INDEX OF SHEETS

16-21

22-54

55-83

85-100

SUMMARY OF QUANTITIES
TYPICAL SECTIONS

SCHEDULES OF QUANTITIES
ALIGNMENTS, TIES, AND BENCHMARKS

PLAN AND PROFILE TR 7

TRAFFIC CONTROL PLAN

CROSS SECTION TR 7

CROSS SECTIONS TR 17

DETAILS

STRUCTURE PLANS - SN 068-0035

STRUCTURE PLANS - SN 068-0036

GENERAL NOTES, HIGHWAY STANDARDS & COMMITMENTS

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.I. SECTION COUNTY TOTAL SHEET NO. 55 (68-5HB-1,2)BRR,BY,D MONTGOMERY 122 1 ILLINOIS CONTRACT NO. 72A59

D-96-031-22

JO DAVESS STEPHENSON WINNERAGO CARROLL OGIE WHITESIDE LEE ROCK BLAND HENRY BUREAU MERCER PUINAM MARSHALL NACOCK MC DONOUGH FULTON MASON MASON

LOCATION OF SECTION INDICATED THUS: –

SN 068–0035, TR 7 (VIRDEN AVE) SN 068-

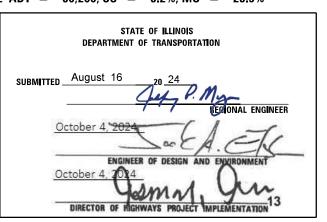
ILLINOIS PROFESSIONAL NO. 43208

2020 ADT = 75

SN 068-0036.TR 17 (N 33rd AVE) 2020 ADT = 50

FUNCTIONAL CLASSIFICATION LOCAL ROAD OVER INTERSTATE

I-55 , FUNCTIONAL CLASSIFICATION: CLASS I - INTERSTATE 2022 ADT = 30,200, SU = 3.2%, MU = 23.5%



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PROPOSED HIGHWAY PLANS

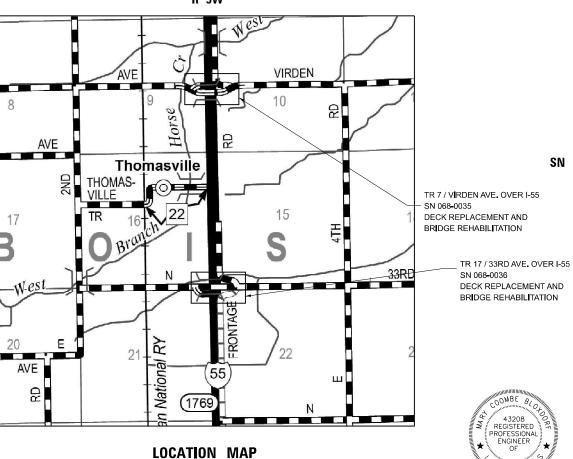
FAI ROUTE 55 (I-55)
SECTION (68-5HB-1,2)BRR,BY,D
PROJECT NHPP-RHMK(559)
MONTGOMERY COUNTY

C-96-036-22

R 5W

GROSS LENGTH = 1,400 FT = 0.265 MILE

SN 068-0036 GROSS LENGTH = 1,350 FT = 0.256 MILE



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

PROJECT ENGINEER JON KELLEY 217–785–2739
PROJECT MANAGER CLOYD JACK 217–524–0064

CONTRACT NO. 72A59

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 \circ

LIST OF STANDARDS

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
420406	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB
515001-04	NAME PLATE FOR BRIDGES
630001-13	STEEL PLATE BEAM GUARDRAIL
630301-09	SHOULDER WIDENING FOR TYPE 1 GUARDRAIL TERMINALS
631031-18	TRAFFIC BARRIER TERMINAL TYPE 6
701001-02	OFF ROAD OPERATIONS, 2L, 2W, MORE THAN 15FT AWAY
701006-05	OFF ROAD OPERATIONS, 2L, 2W, 15 FT TO 24 IN FROM PAVEMENT EDGE
701101-05	OFF ROAD OPERATIONS, MULTILANE, 15 FT TO 24 IN FROM PAVEMENT EDG
701106-02	OFF ROAD OPERATIONS, MULTILANE, MORE THAN 15 FT AWAY
701201-05	LANE CLOSURE 2L 2W-DAY ONLY
701400-12	APPROACH TO LANE CLOSURE FREEWAY EXPRESSWAY
701401 - 13	LANE CLOSURE FREEWAY EXPRESSWAY
701428-01	TRAFFIC CONTROL SET UP REMOVAL FREEWAY EXPRESSWAY
701901-09	TRAFFIC CONTROL DEVICES
725001-01	OBJECT AND TERMINAL MARKERS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
420001-10	PAVEMENT JOINTS

COMMITMENTS

NO COMMITMENTS

GENERAL NOTES

ALL ELEVATIONS REFER TO NAVD-88 MEAN SEA LEVEL DATUM.

THE FOLLOWING RATES OF APPLICATION HAVE BEEN ASSUMED IN CALCULATING PLAN

1.60 TONS/CUBIC YARD 0.05 LBS/SQUARE FEET (MILLED/EXISTING) 0.025 LBS/SQUARE FEET (BETWEEN LIFTS) 0.25 LBS/SQUARE FEET

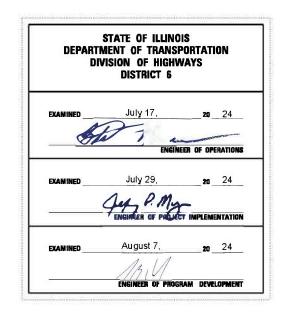
0.056 TON/SQUARE YARD - INCH 90 LBS/ACRE

AGGREGATE OTHER (TYPE B, TYPE C, WEDGE SHOULDER, ETC)
BITUMINOUS MATERIALS (TACK COAT)
BITUMINOUS MATERIALS (TACK COAT)
AGGREGATE (PRIME COAT)
HMA SURFACE/BINDER (112 LBS)
NITROGEN FERTILIZER NUTRIENT
POTASSIUM FERTILIZER NUTRIENT
PHOSPHOROUS FERTILIZER NUTRIENT
TEMPORAL SY SERGING CONTROL SEEDING 90 LBS/ACRE 90 LBS/ACRE 90 LBS/ACRE 100 LBS/ACRE 2 TONS/ACRE 2 TONS/ACRE TEMPORARY EROSION CONTROL SEEDING
MULCH
AGRICULTURAL GROUND LIMESTONE

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE TO THIS PROJECT:

SCALE:

MIXTURE USE:	HMA SURFACE COURSE	HMA PAVEMENT CONNECTOR AND BINDER COURSE
PG	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4.0% @ N50	4.0% @ N50
MIXTURE COMPOSITION	IL-9.5	IL-19.0
FRICTION AGGREGATE	MIX "C"	N/A
MIXTURE WEIGHT	112 LB/SY*IN	112 LB/SY*IN
QUALITY MANAGEMENT	QC/QA	QC/QA
SUBLOT SIZE	N/A	N/A
MTD REQUIRED	NO	NO



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PLOT DATE = 8/14/2024	DATE	REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

LIST OF STANDARDS, GENERAL NOTES, & COMMITMENTS SHEET 1 OF 1 SHEETS STA. TO							
SHEET	1	OF	1	SHEETS	STA.	TO STA.	

	FA	SECTION	с амту	TOTAL	SHI
ı	55	(68-5HB-1,2)BRR, BY,D	MONTGOMERY	122	
_			CONTRACT	NO. 72	A59
1		ILLINOIS FED AL	D PRO IECT		

				NHPP FUNDING	NHPP FUNDING
				90% FED / 10% STATE	90% FED / 10% STATE
				SN 068-0035	SN 068-0036
				BRIDGE	BRIDGE
CODE			TOTAL	0013	0013
NO.	ITEM	UNIT	QUANTITY	RURAL	RURAL
20200100	EARTH EXCAVATION	CU YD	52	34	18
20400800	FURNISHED EXCAVATION	CU YD	120	87	33
21400100	GRADING AND SHAPING DITCHES	FOOT	542	340	202
21400100	GIVADING VIAN ING DITORIES	1001	542	340	202
25000200	OFFDING CLASS 2	ACDE	0.5	0.05	0.25
25000200	SEEDING, CLASS 2	ACRE	0.5	0.25	0.25
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	45	22.5	22.5
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	45	22,5	22.5
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	45	22.5	22.5
25000700	AGRICULTURAL GROUND LIMESTONE	TON	1	0.5	0.5
25100115	MULCH, METHOD 2	ACRE	0.5	0.25	0.25
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	150	75	75
28100105	STONE RIPRAP, CLASS A3	SQ YD	25	9	16
	·				
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	247	101	146
		3			
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	345	155	190
	TO THIRT OF THE TOTAL NEW YAL-BUTTOON	500 10	540	130	150
40600000	TEMPODADY DAMP	20.72	407	222	104
40600990	TEMPORARY RAMP	SQ YD	427	233	194

6-01041-0000

6-01042-0000

Shell	
FILE NAME: Wochell	FEHR GRAHAM ENGINEERING & ENVIRONMENTAL LUMBO SECON FROM DO 1841-005255 © 2024 FEHR GRAHAM

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	PLOT DATE = 8/16/2024	DATE -	REVISED -

SCALE:

	SUMMARY OF QUANTITIES							F.A.I RTE.	SECTION		TOTAL SHEETS	SHEET NO.
								55	(68-5HB-1,2)BRR,BY,D	MONTGOMERY	122	3
										CONTRACT	NO. 72	A59
	SHEET	1	OF	5	SHEETS	STA.	TO STA.		ILLINOIS FED. AID PROJECT			
SHEET 1 OF 5 SHEETS STA. TO STA.								ILLINOIS FED. A		NO. 72	A59	

				NHPP FUNDING	NHPP FUNDING
				90% FED / 10% STATE	90% FED / 10% STATE
				SN 068-0035	SN 068-0036
				BRIDGE	BRIDGE
CODE			TOTAL	0013	0013
NO.	ITEM	UNIT	QUANTITY	RURAL	RURAL
110.	III.	ONIT	QOANTITI	KOKAL	KOKAL
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	46	23	23
+0000000	I I I I I I I I I I I I I I I I I I I	1014	40	20	25
40604050	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "C", N50	TON	68	34	34
10001000	Section Sect	1011	00		
 42000070	PAVEMENT CONNECTOR (HMA) FOR BRIDGE APPROACH SLAB	SQ YD	134	67	67
 44000100	PAVEMENT REMOVAL	SQ YD	356	178	178
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	35	18	17
50102400	CONCRETE REMOVAL	CU YD	10	5.4	4.6
50104701	REMOVAL OF EXISTING CONCRETE DECK NO. 1	EACH	1	1	
50104702	REMOVAL OF EXISTING CONCRETE DECK NO. 2	EACH	1		1
50157300	PROTECTIVE SHIELD	SQ YD	928	464	464
50300225	CONCRETE STRUCTURES	CU YD	56.6	27.4	29.2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	783	381.9	401.1
50300260	BRIDGE DECK GROOVING	SQ YD	2214	1102	1112
50300300	PROTECTIVE COAT	SQ YD	3084	1521	1563
50301350	CONCRETE SUPERSTRUCTURE (APPROACH SLAB)	CU YD	162.8	81.4	81.4

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	PLOT DATE = 8/16/2024	DATE -		REVISED -

STATE OF ILLINOIS	
DEPARTMENT OF TRANSPORTATION	d

SCALE:

SUMMARY OF QUANTITIES	F.A.I RTE. 55	SECTION (68-5HB-1,2)BRR,BY,D	COUNTY	SHEETS 122	SHEET NO. 4	
SHEET 2 OF 5 SHEETS STA.	TO STA.	CONTRACT NO. 72A59 ILLINOIS FED. AID PROJECT				

				6-01041-0000	6-01042-0000
				NHPP FUNDING	NHPP FUNDING
				90% FED / 10% STATE	90% FED / 10% STATE
				SN 068-0035	SN 068-0036
			BRIDGE	BRIDGE	
CODE			TOTAL	0013	0013
NO.	ITEM	UNIT	QUANTITY	RURAL	RURAL
	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 36 IN.	FOOT	132	132	
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	7340	3600	3740
_					
50500505	STUD SHEAR CONNECTORS	EACH	720	240	480
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	288860	141830	147030
51500100	NAME PLATES	EACH	2	1	1
_					
52000110	PREFORMED JOINT STRIP SEAL	FOOT	117	58.5	58.5
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	16	8	8
_					
52100510	ANCHOR BOLTS, 3/4"	EACH	48	32	16
52100520	ANCHOR BOLTS, 1"	EACH	8		8
58700300	CONCRETE SEALER	SQ FT	286	184	102
63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	2,975	1,550	1425
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	8	4	4
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	8	4	4
63200310	GUARDRAIL REMOVAL	FOOT	3082	1754	1328
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	6	6

* SPECIALTY ITEM

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PLOT DATE = 8/16/2024	DATE -		REVISED -

SCALE:

				NHPP FUNDING	NHPP FUNDING
				90% FED / 10% STATE	90% FED / 10% STATE
				SN 068-0035	SN 068-0036
				BRIDGE	BRIDGE
CODE			TOTAL	0013	0013
NO.	ITEM	UNIT	QUANTITY	RURAL	RURAL
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.5	0.5
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1	0.5	0.5
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	60	30	30
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	0.5	0.5
72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	8	4	4
78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	50	26	24
78200010	BARRIER WALL REFLECTORS, TYPE B	EACH	64	32	32
X5080530	BAR TERMINATOR	EACH	96	48	48
X7011800	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	0.5	0.5
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	16	8	8
Z0001903	STRUCTURAL STEEL REMOVAL	POUND	4020	2020	2000
-					
Z0001905	STRUCTURAL STEEL REPAIR	POUND	140		140
		•			

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6-01042-0000

* SPECIALTY ITEM

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	PLOT DATE = 8/16/2024	DATE -	REVISED -

١	SUMMARY OF QUANTITIES								SECTION		COUNTY	SHEETS	NO.
١	SUMMARY OF QUANTITIES						55	(68-5HB-1,2)BRR,BY	r,D	MONTGOMERY	122	6	
Į										CONTRACT	NO. 72	A59	
	SCALE:	SHEET	4 OI	- 5	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT					

				NHPP FUNDING	NHPP FUNDING
				90% FED / 10% STATE	90% FED / 10% STATE
		SN 068-0035	SN 068-0036		
				BRIDGE	BRIDGE
CODE			TOTAL	0013	0013
NO.	ITEM	UNIT	QUANTITY	RURAL	RURAL
Z0003615	REMOVAL OF EXISTING CONCRETE I-BEAM	EACH	6	6	
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1		1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1		1
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	142	24	118
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.5	0.5
Z0076600	TRAINEES	HOUR	2000	2000	
Z0018002	DRAINAGE SCUPPERS, DS-11	EACH	8	4	4
Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	2000	2000	

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ENGINEERING 8 ENVIRONMENTAL

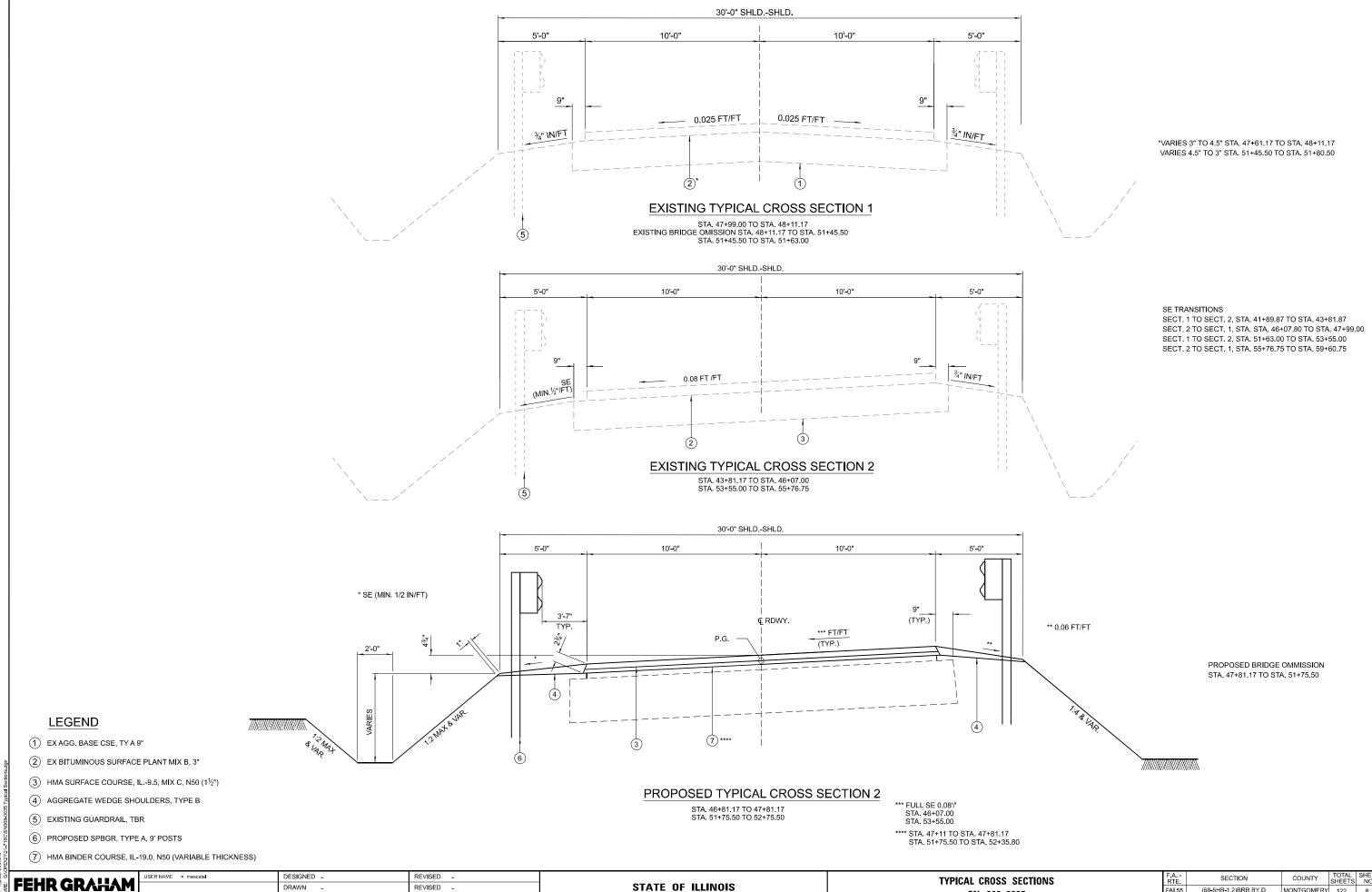
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PLOT DATE = 8/16/2024	DATE -	REVISED _

STATE	OF ILLINOIS	
DEPARTMENT	OF TRANSPORTATIO	N

l lot								F.A.I RTE.	SECTIO	ON	COUNTY	TOTAL SHEETS	SHEET NO.
SUMMARY OF QUANTITIES							55	(68-5HB-1,2)B	RR,BY,D	MONTGOMERY	122	7	
											CONTRACT	NO. 72	A59
SCALE:	SHEET	5 (OF	5	SHEETS	STA.	TO STA.		ILLINOIS FED. AID PROJECT				



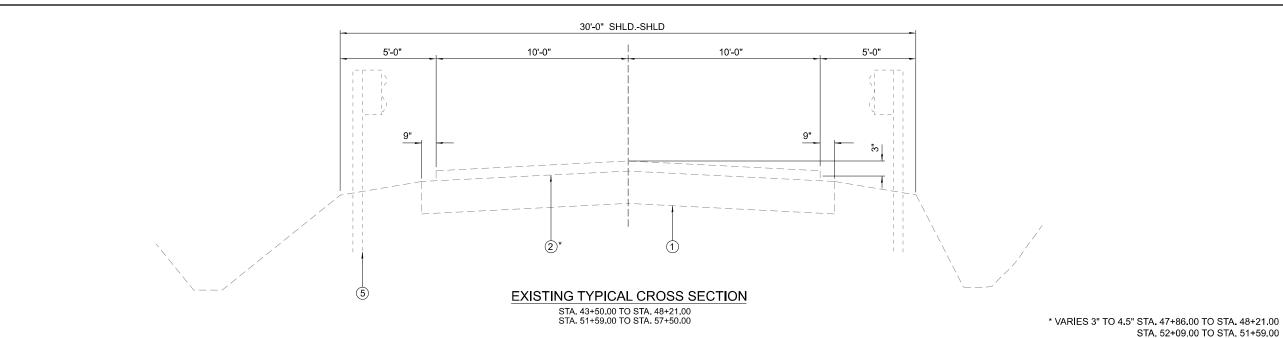
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DRAWN REVISED CHECKED -REVISED PLOT DATE = 8/14/2024 DATE REVISED

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

SCALE: -

(68-5HB-1,2)BRR,BY,D MONTGOMERY 122 8 FAI 55 SN 068-0035 CONTRACT NO. 72A59 SHEET - OF - SHEETS STA. -TO STA. -



30'-0" SHLD.-SHLD 5'-0" 10'-0" 10'-0" 5'-0" Ç RDWY. 1.5% P.G. -(TYP.) (TYP.) (TYP.) STA. 47+54.90 TO STA. 47+91.00 STA. 51+89.00 TO STA. 52+67.60 PROPOSED TYPICAL CROSS SECTION STA. 46+91.00 TO STA. 47+91.00 STA. 51+89.00 TO STA. 52+89.00

LEGEND

- 1 EX AGG. BASE CSE, TY A 9"
- ② EX BITUMINOUS SURFACE PLANT MIX B, 3"
- 3 HMA SURFACE COURSE, IL.-9.5, MIX C, N50 (1½")
- 4) AGGREGATE WEDGE SHOULDERS, TYPE B
- 5 EXISTING GUARDRAIL, TBR
- 6 PROPOSED SPBGR, TYPE A, 9' POSTS
- 7 HMA BINDER COURSE, IL-19.0, N50 (VARIABLE THICKNESS)

TRANSITION CROWN FROM EX TO PROPOSED STA. 46+91.00 TO 47+41.00

TRANSITION CROWN FROM PROPOSED TO EXISTING STA. 52+39.00 TO 52+89.0

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PLOT DATE = 8/14/2024	DATE -	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

SCALE: -

SECTION TYPICAL CROSS SECTIONS FAI 55 (68-5HB-1,2)BRR,BY,D SN 068-0036 SHEET - OF - SHEETS STA. -TO STA. -

COUNTY MONTGOMERY 122 9 CONTRACT NO. 72A59

STA. 52+09.00 TO STA. 51+59.00

	ROADWAY SCHEDULE												
		AGGR. SH	OULDER RATE	-1.60	POUNDS/SF		40600290	40600982	40600990	40603080	40604050	42000070	4810210
	*HMA L	IFT (TACK	COAT) RATE	-0.05	T/CU YD								
	**HMA L	IFT (TACK	COAT) RATE	-0.025	T/CU YD			HMA SURFACE		HMA BINDER	HMA SURFACE	PAVEMENT	AGGREGA
НМА	SURF/ BINDER	(112 LBS) RATE -				MATERIALS	REMOVAL	TEMPORARY		COURSE	CONNECTOR	WEDGE
				0.056	T/SY*IN		(TACK COAT)	BUTT JOINT	RAMP	IL-19.0, N50	IL-9.5, MIX "C", N50	(HMA) FOR BRIDGE	E SHOULDE
		AT I ON		LENGTH	WIDTH	AREA						APPROACH SLAB	TYPE B
R 7	STATION	TO STATIC	ON	FT	FT	SQ FT	POUNDS	SQ YD	SQ YD	TON	TON	SQ YD	TON
	46+01-17 T	O CTA	46:06.17	5.00	20.00	100.00	5.00	11.11	11 11		0.03		0.46
STA.	46+81.17 T		46+86.17	5.00	20.00	100.00	5.00	11.11	11.11		0.93		0.46
STA.		O STA	47+11.00	24.83	20.00	496.60	24.83	55.18	06.67	5 24	4.63		2.30
STA.		O STA	47+50.00	39.00	20.00	780.00	58.50		86.67	5.24	7.28		3.61
STA.		O STA	47+71.17	21.17	20.00	423.40	31.76		47.04	4.38	3.95	22.22	1.96
STA.		O STA	47+81.17	10.00	20.00	200.00						33.33	+
STA.		O STA	51+85.50	10.00	20.00	200.00						33.33	0.93
STA.		O STA	52+00.00	14.50	20.00	290.00	21.75		32.22	4.98	2.71		1.34
STA.		O STA	52+20.00	20.00	20.00	400.00	30.00		44.44	6.86	3.73		1.85
STA.		O STA	52+35.80	15.80	20.00	316.00	23.70			1.66	2.95		1.46
STA.		O STA	52+70.50	34.70	20.00	694.00	34.70	77.11			6.48		3.21
STA.	52+70.50 T	O STA	52+75.50	5.00	20.00	100.00	5.00	11.11	11.11		0.93		0.46
													
TR 17													
STA.	46+91.00 T	O STA	46+96.00	5.00	20.00	100.00	5.00	11.11	11.11		0.93		0.46
STA.	46+96.00 T	O STA	47+54.90	58.90	20.00	1,178.00	58.90	130.89			10.99		5.45
STA.	47+54.90 T	O STA	47+66.00	11.10	20.00	222.00	16.65		24.67	0.33	2.07		1.03
STA.	47+66.00 T	O STA	47+81.00	15.00	20.00	300.00	22.50		33.33	3.21	2.80		1.39
TA.	47+81.00 T	O STA	47+91.00	10.00	20.00	200.00						33.33	
STA.	51+89.00 T	O STA	51+99.00	10.00	20.00	200.00						33.33	
STA.	51+99.00 T	O STA	52+00.00	1.00	20.00	20.00	1.50		2.22	0.57	0.19		0.09
STA.	52+00.00 T	O STA	52+25.00	25.00	20.00	500.00	37.50		55.56	11.24	4.67		2.31
TA.	52+25.00 T	O STA	52+50.00	25.00	20.00	500.00	37.50		55.56	6.33	4.67		2.31
TA.	52+50.00 T	O STA	52+67.60	17.60	20.00	352.00	26.40			1.37	3.29		1.63
TA.	52+67.60 T	O STA	52+84.00	16.40	20.00	328.00	16.40	36.44			3.06		1.52
TA.	52+84.00 T	O STA	52+89.00	5.00	20.00	100.00	5.00	11.11	11.11		0.93		0.46

Milled	Existing	**Betweeen	Lifts

SEEDING & FERTILIZER								
		25000200	25000400	25000500	25000600	25000700	25100115	28000250
	*AREA	SEEDING, CLASS 2	NITROGEN FERT NUTRIENT	PHOSPHORUS FERT NUTRIENT	POTASSIUM FERT NUTRIENT	AGR I CULTURAL GROUND L IMESTONE	MULCH, METHOD 2	TEMP EROSION CONTROL SEEDING
LOCATION	SQ FT	ACRE	POUND	POUND	POUND	TON	ACRE	POUNDS
SN 068-0035	13,000.00	0.25	22.5	22.5	22.5	0.5	0.25	75.0
SN 068-0036	13,000.00	0.25	22.5	22.5	22.5	0.5	0.25	75.0
		·						
TOTAL		0.50	45.0	45.0	45.0	1.0	0.50	150.0
*MEASURED IN CADD								

Ō.	
NRO.	
NAME	FERK UKARAM
ΖΙ	
	ENGINEERING & ENVIRONMENTAL
쁴	LUNOIS DESIGN FIRM NO. 184-003525

4	USER NAME = mescatel	DESIGNED -	REVISED -
1		DRAWN -	REVISED -
	PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 8/14/2024	DATE -	REVISED -

STATE OF	ILLINOIS
DEPARTMENT OF	TRANSPORTATION

SCALE:

LOCATION	EARTH EXCAVAT I ON	EXCAVATION USED IN EMBANKMENT (25% SHRINKAGE)	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD
TR 7				
*STA. 43+25.00 TO STA. 43+84.28	0	0	4	-4
STA. 46+81.17 TO STA. 47+79.17	0	0	14	-14
STA. 47+79.17 TO STA. 48+11.17	21	15	9	7
STA.51+45.50 TO STA. 51+77.50	13	10	36	-27
STA.51+77.50 TO STA. 52+75.50	0	0	46	-46
*STA 55+97.39 TO STA. 56+80.00	0	0	4	-4
SUBTOTAL	34	25	113	-87
TR 17				
*STA. 44+00.00 TO STA. 44+94.11	0	0	8	-8
STA. 46+91.00 TO STA. 47+89.00	0	0	10	-10
STA. 47+89.00 TO STA. 48+21.00	14	10	11	-1
STA.51+59.00 TO STA. 51+91.00	4	3	4	-1
STA.51+91.00 TO STA. 52+89.00	0	0	9	-9
*STA. 56+48.39 TO STA.56+80.00	0	0	4	-4
SUBTOTAL	18	13	46	-33
TOTAL=	52	39	159	-120

EARTHWORK SCHEDULE

 SECTION
 COUNTY SHEETS NO.
 TOTAL SHEETS NO.

 (68-5HP-1,2)BRR,BY,D
 MONTGOMERY 122
 10
 SCHEDULE OF QUANTITIES SHEET 1 OF 2 SHEETS STA. TO STA.

							GUARDRA I	L SCHEDU	LE			
						6320031	63100085	63000003	63100167	72501000	78200005	78200010
							TRAFFIC	STEEL PLATE	TRAFFIC BARRIER	TERMINAL MARKER	GUARDRA I L	BARRIER WALL
							BARRIER	BEAM GUARDRAIL	TERMINAL	DIRECT	REFLECTORS	REFLECTORS
							TERMINAL	TYPE A	TYPE 1 (SPECIAL)	APPLIED	TYPE A	TYPE B
			10067101			GUARDRA I REMOVAL		9 FOOT POSTS	TANGENT			
		CTAT	LOCATION			FOOT				FACIL	FACU	FACU
		JIAI	ION TO S	AT TON		F001	EACH	FOOT	EACH	EACH	EACH	EACH
SN 068-0	035											
STA.	LT	43+47.59		O STA.	48+11 .17	463.58						
STA.	RT	43+60.17	-	O STA.	48+11.17	451.00						
STA.	LT	51+45.50	-	O STA.	55+70 . 74	425.24						
STA.	RT	51+45.50	-	O STA.	55+59.70	414.20						
STA.	LT & RT	43+34.28		O STA.	43+84.28				2	2		
STA.	LT & RT	43+84 .28	-	O STA.	47+59.28			750				
STA.		47+59 - 28		O STA.	47+96 - 17		2					
STA.		51+60.50		O STA.	51+97.39		2					
STA.		51+97.39		O STA.	55+97.39			800		_		
STA. STA.		55+97.39 43+43.28		O STA.	56+47.39 47+96.17				2	2		
STA.		51+60·50		O STA.	56+47 . 39				1		12 14	
STA.		47+96.17		O STA.	51+50.50						14	32
, , , , , , , , , , , , , , , , , , ,				5 5 17 17	51150150							52
SN 068-0	1036											
STA.	LT	45+76 - 71	-	O STA.	48+21.00	244.29						
STA.	RT	45+76 . 20		O STA.	48+21 .00	244.80						
STA.	LT	51+59.00		O STA.	55+78.20	419.20						
STA.	RT	51+59.00	-	O STA.	55+78 - 63	419.63						
STA.	LT & RT	44+44.11		O STA	44+94.11				2	2		
STA.		44+94.11		O STA.	47+69 - 11			550				
STA.	LT & RT	47+69 · 11		O STA.	48+06 - 00		2					
STA.		51+74.00		O STA.	52+10 - 89		2					
STA.		52+10 . 89		O STA.	56+48 · 39			875				
STA. STA.		56+48·39 44+44·11		O STA.	56+98 · 39 48+06 · 00				2	2	10	
STA.		51+74.00		O STA.	56+98 · 39			 			14	
STA.		48+06 - 00		O STA.	51+74 . 00				1		14	32
					3217.1.00							32
			ļ			TOTAL: 3,082	8	2,975	8	8	50	64

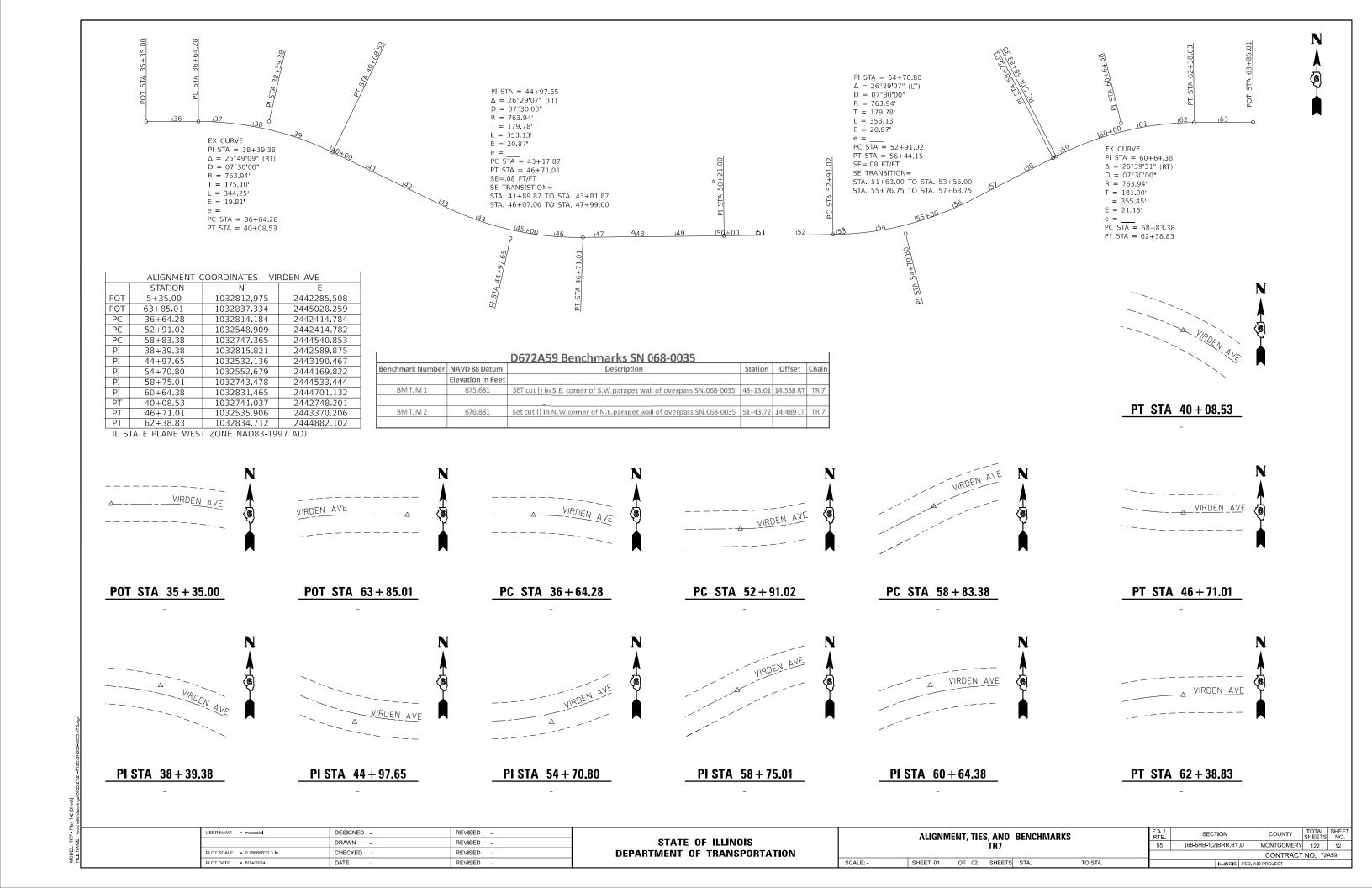
	PAVE	MEN	T RE	AVON	L S	CHEDU	JLE
		-					44000100
							PAVEMENT
							REMOVAL
	LO	CATION		LENGTH	WIDTH	AREA	1
	STATION	TO STAT	TION	FT	FT	SQ FT	SQ YD
TR 7		-					
STA.	47+71.17	TO STA	47+81.17	10.00	20.00	200.00	22,22
STA.	47+81 .17	TO STA	48+11.17	30.00	20.00	600,00	66 .67
STA.	51+45.50	TO STA	51+75.50	30.00	20.00	600.00	66 .67
STA.	51+75.50	TO STA	51+85.50	10.00	20.00	200.00	22 . 22
TR 17							
STA.	47+81.00	TO STA	47+91.00	10.00	20.00	200.00	22 22
STA.	47+91.00	TO STA	48+21.00	30.00	20.00	600.00	66,67
STA.	51+59.00	TO STA	51+89.00	30.00	20.00	600.00	66 67
STA.	51+89.00	TO STA	51+99.00	10.00	20.00	200.00	22 . 22
		_					
						TOTAL :	356.0

	S	TONE RI	PR	AP S	CHE	DULE	
				_			28100105
							STONE RIPRAP
							CLASS A3
	LOC	AT I ON		LENGTH	WIDTH	AREA	1
	STATION	TO STATION		FT	FT	SQ FT	SQ YD
TR 7						,	
STA.	48+08.67	TO STA 48+13.17	LT	4.50	2.00	9.00	1.12
STA.	48+08.67	TO STA 48+13.17	RT	4.50	2.00	9.00	1,12
STA.	48+13.17	TO STA 48+20.17	LT	7.00	3.75	26.25	3.27
STA.	48+13.17	TO STA 48+20.17	RT	7.00	3.75	26.25	3.27
L			_				
TR 17	40.10.50	TO 574 40 22 00		4.50	2.00	0.00	1 1 12
STA.	48+18.50	TO STA 48+23.00	LT	4.50	2.00	9.00	1 12
STA.	48+18.50	TO STA 48+23.00	RT	4.50	2.00	9.00	1.12
STA.	48+23.00	TO STA 48+29.00	LT	6.00	3.75	22.50	2.80
STA.	48+23.00	TO STA 48+29.00	RT	6.00	3.75	22,50	2,80
STA.	51+51.00	TO STA 51+57.00	LT	6.00	3.75	22,50	2,80
STA.	51+51.00	TO STA 51+57.00	RT	6.00	3.75	22.50	2.80
STA.	51+57.00	TO STA 51+61.50	LT	4.50	2.00	9.00	1.12
STA.	51+57.00	TOSTA 51+61.50	RT	4.50	2.00	9.00	1,12
						TOTAL	25.0

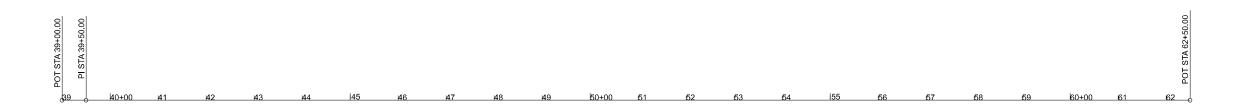
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	DRAWN -	REVISED -
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2024	DATE -	REVISED -

					F.A.I RTE.	SECTION	COUNTY TOTAL SHEET NO.		
ı	SCHEDULE OF QUANTITIES					55	(68-5HP-1,2)BRR,BY,D	MONTGOMERY 122 11	
Į									CONTRACT NO. 72A59
	SCALE:	SHEET 2	OF 2	SHEETS	STA.	TO STA.		ILLINOIS FED. AI	ID PROJECT

REV - MS







	ALIGNMENT COORDINATES - 33RD AVE								
	STATION	N	E						
POT	39+00.00	1024830.767	2442758.804						
POT	62+50.00	1024849.186	2445108.732						
PI	39+50.00	1024831.158	2442808.803						

IL STATE PLANE WEST ZONE NAD83-1997 ADJ



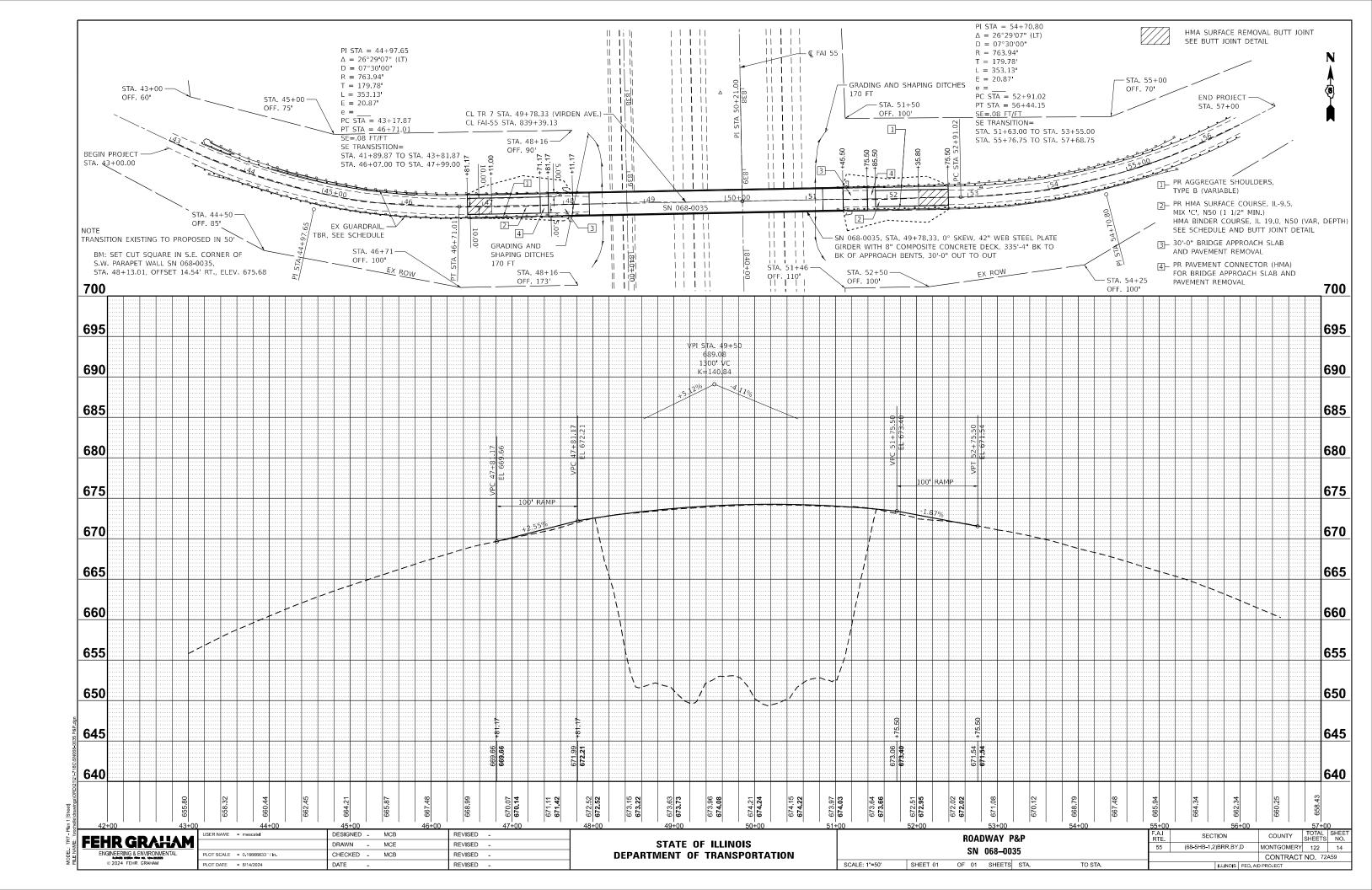
POT STA 39+00.00 POT STA 62+50.00 PI STA 39+50.00

