

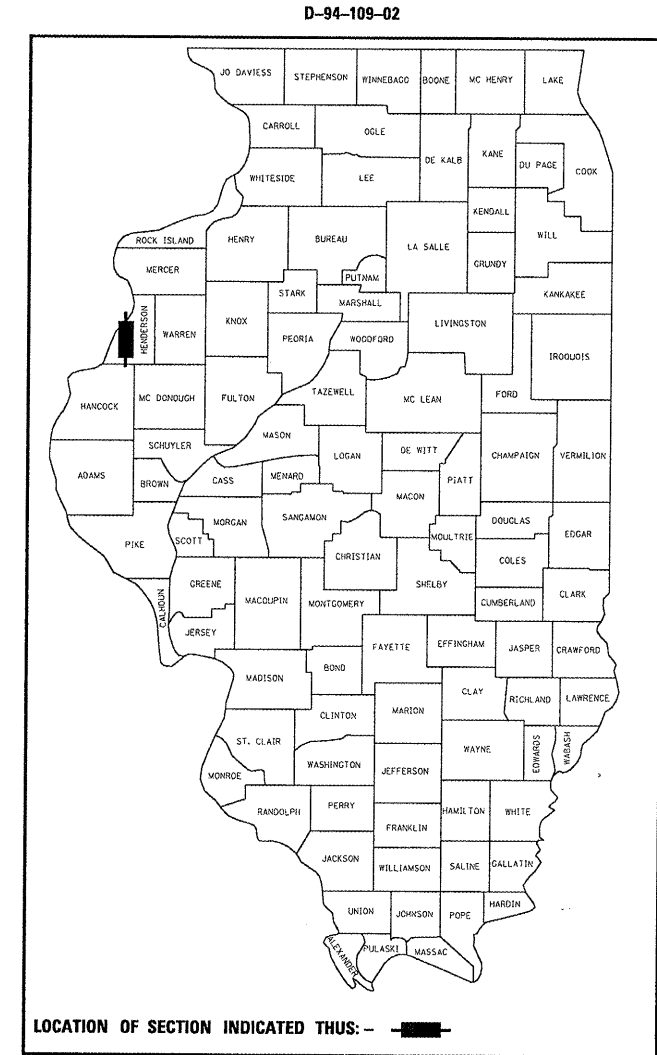
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1)BR	HENDERSON	70	1
FED. ROAD DIST. NO. 4		ILLINOIS	CONTRACT NO. 68298	

FOR INDEX OF SHEETS, SEE SHEET No. 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PROPOSED
HIGHWAY PLANS**
FAP ROUTE 522 (CARMAN ROAD)
SECTION (14-1-B1)BR
PROJECT ACBRF
BRIDGE REPLACEMENT
HENDERSON COUNTY
C-94-126-02

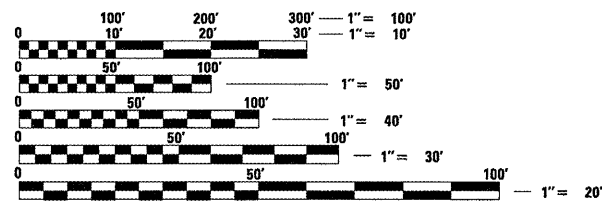
HIGHWAY STANDARDS

000001-06	515001-03	667101-01
001001-02	630001-09	701001-02
250001-D4	630101-D4	701006-03
280001-D4	630301-05	701011-02
406101-D4	631031-09	701201-04
406301-D4	635006-03	701321-11
420401-D4	635011-02	701901-01
440001-D4	635101-D4	704001-06
482001-02	666001-01	780001-D4
482011-03		781001-03



DESIGN DESIGNATION

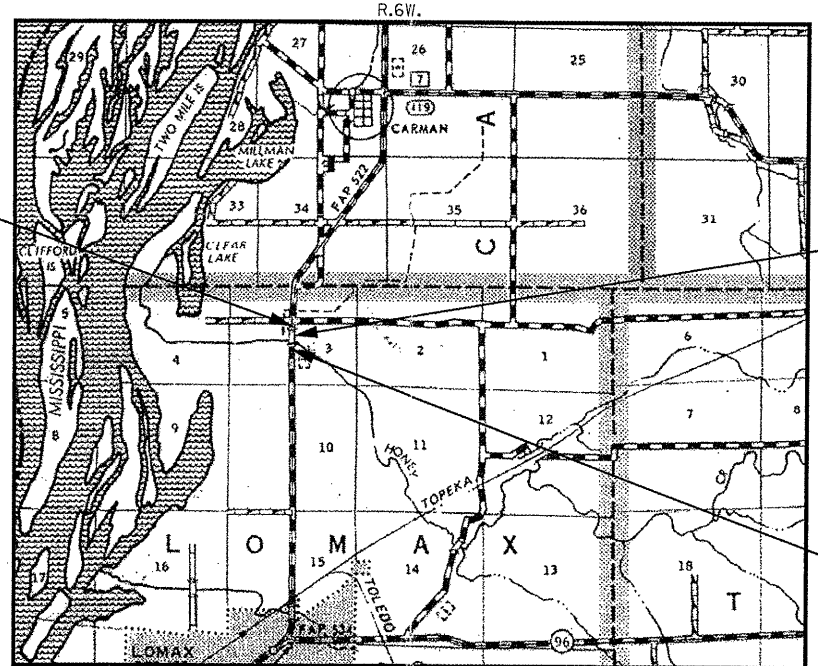
SECTION (14-1-B)BR
OTHER PRINCIPAL ARTERIAL
ADT = 2,810 (2010) 3,430 (2030)
PV = 95.5%
SU = 2.0%
MU = 2.5%



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

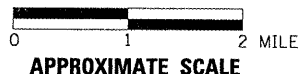
BEGIN PROJECT
FAP RTE 522
STA 370+50.00



STA 378+50.00
REMOVAL OF EXISTING STRUCTURE
NO. 036-3002
WITH PROPOSED STRUCTURE
NO. 036-0071
FAP RTE 522 (CARMAN RD)
OVER HONEY CREEK

END PROJECT
FAP RTE 522
STA 384+50.00

LOCATION MAP



GROSS AND NET LENGTH OF IMPROVEMENT = 1400.00 FEET = 0.27 MILES

HURST-ROSCHKE ENGINEERS, INC.
HILLSBORO, ILLINOIS 62049
(217)532-3959 FAX (217)532-3212

HR
HURST-ROSCHKE
ENGINEERS, INC.

CONSULTANT LIASON: NICHOLAS JACK (309)671-3451
PROJECT ENGINEER: RICHARD DOTSON (309)671-3455
CONTRACT NO. 68298
CATALOG NO. 032283-02D



Mark A. Reitz 3/15/11
MARK A. REITZ P.E. #062-047531 DATE
LICENSE EXPIRES 11/30/2011
HURST-ROSCHKE ENGINEERS, INC.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *Memo 24 20 11*

DEPUTY DIRECTOR OF HIGHWAYS, REGION THREE ENGINEER
Oct 14 20 11
Scott C. Stitt, P.E.
acting ENGINEER OF DESIGN AND ENVIRONMENT

Oct 14 20 11
Christine M. Reed
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

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41-53 CROSS SECTIONS FAP 522 (CARMAN ROAD)

54-70 DISTRICT 4 STANDARDS

UTILITIES – LOCATIONS /INFORMATION ON PLANS

The locations of existing water mains, gas mains, sewers, electric power lines, telephone lines and other utilities as shown on the plans are based on careful field investigation and the best information available, but they are not guaranteed. Unless elevations are shown, all utility locations shown on the cross sections are based on the approximate depth supplied by the utility company. It shall be the Contractor's responsibility to ascertain their exact location from the utility companies and by field inspection.

AVAILABILITY OF ELECTRONIC FILES

Micro Station and GEOPAK files of this project will be made available to the Contractor. If there is a conflict between the electronic files and the printed contract plans and documents, the printed contract plans and documents shall take precedence over the electronic files. The Contractor shall accept all risk associated with using the electronic files and shall hold the Department harmless for any errors or omissions in the electronic files and the data contained therein. Errors or delays resulting from the use of the electronic files by the Contractor shall not result in an extension of time for any interim or final completion date or shall not be considered cause for additional compensation. The Contractor shall not use, share, or distribute these electronic files except for the purpose of constructing this contract. Any claims by third parties due to use or errors shall be the responsibility of the Contractor. The Contractor shall include this disclaimer with the transfer of these electronic files to any other parties and shall include appropriate language binding them to similar responsibilities.

PLAN ELEVATIONS – U. S. G. S. MEAN SEA LEVEL DATUM

All elevations shown refer to U. S. G. S. datum at mean sea level unless otherwise noted.

PROPERTY OWNER ACCESS REQUIREMENTS

Access must be maintained to all existing properties during construction per Article 107.09 unless arrangements are made in writing by the Contractor with the property owners with a copy provided to the Engineer for short-term closures.

TREE REMOVAL

The District Four Tree Committee should be contacted and prior approval obtained for any tree removal beyond the limits/locations included in the plans.

GENERAL NOTES

ENVIRONMENTAL REVIEWS

Prior to the use of any proposed borrow areas, use areas (temporary access roads, detours, run-arounds, etc.) and/or waste areas, the Contractor shall file the required environmental resource request surveys according to Section 107.22 of the Standard Specifications. These surveys are required in order for the Department to conduct cultural and biological resource surveys for the proposed site.

Prior to any waste materials being removed from the construction site the required environmental resource surveys will need to be obtained and filed by the Contractor. Excess waste products removed from the construction site shall be disposed of as required in Section 202.03 of the Standard Specifications.

Any protruding metal bars shall be removed prior to the disposal of broken concrete at approved disposal sites.

The required environmental resource documentation shall include the following:

- * BDE Form 2289 (Environmental Survey Request)
- * A location map showing the size limits and location of the use area
- * Signed property owner agreement form-D4 PI0100
- * Color photographs depicting the use area
- * Borrow Area Entry Agreement form-D4 PI0101

Please note that a minimum of two weeks shall be allowed for the District to obtain the required environmental clearances.

AGGREGATE SURFACE COURSE, TYPE B

Aggregate Surface Course, Type B shall be required for all granular construction of side roads, entrances, and mailbox turnouts, whether or not portions of the surfaces thus constructed are to be covered with a bituminous surface, except where noted differently on the plans.

AGGREGATE FOR DRIVEWAY REPLACEMENT

The material used for construction of permanent aggregate driveways shall be gravel or crushed stone as directed by the Engineer, to replace in kind the existing aggregate driveways.

No additional compensation shall be provided for this requirement but shall be considered as included in the cost of the pay item for the aggregate as specified on the plans.

HURST-ROSCHKE ENGINEERS, INC.
 HILLSBORO, ILLINOIS 62049
 (217)532-3959 FAX (217)532-3212



FILE NAME =	USER NAME = ljaynedm	DESIGNED - JJC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S:\GEN\DRAW\STD&PLNS\Squad4\68298	Horley Crk\468298-shr-general-notes.dgn	DRAWN - UJ	REVISED -		522	(14-1-B1)BR	HENDERSON	70	2
	PLOT SCALE = 200.0004' / 1" =	CHECKED - MAR	REVISED -		CONTRACT NO. 68298				
	PLOT DATE = 8/3/2011	DATE - 2-26-11	REVISED -		FED. ROAD DIST. NO. 4 (ILLINOIS) FED. AID PROJECT				
				SCALE:	SHEET NO. 1 OF 2 SHEETS		STA.	TO STA.	

GENERAL NOTES

PAVEMENT STATIONING NUMBERS & PLACEMENT

The Contractor shall provide labor and materials required to imprint pavement station numbers in the finished surface of the pavement and/or overlay. The numbers shall be approximately 3/4 inch (20mm) wide, 5 inches (125 mm) high and 5/8 inch (15 mm) deep.

The pavement station numbers shall be installed as specified herein:

Interval – 200 feet (English stationing) or 100 meters (metric stationing)

Bottom of Numbers – 6 inches (150 mm) from the inside edge of the pavement marking

Location:

- * 2,3, & 5 Lane Pavements – right edge of pavement in direction of increasing stations
- * Multi-Lane Divided Roadways – outside edge of pavement in both directions
- * Ramps – along baseline edge of pavement

Position – stations shall be placed so they can be read from the adjacent shoulder

Format – English (Metric) pavement stations shall use this format "XXX (XX+X00)" where X represents the pavement station

This work will not be paid for separately, but will be considered included in the cost of the associated pavement and/or overlay pay items.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

Mixture Use(s):	Surface Course	Level Binder 3/4" (Polymerized)	Binder Course (Variable 2.25" to 12")	HMA Shoulder (Surface Lift)	HMA Shoulder (Lower Lifts)	Bridge Approach Connector (Flexible)
RAP % (Max):	15%	10%	25%	30%	15%	25%
ACPG:	PG 64-22	SBS or SBR 70-22	PG 64-22	PG 64-22	PG 64-22	PG 64-22
Design Air Voids:	4.0% N=50	4.0% N=50	4.0% N=50	3.0% N=30	4.0% N=30	4.0% N=50
Mixture Composition: (Gradation Mixture)	IL 9.5 or IL 12.5	IL 4.75	IL 19.0	IL 9.5L	IL 19.0L	IL 19.0
Friction Aggregate	Mixture D (Dolomite only)	N.A.	N.A.	Mixture C	N.A.	N.A.

Notes: Individual lift thickness of each mix type will be no less than 3 times nominal maximum aggregate size and no more than 6 times nominal aggregate size.

POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT) RATES

Surface Type	Estimated Truck Application Rate	Residual Rate
Milled (HMA or PCC)	0.08 gal/sy (0.00034 ton/sy)	0.04 gal/sy
Existing Pavement	0.05 gal/sy (0.00022 ton/sy)	0.025 gal/sy
Fog Coat (between lifts)	0.05 gal/sy (0.00022 ton/sy)	0.025 gal/sy

Note: Estimated truck application rate is used for estimating quantities.

PAVING SURFACE COURSE

Continuous paving operations on the main roadway shall be maintained at all times during the construction of the hot-mix asphalt surface. No interruptions for side roads, entrances, turn lanes, etc. will be allowed.

ORDERING LENGTH CONFIRMATION – DRAINAGE ITEMS

The Contractor shall consult with the Engineer in regard to the exact length of the box/pipe culverts, storm sewers, and/or pipe drains required prior to ordering these items.

RIGHT-OF-WAY MARKERS

When installing right-of-way markers, care shall be taken to not disturb any existing property/right-of-way pins. If a property/right-of-way pin is found at the location of a proposed right-of-way marker, the marker shall be placed one (1) foot in front of the pin.

ENGINEER'S FIELD OFFICE

Add the following sentence to the end of paragraph 670.02 (i) and 670.04 (e):
All of the telephone lines provided shall have unpublished numbers.

NO PASSING ZONE VERIFICATION

The Resident shall contact Operations to verify the location of no passing zones prior to placement of centerline striping.

COMMITMENTS

Commitments are not to be altered without the written approval of all Parties to which the Commitment was made.

Contact the Traffic Operations Engineer at (309) 671-4466 for Permanent Roadway Pavement Marking after Construction.

HURST-ROSCHKE ENGINEERS, INC.
 HILLSBORO, ILLINOIS 62049
 (217)532-3959 FAX (217)532-3212



FILE NAME = D:\68298-sht-general-notes.dgn	USER NAME = AdodeSA	DESIGNED - JJC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES, COMMITMENTS, AND INDEX OF SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN - UJ	REVISED -			522	(14-1-B)IBR	HENDERSON	70	3	
		CHECKED - MAR	REVISED -			CONTRACT NO. 68298					
		DATE - 2-26-11	REVISED -			SCALE:	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.	FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT	

HURST-ROSCHKE ENGINEERS, INC.
HILLSBORO, ILLINOIS 62049
(217)532-3959 FAX (217)532-3212

HR
HURST-ROSCHKE
ENGINEERS, INC.

SUMMARY OF QUANTITIES				FAP RURAL 80% FEDERAL 20% STATE	FAP RURAL 80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	TOTAL	0004	0011
20200100	EARTH EXCAVATION	CU YD	3105	3105	
20300100	CHANNEL EXCAVATION	CU YD	2645	2645	
20400800	FURNISHED EXCAVATION	CU YD	210	210	
* 25000210	SEEDING, CLASS 2A	ACRE	1.75	1.75	
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	158	158	
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	158	158	
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	158	158	
* 25100115	MULCH, METHOD 2	ACRE	0.25	0.25	
* 25100630	EROSION CONTROL BLANKET	SQ YD	7302	7302	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	350	350	
28000400	PERIMETER EROSION BARRIER	FOOT	1650	1650	
28000500	INLET AND PIPE PROTECTION	EACH	5	5	
28100107	STONE RIPRAP, CLASS A4	SQ YD	2497		2497
28200200	FILTER FABRIC	SQ YD	2497		2497
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	571	571	
40600215	POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)	TON	0.6	0.6	
40600300	AGGREGATE (PRIME COAT)	TON	1.0	1.0	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	160	160	
40600990	TEMPORARY RAMP	SQ YD	53	53	
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	671	671	
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	250	250	
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	43	43	
44000100	PAVEMENT REMOVAL	SQ YD	347	347	
48203100	HOT-MIX ASPHALT SHOULDERS	TON	566	566	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50105220	PIPE CULVERT REMOVAL	FOOT	64		64
50200100	STRUCTURE EXCAVATION	CU YD	292		292
50300100	FLOOR DRAINS	EACH	16		16
50300225	CONCRETE STRUCTURES	CU YD	287.5		287.5
50300255	CONCRETE SUPERSTRUCTURE	CU YD	365.7		365.7
50300260	BRIDGE DECK GROOVING	SQ YD	900		900
50300280	CONCRETE ENCASMENT	CU YD	17.2		17.2
50300300	PROTECTIVE COAT	SQ YD	1175		1175
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L. SUM	1		1
50500505	STUD SHEAR CONNECTORS	EACH	4221		4221
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	115850		115850
50800515	BAR SPLICERS	EACH	1094		1094
51201600	FURNISHING STEEL PILES HP12X53	FOOT	1304		1304
51201800	FURNISHING STEEL PILES HP14X73	FOOT	3132		3132
51202305	DRIVING PILES	FOOT	4436		4436
51203600	TEST PILE STEEL HP12X53	EACH	2		2
51203800	TEST PILE STEEL HP14X73	EACH	4		4

SUMMARY OF QUANTITIES				FAP RURAL 80% FEDERAL 20% STATE	FAP RURAL 80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	TOTAL	0004	0011
51500100	NAME PLATES	EACH	1		1
52100520	ANCHOR BOLTS, 1"	EACH	84		84
542D0241	PIPE CULVERTS, CLASS D, TYPE 1 36"	FOOT	16	16	
542D0253	PIPE CULVERTS, CLASS D, TYPE 1 48"	FOOT	70	70	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	64		64
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	1850	1850	
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4	
63200310	GUARDRAIL REMOVAL	FOOT	775	775	
* 63300725	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	FOOT	118.75	118.75	
66700205	PERMANENT SURVEY MARKERS, TYPE 1	EACH	1	1	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6	
67100100	MOBILIZATION	L SUM	1	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	504	504	
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	5263	5263	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1920	1920	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	525	525	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	450	450	
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	5263	5263	
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	21	21	
* 78200520	BARRIER WALL MARKERS, TYPE B	EACH	5	5	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	93		93
X0323265	REMOVE EXISTING RIPRAP	SQ YD	276	276	
X4060826	POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50	TON	126	126	
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	1240	1240	
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1		1
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1		1
X5020503	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 3	EACH	1		1
X5020504	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 4	EACH	1		1
X5080600	MECHANICAL SPLICERS	EACH	144		144
Z0004552	APPROACH SLAB REMOVAL	SQ YD	107	107	
Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	438	438	
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	
Z0034105	MATERIAL TRANSFER DEVICE	TON	1047	1047	
Z0046304	PIPE UNDERDRAIN FOR STRUCTURES 4"	FOOT	134		134
Z0073002	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	1070		1070

* SPECIALTY ITEM

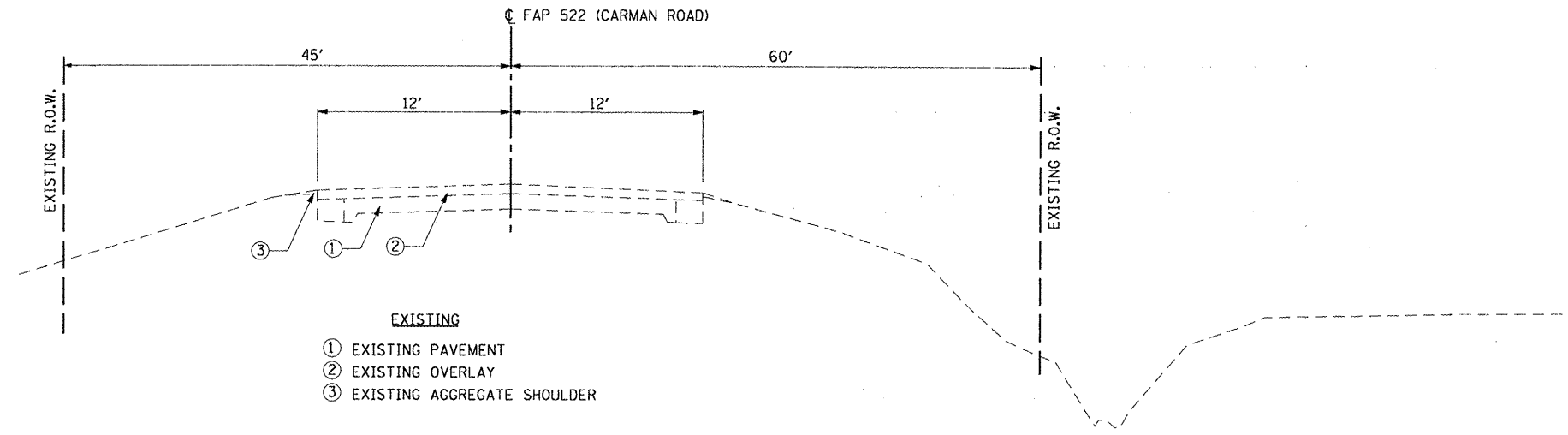
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	PLOT DATE = 8/18/2011	DATE - 2-26-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

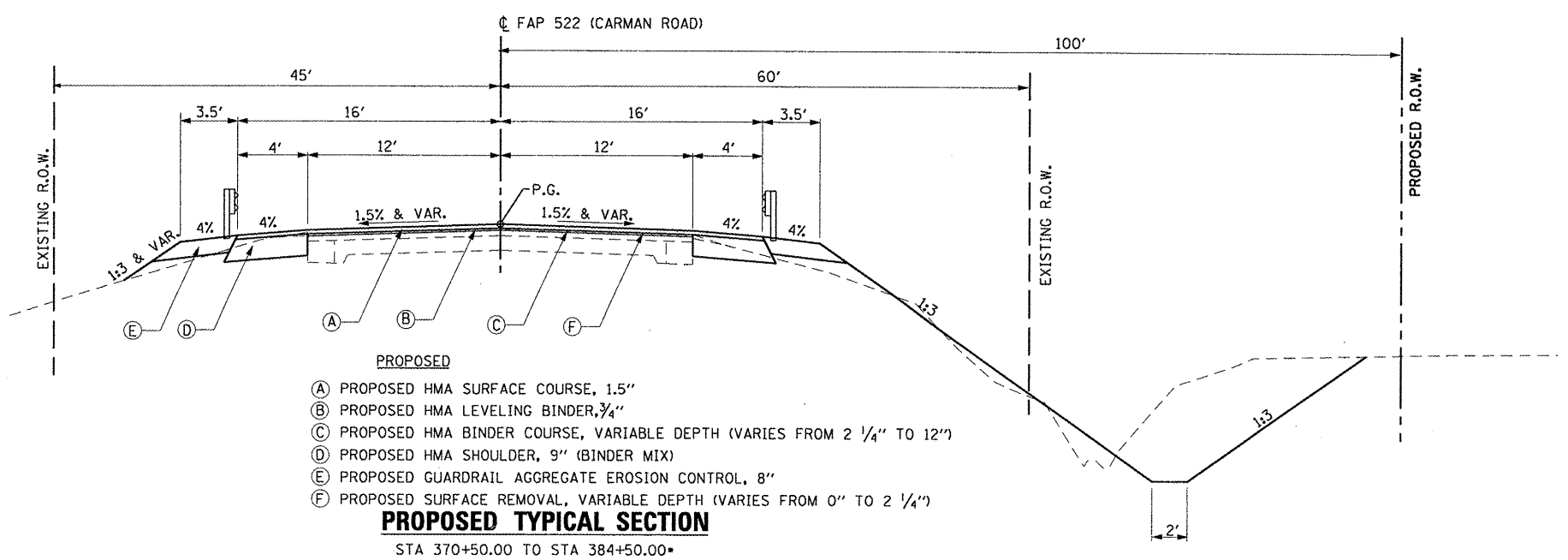
SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

F.A.P. RTE. 522	SECTION (14-1-B)BR	COUNTY HENDERSON	TOTAL SHEETS 70	SHEET NO. 4
FED. ROAD DIST. NO. 4 ILLINOIS			CONTRACT NO. 68298	
FED. AID PROJECT				



- EXISTING**
- ① EXISTING PAVEMENT
 - ② EXISTING OVERLAY
 - ③ EXISTING AGGREGATE SHOULDER

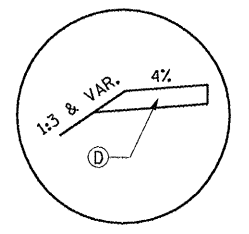
EXISTING TYPICAL SECTION
 STA 370+50.00 TO STA 384+50.00



- PROPOSED**
- (A) PROPOSED HMA SURFACE COURSE, 1.5"
 - (B) PROPOSED HMA LEVELING BINDER, 3/4"
 - (C) PROPOSED HMA BINDER COURSE, VARIABLE DEPTH (VARIES FROM 2 1/4" TO 12")
 - (D) PROPOSED HMA SHOULDER, 9" (BINDER MIX)
 - (E) PROPOSED GUARDRAIL AGGREGATE EROSION CONTROL, 8"
 - (F) PROPOSED SURFACE REMOVAL, VARIABLE DEPTH (VARIES FROM 0" TO 2 1/4")

PROPOSED TYPICAL SECTION
 STA 370+50.00 TO STA 384+50.00

BRIDGE OMISSION
 STA 377+09.00 TO STA 379+91.00



NON GUARDRAIL SECTION DETAIL

FILE NAME =	USER NAME = HJRS1-ROSCHE	DESIGNED JJC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTIONS			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T:\198-1785-W0*7_Honey_Creek\DGND468298-sht-typical.dgn	DRAWN UJ	REVISED -	522					014-1-B1BR	HENDERSON	70	5	
PLOT SCALE = 20.0001" / 1"	CHECKED MAR	REVISED -	CONTRACT NO. 68298									
PLOT DATE = 2/14/2011	DATE 2-26-11	REVISED -	FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT									
				SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.					

SCHEDULES

STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS				
Carman Road				
Station	Station	Side	FOOT	
370+75.00	to 375+75.00	Rt	500	
375+22.00	to 376+97.00	Lt	175	
380+03.50	to 385+41.00	Rt	538	
380+22.50	to 386+60.00	Lt	638	
Total			1850	

SHORT-TERM PAVEMENT MARKING				
Carman Road				
Station	Station	Edge Lines	Center Lines	FOOT
370+50.00	to 384+50.00	224	280	504
Total			504	

PIPE CULVERTS, CLASS D, TYPE 1 36"		
Carman Road		
Station	Side	FOOT
375+58.00	Rt	16
Total		16

TRAFFIC BARRIER TERMINAL, TYPE 6				
Carman Road				
Station	Station	Side	EACH	
376+77.35	to 377+20.50	Rt	1	
376+97.00	to 377+40.15	Lt	1	
379+60.35	to 380+03.50	Rt	1	
379+79.35	to 380+22.50	Lt	1	
Total			4	

TEMPORARY PAVEMENT MARKING - LINE 4"				
Carman Road				
Station	Station	CL	EDGE	FOOT
370+50.00	to 384+50.00	2463	2800	5263
Total			5263	

PIPE CULVERTS, CLASS D, TYPE 1 48"		
Carman Road		
Station	Side	FOOT
376+23.00	Rt	70
Total		70

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT				
Carman Road				
Station	Station	Side	EACH	
370+25.00	to 370+75.00	Rt	1	
374+72.00	to 375+22.00	Lt	1	
385+41.00	to 385+91.00	Rt	1	
386+60.00	to 387+10.00	Lt	1	
Total			4	

WORK ZONE PAVEMENT MARKING REMOVAL					
Carman Road					
Station	Station	Short-Term	Length	Width	SO FT
370+50.00	to 384+50.00	Temporary	504	0.33	167.8
370+50.00	to 384+50.00	Temporary	5263	0.33	1752.4
Total					1920

MATERIAL TRANSFER DEVICE		TON
Carman Road		
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50		671
HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50		250
POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50		126
Total		1047

GUARDRAIL REMOVAL				
Carman Road				
Station	Station	Side	FOOT	
372+93.00	to 376+07.00	Rt	325.0	
376+36.00	to 377+76.00	Rt	150.0	
376+75.00	to 377+75.00	Lt	100.0	
379+30.00	to 380+30.00	Lt	100.0	
Total			775	

RELOCATE TEMPORARY CONCRETE BARRIER			
Carman Road			
Station	Station	Stage	FOOT
375+87.50	to 380+37.50	Stage 2	450
Total			450

PAINT PAVEMENT MARKING - LINE 4"				
Carman Road				
Station	Station	CL	FOOT	
370+50.00	to 380+00.00	CL Yellow - Double Solid	1900	
380+00.00	to 384+50.00	CL Yellow - Solid with Skip Dash (10' Line - 30' Skip)	563	
370+50.00	to 384+50.00	Rt White Edge	1400	
370+50.00	to 384+50.00	Lt White Edge	1400	
Total			5263	

• AFTER INTIAL 400' FROM STD 635001 & STD 635006

LEGEND
GR GUARDRAIL MARKER
BW BARRIER WALL MARKER
S SILVER COLOR

STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)			
Carman Road			
Station	Station	Side	FOOT
375+75.00	to 376+03.00	Rt	56.25
376+43.00	to 376+77.35	Lt	62.50
Total			118.75

TERMINAL MARKER - DIRECT APPLIED			
Carman Road			
Station	Side	EACH	
370+25.00	Rt	1	
374+72.00	Lt	1	
385+91.00	Rt	1	
387+10.00	Lt	1	
Total			4

CHANNEL EXCAVATION		CU YD
Carman Road		
WITHIN BRIDGE LIMITS		1459
UPSTREAM OF BRIDGE		456
DOWNSTREAM OF BRIDGE		730
Total		2645

TEMPORARY CONCRETE BARRIER			
Carman Road			
Station	Station	Stage	FOOT
376+25.00	to 380+75.00	Stage 1	450
380+37.50	to 381+12.50	Stage 2	75
Total			525

TRAFFIC CONTROL AND PROTECTION, STANDARD 701321		
Carman Road		
Stage	EACH	
Stage 1	1	
Stage 2	1	
Total		2

REMOVE EXISTING RIPRAP		
Carman Road		
Station	Station	SO YD
374+84.00	to 376+10.00	160
376+38.00	to 377+40.00	116
Total		276

POLYMERIZED LEVELING BINDER (MACHINE METHOD), IL-4.75, N50					
Carman Road					
Station	Station	Width (ft)	Depth (in)	Area (sq yd)	TON
370+50.00	to 377+02.00	24.16	0.75	1750	73.5
377+02.00	to 377+09.00		0.75	19	0.8
379+91.00	to 380+00.00		0.75	25	1.0
380+00.00	to 384+50.00	24.16	0.75	1208	50.7
Total					126

TEMPORARY BRIDGE TRAFFIC SIGNALS		
Carman Road		
Stage	EACH	
STAGE 1	1	
STAGE 2	1	

IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3			
Carman Road			
Station	Side	EACH	
376+25.00	Lt	1	
380+75.00	Lt	1	
Total			2

IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3			
Carman Road			
Station	Side	EACH	
375+87.50	Rt	1	
381+12.50	Rt	1	
Total			2

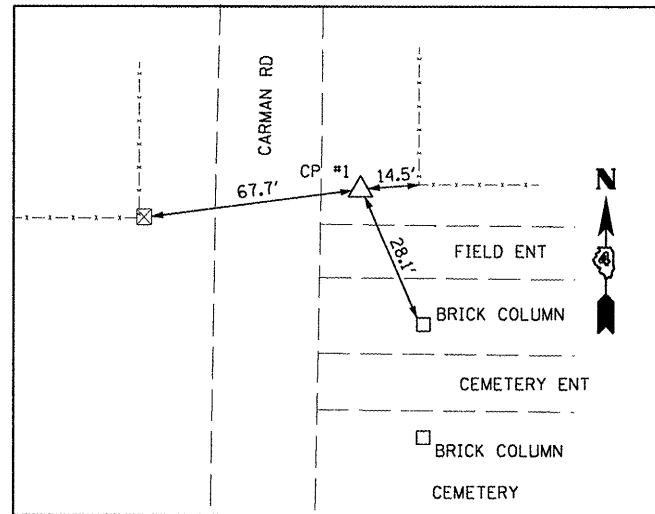
GUARDRAIL & BARRIER WALL MARKER SCHEDULE				
ROUTE	Carman Road		Carman Road	
LOCATION	SB RT SHOULDER		NB RT SHOULDER	
SPACING	150'		150'	
NUMBER	STA	TYPE	STA	TYPE
1	370+75.00	GRS	386+60.00	GRS
2	371+55.00	GRS	385+80.00	GRS
3	372+35.00	GRS	385+00.00	GRS
4	373+15.00	GRS	384+20.00	GRS
5	373+95.00	GRS	383+40.00	GRS
6	374+75.00	GRS	382+60.00	GRS
7	376+75.00	GRS	381+10.00	GRS
8	377+55.00	BWS	379+60.00	BWS
9	378+35.00	BWS	378+10.00	BWS
10	379+15.00	BWS	376+60.00	GRS
11	379+95.00	GRS	375+10.00	GRS
12	380+75.00	GRS		
13	382+25.00	GRS		
14	383+75.00	GRS		
15	385+25.00	GRS		
TOTAL GR	12	S	9	S
TOTAL BW	3	S	2	S

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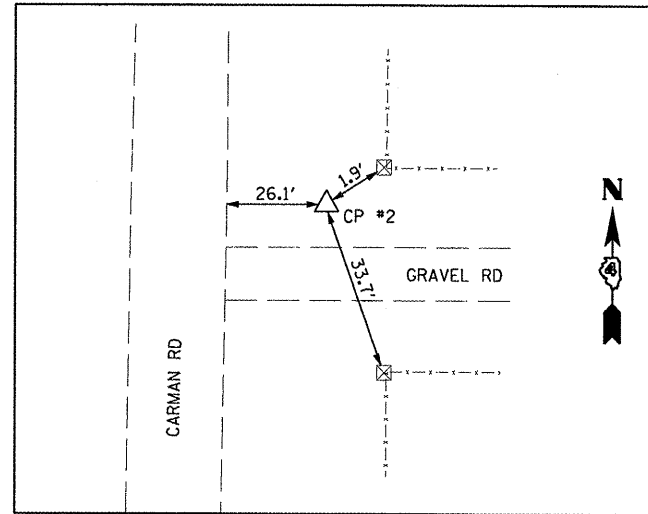
FILE NAME: #GND468298-sht-SCHEDULE.dgn	USER NAME: #USERS	DESIGNED: JJC	REVISED: -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SCHEDULES OF QUANTITIES		F.A.P. RTE. 522	SECTION (14-1-1B)BR	COUNTY HENDERSON	TOTAL SHEETS 70	SHEET NO. 7	
#FILEL	DESIGNED: JJC	DRAWN: TWC	REVISED: -		SCALE:	SHEET NO. 2 OF 2 SHEETS	STA. TO STA.	FED. ROAD DIST. NO. 4 (ILLINOIS) FED. AID PROJECT	CONTRACT NO. 68298			
PLOT SCALE: #SCALE	CHECKED: MAR	REVISIONS: -	DATE: 2-26-11									
PLOT DATE: #DATE	DATE: 2-26-11	REVISED: -										

BENCH MARK
RAILROAD SPIKE IN POWER POLE, ON THE WEST SIDE
OF FAP RTE 522 (CARMAN RD). FIRST POLE SOUTH OF
EXISTING BRIDGE. ELEVATION = 533.59



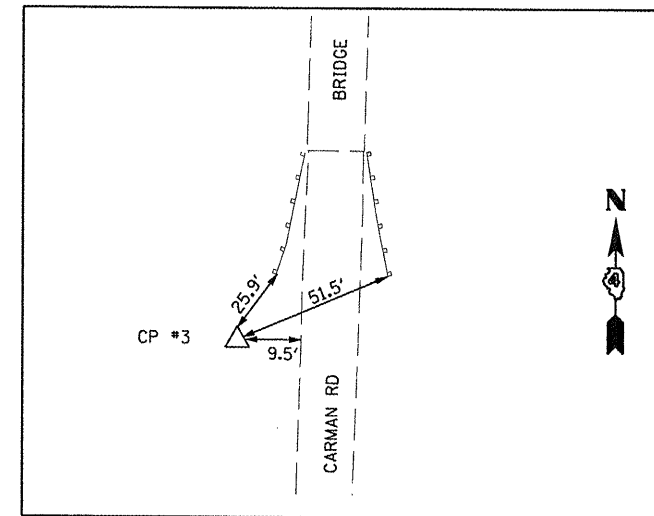
CP #1
#5 REBAR

STA UNKNOWN
N. 1,486,911.2348
E. 2,050,027.7325
ELEV. 542.6917



CP #2
#5 REBAR

STA 389+10.18, 37.20' LT.
N. 1,474,280.3740
E. 2,046,187.9398
ELEV. 534.7922



CP #3
#5 REBAR

STA 380+54.28, 21.88' RT.
N. 1,475,136.5568
E. 2,046,142.5247
ELEV. 539.60

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HR# 190-1785

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES & BENCHMARK

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-1B)BR	HENDERSON	70	8
CONTRACT NO. 68298				

SCALE: 1:20 SHEET NO. 1 OF 1 SHEETS STA. TO STA.

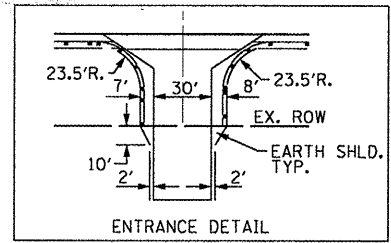
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT

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	PLOT DATE = #DATE#	DATE - 2-26-11	REVISED -

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PLANNED	
CHECKED	
DESIGNED	
DRAWN	
NOTED	
FILE NAME	

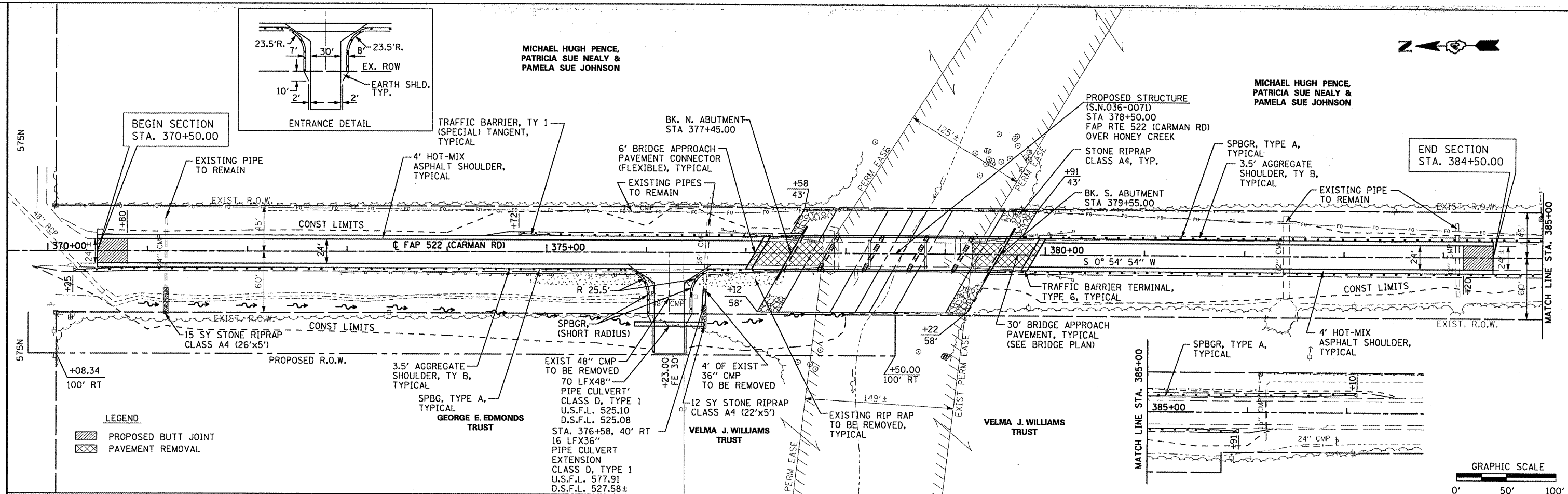
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PROFILING	
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FILE NAME	

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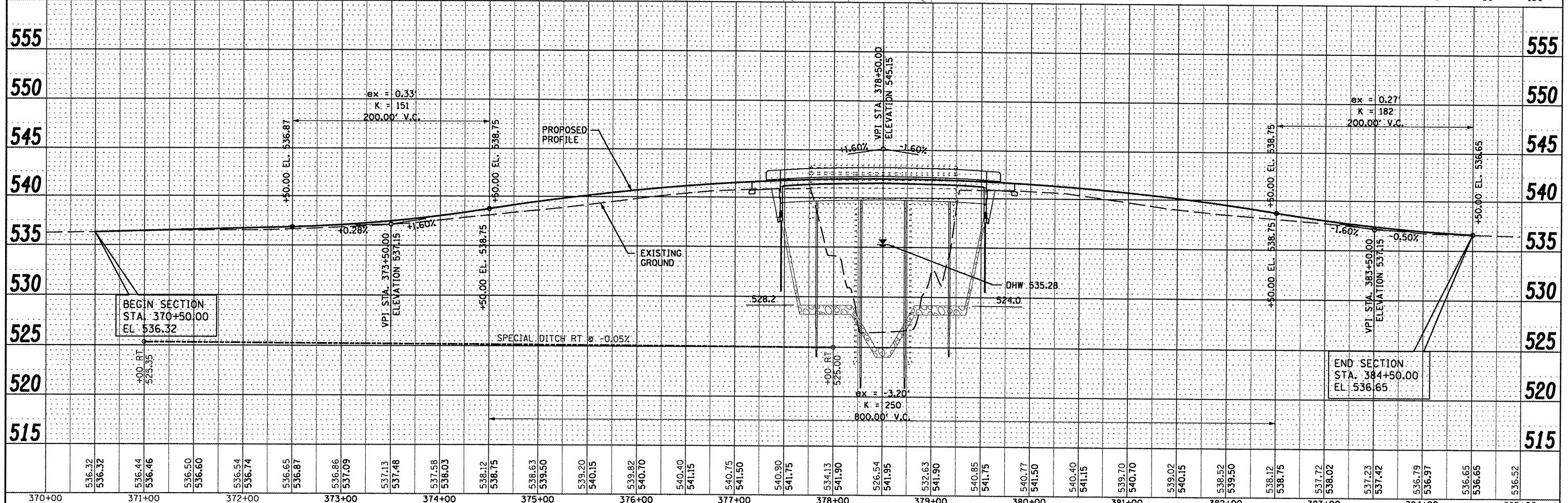
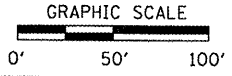
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 PATRICIA SUE NEALY &
 PAMELA SUE JOHNSON

MICHAEL HUGH PENCE,
 PATRICIA SUE NEALY &
 PAMELA SUE JOHNSON



LEGEND

	PROPOSED BUTT JOINT
	PAVEMENT REMOVAL



370+00	371+00	372+00	373+00	374+00	375+00	376+00	377+00	378+00	379+00	380+00	381+00	382+00	383+00	384+00	385+00																																											
536.32	536.32	536.44	536.46	536.50	536.60	536.54	536.74	536.65	536.87	536.86	537.09	537.13	537.48	537.58	538.03	538.12	538.75	538.63	539.50	539.20	540.15	539.82	540.70	540.40	541.15	540.75	541.50	540.90	541.75	534.13	541.90	526.54	541.95	532.63	541.90	540.85	541.75	540.77	541.50	540.40	541.15	539.70	540.70	539.02	540.15	538.52	539.50	538.12	538.75	537.72	538.02	537.23	537.42	536.79	536.97	536.65	536.65	536.52

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE SHEET

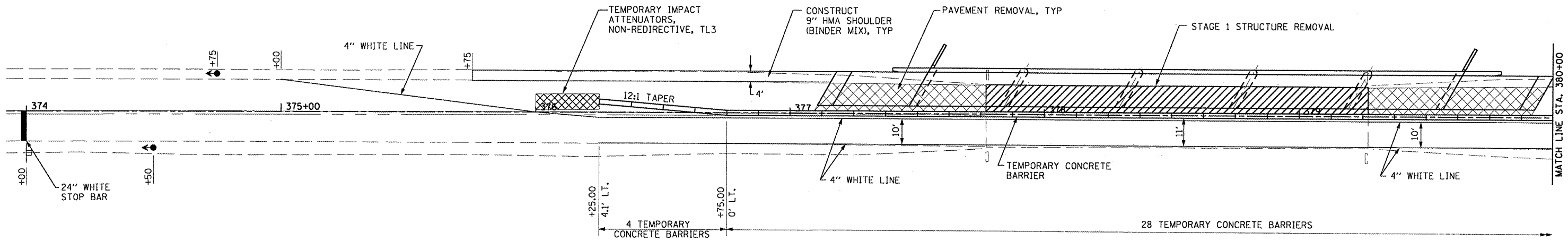
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B)IBR	HENDERSON	70	9
CONTRACT NO. 68298				

SCALE: 1"=50' SHEET NO. 1 OF 1 SHEETS STA. 370+00 TO STA. 385+00

PRIOR TO STAGE 1 CONSTRUCTION

1. PLACE PERIMETER EROSION BARRIER ON DISTURBED SLOPES AS SHOWN ON EROSION CONTROL PLANS.

STAGE 1

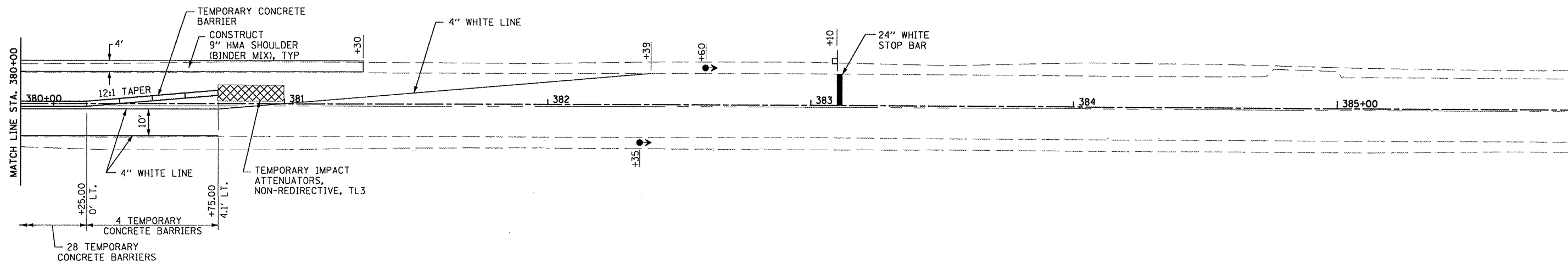
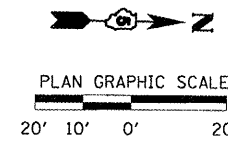


STAGE 1 CONSTRUCTION OF WEST SIDE

1. INSTALL BARRICADES SIGNS, TRAFFIC SIGNALS AND TEMPORARY MARKINGS AS DETAILED ON TRAFFIC CONTROL AND PROTECTION STANDARD 701321.
2. PLACE TEMPORARY CONCRETE BARRIERS. ANCHORS WILL BE REQUIRED.
3. EXISTING GUARD RAIL ON EAST SIDE TO REMAIN IN PLACE DURING STAGE 1 CONSTRUCTION.
4. INSTALL TEMPORARY SOIL RETENTION SYSTEM AS SHOWN ON SHEET 16 S.N. 036-0071 STRUCTURAL PLANS.
5. REMOVE GUARDRAIL, APPROACH PAVEMENT AND WEST SIDE OF EXISTING STRUCTURE. CONSTRUCT PROPOSED STRUCTURE, APPROACH PAVEMENT, APPROACH PAVEMENT CONNECTORS, HMA SHOULDER SECTION, GUARDRAIL AND ALL OTHER COLLATERAL WORK FOR WEST SIDE OF THE ROADWAY AS SHOWN.
6. UPON COMPLETION OF STAGE I, THE LEFT AND RIGHT LANES SHOULD BE PAVED FROM EXISTING ELEVATION AT STATION 374+00 TO THE TOP OF PROPOSED BINDER COURSE ELEVATION AT STATION 375+50 AND LIKewise FROM STATION 383+00 TO 381+50. FROM STATION 375+50 AND STATION 381+50 TO THE PROPOSED BRIDGE, THE LEFT LANE SHOULD BE PAVED TO THE TOP OF BINDER COURSE ELEVATION WITH TEMPORARY RAMPS REQUIRED AT THE BRIDGE. THE TEMPORARY RAMPS SHALL BE CONSIDERED AS INCLUDED IN THE COST OF THE HMA BINDER COURSE.

NOTES:

1. PLACE TRAFFIC CONTROL SIGNS AND DEVICES AS SHOWN IN STANDARD 701321.
2. ALL TEMPORARY BRIDGE TRAFFIC SIGNALS FOR STAGE 1 AND STAGE 2 SHALL BE CONSIDERED AS ONE EACH.
3. BARRIER OFFSETS ARE FROM THE CENTER OF THE BARRIER.
4. TEMPORARY PAVEMENT MARKINGS INCLUDED IN COST OF TRAFFIC CONTROL AND PROTECTION 701321.



PLAN	DATE
SURVEYED	
NOTE BOOK	
ALIGNMENT CHECKED	
PT. OF WAY CHECKED	
PROP. FILE NAME	

PROFILE	DATE
SURVEYED	
GRADES CHECKED	
STRUCTURE NOTATING CHECKED	

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PLOT DATE = 2/14/2011	DATE - 2-26-11		REVISED -

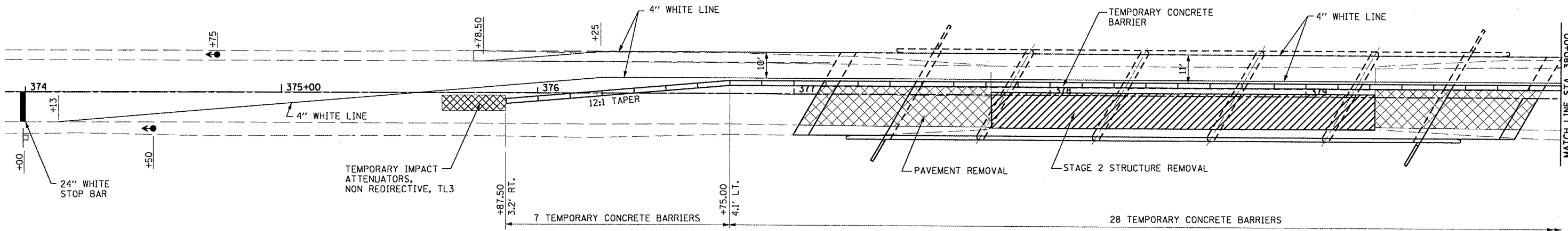
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 1 CONSTRUCTION PLAN

SCALE: 1"=20' SHEET NO. 1 OF 2 SHEETS STA. 374+00 TO STA. 380+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B)BR	HENDERSON	70	10
CONTRACT NO. 68298				
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT				

STAGE 2

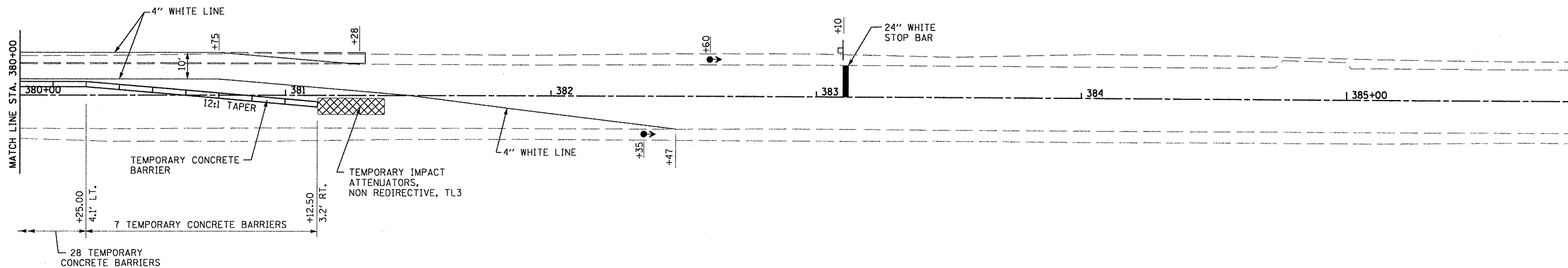
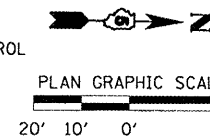


STAGE 2 CONSTRUCTION OF EAST SIDE

1. RELOCATE TEMPORARY CONCRETE BARRIERS, TEMPORARY IMPACT ATTENUATORS AND TEMPORARY MARKINGS AS DETAILED ON TRAFFIC CONTROL AND PROTECTION STANDARD 701321.
2. REMOVE GUARDRAIL, APPROACH PAVEMENT AND REMAINING STRUCTURE FOR EAST SIDE, INCLUDING SECTIONS OF TEMPORARY SOIL RETENTION SYSTEM DESIGNATED TO BE REMOVED AFTER STAGE 1 CONSTRUCTION.
3. CONSTRUCT PROPOSED STRUCTURE, APPROACH PAVEMENT, APPROACH PAVEMENT CONNECTORS, GUARDRAIL AND ALL OTHER COLLATERAL WORK FOR EAST SIDE OF ROADWAY AS SHOWN.
4. REMOVE TRAFFIC CONTROL PAVEMENT MARKINGS, TEMPORARY CONCRETE BARRIERS AND TEMPORARY SIGNALS. COST IS INCLUDED IN TRAFFIC CONTROL AND PROTECTION STANDARD 701321.
5. PAVEMENT MARKINGS WILL BE PLACED AFTER COMPLETION OF STAGE 2.

