6-12-09 Letting, Item 212

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1 & 2	MADISON	148	1

CONTRACT NO. 76634

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAP ROUTE 310 (IL ROUTE 255)
SECTION 60-15VB-1 & 2
PROJECT NHF-0310(136)
MADISON COUNTY
C-98-014-03

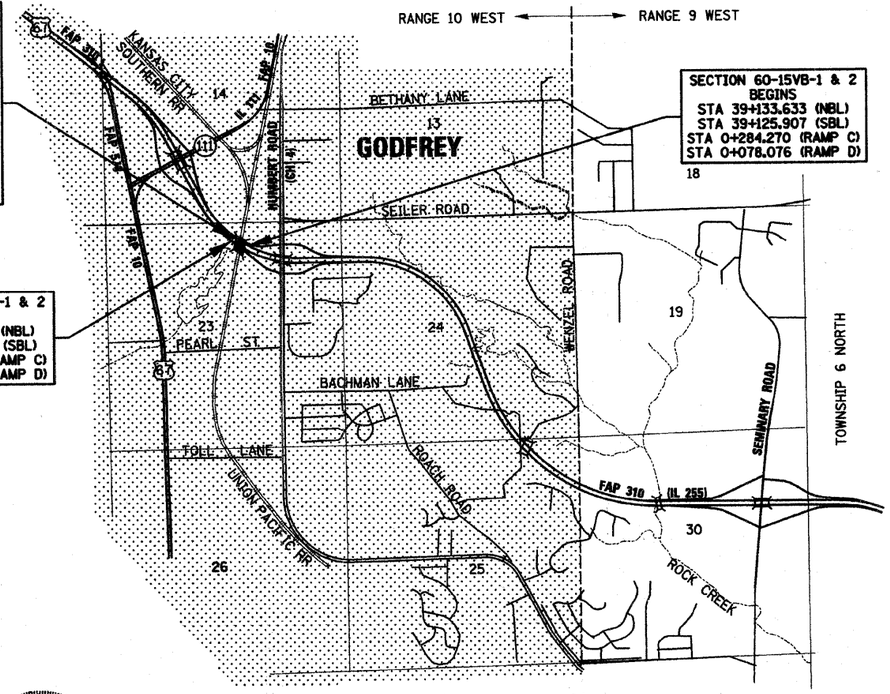
CONSTRUCT TWO GRADE SEPARATION STRUCTURES TO CARRY FAP RTE 310, RAMP C & RAMP D OVER UNION PACIFIC RAILROAD AND KANSAS CITY SOUTHERN RAILWAY

FOR INDEX OF SHEETS AND HIGHWAY STANDARDS SEE SHEET NO. 2

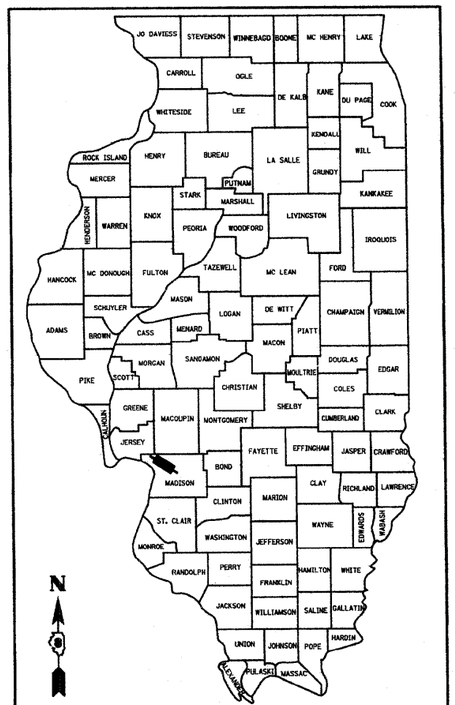
SECTION 60-15VB-1 & 2
TWO GRADE SEPARATION STRUCTURES:

SN 060-0310: CONTINUOUSLY WELDED PLATE GIRDER & R.C. DECK SUPERSTRUCTURE ON PILE BENT ABUTMENTS 57.516 m BK TO BK OF ABUTMENT. CARRIES NBL & RAMP C OVER RAILROAD.

SN 060-0311: CONTINUOUSLY WELDED PLATE GIRDER & TAPERED R.C. DECK SUPERSTRUCTURE ON PILE BENT ABUTMENTS 62.338 m BK TO BK OF ABUTMENT. CARRIES SBL & RAMP D OVER RAILROAD.



D-98-038-92



LOCATION OF SECTION INDICATED THUS:- ■

METRIC RATIOS

1 m 0 2 m
1 : 50

0 5 m 10 m
1 : 100

10 m 0 20 m
1 : 250

5 m 0 20 m
1 : 500

0 50 m 100 m
1 : 1000

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

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

CONTRACT NO. 76634

ERIC B. BARNES 062-052141 LICENSED PROFESSIONAL ENGINEER ILLINOIS

Eric B. Barnes 5-01-09
ERIC B. BARNES DATE

REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS NO. 062-052141
LICENSE EXPIRES NOVEMBER 30, 2009

GROSS AND NET LENGTH OF SECTION 60-15VB-1 & 2
= 58.288 METERS = 0.058 KILOMETERS (NBL)
= 61.685 METERS = 0.062 KILOMETERS (SBL)
= 56.955 METERS = 0.057 KILOMETERS (RAMP C)
= 65.622 METERS = 0.066 KILOMETERS (RAMP D)

DESIGN DESIGNATION
2230(24) ARTERIAL 7.11 (FD-20)

Latitude / Longitude
Latitude: 38.66
Longitude: 90.18

PLANS PREPARED BY:
KLINGNER & ASSOCIATES, P.C.
Engineers / Architects
616 North 24th Street (217) 223-3670
Quincy, Illinois 62301 FAX: 223-3603
Internet Address: www.klingner.com
STATE OF ILLINOIS DESIGN FIRM • 1842738

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED May 4 20 09
Mary C. Jamie
DEPUTY DIRECTORY OF HIGHWAYS, REGION FIVE ENGINEER
May 8, 20 09
Charles J. Ingersoll /RD
ENGINEER OF DESIGN AND ENVIRONMENT
May 8, 20 09
Christine M. Reed /RD
DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROJECT ENGINEER: PATTI LEBEAU (618)346-3179
SQUAD CONTACT: ARTHUR MUEHLFELD (618)346-3209

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XXX

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	149	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 76634

INDEX OF SHEETS

LEGEND

BOP	BEGINNING OF PROFILE GRADE
EOP	END OF PROFILE GRADE
▨	TREES TO BE REMOVED (AREA)

GENERAL NOTES

1. ALL ELEVATIONS REFER TO USGS MEAN SEA LEVEL DATUM.
2. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE NUMBER LISTED OR THE COPY OF STANDARD INCLUDED IN THESE PLANS. THE STANDARDS AND REVISION NUMBERS SHALL APPLY TO THIS PROJECT.
3. ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OUTSIDE THE LIMITS OF RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
5. ALL TREES, BRUSH, AND SHRUBS WITHIN THE CONSTRUCTION LIMITS WILL BE REMOVED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. ONLY THOSE TREES DESIGNATED BY THE ENGINEER OR LISTED IN THE TREE REMOVAL SCHEDULE SHALL BE REMOVED. TREES ALONG THE EDGE OF THE RIGHT OF WAY SHALL BE SAVED IF, IN THE OPINION OF THE ENGINEER, THEY DO NOT INTERFERE WITH CONSTRUCTION OPERATIONS. THE CONTRACTOR WILL PROTECT ALL REMAINING TREES FROM DAMAGE DUE TO HIS OPERATIONS.
6. ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE TO BE GIVEN TO UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT ARE AS FOLLOWS:

ABOVE GROUND	BELOW GROUND
•AMEREN UE	•SBC
	•FOSTERBURG WATER
	•IL AMERICAN WATER - ALTON
	•AMEREN UE
	•MCI WORLDCOM
	•AT&T CABLE SERVICES
	•SPRINT
	•VILLAGE OF GODFREY
	•CHARTER COMMUNICATIONS

MEMBERS OF J.U.L.I.E. (800)-892-0123 ARE INDICATED BY •. NON J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.

GENERAL NOTES

7. SEEDING SHALL BE PLACED ON ALL AREAS THAT ARE DISTURBED BY CONSTRUCTION OPERATIONS AS DIRECTED BY THE ENGINEER. SEEDING SHALL BE PAID FOR ONLY WITHIN THE PROPOSED RIGHT-OF-WAY OR EASEMENT LIMITS. ALL AREAS DISTURBED BY THE CONTRACTOR OUTSIDE THE PROPOSED CONSTRUCTION LIMITS SHALL BE SEEDED, AS DIRECTED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.
8. FERTILIZER NUTRIENTS SHALL BE APPLIED TO BOTH THE SEEDED AREAS AND THE AREAS COVERED WITH EROSION CONTROL BLANKET.
9. DO NOT INCLUDE MULCH OR EMULSIFIED ASPHALT ON EROSION CONTROL BLANKET AREAS.
10. IF ANY UNSUITABLE MATERIAL IS INCOUNTERED DURING CONSTRUCTION, IT WILL BE NECESSARY TO REMOVE THE UNSUITABLE MATERIAL AND REPLACE IT WITH A SUITABLE MATERIAL AS APPROVED BY THE ENGINEER. THIS WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.
11. THE PROPOSED EMBANKMENT SHALL BE BENCHED INTO THE EXISTING SLOPES TO THE SATISFACTION OF THE ENGINEER.
12. IF THERE IS A DISCREPANCY BETWEEN THE RIGHT OF WAY SHOWN ON THE PLANS AND THE PLAT OF HIGHWAYS, THE PLAT OF HIGHWAYS ALWAYS TAKES PRECEDENCE.
13. THE REMOVAL AND DISPOSAL OF ABANDONED FENCING, DEBRIS, BRUSH, RIPRAP, STONE, CONCRETE SLABS, TILE, SIDEWALK, ETC. NOT PAID FOR SPECIFICALLY ON THE PLANS WILL BE CONSIDERED TO BE INCLUDED IN THE EARTH EXCAVATION PAY ITEM.
14. THE FOLLOWING RATES OF APPLICATION HAVE BEEN ASSUMED IN CALCULATING PLAN QUANTITIES:

GRANULAR MATERIALS	2.5 M TONS / CU M
BITUMINOUS MATERIALS	2.0 LITERS / SQ M
AGGREGATE COVER AND SEAL COATS	0.014 M TONS / SQ M

1 METRIC TON = 1000 KG

PERTINENT INFORMATION

1. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER IN WRITING OF THE ANTICIPATED DRIVING AND RE-STRIKE DATE(S) OF THE PILE(S) TO BE DYNAMICALLY MONITORED TO ALLOW THE RESIDENT ENGINEER TO INFORM DR. LONG AT (217-333-2543) AND THE GEOTECHNICAL ENGINEER - VENIECY PEARMAN-GREEN (618-346-3313) OF THE SCHEDULE. THE CONTRACTOR SHALL PROVIDE THE COMPLETED PILE DRIVING EQUIPMENT DATA FORM AND WRITTEN DRIVING AND RE-STRIKE DATES TO THE RESIDENT ENGINEER AND TO DR. LONG A MINIMUM OF TWO WEEKS PRIOR TO DRIVING THE FIRST DYNAMICALLY MONTIORED PILE.

IDOT HIGHWAY STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-01	AREAS OF REINFORCEMENT BARS
202001-01	EARTH MEDIAN DITCH CHECK
280001-04	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
542301-01	PRECAST REINFORCED CONCRETE FLARED END SECTION
701901-01	TRAFFIC CONTROL DEVICES
601101-01	

COMMITMENTS

NO COMMITMENTS HAVE BEEN MADE FOR THIS PROJECT.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES & INDEX
FAP 310 (IL 255)
SECTION 60-15VB-1 & 2
MADISON COUNTY

DRAWN BY EBB

DATE CHECKED BY

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ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	149	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 76634

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE: URBAN, 80% FEDERAL 20% STATE — I000	SEC 60-15VB-1 X171-58	SEC 60-15VB-2 X171-58
28000300	TEMPORARY DITCH CHECKS	EACH	22	22		
28000500	INLET AND PIPE PROTECTION	EACH	7	7		
50500505	STUD SHEAR CONNECTORS	EACH	12354		6183	6171
50800515	BAR SPLICERS	EACH	296		150	146
51203200	TEST PILE METAL SHELLS	EACH	4		2	2
51500100	NAME PLATES	EACH	2		1	1
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	49		27	22
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	9			9
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	30	30		
67100100	MOBILIZATION	L SUM	1	1		
Z0041500	PLUG EXISTING CULVERTS	EACH	1	1		
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1		
Z0065100	SETTLEMENT PLATFORMS	EACH	4	4		
M2010500	TREE REMOVAL, HECTARES	HA	2.0	2.0		
M2020010	EARTH EXCAVATION	CU M	6825	6825		
M2040800	FURNISHED EXCAVATION	CU M	154165	154165		
M2070400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU M	353		181	172
M2500200	SEEDING, CLASS 2	HA	4.2	4.2		
M2500400	NITROGEN FERTILIZER NUTRIENT	KG	420	420		
M2500500	PHOSPHORUS FERTILIZER NUTRIENT	KG	420	420		
M2500600	POTASSIUM FERTILIZER NUTRIENT	KG	420	420		
M2510115	MULCH, METHOD 2	HA	2.9	2.9		
M2510630	EROSION CONTROL BLANKET	SQ M	13101	13101		
M2800250	TEMPORARY EROSION CONTROL SEEDING	KG	1848	1848		
M2800400	PERIMETER EROSION BARRIER	METER	245	245		
M2800407	PERIMETER EROSION BARRIER, MODIFIED	METER	325	325		
M2810105	STONE RIPRAP, CLASS A3	SQ M	169		92	77
M2810725	STONE DUMPED RIPRAP, CLASS B3	SQ M	291	291		
M2811840	RIPRAP FOR STILLING BASIN	M TON	204	204		
M2820200	FILTER FABRIC	SQ M	271	102	92	77
M4021010	AGGREGATE SURFACE COURSE, TYPE B	M TON	2069	2069		
M5020100	STRUCTURE EXCAVATION	CU M	2083		981	1102
M5030280	CONCRETE ENCASEMENT	CU M	26.9		13.6	13.3
M5030290	FORM LINER TEXTURED SURFACE	SQ M	168		86	82
M5030350	CONCRETE STRUCTURES	CU M	1240.5		626.8	613.7
M5030360	CONCRETE SUPERSTRUCTURE	CU M	631.5		307.2	324.3

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES
FAP 310 (IL 255)
SECTION 60-15VB-1 & 2
MADISON COUNTY
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ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	149	4
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 76634

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE: URBAN, 80% FEDERAL 20% STATE — 1000	SEC 60-15VB-1 X171-5B	SEC 60-15VB-2 X171-5B
M5030390	BRIDGE DECK GROOVING	SQ M	2421		1181	1240
M5030450	PROTECTIVE COAT	SQ M	2741		1339	1402
M5050105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		0.5	0.5
M5080205	REINFORCEMENT BARS, EPOXY COATED	KG	195870		86570	109300
M5110100	SLOPE WALL 100 MM	SQ M	2235		1081	1154
~~M5120176~~	FURNISHING METAL SHELL PILES 356MM X 6.35MM	METER	4126.0		1801.0	2325.0
M5120335	DRIVING PILES	METER	4126.0		1801.0	2325.0
M5120900	TEMPORARY SHEET PILING	SQ M	1496		767	729
M5200225	PREFORMED JOINT STRIP SEAL	METER	90.6		46.0	44.6
M5210022	ANCHOR BOLTS, M24	EACH	76		36	40
M5210024	ANCHOR BOLTS, M36	EACH	80		36	44
~~M542E148~~	~~PRECAST REINFORCED CONCRETE FLARED END SECTIONS 1050MM~~	~~EACH~~	~~2~~	~~2~~		
~~M542E152~~	~~PRECAST REINFORCED CONCRETE FLARED END SECTIONS 1200MM~~	~~EACH~~	~~2~~	~~2~~		
M542E168	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 1800MM	EACH	2	2		
M542T215	PIPE CULVERTS, CLASS C, TYPE 1 300MM (TEMPORARY)	METER	51.5	51.5		
M5429770	PIPE CULVERTS, TYPE 7 RCCP 1800MM	METER	113.0	113.0		
M5870300	CONCRETE SEALER	SQ M	292		149	143
M5910100	GEOCOMPOSITE WALL DRAIN	SQ M	193		98	95
M5930100	CONTROLLED LOW-STRENGTH MATERIAL	CU M	7	7		
M6011100	PIPE UNDERDRAINS FOR STRUCTURES 100MM	METER	144.9		71.1	73.8
~~MX033777~~	~~PIPE CULVERTS, TYPE 5 RCCP 1050MM (JACKED)~~	~~METER~~	~~28.5~~	~~28.5~~		
~~MX033778~~	~~PIPE CULVERTS, TYPE 5 RCCP 1200MM (JACKED)~~	~~METER~~	~~29.0~~	~~29.0~~		
⊙ Z0076600	TRAINEES	HOUR	3000	3000		
M542E248	STEEL END SECTIONS 1050 MM	EACH	2	2		
M542E252	STEEL END SECTIONS 1200 MM	EACH	2	2		
MX030575	STEEL CASING PIPE BORED AND JACKED 1050 MM	METER	30.5	30.5		
MX030576	STEEL CASING PIPE BORED AND JACKED 1200 MM	METER	30.5	30.5		

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REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES
FAP 310 (IL 255)
SECTION 60-15VB-1 & 2
MADISON COUNTY
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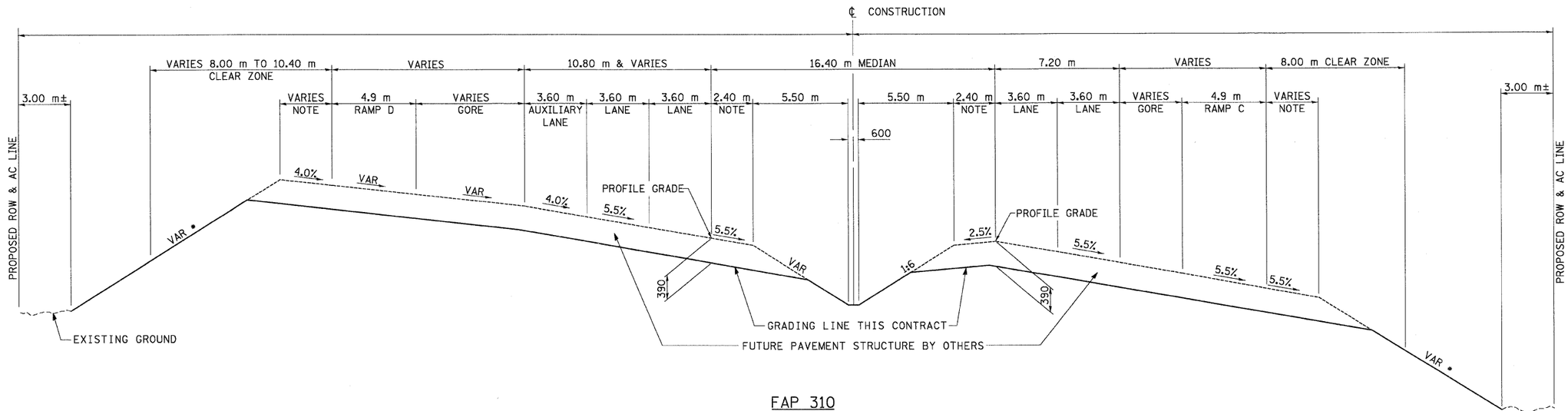
12/15/2008

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	149	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 76623



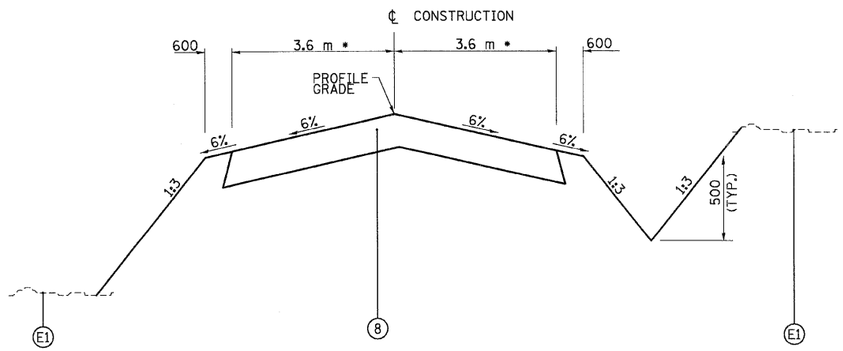
FAP 310
PROPOSED TYPICAL SUPERELEVATED SECTION WITH AUXILIARY LANE

CURVE NO 3 (RIGHT)

STA 39+034.000 TO STA 39+133.633	NBL	FULL SE	(5.5%)
STA 39+034.000 TO STA 39+125.907	SBL	FULL SE	(5.5%)
STA 39+133.633 TO STA 39+191.921	NBL	BRIDGE	
STA 39+125.907 TO STA 39+187.592	SBL	BRIDGE	
STA 39+191.921 TO STA 39+276.500	NBL	FULL SE	(5.5%)
STA 39+187.592 TO STA 39+276.500	SBL	FULL SE	(5.5%)

NOTE: WHERE GUARDRAIL IS TO BE INSTALLED,
INCREASE SHOULDER WIDTH BY 1.0 m
SEE THE GUARDRAIL AND SHOULDER WIDENING SHEETS.

• SEE THE CLEAR ZONE AND SLOPE TRANSITION SHEET



TYPICAL SECTION
TEMPORARY ACCESS ROAD

STA 5+075.000 TO STA 5+658.147

• WIDTH VARIES FROM 3.6 m TO 2.45 m
FROM STA 5+605.306 TO STA 5+658.147

PROPOSED LEGEND

(E1) EXISTING GROUND

(8) PROPOSED AGGREGATE SURFACE COURSE, TYPE B, 200 mm

ALL DIMENSIONS ARE IN mm
UNLESS NOTED OTHERWISE

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TYPICAL SECTIONS
FAP 310 (IL 255)
SECTION 60-15VB-1 & 2
MADISON COUNTY
DRAWN BY EBB
DATE CHECKED BY

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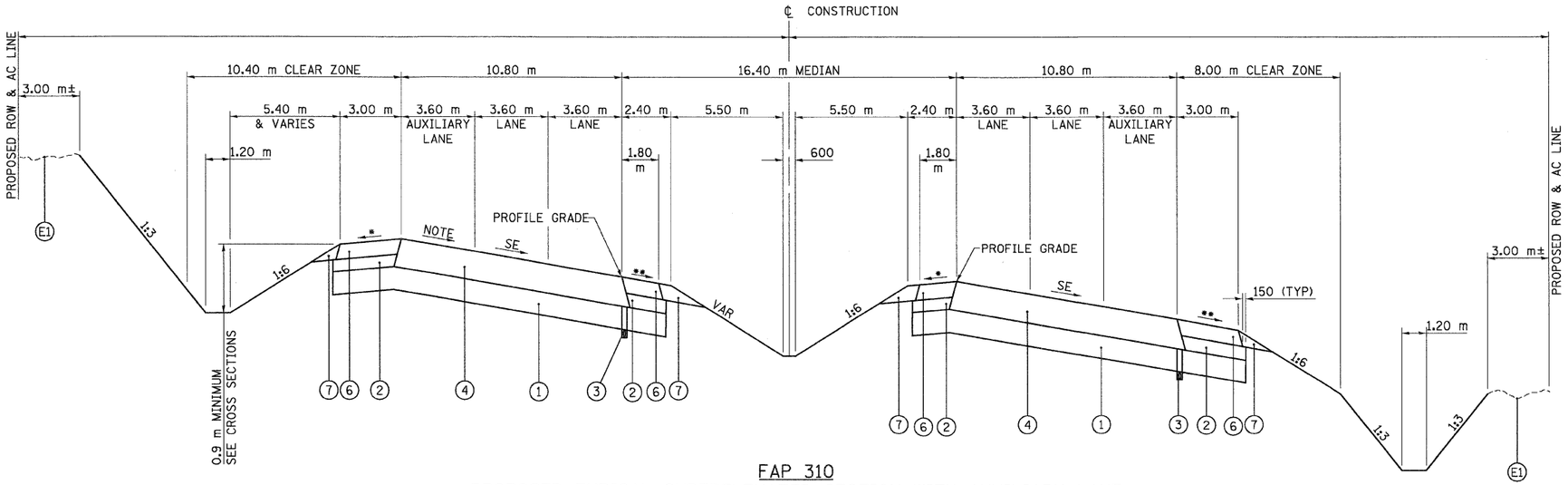
12/15/2008

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	149	6
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 76634



FAP 310
PROPOSED TYPICAL SUPERELEVATED SECTION WITH AUXILIARY LANE

NOTE: STA 39+108.322 TO STA 39+195.000 SBL 4.0%
STA 39+195.000 TO STA 39+260.000 SBL SE TRANSITION
STA 39+260.000 TO STA 39+410.000 SBL FULL SE (5.5%)

CURVE NO 3 (RIGHT)
STA 39+108.322 TO STA 39+126.063 SBL FULL SE (5.5%)
STA 39+126.063 TO STA 39+187.431 SBL BRIDGE OMISSION
STA 39+187.431 TO STA 39+410.000 SBL FULL SE (5.5%)
STA 39+370.000 TO STA 39+542.000 NBL FULL SE (5.5%)
STA 39+542.000 TO STA 39+602.068 NBL SE TRANSITION

* 4% AND VARIES, 8% MAXIMUM BREAKOVER

** 4% OR SE, WHICHEVER IS GREATER

PROPOSED LEGEND

(E1) EXISTING GROUND
(1) LIME STABILIZED SOIL MIXTURE 300 mm
(2) SUBBASE GRANULAR MATERIAL, TYPE C, MTON
(3) SUB-SURFACE DRAIN, STD 601001
(4) HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 390 mm
(HOT-MIX ASPHALT BINDER COURSE, 340 mm;
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 50 mm)
(5) HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 400 mm
(HOT-MIX ASPHALT BINDER COURSE, 350 mm;
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N70, 50 mm)
(6) HOT-MIX ASPHALT SHOULDERS, 200 mm
(7) AGGREGATE SHOULDER, TYPE B, 200 mm

FOR INFORMATION ONLY
NOT INCLUDED IN CONTRACT

ALL DIMENSIONS ARE IN mm
UNLESS NOTED OTHERWISE

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TYPICAL SECTIONS
FAP 310 (IL 255)
SECTION 60-15VB-1 & 2
MADISON COUNTY
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	149	7
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76634

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULES OF QUANTITIES

TEMPORARY DITCH CHECKS

STATION TO STATION		SIDE	SPACING	EACH
FAP 310				
39+148.9	39+225.0	LT	70m	1
RAMP C				
0+165.0	0+250.0	RT	40m	1
0+188.1	0+165.0	LT & RT	80m	1
RAMP D				
0+084.6	0+185.0	RT	65m	1
0+167.6	0+185.0	LT & RT	15m	3
TEMPORARY ACCESS ROAD				
5+025.0	5+045.0	RT	90m	1
5+045.0	5+080.0	RT	25m	1
5+080.0	5+100.0	RT	15m	2
5+080.0	5+100.0	LT	15m	1
5+100.0	5+271.0	RT	75m	2
5+100.0	5+271.0	LT	75m	2
5+271.0	5+375.0	RT	70m	1
5+271.0	5+375.0	LT	70m	1
5+375.0	5+400.0	RT	15m	2
5+375.0	5+400.0	LT	15m	2
TOTAL				22

INLET AND PIPE PROTECTION

STATION	SIDE	EACH
FAP 310		
39+225.0	RT	1
RAMP C		
0+313.2	RT	1
RAMP D		
0+084.6	RT	1
TEMPORARY ACCESS ROAD		
5+080.0	LT	1
5+485.0	RT	1
5+570.0	RT	1
5+650.0	RT	1
TOTAL		7

TREE REMOVAL, HECTARES

STATION TO STATION		SIDE	HA
FAP 310			
39+117.0	39+142.0	LT	0.08
39+147.0	39+345.0	LT & RT	1.87
TOTAL			1.95
USE			2.0

PERIMETER EROSION BARRIER

STATION TO STATION		SIDE	METER
FAP 310			
39+032	39+034	LT & RT	55
39+209	39+284	LT & RT	160
TEMPORARY ACCESS ROAD			
5+480	5+490	LT	10
5+565	5+575	LT	10
5+645	5+655	LT	10
TOTAL			245

AGGREGATE SURFACE COURSE, TYPE B

STATION TO STATION		SIDE	WIDTH	SQ M	M TON
TEMPORARY ACCESS ROAD					
5+075.0	5+605.3	LT & RT	7.2	3818.2	1909.1
5+605.3	5+658.1	LT & RT	4.9-7.2	319.7	159.8
TOTAL					2068.9
USE					2069

CONTROLLED LOW-STRENGTH MATERIAL

STATION	SIDE	DESCRIPTION	LENGTH	CU M
FAP 310				
39+158.3	LT	610 mm STEEL PIPE	22.1	6.4
TOTAL				6.4
USE				7

EARTHWORK SUMMARY

LOCATION STATION TO STATION		EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED 25%	EMBANKMENT	EARTHWORK BALANCE
		CU M			
FAP 310					
39+034.0	39+150.0	1725	1295	82840	(81545)
39+170.0	39+276.5	520	390	73050	(72660)
RAMP C DITCH					
0+165.0	0+188.1	190	145	0	145
RAMP D DITCH					
0+167.6	0+185.0	170	130	0	130
TEMPORARY ACCESS ROAD (TO CONSTRUCT)					
5+075.0	5+658.1	2020	1515	1380	135
TEMPORARY ACCESS ROAD (TO REMOVE) *					
5+075.0	5+658.1	2200	1650	2020	(370)
TOTALS		6825	5125	159290	(154165)

* INCLUDES REMOVAL OF AGGREGATE SURFACE COURSE

SEEDING SCHEDULE

STATION TO STATION		SIDE	WIDTH	SEEDING CLASS 2	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT
				HA	KG		
FAP 310							
39+020	39+180	LT & RT	175m	1.92	192	192	192
39+145	39+275	LT & RT	120m-160m	1.31	131	131	131
TEMPORARY ACCESS ROAD							
5+075	5+620	LT & RT	16m	0.93	93	93	93
TOTALS				4.16	416	416	416
USE				4.2	420	420	420

CULVERT SCHEDULE

STATION	SIDE	PIPE CULVERTS				END SECTIONS			
		TEMPORARY CLASS C TYPE 1 300MM	STEEL CASING BORED AND JACKED		RCCP TYPE 7 1800MM	STEEL		PRECAST CONCRETE
			1050MM	1200MM		1050MM	1200MM	1800MM
		METER				EACH		
FAP 310								
39+225.0	LT & RT				112.7			2
RAMP C								
0+330.0	RT			28.8			2	
RAMP D								
0+070.0	RT		28.3			2		
TEMPORARY ACCESS ROAD								
5+080.0	LT & RT	13.6						
5+485.0	LT & RT	14.5						
5+570.0	LT & RT	11.7						
5+650.0	LT & RT	11.7						
TOTALS		51.5	28.3	28.8	112.7	2	2	2
USE		51.5	28.5	29.0	113.0	2	2	2

PERIMETER EROSION BARRIER, MODIFIED

STATION TO STATION		SIDE	METER
FAP 310			
39+119	39+130	LT & RT	165
39+190	39+205	LT & RT	160
TOTAL			325

QC/QA CONCRETE SCHEDULE

PAY ITEM NUMBER	DESCRIPTION	PLAN QUANTITY	CONVERSION FACTOR	CU M
M5030350	CONCRETE STRUCTURES	cu m	n/a	X.X
M5030360	CONCRETE SUPERSTRUCTURE	cu m	n/a	X.X
MX030385	CONCRETE SLOPEWALL	sq m	0.100 cu m x sq m	X.X
M5930100	CONTROLLED LOW-STRENGTH MATERIAL	cu m	n/a	X.X
TOTAL				X.X

SETTLEMENT PLATES

STATION	SIDE	EACH
FAP 310		
39+138	LT	1
39+199	LT	1
39+225	LT	1
RAMP D		
0+100	RT	1
TOTAL		4

EROSION CONTROL BLANKET

STATION TO STATION		SIDE	WIDTH	SQ M
FAP 310				
39+029	39+162	LT & RT	VAR	7015.9
39+157	39+279	LT & RT	VAR	6084.5
TOTAL				13100.4
USE				13101

PLUG EXISTING CULVERTS

STATION	SIDE	DESCRIPTION	EACH
FAP 310			
39+158.3	LT	610 mm STEEL PIPE	1
TOTAL			1

STONE DUMPED RIPRAP

STATION TO STATION		SIDE	WIDTH	STONE DUMPED RIPRAP CLASS B3 SQ M
RAMP C				
0+266.0	0+315.2	RT	3.9	172.8
0+345.3	0+368.8	RT	3.9	92.2
RAMP D				
0+050.0	0+057.8	RT	3.9	25.4
TOTALS				290.4
USE				291

RIPRAP FOR STILLING BASIN

STATION	SIDE	CLASS	SQ M	RIPRAP FOR STILLING BASIN M TON	FILTER FABRIC SQ M
FAP 310					
39+225.0	LT	A-5	101.1	203.4	101.1
TOTALS				203.4	101.1
USE				204	102

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SCHEDULES OF QUANTITIES
FAP 310 (IL 255)
SECTION 60-15VB-1 & 2
MADISON COUNTY
DRAWN BY EBB
DATE
CHECKED BY

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	149	8
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 76634

CONTROL POINTS			
	POINT	NORTHING	EASTING
MAINLINE FAP 310	100	253,215.1909	701,492.4699
	101	253,215.1990	700,596.3380
	102	254,059.4870	700,295.9546
	103	254,455.9892	700,154.8859
	104	254,980.1650	699,968.3930
	105	254,974.4927	699,412.0589
	106	254,969.7738	698,949.2235
	107	254,964.9360	698,474.7360
	108	255,384.0772	698,252.2896
	109	255,847.4601	698,006.3632
	110	256,032.0913	697,908.3758
	111	256,161.6866	697,744.3781
	112	253,215.1896	701,640.4235
	113	254,977.8964	698,828.7196
	114	255,695.9215	698,086.7876
	115	256,460.6840	697,366.0089

BEGIN PROJECT (FAP 310)
STA 35+150.000
112

PR FAP 310 CURVE NO 1
101 PI STA = 36+194.086
Δ = 70° 24' 53" (RT)
R = 1,270.000 m
T = 896.132 m
L = 1,560.792 m
E = 284.333 m
SE = 4.1%
100 PC STA = 35+297.954
102 PT STA = 36+858.745

PR FAP 310 CURVE NO 2
104 PI STA = 37+835.958
Δ = 70° 59' 58" (LT)
R = 780.000 m
T = 556.363 m
L = 966.556 m
E = 178.092 m
SE = 5.5%
103 PC STA = 37+279.595
105 PT STA = 38+246.151

PR FAP 310 CURVE NO 3
107 PI STA = 39+183.523
Δ = 62° 37' 42" (RT)
R = 780.000 m
T = 474.512 m
L = 852.596 m
E = 132.996 m
SE = 5.5%
106 PC STA = 38+709.010
108 PT STA = 39+561.606

PR FAP 310 CURVE NO 4
110 PI STA = 40+295.227
Δ = 23° 43' 39" (LT)
R = 995.000 m
T = 209.022 m
L = 412.052 m
E = 21.718 m
SE = 4.8%
109 PC STA = 40+086.205
111 PT STA = 40+498.257

STA 38+829.909 (FAP 310)=
STA 20+000.000 (HUMBERT RD)
113

STA 39+914.647 (FAP 310)=
STA 30+000.000 (IL 111)
114

END PROJECT (FAP 310)
POT STA 40+665.645
115

HUMBERT ROAD INTERCHANGE SEE SHEET 9

IL 111 INTERCHANGE SEE SHEET 10

BENCHMARKS		
MARK	ELEVATION	DESCRIPTION
BM# 3007	188.205	CUT "+" ON WEST FLANGE BOLT OF FIRE HYDRANT LOCATED AT SOUTHEAST CORNER OF THE INTERSECTION OF IL 111 & US 67 - IL 111 STA = 29+619.3, 15.1 m RT
BM# 3008	186.070	CUT "+" ON WEST FLANGE BOLT ON FIRE HYDRANT LOCATED AT NORTHEAST CORNER INTERSECTION US 67 & INGHAM LANE - FAP 310 STA = 40+754.8, 8.5 m RT
BM# 3009	184.977	60d NAIL IN POWER POLE LOCATED ON WEST SIDE OF US 67 AND SOUTH OF MAILBOX 7406
BM# 3010	187.953	CUT "+" IN WEST FLANGE BOLT OF FIRE HYDRANT LOCATED ON EAST SIDE HUMBERT ROAD AND NORTH OF MAILBOX 6415 AT HUMBERT RD (ACROSS FROM CHURCH) - HUMBERT STA = 19+822.2, 11.2 m RT
BM# 3014	149.445	RAILROAD SPIKE IN 30" DIA TREE LOCATED NEAR WEST EDGE OF FIELD - FAP 310 STA = 35+362.7, 30.8 m RT
BM# 3016	171.485	40d NAIL LIGHT POLE LOCATED NORTH OF HILGENDORF HOUSE, AND EAST OF METAL GARAGE - FAP 310 STA = 35+936.7, 34.8 m LT
BM# 3017	188.966	RAILROAD SPIKE IN 12" DIA WALNUT - FAP 310 STA = 38+592.0, 8.7 m RT
BM# 3018	185.947	RAILROAD SPIKE IN 8" DIA TREE - FAP 310 = STA 38+295.5, 0.8 m RT
BM# 3019	175.948	RAILROAD SPIKE IN 12" DIA HICKORY - FAP 310 STA = 37+997.0, 1.0 m LT
BM# 3020	178.758	RAILROAD SPIKE IN 12" DIA TREE - FAP 310 STA = 36+828.0, 0.5 m LT
BM# 3021	178.523	RAILROAD SPIKE IN 20" DIA TREE - FAP 310 STA = 37+101.0, 0.0 m RT
BM# 3022	188.010	RAILROAD SPIKE IN POWER POLE LOCATED ON WEST SIDE OF RAILROAD TRACKS BETWEEN RAMP D & FAP 310 - FAP 310 STA = 39+173.5, 27.0 m LT
BM# 3023	187.116	CHSLD "X" ON WEST FLANGE BOLT OF FIRE HYDRANT LOCATED ON SOUTH SIDE OF IL 111 IN FRONT OF RISTER'S AUTO

FOR INFORMATION ONLY

200 0 200
SCALE 1:5000 (METRIC)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL LAYOUT & HORIZONTAL CONTROL FOR MAINLINE FAP 310 (IL 255)

DRAWN BY BGJ
DATE CHECKED BY

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	149	9
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 76634

	POINT	NORTHING	EASTING
	200	254,876.0104	698,827.0311
RAMP A	201	254,874.4964	698,918.3831
	202	254,873.8468	698,957.5811
	203	254,890.8979	698,992.8822
	204	254,923.5183	699,060.4166
	205	254,947.6082	699,110.2902
	206	254,949.2802	699,165.6518
	207	254,956.7212	699,412.0244
	208	254,958.2950	699,464.1360
	209	254,952.7843	699,515.9792
RAMP B	210	254,990.1323	699,406.0501
	211	255,000.8908	699,163.2083
	212	255,003.3558	699,107.5671
	213	255,028.7953	699,058.0207
	214	255,063.0523	698,991.3013
	215	255,080.6103	698,957.1052
	216	255,081.2473	698,918.6701
RAMP C	217	255,082.7092	698,830.4566
	218	255,071.6562	698,696.8803
	219	255,065.8432	698,626.6310
	220	255,096.9365	698,563.3699
	221	255,115.1106	698,526.3936
	222	255,138.8303	698,492.7051
	223	255,183.5622	698,429.1737
	224	255,240.2246	698,376.0084
RAMP D	225	255,096.1499	698,481.6737
	226	254,922.2983	698,695.4855
	227	254,897.0846	698,726.4946
	228	254,886.1023	698,764.9224
	229	254,868.3883	698,826.9048
HUMBERT RD	230	254,583.0037	698,820.0350
	231	254,712.9327	698,824.3285
	232	255,229.3618	698,832.8870
	233	255,312.8595	698,833.5144
	234	255,442.8543	698,832.3511
RR	235	255,213.4110	698,552.0780
	236	254,957.6000	698,496.5750

PR CURVE RAMP A-3
208 PI STA = 0+651.106
Δ = 7° 47' 51" (RT)
R = 765.000 m
T = 52.135 m
L = 104.110 m
E = 1.774 m
SE = 5.5% (MATCH FAP 310)
207 PC STA = 0+598.971
209 PT STA = 0+703.081

PR CURVE RAMP A-2
205 PI STA = 0+298.731
Δ = 24° 03' 05" (RT)
R = 260.000 m
T = 55.387 m
L = 109.142 m
E = 5.834 m
SE = 6.0%
204 PC STA = 0+243.344
206 PT STA = 0+352.486

PR CURVE RAMP A-1
202 PI STA = 0+130.568
Δ = 26° 43' 51" (LT)
R = 165.000 m
T = 39.203 m
L = 76.979 m
E = 4.593 m
SE = 6.0%
201 PC STA = 0+091.365
203 PT STA = 0+168.344

PR CURVE RAMP D-1
227 PI STA = 0+315.538
Δ = 23° 09' 55" (LT)
R = 195.000 m
T = 39.966 m
L = 78.841 m
E = 4.054 m
SE = 5.8%
226 PC STA = 0+275.572
228 PT STA = 0+354.413

PR CURVE RAMP B-1
212 PI STA = 0+298.776
Δ = 24° 38' 29" (RT)
R = 255.000 m
T = 55.696 m
L = 109.669 m
E = 6.012 m
SE = 6.0%
211 PC STA = 0+243.080
213 PT STA = 0+352.749

PR CURVE RAMP B-2
215 PI STA = 0+466.190
Δ = 26° 13' 43" (LT)
R = 165.000 m
T = 38.440 m
L = 75.533 m
E = 4.419 m
SE = 6.0%
214 PC STA = 0+427.749
216 PT STA = 0+503.283

PR CURVE RAMP C-1
219 PI STA = 0+204.522
Δ = 30° 54' 17" (RT)
R = 255.000 m
T = 70.489 m
L = 137.544 m
E = 9.563 m
SE = 6.0%
218 PC STA = 0+134.033
220 PT STA = 0+271.577

PR CURVE RAMP C-2
221 PI STA = 0+312.778
Δ = 8° 58' 29" (RT)
R = 525.000 m
T = 41.201 m
L = 82.234 m
E = 1.614 m
SE = 5.5% (MATCH FAP 310)
220 PCC STA = 0+271.577
222 PCC STA = 0+353.811

PR CURVE RAMP C-3
223 PI STA = 0+431.510
Δ = 11° 40' 29" (RT)
R = 760.000 m
T = 77.699 m
L = 154.860 m
E = 3.962 m
SE = 5.5% (MATCH FAP 310)
222 PCC STA = 0+353.811
224 PT STA = 0+508.671

STA 0+000 (RAMP A)= STA 19+898.100 (HUMBERT RD) 200

STA 0+418.877 (RAMP D)= STA 19+890.477 (HUMBERT RD) 229

STA 38+829.909 (FAP 310)= STA 20+000 (HUMBERT RD)

STA 0+591.508 (RAMP B)= STA 20+104.827 (HUMBERT RD) STA 0+000 (RAMP C) 217

BENCHMARKS		
MARK	ELEVATION	DESCRIPTION
BM# 3005	189.690	CUT "+" IN SOUTHEAST FLANGE BOLT ON FIRE HYDRANT LOCATED ON WEST SIDE OF HUMBERT ROAD AND IN FRONT OF LEWIS AND CLARK SCHOOL - HUMBERT STA = 20+343.6, 16.2 m LT
BM# 3010	187.953	CUT "+" IN WEST FLANGE BOLT OF FIRE HYDRANT LOCATED ON EAST SIDE HUMBERT ROAD AND NORTH OF MAILBOX 6415 AT HUMBERT RD (ACROSS FROM CHURCH) - HUMBERT STA = 19+822.2, 11.2 m RT
BM# 3017	188.966	RAILROAD SPIKE IN 12" DIA WALNUT - FAP 310 STA = 38+592.0, 8.7 m RT
BM# 3018	185.947	RAILROAD SPIKE IN 8" DIA TREE - FAP 310 = STA 38+295.5, 0.8 m RT
BM# 3019	175.948	RAILROAD SPIKE IN 12" DIA HICKORY - FAP 310 STA = 37+997.0, 1.0 m LT
BM# 3022	188.010	RAILROAD SPIKE IN POWER POLE LOCATED ON WEST SIDE OF RAILROAD TRACKS BETWEEN RAMP D & FAP 310 - FAP 310 STA = 39+173.5, 27.0 m LT

FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL LAYOUT & HORIZONTAL CONTROL FOR HUMBERT ROAD INTERCHANGE

DRAWN BY BGJ

DATE CHECKED BY

SCALE 1:2000 (METRIC)

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12/15/2008

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(60-ESB-1)2	MADISON	149	10
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76634

PR CURVE ACRD02
402 PI STA = 5+329.142
Δ = 27° 02′ 13″ (RT)
R = 600.000 m
T = 144.251 m
L = 283.129 m
E = 17.097 m
SE = NONE
401 PC STA = 5+184.891
403 PT STA = 5+468.020

PR CURVE ACRD03
405 PI STA = 5+631.743
Δ = 5° 02′ 46″ (RT)
R = 600.000 m
T = 26.438 m
L = 52.841 m
E = 0.582 m
SE = NONE
404 PC STA = 5+605.306
406 PT STA = 5+658.147

PR CURVE RAMP F-3
308 PI STA = 0+456.364
Δ = 11° 08′ 11″ (LT)
R = 800.000 m
T = 77.993 m
L = 155.494 m
E = 3.793 m
SE = 5.5% (MATCH FAP 310)
307 PC STA = 0+378.372
309 PT STA = 0+533.866

PR CURVE RAMP F-2
305 PI STA = 0+283.025
Δ = 30° 13′ 51″ (RT)
R = 255.000 m
T = 68.878 m
L = 134.545 m
E = 9.138 m
SE = 6.0%
304 PC STA = 0+214.147
306 PT STA = 0+348.692

PR CURVE RAMP F-1
302 PI STA = 0+110.452
Δ = 16° 15′ 07″ (LT)
R = 225.000 m
T = 32.126 m
L = 63.821 m
E = 2.282 m
SE = 5.6%
301 PC STA = 0+078.325
303 PT STA = 0+142.147

PR CURVE RAMP C-3
328 PI STA = 0+485.079
Δ = 8° 36′ 51″ (LT)
R = 505.000 m
T = 38.034 m
L = 75.925 m
E = 1.430 m
SE = 3.9%
327 PC STA = 0+447.045
329 PT STA = 0+522.970

PR CURVE RAMP C-2
325 PI STA = 0+312.094
Δ = 31° 49′ 47″ (RT)
R = 255.000 m
T = 72.710 m
L = 141.661 m
E = 10.164 m
SE = 6.0%
324 PC STA = 0+239.384
326 PT STA = 0+381.045

PR CURVE RAMP C-1
323 PI STA = 0+135.414
Δ = 12° 16′ 00″ (RT)
R = 975.000 m
T = 104.772 m
L = 208.742 m
E = 5.613 m
SE = 4.8% (MATCH FAP 310)
322 PC STA = 0+030.642
324 PT STA = 0+239.384

PR CURVE RAMP E-1
311 PI STA = 0+027.227
Δ = 4° 09′ 29″ (RT)
R = 750.000 m
T = 27.227 m
L = 54.429 m
E = 0.494 m
SE = 5.5% (MATCH FAP 310)
310 PC STA = 0+000.000
312 PT STA = 0+054.429

PR CURVE RAMP E-2
314 PI STA = 0+154.487
Δ = 10° 52′ 32″ (RT)
R = 255.000 m
T = 24.274 m
L = 48.402 m
E = 1.153 m
SE = 6.0%
313 PC STA = 0+130.213
315 PT STA = 0+178.615

PR CURVE RAMP D-1
318 PI STA = 0+508.018
Δ = 10° 44′ 55″ (LT)
R = 1,015.000 m
T = 95.488 m
L = 190.415 m
E = 4.482 m
SE = 4.8%
317 PC STA = 0+412.530
319 PT STA = 0+602.945

PR CURVE IL 111
332 PI STA = 30+696.467
Δ = 49° 37′ 45″ (LT)
R = 671.750 m
T = 310.599 m
L = 581.864 m
E = 68.331 m
SE = 5.0%
331 PC STA = 30+385.868
333 PT STA = 30+967.732

STA 0+000 (RAMP F)=
STA 29+857.028 (IL 111)
STA 0+619.996 (RAMP C)
300

STA 39+914.647 (FAP 310)=
STA 30+000 (IL 111)

STA 0+417.387 (RAMP E)=
STA 30+097.336 (IL 111)
STA 0+000 (RAMP D)
316

CONTROL POINTS			
	POINT	NORTHING	EASTING
RAMP F	300	255,628.6235	698,960.6452
	301	255,571.4148	698,014.1432
	302	255,547.9498	698,036.0863
	303	255,531.5634	698,063.7195
	304	255,494.8391	698,125.6498
	305	255,459.7075	698,184.8942
	306	255,399.5250	698,218.3934
	307	255,373.5916	698,232.8287
	308	255,305.4449	698,270.7610
	309	255,245.9079	698,321.1413
RAMP E	310	255,345.1831	698,296.7091
	311	255,369.1972	698,283.8793
	312	255,394.0784	698,272.8245
	313	255,463.3338	698,242.0541
	314	255,485.5169	698,232.1980
	315	255,509.1612	698,226.7044
RAMP D	316	255,741.7385	698,172.6663
	317	256,047.9211	697,896.2004
	318	256,118.7927	697,832.2073
	319	256,176.4860	697,756.1192
	320	256,272.9078	697,628.9544
RAMP C	321	256,169.0493	697,709.7386
	322	256,148.7703	697,732.7103
	323	256,079.4320	697,811.2552
	324	255,994.9890	697,873.2751
	325	255,936.3867	697,916.3160
	326	255,863.8976	697,921.9778
	327	255,798.0981	697,927.1172
	328	255,760.1795	697,930.0789
	329	255,723.1323	697,938.6866
IL 111	330	255,509.8812	697,738.0762
	331	255,877.5527	698,427.2344
	332	256,023.7544	698,701.2728
	333	256,327.2350	698,767.3900

CONTROL POINTS			
	POINT	NORTHING	EASTING
ACCESS RD	400	255,151.2245	698,514.6421
	401	255,281.5892	698,383.5330
	402	255,383.2996	698,281.2419
	403	255,520.3922	698,236.3636
	404	255,650.8647	698,193.6524
	405	255,675.9904	698,185.4273
	406	255,701.7422	698,179.4440

BENCHMARKS		
MARK	ELEVATION	DESCRIPTION
BM* 3007	188.205	CUT "+" ON WEST FLANGE BOLT OF FIRE HYDRANT LOCATED AT SOUTHEAST CORNER OF THE INTERSECTION OF BUSINESS IL 111 & US 67 - IL 111 STA = 29+619.3, 15.1 m RT
BM* 3008	186.070	CUT "+" ON WEST FLANGE BOLT ON FIRE HYDRANT LOCATED AT NORTHEAST CORNER INTERSECTION US 67 & INGHAM LANE - FAP 310 STA = 40+754.8, 8.5 m RT
BM* 3023	187.116	CHSLD "X" ON WEST FLANGE BOLT OF FIRE HYDRANT LOCATED ON SOUTH SIDE OF BUS IL 111 IN FRONT OF RISTER'S AUTO

100 0 100
SCALE 1:2000 (METRIC)

FOR INFORMATION ONLY

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL LAYOUT &
HORIZONTAL CONTROL
FOR IL 111 INTERCHANGE

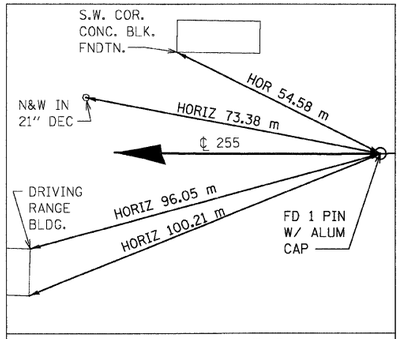
DRAWN BY BGJ
DATE CHECKED BY

p:\00files\000024\dRailroad-Bridge\ROADPLANS\Alignmt_BM2.DGN

12/15/2008

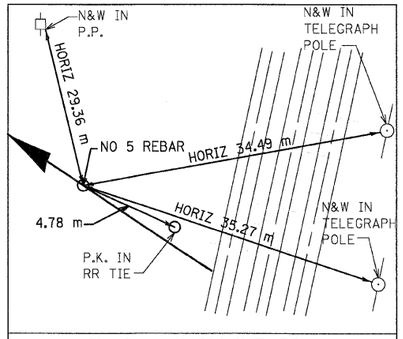
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	149	11
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76034



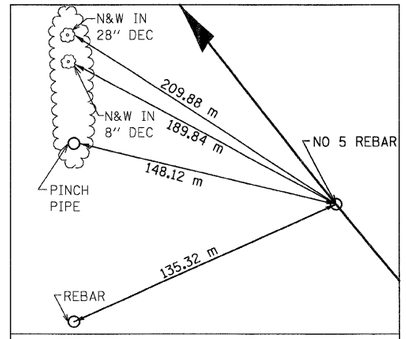
IL 255 MAINLINE PC
STA 38+709.010

N 254,969.7738 E 698,949.2235



IL 255 MAINLINE PI
STA 39+183.523

N 254,964.9360 E 698,474.7360



IL 255 MAINLINE POT
STA 39+410.000

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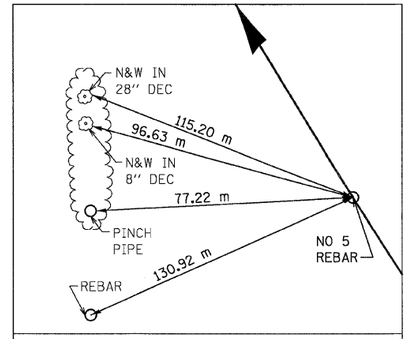
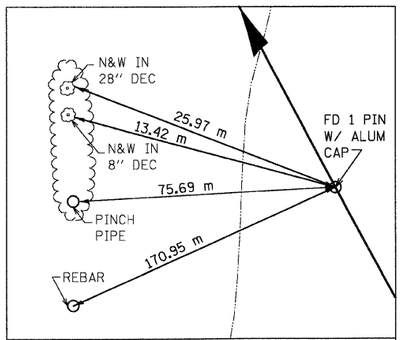


IL 255 MAINLINE POT
STA 39+505.000

N 255,335.0827 E 698,280.6163



IL 255 MAINLINE PT
STA 39+561.606

N 255,384.0772 E 698,252.2896

NOTES:

1) DIMENSIONS LABELED "HORIZ" ARE HORIZONTAL PULLS.
2) DIMENSIONS NOT LABELED "HORIZ" ARE DIRECT PULLS.

N

(TYP ALL TIES THIS DWG)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
HORIZONTAL CONTROL TIES
FAP 310 (IL 255)
SECTION 60-15VB-1&2
MADISON COUNTY

DRAWN BY CES
DATE CHECKED BY

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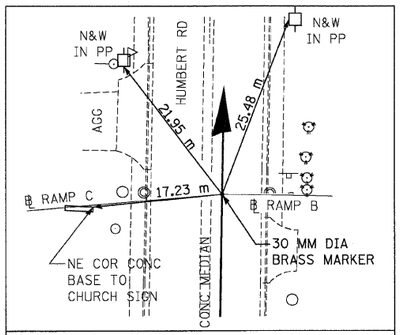
12/15/2008

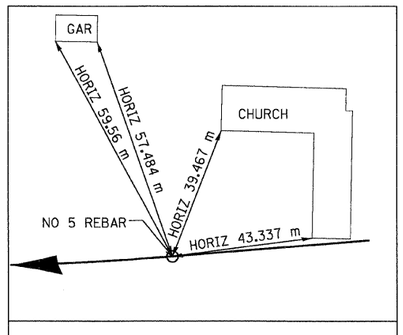
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB1&2	MADISON	149	12
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76034



RAMP 'C' POT STA 0+000.000

N 255,082.7092 E 698,830.4566



RAMP 'C' PC STA 0+134.033

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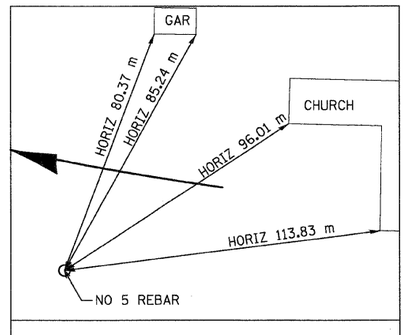

RAMP 'C' PI STA 0+204.522

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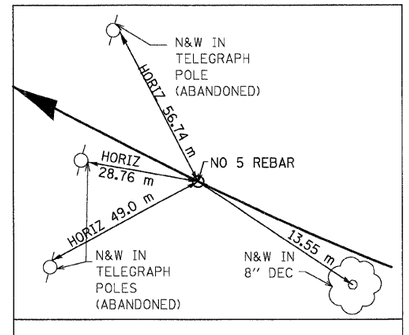

RAMP 'C' PCC STA 0+271.577

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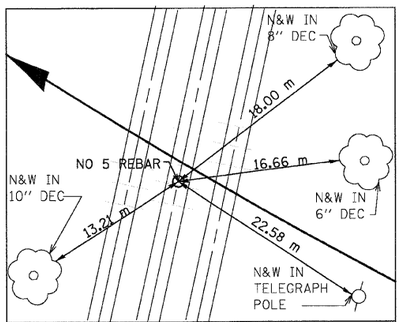
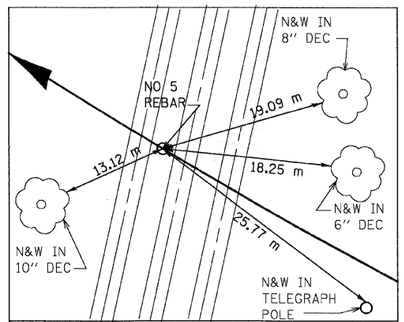


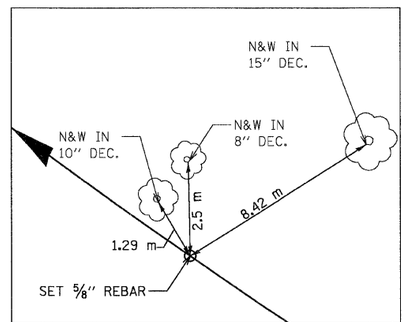
RAMP 'C' PI STA 0+312.778

N 255,115.1106 E 698,526.3936



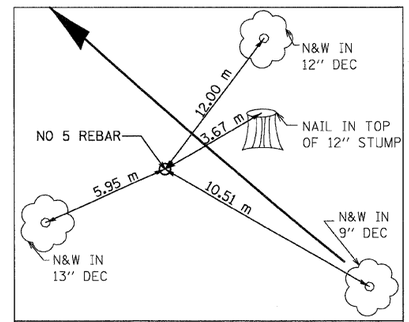
RAMP 'C' POT STA 0+315.500

N 255,117.9366 E 698,524.8069



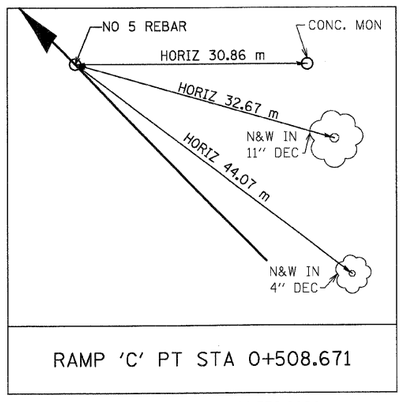
RAMP 'C' PCC STA 0+353.81

N 255,138.8303 E 698,492.7051



RAMP 'C' PI STA 0+431.510

N 255,183.5622 E 698,429.1737



RAMP 'C' PT STA 0+508.671

N 255,240.2246 E 698,376.0084

NOTES:

1) DIMENSIONS LABELED "HORIZ" ARE HORIZONTAL PULLS.
2) DIMENSIONS NOT LABELED "HORIZ" ARE DIRECT PULLS.

N

(TYP ALL TIES THIS DWG)

REVISIONS	
NAME	DATE

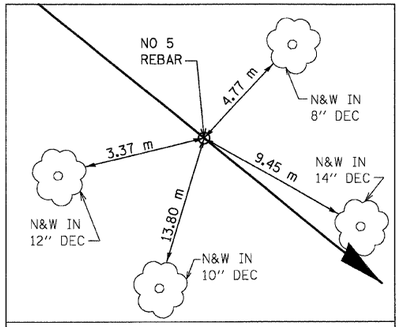
ILLINOIS DEPARTMENT OF TRANSPORTATION
HORIZONTAL CONTROL TIES
FAP 310 (IL 255)
SECTION 60-15VB-1&2
MADISON COUNTY
DRAWN BY CES
DATE CHECKED BY

p:\00files\000024\dRailroad-Bridge\ROADPLANS\ties.dgn

12/15/2008

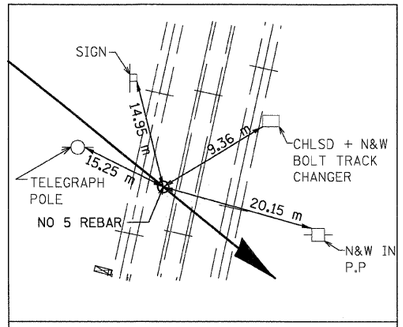
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	149	13
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 76683A



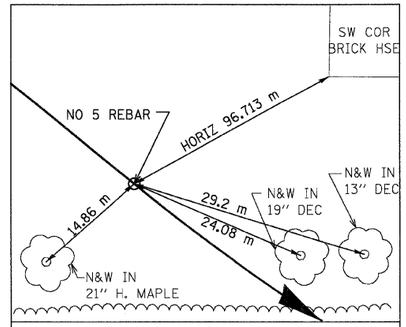
RAMP 'D' POT STA 0+000.000

N 255,096.1499 E 698,481.6737



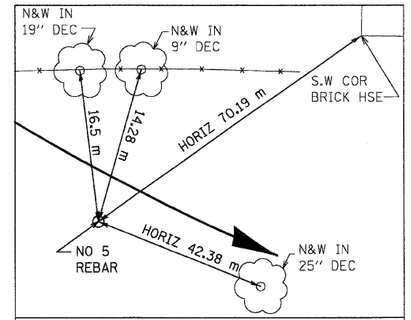
RAMP 'D' POT STA 0+042.000

N 255,069.6531 E 698,514.2608



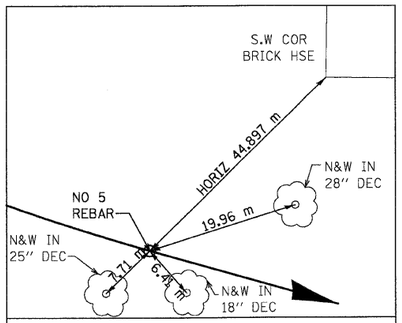
RAMP 'D' PC STA 0+275.572

N 254,922.2983 E 698,695.4855



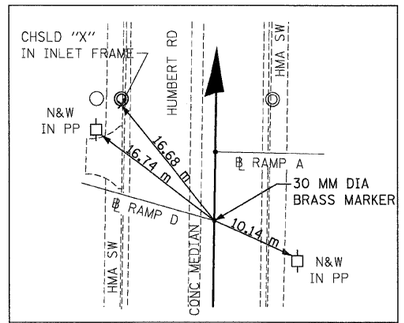
RAMP 'D' PI STA 0+315.538

N 254,897.0846 E 698,726.4946



RAMP 'D' PT STA 0+354.413

N 254,886.1023 E 698,764.9224



RAMP 'D' POT STA 0+418.877

N 254,868.3883 E 698,826.9048

NOTES:

1) DIMENSIONS LABELED "HORIZ" ARE HORIZONTAL PULLS.
2) DIMENSIONS NOT LABELED "HORIZ" ARE DIRECT PULLS.

N

(TYP ALL TIES THIS DWG)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
HORIZONTAL CONTROL TIES
FAP 310 (IL 255)
SECTION 60-15VB-1&2
MADISON COUNTY
DRAWN BY CES
DATE CHECKED BY

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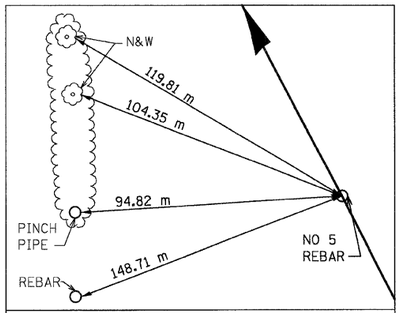
12/15/2008

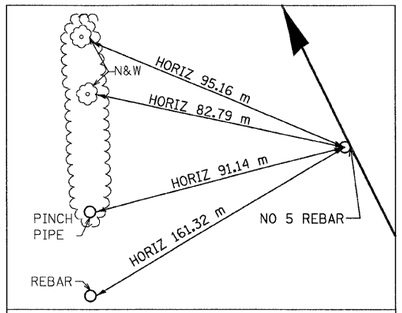
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	14	14
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. Note 24



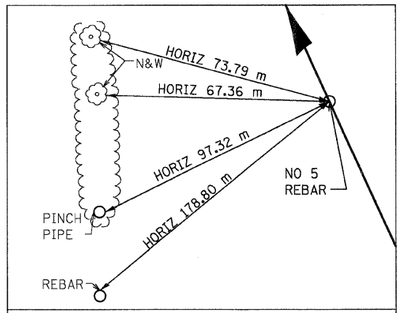
RAMP 'E' PC STA 0+000.000

N 255,345.1831 E 698,296.7091



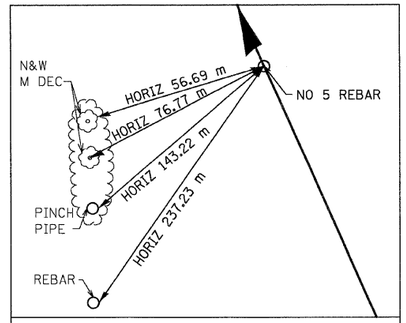
RAMP 'E' PI STA 0+027.227

N 255,369.1972 E 698,283.8793



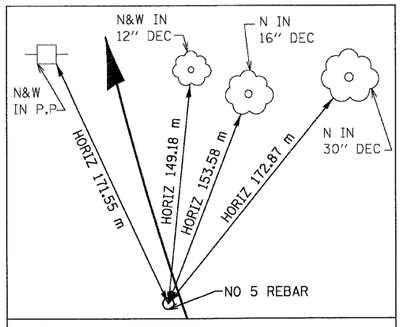
RAMP 'E' PT STA 0+054.429

N 255,394.0784 E 698,272.8245



RAMP 'E' PC STA 0+130.213

N 255,463.3338 E 698,242.0541



RAMP 'E' PI STA 0+154.487

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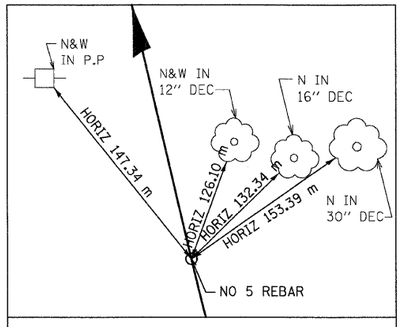

RAMP 'E' PT STA 0+178.615

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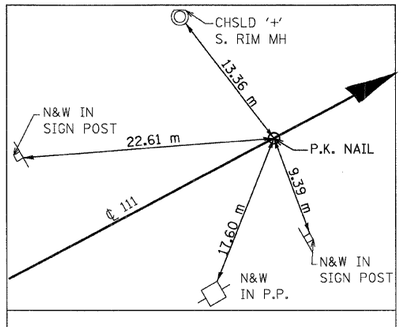

RAMP 'E' POT STA 0+417.387

N 255,741.7385 E 698,172.6663

NOTES:

1) DIMENSIONS LABELED "HORIZ" ARE HORIZONTAL PULLS.

2) DIMENSIONS NOT LABELED "HORIZ" ARE DIRECT PULLS.

