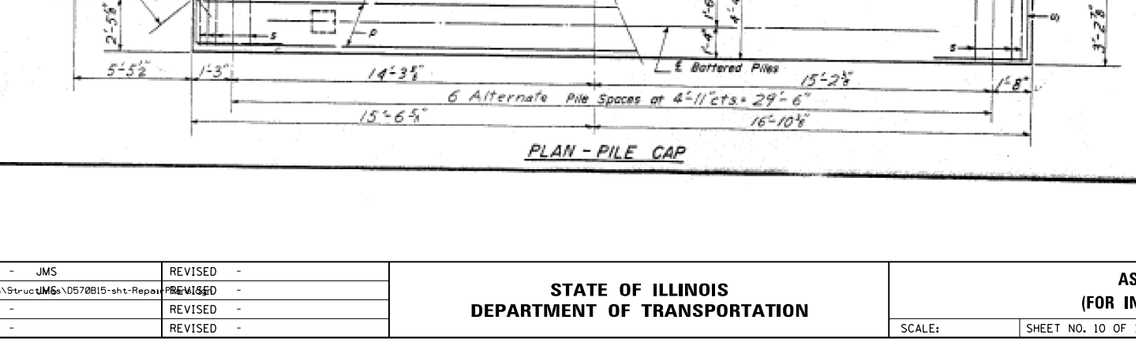


SEC. A-A

SEC. THRU ABUT.



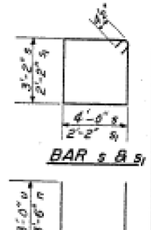
SEAT ELEVATION



TOP VIEW

PILE DATA
Type Concrete
Capacity 30 Tons
Est. Length 60'-0"
No. Reqd. 17 + 1 Test piles @ N Abut.

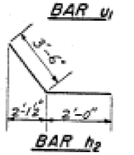
PLAN - PILE CAP



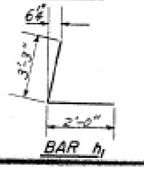
BAR s & s1

BAR u & n

BAR u1



BAR h2



BAR h1

TWO ABUTMENTS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	16	#5	30'-5"	—
h3	24	#5	5'-3"	L
h4	24	#5	5'-6"	L
h5	8	#4	3'-3"	—
h6	8	#4	6'-0"	—
h7	24	#4	10'-7"	—
h8	32	#4	11'-9"	—
h9	8	#4	8'-9"	—
n	36	#4	7'-9"	U
p	16	#7	32'-3"	—
p1	12	#7	8'-9"	—
p2	12	#7	9'-6"	—
s	58	#4	15'-1"	D
s1	32	#4	9'-5"	D
u	8	#6	9'-11"	U
u1	8	#6	9'-0"	L
v	108	#4	5'-0"	—
v1	32	#4	7'-6"	—
v2	56	#4	6'-9"	—
v3	40	#4	6'-0"	—
Class X Concrete		Cu. Yds.	71.5	
Reinforcement Bars		Lbs.	4930	
Concrete Piles		Lin. Ft.	1020	
Test Piles (Concrete)		Ea.	1	

DESIGNED	W. E. Hartley		
CHECKED	John W. Clark Jr.	EXAMINED	AUG 12 1964
DRAWN	P. P. Summer W. A. Sausaman Jr.	PASSED	
CHECKED	John W. Clark Jr.	APPROVED	

A-8-L (15° - 35°) 7-18-62 Rev. 11-27-62

ABUTMENTS
F.A.I. RT. 74 SEC. 10-5HB
CHAMPAIGN COUNTY
STA. 1742+74.26

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\Drawing Data\Structures\D570815-sht-Repair Pre-Revised	USER NAME = sherer.jm	DESIGNED - JMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	DRAWN - JMS	REVISED -
	PLOT DATE = 8/8/2016	CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS-BUILT PLANS
(FOR INFORMATION ONLY)

SCALE: | SHEET NO. 10 OF 10 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	56
		CONTRACT NO. 70B15		
	ILLINOIS	FED. AID PROJECT		

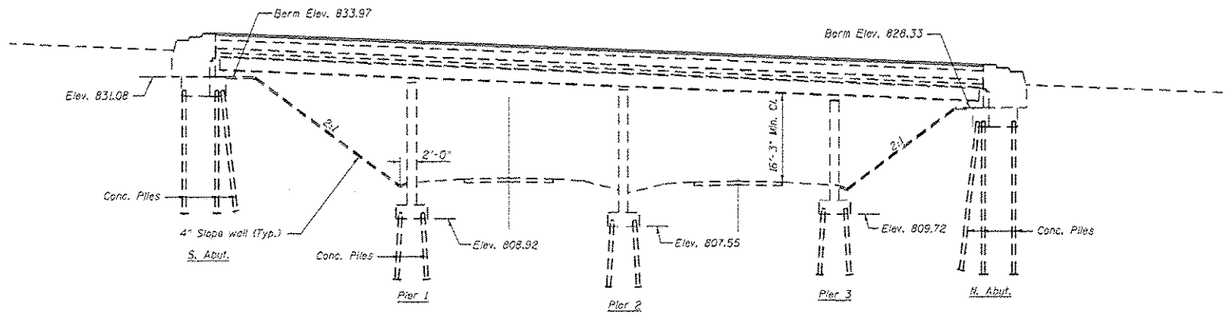
Structure 010-0169 was originally built in 1966 as FAI Route 74, Section 10-5HB-1 at station 1837+30.89 by the State of Illinois in Champaign County.

The existing structure is a four span structure with a back-to-back of abutment length of 211'-0". The structure measures 24'-0" from face-to-face of safety walk and has an out-to-out width of 30'-0". The structure was built on a 15° left-forward skew. The superstructure consists of five steel girders supporting a 6½" reinforced concrete deck. The superstructure is supported by pile bent abutments and piers. The slopes are protected with concrete slope walls.

Method of Construction: Road Closure

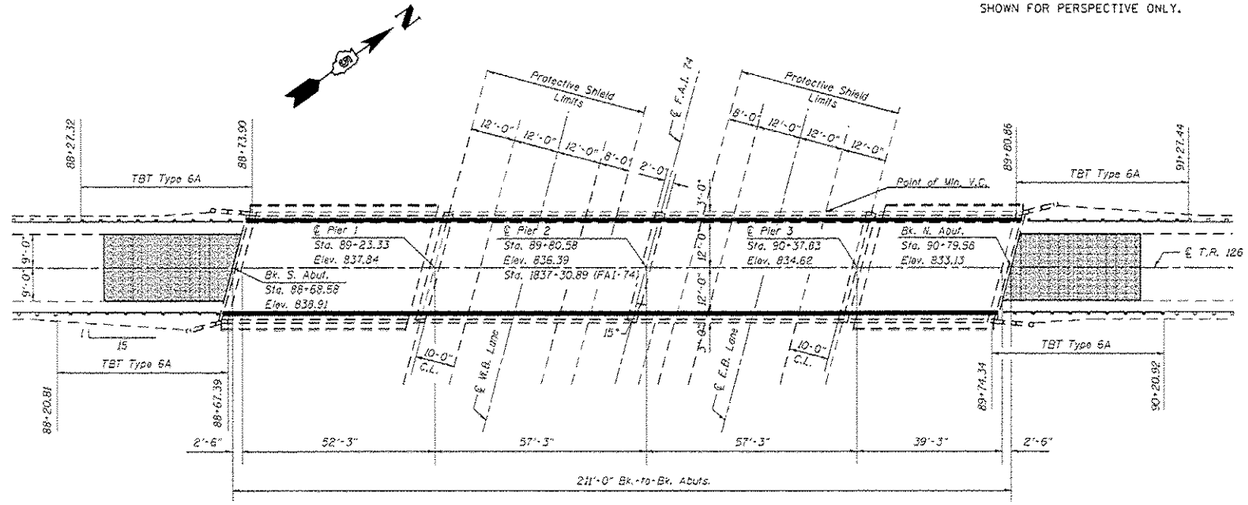
PROPOSED WORK

1. Perform Bridge Deck Scarification ¾"
2. Remove select deck drains, replace select deck drains.
3. Deck Slab Repair (Full depth)
4. Place Polymer Concrete.
5. Place Bridge Deck Latex Concrete 2¼" overlay on Bridge Deck.
6. Install Bridge Rail and Type 6A End Terminals.
7. Place Hot-Mix Asphalt Run-Downs.

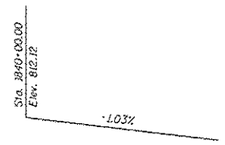


ELEVATION

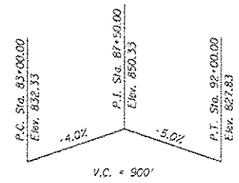
• ELEVATIONS TAKEN FROM AS-BUILT PLANS AND ARE SHOWN FOR PERSPECTIVE ONLY.



PLAN VIEW



PROFILE GRADE F.A.I. 74



PROFILE GRADE T.R. 126

GENERAL NOTES

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contactor 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.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Fibers are included in Bridge Deck Latex Concrete overlays.

LICENSED STRUCTURAL ENGINEER
DAVID CARL PUZEY
081-005470
SPRINGFIELD ILLINOIS
STATE OF ILLINOIS

9/26/16
Expires 11/30/18

TOTAL BILL OF MATERIAL S.N. 010-0169

ITEM	UNIT	TOTAL
Bituminous Materials Tack Coat	Pounds	45.0
HMA Surface Course, Mix "C", N50	Ton	10.0
Protective Shield	Sq Yd	264.0
Floor Drains	Each	10.0
Bridge Deck Grooving	Sq. Yd.	505.0
Steel Rail Type 2399	Foot	420.0
Traffic Barrier Terminal, 6A	Each	4.0
Guardrail Removal	Foot	256.0
Rem & Re-Erect SPBGR, Type A	Foot	50.0
Bridge Deck Scarification ¾"	Sq. Yd.	551.0
Bridge Deck Latex Conc. Overlay 2¼"	Sq. Yd.	551.0
Deck Slab Repair Full Depth Type 1	Sq. Yd.	10.0
Polymer Concrete	Cu. Ft.	2.1

FILE NAME = pw:\\IL284EB1DINTEG.illinois.gov:P41207\Documents\IDOT Offices\District 5\Projects\057	USER NAME = sherer_m	DESIGNED - JMS	REVISED -
		DRAWN - JMS	REVISED -
	PLOT SCALE = 48.2231 ' / in.	CHECKED - ATH	REVISED -
	PLOT DATE = 8/8/2016	DATE - 121714	REVISED -

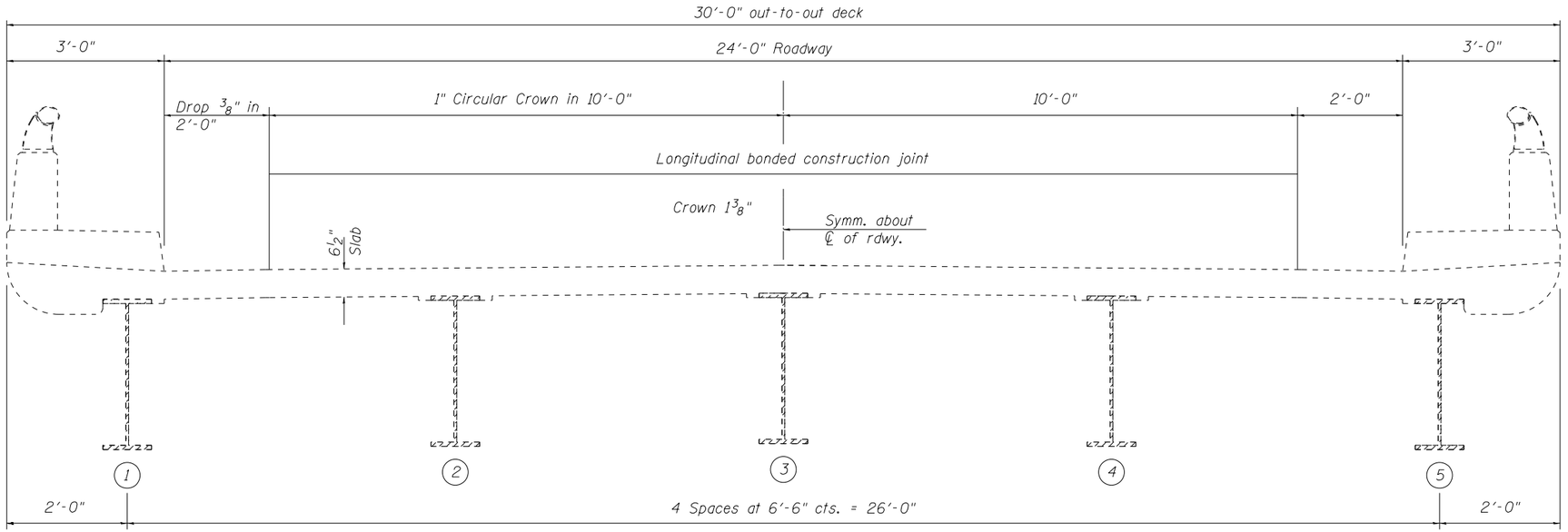
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
S.N. 010-0169

