

CONTRACT NO. 62336

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2-B	MCHENRY	64	1
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

D-91-471-01

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY
F.A.P. ROUTE 533 (IL RTE 176)
OVER THE KISHWAUKEE RIVER
BRIDGE REMOVAL AND REPLACEMENT AND
ROADWAY PROFILE ADJUSTMENT
SECTION 119R-2 B
PROJECT NO. ACBRF-0533(010)
MCHENRY COUNTY
C-91-471-01

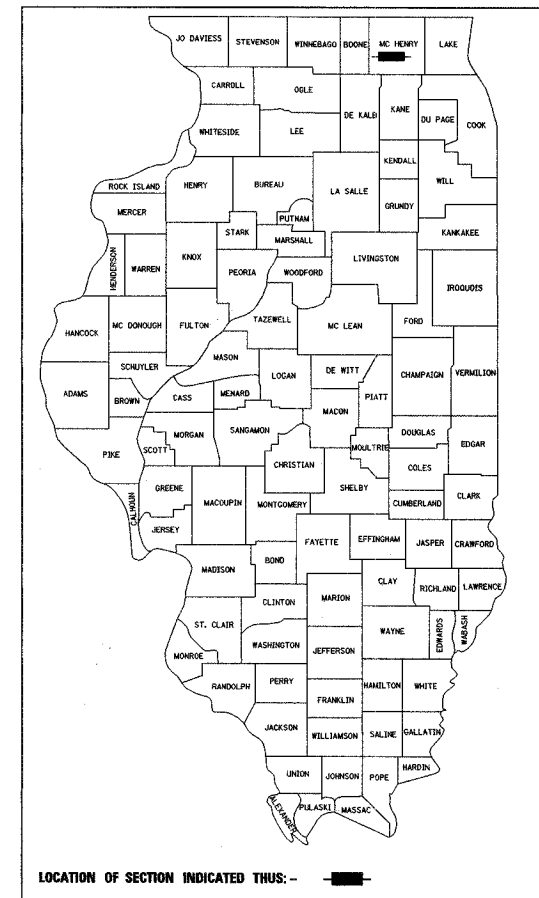
FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA

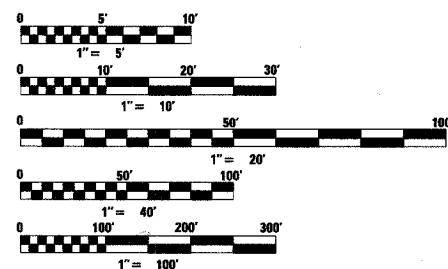
EXISTING ADT
 8,300 (1999)
 DESIGN ADT
 9,960 (2019)
 SPEED LIMIT 55 MPH

DESIGN DESIGNATION

OTHER PRINCIPAL ARTERIAL
 0960 (19) ARTERIAL 3.73 (BIT-20)

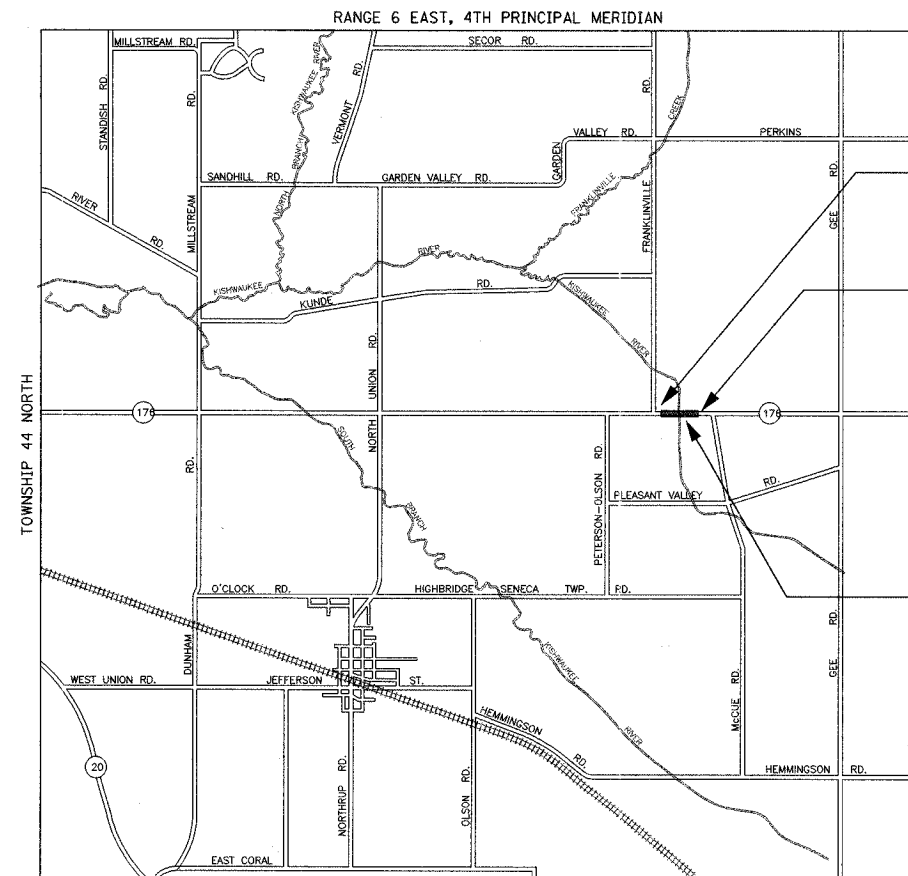


PROJECT LOCATED IN SENECA TOWNSHIP
 IN UNINCORPORATED MCHENRY COUNTY



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



PROJECT BEGINS STA 5+10

PROJECT ENDS STA 15+15


STA 10+00
 EXISTING SN 056-0005
 REMOVE EXISTING 43 FOOT
 SINGLE SPAN STRUCTURE
 PROPOSED SN 056-0078
 78' SINGLE SPAN, ROLLED
 STEEL SUPERSTRUCTURE.



Ronald E. Jankauskas
 10-1-07
Liz Griffin 11-30-09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
 SUBMITTED October 3, 2007
Diane O'Keefe/af
 REGION ONE ENGINEER
 December 7, 2007
Eric E. Jankauskas
 INTERIM ENGINEER OF DESIGN AND ENVIRONMENT
 December 7, 2007
Christine M. Reed/af
 DIRECTOR, DIVISION OF HIGHWAYS

PRINTED BY THE AUTHORITY OF
THE STATE OF ILLINOIS


GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
 ENGINEERS & SCIENTISTS
 8501 W. Higgins Road, Suite 280
 Chicago, Illinois 60631
 (773) 399-0112

CONTRACT NO. 62336

GROSS AND NET LENGTH OF PROJECT: 1,005 FT (0.190 MI)

DISTRICT ONE PLAN PREPARATION ENGINEER: JOSE DOMINGUEZ (847) 705-4232

CONTRACT NO. 62336

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2-B	McHENRY	64	2
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

INDEX OF SHEETS

- 1 TITLE SHEET
- 2 INDEX OF DRAWINGS, HIGHWAY STANDARDS, GENERAL NOTES & COMMITMENTS
- 3-4 SUMMARY OF QUANTITIES
- 5 TYPICAL SECTIONS
- 6 ALIGNMENT, TIES & BENCH MARKS
- 7-10 CONSTRUCTION STAGING
- 11 PLAN AND PROFILE
- 12 DRAINAGE & UTILITY PLAN
- 13 RIGHT OF WAY PLAT
- 14 PAVEMENT MARKING, LANDSCAPING AND EROSION CONTROL PLAN
- 15-35 BRIDGE PLANS SN 056-0078
- 36-47 RETAINING WALL PLANS
- 48-52 DISTRICT ONE DETAIL SHEETS (SEE INDEX THIS SHEET)
- 53-64 CROSS SECTIONS

STATE STANDARDS

STD. NO.	DESCRIPTION
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-01	AREAS OF REINFORCEMENT REBARS
280001-04	TEMPORARY EROSION CONTROL SYSTEMS
406201-01	MAILBOX TURNOUT
420401-06	BRIDGE APPROACH PAVEMENT
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
482011-09	HMA SHOULDER STRIPS/SHOULDERS WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001-02	NAME PLATE FOR BRIDGES
542301-01	PRECAST REINFORCED CONCRETE FLARED END SECTION
601101	CONCRETE HEADWALL FOR PIPE DRAIN
606001-03	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
610001-03	SHOULDER INLET WITH CURB
630001-07	STEEL PLATE BEAM GUARDRAIL
630201-05	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-04	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-06	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
701001-01	OFF ROAD OPERATIONS, 2L, 2W, MORE THAN 4.5 m (15') AWAY
701006-02	OFF ROAD OPERATIONS, 2L 2W, 4.5m (15') TO 600mm (24") FROM PAVEMENT EDGE
701011-01	OFF ROAD MOVING OPERATIONS, 2L 2W, DAY ONLY
701201-02	LANE CLOSURE, 2L 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-02	LANE CLOSURE, 2L 2W, SHORT TIME OPERATIONS
701321-09	LANE CLOSURE 2L, 2W BRIDGE REPAIR WITH BARRIER
701901	TRAFFIC CONTROL DEVICES
704001-04	TEMPORARY CONCRETE BARRIER
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

ILLINOIS ROUTE 176
DISTRICT ONE STANDARDS LIST (INCLUDED AS PLAN SHEETS 48-52)

BD-01	DRIVEWAY DETAILS DISTANCE BETWEEN R. O. W. AND FACE OF CURB/EDGE OF SHOULDER ≥ 4.5m (15')
BD-32	BUTT JOINT AND HOT MIX ASPHALT TAPER DETAILS
TC-10	TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
TC-11	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)
TC-13	DISTRICT ONE TYPICAL PAVEMENT MARKINGS

GENERAL NOTES

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION), (800) 892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, CABLE AND GAS FACILITIES. (48 HOUR NOTIFICATION IS REQUIRED).
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- WHEN MILLED PAVEMENT IS OPEN TO TRAFFIC THE MAXIMUM GRADE DIFFERENTIAL BETWEEN PASSES OF THE MILLING MACHINE SHALL NOT EXCEED 1/2 INCHES WHERE THE SPEED LIMIT IS 45 MPH (80 KM/H) OR LESS AND 1 INCH (25mm) WHERE THE SPEED LIMIT IS GRATER THAN 45 MPH (80 KM/H). WITH WRITTEN APPROVAL FROM THE ENGINEER, A MAXIMUM GRADE DIFFERENTIAL OF 3 INCHES (75mm) MAY BE ALLOWED IF THE EDGE OF THE MILLING IS SLOPED A MINIMUM 1:3 (V:H).
- BUTT JOINTS WILL BE INSTALLED AT THE ENDS OF ALL RESURFACING (WHERE RESURFACING MEETS EXISTING PAVEMENT), IN ACCORDANCE WITH THE "BUTT JOINT AND HOT-MIX ASPHALT TAPER DETAILS" SHEET INCLUDED IN THE PLANS, UNLESS OTHERWISE SPECIFIED.
- DURING CONSTRUCTION, AGGREGATE SURFACE COURSE TYPE B WILL ALSO BE USED TO PROVIDE TEMPORARY ACCESS AT INTERSECTIONS, BUILDING ENTRANCES, AND AS DETERMINED BY THE ENGINEER FOR PEDESTRIAN MOVEMENT.
- ACCESS SHALL BE PROVIDED AT ALL TIMES TO PROPERTIES ABUTTING THE PROPOSED IMPROVEMENT EXCEPT WHERE NOTED ON THE PLANS.
- THE RESIDENT ENGINEER SHALL CONTACT DEBBIE HANLON AREA TRAFFIC FIELD TECHNICIAN AT 847 438-2300 TWO WEEKS PRIOR TO INSTALLING FINAL PAVEMENT MARKINGS.
- THE STATION/OFFSET AND INVERT ELEVATIONS FOR FLARED END SECTIONS ARE REFERENCED TO THE DOWNSTREAM CENTERLINE ENDS OF FLARED END SECTIONS.

COMMITMENTS

- McHENRY COUNTY REQUIRES THAT ALL EMERGENCY SERVICES IN THE AREA SHALL BE NOTIFIED IN WRITING AT LEAST 72 HOURS PRIOR TO IMPLEMENTATION OF STAGED CONSTRUCTION ON ILLINOIS ROUTE 176

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION ILLINOIS ROUTE 176 OVER THE KISHWAUKEE RIVER INDEX OF DRAWINGS, HIGHWAY STANDARDS GENERAL NOTES & COMMITMENTS DRAWN BY: WS CHECKED BY: RJS DATE: 10-05-07
NAME	DATE	

CONTRACT NO. 62336

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2-B	McHENRY	64	3
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS		FED. AID PROJECT	

SUMMARY OF QUANTITIES

PAY ITEM	PAY ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	ROADWAY QUANTITY I000-2A	BRIDGE QUANTITY X071-2A	RETAINING WALLS QUANTITY Y007-2A
20100110	TREE REMOVAL (6 TO 15 UNIT DIAMETER)	UNIT	46	46		
20101300	TREE PRUNING (1 TO 10 INCH DIAMETER)	EACH	15	15		
20101350	TREE PRUNING (OVER 10 INCH DIAMETER)	EACH	10	10		
20101000	TEMPORARY FENCE	FOOT	60	60		
20200100	EARTH EXCAVATION	CU YD	40	40		
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	1,627	1,627		
20300100	CHANNEL EXCAVATION	CU YD	126		126	
20400800	FURNISHED EXCAVATION	CU YD	1,844	1,844		
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	210		108	102
20700420	POROUS GRANULAR EMBANKMENT, SUBGRADE	CU YD	50	50		
20800150	TRENCH BACKFILL	CU YD	5	5		
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	120	120		
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	2,722	2,722		
21101805	COMPOST FURNISH AND PLACE, 2"	SQ YD	936	936		
21400100	GRADING AND SHAPING DITCHES	FOOT	75	75		
25000210	SEEDING, CLASS 2A	ACRE	1	1		
25000300	SEEDING, CLASS 3	ACRE	0.2	0.2		
25000322	SEEDING, CLASS 5A	ACRE	0.2	0.2		
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	50	50		
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	50	50		
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	50	50		
25100630	EROSION CONTROL BLANKET	SQ YD	2,722	2,722		
26000300	TEMPORARY DITCH CHECKS	EACH	11	11		
26000400	PERIMETER EROSION BARRIER	FOOT	2,097	2,097		
28000500	INLET AND PIPE PROTECTION	EACH	1	1		
28100107	STONE RIPRAP, CLASS A4	SQ YD	703	62	641	
28200200	FILTER FABRIC	SQ YD	818	62	756	
35501316	HOT-MIX ASPHALT BASE COURSE, 8"	SQ YD	51	51		
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	596	596		
40600300	AGGREGATE (PRIME COAT)	TON	11	11		
40600400	MIXTURE FOR CRACKS, JOINTS AND FLANGEWAYS	TON	1	1		
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	31	31		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	64	64		
40600990	TEMPORARY RAMP	SQ YD	54	54		
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	6	6		
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	61	61		
40701941	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 13"	SQ YD	1,768	1,768		
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	267	267		
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	53	53		
44000100	PAVEMENT REMOVAL	SQ YD	1,914	1,914		
44000161	HOT-MIX ASPHALT SURFACE REMOVAL, 3"	SQ YD	547	547		
44000200	DRIVEWAY PAVEMENT REMOVAL	SQ YD	39	39		
44004250	PAVED SHOULDER REMOVAL	SQ YD	813	813		
44300200	STRIP REFLECTIVE CRACK CONTROL TREATMENT	FOOT	650	650		
48101600	AGGREGATE SHOULDERS, TYPE B 8"	SQ YD	176	176		
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	1,473	1,473		
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1	
50105220	PIPE CULVERT REMOVAL	FOOT	12	12		
50200100	STRUCTURE EXCAVATION	CU YD	1,879		235	1,644
50300100	FLOOR DRAINS	EACH	8		8	
50300225	CONCRETE STRUCTURES	CU YD	673		92.7	581
50300255	CONCRETE SUPERSTRUCTURES	CU YD	116		116	
50300260	BRIDGE DECK GROOVING	SQ YD	310		310	

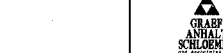
EARTHWORK SCHEDULE

ITEM	STAGE 1	STAGE 2	TOTAL
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL CU YD 20201200	889	738	1,627
EARTH EXCAVATION CU YD 20200100	30	10	40
FURNISHED EXCAVATION CU YD 20400800	1,178	666	1,844
POROUS GRANULAR EMBANKMENT ** CU YD 20700420	25	25	50
GEOTECHNICAL FABRIC FOR GROUND STABILIZATION** SQ YD 21001000	60	60	120

* FURNISHED EXCAVATION VOLUME IS BASED ON A 15% SHRINKAGE FACTOR APPLIED TO THE EARTH EXCAVATION VOLUME

** QUANTITIES HAVE BEEN INCLUDED IN THE PLANS FOR USE FOR EXISTING SOIL CONDITIONS PRIOR TO BUILDING ANY EMBANKMENT. THE QUANTITIES ARE ESTIMATES AND THE ACTUAL DEPTH AND EXTENT OF SUBGRADE TREATMENT WILL BE DETERMINED AT THE TIME OF CONSTRUCTION BY THE ENGINEER OR SOILS INSPECTOR

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION ILLINOIS ROUTE 176 OVER THE KISHWAUKEE RIVER SUMMARY OF QUANTITIES SCALE: DATE: 10-05-07
NAME	DATE	
DRAWN BY: WS CHECKED BY: RJS		GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC. CHICAGO, ILLINOIS



CONTRACT NO. 62336


F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2-B	McHENRY	64	4
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

PAY ITEM	PAY ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	ROADWAY QUANTITY 1000-2A	BRIDGE QUANTITY X071-2A	RETAINING WALLS QUANTITY Y007-2A
50300300	PROTECTIVE COAT	SQ YD	778		409	369
50500305	ERECTING STRUCTURAL STEEL	L SUM	1		1	
50500505	STUD SHEAR CONNECTORS	EACH	1,890		1,890	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	111,370		41,040	70,330
50800515	BAR SPLICERS	EACH	402		402	
51200958	FURNISHING METAL SHELL PILES 14" X 0.250"	FOOT	1,908		1,908	
51202305	DRIVING PILES	FOOT	1,908		1,908	
51203200	TEST PILE METAL SHELLS	EACH	2		2	
51205200	TEMPORARY SHEET PILING	SQ FT	1,244		1,244	
51500100	NAME PLATES	EACH	1		1	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	84		84	
52100210	ERECTING ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	6		6	
52100530	ANCHOR BOLTS, 1 1/4"	EACH	24		24	
54213657	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 12"	EACH	5	5		
550A0050	STORM SEWERS, CLASS A, TYPE 1 12"	FOOT	26	26		
58700300	CONCRETE SEALER	SQ FT	927		927	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	155		77	78
60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	4	4		
60107600	PIPE UNDERDRAINS 4"	FOOT	121	121		
60109580	PIPE UNDERDRAIN FOR STRUCTURES 4"	FOOT	123		123	
60600605	CONCRETE CURB, TYPE B	FOOT	120	120		
61000115	TYPE E INLET BOX, STANDARD 610001	EACH	4	4		
61000120	TYPE E INLET BOX, STANDARD 610001 (SPECIAL)	EACH	1	1		
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4		
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4		
63200310	GUARDRAIL REMOVAL	FOOT	460	460		
67000400	ENGINEERS FIELD OFFICE, TYPE A	CAL MO	10	10		
67100100	MOBILIZATION	L SUM	1	1		
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1		
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	84	84		
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1		
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	20	20		
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	4,020	4,020		
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	3,775	3,775		
70300570	PAVEMENT MARKING TAPE, TYPE III 24"	FOOT	44	44		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2,660	2,660		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1,100	1,100		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1,080	1,080		
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	1,953	1,953		
* 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	308	308		
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	11	11		
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	2	2		
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	4	4		
* 78200520	BARRIER WALL MARKERS, TYPE B	EACH	13	13		
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4		
X0325775	WET REFLECTIVE TEMPORARY TAPE, TYPE III 4 INCH	FOOT	3,775	3,775		
Z0001050	AGGREGATE SUBGRADE 12"	SQ YD	3,114	3,114		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2		

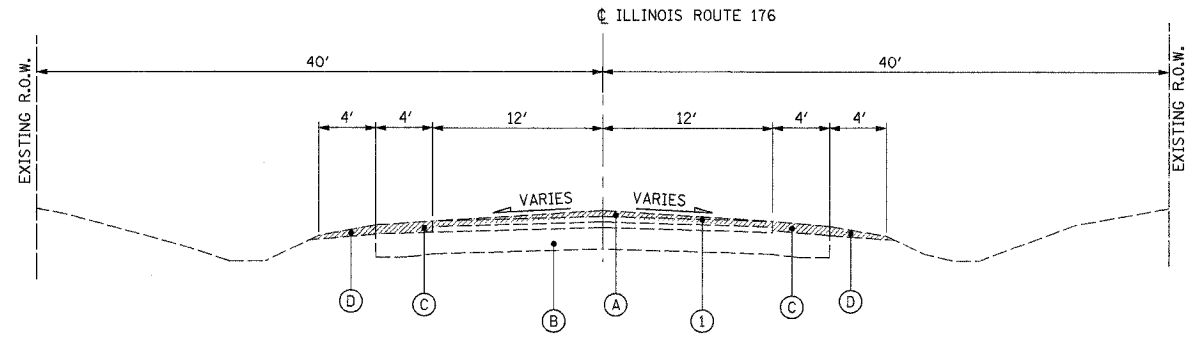
20076400 TRAINERS HOUR 500 500

* SPECIALTY ITEMS @ 1080

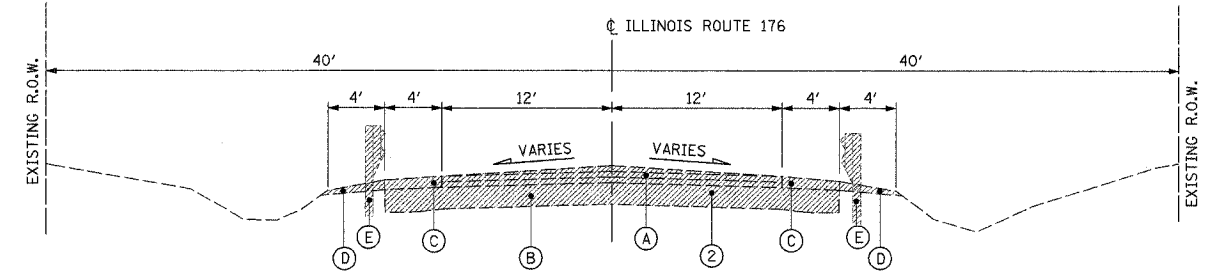
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION ILLINOIS ROUTE 176 OVER THE KISHWAUKEE RIVER SUMMARY OF QUANTITIES SCALE: DRAWN BY: WS DATE: 10-05-07 CHECKED BY: RJS
NAME	DATE	
 GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC. CHICAGO, ILLINOIS		

CONTRACT NO. 62336

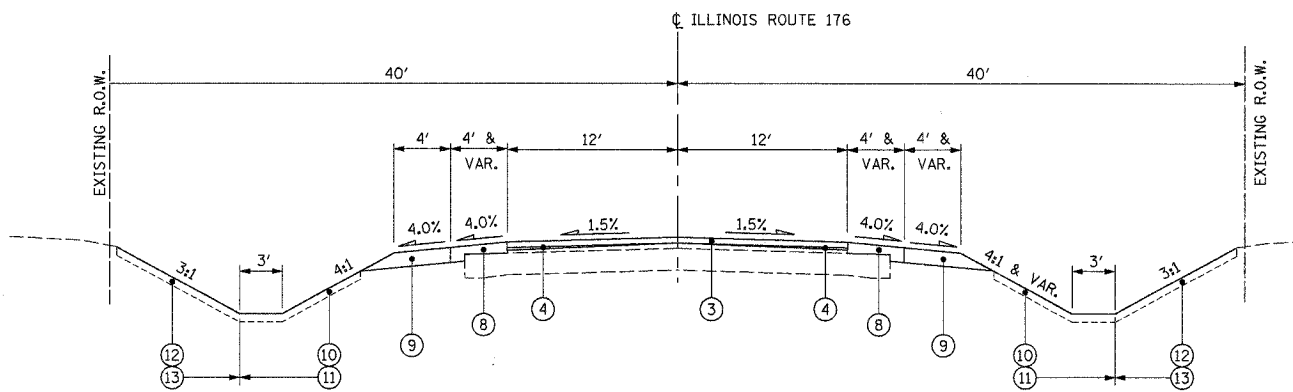
F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2-B	McHENRY	64	5
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



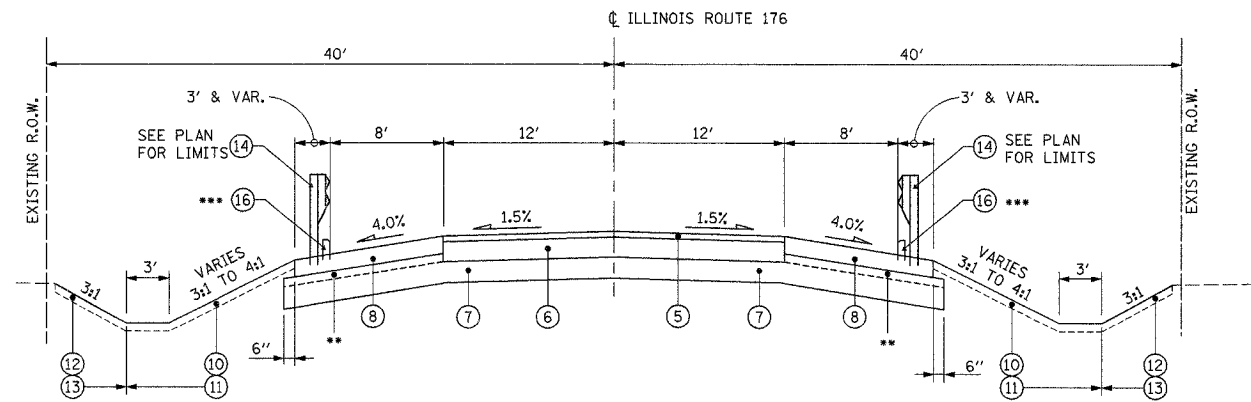
EXISTING TYPICAL SECTION
STA. 5+10 TO STA. 6+50
STA. 14+50 TO STA. 15+15



EXISTING TYPICAL SECTION
STA. 6+50 TO STA. 9+58.50±
STA. 10+41± TO STA. 14+50

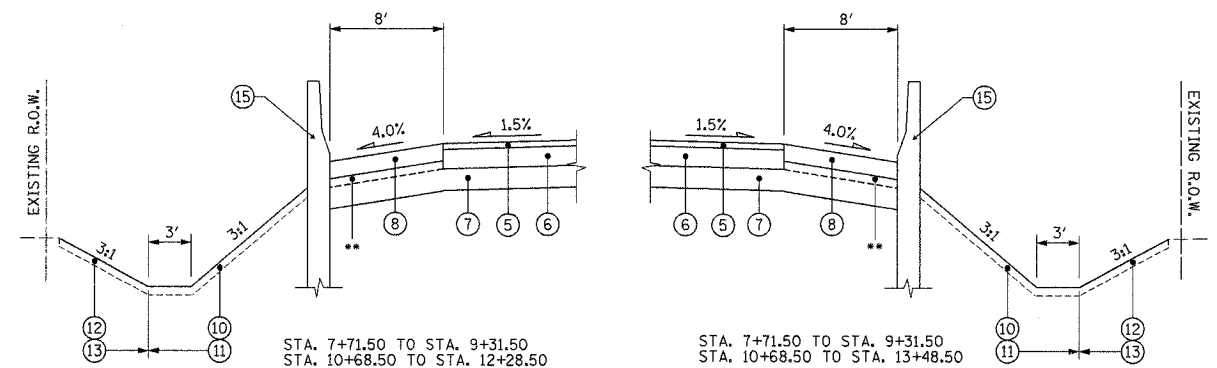


PROPOSED TYPICAL SECTION
STA. 5+10.00 TO STA. 6+50.00
STA. 14+50.00 TO STA. 15+15.00



PROPOSED TYPICAL SECTION
STA. 6+50.00 TO STA. 7+71.50
STA. 12+28.50 TO STA. 14+50.00

OR



PROPOSED TYPICAL SECTION
STA. 7+71.50 TO STA. 9+31.50
STA. 10+68.50 TO STA. 12+28.50

- ADDITIONAL AGGREGATE THICKNESS INCIDENTAL TO 7
- PROVIDE CONCRETE CURB, TYPE B BENEATH TRAFFIC BARRIER TERMINAL SECTION, TYPE 6 PER HWY STD 631031

LEGEND :

EXISTING CONDITIONS:

- (A) HOT-MIX ASPHALT SURFACE ± 5"
- (B) P.C.C. BASE COURSE (VARIES 7"-9")
- (C) HOT-MIX ASPHALT SHOULDER (DEPTH VARIES)
- (D) AGGREGATE SHOULDER
- (E) STEEL PLATE BEAM GUARDRAIL
- ▨ ITEM TO BE REMOVED

PROPOSED IMPROVEMENTS:

- ① HOT-MIX ASPHALT SURFACE REMOVAL, 3 "
- ② PAVEMENT REMOVAL
- ③ HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL 9.5mm, N50, 2 "
- ④ LEVELING BINDER (MACHINE METHOD), IL-9.5, N50 (1" & VARIES)
- ⑤ HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL 9.5, N50, 2" } HOT-MIX ASPHALT PAVEMENT (FULL DEPTH) 13"
- ⑥ HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50, 11"
- ⑦ AGGREGATE SUBGRADE, 12"
- ⑧ HOT-MIX ASPHALT SHOULDERS, 8"
- ⑨ AGGREGATE SHOULDERS, TYPE B, 8"
- ⑩ TOPSOIL FURNISH AND PLACE, 4"
- ⑪ SEEDING, CLASS 2A AND EROSION CONTROL BLANKET
- ⑫ COMPOST FURNISH AND PLACE, 2"
- ⑬ SEEDING, CLASS 3 & 5A
- ⑭ STEEL PLATE BEAM GUARDRAIL, TYPE A
- ⑮ CONCRETE RETAINING WALL
- ⑯ CONCRETE CURB, TYPE B

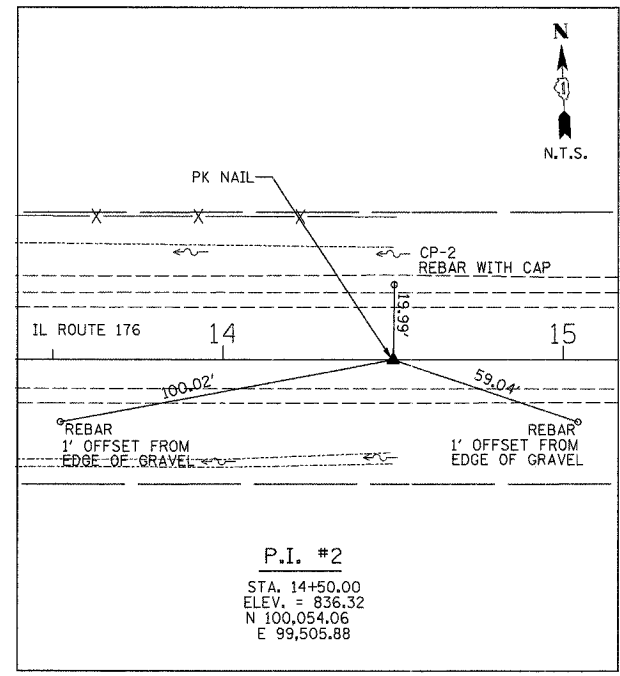
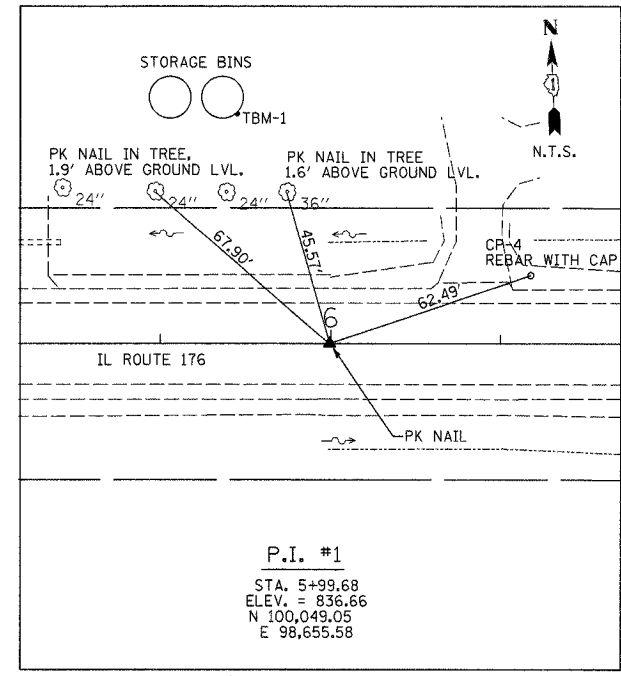
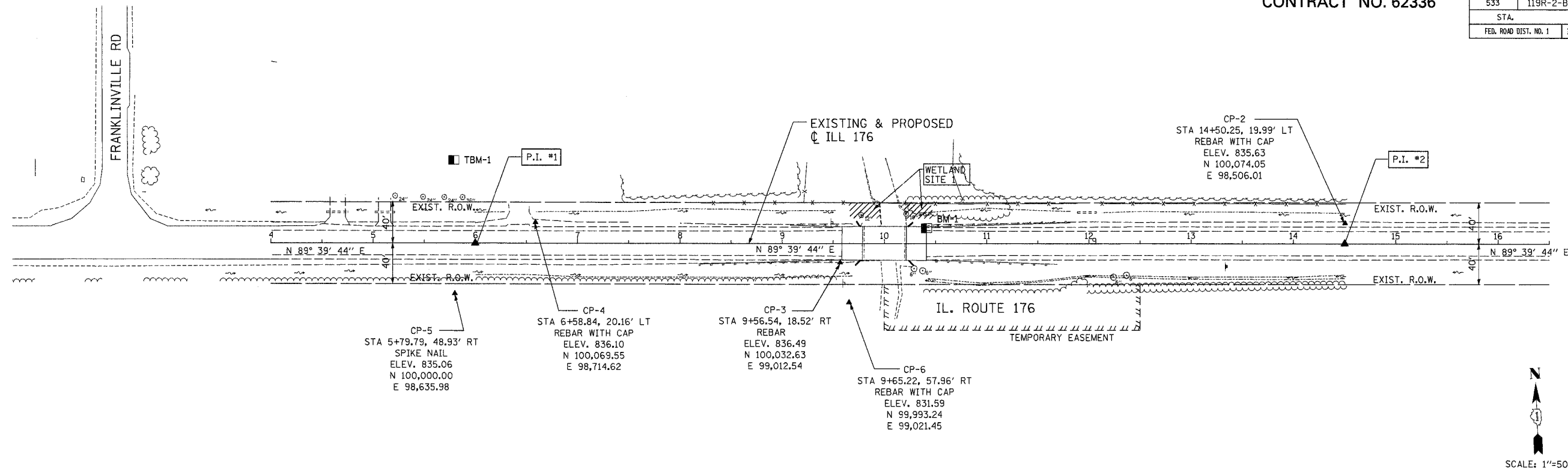
HOT-MIX ASPHALT MIXTURE REQUIREMENTS			
OPERATION	MIXTURE TYPE	AC TYPE	AIR VOIDS
ROADWAY RECONSTRUCT. (FULL-DEPTH)	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL 9.5mm, N50 (2")	PG 64-22	4% @ 50 GYR.
	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50 (11")	PG 64-22*	4% @ 50 GYR.
ROADWAY RESURFACING	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL 9.5mm, N50 (2")	PG 64-22	4% @ 50 GYR.
	LEVELING BINDER (MACHINE METHOD), IL-9.5mm, N50 (1")	PG 64-22*	4% @ 50 GYR.
DRIVEWAYS	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", IL 9.5mm, N50 (2")	PG 64-22	4% @ 50 GYR.
	HOT-MIX ASPHALT BASE COURSE, 6" (PE) OR 8" (CE) (BINDER IL 19.0mm)	PG 64-22*	4% @ 50 GYR.
SHOULDERS	HOT-MIX ASPHALT SHOULDERS, 8"	PG 64-22*	2% @ 30 GYR.
TEMPORARY RAMP	HOT-MIX ASPHALT BINDER IL 19.0 N50	PG 64-22*	4% @ 50 GYR.

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT SURFACE MIXTURE QUANTITIES IS 112 lbs/sq yd/ln
* WHEN RAP EXCEEDS 20%, THE NEW ASPHALT BINDER IN THE MIX SHALL BE PG 58-22

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	ILLINOIS ROUTE 176 OVER THE KISHWAUKEE RIVER	
		TYPICAL SECTIONS	
		SCALE: VERT. N.T.S.	DRAWN BY: WS
		HORIZ. DATE: 10-05-07	CHECKED BY: RJS
		GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC. CHICAGO, ILLINOIS	

CONTRACT NO. 62336

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2-B	McHENRY	64	6
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	



BENCH MARKS		
NO.	DESCRIPTION	ELEVATION
BM-1	NORTH-WEST CORNER OF EAST APPROACH SLAB STA. 10+40.89, 16.49' LT	836.86
TBM-1	SET CHISELED "□" IN SOUTH FACE OF CONCRETE BASE OF EAST STORAGE BIN STA. 5+80.22, 81.30' LT	836.91

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION ILLINOIS ROUTE 176 OVER THE KISHWAUKEE RIVER ALIGNMENT, TIES, & BENCH MARKS
NAME	DATE	

SCALE: VERT.
HORIZ.
DATE: 10-05-07

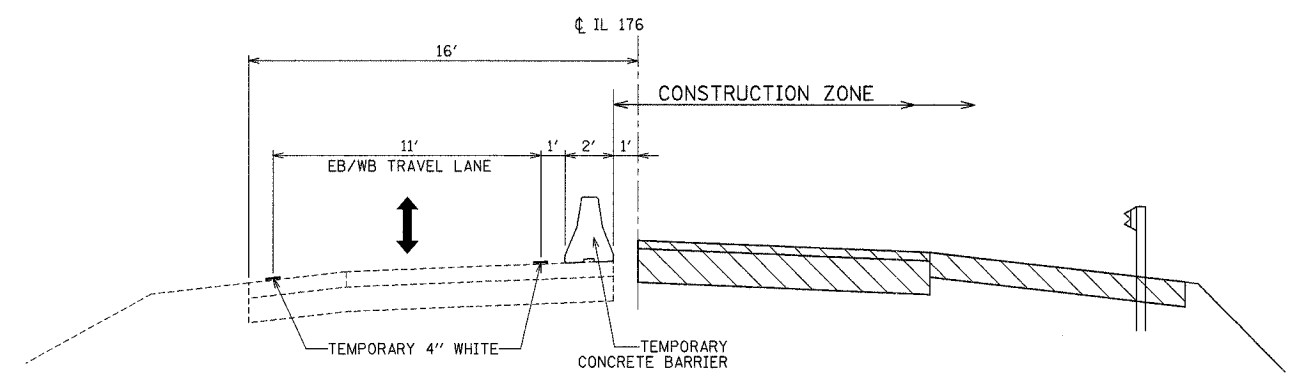
DRAWN BY: WS
CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

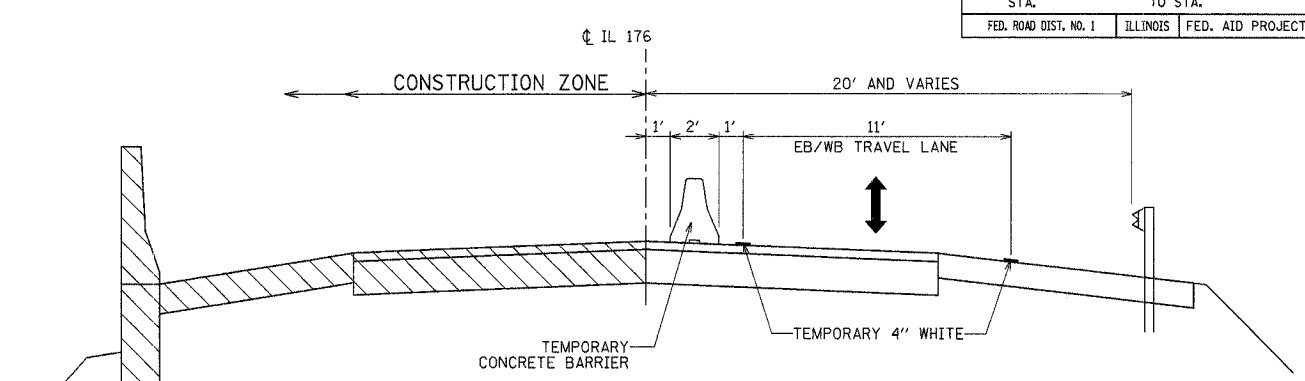
FILE: H:\Jobs\2002\20024023-0\CAD\B07.Tran\cgr\100\ALIGNMENT.dgn
DATE: 05-04-07 15:25

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2-B	McHENRY	64	7
STA.		TO STA.		
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

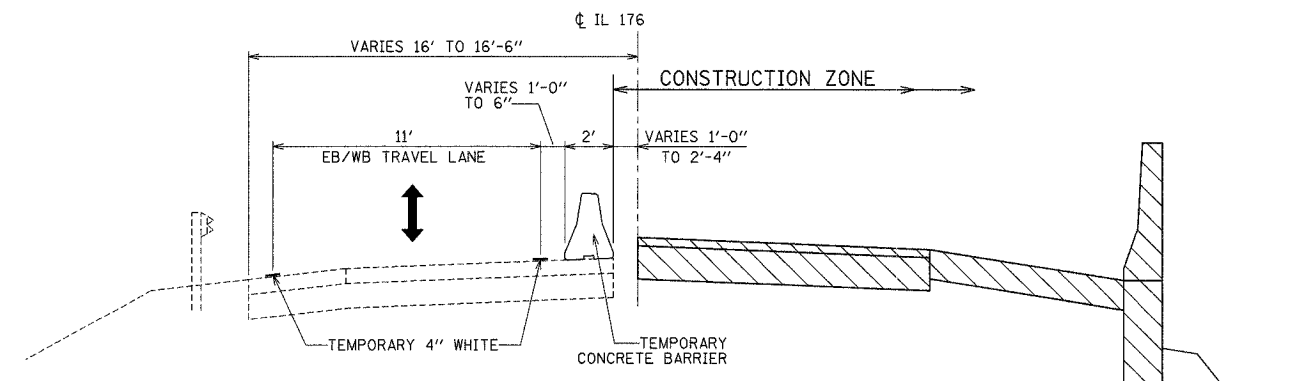
CONTRACT NO. 62336



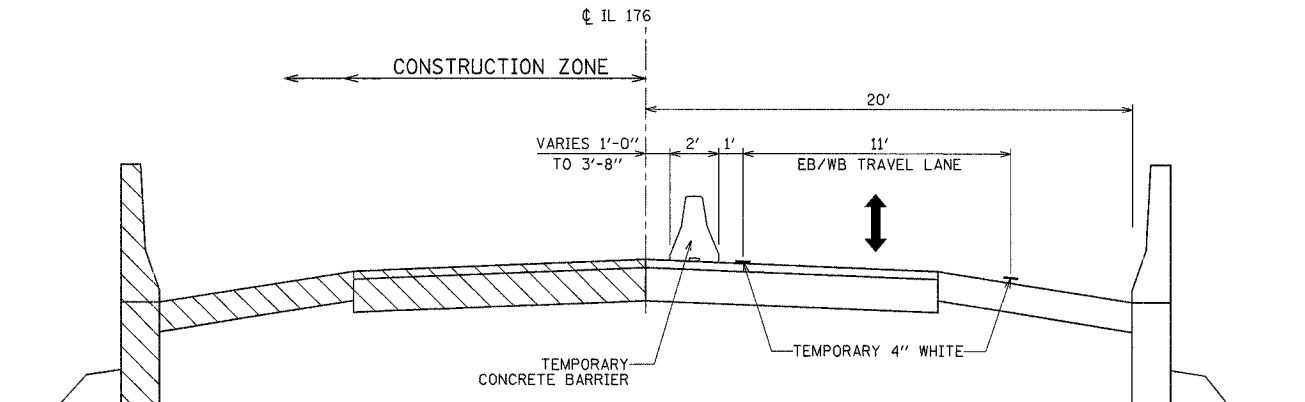
**TYPICAL SECTION
STAGE I CONSTRUCTION**
STA. 5+10 TO STA. 9+10
STA. 10+90 TO STA. 15+15
(LOOKING EAST)



**TYPICAL SECTION
STAGE II CONSTRUCTION**
STA. 5+10 TO STA. 8+80
STA. 11+20 TO STA. 15+15
(LOOKING EAST)



**TYPICAL SECTION
STAGE I CONSTRUCTION**
STA. 9+10 TO STA. 9+60
STA. 10+40 TO STA. 10+90
(LOOKING EAST)

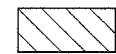





**TYPICAL SECTION
STAGE II CONSTRUCTION**
STA. 8+80 TO STA. 9+60
STA. 10+40 TO STA. 11+20
(LOOKING EAST)

NOTES:

- SEE BRIDGE GENERAL PLAN FOR BRIDGE STAGING AND DIMENSIONS.
- REFER TO STANDARD 701321-08
- SHIFTING TAPERS FOR TEMPORARY CONCRETE BARRIER:
 - STAGE I: 1'-4" SHIFT STA. 9+10 TO STA. 9+50 AND STA. 10+50 TO STA. 10+90
 - STAGE II: 2'-8" SHIFT STA. 8+80 TO STA. 9+60 AND STA. 10+40 TO STA. 11+20.

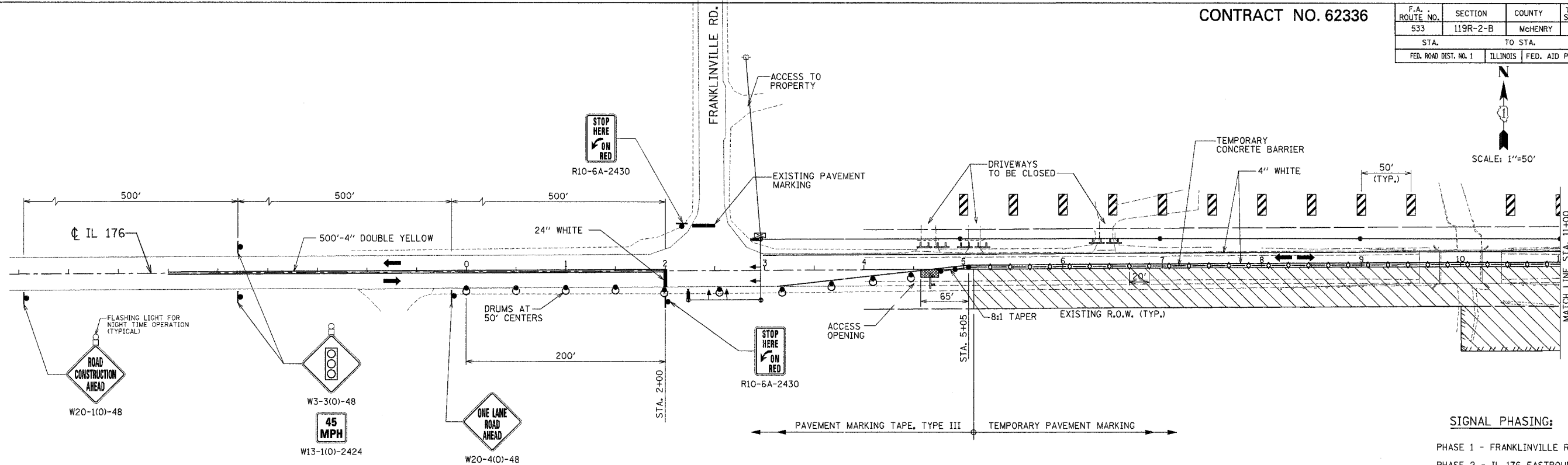
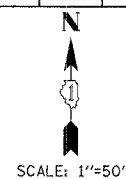
LEGEND :

-  - AREA OF PROPOSED CONSTRUCTION
-  - COMPLETED WORK
-  - DIRECTION OF TRAFFIC

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION ILLINOIS ROUTE 176 OVER THE KISHWAUKEE RIVER SUGGESTED CONSTRUCTION STAGING TYPICAL SECTIONS
NAME	DATE	
		SCALE:
		DATE: 10-05-07
		DRAWN BY: WS
		CHECKED BY: RJS
		GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC. CHICAGO, ILLINOIS

CONTRACT NO. 62336

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2-B	McHENRY	64	8
STA. TO STA.		FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		



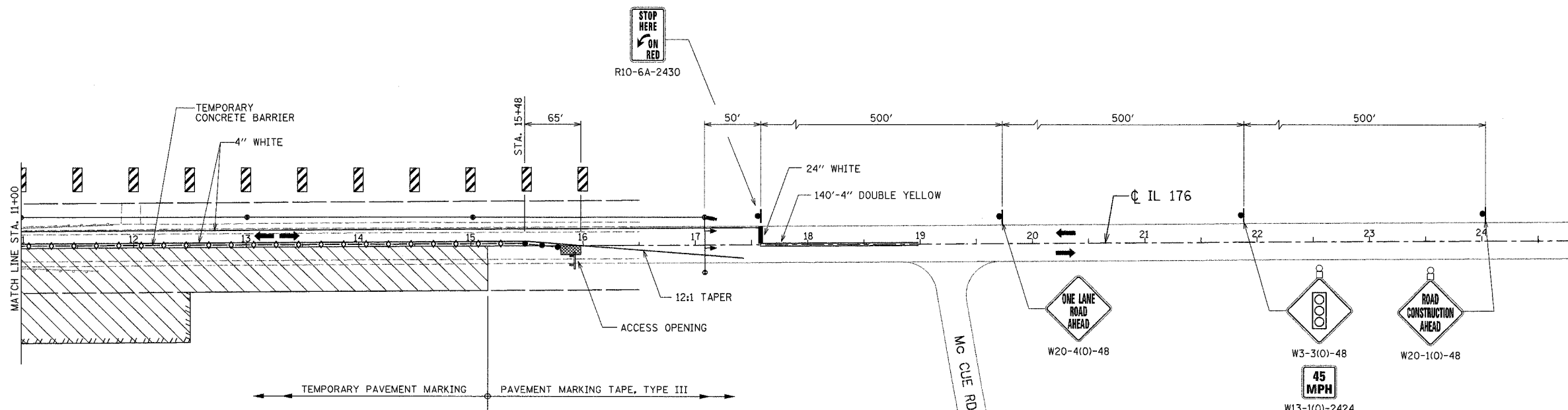
SIGNAL PHASING:
 PHASE 1 - FRANKLINVILLE RD.
 PHASE 2 - IL 176 EASTBOUND.
 PHASE 3 - IL 176 WESTBOUND.
 ALL PHASES BY ACTUATION.
 ALL SIGNALS WILL DWELL IN RED UNTIL ACTUATED.