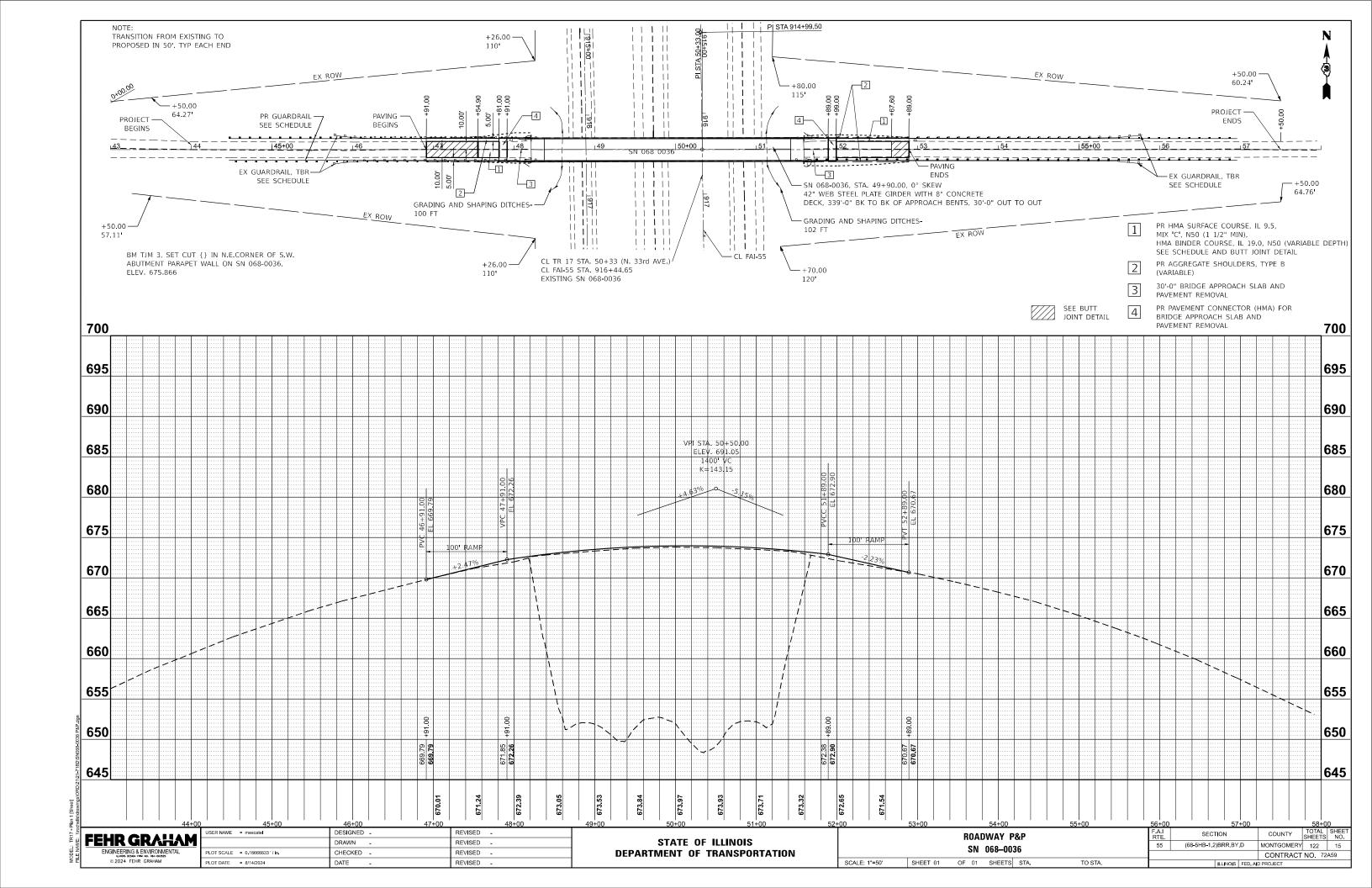
: TR17 - Plan 1-2 [Sheet]

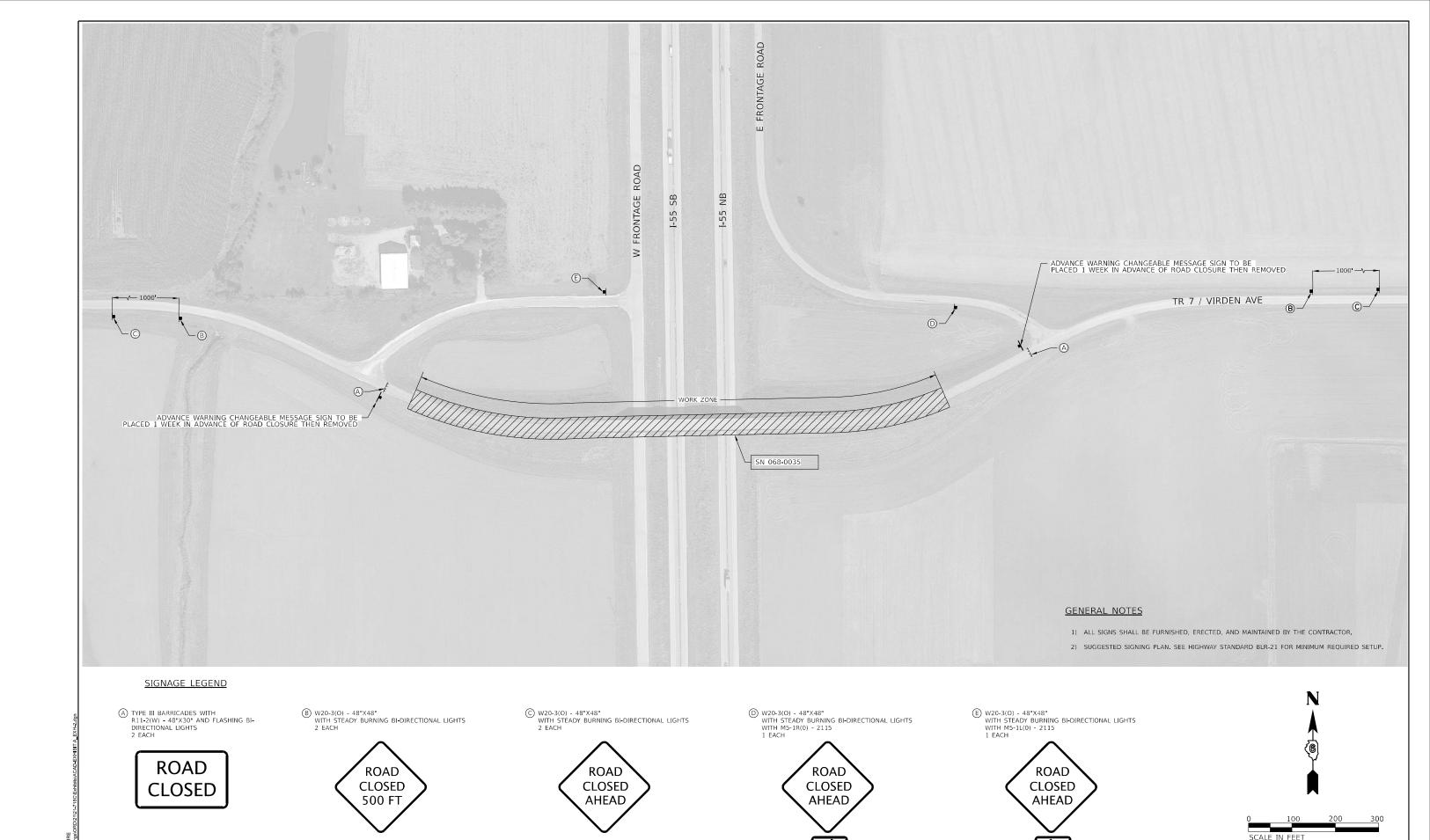
USER NAME = mescatel	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2024	DATE _	REVISED -

STATE OF ILLINOIS	
DEPARTMENT OF TRANSPORTATION	

ALIGNMENT, TIES, AND BENCHMARKS				F.A. I RTE.			TOTAL SHEETS	SHEET NO.		
TR17			55	(68-5HB-1,2)BRR,BY, D	MONTGOMERY	122	13			
INI <i>I</i>						CONTRACT	NO. 72	459		
SHEET 2	OF	2	SHEETS	STA.	TO STA.		ILLINOIS FED. AID PROJECT			







FEHR GRAHAM ENGINEERING & ENVIRONMENTAL LUNCOS DESCON PIRRO NO. 184-003525 © 2024 FEHR GRAHAM

DESIGNED -REVISED -DRAWN REVISED PLOT SCALE = 0.08333317 '/ in. CHECKED -REVISED PLOT DATE = 8/14/2024 DATE REVISED -

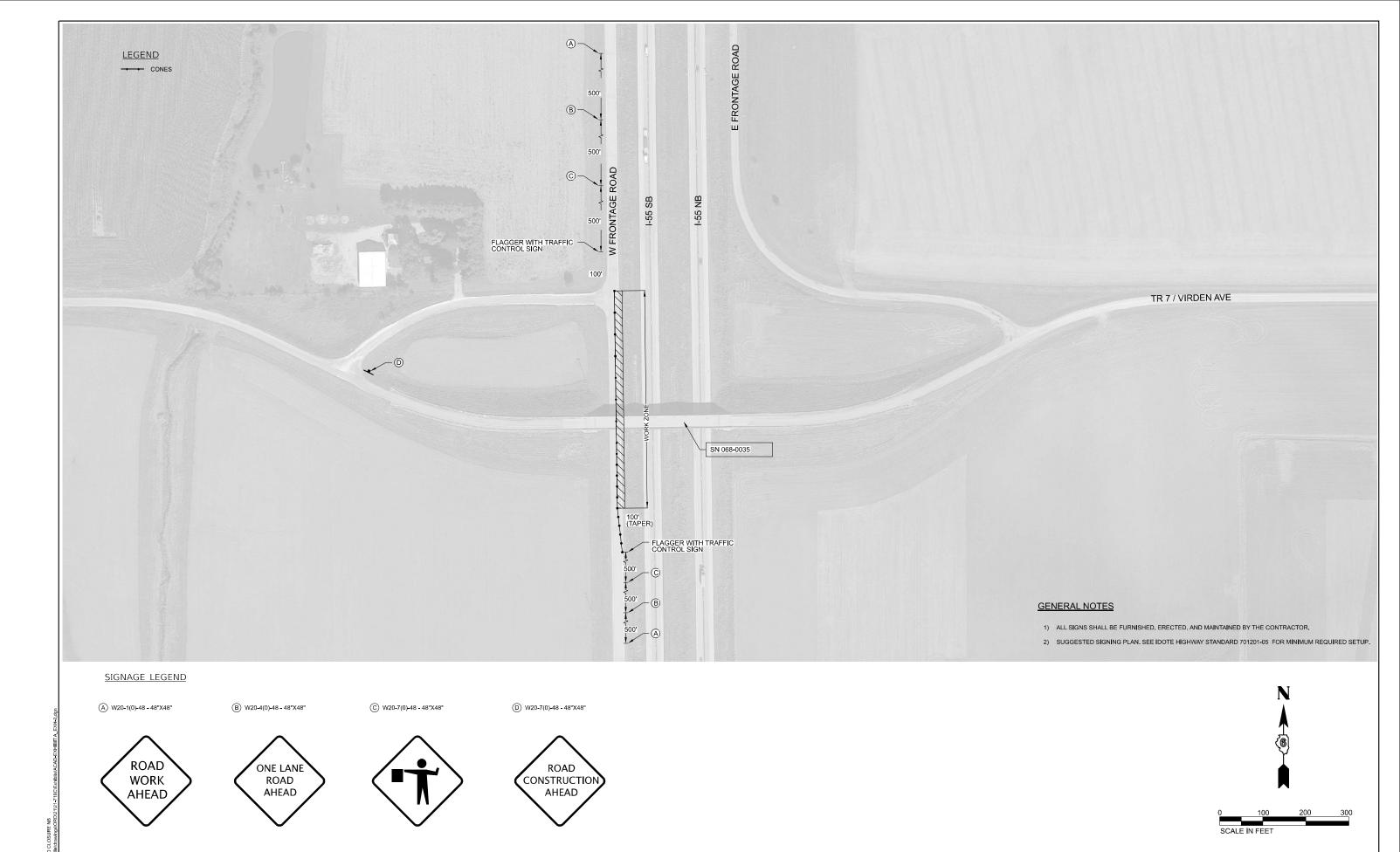
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

TR 7, SN 068-0035 **ROAD CLOSURE PLAN**

SECTION COUNTY MONTGOMERY 122 16 (68-5HB-1,2)BRR,BY,D CONTRACT NO. 72A59

SCALE: 1"=100' SHEET 01 OF 06 SHEETS STA. -

TO STA. -



FEHR GRAHAM

DESIGNED -REVISED -DRAWN -REVISED -PLOT SCALE = 0.08333317 '/ in. CHECKED -REVISED -DATE REVISED -

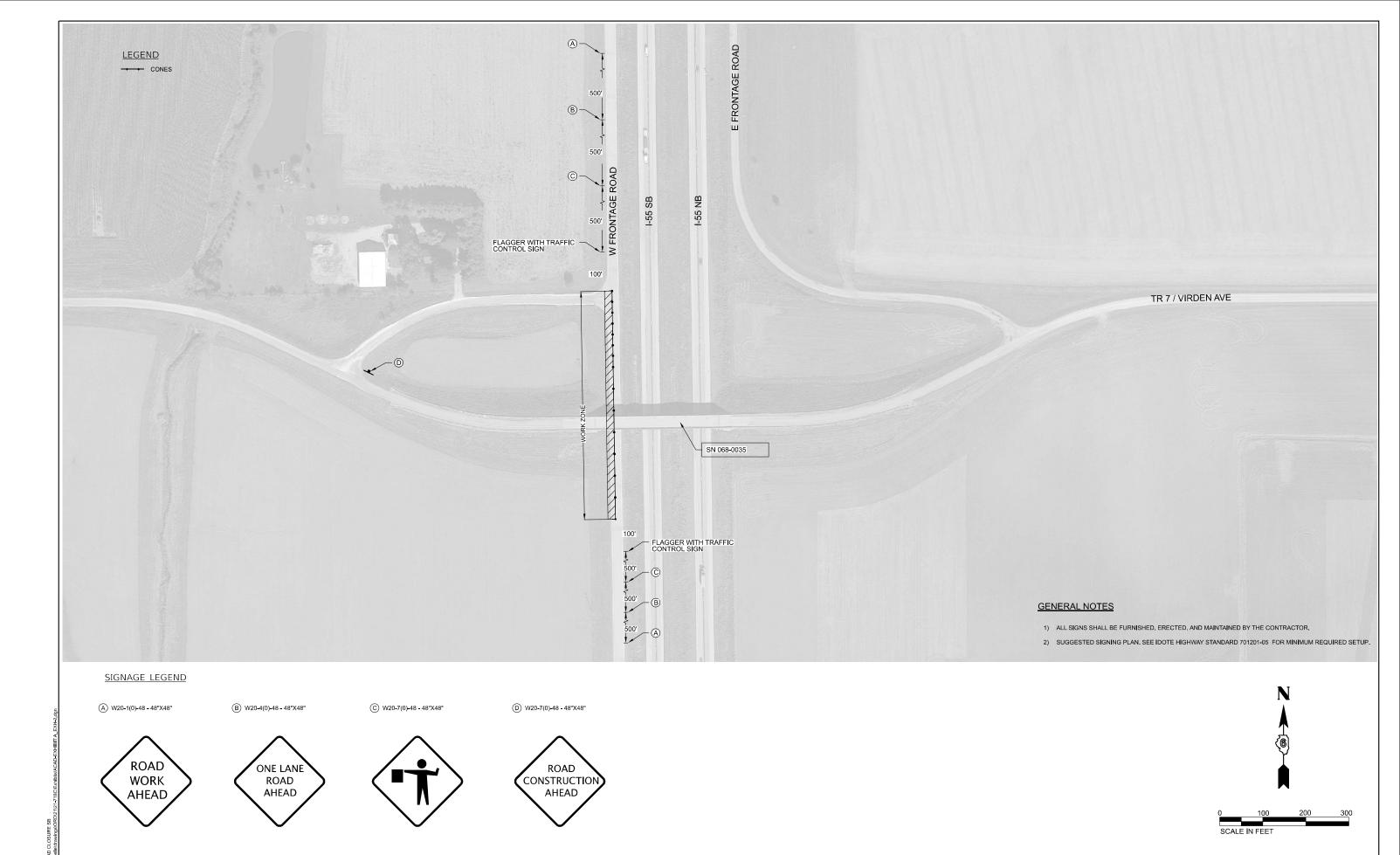
STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

TR 7, SN 068-0035 W FRONTAGE ROAD NB LANE ROAD CLOSURE PLAN SCALE: 1"=100' SHEET 02 OF 06 SHEETS STA. -

 SECTION
 COUNTY
 TOTAL SHEETS NO.

 (68-5HB-1,2)BRR,BY,D
 MONTGOMERY
 122
 17
 CONTRACT NO. 72A59

ENGINEERING & ENVIRONMET ILLINOS DESIGN FIRM NO. 184-003525 © 2024 FEHR GRAHAM



FEHR GRAHAM

ENGINEERING & ENVIRONMENTAL

KUMB BEDIG FIN NO. 181-508187

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 USER NAME
 = jason.dove
 DESIGNED
 REVISED

 DRAWN
 REVISED

 PLOT SCALE
 = 0.08333317*/in.
 CHECKED
 REVISED

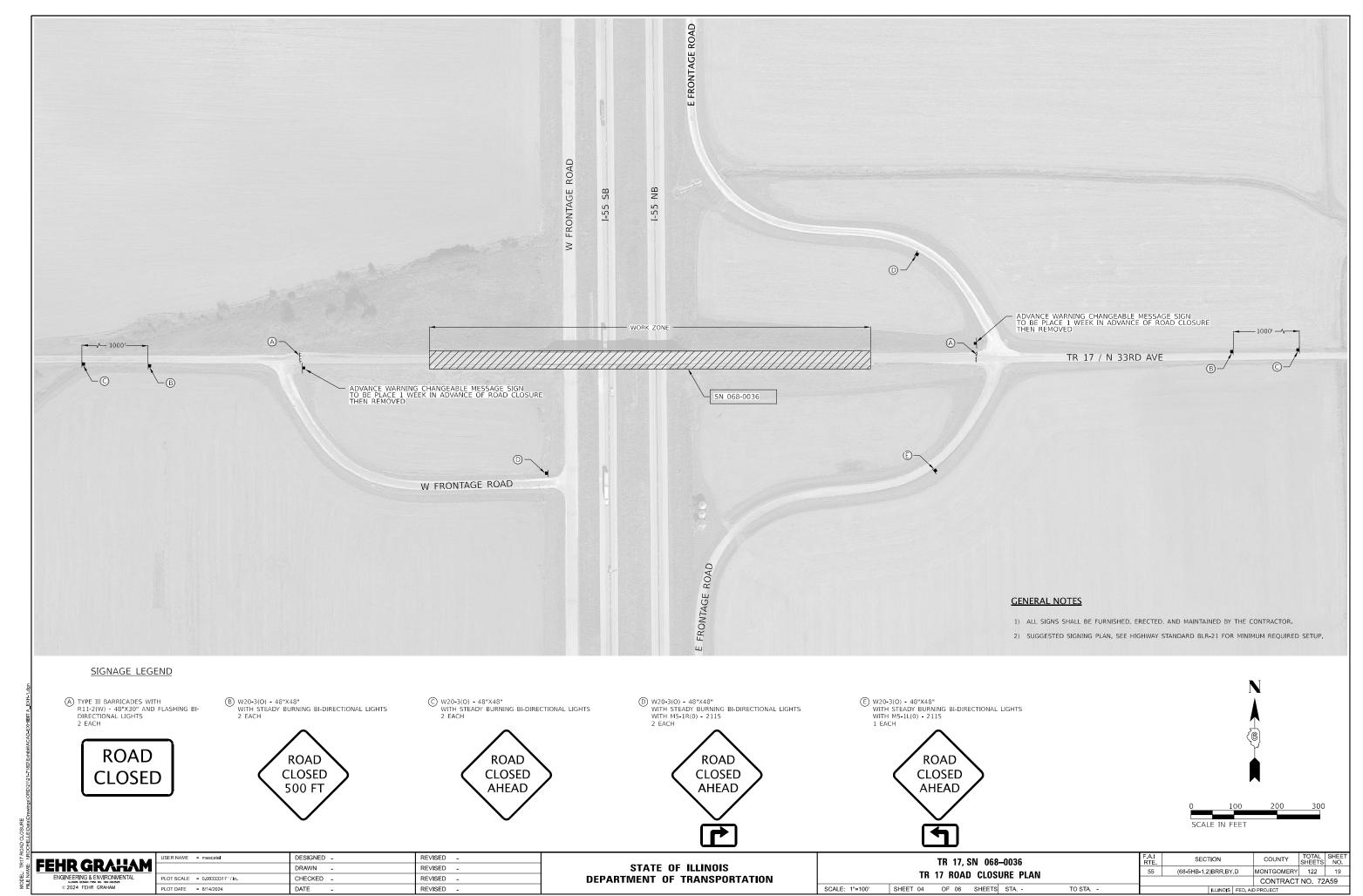
 PLOT DATE
 = 8/15/2024
 DATE
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

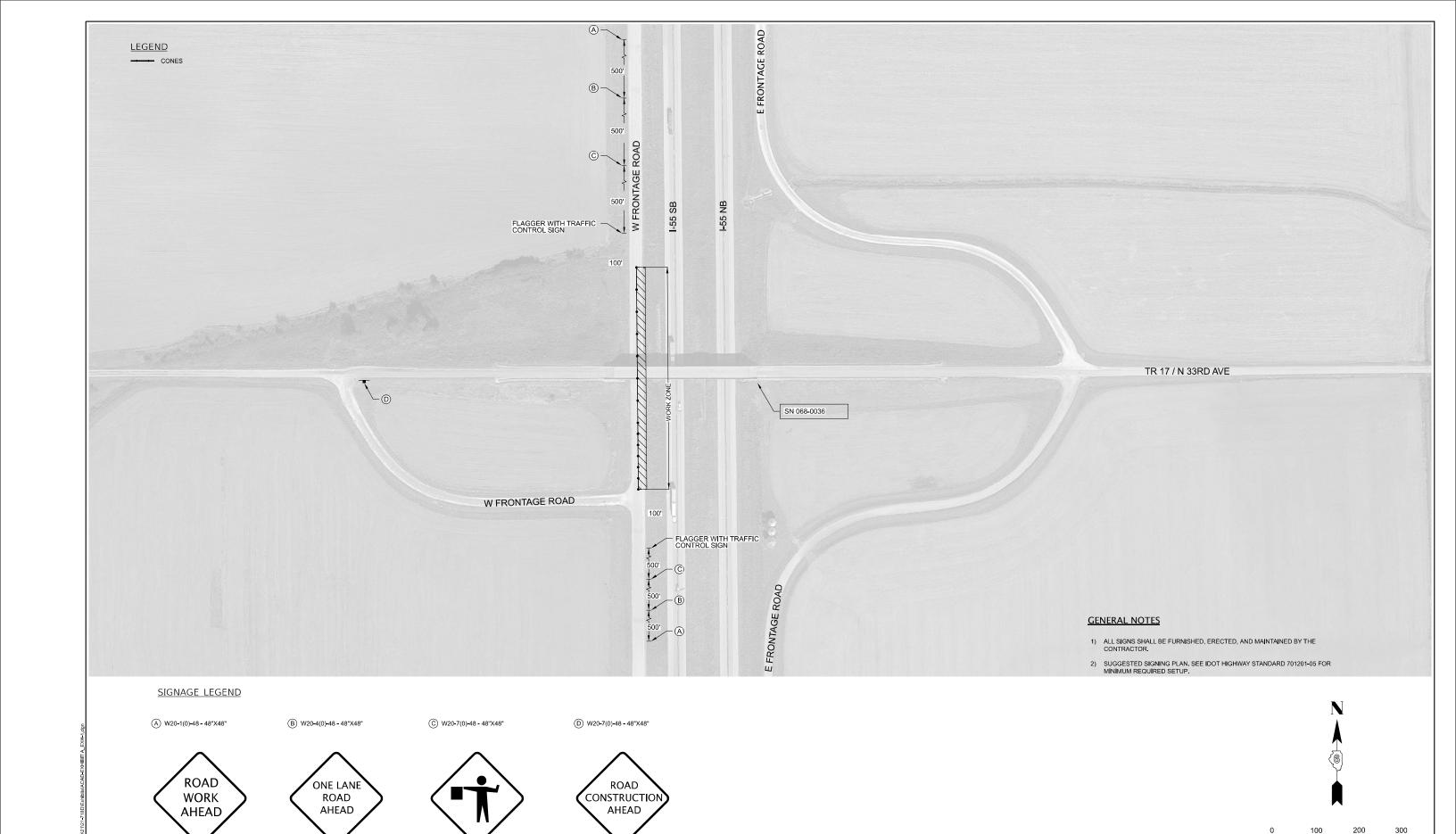
TR 7, SN 068-0035

W FRONTAGE ROAD SB LANE ROAD CLOSURE PLAN

SCALE: 1"=100' SHEET 03 OF 06 SHEETS STA. - TO STA. -



Long Section Number



FEHR GRAHAM

DESIGNED -REVISED -DRAWN -REVISED -PLOT SCALE = 0.08333317 '/ in. CHECKED -REVISED -DATE REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

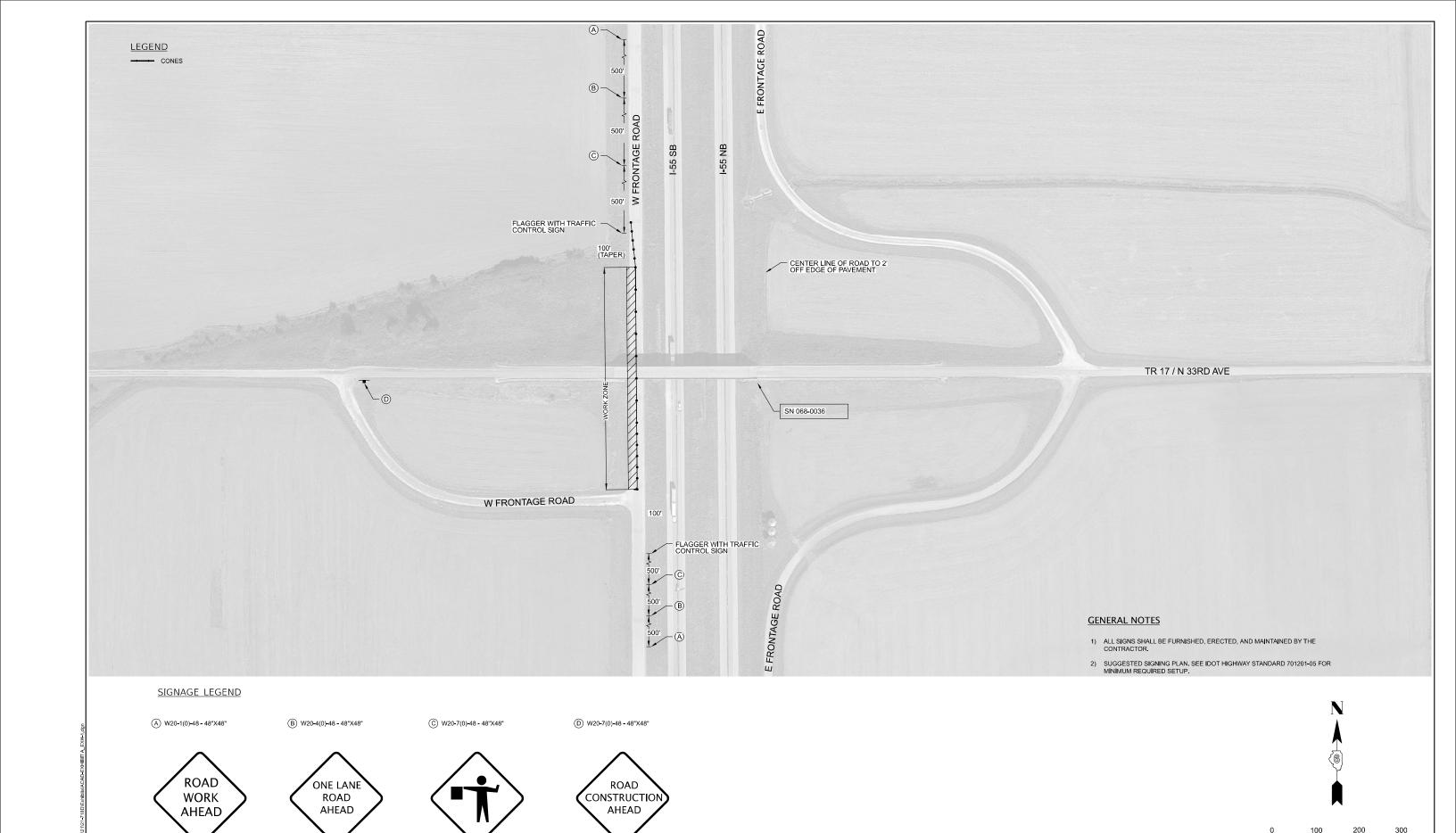
TR 17, SN 068-0036 W FRONTAGE ROAD NB LANE CLOSURE PLAN SCALE: 1"=100' SHEET 05 OF 06 SHEETS STA. -

SECTION COUNTY TOTAL SHEETS NO.

(68-5HB-1,2)BRR,BY,D MONTGOMERY 122 20 CONTRACT NO. 72A59

SCALE IN FEET

ENGINEERING & ENVIRONMET ILLINGS DESIGN FIRM NO. 184-003525 © 2024 FEHR GRAHAM



FEHR GRAHAM ENGINEERING & ENVIRONMENT IN THE PROJECT OF THE PRO

DESIGNED -REVISED -DRAWN -REVISED -PLOT SCALE = 0.08333317 '/ in. CHECKED -REVISED DATE

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

TR 17, SN 068-0036 W FRONTAGE ROAD SB LANE CLOSURE PLAN SCALE: 1"=100' SHEET 06 OF 06 SHEETS STA. -

SECTION COUNTY TOTAL SHEETS NO.

(68-5HB-1,2)BRR,BY,D MONTGOMERY 122 21 CONTRACT NO. 72A59

SCALE IN FEET

Long Section Number

Benchmark: Set cut square in S.E. corner of S.W. parapet wall of overpass SN. 068-0035 at Sta. 48+13.01, Offset 14.54' Rt., Elev. 675.68. Existing Structure: SN 068-0035 was originally built in 1970 as FAI Rte. 55, Section 68-5HB-2. The

structure is 335'-4" back-to-back of approach bents and 30'-0" out-to-out of deck. The structure consists of 3 span composite steel plate girders on vaulted abutments and 2 column piers. The vaulted spans are supported by PPC I-Beams. The structure will be rehabilitated as shown using road closure and a detour to maintain traffic during construction.

No Salvage.

DESIGN STRESSES

FIELD UNITS (New Construction)

f'c = 3,500 psi (Substructure)

f'c = 4,000 psi (Superstructure) fy = 60,000 psi (Reinforcement)

fy = 36,000 psi (M270 Grade 36)

PRECAST PRESTRESSED UNITS (New Construction)

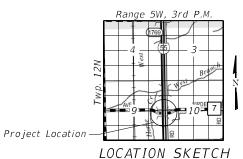
f'c = 6,000 psi f'ci = 5,000 psi

 $fpu = 270,000 psi (0.5"\emptyset low lax. strands)$

 $fpbt = 201,960 psi (0.5"\emptyset low lax. strands)$

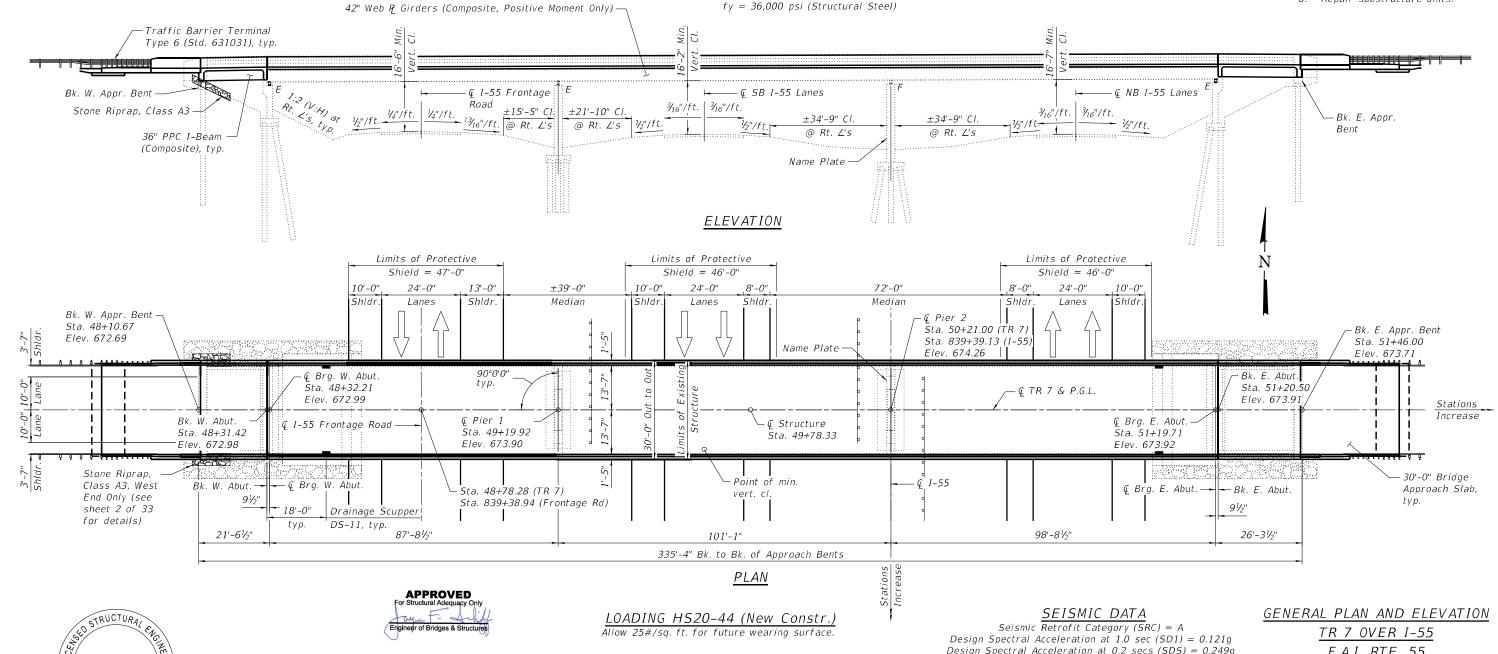
FIELD UNITS (Exist. Construction)

f'c = 3,500 psi (Substructure)fy = 40,000 psi (Reinforcement)



SCOPE OF WORK

- 1. Remove and replace existing concrete deck.
- 2. Remove and replace the bearings with new elastomeric bearings at the abutments.
- 3. Remove and replace the diaphragms at the abutments.
- 4. Remove and replace the PPCI-Beam vaulted spans superstructure.
- Raise the pier crash walls to be at least 5' above grade.
- Repair substructure units.



ROBERT WHITESIDE 081-008015 ATE OF ILLIN

10/03/2024

Robert Whiteside, Illinois S.E. 081-008015 Date Expires 11/30/2026

DESIGN SPECIFICATIONS (New Constr.)

2002 AASHTO Standard Speficiations for Highway Bridges, 17th Edition

2006 Seismic Retrofitting Manual For Highway Structures: Part 1 - Bridges (FHWA-HRT-06-032)

Design Spectral Acceleration at 0.2 secs (SDS) = 0.249g Soil Site Class = C

Performance Level = PL 1

F.A.I. RTE. 55 SECTION (68-5HB-1,2)BRR,BY,D

MONTGOMERY COUNTY STA. 839+39.13 STRUCTURE NO. 068-0035

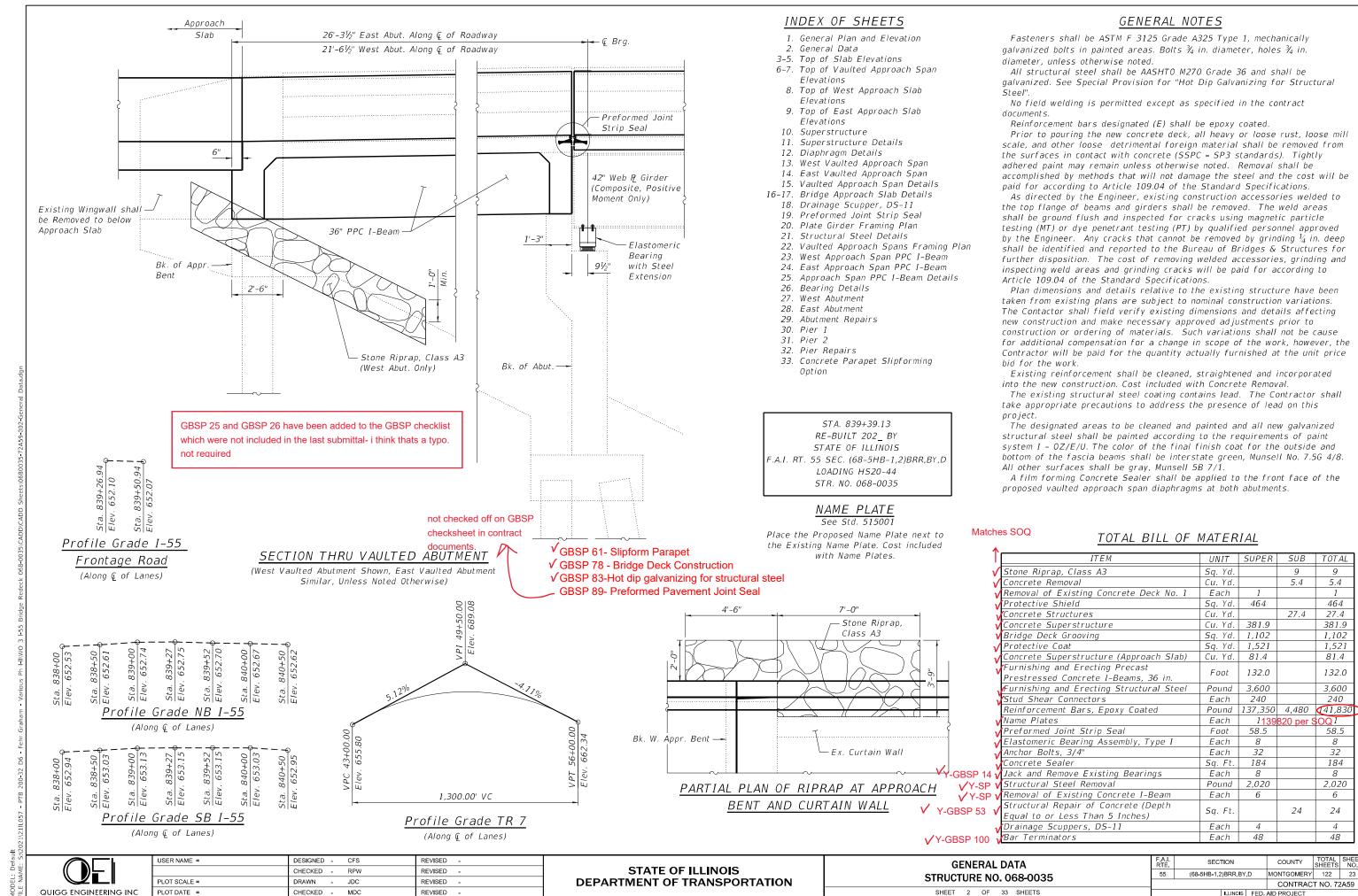


USER NAME =	DESIGNED -	CFS	REVISED	-
	CHECKED -	RPW	REVISED	-
PLOT SCALE =	DRAWN -	JDC	REVISED	-
PLOT DATE =	CHECKED -	MDC	REVISED	-

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

				ELEVATION 68-0035	
SHEET	1	OF	33	SHEETS	

F.A.I. RTE	SECT	TION		COUNTY	TOTAL SHEETS	SHEE NO.
55	(68-5HB-1,2	(68-5HB-1,2)BRR,BY,D			122	22
	·			CONTRAC	T NO. 72	2A59
		ILLINOIS	FED.	AID PROJECT		



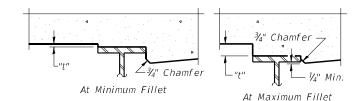
10/8/2024 2:45:32 PI

DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:

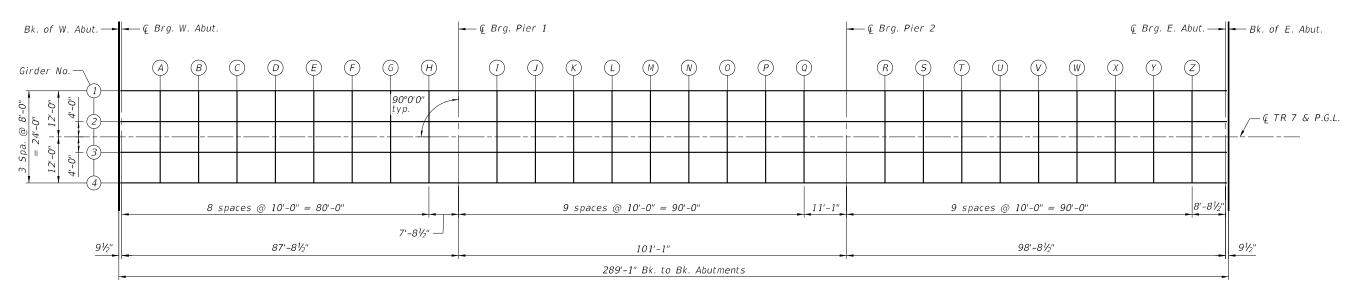
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 4 and 5 of 33.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 4 and 5 of 33, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS





<u>PLAN</u>

(Sheet 1 of 3)



USER NAME =	DESIGNED - CFS	REVISED -
	CHECKED - RPW	REVISED -
PLOT SCALE =	DRAWN - JDC	REVISED -
PLOT DATE =	CHECKED - MDC	REVISED -