NOTES:

1. PLACE TRAFFIC CONTROL SIGNS AND DEVICES AS SHOWN IN STANDARD 701321.
2. ALL TEMPORARY BRIDGE TRAFFIC SIGNALS FOR STAGE 1 AND STAGE 2 SHALL BE CONSIDERED AS ONE EACH.
3. BARRIER OFFSETS ARE FROM THE CENTER OF THE BARRIER.
4. TEMPORARY PAVEMENT MARKINGS INCLUDED IN COST OF TRAFFIC CONTROL AND PROTECTION 701321.



DATE	
BY	
DESIGNED	
CHECKED	
IN CHARGE	
PROJECT NO.	
DATE	
BY	
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IN CHARGE	
PROJECT NO.	

DATE	
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PROJECT NO.	
DATE	
BY	
DESIGNED	
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IN CHARGE	
PROJECT NO.	

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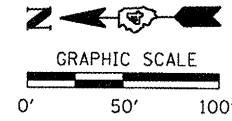
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		CHECKED - MAR	REVISED -
		DATE - 2-26-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE 2 CONSTRUCTION PLAN

SCALE: 1"=20' SHEET NO. 2 OF 2 SHEETS STA. 374+00 TO STA. 384+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B)BR	HENDERSON	70	11
CONTRACT NO. 68298			FED. ROAD DIST. NO. 4 (ILLINOIS) FED. AID PROJECT	

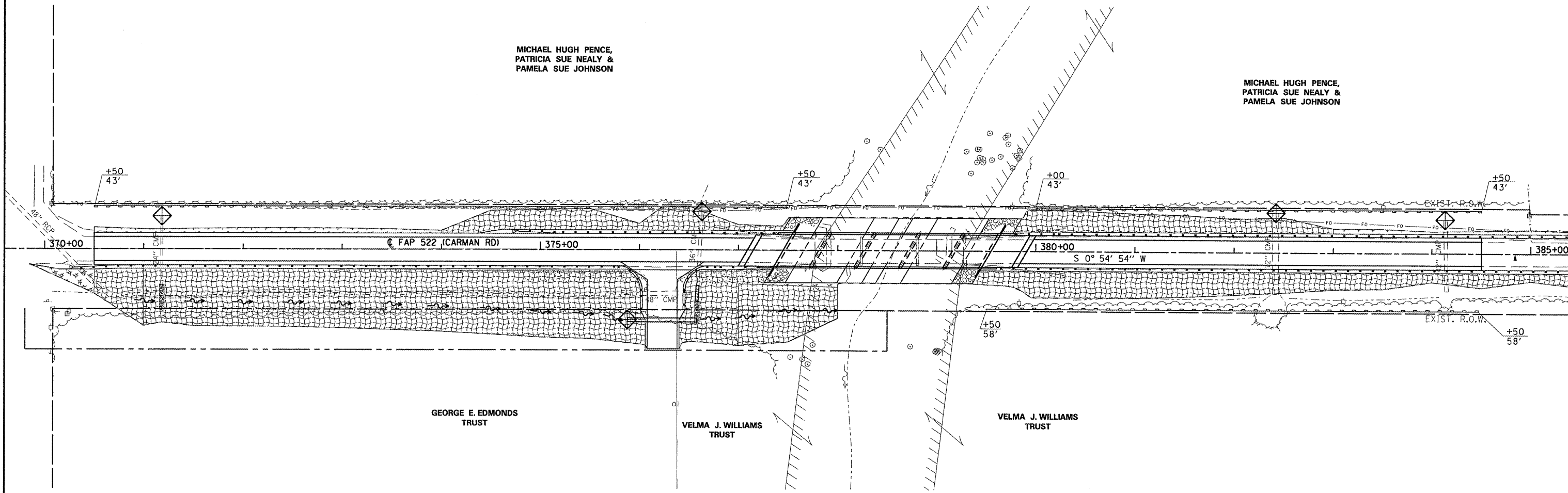


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APPROVED	
NOTE BOOK NO.	
FILE NAME	



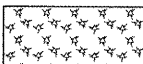
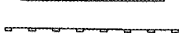
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DESIGNED	
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ALIGNED	
APPROVED	
NOTE BOOK NO.	
FILE NAME	

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PATRICIA SUE NEALY &
PAMELA SUE JOHNSON

MICHAEL HUGH PENCE,
PATRICIA SUE NEALY &
PAMELA SUE JOHNSON



LEGEND

-  INLET AND PIPE PROTECTION
-  EROSION CONTROL BLANKET
-  MULCH METHOD 2 STABILIZED
-  PERIMETER EROSION BARRIER- SILT FILTER

HURST-ROSCHE ENGINEERS, INC.
HILLSBORO, ILLINOIS 62049
(217)552-3959 FAX (217)552-3212

HR
HURST-ROSCHE
ENGINEERS, INC.

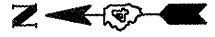
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	PLOT DATE = 2/14/2011	DATE - 2-26-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN

SCALE: 1"=50' SHEET NO. 1 OF 1 SHEETS STA. 370+00 TO STA. 385+00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B)BR	HENDERSON	70	12
CONTRACT NO. 68298				
FED. ROAD DIST. NO. 4 ILLINOIS/FED. AID PROJECT				

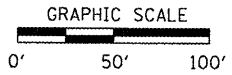
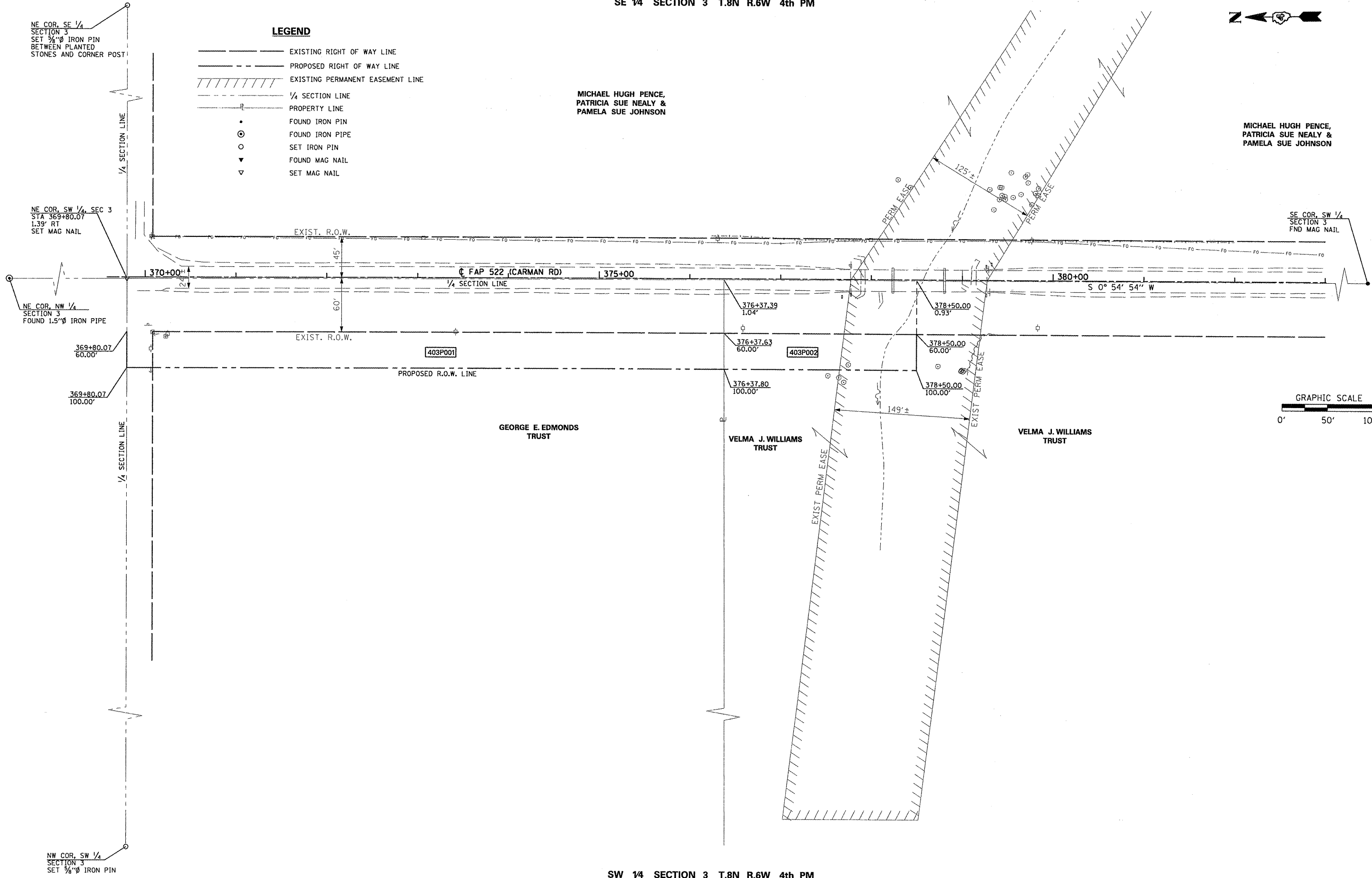


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PATRICIA SUE NEALY &
PAMELA SUE JOHNSON

LEGEND

- EXISTING RIGHT OF WAY LINE
- - - PROPOSED RIGHT OF WAY LINE
- /// EXISTING PERMANENT EASEMENT LINE
- 1/4 SECTION LINE
- PROPERTY LINE
- FOUND IRON PIN
- ⊙ FOUND IRON PIPE
- SET IRON PIN
- ▼ FOUND MAG NAIL
- ▽ SET MAG NAIL

MICHAEL HUGH PENCE,
PATRICIA SUE NEALY &
PAMELA SUE JOHNSON



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HILLSBORO, ILLINOIS 62049
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FILE NAME u:\198-1785_wa*7_honey_oreek\dgn\0468298-sht-row.dgn	USER NAME = HURST-ROSCHKE	DESIGNED - JBM	REVISED -
PLOT SCALE = 100.0004' / IN.	CHECKED -	REVISOR -	REVISOR -
PLOT DATE = 2/14/2011	DATE - 2-2-11	REVISOR -	REVISOR -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS	
PROJECT	JOB NO.
SHEET NO. 1 OF 1 SHEETS	STA. 370+00 TO STA. 384+00

F.A.P. RTE. 552	SECTION (14-1-B1)BR	COUNTY HENDERSON	TOTAL SHEETS 70	SHEET NO. 13
CONTRACT NO. 68298				
FED. ROAD DIST. NO. 4 [ILLINOIS] FED. AID PROJECT				

Bench Mark: Railroad spike in power pole on the west side of the road. The first pole south of the existing bridge. Elevation = 533.59.

Existing Structure: Structure Number 036-3002. 3-span, non-composite continuous steel wide flange beam supporting a cast-in-place concrete deck constructed in 1953 as Section 14-1-B1 on FAS-418. The back to back abutments dimension is 150' with an out-to-out deck width of 26' constructed at a 0° skew with the Carman Road alignment. The flowline of Honey Creek is skewed 30° with the centerline of the structure. The structure currently has a 10 tons per axle and 40 tons gross posted weight limit. The structure is to be replaced using stage construction.

No Salvage

DESIGN SPECIFICATIONS
2010 AASHTO LRFD Bridge Design Specifications

DESIGN STRESSES
FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 50,000$ psi (M270 Grade 50)
 $f_y = 36,000$ psi (M270 Grade 36)

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

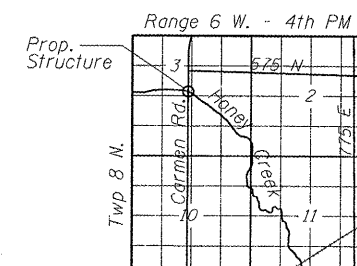
SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.100
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.142
Soil Site Class = D

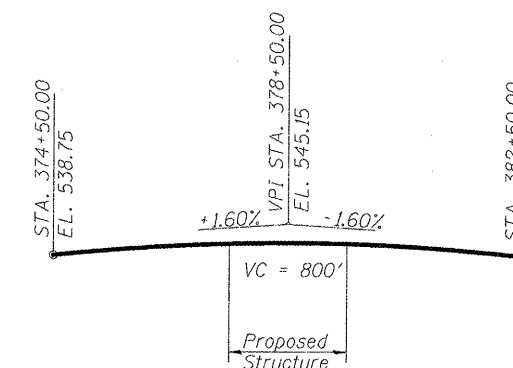
STATION 378+50.00
BUILT 20.. BY
STATE OF ILLINOIS
F.A.P. RT. 522 SEC. (14-1-B)BR
LOADING HL-93
STRUCTURE NO. 036-0071

NAME PLATE

See Std. 515001



LOCATION SKETCH



PROFILE GRADE

(Along \bar{C} of Rdwy.)

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	N. Abut.	Pier 1	Pier 2	Pier 3	Pier 4	S. Abut.
	535.0	509.8	507.8	507.2	509.2	535.0

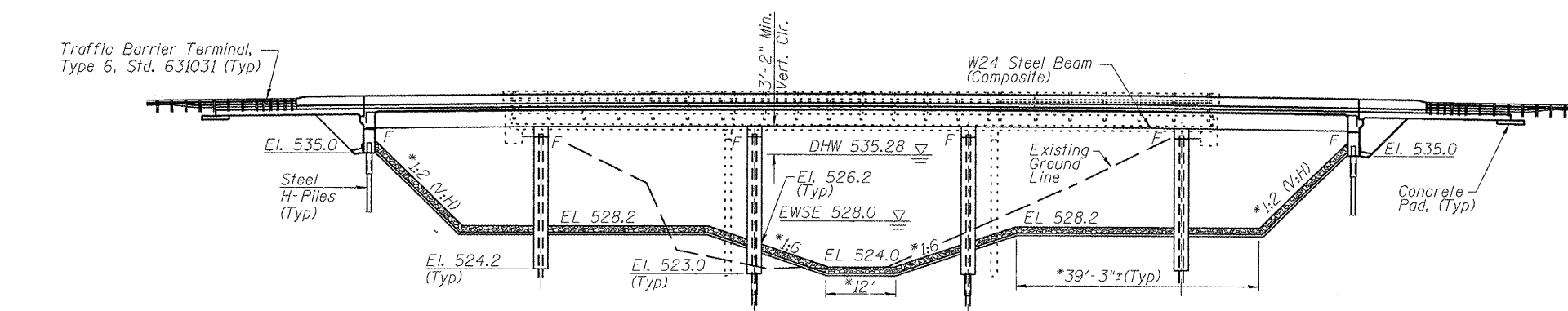
WATERWAY INFORMATION**

Drainage Area = 38450 AC Low Grade Elev. 536.07 @ Sta. 370+25

Flood	Freq. Yr.	Opening Sq. Ft.		Head - Ft.		Headwater El.	
		Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Exst. Overtop.	7	4540	955	534.71	1.36	536.07	
Min. Calc.	10	5237	1060	534.82	1.83	536.65	535.38
Prop. Overtop.	21	6450		535.02	1.05	536.07	
Design	50	8061	1175	535.28	2.34	537.62	536.73
Base	100	9344	1260	535.57	2.74	538.31	537.05
Max. Calc.	500	12413	1275	536.25	2.41	538.66	537.58

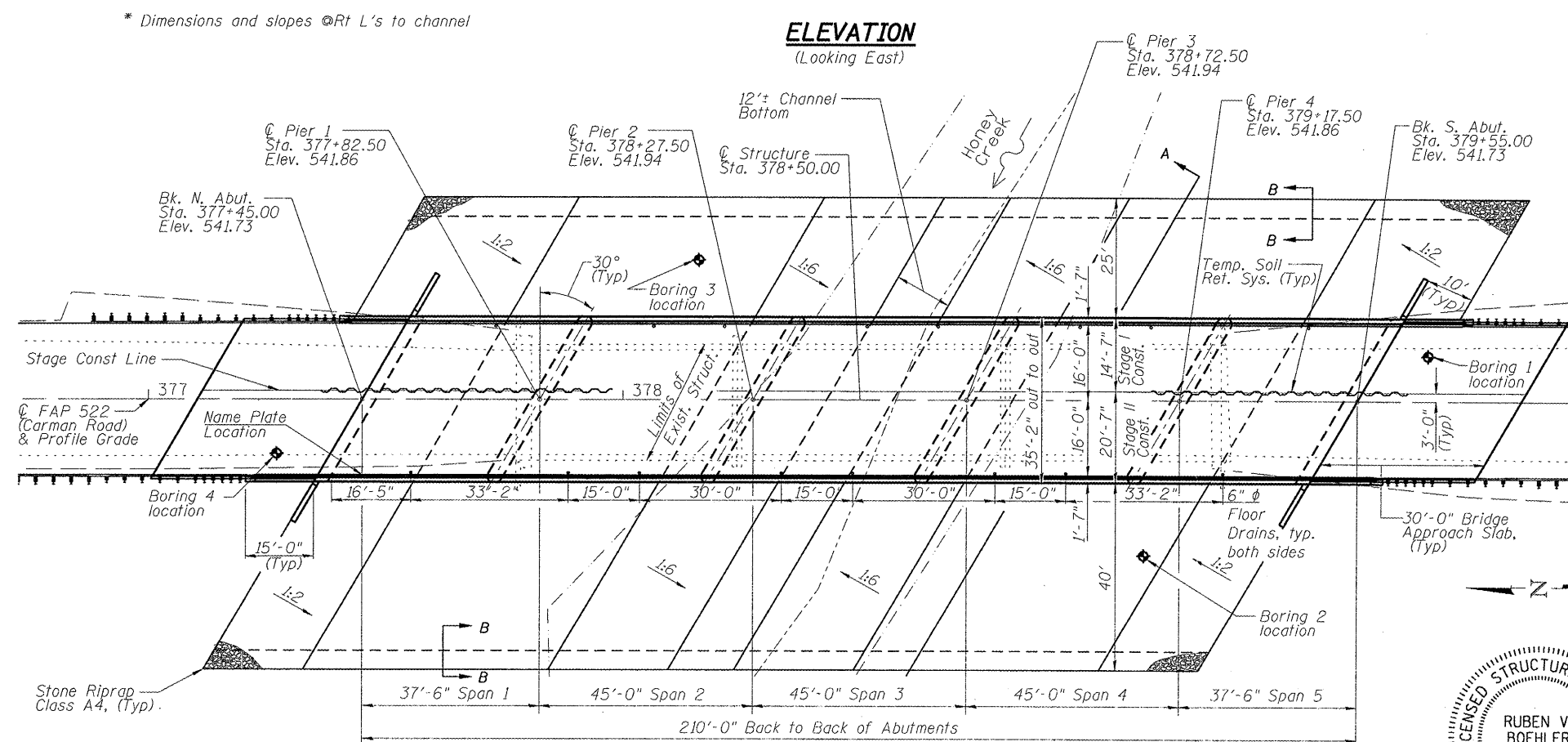
**Waterway Information Table and corresponding elevations have been adjusted by -0.63' to agree with the elevations provided by the local NGVD monuments.

GENERAL PLAN AND ELEVATION
CARMAN RD OVER HONEY CREEK
F.A.P. RTE. 522 - SEC. (14-1-B)BR
HENDERSON COUNTY
STATION 378+50.00
STRUCTURE NO. 036-0071



ELEVATION

(Looking East)

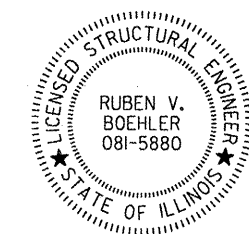


PLAN

NOTE: See sheet 2 of 27 for Sections A-A & B-B.

APPROVED
For Structural Adequacy Only

Rubén V. Boehler
Engineer of Bridges & Structures



Rubén V. Boehler 2-16-2011
RUBEN V. BOEHLER, S.E.
ILLINOIS STRUCTURAL NO. 5880
EXPIRES: NOVEMBER 30, 2012

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HURST-ROSCHKE ENGINEERS, INC.
HILLSBORO, ILLINOIS 62049
(217) 532-3959 FAX (217) 532-3212
HR JOB # 190-1785



FILE NAME =	USER NAME =	DESIGNED - JSP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	F.A.P. RTE. 522	SECTION (14-1-B) BR	COUNTY HENDERSON	TOTAL SHEETS 70	SHEET NO. 14
		CHECKED - CJC	REVISED -		SHEET NO. 1 OF 27 SHEETS	CONTRACT NO. 68298		ILLINOIS FED. AID PROJECT	
		DRAWN - UJ	REVISED -						
		CHECKED - RVB	REVISED -						

INDEX OF SHEETS

1. General Plan and Elevation
2. General Data
3. Stage Construction Plan
4. Temporary Concrete Barrier for Stage Construction
5. Top of Slab Elevation Plan
6. Top of Slab Elevations
7. Top of Slab Elevations
8. Top of North Approach Slab Elevations
9. Top of South Approach Slab Elevations
10. Superstructure Plan
11. Superstructure Details
12. Integral Abutment Diaphragm Details
13. Bridge Approach Slab Details
14. Bridge Approach Slab Details
15. Framing Plan
16. Structural Steel Details
17. Bearing Details
18. North Abutment
19. South Abutment
20. Pier 1
21. Pier 2
22. Pier 3
23. Pier 4
24. HP Pile Details
25. Bar Splicer Assembly Details
26. Cantilever Forming Brackets
27. Subsurface Diagram

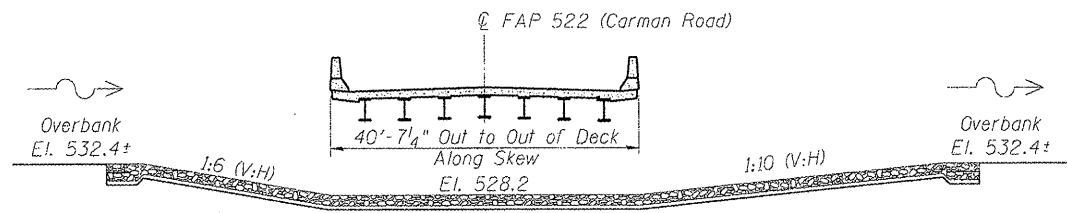
General Notes

1. Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts $\frac{7}{8}$ in. ϕ , holes $\frac{13}{16}$ in. ϕ , unless otherwise noted.
2. Calculated weight of Grade 36 Structural Steel = 8,720 lbs.
Calculated weight of Grade 50 Structural Steel = 108,970 lbs.
3. No field welding is permitted except as specified in the contract documents.
4. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
5. Reinforcement bars designated (E) shall be epoxy coated.
6. If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
7. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
8. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
9. The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Blue, Munsell No. 10B 3/6. See Special Provision for "Cleaning and Painting New Metal Structures".
10. Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
11. Slipforming of the parapet is not allowed.
12. The Contractor is advised that the existing structure contains members that are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the existing structure when developing construction procedures for the complete or partial removal, or replacement of the structure. An existing structure information package is available upon request as noted in the special provisions.
13. Current Ratings on File for Existing Structure
Inventory: HS 13.6
Operating: HS 22.7
Live Load Restrictions: No Overloads

Inventory and Operating Ratings and Live Load Restrictions are provided for information only. Inventory and Operating Ratings are based on HS loading and configuration. Live Load Restrictions are based on Illinois legal loads and configurations. The Ratings and Live Load Restrictions are not necessarily representative of capacities to support the Contractor's equipment.

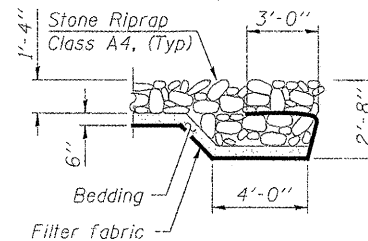
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.		93	93
Stone Riprap, Class A4	Sq. Yd.		2470	2470
Filter Fabric	Sq. Yd.		2470	2470
Removal of Existing Structures	Each	1		1
Structure Excavation	Cu. Yd.		292	292
Floor Drains	Each	16		16
Concrete Structures	Cu. Yd.		287.5	287.5
Concrete Superstructure	Cu. Yd.	365.7		365.7
Bridge Deck Grooving	Sq. Yd.	900		900
Concrete Encasement	Cu. Yd.		17.2	17.2
Protective Coat	Sq. Yd.	1175		1175
Furnishing & Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	4221		4221
Reinforcement Bars, Epoxy Coated	Pound	86,430	29,420	115,850
Bar Splicers	Each	850	244	1094
Furnishing Steel Piles HP12x53	Foot		1304	1304
Furnishing Steel Piles HP14x73	Foot		3132	3132
Driving Piles	Foot		4436	4436
Test Pile Steel HP12x53	Each		2	2
Test Pile Steel HP14x73	Each		4	4
Name Plates	Each	1		1
Anchor Bolts, 1"	Each		84	84
Geocomposite Wall Drain	Sq. Yd.		64	64
Pipe Underdrains for Structures 4"	Foot		134	134
Temporary Soil Retention System	Sq. Ft.		1070	1070
Underwater Structure Excavation Protection-Location 1	Each		1	1
Underwater Structure Excavation Protection-Location 2	Each		1	1
Underwater Structure Excavation Protection-Location 3	Each		1	1
Underwater Structure Excavation Protection-Location 4	Each		1	1
Mechanical Splicers	Each		144	144

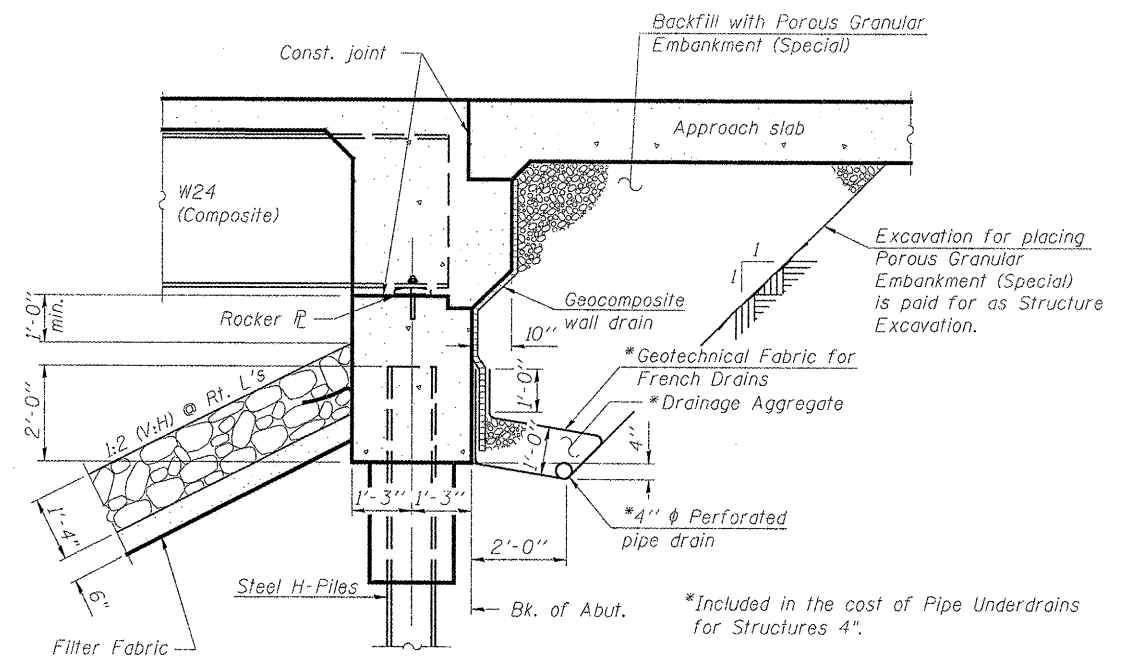


SECTION A-A

(EXCAVATION PAID FOR AS CHANNEL EXCAVATION)



SECTION B-B



SECTION THRU INTEGRAL ABUTMENT

(Horiz. dim. @ Rt. L's)

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 Standard Specifications and Highway Standard 60110).

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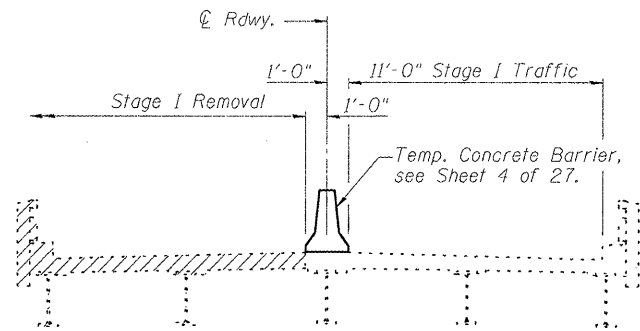
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		CHECKED - CJC	REVISED -
		DRAWN - UJ	REVISED -
		CHECKED - RVB	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

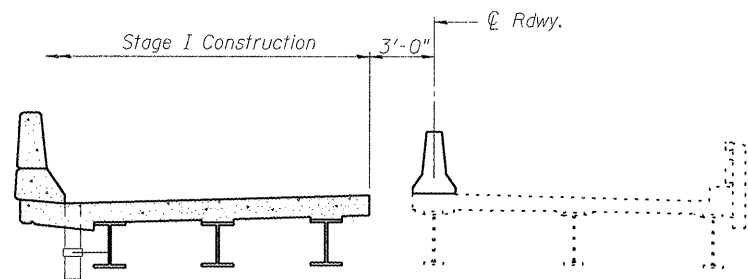
**GENERAL DATA
STRUCTURE NO. 036-0071**

SHEET NO. 2 OF 27 SHEETS

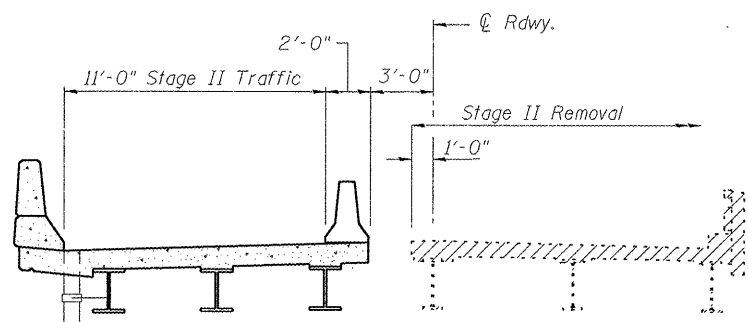
F.A.P. RTE. 522	SECTION (14-1-B1) BR	COUNTY HENDERSON	TOTAL SHEETS 70	SHEET NO. 15
CONTRACT NO. 68298			ILLINOIS FED. AID PROJECT	



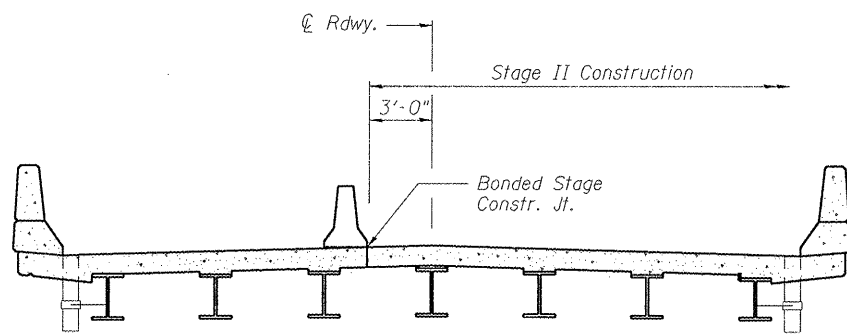
STAGE I REMOVAL



STAGE I CONSTRUCTION



STAGE II REMOVAL

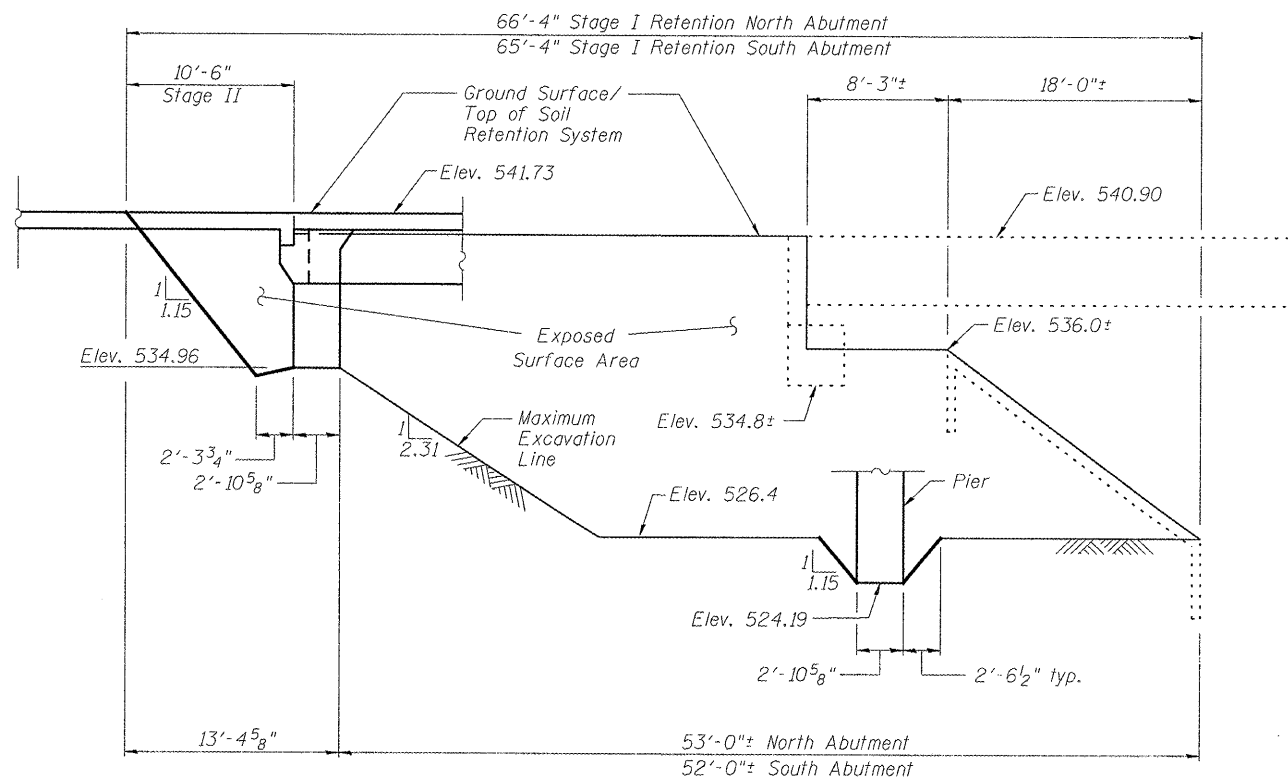


STAGE II CONSTRUCTION

Notes:

A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

All Staging cross sections are looking South.
For Quantity of Temporary Concrete Barrier, see Roadway Plans.
Hatched area indicates Removal of Existing Structures.



TEMPORARY SOIL RETENTION SYSTEM

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ENGINEERS, INC.

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		CHECKED - CJC	REVISED -
PLOT SCALE =		DRAWN - UJ	REVISED -
PLOT DATE =		CHECKED - RVB	REVISED -

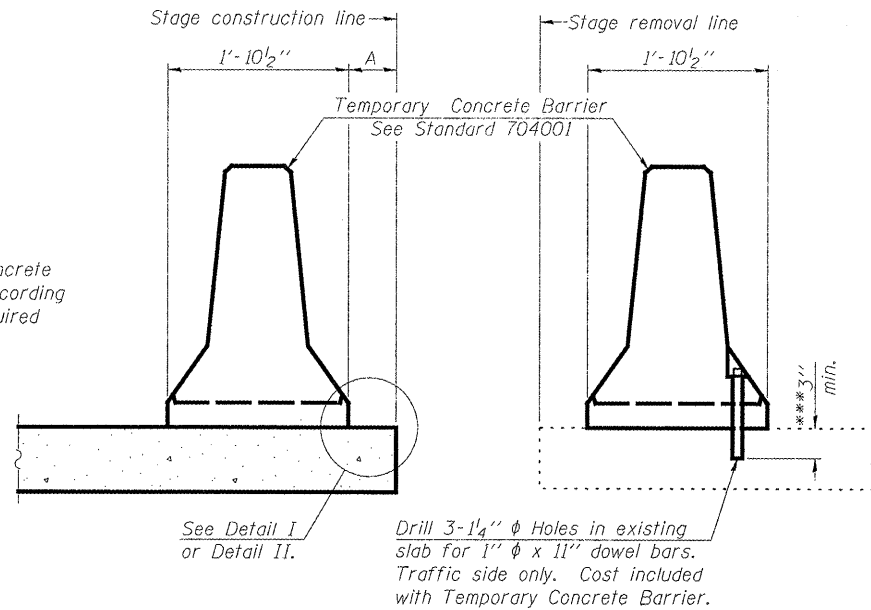
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION PLAN
STRUCTURE NO. 036-0071

SHEET NO. 3 OF 27 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	16
CONTRACT NO. 68298				
ILLINOIS FED. AID PROJECT				

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



NEW SLAB

EXISTING SLAB

SECTIONS THRU SLAB OR DECK BEAM

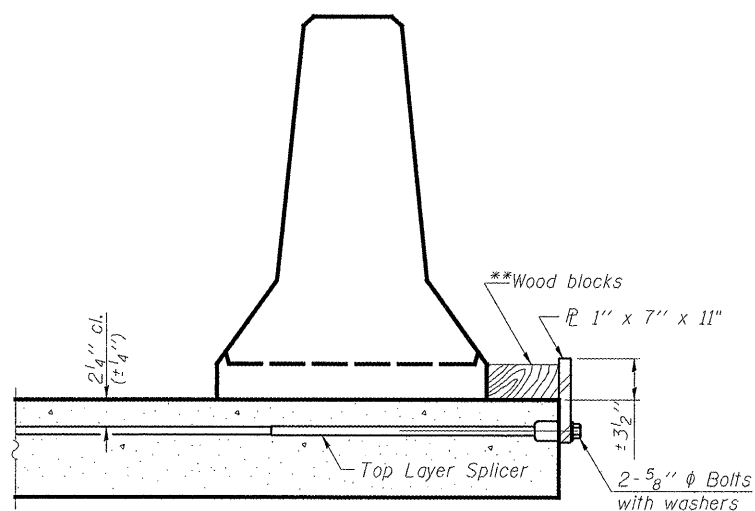
NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7" x 11" steel \mathbb{R} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \mathbb{C} of each barrier panel.

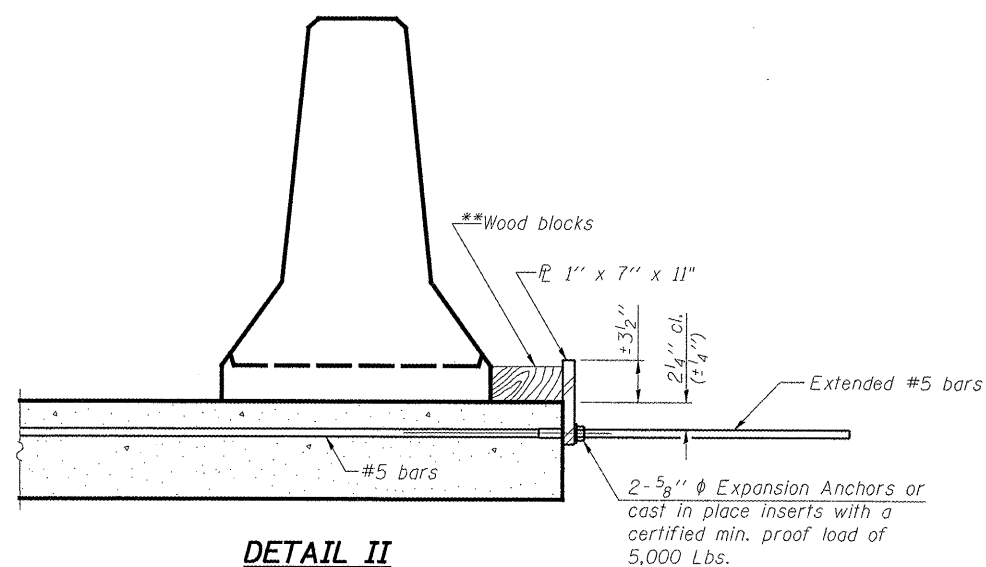
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1" x 7" x 11" steel \mathbb{R} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \mathbb{C} of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 11" 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.

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

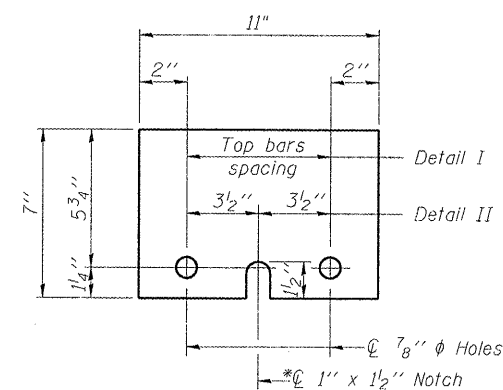


DETAIL I



DETAIL II

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



STEEL RETAINER \mathbb{R} 1" x 7" x 11"

* Required only with Detail II

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HR JOB # 190-1785

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ENGINEERS, INC.

R-27

7-1-10

FILE NAME *	USER NAME *	DESIGNED - JSP	REVISED -
		CHECKED - CJC	REVISED -
		DRAWN - UJ	REVISED -
		CHECKED - RVB	REVISED -

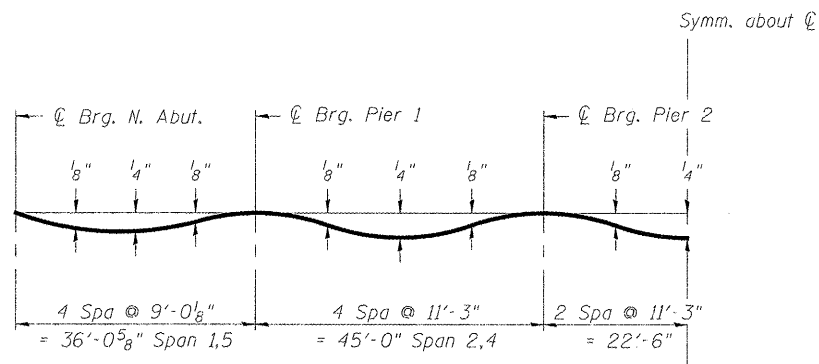
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 036-0071

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
808	94BR-1	CHAMPAIGN	70	17
CONTRACT NO. 70582				

SHEET NO. 4 OF 19 SHEETS

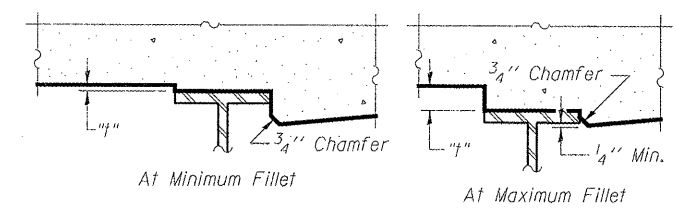
ILLINOIS FED. AID PROJECT



DEAD LOAD DEFLECTION DIAGRAM

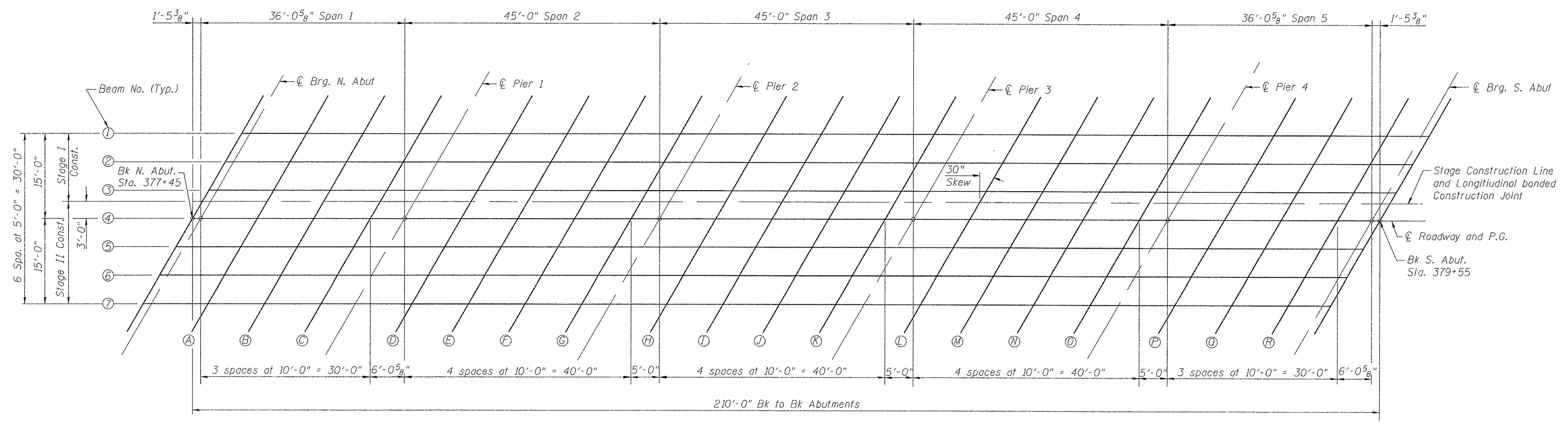
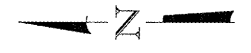
(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 6 & 7 of 27.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 6 & 7 of 27, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



PLAN

HURST-ROSCHKE ENGINEERS, INC.
 HILLSBORO, ILLINOIS 62049
 (217)532-3959 FAX (217)532-3212
 HR JOB # 190-1785

FILE NAME =	USER NAME =	DESIGNED - JSP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATION PLAN STRUCTURE NO. 036-0071	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - CJC	REVISED -			522	(14-1-B1) BR	HENDERSON	70	18	
		DRAWN - UJ	REVISED -			CONTRACT NO. 68298					
		CHECKED - RVB	REVISED -			ILLINOIS FED. AID PROJECT					

BEAM #1

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include Bk. N. Abut., Brg. N. Abut. (A-R), Pier 1 (D-N), Pier 2 (H-R), Pier 3 (L-R), Pier 4 (O-R), and Brg. S. Abut., Bk. S. Abut.

BEAM #2

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include Bk. N. Abut., Brg. N. Abut. (A-R), Pier 1 (D-N), Pier 2 (H-R), Pier 3 (L-R), Pier 4 (O-R), and Brg. S. Abut., Bk. S. Abut.

BEAM #3

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include Bk. N. Abut., Brg. N. Abut. (A-R), Pier 1 (D-N), Pier 2 (H-R), Pier 3 (L-R), Pier 4 (O-R), and Brg. S. Abut., Bk. S. Abut.

LONGITUDINAL BONDED CONST. JOINT

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include Bk. N. Abut., Brg. N. Abut. (A-C), Pier 1 (D-F), Pier 2 (G-I), Pier 3 (J-L), Pier 4 (M-O), and Brg. S. Abut., Bk. S. Abut.

ROADWAY, P.G., AND BEAM #4

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include Bk. N. Abut., Brg. N. Abut. (A-C), Pier 1 (D-F), Pier 2 (G-I), Pier 3 (J-L), Pier 4 (M-O), and Brg. S. Abut., Bk. S. Abut.

BEAM #5

Table with 5 columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include Bk. N. Abut., Brg. N. Abut. (A-C), Pier 1 (D-F), Pier 2 (G-I), Pier 3 (J-L), Pier 4 (M-O), and Brg. S. Abut., Bk. S. Abut.

HURST-ROSCHKE ENGINEERS, INC. HILLSBORO, ILLINOIS 62049 (217)532-3959 FAX (217)532-3312 HR JOB # 190-1785



Table with 4 columns: USER NAME, DESIGNED, CHECKED, PLOT SCALE, PLOT DATE. Values include JSP, CJC, UJ, RVB.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS STRUCTURE NO. 036-0071

SHEET NO. 6 OF 27 SHEETS

Table with 5 columns: F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO. Values include 522, (14-1-B1) BR, HENDERSON, 70, 19.