NOTES:

- SEE BRIDGE GENERAL PLAN FOR BRIDGE STAGING AND DIMENSIONS.
- REFER TO STANDARD 701321

LEGEND:

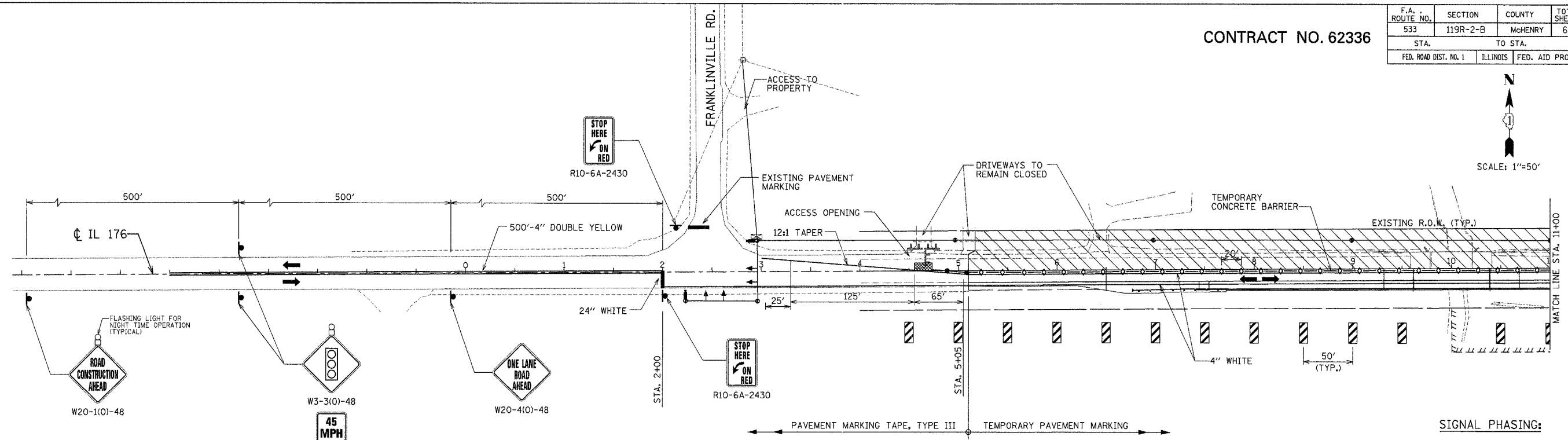
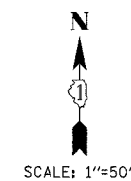
- WORK AREA
- SIGN
- DRUM WITH STEADY BURNING LIGHT
- TEMPORARY CONCRETE BARRIER
- DOUBLE VERTICAL PANEL
- DIRECTION OF TRAFFIC
- TYPE C BIDIRECTIONAL REFLECTOR
- STEADY BURNING LIGHT AND DOUBLE VERTICAL PANEL
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
- TRAFFIC SIGNAL
- TYPE III BARRICADE
- VIDEO VEHICLE DETECTION UNIT
- TEMPORARY TRAFFIC SIGNAL CONTROLLER
- TEMPORARY SERVICE INSTALLATION
- TEMPORARY WOOD POLE & AERIAL CABLE



REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION ILLINOIS ROUTE 176 OVER THE KISHWAUKEE RIVER SUGGESTED CONSTRUCTION STAGING STAGE I
NAME	DATE	
		SCALE: 1"=50'
		DATE: 10-05-07
		DRAWN BY: MW CHECKED BY: RJS
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC. CHICAGO, ILLINOIS		

CONTRACT NO. 62336

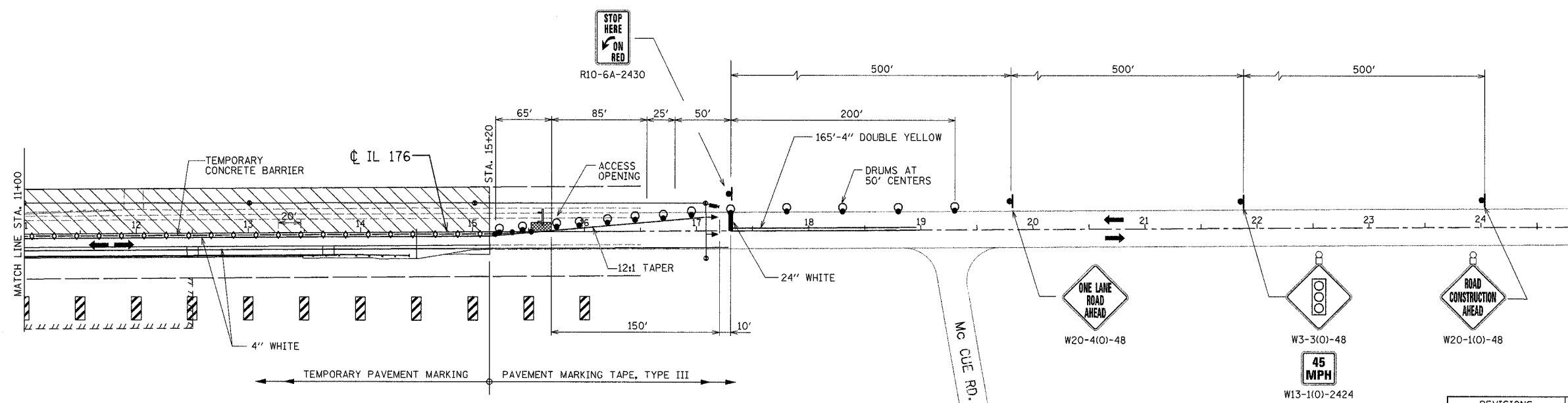
F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2-B	McHENRY	64	9
STA.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



SIGNAL PHASING:
 PHASE 1 - FRANKLINVILLE RD.
 PHASE 2 - IL 176 EASTBOUND.
 PHASE 3 - IL 176 WESTBOUND.
 ALL PHASES BY ACTUATION.
 ALL SIGNALS WILL DWELL IN RED UNTIL ACTUATED.

NOTES:
 1. SEE BRIDGE GENERAL PLAN FOR BRIDGE STAGING AND DIMENSIONS.
 2. REFER TO STANDARD 701321

- LEGEND:**
- WORK AREA
 - SIGN
 - DRUM WITH STEADY BURNING LIGHT
 - TEMPORARY CONCRETE BARRIER
 - DOUBLE VERTICAL PANEL
 - DIRECTION OF TRAFFIC
 - TYPE C BIDIRECTIONAL REFLECTOR
 - STEADY BURNING LIGHT AND DOUBLE VERTICAL PANEL
 - IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE)
 - TRAFFIC SIGNAL
 - TYPE III BARRIAGE
 - VIDEO VEHICLE DETECTION UNIT
 - TEMPORARY TRAFFIC SIGNAL CONTROLLER
 - TEMPORARY SERVICE INSTALLATION
 - TEMPORARY WOOD POLE & AERIAL CABLE



REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION ILLINOIS ROUTE 176 OVER THE KISHWAUKEE RIVER SUGGESTED CONSTRUCTION STAGING STAGE II
NAME	DATE	
		SCALE: 1"=50'
		DATE: 10-05-07
		DRAWN BY: WS
		CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
 CHICAGO, ILLINOIS
 FILE: H:\Jobs2002\20024023-01\CAD\IDOT_Trans\dgn\00\MOT_Plan02.dgn
 DATE: 05-Oct-07 15:22

CONTRACT NO. 62336

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2-B	McHENRY	64	10
STA.		TO STA.		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

CABLE PLAN LEGEND

- R TEMPORARY TRAFFIC SIGNAL SECTION OR PEDESTRIAN SIGNAL SECTION
- PROPOSED CONTROLLER CABINET
- PROPOSED SERVICE INSTALLATION
- 5 INDICATES NUMBER OF CONDUCTORS IN CABLE. ALL CONDUCTORS TO BE NUMBER 14 A.W.G. WIRE UNLESS OTHERWISE NOTED.
- PEDESTRIAN PUSHBUTTON DETECTOR
- EMERGENCY VEHICLE LIGHT DETECTOR
- CONFIRMATION BEACON
- VEHICLE DETECTOR, INDUCTION LOOP. "E" DENOTES EXISTING
- VIDEO VEHICLE DETECTOR UNIT
- 12"(300mm) PEDESTRIAN SIGNAL SECTION
- H/C GROUND ROD AT HANDHOLE OR CONTROLLER
- P GROUND ROD AT POST OR MAST ARM POLE
- S GROUND ROD AT ELECTRIC SERVICE INSTALLATION
- E GROUND ROD EXISTING TO BE REUSED
- GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)
- 24 NO. 62.5/125 MM 12F & SM 12F, FIBER OPTIC CABLE
- 1 NO. 14 1C TRACER CABLE

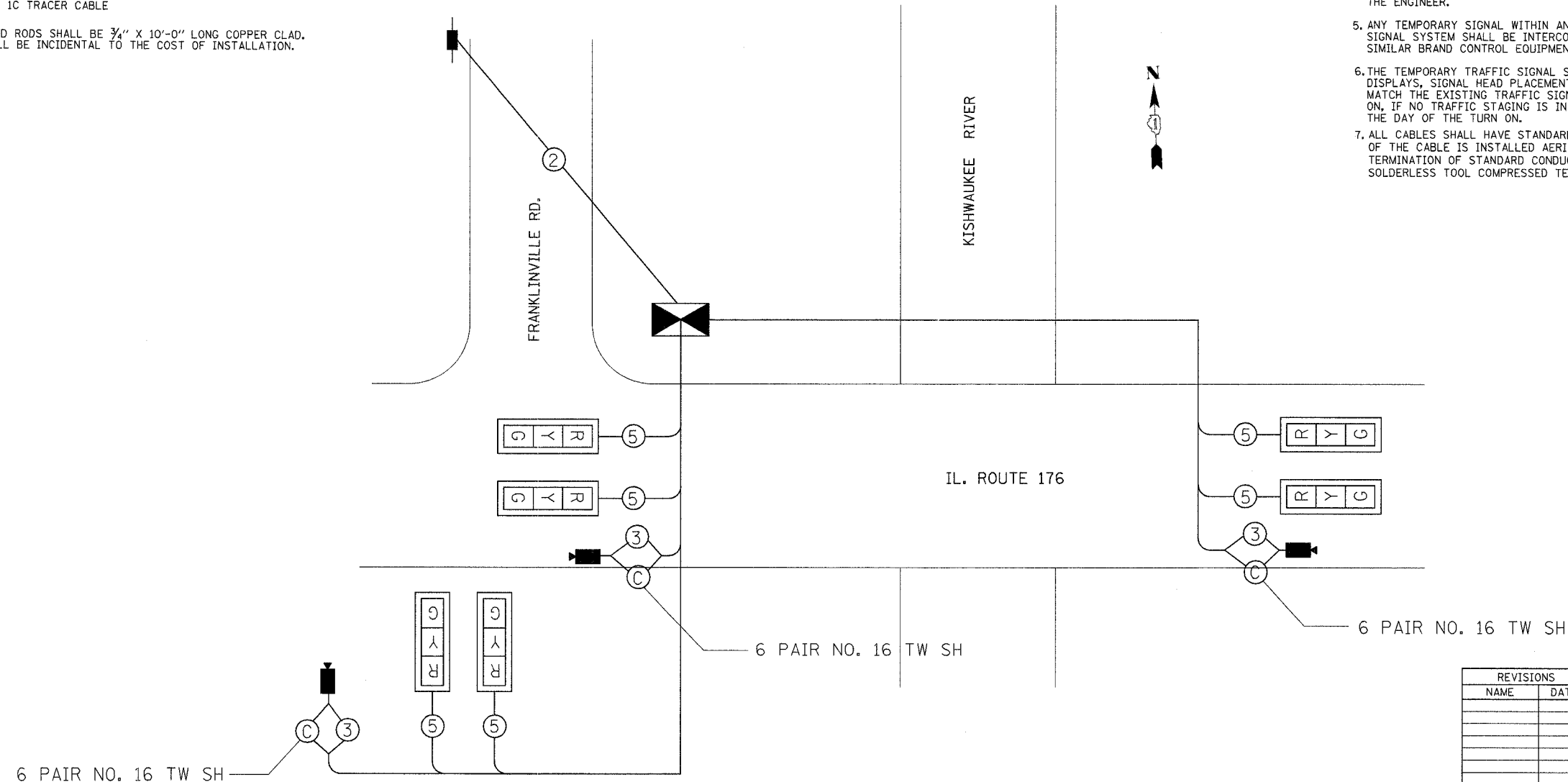
NOTE: ALL NEW GROUND RODS SHALL BE 3/4" X 10'-0" LONG COPPER CLAD. THE COST SHALL BE INCIDENTAL TO THE COST OF INSTALLATION.

SEQUENCE OF OPERATIONS

MOVEMENT	↓		→		←				FLASH	
PHASE	1		2		3					
INTERVAL	1	2A	2B	3	4A	4B	5	6A	6B	
CHANGED TO	2		1 OR 3		1 OR 2					
FRANKLINVILLE SB	G	Y	R	R	R	R	R	R	R	G
IL176 EB	R	R	R	G	Y	R	R	R	R	R
IL176 WB	R	R	R	R	R	R	G	Y	R	R

NOTES FOR TEMPORARY TRAFFIC SIGNALS

1. ALL CONTROL EQUIPMENT INCLUDING EMERGENCY PRE-EMPTION AND COMMUNICATION DEVICES FOR THE TEMPORARY TRAFFIC SIGNAL(S) SHALL BE FURNISHED BY THE CONTRACTOR.
2. ONLY CONTROLLERS SUPPLIED BY ONE OF THE DISTRICT APPROVED CLOSED LOOP EQUIPMENT MANUFACTURERS WILL BE APPROVED FOR USE AT TEMPORARY SIGNAL LOCATIONS. ALL CONTROLLERS USED FOR TEMPORARY TRAFFIC SIGNALS SHALL BE FULLY ACTUATED NEMA MICROPROCESSOR BASED WITH RS232 DATA ENTRY PORTS COMPATIBLE WITH EXISTING MONITORING SOFTWARE APPROVED BY IDOT DISTRICT 1. INSTALLED IN A NEMA TS1 OR TS2 CABINET. ONLY ONE BRAND OF CONTROLLER WILL BE ACCEPTED FOR ANY ONE CONTRACT.
3. ALL TRAFFIC SIGNAL SECTIONS AND PEDESTRIAN SIGNAL SECTIONS SHALL BE 12" HEADS SHALL BE PLACED AS INDICATED ON THE TEMPORARY TRAFFIC SIGNAL PLAN OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL FURNISH ENOUGH CABLE SLACK TO RELOCATE HEADS TO ANY POSITION ON THE SPAN WIRE OR AT LOCATIONS ILLUSTRATED ON THE PLANS FOR CONSTRUCTION STAGING. THE TEMPORARY TRAFFIC SIGNAL SHALL REMAIN IN OPERATION DURING ALL SIGNAL HEAD RELOCATIONS. EACH TEMPORARY TRAFFIC SIGNAL HEAD SHALL HAVE ITS OWN CABLE FROM THE CONTROLLER CABINET TO THE SIGNAL HEAD.
4. ALL EXISTING STREET NAME AND INTERSECTION REGULATORY SIGNS SHALL BE REMOVED FROM EXISTING POLES, RELOCATED AND SECURELY FASTENED TO THE SIGNAL SPAN WIRE OR WOOD POLE AS DIRECTED BY THE ENGINEER.
5. ANY TEMPORARY SIGNAL WITHIN AN EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM SHALL BE INTERCONNECTED TO THAT SYSTEM USING SIMILAR BRAND CONTROL EQUIPMENT.
6. THE TEMPORARY TRAFFIC SIGNAL SHALL HAVE THE SIGNAL HEAD DISPLAYS, SIGNAL HEAD PLACEMENTS AND CONTROLLER PHASING MATCH THE EXISTING TRAFFIC SIGNAL, AT THE TIME OF THE TURN ON, IF NO TRAFFIC STAGING IS IN PLACE OR WILL NOT BE STAGED ON THE DAY OF THE TURN ON.
7. ALL CABLES SHALL HAVE STANDARD CONDUCTORS WHERE ANY PORTION OF THE CABLE IS INSTALLED AERIAL SUSPENDED. ALL WIRING TERMINATION OF STANDARD CONDUCTORS SHALL BE MADE WITH SOLDERLESS TOOL COMPRESSED TERMINALS

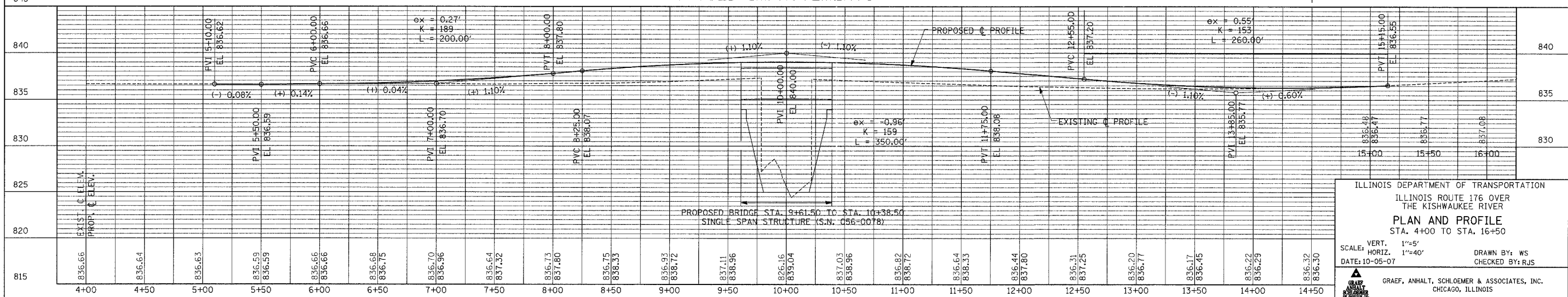
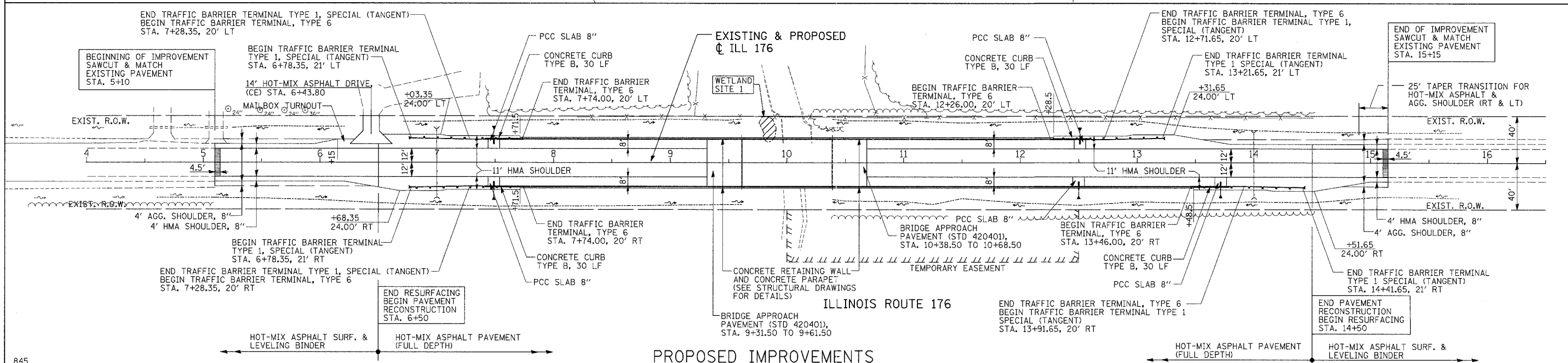
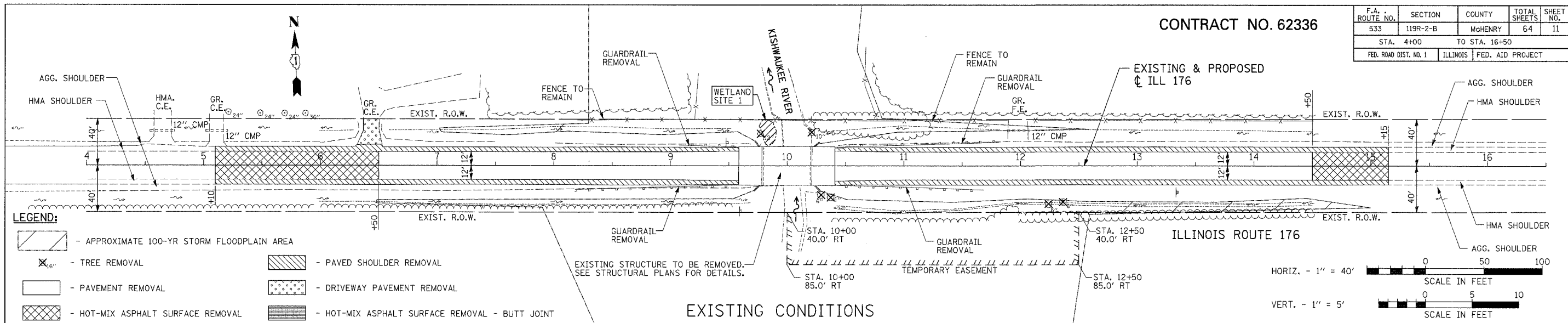


REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION ILLINOIS ROUTE 176 OVER THE KISHWAUKEE RIVER TEMPORARY CABLE PLAN AND TEMPORARY PHASE DESIGNATION DIAGRAM
NAME	DATE	
		SCALE: VERT. N.T.S. DATE: 06-29-07
		DRAWN BY: AAK CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS
FILE: H:\Jobs2002\20024023-DIV\CAD\DOT_Traffic\dgn\00\cableplan.dgn
DATE: 08-01-07 09:52

CONTRACT NO. 62336

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2-B	McHENRY	64	11
STA. 4+00		TO STA. 16+50		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		



PLAN AND PROFILE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 ILLINOIS ROUTE 176 OVER
 THE KISHWAUKEE RIVER
PLAN AND PROFILE
 STA. 4+00 TO STA. 16+50

SCALE: VERT. 1"=5'
 HORIZ. 1"=40'

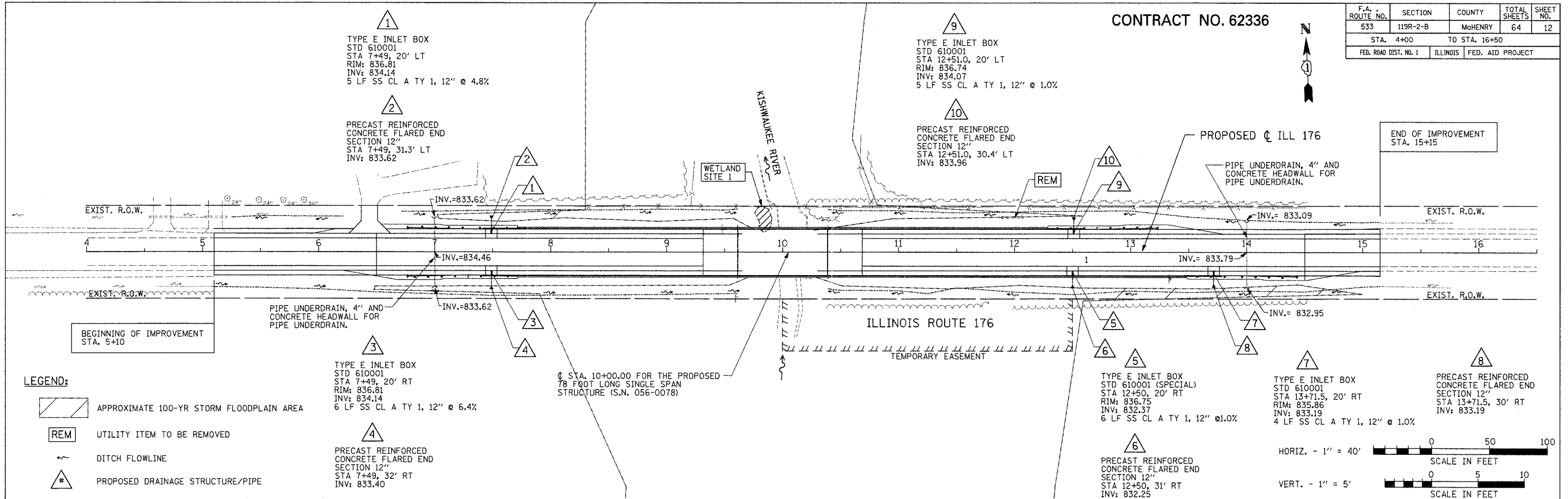
DATE: 10-05-07 DRAWN BY: WS
 CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
 CHICAGO, ILLINOIS

FILE: H:\Jobs\2002\20024023-0\CAD\DOT_Trans\ dgn\00\plan01.dgn
 DATE: 05-01-07 14:54

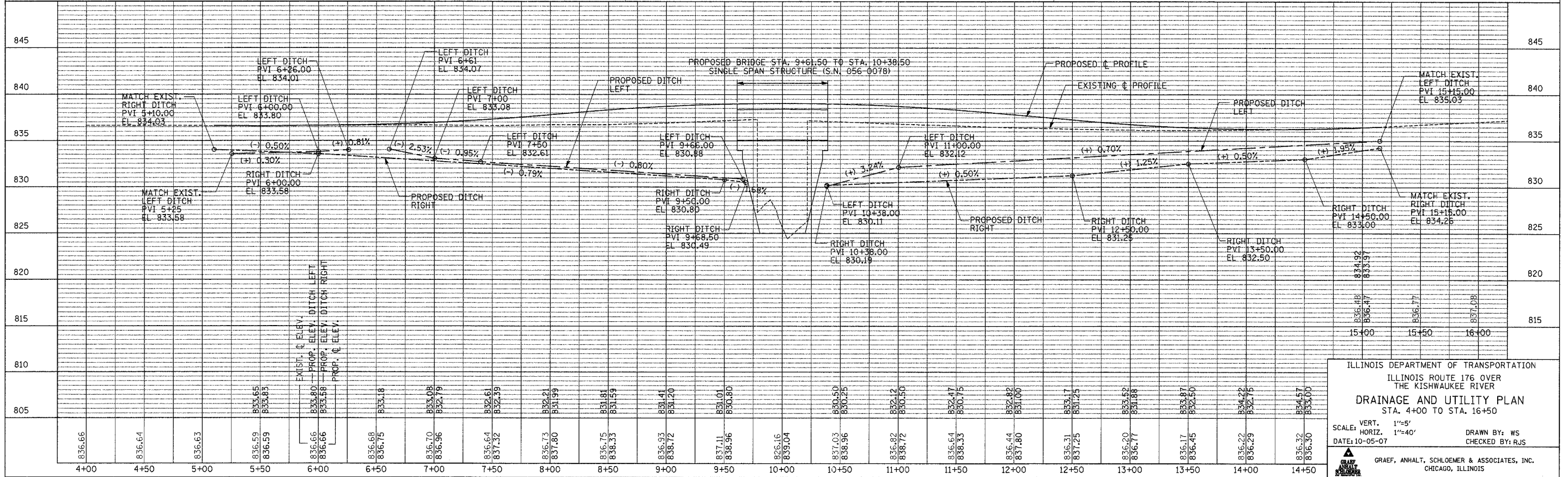
CONTRACT NO. 62336

F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2-B	McHENRY	64	12
STA. 4+00		TO STA. 16+50		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		



LEGEND:

- APPROXIMATE 100-YR STORM FLOODPLAIN AREA
- UTILITY ITEM TO BE REMOVED
- DITCH FLOWLINE
- PROPOSED DRAINAGE STRUCTURE/PIPE



DRAINAGE AND UTILITY PLAN

ILLINOIS DEPARTMENT OF TRANSPORTATION
ILLINOIS ROUTE 176 OVER THE KISHWAUKEE RIVER
DRAINAGE AND UTILITY PLAN
STA. 4+00 TO STA. 16+50

SCALE: VERT. 1"=5'
HORIZ. 1"=40'

DATE: 10-05-07

DRAWN BY: WS
CHECKED BY: RJS

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
CHICAGO, ILLINOIS

FILE: H:\Job\2002\20024023-0\CAD\DOT1.Trans\dgn\plan_11101.dgn
DATE: 05-01-07 15:06

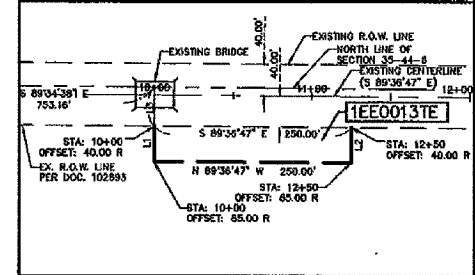
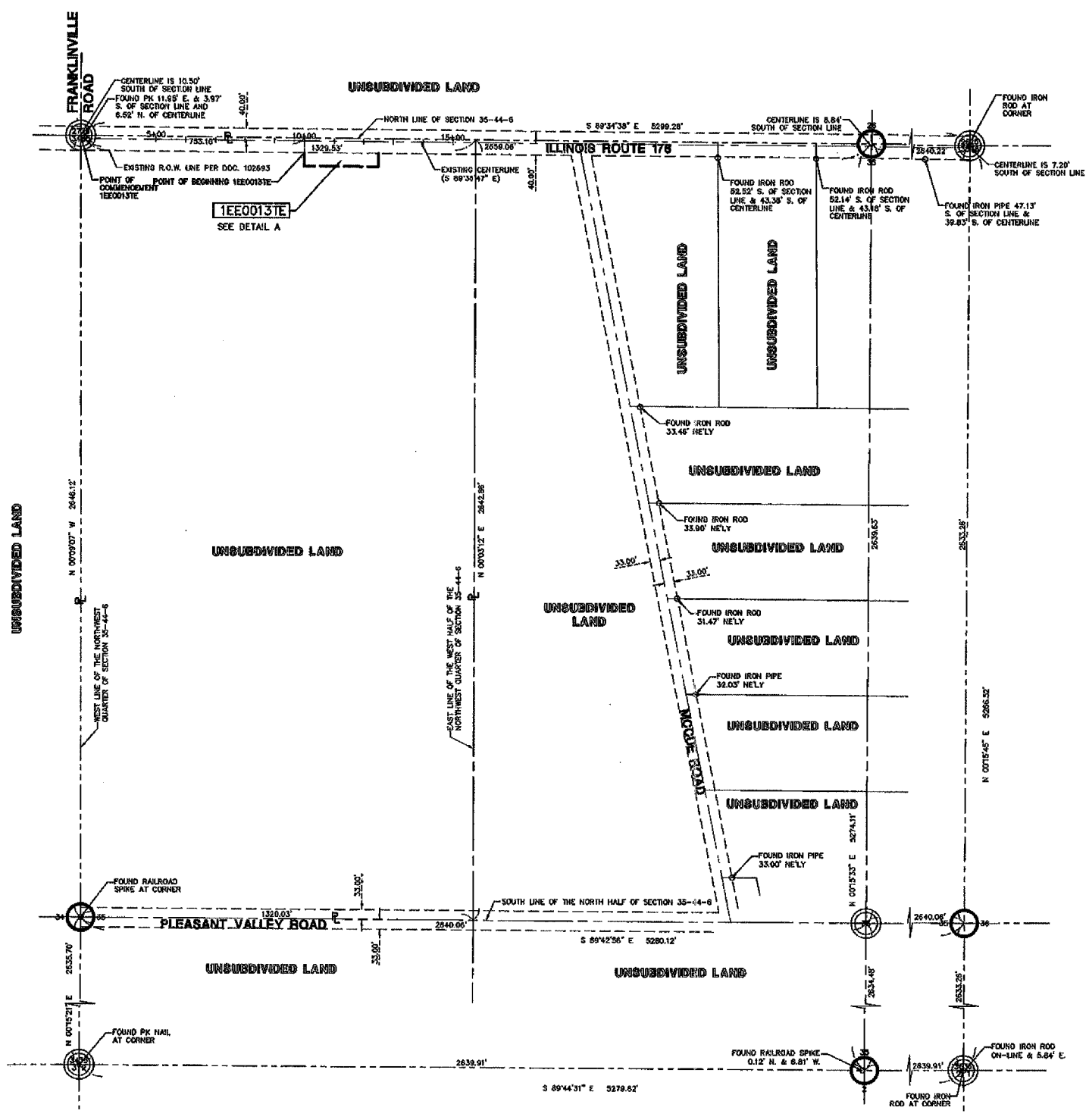
PART OF SEC. 35, T44N, R6E OF THE 3RD P.M., MCHENRY COUNTY, ILLINOIS

PARCEL No.	OWNER	TOTAL HOLDINGS (ACRES)	PART TAKEN (ACRES)	PREVIOUSLY DEDICATED (ACRES)	REMAINDER	EASEMENT AREA (ACRES)	PERMANENT INDEX NUMBER	PURPOSE OF EASEMENT	ACQUIRED BY
1EE0013TE	BRUNO, INC.	80.424	0.000	2.529	80.424	0.258	12-35-100-001 PART OF 12-35-100-003 PART OF 12-35-100-004	FOR GRADING PURPOSES	

CONTRACT No. 62336

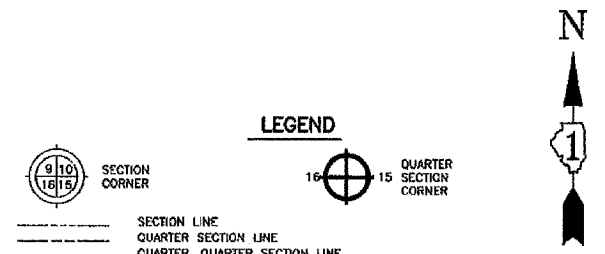
FAA RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	10+00	MCHENRY	64	413
STA. 10+00		TO STA. 12+50		
FED. ROAD DIST. NO. 1		ILLINOIS FED. AID PROJECT		

Map 07_2007 - 0530 Day Name: P:\Users\POPECK\Projects\82336\Map\82336.dwg Updated By: RYPOCK



LINE	BEARING	LENGTH
L1	N 00°23'13" E	45.00'
L2	S 00°23'13" W	45.00'
L3	S 00°23'13" W	35.00'

BY	DATE
RYPOCK	
RYPOCK	
RYPOCK	



- SECTION CORNER
QUARTER SECTION CORNER
- SECTION LINE
QUARTER SECTION LINE
QUARTER, QUARTER SECTION LINE
PLATTED LOT LINE
PROPERTY (DEED) LINE
- APL
APPARENT PROPERTY LINE
CENTERLINE
EXISTING RIGHT OF WAY LINE
PROPOSED RIGHT OF WAY LINE
PROPOSED EASEMENT
MEASURED DIMENSION
COMPUTED DIMENSION
RECORD DATA
- EXISTING BUILDING
- IRON ROD SET
 - IRON PIPE OR ROD FOUND
 - + CUT CROSS FOUND OR SET
 - T1 THESE STAKES, REFERENCE FOUND OR SET MONUMENTATION.
 - T2 IRON ROD FLUSHED WITH GROUND TO TIE FOUND IRON STAKE, IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
 - BT1 THESE STAKES, IN CULTIVATED AREAS, REFERENCE FOUND OR SET MONUMENTATION. BURIED 5/8" IRON ROD 20 INCHES BELOW GROUND TO TIE FOUND IRON STAKE, IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
 - BT2 THESE STAKES, IN CULTIVATED AREAS, REFERENCE FOUND OR SET MONUMENTATION. BURIED 5/8" IRON ROD 20 INCHES BELOW GROUND TO TIE FOUND IRON STAKE, IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
 - BT3 THESE STAKES, IN CULTIVATED AREAS, REFERENCE FOUND OR SET MONUMENTATION. BURIED 5/8" IRON ROD 20 INCHES BELOW GROUND TO TIE FOUND IRON STAKE, IDENTIFIED BY COLORED PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
 - STAKING OF PROPOSED RIGHT OF WAY. SET DIVISION OF HIGHWAYS 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, BURIED 5/8" IRON ROD 20 INCHES BELOW GROUND TO MARK FUTURE SURVEY MARKER POSITION, IDENTIFIED BY COLOR PLASTIC CAP BEARING SURVEYORS REGISTRATION NUMBER.
 - ⊙ PERMANENT SURVEY MARKER, I D O T STD. 2135 (TO BE SET BY OTHERS)
 - RIGHT OF WAY STAKING PROPOSED TO BE SET.
 - ◇ LIGHT STANDARD
 - P.O.B. = POINT OF BEGINNING
 - P.O.C. = POINT OF COMMENCEMENT

STATE OF ILLINOIS
COUNTY OF LAKE

I, REBECCA Y. POPECK, DO HEREBY DECLARE THAT I HAVE SURVEYED THE PLAT OF HIGHWAYS SHOWN HEREON IN SECTION 35, TOWNSHIP 44 NORTH, RANGE 6, EAST OF THE THIRD PRINCIPAL MERIDIAN, MCHENRY COUNTY, ILLINOIS; 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 AT VERNON HILLS, ILLINOIS THIS ____ DAY OF _____, A.D., 2007.

ILLINOIS PROFESSIONAL LAND SURVEYOR No. 3642; EXPIRES NOVEMBER 30, 2008



STATIONING FOR ILLINOIS ROUTE 176 IS BASED ON THE INTERSECTION OF THE EXISTING CENTERLINE AND THE CENTER OF THE BRIDGE BRNO 10+00.

BEARINGS SHOWN HEREON ARE BASED ON ILLINOIS STATE PLANE COORDINATES, EAST ZONE, NORTH AMERICAN DATUM OF 1983. NOS CONTROL POINTS PID #H1159 AND #2235 WERE RECOVERED AND USED FOR CORRECTIONS. ALL COORDINATE AND DIMENSIONAL VALUES SHOWN HEREON ARE "GROUND" NOT "GRID".

COMBINED SCALE FACTOR (GROUND TO GRID) = 0.999842305

ID07 SB23 - 3424 SHEET 1 IS A COVER SHEET AND IS NOT RECORDED

MANHARD CONSULTING
ENGINEERS • SURVEYORS • PLANNERS
600 FORDLAND PARKWAY VERNON HILLS, IL 60061
PH: 815-544-1800 FAX: 815-544-1802

PLAT OF HIGHWAYS
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
IL ROUTE 176

SECTION: AT KISHWAUKEE RIVER MCHENRY COUNTY
PROJECT JOB NO. R-91-048-01
STATION 10+00 TO STATION 12+50
SCALE: 1"=200' SHEET 2 OF 2

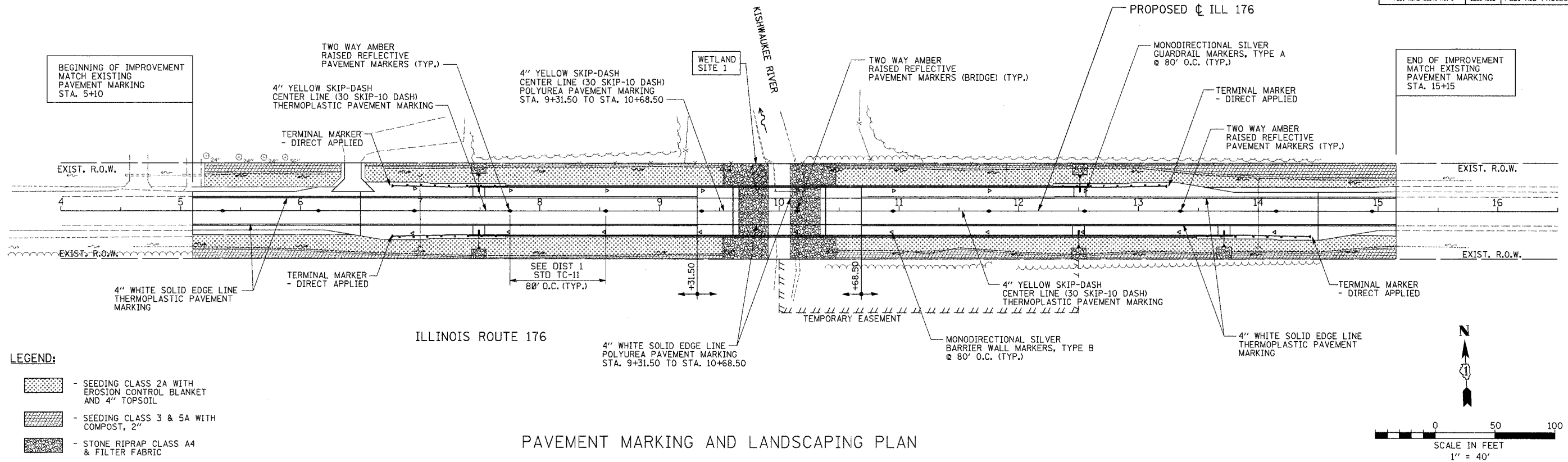
REVISION DATE	DESCRIPTION	BY
03/07/07	REVISED PER IDOT REVIEW	RYP
03/06/07	REVISED PER IDOT REVIEW	RYP
03/05/07	REVISED PER IDOT REVIEW	RYP

RECORDING: RECORDED ON _____ AS DOCUMENT NO. _____

BUREAU OF LAND ACQUISITION
201 WEST CENTER COURT
SCHAUMBURG, ILLINOIS 60196

CONTRACT NO. 62336

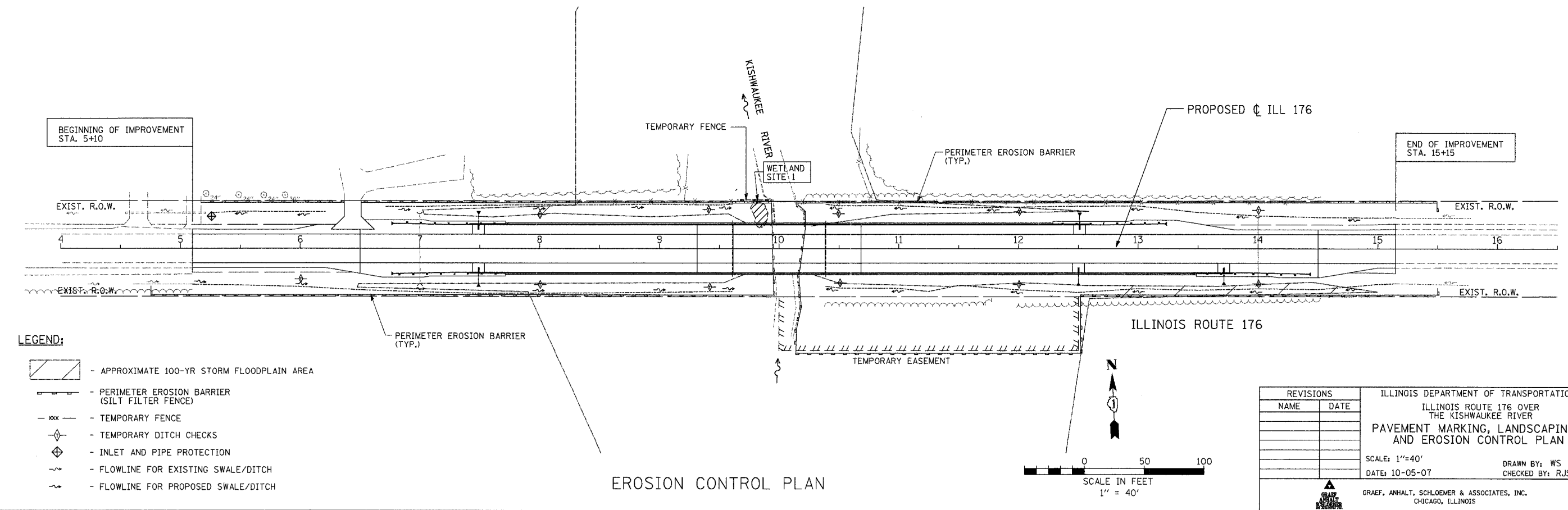
F.A. ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2-B	McHENRY	64	14
STA. 4+00		TO STA. 16+50		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		



PAVEMENT MARKING AND LANDSCAPING PLAN

LEGEND:

- SEEDING CLASS 2A WITH EROSION CONTROL BLANKET AND 4" TOPSOIL
- SEEDING CLASS 3 & 5A WITH COMPOST, 2"
- STONE RIPRAP CLASS A4 & FILTER FABRIC



EROSION CONTROL PLAN

LEGEND:

- APPROXIMATE 100-YR STORM FLOODPLAIN AREA
- PERIMETER EROSION BARRIER (SILT FILTER FENCE)
- TEMPORARY FENCE
- TEMPORARY DITCH CHECKS
- INLET AND PIPE PROTECTION
- FLOWLINE FOR EXISTING SWALE/DITCH
- FLOWLINE FOR PROPOSED SWALE/DITCH

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION ILLINOIS ROUTE 176 OVER THE KISHWAUKEE RIVER PAVEMENT MARKING, LANDSCAPING AND EROSION CONTROL PLAN
NAME	DATE	
		SCALE: 1"=40'
		DATE: 10-05-07
		DRAWN BY: WS CHECKED BY: RJS
		GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC. CHICAGO, ILLINOIS

FILE: H:\Jobs\2002\20024023-0\CAD\DOT_Trans\dgn\00\LandscapingErosion01.dgn
DATE: 05-Oct-07 15:07

Bench Mark: Chiseled "□" in south face of concrete base of east storage bin located approximately 425' northwest of existing S.N. 056-0005. Elev. 836.91.

Existing Structure: S.N. 056-0005, built in 1931 as SBI Rte. 67, Sec. 119, Reconstructed in 1970.

The existing structure is a single span PPC deck beam superstructure on closed abutments. The structure is 43'-0" Bk. to Bk. Abutments and 33'-0" O. to O. Deck. The structure shall be removed and replaced with a single span wide flange superstructure on pile bent abutments. The road shall be kept open to one lane of traffic at all times by utilizing stage construction.

No Salvage.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1 OF 21 SHEETS
533	119R-2B	McHenry	64	15	
FED. AID DIST.	ILLINOIS	FED. AID PROJECT			

Contract #62336

DESIGN SPECIFICATIONS

AASHTO LRFD 4th Edition, 2007

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (Structural Steel M270 Grade 50W)

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.035g
 Site Coefficient (S) = 1.0

LOADING HL-93

Allow 50 #/ sq. ft. for Future Wearing Surface

ADDITIONAL

SOIL BORING LOCATION TABLE

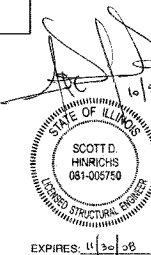
Soil Boring	Station	Offset
R-2	11+50	10.5' Rt.
R-3	12+30	13.0' Rt.
R-4	13+30	13.0' Rt.

