11-18-11 LETTING ITEM 013

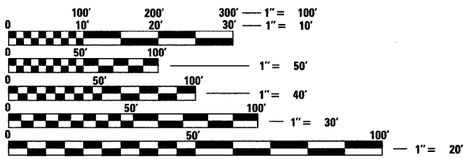
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 66948		

INDEX OF SHEETS

HIGHWAY STANDARDS

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
421001-02	BAR REINFORCEMENT FOR CRC PAVEMENT
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
482011-03	HMA SHLD. STRIPS / SHLDS. WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001-03	NAME PLATE FOR BRIDGES
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
630001-09	STEEL PLATE BEAM GUARDRAIL
630201-06	PCC / HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE I (SPECIAL) GUARDRAIL TERMINALS
631031-09	TRAFFIC BARRIER TERMINAL, TYPE 6
635001-01	DELINEATORS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
642001-01	SHOULDER RUMBLE STRIPS
665001-02	WOVEN WIRE FENCE
701101-02	OFF-RD OPERATIONS, MULTILANE 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE MORE THAN 15' (4.5m) AWAY
701401-06	LANE CLOSURE, FREEWAY / EXPRESSWAY
701402-08	LANE CLOSURE, FREEWAY / EXPRESSWAY, WITH BARRIER
701406-06	LANE CLOSURE, FREEWAY / EXPRESSWAY, DAY OPERATIONS ONLY
701421-03	LANE CLOSURE, MULTILANE, DAY OPPERATIONS ONLY, FOR SPEEDS ≥ 45 MPH TO 55
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

MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS _____



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

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

PROJECT ENGINEER: JOE KANNEL, P.E.
UNIT CHIEF: MICHELE LINDEMANN, P.E.

DISTRICT 3 NO. (815) 434-6131

CONTRACT NO. 66948

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROPOSED
HIGHWAY PLANS

F.A.I. ROUTE 57 (I-57)
SECTION (38-8) BR & BR-1
PROJECT : ACIM-057-6(191)269
BRIDGE REPLACEMENT
IROQUOIS COUNTY

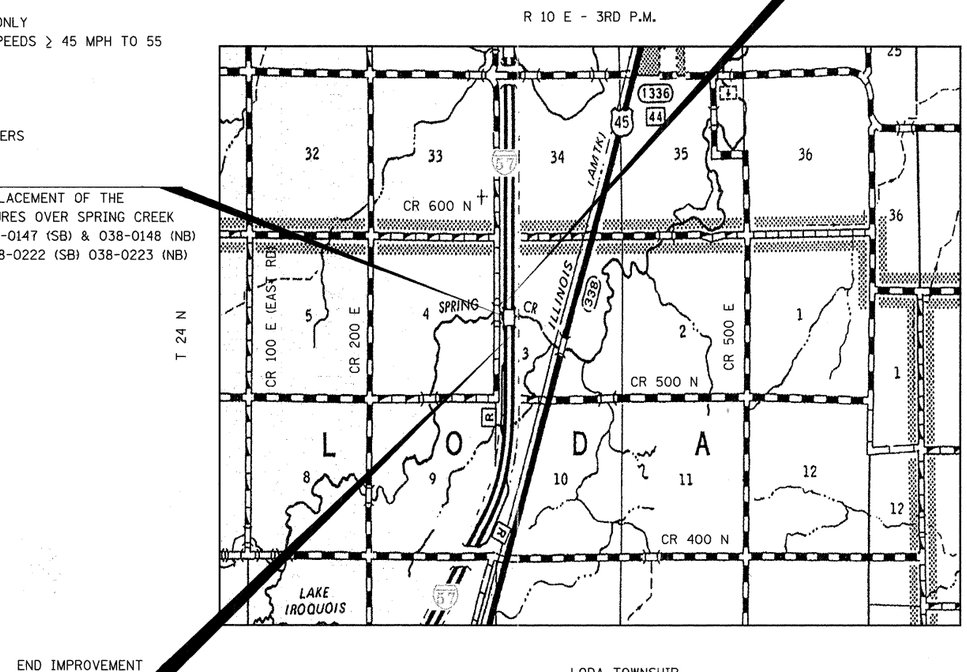
C-93-028-11

I-57 OVER SPRING CREEK
2.5 MILES SOUTH OF THE BUCKLEY INTERCHANGE

BEGIN IMPROVEMENT
STA 1352+20.00

STA 1357+52.00
REMOVAL AND REPLACEMENT OF THE EXISTING STRUCTURES OVER SPRING CREEK
EXISTING S.N. 038-0147 (SB) & 038-0148 (NB)
PROPOSED S.N. 038-0222 (SB) 038-0223 (NB)
LENGTH = 116 FT.

END IMPROVEMENT
STA 1362+80.00



LODA TOWNSHIP

LOCATION MAP
NOT TO SCALE

GROSS LENGTH = 1060 FT. = 0.201 MI.
NET LENGTH = 1060 FT. = 0.201 MI.

HOSSAM M. ABDOU
062-051347
LICENSED PROFESSIONAL ENGINEER OF ILLINOIS
EXPIRATION DATE 11-30-2011
DATE 8/19/2011

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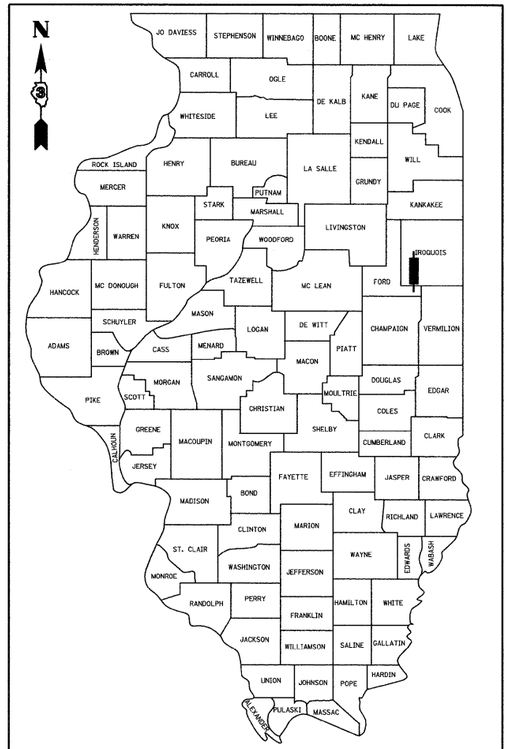
D-93-023-11



LOCATION OF SECTION INDICATED THUS: –

FUNCTIONAL CLASSIFICATION

INTERSTATE (RURAL)
F.A.I. ROUTE 57 (I-57)
2012 ADT = 17,800
P.V. = 72.0% S.U. = 6.0% M.U. = 22.0%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Aug 25 20 11
Eric S. Thurkildsen
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
October 14 20 11
Scott E. Stitt, P.E. /bc
acting ENGINEER OF DESIGN AND ENVIRONMENT
October 14 20 11
Christine M. Reed /bc
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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GENERAL NOTES

THE THICKNESS OF HMA SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA IS PLACED.

THE BASE COURSE WIDENING SHALL BE CARRIED THROUGH ALL ENTRANCES, SIDE ROADS, AND MAILBOX TURNOUTS. EXCEPTIONS WILL BE SHOWN ON THE PLANS.

EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.

THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HMA LIFTS.

FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.

SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.

THE FINISHED EARTHWORK SHALL HAVE A VEGETATION SUSTAINING SOIL COVERING THE TOP FOUR INCHES IN AREAS TO BE SEEDED OR SODDED. THE VEGETATION SUSTAINING SOIL REQUIRED WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF FURNISHED EXCAVATION.

SHORT TERM PAVEMENT MARKINGS SHALL BE USED TO OUTLINE THE PRIME COAT APPLICATION AND EACH RESURFACING LIFT.

ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS INCLUDED IN THESE PLANS.

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

GRANULAR MATERIALS	2.05	TONS / CU YD
BIT MATERIALS (PRIME COAT) ON AGGREGATE BASES	0.375	GAL / SQ YD
POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)	0.10	GAL / SQ YD
FOR ADDITIONAL HMA LIFTS "FOG COAT"	0.08	GAL / SQ YD
HMA RESURFACING	112	LBS / SQ YD / IN
SHORT TERM PAVEMENT MARKING	10	FT /100 FT OF APPLICATION
MIX FOR CRACKS, JTS & FLGWYS	0.0003	TONS / SQ YD
LEVEL BINDER (HAND METHOD)	0.0005	TONS / SQ YD
SUPPLEMENTAL WATERING	3	GAL / SQ YD / APPLICATION
CALCIUM CHLORIDE	2	LB / SQ YD / APPLICATION
TEMPORARY DITCH CHECKS	5	TONS AGGREGATE

MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE: NONE

COMMITMENTS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

PREPARED BY: Dave Broviak
DISTRICT STUDIES & PLANS ENGINEER

DATE: 8-25-11

EXAMINED BY: Robert K Jungas
DISTRICT CONSTRUCTION ENGINEER

Wayne Phillips RED
DISTRICT MATERIALS ENGINEER

Bruce E. Hucker
DISTRICT OPERATIONS ENGINEER

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FILE NAME = ...\final\D366948-sht-gennote.dgn	USER NAME = kholt	DESIGNED - JDC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES & COMMITMENTS	F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - JDC	REVISED -			57	(38-8) BR & BR-1	IROQUOIS	73	2
	PLOT SCALE = $SCALE$	CHECKED - JMS	REVISED -					CONTRACT NO. 66948		
	PLOT DATE = 8/19/2011	DATE - 08/19/2011	REVISED -		SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 1352+20 TO STA. 1362+80	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

CODE NUMBER	ITEM	UNIT	RURAL TOTAL QUALITY	90% FED./10% STATE CONSTRUCTION TYPE CODE: 0004 ROADWAY	0011 SN 038-0222 (SB I-57)	0011 SN 038-0223 (NB I-57)
20200100	EARTH EXCAVATION	CU YD	1190	1190		
20300100	CHANNEL EXCAVATION	CU YD	6439	6439		
20400800	FURNISHED EXCAVATION	CU YD	2320	2320		
• 25000300	SEEDING, CLASS 3	ACRE	1.4	1.4		
• 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	123	123		
• 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	123	123		
• 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	123	123		
25100630	EROSION CONTROL BLANKET	SQ YD	7431	7431		
25100635	HEAVY DUTY EROSION CONTROL BLANKET	SQ YD	4264	4264		
28000305	TEMPORARY DITCH CHECKS	FOOT	54	54		
28000400	PERIMETER EROSION BARRIER	FOOT	2020	2020		
28000500	INLET AND PIPE PROTECTION	EACH	2	2		
28100107	STONE RIPRAP, CLASS A4	SQ YD	2993	149	1,659	1,185
28200200	FILTER FABRIC	SQ YD	3134	290	1,659	1,185
40600115	POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)	GALLON	2243	2243		
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	2	2		
40600645	LEVELING BINDER (MACHINE METHOD), N90	TON	154	154		
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	640	640		
40603090	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90	TON	910	910		
40603545	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90	TON	386	386		
42001300	PROTECTIVE COAT	SQ YD	176	176		
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ YD	176	176		
42100615	PAVEMENT REINFORCEMENT	SQ YD	176	176		
44000100	PAVEMENT REMOVAL	SQ YD	492	492		
44004250	PAVED SHOULDER REMOVAL	SQ YD	4262	4262		
48101200	AGGREGATE SHOULDERS, TYPE B	TON	69	69		
48203100	HOT-MIX ASPHALT SHOULDERS	TON	1435	1435		
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	2		1	1

CODE NUMBER	ITEM	UNIT	RURAL TOTAL QUALITY	90% FED./10% STATE CONSTRUCTION TYPE CODE: 0004 ROADWAY	0011 SN 038-0222 (SB I-57)	0011 SN 038-0223 (NB I-57)
50200100	STRUCTURE EXCAVATION	CU YD	472		236	236
50300100	FLOOR DRAINS	EACH	20		10	10
50300225	CONCRETE STRUCTURES	CU YD	305.4		152.7	152.7
50300255	CONCRETE SUPERSTRUCTURE	CU YD	629.8		314.9	314.9
50300260	BRIDGE DECK GROOVING	SQ YD	1488		744	744
50300280	CONCRETE ENCASEMENT	CU YD	19.6		9.8	9.8
50300300	PROTECTIVE COAT	SQ YD	1860		930	930
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1		0.5	0.5
50500505	STUD SHEAR CONNECTORS	EACH	10320		5,160	5,160
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	188780		94,390	94,390
50800515	BAR SPLICERS	EACH	1656		828	828
51201600	FURNISHING STEEL PILES HP12X53	FOOT	1347		664	683
51202305	DRIVING PILES	FOOT	1347		664	683
51203600	TEST PILE STEEL HP12X53	EACH	6		3	3
51204650	PILE SHOES	EACH	56		28	28
51500100	NAME PLATES	EACH	2		1	1
52100520	ANCHOR BOLTS, 1"	EACH	96		48	48
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	154		77	77
60100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	8	8		
60100905	PIPE DRAINS 4"	FOOT	32	32		
• 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	800	800		
• 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4		
• 63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	4	4		
63200310	GUARDRAIL REMOVAL	FOOT	1033	1033		
63500105	DELINEATORS	EACH	4	4		
64200105	SHOULDER RUMBLE STRIPS	FOOT	3456	3456		
66500105	WOVEN WIRE FENCE, 4'	FOOT	280	280		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8	8		

• SPECIALTY ITEM

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		DRAWN - LLR	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - JMS	REVISED -
	PLOT DATE = $DATE$	DATE - 08/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE | SHEET NO. 1 OF 2 SHEETS | STA. 1352+20 TO STA. 1362+80

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	3
		CONTRACT NO. 66948		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

				← 90% FED. / 10% STATE →		
				CONSTRUCTION TYPE CODE:		
				0004	0011	0011
CODE NUMBER	ITEM	UNIT	RURAL TOTAL QUALITY	ROADWAY	SN 038-0222 (SB I-57)	SN 038-0223 (NB I-57)
67100100	MOBILIZATION	L SUM	1	1		
70100310	TRAFFIC CONTROL AND PROTECTION, STANDARD 701421	L SUM	1	1		
70100700	TRAFFIC CONTROL AND PROTECTION, STANDARD 701406	L SUM	1	1		
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1	1		
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	80	80		
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	7	7		
70300100	SHORT TERM PAVEMENT MARKING	FOOT	10600	10600		
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	14120	14120		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	8828	8828		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	2690	2690		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	2690	2690		
* 78004230	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - INLAID - LINE 6"	FOOT	1766	1766		
* 78005110	EPOXY PAVEMENT MARKING - LINE 4"	FOOT	14120	14120		
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	76	76		
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	8	8		
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	16	16		
* 78200530	BARRIER WALL MARKERS, TYPE C	EACH	48	48		
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4		
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	84	84		
X0326907	PORTABLE, VEHICLE MOUNTED, CHANGEABLE MESSAGE SIGN	CAL MO	7	7		
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	220		110	110
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1		1	
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1		1	
X5020503	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 3	EACH	1			1
X5020504	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 4	EACH	1			1
X6350120	DELINEATOR REMOVAL	EACH	4	4		
X6650202	WOVEN WIRE FENCE REMOVAL	FOOT	280	280		
X7010208	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402 (SPECIAL)	EACH	2	2		
* X7830070	GROOVING FOR RECESSED PAVEMENT MARKING 5"	FOOT	14120	14120		
Z0005216	HOT-MIX ASPHALT STABILIZATION 6" AT STEEL PLATE BEAM GUARD RAIL	SQ YD	681	681		
Z0026407	TEMPORARY SHEET PILING	SQ FT	1239		609	630
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2		
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	270		135	135

* SPECIALTY ITEM

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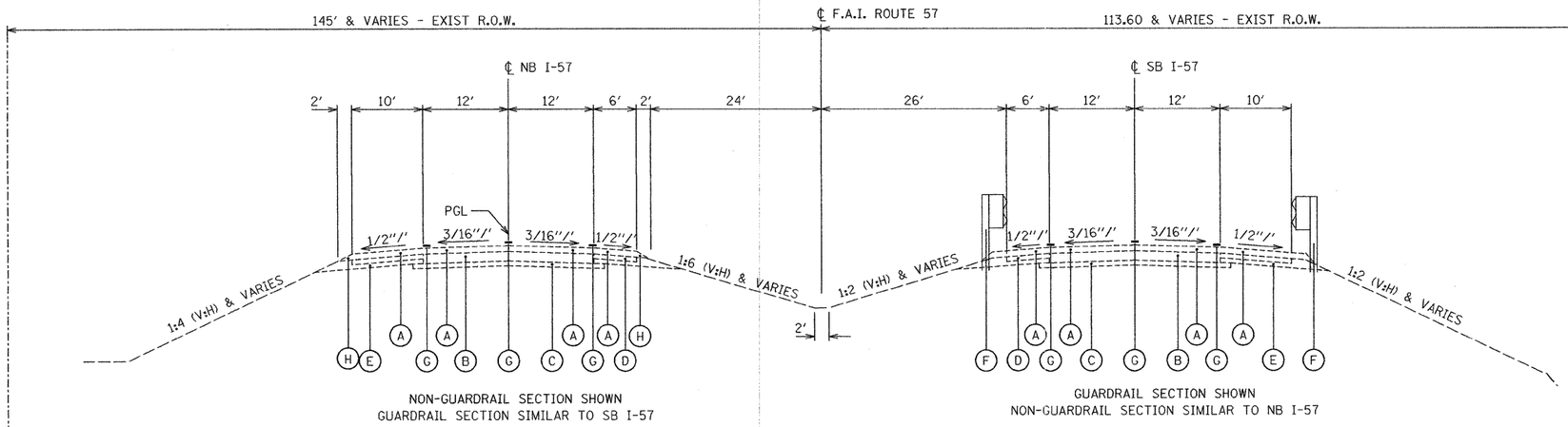
	PLOT DATE = $DATE$	DATE - 08/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: NONE | SHEET NO. 2 OF 2 SHEETS | STA. 1352+20 TO STA. 1362+80

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	4
		CONTRACT NO. 66948		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

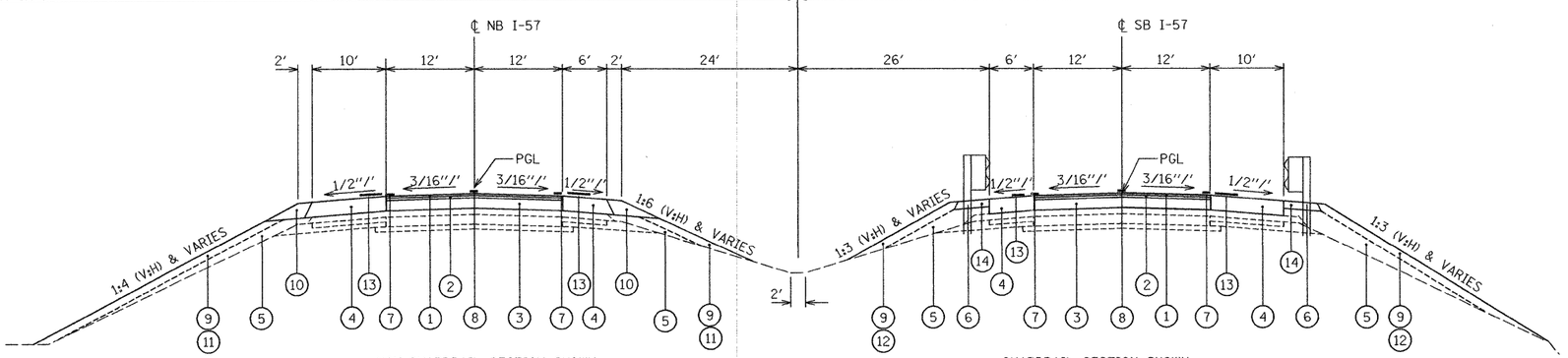


NON-GUARDRAIL SECTION SHOWN
GUARDRAIL SECTION SIMILAR TO SB I-57

GUARDRAIL SECTION SHOWN
NON-GUARDRAIL SECTION SIMILAR TO NB I-57

EXISTING ROADWAY TYPICAL SECTION

STA 1352+20.00 TO STA 1357+00.00
BRIDGE OMISSION STA 1357+00.00 TO STA 1358+04.00
STA 1358+04.00 TO STA 1362+80.00



NON-GUARDRAIL SECTION SHOWN
GUARDRAIL SECTION SIMILAR TO SB I-57

GUARDRAIL SECTION SHOWN
NON-GUARDRAIL SECTION SIMILAR TO NB I-57

PROPOSED ROADWAY TYPICAL SECTION

* STA 1352+20.00 TO STA 1356+94.00
BRIDGE OMISSION STA 1356+94.00 TO STA 1358+10.00
* STA 1358+10.00 TO STA 1362+80.00

(1) POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90 (1 1/2")

(2) LEVELING BINDER (MACHINE METHOD), N90 (3/4")

(3) HOT-MIX ASPHALT BINDER COURSE, IL-19.0 N90
DEPTH VARIES TO MEET EXISTING GROUND. LIFTS
NOT TO EXCEED 4".

(4) HOT-MIX ASPHALT SHOULDERS (THICKNESS VARIES, 1 1/2" MIN)

(5) FURNISHED EXCAVATION

(6) STEEL PLATE BEAM GUARDRAIL, TYPE A 6 FT POSTS

(7) EPOXY PAVEMENT MARKING - LINE 4" (SOLID WHITE OR YELLOW)
& GROOVING FOR RECESSED PAVEMENT MARKING 5"

(8) PERFORMED PLASTIC PAVEMENT MARKING, TYPE B
- INLAID - 6" (DASHED WHITE)

(9) SEEDING, CLASS 3

(10) AGGREGATE SHOULDERS, TYPE B

(11) EROSION CONTROL BLANKET (1V:3H OR FLATTER)

(12) HEAVY DUTY EROSION CONTROL BLANKET (STEEPER THAN 1V:3H)

(13) SHOULDER RUMBLE STRIPS (PLACE AFTER
STAGE II CONSTRUCTION)

(14) HOT-MIX ASPHALT STABILIZATION 6" AT STEEL PLATE BEAM
GUARDRAIL

(A) EXIST HMA SURFACE, 5"

(B) EXIST REINFORCED PCC PAVEMENT, 8"

(C) STABILIZED SUBBASE, 4"

(D) STABILIZED SHOULDER

(E) EXIST AGGREGATE SHOULDER

(F) EXIST STEEL PLATE BEAM GUARDRAIL

(G) EXIST PAVEMENT MARKING

(H) EXIST AGGREGATE SHOULDER, TYPE B

MIX DESIGN TABLE

	HMA BINDER & HMA SHLDR (BOTTOM LIFTS)	HMA SURFACE	HMA SHLDR (TOP 2 1/4")	HMA LEVEL BINDER
PG GRADE	PG64-22	SBS PG70-22	PG64-22	PG64-22
DESIGN AIR VOIDS	4.0% @ N90	4.0% @ N90	4.0% @ N90	4.0% @ N90
MIXTURE COMPOSITION	IL 19.0	IL 9.5	IL 9.5	IL 9.5
FRICTION AGGREGATE		MIXTURE D	MIXTURE C	
DENSITY TEST METHOD	CORES	CORES	CORES**	CORES

* STATIONING INCLUDES 30' OF CONC BRIDGE APPROACH. (SEE BRIDGE PLANS)

** MATERIAL SHALL BE COMPACTED TO 93.0-97.4 PERCENT OF THE MAXIMUM THEORETICAL DENSITY, EXCEPT THAT WHEN PLACED AS FIRST LIFT ON AN UNIMPROVED SUBGRADE, THE MINIMUM PERCENT COMPACTION SHALL BE 92.0 PERCENT. THE MAXIMUM THEORETICAL DENSITY SHALL BE DETERMINED FROM THE MOVING AVERAGE AS SPECIFIED IN THE QC/QA SPECIFICATION.