N

(TYP ALL TIES THIS DWG)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

HORIZONTAL CONTROL TIES

FAP 310 (IL 255)

SECTION 60-15VB-1&2

MADISON COUNTY

DRAWN BY CES

DATE CHECKED BY

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	149	15
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 76634

NE 1/4, SEC 23, T 6 N, R 10 W, 3RD PM

KANSAS CITY SOUTHERN RAILWAY
MILE POST 28 W LOCATED 658.3 m (2,160') SOUTHERLY ALONG RAIL FROM INTERSECTION OF IL 255 AND RAILROAD

LEROY W. BRAKEMEYER & MARIE BRAKEMEYER
PARCEL NO. 8239034

LIMITS OF CONSTRUCTION

PROPOSED BRIDGE APPROACH PAVEMENTS, GUARDRAIL, AND BRIDGE APPROACH PAVEMENT DRAINS TO BE DONE BY OTHERS

STA 39+114.649
94.083 m LT

STA 39+116.000
87.000 m LT

STA 39+121.000
87.000 m LT

STA 39+147.469
105.156 m LT

STA 39+147.000
97.000 m LT

STONE DUMPED
RIPRAP, CLASS B3
25.4 SO M

MCTALYD L.L.C.
AN ILLINOIS LIMITED LIABILITY COMPANY
PARCEL NO. 8239056

NW 1/4, SEC 23, T 6 N, R 10 W, 3RD PM

PROPOSED ENERGY DISSIPATION BASSIN
SEE DETAIL ON SHEET 124

STA 39+215.000
78.000 m LT

SEC 14, T 6 N, R 10 W, 3RD PM

STA 39+225
PROPOSED PIPE CULVERT, RCCP, TYPE 7, 1.800 m Ø X 112.7 m
USFL 184.725, 54.8 m RT
DSFL 184.160, 57.9 m LT
PRECAST REINFORCED CONCRETE FLARED END SECTION STD 542301, 2-EACH
DRAINAGE AREA = 45.94 ha (113.5 acres)
50 YR FLOW = 5.92 cms (209 cfs)
100 YR FLOW = 7.28 cms (257 cfs)

JAMES FITZGERALD, MARK W. SIEVERS,
JAMES K. AND JUDITH D. SIEVERS
PARCEL NO. 8239057

STA 0+070 (RAMP D) = STA 10+086.300 (RR)
PROPOSED STEEL CASING PIPE BORED AND JACKED, 1.050 m Ø X 30.5 m
USFL 184.867, STA 0+084.1, 48.8 m RT
DSFL 184.654, STA 0+056.9, 62.6 m RT
STEEL END SECTIONS, 1.050 m Ø, 2-EACH
DRAINAGE AREA = 3.23 ha (8.0 acres)
50 YR FLOW = 1.08 cms (38 cfs)
100 YR FLOW = 1.33 cms (47 cfs)

STA 39+195.000, 19.000 m LT FAP 310 =
STA 0+000.000, B RAMP D

STA 39+275.000
53.000 m LT

STA 39+124.000
44.000 m LT

STA 39+158.3
PLUG & FILL
EX 610mm STEEL PIPE

SN 060-0311 SB AND RAMP D

KANSAS CITY SOUTHERN RAILWAY & UNION PACIFIC RAILROAD
PARCEL NO. 8239090

BM 3022

℄ SURVEY AND CONSTRUCTION
FAP 310 (IL 255)

WILBUR & JACQUELINE HAMILTON
PARCEL NO. 8239007

STA 39+117.000
28.000 m LT

SECTION 60-15
FAP 310
BY OTHERS

STA 39+128.000
18.000 m LT

STA 0+000
STA 39+170.000
18.000 m LT

STA 39+142.000
18.000 m LT

STA 39+345.000
35.000 m RT

SECTION 60-15
FAP 310
BY OTHERS

PCC STA 0+271.577
℄ FAP RTE 310 STA 39+155.726 =
℄ RAILROAD TRACK #1 STA 10+001.572
℄ FAP RTE 310 STA 39+160.297 =
℄ RAILROAD TRACK #2 STA 10+000.000
℄ FAP RTE 310 STA 39+164.825 =
℄ KANSAS CITY SOUTHERN RAILWAY STA 9+998.419

SN 060-0310 NB AND RAMP C

PCC STA 0+353.811

STONE DUMPED
RIPRAP, CLASS B3
172.8 SO M

PEOPLE OF THE STATE OF ILLINOIS

℄ TEMPORARY ACCESS ROAD

STA 39+213.000
70.000 m RT

STONE DUMPED
RIPRAP, CLASS B3
92.2 SO M

MCTALYD L.L.C.
AN ILLINOIS LIMITED LIABILITY COMPANY
PARCEL NO. 8239056

STA 39+312.000
65.000 m RT

STA 39+112.020
79.066 m RT

STA 39+304.960
67.803 m RT

STA 39+208.664
75.498 m RT

SECTION LINE & PL

JAMES FITZGERALD, MARK W. SIEVERS,
JAMES K. AND JUDITH D. SIEVERS
PARCEL NO. 8239057

STA 0+330 (RAMP C) = STA 9+923.200 (RR)
PROPOSED STEEL CASING PIPE BORED AND JACKED, 1.200 m Ø X 30.5 m
USFL 185.105, STA 0+314.4, 54.3 m RT
DSFL 184.892, STA 0+345.9, 43.7 m RT
STEEL END SECTIONS, 1.200 m Ø, 2-EACH
DRAINAGE AREA = 3.23 ha (8.0 acres)
50 YR FLOW = 1.81 cms (64 cfs)
100 YR FLOW = 2.18 cms (77 cfs)

CHARLES A. BURK JR. &
JOYCE E. BURK
PARCEL NO. 8239041

STA 39+232.549
121.057 m RT

STA 39+018.075
86.648 m RT

STA 39+177.209
87.130 m RT

SCALE IN METERS
(1:500)

CURVE NO 3
PI STA = 39+183.523
Δ = 62° 37' 42" (RT)
R = 780.000 m
T = 474.512 m
L = 852.596 m
E = 132.996 m
PC STA = 38+709.010
PT STA = 39+561.606
SE = 5.5%
SE ATTAINED STA 38+649.000 TO STA 38+729.000
SE REMOVED STA 39+542.000 TO STA 39+622.000

BM 3022-RAILROAD SPIKE IN POWER POLE LOCATED ON WEST SIDE OF RAILROAD TRACKS MAINLINE STA 39+173.5, 27.0 m LT, ELEV 188.010

NE 1/4, SEC 23, T 6 N, R 10 W, 3RD PM

CURVE RAMP C-1
PI STA = 0+204.522
Δ = 30° 54' 17" (RT)
R = 255.000 m
T = 70.489 m
L = 137.544 m
E = 9.563 m
PC STA = 0+134.033
PT STA = 0+271.577
SE = 6.0%
SE ATTAINED STA 0+106.000 TO STA 0+147.000
SE TRANSITION STA 0+272.000 TO STA 0+282.000

CURVE RAMP C-2
PI STA = 0+312.778
Δ = 8° 58' 29" (RT)
R = 525.000 m
T = 41.201 m
L = 82.234 m
E = 1.614 m
PC STA = 0+271.577
PT STA = 0+353.811
SE = 5.5%

CURVE RAMP C-3
PI STA = 0+431.510
Δ = 11° 40' 29" (RT)
R = 760.000 m
T = 77.699 m
L = 154.860 m
E = 3.962 m
PC STA = 0+353.811
PT STA = 0+508.671
SE = 5.5%

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PLAN
FAP 310 (IL 255) OVER RAILROAD
SECTION 60-15VB-1&2
MADISON COUNTY
DRAWN BY BGJ
DATE CHECKED BY

IL 255 (FAP 310), STA 39+000 TO STA 39+350

ebb

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-102	MADISON	19	16
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76634

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

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

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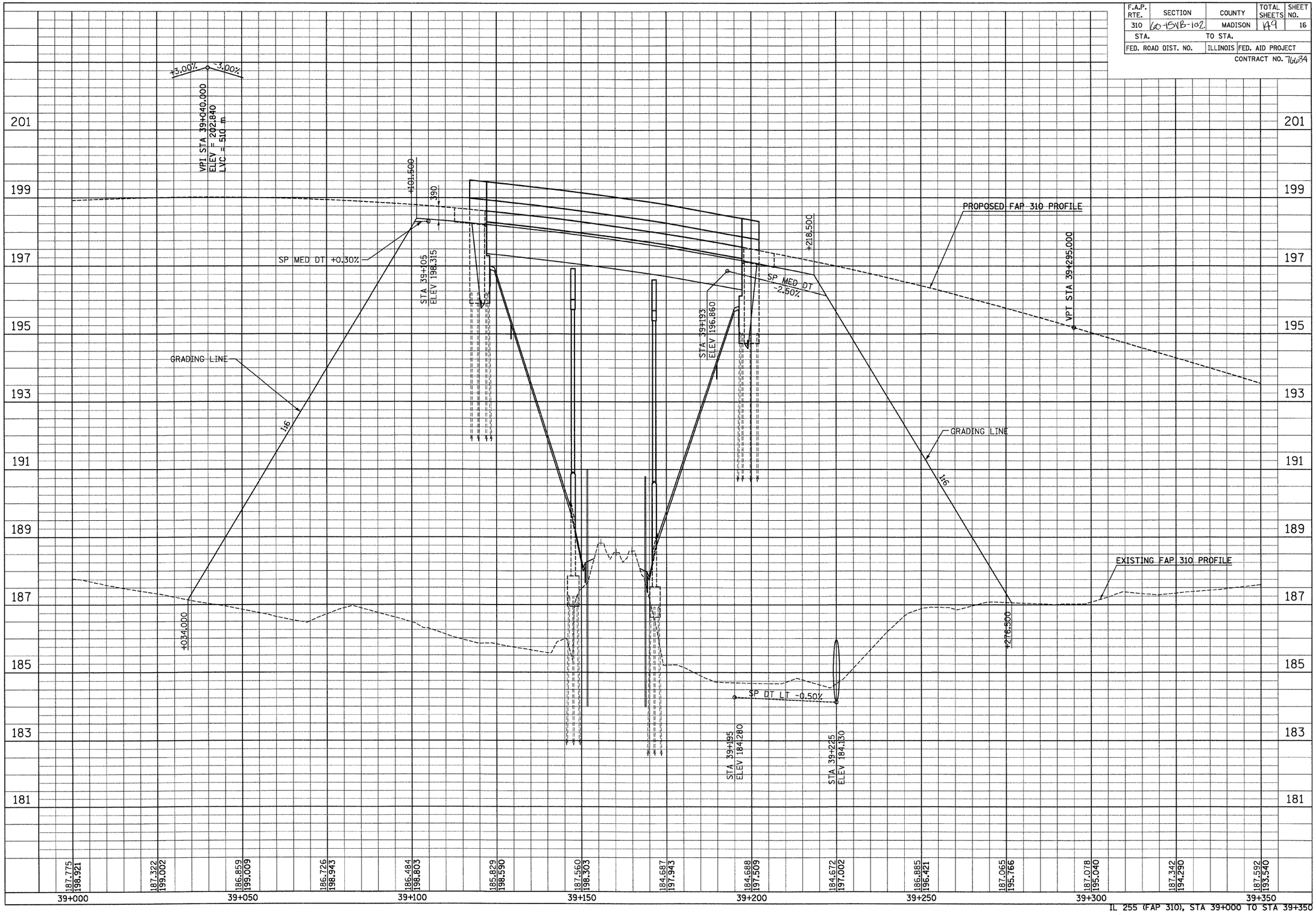

IL 255 (FAP 310), STA 39+000 TO STA 39+350

ENTRANCE RAMP C

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15NB-12	MADISON	149	17
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 71634

BRIDGE OMISSION
STA 0+284.426 TO
STA 0+341.063

STA 0+322.818 TO STA 0+508.671
RAMP C PROFILE IS CONTROLLED BY THE MAINLINE OUTSIDE EOP
MODIFIED ENTRANCE RAMP TERMINAL

PROPOSED MAINLINE PROFILE
OUTSIDE EDGE OF PAVEMENT

PROPOSED RAMP PROFILE

EXISTING GROUND PROFILE

+3.700%
-1.900%
VPI STA 0+230.000
ELEV = 196.854
LVC = 190 m
70 KM/HR DESIGN

STA 0+322.818
SECTION A-A

CRITICAL CLEARANCE STA 0+308.750
101 m (MIN) STRUCTURAL CLEARANCE
SURVEYED TOP OF EAST TRACK RAIL
ELEV = 188.500
VPT STA 0+325.000

STA 0+353.811
SECTION B-B

STA 0+383.910
SECTION C-C

STA 0+413.903
SECTION D-D

STA 0+508.671 (RAMP C) =
STA 39+370.000, 15.0 m RT (FAP 310)

VPC STA 0+010.000

VPT STA 0+070.000

VPC STA 0+135.000

BOP STA 0+043.131
ELEV = 188.689
SECTION 60-15

+3.700%

0.716%

VPI STA 0+009.550
ELEV = 188.342
HUMBERT ROAD EOP

VPI STA 0+040.000
ELEV = 188.124
LVC = 60 m
40 KM/HR DESIGN

SP DT RT -1.00%

SP DT RT 0.70%

STA 0+165
ELEV 186.405

STA 0+260
ELEV 185.555

STA 0+365
ELEV 184.750

	0+000	0+050	0+100	0+150	0+200	0+250	0+300	0+350	0+400	0+450	0+500	0+550
	188.449	188.834	188.309	191.371	187.735	194.113	187.389	196.233	186.829	197.353	187.332	197.473
	184.957	196.675	185.590	195.527	186.989	194.089	187.721	192.605				

FOR INFORMATION ONLY

RAMP C PROFILE SHEET

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

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

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	199	18
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76834

EXIT RAMP D

STA 0+000.000 (RAMP D) =
STA 39+195.000, 19.0 m RT (FAP 310)

SEE NOTE

BRIDGE OMISSION
STA 0+012.622 TO
STA 0+077.907

STA 0+048.637
SECTION B-B

STA 0+061.624
SECTION C-C

STA 0+089.81
SECTION D-D

VPT STA 0+145.000
ELEV = 200.712
LVC = 190 m
70 KM/HR DESIGN

+1.700%

-5.900%

PROPOSED MAINLINE PROFILE
OUTSIDE EDGE OF PAVEMENT

PROPOSED RAMP PROFILE

VPC STA 0+050.000

CRITICAL CLEARANCE STA 0+049.260
TO STRUCTURAL CLEARANCE
TOP OF EAST TRACK RAIL ELEV ± 188.750

7.01 m (MIN) STRUCTURE
SURVEYED TOP OF RAIL

VPT STA 0+240.000

VPC STA 0+331.500

NOTE
STA 0+000.000 TO STA 0+048.637
RAMP D PROFILE IS CONTROLLED BY THE MAINLINE OUTSIDE EOP
MODIFIED EXIT RAMP TERMINAL

EOP STA 0+376.864
ELEV = 187.926
SECTION 60-15

VPT STA 0+406.500

-5.900%

+0.864%

EXISTING GROUND PROFILE

SP DT RT +0.70%

STA 0+185
ELEV 185.575

VPT STA 0+369.000
ELEV = 187.496
LVC = 75 m
50 KM/HR DESIGN

VPT STA 0+409.050
ELEV = 187.842
HUMBERT ROAD EOP

STA 0+000
ELEV 184.280

	202	200	198	196	194	192	190	188	186	184	182	180
0+000							184.915					184.142
0+050							188.745					199.097
0+100							187.128					199.447
0+150							187.347					198.797
0+200							187.690					197.147
0+250							187.336					194.517
0+300							187.531					191.567
0+350							187.917					188.771
0+400							188.021					187.783
0+450												

FOR INFORMATION ONLY

RAMP D PROFILE SHEET

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

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

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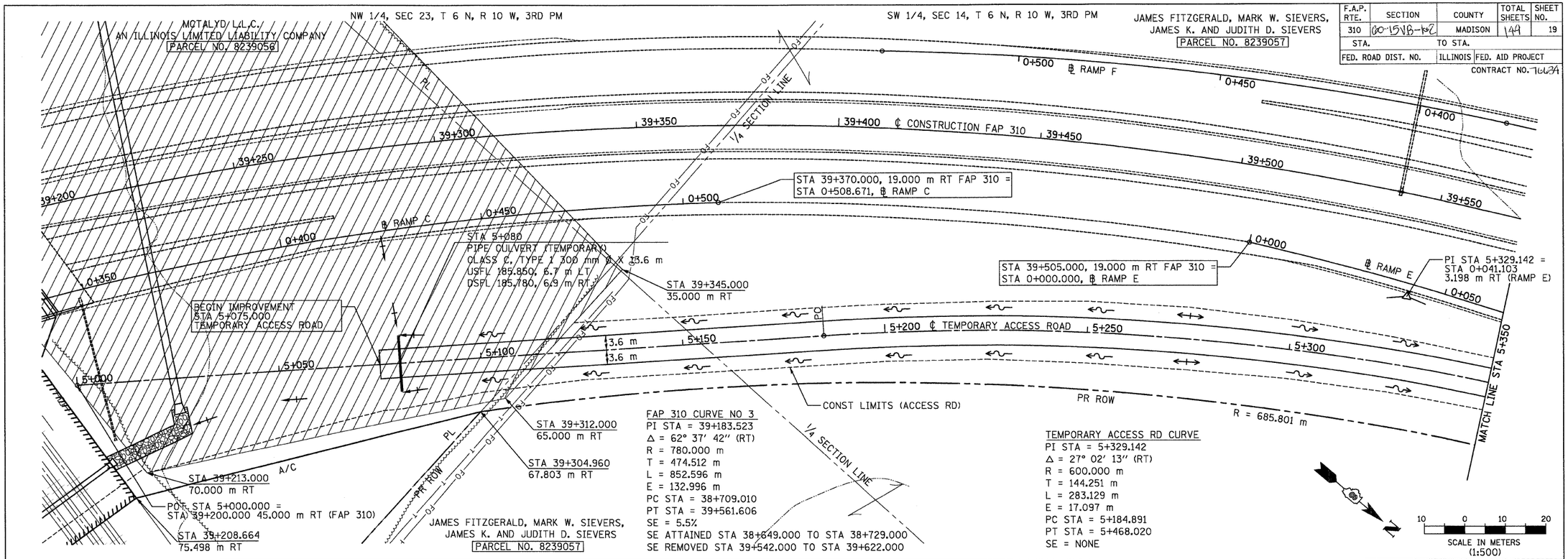
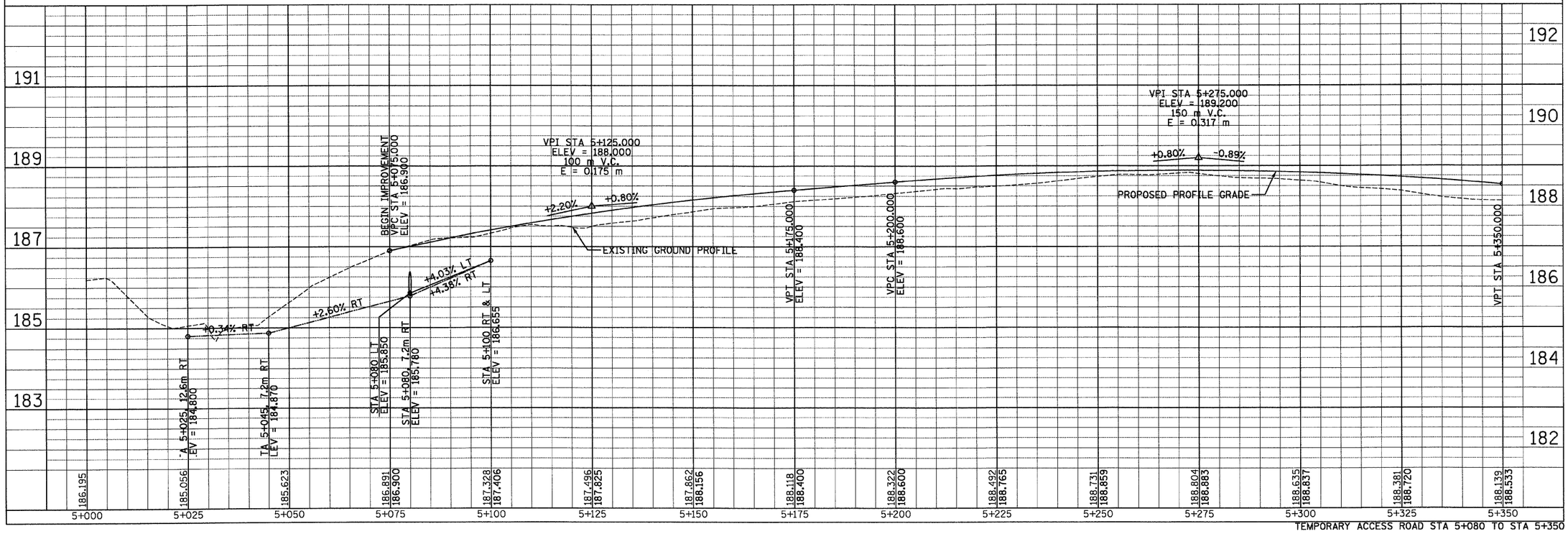
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-BZ	MADISON	149	19
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 76834





TEMPORARY ACCESS ROAD STA 5+080 TO STA 5+350

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

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

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	(60-15)B-R7	MADISON	149	20
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76634

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

ERNEST A. HOOD
PARCEL NO. 8239079

ERNEST A. HOOD &
DELORES J. HODD
PARCEL NO. 8239080

MARY JANE REATHAFORD
PARCEL NO. 8701001

SHIRLEY M. GOSS
PARCEL NO. 8239059

JAMES FITZGERALD, MARK W. SIEVERS,
JAMES K. AND JUDITH D. SIEVERS
PARCEL NO. 8239057

ALTON ENTERTAINMENT
HOLDINGS, INC.
PARCEL NO. 8239061

DUANE & CANDACE RISTER
PARCEL NO. 8239060

℄ CONSTRUCTION FAP 310

℄ RAMP E

℄ TEMPORARY ACCESS ROAD

℄ IL RT 111

CONST LIMITS (ACCESS RD)

MATCH LINE STA 5+350

3.6 m
3.6 m

R = 685.801 m

R = 224.520 m

PR ROW

EX ROW

STA 39+634.287
58.519 m RT

STA 0+178.615
30.480 m RT

STA 5+485
PIPE CULVERT (TEMPORARY)
CLASS C, TYPE 1 300 mm Ø X 14.5 m
USFL 186.098, 7.1 m RT
DSFL 186.002, 7.4 m LT

NOTE: TRANSITION ACCESS ROAD WIDTH FROM 7.2 m TO 4.9 m WITHIN LIMITS OF LAST HORIZONTAL CURVE.

STA 5+570
PIPE CULVERT (TEMPORARY)
CLASS C, TYPE 1 300 mm Ø X 11.7 m
USFL 186.198, 5.7 m RT
DSFL 186.102, 6.0 m LT

STA 5+650
PIPE CULVERT (TEMPORARY)
CLASS C, TYPE 1 300 mm Ø X 11.7 m
USFL 185.748, 5.7 m RT
DSFL 185.652, 6.0 m LT

PI STA 5+631.743
STA 0+350.457
2.450 m LT (RAMP E)

END IMPROVEMENT
POT STA 5+658.147 =
STA 0+376.895, 2.450 m LT
TEMPORARY ACCESS ROAD

STA 0+290.000
30.480 m RT

STA 0+295.728
51.932 m RT

STA 0+298.589
39.624 m RT

STA 0+325.733
51.418 m RT

STA 0+369.459
15.240 m RT

STA 0+362.161
17.208 m RT

BM 3023-CHSLD "X" ON WEST FLANGE BOLT OF FIRE HYDRANT LOCATED ON SOUTH SIDE OF IL 111 IN FRONT OF RISTER'S AUTO.
IL 111 STA 30+094.3, 27.4 m RT
ELEV 187.116

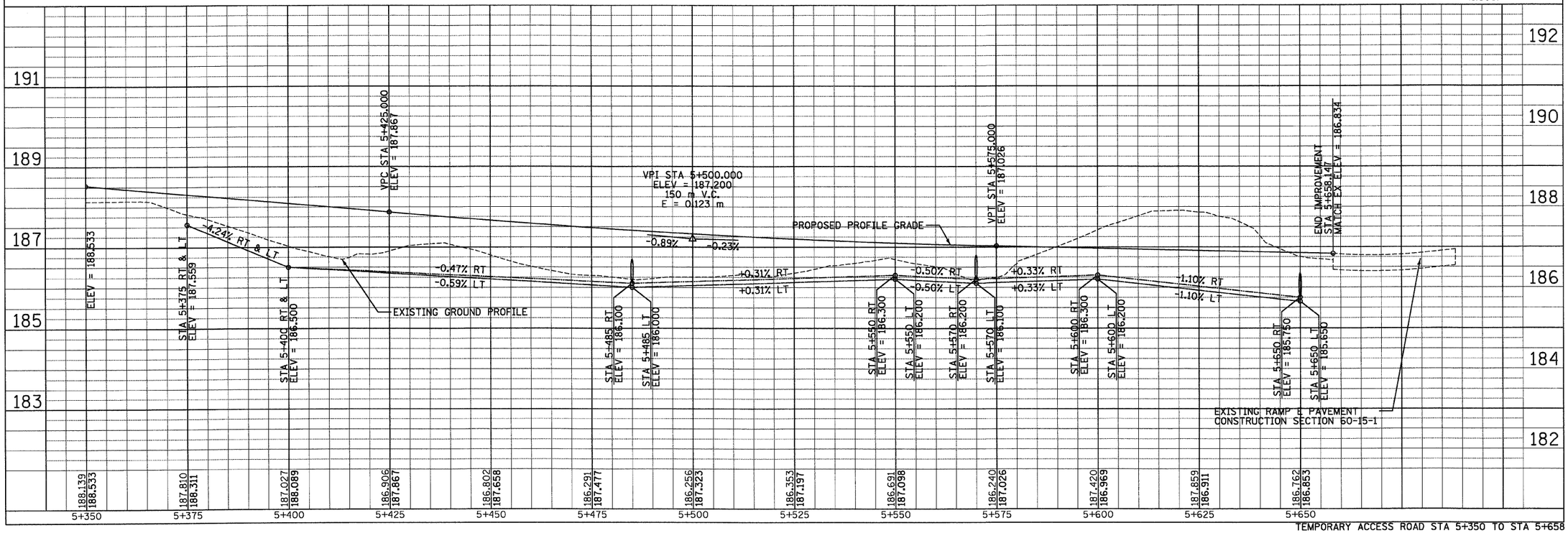
BM 3023

SW 1/4, SEC 14. T 6 N, R 10 W, 3RD PM

TEMPORARY ACCESS RD CURVE
PI STA = 5+329.142
Δ = 27° 02' 13" (RT)
R = 600.000 m
T = 144.251 m
L = 283.129 m
E = 17.097 m
PC STA = 5+184.891
PT STA = 5+468.020
SE = NONE

TEMPORARY ACCESS RD CURVE
PI STA = 5+631.743
Δ = 5° 02' 46" (RT)
R = 600.000 m
T = 26.438 m
L = 52.841 m
E = 0.582 m
PC STA = 5+605.306
PT STA = 5+658.147
SE = NONE

SCALE IN METERS
(1:500)



TEMPORARY ACCESS ROAD STA 5+350 TO STA 5+658

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

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bgJ

COORDINATES SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

COORDINATE TABLE

STATION	OFFSET	NORTH	EAST
38+833.246	9.257 m RT	254,987.5395	698,826.7934
38+841.082	63.304 m RT	255,042.0922	698,827.7062
38+845.441	7.494 m RT	254,987.6826	698,814.6020
38+854.173	61.411 m RT	255,042.2335	698,815.5148
39+115.811	89.800 m LT	254,991.1914	698,515.6344
39+131.289	36.700 m LT	255,045.5696	698,527.5662

PART OF THE NE 1/4 OF SECTION 23, T6N, R10W, OF THE 3RD PM, MADISON COUNTY, ILLINOIS

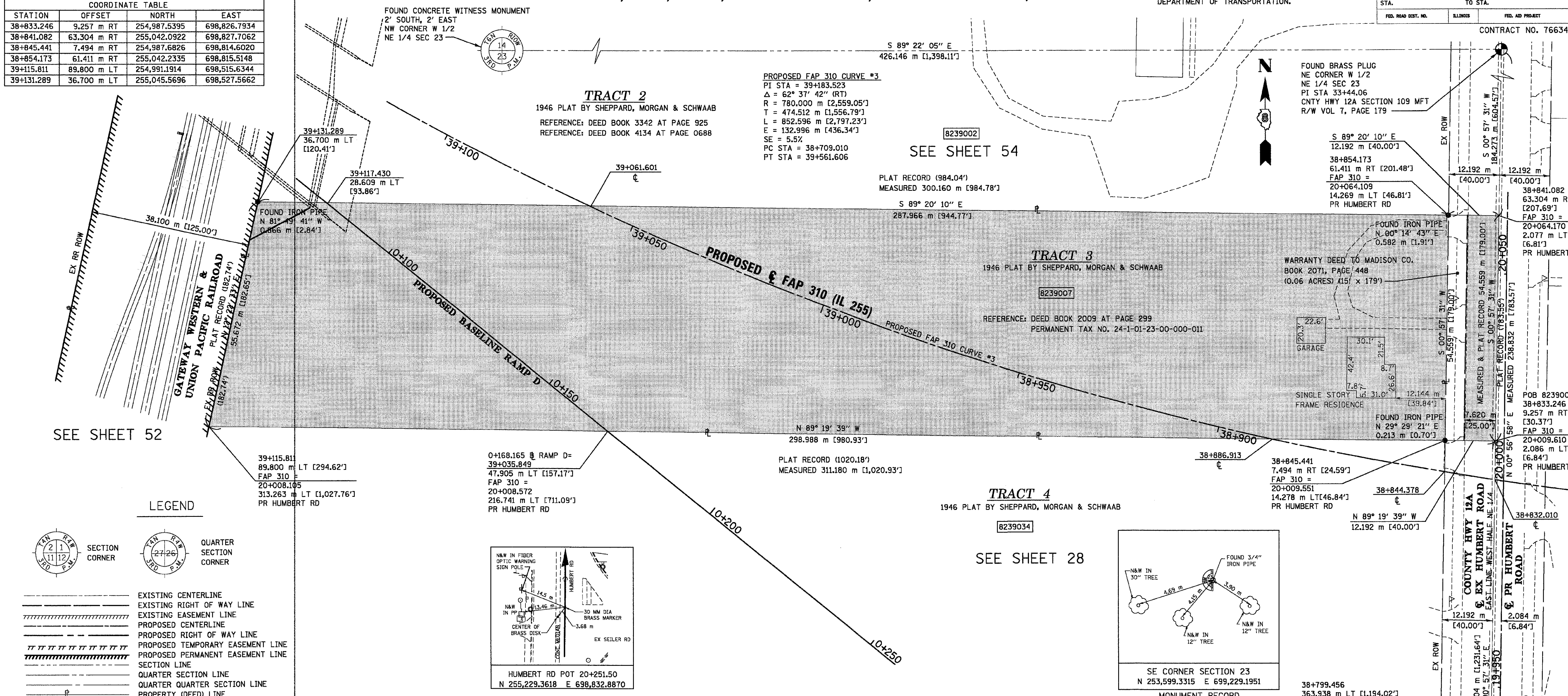
BEARINGS SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-15VB-1&2	MADISON	149	21

STA. TO STA.

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

CONTRACT NO. 76634



LEGEND

SECTION CORNER

QUARTER SECTION CORNER

- EXISTING CENTERLINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- PROPOSED CENTERLINE
- PROPOSED RIGHT OF WAY LINE
- PROPOSED TEMPORARY EASEMENT LINE
- PROPOSED PERMANENT EASEMENT LINE
- SECTION LINE
- QUARTER SECTION LINE
- QUARTER QUARTER SECTION LINE
- PROPERTY (DEED) LINE
- APL — APPARENT PROPERTY LINE
- 121.456 m — MEASURED DIMENSION
- 123.456 m (COMP) — COMPUTED DIMENSION
- [405.04'] — ENGLISH EQUIVALENT TO METRIC DIM.
- (123.45) — RECORDED DIMENSION
- FOUND IRON PIPE OR IRON ROD
- SET 5/8 INCH IRON ROD
- PERMANENT SURVEY MONUMENT, I.D.O.T. STD. 2135 (TO BE SET BY OTHERS)
- CUT CROSS FOUND OR SET
- SAME OWNERSHIP

■ STAKING OF PROPOSED RIGHT OF WAY. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

■ M STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER 20 INCHES BELOW GROUND SURFACE TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

HUMBERT RD POT 20+251.50
N 255,229.3618 E 698,832.8870

SE CORNER SECTION 23
N 253,599.3315 E 699,229.1951

MONUMENT RECORD
DOCUMENT NO. 2004 R 42465
BOOK 4663, PAGE 0001
RECORDED Jul 16, 2004

STATE OF ILLINOIS)
) SS
COUNTY OF ADAMS)

THIS IS TO CERTIFY THAT I, JOHN E. BASINGER AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE DIRECTED THE SURVEY AND DRAFTING OF THE PLAT OF HIGHWAYS SHOWN HEREON IN SECTION 23, TOWNSHIP 6 NORTH, RANGE 10 WEST, OF THE THIRD PRINCIPAL MERIDIAN, MADISON COUNTY, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED ____________

JOHN E. BASINGER, PLS #2766
LICENSE EXPIRATION DATE: 11-30-2006
"THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY."
FIELD WORK COMPLETED: APRIL 2004

FOUND IRON PIN ON W. LINE 0.05 NORTH FROM SW CORNER TRACT 8

SOUTH LINE TRACT 8
1946 PLAT BY SHEPPARD, MORGAN & SCHWAAB
PLAT RECORD (1,267.50')
MEASURED N 89° 00' 04" W 386.62 m [1,268.44']

HUMBERT RD POT STA 20+000 =
FAP 310 POT STA 38+829.909
N 254,977.8964 E 698,828.7196

38+799.456
363.938 m LT [1,194.02']
SE CORNER TRACT 8
1946 PLAT BY SHEPPARD, MORGAN & SCHWAAB

RECORD & MEASURED
48.768 m [160.00']
FOUND IRON PIPE
0.06' EAST
N 00° 46' 58" E
1,015.584 m [3,331.96']
(NOT ON CENTERLINE)
R/W VOL 7 PAGE 13
STA 123+85.6 ℄ SEC 91 MFT
375.404 m [1,231.64']
N 00° 57' 31" E
19+950
S 89° 38' 35" W
RECORD & MEASURED
422.563 m [1,386.36']
R/W VOL 7, PAGE 13
FOUND IRON PIPE
SE COR SEC 23

NOTE:
STA 63+05.1 ℄ SEC 109 MFT
= STA 100+00 ℄ SEC 91 MFT
R/W VOL 7 PAGE 180

PARCEL NO.	OWNER	TOTAL HOLDING	FEE SIMPLE ACQUISITION: GROSS		PREVIOUSLY DEDICATED		NET		REMAINDER	EASEMENTS: PE = PERMANENT TE = TEMPORARY		EASEMENT PURPOSE	PERMANENT TAX NUMBER	PROPERTY ACQUIRED BY
		ACRES	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	ACRES	SQ. FT.			
8239007	WILBUR HAMILTON and JACQUELINE HAMILTON, HUSBAND AND WIFE, AS JOINT TENANTS TITLE REPORT NO. MA-2625	4.0576	4.0576		0.1027		3.9549		0.0000				24-1-01-23-00-000-011	

KLINGNER & ASSOCIATES, P.C.
Engineers / Architects
616 North 24th Street (217) 223-3670
Quincy, Illinois 62301 FAX: 223-3603
Internet Address: www.klingner.com
STATE OF ILLINOIS DESIGN FIRM # 1842738

ILLINOIS DEPARTMENT OF TRANSPORTATION

PLAT OF HIGHWAYS

FAP ROUTE 310 (IL 255)
SECTION 60-15
MADISON COUNTY
JOB NO. R-98-039-92

STATION 38+886.913 TO STATION 39+061.601

0 m 10 m 20 m 30 m
SCALE 1:500

SHEET 2 OF 55

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINSVILLE, ILLINOIS 62234-6198

PLOT DATE: 12/15/2008 11:12:52 AM

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FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-15VB-1&2	MADISON	149	22

STA. TO STA.

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

CONTRACT NO. 76634

COORDINATES SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

COORDINATE TABLE			
STATION	OFFSET	NORTH	EAST
19+930.057	329.037 m LT	254,913.4156	698,498.5686
19+931.523	14.290 m LT	254,909.6652	698,813.2966
19+931.544	9.718 m LT	254,909.6108	698,817.8686
19+931.579	2.098 m LT	254,909.5199	698,825.4879
20+003.719	314.149 m LT	254,986.8199	698,514.6752
20+008.105	313.263 m LT	254,991.1914	698,515.6344
20+009.551	14.278 m LT	254,987.6826	698,814.6020
20+009.567	9.706 m LT	254,987.6233	698,819.1737
20+009.610	2.086 m LT	254,987.5395	698,826.7934

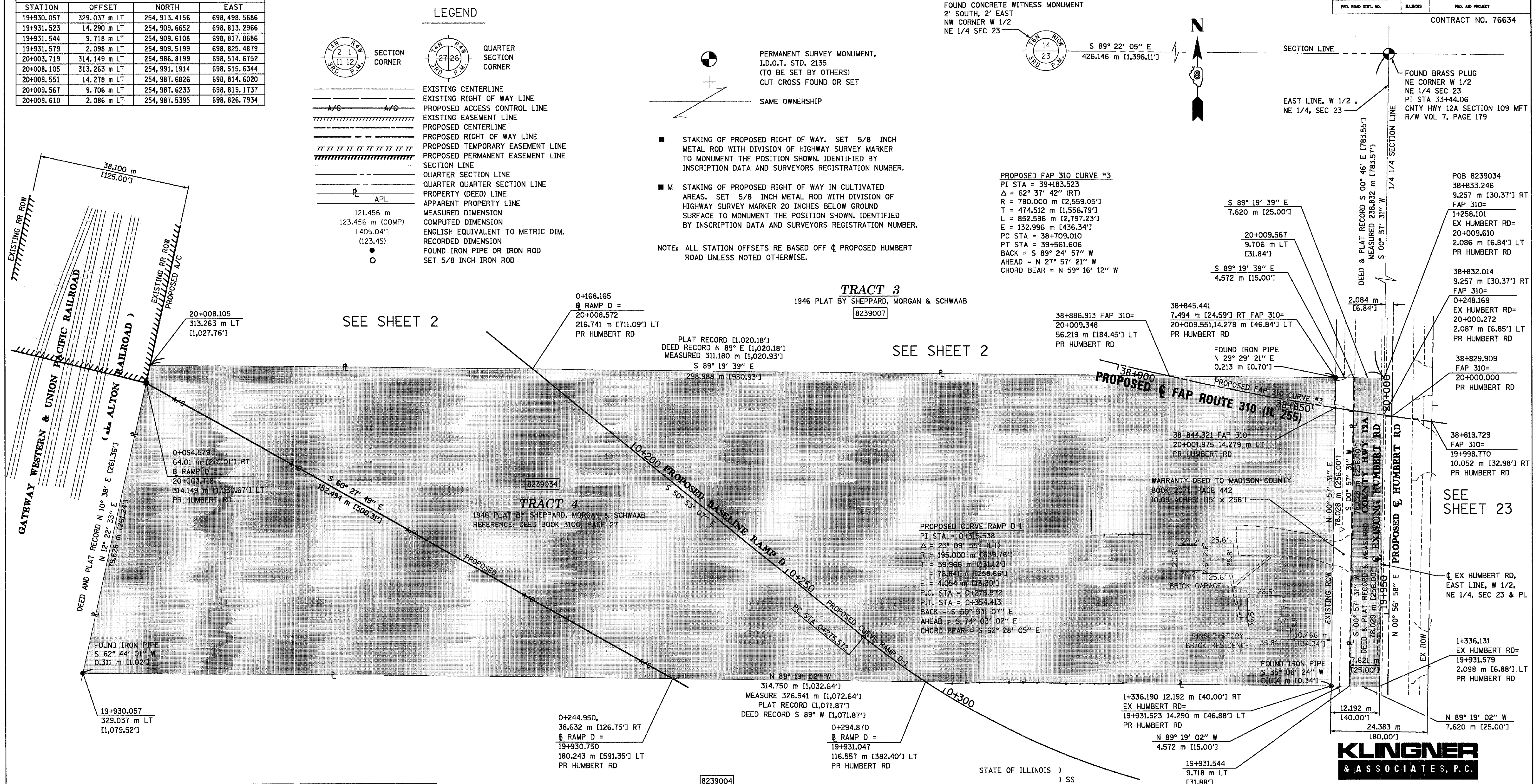
PART OF THE NE 1/4 OF SECTION 23, T6N, R10W, OF THE 3RD PM, MADISON COUNTY, ILLINOIS

BEARINGS SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

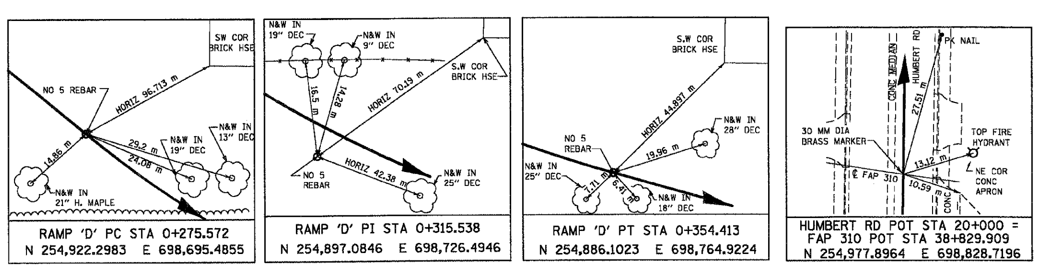
LEGEND

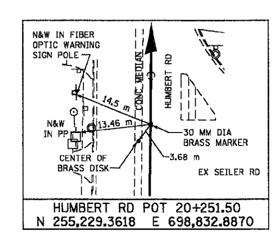
- SECTION CORNER
- QUARTER SECTION CORNER
- EXISTING CENTERLINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED ACCESS CONTROL LINE
- EXISTING EASEMENT LINE
- PROPOSED CENTERLINE
- PROPOSED RIGHT OF WAY LINE
- PROPOSED TEMPORARY EASEMENT LINE
- PROPOSED PERMANENT EASEMENT LINE
- SECTION LINE
- QUARTER SECTION LINE
- QUARTER QUARTER SECTION LINE
- PROPERTY (DEED) LINE
- APL — APPARENT PROPERTY LINE
- 121.456 m — MEASURED DIMENSION
- 123.456 m (COMP) — COMPUTED DIMENSION
- [405.04'] — ENGLISH EQUIVALENT TO METRIC DIM.
- (123.45) — RECORDED DIMENSION
- ● — FOUND IRON PIPE OR IRON ROD
- ○ — SET 5/8 INCH IRON ROD
- PERMANENT SURVEY MONUMENT, I.D.O.T. STD. 2135 (TO BE SET BY OTHERS)
- CUT CROSS FOUND OR SET
- SAME OWNERSHIP
- ■ STAKING OF PROPOSED RIGHT OF WAY. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.
- ■ M STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER 20 INCHES BELOW GROUND SURFACE TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

NOTE: ALL STATION OFFSETS RE BASED OFF ℄ PROPOSED HUMBERT ROAD UNLESS NOTED OTHERWISE.



FOUND CONCRETE WITNESS MONUMENT 2' SOUTH, 2' EAST NW CORNER W 1/2 NE 1/4 SEC 23
S 89° 22' 05" E 426.146 m [1,398.11']
SECTION LINE
FOUND BRASS PLUG NE CORNER W 1/2 NE 1/4 SEC 23 PI STA 33+44.06 CNTY HWY 12A SECTION 109 MFT R/W VOL 7, PAGE 179
EAST LINE, W 1/2, NE 1/4, SEC 23
PROPOSED FAP 310 CURVE #3
PI STA = 39+183.523
Δ = 62° 37' 42" (RT)
R = 780.000 m [2,559.05']
T = 474.512 m [1,556.79']
L = 852.596 m [2,797.23']
E = 132.996 m [436.34']
PC STA = 38+709.010
PT STA = 39+561.606
BACK = S 89° 24' 57" W
AHEAD = N 27° 57' 21" W
CHORD BEAR = N 59° 16' 12" W
TRACT 3
1946 PLAT BY SHEPPARD, MORGAN & SCHWAAB
8239007
SEE SHEET 2
EXISTING RR ROW
38.100 m [125.00']
GATEWAY WESTERN & UNION PACIFIC RAILROAD (a.k.a. ALTON RAILROAD)
EXISTING RR ROW
PROPOSED A/C
20+008.105 313.263 m LT [1,027.76']
0+168.165 ℄ RAMP D = 20+008.572 216.741 m [711.09'] LT PR HUMBERT RD
PLAT RECORD [1,020.18'] DEED RECORD N 89° E [1,020.18'] MEASURED 311.180 m [1,020.93']
S 89° 19' 39" E 298.988 m [980.93']
0+094.579 64.01 m [210.01'] RT ℄ RAMP D = 20+003.718 314.149 m [1,030.67'] LT PR HUMBERT RD
S 60° 27' 49" E 152.494 m [500.31']
8239034
TRACT 4
1946 PLAT BY SHEPPARD, MORGAN & SCHWAAB REFERENCE: DEED BOOK 3100, PAGE 27
10+200 PROPOSED BASELINE RAMP D
S 50° 53' 07" E
DEED AND PLAT RECORD N 10° 38' E [261.36'] N 12° 22' 33" E 79.626 m [261.24']
FOUND IRON PIPE S 62° 44' 01" W 0.311 m [1.02']
19+930.057 329.037 m LT [1,079.52']
PROPOSED CURVE RAMP D-1
PC STA 0+275.572
PROPOSED CURVE RAMP D-1
PI STA = 0+315.538
Δ = 23° 09' 55" (LT)
R = 195.000 m [639.76']
T = 39.966 m [131.12']
L = 78.841 m [258.66']
E = 4.054 m [13.30']
P.C. STA = 0+275.572
P.T. STA = 0+354.413
BACK = S 50° 53' 07" E
AHEAD = S 74° 03' 02" E
CHORD BEAR = S 62° 28' 05" E
N 89° 19' 02" W 314.750 m [1,032.64'] MEASURE 326.941 m [1,072.64'] PLAT RECORD [1,071.87'] DEED RECORD S 89° W [1,071.87']
0+244.950, 38.632 m [126.75'] RT ℄ RAMP D = 19+930.750 180.243 m [591.35'] LT PR HUMBERT RD
0+294.870 ℄ RAMP D = 19+931.047 116.557 m [382.40'] LT PR HUMBERT RD
10+300
8239004
SEE SHEET 55
SEE SHEET 2
38+886.913 FAP 310= 20+009.348 56.219 m [184.45'] LT PR HUMBERT RD
38+845.441 7.494 m [24.59'] RT FAP 310= 20+009.551,14.278 m [46.84'] LT PR HUMBERT RD
FOUND IRON PIPE N 29° 29' 21" E 0.213 m [0.70']
PROPOSED ℄ FAP ROUTE 310 (IL 255)
PROPOSED FAP 310 CURVE #3
38+900 38+850
38+844.321 FAP 310= 20+001.975 14.279 m LT PR HUMBERT RD
WARRANTY DEED TO MADISON COUNTY BOOK 2071, PAGE 442 (0.09 ACRES) (15' x 256')
BRICK GARAGE
SINGLE STORY BRICK RESIDENCE
10.466 m [34.34']
FOUND IRON PIPE S 35° 06' 24" W 0.104 m [0.34']
S 89° 19' 39" E 7.620 m [25.00']
20+009.567 9.706 m LT [31.84']
S 89° 19' 39" E 4.572 m [15.00']
2.084 m [6.84']
DEED & PLAT RECORD S 00° 46' E [783.55'] MEASURED 238.832 m [783.57'] S 00° 57' 31" W
1/4 1/4 SECTION LINE
POB 8239034 38+833.246 9.257 m [30.37'] RT FAP 310= 1+258.101 EX HUMBERT RD= 20+009.610 2.086 m [6.84'] LT PR HUMBERT RD
38+832.014 9.257 m [30.37'] RT FAP 310= 0+248.169 EX HUMBERT RD= 20+000.272 2.087 m [6.85'] LT PR HUMBERT RD
38+829.909 FAP 310= 20+000.000 PR HUMBERT RD
38+819.729 FAP 310= 19+998.770 10.052 m [32.98'] RT PR HUMBERT RD
SEE SHEET 23
EXISTING ROW
COUNTY HWY 12A
℄ EXISTING HUMBERT RD
PROPOSED ℄ HUMBERT RD
N 00° 57' 31" E 78.028 m [256.00']
S 00° 57' 31" W 78.028 m [256.00']
DEED & PLAT RECORD & MEASURED 78.029 m [256.00']
N 00° 56' 58" E
EX ROW
℄ EX HUMBERT RD, EAST LINE, W 1/2, NE 1/4, SEC 23 & PL
1+336.131 EX HUMBERT RD= 19+931.579 2.098 m [6.88'] LT PR HUMBERT RD
7.621 m [25.00']
1+336.190 12.192 m [40.00'] RT EX HUMBERT RD= 19+931.523 14.290 m [46.88'] LT PR HUMBERT RD
N 89° 19' 02" W 4.572 m [15.00']
19+931.544 9.718 m LT [31.88']
12.192 m [40.00']
24.383 m [80.00']
N 89° 19' 02" W 7.620 m [25.00']





STATE OF ILLINOIS)
) SS
COUNTY OF ADAMS)

THIS IS TO CERTIFY THAT I, JOHN E. BASINGER AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE DIRECTED THE SURVEY AND DRAFTING OF THE PLAT OF HIGHWAYS SHOWN HEREON IN SECTION 23, TOWNSHIP 6 NORTH, RANGE 10 WEST, OF THE THIRD PRINCIPAL MERIDIAN, MADISON COUNTY, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED ____________

JOHN E. BASINGER, PLS #2766
LICENSE EXPIRATION DATE: 11-30-2006
"THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY."
FIELD WORK COMPLETED: APRIL 2004

KLINGNER & ASSOCIATES, P.C.
Engineers / Architects
616 North 24th Street (217) 223-3670
Quincy, Illinois 62301 FAX: 223-3603
Internet Address: www.klingner.com
STATE OF ILLINOIS DESIGN FIRM # 1842738

ILLINOIS DEPARTMENT OF TRANSPORTATION

PLAT OF HIGHWAYS

FAP ROUTE 310 (IL 255)
SECTION 60-15
MADISON COUNTY
JOB NO. R-98-039-92

STATION 38+832.014 TO STATION 38+886.913

0 m 10 m 20 m 30 m
SCALE 1:500

SHEET 28 OF 55

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINSVILLE, ILLINOIS 62234-6198

PARCEL NO.	OWNER	TOTAL HOLDING	FEE SIMPLE ACQUISITION						REMAINDER	EASEMENTS			PERMANENT TAX NUMBER	PROPERTY ACQUIRED BY
			GROSS		PREVIOUSLY DEDICATED		NET			PE = PERMANENT TE = TEMPORARY		EASEMENT PURPOSE		
		ACRES	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	ACRES	SQ. FT.			
8239034	LEROY W. BRAKEMEYER AND MARIE A. BRAKEMEYER AS JOINT TENANTS TITLE REPORT NO. MA-2638	6.0615	6.0615	257,641	0.1469	6,400	5.9146	251,241	0.0000				24-1-01-23-00-000-012	

COORDINATES SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

COORDINATE TABLE (PR HUMBERT RD)			
STATION	OFFSET	NORTH	EAST
20+156.240	14.276 m LT	255,134.3516	698,817.0347
20+156.264	9.682 m LT	255,134.2996	698,821.6280
20+156.304	2.062 m LT	255,134.2132	698,829.2476
20+183.627	22.860 m LT	255,161.8772	698,808.9051
20+183.672	14.321 m LT	255,161.7804	698,817.4441
20+183.689	9.678 m LT	255,161.7200	698,822.0870
20+183.736	2.058 m LT	255,161.6415	698,829.7065
20+235.000	32.004 m LT	255,213.3944	698,800.6140
20+248.275	32.004 m LT	255,226.6677	698,800.8340
20+248.372	14.541 m LT	255,226.4751	698,818.2960
20+248.383	9.668 m LT	255,226.4050	698,823.1690
20+248.441	2.048 m LT	255,226.3373	698,830.7890

COORDINATE TABLE (FAP 310-IL 255)			
STATION	OFFSET	NORTH	EAST
39+112.020	79.066 m RT	255136.7971	698601.2443
39+162.529	52.104 m RT	255137.4036	698547.7167
39+177.209	87.130 m RT	255174.0224	698555.7517

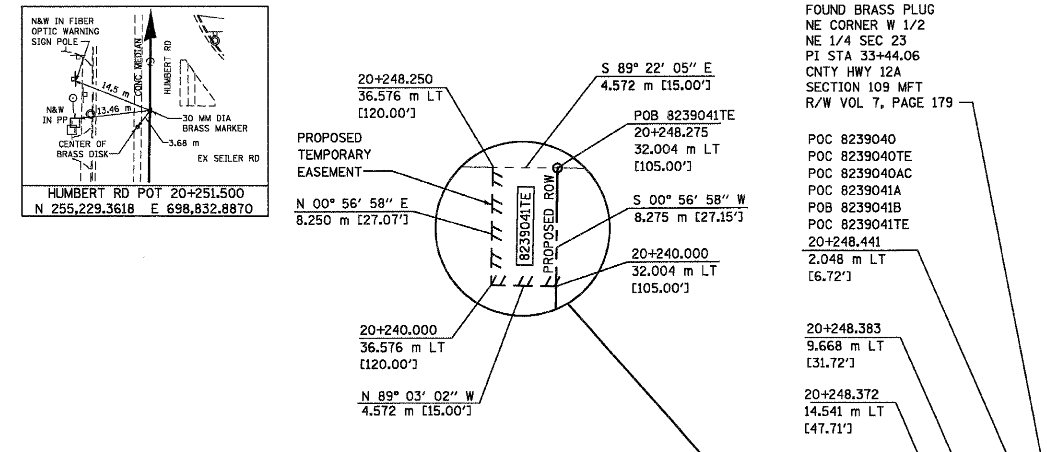
PART OF THE NE 1/4 OF SECTION 23, T6N, R10W, OF THE 3RD PM, MADISON COUNTY, ILLINOIS

STATE OF ILLINOIS)
) SS
COUNTY OF ADAMS)

THIS IS TO CERTIFY THAT I, JOHN E. BASINGER AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE DIRECTED THE SURVEY AND DRAFTING OF THE PLAT OF HIGHWAYS SHOWN HEREON IN SECTION 23, TOWNSHIP 6 NORTH, RANGE 10 WEST. OF THE THIRD PRINCIPAL MERIDIAN, MADISON COUNTY, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED ____________

JOHN E. BASINGER, PLS #2766
LICENSE EXPIRATION DATE: 11-30-2006
"THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY."
FIELD WORK COMPLETED: APRIL 2004



BEARINGS SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-15VB-1&2	MADISON	149	23
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

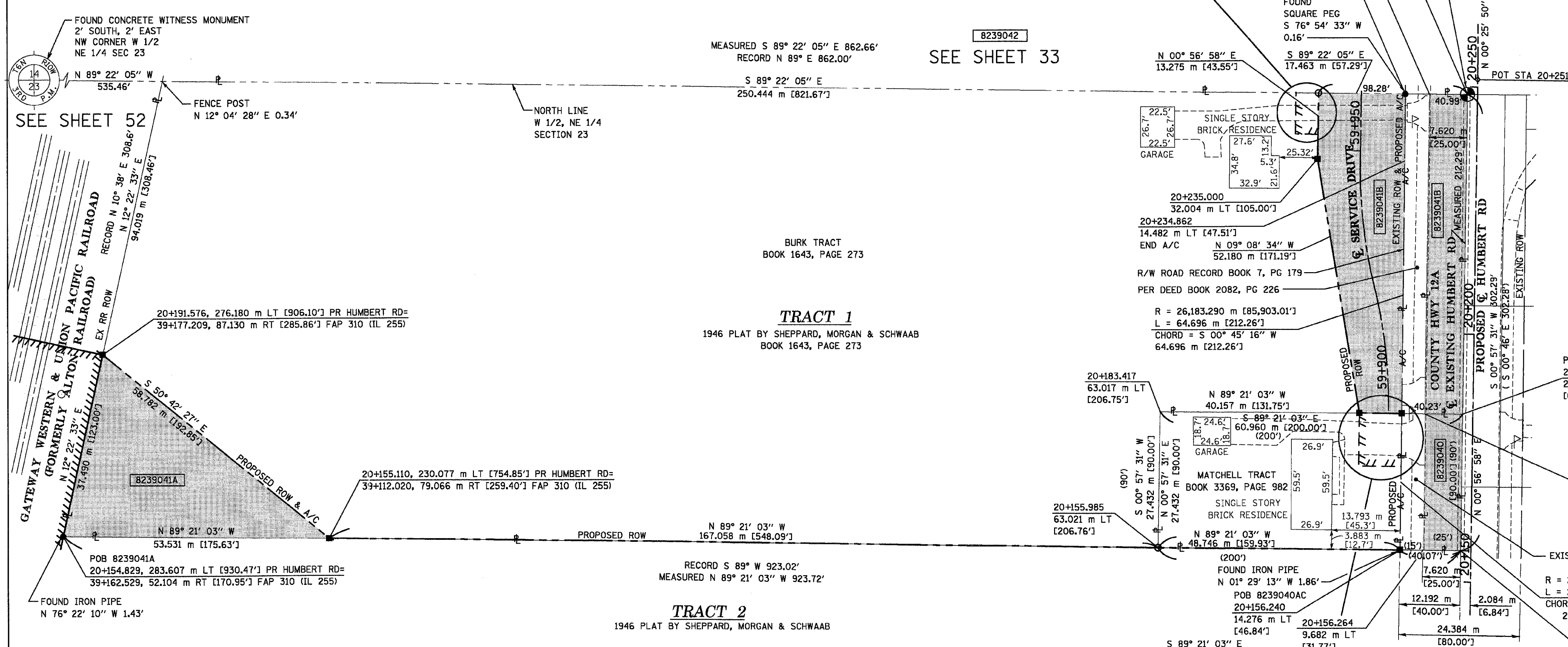
CONTRACT NO. 76634

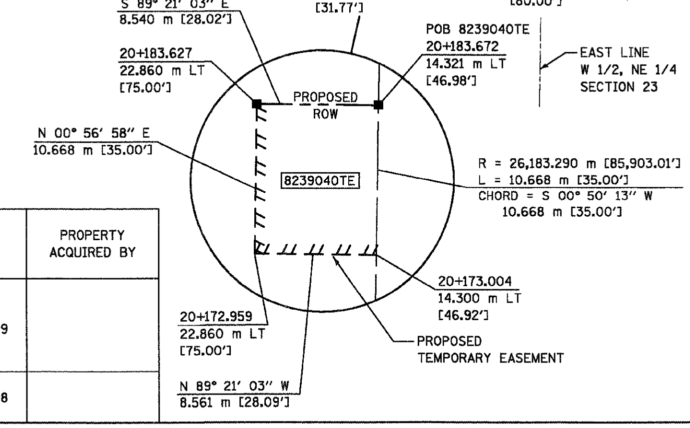
LEGEND

- SECTION CORNER
- QUARTER SECTION CORNER
- EXISTING CENTERLINE
- EXISTING RIGHT OF WAY LINE
- EXISTING ROW AND PROPOSED ACCESS CONTROL LINE
- EXISTING EASEMENT LINE
- PROPOSED CENTERLINE
- PROPOSED RIGHT OF WAY LINE
- PROPOSED TEMPORARY EASEMENT LINE
- PROPOSED PERMANENT EASEMENT LINE
- SECTION LINE
- QUARTER SECTION LINE
- QUARTER QUARTER SECTION LINE
- PROPERTY (DEED) LINE
- APL — APPARENT PROPERTY LINE
- 121.456 m — MEASURED DIMENSION
- 123.456 m (COMP) — COMPUTED DIMENSION
- [405.04'] — ENGLISH EQUIVALENT TO METRIC DIM.
- (123.45) — RECORDED DIMENSION
- FOUND IRON PIPE OR IRON ROD
- SET 5/8 INCH IRON ROD
- PERMANENT SURVEY MONUMENT, I.D.O.T. STD. 2135 (TO BE SET BY OTHERS)
- CUT CROSS FOUND OR SET
- SAME OWNERSHIP

■ STAKING OF PROPOSED RIGHT OF WAY. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

■ M STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER 20 INCHES BELOW GROUND SURFACE TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.





PARCEL NO.	OWNER	TOTAL HOLDING	FEE SIMPLE ACQUISITION						REMAINDER	EASEMENTS			PERMANENT TAX NUMBER	PROPERTY ACQUIRED BY
			GROSS		PREVIOUSLY DEDICATED		NET			PE = PERMANENT TE = TEMPORARY		EASEMENT PURPOSE		
		ACRES	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	ACRES	SQ. FT.			
8239040	MADELYN J. MATCHELL, JANET BRITTAIN and GERALD B. MATCHELL as Joint Tenants TITLE REPORT NO. MA-3040	0.3820	0.0517	2,250	0.0517	2,250	0.0000	0.0000	0.3303	TE 0.0225	982	SERVICE DRIVE & SERVICE DR REMOVAL	24-1-01-23-00-000-009	
8239041	CHARLES A. BURK JR. and JOYCE E. BURK, HUSBAND AND WIFE, AS JOINT TENANTS TITLE REPORT NO. MA-2623	5.7063	A 0.2428 B 0.3449	10,575 15,023	N/A 0.1218	N/A 5,307	0.2428 0.2231	10,575 9,716	5.1186	TE 0.0093	407	ENTRANCE	24-1-01-23-00-000-008	

KLINGNER & ASSOCIATES, P.C.
Engineers / Architects
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Quincy, Illinois 62301 FAX: 223-3603
Internet Address: www.klingner.com
STATE OF ILLINOIS DESIGN FIRM # 1842738

ILLINOIS DEPARTMENT OF TRANSPORTATION
PLAT OF HIGHWAYS
FAP ROUTE 310 (IL 255)
SECTION 60-15
MADISON COUNTY
JOB NO. R-98-039-92
HUMBERT ROAD
STATION 20+156.264 TO STATION 20+248.275
0 m 10 m 20 m 30 m
SCALE 1:500
SHEET 32 OF 55

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINSVILLE, ILLINOIS 62234-6198

PLOT DATE: 12/15/2008 11:14:43 AM

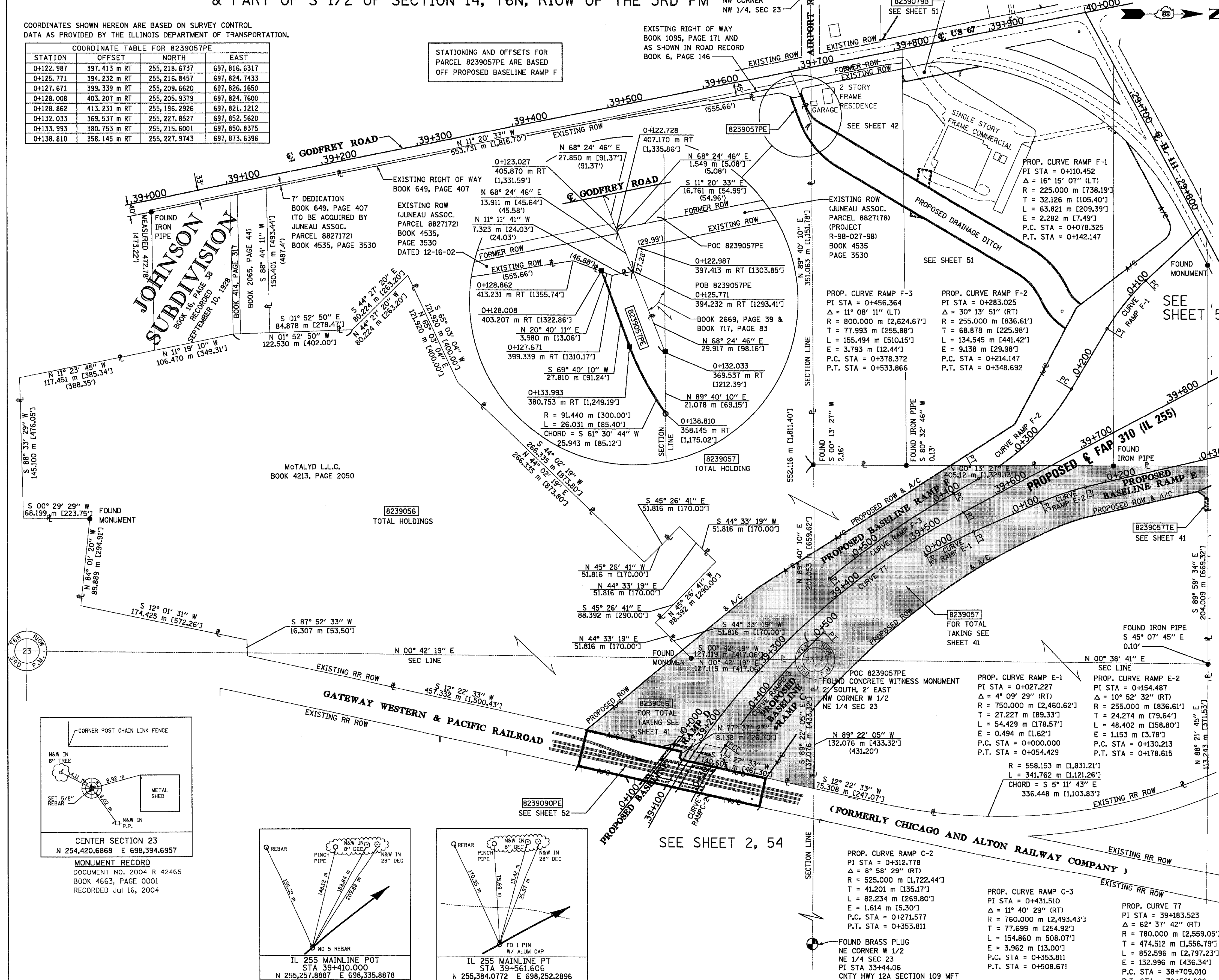
PART OF THE N 1/2 OF SECTION 23, T6N, R10W, OF THE 3RD PM, MADISON COUNTY, ILLINOIS & PART OF S 1/2 OF SECTION 14, T6N, R10W OF THE 3RD PM

BEARINGS SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

COORDINATES SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

COORDINATE TABLE FOR 8239057PE			
STATION	OFFSET	NORTH	EAST
0+122.987	397.413 m RT	255,218.6737	697,816.6317
0+125.771	394.232 m RT	255,216.8457	697,824.7433
0+127.671	399.339 m RT	255,209.6620	697,826.1650
0+128.008	403.207 m RT	255,205.9379	697,824.7600
0+128.862	413.231 m RT	255,196.2926	697,821.1212
0+132.033	369.537 m RT	255,227.8527	697,852.5620
0+133.993	380.753 m RT	255,215.6001	697,850.8375
0+138.810	358.145 m RT	255,227.9743	697,873.6396

STATIONING AND OFFSETS FOR PARCEL 8239057PE ARE BASED OFF PROPOSED BASELINE RAMP F



LEGEND

- SECTION CORNER
- QUARTER SECTION CORNER
- EXISTING CENTERLINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- PROPOSED CENTERLINE
- PROPOSED RIGHT OF WAY LINE
- A/C — PROPOSED RIGHT OF WAY AND PROPOSED ACCESS CONTROL LINE
- PROPOSED TEMPORARY EASEMENT LINE
- PROPOSED PERMANENT EASEMENT LINE
- SECTION LINE
- QUARTER SECTION LINE
- QUARTER QUARTER SECTION LINE
- ℄ — PROPERTY (DEED) LINE
- APL — APPARENT PROPERTY LINE
- 121.456 m — MEASURED DIMENSION
- 123.456 m (COMP) — COMPUTED DIMENSION
- [405.04'] — ENGLISH EQUIVALENT TO METRIC DIM.
- (123.45) — RECORDED DIMENSION
- ● — FOUND IRON PIPE OR IRON ROD
- ○ — SET 5/8 INCH IRON ROD
- PERMANENT SURVEY MONUMENT, I.D.O.T. STD. 2135 (TO BE SET BY OTHERS)
- + — CUT CROSS FOUND OR SET
- SAME OWNERSHIP

■ STAKING OF PROPOSED RIGHT OF WAY. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

■ M STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER 20 INCHES BELOW GROUND SURFACE TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

STATE OF ILLINOIS)
) SS
COUNTY OF ADAMS)

THIS IS TO CERTIFY THAT I, JOHN E. BASINGER AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE DIRECTED THE SURVEY AND DRAFTING OF THE PLAT OF HIGHWAYS SHOWN HEREON IN SECTION 23, TOWNSHIP 6 NORTH, RANGE 10 WEST. OF THE THIRD PRINCIPAL MERIDIAN, MADISON COUNTY, THAT THE SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED ____________

JOHN E. BASINGER, PLS #2766
LICENSE EXPIRATION DATE: 11-30-2006
"THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY."
FIELD WORK COMPLETED: APRIL 2004

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ILLINOIS DEPARTMENT OF TRANSPORTATION
PLAT OF HIGHWAYS
FAP ROUTE 310 (IL 255)
SECTION 60-15
MADISON COUNTY
JOB NO. R-98-039-92

STATION 39+175.751 TO STATION 39+663.389

0 m 50 m 100 m
SCALE 1:2000 SHEET 40 OF 55

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINSVILLE, ILLINOIS 62234-6198

PLOT DATE: 12/15/2008 11:22:41 AM

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-15VB-1&2	MADISON	149	25
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76634

COORDINATES SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

PART OF THE N 1/2 OF SECTION 23, T6N, R10W, OF THE 3RD PM, MADISON COUNTY, ILLINOIS & PART OF S 1/2 OF SECTION 14, T6N, R10W OF THE 3RD PM

BEARINGS SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

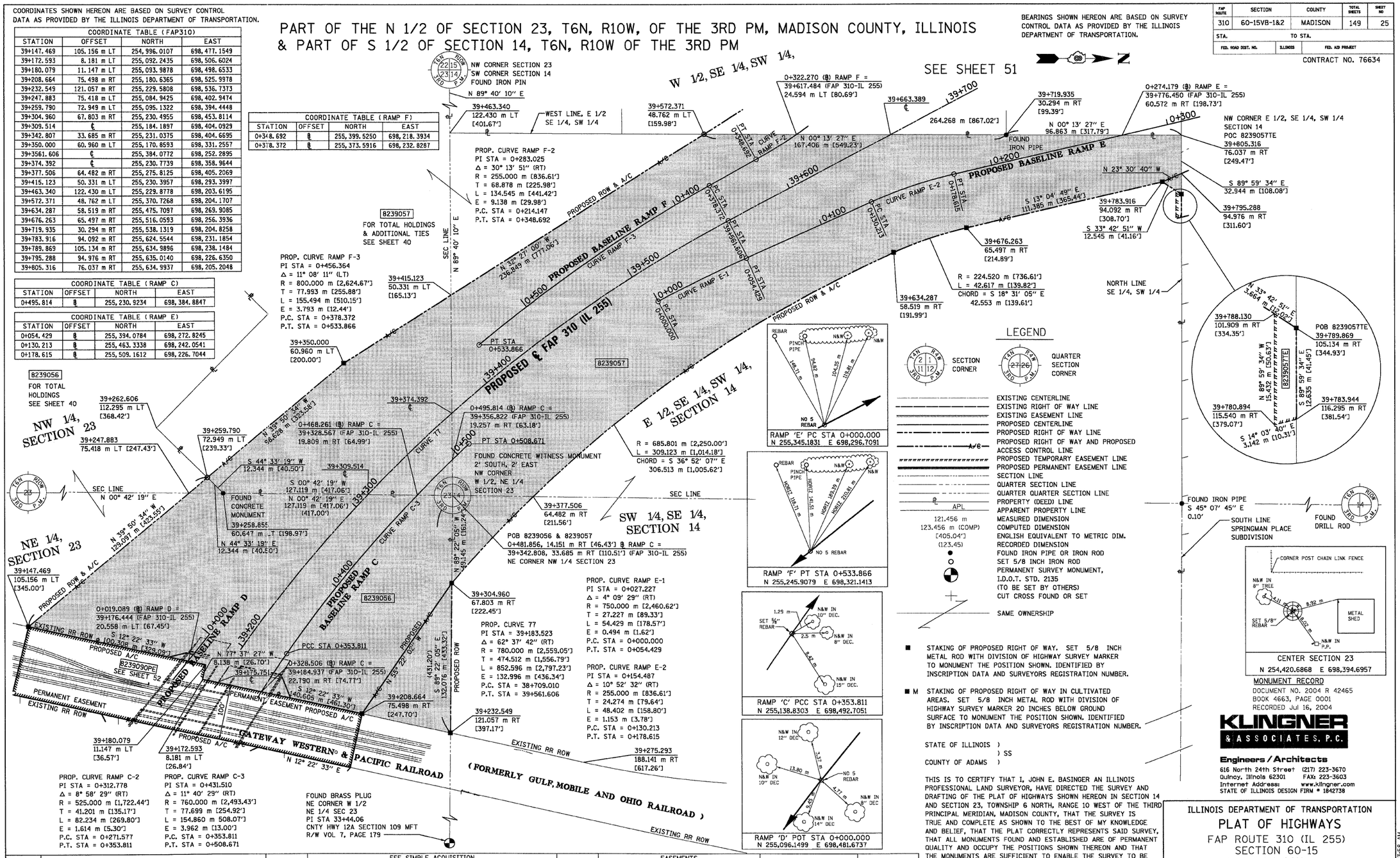
SEE SHEET 51

COORDINATE TABLE (FAP310)			
STATION	OFFSET	NORTH	EAST
39+147.469	105.156 m LT	254,996.0107	698,477.1549
39+172.593	8.181 m LT	255,092.2435	698,506.6024
39+180.079	11.147 m LT	255,093.9878	698,498.6533
39+208.664	75.498 m RT	255,180.6365	698,525.9378
39+232.549	121.057 m RT	255,229.5808	698,536.7373
39+247.883	75.418 m LT	255,084.9425	698,402.9474
39+259.790	72.949 m LT	255,095.1322	698,394.4448
39+304.960	67.803 m RT	255,230.4955	698,453.8114
39+309.514	℄	255,184.1897	698,404.0929
39+342.807	33.685 m RT	255,231.0375	698,404.6695
39+350.000	60.960 m LT	255,170.8593	698,331.2557
39+3561.606	℄	255,384.0772	698,252.2895
39+374.392	℄	255,230.7739	698,358.9644
39+377.506	64.482 m RT	255,275.8125	698,405.2069
39+415.123	50.331 m LT	255,230.3957	698,293.3997
39+463.340	122.430 m LT	255,229.8778	698,203.6195
39+572.371	48.762 m LT	255,370.7268	698,204.1707
39+634.287	58.519 m RT	255,475.7097	698,269.9085
39+676.263	65.497 m RT	255,516.0593	698,256.3936
39+719.935	30.294 m RT	255,538.1319	698,204.8258
39+783.916	94.092 m RT	255,624.5544	698,231.1854
39+789.869	105.134 m RT	255,634.9896	698,238.1484
39+795.288	94.976 m RT	255,635.0140	698,226.6350
39+805.316	76.037 m RT	255,634.9937	698,205.2048

COORDINATE TABLE (RAMP F)			
STATION	OFFSET	NORTH	EAST
0+348.692	℄	255,399.5250	698,218.3934
0+378.372	℄	255,373.5916	698,232.8287

COORDINATE TABLE (RAMP C)			
STATION	OFFSET	NORTH	EAST
0+495.814	℄	255,230.9234	698,384.8847

COORDINATE TABLE (RAMP E)			
STATION	OFFSET	NORTH	EAST
0+054.429	℄	255,394.0784	698,272.8245
0+130.213	℄	255,463.3338	698,242.0541
0+178.615	℄	255,509.1612	698,226.7044



LEGEND

- SECTION CORNER
- QUARTER SECTION CORNER
- EXISTING CENTERLINE
- EXISTING RIGHT OF WAY LINE
- EXISTING EASEMENT LINE
- PROPOSED CENTERLINE
- PROPOSED RIGHT OF WAY LINE
- PROPOSED RIGHT OF WAY AND PROPOSED ACCESS CONTROL LINE
- PROPOSED TEMPORARY EASEMENT LINE
- PROPOSED PERMANENT EASEMENT LINE
- SECTION LINE
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- QUARTER QUARTER SECTION LINE
- PROPERTY (DEED) LINE
- APL — APPARENT PROPERTY LINE
- 121.456 m — MEASURED DIMENSION
- 123.456 m (COMP) — COMPUTED DIMENSION
- [405.04'] — ENGLISH EQUIVALENT TO METRIC DIM.
- (123.45) — RECORDED DIMENSION
- ● FOUND IRON PIPE OR IRON ROD
- ○ SET 5/8 INCH IRON ROD
- PERMANENT SURVEY MONUMENT, I.D.O.T. STD. 2135 (TO BE SET BY OTHERS)
- CUT CROSS FOUND OR SET
- SAME OWNERSHIP

■ STAKING OF PROPOSED RIGHT OF WAY. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

■ M STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER 20 INCHES BELOW GROUND SURFACE TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

STATE OF ILLINOIS)
) SS
COUNTY OF ADAMS)

THIS TO CERTIFY THAT I, JOHN E. BASINGER AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE DIRECTED THE SURVEY AND DRAFTING OF THE PLAT OF HIGHWAYS SHOWN HEREON IN SECTION 14 AND SECTION 23, TOWNSHIP 6 NORTH, RANGE 10 WEST OF THE THIRD PRINCIPAL MERIDIAN, MADISON COUNTY, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED _____

JOHN E. BASINGER, PLS #2766
LICENSE EXPIRATION DATE: 11-30-2006
"THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY."
FIELD WORK COMPLETED: APRIL 2004

MONUMENT RECORD
DOCUMENT NO. 2004 R 42465
BOOK 4663, PAGE 0001
RECORDED Jul 16, 2004

KLINGNER & ASSOCIATES, P.C.
Engineers / Architects
616 North 24th Street (217) 223-3670
Quincy, Illinois 62301 FAX) 223-3603
Internet Address: www.klingner.com
STATE OF ILLINOIS DESIGN FIRM # 1842738

ILLINOIS DEPARTMENT OF TRANSPORTATION
PLAT OF HIGHWAYS
FAP ROUTE 310 (IL 255)
SECTION 60-15
MADISON COUNTY
JOB NO. R-98-039-92

STATION 39+175.751 TO STATION 39+663.389

0 m 20 m 40 m 60 m
SCALE 1:1000 SHEET 41 OF 55

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINSVILLE, ILLINOIS 62234-6198

PARCEL NO.	OWNER	TOTAL HOLDING	FEE SIMPLE ACQUISITION						REMAINDER	EASEMENTS			PERMANENT TAX NUMBER	PROPERTY ACQUIRED BY
			GROSS		PREVIOUSLY DEDICATED		NET			PE = PERMANENT TE = TEMPORARY		EASEMENT PURPOSE		
		ACRES	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	ACRES	SQ. FT.			
8239056	McTALYD L.L.C. AN ILLINOIS LIMITED LIABILITY COMPANY TITLE REPORT NO. MA-2622	52.0656	5.2422	228,350	N/A	N/A	5.2422	228,350	46.8234	N/A	N/A	N/A	24-1-01-23-00-000-004 24-1-01-23-00-000-006	
8239057	JAMES FITZGERALD, AS TO AN UNDIVIDED 50% INTEREST; MARK W. SIEVERS, AS TO AN UNDIVIDED 14% INTEREST; AND JAMES K. SIEVERS AND JUDITH D. SIEVERS, HUSBAND AND WIFE, AS JOINT TENANTS, AS TO AN UNDIVIDED 36% INTEREST TITLE REPORT NO. MA-2621, MA-2614	82.9514	10.9233	475,817	N/A	N/A	82.9514	475,817	WEST 47.4543 EAST 24.5738	TE 0.0106 PE 0.1089	460 4,742	FIELD ENTRANCE GRADING (DRAINAGE DITCH)	24-1-01-23-00-000-003 24-1-01-23-00-000-003.R00 24-1-01-14-00-000-017	

12/15/2008 11:23:58 AM
d:\projects\800026\default\road-&-dgn\ROADPLANS\8239056857.dgn
•REF•
•REF•
•REF•
•REF•
•REF•

PLOT DATE: 12/15/2008 11:23:58 AM

PART OF THE SW 1/4 OF SECTION 14, T6N, R10W, OF THE 3RD PM, MADISON COUNTY, ILLINOIS

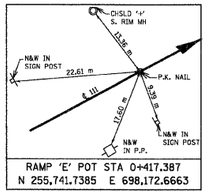
BEARINGS SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-15VB-1&2	MADISON	149	26
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76634

COORDINATES SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

COORDINATE TABLE (BASELINE RAMP E)			
STATION	OFFSET	NORTH	EAST
0+295.727	51.931 m RT	255,634.9880	698,250.7838
0+307.800	℄	255,634.9947	698,197.4677
0+314.787	30.054 m LT	255,634.9986	698,166.6120
0+325.072	11.351 m RT	255,654.3868	698,204.6152
0+325.733	51.418 m RT	255,664.0989	698,243.4926
0+347.183	38.730 m LT	255,664.5899	698,150.8293
0+358.218	2.473 m RT	255,684.6641	698,188.4666
0+417.387	℄	255,741.7385	698,172.6663



RAMP 'E' POT STA 0+417.387
N 255,741.7385 E 698,172.6663

SEE SHEET 44

SEE SHEET 53

SEE SHEET 53

LEGEND

- SECTION CORNER
- QUARTER SECTION CORNER
- EXISTING CENTERLINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED ACCESS CONTROL LINE
- EXISTING EASEMENT LINE
- PROPOSED CENTERLINE
- PROPOSED RIGHT OF WAY LINE
- PROPOSED TEMPORARY EASEMENT LINE
- PROPOSED PERMANENT EASEMENT LINE
- LOT LINE OR DEED LINE
- SECTION LINE
- QUARTER SECTION LINE
- QUARTER QUARTER SECTION LINE
- PROPERTY (DEED) LINE
- APPARENT PROPERTY LINE
- 121.456 m — MEASURED DIMENSION
- 123.456 m (COMP) — COMPUTED DIMENSION
- [405.04'] — ENGLISH EQUIVALENT TO METRIC DIM.
- (123.45) — RECORDED DIMENSION
- FOUND IRON PIPE OR IRON ROD
- SET 5/8 INCH IRON ROD
- PERMANENT SURVEY MONUMENT, I.D.O.T. STD. 2135 (TO BE SET BY OTHERS)
- CUT CROSS FOUND OR SET
- SAME OWNERSHIP

■ STAKING OF PROPOSED RIGHT OF WAY. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

■ M STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER 20 INCHES BELOW GROUND SURFACE TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

STATE OF ILLINOIS)
) SS
COUNTY OF ADAMS)

THIS IS TO CERTIFY THAT I, JOHN E. BASINGER AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE DIRECTED THE SURVEY AND DRAFTING OF THE PLAT OF HIGHWAYS SHOWN HEREON IN SECTION 14, TOWNSHIP 6 NORTH, RANGE 10 WEST. OF THE THIRD PRINCIPAL MERIDIAN, MADISON COUNTY, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED _____

JOHN E. BASINGER, PLS *2766
LICENSE EXPIRATION DATE: 11-30-2006
"THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY."
FIELD WORK COMPLETED: APRIL 2004

KLINGNER & ASSOCIATES, P.C.
Engineers / Architects
616 North 24th Street (217) 223-3670
Quincy, Illinois 62301 FAX: 223-3603
Internet Address: www.klingner.com
STATE OF ILLINOIS DESIGN FIRM # 1842738

ILLINOIS DEPARTMENT OF TRANSPORTATION
PLAT OF HIGHWAYS
FAP ROUTE 310 (IL 255)
SECTION 60-15
MADISON COUNTY
JOB NO. R-98-039-92
RAMP E
STATION 0+307.800 TO STATION 0+357.556