CONTRACT NO. 68298 ILLINOIS FED. AID PROJECT

BEAM #6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	377+39.23	10.00	541.55	541.55
⊕ Brg. N. Abut.	377+40.67	10.00	541.55	541.55
A	377+50.67	10.00	541.60	541.61
B	377+60.67	10.00	541.63	541.65
C	377+70.67	10.00	541.67	541.67
⊕ Pier 1	377+76.73	10.00	541.69	541.69
D	377+86.73	10.00	541.71	541.72
E	377+96.73	10.00	541.74	541.75
F	378+06.73	10.00	541.76	541.77
G	378+16.73	10.00	541.77	541.78
⊕ Pier 2	378+21.73	10.00	541.78	541.78
H	378+31.73	10.00	541.79	541.80
I	378+41.73	10.00	541.79	541.81
J	378+51.73	10.00	541.79	541.81
K	378+61.73	10.00	541.79	541.80
⊕ Pier 3	378+66.73	10.00	541.79	541.79
L	378+76.73	10.00	541.78	541.79
M	378+86.73	10.00	541.77	541.78
N	378+96.73	10.00	541.75	541.76
O	379+06.73	10.00	541.73	541.73
⊕ Pier 4	379+11.73	10.00	541.72	541.72
P	379+21.73	10.00	541.69	541.70
Q	379+31.73	10.00	541.66	541.67
R	379+41.73	10.00	541.63	541.63
⊕ Brg. S. Abut.	379+47.78	10.00	541.60	541.60
Bk. S. Abut.	379+49.23	10.00	541.60	541.60

BEAM #7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	377+36.34	15.00	541.44	541.44
⊕ Brg. N. Abut.	377+37.78	15.00	541.45	541.45
A	377+47.78	15.00	541.49	541.50
B	377+57.78	15.00	541.53	541.54
C	377+67.78	15.00	541.56	541.57
⊕ Pier 1	377+73.84	15.00	541.58	541.58
D	377+83.84	15.00	541.61	541.62
E	377+93.84	15.00	541.64	541.65
F	378+03.84	15.00	541.66	541.67
G	378+13.84	15.00	541.67	541.68
⊕ Pier 2	378+18.84	15.00	541.68	541.68
H	378+28.84	15.00	541.69	541.70
I	378+38.84	15.00	541.70	541.71
J	378+48.84	15.00	541.70	541.71
K	378+58.84	15.00	541.70	541.70
⊕ Pier 3	378+63.84	15.00	541.70	541.70
L	378+73.84	15.00	541.69	541.70
M	378+83.84	15.00	541.68	541.69
N	378+93.84	15.00	541.66	541.67
O	379+03.84	15.00	541.64	541.65
⊕ Pier 4	379+08.84	15.00	541.63	541.63
P	379+18.84	15.00	541.61	541.62
Q	379+28.84	15.00	541.58	541.59
R	379+38.84	15.00	541.54	541.55
⊕ Brg. S. Abut.	379+44.90	15.00	541.52	541.52
Bk. S. Abut.	379+46.34	15.00	541.51	541.51

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TOP OF SLAB ELEVATIONS
STRUCTURE NO. 036-0071

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	20
			CONTRACT NO. 68298	
ILLINOIS FED. AID PROJECT				

SHEET NO. 7 OF 27 SHEETS

EAST EGDE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End of North Appr. Slab	377+24.24	-16.00	541.36
A1	377+34.24	-16.00	541.41
A2	377+44.24	-16.00	541.46
S. End of North Appr. Slab	377+54.24	-16.00	541.50

EAST EDGE OF LANE

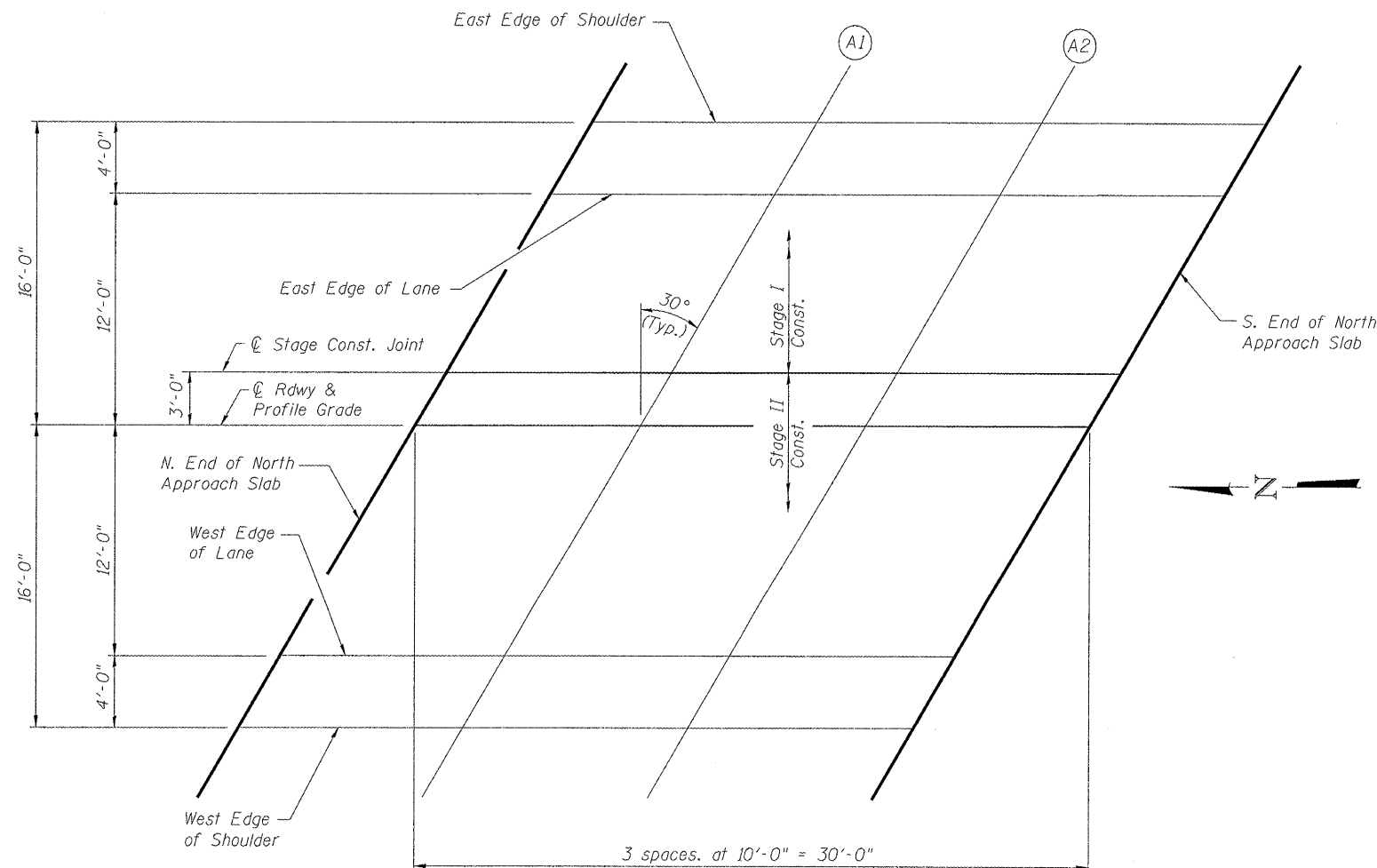
Location	Station	Offset	Theoretical Grade Elevations
N. End of North Appr. Slab	377+21.93	-12.00	541.43
A1	377+31.93	-12.00	541.48
A2	377+41.93	-12.00	541.53
S. End of North Appr. Slab	377+51.93	-12.00	541.57

STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations
N. End of North Appr. Slab	377+16.73	-3.00	541.55
A1	377+26.73	-3.00	541.60
A2	377+36.73	-3.00	541.65
S. End of North Appr. Slab	377+46.73	-3.00	541.69

RDWY AND PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
N. End of North Appr. Slab	377+15.00	0.00	541.59
A1	377+25.00	0.00	541.64
A2	377+35.00	0.00	541.69
S. End of North Appr. Slab	377+45.00	0.00	541.73



PLAN
North Approach

WEST EDGE OF LANE

Location	Station	Offset	Theoretical Grade Elevations
N. End of North Appr. Slab	377+08.07	12.00	541.36
A1	377+18.07	12.00	541.41
A2	377+28.07	12.00	541.47
S. End of North Appr. Slab	377+38.07	12.00	541.51

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End of North Appr. Slab	377+05.76	16.00	541.26
A1	377+15.76	16.00	541.32
A2	377+25.76	16.00	541.37
S. End of North Appr. Slab	377+35.76	16.00	541.42

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DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 036-0071

SHEET NO. 8 OF 27 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	21
CONTRACT NO. 68298			ILLINOIS FED. AID PROJECT	

EAST EGDE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End of South Appr. Slab	379+64.24	-16.00	541.42
A3	379+74.24	-16.00	541.37
A4	379+84.24	-16.00	541.32
S. End of South Appr. Slab	379+94.24	-16.00	541.26

EAST EDGE OF LANE

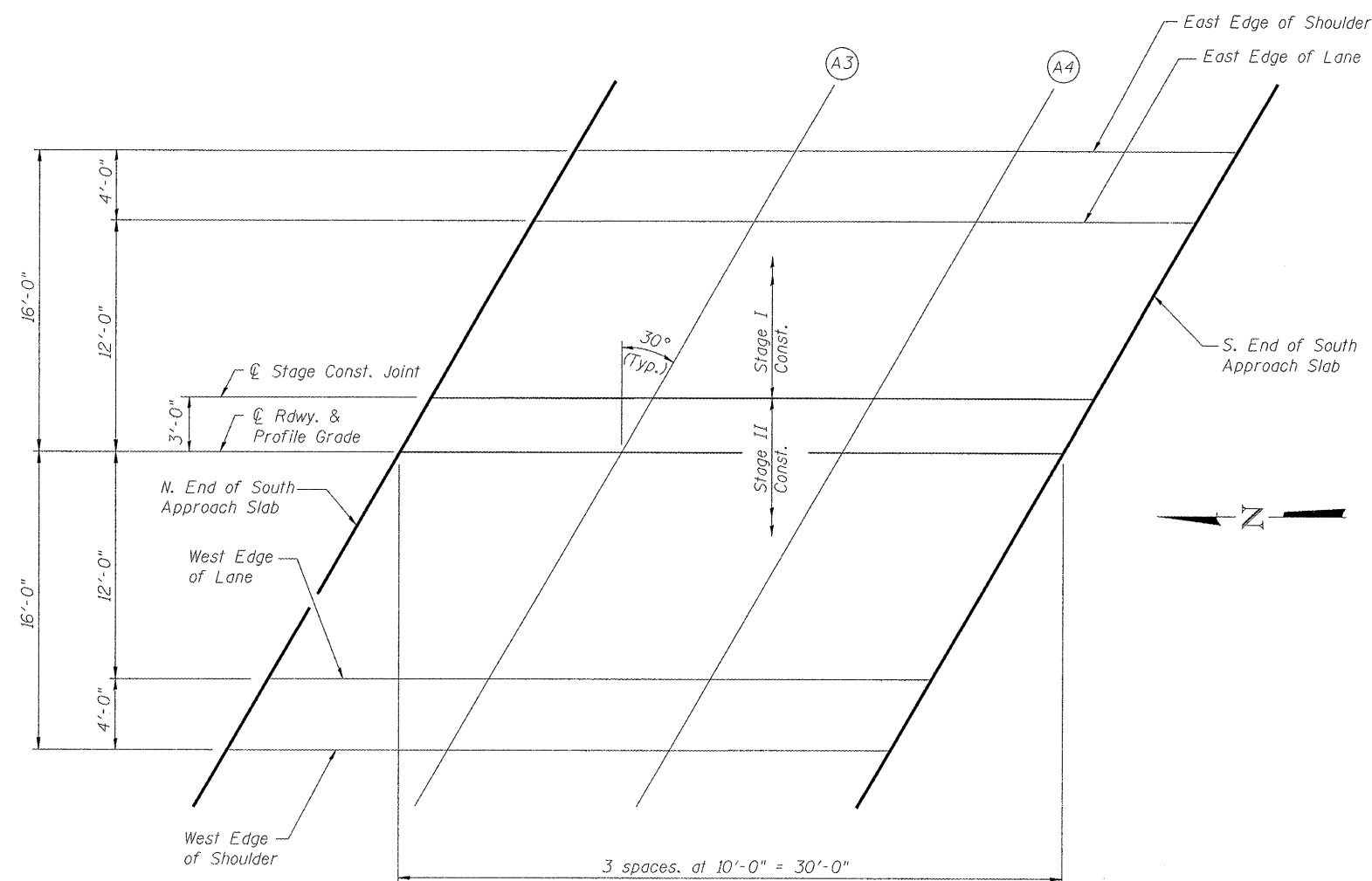
Location	Station	Offset	Theoretical Grade Elevations
N. End of South Appr. Slab	379+61.93	-12.00	541.51
A3	379+71.93	-12.00	541.47
A4	379+81.93	-12.00	541.41
S. End of South Appr. Slab	379+91.93	-12.00	541.36

STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations
N. End of South Appr. Slab	379+56.73	-3.00	541.68
A3	379+66.73	-3.00	541.63
A4	379+76.73	-3.00	541.58
S. End of South Appr. Slab	379+86.73	-3.00	541.53

☉ ROADWAY AND PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
N. End of South Appr. Slab	379+55.00	0.00	541.73
A3	379+65.00	0.00	541.69
A4	379+75.00	0.00	541.64
S. End of South Appr. Slab	379+85.00	0.00	541.59



PLAN
South Approach

WEST EDGE OF LANE

Location	Station	Offset	Theoretical Grade Elevations
N. End of South Appr. Slab	379+48.07	12.00	541.57
A3	379+58.07	12.00	541.53
A4	379+68.07	12.00	541.48
S. End of South Appr. Slab	379+78.07	12.00	541.43

WEST EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
N. End of South Appr. Slab	379+45.76	16.00	541.50
A3	379+55.76	16.00	541.46
A4	379+65.76	16.00	541.41
S. End of South Appr. Slab	379+75.76	16.00	541.36

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		CHECKED - CJC	REVISD -
PLOT SCALE *		DRAWN - UJ	REVISD -
PLOT DATE *		CHECKED - RVB	REVISD -

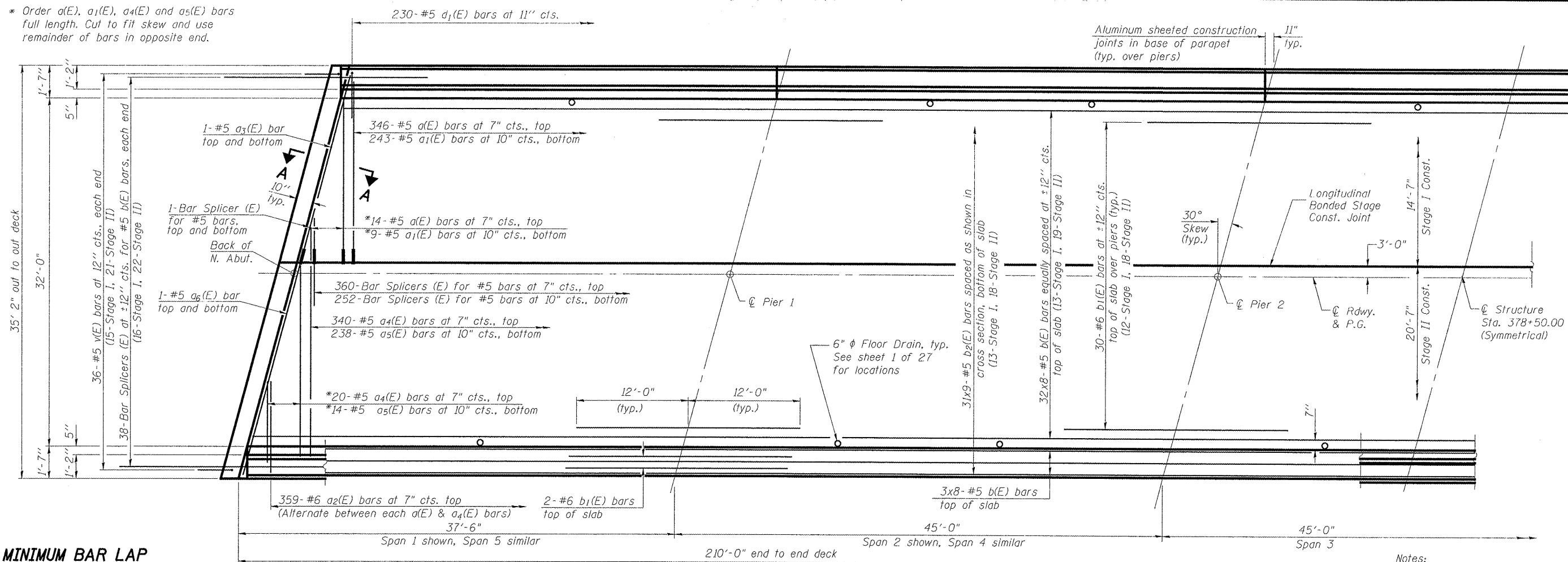
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TOP OF SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 036-0071

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	22
CONTRACT NO. 68298				
ILLINOIS FED. AID PROJECT				

SHEET NO. 9 OF 27 SHEETS

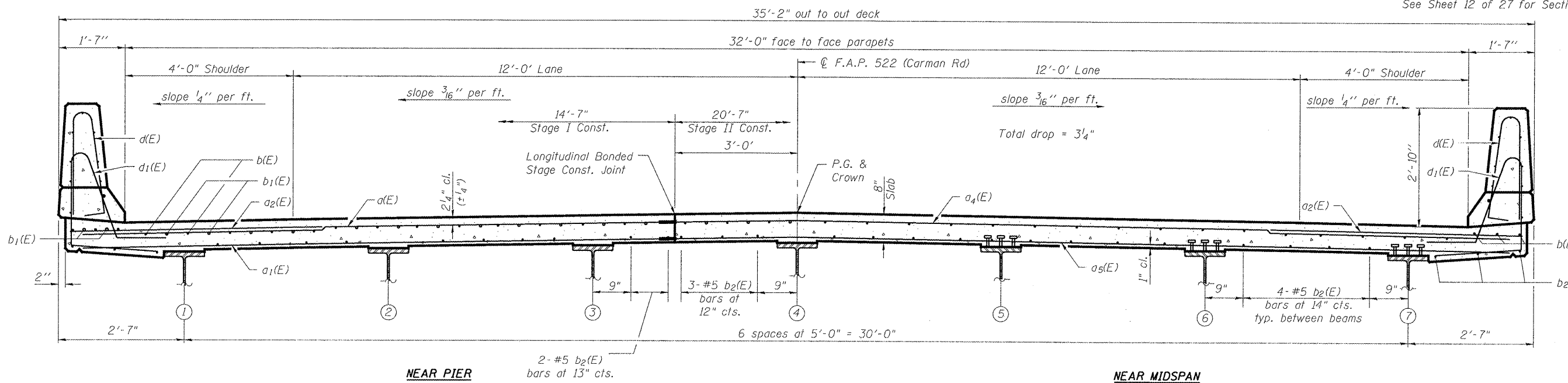
* Order a(E), a₁(E), a₄(E) and a₅(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.



MINIMUM BAR LAP
#5 bar = 2'-7"

PARTIAL PLAN

Notes:
See Sheet 11 of 27 for superstructure details and Bill of Material.
Bars indicated thus 19x8-#5 etc. indicates 19 lines of bars with 8 lengths per line.
See Sheet 11 of 27 for parapet reinforcement.
See Sheet 12 of 27 for Section A-A.



CROSS SECTION
(Looking South)

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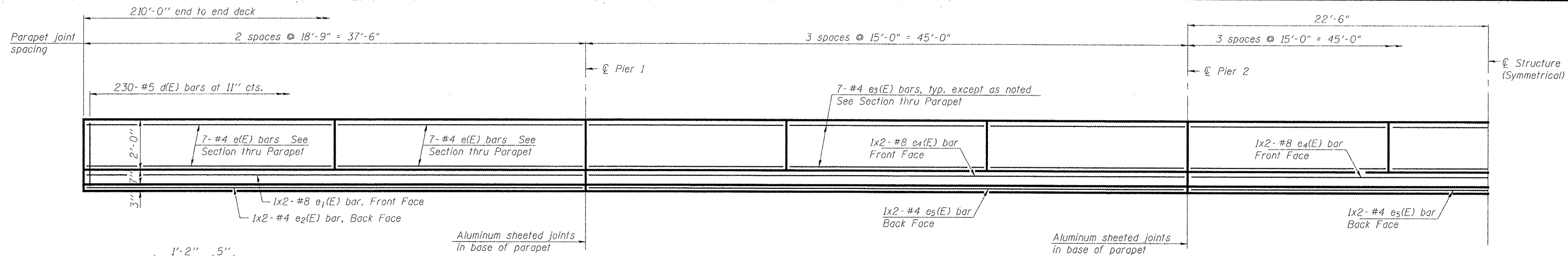
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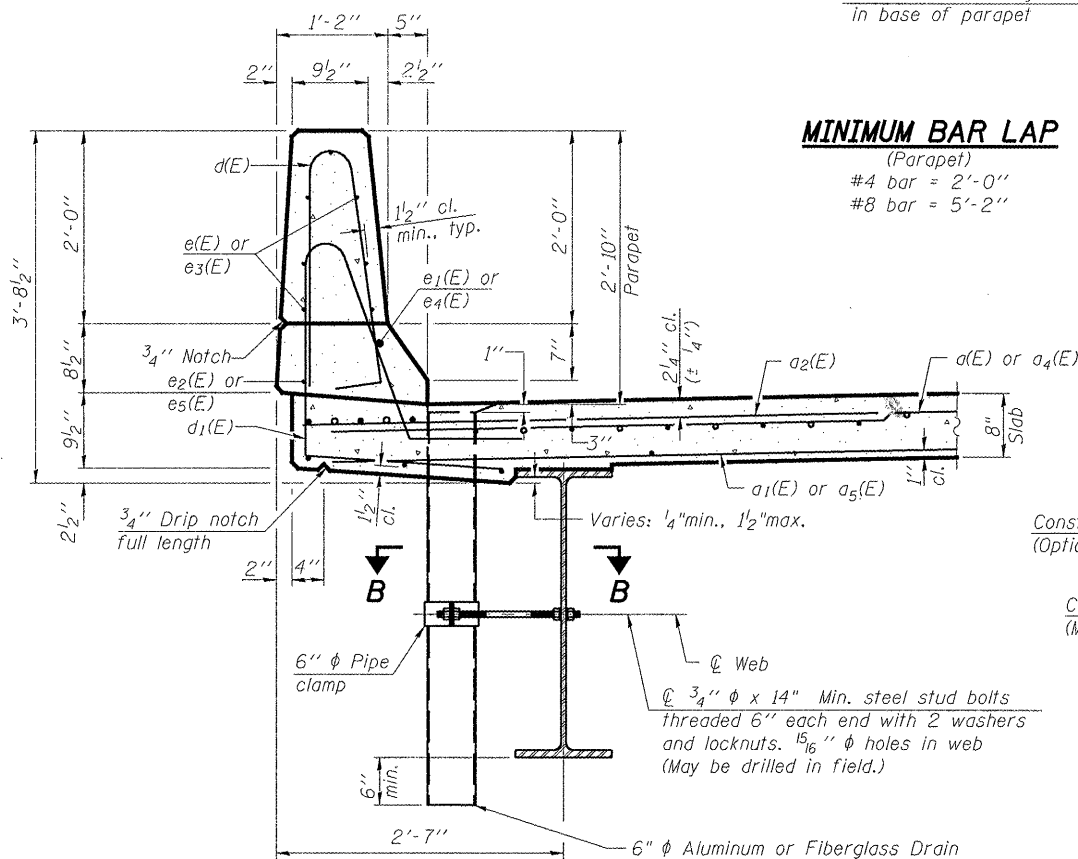
SUPERSTRUCTURE
STRUCTURE NO. 036-0071

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	23
SHEET NO. 10 OF 27 SHEETS			CONTRACT NO. 68298	

ILLINOIS FED. AID PROJECT

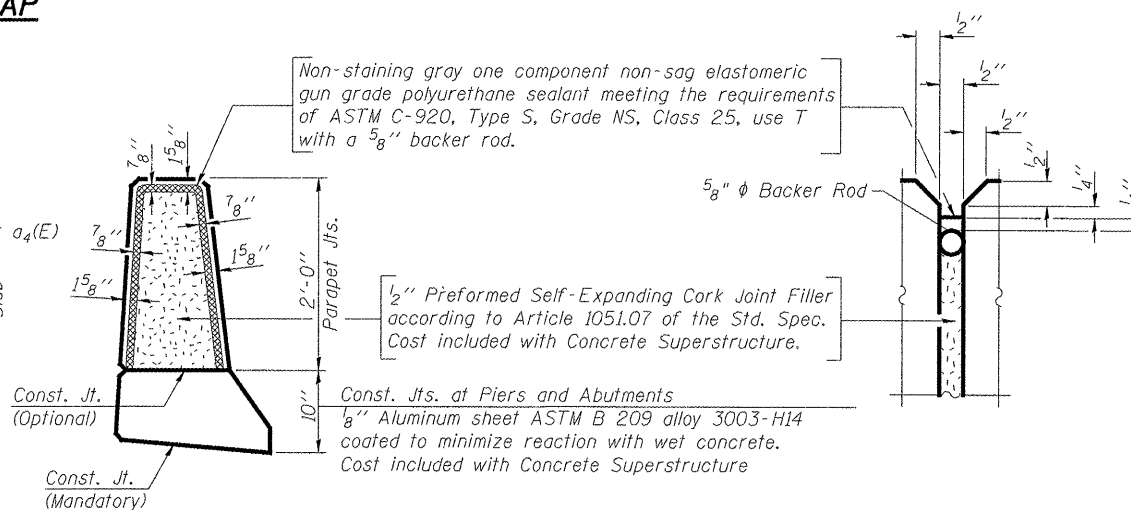


INSIDE ELEVATION OF PARAPET



SECTION THRU PARAPET

MINIMUM BAR LAP
(Parapet)
#4 bar = 2'-0"
#8 bar = 5'-2"



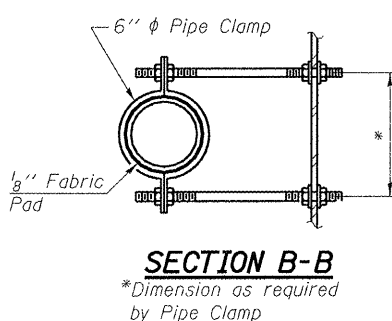
PARAPET JOINT DETAILS

Notes:
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Society of Protective Coatings Spec. SSPC-SPI prior to painting.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.

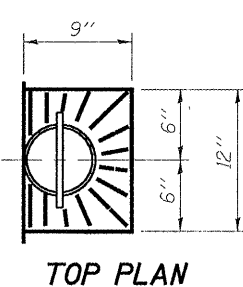
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	360	#5	13'-11"	—
a1(E)	252	#5	13'-9"	—
a2(E)	718	#6	6'-6"	—
a3(E)	4	#5	16'-3"	—
a4(E)	360	#5	19'-11"	—
a5(E)	252	#5	19'-9"	—
a6(E)	4	#5	23'-2"	—
b(E)	304	#5	28'-5"	—
b1(E)	136	#6	24'-0"	—
b2(E)	279	#5	25'-7"	—
d(E)	460	#5	5'-7"	┌
d1(E)	460	#5	7'-4"	┌
e(E)	56	#4	18'-5"	—
e1(E)	8	#8	21'-2"	—
e2(E)	8	#4	19'-7"	—
e3(E)	126	#4	14'-8"	—
e4(E)	12	#8	24'-11"	—
e5(E)	12	#4	23'-4"	—
m(E)	10	#6	16'-6"	—
m1(E)	12	#6	7'-9"	—
m2(E)	10	#6	5'-3"	—
m3(E)	4	#6	2'-6"	—
m4(E)	2	#6	1'-11"	—
m5(E)	10	#6	23'-5"	—
m6(E)	16	#6	8'-5"	—
m7(E)	2	#6	2'-11"	—
m8(E)	2	#6	6'-6"	—
s(E)	72	#5	5'-5"	└
s1(E)	62	#4	8'-4"	└
v(E)	72	#5	3'-10"	└
Reinforcement Bars, Epoxy Coated			Pound	61,815
Concrete Superstructure			Cu. Yds.	254.9

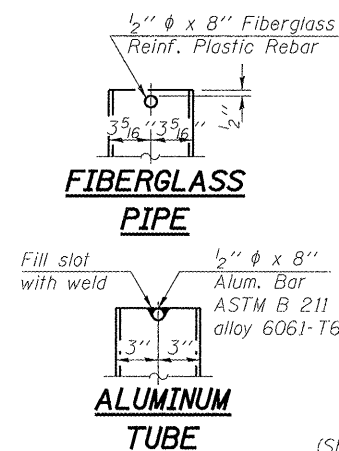
Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.



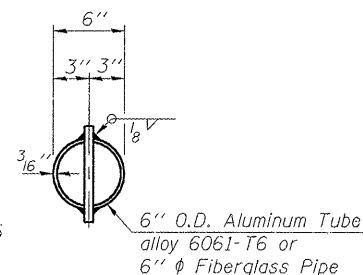
SECTION B-B
*Dimension as required by Pipe Clamp



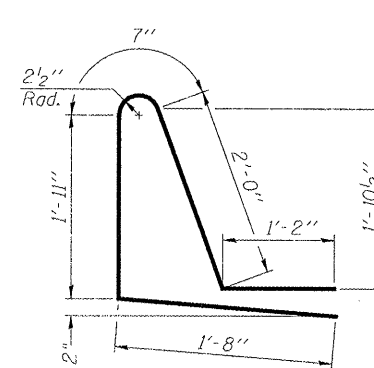
TOP PLAN



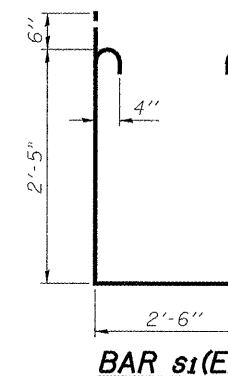
ALUMINUM TUBE TOP PLAN
(Showing Aluminum Tube)



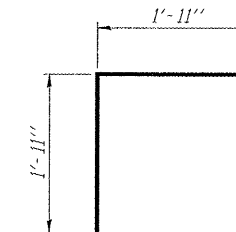
BAR d(E)



BAR d1(E)



BAR s1(E)



BAR v(E)

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S-I-D 7-1-10

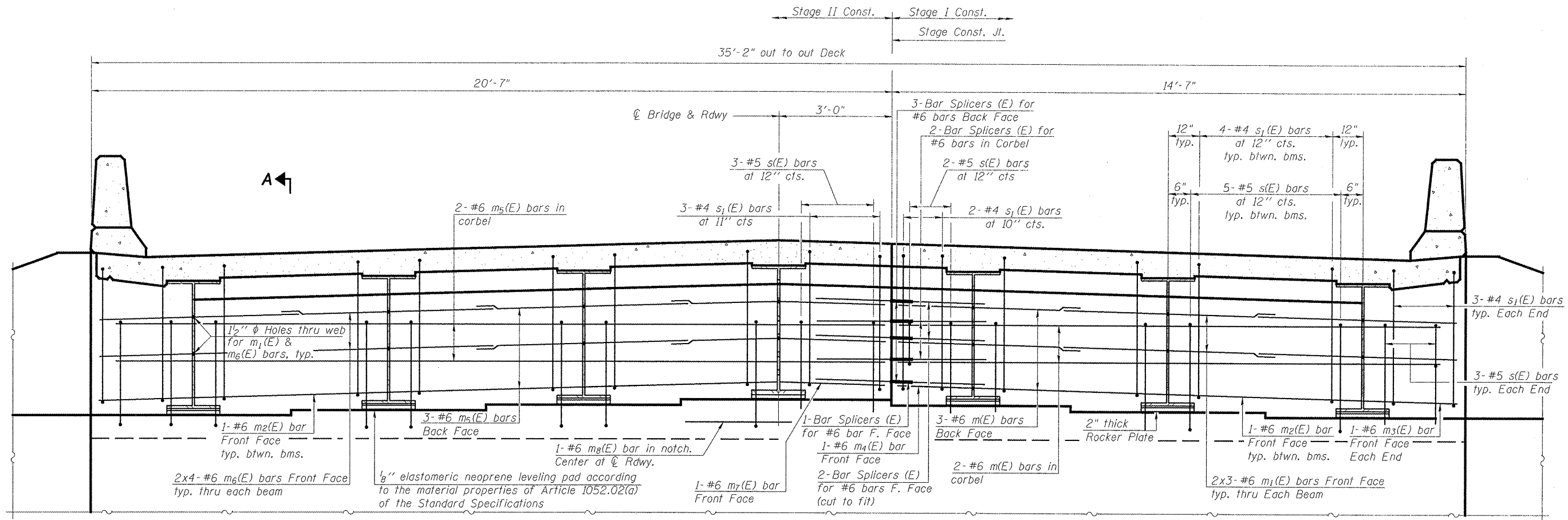
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SUPERSTRUCTURE DETAILS
STRUCTURE NO. 036-0071

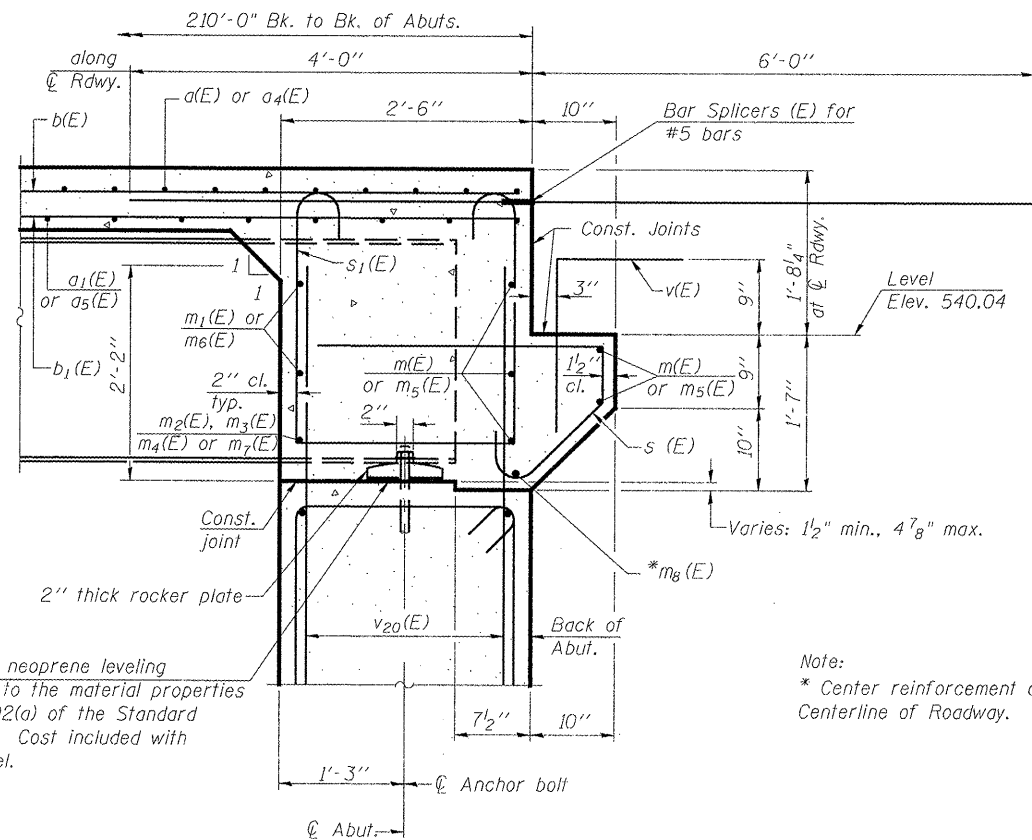
SHEET NO. 11 OF 27 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B) BR	HENDERSON	70	24
CONTRACT NO. 68298			ILLINOIS FED. AID PROJECT	



DIAPHRAGM ELEVATION AT ABUTMENT

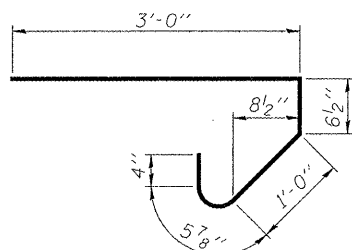
(Dimensions @ Right Angles to Rdwy.)
(Looking North)



SECTION A-A

Dimensions at right angles to abutment, except as shown.

Notes:
Reinforcement bars in diaphragm are billed with Superstructure on sheet 11 of 27.
Concrete in diaphragm is included with Concrete Superstructure on sheet 11 of 27.
For details of bars s1(E) and v(E) see sheet 11 of 27.
The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
v20(E) bars are billed with Abutments on sheets 18 and 19 of 27.
Bars indicated thus 2x4-#6 etc. indicates 2 lines of bars with 4 lengths per line.
For location of holes thru web see sheet 16 of 27.



BAR s(E)

MIN. BAR LAP

#6 bar = 3'-4"

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SI-DS2

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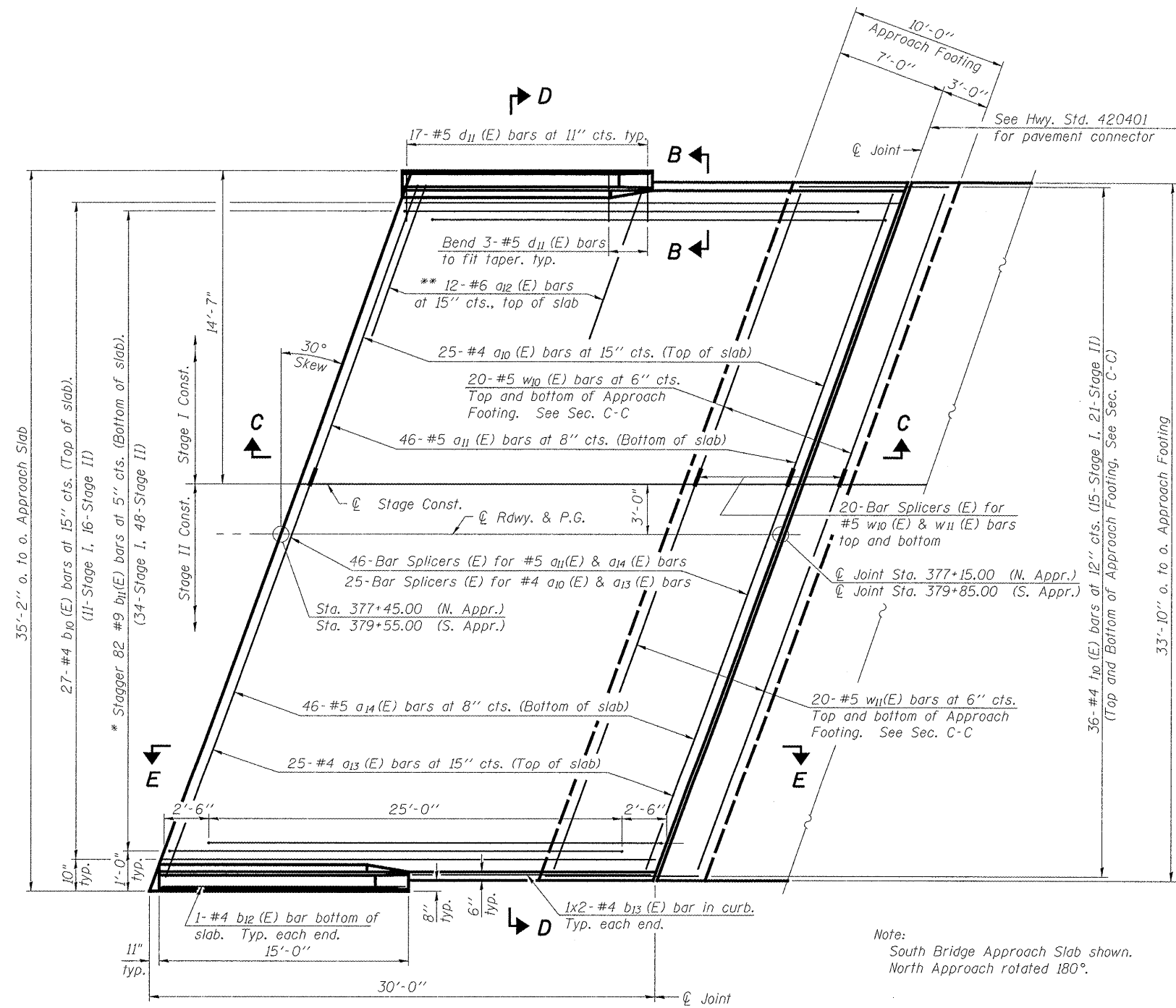
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INTEGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 036-0071

SHEET NO. 12 OF 27 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	25
CONTRACT NO. 68298			ILLINOIS FED. AID PROJECT	

Notes:
 See sheet 14 of 27 for Sections C-C & D-D and View E-E.
 $a_{10}(E)$ and $a_{11}(E)$ bar spacings measured along \varnothing Rdwy.
 Bars indicated 1 x 2 - #4 etc. indicates 1 line of bars with 2 lengths per line.



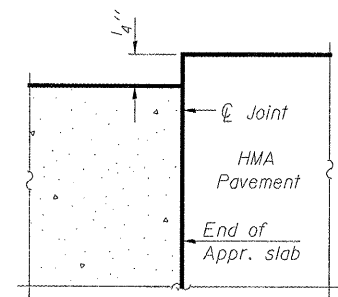
PLAN

* Tilt #9 $b_{11}(E)$ bars as required to maintain clearance.
 ** Space between $a_{10}(E)$ and $a_{13}(E)$ bars, typ. each parapet.

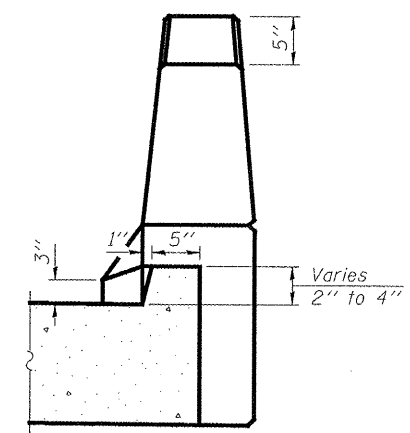
MINIMUM BAR LAP

#4 bar = 2'-1"
 #5 bar = 2'-7"

Note:
 South Bridge Approach Slab shown.
 North Approach rotated 180°.



FLEXIBLE PAVEMENT
 DETAIL A



VIEW B-B

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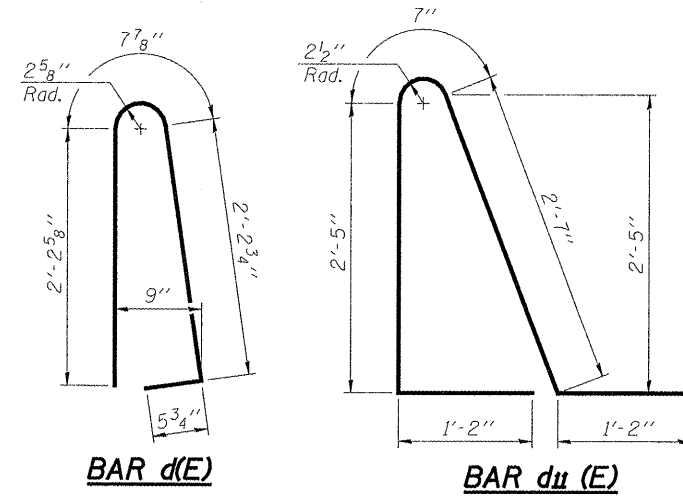
BRIDGE APPROACH SLAB DETAILS
 STRUCTURE NO. 036-0071

SHEET NO. 13 OF 27 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	26
CONTRACT NO. 68298			ILLINOIS FED. AID PROJECT	

Notes:

See sheet 13 of 27 for Detail A and View B-B.
 Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
 Approach footing concrete shall be paid for as Concrete Structures.
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
 For v(E) bar details, see sheet 11 of 27.
 The approach footing maximum applied service bearing pressure (Omax) = 2.0 ksf.
 For bar splicer details, see sheet 25 of 27.
 Cost of excavation for approach footing included with Concrete Structures.
 For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 27.
 For additional parapet details, see sheet 11 of 27.



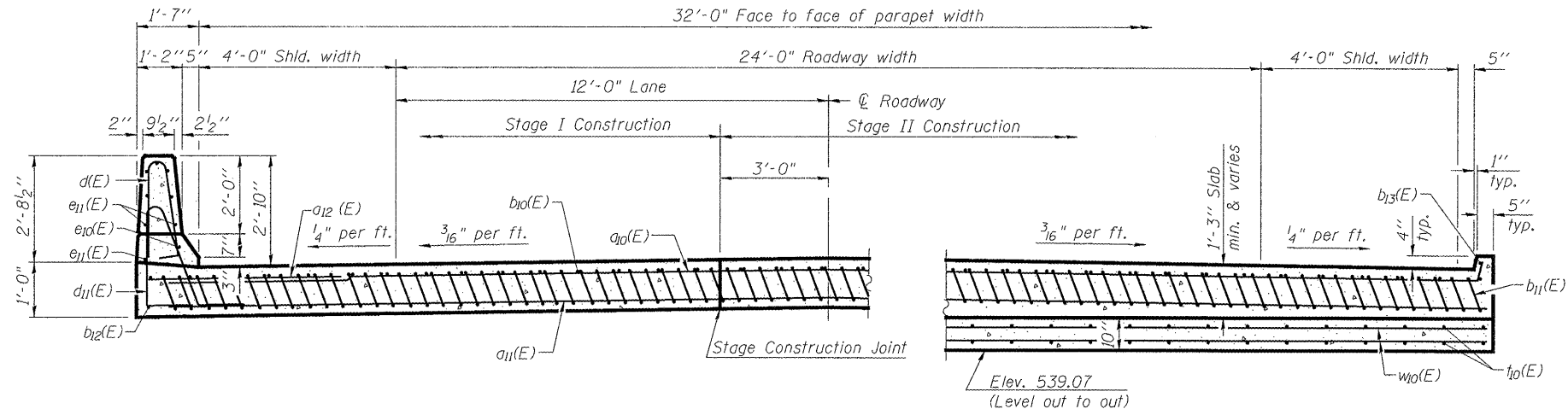
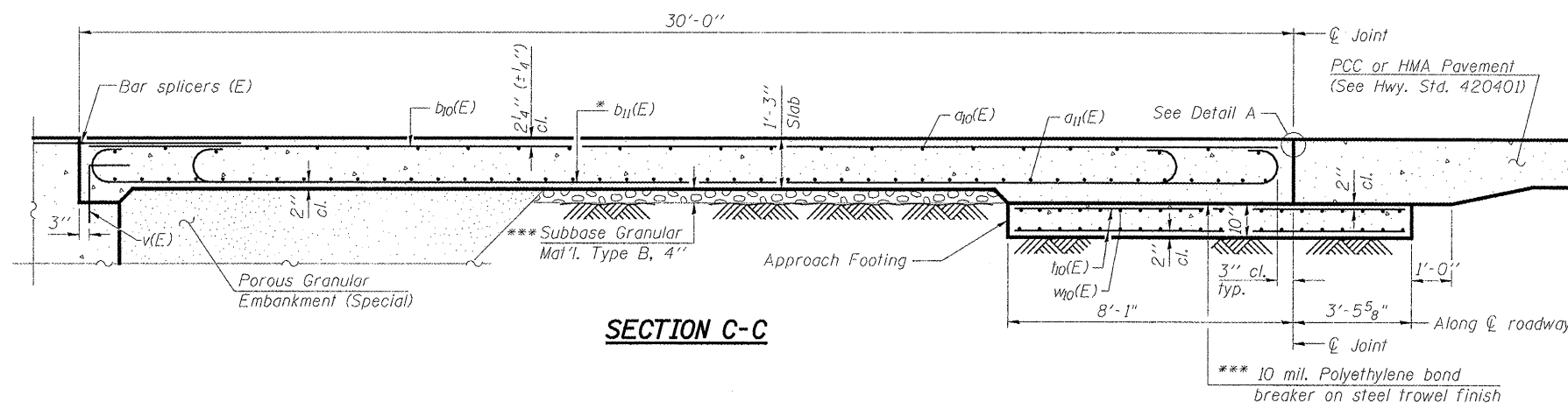
* Tilt #9 b₁₁(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.

**TWO APPROACHES
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a ₁₀ (E)	50	#4	15'-10"	—
a ₁₁ (E)	92	#5	15'-9"	—
a ₁₂ (E)	48	#6	6'-6"	—
a ₁₃ (E)	50	#4	22'-9"	—
a ₁₄ (E)	92	#5	22'-8"	—
b ₁₀ (E)	54	#4	29'-8"	—
b ₁₁ (E)	164	#9	29'-9"	—
b ₁₂ (E)	4	#4	14'-8"	—
b ₁₃ (E)	8	#4	8'-5"	—
d(E)	68	#5	5'-7"	—
d ₁₁ (E)	68	#5	7'-11"	—
e ₁₀ (E)	4	#8	14'-8"	—
e ₁₁ (E)	32	#4	14'-8"	—
f ₁₀ (E)	144	#4	11'-2"	—
w ₁₀ (E)	80	#5	15'-8"	—
w ₁₁ (E)	80	#5	22'-7"	—
Concrete Superstructure			Cu. Yd.	110.8
Concrete Structures			Cu. Yd.	24.1
Reinforcement Bars, Epoxy Coated			Pound	28,885

** Reinforcement Bars, Epoxy Coated
 Superstructure = 24,615
 Substructure = 4,270

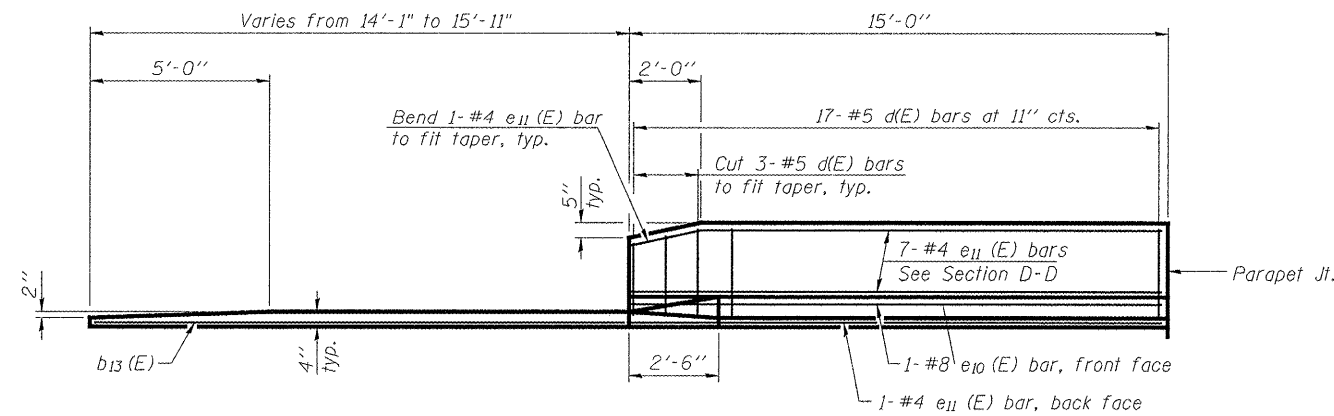


NEAR ABUTMENT

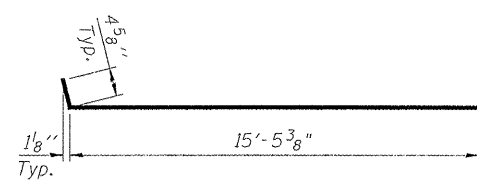
SECTION D-D

(See Plan for dimensions not shown)

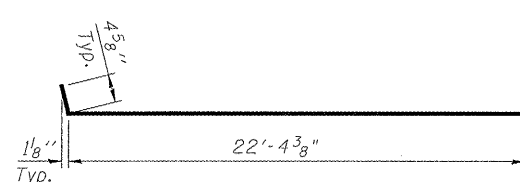
AT APPROACH FOOTING



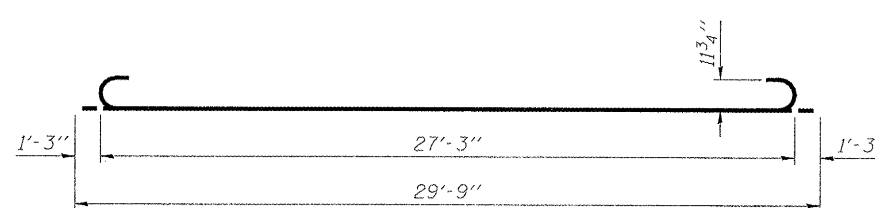
VIEW E-E



BAR a₁₀(E)



BAR a₁₃(E)



BAR b₁₁(E)

(Sheet 2 of 2)

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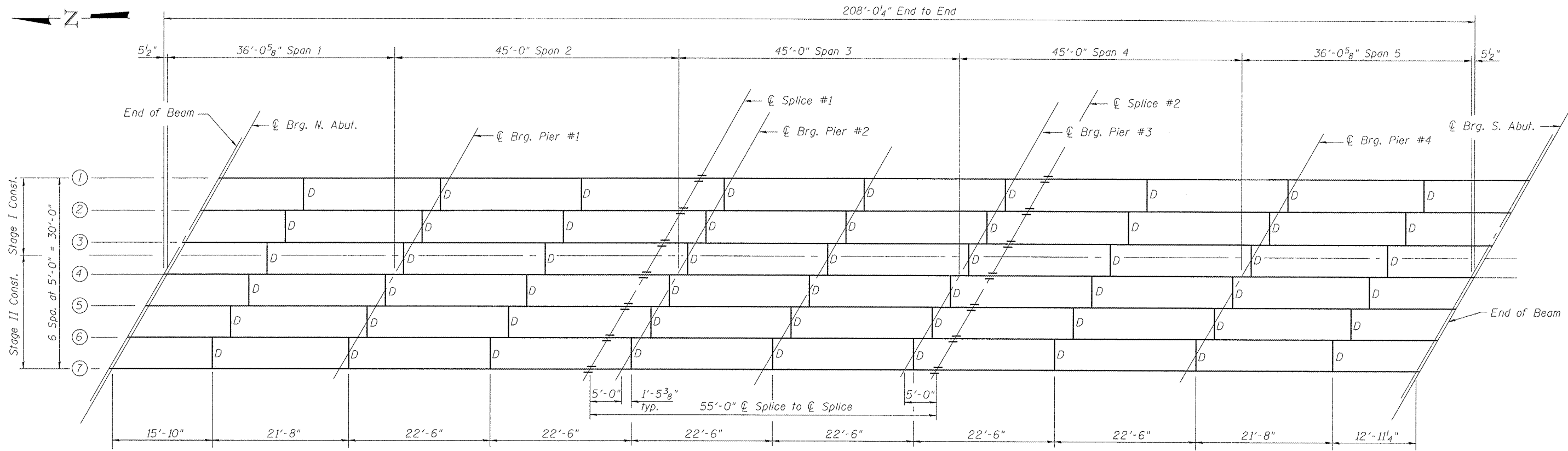
FILE NAME =	USER NAME =	DESIGNED - JSP	REVISED -
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		DRAWN - UJ	REVISED -
		CHECKED - RVB	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS
 STRUCTURE NO. 036-0071

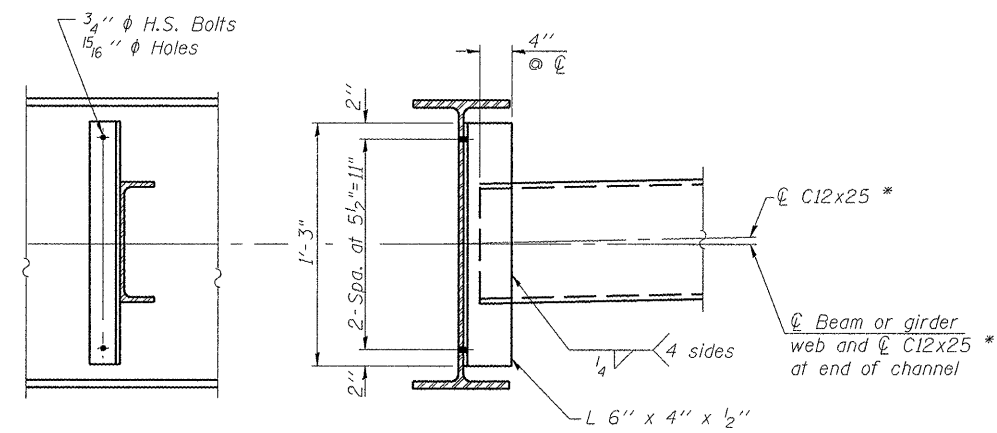
SHEET NO. 14 OF 27 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	27
			CONTRACT NO. 68298	
ILLINOIS FED. AID PROJECT				



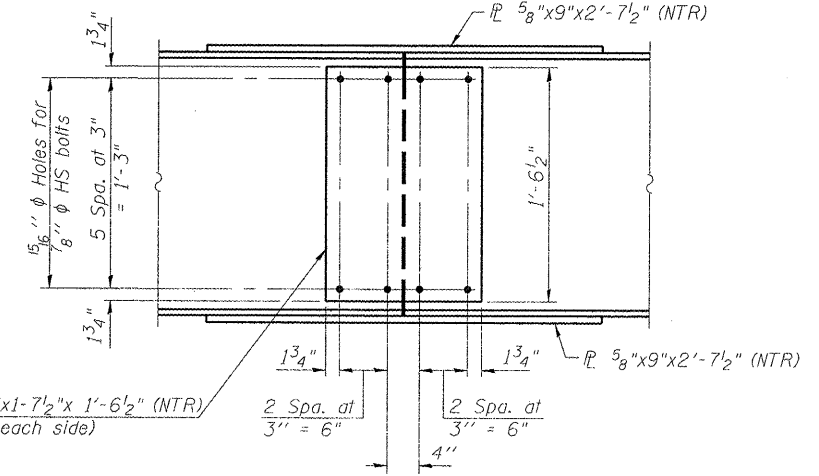
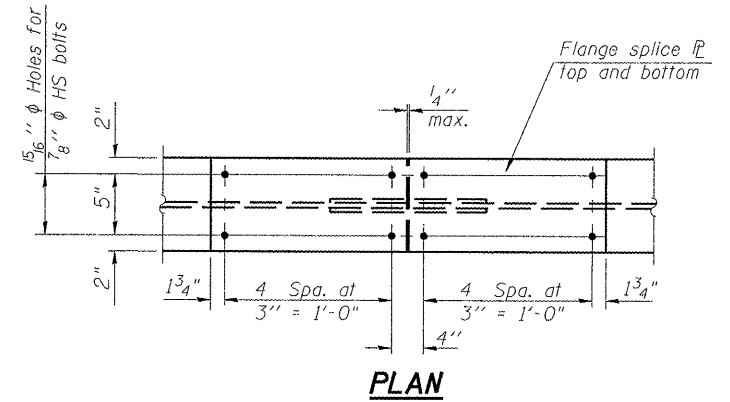
FRAMING PLAN

All beams shall be W24x68 AASHTO M270 Grade 50 (NTR)



INTERIOR DIAPHRAGM "D"
(54 Required)

*C12x30 is permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.