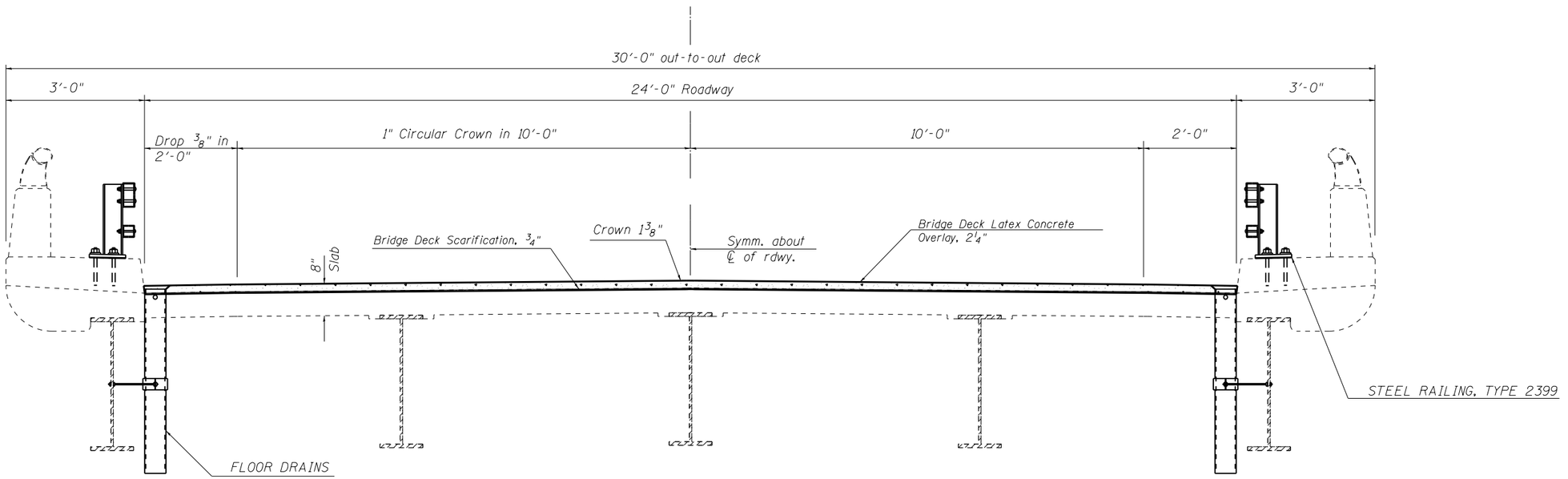
SCALE: | SHEET NO. 1 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	57
		CONTRACT NO. 70B15		
		ILLINOIS FED. AID PROJECT		

EXISTING TYPICAL DECK CROSS–SECTION



PROPOSED TYPICAL DECK CROSS–SECTION



FIBER IS REQUIRED FOR BIRDGE DECK LATEX CONCRETE OVERLAY, 2 1/4"

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structures\D570B15-sht-Repair-Details	USER NAME = shererjm	DESIGNED - GMS	REVISED -
		DRAWN - GMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

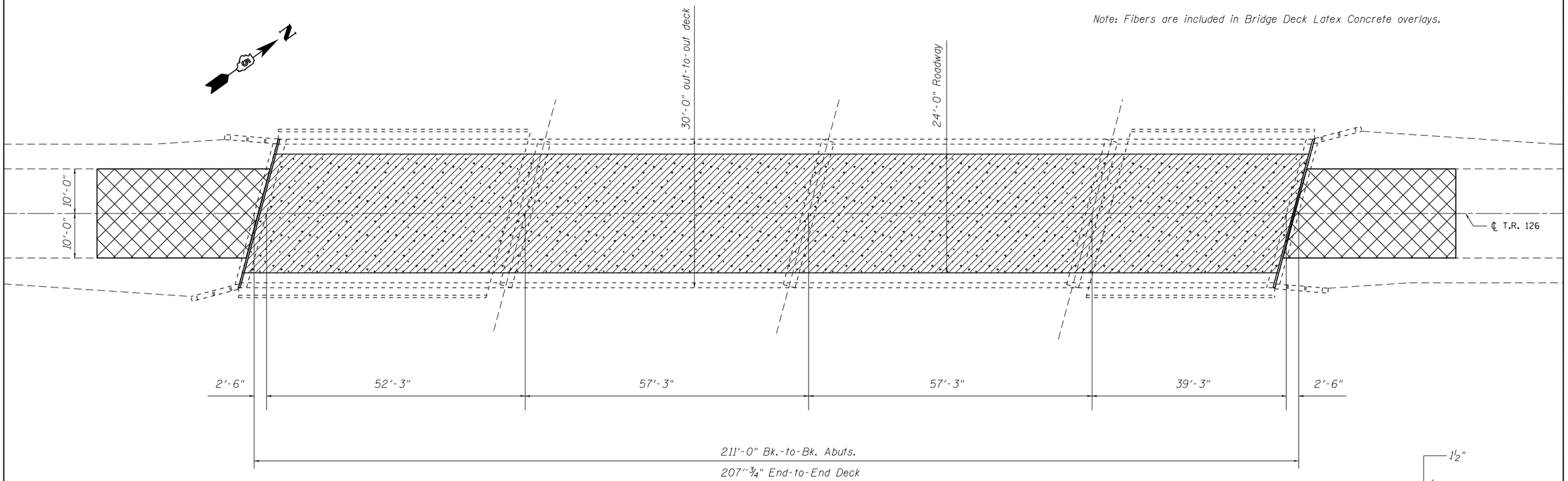
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

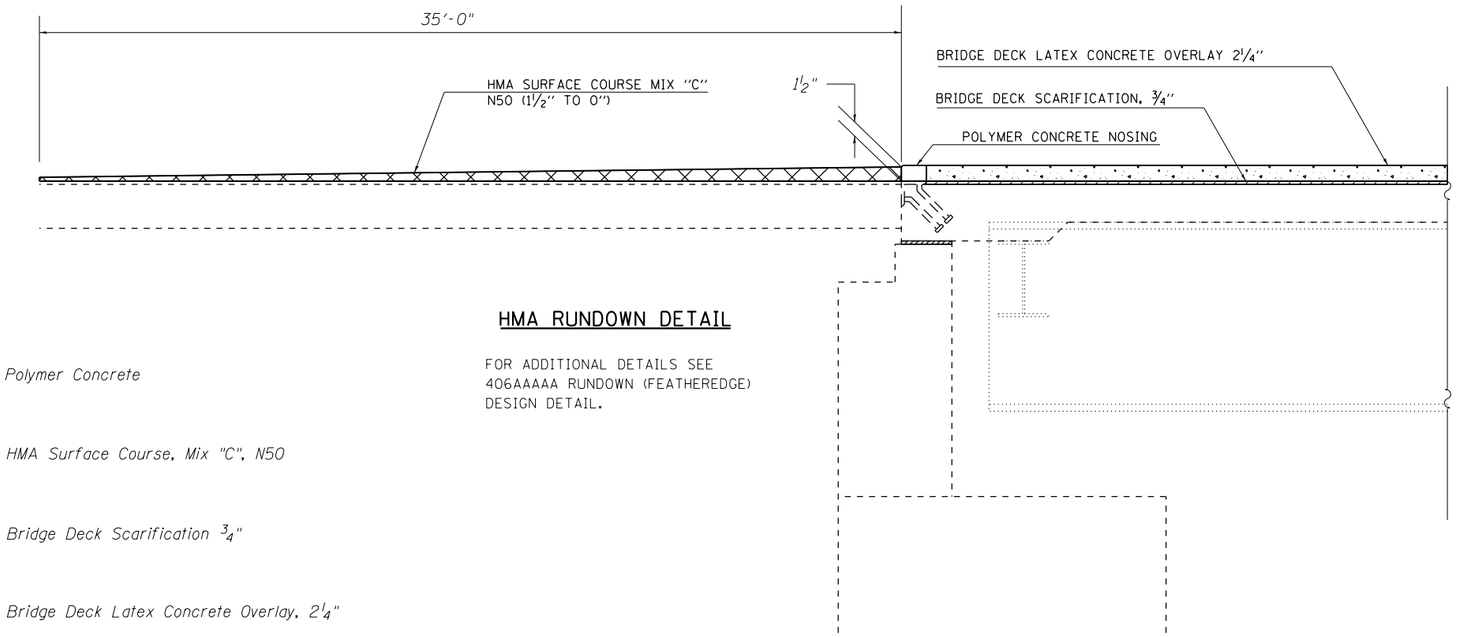
TYPICAL DECK CROSS–SECTIONS
S.N. 010–0169

SCALE: | SHEET NO. 2 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	58
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

Note: Fibers are included in Bridge Deck Latex Concrete overlays.





HMA RUNDOWN DETAIL

FOR ADDITIONAL DETAILS SEE
406AAAAA RUNDOWN (FEATHEREDGE)
DESIGN DETAIL.

JOINT DETAIL

Polymer Concrete

HMA Surface Course, Mix "C", N50

Bridge Deck Scarification ¾"

Bridge Deck Latex Concrete Overlay, 2¼"

BILL OF MATERIALS

ITEM	UNIT	TOTAL
BRIDGE DECK GROOVING	SQ YD	505.0
BRIDGE DECK SCARIFICATION ¾"	SQ YD	551.0
BRIDGE DECK LATEX CONCRETE OVERLAY, 2¼"	SQ YD	551.0
POLYMER CONCRETE	CU FT	2.1

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structures\D570B15-sht-Repair-Plan.dgn	USER NAME = shererjm	DESIGNED - GMS	REVISED -
		DRAWN - GMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

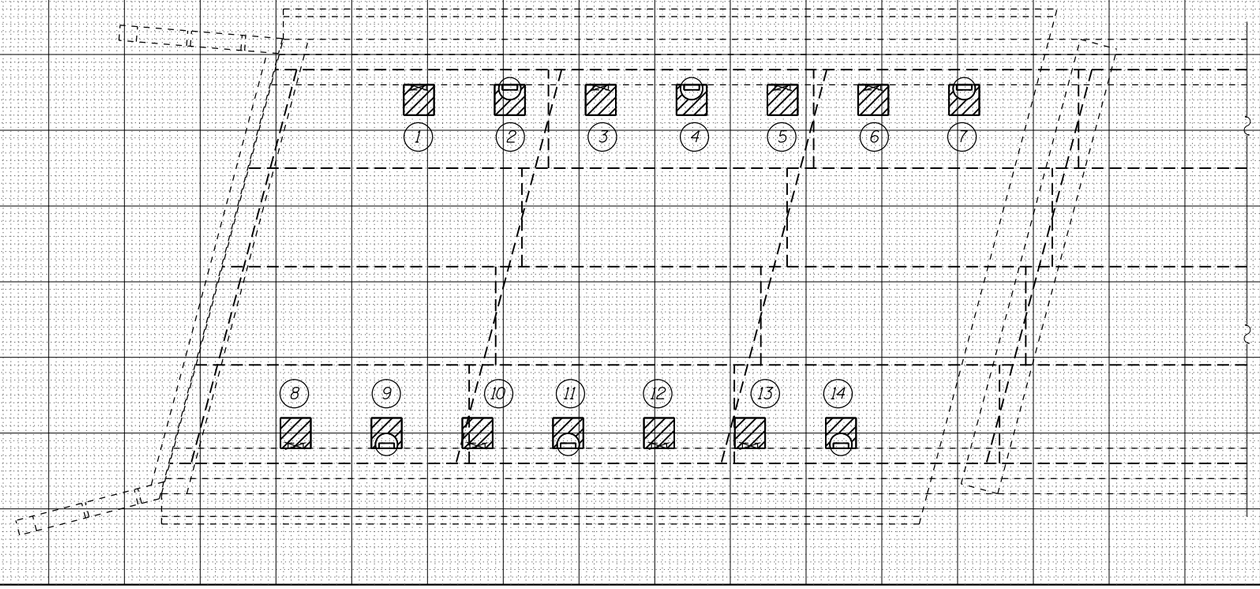
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEARING SURFACE PLAN
S.N. 010-0169

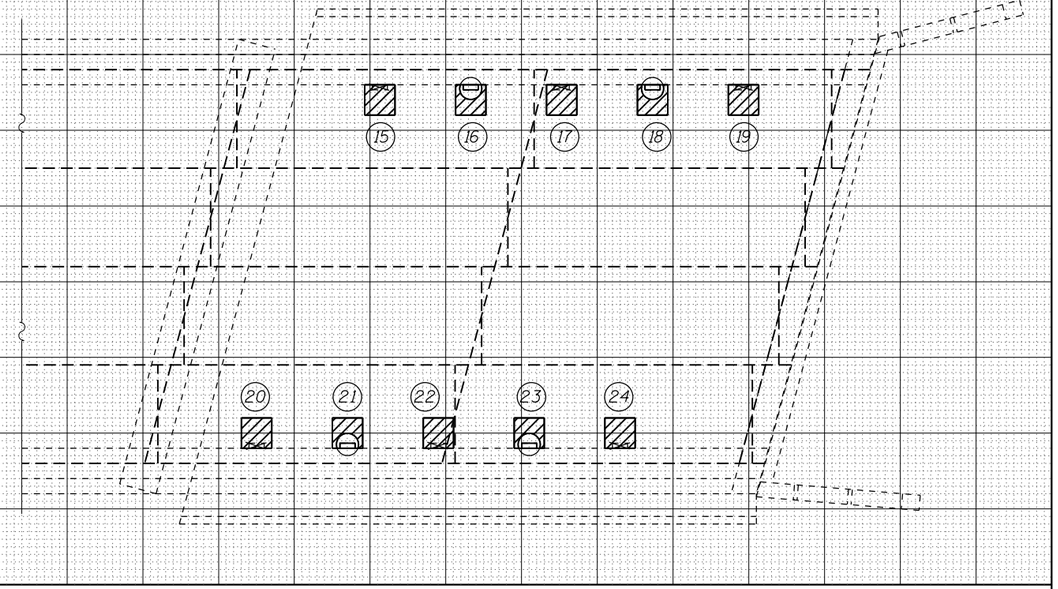
SCALE: | SHEET NO. 3 OF 6 SHEETS | STA. | TO STA.