STATION 10+00
 BUILT 200_ BY
 STATE OF ILLINOIS
 F.A.P. RTE 533 SEC. 120A-B-R
 LOADING HL-93
 STR. NO. 056-0078

NAME PLATE
 See Std. 515001

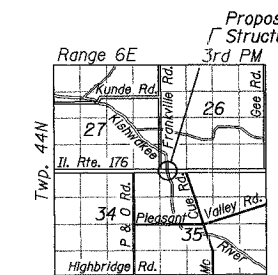
LEGEND

- Existing Abut. & Wingwalls to be removed to 1'-0" below proposed grade
- Stone Riprap
- Soil Boring (For additional Soil Borings at Retaining Walls, see Retaining Wall Plans)

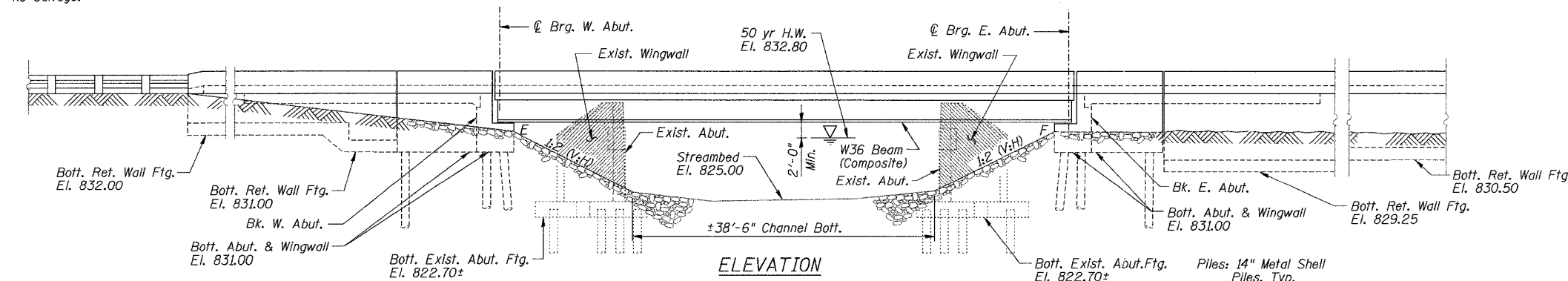


APPROVED
 FOR STRUCTURAL ADEQUACY ONLY

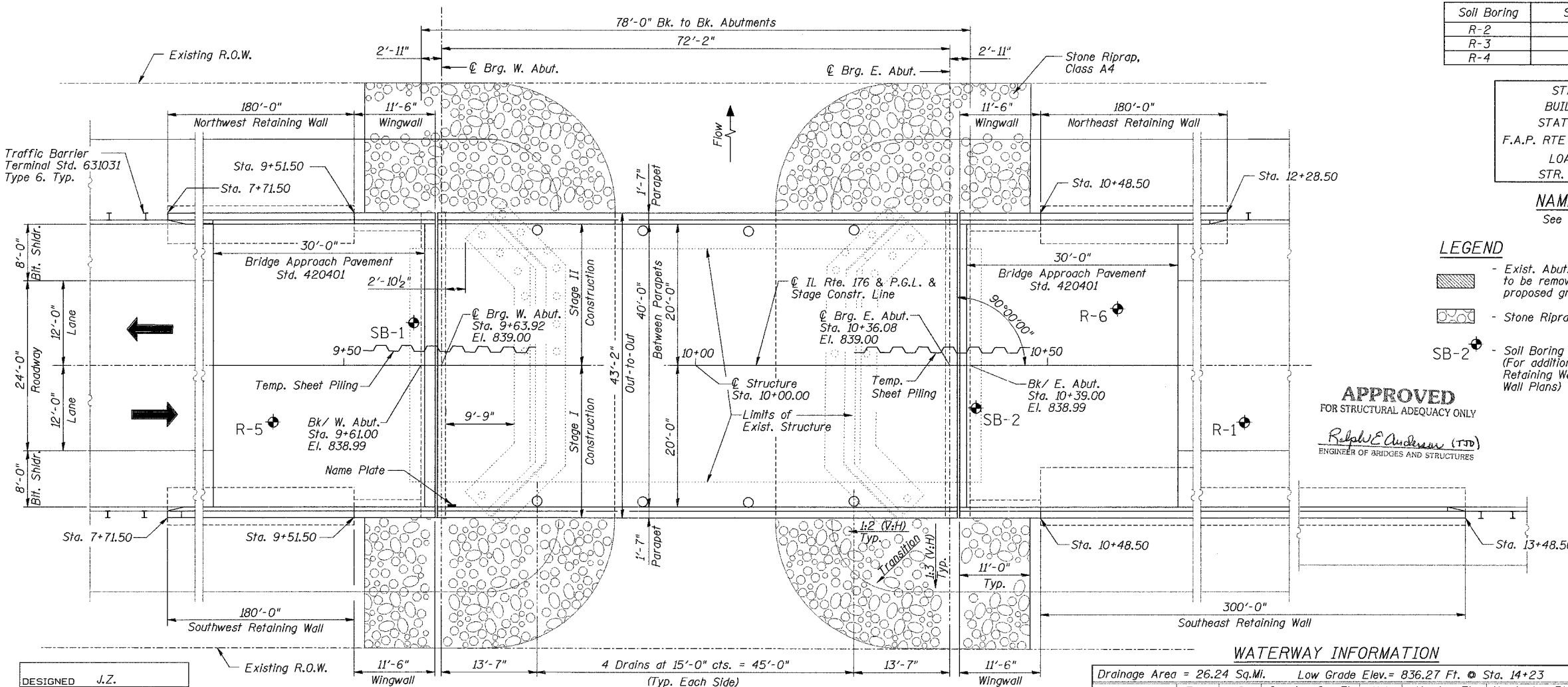
Robert E. Anderson (TJD)
 ENGINEER OF BRIDGES AND STRUCTURES



LOCATION SKETCH



ELEVATION



PLAN

WATERWAY INFORMATION

Drainage Area = 26.24 Sq.Mi. Low Grade Elev. = 836.27 Ft. @ Sta. 14+23

Flood	Freq. Yr.	Q		Opening Sq. Ft.		Head - Ft.		Headwater El.	
		C.F.S.	Exist.	Prop.	Nat.	H.W.E. Exist.	Prop.	Exist.	Prop.
Design	50	1666	312	405	832.8	0.3	0.2	833.1	833.1
Base	100	1875	324	425	833.1	0.4	0.4	833.5	833.5
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	2320	347	465	833.7	0.6	0.5	834.3	834.2

DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

GENERAL PLAN & ELEVATION
 IL Route 176 over the Kishwaukee River
 F.A.P. RTE 533, SECTION 119R-2B
 McHENRY COUNTY
 STATION 10+00.00
 S.N. 056-0078

DATE: 10-05-07
 GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
 CHICAGO ILLINOIS

I:\Projects\056-0005\Drawings\10-05-07\10-05-07-15.dwg
 10/22/07 10:53:18 AM
 S:\Users\jz\My Documents\Projects\056-0005-5.dwg

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 OF 21 SHEETS
533	119R-2B	McHenry	64	16	
FED. ROAD DIST.		ILLINOIS		FED. AID PROJECT-	

Contract #62336

GENERAL NOTES

Fasteners shall be AASTHO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts 7/8" dia., holes 5/16" dia. unless otherwise noted.

Calculated weight of Structural Steel = 87,270 lbs. (M 270, Gr. 50W) (Including beams, diaphragms, diaphragm gusset plates, end diaphragm splice plates, fixed bearing plates and side retainers.)

All structural steel shall be AASHTO M 270 Grade 50W except expansion joints which shall be AASHTO M 270 Grade 36.

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

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

Reinforcement bars designated (E) shall be epoxy coated.

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

Structural steel shall only be painted for a distance of 10 feet each way from the deck joints. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel."

All exposed structural steel of the bearings shall be cleaned and shop painted as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel."

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

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

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

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

Slipforming of the parapets is not allowed.

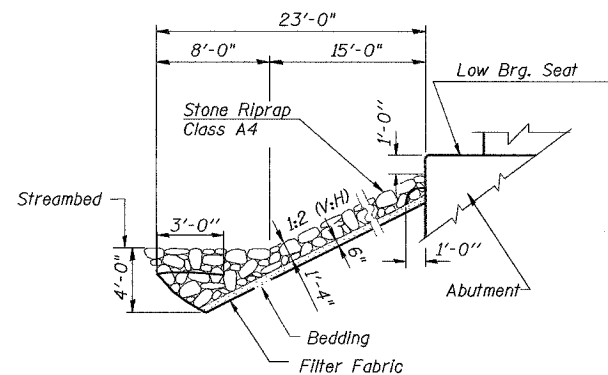
The Metal Shell piles shall be according to ASTM A 252 Grade 3.

TOTAL BILL OF MATERIAL

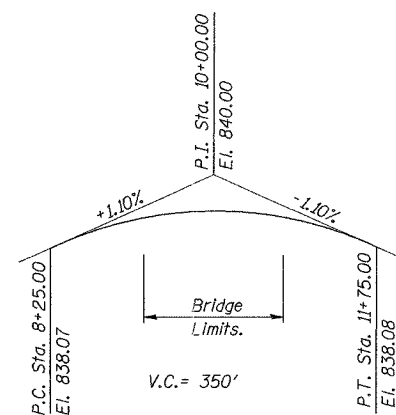
ITEMS	UNITS	SUPER-STRUCTURE	SUB-STRUCTURE	TOTAL
Parous Granular Embankment (Special)	CU YD	-	108	108
Stone Riprap, Class A4	SQ YD	-	641	641
Filter Fabric	SQ YD	-	756	756
Removal of Existing Structures	EACH	1	-	1
Structure Excavation	CU YD	-	235	235
Floor Drains	EACH	8	-	8
Concrete Structures	CU YD	-	92.7	92.7
Concrete Superstructure	CU YD	116.1	-	116.1
Bridge Deck Grooving	SQ YD	310	-	310
Protective Coat	SQ YD	409	-	409
Erecting Structural Steel	L. SUM	1	-	1
Stud Shear Connectors	EACH	1,890	-	1,890
Reinforcement Bars, Epoxy Coated	LB	26,710	14,330	41,040
Bar Splacers	EACH	278	124	402
Furnishing Metal Shell Piles 14" x 0.250"	FOOT	-	1,908	1,908
Driving Piles	FOOT	-	1,908	1,908
Test Pile Metal Shells	EACH	-	2	2
Temporary Sheet Piling	SQ FT	-	1,244	1,244
Name Plates	EACH	1	-	1
Preformed Joint Strip Seal	FOOT	84	-	84
Erecting Elastomeric Bearing Assembly, Type I	EACH	6	-	6
Anchor Bolts 1/4"	EACH	-	24	24
Concrete Sealer	SQ FT	-	927	927
Geocomposite Wall Drain	SQ YD	-	77	77
Pipe Underdrains for Structures 4"	FOOT	-	123	123

INDEX OF SHEETS

1. GENERAL PLAN & ELEVATION
2. GENERAL NOTES & TOTAL BILL OF MATERIAL
3. CONSTRUCTION STAGING
4. TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
5. TOP OF SLAB ELEVATIONS I
6. TOP OF SLAB ELEVATIONS II
7. TOP OF WEST APPROACH SLAB ELEVATIONS
8. TOP OF EAST APPROACH SLAB ELEVATIONS
9. DECK PLAN & CROSS SECTION
10. DECK DETAILS
11. PREFORMED JOINT STRIP SEAL
12. FRAMING PLAN
13. BEAM DETAILS
14. BEARING DETAILS
15. EAST & WEST ABUTMENTS
16. ABUTMENT WINGWALL & DETAILS
17. CONCRETE PILE DETAILS
18. BAR SPLICER ASSEMBLY DETAILS
19. BORING LOGS I
20. BORING LOGS II
21. BORING LOGS III



STONE RIPRAP ANCHOR DETAIL



PROFILE GRADE

along @ IL Rte. 176

DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

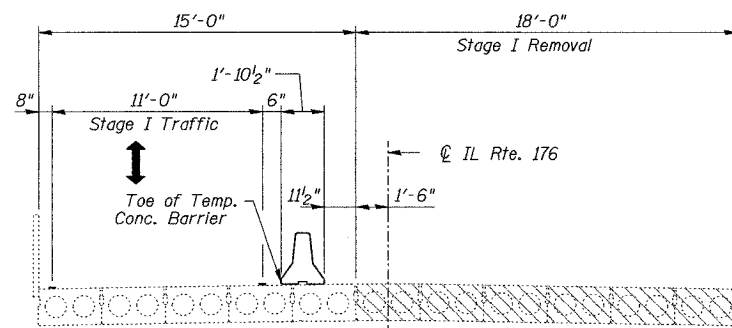
GENERAL NOTES &
TOTAL BILL OF MATERIAL
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078

DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

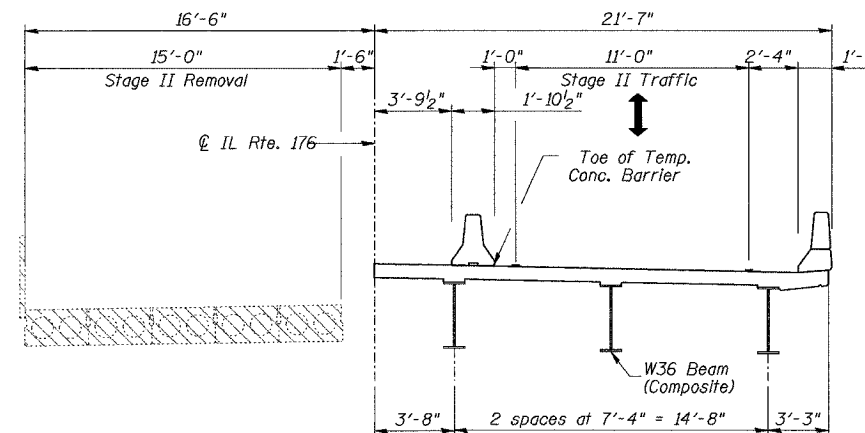
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2B	McHenry	64	17
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT	

SHEET NO. 3 OF 21 SHEETS

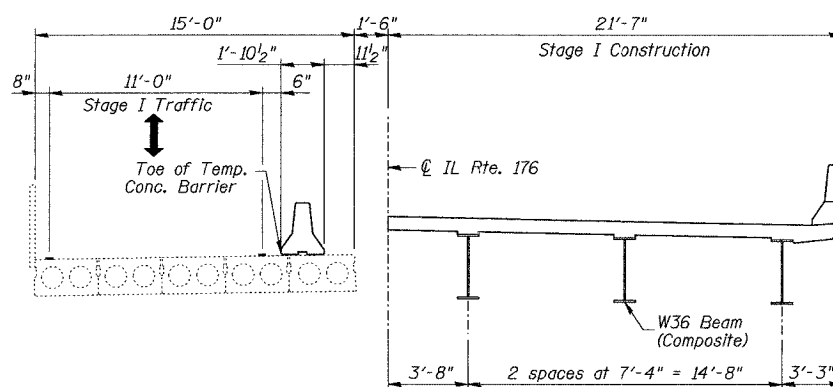
Contract #62336



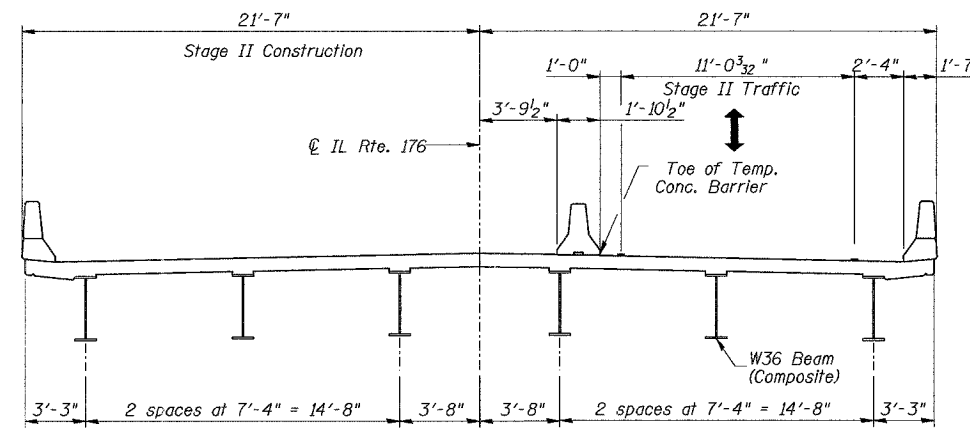
STAGE I REMOVAL
(Looking East)



STAGE II REMOVAL
(Looking East)



STAGE I CONSTRUCTION
(Looking East)



STAGE II CONSTRUCTION
(Looking East)

Note:
The Stage Construction Line at the substructure is in a different location than at the superstructure. See Sheet 15 of 21 for the Stage Construction Line at the substructure.

DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

CONSTRUCTION STAGING
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

P:\p28\2006\1017\choure work\refma\bridge\105E-005-S-03.dgn
10/7/2007 10:08:54 AM

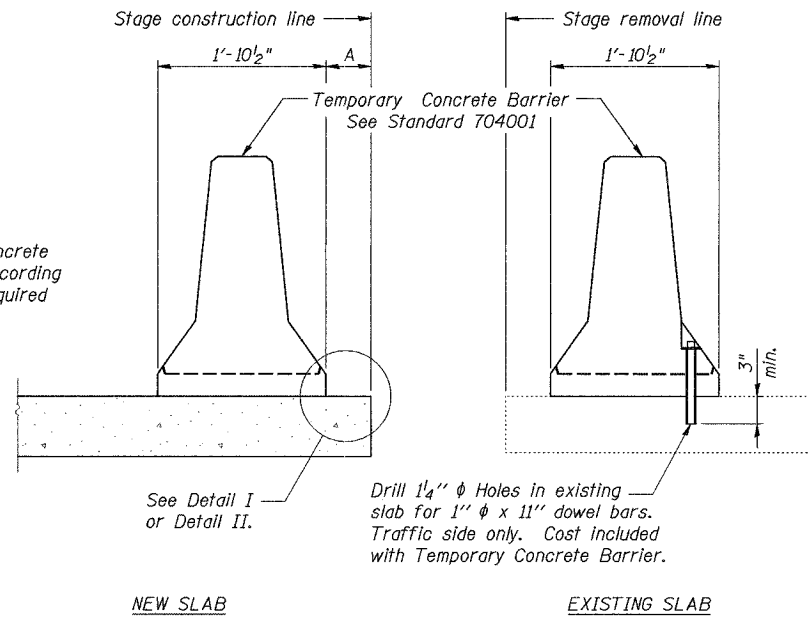
10/7/2007 10:08:54 AM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2B	McHenry	64	18
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 4 OF
21 SHEETS

Contract #62336

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB

EXISTING SLAB

SECTIONS THRU SLAB

NOTES

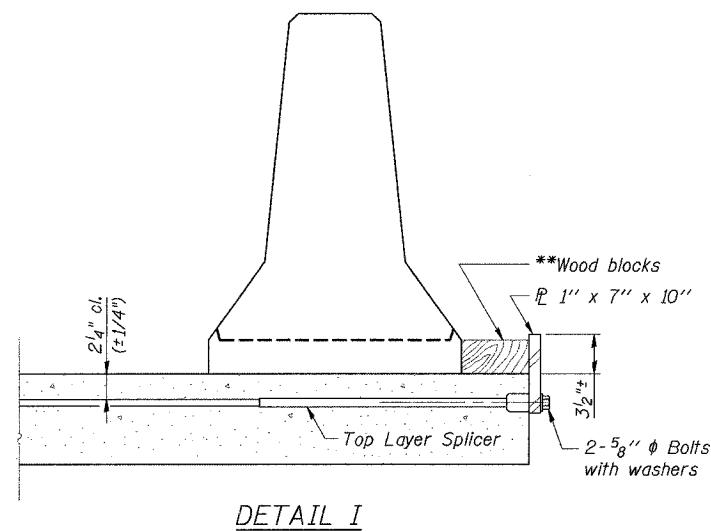
Detail I - With Bar Splicer or Couplers:

Connect one (1) 1"x7"x10" steel \bar{P} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

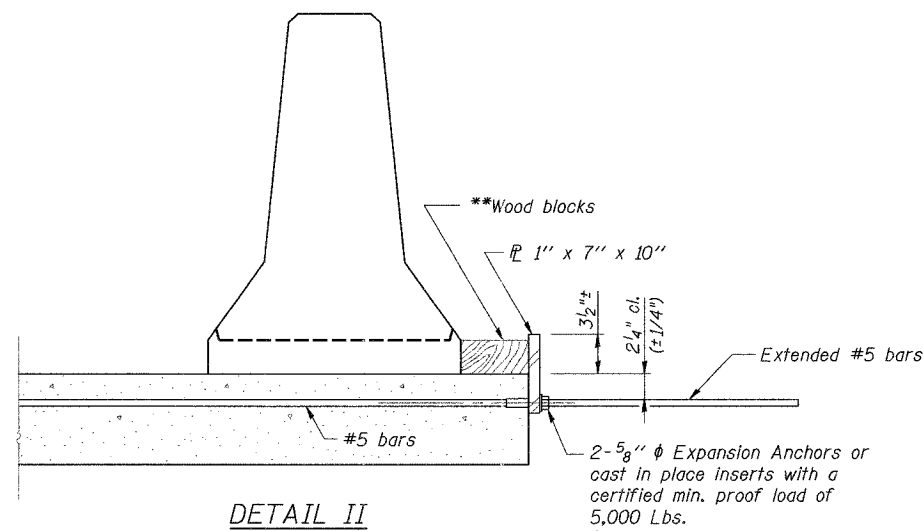
Detail II - With Extended Reinforcement Bars:

Connect one (1) 1"x7"x10" steel \bar{P} to the concrete slab with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

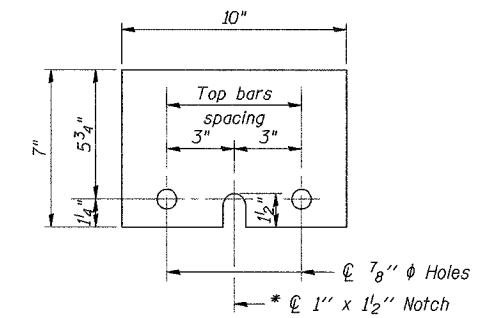
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



DETAIL I



DETAIL II



STEEL RETAINER 1" x 7" x 10"

* Required only with Detail II

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

DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

R-27 11-1-06

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078

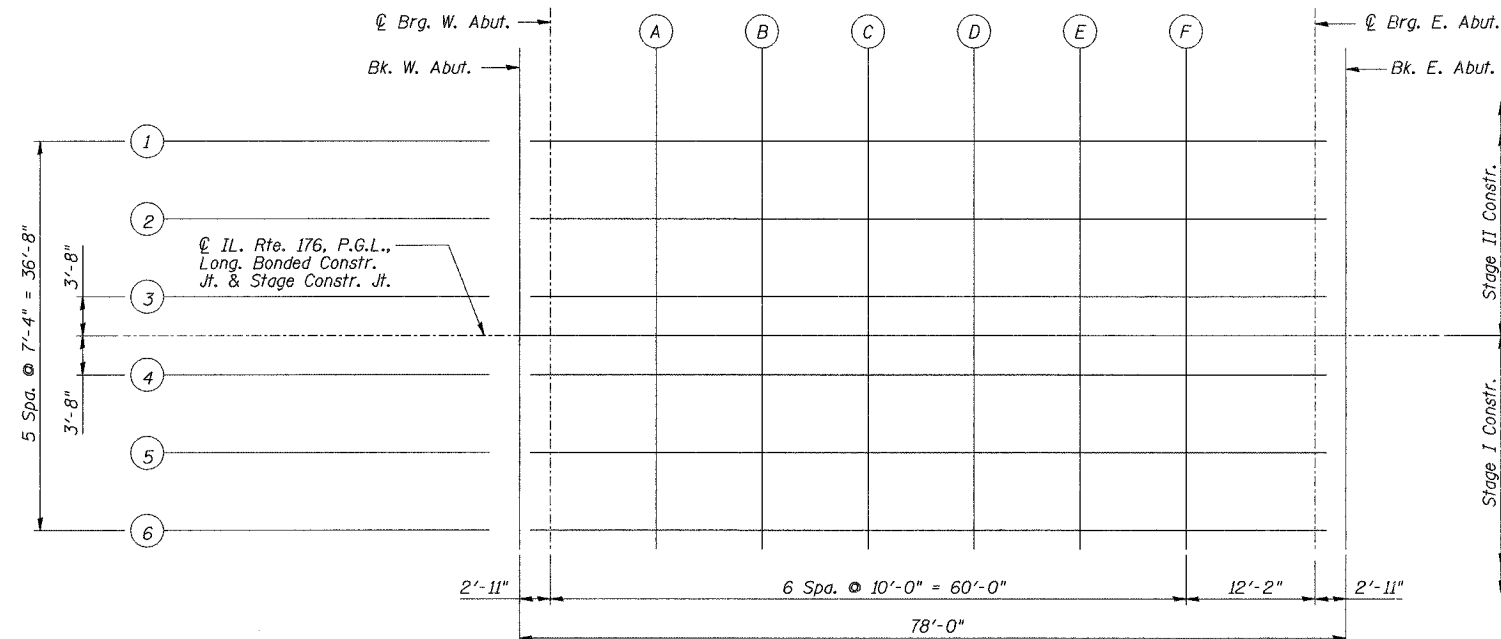
DATE: 10-05-07

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

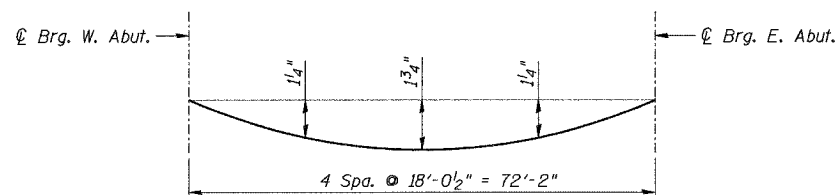
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
533	119R-2B	McHenry	64	19
FED. ROAD DIST.		ILLINOIS		
		FED. AID PROJECT-		

SHEET NO. 5 OF
21 SHEETS

Contract #62336



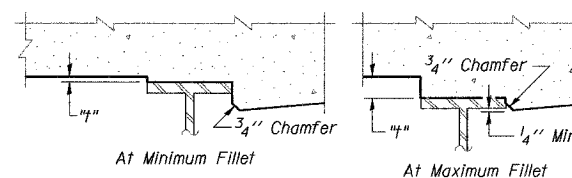
PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete deck and all superimposed dead loads except future wearing surface.)

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



To determine "h": 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, minus slab thickness, equals the fillet heights "h" above top flange of beams.

FILLET HEIGHTS

DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

TOP OF SLAB ELEVATIONS I
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078

DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

P:\p042006\p042006.dwg work\p042006\bridge\556-0005-S-05.dwg 10/27/07 10:02:30 AM

P:\p042006\p042006.dwg work\p042006\bridge\556-0005-S-05.dwg 10/27/07 10:02:30 AM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2B	McHenry	64	20
FED. ROAD DIST.		FED. AID PROJECT-		

SHEET NO. 6 OF 21 SHEETS

Contract #62336

IL RTE. 176, P.G.L.,
LONG BONDED CONSTR. JOINT &
STAGE CONSTR. JT.

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	9+61.00	-18.333	838.68	838.68
C.L. Brg. W. Abut.	9+63.92	-18.333	838.69	838.69
A	9+73.92	-18.333	838.71	838.75
B	9+83.92	-18.333	838.72	838.82
C	9+93.92	-18.333	838.73	838.86
D	10+03.92	-18.333	838.73	838.87
E	10+13.92	-18.333	838.72	838.85
F	10+23.92	-18.333	838.71	838.79
C.L. Brg. E. Abut.	10+36.08	-18.333	838.69	838.69
Back of E. Abut.	10+39.00	-18.333	838.68	838.68

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	9+61.00	-11.00	838.82	838.82
C.L. Brg. W. Abut.	9+63.92	-11.00	838.83	838.83
A	9+73.92	-11.00	838.85	838.89
B	9+83.92	-11.00	838.86	838.96
C	9+93.92	-11.00	838.87	839.00
D	10+03.92	-11.00	838.87	839.01
E	10+13.92	-11.00	838.87	839.00
F	10+23.92	-11.00	838.85	838.94
C.L. Brg. E. Abut.	10+36.08	-11.00	838.83	838.83
Back of E. Abut.	10+39.00	-11.00	838.82	838.82

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	9+61.00	-3.67	838.93	838.93
C.L. Brg. W. Abut.	9+63.92	-3.67	838.94	838.94
A	9+73.92	-3.67	838.96	839.00
B	9+83.92	-3.67	838.97	839.07
C	9+93.92	-3.67	838.98	839.11
D	10+03.92	-3.67	838.98	839.12
E	10+13.92	-3.67	838.98	839.11
F	10+23.92	-3.67	838.96	839.05
C.L. Brg. E. Abut.	10+36.08	-3.67	838.94	838.94
Back of E. Abut.	10+39.00	-3.67	838.93	838.93

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	9+61.00	0.00	838.99	838.99
C.L. Brg. W. Abut.	9+63.92	0.00	839.00	839.00
A	9+73.92	0.00	839.02	839.06
B	9+83.92	0.00	839.03	839.13
C	9+93.92	0.00	839.04	839.17
D	10+03.92	0.00	839.04	839.17
E	10+13.92	0.00	839.03	839.16
F	10+23.92	0.00	839.02	839.10
C.L. Brg. E. Abut.	10+36.08	0.00	839.00	839.00
Back of E. Abut.	10+39.00	0.00	838.99	838.99

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	9+61.00	3.67	838.93	838.93
C.L. Brg. W. Abut.	9+63.92	3.67	838.94	838.94
A	9+73.92	3.67	838.96	839.00
B	9+83.92	3.67	838.97	839.07
C	9+93.92	3.67	838.98	839.11
D	10+03.92	3.67	838.98	839.12
E	10+13.92	3.67	838.98	839.11
F	10+23.92	3.67	838.96	839.05
C.L. Brg. E. Abut.	10+36.08	3.67	838.94	838.94
Back of E. Abut.	10+39.00	3.67	838.93	838.93

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	9+61.00	11.00	838.82	838.82
C.L. Brg. W. Abut.	9+63.92	11.00	838.83	838.83
A	9+73.92	11.00	838.85	838.89
B	9+83.92	11.00	838.86	838.96
C	9+93.92	11.00	838.87	839.00
D	10+03.92	11.00	838.87	839.01
E	10+13.92	11.00	838.87	839.00
F	10+23.92	11.00	838.85	838.94
C.L. Brg. E. Abut.	10+36.08	11.00	838.83	838.83
Back of E. Abut.	10+39.00	11.00	838.82	838.82

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of W. Abut.	9+61.00	18.33	838.68	838.68
C.L. Brg. W. Abut.	9+63.92	18.33	838.69	838.69
A	9+73.92	18.33	838.71	838.75
B	9+83.92	18.33	838.72	838.82
C	9+93.92	18.33	838.73	838.86
D	10+03.92	18.33	838.73	838.87
E	10+13.92	18.33	838.72	838.85
F	10+23.92	18.33	838.71	838.79
C.L. Brg. E. Abut.	10+36.08	18.33	838.69	838.69
Back of E. Abut.	10+39.00	18.33	838.68	838.68

DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

TOP OF SLAB ELEVATIONS II
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

D:\p082006\p1et\where work\p1et\final\top\top\056-0005-5-06.dgn 10/7/2007 10:32:34 AM 062336

D:\p082006\p1et\where work\p1et\final\top\top\056-0005-5-06.dgn 10/7/2007 10:32:34 AM 062336

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
533	119R-2B	McHenry	64	21
FED. ROAD DIST.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7 OF
21 SHEETS

Contract #62336

© IL RTE. 176, P.G.L.,
LONG. CONSTR. JT. &
STAGE CONSTR. JT.

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	9+31.50	-20.00	838.39
A	9+41.50	-20.00	838.48
B	9+51.50	-20.00	838.57
Bk. W. Abut	9+61.00	-20.00	838.65
Start W. Appr. Pav't.	9+61.50	-20.00	838.65

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	9+31.50	-12.00	838.71
A	9+41.50	-12.00	838.75
B	9+51.50	-12.00	838.78
Bk. W. Abut	9+61.00	-12.00	838.81
Start W. Appr. Pav't.	9+61.50	-12.00	838.81

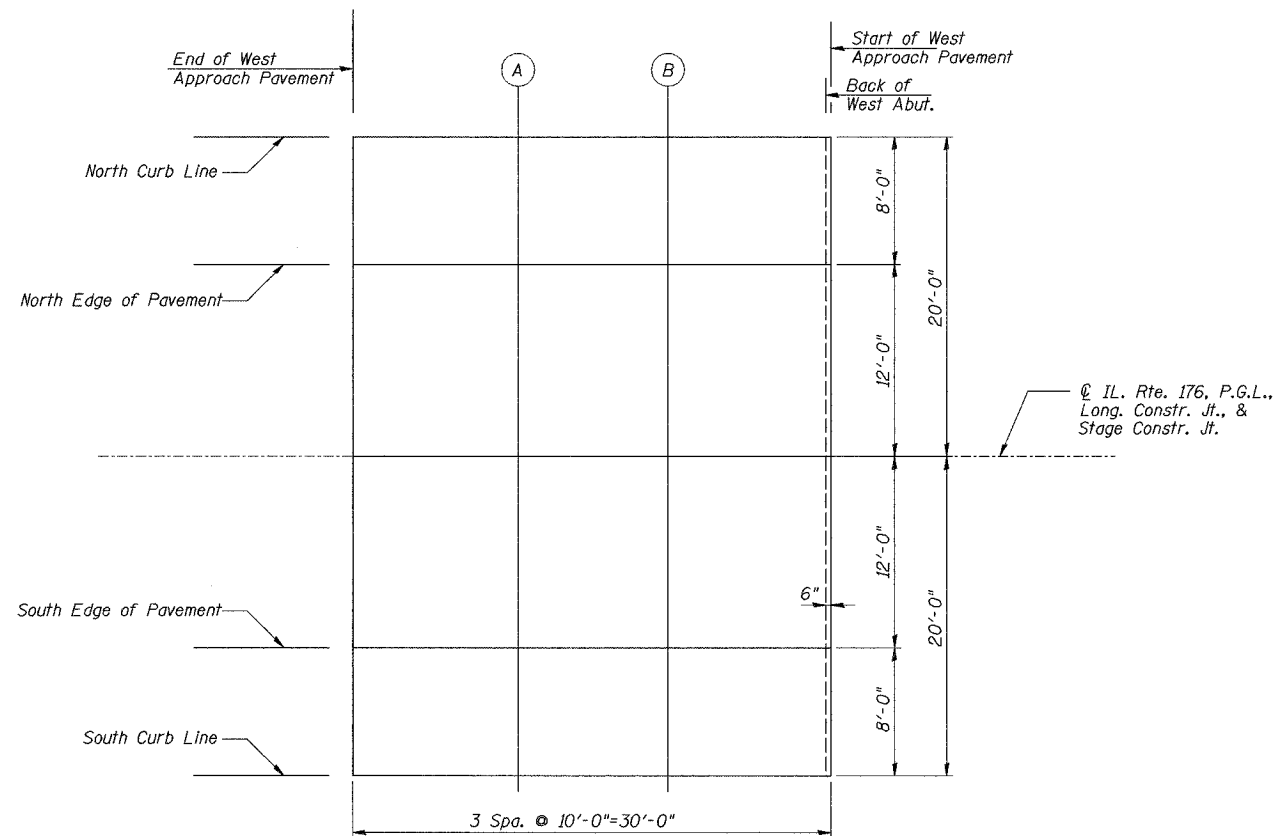
Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	9+31.50	0.00	838.89
A	9+41.50	0.00	838.93
B	9+51.50	0.00	838.96
Bk. W. Abut	9+61.00	0.00	838.99
Start W. Appr. Pav't.	9+61.50	0.00	838.99

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	9+31.50	12.00	838.71
A	9+41.50	12.00	838.75
B	9+51.50	12.00	838.78
Bk. W. Abut	9+61.00	12.00	838.81
Start W. Appr. Pav't.	9+61.50	12.00	838.81

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	9+31.50	20.00	838.39
A	9+41.50	20.00	838.48
B	9+51.50	20.00	838.57
Bk. W. Abut	9+61.00	20.00	838.65
Start W. Appr. Pav't.	9+61.50	20.00	838.65



PLAN



DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

TOP OF WEST APPROACH
SLAB ELEVATIONS
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078

DATE: 10-05-07

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

n:\jobs\2005\plot\chairs\work\pre\final\bridge\056-0005-5-07.dgn
 10/27/07 12:07 PM
 056357 AM

10/27/07 12:07 PM
 056357 AM

ROUTE NO.	SECTION	COUNTY	STATION	SHEET
533	119R-2B	McHenry	64	22
FED. ROAD DIST.		ILLINOIS		

SHEET NO. 8 OF
21 SHEETS

Contract #62336

**IL RTE. 176, P.G.L.,
LONG. CONSTR. JT., &
STAGE CONSTR. JT.**

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Start E. Appr. Pav't	10+38.50	-20.00	838.65
Bk. E. Abut.	10+39.00	-20.00	838.65
A	10+48.50	-20.00	838.57
B	10+58.50	-20.00	838.48
End E. Appr. Pav't.	10+68.50	-20.00	838.39

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Start E. Appr. Pav't	10+38.50	-12.00	838.81
Bk. E. Abut.	10+39.00	-12.00	838.81
A	10+48.50	-12.00	838.78
B	10+58.50	-12.00	838.75
End E. Appr. Pav't.	10+68.50	-12.00	838.71

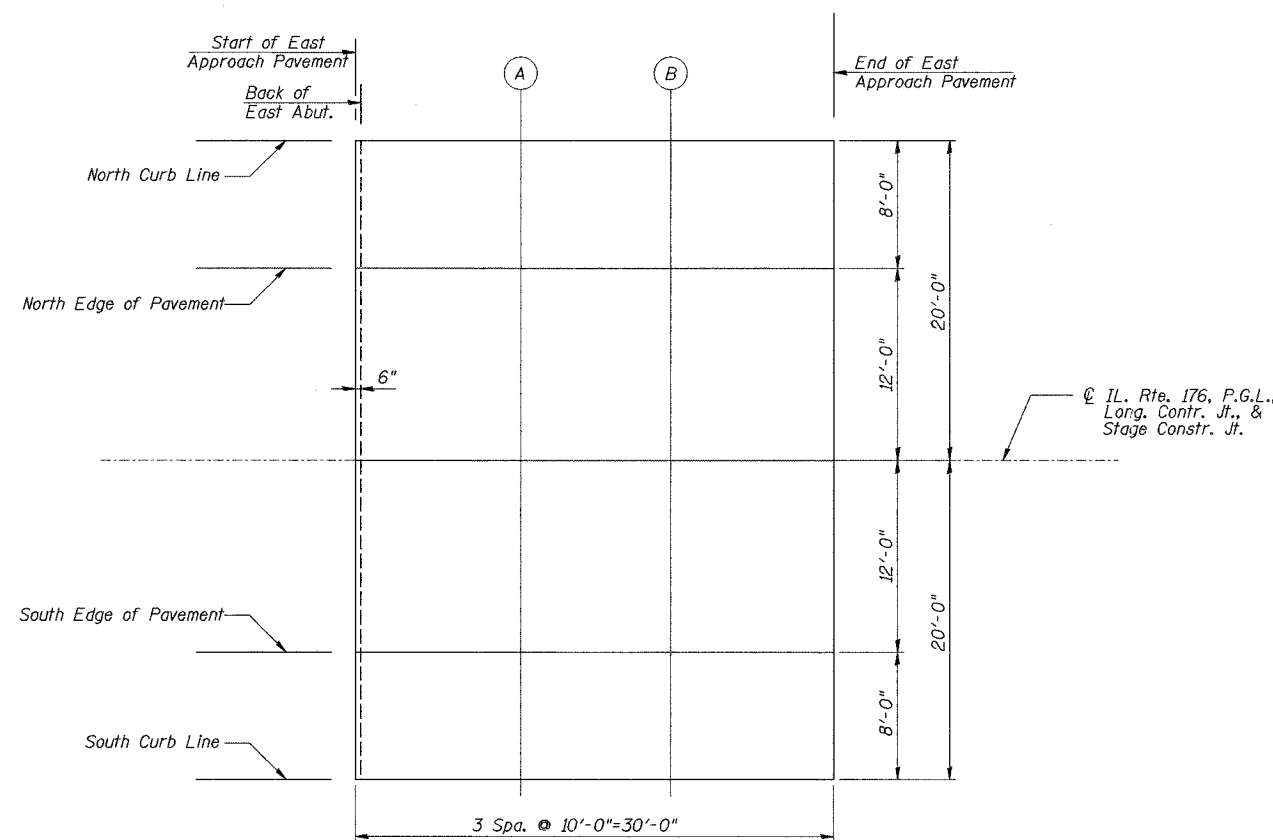
Location	Station	Offset	Theoretical Grade Elevations
Start E. Appr. Pav't	10+38.50	0.00	838.99
Bk. E. Abut.	10+39.00	0.00	838.99
A	10+48.50	0.00	838.96
B	10+58.50	0.00	838.93
End E. Appr. Pav't.	10+68.50	0.00	838.89

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Start E. Appr. Pav't	10+38.50	12.00	838.81
Bk. E. Abut.	10+39.00	12.00	838.81
A	10+48.50	12.00	838.78
B	10+58.50	12.00	838.75
End E. Appr. Pav't.	10+68.50	12.00	838.71

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Start E. Appr. Pav't	10+38.50	20.00	838.65
Bk. E. Abut.	10+39.00	20.00	838.65
A	10+48.50	20.00	838.57
B	10+58.50	20.00	838.48
End E. Appr. Pav't.	10+68.50	20.00	838.39



PLAN



DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

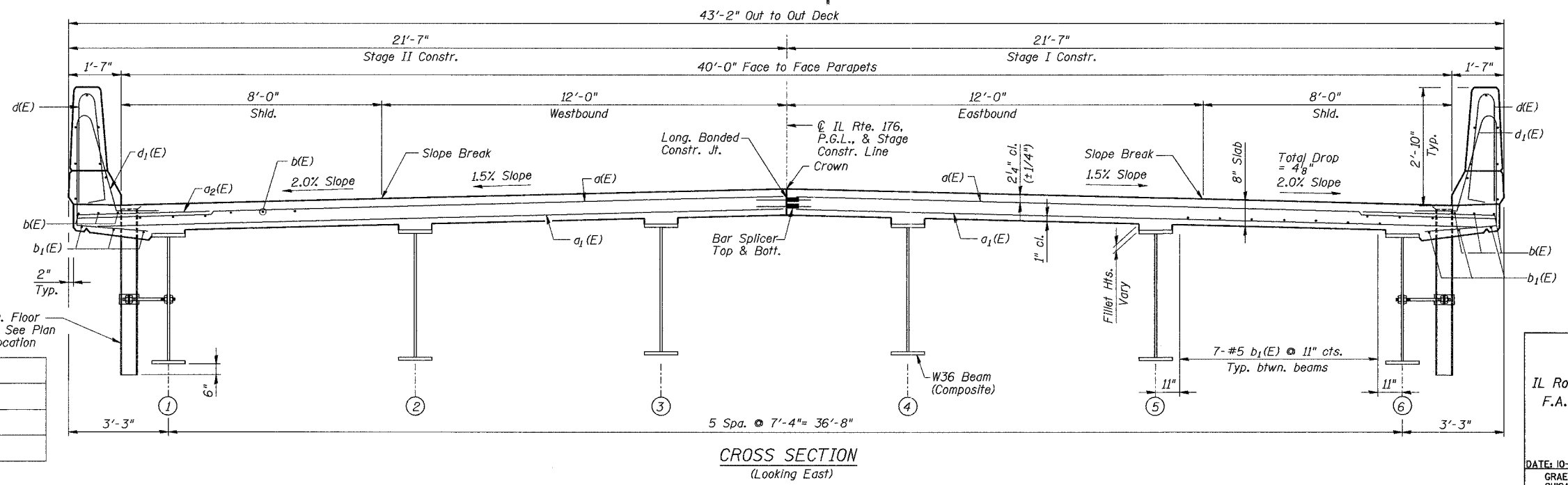
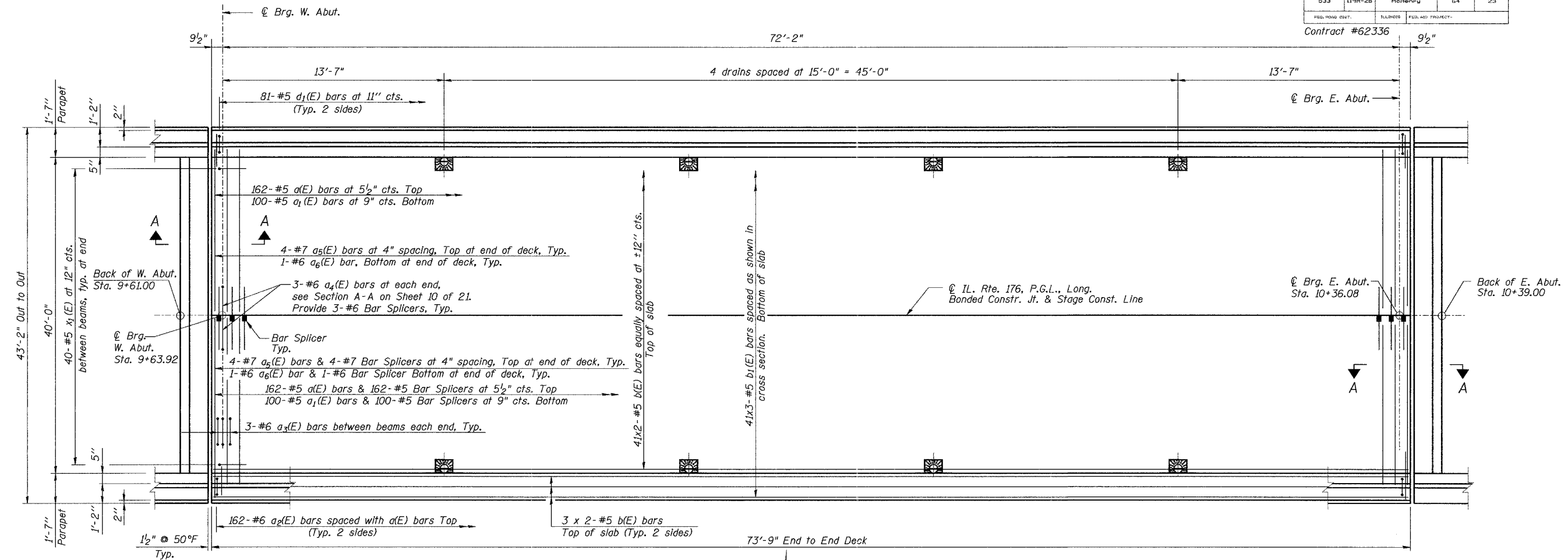
TOP OF EAST APPROACH
SLAB ELEVATIONS
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

n:\jobs\2006\pilot\chicago\work\pilot\final\brIDGE\056-0005-S-08.dgn
 10/26/07 11:41 AM

n:\jobs\2006\pilot\chicago\work\pilot\final\brIDGE\056-0005-S-08.dgn
 10/26/07 11:41 AM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2B	McHenry	64	23
PROJ. ROAD DIST.		MILEAGE		FEEDBACK PROJECT
Contract #62336				

SHEET NO. 9 OF 21 SHEETS



NOTES:

See Sheet 10 of 21 for superstructure details and Bill of Material.

Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

See Sheet 10 of 21 for parapet reinforcement.

Work this Sheet with Sheet 10 of 21.

See Sheet 3 of 21 for Construction Staging.

See Sheet 10 of 21 for Section A-A.