0 m 5 m 10 m 15 m
SCALE 1:250 SHEET 43 OF 55

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINSVILLE, ILLINOIS 62234-6198

PARCEL NO.	OWNER	TOTAL HOLDING	FEE SIMPLE ACQUISITION GROSS ACRES	GROSS SQ. FT.	PREVIOUSLY DEDICATED ACRES	PREVIOUSLY DEDICATED SQ. FT.	NET ACRES	NET SQ. FT.	REMAINDER ACRES	EASEMENTS PE = PERMANENT TE = TEMPORARY PE ACRES	EASEMENTS PE = PERMANENT TE = TEMPORARY PE SQ. FT.	EASEMENT PURPOSE	PERMANENT TAX NUMBER	PROPERTY ACQUIRED BY
		ACRES	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	ACRES	SQ. FT.			
8239059	SHIRLEY M. GOSS, TITLE REPORT NO. MA-3735.0, MA-2615, MA-2617, MA-2618 (EXPIRED)	0.7079	0.7079	30,834	N/A	N/A	0.7079	30,834	0.0000	N/A	N/A	N/A	24-2-01-14-03-301-005 24-2-01-14-03-301-006 24-2-01-14-03-301-007.001 (PT)	

ROUTE: 310 SECTION: 60-15 COUNTY: MADISON JOB NO. R-98-039-92

12/15/2008 11:25:01 AM
PLOT DATE: 12/15/2008 11:25:01 AM

COORDINATES SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

PART OF THE SW 1/4 OF SECTION 14, T6N, R10W, OF THE 3RD PM, MADISON COUNTY, ILLINOIS

BEARINGS SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	149	27
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76634

COORDINATE TABLE (CONST IL 111)			
STATION	OFFSET	NORTH	EAST
29+665.605	0.168 m LT	255,538.6670	697,791.6755
29+725.478	31.875 m RT	255,538.5790	697,859.5833
29+742.363	25.908 m RT	255,551.7912	697,871.6723
29+834.173	25.908 m RT	255,595.0071	697,952.6756
29+857.028	℄	255,628.6235	697,960.6452
29+866.139	0.144 m LT	255,633.0391	697,968.6153
29+883.801	7.033 m RT	255,635.0211	697,987.5772
29+893.205	12.051 m RT	255,635.0198	697,998.2364
29+999.850	68.964 m RT	255,635.0046	698,119.1175
29+999.974	12.064 m RT	255,685.2657	698,092.4429
30+041.751	91.326 m RT	255,634.9986	698,166.6120
30+041.755	57.789 m RT	255,664.5899	698,150.8293
30+084.411	57.794 m RT	255,684.6641	698,188.4666
30+084.417	12.073 m RT	255,725.0049	698,166.9505

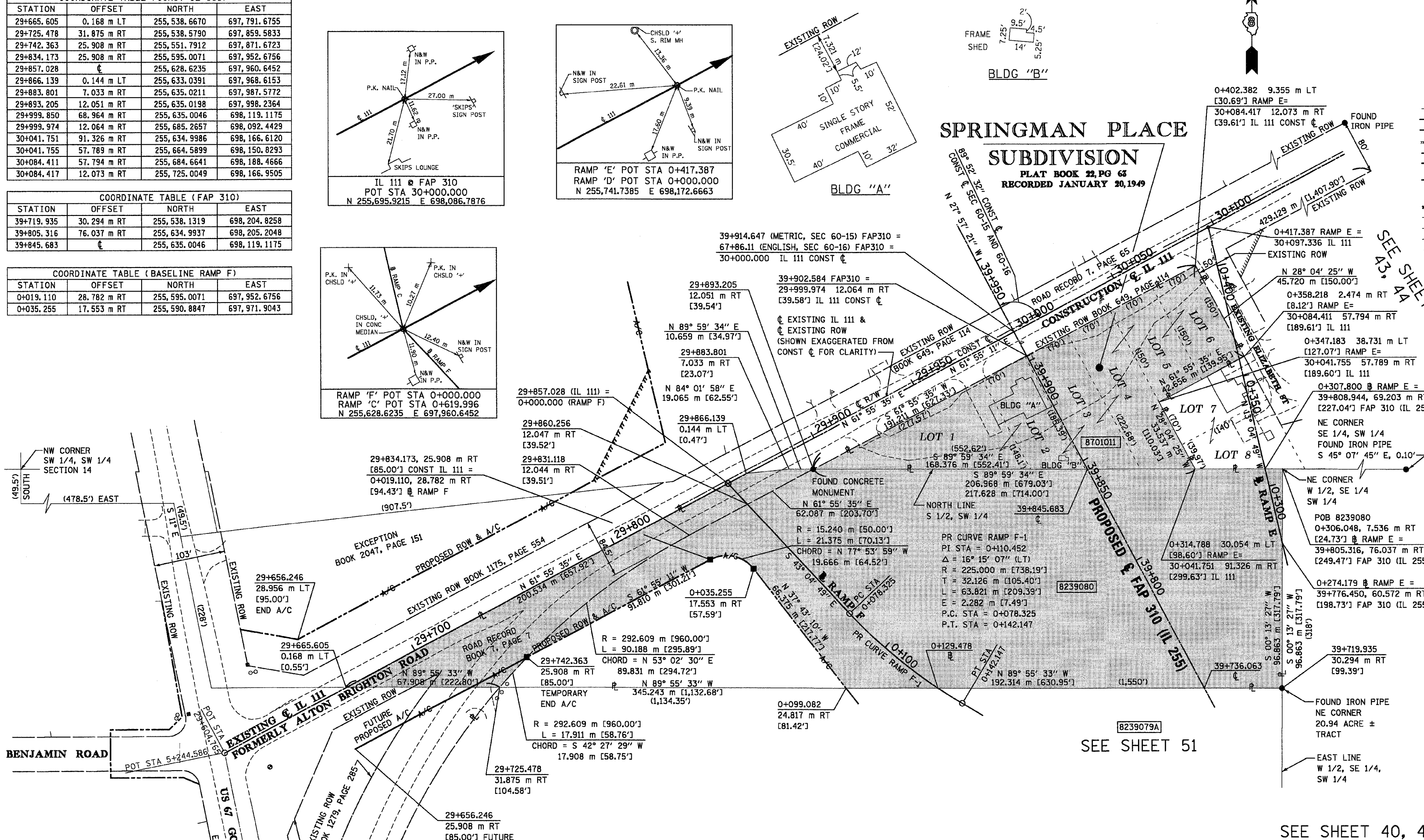
COORDINATE TABLE (FAP 310)			
STATION	OFFSET	NORTH	EAST
39+719.935	30.294 m RT	255,538.1319	698,204.8258
39+805.316	76.037 m RT	255,634.9937	698,205.2048
39+845.683	℄	255,635.0046	698,119.1175

COORDINATE TABLE (BASELINE RAMP F)			
STATION	OFFSET	NORTH	EAST
0+019.110	28.782 m RT	255,595.0071	697,952.6756
0+035.255	17.553 m RT	255,590.8847	697,971.9043

IL 111 ℄ FAP 310
POT STA 30+000.000
N 255,695.9215 E 698,086.7876

RAMP 'E' POT STA 0+417.387
RAMP 'D' POT STA 0+000.000
N 255,741.7385 E 698,172.6663

RAMP 'F' POT STA 0+000.000
RAMP 'C' POT STA 0+619.996
N 255,628.6235 E 697,960.6452



LEGEND

- SECTION CORNER
- QUARTER SECTION CORNER
- EXISTING CENTERLINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED ACCESS CONTROL LINE
- EXISTING EASEMENT LINE
- PROPOSED CENTERLINE
- PROPOSED RIGHT OF WAY LINE
- PROPOSED RIGHT OF WAY AND PROPOSED ACCESS CONTROL LINE
- PROPOSED TEMPORARY EASEMENT LINE
- PROPOSED PERMANENT EASEMENT LINE
- SECTION LINE
- QUARTER SECTION LINE
- QUARTER QUARTER SECTION LINE
- PROPERTY (DEED) LINE
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- 121.456 m — MEASURED DIMENSION
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- [405.04'] — ENGLISH EQUIVALENT TO METRIC DIM.
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- FOUND IRON PIPE OR IRON ROD
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- PERMANENT SURVEY MONUMENT, I.D.O.T. STD. 2135 (TO BE SET BY OTHERS)
- CUT CROSS FOUND OR SET
- SAME OWNERSHIP

■ STAKING OF PROPOSED RIGHT OF WAY. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

■ M STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER 20 INCHES BELOW GROUND SURFACE TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

STATE OF ILLINOIS)
) SS
COUNTY OF ADAMS)

THIS IS TO CERTIFY THAT I, JOHN E. BASINGER AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE DIRECTED THE SURVEY AND DRAFTING OF THE PLAT OF HIGHWAYS SHOWN HEREON IN SECTION 14, TOWNSHIP 6 NORTH, RANGE 10 WEST. OF THE THIRD PRINCIPAL MERIDIAN, MADISON COUNTY, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED ______________

____
JOHN E. BASINGER, PLS #2766
LICENSE EXPIRATION DATE: 11-30-2006
"THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY."
FIELD WORK COMPLETED: APRIL 2004

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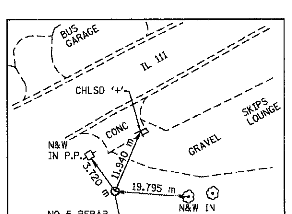
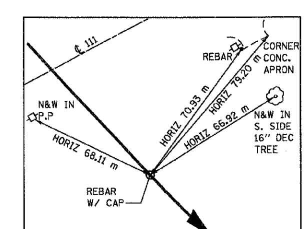
Internet Address: www.klingner.com
STATE OF ILLINOIS DESIGN FIRM # 1842738

CENTERLINE OF CONSTRUCTION BEARING EQUATION FOR FAP 310		
KLINGNER (SOUTH OF IL 111) STA. 39+561.606 TO STA. 39+913.870		HURST ROSCHE (NORTH OF IL 111) STA. 67+86.11 TO STA. 73+49.03
N 61° 55' 11" E	=	N 61° 55' 18" E

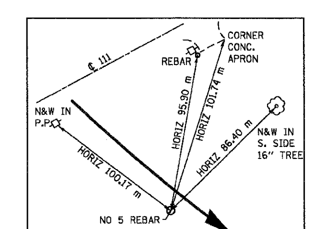
CENTERLINE OF CONSTRUCTION BEARING EQUATION FOR IL 111		
KLINGNER		HURST ROSCHE
N 27° 57' 21" W	=	N 27° 57' 14" W



TRAVERSE POINT #2050
STA 39+897 86 m LT
N 255,640.0178 E 698,019.0958



RAMP 'F' PC STA 0+078.325
N 255,571.4148 E 698,014.1432



RAMP 'F' PI STA 0+110.452
N 255,547.9498 E 698,036.0863

PARCEL NO.	OWNER	TOTAL HOLDING	FEE SIMPLE ACQUISITION: GROSS		FEE SIMPLE ACQUISITION: PREVIOUSLY DEDICATED		FEE SIMPLE ACQUISITION: NET		REMAINDER	EASEMENTS: PE = PERMANENT TE = TEMPORARY		EASEMENT PURPOSE	PERMANENT TAX NUMBER	PROPERTY ACQUIRED BY
		ACRES	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	ACRES	SQ. FT.			
8239080	ERNEST A. HOOD AND DELORES J. HOOD, HUSBAND AND WIFE, AS TENANTS IN COMMON TITLE REPORT NO. MA-2613	7.7136	6.4611	281,444	0.8748	38,108	5.5863	243,336	1.2525	N/A	N/A	N/A	24-1-01-14-00-000-016	
8701011	MARY JANE REATHAFORD TITLE REPORT NO. MA-1832.0 (dated Jan 5, 2003)	1.9366	1.9366	84,359	N/A	N/A	1.9366	84,359	0.0000	N/A	N/A	N/A	24-2-01-14-03-301-002 24-2-01-14-03-301-004	

KLINGNER NOTE:
THE PLAT OF HIGHWAYS FOR THOSE PARCELS NORTH OF ILLINOIS ROUTE 111 WERE PREPARED BY HURST ROSCHE ENGINEERS, INC., (I.D.O.T. JOB NO. R-98-001-97). THE BASIS OF BEARING FOR THE SURVEY PREPARED BY KLINGNER & ASSOCIATES, INC. AND THE BASIS OF BEARING FOR THE SURVEY PREPARED BY HURST ROSCHE ENGINEERS, INC. DIFFER BY 7 SECONDS. HOWEVER, THE PHYSICAL LOCATION OF THE PROPOSED CENTERLINE OF CONSTRUCTION FOR FAP ROUTE 310 AND ILLINOIS ROUTE 111 ARE EQUAL.

ILLINOIS DEPARTMENT OF TRANSPORTATION
PLAT OF HIGHWAYS
FAP ROUTE 310 (IL 255)
SECTION 60-15
MADISON COUNTY
JOB NO. R-98-039-92
IL 111
STATION 29+656.246 TO STATION 30+084.417

0 m 20 m 40 m 60 m
SCALE 1:1000

SHEET 53 OF 55

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINSVILLE, ILLINOIS 62234-6198

PLOT DATE: 12/15/2008 11:25:55 AM

12/15/2008 11:25:55 AM

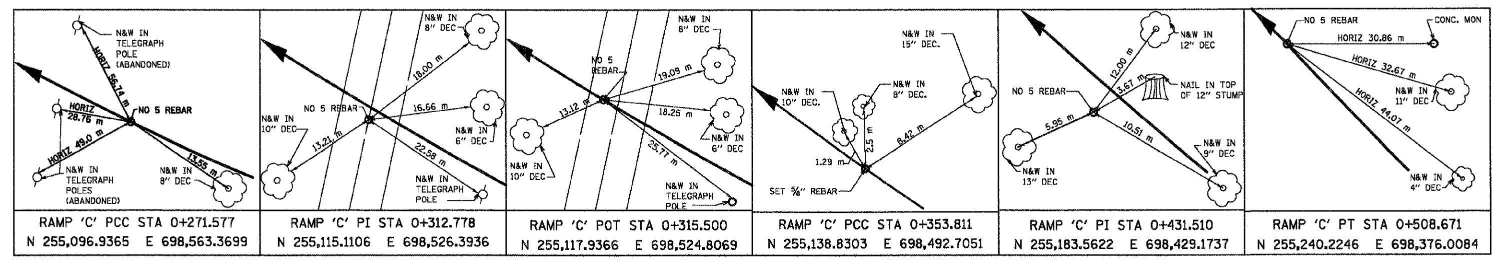
CONTRACT NO. 76634

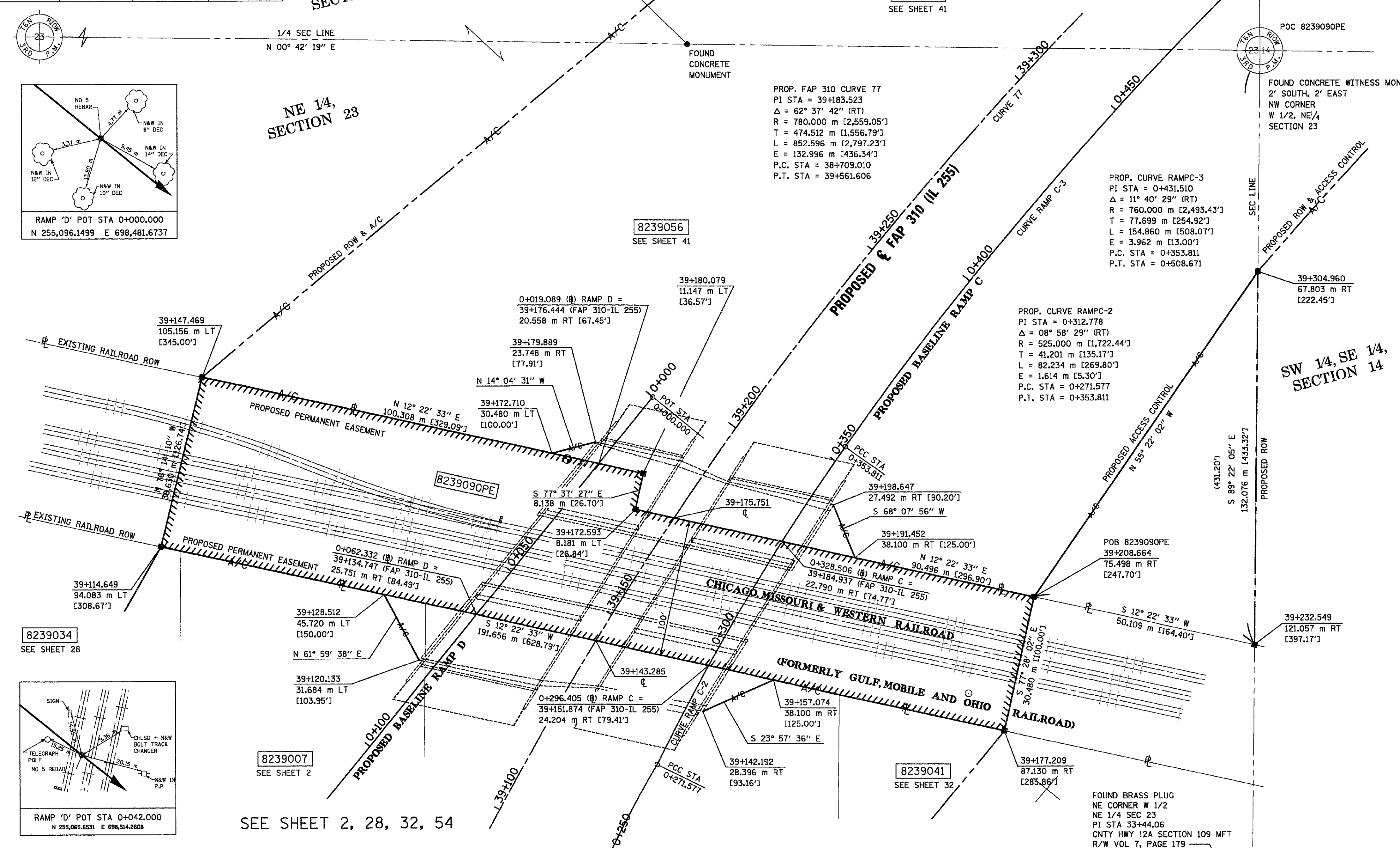
PART OF THE NE 1/4 OF SECTION 23, T6N, R10W, OF THE 3RD PM, MADISON COUNTY, ILLINOIS

COORDINATES SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

BEARINGS SHOWN HEREON ARE BASED ON SURVEY CONTROL DATA AS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

COORDINATE TABLE			
STATION	OFFSET	NORTH	EAST
39+114.649	94.083 m LT	254,986.8199	698,514.6752
39+120.133	31.684 m LT	255,044.0853	698,540.1578
39+128.512	45.720 m LT	255,036.3076	698,525.5339
39+142.192	28.396 m RT	255,107.0806	698,551.5197
39+143.285	℄	255,083.3685	698,535.8602
39+147.469	105.156 m LT	254,996.0107	698,477.1549
39+157.074	38.100 m RT	255,122.8332	698,544.5194
39+172.593	8.181 m LT	255,092.2435	698,506.6024
39+172.710	30.480 m LT	255,073.7092	698,494.2037
39+175.751	℄	255,100.8152	698,508.4832
39+177.209	87.130 m RT	255,174.0224	698,555.7517
39+179.889	23.748 m LT	255,083.4333	698,491.7657
39+180.079	11.147 m LT	255,093.9878	698,498.6533
39+191.452	38.100 m RT	255,140.9229	698,517.2834
39+198.647	27.492 m RT	255,136.2110	698,505.5432
39+208.664	75.498 m RT	255,180.6365	698,525.9978
39+232.549	121.057 m RT	255,229.5808	698,536.7373





LEGEND

- SECTION CORNER
- QUARTER SECTION CORNER
- EXISTING CENTERLINE
- EXISTING RIGHT OF WAY LINE
- PROPOSED ACCESS CONTROL LINE
- EXISTING EASEMENT LINE
- PROPOSED CENTERLINE
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- PROPOSED PERMANENT EASEMENT LINE
- SECTION LINE
- QUARTER SECTION LINE
- QUARTER QUARTER SECTION LINE
- ℔ PROPERTY (DEED) LINE
- APL APPARENT PROPERTY LINE
- 121.456 m MEASURED DIMENSION
- 123.456 m (COMP) COMPUTED DIMENSION
- [405.04'] ENGLISH EQUIVALENT TO METRIC DIM.
- (123.45) RECORDED DIMENSION
- ● FOUND IRON PIPE OR IRON ROD
- ○ SET 5/8 INCH IRON ROD
- PERMANENT SURVEY MONUMENT, I.D.O.T. STD. 2135 (TO BE SET BY OTHERS)
- CUT CROSS FOUND OR SET
- SAME OWNERSHIP

■ STAKING OF PROPOSED RIGHT OF WAY. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

■ M STAKING OF PROPOSED RIGHT OF WAY IN CULTIVATED AREAS. SET 5/8 INCH METAL ROD WITH DIVISION OF HIGHWAY SURVEY MARKER 20 INCHES BELOW GROUND SURFACE TO MONUMENT THE POSITION SHOWN. IDENTIFIED BY INSCRIPTION DATA AND SURVEYORS REGISTRATION NUMBER.

STATE OF ILLINOIS)
) SS
COUNTY OF ADAMS)

THIS IS TO CERTIFY THAT I, JOHN E. BASINGER AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE DIRECTED THE SURVEY AND DRAFTING OF THE PLAT OF HIGHWAYS SHOWN HEREON IN SECTION 23, TOWNSHIP 6 NORTH, RANGE 10 WEST. OF THE THIRD PRINCIPAL MERIDIAN, MADISON COUNTY, THAT THE SURVEY IS TRUE AND COMPLETE AS SHOWN TO THE BEST OF MY KNOWLEDGE AND BELIEF, THAT THE PLAT CORRECTLY REPRESENTS SAID SURVEY, THAT ALL MONUMENTS FOUND AND ESTABLISHED ARE OF PERMANENT QUALITY AND OCCUPY THE POSITIONS SHOWN THEREON AND THAT THE MONUMENTS ARE SUFFICIENT TO ENABLE THE SURVEY TO BE RETRACED. MADE FOR THE DEPARTMENT OF TRANSPORTATION, STATE OF ILLINOIS.

DATED ____________

JOHN E. BASINGER, PLS #2766
LICENSE EXPIRATION DATE: 11-30-2006
"THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY."
FIELD WORK COMPLETED: APRIL 2004

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STATE OF ILLINOIS DESIGN FIRM # 1842738

ILLINOIS DEPARTMENT OF TRANSPORTATION

PLAT OF HIGHWAYS

FAP ROUTE 310 (IL 255)
SECTION 60-15
MADISON COUNTY
JOB NO. R-98-039-92

STATION 39+143.285 TO STATION 39+175.751

0 m 10 m 20 m 30 m
SCALE 1:500

SHEET 52 OF 55

ILLINOIS DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS/DISTRICT 8
1102 EASTPORT PLAZA DRIVE
COLLINSVILLE, ILLINOIS 62234-6198

PARCEL NO.	OWNER	TOTAL HOLDING	FEE SIMPLE ACQUISITION: GROSS		PREVIOUSLY DEDICATED		NET		REMAINDER	EASEMENTS (PE = PERMANENT, TE = TEMPORARY)		EASEMENT PURPOSE	PERMANENT TAX NUMBER	PROPERTY ACQUIRED BY
		ACRES	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	SQ. FT.	ACRES	ACRES	SQ. FT.			
8239090	GATEWAY WESTERN RAILWAY COMPANY, AS TO AN UNDIVIDED ½ INTEREST; AND UNION PACIFIC RAILROAD COMPANY, AS TO AN UNDIVIDED ½ INTEREST TITLE REPORT NO. MA-3761.0, MA-2680 (EXPIRED)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	PE 1.6430	71,567	BRIDGE OVER RAILROAD	24-1-01-23-00-000-906	

PLOT DATE: 12/15/2008 11:26:34 AM
12/15/2008 11:26:34 AM
12/15/2008
pw:\\files\\00024\\drailroad-bridge\\roadplans\\8239090.dgn
*REF-
*REF-
*REF-
*REF-

12/15/2008

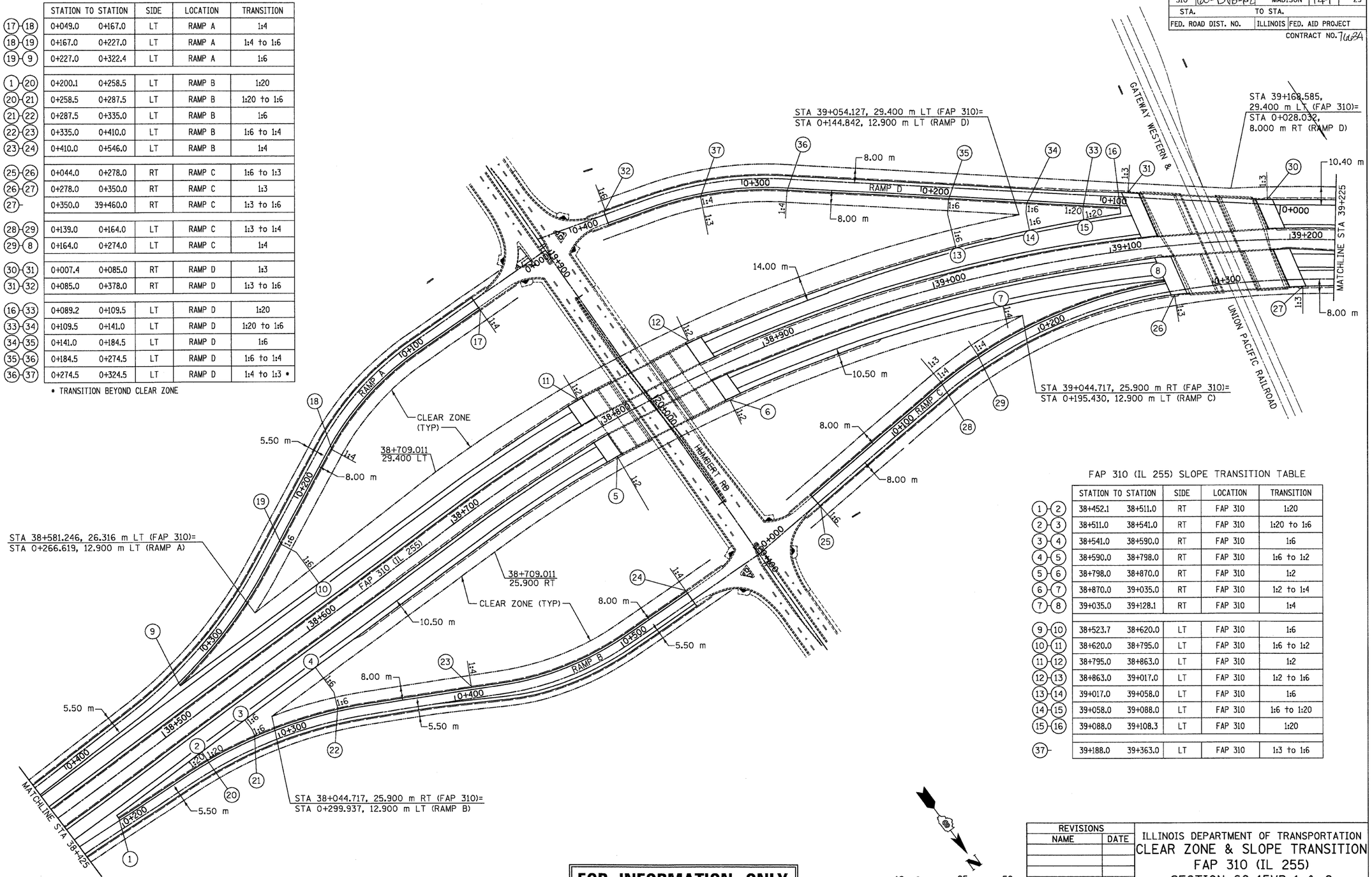
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	149	29
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76824

RAMPS SLOPE TRANSITION TABLE

	STATION	TO STATION	SIDE	LOCATION	TRANSITION
17-18	0+049.0	0+167.0	LT	RAMP A	1:4
18-19	0+167.0	0+227.0	LT	RAMP A	1:4 to 1:6
19-9	0+227.0	0+322.4	LT	RAMP A	1:6
1-20	0+200.1	0+258.5	LT	RAMP B	1:20
20-21	0+258.5	0+287.5	LT	RAMP B	1:20 to 1:6
21-22	0+287.5	0+335.0	LT	RAMP B	1:6
22-23	0+335.0	0+410.0	LT	RAMP B	1:6 to 1:4
23-24	0+410.0	0+546.0	LT	RAMP B	1:4
25-26	0+044.0	0+278.0	RT	RAMP C	1:6 to 1:3
26-27	0+278.0	0+350.0	RT	RAMP C	1:3
27-	0+350.0	39+460.0	RT	RAMP C	1:3 to 1:6
28-29	0+139.0	0+164.0	LT	RAMP C	1:3 to 1:4
29-8	0+164.0	0+274.0	LT	RAMP C	1:4
30-31	0+007.4	0+085.0	RT	RAMP D	1:3
31-32	0+085.0	0+378.0	RT	RAMP D	1:3 to 1:6
16-33	0+089.2	0+109.5	LT	RAMP D	1:20
33-34	0+109.5	0+141.0	LT	RAMP D	1:20 to 1:6
34-35	0+141.0	0+184.5	LT	RAMP D	1:6
35-36	0+184.5	0+274.5	LT	RAMP D	1:6 to 1:4
36-37	0+274.5	0+324.5	LT	RAMP D	1:4 to 1:3 *

* TRANSITION BEYOND CLEAR ZONE



FAP 310 (IL 255) SLOPE TRANSITION TABLE

	STATION	TO STATION	SIDE	LOCATION	TRANSITION
1-2	38+452.1	38+511.0	RT	FAP 310	1:20
2-3	38+511.0	38+541.0	RT	FAP 310	1:20 to 1:6
3-4	38+541.0	38+590.0	RT	FAP 310	1:6
4-5	38+590.0	38+798.0	RT	FAP 310	1:6 to 1:2
5-6	38+798.0	38+870.0	RT	FAP 310	1:2
6-7	38+870.0	39+035.0	RT	FAP 310	1:2 to 1:4
7-8	39+035.0	39+128.1	RT	FAP 310	1:4
9-10	38+523.7	38+620.0	LT	FAP 310	1:6
10-11	38+620.0	38+795.0	LT	FAP 310	1:6 to 1:2
11-12	38+795.0	38+863.0	LT	FAP 310	1:2
12-13	38+863.0	39+017.0	LT	FAP 310	1:2 to 1:6
13-14	39+017.0	39+058.0	LT	FAP 310	1:6
14-15	39+058.0	39+088.0	LT	FAP 310	1:6 to 1:20
15-16	39+088.0	39+108.3	LT	FAP 310	1:20
37-	39+188.0	39+363.0	LT	FAP 310	1:3 to 1:6

FOR INFORMATION ONLY

10 0 25 50
SCALE IN METERS
(1:1000)

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
CLEAR ZONE & SLOPE TRANSITION
FAP 310 (IL 255)
SECTION 60-15VB-1 & 2
MADISON COUNTY
DRAWN BY BGJ
DATE CHECKED BY

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12/15/2008

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	149	30
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTRACT NO. 76634

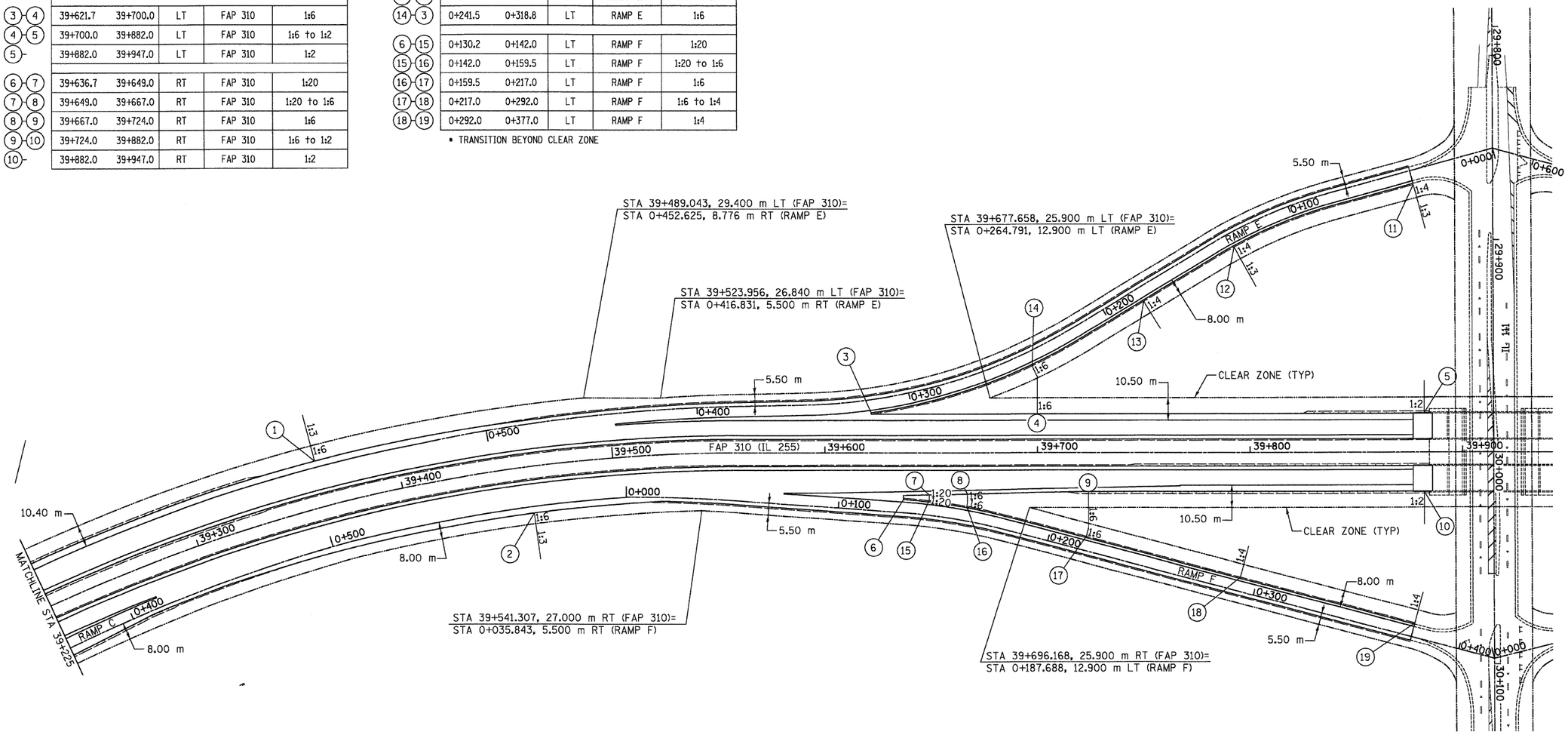
FAP 310 (IL 255) SLOPE TRANSITION TABLE

	STATION TO STATION		SIDE	LOCATION	TRANSITION
1	39+188.0	39+363.0	LT	FAP 310	1:3 to 1:6
2	0+350.0	39+460.0	RT	FAP 310	1:3 to 1:6
3-4	39+621.7	39+700.0	LT	FAP 310	1:6
4-5	39+700.0	39+882.0	LT	FAP 310	1:6 to 1:2
5	39+882.0	39+947.0	LT	FAP 310	1:2
6-7	39+636.7	39+649.0	RT	FAP 310	1:20
7-8	39+649.0	39+667.0	RT	FAP 310	1:20 to 1:6
8-9	39+667.0	39+724.0	RT	FAP 310	1:6
9-10	39+724.0	39+882.0	RT	FAP 310	1:6 to 1:2
10	39+882.0	39+947.0	RT	FAP 310	1:2

RAMPS SLOPE TRANSITION TABLE

	STATION TO STATION		SIDE	LOCATION	TRANSITION
11-12	0+040.5	0+131.5	LT	RAMP E	1:4
12-13	0+131.5	0+181.5	LT	RAMP E	1:3 to 1:4 •
13-14	0+181.5	0+241.5	LT	RAMP E	1:4 to 1:6
14-3	0+241.5	0+318.8	LT	RAMP E	1:6
6-15	0+130.2	0+142.0	LT	RAMP F	1:20
15-16	0+142.0	0+159.5	LT	RAMP F	1:20 to 1:6
16-17	0+159.5	0+217.0	LT	RAMP F	1:6
17-18	0+217.0	0+292.0	LT	RAMP F	1:6 to 1:4
18-19	0+292.0	0+377.0	LT	RAMP F	1:4

• TRANSITION BEYOND CLEAR ZONE



FOR INFORMATION ONLY

10 0 25 50
SCALE IN METERS
(1:1000)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
CLEAR ZONE & SLOPE TRANSITION
FAP 310 (IL 255)
SECTION 60-15VB-1 & 2
MADISON COUNTY
DRAWN BY BGJ
DATE CHECKED BY

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
310	60-15VB-1&2	MADISON	149	31
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT NO. 76634

END SPECIAL V DITCH
BEGIN SPECIAL 1.2 m DITCH
STA 0+185.0, 40.6 m RT
(RAMP D)
ELEV 185.575

END SPECIAL 1.2 m DITCH
STA 0+084.6, 48.6 m RT
(RAMP D)
ELEV 184.870

LIMITS OF CONSTRUCTION

STA 0+070 (RAMP D) = STA 10+086.300 (RR)
PROPOSED STEEL CASING PIPE BORED AND JACKED, 1.050 m Ø X 30.5 m
USFL 184.867, STA 0+084.1, 48.8 m RT
DSFL 184.654, STA 0+056.9, 62.6 m RT
STEEL END SECTIONS, 1.050 m Ø, 2-EACH
DRAINAGE AREA = 3.23 ha (8.0 acres)
50 YR FLOW = 1.08 cms (38 cfs)
100 YR FLOW = 1.33 cms (47 cfs)

END SPECIAL 1.2 m DITCH
STA 39+225.0, 66.7 m LT
(FAP 310)
ELEV 184.130

STA 39+225
PROPOSED PIPE CULVERT, RCCP, TYPE SPECIAL, 1.800 m Ø X 112.7 m
USFL 184.725, 54.8 m RT
DSFL 184.160, 57.9 m LT
PRECAST REINFORCED CONCRETE FLARED END SECTION STD 542301, 2-EACH
DRAINAGE AREA = 45.94 ha (113.5 acres)
50 YR FLOW = 5.92 cms (209 cfs)
100 YR FLOW = 7.28 cms (257 cfs)

BEGIN SPECIAL 1.2 m DITCH
STA 39+148.9, 87.4 m LT
(FAP 310)
ELEV 184.670

LIMITS OF CONSTRUCTION

FUTURE RAMP D

BEGIN SPECIAL V DITCH
STA 0+167.6, 1.8 m LT
(RAMP D)
ELEV 187.000

EXISTING GROUND
1:3 1:3
SD ELEV
SPECIAL V DITCH SECTION

BEGIN SPECIAL V DITCH
STA 5+077.3, 31.7 m LT (ACCESS ROAD)
ELEV 185.900

℄ SURVEY AND CONSTRUCTION
FAP 310 (IL 255)

BEGIN SPECIAL V DITCH
STA 0+188.1, 28.2 m LT
(RAMP C)
ELEV 186.750

FUTURE RAMP C

℄ RAMP C

END SPECIAL V DITCH
STA 5+080.0, 7.0 m LT (ACCESS ROAD)
ELEV 185.850

PT STA 0+508.671

END SPECIAL 1.2 m DITCH
STA 0+313.2, 54.6 m RT
(RAMP C)
ELEV 185.110

END SPECIAL V DITCH
BEGIN SPECIAL 1.2 m DITCH
STA 0+165.0, 30.4 m RT
(RAMP C)
ELEV 186.405

SPECIAL 1.2 m DITCH
STA 0+250.0, 39.2 m RT
(RAMP C)
ELEV 185.555

STA 0+330 (RAMP C) = STA 9+923.200 (RR)
PROPOSED STEEL CASING PIPE BORED AND JACKED, 1.200 m Ø X 30.5 m
USFL 185.105, STA 0+314.4, 54.3 m RT
DSFL 184.892, STA 0+345.9, 43.7 m RT
STEEL END SECTIONS, 1.200 m Ø, 2-EACH
DRAINAGE AREA = 3.23 ha (8.0 acres)
50 YR FLOW = 1.81 cms (64 cfs)
100 YR FLOW = 2.18 cms (77 cfs)

UNION PACIFIC RAILROAD & KANSAS CITY SOUTHERN RAILWAY

BEGIN IMPROVEMENT
STA 5+075.000
TEMPORARY ACCESS ROAD

BEGIN SPECIAL V DITCH
STA 5+025.0, 12.6 m RT (ACCESS ROAD)
ELEV 184.800

END SPECIAL V DITCH
STA 5+080.0, 7.2 m RT (ACCESS ROAD)
ELEV 185.780

SPECIAL V DITCH
STA 5+045.0, 7.2 m RT (ACCESS ROAD)
ELEV 184.870

EXISTING GROUND
1:3 1.2 m 1:3
SD ELEV
SPECIAL 1.2 m DITCH SECTION

STA 5+080.0
PIPE CULVERT (TEMPORARY)
CLASS C, TYPE 1 300 mm Ø X 13.6 m
USFL 185.850, 6.7 m LT
DSFL 185.780, 6.9 m RT

℄ TEMPORARY ACCESS ROAD

0 10 25
SCALE IN METERS
(1:500)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GRADING PLAN
FAP 310 (IL 255)
SECTION 60-15VB-1&2
MADISON COUNTY
DRAWN BY BGJ
DATE CHECKED BY

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BM 3022 - Railroad spike in power pole located on west side of railroad tracks.
Mainline Sta. 39+175, 27 m Lt, Elev. 188.010

Existing Structure - None

① TEMPORARY SHEET PILING NOTES

Temporary Sheet Piling shall have a minimum Section Modulus = 1.74×10^6 mm^3/m

Excavation on pier side of Temp. Sheet Piling shall not extend below Bottom of Pier footing.

Excavation on Railroad side of Temp. Sht. Piling is not allowed.

Kansas City Southern Railway Mile Post 28W is located 658.3 m (2,160') southerly along rail from intersection of IL 255 and Railroad

INDEX OF SHEETS

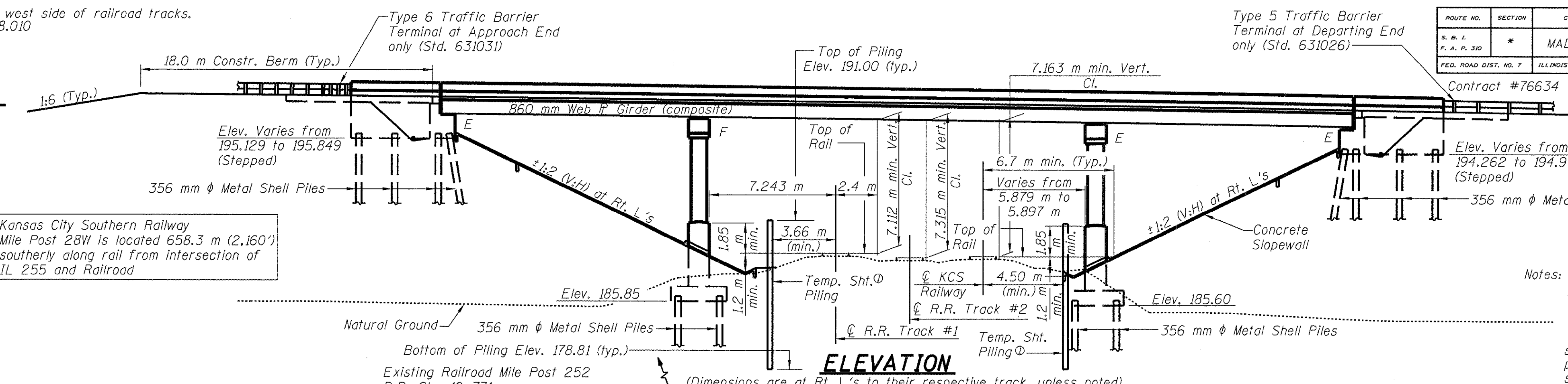
APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS — ALAN D. LUKENS — 081-005167 — QUINCY, ILLINOIS — LICENSED STRUCTURAL ENGINEER

5-7-09

Alan D. Lukens — Date
Licensed Structural Engineer
State of Illinois No. 081-005167
License Expires 11/30/10



Type 6 Traffic Barrier Terminal at Approach End only (Std. 631031)
18.0 m Constr. Berm (Typ.)
Top of Piling Elev. 191.00 (typ.)
7.163 m min. Vert. Cl.
Type 5 Traffic Barrier Terminal at Departing End only (Std. 631026)
860 mm Web PL Girder (composite)
Elev. Varies from 195.129 to 195.849 (Stepped)
356 mm ϕ Metal Shell Piles
Elev. Varies from 194.262 to 194.972 (Stepped)
Concrete Slopewall
Elev. 185.85
Elev. 185.60
Natural Ground
Bottom of Piling Elev. 178.81 (typ.)
℄ R.R. Track #1
℄ KCS Railway
℄ R.R. Track #2
Temp. Sht. Piling ①
Existing Railroad Mile Post 252 R.R. Sta. 10+771
ELEVATION
(Dimensions are at Rt. ∟'s to their respective track, unless noted)

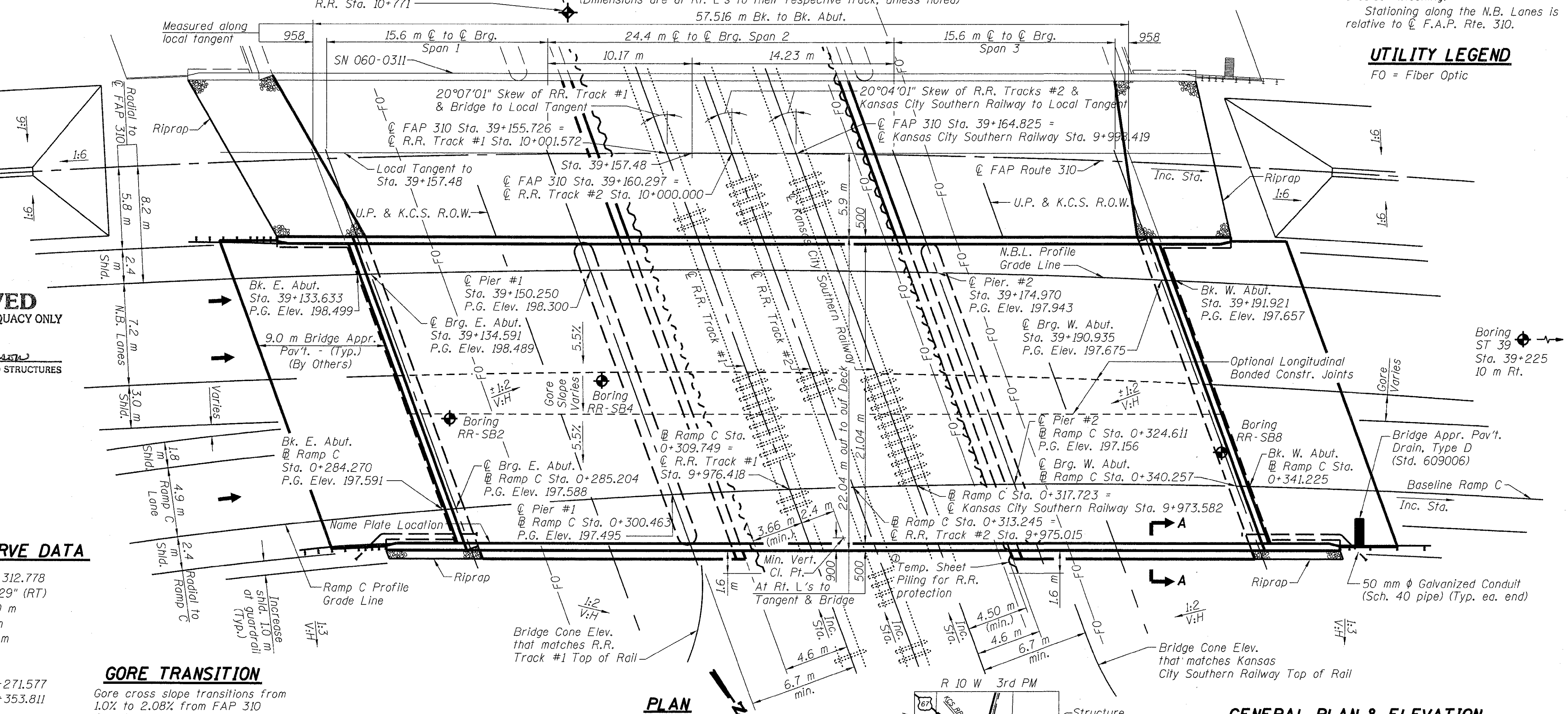
Notes: No deck drains will be permitted in the span over tracks or within 3 m of cross arm of a railroad pole line.

The width between the guardrails shall be the width between bridge parapets which will require approach shoulder widening.

Stationing along the N.B. Lanes is relative to ℄ F.A.P. Rte. 310.

UTILITY LEGEND

FO = Fiber Optic



57.516 m Bk. to Bk. Abut.
15.6 m ℄ to ℄ Brg. Span 1
24.4 m ℄ to ℄ Brg. Span 2
15.6 m ℄ to ℄ Brg. Span 3
SN 060-0311
20°07'01" Skew of R.R. Track #1 & Bridge to Local Tangent
20°04'01" Skew of R.R. Tracks #2 & Kansas City Southern Railway to Local Tangent
℄ FAP 310 Sta. 39+155.726 = ℄ R.R. Track #1 Sta. 10+001.572
℄ FAP 310 Sta. 39+164.825 = ℄ Kansas City Southern Railway Sta. 9+998.419
℄ FAP 310 Sta. 39+160.297 = ℄ R.R. Track #2 Sta. 10+000.000
℄ FAP Route 310
U.P. & K.C.S. R.O.W.
Bk. E. Abut. Sta. 39+133.633 P.G. Elev. 198.499
℄ Pier #1 Sta. 39+150.250 P.G. Elev. 198.300
℄ Brg. E. Abut. Sta. 39+134.591 P.G. Elev. 198.489
℄ Pier #2 Sta. 39+174.970 P.G. Elev. 197.943
℄ Brg. W. Abut. Sta. 39+190.935 P.G. Elev. 197.675
Bk. W. Abut. Sta. 39+191.921 P.G. Elev. 197.657
Boring ST 39 Sta. 39+225 10 m Rt.
Boring RR-SB2
Boring RR-SB4
Boring RR-SB8
9.0 m Bridge Appr. Pav't. - (Typ.) (By Others)
Optional Longitudinal Bonded Constr. Joints
Bridge Appr. Pav't. Drain, Type D (Std. 609006)
Baseline Ramp C
Name Plate Location
Ramp C Profile Grade Line
Bridge Cone Elev. that matches R.R. Track #1 Top of Rail
Bridge Cone Elev. that matches Kansas City Southern Railway Top of Rail
50 mm ϕ Galvanized Conduit (Sch. 40 pipe) (Typ. ea. end)
Temp. Sheet Piling for R.R. protection
PLAN

FAP 310 CURVE DATA

PI STA. 39+183.523
Δ = 62° 37' 42" (RT)
R = 780.000 m
T = 474.512 m
L = 852.596 m
E = 132.996 m
PC Sta. 38+709.010
PT Sta. 39+561.606
SE = 5.5%

RAMP C CURVE DATA

PI Sta. = 0+312.778
Δ = 8° 58' 29" (RT)
R = 525.000 m
T = 41.201 m
L = 82.234 m
E = 1.614 m
SE = 5.5%
PC Sta. = 0+271.577
PT Sta. = 0+353.811

GORE TRANSITION

Gore cross slope transitions from 1.0% to 2.08% from FAP 310 Sta. 39+178.890 to Sta 39+210.881

DESIGNED	ADL
CHECKED	WLW
DRAWN	DGM/ADL
CHECKED	WLW

KLINGNER & ASSOCIATES, P.C.
Engineers · Architects · Surveyors
STATE OF ILLINOIS DESIGN FIRM # 1842738

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications

LOADING MS18

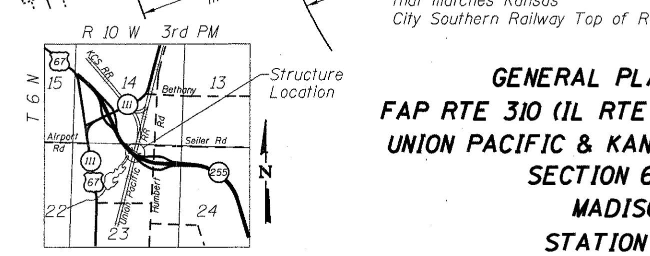
Allow 2.4 kN/m^2 for future wearing surface.

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.080g
Site Coefficient (S) = 1.0

DESIGN STRESSES

FIELD UNITS
f'c = 24 MPa
fy = 400 MPa (reinf.)
fy = 345 MPa (M270M Grade 345)
fy = 250 MPa (M270M Grade 250)



LOCATION SKETCH

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.P. 310	*	MADISON	149	32

SHEET NO. 1 — 36 SHEETS

Contract #76634 — * 60-15VB-1 & 2

GENERAL PLAN & ELEVATION
FAP RTE 310 (IL RTE 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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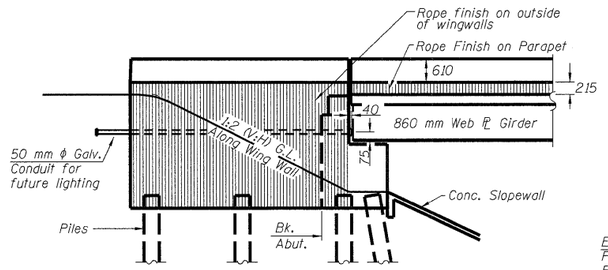
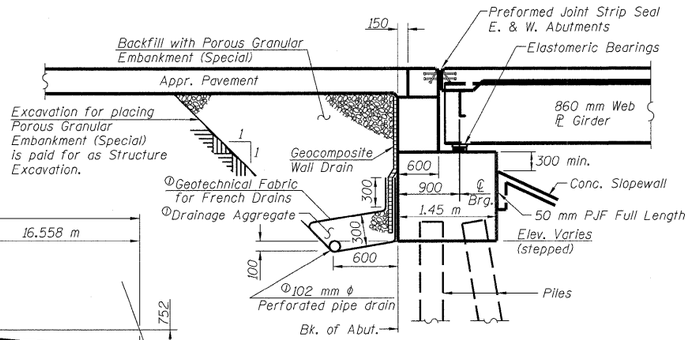


WINGWALL ELEVATION

① Included in the cost of Pipe Underdrains for Structures.

Note:
All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls. The pipe shall extend under the south wingwall to SN 060-0311. The pipe shall also extend under the north wingwall until intersecting the north side slopes. The pipes shall drain into a concrete headwall on north side slope. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



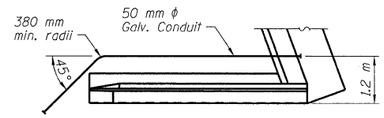
SECTION THRU ABUTMENT

(Horiz. Dim. at Rt. L's, unless noted)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	33
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
36 SHEETS

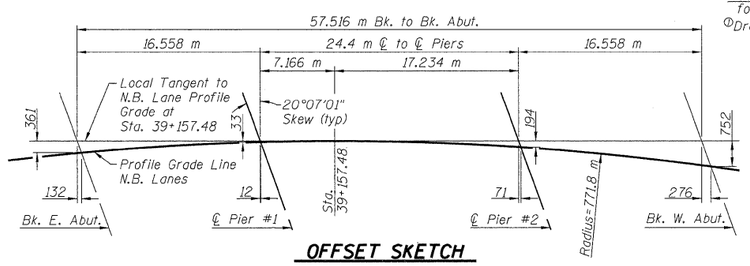
Contract #76634 * 60-15VB-1 & 2



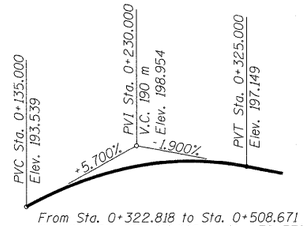
Notes:
50 mm ϕ Galv. Conduit shall be Sch. 40 pipe.
Extend to clear wingwall at a point outside of the shoulder.
Cost included with "Concrete Superstructures"
See Sheet #1 of 36 for locations.

PARTIAL PLAN OF ABUTMENT

(Showing Electrical Conduit)



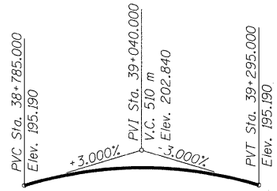
OFFSET SKETCH



From Sta. 0+322.818 to Sta. 0+508.671
(Mainline Sta. 39+178.890 to Sta. 39+370.000)
Ramp C profile is controlled by mainline outside edge of pavement modified entrance ramp terminal

FAP 310 RAMP C PROFILE

(Along Baseline)



FAP 310 PROFILE

(Along Median Edge)

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts M22, open holes 24 mm ϕ, unless otherwise noted.

Calculated mass of Structural Steel = 124,010 kg (M270M Grade 345)
15,630 kg (M270M Grade 250)

The inorganic zinc rich primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior surfaces shall be gray, Munsell No. 5B 7/1. The color of the finish for the exterior and bottom flange of the fascia girders shall be Reddish Brown, Munsell No. 2.5 YR 3/4. See Special Provisions for "Cleaning and Painting New Metal Structures".

The structural steel bearing plates of the Elastomeric Bearing Assemblies shall conform to the requirements of AASHTO M 270M Grade 345.

Slope wall shall be reinforced with welded wire fabric, 152 x 152-MW25.8 x MW25.8 with a mass of 2.91 kg/m².

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments. Pile driving at the abutments will NOT be allowed until two (2) months after the completions of the embankment cones.

The contractor shall drive one (1) metal shell test pile in a permanent location at the East Abutment and at Pier #2 as directed by the Engineer before ordering the remainder of piles.

Concrete Sealer shall be applied to designated seat areas of the abutments.

The elevations of the existing top-of-rail profiles shall be verified prior to beginning construction.

All dimensions are in millimeters (mm) except as noted.

All structural steel shall be AASHTO M 270M Grade 345 unless noted otherwise.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 400. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of 3 mm. Adjustment shall be made either by grinding the surface or by shimming the bearings.

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

Two 3 mm adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

Piles shall be driven through 380 mm diameter precored holes extending to elevation 185.5 at East Abutment & Elevation 184.5 at West Abutment according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles.

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

Slip forming of parapets will not be allowed.

TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER	SUB	TOTAL
	Furnishing and Erecting Structural Steel	Lump Sum	0.5		0.5
	Stud Shear Connectors	Each	6,183		6,183
	Test Pile Metal Shells	Each		2	2
	Name Plates	Each	1		1
***	Pipe Underdrains for structures, 100 mm	Meter		71.1	71.1
	Geocomposite Wall Drain	m2		98	98
	Concrete Encasement	m3		13.6	13.6
	Anchor Bolts, M24	Each		36	36
	Anchor Bolts, M36	Each		36	36
	Porous Granular Embankment (Special)	m3		181	181
***	Stone Riprap, Class A3	m2		92	92
***	Filter Fabric	m2		92	92
**	Protective Coat	m2	1,339		1,339
	Structure Excavation	m3		981	981
	Elastomeric Bearing Assembly, Type 1	Each	27		27
	Concrete Structures	m3		626.8	626.8
	Concrete Superstructure	m3	307.2		307.2
	Bridge Deck Grooving	m2	1,181		1,181
	Reinforcement Bars, Epoxy Coated	kg	52,310	34,260	86,570
	Bar Splicers	Each		150	150
	Furnishing Metal Shell Piles 356mmX6.35mm	Meter		1,801.0	1,801.0
	Driving Piles	Meter		1,801.0	1,801.0
	Concrete Sealer	m2		149	149
***	Slopewall 100 mm	m2		1,081	1,081
	Form Liner Textured Surface	m2	24	62	86
***	Temporary Sheet Piling	m2		767	767
	Preformed Joint Strip Seal	Meter	46.0		46.0

** Quantity is for inside & top surface of parapet & deck.
*** For Quantity North of Local Tangent to ℄ FAP 310 at Sta. 39+157.48.

DESIGNED	ADL
CHECKED	WLW
DRAWN	DGM/ADL
CHECKED	WLW

STATION 39+160.297
BUILT 200_ BY
STATE OF ILLINOIS
F.A.P. RT. 310 SEC. 60-15VB-1&2
LOADING MS18
STR. NO. 060-0310

NAME PLATE

See Std. 515001
(1 Required)

TOTAL BILL OF MATERIALS.
GENERAL NOTES AND DETAILS
FAP RTE 310 (IL RTE 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

5/7/2009 10:27:20 AM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. M. 310	*	MADISON	149	34
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
36 SHEETS

Contract #76634
* 60-15VB-1 & 2

Sta. 9+955.254 Elev. 188.817
-0.619%
Sta. 9+966.238 Elev. 188.749
-0.490%
Sta. 9+976.437 Elev. 188.699
-0.554%
Sta. 9+986.552 Elev. 188.643
-0.429%
Sta. 9+997.036 Elev. 188.598
-0.547%
Sta. 10+007.831 Elev. 188.539

KANSAS CITY SOUTHERN RAILWAY TOP OF RAIL ELEVATIONS

Sta. 9+955.426 Elev. 188.703
-0.293%
Sta. 9+966.361 Elev. 188.671
-0.361%
Sta. 9+976.876 Elev. 188.633
-0.445%
Sta. 9+986.761 Elev. 188.589
-0.310%
Sta. 9+997.404 Elev. 188.556
-0.395%
Sta. 10+008.030 Elev. 188.514

R.R. TRACK #2 TOP OF RAIL ELEVATIONS

(Union Pacific Railroad)

Sta. 9+955.201 Elev. 188.936
-0.144%
Sta. 9+966.336 Elev. 188.920
-0.194%
Sta. 9+976.640 Elev. 188.900
-0.380%
Sta. 9+986.905 Elev. 188.861
-0.212%
Sta. 9+997.304 Elev. 188.839
-0.311%
Sta. 10+007.932 Elev. 188.806

R.R. TRACK #1 TOP OF RAIL ELEVATIONS

(Union Pacific Railroad)

RAILROAD GENERAL NOTES

The proposed bridge shall not increase the quantity and/or characteristics of the flow in the Railroad's ditches and/or drainage structures.

The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the Engineer and the Railroad prior to construction.

The Contractor shall submit a proposed method of erosion and sediment control and have the method approved by the Engineer and Railroad.

All shoring systems that impact the Railroad's operations and/or supports the Railroad's embankment shall be designed and constructed per current Railroad Guidelines for Temporary Shoring. Railroad approval is required before construction.

All demolitions within the Railroad's right-of-way and/or demolition that may impact the Railroad's tracks or operations shall be in compliance with the Railroad's Demolition Guidelines.

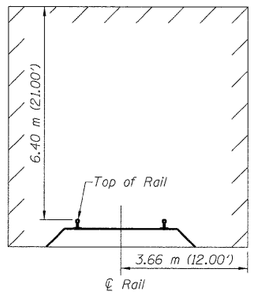
Erection over the Railroad's right-of-way shall not interrupt the Railroad's operation, enabling the tracks to remain open to traffic per the Railroad's requirements.

Railroad requirements do not allow work within 50 feet of track centerline when a train passes the work site and all personnel must clear the area within 25 feet of the track centerline and secure all equipment.

Falsework clearances shall comply with minimum construction clearances.

All permanent clearances shall be verified before project closing.

For Railroad coordination refer to the Railroad Minimum Requirements in the Special Provisions.



MINIMUM CONSTRUCTION CLEARANCE

(Perpendicular to Railroad)

Note:

No construction activities or other obstructions may be placed within these limits during construction.

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

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RAILROAD GENERAL NOTES AND DETAILS
FAP RTE 310 (IL RTE 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

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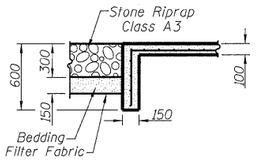
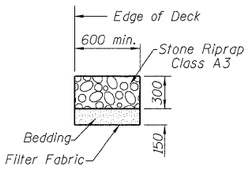
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310		MADISON	149	35
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 4
36 SHEETS

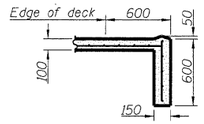
Contract #76634 * 60-15VB-1 & 2



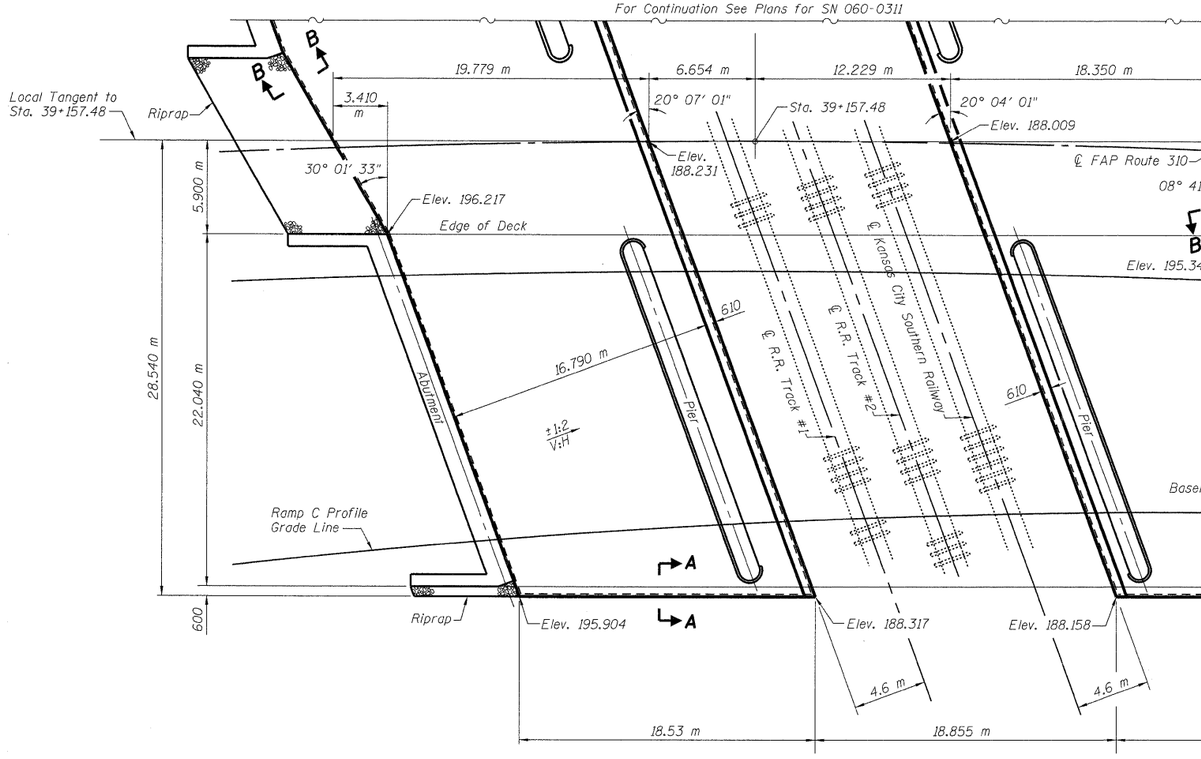
SECTION B-B BETWEEN RIPRAP AND CONCRETE SLOPEWALL



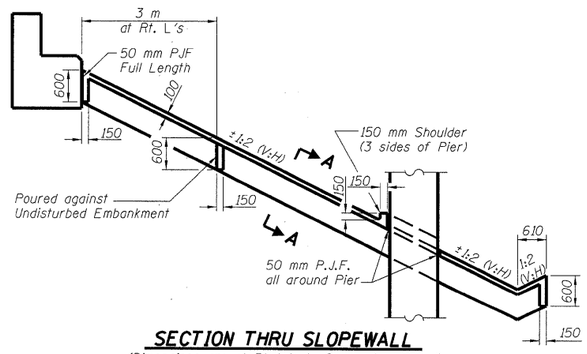
RIPRAP DETAIL



SECTION A-A

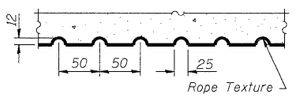


CONCRETE SLOPEWALL PLAN



SECTION THRU SLOPEWALL

(Dimensions are at Rt. L's to Cap, unless noted)



Note:
Rope Texture Concrete surfaces will be billed as "Form Liner Textured Surface".

ROPE TEXTURE CONCRETE DETAIL

The use of reverse image polyvinyl plastic sheets (form liners) attached to concrete forms, will produce the textured surfaces as depicted.

BILL OF MATERIAL

Item	Unit	Quantity
Slopewall 100 mm	m^2	1,081

DESIGNED	ADL
CHECKED	WLW
DRAWN	RLW/ADL
CHECKED	WLW

SLOPEWALL AND CONCRETE TEXTURE DETAILS
FAP RTE 310 (IL RTE 255) NB & RAMP C OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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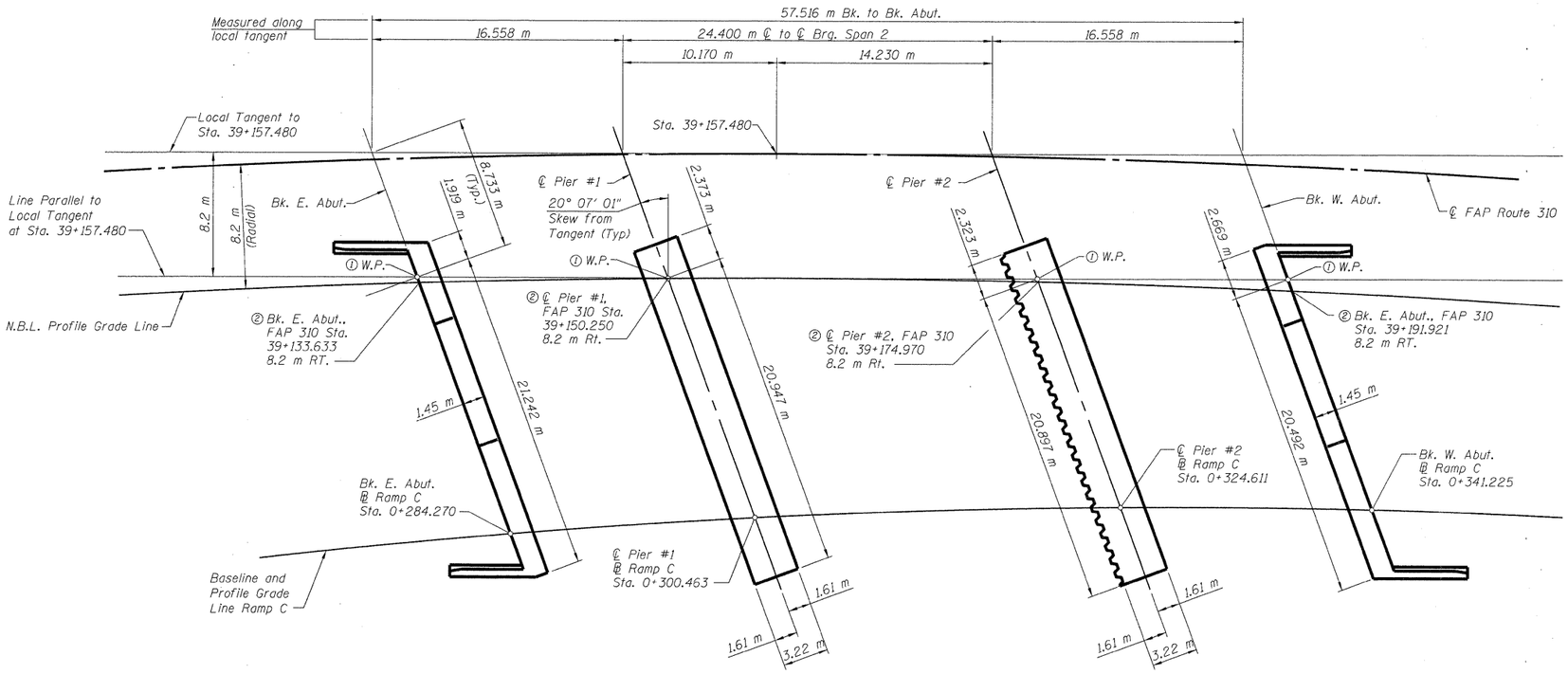
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310		MADISON	149	36
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 5
36 SHEETS

Contract #76634 * 60-15VB-1 & 2



Notes:

① W.P.'s are from line parallel to Local Tangent at Sta. 39+157.480. Footings are dimensioned from W.P.'s.

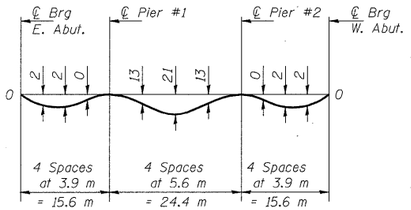
② Sta./offset on N.B.L. Profile Grade Line

FOOTING PLAN

DESIGNED	ADL
CHECKED	WLW
DRAWN	RLW/ADL
CHECKED	WLW

FOOTING PLAN
FAP RTE 310 (IL RTE 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.



DEAD LOAD DEFLECTION DIAGRAM

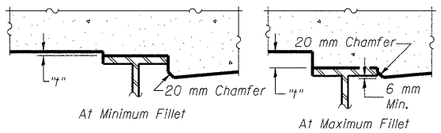
(Includes weight of concrete slab and parapet)

Notes: The dead load deflections diagram is not to be used in the field if the engineer is working from the Theoretical Grade Elevations Adjusted for Dead Load Deflections as shown in tables on sheets #7 thru #9 of 36.

All offsets are in meters.

Offsets are measured perpendicular from ℄ FAP 310 or from ℄ Ramp C.

Offsets to the left are negative. Offsets to the right are positive.



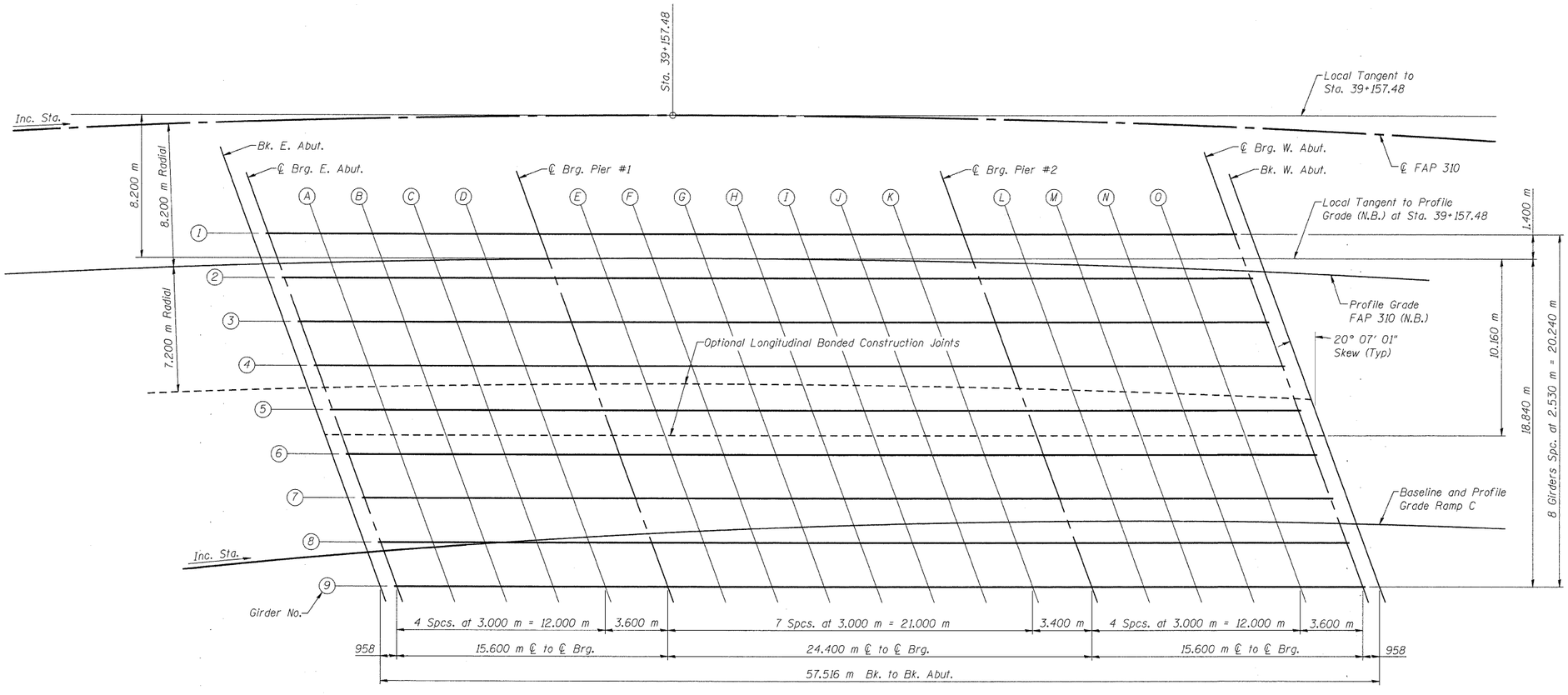
To determine "t": After all structural steel and precast beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets #7 thru #9 of 36, minus slab thickness, equals the fillet height "t" above the top flange of beams or girders.