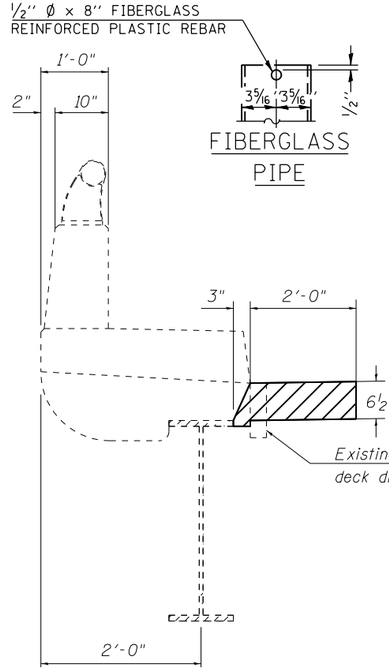
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	59
		CONTRACT NO. 70B15		
	ILLINOIS	FED. AID PROJECT		

PLAN VIEW OF DRAINS (SPAN 1)

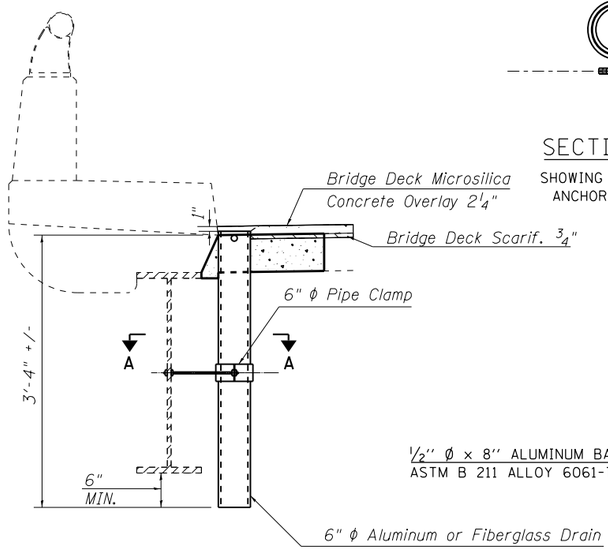


PLAN VIEW OF DRAINS (SPAN 4)

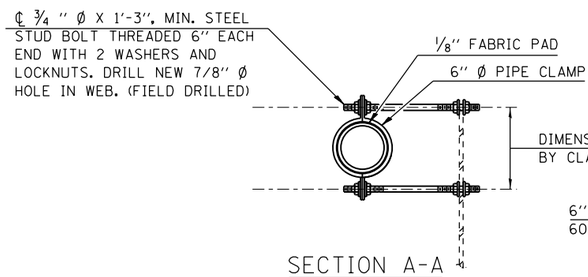




SECTION AT EXISTING DRAIN

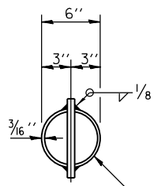


SECTION AT PROPOSED DRAIN



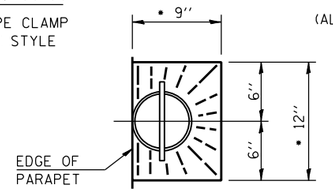
SECTION A-A

SHOWING PIPE CLAMP
ANCHORAGE STYLE



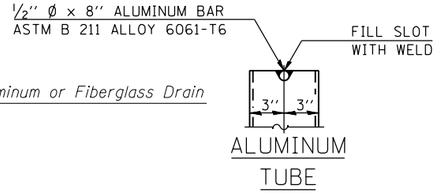
TOP PLAN

(ALUMINUM TUBE SHOWN)



TOP PLAN

• SLOPE TO DRAIN



ALUMINUM TUBE

NOTES:

Patch sizes shown represent conditions at the time the plans were completed. The actual sizes and locations of patching shall be determined by the engineer. The Engineer shall show the actual locations of the deck repairs on this sheet.

The existing drains shall be removed. Cost included with "Deck Slab Repair (Full Depth, Type I)".

Extreme care must be used when removing concrete near the top flange of the beams. The contractor is responsible for any damage to the beams.

The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Society of Protective Coating's Spec. SSPC-SP1 prior to painting.

Fiberglass Pipe Shall Conform to ASTM D 2996, with Short-Time Rupture Strength Hoop Tensile Stress of 30,000 P.S.I. Minimum.

Galvanized Clamping Device and All Stud Bolts, Washers and Nuts According to AASHTO M232. Cost of clamping device and galvanizing included with floor drain.

All Dimensions Shall be Field Verified by the Contractor Prior to Ordering of Materials.

LEGEND

EXISTING DECK DRAINS (TO BE REPLACED WITH FLOOR DRAINS)

EXISTING DECK DRAINS (TO BE ELIMINATED)

DECK SLAB REPAIR (FULL DEPTH, TYPE I)

BILL OF MATERIALS

ITEM	UNIT	TOTAL
FLOOR DRAINS	EACH	10.0

COST OF REMOVAL OF EXISTING DRAINS IS INCLUDED IN DECK SLAB REPAIR.

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 =	USER NAME = sherer.jm	DESIGNED -	REVISED -
p:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\CAD\Structures\D570B15-sht-RepairPlans.dgn		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE DECK PATCHING & DRAIN DETAIL
S.N. 010-0169

SCALE: | SHEET 4 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	60
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

PATCH NO.	SIZE		DECK SLAB REPAIR (FULL DEPTH T1)	DECK SLAB REPAIR (FULL DEPTH T2)
	LENGTH (FT)	WIDTH (FT)	SQ YD	SQ YD
1	2	2	0.4	
2	2	2	0.4	
3	2	2	0.4	
4	2	2	0.4	
5	2	2	0.4	
6	2	2	0.4	
7	2	2	0.4	
8	2	2	0.4	
9	2	2	0.4	
10	2	2	0.4	
11	2	2	0.4	
12	2	2	0.4	
13	2	2	0.4	
14	2	2	0.4	
15	2	2	0.4	
16	2	2	0.4	
17	2	2	0.4	
		SUB-TOTAL =	6.8	

PATCH NO.	SIZE		DECK SLAB REPAIR (FULL DEPTH T1)	DECK SLAB REPAIR (FULL DEPTH T2)
	LENGTH (FT)	WIDTH (FT)	SQ YD	SQ YD
18	2	2	0.4	
19	2	2	0.4	
20	2	2	0.4	
21	2	2	0.4	
22	2	2	0.4	
23	2	2	0.4	
24	2	2	0.4	
		SUB-TOTAL =	2.8	
		TOTAL =	9.6	
		USE =	10.0	

DECK SURVEY PERFORMED ON AUGUST 6, 2013. IF MORE THAN ONE WINTER FREEZE-THAW CYCLE OCCURS BETWEEN THE INITIAL INSPECTION AND THE COMMENCEMENT OF WORK, THE FINAL PLAN QUANTITIES FOR DECK REPAIRS MUST BE BASED ON A NEW INSPECTION OF THE DECK.

BILL OF MATERIALS

ITEM	UNIT	TOTAL
DECK SLAB REPAIR (FULL DEPTH, TYPE I)	SQ YD	10.0

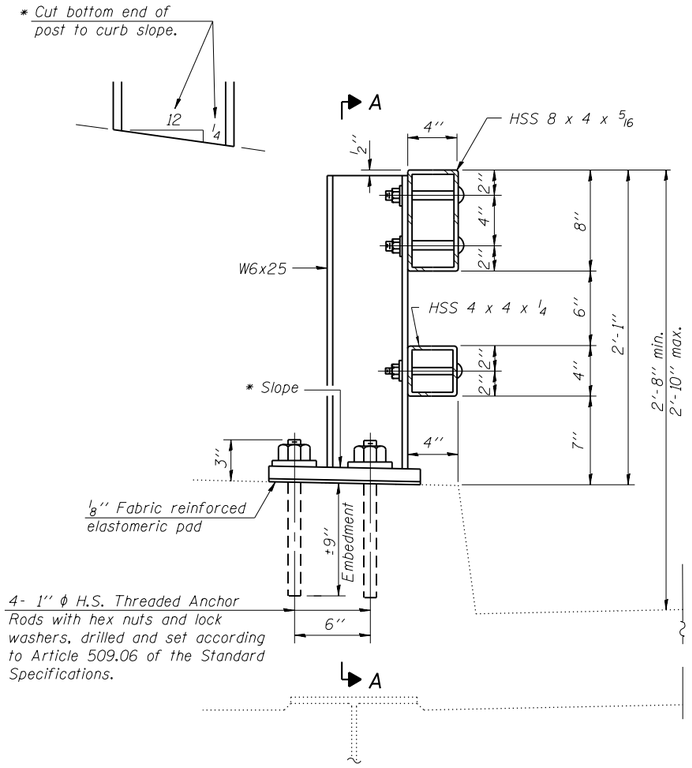
FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structure\JMS\D570B15-sht-Repair-Plan.dgn	USER NAME = sherer.jm	DESIGNED - JMS	REVISED -
		DRAWN - JMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
Default	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

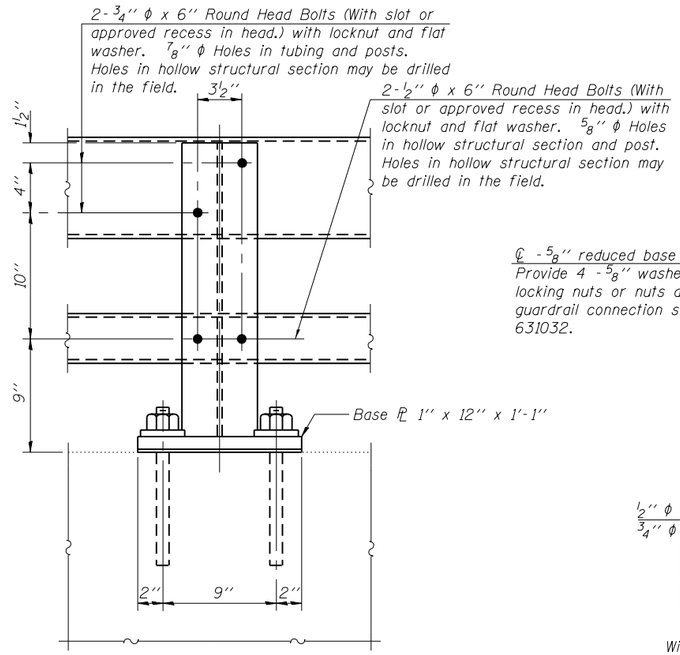
SCHEDULES OF BRIDGE DECK PATCHING
S.N. 010-0169

SCALE: | SHEET 5 OF 6 SHEETS | STA. | TO STA.

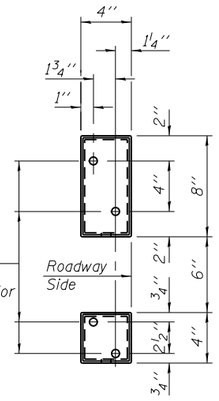
F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	61
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			



SECTION AT RAIL POST



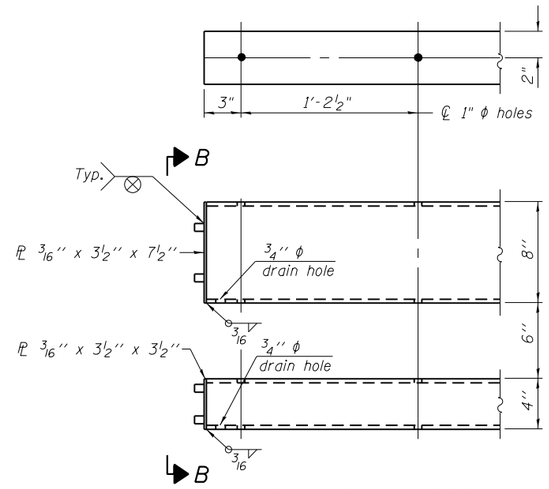
SECTION A-A



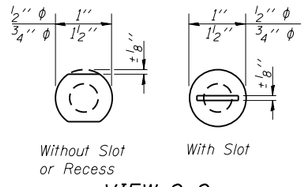
℄ - 5/8" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032.

Roadway Side

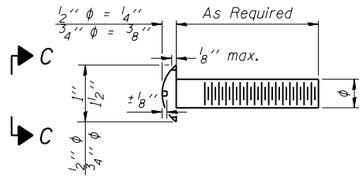
VIEW B-B



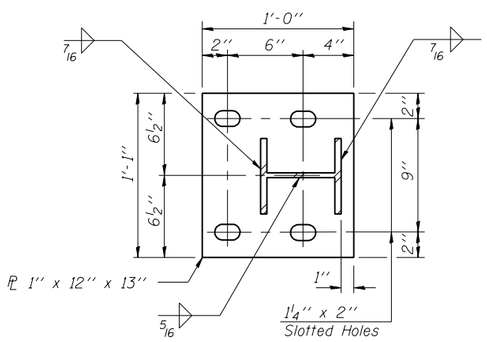
END OF RAIL DETAILS



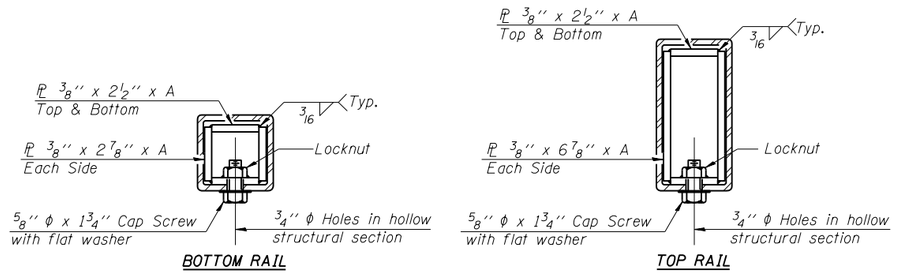
VIEW C-C



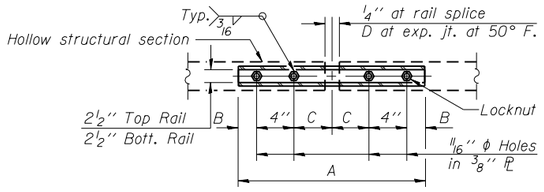
DETAIL OF 1/2" ϕ & 3/4" ϕ ROUND HEAD BOLTS



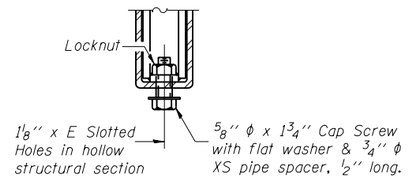
BASE PLATE DETAIL



SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE ℄ TYPICAL



RAIL SPLICE CONNECTION AT EXPANSION JT.

Notes:

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

Posts shall not be located closer than 1'-3" to an existing bridge expansion joint or end of bridge.

Steel Bridge Rail expansion joint shall be provided between any two (2) posts which span a bridge expansion joint. Bolts located at expansion joint shall be provided with locknuts and shall be tightened only to a point that will allow railing movement.

Provide one 1/8" and two 1/16" steel shims for 25% of the posts. Shims shall be similar to base plates in size and holes.