Min. Lap Length:

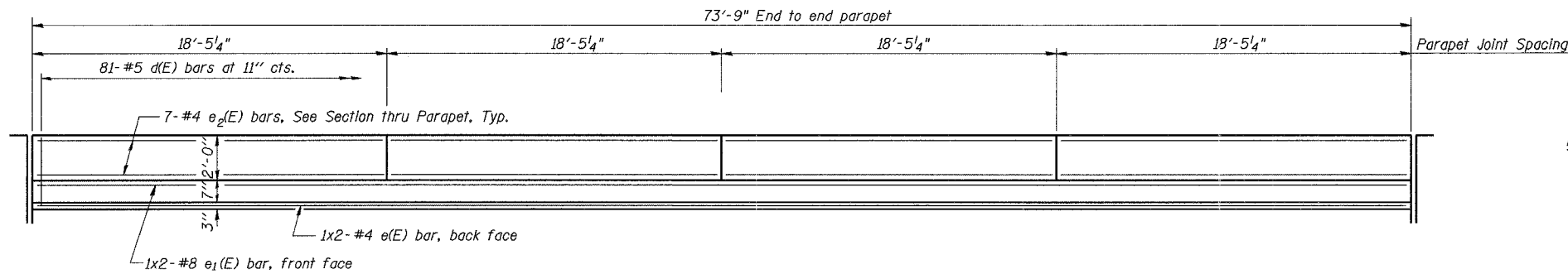
Bar Size	Lap
#4	1'-8"
#5	2'-2"
#6	2'-7"

DECK PLAN & CROSS SECTION
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078

DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

m:\jbs2006\plot\chore\work\prefinal\bridge\056-0005-S-03.dgn
 10/26/07 11:44 AM

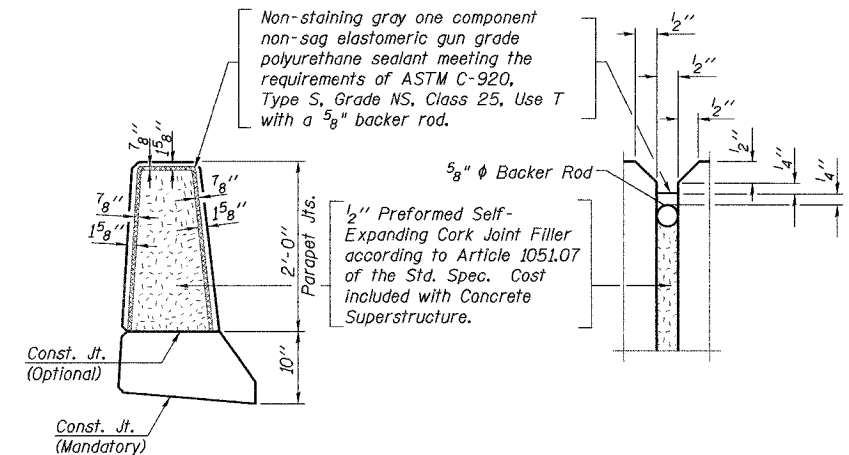
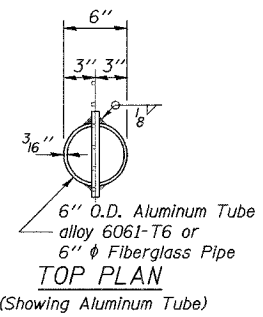
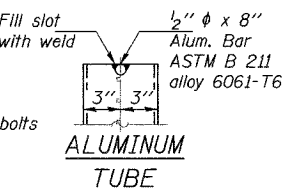
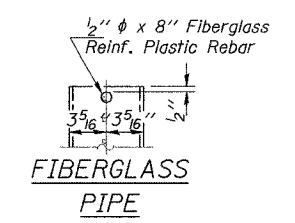
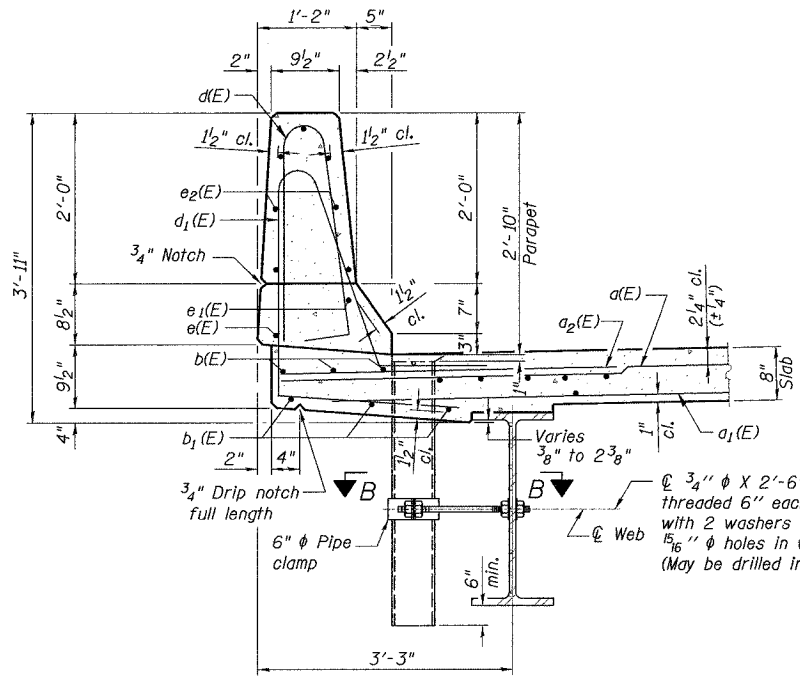


MINIMUM BAR LAP
(Parapet)
#4 bar = 1'-8"
#8 bar = 4'-6"

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	324	#5	21'-3"	—
a1(E)	200	#5	20'-9"	—
a2(E)	324	#6	6'-0"	—
a3(E)	24	#6	8'-5"	—
a4(E)	12	#6	4'-1"	—
a5(E)	16	#7	21'-3"	—
a6(E)	4	#6	18'-2"	—
b(E)	94	#5	37'-10"	—
b1(E)	123	#5	26'-8"	—
d(E)	162	#5	5'-7"	—
d1(E)	162	#5	7'-11"	—
e(E)	4	#4	37'-8"	—
e1(E)	4	#8	39'-0"	—
e2(E)	56	#4	18'-1"	—
x1(E)	80	#5	5'-11"	—
Floor Drains	EACH		8	
Concrete Superstructure	CU YD		116.1	
Bridge Deck Grooving	SQ YD		310	
Protective Coat	SQ YD		409	
Reinforcement Bars, Epoxy Coated	LB		26,710	
Bar Splicers	EACH		278	

INSIDE ELEVATION OF PARAPET

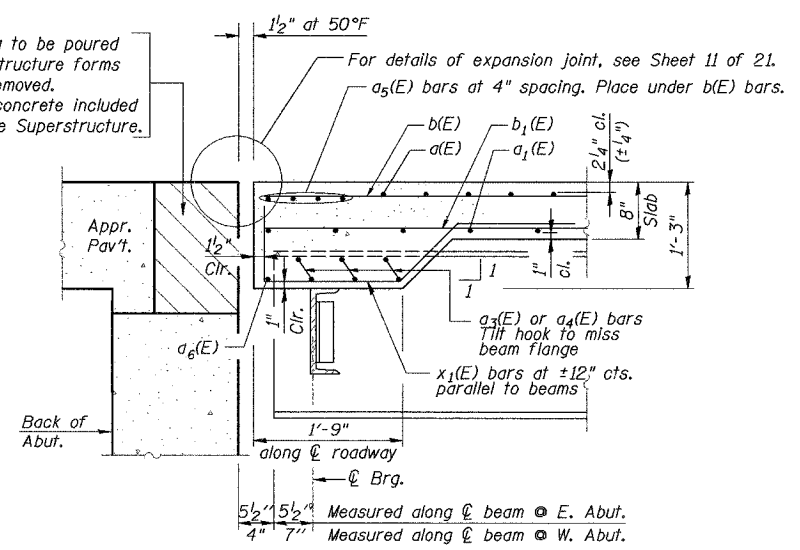


PARAPET JOINT DETAILS

Notes:
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

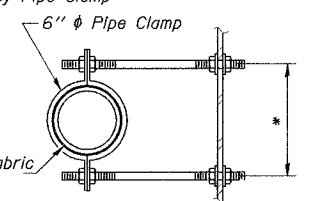
SECTION THRU PARAPET

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.

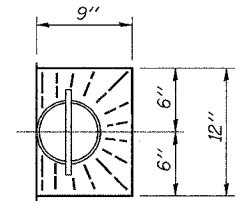


SECTION A-A

* Dimension as required by Pipe Clamp

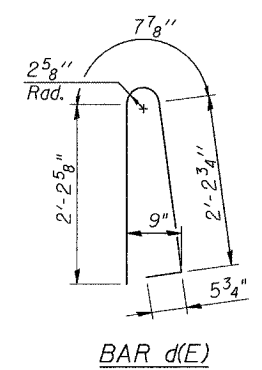


SECTION B-B

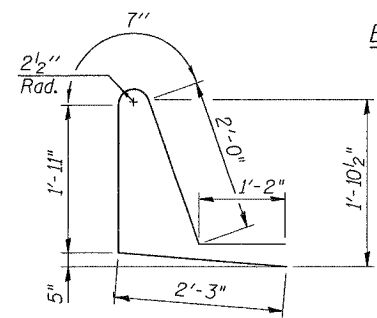


TOP PLAN

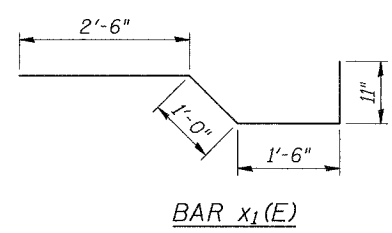
DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.



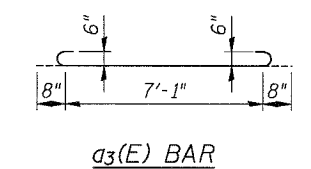
BAR d(E)



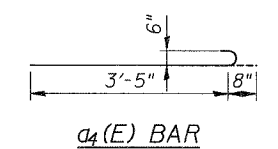
BAR d1(E)



BAR x1(E)



a3(E) BAR



a4(E) BAR

DECK DETAILS

IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

n:\jbs2006\p1et\share\work\final\bridge\536-0005-S-10.dgn
 04/25/07 11:41 AM

11/17/2007 10:12:44 AM

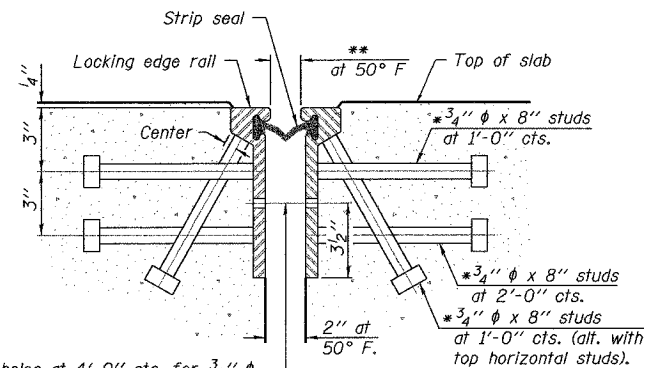
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

** 1/2" at East Abutment and West Abutment

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
533	119R-2B	McHenry	64	25
FED. ROAD DIST.		ILLINOIS		FED. AID PROJECT-

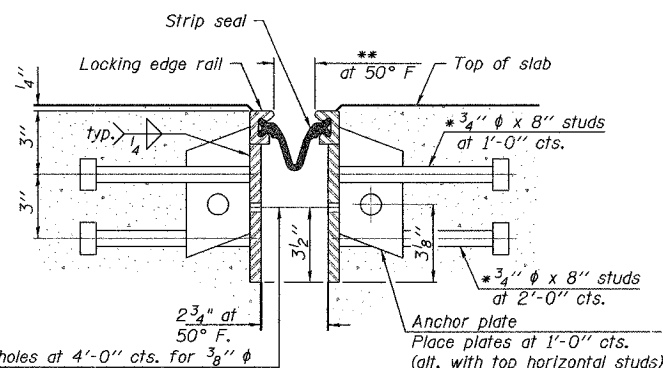
SHEET NO. 11 OF 21 SHEETS

Contract #62336



7/16" ϕ holes at 4'-0" cts. for 3/8" 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



7/16" ϕ holes at 4'-0" cts. for 3/8" 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:

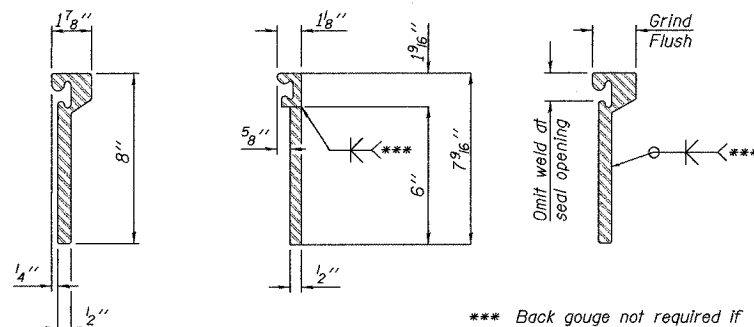
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The 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.

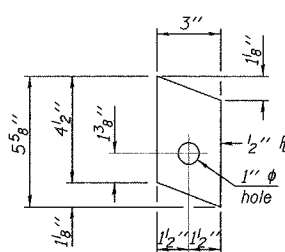


ROLLED (EXTRUDED) RAIL WELDED RAIL

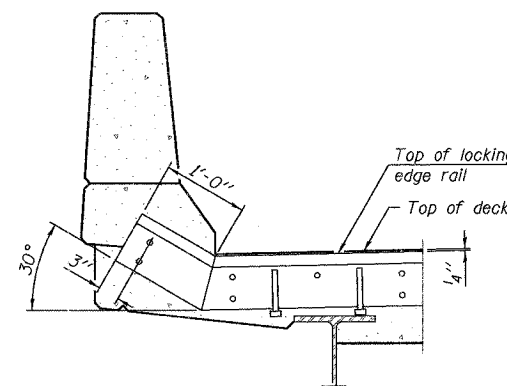
*** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

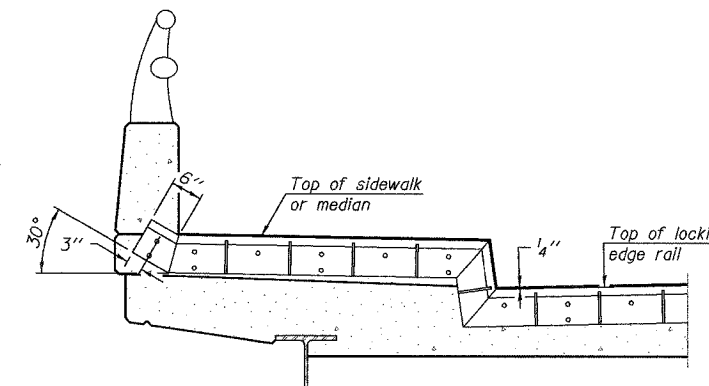
The inside of the locking edge rail groove shall be free of weld residue.



ANCHOR PLATE (for welded rail)



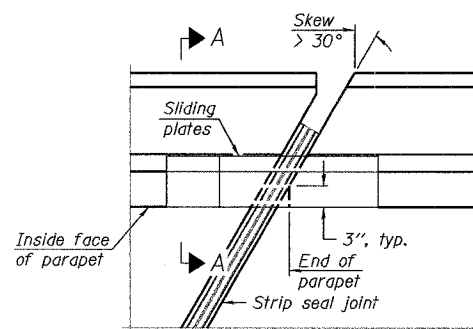
AT PARAPET



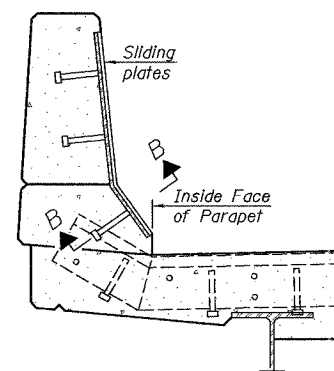
AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

LOCKING EDGE RAILS



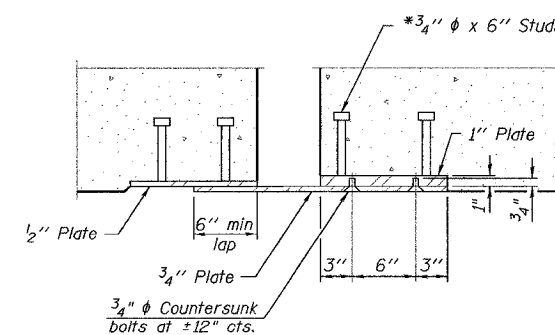
PLAN



SECTION A-A

POINT BLOCK DETAILS (for skew > 30°)

TYPICAL END TREATMENTS



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	FOOT	84

DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

EJ-SSJ 9-3-07

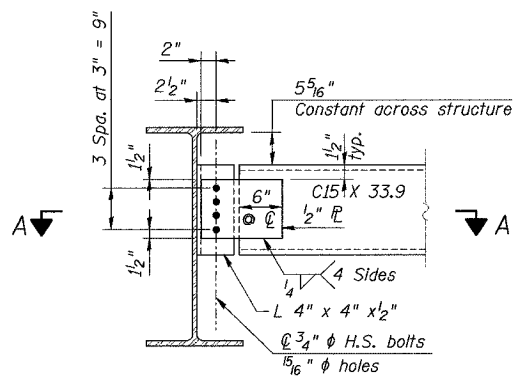
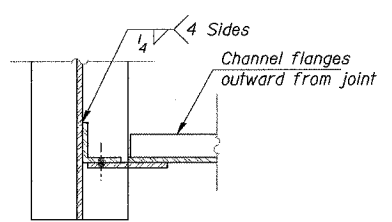
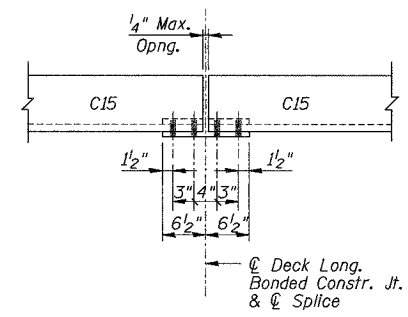
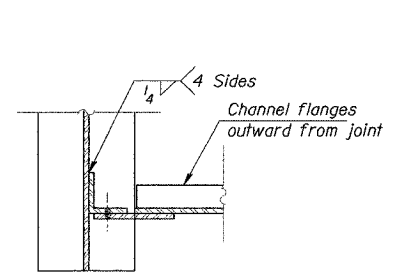
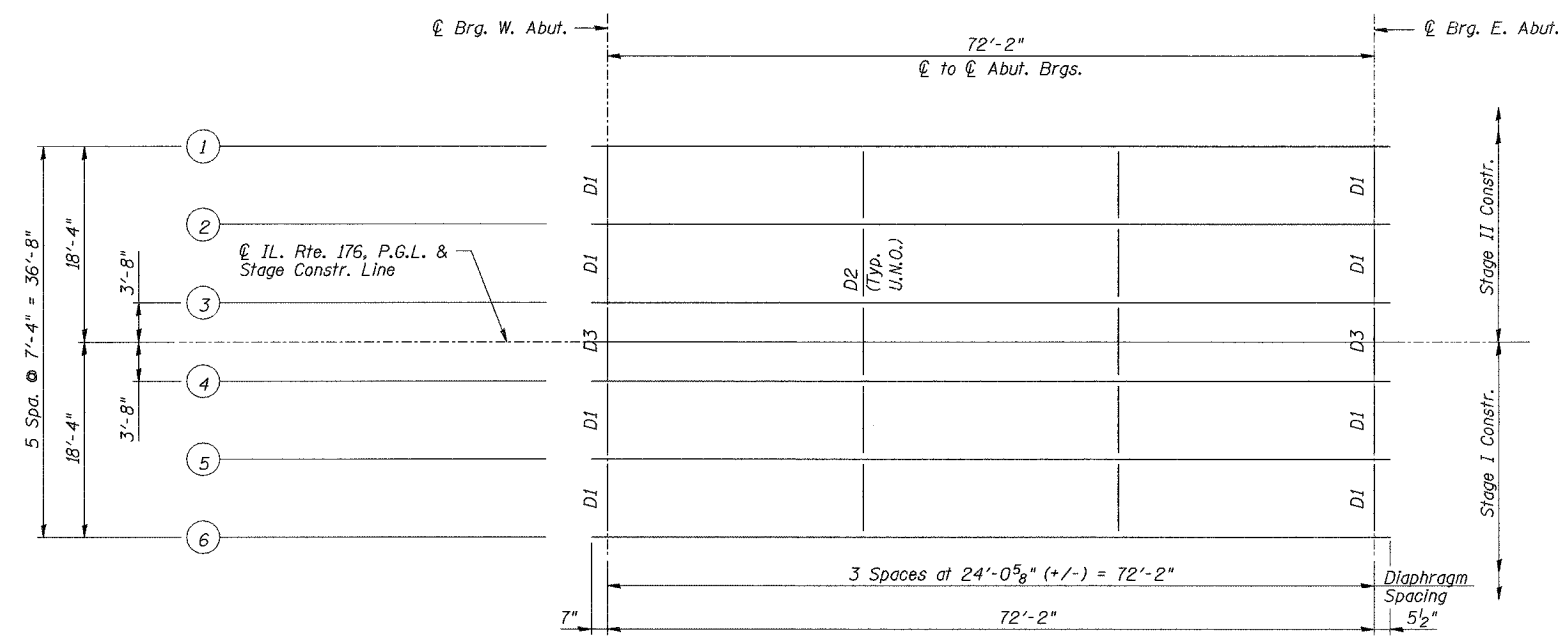
PREFORMED JOINT STRIP SEAL
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078

DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

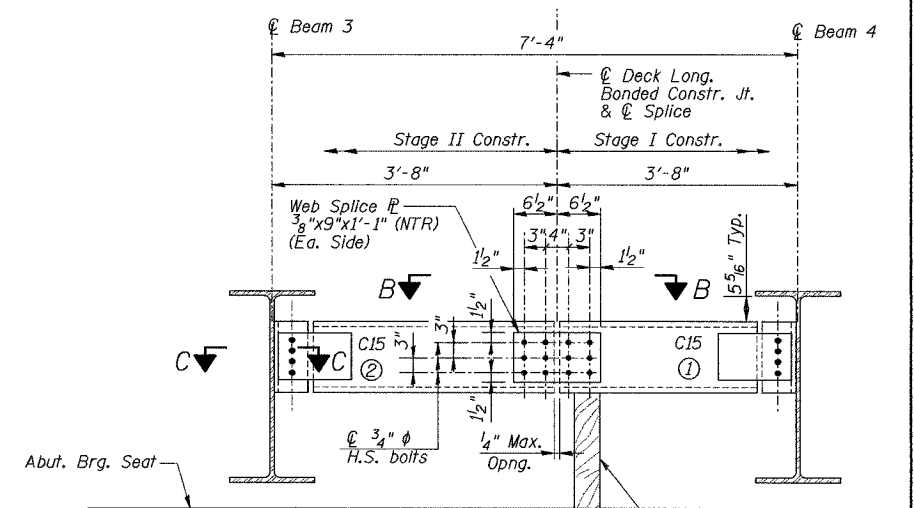
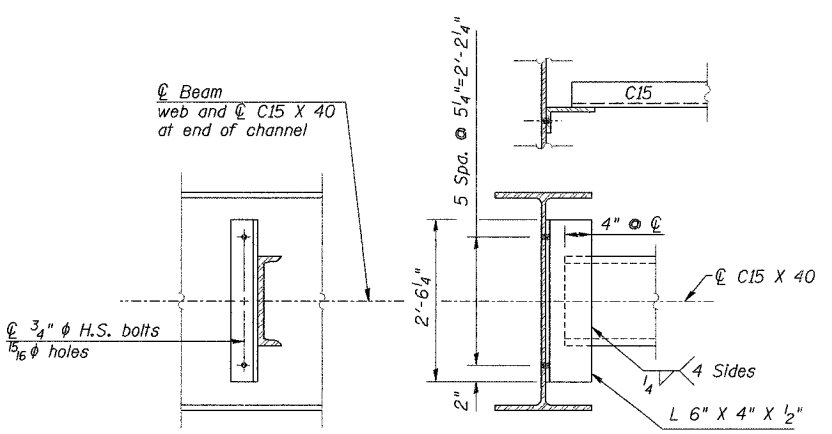
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL
533	119R-2B	McHenry	84	26
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT-	

Contract #62336

SHEET NO. 12 OF 21 SHEETS



FRAMING PLAN



Note:
Two hardened washers required for each set of oversized holes at diaphragms.
All Structural Steel on this sheet shall be AASHTO M270 Grade 50W.
All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms of supports may be temporarily disconnected to install bearing anchor rods.

DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

FRAMING PLAN

IL Route 176 over the Kishwaukee River

F.A.P. RTE 533, SECTION 119R-2B

McHENRY COUNTY

STATION 10+00.00

S.N. 056-0078

DATE: 10-05-07

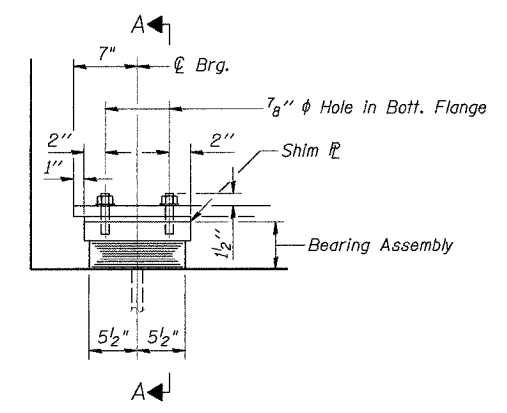
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC

CHICAGO ILLINOIS

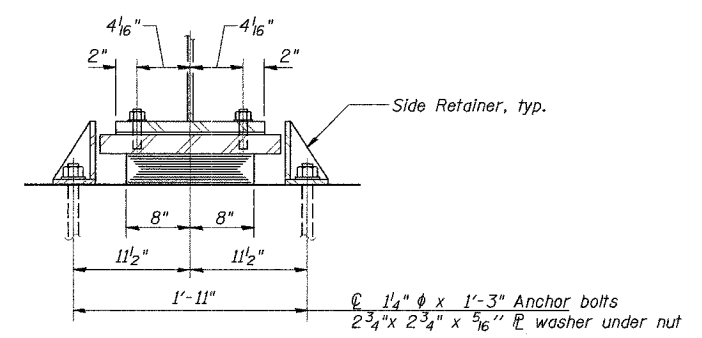
T:\Jobs\2006\pof\chicago\work\pof\final\brldp\056-0005-5-12.dgn
 10/25/07 11:20 AM
 056-0005-5-12.dgn

10/25/07 11:20 AM
 056-0005-5-12.dgn

Contract #62336

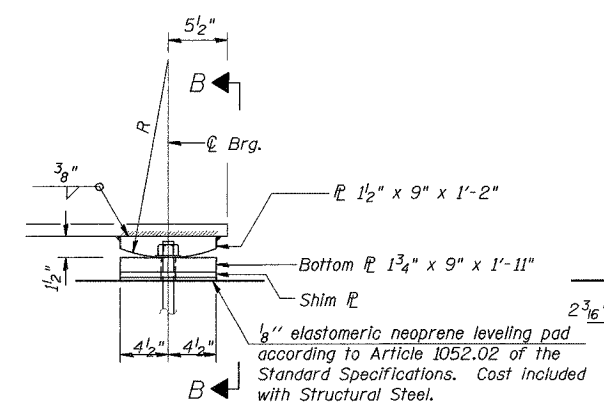


ELEVATION AT ABUT.

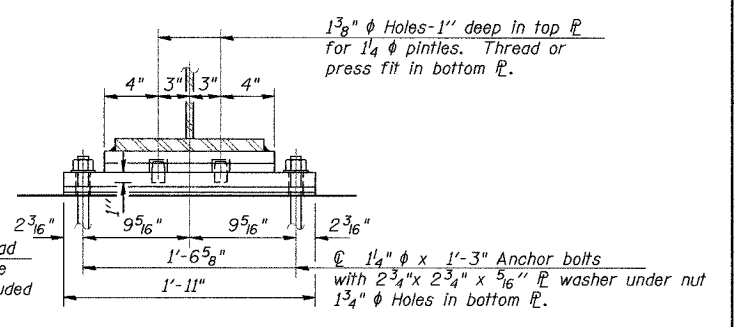


SECTION A-A

TYPE I ELASTOMERIC EXP. BRG. AT W. ABUT.

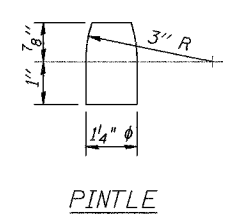


ELEVATION AT ABUT.

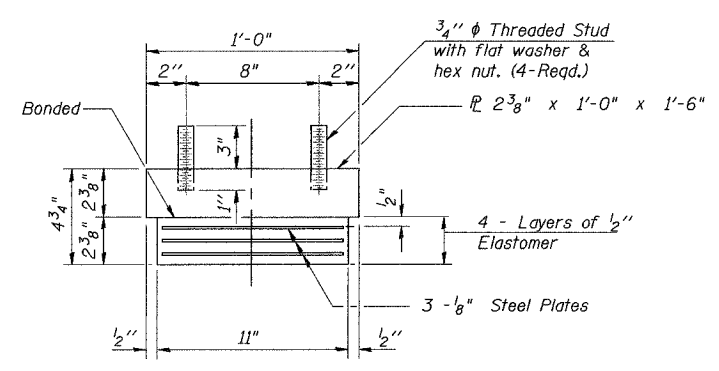


SECTION B-B

FIXED BEARING AT E. ABUT.



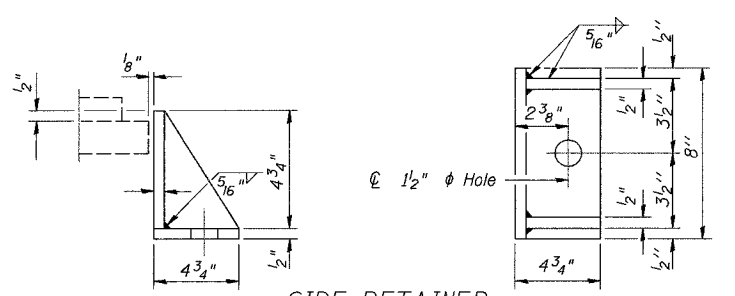
PINTLE



BEARING ASSEMBLY

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

Notes:
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.
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 52L06 of the Standard Specifications.
Erecting side retainers and other steel members required for the bearing assembly shall be included in the cost of Erecting Elastomeric Bearing Assembly, Type I.
The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M 270 Grade 50W.



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

DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

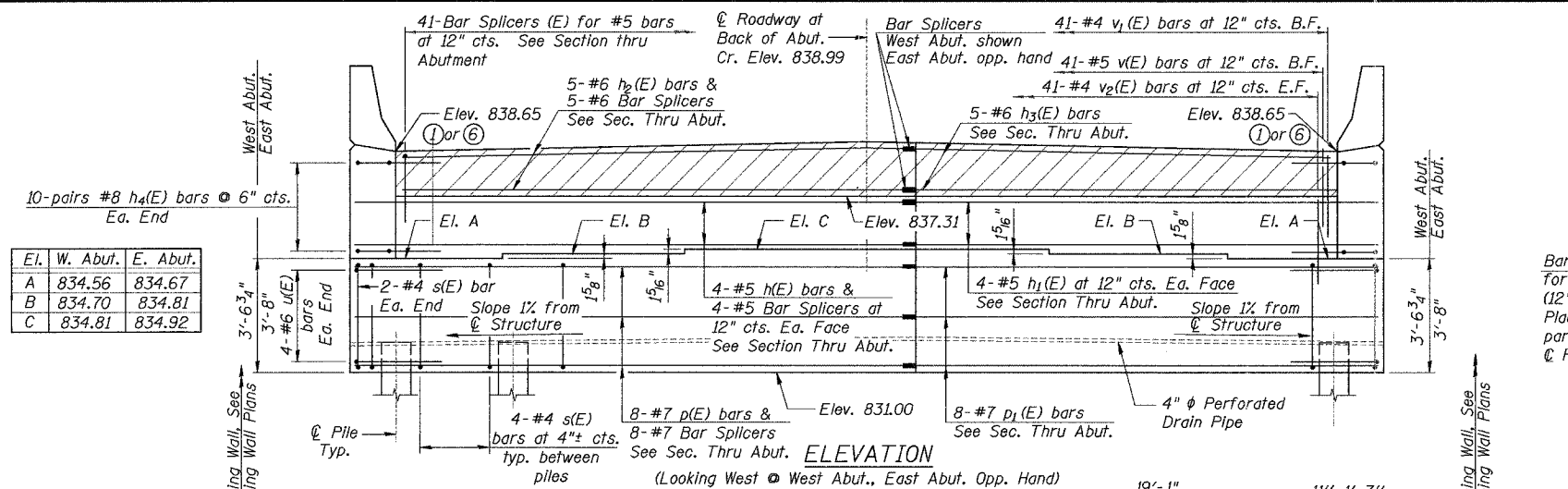
BILL OF MATERIAL

Item	Unit	Total
Erecting Elastomeric Bearing Assembly, Type I	EACH	6
Anchor Bolts 1 1/4"	EACH	24

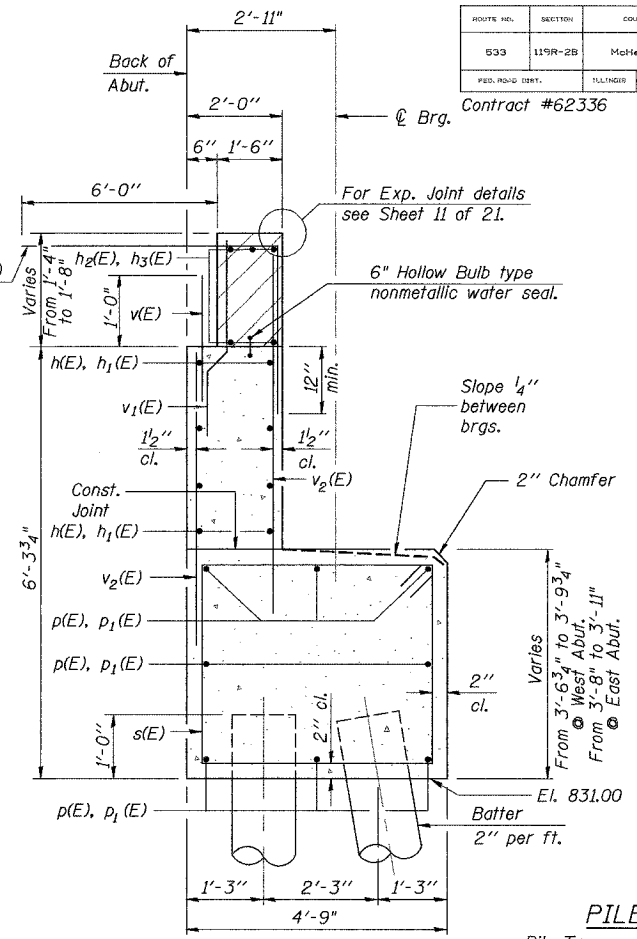
BEARING DETAILS
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

n:\jobs\056\056\sheet\chore\work\pre\final\ur\lga\056-005-S-14.dgn
 10/13/07 10:03:57 AM

n:\jobs\056\056\sheet\chore\work\pre\final\ur\lga\056-005-S-14.dgn
 10/13/07 10:03:57 AM



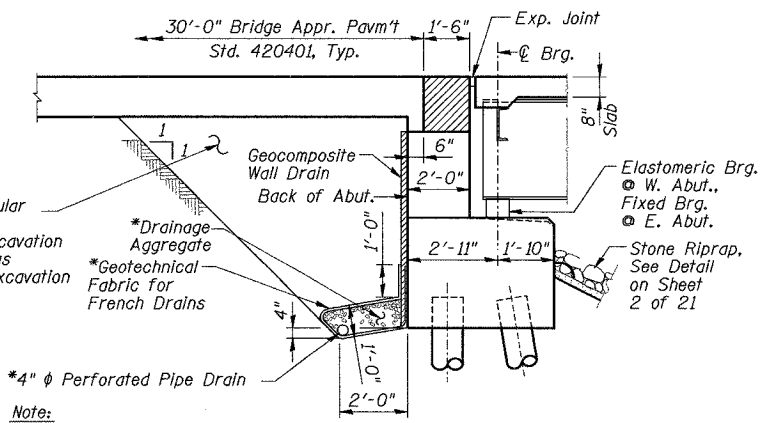
Elev.	W. Abut.	E. Abut.
A	834.56	834.67
B	834.70	834.81
C	834.81	834.92



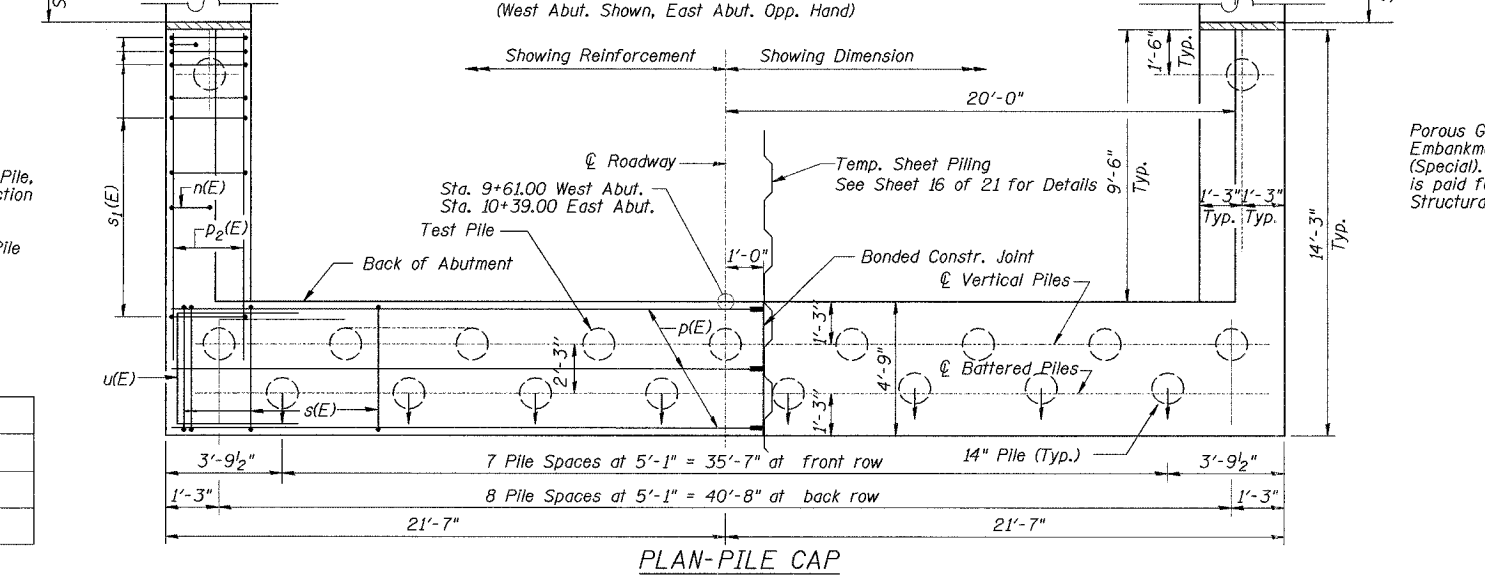
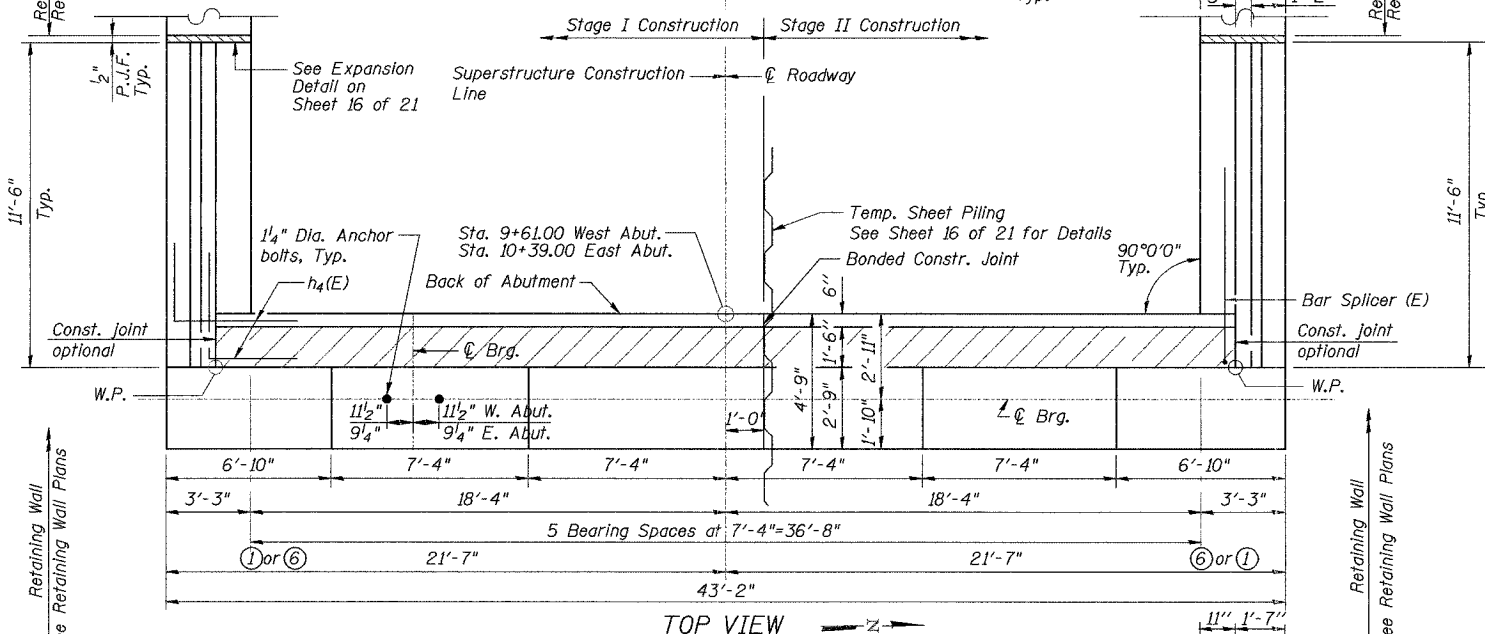
Notes:
Hatched area to be poured after superstructure false work has been removed. Quantity of Concrete Included with Concrete Superstructure.
Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.
Concrete sealer shall be applied to the top of seats, front face of backwall, and front face of abutment stem.
Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.

PILE DATA

Pile Type and Size: Metal Shell 14" dia. x 1/4" Walls
Nominal Required Bearing: 390 kips
Allowable Resistance Available: 130 kips
Estimated Pile Length: 52 ft. @ West Abut.
54 ft. @ East Abut.
Number of Production Piles: 18 at each Abut.
Number of Test Piles: 1 at each Abut.



Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls (See Article 601.05 of the Std. Specifications and Highway Std. 601101).
* Included in the cost of Pipe Underdrains for Structures.



LEGEND
 Designates Battered Pile, arrow points to direction of batter
 Designates Vertical Pile

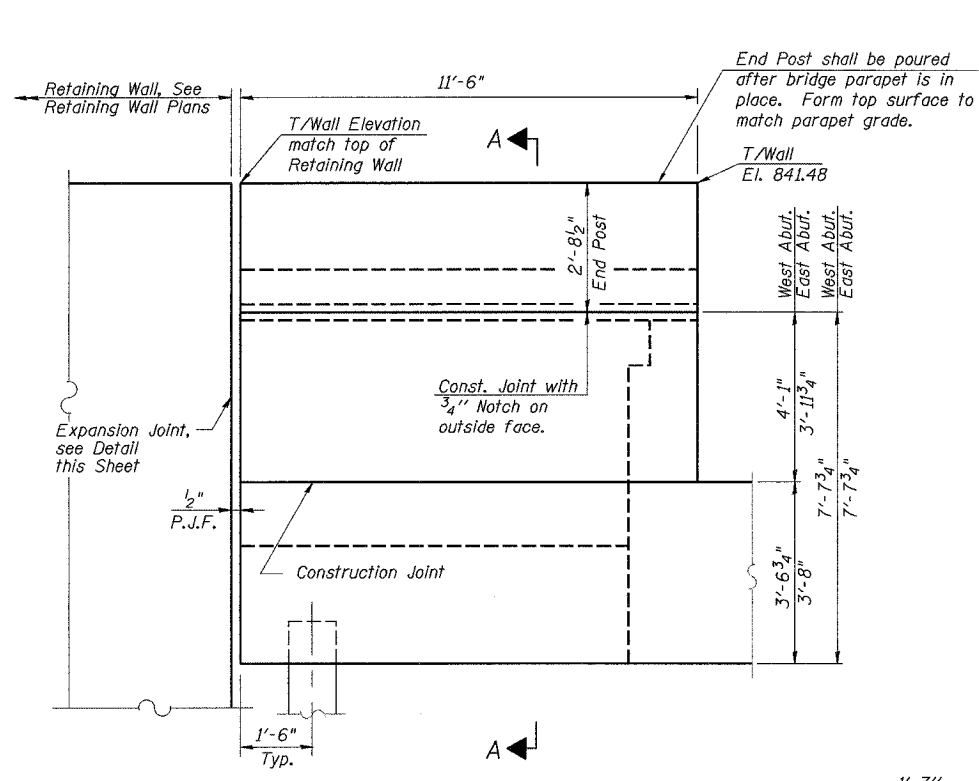
DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

EAST & WEST ABUTMENTS
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

ABUTMENT
BILL OF MATERIAL

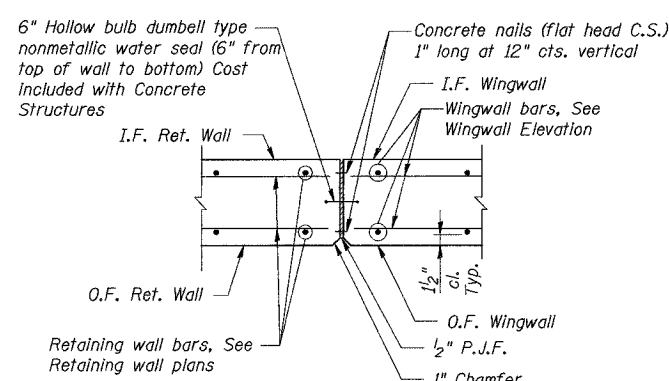
Bar	No.	Size	Length	Shape
h(E)	16	#5	22'-3"	
h ₁ (E)	16	#5	20'-3"	
h ₂ (E)	10	#6	20'-8"	
h ₃ (E)	10	#6	18'-8"	
h ₄ (E)	80	#8	16'-8"	
h ₅ (E)	48	#8	11'-2"	
h ₆ (E)	48	#4	11'-2"	
n(E)	52	#6	12'-4"	
p(E)	16	#7	22'-3"	
p ₁ (E)	16	#7	20'-3"	
p ₂ (E)	40	#8	13'-10"	
s(E)	136	#4	15'-11"	
s ₁ (E)	40	#4	9'-5"	
u(E)	16	#6	13'-9"	
v(E)	82	#5	2'-4"	
v ₁ (E)	82	#4	2'-10"	
v ₂ (E)	164	#4	5'-6"	
v ₃ (E)	52	#6	5'-7"	
v ₄ (E)	52	#6	5'-5"	
Porous Granular Embankment (Special)				CU YD 108
Stone Riprap				50 YD 641
Filter Fabric				50 YD 756
Structure Excavation				CU YD 235
Concrete Structures				CU YD 92.7
Reinforcement Bars, Epoxy Coated				LB 14,330
Bar Splicers				EACH 124
Furnishing Metal				FOOT 1,908
Shell Piles 14" x 0.250"				
Driving Piles				FOOT 1,908
Test Pile Metal				EACH 2
Shells				
Temporary Sheet Piling				50 FT 1,244
Concrete Sealer				50 FT 927
Geocomposite Wall Drain				50 YD 77
Pipe Underdrains for Structures 4"				FOOT 123

For details of Bar Splicers, see Sheet 18 of 21.
 For details of Piles, see Sheet 17 of 21.



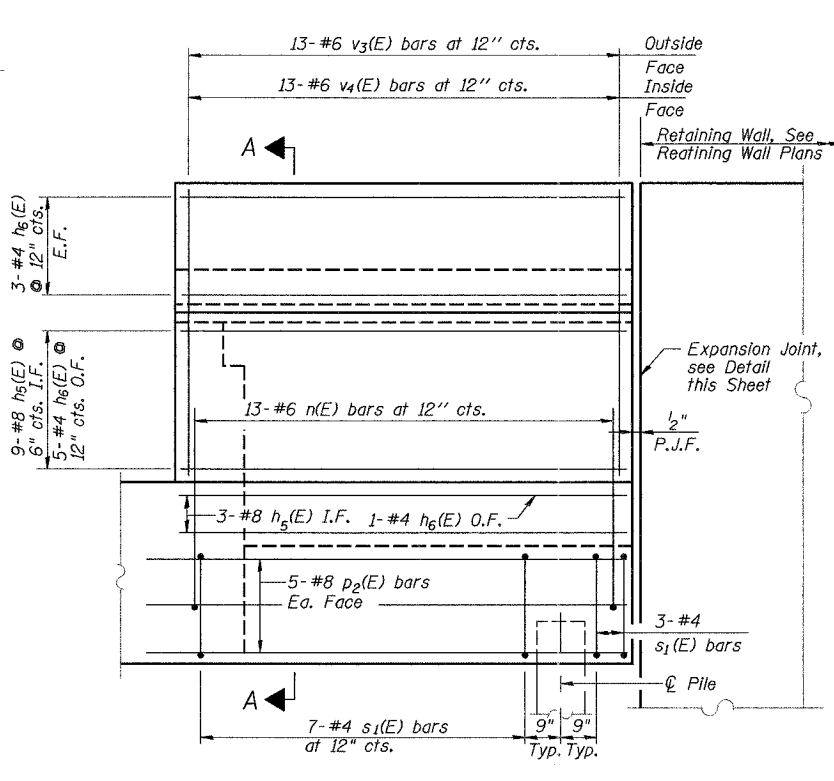
WINGWALL ELEVATION
 Showing Dimensions

Note:
 Quantity of concrete in end post included with Concrete Superstructure on Sheet 10 of 21.

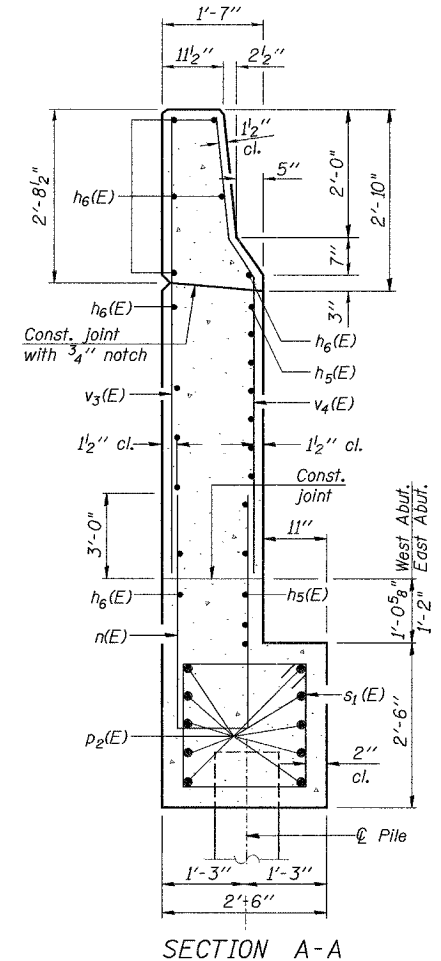


EXPANSION JOINT DETAIL

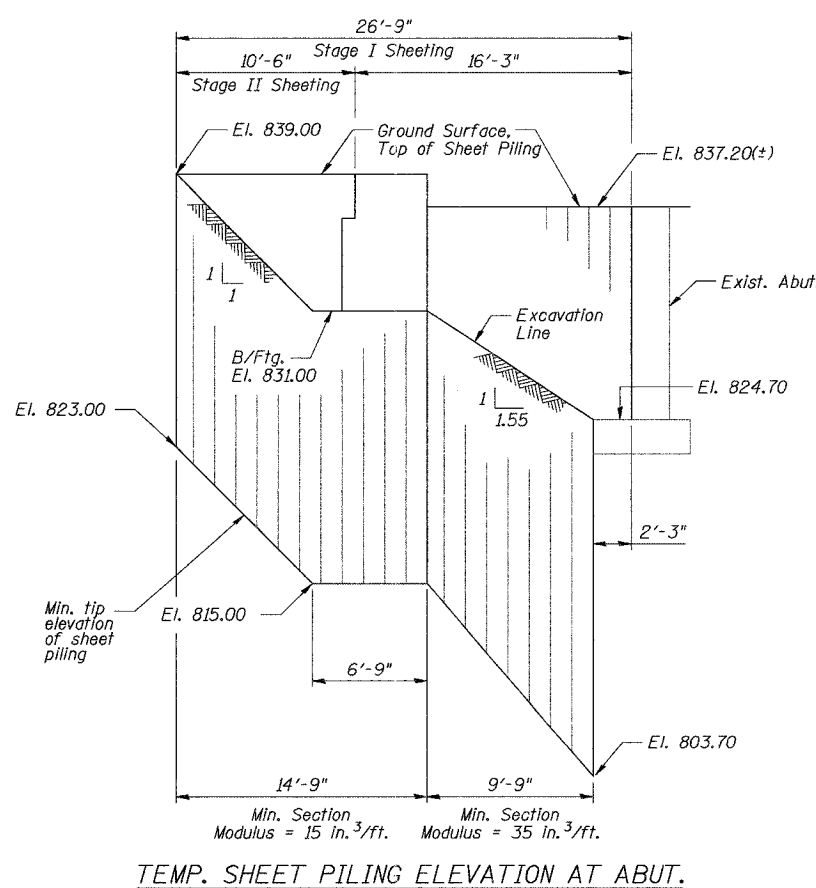
DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.