FILLET HEIGHTS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. N. I. F. A. P. 310	*	MADISON	149	37
FED. ROAD DIST. NO. ?	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
36 SHEETS

Contract #76634 * 60-15VB-1 & 2



PLAN

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/RLW
CHECKED	WLW

TOP OF SLAB ELEVATIONS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.P. 310	*	MADISON	149	38
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 7
36 SHEETS

Contract #76634 * 60-15VB-1 & 2

Profile Grade (N.B.L.) FAP 310

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+133.633	8.200	0+279.763	-17.007	198.499	198.499
℄ Brg. E. Abut.	39+134.591	8.200	0+280.680	-16.949	198.489	198.489
A	39+137.594	8.200	0+283.554	-16.770	198.455	198.457
B	39+140.601	8.200	0+286.432	-16.595	198.420	198.422
C	39+143.612	8.200	0+289.316	-16.424	198.384	198.385
D	39+146.626	8.200	0+292.205	-16.259	198.346	198.346
℄ Brg. Pier #1	39+150.250	8.200	0+295.678	-16.066	198.300	198.300
E	39+153.273	8.200	0+298.577	-15.911	198.260	198.266
F	39+156.301	8.200	0+301.482	-15.760	198.219	198.232
G	39+159.334	8.200	0+304.392	-15.614	198.177	198.196
H	39+162.371	8.200	0+307.307	-15.473	198.134	198.155
I	39+165.412	8.200	0+310.228	-15.337	198.090	198.109
J	39+168.457	8.200	0+313.153	-15.205	198.044	198.058
K	39+171.507	8.200	0+316.084	-15.079	197.998	198.005
℄ Brg. Pier #2	39+174.970	8.200	0+319.412	-14.941	197.943	197.943
L	39+178.030	8.200	0+322.355	-14.825	197.894	197.894
M	39+181.095	8.200	0+325.302	-14.714	197.844	197.845
N	39+184.165	8.200	0+328.255	-14.607	197.792	197.794
O	39+187.239	8.200	0+331.214	-14.506	197.740	197.742
℄ Brg. W. Abut.	39+190.935	8.200	0+334.772	-14.391	197.675	197.675
Bk. W. Abut.	39+191.921	8.200	0+335.720	-14.361	197.657	197.657

Optional Longitudinal Bonded Construction Joint (10.16 m RT of Local Tangent)

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+136.999	18.097	0+282.399	-6.925	197.979	197.979
℄ Brg. E. Abut.	39+137.980	18.122	0+283.342	-6.843	197.972	197.972
A	39+141.051	18.191	0+286.294	-6.595	197.950	197.952
B	39+144.122	18.248	0+289.248	-6.364	197.926	197.928
C	39+147.193	18.294	0+292.205	-6.150	197.899	197.900
D	39+150.265	18.327	0+295.165	-5.952	197.869	197.869
℄ Brg. Pier #1	39+153.952	18.352	0+298.719	-5.738	197.829	197.829
E	39+157.024	18.360	0+301.682	-5.578	197.793	197.799
F	39+160.097	18.356	0+304.648	-5.434	197.755	197.768
G	39+163.169	18.340	0+307.615	-5.308	197.714	197.733
H	39+166.241	18.312	0+310.583	-5.199	197.670	197.691
I	39+169.313	18.272	0+313.553	-5.106	197.623	197.642
J	39+172.384	18.221	0+316.523	-5.031	197.574	197.588
K	39+175.455	18.158	0+319.494	-4.972	197.522	197.529
℄ Brg. Pier #2	39+178.935	18.072	0+322.862	-4.927	197.461	197.461
L	39+182.004	17.983	0+325.834	-4.904	197.405	197.405
M	39+185.073	17.883	0+328.806	-4.900	197.351	197.352
N	39+188.141	17.771	0+331.779	-4.911	197.297	197.299
O	39+191.208	17.647	0+334.751	-4.939	197.243	197.245
℄ Brg. W. Abut.	39+194.887	17.483	0+338.317	-4.996	197.178	197.178
Bk. W. Abut.	39+195.867	17.437	0+339.266	-5.016	197.160	197.160

Optional Longitudinal Bonded Construction Joint (7.2 m RT of PG)

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+136.072	15.400	0+281.670	-9.673	198.074	198.074
℄ Brg. E. Abut.	39+137.041	15.400	0+282.601	-9.615	198.063	198.063
A	39+140.075	15.400	0+285.517	-9.437	198.028	198.030
B	39+143.114	15.400	0+288.439	-9.264	197.992	197.994
C	39+146.156	15.400	0+291.365	-9.095	197.955	197.956
D	39+149.203	15.400	0+294.297	-8.931	197.916	197.916
℄ Brg. Pier #1	39+152.865	15.400	0+297.822	-8.741	197.869	197.869
E	39+155.921	15.400	0+300.765	-8.588	197.828	197.834
F	39+158.981	15.400	0+303.713	-8.440	197.787	197.800
G	39+162.046	15.400	0+306.667	-8.296	197.743	197.762
H	39+165.115	15.400	0+309.626	-8.157	197.699	197.720
I	39+168.189	15.400	0+312.591	-8.024	197.654	197.673
J	39+171.267	15.400	0+315.561	-7.895	197.607	197.621
K	39+174.351	15.400	0+318.536	-7.771	197.560	197.567
℄ Brg. Pier #2	39+177.851	15.400	0+321.915	-7.637	197.504	197.504
L	39+180.944	15.400	0+324.902	-7.524	197.454	197.454
M	39+184.043	15.400	0+327.895	-7.416	197.402	197.403
N	39+187.146	15.400	0+330.893	-7.313	197.350	197.352
O	39+190.255	15.400	0+333.897	-7.215	197.296	197.298
℄ Brg. W. Abut.	39+193.991	15.400	0+337.509	-7.104	197.230	197.230
Bk. W. Abut.	39+194.988	15.400	0+338.473	-7.076	197.212	197.212

Baseline & Profile Grade Ramp C

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+139.365	24.896	0+284.270	0.000	197.591	197.591
℄ Brg. E. Abut.	39+140.328	24.839	0+285.204	0.000	197.588	197.588
A	39+143.343	24.667	0+288.128	0.000	197.578	197.580
B	39+146.362	24.498	0+291.057	0.000	197.564	197.566
C	39+149.386	24.335	0+293.991	0.000	197.546	197.547
D	39+152.414	24.176	0+296.929	0.000	197.525	197.525
℄ Brg. Pier #1	39+156.055	23.992	0+300.462	0.000	197.495	197.495
E	39+159.094	23.844	0+303.412	0.000	197.466	197.472
F	39+162.138	23.701	0+306.367	0.000	197.434	197.447
G	39+165.187	23.563	0+309.327	0.000	197.398	197.417
H	39+168.242	23.429	0+312.292	0.000	197.358	197.379
I	39+171.302	23.300	0+315.264	0.000	197.315	197.334
J	39+174.367	23.177	0+318.240	0.000	197.268	197.282
K	39+177.439	23.058	0+321.223	0.000	197.218	197.225
℄ Brg. Pier #2	39+180.927	22.929	0+324.611	0.000	197.156	197.156
L	39+184.011	22.821	0+327.606	0.000	197.103	197.103
M	39+187.101	22.718	0+330.608	0.000	197.049	197.050
N	39+190.198	22.620	0+333.616	0.000	196.993	196.995
O	39+193.301	22.527	0+336.631	0.000	196.937	196.939
℄ Brg. W. Abut.	39+197.033	22.422	0+340.257	0.000	196.867	196.867
Bk. W. Abut.	39+198.029	22.396	0+341.225	0.000	196.849	196.849

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/DGM
CHECKED	WLW

TOP OF SLAB ELEVATIONS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	39
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 8
36 SHEETS

Contract #76634 * 60-15VB-1 & 2

GIRDER #1

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+133.037	6.420	0+279.300	-18.820	198.604	198.604
℄ Brg. E. Abut.	39+134.003	6.450	0+280.222	-18.732	198.592	198.592
A	39+137.027	6.534	0+283.108	-18.466	198.553	198.555
B	39+140.052	6.607	0+285.996	-18.217	198.514	198.516
C	39+143.077	6.668	0+288.887	-17.984	198.475	198.476
D	39+146.102	6.718	0+291.781	-17.767	198.435	198.435
℄ Brg. Pier #1	39+149.733	6.762	0+295.256	-17.529	198.386	198.386
E	39+152.760	6.786	0+298.155	-17.349	198.345	198.351
F	39+155.786	6.798	0+301.055	-17.186	198.304	198.317
G	39+158.812	6.799	0+303.957	-17.039	198.262	198.281
H	39+161.839	6.788	0+306.860	-16.908	198.219	198.240
I	39+164.865	6.765	0+309.765	-16.794	198.177	198.196
J	39+167.891	6.731	0+312.670	-16.697	198.133	198.147
K	39+170.917	6.685	0+315.577	-16.616	198.090	198.097
℄ Brg. Pier #2	39+174.345	6.619	0+318.872	-16.545	198.040	198.040
L	39+177.370	6.549	0+321.780	-16.500	197.995	197.995
M	39+180.394	6.466	0+324.689	-16.471	197.950	197.951
N	39+183.417	6.372	0+327.598	-16.459	197.905	197.907
O	39+186.440	6.267	0+330.507	-16.464	197.859	197.861
℄ Brg. W. Abut.	39+190.066	6.125	0+333.997	-16.491	197.803	197.803
Bk. W. Abut.	39+191.031	6.084	0+334.926	-16.503	197.788	197.788

GIRDER #2

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+133.894	8.978	0+279.967	-16.215	198.453	198.453
℄ Brg. E. Abut.	39+134.863	9.006	0+280.893	-16.128	198.441	198.441
A	39+137.897	9.087	0+283.793	-15.866	198.402	198.404
B	39+140.932	9.157	0+286.696	-15.621	198.363	198.365
C	39+143.967	9.214	0+289.601	-15.392	198.323	198.324
D	39+147.003	9.261	0+292.509	-15.180	198.283	198.283
℄ Brg. Pier #1	39+150.646	9.300	0+296.001	-14.947	198.234	198.234
E	39+153.682	9.321	0+298.914	-14.771	198.193	198.199
F	39+156.718	9.330	0+301.828	-14.612	198.151	198.164
G	39+159.755	9.327	0+304.744	-14.469	198.109	198.128
H	39+162.791	9.312	0+307.661	-14.343	198.067	198.088
I	39+165.827	9.286	0+310.580	-14.234	198.024	198.043
J	39+168.863	9.248	0+313.499	-14.141	197.981	197.995
K	39+171.898	9.198	0+316.420	-14.065	197.937	197.944
℄ Brg. Pier #2	39+175.338	9.128	0+319.731	-14.000	197.887	197.887
L	39+178.372	9.054	0+322.653	-13.959	197.842	197.842
M	39+181.406	8.967	0+325.575	-13.936	197.797	197.798
N	39+184.439	8.869	0+328.497	-13.929	197.751	197.753
O	39+187.472	8.760	0+331.420	-13.939	197.705	197.707
℄ Brg. W. Abut.	39+191.109	8.613	0+334.927	-13.972	197.649	197.649
Bk. W. Abut.	39+192.077	8.571	0+335.860	-13.985	197.634	197.634

GIRDER #3

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+134.756	11.534	0+280.640	-13.611	198.302	198.302
℄ Brg. E. Abut.	39+135.729	11.561	0+281.570	-13.525	198.290	198.290
A	39+138.773	11.639	0+284.485	-13.267	198.251	198.253
B	39+141.818	11.705	0+287.402	-13.026	198.212	198.214
C	39+144.863	11.760	0+290.322	-12.801	198.172	198.173
D	39+147.909	11.802	0+293.244	-12.593	198.131	198.131
℄ Brg. Pier #1	39+151.564	11.838	0+296.753	-12.365	198.082	198.082
E	39+154.611	11.855	0+299.680	-12.194	198.041	198.047
F	39+157.657	11.860	0+302.608	-12.039	197.999	198.012
G	39+160.703	11.853	0+305.538	-11.901	197.957	197.976
H	39+163.749	11.835	0+308.470	-11.779	197.915	197.936
I	39+166.795	11.805	0+311.402	-11.675	197.872	197.891
J	39+169.841	11.764	0+314.336	-11.587	197.828	197.842
K	39+172.886	11.710	0+317.271	-11.516	197.784	197.791
℄ Brg. Pier #2	39+176.337	11.636	0+320.597	-11.456	197.734	197.734
L	39+179.381	11.557	0+323.533	-11.420	197.689	197.689
M	39+182.425	11.467	0+326.469	-11.402	197.644	197.645
N	39+185.468	11.365	0+329.406	-11.400	197.598	197.600
O	39+188.510	11.252	0+332.342	-11.415	197.552	197.554
℄ Brg. W. Abut.	39+192.159	11.100	0+335.865	-11.455	197.496	197.496
Bk. W. Abut.	39+193.130	11.057	0+336.803	-11.470	197.481	197.481

GIRDER #4

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+135.625	14.089	0+281.319	-11.008	198.151	198.151
℄ Brg. E. Abut.	39+136.601	14.116	0+282.254	-10.924	198.139	198.139
A	39+139.655	14.190	0+285.183	-10.669	198.100	198.102
B	39+142.710	14.253	0+288.115	-10.432	198.060	198.062
C	39+145.766	14.304	0+291.049	-10.211	198.020	198.021
D	39+148.821	14.343	0+293.986	-10.007	197.980	197.980
℄ Brg. Pier #1	39+152.489	14.374	0+297.512	-9.785	197.930	197.930
E	39+155.545	14.388	0+300.453	-9.618	197.889	197.895
F	39+158.602	14.389	0+303.396	-9.467	197.847	197.860
G	39+161.658	14.379	0+306.341	-9.334	197.805	197.824
H	39+164.714	14.357	0+309.286	-9.217	197.762	197.783
I	39+167.770	14.323	0+312.233	-9.117	197.719	197.738
J	39+170.826	14.278	0+315.181	-9.034	197.675	197.689
K	39+173.881	14.221	0+318.130	-8.968	197.631	197.638
℄ Brg. Pier #2	39+177.343	14.142	0+321.472	-8.913	197.581	197.581
L	39+180.397	14.059	0+324.422	-8.883	197.536	197.536
M	39+183.451	13.965	0+327.372	-8.869	197.491	197.492
N	39+186.503	13.860	0+330.322	-8.873	197.445	197.447
O	39+189.555	13.742	0+333.272	-8.893	197.398	197.400
℄ Brg. W. Abut.	39+193.216	13.586	0+336.812	-8.940	197.342	197.342
Bk. W. Abut.	39+194.190	13.541	0+337.754	-8.956	197.327	197.327

GIRDER #5

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+136.499	16.644	0+282.005	-8.406	198.029	198.029
℄ Brg. E. Abut.	39+137.478	16.669	0+282.945	-8.323	198.019	198.019
A	39+140.543	16.740	0+285.889	-8.073	197.989	197.991
B	39+143.608	16.799	0+288.835	-7.839	197.958	197.960
C	39+146.674	16.847	0+291.784	-7.623	197.926	197.927
D	39+149.740	16.882	0+294.735	-7.423	197.891	197.891
℄ Brg. Pier #1	39+153.419	16.910	0+298.279	-7.205	197.848	197.848
E	39+156.486	16.919	0+301.235	-7.043	197.810	197.816
F	39+159.552	16.917	0+304.192	-6.897	197.770	197.783
G	39+162.619	16.903	0+307.150	-6.768	197.728	197.747
H	39+165.685	16.878	0+310.111	-6.656	197.684	197.705
I	39+168.751	16.840	0+313.072	-6.561	197.639	197.658
J	39+171.817	16.791	0+316.034	-6.482	197.591	197.605
K	39+174.882	16.730	0+318.997	-6.421	197.542	197.549
℄ Brg. Pier #2	39+178.355	16.647	0+322.356	-6.372	197.484	197.484
L	39+181.419	16.561	0+325.320	-6.347	197.432	197.432
M	39+184.483	16.463	0+328.284	-6.339	197.381	197.382
N	39+187.545	16.353	0+331.248	-6.347	197.329	197.331
O	39+190.607	16.231	0+334.212	-6.373	197.276	197.278
℄ Brg. W. Abut.	39+194.279	16.070	0+337.768	-6.426	197.213	197.213
Bk. W. Abut.	39+195.257	16.024	0+338.715	-6.444	197.196	197.196

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/DGM
CHECKED	WLW

TOP OF SLAB ELEVATIONS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 310	*	MADISON	149	40
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 9
36 SHEETS

Contract #76634 * 60-15VB-1 & 2

GIRDER #6

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+137.379	19.197	0+282.698	-5.805	197.916	197.916
℄ Brg. E. Abut.	39+138.361	19.222	0+283.643	-5.723	197.910	197.910
A	39+141.436	19.289	0+286.601	-5.477	197.887	197.889
B	39+144.512	19.345	0+289.562	-5.247	197.862	197.864
C	39+147.588	19.389	0+292.526	-5.035	197.835	197.836
D	39+150.664	19.421	0+295.491	-4.839	197.804	197.804
℄ Brg. Pier #1	39+154.356	19.444	0+299.053	-4.627	197.764	197.764
E	39+157.433	19.450	0+302.023	-4.469	197.728	197.734
F	39+160.510	19.444	0+304.995	-4.328	197.689	197.702
G	39+163.586	19.427	0+307.968	-4.203	197.648	197.667
H	39+166.663	19.397	0+310.943	-4.096	197.604	197.625
I	39+169.739	19.356	0+313.918	-4.006	197.557	197.576
J	39+172.815	19.303	0+316.895	-3.932	197.508	197.522
K	39+175.890	19.238	0+319.872	-3.876	197.455	197.462
℄ Brg. Pier #2	39+179.375	19.150	0+323.247	-3.833	197.392	197.392
L	39+182.449	19.060	0+326.226	-3.813	197.338	197.338
M	39+185.522	18.958	0+329.204	-3.810	197.284	197.285
N	39+188.594	18.845	0+332.182	-3.824	197.230	197.232
O	39+191.665	18.719	0+335.160	-3.855	197.176	197.178
℄ Brg. W. Abut.	39+195.350	18.553	0+338.733	-3.914	197.111	197.111
Bk. W. Abut.	39+196.330	18.506	0+339.685	-3.934	197.093	197.093

GIRDER #7

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+138.265	21.750	0+283.398	-3.205	197.771	197.771
℄ Brg. E. Abut.	39+139.250	21.773	0+284.347	-3.124	197.764	197.764
A	39+142.336	21.837	0+287.321	-2.882	197.741	197.743
B	39+145.422	21.889	0+290.297	-2.656	197.715	197.717
C	39+148.509	21.930	0+293.275	-2.448	197.686	197.687
D	39+151.595	21.958	0+296.255	-2.257	197.655	197.655
℄ Brg. Pier #1	39+155.299	21.977	0+299.835	-2.050	197.614	197.614
E	39+158.386	21.980	0+302.820	-1.896	197.577	197.583
F	39+161.473	21.970	0+305.806	-1.760	197.538	197.551
G	39+164.560	21.949	0+308.794	-1.640	197.495	197.514
H	39+167.647	21.916	0+311.783	-1.538	197.450	197.471
I	39+170.733	21.871	0+314.773	-1.452	197.403	197.422
J	39+173.819	21.814	0+317.765	-1.384	197.353	197.367
K	39+176.904	21.745	0+320.756	-1.332	197.300	197.307
℄ Brg. Pier #2	39+180.400	21.653	0+324.148	-1.295	197.236	197.236
L	39+183.484	21.559	0+327.140	-1.280	197.182	197.182
M	39+186.567	21.453	0+330.133	-1.282	197.128	197.129
N	39+189.650	21.335	0+333.126	-1.302	197.074	197.076
O	39+192.731	21.205	0+336.118	-1.338	197.020	197.022
℄ Brg. W. Abut.	39+196.427	21.034	0+339.708	-1.404	196.955	196.955
Bk. W. Abut.	39+197.411	20.986	0+340.664	-1.426	196.937	196.937

GIRDER #8

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+139.157	24.3015	0+284.105	-0.6052	197.625	197.625
℄ Brg. E. Abut.	39+140.146	24.3234	0+285.059	-0.5256	197.618	197.618
A	39+143.242	24.3841	0+288.047	-0.2876	197.594	197.596
B	39+146.338	24.4329	0+291.038	-0.0666	197.567	197.569
C	39+149.435	24.4698	0+294.031	0.1372	197.538	197.539
D	39+152.532	24.4948	0+297.027	0.3241	197.506	197.506
℄ Brg. Pier #1	39+156.249	24.5091	0+300.624	0.5257	197.464	197.464
E	39+159.346	24.5078	0+303.624	0.6749	197.426	197.432
F	39+162.444	24.4947	0+306.625	0.8069	197.386	197.399
G	39+165.541	24.4697	0+309.628	0.9219	197.343	197.362
H	39+168.638	24.4327	0+312.632	1.0196	197.297	197.318
I	39+171.734	24.3838	0+315.637	1.1003	197.248	197.267
J	39+174.830	24.3231	0+318.643	1.1637	197.197	197.211
K	39+177.926	24.2504	0+321.649	1.21	197.144	197.151
℄ Brg. Pier #2	39+181.433	24.1536	0+325.057	1.2416	197.080	197.080
L	39+184.527	24.0556	0+328.064	1.2513	197.026	197.026
M	39+187.620	23.9456	0+331.071	1.2437	196.972	196.973
N	39+190.712	23.8238	0+334.078	1.2189	196.918	196.920
O	39+193.804	23.6901	0+337.085	1.177	196.864	196.866
℄ Brg. W. Abut.	39+197.511	23.5139	0+340.692	1.104	196.799	196.799
Bk. W. Abut.	39+198.498	23.4642	0+341.652	1.0804	196.781	196.781

GIRDER #9

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+140.055	26.8521	0+284.105	-0.6052	197.479	197.479
℄ Brg. E. Abut.	39+141.047	26.8729	0+285.059	-0.5256	197.472	197.472
A	39+144.154	26.9301	0+288.047	-0.2876	197.447	197.449
B	39+147.261	26.9754	0+291.038	-0.0666	197.419	197.421
C	39+150.368	27.0087	0+294.031	0.1372	197.389	197.390
D	39+153.476	27.0301	0+297.027	0.3241	197.356	197.356
℄ Brg. Pier #1	39+157.205	27.04	0+300.624	0.5257	197.314	197.314
E	39+160.313	27.035	0+303.624	0.6749	197.275	197.281
F	39+163.420	27.0182	0+306.625	0.8069	197.234	197.247
G	39+166.528	26.9893	0+309.628	0.9219	197.190	197.209
H	39+169.635	26.9486	0+312.632	1.0196	197.143	197.164
I	39+172.742	26.8958	0+315.637	1.1003	197.094	197.113
J	39+175.848	26.8312	0+318.643	1.1637	197.042	197.056
K	39+178.954	26.7546	0+321.649	1.21	196.987	196.994
℄ Brg. Pier #2	39+182.472	26.6533	0+325.057	1.2416	196.924	196.924
L	39+185.577	26.5512	0+328.064	1.2513	196.870	196.870
M	39+188.680	26.4372	0+331.071	1.2437	196.816	196.817
N	39+191.782	26.3113	0+334.078	1.2189	196.762	196.764
O	39+194.883	26.1735	0+337.085	1.177	196.708	196.710
℄ Brg. W. Abut.	39+198.603	25.9923	0+340.692	1.104	196.643	196.643
Bk. W. Abut.	39+199.593	25.9412	0+341.652	1.0804	196.625	196.625

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/DGM
CHECKED	WLW

TOP OF SLAB ELEVATIONS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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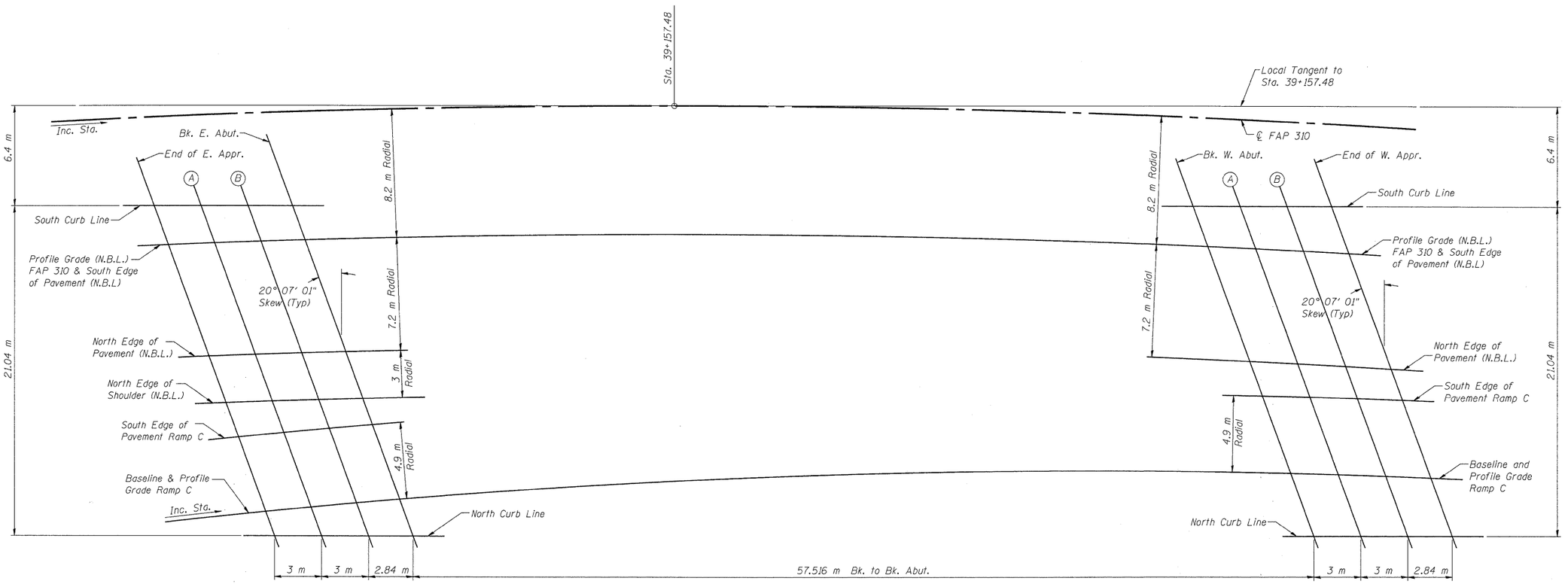
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	41
FED. ROAD DIST. NO. 9		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 10
36 SHEETS

Contract #76634 * 60-15VB-1 & 2

Notes:
See sheet #11 of 36 for Theoretical Grade Elevation Tables.
All offsets are in meters.
Offsets are measured perpendicular from ℄ FAP 310 or from ℄ Ramp C.
Offsets to the left are negative. Offsets to the right are positive.



EAST APPROACH

WEST APPROACH

PLAN

DESIGNED	ADL
CHECKED	WLW
DRAWN	KTH
CHECKED	WLW

TOP OF APPROACH SLAB ELEVATIONS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

South Curb Line

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
Bk. W. Abut.	39+190.867	5.691	0+334.779	-16.901	197.812
A	39+193.885	5.557	0+337.685	-16.946	197.766
B	39+196.903	5.411	0+340.591	-17.009	197.719
End of Appr.	39+199.759	5.262	0+343.341	-17.083	197.675

Profile Grade (N.B.L.) FAP 310

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
Bk. W. Abut.	39+191.921	8.200	0+335.720	-14.361	197.657
A	39+195.008	8.200	0+338.693	-14.272	197.602
B	39+198.101	8.200	0+341.671	-14.189	197.545
End of Appr.	39+201.033	8.200	0+344.496	-14.114	197.490

North Edge of Pavement (N.B.L.)

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
Bk. W. Abut.	39+194.988	15.400	0+338.473	-7.076	197.212
A	39+198.109	15.400	0+341.491	-6.991	197.151
B	39+201.236	15.400	0+344.515	-6.911	197.090
End of Appr.	39+204.202	15.400	0+347.384	-6.841	197.033

South Edge of Pavement Ramp C

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
Bk. W. Abut.	39+195.916	17.551	0+339.311	-4.900	197.153
A	39+199.012	17.468	0+342.310	-4.900	197.094
B	39+202.115	17.391	0+345.316	-4.900	197.036
End of Appr.	39+205.059	17.322	0+348.169	-4.900	196.980

Baseline & Profile Grade Ramp C

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
Bk. W. Abut.	39+198.029	22.396	0+341.225	0.000	196.849
A	39+201.149	22.316	0+344.257	0.000	196.789
B	39+204.276	22.241	0+347.296	0.000	196.728
End of Appr.	39+207.244	22.175	0+350.179	0.000	196.670

North Curb Line

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
Bk. W. Abut.	39+199.767	26.333	0+342.809	3.981	196.601
A	39+202.867	26.164	0+345.830	3.889	196.545
B	39+205.965	25.984	0+348.850	3.780	196.490
End of Appr.	39+208.897	25.802	0+351.708	3.661	196.437

WEST APPROACH

South Curb Line

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
End of Appr.	39+124.001	5.687	0+270.751	-20.128	198.738
A	39+127.021	5.810	0+273.592	-19.808	198.701
B	39+130.042	5.921	0+276.469	-19.504	198.664
Bk. E. Abut.	39+132.902	6.016	0+279.195	-19.232	198.628

Profile Grade (N.B.L.) FAP 310

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
End of Appr.	39+124.810	8.200	0+271.337	-17.567	198.592
A	39+127.801	8.200	0+274.186	-17.372	198.562
B	39+130.795	8.200	0+277.049	-17.183	198.530
Bk. E. Abut.	39+133.633	8.200	0+279.763	-17.007	198.499

North Edge of Pavement (N.B.L.)

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
End of Appr.	39+127.158	15.400	0+273.112	-10.229	198.172
A	39+130.179	15.400	0+276.011	-10.036	198.139
B	39+133.205	15.400	0+278.916	-9.847	198.105
Bk. E. Abut.	39+136.073	15.400	0+281.671	-9.673	198.074

North Edge of Shoulder (N.B.L.)

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
End of Appr.	39+128.150	18.400	0+273.869	-7.172	197.997
A	39+131.184	18.400	0+276.787	-6.979	197.963
B	39+134.223	18.400	0+279.710	-6.791	197.928
Bk. E. Abut.	39+137.104	18.400	0+282.481	-6.617	197.896

South Edge of Pavement Ramp C

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
End of Appr.	39+128.892	20.629	0+274.438	-4.900	197.886
A	39+131.873	20.440	0+277.320	-4.900	197.881
B	39+134.857	20.256	0+280.205	-4.900	197.873
Bk. E. Abut.	39+137.687	20.086	0+282.941	-4.900	197.866

Baseline & Profile Grade Ramp C

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
End of Appr.	39+130.509	25.437	0+275.683	0.000	197.600
A	39+133.511	25.249	0+278.593	0.000	197.600
B	39+136.516	25.065	0+281.507	0.000	197.597
Bk. E. Abut.	39+139.365	24.896	0+284.270	0.000	197.591

North Curb Line

Location	℄ FAP 310		℄ Ramp C		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
End of Appr.	39+131.042	27.008	0+276.095	1.602	197.507
A	39+134.148	27.103	0+279.091	1.890	197.493
B	39+137.255	27.187	0+282.090	2.162	197.472
Bk. E. Abut.	39+140.197	27.255	0+284.932	2.404	197.456

EAST APPROACH

DESIGNED	ADL
CHECKED	WLW
DRAWN	KTH
CHECKED	WLW

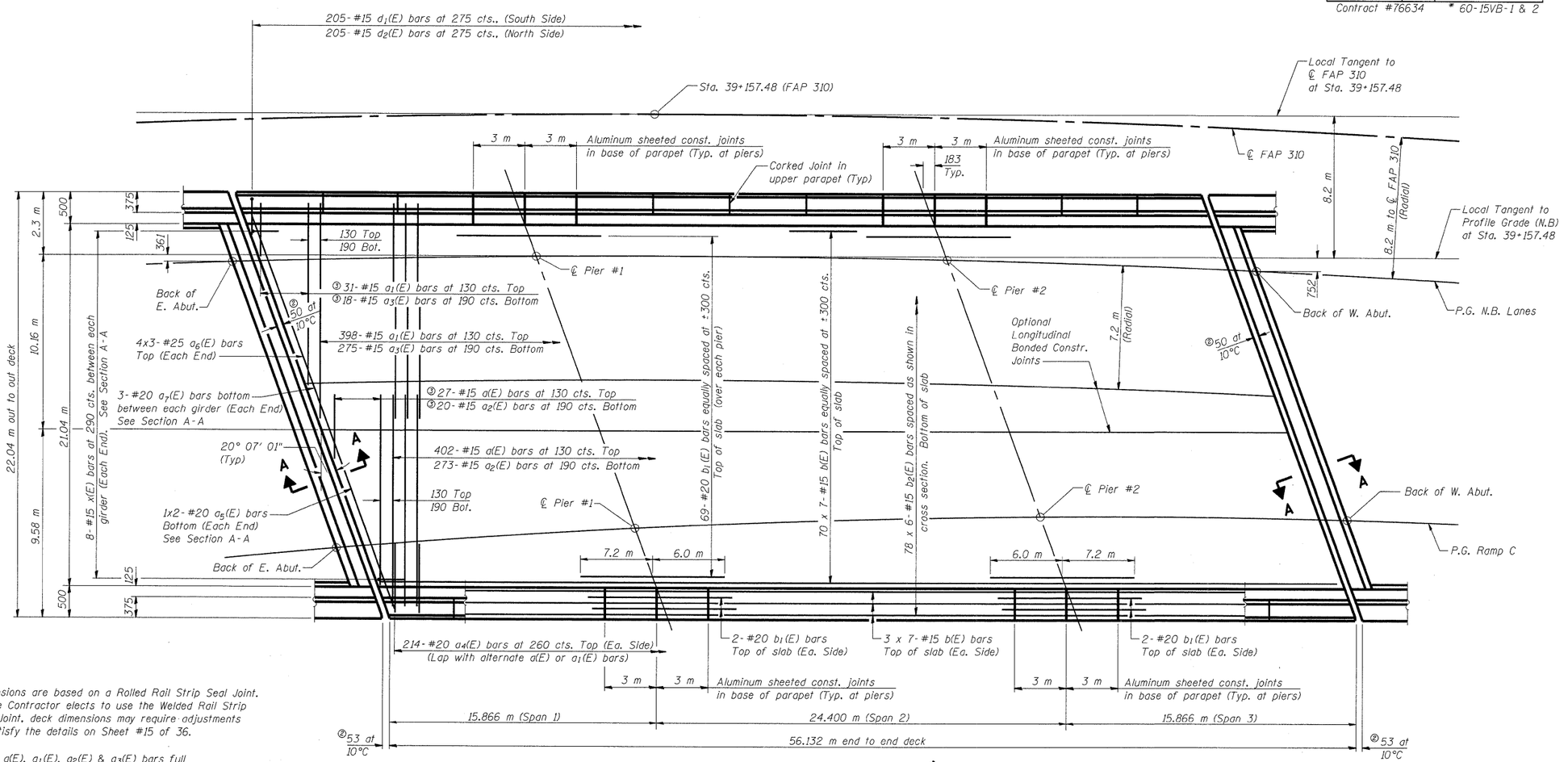
TOP OF APPROACH SLAB ELEVATIONS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F.A.P. 310	*	MADISON	149	43
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 12
36 SHEETS

Contract #76634 * 60-15VB-1 & 2



② Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint. deck dimensions may require adjustments to satisfy the details on Sheet #15 of 36.

③ Order a(E), a_1(E), a_2(E) & a_3(E) bars full length cut to fit skew and use remainder use remainder of bars in opposite end.

PLAN

Min. Lap
#15 bars = 640
#20 bars = 790
#25 bars = 1.32 m

Notes: See Sheet #14 of 36 for superstructure details and Bill of Materials.
Bars indicated thus 20 x 3- #15 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheet #14 of 36 for parapet reinforcement.
See Sheet #13 of 36 for Cross Section thru Deck.
See Sheet #13 of 36 for Section A-A.
Lap a(E) bars with a_1(E) bars.
Lap a_2(E) bars with a_3(E) bars.

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/DGM
CHECKED	WLW

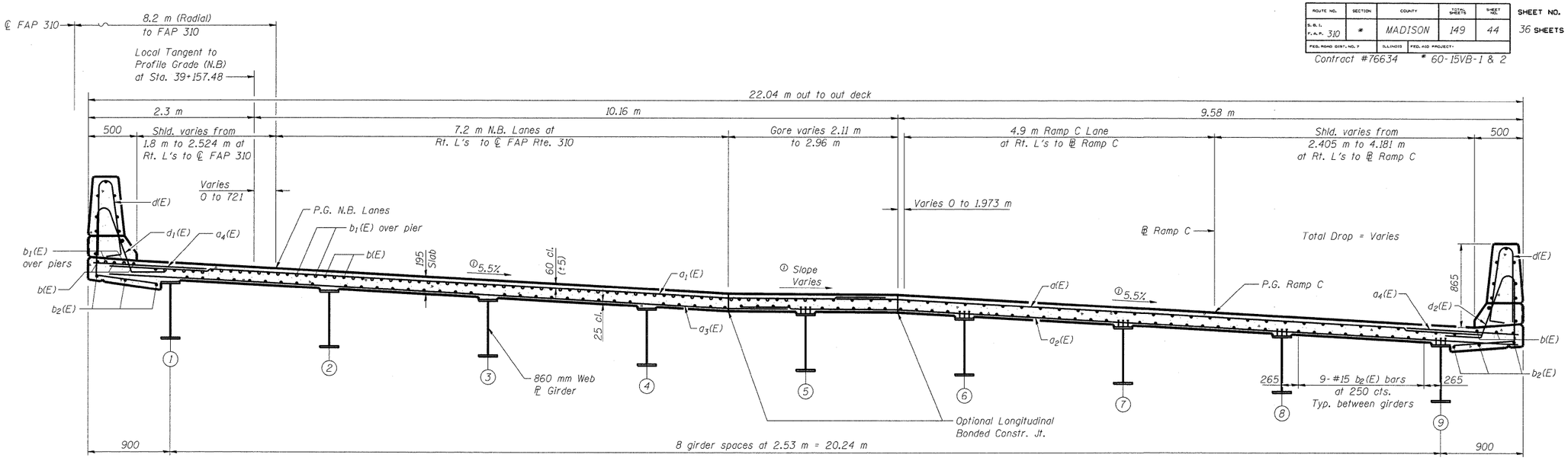
SUPERSTRUCTURE
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	44
FED. ROAD DIST. NO. 9		ILLINOIS	FED. AID PROJECT	

SHEET NO. 13
36 SHEETS

Contract #76634 * 60-15VB-1 & 2



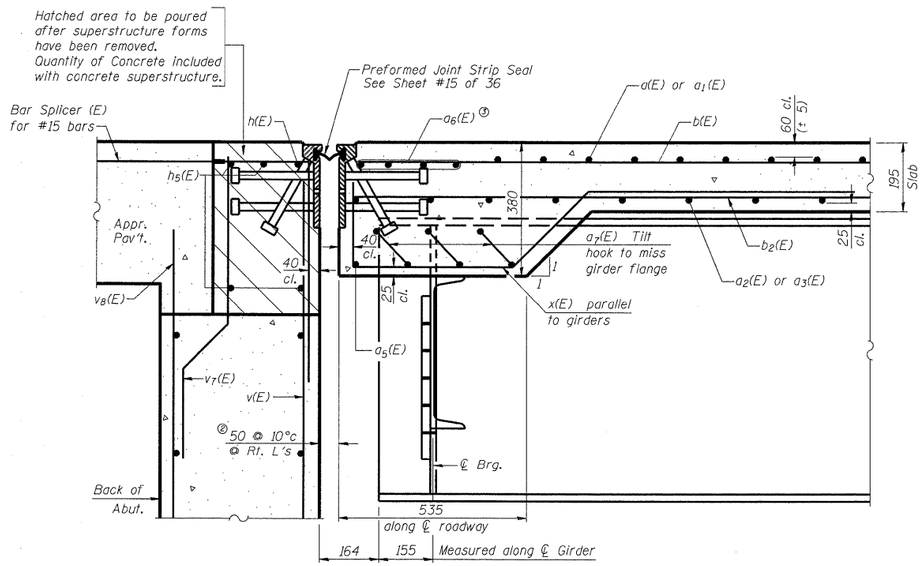
① Slopes are at Rt. L's to local tangent at Sta 39+157.48

NEAR PIER

NEAR MIDSPAN

CROSS SECTION THRU DECK

(Looking West)
(All dimensions are at Rt. L's to Local Tangent at Sta. 39+157.48, unless noted)



SECTION A-A

At East and West Abutments

Note:
$a_5(E)$, $a_6(E)$ and $a_7(E)$ bars placed along skew.

② Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Sheet #15 of 36.

③ $a_6(E)$ bars at 100 mm spacing. Place under longitudinal bars.

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/DGM
CHECKED	WLW

SUPERSTRUCTURE DETAILS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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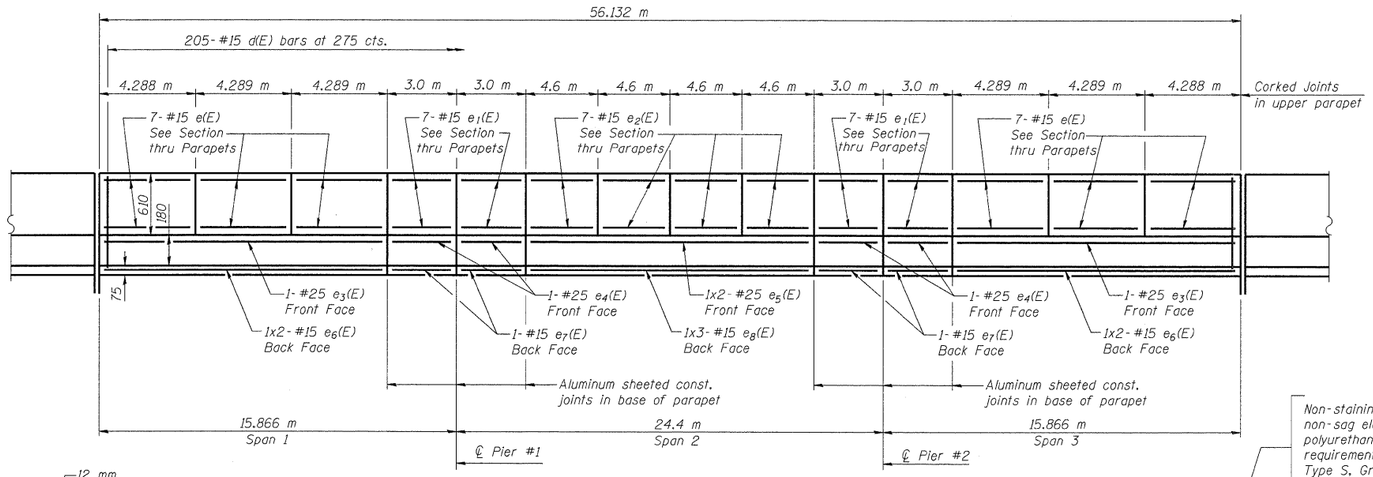
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F.A.P. 310	*	MADISON	149	45
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

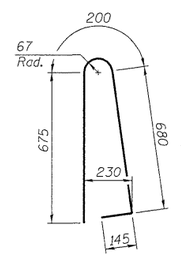
SHEET NO. 14
36 SHEETS

Contract #76634 * 60-15VB-1 & 2

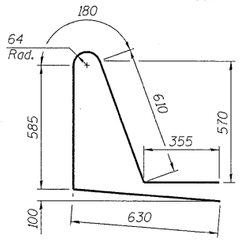


INSIDE ELEVATION OF PARAPETS

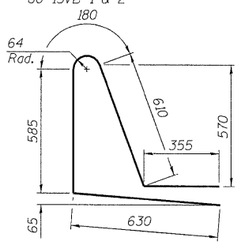
Min. Bar Lap
#15 bars-640
#25 bars-1.32 m



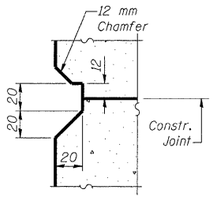
BAR d(E)



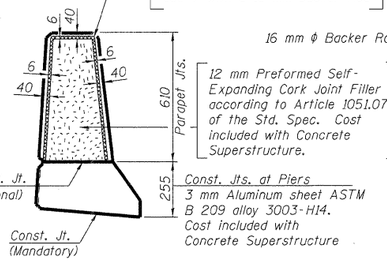
BAR d_1(E)



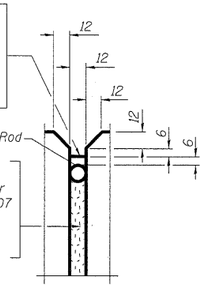
BAR d_2(E)

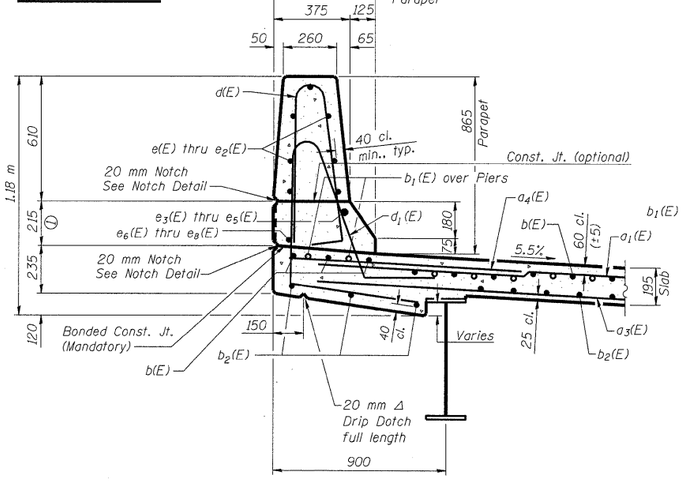


NOTCH DETAIL



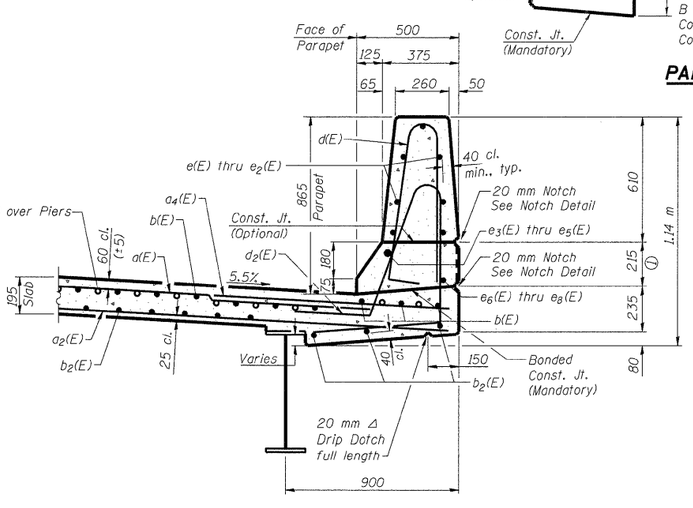
PARAPET JOINT DETAILS





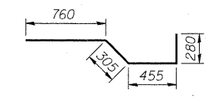
SECTION THRU SOUTH PARAPET

① Patterned Rope Texture Concrete. See Sheet #4 of 36 for details.

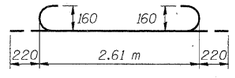


SECTION THRU NORTH PARAPET

① Patterned Rope Texture Concrete. See Sheet #4 of 36 for details.



BAR x(E)



a_7(E) BAR

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
a(E)	429	#15	10.40	
a_1(E)	429	#15	12.00	
a_2(E)	293	#15	11.80	
a_3(E)	293	#15	10.60	
a_4(E)	428	#20	1.80	
a_5(E)	4	#20	11.95	
a_6(E)	24	#25	8.95	
a_7(E)	48	#20	3.05	
b(E)	532	#15	8.60	
b_1(E)	146	#20	13.20	
b_2(E)	468	#15	9.90	
d(E)	410	#15	1.70	
d_1(E)	205	#15	2.36	
d_2(E)	205	#15	2.36	
e(E)	84	#15	4.20	
e_1(E)	56	#15	2.91	
e_2(E)	56	#15	4.51	
e_3(E)	4	#25	12.78	
e_4(E)	8	#25	2.92	
e_5(E)	4	#25	9.84	
e_6(E)	8	#15	6.73	
e_7(E)	8	#15	2.92	
e_8(E)	6	#15	6.47	
x(E)	128	#15	1.80	
Reinforcement Bars, Epoxy Coated			kg	52,310
Concrete Superstructure			m³	307.2
Bridge Deck Grooving			m²	1,181
Protective Coat			m²	1,339
Form Liner Textured Surface			m²	24

Bars indicated thus 1 x 5-#15 etc. indicates 1 line of bars with 5 lengths per line.

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/DGM
CHECKED	WLW

SUPERSTRUCTURE DETAILS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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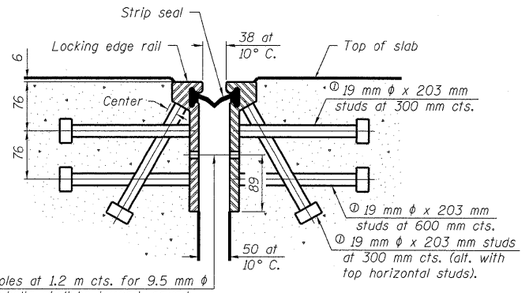
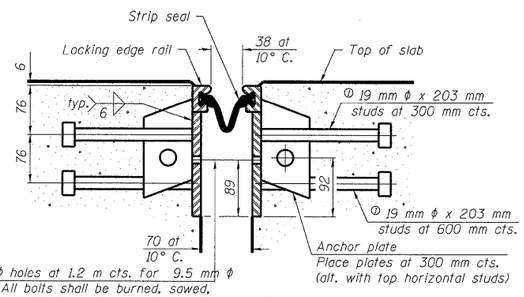
① Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



11 mm ϕ holes at 1.2 m cts. for 9.5 mm ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU ROLLED RAIL JOINT



11 mm ϕ holes at 1.2 m cts. for 9.5 mm ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT

Notes:

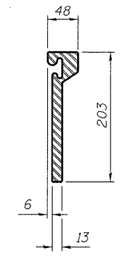
The strip seal shall be made continuous and shall have a minimum thickness of 6 mm. The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 102 mm.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

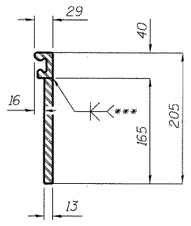
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

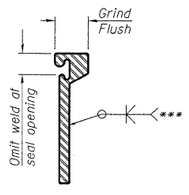
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.



ROLLED (EXTRUDED) RAIL



WELDED RAIL

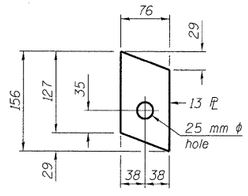


*** Back gouge not required if complete joint penetration is verified by mock-up.

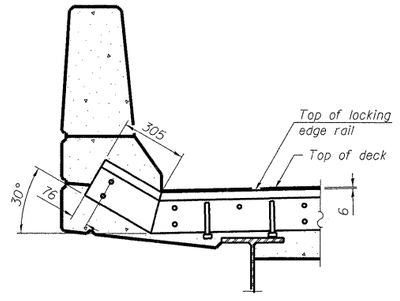
LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

LOCKING EDGE RAILS



ANCHOR ℄
(for welded rail)



AT PARAPET

END TREATMENT

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	m	46.0

DESIGNED	ADL
CHECKED	
DRAWN	KTH
CHECKED	

PREFORMED JOINT STRIP SEAL
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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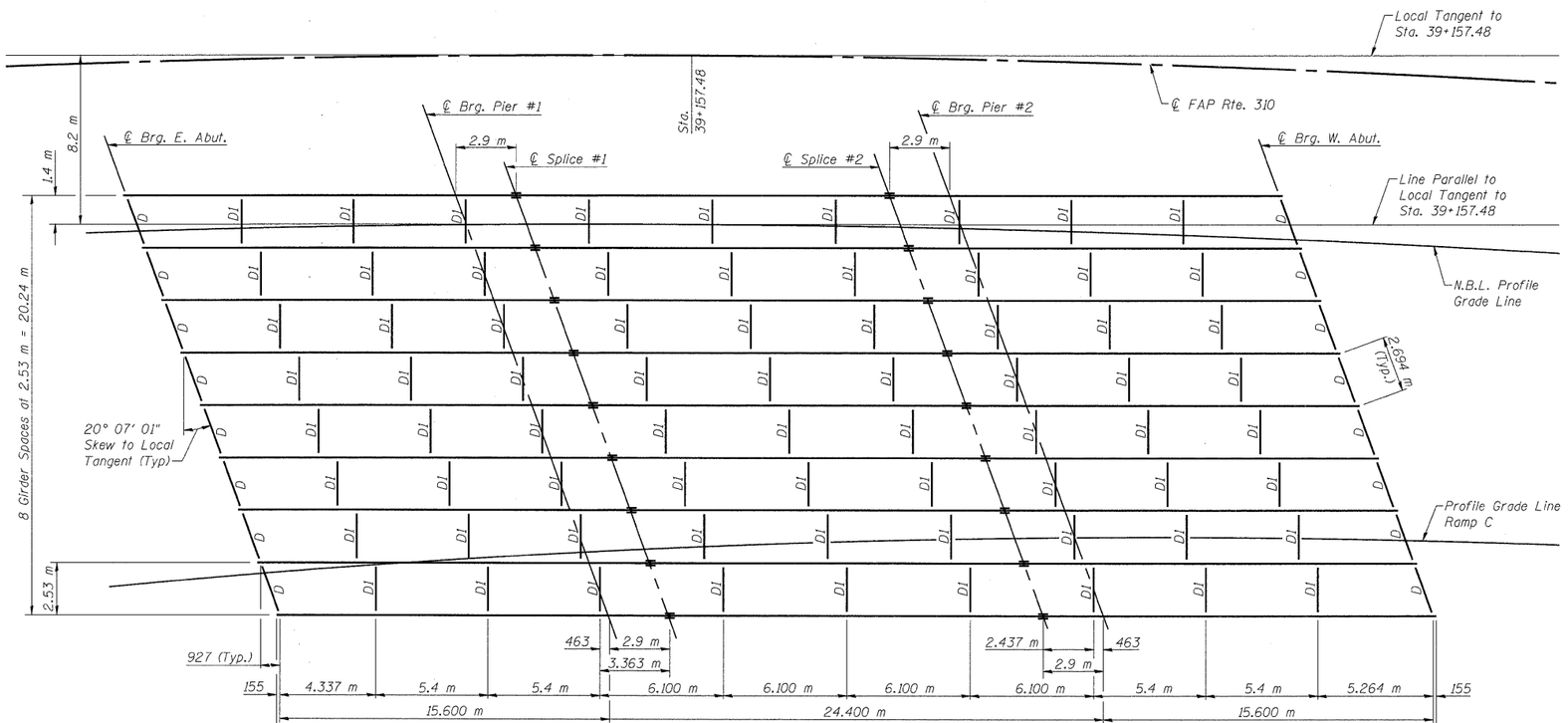
5/7/2009 10:32:09 AM

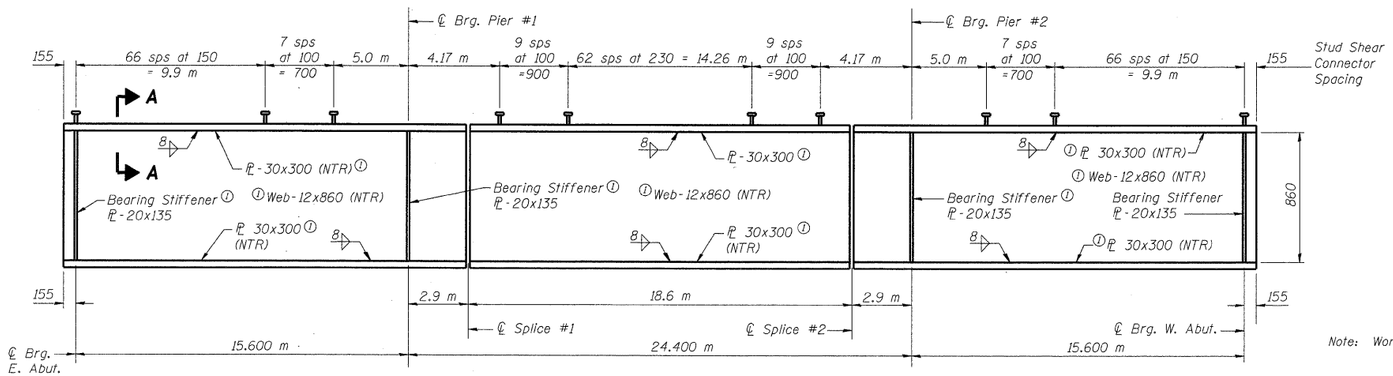
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	47
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 16
36 SHEETS

Contract #76634 * 60-15VB-1 & 2



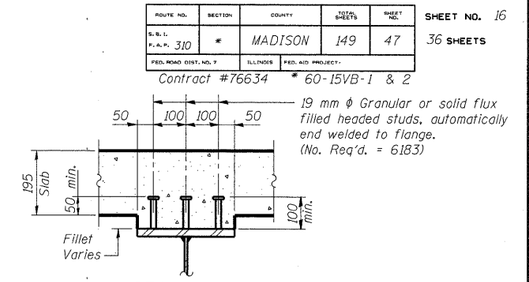
FRAMING PLAN



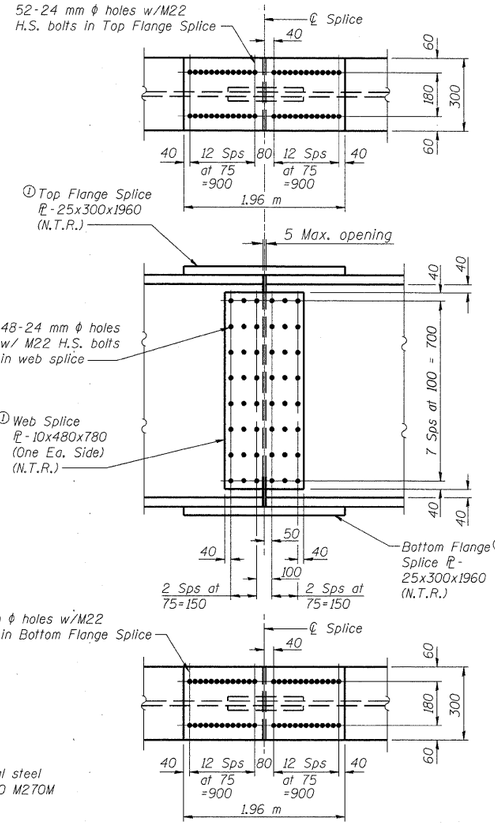
GIRDER ELEVATION

"NTR" denotes plates to which notch toughness requirements are applicable.

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/DGM
CHECKED	WLW



SECTION A-A



① Indicates structural steel conforming to AASHTO M270M Grade 345.

Note: Work this sheet with sheet #17 of 36.

FIELD SPLICE DETAIL

GIRDER DETAILS & FRAMING PLAN
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

p:\00files\000024\Railroad-Bridge\SN060-0310 Plans\060-0310girders.dgn

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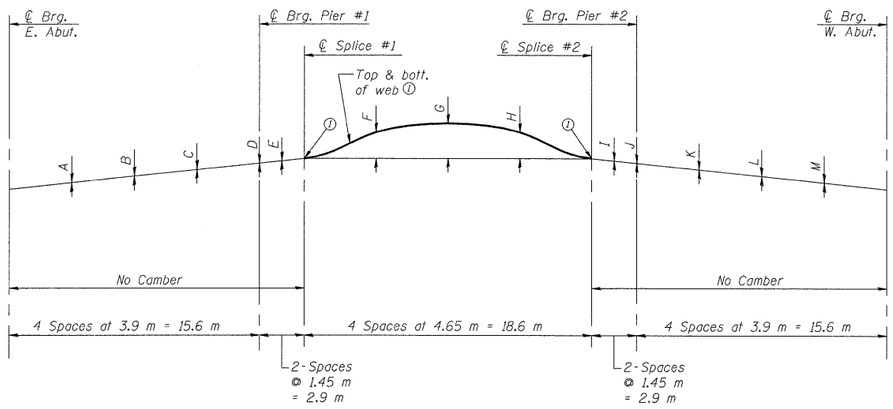
p:\20files\200024\dRail-road-Bridge\SN060-0310 Plans\060-0310girders.dgn



CAMBER DIAGRAM

① Theoretical elevation before dead load deflection

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	48
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 17
36 SHEETS

Contract #76634 * 60-15VB-1 & 2

TOP OF WEB ELEVATIONS

GIRDER	℄ Brg. E. Abut.	℄ Brg. Pier #1	Splice #1 *	Splice #2 *	℄ Brg. Pier #2	℄ Brg. W. Abut.
1	198.339	198.116	198.074	197.810	197.770	197.550
2	198.188	197.964	197.922	197.658	197.617	197.396
3	198.037	197.812	197.771	197.505	197.464	197.243
4	197.886	197.660	197.618	197.352	197.311	197.089
5	197.766	197.575	197.539	197.262	197.214	196.960
6	197.657	197.489	197.457	197.174	197.125	196.858
7	197.511	197.339	197.307	197.019	196.969	196.702
8	197.365	197.188	197.156	196.862	196.813	196.546
9	197.219	197.038	197.004	196.706	196.656	196.390

Elevations for fabrication use only.
* Top of web elevation before dead load deflection.

INTERIOR GIRDER REACTION TABLE

		E. & W. Abuts.	Piers 1 & 2
R℄	(kN)	111	490
RM_L	(kN)	191	248
Imp.	(kN)	53	64
R (Total)	(kN)	355	802

INTERIOR GIRDER MOMENT TABLE

		0.4 Sp. 1 & 3	Piers 1 & 2	0.5 Sp. 2
I_s	(10^6 mm^4)	4,202	4,202	4,202
I_c (n)	(10^6 mm^4)	10,422		10,422
I_c (3n)	(10^6 mm^4)	7,785		7,785
S_s	(10^3 mm^3)	9,134	9,134	9,134
S_c (n)	(10^3 mm^3)	12,549		12,549
S_c (3n)	(10^3 mm^3)	11,520		11,520
℄	(kN/m)	14.45	21.63	14.45
$M_{℄}$	(kN·m)	168	903	441
$s_{℄}$	(kN/m)	7.18		7.18
$M_{s℄}$	(kN·m)	102		266
M_L	(kN·m)	561	427	845
M_{imp}	(kN·m)	157	111	203
$\frac{5}{3}[M_L + M_{imp}]$	(kN·m)	1,197	897	1,747
M_a	(kN·m)	1,907	2,340	3,190
* M_u	(kN·m)	4,235		4,084
$f_{s℄}$ non-comp	(MPa)	18	99	48
$f_{s℄}$ (comp)	(MPa)	9		23
$f_s\frac{5}{3}(M_L + M_{imp})$	(MPa)	95	98	139
f_s (Overload)	(MPa)	122	197	210
** f_s (Total)	(MPa)		256	
VR	(kN)	277		274

* Compact Composite Section at 0.4 Span 1 & 3, 0.5 Span 2
** Non-compact, non-composite, partially braced section at Piers 1 & 2

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads.

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads.

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads.

℄: Un-factored non-composite dead load.

$M_{℄}$: Un-factored moment due to non-composite dead load.

$s_{℄}$: Un-factored long-term composite (superimposed) dead load.

$M_{s℄}$: Un-factored moment due to long-term composite (superimposed) dead load.

M_L: Un-factored live load moment.

M_{imp}: Un-factored moment due to impact.

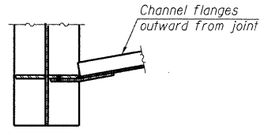
M_a: Factored design moment (kip-ft.).
$1.3\ [M_{℄} + M_{s℄} + \frac{5}{3}(M_L + M_{imp})]$

M_u: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.4.

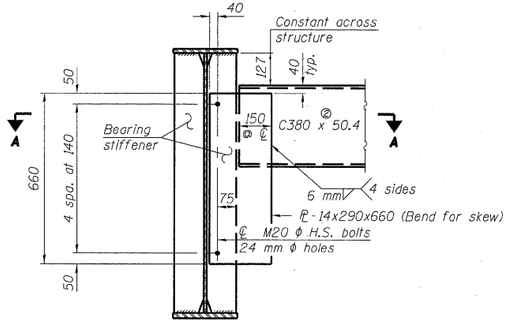
f_s (Overload): Sum of stresses as computed from the moments below.
$M_{℄} + M_{s℄} + \frac{5}{3}(M_L + M_{imp})$

f_s (Total): Sum of stresses as computed from the moments below on non-compact section.
$1.3\ [M_{℄} + M_{s℄} + \frac{5}{3}(M_L + M_{imp})]$

VR: Maximum M_L + impact horizontal shear range within the composite portion of the span for stud shear connector design.



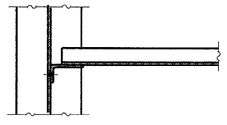
SECTION A-A



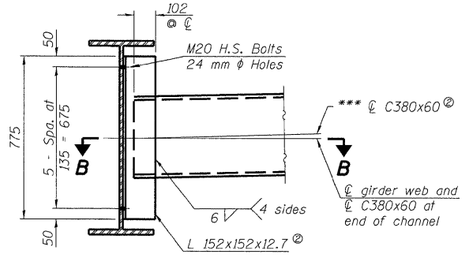
END DIAPHRAGM, D

(16 Required)

Note:
Two hardened washers required for each set of oversized holes.



SECTION B-B



INTERIOR DIAPHRAGM, DI

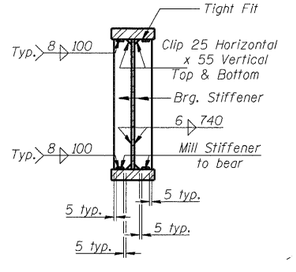
(72 Required)

Note:
Two hardened washers required for each set of oversized holes.

CAMBER DIAGRAM DIMENSIONS - mm

Girder No.	A	B	C	D	E	F	G	H	I	J	K	L	M
1	0	0	0	0	0	26	44	26	0	0	0	0	0
2	0	0	0	0	0	26	44	26	0	0	0	0	0
3	0	0	0	0	0	26	44	26	0	0	0	0	0
4	0	0	0	0	0	26	44	26	0	0	0	0	0
5	0	0	0	0	0	31	51	31	0	0	0	0	0
6	0	0	0	0	0	34	55	34	0	0	0	0	0
7	0	0	0	0	0	34	55	34	0	0	0	0	0
8	0	0	0	0	0	34	55	34	0	0	0	0	0
9	0	0	0	0	0	34	55	34	0	0	0	0	0

*** Alternate C380x74 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no extra cost to the Department.



SECTION THRU BEARING STIFFENER AT ABUTMENTS AND PIERS

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/DGM
CHECKED	WLW

② Indicates structural steel conforming to AASHTO M270M Grade 250.

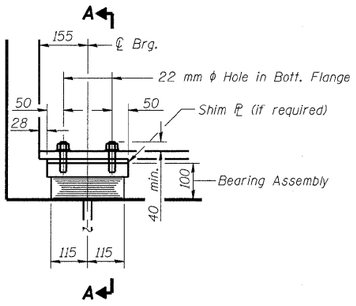
All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor bolts.

GIRDER DETAILS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

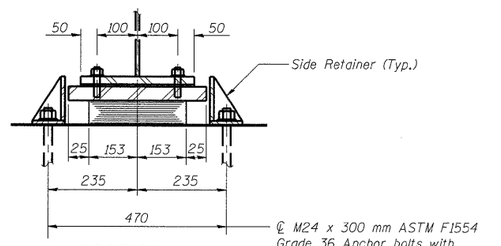
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. R. I. F. A. P. 310	*	MADISON	149	49
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 18
36 SHEETS

Contract #76634 * 60-15VB-1 & 2

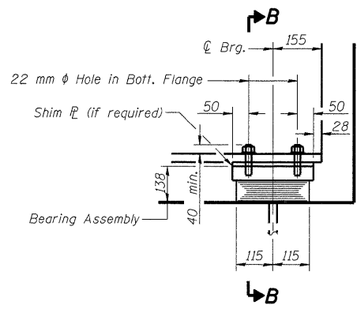


ELEVATION

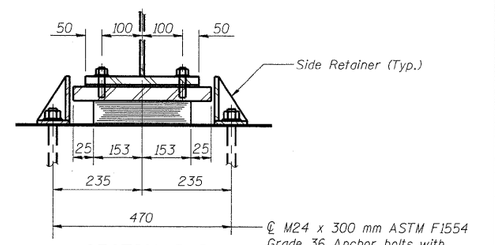


SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.- EAST ABUT.

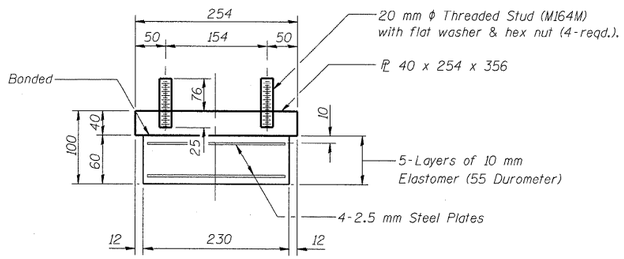


ELEVATION



SECTION B-B

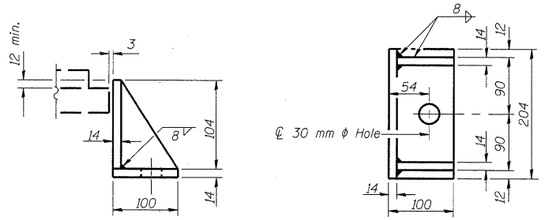
TYPE I ELASTOMERIC EXP. BRG.- WEST ABUT.



BEARING ASSEMBLY - EAST ABUT.

(9-Req'd)

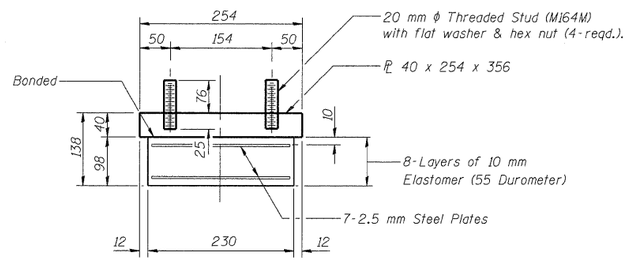
Note: Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER - EAST ABUT.

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

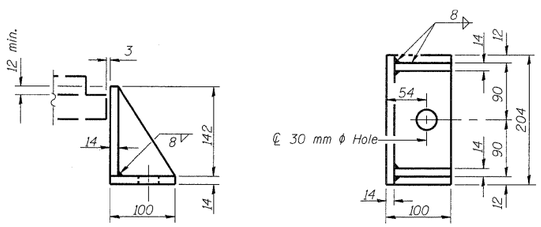
(18-Req'd)



BEARING ASSEMBLY - WEST ABUT.

(9-Req'd)

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



SIDE RETAINER - WEST ABUT.

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

(18-Req'd)

Notes:

See Sheet #19 of 36 for Bearings at Pier #1 & Pier #2.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554. Since there is no metric specification for ASTM F1554 the anchor bolt requirements are given in English units.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

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

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270M Grade 345.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	27
Anchor Bolts 24 mm ϕ	Each	36
Anchor Bolts 36 mm ϕ	Each	36

BEARING DETAILS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/DGM
CHECKED	WLW

I-2-E1 (M) 4-30-99

Klingner & Assoc., P.C.

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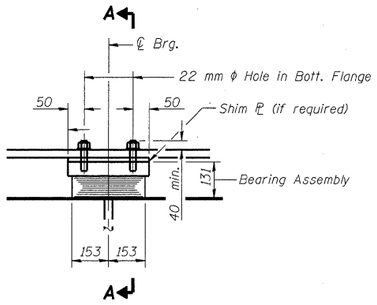
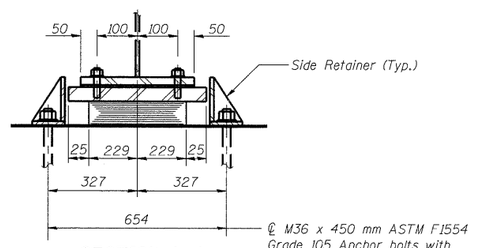
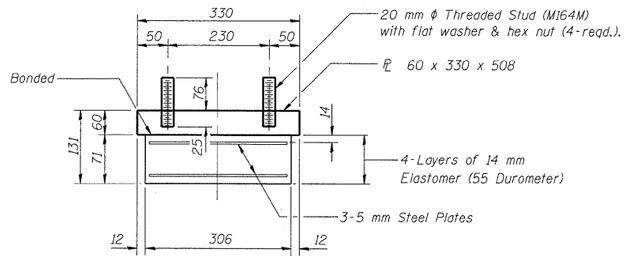


ELEVATION



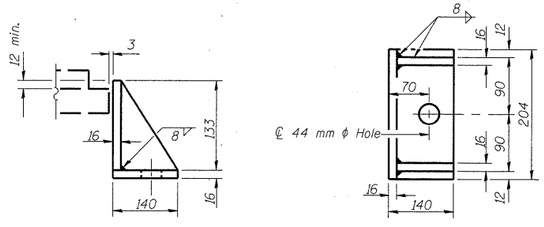
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG. - PIER #2

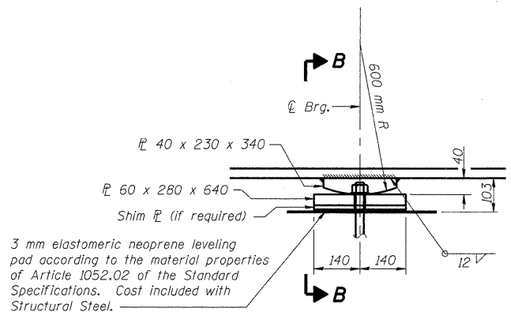


BEARING ASSEMBLY - PIER #2
(9-Req'd)

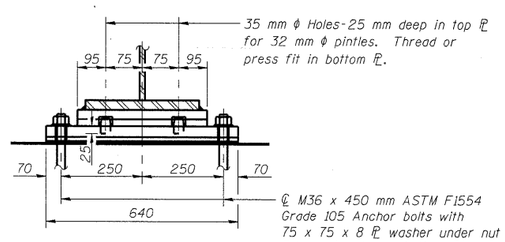
Note: Shim plates shall not be placed under Bearing Assembly.



SIDE RETAINER - PIER #2
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
(18-Req'd)

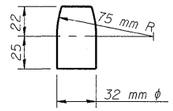


ELEVATION



SECTION B-B

FIXED BEARING - PIER #1
(9-Req'd)



PINTLE
(18-Req'd)

Notes:
See sheet #18 of 36 for Bill of Material
See sheet #18 of 36 for more notes.