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

SPLICE DIMENSIONS

T	D	A	B	C	E
≤4"	2 1/2"	1'-8"	2"	4"	2 1/2"
>4"≤6 1/2"	3 3/4"	2'-0"	2 1/2"	5 1/2"	3 1/2"
>6 1/2"≤9"	5"	2'-4"	3 1/2"	6 1/2"	9"
>9"≤13"	7"	2'-10"	4 1/2"	8 1/2"	11"
Rail Splice	1/4"	1'-8"	2"	4"	—

T = Total movement at expansion joint as shown on the design plans.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type 2399	Foot	420.0

(6'-3" Maximum Post Spacing)

R-31

7-1-10

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\DrawingData\Structures\D570815-sht-Repair-RR-Rail	USER NAME = sherer.jm	DESIGNED - JMS	REVISED -
		DRAWN - JMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STEEL RAILING, TYPE 2399
S.N. 010-0169

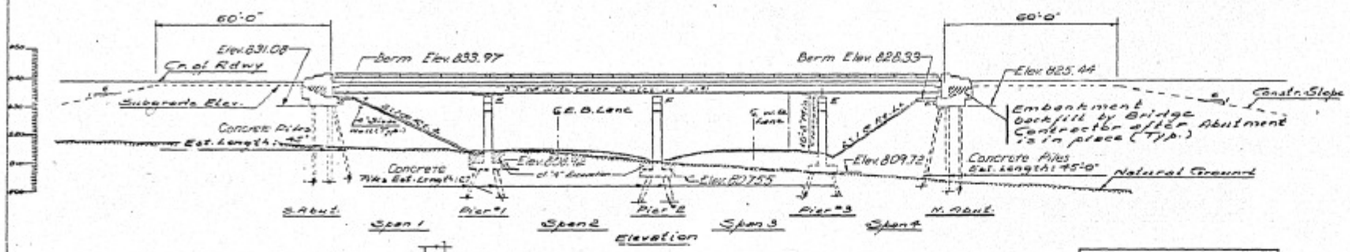
SCALE: | SHEET NO. 6 OF 6 SHEETS | STA. | TO STA.

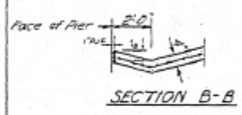
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(10-4.10-5)I	Champaign	74	62
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

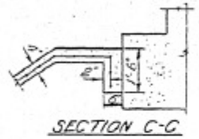
BM. 1 U.S.C. & G.S. Marked "W 204" 360' Lt.
Sta. 1842+90 (Elev. 810.22)

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

					SHEET NO. 1
F.A.I. 74	10-5HB-1	CHAMPAIGN	24	8	10 SHEETS

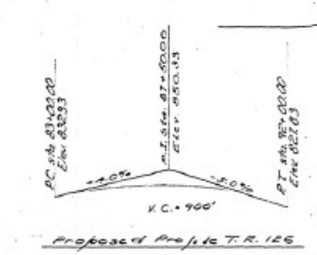






STATION 1837+30.89
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 74 SEC. 10-5HB-1
PROJ. I-74-5(34)
LOADING HS 15

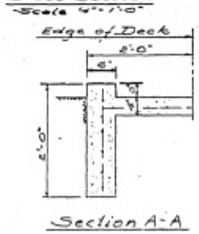
NAME PLATE
(See Standard 2113-1)



Proposed Profile T.R. 126

Profile F.A.I. Rte. 74

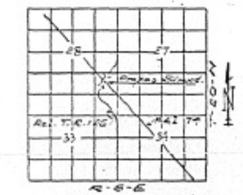
Plan



Section A-A

Cross Section
Scale 1/2" = 1'-0"

DESIGN STRESSES
f_c = 400 psi. Super & Sub.
v_c = 75 psi. Footings
f_s = 20,000 psi. Reinf.
f_s = 20,000 psi. Struct. (A36)
n = 10
Allow ℄ Deflect = $\frac{L}{1,000}$
LOADING: HS 15-44



GENERAL PLAN & ELEVATION
T.R. 126 OVER F.A.I. RT. 74
PROJ: I-74-5(34)179
F.A.I. RT. 74 - SECTION 10-5HB-1
CHAMPAIGN COUNTY
STA. 1837+30.89

GENERAL NOTES

Coarse aggregate to be used in painted surfaces and end post must be free of chert, flint, limonite, lignite and soft sandstone.

This concrete floor slab shall be finished in accordance with Art. 503.19 of the Standard Specifications.

Slope Wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58 # per 100 Sq. Ft.

All reinforcement bars shall be skipped 20 diameters unless otherwise shown.

All structural steel shall conform to A.S.T.M. Designation A-36.

Rivets ⅞ " ℄, Open Holes 15/16 " ℄, unless otherwise noted.

Anchor bolts shall be set before fastening diaphragms over supports.

Exposed surfaces of the expansion devices, inaccessable after erection, shall receive two shop coats of red lead paint. All other surfaces shall be given one shop coat of red lead paint. Anchor studs shall not be painted.

Expansion devices are included in the quantity of structural steel. Est. weight = 0.90 Lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Article 561 to 565 inclusive of the Standard Specifications.

Concrete piles at abutments shall be driven in holes preformed thru the embankment in accordance with Article 602.9 (c) of the Standard Specifications.

The contractor shall drive two concrete test piles one at North Acutment and one at Pier 2. All in permanent locations as directed by the Engineer before ordering the remainder of piles.

Excavation for portions of structures in the embankments shall not be classified.

TOTAL BILL OF MATERIALS

Item	Unit	Super	Sub	Total
Cl "A" Excav. for Structure	Cu. Yds.		80	80
Cl. "A" Concrete	Cu. Yds.	188.8	19.8	388.6
Protective Coat	Sq. Yds.	772		772
Structural Steel	Lbs.	141,080		141,080
Aluminum Handrail	Lin. Ft.	415		415
Reinforcement Bars	Lbs.	39,400	(6,120)	55,520
Concrete Piles	Lin. Ft.		1710	1710
Test Piles (Concrete)	Each		2	2
Name Plates	Each		2	2
Slope Wall 4"	Sq. Yds.		370	370

DESIGNED	Stanley & Lum	APPROVED	Chief Engineer
CHECKED	Paul C. Wang	PASSED	H.J. Gelles
DRAWN	R.P. Summar	DATE	
CHECKED	Paul C. Wang		

General Layout of Proposed Structure

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\DRAWING	USER NAME = sherer.jm	DESIGNED - JMS	REVISED -
	Data\Structures\D570815-sht-Repair	DRAWN - JMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS-BUILT PLANS
(FOR INFORMATION ONLY)

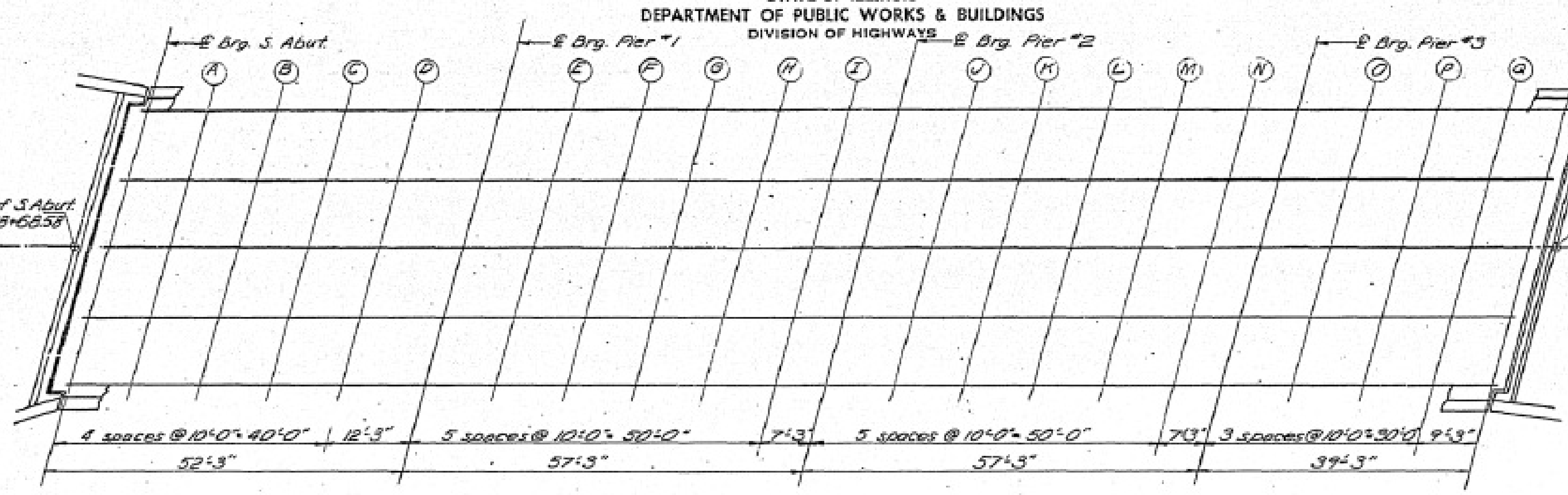
SCALE: | SHEET NO. 1 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	63
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	10-5HB-1	Champaign	24	9

SHEET NO. 2 — 10 SHEETS



PLAN

Beam	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of S. Abut. 4	8866.498	6.500	836.938	836.938
3	8868.580	.000	836.909	836.909
2	8870.322 -	6.500	836.880	836.880
℄ Brg S. Abut.	8869.338	6.500	836.895	836.895
	8871.080	.000	836.867	836.867
	8872.822 -	6.500	836.837	836.837
(A)	8879.338	6.500	836.722	836.742
	8881.080	.000	836.691	836.719
	8882.822 -	6.500	836.659	836.679
(B)	8889.338	6.500	836.538	836.558
	8891.080	.000	836.504	836.533
	8892.822 -	6.500	836.471	836.500
(C)	8899.338	6.500	836.343	836.379
	8901.080	.000	836.308	836.335
	8902.822 -	6.500	836.272	836.300
(D)	8909.338	6.500	836.139	836.154
	8911.080	.000	836.102	836.117
	8912.822 -	6.500	836.065	836.070
℄ Brg Pier #1	8921.588	6.500	837.875	837.875
	8923.330	.000	837.836	837.836
	8925.072 -	6.500	837.797	837.797
(E)	8931.588	6.500	837.648	837.652
	8933.330	.000	837.608	837.611
	8935.072 -	6.500	837.567	837.571
(F)	8941.588	6.500	837.419	837.419
	8943.330	.000	837.370	837.377
	8945.072 -	6.500	837.323	837.334
(G)	8951.588	6.500	837.165	837.175
	8953.330	.000	837.121	837.131
	8956.072 -	6.500	837.077	837.067

Beam	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
(H) 4	8961.588	6.500	836.908	836.915
3	8963.330	.000	836.863	836.869
2	8965.072 -	6.500	836.817	836.823
(I)	8971.588	6.500	836.642	836.648
	8973.330	.000	836.595	836.597
	8975.072 -	6.500	836.547	836.549
℄ Brg Pier #2	8978.838	6.500	836.442	836.442
	8980.580	.000	836.394	836.394
	8982.322 -	6.500	836.345	836.345
(J)	8988.838	6.500	836.159	836.170
	8990.580	.000	836.108	836.119
	8992.322 -	6.500	836.057	836.068
(K)	8998.838	6.500	835.865	835.882
	9000.580	.000	835.812	835.830
	9002.322 -	6.500	835.760	835.775
(L)	9008.838	6.500	835.561	835.581
	9010.580	.000	835.507	835.527
	9012.322 -	6.500	835.453	835.433
(M)	9018.838	6.500	835.247	835.264
	9020.580	.000	835.191	835.208
	9022.322 -	6.500	835.135	835.152
(N)	9028.838	6.500	834.923	834.931
	9030.580	.000	834.866	834.874
	9032.322 -	6.500	834.810	834.818
℄ Brg. Pier #3	9036.088	6.500	834.682	834.682
	9037.830	.000	834.624	834.624
	9039.572 -	6.500	834.565	834.565
(O)	9046.088	6.500	834.341	834.341
	9047.830	.000	834.281	834.281
	9049.572 -	6.500	834.220	834.220
(P)	9056.088	6.500	833.990	833.995
	9057.830	.000	833.928	833.933
	9059.572 -	6.500	833.865	833.871
(Q)	9066.088	6.500	833.628	833.634
	9067.830	.000	833.565	833.570
	9069.572 -	6.500	833.503	833.508
℄ Brg. N. Abut.	9075.338	6.500	833.285	833.285
	9077.080	.000	833.221	833.221
	9078.822 -	6.500	833.155	833.155
Bk. of N. Abut.	9077.838	6.500	833.190	833.190
	9079.580	.000	833.126	833.126
	9081.322 -	6.500	833.060	833.060

Beam	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of S. Abut. 6	8865.097	13.000	836.987	836.987
1	8872.063 -	13.000	836.850	836.850
℄ Brg. S. Abut.	8867.597	13.000	836.955	836.955
	8874.563 -	13.000	836.806	836.806
(A)	8877.597	13.000	836.753	836.781
	8884.563 -	13.000	836.627	836.655
(B)	8887.597	13.000	836.570	836.610
	8894.563 -	13.000	836.437	836.477
(C)	8897.597	13.000	836.378	836.413
	8904.563 -	13.000	836.238	836.273
(D)	8907.597	13.000	836.175	836.195
	8914.563 -	13.000	836.028	836.048
℄ Brg. Pier #1	8919.847	13.000	837.913	837.913
	8926.813 -	13.000	837.758	837.758
(E)	8929.847	13.000	837.687	837.692
	8936.813 -	13.000	837.526	837.530
(F)	8939.847	13.000	837.454	837.462
	8946.813 -	13.000	837.288	837.293
(G)	8949.847	13.000	837.209	837.224
	8956.813 -	13.000	837.032	837.047
(H)	8959.847	13.000	836.954	836.965
	8966.813 -	13.000	836.771	836.782
(I)	8969.847	13.000	836.689	836.694
	8976.813 -	13.000	836.499	836.504
℄ Brg. Pier #2	8977.097	13.000	836.491	836.491
	8984.063 -	13.000	836.296	836.296
(J)	8987.097	13.000	836.209	836.221
	8994.063 -	13.000	836.009	836.021
(K)	8997.097	13.000	835.917	835.944
	9004.063 -	13.000	835.707	835.724
(L)	9007.097	13.000	835.615	835.650
	9014.063 -	13.000	835.398	835.433
(M)	9017.097	13.000	835.302	835.307
	9024.063 -	13.000	835.078	835.103
(N)	9027.097	13.000	834.980	834.991
	9034.063 -	13.000	834.750	834.761

Beam	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
℄ Brg Pier #3 6	9034.347	13.000	834.741	834.741
1	9041.313 -	13.000	834.505	834.505
(O)	9044.347	13.000	834.401	834.401
	9051.313 -	13.000	834.159	834.159
(P)	9054.347	13.000	834.052	834.057
	9061.313 -	13.000	833.803	833.808
(Q)	9064.347	13.000	833.690	833.697
	9071.313 -	13.000	833.436	833.441
℄ Brg N. Abut.	9073.597	13.000	833.351	833.351
	9080.563 -	13.000	833.088	833.088
Bk. of N. Abut.	9076.097	13.000	833.258	833.258
	9083.063 -	13.000	832.993	832.993

DESIGNED Stanley S. [illegible]
CHECKED Paul C. Wang
DRAWN R. P. Summer
CHECKED Paul C. Wang

APRIL 27 1965
EXAMINED [signature] ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED [signature] ENGINEER OF DESIGN
APPROVED [signature] CHIEF HIGHWAY ENGINEER

TOP SLAB ELEVATION
F.A.I. RT. 74 SEC. 10-5HB-1
CHAMPAIGN COUNTY
STA. 1837+30.89

FILE NAME =	USER NAME = sharerjm	DESIGNED - JMS	REVISED -
pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570BRAWN\Data\Structures\D570B15-sht-Repair		DRAWN - JMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS-BUILT PLANS
(FOR INFORMATION ONLY)

SCALE: | SHEET NO. 2 OF 6 SHEETS | STA. | TO STA.