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FILE NAME = ...\final\D366948-sht-typ.dgn	USER NAME = kholt	DESIGNED - JDC	REVISED -
		DRAWN - JDC	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - JMS	REVISED -
	PLOT DATE = 8/22/2011	DATE - 08/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 1352+20 TO STA. 1362+80

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	5
		CONTRACT NO. 66948		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

PAVEMENT AND SHOULDERS

LOCATION	STATION			LENGTH	MIXTURE FOR CRACKS, JOINTS, & FLANGEWAYS	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90	POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90	LEVELING BINDER (MACHINE METHOD), N90	PAVEMENT REMOVAL	PAVED SHOULDER REMOVAL	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	AGGREGATE SHOULDERS, TYPE B	HOT-MIX ASPHALT STABILIZATION 6" AT STEEL PLATE BEAM GUARDRAIL	HOT-MIX ASPHALT SHOULDERS	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	PROTECTIVE COAT	PAVEMENT REINFORCEMENT
				FOOT	TON	TON	GAL	TON	TON	SQ YD	SQ YD	SQ YD	TON	SQ YD	TON	SQ YD	SQ YD	SQ YD
NORTHBOUND PAVEMENT	STA. 1352+20	TO	STA. 1356+64	444	0.25	253	323	97	39	123		160			172	44	44	44
	STA. 1358+40	TO	STA. 1362+80	440	0.25	250	320	96	38	123		160			102	44	44	44
SOUTHBOUND PAVEMENT	STA. 1352+20	TO	STA. 1356+64	444	0.25	205	323	97	39	123		160			150	44	44	44
	STA. 1358+40	TO	STA. 1362+80	440	0.25	202	320	96	38	123		160			89	44	44	44
NORTHBOUND SHLDRS	STA. 1352+20	TO	STA. 1356+64	444	0.25		260						34.5	347				
	STA. 1358+40	TO	STA. 1362+80	440	0.25		258											
SOUTHBOUND SHLDRS	STA. 1352+20	TO	STA. 1356+64	444	0.25		260						34.5	334				
	STA. 1358+40	TO	STA. 1362+80	440	0.25		179											
NORTHBOUND SHLDR (STAGING)	STA. 1349+60	TO	STA. 1367+25								2131				461			
SOUTHBOUND SHLDR (STAGING)	STA. 1347+75	TO	STA. 1365+40								2131				461			
			TOTAL:		2	910	2243	386	154	492	4262	640	69	681	1435	176	176	176

PAVEMENT MARKINGS AND DELINEATORS

LOCATION	STATION			LENGTH	EPOXY PAVEMENT MARKING - LINE 4" WHITE	EPOXY PAVEMENT MARKING - LINE 4" YELLOW	* GROOVING FOR RECESSED PAVEMENT MARKING 5"	PREFORMED PLASTIC PAVEMENT MARKING, TYPE B - INLAID - 6 INCH	RAISED REFLECTIVE PAVEMENT MARKER	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	DELINEATOR	DELINEATOR REMOVAL
					FOOT	FOOT	FOOT	FOOT	EACH	EACH	EACH	EACH	EACH
NORTHBOUND	STA. 1349+60	TO	STA. 1352+20	260	520		520	130	6	6			
	STA. 1352+20	TO	STA. 1363+80	1160	2320		2320	580	26	30	4	2	2
	STA. 1363+80	TO	STA. 1367+25	345	690		690	173	6	6			
SOUTHBOUND	STA. 1347+75	TO	STA. 1351+20	345	690		690	173	6	6			
	STA. 1351+20	TO	STA. 1362+80	1160	2320		2320	580	26	30	4	2	2
	STA. 1362+80	TO	STA. 1365+40	260	520		520	130	6	6			
NORTHBOUND	STA. 1349+60	TO	STA. 1352+20	260		520	520						
	STA. 1352+20	TO	STA. 1363+80	1160		2320	2320						
	STA. 1363+80	TO	STA. 1367+25	345		690	690						
SOUTHBOUND	STA. 1347+75	TO	STA. 1351+20	345		690	690						
	STA. 1351+20	TO	STA. 1362+80	1160		2320	2320						
	STA. 1362+80	TO	STA. 1365+40	260		520	520						
			TOTAL:		7060	7060	14120	1766	76	84	8	4	4

*GROOVING TO BE USED FOR 4" EDGE LINE ONLY

PERMANENT DRAINAGE AND EROSION CONTROL

LOCATION	SEEDING CLASS 3	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	EROSION CONTROL BLANKET	HEAVY DUTY EROSION CONTROL BLANKET	STONE RIPRAP, CLASS A4	FILTER FABRIC	INLET & PIPE PROTECTION	CONCRETE HEADWALL FOR PIPE DRAINS
	ACRE	POUND	POUND	POUND	SQ YD	SQ YD	SQ YD	SQ YD	EA	EA
NB	0.6	55	55	55	4020	1827	74.5	145	1	4
SB	0.8	68	68	68	3411	2437	74.5	145	1	4
TOTAL:	1.4	123	123	123	7431	4264	149	290	2	8

WORK ZONE TRAFFIC CONTROL

LOCATION	TEMP CONC. BARRIER	RELOCATE TEMP. CONC. BARRIER	IMPACT ATTEN., TEMP.	IMPACT ATTEN., RELOC.	BARRIER WALL MARKERS
	FOOT	FOOT	EACH	EACH	EACH
NORTHBOUND	1345	1345	1	1	24
SOUTHBOUND	1345	1345	1	1	24
TOTAL:	2690	2690	2	2	48

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	PLOT DATE = 8/22/2011	DATE - 08/19/2011	REVISED -	

SCHEDULE OF QUANTITIES

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 1352+20 TO STA. 1362+80

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	6
		CONTRACT NO. 66948		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SCHEDULE OF QUANTITIES

GUARDRAIL

LOCATION			GUARDRAIL REMOVAL	SPBGR TYPE A 6 FT POSTS	TBT TYPE 6	TBT TYPE 1, SPECIAL (FLARED)	GUARDRAIL MARKERS, TYPE A	TERMINAL MARKER-DIRECT APPLIED
			FOOT	FOOT	EACH	EACH	EACH	EACH
RIGHT SIDE								
STA. 1358+05	TO	STA. 1360+07	202					
STA. 1354+61	TO	STA. 1357+00	239					
STA. 1354+61	TO	STA. 1356+36		175	1			
STA. 1358+68	TO	STA. 1360+43		175	1			
STA. 1354+11	TO	STA. 1356+79				1	4	1
STA. 1358+25	TO	STA. 1360+93				1	4	1
LEFT SIDE								
STA. 1358+05	TO	STA. 1361+96	392					
STA. 1355+00	TO	STA. 1357+00	200					
STA. 1354+11	TO	STA. 1356+36		225	1			
STA. 1358+68	TO	STA. 1360+93		225	1			
STA. 1353+61	TO	STA. 1356+79				1	4	1
STA. 1358+25	TO	STA. 1361+43				1	4	1
TOTAL:			1033	800	4	4	16	4

TEMPORARY EROSION CONTROL

TEMPORARY DITCH CHECKS			PERIMETER EROSION BARRIER				
STATION	OFFSET	LENGTH (FT)	STATION		STATION	RT/LT	FOOT
STA. 1352+93	1.0 LT	6	STA. 1352+20	TO	STA. 1357+00	RT	480
STA. 1353+93	1.0 LT	6	STA. 1357+50	TO	STA. 1362+80	LT	530
STA. 1354+93	1.6 LT	6	STA. 1352+20	TO	STA. 1357+00	RT	480
STA. 1355+93	3.4 LT	6	STA. 1357+50	TO	STA. 1362+80	LT	530
STA. 1358+94	1.4 LT	6					
STA. 1359+92	1.3 LT	6					
STA. 1360+92	1.3 LT	5					
STA. 1361+92	1.3 LT	6					
STA. 1362+92	1.3 LT	7					
TOTAL:		54	TOTAL:				2020

EARTHWORK

LOCATION			EARTH EXCAVATION (2)	EARTH EX. ADJ. FOR SHRINKAGE (1)	FURNISHED EXCAVATION (3)	EARTHWORK BAL. WASTE (+) OR SHORTAGE (-)
			CU YD	CU YD	CU YD	CU YD
STA. 1352+20	TO	STA. 1353+00	140	105	269	(164)
STA. 1353+00	TO	STA. 1354+00	106	80	189	(109)
STA. 1354+00	TO	STA. 1355+00	119	89	229	(140)
STA. 1355+00	TO	STA. 1356+00	135	101	263	(162)
STA. 1356+00	TO	STA. 1356+64	190	143	580	(437)
STA. 1358+40	TO	STA. 1359+00	157	118	257	(139)
STA. 1359+00	TO	STA. 1360+00	163	122	257	(135)
STA. 1360+00	TO	STA. 1361+00	60	45	91	(46)
STA. 1361+00	TO	STA. 1362+00	38	29	62	(33)
STA. 1362+00	TO	STA. 1362+80	82	62	123	(61)
TOTAL:			1190	894	2320	(1426)

(1) QUANTITY OF EARTH EXCAVATION ADJUSTED FOR A SHRINKAGE FACTOR OF 25% .
(2) ACCOUNTS FOR TOP 6 INCHES OF UNSUITABLE SOIL INCLUDED IN EARTH EXCAVATION.
(3) INCLUDES 6 INCHES OF UNSUITABLE SOIL REMOVAL.

TEMPORARY PAVEMENT MARKINGS

LOCATION	STATION			LENGTH	TEMPORARY PAVEMENT MARKING -LINE WHITE 4"	TEMPORARY PAVEMENT MARKING -LINE YELLOW 4"	SHORT TERM PAVEMENT MARKING	WORK ZONE, PAVEMENT MARKING REMOVAL
					FOOT	FOOT	FOOT	SQ FT
NORTHBOUND	STA. 1349+60	TO	STA. 1352+20	260	260	260		173
	STA. 1352+20	TO	STA. 1363+80	1160	1160	1160	5300	3541
	STA. 1363+80	TO	STA. 1367+25	345	345	345		230
SOUTHBOUND	STA. 1347+75	TO	STA. 1351+20	345	345	345		230
	STA. 1351+20	TO	STA. 1362+80	1160	1160	1160	5300	3541
	STA. 1362+80	TO	STA. 1365+40	260	260	260		173
NORTHBOUND	STA. 1349+60	TO	STA. 1352+20	260	260	260		173
	STA. 1352+20	TO	STA. 1363+80	1160	1160	1160		297
	STA. 1363+80	TO	STA. 1367+25	345	345	345		0
SOUTHBOUND	STA. 1347+75	TO	STA. 1351+20	345	345	345		297
	STA. 1351+20	TO	STA. 1362+80	1160	1160	1160		173
	STA. 1362+80	TO	STA. 1365+40	260	260	260		0
			TOTAL:		7060	7060	10600	8828

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DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 1352+20 TO STA. 1362+80

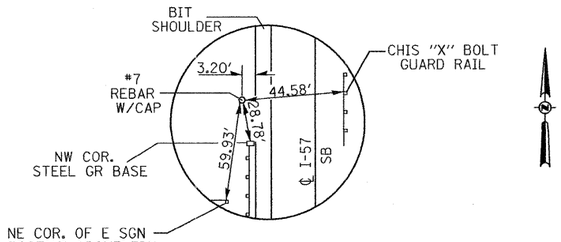
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	7
		CONTRACT NO. 66948		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

CONTROL POINT #1341

CONCRETE MONUMENT
LOCATED ON 1ST DITCH CHECK NORTH OF BRIDGES.
STA 1357+52.48
"X" ON DISC IS 0.09' RT. OF TRUE ℄.
N 1,423,050.166
E 1,060,065.927
NO TIE INCLUDED
ELEV. 705.192

CONTROL POINT #1377

CONCRETE MONUMENT
LOCATED ON 1ST DITCH CHECK SOUTH OF BRIDGES.
STA 1357+52.48
"X" ON PLUG IS 0.12' LT. OF TRUE ℄.
N 1,419,381.184
E 1,060,123.597
NO TIE INCLUDED
ELEV. 708.577



CONTROL POINT #1354
#7 REBAR WITH CAP

STA 1354+71.80, 69.79' RT
ELEV 702.786
N 1,421,692.487
E 1,060,017.482

CONTROL POINTS AND BENCHMARKS WILL BE CONFIRMED BY THE CONTRACTOR PRIOR TO WORK.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TIE POINTS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 1352+20 TO STA. 1362+80

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	8
		CONTRACT NO. 66948		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

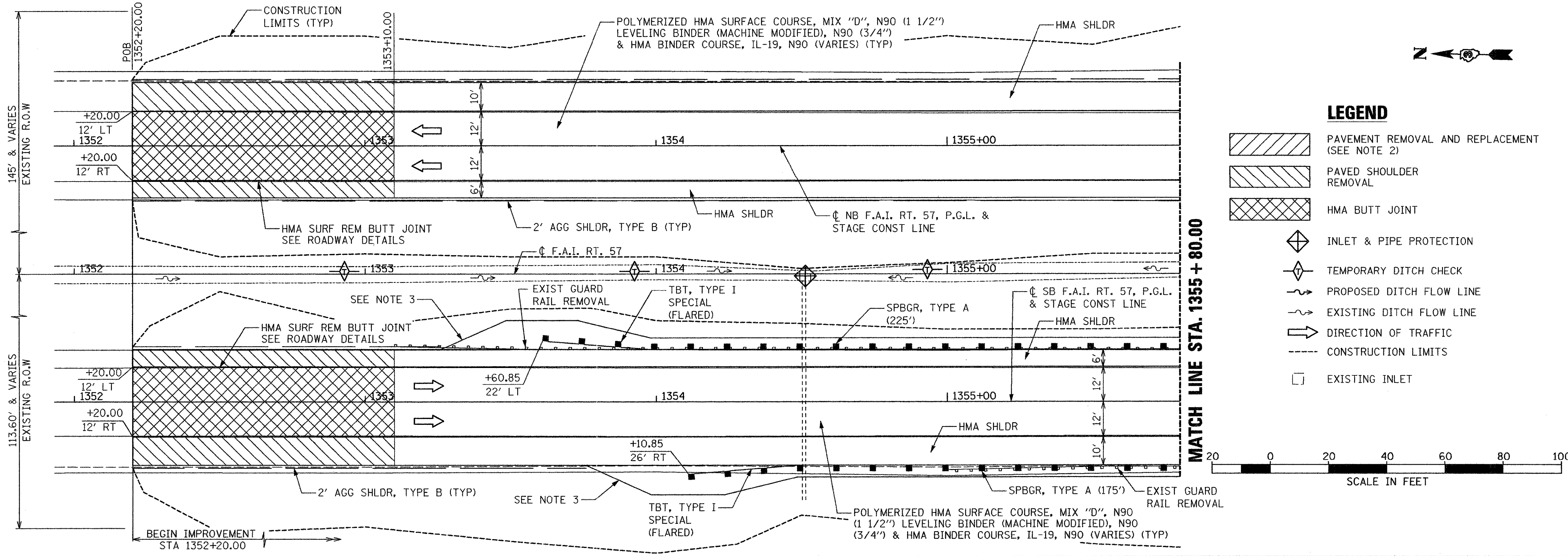
BENCHMARK #10

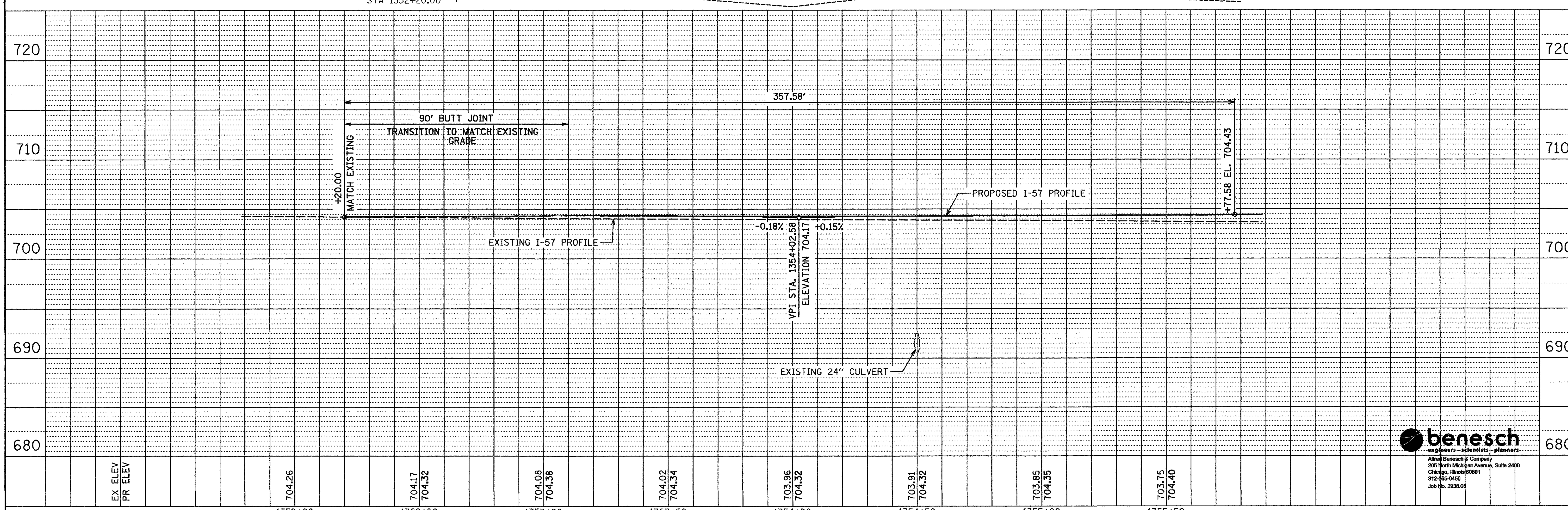
CUT "□" TOP OF NORTHEAST WINGWALL OF NB I-57 BRIDGE.

STA 1357+01.48, 67.86' LT
ELEV 703.901

NOTES:

1. PLACE EROSION CONTROL FENCE AROUND THE PERIMETER OF WORK OUTSIDE OF THE CONSTRUCTION LIMITS
2. SEE MOT PLANS FOR LIMITS OF HMA SHOULDER REMOVAL DURING STAGE 1A
3. SEE HWY. STD. 630301 FOR SHOULDER WIDENING DETAILS AND 630201 FOR RESURFACING DETAIL FOR LIMITS OF HMA STABILIZATION





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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE

SCALE: 1"=20'H/5'V | SHEET NO. 1 OF 3 SHEETS | STA. 1352+20 TO STA. 1355+80

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	9
		CONTRACT NO. 66948		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

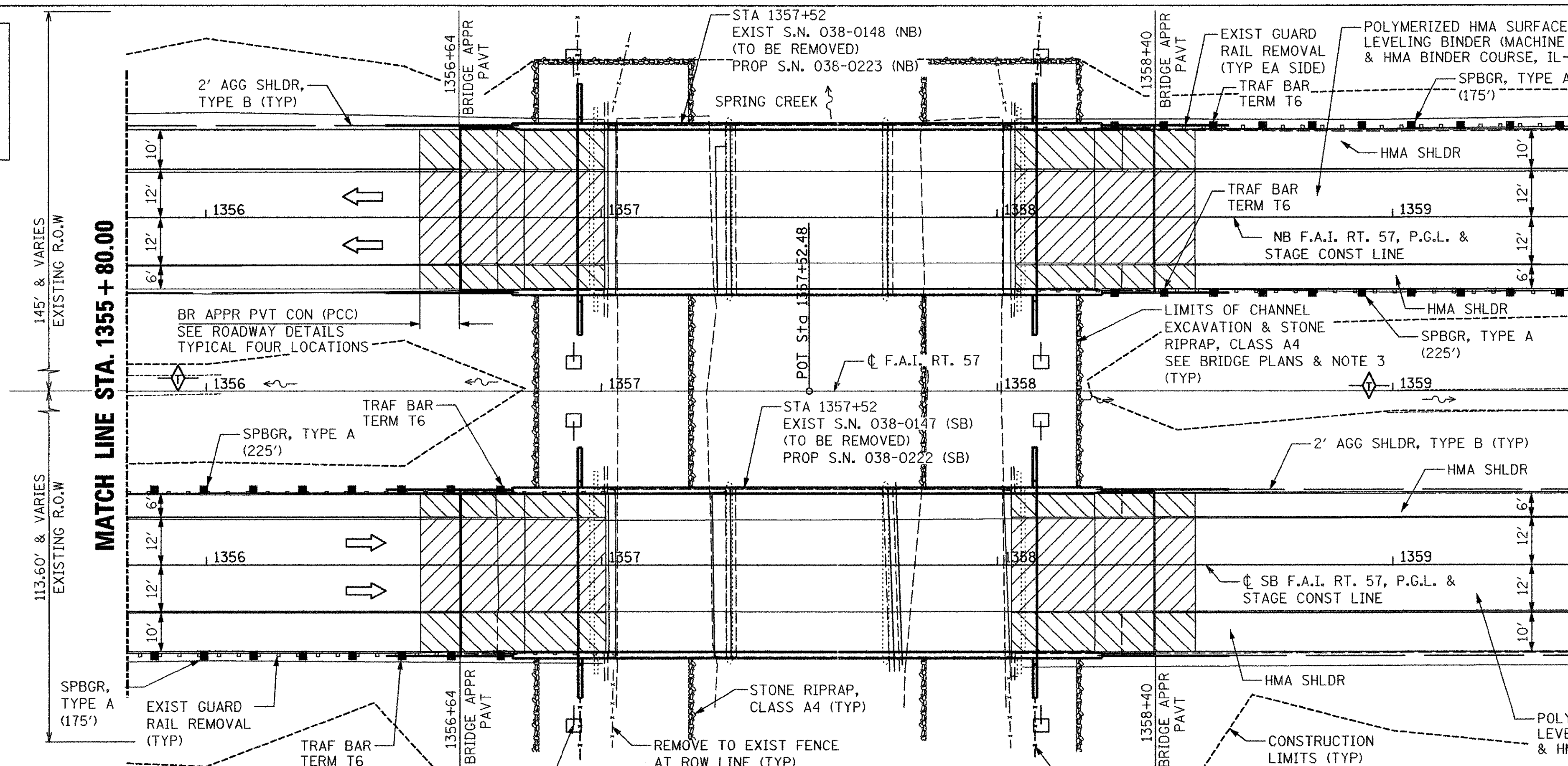
BENCHMARK #10

CUT "□" TOP OF NORTHEAST WINGWALL OF NB I-57 BRIDGE.

STA 1357+01.48, 67.86' LT
ELEV 703.901

NOTES:

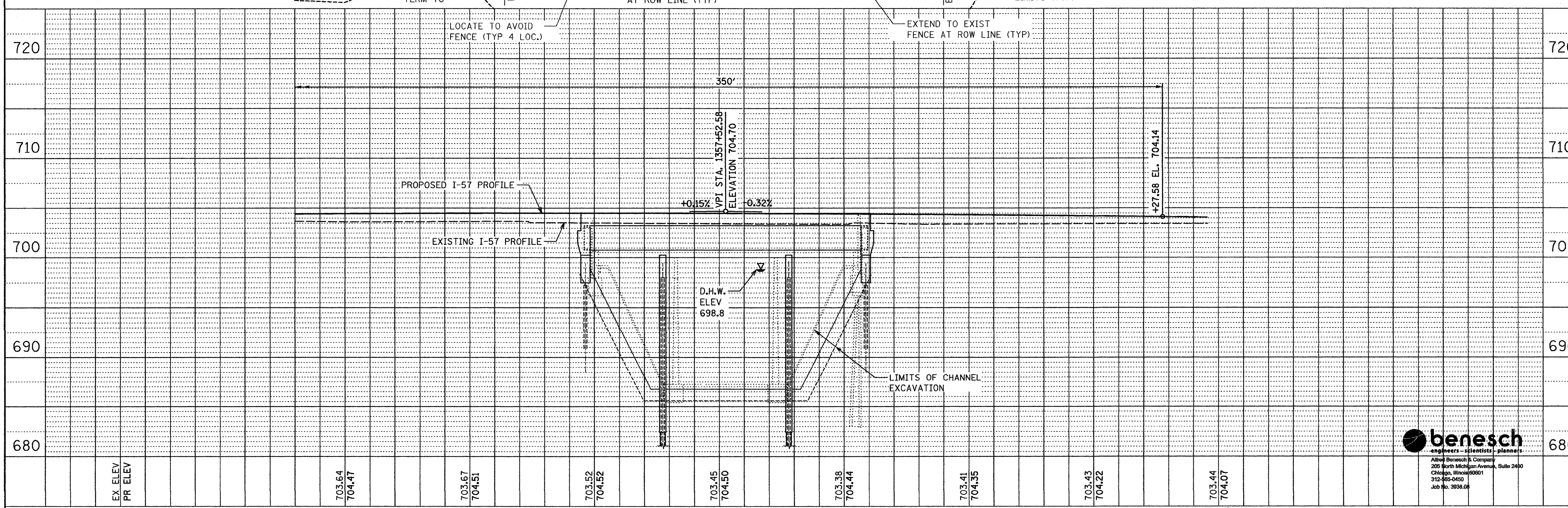
1. PLACE EROSION CONTROL FENCE AROUND THE PERIMETER OF WORK OUTSIDE OF THE CONSTRUCTION LIMITS
2. PAVEMENT REMOVAL:
   STA 1356+54 TO STA 1357+00
   STA 1358+04 TO STA 1358+50
   PAVEMENT REPLACEMENT:
   STA 1356+54 TO STA 1356+64
   STA 1358+40 TO STA 1358+50
   EXISTING BRIDGE OMISSION:
   STA 1357+00 TO STA 1358+04
3. CHANNEL EXCAVATION INCLUDES SILT AND DEBRIS ACCUMULATED ABOVE THE EXISTING CHANNEL LIMITS
4. SEE MOT PLANS FOR LIMITS OF HMA SHOULDER REMOVAL DURING STAGE 1A
5. SEE ROADWAY DETAILS SHEET FOR REPAIR OF EXISTING DIKES (4 LOC.)



LEGEND

- PAVEMENT REMOVAL AND REPLACEMENT (SEE NOTE 2)
- PAVED SHOULDER REMOVAL
- HMA BUTT JOINT
- INLET & PIPE PROTECTION
- TEMPORARY DITCH CHECK
- PROPOSED DITCH FLOW LINE
- EXISTING DITCH FLOW LINE
- DIRECTION OF TRAFFIC
- CONSTRUCTION LIMITS
- EXISTING INLET
- PROP DRAIN PIPE 4" W/ CONC HDWL SEE SECTION THRU INTEGRAL ABUTMENT ON BRIDGE SHEET S2 OF S41
- EXIST WOVEN WIRE FENCE
- PROP WOVEN WIRE FENCE, 4'

20 0 20 40 60 80 100
SCALE IN FEET



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE

SCALE: 1"=20'H/5'V | SHEET NO. 2 OF 3 SHEETS | STA. 1355+80 TO STA. 1359+45

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	10
		CONTRACT NO. 66948		

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

PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, R.T. OF WAY CHECKED, CADD FILE NAME, NOTE BOOK NO. | BY | DATE

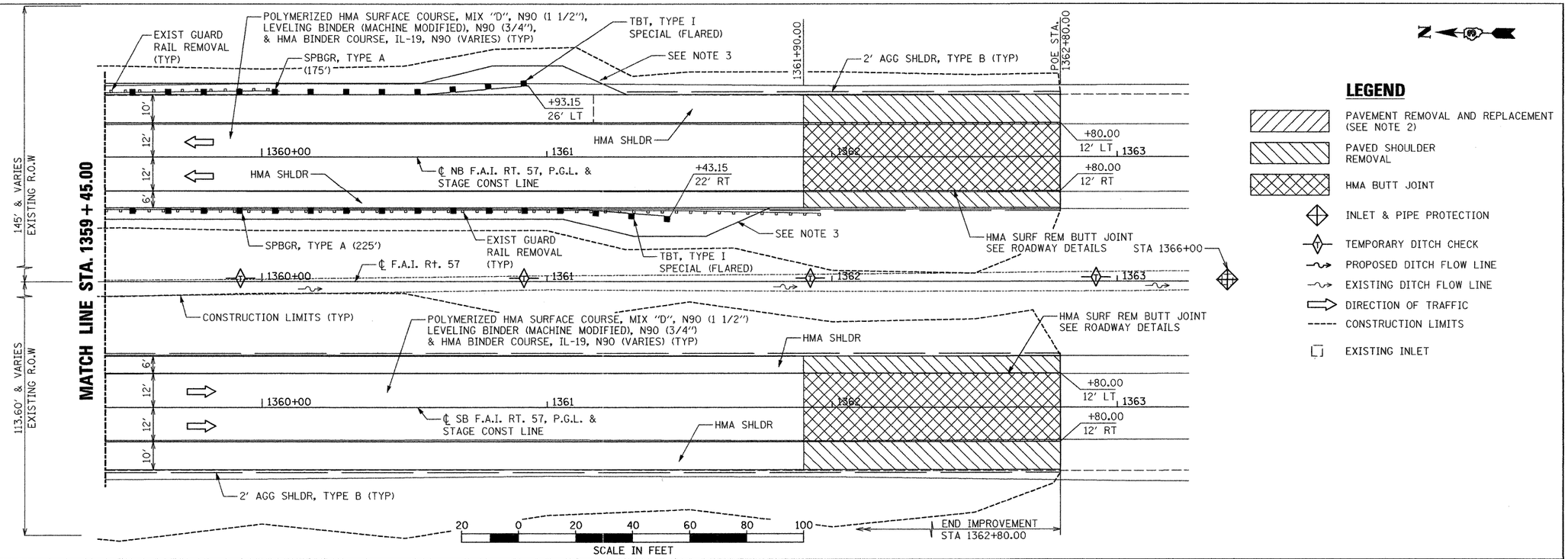
PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, B.M. NOTED, STRUCTURE NOTATIONS CHKD, NOTE BOOK NO. | BY | DATE