SPlice DETAIL
(14 Required)

All splice plate material shall be AASHTO M270 Grade 50 (NTR).

Notes:
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
Two hardened washers required for each set of oversized holes.

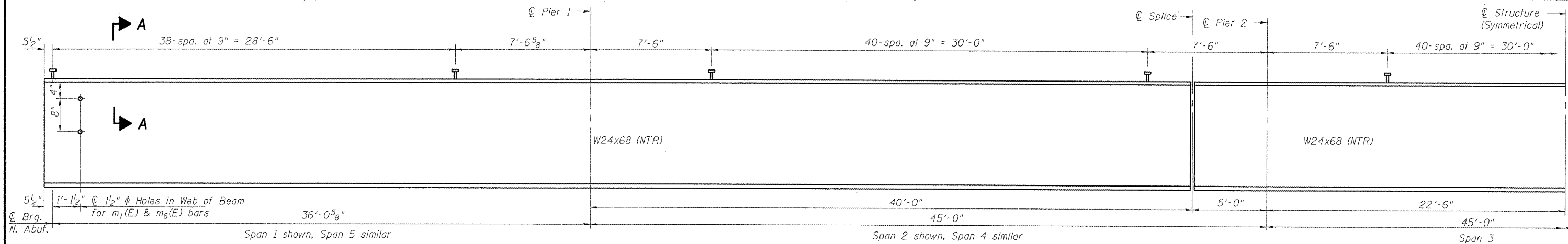
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HR JOB # 190-1785

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		CHECKED - CJC	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 036-0071
SHEET NO. 15 OF 27 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	28
CONTRACT NO. 68298				
ILLINOIS FED. AID PROJECT				



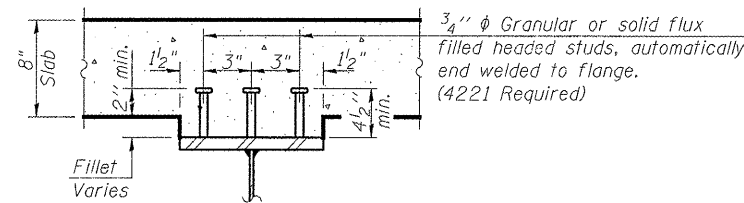
BEAM ELEVATION

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

Beam Number	N. Abut.	Pier 1	Splice #1	Pier 2	Pier 3	Splice #2	Pier 4	S. Abut.
1	540.80	540.86	540.91	540.91	540.90	540.90	540.81	540.73
2	540.89	540.94	541.01	541.01	541.00	540.99	540.91	540.84
3	540.95	541.02	541.08	541.08	541.08	541.08	541.00	540.93
4	541.02	541.09	541.16	541.16	541.16	541.16	541.09	541.02
5	540.93	541.00	541.08	541.08	541.08	541.08	541.02	540.95
6	540.84	540.91	540.99	541.00	541.01	541.01	540.94	540.89
7	540.73	540.81	540.90	540.90	540.91	540.91	540.86	540.80

TOP OF BEAM ELEVATIONS

(For fabrication only)



SECTION A-A

	INTERIOR GIRDER MOMENT TABLE					
	0.4 Sp. 1 or 0.6 Sp. 5	Piers 1 & 4	0.5 Sp. 2 or Sp. 4	Piers 2 & 3	0.5 Sp. 3	
I_s	(in ⁴)	1830	1830	1830	1830	1830
$I_c(n)$	(in ⁴)	5793	-	5793	-	5793
$I_c(3n)$	(in ⁴)	4302	-	4302	-	4302
S_s	(in ³)	154	154	154	154	154
$S_c(n)$	(in ³)	248	-	248	-	248
$S_c(3n)$	(in ³)	223	-	223	-	223
DC1	(k/')	0.615	0.615	0.615	0.615	0.615
MDC1	(k)	54	98	52	100	51
DC2	(k/')	0.130	0.130	0.130	0.130	0.130
MDC2	(k)	13	18	15	19	14
DW	(k/')	0.250	0.250	0.250	0.250	0.250
MDW	(k)	26	34	28	36	27
$M_L + IM$	(k)	263	156	278	162	281
M_u (Strength I)	(k)	583	469	612	486	613
$\phi_r M_n, \phi_r M_{nc}$	(k)	1280	539	1281	539	1282
f_s DC1	(ksi)	4.21	7.64	4.05	7.79	3.97
f_s DC2	(ksi)	0.70	1.40	0.81	1.48	0.75
f_s DW	(ksi)	1.40	2.65	1.51	2.81	1.45
f_s 1.3(L+IM)	(ksi)	16.54	15.80	17.49	16.41	17.68
f_s (Service II)	(ksi)	22.85	27.49	23.86	28.49	23.85
V_r	(k)	13.9	-	14.9	-	14.9

* Compact sections

	INTERIOR GIRDER REACTION TABLE			
	Abutments	Piers 1 & 4	Piers 2 & 3	
RDC1	(k)	8.6	26.8	26.8
RDC2	(k)	1.9	5.7	5.9
RDW	(k)	3.6	11.0	11.3
$R_L + IM$	(k)	47.3	68.9	70.5
RTotal	(k)	61.4	112.4	114.5

- I_s, S_s : Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total-Strength I, and Service II) due to non-composite dead loads (in⁴ and in³).
- $I_c(n), S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total-Strength I, and Service II) due to short-term composite live loads (in⁴ and in³).
- $I_c(3n), S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in⁴ and in³).
- Z: Plastic Section Modulus of the steel section in non-composite areas. Omit line in Moment Table if not used in design calculations (in³).
- DC1: Un-factored non-composite dead load (kips/ft.).
- MDC1: Un-factored moment due to non-composite dead load (kip-ft.).
- DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- MDC2: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- $M_L + IM$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
- M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + IM$
- $\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
- $\phi_r M_{nc}$: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).
- f_s (Service II): Sum of stresses as computed from the moments below (ksi).
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_L + IM$
- V_r : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

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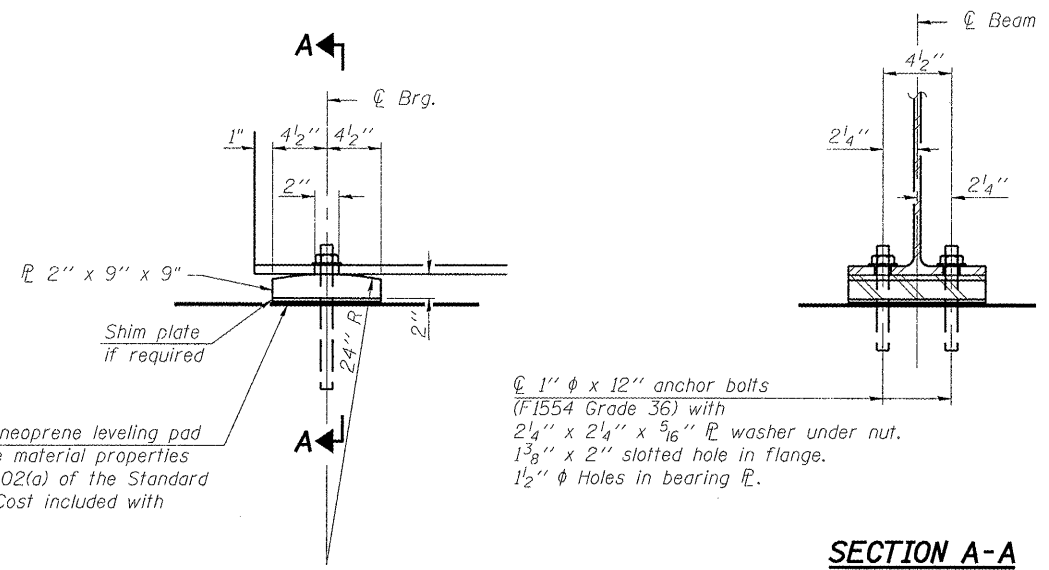
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		CHECKED - CJC	REVISED -
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
 STRUCTURE NO. 036-0071

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	29
				CONTRACT NO. 68298
ILLINOIS FED. AID PROJECT				

SHEET NO. 16 OF 27 SHEETS

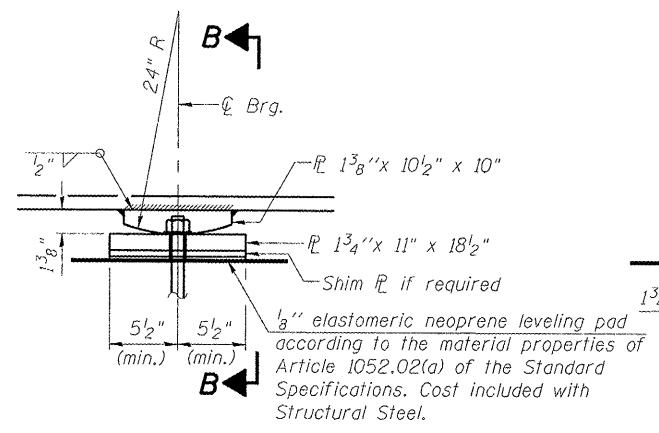


1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Structural Steel.

1" ϕ x 12" anchor bolts (F1554 Grade 36) with 2 1/4" x 2 1/4" x 5/16" \mathbb{R} washer under nut. 1 3/8" x 2" slotted hole in flange. 1 1/2" ϕ Holes in bearing \mathbb{R} .

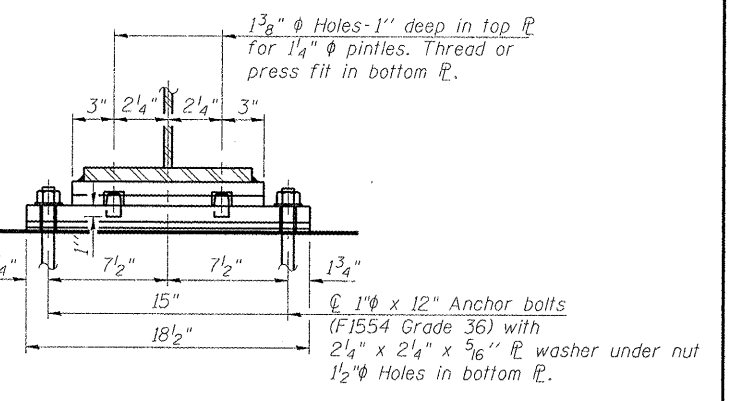
ELEVATION AT ABUTMENT

FIXED BEARING AT ABUTMENTS
(14 Required)

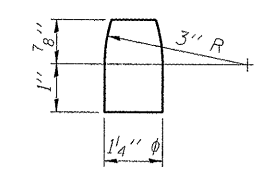


ELEVATION AT PIER

FIXED BEARING AT PIERS
(28 Required)



SECTION B-B



PINTLE

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.
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
 Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
 All bearing plates shall be AASHTO M270, Grade 50.

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	84

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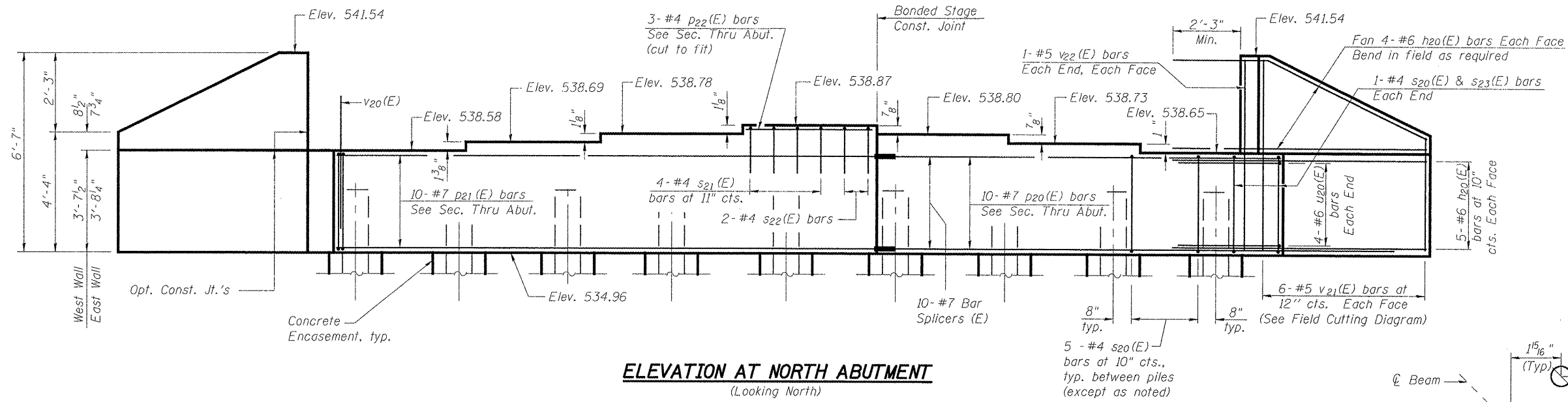
HR
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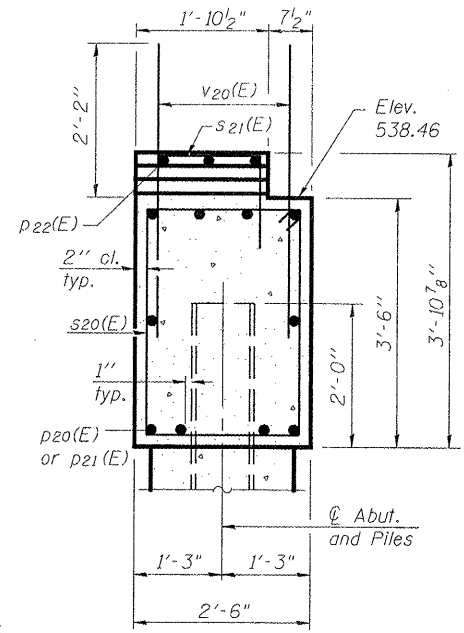
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
STRUCTURE NO. 036-0071
 SHEET NO. 17 OF 27 SHEETS

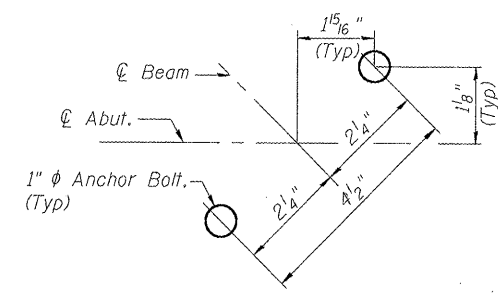
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	30
CONTRACT NO. 68298			ILLINOIS FED. AID PROJECT	



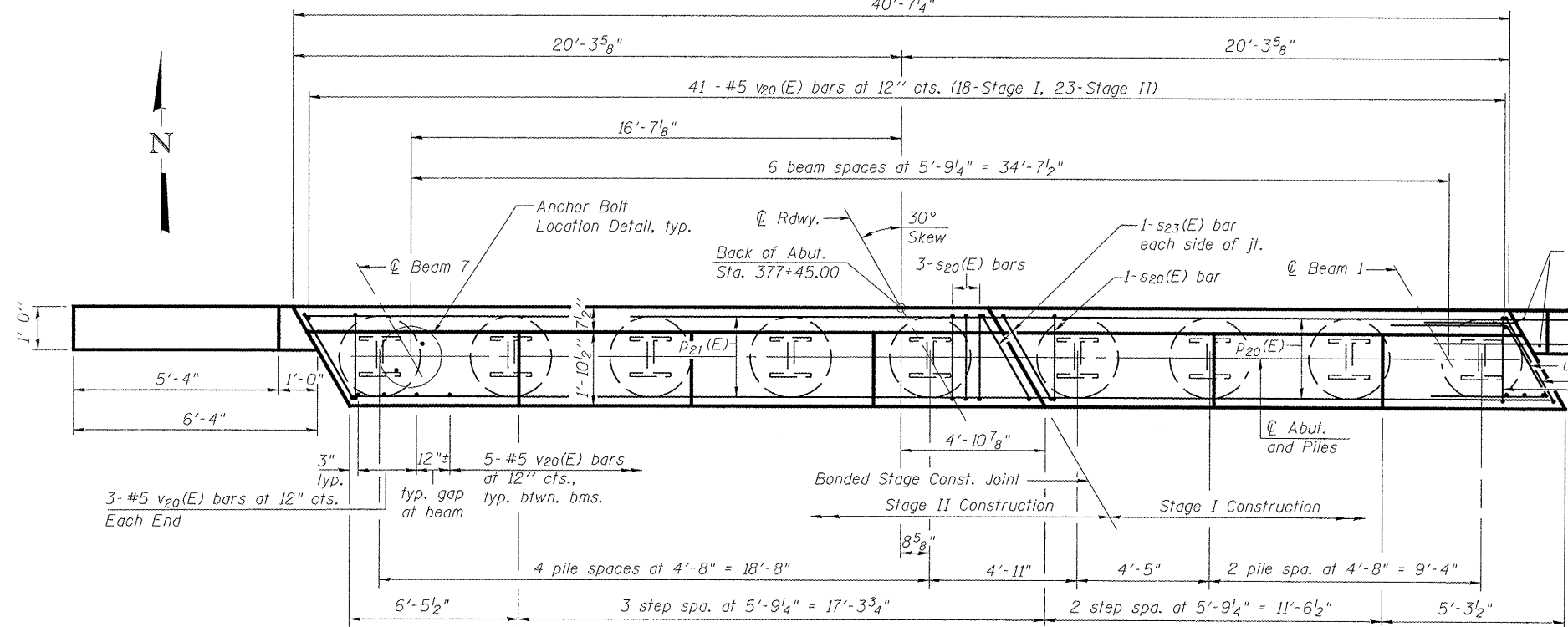
ELEVATION AT NORTH ABUTMENT
(Looking North)



SEC. THRU ABUT.



ANCHOR BOLT LOCATION DETAIL



PLAN

PILE DATA

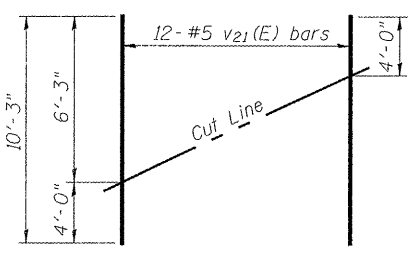
Type: HP12x53
 Nominal Required Bearing: 195 kips
 Factored Resistance Available: 107 kips
 Est. Length: 74'
 No. Production Piles: 8
 **No. Test Piles: 1

**Test Pile shall be driven in conformance with Special Provision, Dynamic Pile Monitoring. Minimum waiting period = 10 days.

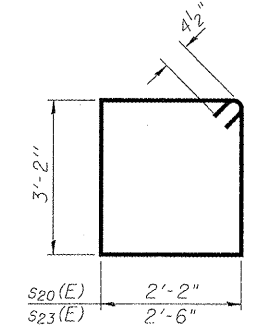
BILL OF MATERIAL

Bar No.	Size	Length	Shape
h20(E)	#6	8'-10"	—
p20(E)	#7	16'-6"	—
p21(E)	#7	23'-5"	—
p22(E)	#4	6'-3"	—
s20(E)	#4	11'-5"	□
s21(E)	#4	4'-10"	□
s22(E)	#4	5'-0"	□
s23(E)	#4	12'-1"	□
u20(E)	#6	8'-5"	∩
v20(E)	#5	4'-4"	—
v21(E)	#5	10'-3"	—
v22(E)	#5	6'-3"	—
Structure Excavation	Cu. Yd.	108	
Concrete Structures	Cu. Yd.	16.6	
Reinforcement Bars, Epoxy Coated	Pound	2,275	
Furnishing Steel Piles, HP12x53	Foot	592	
Driving Piles	Foot	592	
Test Pile Steel HP12x53	Each	1	
Concrete Encasement	Cu. Yd.	3.1	

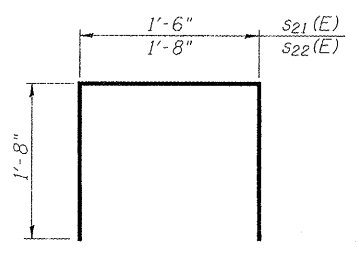
*Includes 46.5 Cu. Yd. Structure Excavation for Porous Granular Embankment, Special



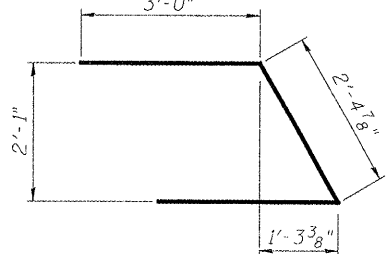
FIELD CUTTING DIAGRAM
Order v21(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s20(E) & s23(E)



BAR s21(E) & s22(E)



BAR u20(E)

Notes:
 Pour steps monolithically with cap.
 For details of Bar Splicers, see sheet 25 of 27.
 For details of piles and Concrete Encasement, see sheet 24 of 27.

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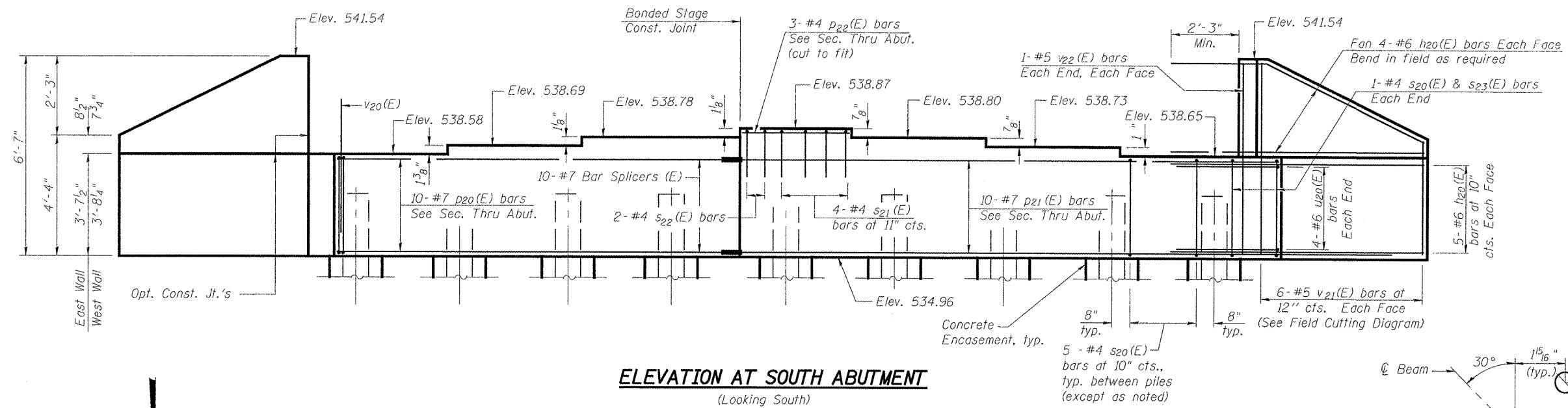
AI-L

FILE NAME =	USER NAME =	DESIGNED - JSP	REVISED -
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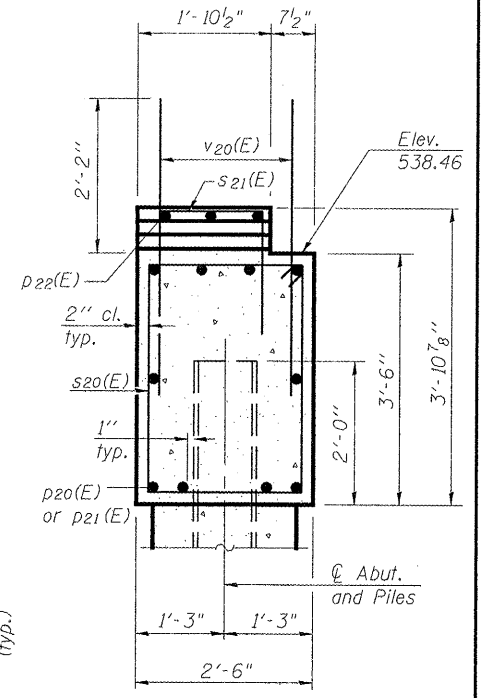
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT
 STRUCTURE NO. 036-0071
 SHEET NO. 18 OF 27 SHEETS

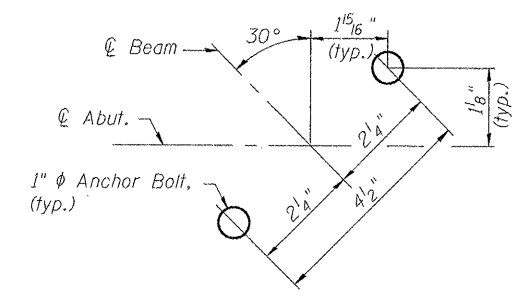
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	31
CONTRACT NO. 68298				
ILLINOIS FED. AID PROJECT				



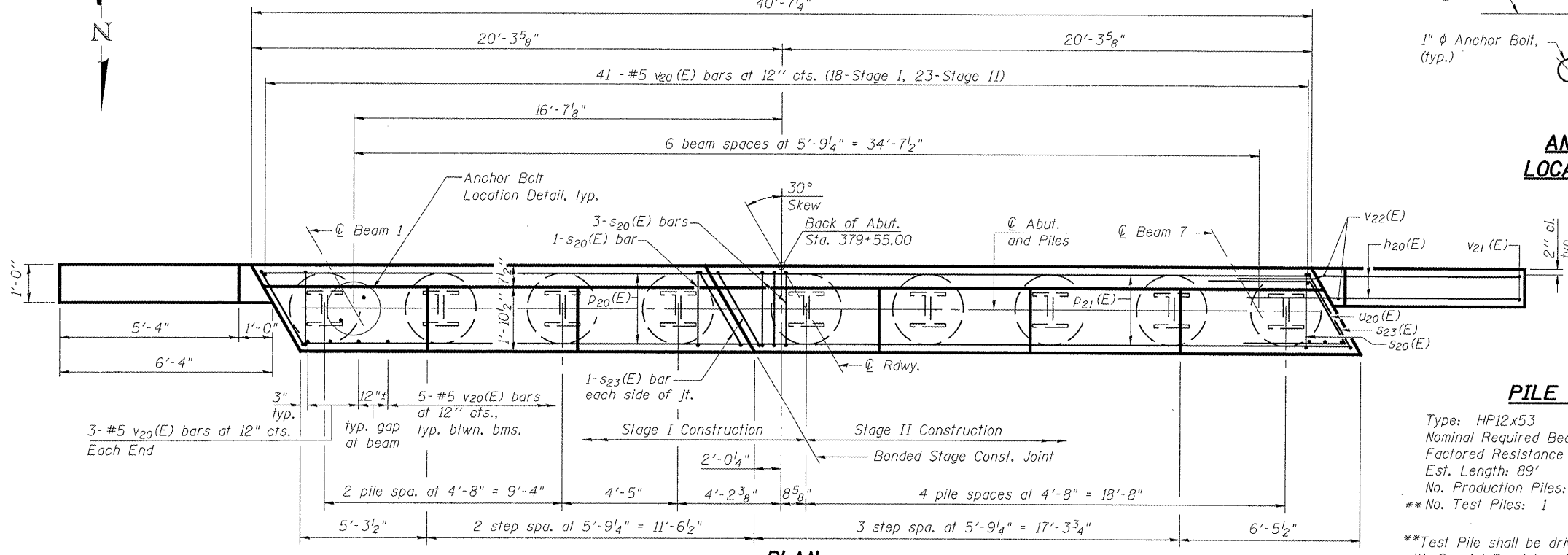
ELEVATION AT SOUTH ABUTMENT
(Looking South)



SEC. THRU ABUT.



ANCHOR BOLT LOCATION DETAIL



PLAN

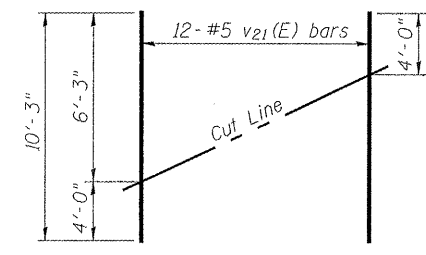
PILE DATA

Type: HP12x53
Nominal Required Bearing: 191 kips
Factored Resistance Available: 105 kips
Est. Length: 89'
No. Production Piles: 8
**No. Test Piles: 1

**Test Pile shall be driven in conformance with Special Provision, Dynamic Pile Monitoring. Minimum waiting period = 10 days.

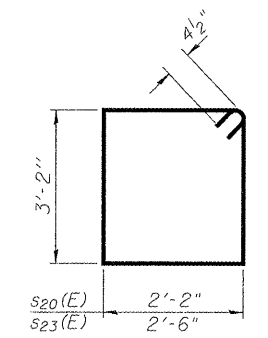
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h20(E)	36	#6	8'-10"	—
p20(E)	10	#7	16'-6"	—
p21(E)	10	#7	23'-5"	—
p22(E)	3	#4	6'-3"	—
s20(E)	41	#4	11'-5"	□
s21(E)	4	#4	4'-10"	□
s22(E)	2	#4	5'-0"	□
s23(E)	4	#4	12'-1"	□
u20(E)	8	#6	8'-5"	∩
v20(E)	77	#5	4'-4"	—
v21(E)	12	#5	10'-3"	—
v22(E)	4	#5	6'-3"	—
* Structure Excavation				Cu. Yd. 108
* Concrete Structures				Cu. Yd. 16.6
* Reinforcement Bars, Epoxy Coated				Pound 2,275
* Furnishing Steel Piles, HP12x53				Foot 712
* Driving Piles				Foot 712
** Test Pile Steel HP12x53				Each 1
* Concrete Encasement				Cu. Yd. 3.1

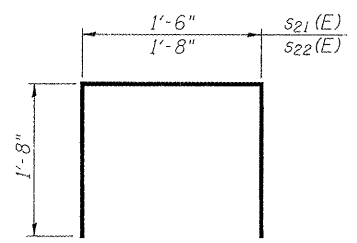


FIELD CUTTING DIAGRAM

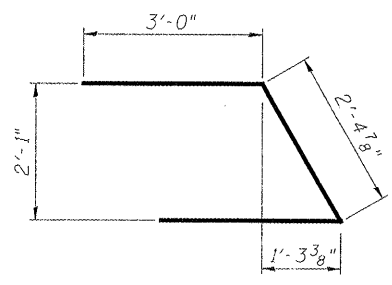
Order v21(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s20(E) & s23(E)



BAR s21(E) & s22(E)



BAR u20(E)

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AI-L

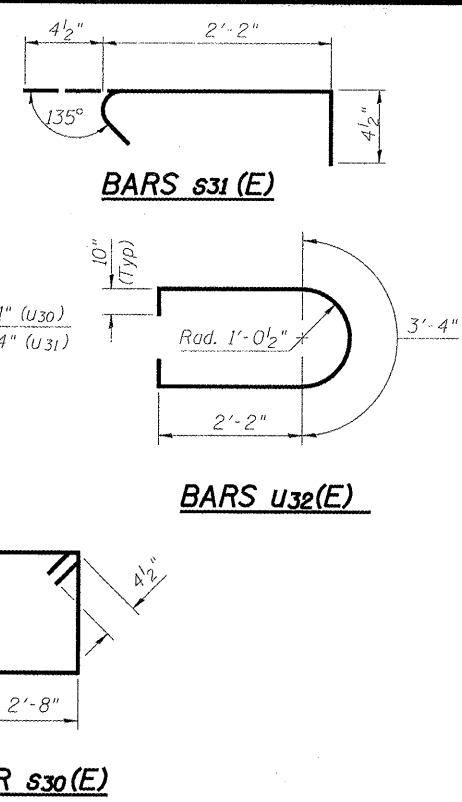
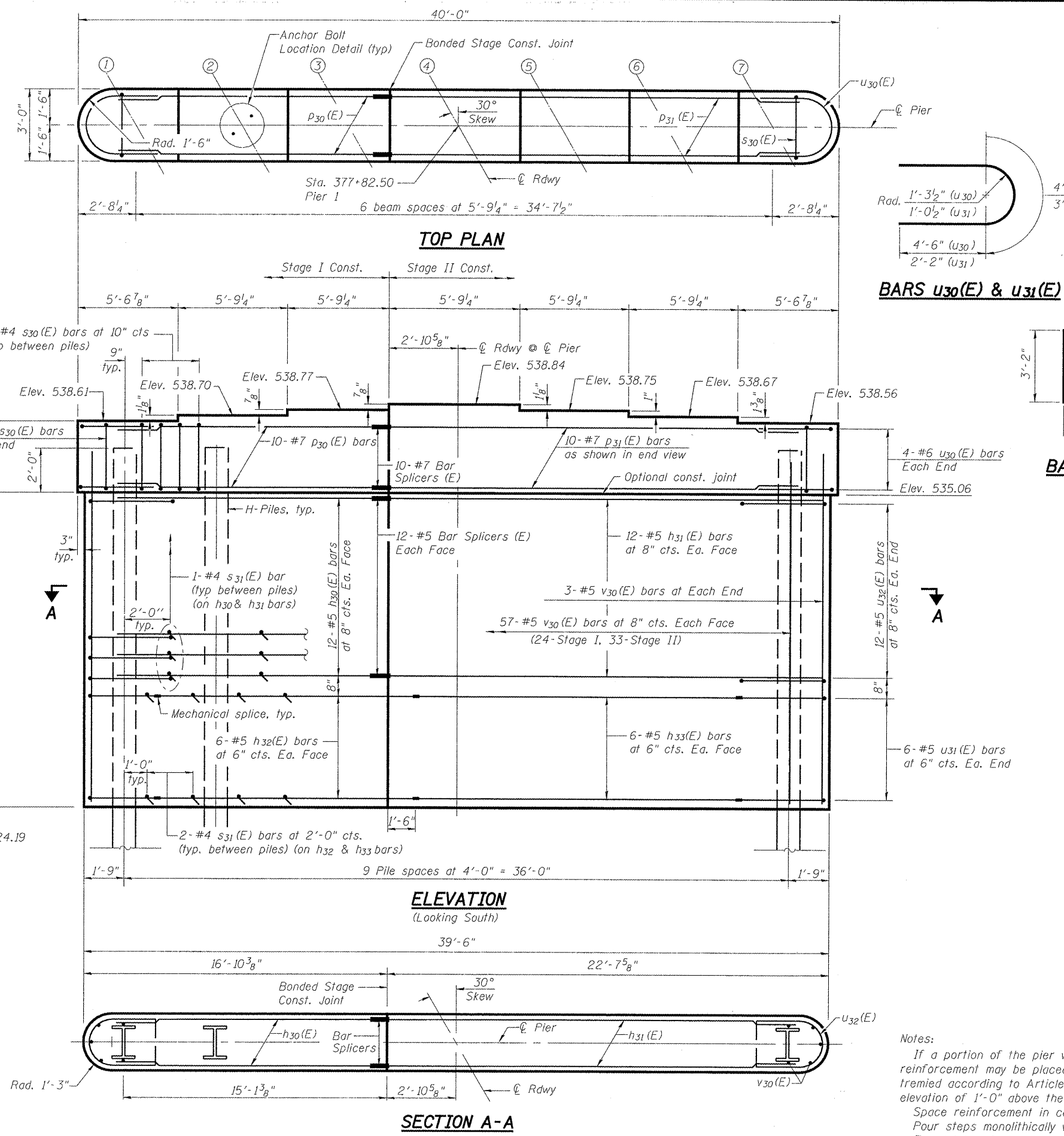
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		CHECKED - RVB	REVISED -

STATE OF ILLINOIS	SOUTH ABUTMENT	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DEPARTMENT OF TRANSPORTATION	STRUCTURE NO. 036-0071	522	(14-1-B1) BR	HENDERSON	70	32
	SHEET NO. 19 OF 27 SHEETS				CONTRACT NO. 68298	
					ILLINOIS FED. AID PROJECT	

PIER 1 PILE DATA

Type: HP14x73
 Nominal Required Bearing: 248 kips
 Factored Resistance Available: 131 kips
 Est. Length: 87'
 No. Production Piles: 9
 ** No. Test Piles: 1

**Test Pile shall be driven in conformance with Special Provision, Dynamic Pile Monitoring. Minimum waiting period = 10 days.



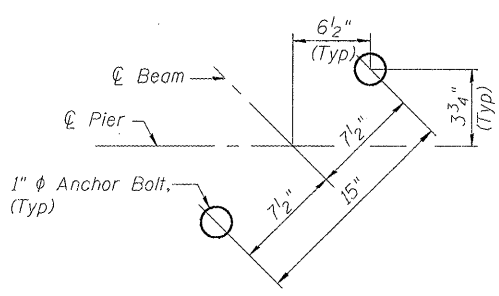
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h30(E)	24	#5	15'-7"	—
h31(E)	24	#5	21'-4"	—
h32(E)	12	#5	15'-0"	—
h33(E)	12	#5	17'-9"	—
D30(E)	10	#7	15'-10"	—
D31(E)	10	#7	21'-7"	—
s30(E)	38	#4	12'-5"	□
s31(E)	216	#4	2'-11"	┌┐
u30(E)	8	#6	13'-1"	U
u31(E)	12	#5	7'-8"	U
u32(E)	24	#5	9'-4"	U
v30(E)	120	#5	12'-11"	—
Structure Excavation		Cu. Yd.	23	
Concrete Structures		Cu. Yd.	55.4	
Reinforcement Bars, Epoxy Coated		Pound	4,940	
Furnishing Steel Piles HP14x73		Foot	783	
Driving Piles		Foot	783	
** Test Pile Steel HP14x73		Each	1	
Underwater Structure Excavation Protection-Location 1		Each	1	

Notes:
 If a portion of the pier wall or concrete encasement is underwater, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.
 Space reinforcement in cap to miss anchor bolts.
 Four steps monolithically with cap.
 For details of piles, see sheet 24 of 27.

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ANCHOR BOLT LOCATION DETAIL



FILE NAME *	USER NAME *	DESIGNED -	REVISD -
...	JSP	JSP	
	CJC	CJC	
	UJ	UJ	
	RVB	RVB	

STATE OF ILLINOIS
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PIER 1
 STRUCTURE NO. 036-0071

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	33

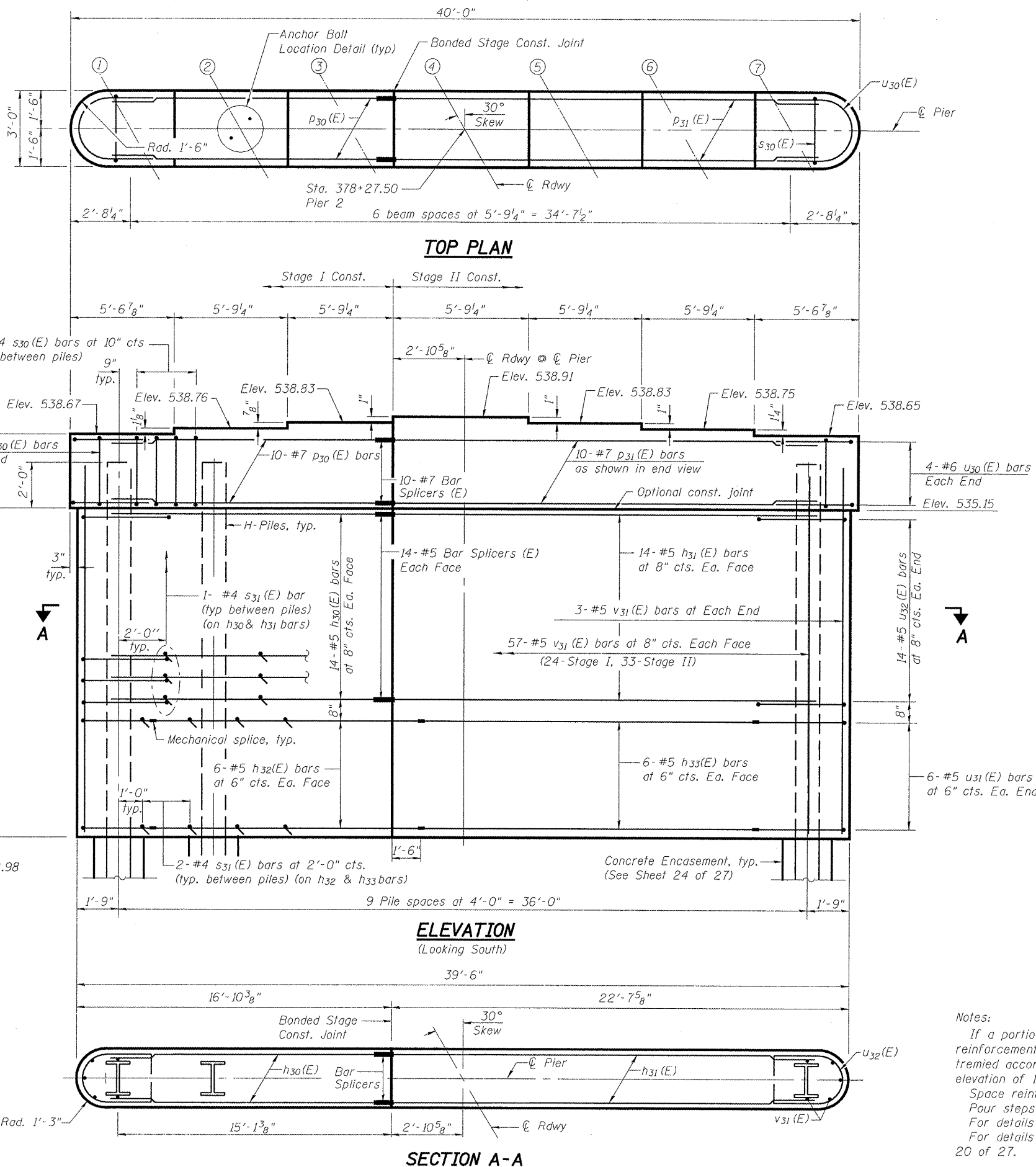
SHEET NO. 20 OF 27 SHEETS

ILLINOIS FED. AID PROJECT

PIER 2 PILE DATA

Type: HP14x73
 Nominal Required Bearing: 242 kips
 Factored Resistance Available: 128 kips
 Est. Length: 87'
 No. Production Piles: 9
 ** No. Test Piles: 1

**Test Pile shall be driven in conformance with Special Provision, Dynamic Pile Monitoring. Minimum waiting period = 10 days.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h30(E)	28	#5	15'-7"	—
h31(E)	28	#5	21'-4"	—
h32(E)	12	#5	15'-0"	—
h33(E)	12	#5	17'-9"	—
p30(E)	10	#7	15'-10"	—
p31(E)	10	#7	21'-7"	—
s30(E)	38	#4	12'-5"	□
s31(E)	234	#4	2'-11"	┌
u30(E)	8	#6	13'-1"	U
u31(E)	12	#5	7'-8"	U
u32(E)	28	#5	9'-4"	U
v31(E)	120	#5	14'-2"	—
Structure Excavation		Cu. Yd.	15	
Concrete Structures		Cu. Yd.	59.7	
Concrete Encasement		Cu. Yd.	5.5	
Reinforcement Bars, Epoxy Coated		Pound	5,325	
Furnishing Steel Piles HP14x73		Foot	783	
Driving Piles		Foot	783	
** Test Pile Steel HP14x73		Each	1	
Underwater Structure Excavation Protection-Location 2		Each	1	

Notes:
 If a portion of the pier wall or concrete encasement is underwater, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see sheet 24 of 27.
 For details of reinforcement, (s30, s31, u30, u31 & u32) see sheet 20 of 27.

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		CHECKED - CJC	REVISED -
PLOT SCALE =		DRAWN - UJ	REVISED -
PLOT DATE =		CHECKED - RVB	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

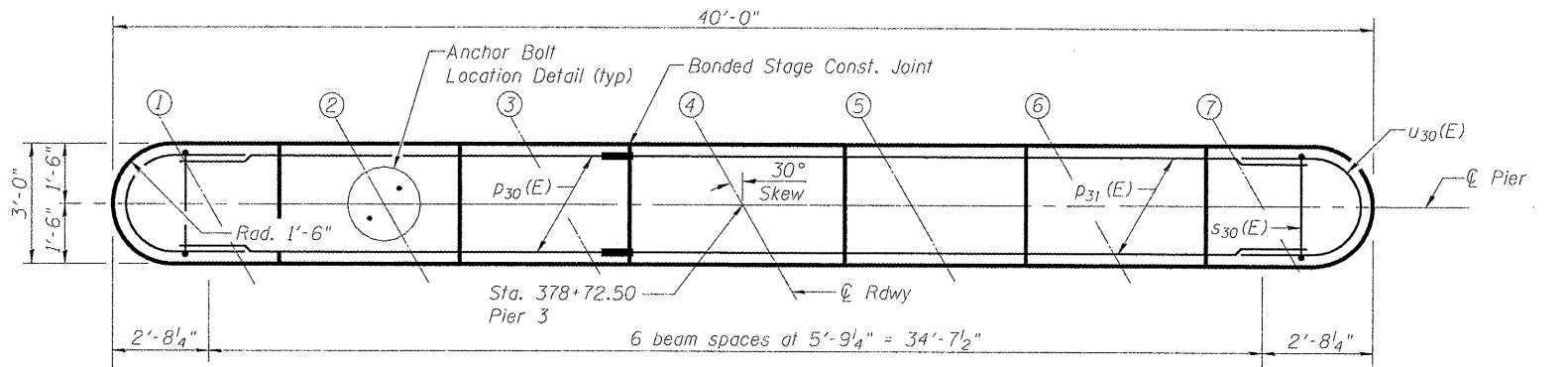
PIER 2
 STRUCTURE NO. 036-0071
 SHEET NO. 21 OF 27 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	34
CONTRACT NO. 68298				
ILLINOIS FED. AID PROJECT				

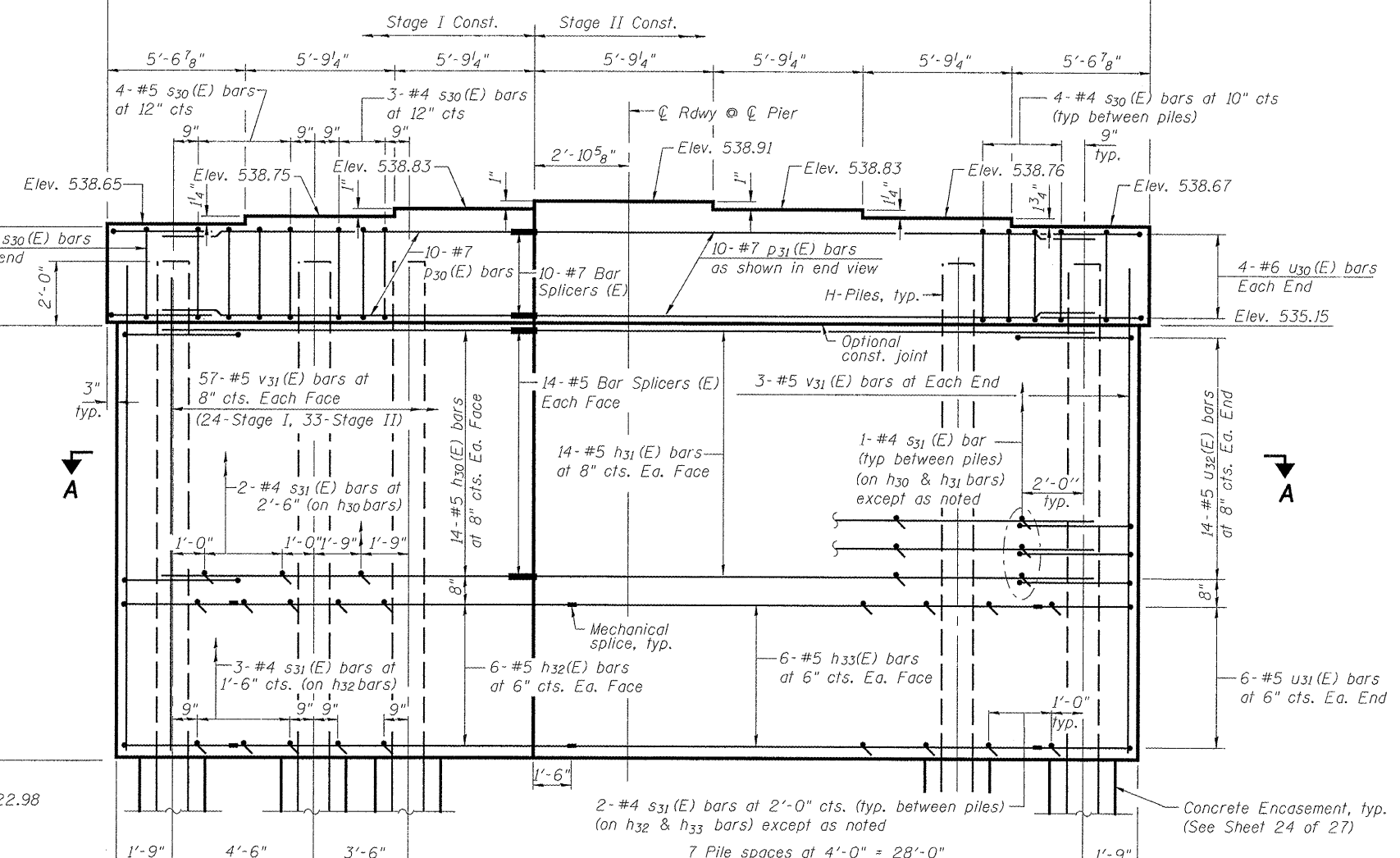
PIER 3 PILE DATA

Type: HP14x73
 Nominal Required Bearing: 242 kips
 Factored Resistance Available: 128 kips
 Est. Length: 87'
 No. Production Piles: 9
 ** No. Test Piles: 1

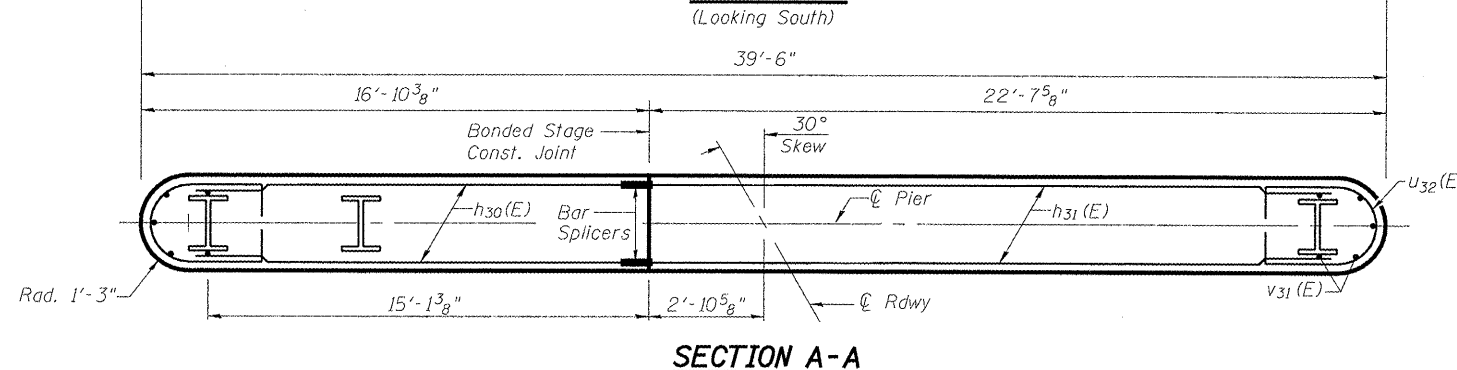
**Test Pile shall be driven in conformance with Special Provision, Dynamic Pile Monitoring. Minimum waiting period = 10 days.



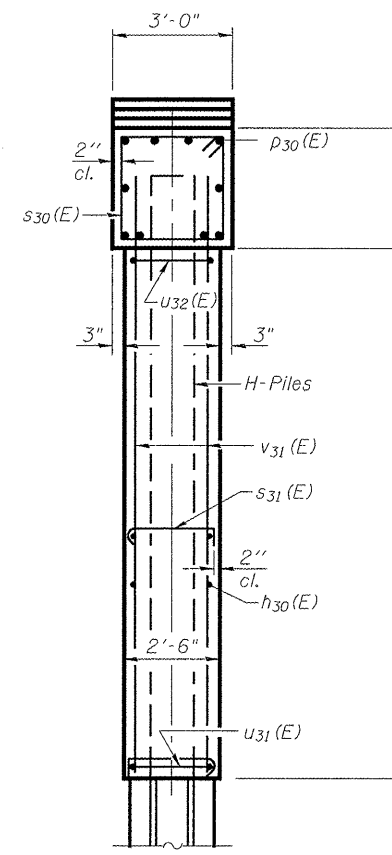
TOP PLAN



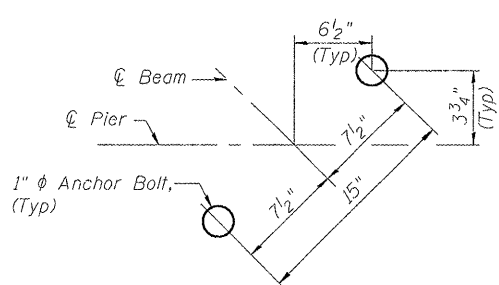
ELEVATION
(Looking South)



SECTION A-A



END VIEW



ANCHOR BOLT LOCATION DETAIL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h30 (E)	28	#5	15'-7"	—
h31 (E)	28	#5	21'-4"	—
h32 (E)	12	#5	15'-0"	—
h33 (E)	12	#5	17'-9"	—
p30 (E)	10	#7	15'-10"	—
p31 (E)	10	#7	21'-7"	—
s30 (E)	38	#4	12'-5"	□
s31 (E)	254	#4	2'-11"	J
u30 (E)	8	#6	13'-1"	U
u31 (E)	12	#5	7'-8"	U
u32 (E)	28	#5	9'-4"	U
v31 (E)	120	#5	14'-2"	—
Structure Excavation		Cu. Yd.	15	
Concrete Structures		Cu. Yd.	59.7	
Concrete Encasement		Cu. Yd.	5.5	
Reinforcement Bars, Epoxy Coated		Pound	5,365	
Furnishing Steel Piles HP14x73		Foot	783	
Driving Piles		Foot	783	
** Test Pile Steel HP14x73		Each	1	
Underwater Structure Excavation		Each	1	
Protection-Location 3				

Notes:
 If a portion of the pier wall or concrete encasement is underwater, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see sheet 24 of 27.
 For details of reinforcement, (s30, s31, u30, u31 & u32) see sheet 20 of 27.