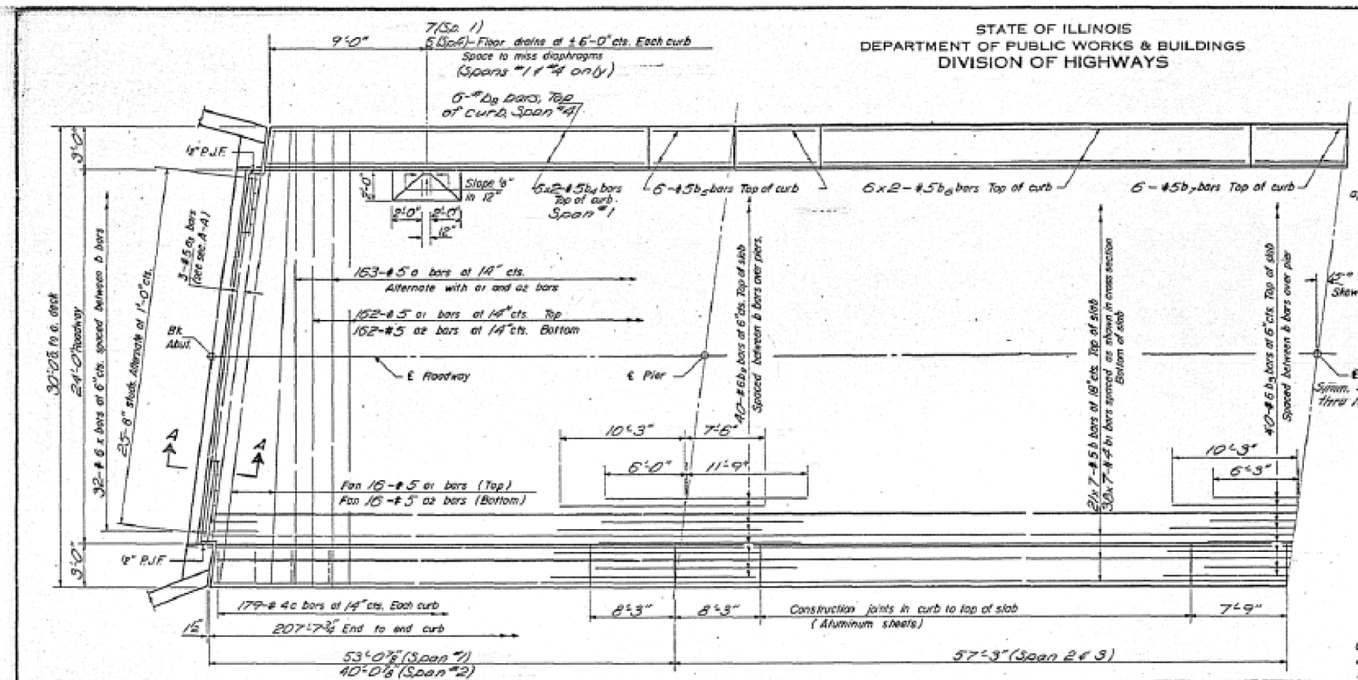
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	64

CONTRACT NO. 70B15

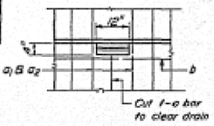
ILLINOIS | FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

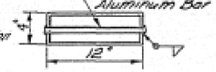
					SHEET NO 3
I-5-L 74	10-5HB-1	Champaign	24	10	10 SHEETS



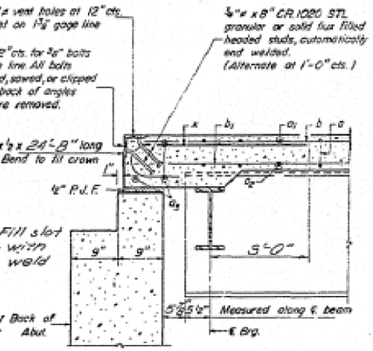
HALF PLAN



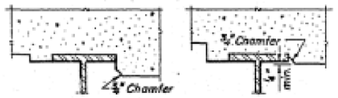
TYP. DETAIL AT DRAIN



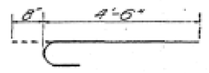
DETAIL ~ TOP OF DRAIN



SECTION A-A

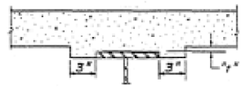


DETAIL A



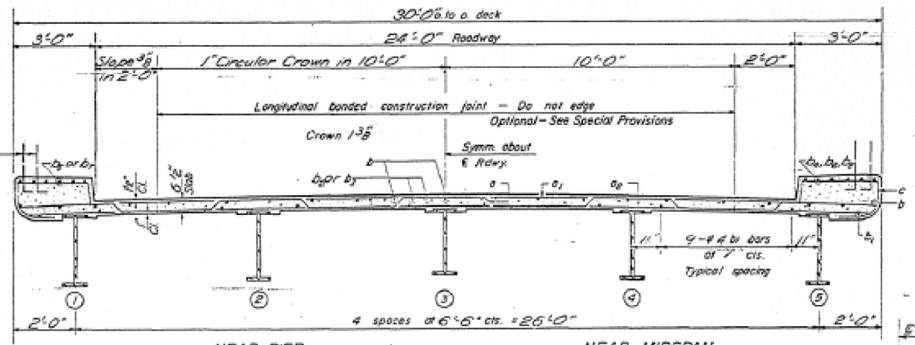
BAR x

Note:
Bars indicated thus 20 x 3 - #5 etc. indicates 20 lines of bars with 3 lengths per line.
Min. bar laps = 20 dia.



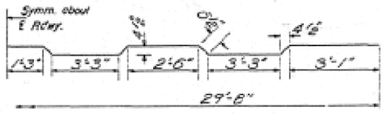
STANDARD FILLET DETAIL

To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 2. These elevations subtracted from the "Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 2, minus slab thickness, equals the fillet heights "f" above top of beams.

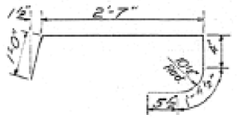


NEAR PIER NEAR MIDSPAN

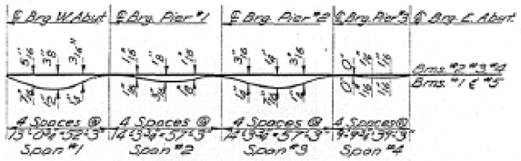
CROSS SECTION



BAR a



BAR c

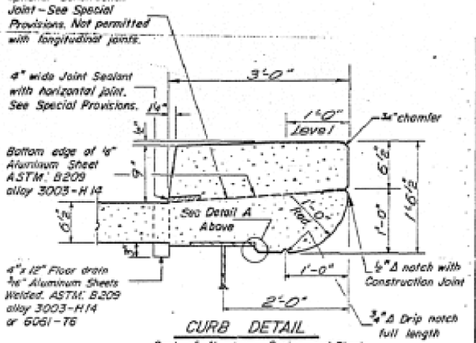


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 2.

Optional Construction Joint - See Special Provisions. Not permitted with longitudinal joints.



CURB DETAIL

Cost of Aluminum Drains and Sheets shall be incidental to Class X Concrete.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	163	#5	31'-0"	
a1	194	#5	29'-2"	
a2	194	#5	28'-9"	
a3	6	#5	24'-6"	
b	147	#5	30'-9"	
b1	288	#8	30'-9"	
b2	80	#6	17'-9"	
b3	40	#6	15'-6"	
b4	24	#5	23'-0"	
b5	48	#5	8'-0"	
b6	48	#5	21'-5"	
b7	24	#5	7'-6"	
b8	18	#5	31'-6"	
c	356	#4	5'-9"	
z	64	#6	5'-2"	
Reinforcement Bars			Lbs	35025
Structural Steel			Lbs	M1080
Class X Concrete			Cu. Yd.	107.2

* Weight of bearing assemblies with lead plates, and anchor bolts are included as structural steel. Est. Wt = 6320 Lbs.

DESIGNED	Stanley S. Lin	
CHECKED	Paul C. Wang	
P.G. Barnett	D.L. Beemer	
CHECKED	Paul C. Wang	

EXAMINED Carl Turman, DIRECTOR OF HIGHWAYS AND STATE HIGHWAY ENGINEER — APRIL 27 1965
PASSED
APPROVED, DIVISION OF HIGHWAYS

I-5-L (≦ 15°) 10-10-62 Rev. 11-1-63 5-1-64

SUPERSTRUCTURE
F.A.I. RT. 74 SEC. 10-5HB-1
CHAMPAIGN COUNTY
STA. 1837+30.89

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structures\D570B15-sht-Repair-PBeam	USER NAME = sherer.jm	DESIGNED - JMS	REVISED -	
		DRAWN - JMS	REVISED -	
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -	
	PLOT DATE = 8/8/2016	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS-BUILT PLANS
(FOR INFORMATION ONLY)

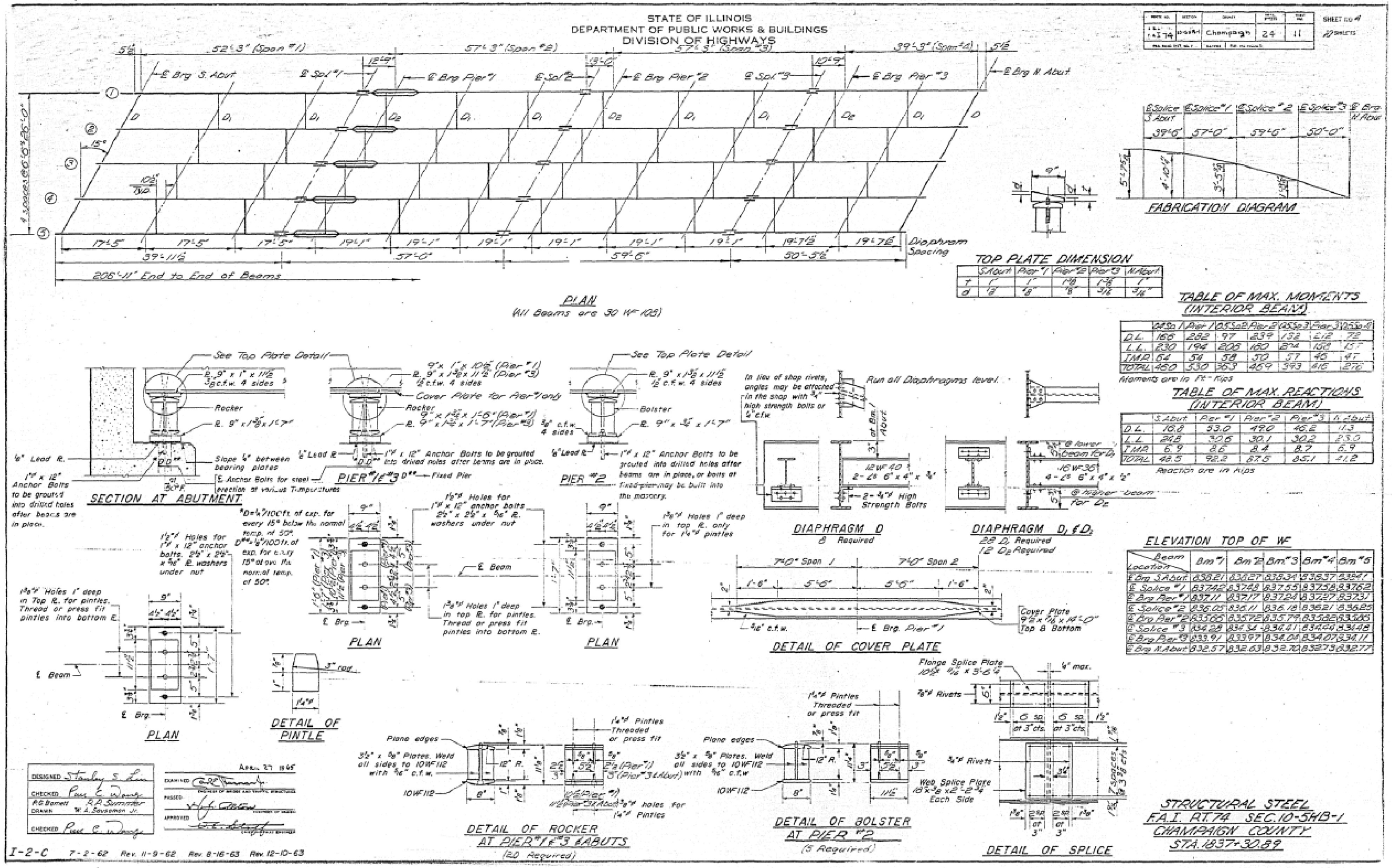
SCALE: | SHEET NO. 3 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	65
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 74	10-5HB-1	Champaign	24	11

SHEET NO. 4 OF 10 SHEETS



TOP PLATE DIMENSION

	S.Abut	Pier #1	Pier #2	Pier #3	N.Abut
t	1"	1"	1 1/8	1 3/8	1"
d	1/8	1/8"	1/8	3/16	3/16"

TABLE OF MAX. MOMENTS
(INTERIOR BEAM)