BENCHMARK #U201

CONCRETE MONUMENT
NGS BENCHMARK
STA 1387+87.04
129.08' LT
ELEV 718.473

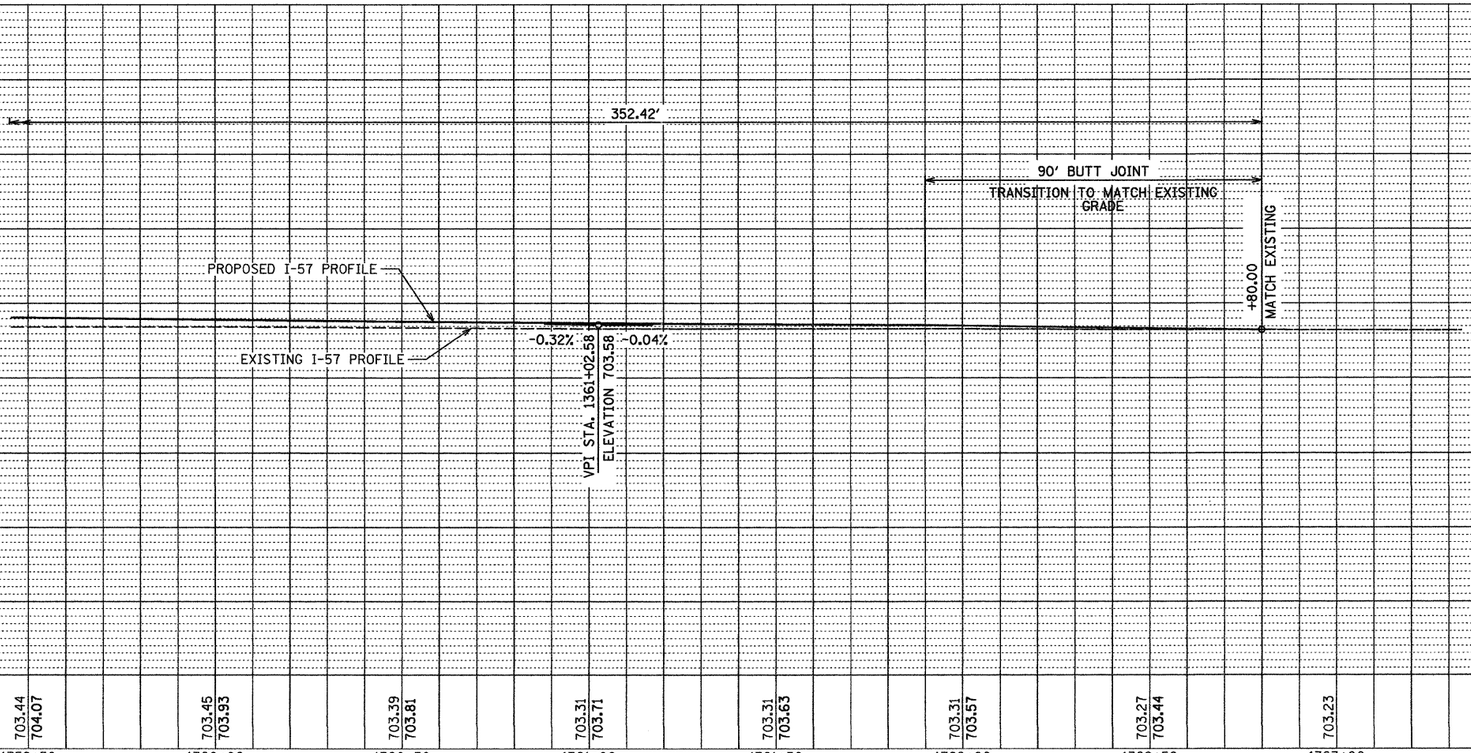
NOTES:

1. PLACE EROSION CONTROL FENCE AROUND THE PERIMETER OF WORK OUTSIDE OF THE CONSTRUCTION LIMITS
2. SEE MOT PLANS FOR LIMITS OF HMA SHOULDER REMOVAL DURING STAGE 1A
3. SEE HWY. STD. 630301 FOR SHOULDER WIDENING DETAILS AND 630201 FOR RESURFACING DETAIL FOR LIMITS OF HMA STABILIZATION



LEGEND

- PAVEMENT REMOVAL AND REPLACEMENT (SEE NOTE 2)
- PAVED SHOULDER REMOVAL
- HMA BUTT JOINT
- INLET & PIPE PROTECTION
- TEMPORARY DITCH CHECK
- PROPOSED DITCH FLOW LINE
- EXISTING DITCH FLOW LINE
- DIRECTION OF TRAFFIC
- CONSTRUCTION LIMITS
- EXISTING INLET



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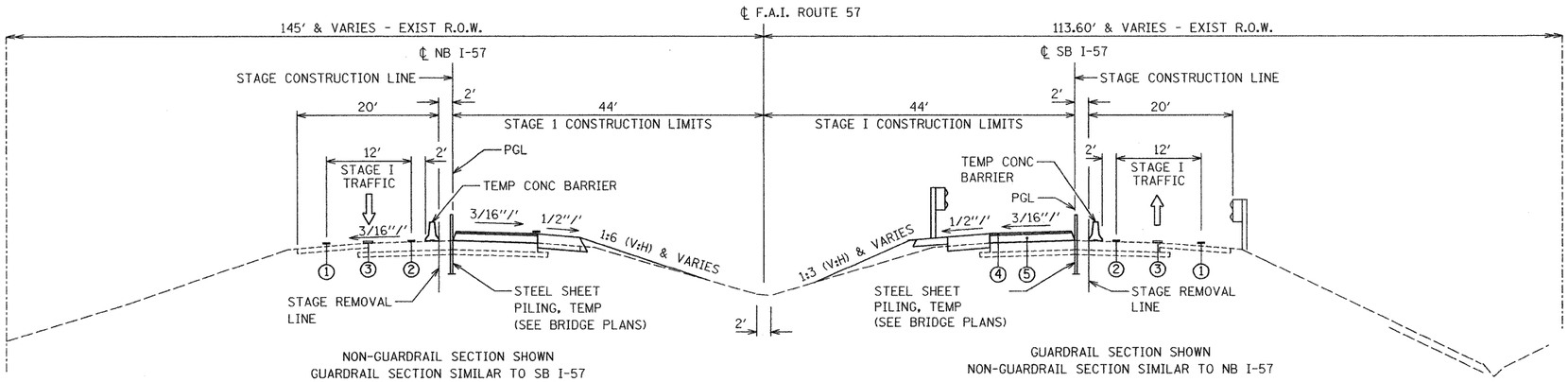
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE

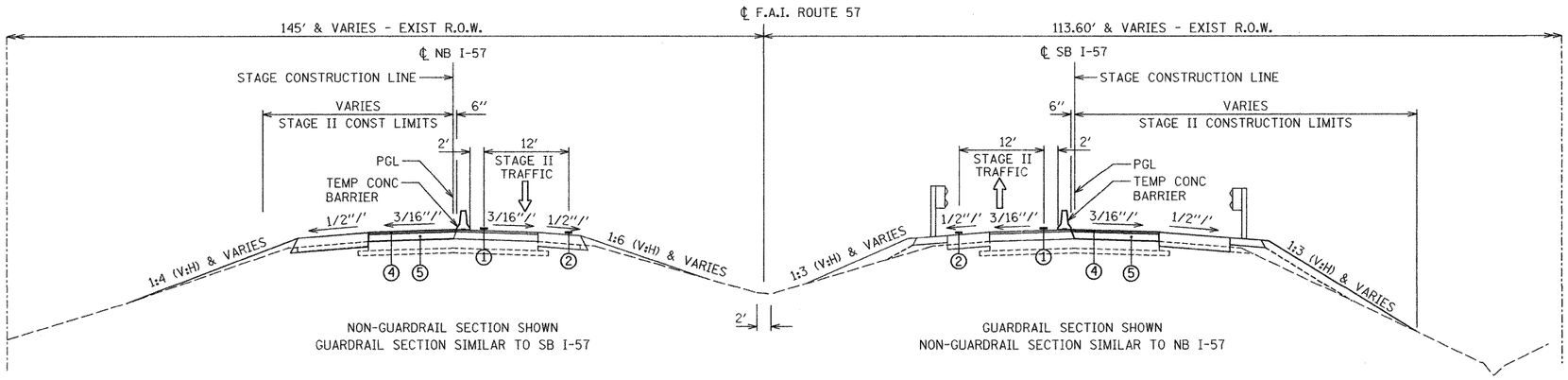
SCALE: 1"=20'H/5'V | SHEET NO. 3 OF 3 SHEETS | STA. 1359+45 TO STA. 1362+80

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	11
		CONTRACT NO. 66948		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



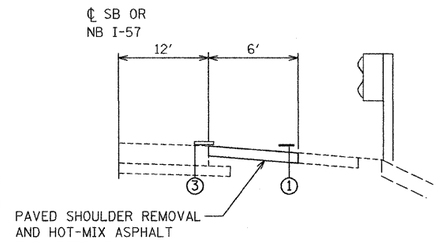
STAGE I TYPICAL SECTION

LOOKING SOUTH
STA 1352+20.00 TO STA 1356+94.00
BRIDGE OMISSION STA 1356+94.00 TO STA 1358+10.00
STA 1358+10.00 TO STA 1362+80.00



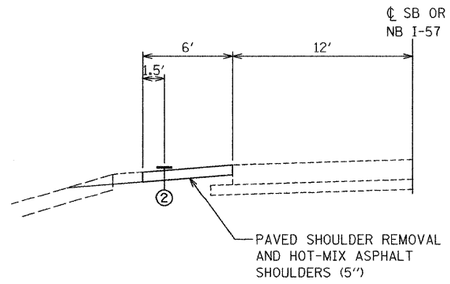
STAGE II TYPICAL SECTION

LOOKING SOUTH
STA 1352+20.00 TO STA 1356+94.00
BRIDGE OMISSION STA 1356+94.00 TO STA 1358+10.00
STA 1358+10.00 TO STA 1362+80.00



OUTSIDE SHOULDER REPLACEMENT REQUIRED FOR STAGE I TRAFFIC

SB I-57 STA 1347+75 TO STA 1365+40
NB I-57 STA 1349+60 TO STA 1367+25



INSIDE SHOULDER REPLACEMENT REQUIRED FOR STAGE II TRAFFIC

NB I-57 STA 1349+60 TO STA 1352+20
SB I-57 STA 1347+75 TO STA 1352+20
SB I-57 STA 1362+80 TO STA 1365+40
NB I-57 STA 1362+80 TO STA 1367+25

STAGE 1A PARTIAL SECTION

CONSTRUCTED PRIOR TO STAGE I
USE HWY. STD. 701401 FOR TRAFFIC CONTROL
NB INSIDE SHOULDER
NB OUTSIDE SHOULDER
SB INSIDE SHOULDER
SB OUTSIDE SHOULDR

NOTES APPLYING TO ALL STAGES:

1. WHITE TEMPORARY PAVEMENT MARKING LINE, 4″
2. YELLOW TEMPORARY PAVEMENT MARKING LINE, 4″
3. EXIST WHITE LINE (REMOVE)
4. LEVELING BINDER (MACHINE METHOD), N90 (3/4″)
5. HOT-MIX ASPHALT BINDER COURSE, IL-19.0 N90 DEPTH VARIES TO MEET EXISTING GROUND. LIFTS NOT TO EXCEED 4″.

REMOVE EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH STAGE TRAFFIC LANES AND SHIFTS.

PLACE POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE AFTER THE COMPLETION OF STAGE II CONSTRUCTION. USE HWY. STD. 701401 FOR TRAFFIC CONTROL

ALL WORK USING HWY. STD. 701401 FOR STAGE 1A AND FOR TOP COURSE WORK IS INCLUDED WITH PAY ITEM "TRAFFIC CONTROL AND PROTECION, STANDARD 701401" (70100800).

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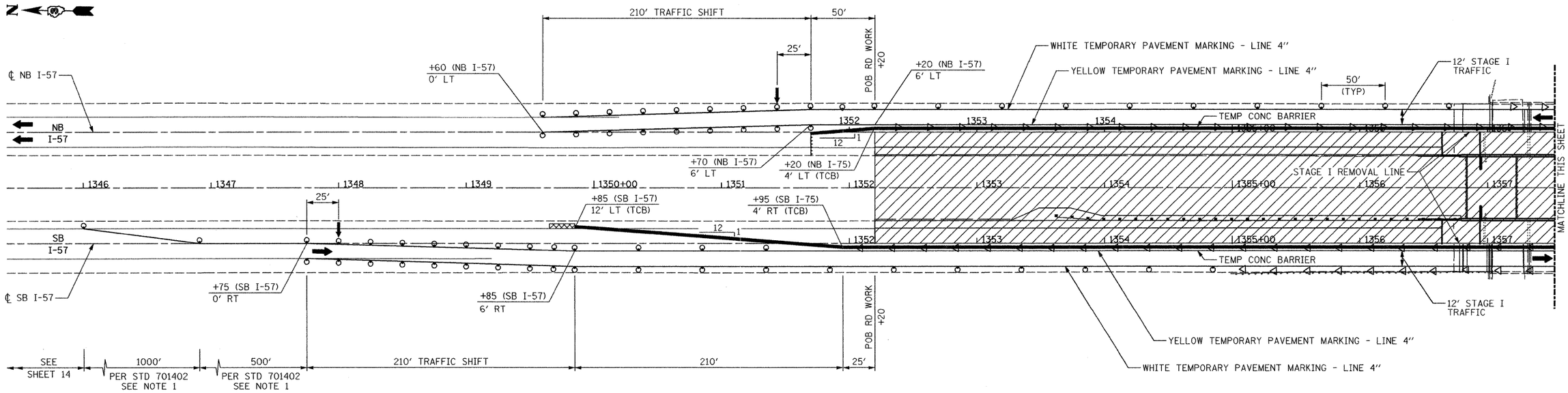
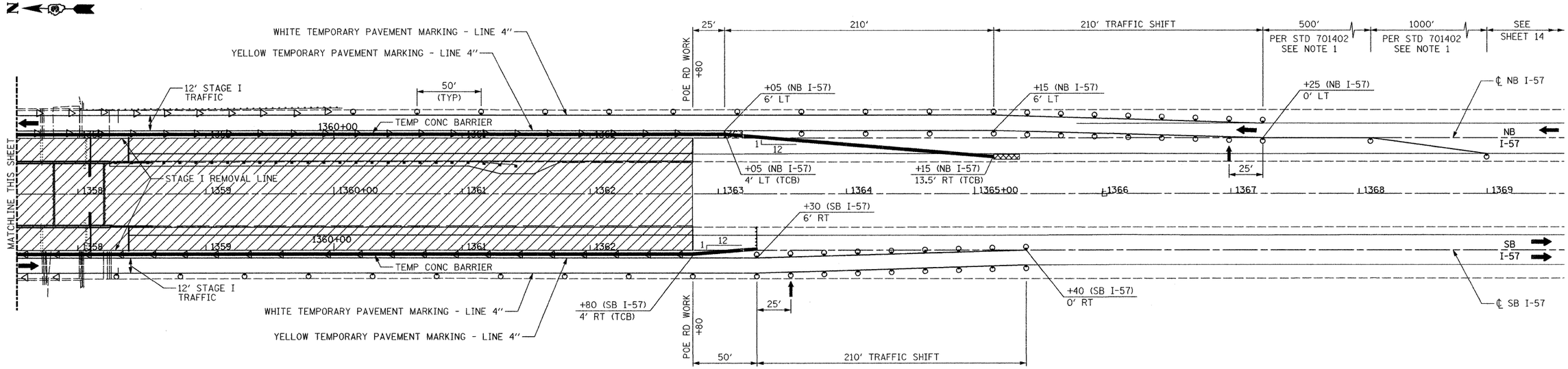
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC

SCALE: NONE | SHEET NO. 1 OF 4 SHEETS | STA. 1352+20 TO STA. 1362+80

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	12
		CONTRACT NO. 66948		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





LEGEND

- WORK AREA
- TEMPORARY CONCRETE BARRIER (TCB)
- TRAFFIC DEVICES SHALL BE TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- SIGN
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3
- ARROW BOARD
- CRYSTAL, MONODIRECTIONAL BARRIER WALL/GUARDRAIL MARKER PER STANDARD 701402
- BARRICADE, TYPE III

NOTES

1. SEE HIGHWAY STANDARD 701402 FOR DETAILS OF 1000′ LANE CLOSURE AND 500′ TANGENT AND ADDITIONAL TRAFFIC CONTROL INFORMATION.
2. TEMPORARY CONCRETE BARRIER AND IMPACT ATTENUATORS WILL BE PAID FOR SEPARATELY.
3. VERTICAL BARRICADES SHALL NOT BE USED IN LANE SHIFT TAPER.
4. TRAFFIC DEVICES SHALL BE SPACED AT 25′ CTS ALONG TRAFFIC SHIFTS AND 50′ CTS ALONG TANGENT SECTIONS.
5. OFFSETS TO TEMPORARY CONCRETE BARRIER (TCB) ARE TO THE TOE OF THE TCB NEAREST TO TEMPORARY TRAFFIC.

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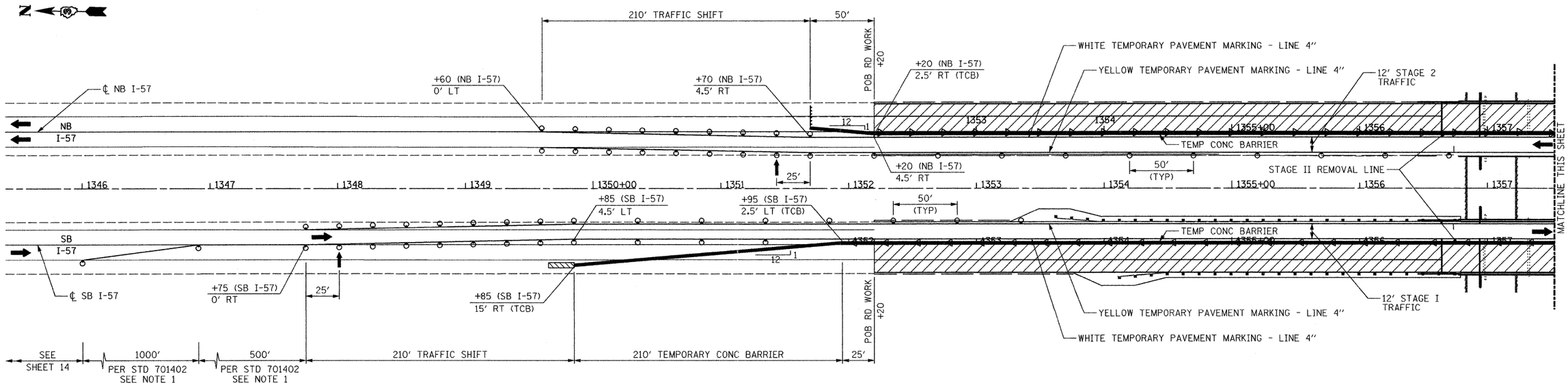
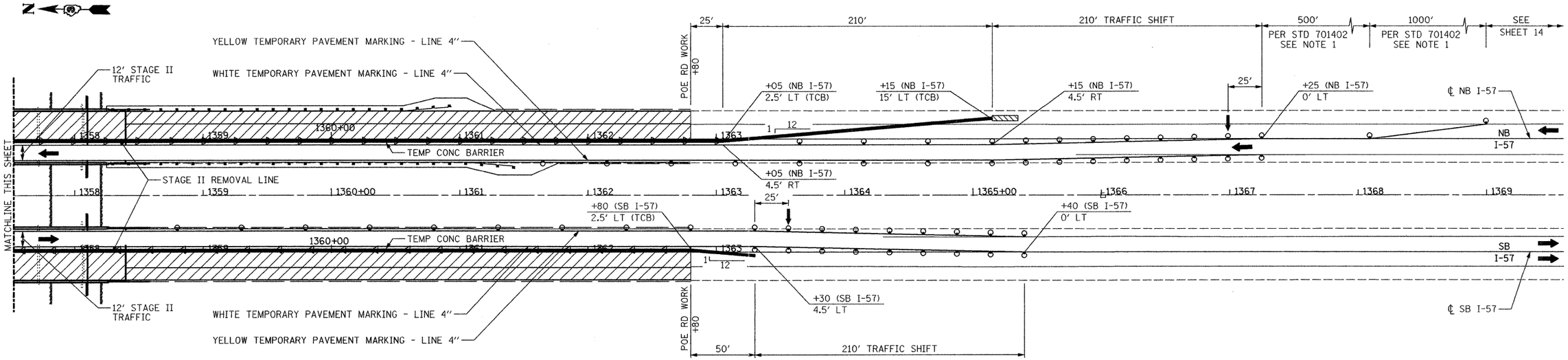
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC – STAGE I

SCALE: 1″=40′ | SHEET NO. 2 OF 4 SHEETS | STA. 1352+20 TO STA. 1362+80

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	13
		CONTRACT NO. 66948		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





LEGEND

- WORK AREA
- TEMPORARY CONCRETE BARRIER (TCB)
- TRAFFIC DEVICES SHALL BE TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH STEADY BURN MONODIRECTIONAL LIGHT
- SIGN
- IMPACT ATTENUATOR, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3
- ARROW BOARD
- CRYSTAL, MONODIRECTIONAL BARRIER WALL/GUARDRAIL MARKER PER STANDARD 701402
- BARRICADE, TYPE III

NOTES

1. SEE HIGHWAY STANDARD 701402 FOR DETAILS OF 1000' LANE CLOSURE AND 500' TANGENT AND ADDITIONAL TRAFFIC CONTROL INFORMATION.
2. TEMPORARY CONCRETE BARRIER AND IMPACT ATTENUATORS WILL BE PAID FOR SEPARATELY.
3. VERTICAL BARRICADES SHALL NOT BE USED IN LANE SHIFT TAPER.
4. TRAFFIC DEVICES SHALL BE SPACED AT 25' CTS ALONG TRAFFIC SHIFTS AND 50' CTS ALONG TANGENT SECTIONS.
5. OFFSETS TO TEMPORARY CONCRETE BARRIER (TCB) ARE TO THE TOE OF THE TCB NEAREST TO TEMPORARY TRAFFIC.

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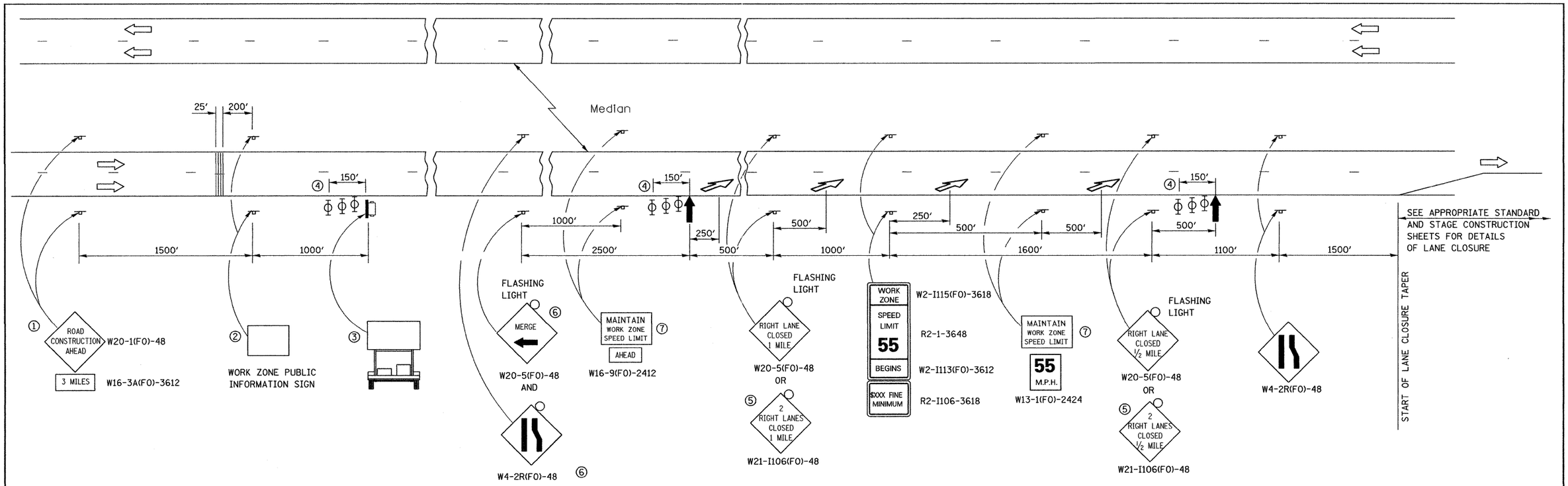
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC – STAGE II

SCALE: 1"=40' | SHEET NO. 3 OF 4 SHEETS | STA. 1352+20 TO STA. 1362+80

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	14
		CONTRACT NO. 66948		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



① THE ROAD CONSTRUCTION AHEAD SIGN SHALL BE LOCATED 3 MILES IN ADVANCE OF THE PROJECT LIMITS.

② THE MESSAGE AND SIZE OF THE WORK ZONE PUBLIC INFORMATION SIGN SHALL BE AS SPECIFIED BY THE DEPARTMENT.

③ TO BE PLACED IN THE MEDIAN WHEN FEASABLE. THE MESSAGE BOARD SHALL BE USED TO DISPLAY STATUS OF LANES WITHIN THE PROJECT. THE PRIMARY MESSAGES SHALL BE:
"RIGHT LANE CLOSED" / " x MILES AHEAD"
"LEFT LANE CLOSED" / " x MILES AHEAD"
"ALL LANES OPEN"

④ THREE, TYPE II BARRICADES, DRUMS, OR VERTICAL BARRICADES AT 50′ CENTERS.

⑤ THIS SIGN SHALL BE USED WHEN 2 LANES ARE CLOSED.

⑥ WHEN THE LEFT LANE IS CLOSED, SWITCH THESE TWO SIGNS AND THE DIRECTION OF THE MERGE ARROW.

⑦ 48″x36″ FLUORESCENT ORANGE SIGN WITH BLACK LETTERS.

48″

MAINTAIN	8″
WORK ZONE	6″
SPEED LIMIT	6″

36″

ARROW BOARD

PORTABLE CHANGEABLE MESSAGE SIGN

SIGN

TYPE II BARRICADE, DRUM, OR VERTICAL BARRICADE WITH MONODIRECTIONAL FLASHING LIGHT

LANE DROP ARROW - SEE STANDARD 780001

TEMPORARY THERMOPLASTIC RUMBLE STRIPS

GENERAL NOTE:

THIS STANDARD IS USED WHERE AT ANY TIME A LANE IS CLOSED ON A FREEWAY/EXPRESSWAY.

WHEN THE LEFT LANE IS CLOSED, LEFT LANE CLOSED SIGNS SHALL BE SUBSTITUTED FOR THE RIGHT LANE CLOSED SIGNS.

THE FIRST TWO SIGNS AND THE MESSAGE BOARD ARE STATIONARY. THE OTHER SIGNS AND ARROWBOARDS SHALL BE MOVED AS NECESSARY TO MAINTAIN THE REQUIRED DISTANCE FROM THE START OF THE LANE CLOSURE TAPER(S).