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	48+31.42	-12.00	672.79	672.79
₡ Brg. W. Abut.	48+32.21	-12.00	672.80	672.80
А	48+42.21	-12.00	672.93	672.98
В	48+52.21	-12.00	673.06	673.14
С	48+62.21	-12.00	673.17	673.27
D	48+72.21	-12.00	673.28	673.39
Ε	48+82.21	-12.00	673.39	673.48
F	48+92.21	-12.00	673.48	673.55
G	49+02.21	-12.00	673.57	673.61
Н	49+12.21	-12.00	673.65	673.66
⊈ Brg. Pier 1	49+19.92	-12.00	673.71	673.71
I	49+29.92	-12.00	673.78	673.77
J	49+39.92	-12.00	673.84	673.84
K	49+49.92	-12.00	673.89	673.90
L	49+59.92	-12.00	673.94	673.96
M	49+69.92	-12.00	673.98	674.00
N	49+79.92	-12.00	674.01	674.03
0	49+89.92	-12.00	674.04	674.04
Р	49+99.92	-12.00	674.05	674.05
Q	50+09.92	-12.00	674.07	674.06
© Brg. Pier 2	50+21.00	-12.00	674.07	674.07
R	50+31.00	-12.00	674.07	674.09
S	50+41.00	-12.00	674.06	674.12
T	50+51.00	-12.00	674.04	674.13
U	50+61.00	-12.00	674.01	674.14
V	50+71.00	-12.00	673.98	674.13
W	50+81.00	-12.00	673.94	674.09
X	50+91.00	-12.00	673.90	674.03
Y	51+01.00	-12.00	673.84	673.94
Z	51+11.00	-12.00	673.78	673.83
€ Brg. E. Abut.	51+19.71	-12.00	673.73	673.73
Bk. of E. Abut.	51+20.50	-12.00	673.72	673.72

GIRDER 2

OINDEN Z							
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection			
Bk. of W. Abut.	48+31.42	-4.00	672.92	672.92			
ℚ Brg. W. Abut.	48+32.21	-4.00	672.93	672.93			
A	48+42.21	-4.00	673.06	673.11			
В	48+52.21	-4.00	673.19	673.27			
С	48+62.21	-4.00	673.30	673.41			
D	48+72.21	-4.00	673.41	673.53			
E	48+82.21	-4.00	673.52	673.62			
F	48+92.21	-4.00	673.61	673.69			
G	49+02.21	-4.00	673.70	673.75			
Н	49+12.21	-4.00	673.78	673.80			
ℚ Brg. Pier 1	49+19.92	-4.00	673.84	673.84			
I	49+29.92	-4.00	673.91	673.90			
J	49+39.92	-4.00	673.97	673.97			
K	49+49.92	-4.00	674.02	674.03			
L	49+59.92	-4.00	674.07	674.09			
М	49+69.92	-4.00	674.11	674.13			
N	49+79.92	-4.00	674.14	674.16			
0	49+89.92	-4.00	674.17	674.17			
P	49+99.92	-4.00	674.18	674.18			
Q	50+09.92	-4.00	674.20	674.19			
€ Brg. Pier 2	50+21.00	-4.00	674.20	674.20			
R	50+31.00	-4.00	674.20	674.22			
5	50+41.00	-4.00	674.19	674.25			
T	50+51.00	-4.00	674.17	674.27			
U	50+61.00	-4.00	674.14	674.28			
V	50+71.00	-4.00	674.11	674.27			
W	50+81.00	-4.00	674.07	674.23			
X	50+91.00	-4.00	674.03	674.17			
Y	51+01.00	-4.00	673.97	674.08			
Z	51+11.00	-4.00	673.91	673.97			
€ Brg. E. Abut.	51+19.71	-4.00	673.86	673.86			
Bk. of E. Abut.	51+20.50	-4.00	673.85	673.85			

<u> ⊊ TR 7 & P.G.L.</u>

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	48+31.42	0.00	672.98	672.98
⊊ Brg. W. Abut.	48+32.21	0.00	672.99	672.99
А	48+42.21	0.00	673.12	673.17
В	48+52.21	0.00	673.25	673.33
С	48+62.21	0.00	673.36	673.47
D	48+72.21	0.00	673.47	673.59
Ε	48+82.21	0.00	673.58	673.68
F	48+92.21	0.00	673.67	673.75
G	49+02.21	0.00	673.76	673.81
Н	49+12.21	0.00	673.84	673.86
⊊ Brg. Pier 1	49+19.92	0.00	673.90	673.90
I	49+29.92	0.00	673.97	673.96
J	49+39.92	0.00	674.03	674.03
К	49+49.92	0.00	674.08	674.09
L	49+59.92	0.00	674.13	674.15
М	49+69.92	0.00	674.17	674.19
N	49+79.92	0.00	674.20	674.22
0	49+89.92	0.00	674.23	674.23
Р	49+99.92	0.00	674.24	674.24
Q	50+09.92	0.00	674.26	674.25
₡ Brg. Pier 2	50+21.00	0.00	674.26	674.26
R	50+31.00	0.00	674.26	674.28
S	50+41.00	0.00	674.25	674.31
T	50+51.00	0.00	674.23	674.33
U	50+61.00	0.00	674.20	674.34
V	50+71.00	0.00	674.17	674.33
W	50+81.00	0.00	674.13	674.29
X	50+91.00	0.00	674.09	674.23
Υ	51+01.00	0.00	674.03	674.14
Z	51+11.00	0.00	673.97	674.03
⊈ Brg. E. Abut.	51+19.71	0.00	673.92	673.92
Bk. of E. Abut.	51+20.50	0.00	673.91	673.91

(Sheet 2 of 3)



USER NAME = DESIGNED - CFS REVISED -CHECKED - RPW REVISED -DRAWN - JDC REVISED -PLOT DATE = CHECKED - MDC REVISED -

GIRDER 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	48+31.42	4.00	672.92	672.92
Ç Brg. W. Abut.	48+32.21	4.00	672.93	672.93
A	48+42.21	4.00	673.06	673.11
В	48+52.21	4.00	673.19	673.27
С	48+62.21	4.00	673.30	673.41
D	48+72.21	4.00	673.41	673.53
Ε	48+82.21	4.00	673.52	673.62
F	48+92.21	4.00	673.61	673.69
G	49+02.21	4.00	673.70	673.75
H	49+12.21	4.00	673.78	673.80
ℚ Brg. Pier 1	49+19.92	4.00	673.84	673.84
I	49+29.92	4.00	673.91	673.90
J	49+39.92	4.00	673.97	673.97
K	49+49.92	4.00	674.02	674.03
L	49+59.92	4.00	674.07	674.09
М	49+69.92	4.00	674.11	674.13
N	49+79.92	4.00	674.14	674.16
0	49+89.92	4.00	674.17	674.17
Р	49+99.92	4.00	674.18	674.18
Q	50+09.92	4.00	674.20	674.19
€ Brg. Pier 2	50+21.00	4.00	674.20	674.20
R	50+31.00	4.00	674.20	674.22
S	50+41.00	4.00	674.19	674.25
T	50+51.00	4.00	674.17	674.27
U	50+61.00	4.00	674.14	674.28
V	50+71.00	4.00	674.11	674.27
W	50+81.00	4.00	674.07	674.23
X	50+91.00	4.00	674.03	674.17
Y	51+01.00	4.00	673.97	674.08
Z	51+11.00	4.00	673.91	673.97
⊊ Brg. E. Abut.	51+19.71	4.00	673.86	673.86
Bk. of E. Abut.	51+20.50	4.00	673.85	673.85

GIRDER 4

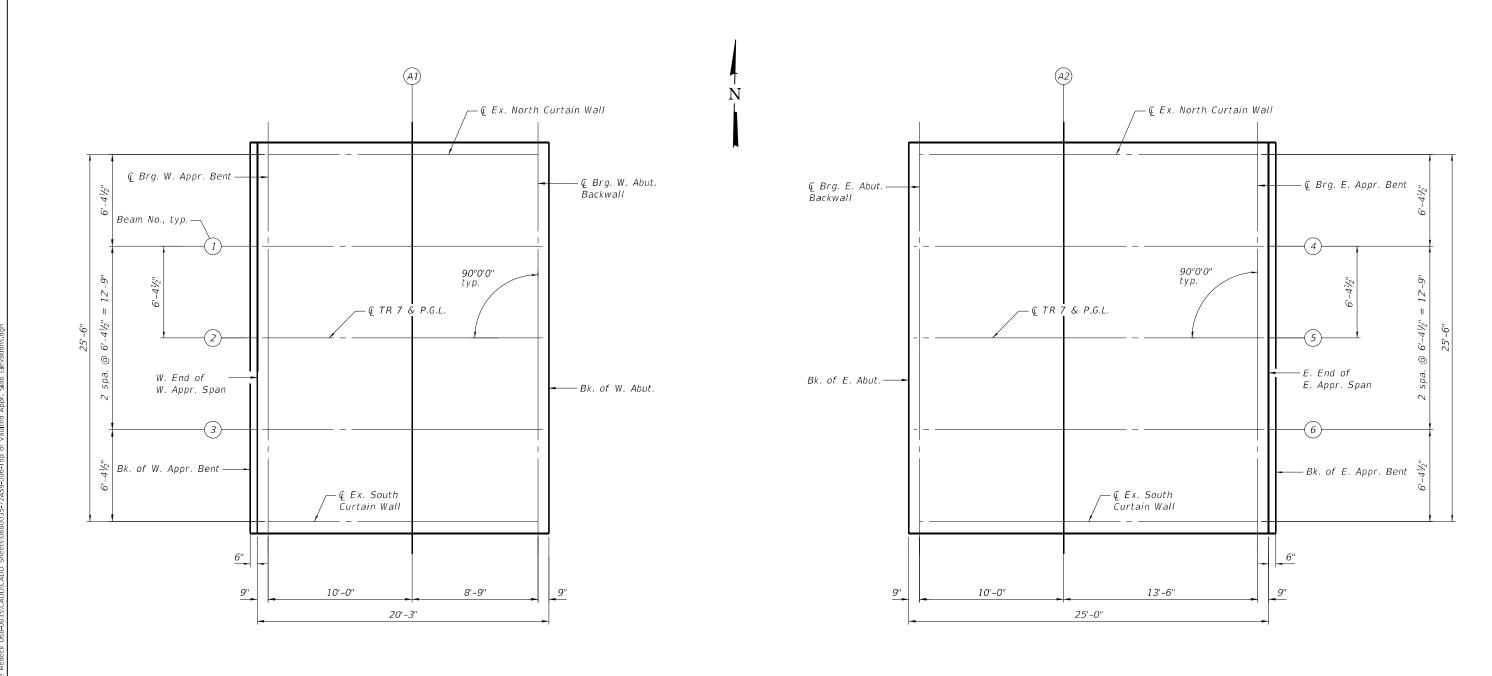
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Abut.	48+31.42	12.00	672.79	672.79
ℚ Brg. W. Abut.	48+32.21	12.00	672.80	672.80
A	48+42.21	12.00	672.93	672.98
В	48+52.21	12.00	673.06	673.14
С	48+62.21	12.00	673.17	673.27
D	48+72.21	12.00	673.28	673.39
E	48+82.21	12.00	673.39	673.48
F	48+92.21	12.00	673.48	673.55
G	49+02.21	12.00	673.57	673.61
Н	49+12.21	12.00	673.65	673.66
ℚ Brg. Pier 1	49+19.92	12.00	673.71	673.71
I	49+29.92	12.00	673.78	673.77
J	49+39.92	12.00	673.84	673.84
К	49+49.92	12.00	673.89	673.90
L	49+59.92	12.00	673.94	673.96
М	49+69.92	12.00	673.98	674.00
N	49+79.92	12.00	674.01	674.03
0	49+89.92	12.00	674.04	674.04
Р	49+99.92	12.00	674.05	674.05
Q	50+09.92	12.00	674.07	674.06
⊊ Brg. Pier 2	50+21.00	12.00	674.07	674.07
R	50+31.00	12.00	674.07	674.09
S	50+41.00	12.00	674.06	674.12
T	50+51.00	12.00	674.04	674.13
U	50+61.00	12.00	674.01	674.14
V	50+71.00	12.00	673.98	674.13
W	50+81.00	12.00	673.94	674.09
Χ	50+91.00	12.00	673.90	674.03
Υ	51+01.00	12.00	673.84	673.94
Z	51+11.00	12.00	673.78	673.83
ℚ Brg. E. Abut.	51+19.71	12.00	673.73	673.73
Bk. of E. Abut.	51+20.50	12.00	673.72	673.72

(Sheet 3 of 3)



USER NAME =	DESIGNED	-	CFS	REVISED -	
	CHECKED	-	RPW	REVISED -	
PLOT SCALE =	DRAWN	-	JDC	REVISED -	
PLOT DATE =	CHECKED	-	MDC	REVISED -	

r - PTB 200-32 D6 - Fehr Graham - Various Ph I-II),WO 3 I-55 Bridge Redeck 068-0035,CADD\CADD Sheets\0680035-72A59-00



WEST VAULTED APPROACH SPAN PLAN

EAST VAULTED APPROACH SPAN PLAN

QUIGG ENGINEERING INC

 USER NAME =
 DESIGNED - CFS
 REVISED

 CHECKED - RPW
 REVISED

 PLOT SCALE =
 DRAWN - JDC
 REVISED

 PLOT DATE =
 CHECKED - MDC
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF VAULTED APPROACH SPAN ELEVATIONS
STRUCTURE NO. 068-0035

SHEET 6 OF 33 SHEETS

 F.A.I. RTE.
 SECTION
 COUNTY SHEETS
 TOTAL SHEETS
 SHEETS NO.

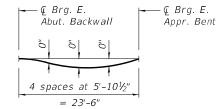
 55
 (68-5HB-1,2)BRR,BY,D
 MONTGOMERY
 122
 27

 CONTRACT NO. 72A59

WEST APPROACH SPAN

EAST APPROACH SPAN DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only, excluding beams.)



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only, excluding beams.)

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 below.

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection		
Bk. of W. Appr. Bent & Brg. W. Appr. Bent A1 & Brg. W. Abut. Backwall Bk. of W. Abut.	48+11.92 48+21.92 48+30.67	-6.38 -6.38 -6.38 -6.38 -6.38	672.59 672.61 672.76 672.88 672.89	672.59 672.61 672.76 672.88 672.89		

WEST APPROACH SPAN SOUTH CURTAIN WALL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Appr. Bent & Brg. W. Appr. Bent A1 & Brg. W. Abut. Backwall Bk. of W. Abut.	48+10.67 48+11.92 48+21.92 48+30.67 48+31.42	12.75 12.75 12.75 12.75 12.75	672.48 672.50 672.65 672.77 672.78	672.48 672.50 672.65 672.77 672.78

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of E Abut. © Brg. E. Abut. Backwall A2 © Brg. E. Appr. Bent Bk. of E. Appr. Bent	51+21.25 51+31.25 51+44.75	-6.38 -6.38 -6.38 -6.38 -6.38	673.81 673.81 673.73 673.62 673.61	673.81 673.81 673.74 673.62 673.61

EAST APPROACH SPAN SOUTH CURTAIN WALL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of E. Abut. © Brg. E. Abut. Backwall A2 © Brg. E. Appr. Bent Bk. of E. Appr. Bent	51+21.25 51+31.25 51+44.75	12.75 12.75 12.75 12.75 12.75	673.71 673.70 673.63 673.51 673.50	673.71 673.70 673.63 673.51 673.50

⊊ TR 7, P.G.L., & BEAM 2

To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations

shown below, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections"

FILLET HEIGHTS (APPROACH SPANS)

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Appr. Bent & Brg. W. Appr. Bent A1 & Brg. W. Abut. Backwall Bk. of W. Abut.		0.00 0.00 0.00 0.00 0.00	672.69 672.71 672.85 672.97 672.98	672.69 672.71 672.85 672.97 672.98

♀ TR 7, P.G.L., & BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of E. Abut. © Brg. E. Abut. Backwall A2 © Brg. E. Appr. Bent Bk. of E. Appr. Bent	51+21.25 51+31.25 51+44.75	0.00 0.00 0.00 0.00 0.00	673.91 673.90 673.83 673.72 673.71	673.91 673.90 673.83 673.72 673.71

WEST APPROACH SPAN NORTH CURTAIN WALL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Appr. Bent	48+10.67	-12.75	672.48	672.48
© Brg. W. Appr. Bent	48+11.92	-12.75	672.50	672.50
A1	48+21.92	-12.75	672.65	672.65
© Brg. W. Abut. Backwall	48+30.67	-12.75	672.77	672.77
Bk. of W. Abut.	48+31.42	-12.75	672.78	672.78

BEAM 3

Location	Station	0ffset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of W. Appr. Bent	48+10.67	6.38	672.59	672.59
& Brg. W. Appr. Bent	48+11.92	6.38	672.61	672.61
A1	48+21.92	6.38	672.76	672.76
& Brg. W. Abut. Backwall	48+30.67	6.38	672.88	672.88
Bk. of W. Abut.	48+31.42	6.38	672.89	672.89

EAST APPROACH SPAN NORTH CURTAIN WALL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of E. Abut. © Brg. E. Abut. Backwall A2 © Brg. E. Appr. Bent Bk. of E. Appr. Bent	51+21.25 51+31.25 51+44.75	-12.75 -12.75 -12.75 -12.75 -12.75	673.71 673.70 673.63 673.51 673.50	673.71 673.70 673.63 673.51 673.50

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection		
Bk. of E. Abut. © Brg. E. Abut. Backwall A2 © Brg. E. Appr. Bent Bk. of E. Appr. Bent	51+20.50 51+21.25 51+31.25 51+44.75 51+46.00	6.38 6.38 6.38 6.38 6.38	673.81 673.81 673.73 673.62 673.61	673.81 673.81 673.74 673.62 673.61		

LUGG ENGINEERING IN

2-17-2017			
USER NAME =	DESIGNED - CFS	REVISED -	
	CHECKED - RPW	REVISED -	
PLOT SCALE =	DRAWN - JDC	REVISED -	
PLOT DATE =	CHECKED - MDC	REVISED -	

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

TOP OF VAULTED APPROACH SPAN ELEVATIONS								
STRUCTURE NO. 068-0035								
OUEET 7 OF DO OUEETO								

F.A.I. RTE				COUNTY	TOTAL SHEETS	SHEET NO.
55	(68-5HB-1,2	(68-5HB-1,2)BRR,BY,D		MONTGOMERY	122	28
				CONTRAC	T NO. 72	2A59
		ILLINOIS	FED.	AID PROJECT		

NORTH EDGE OF SHOULDER

Location	Station	0ffset	Theoretical Grade Elevations
W. End W. Approach Slab	47+81.17	-13.58	672.00
B1 B2	47+91.17 48+01.17	-13.58 -13.58	672.16 672.32
E. End W. Approach Slab	48+11.17	-13.58	672.47

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Approach Slab	47+81.17	-10.00	672.07
B1 B2	47+91.17 48+01.17	-10.00 -10.00	672.23 672.39
E. End W. Approach Slab	48+11.17	-10.00	672.55

Location	Station	Offset	Theoretical Grade Elevations				
W. End W. Approach Slab	47+81.17	0.00	672.22				
B1 B2	47+91.17 48+01.17	0.00 0.00	672.38 672.54				
E. End W. Approach Slab	48+11.17	0.00	672.70				

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Approach Slab	47+81.17	10.00	672.07
B1 B2	47+91.17 48+01.17	10.00 10.00	672.23 672.39
E. End W. Approach Slab	48+11.17	10.00	672.55

North Edge of Shoulder W. End of W. Appr. Slab 90°0'0" W. Appr. Slab Fig. 1. South Edge of Pavement South Edge of Shoulder 3 spaces at 10'-0" = 30'-0"

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End W. Approach Slab	47+81.17	13.58	672.00
B1 B2	47+91.17 48+01.17	13.58 13.58	672.16 672.32
E. End W. Approach Slab	48+11.17	13.58	672.47

<u>PLAN</u>

(Sheet 1 of 2)



USER NAME =	DESIGNED -	CFS	REVISED -	
	CHECKED -	RPW	REVISED -	
PLOT SCALE =	DRAWN -	JDC	REVISED -	
PLOT DATE =	CHECKED -	MDC	REVISED -	

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End E. Approach Slab	51+45.50	-13.58	673.49
B3 B4	51+55.50 51+65.50	-13.58 -13.58	673.40 673.30
E. End E. Approach Slab	51+75.50	-13.58	673.19

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	
W. End E. Approach Slab	51+45.50	-10.00	673.56	
B3 B4	51+55.50 51+65.50	-10.00 -10.00	673.47 673.37	
E. End E. Approach Slab	51+75.50	-10.00	673.26	

♀ TR 7 & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations			
W. End E. Approach Slab	51+45.50	0.00	673.71			
B3 B4	51+55.50 51+65.50	0.00 0.00	673.62 673.52			
E. End E. Approach Slab	51+75.50	0.00	673.41			

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	
W. End E. Approach Slab	51+45.50	10.00	673.56	
B3 B4	51+55.50 51+65.50	10.00 10.00	673.47 673.37	
E. End E. Approach Slab	51+75.50	10.00	673.26	

SOUTH EDGE OF SHOULDER

Location	Station	0ffset	Theoretical Grade Elevations			
W. End E. Approach Slab	51+45.50	13.58	673.49			
B3 B4	51+55.50 51+65.50	13.58 13.58	673.40 673.30			
E. End E. Approach Slab	51+75.50	13.58	673.19			

North Edge of Shoulder North Edge of Pavement North Edge of Pavement E. Appr. Slab G TR 7 & P.G.L. South Edge of Shoulder

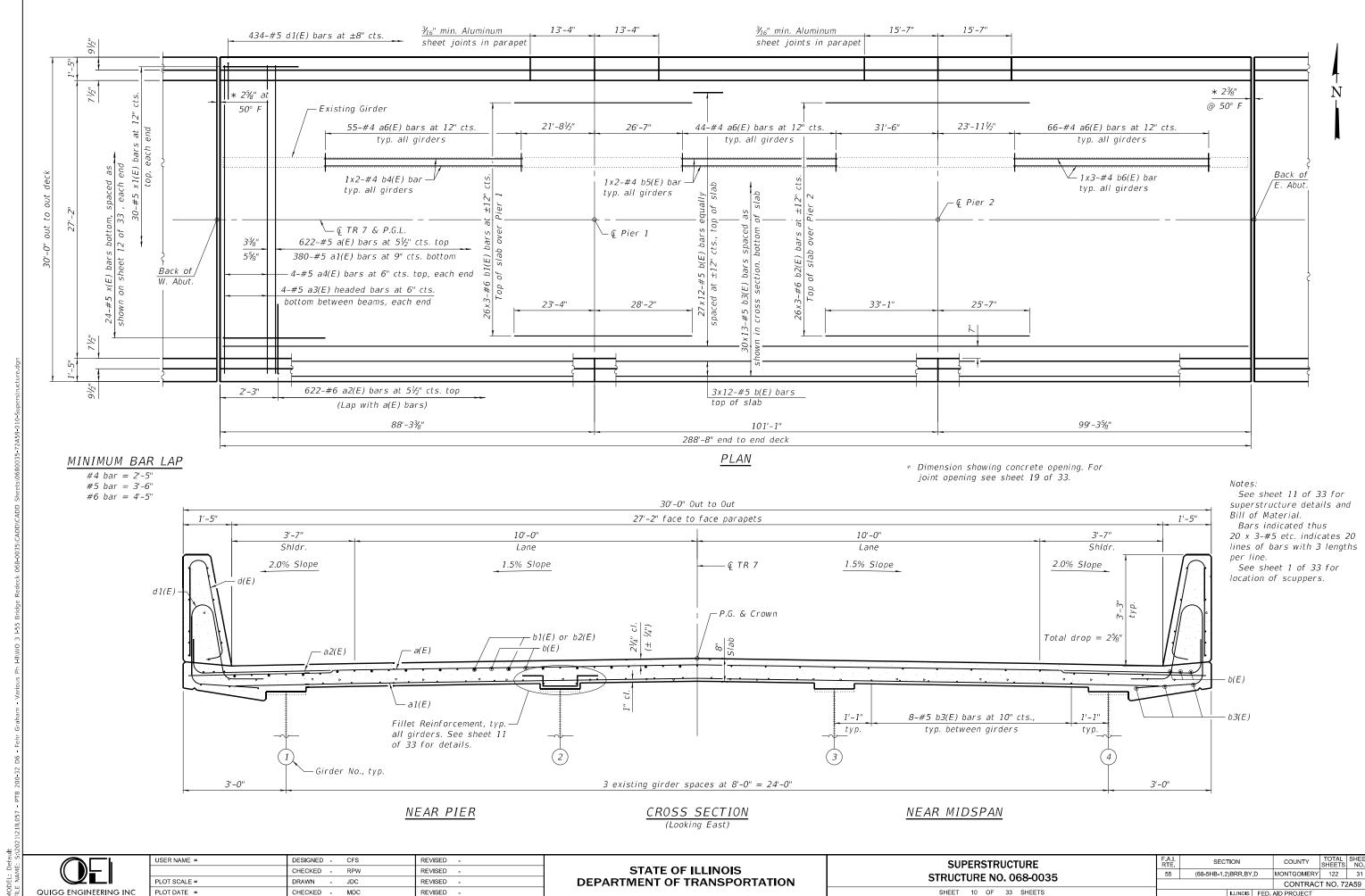
<u>PLAN</u>

3 spaces at 10'-0" = 30'-0"

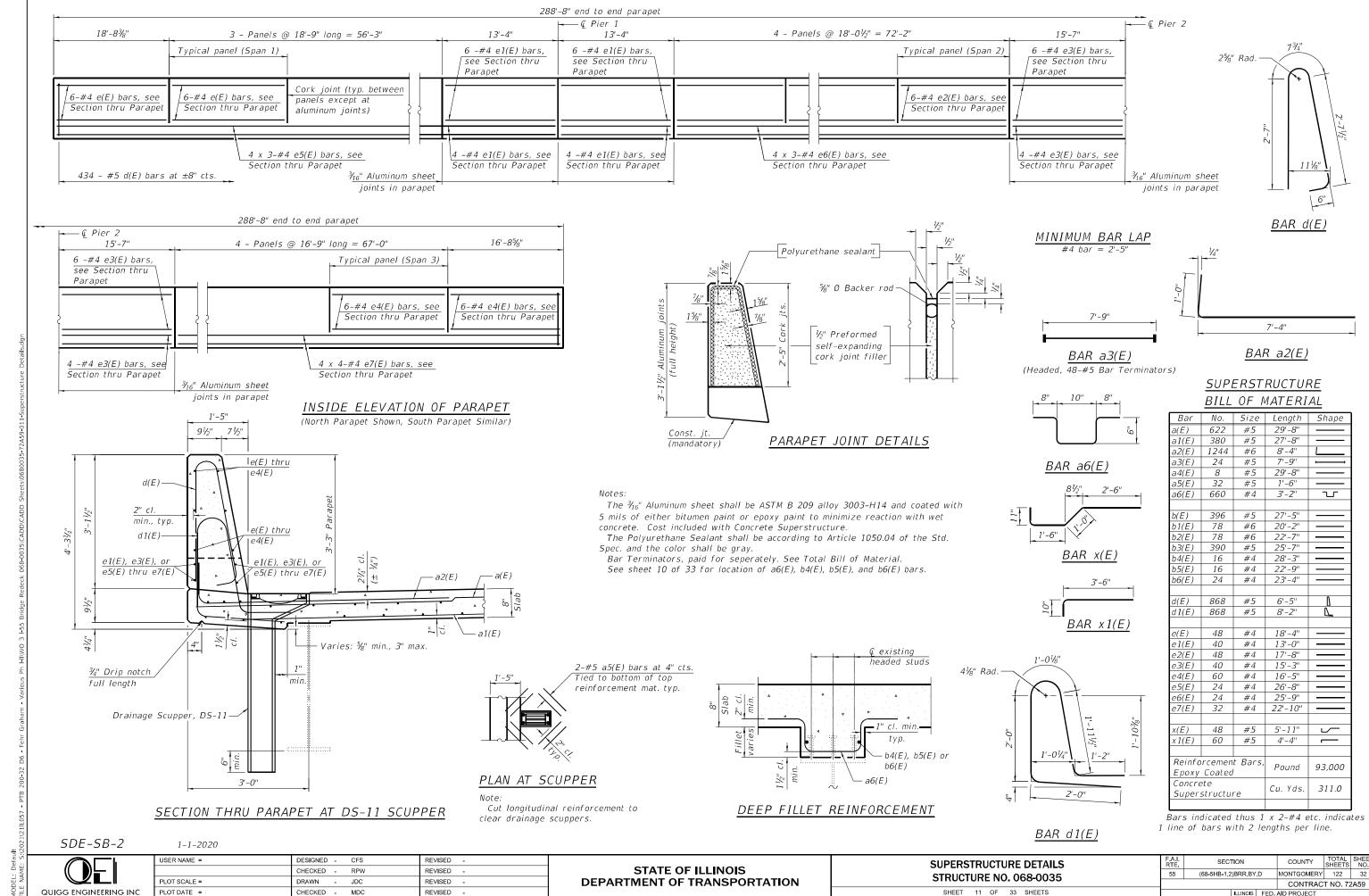
(Sheet 2 of 2)



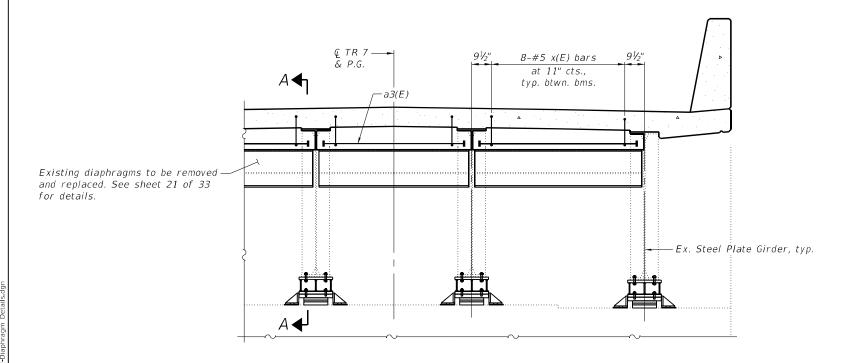
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PLOT DATE =	CHECKED -	MDC	REVISED -	



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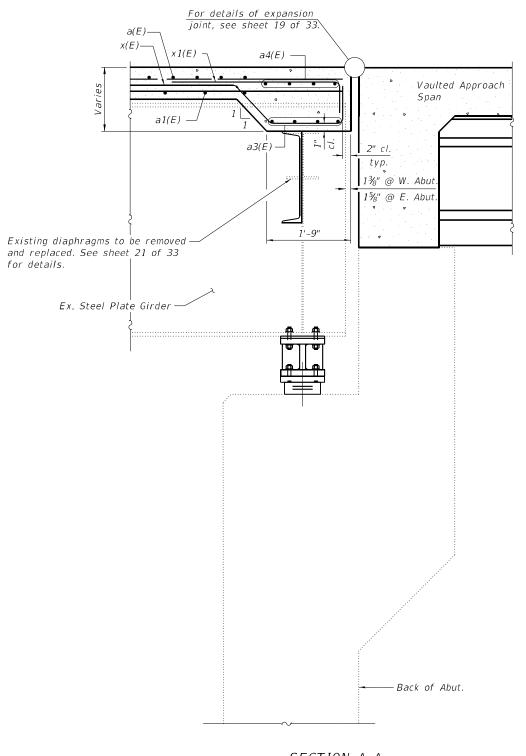
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DIAPHRAGM AT ABUTMENT

Notes:

See sheet 11 of 33 for superstructure details and Bill of Material.



<u>SECTION A-A</u>
(Full diaphragm not shown for clarity)



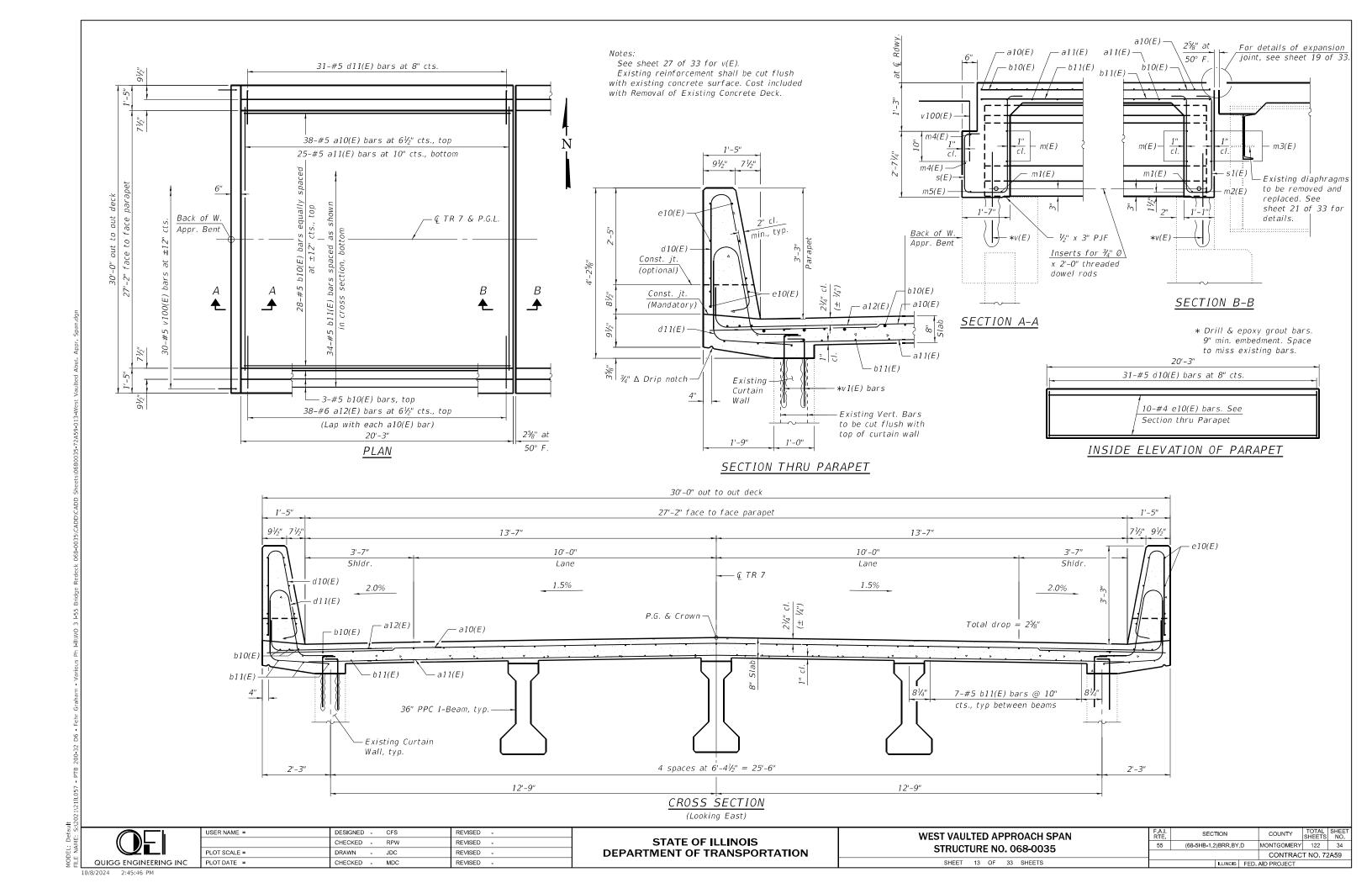
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 DESIGNED - CFS
 REVISED - RE

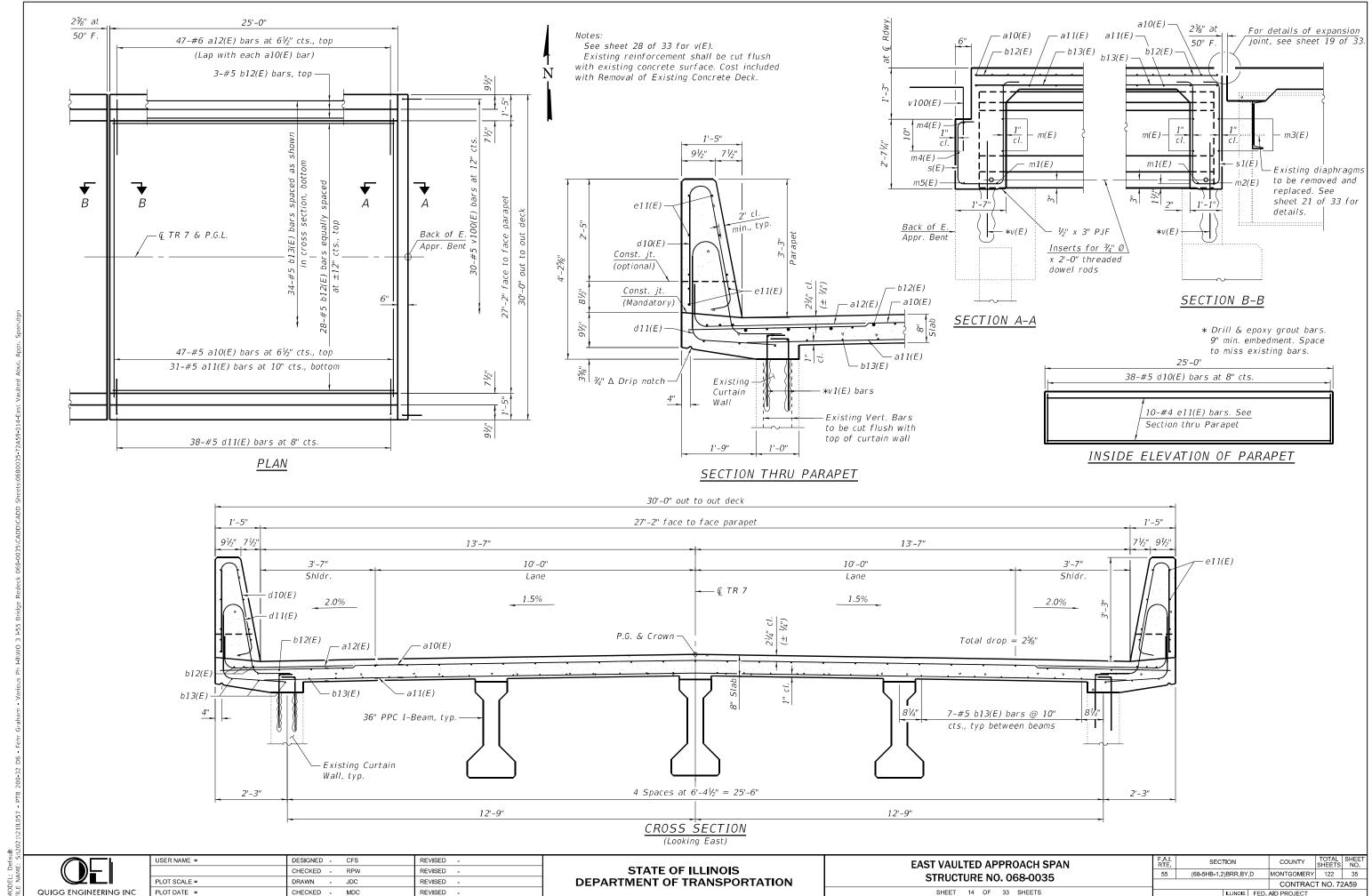
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

 DIAPHRAGM DETAILS
 F.A.I. RTE.
 SECTION
 COUNTY
 SHEET SHEETS
 NO.

