

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
IL 164	(116-C)BR-1	HENDERSON	50	1
ILLINOIS			68761	

FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR STANDARDS, SEE SHEET NO. 2

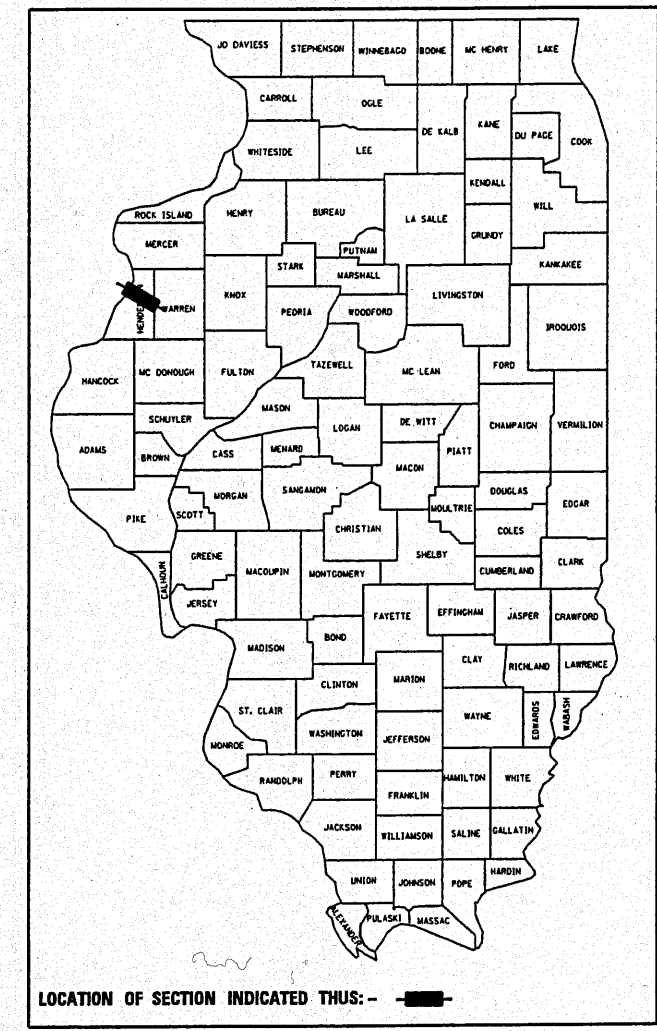
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

FAP ROUTE 657 (IL ROUTE 164)
SECTION (116-C)BR-1
PROJECT BRF-0657(008)
HENDERSON COUNTY
STRUCTURE REPLACEMENT
2.3 MILES EAST OF OQUAWKA

C-94-140-07

D-94-096-07



FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL RURAL
DESIGN SPEED: 55 MPH
POSTED SPEED: 55 MPH
ADT: 1800 (2009)
PV: 91.7% SU: 4.4% MU: 3.9%

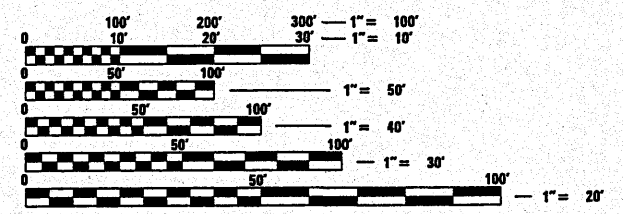
ENGINEERS SIGNATURE BOX

DATE SIGNED: 10/4/10	DATE SIGNED: 10/4/10
RYAN M. BRADLE, P.E. IL REG. NO. 062-055671 EXP. DATE: 11/30/2011	BRANDI A. BUSH, P.E. IL REG. NO. 062-060336 EXP. DATE: 11/30/2011

PREPARED BY:



7615 NORTH HARKER DRIVE
PEORIA, ILLINOIS 61615
TEL 309-693-7615
FAX 309-693-7616
CONTACT: RICK ANDERSON



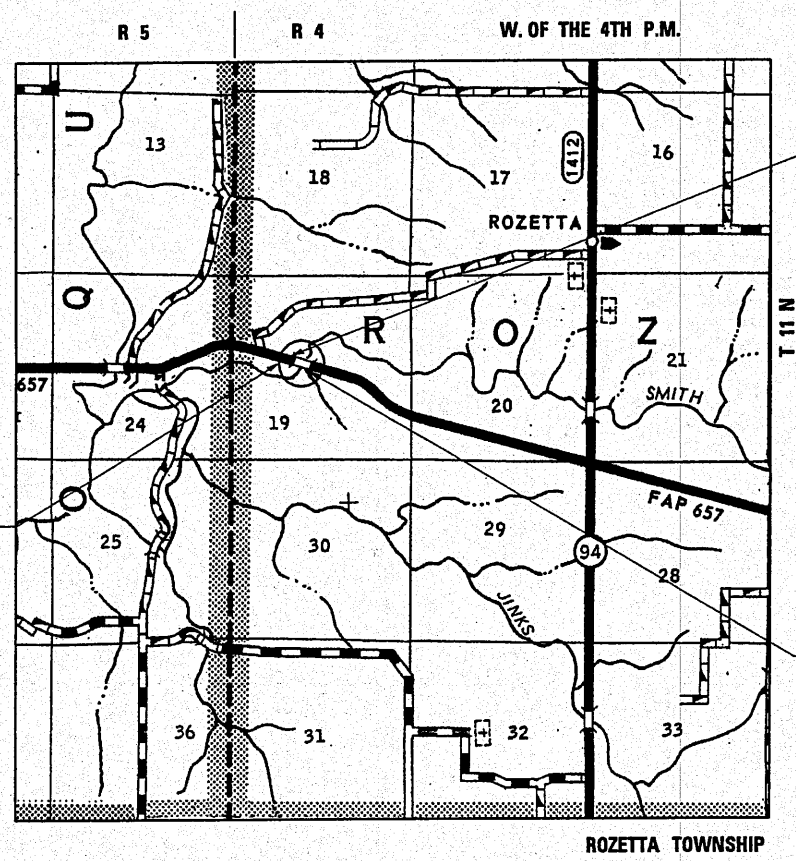
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

ROZETTA TOWNSHIP SECTION 19

PROJECT ENGINEER RICH DOTSON 309-671-3455
PROJECT MANAGER TERRISA WORSFOLD 309-671-3465

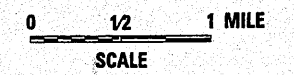
CONTRACT NO. 68761
CATALOG NO. 033601-00D



EXIST. SN 036-0038
PROP. SN 036-0370
STA. 150+72.50
2-SPAN PCC DECK BEAM
BRIDGE ON IL 164 OVER
SMITH CREEK WILL BE
REPLACED WITH A 2-SPAN
I-BEAM BRIDGE

SECTION (116-C)BR-1 BEGINS
STA. 147+25.00

SECTION (116-C)BR-1 ENDS
STA. 154+25.00



GROSS LENGTH = 700 FT. = 0.133 MILE
NET LENGTH = 700 FT. = 0.133 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 10/21/10

DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Dec 10 2010

ACTING ENGINEER OF DESIGN AND ENVIRONMENT

Dec 10 2010

DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

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COMMITMENTS

CONTACT KEVIN MILLER AT (309) 734-7707 OR (309) 221-4700 THIRTY (30) DAYS PRIOR TO CONSTRUCTION IN REGARD TO PARCEL NO. 4BA001 (ADDRESS: 1590 90TH STREET, RR#4, MONMOUTH, IL 61462) TO DISCUSS FENCE CONCERNS.

HIGHWAY STANDARDS

NUMBER	TITLE
000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
630001-09	STEEL PLATE BEAM GUARDRAIL
630201-06	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-09	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY
701006-03	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24' (600mm) FROM PAVEMENT EDGE
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
701306-03	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS > 45 MPH
701311-03	LANE CLOSURE 2L, 2W MOVING OPERATIONS-DAY ONLY
701321-11	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS > 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
720011-01	METAL POSTS FOR SIGNS, MARKERS AND DELINEATORS
780001-02	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
886001-01	DETECTOR LOOP INSTALLATIONS
886006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS
60101-01	CONCRETE HEADWALL FOR PIPE DRAIN

GENERAL NOTES

- JANUARY 1, 2007 AND THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" ADOPTED JANUARY 1, 2011 SHALL GOVERN THE CONSTRUCTION OF THE PROPOSED WORK EXCEPT AS MODIFIED BY THE DRAWINGS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO ANY UTILITY LINES AND EXISTING IMPROVEMENTS TO REMAIN THAT ARE DAMAGED AS A RESULT OF THE WORK.
- ADJUSTMENTS OF PROPOSED GRADES TO MATCH EXISTING ENTRANCES OR OTHER FIELD CONDITIONS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER.
- THE WORK AREA SHALL BE POSITIVELY DRAINED DURING CONSTRUCTION. FINAL GRADES SHALL BE PROTECTED AGAINST DAMAGE FROM EROSION, SEDIMENTATION, AND TRAFFIC.
- WHERE PROPOSED CONSTRUCTION ABUTS EXISTING APPURTENANCES, A FULL DEPTH SAWCUT SHALL BE MADE TO ACHIEVE A CLEAN BREAK BETWEEN THE PROPOSED AND THE EXISTING PAVEMENT. THE SAWCUT IS TO BE INCLUDED IN THE COST OF THE PAVEMENT REMOVAL.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AND AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

STATUS OF UTILITIES					
NAME OF UTILITY	STATION	OFFSET	TYPE OF UTILITY	TYPE OF CONFLICT	DISPOSITION
AMERENIP	150+17	40'-6" RT	ELECTRIC POLE	GRADING & RIPRAP	RELOCATE

MIXTURE USE(S):	SURFACE COURSE (1 1/2" NOMINAL)	BINDER COURSE (2 1/4" NOMINAL & VARIABLE)	HMA SHOULDER (SURFACE LIFT)	HMA SHOULDER (LOWER LIFTS)
AC/PG:	PG 64-22	PG 64-22	PG 64-22	PG 64-22
RAP% (MAX):**	15%	25%	30%	30%
DESIGN AIR VOIDS:	4.0%±N=50	4.0%±N=50	3.0%±N=30	4.0%±N=30
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL 9.5 OR IL 12.5	IL 19.0	IL 9.5L	IL 19.0L
FRICITION AGGREGATE:	MIXTURE D	N.A.	MIXTURE C	N.A.

**IF THE RAP OPTION IS SELECTED, THE ASPHALT CEMENT GRADE MAY NEED TO BE ADJUSTED; THIS WILL BE DETERMINED BY THE ENGINEER.

NOTES: INDIVIDUAL LIFT THICKNESS OF EACH MIX TYPE WILL BE NO LESS THAN 3 X NOMINAL MAXIMUM AGGREGATE SIZE AND NO MORE THAN 6 X NOMINAL MAXIMUM AGGREGATE SIZE.

8.THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES

POLYMERIZED PRIME COAT		
SURFACE TYPE	ESTIMATED TRUCK APPLICATION RATE	RESIDUAL RATE
MILLED (HMA OR PCC)	0.08 GAL/S.Y. (Q00034 TON/(S.Y.))	0.04 GAL/S.Y.
EXISTING PAVEMENT (NOT MILLED)	0.05 GAL/S.Y. (Q00022 TON/(S.Y.))	0.025 GAL/S.Y.
FOG COAT BETWEEN LIFTS	0.05 GAL/S.Y. (Q00022 TON/(S.Y.))	0.025 GAL/S.Y.

HOT-MIX ASPHALT	112 LBS/50 YD/INCH
NITROGEN FERTILIZER NUTRIENTS	90 LB/ACRE
PHOSPHORUS FERTILIZER NUTRIENTS	90 LB/ACRE
POTASSIUM FERTILIZER NUTRIENTS	90 LB/ACRE

9.TREE REMOVAL MAY BE NECESSARY PRIOR TO UTILITY COMPANIES BEING ABLE TO RELOCATE THEIR FACILITIES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR SHOULD COORDINATE ANY CONTRACT TREE REMOVAL ACTIVITIES OR INCOMPLETE UTILITY RELOCATIONS.

10.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.

11. PRIOR TO WINTER SHUTDOWN THE FOLLOWING STEPS SHALL BE TAKEN:
 -ALL COLD MILLED SURFACES SHALL BE OVERLAID.
 -ALL LANES SHALL BE REOPENED TO TRAFFIC.
 -MANHOLES, WHERE APPLICABLE, SHALL BE ADJUSTED TO THE ELEVATION OF THE BINDER COURSE/LEVELING BINDER TO EASE IN PLOWING SNOW, AND RE-ADJUSTED TO FINISHED GRADE IN THE SPRING. THE INITIAL MANHOLE ADJUSTMENT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE AND ANY RE-ADJUSTMENT, AS DIRECTED BY THE ENGINEER, WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04.
 -TEMPORARY OR PERMANENT PAVEMENT MARKING SHALL BE PLACED AS APPLICABLE.

12.THE DISTRICT FOUR TREE COMMITTEE SHOULD BE CONTACTED AND PRIOR APPROVAL OBTAINED FOR ANY TREE REMOVAL BEYOND THE LIMITS/LOCATIONS INCLUDED IN THE PLANS.

13.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 TO THE ENGINEER FOR SHORT-TERM CLOSURES.

14.MICROSTATION 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 SOLE 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.

15. BUTT JOINTS SHALL NOT BE MILLED MORE THAN THREE (3) DAYS PRIOR TO PLACEMENT OF THE HMA SURFACE COURSE.

16. 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.

17. 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 (20 MM) 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
 - RAMP - 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 INCLUDED IN THE COST OF THE ASSOCIATED PAVEMENT AND/OR OVERLAY PAY ITEMS.

18. 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.

19. 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.

20. THE RESIDENT SHALL CONTACT OPERATIONS TO VERIFY THE LOCATION OF NO PASSING ZONES PRIOR TO PLACEMENT OF CENTERLINE STRIPING.

21. SIGN LOCATIONS MAY VARY FROM THE STATIONS SHOWN ON THE PLANS IN ACCORDANCE WITH DIRECTIONS FROM THE ENGINEER AT THE TIME OF CONSTRUCTION. SIGN LOCATIONS MAY BE ADJUSTED IN THE FIELD TO AVOID ANY FOUND UTILITIES. ALL WOOD POST LOCATIONS SHALL BE VERIFIED WITH THE BUREAU OF OPERATIONS, TRAFFIC SECTION, BEFORE INSTALLATION.

22. 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 P10100
 • COLOR PHOTOGRAPHS DEPICTING THE USE AREA
 • BORROW AREA ENTRY AGREEMENT FORM - D4 P10101

PLEASE NOTE THAT A MINIMUM OF TWO WEEKS SHALL BE ALLOWED FOR THE DISTRICT TO OBTAIN THE REQUIRED ENVIRONMENTAL CLEARANCES.

FILE NAME =	USER NAME = rmbredle	DESIGNED - RMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 164 OVER SMITH CREEK STANDARDS AND GENERAL NOTES	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
S:\237\2028\23728001\11645m:thCreek\CA	D:\CAADD Sheets\10468761-sht-gennotes.dgn	DRAWN - WLL	REVISED -			657	(116-CIBR-1)	HENDERSON	56	2	
	PLOT SCALE = 40.0000' / IN.	CHECKED - RJA	REVISED -			CONTRACT NO. 68761					
	PLOT DATE = 10/23/2010	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

SUMMARY OF QUANTITIES				ROADWAY FAP 657 (IL 164) 80% FEDERAL 20% STATE	STRUCTURE SN 036-0370 80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE	
				ROADWAY 0004	BRIDGE 0011
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	13	13	
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	18	18	
20200100	EARTH EXCAVATION	CU YD	215	215	
20200500	EARTH EXCAVATION (WIDENING)	CU YD	38	38	
20300100	CHANNEL EXCAVATION	CU YD	569	569	
20400800	FURNISHED EXCAVATION	CU YD	510	510	
21101615	TOPSOIL FURNISH AND PLACE, 4"	SQ YD	2,905	2,905	
25000200	SEEDING, CLASS 2	ACRE	0.75	0.75	
25000300	SEEDING, CLASS 3	ACRE	0.25	0.25	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	90	90	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	90	90	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	90	90	
25100115	MULCH, METHOD 2	ACRE	0.75	0.75	
25100635	HEAVY DUTY EROSION CONTROL BLANKET	SO YD	107	107	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	300	300	
28000305	TEMPORARY DITCH CHECKS	FOOT	333	333	
28000400	PERIMETER EROSION BARRIER	FOOT	390	390	
28000500	INLET AND PIPE PROTECTION	EACH	1	1	
28100107	STONE RIPRAP, CLASS A4	SO YD	1066	28	1038
28200200	FILTER FABRIC	SO YD	1066	28	1038
31101000	SUBBASE GRANULAR MATERIAL, TYPE B	TON	94	94	
31101200	SUBBASE GRANULAR MATERIAL, TYPE B 4"	SO YD	373	373	
35650400	BASE COURSE WIDENING 9"	SO YD	106	106	
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	48	48	
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	10	10	
40600215	POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)	TON	0.6	0.6	
40600300	AGGREGATE (PRIME COAT)	TON	3	3	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SO YD	489	489	
40600990	TEMPORARY RAMP	SO YD	134	134	
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	83	83	
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	150	150	
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SO YD	48	48	
44000100	PAVEMENT REMOVAL	SO YD	73	73	
48203100	HOT-MIX ASPHALT SHOULDERS	TON	141	141	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50100300	REMOVAL OF EXISTING STRUCTURES NO.1	EACH	1		1
50100400	REMOVAL OF EXISTING STRUCTURES NO.2	EACH	1		1

* SPECIALTY ITEM

SUMMARY OF QUANTITIES				ROADWAY FAP 657 (IL 164) 80% FEDERAL 20% STATE	STRUCTURE SN 036-0370 80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE	
				ROADWAY 0004	BRIDGE 0011
50200100	STRUCTURE EXCAVATION	CU YD	191		191
50300100	FLOOR DRAINS	EACH	16		16
50300225	CONCRETE STRUCTURES	CU YD	92.5		92.5
50300255	CONCRETE SUPERSTRUCTURE	CU YD	274.7		274.7
50300260	BRIDGE DECK GROOVING	SQ YD	636		636
50300280	CONCRETE ENCASEMENT	CU YD	3.4		3.4
50300300	PROTECTIVE COAT	SO YD	817		817
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		1
50500505	STUD SHEAR CONNECTORS	EACH	2268		2268
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	73170		73170
50800515	BAR SPLICERS	EACH	745		745
51200959	FURNISHING METAL SHELL PILES 14" X 0.312"	FOOT	932		932
51202305	DRIVING PILES	FOOT	932		932
51203200	TEST PILE METAL SHELLS	EACH	3		3
51204650	PILE SHOES	EACH	6		6
51500100	NAME PLATES	EACH	1		1
52100520	ANCHOR BOLTS, 1"	EACH	36		36
54214521	PRECAST REINFORCED CONCRETE FLARED END SECTIONS, EQUIVALENT ROUND-SIZE 36"	EACH	2	2	
542A5491	PIPE CULVERTS, CLASS A, TYPE I EQUIVALENT ROUND-SIZE 36"	FOOT	40	40	
59100100	GEOCOMPOSITE WALL DRAIN	SO YD	56		56
63000001	* STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	262.5	262.5	
63100085	* TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	
63100169	* TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	4	4	
63200310	GUARDRAIL REMOVAL	FOOT	400	400	
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	5	5	
66700205	PERMANENT SURVEY MARKERS, TYPE I	EACH	1	1	
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	8	8	
67100100	MOBILIZATION	L SUM	1	1	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	4	4	
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6	
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	0.5	0.5	
70300100	SHORT TERM PAVEMENT MARKING	FOOT	70	70	
70300520	PAVEMENT MARKING TAPE, TYPE III 4"	FOOT	3,174	3,174	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	880	880	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	650	650	

* SPECIALTY ITEM

FILE NAME *	USER NAME * #USER#	DESIGNED - RMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 164 OVER SMITH CREEK SUMMARY OF QUANTITIES			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN - WLL	REVISED -					657	(116-CIBR-1)	HENDERSON	56	3	
	PLOT SCALE * #SCALE#	CHECKED - RJA	REVISED -					SCALE: SHEET NO. OF SHEETS STA. TO STA.			CONTRACT NO. 68761		
	PLOT DATE * #DATE#	DATE -	REVISED -					ILLINOIS FED. AID PROJECT					

SUMMARY OF QUANTITIES				ROADWAY FAP 657 (IL 164) 80% FEDERAL 20% STATE	STRUCTURE SN 036-0370 80% FEDERAL 20% STATE
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION TYPE CODE	
				ROADWAY 0004	BRIDGE 0011
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	600	600	
78001110	* PAINT PAVEMENT MARKING - LINE 4"	FOOT	1580	1580	
78100100	* RAISED REFLECTIVE PAVEMENT MARKER	EACH	6	6	
78100105	* RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	3	3	
78200410	* GUARDRAIL MARKERS, TYPE A	EACH	16	16	
78201000	* TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	
78300100	PAVEMENT MARKING REMOVAL	SO FT	647	647	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	9	9	
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	91		91
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SO YD	748	748	
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1		1
X6650202	WOVEN WIRE FENCE REMOVAL	FOOT	235	235	
X7016500	TEMPORARY BRIDGE TRAFFIC SIGNALS (SPECIAL)	EACH	1	1	
Z0001002	GUARDRAIL AGGREGATE EROSION CONTROL	TON	200	200	
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	32		32
Z0004552	APPROACH SLAB REMOVAL	SO YD	194	194	
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	
Z0026407	TEMPORARY SHEET PILING	SO FT	928		928
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	221	221	
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	135		135

* SPECIALTY ITEM

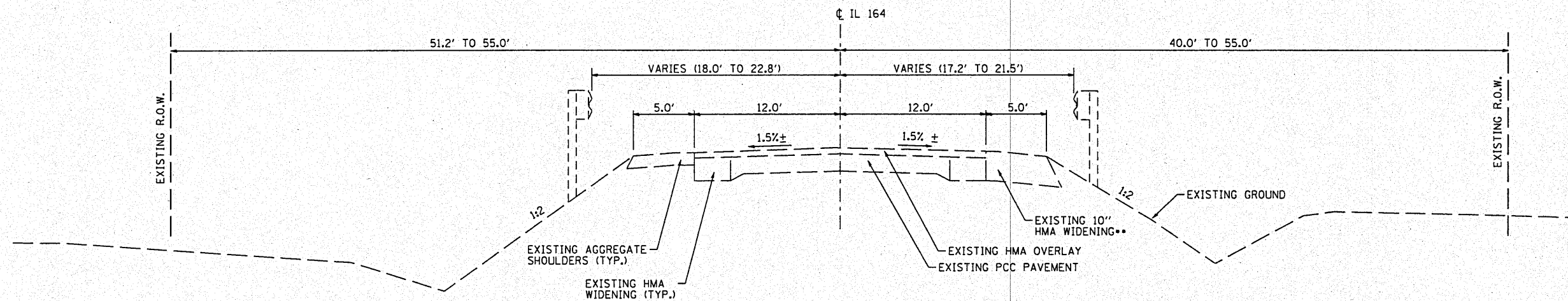
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PLOT SCALE = 48.0000' / IN.	CHECKED - RJA	REVISED -	
PLOT DATE = 10/23/2010	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

IL 164 OVER SMITH CREEK
SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
657	(116-C)BR-1	HENDERSON	56	4
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68761	



EXISTING TYPICAL SECTION
NOT TO SCALE

STA. 147+25.00 TO STA. 154+25.00
BRIDGE OMISSION
STA. 150+17.15 TO STA. 151+32.63

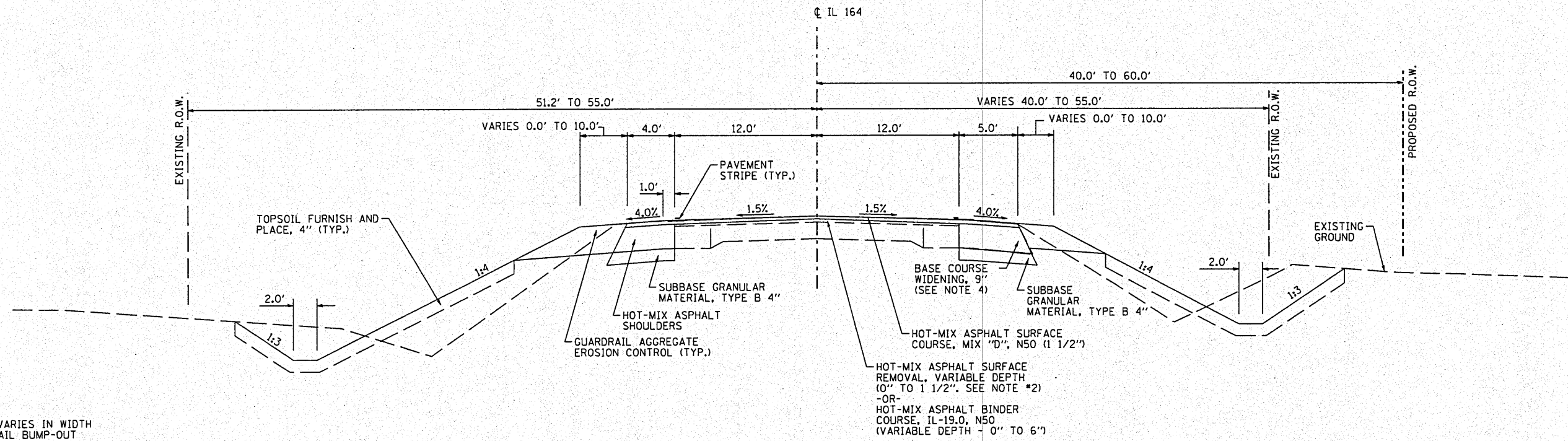
GUARDRAIL RT. STA. 149+10.74 TO 150+11.20 AND 151+26.38 TO 152+27.24
GUARDRAIL LT. STA. 149+22.72 TO 150+23.47 AND 151+39.16 TO 152+39.51
**EXISTING 10" HMA WIDENING FROM STA. 148+10.00 TO STA. 150+10.00 AND
STA. 151+28.00 TO STA. 153+28.00 .

FILE NAME =	USER NAME = rmbrodie	DESIGNED - RMB	REVISED -
S:\237\2008\23708000\IL1645m:thCreek\CA\DD\CADD Sheets\0468761-sht-typ.dgn		DRAWN - WLL	REVISED -
		CHECKED - RJA	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

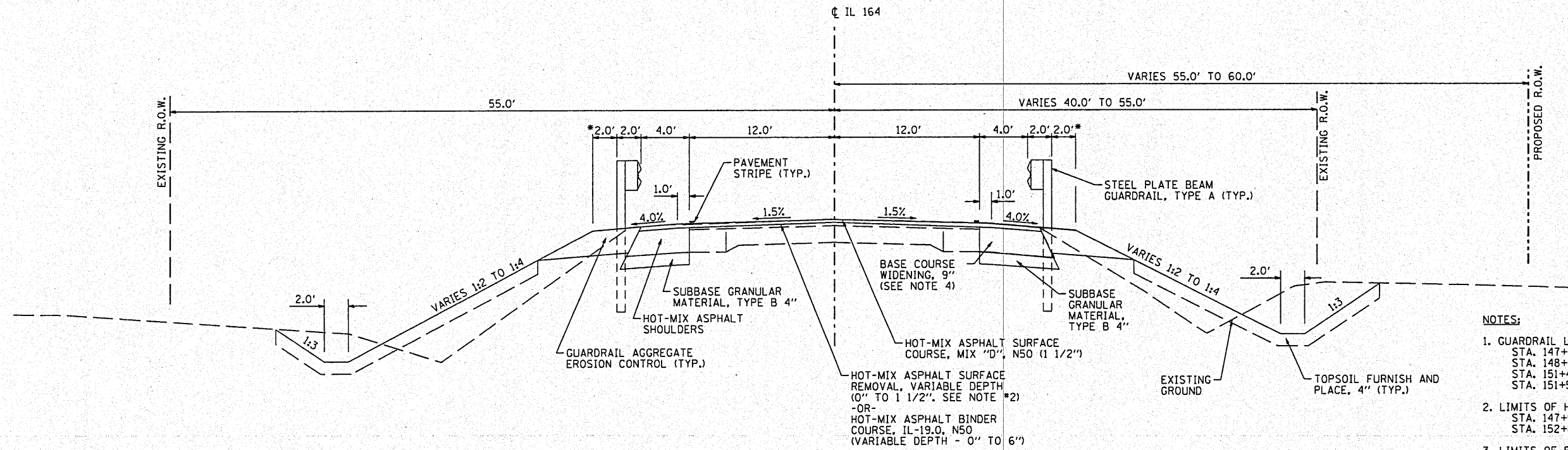
IL 164 OVER SMITH CREEK			
EXISTING TYPICAL SECTION			
SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
657	1116-C1BR-1	HENDERSON	56	5
CONTRACT NO. 68761				
ILLINOIS FED. AID PROJECT				



* SHOULDER VARIES IN WIDTH AT GUARDRAIL BUMP-OUT LOCATIONS

PROPOSED TYPICAL SECTION
NOT TO SCALE
RT. STA. 147+25.00 TO RT. STA. 147+93.53
RT. STA. 152+39.83 TO RT. STA. 154+25.00
LT. STA. 147+25.00 TO LT. STA. 148+42.67
LT. STA. 153+51.47 TO LT. STA. 154+25.00



- NOTES:**
1. GUARDRAIL LIMITS
STA. 147+93.53 TO STA. 149+86.68, RT
STA. 148+42.67 TO STA. 149+98.32, LT
STA. 151+46.68 TO STA. 152+39.83, RT
STA. 151+58.32 TO STA. 153+51.47, LT
 2. LIMITS OF HMA REMOVAL (VARIABLE DEPTH)
STA. 147+55.00 TO STA. 148+70.95
STA. 152+83.23 TO STA. 153+95.00
 3. LIMITS OF BUTT JOINTS
STA. 147+25.00 TO STA. 147+55.00
STA. 148+70.95 TO STA. 149+15.95
STA. 152+38.23 TO STA. 152+83.23
STA. 153+95.00 TO STA. 154+25.00
 4. SEE STAGING PLAN TYPICAL SECTIONS FOR LIMITS OF BASE COURSE WIDENING, 9\"/>

PROPOSED TYPICAL SECTION
NOT TO SCALE
RT. STA. 147+93.53 TO RT. STA. 152+39.83
LT. STA. 148+42.67 TO LT. STA. 153+51.47
BRIDGE OMISSION
STA. 149+77.50 TO STA. 151+67.50
(TO ENDS OF APPROACH PAVEMENT)

FILE NAME =	USER NAME = rmbrodie	DESIGNED - RMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 164 OVER SMITH CREEK PROPOSED TYPICAL SECTIONS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
S:\237\2008\23708001\IL164SmithCreek\CA	D:\CADD Sheets\0468761-sht-tyo.dgn	DRAWN - WLL	REVISED -			657	(116-C)BR-1	HENDERSON	56	6	
	PLOT SCALE = 1/8" = 1' IN.	CHECKED - RJA	REVISED -			CONTRACT NO. 68761					
	PLOT DATE = 10/23/2010	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					

20100110 TREE REMOVAL, (6 TO 15 UNITS DIAMETER)	
LOCATION	UNIT
STA. 150+88.60, 50.0' RT	6
STA. 150+89.10, 40.3' RT	7
TOTAL	13

25100635 HEAVY DUTY EROSION CONTROL BLANKET	
LOCATION	SQ YD
STA. 151+58.32 TO STA. 152+00.00, LT	106.98
TOTAL	107

28000250 TEMPORARY EROSION CONTROL SEEDING	
LOCATION	POUND
ENTIRE PROJECT	300
TOTAL	300

40600982 HOT-MIX ASPHALT SURFACE REMOVAL-BUTT JOINT	
LOCATION	SQ YD
STA. 147+25.00 TO STA. 147+55.00	97.87
STA. 148+70.95 TO STA. 149+15.95	145.57
STA. 152+38.23 TO STA. 152+83.23	145.15
STA. 153+95.00 TO STA. 154+25.00	100.38
TOTAL	489

20100210 TREE REMOVAL, (OVER 15 UNITS DIAMETER)	
LOCATION	UNIT
STA. 151+37.37, 41.9' LT	18
TOTAL	18

20300100 CHANNEL EXCAVATION	
LOCATION	CU YD
STA. 10+07.84 TO STA. 11+00.00 (ALONG CREEK)	568.03
TOTAL	569

LOCATION	20200100 EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE (25%)	EMBANKMENT	20400800 FURNISHED EXCAVATION
STA. TO STA.	CU YD	CU YD	CU YD	CU YD
147+25.00 TO 154+25.00 STAGE 1	149.64	112.23	272.56	160.34
147+25.00 TO 154+25.00 STAGE 2	61.02	45.76	364.03	318.26
FROM CHANNEL EXCAVATION	0.00	0.00	29.10	29.10
TOTAL	211	157.99	665.69	508
ROUNDED TOTAL	215			510

LOCATION	25000200 SEEDING, CLASS 2	25000300 SEEDING, CLASS 3	25000400 NITROGEN FERTILIZER NUTRIENT	25000500 PHOSPHORUS FERTILIZER NUTRIENT	25000600 POTASSIUM FERTILIZER NUTRIENT	25100115 MULCH, METHOD 2	21101615 TOPSOIL FURNISH AND PLACE, 4"
LOCATION	ACRE	ACRE	POUND	POUND	POUND	ACRE	SQ YD
STA. 147+25.00 TO STA. 150+06.86, LT	0.15		13.50	13.50	13.50	0.15	686.72
STA. 147+25.00 TO STA. 149+88.26, RT	0.14		12.60	12.60	12.60	0.14	642.40
BRIDGE OMISSION							
STA. 152+00.00 TO STA. 154+25.00, LT	0.16		14.40	14.40	14.40	0.16	733.95
STA. 151+38.14 TO STA. 154+25.00, RT	0.16		14.40	14.40	14.40	0.16	735.34
STA. 151+58.32 TO STA. 152+00.00, LT		0.02	22.50	22.50	22.50		106.98
TOTAL	0.75	0.25	90	90	90	0.75	2,905

28000305 TEMPORARY DITCH CHECKS		
LOCATION		FOOT
STA. 147+25.00, 38.0' LT		20.50
STA. 148+25.00, 40.8' LT		22.70
STA. 149+25.00, 39.5' LT		22.15
STA. 151+22.12, 40.0' LT		20.00
STA. 151+30.00, 39.6' LT		20.00
STA. 151+40.00, 39.4' LT		20.00
STA. 151+50.00, 39.2' LT		20.00
STA. 152+50.00, 39.2' LT		21.70
STA. 153+00.00, 43.5' LT		23.20
STA. 154+00.00, 39.2' LT		23.20
STA. 151+05.00, 37.4' RT		20.00
STA. 151+20.00, 39.3' RT		20.00
STA. 151+35.00, 41.1' RT		20.00
STA. 151+50.00, 42.9' RT		20.00
STA. 152+00.00, 41.5' RT		11.50
STA. 153+00.00, 43.7' RT		13.00
STA. 154+00.00, 40.0' RT		14.60
TOTAL		333

28000400 PERIMETER EROSION BARRIER		
LOCATION		FOOT
STA. 147+25.00, 20.7' TO STA. 147+50.00, 21.0' RT		24.5
STA. 147+50.00, 21.0' TO STA. 147+80.29, 53.2' RT		44.5
STA. 147+80.29, 53.2' TO STA. 148+08.86, 53.2' RT		28.6
STA. 148+08.86, 53.2' TO STA. 148+50.00, 49.4' RT		41.4
STA. 148+50.00, 49.4' TO STA. 149+00.00, 42.7' RT		50.4
STA. 149+00.00, 42.7' TO STA. 149+50.00, 44.7' RT		50.0
STA. 149+50.00, 44.7' TO STA. 149+88.23, 48.1' RT		38.4
STA. 149+88.23, 48.1' TO STA. 150+00.00, 47.8' RT		11.8
STA. 152+00.00, 51.2' TO STA. 152+30.66, 54.1' RT		30.8
STA. 152+30.66, 54.1' TO STA. 153+00.00, 52.7' RT		69.4
TOTAL		390

28000500 INLET AND PIPE PROTECTION	
LOCATION	EACH
STA. 152+69.73, 43.01' RT	1
TOTAL	1

28100107 STONE RIPRAP, CLASS A4	
LOCATION	SQ YD
DITCH	
STA. 150+00.00 TO STA. 150+16.86, LT	11.8
STA. 151+19.91 TO STA. 151+50.00, LT	6.8
STA. 151+38.05 TO STA. 151+50.00, RT	9.7
BRIDGE	1038.0
TOTAL	1066

28200200 FILTER FABRIC	
LOCATION	SQ YD
DITCH	
STA. 150+00.00 TO STA. 150+16.86, LT	11.8
STA. 151+19.91 TO STA. 151+50.00, LT	6.8
STA. 151+38.05 TO STA. 151+50.00, RT	9.7
BRIDGE	1038.0
TOTAL	1066

40200800 AGGREGATE SURFACE COURSE TYPE B	
LOCATION	TON
STA 152+72 RT, 20.0' WIDE	47.6
TOTAL	48

48203100 HOT-MIX ASPHALT SHOULDERS	
LOCATION	TON
STA. 147+25.00 TO STA. 150+06.86, LT	55.7
STA. 151+37.50 TO STA. 154+25.00, LT	58.5
STA. 148+00.00 TO STA. 150+06.86, RT	15.5
STA. 151+50.00 TO STA. 153+00.00, RT	11.2
TOTAL	141

40600300 AGGREGATE (PRIME COAT)	
LOCATION	TON
ON MILLED SURFACE	
STA. 147+25.00 TO STA. 149+15.95	1.0
STA. 152+38.23 TO STA. 154+25.00	1.0
FOG COAT ON NEW BINDER	
STA. 149+15.95 TO STA. 149+71.50	0.2
STA. 151+73.50 TO STA. 152+83.23	0.2
TOTAL	3

40603080 HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	
LOCATION	TON
STA. 148+70.95 TO STA. 149+71.50	39.7
BRIDGE OMISSION	
STA. 151+73.50 TO STA. 152+83.23	43.7
TOTAL	83

40603335 HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	
LOCATION	TON
STA. 142+25.00 TO STA. 149+71.50	74
STA. 151+73.50 TO STA. 154+25.00	76
TOTAL	150

78300100 PAVEMENT MARKING REMOVAL		
LOCATION	TYPE	SQ FT
STA. 145+69.95 TO STA. 149+87.23, LT	SOLID	139
STA. 151+62.64 TO STA. 155+77.70, LT	SOLID	138
STA. 145+69.95 TO STA. 149+87.23, RT	SOLID	139
STA. 151+62.64 TO STA. 155+77.70, RT	SOLID	138
STA. 145+69.95 TO STA. 149+87.23, CL	DASHED	46
STA. 151+62.64 TO STA. 155+77.70, CL	DASHED	46
TOTAL		647

50100300 REMOVAL OF EXISTING STRUCTURES NO. 1	
LOCATION	EACH
STA. 151+65.19, LT (2' W x 2.5' H BOX CULVERT, 17.5' LONG)	1
TOTAL	1

50100400 REMOVAL OF EXISTING STRUCTURES NO. 2	
LOCATION	EACH
STA. 152+35.82, RT (2' W x 3' H BOX CULVERT, 17.5' LONG)	1
TOTAL	1

20200500 EARTH EXCAVATION (WIDENING)	
LOCATION	CU YD
STA. 147+25.00 TO STA. 148+10.00, RT	18.2
STA. 153+28.00 TO STA. 154+25.00, RT	20.2
TOTAL	38

40600215 POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)	
LOCATION	TON
ON MILLED SURFACE	
STA. 147+25.00 TO STA. 149+15.95	0.17
STA. 152+38.23 TO STA. 154+25.00	0.17
ON EXISTING PAVEMENT	
STA. 149+15.95 TO STA. 149+71.50	0.03
STA. 151+73.50 TO STA. 152+83.23	0.04
FOG COAT ON BINDER	
STA. 149+15.95 TO STA. 149+71.50	0.03
STA. 151+73.50 TO STA. 152+83.23	0.04
HMA SHOULDERS ON AGG BASE (LT SIDE)	
STA. 147+25.00 TO STA. 149+77.18, LT	0.04
STA. 151+78.25 TO STA. 154+25.00, LT	0.04
FOG COAT ON SHOULDERS (RT SIDE)	
STA. 147+25.00 TO STA. 149+66.75, RT	0.02
STA. 151+68.06 TO STA. 154+25.00, RT	0.03
TOTAL	0.6

35650400 BASE COURSE WIDENING, 9 INCH	
LOCATION	SQ YD
STA. 147+25.00 TO STA. 148+10.00, RT	50.5
STA. 153+28.00 TO STA. 154+25.00, RT	55.8
TOTAL	106

63000001 STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	
LOCATION	FOOT
STA. 148+43.53 TO STA. 149+43.53, RT	100.00
STA. 148+92.67 TO STA. 149+55.17, LT	62.50
STA. 152+01.47 TO STA. 153+01.47, LT	100.00
TOTAL	262.5

63100085 TRAFFIC BARRIER TERMINAL, TYPE 6	
LOCATION	EACH
STA. 149+55.17 TO STA. 149+98.32, LT	1
STA. 149+43.53 TO STA. 149+86.68, RT	1
STA. 151+58.32 TO STA. 152+01.47, LT	1
STA. 151+46.68 TO STA. 151+89.83, RT	1
TOTAL	4

63100169 TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	
LOCATION	EACH
STA. 147+93.53 TO STA. 148+43.53, RT	1
STA. 148+42.67 TO STA. 148+92.67, LT	1
STA. 151+89.83 TO STA. 152+39.83, RT	1
STA. 153+01.47 TO STA. 153+51.47, LT	1
TOTAL	4

63200310 GUARDRAIL REMOVAL	
LOCATION	FOOT
STA. 149+22.72 TO STA. 150+23.47, LT	100.86
STA. 149+10.74 TO STA. 150+11.20, RT	100.56
STA. 151+39.16 TO STA. 152+39.51, LT	100.45
STA. 151+26.38 TO STA. 152+27.24, RT	100.94
TOTAL	400

X6650202 WOVEN WIRE FENCE REMOVAL	
LOCATION	FOOT
STA. 147+70.34 TO STA. 149+99.31, RT	228.97
STA. 149+99.31 TO STA. 149+96.70, RT	6.36
TOTAL	235

67000500 ENGINEER'S FIELD OFFICE, TYPE B	
LOCATION	CAL MO
ENTIRE PROJECT	8
TOTAL	8

Z0004552 APPROACH SLAB REMOVAL	
LOCATION	SO YD
STA. 149+87.23 TO STA. 150+17.23	96
STA. 151+32.63 TO STA. 151+62.64	97
TOTAL	194

70100405 TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	
LOCATION	EACH
ENTIRE PROJECT	1
TOTAL	1

70103815 TRAFFIC CONTROL SURVEILLANCE	
LOCATION	CAL DA
ENTIRE PROJECT	4
TOTAL	4

X7016500 TEMPORARY BRIDGE TRAFFIC SIGNALS (SPECIAL)	
LOCATION	EACH
ENTIRE PROJECT	1
TOTAL	1

70106700 TEMPORARY RUMBLE STRIP	
LOCATION	EACH
STA. 138+69.95, RT	1
STA. 133+69.95, RT	1
STA. 128+69.95, RT	1
STA. 162+77.70, LT	1
STA. 167+77.70, LT	1
STA. 172+77.70, LT	1
TOTAL	6