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/DGM
CHECKED	WLW

I-2-E1 (M) 4-30-99

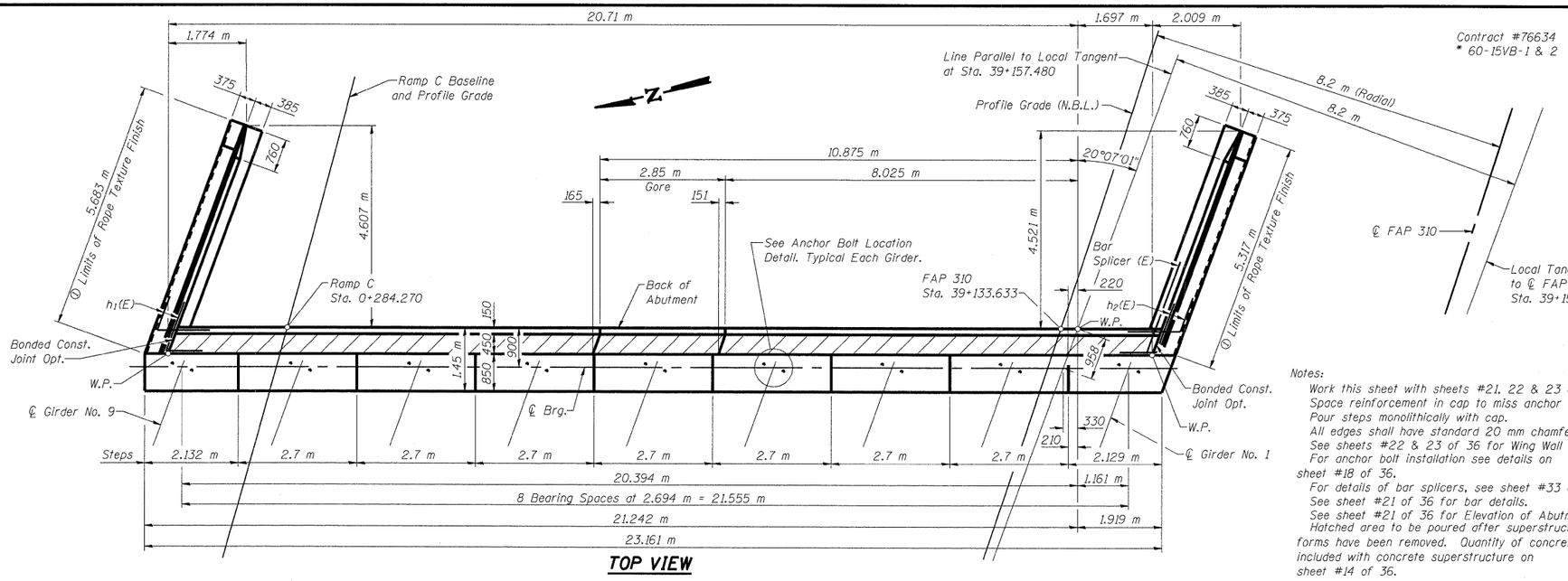
BEARING DETAILS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

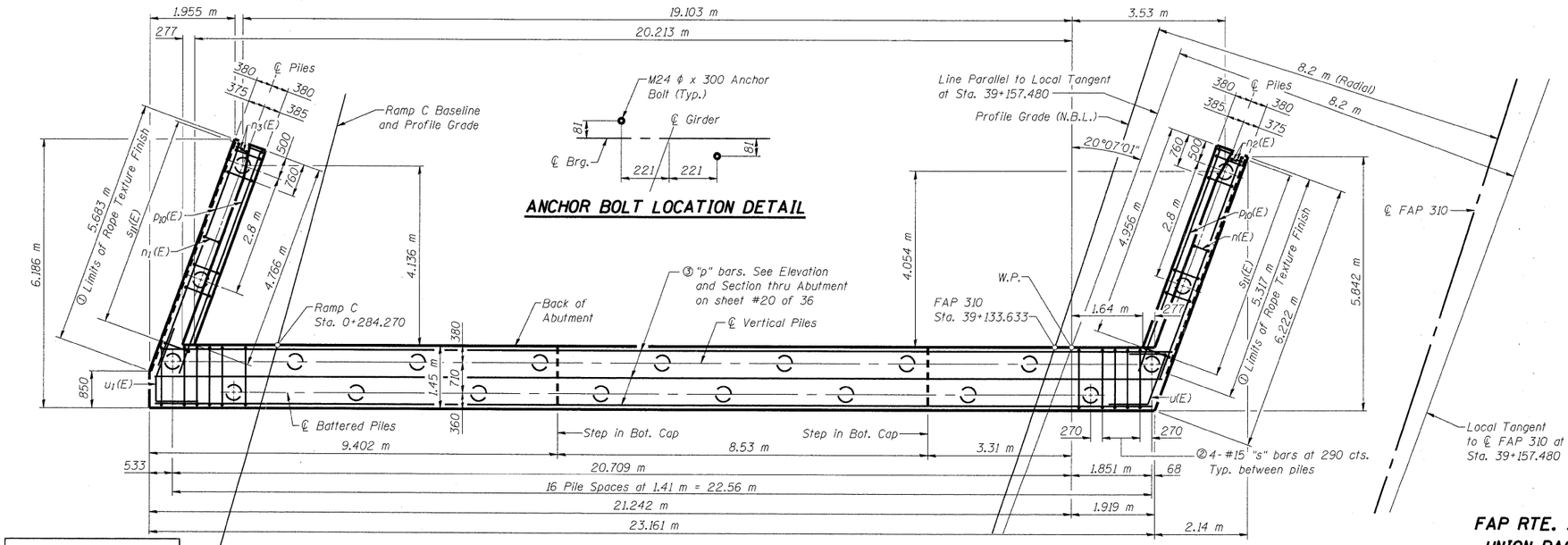
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	51
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 20
36 SHEETS

Contract #76634
* 60-15VB-1 & 2



TOP VIEW



ANCHOR BOLT LOCATION DETAIL

PLAN PILE-CAP

EAST ABUT. BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h(E)	14	#15	11.52	
h1(E)	10	#15	2.03	
h2(E)	10	#15	2.03	
h3(E)	12	#15	5.24	
h4(E)	8	#15	5.25	
h5(E)	11	#15	5.60	
h6(E)	7	#15	5.61	
h7(E)	8	#20	11.60	
n(E)	16	#20	4.38	
n1(E)	16	#20	3.58	
n2(E)	6	#20	2.20	
n3(E)	6	#20	1.80	
p(E)	3	#25	7.18	
p1(E)	3	#25	9.98	
p2(E)	2	#25	9.24	
p3(E)	1	#25	9.11	
p4(E)	12	#15	11.85	
p5(E)	1	#25	2.05	
p6(E)	1	#25	2.29	
p7(E)	1	#25	2.53	
p8(E)	21	#25	4.15	
p9(E)	3	#25	3.52	
p10(E)	12	#25	5.46	
s(E)	6	#15	5.78	
s1(E)	7	#15	5.48	
s2(E)	2	#15	5.18	
s3(E)	6	#15	5.78	
s4(E)	7	#15	5.46	
s5(E)	8	#15	5.22	
s6(E)	3	#15	5.02	
s7(E)	5	#15	5.86	
s8(E)	8	#15	5.56	
s9(E)	8	#15	5.26	
s10(E)	5	#15	4.98	
s11(E)	34	#15	2.90	
u(E)	5	#20	3.39	
u1(E)	5	#20	2.69	
v(E)	150	#15	1.70	
v1(E)	16	#20	2.11	
v2(E)	16	#20	2.06	
v3(E)	19	#20	2.06	
v4(E)	3	#20	2.07	
v5(E)	3	#20	2.02	
v6(E)	19	#20	2.01	
v7(E)	75	#15	1.10	
v8(E)	75	#15	0.68	
Concrete Structures			m³	71.5
Reinforcement Bars (Epoxy Coated)			kg	4,180
Bar Splicers			each	75
Structure Excavation			m³	155
Furnishing Metal Pile Shell 356mmX6.35mm			m	450.0
Driving Piles			m	450.0
Concrete Sealer			m²	74
Form Liner Textured Surface			m²	31
Test Pile Metal Shells			Each	1
Concrete Encasement			m³	6.8

Notes:
Work this sheet with sheets #21, 22 & 23 of 36.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
All edges shall have standard 20 mm chamfer.
See sheets #22 & 23 of 36 for Wing Wall Details.
For anchor bolt installation see details on sheet #18 of 36.
For details of bar splicers, see sheet #33 of 36.
See sheet #21 of 36 for bar details.
See sheet #21 of 36 for Elevation of Abutment.
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with concrete superstructure on sheet #14 of 36.

DESIGNED	ADL
CHECKED	WLW
DRAWN	RLW/ADL
CHECKED	WLW

PILE DATA

Type & Size: Metal Shell - 356 mm ϕ x 6.35 mm walls
Nominal Required Bearing: 1500 kN
Allowable Resistance Available: 500 kN
Est. Length: 22.5 m
No. Required: 20+1 Test Pile

① Patterned Rope Texture Concrete (See sheet #4 of 36 for details)
② "s" bars include s(E) thru s10(E). See Elevation on sheet #21 of 36.
③ "p" bars include p(E) thru p9(E).

EAST ABUTMENT
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

5/7/2009 10:29:54 AM
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	52
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 21
36 SHEETS

Contract #76634 * 60-15VB-1 & 2

5/7/2009 10:30:13 AM

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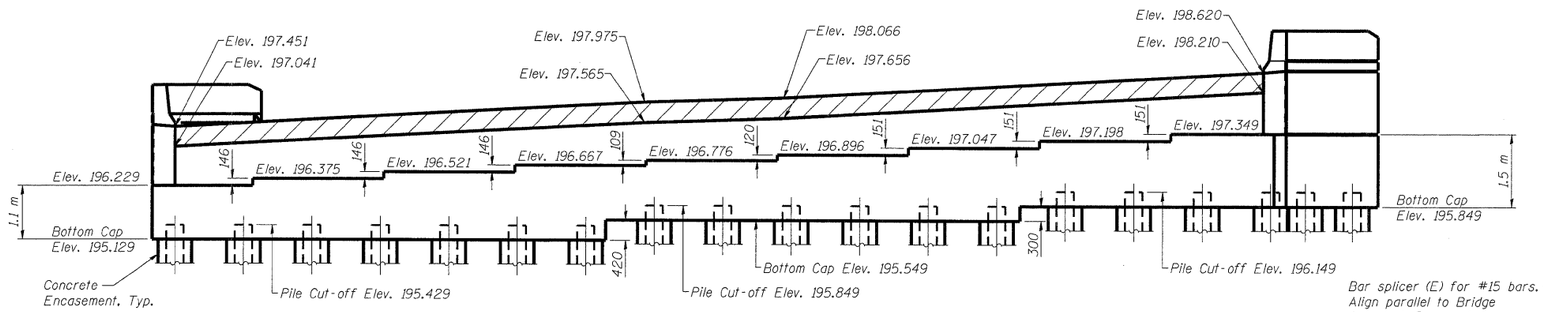
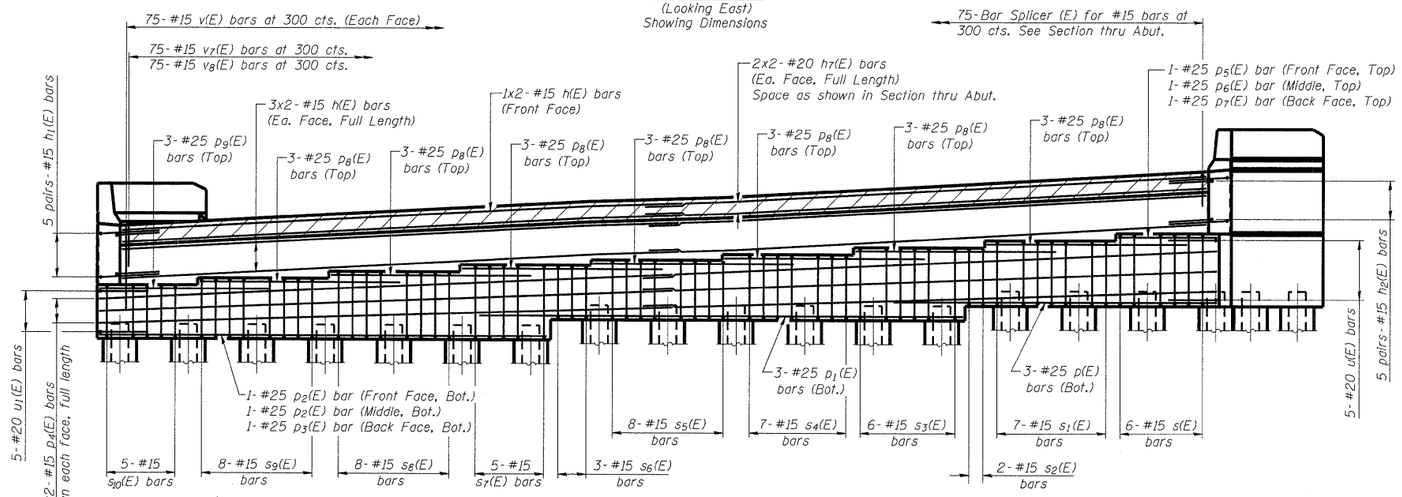
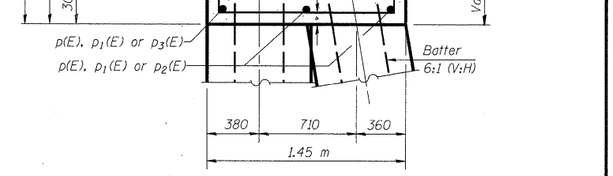


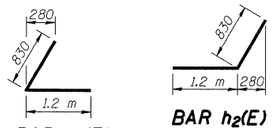
ELEVATION
(Looking East)
Showing Dimensions

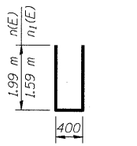


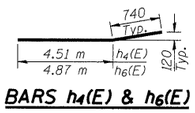
ELEVATION
(Looking East)
Showing Reinforcement



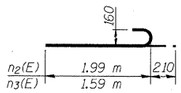
SEC. THRU ABUT.
(Dimensions at Rt. L's to Abutment)





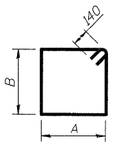


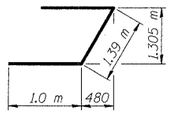
DESIGNED	ADL
CHECKED	WLW
DRAWN	RLW/ADL
CHECKED	WLW

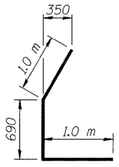


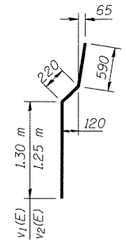
A & B DIMENSIONS

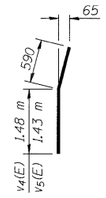
Bar	A	B
s(E)	1.35 m	1.4 m
s1(E)	1.35 m	1.25 m
s2(E)	1.35 m	1.1 m
s3(E)	1.35 m	1.4 m
s4(E)	1.35 m	1.24 m
s5(E)	1.35 m	1.12 m
s6(E)	1.35 m	1.02 m
s7(E)	1.35 m	1.44 m
s8(E)	1.35 m	1.29 m
s9(E)	1.35 m	1.14 m
s10(E)	1.35 m	1.0 m
s11(E)	650	660

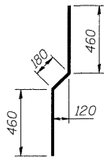












Notes:
Bars indicated thus 3 x 2-#15 etc. indicates 3 lines of bars with 2 lengths per line.

Work this sheet with sheets #20, 22 & 23 of 36.

For Concrete Encasement Details, See Sheet #32 of 36.

Min. Lap
#15 bars = 640
#20 bars = 790

EAST ABUTMENT DETAILS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

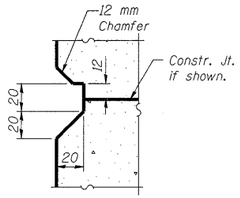
Klingner & Assoc., P.C.

10:30:24 AM

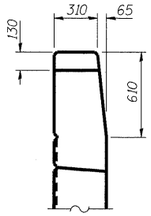
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
E. B. L. F. A. P. 310	*	MADISON	149	53
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT=	

SHEET NO. 22
36 SHEETS

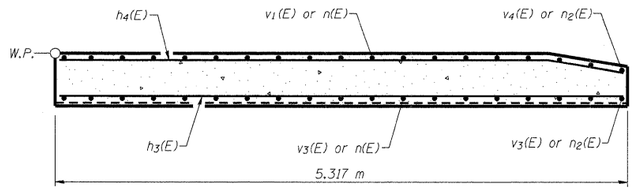
Contract #76634 * 60-15VB-1 & 2



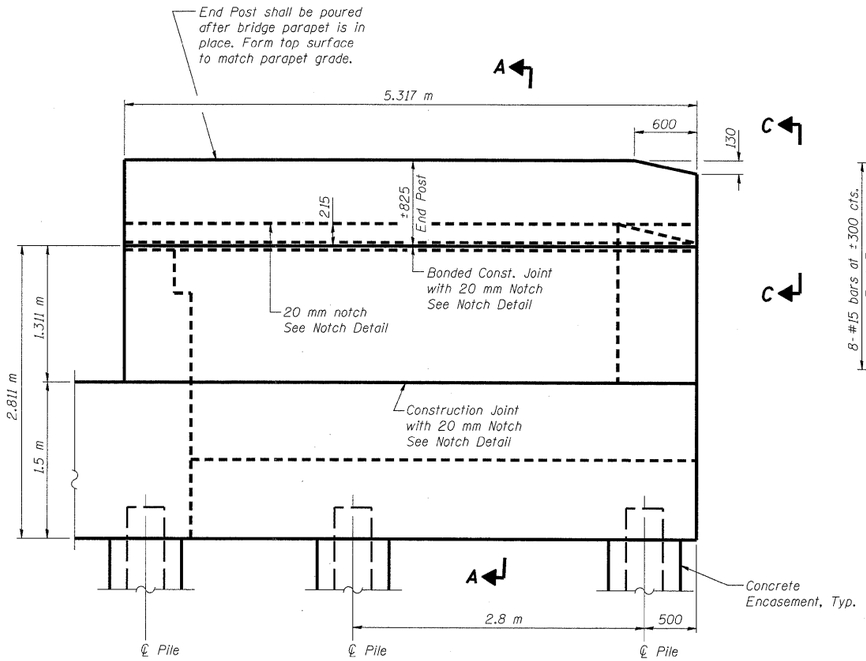
NOTCH DETAIL



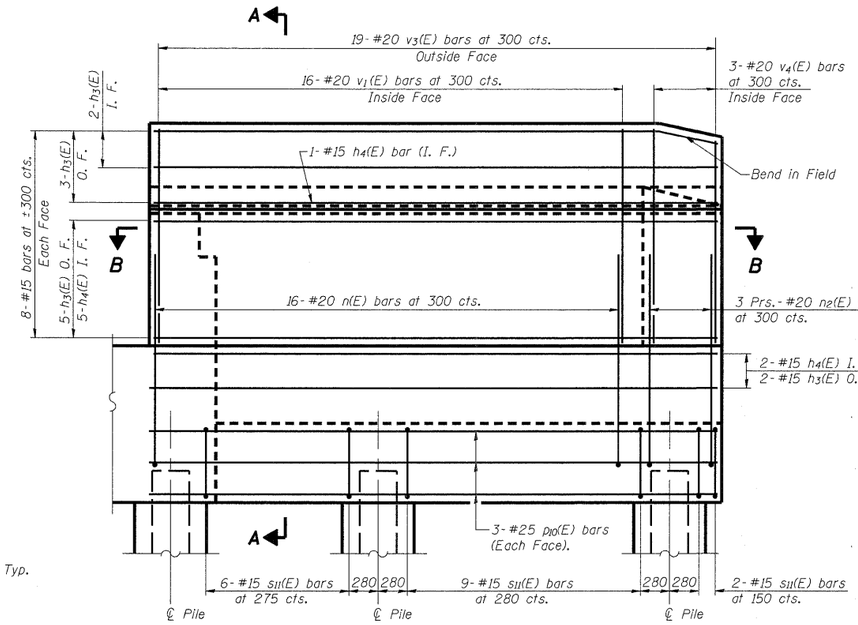
VIEW C-C



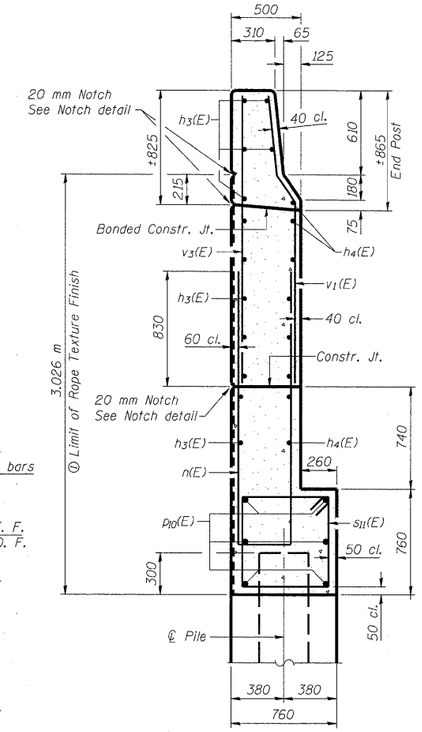
SEC. B-B



SOUTH WING WALL ELEVATION
(Looking North)
Showing Dimensions



SOUTH WING WALL ELEVATION
(Looking North)
Showing Reinforcement



SEC. A-A

① Patterned Rope Texture Concrete
(See Sheet #4 of 36 for details)

DESIGNED	ADL
CHECKED	WLW
DRAWN	RLW/ADL
CHECKED	WLW

Notes:
Work this sheet with sheets #20, 21 & 23 of 36.
Quantity of concrete in end post included with Concrete Superstructure on sheet #14 of 36.

EAST ABUTMENT DETAILS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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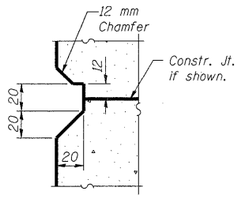
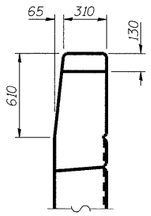
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	54
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT:	

SHEET NO. 23
36 SHEETS

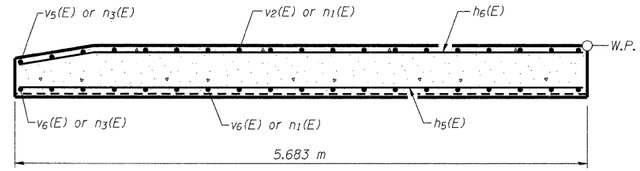
Contract #76634 * 60-15VB-1 & 2



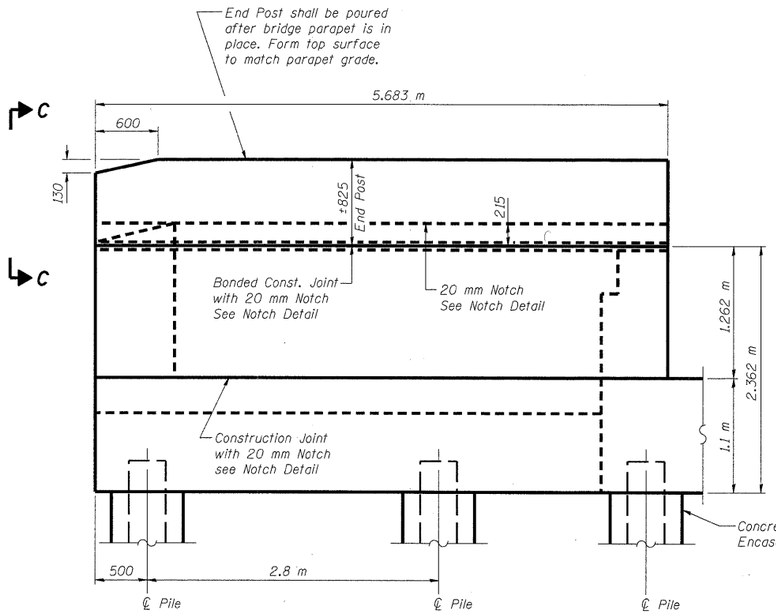
NOTCH DETAIL



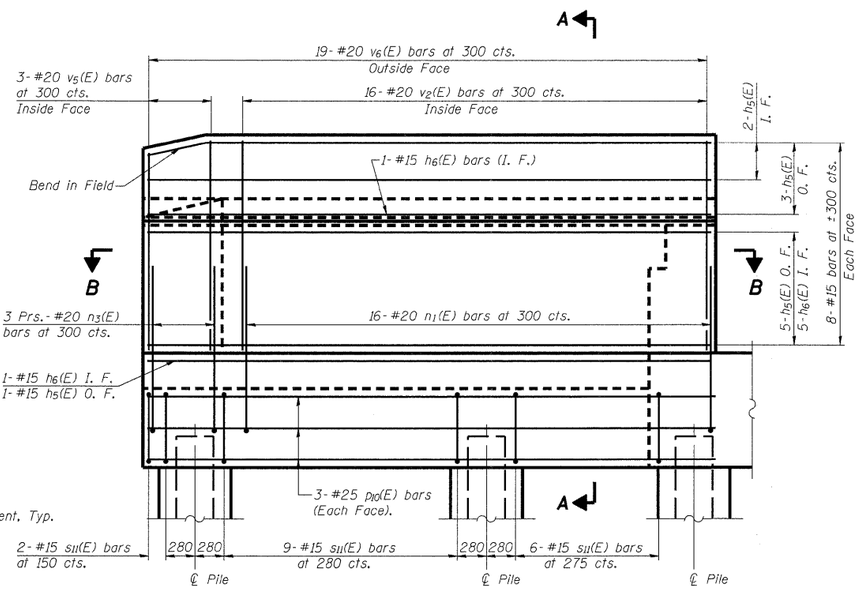
VIEW C-C



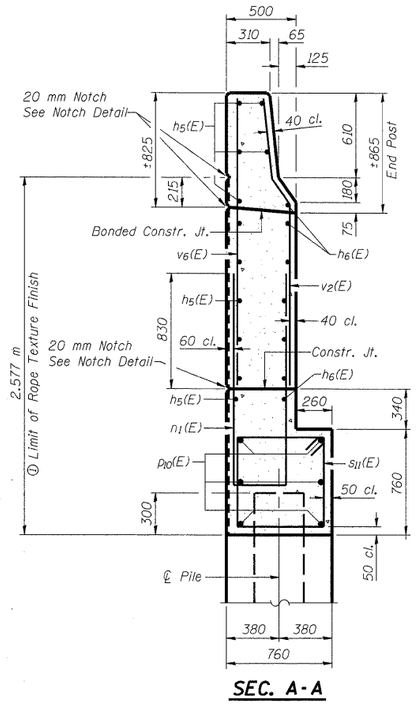
SEC. B-B



NORTH WING WALL ELEVATION
(Looking South)
Showing Dimensions



NORTH WING WALL ELEVATION
(Looking South)
Showing Reinforcement



SEC. A-A

① Patterned Rope Texture Concrete
(See Sheet #4 of 36 for details)

DESIGNED	ADL
CHECKED	WLW
DRAWN	RLW/ADL
CHECKED	WLW

Note:
Work this sheet with sheets #20, 21 & 22 of 36.
Quantity of concrete in end post included with Concrete Superstructure on sheet #14 of 36.

EAST ABUTMENT DETAILS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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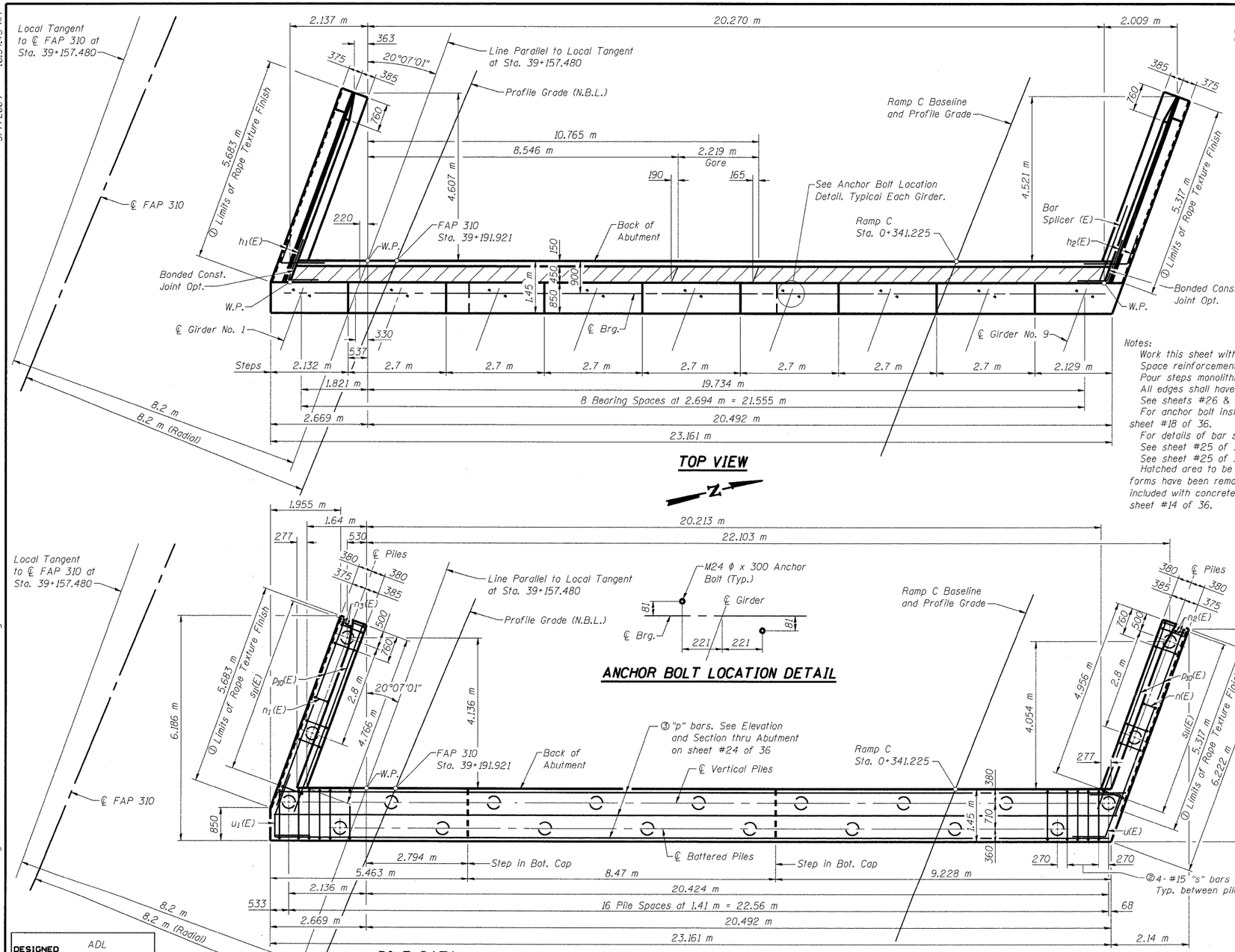
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	55
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT.	

SHEET NO. 24
36 SHEETS

Contract #76634
* 60-15VB-1 & 2



TOP VIEW

PLAN PILE-CAP

PILE DATA

Type & Size: Metal Shell - 356 mm ϕ x 6.35 mm walls
Nominal Required Bearing: 1500 kN
Allowable Resistance Available: 500 kN
Est. Length: 22.0 m
No. Required: 21

① Patterned Rope Texture Concrete (See sheet #4 of 36 for details).
② "s" bars include $s_{7}(E)$ thru $s_{10}(E)$ and $s_{12}(E)$ thru $s_{17}(E)$ See Elevation sheet #25 of 36.
③ "p" bars include $p_1(E)$, $p_4(E)$, $p_8(E)$, and $p_{11}(E)$ thru $p_{17}(E)$.

Notes:
Work this sheet with sheets #25, 26 & 27 of 36.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
All edges shall have standard 20 mm chamfer.
See sheets #26 & 27 of 36 for Wing Wall Details.
For anchor bolt installation see details on sheet #18 of 36.
For details of bar splices, see sheet #33 of 36.
See sheet #25 of 36 for bar details.
See sheet #25 of 36 for Elevation of Abutment.
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with concrete superstructure on sheet #14 of 36.

WEST ABUTMENT BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h(E)	14	#15	11.52	
$h_1(E)$	10	#15	2.03	
$h_2(E)$	10	#15	2.03	
$h_3(E)$	11	#15	5.24	
$h_4(E)$	7	#15	5.25	
$h_5(E)$	12	#15	5.60	
$h_6(E)$	8	#15	5.61	
$h_7(E)$	8	#20	11.60	
$n_1(E)$	16	#20	3.58	
$n_3(E)$	6	#20	1.80	
$n_7(E)$	16	#20	4.48	
$n_8(E)$	6	#20	2.25	
$p_1(E)$	3	#25	9.98	
$p_4(E)$	12	#15	11.85	
$p_8(E)$	21	#25	4.15	
$p_{10}(E)$	12	#25	5.46	
$p_{11}(E)$	3	#15	6.85	
$p_{12}(E)$	1	#25	9.14	
$p_{13}(E)$	1	#25	9.38	
$p_{14}(E)$	1	#25	9.61	
$p_{15}(E)$	2	#25	5.30	
$p_{16}(E)$	1	#25	5.15	
$p_{17}(E)$	3	#25	4.10	
$s_7(E)$	6	#15	5.86	
$s_8(E)$	16	#15	5.56	
$s_9(E)$	2	#15	5.26	
$s_{10}(E)$	6	#15	4.98	
$s_{11}(E)$	34	#15	2.90	
$s_{12}(E)$	5	#15	5.88	
$s_{13}(E)$	7	#15	5.30	
$s_{14}(E)$	3	#15	5.08	
$s_{15}(E)$	5	#15	5.90	
$s_{16}(E)$	7	#15	5.60	
$s_{17}(E)$	8	#15	5.28	
u(E)	5	#20	3.39	
$u_1(E)$	5	#20	2.69	
v(E)	150	#15	1.70	
$v_7(E)$	75	#15	1.10	
$v_8(E)$	75	#15	0.68	
$v_9(E)$	16	#20	2.14	
$v_{10}(E)$	16	#20	2.09	
$v_{11}(E)$	19	#20	2.09	
$v_{12}(E)$	3	#20	2.10	
$v_{13}(E)$	3	#20	2.05	
$v_{14}(E)$	19	#20	2.04	
Concrete Structures		m^3	72.9	
Reinforcement Bars (Epoxy Coated)		kg	4,190	
Bar Splicers		each	75	
Structure Excavation		m^3	158	
Furnishing Metal Pile Shell 356mmX6.35mm		m	462.0	
Driving Piles		m	462.0	
Concrete Sealer		m^2	75	
Form Liner Textured Surface		m^2	31	
Concrete Encasement		m^3	6.8	

DESIGNED	ADL
CHECKED	WLW
DRAWN	RLW/ADL
CHECKED	WLW

WEST ABUTMENT
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

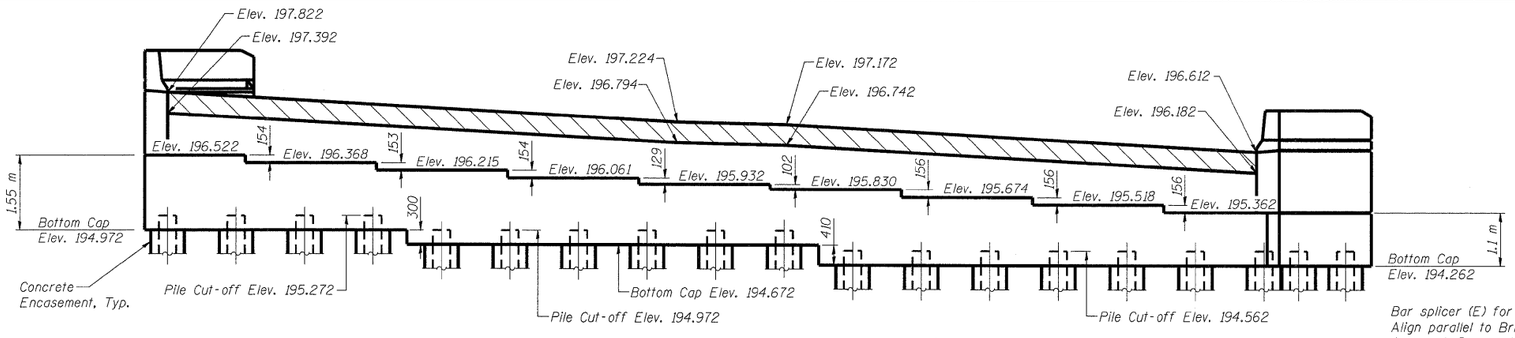
Klingner & Assoc., P.C.

p:\00files\000024\rdRail-road-Bridge\SN060-0310 Plans\060-0310West Abutment.dgn
5/7/2009 10:39:43 AM

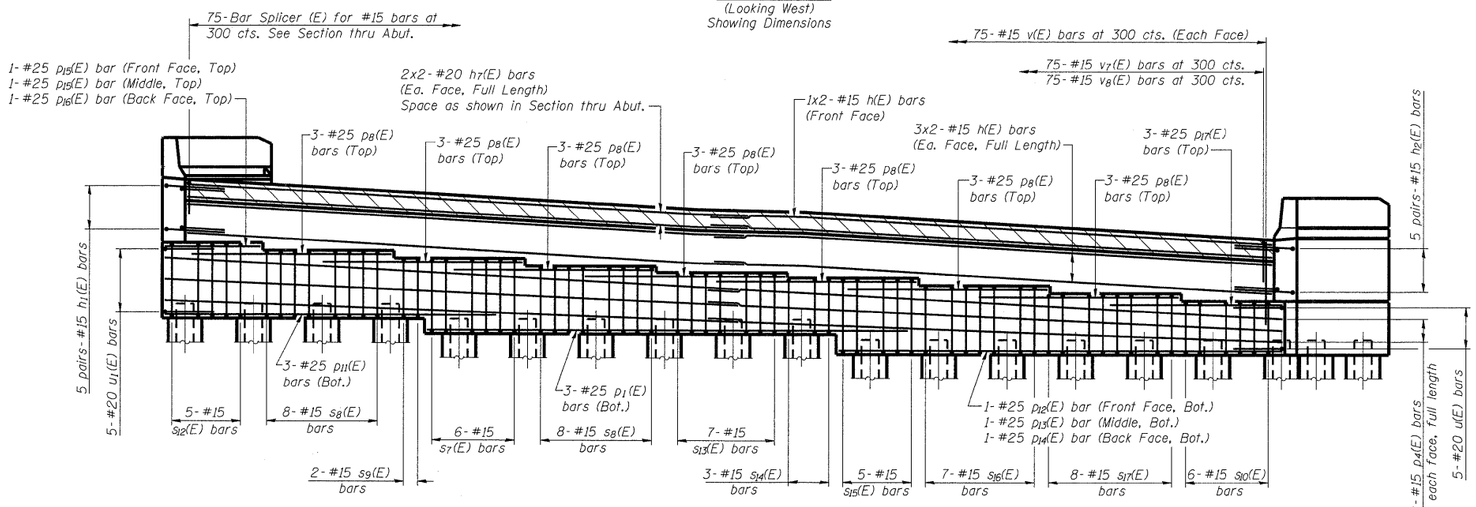
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.P. 310	*	MADISON	149	56
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 25
36 SHEETS

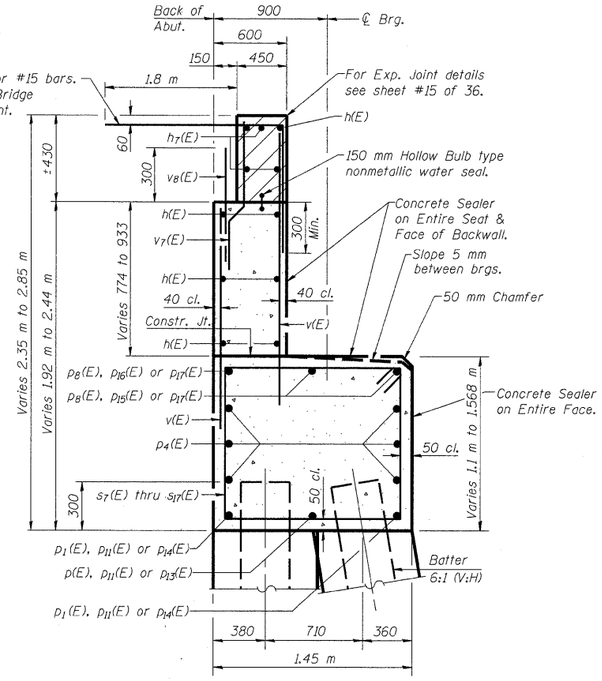
Contract #76634 * 60-15VB-1 & 2



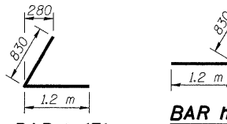
ELEVATION
(Looking West)
Showing Dimensions



ELEVATION
(Looking West)
Showing Reinforcement

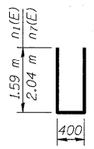


SEC. THRU ABUT.
(Dimensions at Rt. L's to Abutment)

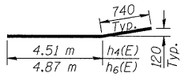


BAR $h_1(E)$

BAR $h_2(E)$

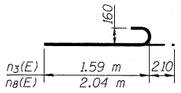


BAR $n_1(E)$ & $n_7(E)$



BARS $h_4(E)$ & $h_6(E)$

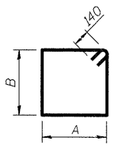
DESIGNED	ADL
CHECKED	WLW
DRAWN	RLW/ADL
CHECKED	WLW



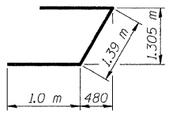
BAR $n_3(E)$ & $n_8(E)$

A & B DIMENSIONS

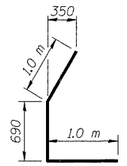
Bar	A	B
$s_7(E)$	1.35 m	1.44 m
$s_8(E)$	1.35 m	1.29 m
$s_9(E)$	1.35 m	1.14 m
$s_{10}(E)$	1.35 m	1.0 m
$s_{11}(E)$	0.65 m	0.66 m
$s_{12}(E)$	1.35 m	1.45 m
$s_{13}(E)$	1.35 m	1.16 m
$s_{14}(E)$	1.35 m	1.05 m
$s_{15}(E)$	1.35 m	1.46 m
$s_{16}(E)$	1.35 m	1.31 m
$s_{17}(E)$	1.35 m	1.15 m



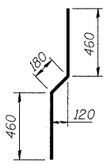
BARS $s_7(E)$ thru $s_{17}(E)$



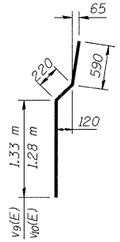
BAR u(E)



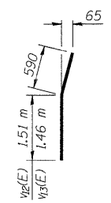
BAR $u_1(E)$



BAR $v_7(E)$



BAR $v_9(E)$ & $v_{10}(E)$



BAR $v_{12}(E)$ & $v_{13}(E)$

Notes:
Bars indicated thus 3 x 2-#15 etc. indicates 3 lines of bars with 2 lengths per line.

Work this sheet with sheets #24, 26 & 27 of 36.

For Concrete Encasement Details, See Sheet #32 of 36.

Min. Lap
#15 bars = 640
#20 bars = 790

WEST ABUTMENT DETAILS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

5/7/2009 10:40:01 AM
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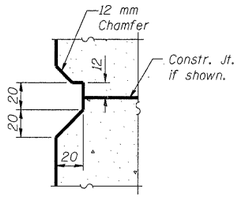
10:40:11 AM

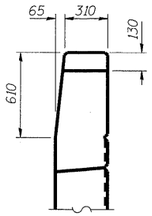
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	57
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 26
36 SHEETS

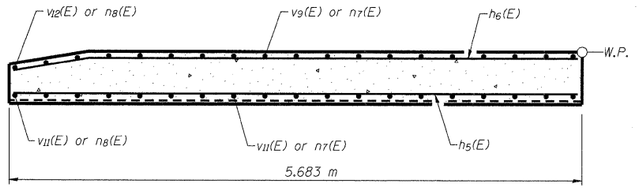
Contract #76634 * 60-15VB-1 & 2



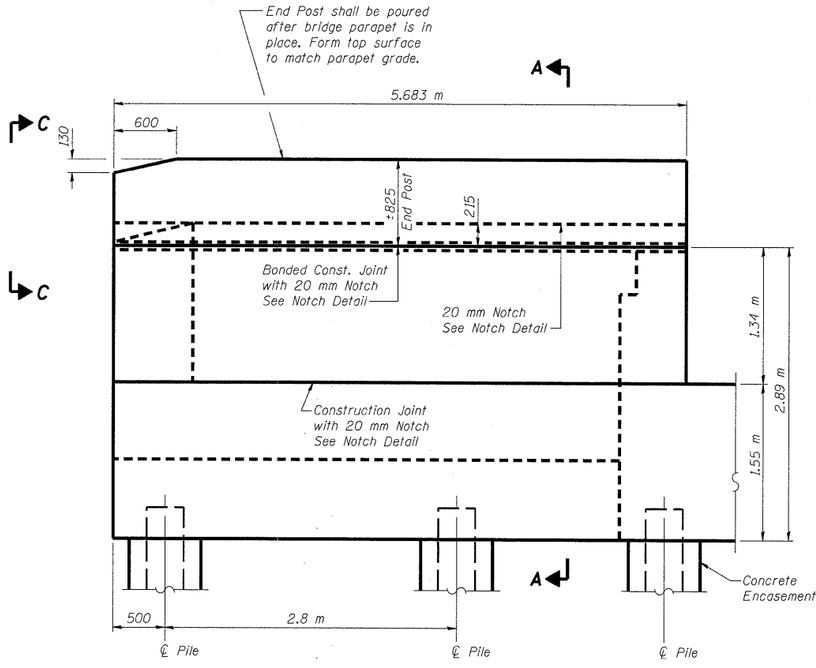
NOTCH DETAIL



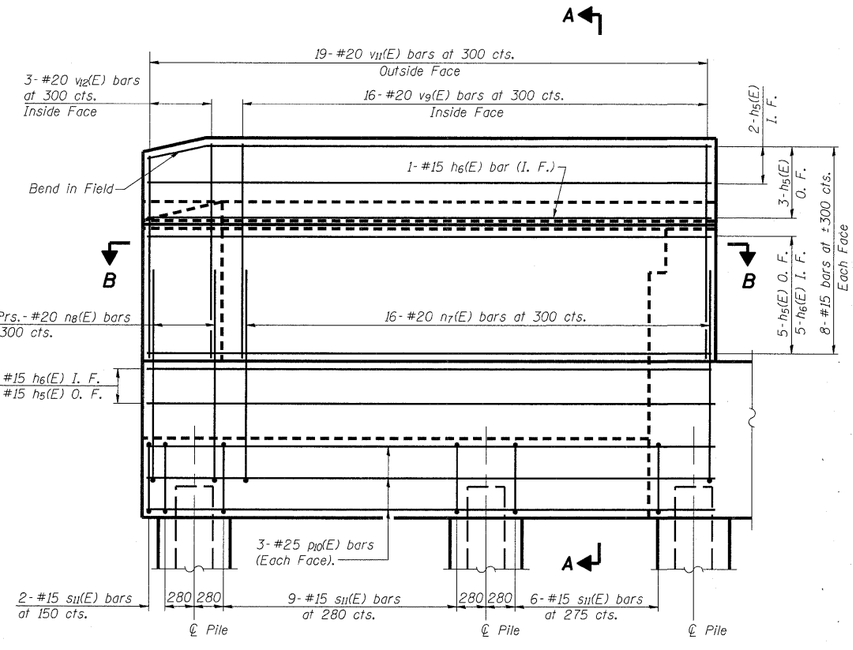
VIEW C-C



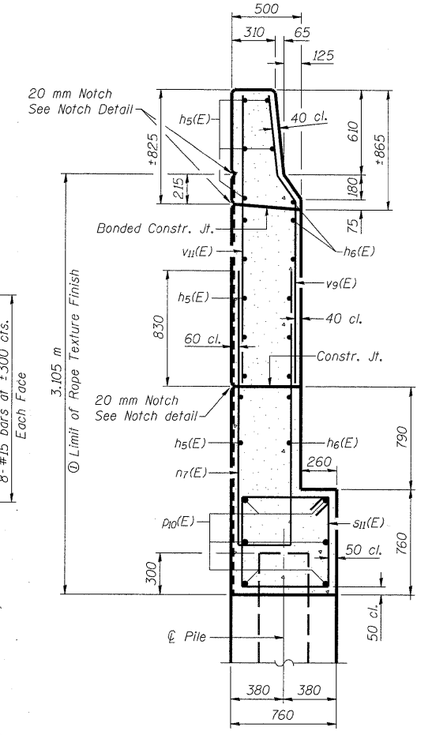
SEC. B-B



SOUTH WING WALL ELEVATION
(Looking North)
Showing Dimensions



SOUTH WING WALL ELEVATION
(Looking North)
Showing Reinforcement



SEC. A-A

① Patterned Rope Texture Concrete
(See Sheet #4 of 36 for details)

DESIGNED	ADL
CHECKED	WLW
DRAWN	RLW/ADL
CHECKED	WLW

Note:
Work this sheet with sheets #24, 25 & 27 of 36.
Quantity of concrete in end post included with Concrete Superstructure on sheet #14 of 36.

WEST ABUTMENT DETAILS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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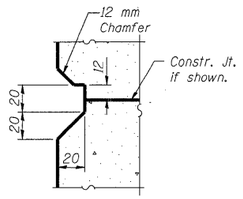
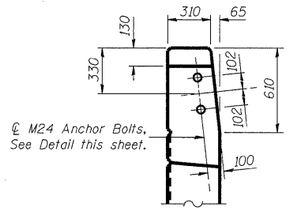
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
E. B. I. F. A. P. 310	*	MADISON	149	58
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 27
36 SHEETS

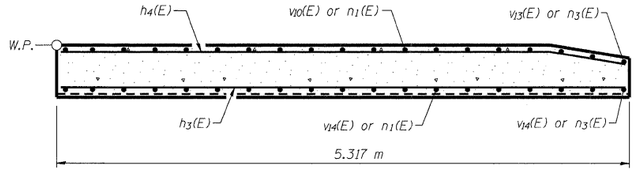
Contract #76634 * 60-15VB-1 & 2



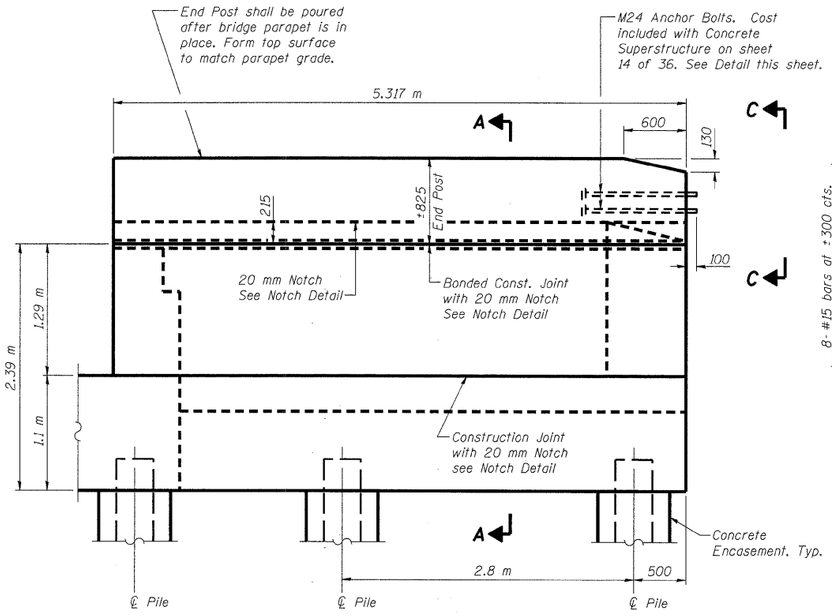
NOTCH DETAIL



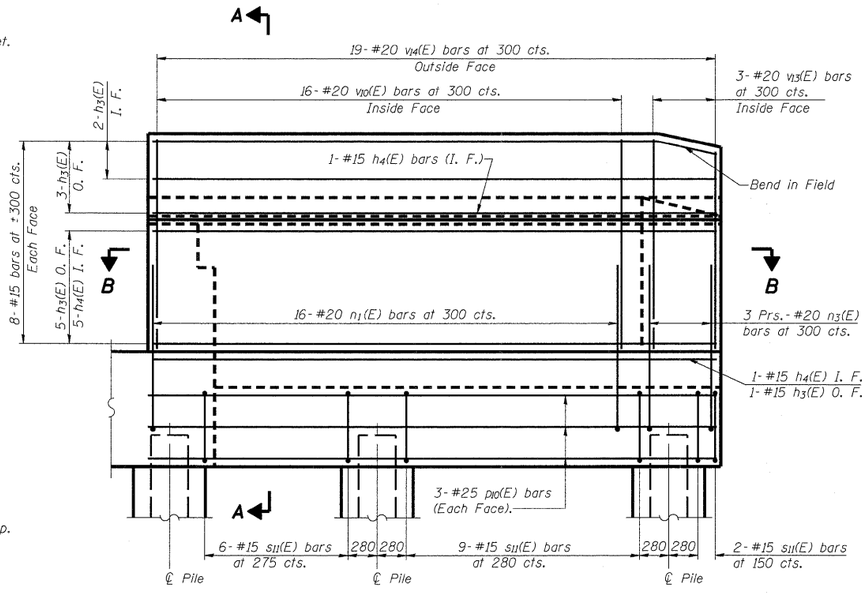
VIEW C-C



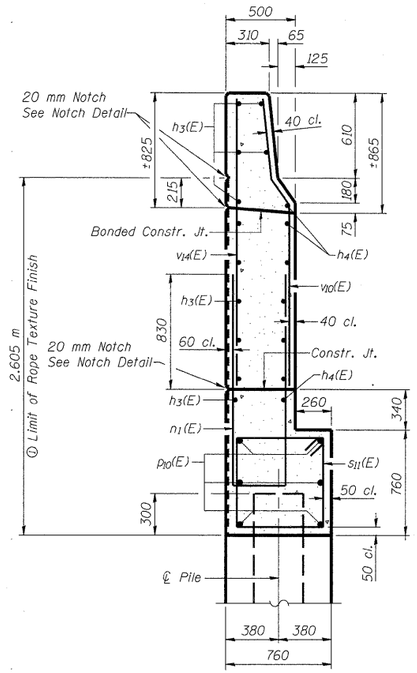
SEC. B-B



NORTH WING WALL ELEVATION
(Looking South)
Showing Dimensions

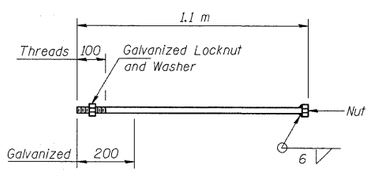


NORTH WING WALL ELEVATION
(Looking South)
Showing Reinforcement



SEC. A-A

① Patterned Rope Texture Concrete
(See Sheet #4 of 36 for details)



M24 ANCHOR BOLT

DESIGNED	ADL
CHECKED	WLW
DRAWN	RLW/ADL
CHECKED	WLW

Note:
Work this sheet with sheets #24, 25 & 26 of 36.
Quantity of concrete in end post included with Concrete Superstructure on sheet #14 of 36.

WEST ABUTMENT DETAILS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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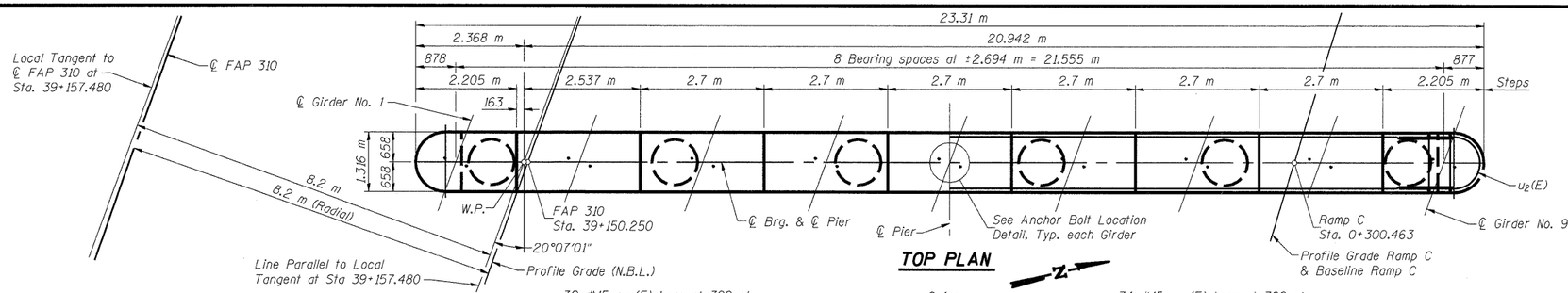
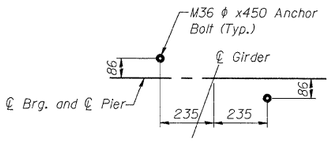
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	59
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT.		

SHEET NO. 28
36 SHEETS

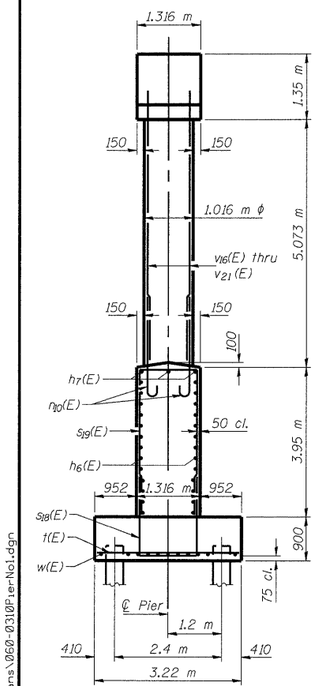
Contract #76634 * 60-15VB-1 & 2



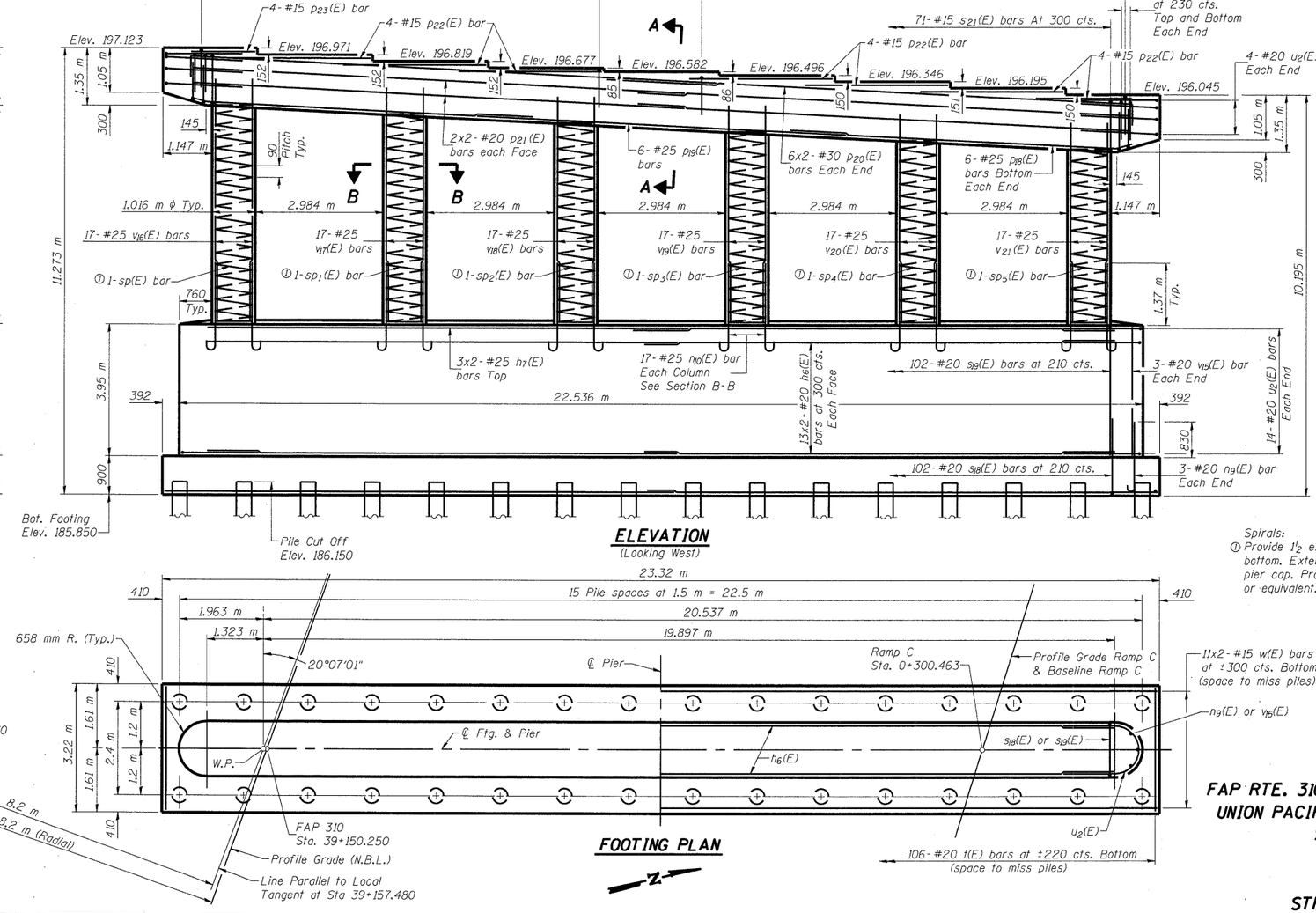
TOP PLAN



ANCHOR BOLT LOCATION DETAIL



END VIEW



ELEVATION
(Looking West)

Notes:
Work this sheet with sheet #29 of 36.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
All edges shall have standard 20 mm chamfer except as noted.
Minimum Spiral lap = 800 mm.
Spiral Laps not included in Bill of Materials. Cost of Spiral Laps and #15 spacers shall be included in cost of "Reinforcement Bars, Epoxy Coated".
See sheet #29 of 36 for bar details.
See sheet #29 of 36 for Sections A-A.
See sheet #29 of 36 for Sections B-B.
Pier protection crash wall design complies with the requirements of AREMA Chapter 8, Part 2, Section 2.1.5.1.

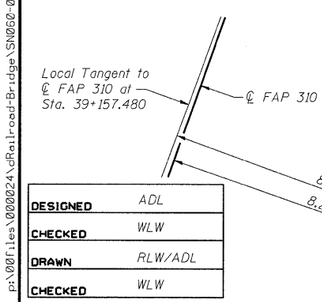
Min. Lap
#15- 890
#20- 1.11 m
#25- 1.85 m
#30- 2.59 m

PILE DATA

Type & Size: Metal Shell - 356 mm ϕ x 6.35 mm walls
Nominal Required Bearing: 1500 kN
Allowable Resistance Available: 500 kN
Est. Length: 16.0 m
No. Required: 32

Spirals:
① Provide 1½ extra turns top and bottom. Extend spiral 50 mm into pier cap. Provide 4- #15 spacers or equivalent.

FOOTING PLAN



DESIGNED	ADL
CHECKED	WLW
DRAWN	RLW/ADL
CHECKED	WLW

PIER #1
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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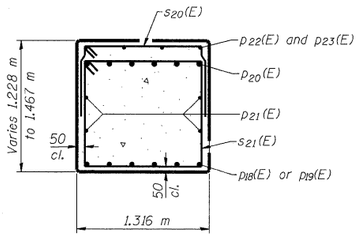
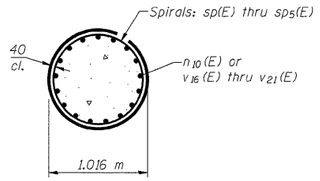
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	60
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT:	

SHEET NO. 29
36 SHEETS

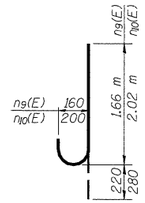
Contract #76634 * 60-15VB-1 & 2



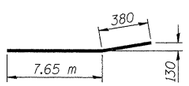
SECTION A-A



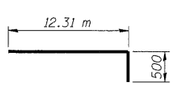
SECTION B-B



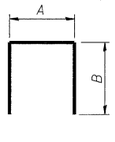
BAR n9(E) & n10(E)



BAR p18(E)



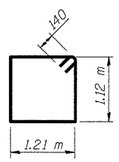
BAR p20(E)



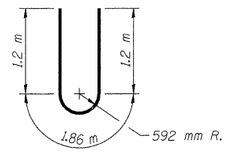
BARS s18(E), s19(E), s20(E)

A & B DIMENSIONS

Bar	A	B
s18(E)	1.21 m	1.73 m
s19(E)	1.21 m	3.870 m
s20(E)	1.21 m	870



BARS s21(E)



BAR u2(E)

PIER #1 BILL OF MATERIAL

	Bar	No.	Size	Length (m)	Shape
	h6(E)	52	#20	11.18	
	h7(E)	6	#25	11.55	
	n9(E)	6	#20	1.88	
	n10(E)	102	#25	2.30	
	p18(E)	12	#25	8.03	
	p19(E)	6	#25	9.80	
	p20(E)	12	#30	12.81	
	p21(E)	8	#20	11.57	
	p22(E)	28	#15	3.40	
	p23(E)	4	#15	1.49	
	s18(E)	102	#20	4.67	
	s19(E)	102	#20	8.95	
	s20(E)	74	#15	2.95	
	s21(E)	71	#15	4.94	
*	sp(E)	1	#15	5.12	
*	sp1(E)	1	#15	4.91	
*	sp2(E)	1	#15	4.71	
*	sp3(E)	1	#15	4.51	
*	sp4(E)	1	#15	4.31	
*	sp5(E)	1	#15	4.10	
	t(E)	106	#20	3.12	
	u2(E)	36	#20	4.26	
	v15(E)	6	#20	3.87	
	v16(E)	17	#25	5.80	
	v17(E)	17	#25	5.60	
	v18(E)	17	#25	5.40	
	v19(E)	17	#25	5.20	
	v20(E)	17	#25	5.00	
	v21(E)	17	#25	4.80	
	w(E)	22	#15	12.06	
	Concrete Structures		m³	247.1	
	Reinforcement Bars (Epoxy Coated)		kg	13,830	
	Structure Excavation		m³	365	
	Furnishing Metal Pile Shell 356mmX6.35mm		m	512.0	
	Driving Piles		m	512.0	

*Length is height of spiral

DESIGNED	ADL
CHECKED	WLW
DRAWN	RLW/ADL
CHECKED	WLW

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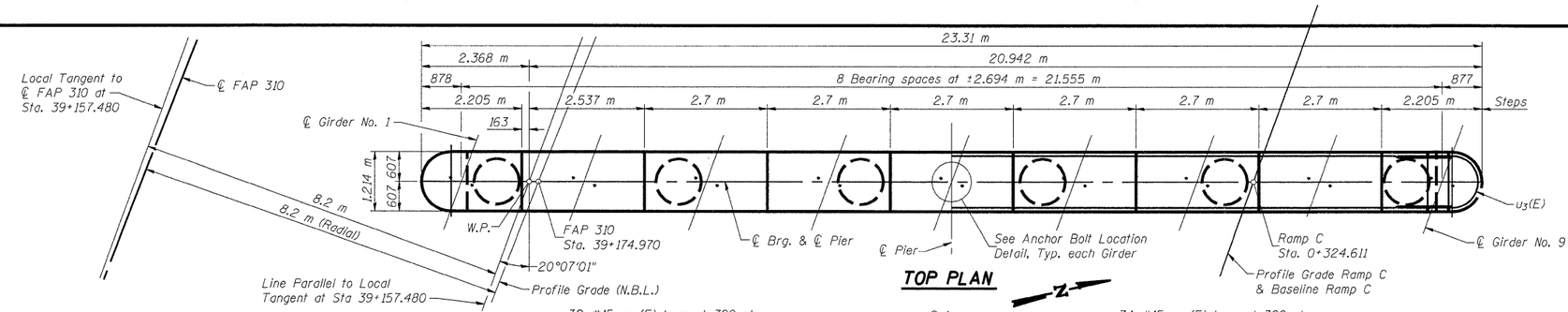
PIER #1 DETAILS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

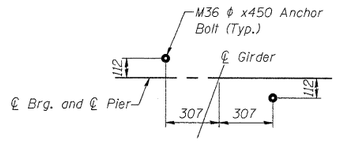
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U. S. R. I. F. A. P. 310	*	MADISON	149	61
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 30
36 SHEETS

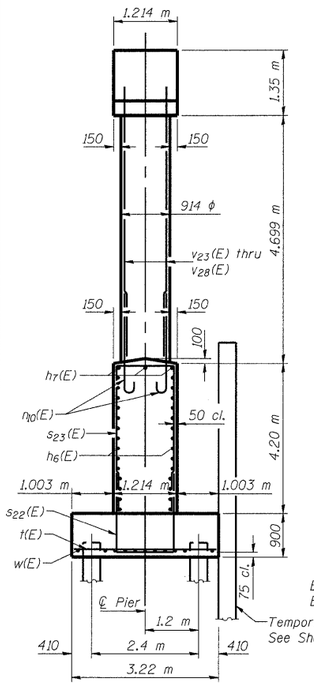
Contract #76634 * 60-15VB-1 & 2



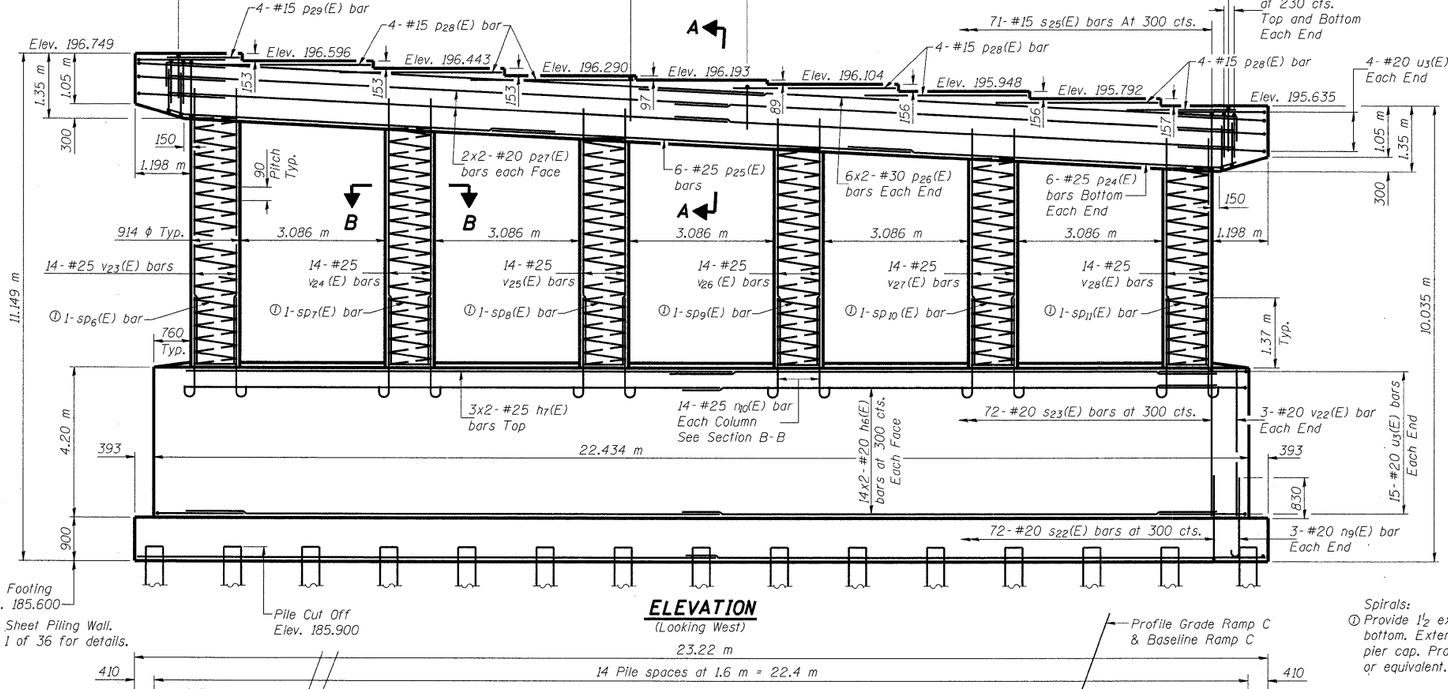
TOP PLAN



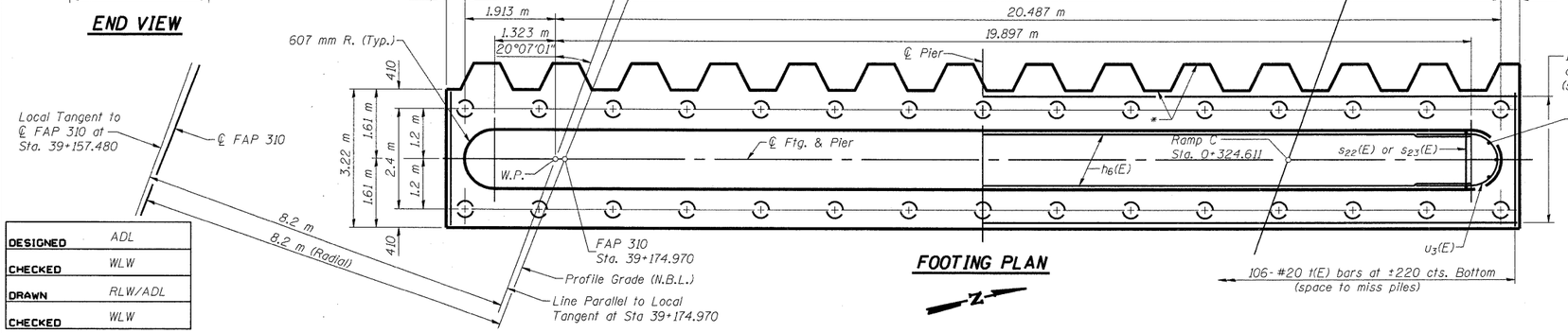
ANCHOR BOLT LOCATION DETAIL



END VIEW



ELEVATION
(Looking West)



FOOTING PLAN

DESIGNED	ADL
CHECKED	WLW
DRAWN	RLW/ADL
CHECKED	WLW

Notes:
- Work this sheet with sheet #31 of 36.
- Space reinforcement in cap to miss anchor bolts.
- Pour steps monolithically with cap.
- All edges shall have standard 20 mm chamfer except as noted.
- Mimimum Spiral lap = 800 mm.
- Spiral Laps not included in Bill of Materials. Cost of Spiral Laps and #15 spacers shall be included in cost of "Reinforcement Bars, Epoxy Coated".
- See sheet #31 of 36 for bar details.
- See sheet #31 of 36 for Sections A-A.
- See sheet #31 of 36 for Sections B-B.
- Pier protection crash wall design complies with the requirements of AREMA Chapter 8, Part 2, Section 2.1.5.1.

Min. Lap
#15- 890
#20- 1.11 m
#25- 1.85 m
#30- 2.59 m

PILE DATA

Type & Size: Metal Shell - 356 mm ϕ x 6.35 mm walls
Nominal Required Bearing: 1500 kN
Allowable Resistance Available: 500 kN
Est. Length: 13.0 m
No. Required: 29 + 1 Test Pile

Spirals:
① Provide 1½ extra turns top and bottom. Extend spiral 50 mm into pier cap. Provide 4- #15 spacers or equivalent.

*½" P.J.F. between Temporary Sheet Piling and footings. After Temporary Sheet Piling is removed dispose of ½" P.J.F. Cost included with Concrete Structures.