SEE SPECIAL PROVISIONS.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE SHOWN.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

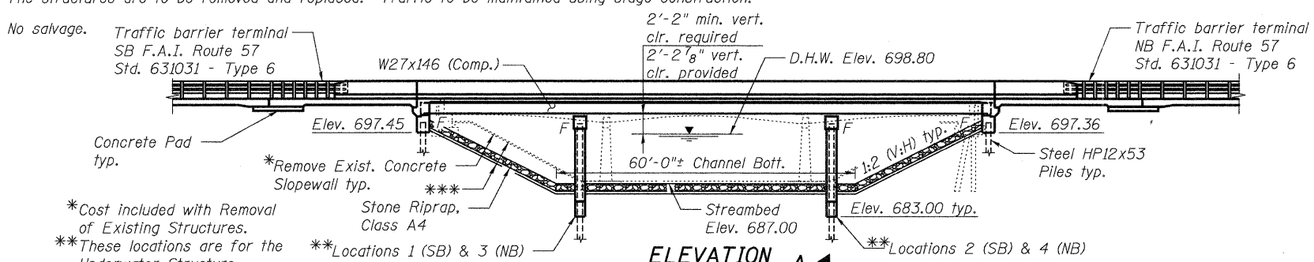
STANDARD 701400 (SPECIAL)

SCALE: 1″=40′ | SHEET NO. 4 OF 4 SHEETS | STA. 1352+20 TO STA. 1362+80

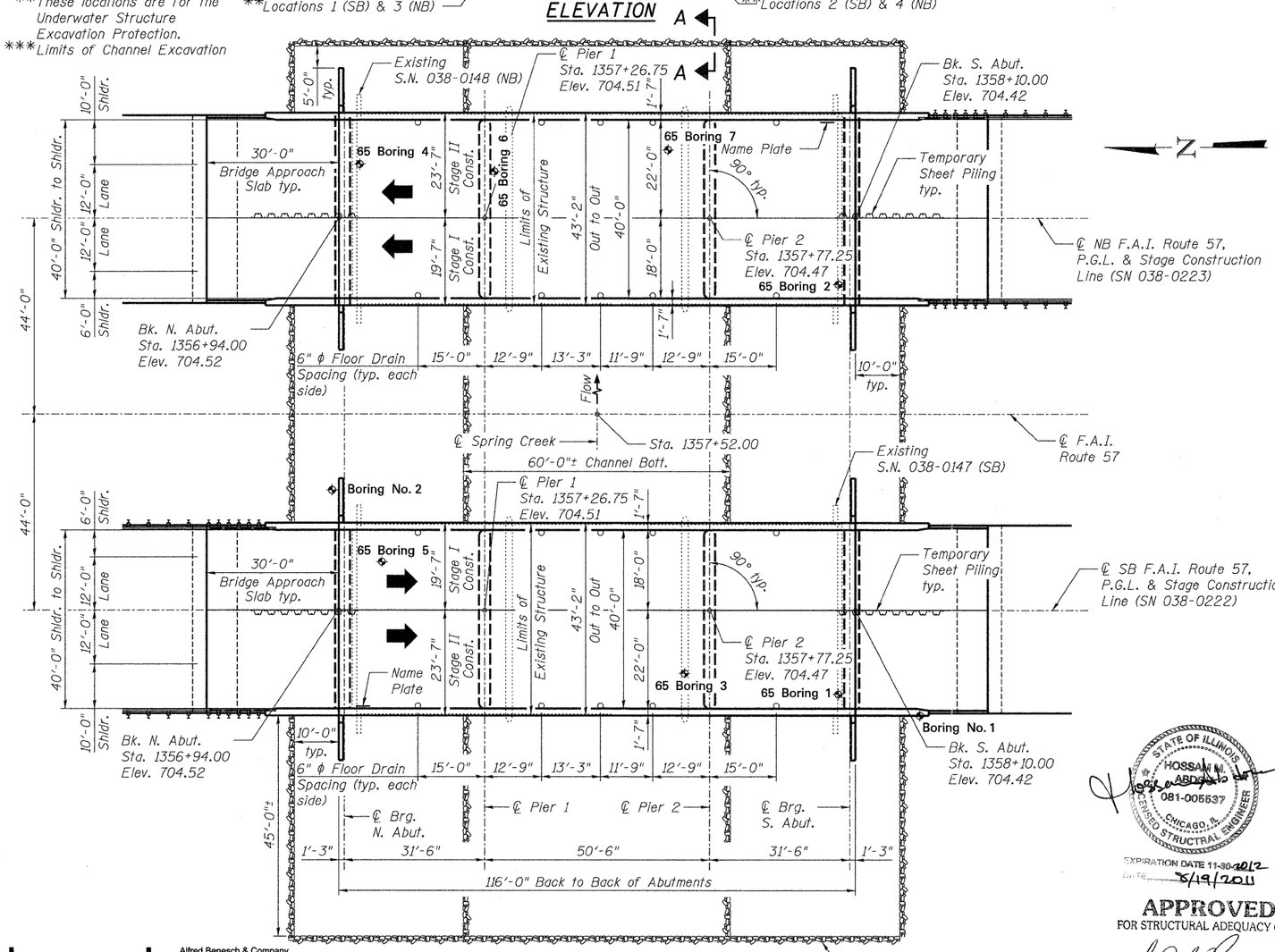
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	15
		CONTRACT NO. 66948		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

Bench Mark: BM#10 Cut "□" in top of northeast wingwall of Existing Structure No. 038-0148 (I-57 NB), Sta. 1357+01.48, 67.86' LT., Elev. 703.901

Existing Structures: S.N. 038-0147 SB and 038-0148 NB were originally constructed in 1968 as F.A.I. Route 57, Section 38-8B. The existing dual structures consist of 3-span continuous haunched concrete tee beams supported by open abutments and tapered solid wall concrete piers on spread footings. Each structure is 105'-0" back-to-back of abutments and 42'-6" wide out-to-out of the deck (40'-0" clear width between the bridge rails). The structures are to be removed and replaced. Traffic to be maintained using stage construction.



ELEVATION



PLAN

WATERWAY INFORMATION

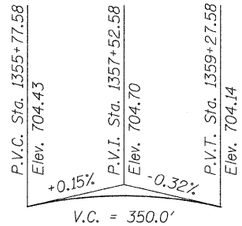
Drainage Area = 32.3 sq. mi. Low Grade Elev. 703.14 @ Sta. 1367+09

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	2915	505	812	698.0	1.9	1.3	699.9	699.3
Design	50	4600	572	894	698.8	3.8	2.4	702.6	701.2
Base	100	5334	599	927	699.2	4.0	2.7	703.1	701.8
Overtopping	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max. Calc.	500	7096	656	1003	699.9	4.4	2.9	704.3	702.8

10 Year Velocity Through Existing Structure = 5.0 fps
10 Year Velocity Through Proposed Structure = 4.4 fps

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	N. Abut.	Pier 1	Pier 2	S. Abut.
	697.37	684.80	684.80	697.28



PROFILE GRADE

(along ℄ I-57 SB & NB)

STATION 1357+52
BUILT 20 BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. (38-8) BR & BR-1
LOADING HL-93
STR. NO. 038-0222

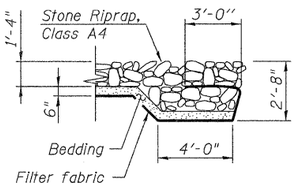
SB NAME PLATE

See Std. 515001

STATION 1357+52
BUILT 20 BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. (38-8) BR & BR-1
LOADING HL-93
STR. NO. 038-0223

NB NAME PLATE

See Std. 515001



SECTION A-A

(Typical along outside perimeter)

LOADING HL-93

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

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications, 5th Edition

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (AASHTO M270 Grade 50W)

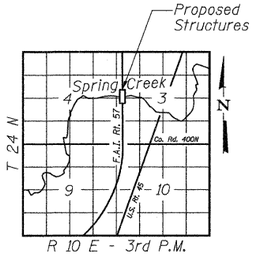
SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.083g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.143g
Soil Site Class = C

STATE OF ILLINOIS
HOSSAM M. ABDELRAZIG
081-005537
LICENSED STRUCTURAL ENGINEER
CHICAGO, IL
EXPIRATION DATE 11-30-2012
5/19/2011

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

ENGINEER OF BRIDGES AND STRUCTURES



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
I-57 OVER SPRING CREEK
F.A.I. ROUTE 57 - SEC. (38-8) BR & BR-1
IROQUOIS COUNTY
STATION 1357+52.00
STRUCTURE NO. 038-0222/0223

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. S1 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	16
		CONTRACT NO. 66948		
		ILLINOIS FED. AID PROJECT		

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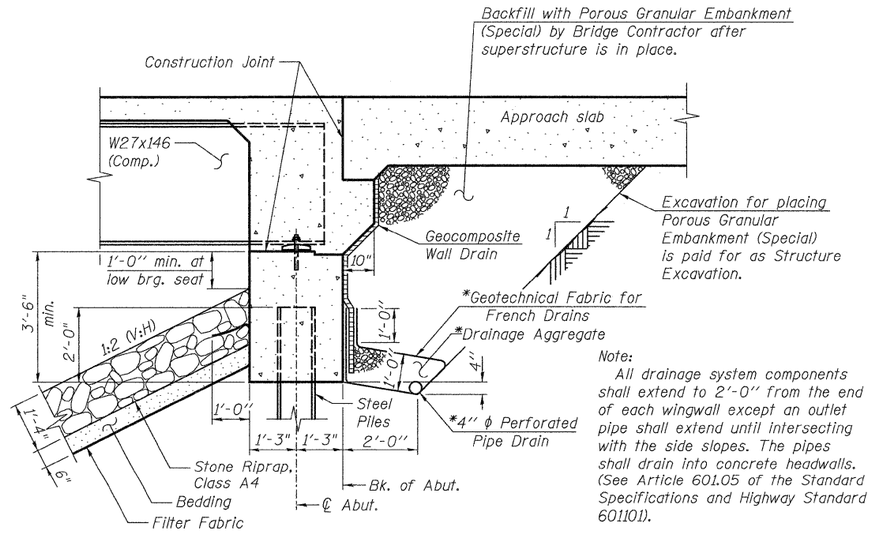
GENERAL NOTES

1. Fasteners shall be AASHTO M164 Type 3. Bolts $^{7}/_{8}$" diameter, holes $^{15}/_{16}$" diameter, unless otherwise noted.
2. Calculated weight of Structural Steel = 271,870 lbs.
3. All structural steel shall be AASHTO M270 Grade 50W. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".
4. No field welding is permitted except as specified in the contract documents.
5. Reinforcement bars shall conform to the requirements of ASTM A706 Gr. 60.
6. Reinforcement bars designated (E) shall be epoxy coated.
7. If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
8. Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $^{1}/_{8}$ in. (0.01 ft.). Adjustment shall be made by either grinding the surface or by shimming the bearings.
9. Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3". Painted areas shall be primed in the shop with a Department approved zinc rich primer. Field painting will not be required.
10. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
11. The existing bearings contain lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
12. The Contractor is advised that the existing concrete superstructure is a continuous structure and removal must be done in a proper sequence, possibly with falsework support.
13. The existing concrete piles at the south abutment of existing Structure No. 038-0148 (NB) shall be left in place and the top portions removed to 1'-0" below the bottom of the proposed stone riprap bedding grade. Cost is included with Removal of Existing Structures.

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL	SUPER	SUB
Stone Riprap, Class A4	Sq .Yd.	2,844		2,844
Filter Fabric	Sq. Yd.	2,844		2,844
Removal of Existing Structures	Each	2		
Structure Excavation	Cu. Yd.	472		472
Floor Drains	Each	20	20	
Concrete Structures	Cu. Yd.	305.4		305.4
Concrete Superstructure	Cu. Yd.	629.8	629.8	
Bridge Deck Grooving	Sq. Yd.	1,488	1,488	
Concrete Encasement	Cu. Yd.	19.6		19.6
Protective Coat	Sq. Yd.	1,860	1,860	
Furnishing and Erecting Structural Steel	L. Sum	1	1	
Stud Shear Connectors	Each	10,320	10,320	
Reinforcement Bars, Epoxy Coated	Pound	188,780	151,040	37,740
Bar Splicers	Each	1,656	1,320	336
Furnishing Steel Piles HP12x53	Foot	1,347		1,347
Driving Piles	Foot	1,347		1,347
Test Pile Steel HP12x53	Each	6		6
Pile Shoes	Each	56		56
Name Plates	Each	2	2	
Anchor Bolts, 1"	Each	96		96
Geocomposite Wall Drain	Sq. Yd.	154		154
Temporary Sheet Piling	Sq. Ft.	1,239		1,239
Pipe Underdrains For Structures, 4"	Foot	270		270
Porous Granular Embankment, Special	Cu. Yd.	220		220
Underwater Structure Excavation Protection - Location 1	Each	1		1
Underwater Structure Excavation Protection - Location 2	Each	1		1
Underwater Structure Excavation Protection - Location 3	Each	1		1
Underwater Structure Excavation Protection - Location 4	Each	1		1



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).

SECTION THRU INTEGRAL ABUTMENT

*Included in the cost of Pipe Underdrains for Structures, 4".

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS AND TOTAL BILL OF MATERIAL
STRUCTURE NO. 038-0222\0223
SHEET NO. S2 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	17
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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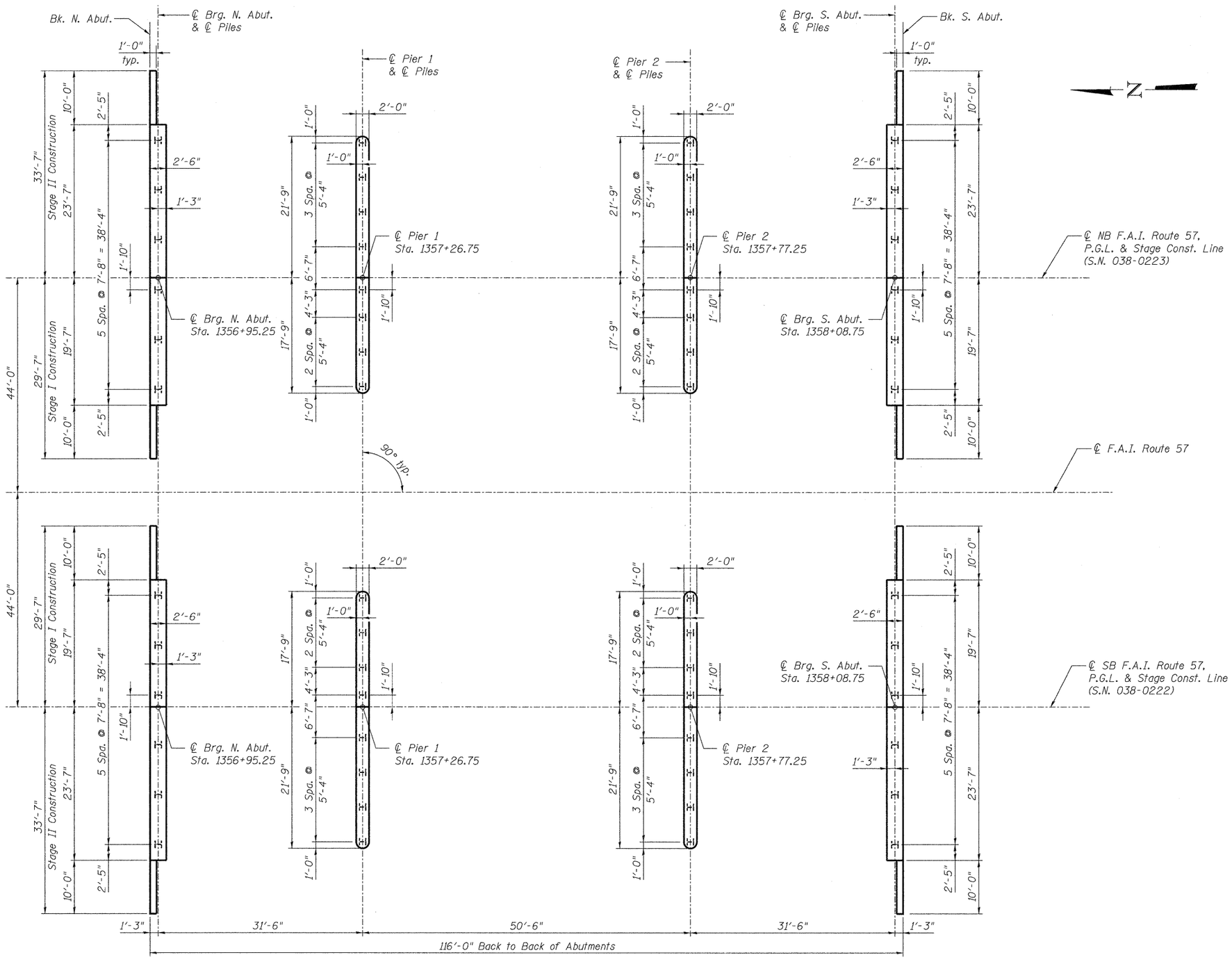

NOTES:

1. For Abutment details, see sheets S20 and S21 of S41.
2. For Pier Details, see sheets S22 and S23 of S41.
3. For HP Pile Details, see sheet S24 of S41.

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FOUNDATION LAYOUT

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FOUNDATION LAYOUT
STRUCTURE NO. 038-0222\0223
SHEET NO. S3 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	18
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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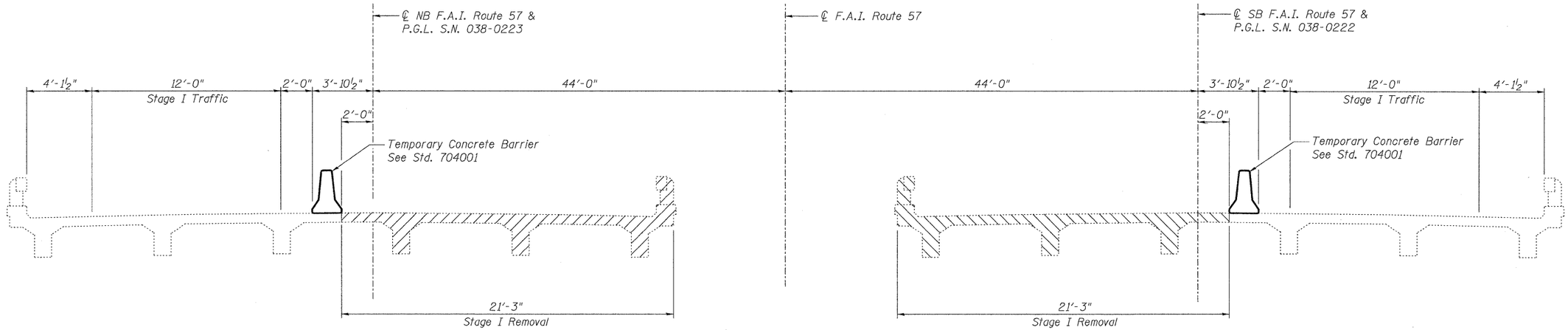
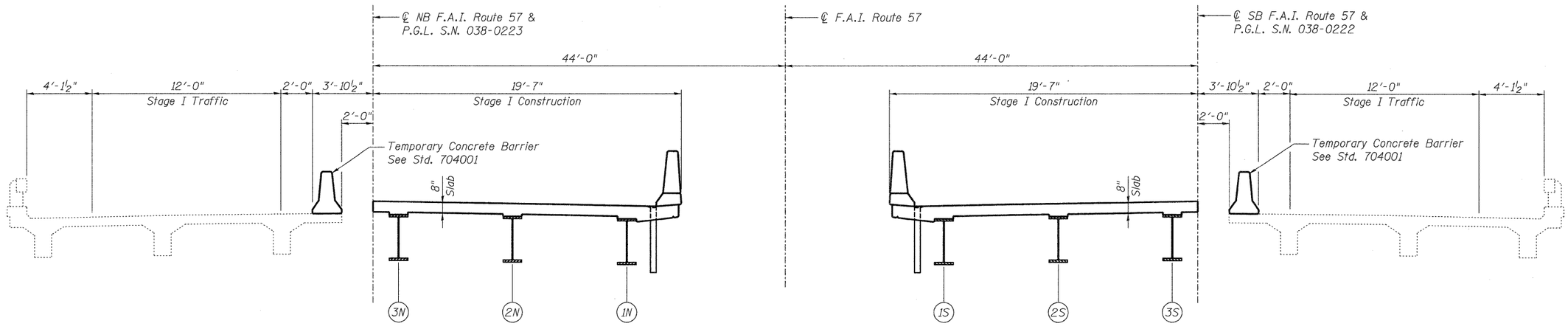


STAGE I REMOVAL



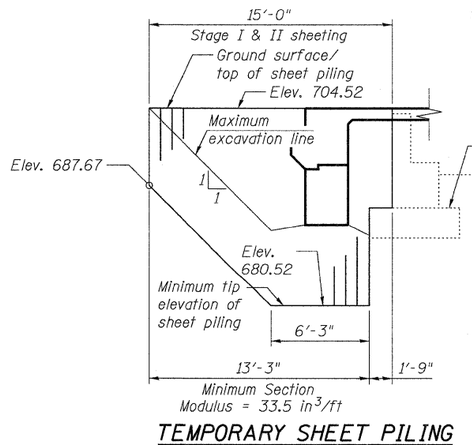
STAGE I CONSTRUCTION

LEGEND

Indicates Removal of Existing Structures

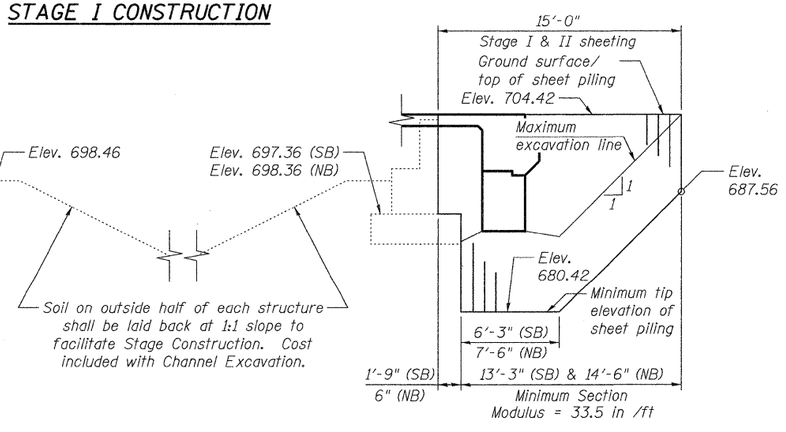
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Temporary Sheet Piling	Sq. Ft.	1,239



TEMPORARY SHEET PILING

(at North Abutment)
(N.T.S.)



TEMPORARY SHEET PILING

(at South Abutment)
(N.T.S.)

NOTES:

1. 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.
2. The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.
3. Cross Sections are shown looking South.
4. See sheet S6 of S41 for details of Temporary Concrete Barrier. For quantity, see Roadway Plans.

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	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I CONSTRUCTION DETAILS AND TEMPORARY SHEET PILING
STRUCTURE NO. 038-0222/0223
SHEET NO. S4 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	19
		CONTRACT NO. 66948		
	ILLINOIS	FED. AID PROJECT		

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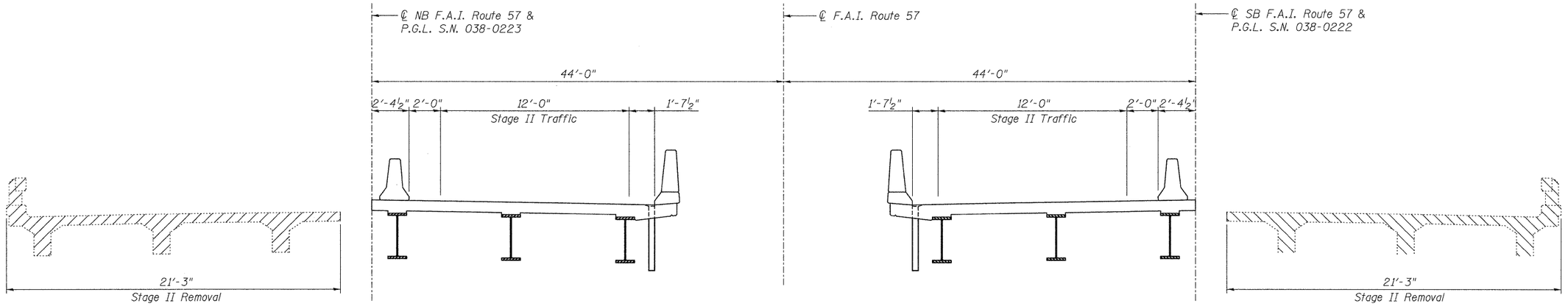
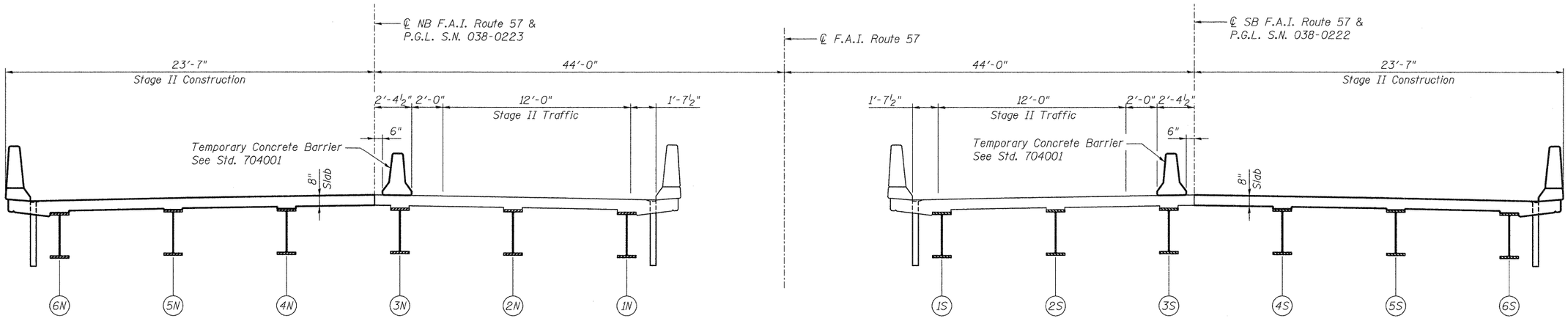


STAGE II REMOVAL



STAGE II CONSTRUCTION

LEGEND

Indicates Removal of Existing Structures

NOTES:

1. Cross Sections are shown looking South.
2. See sheet S6 of S41 for details of Temporary Concrete Barrier. For quantity, see Roadway Plans.

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	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = Ø8\18\2Ø11	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II CONSTRUCTION DETAILS
STRUCTURE NO. 038-0222/0223
SHEET NO. S5 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	20
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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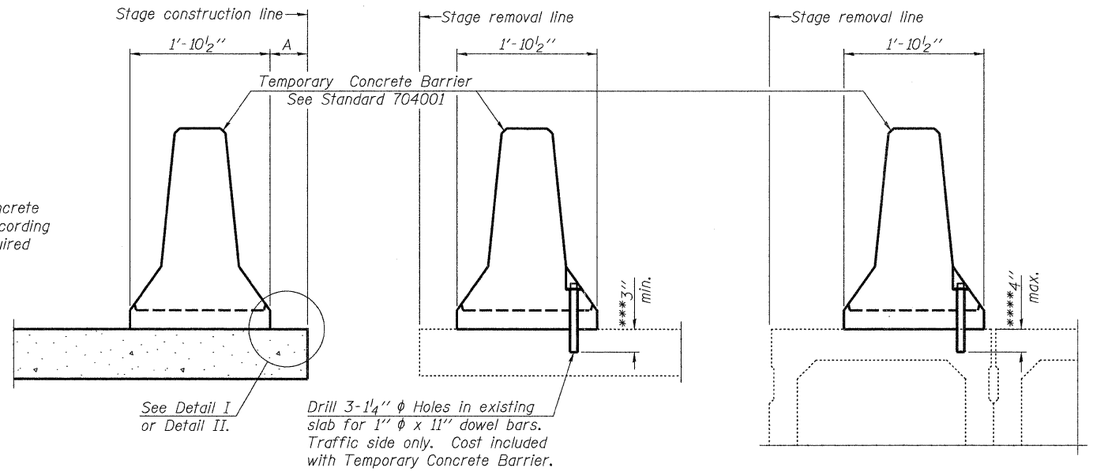
When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



NEW SLAB | EXISTING SLAB | EXISTING DECK BEAM

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1" x 7' 'x "W" steel ℙ to the top layer of couplers with 2-$\frac{5}{8}$" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

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

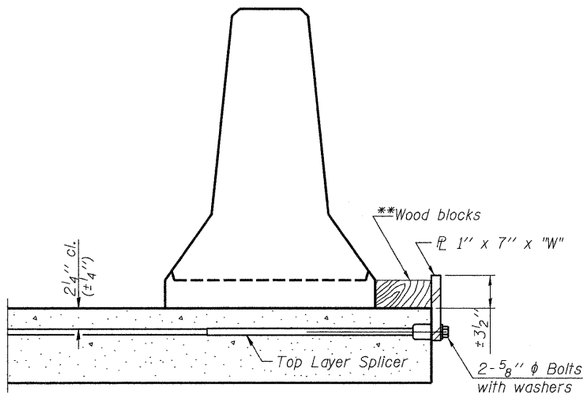
Cost of anchorage is included with Temporary Concrete Barrier.