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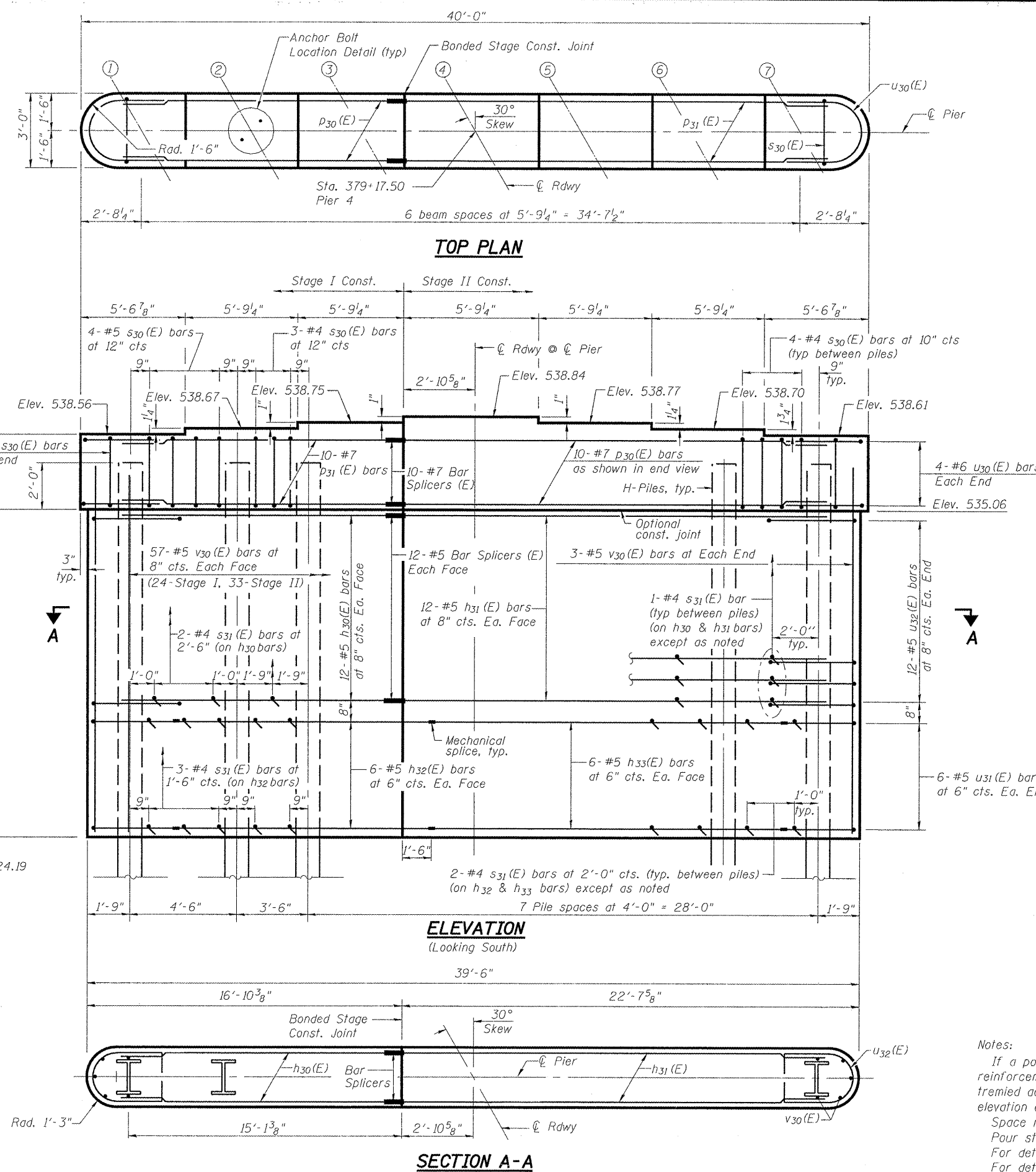


FILE NAME =	USER NAME =	DESIGNED - JSP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER 3 STRUCTURE NO. 036-0071	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		CHECKED - CJC	REVISED -			522	(14-1-B1) BR	HENDERSON	70	35	
		PLOT SCALE =	REVISED -			CONTRACT NO. 68298					
		PLOT DATE =	REVISED -			ILLINOIS FED. AID PROJECT					

PIER 4 PILE DATA

Type: HP14x73
 Nominal Required Bearing: 248 kips
 Factored Resistance Available: 131 kips
 Est. Length: 87'
 No. Production Piles: 9
 ** No. Test Piles: 1

**Test Pile shall be driven in conformance with Special Provision, Dynamic Pile Monitoring. Minimum waiting period = 10 days.



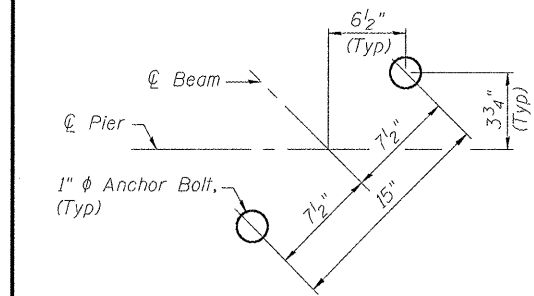
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h30(E)	24	#5	15'-7"	—
h31(E)	24	#5	21'-4"	—
h32(E)	12	#5	15'-0"	—
h33(E)	12	#5	17'-9"	—
p30(E)	10	#7	15'-10"	—
p31(E)	10	#7	21'-7"	—
s30(E)	37	#4	12'-5"	□
s31(E)	234	#4	2'-11"	┘┐
u30(E)	8	#6	13'-1"	U
u31(E)	12	#5	7'-8"	U
u32(E)	24	#5	9'-4"	U
v30(E)	120	#5	12'-11"	—
Structure Excavation			Cu. Yd.	23
Concrete Structures			Cu. Yd.	55.4
Reinforcement Bars, Epoxy Coated			Pound	4,970
Furnishing Steel Piles HP14x73			Foot	783
Driving Piles			Foot	783
** Test Pile Steel HP14x73			Each	1
Underwater Structure Excavation Protection-Location 4			Each	1

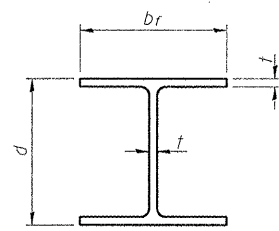
Notes:
 If a portion of the pier wall or concrete encasement is underwater, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.
 Space reinforcement in cap to miss anchor bolts.
 Pour steps monolithically with cap.
 For details of piles, see sheet 24 of 27.
 For details of reinforcement, (s30, s31, u30, u31 & u32) see sheet 20 of 27.

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ANCHOR BOLT LOCATION DETAIL

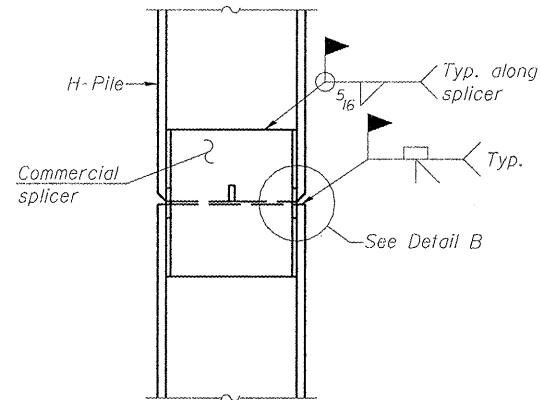


FILE NAME *	USER NAME *	DESIGNED - JSP	REVISIONS	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PIER 4 STRUCTURE NO. 036-0071	F.A.P. RTE. 522	SECTION (14-1-B1) BR	COUNTY HENDERSON	TOTAL SHEETS 70	SHEET NO. 36
		CHECKED - CJC	REVISIONS						CONTRACT NO. 68298	
		PLOT SCALE *	REVISIONS						ILLINOIS FED. AID PROJECT	
		PLOT DATE *	REVISIONS						SHEET NO. 23 OF 27 SHEETS	

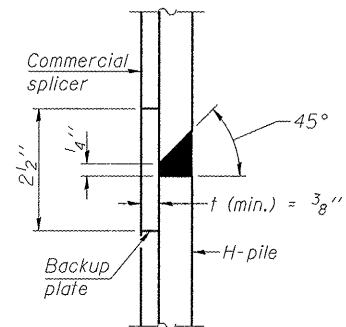


STEEL PILE TABLE

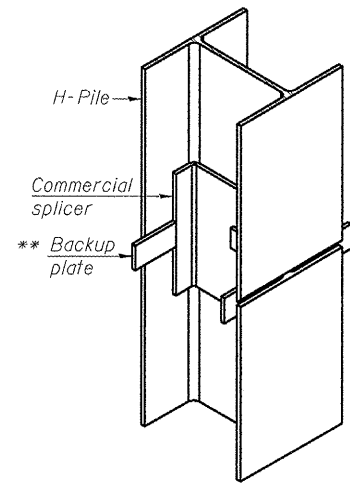
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"



ELEVATION

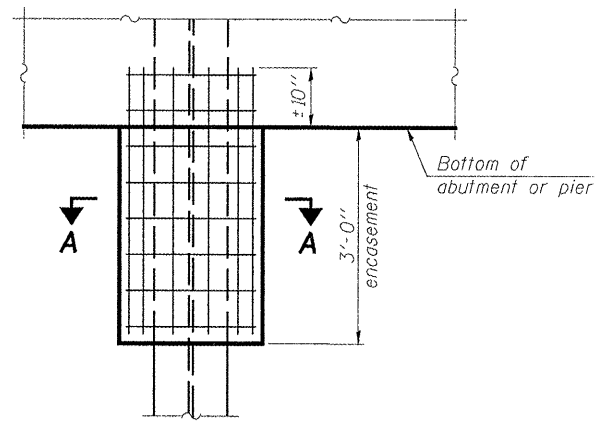


DETAIL "B"



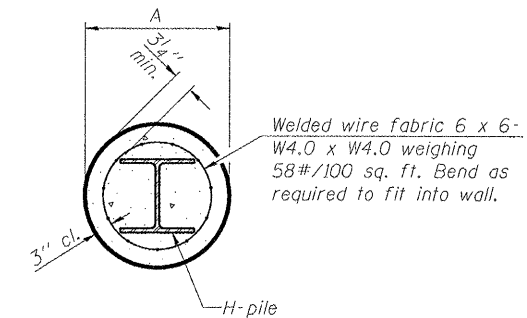
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

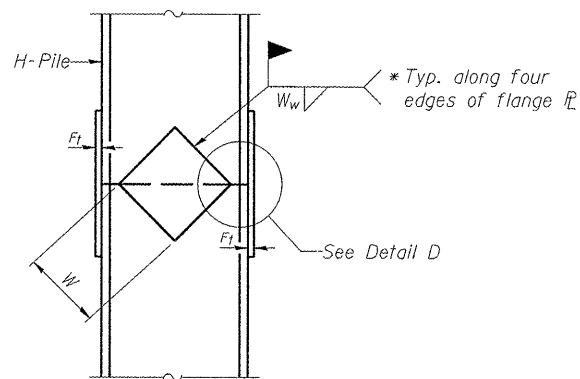


ELEVATION

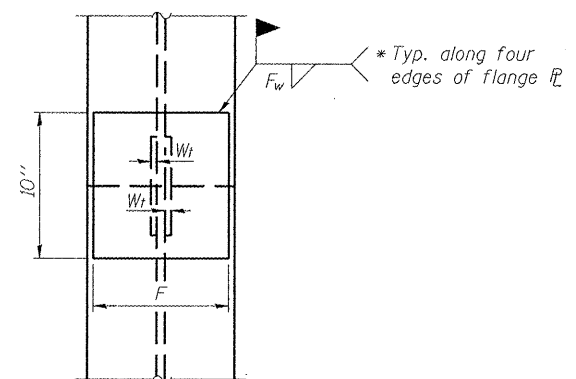
PILE ENCASEMENT



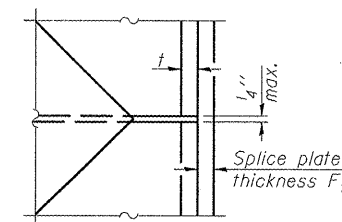
SECTION A-A



ELEVATION



END VIEW



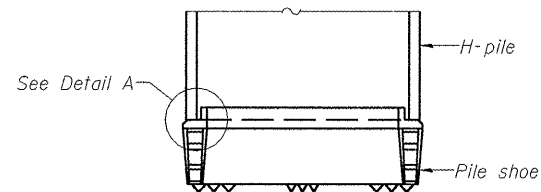
DETAIL D

WELDED PLATE FIELD SPLICE

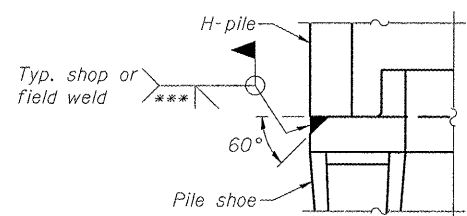
Designation	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

* Interrupt welds 1/4" from end of web and/or each flange.
** Remove portions of backup plates that extend outside the flanges.
*** Weld size per pile shoe manufacturer (5/16" min.).

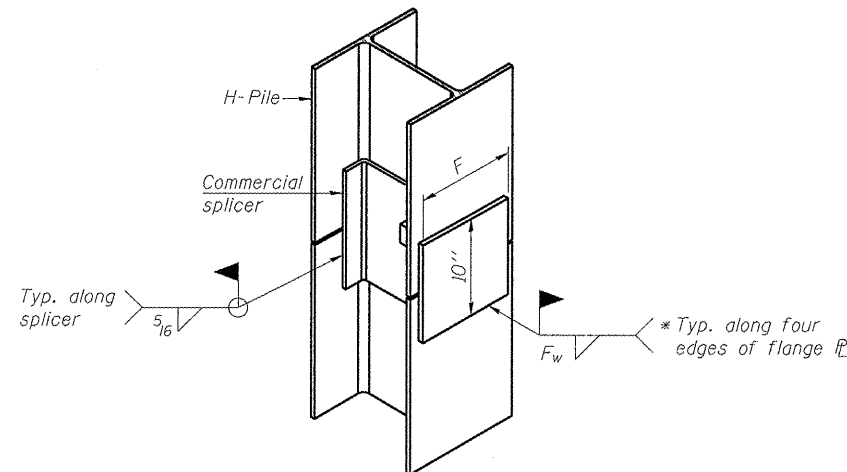


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

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HR
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ENGINEERS, INC.

F-HP 7-1-10

FILE NAME	USER NAME	DESIGNED	REVISIONS
	JSP	JSP	-
	CJC	CJC	-
	UJ	UJ	-
	RVB	RVB	-

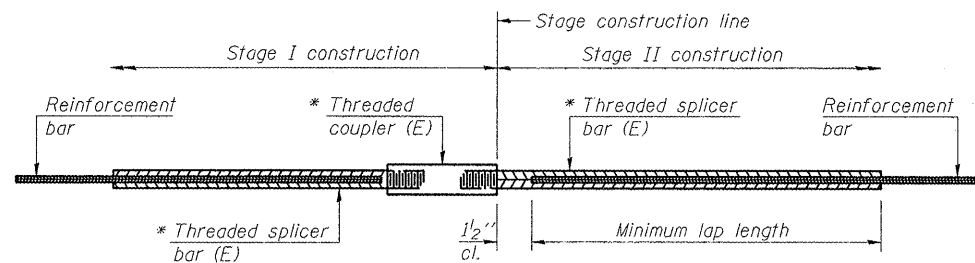
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 036-0071

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	37
CONTRACT NO. 68298				

SHEET NO. 24 OF 27 SHEETS

ILLINOIS FED. AID PROJECT



STANDARD BAR SPLICER ASSEMBLY

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

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

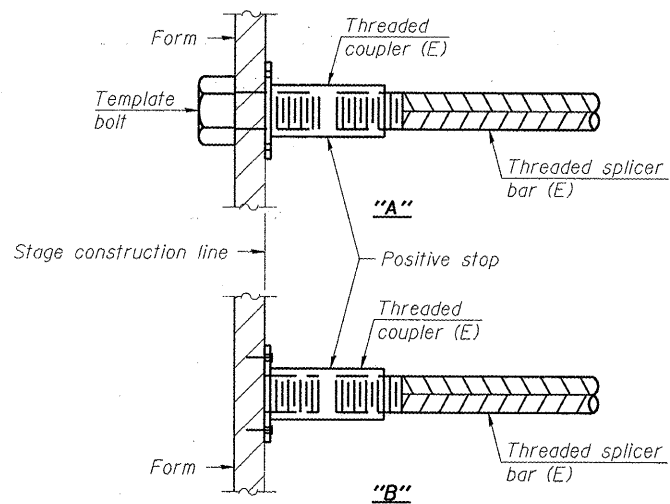
Threaded splicer bar length = min. lap length + 1 1/2" + thread length

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

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	616	Table 3
Diaphragm	#6	16	Table 5
Appr. Slab	#4	50	Table 3
Appr. Slab	#5	92	Table 3
Appr. Slab Foot.	#5	80	Table 3
North Abut.	#7	10	Table 4
South Abut.	#7	10	Table 4
Pier 1	#5	24	Table 4
Pier 1	#7	10	Table 4
Pier 2	#5	28	Table 4
Pier 2	#7	10	Table 4
Pier 3	#5	28	Table 4
Pier 3	#7	10	Table 4
Pier 4	#5	24	Table 4
Pier 4	#7	10	Table 4

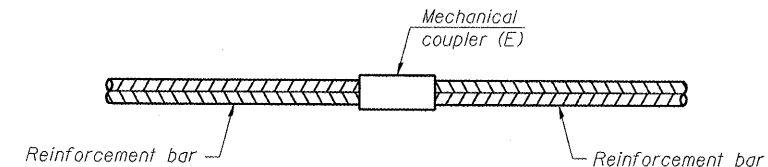
NOTES

- Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
- All reinforcement shall be lapped and tied to the splicer bars.
- Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
- See special provision for Mechanical Splicers.
- See approved list of bar splicer assemblies and mechanical splicers for alternatives.



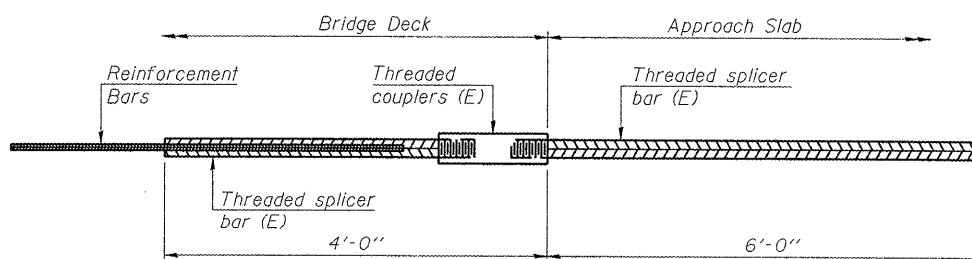
INSTALLATION AND SETTING METHODS

- "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.



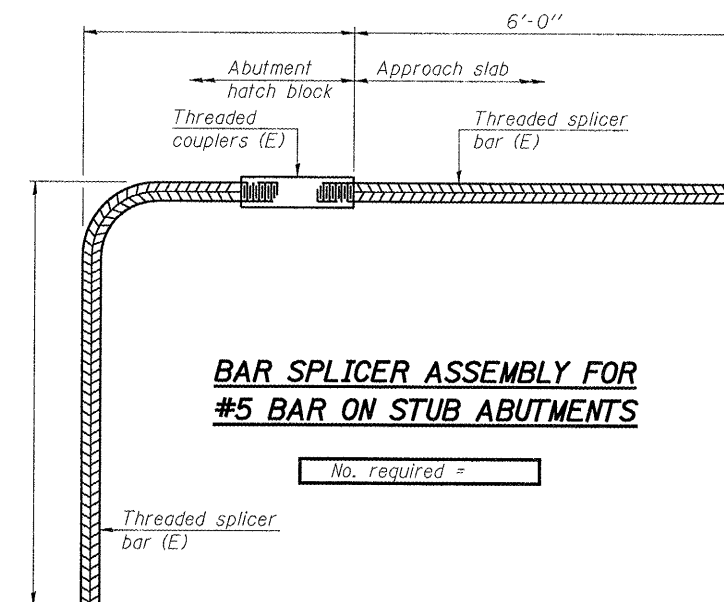
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Pier 1	#5	36
Pier 2	#5	36
Pier 3	#5	36
Pier 4	#5	36



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

No. required = 76



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

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HR
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BSD-1 7-1-10

FILE NAME *	USER NAME *	DESIGNED - JSP	REVISIONS -
		CHECKED - CJC	REVISIONS -
PLOT SCALE *		DRAWN - UJ	REVISIONS -
PLOT DATE *		CHECKED - RVB	REVISIONS -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 036-0071

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	38
CONTRACT NO. 68298				
ILLINOIS FED. AID PROJECT				

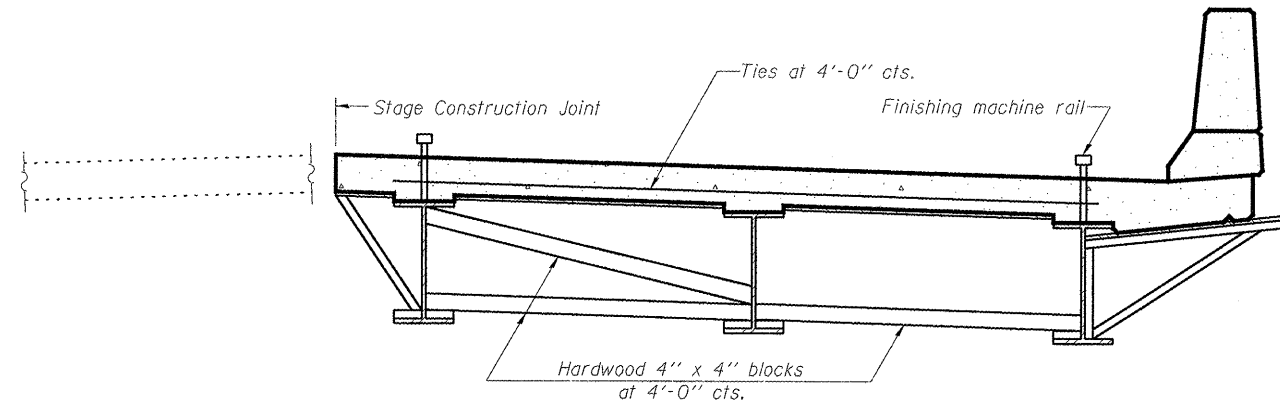
SHEET NO. 25 OF 27 SHEETS

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.

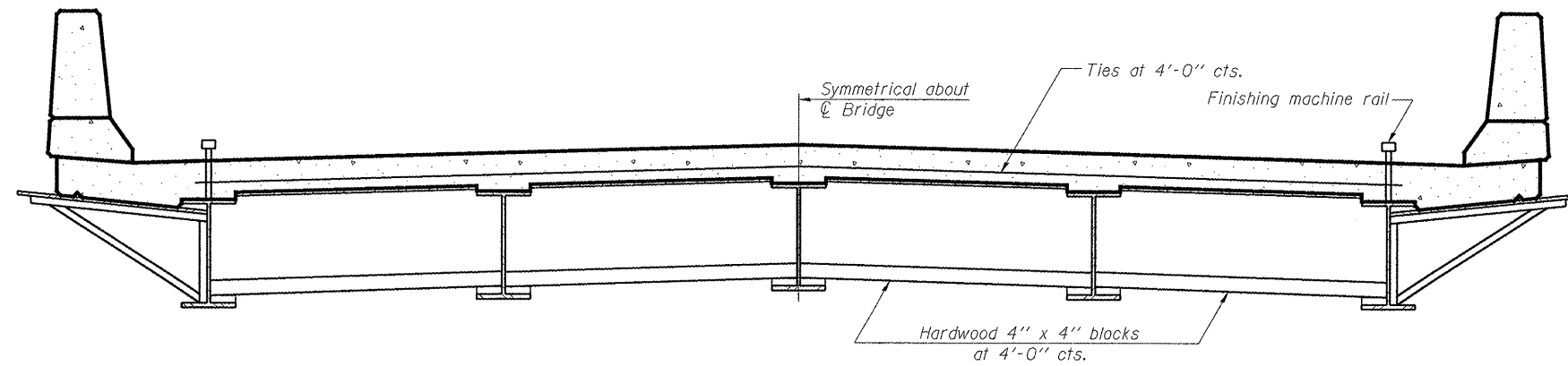
The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



**FORM BRACES FOR
STAGE CONSTRUCTION**



**FORM BRACES FOR
STANDARD CONSTRUCTION**

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HR JOB # 190-1785

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SB-1

7-1-10

FILE NAME =	USER NAME =	DESIGNED - JSP	REVISED -
		CHECKED - CJC	REVISED -
		DRAWN - UJ	REVISED -
		CHECKED - RVB	REVISED -

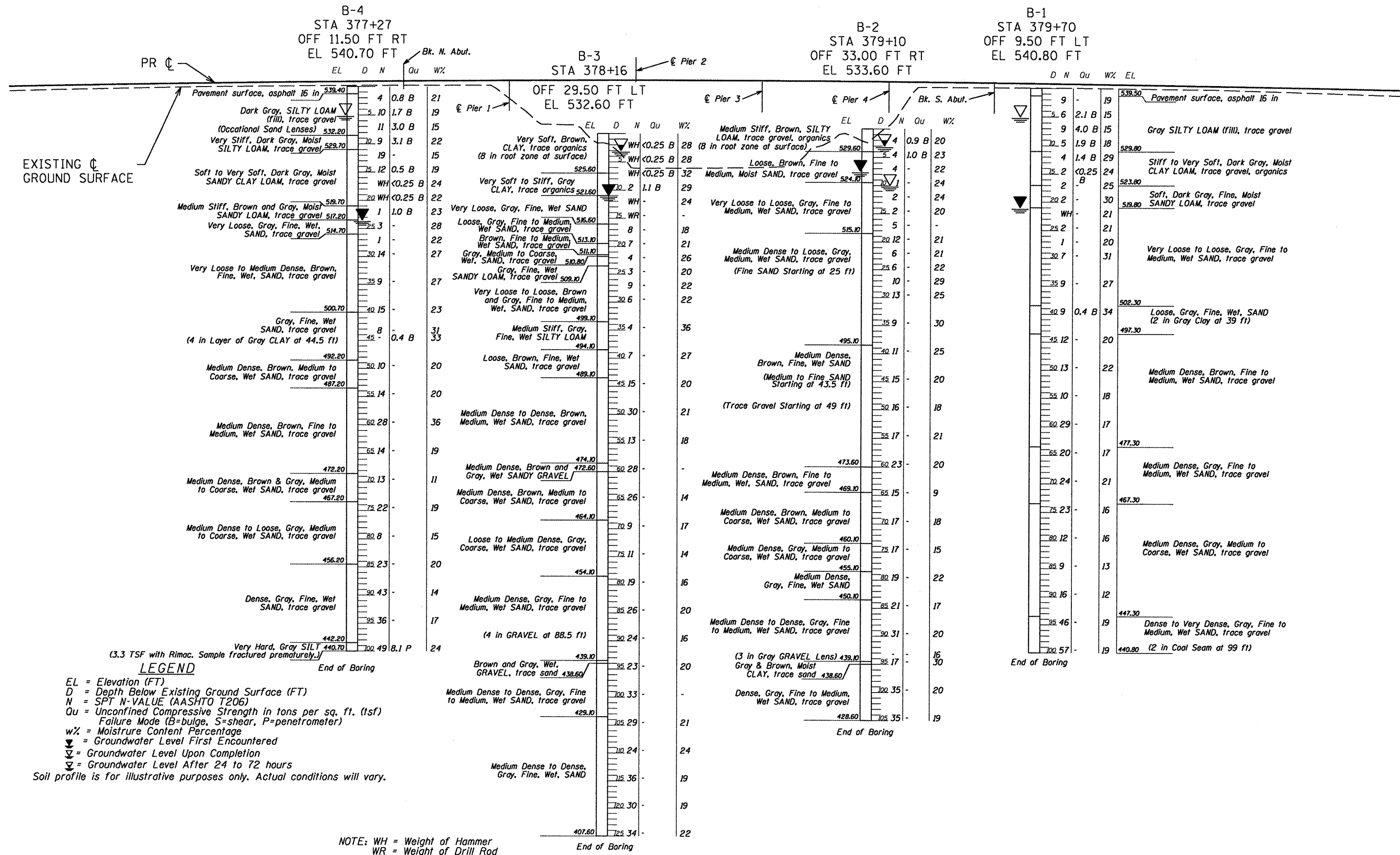
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER FORMING BRACKETS FOR SUPERSTRUCTURES WITH
W27 BEAMS AND SMALLER STRUCTURE NO. 036-0071

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1) BR	HENDERSON	70	39
CONTRACT NO. 68298			ILLINOIS FED. AID PROJECT	

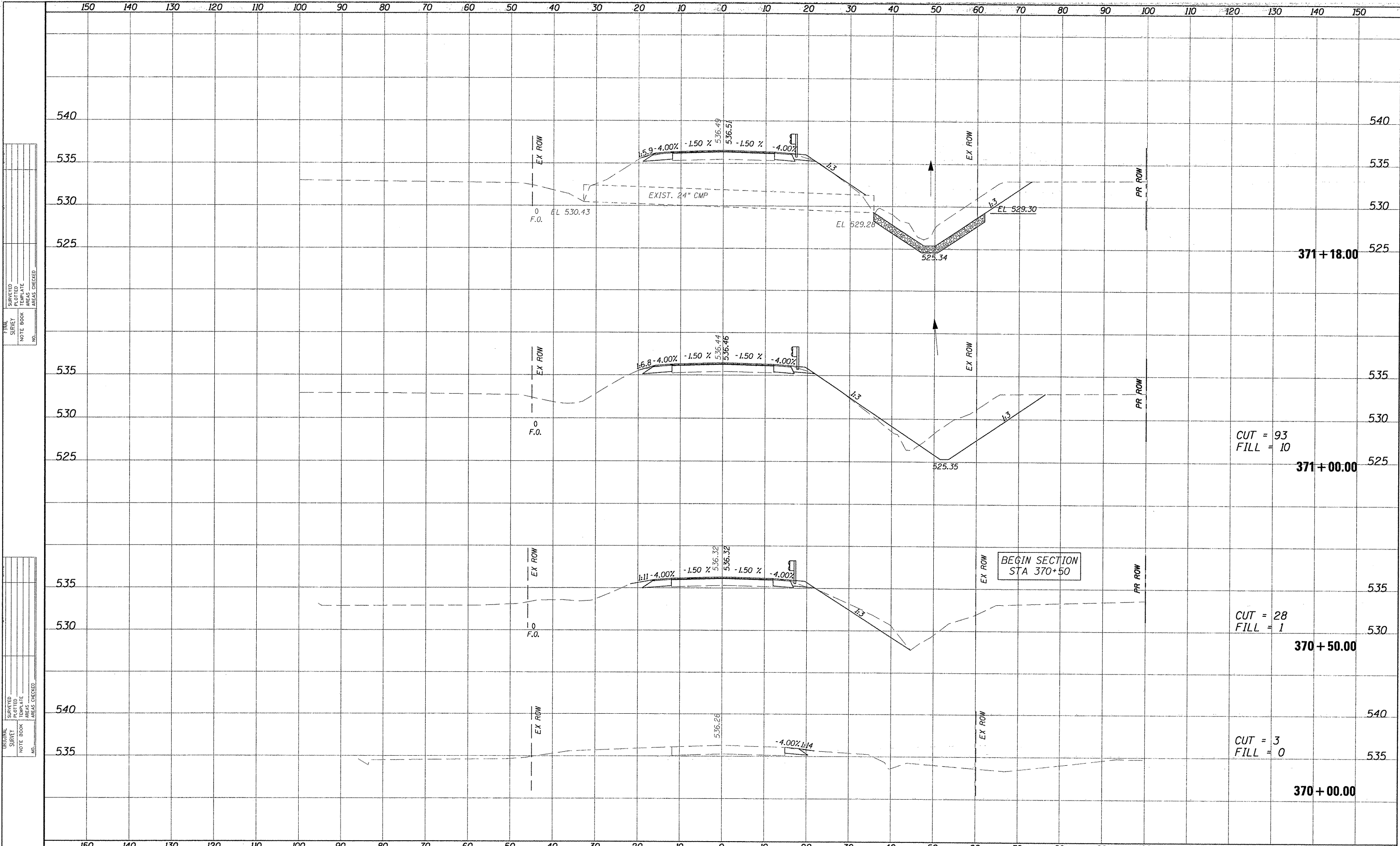
SHEET NO. 26 OF 27 SHEETS

ILLINOIS FED. AID PROJECT



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FILE NAME =	USER NAME =	DESIGNED - JSP	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUBSURFACE DIAGRAM STRUCTURE NO. 036-0071	F.A.P. RTE. =	SECTION =	COUNTY =	TOTAL SHEETS =	SHEET NO. =	
		CHECKED - CJC	REVISED -			522	(14-1-B1) BR	HENDERSON	70	40	
PLOT SCALE =		DRAWN - UJ	REVISED -			CONTRACT NO. 68298					
PLOT DATE =		CHECKED - RVB	REVISED -			SHEET NO. 27 OF 27 SHEETS					



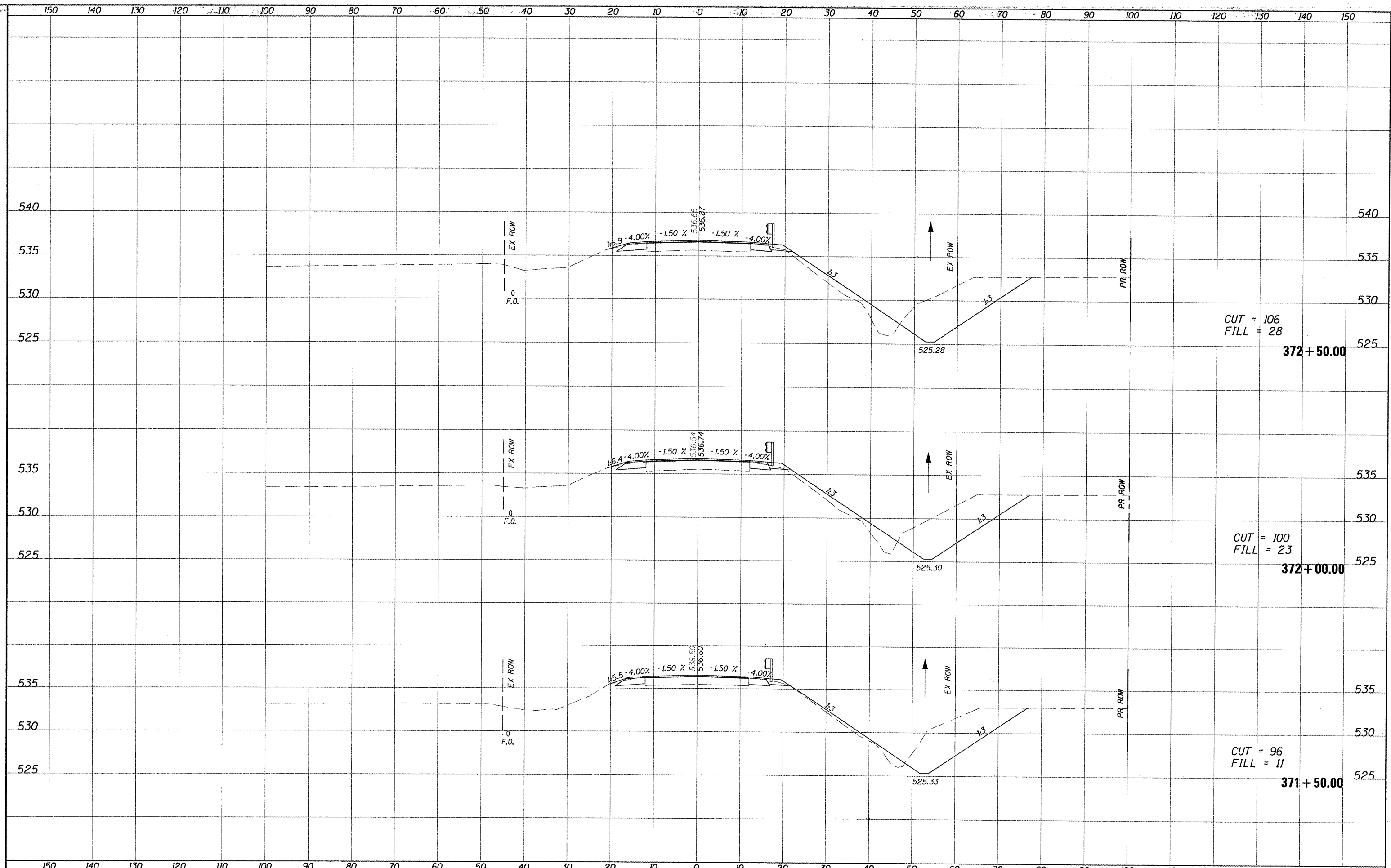
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PLOT SCALE = 20.0001 / IN.	CHECKED -	REVISED -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 370+00.00	TO STA. 371+18.00	CONTRACT NO. 68298	ILLINOIS FED. AID PROJECT	
PLOT DATE = 2/14/2011	DATE = 2-26-11	REVISED -	REVISED -										

FINAL SURVEY PLOTTED DATE AREAS CHECKED

ORIGINAL SURVEY PLOTTED DATE AREAS CHECKED



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USER NAME = HURST-ROSCHKE	DESIGNED -	REVISED -
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PLOT DATE = 2/14/2011	CHECKED -	REVISED -
DATE = 2-26-11	DATE -	REVISED -

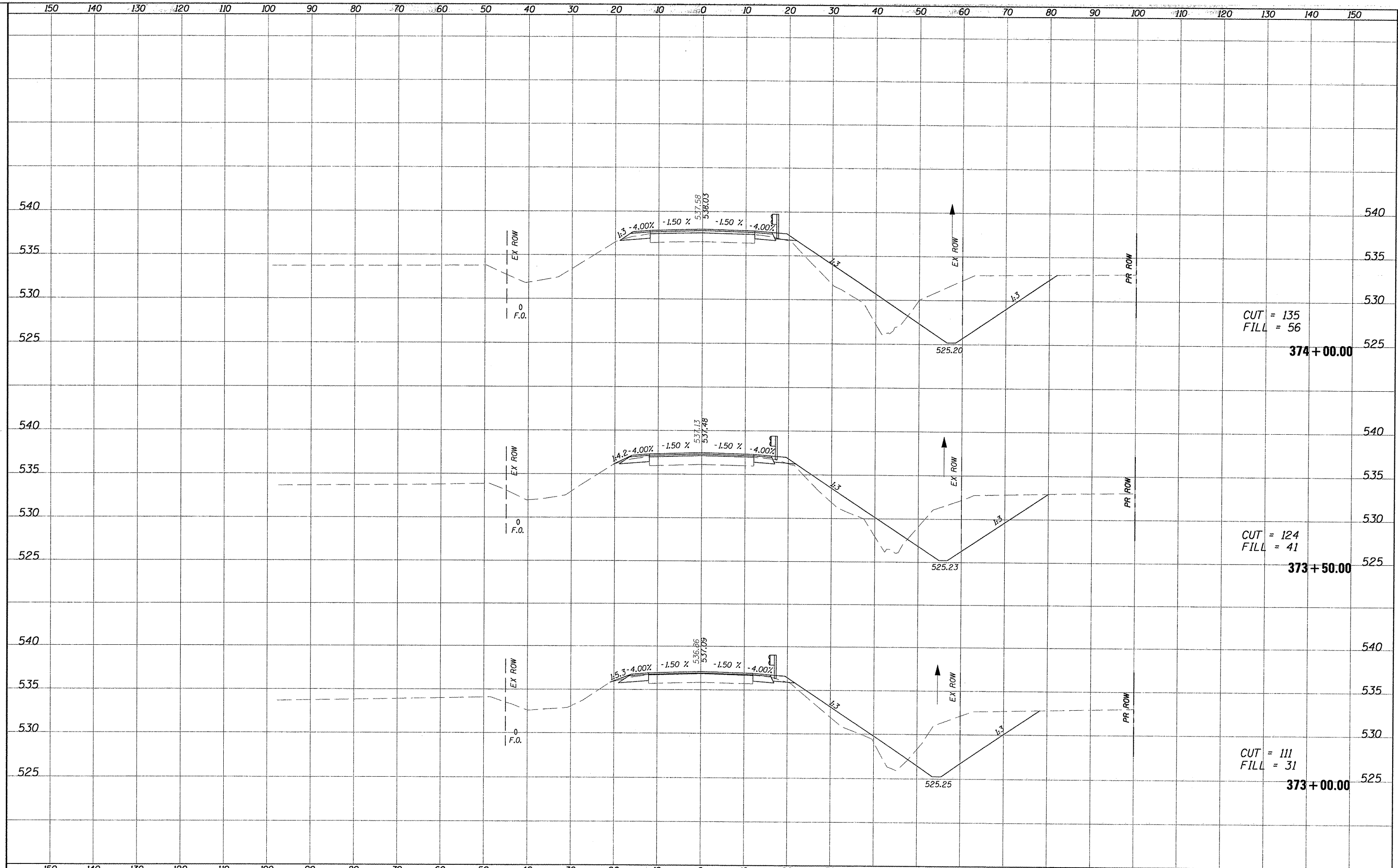
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SCALE: SHEET NO. OF SHEETS STA. 371+50.00 TO STA. 372+50.00

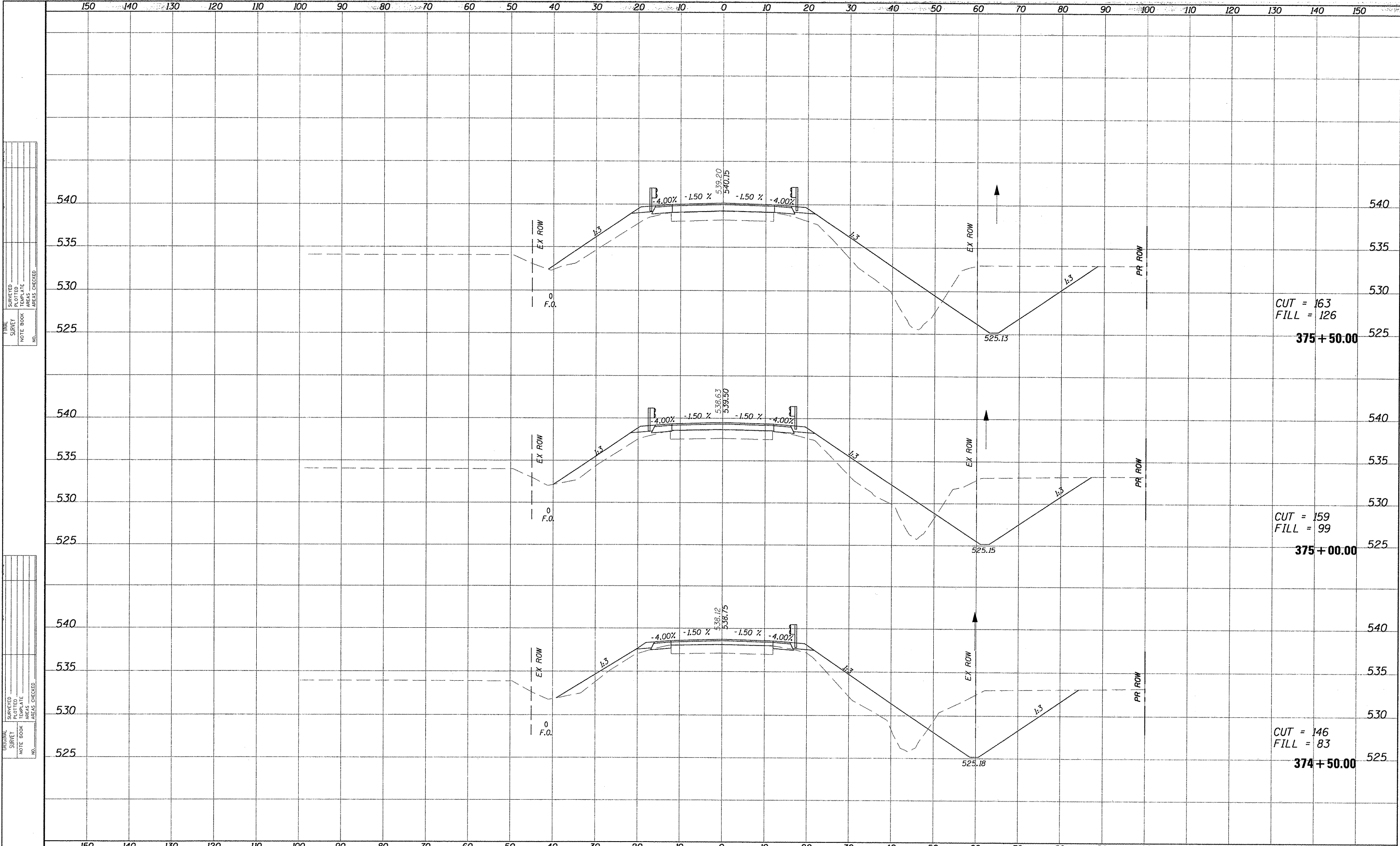
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1BR)	HENDERSON	70	42
CONTRACT NO. 68298			ILLINOIS FED. AID PROJECT	

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ORIGINAL SURVEY PLOTTED AREAS CHECKED

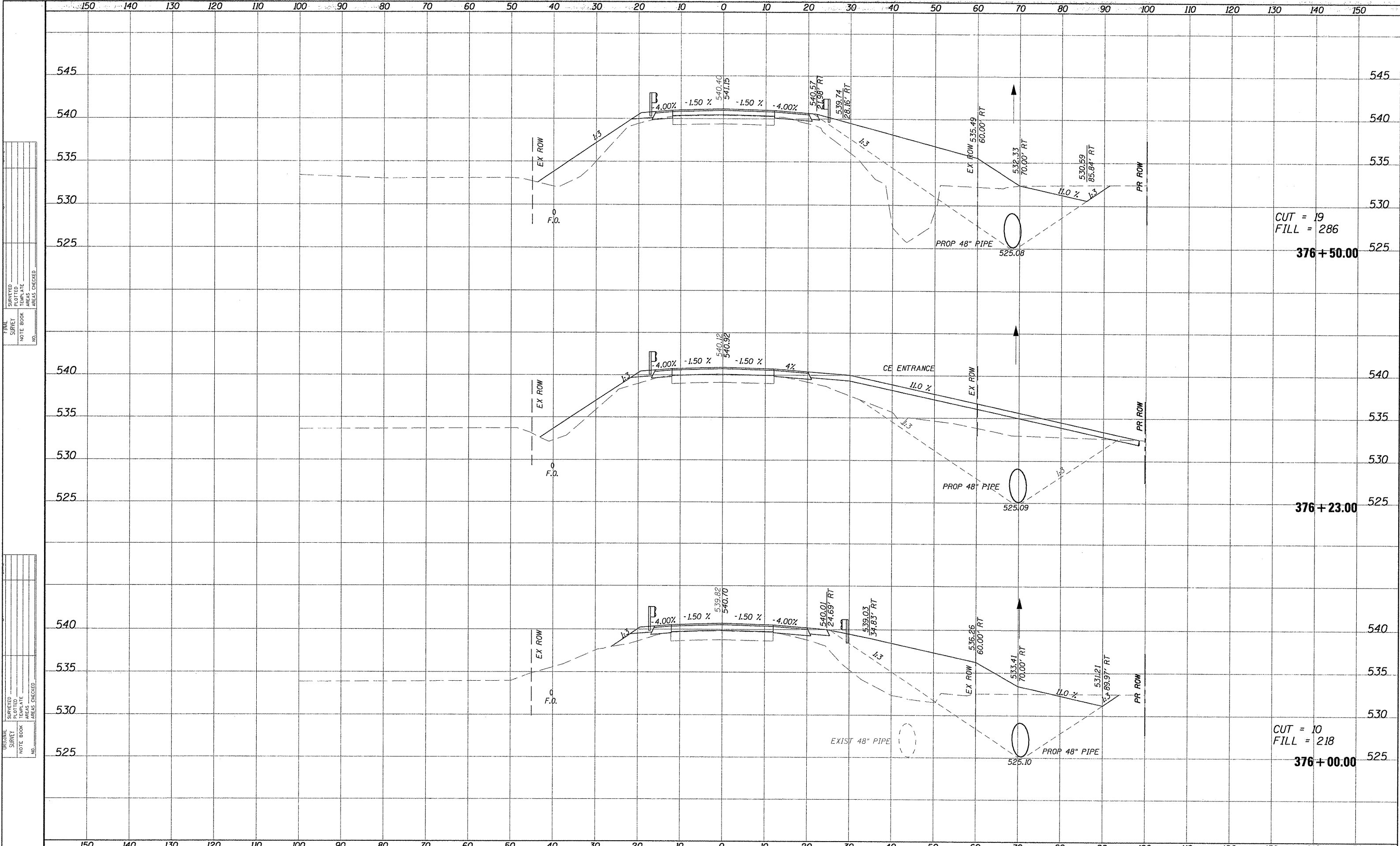


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PLOT SCALE = 20.0001" / IN.	CHECKED -	REVISED -	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA. 373+00.00 TO STA. 374+00.00	CONTRACT NO. 68298					
PLOT DATE = 2/14/2011	DATE - 2-26-11	REVISED -	REVISED -		ILLINOIS FED. AID PROJECT								



FINAL SURVEYED
 SURVEY
 NOTE BOOK
 NO.

UNRECORDED SURVEY
 SURVEY
 NOTE BOOK
 NO.