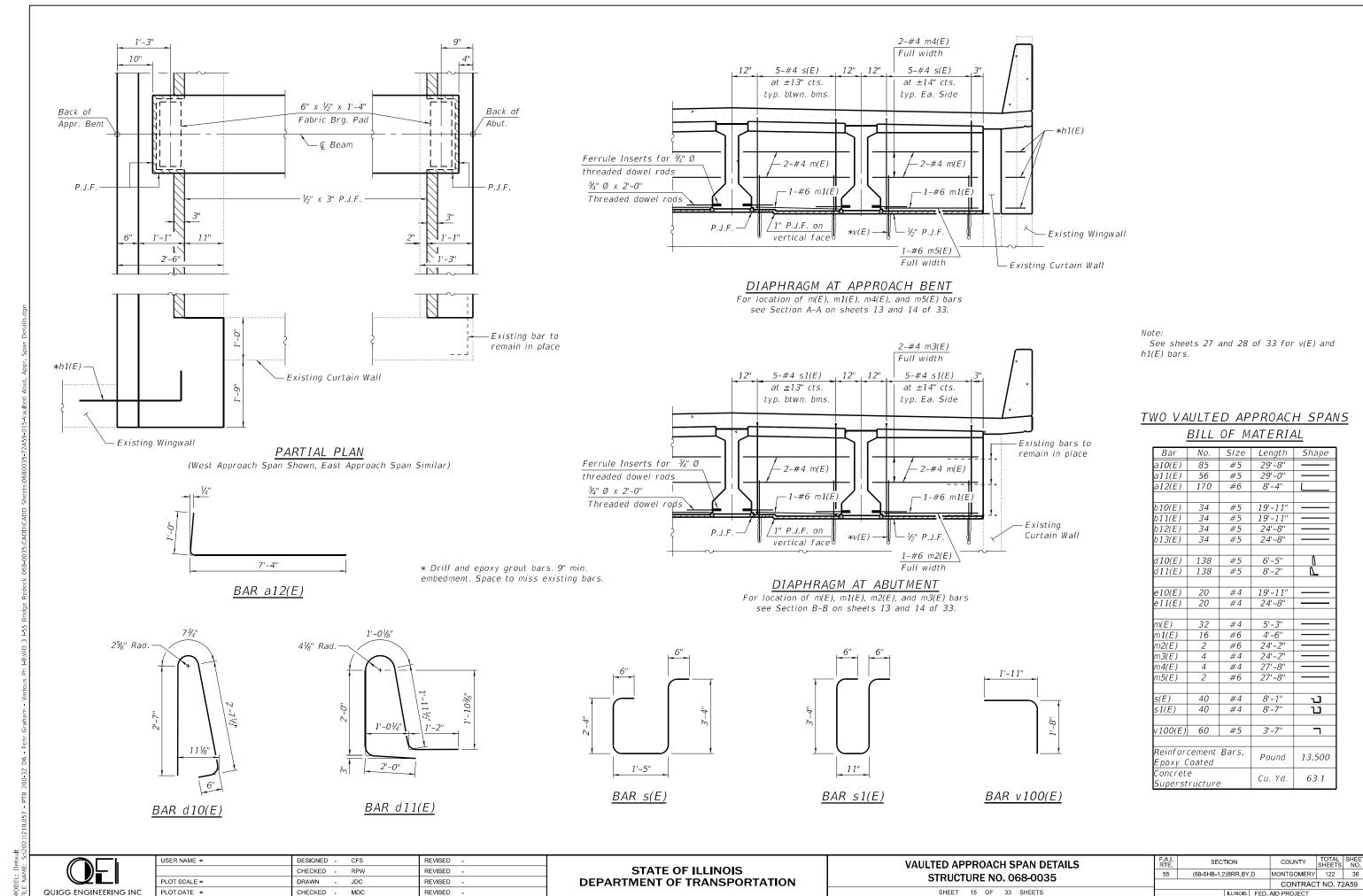
 STRUCTURE NO. 068-0035
 55 (68-5HB-1,2)BRR,BY,D MONTGOMERY
 MONTGOMERY
 122 33

 SHEET
 12 0F 33 SHEETS
 ILLINOIS FED. AID PROJECT





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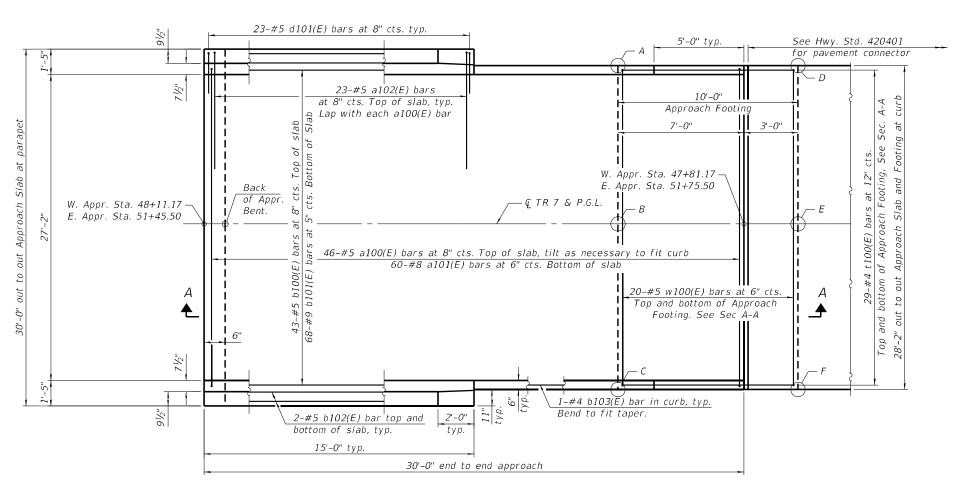


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QUIGG ENGINEERING INC

PLOT DATE =

CHECKED - MDC

REVISED -

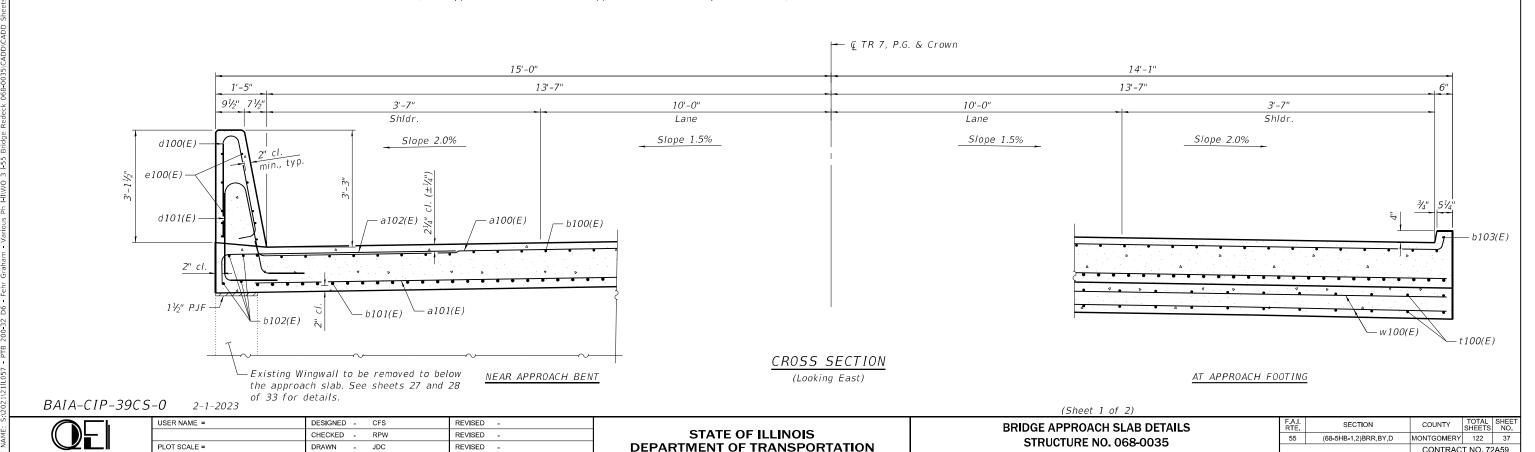
TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

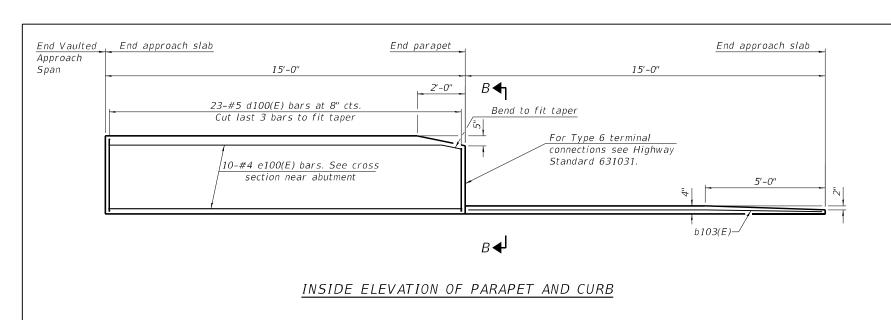
SHEET 16 OF 33 SHEETS

W	est Approa	ch	East Approach			
Point/ Location	Тор	Bottom	Point/ Location	Тор	Bottom	
Α	670.82	669.99	Α	671.98	671.14	
В	671.05	670.22	В	672.21	671.37	
С	670.82	669.99	С	671.98	671.14	
D	670.65	669.82	D	671.87	671.03	
Ε	670.88	670.05	E	672.10	671.27	
F	670.65	669.82	F	671.87	671.03	

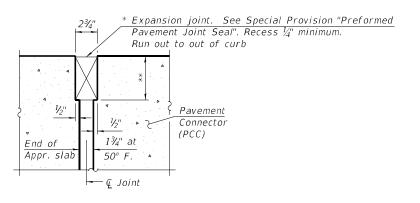
CONTRACT NO. 72A59

PLAN (East approach slab shown; West approach slab similar by 180° rotation)





30'-0" end to end approach * 10 mil. Polyethylene bond breaker on steel trowel finish relief joint sealer. Full width. See Detail Ab100(E) b101(E)-- a100(E) __ a101(E) /// Approach * Subbase Granular Mat'l. Type B, 4" Footing t100(E) typ. v100(E) w100(E) 7'-0" 3'-0" SECTION A-A



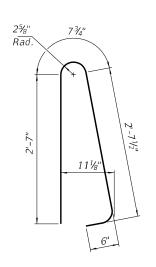
DETAIL A

(Detail A shown, applies to Highway Standard 420401 only. Detail A for pavement connector (HMA) may be found on Highway Standard 420406.)

- * Cost included with Concrete Superstructure (Approach Slab).
- ** Per manufacturer recommendations

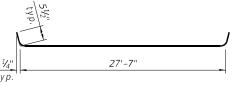
VIEW B-B

Notes: Parapet concrete shall be paid for as Concrete Superstructure. Approach slab shall be paid for as Concrete Superstructure (Approach Slab). Approach footing concrete shall be paid for as Concrete Structures. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf. Cost of excavation for approach footing included with Concrete Structures.

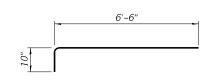


41/8" Rad 1'-1" 1'-6"

<u>BAR</u> d100(E)



BAR a100(E)



BAR a102(E)

TWO APPROACHES BILL OF MATERIAL

BAR d101(E)

_								
Bar	No.	Size	Length	Shape				
a100(E)	92	#5	28'-6"					
a101(E)	120	#8	27'-10"					
a102(E)	92	#5	7'-4"					
b100(E)	86	#5	29'-8"					
b101(E)	136	#9	29'-8"					
b102(E)	16	#5	14'-8"					
b103(E)	4	#4	14'-8"					
d100(E)	92	#5	6'-5"	N				
d101(E)	92	#5	8'-6"	<u> </u>				
e100(E)	40	#4	14'-8"					
t100(E)	116	#4	9'-8"					
w100(E)	80	#5	27'-10"					
Concrete	Supersti	ructure	Cu. Yd.	7.8				
Concrete	Superstr	ucture	Cu. Yd.	81.4				
(Approach	Slab)		Cu. ru.	01.4				
Concrete Structures			Cu. Yd.	17.4				
Reinforce	ment Bai	Pound	33,930					
Ероху Со	ated		Found	الدورور				

BAIA-CIP-39CS-0 2-1-2023



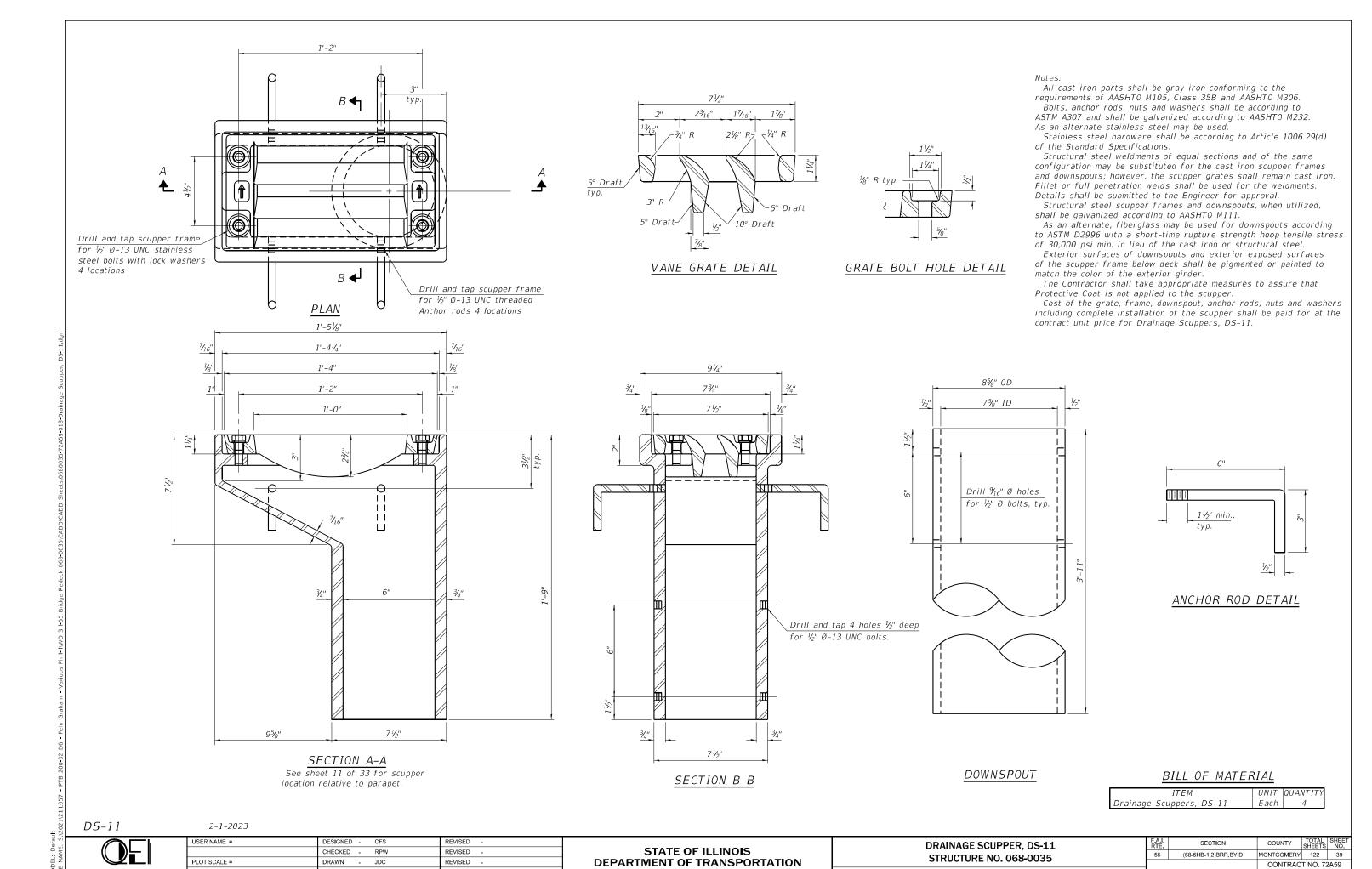
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	CHECKED	-	RPW	REVISED	-
PLOT SCALE =	DRAWN	-	JDC	REVISED	-
PLOT DATE =	CHECKED	-	MDC	REVISED	-

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

				LAB DETAILS 68-0035	
SHEET	17	OF	33	SHEETS	

(Sheet 2 of 2)

SECTION COUNTY (68-5HB-1,2)BRR,BY,D MONTGOMERY 122 38 55 CONTRACT NO. 72A59

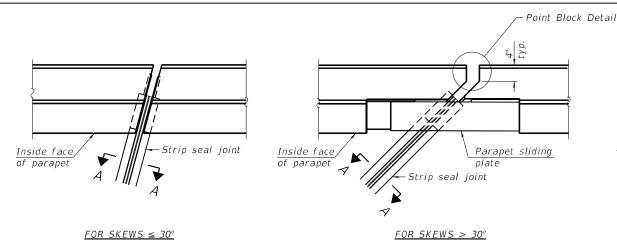


SHEET 18 OF 33 SHEETS

QUIGG ENGINEERING INC 10/8/2024 2:45:52 PM PLOT DATE =

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REVISED -

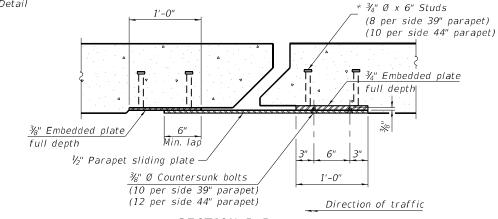


PLAN AT PARAPET

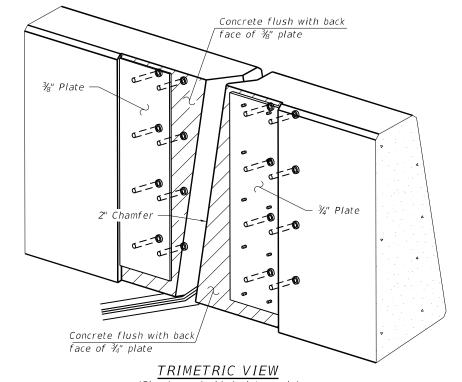
Top of locking

Top of deck

edge rail



SECTION B-B



The strip seal shall be made continuous and shall have a minimum thickness of $\frac{1}{4}$ ". The configuration of the strip seal shall match the configuration of the locking edge

rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4½" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.

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.

The Maximum space between locking edge rail segments shall be $\frac{3}{16}$ " and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal. 39" constant slope barrier shown, 44" constant slope barrier

similar as noted.

Notes:

The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.

SECTION AT PARAPET

6" cts.

Parapet sliding

Inside Face

of Parapet

nlate

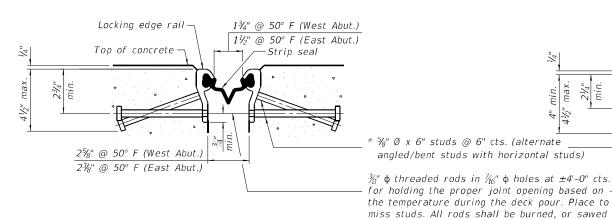
2" Max.

В

%" Ø x 6" Studs

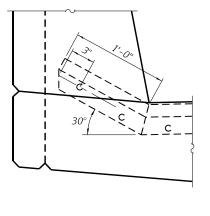
Detail A -

(Skews > 30° shown. Skews ≤ 30° similar except as shown in plan view.)

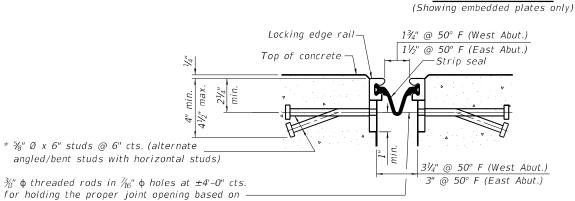


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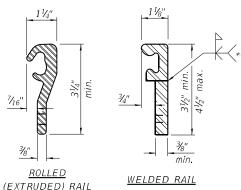
SHOWING ROLLED RAIL JOINT



DETAIL A

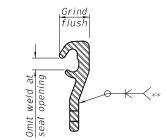


SHOWING WELDED RAIL JOINT



LOCKING EDGE RAILS

** Back gouge not required if complete joint penetration is verified by mock-up.



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	58.5

SECTION A-A

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

off flush with the plates after concrete is set.

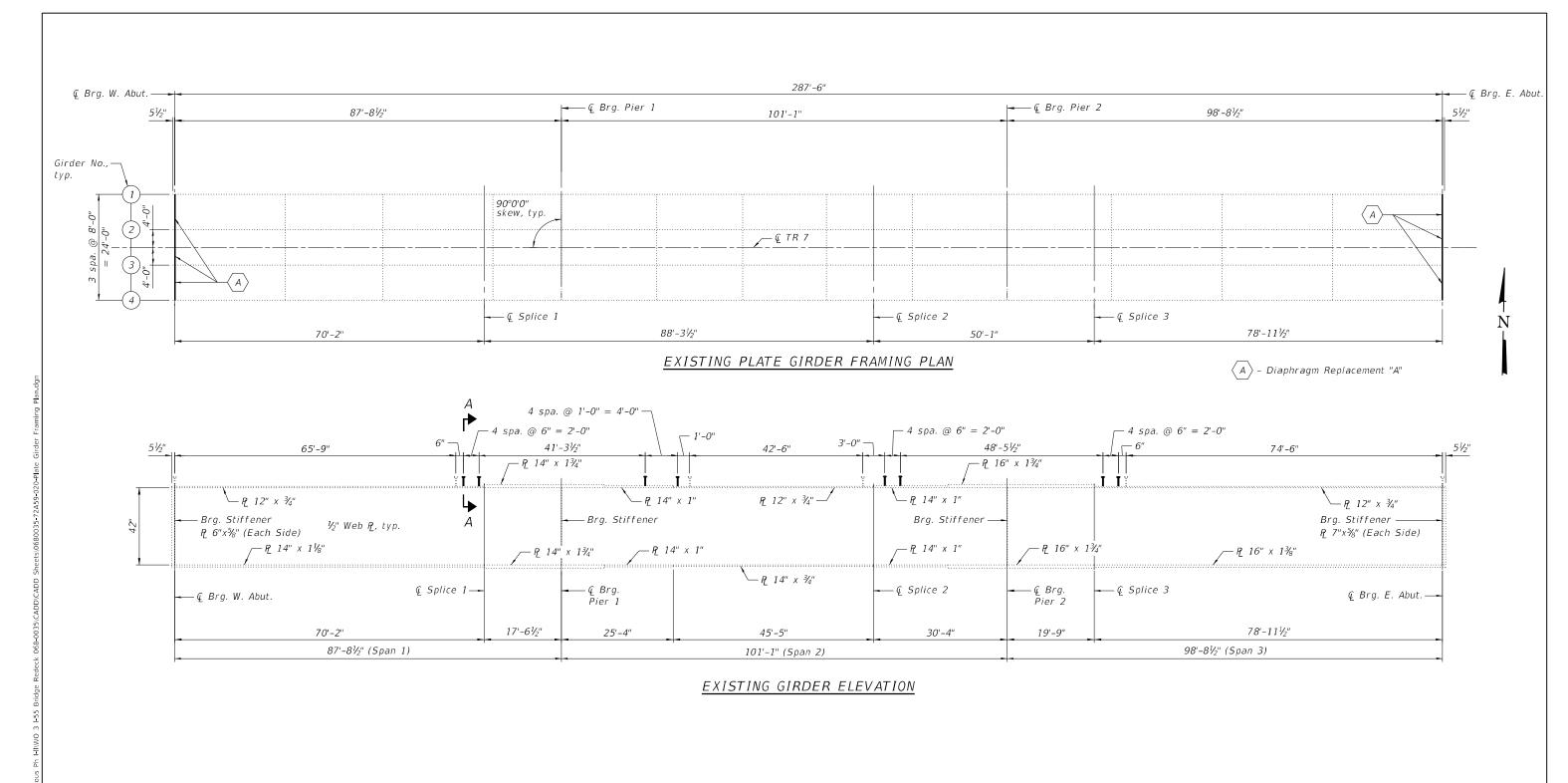
EJ-SS

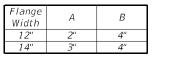
QUIGG ENGINEERING INC

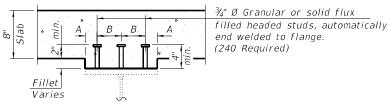
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	CHECKED -	RPW	REVISED -
PLOT SCALE =	DRAWN -	JDC	REVISED -
PLOT DATE =	CHECKED -	MDC	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** PREFORMED JOINT STRIP SEAL **STRUCTURE NO. 068-0035** SHEET 19 OF 33 SHEETS

A.I. RTE	SEC ⁻	TION		COUNTY	TOTAL SHEETS	SHE
55	(68-5HB-1,2)BRR,BY,D			MONTGOMERY	122	40
				CONTRAC	T NO. 72	2A59
		RUMOIS	FED	AID PROJECT		







SECTION A-A

Note:

See sheet 21 of 33 for notes, details, and Bill of Material for Diaphragm Replacement "A". See sheets 10 and 11 of 33 for fillet reinforcement.

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		CHECKED -	RPW	REVISED -
	PLOT SCALE =	DRAWN -	JDC	REVISED -
:	PLOT DATE =	CHECKED -	MDC	REVISED -

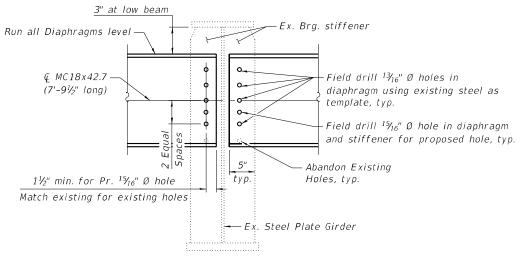
STATE OF ILLINOIS	
DEPARTMENT OF TRANSPORTATION	

PLATE GIRDER FRAMING PLAN	F.A.I. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEE
STRUCTURE NO. 068-0035		(68-5HB-1,2)BRR,BY,D	MONTGOMERY	122	41
311001011 No. 000-0033			CONTRAC	T NO. 72	2A59
SHEET 20 OF 33 SHEETS		ILLINOIS EED	AID PROJECT		

	INTERIOR GIRDER MOMENT TABLE									
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3				
Is, Ss	(in⁴)	14,050	26,547	11,972	29,898	15,991				
Ic(n)	(in⁴)	43,325	-	34,881	-	52,627				
Ic(3n)	(in⁴)	31,701	-	26,199	=	37,378				
Ss	(in³)	743	1,167	571	1,314	946				
Sc(n)	(in³)	1,097	-	858	-	1,382				
Sc(3n)	(in³)	1,009	-	787	-	1,274				
Z	(in³)	-	1,292	-	1,446	-				
₽	(k/')	1.004	1.553	0.987	1.580	1.026				
ΜP	('k)	565	-1,286	220	-1,669	726				
s P	(k/')	0.463	-	0.463	-	0.463				
Ms P	('k)	278	-	175	-	358				
LLDF		1.455	1.455	1.455	1.455	1.455				
ΜŁ	('k)	836	-576	693	-663	954				
MI	('k)	197	-131	153	-147	213				
5/3 [MLL +1]	('k)	1722	-1178	1410	-1350	1945				
Ма	('k)	3335	-3203	2348	-3925	3938				
*Mu	('k)	4385	3877	3622	4337	5282				
fs DL (non-comp)	(ksi)	9.1	-13.2	4.6	-15.2	9.2				
fs DL (comp)	(ksi)	3.3	-	2.7	-	3.4				
fs 5/3 [MLL + Mi]	(ksi)	18.8	-12.1	19.7	-12.3	16.9				
fs (Overload)	(ksi)	31.2	-25.3	27.0	-27.5	29.5				
**fs (Total)	(ksi)	-	-			-				
VR	(k)	52.5	_	54.5	-	55.7				

INTERIOR GIRDER REACTION TABLE					
		W. Abut.	Pier 1	Pier 2	E. Abut.
LLDF		1.698	1.455	1.455	1.698
Rol	(k)	50.8	150.9	171.8	57.9
RLL	(k)	50.0	68.9	72.3	50.6
Ri	(k)	11.7	11.0	11.2	11.3
R _{Total} (Service I)	(k)	112.5	230.8	255.3	119.8

- * Compact section
- ** Braced non-compact and partially braced section



ABUTMENT DIAPHRAGM REPLACEMENT "A"

(6 Diaphragms Required)

- Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total and Overload) due to non-composite dead loads (in.4 and in.3).
- Ic(n), Sc(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total and Overload) due to short-term composite live loads (in.4 and in.3).
- Ic(3n), Sc(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total and Overload) due to long-term composite (superimposed) dead loads (in.* and in.3).
 - Z: Plastic Section Modulus of the steel section in non-composite areas (in.3).
 - p: Un-factored non-composite dead load (kips/ft.).
 - MP: Un-factored moment due to non-composite dead load (kip-ft.).
 - s $g: Un-factored\ long-term\ composite\ (superimposed)\ dead\ load\ (kips/ft.)$
 - $M_{\rm S}$ P: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
 - LLDF: Live Load Distribution Factor for moment and shear computed according to AASHTO LFD 3.23.1.
 - Mt: Un-factored live load moment (kip-ft.).
 - MI: Un-factored moment due to impact (kip-ft.).
 - Ma: Factored design moment (kip-ft.).
 - 1.3 $[MP + MSP + \frac{5}{3}(ML + MI)]$
 - Mu: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
- fs (Overload): Sum of stresses as computed from the moments below (ksi). $M \mathbb{P} + M \mathbb{S} \mathbb{P} + \frac{5}{3} \left(M \frac{1}{4} + M I \right)$
- fs (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
 - 1.3 $[MP + MsP + \frac{5}{3}(Mt + MI)]$
 - VR: Maximum½ + impact shear range within the composite portion of the span for stud shear connector design (kips).

Notes:

Field drill $^{1}\mathcal{Y}_{16}$ " Ø holes for \mathcal{Y}_{4} " Ø bolts into existing stiffener and proposed diaphragm for diaphragm replacement.

All steel channels shall be AASHTO M270 Grade 36. Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts $\frac{3}{4}$ " 0, holes $\frac{13}{16}$ " 0, unless otherwise noted.

All materials for the diaphragm replacement including channels, bolts, nuts, and washers shall be galvanized per the special provision "Hot Dip Galvanizing for Structural Steel". Cost included in Furnishing and Erecting Structural Steel.

See sheet 20 of 33 for locations of Diaphragm Replacement "A".

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". Cost included in Furnishing and Erecting Structural Steel.

Two hardened washers required for each set of oversized holes.

Alternate channels of equal depth and larger weight are permitted to facilitate material acquisition.

Alternate channels if utilized, shall be provided at no additional cost to the Department.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	2,040
Structural Steel Removal	Pound	2,020

QUIGG ENGINEERING INC

 USER NAME =
 DESIGNED - CFS
 REVISED

 CHECKED - RPW
 REVISED

 PLOT SCALE =
 DRAWN - JDC
 REVISED

 PLOT DATE =
 CHECKED - MDC
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

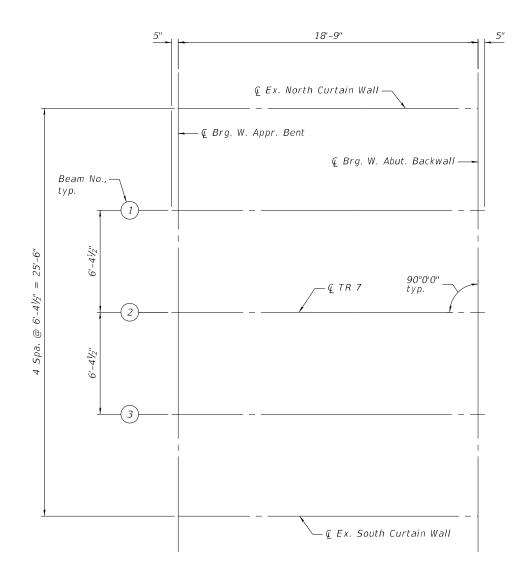
STRUCTURAL STEEL DETAILS
STRUCTURE NO. 068-0035

SHEET 21 OF 33 SHEETS

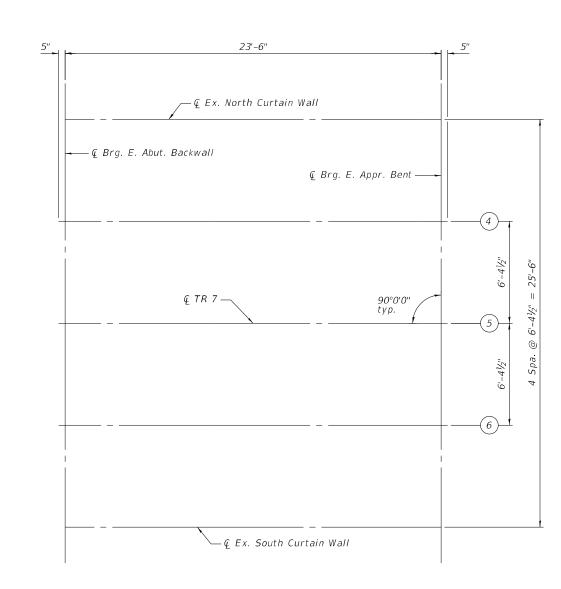
 F.A.I. RTE.
 SECTION
 COUNTY
 TOTAL SHEETS
 SHEETS NO.

 55
 (68-5HB-1,2)BRR,BY,D
 MONTGOMERY
 122
 42

 CONTRACT NO. 72A59



WEST APPROACH SPAN FRAMING PLAN



EAST APPROACH SPAN FRAMING PLAN

QUIGG ENGINEERING INC

 USER NAME =
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 REVISED

 CHECKED - RPW
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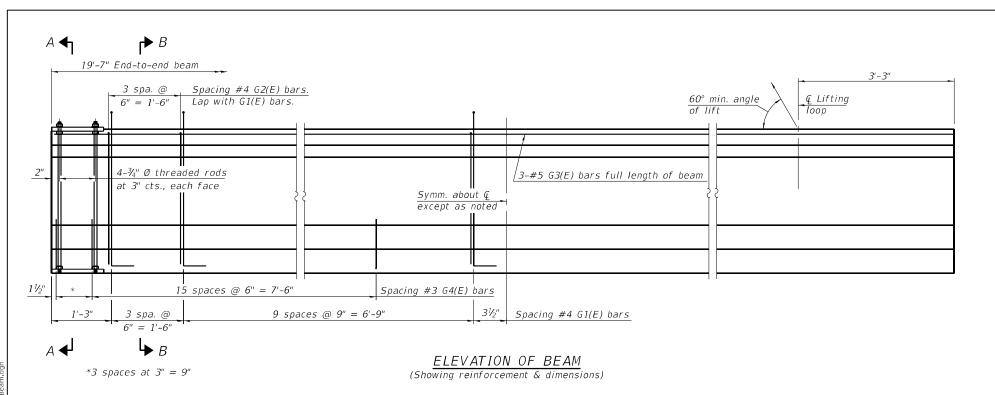
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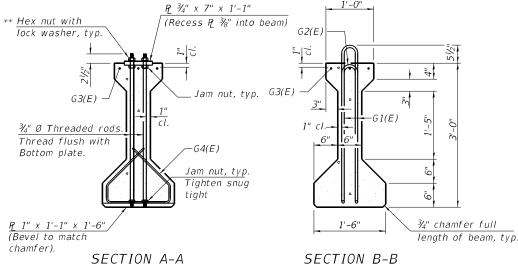
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 REVISED

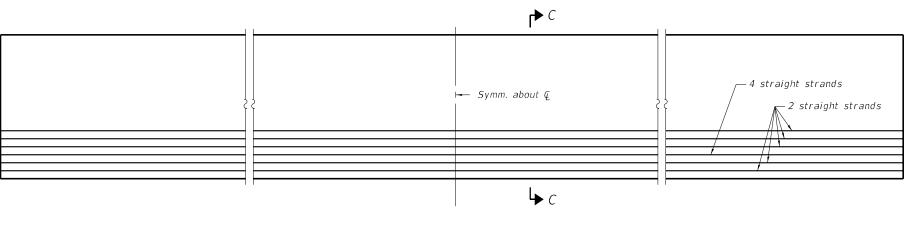
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

VAULTED APPROACH SPANS FRAMING PLAN STRUCTURE NO. 068-0035

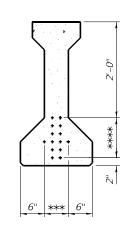
SHEET 22 OF 33 SHEETS











** Only tighten sufficiently to

compress lock washers

<u>SECTION C-C</u> (14'-½" Ø 270 ksi strands) (Strand Pattern 14SU)

*** 3 Spa. at 2" = 6" **** 5 Spa. at 2" = 10"

BAR LIST ONE BEAM ONLY (For information only)

Bar	No.	Size	Length	Shape
G1(E)	26	#4	7'-7"	ΛL
G2(E)	26	#4	5'-8"	N
G3(E)	3	#5	19'-3"	
G4(E)	38	#3	4'-1"	Ğ

lote:

See sheet 25 of 33 for additional details and Bill of Material.

PI-4-36

2-17-2017
USER NAME =

 USER NAME =
 DESIGNED - CFS
 REVISED

 CHECKED - RPW
 REVISED

 PLOT SCALE =
 DRAWN - JDC
 REVISED

 PLOT DATE =
 CHECKED - MDC
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

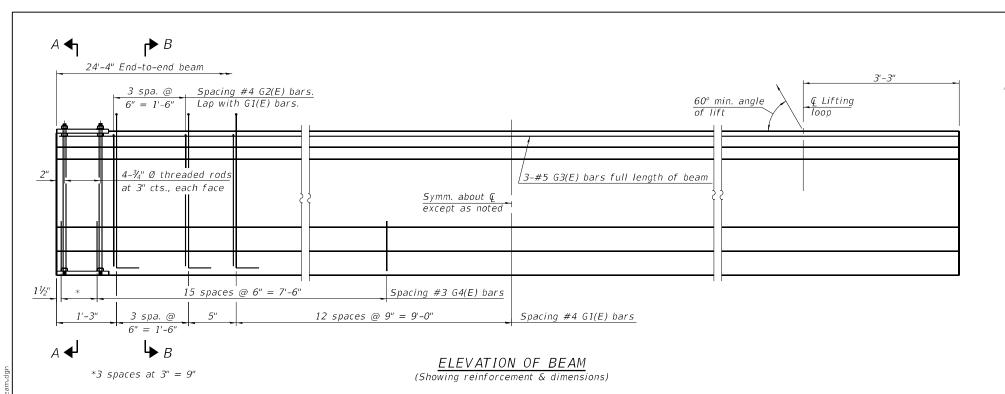
WEST APPROACH SPAN PPC I-BEAM STRUCTURE NO. 068-0035

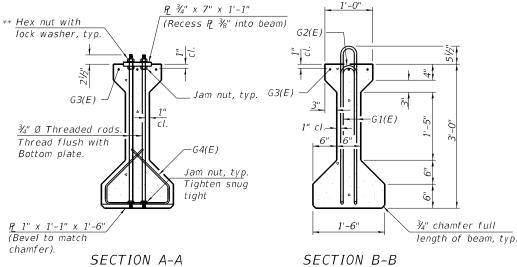
SHEET 23 OF 33 SHEETS

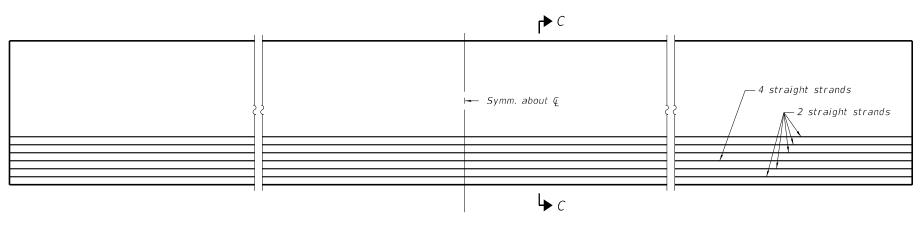
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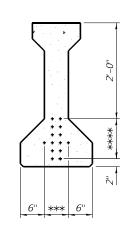
. 200-32. D6 - Fehr Graham - Various Ph I-II/WO 3 I-55. Bridge Redeck 068-0035/CADD/CADD Sheets/0680035-72A5







ELEVATION OF BEAM (Showing prestressing steel)



** Only tighten sufficiently to

compress lock washers

<u>SECTION C-C</u> (14'-½" Ø 270 ksi strands) (Strand Pattern 14SU)

*** 3 Spa. at 2" = 6" **** 5 Spa. at 2" = 10"

<u>BAR LIST</u> <u>ONE BEAM ONLY</u> (For information only)

Bar	No.	Size	Length	Shape
G1(E)	33	#4	7'-7"	ΛL
G2(E)	33	#4	5'-8"	N
G3(E)	3	#5	24'-0"	
G4(E)	38	#3	4'-1"	ے

lote:

See sheet 25 of 33 for additional details and Bill of Material.

PI-4-36

2-17-2017



USER NAME =	DESIGNED	-	CFS	REVISED	-
	CHECKED	-	RPW	REVISED	-
PLOT SCALE =	DRAWN	-	JDC	REVISED	-
PLOT DATE =	CHECKED	-	MDC	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EAST APPROACH SPAN PPC I-BEAM STRUCTURE NO. 068-0035

SHEET 24 OF 33 SHEETS

 F.A.I. RTE.
 SECTION
 COUNTY MONTGOMERY
 TOTAL SHEETS NO.
 SHEETS NO.

 55
 (68-5HB-1,2)BRR,BY,D
 MONTGOMERY
 122
 45

 CONTRACT NO. 72A59

 ILLINOIS
 FED. AID PROJECT

WOOGG ENGINEER

TB 200-32 D6 - Fehr Graham - Various Ph I-II,WO 3 I-55 Bridge Redeck 068-0035\CADD\CADD Sheets\0680

WEST APPROACH SPAN

INTERIOR BEAM MOMENT TABLE				
		0.5 Sp. 1		
I	(in ⁴)	48,648		
I'	(in⁴)	169,570		
Sb	(in³)	3,165		
Sb'	(in³)	6,013		
St	(in³)	2,358		
St'	(in³)	21,744		
P	(k/')	1.026		
MР	('k)	45		
s P	(k/')	0.369		
MsP	('k)	16		
LLDF		1.160		
M Ł	('k)	87		
ΜI	('k)	26		

INTERIOR BEAM	REAC	TION TABLE
		Supports
LLDF		1.373
R₽	(k)	9.6
$R_s \varrho$	(k)	3.4
R Ł	(k)	27.5
RI	(k)	8.3
RTotal (Service I)	(k)	48.8

EAST APPROACH SPAN

INTERIOR BEAM MOMENT TABLE			
		0.5 Sp. 1	
I	(in ⁴)	48,648	
I'	(in⁴)	183,024	
Sb	(in³)	3,165	
Sb'	(in³)	6,188	
St	(in³)	2,358	
St'	(in³)	28,496	
P	(k/')	1.024	
MР	('k)	71	
s P	(k/')	0.369	
Ms₽	('k)	25	
LLDF		1.160	
ΜŁ	('k)	109	
ΜI	('k)	33	
· ·			

INTERIOR BEAM	REAC	TION TABLE
		Supports
LLDF		1.373
R₽	(k)	12.0
$R_s \varrho$	(k)	4.3
R Ł	(k)	30.8
RI	(k)	9.2
RTotal (Service I)	(k)	56.3

- I: Non-composite moment of inertia of beam section (in.4).
- I': Composite moment of inertia of beam section (in.4).
- Sb: Non-composite section modulus for the bottom fiber of the prestressed beam (in.3).
- Sb': Composite section modulus for the bottom fiber of the prestressed beam (in.3).
- St: Non-composite section modulus for the top fiber of the prestressed beam (in.3).
- St: Composite section modulus for the top fiber of the prestressed beam (in.3).
- ₽: Un-factored non-composite dead load (kips/ft.).
- MP: Un-factored moment due to non-composite dead load conservatively taken at 0.5 of the span (kip-ft.).
- sp: Un-factored long-term composite (superimposed) dead load (kips/ft.).
- Ms9: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
- LLDF: Live Load Distribution Factor for moment and shear computed according to AASHTO LFD 3.23.1.
- M½: Un-factored live load moment on the composite section (kip-ft.).
- MI: Un-factored moment due to impact on the composite section (kip-ft.).

<u>NOTES</u>

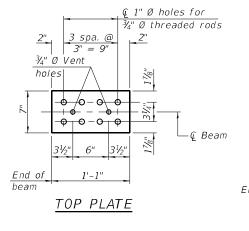
Inserts for $\frac{3}{4}$ " Ø threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in.

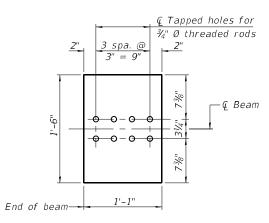
The beams shall have a final concrete compressive strength, f'c, of 6,000 psi and a release concrete compressive strength, f'ci, of 5,000 psi.

A minimum $2\frac{1}{2}$ " Ø lifting pin shall be used to engage the lifting loops during handling. The top and bottom plates shall be AASHTO M270 Grade 50.

The top and bottom plates shall be galvanized according to AASHTO M111. The threaded rods, nuts and washers shall be galvanized according to AASHTO M232.

Threaded rods shall be ASTM F 1554 Grade 55.



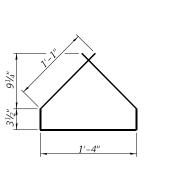


BOTTOM PLATE

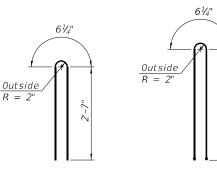
See bearing details for pintle hole locations when required.

3'' Radius $1\frac{1}{4}''$ Ø Conduit Top of Beam $3 - \frac{1}{2}''$ Ø 270 ksi strands 6'' $\pm 6''$ cts.

LIFTING LOOP DETAIL



 $BAR G4(E) \qquad BAR G2(E)$



BAR G1(E)

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	Ft.	132.0



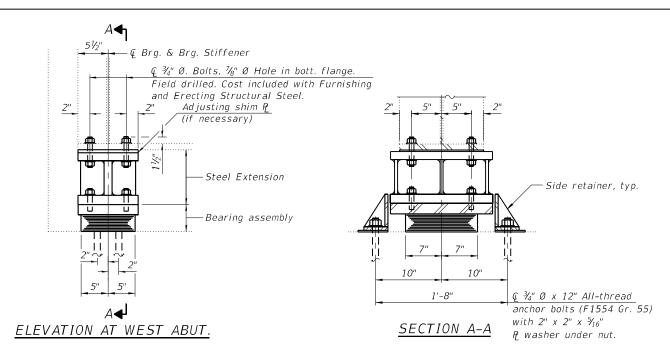
USER NAME =	DESIGNED - CFS	REVISED -
	CHECKED - RPW	REVISED -
PLOT SCALE =	DRAWN - JDC	REVISED -
PLOT DATE =	CHECKED - MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

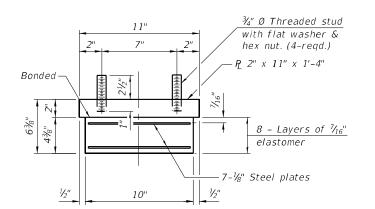
APPROACH SPAN PPC I-BEAM DETAILS					
STRUCTURE NO. 068-0035					

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEE NO.	
55	(68-5HB-1,2)BRR,BY	MONTGOMERY	122	46	
			CONTRAC	T NO. 72	2A59
	ILLINOIS	EED	AID DRO IECT		

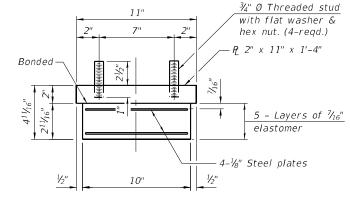
QUIGG ENGINEE



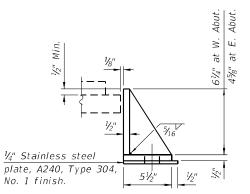




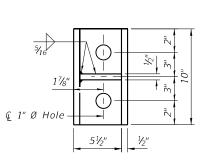
WEST ABUT. BEARING ASSEMBLY



EAST ABUT. BEARING ASSEMBLY

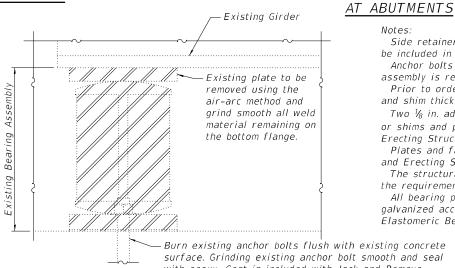


Shim plates shall not be placed under bearing assembly.