The 1" x 7" x "W" 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.

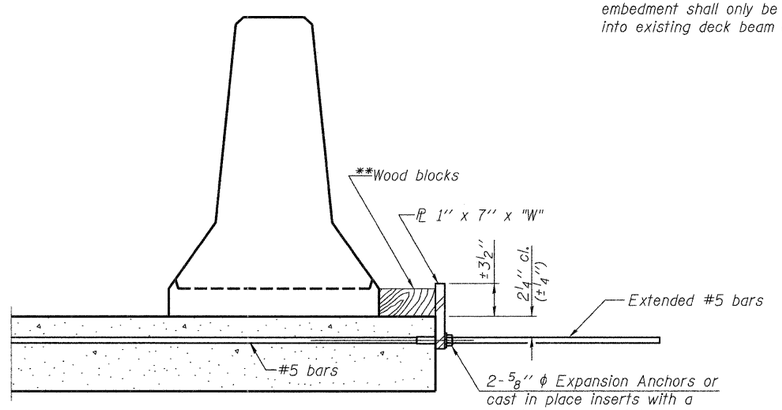
SECTIONS THRU SLAB OR DECK BEAM

*** 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.



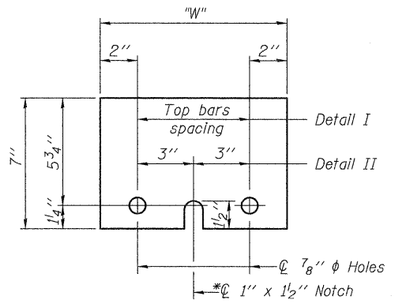
DETAIL I



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 ℙ 1" x 7" x "W"

* Required only with Detail II

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	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
STRUCTURE NO. 038-02220223
SHEET NO. S6 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	21
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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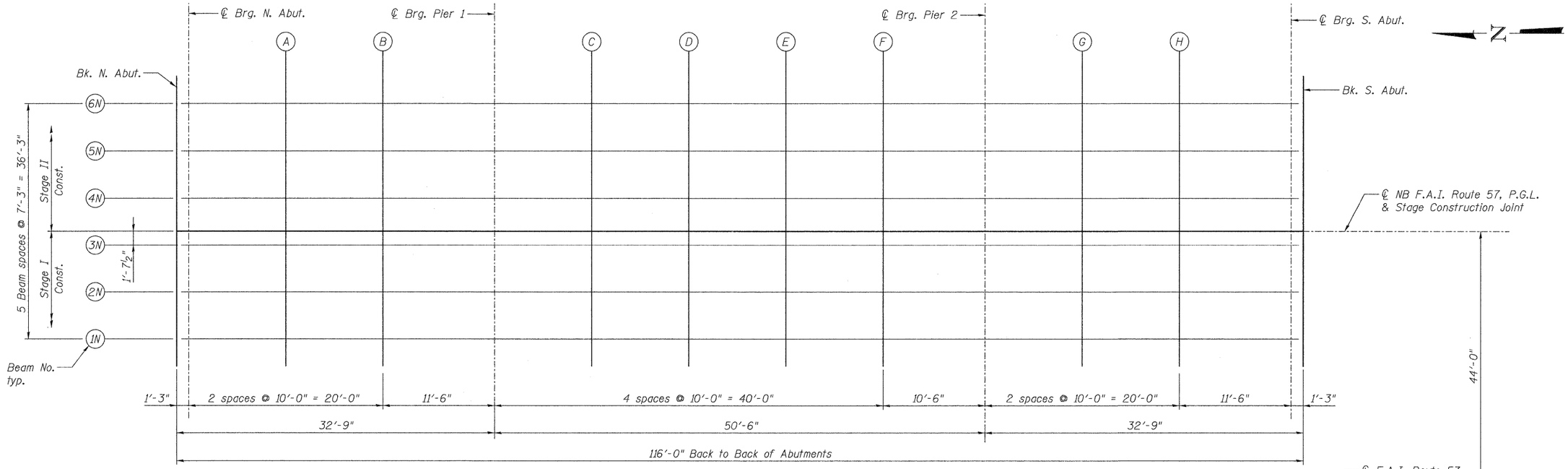
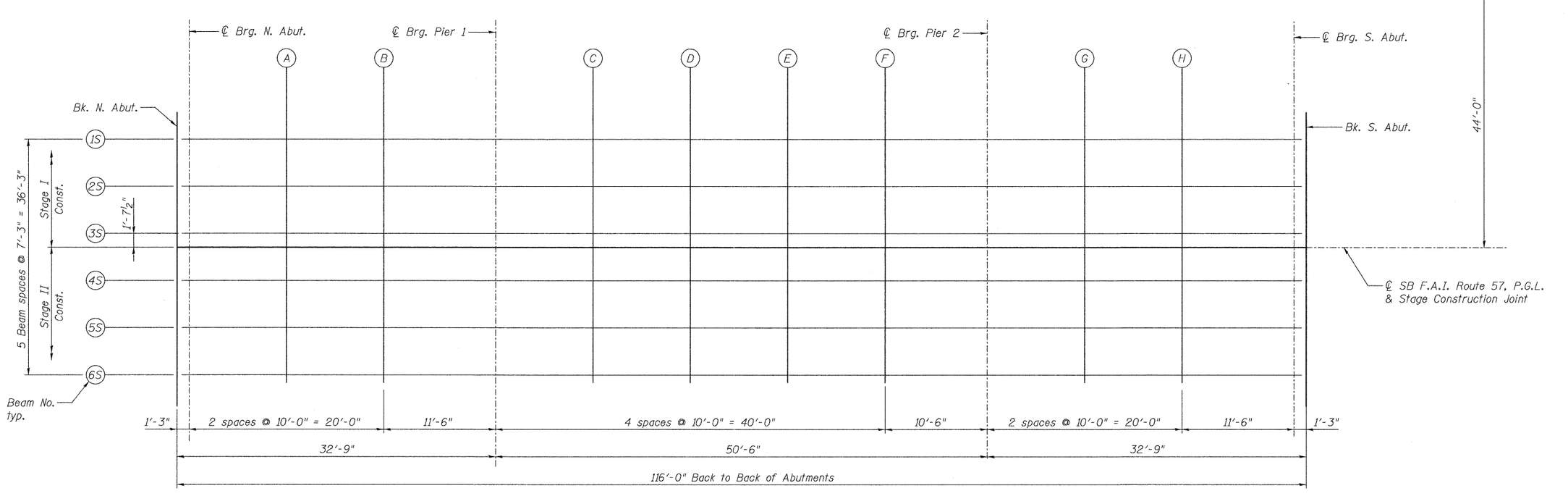


PLAN - S.N. 038-0223



PLAN - S.N. 038-0222

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	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (1 OF 3)
STRUCTURE NO. 038-0222/0223
SHEET NO. 57 OF 541 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	22
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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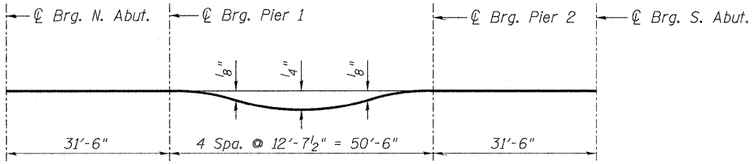
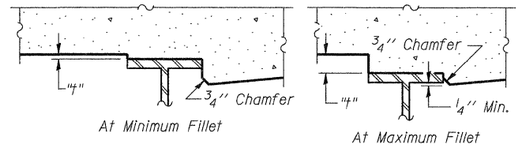


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note: The above deflections are not for use in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted For Dead Load Deflection".



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 and on sheet S9 of S41. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below and on sheet S9 of S41, minus 8" slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

BEAMS 1S & 1N

Location	Station	Offset Beam 1S	Offset Beam 1N	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. N. ABUT.	1356+94.00	-16.13	16.13	704.24	704.24
℄ BRG. N. ABUT.	1356+95.25	-16.13	16.13	704.24	704.24
A	1357+05.25	-16.13	16.13	704.24	704.24
B	1357+15.25	-16.13	16.13	704.24	704.24
℄ BRG. PIER 1	1357+26.75	-16.13	16.13	704.24	704.24
C	1357+36.75	-16.13	16.13	704.23	704.24
D	1357+46.75	-16.13	16.13	704.22	704.24
E	1357+56.75	-16.13	16.13	704.22	704.23
F	1357+66.75	-16.13	16.13	704.21	704.22
℄ BRG. PIER 2	1357+77.25	-16.13	16.13	704.19	704.19
G	1357+87.25	-16.13	16.13	704.18	704.18
H	1357+97.25	-16.13	16.13	704.17	704.17
℄ BRG. S. ABUT.	1358+08.75	-16.13	16.13	704.15	704.15
BK. S. ABUT.	1358+10.00	-16.13	16.13	704.15	704.15

BEAMS 2S & 2N

Location	Station	Offset Beam 2S	Offset Beam 2N	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. N. ABUT.	1356+94.00	-8.88	8.88	704.38	704.38
℄ BRG. N. ABUT.	1356+95.25	-8.88	8.88	704.38	704.38
A	1357+05.25	-8.88	8.88	704.38	704.38
B	1357+15.25	-8.88	8.88	704.38	704.38
℄ BRG. PIER 1	1357+26.75	-8.88	8.88	704.37	704.37
C	1357+36.75	-8.88	8.88	704.37	704.37
D	1357+46.75	-8.88	8.88	704.36	704.38
E	1357+56.75	-8.88	8.88	704.35	704.37
F	1357+66.75	-8.88	8.88	704.34	704.35
℄ BRG. PIER 2	1357+77.25	-8.88	8.88	704.33	704.33
G	1357+87.25	-8.88	8.88	704.32	704.32
H	1357+97.25	-8.88	8.88	704.30	704.30
℄ BRG. S. ABUT.	1358+08.75	-8.88	8.88	704.29	704.29
BK. S. ABUT.	1358+10.00	-8.88	8.88	704.28	704.28

BEAMS 3S & 3N

Location	Station	Offset Beam 3S	Offset Beam 3N	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. N. ABUT.	1356+94.00	-1.63	1.63	704.49	704.49
℄ BRG. N. ABUT.	1356+95.25	-1.63	1.63	704.49	704.49
A	1357+05.25	-1.63	1.63	704.49	704.49
B	1357+15.25	-1.63	1.63	704.49	704.49
℄ BRG. PIER 1	1357+26.75	-1.63	1.63	704.48	704.48
C	1357+36.75	-1.63	1.63	704.48	704.49
D	1357+46.75	-1.63	1.63	704.47	704.49
E	1357+56.75	-1.63	1.63	704.46	704.48
F	1357+66.75	-1.63	1.63	704.45	704.46
℄ BRG. PIER 2	1357+77.25	-1.63	1.63	704.44	704.44
G	1357+87.25	-1.63	1.63	704.43	704.43
H	1357+97.25	-1.63	1.63	704.42	704.42
℄ BRG. S. ABUT.	1358+08.75	-1.63	1.63	704.40	704.40
BK. S. ABUT.	1358+10.00	-1.63	1.63	704.40	704.40

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (2 OF 3)
STRUCTURE NO. 038-0222/0223
SHEET NO. S8 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	23
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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℄ SB/NB F.A.I. ROUTE 57, P.G.L. & STAGE CONSTRUCTION JOINT

Location	Station	Offset SB I-57	Offset NB I-57	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. N. ABUT.	1356+94.00	0.00	0.00	704.52	704.52
℄ BRG. N. ABUT.	1356+95.25	0.00	0.00	704.52	704.52
A	1357+05.25	0.00	0.00	704.52	704.52
B	1357+15.25	0.00	0.00	704.51	704.51
℄ BRG. PIER 1	1357+26.75	0.00	0.00	704.51	704.51
C	1357+36.75	0.00	0.00	704.50	704.51
D	1357+46.75	0.00	0.00	704.50	704.51
E	1357+56.75	0.00	0.00	704.49	704.51
F	1357+66.75	0.00	0.00	704.48	704.49
℄ BRG. PIER 2	1357+77.25	0.00	0.00	704.47	704.47
G	1357+87.25	0.00	0.00	704.46	704.46
H	1357+97.25	0.00	0.00	704.44	704.44
℄ BRG. S. ABUT.	1358+08.75	0.00	0.00	704.42	704.42
BK. S. ABUT.	1358+10.00	0.00	0.00	704.42	704.42

BEAMS 4S & 4N

Location	Station	Offset Beam 4S	Offset Beam 4N	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. N. ABUT.	1356+94.00	5.63	-5.63	704.43	704.43
℄ BRG. N. ABUT.	1356+95.25	5.63	-5.63	704.43	704.43
A	1357+05.25	5.63	-5.63	704.43	704.43
B	1357+15.25	5.63	-5.63	704.43	704.43
℄ BRG. PIER 1	1357+26.75	5.63	-5.63	704.42	704.42
C	1357+36.75	5.63	-5.63	704.42	704.42
D	1357+46.75	5.63	-5.63	704.41	704.43
E	1357+56.75	5.63	-5.63	704.40	704.42
F	1357+66.75	5.63	-5.63	704.39	704.40
℄ BRG. PIER 2	1357+77.25	5.63	-5.63	704.38	704.38
G	1357+87.25	5.63	-5.63	704.37	704.37
H	1357+97.25	5.63	-5.63	704.35	704.36
℄ BRG. S. ABUT.	1358+08.75	5.63	-5.63	704.34	704.34
BK. S. ABUT.	1358+10.00	5.63	-5.63	704.33	704.33

BEAMS 5S & 5N

Location	Station	Offset Beam 5S	Offset Beam 5N	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. N. ABUT.	1356+94.00	12.88	-12.88	704.31	704.31
℄ BRG. N. ABUT.	1356+95.25	12.88	-12.88	704.31	704.31
A	1357+05.25	12.88	-12.88	704.31	704.31
B	1357+15.25	12.88	-12.88	704.31	704.31
℄ BRG. PIER 1	1357+26.75	12.88	-12.88	704.30	704.30
C	1357+36.75	12.88	-12.88	704.30	704.31
D	1357+46.75	12.88	-12.88	704.29	704.31
E	1357+56.75	12.88	-12.88	704.28	704.30
F	1357+66.75	12.88	-12.88	704.27	704.28
℄ BRG. PIER 2	1357+77.25	12.88	-12.88	704.26	704.26
G	1357+87.25	12.88	-12.88	704.25	704.25
H	1357+97.25	12.88	-12.88	704.24	704.24
℄ BRG. S. ABUT.	1358+08.75	12.88	-12.88	704.22	704.22
BK. S. ABUT.	1358+10.00	12.88	-12.88	704.22	704.22

BEAMS 6S & 6N

Location	Station	Offset Beam 6S	Offset Beam 6N	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. N. ABUT.	1356+94.00	20.13	-20.13	704.16	704.16
℄ BRG. N. ABUT.	1356+95.25	20.13	-20.13	704.16	704.16
A	1357+05.25	20.13	-20.13	704.16	704.16
B	1357+15.25	20.13	-20.13	704.16	704.16
℄ BRG. PIER 1	1357+26.75	20.13	-20.13	704.15	704.15
C	1357+36.75	20.13	-20.13	704.15	704.16
D	1357+46.75	20.13	-20.13	704.14	704.16
E	1357+56.75	20.13	-20.13	704.13	704.15
F	1357+66.75	20.13	-20.13	704.12	704.13
℄ BRG. PIER 2	1357+77.25	20.13	-20.13	704.11	704.11
G	1357+87.25	20.13	-20.13	704.10	704.10
H	1357+97.25	20.13	-20.13	704.09	704.09
℄ BRG. S. ABUT.	1358+08.75	20.13	-20.13	704.07	704.07
BK. S. ABUT.	1358+10.00	20.13	-20.13	704.07	704.07

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (3 OF 3)
STRUCTURE NO. 038-0222/0223
SHEET NO. 59 OF 541 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	24
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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EDGE OF INSIDE SHOULDER (SB & NB)

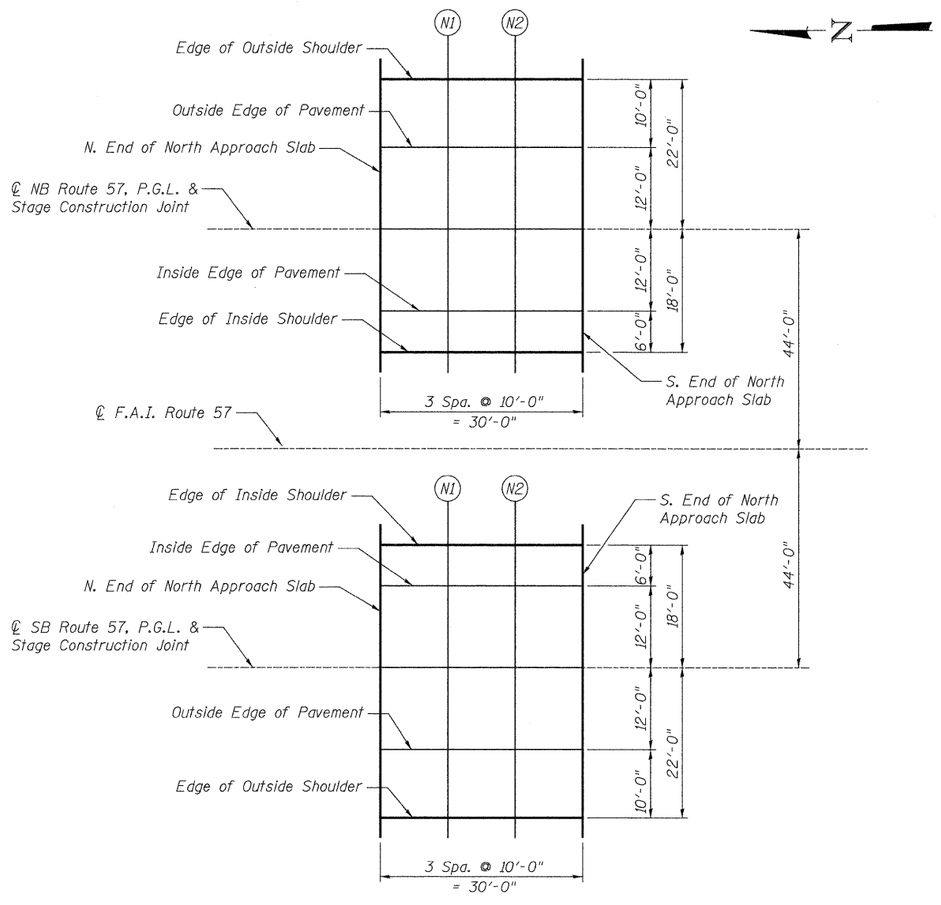
Location	Station	Offset SB I-57	Offset NB I-57	Theoretical Grade Elevations
N. END OF NORTH APPR. SLAB	1356+64.00	-18.00	18.00	704.20
N1	1356+74.00	-18.00	18.00	704.20
N2	1356+84.00	-18.00	18.00	704.20
S. END OF NORTH APPR. SLAB	1356+94.00	-18.00	18.00	704.20

INSIDE EDGE OF PAVEMENT (SB & NB)

Location	Station	Offset SB I-57	Offset NB I-57	Theoretical Grade Elevations
N. END OF NORTH APPR. SLAB	1356+64.00	-12.00	12.00	704.33
N1	1356+74.00	-12.00	12.00	704.33
N2	1356+84.00	-12.00	12.00	704.33
S. END OF NORTH APPR. SLAB	1356+94.00	-12.00	12.00	704.33

℄ SB/NB F.A.I. ROUTE 57, P.G.L. & STAGE CONSTRUCTION JOINT

Location	Station	Offset SB I-57	Offset NB I-57	Theoretical Grade Elevations
N. END OF NORTH APPR. SLAB	1356+64.00	0.00	0.00	704.52
N1	1356+74.00	0.00	0.00	704.52
N2	1356+84.00	0.00	0.00	704.52
S. END OF NORTH APPR. SLAB	1356+94.00	0.00	0.00	704.52



PLAN
North Approaches

OUTSIDE EDGE OF PAVEMENT (SB & NB)

Location	Station	Offset SB I-57	Offset NB I-57	Theoretical Grade Elevations
N. END OF NORTH APPR. SLAB	1356+64.00	12.00	-12.00	704.33
N1	1356+74.00	12.00	-12.00	704.33
N2	1356+84.00	12.00	-12.00	704.33
S. END OF NORTH APPR. SLAB	1356+94.00	12.00	-12.00	704.33

EDGE OF OUTSIDE SHOULDER (SB & NB)

Location	Station	Offset SB I-57	Offset NB I-57	Theoretical Grade Elevations
N. END OF NORTH APPR. SLAB	1356+64.00	22.00	-22.00	704.12
N1	1356+74.00	22.00	-22.00	704.12
N2	1356+84.00	22.00	-22.00	704.12
S. END OF NORTH APPR. SLAB	1356+94.00	22.00	-22.00	704.12

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	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TOP OF NORTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 038-0222/0223
SHEET NO. S10 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	25
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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EDGE OF INSIDE SHOULDER (SB & NB)

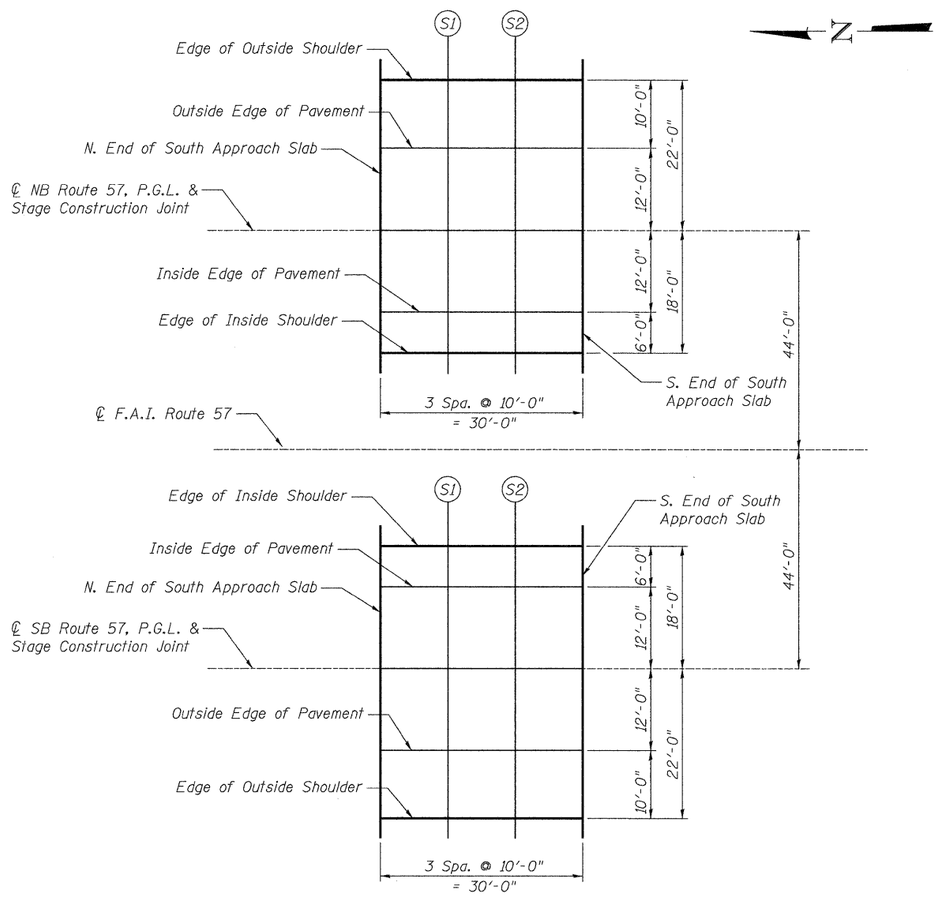
Location	Station	Offset SB I-57	Offset NB I-57	Theoretical Grade Elevations
N. END OF SOUTH APPR. SLAB	1358+10.00	-18.00	18.00	704.11
S1	1358+20.00	-18.00	18.00	704.09
S2	1358+30.00	-18.00	18.00	704.07
S. END OF SOUTH APPR. SLAB	1358+40.00	-18.00	18.00	704.05

INSIDE EDGE OF PAVEMENT (SB & NB)

Location	Station	Offset SB I-57	Offset NB I-57	Theoretical Grade Elevations
N. END OF SOUTH APPR. SLAB	1358+10.00	-12.00	12.00	704.24
S1	1358+20.00	-12.00	12.00	704.22
S2	1358+30.00	-12.00	12.00	704.20
S. END OF SOUTH APPR. SLAB	1358+40.00	-12.00	12.00	704.18

℄ SB/NB F.A.I. ROUTE 57, P.G.L. & STAGE CONSTRUCTION JOINT

Location	Station	Offset SB I-57	Offset NB I-57	Theoretical Grade Elevations
N. END OF SOUTH APPR. SLAB	1358+10.00	0.00	0.00	704.43
S1	1358+20.00	0.00	0.00	704.41
S2	1358+30.00	0.00	0.00	704.39
S. END OF SOUTH APPR. SLAB	1358+40.00	0.00	0.00	704.37



PLAN
South Approaches

OUTSIDE EDGE OF PAVEMENT (SB & NB)

Location	Station	Offset SB I-57	Offset NB I-57	Theoretical Grade Elevations
N. END OF SOUTH APPR. SLAB	1358+10.00	12.00	-12.00	704.24
S1	1358+20.00	12.00	-12.00	704.22
S2	1358+30.00	12.00	-12.00	704.20
S. END OF SOUTH APPR. SLAB	1358+40.00	12.00	-12.00	704.18

EDGE OF OUTSIDE SHOULDER (SB & NB)

Location	Station	Offset SB I-57	Offset NB I-57	Theoretical Grade Elevations
N. END OF SOUTH APPR. SLAB	1358+10.00	22.00	-22.00	704.03
S1	1358+20.00	22.00	-22.00	704.01
S2	1358+30.00	22.00	-22.00	703.99
S. END OF SOUTH APPR. SLAB	1358+40.00	22.00	-22.00	703.97