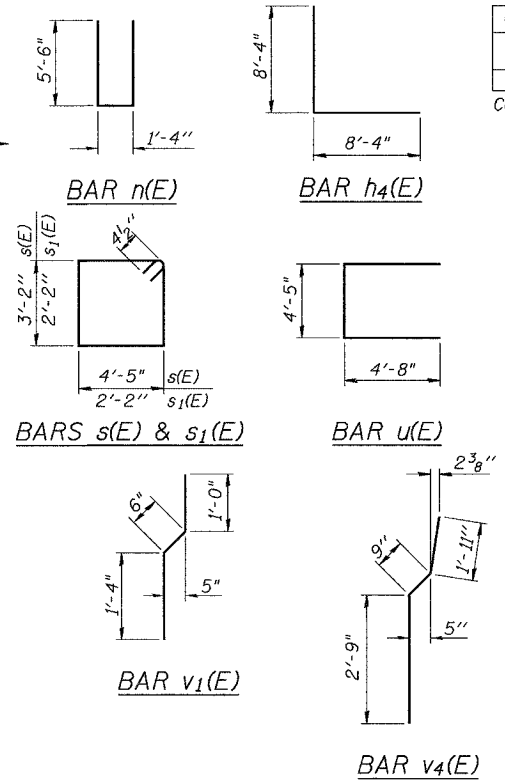
WINGWALL ELEVATION
 Showing Reinforcement



SECTION A-A



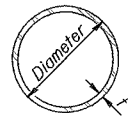
TEMP. SHEET PILING ELEVATION AT ABUT.



Notes:
 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.
 The contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

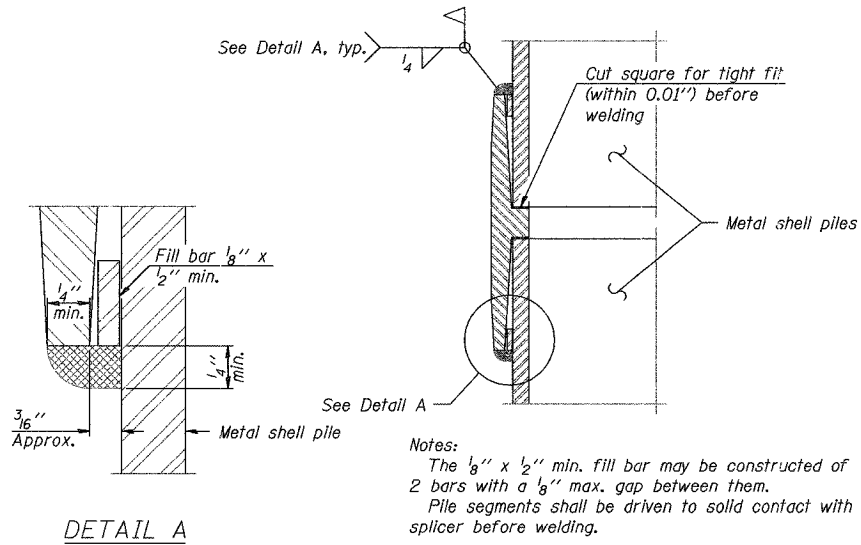
ABUTMENT WINGWALL AND DETAILS
 IL Route 176 over the Kishwaukee River
 F.A.P. RTE 533, SECTION 119R-2B
 McHENRY COUNTY
 STATION 10+00.00
 S.N. 056-0078
 DATE: 10-05-07
 GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
 CHICAGO ILLINOIS

P:\Jobs\2005\p161\where work\p161\final\loga\056-0005-S-16.dgn
 10/23/07 10:31:04 AM



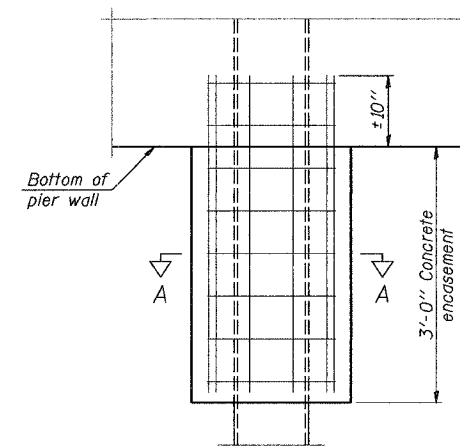
METAL SHELL PILE TABLE

Designation	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)	Encasement diameter A
PP12	0.179"	22.60	0.0274	30"
PP12	0.250"	31.37	0.0267	30"
PP14	0.250"	36.71	0.0368	30"
PP14	0.312"	45.61	0.0361	30"



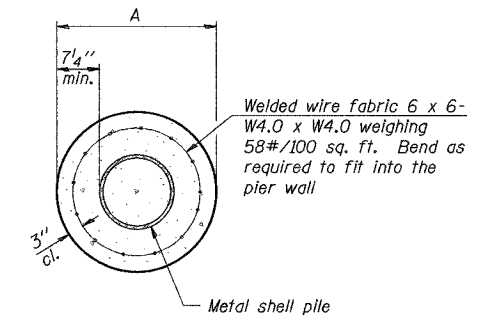
DETAIL A

WELDED COMMERCIAL SPLICE



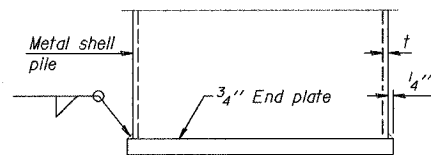
ELEVATION

CONCRETE ENCASEMENT AT PIERS

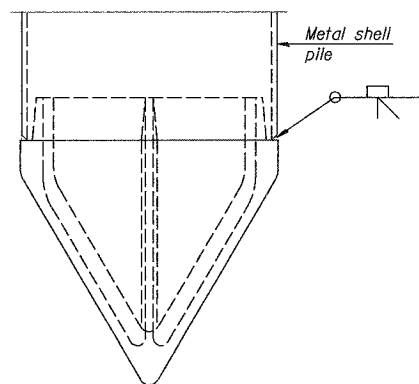


SECTION A-A

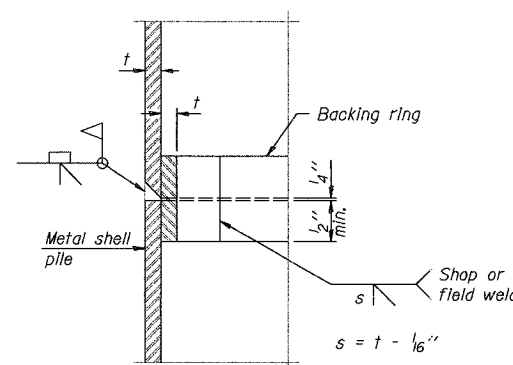
Notes:
See Metal Shell Pile Table for dimension "A".
Forms for encasement may be omitted when soil conditions permit.



END PLATE ATTACHMENT

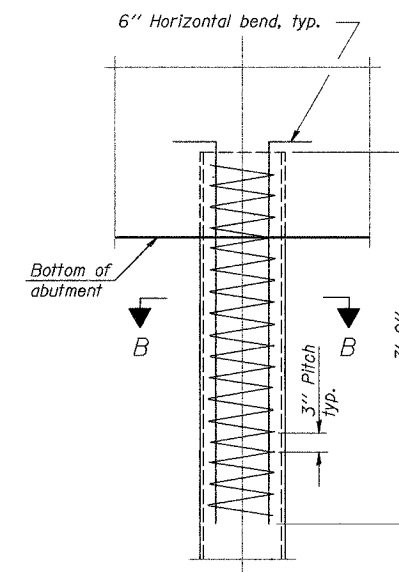


METAL SHELL PILE SHOE ATTACHMENT



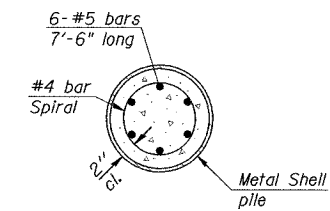
COMPLETE PENETRATION WELD SPLICE

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



ELEVATION

METAL SHELL REINFORCEMENT AT ABUTMENTS



SECTION B-B

CONCRETE PILE DETAILS

IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078

DATE: 10-05-07

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

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

DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

F-MS 11-1-06

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2B	McHenry	64	32
FIELD ROAD DIST.		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 18 OF 21 SHEETS

Contract #62336

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 60 ksi 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 kips) = $1.25 \times f_y \times A_t$
- ② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times f_{sallow} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 f_{sallow} = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

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."

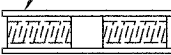
The diameter of this part is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR



** ONE PIECE

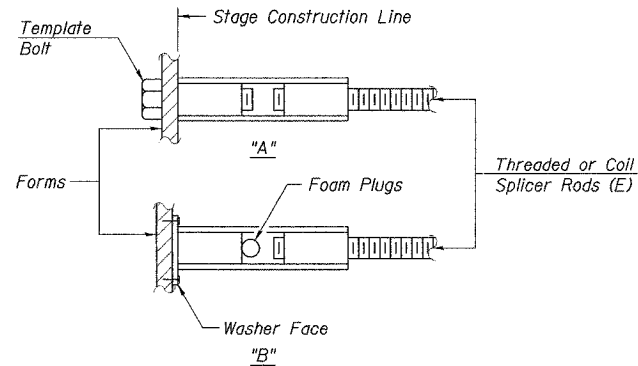
Wire Connector



WELDED SECTIONS

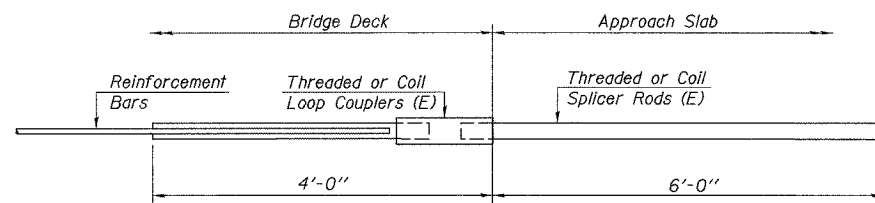
BAR SPLICER ASSEMBLY ALTERNATIVES

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



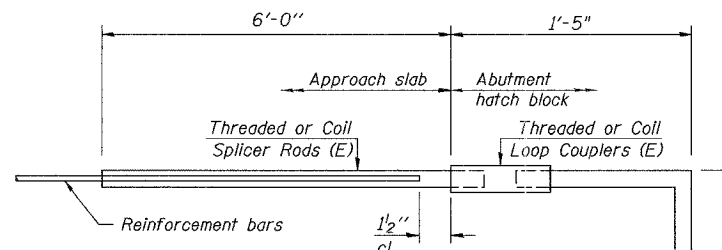
INSTALLATION AND SETTING METHODS

"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.



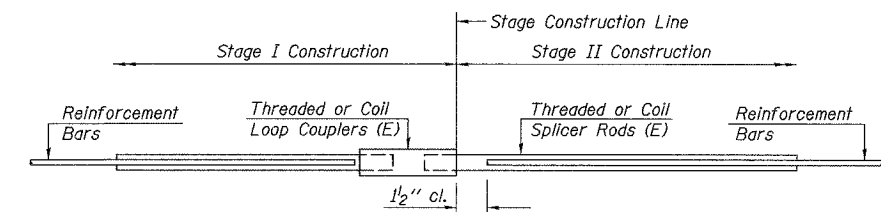
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	9.2 kips - tension
No. Required =	



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar	
Min. Capacity =	23.0 kips - tension
Min. Pull-out Strength =	9.2 kips - tension
No. Required =	82



STANDARD

Bar Size	No. Assemblies Required	Location
#5	262	Slab
#6	8	Slab
#7	8	Slab
#5	8	W. Abut.
#5	8	E. Abut.
#6	5	W. Abut.
#6	5	E. Abut.
#7	8	W. Abut.
#7	8	E. Abut.

BAR SPLICER ASSEMBLY DETAILS
 IL Route 176 over the Kishwaukee River
 F.A.P. RTE 533, SECTION 119R-2B
 McHENRY COUNTY
 STATION 10+00.00
 S.N. 056-0078

DATE: 10-05-07
 GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
 CHICAGO ILLINOIS

DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.
BSD-1	11-1-06

n:\jess2005\cbit\where work\pre final\br dge\056-005-S-18.dgn
 10/03/07 10:03:21 AM

n:\jess2005\cbit\where work\pre final\br dge\056-005-S-18.dgn
 10/03/07 10:03:21 AM

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Arthur Court, Suite 204
Naperville, Illinois 60565
(630) 353-7336

SOIL BORING LOG

PAGE 1 of 3
DATE October 29, 2003
LOGGED BY RJ
GSI JOB No. 0340

ROUTE SBI-67 DESCRIPTION Il. 176 over Kishwaukee River
SECTION 120A-B-R LOCATION Section 35, Range 6E, Township 44N in Seneca Township
COUNTY McHenry DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE D-120 Safety Hammer

STRUCT. NO. 056-0078	Surface Water Elev. <i>n/a</i>	DEPTH (ft)	BLOW (blows/6")	UCS (tsf)	MOIST (%)
Station XX	Stream Bed Elev. <i>n/a</i>				
BORING NO. SB-1	Groundwater Depth				
Northing 9+60	First Encounter <i>n/a</i>				
Easting 6.0' Left	Upon Completion <i>n/a</i>				
Ground Surface Elev. <i>837.1</i>	After ____ Hrs.				

8.0" ASPHALT, 4.5" CONCRETE					
SANDY CLAY LOAM—black—medium dense	6		5		
	7		4		
	8	—	9	NP	22
SAND & GRAVEL—gray—medium dense (A-1-b)	5		4		
	8		11		
	10	—	10	NP	15
SAND & GRAVEL—gray—medium dense (A-1-b)			5		
			5		
		NP	7	NP	22
SAND & GRAVEL—gray—medium dense (A-1-b)	5		5		
	6		6		
	10	7	9	NP	16
SAND & GRAVEL—gray—medium dense (A-1-b)	4				
	11				
	10	NP	11		
SAND & GRAVEL—gray—medium dense (A-1-b)	5		12		
	8		13		
	10	NP	8	NP	19
SAND & GRAVEL—gray—medium dense (A-1-b)	10				
	12				
	12	NP	10		
FINE SAND—gray—loose to medium dense (A-3)	3		4		
	5		4		
	10	5	7	NP	14

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B—Bulge, S—Shear, P—Penetrometer) ST—Shelby Tube Sample VS—Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR—No Recovery

DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Arthur Court, Suite 204
Naperville, Illinois 60565
(630) 353-7336

SOIL BORING LOG

PAGE 2 of 3
DATE October 29, 2003
LOGGED BY RJ
GSI JOB No. 0340

ROUTE SBI-67 DESCRIPTION Il. 176 over Kishwaukee River
SECTION 120A-B-R LOCATION Section 35, Range 6E, Township 44N in Seneca Township
COUNTY McHenry DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE D-120 Safety Hammer

STRUCT. NO. 056-0078	Surface Water Elev. <i>n/a</i>	DEPTH (ft)	BLOW (blows/6")	UCS (tsf)	MOIST (%)
Station XX	Stream Bed Elev. <i>n/a</i>				
BORING NO. SB-1	Groundwater Depth				
Northing 9+60	First Encounter <i>n/a</i>				
Easting 6.0' Left	Upon Completion <i>n/a</i>				
Ground Surface Elev. <i>837.1</i>	After ____ Hrs.				

SAND & GRAVEL—gray—medium dense (A-1-b)					
SAND—gray—medium dense (A-3)					
			6		
			13		
SAND—gray—medium dense (A-3)			8		
			8		
			10	NP	20
SAND—gray—medium dense (A-3)			8		
			8		
			10	NP	19
SAND—gray—medium dense (A-3)			7		
			6		
			9	NP	16
SAND—gray—medium dense (A-3)			10		
			12		
			12	NP	22
SAND—gray—medium dense (A-3)			10		
			10		
			10	NP	24

Drillers Observation: Blow in sands.
Blind drill to -96.0'.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B—Bulge, S—Shear, P—Penetrometer) ST—Shelby Tube Sample VS—Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR—No Recovery

BORING LOGS I
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078
DATE 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS


10/29/2003 08:00:00 AM
 10/29/2003 08:00:00 AM
 10/29/2003 08:00:00 AM

10/29/2003 08:00:00 AM
 10/29/2003 08:00:00 AM
 10/29/2003 08:00:00 AM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2B	McHenry	64	34
FED. ROAD DIST.		FED. ROAD PROJECT		

SHEET NO. 20 OF 21 SHEETS

Contract #62336



Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Ashport Court, Suite 204
Naperville, Illinois 60565
(630) 251-7228

SOIL BORING LOG

PAGE 3 of 3
DATE October 29, 2003
LOGGED BY RJ
GSI JOB No. 0340

ROUTE SBI-67 DESCRIPTION IL 176 over Kishwaukee River
SECTION 120A-B-R LOCATION Section 35, Range 6E, Township 44N in Seneca Township
COUNTY McHenry DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE D-120 Safety Hammer

STRUCT. NO. 056-0078
Station XX
BORING NO. SB-1
Northing 9+60
Easting 6.0' Left
Ground Surface Elev. 837.1

DEPTH H	BLOW S	UCS Qu	MOIST T	Surface Water Elev.		DEPTH H	BLOW S	UCS Qu	MOIST T
				(ft)	(/6")				
				Stream Bed Elev.	<u>n/a</u>				
				Groundwater Depth	<u>n/a</u>				
				First Encounter	<u>n/a</u>				
				Upon Completion	<u>n/a</u>				
				After _____ Hrs.	<u>n/a</u>				

Drillers Observation: Blow in sands.
Blind drill to -96.0'.

Drillers Observation: Apparent bedrock

End Of Boring @ -97.5'
Hollow Stem Augers
D-120 Safety Hammer

DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in Italics above moist (%)
NR-No Recovery

BORING LOGS II
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

P:\Jobs\2006\plot\share work\prefinal\bor-log\056-0005-S-20.dgn
 10/29/03 10:47:28 AM

P:\Jobs\2006\plot\share work\prefinal\bor-log\056-0005-S-20.dgn
 10/29/03 10:47:28 AM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2B	McHenry	64	35
FED. ROAD DIST.		ILLINOIS		

SHEET NO. 21 OF 21 SHEETS

Contract #62336

PAGE 1 of 2
DATE October 14, 2003
LOGGED BY RJ
GSI JOB No. 0340

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Arden Court, Suite 204
Naperville, Illinois 60565
(800) 355-7226

SOIL BORING LOG

ROUTE SBI-67 DESCRIPTION II, 176 over Kishwaukee River
SECTION 120A-B-R LOCATION Section 35, Range 6E, Township 44N in Seneca Township
COUNTY McHenry DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME-75 Auto Hammer

STRUCT. NO. 056-0078
Station XX

BORING NO. SB-2
Northing 10+40
Easting 6.0' Right
Ground Surface Elev. 836.9

DEPTH (ft)	BULGE (in)	UCS (tsf)	MOIST (%)	DEPTH (ft)	BULGE (in)	UCS (tsf)	MOIST (%)
5				7			
6				4			
7	NP	15		4	NP	19	
4				5			
11				6			
5	NP	18		25	4	NP	21
3				5			
3				5			
4	NP	7		7	NP	24	
3				4			
4				6			
10	3	NP	8	30	5	NP	21
24							
10							
7	NP	15					
12				0			
15				1			
15	7	NP	23	35	1	NP	16
4							
5							
4	NP	22					
4				7			
4				11			
20	3	NP	23	40	11	NP	14

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Depth First Encounter 825.9
Upon Completion n/a
After Hrs. n/a

8.0" ASPHALT, 4.5" CONCRETE

SANDY CLAY LOAM--black-medium dense

FINE SAND--brown--loose to medium dense (A-3)

SILTY LOAM--gray--medium dense (A-4)

FINE SAND--gray--loose to medium dense (A-3)

CLAYEY SAND--gray--very loose to medium dense (A-2-6)

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

DESIGNED	J.Z.
CHECKED	S.D.H.
DRAWN	M.S.M.
CHECKED	S.D.H.

PAGE 2 of 2
DATE October 14, 2003
LOGGED BY RJ
GSI JOB No. 0340

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Arden Court, Suite 204
Naperville, Illinois 60565
(800) 355-7226

SOIL BORING LOG

ROUTE SBI-67 DESCRIPTION II, 176 over Kishwaukee River
SECTION 120A-B-R LOCATION Section 35, Range 6E, Township 44N in Seneca Township
COUNTY McHenry DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME-75 Auto Hammer

STRUCT. NO. 056-0078
Station XX

BORING NO. SB-2
Northing 10+40
Easting 6.0' Right
Ground Surface Elev. 836.9

DEPTH (ft)	BULGE (in)	UCS (tsf)	MOIST (%)	DEPTH (ft)	BULGE (in)	UCS (tsf)	MOIST (%)
7				7			
9				11	NP	14	
12				12			
10				10			
50	12	NP	15	70			
11				11			
12				12			
55	12	NP	13	75			
12							
13							
60	15	NP	20	80			

Surface Water Elev. n/a
Stream Bed Elev. n/a
Groundwater Depth First Encounter 825.9
Upon Completion n/a
After Hrs. n/a

CLAYEY SAND--gray--very loose to medium dense (A-2-6)

SAND & GRAVEL--brown & gray--medium dense (A-1-b)

Drillers Observation: Auger refusal @ -65.0'. Apparent bedrock.

End Of Boring @ -65.0'
Hollow Stem Augers
CME-75 Automatic Hammer

FINE SAND--brown--loose to medium dense (A-3)

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

BORING LOGS III
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STATION 10+00.00
S.N. 056-0078
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

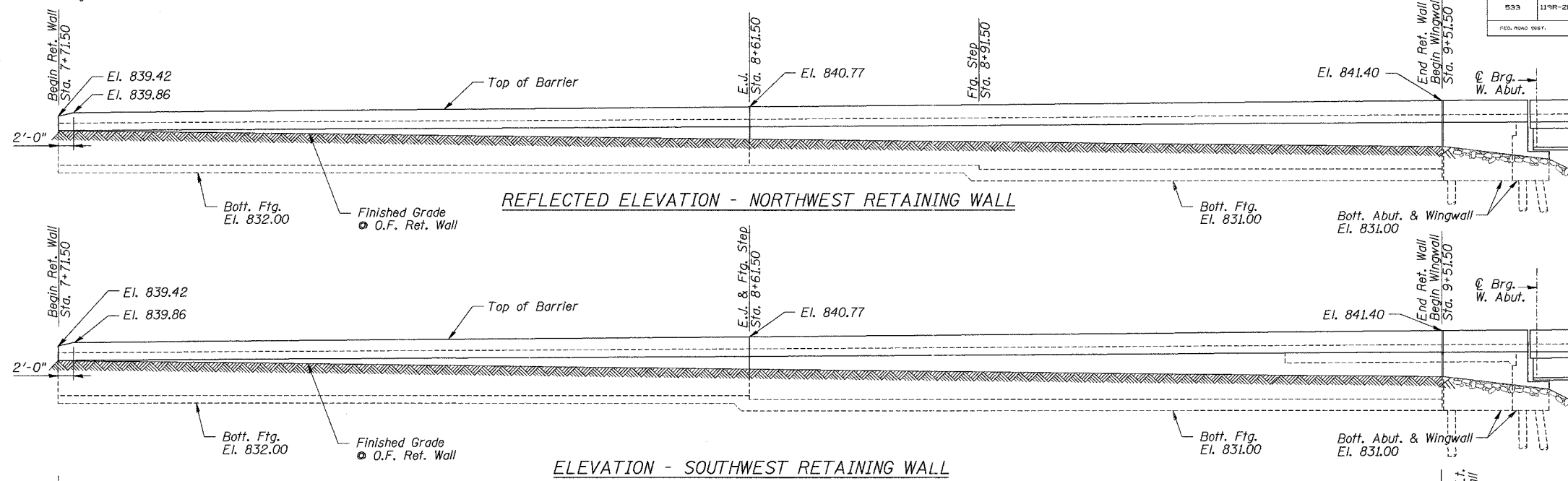
R:\Jobs\2006\056\056-0078\119R-2B\119R-2B-056-0078-005-S-21.dgn
 10/13/03 11:44 AM

R:\Jobs\2006\056\056-0078\119R-2B\119R-2B-056-0078-005-S-21.dgn
 10/13/03 11:44 AM

Bench Mark: Chiseled "□" in south face of concrete base of east storage bin located approximately 425' northwest of existing S.N. 056-0005. Elev. 836.91.

ROUTE NO.	SECTION	QUANTITY	TOTAL SHEETS	SHEET NO.
533	119R-2B	McHenry	64	36

Contract #62336



GENERAL NOTES

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

Reinforcement bars designated (E) shall be epoxy coated.

For Total Bill of Material, see Sheet 9 of 12.

DESIGN SPECIFICATIONS

AASHTO 17th Edition, 2002

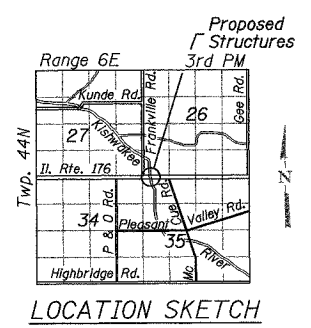
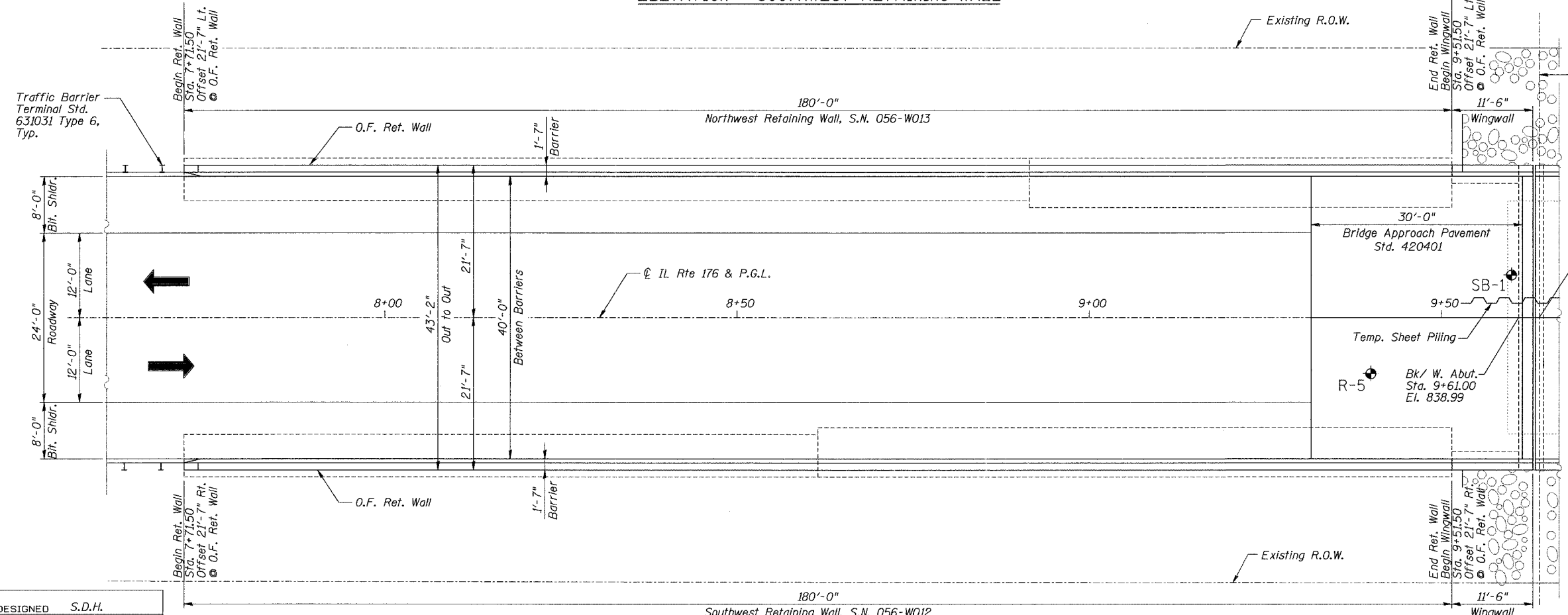
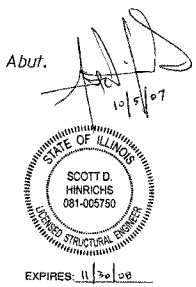
DESIGN STRESSES

FIELD UNITS

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

SEISMIC DATA

Seismic Performance Category (SPC)= A
 Bedrock Acceleration Coefficient (A)= 0.035g
 Site Coefficient (S)= 1.0



DESIGNED	S.D.H.
CHECKED	J.A.Z.
DRAWN	M.S.M.
CHECKED	S.D.H.

Notes:

1. E.J. = Expansion Joint

2. For Profile Grade, see Sheet 3 of 12.

LEGEND

- Stone Riprap, see Bridge Plans

- Soil Boring (For additional Soil Borings at Bridge, see Bridge Plans.)

GENERAL PLAN & ELEVATION I RETAINING WALLS

IL Route 176 over the Kishwaukee River

F.A.P. RTE 533, SECTION 119R-2B

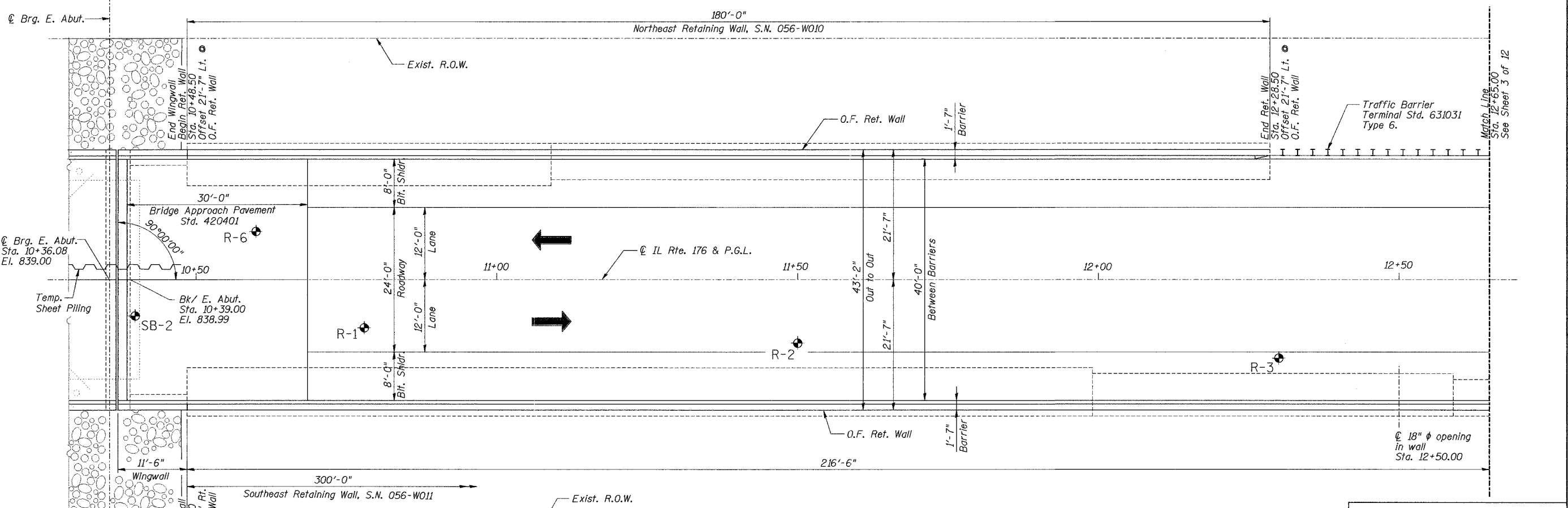
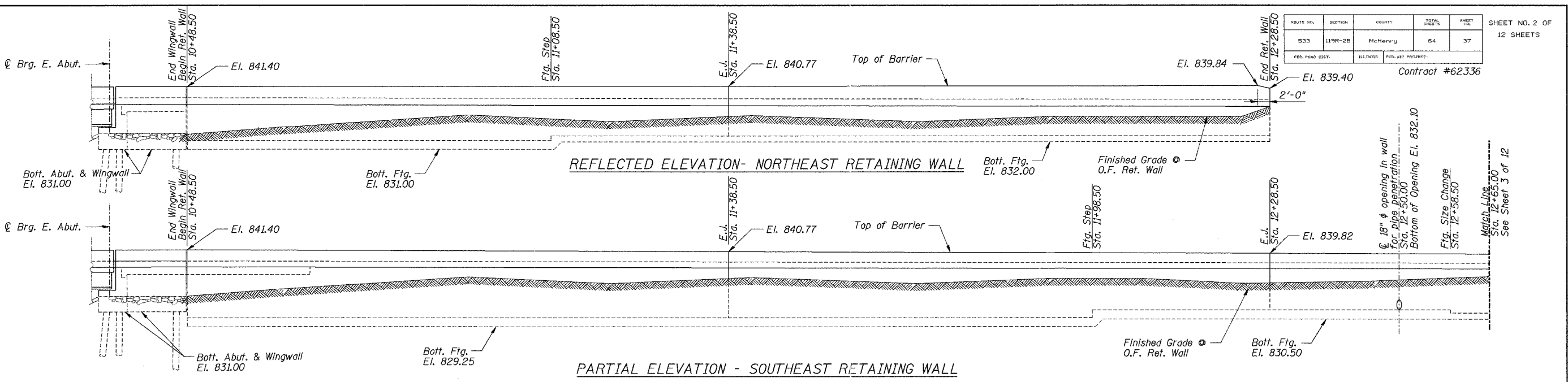
McHENRY COUNTY

STA. 7+71.50 TO STA. 13+48.50

DATE: 10-05-07

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
 CHICAGO ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2B	McHenry	64	37
FED. ROAD DIST.		ILLINOIS	FED. AID PROJECT-	
Contract #62336				



DESIGNED	S.D.H.
CHECKED	J.A.Z.
DRAWN	M.S.M.
CHECKED	S.D.H.

Notes:
 1. E.J. = Expansion Joint
 2. For Profile Grade, see Sheet 3 of 12.



- LEGEND**
- Stone Riprap, see Bridge Plans
 - R-2 - Soil Boring (For additional Soil Borings at Bridge, see Bridge Plans)

**GENERAL PLAN & ELEVATION II
 RETAINING WALLS**
 IL Route 176 over the Kishwaukee River
 F.A.P. RTE 533, SECTION 119R-2B
 McHENRY COUNTY
 STA. 7+71.50 TO STA. 13+48.50
 DATE: 10-05-07
 GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
 CHICAGO ILLINOIS

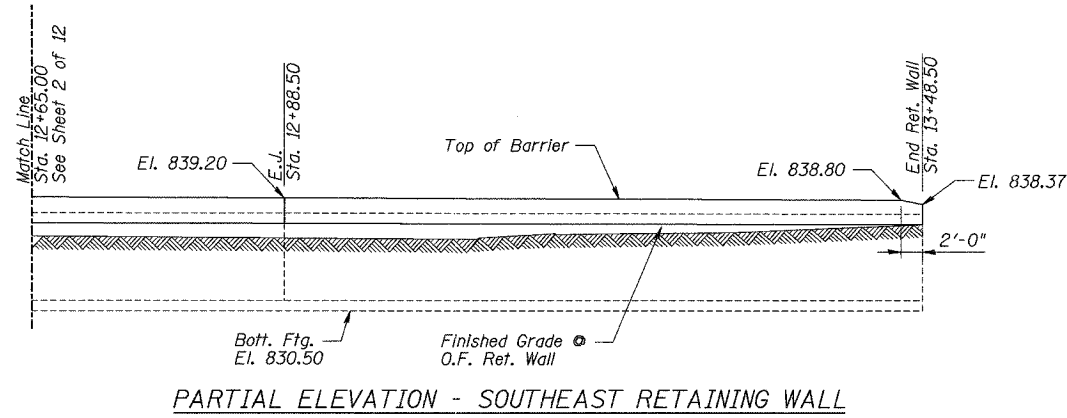
N:\jobs\056\plan\chore\work\final\RetWall\056-005-S-2.dgn
 10/13/07 10:45:00 AM

N:\jobs\056\plan\chore\work\final\RetWall\056-005-S-2.dgn
 10/13/07 10:45:00 AM

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2B	McHenry	64	38
FED. ROAD DIST.		FED. AID PROJECT-		

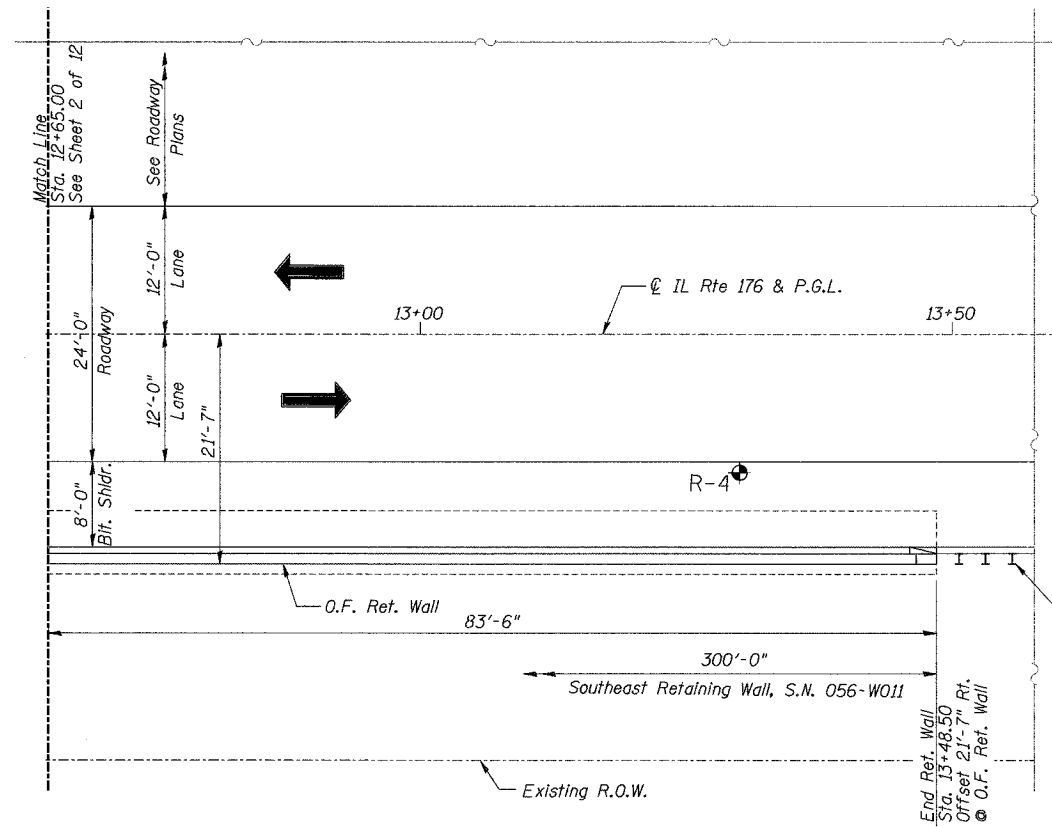
SHEET NO. 3 OF 12 SHEETS

Contract #62336

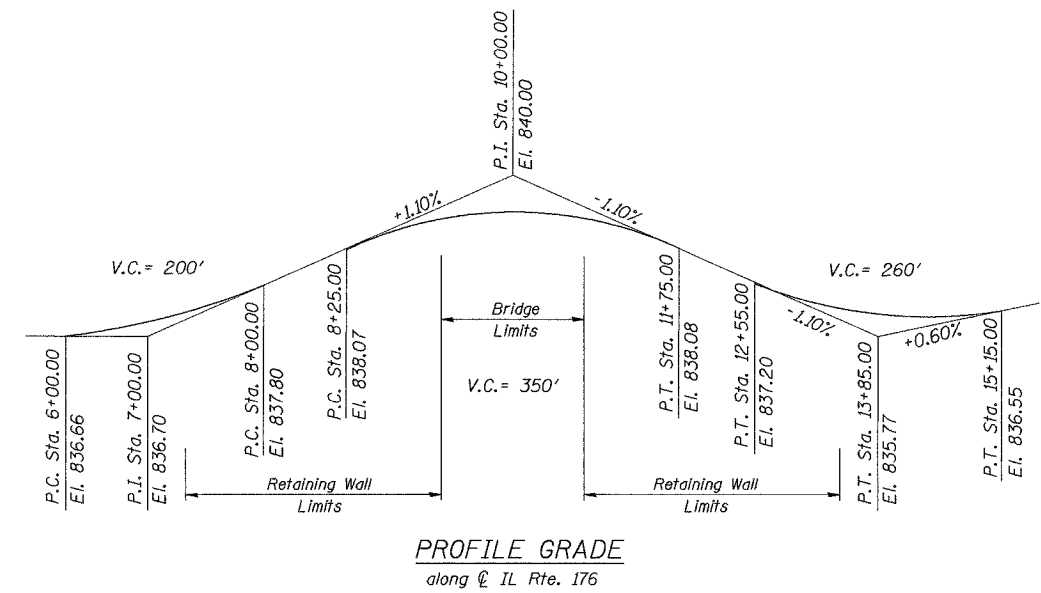


LEGEND

R-4 - Soil Boring



PLAN



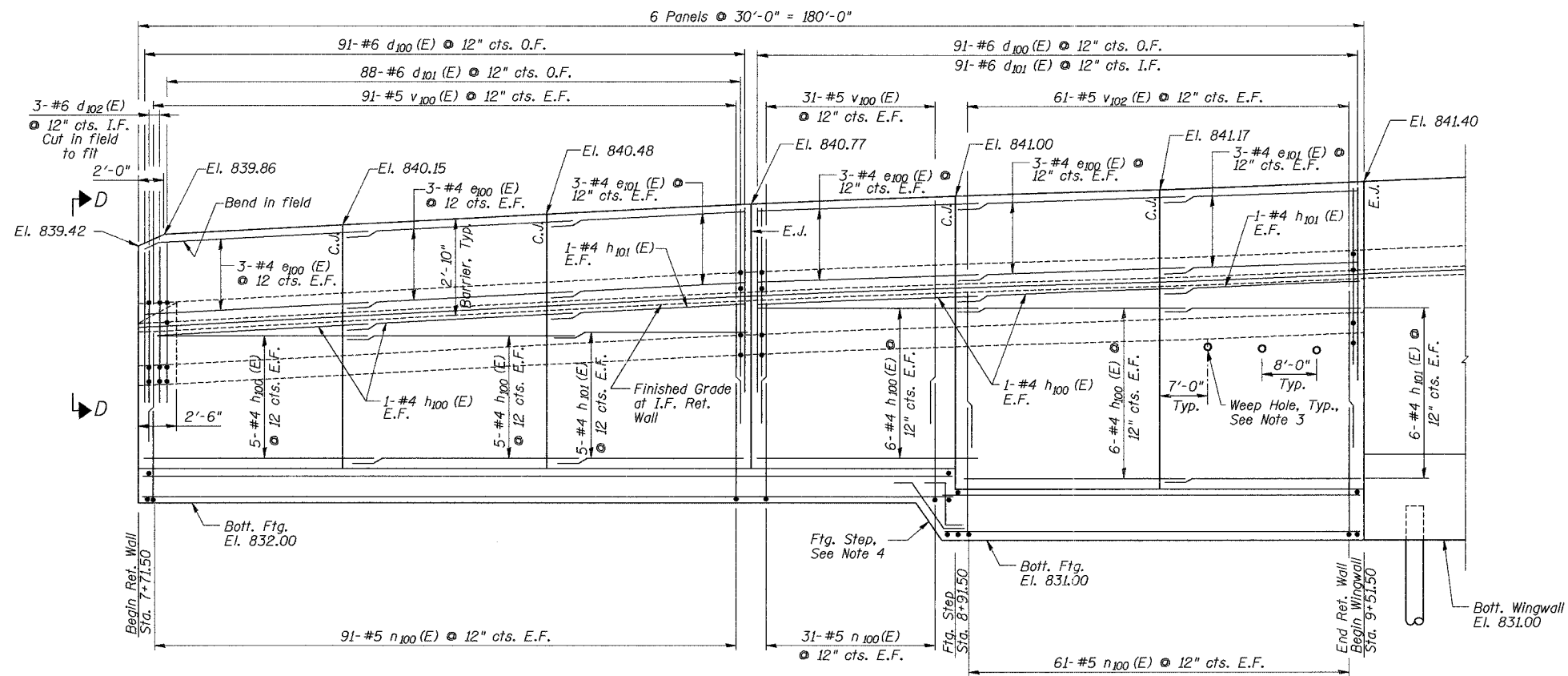
PROFILE GRADE
along CL IL Rte. 176

Notes:

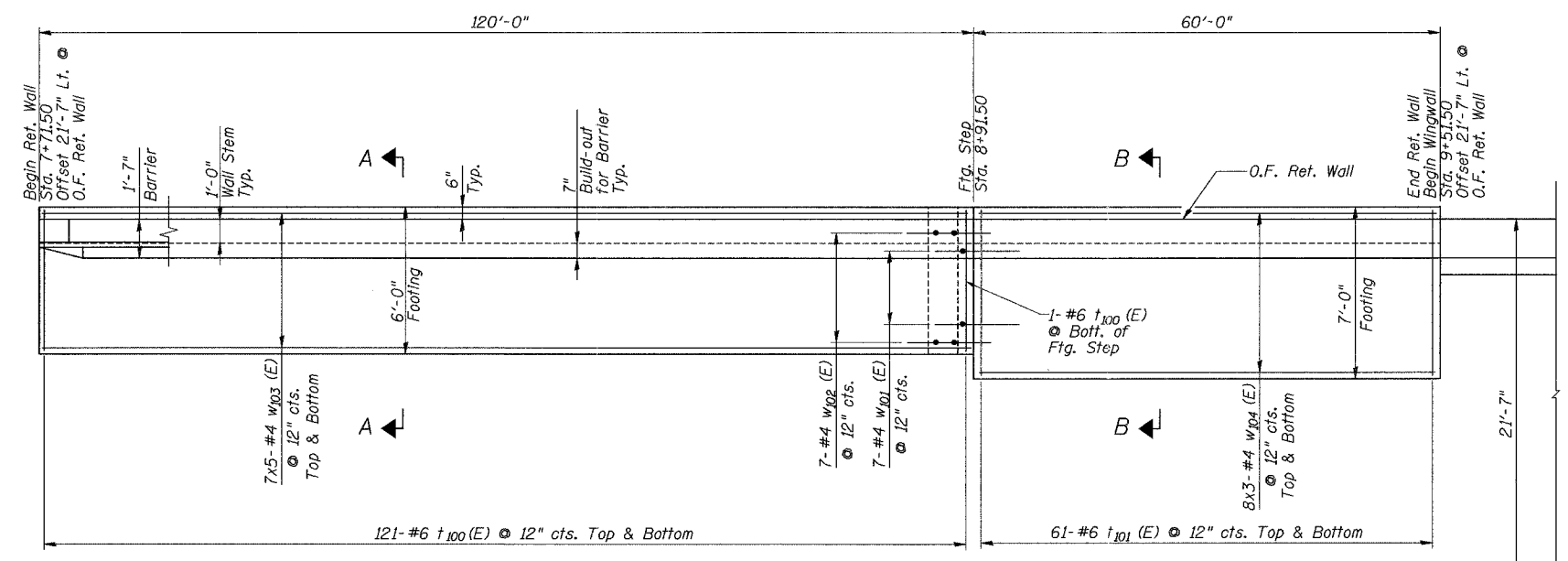
1. E.J. = Expansion Joint

GENERAL PLAN & ELEVATION III
RETAINING WALLS
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STA. 7+71.50 TO STA. 13+48.50
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

DESIGNED	S.D.H.
CHECKED	J.A.Z.
DRAWN	M.S.M.
CHECKED	S.D.H.



NORTHWEST RETAINING WALL REFLECTED ELEVATION
(Outside Face Elevation)



NORTHWEST RETAINING WALL PLAN

- Notes:**
- E.J. = Expansion Joint
C.J. = Construction Joint
For Joint Details, see Sheet 8 of 12.
 - For Sections A-A & B-B and View D-D, see Sheet 8 of 12.
 - Place Weep Hole so that bottom of hole is 1'-0" above Finished Grade at the O.F. Ret. Wall. Place in Wall Panel adjacent to Wingwall only.
 - For Footing Step Detail, see Sheet 8 of 12.
 - Bars indicated thus 8x3-#4 etc. indicates 8 lines of bars with 3 lengths per line.
 - Minimum lap lengths:
#4 = 1'-8"
#4 = 2'-5" (top bars)
#5 = 2'-2"
#6 = 2'-7"

DESIGNED	S.D.H.
CHECKED	J.A.Z.
DRAWN	M.S.M.
CHECKED	S.D.H.