SIDE RETAINER

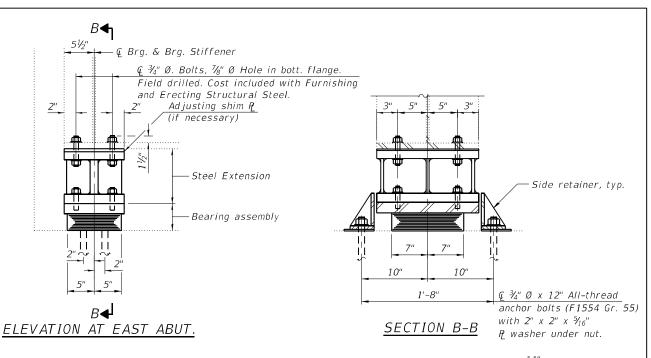
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



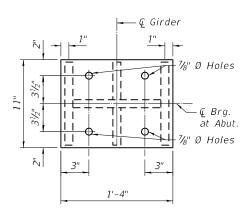
-Burn existing anchor bolts flush with existing concrete surface. Grinding existing anchor bolt smooth and seal with epoxy. Cost is included with Jack and Remove

EXISTING BEARING REMOVAL DETAIL (BOTH ABUTMENTS)

(Cost of bearing removal is included with Jack and Remove Existing Bearings)







PLAN STEEL EXTENSION

- G Brg. at Abut. SECTION C-C G Girder -

ELEVATION STEEL EXTENSION AT ABUTMENTS

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Anchor bolts and side retainers at all supports shall be installed as each existing bearing assembly is replaced unless an equivalent temporary means of lateral restraint is used. Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

Two V_8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown. Adjusting shim plates shall be paid for with "Furnishing and Erecting Structural Steel".

Plates and fasteners required for the steel extensions shall be paid for with Furnishing and Erecting Structural Steel.

The structural steel plates of the Bearing Assembly and steel extensions shall conform to the requirements of AASHTO M270 Grade 36

All bearing plates, steel extensions, side retainers, anchor bolts, nuts, and washers shall be galvanized according to AASHTO M111 or M232 as applicable. Cost shall be included with Elastomeric Bearing Assembly, Type I.

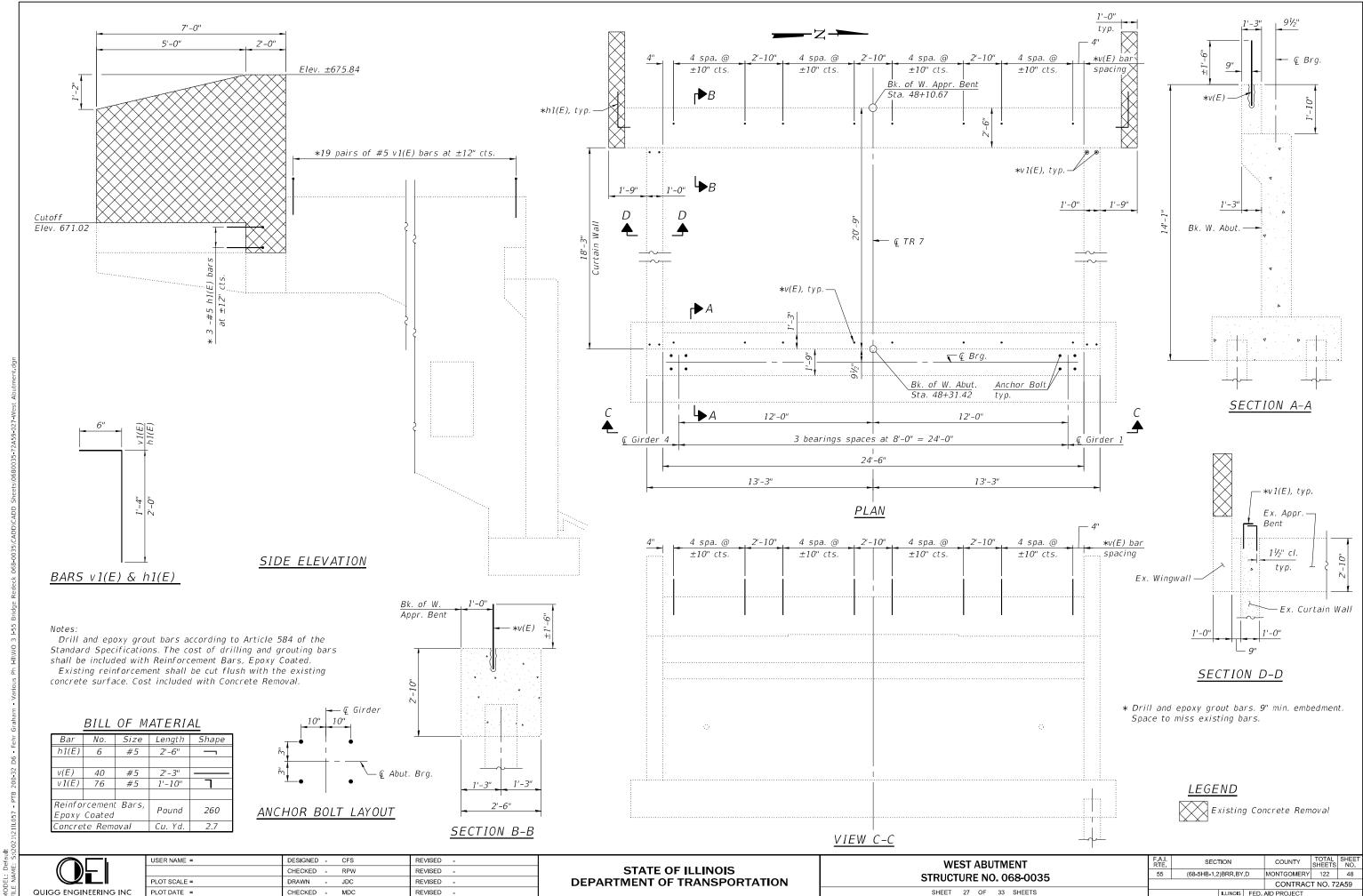
BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	1,560
Elastomeric Bearing Assembly Type I	Each	8
Anchor Bolts, ¾"	Each	32

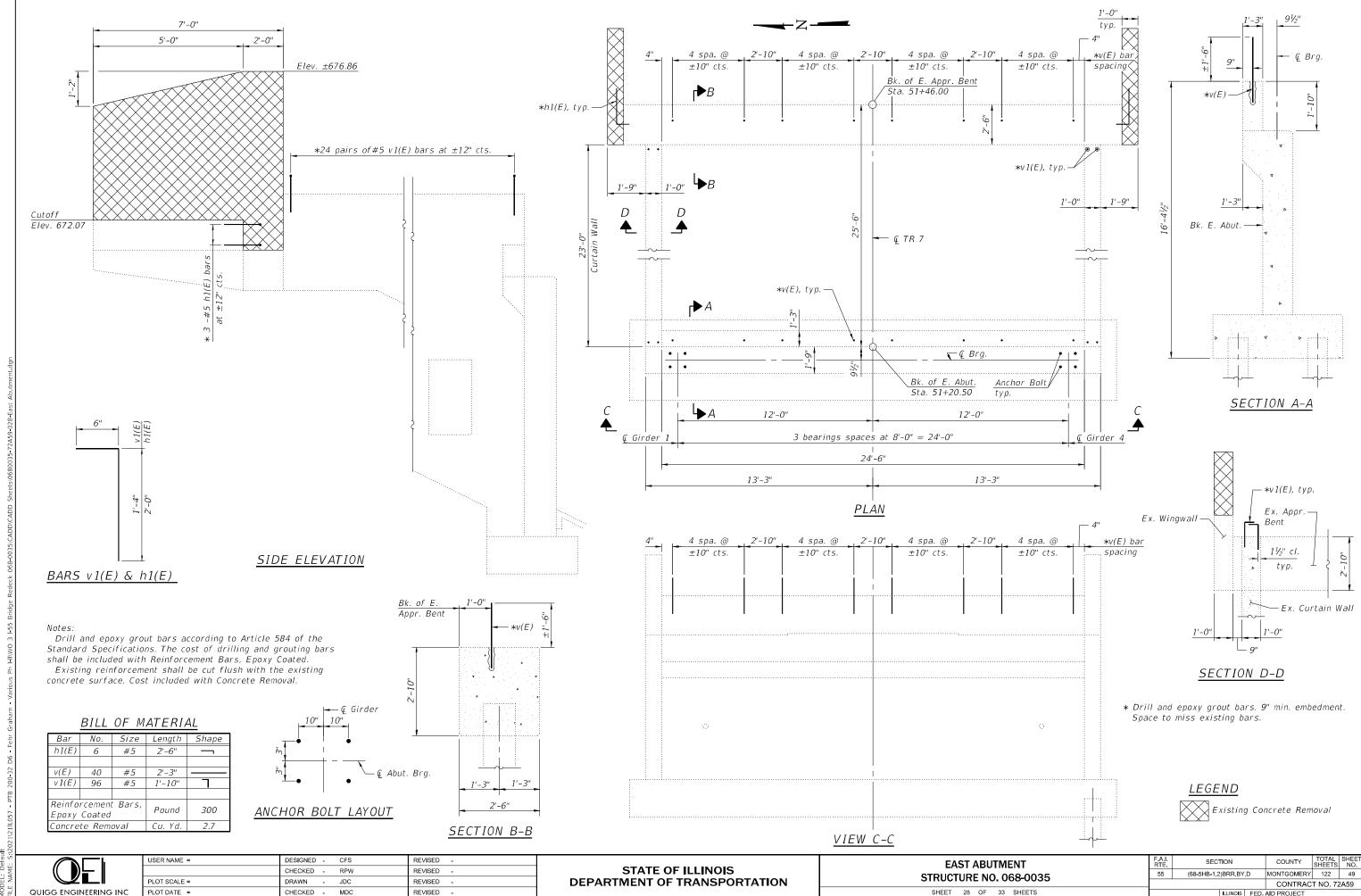


USER NAME =	DESIGNED	-	CFS	REVISED	-
	CHECKED	-	RPW	REVISED	-
PLOT SCALE =	DRAWN	-	JDC	REVISED	-
PLOT DATE =	CHECKED	-	MDC	REVISED	-

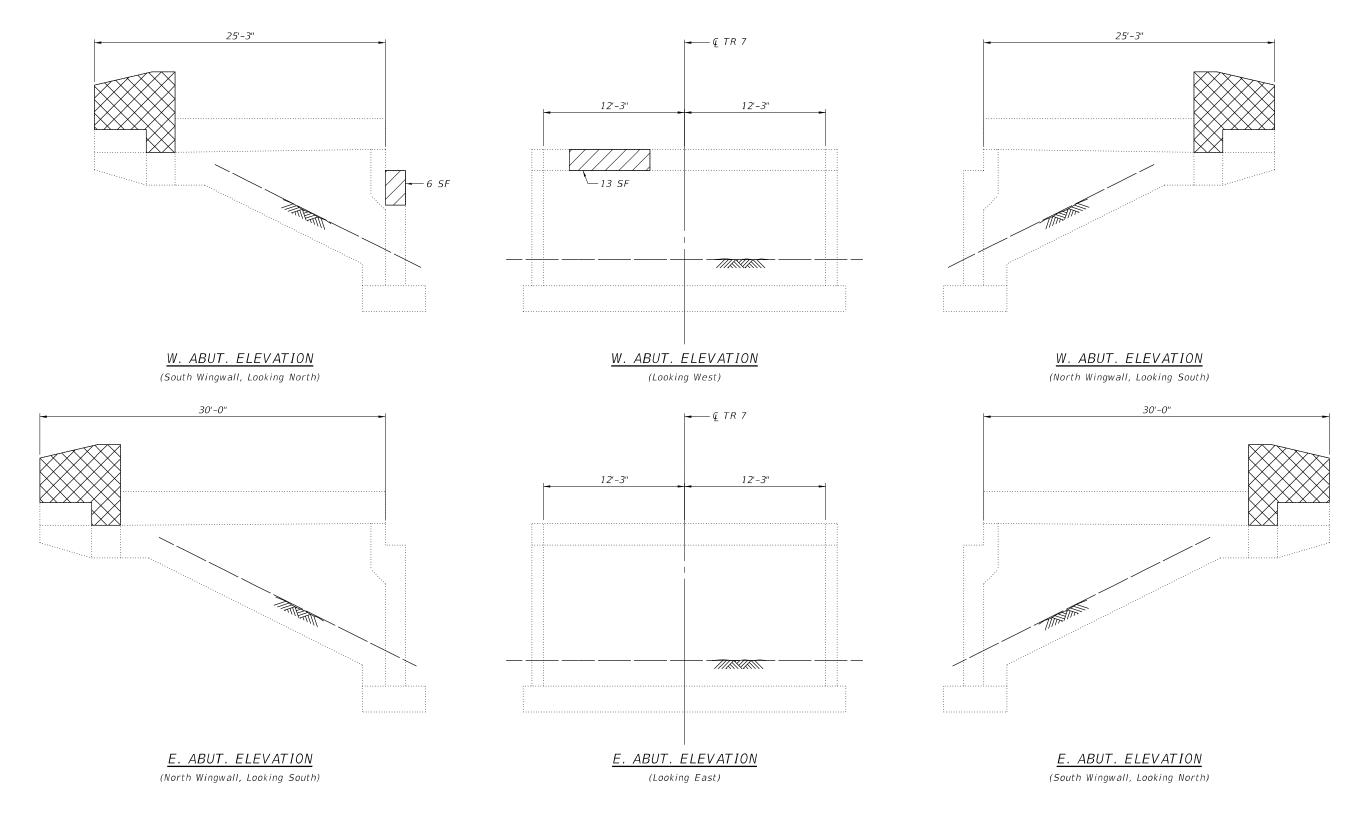
BEARING DETAILS	F.A.I. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STRUCTURE NO. 068-0035		(68-5HB-1,2)BRR,BY,D	MONTGOMERY	122	47
			CONTRAC	T NO. 72	A59
SHEET 26 OF 33 SHEETS		ILLINOIS FED	AID PROJECT		



10/8/2024 2:46:03 PM



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LEGEND

Structral Repair of Concrete
(Depth Equal to or Less than 5")

Existing Concrete Removal

Item
Structural Repair of Concrete (Depth Equal to or Less than 5")



 USER NAME =
 DESIGNED - CFS
 REVISED - RE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ABUTMENT REPAIRS
STRUCTURE NO. 068-0035

SHEET 29 OF 33 SHEETS

 F.A.I. RTE.
 SECTION
 COUNTY
 TOTAL SHEETS
 SHEETS NO.

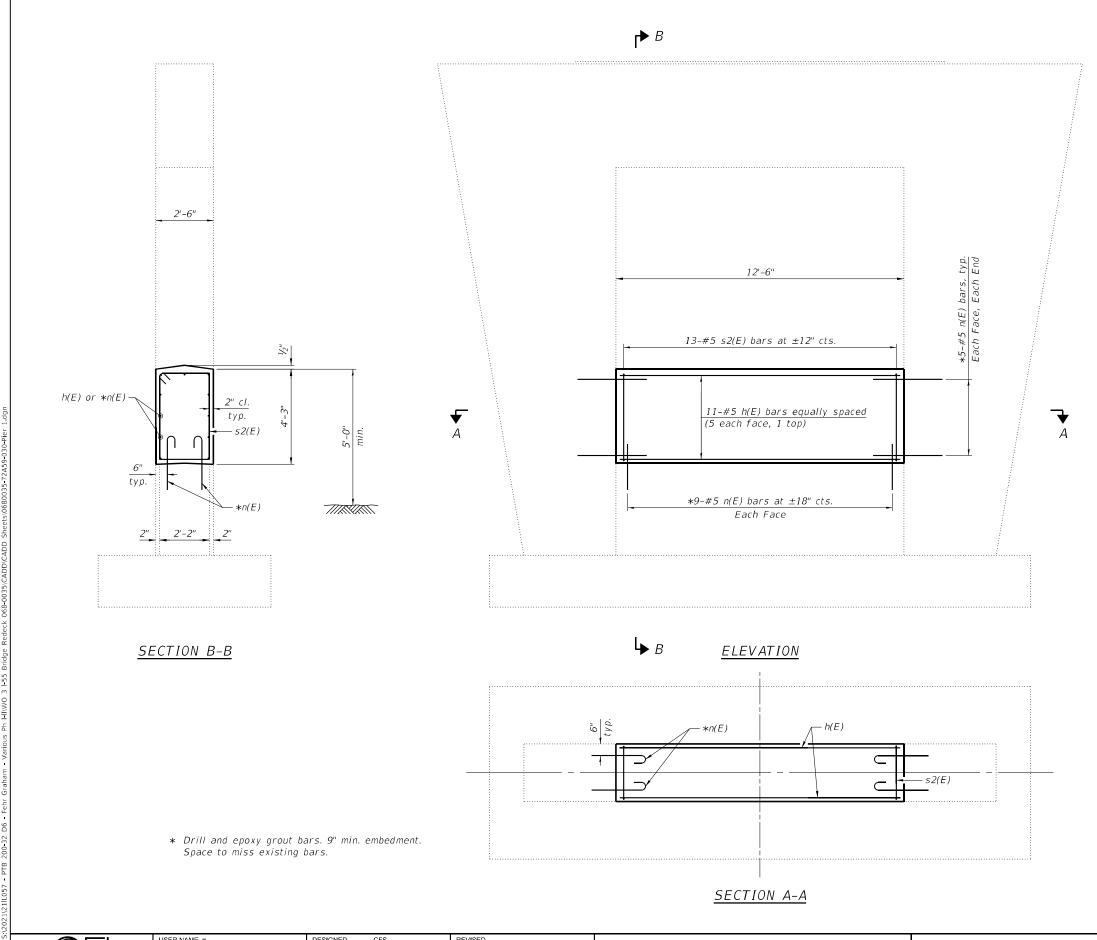
 55
 (68-5HB-1,2)BRR,BY,D
 MONTGOMERY
 122
 50

 CONTRACT NO. 72A59

 ILLINOIS
 FED. AID PROJECT

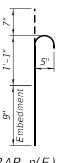
BILL OF MATERIAL

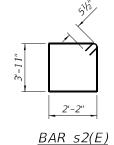
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Note:

Drill and epoxy grout bars according to Article 584 of the Standard Specifications. The cost of drilling and grouting bars shall be included with Reinforcement Bars, Epoxy Coated.





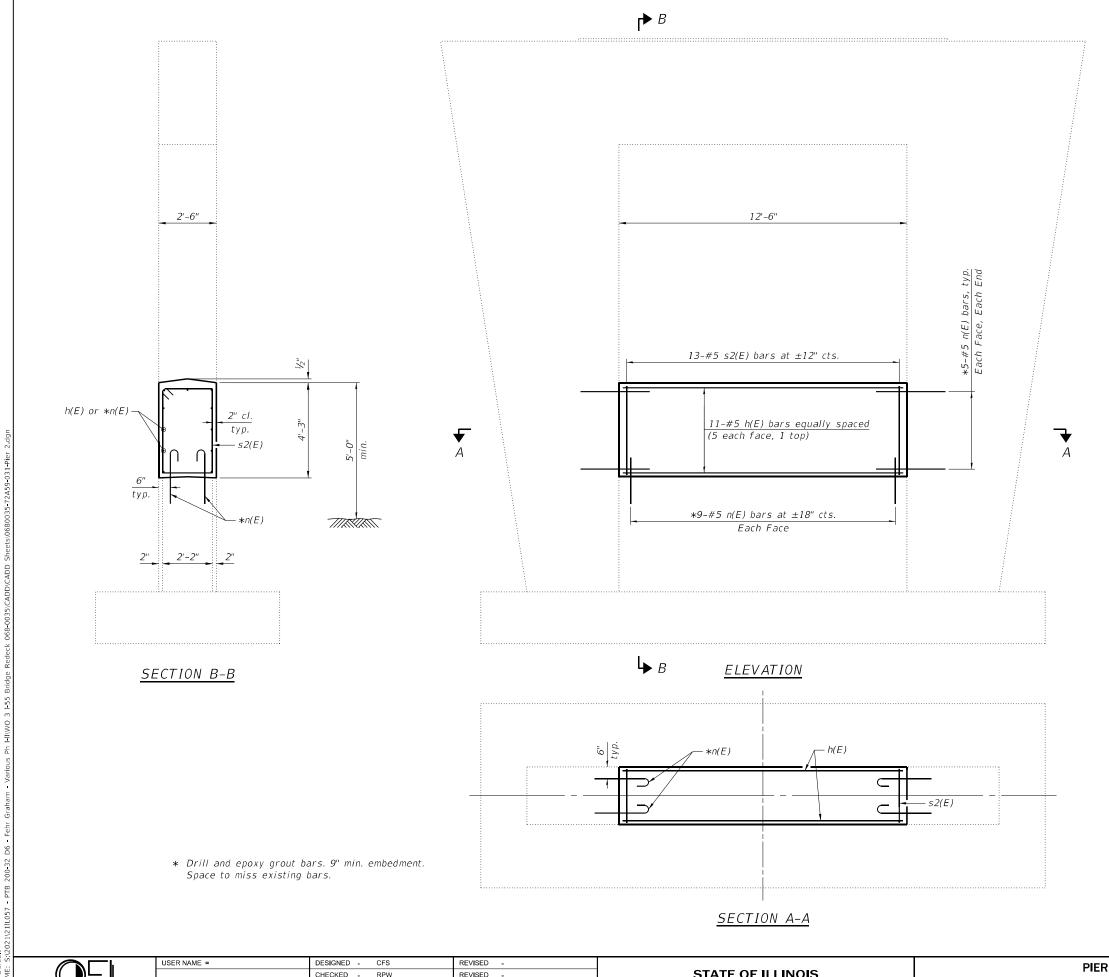
BAR n(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	11	#5	12'-2"	
n(E)	38	#5	2'-5"	
s2(E)	13	#5	13'-1"	
Concre	te Stru	ctures	Cu. Yd.	5.0
Reinfo	rcemen	Bars,	Pound	420
Ероху	Coated		Pound	420

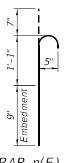


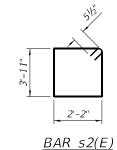
USER NAME =	DESIGNED -	CFS	REVISED	-
	CHECKED -	RPW	REVISED	-
PLOT SCALE =	DRAWN -	JDC	REVISED	-
PLOT DATE =	CHECKED -	MDC	REVISED	-



No

Drill and epoxy grout bars according to Article 584 of the Standard Specifications. The cost of drilling and grouting bars shall be included with Reinforcement Bars, Epoxy Coated.





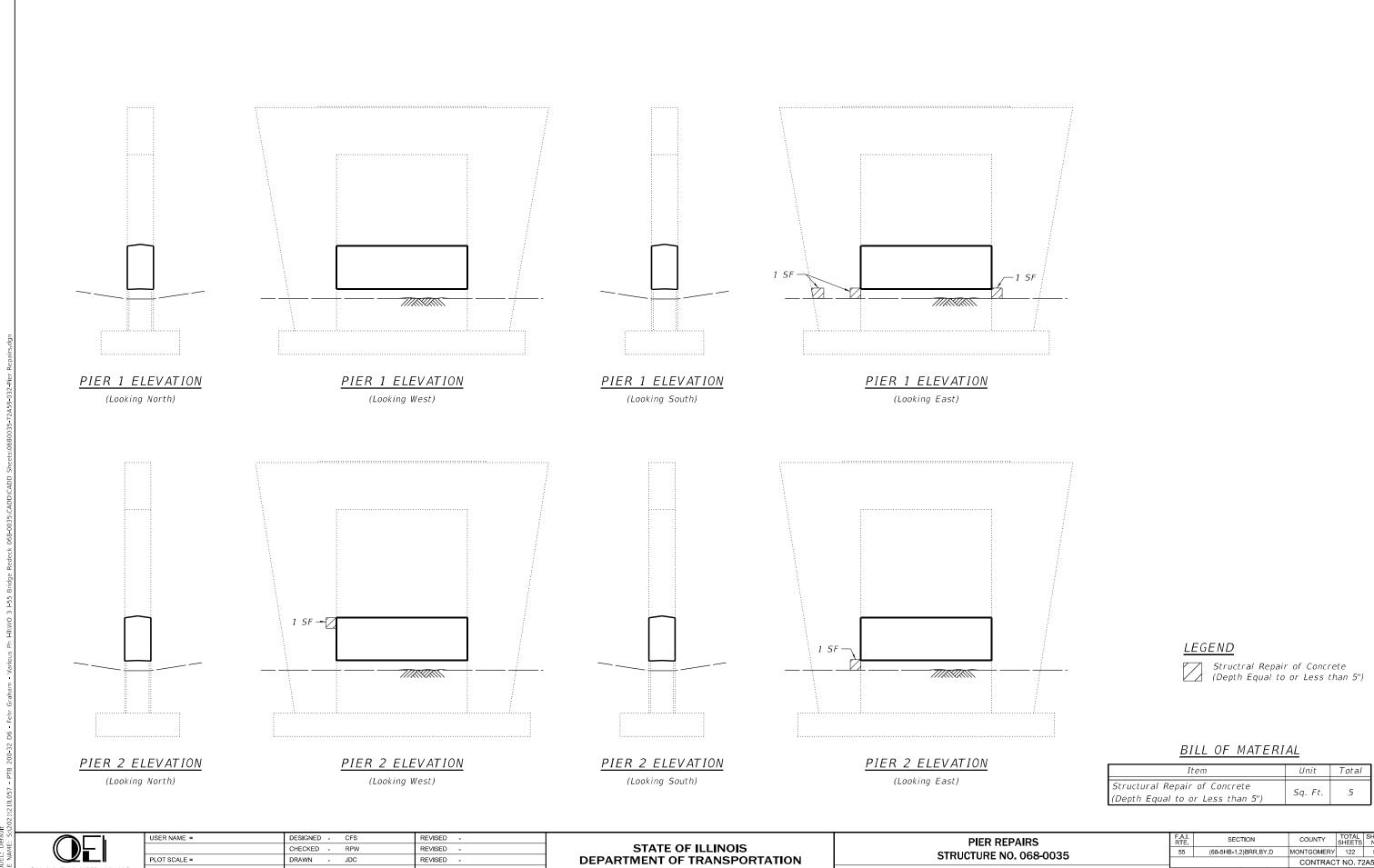
BAR n(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	11	#5	12'-2"	
n(E)	38	#5	2'-5"	
s2(E)	13	#5	13'-1"	
Concre	te Stru	ctures	Cu. Yd.	5.0
	rcemen	Bars,	Pound	420
Ероху	Coated		FUUIIU	420



USER NAME =	DESIGNED	-	CFS	REVISED	-
	CHECKED	-	RPW	REVISED	-
PLOT SCALE =	DRAWN	-	JDC	REVISED	-
PLOT DATE =	CHECKED	-	MDC	REVISED	-



(68-5HB-1,2)BRR,BY,D

MONTGOMERY 122 53

CONTRACT NO. 72A59

55

STRUCTURE NO. 068-0035

SHEET 32 OF 33 SHEETS

QUIGG ENGINEERING INC

PLOT SCALE =

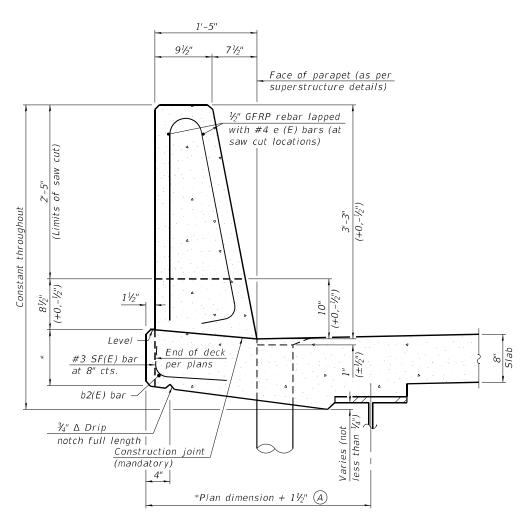
PLOT DATE =

DRAWN

CHECKED - MDC

REVISED

REVISED -



39" CONSTANT-SLOPE PARAPET SECTION

(Showing dimensions, d(E), and $\frac{1}{2}$ " \emptyset GFRP rebar)

*See Superstructure Details.

8½",

Level

per plans

Construction joint

4"_

(mandatory)

#3 SF(E) bar

b2(E) bar

notch full length |

at 8" cts.

¾" ∆ Drip

44" CONSTANT-SLOPE PARAPET SECTION

Face of parapet (as per

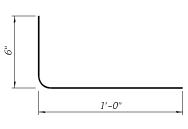
superstructure details)

1/2" GFRP rebar lapped

with #4 e (E) bars (at

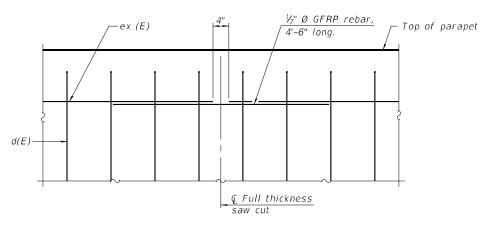
saw cut locations)

(Showing dimensions, d(E), and ½" Ø GFRP rebar)



11-1-2022

SF(E) BAR



*Plan dimension + $1\frac{1}{2}$ " (A)

GFRP REBAR STIFFENING DETAIL

(Place as shown in parapet section at each parapet joint location.)

1'-5"

8½"

81/2"

SFP 39-44

QUIGG ENGINEERING INC

JSER NAME = DESIGNED - CFS REVISED -CHECKED - RPW REVISED -PLOT SCALE = REVISED PLOT DATE = CHECKED - MDC REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION **CONCRETE PARAPET SLIPFORMING OPTION** 55 **STRUCTURE NO. 068-0035** SHEET 33 OF 33 SHEETS

Notes:

All dimensions shall remain the same as shown on

superstructure details, except dimension A which is

Place full depth aluminum sheets as shown on

Replace all cork joint filler locations with a full

Steel superstructure shown. Other superstructure

to be revised as shown. Additional concrete needed to revise dimension A = 0.00348 cu. yds./ft.

for 39" and 44" parapets.

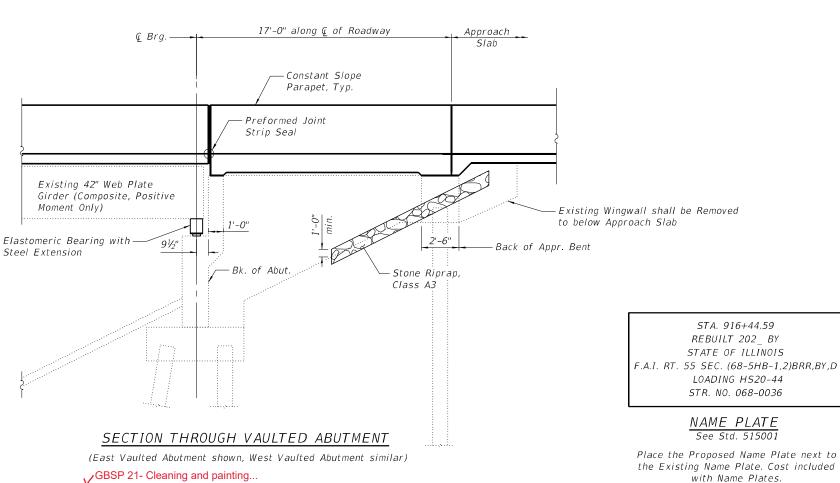
superstructure details.

thickness saw cut.

types similar.

SECTION COUNTY (68-5HB-1,2)BRR,BY,D MONTGOMERY 122 54 CONTRACT NO. 72A59

Bencmark: BM TJM 3, Set cut {} in N.E. corner of S.W. abutment parapet wall on SN 068-0036, Elev. 675.866 SCOPE OF WORK Existing Structure: SN 068-0036 was originally built in 1970 as FAI 55, Section 68-5HB-1, as a 3-span 42" 1. Remove and replace existing concrete deck and vaulted web steel plate girder supporting a 7.5" composite reinforced concrete deck. The substructure consists of approach span. Construct approach slabs. vaulted concrete abutments and two, 2-column trapezoidal concrete piers. A 1.5" overlay was placed in 1986. 2. Remove and replace the bearings with new elastomeric In 1997, the abutment bearings were replaced with elastomeric bearings, and the preformed joint seals were bearings at the abutments. replaced. In 2002, the east end of the south two girders were replaced due to impact and repairs made to 3. Repair the steel girders. Remove and replace the diaphragms the other two girders. The steel was painted in 2019. The structure has an overall length of 339'-0" back-toat the abutments. back of approach bents and the deck is 30'-0" out-to-out. 4. Clean and paint end 10'-0" of all girders and other structural Traffic will be detoured during construction. steel at both abutments. 5. Raise the pier crash walls to be at least 5' above grade. 6. Repair substructure units. No Salvage. Traffic Barrier Terminal — @ Brg. W. Abut. -- € Pier 2 Brg. E. Abut. --- € Pier 1 Type 6 (Std. 631031), Typ. Bk. E. Appr. Bent $\begin{array}{c|c}
\pm 17' - 11^{l_2}" & E \pm 18' - 6^{l_2}" \\
\hline
Clearance & Clearance
\end{array}$ Bk. W. Appr. Bent ± 36′-11½ -Existing 42" Web DESIGN SPECIFICATIONS (NEW CONSTR. Clearance Plate Girder -@ *I-5*5 SB - € I-55 NB (Composite, Positive 2002 AASHTO Standard Specifications Road Lanes Lanes Moment Only) 2006 Seismic Retrofit Manual for Highway Stone Riprap, Class A3, typ. Structures Part 1 - Bridges (FHWA) Name Plate Existing Concrete LOADING HS20-44 (NEW CONSTR.) ± 36'-9 Slopewall (to remain) Clearance Allow 25 psf for future wearing surface. DESIGN STRESSES SEISMIC DATA ELEVATION FIELD UNITS (New Construction) Seismic Retrofit Category (SRC) = A (Looking North) f'c = 4,000 psi (Superstructure) Design Spectral Acceleration at 1.0 sec (SD1) = 0.114 f'c = 3,500 psi (Substructure) Design Spectral Acceleration at 0.2 sec (SDS) = 0.213 fy = 60,000 psi (Reinforcement) Soil Site Class = C fy = 36,000 psi (M270 Grade 36) Performance Level = PL 1 fy = 50,000 psi (M270 Grade 50) FIELD UNITS (Exist. Construction) f'c = 3,000 psi (Superstructure) f'c = 3,500 psi (Substructure) fy = 40,000 psi (Reinforcement) Bk. E. Abut. Bk. W. Abut. fy = 36,000 psi (Structural Steel) Sta. 51+42.79 Sta. 48+37.21 64'-0" Elev. 673.37 Elev. 672.89 88'-21/2' © Brg. W. Abut. - Bk. E. Appr. Bent Bk. W. Appr. Bent -Sta. 48+38.00 Sta. 51+59.50 Sta. 48+20.50 Elev. 672.90 Elev. 672.67 Elev. 673.21 î Pier 2 I € Pier 1 € Brg. E. Abut. Name Plate Sta. 50+33.00 (TR 17) | Sta. 49+33.00 Sta. 51+42.00 Sta. 49+90.00 Sta. 916+44.65 (F.A.I. 55) Elev. 673.38 | Elev. 673.74 Station Elev. 673.95 Increases 30'-0" Bridge PROFILE GRADE 90°0′0" TR 17 Appr. Slab, typ (€ Frontage Road) & P.G.L. Point of Minimum Stone Riprap, - € Brg. W. Abut. Class A3, typ. (see sheet 2 of Vertical Clearance € Brg. E. Abut. - Bk. E. Abut. 91/2" 1 16'-0" 24'-0" 24'-0" 24'-0" € I-55 — 29 for details) Frontage Road 18'-0" Shldr. Drainage Scupper Shidr. I-55 SB Lanes -55 NB Lanes Shidr. DS-11, typ. typ. 47'-0" 46'-0" 46'-0" Limits of Protective Shield Limits of Protective Shield Limits of Protective Shield 16'-8'2' 16'-812' 100'-0" Span 2 109'-912 PROFILE GRADE Span 1 339'-0" Bk. to Bk. Approach Bents (along € TR 17) R5W 3RD P.M. PLAN SED STRUCTURAL GENERAL PLAN AND ELEVATION TR 17 OVER I-55 기(ROBERT WHITESIDE)당 F.A.I. RTE. 55 10/03/2024 081-008015 SECTION (68-5HB-1,2)BRR,BY,D Robert Whiteside, Illinois S.E. 081-008015 Date APPROVED Structure Expires 11/30/2026 MONTGOMERY COUNTY Location JE OF ILLING STA. 916+44.59 PROFILE GRADE PROFILE GRADE LOCATION SKETCH STRUCTURE NO. 068-0036 (F.A.I. 55 SB) (F.A.I. 55 NB) DESIGNED - ZLD JSER NAME = Structures2 REVISED COUNTY **GENERAL PLAN AND ELEVATION STATE OF ILLINOIS** CHECKED -0680036-72A59-001-GPE.dgn RPW REVISED 55 (68-5HB-1.2)BRR.BY.D MONTGOMERY 122 55 **STRUCTURE NO. 068-0036** 32:0.000000 ':" / in DRAWN REVISED **DEPARTMENT OF TRANSPORTATION** CONTRACT NO. 72A59 QUIGG ENGINEERING INC SHEET 1 OF 29 SHEETS PLOT DATE = CHECKED -REVISED MDC 10/8/2024 3:08:09 PM



with Name Plates.