CUT = 19
FILL = 286

376+50.00

CUT = 10
FILL = 218

376+23.00

CUT = 10
FILL = 218

376+00.00

FINAL SURVEY NOTE BOOK NO. SURVEYED AREAS CHECKED

ORIGINAL SURVEY NOTE BOOK NO. SURVEYED AREAS CHECKED

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PLOT DATE = 2/14/2011

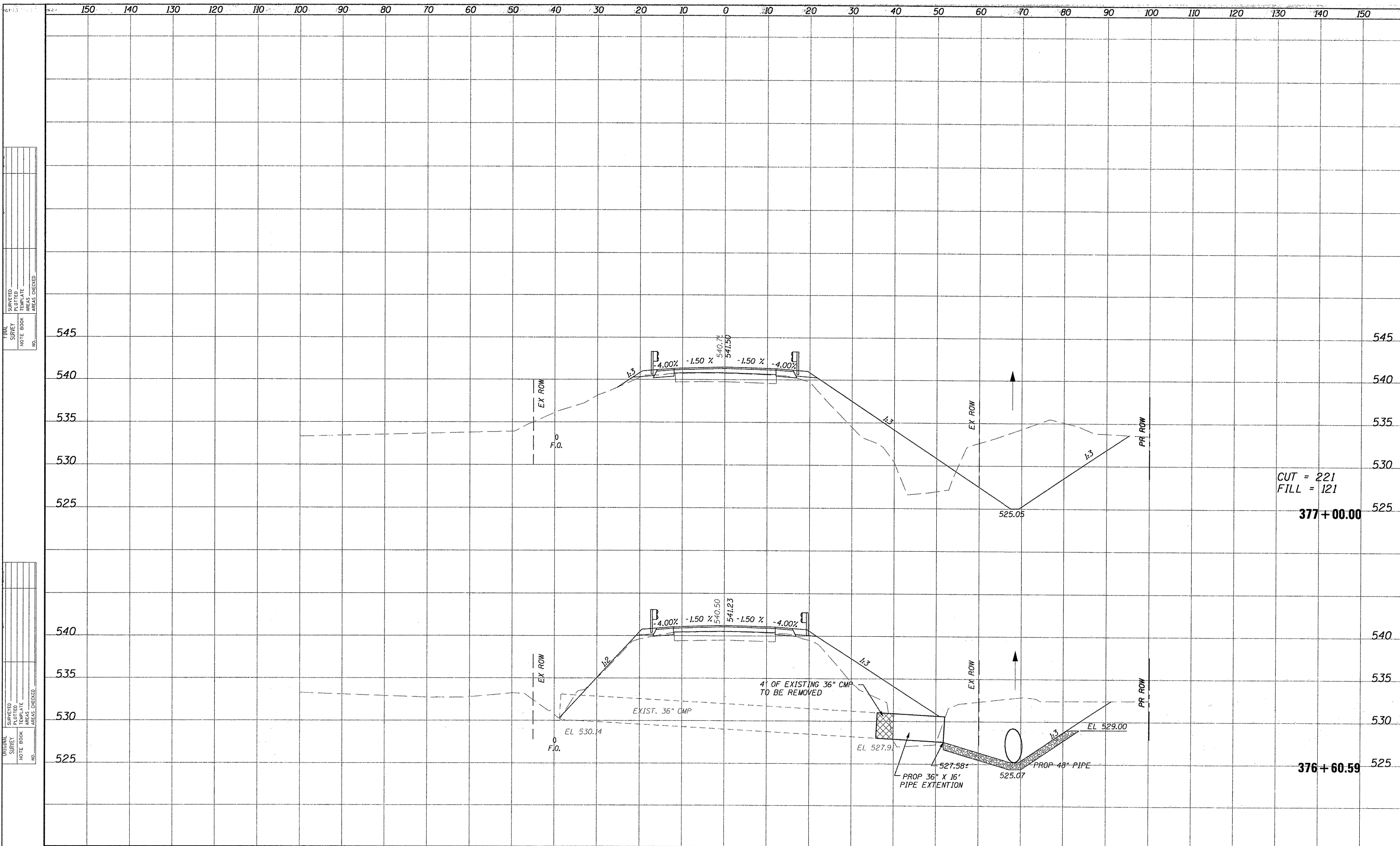
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	DRAWN -	REVISED -
	CHECKED -	REVISED -
DATE = 2-26-11		REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: SHEET NO. OF SHEETS STA. 376+00.00 TO STA. 376+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B)BR	HENDERSON	70	45
				CONTRACT NO. 68298
ILLINOIS FED. AID PROJECT				



CUT = 221
FILL = 121

377+00.00

376+60.59

FINAL	SURVEYED	NO.
	NOTE BOOK	
	TEMP. PLATE	
	AREAS CHECKED	

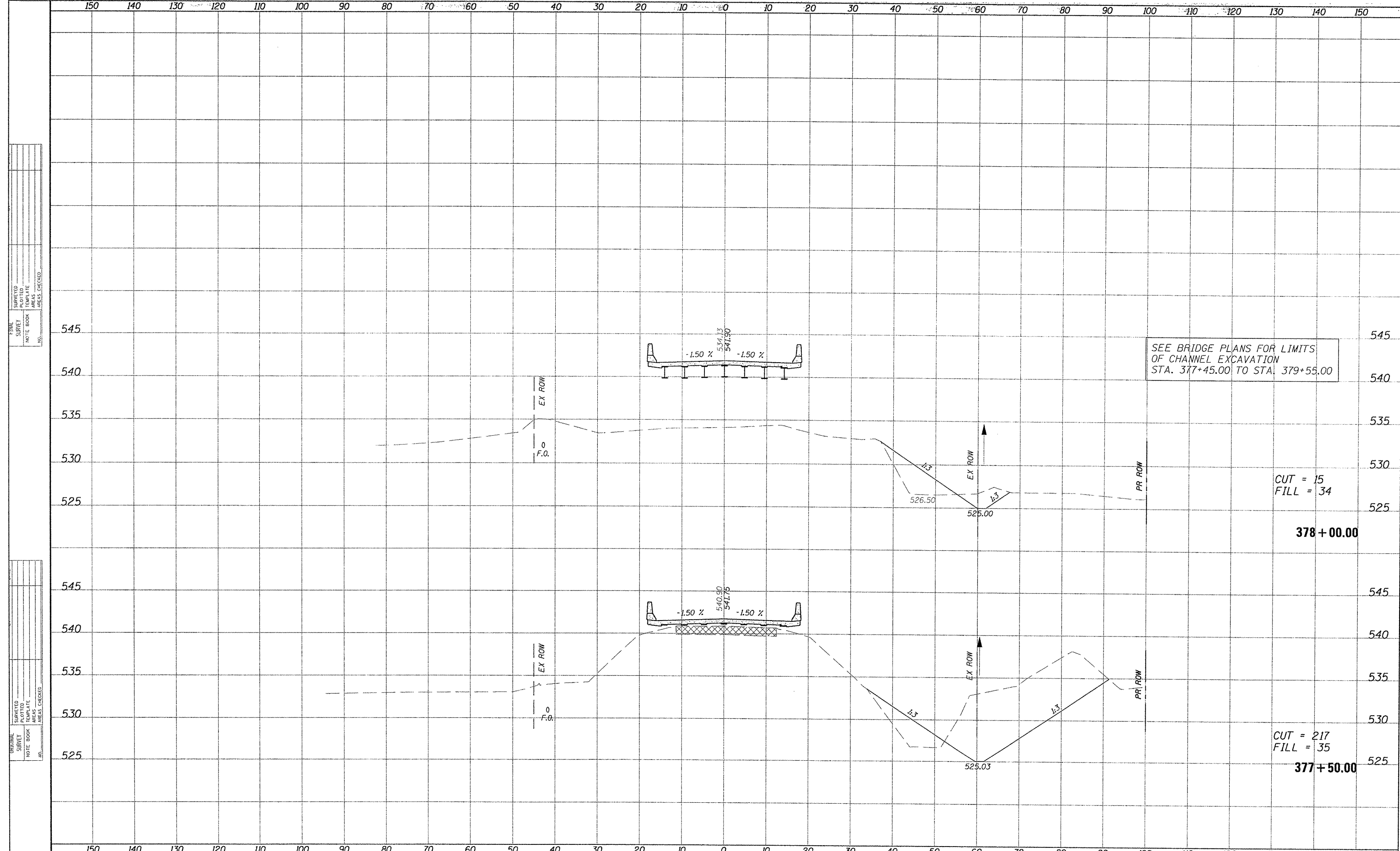
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	NOTE BOOK	
	TEMP. PLATE	
	AREAS CHECKED	

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PLOT DATE = 2/14/2011	DATE = 2-26-11		REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCALE:	SHEET NO. OF SHEETS	STA. 376+60.58 TO STA. 377+00.00
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F.A.P. RTE. 522	SECTION (14-1-B)BR	COUNTY HENDERSON	TOTAL SHEETS 70	SHEET NO. 46
CONTRACT NO. 68298				ILLINOIS FED. AID PROJECT



FINISH	SURVEY	PROFILING
NOTE BOOK	TEMPLATE	AREAS CHECKED
NO.		

ORIGINAL	SURVEY	PROFILING
NOTE BOOK	TEMPLATE	AREAS CHECKED
NO.		

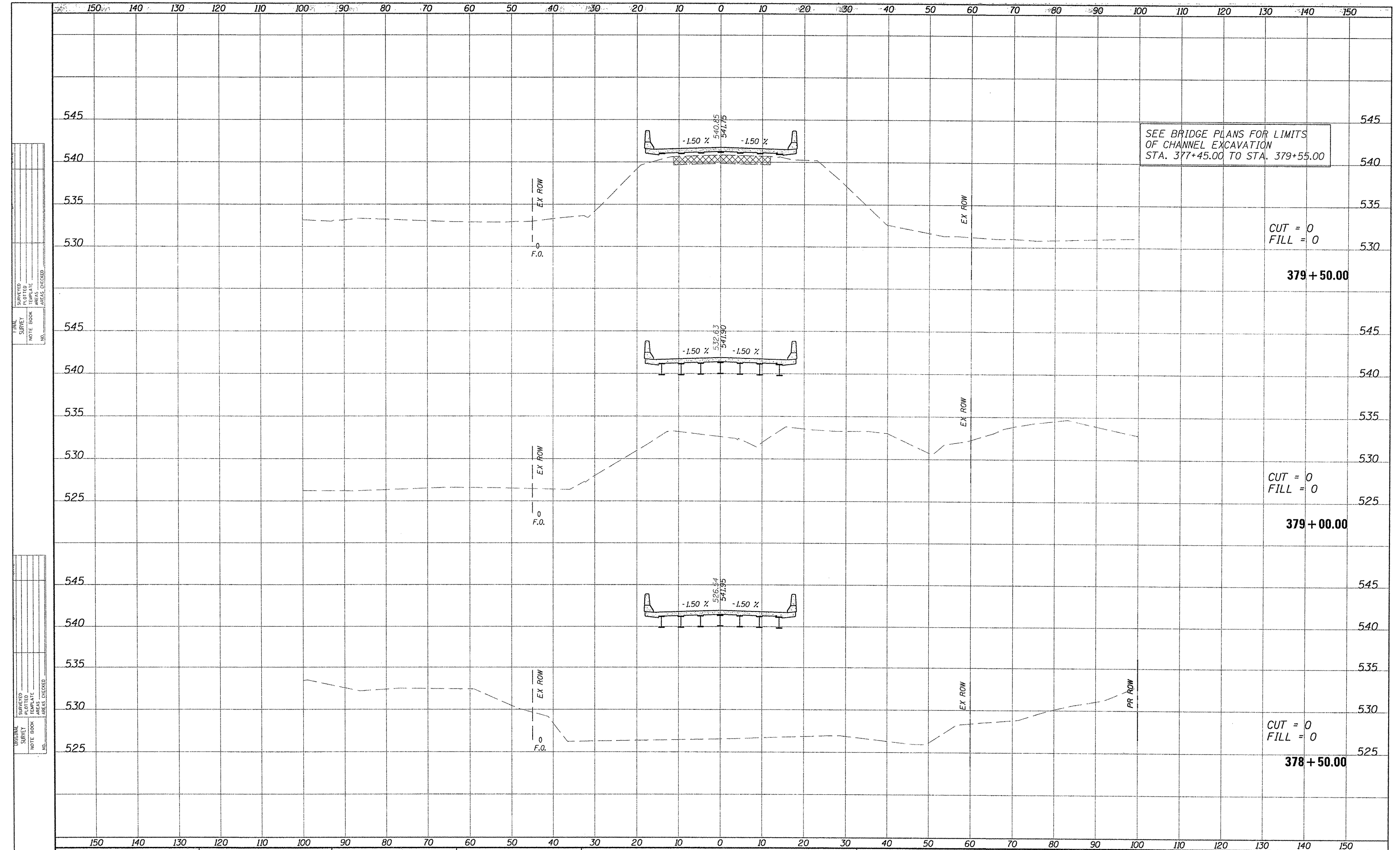
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FILEL

USER NAME = #USER#	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = #SCALE#	CHECKED -	REVISED -
PLOT DATE = #DATE#	DATE - 2-26-11	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SCALE: SHEET NO. OF SHEETS STA. 377+50.00 TO STA. 378+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B)BR	HENDERSON	70	47
			CONTRACT NO. 68298	
ILLINOIS FED. AID PROJECT				



NO.	AREAS CHECKED
NO.	EMPLATE
NO.	DESIGNED
NO.	CHECKED
NO.	DRAWN
NO.	PLOTTED
NO.	SURVEYED

NO.	AREAS CHECKED
NO.	EMPLATE
NO.	DESIGNED
NO.	CHECKED
NO.	DRAWN
NO.	PLOTTED
NO.	SURVEYED

FILE NAME : #FILEL*

USER NAME : #USER*

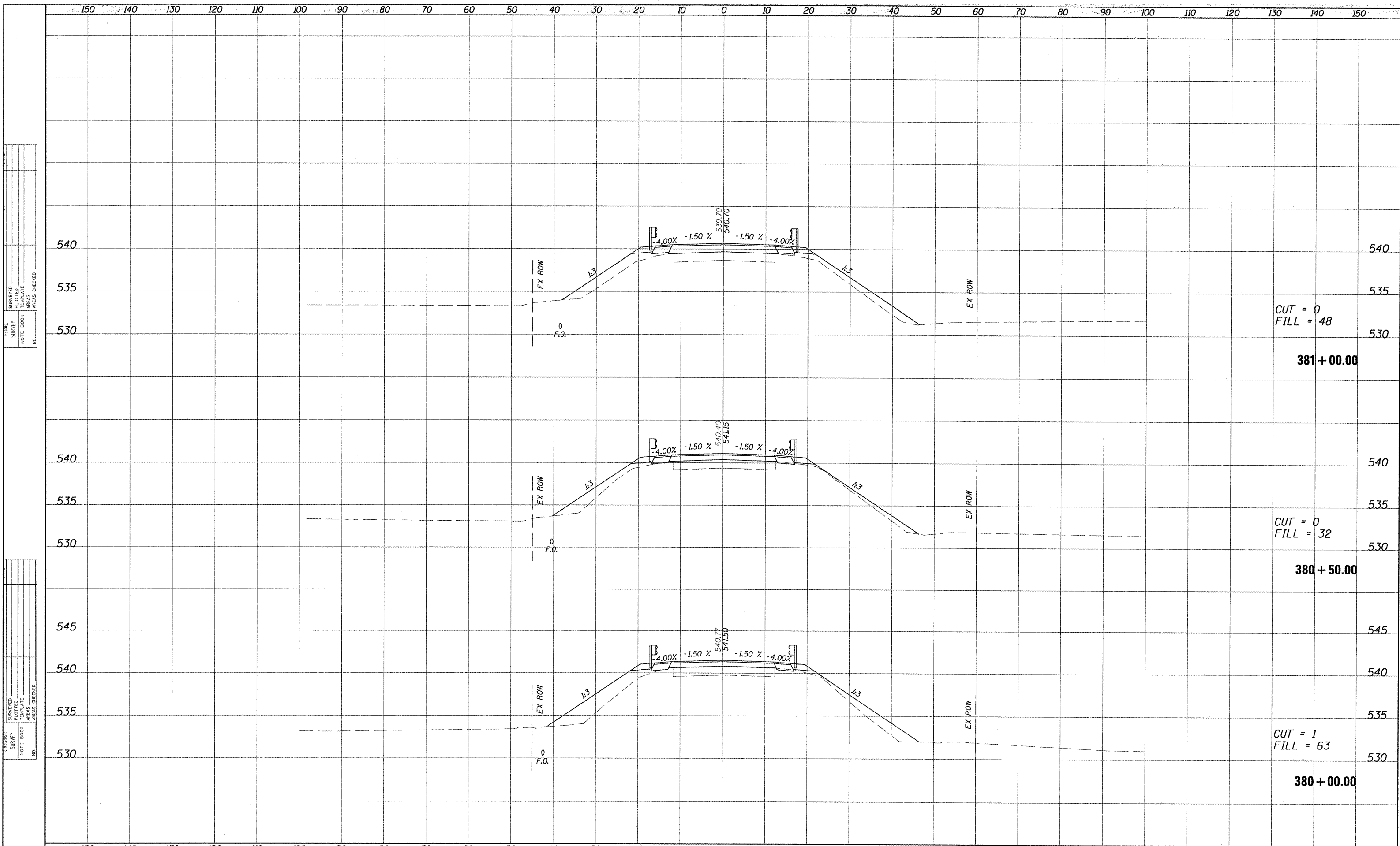
DESIGNED - REVISED -
 DRAWN - REVISED -
 CHECKED - REVISED -
 DATE - 2-26-11

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: SHEET NO. OF SHEETS STA. 378+50.00 TO STA. 379+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B)BR	HENDERSON	70	48
CONTRACT NO. 68298				
ILLINOIS FED. AID PROJECT				



CUT = 0
 FILL = 48
 381+00.00

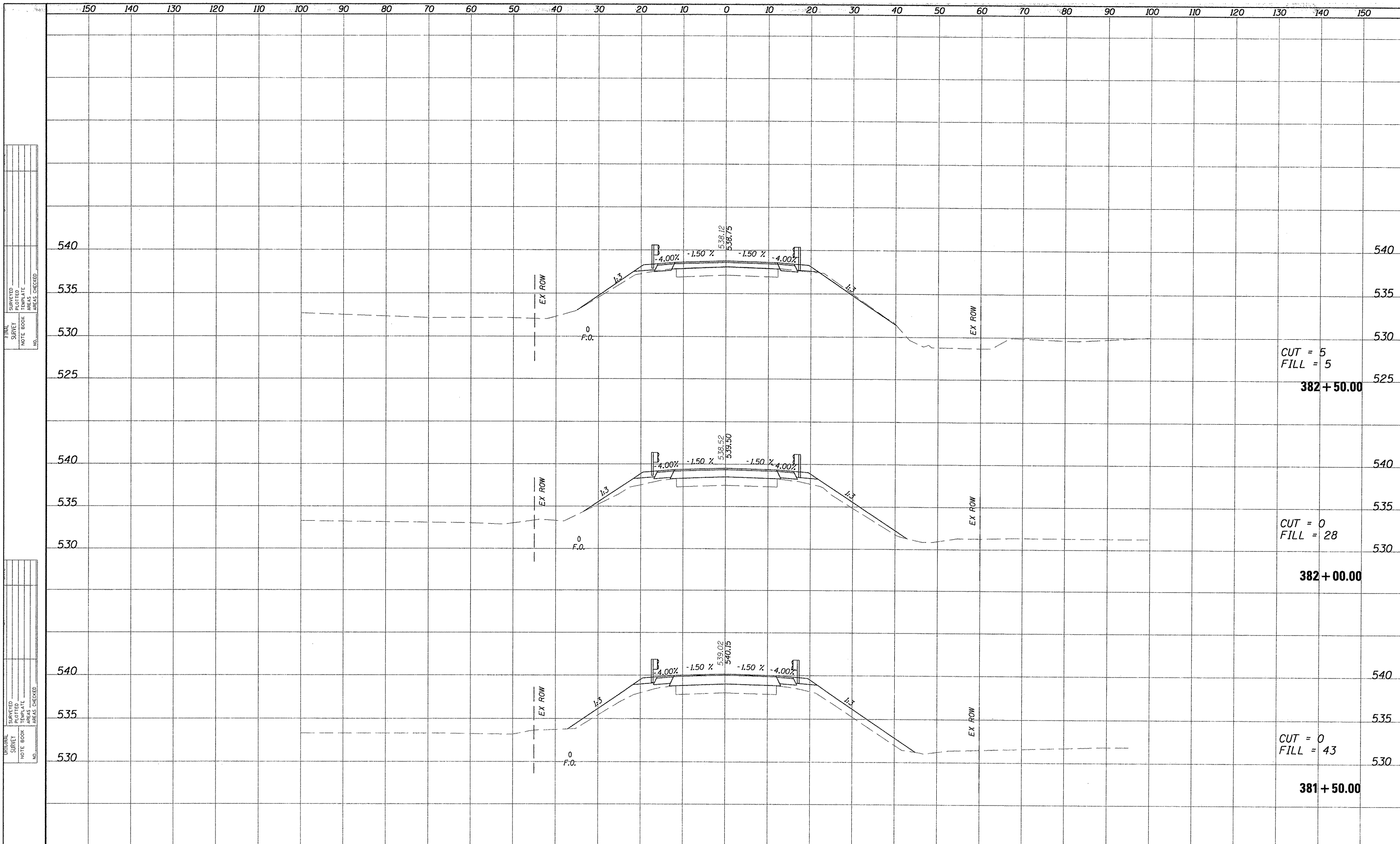
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 FILL = 32
 380+50.00

CUT = 1
 FILL = 63
 380+00.00

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 NOTE BOOK NO.: [blank]
 TEMPLATE AREAS CHECKED: [blank]

ORIGINAL SURVEY
 SURVEYED BY: [blank]
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 TEMPLATE AREAS CHECKED: [blank]

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	PLOT SCALE = 20.0001' / IN.	DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 380+00.00	TO STA. 381+00.00	CONTRACT NO. 68298		
	PLOT DATE = 2/14/2011	CHECKED -	REVISED -								ILLINOIS FED. AID PROJECT		
		DATE = 2-26-11	REVISED -										



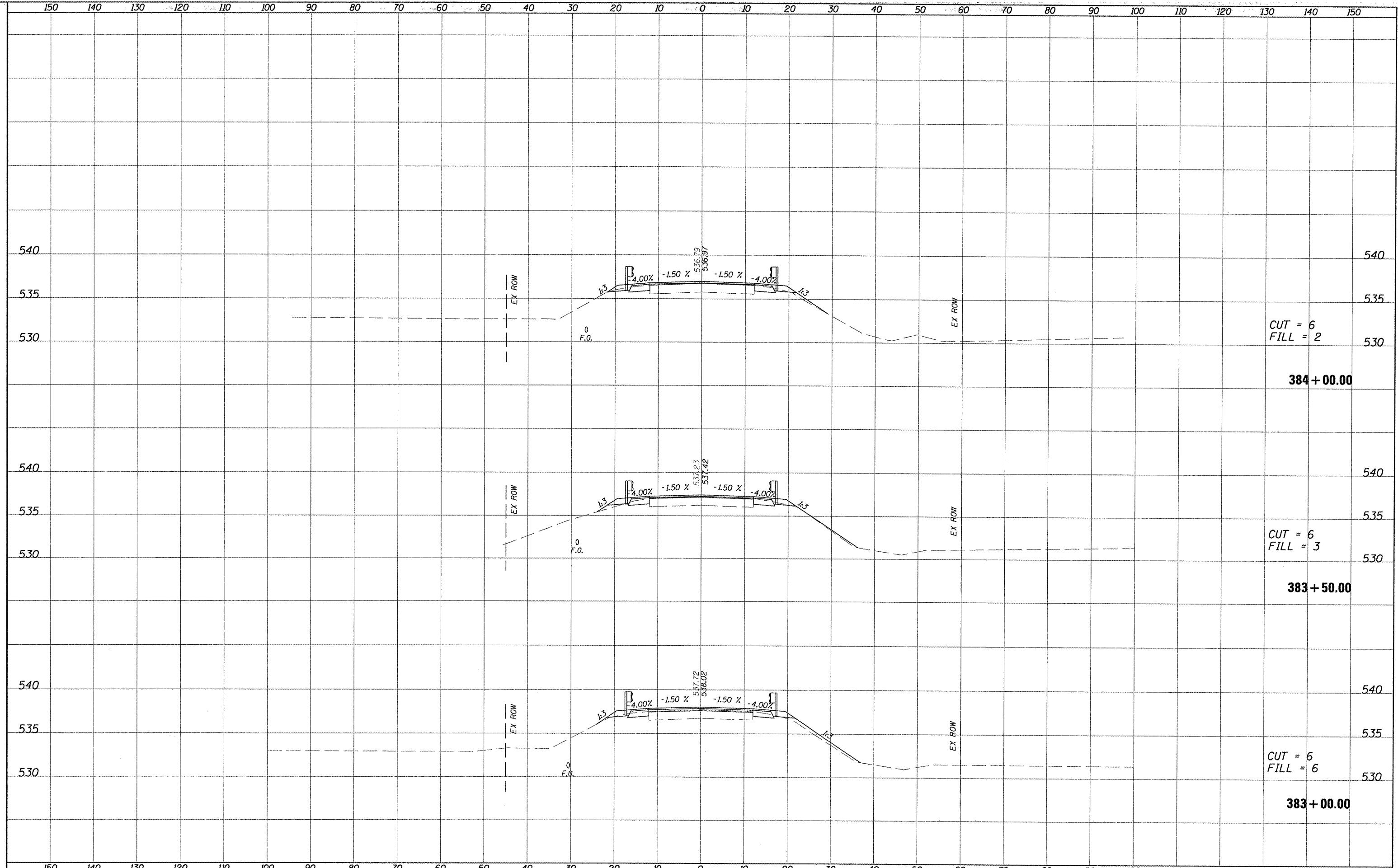
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 SURVEY COPY TO DATE
 NOTE BOOK NO. AREAS CHECKED

ORIGINAL SURVEYED PLOTTED
 SURVEY COPY TO DATE
 NOTE BOOK NO. AREAS CHECKED

FILE NAME = T:\198-1785.WD*7_Honey_Creek\geopak\xsec.dgn	USER NAME = HURST-ROSCHE	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS				F.A.P. RTE. 522	SECTION (14-1-B1)BR	COUNTY HENDERSON	TOTAL SHEETS 70	SHEET NO. 50
	PLOT SCALE = 20.0001' / IN.	DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 381+50.00	TO STA. 382+50.00	CONTRACT NO. 68298		
	PLOT DATE = 2/14/2011	CHECKED -	REVISED -										
		DATE = 2-26-11	REVISED -										

FINAL SURVEYED PLOTTED
 SURVEY NOTE BOOK AREAS
 NO. AREAS CHECKED

FINAL SURVEYED PLOTTED
 SURVEY NOTE BOOK AREAS
 NO. AREAS CHECKED



CUT = 6
 FILL = 2

CUT = 6
 FILL = 3

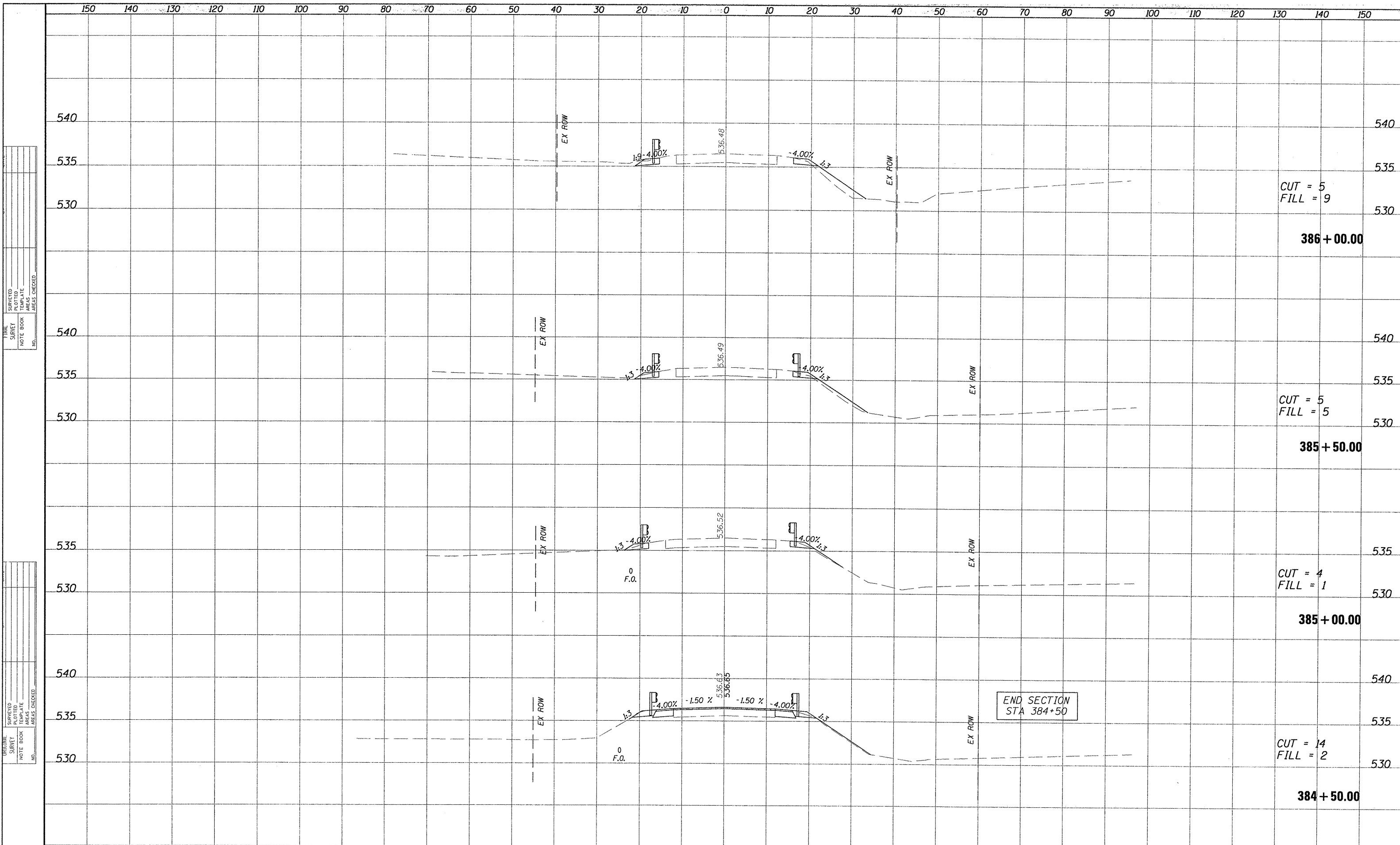
CUT = 6
 FILL = 6

384 + 00.00

383 + 50.00

383 + 00.00

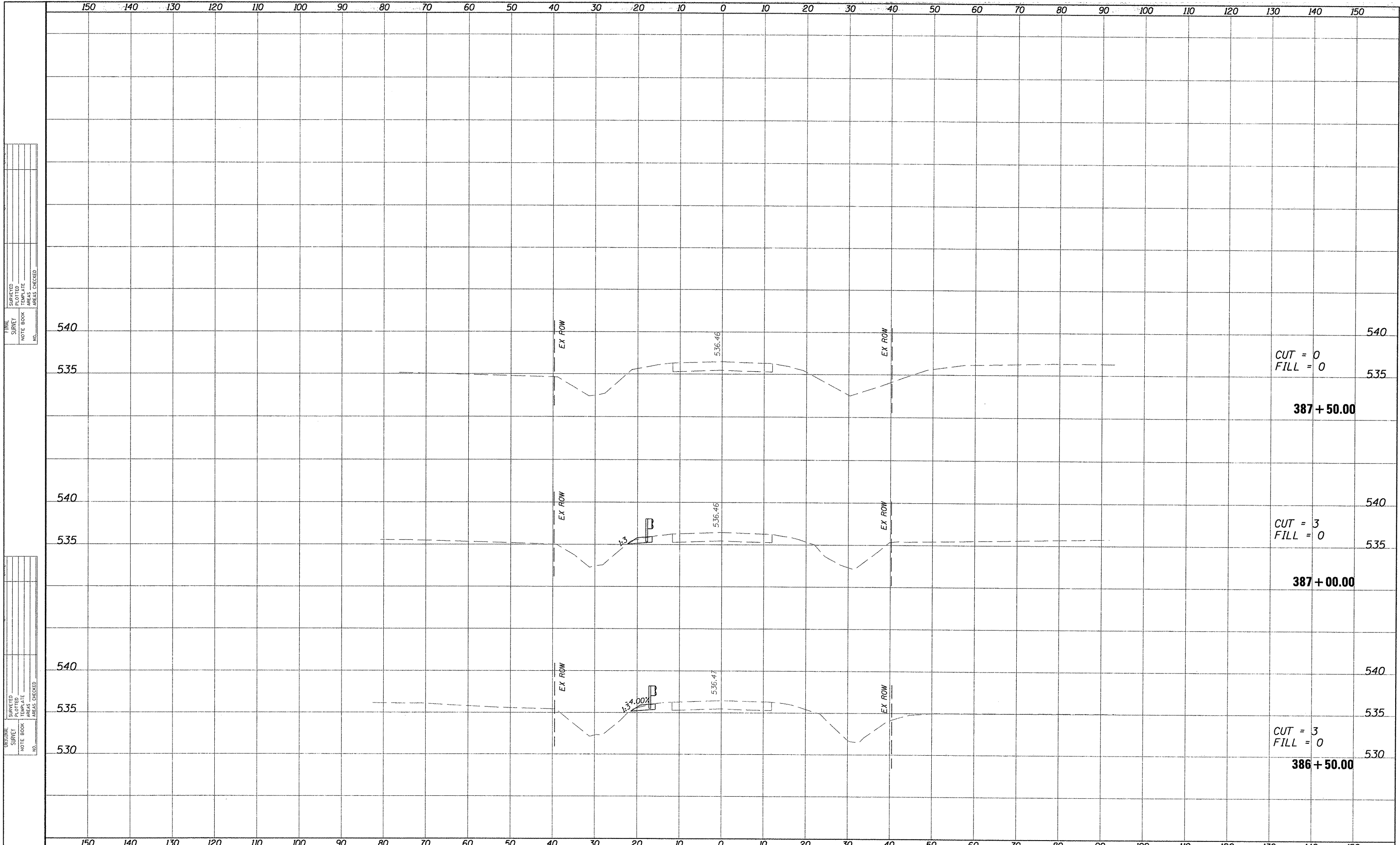
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	PLOT SCALE = 20.0001" / IN.	DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 383+00.00	TO STA. 384+00.00	CONTRACT NO. 68298		
	PLOT DATE = 2/14/2011	CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT								
		DATE = 2-26-11	REVISED -										



ORIGINAL SURVEY NO. _____
 SURVEY NAME _____
 NOTE BOOK NO. _____
 TEMPLATE AREAS CHECKED _____
 AREAS CHECKED _____

ORIGINAL SURVEY NO. _____
 SURVEY NAME _____
 NOTE BOOK NO. _____
 TEMPLATE AREAS CHECKED _____
 AREAS CHECKED _____

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PLOT SCALE = 20.0001" / 1"	CHECKED -	REVISED -	REVISED -			CONTRACT NO. 68298				
PLOT DATE = 2/14/2011	DATE 2-26-11	REVISED -	REVISED -			ILLINOIS FED. AID PROJECT				
SCALE: SHEET NO. OF SHEETS STA. 384+50.00 TO STA. 386+00.00										



CUT = 0
FILL = 0

387+50.00

CUT = 3
FILL = 0

387+00.00

CUT = 3
FILL = 0

386+50.00

FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	DATE
	AREAS
	CHECKED

ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	DATE
	AREAS
	CHECKED

FILE NAME = T:\198-1785_WD*7_Honey_Creek\geopak\ssuo.dgn

USER NAME = HURST-ROSCHE	DESIGNED -	REVISED -
PLOT SCALE = 20.0001' / IN.	DRAWN -	REVISED -
PLOT DATE = 2/14/2011	CHECKED -	REVISED -
DATE = 2-26-11		REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

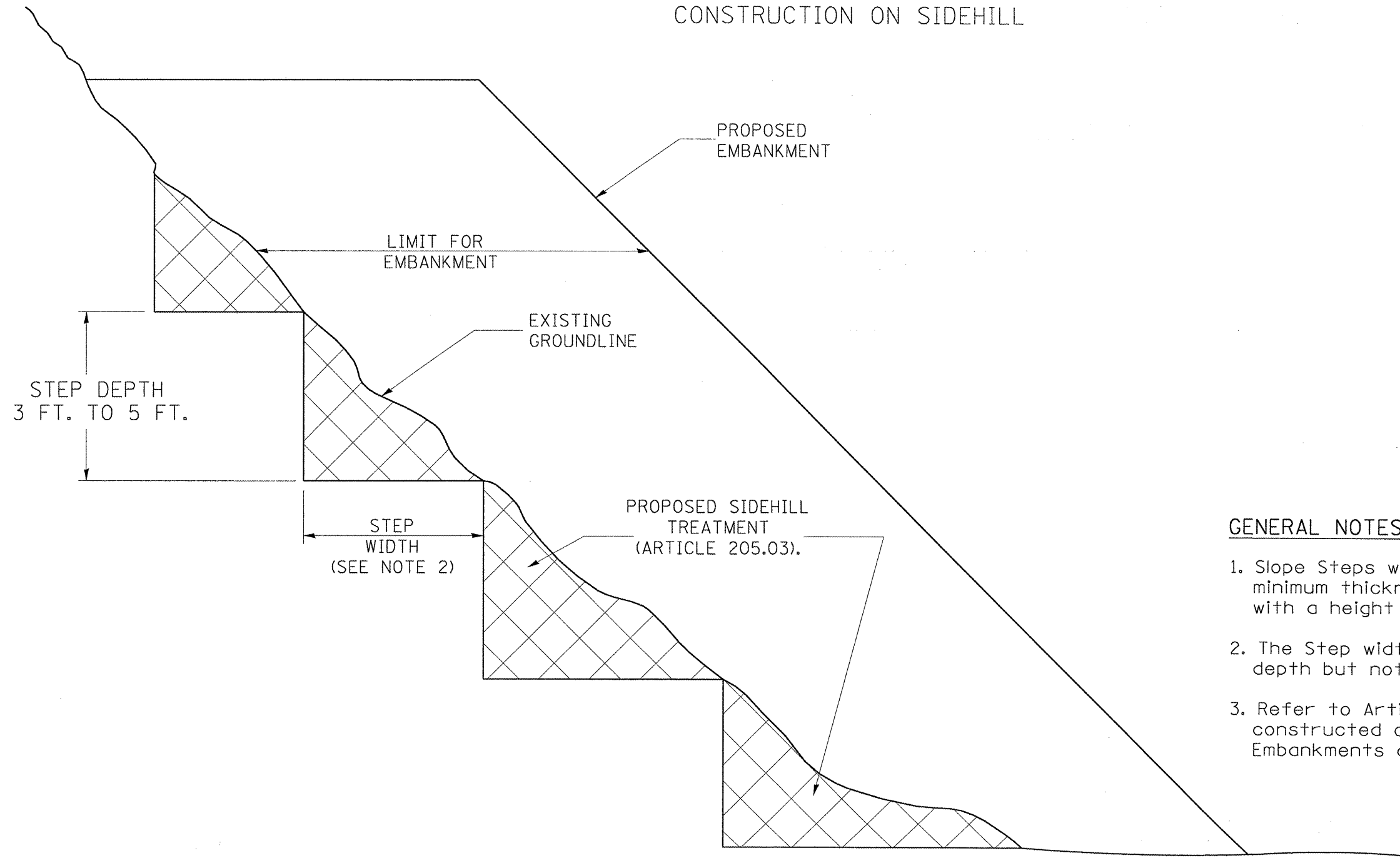
CROSS SECTIONS

SCALE: SHEET NO. OF SHEETS STA. 386+50.00 TO STA. 387+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B)BR	HENDERSON	70	53
CONTRACT NO. 68298			ILLINOIS FED. AID PROJECT	

SLOPE STEPS DETAIL

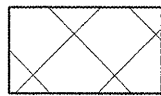
TYPICAL CROSS-SECTION EMBANKMENT CONSTRUCTION ON SIDEHILL



GENERAL NOTES:

1. Slope Steps will be required for all 12(300) minimum thickness "silver fills" and on a fills with a height of 10'(3.0m).
2. The Step width shall be twice the Step depth but not less than 6 feet.
3. Refer to Article 205.03 for Embankment to be constructed on Hillside or Slopes, or if existing Embankments are to be widened.

REPLACEMENT MATERIAL:



STANDARD EMBANKMENT
(IN ACCORDANCE WITH
205 OF THE STANDARD SPECIFICATION).

DESIGNER NOTE:

1. EACH PROJECT SHOULD BE REVIEWED INDEPENDENTLY FOR TREATMENT REQUIRED.
2. REFER TO THIS DETAIL WITH NOTE ON APPLICABLE TYPICAL SECTIONS.

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

1-1-97	RENUM. L-5.03, NEW REVISION BOX, REVISED TITLE BOX, REVISED GENERAL NOTES.	T.P.
10-16-06	REVISED TO 2007 SPEC.	M.A.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SLOPE STEPS DETAIL

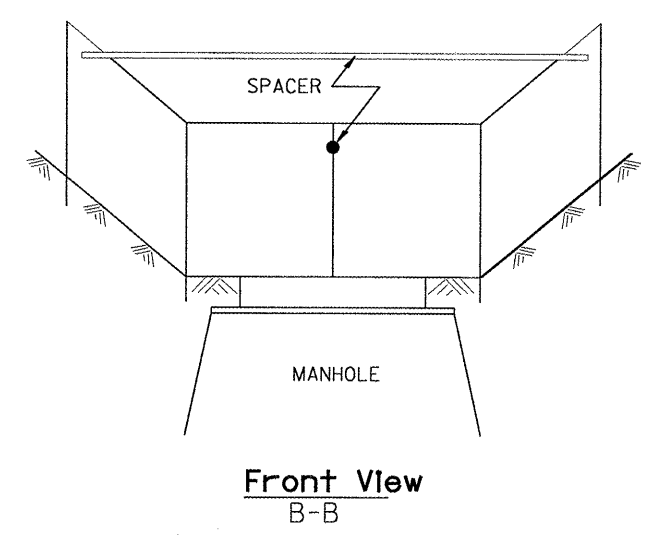
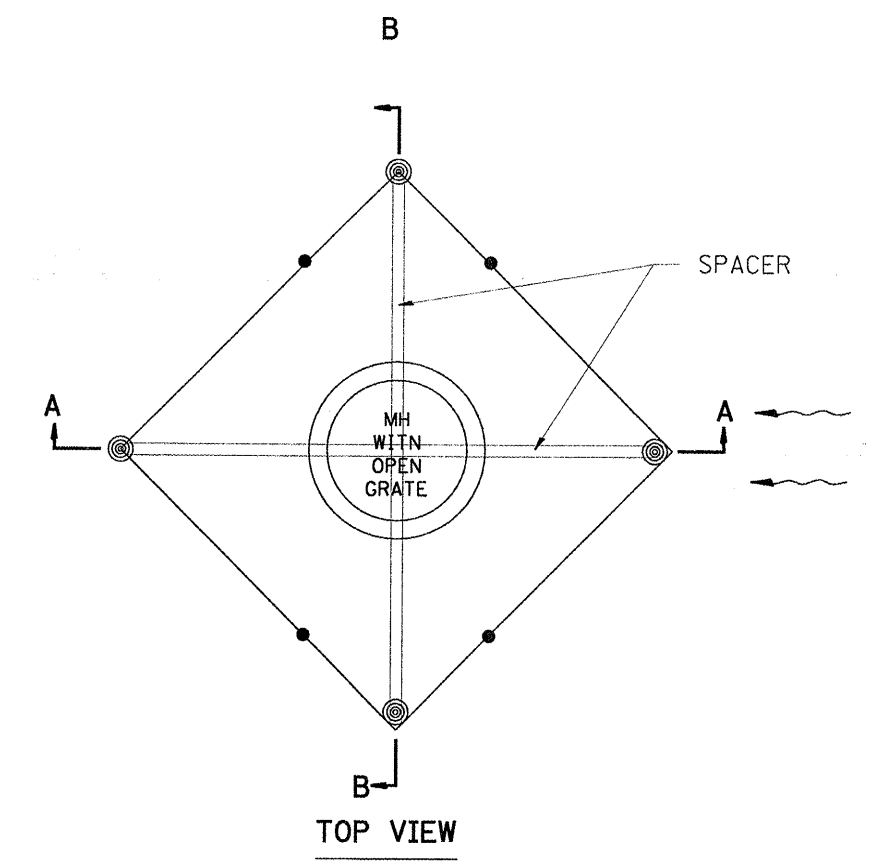
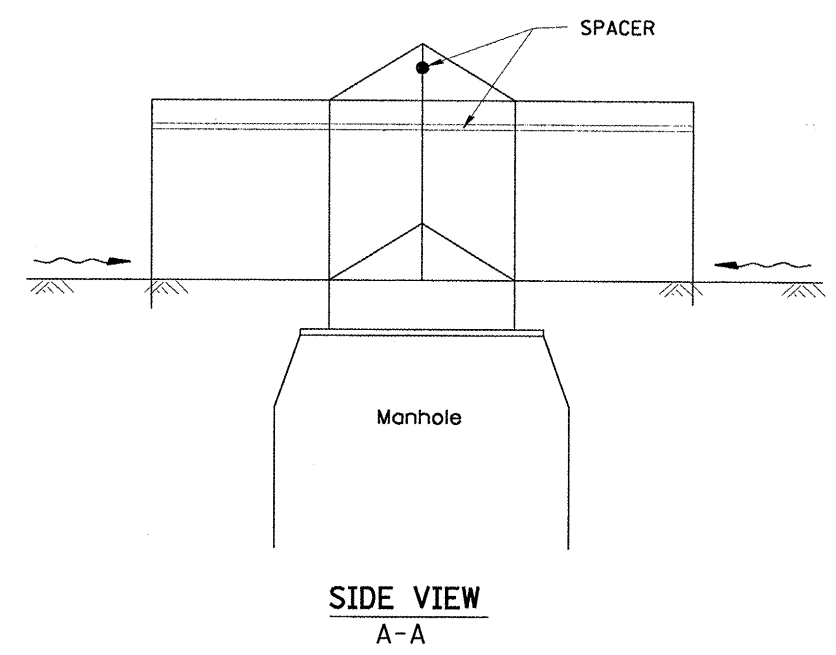
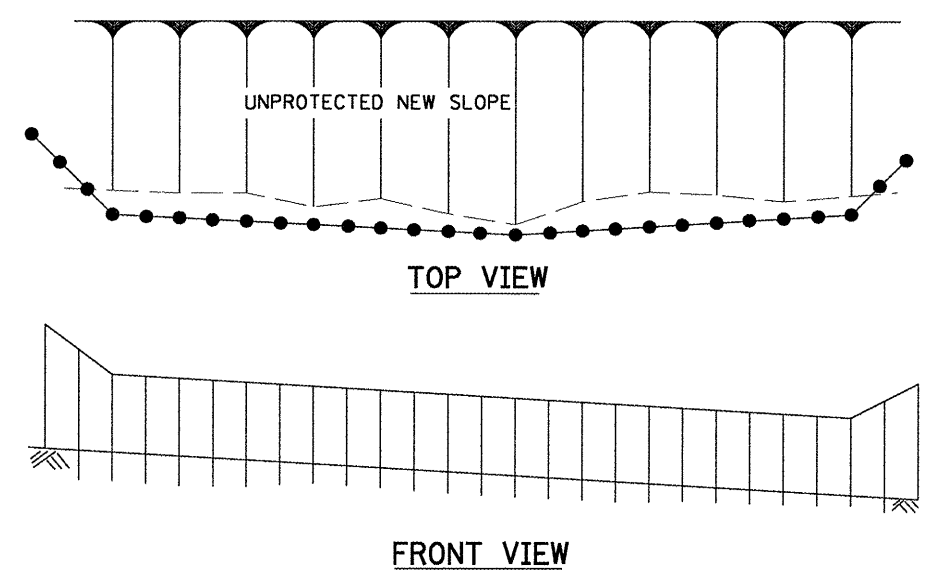
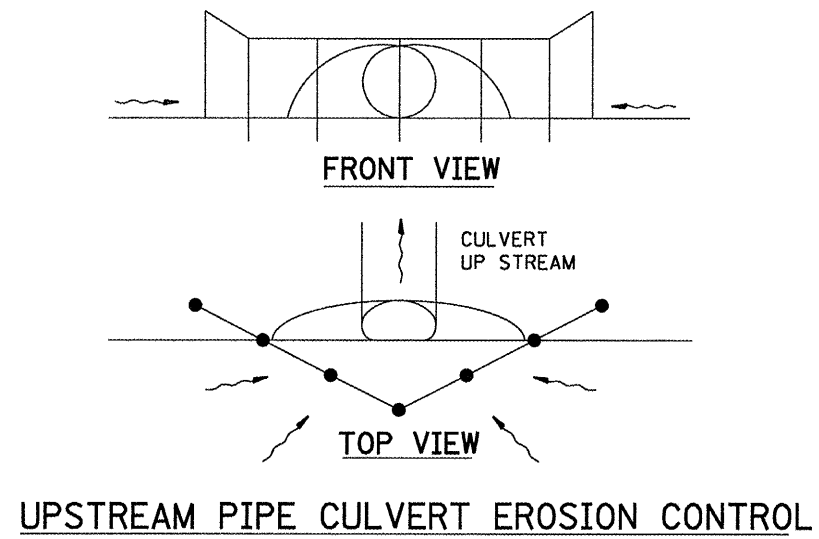
NOT TO SCALE

CADD STD. 205001-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1)BR	HENDERSON	70	54
CONTRACT NO. 68298				

FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT

Designer NOTES:
 1. Designer to modify this Special Detail sheet, as needed, for inclusion in plans.
 2. Include Highway Standard 280001 "TEMPORARY EROSION CONTROL SYSTEM."



**EROSION CONTROL
AT
OPEN GRATE MAN HOLE**

GENERAL NOTES:

1. This work shall be performed in accordance with Sections 280 & 1081, of the Standard Specifications.
2. Additional Timber or Metal Post shall be installed, as needed.

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

1-1-97		T.P.
3-11-03	ELIMINATED SILT FENCE DITCH CHECK	M.A.

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TYPICAL APPLICATION OF SILT FILTER FENCE

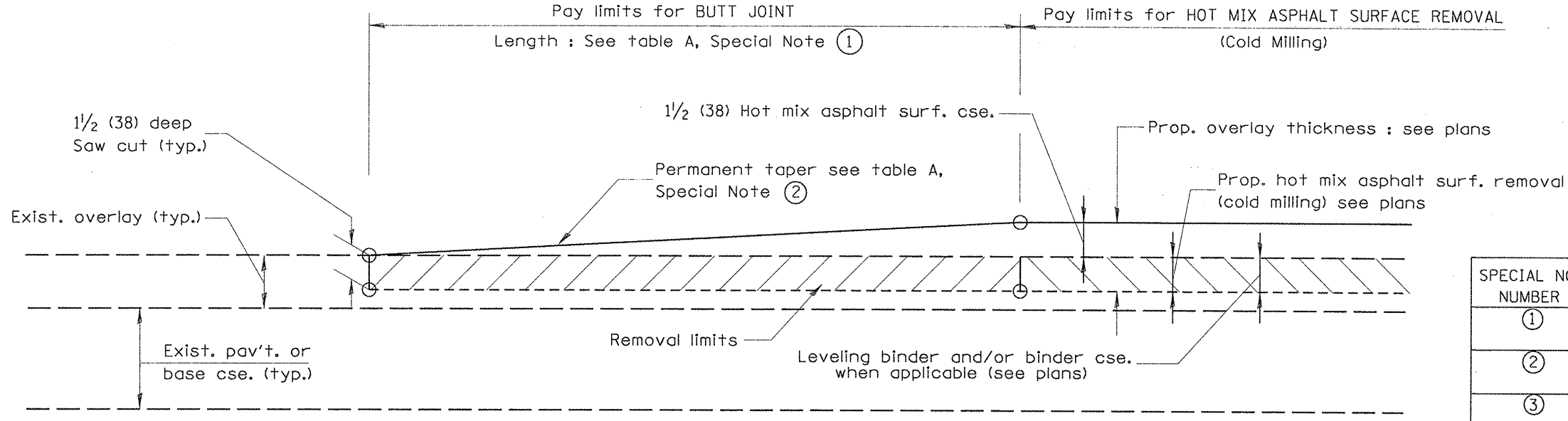
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1)BR	HENDERSON	70	55
CONTRACT NO. 68298				

NOT TO SCALE

CADD STD. 280001-D4

FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT

DESIGNER NOTES:
 1. Include District Special Provision for Butt Joints & for Hot Mix Asphalt Removal (Cold Milling).
 2. The butt joints pay item includes the saw cut & temporary ramp. Payment for the Butt Joint applies whether or not the project features Hot Mix Asphalt Removal (Cold Milling).



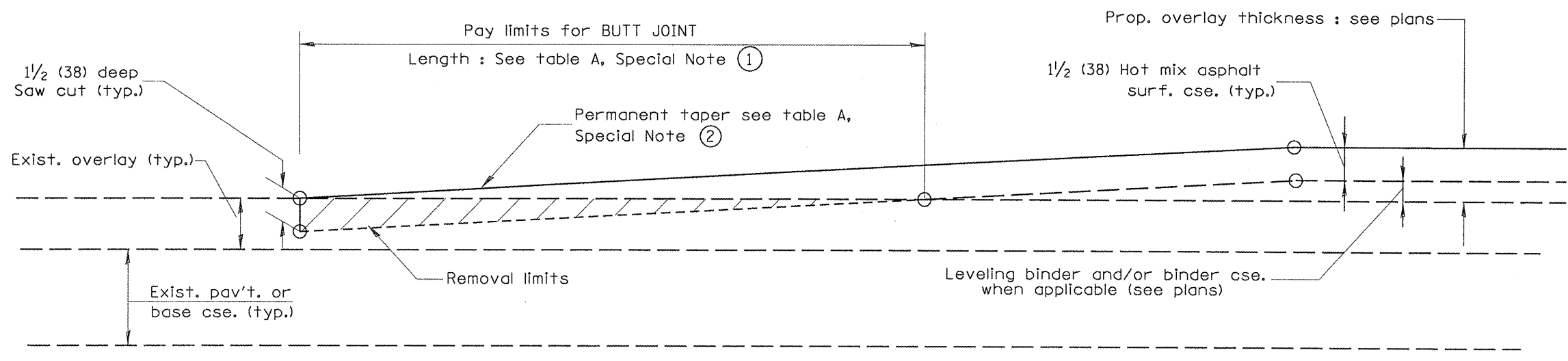
CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

TABLE A
(LENGTHS AND TAPER RATES)

SPECIAL NOTE NUMBER	ELEMENT	MAINLINE INTERSTATES & 4-LANE EXPRESSWAYS	ALL OTHERS
①	LENGTH OF BUTT JOINT	60'(18.0 m)	30'(9.0 m)
②	PERMANENT TAPER RATE	1:480	1:240
③	TEMPORARY RAMP TAPER RATE	1:80	1:40
④	TEMPORARY RAMP LENGTH	10'(3.0 m)	5'(1.5 m)
⑤	LENGTH OF BUTT JOINT	10'(3.0 m)	10'(3.0 m)

GENERAL NOTES

- The work shall be done in accordance with Article 406.08 and the Special Provision for Butt Joints.
- The pavement surface to be removed may be either bituminous or P.C. concrete. The work shall be performed in accordance with Article 440.04 and the Special Provisions for Butt Joints.
- The saw cut joints shall be primed just prior to the placing of bituminous material. The work will be in accordance with the applicable portions of Article 406.05.