NORTHWEST RETAINING WALL
S.N. 056-W013
PLAN AND ELEVATION
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STA. 7+71.50 TO STA. 13+48.50
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

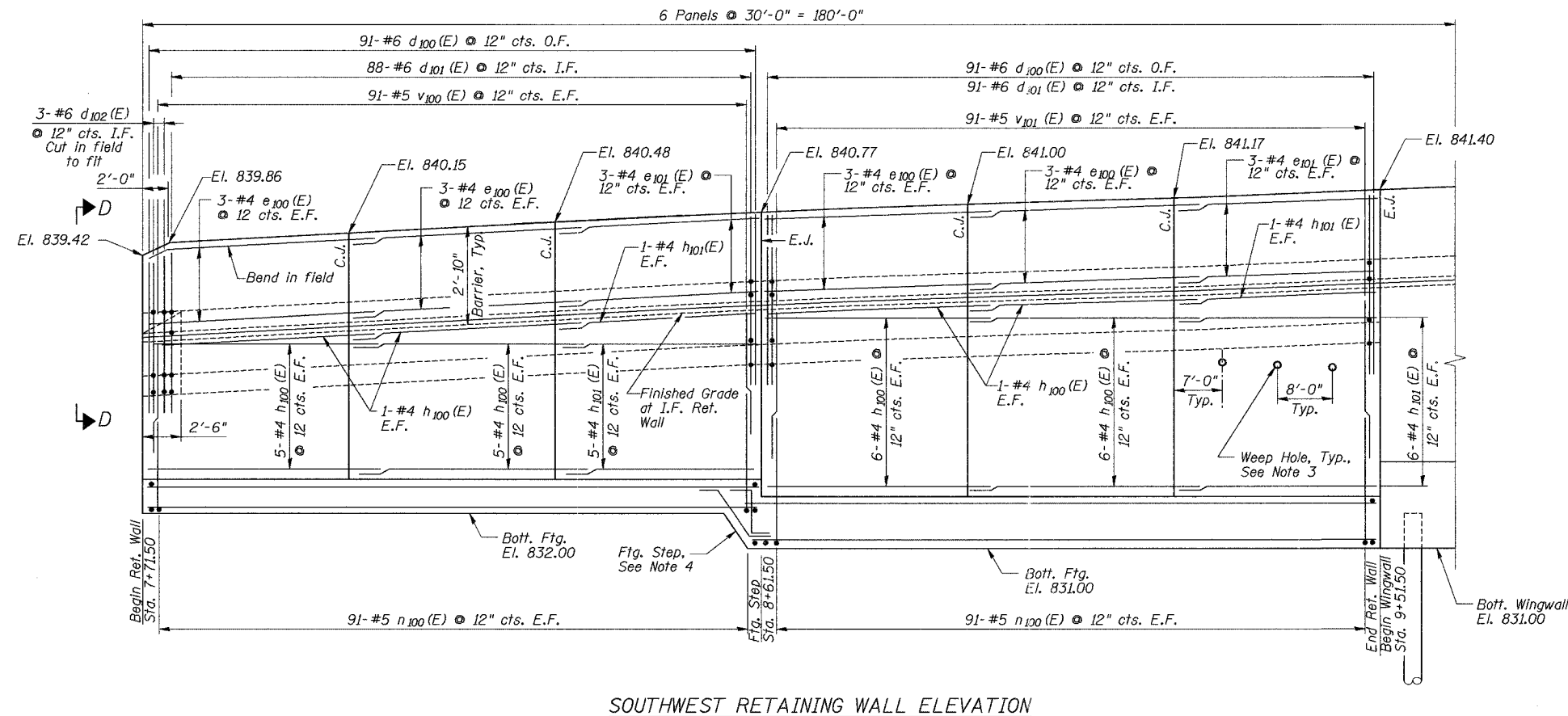
n:\p052005\sheet\where work\refinal\RetWall\056-005-S-4.dgn
10/3/07 10:03:50 AM

V:\P052005\sheet\where work\refinal\RetWall\056-005-S-4.dgn 10/3/07 10:03:50 AM

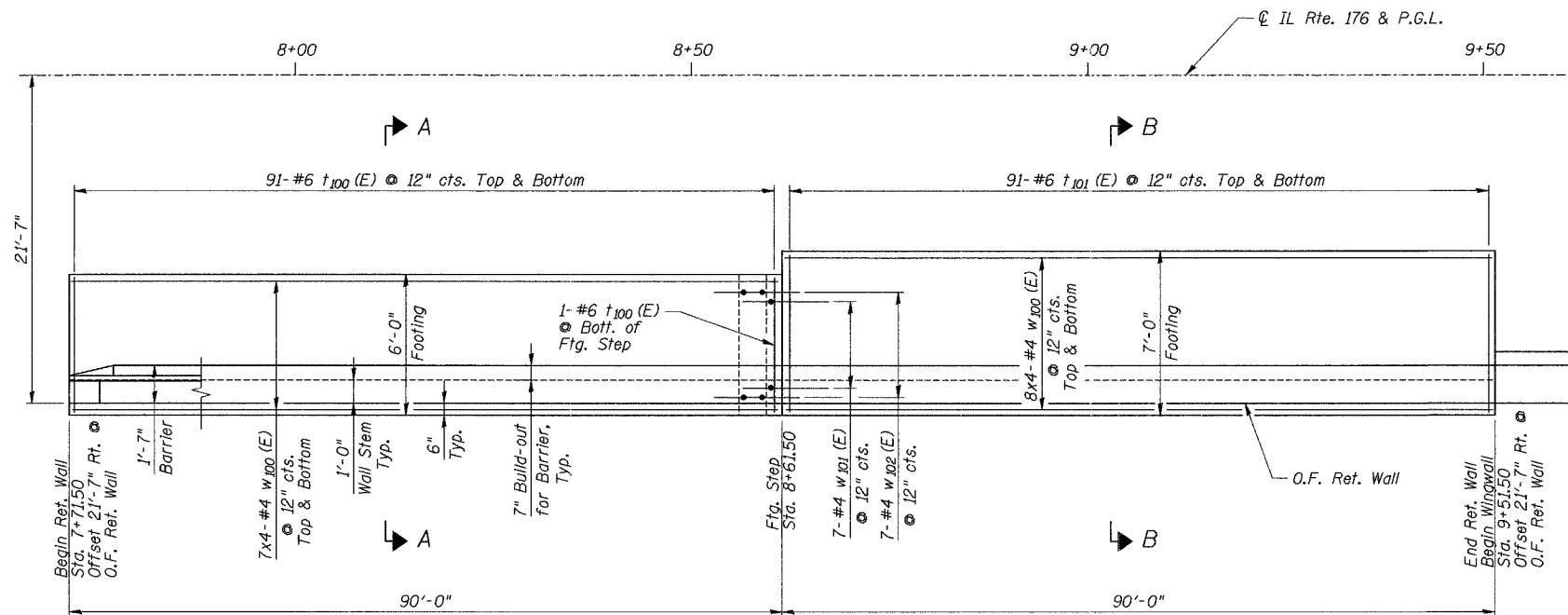
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2B	McHenry	64	48
FED. ROAD DIST.		FED. AID PROJECT-		

SHEET NO. 5 OF 12 SHEETS

Contract #62336



SOUTHWEST RETAINING WALL ELEVATION



SOUTHWEST RETAINING WALL PLAN

Notes:

1. E.J.= Expansion Joint
C.J.= Construction Joint
For Joint Details, see Sheet 8 of 12.
2. For Sections A-A & B-B and View D-D, see Sheet 8 of 12.
3. Place Weep Hole so that bottom of hole is 1'-0" above Finished Grade at the O.F. Ret. Wall. Place in Wall Panel adjacent to Wingwall only.
4. For Footing Step Detail, see Sheet 8 of 12.
5. Bars indicated thus 8x3- #4 etc, indicates 8 lines of bars with 3 lengths per line.
6. Minimum lap lengths:
#4 = 1'-8"
#4 = 2'-5" (top bars)
#5 = 2'-2"
#6 = 2'-7"

SOUTHWEST RETAINING WALL
S.N. 056-W012
PLAN AND ELEVATION
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STA. 7+71.50 TO STA. 13+48.50
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

DESIGNED	S.D.H.
CHECKED	J.A.Z.
DRAWN	M.S.M.
CHECKED	S.D.H.

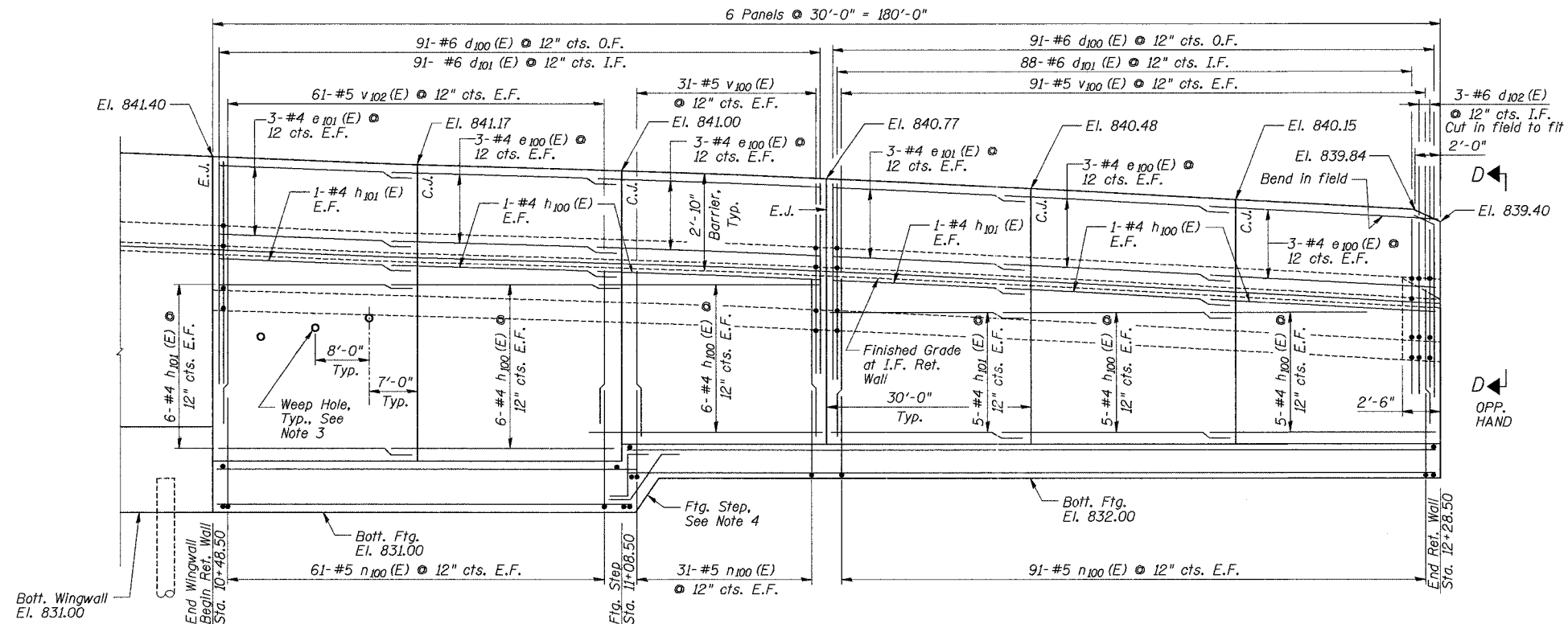
n:\projects\056\plot\chore work\prefinal\RetWall\056-0005-S-5.dgn
 10/05/07 10:41 AM

n:\projects\056\plot\chore work\prefinal\RetWall\056-0005-S-5.dgn
 10/05/07 10:41 AM

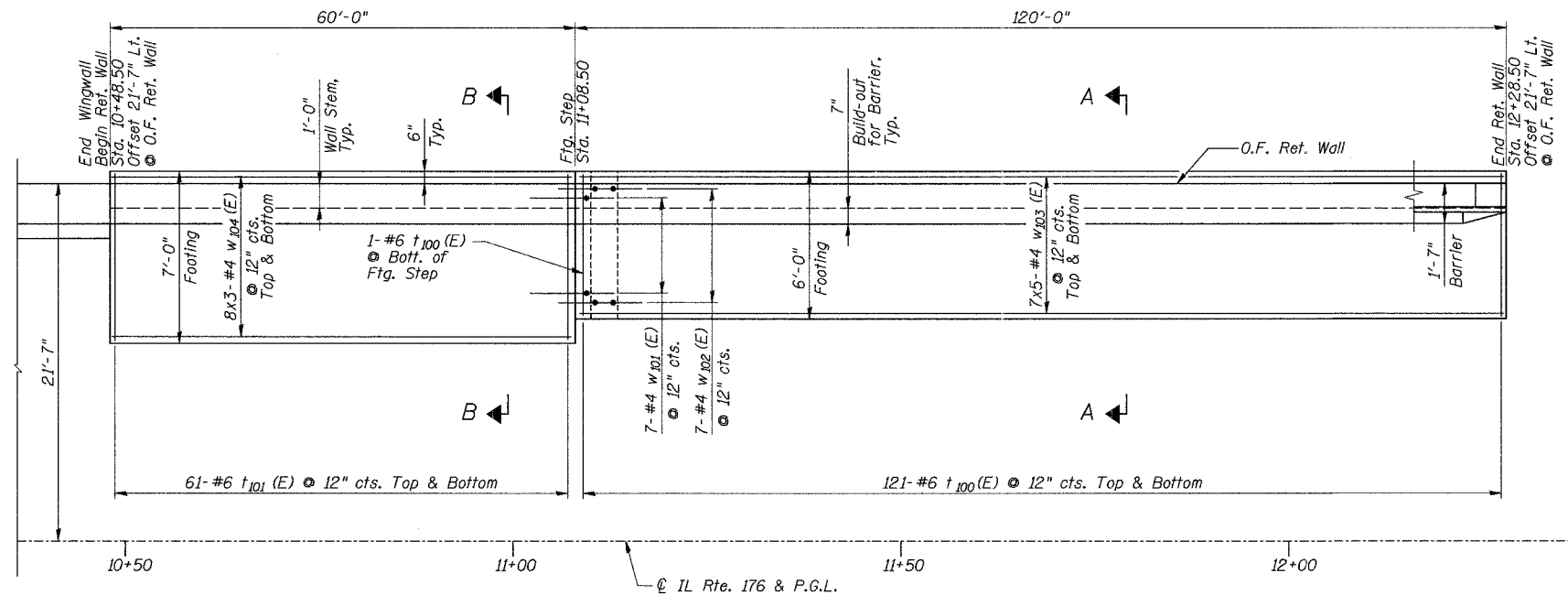
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
533	119R-2B	McHenry	64	41
FED. ROAD DIST.		FED. ROAD PROJECT		

Contract #62336

SHEET NO. 6 OF 12 SHEETS



NORTHEAST RETAINING WALL REFLECTED ELEVATION
(Outside Face Elevation)



NORTHEAST RETAINING WALL PLAN

Notes:

- E.J.= Expansion Joint
C.J.= Construction Joint
For Joint Details, see Sheet 8 of 12.
- For Sections A-A & B-B and View D-D, see Sheet 8 of 12.
- Place Weep Hole so that bottom of hole is 1'-0" above Finished Grade El. at the O.F. Ret. Wall. Place in Wall Panel adjacent to Wingwall only.
- For Footing Step Detail, see Sheet 8 of 12.
- Bars indicated thus 8x3-#4 etc. indicates 8 lines of bars with 3 lengths per line.
- Minimum lap lengths:
#4 = 1'-8"
#4 = 2'-5" (top bars)
#5 = 2'-2"
#6 = 2'-7"

DESIGNED	S.D.H.
CHECKED	J.A.Z.
DRAWN	M.S.M.
CHECKED	S.D.H.

NORTHEAST RETAINING WALL
S.N. 056-W010
PLAN AND ELEVATION
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STA. 7+71.50 TO STA. 13+48.50
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

P:\056\2006\p1st\where work\p1st\final\RetWall\056-0056-S-6.dgn
 10/4/2007 10:03:57 AM

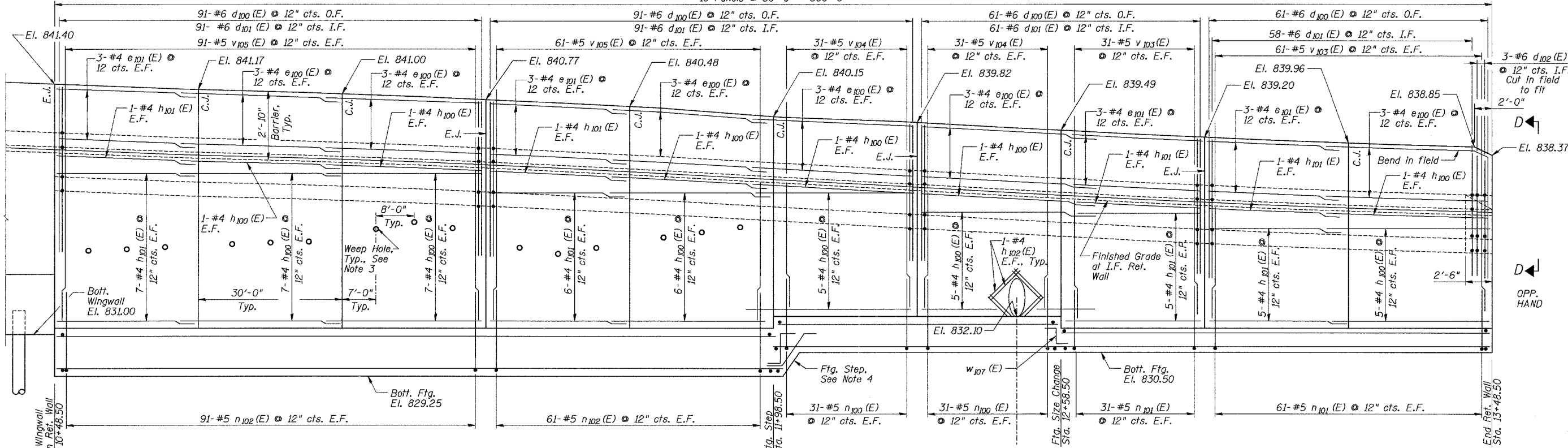
P:\056\2006\p1st\where work\p1st\final\RetWall\056-0056-S-6.dgn
 10/4/2007 10:03:57 AM

ROUTE NO.	SECTION	COUNTY	SHEET NO.	POST MILE
533	119R-2B	McHenry	64	42
FED. ROAD DIST.		FED. RD. PROJECT-		

SHEET NO. 7 OF
12 SHEETS

Contract #62336

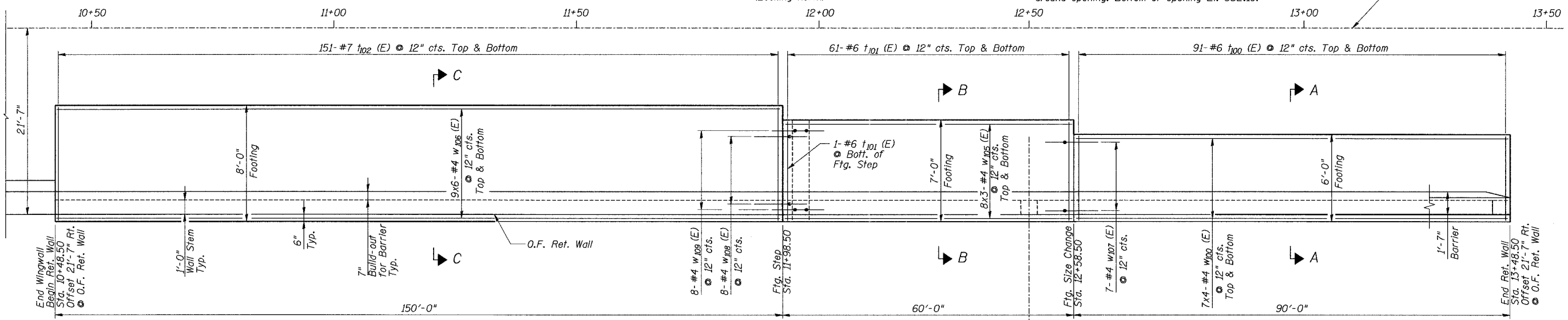
10 Panels @ 30'-0" = 300'-0"



SOUTHEAST RETAINING WALL ELEVATION

(Looking North)

① 18" φ opening in wall stem
Sta. 12+50.00. Cut horiz. bars as
required. Relocate vertical bars
around opening. Bottom of opening El. 832.10.



SOUTHEAST RETAINING WALL PLAN

① 18" φ opening in wall stem
Sta. 12+50.00

SOUTHEAST RETAINING WALL
S.N. 056-W011
PLAN AND ELEVATION
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STA. 7+71.50 TO STA. 13+48.50
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

Notes:

1. E.J.= Expansion Joint
C.J.= Construction Joint
For Joint Details, see Sheet 8 of 12.
2. For Sections A-A, B-B, C-C, and View D-D,
see Sheet 8 of 12.
3. Place Weep Hole so that bottom
of hole is 1'-0" above Finished Grade
at the O.F. Ret. Wall. Place in first
5 Wall Panels adjacent to Wingwall only.
4. For Footing Step Detail, see
Sheet 8 of 12.
5. Bars indicated thus 8x3-#4 etc.
indicates 8 lines of bars with 3
lengths per line.
6. Minimum lap length:
#4 = 1'-8"
#4 = 2'-5" (top bars)
#5 = 2'-2"
#6 = 2'-7"

DESIGNED	S.D.H.
CHECKED	J.A.Z.
DRAWN	M.S.M.
CHECKED	S.D.H.

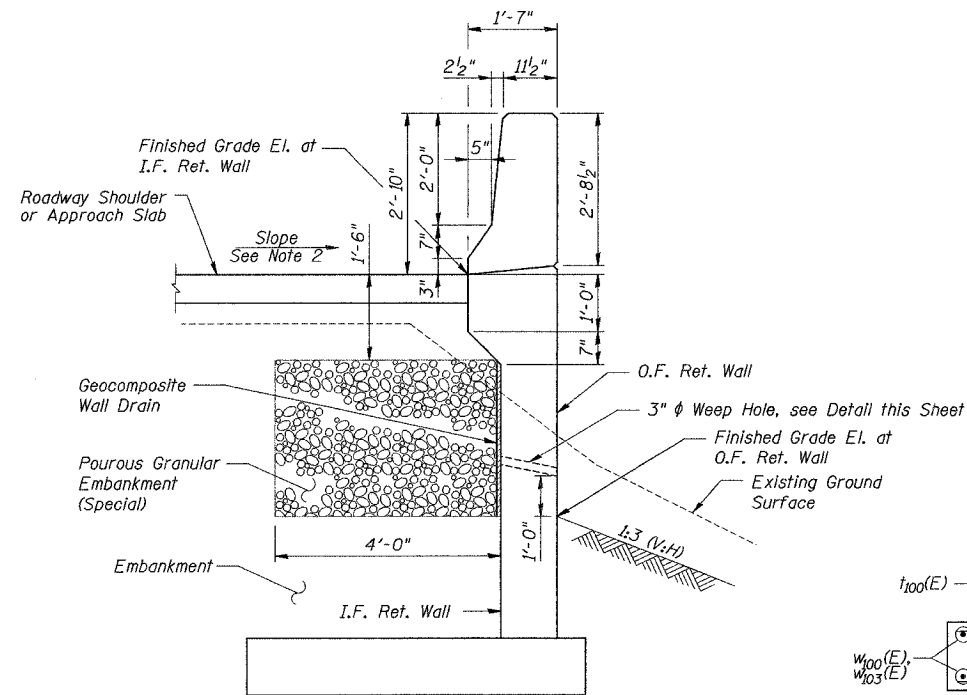
N:\022006\p10\shere work\p10\shere\wall\056-005-5-7.dwg
 10/24/2007 10:24:50 AM

V:\022006\006\5-7.dwg 10/27/2007 10:46:30 AM

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
533	119R-2B	McHenry	64	43

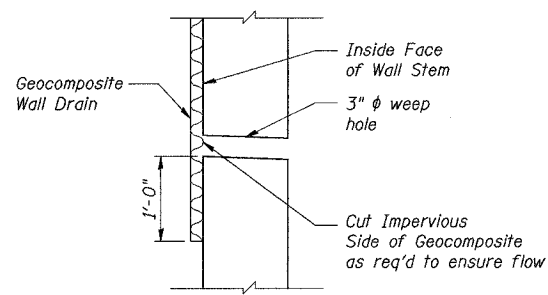
SHEET NO. 8 OF 12 SHEETS

Contract #62336

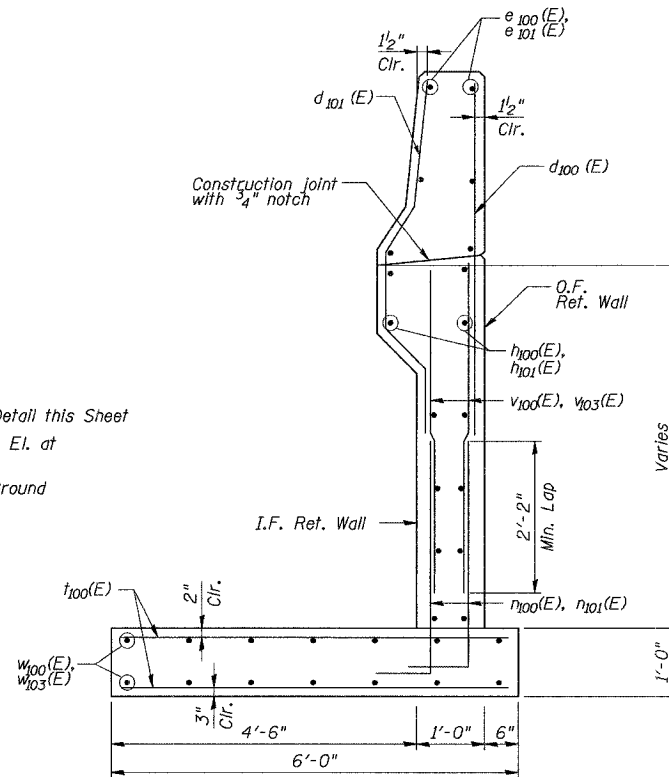


TYPICAL SECTION
(Through Retaining Walls)

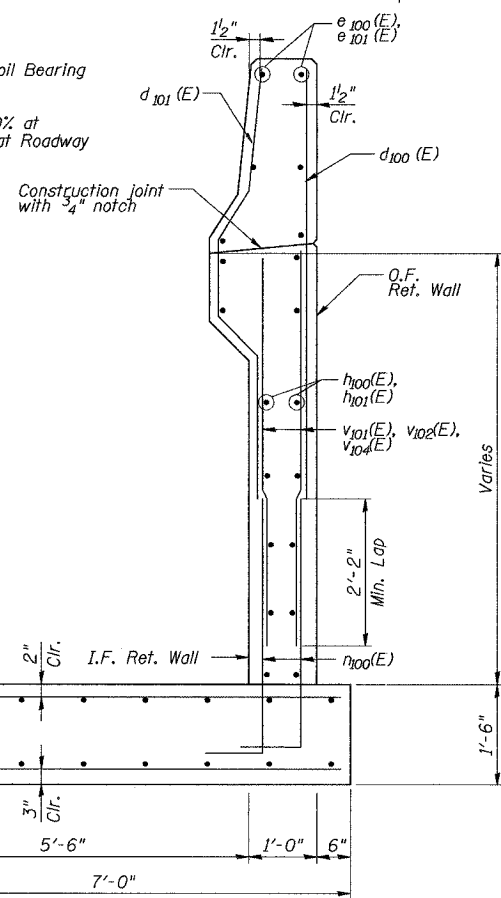
- Notes: 1. Allowable Equivalent Uniform Soil Bearing Pressure = 2,000 psf
2. Slope varies from 2.0% to 4.0% at Approach Slab. Slope is 4.0% at Roadway Shoulder.



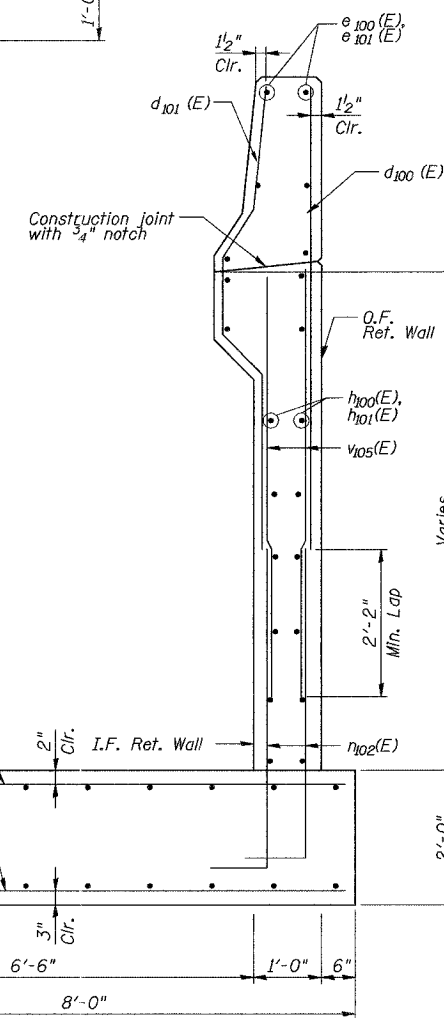
WEEP HOLE DRAIN DETAIL



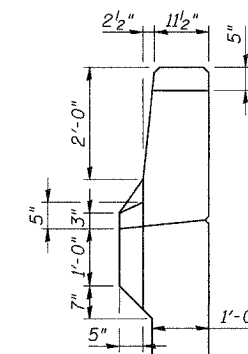
SECTION A-A



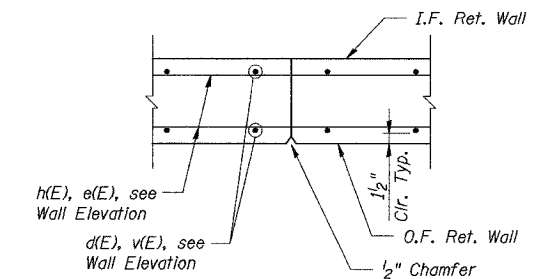
SECTION B-B



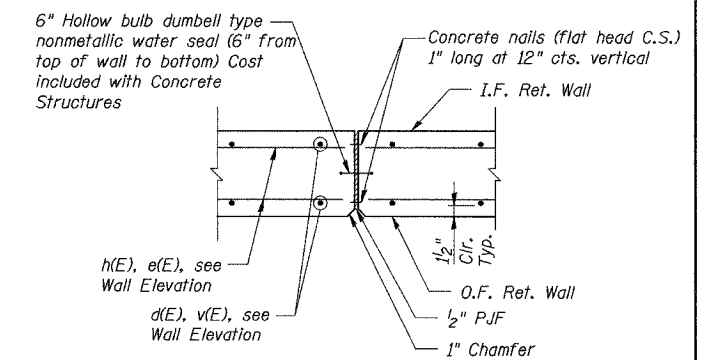
SECTION C-C



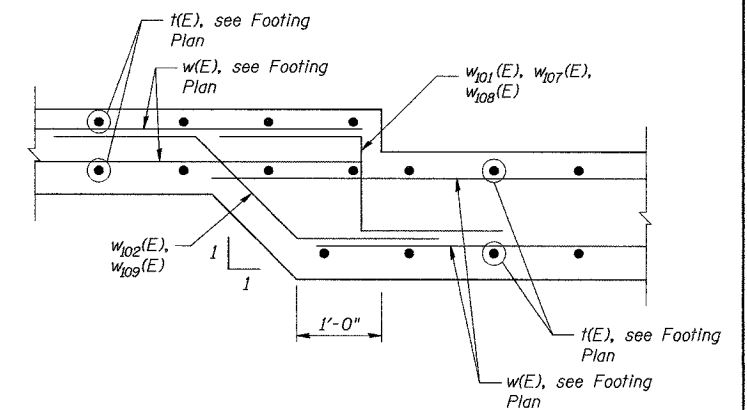
VIEW D-D



CONSTRUCTION JOINT DETAIL



EXPANSION JOINT DETAIL

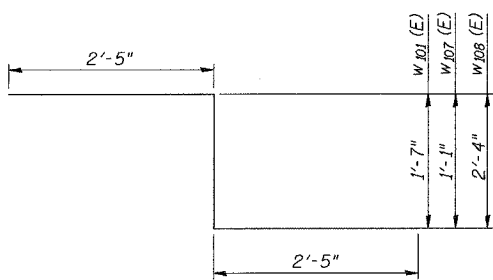


FOOTING STEP DETAIL

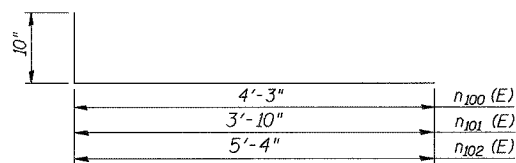
DESIGNED	S.D.H.
CHECKED	J.A.Z.
DRAWN	M.S.M.
CHECKED	S.D.H.

RETAINING WALL DETAILS I
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STA. 7+71.50 TO STA. 13+48.50
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

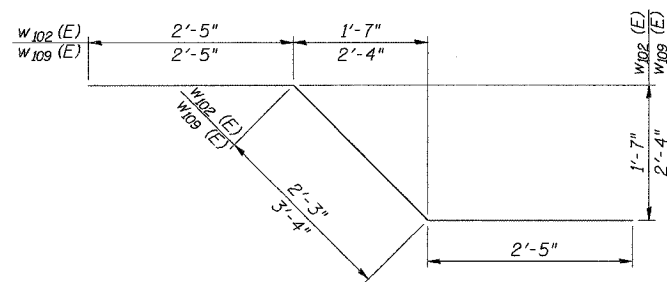
Contract #62336



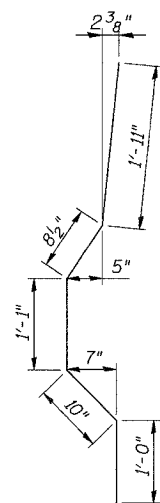
BARS $w_{101}(E)$, $w_{107}(E)$, $w_{108}(E)$



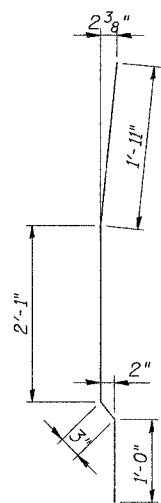
BARS $n_{100}(E)$, $n_{101}(E)$, $n_{102}(E)$



BARS $w_{102}(E)$, $w_{109}(E)$



BAR $d_{101}(E)$



BAR $d_{102}(E)$

NORTHWEST RETAINING WALL BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$d_{100}(E)$	182	#6	5'-6"	—
$d_{101}(E)$	179	#6	5'-7"	—
$d_{102}(E)$	3	#6	5'-3"	—
$e_{100}(E)$	24	#4	32'-5"	—
$e_{101}(E)$	12	#4	29'-8"	—
$h_{100}(E)$	52	#4	32'-5"	—
$h_{101}(E)$	26	#4	29'-8"	—
$n_{100}(E)$	366	#5	5'-1"	—
$t_{100}(E)$	243	#6	5'-8"	—
$t_{101}(E)$	122	#6	6'-8"	—
$v_{100}(E)$	244	#5	3'-10"	—
$v_{102}(E)$	122	#5	5'-6"	—
$w_{101}(E)$	7	#4	6'-5"	—
$w_{102}(E)$	7	#4	7'-1"	—
$w_{103}(E)$	70	#4	25'-11"	—
$w_{104}(E)$	48	#4	22'-2"	—
Porous Granular Embankment (Special)	Cu. Yd.		11	
Structure Excavation	Cu. Yd.		296	
Concrete Structures	Cu. Yd.		110.8	
Protective Coat	Sq. Yd.		79	
Reinforcement Bars, Epoxy Coated	Pound		14,320	
Geocomposite Wall Drain	Sq. Yd.		9	

SOUTHWEST RETAINING WALL BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$d_{100}(E)$	182	#6	5'-6"	—
$d_{101}(E)$	179	#6	5'-7"	—
$d_{102}(E)$	3	#6	5'-3"	—
$e_{100}(E)$	24	#4	32'-5"	—
$e_{101}(E)$	12	#4	29'-8"	—
$h_{100}(E)$	52	#4	32'-5"	—
$h_{101}(E)$	26	#4	29'-8"	—
$n_{100}(E)$	364	#5	5'-1"	—
$t_{100}(E)$	183	#6	5'-8"	—
$t_{101}(E)$	182	#6	6'-8"	—
$v_{100}(E)$	182	#5	3'-10"	—
$v_{101}(E)$	182	#5	5'-3"	—
$w_{101}(E)$	120	#4	24'-9"	—
$w_{101}(E)$	7	#4	6'-5"	—
$w_{102}(E)$	7	#4	7'-1"	—
Porous Granular Embankment (Special)	Cu. Yd.		17	
Structure Excavation	Cu. Yd.		317	
Concrete Structures	Cu. Yd.		116.4	
Protective Coat	Sq. Yd.		79	
Reinforcement Bars, Epoxy Coated	Pound		14,510	
Geocomposite Wall Drain	Sq. Yd.		13	

NORTHEAST RETAINING WALL BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$d_{100}(E)$	182	#6	5'-6"	—
$d_{101}(E)$	179	#6	5'-7"	—
$d_{102}(E)$	3	#6	5'-3"	—
$e_{100}(E)$	24	#4	32'-5"	—
$e_{101}(E)$	12	#4	29'-8"	—
$h_{100}(E)$	52	#4	32'-5"	—
$h_{101}(E)$	26	#4	29'-8"	—
$n_{100}(E)$	366	#5	5'-1"	—
$t_{100}(E)$	243	#6	5'-8"	—
$t_{101}(E)$	122	#6	6'-8"	—
$v_{100}(E)$	244	#5	3'-10"	—
$v_{102}(E)$	122	#5	5'-6"	—
$w_{101}(E)$	7	#4	6'-5"	—
$w_{102}(E)$	7	#4	7'-1"	—
$w_{103}(E)$	70	#4	25'-11"	—
$w_{104}(E)$	48	#4	22'-2"	—
Porous Granular Embankment (Special)	Cu. Yd.		12	
Structure Excavation	Cu. Yd.		308	
Concrete Structures	Cu. Yd.		110.8	
Protective Coat	Sq. Yd.		79	
Reinforcement Bars, Epoxy Coated	Pound		14,320	
Geocomposite Wall Drain	Sq. Yd.		9	

SOUTHEAST RETAINING WALL BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$d_{100}(E)$	304	#6	5'-6"	—
$d_{101}(E)$	301	#6	5'-7"	—
$d_{102}(E)$	3	#6	5'-3"	—
$e_{100}(E)$	36	#4	32'-5"	—
$e_{101}(E)$	24	#4	29'-8"	—
$h_{100}(E)$	82	#4	32'-5"	—
$h_{101}(E)$	54	#4	29'-8"	—
$h_{102}(E)$	16	#4	2'-0"	—
$n_{100}(E)$	124	#5	5'-1"	—
$n_{101}(E)$	184	#5	4'-8"	—
$n_{102}(E)$	304	#5	6'-2"	—
$t_{100}(E)$	182	#6	5'-8"	—
$t_{101}(E)$	123	#6	6'-8"	—
$t_{102}(E)$	302	#7	7'-8"	—
$v_{103}(E)$	184	#5	4'-3"	—
$v_{104}(E)$	124	#5	4'-6"	—
$v_{105}(E)$	304	#5	5'-11"	—
$w_{100}(E)$	56	#4	24'-9"	—
$w_{105}(E)$	48	#4	21'-6"	—
$w_{106}(E)$	108	#4	27'-4"	—
$w_{107}(E)$	7	#4	5'-11"	—
$w_{108}(E)$	8	#4	7'-2"	—
$w_{109}(E)$	8	#4	8'-2"	—
Porous Granular Embankment (Special)	Cu. Yd.		62	
Structure Excavation	Cu. Yd.		723	
Concrete Structures	Cu. Yd.		242.5	
Protective Coat	Sq. Yd.		132	
Reinforcement Bars, Epoxy Coated	Pound		27,180	
Geocomposite Wall Drain	Sq. Yd.		47	

TOTAL BILL OF MATERIAL

ITEMS	UNITS	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.	102
Structure Excavation	Cu. Yd.	1,644
Concrete Structures	Cu. Yd.	580.5
Protective Coat	Sq. Yd.	369
Reinforcement Bars, Epoxy Coated	Pound	70,330
Geocomposite Wall Drain	Sq. Yd.	78

DESIGNED	S.D.H.
CHECKED	J.A.Z.
DRAWN	M.S.M.
CHECKED	S.D.H.

RETAINING WALL DETAILS II
 IL Route 176 over the Kishwaukee River
 F.A.P. RTE 533, SECTION 119R-2B
 McHENRY COUNTY
 STA. 7+71.50 TO STA. 13+48.50
 DATE: 10-05-07
 GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
 CHICAGO ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
533	119R-2B	McHenry	64	45
FED. ROAD DIST.		STATE		FED. AID PROJECT

SHEET NO. 10 OF
12 SHEETS

Contract #62336

Geo Services, Inc. Geotechnical, Environmental & Civil Engineering
805 Archer St., Suite 204, Naperville, Illinois 60565
(815) 351-2888

SOIL BORING LOG

PAGE 1 of 1
DATE October 28, 2003
LOGGED BY RJ
IDOT Job No. D-91-471-01
GSI JOB No. 0340

ROUTE SBI-67 DESCRIPTION Illinois Route 176 over the Kishwaukee River
SECTION 120A-B-R LOCATION Section 35, Range 6E, Township 44N in Seneca Township, Marengo, IL.
COUNTY McHenry DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE D-120 Safety Hammer

STRUCT. NO. 056-0078
Station 349+85.75

BORING NO. R-1
Station 10+70
Offset: 10.5' Right
Ground Surface Elev. 836.8

	DEPTH				MOISTURE	SPT	UNSATURATED	MOISTURE	SPT	UNSATURATED
	(ft)	(/6")	(tsf)	(%)						
8.0" ASPHALT, 4.5" CONCRETE										
SANDY CLAY LOAM--black-- loose to medium dense	6									
	7				3					
	11			11	4	NP	16			
CLAY--dark brown--loose Apparent Fill	3				2					
	3				2					
	5			12	3	NP	17			
CLAYEY SAND--brown-- loose to medium dense (A-2-6)	2				7					
	3				3					
	4			16	5	NP	18			
Fine SAND--brown-- very loose to medium dense (A-3)	4				4					
	5				6					
	4			12	8	NP	17			
CLAYEY SAND--brown-- loose to medium dense (A-2-6)	3				3					
	3				5	NP	14			
	5				7	NP	23			
End Of Boring @ -35.0' Hollow Stem Augers D-120 Safety Hammer	1				6					
	1				10					
	2			14	11	NP	17			
Fine SAND--brown-- loose to medium dense (A-3)	3				3					
	4				7	NP	15			
	7				4					
End Of Boring @ -35.0' Hollow Stem Augers GME-75 Auto Hammer	4				5					
	6				4					
	8			16	4	NP	18			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B--Bulge, S--Shear, P--Penetrometer) ST--Shelby Tube Sample VS--Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR--No Recovery

DESIGNED	S.D.H.
CHECKED	J.A.Z.
DRAWN	M.S.M.
CHECKED	S.D.H.

Geo Services, Inc. Geotechnical, Environmental & Civil Engineering
805 Archer St., Suite 204, Naperville, Illinois 60565
(815) 351-2888

SOIL BORING LOG

PAGE 1 of 1
DATE October 23, 2003
LOGGED BY RJ
IDOT Job No. D-91-471-01
GSI JOB No. 0340

ROUTE SBI-67 DESCRIPTION Illinois Route 176 over the Kishwaukee River
SECTION 120A-B-R LOCATION Section 35, Range 6E, Township 44N in Seneca Township, Marengo, IL.
COUNTY McHenry DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE GME-75 Auto Hammer

STRUCT. NO. 056-0078
Station 349+85.75

BORING NO. R-2
Station 11+50
Offset: 10.5' Right
Ground Surface Elev. 836.3

	DEPTH				MOISTURE	SPT	UNSATURATED	MOISTURE	SPT	UNSATURATED
	(ft)	(/6")	(tsf)	(%)						
2.0" ASPHALT, 10.0" SAND & GRAVEL										
Fine SAND--brown-- loose to medium dense (A-3)	4				2					
	4				3					
	5			9	5	NP	NR			
CLAYEY SAND--brown-- loose to medium dense (A-2-6)	3				5					
	3				3					
	4				4					
Fine SAND--brown-- very loose to medium dense (A-3)	5				4					
	5				5					
	7			17	5	NP	19			
CLAYEY SAND--brown-- loose to medium dense (A-2-6)	5				5					
	5				4					
	7			15	9	NP	15			
End Of Boring @ -35.0' Hollow Stem Augers GME-75 Auto Hammer	3				3					
	5				2					
	7				1	NP	16			
Fine SAND--brown-- loose to medium dense (A-3)	5				0					
	4				0					
	3			13	0	NP	18			
End Of Boring @ -35.0' Hollow Stem Augers GME-75 Auto Hammer	3				0					
	7				0					
	9				3	NP	13			
Fine SAND--brown-- loose to medium dense (A-3)	3				3					
	5				2					
	4				1	NP	16			
End Of Boring @ -35.0' Hollow Stem Augers GME-75 Auto Hammer	5				0					
	4				0					
	4			18	4	NP	18			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B--Bulge, S--Shear, P--Penetrometer) ST--Shelby Tube Sample VS--Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR--No Recovery

BORING LOGS (SHEET 1 of 3)
RETAINING WALLS
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STA. 7+71.50 TO STA. 13+48.50
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

Contract #62336

PAGE 1 of 1
DATE October 23, 2003
LOGGED BY RJ
GSJ JOB No. 0340

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Arden Court, Suite 204
Naperville, Illinois 60565
(630) 855-2838

SOIL BORING LOG

IDOT Job No. D-91-471-01 GSI JOB No. 0340

ROUTE SBI-67 DESCRIPTION Illinois Route 176 over the Kishwaukee River

SECTION 120A-B-R LOCATION Section 35, Range 6E, Township 44N in Seneca Township, Marengo, Il.

COUNTY McHenry DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME-75 Auto Hammer

STRUCT. NO. 056-0078 Surface Water Elev. n/a
Station 349+85.75 Stream Bed Elev. n/a

BORING NO. R-3 Groundwater Depth
Station: 12+30 First Encounter 827.5 ▼
Offset: 13.0' Right Upon Completion 827.5 ▼
Ground Surface Elev. 836.0 (ft) (/6") (tsf) (%) After _____ Hrs. _____ ▼

DEPTH (ft)	BLOW COUNT (S)	UCS (tsf)	MOIST (%)	DEPTH (ft)	BLOW COUNT (S)	UCS (tsf)	MOIST (%)
9	3			3			
5	2			2			
5	4	NP	12	4	NP	19	
3	4			4			
2	7			7			
5	4	NP	13	5	NP	15	
3	3			3			
4	5			5			
5	2	NP	7	2	NP	21	
3	4			4			
3	3			3			
10	3	NP	18	10	NP	13	
4	2			2			
3	3			3			
2	2	NP	22	4	NP	18	
3	2			2			
5	3			3			
15	7	NP	10	15	NP	17	
4							
3							
2	2	NP	13				
2							
3							
20	4	NP	15	20			

CRUSHED ASPHALT & STONE

SANDY CLAY LOAM--black--loose to medium dense

Fine SAND--brown--loose to medium dense (A-3)

Fine SAND--brown--loose to medium dense (A-3)

CLAYEY SAND--brown--loose (A-2-6)

SAND & GRAVEL--brown--medium dense to dense (A-1-b)

Fine SAND--brown--loose to medium dense (A-3)

CLAYEY SAND--brown--loose (A-2-6)

End Of Boring @ -35.0'
Hollow Stem Augers
CME-75 Auto Hammer

PAGE 1 of 1
DATE October 27, 2003
LOGGED BY RJ
GSJ JOB No. 0340

Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Arden Court, Suite 204
Naperville, Illinois 60565
(630) 855-2838

SOIL BORING LOG

IDOT Job No. D-91-471-01 GSI JOB No. 0340

ROUTE SBI-67 DESCRIPTION Illinois Route 176 over the Kishwaukee River

SECTION 120A-B-R LOCATION Section 35, Range 6E, Township 44N in Seneca Township, Marengo, Il.

COUNTY McHenry DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE CME-75 Auto Hammer

STRUCT. NO. 056-0078 Surface Water Elev. n/a
Station 349+85.75 Stream Bed Elev. n/a

BORING NO. R-4 Groundwater Depth
Station: 13+30 First Encounter 829.8 ▼
Offset: 13.0' Right Upon Completion 806.8 ▼
Ground Surface Elev. 835.8 (ft) (/6") (tsf) (%) After _____ Hrs. _____ ▼

DEPTH (ft)	BLOW COUNT (S)	UCS (tsf)	MOIST (%)	DEPTH (ft)	BLOW COUNT (S)	UCS (tsf)	MOIST (%)
4	2			2			
4	3			3			
7	5	NP	18	5	NP	19	
2	5			5			
4	7			7			
5	5	NP	12	5	NP	20	
3	3			3			
5	5			5			
9	2	NP	9	9	NP	9	
5	3			3			
6	3			6			
10	8	NP	12	10	NP	7	
13							
16							
8	2	NP	9	8	NP	9	
5	5			5			
4	3			4			
15	5	NP	12	15	NP	12	
15							
7							
8	2	NP	10	7			
7							
12							
20	7	NP	17	20			

CRUSHED ASPHALT & STONE

SANDY CLAY LOAM--black--medium dense

Fine SAND--brown--loose to medium dense (A-3)

CLAYEY SAND--brown--loose (A-2-6)

SAND & GRAVEL--brown--medium dense to dense (A-1-b)

Fine SAND--brown--loose to medium dense (A-3)

CLAYEY SAND--brown--loose (A-2-6)

End Of Boring @ -35.0'
Hollow Stem Augers
CME-75 Auto Hammer

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B--Bulge, S--Shear, P--Penetrometer) ST--Shelby Tube Sample VS--Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR--No Recovery

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B--Bulge, S--Shear, P--Penetrometer) ST--Shelby Tube Sample VS--Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR--No Recovery


DESIGNED	S.D.H.
CHECKED	J.A.Z.
DRAWN	M.S.M.
CHECKED	S.D.H.