70300100 SHORT-TERM PAVEMENT MARKING	
LOCATION	FOOT
STA. 147+25.00 TO STA. 154+25.00, CL	70.0
TOTAL	70

70301000 WORK ZONE PAVEMENT MARKING REMOVAL				
LOCATION	TYPE	LENGTH	SO FT	
STAGE 1				
STA. 146+29.95, 12.4' LT TO STA. 147+29.95, CL	SOLID	100.77	33.6	
STA. 147+29.95, CL TO STA. 149+95.95, 5.5' RT	SOLID	66.23	22.1	
STA. 149+95.95, 5.5' RT TO STA. 153+62.50, 5.5' RT	SOLID	566.55	188.9	
STA. 153+62.50, 5.5' RT TO STA. 155+67.70, 12.0' LT	SOLID	205.91	68.6	
STA. 155+67.70, 12.0' LT TO STA. 147+95.49, 16.5' RT	SOLID	52.77	17.6	
STA. 147+95.49, 16.5' RT TO STA. 153+62.96, 16.5' RT	SOLID	567.47	189.2	
STA. 153+62.96, 16.5' RT TO STA. 154+08.60, 12.7' RT	SOLID	45.80	15.3	
STAGE 2				
STA. 146+10.74, 11.9' RT TO STA. 147+95.95, 3.5' LT	SOLID	185.85	62.0	
STA. 147+95.95, 3.5' LT TO STA. 153+62.5, 3.5' LT	SOLID	566.55	188.9	
STA. 153+62.5, 3.5' LT TO STA. 154+04.50, CL	SOLID	42.15	14.1	
STA. 154+04.50, CL TO STA. 155+04.50, 13.0' RT	SOLID	100.84	33.6	
STOP BAR				
STA. 145+69.95, RT	STOP BAR	11.5	23.0	
STA. 155+77.70, LT	STOP BAR	11.5	23.0	
TOTAL			880	

70400100 TEMPORARY CONCRETE BARRIER	
LOCATION	FOOT
STA. 147+50.30 TO STA. 153+99.70	650
TOTAL	650

70400200 RELOCATE TEMPORARY CONCRETE BARRIER	
LOCATION	FOOT
STA. 147+75.22 TO STA. 153+74.78	600
TOTAL	600

78100100 RAISED REFLECTIVE PAVEMENT MARKER	
LOCATION	EACH
STA. 147+25.00 TO STA. 149+71.00	3
BRIDGE OMISSION	
STA. 151+74.00 TO STA. 154+25.00	3
TOTAL	6

78200410 GUARDRAIL MARKERS, TYPE A	
LOCATION	EACH
STA. 147+93.53 TO STA. 149+96.68, RT	4
STA. 148+42.67 TO STA. 149+98.32, LT	4
STA. 151+46.68 TO STA. 152+39.83, RT	4
STA. 151+58.32 TO STA. 153+51.47, LT	4
TOTAL	16

78201000 TERMINAL MARKER-DIRECT APPLIED	
LOCATION	EACH
STA. 147+93.53, RT	1
STA. 148+42.67, LT	1
STA. 152+39.83, RT	1
STA. 153+51.47, LT	1
TOTAL	4

78300200 RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	
LOCATION	EACH
STA. 147+25.00 TO STA. 154+25.00, CL	9
TOTAL	9

Z0001002 GUARDRAIL AGGREGATE EROSION CONTROL	
LOCATION	TON
STA. 147+54.25 TO STA. 149+86.68, RT	58.07
STA. 148+04.87 TO STA. 149+98.32, LT	50.39
STA. 151+46.68 TO STA. 152+47.94, RT	28.87
STA. 151+58.32 TO STA. 153+90.25, LT	58.01
TOTAL	200

66600105 FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	
LOCATION	EACH
STA. 147+25.00, 40.0' RT	1
STA. 147+50.00, 60.0' RT	1
STA. 148+25.00, 60.0' RT	1
STA. 148+50.00, 55.0' RT	1
STA. 150+50.00, 55.0' RT	1
TOTAL	5

40600990 TEMPORARY RAMP				
LOCATION	LENGTH	WIDTH	SO YD	
STA. 147+25.00 (BUTT JOINT)	5.0'	32.00	17.88	
STA. 148+70.95 (BUTT JOINT)	8.44'	32.00	30.00	
STA. 149+71.12	5.0'	32.00	18.92	
STA. 152+29.79	5.0'	34.00	18.92	
STA. 152+38.23 (BUTT JOINT)	8.44'	32.00	30.00	
STA. 154+25.00 (BUTT JOINT)	5.0'	33.00	18.58	
TOTAL			134	

78001110 PAINT PAVEMENT MARKING - LINE 4"			
LOCATION	COLOR	TYPE	FOOT
STA. 147+25.00 TO STA. 154+25.00, CL	YELLOW	SKIP DASH	180.0
STA. 147+25.00 TO STA. 154+25.00, LT	WHITE	SOLID	700.0
STA. 147+25.00 TO STA. 154+25.00, RT	WHITE	SOLID	700.0
TOTAL			1580

Z0034105 MATERIAL TRANSFER DEVICE		
LOCATION	MATERIAL	TON
STA. 148+70.95 TO STA. 149+71.50	TOP BINDER LIFT (2 1/4")	33.8
STA. 142+25.00 TO STA. 149+71.50	SURFACE (1 1/2")	74.1
BRIDGE OMISSION		
STA. 151+73.50 TO STA. 152+83.23	TOP BINDER LIFT (2 1/4")	36.9
STA. 151+73.50 TO STA. 154+25.00	SURFACE (1 1/2")	75.9
TOTAL		221

Z0030250 IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE)	
LOCATION	EACH
STA. 148+00.30, LT	1
STA. 153+49.70, LT	1
TOTAL	2

Z0030350 IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE)	
LOCATION	EACH
STA. 148+25.22 RT	1
STA. 153+24.78, RT	1
TOTAL	2

54214521 PRECAST REINFORCED CONCRETE FLARED END SECTIONS, EQUIVALENT ROUND-SIZE 36"	
LOCATION	EACH
STA. 152+26.99, 42.1' RT	1
STA. 152+66.98, 43.0' RT	1
TOTAL	2

542A5491 PIPE CULVERTS, CLASS A, TYPE 1 EQUIVALENT ROUND-SIZE 36"	
LOCATION	FOOT
STA. 152+26.99 TO STA. 152+66.98, RT	40
TOTAL	40

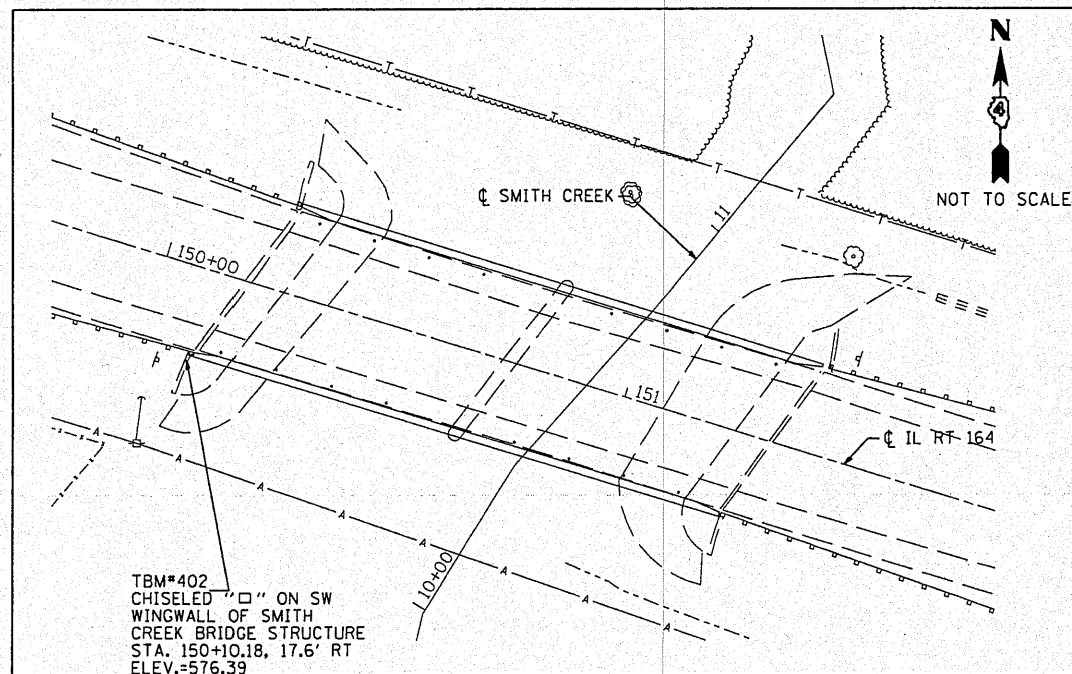
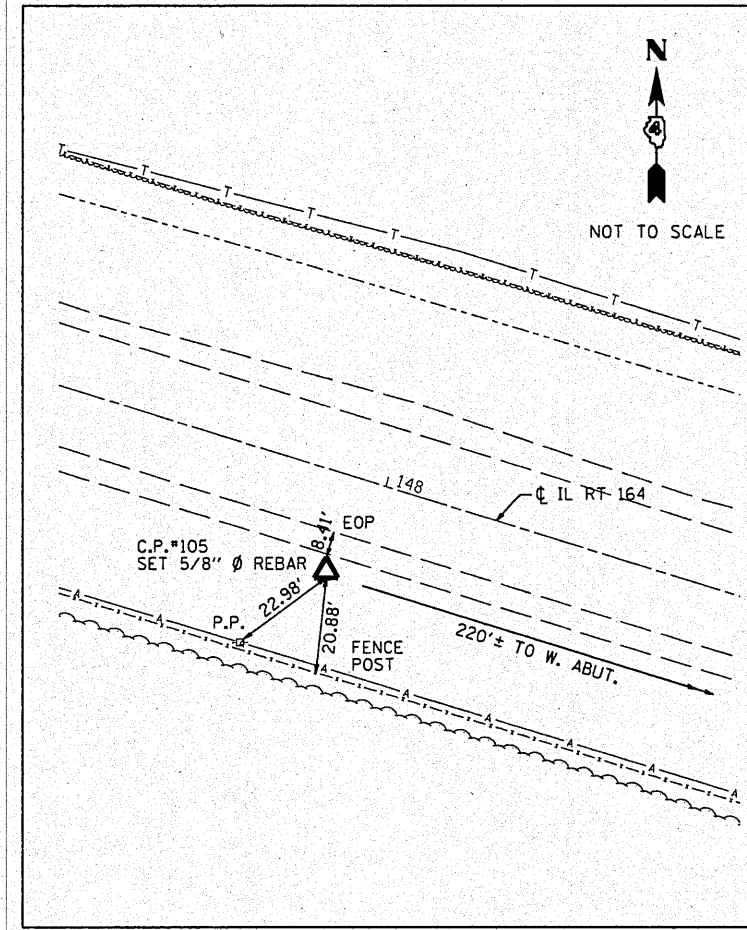
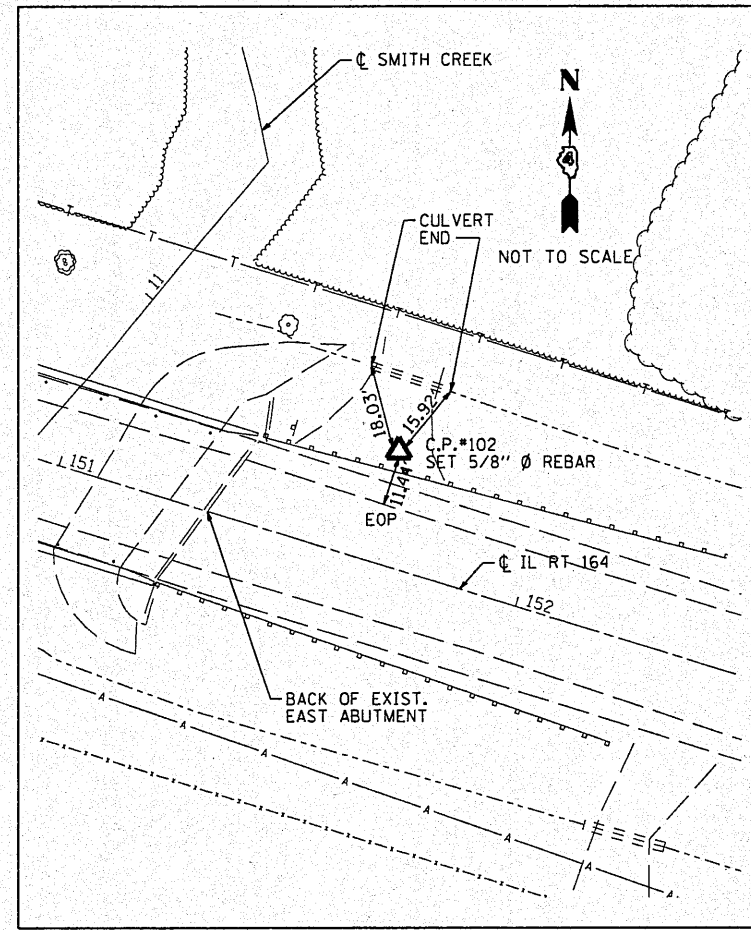
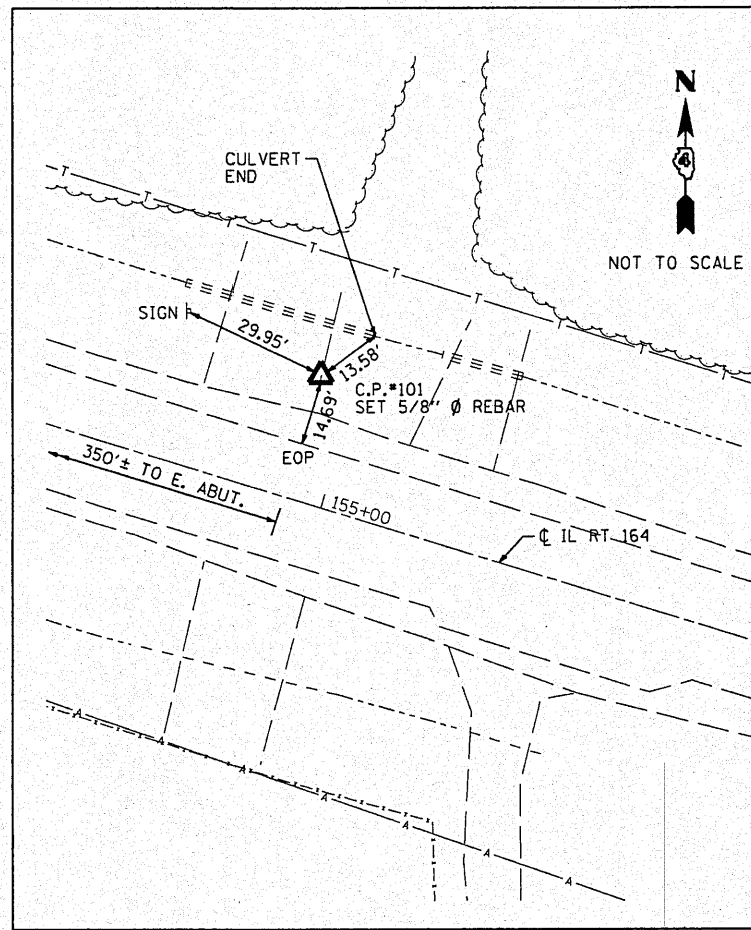
78100105 RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	
LOCATION	EACH
STA. 149+71.00 TO STA. 151+74.00	3
TOTAL	3

66700205 PERMANENT SURVEY MARKERS, TYPE I ON STRUCTURE (AS DIRECTED BY ENGINEER)	
LOCATION	EACH
ENTIRE PROJECT	1
TOTAL	1

67100100 MOBILIZATION	
LOCATION	L SUM
ENTIRE PROJECT	1
TOTAL	1

Z0013798 CONSTRUCTION LAYOUT	
LOCATION	L SUM
ENTIRE PROJECT	1
TOTAL	1

70100460 TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	
LOCATION	L SUM
ENTIRE PROJECT	1
TOTAL	1



BENCHMARK INFORMATION

TBM#402: CHISELED "□" ON SW WINGWALL OF SMITH CREEK BRIDGE STRUCTURE STA. 150+10.18, 17.6' RT ELEV. = 576.39

HORIZONTAL CONTROL POINTS (GROUND COORDINATES)

POINT	NORTH	EAST	ELEVATION	CHAIN	STATION	OFFSET	DESCRIPTION
101	1554046.293	2095932.086	574.93	IL164	154+91.96	26.29' LT.	SET 5/8" REBAR
102	1554139.268	2095620.818	575.05	IL164	151+67.11	23.75' LT.	SET 5/8" REBAR
105	1554206.798	2095250.475	574.85	IL164	147+93.27	20.46' RT.	SET 5/8" REBAR






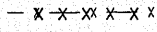


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PLOT DATE = 10/23/2010		DATE -	REVISED -

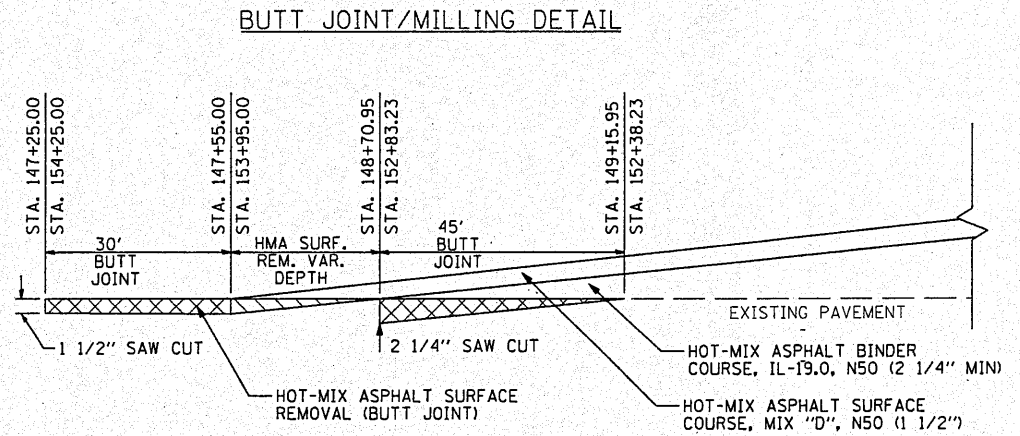
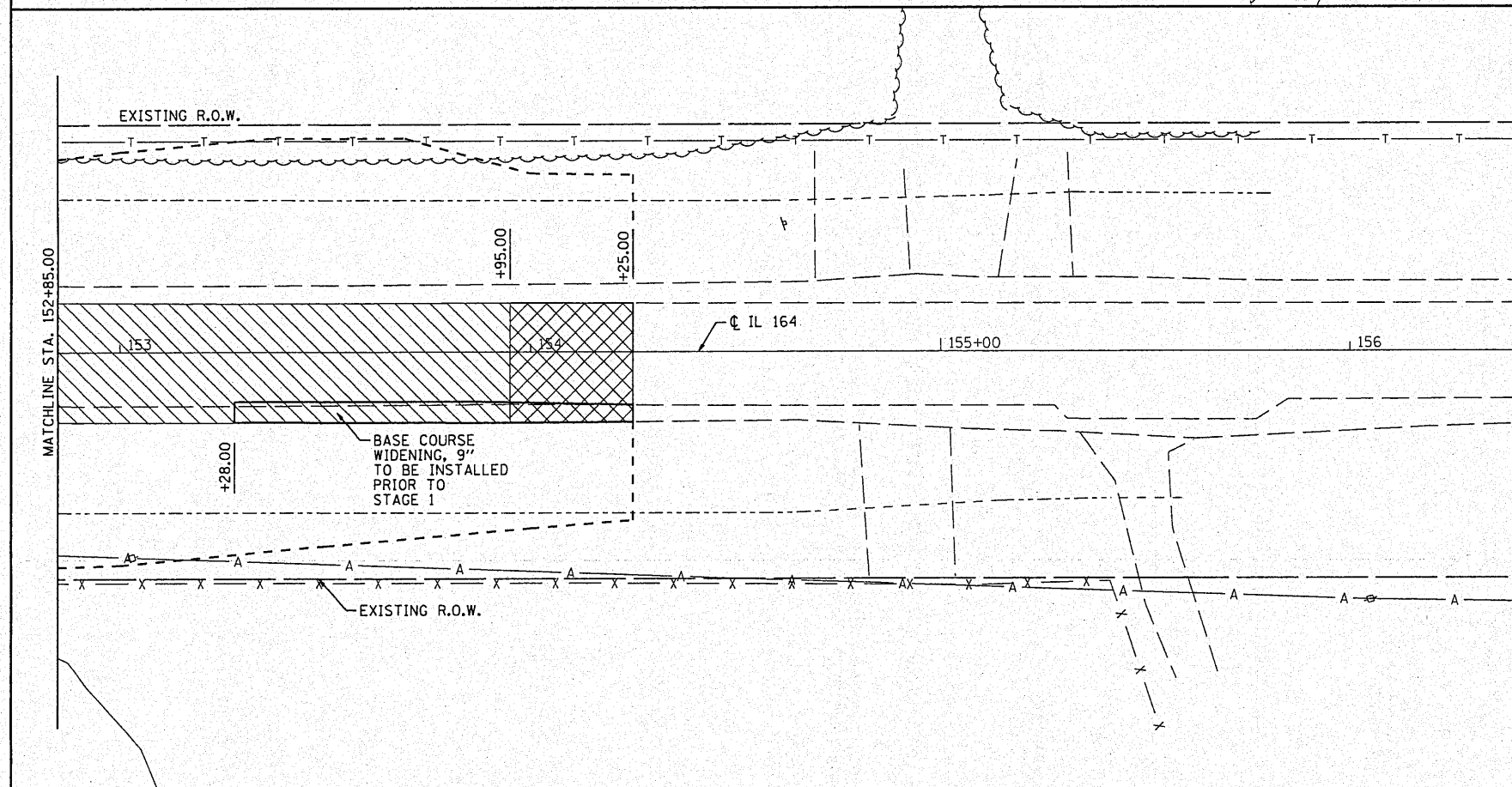
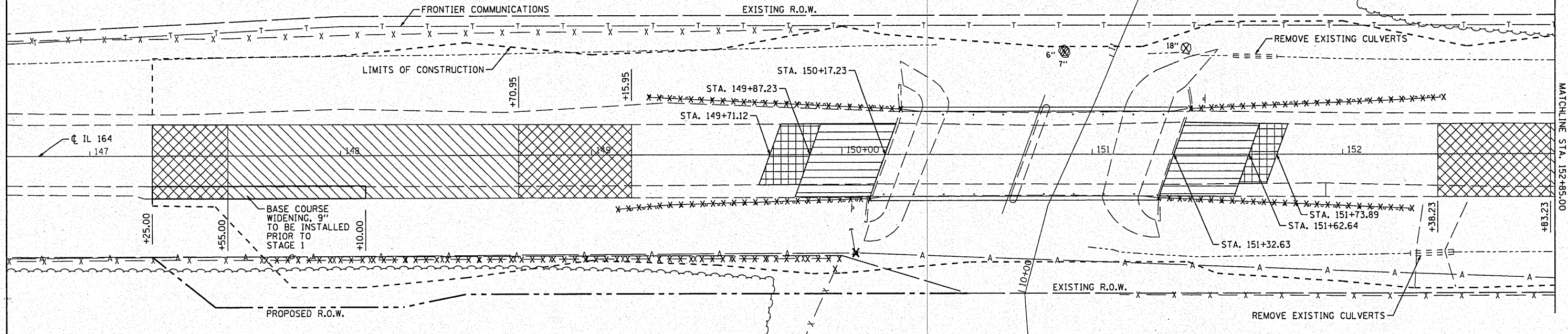
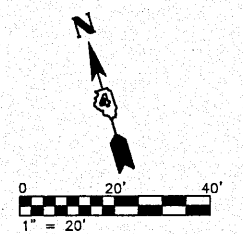
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**IL 164 OVER SMITH CREEK
ALIGNMENT, TIES AND BENCHMARKS**

SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	F.A.P. RTE. 657	SECTION 116-C1BR-1	COUNTY HENDERSON	TOTAL SHEETS 56	SHEET NO. 9
							CONTRACT NO. 68761
ILLINOIS FED. AID PROJECT							

REMOVAL LEGEND

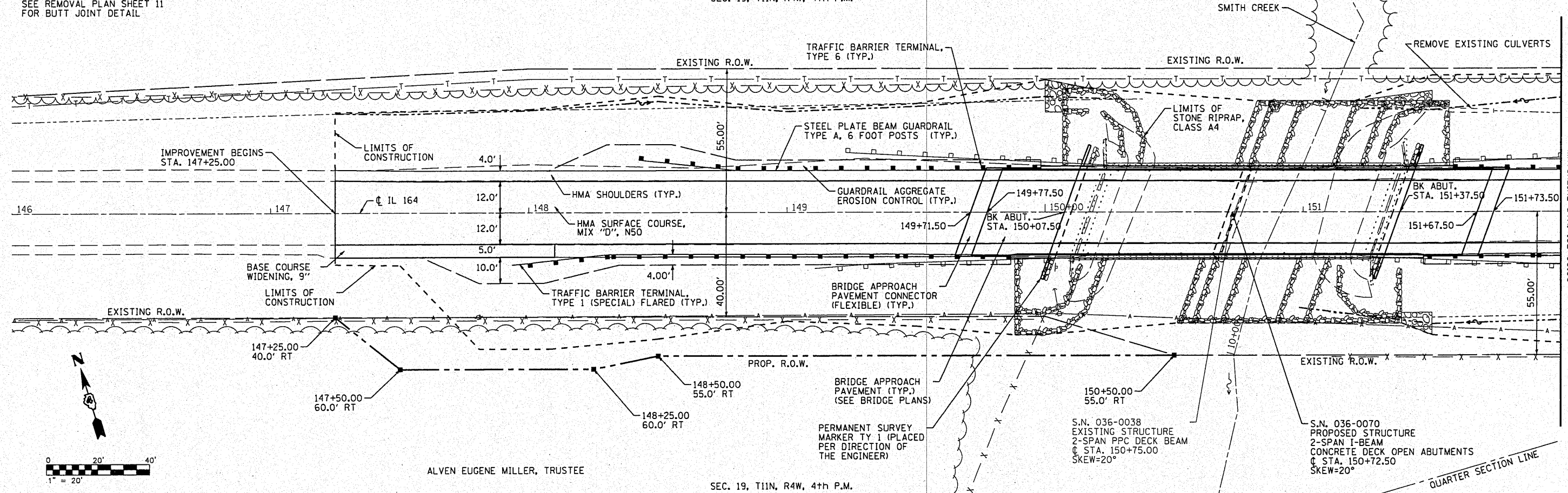
-  PAVEMENT REMOVAL
-  TREE REMOVAL
-  HOT-MIX ASPHALT SURFACE REMOVAL-BUTT JOINT
-  APPROACH PAVEMENT REMOVAL
-  HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH
-  FENCE REMOVAL
-  POWER POLE TO BE RELOCATED (BY OTHERS)
-  GUARDRAIL REMOVAL



FILE NAME =	USER NAME = rmbrodie	DESIGNED - RMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 164 OVER SMITH CREEK REMOVAL PLAN	F.A.P. RTE. 657	SECTION (116-CJBR-1)	COUNTY HENDERSON	TOTAL SHEETS 56	SHEET NO. 11	
S:\237\2008\237080801\IL164SmithCreek\CAD\CADD Sheets\0468761-sh1-removal.dgn	DRAWN - WLL	REVISI	REVISI			CONTRACT NO. 68761					
PLOT SCALE = 48.0000' / IN.	CHECKED - RJA	REVISI	REVISI			ILLINOIS FED. AID PROJECT					
PLOT DATE = 10/23/2010	DATE -	REVISI	REVISI			SCALE: SHEET NO. OF SHEETS STA. 147+25.00 TO STA. 154+25.00					

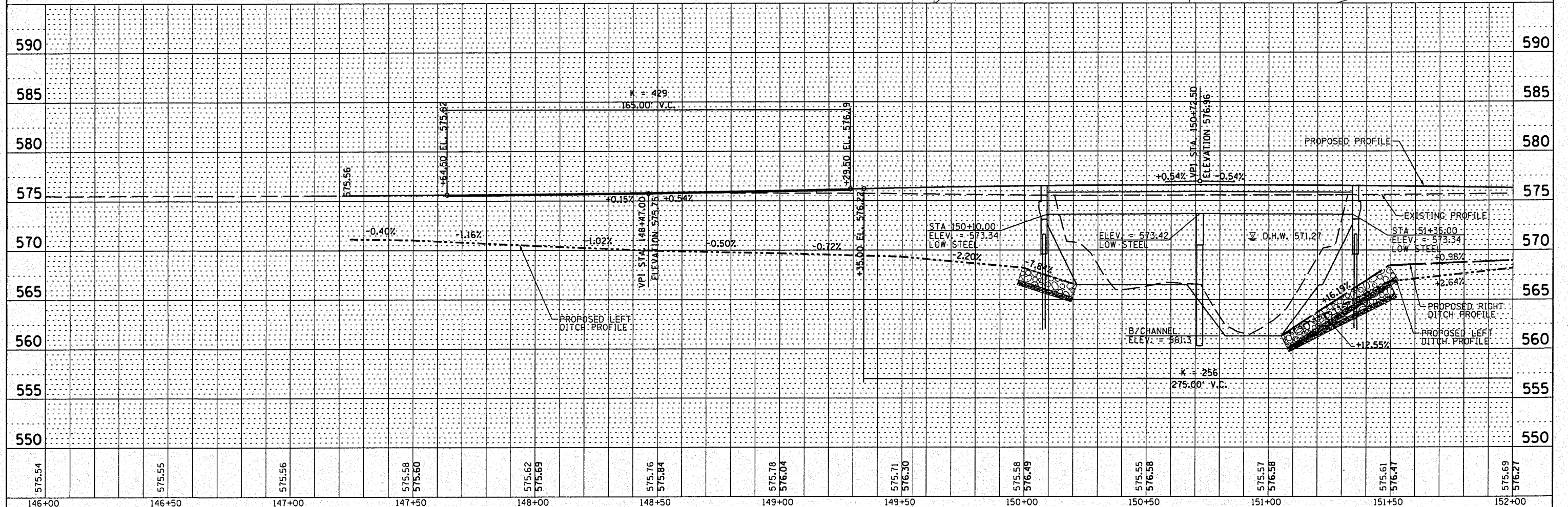
SEE REMOVAL PLAN SHEET 11
FOR BUTT JOINT DETAIL

SEC. 19, T11N, R4W, 4th P.M.

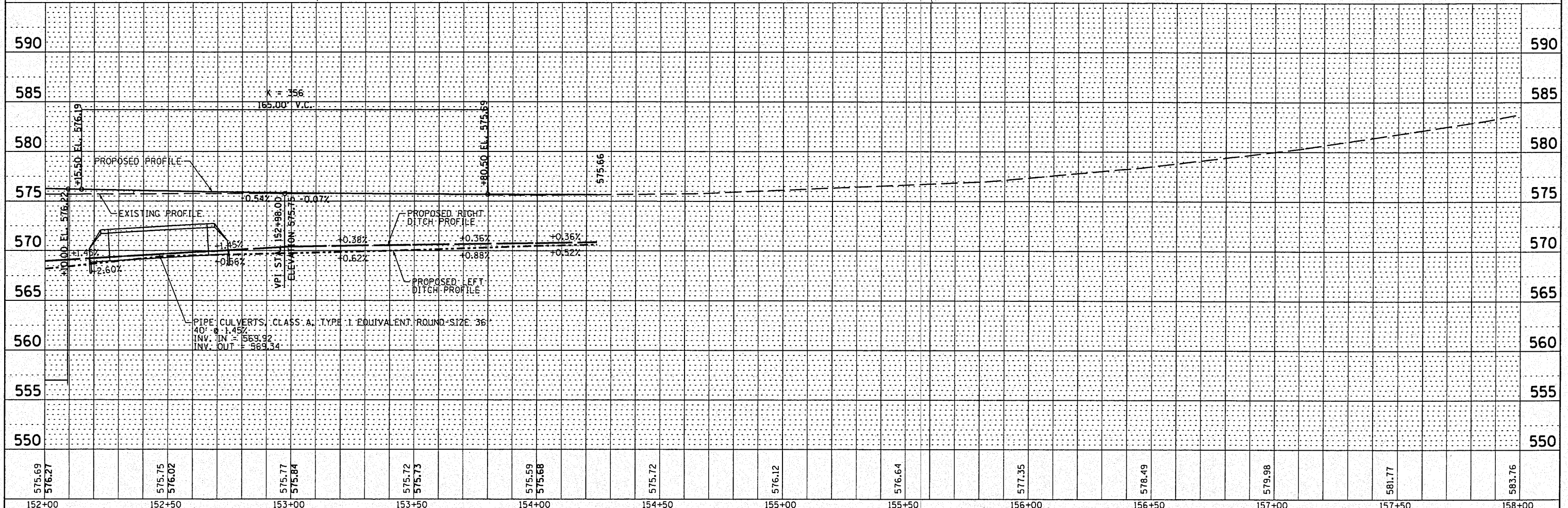
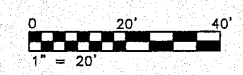
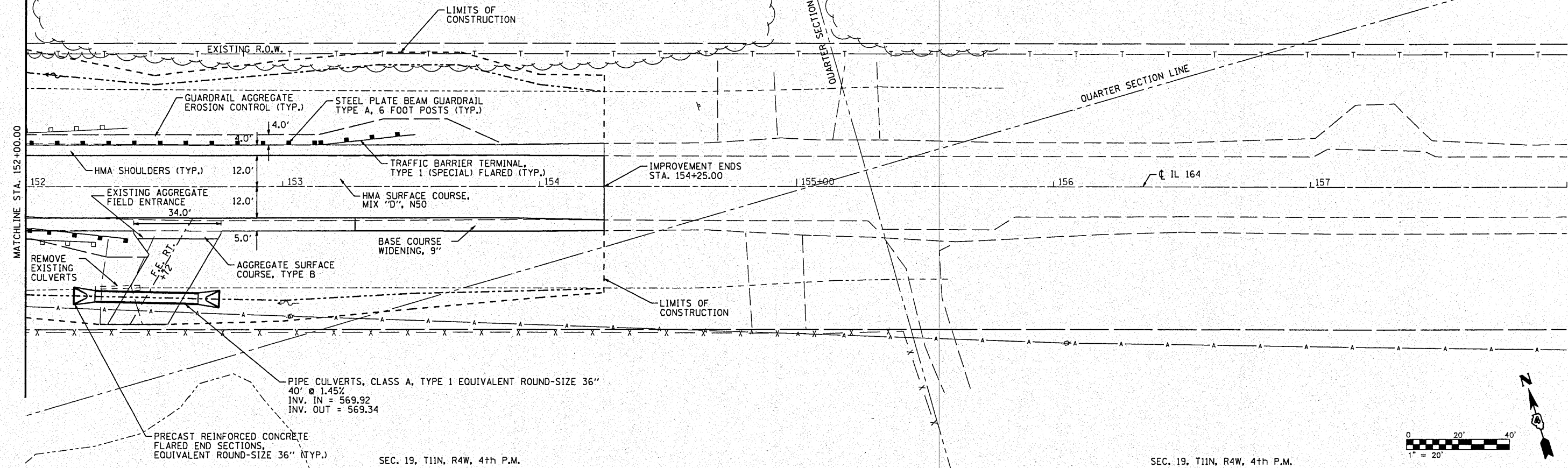


ALVEN EUGENE MILLER, TRUSTEE

SEC. 19, T11N, R4W, 4th P.M.



575.54	575.55	575.56	575.58 575.60	575.62 575.65	575.76 575.84	575.78 576.04	575.71 576.30	575.58 576.49	575.55 576.58	575.57 576.58	575.61 576.47	575.69 576.27		
146+00	146+50	147+00	147+50	148+00	148+50	149+00	149+50	150+00	150+50	151+00	151+50	152+00		
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PLOT SCALE = 40.0000" / IN.			CHECKED -			REVISED -			657 (116-C)BR-1 HENDERSON 56 12			CONTRACT NO. 68761		
PLOT DATE = 10/23/2010			DATE -			REVISED -			SCALE: SHEET NO. OF SHEETS STA. 147+25.00 TO STA. 152+00.00			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		



575.69	576.27	575.75	576.02	575.77	575.84	575.72	575.73	575.59	575.68	575.72	576.12	576.64	577.35	578.49	579.98	581.77	583.76
152+00	152+50	153+00	153+50	154+00	154+50	155+00	155+50	156+00	156+50	157+00	157+50	158+00					

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 PLOT DATE = 10/23/2010

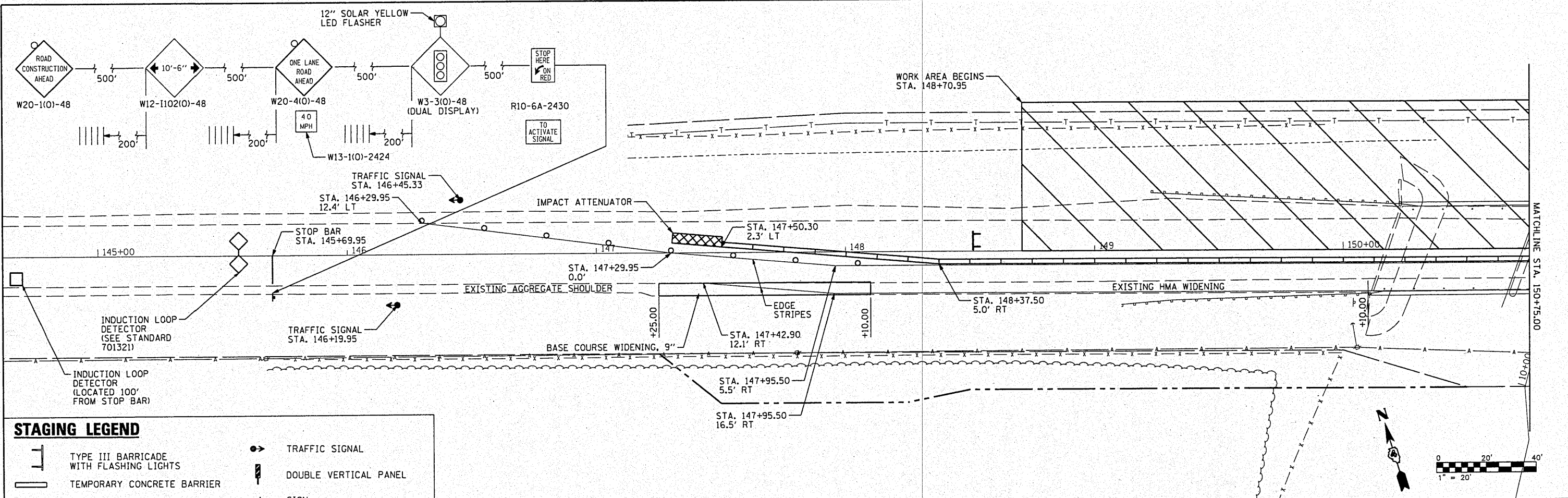
DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

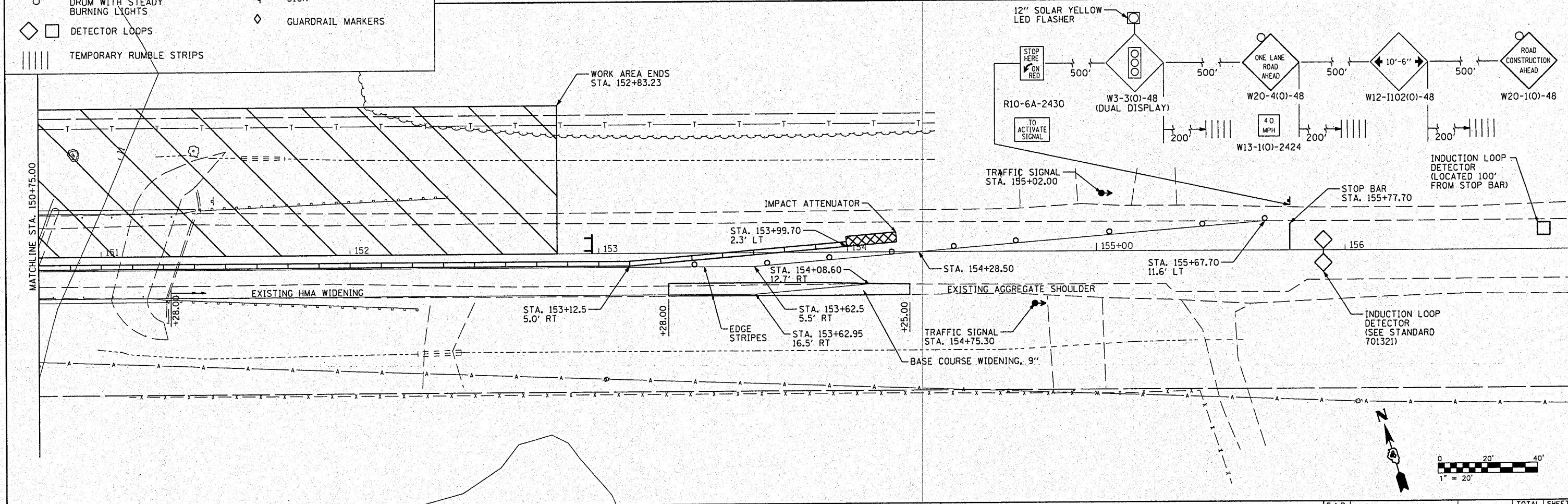
**IL 164 OVER SMITH CREEK
 PLAN AND PROFILE**
 SCALE: SHEET NO. OF SHEETS STA. 152+00.00 TO STA. 154+25.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
657	(116-C)BR-1	HENDERSON	56	13
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 68761	

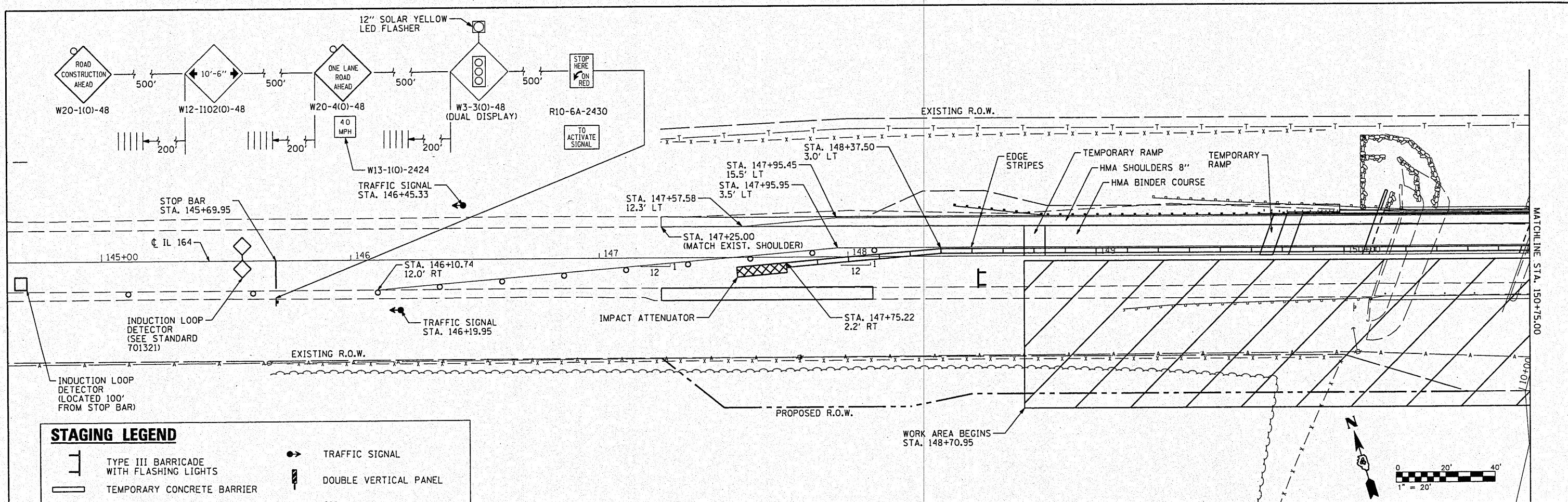


STAGING LEGEND

	TYPE III BARRICADE WITH FLASHING LIGHTS		TRAFFIC SIGNAL
	TEMPORARY CONCRETE BARRIER		DOUBLE VERTICAL PANEL
	DRUM WITH STEADY BURNING LIGHTS		SIGN
	DETECTOR LOOPS		GUARDRAIL MARKERS
	TEMPORARY RUMBLE STRIPS		