UNIT SUPER SUB TOTAL

INDEX OF SHEETS

GBSP 78- Bridge Deck Construction
GBSP 83-Hot Dip Galvanizing for Structural Steel

✓GBSP 89- Preformed Pavement Joint Seal

- 1. General Plan and Elevation
- 2. General Data

GBSP 61- Slipform Parapet

- 3-5. Top of Slab Elevations
- 6-7. Top of Vaulted Approach Span Elevations
- 8-9. Top of Approach Slab Elevations
- 10. Superstructure
- 11. Superstructure Details
- 12. Diaphragm Details
- 13. Vaulted Approach Span Details
- 14-15. Bridge Approach Slab Details
- 16. Drainage Scupper, DS-11 17. Preformed Joint Strip Seal
- 18. Framing Plan
- 19. Structural Steel Details
- 20. Girder End Repairs
- 21. West Abutment Bearing Details 22. East Abutmenr Bearing Details
- 23. West Abutment
- 24. East Abutment
- 25. Abutment Repairs
- 26. Pier 1
- 27. Pier 2
- 28. Pier Repairs

29. Concrete Parapet Slipforming Option

TOTAL BILL OF MATERIAL Matches SOQ

Stone Riprap, Class A3 Sq. Yd. 16 16 16 16 16 16 16 1		ITEM	UNII	SUPER	SUB	TUTAL
Removal of Existing Concrete Deck No. 2	\	Stone Riprap, Class A3	Sq. Yd.		16	16
Protective Shield Sq. Yd. 464 464 464 Concrete Structures Cu. Yd. 29.2 29.2 29.2 (Concrete Superstructure) Cu. Yd. 401.1		√Concrete Removal	Cu. Yd.		4.6	4.6
Concrete Structures		√Removal of Existing Concrete Deck No. 2	Each	1		1
Viconcrete Superstructure Cu. Yd. 401.1		√Protective Shield	Sq. Yd.	464		464
Bridge Deck Grooving		Concrete Structures	Cu. Yd.		29.2	29.2
Protective Coat		Concrete Superstructure	Cu. Yd.	401.1		401.1
Concrete Superstructure (Approach Slab) Concrete Superstructure (Approach Slab) Furnishing and Erecting Structural Steel Furnishing and Erecting Structural Steel Reinforcement Bars, Epoxy Coated Name Plates Reinforcement Bars, Epoxy Coated Name Plates Foot 58.5 Each 1 Preformed Joint Strip Seal Foot 58.5 Elastomeric Bearing Assembly, Type 1 Anchor Bolts, ¾ Anchor Bolts, ¼ Concrete Sealer Y-GBSP 140 Ack and Remove Existing Bearings Structural Steel Removal Y-GBSP 26 Containment and Disposal of Lead Paint Cleaning Residues No. 1 V-GBSP 25 Cleaning and Painting Steel Bridge No. 1 Drainage Scuppers, DS-11 Bar Terminators Each 48 81.4 8						
Furnishing and Erecting Structural Steel Stud Shear Connectors Reinforcement Bars, Epoxy Coated Name Plates Preformed Joint Strip Seal Preformed Java Value Preformed Joint Strip Seal Preformed Java Value Preformed Joint Strip Seal Preformed Joint Strip Seal		*	Sq. Yd.	1,563		1,563
V Stud Shear Connectors Reinforcement Bars, Epoxy Coated Reinforcement Bars, Epoxy Coated VName Plates VPreformed Joint Strip Seal VElastomeric Bearing Assembly, Type 1 Vanchor Bolts, ¾ Vanchor Bolts, 1" Vanchor Bolts, 1	5		Cu. Yd.	81.4		
Reinforcement Bars, Epoxy Coated Vame Plates Vereformed Joint Strip Seal Vereformed Joint Seach New Joint Join	_		Pound	3,740		
Vame Plates Vereformed Joint Strip Seal Velastomeric Bearing Assembly, Type 1 Vanchor Bolts, 3/4" Vanchor Bolts, 1" Each 8 8 Vanchor Bolts, 1" Vanchor Bolts, 1" Each 8 8 Vanchor Bolts, 1" Vanchor Bolts, 1" Each 8 8 Vanchor Bolts, 1" Vanchor Bolts, 1" Each 8 8 Vanchor Bolts, 1" Vanchor Bolts, 1" Each 8 8 Vanchor Bolts, 1" Vanchor Bolts, 1" Each 8 8 Vanchor Bolts, 1" Vanchor Bolts, 1" Each 8 8 Vanchor Bolts, 1" Vanchor Bolts, 10 Vanchor Bolts, 10 Vanchor Bolts, 10 I Logum I 1 Vanchor Bolts, 10 Vanchor Bolts, 10 I Logum I 1 Vanchor Bolts, 10 Vanchor Bolts, 10 I Logum I 1 Vanchor Bolts, 10 Vanchor Bolts, 10 I Logum I 1 Vanchor Bolts, 10 Vanchor Bolts, 10 I Logum I 1 Vanchor Bolts, 10 Vanchor Bolts, 10 I Logum I 1 Vanchor Bolts, 10 Vanchor Bolts, 10 I Logum I 1 I 1 Vanchor Bolts, 10 I Logum I 1 Vanchor Bolts, 10 I Logum I 1 Vanchor Bolts, 10 I Logum I 1 I 1 Vanchor Bolts, 10 I Logum I 1 Vanchor Bolts, 10 I Logum I 1 I 1 Vanchor Bolts, 10 I Logum I 1 Vanchor Bolts, 10 I Logum I 1 I 1 Vanchor Bolts, 10 I Logum I 1 I 1 Vanchor Bolts, 10 I Logum I 1	V		Each			
VPreformed Joint Strip Seal VElastomeric Bearing Assembly, Type 1 VAnchor Bolts, ¾" VAnchor Bolts, ¾" VAnchor Bolts, 1" VAnchor Bolts, 1" VConcrete Sealer VConcrete Sealer VGount Strip Bearings VY-GBSP 14V VASP VStructural Steel Removal VY-SPV VStructural Steel Repair VY-GBSP 25 VCleaning and Painting Steel Bridge No. 1 VY-GBSP 53 VY-GBSP 53 VY-GBSP 54 VY-GBSP 55 VY-GBSP 55 VY-GBSP 55 VY-GBSP 55 VY-GBSP 56 VY-GBSP 57 VY-GBSP 57 VY-GBSP 58 VY-GBSP					4,540	
VElastomeric Bearing Assembly, Type 1 VAnchor Bolts, ¾" Anchor Bolts, ¾" Anchor Bolts, 1" Concrete Sealer Y-GBSP 14v Jack and Remove Existing Bearings VY-SP VStructural Steel Removal Y-SPV Structural Steel Repair Y-GBSP 25 VCleaning and Painting Steel Bridge No. 1 VY-GBSP 53 VStructural Repair of Concrete (Depth Equal to or Less Than 5 Inches) VY-GBSP 100 VBar Terminators VY-GBSP 100 VBar Terminators VANCHOR BOLTS, ¾" Each 8 8 8 8 8 8 8 8 8 8 8 8 8		<u> </u>	Each	•		-
VAnchor Bolts, ¾" Anchor Bolts, ¼" Anchor Bolts, 1" Concrete Sealer Y-GBSP 14V Jack and Remove Existing Bearings Y-SPV Structural Steel Removal Y-SPV Structural Steel Repair Y-GBSP 25 (Containment and Disposal of Lead Paint Cleaning Residues No. 1 Y-GBSP 25 (Cleaning and Painting Steel Bridge No. 1 Y-GBSP 25 (Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) Sq. Ft. Drainage Scuppers, DS-11 Y-GBSP 100 (Bar Terminators Each 48 48	•					
Anchor Bolts, 1" Y-GBSP 14V Jack and Remove Existing Bearings Y-SP V Structural Steel Removal Y-GBSP 26 V Containment and Disposal of Lead Paint Cleaning Residues No. 1 Y-GBSP 25 Cleaning and Painting Steel Bridge No. 1 Y-GBSP 53 Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) Sq. Ft. Drainage Scuppers, DS-11 Y-GBSP 100 Bar Terminators Each 48 8 8 8 8 8 8 8 8 8 8 8 8						
VConcrete Sealer V-GBSP 14V Jack and Remove Existing Bearings V-SP Structural Steel Removal V-SP Structural Steel Repair V-GBSP 26 VContainment and Disposal of Lead Paint Cleaning Residues No. 1 V-GBSP 25 Cleaning and Painting Steel Bridge No. 1 V-GBSP 53 Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) V-GBSP 100 Bar Terminators	•					
Y-GBSP 144 Jack and Remove Existing Bearings VY-SP Structural Steel Removal Y-SP Structural Steel Repair Y-GBSP 264 Containment and Disposal of Lead Paint Cleaning Residues No. 1 Y-GBSP 255 Cleaning and Painting Steel Bridge No. 1 VY-GBSP 534 Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) VY-GBSP 1004 Bar Terminators Each 4 VS-GBSP 1004 Bar Terminators VS-GBSP 1004 Bar Terminators	1		Each			8
VY-SP Structural Steel Removal 2,000 2,000 VY-SP Structural Steel Repair Pound 140 140 Y-GBSP 26 Containment and Disposal of Lead Paint Cleaning Residues No. 1 L. Sum 1 1 Y-GBSP 25 Cleaning and Painting Steel Bridge No. 1 L. Sum 1 1 VY-GBSP 53 Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) Sq. Ft. 118 118 Drainage Scuppers, DS-11 Each 4 VY-GBSP 100 Bar Terminators Each 48 48			-			
Y-SPV Structural Steel Repair Pound 140 Y-GBSP 26 Containment and Disposal of Lead Paint Cleaning Residues No. 1 V-GBSP 25 Cleaning and Painting Steel Bridge No. 1 V-GBSP 53 Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) Sq. Ft. Drainage Scuppers, DS-11 Y-GBSP 100 Bar Terminators Pound 140 140 140 140 140 140 140 140 140 140						
Y-GBSP 26 Containment and Disposal of Lead Paint Cleaning Residues No. 1 L. Sum 1 1 1 Y-GBSP 25 Cleaning and Painting Steel Bridge No. 1 L. Sum 1 1 1 V-GBSP 53 Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) Sq. Ft. 118 118 Drainage Scuppers, DS-11 Each 4 4 V-GBSP 100 Bar Terminators Each 48 48	VY-SP	Structural Steel Removal				-
Y-GBSP 26 Containment and Disposal of Lead Paint Cleaning Residues No. 1 L. Sum 1 1 1 Y-GBSP 25 Cleaning and Painting Steel Bridge No. 1 L. Sum 1 1 1 V-GBSP 53 Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches) Sq. Ft. 118 118 Drainage Scuppers, DS-11 Each 4 4 V-GBSP 100 Bar Terminators Each 48 48	. VY-SPV	Structural Steel Repair				140
√Y-GBSP 53Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)Sq. Ft.118118√Drainage Scuppers, DS-11Each44✓ Y-GBSP 100√Bar TerminatorsEach4848	Y-GBSP 26	Containment and Disposal of Lead Paint Cleaning Residues No. 1				1
Variange Scuppers, DS-11Each44✓ Y-GBSP 100 Bar TerminatorsEach4848	Y-GBSP 25	√Cleaning and Painting Steel Bridge No. 1		1		
VY-GBSP 100 √Bar Terminators Each 48 48	✓Y-GBSP 53				118	
V Y-GBSP 100 √Bar TerminatorsEach4848	,					
	Y-GBSP 100	∦ Bar Terminators	Each	48		48

GENERAL NOTES

Fasteners shall be ASTM F 3125 Grade A325 Type 1, mechanically galvanized bolts in painted areas. Bolts ¾ in. diameter, holes 1¾16 in. diameter, unless otherwise noted.

Calculated weight of Structural Steel = 140 lbs (M270 Grade 50)

= 3.740 lbs (M270 Grade 36)

All structural steel shall be galvanized. See Special Provision for "Hot Dip Galvanizing for Structural Steel".

No field welding is permitted except as specified in the contract documents. 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 detrimental foreign material shall be removed from the surfaces in contact with concrete (SSPC - SP3 standards). 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 paid for according to Article 109.04 of the Standard Specifications.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding $\frac{1}{4}$ in. deep shall be identified and reported to the Bureau of Bridges & Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

A film forming Concrete Sealer shall be applied to the front face of the proposed vaulted approach span at both abutments.

Plan dimensions and details relative to the existing structure have been taken from 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.

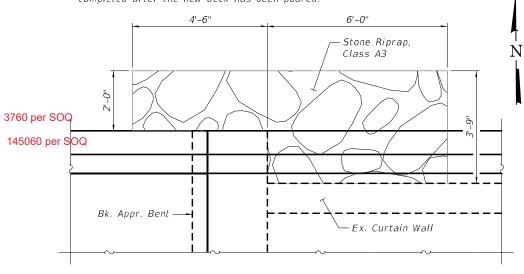
Existing reinforcement shall be cleaned, straightened and incorporated into the new construction. Cost included with Concrete Removal.

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

Cleaning and painting of the existing structural steel shall be as specified in the Special Provision for "Cleaning and Painting Existing Steel Structures". All beams and other structural steel from the beam end to 10'-0" (measured along the beam) shall be cleaned per near white blast cleaning (SSPC-SP10).

The designated areas to be cleaned and painted and all new galvanized structural steel shall be painted according to the requirements of paint system I-OZ/E/U. The color of the final finish coat for the outside and bottom of the fascia beams shall be interstate green, Munsell No. 7.5G 4/8. All other surfaces shall be gray, Munsell

Areas to be cleaned shall be blasted and have the prime coat applied while the bridge deck is removed. Application of the intermediate and topcoats shall be completed after the new deck has been poured.



RIPRAP AT APPROACH BENT AND CURTAIN WALL

(Northwest riprap shown, others similar)

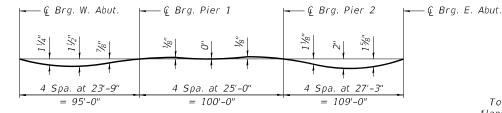


USER NAME = Structures2	DESIGNED -	ZLD	REVISED -
0680036-72A59-002-General_Data.dgn	CHECKED -	RPW	REVISED -
PLOT SCALE = 32:0.000000 ':" / in.	DRAWN -	JDC	REVISED -
PLOT DATE =	CHECKED -	MDC	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

GENERAL DATA STRUCTURE NO. 068-0036 SHEET 2 OF 29 SHEETS

SECTION COUNTY (68-5HB-1.2)BRR.BY.D MONTGOMERY 122 56 CONTRACT NO. 72A59



At Minimum Fillet At Maximum Fillet At Maximum Fillet

INTERIOR GIRDER DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

EXTERIOR GIRDER DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

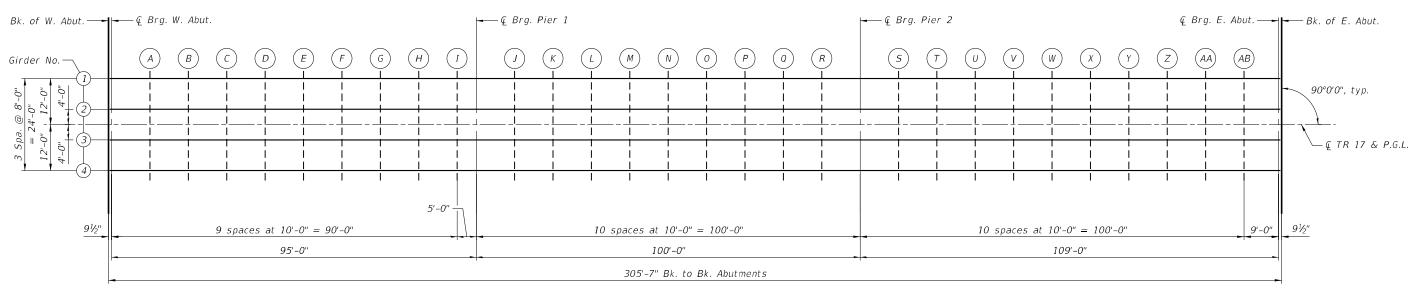
Note:

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 sheets 4 and 5 of 29.

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 4 and 5 of 29, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

T N



PLAN

(Sheet 1 of 3)

QUIGG ENGINEERING INC

 USER NAME = Structures2
 DESIGNED - ZLD
 REVISED

 0680036-72A59-003-Top of Slab Elevations.dgn
 CHECKED - RPW
 REVISED

 PLOT SCALE = 25:0.0000 '." / in.
 DRAWN - JDC
 REVISED

 PLOT DATE = CHECKED - MDC
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS

STRUCTURE NO. 068-0036

SHEET 3 OF 29 SHEETS

 F.A.I. RTE.
 SECTION
 COUNTY
 TOTAL SHEETS
 SHEETS

 55
 (68-5HB-1,2)BRR,BY,D
 MONTGOMERY
 122
 57

 CONTRACT NO. 72A59

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
Bk. W. Abut.	48+37.21	-12.00	672.70	672.70
∉ Brg. W. Abut.	48+38.00	-12.00	672.71	672.71
А	48+48.00	-12.00	672.82	672.87
В	48+58.00	-12.00	672.94	673.02
С	48+68.00	-12.00	673.04	673.16
D	48+78.00	-12.00	673.14	673.27
Ε	48+88.00	-12.00	673.23	673.35
F	48+98.00	-12.00	673.31	673.42
G	49+08.00	-12.00	673.39	673.46
Н	49+18.00	-12.00	673.46	673.50
I	49+28.00	-12.00	673.52	673.53
₢ Brg. Pier 1	49+33.00	-12.00	673.55	673.55
J	49+43.00	-12.00	673.60	673.59
К	49+53.00	-12.00	673.65	673.64
L	49+63.00	-12.00	673.69	673.68
М	49+73.00	-12.00	<i>673.72</i>	<i>673.72</i>
N	49+83.00	-12.00	673.74	673.74
0	49+93.00	-12.00	673.76	673.76
Р	50+03.00	-12.00	673.77	673.76
Q	50+13.00	-12.00	673.77	673.76
R	50+23.00	-12.00	673.77	673.76
ℚ Brg. Pier 2	50+33.00	-12.00	673.76	673.76
S	50+43.00	-12.00	673.74	673.77
T	50+53.00	-12.00	673.72	673.78
U	50+63.00	-12.00	673.69	673.79
V	50+73.00	-12.00	673.65	673.78
W	50+83.00	-12.00	673.60	673.76
Χ	50+93.00	-12.00	673.55	673.72
Υ	51+03.00	-12.00	673.49	673.65
Z	51+13.00	-12.00	673.42	673.56
AA	51+23.00	-12.00	673.35	673.45
AB	51+33.00	-12.00	673.27	673.32
₢ Brg. E. Abut.	51+42.00	-12.00	673.19	673.19
Bk. E. Abut.	51+42.79	-12.00	673.18	673.18

GIRDER 2

Location	Station	0ffset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
Bk. W. Abut.	48+37.21	-4.00	672.83	672.83
€ Brg. W. Abut.	48+38.00	-4.00	672.84	672.84
А	48+48.00	-4.00	672.95	673.01
В	48+58.00	-4.00	673.07	673.16
С	48+68.00	-4.00	673.17	673.30
D	48+78.00	-4.00	673.27	673.41
Ε	48+88.00	-4.00	673.36	673.50
F	48+98.00	-4.00	673.44	673.56
G	49+08.00	-4.00	673.52	673.60
Н	49+18.00	-4.00	673.59	673.63
I	49+28.00	-4.00	673.65	673.66
ℚ Brg. Pier 1	49+33.00	-4.00	673.68	673.68
J	49+43.00	-4.00	673.73	673.72
К	49+53.00	-4.00	673.78	673.77
L	49+63.00	-4.00	673.82	673.81
М	49+73.00	-4.00	673.85	673.85
N	49+83.00	-4.00	673.87	673.87
0	49+93.00	-4.00	673.89	673.89
Р	50+03.00	-4.00	673.90	673.89
Q	50+13.00	-4.00	673.90	673.88
R	50+23.00	-4.00	673.90	673.88
ℚ Brg. Pier 2	50+33.00	-4.00	673.89	673.89
S	50+43.00	-4.00	673.87	673.90
T	50+53.00	-4.00	673.85	673.92
U	50+63.00	-4.00	673.82	673.93
V	50+73.00	-4.00	673.78	673.93
W	50+83.00	-4.00	673.73	673.91
X	50+93.00	-4.00	673.68	673.87
Υ	51+03.00	-4.00	673.62	673.80
Z	51+13.00	-4.00	673.55	673.71
AA	51+23.00	-4.00	673.48	673.59
AB	51+33.00	-4.00	673.40	673.45
ℚ Brg. E. Abut.	51+42.00	-4.00	673.32	673.32
Bk. E. Abut.	51+42.79	-4.00	673.31	673.31

<u>Ç</u> TR 17 AND P.G.L.

Location Station Offset Theoretical Grade Elevations and justed for Load Deflet (Load Deflet) Elevations and justed for Load Deflet (Load Deflet) Bk. W. Abut. 48+37.21 0.00 672.89 672.89 Q Brg. W. Abut. 48+38.00 0.00 672.90 672.90 A 48+48.00 0.00 673.01 673.02 B 48+58.00 0.00 673.13 673.23 C 48+68.00 0.00 673.23 673.36 D 48+78.00 0.00 673.33 673.47 E 48+88.00 0.00 673.42 673.56 G 49+08.00 0.00 673.58 673.65 G 49+08.00 0.00 673.75 673.65 H 49+18.00 0.00 673.74 673.76 G Brg. Pier 1 49+33.00 0.00 673.74 673.78 K 49+53.00 0.00 673.84 673.83 M 49+73.00 0.00 673.93 673.93 <th></th> <th></th> <th></th> <th></th> <th></th>					
© Brg. W. Abut. 48+38.00 0.00 672.90 672.90 A 48+48.00 0.00 673.01 673.07 B 48+58.00 0.00 673.13 673.22 C 48+68.00 0.00 673.23 673.36 D 48+78.00 0.00 673.33 673.47 E 48+88.00 0.00 673.50 673.62 G 49+08.00 0.00 673.58 673.66 H 49+18.00 0.00 673.58 673.66 H 49+28.00 0.00 673.71 673.72 © Brg. Pier 1 49+33.00 0.00 673.74 673.74 J 49+43.00 0.00 673.88 673.87 K 49+53.00 0.00 673.88 673.87 M 49+73.00 0.00 673.93 673.93 N 49+83.00 0.00 673.93 673.95 P 50+03.00 0.00 673.95 673.95	Location	Station	Offset	Grade	Theoretical Grade Elevations Adjusted for Dead Load Deflections
A 48+48.00 0.00 673.01 673.07 B 48+58.00 0.00 673.13 673.22 C 48+68.00 0.00 673.23 673.36 D 48+78.00 0.00 673.33 673.47 E 48+88.00 0.00 673.50 673.62 G 49+08.00 0.00 673.50 673.62 G 49+08.00 0.00 673.58 673.66 H 49+18.00 0.00 673.71 673.72 ¶ Brg. Pier 1 49+33.00 0.00 673.74 673.74 # 49+43.00 0.00 673.74 # 49+53.00 0.00 673.84 673.83 L 49+63.00 0.00 673.88 673.86 M 49+73.00 0.00 673.93 673.93 N 49+83.00 0.00 673.95 673.93 N 49+83.00 0.00 673.96 673.94 # 50+03.00 0.00 673.96 673.94 # 50+23.00 0.00 673.88 673.89 # 50+23.00 0.00 673.88 673.89 # 50+23.00 0.00 673.88 673.93 # 50+3.00 0.00 673.96 673.94 # 50+63.00 0.00 673.96 673.95 # 50+63.00 0.00 673.86 673.95 # 50+63.00 0.00 673.88 673.89 # 50+23.00 0.00 673.88 673.95 # 50+3.00 0.00 673.88 673.95 # 50+3.00 0.00 673.86 673.95 # 50+3.00 0.00 673.86 673.95 # 50+3.00 0.00 673.88 673.99 # 50+63.00 0.00 673.88 673.99 # 50+83.00 0.00 673.88 673.99 # 50+83.00 0.00 673.79 673.99 # 50+83.00 0.00 673.88 673.99 # 50+83.00 0.00 673.88 673.99 # 50+83.00 0.00 673.66 673.99 # 50+83.00 0.00 673.68 673.89 # 50+83.00 0.00 673.68 673.86 # 50+23.00 0.00 673.66 673.99 # 50+83.00 0.00 673.66 673.99 # 50+83.00 0.00 673.66 673.99 # 50+83.00 0.00 673.66 673.99 # 50+83.00 0.00 673.66 673.99 # 50+83.00 0.00 673.66 673.99 # 50+83.00 0.00 673.68 673.86 # 673.86 # 673.86 # 673.86 # 673.86 # 673.86 # 673.86 # 673.86 # 673.86 # 673.86	Bk. W. Abut.	48+37.21	0.00	672.89	672.89
B	Brg. W. Abut.	48+38.00	0.00	672.90	672.90
C	Α	48+48.00	0.00	673.01	673.07
D	В	48+58.00	0.00	673.13	673.22
E 48+88.00 0.00 673.42 673.56 F 48+98.00 0.00 673.50 673.62 G 49+08.00 0.00 673.58 673.66 H 49+18.00 0.00 673.58 673.65 I 49+28.00 0.00 673.71 673.72 © Brg. Pier 1 49+33.00 0.00 673.74 673.74 J 49+43.00 0.00 673.79 673.78 K 49+53.00 0.00 673.84 673.83 L 49+63.00 0.00 673.88 673.87 M 49+73.00 0.00 673.91 673.91 N 49+83.00 0.00 673.93 673.93 0 49+93.00 0.00 673.95 673.95 P 50+03.00 0.00 673.96 673.94 R 50+23.00 0.00 673.96 673.94 © Brg. Pier 2 50+33.00 0.00 673.91 673.95 S 50+43.00 0.00 673.91 673.94 U 50+63.00 0.00 673.95 673.95 V 50+73.00 0.00 673.96 673.94 V 50+73.00 0.00 673.91 673.95 X 50+93.00 0.00 673.91 673.95 Y 51+03.00 0.00 673.74 673.93 Y 51+03.00 0.00 673.68 673.74 F 51+23.00 0.00 673.54 673.65	С	48+68.00	0.00	673.23	673.36
F 48+98.00 0.00 673.50 673.62 673.62 6 49+08.00 0.00 673.58 673.66 H 49+18.00 0.00 673.65 673.65 1 49+28.00 0.00 673.71 673.72 6 Brg. Pier 1 49+33.00 0.00 673.74 673.74 673.74 J 49+63.00 0.00 673.84 673.83 673.66 H 49+73.00 0.00 673.84 673.83 673.87 H 49+3.00 0.00 673.88 673.87 H 49+3.00 0.00 673.91 673.91 673.91 673.91 N 49+83.00 0.00 673.93 673.93 673.93 0 49+93.00 0.00 673.95 673.95 673.95 P 50+03.00 0.00 673.96 673.96 673.94 R 50+23.00 0.00 673.96 673.94 673.94 F 50+53.00 0.00 673.91 673.94 F 50+53.00 0.00 673.91 673.95 F 50+3.00 0.00 673.96 673.95 F 50+3.00 0.00 673.96 673.95 F 50+3.00 0.00 673.96 673.94 F 50+53.00 0.00 673.91 673.98 F 50+53.00 0.00 673.91 673.98 F 50+53.00 0.00 673.91 673.98 F 50+53.00 0.00 673.88 673.99 F 50+53.00 0.00 673.88 673.99 F 50+53.00 0.00 673.84 673.99 F 50+53.00 0.00 673.84 673.99 F 50+53.00 0.00 673.74 673.93 F 50+53.00 0.00 673.68 673.99 F 51+3.00 0.00 673.68 673.86 F 51+23.00 0.00 673.54 673.65	D	48+78.00	0.00	673.33	673.47
G 49+08.00 0.00 673.58 673.66 H 49+18.00 0.00 673.65 673.65 I 49+28.00 0.00 673.71 673.72 Q Brg. Pier 1 49+3.00 0.00 673.74 673.74	Ε	48+88.00	0.00	673.42	673.56
H 49+18.00 0.00 673.65 673.65 1 673.69 1 49+28.00 0.00 673.71 673.72 673.72 673.72 673.74 673.74 673.74 673.74 673.74 673.74 673.74 673.74 673.74 673.74 673.74 673.74 673.74 673.74 673.75 673.78 673.78 673.79 673.78 673.78 673.83 673.83 673.83 673.83 673.84 673.83 673.81 673.91 673.91 673.91 673.91 673.93 673.93 673.93 673.93 673.93 673.93 673.93 673.95 673	F	48+98.00	0.00	673.50	673.62
I 49+28.00 0.00 673.71 673.72 © Brg. Pier 1 49+33.00 0.00 673.74 673.74 J 49+43.00 0.00 673.79 673.78 K 49+53.00 0.00 673.84 673.83 L 49+63.00 0.00 673.91 673.91 N 49+83.00 0.00 673.93 673.93 0 49+93.00 0.00 673.95 673.95 P 50+03.00 0.00 673.96 673.95 Q 50+13.00 0.00 673.96 673.94 R 50+23.00 0.00 673.95 673.95 G Brg. Pier 2 50+33.00 0.00 673.95 673.95 S 50+43.00 0.00 673.93 673.95 T 50+53.00 0.00 673.93 673.96 V 50+63.00 0.00 673.88 673.99 V 50+73.00 0.00 673.88 673.99 V 50+83.00 0.00 673.84 673.99	G	49+08.00	0.00	673.58	673.66
Q Brg. Pier 1 49+33.00 0.00 673.74 673.74 J 49+43.00 0.00 673.79 673.78 K 49+53.00 0.00 673.84 673.83 L 49+63.00 0.00 673.88 673.83 M 49+73.00 0.00 673.91 673.91 N 49+83.00 0.00 673.93 673.93 O 49+93.00 0.00 673.95 673.95 P 50+03.00 0.00 673.96 673.94 R 50+23.00 0.00 673.96 673.94 Q Frier 2 50+33.00 0.00 673.95 673.95 S 50+43.00 0.00 673.93 673.95 G Brg. Pier 2 50+33.00 0.00 673.93 673.95 S 50+43.00 0.00 673.93 673.96 U 50+63.00 0.00 673.88 673.99 V 50+73.00 0.00 673.84	Н	49+18.00	0.00	673.65	673.69
J 49+43.00 0.00 673.79 673.78 K 49+53.00 0.00 673.84 673.83 L 49+63.00 0.00 673.88 673.87 M 49+73.00 0.00 673.91 673.91 N 49+83.00 0.00 673.93 673.93 0 49+93.00 0.00 673.95 673.95 P 50+03.00 0.00 673.96 673.96 Q 50+13.00 0.00 673.96 673.94 R 50+23.00 0.00 673.96 673.95 S 50+43.00 0.00 673.95 673.95 S 50+43.00 0.00 673.95 673.95 V 50+53.00 0.00 673.95 673.95 V 50+63.00 0.00 673.88 673.99 V 50+83.00 0.00 673.88 673.99 W 50+83.00 0.00 673.74 673.93 Y 51+03.00 0.00 673.68 673.86 Z 51+13.00 0.00 673.61 673.77 AAA 51+23.00 0.00 673.54 673.65	I	49+28.00	0.00	673.71	673.72
K 49+53.00 0.00 673.84 673.83 L 49+63.00 0.00 673.88 673.87 M 49+73.00 0.00 673.91 673.93 N 49+83.00 0.00 673.93 673.93 O 49+93.00 0.00 673.95 673.95 P 50+03.00 0.00 673.96 673.95 Q 50+13.00 0.00 673.96 673.94 Q Forestall 0.00 673.96 673.94 Q Forestall 0.00 673.96 673.94 Q Forestall 0.00 673.95 673.95 S 50+23.00 0.00 673.95 673.95 S 50+43.00 0.00 673.93 673.95 T 50+53.00 0.00 673.91 673.98 V 50+73.00 0.00 673.88 673.99 V 50+30.00 0.00 673.84 673.99 X 50+93.00 0.00 673.74 673.93 Y 51+03.00 <td>Brg. Pier 1</td> <td>49+33.00</td> <td>0.00</td> <td>673.74</td> <td>673.74</td>	Brg. Pier 1	49+33.00	0.00	673.74	673.74
L 49+63.00 0.00 673.88 673.87 M 49+73.00 0.00 673.91 673.91 N 49+83.00 0.00 673.93 673.93 0 49+93.00 0.00 673.95 673.95 P 50+03.00 0.00 673.96 673.96 Q 50+13.00 0.00 673.96 673.94 R 50+23.00 0.00 673.96 673.94 Q Brg. Pier 2 50+33.00 0.00 673.95 S 50+43.00 0.00 673.95 T 50+53.00 0.00 673.91 673.98 U 50+63.00 0.00 673.88 673.99 V 50+73.00 0.00 673.88 673.99 W 50+83.00 0.00 673.79 X 50+93.00 0.00 673.74 673.93 Y 51+03.00 0.00 673.68 673.86 Z 51+13.00 0.00 673.61 673.77 AAA 51+23.00 0.00 673.54 673.65	J	49+43.00	0.00	673.79	673.78
M 49+73.00 0.00 673.91 673.91 N 49+83.00 0.00 673.93 673.93 0 49+93.00 0.00 673.95 673.95 P 50+03.00 0.00 673.96 673.95 Q 50+13.00 0.00 673.96 673.94 R 50+23.00 0.00 673.96 673.94 F 50+33.00 0.00 673.95 673.95 S 50+43.00 0.00 673.93 673.96 T 50+53.00 0.00 673.91 673.98 V 50+63.00 0.00 673.88 673.99 V 50+73.00 0.00 673.84 673.99 X 50+93.00 0.00 673.74 673.93 Y 51+03.00 0.00 673.68 673.68 Z 51+13.00 0.00 673.61 673.77 AA 51+23.00 0.00 673.54 673.65	К	49+53.00	0.00	673.84	673.83
N 49+83.00 0.00 673.93 673.93 0 673.93 0 673.95 673.95 673.95 673.95 673.95 673.95 673.95 673.95 673.95 673.95 673.95 673.95 673.96 673.97 673.98 673.99 0.00 673.91 673.98 673.99 0.00 673.88 673.99 0.00 673.88 673.99 0.00 673.84 673.99 0.00 673.84 673.99 0.00 673.79 673.97 0.00 673.79 673.97 0.00 673.79 673.97 0.00 673.79 673.97 0.00 673.79 673.97 0.00 673.79 673.97 0.00 673.68 673.99 0.00 673.68 673.99 0.00 673.68 673.99 0.00 673.68 673.88 673.99 0.00 673.68 673.99 0.00 673.68 673.99 0.00 673.68 673.88 673.99 0.00 673.68 673.99 0.00 673.68 673.99 0.00 673.68 673.86 673	L	49+63.00	0.00	673.88	673.87
0 49+93.00 0.00 673.95 673.95 P 50+03.00 0.00 673.96 673.95 Q 50+13.00 0.00 673.96 673.94 R 50+23.00 0.00 673.96 673.94 Q Brg. Pier 2 50+33.00 0.00 673.95 673.95 S 50+43.00 0.00 673.93 673.96 T 50+53.00 0.00 673.91 673.98 U 50+63.00 0.00 673.88 673.99 V 50+73.00 0.00 673.84 673.99 X 50+93.00 0.00 673.79 673.93 Y 51+03.00 0.00 673.68 673.86 Z 51+13.00 0.00 673.61 673.77 AA 51+23.00 0.00 673.54 673.65	М	49+73.00	0.00	673.91	673.91
P 50+03.00 0.00 673.96 673.95 Q 50+13.00 0.00 673.96 673.94 R 50+23.00 0.00 673.96 673.94 Q Brg. Pier 2 50+33.00 0.00 673.95 673.95 S 50+43.00 0.00 673.93 673.96 T 50+53.00 0.00 673.91 673.98 V 50+63.00 0.00 673.88 673.99 V 50+73.00 0.00 673.79 673.97 X 50+93.00 0.00 673.74 673.93 Y 51+03.00 0.00 673.68 673.86 Z 51+13.00 0.00 673.54 673.65	N	49+83.00	0.00	673.93	673.93
Q 50+13.00 0.00 673.96 673.94 R 50+23.00 0.00 673.96 673.94 Q Brg. Pier 2 50+33.00 0.00 673.95 673.95 S 50+43.00 0.00 673.93 673.96 T 50+53.00 0.00 673.91 673.96 U 50+63.00 0.00 673.88 673.99 V 50+73.00 0.00 673.88 673.99 W 50+83.00 0.00 673.79 673.97 X 50+93.00 0.00 673.74 673.93 Y 51+03.00 0.00 673.68 673.86 Z 51+13.00 0.00 673.61 673.77 AA 51+23.00 0.00 673.54 673.65	0	49+93.00	0.00	673.95	673.95
R 50+23.00 0.00 673.96 673.94 © Brg. Pier 2 50+33.00 0.00 673.95 673.95 S 50+43.00 0.00 673.93 673.96 T 50+53.00 0.00 673.91 673.98 U 50+63.00 0.00 673.88 673.99 V 50+73.00 0.00 673.84 673.99 W 50+83.00 0.00 673.79 673.97 X 50+93.00 0.00 673.74 673.93 Y 51+03.00 0.00 673.68 673.86 Z 51+13.00 0.00 673.61 673.77 AA 51+23.00 0.00 673.54 673.65	Р	50+03.00	0.00	673.96	673.95
Q Brg. Pier 2 50+33.00 0.00 673.95 673.95 S 50+43.00 0.00 673.93 673.96 T 50+53.00 0.00 673.91 673.98 U 50+63.00 0.00 673.88 673.99 V 50+73.00 0.00 673.84 673.99 W 50+83.00 0.00 673.79 673.93 X 50+93.00 0.00 673.74 673.93 Y 51+03.00 0.00 673.68 673.86 Z 51+13.00 0.00 673.54 673.65 AA 51+23.00 0.00 673.54 673.65	Q	50+13.00	0.00	673.96	673.94
S 50+43.00 0.00 673.93 673.96 T 50+53.00 0.00 673.91 673.98 U 50+63.00 0.00 673.88 673.99 V 50+73.00 0.00 673.84 673.99 W 50+83.00 0.00 673.79 673.93 X 50+93.00 0.00 673.74 673.93 Y 51+03.00 0.00 673.68 673.86 Z 51+13.00 0.00 673.61 673.77 AA 51+23.00 0.00 673.54 673.65	R	50+23.00	0.00	673.96	673.94
T 50+53.00 0.00 673.91 673.98 U 50+63.00 0.00 673.88 673.99 V 50+73.00 0.00 673.84 673.99 W 50+83.00 0.00 673.79 673.97 X 50+93.00 0.00 673.74 673.93 Y 51+03.00 0.00 673.68 673.86 Z 51+13.00 0.00 673.61 673.77 AA 51+23.00 0.00 673.54 673.65	Brg. Pier 2	50+33.00	0.00	673.95	673.95
U 50+63.00 0.00 673.88 673.99 V 50+73.00 0.00 673.84 673.99 W 50+83.00 0.00 673.79 673.97 X 50+93.00 0.00 673.74 673.93 Y 51+03.00 0.00 673.68 673.86 Z 51+13.00 0.00 673.61 673.77 AA 51+23.00 0.00 673.54 673.65	S	50+43.00	0.00	673.93	673.96
V 50+73.00 0.00 673.84 673.99 W 50+83.00 0.00 673.79 673.97 X 50+93.00 0.00 673.74 673.93 Y 51+03.00 0.00 673.68 673.86 Z 51+13.00 0.00 673.61 673.77 AA 51+23.00 0.00 673.54 673.65	T	50+53.00	0.00	673.91	673.98
W 50+83.00 0.00 673.79 673.97 X 50+93.00 0.00 673.74 673.93 Y 51+03.00 0.00 673.68 673.86 Z 51+13.00 0.00 673.61 673.77 AA 51+23.00 0.00 673.54 673.65	U	50+63.00	0.00	673.88	673.99
X 50+93.00 0.00 673.74 673.93 Y 51+03.00 0.00 673.68 673.86 Z 51+13.00 0.00 673.61 673.77 AA 51+23.00 0.00 673.54 673.65	V	50+73.00	0.00	673.84	673.99
Y 51+03.00 0.00 673.68 673.86 Z 51+13.00 0.00 673.61 673.77 AA 51+23.00 0.00 673.54 673.65	W	50+83.00	0.00	673.79	673.97
Z 51+13.00 0.00 673.61 673.77 AA 51+23.00 0.00 673.54 673.65	Χ	50+93.00	0.00	673.74	673.93
AA 51+23.00 0.00 673.54 673.65	Υ	51+03.00	0.00	673.68	673.86
	Z	51+13.00	0.00	673.61	673.77
AB 51+33.00 0.00 673.46 673.51	AA	51+23.00	0.00	673.54	673.65
	AB	51+33.00	0.00	673.46	673.51
© Brg. E. Abut. 51+42.00 0.00 673.38 673.38	Brg. E. Abut.	51+42.00	0.00	673.38	673.38
Bk. E. Abut. 51+42.79 0.00 673.37 673.37	Bk. E. Abut.	51+42.79	0.00	673.37	673.37

MODEL: Default

 USER NAME = Structures2
 DESIGNED - ZLD
 REVISED

 0680036-72A59-004-Top of Slab Elevations.dgn
 CHECKED - RPW
 REVISED

 PLOT SCALE = 0:2.0000 :" / in.
 DRAWN - JDC
 REVISED

 PLOT DATE = CHECKED - MDC
 REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 068-0036

SHEET 4 OF 29 SHEETS

(Sheet 2 of 3)

<u>GIRDER 3</u>

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
Bk. W. Abut.	48+37.21	4.00	672.83	672.83
€ Brg. W. Abut.	48+38.00	4.00	672.84	672.84
Α	48+48.00	4.00	672.95	673.01
В	48+58.00	4.00	673.07	673.16
С	48+68.00	4.00	673.17	673.30
D	48+78.00	4.00	673.27	673.41
Ε	48+88.00	4.00	673.36	673.50
F	48+98.00	4.00	673.44	673.56
G	49+08.00	4.00	673.52	673.60
Н	49+18.00	4.00	673.59	673.63
I	49+28.00	4.00	673.65	673.66
ℚ Brg. Pier 1	49+33.00	4.00	673.68	673.68
J	49+43.00	4.00	673.73	673.72
К	49+53.00	4.00	673.78	673.77
L	49+63.00	4.00	673.82	673.81
М	49+73.00	4.00	673.85	673.85
N	49+83.00	4.00	673.87	673.87
0	49+93.00	4.00	673.89	673.89
Р	50+03.00	4.00	673.90	673.89
Q	50+13.00	4.00	673.90	673.88
R	50+23.00	4.00	673.90	673.88
ℚ Brg. Pier 2	50+33.00	4.00	673.89	673.89
S	50+43.00	4.00	673.87	673.90
T	50+53.00	4.00	673.85	673.92
U	50+63.00	4.00	673.82	673.93
V	50+73.00	4.00	673.78	673.93
W	50+83.00	4.00	673.73	673.91
Χ	50+93.00	4.00	673.68	673.87
Υ	51+03.00	4.00	673.62	673.80
Ζ	51+13.00	4.00	673.55	673.71
AA	51+23.00	4.00	673.48	673.59
AB	51+33.00	4.00	673.40	673.45
ℚ Brg. E. Abut.	51+42.00	4.00	673.32	673.32
Bk. E. Abut.	51+42.79	4.00	673.31	673.31

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
Bk. W. Abut.	48+37.21	12.00	672.70	672.70
€ Brg. W. Abut.	48+38.00	12.00	672.71	672.71
A	48+48.00	12.00	672.82	672.87
В	48+58.00	12.00	672.94	673.02
С	48+68.00	12.00	673.04	673.16
D	48+78.00	12.00	673.14	673.27
Ε	48+88.00	12.00	673.23	673.35
F	48+98.00	12.00	673.31	673.42
G	49+08.00	12.00	673.39	673.46
Н	49+18.00	12.00	673.46	673.50
I	49+28.00	12.00	673.52	673.53
ℚ Brg. Pier 1	49+33.00	12.00	673.55	673.55
J	49+43.00	12.00	673.60	673.59
K	49+53.00	12.00	673.65	673.64
L	49+63.00	12.00	673.69	673.68
М	49+73.00	12.00	673.72	<i>673.72</i>
N	49+83.00	12.00	673.74	673.74
0	49+93.00	12.00	673.76	673.76
Р	50+03.00	12.00	673.77	673.76
Q	50+13.00	12.00	673.77	673.76
R	50+23.00	12.00	673.77	673.76
ℚ Brg. Pier 2	50+33.00	12.00	673.76	673.76
5	50+43.00	12.00	673.74	673.77
T	50+53.00	12.00	673.72	673.78
U	50+63.00	12.00	673.69	673.79
V	50+73.00	12.00	673.65	673.78
W	50+83.00	12.00	673.60	673.76
X	50+93.00	12.00	673.55	673.72
Υ	51+03.00	12.00	673.49	673.65
Z	51+13.00	12.00	673.42	673.56
AA	51+23.00	12.00	673.35	673.45
AB	51+33.00	12.00	673.27	67 <i>3.32</i>
€ Brg. E. Abut.	51+42.00	12.00	673.19	673.19
Bk. E. Abut.	51+42.79	12.00	673.18	673.18

(Sheet 3 of 3)

	<u>د ا</u>	3 5 1
		DEL: Defaul E NAME: S:\
1C	d QUIGG ENGINEERING	울림
	10/8/2024 3:08:16 PM	
7	QUIGG ENGINEERING 10/8/2024 3:08:16 PM	MODEL: D FILE NAME

 USER NAME = Structures2
 DESIGNED - ZLD
 REVISED

 0680036-72A59-005-Top of Slab Elevations.dgn
 CHECKED - RPW REVISED

 PLOT SCALE = 0:2.0000 ':" / in.
 DRAWN - JDC REVISED

 PLOT DATE = CHECKED - MDC
 REVISED

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
Bk. of W. Appr. Bent	48+20.50	-13.58	672.45	672.45
W. End of W. Vaulted Approach Span	48+21.00	-13.58	672.46	672.46
AI	48+31.00	-13.58	672.59	672.59
E. End of W. Vaulted Approach Span	48+37.21	-13.58	672.67	672.67

Bk. of W. Appr. Bent —

W. End of W. Vaulted —

Appr. Span

(A1)

90°0'0", typ.

6'-21/2"

- @ TR 17 & P.G.L.

— North Edge of Shoulder

- E. End. of W. Vaulted Appr. Span & Bk. of

W. Abut.

– South Edge of Pavement

— South Edge of Shoulder

— North Edge of Pavement

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
Bk. of W. Appr. Bent	48+20.50	-10.00	672.52	672.52
W. End of W. Vaulted Approach Span	48+21.00	-10.00	672.53	672.53
A1	48+31.00	-10.00	672.66	672.66
E. End of W. Vaulted Approach Span & Bk. of W. Abut.	48+37.21	-10.00	672.74	672.74

<u>G TR 17 & P.G.L.</u>

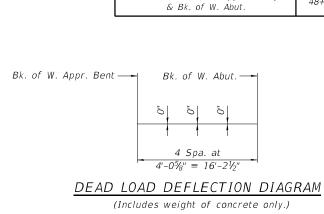
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
Bk. of W. Appr. Bent	48+20.50	0.00	672.67	672.67
W. End of W. Vaulted Approach Span	48+21.00	0.00	672.68	672.68
A1	48+31.00	0.00	672.81	672.81
E. End of W. Vaulted Approach Span & Bk. of W. Abut.	48+37.21	0.00	672.89	672.89

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
Bk. of W. Appr. Bent	48+20.50	10.00	672.52	672.52
W. End of W. Vaulted Approach Span	48+21.00	10.00	672.53	672.53
A1	48+31.00	10.00	672.66	672.66
E. End of W. Vaulted Approach Span & Bk. of W. Abut.	48+37.21	10.00	672.74	672.74

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
Bk. of W. Appr. Bent	48+20.50	13.58	672.45	672.45
W. End of W. Vaulted Approach Span	48+21.00	13.58	672.46	672.46
A1	48+31.00	13.58	672.59	672.59
E. End of W. Vaulted Approach Span & Bk. of W. Abut.	48+37.21	13.58	672.67	672.67



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 and grinding as shown on this sheet.