**BORING LOGS (SHEET 2 of 3)
RETAINING WALLS**
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STA. 7+71.50 TO STA. 13+48.50
DATE 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

R:\Jobs\2006\plots\share work\prefinal\RetWall\556-0005-S-1.dgn
 10/23/03 11:41 AM

R:\Jobs\2006\plots\share work\prefinal\RetWall\556-0005-S-1.dgn
 10/27/03 10:42 AM

Contract #62336



Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Archer Court, Suite 204
Naperville, Illinois 60565
(630) 851-7336

SOIL BORING LOG

PAGE 1 of 1
DATE November 25, 2003
LOGGED BY TOB
IDOT Job No. D-91-471-01
GSI JOB No. 0340


ROUTE SBI-67 DESCRIPTION Illinois Route 176 over the Kishwaukee River
SECTION 120A-B-R LOCATION Section 35, Range 6E, Township 44N in Seneca Township, Marengo, IL.
COUNTY McHenry DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE D-120 Safety Hammer

STRUCT. NO. 056-0078
Station 349+85.75
BORING NO. R-5
Station: 9+40
Offset: 6.0' Right
Ground Surface Elev. 837.5

DEPTH (ft)	BULGE (ft)	UCS (tsf)	MOIST (%)	Surface Water Elev.		DEPTH (ft)	BULGE (ft)	UCS (tsf)	MOIST (%)
				n/a	n/a				
				Stream Bed Elev. n/a					
				Groundwater Depth					
				First Encounter 826.5					
				Upon Completion n/a					
				After Hrs.					
8.0" ASPHALT, 4.5" CONCRETE									
21						3			
15						4			
13		12				7	NP	18	
SANDY CLAY LOAM-black-medium dense									
6						4			
7						7			
-5	9	NP	8			-25	6	NP	22
CLAYEY SAND-brown-medium dense (A-2-6)									
5						4			
8						10			
12	NP	20				13	NP	14	
Fine SAND-brown-medium dense (A-3)									
6						5			
7						12			
-10	5	NP	8			-30	17	NP	16
Fine SAND-brown-loose to medium dense (A-3)									
4						15			
5						18			
7	NP	18				27	NP	8	
SAND & GRAVEL-brown-dense (A-1-b)									
3						16			
3						20			
-15	3	NP	22			-35	16	NP	12
End Of Boring @ -35.0' Hollow Stem Augers D-120 Safety Hammer									
2									
3									
4	NP	12							
5									
4									
-20	5	NP	NR			-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

DESIGNED	S.D.H.
CHECKED	J.A.Z.
DRAWN	M.S.M.
CHECKED	S.D.H.



Geo Services, Inc.
Geotechnical, Environmental & Civil Engineering
805 Archer Court, Suite 204
Naperville, Illinois 60565
(630) 851-7336

SOIL BORING LOG

PAGE 1 of 1
DATE November 25, 2003
LOGGED BY TOB
IDOT Job No. D-91-471-01
GSI JOB No. 0340

ROUTE SBI-67 DESCRIPTION Illinois Route 176 over the Kishwaukee River
SECTION 120A-B-R LOCATION Section 35, Range 6E, Township 44N in Seneca Township, Marengo, IL.
COUNTY McHenry DRILLING METHOD 3.25" Hollow Stem Auger HAMMER TYPE D-120 Safety Hammer

STRUCT. NO. 056-0078
Station 349+85.75
BORING NO. R-6
Station: 10+60
Offset: 6.0' Left
Ground Surface Elev. 837.0

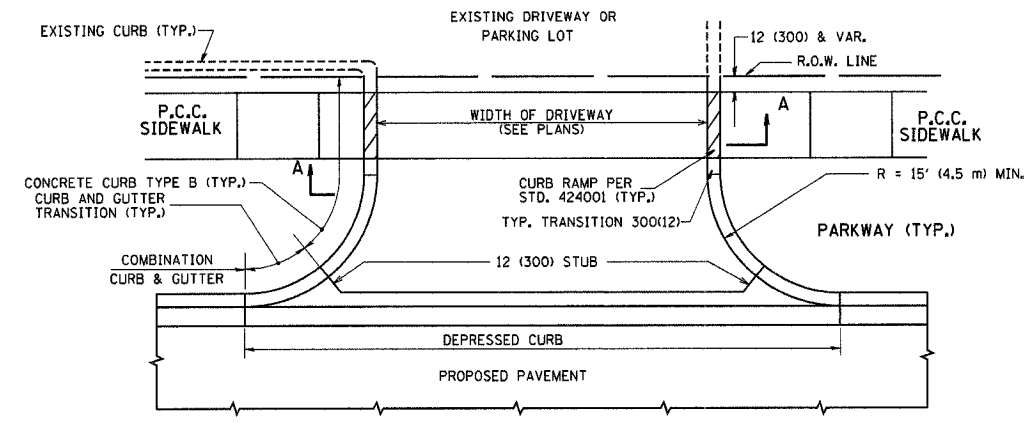
DEPTH (ft)	BULGE (ft)	UCS (tsf)	MOIST (%)	Surface Water Elev.		DEPTH (ft)	BULGE (ft)	UCS (tsf)	MOIST (%)
				n/a	n/a				
				Stream Bed Elev. n/a					
				Groundwater Depth					
				First Encounter 826.0					
				Upon Completion n/a					
				After Hrs.					
8.0" ASPHALT, 4.5" CONCRETE									
						15			
						11			
						12		8	
SANDY CLAY LOAM-black-medium dense									
						13			
						26			
-5	8	NP	10			-25	6	NP	18
Fine SAND-brown & gray-loose to dense (A-3)									
5						5			
7						7			
6	NP	4				6	NP	4	
Fine SAND-brown-loose to medium dense (A-3)									
4						4			
5						5			
-10	4	NP	9			-10	4	NP	9
CLAYEY SAND-brown-medium dense (A-2-6)									
5						5			
7						7			
8	NP	13				8	NP	13	
Fine SAND-brown & gray-loose to dense (A-3)									
4						4			
4						4			
-15	7	NP	21			-15	7	NP	21
End Of Boring @ -35.0' Hollow Stem Augers D-120 Safety Hammer									
3						3			
9						9			
10	NP	20				10	NP	20	
3						3			
3						3			
-20	4	NP	22			-20	4	NP	22

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) ST-Shelby Tube Sample VS-Vane Shear Test
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) The Unit Dry Weight (pcf) is noted in italics above moist (%)
NR-No Recovery

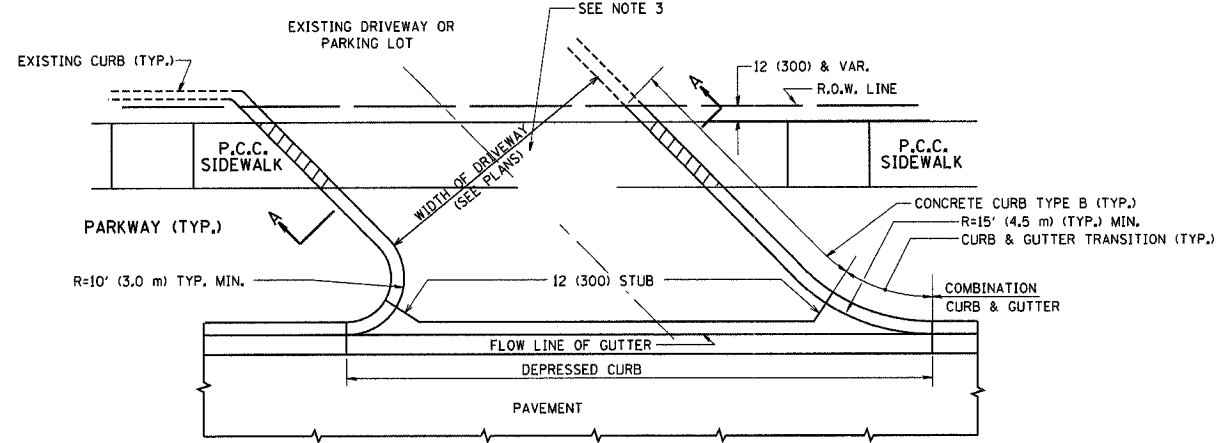
BORING LOGS (SHEET 3 of 3)
RETAINING WALLS
IL Route 176 over the Kishwaukee River
F.A.P. RTE 533, SECTION 119R-2B
McHENRY COUNTY
STA. 7+71.50 TO STA. 13+48.50
DATE: 10-05-07
GRAEF, ANHALT, SCHLOEMER & ASSOCIATES INC
CHICAGO ILLINOIS

I:\Jobs\2005\p051\chore_wor\p051\Final\Re\Wat\056-0005-S-12.dgn 10/27/07 10:48:58 AM

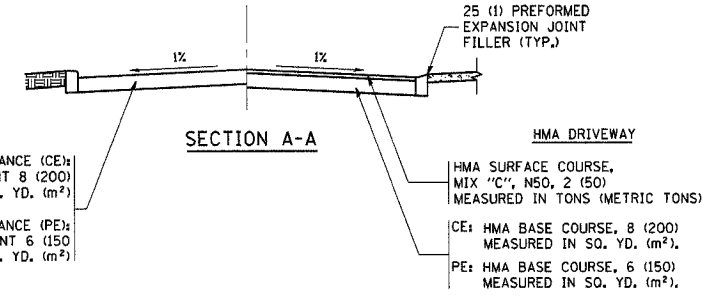
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			64	48
STA.		TO STA.		
FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT				



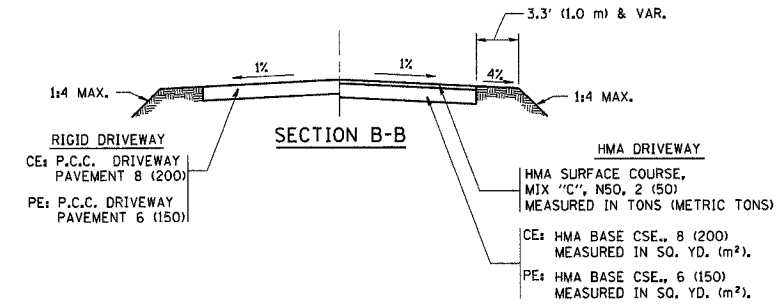
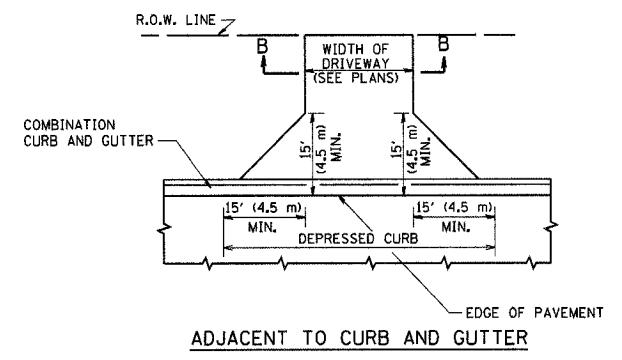
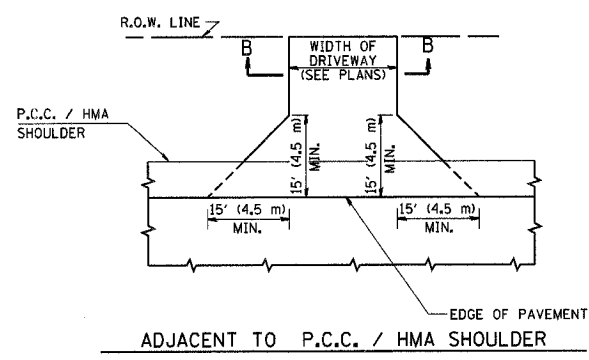
WITH CONCRETE CURB, TYPE B



WITH CONCRETE CURB, TYPE B



SECTION A-A



SECTION B-B

RURAL FIELD ENTRANCE (FE)
HMA SURFACE COURSE, MIX "C", N50, 2 (50) MEASURED IN TONS (METRIC TONS)
AGGREGATE BASE CSE., TYPE A B (200) MEASURED IN SQ. YD. (m²).

GENERAL NOTES:

DRIVEWAY SLOPES, LOCATIONS, & GEOMETRIC LAYOUT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "HANDBOOK FOR POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS". FOR FURTHER LAYOUT REQUIREMENTS, REFER TO ILLUSTRATIONS IN THE PERMIT HANDBOOK. DRIVEWAYS SHALL BE REPLACED IN KIND, UNLESS OTHERWISE NOTED ON THE PLANS.

COMMERCIAL DRIVEWAYS SHALL BE CONSTRUCTED WITH CONCRETE CURB, TYPE B RETURNS EXCEPT WHEN THE SIDEWALK EDGE IS 4 FEET (1.2 METERS) OR LESS FROM THE BACK OF CURB, CONSTRUCT A FLARE DRIVEWAY WITHOUT CURB.

THE RESIDENT ENGINEER SHALL CONTACT THE TRAFFIC PERMIT OFFICE AT 847/ 705-4131 FOR ANY QUESTIONS ON DRIVEWAYS SHOWN IN THE PLANS, SPECIFICALLY IN REFERENCE TO ADDITIONAL AND/OR RELOCATION/REMOVAL OF A DRIVEWAY.

COMBINATION CONCRETE CURB & GUTTER SHALL BE MEASURED STRAIGHT ACROSS THE DRIVEWAY. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR THE CURB & GUTTER TRANSITION.

1 (25) PREFORMED EXPANSION JOINT FILLER WILL NOT BE PAID SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF THE P.C.C. DRIVEWAY PAVEMENT OR P.C.C. SIDEWALK.

WHEN THE P.C.C. SIDEWALK EXTENDS THROUGH THE DRIVEWAY, THE THICKNESS OF THE SIDEWALK IN THE DRIVEWAY AREA SHALL BE THE SAME AS THE DRIVEWAY THICKNESS. SIDEWALK WILL BE PAID FOR AS P.C.C. SIDEWALK OF THE THICKNESS SPECIFIED. SIDEWALK CROSS SLOPE THRU DRIVEWAY AREA TO BE A MAXIMUM OF 1:50.

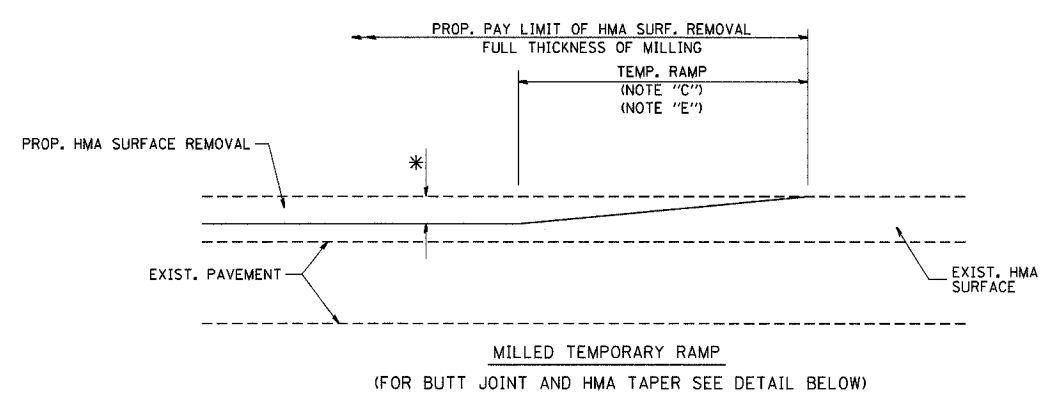
ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE NOTED

REVISIONS	
NAME	DATE
R. SHAH	11-04-95
J. POLLASTRINI	08-12-96
J. POLLASTRINI	12-14-96
A. ABBAS	03-21-97
T. HOLTZ	04-08-97
M. GOMEZ	04-06-01
P. LOFLEUR	04-15-03
R. BORO	01-01-07

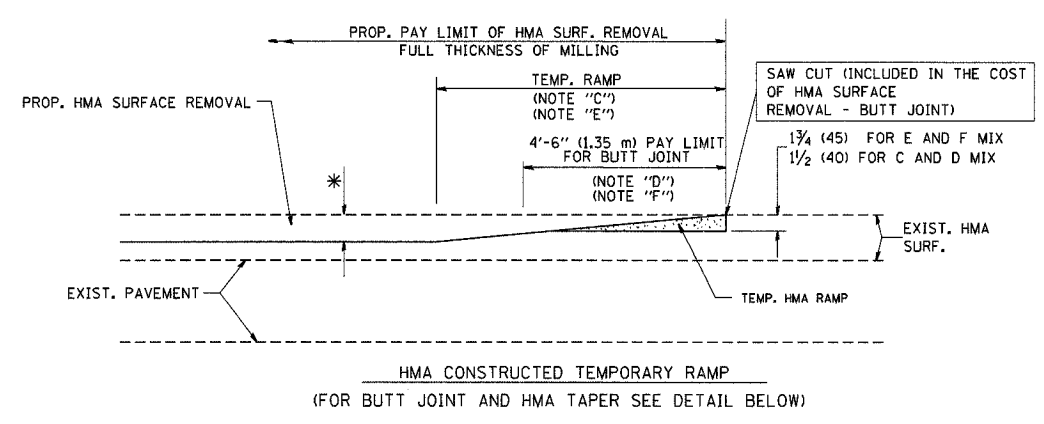
ILLINOIS DEPARTMENT OF TRANSPORTATION
DRIVEWAY DETAILS
DISTANCE BETWEEN R.O.W. AND FACE OF CURB & EDGE OF SHOULDER >= 15' (4.5 m)

SCALE: VERT. NONE
HORIZ. DRAWN BY
CHECKED BY

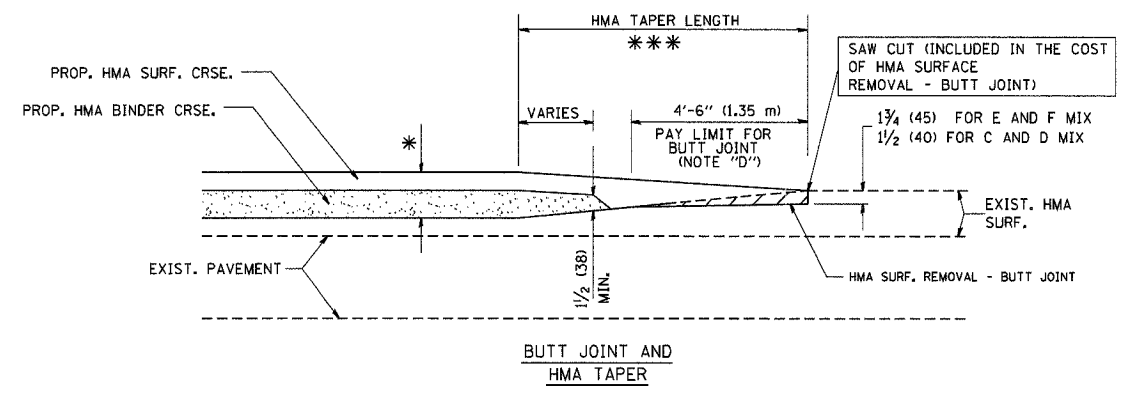
PLOT DATE = 4/11/2007
DRAWN BY = [unreadable]
PLT SCALE = 1/8" = 1'-0"
USER NAME = driveway



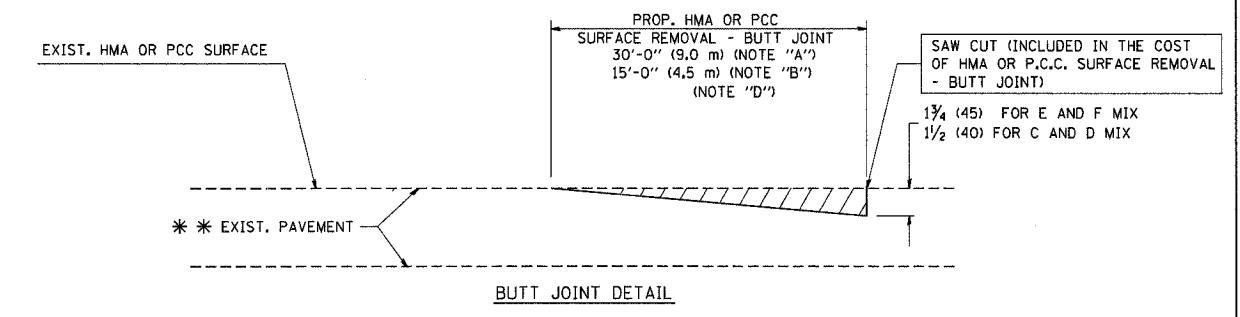
OPTION 1



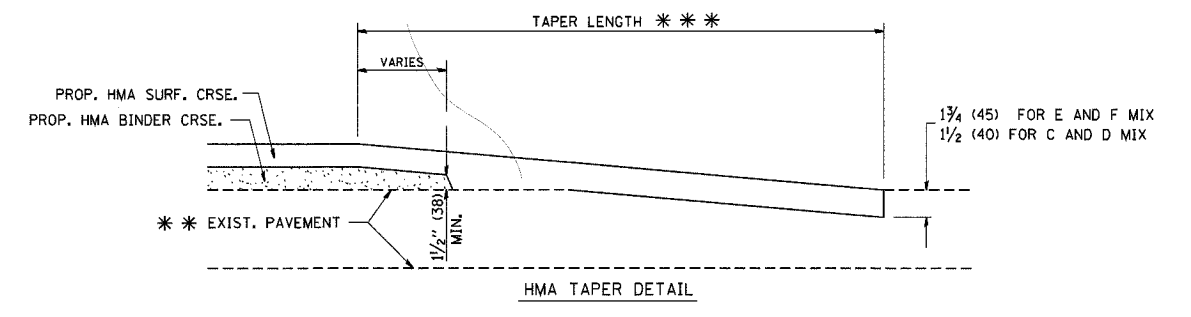
OPTION 2
 TYPICAL TEMPORARY RAMP



TYPICAL BUTT JOINT AND HMA TAPER
 FOR MILLING AND RESURFACING



BUTT JOINT DETAIL



HMA TAPER DETAIL

TYPICAL BUTT JOINT AND HMA TAPER
 FOR RESURFACING ONLY

* * * PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

NOTES

- A: MAINLINE ROADWAYS AND MAJOR SIDE ROADS.
- B: MINOR SIDE ROADS.
- C: THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
- D: THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
- E: TAPER THE TEMP. RAMP AT A RATE OF 3'-0" (900 mm) PER 1 INCH (25 mm) OF MILLING THICKNESS.
- F: INSTALLATION AND REMOVAL OF THE 4'-6" (1.35 m) TEMP. RAMP IS INCLUDED IN COST OF HMA SURFACE REMOVAL - BUTT JOINT
- G: SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- * SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- * * * 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A")
 10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

REVISIONS	
NAME	DATE
M. DE YONG	6-13-90
M. DE YONG	7-3-90
M. DE YONG	3-27-92
R. SHAH	09/09/94
R. SHAH	10/25/94
A. ABBAS	03/21/97
M. GOMEZ	04/06/01
R. BORO	01/01/07

ILLINOIS DEPARTMENT OF TRANSPORTATION

BUTT JOINT AND
 HMA TAPER
 DETAILS

SCALE: VERT. NONE
 HORIZ.

DRAWN BY
 CHECKED BY

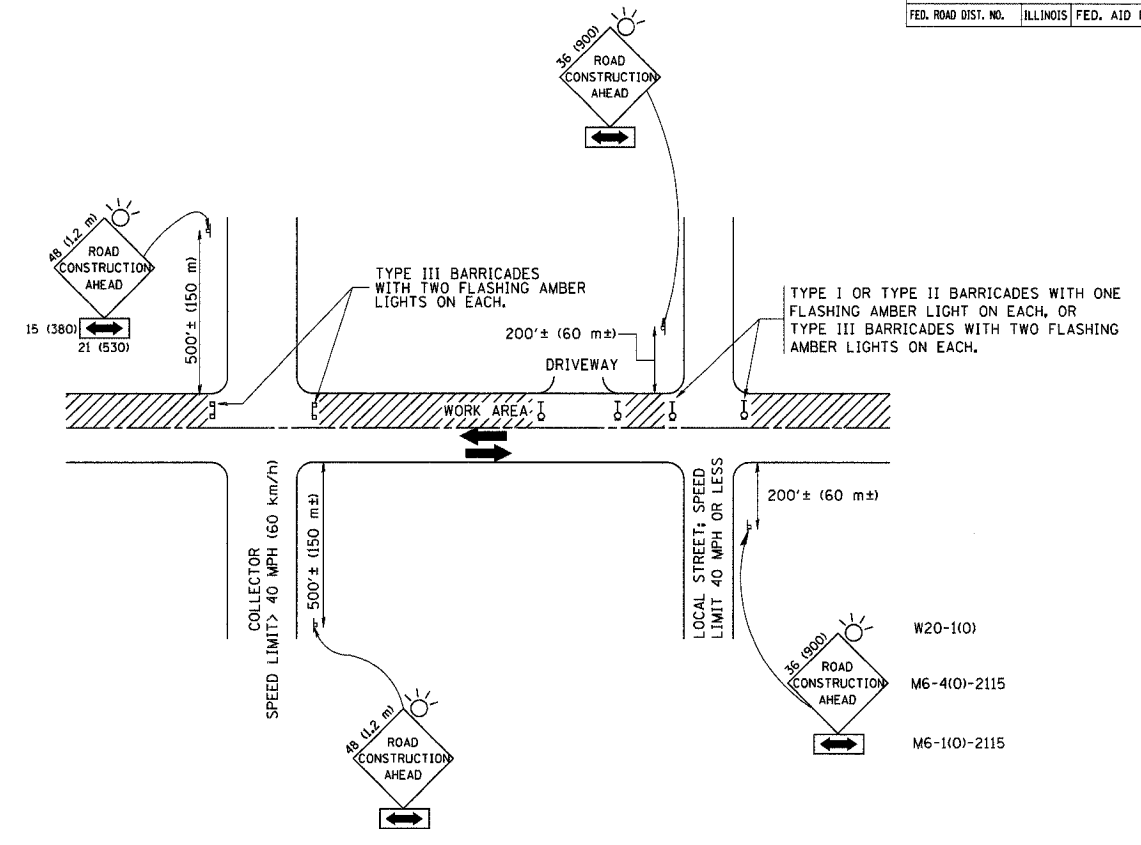
BD400-05 (VI-BD32)

BASIS OF PAYMENT:

THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL - BUTT JOINT".

PLOT DATE = 3/15/2007
 FILE NAME = K:\projects\bd32.dgn
 PLOT SCALE = 1/8" = 1'-0"
 USER NAME = bboard

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			64	50
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

- A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS
- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE ROAD CONSTRUCTION AHEAD SIGN 36 x 36 (900x900) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
 - SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - ONE ROAD CONSTRUCTION AHEAD SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE OF THE MAIN ROUTE.
 - THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
 - WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).
- B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:
- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
- D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

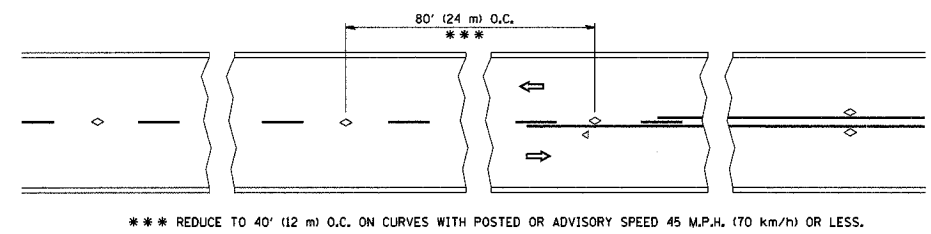
All dimensions are in millimeters (inches) unless otherwise shown.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
NAME	DATE	
LHA	6/89	
T. RAMMACHER	09/08/94	
J. OBERLE	10/18/95	
A. HOUSEH	03/06/96	
A. HOUSEH	10/15/96	
T. RAMMACHER	01/06/00	

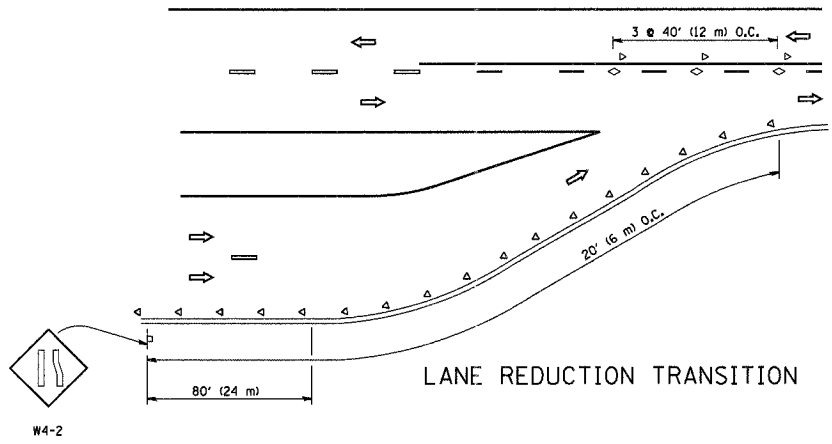
SCALE: NONE
DRAWN BY
CHECKED BY
TC-10

PLOT DATE = 3/6/2007
FILE NAME = K:\kshanson\c1818.dgn
PLOT SCALE = 1/8"=1'-0"
USER NAME = bauerd

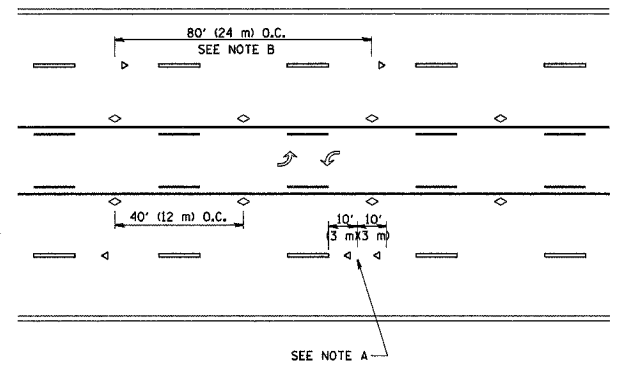
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			64	51
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



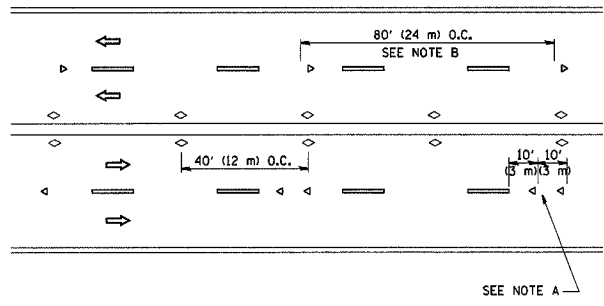
TWO-LANE/TWO-WAY



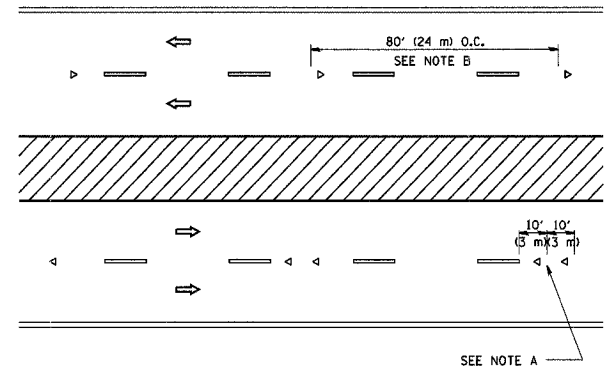
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.

LANE MARKER NOTES

- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H. (20 km/h) LOWER THAN POSTED SPEEDS.

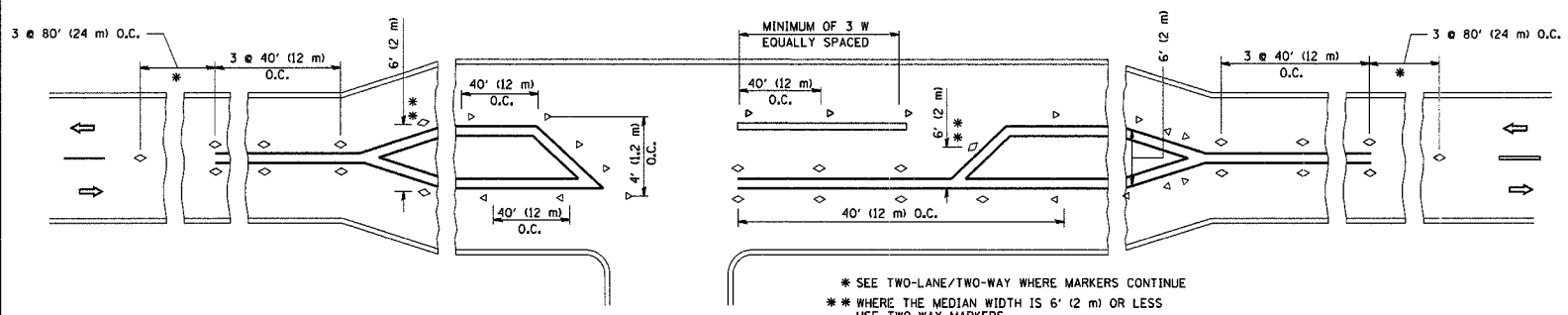
SYMBOLS

- YELLOW STRIPE
- WHITE STRIPE
- ◁ ONE-WAY AMBER MARKER
- ◁ ONE-WAY CRYSTAL MARKER (W/O)
- ◊ TWO-WAY AMBER MARKER

DESIGN NOTES

1. DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
2. EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
3. THE EXACT MARKER LIMITS, SPACING, AND COLOR SHOULD BE INCLUDED IN THE PLANS.
4. MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

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



LEFT TURN

- * SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
- ** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

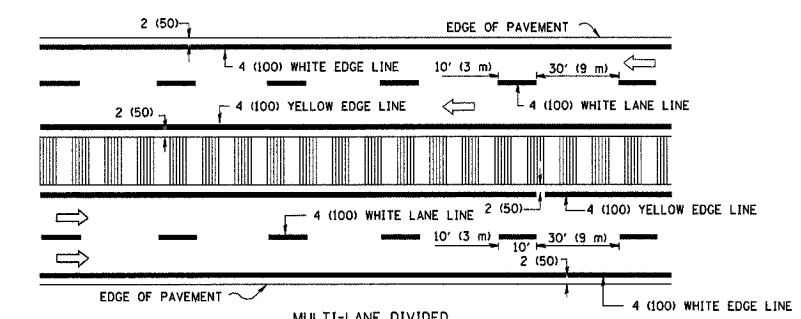
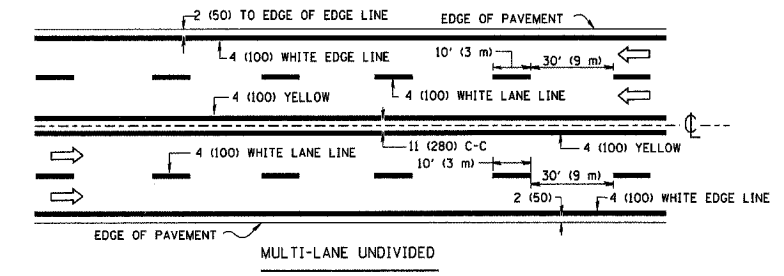
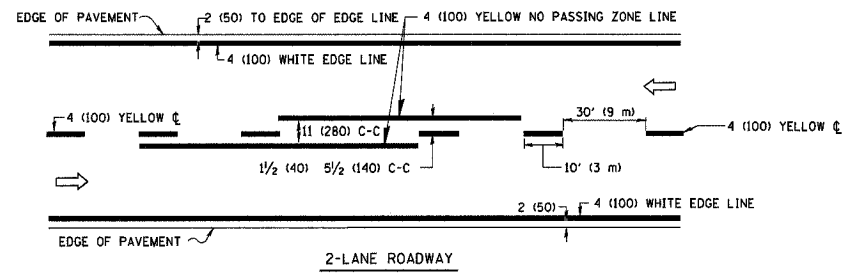
PLOT DATE = 3/6/2007
 FILE NAME = K:\nhst\pav\l11.dgn
 PLOT SCALE = 1/8" = 1' IN.
 USER NAME = bbarndt

REVISIONS	
NAME	DATE
T. RAMMACHER	09-19-94
T. RAMMACHER	03-12-99
T. RAMMACHER	01-06-00

ILLINOIS DEPARTMENT OF TRANSPORTATION
 TYPICAL APPLICATIONS
 RAISED REFLECTIVE PAVEMENT
 MARKERS (SNOW-PLOW RESISTANT)

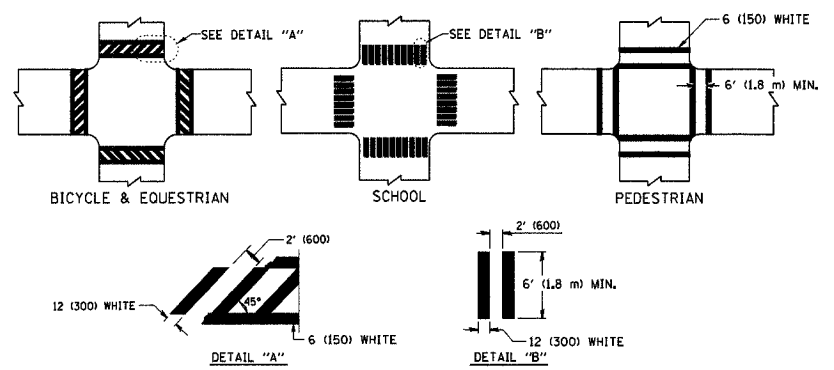
SCALE: NONE
 DRAWN BY CADD
 CHECKED BY
 TC-11

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
			64	52
STA. TO STA.		ILLINOIS FED. AID PROJECT		

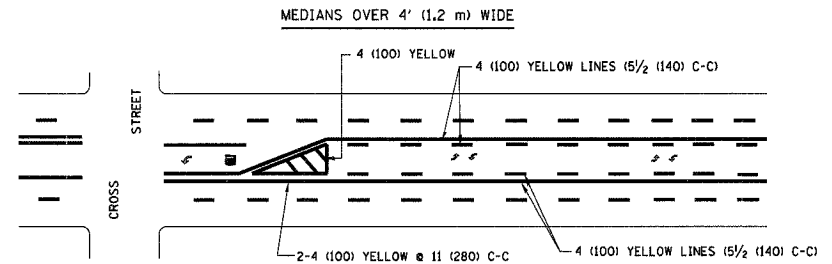
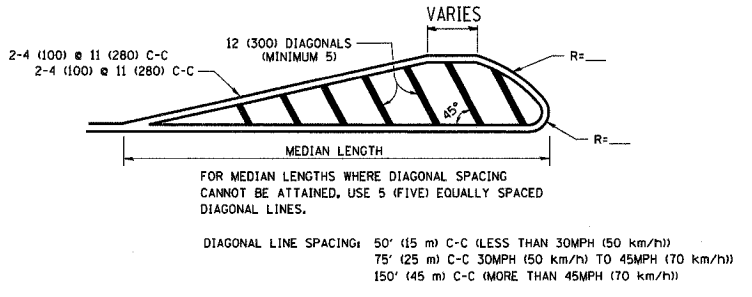
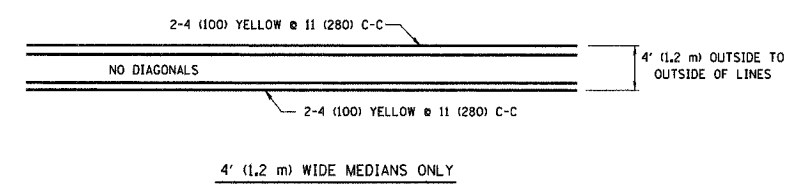


NOTE: MEDIANS WITH BARRIER CURB DO NOT REQUIRE AN EDGE LINE

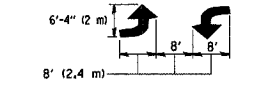
TYPICAL LANE AND EDGE LINE MARKING



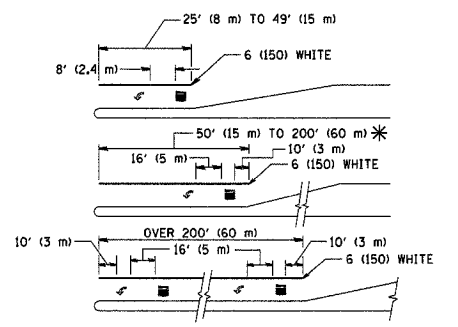
TYPICAL CROSSWALK MARKING



A MINIMUM OF TWO PAIRS OF TURN ARROWS SHALL BE USED, WHITE IN COLOR. ADDITIONAL PAIRS SHALL BE PLACED AT 200' (60 m) TO 300' (90 m) INTERVALS.



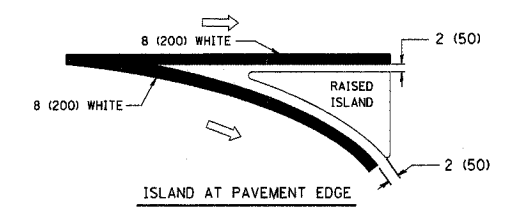
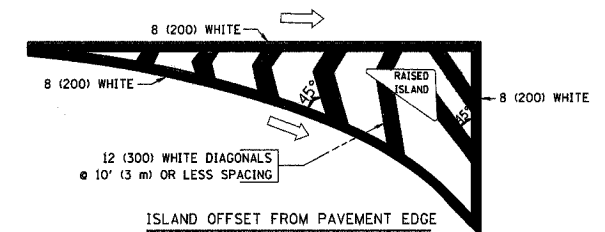
TYPICAL TURN LANE MARKING



FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²) * TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".

TYPICAL LEFT (OR RIGHT) TURN LANE

TYPICAL TURN LANE MARKING



TYPICAL ISLAND MARKING

TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	5/2 (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MOUNTABLE MEDIANS IN YELLOW; EDGE LINES ARE NOT USED NEXT TO BARRIER CURB
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5/2 (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART SEE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4' (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT. OTHERWISE, PLACE AT DESIRED STOPPING POINT, PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW; TWO WAY TRAFFIC WHITE; ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
CORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4.5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
SHOULDER DIAGONALS	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))

FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

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

REVISIONS	
NAME	DATE
EVERS	03-19-90
T. RAMMACHER	10-27-94
ALEX HOUSEH	10-09-96
ALEX HOUSEH	10-17-96
T. RAMMACHER	01-06-00

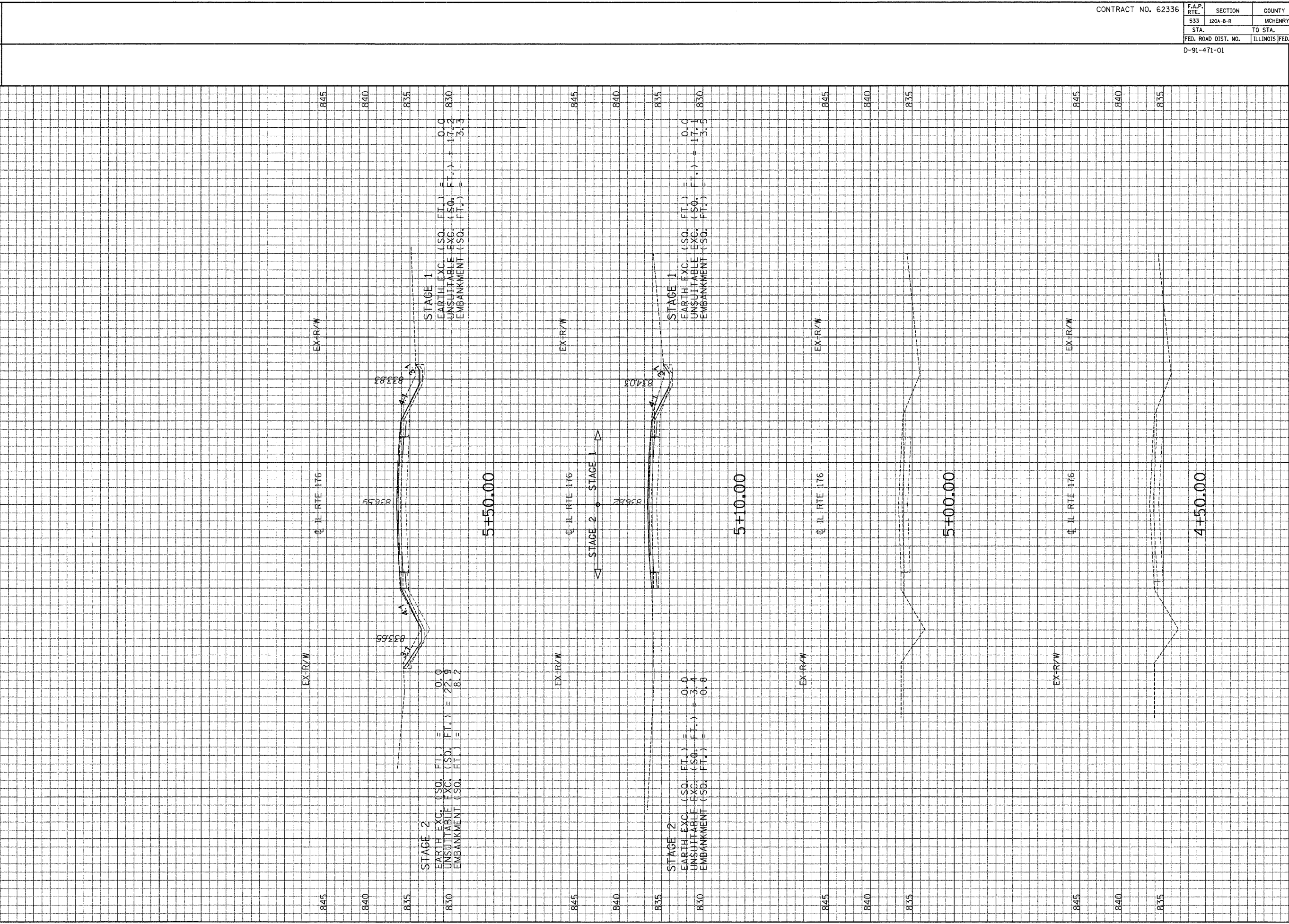
ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT ONE
TYPICAL PAVEMENT MARKINGS

SCALE: NONE
DRAWN BY CADD
CHECKED BY
TC-13

PLOT DATE = 3/6/2007
FILE NAME = K:\admission\ad\3.dgn
PLOT SCALE = 1/8" = 1'-0"
USER NAME = bauerof

END AREAS
EXCAV.
SO. FT.