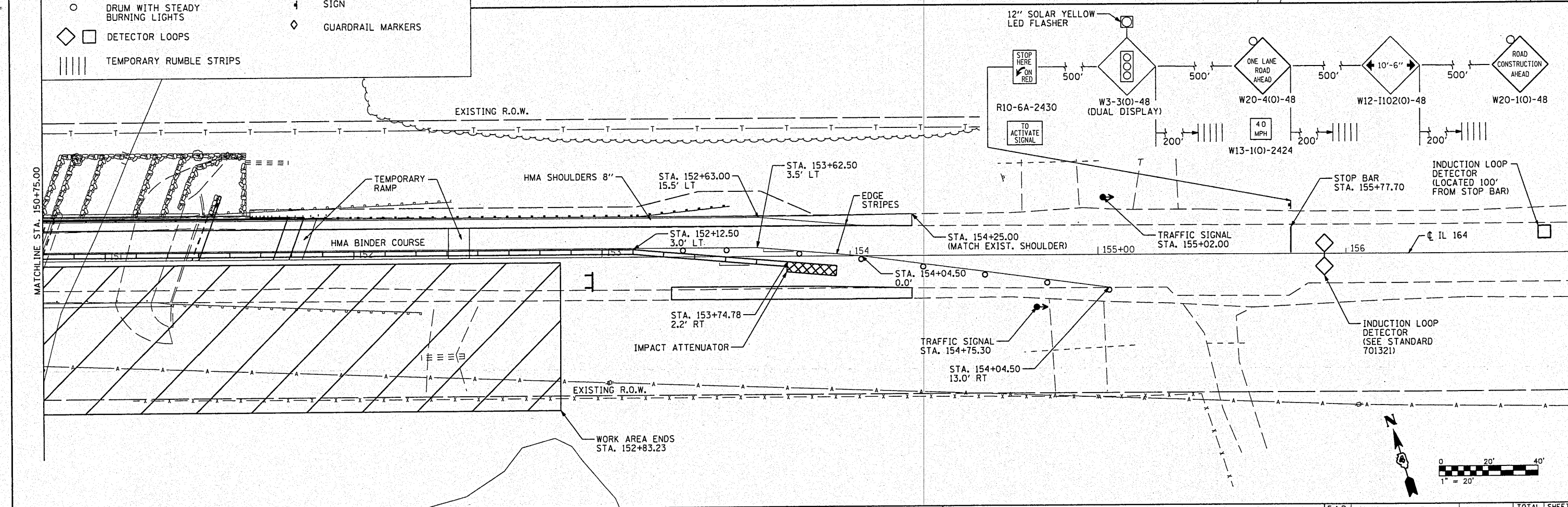


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PLOT SCALE = 40.0000' / IN.	CHECKED - RJA	REVISIONS	SCALE: SHEET NO. OF SHEETS STA. 147+25.00 TO STA. 154+25.00			CONTRACT NO. 68761				
PLOT DATE = 10/23/2010	DATE -	REVISIONS	ILLINOIS FED. AID PROJECT							

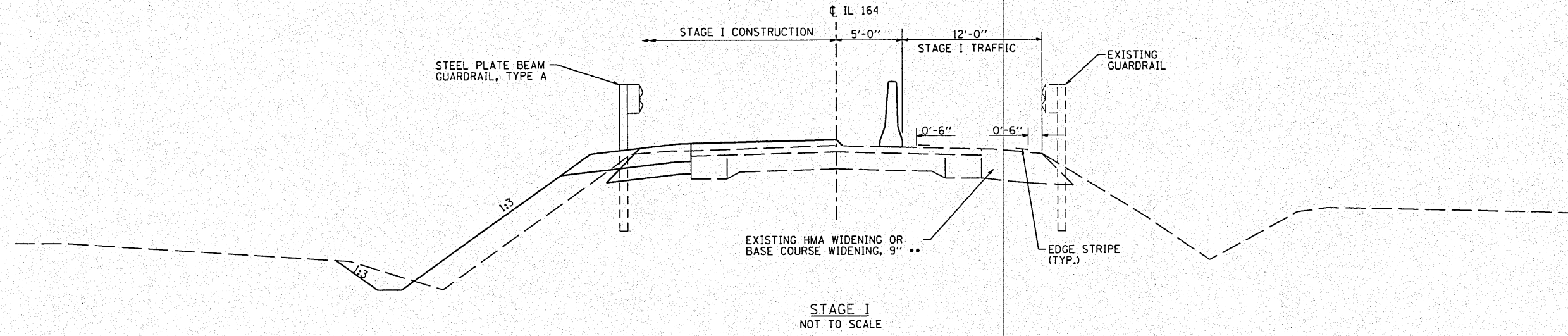


STAGING LEGEND

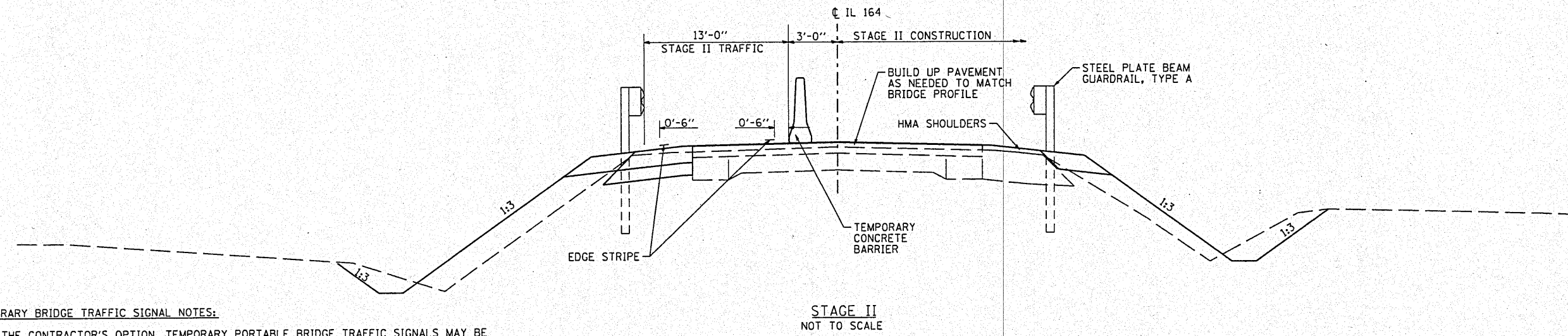
	TYPE III BARRICADE WITH FLASHING LIGHTS		TRAFFIC SIGNAL
	TEMPORARY CONCRETE BARRIER		DOUBLE VERTICAL PANEL
	DRUM WITH STEADY BURNING LIGHTS		SIGN
	DETECTOR LOOPS		GUARDRAIL MARKERS
	TEMPORARY RUMBLE STRIPS		



FILE NAME =	USER NAME = rmbredie	DESIGNED - RMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 164 OVER SMITH CREEK STAGING PLAN-STAGE 2 CONSTRUCTION	F.A.P. RTE. 657	SECTION 116-C)BR-1	COUNTY HENDERSON	TOTAL SHEETS 56	SHEET NO. 15	
SCALE = 48,000' / IN.	CHECKED - RJA	REVISIONS				CONTRACT NO. 68761		ILLINOIS FED. AID PROJECT			
PLOT DATE = 10/23/2010	DATE -	REVISIONS				SCALE: SHEET NO. OF SHEETS STA. 147+25.00 TO STA. 154+25.00					



•• NOTE:
 BASE COURSE WIDENING, 9" REQUIRED FROM
 STA. 147+25.00 TO STA. 148+10.00, RT AND
 STA. 153+28.00 TO STA. 154+25.00, RT



TEMPORARY BRIDGE TRAFFIC SIGNAL NOTES:

1. AT THE CONTRACTOR'S OPTION, TEMPORARY PORTABLE BRIDGE TRAFFIC SIGNALS MAY BE USED IN PLACE OF TEMPORARY BRIDGE TRAFFIC SIGNALS.
2. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH STANDARD 701321 EXCEPT WHERE MODIFIED ON THIS PLAN SHEET.
3. TWO PHASE SIGNAL OPERATION IS REQUIRED. THE ENGINEER OF TRAFFIC SHALL APPROVE ALL TIMING PARAMETERS.
4. STOP BAR PLACEMENT, TEMPORARY CONCRETE BARRIER AND SIGNAL PLACEMENT/DETAILS SHALL BE AS SHOWN OR AS DIRECTED BY THE ENGINEER.
5. ADVANCE WARNING SIGNS ARE REQUIRED AS SHOWN ON THE STAGING PLAN SHEETS. THE CONTRACTOR SHALL FURNISH AND INSTALL SOLAR POWERED YELLOW FLASHERS ON THE ADVANCE SIGNAL AHEAD SIGNS. THE CONTRACTOR SHALL RETURN THE FLASHERS TO THE DEPARTMENT UPON REMOVAL OF THE TEMPORARY BRIDGE TRAFFIC SIGNALS.
6. ALL TRAFFIC SIGNAL AND ADVANCE WARNING FLASHER SECTIONS SHALL HAVE 12" DIAMETER LENSES.
7. THE TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PLACED AS INDICATED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
8. THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL CONFORM TO ALL MUTCD REQUIREMENTS.
9. THE CONTRACTOR, AT HIS OPTION, MAY ELECT TO UTILIZE MICROWAVE DETECTORS FOR BOTH MAINLINE APPROACHES.
10. ALL LABOR AND MATERIALS REQUIRED TO COMPLY WITH THESE REQUIREMENTS AND PLAN SHEET DETAILS SHALL BE INCLUDED IN THE PRICE FOR THE TEMPORARY BRIDGE SIGNAL INSTALLATION. THERE WILL BE NO ADDITIONAL COMPENSATION.

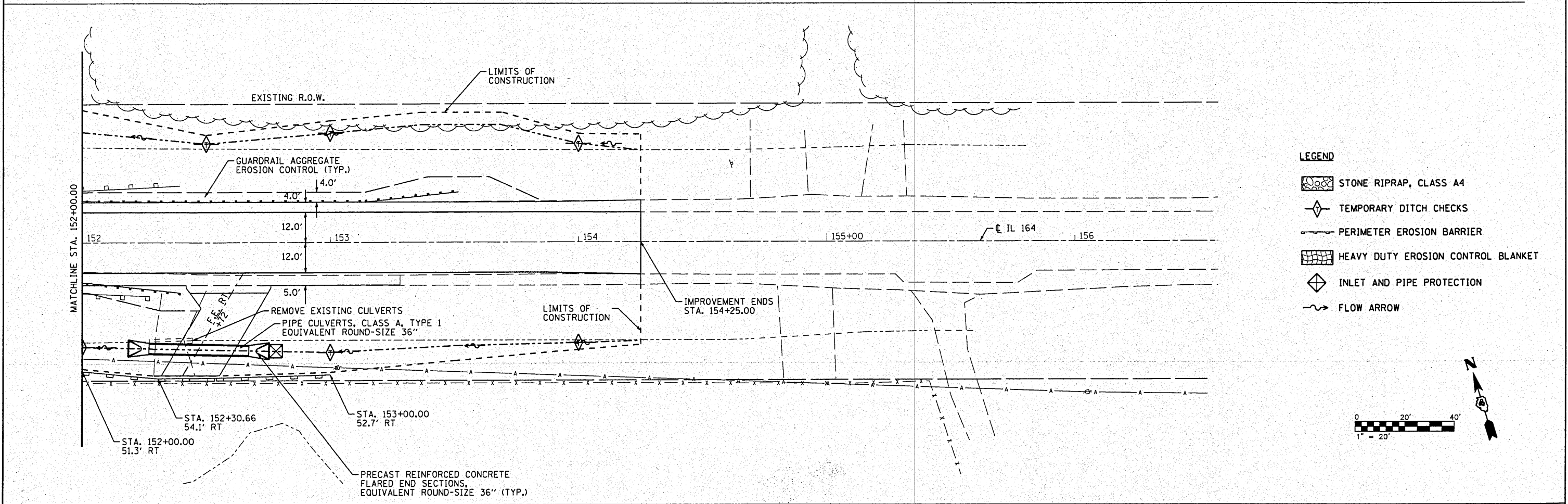
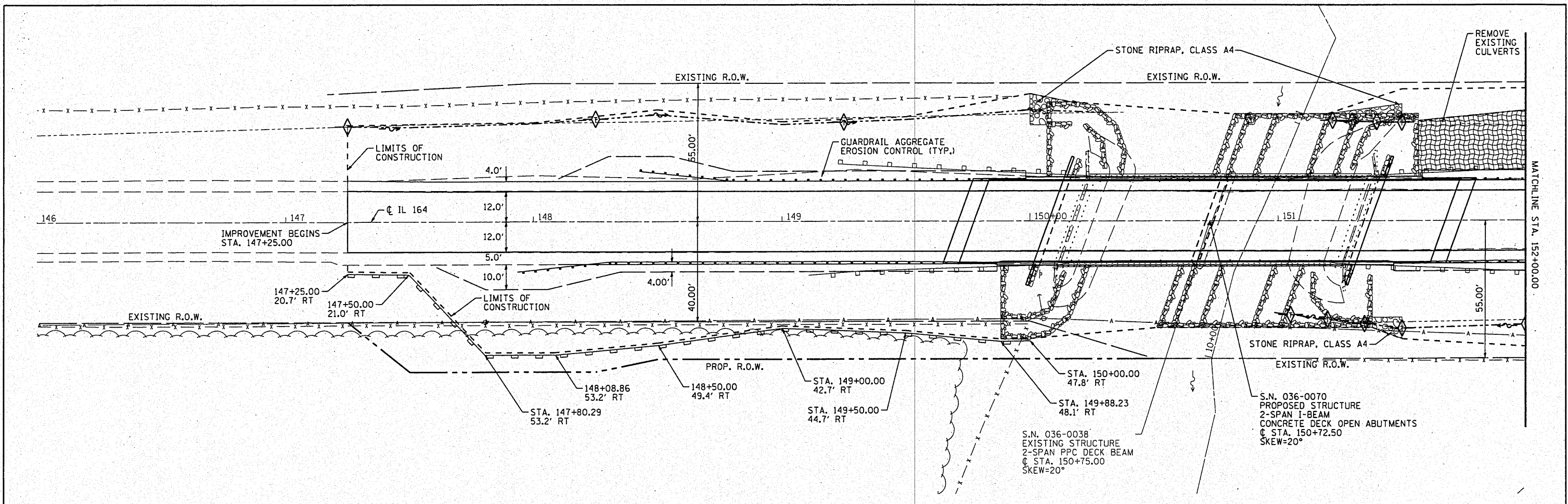
SUGGESTED SEQUENCE OF CONSTRUCTION FOR STAGE 1 CONSTRUCTION:

1. USE STANDARD 701201 TO CONSTRUCT THE BASECOURSE WIDENING, 9" FROM STA. 147+25.00 TO STA. 148+10.00 RT AND STA. 153+28.00 TO STA. 154+25.00 RT
2. USE STANDARD 701321 FOR BRIDGE, APPROACH PAVEMENT, AND CONNECTOR PAVEMENT WORK.
3. REMOVE STAGE 1 PORTION OF THE EXISTING STRUCTURE, GUARDRAIL, PAVEMENT, AND SHOULDERS.
4. CONSTRUCT STAGE 1 PORTION OF THE PROPOSED BRIDGE INCLUDING APPROACH PAVEMENTS, CONNECTOR PAVEMENTS, RIPRAP, GUARDRAIL, HMA SHOULDERS, BINDER COURSE, AND TEMPORARY RAMPS.

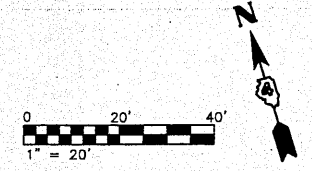
SUGGESTED SEQUENCE OF CONSTRUCTION FOR STAGE 2 CONSTRUCTION:

1. USE STANDARD 701321 FOR BRIDGE, APPROACH PAVEMENT, AND CONNECTOR PAVEMENT WORK.
2. REMOVE STAGE 2 PORTION OF THE EXISTING STRUCTURE, GUARDRAIL, PAVEMENT, AND SHOULDERS.
3. CONSTRUCT STAGE 2 PORTION OF THE PROPOSED BRIDGE INCLUDING APPROACH PAVEMENTS, CONNECTOR PAVEMENTS, RIPRAP, GUARDRAIL, HMA SHOULDERS, BINDER COURSE, AND TEMPORARY RAMPS.
4. CONSTRUCT ALL MILLING AND SURFACE COURSE USING STANDARD 701306.

FILE NAME = S:\237\2008\23700001\IL164\SmithCreek\CA	USER NAME = rmbrodie	DESIGNED - RMB	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IL 164 OVER SMITH CREEK STAGING TYPICAL SECTIONS	F.A.P. RTE. = 657	SECTION = (116-C1BR-1)	COUNTY = HENDERSON	TOTAL SHEETS = 56	SHEET NO. = 16	
	PLOT SCALE = 40.0000' / IN.	CHECKED - RJA	REVISED -			CONTRACT NO. 68761					
	PLOT DATE = 10/23/2010	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
						SCALE:	SHEET NO. OF SHEETS	STA. TO STA.			



- LEGEND**
- STONE RIPRAP, CLASS A4
 - TEMPORARY DITCH CHECKS
 - PERIMETER EROSION BARRIER
 - HEAVY DUTY EROSION CONTROL BLANKET
 - INLET AND PIPE PROTECTION
 - FLOW ARROW



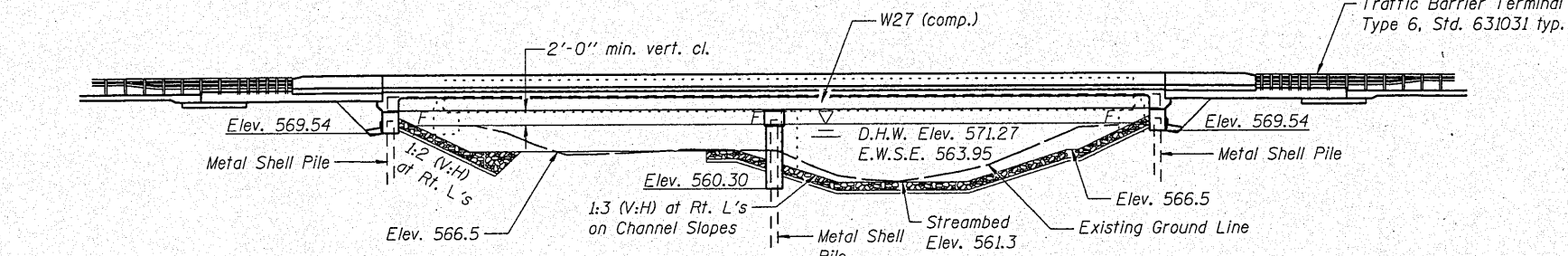
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PLOT SCALE = 48.0000' / IN.	CHECKED - RJA	REVISED -	SCALE: SHEET NO. OF SHEETS STA. 147+25.00 TO STA. 154+25.00			CONTRACT NO. 68761				
PLOT DATE = 10/23/2010	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

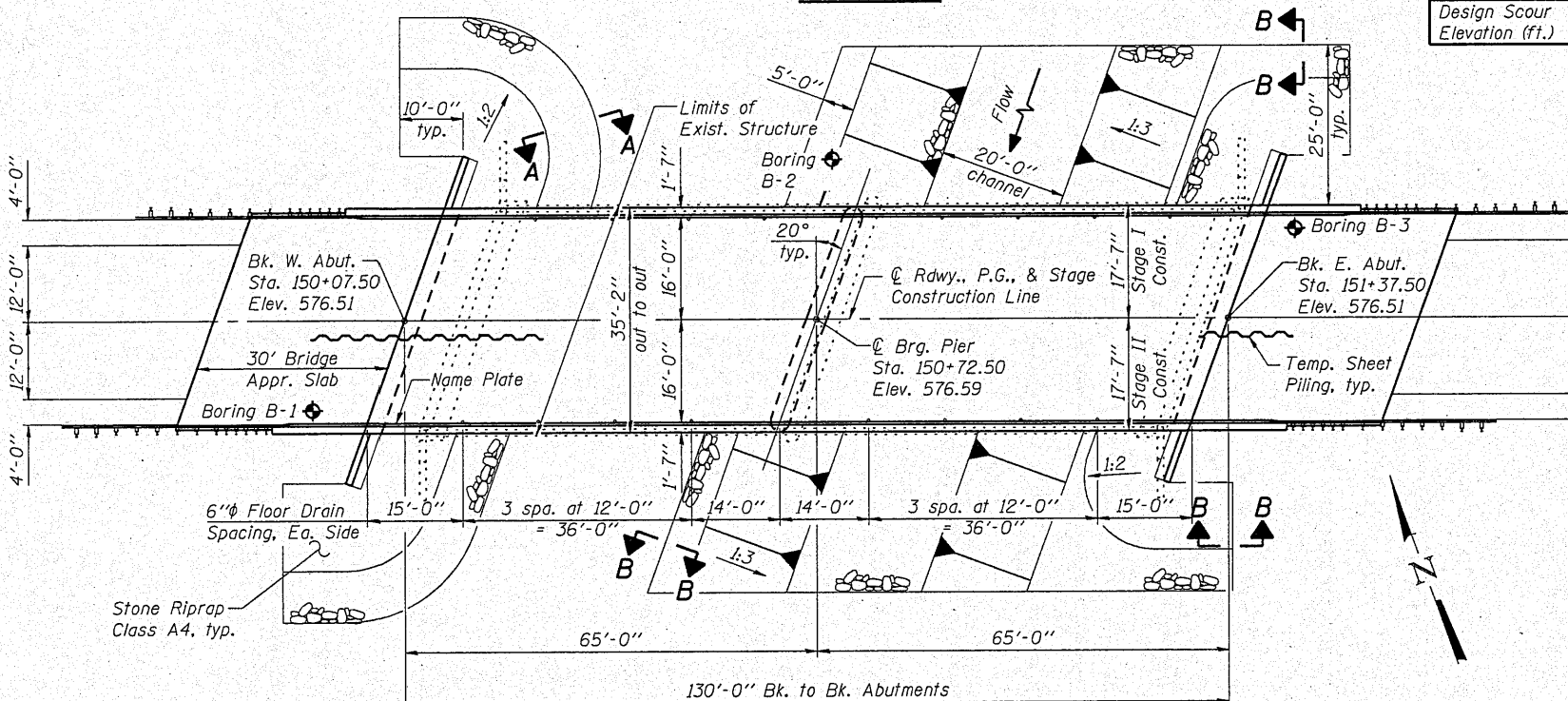
Benchmark: Chiseled square on SW wingwall of bridge, S.N. 036-0038, Sta. 150+06.74, 17.2' Rt., Elev. 576.39.

Existing Structure: S.N. 036-0038 was built in 1979 as F.A. Rt. 657, Sec. 116-C-BR, at Station 150+75. The existing two-span structure consists of 27" P.P.C. deck beams supported on pile bent abutments and pier. The structure is 118'-0" back to back of abutments and 36'-0" out to out of deck beams. Existing structure will be removed and replaced utilizing stage construction to maintain one lane of traffic.

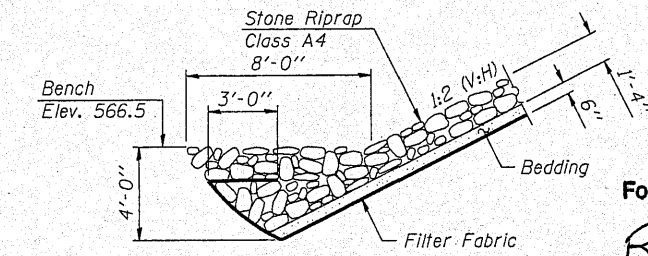
No salvage.



ELEVATION



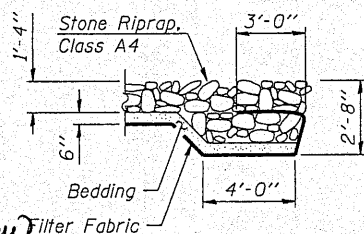
PLAN



SECTION A-A

APPROVED
For Structural Adequacy Only

Ralph E. Anderson
Engineer of Bridges & Structures (180)



SECTION B-B

WATERWAY INFORMATION

Low Grade Elev.: N/A Grade decreases to west
Drainage Area = 12.6 sq. mi. Low Grade is beyond the limits of this contract

Flood	Freq. Yr.	Q C.F.S.	Opening Exist. Prop.	Sq. Ft. Nat. H.W.E.	Head - Ft. Exist. Prop.	Headwater El. Exist. Prop.
Design	10	2046	415	565	570.31	0.78 0.47 571.09 570.78
Base	50	3218	508	670	571.27	1.84 0.97 573.11 572.24
Overtopping	100	3756	542	708	571.61	1.66 1.23 573.27 572.84
Max. Calc.	500	5049	610	---	572.29	2.68 --- 574.97 ---
				786	572.29	--- 1.87 --- 574.16

10-Year Velocity through Existing Structure = 4.5 fps
10-Year Velocity through Proposed Structure = 3.9 fps

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	E. Abut.
	569.5	552.1	569.5

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 and 2009 Interims

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

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

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.096g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.138g
Soil Site Class = D

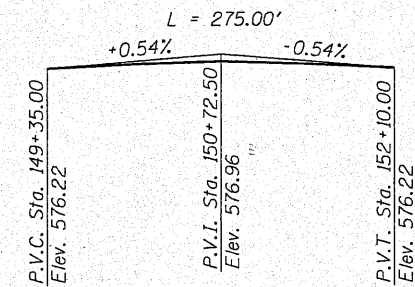
STATION 150+72.50
BUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RT. 657 SEC. (116-C)BR-1
LOADING HL-93
STRUCTURE NO. 036-0070

NAME PLATE

See Std. 515001

PROFILE GRADE

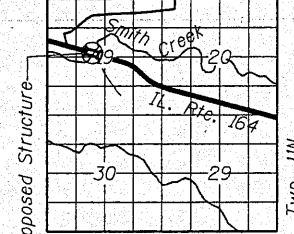
(along E Roadway)



Bryan Swanson
Date Signed: 10-25-10
Exp. Date: 11-30-10



Range 4W 4th P.M.



LOCATION SKETCH

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts $\frac{3}{8}$ in. ϕ , holes $\frac{3}{16}$ in. ϕ , unless otherwise noted.
Calculated weight of Structural Steel = 104,370 lbs. (Grade 50)
4,510 lbs. (Grade 36)

No field welding is permitted except as specified in the contract documents.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
Reinforcement bars designated (E) shall be epoxy coated.
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.
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".
Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
Slipforming of the parapets is not allowed.
Removal of the existing concrete stopwalls shall be included in the cost of Removal of Existing Structures.
The piles to be dynamically monitored, according to the special provision "Dynamic Pile Monitoring", shall be the test piles specified at each of the substructure units. The scheduling of the test pile driving (initial and restrikes) shall be coordinated with the researcher. The test pile shall be driven with a Diesel Hammer, possibly at a reduced fuel setting, to a minimal penetration resistance as determined by the researcher. A restrike shall be applied between 1 and 24 hours after end of initial driving. A second restrike shall occur at least 7 days later and preferably much later when production piling is completed for that stage in each substructure. Restrikes will consist of up to 30 hammer blows, or up to 3 inches of pile penetration. The hammer shall be warmed up before restriking the test pile on another pile or surface as directed by the researcher.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.		91	91
Stone Riprap, Class A4	Sq. Yd.		1038	1038
Filter Fabric	Sq. Yd.		1038	1038
Removal of Existing Structures	Each		1	1
Structure Excavation	Cu. Yd.		191	191
Floor Drains	Each	16		16
Concrete Structures	Cu. Yd.		92.5	92.5
Concrete Superstructure	Cu. Yd.	274.7		274.7
Bridge Deck Grooving	Sq. Yd.	636		636
Concrete Encasement	Cu. Yd.		3.4	3.4
Protective Coat	Sq. Yd.	817		817
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	2268		2268
Reinforcement Bars, Epoxy Coated	Pound	62470	10700	73170
Bar Splicers	Each	613	132	745
Furnishing Metal Shell Piles 14"x0.312"	Foot		932	932
Driving Piles	Foot		932	932
Test Pile Metal Shells	Each		3	3
Pile Shoes	Each		6	6
Temporary Sheet Piling	Sq. Ft.		928	928
Name Plates	Each	1		1
Anchor Bolts, 1"	Each		36	36
Geocomposite Wall Drain	Sq. Yd.		56	56
Pipe Underdrains for Structures 4"	Foot		135	135
Underwater Structure Excavation Protection - Location 1	Each		1	1
Asbestos Bearing Pad Removal	Each			32

GENERAL PLAN AND ELEVATION

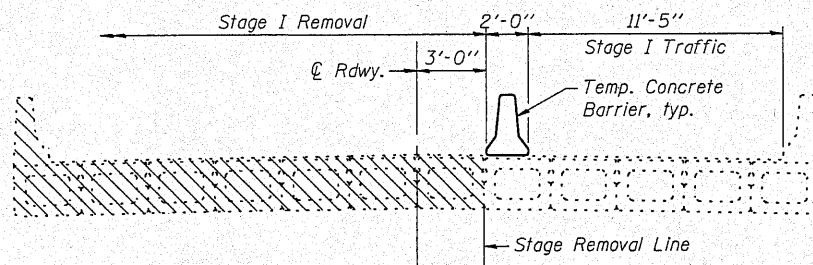
IL 164 OVER SMITH CREEK
F.A.P. RTE. 657 SEC. (116-C)BR-1
HENDERSON COUNTY
STATION 150+72.50
STRUCTURE NO. 036-0070

SHEET NO. 1	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	657	(116-C)BR-1	HENDERSON	56	18
CONTRACT NO. 68761					
FED. ROAD DIST. NO. [] ILLINOIS FED. AID PROJECT					

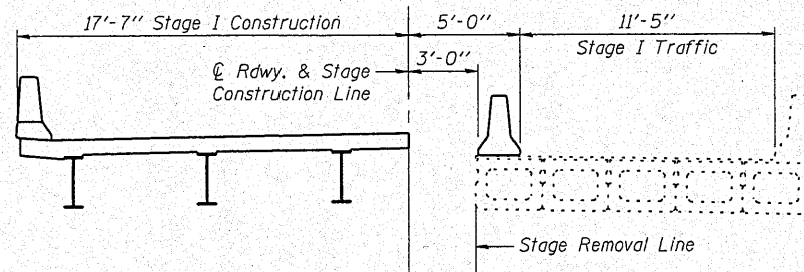


DESIGNED - BAS
CHECKED - KEF
DRAWN - SGM
CHECKED - BAS

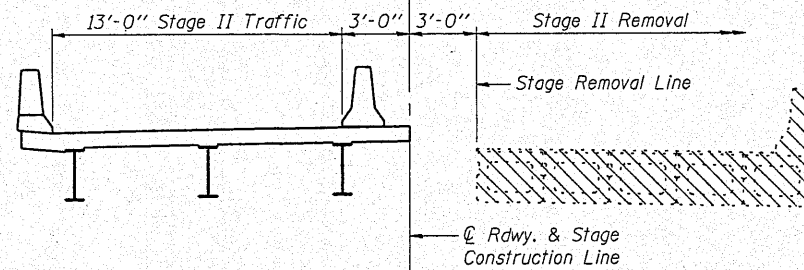
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



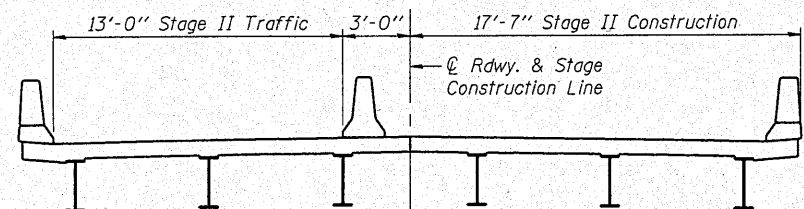
STAGE I REMOVAL
(Looking East)



STAGE I CONSTRUCTION
(Looking East)



STAGE II REMOVAL
(Looking East)



STAGE II CONSTRUCTION
(Looking East)

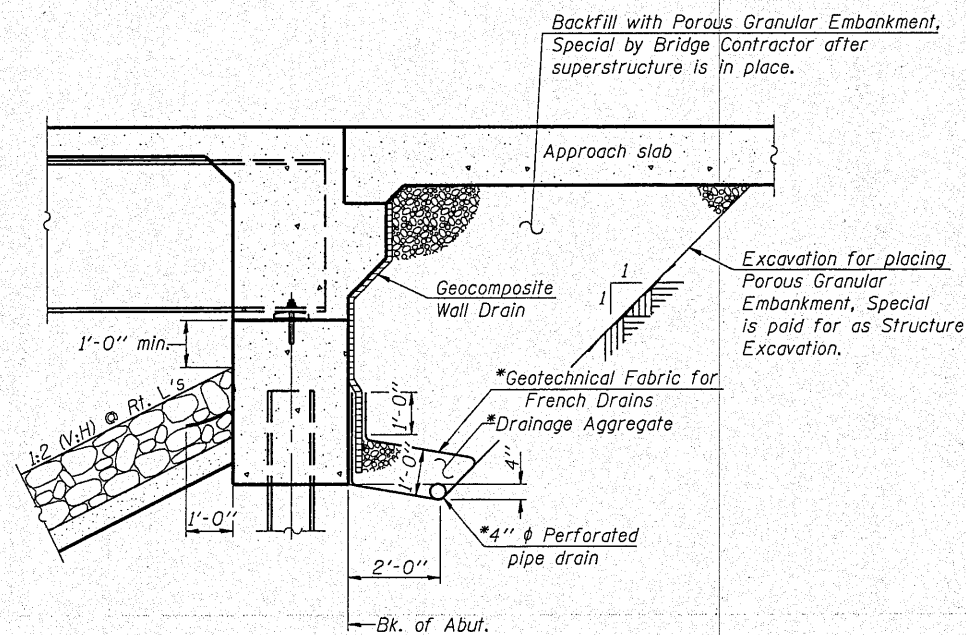
Staging Notes:
Hatched areas indicate Removal of Existing Structures.
For quantity and location of Temporary Concrete Barrier, see Roadway Plans.
Existing substructure units shall be sawcut 2'-6" from the centerline of roadway. Care must be taken during removal to not damage the existing piles that remain to support Stage I traffic.

DESIGNED - BAS
CHECKED - KEF
DRAWN - SGM
CHECKED - BAS

BILL OF MATERIAL

Item	Unit	Total
Temporary Sheet Piling	Sq. Ft.	928

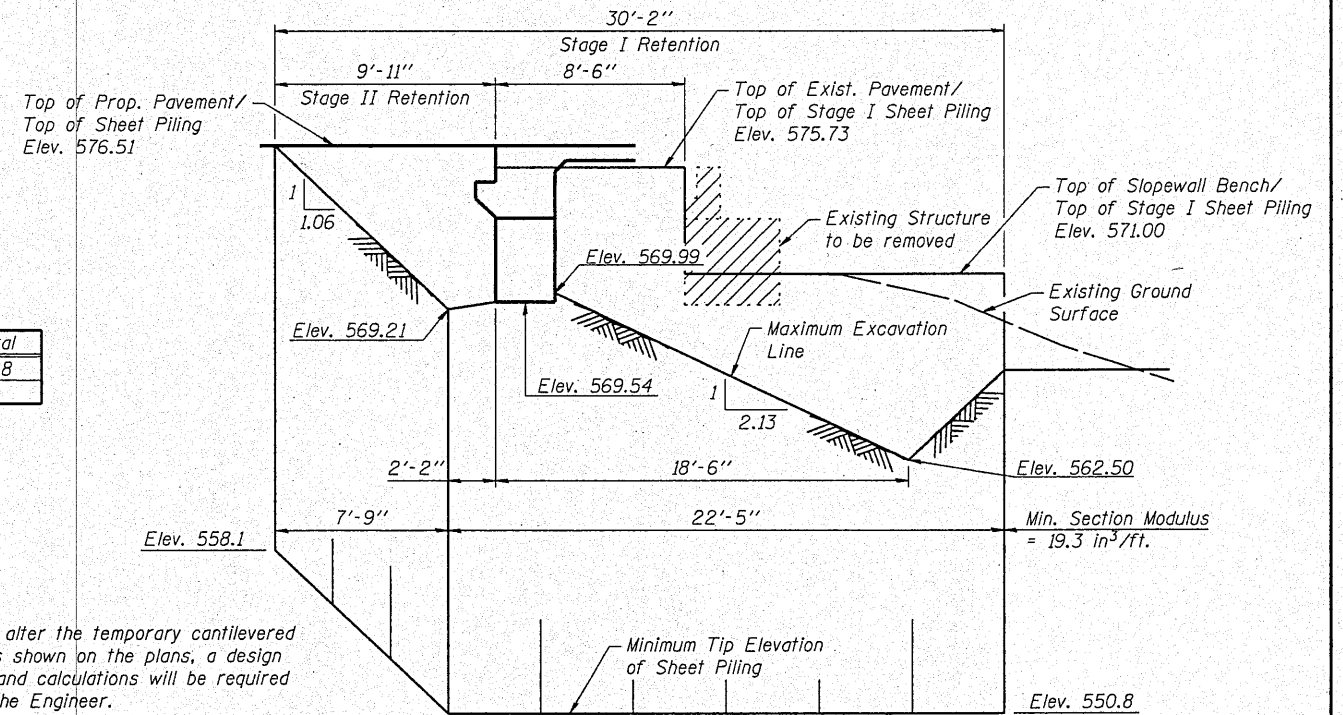
Note:
If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.
The Contractor shall use an appropriate section and driving equipment to drive the sheet piling through a hard driving layer as indicated by the boring at the West Abutment.



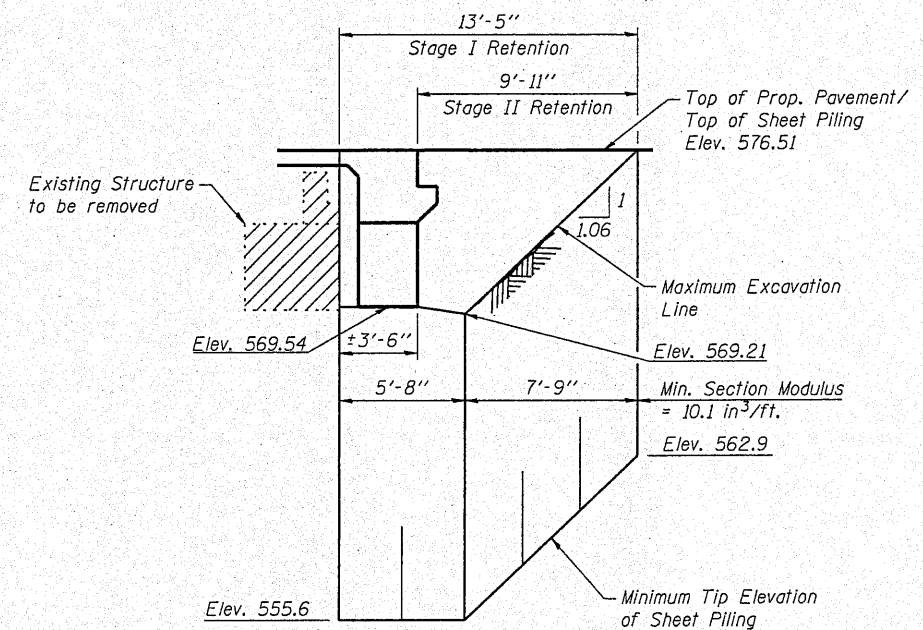
SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. @ Rt. L's)

*Included in the cost of Pipe Underdrains for Structures.

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 601101).



TEMPORARY SHEET PILING
(West Abutment)



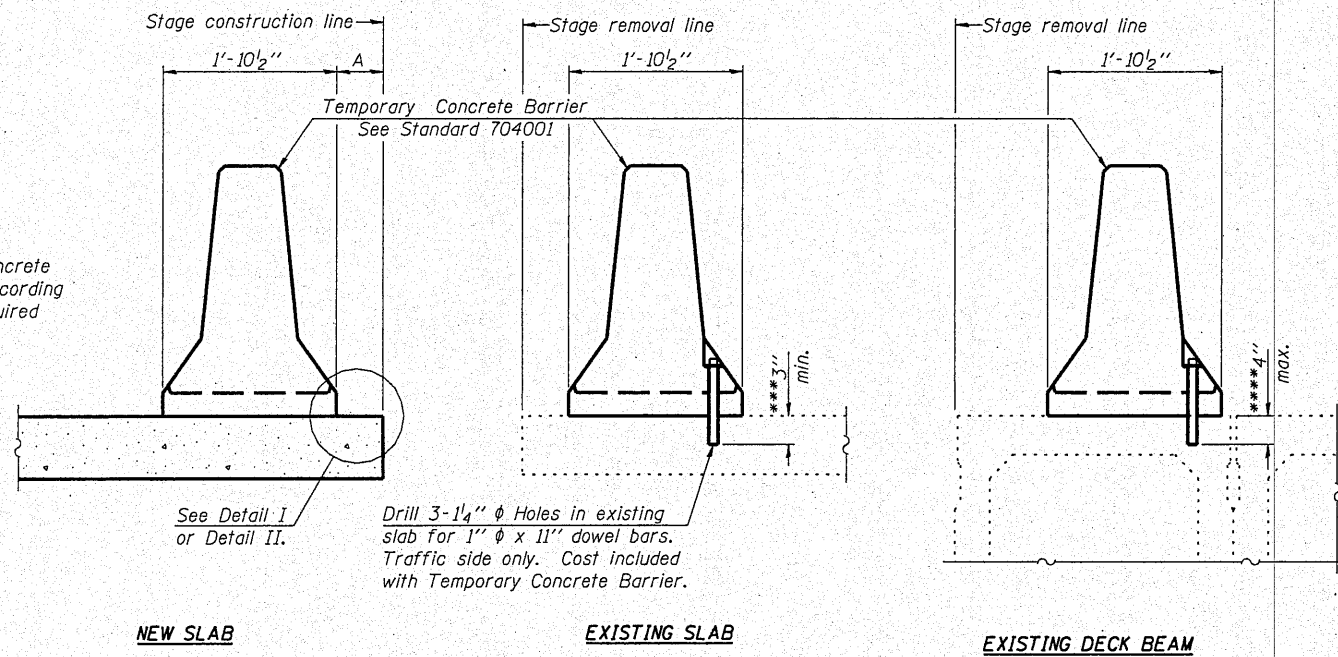
TEMPORARY SHEET PILING
(East Abutment)

STAGE CONSTRUCTION DETAILS
STRUCTURE NO. 036-0070

SHEET NO. 2	F.A.P. RTE. 657	SECTION (116-C)BR-1	COUNTY HENDERSON	TOTAL SHEETS 56	SHEET NO. 19
22 SHEETS					
CONTRACT NO. 68761					
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

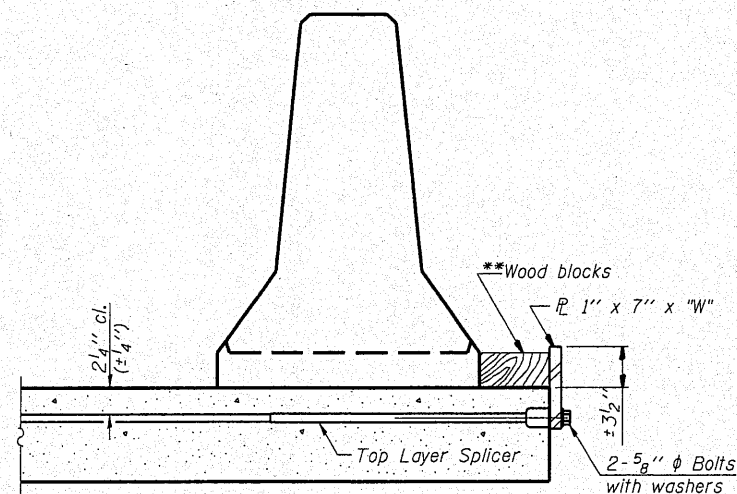
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{P} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{P} to the concrete slab 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 \bar{C} of each barrier panel.