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TOP OF SOUTH APPROACH SLAB ELEVATIONS
STRUCTURE NO. 038-0222/0223
SHEET NO. S11 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	26
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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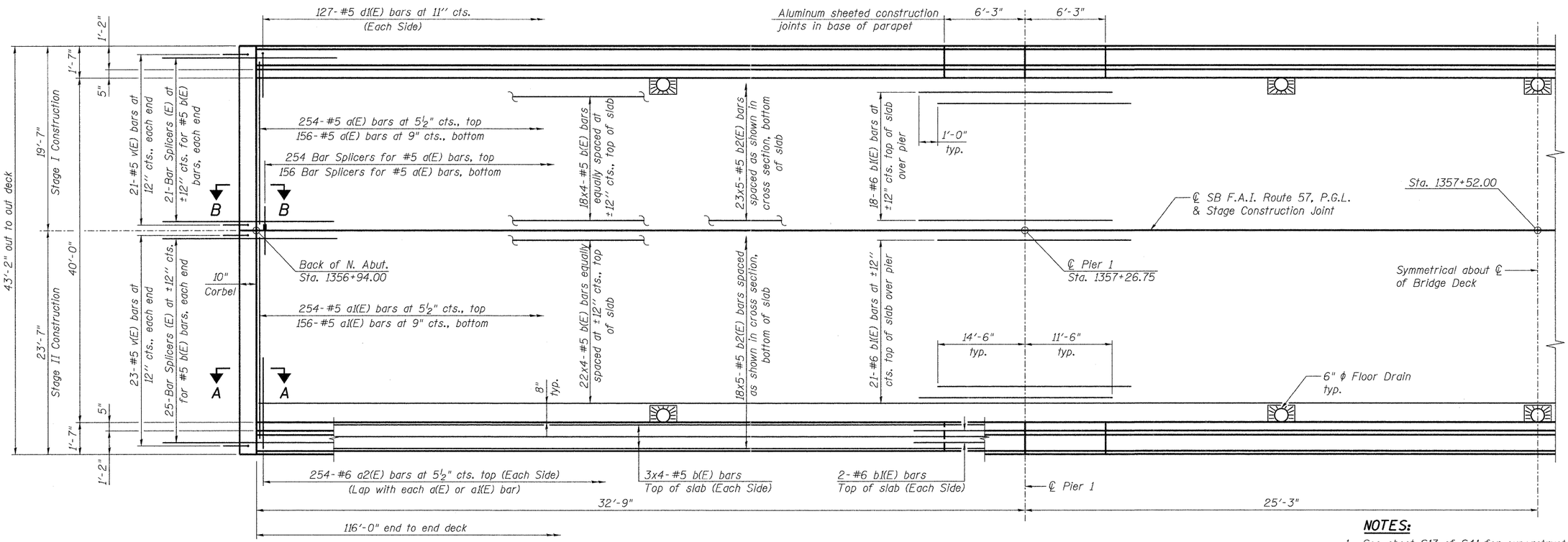


PARTIAL PLAN

(SB North half shown - NB similar)

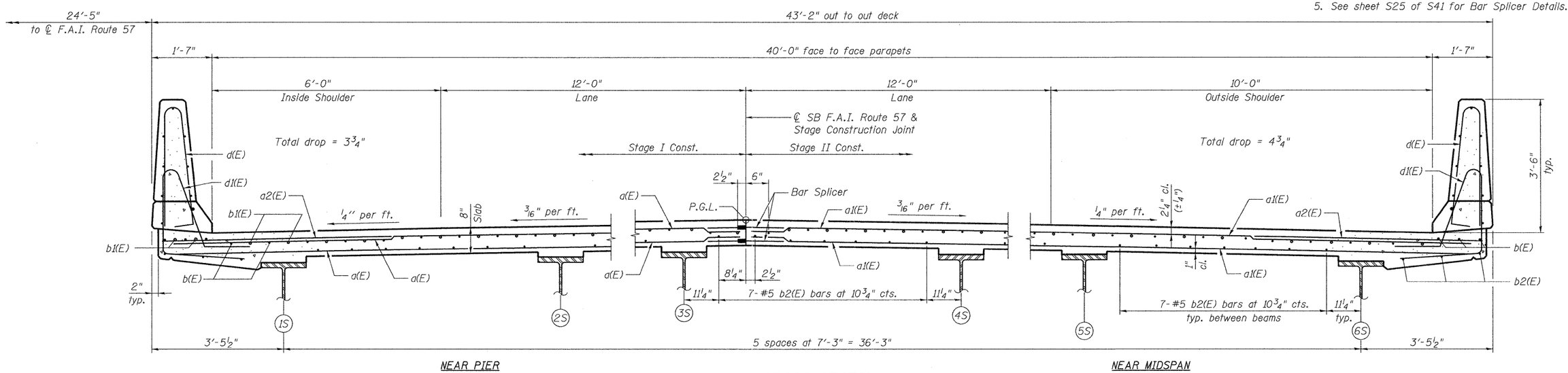
MINIMUM BAR LAP

(Slab)

#5 bar = 3'-3"

NOTES:

1. See sheet S13 of S41 for superstructure details, parapet reinforcement and Bill of Material.
2. See sheet S14 of S41 for Sections A-A and B-B.
3. Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
4. See sheet S1 of S41 for Floor Drain locations.
5. See sheet S25 of S41 for Bar Splicer Details.



NEAR PIER

CROSS SECTION

(SB - Looking South)

NEAR MIDSPAN

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SUPERSTRUCTURE
STRUCTURE NO. 038-0222/0223
SHEET NO. S12 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	27
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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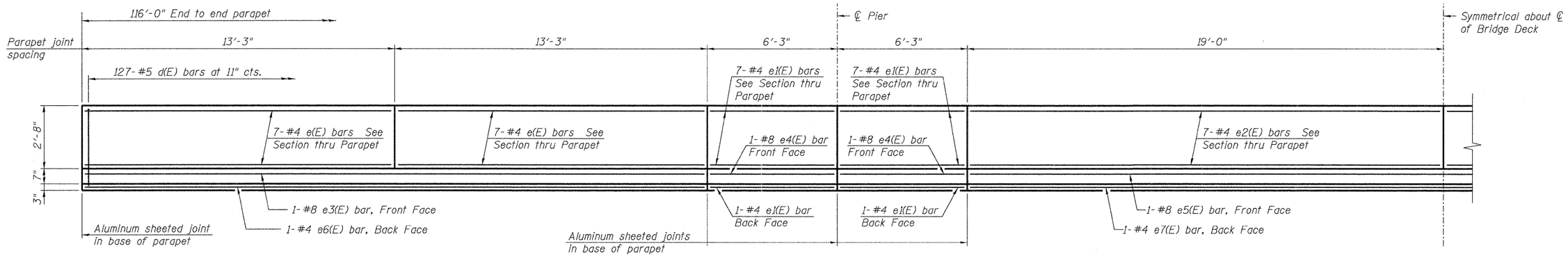
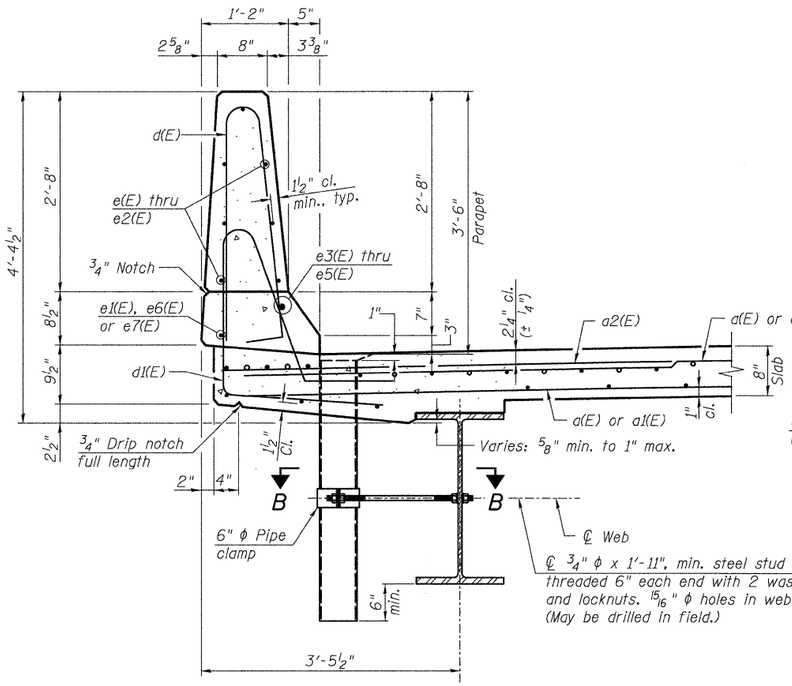
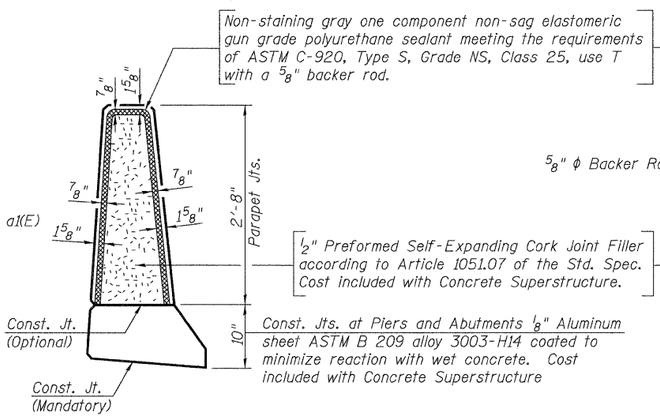


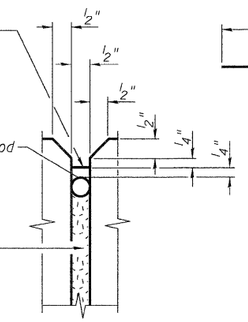
INSIDE ELEVATION OF PARAPET

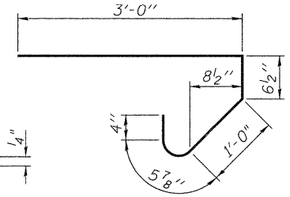


SECTION THRU PARAPET

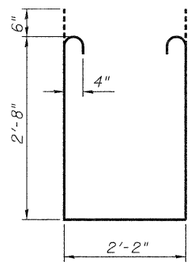


PARAPET JOINT DETAILS



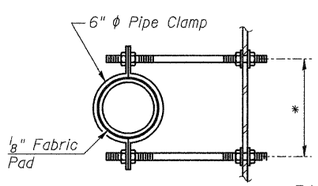


BAR s(E)

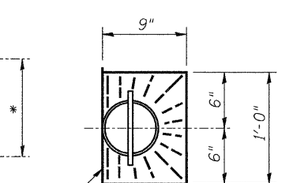


BAR s1(E)

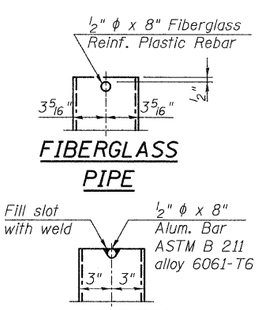
Notes:
1. Floor Drains need not be painted.
2. Floor Drains shall be located clear of all diaphragms.
3. Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.
4. Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.



SECTION B-B
*Dimension as required by Pipe Clamp.

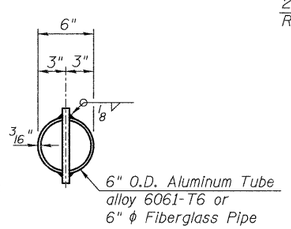


TOP PLAN

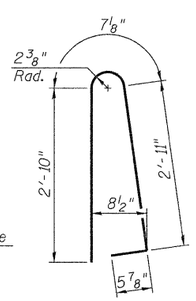


FIBERGLASS PIPE

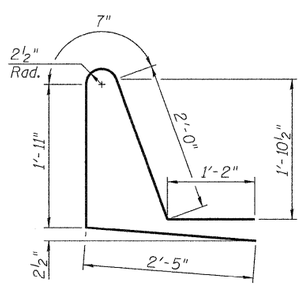
ALUMINUM TUBE



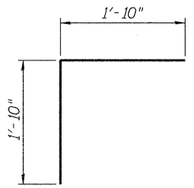
TOP PLAN
(Showing Aluminum Tube)



BAR d(E)



BAR d1(E)



BAR v(E)

SUPERSTRUCTURE BILL OF MATERIAL (TWO DECKS)

Bar	No.	Size	Length	Shape
d(E)	820	#5	19'-3"	
a1(E)	820	#5	23'-3"	
a2(E)	1016	#6	6'-6"	
b(E)	368	#5	31'-6"	
b1(E)	172	#6	27'-0"	
b2(E)	410	#5	25'-10"	
d(E)	508	#5	6'-10"	
d1(E)	508	#5	8'-1"	
e(E)	112	#4	12'-11"	
e1(E)	128	#4	5'-11"	
e2(E)	56	#4	18'-8"	
e3(E)	8	#8	26'-2"	
e4(E)	16	#8	5'-11"	
e5(E)	4	#8	37'-8"	
e6(E)	8	#4	26'-2"	
e7(E)	4	#4	37'-8"	
m(E)	28	#6	19'-5"	
m1(E)	16	#6	6'-9"	
m2(E)	8	#6	3'-1"	
m3(E)	28	#6	23'-5"	
m4(E)	4	#6	1'-5"	
m5(E)	4	#6	5'-5"	
s(E)	164	#5	5'-5"	
s1(E)	164	#4	8'-6"	
v(E)	176	#5	3'-8"	

Reinforcement Bars, Epoxy Coated	Pound	92,490
Concrete Superstructure	Cu. Yd.	366.4
Bridge Deck Grooving	Sq. Yd.	980
Protective Coat	Sq. Yd.	1,254
Floor Drains	Each	20

Bars indicated thus 20x3-#5 etc. indicates 20 lines of bars with 3 lengths per line.

MINIMUM BAR LAP

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

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DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STRUCTURE NO. 038-0222/0223
SHEET NO. S13 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	28
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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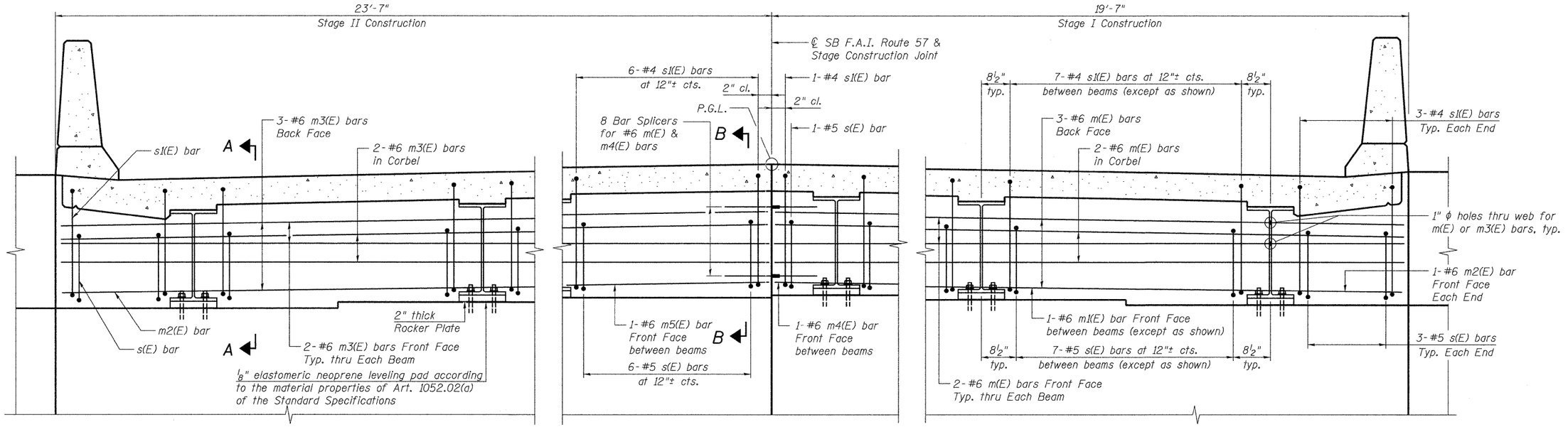
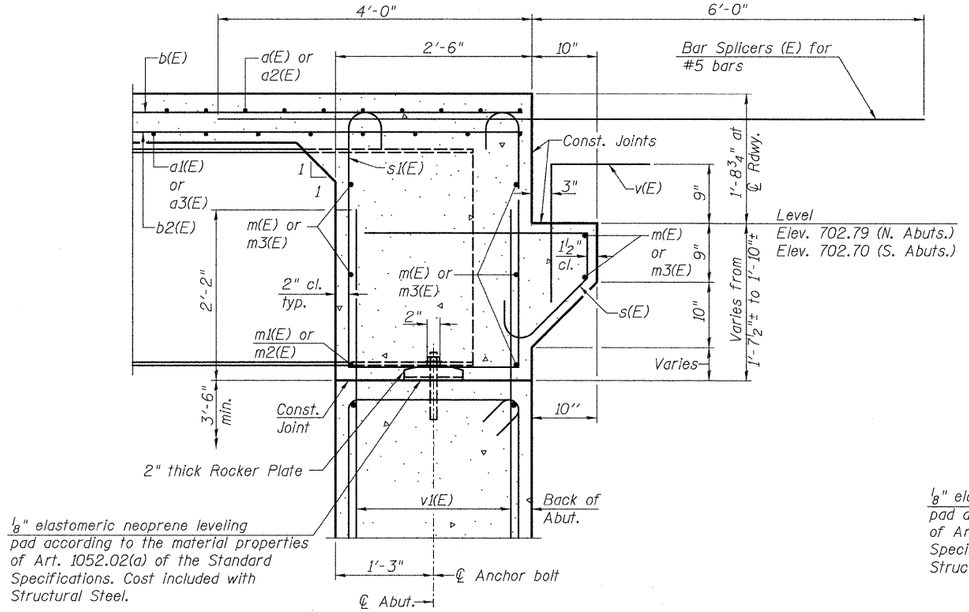


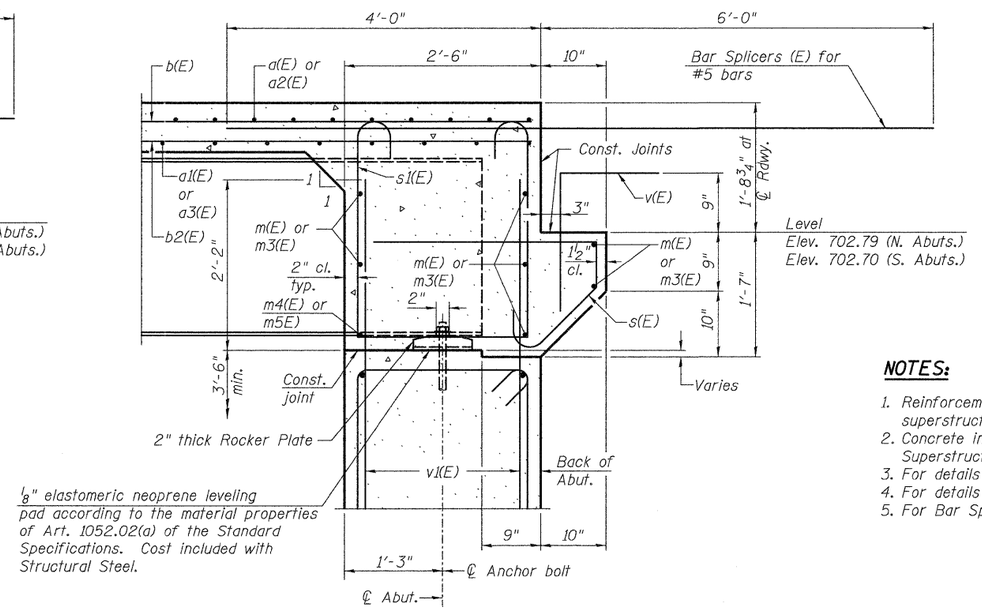
DIAPHRAGM ELEVATION AT ABUTMENT

(SB N. Abutment shown looking North - NB N. Abutment opposite hand)



SECTION A-A

(Beams 1, 2, 5 and 6)
(Diaphragms at S. Abutments similar)



SECTION B-B

(Beams 3 and 4)
(Diaphragms at S. Abutments similar)

NOTES:

1. Reinforcement bars in diaphragm are billed with superstructure on sheet S13 of S41.
2. Concrete in diaphragm is included with Concrete Superstructure on sheet S13 of S41.
3. For details of bars s(E) & s1(E), see sheet S13 of S41.
4. For details of v1(E) bars, see sheets S20 and S21 of S41.
5. For Bar Splicer Details, see sheet S25 of S41.

MINIMUM BAR LAP

#6 bar = 3'-4"

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INTEGRAL ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 038-0222/0223
SHEET NO. S14 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	29
		CONTRACT NO. 66948		
	ILLINOIS	FED. AID PROJECT		

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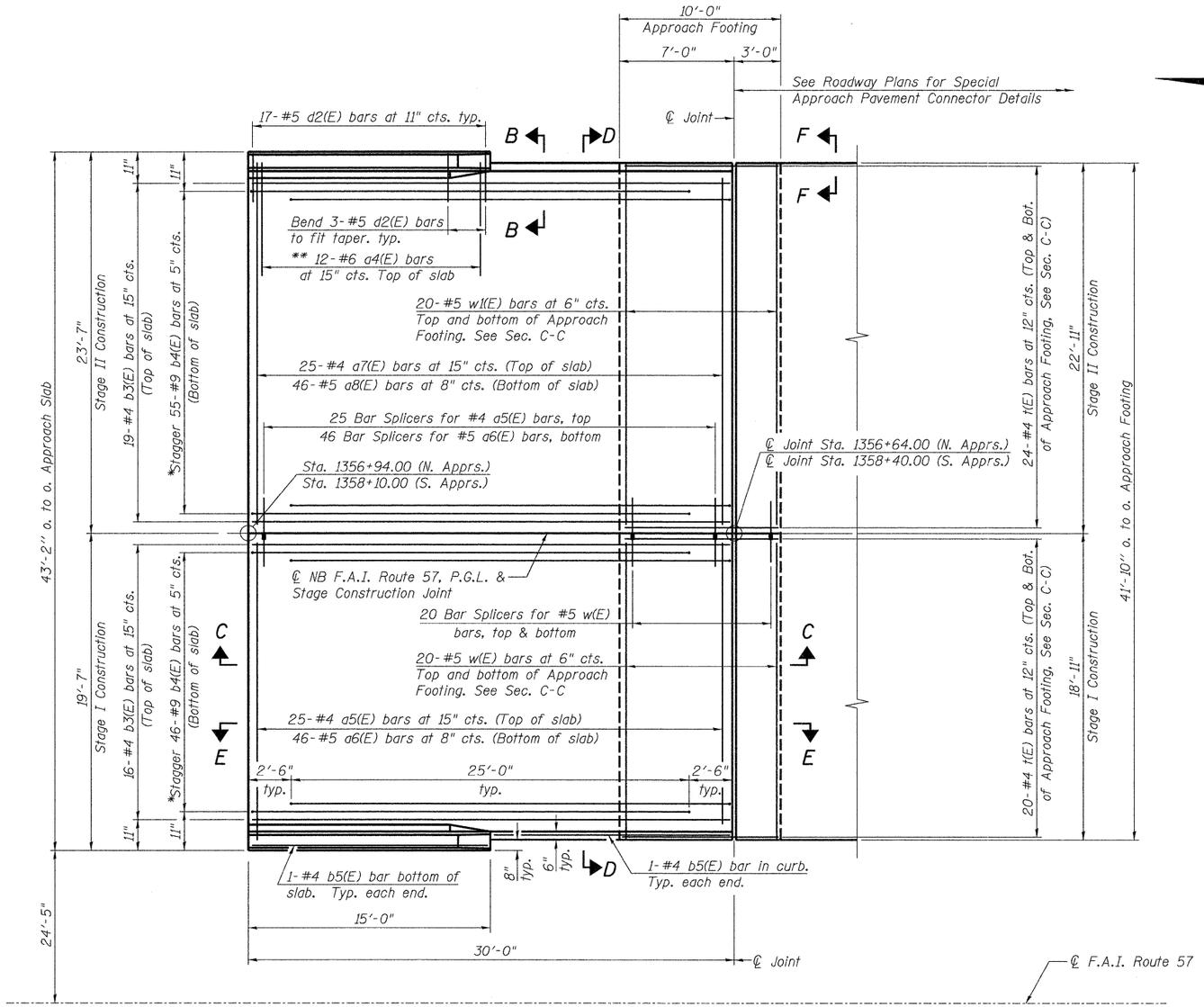
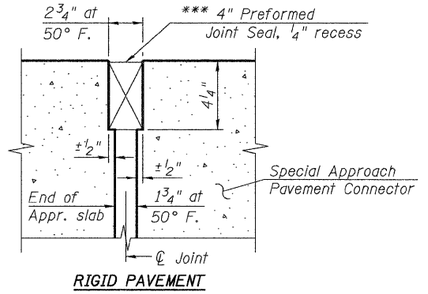


PLAN

(NB South Approach shown, NB North Approach similar)
(SB South & North Approaches symmetrical about ℄ F.A.I. Route 57)

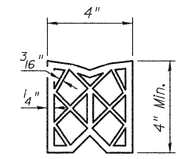
* Tilt #9 b4(E) bars as required to maintain clearance.
** Space between a5(E) or a7(E) bars, typ. ea. parapet.