90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90



845
840
835
830
845
840
835
845
840
835
845
840
835

EX-R/W

IL RTE 176

5+50.00

5+10.00

4+50.00

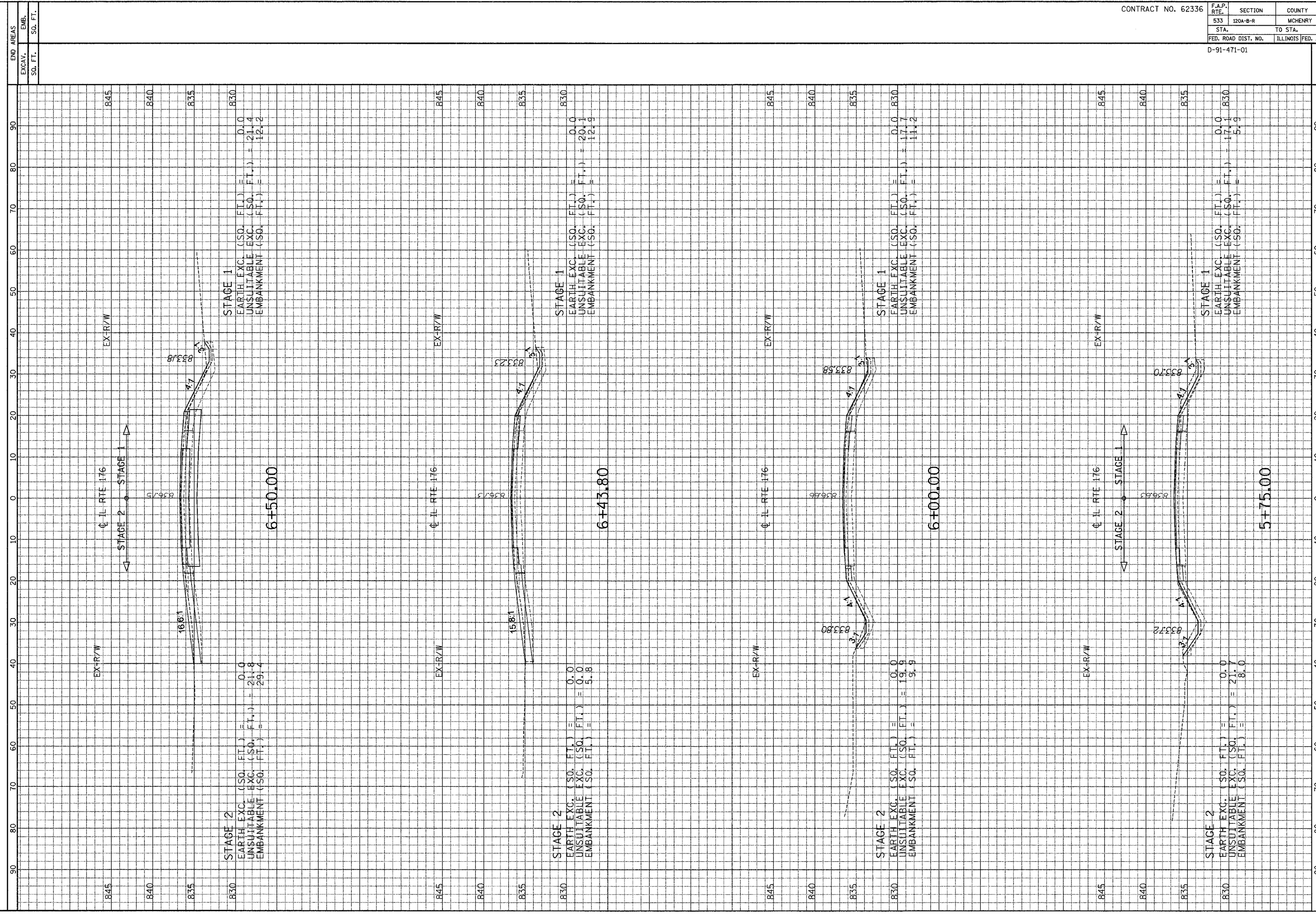
ILLINOIS DEPARTMENT OF TRANSPORTATION

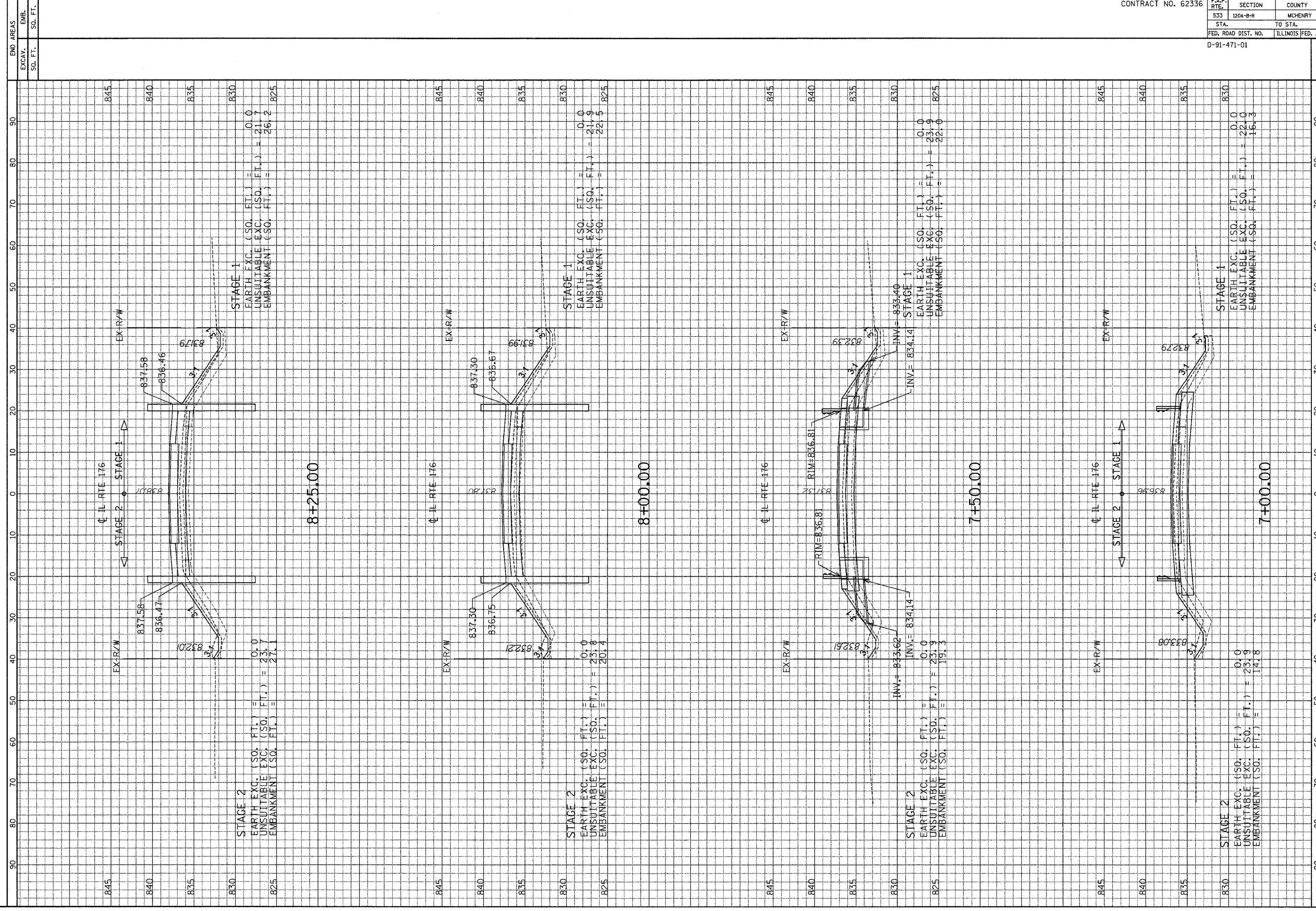
F.A.P. ROUTE 533 (IL RTE 176) OVER THE KISHWAUKEE RIVER

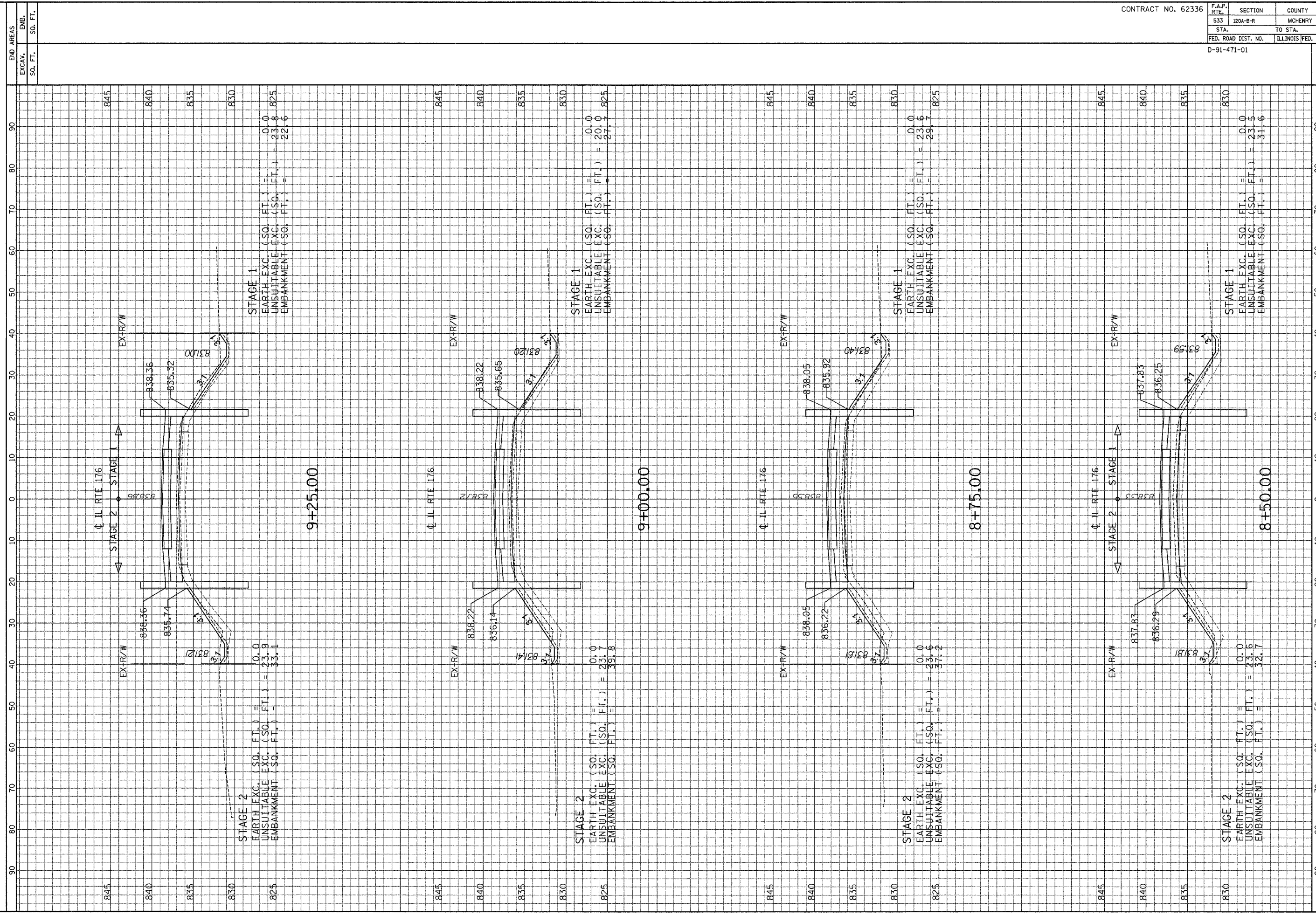
CROSS SECTIONS

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

D-91-471-01





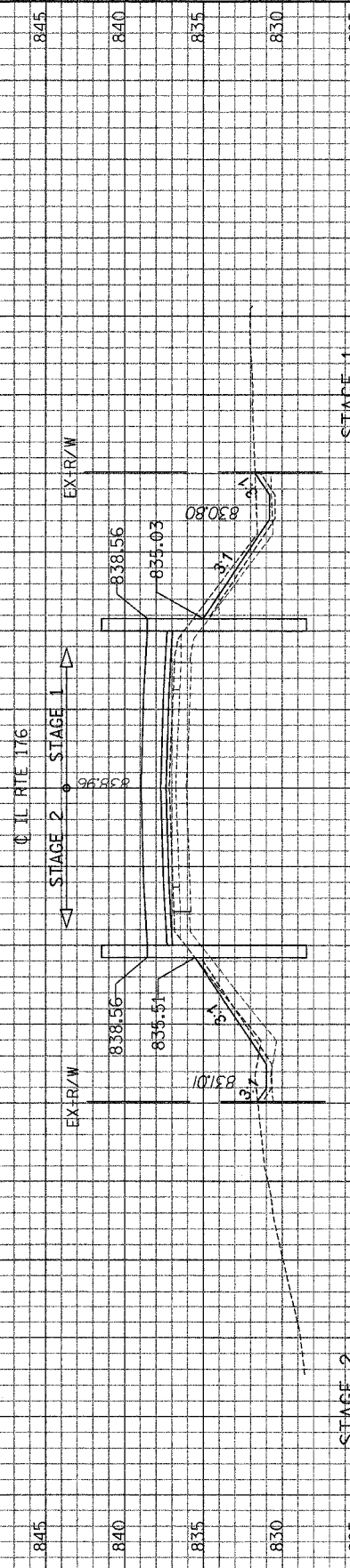
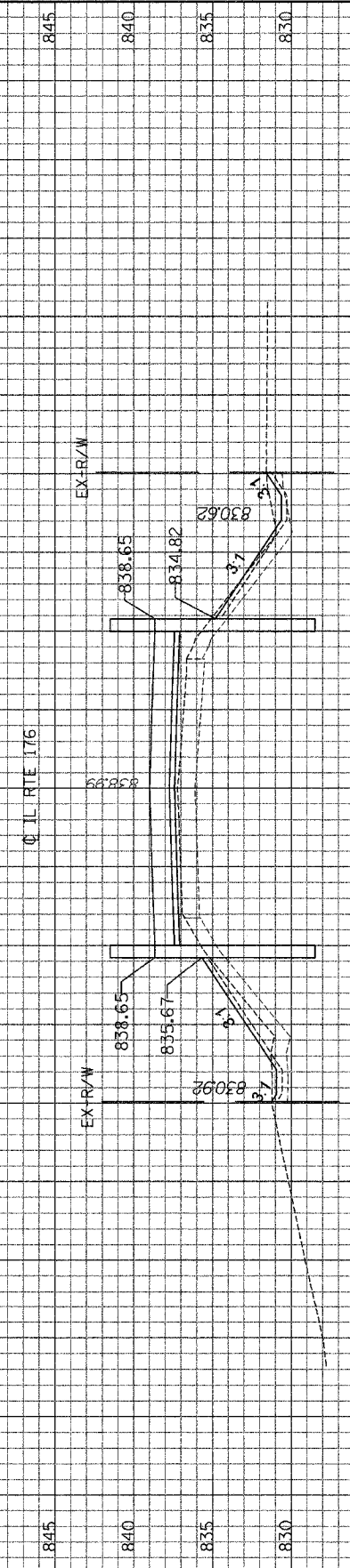
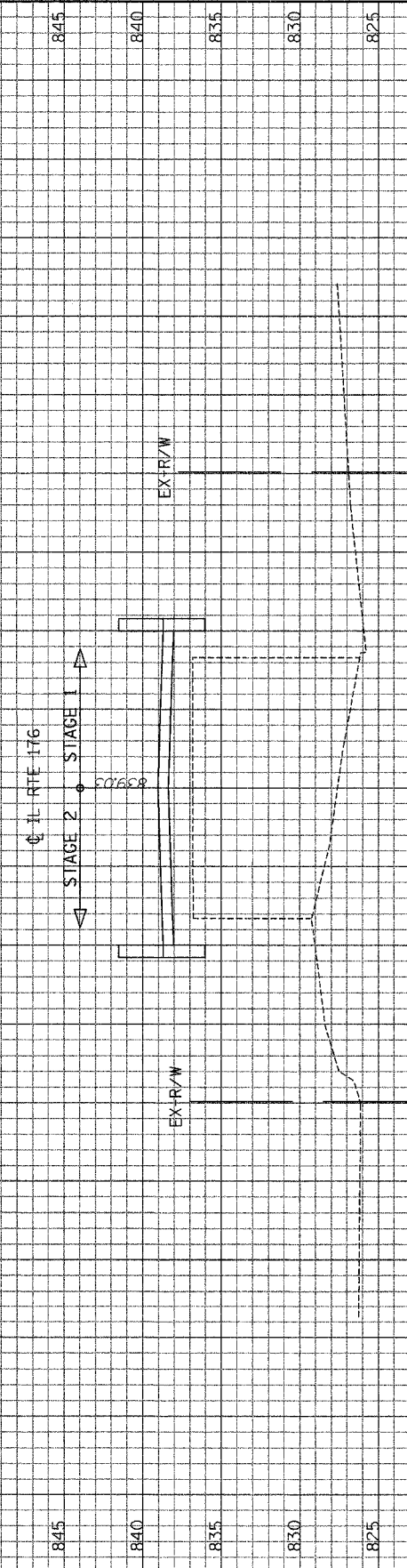


ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCALE: HORIZ. 1" = 10'
 VERT. 1" = 5'
 CROSS SECTIONS
 F.A.P. ROUTE 533 (IL RTE 176) OVER THE KISHWAKE RIVER
 GRAE, MAIT, SORBER & ASSOCIATES, INC.
 ENGINEERS & SCIENTISTS
 8501 N. Higgins Road, Suite 280
 Chicago, Illinois 60631
 (773) 399-0122
 FILE: H:\Jobs\2002\20024023-01\CAD\IDOT_Trans\dgn\Refs\ALIGN\Xshht\01FINAL.dgn
 DATE: 05-Oct-07 15:33

CONTRACT NO. 62336		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		533	120A-B-R	MCHENRY	64	57
		STA.	TO STA.			
		FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
		D-91-471-01				

END AREAS
EXCAV.
SO. FT.

90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90



ILLINOIS DEPARTMENT
OF TRANSPORTATION

GRAF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
ENGINEERS & SCIENTISTS
600 W. Higgins Road, Suite 280
Chicago, IL 60641
(773) 398-0102

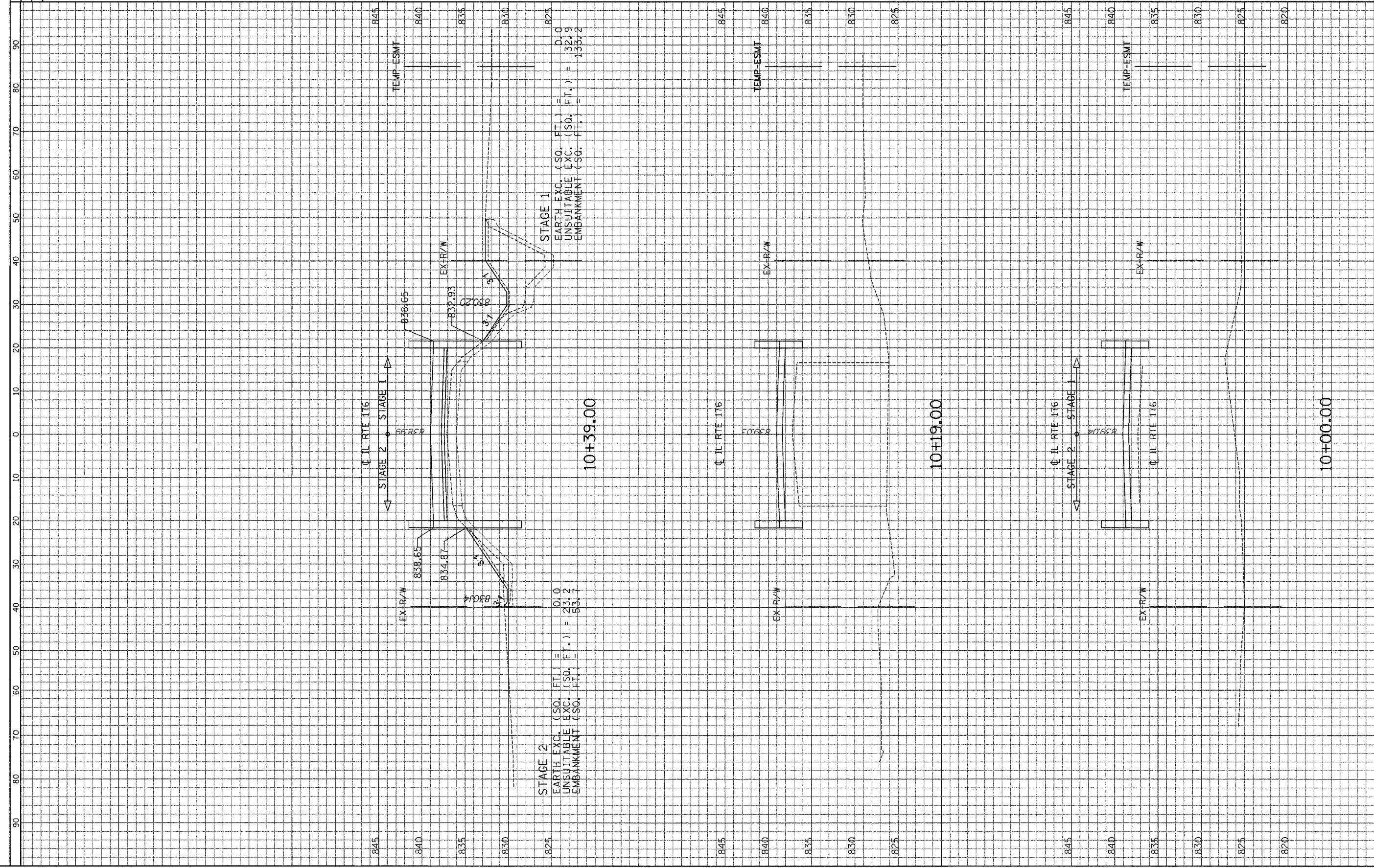
F.A.P. ROUTE 533 (IL RTE 176)
OVER THE KISHWAUKEE RIVER

CROSS SECTIONS

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

CONTRACT NO. 62336		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		533	I20A-B-R	MCHENRY	64	58
		STA.	TO STA.		ILLINOIS FED. AID PROJECT	
		D-91-471-01				

END AREAS
EXCAV.
EMB.
SQ. FT.
SQ. FT.



STAGE 2
 EARTH EXC. (SQ. FT.) = 0.0
 UNSUITABLE EXC. (SQ. FT.) = 23.2
 EMBANKMENT (SQ. FT.) = 53.7

STAGE 1
 EARTH EXC. (SQ. FT.) = 0.0
 UNSUITABLE EXC. (SQ. FT.) = 32.9
 EMBANKMENT (SQ. FT.) = 135.2

GRAEF, ANHALT, SCHLOMER & ASSOCIATES, INC.
 ENGINEERS & SCIENTISTS
 8501 W. Higgins Road, Suite 280
 Chicago, Illinois 60631
 (773) 398-0122

ILLINOIS DEPARTMENT
 OF TRANSPORTATION

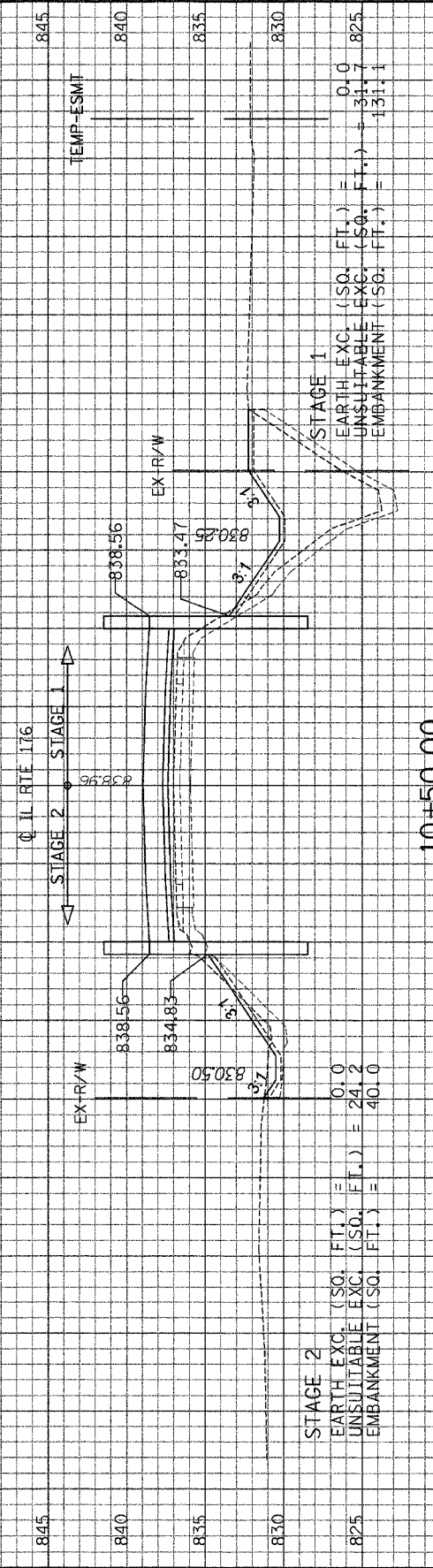
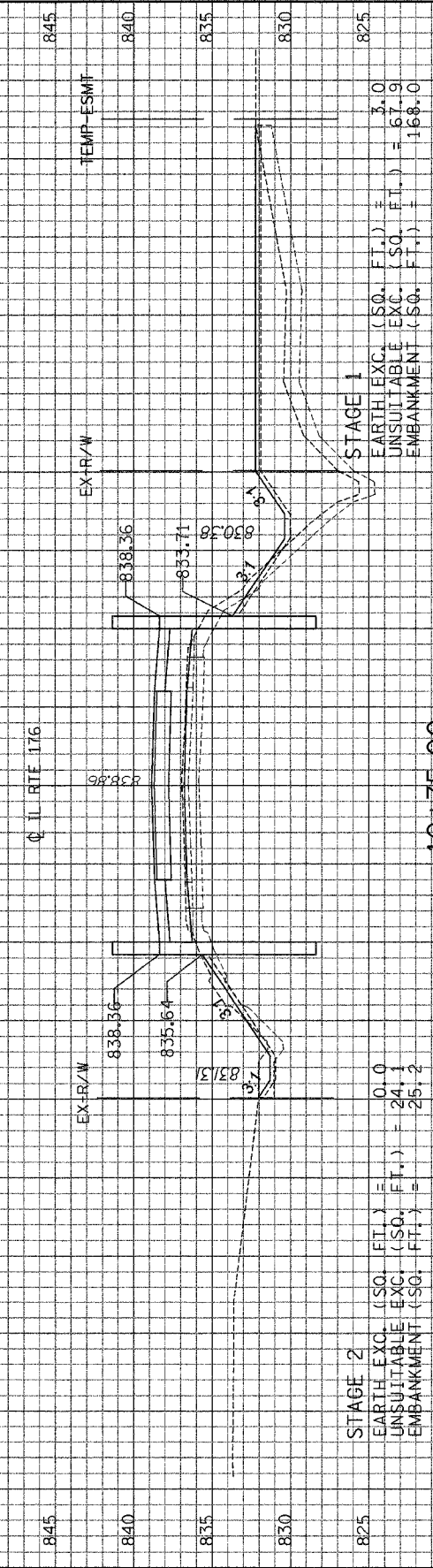
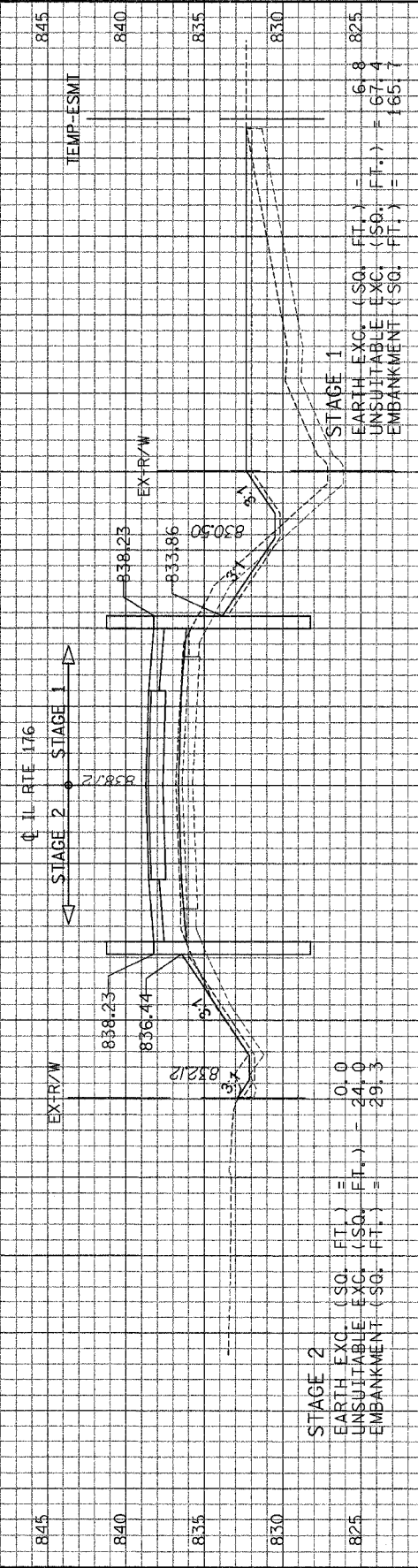
F.A.P. ROUTE 533 (IL RTE 176)
 OVER THE KISHAWA RIVER

CROSS SECTIONS
 SCALE: HORIZ. 1" = 10'
 VERT. 1" = 5'

CONTRACT NO. 62336		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		533	120A-B-R	MCHENRY	64	59
		STA.	TO STA.			
		FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
		D-91-471-01				

END AREAS
EXCAV.
SO. FT.

90
80
70
60
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90



F.A.P. ROUTE 533 (IL RTE 176)
OVER THE KISHWAUKEE RIVER

CROSS SECTIONS

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

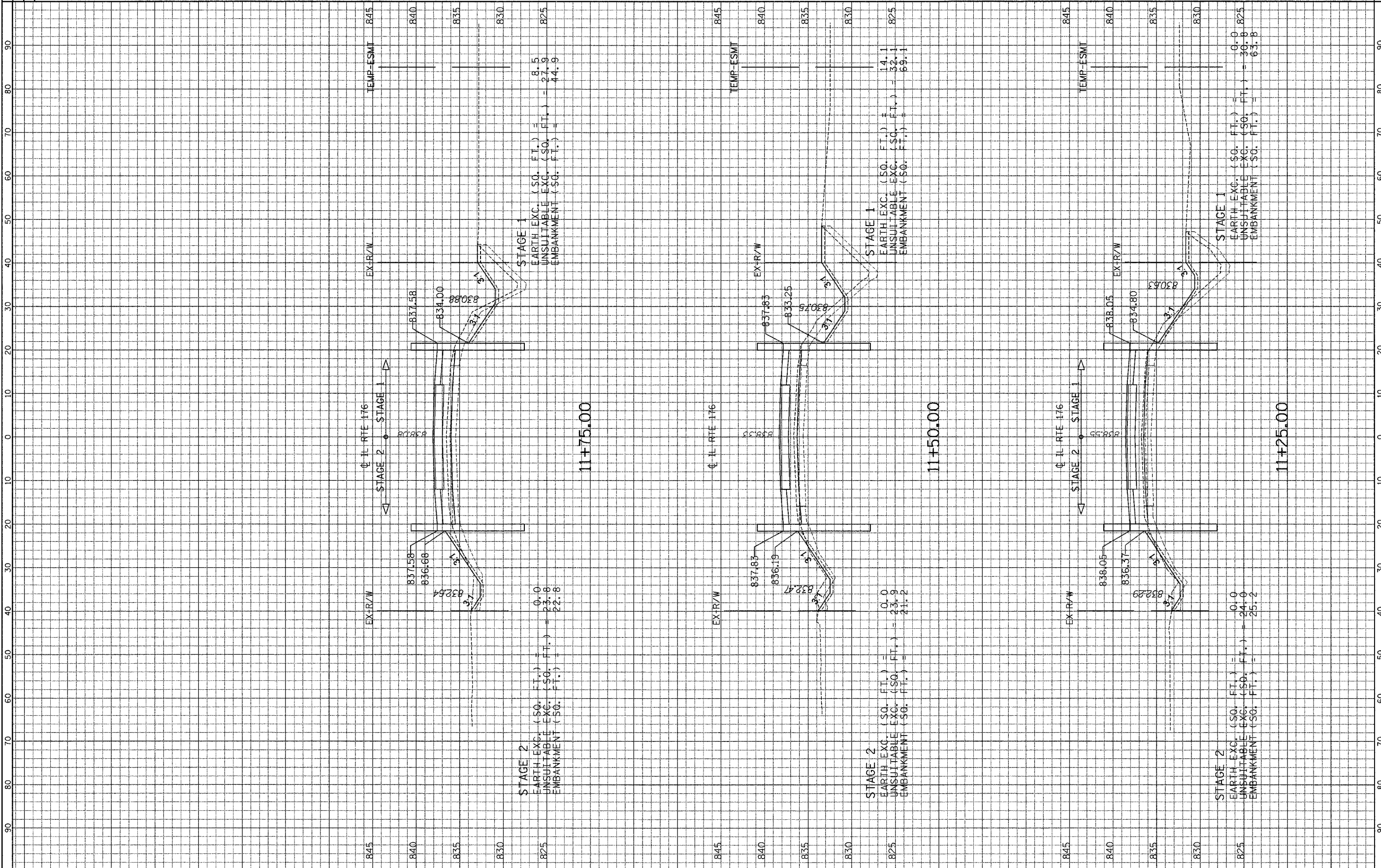
ILLINOIS DEPARTMENT
OF TRANSPORTATION

GRAFF, ANGLIT, SCHUMER & ASSOCIATES, INC.
ENGINEERS & SCIENTISTS
8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631
(773) 399-0112

FILE: H:\Jobs\2002\20024023-01\CAD\IDOT_Trans\ dgn\refs\ALIGN_1\shite01\FINAL.dgn
DATE: 05-Oct-07 15:33

END AREAS
EXCAV. SQ. FT.
EMB. SQ. FT.

CONTRACT NO. 62336	F.A.P. RTE. 533	SECTION 120A-B-R	COUNTY MCHENRY	TOTAL SHEETS 64	SHEET NO. 60
STA.	TO STA.		ILLINOIS FED. AID PROJECT		
D-91-471-01					



ILLINOIS DEPARTMENT OF TRANSPORTATION

F.A.P. ROUTE 533 (IL RTE 176) OVER THE KISHWAUKEE RIVER

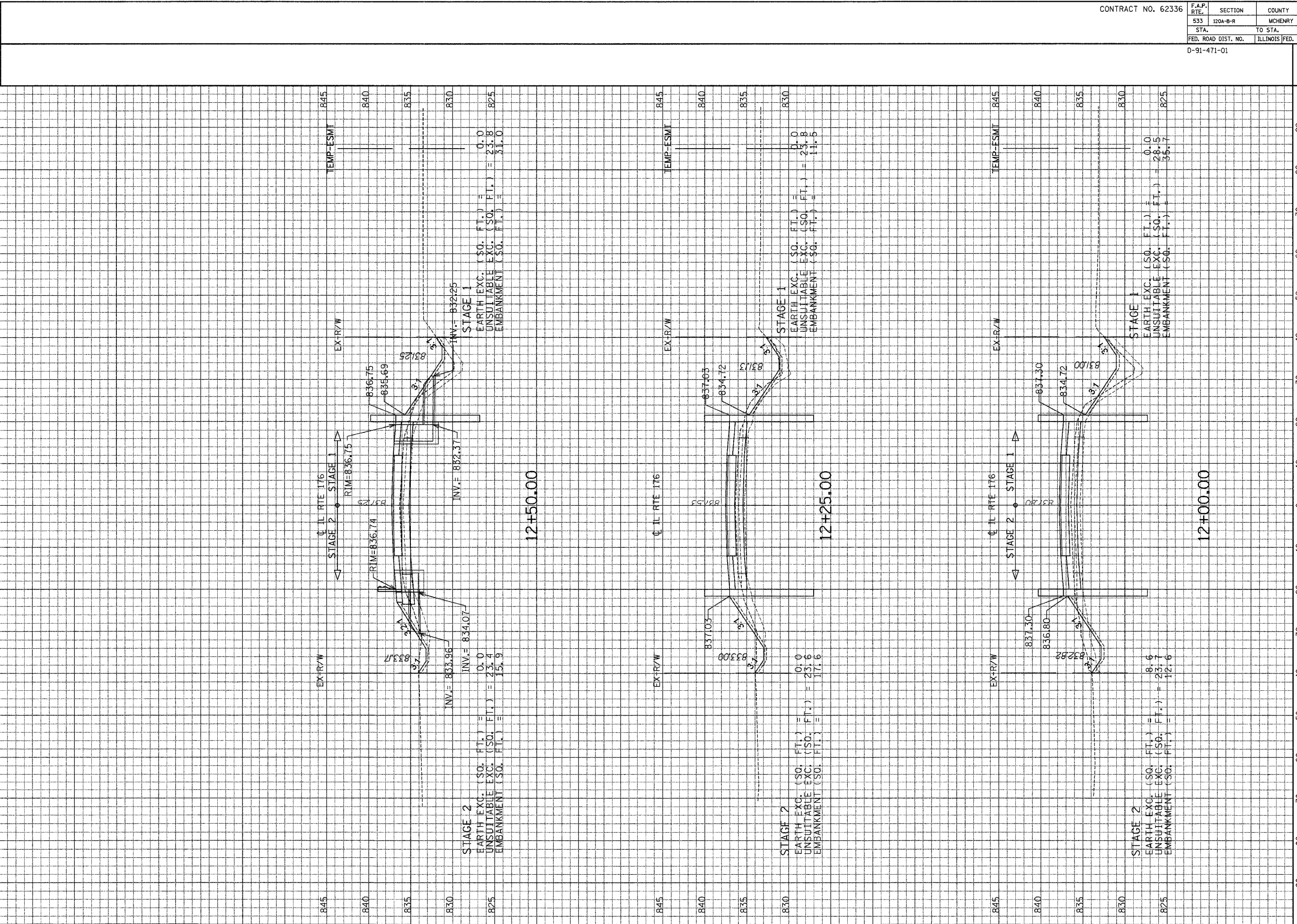
CROSS SECTIONS

SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

GRAEF, ANHALT, SCHLOEMER & ASSOCIATES, INC.
ENGINEERS & SCIENTISTS
8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631
(773) 399-0121

END AREAS
EXCAV.
SQ. FT.

90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90



ILLINOIS DEPARTMENT OF TRANSPORTATION

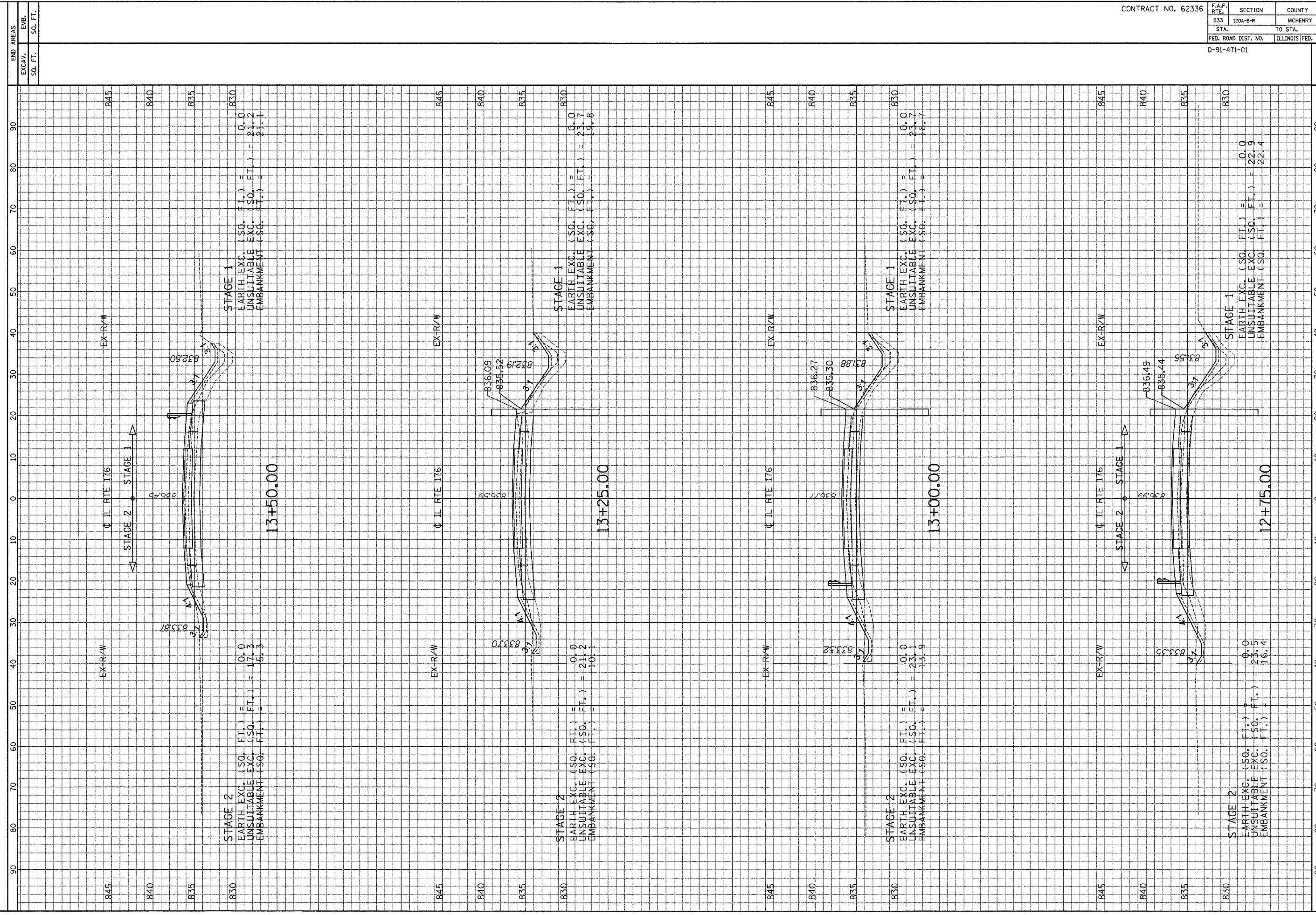
SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

CROSS SECTIONS

F.A.P. ROUTE 533 (IL RTE 176) OVER THE KISHAWAKE RIVER

DATE: 05-Oct-07 15:33

FILE: H:\Jobs\2002\20024023-01\CAD\IDOT_Trans\dgn\refs\ALIGN.1\sheet01FINAL.dgn



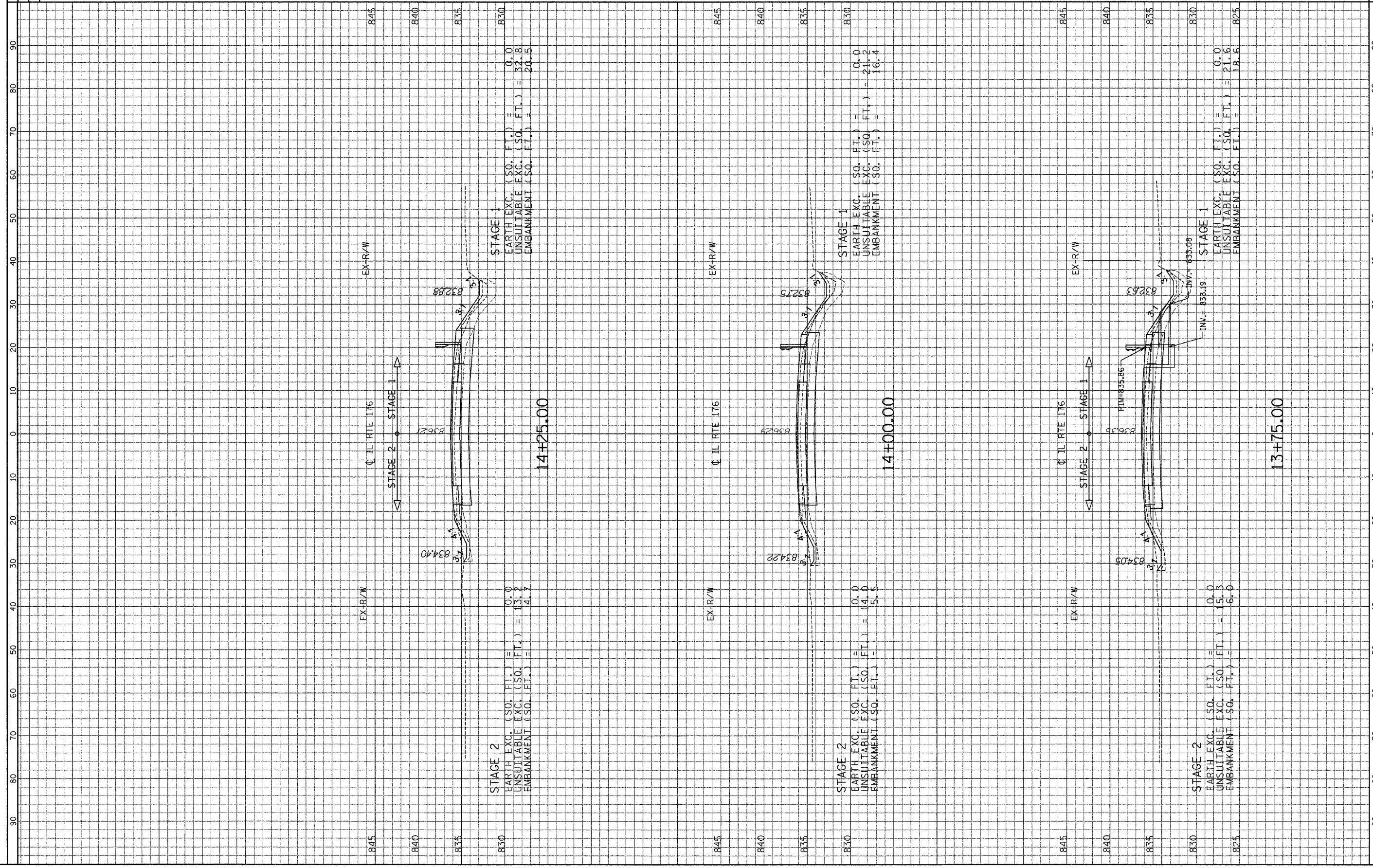
SCALE: HORIZ. 1" = 10'
 VERT. 1" = 5'

CROSS SECTIONS
 ILLINOIS DEPARTMENT
 OF TRANSPORTATION

GRUPP ASSOCIATES, INC.
 ENGINEERS & ARCHITECTS
 8501 N. Higgins Road, Suite 280
 Chicago, Illinois 60631
 (773) 395-9112

CONTRACT NO. 62336		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		533	120A-B-R	MCHENRY	64	63
		STA.	TO STA.			
		FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
		D-91-471-01				

END AREAS
EXCAV. SQ. FT.
EMB. SQ. FT.



SCALE: HORIZ. 1" = 10'
VERT. 1" = 5'

CROSS SECTIONS

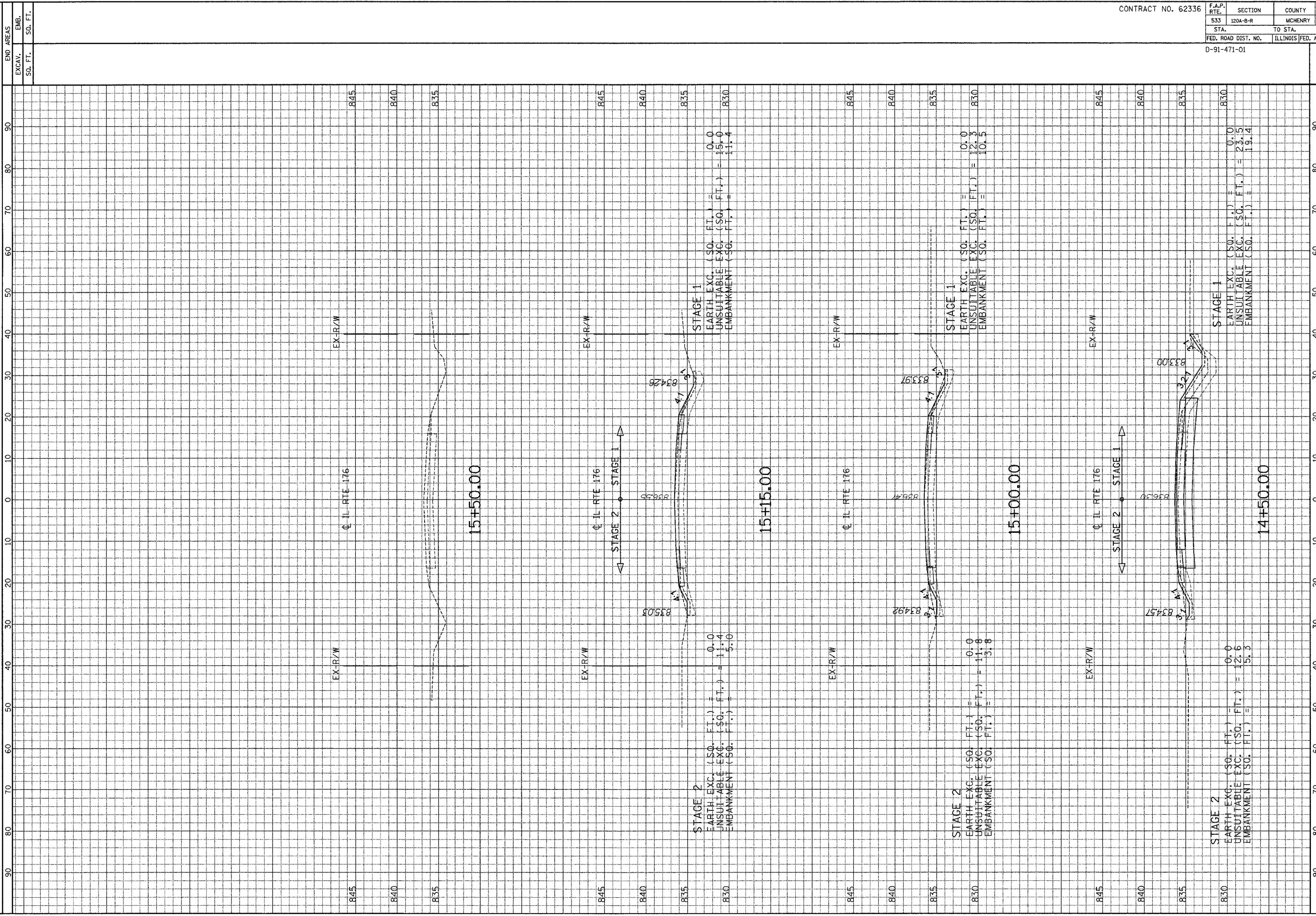
F.A.P. ROUTE 533 (IL RTE 176)
OVER THE KISHWAUKEE RIVER

ILLINOIS DEPARTMENT
OF TRANSPORTATION

DATE: 05-Oct-07 15:33

FILE: H:\Jobs\2002\20024023-01\CAD\DOT1\Trans\dgn\Refs\ALIGN1\Xshite01\FINAL.dgn

GRAFF, ANWALT, SCHAEFER & ASSOCIATES, INC.
ENGINEERS, ARCHITECTS, PLANNERS, SCENARISTS
8501 W. Higgins Road, Suite 280
Chicago, Illinois 60631
(773) 399-0112



END AREAS
EXCAV. SQ. FT.
EMB. SQ. FT.

SCALE: HORIZ. 1" = 10'
 VERT. 1" = 5'

ILLINOIS DEPARTMENT OF TRANSPORTATION

GRAF, ANHULT, SCHLOMER & ASSOCIATES, INC.
 ENGINEERS & SCIENTISTS
 6501 N. Higgins Road, Suite 280
 Chicago, Illinois 60631
 (773) 399-0112