	0.4 Sp 1	Pier 1	0.5 Sp 2	Pier 2	0.5 Sp 3	Pier 3	0.5 Sp 4
D.L.	166	282	97	239	132	212	72
L.L.	230	194	208	180	204	158	157
IMP.	64	54	58	50	57	46	47
TOTAL	460	530	363	469	393	416	276

Moments are in Ft-Kips

TABLE OF MAX. REACTIONS
(INTERIOR BEAM)

	S.Abut	Pier #1	Pier #2	Pier #3	N.Abut
D.L.	16.8	53.0	49.0	46.2	11.3
L.L.	24.8	30.6	30.1	30.2	23.0
IMP.	6.9	8.6	8.4	8.7	6.9
TOTAL	48.5	92.2	87.5	85.1	41.2

Reaction are in Kips

ELEVATION TOP OF WF

Location \ Beam	Bm #1	Bm #2	Bm #3	Bm #4	Bm #5
℄ Brg S.Abut	838.21	838.27	838.34	838.37	838.41
℄ Splice #1	837.42	837.48	837.55	837.58	837.62
℄ Brg Pier #1	837.11	837.17	837.24	837.27	837.31
℄ Splice #2	836.05	836.11	836.18	836.21	836.25
℄ Brg Pier #2	835.65	835.72	835.79	835.82	835.86
℄ Splice #3	834.28	834.34	834.41	834.44	834.48
℄ Brg Pier #3	833.91	833.97	834.04	834.07	834.11
℄ Brg N.Abut	832.57	832.63	832.70	832.73	832.77

STRUCTURAL STEEL
F.A.I. RT. 74 SEC. 10-5HB-1
CHAMPAIGN COUNTY
STA. 1837+30.89

DESIGNED Stanley S. Lin
CHECKED Paul E. Woodz
P.G. Barnett / R.P. Summer
DRAWN W.A. Seyseman Jr.
CHECKED
April 27 1965

I-2-C 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\CADD Data\Structures\D570B15-sht-Repair.dgn	USER NAME = sherer.jm	DESIGNED - JMS	REVISED -
		DRAWN - JMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS-BUILT PLANS
(FOR INFORMATION ONLY)

SCALE: | SHEET NO. 4 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	66

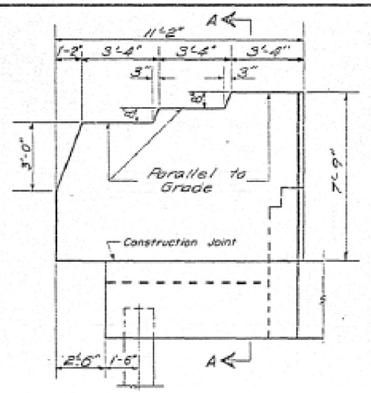
CONTRACT NO. 70B15

ILLINOIS FED. AID PROJECT

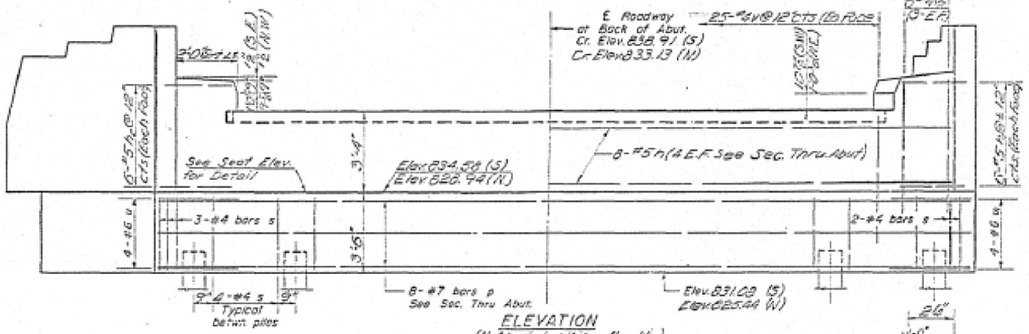
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
F.A.I. 74	(10-4,10-5)I	Champaign	24	13

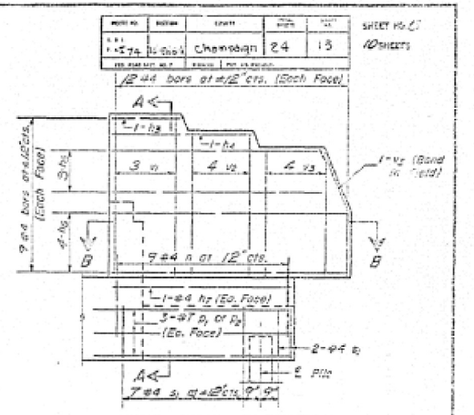
SHEET NO. 1 OF 10 SHEETS



WING WALL ELEVATION
Dimensions

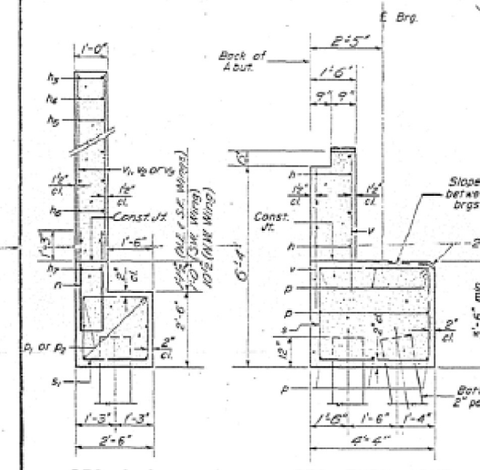


ELEVATION
(N. Abut looking North)
(S. Abut looking South)

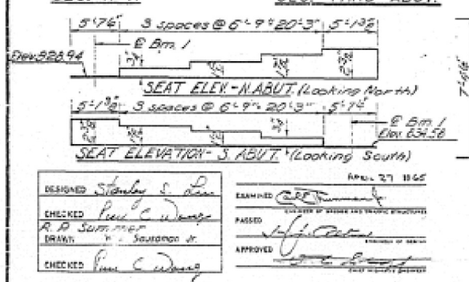


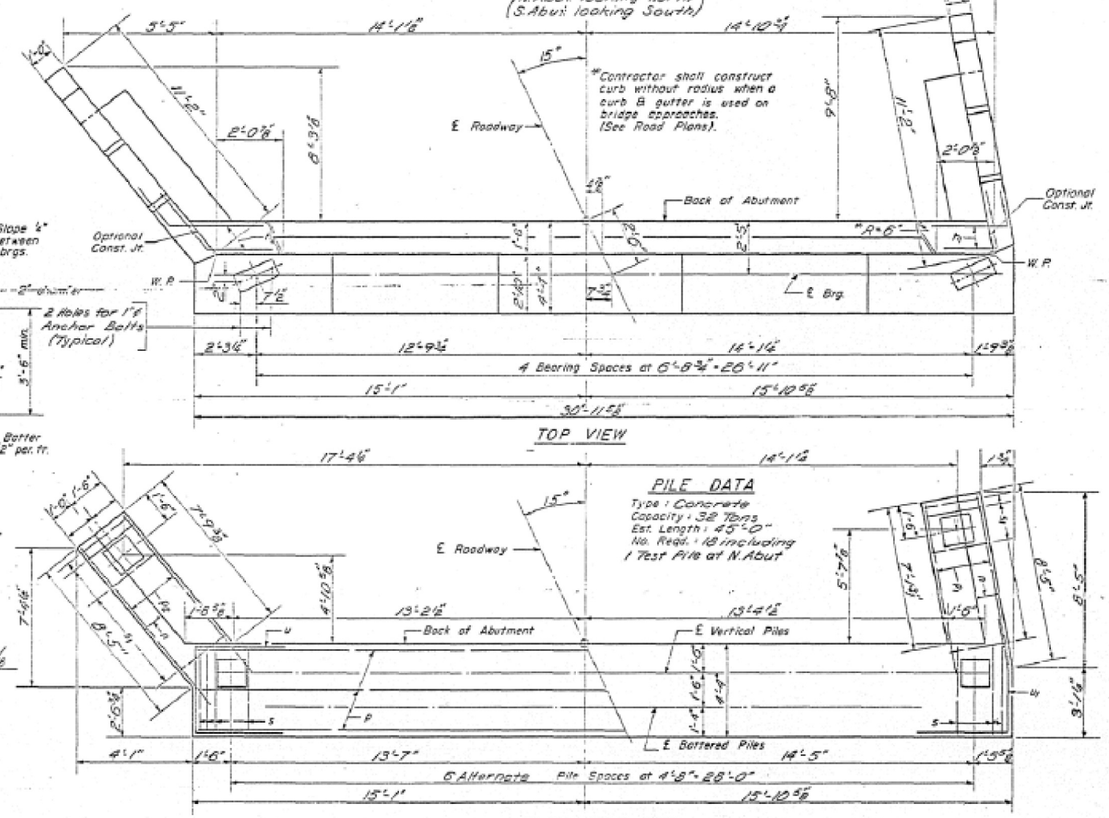
WING WALL ELEVATION
Reinforcement

SEC. B-B



SEC. A-A SEC. THRU ABUT.





PLAN - PILE CAP

PILE DATA
Type : Concrete
Capacity : 32 Tons
Est. Length : 45'-0"
No. Req'd. : 18 including 1 Test Pile at N. Abut

TWO ABUTMENTS
BILL OF MATERIAL

Bar	No.	Size	Length	S. 128
h	16	#5	28'-9"	
h1	24	#5	5'-9"	
h2	24	#5	6'-0"	
h3	8	#4	2'-10"	
h4	8	#4	6'-2"	
h5	24	#4	9'-6"	
h6	32	#4	10'-0"	
h7	8	#4	8'-0"	
n	36	#4	8'-3"	
p	16	#7	30'-6"	
p1	12	#7	6'-3"	
p2	12	#7	10'-0"	
s	58	#4	15'-1"	
s1	36	#4	9'-3"	
u	8	#6	11'-11"	
u1	8	#6	8'-9"	
v	100	#4	3'-0"	
v1	24	#4	7'-8"	
v2	66	#4	6'-10"	
v3	40	#4	6'-2"	
Class X Concrete			Cu. Yds.	646
Reinforcement Bars			Lbs.	42820
Concrete Piles			Lin. Ft.	765
Test Piles (Concrete)			Ea.	1

ABUTMENTS
F.A.I. RT. 74 SEC. (10-5)HB-1
CHAMPAIGN COUNTY
STA. 1837+30.89

A-8-L (15° - 35°) 7-18-62 Rev. 11-27-62

DESIGNED	Stanley S. Lee		
CHECKED	Paul C. Wenger		
DRAWN	R. D. Summer / Salvador Jr.		
CHECKED	Paul C. Wenger		

Approved 27 1965
EXAMINED — ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF BRIDGES
APPROVED — CHIEF ENGINEER

FILE NAME =	USER NAME = sherer.jm	DESIGNED - JMS	REVISED -
pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\DrawingData\Structures\D570815-sht-Repair-PE.dgn		DRAWN - JMS	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS-BUILT PLANS
(FOR INFORMATION ONLY)

SCALE: | SHEET NO. 5 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	67
			CONTRACT NO. 70B15	
		ILLINOIS	FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

					SHEET NO. 7
F.A.I. RTE. 74	SECTION (10-4,10-5)I	COUNTY CHAMPAIGN	TOTAL SHEETS 74	SHEET NO. 68	
					20 SHEETS

PILE DATA

Type : Concrete
Capacity : 30 Tons
Est. Length : 27'-0"
No. Req'd. : 56 Piles (12 for Pier "1", 16 for Pier "2", includes 1 Test Pile)

2 Holes for 1" Anchor Bolts (Typical)

TOP PLAN

ELEVATION (Looking South)

END VIEW

DIMENSIONS

REINFORCEMENT

FOOTING PLAN

Note: Spacer reinforcement can be miss anchor bolts. Min. bar load = 20 k/ft. Unless otherwise noted, four steps manufactured with cap. All edges shall have standard ¾" chamfers except footings.

SECTION A-A

A & B DIMENSIONS

Bar	A	B
S_2	2'-2"	2'-0"
S_1	2'-2"	3'-0"
S_3	2'-3"	2'-5"
S_4	2'-3"	2'-6"

S_3 BARS

U_2 BAR

n_1 BAR

PIER "1" & "2"
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
S_2	72	# 5	12'-8"	—
h_4	8	# 5	27'-9"	—
n_1	2	# 5	30'-9"	—
n	72	# 5	5'-0"	⌐
P_2	20	# 9	30'-9"	—
P_1	20	# 5	10'-3"	—
S_1	32	# 5	6'-8"	⌐
S_3	56	# 5	8'-2"	⌐
S_4	32	# 5	9'-3"	⌐
S_5	56	# 5	7'-3"	⌐
t	48	# 5	6'-3"	—
U_2	12	# 5	3'-4"	⌐
U_1	72	# 5	23'-6"	—
W	5	# 5	5'-6"	—
W_1	5	# 5	20'-3"	—
Class	Concrete	Cu. Yds.	93.6	
Reinforcement Bars		Lbs.	7200	
Concrete Piles		Lin. Ft.	675	
Test Piles Concrete		Each	1	

DESIGNED	[illegible]
CHECKED	[illegible]
DRAWN	W. A. Sousoman
CHECKED	[illegible]
EXAMINED	[illegible]
PASSED	[illegible]
APPROVED	[illegible]