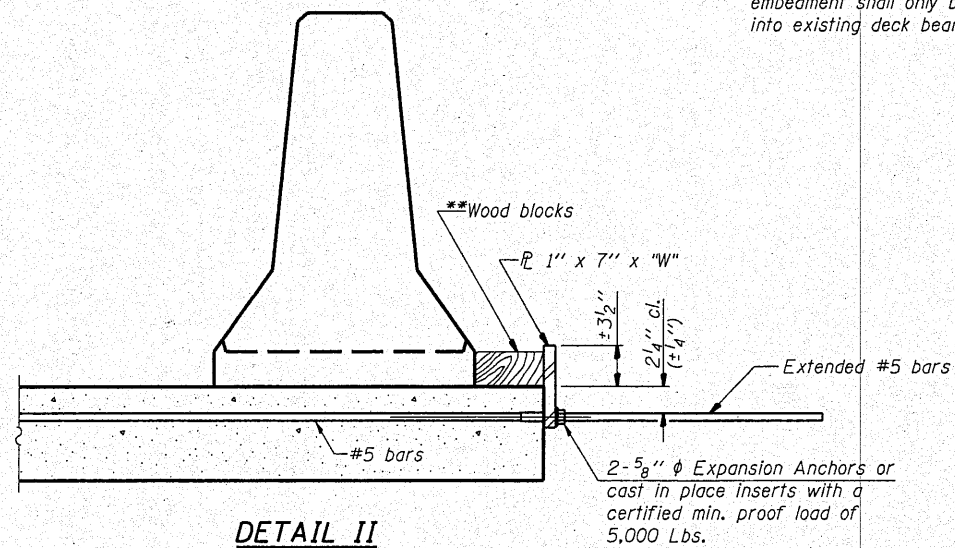
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

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

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



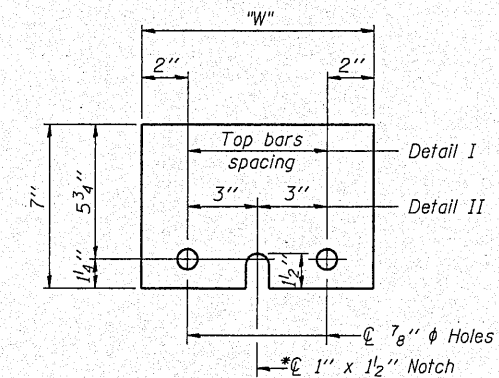
DETAIL I



DETAIL II

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

"W" = Top bars spacing + 4"



STEEL RETAINER \bar{P} 1" x 7" x 10"

* Required only with Detail II



DESIGNED - BAS
CHECKED - KEF
DRAWN - SGM
CHECKED - BAS

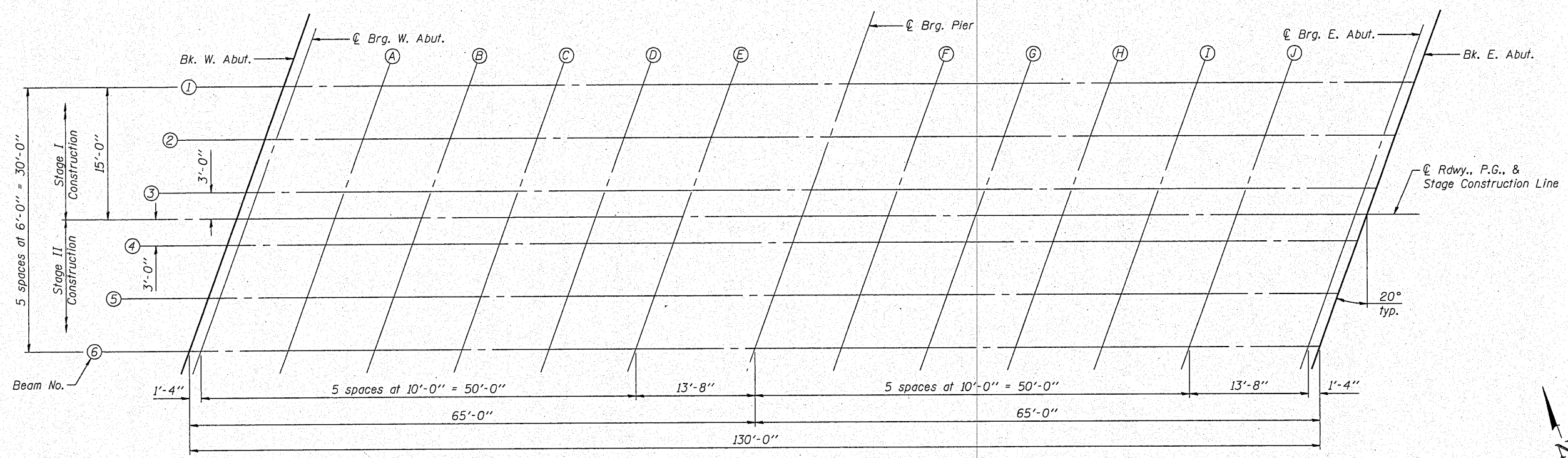
R-27

11-1-09

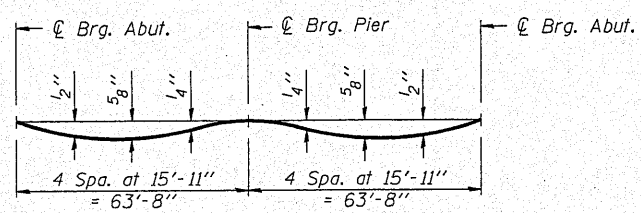
TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
STRUCTURE NO. 036-0070

SHEET NO. 3 22 SHEETS	F.A.P. RTE. 657	SECTION (116-C)BR-1	COUNTY HENDERSON	TOTAL SHEETS 56	SHEET NO. 20
	CONTRACT NO. 68761			FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN



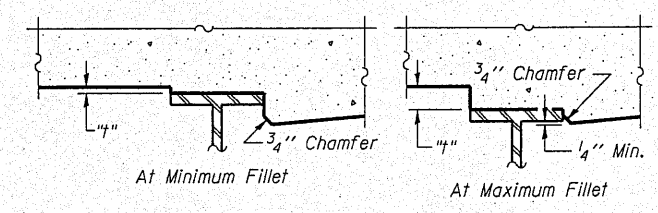
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 4 and 5 of 22.

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	150+12.96	-15.00	576.27	576.27
⊕ Brg. W. Abut.	150+14.29	-15.00	576.27	576.27
A	150+24.29	-15.00	576.30	576.33
B	150+34.29	-15.00	576.31	576.37
C	150+44.29	-15.00	576.33	576.38
D	150+54.29	-15.00	576.33	576.38
E	150+64.29	-15.00	576.34	576.36
⊕ Brg. Pier	150+77.96	-15.00	576.34	576.34
F	150+87.96	-15.00	576.34	576.35
G	150+97.96	-15.00	576.33	576.36
H	151+07.96	-15.00	576.32	576.37
I	151+17.96	-15.00	576.30	576.36
J	151+27.96	-15.00	576.28	576.32
⊕ Brg. E. Abut.	151+41.63	-15.00	576.25	576.25
Bk. E. Abut.	151+42.96	-15.00	576.24	576.24



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted For Dead Load Deflection" shown on sheets 4 and 5 of 22, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 036-0070



DESIGNED - BAS
CHECKED - KEF
DRAWN - SGM
CHECKED - BAS

SHEET NO. 4	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	657	(116-C)BR-1	HENDERSON	56	21
22 SHEETS	CONTRACT NO. 68761				
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	150+10.78	-9.00	576.38	576.38
☉ Brg. W. Abut.	150+12.11	-9.00	576.38	576.38
A	150+22.11	-9.00	576.40	576.43
B	150+32.11	-9.00	576.42	576.47
C	150+42.11	-9.00	576.43	576.49
D	150+52.11	-9.00	576.44	576.49
E	150+62.11	-9.00	576.45	576.47
☉ Brg. Pier	150+75.78	-9.00	576.45	576.45
F	150+85.78	-9.00	576.45	576.46
G	150+95.78	-9.00	576.44	576.48
H	151+05.78	-9.00	576.43	576.48
I	151+15.78	-9.00	576.41	576.47
J	151+25.78	-9.00	576.39	576.44
☉ Brg. E. Abut.	151+39.45	-9.00	576.36	576.36
Bk. E. Abut.	151+40.78	-9.00	576.36	576.36

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	150+08.59	-3.00	576.46	576.46
☉ Brg. W. Abut.	150+09.92	-3.00	576.47	576.47
A	150+19.92	-3.00	576.49	576.52
B	150+29.92	-3.00	576.51	576.56
C	150+39.92	-3.00	576.52	576.58
D	150+49.92	-3.00	576.53	576.58
E	150+59.92	-3.00	576.54	576.56
☉ Brg. Pier	150+73.59	-3.00	576.54	576.54
F	150+83.59	-3.00	576.54	576.55
G	150+93.59	-3.00	576.54	576.57
H	151+03.59	-3.00	576.53	576.58
I	151+13.59	-3.00	576.51	576.57
J	151+23.59	-3.00	576.49	576.53
☉ Brg. E. Abut.	151+37.26	-3.00	576.46	576.46
Bk. E. Abut.	151+38.59	-3.00	576.46	576.46

☉ RDWY., P.G., & STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	150+07.50	0.00	576.51	576.51
☉ Brg. W. Abut.	150+08.83	0.00	576.51	576.51
A	150+18.83	0.00	576.53	576.57
B	150+28.83	0.00	576.55	576.61
C	150+38.83	0.00	576.57	576.62
D	150+48.83	0.00	576.58	576.62
E	150+58.83	0.00	576.59	576.61
☉ Brg. Pier	150+72.50	0.00	576.59	576.59
F	150+82.50	0.00	576.59	576.60
G	150+92.50	0.00	576.58	576.62
H	151+02.50	0.00	576.57	576.63
I	151+12.50	0.00	576.56	576.62
J	151+22.50	0.00	576.54	576.58
☉ Brg. E. Abut.	151+36.17	0.00	576.51	576.51
Bk. E. Abut.	151+37.50	0.00	576.51	576.51

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	150+06.41	3.00	576.46	576.46
☉ Brg. W. Abut.	150+07.74	3.00	576.46	576.46
A	150+17.74	3.00	576.49	576.52
B	150+27.74	3.00	576.51	576.56
C	150+37.74	3.00	576.52	576.58
D	150+47.74	3.00	576.53	576.58
E	150+57.74	3.00	576.54	576.56
☉ Brg. Pier	150+71.41	3.00	576.54	576.54
F	150+81.41	3.00	576.54	576.56
G	150+91.41	3.00	576.54	576.57
H	151+01.41	3.00	576.53	576.58
I	151+11.41	3.00	576.51	576.57
J	151+21.41	3.00	576.50	576.54
☉ Brg. E. Abut.	151+35.08	3.00	576.47	576.47
Bk. E. Abut.	151+36.41	3.00	576.46	576.46

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	150+04.22	9.00	576.36	576.36
☉ Brg. W. Abut.	150+05.55	9.00	576.36	576.36
A	150+15.55	9.00	576.39	576.42
B	150+25.55	9.00	576.41	576.46
C	150+35.55	9.00	576.42	576.48
D	150+45.55	9.00	576.44	576.48
E	150+55.55	9.00	576.45	576.47
☉ Brg. Pier	150+69.22	9.00	576.45	576.45
F	150+79.22	9.00	576.45	576.46
G	150+89.22	9.00	576.45	576.48
H	150+99.22	9.00	576.44	576.49
I	151+09.22	9.00	576.42	576.48
J	151+19.22	9.00	576.41	576.45
☉ Brg. E. Abut.	151+32.89	9.00	576.38	576.38
Bk. E. Abut.	151+34.22	9.00	576.38	576.38

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	150+02.04	15.00	576.24	576.24
☉ Brg. W. Abut.	150+03.37	15.00	576.25	576.25
A	150+13.37	15.00	576.27	576.30
B	150+23.37	15.00	576.29	576.35
C	150+33.37	15.00	576.31	576.37
D	150+43.37	15.00	576.32	576.37
E	150+53.37	15.00	576.33	576.35
☉ Brg. Pier	150+67.04	15.00	576.34	576.34
F	150+77.04	15.00	576.34	576.35
G	150+87.04	15.00	576.34	576.37
H	150+97.04	15.00	576.33	576.38
I	151+07.04	15.00	576.32	576.37
J	151+17.04	15.00	576.30	576.34
☉ Brg. E. Abut.	151+30.71	15.00	576.27	576.27
Bk. E. Abut.	151+32.04	15.00	576.27	576.27



DESIGNED - BAS
CHECKED - KEF
DRAWN - SGM
CHECKED - BAS

**TOP OF SLAB ELEVATIONS
STRUCTURE NO. 036-0070**

SHEET NO. 5	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	657	(116-C)BR-1	HENDERSON	56	22
22 SHEETS		CONTRACT NO. 68761			
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FACE OF NORTH PARAPET

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Slab	149+83.32	-16.00	576.16
K	149+93.32	-16.00	576.20
L	150+03.32	-16.00	576.23
Back of W. Abut.	150+13.32	-16.00	576.25
Back of E. Abut.	151+43.32	-16.00	576.22
M	151+53.32	-16.00	576.19
N	151+63.32	-16.00	576.16
End E. Appr. Slab	151+73.32	-16.00	576.12

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Slab	149+81.87	-12.00	576.24
K	149+91.87	-12.00	576.28
L	150+01.87	-12.00	576.31
Back of W. Abut.	150+11.87	-12.00	576.33
Back of E. Abut.	151+41.87	-12.00	576.31
M	151+51.87	-12.00	576.28
N	151+61.87	-12.00	576.25
End E. Appr. Slab	151+71.87	-12.00	576.21

☉ RDWY., P.G., & STAGE CONSTRUCTION LINE

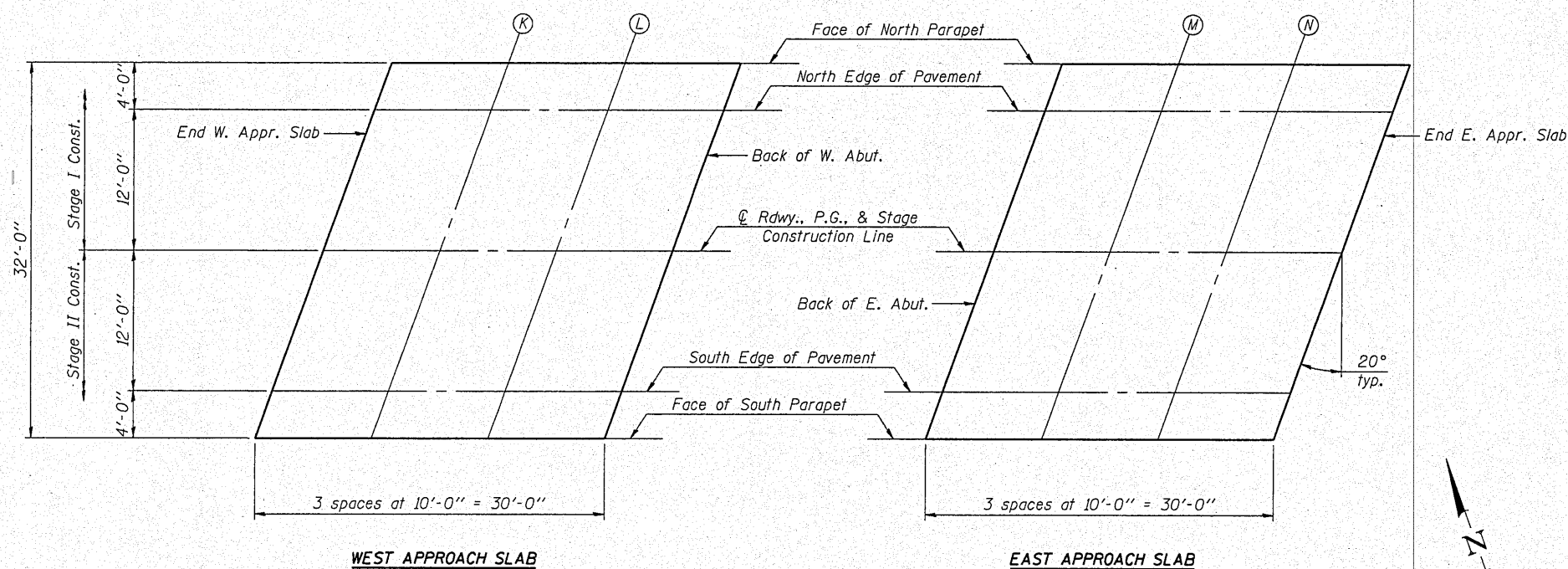
Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Slab	149+77.50	0.00	576.41
K	149+87.50	0.00	576.45
L	149+97.50	0.00	576.48
Back of W. Abut.	150+07.50	0.00	576.51
Back of E. Abut.	151+37.50	0.00	576.51
M	151+47.50	0.00	576.48
N	151+57.50	0.00	576.45
End E. Appr. Slab	151+67.50	0.00	576.41

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Slab	149+73.13	12.00	576.21
K	149+83.13	12.00	576.25
L	149+93.13	12.00	576.28
Back of W. Abut.	150+03.13	12.00	576.31
Back of E. Abut.	151+33.13	12.00	576.33
M	151+43.13	12.00	576.31
N	151+53.13	12.00	576.28
End E. Appr. Slab	151+63.13	12.00	576.24

FACE OF SOUTH PARAPET

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Slab	149+71.68	16.00	576.12
K	149+81.68	16.00	576.16
L	149+91.68	16.00	576.19
Back of W. Abut.	150+01.68	16.00	576.22
Back of E. Abut.	151+31.68	16.00	576.25
M	151+41.68	16.00	576.23
N	151+51.68	16.00	576.20
End E. Appr. Slab	151+61.68	16.00	576.16



PLAN



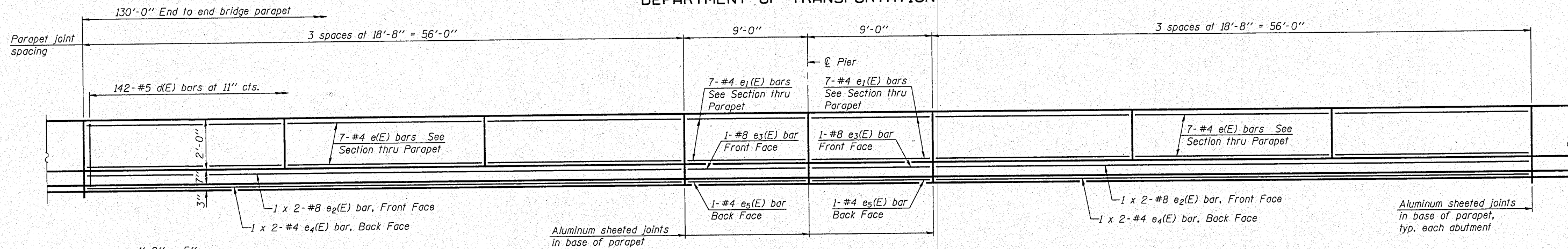
**TOP OF APPROACH
SLAB ELEVATIONS
STRUCTURE NO. 036-0070**



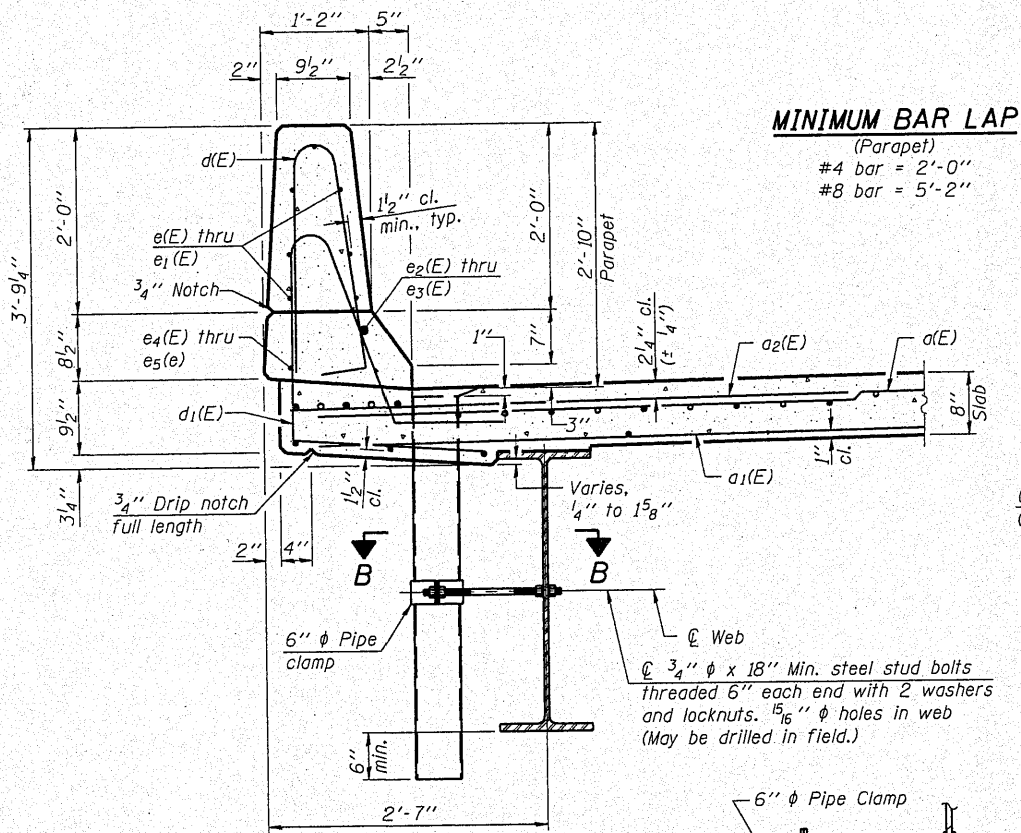
DESIGNED - BAS
CHECKED - KEF
DRAWN - SGM
CHECKED - BAS

SHEET NO. 6	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	657	(116-C)BR-1	HENDERSON	56	23
CONTRACT NO. 68761					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



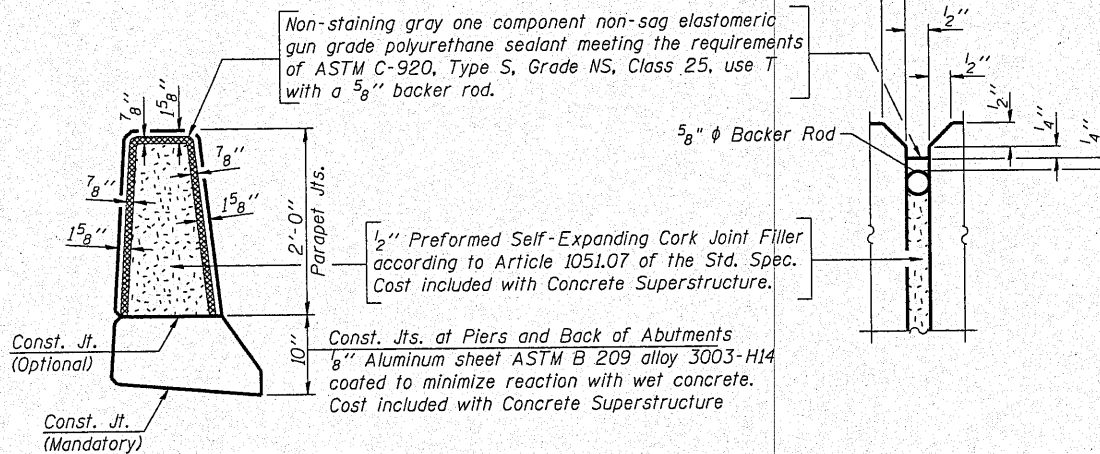
INSIDE ELEVATION OF PARAPET



SECTION THRU PARAPET

MINIMUM BAR LAP
(Parapet)

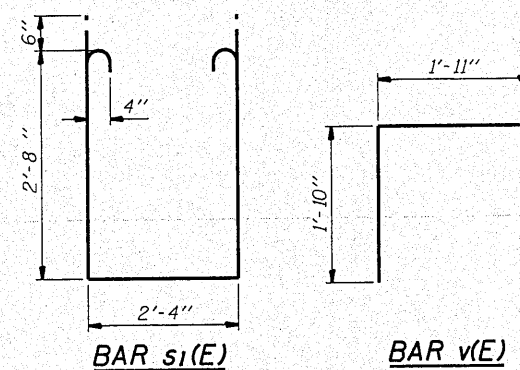
#4 bar = 2'-0"
#8 bar = 5'-2"



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 galvanizing is included with Floor Drains.

BAR s(E)



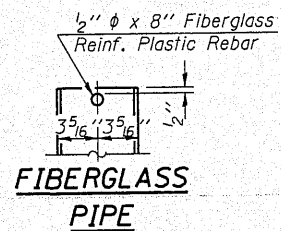
BAR s1(E)

BAR v(E)

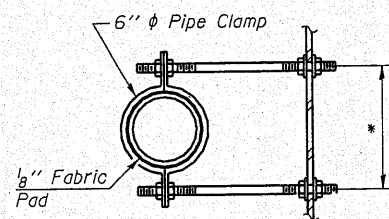
SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	446	#5	17'-1"	—
a1(E)	312	#5	16'-10"	—
a2(E)	446	#6	6'-6"	—
a3(E)	8	#5	18'-4"	—
b(E)	190	#5	28'-0"	—
b1(E)	36	#6	36'-0"	—
b2(E)	192	#5	23'-9"	—
d(E)	284	#5	5'-7"	—
d1(E)	284	#5	7'-4"	—
e(E)	84	#4	18'-4"	—
e1(E)	28	#4	8'-8"	—
e2(E)	8	#8	30'-6"	—
e3(E)	4	#8	8'-8"	—
e4(E)	8	#4	28'-11"	—
e5(E)	4	#4	8'-8"	—
m(E)	20	#6	18'-4"	—
m1(E)	24	#6	8'-0"	—
m2(E)	8	#6	6'-0"	—
m3(E)	4	#6	2'-4"	—
m4(E)	4	#6	2'-10"	—
s(E)	80	#5	5'-5"	—
s1(E)	72	#4	8'-8"	—
v(E)	72	#5	3'-9"	—
Reinforcement Bars, Epoxy Coated			Pound	38210
Concrete Superstructure			Cu. Yd.	167.5

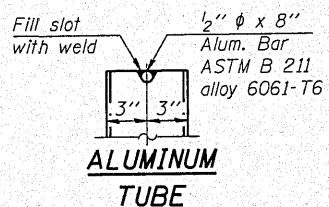
Bars indicated thus 1 x 2 - #5 etc. indicates 1 line of bars with 2 lengths per line.



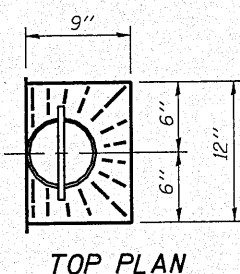
FIBERGLASS PIPE



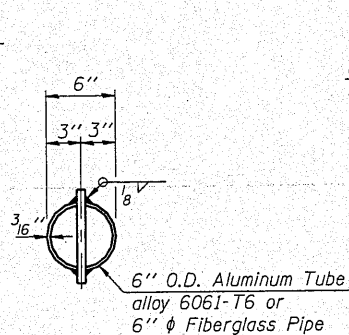
SECTION B-B
*Dimension as required by Pipe Clamp



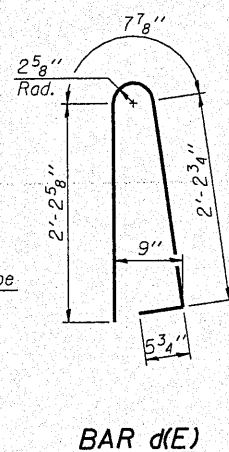
ALUMINUM TUBE



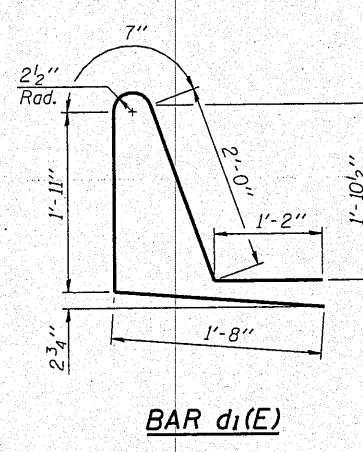
TOP PLAN



TOP PLAN
(Showing Aluminum Tube)



BAR d(E)



BAR d1(E)

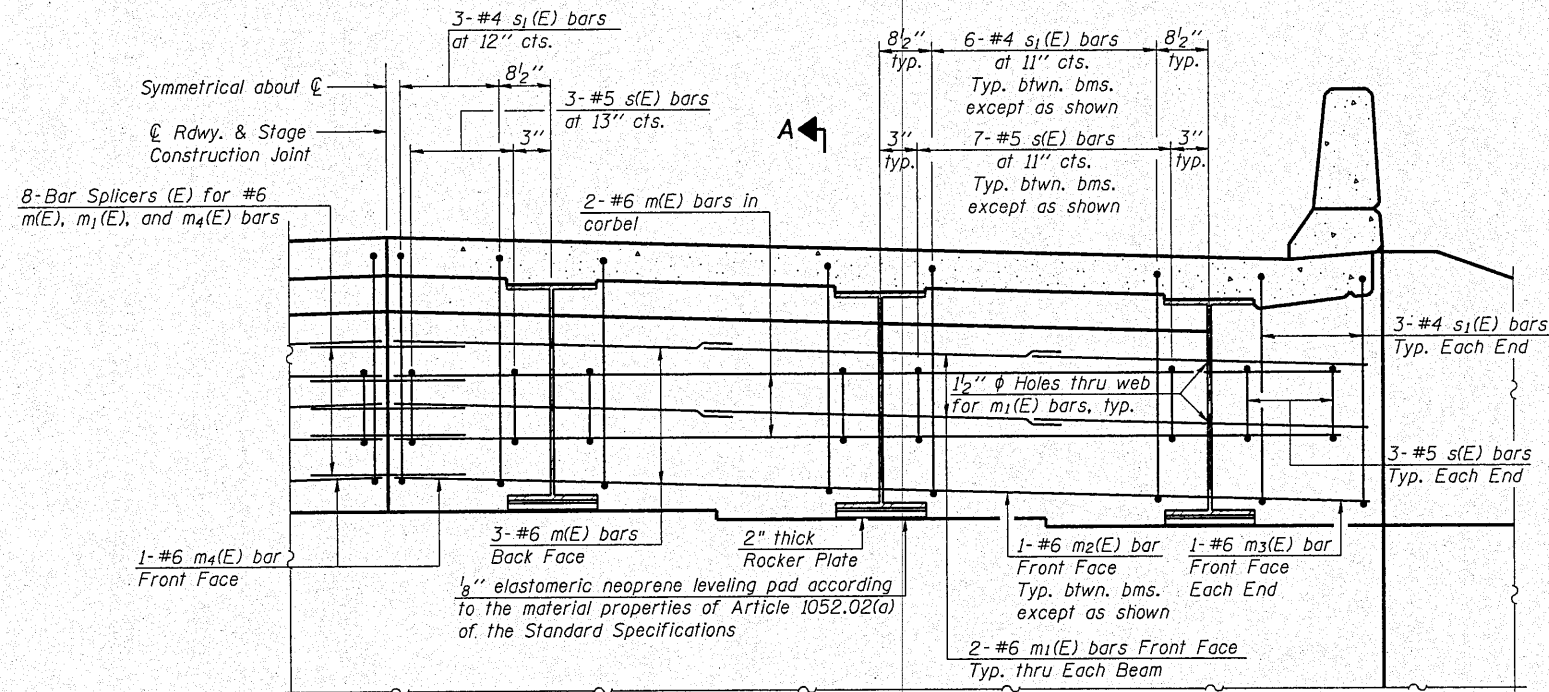


DESIGNED - BAS
CHECKED - KEF
DRAWN - SGM
CHECKED - BAS

SHEET NO. 8 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	657	(116-C)BR-1	HENDERSON	56	25
CONTRACT NO. 68761					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 036-0070

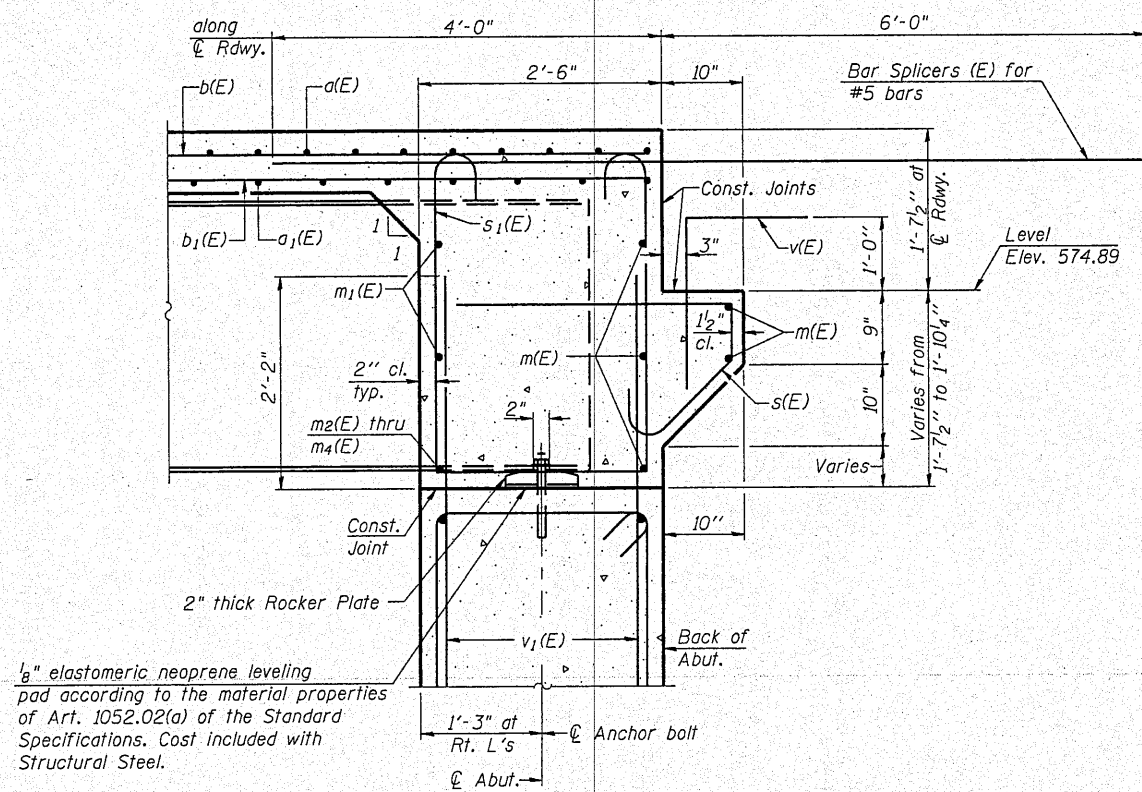
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DIAPHRAGM ELEVATION AT ABUTMENT

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 8 of 22.
Concrete in diaphragm is included with Concrete Superstructure on sheet 8 of 22.
For details of bars s(E) & s1(E) see sheet 8 of 22.
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.

MIN. BAR LAP
#6 bar = 3'-4"



SECTION A-A

Dimensions at right angles to abutment, except as shown.



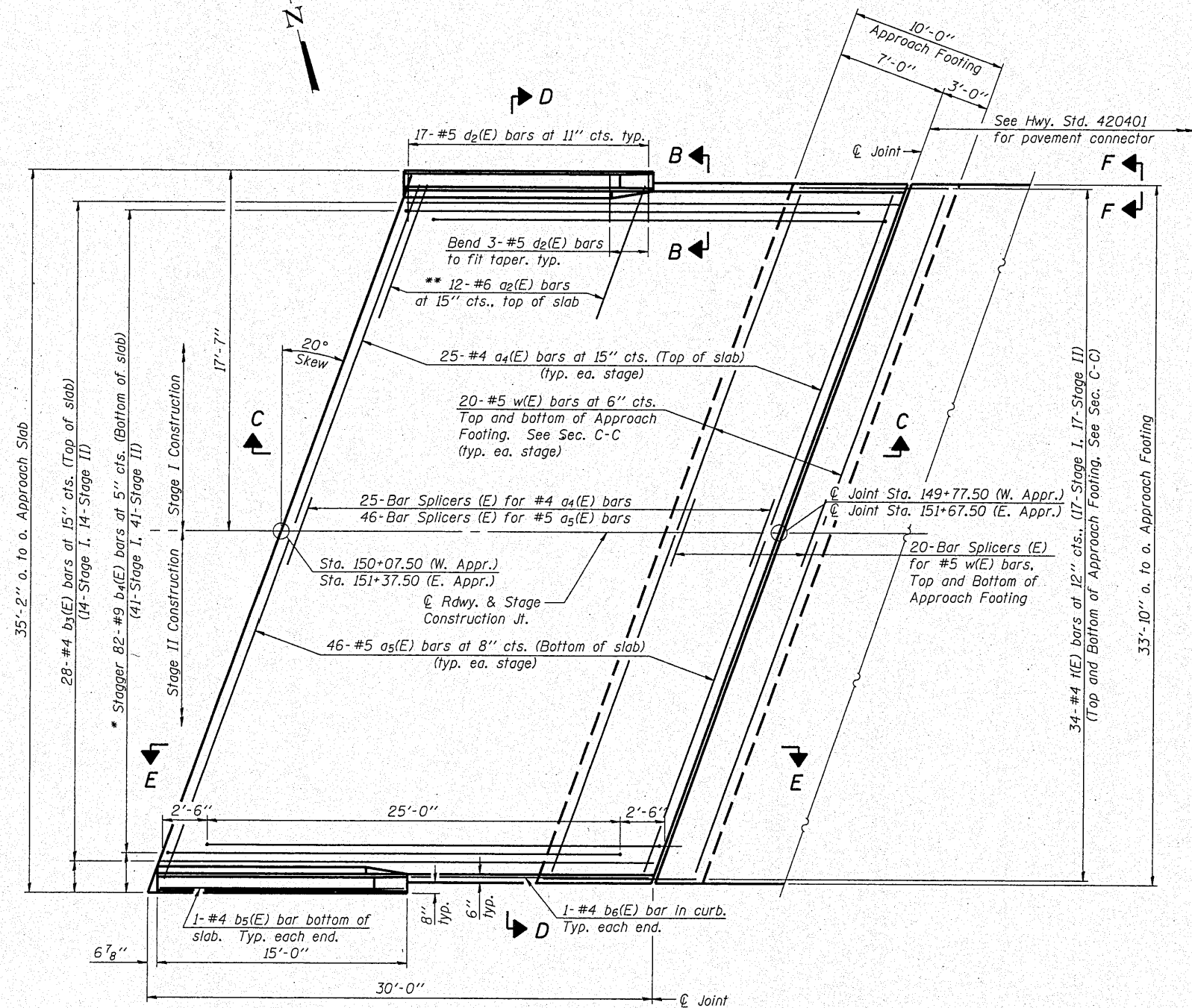
DESIGNED - BAS
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DRAWN - SGM
CHECKED - BAS

INTEGRAL ABUTMENT
DIAPHRAGM DETAILS
STRUCTURE NO. 036-0070

SHEET NO. 9 22 SHEETS	F.A.P. RTE. 657	SECTION (116-C)BR-1	COUNTY HENDERSON	TOTAL SHEETS 56	SHEET NO. 26
	CONTRACT NO. 68761				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

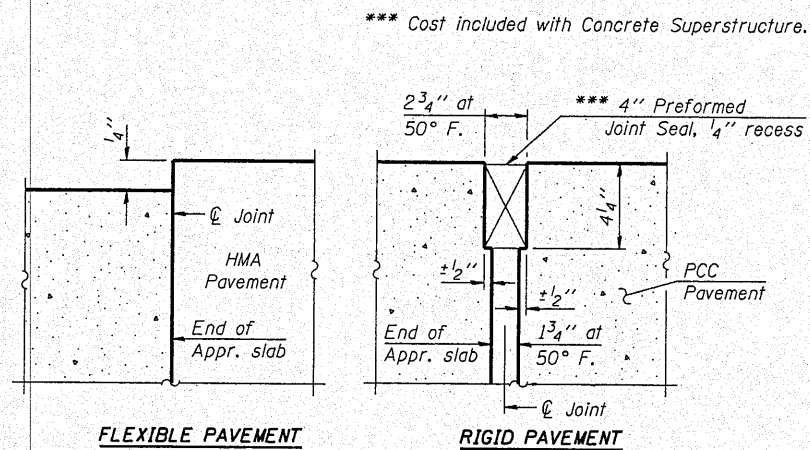
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 11 of 22 for Sections C-C & D-D and View E-E.
a₄(E) and a₅(E) bar spacings measured along ϕ Rdwy.

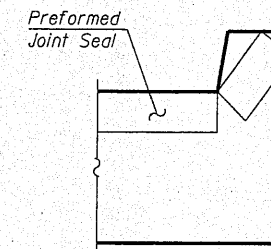


PLAN

* Tilt #9 b₄(E) bars as required to maintain clearance.
** Space between a₄(E) bars, typ. each parapet.

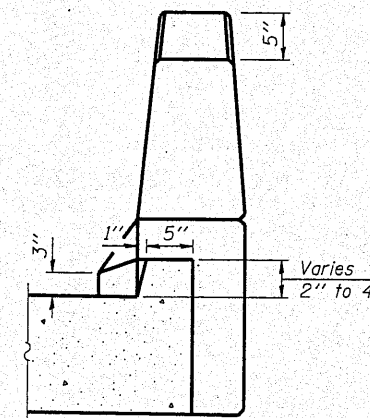


DETAIL A



VIEW F-F

Angle Preformed Joint Seal at 45° at curbs when req'd for drainage.