USER NAME = Structures2	DESIGNED	-	ZLD	REVISED -	
0680036-72A59-006-Top of Vaulted Appr. Slab El	ev@Hittir@ktligt0	-	RPW	REVISED -	
PLOT SCALE = 6:8.0000 ':" / in.	DRAWN	-	JDC	REVISED -	
PLOT DATE =	CHECKED	-	MDC	REVISED -	

10'-0"

PLAN

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections		
W. End of E. Vaulted Approach Span & Bk. of E. Abut.	51+42.79	-13.58	673.15	673.15		
A2	51+52.79	-13.58	673.06	673.06		
E. End of E. Vaulted Approach Span	51+59.00	-13.58	672.99	672.99		
Bk. of E. Appr. Bent	51+59.50	-13.58	672.99	672.99		

W. End of E. Vaulted — Appr. Slab & Bk. of

E. Abut.

(A2)

90°0'0", typ.

− Q TR 17 & P.G.L.

— North Edge of Shoulder

- Bk. of E. Appr. Bent

E. End of E. Vaulted

Appr. Slab

— South Edge of Pavement

— South Edge of Shoulder

 $6'-2^{1}/_{2}''$

__North Edge of Pavement

NORTH EDGE OF PAVEMENT

Location	Station	0ffset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
W. End of E. Vaulted Approach Span & Bk. of E. Abut.	51+42.79	-10.00	673.22	673.22
A2	51+52.79	-10.00	673.13	673.13
E. End of E. Vaulted Approach Span	51+59.00	-10.00	673.07	673.07
Bk. of E. Appr. Bent	51+59.50	-10.00	673.06	673.06

♀ TR 17 & P.G.L.

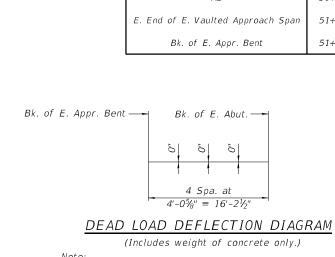
Location	Station	0ffset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
W. End of E. Vaulted Approach Span & Bk. of E. Abut.	51+42.79	0.00	673.37	673.37
A2	51+52.79	0.00	673.28	673.28
E. End of E. Vaulted Approach Span	51+59.00	0.00	673.22	673.22
Bk. of E. Appr. Bent	51+59.50	0.00	673.21	673.21

SOUTH EDGE OF PAVEMENT

Location	Station	0ffset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
W. End of E. Vaulted Approach Span & Bk. of E. Abut.	51+42.79	10.00	673.22	673.22
A2	51+52.79	10.00	673.13	673.13
E. End of E. Vaulted Approach Span	51+59.00	10.00	673.07	673.07
Bk. of E. Appr. Bent	51+59.50	10.00	673.06	673.06

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflections
W. End of E. Vaulted Approach Span & Bk. of E. Abut.	51+42.79	13.58	673.15	673.15
A2	51+52.79	13.58	673.06	673.06
E. End of E. Vaulted Approach Span	51+59.00	13.58	672.99	672.99
Bk. of E. Appr. Bent	51+59.50	13.58	672.99	672.99



(Includes weight of concrete only.)

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 and grinding as shown on this



USER NAME = Structures2	DESIGNED	-	ZLD	REVISED -	
0680036-72A59-007-Top of Vaulted Appr. Slab El	ev@HitEr@Kdfg10	-	RPW	REVISED -	
PLOT SCALE = 6:8.0000 ':" / in.	DRAWN	-	JDC	REVISED -	
PLOT DATE =	CHECKED	-	MDC	REVISED -	

10'-0"

<u>PLAN</u>

Location	Station	0ffset	Theoretical Grade Elevations
W. End of W. Approach	47+91.00	-13.58	672.02
B1 B2	48+01.00 48+11.00	-13.58 -13.58	672.18 672.32
E. End of W. Approach	48+21.00	-13.58	672.46

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Approach	47+91.00	-10.00	672.10
B1 B2	48+01.00 48+11.00	-10.00 -10.00	672.25 672.39
E. End of W. Approach	48+21.00	-10.00	672.53

Location	Station	0ffset	Theoretical Grade Elevations
W. End of W. Approach	47+91.00	0.00	672.25
B1 B2	48+01.00 48+11.00	0.00 0.00	672.40 672.54
E. End of W. Approach	48+21.00	0.00	672.68

W. End of W. Appr. Slab South Edge of Shoulder North Edge of Shoulder North Edge of Shoulder North Edge of Shoulder Porth Edge of Shoulder South Edge of Shoulder

3 spaces at 10'-0" = 30'-0"

<u>PLAN</u>

(B2)

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Approach	47+91.00	10.00	672.10
B1 B2	48+01.00 48+11.00	10.00 10.00	672.25 672.39
E. End of W. Approach	48+21.00	10.00	672.53

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of W. Approach	47+91.00	13.58	672.02
B1 B2	48+01.00 48+11.00	13.58 13.58	672.18 672.32
E. End of W. Approach	48+21.00	13.58	672.46

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	51+59.00	-13.58	672.99
B3 B4	51+69.00 51+79.00	-13.58 -13.58	672.89 672.78
E. End of E. Approach	51+89.00	-13.58	672.66

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	51+59.00	-10.00	673.07
B3 B4	51+69.00 51+79.00	-10.00 -10.00	672.96 672.85
E. End of E. Approach	51+89.00	-10.00	672.73

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	51+59.00	0.00	673.22
B3 B4	51+69.00 51+79.00	0.00 0.00	673.11 673.00
E. End of E. Approach	51+89.00	0.00	672.88

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	51+59.00	10.00	673.07
B3 B4	51+69.00 51+79.00	10.00 10.00	672.96 672.85
E. End of E. Approach	51+89.00	10.00	672.73

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. End of E. Approach	51+59.00	13.58	672.99
B3 B4	51+69.00 51+79.00	13.58 13.58	672.89 672.78
E. End of E. Approach	51+89.00	13.58	672.66

4	(B3) (B4)	
N 	North Edge of Shoulder	
N	North Edge of Pavement	3-7" Shldr.
	90°0'0", typ.	10'-0" Lane
		272"
	E. End of E. Appr. Slab	10'-0" Lane
W. End of E. Appr. Slab ————	South Edge of Pavement	10, 10,
	South Edge of Shoulder	3'-7" Shldr.
-	3 spaces at 10'-0" = 30'-0" PLAN	

 USER NAME = Structures2
 DESIGNED - ZLD
 REVISED

 0680036-72A59-009-Top of Approach Slab Eleva io69H59KED - RPW
 REVISED

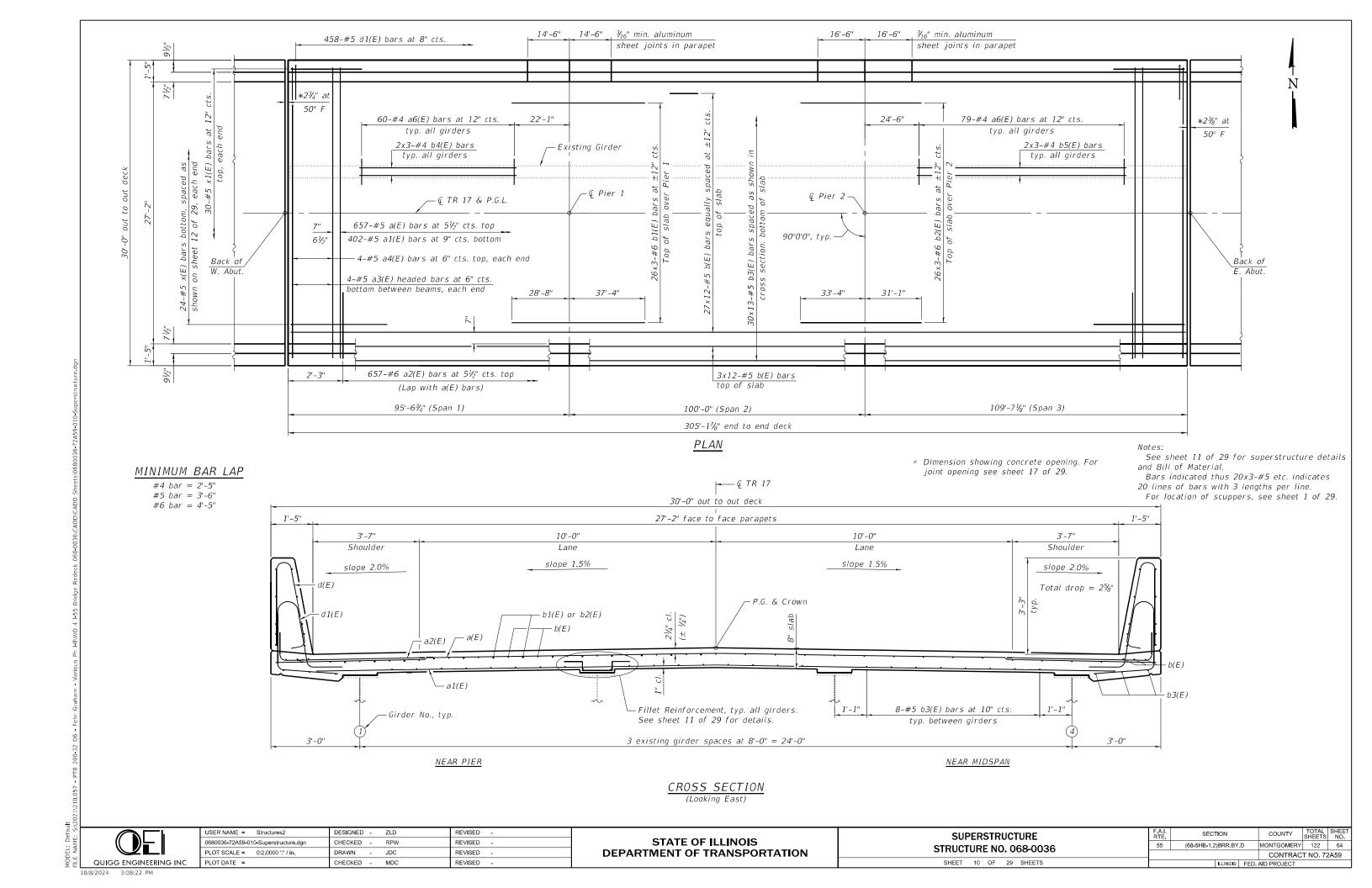
 PLOT SCALE = 6:8.0000 ':" / in.
 DRAWN - JDC
 REVISED

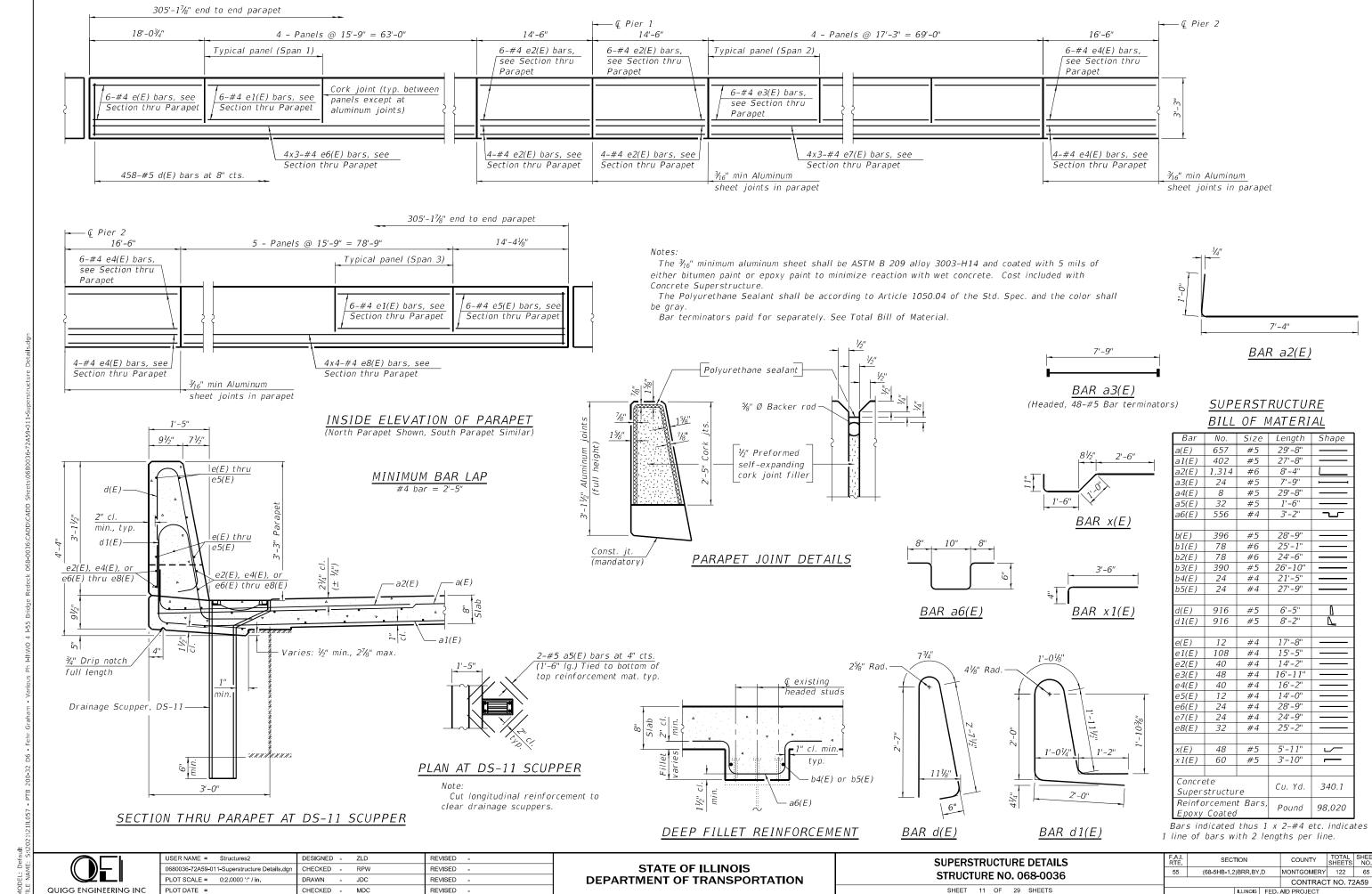
 PLOT DATE = CHECKED - MDC
 REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

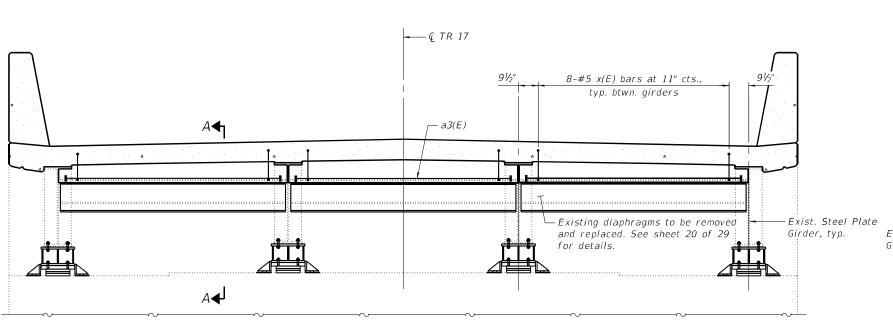
TOP OF EAST APPROACH SLAB ELEVATIONS
STRUCTURE NO. 068-0036

SHEET 9 OF 29 SHEETS





10/8/2024 3:08:23 PM



DIAPHRAGM AT ABUTMENT

For details of expansion joint, see sheet 17 of 29. x(E) x1(E) a4(E) — Vaulted Approach • Span a1(E) a3(E) typ. Existing diaphragms to be removed— and replaced. See sheet 20 of 29 11/4" at W. Abut. 1%" at E. Abut. for details. Exist. Steel Plate -Girder

Note:

See sheet 11 of 29 for superstructure details and Bill of Material.

SECTION A-A

— Back of Abut.

QUIGG ENGINEERING INC

 USER NAME = Structures2
 DESIGNED - ZLD
 REVISED

 0680036-72A59-012-Diaphragm Details.dgn
 CHECKED - RPW
 REVISED

 PLOT SCALE = 0:2,0000 ':" / in.
 DRAWN - JDC
 REVISED

 PLOT DATE = CHECKED - MDC
 REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS
STRUCTURE NO. 068-0036

SHEET 12 OF 29 SHEETS

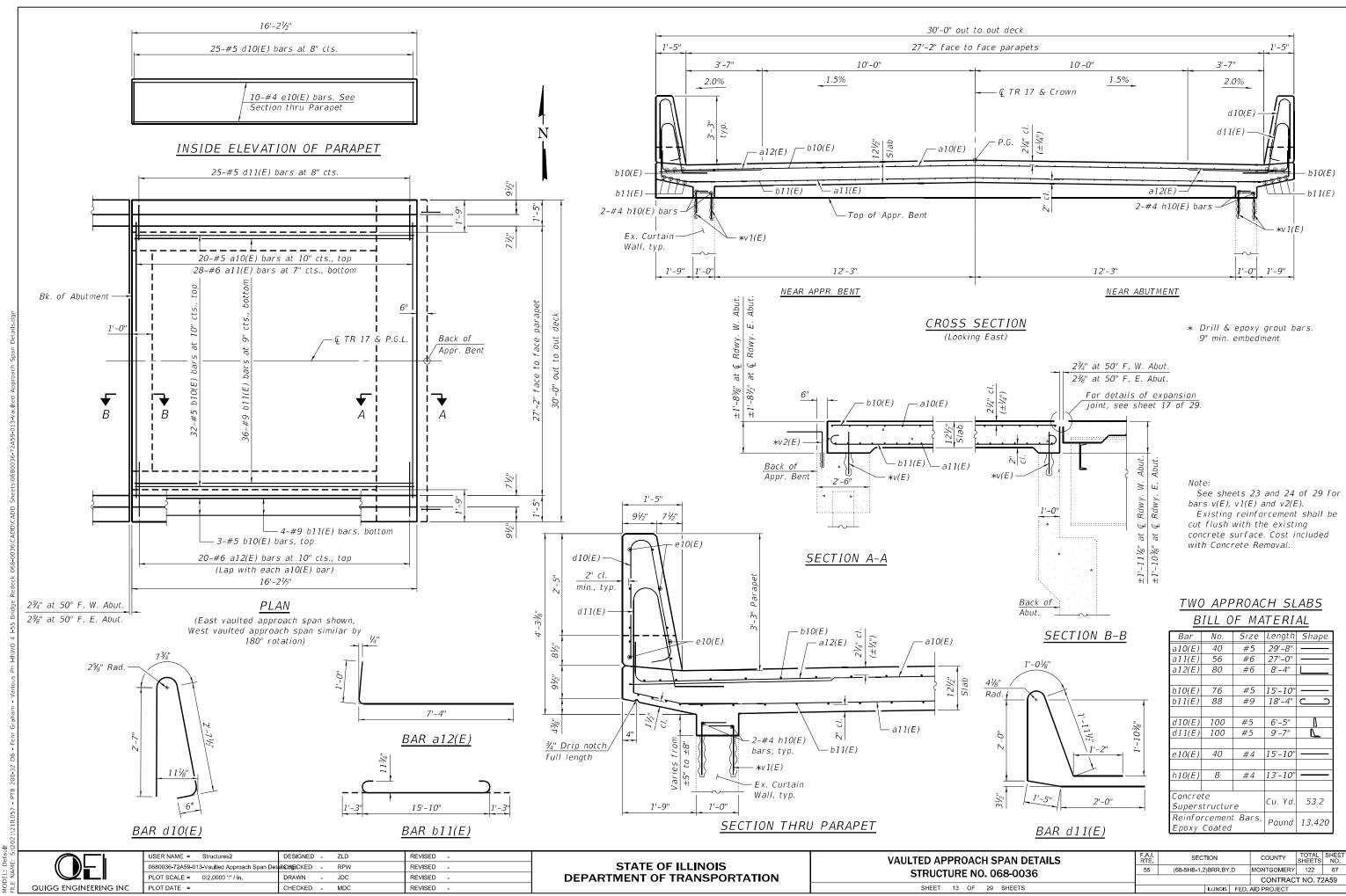
 F.A.I. RTE.
 SECTION
 COUNTY SHEETS
 TOTAL NO.
 SHEETS NO.

 55
 (68-5HB-1,2)BRR,BY,D
 MONTGOMERY
 122
 656

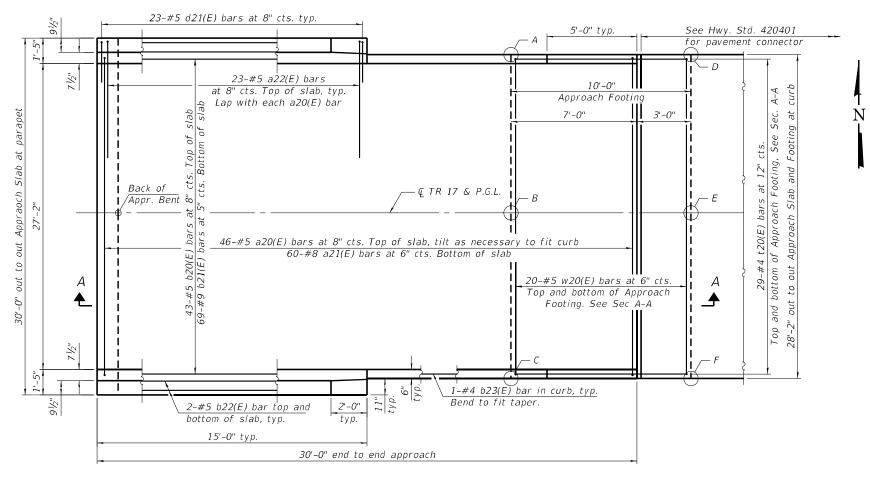
 CONTRACT NO. 72A59

 ILLINOIS FED. AID PROJECT

10/8/2024 3:08:25 PM



10/8/2024 3:08:26 PM



TOP AND BOTTOM ELEVATIONS FOR APPROACH FOOTING

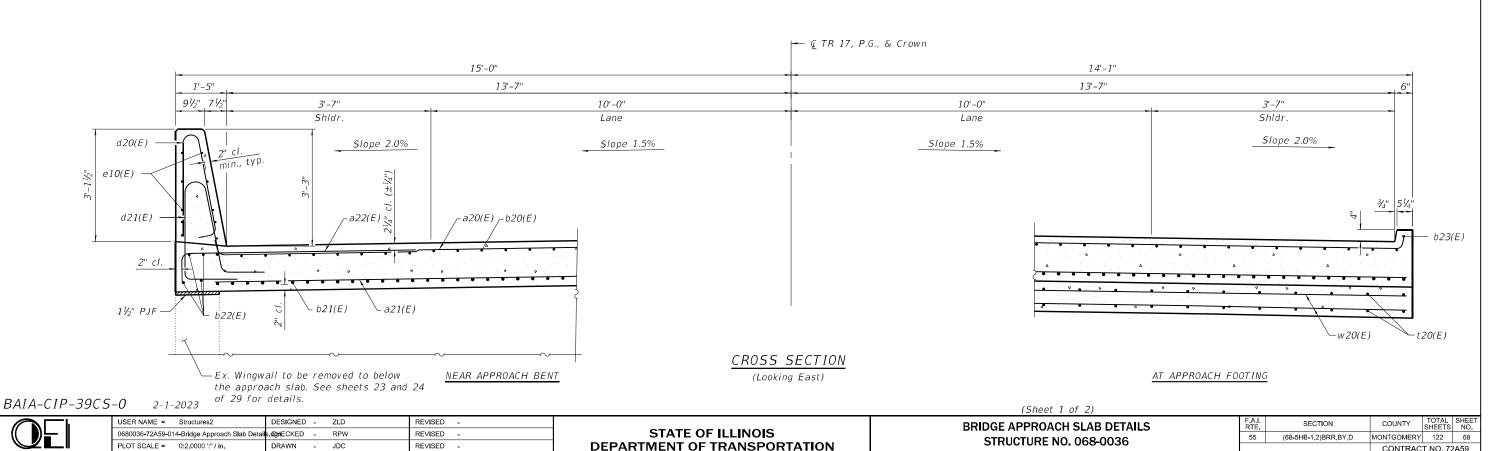
W	est Approa	ch	Ea	ast Approa	ch
Point/ Location	Тор	Bottom	Point/ Location	Тор	Bottom
Α	670.87	670.04	Α	671.48	670.65
В	671.10	670.27	В	671.71	670.88
С	670.87	670.04	С	671.48	670.65
D	670.72	669.88	D	671.36	670.53
Ε	670.95	670.11	E	671.59	670.76
F	670.72	669.88	F	671.36	670.53

CONTRACT NO. 72A59

PLAN (East approach slab shown; West approach slab similar by 180° rotation)

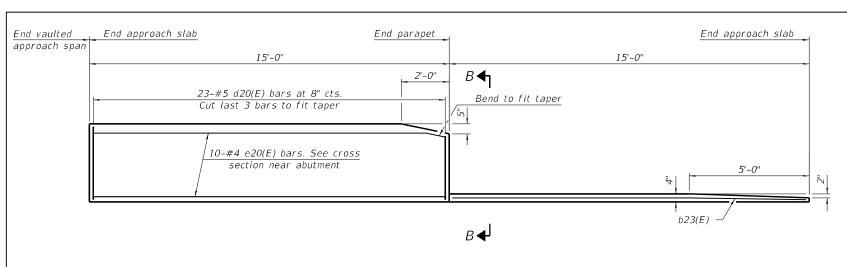
REVISED -

CHECKED - MDC

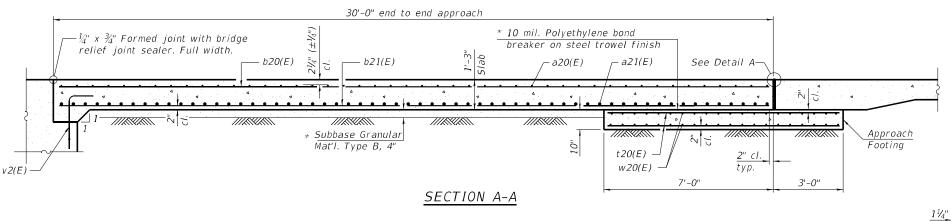


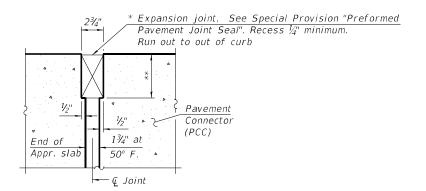
SHEET 14 OF 29 SHEETS

PLOT DATE =



INSIDE ELEVATION OF PARAPET AND CURB

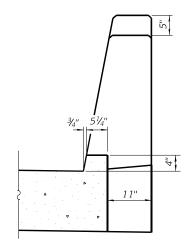




DETAIL A

(Detail A shown, applies to Highway Standard 420401 only. Detail A for pavement connector (HMA) may be found on Highway Standard 420406.)

- * Cost included with Concrete Superstructure (Approach Slab).
- ** Per manufacturer recommendations



VIEW B-B

Notes:

Parapet concrete shall be paid for as Concrete Superstructure.

Approach slab shall be paid for as Concrete Superstructure (Approach Slab).

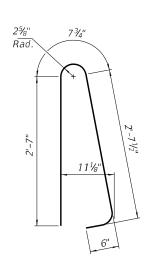
Approach footing concrete shall be paid for as Concrete Structures.

The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

Cost of excavation for approach footing included with Concrete Structures.

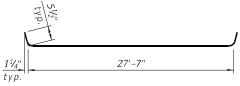
See sheets 23 and 24 of 29 for details of v2(E) bar.

Rad

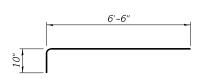


1'-6" "S

BAR d20(E)



BAR a20(E)



BAR a22(E)

TWO APPROACHES BILL OF MATERIAL

BAR d21(E)

_				
Bar	No.	Size	Length	Shape
a20(E)	92	#5	28'-6"	
a21(E)	120	#8	27'-10"	
a22(E)	92	#5	7'-4"	
b20(E)	86	#5	29'-8"	
b21(E)	138	#9	29'-8"	
b22(E)	16	#5	14'-8"	
b23(E)	4	#4	14'-8"	
d20(E)	92	#5	6'-5"	N
d21(E)	92	#5	8'-6"	<u> </u>
e20(E)	40	#4	14'-8"	
t20(E)	116	#4	9'-8"	
w20(E)	80	#5	27'-10"	
Concrete	Structur	es	Cu. Yd.	17.4
Concrete	Supersti	ructure	Cu. Yd.	7.8
Concrete Superstructure			Cu. Yd.	81.4
(Approach	slab)		Cu. Tu.	01.4
Reinforce	ment Bai	·s,	Pound	34.130
Ероху Со	ated		round	34,130

BAIA-CIP-39CS-0 2-1-2023



I	USER NAME = Structures2	DESIGNED	-	ZLD	REVISED -
ſ	0680036-72A59-015-Bridge Approach Slab Detail	s.@UHECKED	-	RPW	REVISED -
ſ	PLOT SCALE = 0:2.0000 ':" / in.	DRAWN	-	JDC	REVISED -
	PLOT DATE =	CHECKED	-	MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

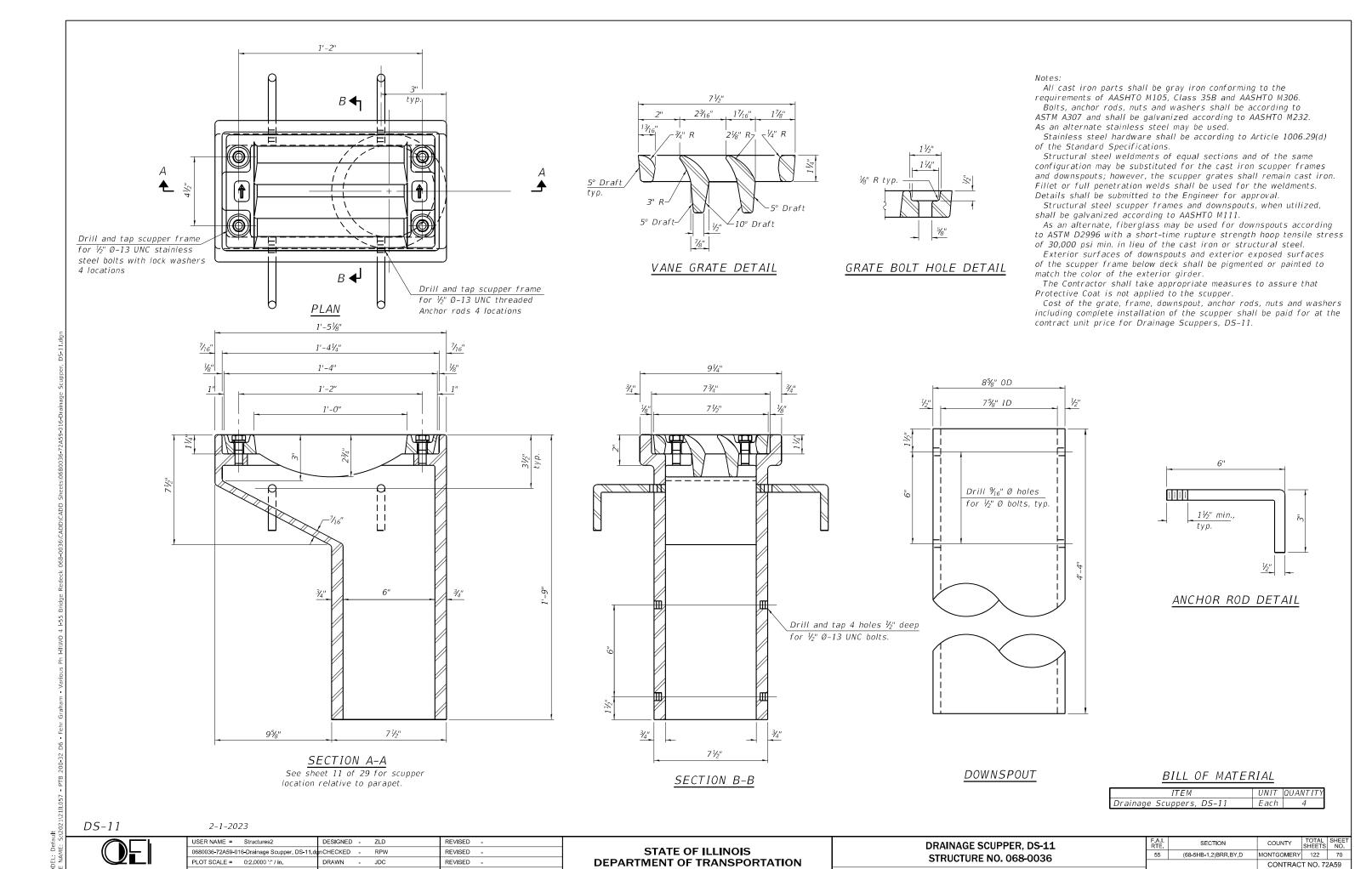
 				LAB DETAILS 68-0036
SHEET	15	OF	29	SHEETS

(Sheet 2 of 2)

QUIGG ENGINEER
10/8/2024 3:08:28 PM

- Fehr Graham - Various Ph I-II/WO 4 I-55 Bridge Redeck 068-003

IODEL: Default

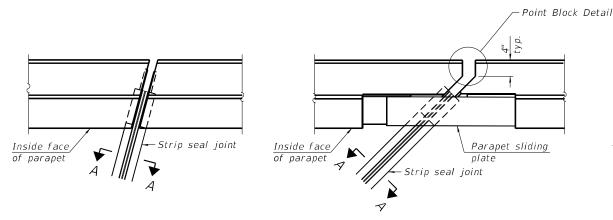


SHEET 16 OF 29 SHEETS

QUIGG ENGINEERING INC 10/8/2024 3:08:29 PM PLOT DATE =

REVISED -

CHECKED - MDC



FOR SKEWS > 30°

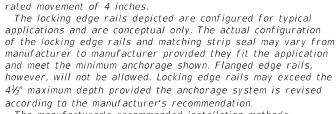
(10 per side 44" parapet) (11 per side 44" parapet) (12 per side 44" parapet) (13 per side 44" parapet) (14 per side 44" parapet)

* ¾" Ø x 6" Studs

(8 per side 39" parapet)

SECTION B-B

1'-0"



The strip seal shall be made continuous and shall have a minimum thickness of \(\frac{1}{4} \). The configuration of the strip

are not permitted. The gland shall be sized for a maximum

seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations

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.

The Maximum space between locking edge rail segments shall be $\frac{3}{16}$ " and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.

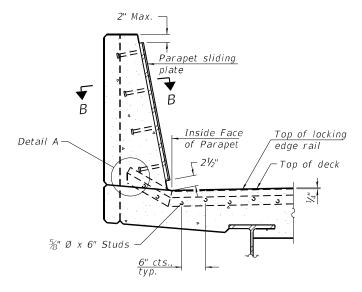
Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.
39" constant slope barrier shown, 44" constant slope barrier

similar as noted.

Notes:

The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.

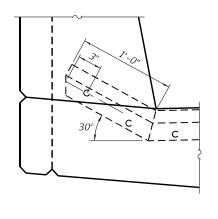
PLAN AT PARAPET



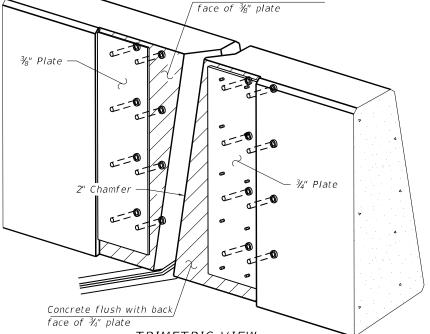
FOR SKEWS ≤ 30°

SECTION AT PARAPET

(Skews > 30° shown. Skews $\leq 30^{\circ}$ similar except as shown in plan view.)

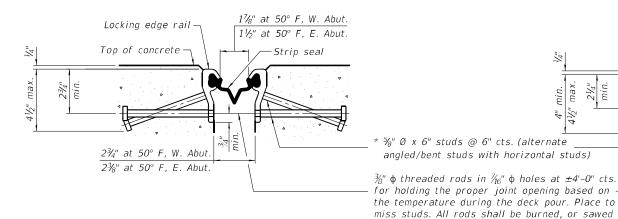


DETAIL A



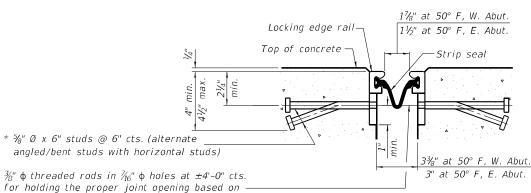
Concrete flush with back

TRIMETRIC VIEW
(Showing embedded plates only)

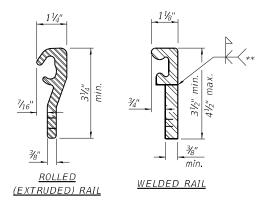


1-1-2020

SHOWING ROLLED RAIL JOINT

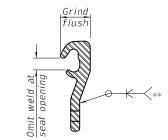


SHOWING WELDED RAIL JOINT



LOCKING EDGE RAILS

** Back gouge not required if complete joint penetration is verified by mock-up.



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	58.5

SECTION A-A

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

off flush with the plates after concrete is set.

EJ-SS



USER NAME =	Structures2	DESIGNED	-	ZLD	REVISED	-
0680036-72A59-01	7-Preformed Joint Strip Seal.d	nCHECKED	-	RPW	REVISED	-
PLOT SCALE =	0:2.0000 ':" / in.	DRAWN	-	JDC	REVISED	-
PLOT DATE =		CHECKED	-	MDC	REVISED	-

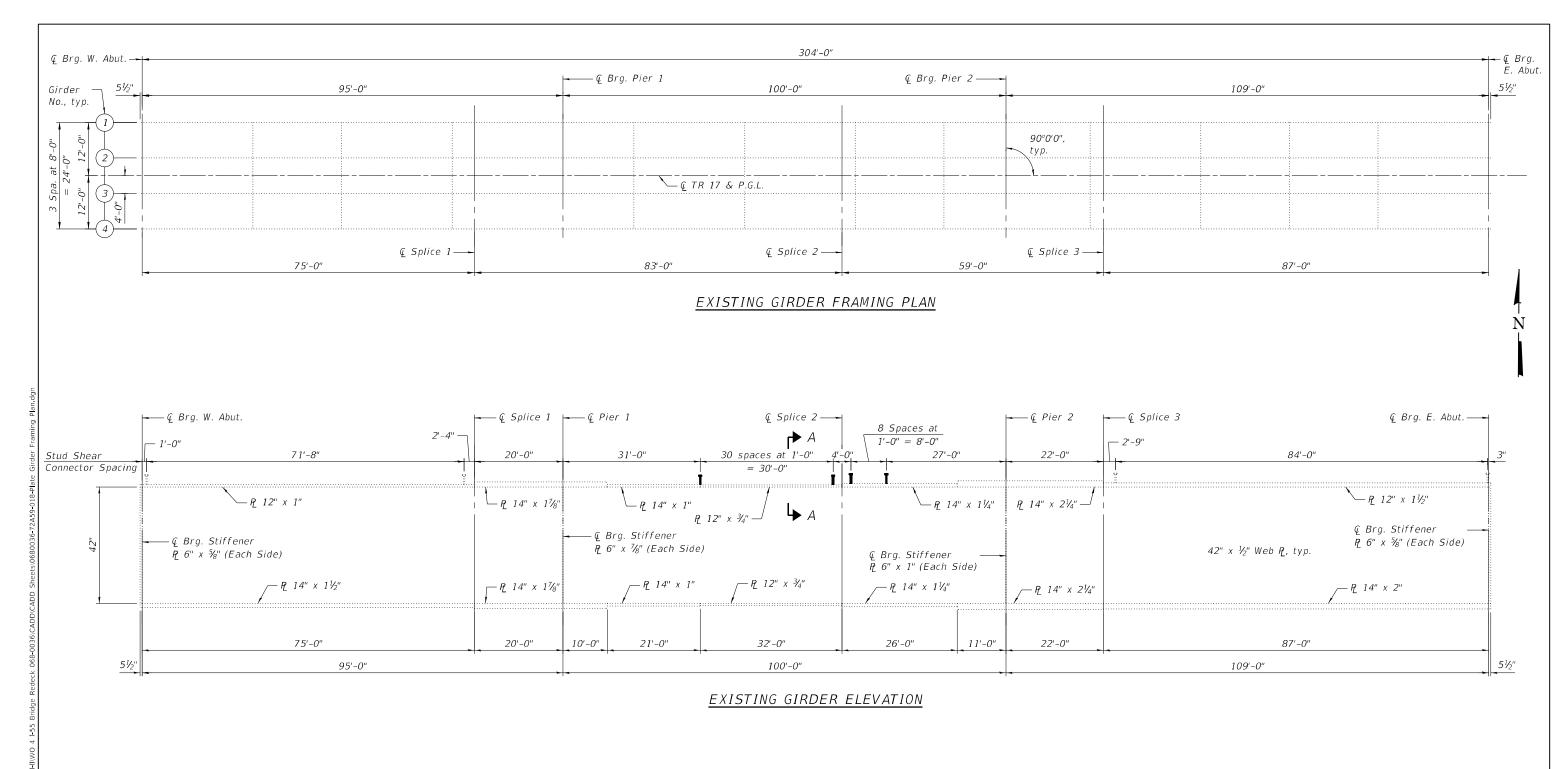
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

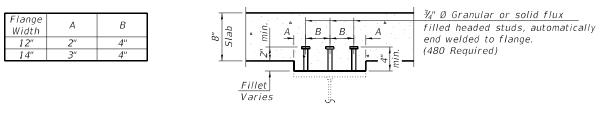
PREFORMED JOINT STRIP SEAL STRUCTURE NO. 068-0036

SHEET 17 OF 29 SHEETS

F.A.I. RTE	SECTION			COUNTY	TOTAL SHEETS	SHE
55	(68-5HB-1,2)BRR,BY,D			MONTGOMERY	122	71
				CONTRAC	T NO. 72	2A59
	l ILI	INOIS	FFD.	AID PROJECT		

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SECTION A-A

ote:

See sheets 10 and 11 of 29 for fillet reinforcement.