PIER #2
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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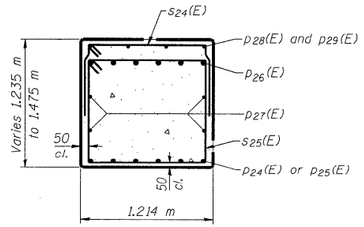
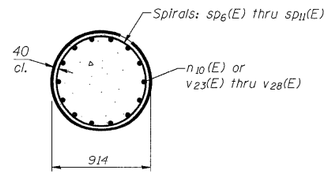
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	62
FED. ROAD DIST. NO. 9		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 31
36 SHEETS

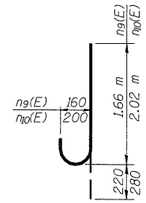
Contract #76634 * 60-15VB-1 & 2



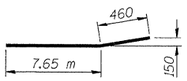
SECTION A-A



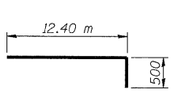
SECTION B-B



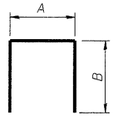
BAR n9(E) & n10(E)



BAR p24(E)



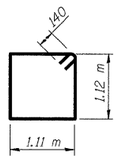
BAR p26(E)



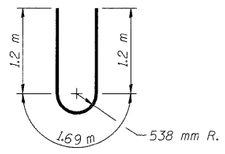
BARS s22(E), s23(E), s24(E)

A & B DIMENSIONS

Bar	A	B
s22(E)	1.11 m	1.73 m
s23(E)	1.11 m	4.12 m
s24(E)	1.11 m	870



BARS s25(E)



BAR u3(E)

PIER #2 BILL OF MATERIAL

	Bar	No.	Size	Length (m)	Shape
	h8(E)	56	#20	11.18	
	h7(E)	6	#25	11.55	
	n9(E)	6	#20	1.88	
	n10(E)	84	#25	2.30	
	p24(E)	12	#25	8.11	
	p25(E)	6	#25	9.65	
	p26(E)	12	#30	12.90	
	p27(E)	8	#20	11.65	
	p28(E)	28	#15	3.40	
	p29(E)	4	#15	1.54	
	s22(E)	72	#20	4.57	
	s23(E)	72	#20	9.35	
	s24(E)	74	#15	2.85	
	s25(E)	71	#15	4.74	
*	sp6(E)	1	#15	4.74	
*	sp7(E)	1	#15	4.53	
*	sp8(E)	1	#15	4.32	
*	sp9(E)	1	#15	4.11	
*	sp10(E)	1	#15	3.90	
*	sp11(E)	1	#15	3.69	
	t(E)	106	#20	3.12	
	u3(E)	38	#20	4.09	
	v22(E)	6	#20	4.12	
	v23(E)	14	#25	5.40	
	v24(E)	14	#25	5.20	
	v25(E)	14	#25	5.00	
	v26(E)	14	#25	4.80	
	v27(E)	14	#25	4.60	
	v28(E)	14	#25	4.40	
	w(E)	22	#15	12.06	
	Concrete Structures			m^3	235.3
	Reinforcement Bars (Epoxy Coated)			kg	12,060
	Structure Excavation			m^3	303
	Furnishing Metal Pile Shell 356mmX6.35mm			m	377.0
	Driving Piles			m	377.0
	Test Pile Metal Shells			Each	1

*Length is height of spiral

DESIGNED	ADL
CHECKED	WLW
DRAWN	RLW/ADL
CHECKED	WLW

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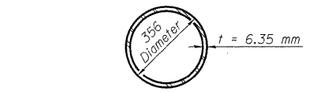
PIER #2 DETAILS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

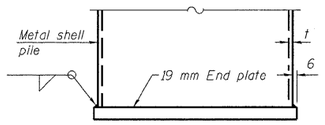
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.P. 310	*	MADISON	149	63
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 32
36 SHEETS

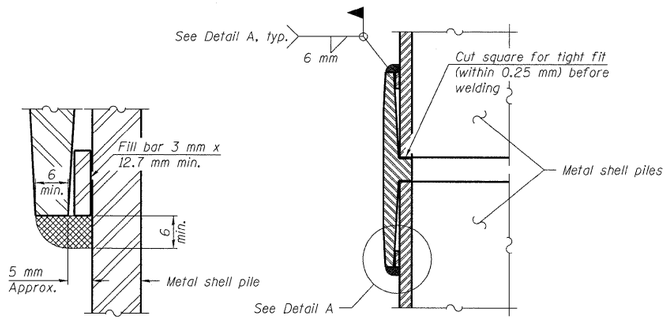
Contract #76634 * 60-15VB-1 & 2



METAL SHELL PILE



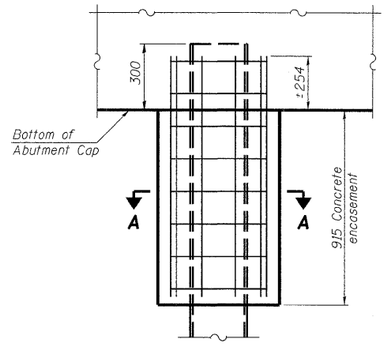
END PLATE ATTACHMENT



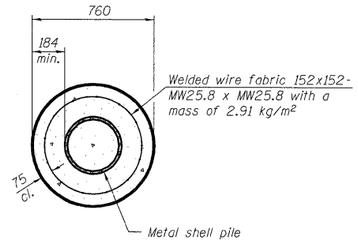
DETAIL A

Notes:
The 3 x 12.7 mm min. fill bar may be constructed of 2 bars with a 3 mm max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



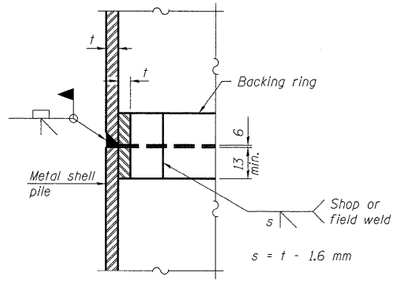
ELEVATION



SECTION A-A

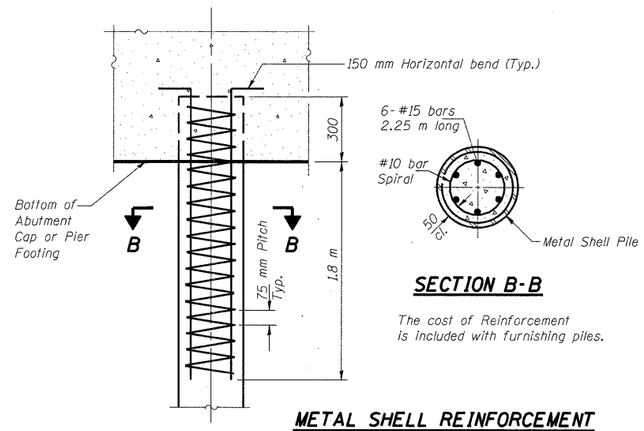
Notes:
Forms for encasement may be omitted when soil conditions permit.

CONCRETE ENCASEMENT AT ABUTMENTS



COMPLETE PENETRATION WELD SPLICE

Backing ring made from pile shell. Remove segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



SECTION B-B

The cost of Reinforcement is included with furnishing piles.

METAL SHELL REINFORCEMENT AT ABUTMENTS & PIERS

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

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/DGM
CHECKED	WLW

PILE DETAILS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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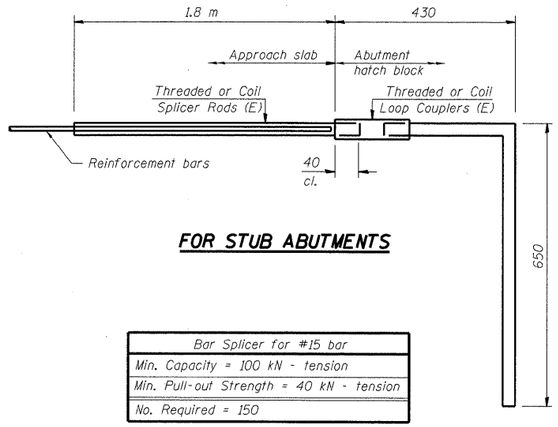
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.P. 310	*	MADISON	149	64
FED. HIWAY DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

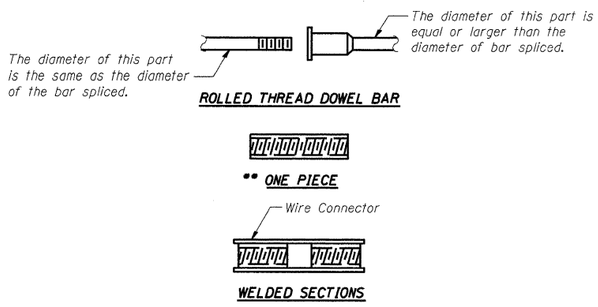
SHEET NO. 33
36 SHEETS

Contract #76634 * 60-15VB-1 & 2



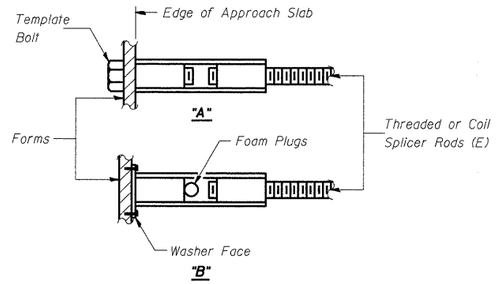
FOR STUB ABUTMENTS

Bar Splicer for #15 bar
Min. Capacity = 100 kN - tension
Min. Pull-out Strength = 40 kN - tension
No. Required = 150



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563M, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

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

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 400 MPa yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kN) = 1.25 x fy x A_f

② Minimum *Pull-out Strength (Tension in kN) = 0.66 x fy x A_f

Where fy = Yield strength of lapped reinforcement bars in MPa.
A_f = Tensile stress area of lapped reinforcement bars (mm^2).
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kN - tension	Min. Pull-Out Strength kN - tension
#15	660 mm	100	40
#20	790 mm	150	60
#25	1.04 m	250	100
#30	1.37 m	350	140

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

All dimensions are in millimeters (mm) except as noted.

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/DGM
CHECKED	WLW

BAR SPLICER ASSEMBLY DETAILS
FAP RTE. 310 (IL RTE. 255) NB & RAMP C OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0310

Klingner & Assoc., P.C.

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FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-15VB-1 & 2	MADISON	149	65
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 34

36 SHEETS

Contract #76634

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 2

Date 5/01

ROUTE FAP 310 DESCRIPTION IL 255 over Railroad Tracks LOGGED BY Larry Ford

SECTION 60-15VB-1,2 LOCATION , SEC. 23, TWP. 6N, RNG. 10W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. 060-0310
Station

BORING NO. RR-SB 2
Station 39+140
Offset 18.50m RT CL
Ground Surface Elev. 185.60 m

Surface Water Elev. m
Stream Bed Elev. m

Groundwater Elev.:
First Encounter 183.0 m
Upon Completion m
After Hrs. m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Gray SILTY CLAY			
	2		
	2	86	
	2	B	28
-1.5	3		
	3	115	
183.8	4	B	25
Gray SILTY CLAY LOAM			
	3		
	3	125	
183.0 ▼	4	S/15	21
Gray CLAY LOAM			
-3.0	3		
	3	201	
	4	S/15	21
	2		
	3	125	
	4	S/10	23
-4.5	3		
	4	163	
	5	S/10	20
	4		
	14	498	
179.6 -6.0	18	S/15	12

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Brown SAND (fine to coarse) 179.4	11		18
	13	NC	9
Gray CLAY LOAM	27	508	
179.0		S/10	
	5		
Gray SANDY GRAVEL	13		
See Gradation @ 7 m	18	NC	8
178.4			
Gray CLAY LOAM -7.5	6		
	9	364	
	14	S/15	14
	5		
	10	345	
	13	S/20	15
-9.0	7		
	10	441	
	19	B	17
175.4			
Gray SILTY CLAY -10.5	5		
	8	268	
	13	B	20
-12.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 2 of 2

Date 5/01

ROUTE FAP 310 DESCRIPTION IL 255 over Railroad Tracks LOGGED BY Larry Ford

SECTION 60-15VB-1,2 LOCATION , SEC. 23, TWP. 6N, RNG. 10W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. 060-0310
Station

BORING NO. RR-SB 2
Station 39+140
Offset 18.50m RT CL
Ground Surface Elev. 185.60 m

Surface Water Elev. m
Stream Bed Elev. m

Groundwater Elev.:
First Encounter 183.0 m
Upon Completion m
After Hrs. m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Gray SILTY CLAY (continued)			
	8	460	
	10	B	20
	15		
-13.5	5		
	6	211	
	8	S/10	24
-15.0	4		
	7	201	
	9	S/15	22
170.0			
Gray and Brown CLAY LOAM			
-16.5	8		
	12	316	
	20	B	18
-18.0			

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Gray and Brown CLAY LOAM (continued) 167.3	5	249	
	9	S/10	22
	14		
End of Boring			
-19.5			
-21.0			
-22.5			
-24.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS

FAP ROUTE 310
SECTION 60-15HB
MADISON COUNTY

$$DATE$$
DATE-TIME
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*REF-
*REF-

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-15VB-1 & 2	MADISON	149	66
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 35

36 SHEETS

Contract #76634

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 2

Date 6302

ROUTE FAP 310 DESCRIPTION IL 255 over Railroad Tracks LOGGED BY Larry Ford

SECTION 60-15VB-1,2 LOCATION , SEC. 23, TWP. 6N, RNG. 10W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. 060-0310
Station

BORING NO. RR-SB 4
Station 39+151
Offset 16.00m RT CL
Ground Surface Elev. 187.04 m

Surface Water Elev. m
Stream Bed Elev. m

Groundwater Elev.:
First Encounter 182.8 m ▼
Upon Completion m
After Hrs. m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Brown and Gray Silt LOAM with some RR Balast (Fill)			
	1		
	2	38	29
	2	S15	
185.8			
Brown and Gray Silty CLAY -1.5	3		
	2	115	28
	3	S15	
	3		
	3	144	23
	5	S15	
-3.0	3		
	3	125	24
	3	S20	
	2		
	3	163	25
	4	S15	
182.8 ▼			
Brown and Gray Clay LOAM -4.5	2		
	4	192	21
	6	S10	
	3		
	4	172	20
	5	S10	
-6.0	3		
Brown and Gray Clay LOAM (continued)			
	3	172	21
	4	S10	
180.6			
Gray SAND			
180.3	0		24
	5	NC	
Gray Clay LOAM	10	383	11
		S10	
-7.5	7		
	13	402	10
	20	S15	
	12		
	17	584	10
	30	S10	
-9.0	6		
	8	383	20
	12	S10	
177.1			
Gray Silty CLAY			
-10.5	6		
	9	316	21
	12	S10	
-12.0	4		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 2 of 2

Date 6302

ROUTE FAP 310 DESCRIPTION IL 255 over Railroad Tracks LOGGED BY Larry Ford

SECTION 60-15VB-1,2 LOCATION , SEC. 23, TWP. 6N, RNG. 10W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. 060-0310
Station

BORING NO. RR-SB 4
Station 39+151
Offset 16.00m RT CL
Ground Surface Elev. 187.04 m

Surface Water Elev. m
Stream Bed Elev. m

Groundwater Elev.:
First Encounter 182.8 m ▼
Upon Completion m
After Hrs. m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Gray Silty CLAY (continued)			
	6	211	25
	8	S10	
172.6			
Gray and Brown Clay LOAM			
-15.0	5		
	8	335	20
	13	S5	
-16.5	4		
	6	335	20
	8	S10	
-18.0	6		
Gray and Brown Clay LOAM (continued)			
	8	316	21
	13	S5	
168.1			
Brown SAND			
See Gradation @ 19.5 m (64.5 ft) -19.5	14		
167.4	18		17
Brown and Gray Clay LOAM 167.2	12	NC	21
		278	
End of Boring		S10	
-21.0			
-22.5			
-24.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS

FAP ROUTE310
SECTION 60-15HB-2
MADISON COUNTY

$$DATE$$
DATE-TIME
D:\BOO+files\D0000248\Railroad-Bridge\BSN060-0310 Plans\B060-0310SoilBorings.dgn
*REF-
*REF-

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
310	60-15VB-1 & 2	MADISON	149	67
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 36

36 SHEETS

Contract #76634

060-0310

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 1 of 3

Date 11002

ROUTE FAP 310 DESCRIPTION IL 255 over Railroad Tracks LOGGED BY Larry Ford

SECTION 60-15VB-1,2 LOCATION , SEC. 23, TWP. 6N, RNG. 10W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. 060-0310
Station

BORING NO. RR-SB 8
Station 39+195.83
Offset 20.13m RT CL
Ground Surface Elev. 184.75 m

Surface Water Elev. _____ m
Stream Bed Elev. _____ m

Groundwater Elev.:
First Encounter _____ m
Upon Completion _____ m
After _____ Hrs. _____ m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Gray SILTY CLAY			
	2		
	3	67	
	4	S/15	26
183.5			
Gray SILTY CLAY LOAM			
-1.5	2		
	3	125	
	4	S/10	22
182.8			
Gray SILTY CLAY			
	3		
	4	125	
	5	S/15	24
181.9			
-3.0	2		
Brown and Gray CLAY LOAM			
	4	153	
	4	S/10	23
	3		
	4	172	
	5	S/10	21
-4.5	3		
	3	125	
	5	S/10	20
	3		
	3	38	
	4	S/10	16
-6.0			
Brown and Gray CLAY LOAM (continued)			
	6	345	
	11	S/20	10
	13		
	8		
	14	402	
	19	S/10	10
-7.5	7		
	6	402	
	5	S/10	11
176.8			
Gray SAND	17		
See Gradation @ 8.0m	23		
	24	NC	12
176.0			
Gray LOAMY SAND			
-9.0	19		
	22	182	
	25	S/5	10
175.1			
Gray LOAM			
-10.6	12		
	15	575	
	19	S/20	11
173.6			
Gray CLAY			
-12.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 2 of 3

Date 11002

ROUTE FAP 310 DESCRIPTION IL 255 over Railroad Tracks LOGGED BY Larry Ford

SECTION 60-15VB-1,2 LOCATION , SEC. 23, TWP. 6N, RNG. 10W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. 060-0310
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Offset 20.13m RT CL
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Surface Water Elev. _____ m
Stream Bed Elev. _____ m

Groundwater Elev.:
First Encounter _____ m
Upon Completion _____ m
After _____ Hrs. _____ m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Gray CLAY (continued)			
	5	316	
	9	B	20
	14		
172.1			
Gray CLAY LOAM			
-13.5	5		
	7	230	
	9	S/10	24
-15.0	9		
	15	527	
	39	B	19
-16.5	5		
	9	335	
	12	S/15	21
-18.0			
Gray CLAY LOAM (continued)			
166.4			
Gray CLAY			
-19.5	5		
	7	278	
	9	S/10	22
-21.0	7		
	9	316	
	12	S/10	24
-22.5	10		
	12	498	
	18	S/15	19
-24.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Page 3 of 3

Date 11002

ROUTE FAP 310 DESCRIPTION IL 255 over Railroad Tracks LOGGED BY Larry Ford

SECTION 60-15VB-1,2 LOCATION , SEC. 23, TWP. 6N, RNG. 10W, 3 PM

COUNTY Madison DRILLING METHOD Hollow Stem Auger HAMMER TYPE 140# Automatic

STRUCT. NO. 060-0310
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Ground Surface Elev. 184.75 m

Surface Water Elev. _____ m
Stream Bed Elev. _____ m

Groundwater Elev.:
First Encounter _____ m
Upon Completion _____ m
After _____ Hrs. _____ m

DEPTH (m)	BLOWS (/150 mm)	UCS Qu (kPa)	MOIST (%)
Gray CLAY (continued)			
	10	450	
	15	S/15	19
	24		
-25.5	10		
	14	249	
	27	S/10	18
158.0			
Brown and Gray SHALE	45		
-27.0	50/1"	441	11
157.6		S/10	
End of Boring			
-28.5			
-30.0			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, from 137 (Rev. 8-99)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS

FAP ROUTE 310
SECTION 60-15HB
MADISON COUNTY

$$DATE$$
DATE-TIME
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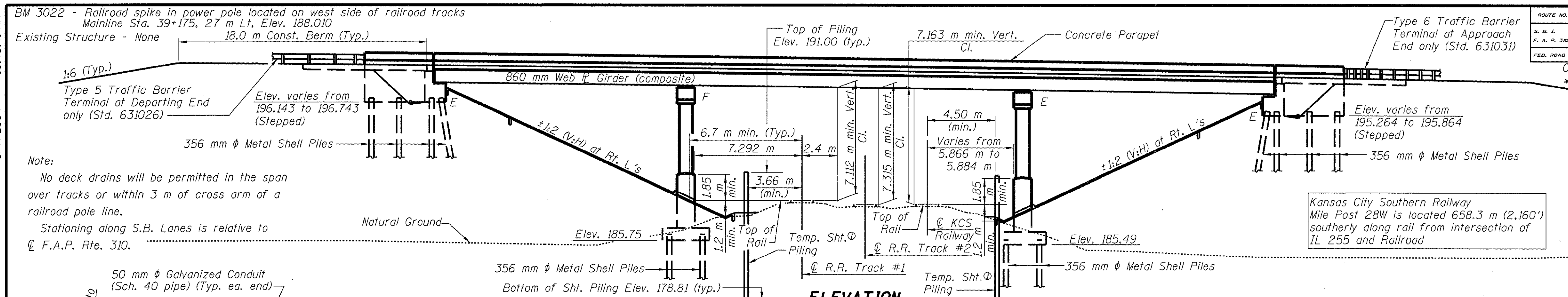
*REF-
*REF-

10:48:41 AM 5/7/2009

BM 3022 - Railroad spike in power pole located on west side of railroad tracks Mainline Sta. 39+175, 27 m Lt. Elev. 188.010

Existing Structure - None

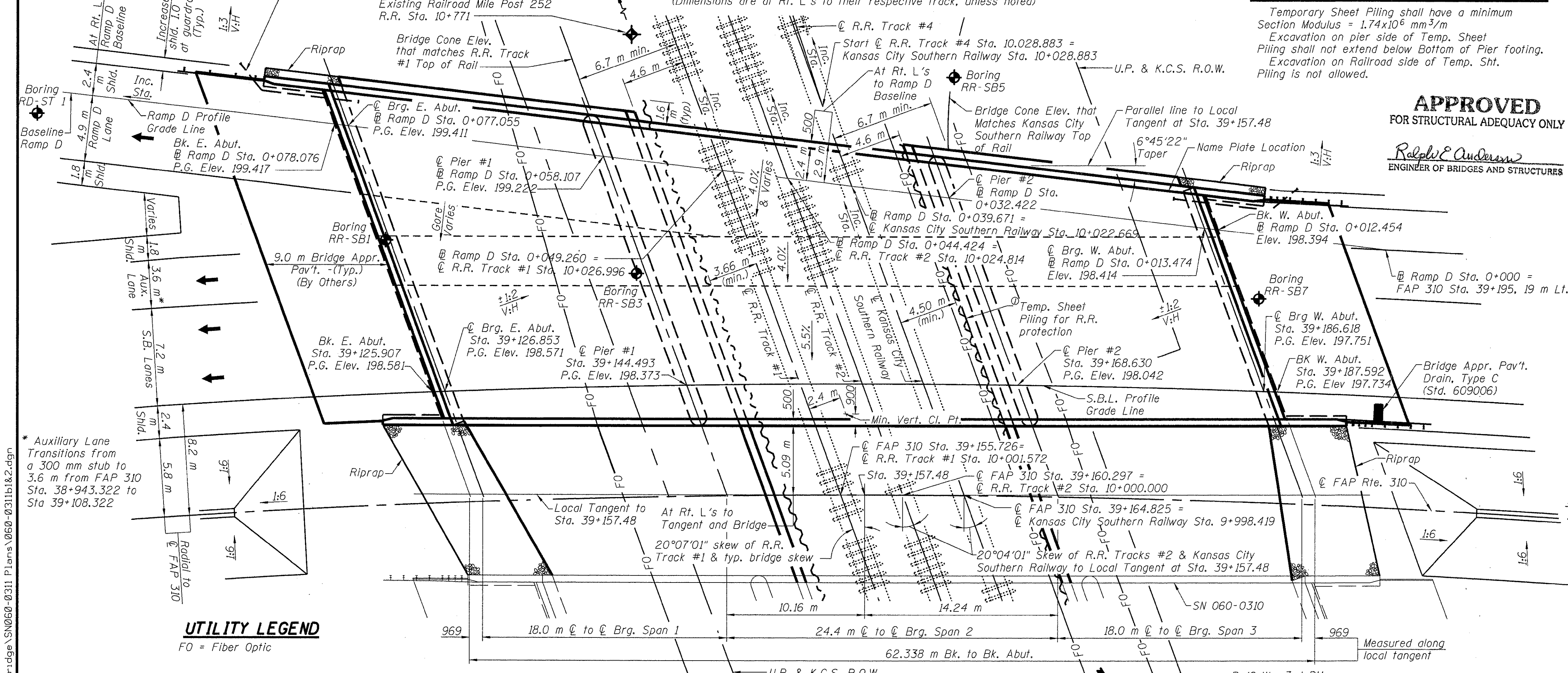
Note:
No deck drains will be permitted in the span over tracks or within 3 m of cross arm of a railroad pole line.
Stationing along S.B. Lanes is relative to ℄ F.A.P. Rte. 310.



18.0 m Const. Berm (Typ.)
1:6 (Typ.)
Type 5 Traffic Barrier Terminal at Departing End only (Std. 631026)
Elev. varies from 196.143 to 196.743 (Stepped)
356 mm ϕ Metal Shell Piles
860 mm Web ℙ Girder (composite)
Top of Piling Elev. 191.00 (typ.)
7.163 m min. Vert. Cl.
Concrete Parapet
Type 6 Traffic Barrier Terminal at Approach End only (Std. 631031)
Elev. varies from 195.264 to 195.864 (Stepped)
6.7 m min. (Typ.)
7.292 m
2.4 m
3.66 m (min.)
4.50 m (min.)
Varies from 5.866 m to 5.884 m
Natural Ground
Elev. 185.75
Elev. 185.49
Top of Rail
Temp. Sht. Piling
℄ R.R. Track #1
℄ R.R. Track #2
℄ KCS Railway
356 mm ϕ Metal Shell Piles
Bottom of Sht. Piling Elev. 178.81 (typ.)
Kansas City Southern Railway Mile Post 28W is located 658.3 m (2,160') southerly along rail from intersection of IL 255 and Railroad

ELEVATION

(Dimensions are at Rt. L's to their respective track, unless noted)



50 mm ϕ Galvanized Conduit (Sch. 40 pipe) (Typ. ea. end)
Existing Railroad Mile Post 252 R.R. Sta. 10+771
Bridge Cone Elev. that matches R.R. Track #1 Top of Rail
Riprap
Boring RD-ST 1
Baseline Ramp D
Ramp D Profile Grade Line
Bk. E. Abut. ℗ Ramp D Sta. 0+078.076 P.G. Elev. 199.417
℄ Brg. E. Abut. ℗ Ramp D Sta. 0+077.055 P.G. Elev. 199.411
℄ Pier #1 ℗ Ramp D Sta. 0+058.107 P.G. Elev. 199.222
℄ R.R. Track #4
Start ℄ R.R. Track #4 Sta. 10.028.883 = Kansas City Southern Railway Sta. 10+028.883
At Rt. L's to Ramp D Baseline
Boring RR-SB5
U.P. & K.C.S. R.O.W.
Bridge Cone Elev. that Matches Kansas City Southern Railway Top of Rail
Parallel line to Local Tangent at Sta. 39+157.48
6°45'22" Taper
Name Plate Location
Boring RR-SB1
9.0 m Bridge Appr. Pav't. (Typ.) (By Others)
℗ Ramp D Sta. 0+049.260 = ℄ R.R. Track #1 Sta. 10+026.996
Boring RR-SB3
℄ Pier #2 ℗ Ramp D Sta. 0+032.422
℗ Ramp D Sta. 0+039.671 = Kansas City Southern Railway Sta. 10+022.669
℗ Ramp D Sta. 0+044.424 = ℄ R.R. Track #2 Sta. 10+024.814
℄ Brg. W. Abut. ℗ Ramp D Sta. 0+013.474 Elev. 198.414
Bk. W. Abut. ℗ Ramp D Sta. 0+012.454 Elev. 198.394
℗ Ramp D Sta. 0+000 = FAP 310 Sta. 39+195, 19 m Lt.
Boring RR-SB7
Temp. Sheet Piling for R.R. protection
Bk. E. Abut. Sta. 39+125.907 P.G. Elev. 198.581
℄ Brg. E. Abut. Sta. 39+126.853 P.G. Elev. 198.571
℄ Pier #1 Sta. 39+144.493 P.G. Elev. 198.373
℄ Pier #2 Sta. 39+168.630 P.G. Elev. 198.042
℄ Brg W. Abut. Sta. 39+186.618 P.G. Elev. 197.751
BK W. Abut. Sta. 39+187.592 P.G. Elev 197.734
Bridge Appr. Pav't. Drain, Type C (Std. 609006)
S.B.L. Profile Grade Line
Min. Vert. Cl. Pt.
℄ FAP 310 Sta. 39+155.726 = ℄ R.R. Track #1 Sta. 10+001.572
Sta. 39+157.48
℄ FAP 310 Sta. 39+160.297 = ℄ R.R. Track #2 Sta. 10+000.000
℄ FAP 310 Sta. 39+164.825 = ℄ Kansas City Southern Railway Sta. 9+998.419
Local Tangent to Sta. 39+157.48
At Rt. L's to Tangent and Bridge
20°07'01" skew of R.R. Track #1 & typ. bridge skew
20°04'01" Skew of R.R. Tracks #2 & Kansas City Southern Railway to Local Tangent at Sta. 39+157.48
℄ FAP Rte. 310
Riprap
Inc. Sta.
* Auxiliary Lane Transitions from a 300 mm stub to 3.6 m from FAP 310 Sta. 38+943.322 to Sta 39+108.322
Radial to ℄ FAP 310
SN 060-0310
10.16 m
14.24 m
969
18.0 m ℄ to ℄ Brg. Span 1
24.4 m ℄ to ℄ Brg. Span 2
18.0 m ℄ to ℄ Brg. Span 3
Measured along local tangent
62.338 m Bk. to Bk. Abut.
U.P. & K.C.S. R.O.W.

PLAN

UTILITY LEGEND
FO = Fiber Optic

①TEMPORARY SHEET PILING NOTES
Temporary Sheet Piling shall have a minimum Section Modulus = 1.74×10^6 mm³/m
Excavation on pier side of Temp. Sheet Piling shall not extend below Bottom of Pier footing.
Excavation on Railroad side of Temp. Sht. Piling is not allowed.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.P. 310	*	MADISON	149	68
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
45 SHEETS

Contract #76634
* 60-15VB-1 & 2

INDEX OF SHEETS

STATE OF ILLINOIS
ALAN D. LUKENS
081-005167
QUINCY, ILLINOIS
LICENSED STRUCTURAL ENGINEER

5-7-09
Alan D. Lukens — Date
Licensed Structural Engineer
State of Illinois No. 081-005167
License Expires 11/30/10

RAMP D SE TRANSITION
4.0% From 0+000 to 0+048.637
Transition from 4.0% to 1.5%
From Sta. 0+048.637 to Sta. 0+089.181

FAP 310 CURVE DATA
PI Sta. 39+183.523
Δ = 62° 37' 42" (RT)
R = 780.000 m
T = 474.512 m
L = 852.596 m
E = 132.996 m
PC Sta. 38+709.010
PT Sta. 39+561.606
SE = 5.5% (S.B. Lanes)
SE = 4.0% (Aux. Lane)

Boring ST 39

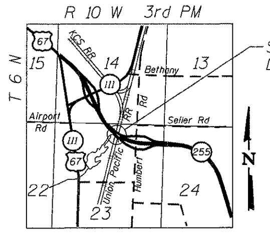
DESIGN SPECIFICATIONS
2002 AASHTO Standard Specifications

LOADING MS18
Allow 2.4 kN/m² for future wearing surface.

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.080g
Site Coefficient (S) = 1.0

DESIGN STRESSES
FIELD UNITS
f'c = 24 MPa
fy = 400 MPa (reinf.)

fy = 345 MPa (M270M Grade 345)
fy = 250 MPa (M270M Grade 250)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

DESIGNED	ADL
CHECKED	WLW
DRAWN	DGM/ADL
CHECKED	WLW

KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors
STATE OF ILLINOIS DESIGN FIRM # 1842738

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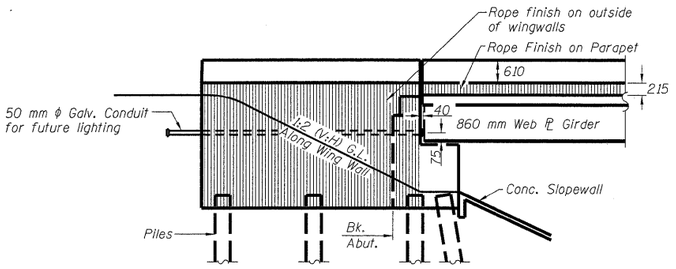
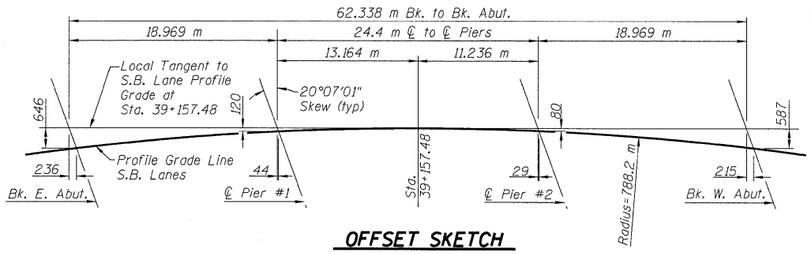
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U. S. R. I. F. A. P. 310	*	MADISON	149	69
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
45 SHEETS

Contract #76634
* 60-15VB-1 & 2

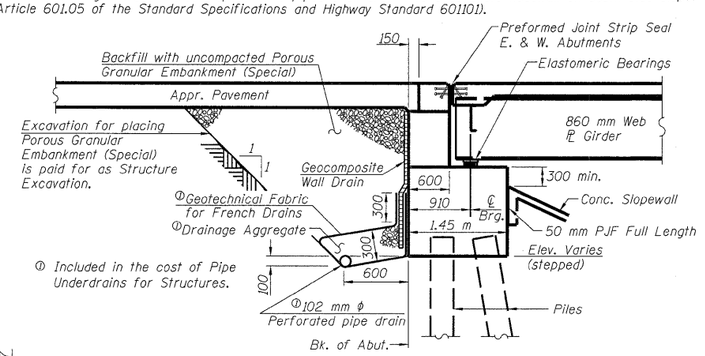


WINGWALL ELEVATION



OFFSET SKETCH

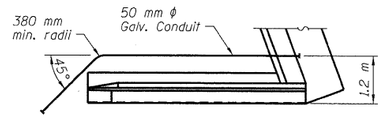
Note:
All drainage system components shall extend parallel to the abutment back wall until they intersect the wingwalls. The pipe shall extend under the north wingwall to SN 060-0310. The pipe shall also extend under the south wingwall until intersecting the south side slopes. The pipes shall drain into a concrete headwall on south side slope. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



① Included in the cost of Pipe Underdrains for Structures.

SECTION THRU ABUTMENT

(Horiz. Dim. at Rt. L's, unless noted)



Notes:
50 mm ϕ Galv. Conduit shall be Sch. 40 pipe. Extend to clear wingwall at a point outside of the shoulder. Cost included with "Concrete Superstructure" See Sheet #1 of 45 for locations.

PARTIAL PLAN OF ABUTMENT

(Showing Electrical Conduit)

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts M22, holes 24 mm ϕ, unless otherwise noted.

Calculated mass of Structural Steel = 140,780 kg (M270M Grade 345)
13,730 kg (M270M Grade 250)

The inorganic zinc rich primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior surfaces shall be gray, Munsell No. 5B 7/1. The color of the finish for the exterior and bottom flange of the fascia girders shall be Reddish Brown, Munsell No. 2.5 YR 3/4. See Special Provisions for "Cleaning and Painting New Metal Structures".

The structural steel bearing plates of the Elastomeric Bearing Assemblies shall conform to the requirements of AASHTO M 270M Grade 345.

Slope wall shall be reinforced with welded wire fabric, 152 x 152-MW25.8 x MW25.8 with a mass of 2.91 kg/m².

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments. Pile driving at the abutments will NOT be allowed until two (2) months after the completion of the embankment cones.

The contractor shall drive one (1) metal shell test pile in a permanent location at the West Abutment and at Pier #1 as directed by the Engineer before ordering the remainder of piles.

Concrete Sealer shall be applied to all exposed surface areas of the abutments.

The elevations of the existing top-of-rail profiles shall be verified prior to beginning construction.

All dimensions are in millimeters (mm) except as noted.

All structural steel shall be AASHTO M 270M Grade 345 unless noted otherwise.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 400. See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of 3 mm. Adjustment shall be made either by grinding the surface or by shimming the bearings.

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

Two 3 mm adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

Piles shall be driven through 380 mm diameter precored holes extending to elevation 185.5 at East Abutment & Elevation 184.5 at West Abutment according to Article 512.09(c) of the Standard Specifications. Cost included in driving piles.

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

Slip forming of parapets will not be allowed.

TOTAL BILL OF MATERIAL

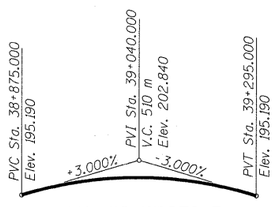
	ITEM	UNIT	SUPER	SUB	TOTAL
	Stud Shear Connectors	Each	6.171		6.171
	Bar Splicers	Each		146	146
	Test Pile Metal Shells	Each		2	2
	Name Plates	Each	1		1
	Elastomeric Bearing Assembly, Type I	Each	22		22
	Elastomeric Bearing Assembly, Type II	Each	9		9
	Porous Granular Embankment, Special	m3		172	172
***	Stone Riprap, Class A3	m2		77	77
***	Filter Fabric	m2		77	77
	Structure Excavation	m3		1.102	1.102
	Concrete Encasement	m3		13.3	13.3
	Form Liner Textured Surface	m2	27	55	82
	Concrete Structures	m3		613.7	613.7
	Concrete Superstructure	m3	324.3		324.3
	Bridge Deck Grooving	m2	1,240		1,240
**	Protective Coat	m2	1,402		1,402
	Furnishing and Erecting Structural Steel	L Sum	0.5		0.5
	Reinforcement Bars, Epoxy Coated	kg	59,010	50,290	109,300
***	Slope Wall 100 mm	m2		1,154	1,154
	Furnishing Metal Shell Piles 356mmX6.35mm	Meter		2,325.0	2,325.0
	Driving Piles	Meter		2,325.0	2,325.0
***	Temporary Sheet Piling	m2		729	729
	Anchor Bolts, M24	Each	40		40
	Anchor Bolts, M36	Each	44		44
	Preformed Joint Strip Seal	Meter	44.6		44.6
	Concrete Sealer	m2		143	143
	Geocomposite Wall Drain	m2		95	95
***	Pipe Underdrains for Structures 100 mm	Meter		73.8	73.8

** Quantity is for inside & top surface of parapet & deck.
*** For Quantity South of Local Tangent to ℄ F.A.P. Rte. 310 at Sta. 39+157.48.

STATION 39+160.297
BUILT 200_ BY
STATE OF ILLINOIS
F.A.P. RT. 310 SEC. 60-15VB-1&2
LOADING MS18
STR. NO. 060-0311

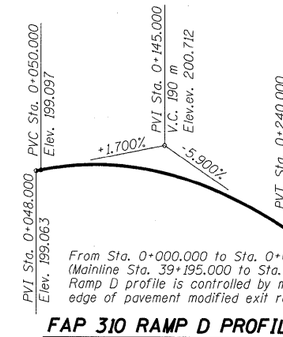
NAME PLATE

See Std. 515001
(1 Required)



FAP 310 PROFILE

(Along Median Edge)



From Sta. 0+000.000 to Sta. 0+048.637 (Mainline Sta. 39+195.000 to Sta. 39+147.893) Ramp D profile is controlled by mainline outside edge of pavement modified exit ramp terminal

FAP 310 RAMP D PROFILE

(Along Baseline)

DESIGNED	ADL
CHECKED	WLW
DRAWN	DGM/ADL
CHECKED	WLW

TOTAL BILL OF MATERIALS,
GENERAL NOTES AND DETAILS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

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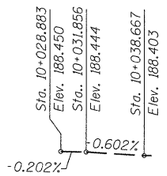
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	70
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

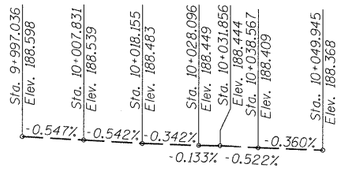
SHEET NO. 3
45 SHEETS

Contract #76634
* 60-15VB-1 & 2

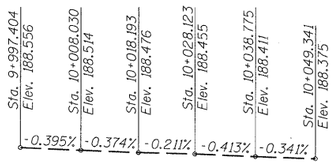


R.R. TRACK #4 TOP OF RAIL ELEVATIONS

(Union Pacific Railroad)

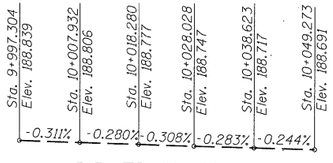


KANSAS CITY SOUTHERN RAILWAY TOP OF RAIL ELEVATIONS



R.R. TRACK #2 TOP OF RAIL ELEVATIONS

(Union Pacific Railroad)



R.R. TRACK #1 TOP OF RAIL ELEVATIONS

(Union Pacific Railroad)

RAILROAD GENERAL NOTES

The proposed bridge shall not increase the quantity and/or characteristics of the flow in the Railroad's ditches and/or drainage structures.

The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the Engineer and the Railroad prior to construction.

The Contractor shall submit a proposed method of erosion and sediment control and have the method approved by the Engineer and Railroad.

All shoring systems that impact the Railroad's operations and/or supports the Railroad's embankment shall be designed and constructed per current Railroad Guidelines for Temporary Shoring. Railroad approval is required before construction.

All demolitions within the Railroad's right-of-way and/or demolition that may impact the Railroad's tracks or operations shall be in compliance with the Railroad's Demolition Guidelines.

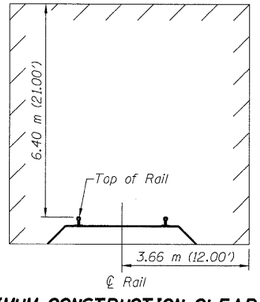
Erection over the Railroad's right-of-way shall not interrupt the Railroad's operation, enabling the tracks to remain open to traffic per the Railroad's requirements.

Railroad requirements do not allow work within 50 feet of track centerline when a train passes the work site and all personnel must clear the area within 25 feet of the track centerline and secure all equipment.

Falsework clearances shall comply with minimum construction clearances.

All permanent clearances shall be verified before project closing.

For Railroad coordination refer to the Railroad Minimum Requirements in the Special Provisions.



MINIMUM CONSTRUCTION CLEARANCE

(Perpendicular to Railroad)

Note:

No construction activities or other obstructions may be placed within these limits during construction.

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

RAILROAD GENERAL NOTES AND DETAILS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

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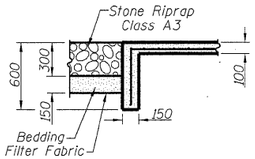
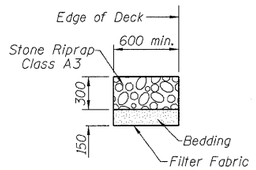
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	71
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
45 SHEETS

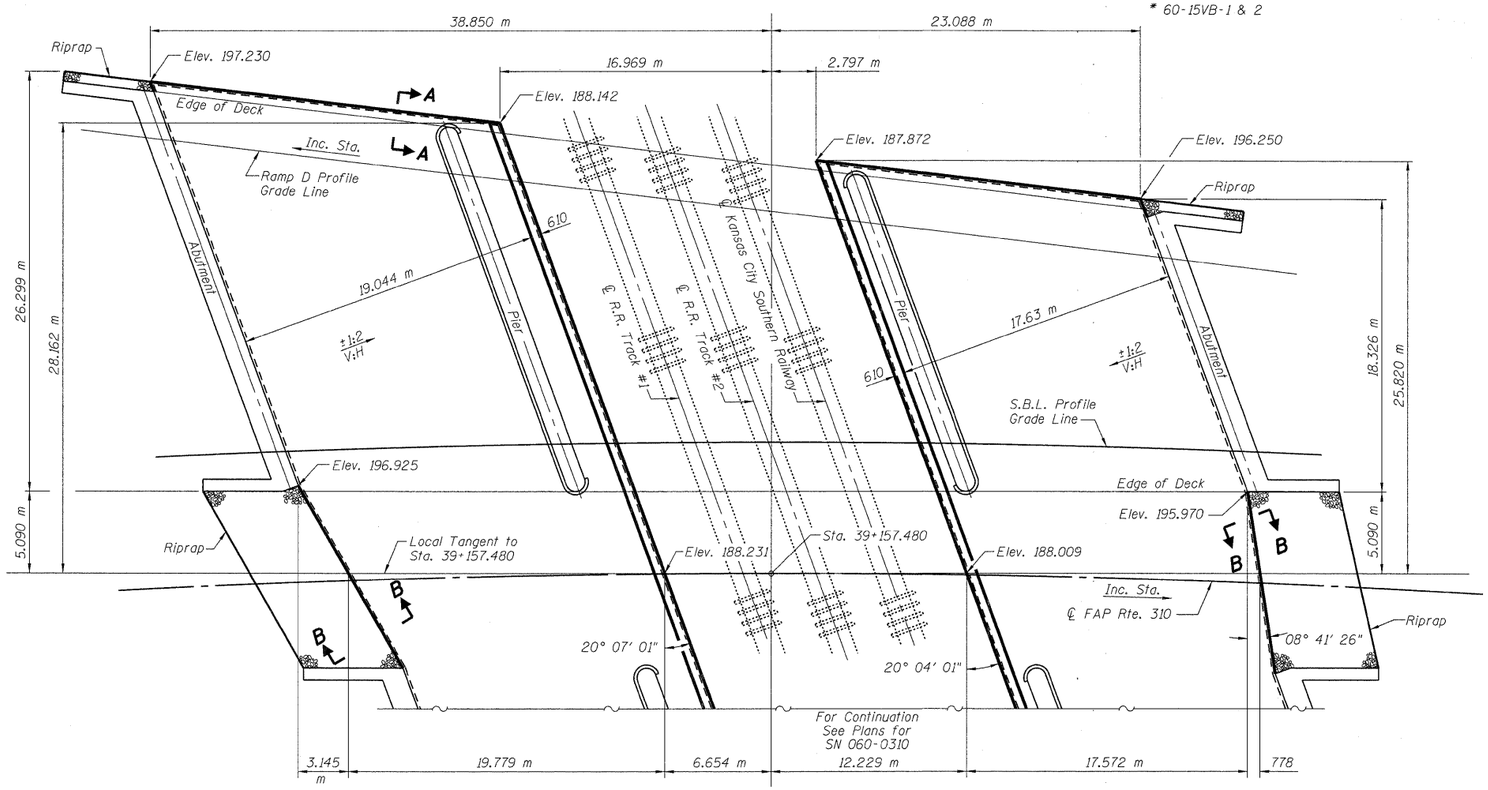
Contract #76634
* 60-15VB-1 & 2



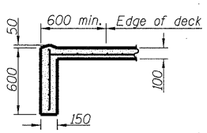
SECTION B-B BETWEEN RIPRAP AND CONCRETE SLOPEWALL



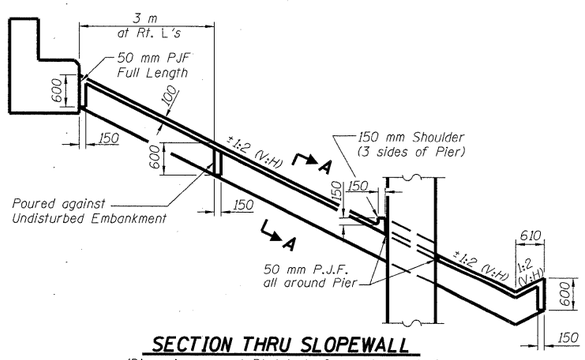
RIPRAP DETAIL



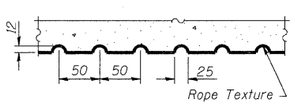
CONCRETE SLOPEWALL PLAN



SECTION A-A



SECTION THRU SLOPEWALL
(Dimensions are at Rt. L's to Cap, unless noted)



Note:
Rope Texture Concrete surfaces will be billed as "Form Liner Textured Surface".

ROPE TEXTURE CONCRETE DETAIL

The use of reverse image polyvinyl plastic sheets (form liners) attached to concrete forms, will produce the textured surfaces as depicted.

BILL OF MATERIAL

Item	Unit	Quantity
Slopewall 100 mm	m^2	1,154

DESIGNED	ADL
CHECKED	WLW
DRAWN	RLW/ADL
CHECKED	WLW

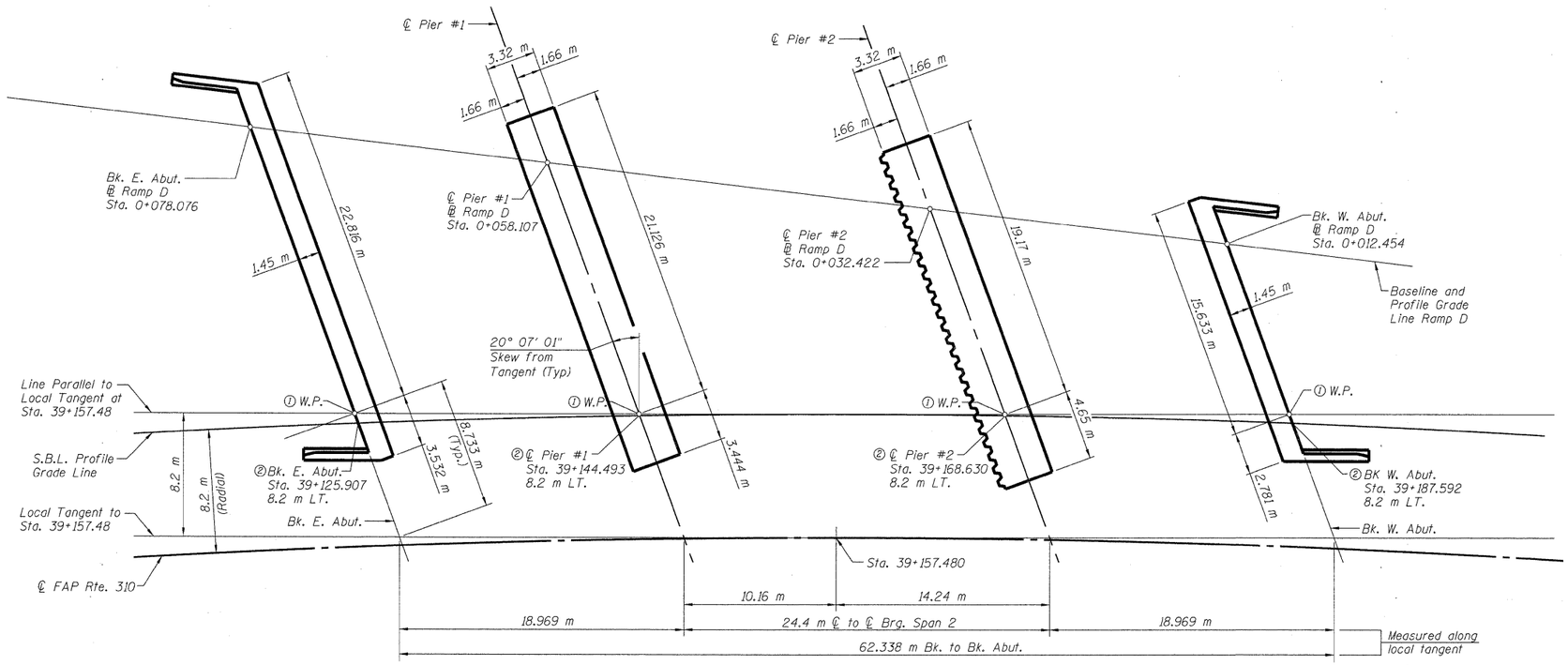
SLOPEWALL AND CONCRETE TEXTURE DETAILS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	72
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
45 SHEETS

Contract #76634
* 60-15VB-1 & 2



FOOTING PLAN

N

Notes:

① W.P.'s are from line parallel to Local Tangent at Sta. 39+157.480. Footings are dimensioned from W.P.'s.

② Sta./offset on S.B.L. Profile Grade Line

DESIGNED	ADL
CHECKED	WLW
DRAWN	KTH
CHECKED	WLW

FOOTING PLAN
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

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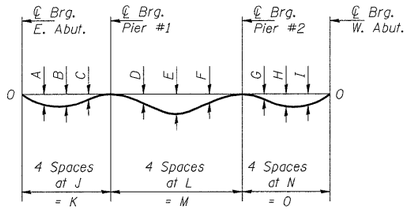
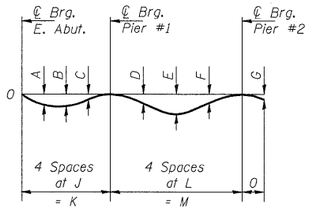


DEAD LOAD DEFLECTION DIAGRAM

(For Girders 1, 3, & 5-11)

(Includes weight of concrete slab and parapet)



DEAD LOAD DEFLECTION DIAGRAM

(For Girders 2 & 4)

(Includes weight of concrete slab and parapet)

Notes:

The dead load deflection diagrams are not to be used in the field if the engineer is working from the Theoretical Grade Elevations Adjusted for Dead Load Deflections as shown on sheets #7 thru #10 of 45.

All offsets are in meters.

Offsets are measured perpendicular from ℄ FAP 310 or from ℄ Ramp D.

Offsets to the left are negative. Offsets to the right are positive.

See Sheets #7 thru #10 of 45 for Elevations.

See Sheet #7 of 45 for Fillet Height Detail.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	73
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6

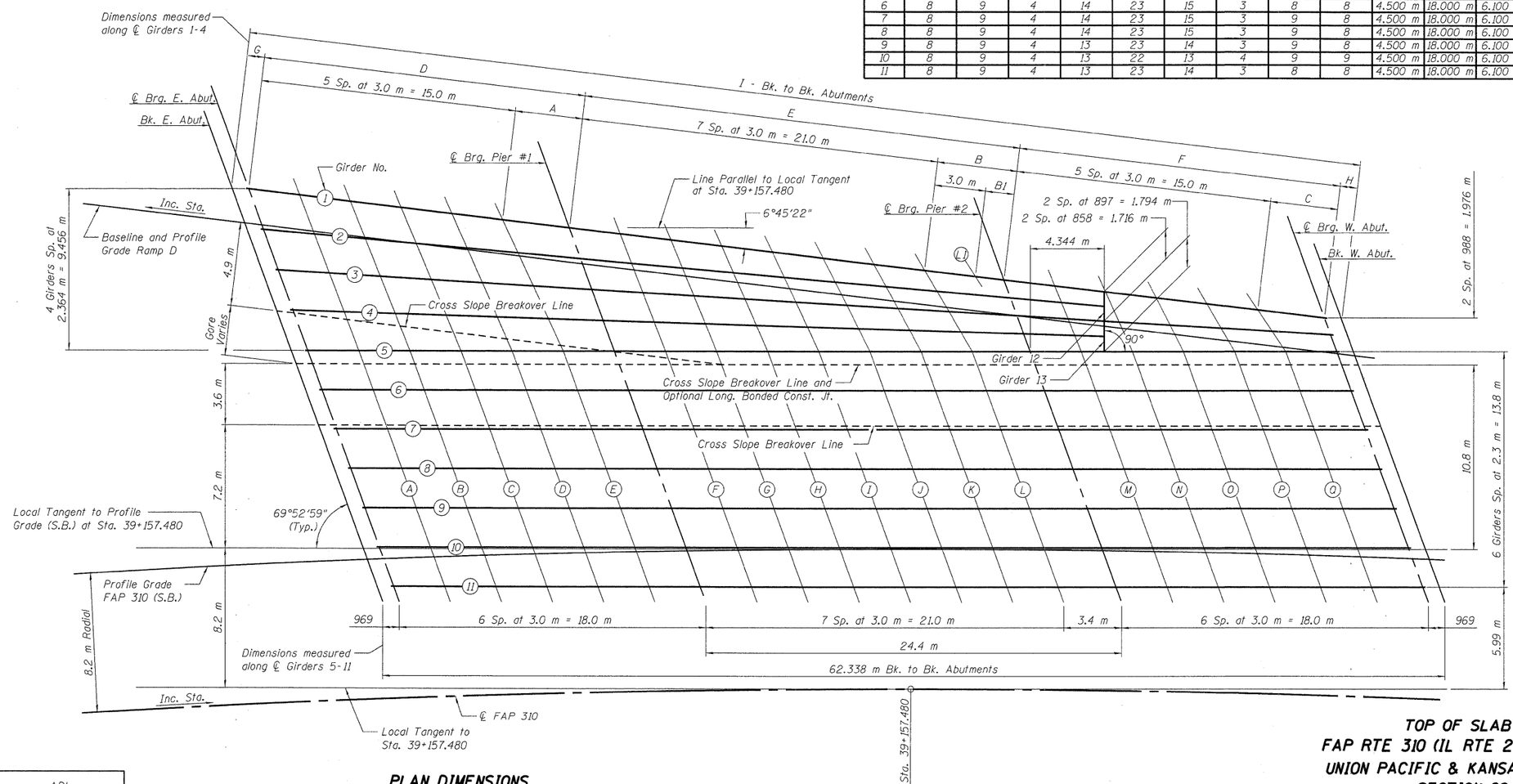
45 SHEETS

Contract #76634

* 60-15VB-1 & 2

DEAD LOAD DEFLECTION DIAGRAM - DIMENSIONS

Girder	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	6	10	5	15	25	17	0	3	5	±4.737 m	18.948 m	±6.421 m	25.685 m	±4.737 m	18.948 m
2	9	9	5	12	22	14	0			±4.672 m	18.689 m	±6.333 m	25.334 m		5.518 m
3	8	9	5	12	20	13	0	2	4	±4.610 m	18.442 m	±6.250 m	24.999 m	±4.610 m	18.442 m
4	8	10	4	12	21	13	0			±4.554 m	18.214 m	±6.173 m	24.690 m		4.728 m
5	8	8	4	13	22	15	0	3	4	4.500 m	18.000 m	6.100 m	24.400 m	4.500 m	18.000 m
6	8	9	4	14	23	15	3	8	8	4.500 m	18.000 m	6.100 m	24.400 m	4.500 m	18.000 m
7	8	9	4	14	23	15	3	9	8	4.500 m	18.000 m	6.100 m	24.400 m	4.500 m	18.000 m
8	8	9	4	14	23	15	3	9	8	4.500 m	18.000 m	6.100 m	24.400 m	4.500 m	18.000 m
9	8	9	4	13	23	14	3	9	8	4.500 m	18.000 m	6.100 m	24.400 m	4.500 m	18.000 m
10	8	9	4	13	22	13	4	9	9	4.500 m	18.000 m	6.100 m	24.400 m	4.500 m	18.000 m
11	8	9	4	13	23	14	3	8	8	4.500 m	18.000 m	6.100 m	24.400 m	4.500 m	18.000 m



PLAN

PLAN DIMENSIONS

	A	B	C	D	E	F	G	H	I	B1
Girder 1	3.948 m	4.685 m	3.948 m	18.948 m	25.685 m	18.948 m	1.020 m	1.020 m	65.622 m	1.685 m
Girder 2	3.689 m	4.334 m		18.689 m	25.334 m		1.006 m			
Girder 3	3.442 m	3.999 m	3.442 m	18.442 m	24.999 m	18.442 m	0.993 m	0.993 m	63.869 m	
Girder 4	3.214 m	3.690 m		18.214 m	24.690 m		0.981 m			

DESIGNED	ADL
CHECKED	WLW
DRAWN	SEB/ADL
CHECKED	WLW

TOP OF SLAB ELEVATIONS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. L. F. A. P. 310	*	MADISON	149	74
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 7
45 SHEETS

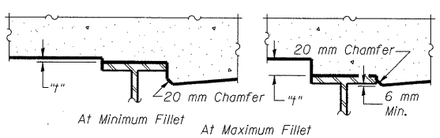
Contract #76634
* 60-15VB-1 & 2

PROFILE GRADE (S.B.L.) FAP 310

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+125.907	-8.200	0+068.589	-18.720	198.581	198.581
℄ Brg. E. Abut.	39+126.853	-8.200	0+067.645	-18.570	198.571	198.571
A	39+129.784	-8.200	0+064.719	-18.112	198.541	198.547
B	39+132.718	-8.200	0+061.788	-17.665	198.509	198.518
C	39+135.656	-8.200	0+058.852	-17.227	198.477	198.486
D	39+138.598	-8.200	0+055.910	-16.801	198.443	198.448
E	39+141.543	-8.200	0+052.963	-16.385	198.409	198.411
℄ Brg. Pier #1	39+144.493	-8.200	0+050.010	-15.979	198.373	198.373
F	39+147.446	-8.200	0+047.052	-15.585	198.336	198.341
G	39+150.403	-8.200	0+044.089	-15.201	198.298	198.311
H	39+153.364	-8.200	0+041.120	-14.827	198.259	198.279
I	39+156.329	-8.200	0+038.145	-14.465	198.219	198.242
J	39+159.298	-8.200	0+035.166	-14.113	198.178	198.200
K	39+162.272	-8.200	0+032.180	-13.772	198.136	198.151
L	39+165.249	-8.200	0+029.190	-13.442	198.092	198.099
℄ Brg. Pier #2	39+168.629	-8.200	0+025.793	-13.082	198.042	198.042
M	39+171.616	-8.200	0+022.790	-12.775	197.996	197.997
N	39+174.608	-8.200	0+019.782	-12.480	197.949	197.954
O	39+177.603	-8.200	0+016.768	-12.195	197.901	197.910
P	39+180.604	-8.200	0+013.749	-11.922	197.852	197.861
Q	39+183.609	-8.200	0+010.723	-11.661	197.802	197.808
℄ Brg. W. Abut.	39+186.619	-8.200	0+007.692	-11.410	197.751	197.751
Bk. W. Abut.	39+187.592	-8.200	0+006.712	-11.331	197.734	197.734

CROSS SLOPE BREAKOVER LINE AND OPTIONAL LONG. BONDED CONST. JT. (10.8 m LT OF LOCAL TANGENT)

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+122.274	-19.815	0+074.099	-7.848	199.207	199.207
℄ Brg. E. Abut.	39+123.218	-19.771	0+073.137	-7.734	199.196	199.196
A	39+126.141	-19.645	0+070.157	-7.381	199.159	199.165
B	39+129.066	-19.530	0+067.178	-7.028	199.122	199.131
C	39+131.991	-19.427	0+064.199	-6.675	199.085	199.094
D	39+134.917	-19.334	0+061.220	-6.322	199.047	199.052
E	39+137.843	-19.253	0+058.241	-5.969	199.009	199.011
℄ Brg. Pier #1	39+140.770	-19.183	0+055.261	-5.616	198.971	198.971
F	39+143.698	-19.125	0+052.282	-5.263	198.932	198.937
G	39+146.626	-19.077	0+049.303	-4.910	198.892	198.905
H	39+149.554	-19.041	0+046.324	-4.557	198.853	198.872
I	39+152.483	-19.016	0+043.345	-4.204	198.813	198.836
J	39+155.411	-19.003	0+040.366	-3.851	198.772	198.793
K	39+158.340	-19.000	0+037.386	-3.498	198.731	198.746
L	39+161.268	-19.009	0+034.407	-3.146	198.690	198.698
℄ Brg. Pier #2	39+164.587	-19.033	0+031.031	-2.746	198.642	198.642
M	39+167.516	-19.066	0+028.052	-2.393	198.600	198.601
N	39+170.444	-19.110	0+025.073	-2.040	198.557	198.560
O	39+173.371	-19.166	0+022.093	-1.687	198.514	198.520
P	39+176.299	-19.233	0+019.114	-1.334	198.471	198.478
Q	39+179.225	-19.311	0+016.135	-0.981	198.427	198.431
℄ Brg. W. Abut.	39+182.151	-19.400	0+013.156	-0.628	198.383	198.383
Bk. W. Abut.	39+183.096	-19.431	0+012.193	-0.514	198.368	198.368



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 above and on Sheets #8 thru #10 of 45, minus slab thickness, equals the fillet height "t" above the top flange of the girders.

FILLET HEIGHTS

DESIGNED	ADL
CHECKED	WLW
DRAWN	KTH
CHECKED	WLW

CROSS SLOPE BREAKOVER LINE (4.9 m LT OF RAMP D)

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+121.307	-22.966	0+075.592	-4.900	199.287	199.287
℄ Brg. E. Abut.	39+122.285	-22.800	0+074.572	-4.900	199.276	199.276
A	39+125.286	-22.298	0+071.444	-4.900	199.243	199.249
B	39+128.300	-21.807	0+068.306	-4.900	199.205	199.214
C	39+131.329	-21.325	0+065.156	-4.900	199.163	199.172
D	39+134.374	-20.854	0+061.993	-4.900	199.116	199.122
E	39+137.438	-20.393	0+058.815	-4.900	199.066	199.069
℄ Brg. Pier #1	39+140.517	-19.943	0+055.624	-4.900	199.011	199.011
F	39+143.577	-19.508	0+052.457	-4.900	198.953	198.957
G	39+146.622	-19.088	0+049.308	-4.900	198.891	198.903
End	39+146.709	-19.076	0+049.218	-4.900	198.889	198.901
H						
I						
J						
K						
L						
℄ Brg. Pier #2						
M						
N						
O						
P						
Q						
℄ Brg. W. Abut.						
Bk. W. Abut.						

CROSS SLOPE BREAKOVER LINE (7.2 m LT OF LOCAL TANGENT)

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+123.405	-16.160	0+072.366	-11.267	199.047	199.047
℄ Brg. E. Abut.	39+124.354	-16.118	0+071.404	-11.153	199.036	199.036
A	39+127.291	-15.996	0+068.424	-10.800	198.999	199.005
B	39+130.229	-15.886	0+065.445	-10.448	198.962	198.971
C	39+133.167	-15.787	0+062.466	-10.095	198.924	198.933
D	39+136.107	-15.699	0+059.487	-9.742	198.887	198.892
E	39+139.047	-15.622	0+056.508	-9.389	198.848	198.850
℄ Brg. Pier #1	39+141.987	-15.557	0+053.528	-9.036	198.810	198.810
F	39+144.928	-15.503	0+050.549	-8.683	198.771	198.776
G	39+147.870	-15.460	0+047.570	-8.330	198.731	198.744
H	39+150.811	-15.429	0+044.591	-7.977	198.691	198.711
I	39+153.753	-15.409	0+041.612	-7.624	198.651	198.674
J	39+156.695	-15.400	0+038.633	-7.271	198.610	198.632
K	39+159.637	-15.403	0+035.653	-6.918	198.569	198.584
L	39+162.579	-15.417	0+032.674	-6.565	198.527	198.534
℄ Brg. Pier #2	39+165.913	-15.446	0+029.298	-6.165	198.480	198.480
M	39+168.854	-15.485	0+026.319	-5.812	198.437	198.438
N	39+171.795	-15.534	0+023.340	-5.460	198.395	198.400
O	39+174.736	-15.595	0+020.360	-5.107	198.351	198.360
P	39+177.676	-15.667	0+017.381	-4.754	198.308	198.317
Q	39+180.616	-15.750	0+014.402	-4.401	198.264	198.270
℄ Brg. W. Abut.	39+183.555	-15.845	0+011.423	-4.048	198.219	198.219
Bk. W. Abut.	39+184.504	-15.878	0+010.460	-3.934	198.205	198.205

TOP OF SLAB ELEVATIONS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER
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STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	75
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 8
45 SHEETS

Contract #76634
* 60-15VB-1 & 2

BASELINE & PROFILE GRADE RAMP D

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+119.716	-28.208	0+078.075	0.000	199.417	199.417
℄ Brg. E. Abut.	39+120.687	-28.040	0+077.055	0.000	199.411	199.411
A	39+123.582	-27.546	0+074.017	0.000	199.390	199.396
B	39+126.484	-27.063	0+070.975	0.000	199.366	199.375
C	39+129.392	-26.590	0+067.930	0.000	199.338	199.347
D	39+132.307	-26.128	0+064.881	0.000	199.306	199.311
E	39+135.231	-25.677	0+061.827	0.000	199.270	199.272
℄ Brg. Pier #1	39+138.796	-25.143	0+058.107	0.000	199.222	199.222
F	39+141.723	-24.717	0+055.057	0.000	199.178	199.183
G	39+144.659	-24.302	0+052.000	0.000	199.130	199.143
H	39+147.604	-23.897	0+048.938	0.000	199.079	199.097
I	39+150.559	-23.503	0+045.867	0.000	199.027	199.049
J	39+153.526	-23.120	0+042.787	0.000	198.971	198.991
K	39+156.508	-22.746	0+039.696	0.000	198.914	198.928
L	39+159.505	-22.383	0+036.590	0.000	198.856	198.862
℄ Brg. Pier #2	39+163.532	-21.914	0+032.422	0.000	198.778	198.778
M	39+166.521	-21.580	0+029.332	0.000	198.720	198.721
N	39+169.528	-21.257	0+026.225	0.000	198.661	198.667
O	39+172.561	-20.942	0+023.094	0.000	198.601	198.610
P	39+175.630	-20.637	0+019.929	0.000	198.540	198.549
Q	39+178.751	-20.339	0+016.712	0.000	198.478	198.485
℄ Brg. W. Abut.	39+181.895	-20.053	0+013.474	0.000	198.414	198.414
Bk. W. Abut.	39+182.886	-19.965	0+012.454	0.000	198.394	198.394

GIRDER #1

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+119.073	-30.348	0+079.089	2.000	199.465	199.465
℄ Brg. E. Abut.	39+120.041	-30.179	0+078.069	2.000	199.460	199.460
A	39+122.892	-29.689	0+075.069	2.000	199.445	199.451
B	39+125.745	-29.210	0+072.069	2.000	199.426	199.436
C	39+128.602	-28.741	0+069.069	2.000	199.403	199.413
D	39+131.463	-28.284	0+066.069	2.000	199.377	199.384
E	39+134.326	-27.837	0+063.069	2.000	199.347	199.351
℄ Brg. Pier #1	39+138.100	-27.266	0+059.121	2.000	199.302	199.302
F	39+140.970	-26.845	0+056.121	2.000	199.264	199.269
G	39+143.844	-26.434	0+053.121	2.000	199.223	199.237
H	39+146.721	-26.035	0+050.121	2.000	199.177	199.198
I	39+149.600	-25.646	0+047.121	2.000	199.129	199.153
J	39+152.482	-25.269	0+044.121	2.000	199.075	199.099
K	39+155.367	-24.902	0+041.121	2.000	199.020	199.040
L	39+158.254	-24.547	0+038.121	2.000	198.965	198.977
L1	39+161.144	-24.202	0+035.121	2.000	198.909	198.913
℄ Brg. Pier #2	39+162.768	-24.014	0+033.435	2.000	198.877	198.877
M	39+165.662	-23.686	0+030.435	2.000	198.821	198.821
N	39+168.558	-23.370	0+027.435	2.000	198.764	198.764
O	39+171.456	-23.065	0+024.435	2.000	198.707	198.709
P	39+174.356	-22.771	0+021.435	2.000	198.649	198.653
Q	39+177.259	-22.488	0+018.435	2.000	198.591	198.595
℄ Brg. W. Abut.	39+181.082	-22.133	0+014.487	2.000	198.514	198.514
Bk. W. Abut.	39+182.070	-22.044	0+013.467	2.000	198.494	198.494

GIRDER #2

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+119.805	-27.915	0+077.937	-0.274	199.410	199.410
℄ Brg. E. Abut.	39+120.767	-27.777	0+076.931	-0.246	199.404	199.404
A	39+123.638	-27.373	0+073.932	-0.161	199.385	199.391
B	39+126.512	-26.980	0+070.933	-0.077	199.363	199.372
C	39+129.389	-26.598	0+067.934	0.007	199.338	199.347
D	39+132.269	-26.227	0+064.935	0.092	199.309	199.316
E	39+135.151	-25.868	0+061.937	0.176	199.277	199.281
℄ Brg. Pier #1	39+138.698	-25.440	0+058.249	0.280	199.233	199.233
F	39+141.586	-25.105	0+055.250	0.365	199.194	199.199
G	39+144.476	-24.781	0+052.252	0.449	199.151	199.162
H	39+147.368	-24.467	0+049.253	0.533	199.105	199.122
I	39+150.263	-24.165	0+046.254	0.618	199.058	199.079
J	39+153.159	-23.874	0+043.255	0.702	199.007	199.027
K	39+156.058	-23.594	0+040.256	0.787	198.956	198.972
L	39+158.959	-23.325	0+037.258	0.871	198.904	198.913
℄ Brg. Pier #2	39+163.152	-22.957	0+032.925	0.993	198.828	198.828
M	39+166.058	-22.715	0+029.927	1.078	198.774	198.774
End	39+168.497	-22.521	0+027.410	1.148	198.730	198.730
N						
O						
P						
Q						
℄ Brg. W. Abut.						
Bk. W. Abut.						

GIRDER #3

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+120.541	-25.481	0+076.784	-2.549	199.351	199.351
℄ Brg. E. Abut.	39+121.497	-25.375	0+075.793	-2.492	199.344	199.344
A	39+124.387	-25.061	0+072.798	-2.319	199.322	199.328
B	39+127.279	-24.759	0+069.803	-2.147	199.297	199.306
C	39+130.174	-24.467	0+066.808	-1.975	199.269	199.278
D	39+133.070	-24.187	0+063.813	-1.803	199.238	199.244
E	39+135.969	-23.917	0+060.817	-1.630	199.205	199.209
℄ Brg. Pier #1	39+139.297	-23.622	0+057.381	-1.433	199.162	199.162
F	39+142.199	-23.376	0+054.386	-1.261	199.122	199.125
G	39+145.104	-23.142	0+051.391	-1.088	199.079	199.090
H	39+148.009	-22.919	0+048.396	-0.916	199.036	199.052
I	39+150.917	-22.707	0+045.401	-0.744	198.988	199.008
J	39+153.826	-22.506	0+042.406	-0.572	198.941	198.961
K	39+156.736	-22.316	0+039.411	-0.400	198.892	198.906
L	39+159.648	-22.137	0+036.416	-0.227	198.844	198.853
℄ Brg. Pier #2	39+163.531	-21.917	0+032.423	0.002	198.779	198.779
M	39+166.446	-21.764	0+029.428	0.175	198.729	198.729
N	39+169.361	-21.623	0+026.433	0.347	198.679	198.679
O	39+172.278	-21.493	0+023.438	0.519	198.628	198.630
P	39+175.195	-21.374	0+020.443	0.691	198.578	198.582
Q	39+178.114	-21.266	0+017.448	0.864	198.526	198.529
℄ Brg. W. Abut.	39+181.463	-21.157	0+014.012	1.061	198.467	198.467
Bk. W. Abut.	39+182.429	-21.128	0+013.020	1.118	198.450	198.450

DESIGNED	ADL
CHECKED	WLW
DRAWN	KTH
CHECKED	WLW

TOP OF SLAB ELEVATIONS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	76
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9
45 SHEETS

Contract #76634
* 60-15VB-1 & 2

GIRDER #4

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+121.282	-23.049	0+075.632	-4.823	199.289	199.289
℄ Brg. E. Abut.	39+122.231	-22.974	0+074.655	-4.737	199.281	199.281
A	39+125.138	-22.752	0+071.666	-4.476	199.256	199.262
B	39+128.046	-22.541	0+068.677	-4.215	199.228	199.237
C	39+130.956	-22.341	0+065.689	-3.954	199.198	199.208
D	39+133.867	-22.152	0+062.700	-3.693	199.165	199.171
E	39+136.779	-21.974	0+059.712	-3.432	199.129	199.132
℄ Brg. Pier #1	39+139.901	-21.797	0+056.510	-3.153	199.088	199.088
F	39+142.816	-21.642	0+053.521	-2.892	199.047	199.051
G	39+145.731	-21.499	0+050.532	-2.631	199.004	199.015
H	39+148.648	-21.367	0+047.544	-2.370	198.962	198.979
I	39+151.566	-21.246	0+044.555	-2.109	198.918	198.939
J	39+154.485	-21.137	0+041.567	-1.848	198.874	198.893
K	39+157.404	-21.038	0+038.578	-1.587	198.830	198.844
L	39+160.325	-20.951	0+035.589	-1.326	198.785	198.792
℄ Brg. Pier #2	39+163.917	-20.860	0+031.913	-1.005	198.729	198.729
M	39+166.839	-20.798	0+028.924	-0.744	198.683	198.683
End	39+168.521	-20.767	0+027.203	-0.594	198.656	198.656
N						
O						
P						
Q						
℄ Brg. W. Abut.						
Bk. W. Abut.						