VIEW B-B



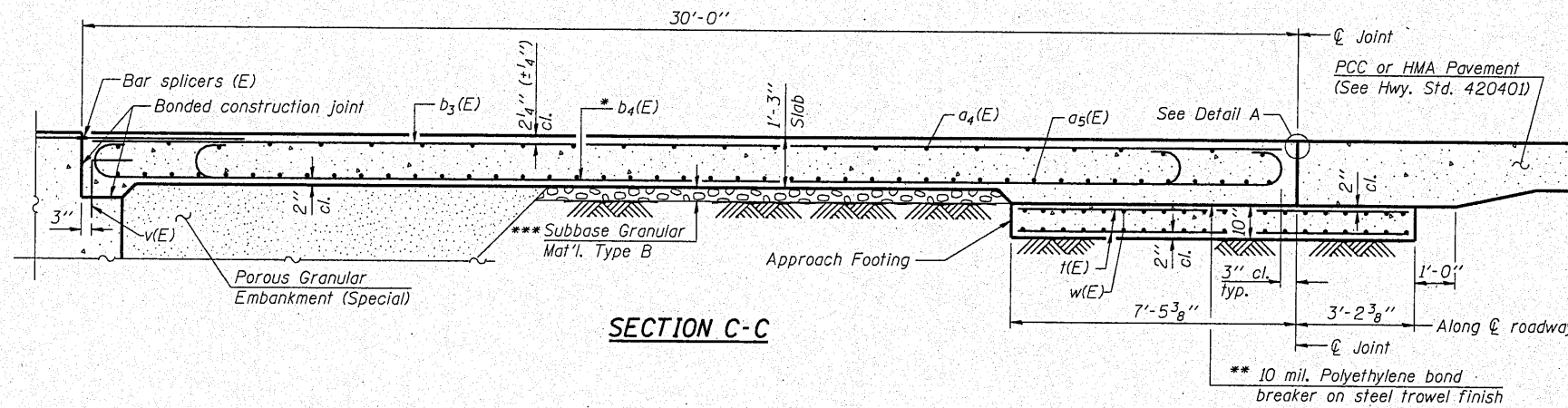
DESIGNED - BAS
CHECKED - KEF
DRAWN - SGM
CHECKED - BAS

(Sheet 1 of 2)
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 036-0070

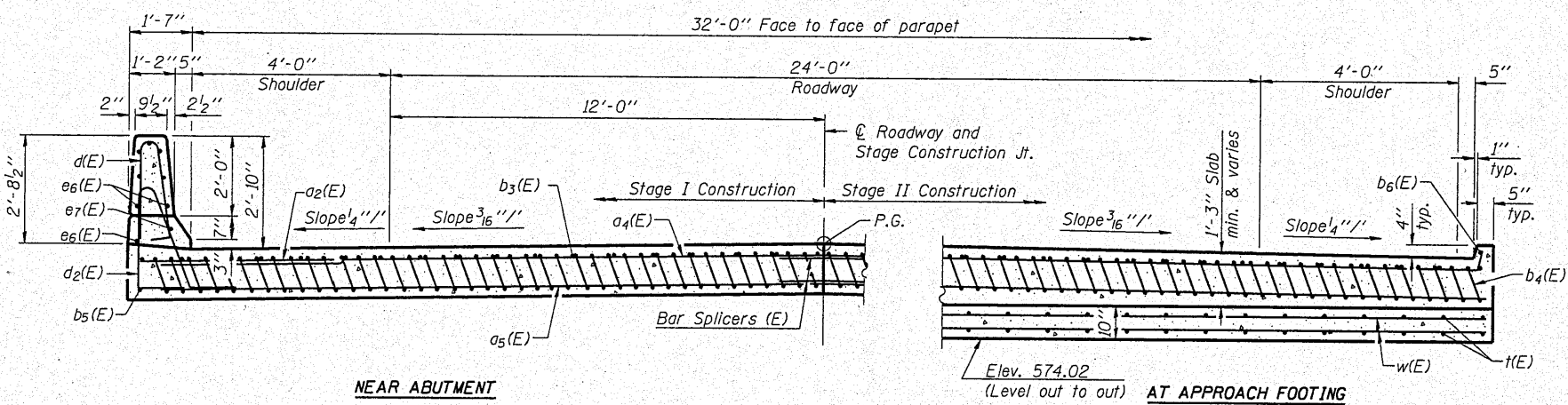
SHEET NO. 10	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	657	(116-C)BR-1	HENDERSON	56	27
			CONTRACT NO. 68761		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

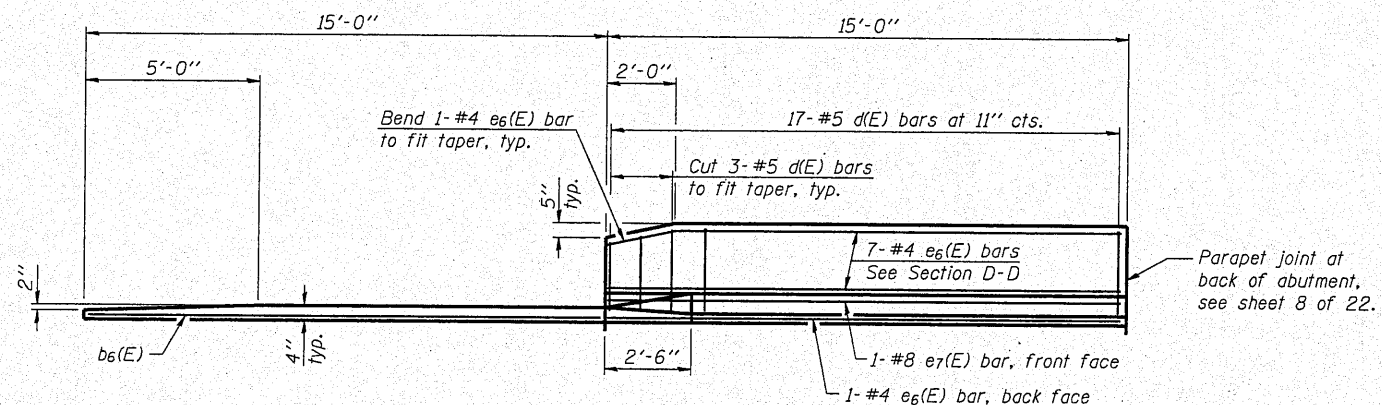
Notes:
See sheet 10 of 22 for Detail A and View B-B.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheet 8 of 22.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 18 of 22.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment, (Special) and drainage treatment details, see sheet 1 of 22.
For additional parapet details, see sheet 8 of 22.



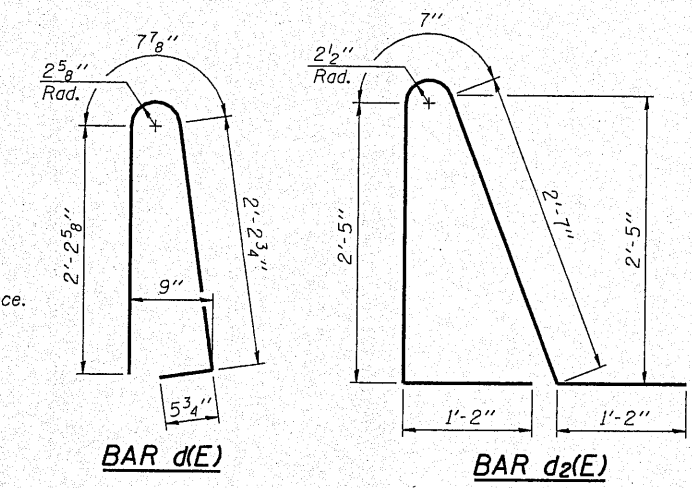
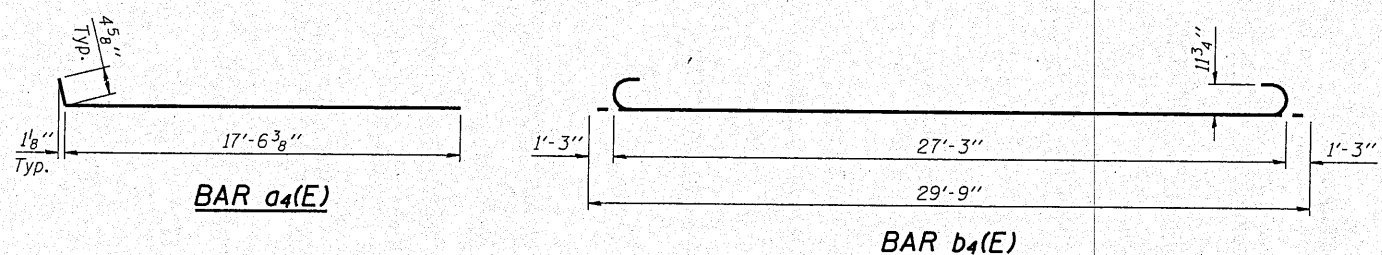
SECTION C-C



SECTION D-D
(See Plan for dimensions not shown)



VIEW E-E



* Tilt #9 b4(E) bars as required to maintain clearance.
** Cost included with Concrete Superstructure.
*** See Rdwy. Plans for quantity.

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a2(E)	48	#6	6'-6"	
a4(E)	100	#4	17'-11"	
a5(E)	184	#5	17'-8"	
b3(E)	56	#4	29'-8"	
b4(E)	164	#9	29'-9"	
b5(E)	4	#4	14'-8"	
b6(E)	4	#4	14'-1"	
d(E)	68	#5	5'-7"	
d2(E)	68	#5	7'-11"	
e6(E)	32	#4	14'-8"	
e7(E)	4	#8	14'-8"	
i(E)	136	#4	10'-3"	
w(E)	160	#5	17'-8"	
Concrete Superstructure		Cu. Yd.	107.2	
Concrete Structures		Cu. Yd.	22.2	
Reinforcement Bars, Epoxy Coated		Pound	28140	

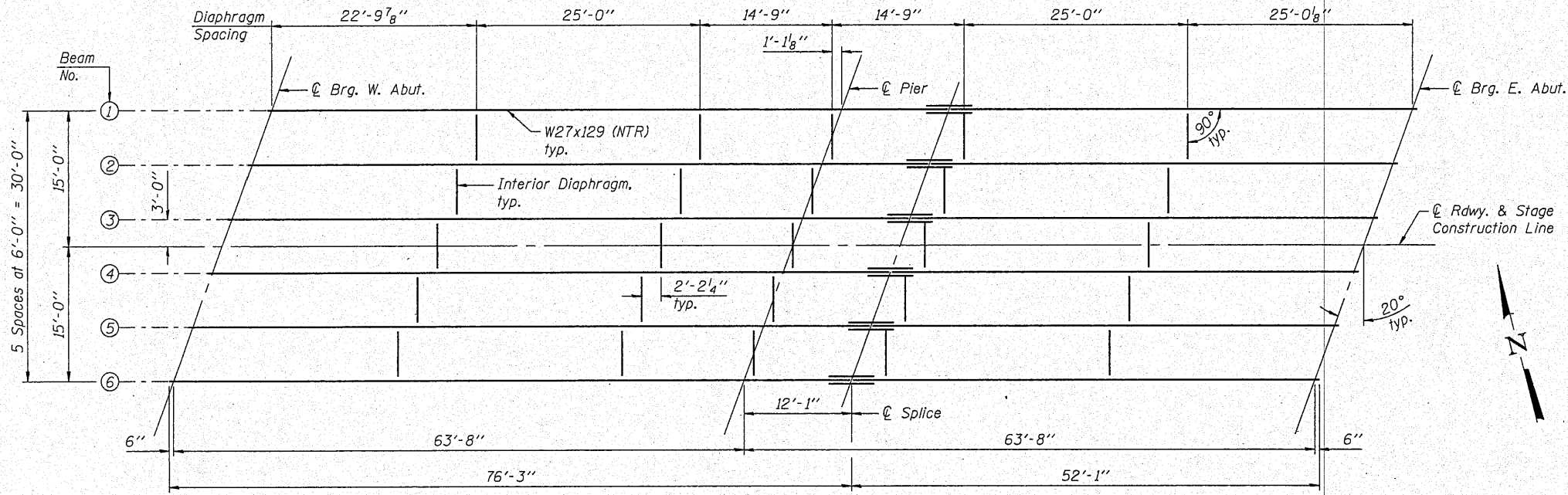
MAUREN & STUTZ, INC.
ENGINEERS SURVEYORS

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CHECKED - KEF
DRAWN - SGM
CHECKED - BAS

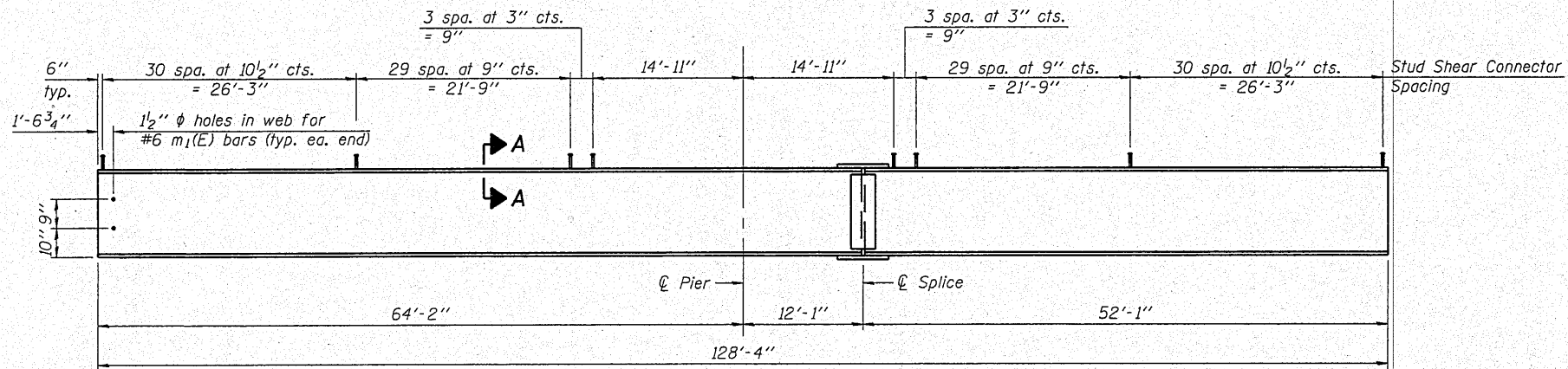
(Sheet 2 of 2)
BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 036-0070

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	657	(116-C)BR-1	HENDERSON	56	28
CONTRACT NO. 68761					
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN



ELEVATION

TOP OF BEAM ELEVATIONS

(For Fabrication Only)

	☉ Brg. W. Abut.	☉ Pier	☉ Splice	☉ Brg. E. Abut.
Beam 1	575.547	575.560	575.563	575.517
Beam 2	575.657	575.670	575.673	575.637
Beam 3	575.747	575.760	575.763	575.747
Beam 4	575.747	575.760	575.763	575.747
Beam 5	575.637	575.671	575.677	575.657
Beam 6	575.517	575.561	575.569	575.547

INTERIOR GIRDER REACTION TABLE

		Abut.	Pier
R_{DC1}	(k)	18.0	59.9
R_{DC2}	(k)	3.9	11.3
R_{DW}	(k)	7.0	20.1
$R_{\text{L} + \text{IM}}$	(k)	70.7	93.9
R_{Total}	(k)	99.5	185.2

INTERIOR GIRDER MOMENT TABLE			
		0.4 Sp. 1 or 0.6 Sp. 2	Pier
I_s	(in ⁴)	4760	4760
$I_c(n)$	(in ⁴)	12631	-
$I_c(3n)$	(in ⁴)	9195	-
S_s	(in ³)	345	345
$S_c(n)$	(in ³)	505	-
$S_c(3n)$	(in ³)	455	-
Z	(in ³)	-	395
$DC1$	(k/ft)	.752	.752
M_{DC1}	(k)	213.4	381.1
$DC2$	(k/ft)	.150	.150
M_{DC2}	(k)	50.8	55.4
DW	(k/ft)	.267	.267
M_{DW}	(k)	90.5	98.6
$M_{\text{L} + \text{IM}}$	(k)	701.3	434.1
M_u (Strength I)	(k)	1693	1453
$\phi_r M_n$, $\phi_r M_{nc}$	(k)	2494	1646
f_s DC1	(ksi)	7.42	13.25
f_s DC2	(ksi)	1.34	1.93
f_s DW	(ksi)	2.39	3.43
f_s 1.3(L+IM)	(ksi)	21.66	19.63
f_s (Service II)	(ksi)	32.81	38.24
f_s (Total)(Strength I)	(ksi)	-	-
V_r	(k)	24.3	-

* Compact sections
** Non-Compact and slender sections

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 (in³).

$DC1$: Un-factored non-composite dead load (kips/ft.).

M_{DC1} : 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.).

M_{DC2} : 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.).

M_{DW} : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

$M_{\text{L} + \text{IM}}$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\text{L} + \text{IM}}$

$\phi_r M_n$: 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).
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_{\text{L} + \text{IM}}$

f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_{\text{L} + \text{IM}}$

V_r : Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

Notes:
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
All structural steel beams shall conform to the requirements of AASHTO M 270 Grade 50.
See sheet 13 of 22 for Section A-A, splice, bearing, and diaphragm details.

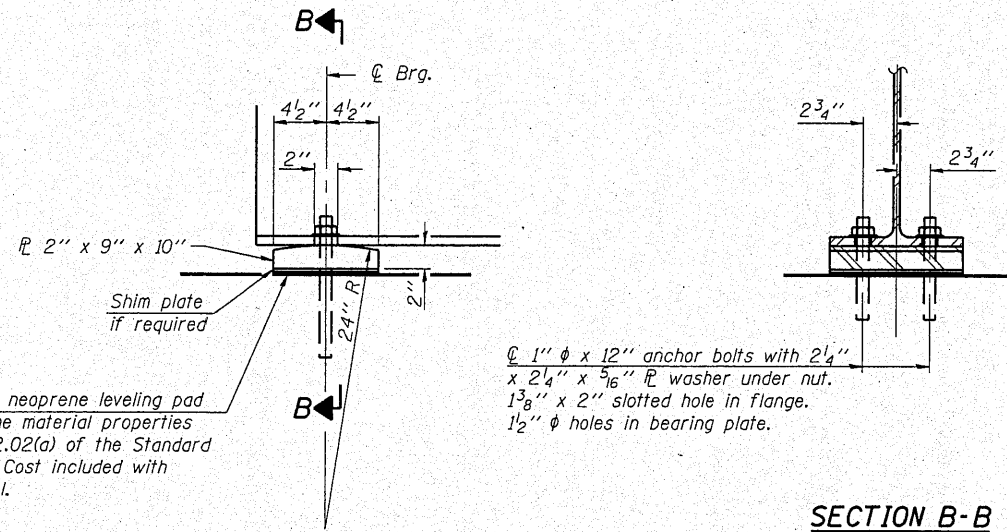


DESIGNED - BAS
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DRAWN - SGM
CHECKED - BAS

STRUCTURAL STEEL
STRUCTURE NO. 036-0070

SHEET NO. 12	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	657	(116-C)BR-1	HENDERSON	56	29
22 SHEETS	CONTRACT NO. 68761				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



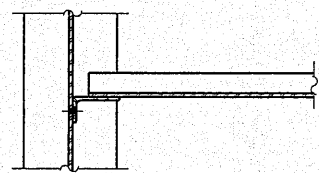
ELEVATION AT ABUTMENT

SECTION B-B

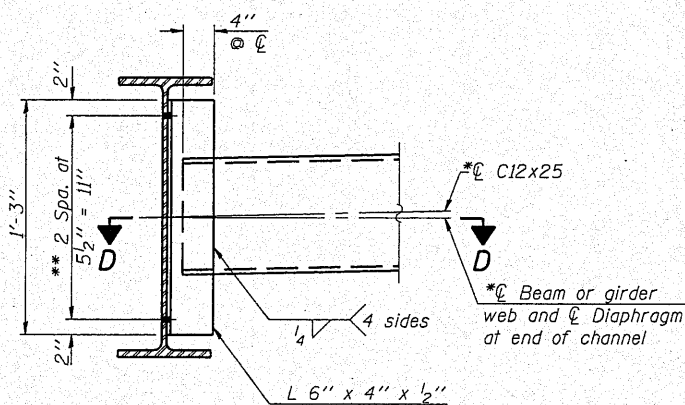
1/8" elastomeric neoprene leveling pad according to the material properties of Article 1052.02(a) of the Standard Specifications. Cost included with Structural Steel.

1" ϕ x 12" anchor bolts with 2 1/4" x 2 1/4" x 7/16" ϕ washer under nut. 1 3/8" x 2" slotted hole in flange. 1/2" ϕ holes in bearing plate.

FIXED BEARING



SECTION D-D



INTERIOR DIAPHRAGM

Note:
Two hardened washers required for each set of oversized holes.
*Alternate channels, C12x30, are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section. The alternate, if utilized, shall be provided at no additional cost to the Department.
**3/4" ϕ HS bolts, 1 5/16" ϕ holes

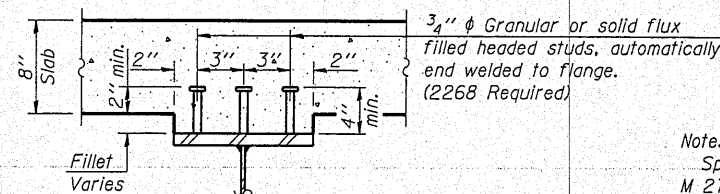


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DRAWN - SGM
CHECKED - BAS

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 and pintles shall conform to the requirements of AASHTO M 270 Grade 50.

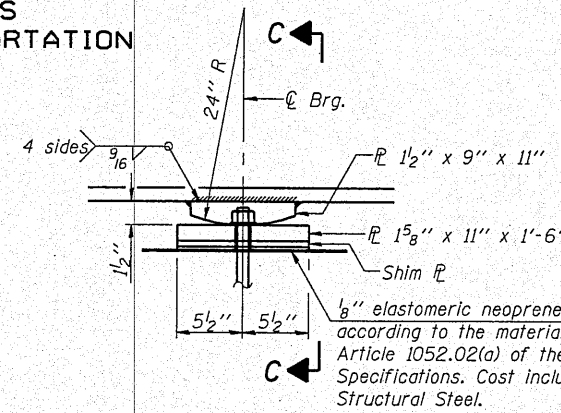
BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	36



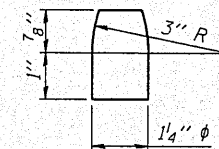
SECTION A-A

3/4" ϕ Granular or solid flux filled headed studs, automatically end welded to flange. (2268 Required)

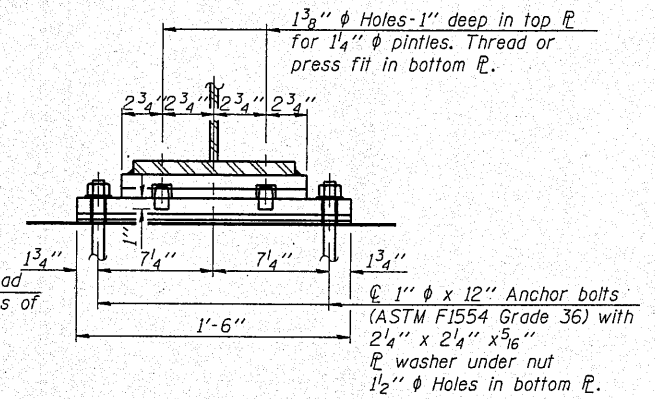


ELEVATION AT PIER

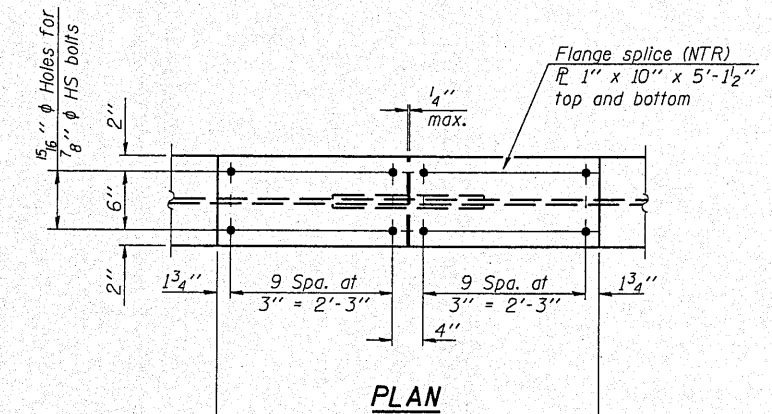
FIXED BEARING



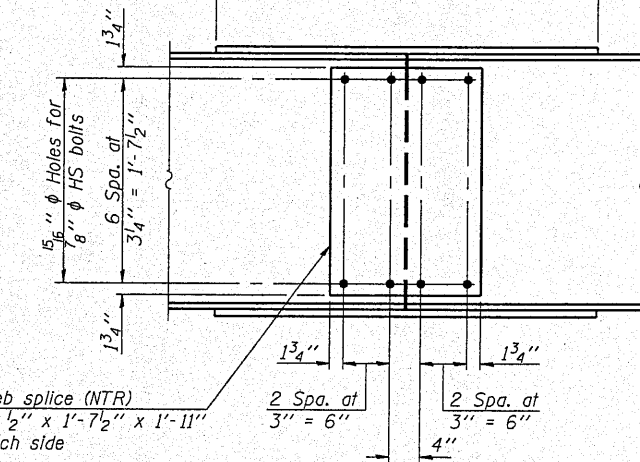
PINTLE



SECTION C-C



PLAN



ELEVATION

SPLICE DETAIL

(6 Required)

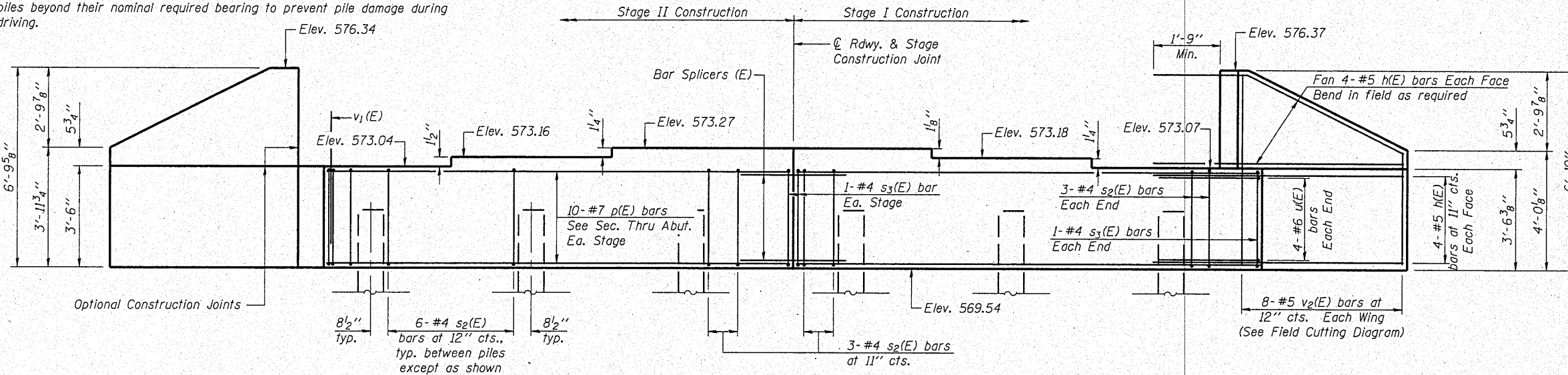
Notes:
Splice plates shall conform to the requirements of AASHTO M 270 Grade 50.
Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 036-0070

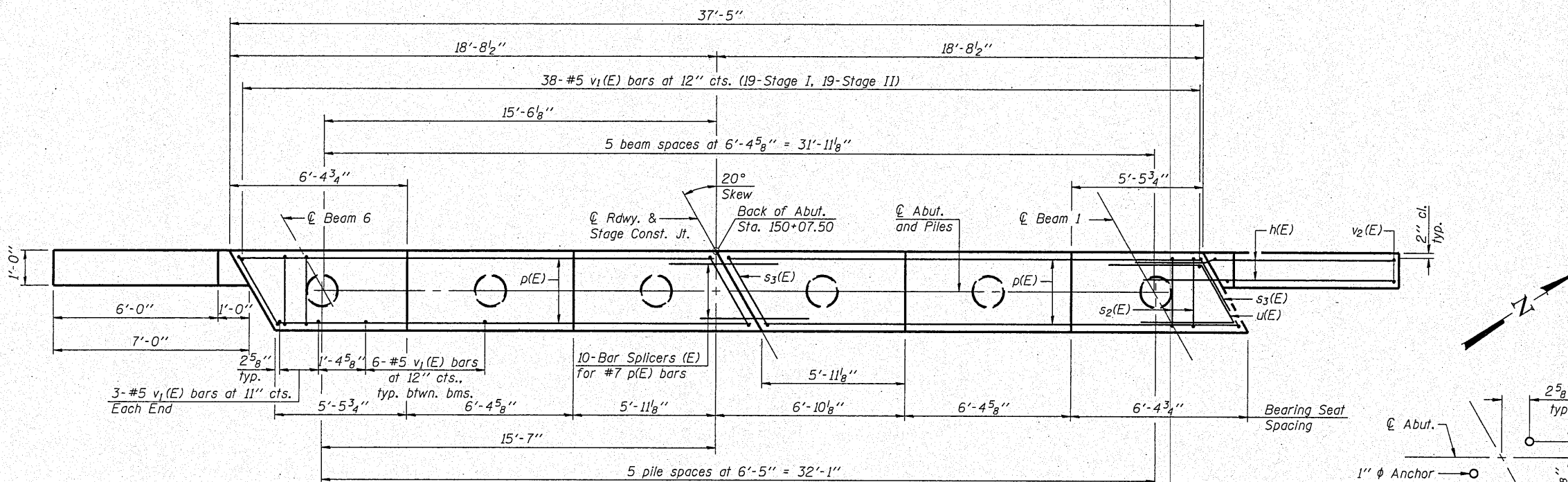
SHEET NO. 13 22 SHEETS	F.A.P. RTE. 657	SECTION (116-C)BR-1	COUNTY HENDERSON	TOTAL SHEETS 56	SHEET NO. 30
	CONTRACT NO. 68761			FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
Pour steps monolithically with cap.
Space reinforcement to miss anchor bolts.
The Contractor shall limit the pile hammer size selected considering the relatively high soil strengths indicated in the borings and avoid overdriving the piles beyond their nominal required bearing to prevent pile damage during driving.



ELEVATION



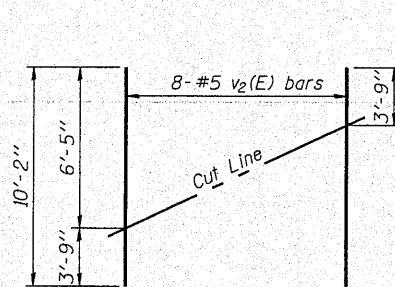
PLAN

PILE DATA

Type: Metal Shell-14 in. dia. x 0.312 in. walls with pile shoes
Nominal Required Bearing: 295 kips
Factored Resistance Available: 162 kips
Est. Length: 48 ft.
No. Production Piles: 5
No. Test Piles: 1

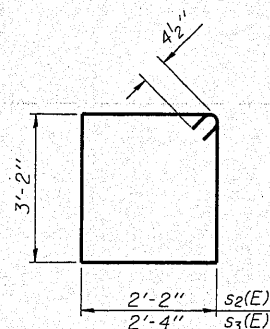


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CHECKED - KEF
DRAWN - SGM
CHECKED - BAS

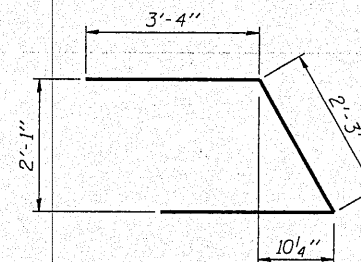


FIELD CUTTING DIAGRAM

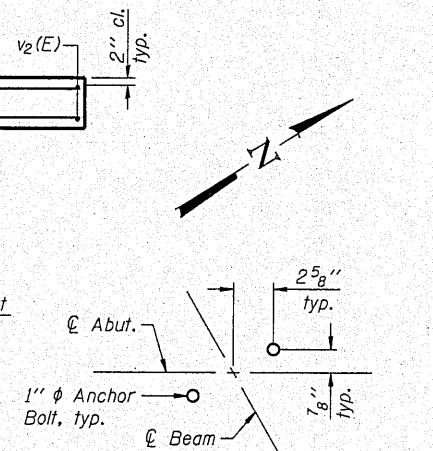
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



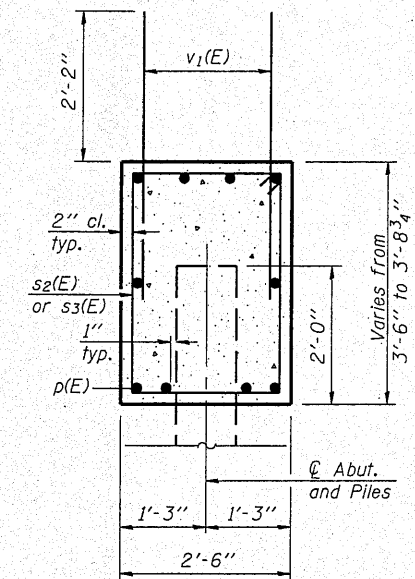
BARS s2(E) & s3(E)



BAR u(E)



TYP. ANCHOR BOLT LAYOUT



SEC. THRU ABUT.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#5	9'-3"	—
p(E)	20	#7	18'-4"	—
s2(E)	36	#4	11'-5"	□
s3(E)	4	#4	11'-9"	□
u(E)	8	#6	8'-11"	┘
v1(E)	74	#5	4'-4"	—
v2(E)	16	#5	10'-2"	—
Structure Excavation		Cu. Yd.		89
Concrete Structures		Cu. Yd.		14.9
Reinforcement Bars, Epoxy Coated		Pound		1980
Furnishing Metal Shell Piles, 14"x0.312"		Foot		240
Driving Piles		Foot		240
Test Pile, Metal Shells		Each		1
Pile Shoes		Each		6

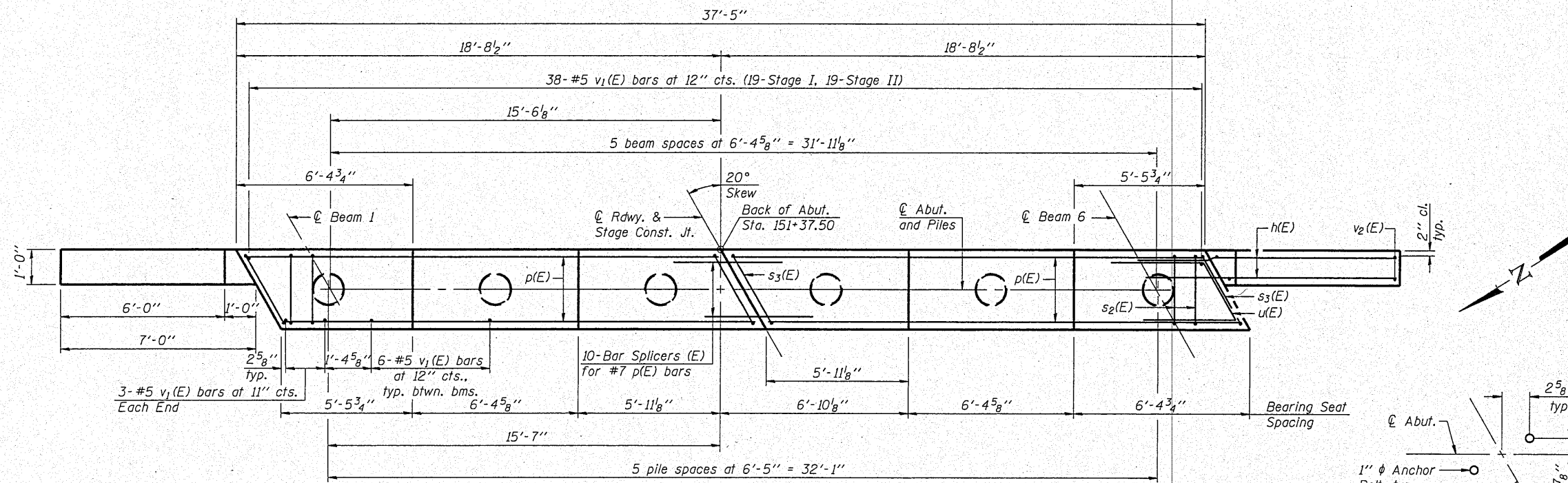
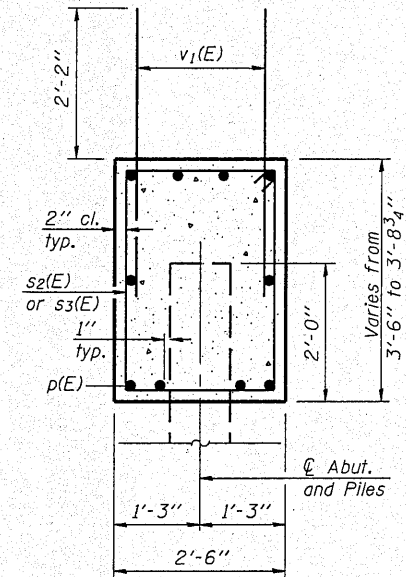
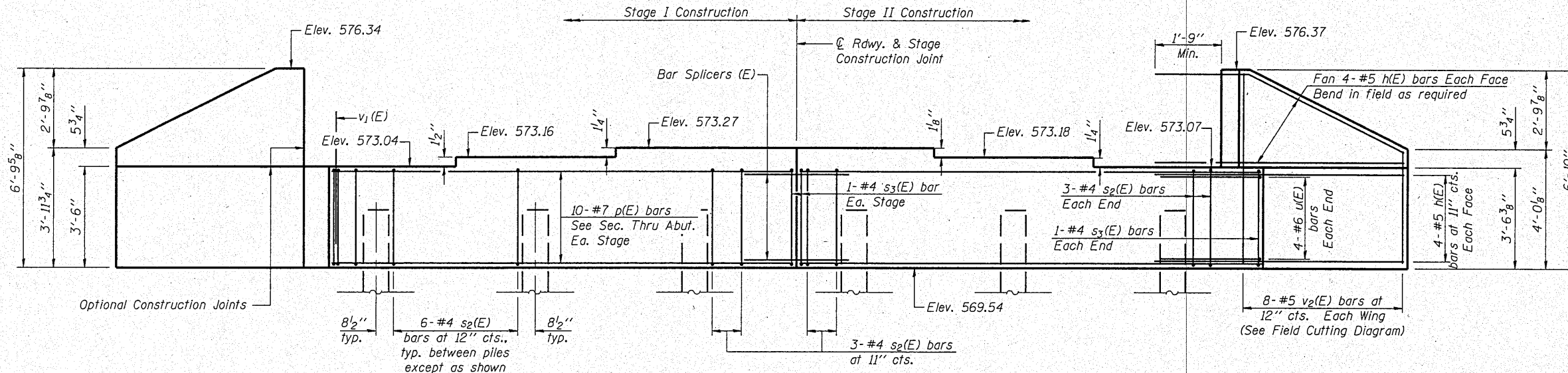
For details of Bar Splicers, see sheet 18 of 22.
For details of piles, see sheet 17 of 22.

WEST ABUTMENT
STRUCTURE NO. 036-0070

SHEET NO. 14 22 SHEETS	F.A.P. RTE. 657	SECTION (116-C)BR-1	COUNTY HENDERSON	TOTAL SHEETS 56	SHEET NO. 31
	CONTRACT NO. 68761				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
Pour steps monolithically with cap.
Space reinforcement to miss anchor bolts.

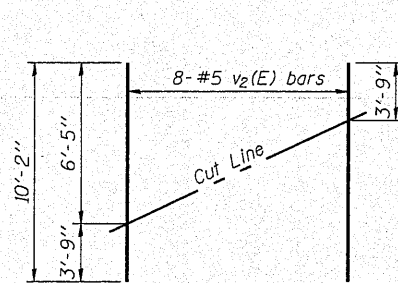


PILE DATA

Type: Metal Shell-14 in. dia. x 0.312 in. walls
Nominal Required Bearing: 295 kips
Factored Resistance Available: 162 kips
Est. Length: 53 ft.
No. Production Piles: 5
No. Test Piles: 1



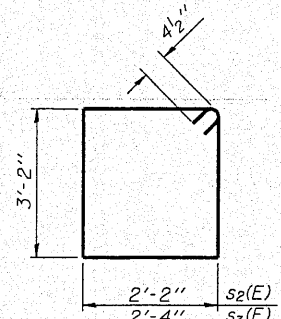
DESIGNED - BAS
CHECKED - KEF
DRAWN - SGM
CHECKED - BAS



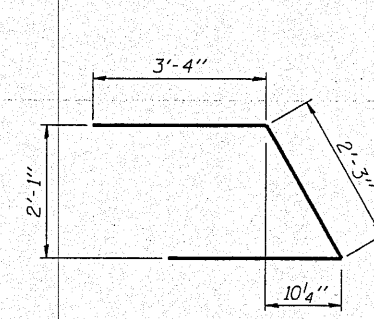
FIELD CUTTING DIAGRAM

Order v₂(E) full length. Cut as shown and use remainder of bars in opposite face.

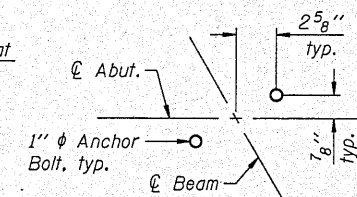
BARS s₂(E) & s₃(E)



BAR u(E)



TYP. ANCHOR BOLT LAYOUT



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#5	9'-3"	—
p(E)	20	#7	18'-4"	—
s ₂ (E)	36	#4	11'-5"	□
s ₃ (E)	4	#4	11'-9"	□
u(E)	8	#6	8'-11"	┘
v ₁ (E)	74	#5	4'-4"	—
v ₂ (E)	16	#5	10'-2"	—
Structure Excavation		Cu. Yd.	79	
Concrete Structures		Cu. Yd.	14.9	
Reinforcement Bars, Epoxy Coated		Pound	1980	
Furnishing Metal Shell Piles, 14"x0.312"		Foot	265	
Driving Piles		Foot	265	
Test Pile, Metal Shells		Each	1	

For details of Bar Splicers, see sheet 18 of 22.
For details of piles, see sheet 17 of 22.