CASE 2 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

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

01-01-97	RENUM. C-23.01, NEW REVISION BOX	T.P.
04-01-97	CORRECTION TO DEPTH	J.A.
09-15-05	REVISED DESIGNER NOTE	M.M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

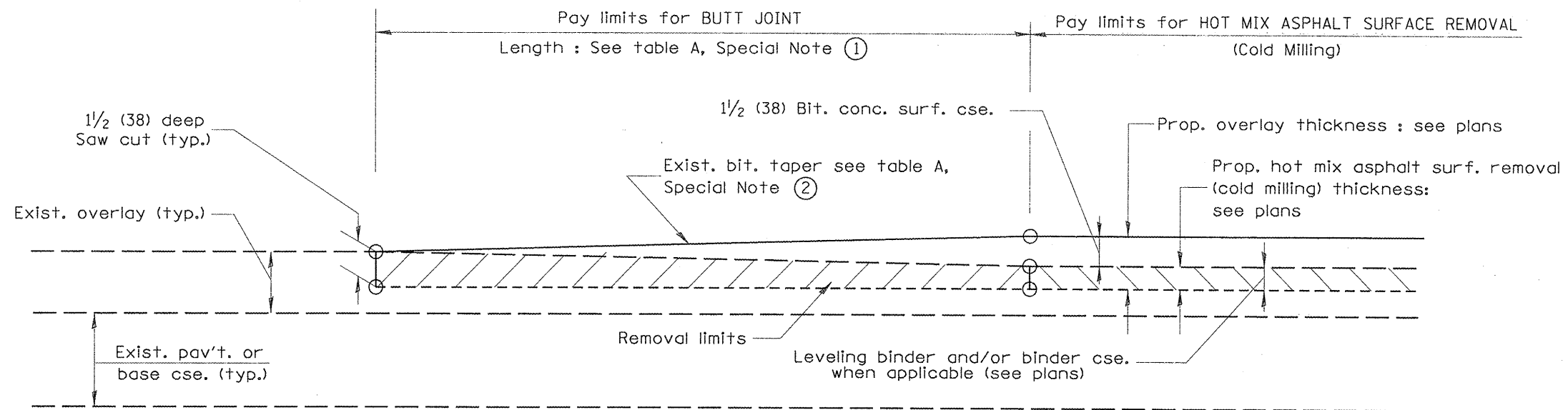
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

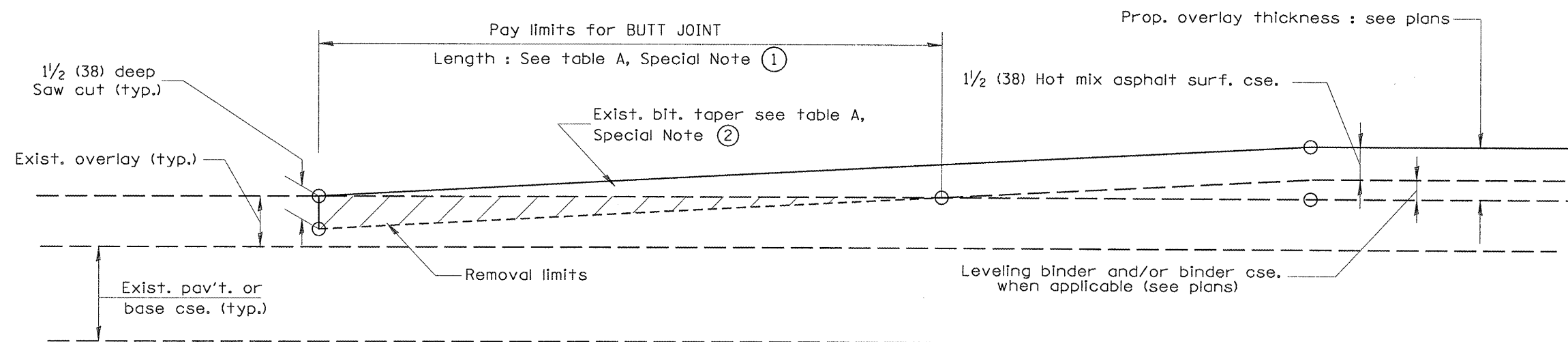
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1)BR	HENDERSON	70	56
CONTRACT NO. 68298				

NOT TO SCALE

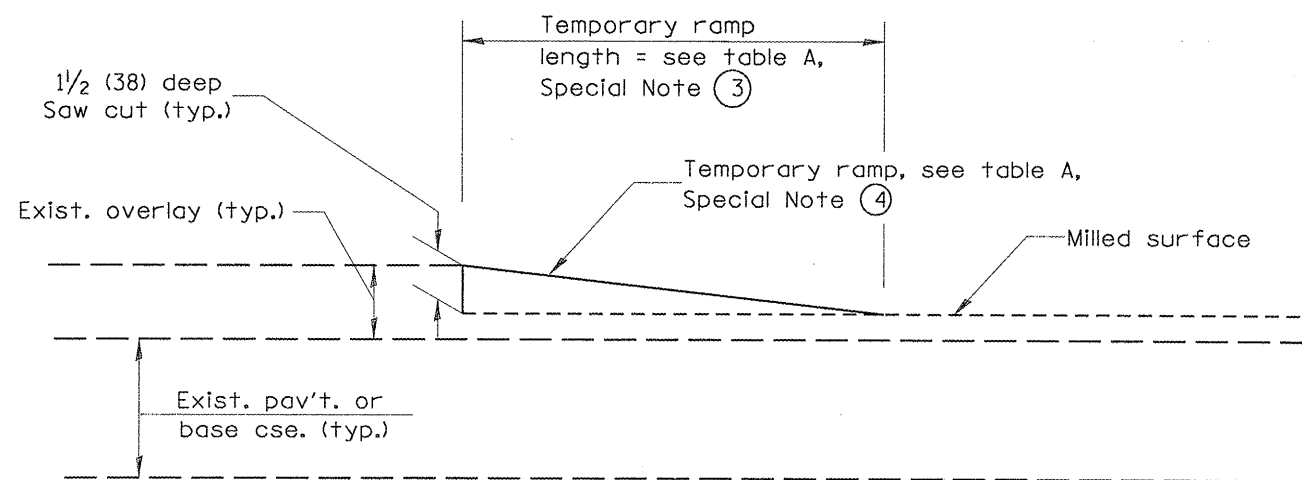
SHT. 1 OF 3
CADD STD. 406101-D4



**CASE 3 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER**



**CASE 4 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER**



DETAIL TEMPORARY RAMP

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

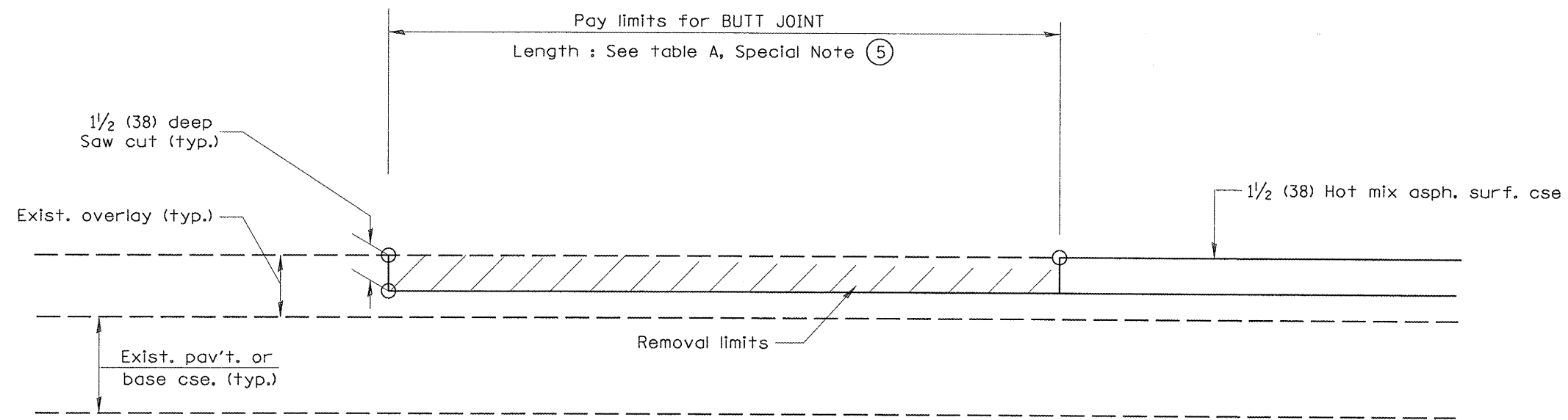
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

NOT TO SCALE

SHT. 2 OF 3
CADD STD. 406101-D4

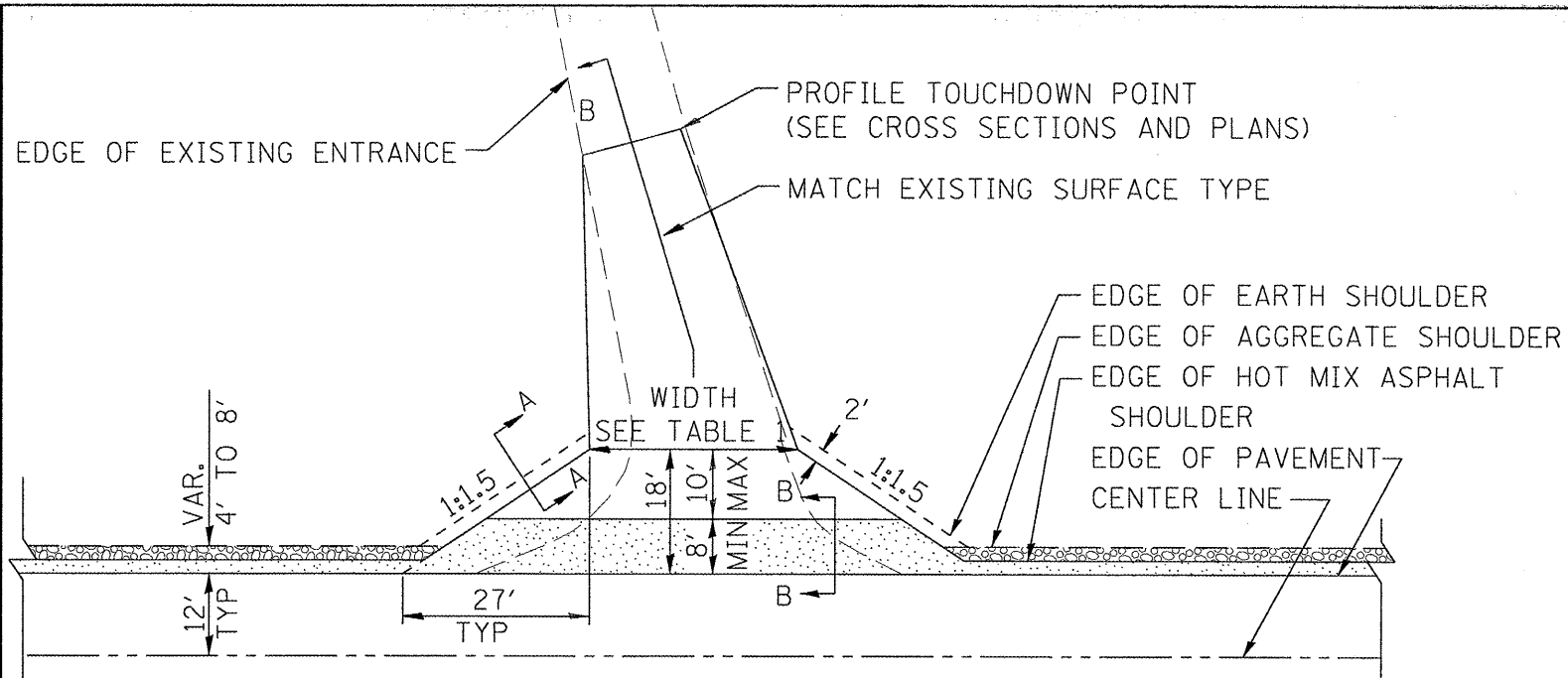
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B)BR	HENDERSON	70	57
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT			CONTRACT NO. 68298	



CASE 5 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)
TIE-IN TO EXISTING BITUMINOUS TAPER

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

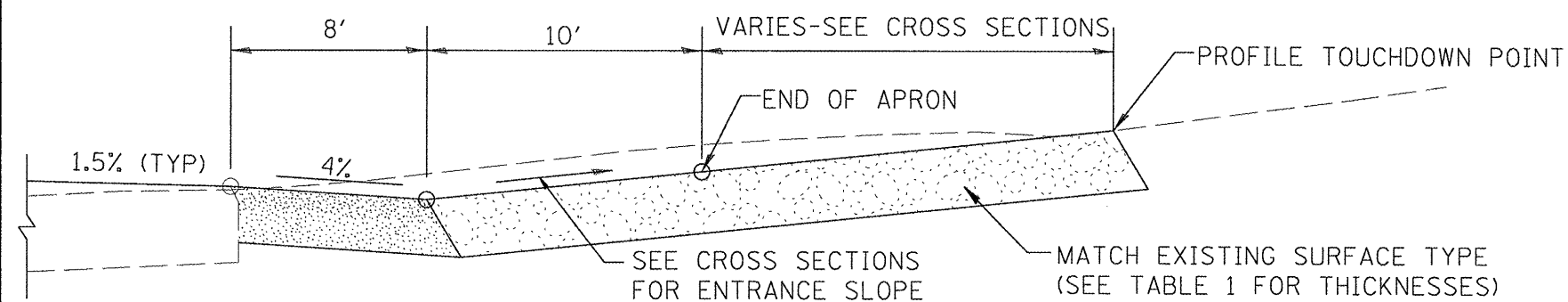
				STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		BUTT JOINTS			
				NOT TO SCALE		SHT. 3 OF 3 CADD STD. 406101-D4			
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.					
522	(14-1-B1)BR	HENDERSON	70	58	CONTRACT NO. 68298				
<small>FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT</small>									



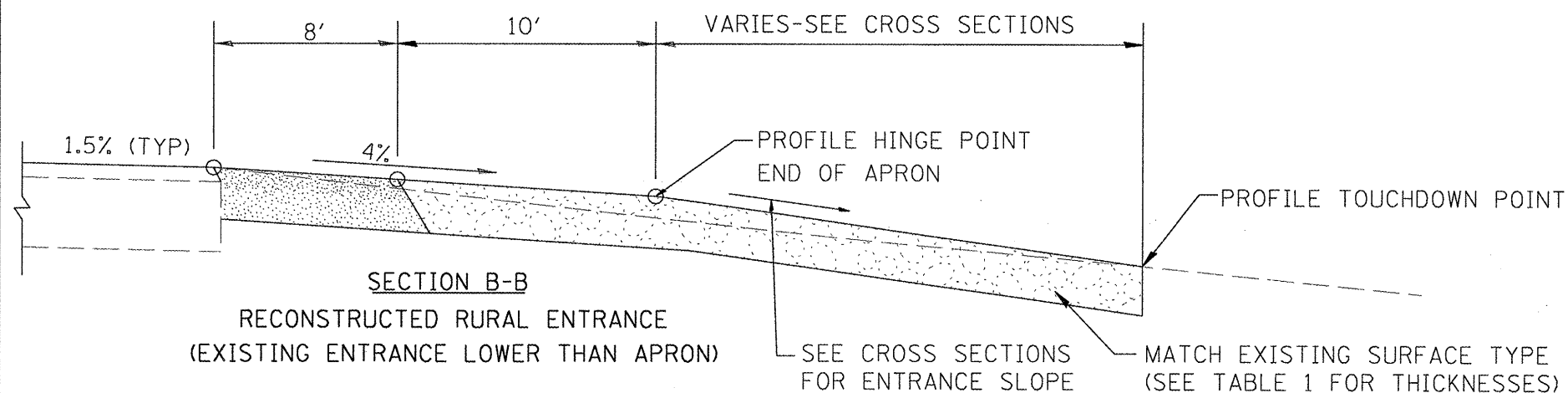
HOT MIX ASPHALT SHOULDER, 8"
 AGGREGATE SHOULDER, TYPE B, 6"

PLAN

COMMERCIAL / FARM-RELATED ENTRANCE

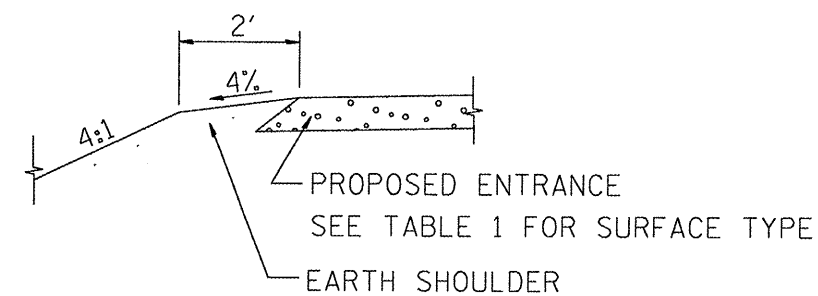


SECTION B-B
RECONSTRUCTED RURAL ENTRANCE
(EXISTING ENTRANCE HIGHER THAN APRON)



SECTION B-B
RECONSTRUCTED RURAL ENTRANCE
(EXISTING ENTRANCE LOWER THAN APRON)

TABLE 1							
RURAL ENTRANCE DESIGN							
ELEMENT	NON-COMMERCIAL		NON-COMMERCIAL W/ LARGE FARM EQUIPMENT		COMMERCIAL		
					1-WAY OPERATION	2-WAY OPERATION	
WIDTH (W)	12'(3.6m) Min.	24'(7.2m) Max.	20'(6.1m)Max.	30'(9.0m)Max.	14'(4.3m) Min.	24'(7.2m) Max.	24'(7.2m) Min., 35'(10.7m) Max.
FLARE	1:1.5						
MAX. GRADE (G)	12%		12%		10%		
SURFACE TYPE							
INCIDENTAL HOT MIX ASPHALT SURFACING	6"		—		8"		
AGGREGATE SURFACE COURSE	6"		8"		8"		
PCC DRIVEWAY PAVEMENT	6"		—		7"		



SECTION A-A
SHOULDER TREATMENT FOR RURAL ENTRANCES

GENERAL NOTES

- ENTRANCES SHALL SLOPE AWAY FROM THE PAVEMENT AT A RATE EQUAL TO THE SHOULDER SLOPE FOR A MINIMUM DISTANCE OF 8'.
- A MINIMUM 8' PAVED SHOULDER SHALL BE CONSTRUCTED BETWEEN LOCATIONS WHERE THE RURAL ENTRANCE IS LESS THAN 50' FROM AN ADJACENT SIDEROAD, ENTRANCE OR MAILBOX TURNOUT.
- A TAPER RATE OF 5:1 IS DESIRABLE WHEN TRANSITING FROM THE RURAL ENTRANCE WIDTH SHOWN IN TABLE 1, TO THE EXISTING ENTRANCE WIDTH.

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

01-01-97	RENUM. C-103.06, NEW REVISION BOX	T.P.	10-16-06	REVISED TO 2007 SPEC.	M.A.
07-01-97	REVISE DESIGNER NOTES	J.A.			
01-17-03	ADJUST DESIGN, CHANGE ENTRANCE	JATR			
09-15-05	RADIUS FOR FLARE	M.M.A.			

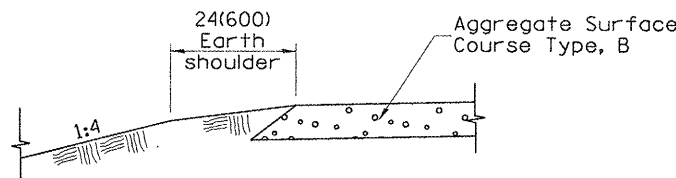
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

RURAL ENTRANCES FOR "3R" PROJECTS

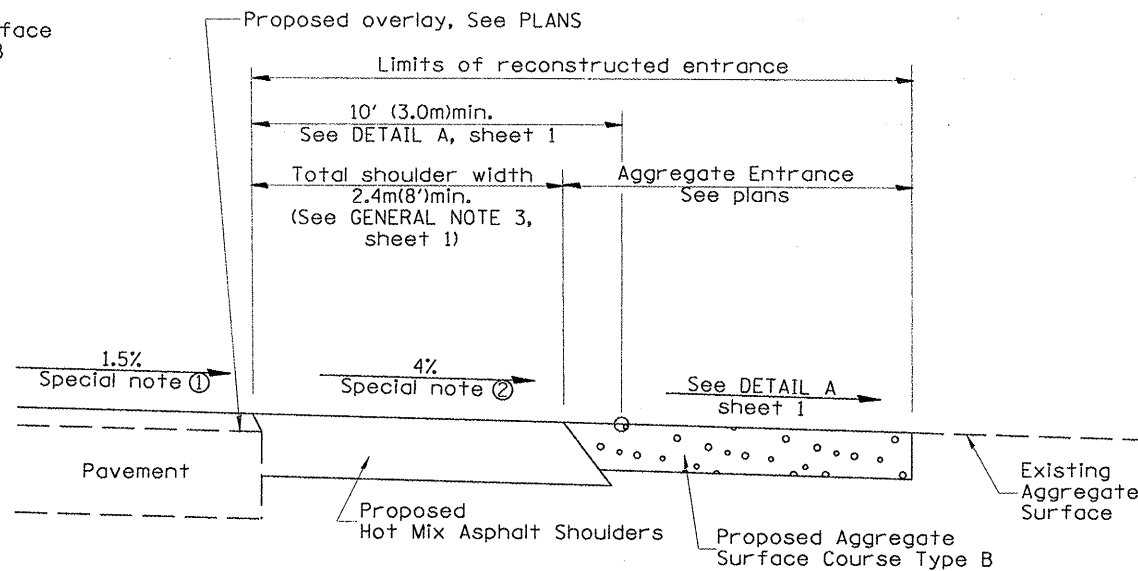
NOT TO SCALE

SHT. 1 OF 2
CADD STD. 406301-D4

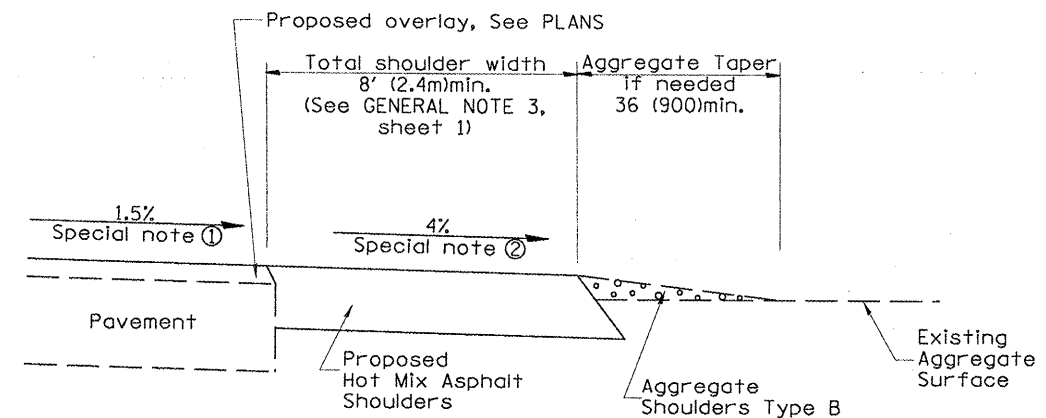
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1)BR	HENDERSON	70	59
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT			CONTRACT NO. 68298	



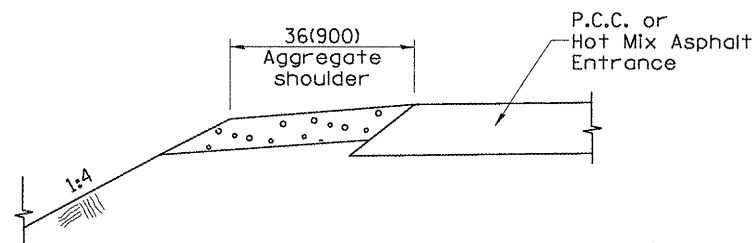
SECTION A-A
SHOULDER TREATMENT FOR AGGREGATE ENTRANCES



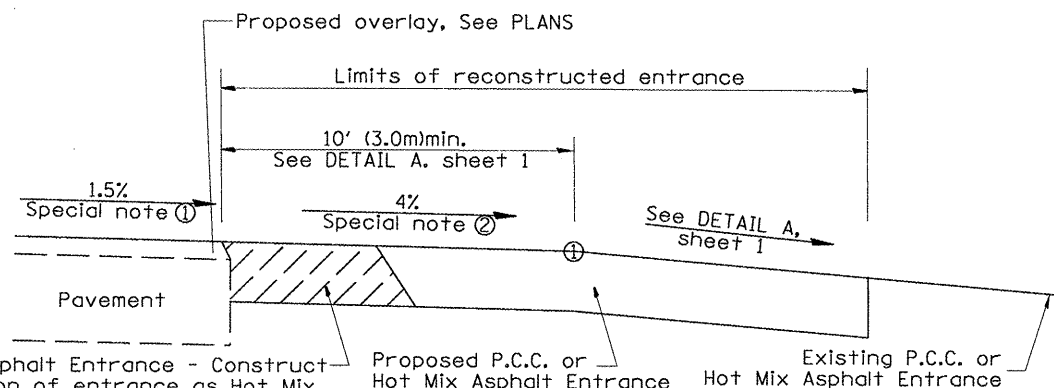
SECTION B-B
RECONSTRUCTED AGGREGATE ENTRANCE



SECTION B-B
EXISTING AGGREGATE ENTRANCE

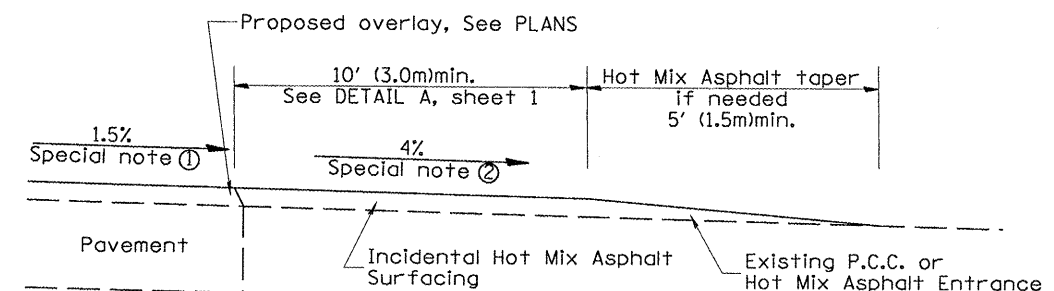


SECTION C-C
SHOULDER TREATMENT FOR P.C.C. OR HOT MIX ASPHALT ENTRANCES

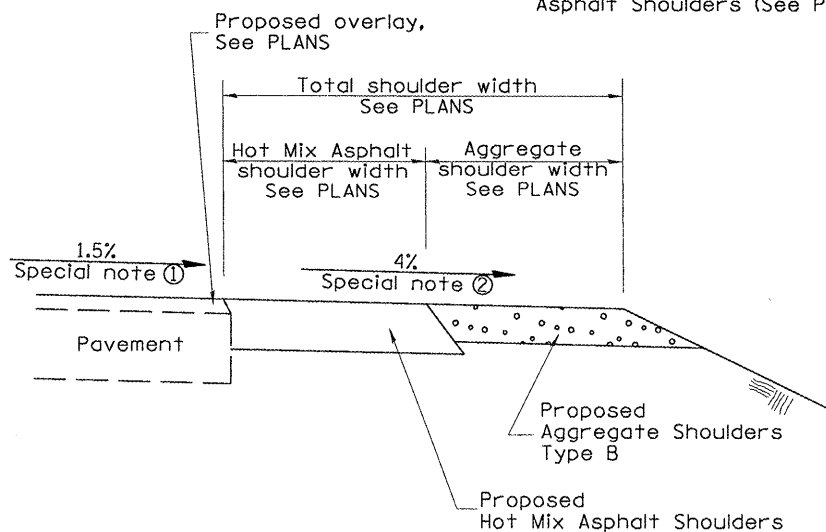


Hot Mix Asphalt Entrance - Construct this portion of entrance as Hot Mix Asphalt Shoulders (See Plan)
Proposed P.C.C. or Hot Mix Asphalt Entrance
Existing P.C.C. or Hot Mix Asphalt Entrance

SECTION D-D
RECONSTRUCTED P.C.C. OR HOT MIX ASPHALT ENTRANCE



SECTION D-D
EXISTING P.C.C. OR HOT MIX ASPHALT ENTRANCE



SECTION E-E
MAINLINE SHOULDER TREATMENT

SPECIAL NOTES

- ① The mainline pavement cross-slope is 1.5% for tangent alignment. See PLANS for cross-slope on superelevated horizontal curves.
- ② The shoulder slope shall control the entrance profile for a distance of 10' (3.0m) minimum from the pavement edge. The shoulder cross-slope is 4% for tangent alignment. Through superelevated curves, the maximum pavement-shoulder breakover should not be greater than 10% for shoulders 6' (1.8m) and wider and 12% for shoulders 4' (1.2m) and less. Where 12' (366cm) paved shoulders are provided, the breakover should be at the edge of the paved shoulder rather than at the pavement edge.

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RURAL ENTRANCES FOR "3R" PROJECTS

NOT TO SCALE

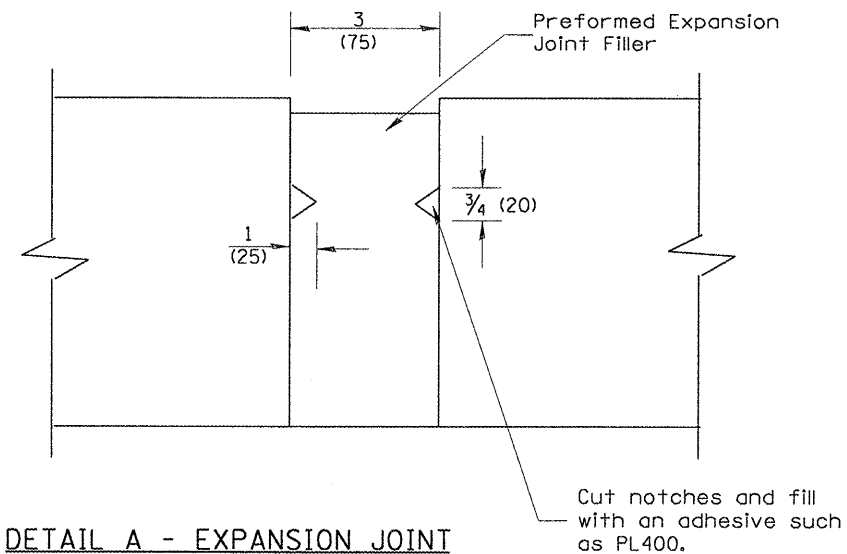
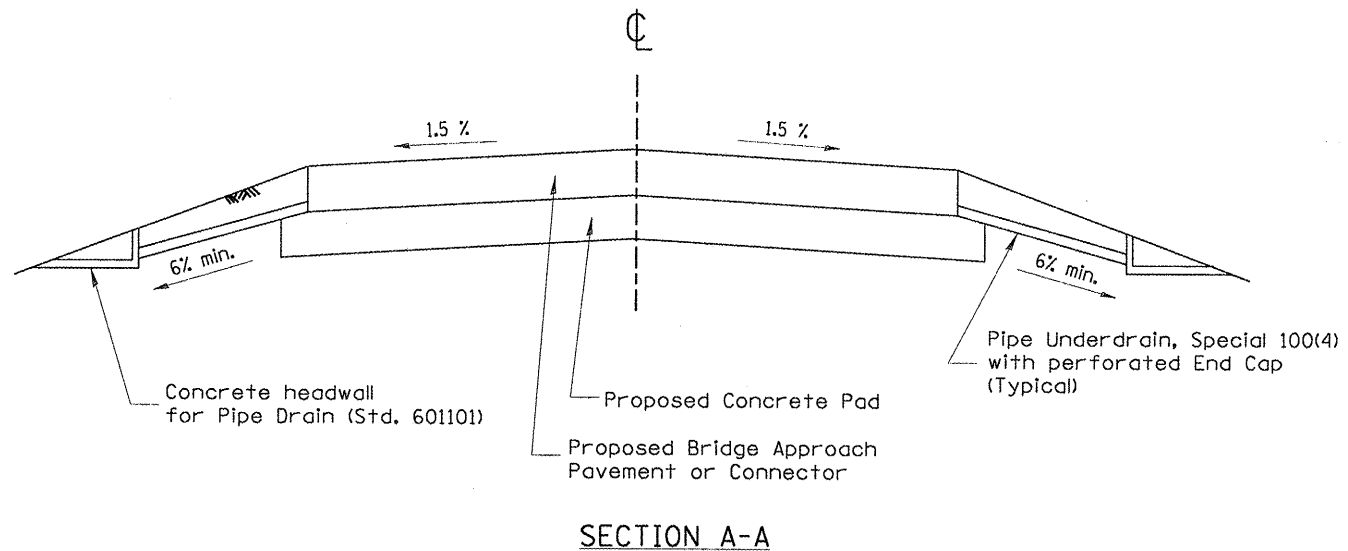
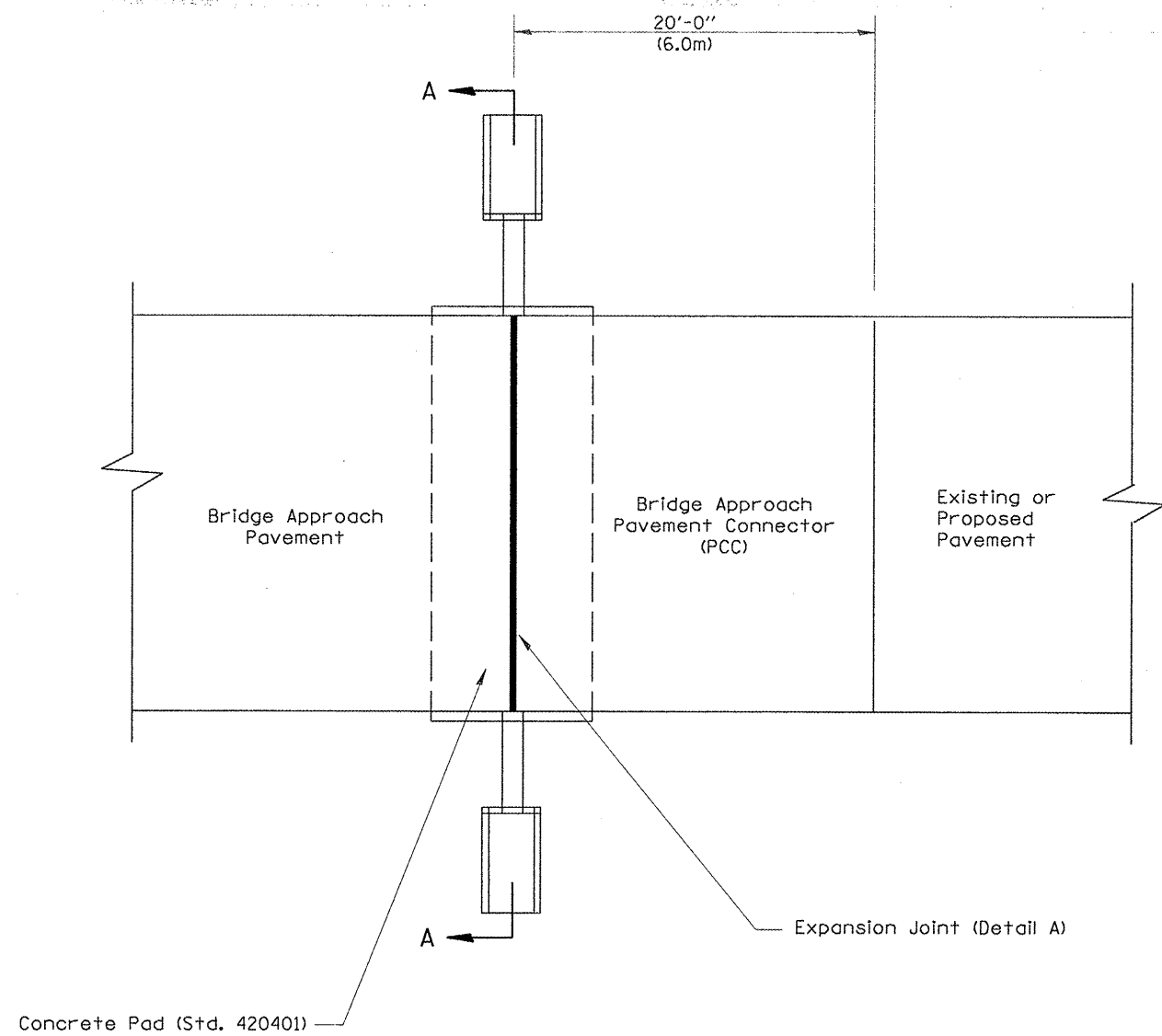
SHT. 2 OF 2
CADD STD. 406301-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B)BR	HENDERSON	70	60
CONTRACT NO. 68298				

FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT

DESIGNER NOTE:

1. Include Standards 420001, 601101 and 420401 in plans.



DETAIL A - EXPANSION JOINT

Preformed Expansion Joint Filler shall meet the requirements of Article 1051.08 or 1051.09. The expansion joint shall be constructed in accordance with Expansion Joint Sealing Detail shown on Standard 420001 and as shown herein.

GENERAL NOTES:

1. All work shall be done in accordance with Standard 420401 except as shown herein.
2. The concrete headwalls and pipe underdrain special will be in accordance with Section 601.
3. The bridge approach pavement connector (pcc) shall be constructed similar to section G-G for existing construction rigid pavement as shown standard 420401. Adjacent to PCC base course or pavement deformed bars will be required. Adjacent to bituminous pavement deformed bars will not be required.

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

01-01-97	RENUM. H-6.09, NEW REVISION BOX, NOTES	T.P.
02-22-97	REVISED SECTION A-A	
03-01-97	CORRECT STD. NO. IN NOTES	J.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH DETAIL

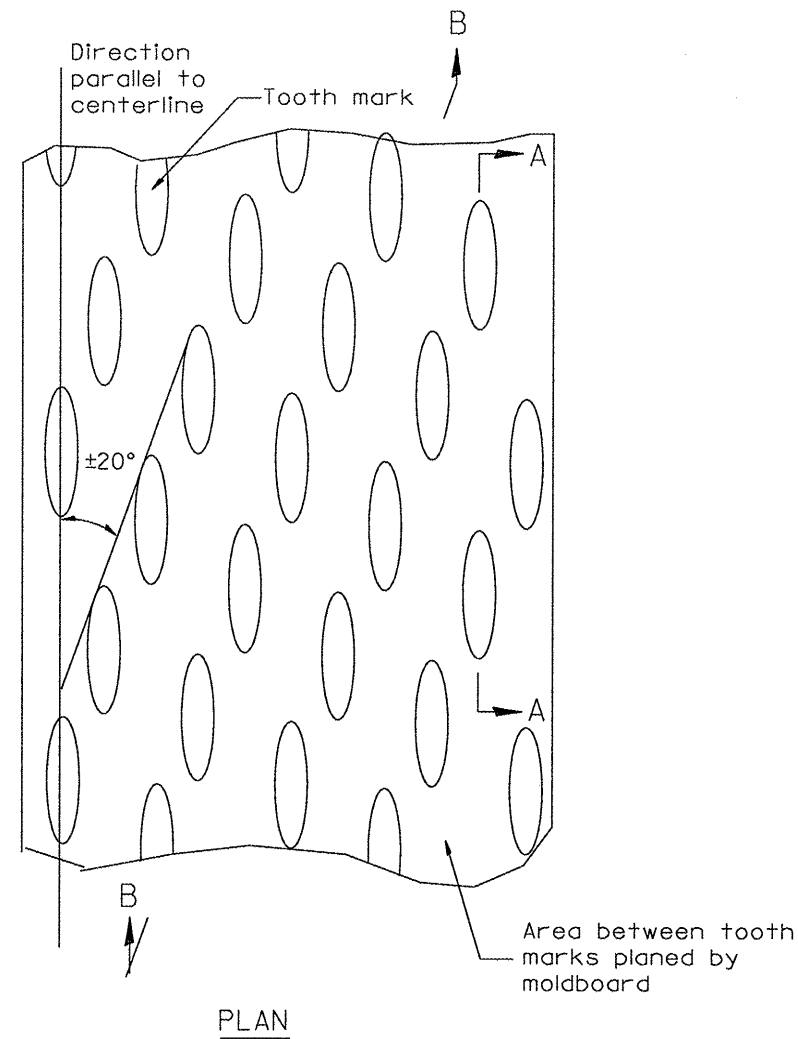
NOT TO SCALE

CADD STD. 420401-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1)BR	HENDERSON	70	61
CONTRACT NO. 68298				

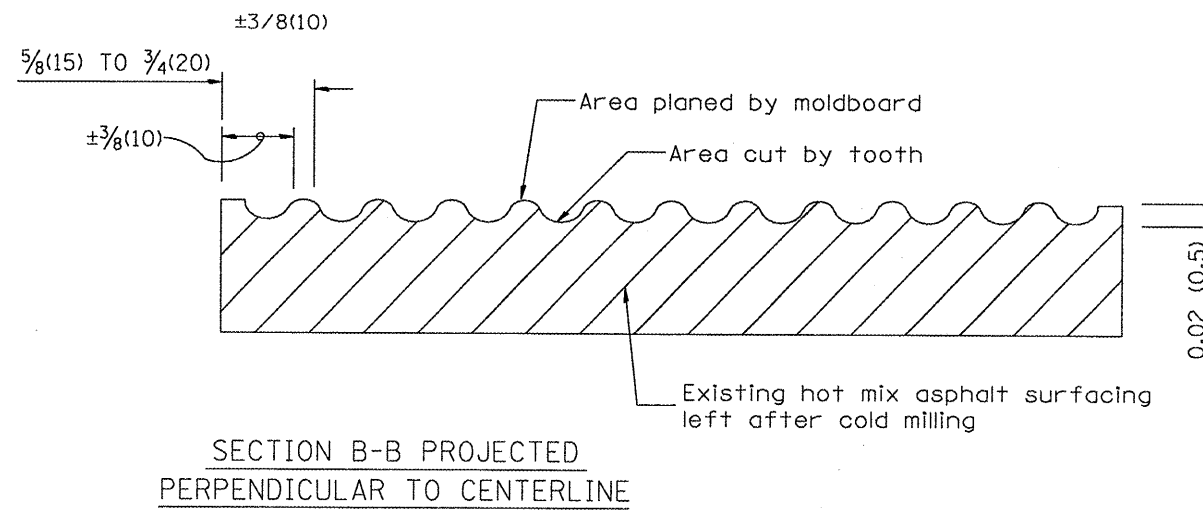
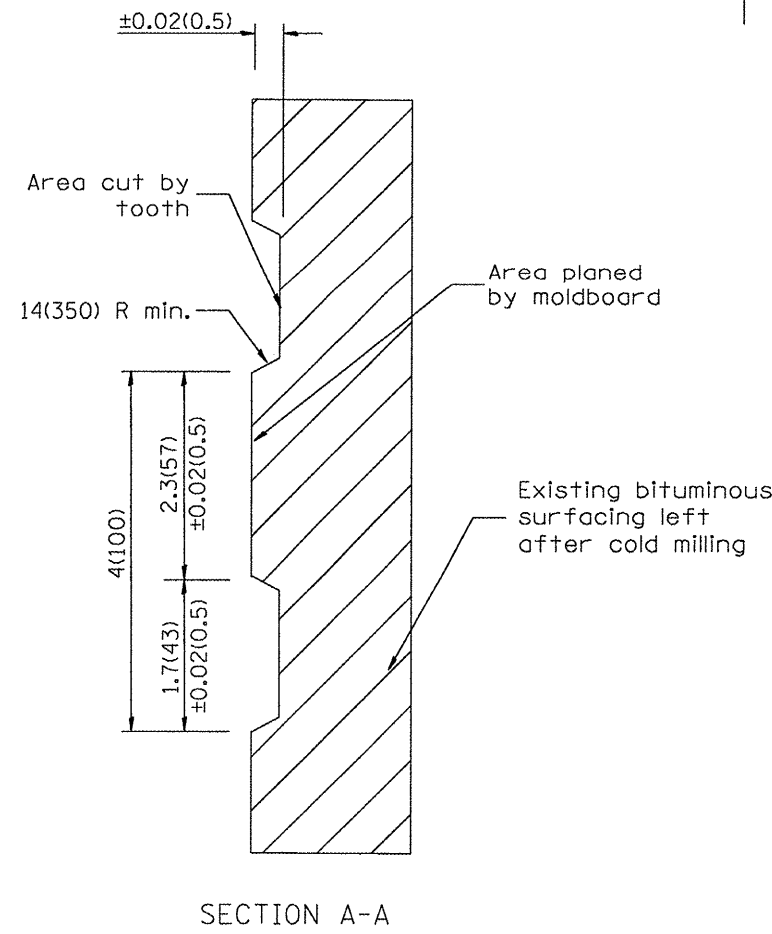
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT

DESIGNER NOTES:
1. INCLUDE DISTRICT SPECIAL PROVISION, IF APPLICABLE.



General notes:

1. Coldmilling shall consist of two processes: Cutting with carbide teeth mounted on a rotating drum, and planing with a moldboard mounted immediately behind the cutting drum.
2. Other similar patterns will be acceptable if they consist of a smooth, flat, planed surface interspersed with a pattern of discontinuous longitudinal striations.



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

01-01-97	RENUM. C-104.01, NEW REVISION BOX	T.P.
04-20-98	REMOVED MILLING DETAIL FROM STANDARD	J.A.
09-08-98	CORRECT NOTE LEADER PLACEMENT	R.W.
10-16-06	REVISED TO 2007 SPEC.	M.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

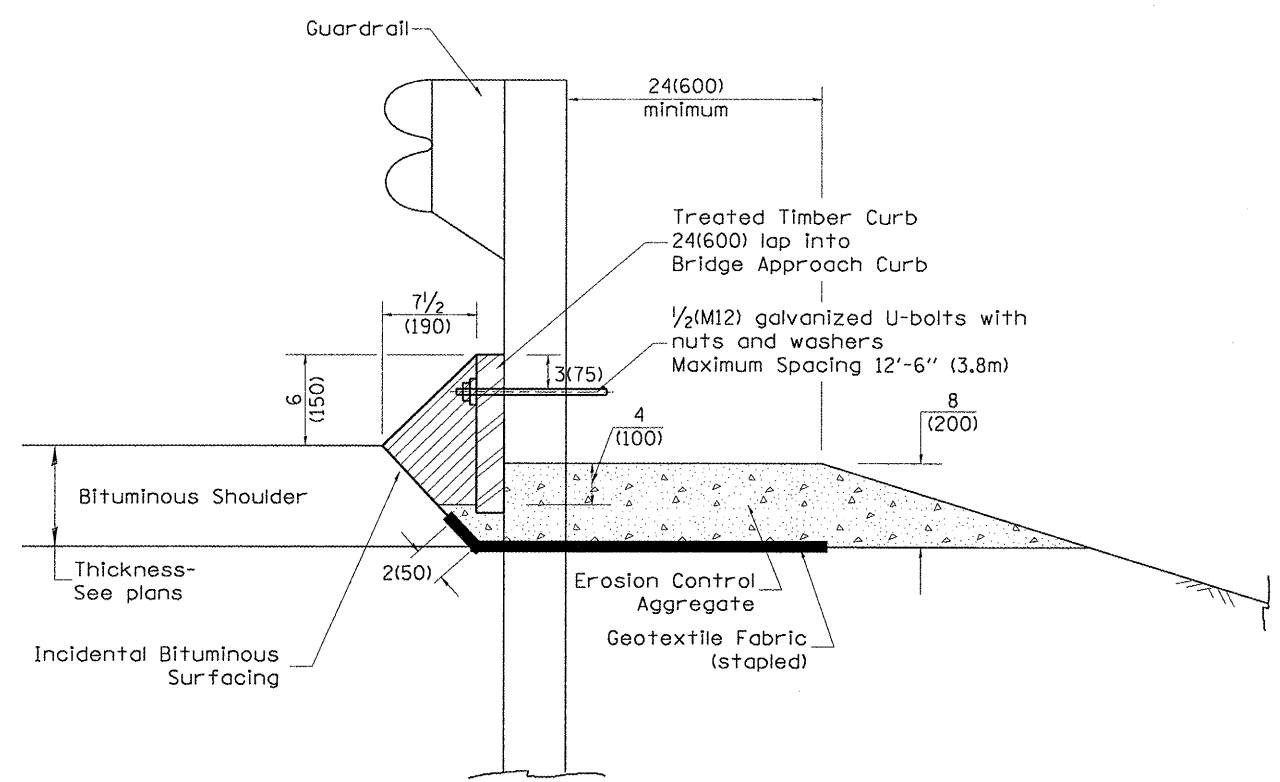
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1)BR	HENDERSON	70	62
CONTRACT NO. 68298				

NOT TO SCALE

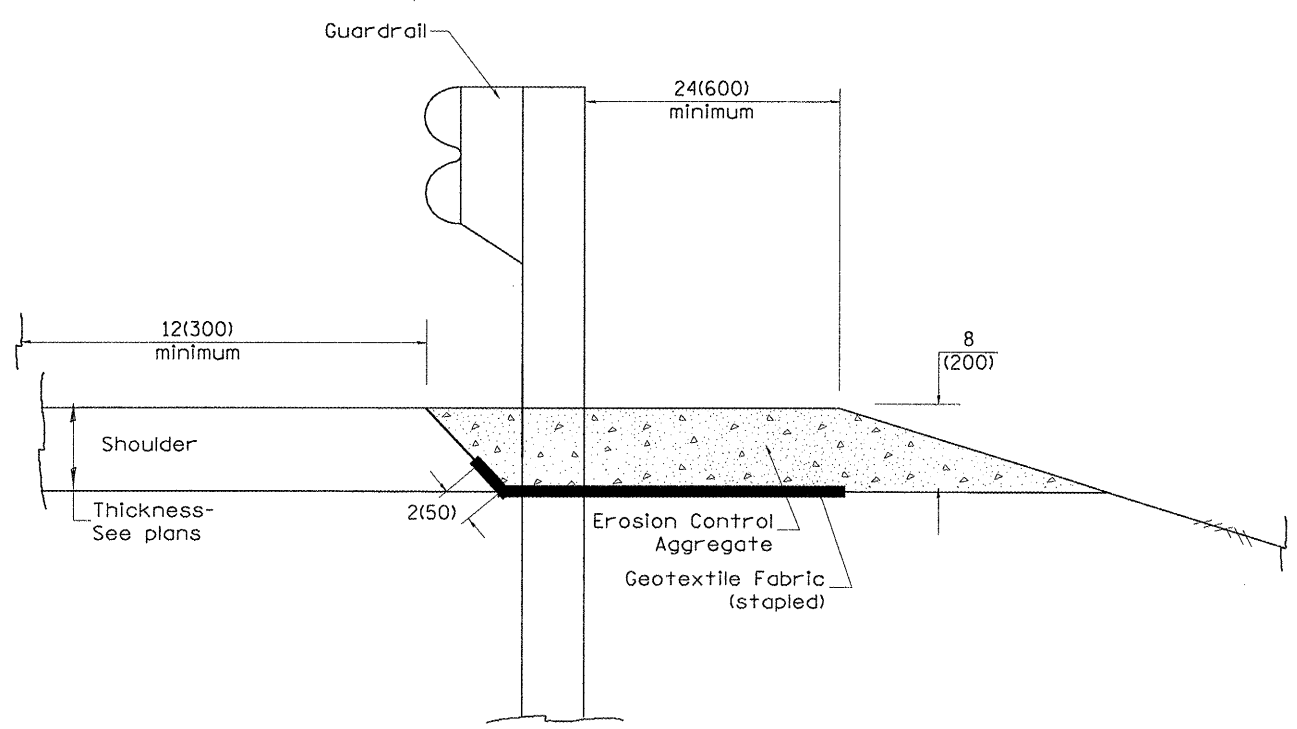
CADD STD. 440001-D4

FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT

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



TYPICAL SECTION WITH EROSION CONTROL CURB



TYPICAL SECTION WITHOUT EROSION CONTROL CURB

GENERAL NOTES: EROSION CONTROL CURB

1. This work shall consist of grading as needed, installing hardware and treated timber boards, furnishing and placing mastic material and incidental bituminous surfacing in front of Steel Plate Beam Guardrail in accordance with Plan Details.
2. Timber shall be treated in accordance with Article 1007.12. All preservatives specified in the article will be allowed. Waterborne preservatives "asa" and "cca" shall have a minimum retention of 0.40 lbs./cu. ft. (6.4 kg/m³)

GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

1. This work shall consist of grading as needed, furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.
2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.
3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 12(300) minimum overlap. A knife cut for guardrail post installation is necessary.
4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.
5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.
6. Materials shall meet the following requirements:
 - A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.
 - B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.