*** Cost included with Concrete Superstructure.

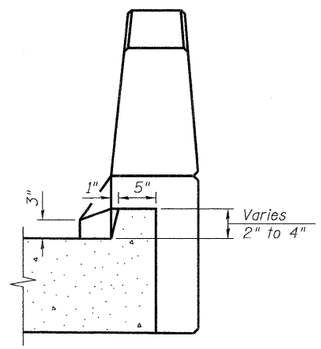


RIGID PAVEMENT

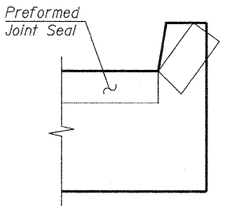
DETAIL A



PREFORMED JOINT SEAL



VIEW B-B



VIEW F-F

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

NOTE:

See sheet S16 of S41 for Sections C-C & D-D and View E-E.
a5(E), a6(E), a7(E) and a8(E) bar spacings measured along ℄ Rdwy.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS (1 OF 2)
STRUCTURE NO. 038-0222\0223
SHEET NO. S15 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	30
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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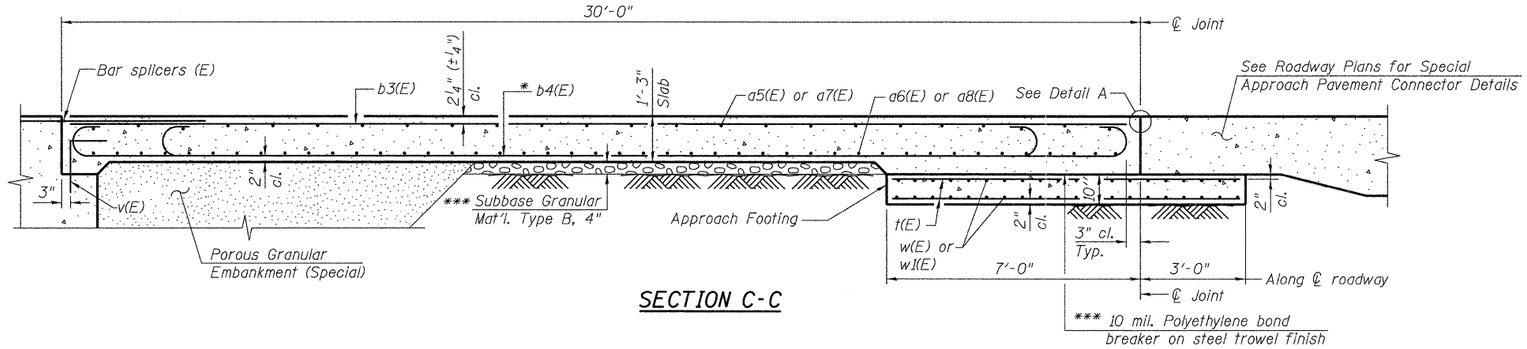
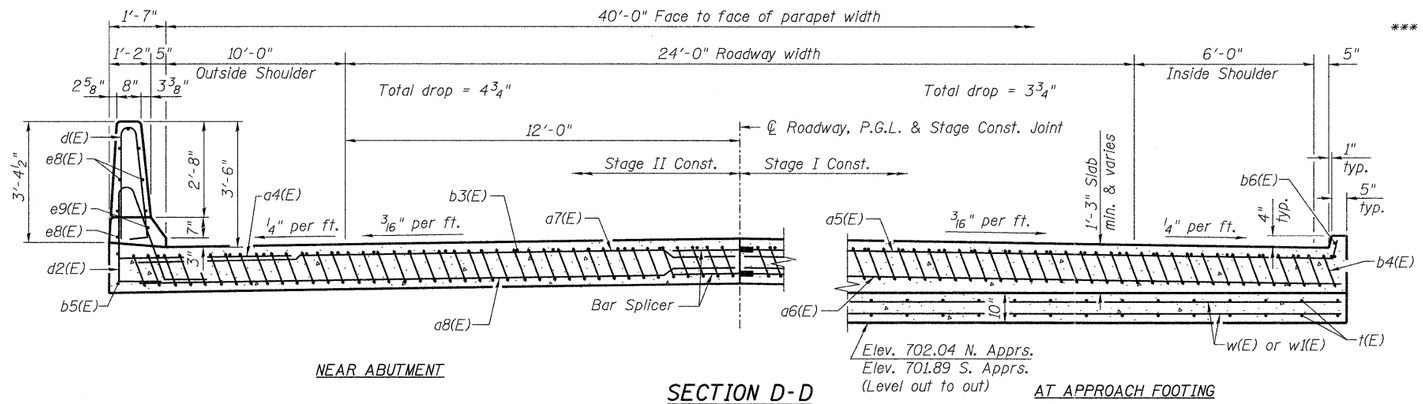


SECTION C-C

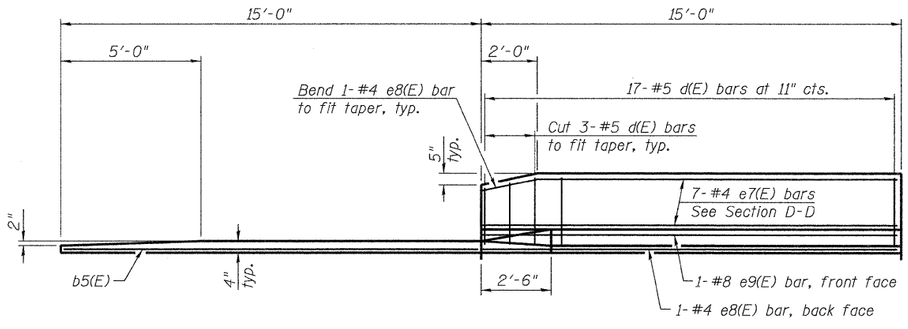


NEAR ABUTMENT

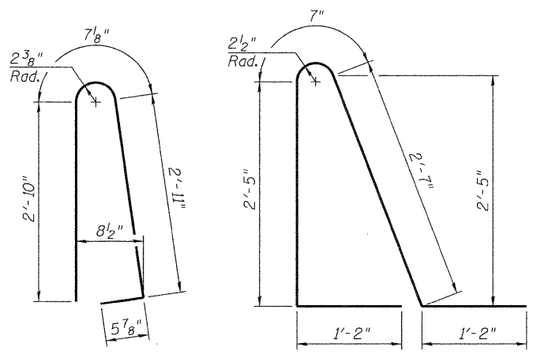
AT APPROACH FOOTING

SECTION D-D

(See Plan for dimensions not shown)

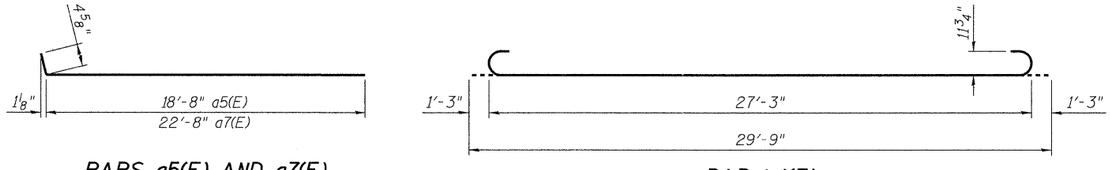


VIEW E-E



BAR d(E)

BAR d2(E)



BARS a5(E) AND a7(E)

BAR b4(E)

FOUR APPROACHES BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a4(E)	96	#6	6'-6"	
a5(E)	100	#4	19'-1"	
a6(E)	184	#5	18'-9"	
a7(E)	100	#4	23'-1"	
a8(E)	184	#5	22'-9"	
b3(E)	140	#4	29'-8"	
b4(E)	404	#9	29'-9"	
b5(E)	16	#4	14'-8"	
d(E)	136	#5	6'-10"	
d2(E)	136	#5	7'-11"	
e8(E)	64	#4	14'-8"	
e9(E)	8	#8	14'-8"	
t(E)	352	#4	9'-8"	
w(E)	160	#5	18'-9"	
w1(E)	160	#5	22'-9"	
Concrete Superstructure		Cu. Yd.	263.4	
Concrete Structures		Cu. Yd.	51.6	
Reinforcement Bars, Epoxy Coated		Pound	67,750	
Bridge Deck Grooving		Sq. Yd.	508	
Protective Coat		Sq. Yd.	606	

* Tilt #9 b4(E) bars as required to maintain clearance.

*** Cost included with Concrete Superstructure.

NOTES:

1. See sheet S15 of S41 for Detail A and View B-B.
2. Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
3. Approach footing concrete shall be paid for as Concrete Structures.
4. Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
5. For v(E) bar details, see sheets S13 and S14 of S41.
6. The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
7. For bar splicer details, see sheet S25 of S41.
8. Cost of excavation for approach footing included with Concrete Structures.
9. For Porous Granular Embankment (Special) and drainage treatment details, see sheet S2 of S41.
10. For additional parapet details, see sheet S13 of S41.

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	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH SLAB DETAILS (2 OF 2)
STRUCTURE NO. 038-0222/0223
SHEET NO. S16 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	31
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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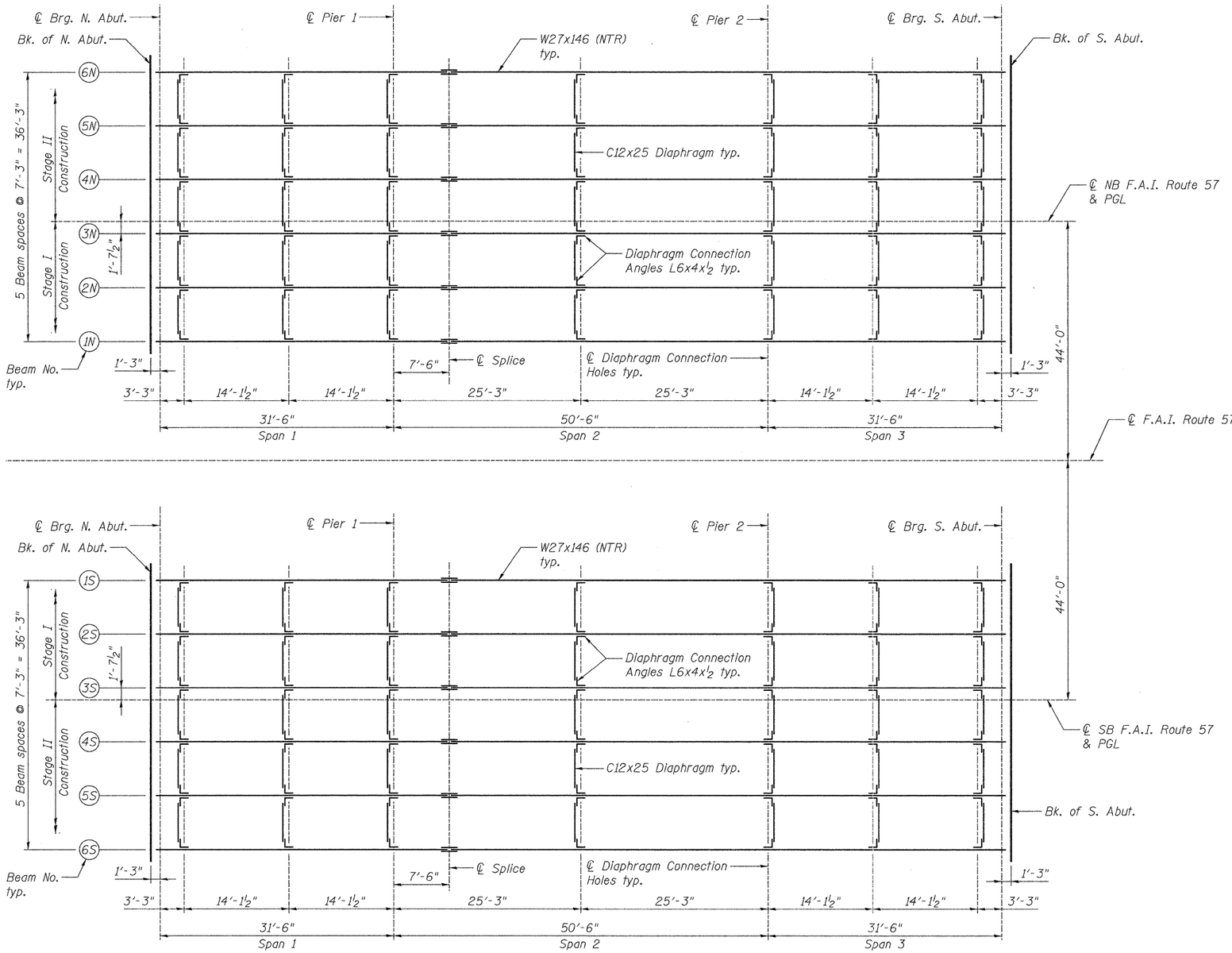
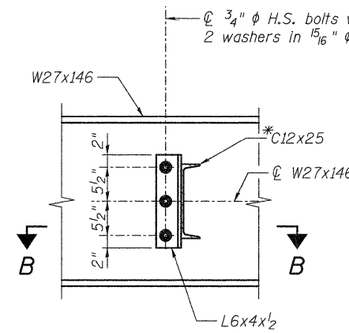
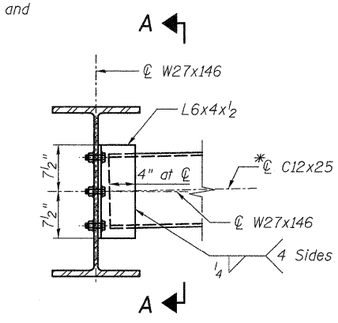


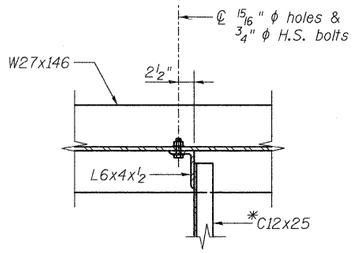
FRAMING PLAN



SECTION A-A



DIAPHRAGM DETAIL



SECTION B-B

NOTES:

1. Two hardened washers required for each set of oversized holes.
2. *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. 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.
4. Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
5. Work this sheet with sheets S18 and S19 of S41.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
STRUCTURE NO. 038-0222/0223
SHEET NO. S17 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	32
		CONTRACT NO. 66948		
		ILLINOIS FED. AID PROJECT		

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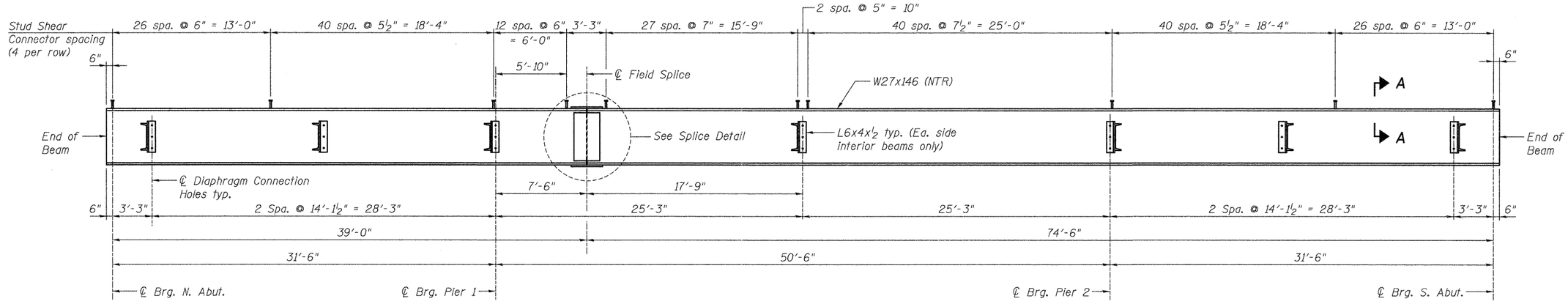
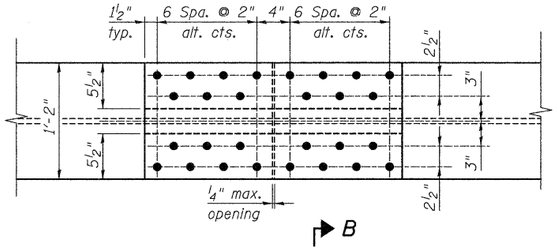
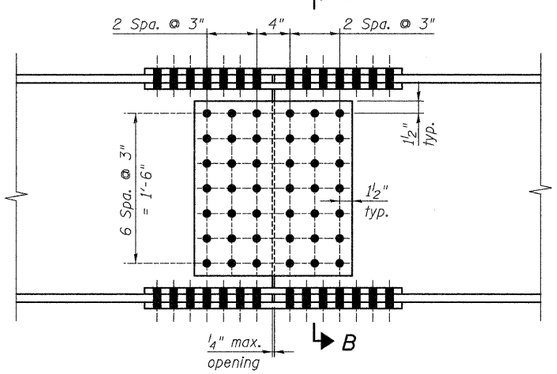


BEAM ELEVATION

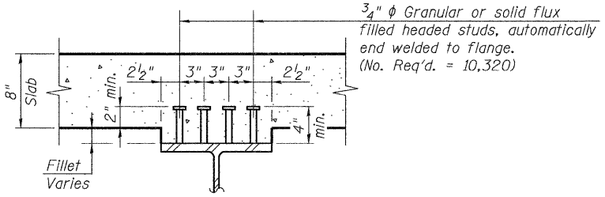




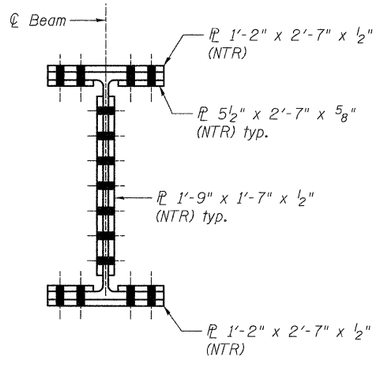
SPLICE DETAIL

NOTE:

Work this sheet with sheets S17 and S19 of S41.



SECTION A-A



SECTION B-B

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 0.6 Sp. 3	Pier 1 or 2	0.5 Span 2
I_s	(in^4)	5660	5660	5660
$I_c(n)$	(in^4)	16813	8105	16813
$I_c(3n)$	(in^4)	12058	8105	12058
$I_c(cr)$	(in^4)	-----	7920	-----
S_s	(in^3)	414	414	414
$S_c(n)$	(in^3)	638	744	638
$S_c(3n)$	(in^3)	572	744	572
$S_c(cr)$	(in^3)	-----	726	-----
DC1	(k/')	0.915	0.915	0.915
M_{DC1}	('k)	41	169	123
DC2	(k/')	0.173	0.173	0.173
M_{DC2}	('k)	8	32	23
DW	(k/')	0.333	0.333	0.333
M_{DW}	('k)	15	62	44
M_{L+IM}	('k)	327	371	428
M_u (Strength I)	('k)	656	994	998
$\phi_f M_n$	('k)	3025	2562	3025
f_s DC1	(ksi)	1.2	4.9	3.6
f_s DC2	(ksi)	0.2	0.5	0.5
f_s DW	(ksi)	0.3	1.0	0.9
f_s (L+IM)	(ksi)	6.1	6.1	8.0
f_s (Service II)	(ksi)	9.7	14.4	15.4
$0.95R_hF_{yf}$	(ksi)	47.5	47.5	47.5
f_s (Total)(Strength I)	(ksi)	-----	-----	-----
$\phi_f F_n$	(ksi)	-----	-----	-----
V_f	(k)	34.4	44.1	34.1

INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier
R_{DC1}	(k)	16.0	42.9
R_{DC2}	(k)	1.7	8.1
R_{DW}	(k)	3.3	15.6
R_{L+IM}	(k)	55.7	91.4
R_{Total}	(k)	76.7	158.0

*TOP OF BEAM ELEVATIONS						
Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
℄ Brg. N. Abut.	703.50	703.63	703.75	703.68	703.57	703.41
℄ Brg. Pier 1	703.49	703.62	703.74	703.67	703.56	703.41
℄ Splice	703.48	703.61	703.72	703.66	703.54	703.39
℄ Brg. Pier 2	703.45	703.58	703.69	703.63	703.51	703.36
℄ Brg. S. Abut.	703.40	703.54	703.65	703.59	703.47	703.32

*For Fabrication Only

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 (in.⁴ and in.³).

$I_c(n)$, $S_c(n)$: 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) in uncracked sections, due to short-term composite live loads (in.⁴ and in.³).

$I_c(3n)$, $S_c(3n)$: 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) in uncracked sections, due to long-term composite (superimposed) dead loads (in.⁴ and in.³).

$I_c(cr)$, $S_c(cr)$: Composite moment of inertia and section modulus of the steel and longitudinal deck reinforcement, used for computing f_s (Total-Strength I and Service II) in cracked sections, due to both short-term composite live loads and long-term composite dead loads (in.⁴ and in.³).

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

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

$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

f_s DC1: Un-factored stress at edge of flange for controlling steel flange due to vertical non-composite dead loads as calculated below (ksi).
M_{DC1} / S_{nc}

f_s DC2: Un-factored stress at edge of flange for controlling steel flange due to vertical composite dead loads as calculated below (ksi).
$M_{DC2} / S_c(3n)$ or $M_{DC2} / S_c(cr)$ as applicable.

f_s DW: Un-factored stress at edge of flange for controlling steel flange due to vertical composite future wearing surface loads as calculated below (ksi).
$M_{DW} / S_c(3n)$ or $M_{DW} / S_c(cr)$ as applicable.

f_s (L+IM): Un-factored stress at edge of flange for controlling steel flange due to vertical composite live plus impact loads as calculated below (ksi).
$M_{L+IM} / S_c(n)$ or $M_{L+IM} / S_c(cr)$ as applicable.

f_s (Service II): Sum of stresses as computed below (ksi).
$f_{sDC1} + f_{sDC2} + f_{sDW} + 1.3\ f_s(L+IM)$

$0.95R_hF_{yf}$: Composite stress capacity for Service II loading according to Article 6.10.4.2 (ksi).

f_s (Total)(Strength I): Sum of stresses as computed below on non-compact section (ksi).
$1.25\ (f_{sDC1} + f_{sDC2}) + 1.5\ f_{sDW} + 1.75\ f_{sL+IM}$

$\phi_f F_n$: Non-Compact composite positive or negative stress capacity for Strength I loading according to Article 6.10.7.2 (ksi).

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

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 038-0222/0223
SHEET NO. S18 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	33
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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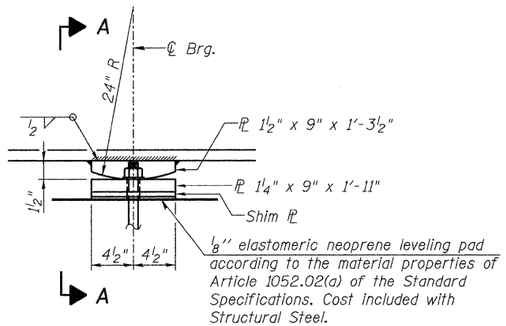
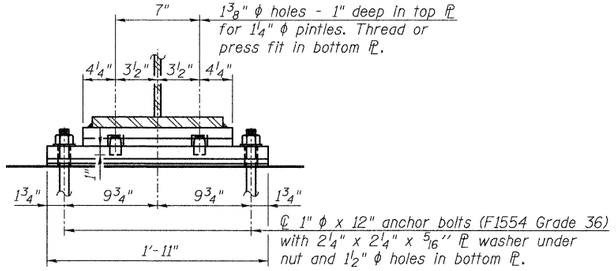
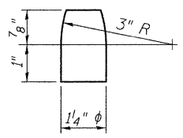


ELEVATION

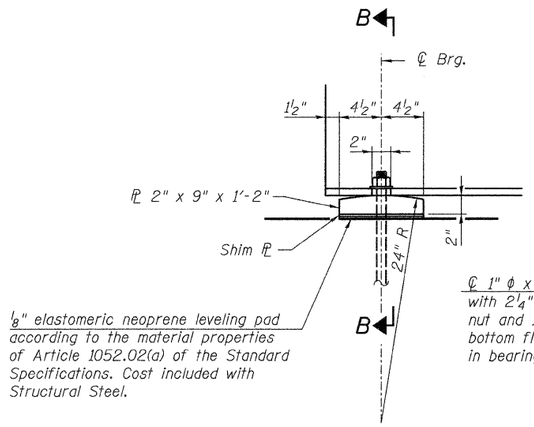


SECTION A-A

FIXED BEARING AT PIER



PINTLE



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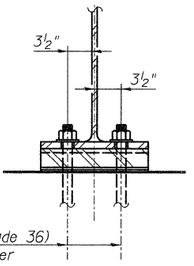

SECTION B-B

FIXED BEARING AT ABUTMENT

NOTES:

1. 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.
2. Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
3. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
4. Steel members required for the bearing assembly shall be included in the cost of Structural Steel.
5. Two ⅛ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
6. Work this sheet with sheets S14, S17, S18 and S20 through S23 of S41.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEARING DETAILS
STRUCTURE NO. 038-0222/0223
SHEET NO. S19 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	34
		CONTRACT NO. 66948		
		ILLINOIS FED. AID PROJECT		

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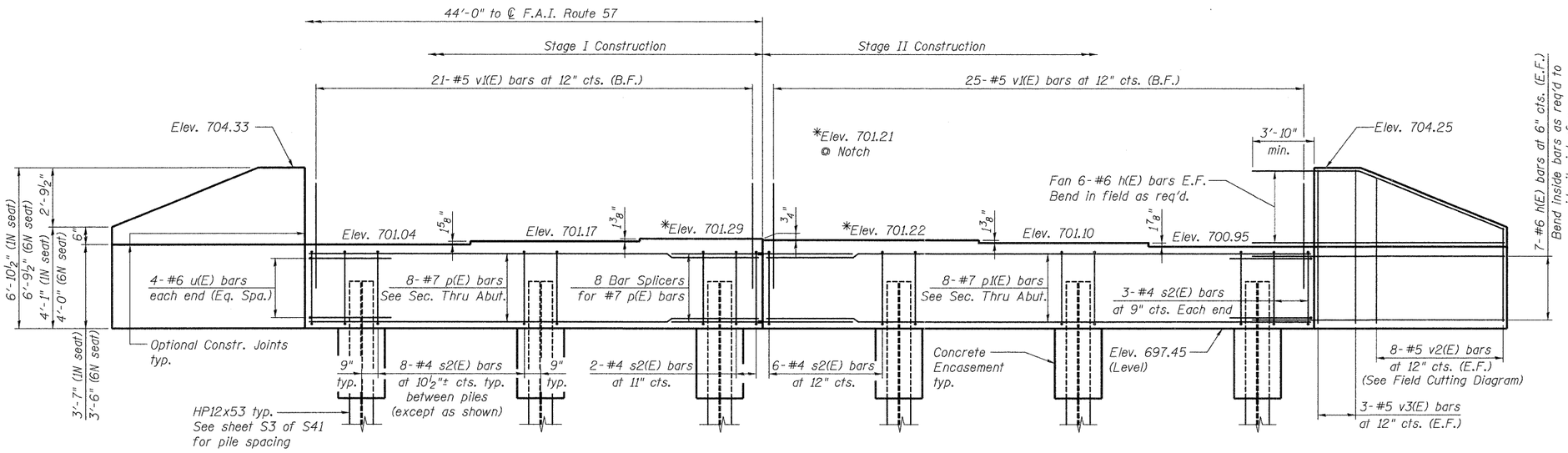
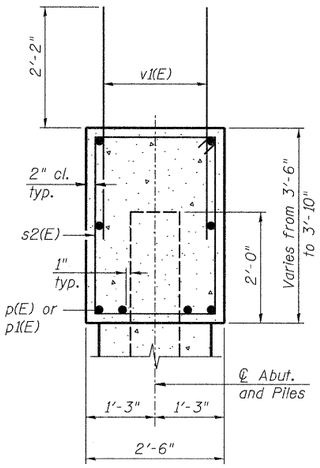


ELEVATION

(Looking North)
(NB N. Abut. shown, SB N. Abut. Opposite Hand)

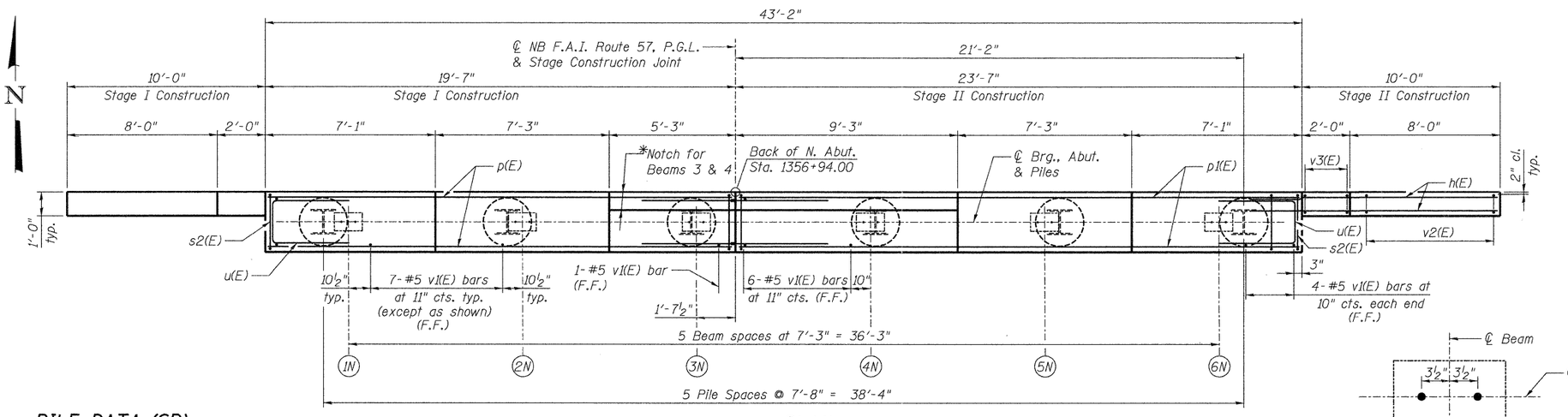


SECTION THRU ABUT.