**EAST ABUTMENT
STRUCTURE NO. 036-0070**

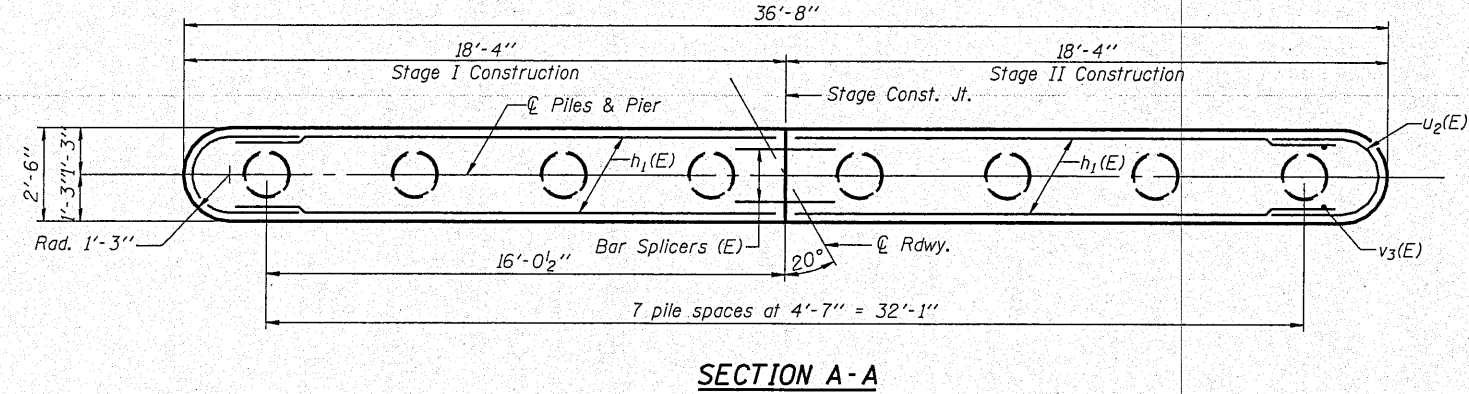
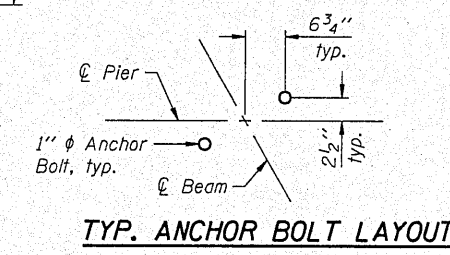
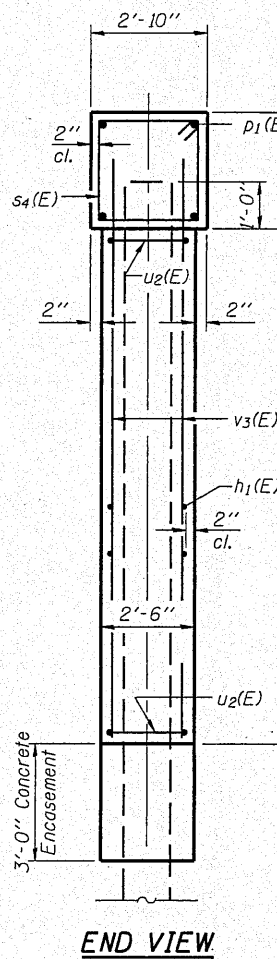
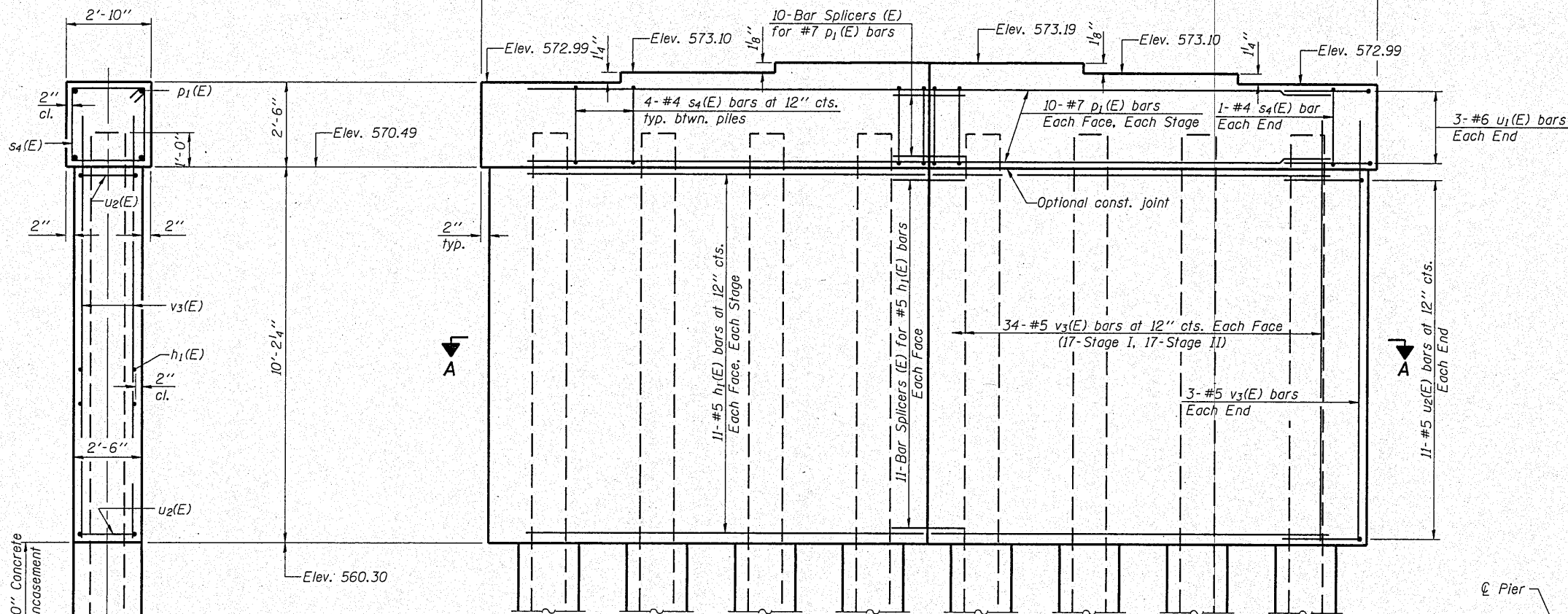
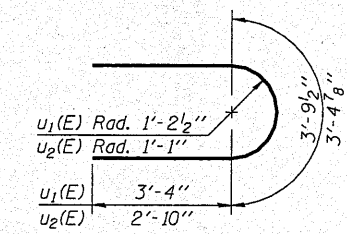
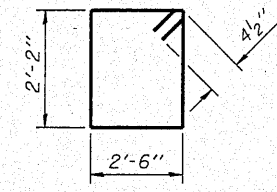
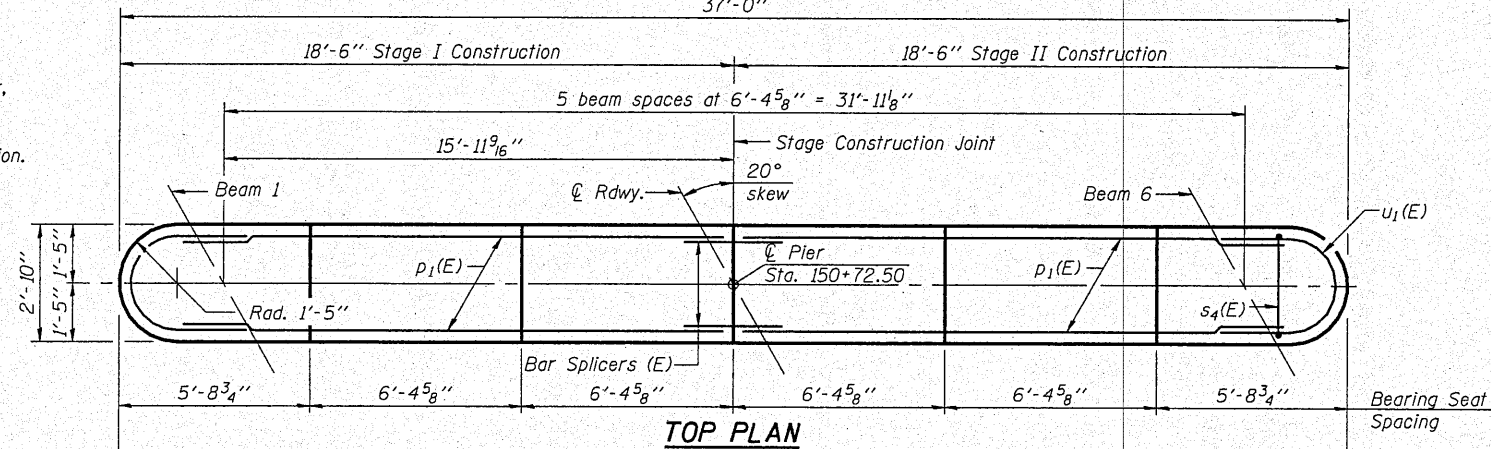
SHEET NO. 15 22 SHEETS	F.A.P. RTE. 657	SECTION (116-C)BR-1	COUNTY HENDERSON	TOTAL SHEETS 56	SHEET NO. 32
	CONTRACT NO. 68761				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles and Concrete Encasement, see sheet 17 of 22.
For details of Bar Splicers, see sheet 18 of 22.
If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremmed according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.

PILE DATA

Type: Metal Shell-14 in. dia. x 0.312 in. walls
Nominal Required Bearing: 344 kips
Factored Resistance Available: 170 kips
Est. Length: 61 ft.
No. Production Piles: 7
No. Test Piles: 1



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₁ (E)	44	#5	16'-11"	—
p ₁ (E)	20	#7	16'-11"	—
s ₄ (E)	30	#4	10'-1"	□
u ₁ (E)	6	#6	10'-6"	U
u ₂ (E)	22	#5	9'-1"	U
v ₃ (E)	74	#5	11'-6"	—
Structure Excavation		Cu. Yd.	23	
Concrete Structures		Cu. Yd.	40.5	
Concrete Encasement		Cu. Yd.	3.4	
Reinforcement Bars, Epoxy Coated		Pound	2860	
Furnishing Metal Shell Piles, 14"x0.312"		Foot	427	
Driving Piles		Foot	427	
Test Pile, Metal Shells		Each	1	
Underwater Structure Excavation Protection - Location 1		Each	1	

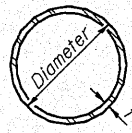
**PIER
STRUCTURE NO. 036-0070**



DESIGNED - BAS
CHECKED - KEF
DRAWN - SGM
CHECKED - BAS

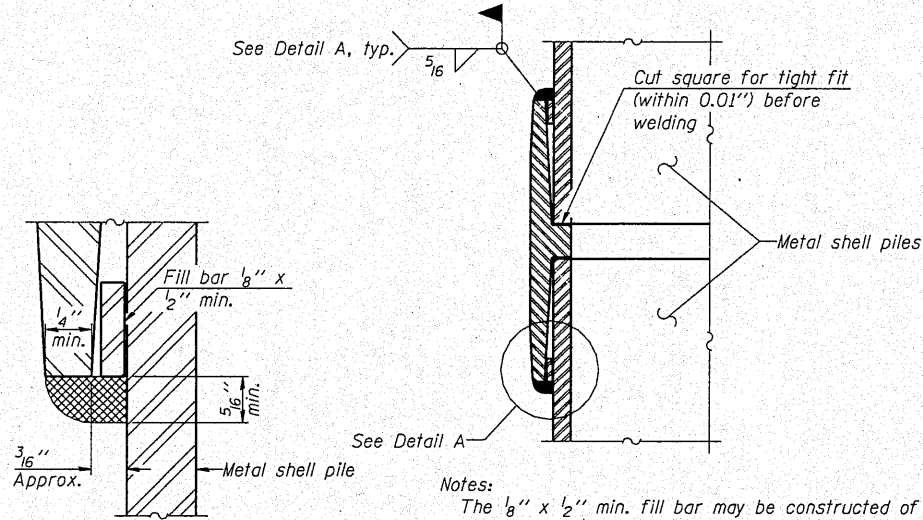
SHEET NO. 16 22 SHEETS	F.A.P. RTE. 657	SECTION (116-C)BR-1	COUNTY HENDERSON	TOTAL SHEETS 56	SHEET NO. 33
	CONTRACT NO. 68761			FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



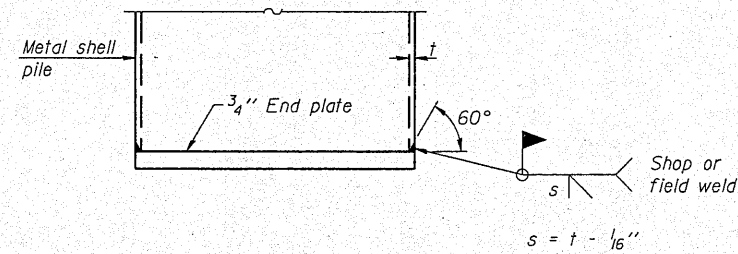
METAL SHELL PILE TABLE

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

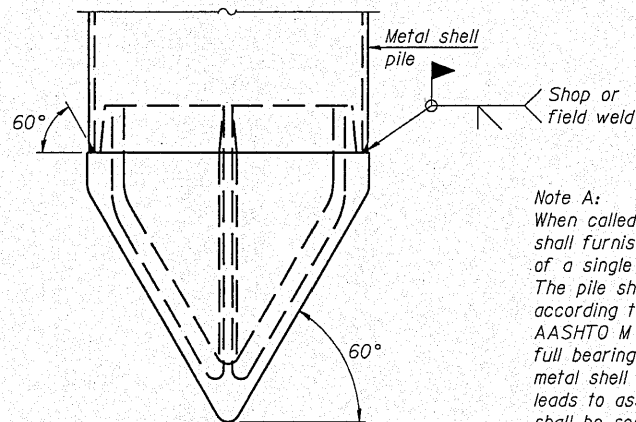


Notes:
The $\frac{1}{8}$ " x $\frac{1}{2}$ " min. fill bar may be constructed of 2 bars with a $\frac{1}{8}$ " max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



END PLATE ATTACHMENT



Note A:
When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.

METAL SHELL PILE SHOE ATTACHMENT

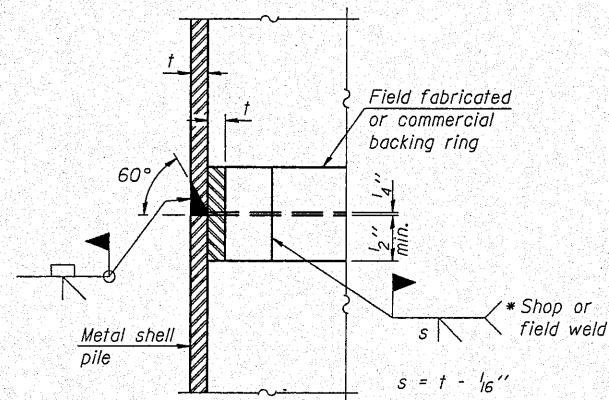
(See Note A)



DESIGNED - BAS
CHECKED - KEF
DRAWN - SGM
CHECKED - BAS

F-MS

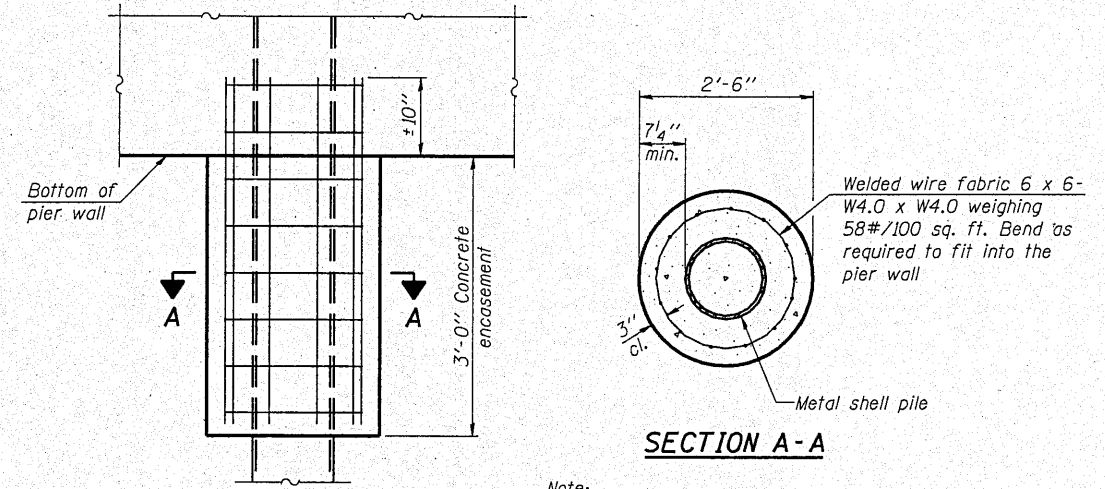
11-1-09



COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.

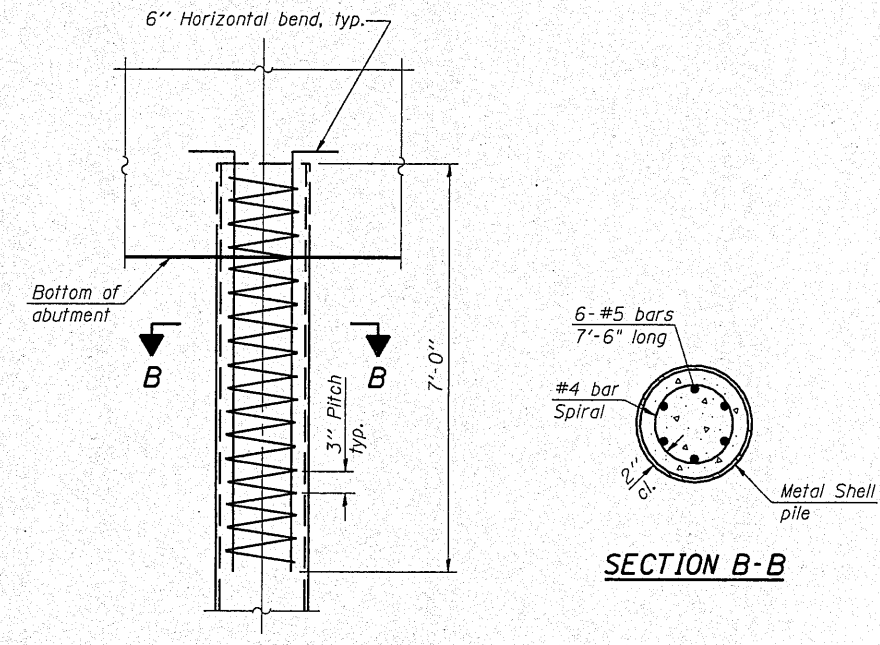
Note:
The metal shell piles shall be according to ASTM A 252 Grade 3.



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

ELEVATION

CONCRETE ENCASEMENT AT PIERS



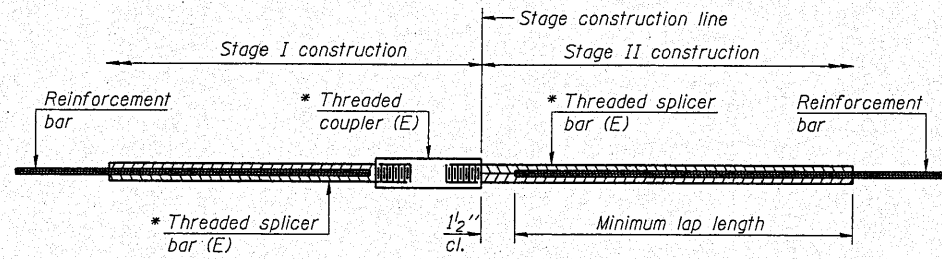
ELEVATION

METAL SHELL REINFORCEMENT AT ABUTMENTS

METAL SHELL PILE DETAILS
STRUCTURE NO. 036-0070

SHEET NO. 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	657	(116-C)BR-1	HENDERSON	56	34
			CONTRACT NO. 68761		
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

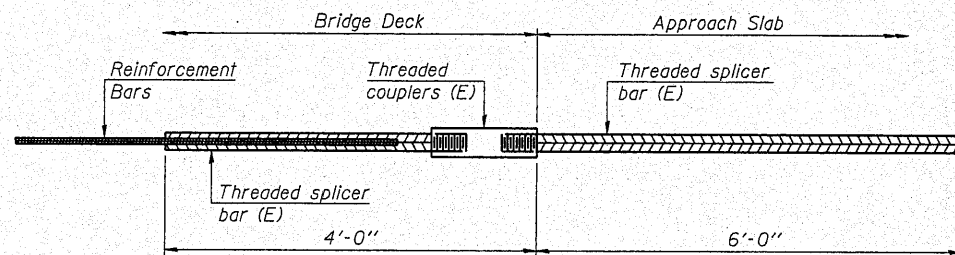
Bar size to be spliced	Minimum Lap Lengths			
	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

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

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

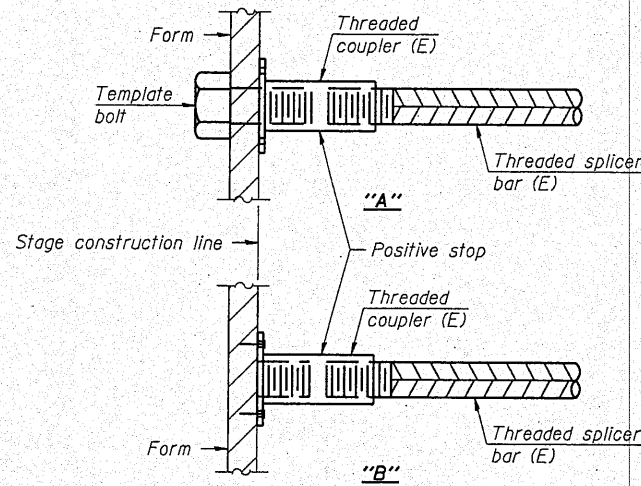
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	383	Table 3
Approach Slab	#4	50	Table 4
Approach Slab	#5	172	Table 3
Diaphragm	#6	16	Table 4
Abutments	#7	20	Table 4
Pier	#7	10	Table 4
Pier	#5	22	Table 4



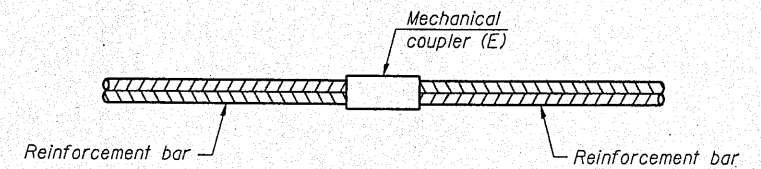
BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 72



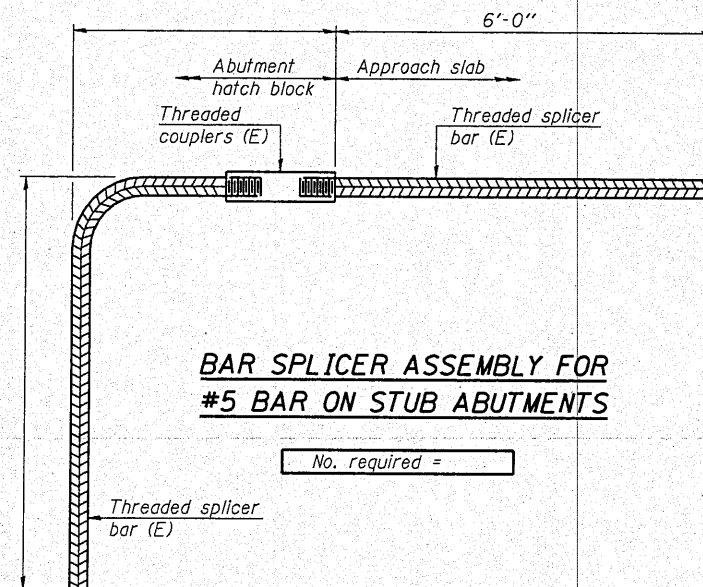
INSTALLATION AND SETTING METHODS

"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



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

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

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 036-0070**



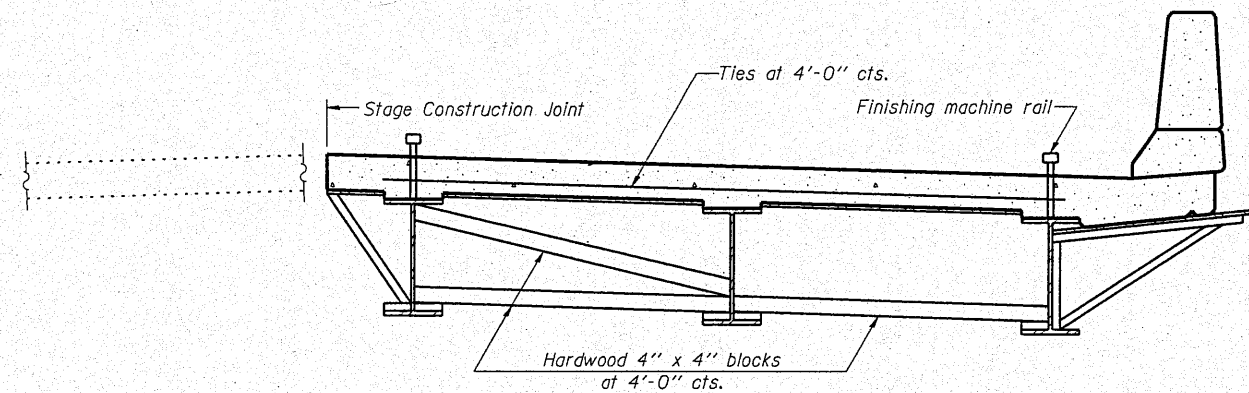
DESIGNED - BAS
CHECKED - KEF
DRAWN - SGM
CHECKED - BAS

BSD-1

11-1-09

SHEET NO. 18 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	657	(116-C)BR-1	HENDERSON	56	35
CONTRACT NO. 68761					
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



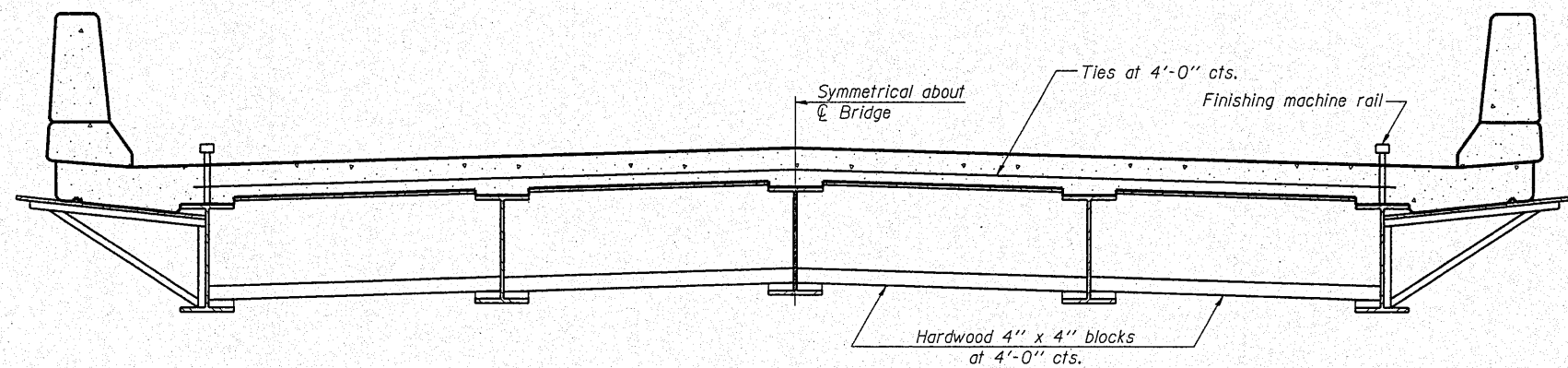
**FORM BRACES FOR
STAGE CONSTRUCTION**

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
STANDARD CONSTRUCTION**



DESIGNED - BAS
CHECKED - KEF
DRAWN - SGM
CHECKED - BAS

SB-1

11-1-09

**CANTILEVER FORMING BRACKETS
FOR SUPERSTRUCTURES WITH
W27 BEAMS AND SMALLER
STRUCTURE NO. 036-0070**

SHEET NO.	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19	657	(116-C)BR-1	HENDERSON	56	36
22 SHEETS			CONTRACT NO. 68761		
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Page 1 of 2
Date 5/28/09

ROUTE IL 164 DESCRIPTION Bridge Over Smith Creek
SECT. (116-C)BR-1 STRUCT. NO. 036-0070 DRILLED BY B. Williamson
COUNTY Henderson LOCATION Rozetta Township S. 19, TWP. 11N, RNG. 4W

Boring No.	Station	Offset	Surface Elev.	D	B	Qu	W	Surface Water Elev.	D	B	Qu	W
B-1 W. Abutment	149+93	14.00ft RT	576.50 ft	DEPTH	LOWS	tsf	%		DEPTH	LOWS	tsf	%
			575.70	4	B	19.4		551.00	5	B	16.2	
				2		1.80		Very stiff to stiff gray SILTY LOAM, moist	6		2.26	
				2	B	21.5			7			
				2		0.72			4	B	20.8	
				2					6		2.25	
			570.50	2	B	25.7			7			
				2		0.60			4	B	20.8	
				4					6		2.25	
				0	B	29.2			7			
				1		0.33			4	B	20.8	
				2					6		2.25	
			565.50	3					7			
				2					4	B	20.8	
				1					6		2.25	
				2					7			
				0	B	29.2			4	B	20.8	
				1		0.33			6		2.25	
				2					7			
			560.50	3	B	19.6			4	P	23.3	
				4		2.21			7		1.5	
				5					6			
				3	B	17.1			4	B	21.7	
				3		2.13			3		1.80	
				3					4			
			556.50	3	B	12.1			2	B	21.7	
				6		5.33			3		1.80	
				10					4			
				7	B	14.9			1	B	19.1	
				11		3.03			3		1.53	
				13					5			

SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test Stations, Depths, Offset, and Elevations are in Feet

ILLINOIS DEPARTMENT OF TRANSPORTATION
Testing Service Corporation
STRUCTURE BORING LOG

Page 2 of 2
Date 5/28/09

STRUCTURE NO. 036-0070 ROUTE IL 164
SECTION (116-C)BR-1 COUNTY Henderson
STRUCTURE NO. 036-0070 ROUTE IL 164
SECTION (116-C)BR-1 COUNTY Henderson

Boring No.	Station	Offset	Surface Elev.	D	B	Qu	W	Surface Water Elev.	D	B	Qu	W
B-1 W. Abutment	149+93	14.00ft RT	526.50 ft	DEPTH	LOWS	tsf	%		DEPTH	LOWS	tsf	%
			526.50					501.50				
								Very stiff gray SILTY LOAM, moist				
								499.50				
								Medium dense gray fine SAND, saturated				
				3	P	19.4			4			
				3		1.5			10			
				4					11			
				3	B	22.6						
				3		1.74			3		24.8	
				5					8			
				5					10			
				2	B	22.6						
				3		1.74			3		24.8	
				5					8			
				5					10			
				3	B	25.7						
				3		2.10			4	P	26.1	
				6					10		3.0	
				6					9			
				2	B	23.5						
				4		2.13						
				6								
				2	B	22.1						
				2		2.10						
				4								

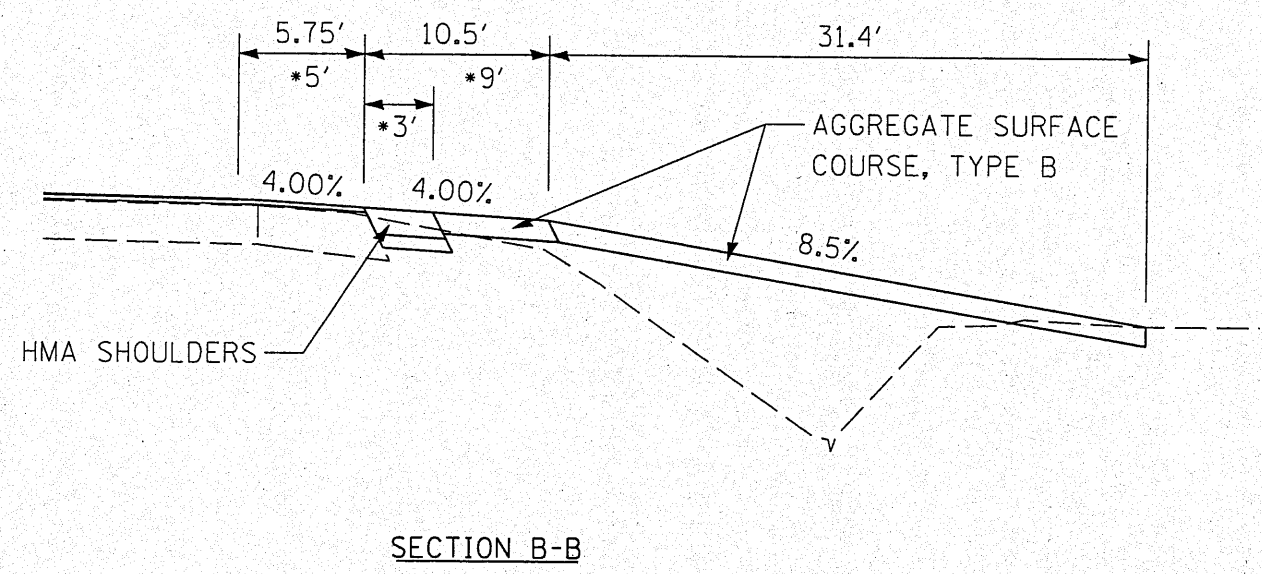
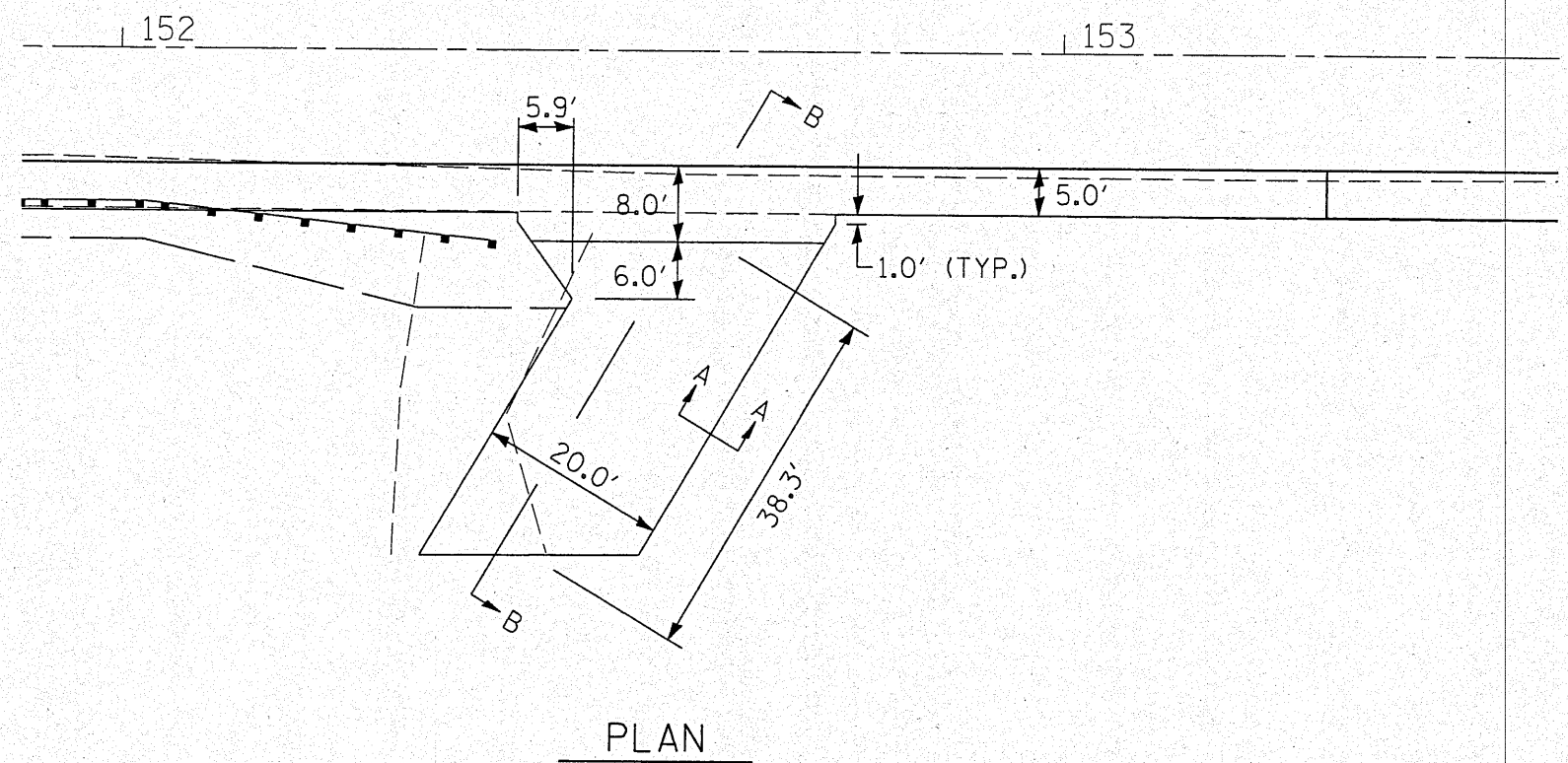
SPT. (N) = Sum of last two blow values in sample. (Qu) B=Bulge S=Shear P=Penetration Test Stations, Depths, Offset, and Elevations are in Feet



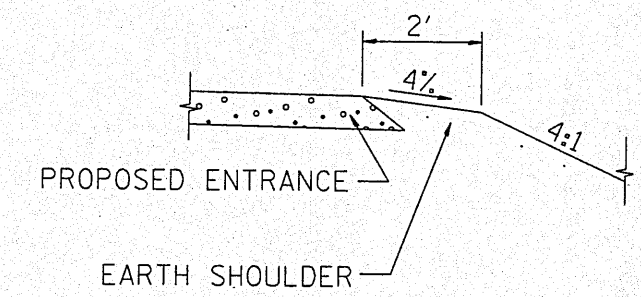
DESIGNED - BAS
CHECKED - KEF
DRAWN - SGM
CHECKED - BAS

SOIL BORINGS
STRUCTURE NO. 036-0070

SHEET NO. 20 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	657	(116-C)BR-1	HENDERSON	56	37
			CONTRACT NO. 68761		
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					



* DISTANCES ARE PERPENDICULAR TO CENTERLINE OF IL 164.



SECTION A-A
SHOULDER TREATMENT FOR RURAL ENTRANCES

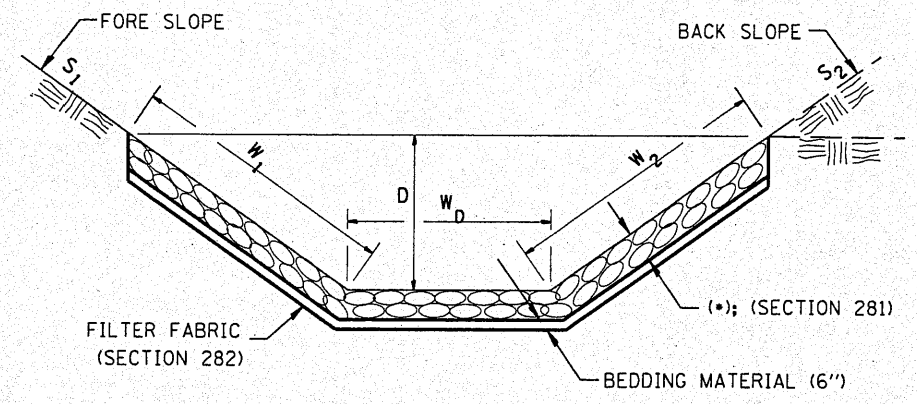
GENERAL NOTES

- ENTRANCES SHALL SLOPE AWAY FROM THE PAVEMENT AT A RATE EQUAL TO THE SHOULDER SLOPE FOR A MINIMUM DISTANCE OF 8'.
- A TAPER RATE OF 5:1 IS DESIRABLE WHEN TRANSITING FROM THE RURAL ENTRANCE WIDTH TO THE EXISTING ENTRANCE WIDTH.

Designer NOTES:

1. Designer to modify this Special Detail Sheet, as needed for inclusion in plans.
2. (*) Designer to specify pay item including material, quality, and gradation.
3. (**) Designer to specify thickness of bedding material.
4. Include District Special Provision if needed.

**CASE 1
(DITCH)**



(*)						
LOCATION	S_1	S_2	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	V:H	V:H	lin ft	lin ft	sq yds	sq yds
150+00 to 150+17 LT	1:3	1:3	14.5	17	11.8	11.8
151+20 to 151+50 LT	1:2	1:3	13	30	6.8	6.8
151+38 to 151+50 RT	1:2.5	1:3	11	12	9.7	9.7
				TOTAL	28	28

(1) WIDTH = $W_1 + W_2 + W_b$

SEE PLAN VIEW FOR AREAS
SEE PLAN VIEW FOR AREAS
SEE PLAN VIEW FOR AREAS

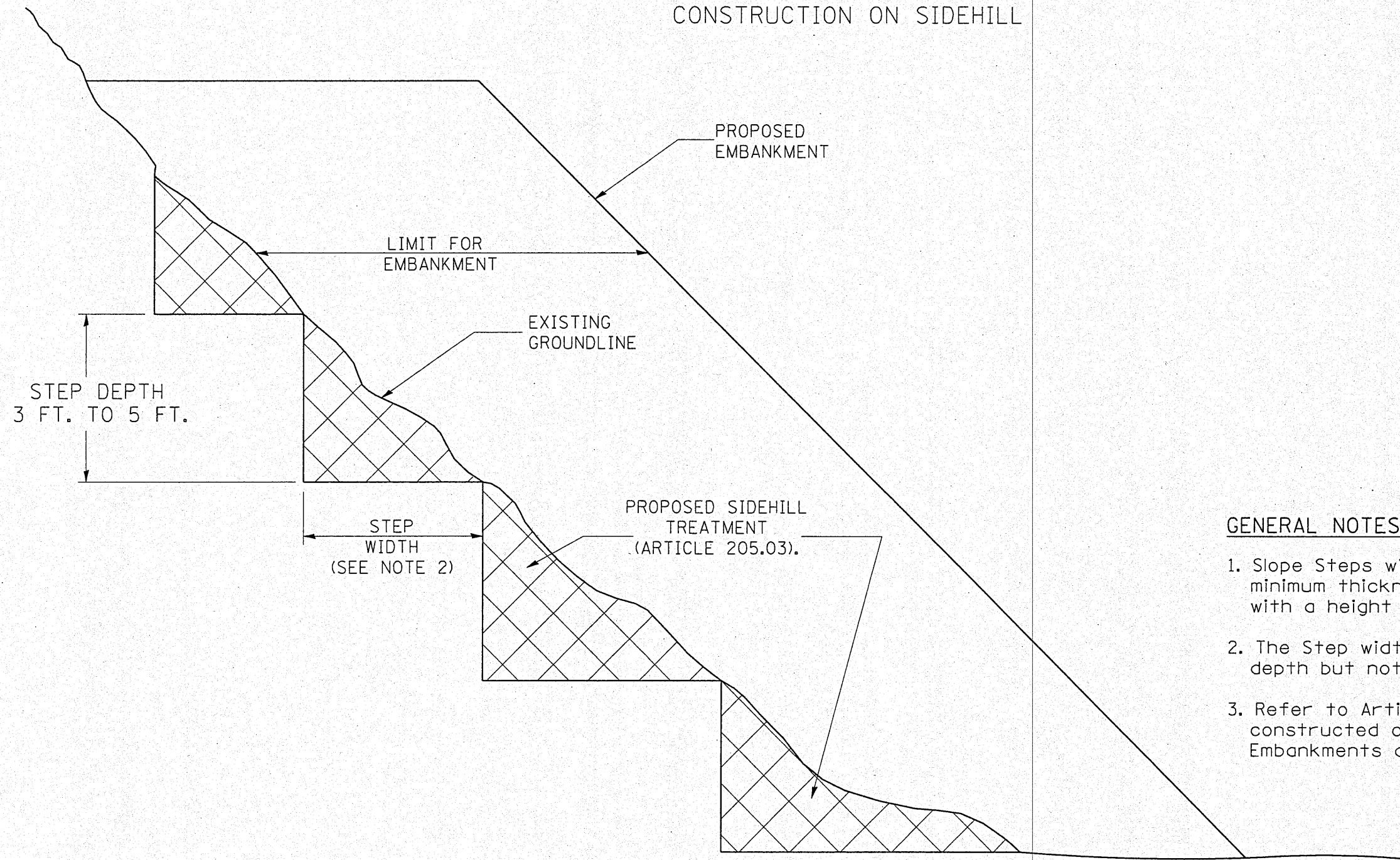
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIPRAP DITCH FOR EROSION PROTECTION
NOT TO SCALE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
657	1116-C/BR-1	HENDERSON	56	41
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68761	

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.