GIRDER #5

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+122.027	-20.617	0+074.479	-7.097	199.222	199.222
℄ Brg. E. Abut.	39+122.970	-20.573	0+073.517	-6.983	199.211	199.211
A	39+125.891	-20.446	0+070.538	-6.630	199.179	199.185
B	39+128.812	-20.331	0+067.558	-6.277	199.146	199.154
C	39+131.734	-20.226	0+064.579	-5.924	199.112	199.120
D	39+134.657	-20.133	0+061.600	-5.571	199.079	199.084
E	39+137.581	-20.050	0+058.621	-5.218	199.046	199.048
℄ Brg. Pier #1	39+140.505	-19.979	0+055.642	-4.866	199.013	199.013
F	39+143.429	-19.920	0+052.663	-4.513	198.972	198.976
G	39+146.354	-19.871	0+049.683	-4.160	198.928	198.940
H	39+149.280	-19.834	0+046.704	-3.807	198.890	198.908
I	39+152.205	-19.808	0+043.725	-3.454	198.850	198.872
J	39+155.131	-19.794	0+040.746	-3.101	198.809	198.829
K	39+158.057	-19.790	0+037.767	-2.748	198.768	198.783
L	39+160.982	-19.798	0+034.788	-2.395	198.727	198.735
℄ Brg. Pier #2	39+164.298	-19.821	0+031.411	-1.995	198.680	198.680
M	39+167.224	-19.852	0+028.432	-1.642	198.637	198.637
N	39+170.149	-19.895	0+025.453	-1.289	198.595	198.596
O	39+173.074	-19.950	0+022.474	-0.936	198.552	198.555
P	39+175.998	-20.015	0+019.494	-0.583	198.508	198.513
Q	39+178.922	-20.092	0+016.515	-0.230	198.465	198.469
℄ Brg. W. Abut.	39+181.845	-20.180	0+013.536	0.123	198.420	198.420
Bk. W. Abut.	39+182.789	-20.211	0+012.574	0.237	198.406	198.406

GIRDER #6

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+122.747	-18.281	0+073.372	-9.282	199.140	199.140
℄ Brg. E. Abut.	39+123.693	-18.239	0+072.410	-9.168	199.128	199.128
A	39+126.622	-18.115	0+069.430	-8.815	199.092	199.098
B	39+129.552	-18.001	0+066.451	-8.462	199.055	199.064
C	39+132.483	-17.900	0+063.472	-8.109	199.018	199.027
D	39+135.415	-17.809	0+060.493	-7.756	198.980	198.985
E	39+138.347	-17.730	0+057.514	-7.403	198.942	198.944
℄ Brg. Pier #1	39+141.279	-17.662	0+054.535	-7.050	198.903	198.903
F	39+144.213	-17.605	0+051.555	-6.698	198.864	198.869
G	39+147.146	-17.560	0+048.576	-6.345	198.825	198.838
H	39+150.080	-17.526	0+045.597	-5.992	198.785	198.805
I	39+153.014	-17.503	0+042.618	-5.639	198.745	198.768
J	39+155.948	-17.492	0+039.639	-5.286	198.704	198.726
K	39+158.882	-17.491	0+036.660	-4.933	198.663	198.678
L	39+161.817	-17.502	0+033.680	-4.580	198.622	198.629
℄ Brg. Pier #2	39+165.142	-17.528	0+030.304	-4.180	198.574	198.574
M	39+168.076	-17.564	0+027.325	-3.827	198.532	198.533
N	39+171.009	-17.610	0+024.346	-3.474	198.489	198.494
O	39+173.942	-17.668	0+021.366	-3.121	198.446	198.454
P	39+176.875	-17.737	0+018.387	-2.768	198.403	198.412
Q	39+179.807	-17.817	0+015.408	-2.415	198.359	198.364
℄ Brg. W. Abut.	39+182.738	-17.908	0+012.429	-2.062	198.314	198.314
Bk. W. Abut.	39+183.685	-17.940	0+011.467	-1.948	198.300	198.300

GIRDER #7

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+123.471	-15.946	0+072.265	-11.467	199.035	199.035
℄ Brg. E. Abut.	39+124.420	-15.905	0+071.302	-11.353	199.023	199.023
A	39+127.358	-15.783	0+068.323	-11.000	198.987	198.993
B	39+130.297	-15.673	0+065.344	-10.647	198.949	198.958
C	39+133.236	-15.574	0+062.365	-10.294	198.912	198.921
D	39+136.177	-15.487	0+059.386	-9.941	198.874	198.879
E	39+139.117	-15.410	0+056.407	-9.588	198.836	198.838
℄ Brg. Pier #1	39+142.059	-15.345	0+053.427	-9.235	198.797	198.797
F	39+145.000	-15.292	0+050.448	-8.882	198.758	198.763
G	39+147.942	-15.249	0+047.469	-8.530	198.718	198.731
H	39+150.885	-15.218	0+044.490	-8.177	198.679	198.699
I	39+153.827	-15.199	0+041.511	-7.824	198.638	198.661
J	39+156.770	-15.190	0+038.532	-7.471	198.597	198.619
K	39+159.713	-15.193	0+035.552	-7.118	198.556	198.571
L	39+162.655	-15.207	0+032.573	-6.765	198.515	198.522
℄ Brg. Pier #2	39+165.990	-15.237	0+029.197	-6.365	198.467	198.467
M	39+168.932	-15.276	0+026.218	-6.012	198.425	198.426
N	39+171.874	-15.325	0+023.238	-5.659	198.382	198.387
O	39+174.816	-15.386	0+020.259	-5.306	198.339	198.348
P	39+177.757	-15.459	0+017.280	-4.953	198.295	198.304
Q	39+180.697	-15.542	0+014.301	-4.600	198.251	198.257
℄ Brg. W. Abut.	39+183.637	-15.637	0+011.322	-4.247	198.206	198.206
Bk. W. Abut.	39+184.586	-15.670	0+010.359	-4.133	198.192	198.192

DESIGNED	ADL
CHECKED	WLW
DRAWN	KTH
CHECKED	WLW

TOP OF SLAB ELEVATIONS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

GIRDER #8

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+124.200	-13.612	0+071.158	-13.652	198.898	198.898
℄ Brg. E. Abut.	39+125.152	-13.572	0+070.195	-13.538	198.886	198.886
A	39+128.098	-13.453	0+067.216	-13.185	198.850	198.856
B	39+131.046	-13.346	0+064.237	-12.832	198.812	198.821
C	39+133.994	-13.250	0+061.258	-12.479	198.775	198.784
D	39+136.943	-13.165	0+058.279	-12.126	198.737	198.742
E	39+139.892	-13.092	0+055.299	-11.773	198.698	198.700
℄ Brg. Pier #1	39+142.842	-13.030	0+052.320	-11.420	198.660	198.660
F	39+145.793	-12.979	0+049.341	-11.067	198.620	198.625
G	39+148.743	-12.940	0+046.362	-10.714	198.581	198.594
H	39+151.694	-12.912	0+043.383	-10.361	198.541	198.561
I	39+154.646	-12.895	0+040.404	-10.009	198.500	198.523
J	39+157.597	-12.890	0+037.424	-9.656	198.459	198.481
K	39+160.548	-12.896	0+034.445	-9.303	198.418	198.433
L	39+163.499	-12.914	0+031.466	-8.950	198.377	198.384
℄ Brg. Pier #2	39+166.844	-12.947	0+028.090	-8.550	198.329	198.329
M	39+169.794	-12.989	0+025.110	-8.197	198.286	198.287
N	39+172.745	-13.042	0+022.131	-7.844	198.243	198.248
O	39+175.694	-13.106	0+019.152	-7.491	198.200	198.209
P	39+178.644	-13.182	0+016.173	-7.138	198.156	198.165
Q	39+181.592	-13.269	0+013.194	-6.785	198.112	198.118
℄ Brg. W. Abut.	39+184.541	-13.367	0+010.215	-6.432	198.067	198.067
Bk. W. Abut.	39+185.493	-13.402	0+009.252	-6.318	198.053	198.053

GIRDER #9

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+124.933	-11.279	0+070.050	-15.837	198.761	198.761
℄ Brg. E. Abut.	39+125.888	-11.239	0+069.088	-15.723	198.750	198.750
A	39+128.843	-11.123	0+066.109	-15.370	198.713	198.719
B	39+131.799	-11.019	0+063.130	-15.017	198.675	198.684
C	39+134.756	-10.926	0+060.151	-14.664	198.638	198.647
D	39+137.714	-10.844	0+057.171	-14.311	198.600	198.605
E	39+140.672	-10.774	0+054.192	-13.958	198.561	198.563
℄ Brg. Pier #1	39+143.631	-10.715	0+051.213	-13.605	198.522	198.522
F	39+146.590	-10.667	0+048.234	-13.252	198.483	198.488
G	39+149.549	-10.631	0+045.255	-12.899	198.443	198.456
H	39+152.509	-10.606	0+042.276	-12.546	198.403	198.423
I	39+155.468	-10.593	0+039.296	-12.193	198.362	198.385
J	39+158.428	-10.591	0+036.317	-11.841	198.321	198.342
K	39+161.388	-10.600	0+033.338	-11.488	198.280	198.294
L	39+164.348	-10.621	0+030.359	-11.135	198.238	198.245
℄ Brg. Pier #2	39+167.702	-10.658	0+026.982	-10.735	198.190	198.190
M	39+170.661	-10.703	0+024.003	-10.382	198.148	198.149
N	39+173.620	-10.759	0+021.024	-10.029	198.105	198.110
O	39+176.578	-10.827	0+018.045	-9.676	198.061	198.070
P	39+179.536	-10.906	0+015.066	-9.323	198.017	198.026
Q	39+182.493	-10.997	0+012.087	-8.970	197.973	197.979
℄ Brg. W. Abut.	39+185.449	-11.098	0+009.107	-8.617	197.928	197.928
Bk. W. Abut.	39+186.404	-11.134	0+008.145	-8.503	197.914	197.914

GIRDER #10

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+125.670	-8.946	0+068.943	-18.022	198.625	198.625
℄ Brg. E. Abut.	39+126.628	-8.907	0+067.981	-17.908	198.613	198.613
A	39+129.592	-8.794	0+065.002	-17.555	198.576	198.582
B	39+132.557	-8.693	0+062.023	-17.202	198.538	198.547
C	39+135.523	-8.602	0+059.043	-16.849	198.501	198.510
D	39+138.489	-8.524	0+056.064	-16.496	198.462	198.467
E	39+141.456	-8.456	0+053.085	-16.143	198.424	198.426
℄ Brg. Pier #1	39+144.424	-8.400	0+050.106	-15.790	198.385	198.385
F	39+147.391	-8.356	0+047.127	-15.437	198.345	198.350
G	39+150.360	-8.323	0+044.148	-15.084	198.305	198.318
H	39+153.328	-8.301	0+041.168	-14.731	198.265	198.283
I	39+156.296	-8.291	0+038.189	-14.378	198.224	198.246
J	39+159.265	-8.292	0+035.210	-14.025	198.183	198.203
K	39+162.233	-8.305	0+032.231	-13.673	198.142	198.156
L	39+165.201	-8.329	0+029.252	-13.320	198.100	198.106
℄ Brg. Pier #2	39+168.565	-8.370	0+025.875	-12.920	198.052	198.052
M	39+171.533	-8.418	0+022.896	-12.567	198.009	198.010
N	39+174.500	-8.478	0+019.917	-12.214	197.966	197.972
O	39+177.467	-8.549	0+016.938	-11.861	197.922	197.931
P	39+180.433	-8.631	0+013.959	-11.508	197.878	197.887
Q	39+183.399	-8.725	0+010.979	-11.155	197.834	197.841
℄ Brg. W. Abut.	39+186.363	-8.831	0+008.000	-10.802	197.789	197.789
Bk. W. Abut.	39+187.321	-8.867	0+007.038	-10.688	197.775	197.775

GIRDER #11

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
Bk. E. Abut.	39+126.412	-6.614	0+067.836	-20.207	198.488	198.488
℄ Brg. E. Abut.	39+127.372	-6.576	0+066.874	-20.093	198.476	198.476
A	39+130.346	-6.466	0+063.895	-19.740	198.439	198.445
B	39+133.319	-6.367	0+060.915	-19.387	198.401	198.410
C	39+136.294	-6.280	0+057.936	-19.034	198.363	198.372
D	39+139.269	-6.204	0+054.957	-18.681	198.325	198.331
E	39+142.245	-6.140	0+051.978	-18.328	198.286	198.288
℄ Brg. Pier #1	39+145.221	-6.087	0+048.999	-17.975	198.247	198.247
F	39+148.198	-6.046	0+046.020	-17.622	198.208	198.213
G	39+151.175	-6.016	0+043.040	-17.269	198.168	198.181
H	39+154.152	-5.997	0+040.061	-16.916	198.127	198.146
I	39+157.129	-5.990	0+037.082	-16.563	198.086	198.109
J	39+160.106	-5.994	0+034.103	-16.210	198.045	198.067
K	39+163.083	-6.010	0+031.124	-15.857	198.004	198.018
L	39+166.060	-6.038	0+028.144	-15.505	197.962	197.969
℄ Brg. Pier #2	39+169.433	-6.082	0+024.768	-15.105	197.914	197.914
M	39+172.410	-6.134	0+021.789	-14.752	197.871	197.872
N	39+175.385	-6.197	0+018.810	-14.399	197.827	197.832
O	39+178.361	-6.272	0+015.831	-14.046	197.784	197.792
P	39+181.335	-6.358	0+012.851	-13.693	197.740	197.749
Q	39+184.309	-6.455	0+009.872	-13.340	197.695	197.701
℄ Brg. W. Abut.	39+187.283	-6.564	0+006.893	-12.987	197.650	197.650
Bk. W. Abut.	39+188.243	-6.602	0+005.931	-12.873	197.635	197.635

GIRDERS 12 & 13

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
	Station	Offset	Station	Offset		
at Girder 1	39+168.485	-23.378	0+027.511	2.000	198.766	198.766
at Girder 2	39+168.497	-22.521	0+027.410	1.148	198.730	198.730
at Girder 3	39+168.509	-21.663	0+027.309	0.297	198.694	198.694
at Girder 4	39+168.521	-20.767	0+027.203	-0.594	198.656	198.656
at Girder 5	39+168.534	-19.870	0+027.098	-1.484	198.614	198.614

DESIGNED	ADL
CHECKED	WLW
DRAWN	KTH
CHECKED	WLW

TOP OF SLAB ELEVATIONS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

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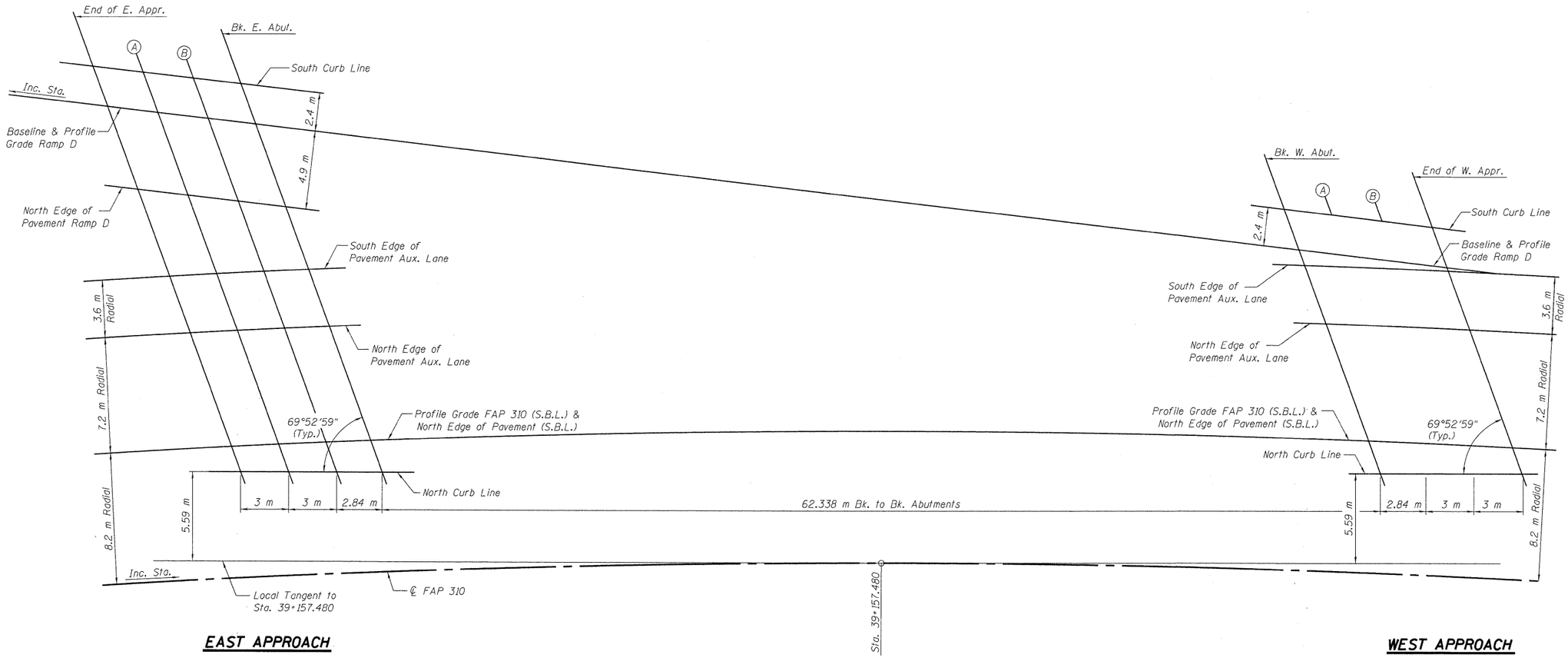
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	78
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 11
45 **SHEETS**

Contract #76634
* 60-15VB-1 & 2

Notes:
See sheet #12 of 45 for Theoretical Grade Elevation Tables.
All offsets are in meters.
Offsets are measured perpendicular from ℄ FAP 310 or from ℄ Ramp D.



EAST APPROACH

WEST APPROACH

PLAN

DESIGNED	ADL
CHECKED	WLW
DRAWN	KTH
CHECKED	WLW

TOP OF APPROACH SLAB ELEVATIONS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. P. 310	*	MADISON	149	79
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 12
45 SHEETS

Contract #76634
* 60-15VB-1 & 2

SOUTH CURB LINE

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
End of E. Appr.	39+110.134	-32.379	0+088.598	2.400	199.492
A	39+113.120	-31.824	0+085.440	2.400	199.492
B	39+116.110	-31.280	0+082.282	2.400	199.483
Bk. E. Abut.	39+118.944	-30.777	0+079.292	2.400	199.474

SOUTH EDGE OF PAVEMENT AUX. LANE

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
End of E. Appr.	39+114.040	-19.000	0+082.282	-10.064	199.233
A	39+116.916	-19.000	0+079.379	-9.560	199.207
B	39+119.796	-19.000	0+076.471	-9.067	199.180
Bk. E. Abut.	39+122.524	-19.000	0+073.713	-8.609	199.154

BASELINE & PROFILE GRADE RAMP D

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
End of E. Appr.	39+110.876	-29.801	0+087.381	0.000	199.453
A	39+113.872	-29.249	0+084.223	0.000	199.445
B	39+116.872	-28.709	0+081.065	0.000	199.432
Bk. E. Abut.	39+119.716	-28.209	0+078.076	0.000	199.417

NORTH EDGE OF PAVEMENT AUX. LANE

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
End of E. Appr.	39+115.115	-15.400	0+080.580	-13.421	199.079
A	39+118.005	-15.400	0+077.675	-12.921	199.053
B	39+120.899	-15.400	0+074.766	-12.432	199.026
Bk. E. Abut.	39+123.641	-15.400	0+072.006	-11.978	198.999

NORTH CURB LINE

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
End of E. Appr.	39+117.782	-6.609	0+076.422	-21.626	198.572
A	39+120.754	-6.462	0+073.443	-21.273	198.536
B	39+123.726	-6.327	0+070.464	-20.920	198.500
Bk. E. Abut.	39+126.541	-6.209	0+067.644	-20.586	198.465

NORTH EDGE OF PAVEMENT RAMP D

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
End of E. Appr.	39+112.406	-24.541	0+084.898	-4.900	199.361
A	39+115.423	-23.995	0+081.740	-4.900	199.339
B	39+118.443	-23.461	0+078.582	-4.900	199.314
Bk. E. Abut.	39+121.306	-22.967	0+075.593	-4.900	199.286

PROFILE GRADE FAP 310 (S.B.L.) & NORTH EDGE OF PAVEMENT (S.B.L.)

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
End of E. Appr.	39+117.295	-8.200	0+077.175	-20.140	198.664
A	39+120.214	-8.200	0+074.267	-19.648	198.637
B	39+123.137	-8.200	0+071.353	-19.166	198.608
Bk. E. Abut.	39+125.907	-8.200	0+068.590	-18.720	198.581

EAST APPROACH

SOUTH CURB LINE

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
Bk. W. Abut.	39+181.916	-22.464	0+013.671	2.400	198.508
A	39+184.812	-22.210	0+010.681	2.400	198.449
B	39+187.874	-21.954	0+007.523	2.400	198.387
End of W. Appr.	39+190.938	-21.709	0+004.365	2.400	198.323

NORTH EDGE OF PAVEMENT AUX. LANE

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
Bk. W. Abut.	39+184.701	-15.400	0+010.228	-4.393	198.179
A	39+187.527	-15.400	0+007.357	-4.160	198.131
B	39+190.516	-15.400	0+004.319	-3.924	198.078
End of W. Appr.	39+193.510	-15.400	0+001.274	-3.699	198.025

BASELINE & PROFILE GRADE RAMP D

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
Bk. W. Abut.	39+182.894	-19.968	0+012.454	0.000	198.394
A	39+185.800	-19.718	0+009.464	0.000	198.334
B	39+188.827	-19.465	0+006.306	0.000	198.270
End of W. Appr.	39+191.945	-19.225	0+003.149	0.000	198.206

PROFILE GRADE FAP 310 (S.B.L.) & NORTH EDGE OF PAVEMENT (S.B.L.)

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
Bk. W. Abut.	39+187.597	-8.200	0+006.712	-11.331	197.734
A	39+190.452	-8.200	0+003.836	-11.108	197.681
B	39+193.473	-8.200	0+000.792	-10.883	197.627
End of W. Appr.	39+196.499	-8.200			197.574

SOUTH EDGE OF PAVEMENT AUX. LANE

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
Bk. W. Abut.	39+183.274	-19.000	0+011.984	-0.928	198.348
A	39+186.085	-19.000	0+009.114	-0.690	198.300
B	39+189.059	-19.000	0+006.078	-0.448	198.248
End of W. Appr.	39+192.032	-19.000	0+003.038	-0.218	198.195

NORTH CURB LINE

Location	℄ FAP 310		℄ Ramp D		Theoretical Grade Elevations
	Station	Offset	Station	Offset	
Bk. W. Abut.	39+188.408	-6.209	0+005.739	-13.252	197.608
A	39+191.223	-6.325	0+002.918	-12.919	197.655
B	39+194.196	-6.459			197.519
End of W. Appr.	39+197.168	-6.605			197.473

WEST APPROACH

TOP OF APPROACH SLAB ELEVATIONS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

DESIGNED	ADL
CHECKED	WLW
DRAWN	KTH
CHECKED	WLW

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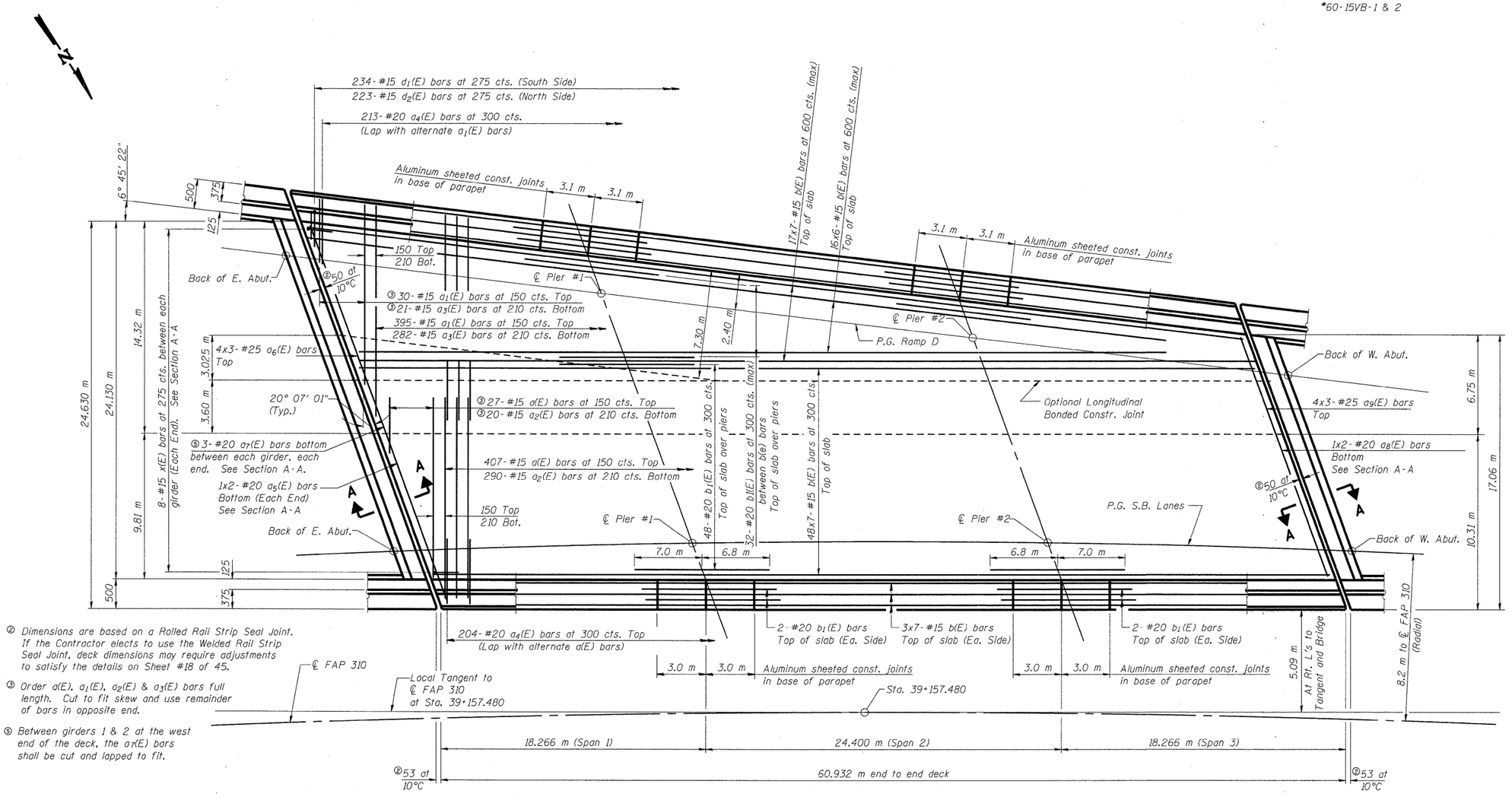
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	80
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT -	

SHEET NO. 13
45 SHEETS

Contract #76634
*60-15VB-1 & 2



② Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Sheet #18 of 45.

③ Order a(E), a_1(E), a_2(E) & a_3(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

⑤ Between girders 1 & 2 at the west end of the deck, the a_7(E) bars shall be cut and lapped to fit.

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/DGM
CHECKED	WLW

Notes: See Sheet #16 of 45 for superstructure details and Bill of Materials.
Bars indicated thus 3x7-#15 etc. indicates 3 lines of bars with 7 lengths per line.
See Sheet #17 of 45 for parapet reinforcement.
See Sheet #15 of 45 for Cross Section thru Deck.
See Sheet #15 of 45 for Section A-A.
Lap a(E) bars with a_1(E) bars.
Lap a_2(E) bars with a_3(E) bars.

PLAN

MIN. BAR LAPS

#15 bars = 640
#20 bars = 790
#25 bars = 1.32 m

(Sheet 1 of 2)

SUPERSTRUCTURE
FAP RTE. 310 (IL RTE. 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

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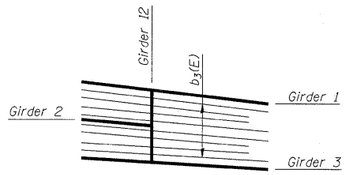
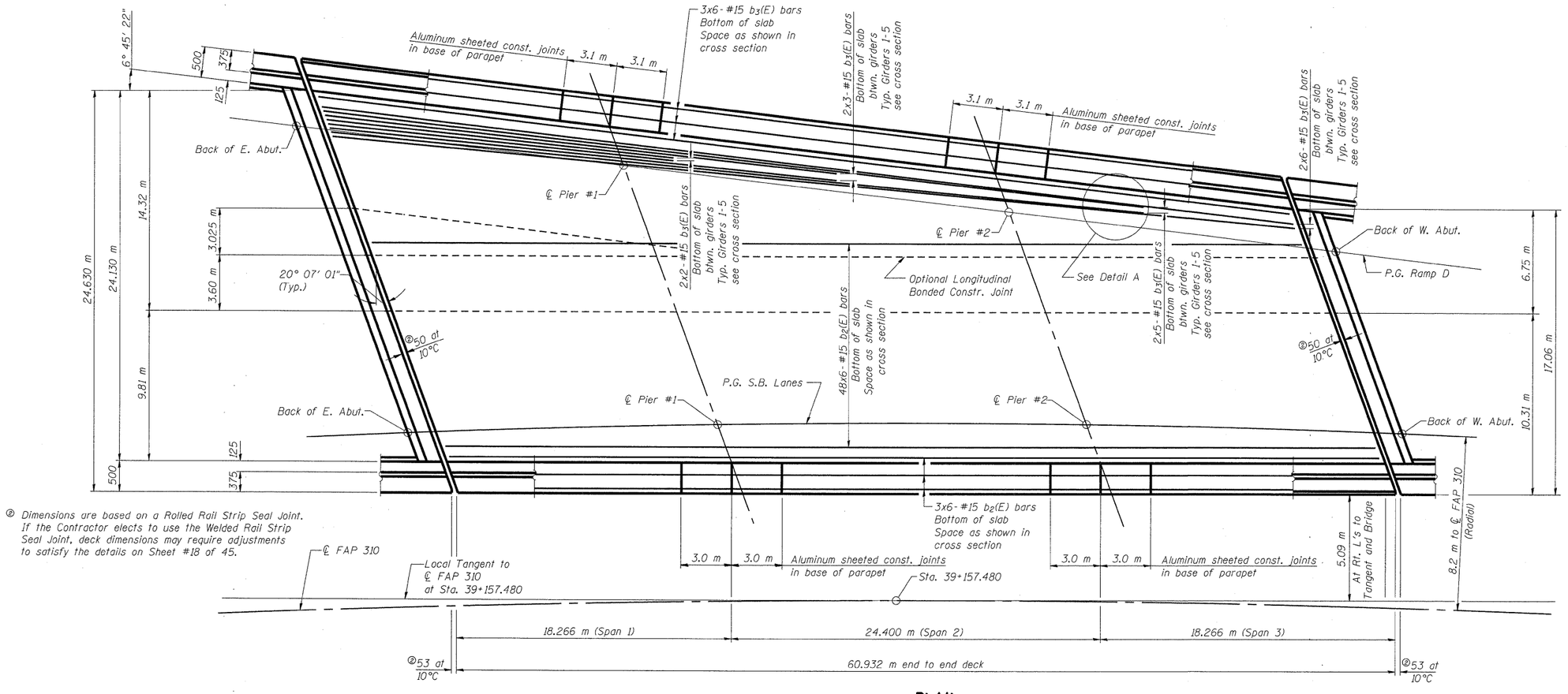
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	81
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 14
45 SHEETS

Contract #76634
*60-15VB-1 & 2



DETAIL A



② Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Sheet #18 of 45.

PLAN

(Showing bottom of slab longitudinal reinforcement)

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

Notes: See Sheet #16 of 45 for superstructure details and Bill of Materials.
Bars indicated thus 2x3-#15 etc. indicates 2 lines of bars with 3 lengths per line.
See Sheet #15 of 45 for Cross Section thru Deck.
Bottom longitudinal bars between girders 2 thru 4 not shown for clarity.

MIN. BAR LAPS

#15 bars = 640
#20 bars = 790
#25 bars = 1.32 m

(Sheet 2 of 2)

SUPERSTRUCTURE
FAP RTE. 310 (IL RTE. 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

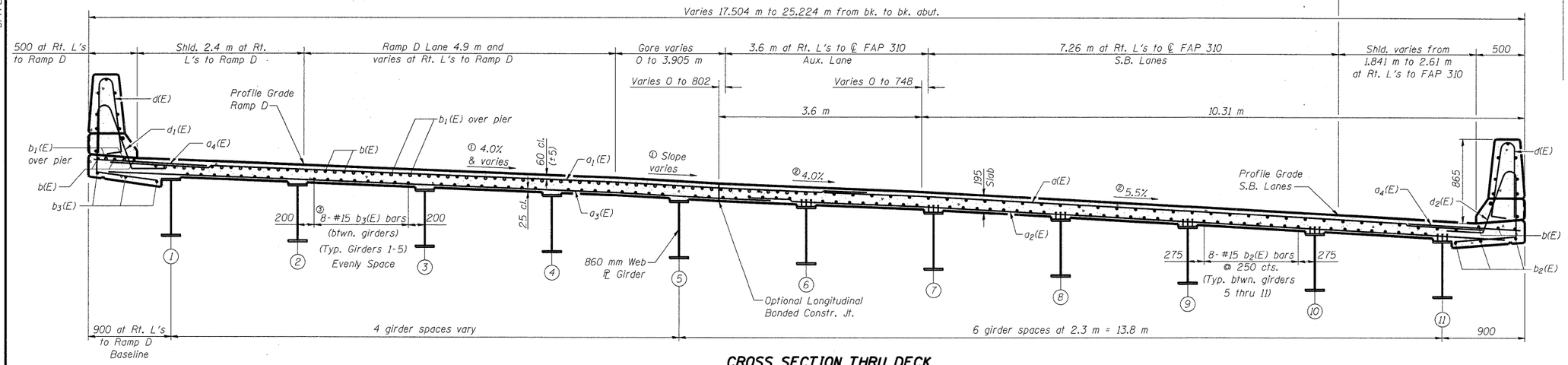
Klingner & Assoc., P.C.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. L. F. A. P. 310	*	MADISON	149	82
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 15
45 SHEETS

Contract #76634
*60-15VB-1 & 2
8.2 m (Radial)
to FAP 310

℄ FAP 310



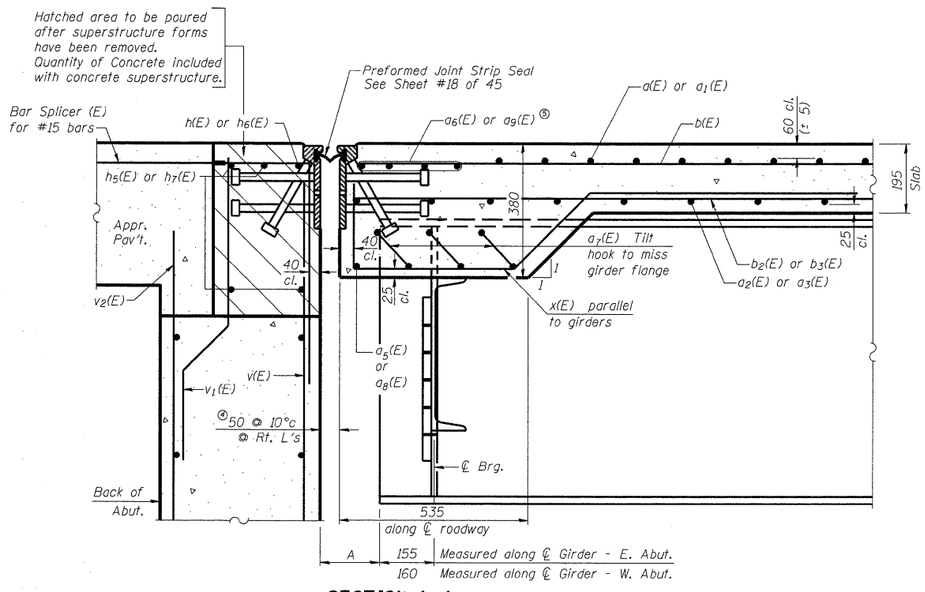
NEAR PIER

CROSS SECTION THRU DECK

(Looking West)
(All dimensions are at Rt. L's to Local Tangent at Sta. 39+157.48, unless noted)

NEAR MIDSPAN

① at Rt. L's to Ramp D Baseline
② at Rt. L's to local tangent at Sta 39+157.48
③ Number of Bars varies from 2 to 8



SECTION A-A

At East and West Abutments

"A" DIMENSION

	E. Abut.	W. Abut.
Girder 1	181	176
Girder 2	177	
Girder 3	172	167
Girder 4	168	
Girders 5-11	164	159

Notes:
$a_5(E)$, $a_6(E)$ and $a_7(E)$ bars placed along skew.
See sheet #14 of 45 for $b_3(E)$ layout.

④ Dimensions are based on a Rolled Rail Strip Seal Joint. If the Contractor elects to use the Welded Rail Strip Seal Joint, deck dimensions may require adjustments to satisfy the details on Sheet #18 of 45.

⑤ $a_6(E)$ bars at 100 mm spacing. Place under longitudinal bars.

DESIGNED	ADL
CHECKED	WLW
DRAWN	KTH
CHECKED	WLW

SUPERSTRUCTURE DETAILS
FAP RTE. 310 (IL RTE. 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

5/7/2009 10:57:49 AM
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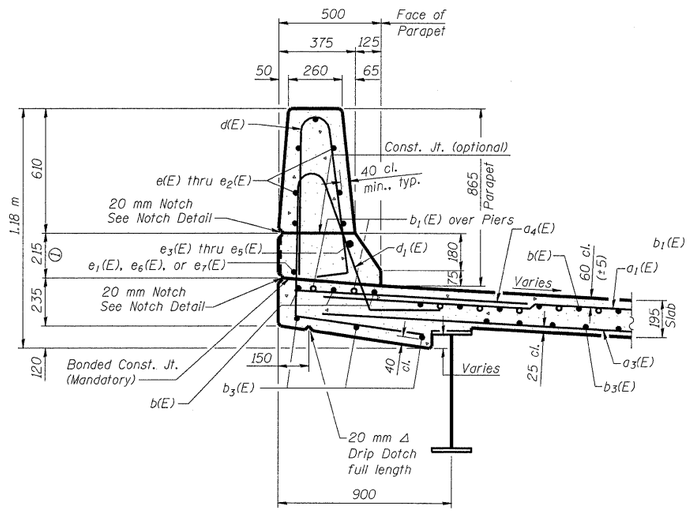
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
R. R. I. F. A. P. 310	*	MADISON	149	83
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

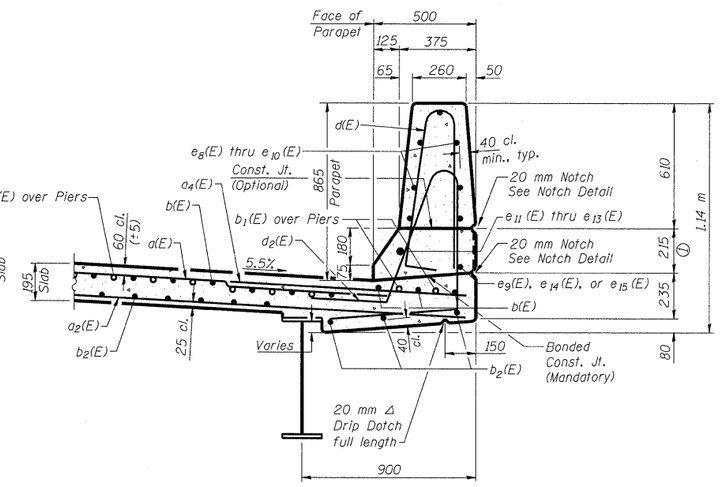
SHEET NO. 16
45 SHEETS

Contract #76634
*60-15VB-1 & 2



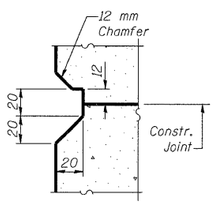
SECTION THRU SOUTH PARAPET

① Patterned Rope Texture Concrete. See Sheet #4 of 45 for details.

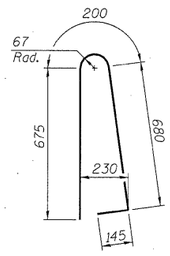


SECTION THRU NORTH PARAPET

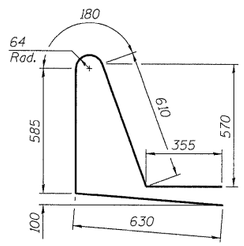
① Patterned Rope Texture Concrete. See Sheet #4 of 45 for details.



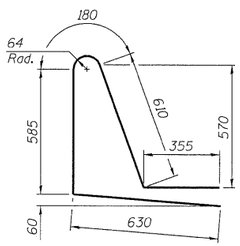
NOTCH DETAIL



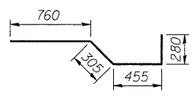
BAR d(E)



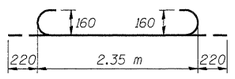
BAR d_1(E)



BAR d_2(E)



BAR x(E)



a_7(E) BAR

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
a(E)	434	#15	10.90	
a_1(E)	425	#15	13.70	
a_2(E)	310	#15	13.90	
a_3(E)	303	#15	10.70	
a_4(E)	417	#20	1.80	
a_5(E)	2	#20	13.65	
a_6(E)	12	#25	9.72	
a_7(E)	54	#20	2.79	
a_8(E)	2	#20	9.63	
a_9(E)	12	#25	7.04	
b(E)	593	#15	9.72	
b_1(E)	168	#20	13.80	
b_2(E)	306	#15	10.70	
b_3(E)	146	#15	11.23	
d(E)	457	#15	1.70	
d_1(E)	234	#15	2.36	
d_2(E)	223	#15	2.36	
e(E)	42	#15	5.28	
e_1(E)	32	#15	3.00	
e_2(E)	28	#15	4.77	
e_3(E)	4	#25	8.68	
e_4(E)	4	#25	3.00	
e_5(E)	2	#25	10.35	
e_6(E)	4	#15	8.34	
e_7(E)	3	#15	6.89	
e_8(E)	42	#15	5.00	
e_9(E)	32	#15	2.90	
e_{10}(E)	28	#15	4.50	
e_{11}(E)	4	#25	8.25	
e_{12}(E)	4	#25	2.90	
e_{13}(E)	2	#25	9.81	
e_{14}(E)	4	#15	7.90	
e_{15}(E)	3	#15	6.53	
x(E)	128	#15	1.80	
Reinforcement Bars, Epoxy Coated		kg	59,010	
Concrete Superstructure		m^3	324.3	
Bridge Deck Grooving		m^2	1,240	
Protective Coat		m^2	1,402	
Form Liner Textured Surface		m^2	27	

Bars indicated thus 1 x 2-#15 etc. indicates 1 line of bars with 2 lengths per line.

DESIGNED	ADL
CHECKED	WLW
DRAWN	KTH
CHECKED	WLW

SUPERSTRUCTURE DETAILS
FAP RTE. 310 (IL RTE. 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

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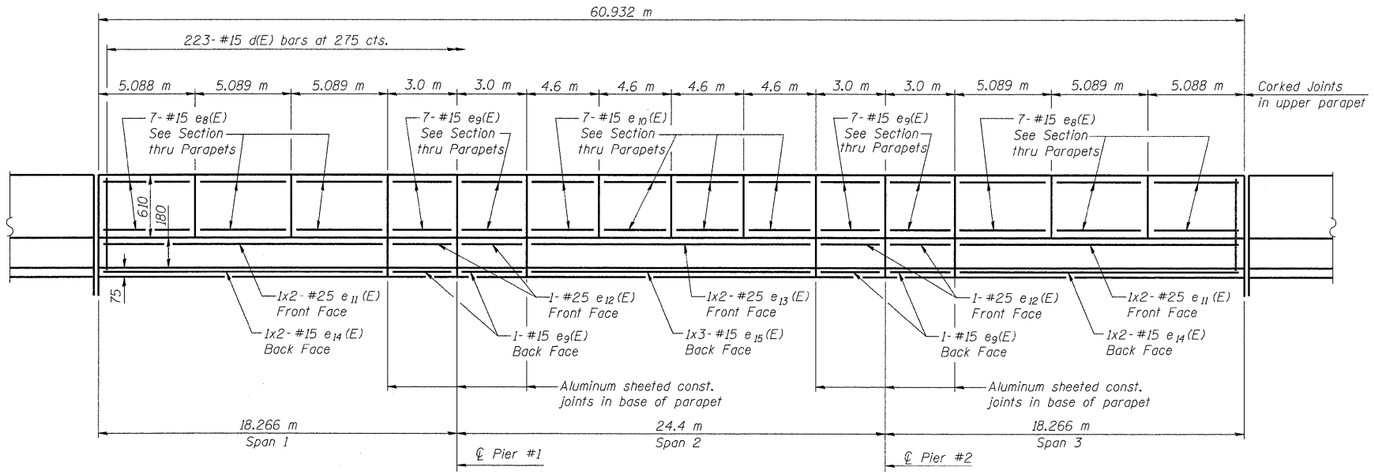
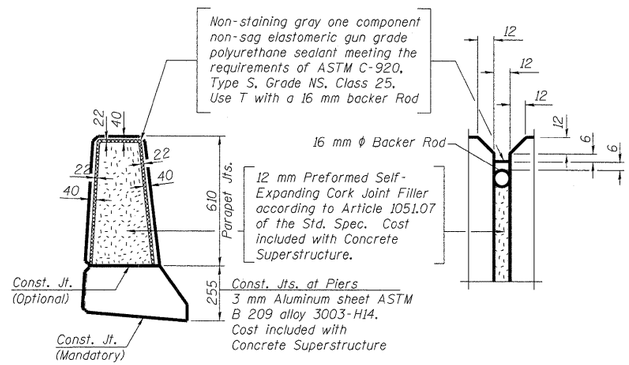
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
R. R. I. F. A. P. 310	*	MADISON	149	84
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 17
45 SHEETS

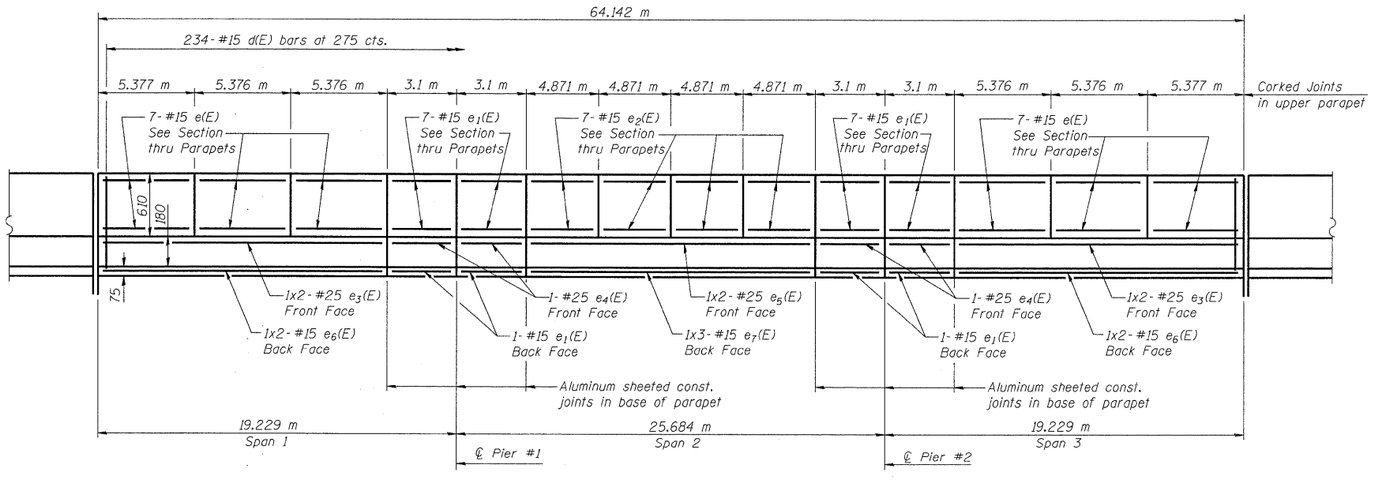
Contract #76634
*60-15VB-1 & 2



INSIDE ELEVATION OF NORTH PARAPET



PARAPET JOINT DETAILS



INSIDE ELEVATION OF SOUTH PARAPET

MIN. BAR LAPS

#15 bars = 640
#20 bars = 790
#25 bars = 1.32 m

DESIGNED	ADL
CHECKED	WLW
DRAWN	KTH
CHECKED	WLW

SUPERSTRUCTURE DETAILS
FAP RTE. 310 (IL RTE. 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

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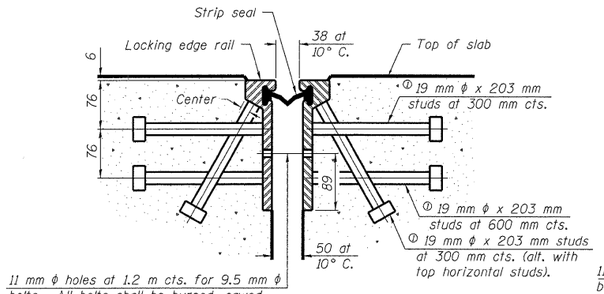
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.P. 310	*	MADISON	149	85
FED. ROAD DIST. NO. 9		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 18
45 SHEETS

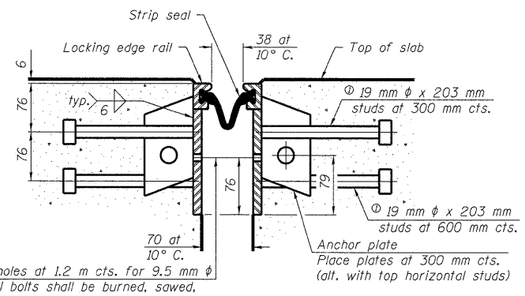
Contract #76634
* 60-15VB-1 & 2

① Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



11 mm ϕ holes at 1.2 m cts. for 9.5 mm ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU ROLLED RAIL JOINT



11 mm ϕ holes at 1.2 m cts. for 9.5 mm ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

SECTION THRU WELDED RAIL JOINT

Notes:

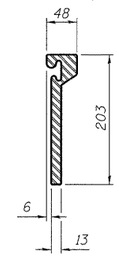
The strip seal shall be made continuous and shall have a minimum thickness of 6 mm. The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 102 mm.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

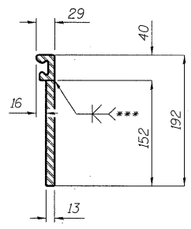
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

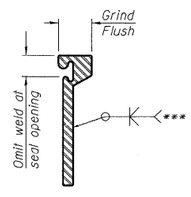
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.



ROLLED (EXTRUDED) RAIL



WELDED RAIL

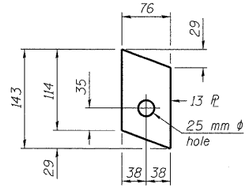


*** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

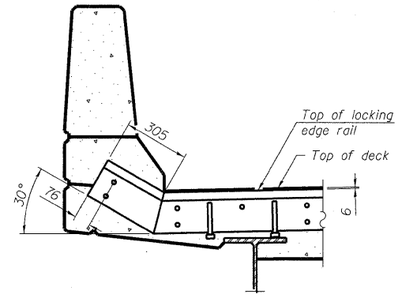
The inside of the locking edge rail groove shall be free of weld residue.

LOCKING EDGE RAILS



ANCHOR ℄

(for welded rail)



AT PARAPET

END TREATMENT

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	m	44.6

DESIGNED	ADL
CHECKED	WLW
DRAWN	KTH
CHECKED	WLW

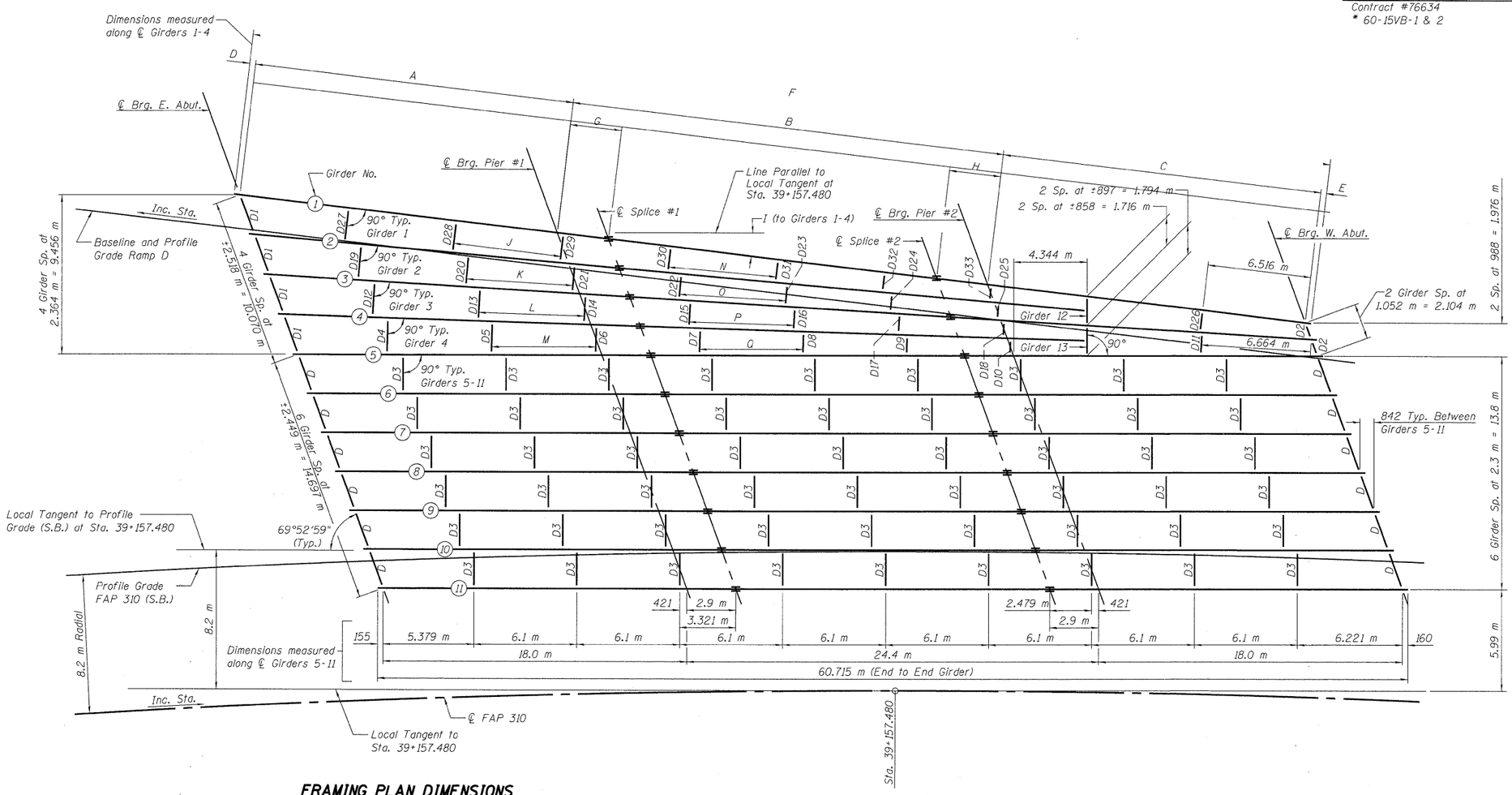
PREFORMED JOINT STRIP SEAL
FAP RTE. 310 (IL RTE. 255) SB & RAMP D OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	86
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 19
45 SHEETS

Contract #76634
* 60-15VB-1 & 2



FRAMING PLAN DIMENSIONS

	A	B	C	D	E	F	G	H	I
Girder 1	18.948 m	25.685 m	18.948 m	155	160	63.896 m	3.053 m	3.053 m	6.756°
Girder 2	18.689 m	25.334 m		155			3.011 m		5.144°
Girder 3	18.442 m	24.999 m	18.442 m	155	160	62.198 m	2.971 m	2.935 m	3.465°
Girder 4	18.214 m	24.690 m		155			2.935 m		1.766°

J	6.461 m Typ. for Girder 1 - Span 1
K	6.366 m Typ. for Girder 2 - Span 1
L	6.275 m Typ. for Girder 3 - Span 1
M	6.190 m Typ. for Girder 4 - Span 1
N	6.376 m Typ. for Girder 1 - Span 2
O	6.290 m Typ. for Girder 2 - Span 2
P	6.209 m Typ. for Girder 3 - Span 2
Q	6.134 m Typ. for Girder 4 - Span 2

FRAMING PLAN

DESIGNED	ADL
CHECKED	WLW
DRAWN	ADL/KTH
CHECKED	WLW

GIRDER DETAILS & FRAMING PLAN
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
FAP ROUTE 310 SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

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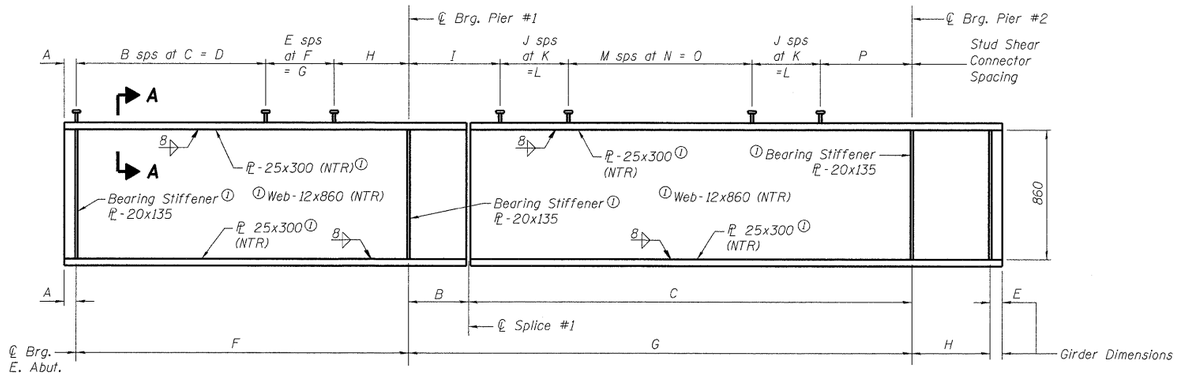
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	87
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

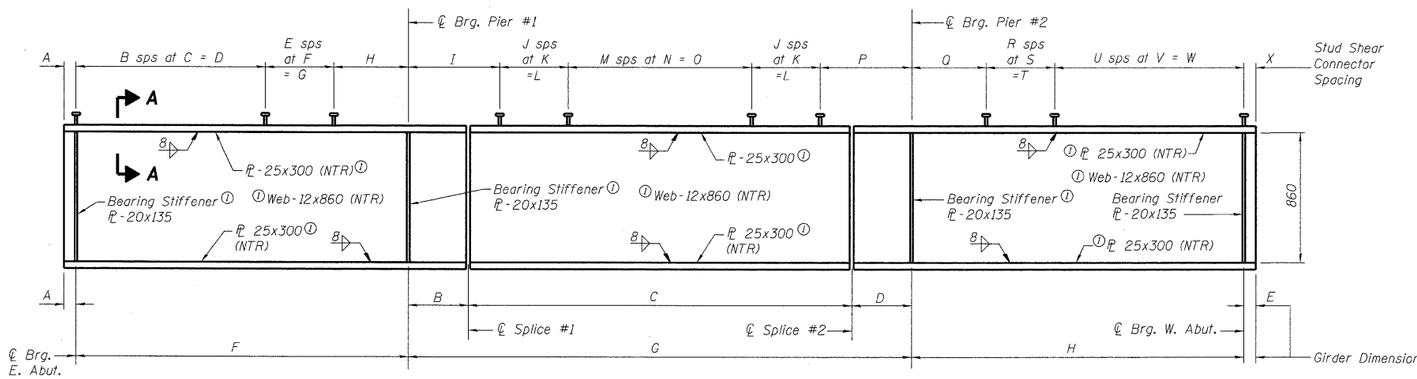
SHEET NO. 20
45 SHEETS

Contract #76634
* 60-15VB-1 & 2



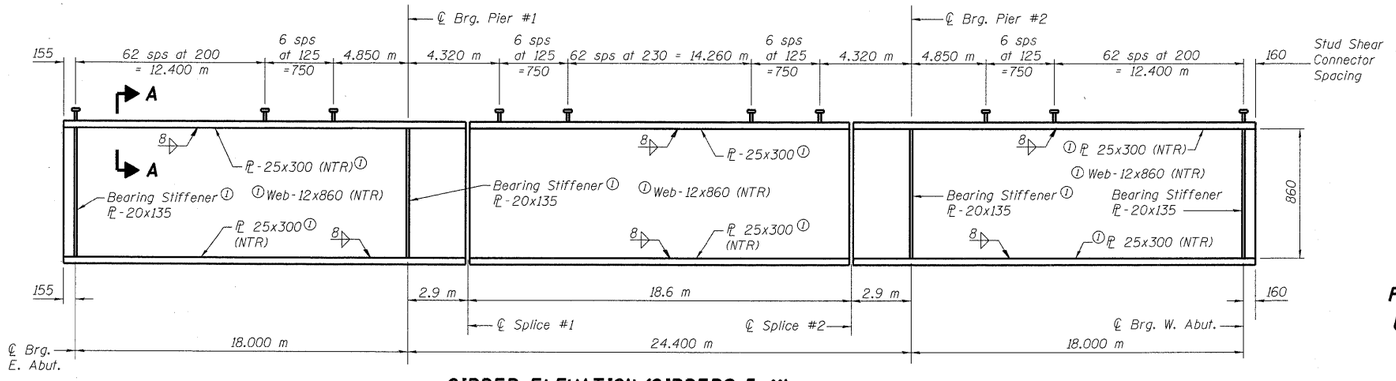
GIRDER ELEVATION (GIRDERS 2 & 4)

"NTR" denotes plates to which notch toughness requirements are applicable.



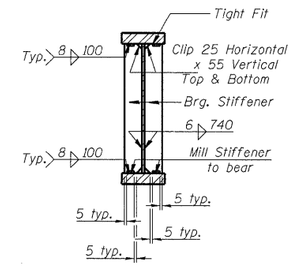
GIRDER ELEVATION (GIRDERS 1 & 3)

"NTR" denotes plates to which notch toughness requirements are applicable.



GIRDER ELEVATION (GIRDERS 5-11)

"NTR" denotes plates to which notch toughness requirements are applicable.



SECTION THRU BEARING STIFFENER AT ABUTMENTS AND PIERS

① Indicates structural steel conforming to AASHTO M270M Grade 345.

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

GIRDER DETAILS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

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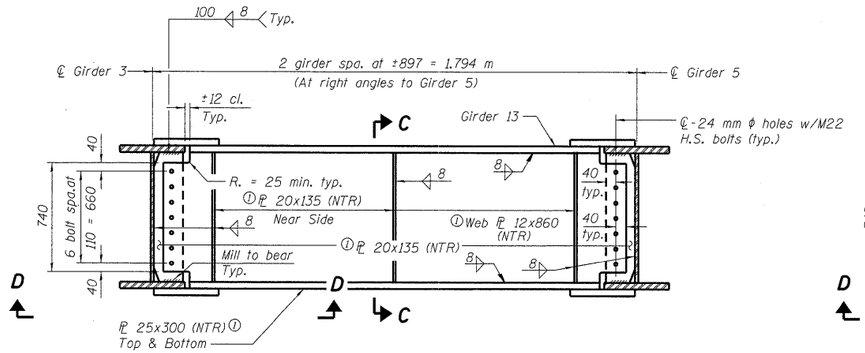
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. RT. I. F. A. P. 310	*	MADISON	149	88
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

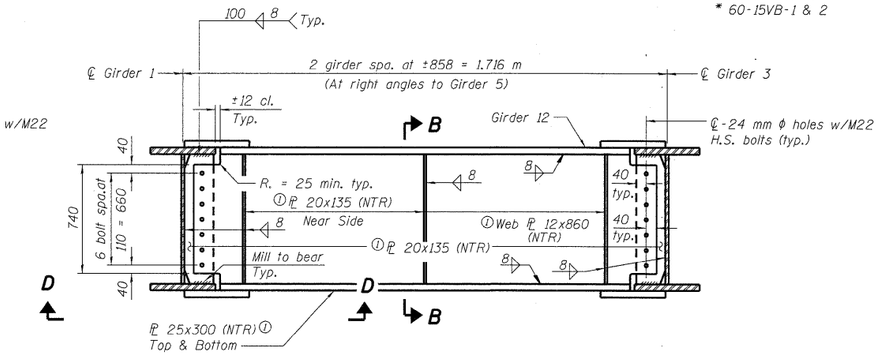
SHEET NO. 21
45 SHEETS

Contract #76634
* 60-15VB-1 & 2



GIRDER 13 ELEVATION

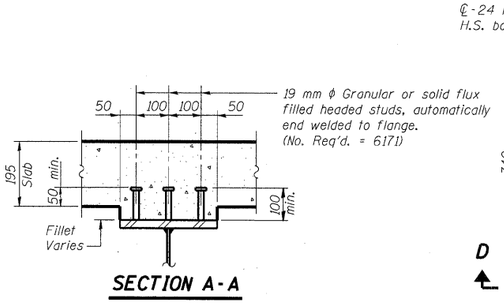
(Girder 4 omitted for clarity. See Section C-C.)
"NTR" denotes plates to which notch toughness requirements are applicable.



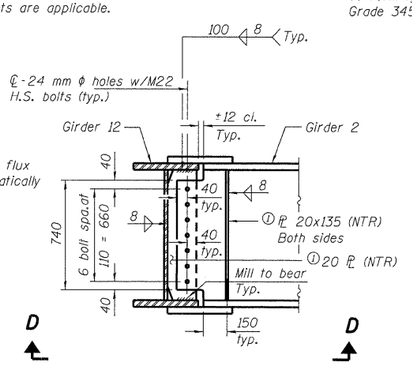
GIRDER 12 ELEVATION

(Girder 2 omitted for clarity. See Section B-B.)
"NTR" denotes plates to which notch toughness requirements are applicable.

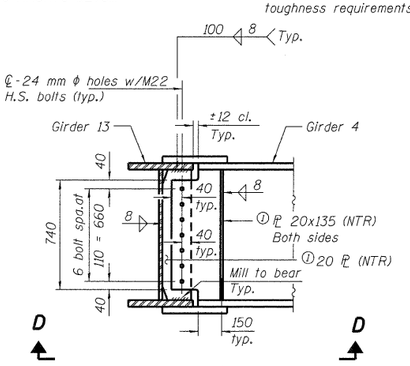
① indicates structural steel conforming to AASHTO M270M Grade 345.



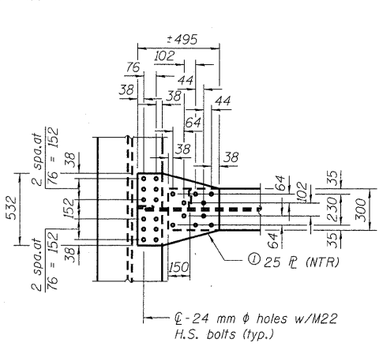
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

STUD SHEAR CONNECTOR SPACING

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
Girder 1	155	62	215	13.330 m	5	125	625	4.993 m	4.762 m	6	100	600	45	340	15.300 m	4.423 m	6.993 m	3	250	750	27	415	11.205 m	160
Girder 2	155	62	215	13.330 m	5	125	625	4.734 m	4.972 m	6	100	600	45	330	14.850 m	4.312 m								
Girder 3	155	62	215	13.330 m	5	125	625	4.487 m	5.069 m	6	100	600	45	325	14.625 m	4.105 m	7.162 m	3	250	750	27	390	10.530 m	160
Girder 4	155	62	210	13.020 m	5	125	625	4.569 m	4.705 m	6	100	600	45	320	14.400 m	4.385 m								

GIRDER DIMENSIONS

	A	B	C	D	E	F	G	H
Girder 1	155	3.053 m	19.579 m	3.053 m	160	18.948 m	25.685 m	18.948 m
Girder 2	155	3.011 m	22.323 m		251	18.689 m	25.334 m	5.547 m
Girder 3	155	2.971 m	19.093 m	2.935 m	160	18.442 m	24.999 m	18.442 m
Girder 4	155	2.935 m	21.755 m		251	18.214 m	24.690 m	4.667 m

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

GIRDER DETAILS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

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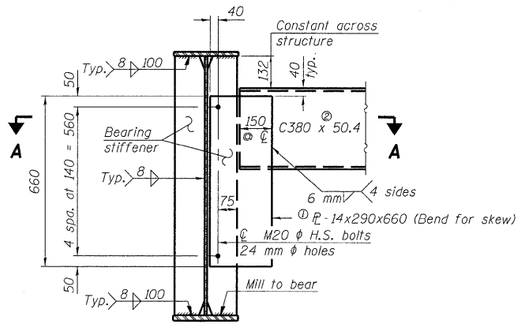
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	89
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 22
45 SHEETS

Contract #76634
* 60-15VB-1 & 2

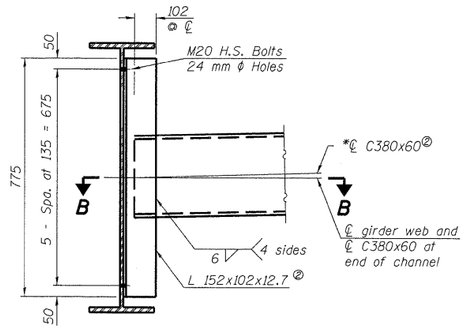
*Alternate C380x74 channels are permitted to facilitate material acquisition.
Calculated weight of structural steel is based on the lighter section.
The alternate, if utilized, shall be provided at no extra cost to the Department.



END DIAPHRAGMS D, D1 & D2

(18 Required)

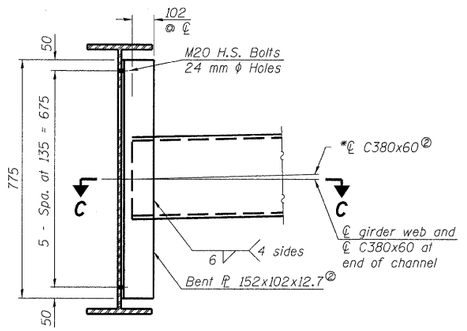
Note:
Two hardened washers required for each set of oversized holes.



INTERIOR DIAPHRAGM D3

(54 Required)

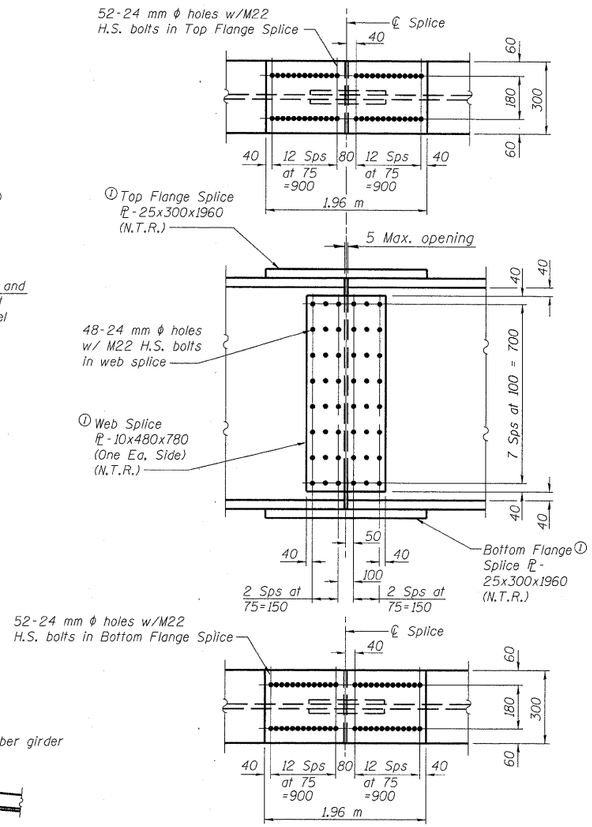
Note:
Two hardened washers required for each set of oversized holes.
All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor bolts.



INTERIOR DIAPHRAGMS, D4 THRU D33

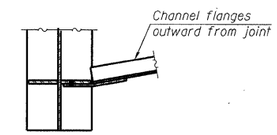
(30 Required)

Note:
Two hardened washers required for each set of oversized holes.
All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor bolts.

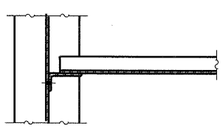


FIELD SPLICE DETAIL

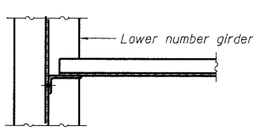
(Typical for all girders)



SECTION A-A

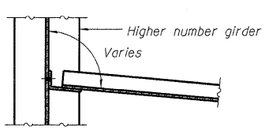


SECTION B-B



SECTION C-C

(At lower number girder)



SECTION C-C

(At higher number girder)

① Indicates structural steel conforming to AASHTO M270M Grade 345.

② Indicates structural steel conforming to AASHTO M270M Grade 250.

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

GIRDER DETAILS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

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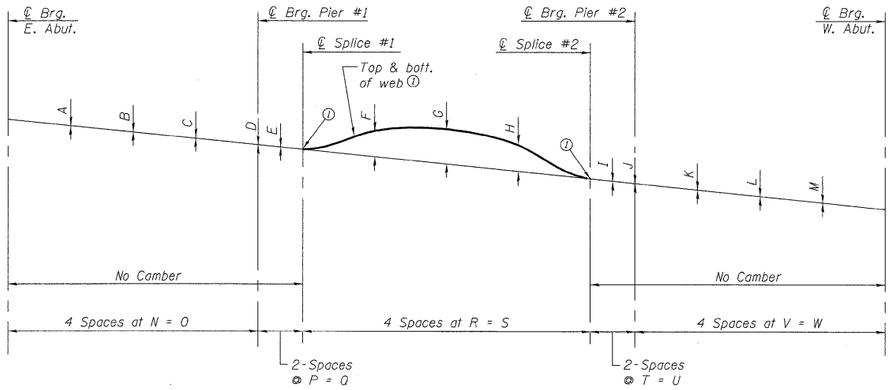
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	90
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

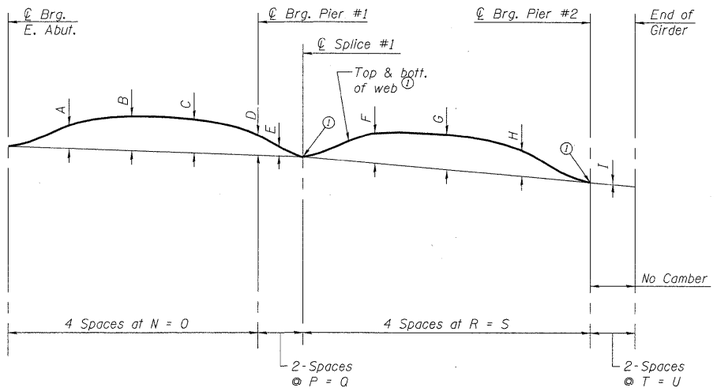
SHEET NO. 23
45 SHEETS

Contract #76634
* 60-15VB-1 & 2



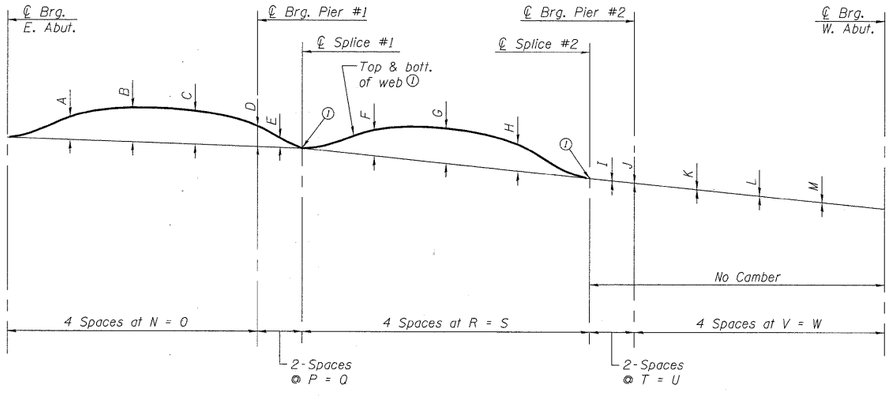
CAMBER DIAGRAM (GIRDERS 6-11)

① Theoretical elevation before dead load deflection



CAMBER DIAGRAM (GIRDERS 2 & 4)

① Theoretical elevation before dead load deflection



CAMBER DIAGRAM (GIRDERS 1, 3, & 5)

① Theoretical elevation before dead load deflection

TOP OF WEB ELEVATIONS							
GIRDER	℄ Brg. E. Abut.	℄ Brg. Pier #1	Splice #1 *	Splice #2 *	℄ Brg. Pier #2	℄ Brg. W. Abut.	End of Girder
1	199.212	199.054	198.995	198.667	198.629	198.266	
2	199.156	198.985	198.925		198.580		198.483
3	199.096	198.914	198.852	198.559	198.531	198.219	
4	199.033	198.840	198.778		198.481		198.409
5	198.963	198.765	198.703	198.453	198.432	198.172	
6	198.880	198.655	198.597	198.348	198.326	198.066	
7	198.775	198.549	198.491	198.241	198.219	197.958	
8	198.638	198.412	198.353	198.102	198.081	197.819	
9	198.502	198.274	198.216	197.964	197.942	197.680	
10	198.365	198.137	198.077	198.077	197.804	197.541	
11	198.228	197.999	197.941	197.687	197.666	197.402	

Elevations for fabrication use only.
* Top of web elevation before dead load deflection.
See sheet 24 of 45 for Camber Diagram Dimensions.