OLUGG ENGINEEPING INC

USER NAME = Structures2	DESIGNED	-	ZLD	REVISED -	
0680036-72A59-018-Plate Girder Framing Plan.d	nCHECKED	-	RPW	REVISED -	
PLOT SCALE = 21:8.0000 ':" / in.	DRAWN	-	JDC	REVISED -	
PLOT DATE =	CHECKED	-	MDC	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN	F.A.I. RTE	SECTION
STRUCTURE NO. 068-0036	55	(68-5HB-1,2)BRR,BY,D
311.001011L 1101.000-0030		

		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp.
Is	(in⁴)	17,842	28,368	11,312	33,953	24,415
Ic(n)	(in⁴)	51,954		32,418	-	63,711
Ic(3n)	(in⁴)	37,547	-	24,535	-	45,871
Ss	(in³)	948	1,240	520	1,460	1,242
Sc(n)	(in³)	1,341	-	789	-	1,673
Sc(3n)	(in³)	1,236	-	722	-	1,542
Ζ	(in³)	-	1,372	-	1,614	-
P	(k/')	1.043	1.575	0.991	1.611	1.087
MP	('k)	735	-1,408	121	-1,803	1,037
s P	(k/')	0.463	-	0.463	-	0.463
MsP	('k)	341	-	128	-	461
LLDF		1.455	1.455	1.455	1.455	1.455
ΜŁ	('k)	914	-657	670	-731	1,055
MI	('k)	208	-148	149	-159	225
5/3 [MŁ + 1]	('k)	1870	-1342	1365	-1483	2133
Ма	('k)	3830	-3575	2098	-4272	4720
Mu	('k)	5217	4117	3405	4843	6300
fs₽(non-comp)	(ksi)	9.3	-13.6	2.8	-14.8	10.0
fs₽ (comp)	(ksi)	3.3	-	2.1	-	3.6
fs 5/3 [M & + M _I]	(ksi)	16.7	-13.0	20.8	-12.2	15.3
fs (Overload)	(ksi)	29.3	-26.6	25.7	-27.0	28.9
fs (Total)	(ksi)	-	-	-	-	_
VR	(k)	<i>55.7</i>	_	54.6	_	55.6

** Braced non-compact and partially braced section

INTERIOR GIRDER REACTION TABLE						
	W. Abut.	Pier 1	Pier 2	E. Abut.		
LLDF	1.698	1.455	1.455	1.698		
R ₽ (k)	57.9	158.5	182.5	69.2		
R 4 (k)	50.4	71.3	75.1	51.1		
R_I (k)	11.5	11.2	11.3	10.9		
RTotal (Service I) (k)	119.8	241.0	268.9	131.2		

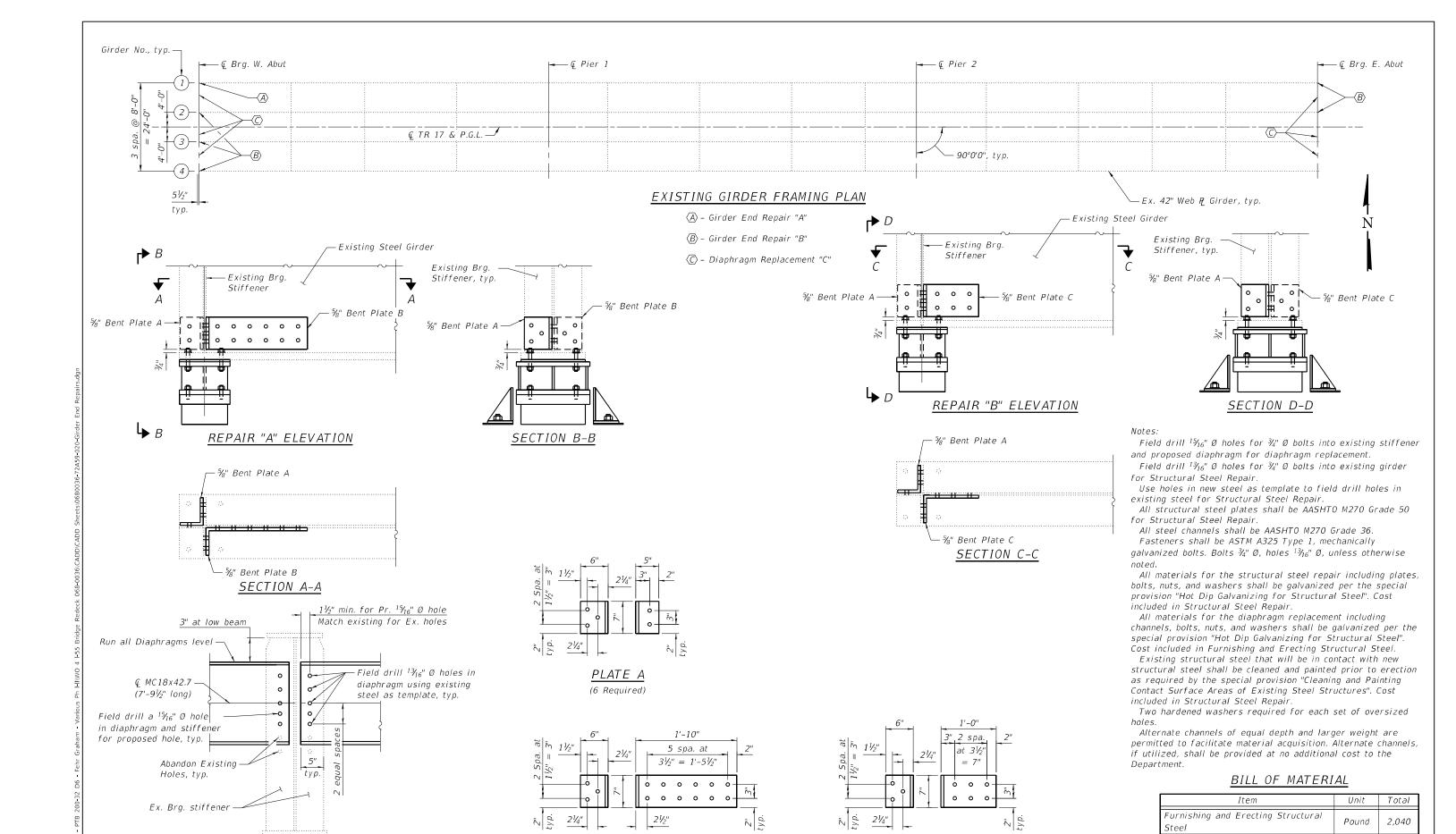
- Is, Ss: Non-composite moment of inertia and section modulus of the steel section used for computing fs(Total and Overload) due to non-composite dead loads (in.4 and in.3).
- Ic(n), Sc(n): Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing fs(Total and Overload) due to short-term composite live loads (in.4 and in.3).
- Ic(3n), Sc(3n): Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing fs(Total and Overload) due to long-term composite (superimposed) dead loads (in.4 and in.3).
 - Z: Plastic Section Modulus of the steel section in non-composite areas (in.3).
 - P: Un-factored non-composite dead load (kips/ft.).
 - $M\bar{\varrho}$: Un-factored moment due to non-composite dead load (kip-ft.).
 - sq: Un-factored long-term composite (superimposed) dead load (kips/ft.)
 - M_s Q: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).
 - LLDF: Live Load Distribution Factor for moment and shear computed according to AASHTO LFD 3.23.1.
 - Mt: Un-factored live load moment (kip-ft.).
 - MI: Un-factored moment due to impact (kip-ft.).
 - Ma: Factored design moment (kip-ft.).

 $1.3 [MP + MSP + \frac{5}{3} (ML + MI)]$

- Mu: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).
- fs (Overload): Sum of stresses as computed from the moments below (ksi). ${\rm M} {\mathbb P} + {\rm M} {\rm S} {\mathbb P} + \frac{5}{3} \left({\rm M}^{\rm L} + {\rm M} {\rm I} \right)$
- fs (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).

 $1.3 [MP + MsP + \frac{5}{3} (ML + MI)]$

VR: Maximum½ + impact shear range within the composite portion of the span for stud shear connector design (kips).



QUIGG ENGINEERING INC

 USER NAME = Structures2
 DESIGNED - ZLD
 REVISED

 0680036-72A59-020-Girder End Repairs.dgn
 CHECKED - RPW
 REVISED

 PLOT SCALE = 23:4.0000 '." / in.
 DRAWN - JDC
 REVISED

 PLOT DATE = CHECKED - MDC
 REVISED

DIAPHRAGM REPLACEMENT "C"

(6 Diaphragms Required)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLATE B

(1 Required)

GIRDER END REPAIRS
STRUCTURE NO. 068-0036

SHEET 20 OF 29 SHEETS

PLATE C

(5 Required)

2,000

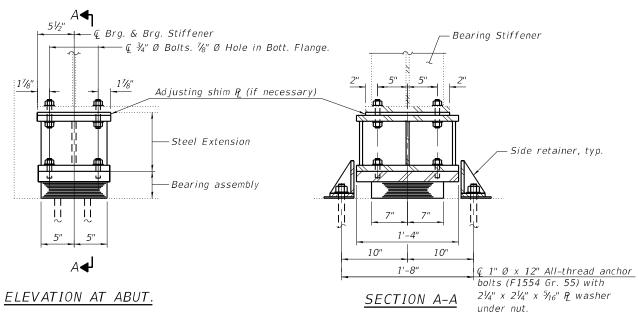
140

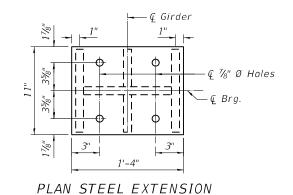
Pound

Structural Steel Removal

Structural Steel Repair

10/8/2024 3:08:34 PM





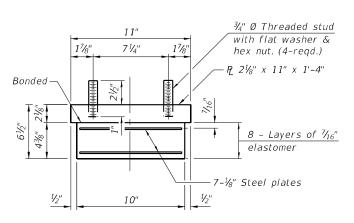
AT WEST ABUTMENT



1" typ. SECTION C-C



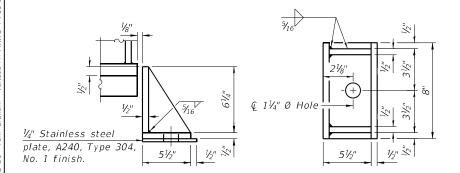
(4 Required)



WEST ABUT. BEARING ASSEMBLY

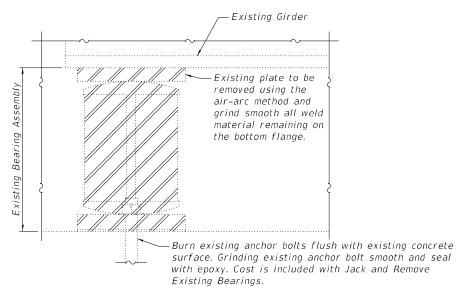
Note

Shim plates shall not be placed under bearing assembly.



SIDE RETAINER

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



EXISTING BEARING REMOVAL DETAIL

(Cost of bearing removal is included with Jack and Remove Existing Bearings)

Notes

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Anchor bolts and side retainers at all supports shall be installed as each existing bearing assembly is replaced unless an equivalent temporary means of lateral restraint is used. Prior to ordering any materials, the Contractor shall verify in

the field all bearing height and shim plate thickness dimensions.

Plates and fasteners required for the steel extensions shall
be paid for with "Furnishing and Erecting Structural Steel".

The structural steel plates of the Bearing Assembly and steel extensions shall conform to the requirements of AASHTO M270 Grade 36.

Two V_8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown. Adjusting shim plates shall be paid for with "Furnishing and Erecting Structural Steel".

All bearing plates, steel extensions, side retainers, anchor bolts, nuts and washers shall be galvanized according to AASHTO M111 or M232 as applicable. Cost shall be included with Elastomeric Bearing Assembly, Type I.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	730
Elastomeric Bearing Assembly, Type I	Each	4
Anchor Bolts, 1"	Each	8



USER NAME = Structures2	DESIGNED	-	ZLD	REVISED -
0680036-72A59-021-West Abut Bearing Details.	gnCHECKED	-	RPW	REVISED -
PLOT SCALE = 0:2.0000 ':" / in.	DRAWN	-	JDC	REVISED -
PLOT DATE =	CHECKED	-	MDC	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

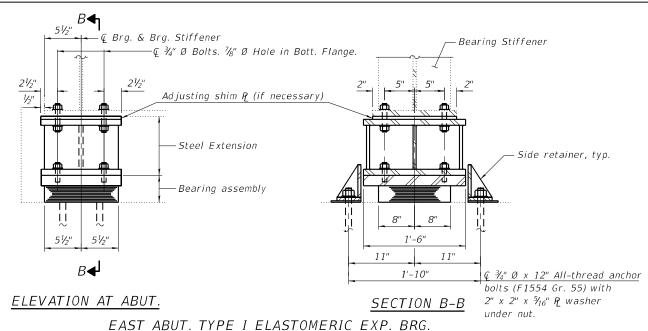
WEST ABUTMENT BEARING DETAILS
STRUCTURE NO. 068-0036

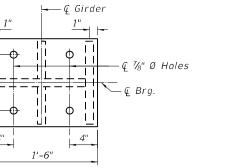
SHEET 21 OF 29 SHEETS

A.I. TE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
55	(68-5HB-1,2)BRR,BY,D		MONTGOMERY	122	75
			CONTRAC	T NO. 72	2A59
	ILLINOIS	FED.	AID PROJECT		

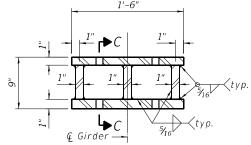
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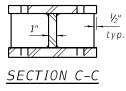




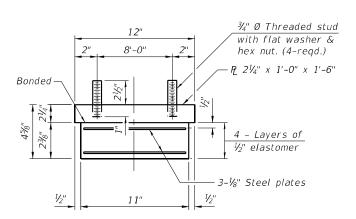
PLAN STEEL EXTENSION
AT EAST ABUTMENT



ELEVATION STEEL EXTENSION
AT EAST ABUTMENT



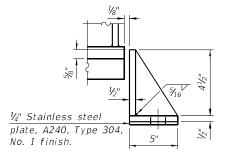


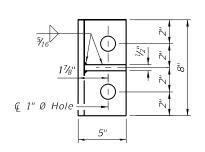


EAST ABUT. BEARING ASSEMBLY

Noto:

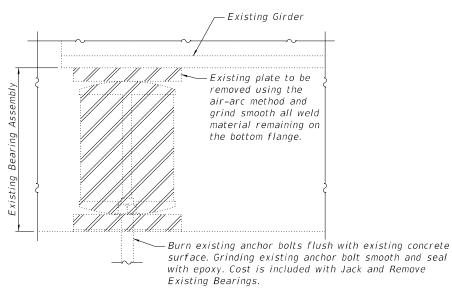
Shim plates shall not be placed under bearing assembly.





SIDE RETAINER

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



EXISTING BEARING REMOVAL DETAIL

(Cost of bearing removal is included with Jack and Remove Existing Bearings)

Notes:

Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

Anchor bolts and side retainers at all supports shall be installed as each existing bearing assembly is replaced unless an equivalent temporary means of lateral restraint is used.

Prior to ordering any materials, the Contractor shall verify in the field all bearing height and shim plate thickness dimensions. Plates and fasteners required for the steel extensions shall be paid for with "Furnishing and Erecting Structural Steel".

The structural steel plates of the Bearing Assembly and steel extensions shall conform to the requirements of AASHTO M270 Grade 36.

Two $\frac{1}{8}$ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown. Adjusting shim plates shall be paid for with "Furnishing and Erecting Structural Steel".

All bearing plates, steel extensions, side retainers, anchor bolts, nuts and washers shall be galvanized according to AASHTO M111 or M232 as applicable. Cost shall be included with Elastomeric Bearing Assembly, Type I.

BILL OF MATERIAL

ADDITIONAL SHIM PLATE THICKNESS REQUIRED

	Girder 1	Girder 2	Girder 3	Girder 4
E. Abut.	1/8"	0"	0	1/8"

Item	Unit	Total
Furnishing and Erecting Structural Steel	Pound	970
Elastomeric Bearing Assembly, Type I	Each	4
Anchor Bolts, ¾"	Each	16

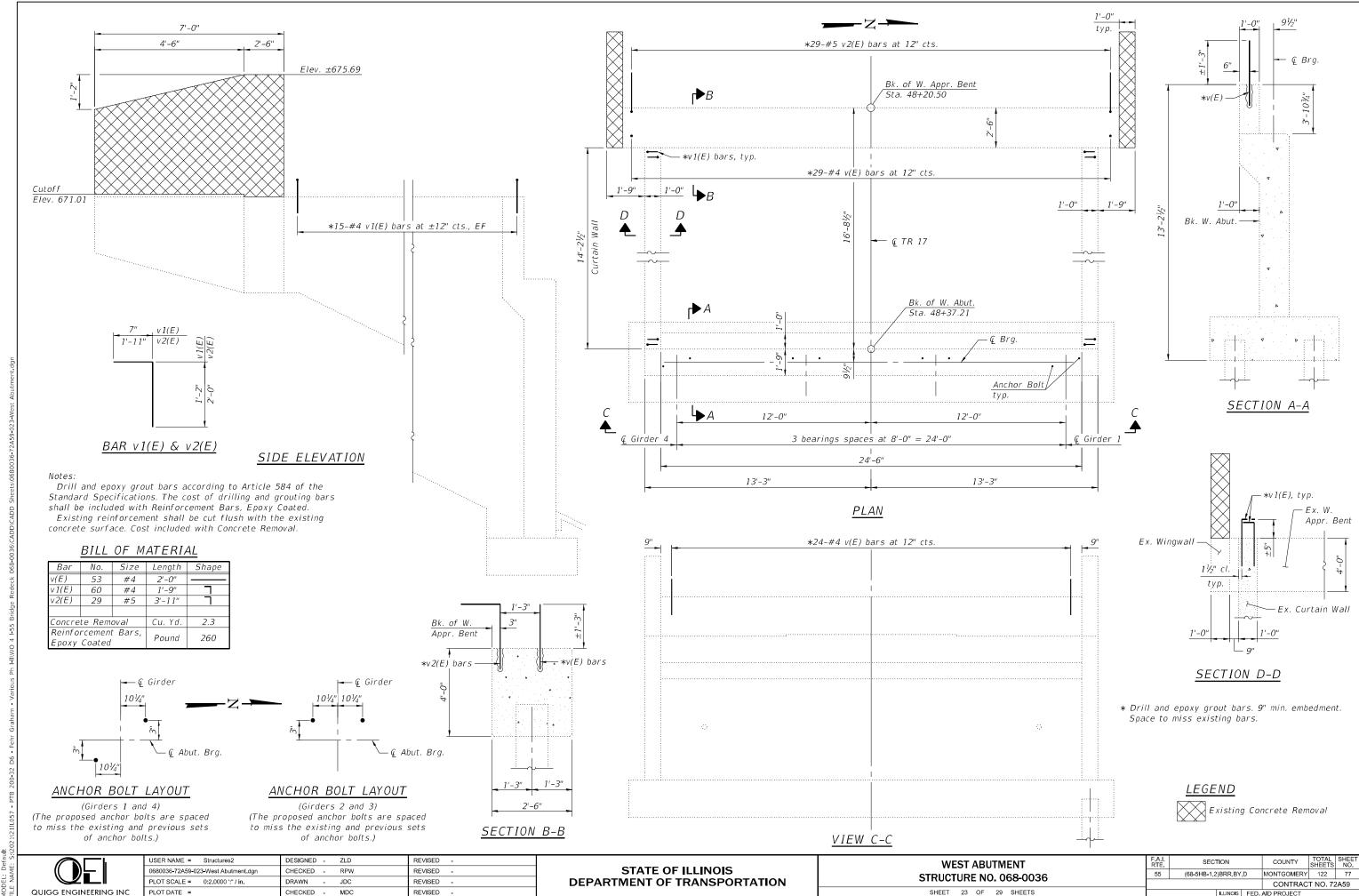


USER NAME = Structures2	DESIGNED	-	ZLD	REVISED -
0680036-72A59-022-East Abut Bearing Details do	nCHECKED	-	RPW	REVISED -
PLOT SCALE = 0:2.0000 ':" / in.	DRAWN	-	JDC	REVISED -
PLOT DATE =	CHECKED	-	MDC	REVISED -

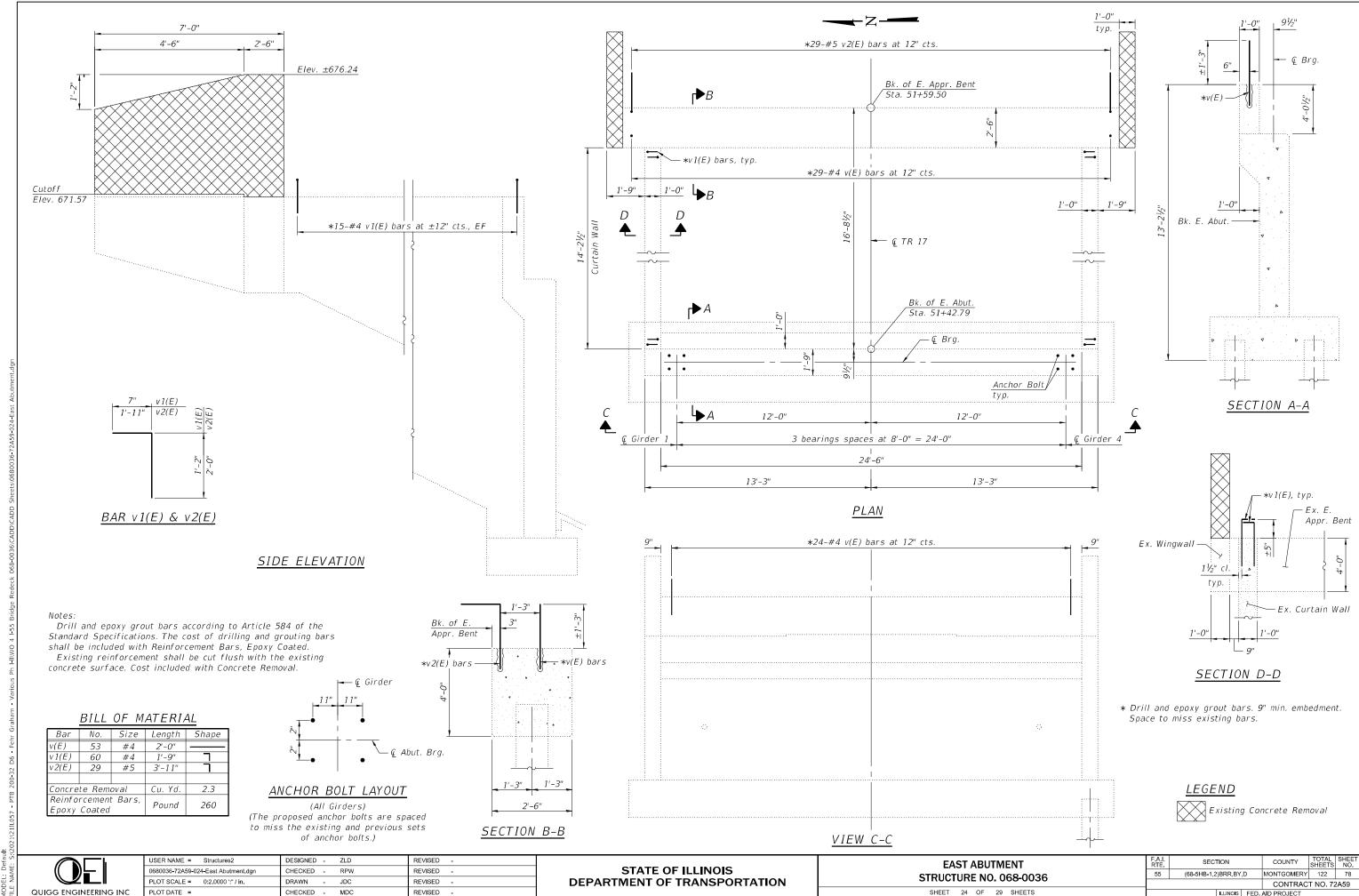
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

 EAST ABUTMENT BEARING DETAILS STRUCTURE NO. 068-0036								
SHEET	22	OF	29	SHEETS				

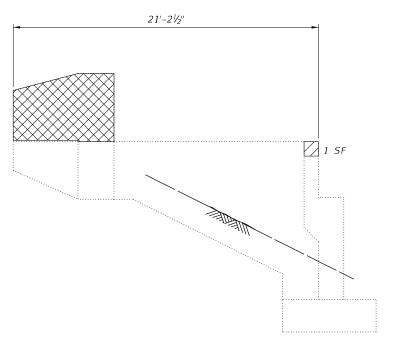
F.A.I. RTE	SECTION	COUNTY	TOTAL SHEETS	SHEE NO.
55	(68-5HB-1,2)BRR,BY,D	MONTGOMERY	122	76
		CONTRAC	T NO. 72	2A59
	ILLINOIS FED.	AID PROJECT		



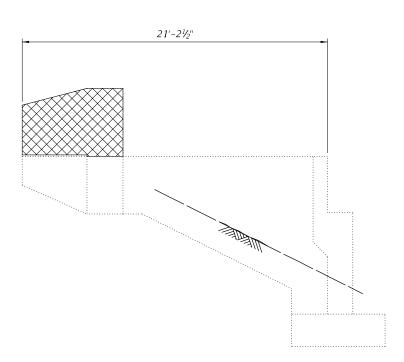
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W. ABUT. ELEVATION
(Looking North)



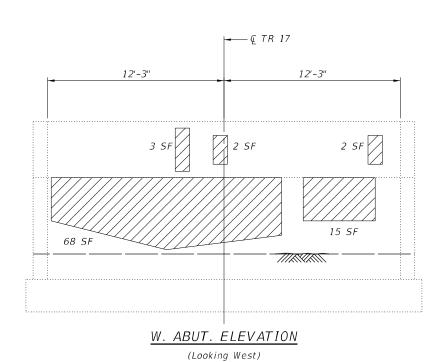
E. ABUT. ELEVATION

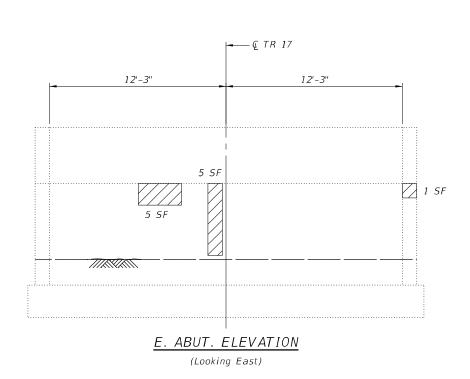
(Looking South)

<u>LEGEND</u>

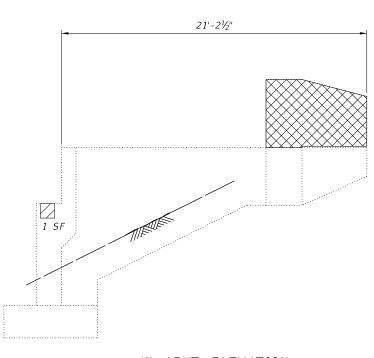
Structural Repair of Concrete (Depth Equal to or Less than 5")

Existing Concrete Removal





Seat width = 1'-9"



W. ABUT. ELEVATION
(Looking South)

4 SF on Face of
Approach Bent
6 SF

E. ABUT. ELEVATION

(Looking North)

BILL OF MATERIAL

ITEM	UNIT	TOTAL	
Structural Repair of Concrete (Depth Equal to or Less than 5")	Sq. Ft.	115	



 USER NAME = Structures2
 DESIGNED - ZLD
 REVISED

 0680036-72A59-025-Abutment Repairs.dgn
 CHECKED - RPW
 REVISED

 PLOT SCALE = 6:8.0000 '." / in.
 DRAWN - JDC
 REVISED

 PLOT DATE =
 CHECKED - MDC
 REVISED

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

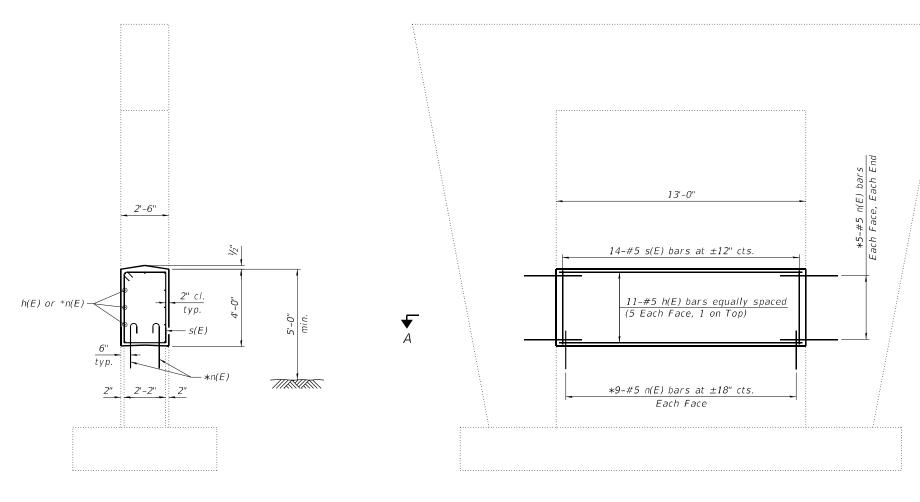
ABUTMENT REPAIRS
STRUCTURE NO. 068-0036

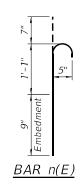
SHEET 25 OF 29 SHEETS

 F.A.I. RTE.
 SECTION
 COUNTY SHEETS
 TOTAL SHEETS
 SHEET NO.

 55
 (68-5HB-1,2)BRR,BY,D
 MONTGOMERY
 122
 79

 CONTRACT NO. 72A59





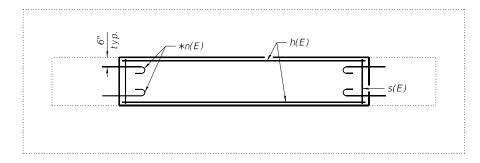
SECTION B-B

₽ B <u>ELEVATION</u>

* Drill and epoxy grout bars. 9" min. embedment. Space to miss existing bars.

Note

Drill and epoxy grout bars according to Article 584 of the Standard Specifications. The cost of drilling and epoxy grouting bars shall be included with Reinforcement Bars, Epoxy Coated.



BAR s(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	11	#5	12'-8"	
n(E)	38 #5		2'-5"	
s(E)	14	#5	12'-7"	
Concrete Structures			Cu. Yd.	4.9
Reinforcement Bars,			Pound	4.30
Ероху	Coated		i ounu	730

SECTION A-A



 USER NAME = Structures2
 DESIGNED - ZLD
 REVISED

 0680036-72A59-026-Pier 1.dgn
 CHECKED - RPW
 REVISED

 PLOT SCALE = 5:0.0000 "." / in.
 DRAWN - JDC
 REVISED

 PLOT DATE =
 CHECKED - MDC
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1
STRUCTURE NO. 068-0036

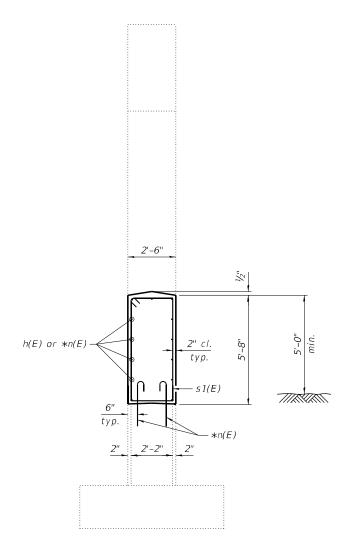
SHEET 26 OF 29 SHEETS

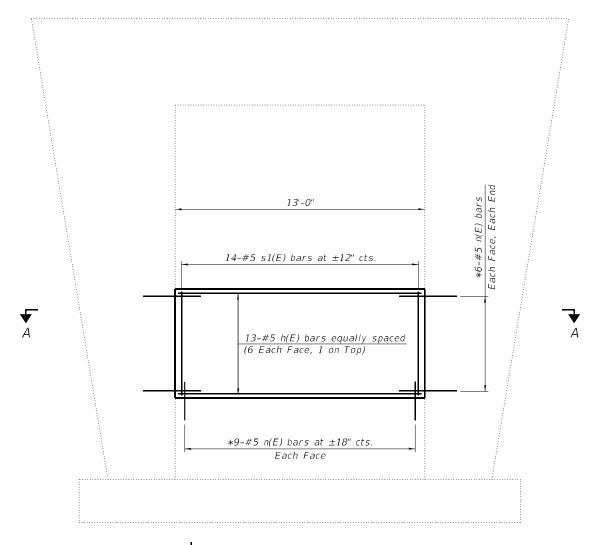
F.A.I. RTE. SECTION COUNTY TOTAL SHEETS NO.

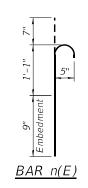
55 (68-5HB-1,2)BRR,BY,D MONTGOMERY 122 80

CONTRACT NO. 72A59

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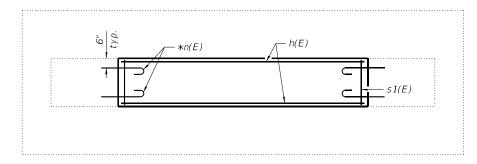
SECTION B-B

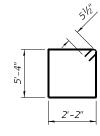
► B <u>ELEVATION</u>

* Drill and epoxy grout bars. 9" min. embedment. Space to miss existing bars.

Note

Drill and epoxy grout bars according to Article 584 of the Standard Specifications. The cost of drilling and epoxy grouting bars shall be included with Reinforcement Bars, Epoxy Coated.





BARS s1(E)

BILL OF MATERIAL

		Size	Length	Shape				
h(E) 13 #5		12'-8"						
n(E)	42	#5	2'-5"					
s1(E)	14	#5	15'-11"					
Concre	13 #5 12'-8" ————————————————————————————————————							
Reinforcement Bars, Epoxy Coated			Pound	510				
				,				

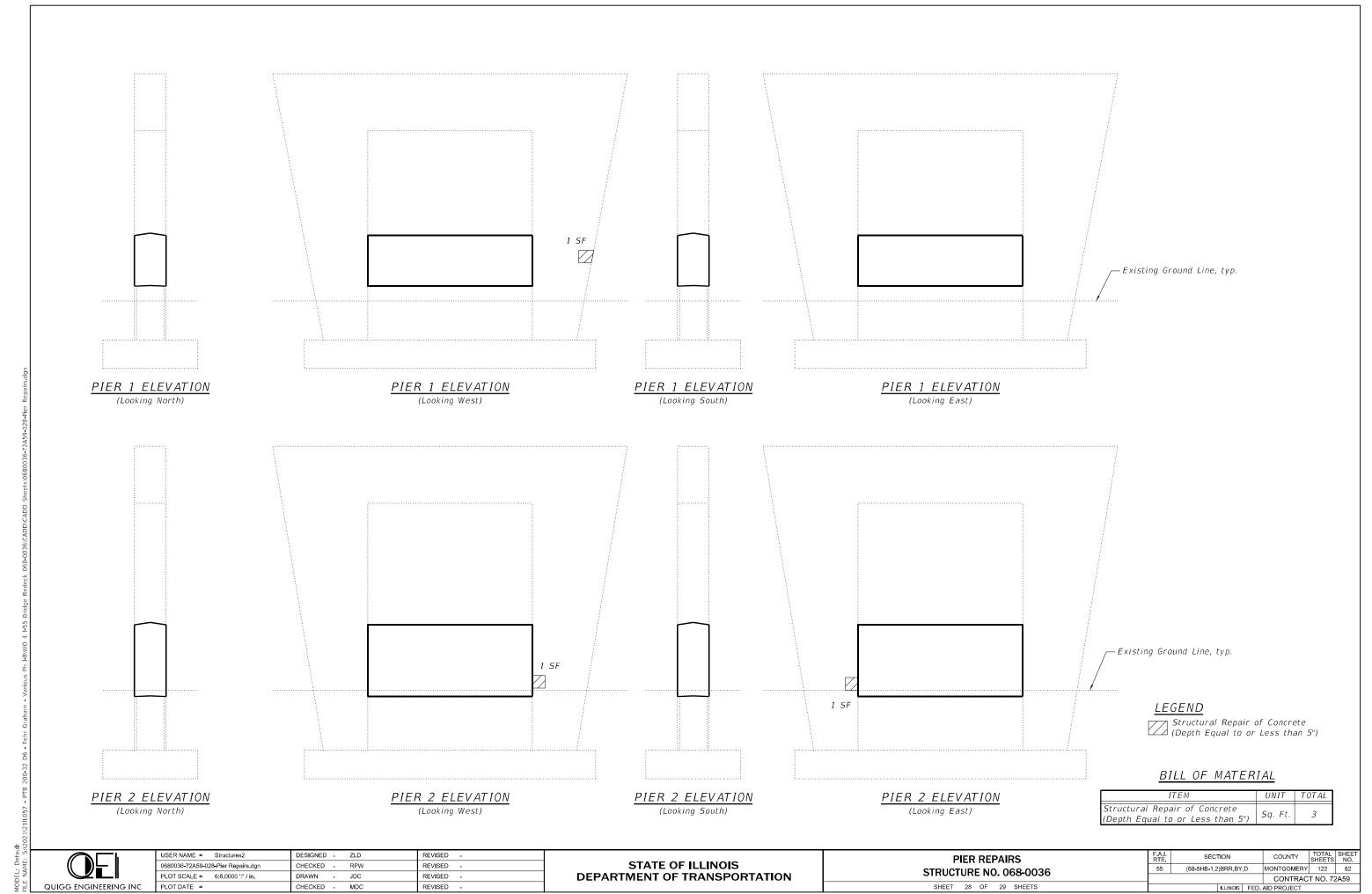
SECTION A-A



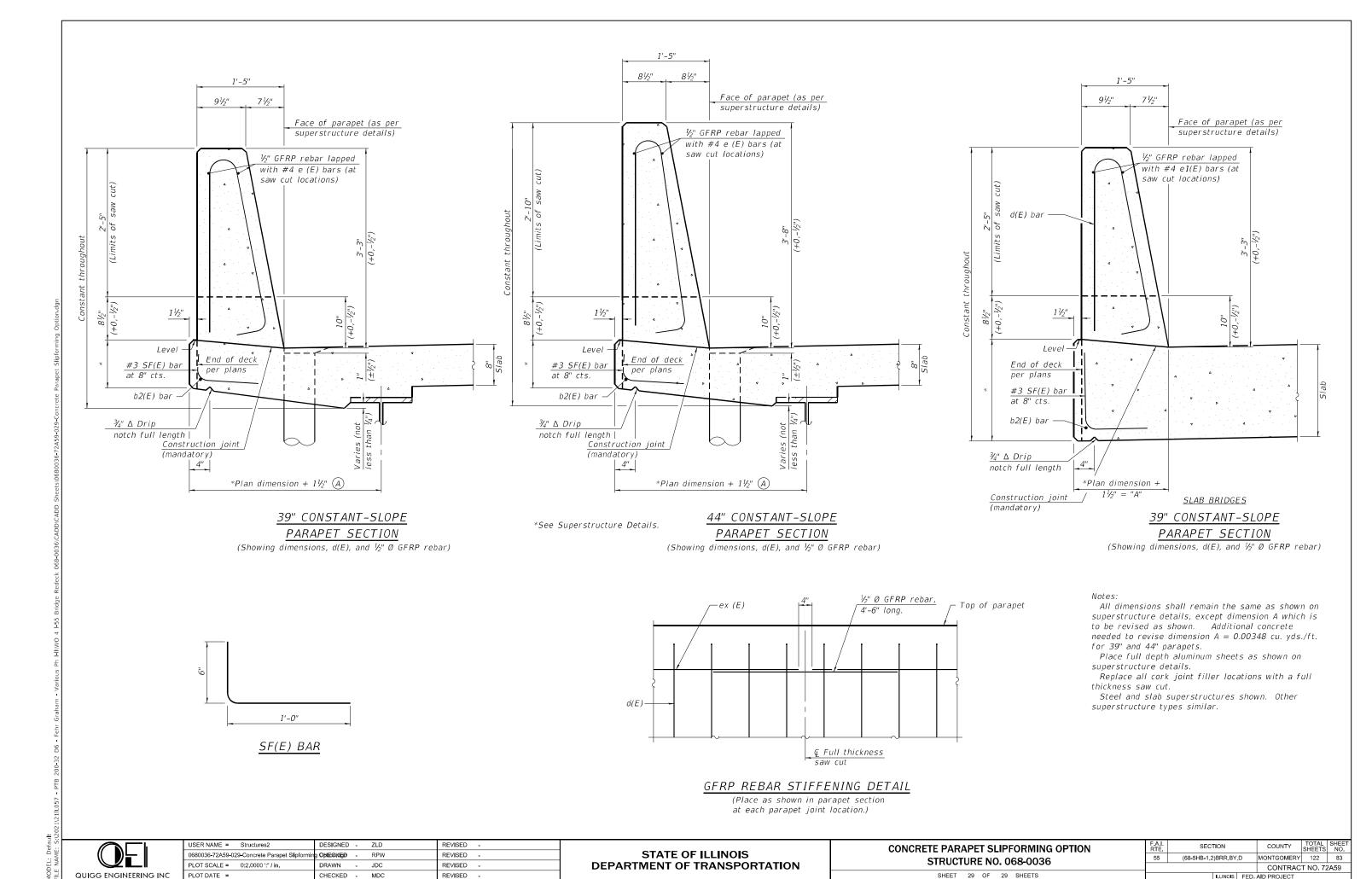
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0680036-72A59-027-Pier 2.dgn	CHECKED -	RPW	REVISED -
PLOT SCALE = 5:0.0000 ':" / in.	DRAWN -	JDC	REVISED -
PLOT DATE =	CHECKED -	MDC	REVISED -

PIER 2		SECTION	COUNTY	TOTAL SHEETS	
STRUCTURE NO. 068-0036	55	(68-5HB-1,2)BRR,BY,D	MONTGOMERY	122	HEETS NO.
31RUCTURE NO. 000-0030			CONTRAC	T NO. 72	2A59
SHEET 27 OF 29 SHEETS		ILLINOIS FED	AID PROJECT		

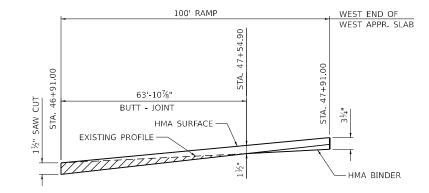
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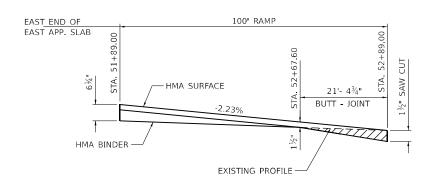


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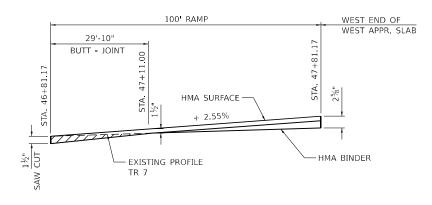


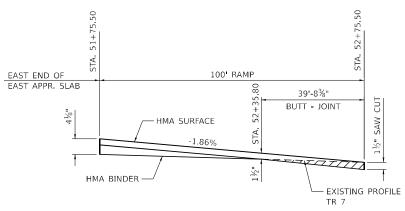
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BUTT - JOINT DETAILS TR 17





BUTT - JOINT DETAILS TR 7

FEHR GRAHAM	Γ
ENGINEERING & ENVIRONMENTAL	Ī
© 2024 FEHR GRAHAM	Ī
NUMBER OCSEN PRIN NO. 164-003525	

USER NAME = mescatel	DESIGNED -	MCB	REVISED -	
	DRAWN -	MCE	REVISED -	İ
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	MCB	REVISED -	İ
PLOT DATE = 8/14/2024	DATE -	1/4/2024	REVISED -	İ

STATE OF ILLINOIS						
DEPARTMENT	0F	TRANSPORTATION				

	BUTT JOINT DETAILS				F.A.I RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
	TR 17 & TR 7					55	(68-5HB-1,2)BRR,BY,D	MONTGOMERY	122	84	
								CONTRACT	NO. 72	A59	
	SCALE:	SHEET -	OF -	SHEETS	STA.	TO STA.		ILLINOIS FED. AID PROJECT			