DESIGNER NOTE:

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

REPLACEMENT MATERIAL:



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

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**

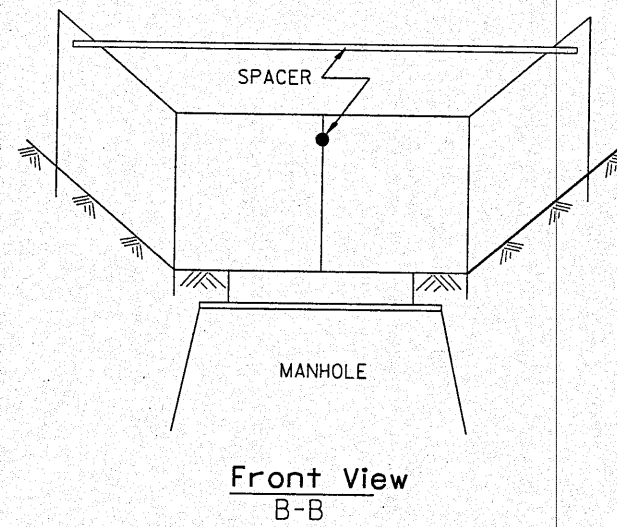
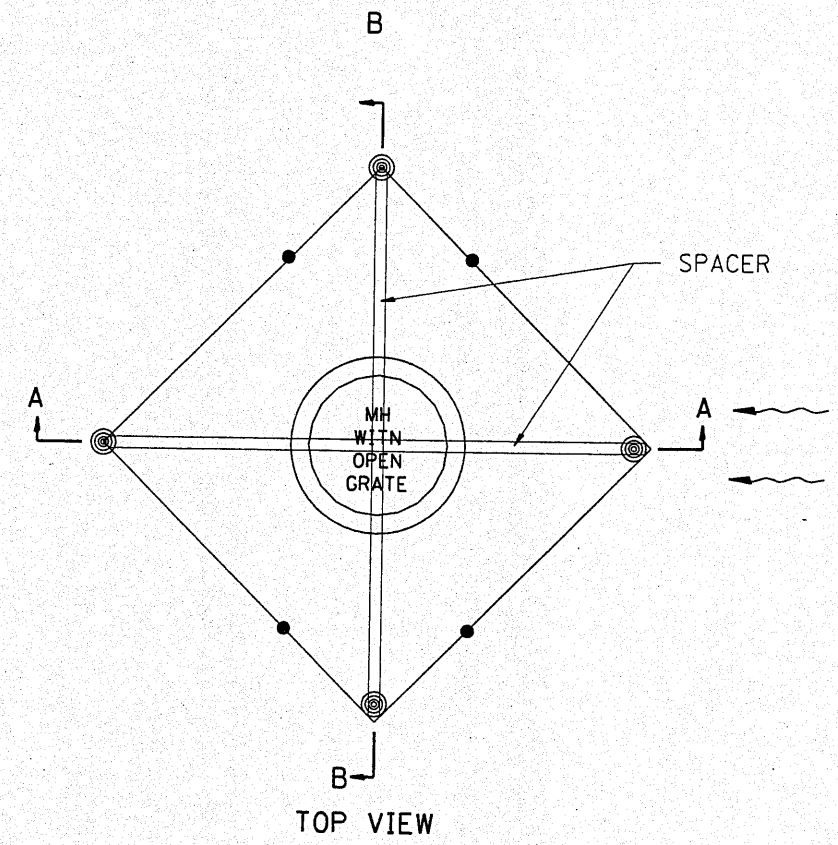
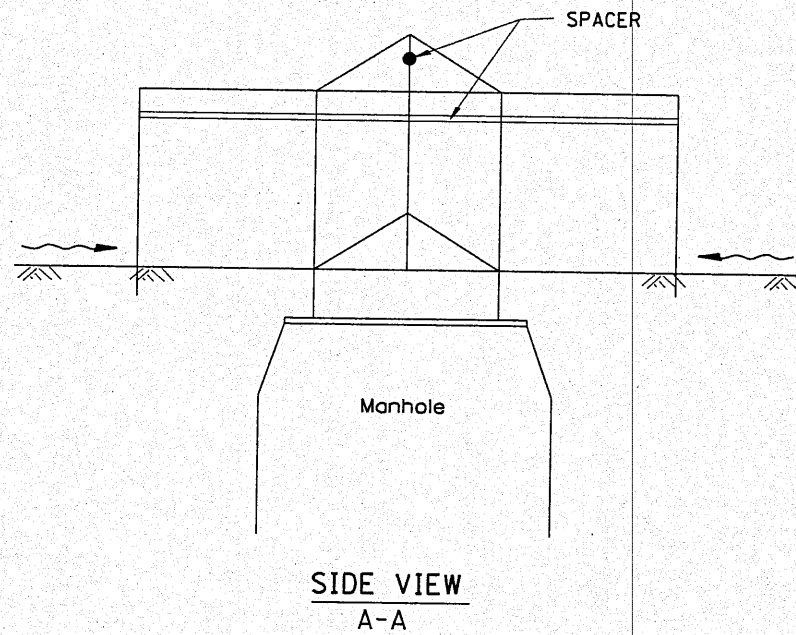
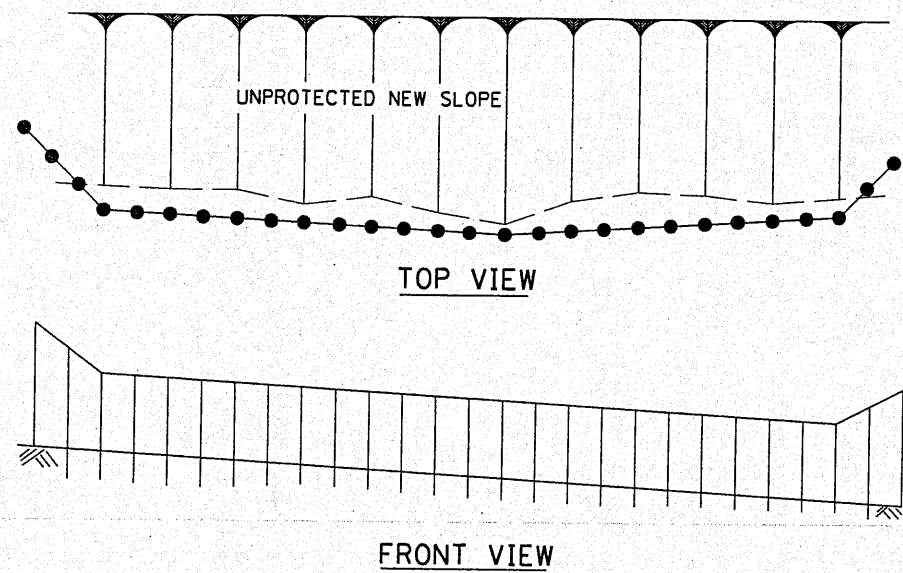
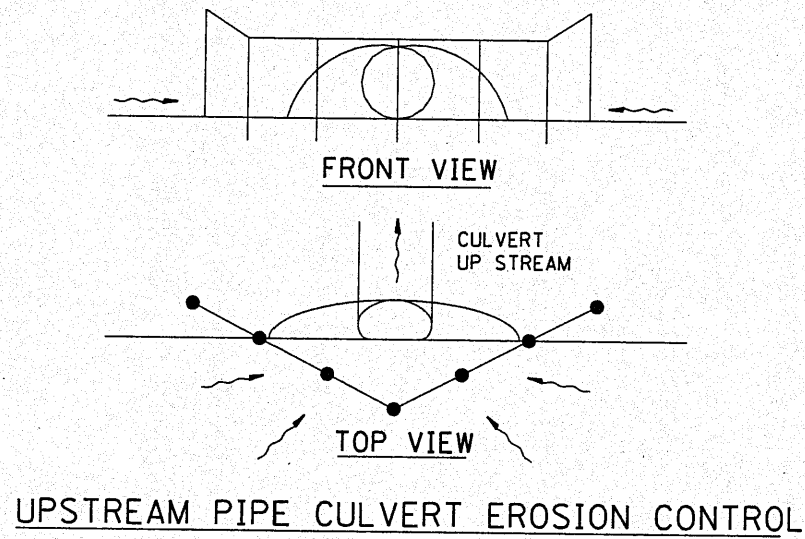
SLOPE STEPS DETAIL

NOT TO SCALE

CADD STD. 205001-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
657	(116-C)BR-1	HENDERSON	56	42
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 68761	

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**

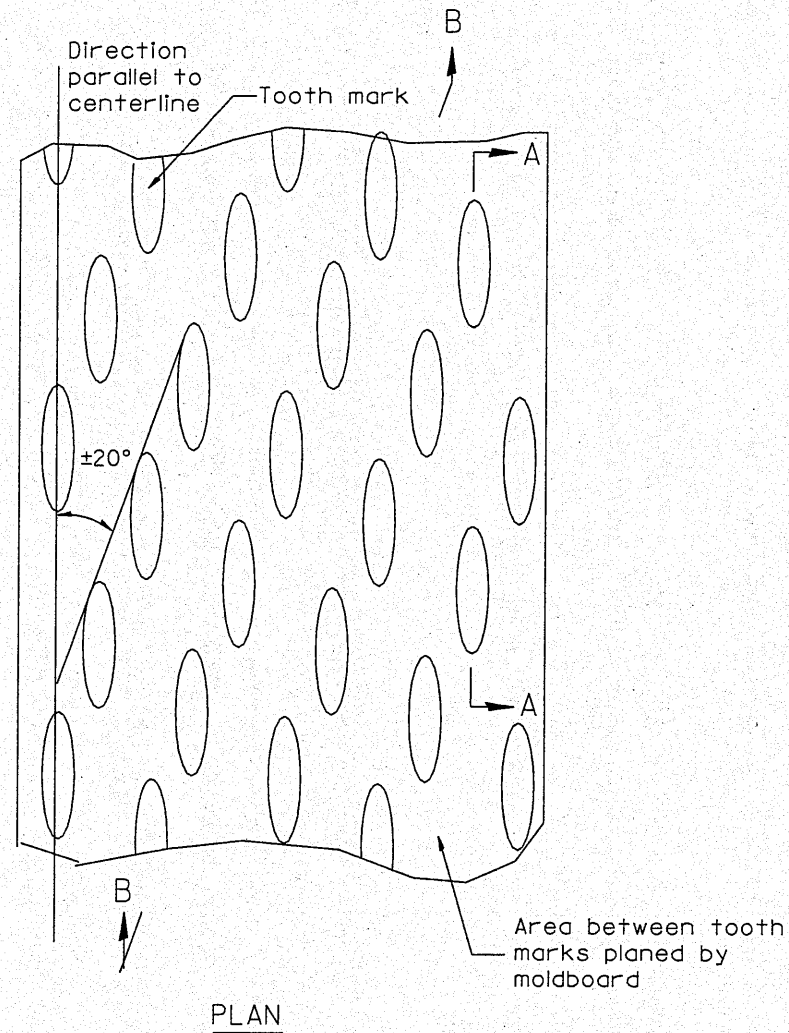
TYPICAL APPLICATION OF SILT FILTER FENCE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
657	(116-C)BR-1	HENDERSON	56	43
CONTRACT NO. 68761				

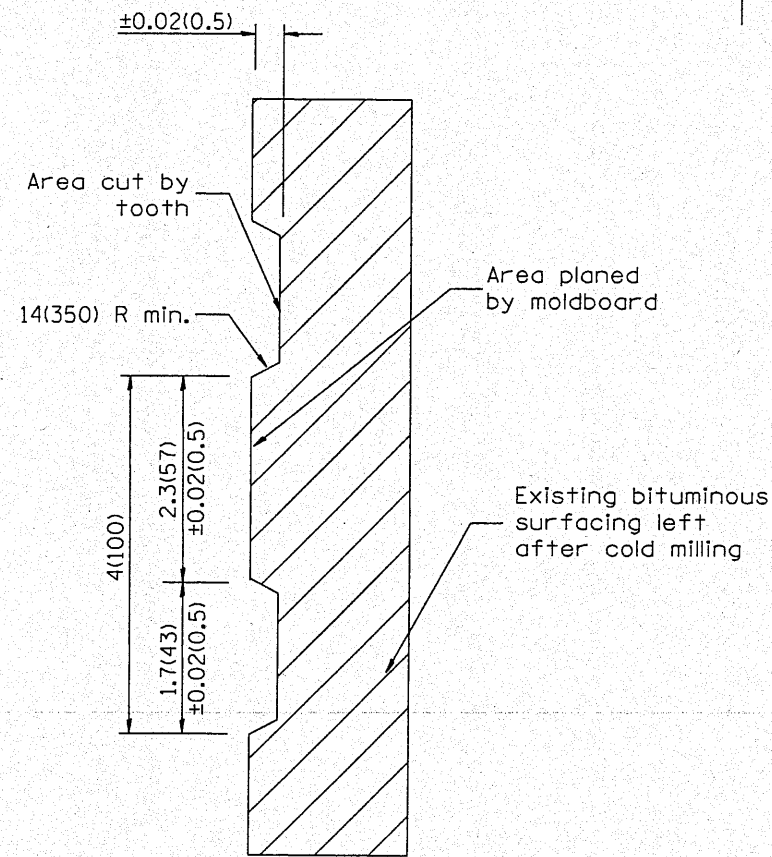
NOT TO SCALE

CADD STD. 280001-D4

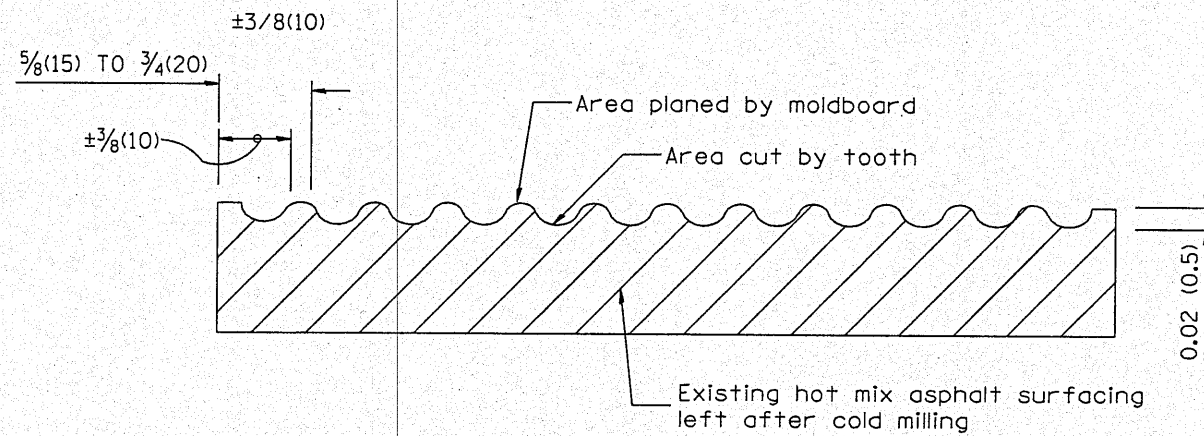
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT



PLAN



SECTION A-A



SECTION B-B PROJECTED
PERPENDICULAR TO CENTERLINE

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.

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

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

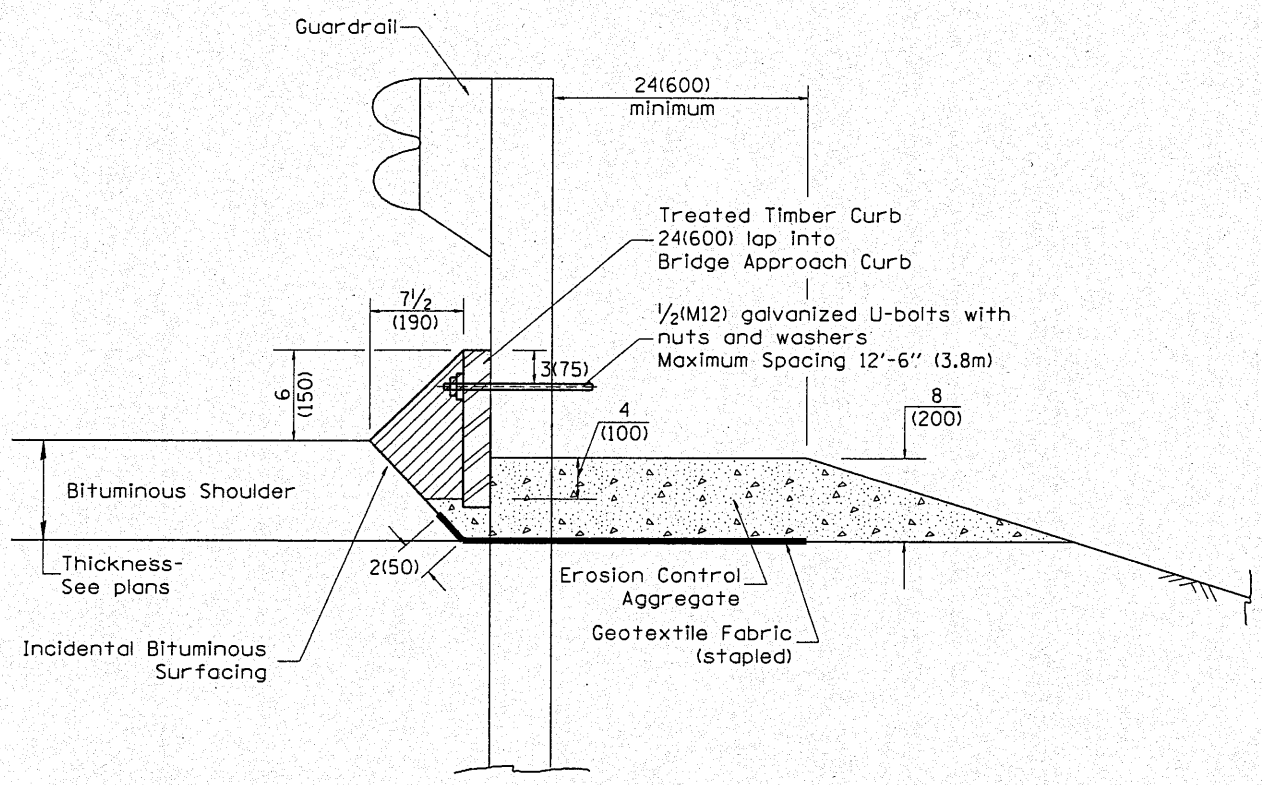
HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

NOT TO SCALE

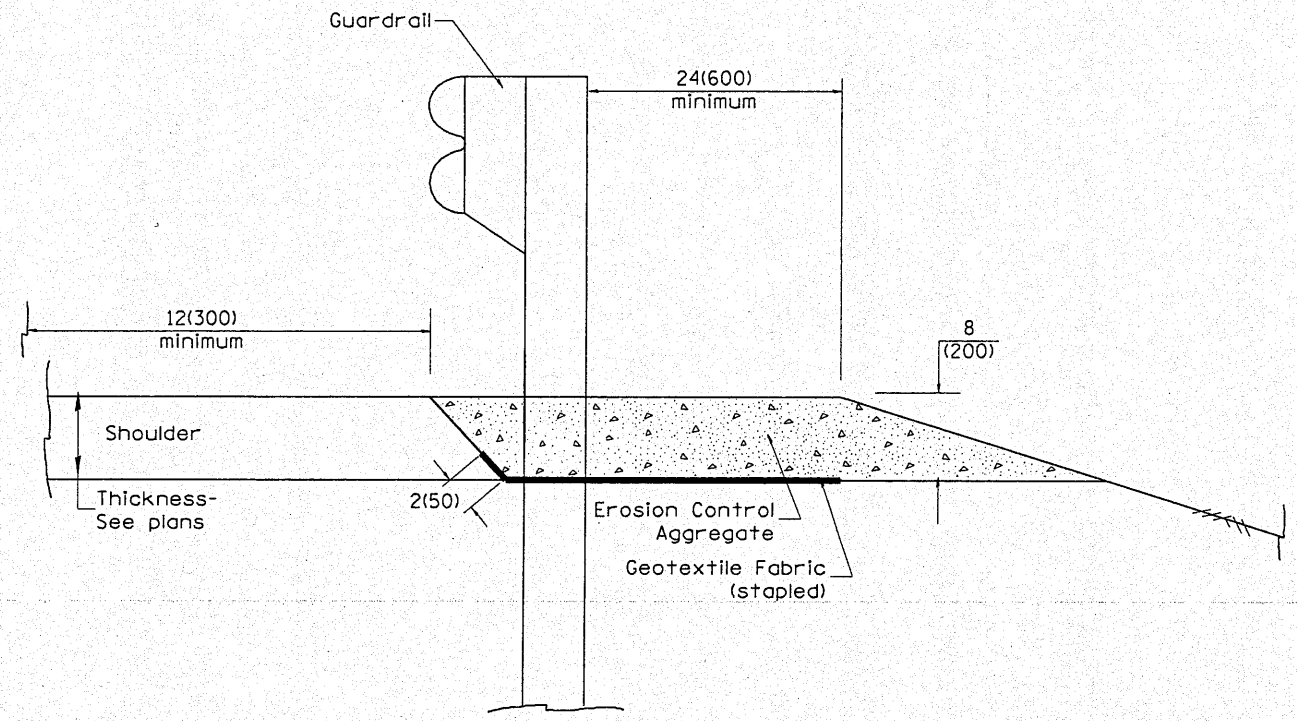
CADD STD. 440001-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
657	1116-CIBR-1	HENDERSON	56	44
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68761	

1. Use EROSION CONTROL CURB at guardrail installations where grades are equal to or greater than 1% and at inlets. (Include District Special Provision)
 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.

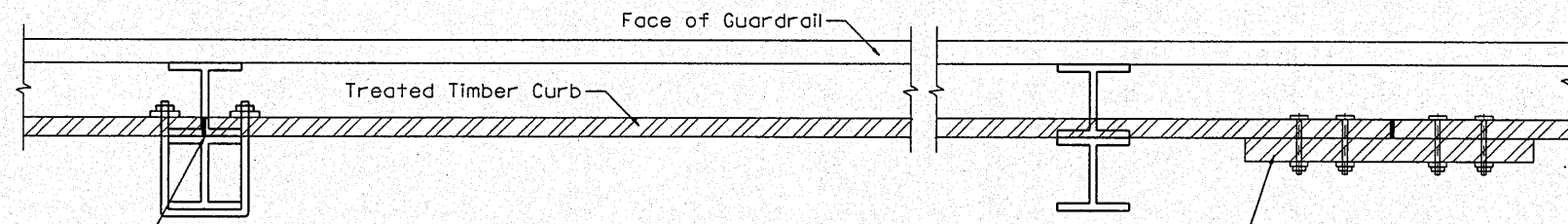
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL EROSION CONTROL TREATMENTS

NOT TO SCALE

SHT. 1 OF 2
CADD STD. 630101-D4

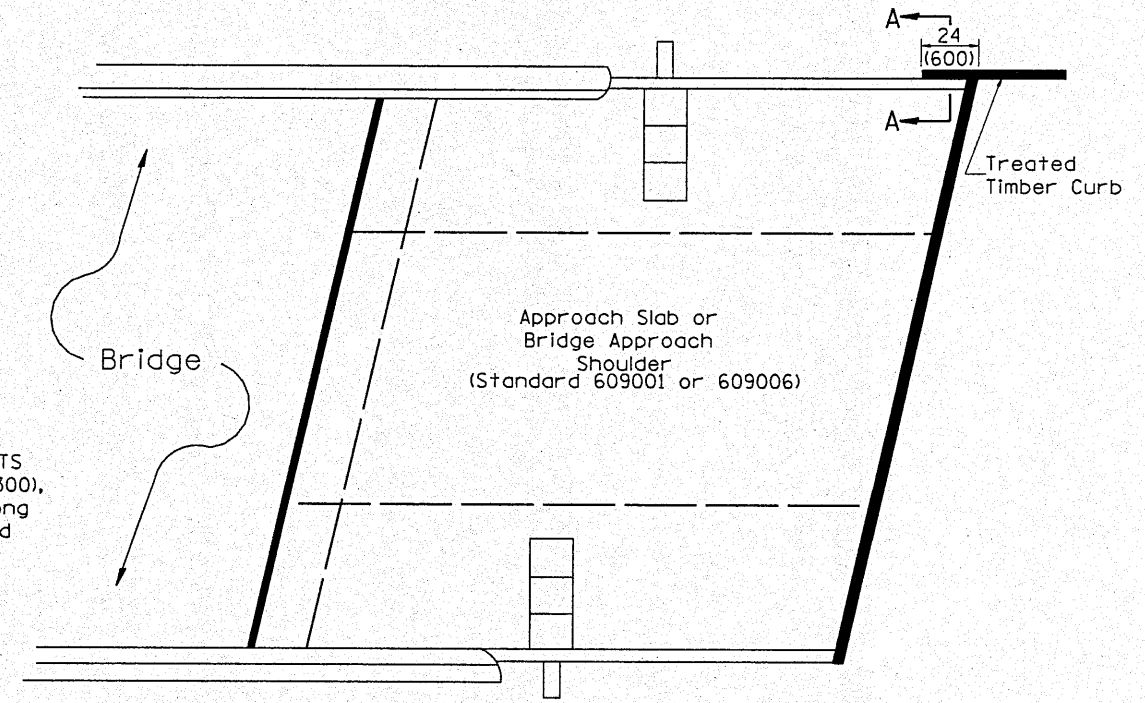
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
657	(116-C)BR-1	HENDERSON	56	45
CONTRACT NO. 68761			FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT	



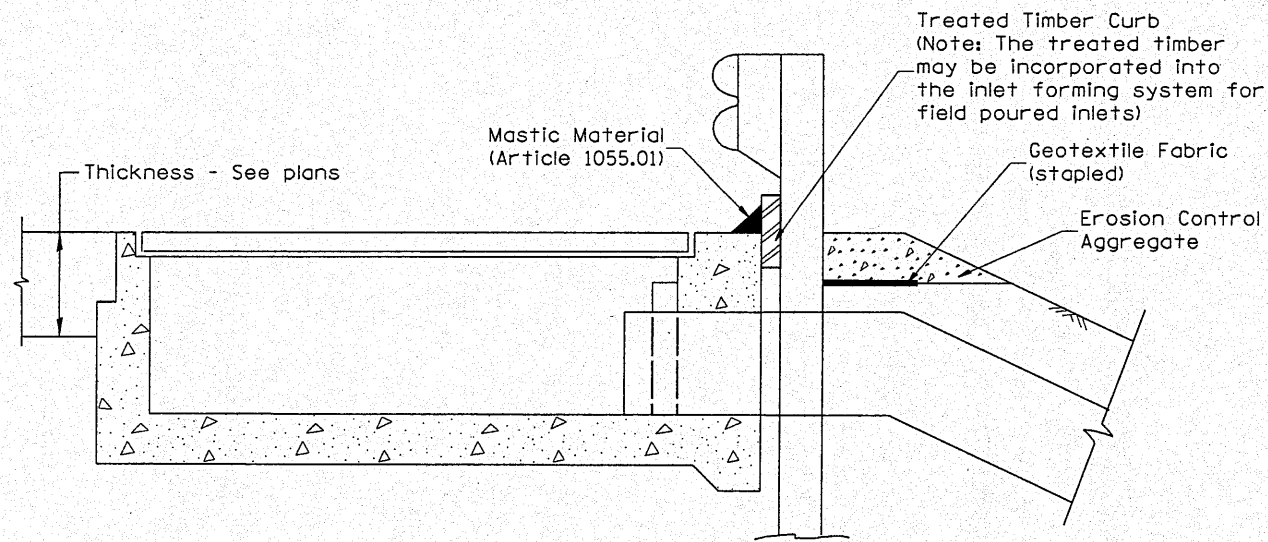
SPLICE LOCATED AT GUARDRAIL POST
1/2(M12) galvanized U-bolt with
nut & washer

SPLICE LOCATED BETWEEN GUARDRAIL POSTS
treated timber splice plate 2x12 (50x300),
actual size 1 1/2x1 1/2 (40x290), 24(600) long
with 8 evenly spaced 1/2(M12) galvanized
bolts with nuts & washers.

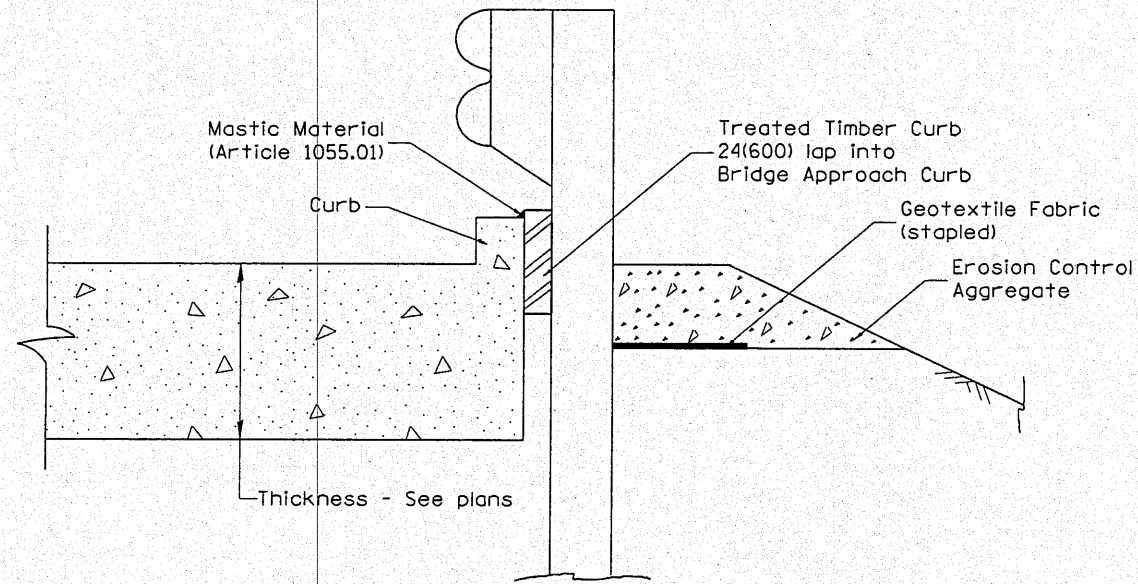
DETAIL A
(Typical Treated Timber Splices)



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.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

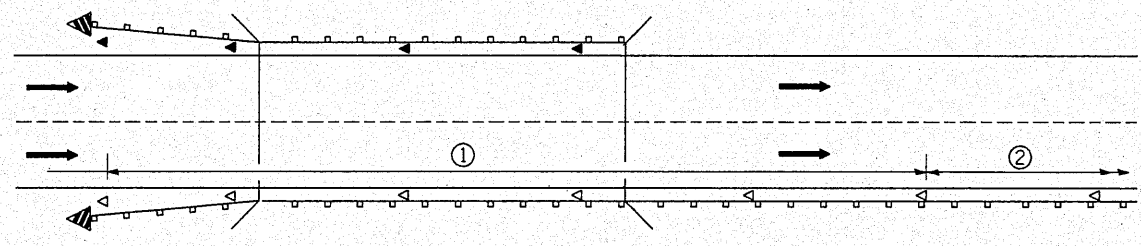
GUARDRAIL EROSION CONTROL TREATMENTS

NOT TO SCALE

SHT. 2 OF 2
CADD STD. 630101-D4

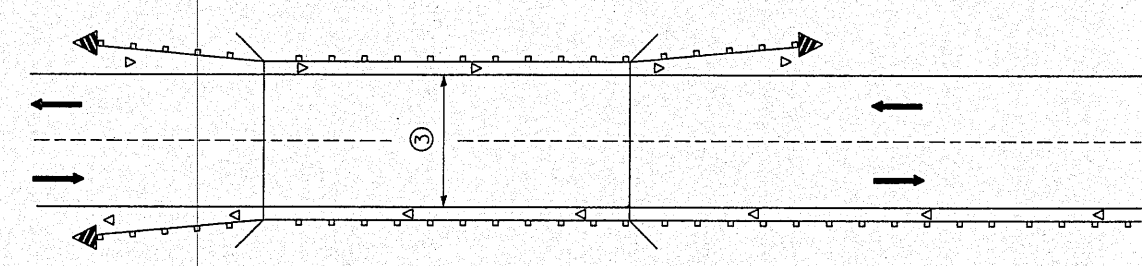
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
657	(116-CIBR-1)	HENDERSON	56	46
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68761	

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



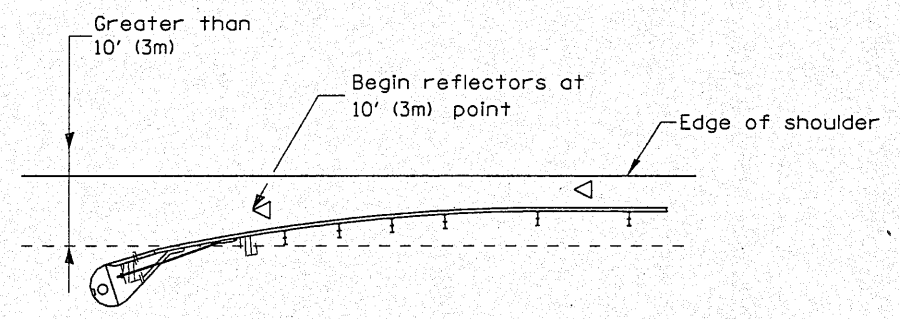
- ③ Bidirectional silver/silver should be used in lieu of monodirectional silver on both sides of two-lane bridges where the bridge pavement is less than 24 (610) wider than the pavement approaching the bridge.

TWO-WAY TRAFFIC

GUARDRAIL / BARRIER WALL / BRIDGE RAIL REFLECTORS

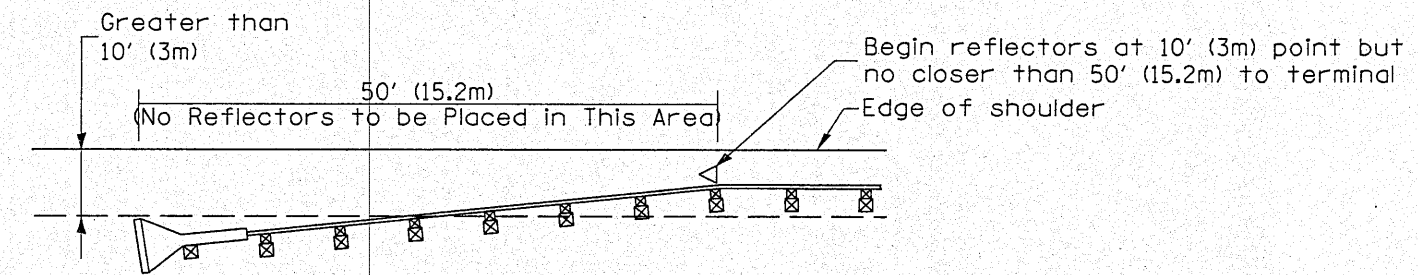
LEGEND

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



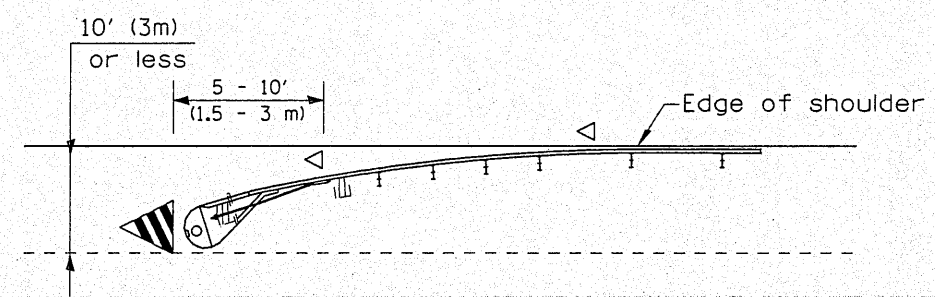
NOTE: Omit terminal marker when terminal over 10' (3m) from edge of paved shoulder or break point of unpaved shoulder, or when terminal buried in backslope.

Traffic Barrier Terminal Type(*) and/or Turned-Down Terminal
 [Terminal over 10' (3m) from edge of shoulder]
 •See Plans for Type

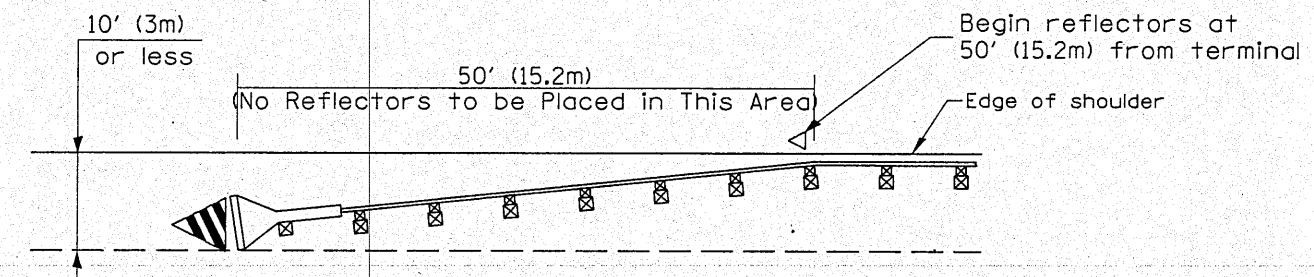


NOTE: Omit terminal marker when terminal over 10' from edge of paved shoulder or break point of unpaved shoulder.