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

GIRDER DETAILS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. R. I. F. A. P. 310	*	MADISON	149	91
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 24
45 SHEETS

Contract #76634
* 60-15VB-1 & 2

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REACTION TABLE (GIRDER 1)					
		E. Abut.	Pier 1	Pier 2	W. Abut.
R℄	(kN)	125	435	344	94
R℄	(kN)	165	203	202	136
Imp.	(kN)	44	53	53	37
R (Total)	(kN)	334	691	599	267

REACTION TABLE (GIRDER 2)				
		E. Abut.	Pier 1	Pier 1
R℄	(kN)	132	430	348
R℄	(kN)	190	225	183
Imp.	(kN)	51	59	48
R (Total)	(kN)	373	714	579

REACTION TABLE (GIRDER 3)					
		E. Abut.	Pier 1	Pier 2	W. Abut.
R℄	(kN)	131	424	296	93
R℄	(kN)	197	232	195	117
Imp.	(kN)	53	60	51	32
R (Total)	(kN)	381	716	542	242

REACTION TABLE (GIRDER 4)				
		E. Abut.	Pier 1	Pier 1
R℄	(kN)	130	423	357
R℄	(kN)	200	233	233
Imp.	(kN)	54	61	61
R (Total)	(kN)	384	717	651

REACTION TABLE (GIRDER 5)					
		E. Abut.	Pier 1	Pier 2	W. Abut.
R℄	(kN)	128	446	341	100
R℄	(kN)	199	259	248	159
Imp.	(kN)	54	67	64	43
R (Total)	(kN)	381	772	653	302

REACTION TABLE (GIRDERS 6-10)			
		E. & W. Abuts.	Piers 1 & 2
R℄	(kN)	128	467
R℄	(kN)	203	287
Imp.	(kN)	55	75
R (Total)	(kN)	386	829

REACTION TABLE (GIRDER 11)			
		E. & W. Abuts.	Piers 1 & 2
R℄	(kN)	127	461
R℄	(kN)	193	258
Imp.	(kN)	52	67
R (Total)	(kN)	372	786

CAMBER DIAGRAM DIMENSIONS

Girder No.	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	28	41	40	29	14	47	56	45	0	0	0	0	0	4.737 m	18.948 m	1.527 m	3.053 m	4.895 m	19.579 m	1.527 m	3.053 m	4.737 m	18.948 m
2	27	39	37	28	14	41	42	28	0					4.672 m	18.689 m	1.506 m	3.011 m	5.581 m	22.323 m	2.729 m	5.457 m		
3	26	38	36	28	14	35	41	36	0	0	0	0	0	4.611 m	18.442 m	1.486 m	2.971 m	4.773 m	19.093 m	1.468 m	2.935 m	4.611 m	18.442 m
4	24	36	33	27	14	34	34	22	0					4.554 m	18.214 m	1.468 m	2.935 m	5.439 m	21.755 m	2.334 m	4.667 m		
5	14	21	22	26	13	34	40	35	0	0	0	0	0	4.500 m	18.000 m	1.450 m	2.900 m	4.650 m	18.600 m	1.450 m	2.900 m	4.500 m	18.000 m
6	0	0	0	0	0	36	42	37	0	0	0	0	0	4.500 m	18.000 m	1.450 m	2.900 m	4.650 m	18.600 m	1.450 m	2.900 m	4.500 m	18.000 m
7	0	0	0	0	0	36	42	37	0	0	0	0	0	4.500 m	18.000 m	1.450 m	2.900 m	4.650 m	18.600 m	1.450 m	2.900 m	4.500 m	18.000 m
8	0	0	0	0	0	37	43	37	0	0	0	0	0	4.500 m	18.000 m	1.450 m	2.900 m	4.650 m	18.600 m	1.450 m	2.900 m	4.500 m	18.000 m
9	0	0	0	0	0	36	43	36	0	0	0	0	0	4.500 m	18.000 m	1.450 m	2.900 m	4.650 m	18.600 m	1.450 m	2.900 m	4.500 m	18.000 m
10	0	0	0	0	0	36	43	37	0	0	0	0	0	4.500 m	18.000 m	1.450 m	2.900 m	4.650 m	18.600 m	1.450 m	2.900 m	4.500 m	18.000 m
11	0	0	0	0	0	36	43	36	0	0	0	0	0	4.500 m	18.000 m	1.450 m	2.900 m	4.650 m	18.600 m	1.450 m	2.900 m	4.500 m	18.000 m

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

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GIRDER DETAILS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER
UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	92
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 25
45 **SHEETS**

Contract #76634
* 60-15VB-1 & 2

MOMENT TABLE (GIRDER 1)

		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.4 Sp. 3
Is	(10^6 mm⁴)	3,574	3,574	3,574	3,574	3,574
Ic (n)	(10^6 mm⁴)	9,235		9,235		9,235
Ic (3n)	(10^6 mm⁴)	6,914		6,914		6,914
Ss	(10^3 mm³)	7,851	7,851	7,851	7,851	7,851
Sc (n)	(10^3 mm³)	11,045		11,045		11,045
Sc (3n)	(10^3 mm³)	10,126		10,126		10,126
$\mathcal{D}$	(kN/m)	11.434	10.705	9.881	9.057	9.902
$M\mathcal{D}$	(kN·m)	271	572	325	435	153
$s\mathcal{D}$	(kN/m)	6.310	6.310	6.310	6.310	6.310
$M_s\mathcal{D}$	(kN·m)	146	315	222	272	104
M_L	(kN·m)	566	406	536	390	485
M_{imp}	(kN·m)	153	101	129	98	131
$\frac{5}{3}[M_L+M_{imp}]$	(kN·m)	1,198	845	1,108	813	1,027
Ma	(kN·m)	2,100	2,252	2,152	1,976	1,669
* M_u	(kN·m)	4,505		4,158		3,918
$fs\mathcal{D}$ non-comp	(MPa)	27	73	32	55	15
$fs\mathcal{D}$ (comp)	(MPa)	14		22		10
$fs\frac{5}{3}(M_L+M_{imp})$	(MPa)	108	108	100	104	93
fs (Overload)	(MPa)	150	180	154	159	118
** fs (Total)	(MPa)		235		207	
VR	(kN)	237				270

MOMENT TABLE (GIRDER 2)

		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2
Is	(10^6 mm⁴)	3,574	3,574	3,574	3,574
Ic (n)	(10^6 mm⁴)	9,235		9,235	
Ic (3n)	(10^6 mm⁴)	6,914		6,914	
Ss	(10^3 mm³)	7,851	7,851	7,851	7,851
Sc (n)	(10^3 mm³)	11,045		11,045	
Sc (3n)	(10^3 mm³)	10,126		10,126	
$\mathcal{D}$	(kN/m)	12.002	10.530	8.855	7.180
$M\mathcal{D}$	(kN·m)	292	553	291	396
$s\mathcal{D}$	(kN/m)	6.310	6.310	6.310	6.310
$M_s\mathcal{D}$	(kN·m)	141	307	217	282
M_L	(kN·m)	572	406	503	312
M_{imp}	(kN·m)	155	102	121	87
$\frac{5}{3}[M_L+M_{imp}]$	(kN·m)	1,212	847	1,040	665
Ma	(kN·m)	2,138	2,219	2,012	1,746
* M_u	(kN·m)	4,507		4,159	
$fs\mathcal{D}$ non-comp	(MPa)	29	70	29	50
$fs\mathcal{D}$ (comp)	(MPa)	14		21	
$fs\frac{5}{3}(M_L+M_{imp})$	(MPa)	110	108	94	85
fs (Overload)	(MPa)	152	178	144	135
** fs (Total)	(MPa)		232		176
VR	(kN)	270		217	

MOMENT TABLE (GIRDER 3)

		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.4 Sp. 3
Is	(10^6 mm⁴)	3,574	3,574	3,574	3,574	3,574
Ic (n)	(10^6 mm⁴)	9,235		9,235		9,235
Ic (3n)	(10^6 mm⁴)	6,914		6,914		6,914
Ss	(10^3 mm³)	7,851	7,851	7,851	7,851	7,851
Sc (n)	(10^3 mm³)	11,045		11,045		11,045
Sc (3n)	(10^3 mm³)	10,126		10,126		10,126
$\mathcal{D}$	(kN/m)	12.127	10.636	8.952	7.267	9.050
$M\mathcal{D}$	(kN·m)	291	535	270	358	100
$s\mathcal{D}$	(kN/m)	6.310	6.310	6.310	6.310	6.310
$M_s\mathcal{D}$	(kN·m)	137	297	208	250	99
M_L	(kN·m)	574	413	497	337	446
M_{imp}	(kN·m)	155	103	119	84	121
$\frac{5}{3}[M_L+M_{imp}]$	(kN·m)	1,215	860	1,027	702	945
Ma	(kN·m)	2,136	2,200	1,956	1,703	1,487
* M_u	(kN·m)	4,512		4,173		3,930
$fs\mathcal{D}$ non-comp	(MPa)	29	68	27	46	10
$fs\mathcal{D}$ (comp)	(MPa)	14		21		10
$fs\frac{5}{3}(M_L+M_{imp})$	(MPa)	110	110	93	89	86
fs (Overload)	(MPa)	152	178	140	135	105
** fs (Total)	(MPa)		231		175	
VR	(kN)	275		221		255

MOMENT TABLE (GIRDER 4)

		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2
Is	(10^6 mm⁴)	3,574	3,574	3,574	3,574
Ic (n)	(10^6 mm⁴)	9,235		9,235	
Ic (3n)	(10^6 mm⁴)	6,914		6,914	
Ss	(10^3 mm³)	7,851	7,851	7,851	7,851
Sc (n)	(10^3 mm³)	11,045		11,045	
Sc (3n)	(10^3 mm³)	10,126		10,126	
$\mathcal{D}$	(kN/m)	12.252	10.742	9.035	7.327
$M\mathcal{D}$	(kN·m)	284	537	283	388
$s\mathcal{D}$	(kN/m)	6.310	6.310	6.310	6.310
$M_s\mathcal{D}$	(kN·m)	134	286	198	265
M_L	(kN·m)	587	418	515	354
M_{imp}	(kN·m)	159	104	124	103
$\frac{5}{3}[M_L+M_{imp}]$	(kN·m)	1,243	870	1,065	762
Ma	(kN·m)	2,160	2,201	2,010	1,839
* M_u	(kN·m)	4,514		4,175	
$fs\mathcal{D}$ non-comp	(MPa)	28	68	28	49
$fs\mathcal{D}$ (comp)	(MPa)	13		20	
$fs\frac{5}{3}(M_L+M_{imp})$	(MPa)	113	111	96	97
fs (Overload)	(MPa)	154	179	144	146
** fs (Total)	(MPa)		233		190
VR	(kN)	283		231	

MOMENT TABLE (GIRDER 5)

		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.4 Sp. 3
Is	(10^6 mm⁴)	3,574	3,574	3,574	3,574	3,574
Ic (n)	(10^6 mm⁴)	9,235		9,235		9,235
Ic (3n)	(10^6 mm⁴)	6,914		6,914		6,914
Ss	(10^3 mm³)	7,851	7,851	7,851	7,851	7,851
Sc (n)	(10^3 mm³)	11,045		11,045		11,045
Sc (3n)	(10^3 mm³)	10,126		10,126		10,126
$\mathcal{D}$	(kN/m)	12.730	11.966	11.101	10.235	11.173
$M\mathcal{D}$	(kN·m)	271	574	323	439	162
$s\mathcal{D}$	(kN/m)	6.310	6.310	6.310	6.310	6.310
$M_s\mathcal{D}$	(kN·m)	133	289	214	246	121
M_L	(kN·m)	621	462	627	398	572
M_{imp}	(kN·m)	168	115	150	100	154
$\frac{5}{3}[M_L+M_{imp}]$	(kN·m)	1,315	962	1,295	830	1,210
Ma	(kN·m)	2,235	2,372	2,382	1,970	1,941
* M_u	(kN·m)	4,606		4,698		4,698
$fs\mathcal{D}$ non-comp	(MPa)	27	73	32	56	16
$fs\mathcal{D}$ (comp)	(MPa)	13		21		12
$fs\frac{5}{3}(M_L+M_{imp})$	(MPa)	119	122	117	106	110
fs (Overload)	(MPa)	159	196	170	162	137
** fs (Total)	(MPa)		254		210	
VR	(kN)	285		276		298

MOMENT TABLE (GIRDERS 6-10)

		0.4 Sp. 1 & 3	Piers 1 & 2	0.5 Sp. 2
Is	(10^6 mm⁴)	3,574	3,574	3,574
Ic (n)	(10^6 mm⁴)	9,235		9,235
Ic (3n)	(10^6 mm⁴)	6,914		6,914
Ss	(10^3 mm³)	7,851	7,851	7,851
Sc (n)	(10^3 mm³)	11,045		11,045
Sc (3n)	(10^3 mm³)	10,126		10,126
$\mathcal{D}$	(kN/m)	13.160	13.160	13.160
$M\mathcal{D}$	(kN·m)	289	614	367
$s\mathcal{D}$	(kN/m)	6.310	6.310	6.310
$M_s\mathcal{D}$	(kN·m)	140	277	200
M_L	(kN·m)	645	514	182
M_{imp}	(kN·m)	174	129	182
$\frac{5}{3}[M_L+M_{imp}]$	(kN·m)	1,365	1,072	607
Ma	(kN·m)	2,332	2,551	1,526
* M_u	(kN·m)	4,592		4,698
$fs\mathcal{D}$ non-comp	(MPa)	29	78	36
$fs\mathcal{D}$ (comp)	(MPa)	14		20
$fs\frac{5}{3}(M_L+M_{imp})$	(MPa)	124	137	55
fs (Overload)	(MPa)	166	215	111
** fs (Total)	(MPa)		279	
VR	(kN)	293		308

MOMENT TABLE (GIRDER 11)

		0.4 Sp. 1 & 3	Piers 1 & 2	0.5 Sp. 2
Is	(10^6 mm⁴)	3,574	3,574	3,574
Ic (n)	(10^6 mm⁴)	9,235		9,235
Ic (3n)	(10^6 mm⁴)	6,914		6,914
Ss	(10^3 mm³)	7,851	7,851	7,851
Sc (n)	(10^3 mm³)	11,045		11,045
Sc (3n)	(10^3 mm³)	10,126		10,126
$\mathcal{D}$	(kN/m)	13.160	13.160	13.160
$M\mathcal{D}$	(kN·m)	268	613	364
$s\mathcal{D}$	(kN/m)	6.310	6.310	6.310
$M_s\mathcal{D}$	(kN·m)	140	273	190
M_L	(kN·m)	644	497	738
M_{imp}	(kN·m)	174	124	184
$\frac{5}{3}[M_L+M_{imp}]$	(kN·m)	1,363	1,035	1,537
Ma	(kN·m)	2,303	2,497	2,718
* M_u	(kN·m)	4,594		4,698
$fs\mathcal{D}$ non-comp	(MPa)	26	78	36
$fs\mathcal{D}$ (comp)	(MPa)	14		19
$fs\frac{5}{3}(M_L+M_{imp})$	(MPa)	123	132	139
fs (Overload)	(MPa)	164	210	194
** fs (Total)	(MPa)		273	
VR	(kN)	279		267

*Compact Composite Section at 0.4 Span 1 & 3, 0.5 Span 2
**Non-compact, non-composite, partially braced section at Piers 1 & 2

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads.

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads.

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads.

$\mathcal{D}$: Un-factored non-composite dead load.

$M\mathcal{D}$: Un-factored moment due to non-composite dead load.

$s\mathcal{D}$: Un-factored long-term composite (superimposed) dead load.

$M_s\mathcal{D}$: Un-factored moment due to long-term composite (superimposed) dead load.

M_L: Un-factored live load moment.

M_{imp}: Un-factored moment due to impact.

Ma: Factored design moment.
$1.3\ [\ M\mathcal{D} + M_s\mathcal{D} + \frac{5}{3}\ (M_L + M_{imp})\ ]$

M_u: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.4.

f_s (Overload): Sum of stresses as computed from the moments below.
$M\mathcal{D} + M_s\mathcal{D} + \frac{5}{3}\ (M_L + M_{imp})$

f_s (Total): Sum of stresses as computed from the moments below on non-compact section.
$1.3\ [M\mathcal{D} + M_s\mathcal{D} + \frac{5}{3}\ (M_L + M_{imp})]$

VR: Maximum M_L + impact horizontal shear range within the composite portion of the span for stud shear connector design.

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

GIRDER DETAILS
FAP RTE 310 (IL RTE 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

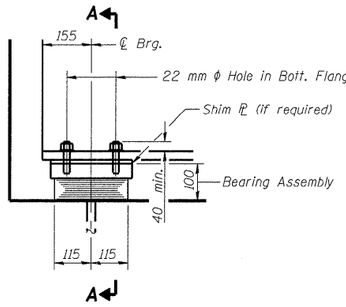
Klingner & Assoc., P.C.

p:\00files\000024\vRailroad-Bridge\SN060-0311 Plans\060-0311 Framing Plan.dgn

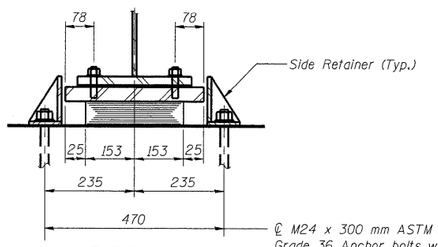
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	93
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 26
45 SHEETS

Contract #76634
* 60-15VB-1 & 2

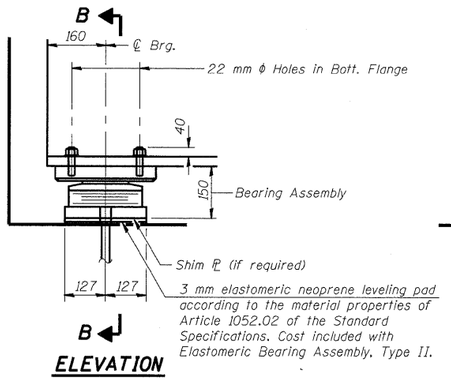


ELEVATION



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.- EAST ABUT.



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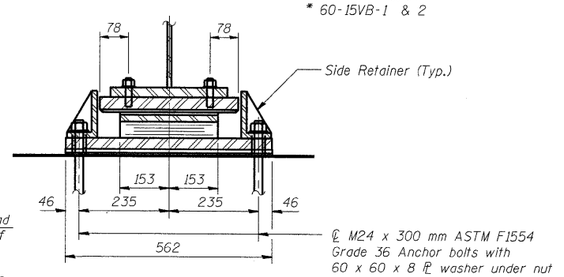
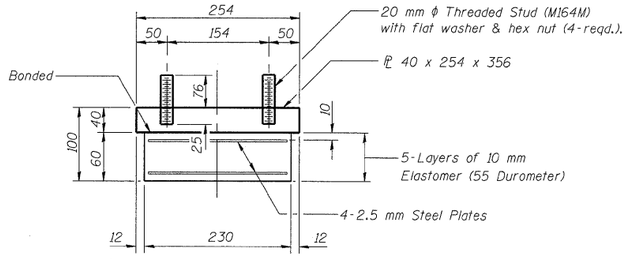


SECTION B-B

TYPE II ELASTOMERIC EXP. BRG. - WEST ABUT.

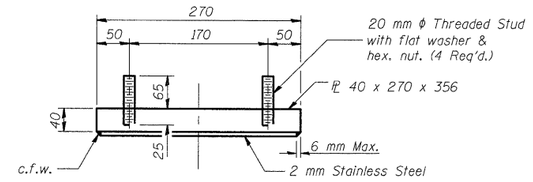
Notes:
See sheet #27 of 45 for Bill of Material
See sheet #27 of 45 for more notes.



BEARING ASSEMBLY - EAST ABUT.

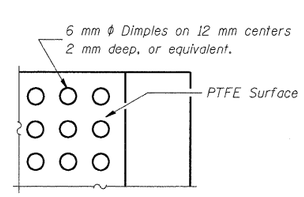
(11-Req'd)

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

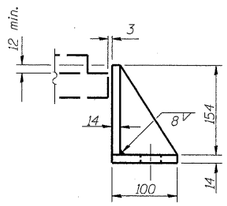


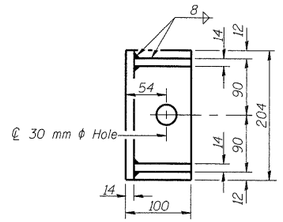
TOP BEARING ASSEMBLY - WEST ABUT.

(9-Req'd)



PLAN-PTFE SURFACE

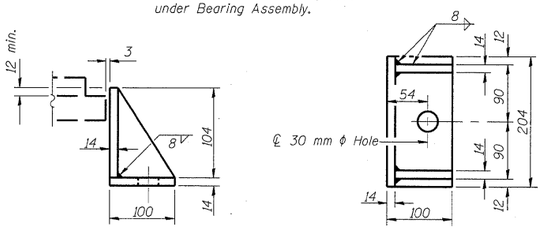




SIDE RETAINER - WEST ABUT.

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

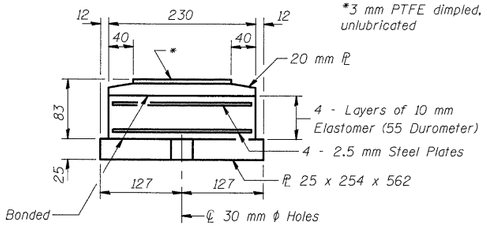
(18-Req'd)



SIDE RETAINER - EAST ABUT.

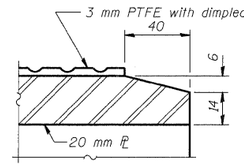
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

(22-Req'd)

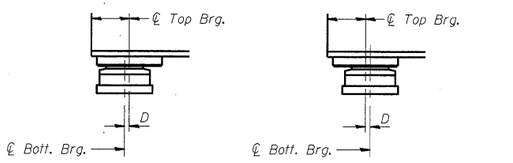


BOTTOM BEARING ASSEMBLY - WEST ABUT.

(9-Req'd)

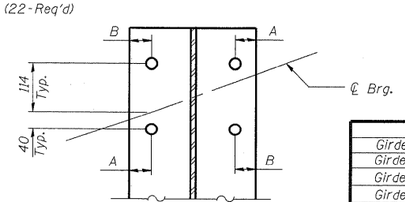


SECTION THRU PTFE



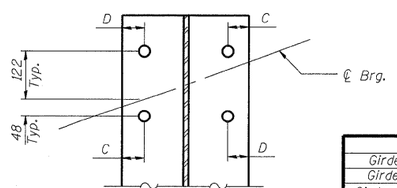
SETTING ANCHOR BOLTS AT EXP. BRG.

D= 1 mm per each 10 m of expansion for every 8 °C temp. change from the normal temp. of 10 °C.



	A	B
Girder 1	60	42
Girder 2	58	44
Girder 3	55	46
Girder 4	52	48
Girders 5-11	50	50

BOTTOM FLANGE HOLE DETAIL - E. ABUT.



	C	D
Girder 1	61	41
Girder 3	55	44
Girders 5-11	50	50

BOTTOM FLANGE HOLE DETAIL - W. ABUT.

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

(Sheet 1 of 2)

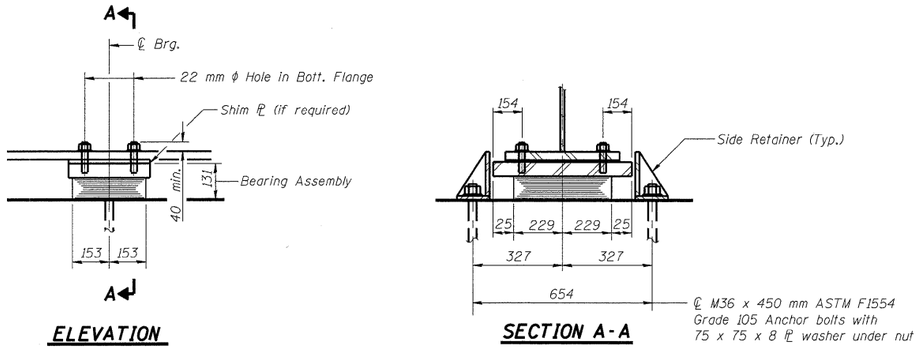
BEARING DETAILS
FAP RTE. 310 (IL RTE. 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.P. 310	*	MADISON	149	94
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 27
45 SHEETS

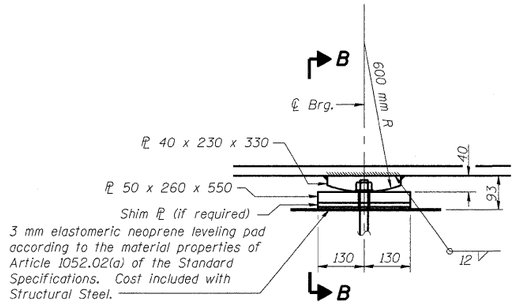
Contract #76634
* 60-15VB-1 & 2



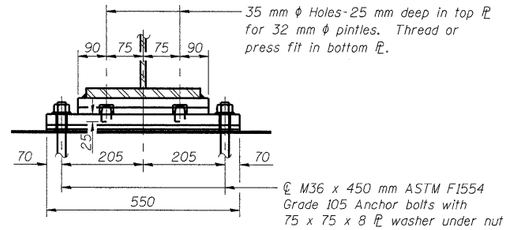
ELEVATION

SECTION A-A

TYPE I ELASTOMERIC EXP. BRG. - PIER #2



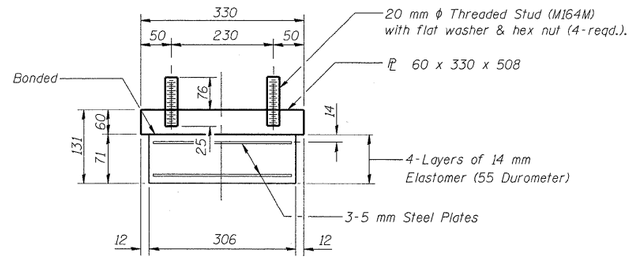
ELEVATION



SECTION B-B

FIXED BEARING - PIER #1

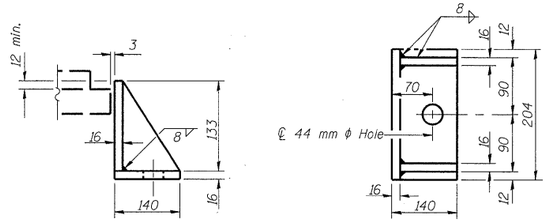
(11-Req'd)



BEARING ASSEMBLY - PIER #2

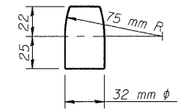
(11-Req'd)

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



SIDE RETAINER - PIER #2

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
(22-Req'd)

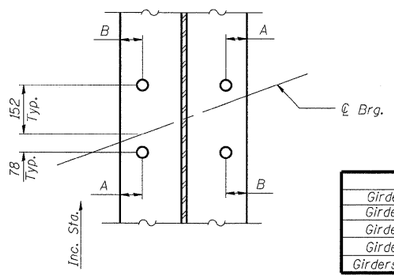


PINTLE

(22-Req'd)

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	22
Elastomeric Bearing Assembly Type II	Each	9
Anchor Bolts 24 mm ϕ	Each	40
Anchor Bolts 36 mm ϕ	Each	44



	A	B
Girder 1	65	37
Girder 2	61	40
Girder 3	57	43
Girder 4	54	47
Girders 5-11	50	50

BOTTOM FLANGE HOLE DETAIL - PIER #2

Notes:

See Sheet #26 of 45 for Bearings at East and West Abutments.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554. Since there is no metric specification for ASTM F1554 the anchor bolt requirements are given in English units.

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Anchor bolts for side retainers of Type I bearings may be cast in place or installed in holes drilled before or after members are in place.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

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

The 3 mm PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 3 mm PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270M Grade 345.

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

(Sheet 2 of 2)

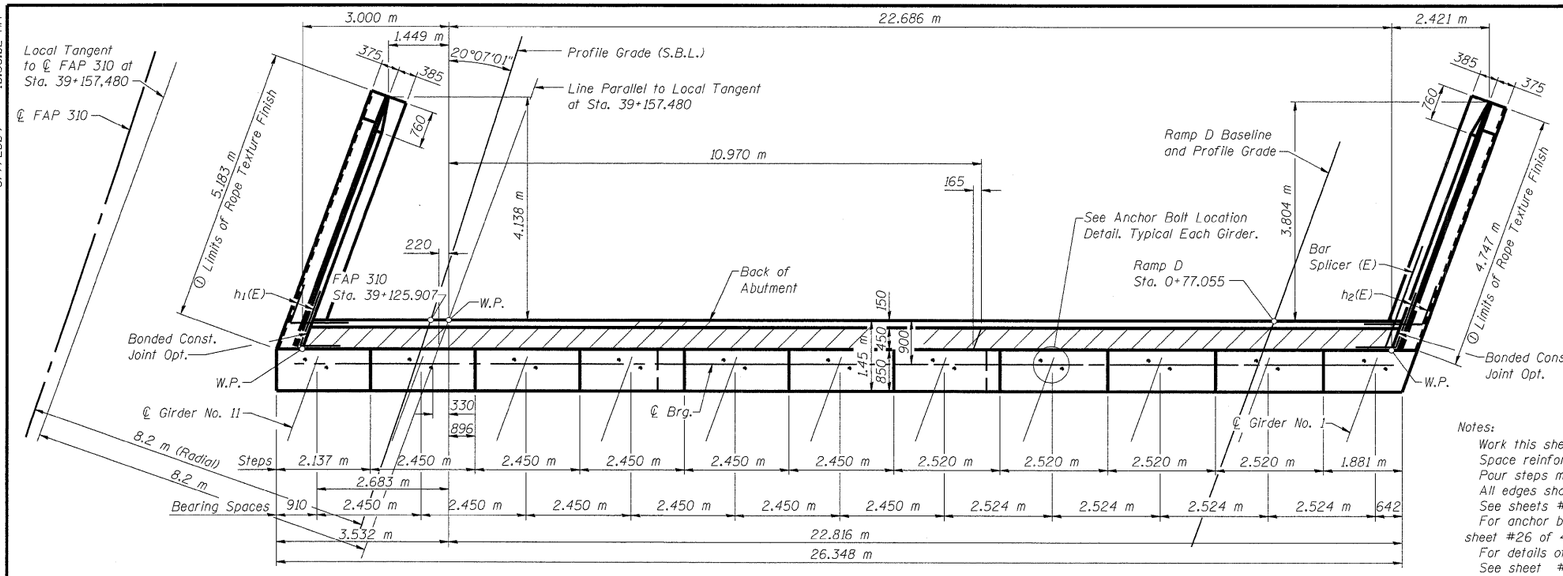
BEARING DETAILS
FAP RTE. 310 (IL RTE. 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

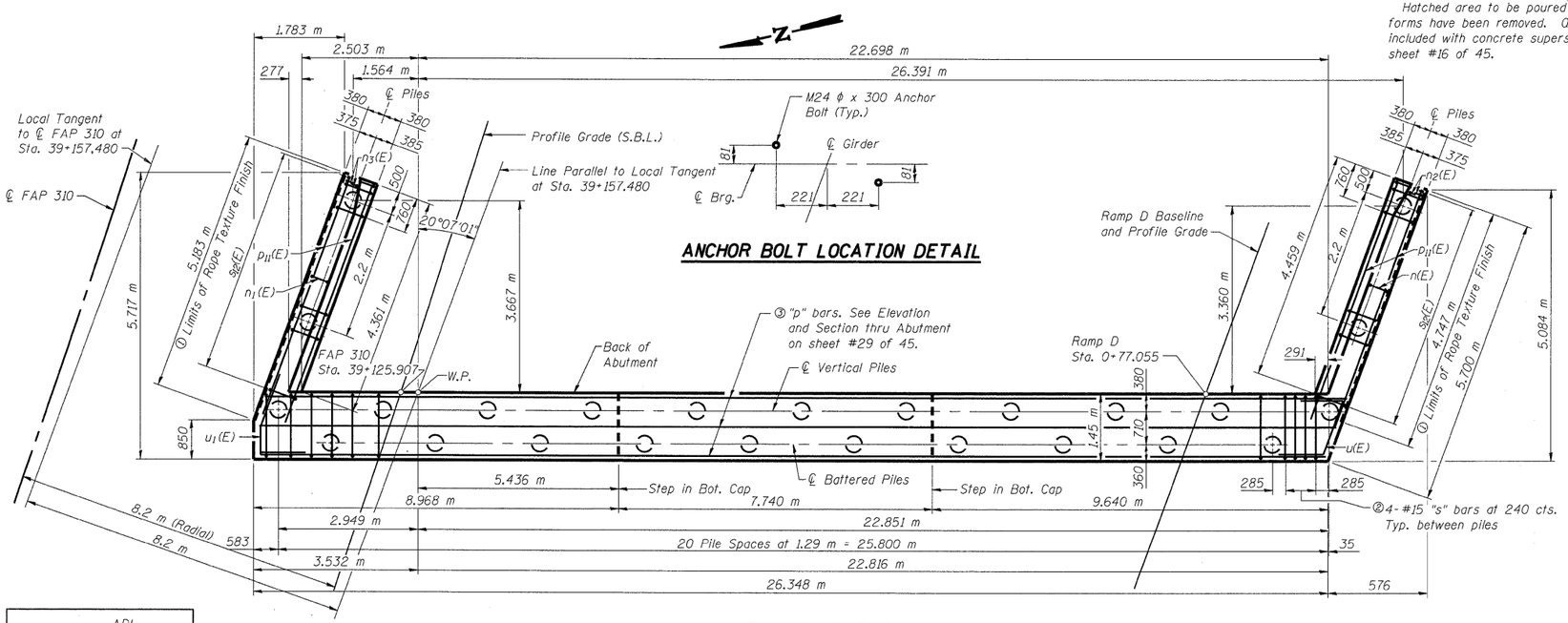
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.P. 310	*	MADISON	149	95
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 28
45 SHEETS

Contract #76634
* 60-15VB-1 & 2



TOP VIEW



ANCHOR BOLT LOCATION DETAIL

PLAN PILE-CAP

PILE DATA

Type & Size: Metal Shell - 356 mm ϕ x 6.35 mm walls
Nominal Required Bearing: 1500 kN
Allowable Resistance Available: 500 kN
Est. Length: 25.0 m
No. Required: 25

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

Notes:
Work this sheet with sheets #29, 30 & 31 of 45.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
All edges shall have standard 20 mm chamfer.
See sheets #30 & 31 of 45 for Wing Wall Details.
For anchor bolt installation see details on sheet #26 of 45.
For details of bar splicers, see sheet #41 of 45.
See sheet #29 of 45 for bar details.
See sheet #29 of 45 for Elevation of Abutment.
See sheet #40 of 45 for pile details.
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with concrete superstructure on sheet #16 of 45.

① Patterned Rope Texture Concrete (See sheet #4 of 45 for details)

② "s" bars include s(E) thru s11(E). See Elevation on sheet #29 of 45.

③ "p" bars include p(E) thru p10(E).

EAST ABUT. BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h(E)	14	#15	13.14	
h1(E)	10	#15	2.03	
h2(E)	10	#15	2.03	
h3(E)	12	#15	4.67	
h4(E)	8	#15	4.68	
h5(E)	8	#20	13.23	
h6(E)	11	#15	5.10	
h7(E)	7	#15	5.11	
n(E)	14	#20	4.40	
n1(E)	14	#20	3.64	
n2(E)	6	#20	2.21	
n3(E)	6	#20	1.83	
p(E)	3	#25	8.80	
p1(E)	3	#25	9.19	
p2(E)	3	#25	11.09	
p3(E)	12	#15	13.50	
p4(E)	3	#25	3.52	
p5(E)	15	#25	3.90	
p6(E)	3	#25	3.97	
p7(E)	3	#25	6.49	
p8(E)	1	#25	5.85	
p9(E)	1	#25	6.15	
p10(E)	1	#25	6.46	
p11(E)	12	#25	4.95	
s(E)	6	#15	4.98	
s1(E)	9	#15	5.24	
s2(E)	8	#15	5.52	
s3(E)	6	#15	5.80	
s4(E)	2	#15	5.20	
s5(E)	8	#15	5.46	
s6(E)	8	#15	5.68	
s7(E)	6	#15	5.84	
s8(E)	7	#15	5.38	
s9(E)	8	#15	5.50	
s10(E)	7	#15	5.62	
s11(E)	6	#15	5.94	
s12(E)	30	#15	2.90	
u(E)	5	#20	3.48	
u1(E)	5	#20	2.76	
v(E)	172	#15	1.70	
v1(E)	86	#15	1.10	
v2(E)	86	#15	0.68	
v3(E)	17	#20	2.03	
v4(E)	14	#20	2.05	
v5(E)	3	#20	2.01	
v6(E)	17	#20	1.97	
v7(E)	14	#20	1.99	
v8(E)	3	#20	1.95	

Bar Splicers	Each	86
Structure Excavation	m^3	209
Concrete Encasement	m^3	7.8
Form Liner Textured Surface	m^2	27
Concrete Structures	m^3	82.0
Reinforcement Bars (Epoxy Coated)	kg	4,440
Furnishing Metal Shell Piles 356mmX6.35mm	m	625
Driving Piles	m	625
Concrete Sealer	m^2	84

EAST ABUTMENT
FAP RTE. 310 (IL RTE. 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. R. I. F. A. P. 310	*	MADISON	149	96
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

SHEET NO. 29
45 SHEETS

Contract #76634
* 60-15VB-1 & 2

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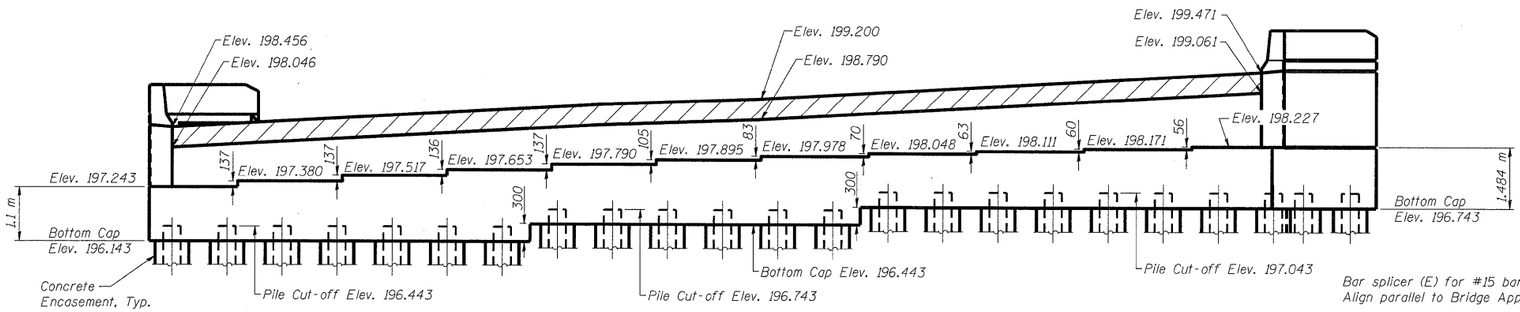
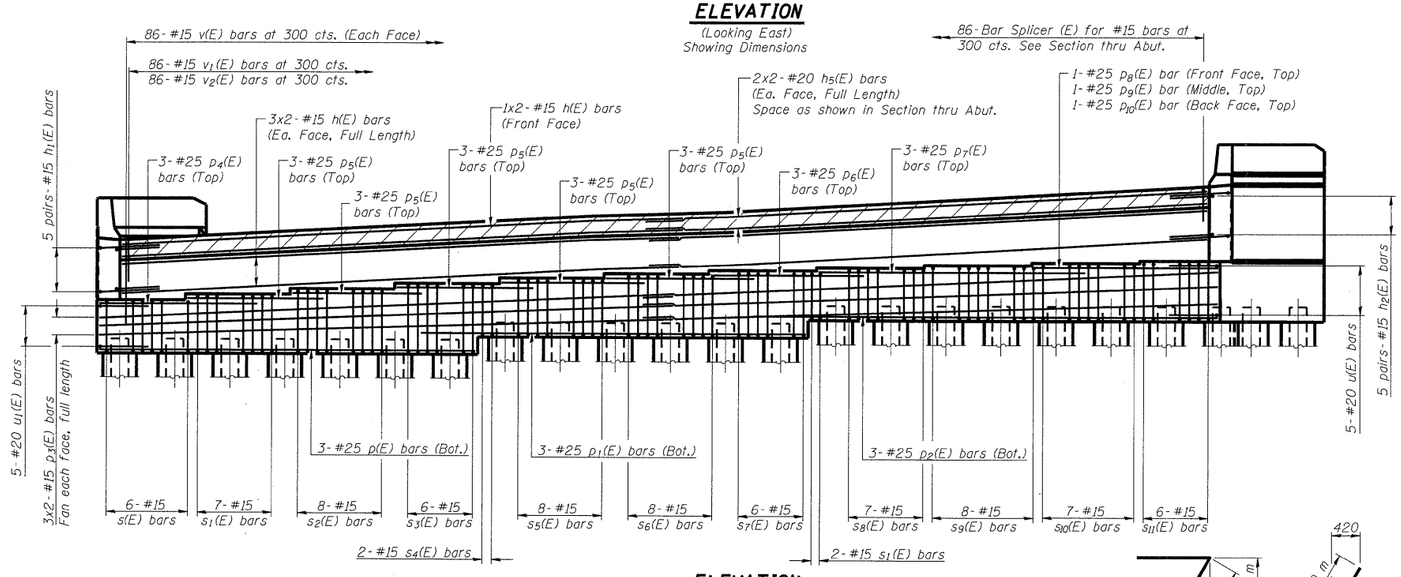
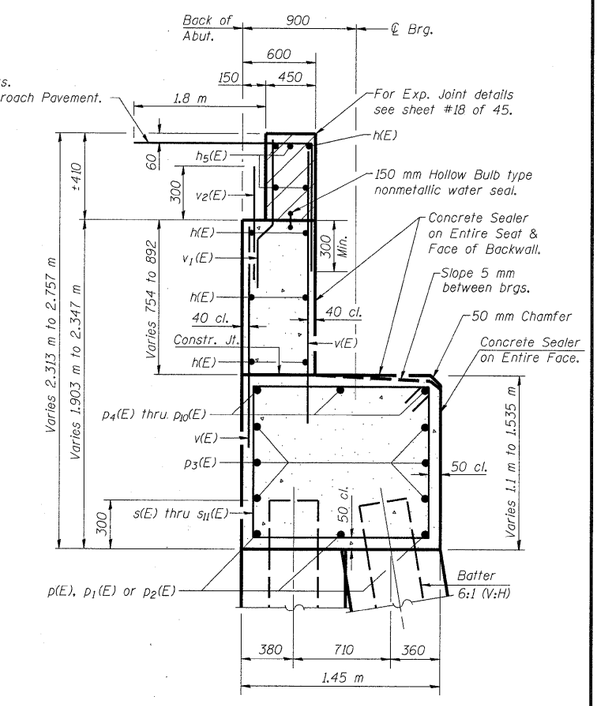


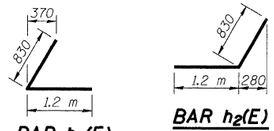
ELEVATION
(Looking East)
Showing Dimensions

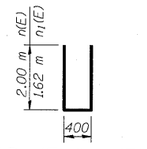


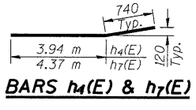
ELEVATION
(Looking East)
Showing Reinforcement

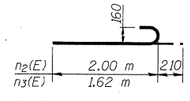


SEC. THRU ABUT.
(Dimensions at Rt. L's to Abutment)





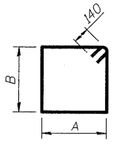


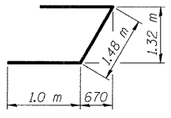


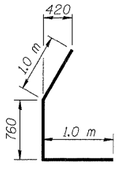
DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

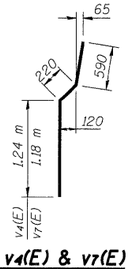
A & B DIMENSIONS

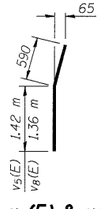
Bar	A	B
s(E)	1.35 m	1.00 m
s1(E)	1.35 m	1.13 m
s2(E)	1.35 m	1.27 m
s3(E)	1.35 m	1.41 m
s4(E)	1.35 m	1.11 m
s5(E)	1.35 m	1.24 m
s6(E)	1.35 m	1.35 m
s7(E)	1.35 m	1.43 m
s8(E)	1.35 m	1.20 m
s9(E)	1.35 m	1.26 m
s10(E)	1.35 m	1.32 m
s11(E)	1.35 m	1.48 m
s12(E)	650	660

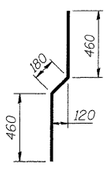












Notes:
Bars indicated thus 3 x 2-#15 etc. indicates 3 lines of bars with 2 lengths per line.

Work this sheet with sheets #28, 30 & 31 of 45.

For Concrete Encasement Details, See Sheet #40 of 45.

Min. Lap
#15 bars = 640
#20 bars = 790

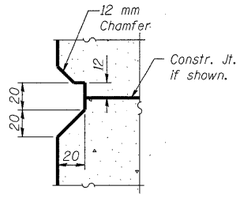
EAST ABUTMENT DETAILS
FAP RTE. 310 (IL RTE. 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

10:53:25 AM

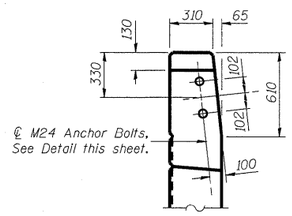
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	97
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 30
45 SHEETS

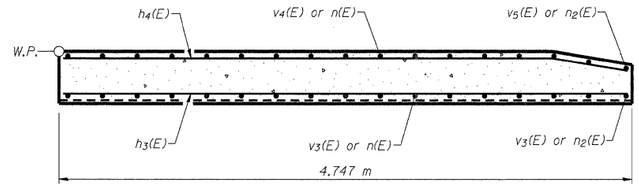
Contract #76634
* 60-15VB-1 & 2



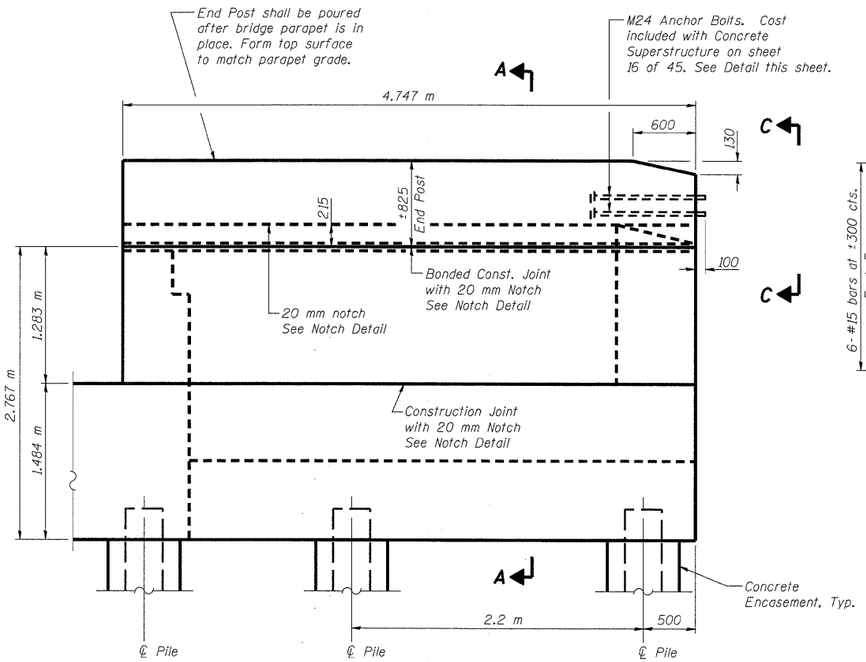
NOTCH DETAIL



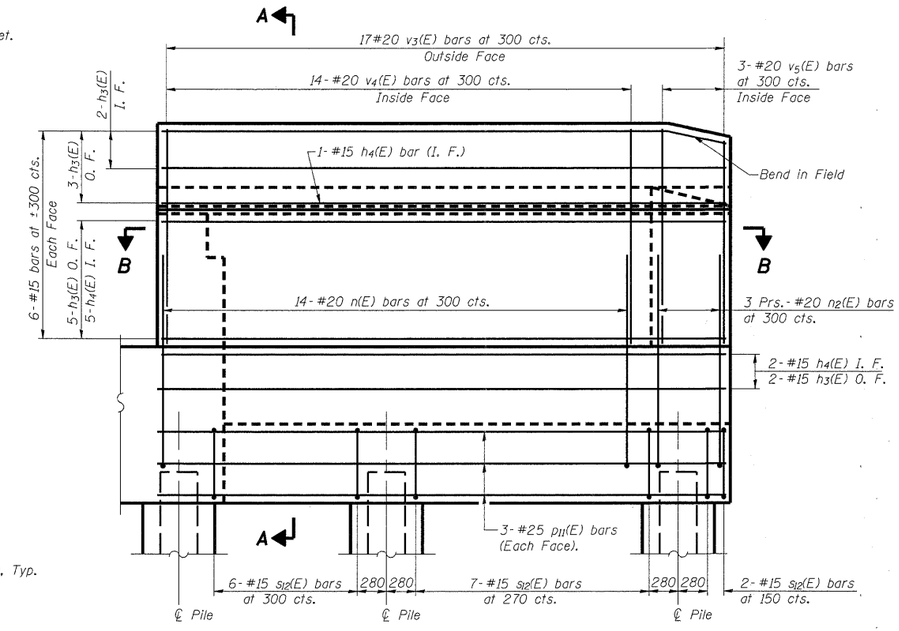
VIEW C-C



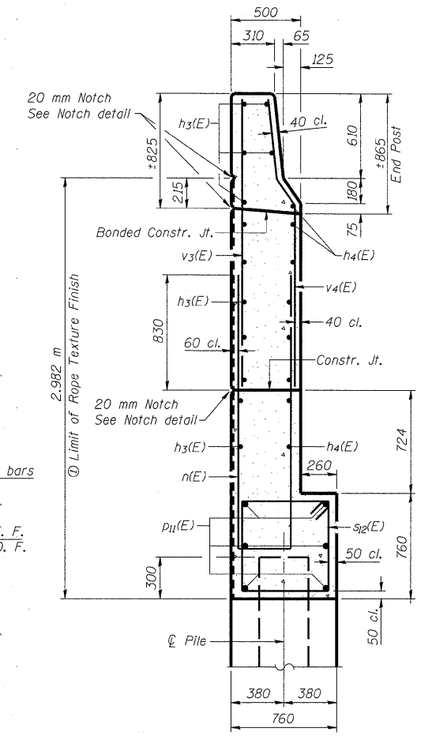
SEC. B-B



SOUTH WING WALL ELEVATION
(Looking North)
Showing Dimensions

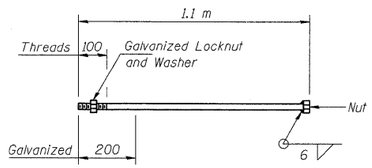


SOUTH WING WALL ELEVATION
(Looking North)
Showing Reinforcement



SEC. A-A

① Patterned Rope Texture Concrete
(See Sheet #4 of 45 for details)



M24 ANCHOR BOLT

Notes:
Work this sheet with sheets #28, 29 & 31 of 45.
Quantity of concrete in end post included with Concrete Superstructure on sheet #16 of 45.

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

p:\00files\000024\dRailroad-Bridge\SN060-0311 Plans\060-0311EastAbutment.dgn

EAST ABUTMENT DETAILS
FAP RTE. 310 (IL RTE. 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

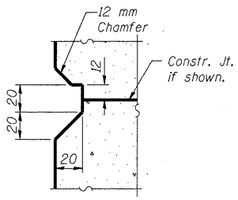
Klingner & Assoc., P.C.

10:53:36 AM

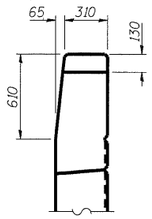
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. B. I. F. A. P. 310	*	MADISON	149	98
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 31
45 SHEETS

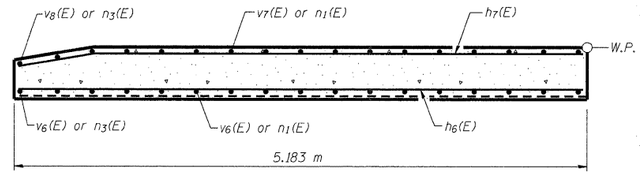
Contract #76634
* 60-15VB-1 & 2



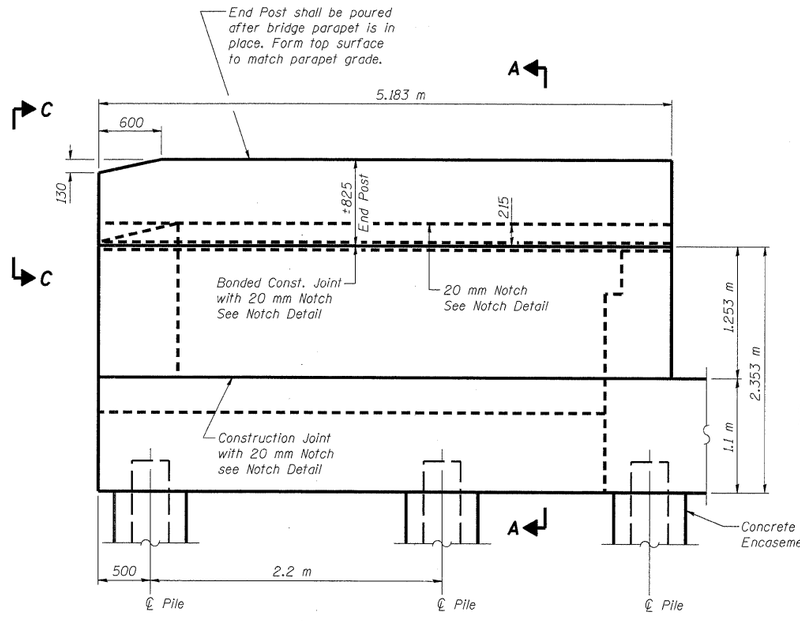
NOTCH DETAIL



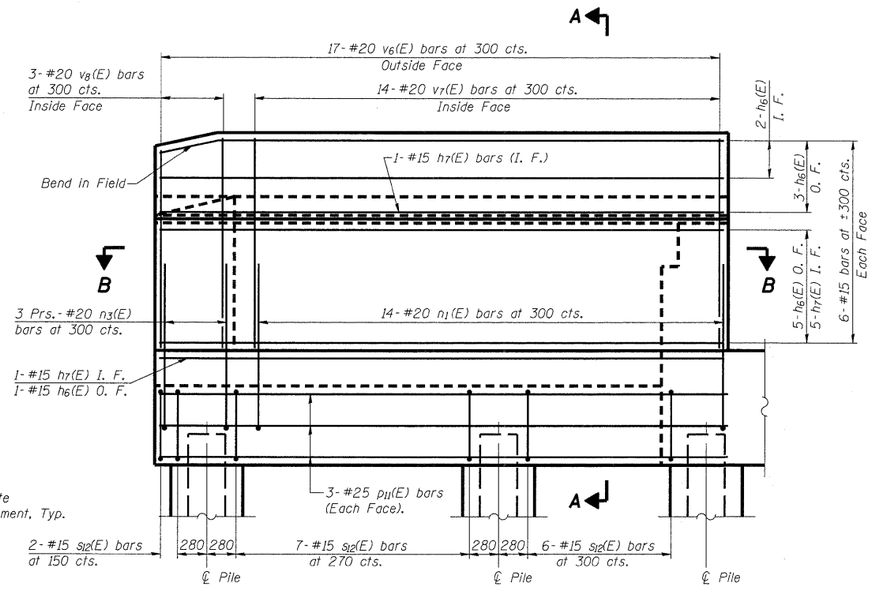
VIEW C-C



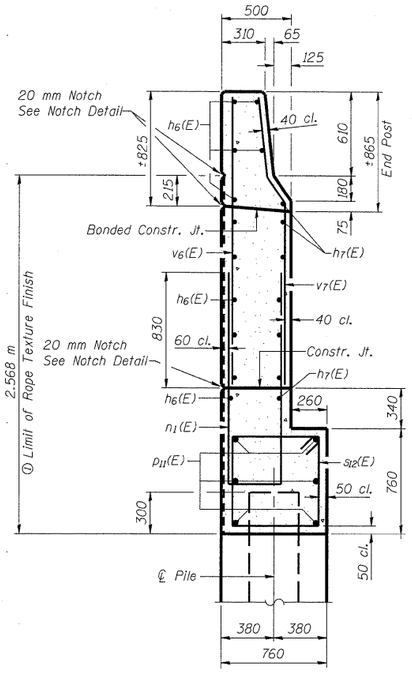
SEC. B-B



NORTH WING WALL ELEVATION
(Looking South)
Showing Dimensions



NORTH WING WALL ELEVATION
(Looking South)
Showing Reinforcement



SEC. A-A

① Patterned Rope Texture Concrete
(See Sheet #4 of 45 for details)

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

Note:
Work this sheet with sheets #28, 29 & 30 of 45.
Quantity of concrete in end post included with Concrete Superstructure on sheet #16 of 45.

EAST ABUTMENT DETAILS
FAP RTE. 310 (IL RTE. 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

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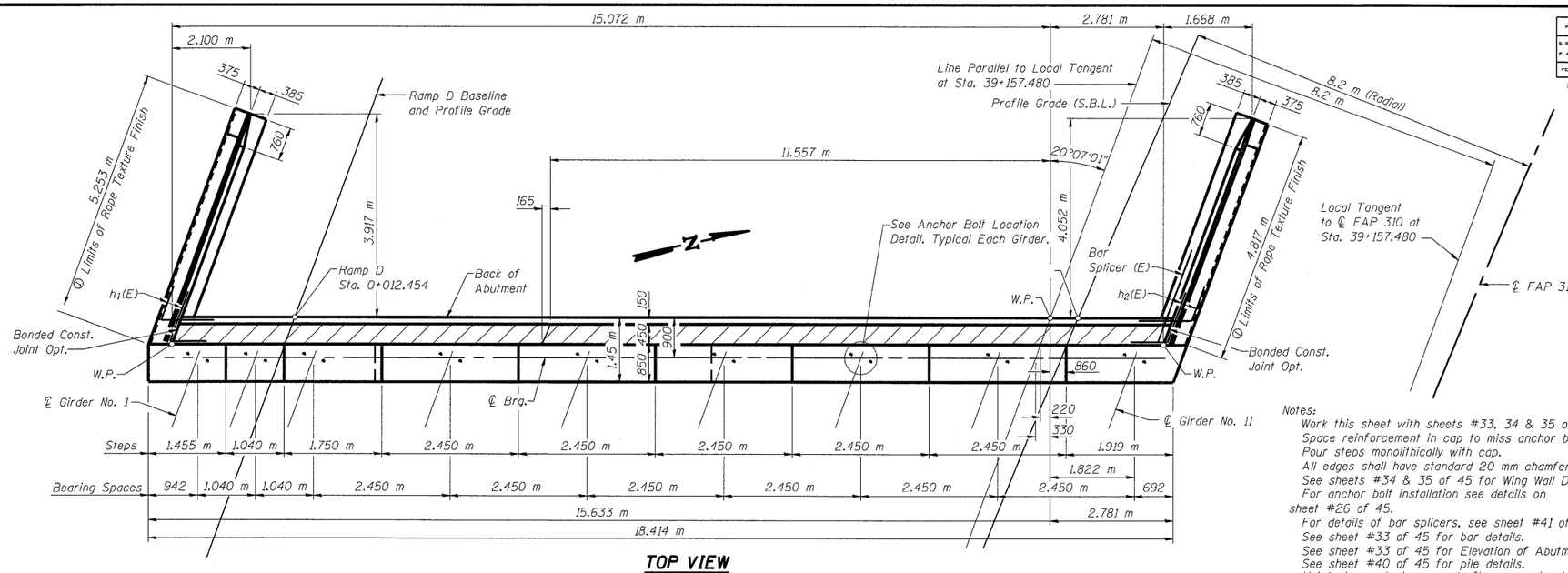
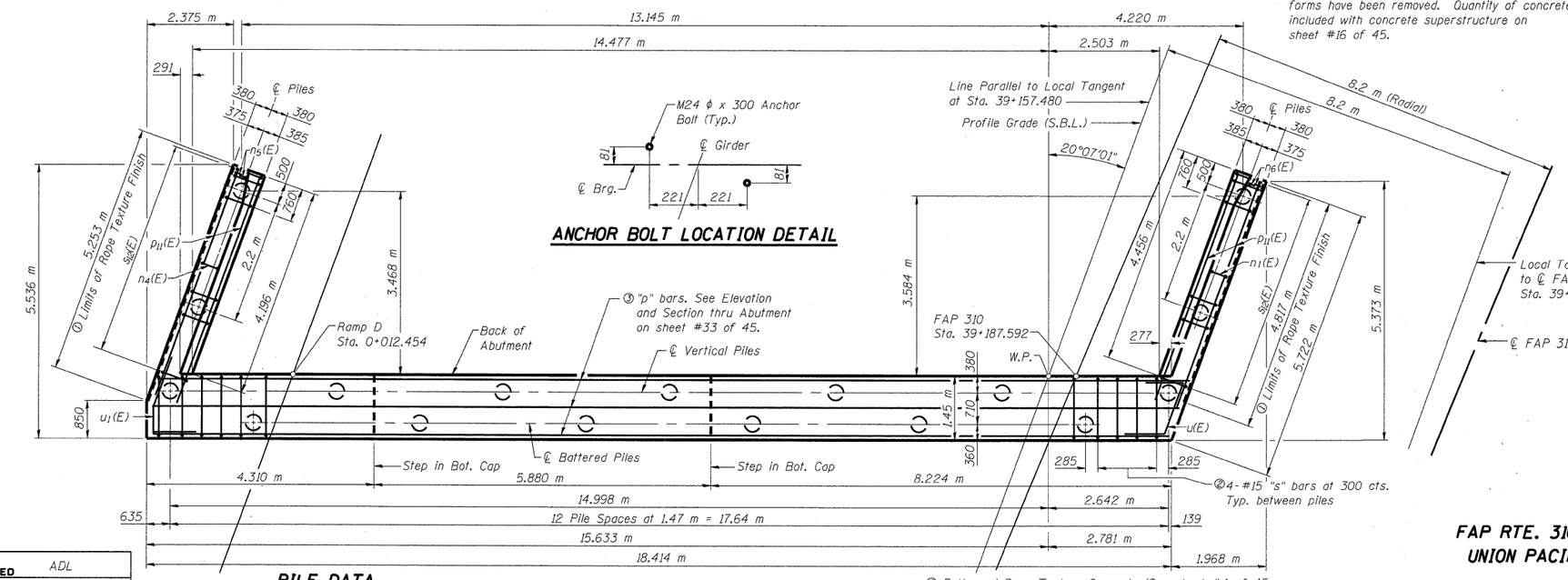
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.P. 310	*	MADISON	149	99
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 32
45 SHEETS

Contract #76634 * 60-15VB-1 & 2



TOP VIEW



ANCHOR BOLT LOCATION DETAIL

PILE DATA

Type & Size: Metal Shell - 356 mm ϕ x 6.35 mm walls
Nominal Required Bearing: 1500 kN
Allowable Resistance Available: 500 kN
Est. Length: 27.5 m
No. Required: 16 + 1 Test Pile

PLAN PILE-CAP

① Patterned Rope Texture Concrete (See sheet #4 of 45 for details).
② "s" bars include s(E), s9(E) and s13(E) thru s19(E) See Elevation sheet #33 of 45.
③ "p" bars include p5(E) and p13(E) thru p19(E).

Notes:
Work this sheet with sheets #33, 34 & 35 of 45.
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
All edges shall have standard 20 mm chamfer.
See sheets #34 & 35 of 45 for Wing Wall Details.
For anchor bolt installation see details on sheet #26 of 45.
For details of bar splicers, see sheet #41 of 45.
See sheet #33 of 45 for bar details.
See sheet #33 of 45 for Elevation of Abutment.
See sheet #40 of 45 for pile details.
Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with concrete superstructure on sheet #16 of 45.

WEST ABUT. BILL OF MATERIAL

Bar	No.	Size	Length (m)	Shape
h1(E)	10	#15	2.03	
h2(E)	10	#15	2.03	
h8(E)	12	#15	5.17	
h9(E)	8	#15	5.18	
h10(E)	11	#15	4.74	
h11(E)	7	#15	4.75	
h12(E)	14	#15	9.05	
h13(E)	8	#20	9.12	
n1(E)	14	#20	3.64	
n4(E)	14	#20	4.10	
n5(E)	6	#20	1.83	
n6(E)	6	#20	2.06	
p5(E)	15	#25	3.90	
p11(E)	12	#25	4.95	
p12(E)	3	#25	8.12	
p13(E)	3	#25	7.33	
p14(E)	3	#25	5.65	
p15(E)	12	#15	9.43	
p16(E)	3	#25	3.37	
p17(E)	3	#25	3.20	
p18(E)	2	#25	2.28	
p19(E)	1	#25	2.11	
s(E)	6	#15	4.98	
s9(E)	10	#15	5.50	
s12(E)	30	#15	2.90	
s13(E)	6	#15	5.26	
s14(E)	6	#15	5.54	
s15(E)	4	#15	5.82	
s16(E)	3	#15	5.22	
s17(E)	6	#15	5.70	
s18(E)	5	#15	5.32	
s19(E)	3	#15	5.42	
u(E)	5	#20	3.48	
u1(E)	5	#20	2.76	
v(E)	120	#15	1.70	
v1(E)	60	#15	1.10	
v2(E)	60	#15	.68	
v9(E)	17	#20	2.08	
v10(E)	14	#20	2.14	
v11(E)	3	#20	2.06	
v12(E)	17	#20	1.98	
v13(E)	14	#20	2.00	
v14(E)	3	#20	1.96	

Bar Splicers	Each	60
Structure Excavation	m^3	161
Concrete Encasement	m^3	5.5
Form Liner Textured Surface	m^2	28
Concrete Structures	m^3	58.3
Reinforcement Bars (Epoxy Coated)	kg	3,470
Furnishing Metal Shell Piles 356mmX6.35mm	m	440
Driving Piles	m	440
Concrete Sealer	m^2	59
Test Pile Metal Shells	Each	1

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

WEST ABUTMENT
FAP RTE. 310 (IL RTE. 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

5/7/2009 11:00:25 AM
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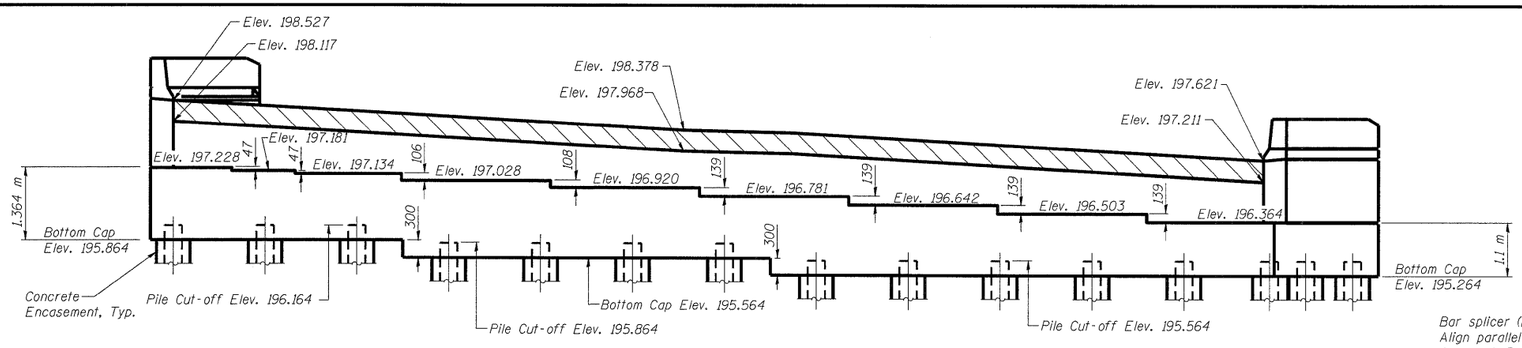
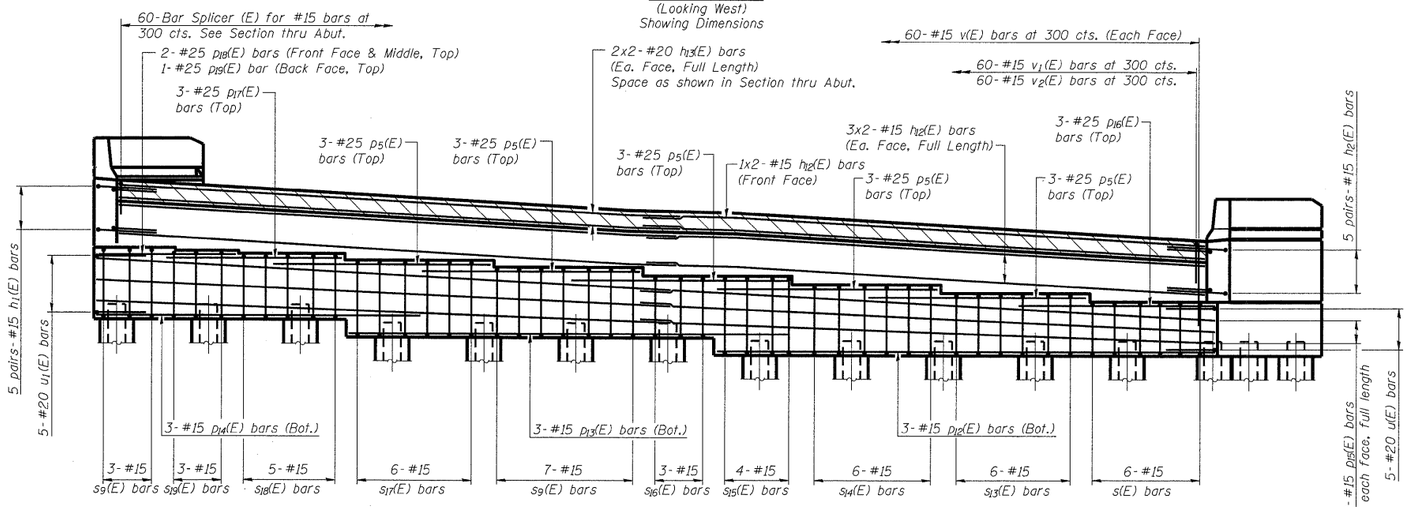
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U. S. I. F.A.P. 310	*	MADISON	149	100
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 33
45 SHEETS

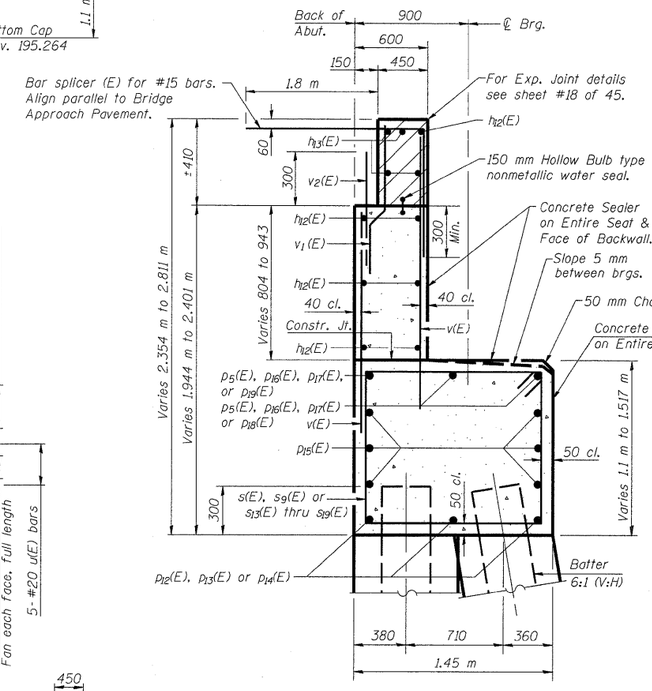
Contract #76634
* 60-15VB-1 & 2



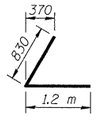
ELEVATION
(Looking West)
Showing Dimensions



ELEVATION
(Looking West)
Showing Reinforcement

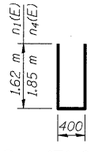


SEC. THRU ABUT.
(Dimensions at Rt. L's to Abutment)

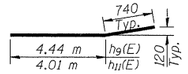


BAR $h_1(E)$

BAR $h_2(E)$



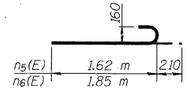
BAR $n_1(E)$ & $n_4(E)$



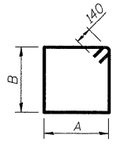
BARS $h_9(E)$ & $h_{11}(E)$

A & B DIMENSIONS

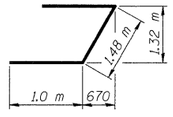
Bar	A	B
s(E)	1.35 m	1.00 m
s9(E)	1.35 m	1.26 m
s12(E)	650	660
s13(E)	1.35 m	1.14 m
s14(E)	1.35 m	1.28 m
s15(E)	1.35 m	1.42 m
s16(E)	1.35 m	1.12 m
s17(E)	1.35 m	1.36 m
s18(E)	1.35 m	1.17 m
s19(E)	1.35 m	1.22 m



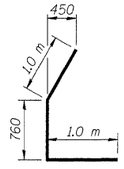
BAR $n_5(E)$ & $n_6(E)$



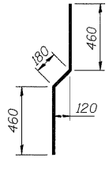
BARS s(E), $s_9(E)$, & $s_{12}(E)$ thru $s_{19}(E)$



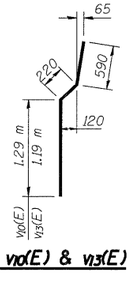
BAR u(E)



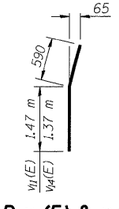
BAR $u_1(E)$



BAR $v_1(E)$



BAR $v_{10}(E)$ & $v_{13}(E)$



BAR $v_{11}(E)$ & $v_{14}(E)$

Notes:
Bars indicated thus 3 x 2-#15 etc. indicates 3 lines of bars with 2 lengths per line.

Work this sheet with sheets #32, 34 & 35 of 45.

For Concrete Encasement Details, See Sheet #40 of 45.

Min. Lap
#15 bars = 640
#20 bars = 790

DESIGNED	ADL
CHECKED	WLW
DRAWN	RJP
CHECKED	WLW

WEST ABUTMENT DETAILS
FAP RTE. 310 (IL RTE. 255) SB & RAMP D OVER UNION PACIFIC & KANSAS CITY SOUTHERN R.R.
SECTION 60-15VB-1 & 2
MADISON COUNTY
STATION 39+160.297
STRUCTURE NUMBER 060-0311

Klingner & Assoc., P.C.

5/7/2009 11:08:46 AM
p:\08files\080024\dRailroad-Bridge\SN060-0311 Plans\060-0311WestAbutment.dgn