APRIL 27 1960

P-2 Re-drawn 7-17-59 Rev. 11-25-59

PIER "1" & "2"
F.A.I. RT 74 SEC. 10-5HB-1
CHAMPAIGN COUNTY
STA. 1637+30.89

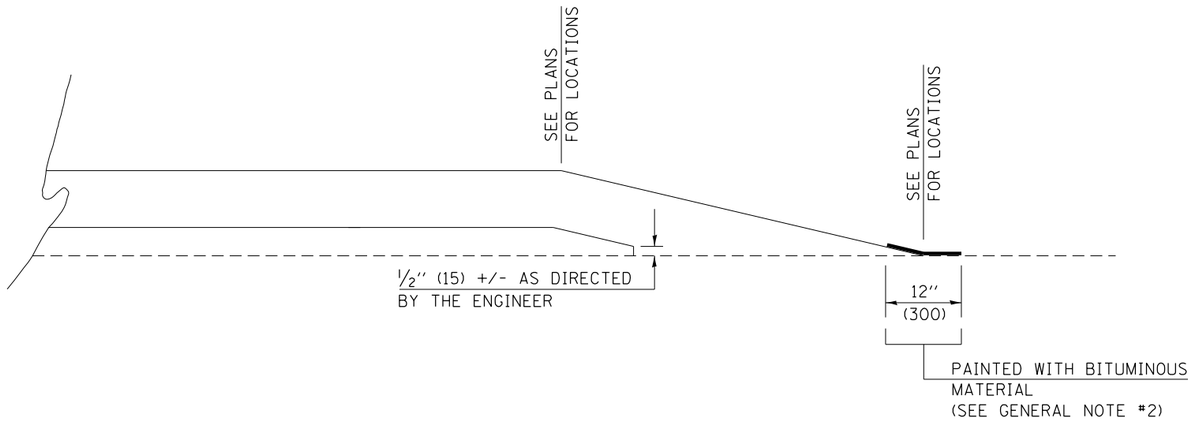
FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\Data\Structures\JMS\D570B15-sht-Repair	USER NAME = sherer.jm	DESIGNED - JMS	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

AS-BUILT PLANS
(FOR INFORMATION ONLY)

SCALE: | SHEET NO. 6 OF 6 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	CHAMPAIGN	74	68
		CONTRACT NO. 70B15		
	ILLINOIS FED. AID PROJECT			



GENERAL NOTES

1. ALL PROPOSED RUNDOWNS SHALL BE UNIFORMLY CONSTRUCTED AS FOLLOWS:
   1:240 (20 FEET PER INCH) OF THICKNESS FOR NON-INTERSTATE IMPROVEMENTS (SEE ARTICLE 406.09)
   1:360 (30 FEET PER INCH) OF THICKNESS FOR INTERSTATE IMPROVEMENTS

2. ON RESURFACING RUNDOWNS THAT ARE TO REMAIN IN PLACE AFTER COMPLETION OF THE SECTION, THE END OF THE FEATHEREDGE SHALL BE PAINTED WITH A UNIFORM COATING OF AC OR HFE BITUMINOUS MATERIAL APPROVED BY THE ENGINEER AFTER THE RUNDOWN IS COMPLETED. THE BITUMINOUS MATERIAL SHALL BE PAINTED ACROSS THE END OF THE RUNDOWN APPROXIMATELY 12 INCHES (300 mm) WIDE, 6 INCHES (150 mm) ON THE RUNDOWN AND 6 INCHES (150 mm) ON THE PAVEMENT. THE PAINTED STRIP SHALL BE COVERED WITH SAND. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

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

DISTRICT 5 DETAIL NO. 406AAAAA

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structures\D570B15-sht-Design.dgn	USER NAME = shererjm	DESIGNED -	REVISED - 12/06
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

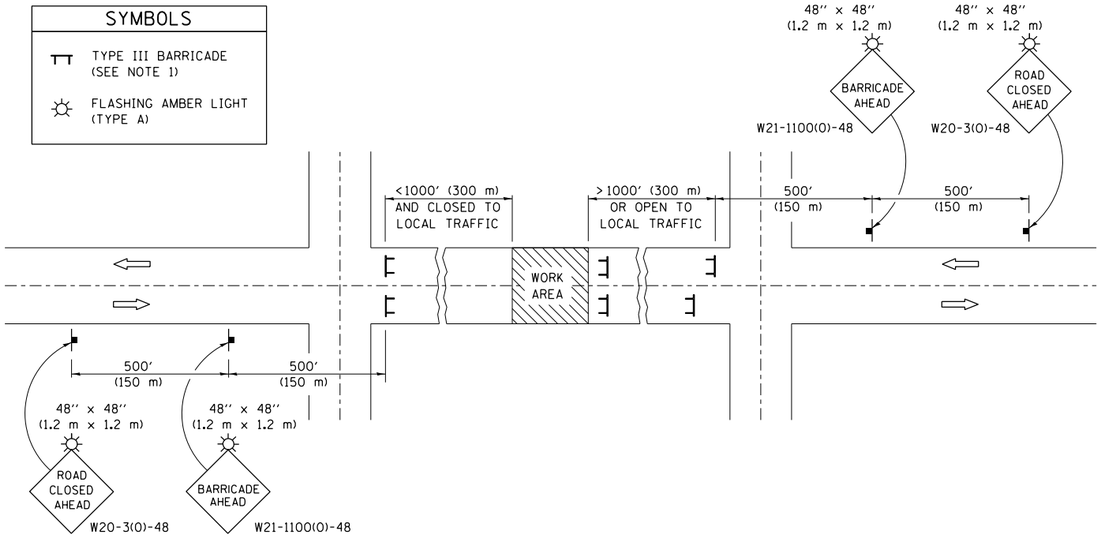
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FEATHREDGE RUNDOWN

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	Champaign	74	69
		CONTRACT NO. 70B15		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

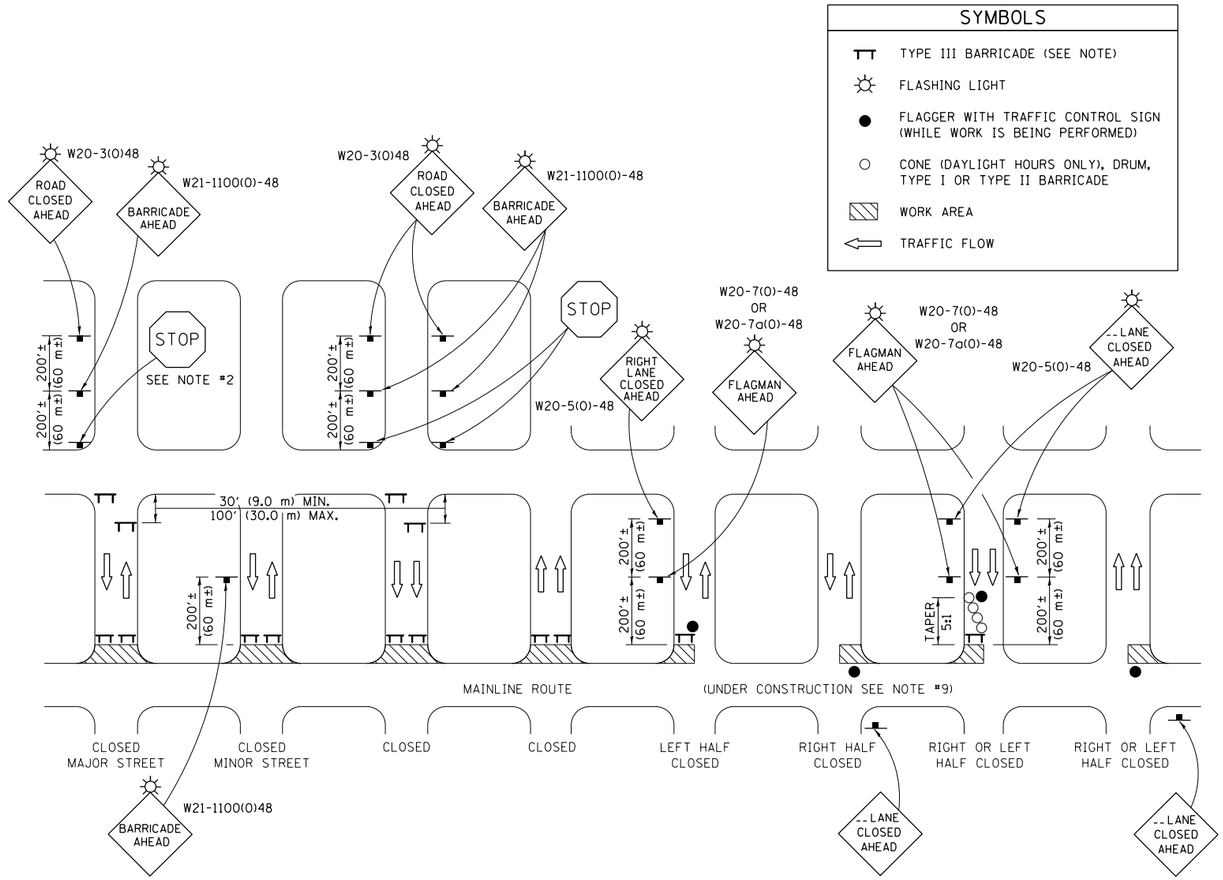
ROAD CLOSURE



GENERAL NOTES

1. 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.
2. 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.
3. 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.
4. STANDARD 701901 SHALL APPLY FOR THE PLACEMENT & DESIGN OF TYPE III BARRICADES.
5. 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.
6. REFLECTORIZED STRIPING SHALL APPEAR ON BOTH SIDES OF THE TY III BARRICADES IF ROAD IS OPEN TO LOCAL TRAFFIC.
7. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
8. 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.
9. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
10. FORMS BT. 725 AND BT. 726 ARE REQUIRED.
11. 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.
12. 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.

SIDEROAD / STREET CLOSURE



GENERAL NOTES

1. 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.
2. WHERE A STOP CONDITION EXISTS, AS SHOWN ABOVE, WARNING SIGNS MAY BE OMITTED IN ADVANCE OF THE "STOP" SIGN.
3. STANDARD 701901 SHALL APPLY FOR THE PLACEMENT & MANUFACTURE OF TYPE III BARRICADES.
4. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
5. ONE FLASHING LIGHT IS REQUIRED ABOVE EACH ADVANCE WARNING SIGN DURING HOURS OF DARKNESS.
6. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
7. FORMS BT 725 AND BT 726 ARE REQUIRED.
8. THE MAINLINE ROUTE TEMPORARY TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE PLANS, SPECIAL PROVISIONS AND STANDARD SPECIFICATIONS.
9. 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. 70200000

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DRAWINGData\Structures\D570B15-sht-Design	USER NAME = shererjm	DESIGNED -	REVISED - 11/06
		DRAWN -	REVISED - 12/07
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED - 09/09 - KJT
	PLOT DATE = 8/8/2016	DATE -	REVISED -

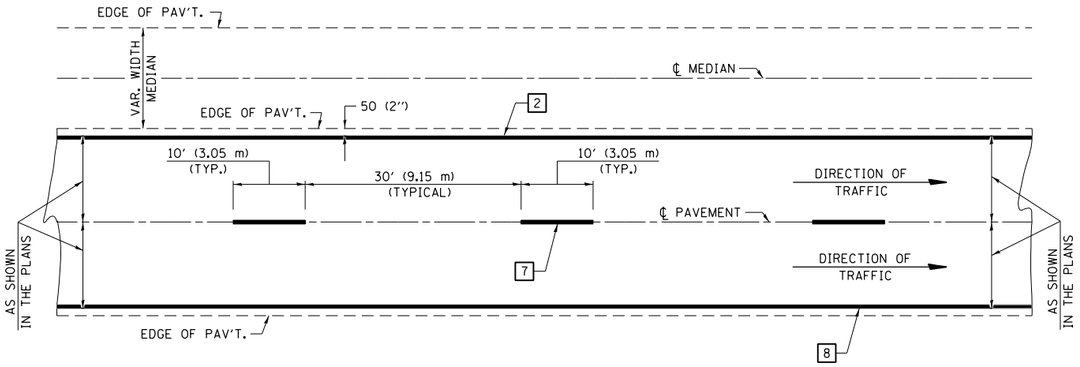
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	Champaign	74	70
		CONTRACT NO. 70B15		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

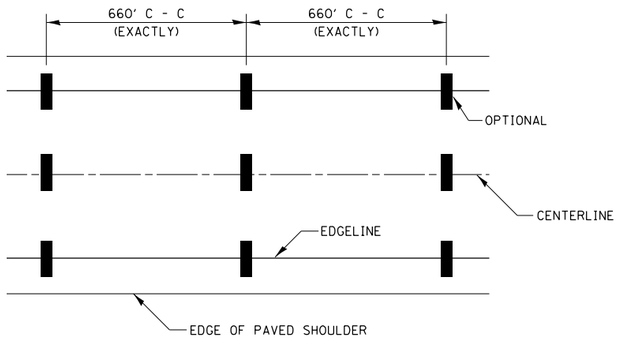
CENTERLINE INTERSTATE OR MULTI-LANE TWO WAY DIVIDED HIGHWAY



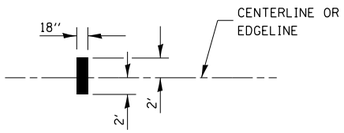
NOTE: PAVEMENT MARKINGS ARE TO BE EXTENDED THROUGH OMISSIONS WHEN APPLICABLE.

NOTE: SEE ARTICLES 780.04 & 781.03 FOR LOCATION OF STRIPES AND MARKERS RELATIVE TO EDGES OR JOINTS.

FOR RAISED REFLECTIVE PAVEMENT MARKERS, REFER TO STANDARD 781001.



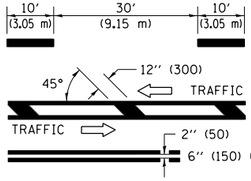
IT WILL BE NECESSARY TO HAVE A REPRESENTATIVE OF THE STATE POLICE PRESENT SO THAT THE ACCURACY OF MEASUREMENT CAN BE ATTESTED TO IN COURT.

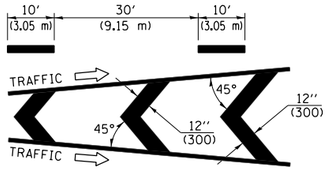


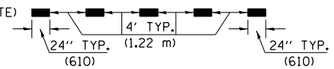
AERIAL SPEED CHECK ZONES

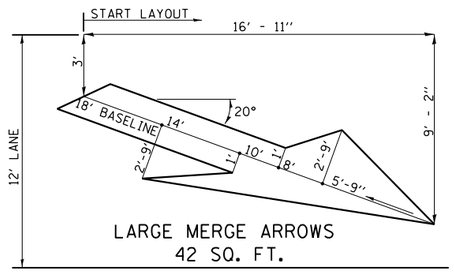
TYPICAL PAVEMENT MARKING LEGEND

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)



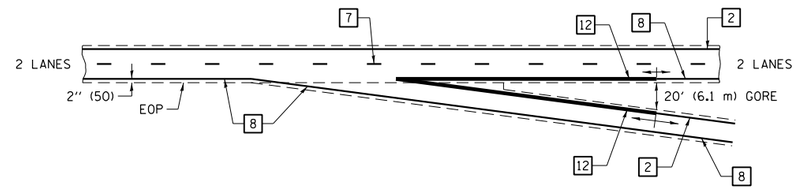




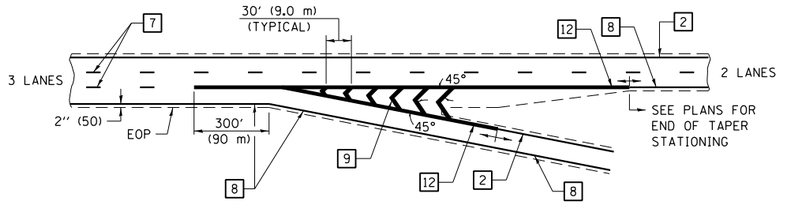


LARGE MERGE ARROWS
42 SQ. FT.