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



Traffic Barrier Terminal Type(*) and/or Turned-Down Terminal
 [Terminal over 10' (3m) or less from edge of shoulder]
 •See Plans for Type



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**

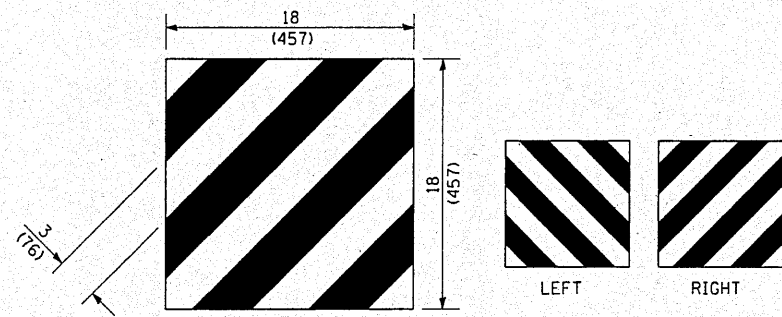
GUARDRAIL AND BARRIER WALL DELINEATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
657	(116-C)BR-1	HENDERSON	56	47
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	

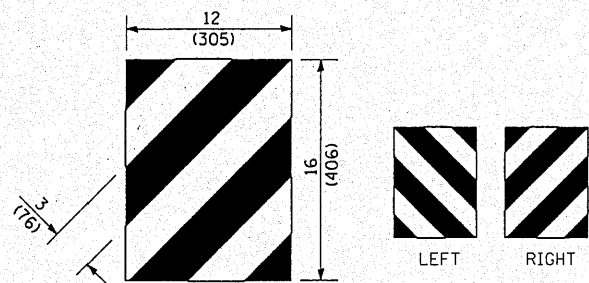
NOT TO SCALE

SHT. 1 OF 3
CADD STD. 635101-D4

CONTRACT NO. 68761



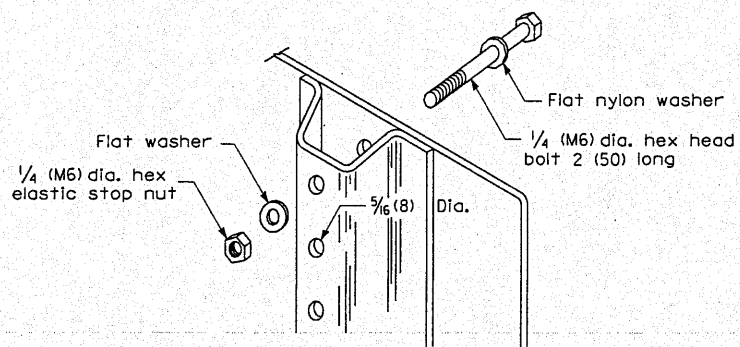
For Traffic Barrier Terminal Type 1 (Special)



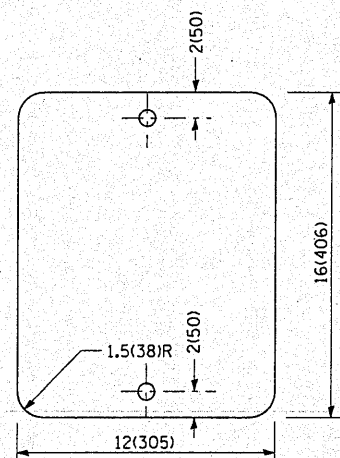
For Traffic Barrier Terminal Type (*) and Post Mount
• See Plans for Type

TERMINAL MARKER DETAILS

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

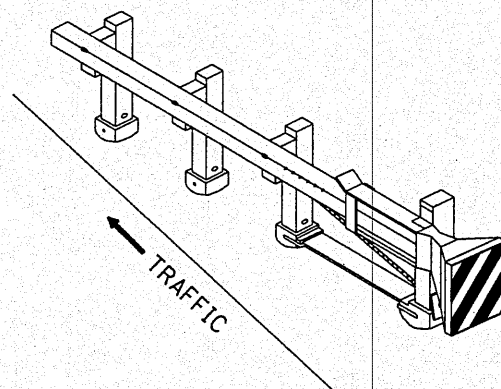


DETAIL OF MOUNTING TERMINAL MARKER TO POST

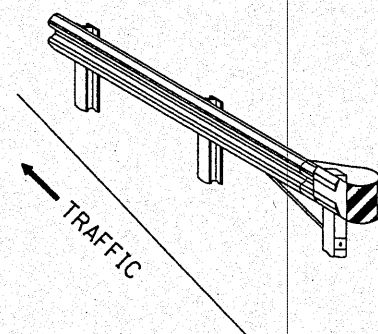


STANDARD TERMINAL MARKER

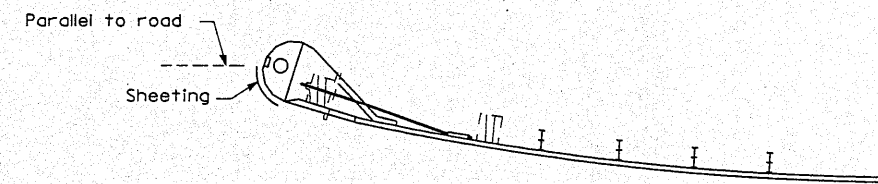
POST MOUNTED TERMINAL MARKER ASSEMBLY



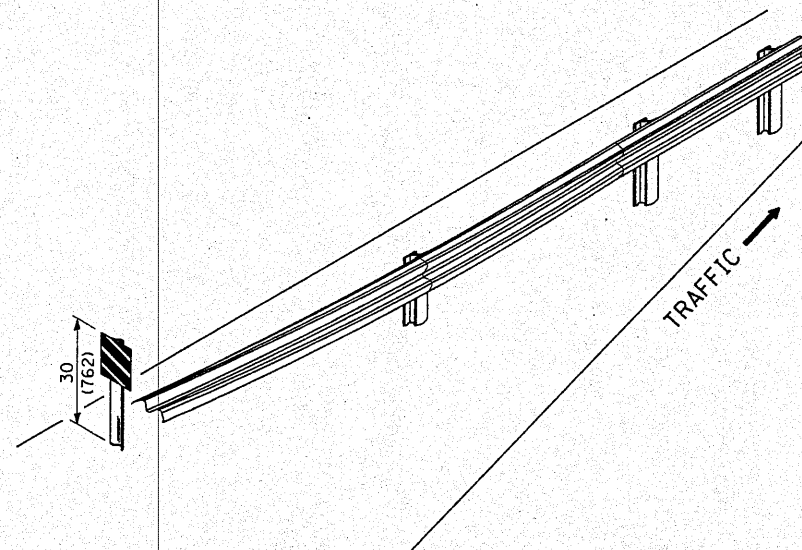
Standard Treatment - Direct Applied Sheeting
Traffic Barrier Terminal Type 1 (Special)



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



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



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

TERMINAL MARKER TREATMENTS

GENERAL NOTES

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

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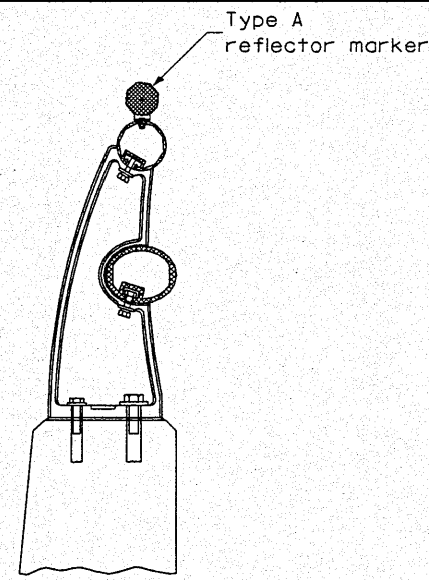
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GUARDRAIL AND BARRIER WALL DELINEATION

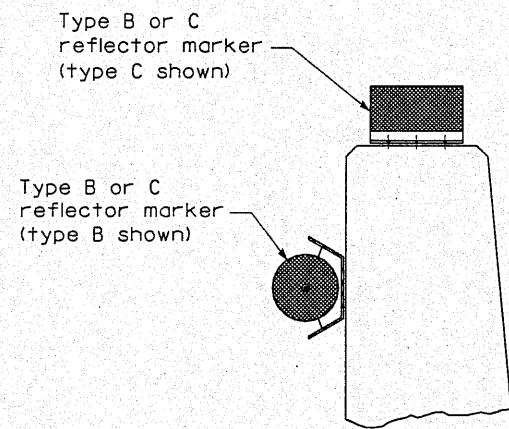
NOT TO SCALE

SHT. 2 OF 3
CADD STD. 635101-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
657	(116-C)BR-1	HENDERSON	56	48
FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT			CONTRACT NO. 68761	

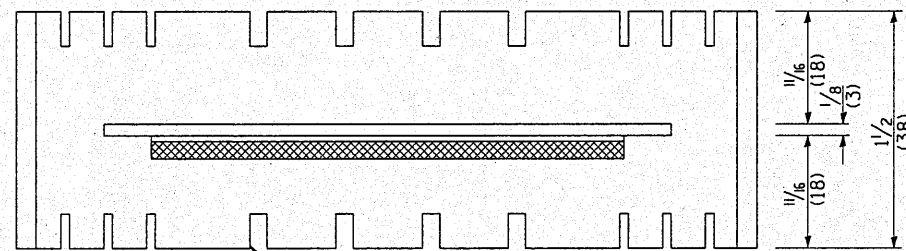


TYPICAL MOUNTING DETAIL FOR BRIDGE RAIL REFLECTOR

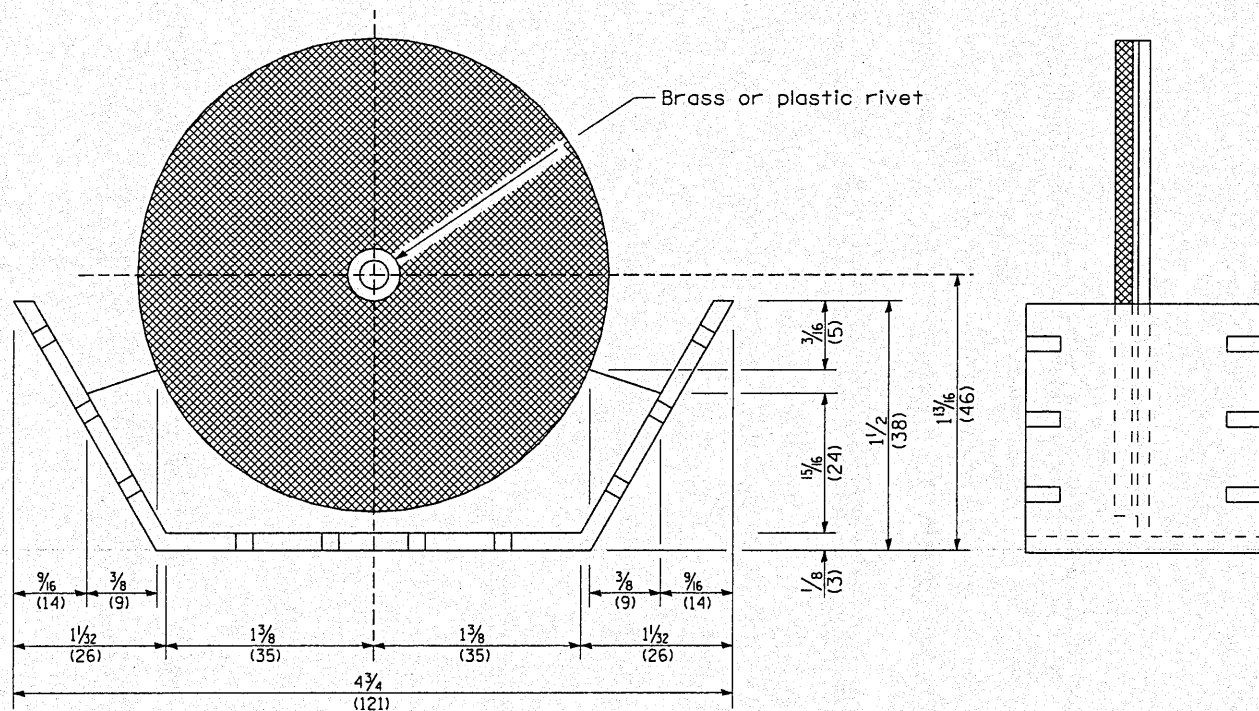


TYPICAL MOUNTING DETAIL FOR BARRIER WALL REFLECTOR

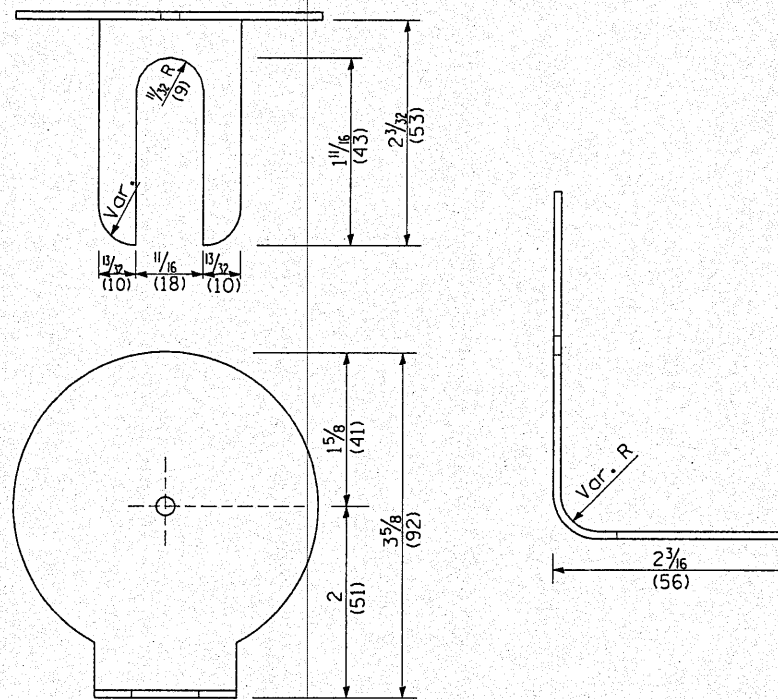
REFLECTOR MOUNTING



Adhesive weep slots or holes equally spaced on both sides

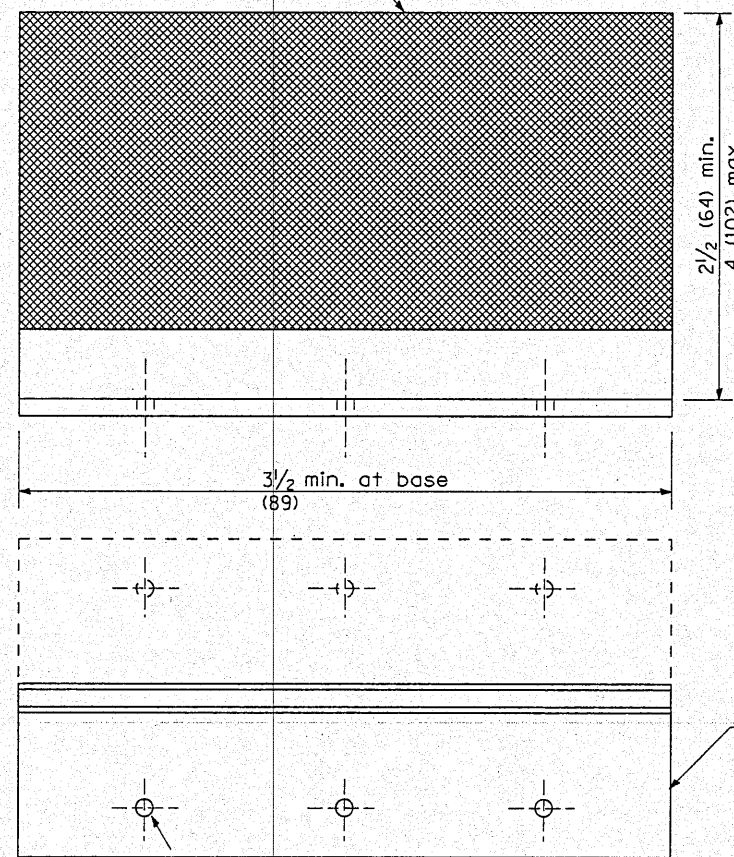


REFLECTOR MARKER TYPE B



REFLECTOR MARKER TYPE A

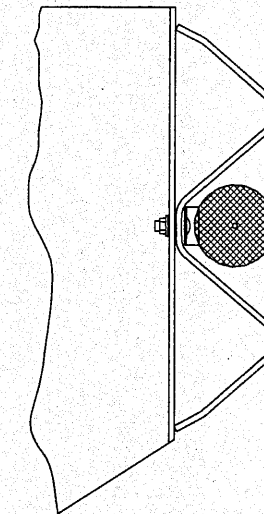
Min. reflective area 6 1/2 sq. in. (4,194 mm²) each side. May be rectangular or slight trapezoid.



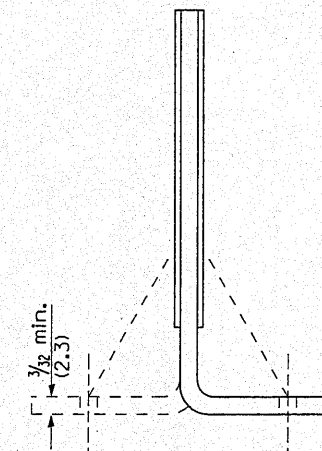
REFLECTOR MARKER TYPE C

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

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



TYPICAL GUARDRAIL MOUNTING WITH REFLECTOR MARKER TYPE A



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

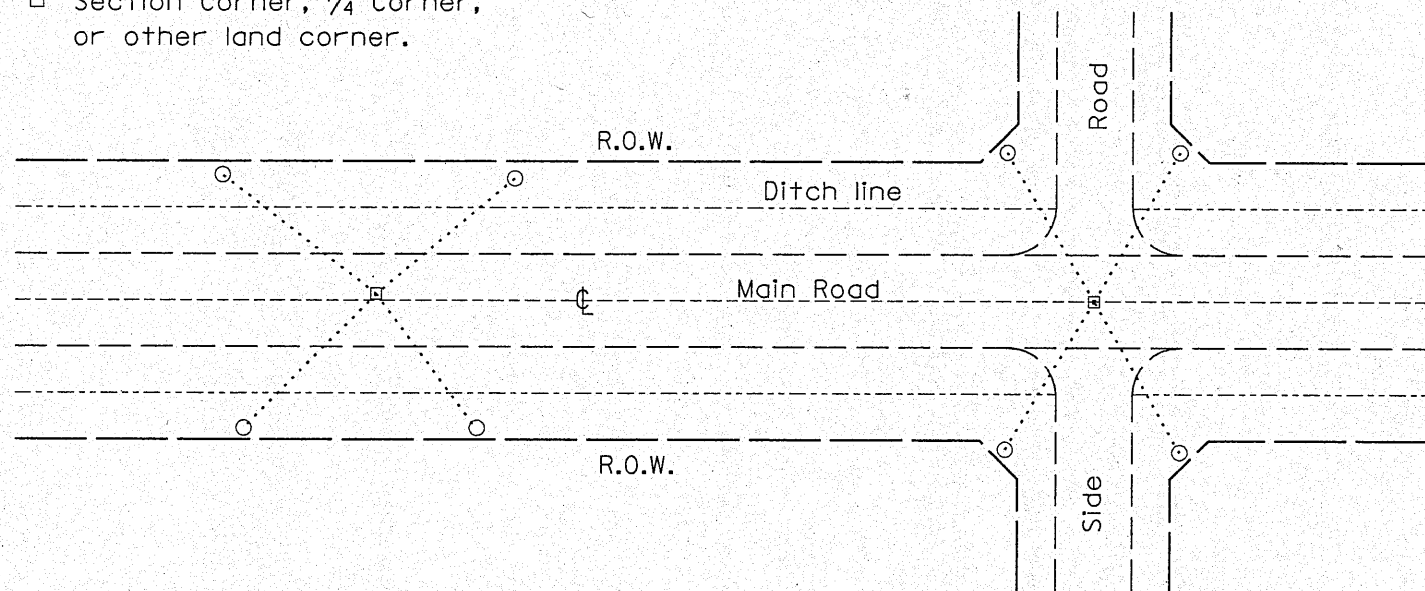
REFLECTORS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
657	1116-C18R-1	HENDERSON	56	49
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
			CONTRACT NO. 68761	

PERMANENT SURVEY TIES

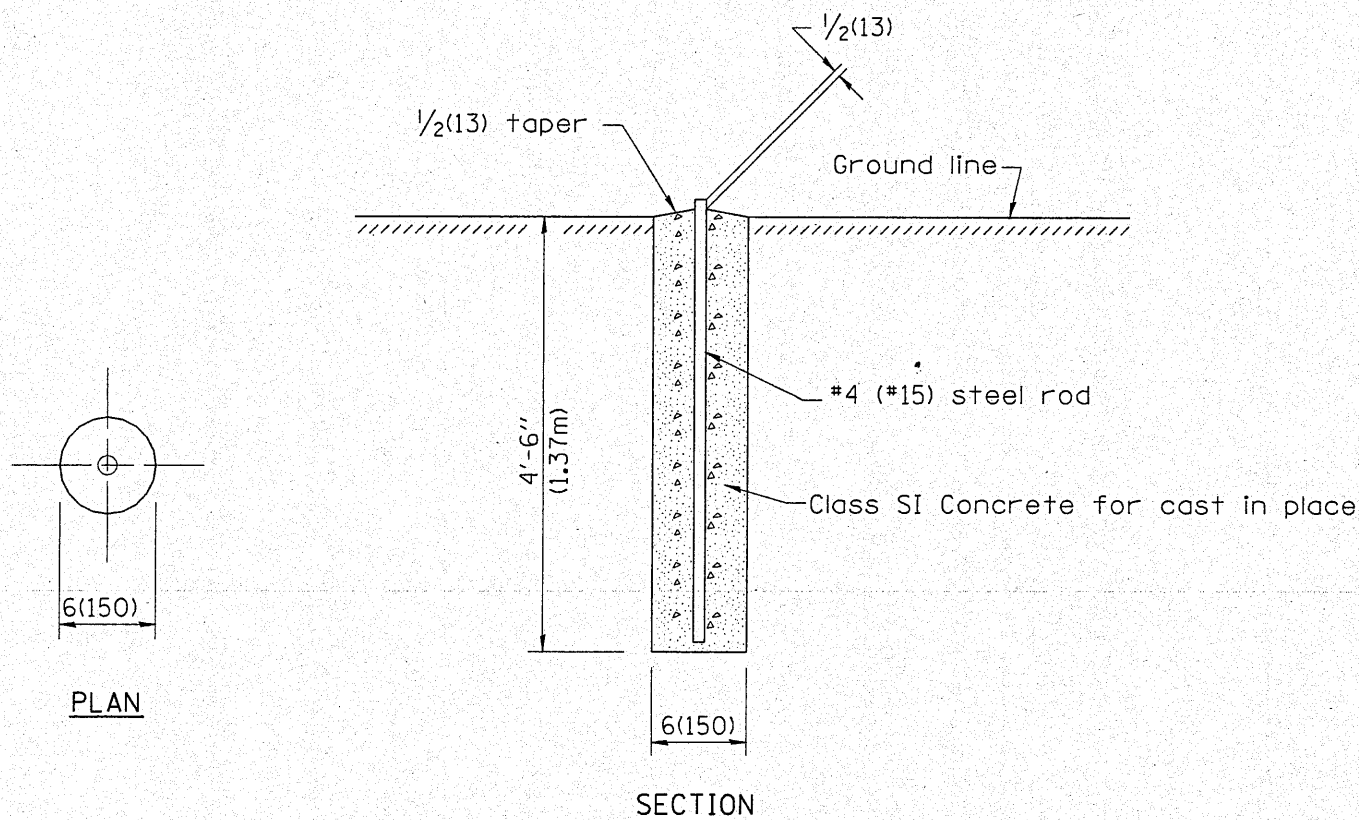
- Permanent Survey Tie
- Section Corner, 1/4 Corner, or other land corner.



TYPICAL APPLICATION

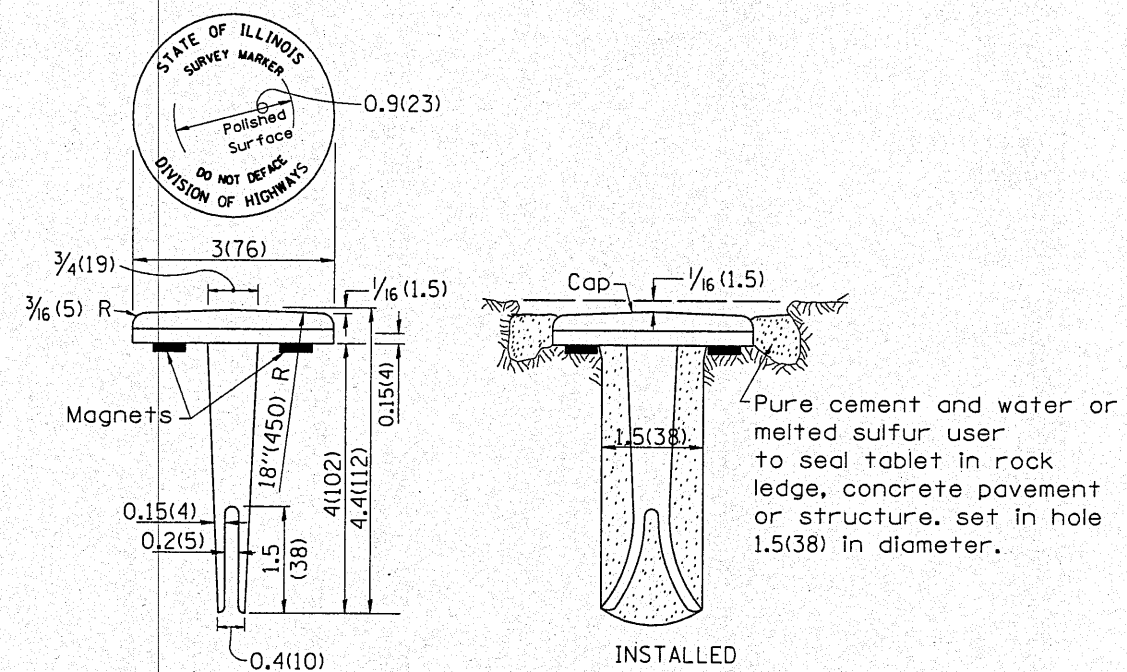
GENERAL NOTES

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 IDOT Chief of Surveys.



DESIGNER NOTES:
 1. ADD DISTRICT SPECIAL PROVISION.
 2. MODIFIES STATE STD 667101 TO CALL FOR "BRONZE" TABLET.

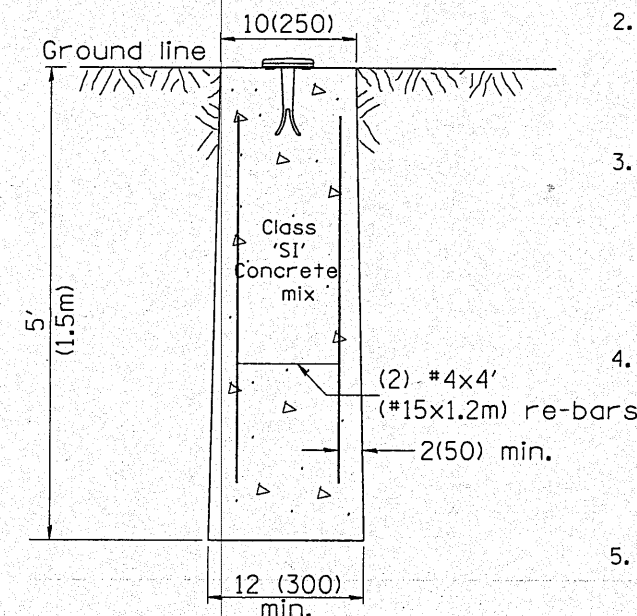
PERMANENT SURVEY MARKERS



BRONZE TABLET - No Scale 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 and P.C.'s 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				
07-07-98	ADD DESIGNER NOTE	J.A.			
05-24-06	REMOVED GEN. NOTE UNDER TIES	M.A.			

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

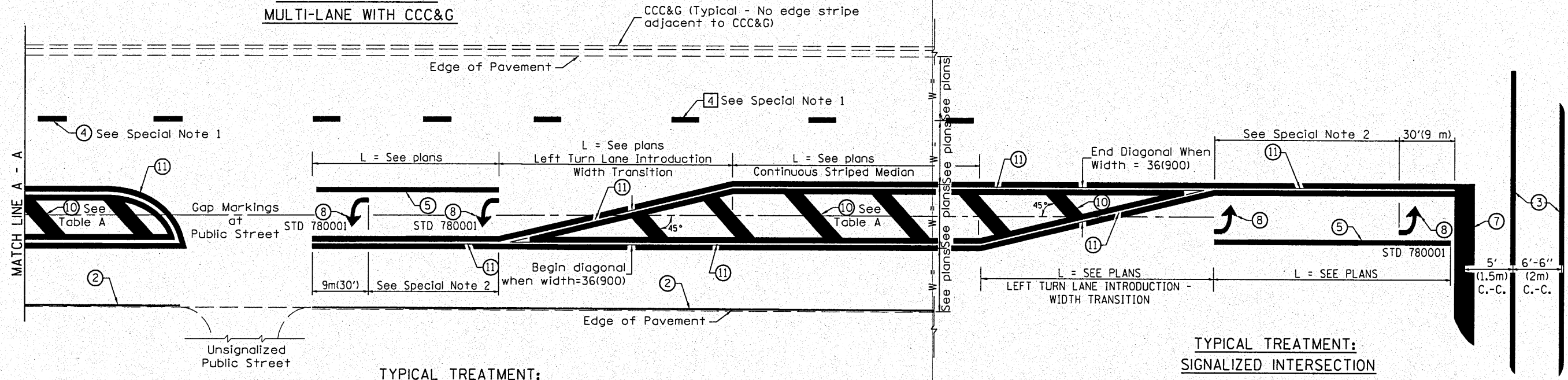
**PERMANENT SURVEY TIE &
PERMANENT SURVEY MARKERS TY.I - TY.II**

NOT TO SCALE

CADD STD. 667101-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
657	1116-C1BR-1	HENDERSON	56	50
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 68761	

**TYPICAL TREATMENT:
MULTI-LANE WITH CCC&G**



**TYPICAL TREATMENT:
2-LANE WITH SHOULDER**

TYPICAL MEDIAN TRANSITIONS

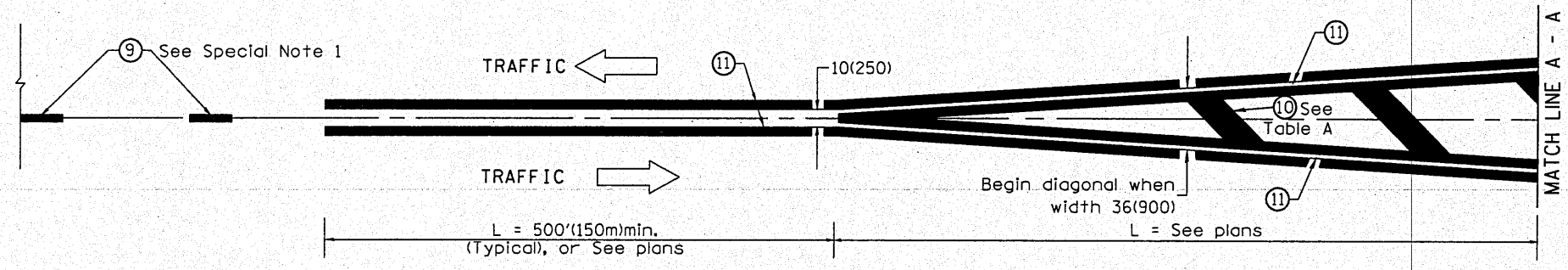
**TYPICAL TREATMENT:
SIGNALIZED INTERSECTION**

FLUSH PAVED MEDIAN: RESTRICTED LEFT TURN LANE

TABLE A

RECOMMENDED SPACING BETWEEN DIAGONAL LINES

SPEED LIMIT RANGE	INTERSECTION CHANNELIZATION (Includes Width Transitions for Median and Left Turn Lane Introductions)	
	CONTINUOUS	
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

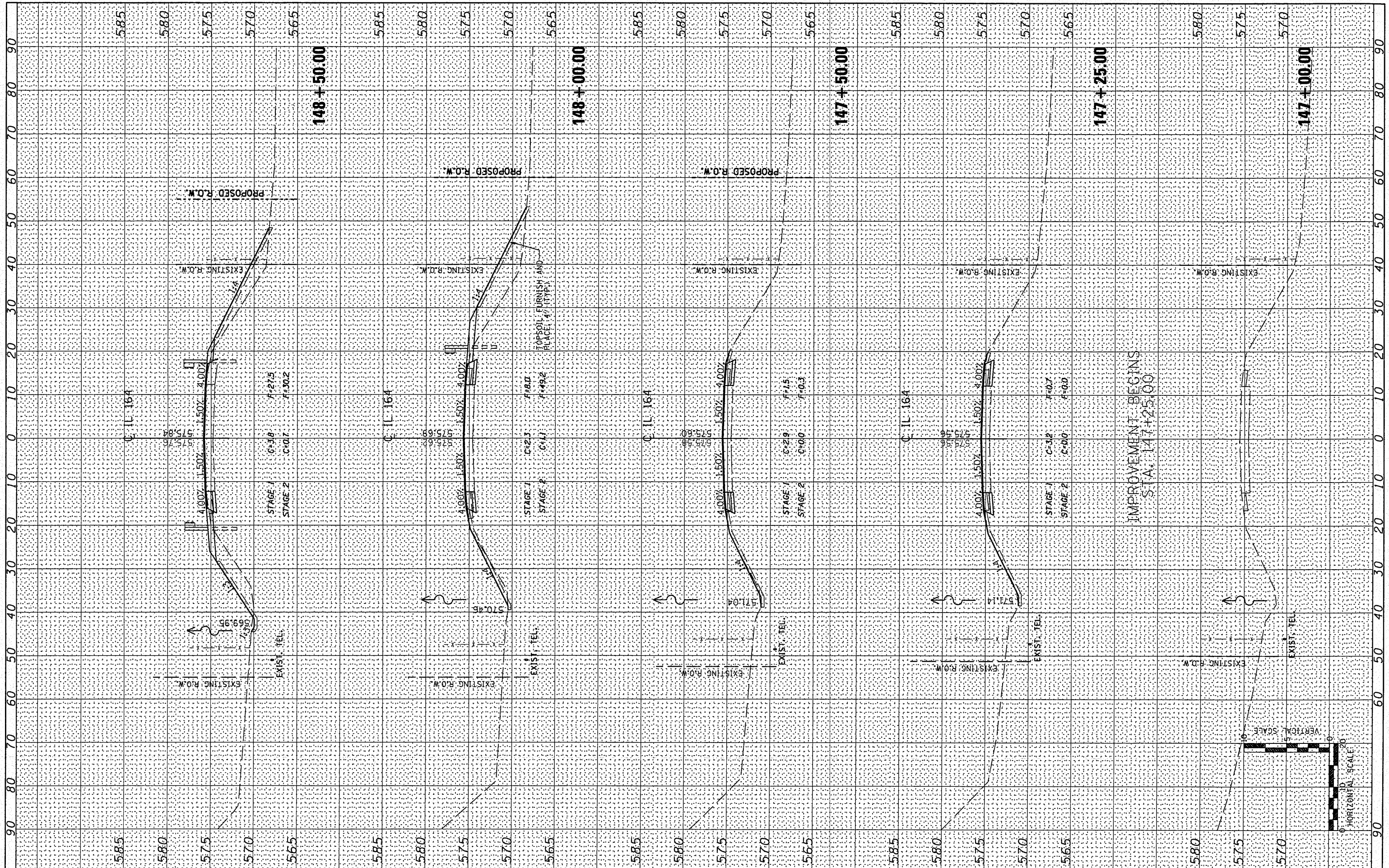
NOT TO SCALE

SHT. 2 OF 2
CADD STD. 780001-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
657	1116-CIBR-1	HENDERSON	56	52
CONTRACT NO. 68761				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

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

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



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

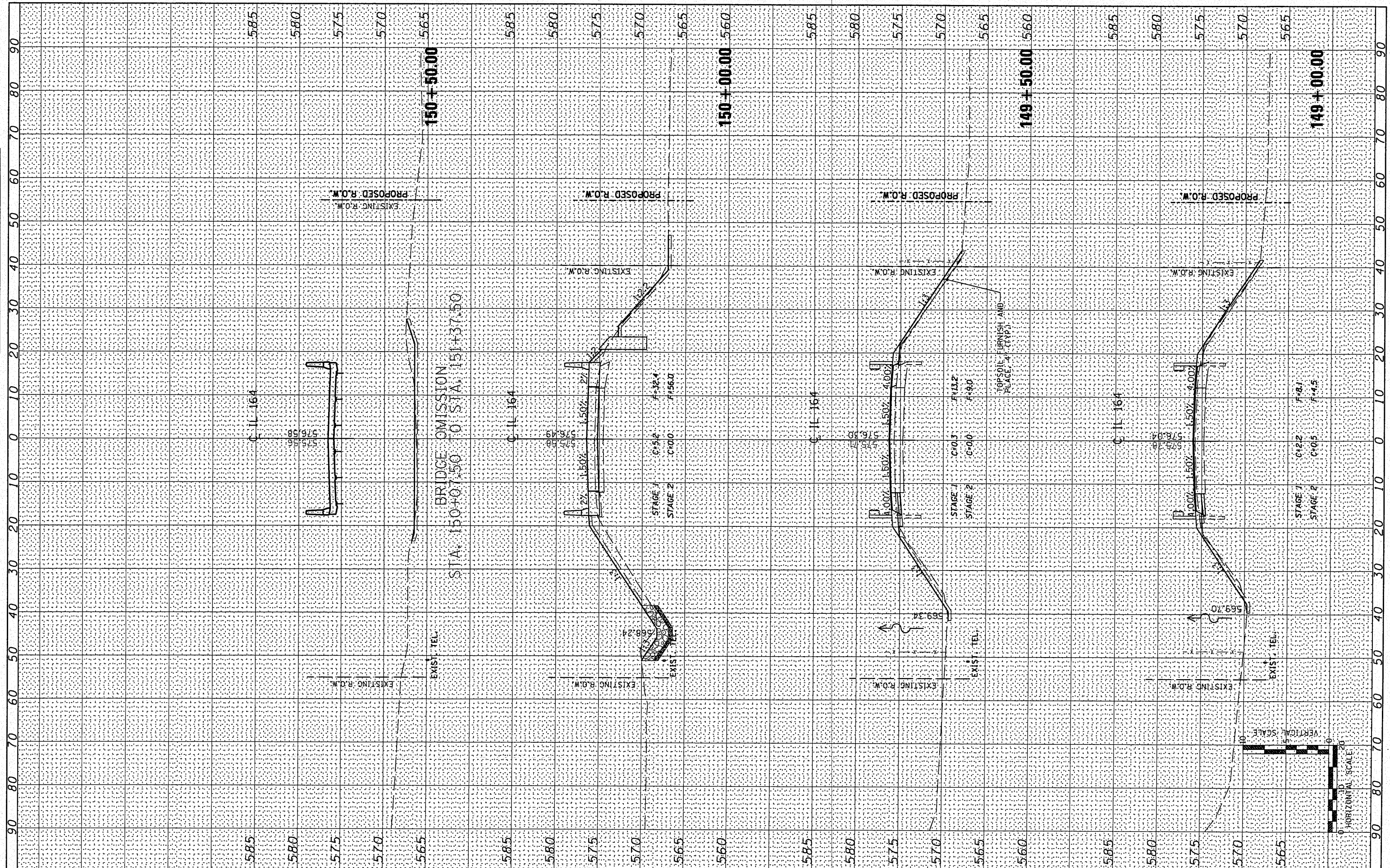
**IL 164 OVER SMITH CREEK
CROSS SECTIONS**

SCALE: SHEET NO. OF SHEETS STA. 147+00.00 TO STA. 148+50.00

F.A.P. RTE. 657	SECTION (116-C) BR-1	COUNTY HENDERSON	TOTAL SHEETS 56	SHEET NO. 53
CONTRACT NO. 6876			ILLINOIS FED. AID PROJECT	

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

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



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PLOT DATE = 10/23/2010	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

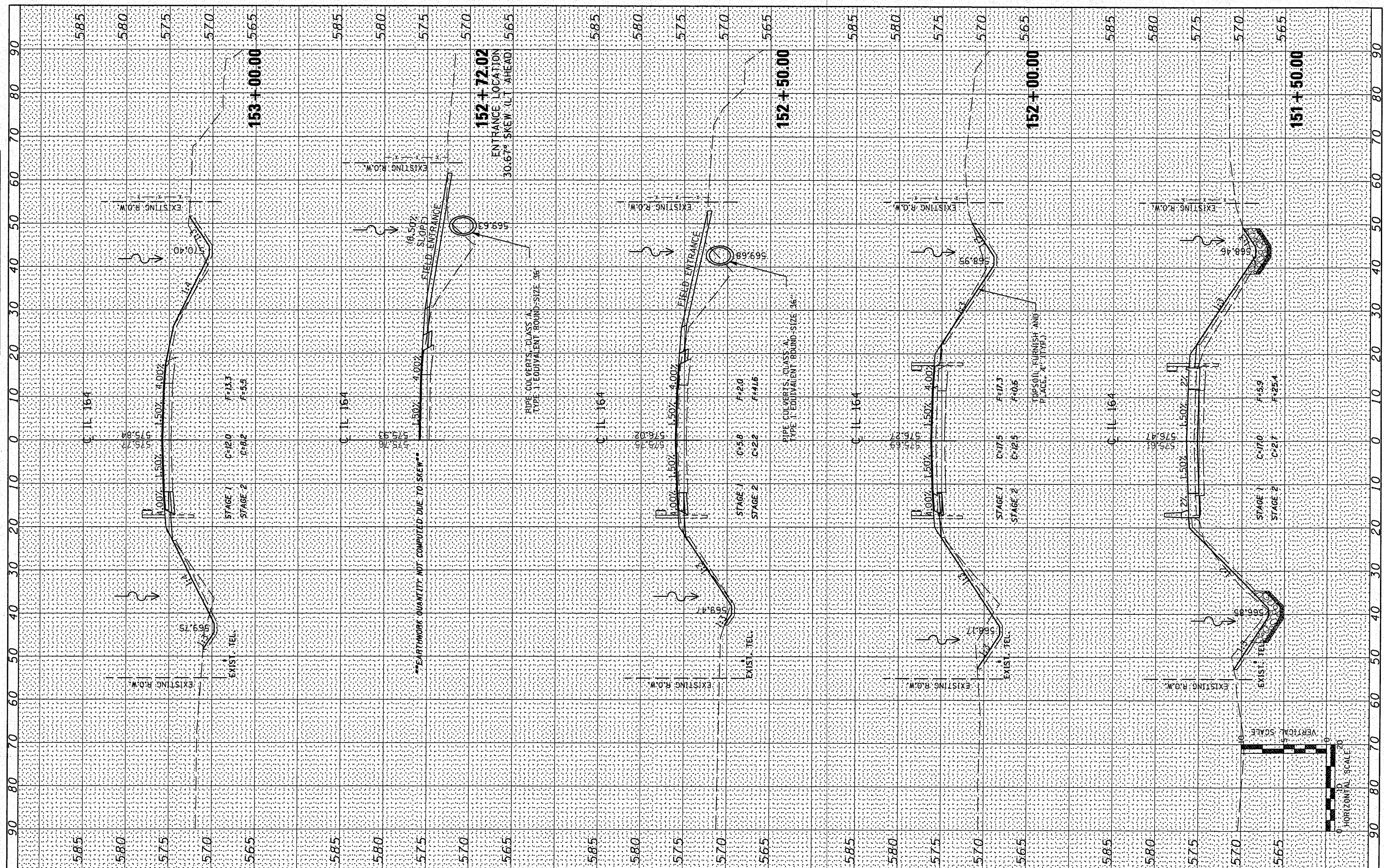
**IL 164 OVER SMITH CREEK
CROSS SECTIONS**

SCALE: SHEET NO. OF SHEETS STA. 149+00.00 TO STA. 150+50.00

F.A.P. RTE. 657	SECTION (116-C) BR-1	COUNTY HENDERSON	TOTAL SHEETS 56	SHEET NO. 54
CONTRACT NO. 68761			ILLINOIS FED. AID PROJECT	

BY	DATE
SURVEYED	
PLOTTED	
DATE	
NO. CHECKED	

BY	DATE
SURVEYED	
PLOTTED	
DATE	
NO. CHECKED	



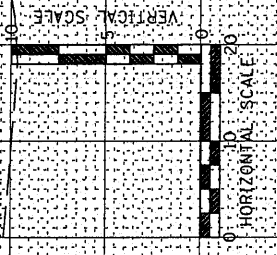
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REVISIONS:
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

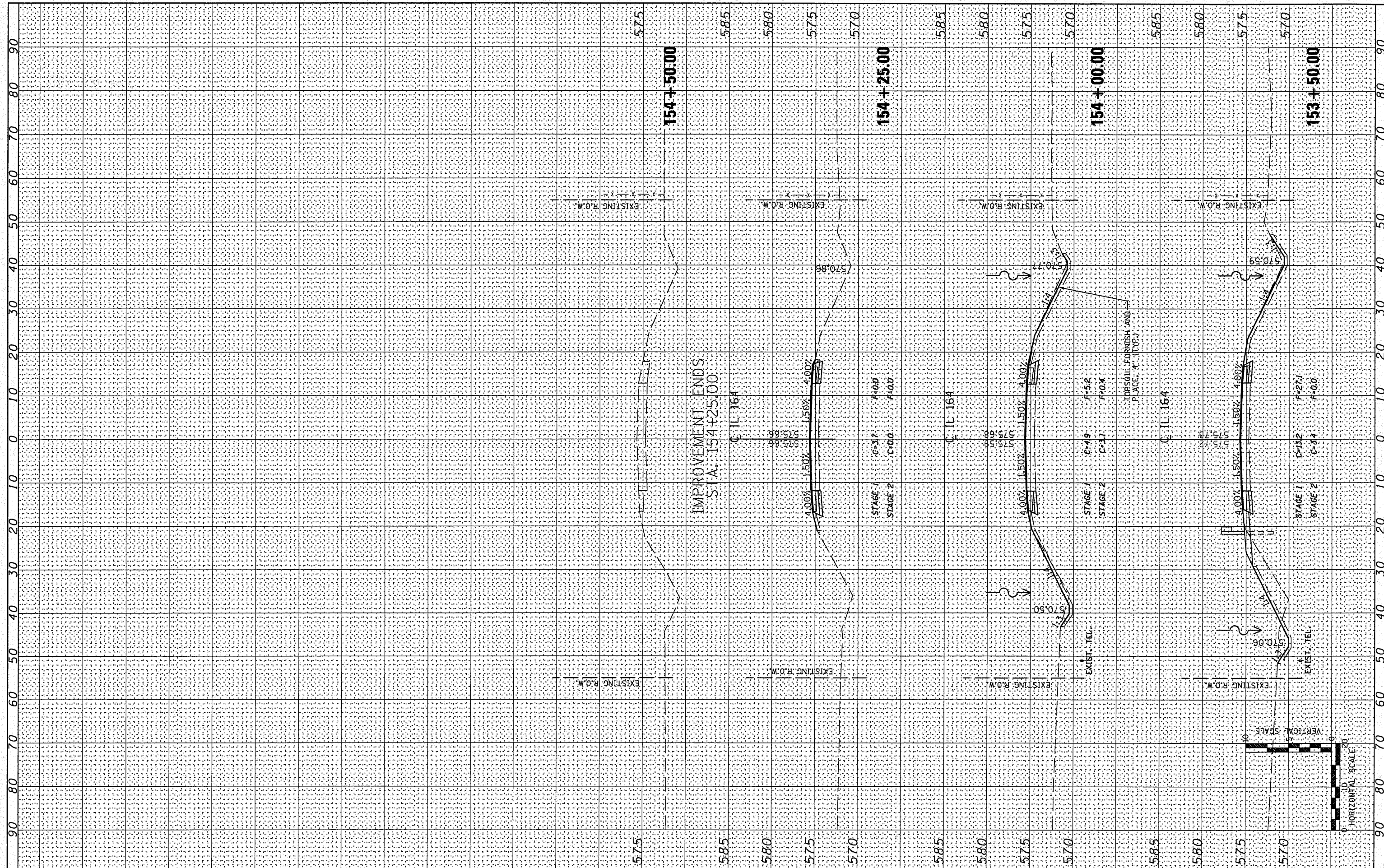
**IL 164 OVER SMITH CREEK
 CROSS SECTIONS**
 SCALE: SHEET NO. OF SHEETS STA. 151+50.00 TO STA. 153+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
657	(116-C) BR-1	HENDERSON	56	55
CONTRACT NO. 68761			ILLINOIS FED. AID PROJECT	



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

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



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 PLOT SCALE = 20.0000 / IN.
 PLOT DATE = 10/23/2010

DESIGNED -	REVIS
DRAWN -	REVIS
CHECKED -	REVIS
DATE -	REVIS

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**IL 164 OVER SMITH CREEK
 CROSS SECTIONS**

SCALE: SHEET NO. OF SHEETS STA. 153+50.00 TO STA. 154+50.00

F.A.P. RTE. 657	SECTION (116-C) BR-1	COUNTY HENDERSON	TOTAL SHEETS 56	SHEET NO. 56
CONTRACT NO. 68761			ILLINOIS FED. AID PROJECT	