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

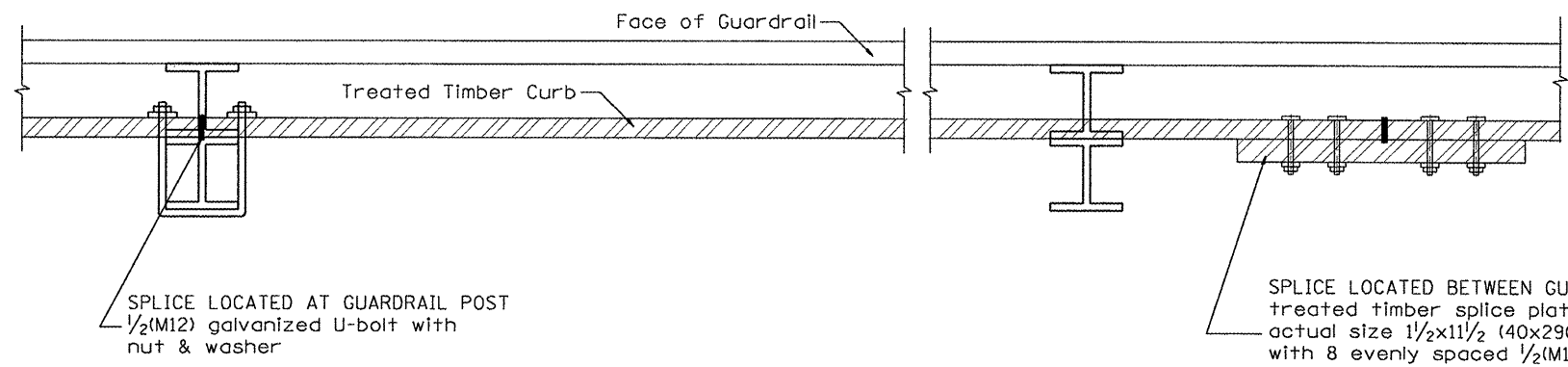
01-01-97	RENUM. C-22.01, NEW REVISION BOX	T.P.
03-01-97	CORRECT STD. NUMBERS IN NOTES PG. 2	J.A.
11-03-00	CORRECTION TO NOTES	M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

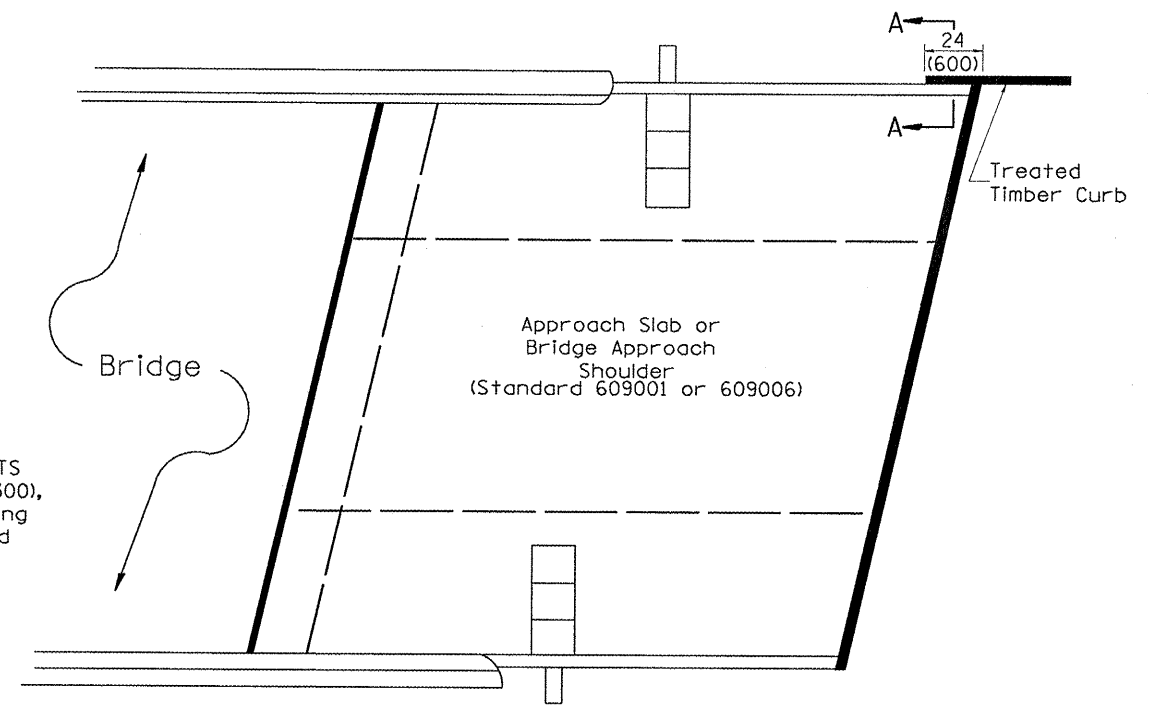
GUARDRAIL EROSION CONTROL TREATMENTS

NOT TO SCALE SHT. 1 OF 2
CADD STD. 630101-D4

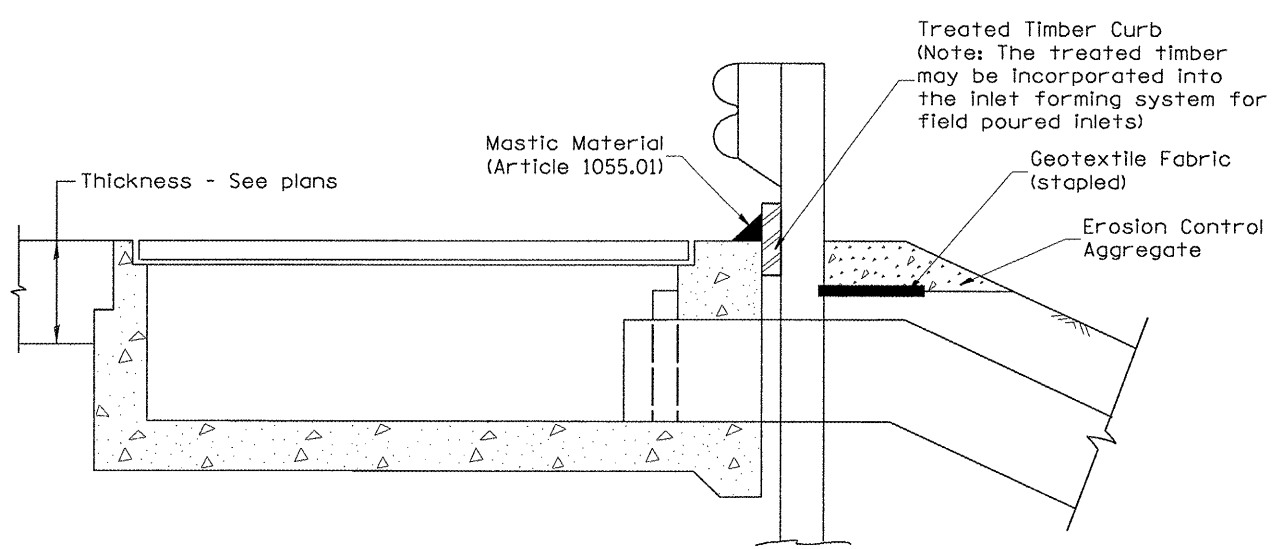
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1)BR	HENDERSON	70	63
			CONTRACT NO. 68298	



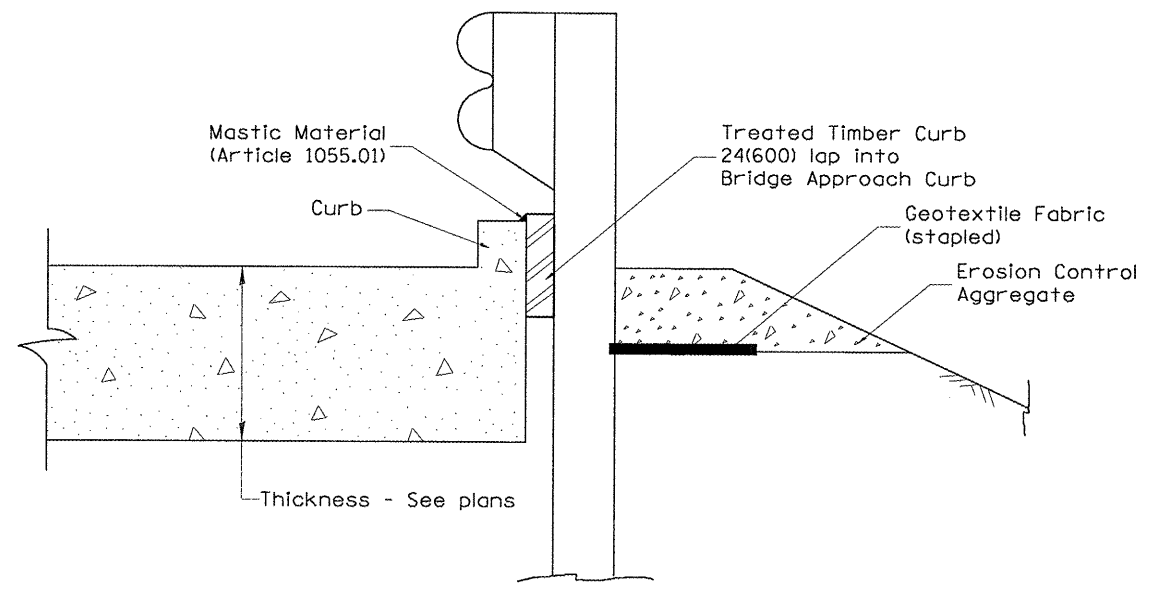
DETAIL A
(Typical Treated Timber Splices)



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



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



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

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL EROSION CONTROL TREATMENTS

NOT TO SCALE

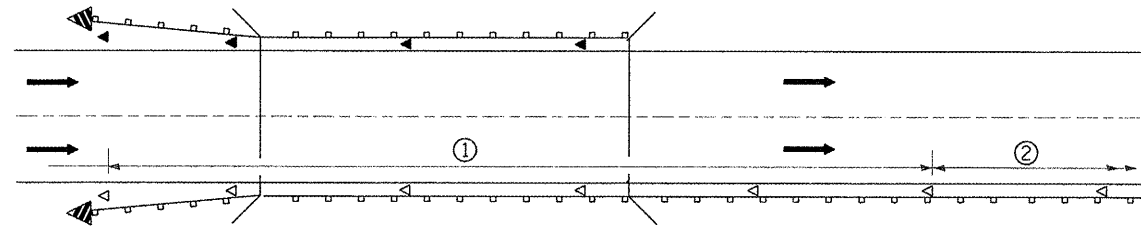
SHT. 2 OF 2
CADD STD. 630101-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1)BR	HENDERSON	70	64
CONTRACT NO. 68298				

FED. ROAD DIST. NO. 4 | ILLINOIS FED. AID PROJECT

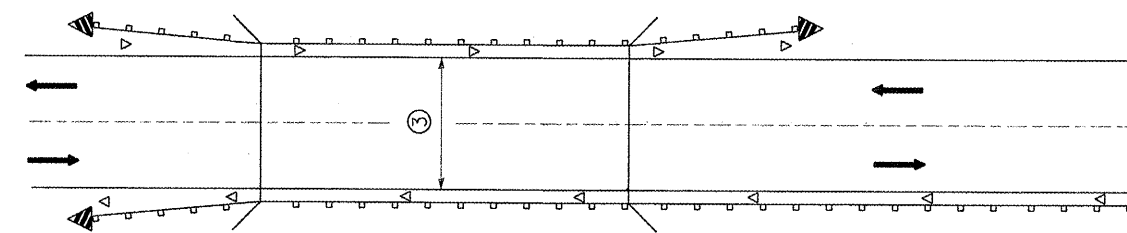
DESIGNER NOTES:

1. INCLUDE APPROPRIATE SPECIAL PROVISIONS FOR "GUARD RAIL DELINEATION POLICY: 1. TERMINAL MARKER, 2. TERMINAL MARK POST, AND 3. GUARDRAIL AND BARRIER WALL MARKERS."
 FROM INTERIM SPECIAL PROVISIONS 94-74; "GUARDRAIL AND BARRIER WALL DELINEATION."
 2. IF POST MOUNT TERMINAL MARKER IS USED, INCLUDE STATE STD. 720011.



- ① Spacing 80 ft. (24 m) max. for first 400 ft. (122 m) or curve spacing shown in Standard 635001, whichever is less (min. 4 reflectors regardless of length).
- ② After 400 ft. (122 m), transition to normal delineator spacing shown in Standard 635001, and continue as required.

ONE-WAY TRAFFIC



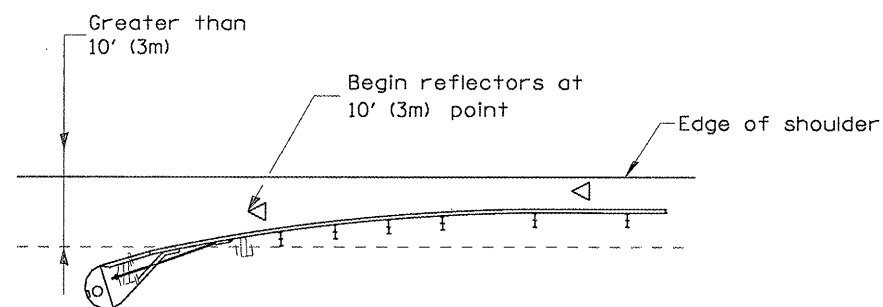
- ③ Bidirectional silver/silver should be used in lieu of monodirectional silver on both sides of two-lane bridges where the bridge pavement is less than 24 (610) wider than the pavement approaching the bridge.

TWO-WAY TRAFFIC

GUARDRAIL / BARRIER WALL / BRIDGE RAIL REFLECTORS

LEGEND

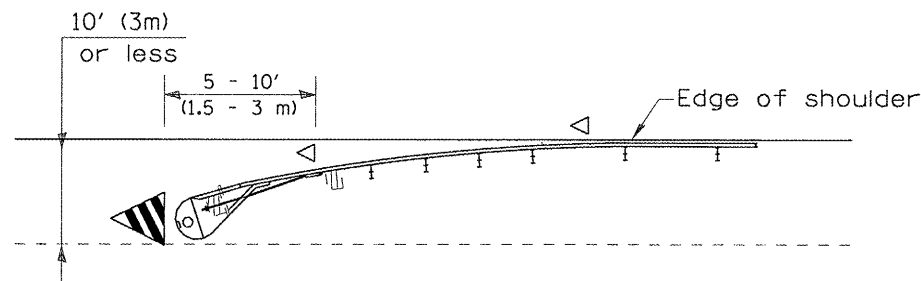
- ◁ Monodirectional silver
- ◄ Monodirectional amber
- ◄ Terminal Marker - Black/Yellow
Left or Right as appropriate



NOTE: Omit terminal marker when terminal over 10' (3m) from edge of paved shoulder or break point of unpaved shoulder, or when terminal buried in backslope.

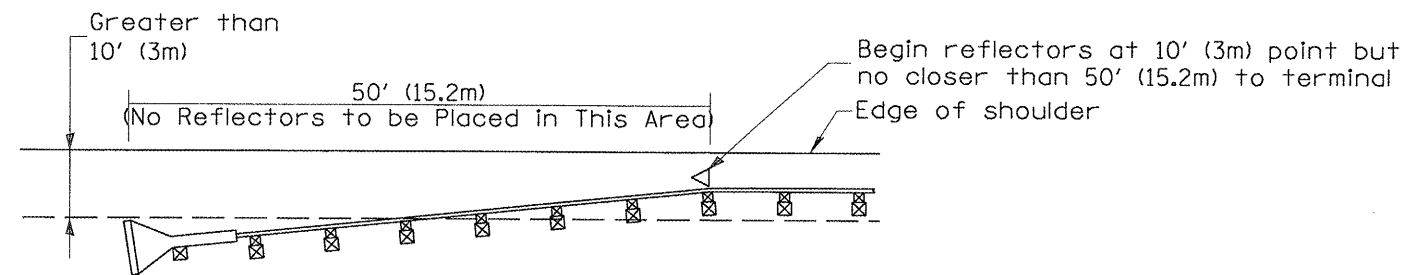
Traffic Barrier Terminal Type(*) and/or Turned-Down Terminal

[Terminal over 10' (3m) from edge of shoulder]
 *See Plans for Type



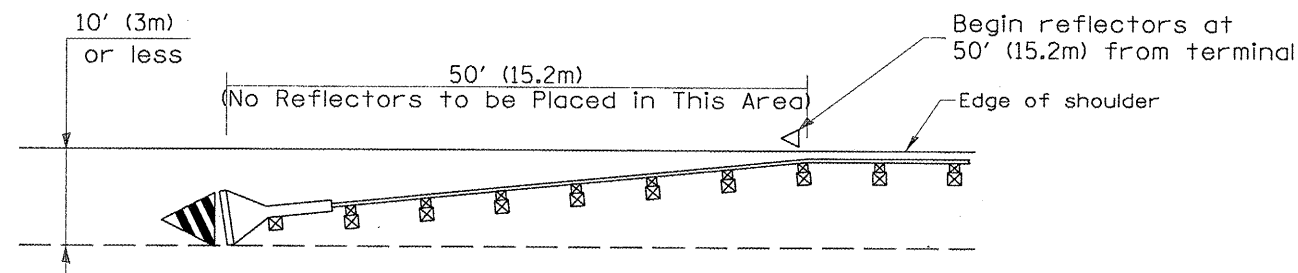
Traffic Barrier Terminal Type(*) and/or Turned-Down Terminal

[Terminal over 10' (3m) or less from edge of shoulder]
 *See Plans for Type



NOTE: Omit terminal marker when terminal over 10' (3m) from edge of paved shoulder or break point of unpaved shoulder.

Traffic Barrier Terminal Type 1 (Special)
 [Terminal over 10' (3m) from edge of shoulder]



Traffic Barrier Terminal Type 1(Special)

[Terminal 10' (3m) or less from edge of shoulder]

TERMINAL MARKER PLACEMENT

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

01-01-97	RENUM. E-10.02, NEW REVISION BOX	T.P.
03-01-97	CORRECT STD. SPEC. *	J.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

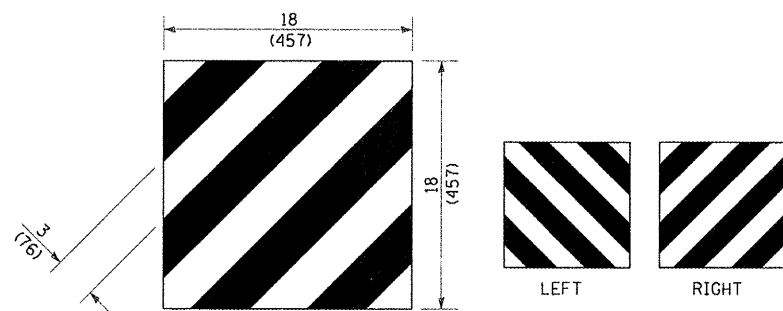
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

GUARDRAIL AND BARRIER WALL DELINEATION

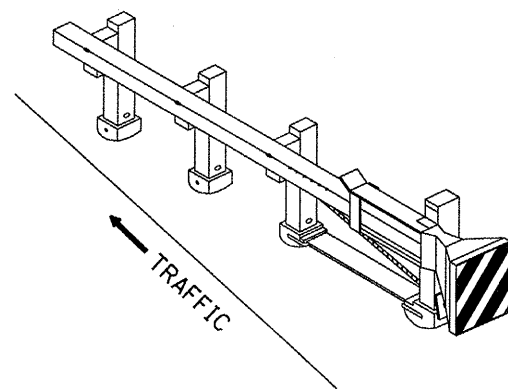
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SHT. 1 OF 3
 CADD STD. 635101-D4

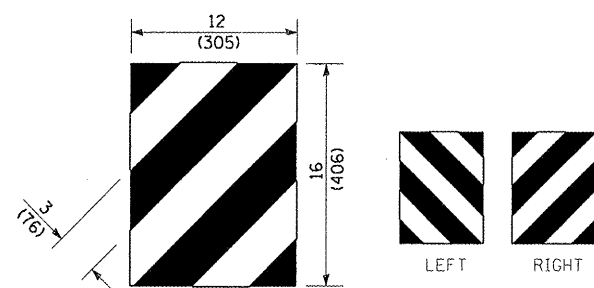
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B)DBR	HENDERSON	70	65
FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT			CONTRACT NO. 68298	



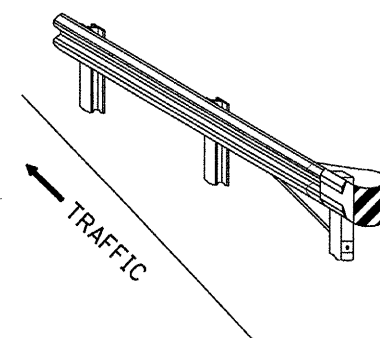
For Traffic Barrier Terminal Type 1 (Special)



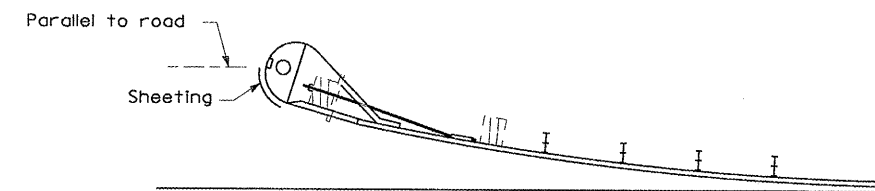
Standard Treatment - Direct Applied Sheeting
Traffic Barrier Terminal Type 1 (Special)



For Traffic Barrier Terminal Type (*)
and Post Mount
• See Plans for Type



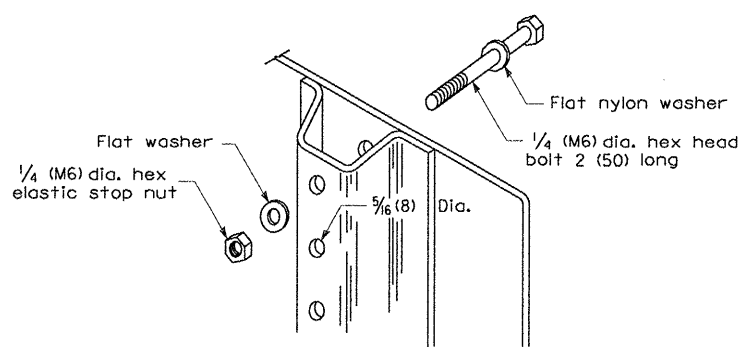
Standard Treatment - Direct Applied Sheeting
Traffic Barrier Terminal Type (*)
• See Plans for Type



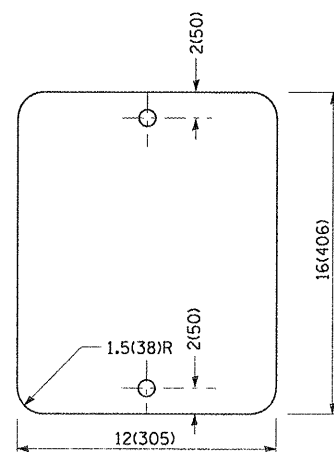
Sheeting Position for
Traffic Barrier Terminal Type (*)
• See Plans for Type

TERMINAL MARKER DETAILS

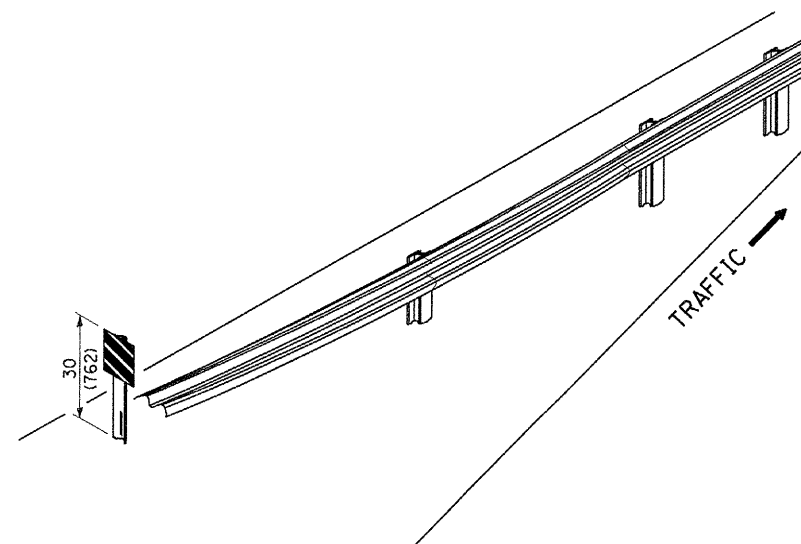
- Color: Black / Yellow reflectorized
- OM - I100 (L or R) Direct applied reflective sheeting
- OM - I200 (L or R) Post mounted



DETAIL OF MOUNTING TERMINAL MARKER TO POST



STANDARD TERMINAL MARKER



ALTERNATE TREATMENT - POST MOUNTED
(For turned-down terminal where sheeting cannot be direct applied)

POST MOUNTED TERMINAL MARKER ASSEMBLY

TERMINAL MARKER TREATMENTS

GENERAL NOTES

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

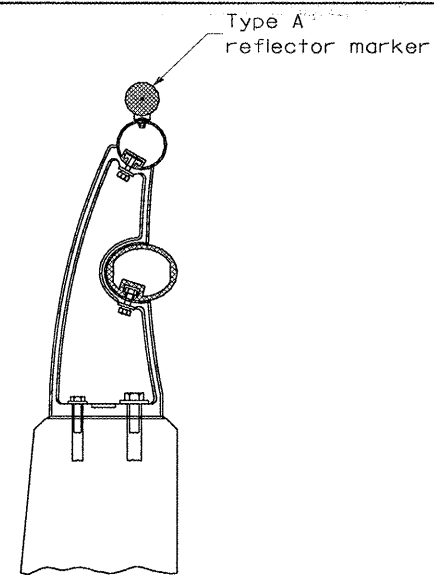
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL AND BARRIER WALL DELINEATION

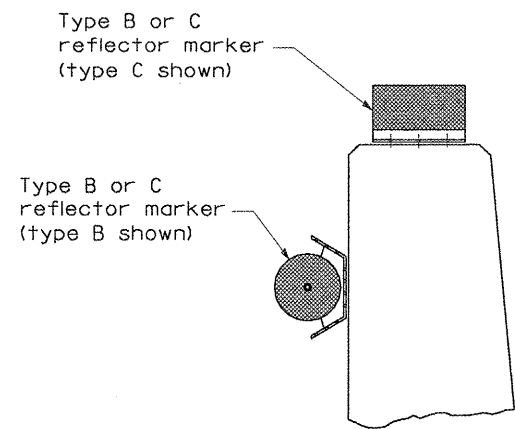
NOT TO SCALE

SHT. 2 OF 3
CADD STD. 635101-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B)BR	HENDERSON	70	66
CONTRACT NO. 68298			FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT	

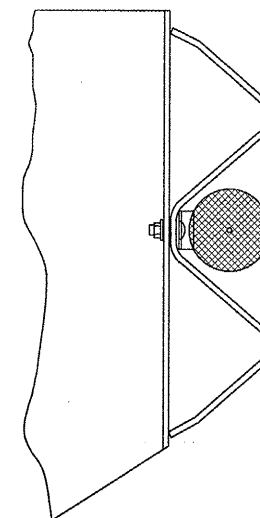
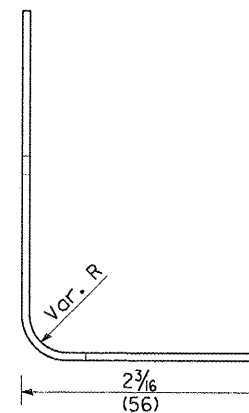
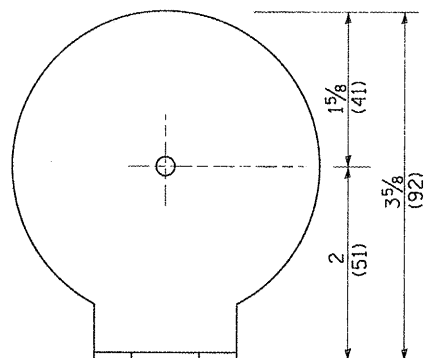
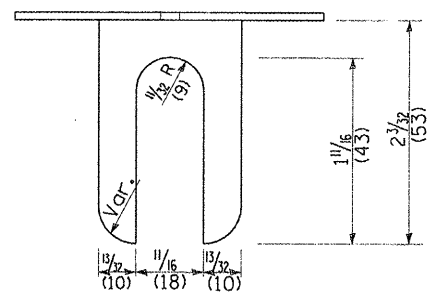


TYPICAL MOUNTING DETAIL FOR BRIDGE RAIL REFLECTOR

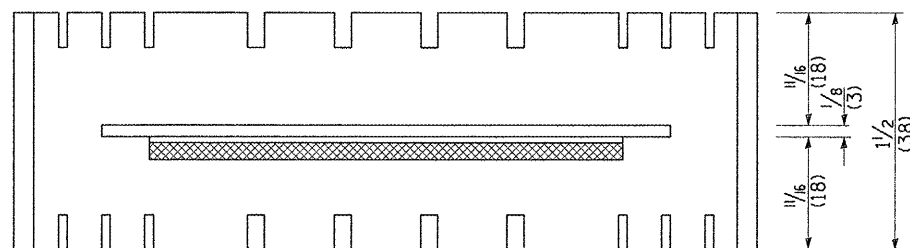


TYPICAL MOUNTING DETAIL FOR BARRIER WALL REFLECTOR

REFLECTOR MOUNTING



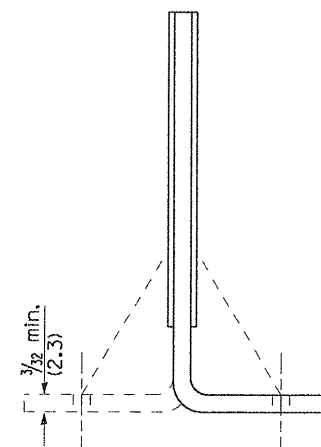
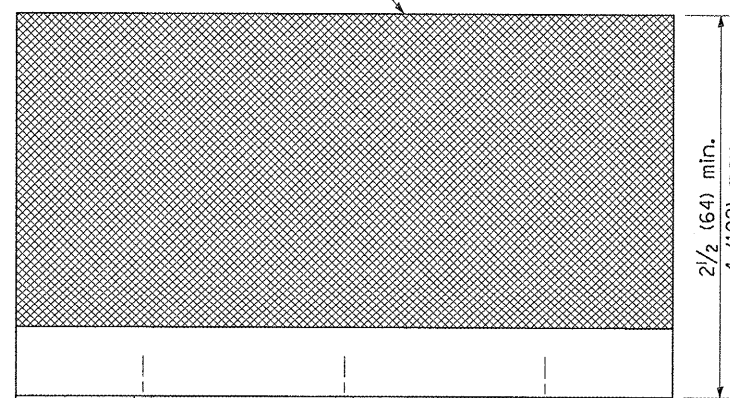
TYPICAL GUARDRAIL MOUNTING WITH REFLECTOR MARKER TYPE A



Adhesive weep slots or holes equally spaced on both sides

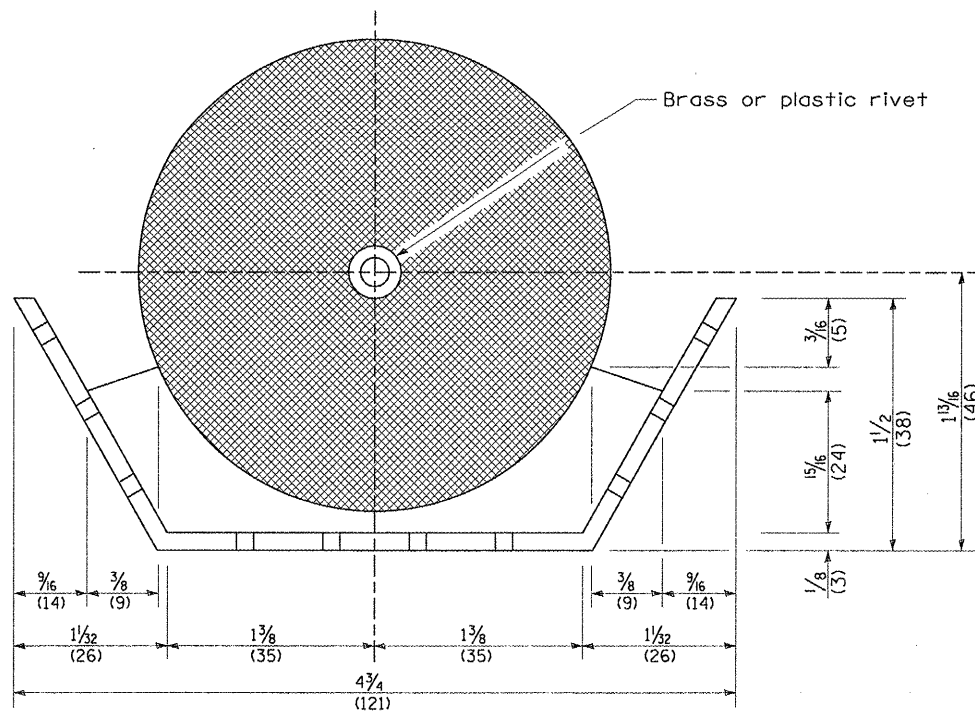
REFLECTOR MARKER TYPE A

Min. reflective area 6 1/2 sq. in. (4,194 mm²) each side. May be rectangular or slight trapezoid.

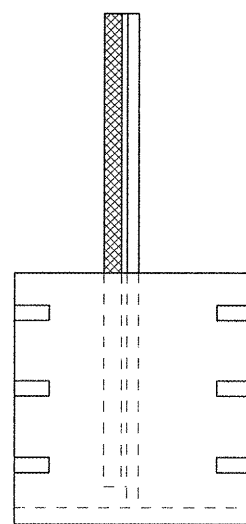


Cross section may be "T" or "L" shaped and may have side supports at ends.

REFLECTORS

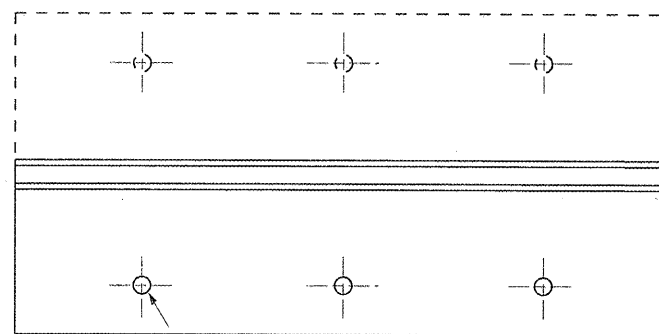


REFLECTOR MARKER TYPE B



3 min. adhesive weep holes or slots each side, variable spacing.

REFLECTOR MARKER TYPE C



Minimum total area of base 7.0 Sq. in. (4,516 mm²)

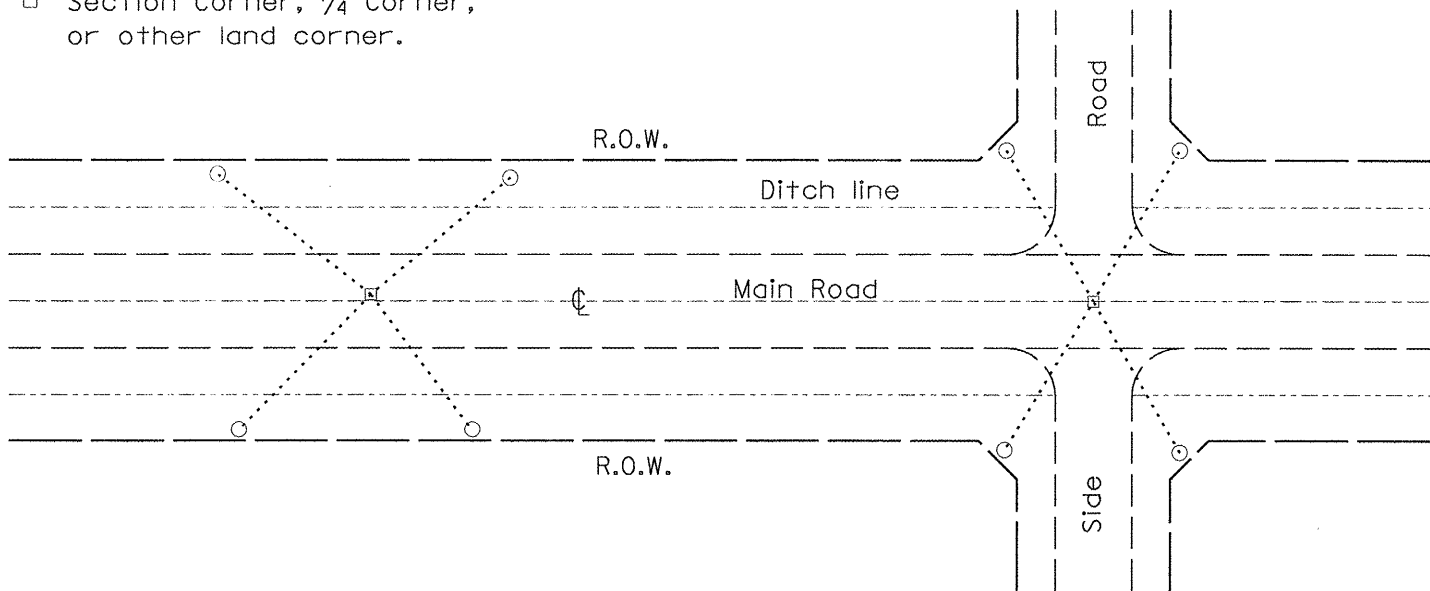
All dimensions are in inches (millimeters) unless otherwise noted.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B)BR	HENDERSON	70	67
CONTRACT NO. 68298				

1. ADD DISTRICT SPECIAL PROVISION IF PLACING A TYPE I MARKER ON A STRUCTURE.
 2. MODIFIES STATE STD 667101. DON'T USE STATE STD IF USING CADD STANDARD
 3. PERMANENT SURVEY MARKERS SHALL BE PLACED TO PERPETUATE THE SURVEY LINES OF DIVIDED HIGHWAYS AND THE CENTERLINE OF ALL OTHERS WHERE THESE LINES HAVE BEEN ESTABLISHED BY SURVEY.
 4. PERMANENT SURVEY MARKERS SHALL BE PLACED AT ALL LAND SECTION CORNERS WITHIN THE STATE R.O.W. WHERE THE MONUMENTS HAVE BEEN FOUND OR RELOCATED BY SURVEY.

PERMANENT SURVEY TIES

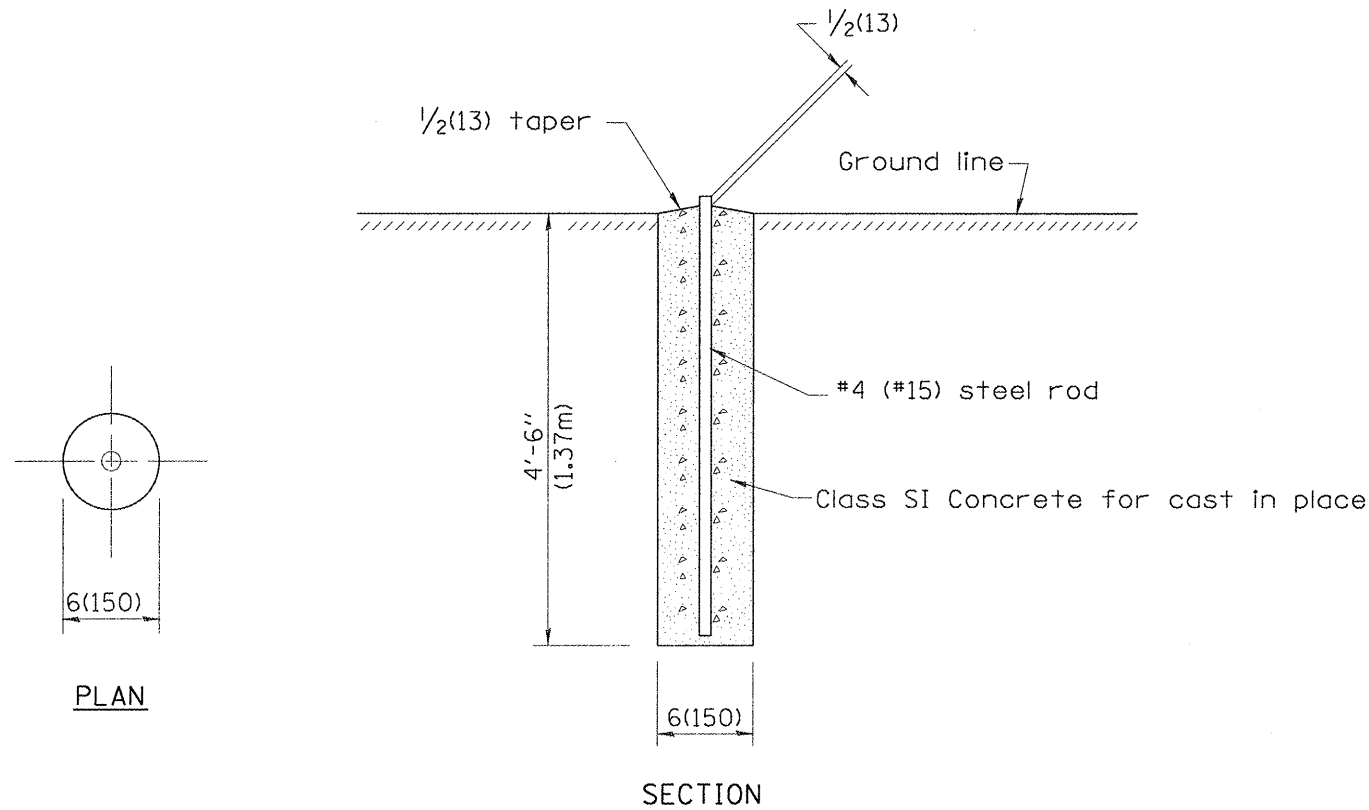
- Permanent Survey Tie
- Section Corner, 1/4 Corner, or other land corner.



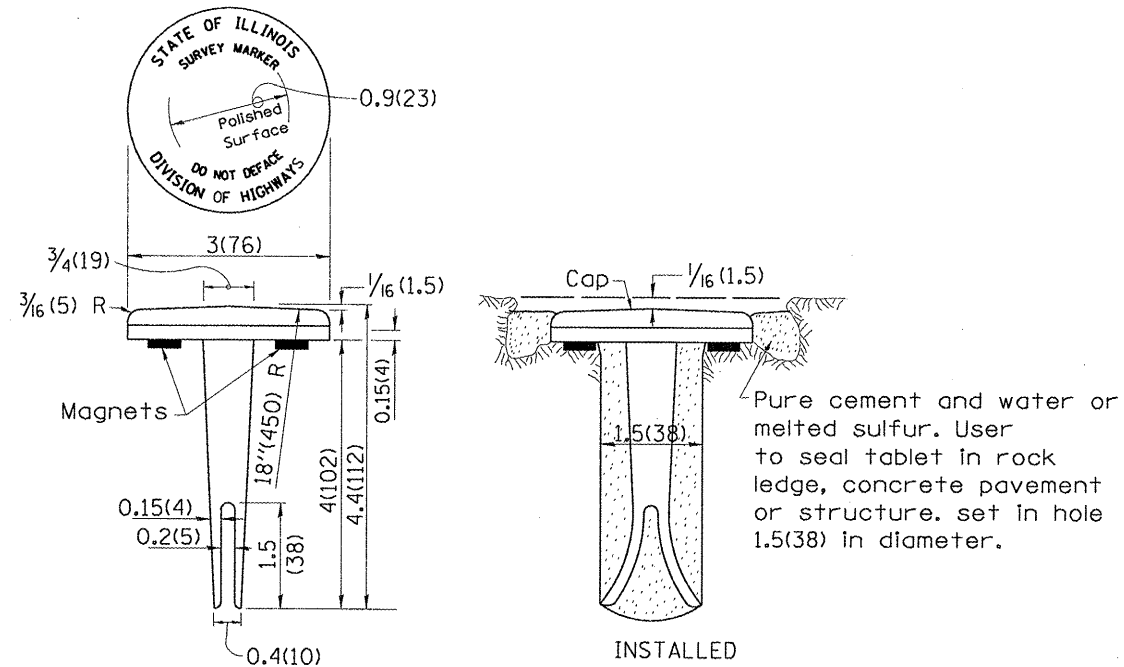
TYPICAL APPLICATION

GENERAL NOTES

1. The marker shall be cast in place of Class SI Concrete.
2. Tie marker shall be installed after the final seeding has been completed unless otherwise specified by the Engineer.
3. The tie distances to the section corner shall be measured and recorded by the surveyor setting the PSM. All ties shall be turned over to the IDOT Chief of Surveys or Chief of Plats for recordation.
4. All documentation shall be performed by a PLS



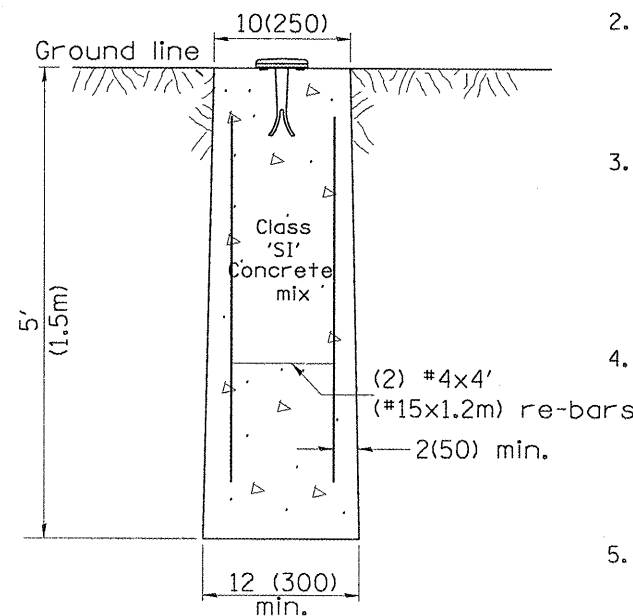
PERMANENT SURVEY MARKERS



TYPE I

GENERAL NOTES

1. All type II markers shall be cast in place, and precast markers will not be allowed.
2. Two permanent magnets, each having a diameter of 3/4 (19) and a thickness of 1/4 (6), or equivalent, shall be attached to the underside of the tablet with an approved epoxy bonding agent.
3. The location of the markers shall be in accordance with the plans in general, the markers will be placed at the P.T.'s, P.C.'s, and P.I.'s located within the R.O.W. of horizontal curves and spaces along the tangents in a way that a minimum of two markers are always inter-visible, and not to exceed 1000' (300m).
4. The markers shall be placed under the direction of the Engineer and shall be installed in a workmanlike manner in order that there will be no further settlement or horizontal shifting. The monuments shall be placed in a way that the survey point will fall within the portion of the plaque provided for that purpose.
5. The project designation, the centerline station, the survey point, and the elevation shall be permanently marked by the use of metal dies after marker has been installed.



MARKER CAST IN PLACE TYPE II

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

01-01-97	RENUM. D-3.01, NEW REVISION BOX, REVISED	T.P.	10-16-06	REVISED TO 2007 SPEC.	M.A.
	TITLE BOX, ADD DESIGNER NOTE		01-04-11	REVISED FOR CORRECTIONS	R.D.
07-07-98	ADD DESIGNER NOTE	J.A.			
05-24-06	REMOVED GEN. NOTE UNDER TIES	M.A.			

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

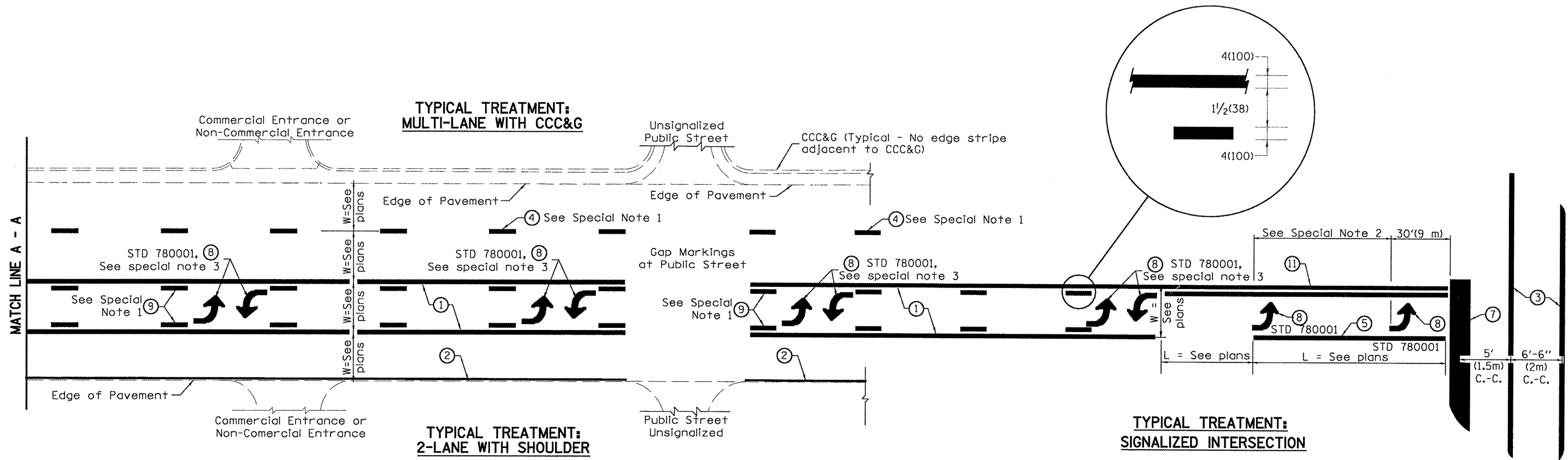
**PERMANENT SURVEY TIE &
PERMANENT SURVEY MARKERS TY.I - TY.II**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1)BR	HENDERSON	70	68
			CONTRACT NO. 68298	

NOT TO SCALE

CADD STD. 667101-D4

FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT



**FLUSH PAVED MEDIAN; TWO-WAY LEFT TURN LANE
WITH ONE-WAY LEFT TURN LANE AT SIGNALIZED INTERSECTION**

TYPICAL PAVEMENT MARKING LEGEND

(Note: This is a District Standard Legend. Some elements may not apply to specific project.)

- ① 4(100) Solid (Yellow)
- ② 4(100) Solid (White)
- ③ 2-6(150) Crosswalk @ 6'-6" (2m)min C.-C. (White)
2-8(200) Crosswalk @ 6'-6" (2m)min C.-C. (White) (When traffic signals are present.)
- ④ 6(150) Skip-Dash (White) (See Special Note 1)
- ⑤ 8(200) Solid (White)
- ⑥ 12(300) Diagonal (White) (Item ⑥ is shown on Std. 780001)
- ⑦ 24(600) Stop Bar (White)
- ⑧ Letters & Arrows (See Std. 780001 and Special Notes 2 & 3)
- ⑨ 4(100) Skip-Dash (Yellow) (See Special Note 1)
- ⑩ 12(300) Diagonal (Yellow) (See Table A)
- ⑪ 4(100) Double Solid (Yellow) (See Table A)

SPECIAL NOTES

1. Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversely across the pavement.
2. The following shall apply to arrows located in one-way left turn lanes:
 - A. A minimum of two (2) arrows is required.
 - B. The maximum spacing between arrows is 80' (24 m).
 - C. Arrows shall be evenly spaced if three (3) or more are required.
3. The following shall apply to arrow pairs located in two-way left turn lanes:
 - A. A minimum of two (2) arrow pairs is required.
 - B. The maximum spacing between arrow pairs is 200' (61 m).
 - C. Arrow pairs shall be evenly spaced if three (3) or more are required.
 - D. The spacing between BI Directional Left Turn Arrows is 33' (10 m).

GENERAL NOTES

1. Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
2. See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.

DESIGNER NOTES:
1. Include State Standard 780001 (Typical Pavement Markings)

01-01-97	RENUM. F-8.03, NEW REVISION BOX	T.P.	10-16-06	REVISED TO 2007 SPEC.
02-07-97	ADD BI DIRECTIONAL DIMENSION	J.A.		
10-97	CORRECT BI DIRECTIONAL DIMENSION	J.A.		
08-02	ADD CROSSWALK DMNS. WITH T.S.	M.A.		

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

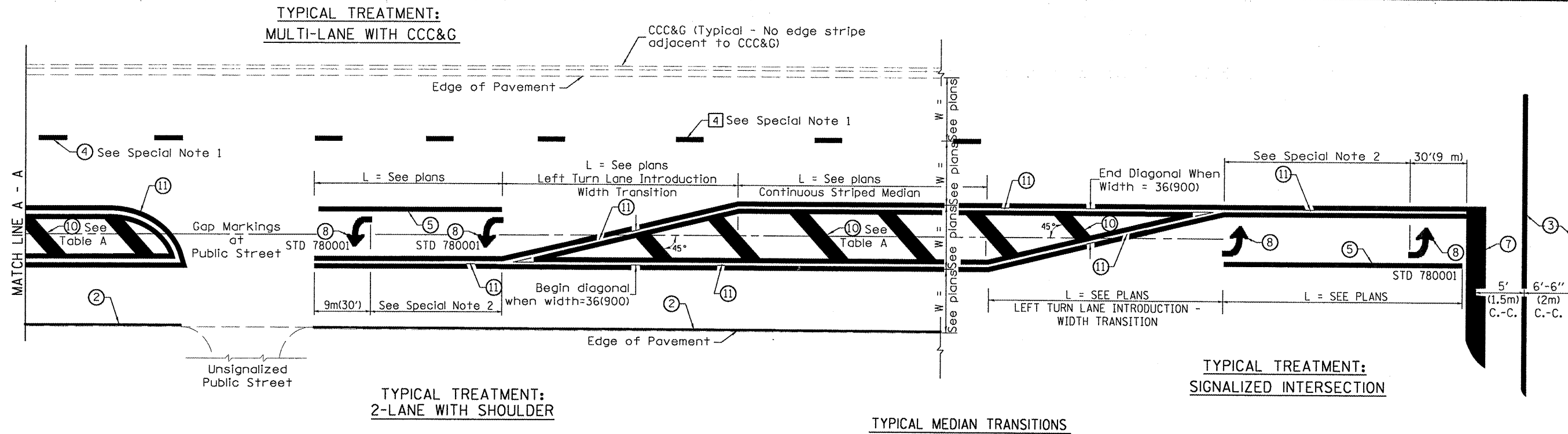
TYPICAL PAVEMENT MARKINGS

NOT TO SCALE

SHT. 1 OF 2
CADD STD. 780001-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B)BR	HENDERSON	70	69
CONTRACT NO. 68298				

FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT



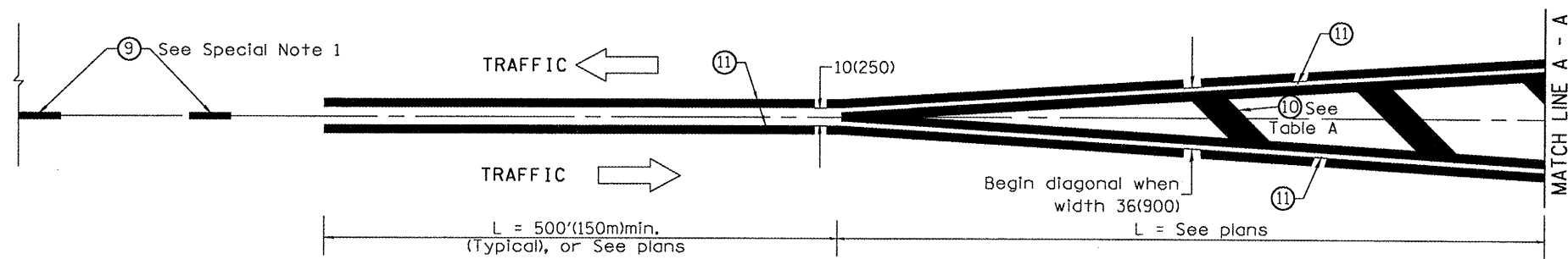
TYPICAL TREATMENT:
2-LANE WITH SHOULDER

TYPICAL MEDIAN TRANSITIONS

FLUSH PAVED MEDIAN: RESTRICTED LEFT TURN LANE

TABLE A
RECOMMENDED SPACING BETWEEN DIAGONAL LINES

SPEED LIMIT RANGE	CONTINUOUS	INTERSECTION CHANNELIZATION
		(Includes Width Transitions for Median and Left Turn Lane Introductions)
Less Than 30 mph (50 km/h)	50' (15m)	15' (5m)
30 - 45 mph (50 - 70 km/h)	75' (23m)	20' (6m)
Over 45 mph (70 km/h)	150' (46m)	30' (9m)



MEDIAN INTRODUCTION - WIDTH TRANSITIONS

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL PAVEMENT MARKINGS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
522	(14-1-B1)BR	HENDERSON	70	70
CONTRACT NO. 68298				

NOT TO SCALE

SHT. 2 OF 2
CADD STD. 780001-D4

FED. ROAD DIST. NO. 4 ILLINOIS FED. AID PROJECT