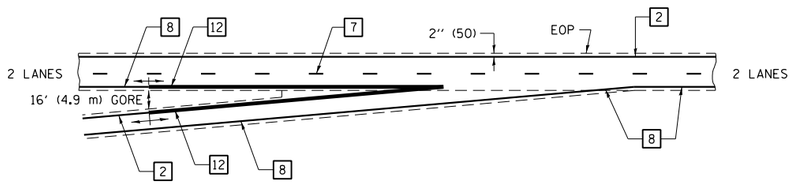
TYPICAL EXIT RAMP TERMINAL



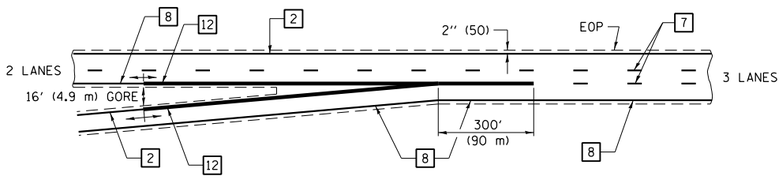
EXIT RAMP TERMINAL with EXCLUSIVE (auxiliary) LANE



TYPICAL ENTRANCE RAMP TERMINAL



ENTRANCE RAMP TERMINAL with EXCLUSIVE LANE



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

DISTRICT 5 DETAIL NO. 7800BBBB

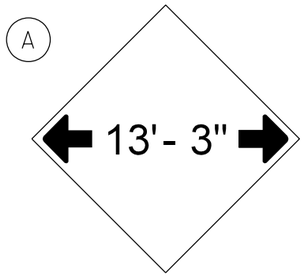
FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\DrawingData\Structures\D570815-sht-DesignDetails.dgn	USER NAME = shererjm	DESIGNED -	REVISED - 11/06
		DRAWN -	REVISED -
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/8/2016	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING (INTERSTATE & MULTI-LANE APPLICATIONS)

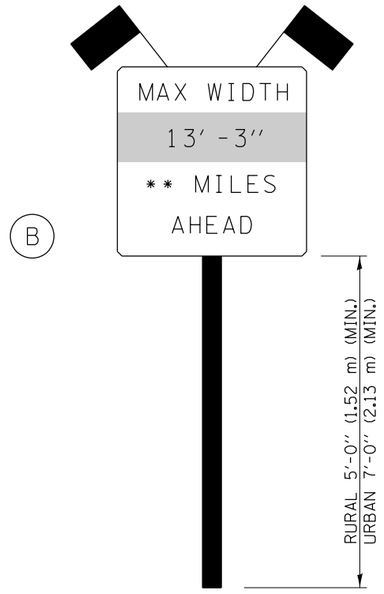
SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	Champaign	74	71
		CONTRACT NO. 70B15		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

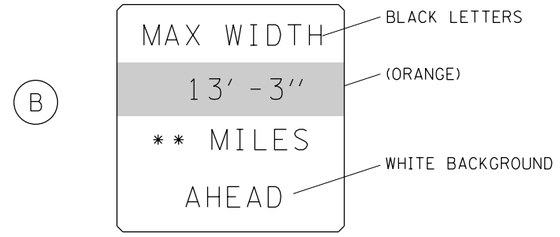


W12-2(0)-48"x48"(1200x1200)

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 PANEL, TYPE II



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

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.

** SEE DETAILS AND DESCRIPTIONS ON NEXT 2 SHEETS

STAGE WIDTHS:

STAGE 1 WIDTH = 17'-9" actual; 16'-3" posted; REQUIRED

STAGE 2 WIDTH = 14'-9" actual; 13'-3" posted; REQUIRED

GENERAL NOTES

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

FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structures\D570B15-sht-DesignDetails.dgn	USER NAME = shererjm	DESIGNED -	REVISED - 03/11 -KJT
		DRAWN -	REVISED - 05/08
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED - 10/08 - KJT
	PLOT DATE = 8/8/2016	DATE -	REVISED - 7/09 - KJT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WIDTH RESTRICTION SIGNING

SCALE: | SHEET NO. 1 OF 3 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	Champaign	74	72
		CONTRACT NO. 70B15		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

WIDTH RESTRICTION SIGNING FOR FAI 74 WESTBOUND TRAFFIC

AT FAI 57 INTERCHANGE

B1 NORTHWEST OF FAI 57 INTERCHANGE FOR FAI-74 WB
ERECT BY THE 70 MPH SIGN
DUAL DISPLAY; INCLUDE 7 MILES AHEAD

7 MILE

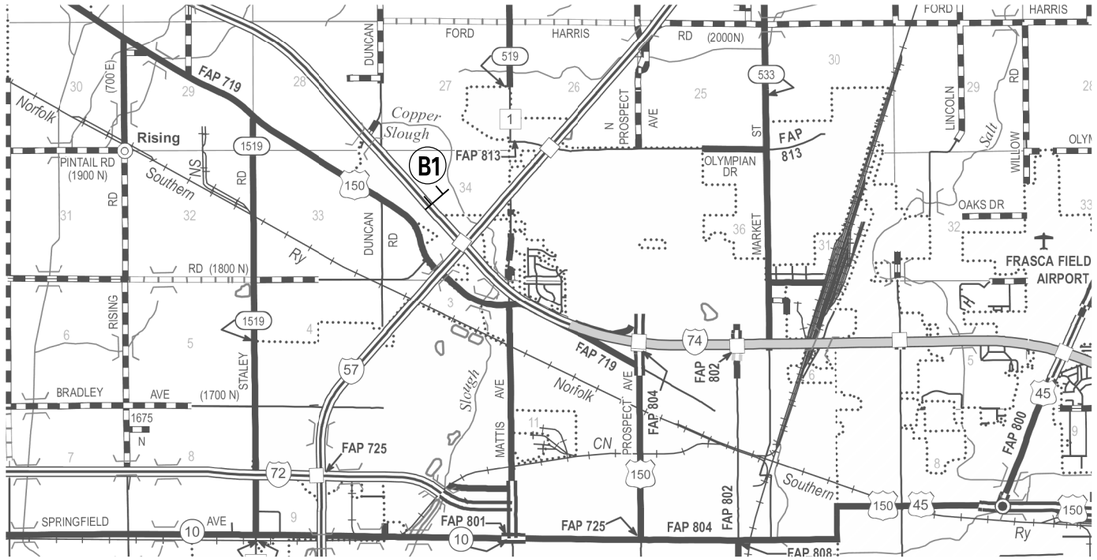
AT PRAIRIEVIEW ROAD INTERCHANGE

B2 EAST OF PRAIRIEVIEW INTERCHANGE FOR FAI-74 WB
ERECT BY LAKE OF THE WOODS BROWN BOARD SIGN
DUAL DISPLAY; INCLUDE 2 MILES AHEAD

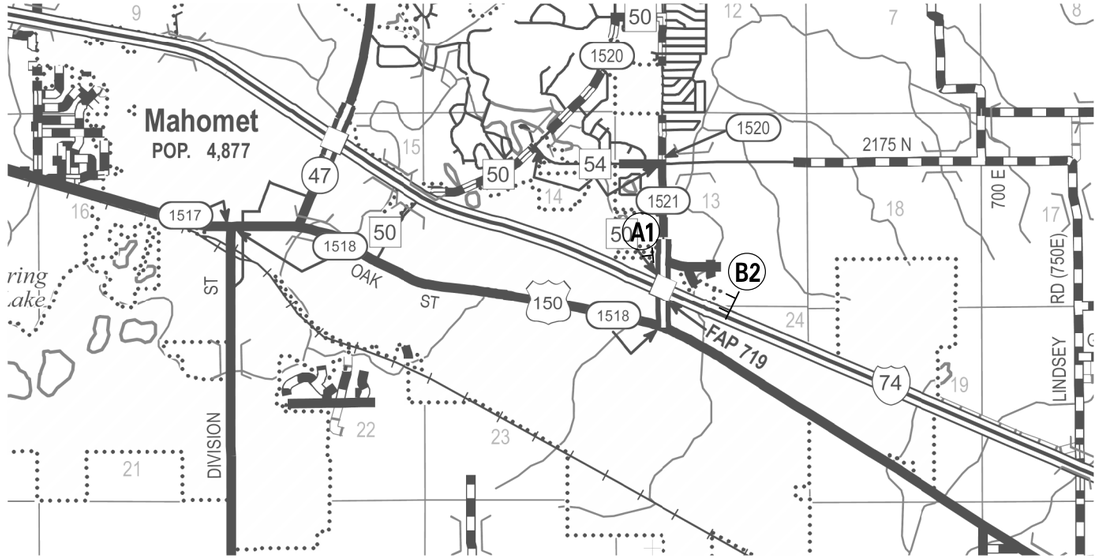
2 MILE

A1 PRAIRIEVIEW ROAD INTERCHANGE FOR WB I-74 RAMP
ERECT BESIDE USE PROHIBITED BY SIGN

AT FAI 57 INTERCHANGE



AT PRAIRIEVIEW ROAD INTERCHANGE



FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570815\Design Data\Structures\D570815-sht-Design Data.dgn	USER NAME = sherer.jm	DESIGNED -	REVISED - 03/11 -KJT	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WIDTH RESTRICTION SIGNING
	PLOT SCALE = 40.0000 ' / in.	DRAWN -	REVISED - 05/08		
	PLOT DATE = 8/8/2016	CHECKED -	REVISED - 10/08 - KJT		
		DATE -	REVISED - 7/09 - KJT		SCALE: / SHEET NO. 2 OF 3 SHEETS / STA. / TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	(10-4,10-5)I	Champaign	74	73
		CONTRACT NO. 70B15		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

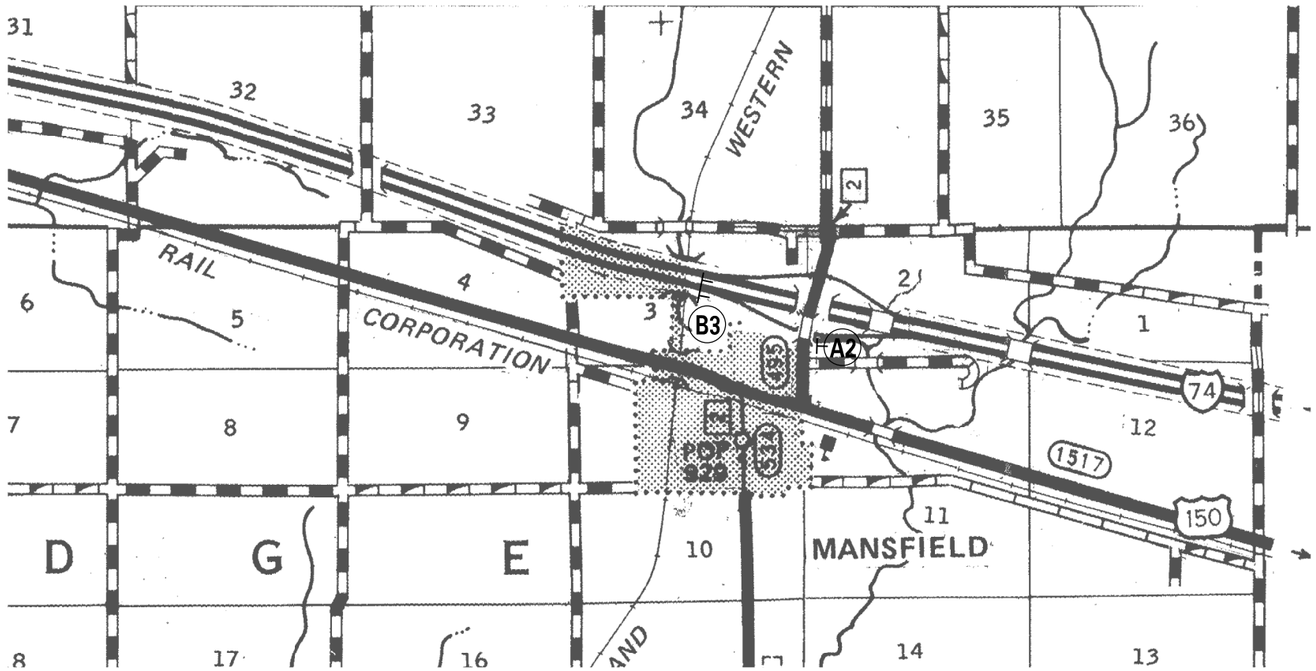
WIDTH RESTRICTION SIGNING FOR FAI 74 EASTBOUND TRAFFIC

AT MANSFIELD INTERCHANGE

A2 MANSFIELD INTERCHANGE FOR EB I-74 RAMP
ERECT ACROSS RAMP FROM USE PROHIBITED BY SIGN

B3 SOUTHEAST OF MANSFIELD INTERCHANGE FOR FAI-74 EB
ERECT BY MILE POST 165
DUAL DISPLAY; INCLUDE 6 MILES AHEAD

6 MILE



FILE NAME = pw:\\IL084EBIDINTEG.illinois.gov:PWIDOT\Documents\IDOT Offices\District 5\Projects\D570B15\DrawingData\Structures\D570B15-sht-Design.dgn	USER NAME = shererjm	DESIGNED -	REVISED - 03/11 -KJT	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	WIDTH RESTRICTION SIGNING			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 40.0000 ' / in.	CHECKED -	REVISED - 10/08 - KJT					74	(10-4,10-5)I	Champaign	74	74
	PLOT DATE = 8/8/2016	DATE -	REVISED - 7/09 - KJT		SCALE:	SHEET NO. 3 OF 3 SHEETS	STA. TO STA.			CONTRACT NO. 70B15		
								FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		