(Notch at Beams 3 and 4 not shown. See Sec. B-B on sheet S14 of S41 for notch details.)

TWO ABUTMENTS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	104	#6	14'-2"	
p(E)	16	#7	19'-5"	
p1(E)	16	#7	23'-5"	
s2(E)	92	#4	11'-5"	
u(E)	16	#6	9'-9"	
v1(E)	178	#5	4'-4"	
v2(E)	32	#5	9'-10"	
v3(E)	24	#5	6'-6"	
Structure Excavation		Cu. Yd.	166	
Concrete Structures		Cu. Yd.	37.8	
Reinforcement Bars, Epoxy Coated		Pound	5,850	
Furnishing Steel Piles, HP12x53		Foot	154	
Driving Piles		Foot	154	
Test Pile Steel, HP12x53		Each	1	
Pile Shoes		Each	12	
Concrete Encasement		Cu. Yd.	4.2	



PLAN

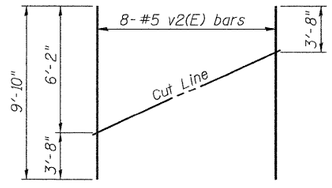
(NB N. Abut. shown, SB N. Abut. Opposite Hand)

PILE DATA (SB)

Type: HP12x53 with pile shoes
Nominal Required Bearing: 178 kips
Factored Resistance Available: 98 kips
Est. Length: 14 feet
No. Production Piles: 5
No. Test Piles: 1

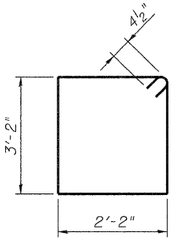
PILE DATA (NB)

Type: HP12x53 with pile shoes
Nominal Required Bearing: 178 kips
Factored Resistance Available: 98 kips
Est. Length: 14 feet
No. Production Piles: 6
No. Test Piles: 0

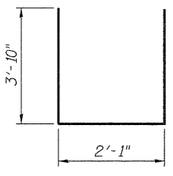


FIELD CUTTING DIAGRAM

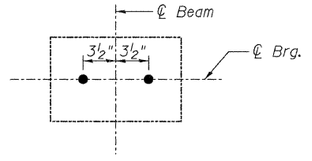
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s2(E)



BAR u(E)



ANCHOR BOLT LAYOUT DETAIL

NOTES:

1. Pour steps monolithically with cap.
2. E.F. denotes Each Face, F.F. denotes Front Face and B.F. denotes Back Face.
3. For details of Bar Splicers, see sheet S25 of S41.
4. For details of piles and concrete encasement, see sheet S24 of S41.

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FILE NAME = 0380222&0223_66948_020_nabutdet.dgn	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
		CHECKED - AAY	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH ABUTMENT DETAILS
STRUCTURE NO. 038-0222/0223
SHEET NO. S20 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	35
		CONTRACT NO. 66948		
		ILLINOIS FED. AID PROJECT		

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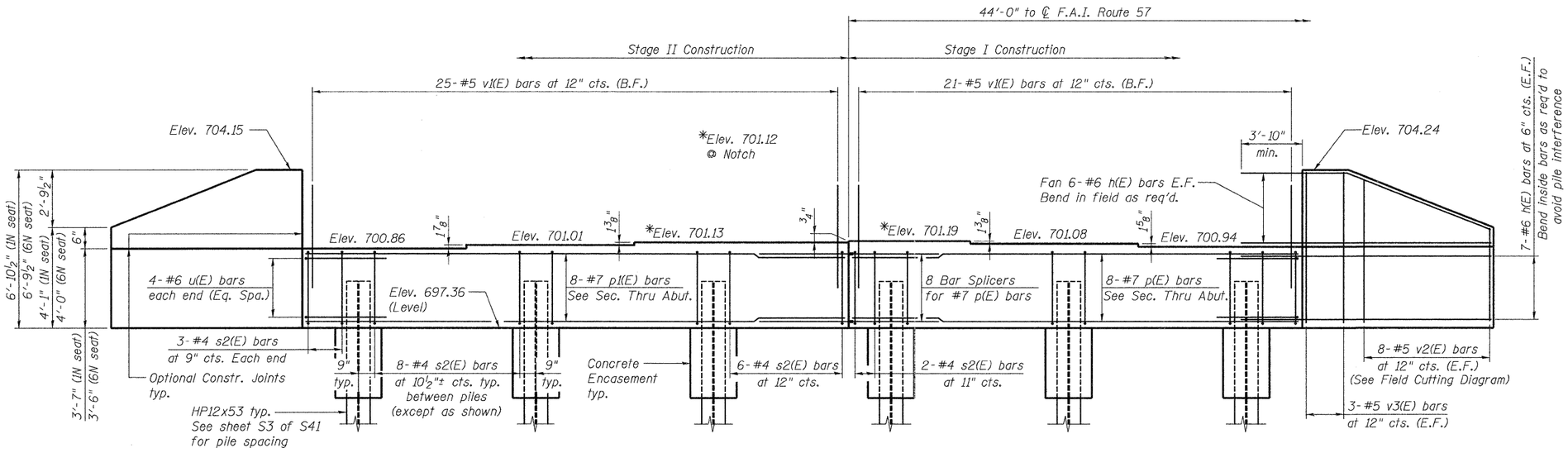
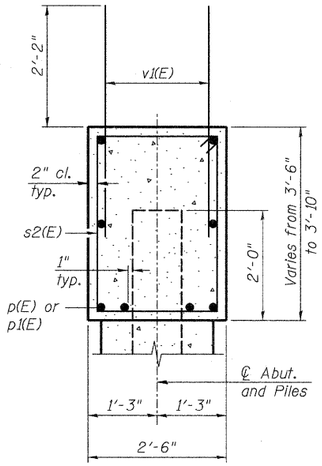
08\18\2011



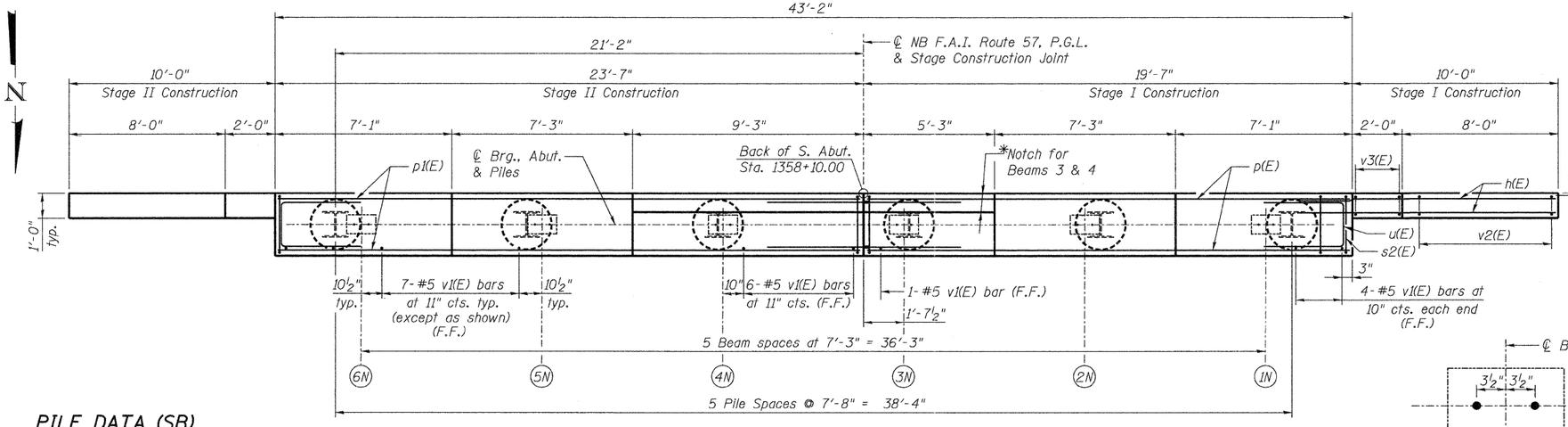
ELEVATION

(Looking South)
(NB S. Abut. shown, SB S. Abut. Opposite Hand)



SECTION THRU ABUT.

(Notch at Beams 3 and 4 not shown. See Sec. B-B on sheet S14 of S41 for notch details.)



PLAN

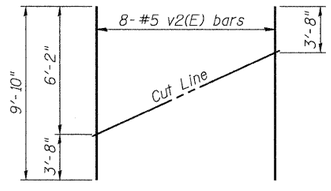
(NB S. Abut. shown, SB S. Abut. Opposite Hand)

PILE DATA (SB)

Type: HP12x53 with pile shoes
Nominal Required Bearing: 179 kips
Factored Resistance Available: 98 kips
Est. Length: 15 feet
No. Production Piles: 6
No. Test Piles: 0

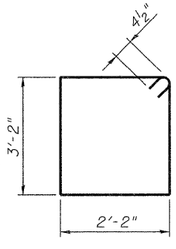
PILE DATA (NB)

Type: HP12x53 with pile shoes
Nominal Required Bearing: 178 kips
Factored Resistance Available: 98 kips
Est. Length: 19 feet
No. Production Piles: 5
No. Test Piles: 1

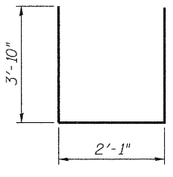


FIELD CUTTING DIAGRAM

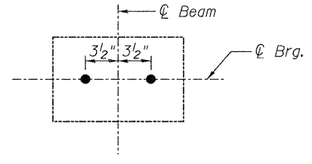
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s2(E)



BAR u(E)



ANCHOR BOLT LAYOUT DETAIL

TWO ABUTMENTS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	104	#6	14'-2"	
p(E)	16	#7	19'-5"	
p1(E)	16	#7	23'-5"	
s2(E)	92	#4	11'-5"	
u(E)	16	#6	9'-9"	
v1(E)	178	#5	4'-4"	
v2(E)	32	#5	9'-10"	
v3(E)	24	#5	6'-6"	
Structure Excavation	Cu. Yd.		166	
Concrete Structures	Cu. Yd.		37.8	
Reinforcement Bars, Epoxy Coated	Pound		5,850	
Furnishing Steel Piles, HP12x53	Foot		185	
Driving Piles	Foot		185	
Test Pile Steel, HP12x53	Each		1	
Pile Shoes	Each		12	
Concrete Encasement	Cu. Yd.		4.2	

NOTES:

1. Pour steps monolithically with cap.
2. E.F. denotes Each Face, F.F. denotes Front Face and B.F. denotes Back Face.
3. For details of Bar Splicers, see sheet S25 of S41.
4. For details of piles and concrete encasement, see sheet S24 of S41.

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	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT DETAILS
STRUCTURE NO. 038-0222/0223
SHEET NO. S21 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	36
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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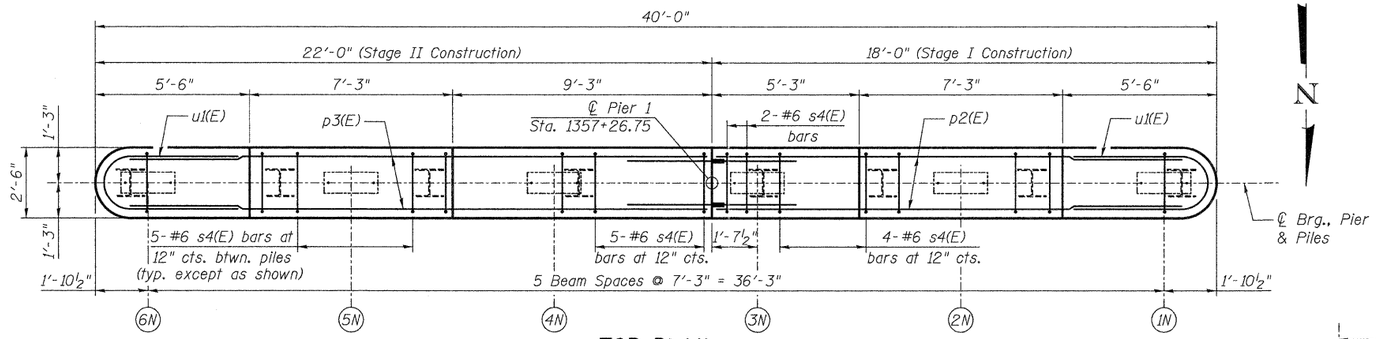
PILE DATA (SB)

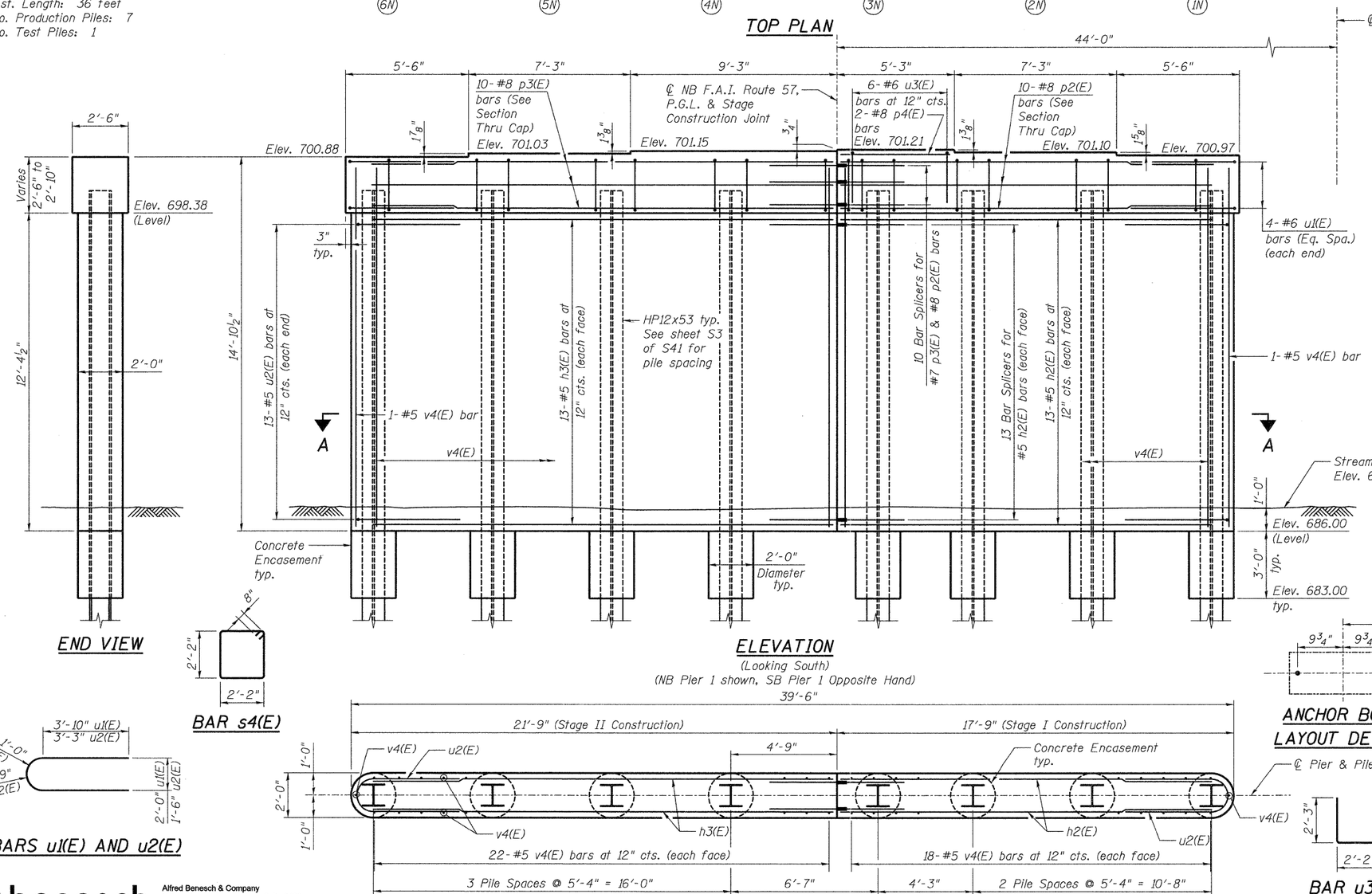
Type: HP12x53 with pile shoes
Nominal Required Bearing: 296 kips
Factored Resistance Available: 163 kips
Est. Length: 36 feet
No. Production Piles: 7
No. Test Piles: 1

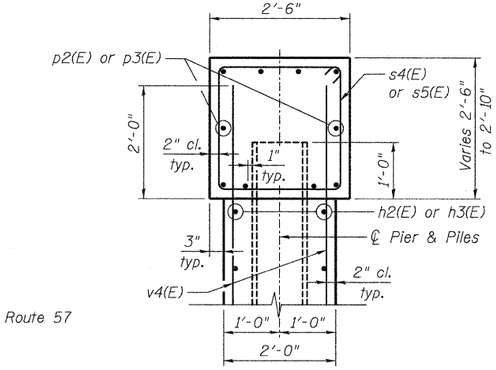
PILE DATA (NB)

Type: HP12x53 with pile shoes
Nominal Required Bearing: 295 kips
Factored Resistance Available: 163 kips
Est. Length: 36 feet
No. Production Piles: 7
No. Test Piles: 1



TOP PLAN





SECTION THRU CAP

TWO PIERS BILL OF MATERIAL

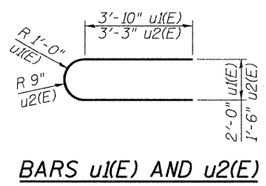
Bar	No.	Size	Length	Shape
h2(E)	52	#5	16'-9"	
h3(E)	52	#5	20'-9"	
p2(E)	20	#8	16'-9"	
p3(E)	20	#8	20'-9"	
p4(E)	4	#8	4'-11"	
s4(E)	72	#6	10'-0"	
u1(E)	16	#6	10'-10"	
u2(E)	52	#5	8'-10	
u3(E)	12	#6	6'-8"	
v4(E)	164	#5	14'-2"	

Structure Excavation	Cu. Yd.	72
Concrete Structures	Cu. Yd.	89.2
Reinforcement Bars, Epoxy Coated	Pound	8,420
Furnishing Steel Piles, HP12x53	Foot	504
Driving Piles	Foot	504
Test Pile Steel, HP12x53	Each	2
Pile Shoes	Each	16
Underwater Structure Excavation Protection - Location 1	Each	1
Underwater Structure Excavation Protection - Location 3	Each	1
Concrete Encasement	Cu. Yd.	5.6

END VIEW

BAR s4(E)

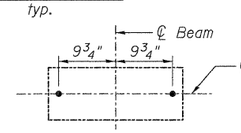
BARS u1(E) AND u2(E)



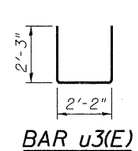
ELEVATION

(Looking South)
(NB Pier 1 shown, SB Pier 1 Opposite Hand)

SECTION A-A



ANCHOR BOLT LAYOUT DETAIL



BAR u3(E)

NOTES:

1. If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at time of construction.
2. For details of piles and reinforcement of Concrete Encasement, see sheet S24 of S41.
3. For details of Bar Splicers, see sheet S25 of S41.

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	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 1 DETAILS
STRUCTURE NO. 038-0222\0223
SHEET NO. S22 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	37
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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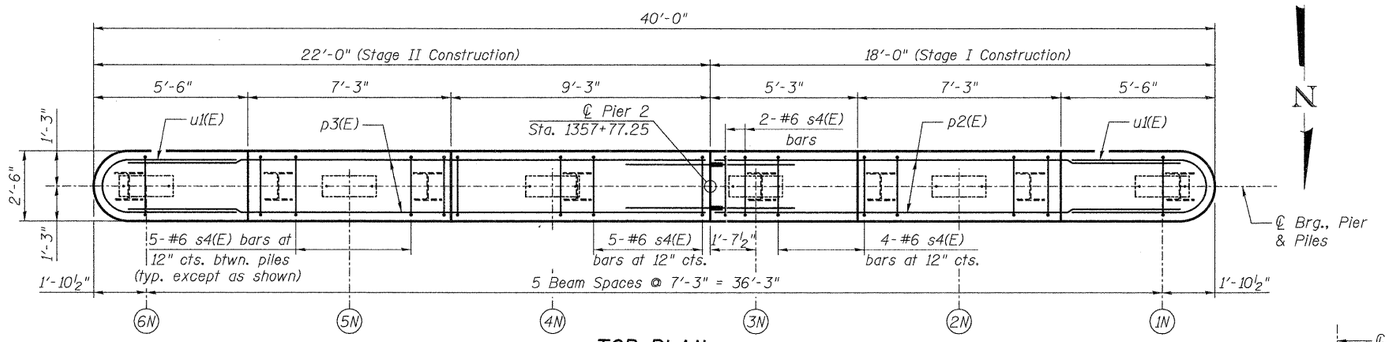
PILE DATA (SB)

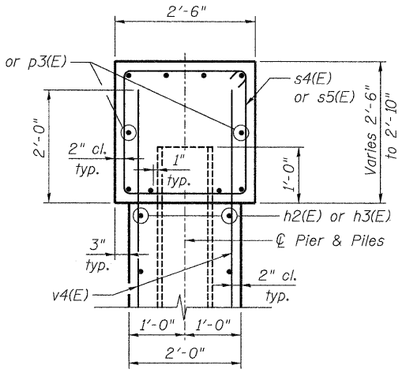
Type: HP12x53 with pile shoes
Nominal Required Bearing: 296 kips
Factored Resistance Available: 163 kips
Est. Length: 36 feet
No. Production Piles: 7
No. Test Piles: 1

PILE DATA (NB)

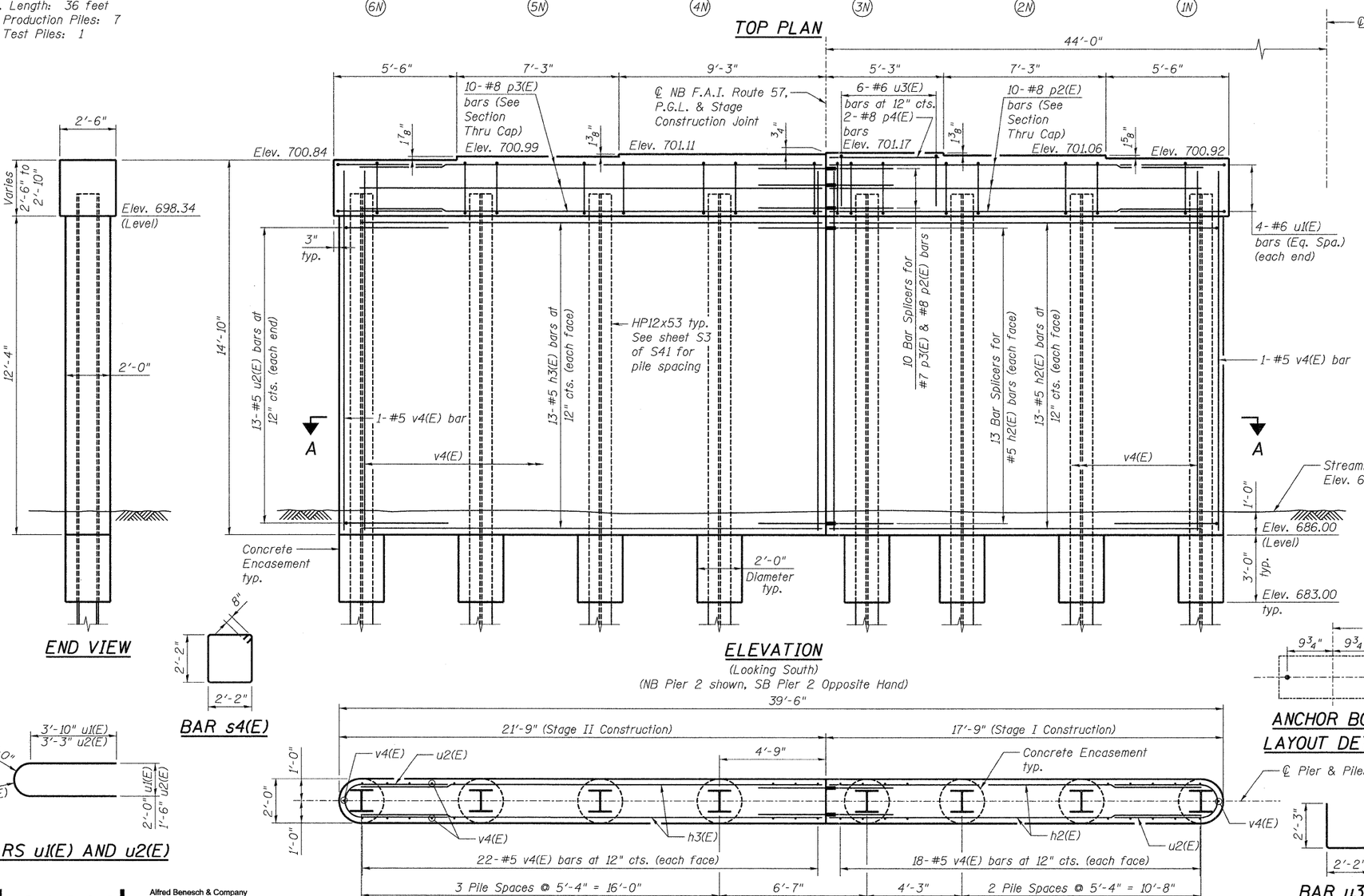
Type: HP12x53 with pile shoes
Nominal Required Bearing: 295 kips
Factored Resistance Available: 163 kips
Est. Length: 36 feet
No. Production Piles: 7
No. Test Piles: 1



TOP PLAN

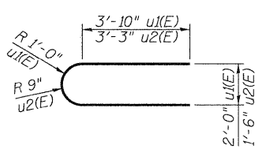


SECTION THRU CAP



END VIEW

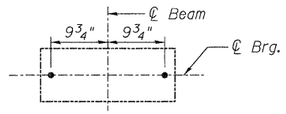
BAR s4(E)



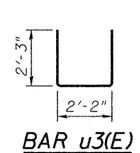
BARS u1(E) AND u2(E)

SECTION A-A

(Looking South)
(NB Pier 2 shown, SB Pier 2 Opposite Hand)



ANCHOR BOLT LAYOUT DETAIL



BAR u3(E)

TWO PIERS BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h2(E)	52	#5	16'-9"	
h3(E)	52	#5	20'-9"	
p2(E)	20	#8	16'-9"	
p3(E)	20	#8	20'-9"	
p4(E)	4	#8	4'-11"	
s4(E)	72	#6	10'-0"	
u1(E)	16	#6	10'-10"	
u2(E)	52	#5	8'-10	
u3(E)	12	#6	6'-8"	
v4(E)	164	#5	14'-2"	

Structure Excavation	Cu. Yd.	68
Concrete Structures	Cu. Yd.	89.0
Reinforcement Bars, Epoxy Coated	Pound	8,420
Furnishing Steel Piles, HP12x53	Foot	504
Driving Piles	Foot	504
Test Pile Steel, HP12x53	Each	2
Pile Shoes	Each	16
Underwater Structure Excavation Protection - Location 2	Each	1
Underwater Structure Excavation Protection - Location 4	Each	1
Concrete Encasement	Cu. Yd.	5.6

NOTES:

1. If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at time of construction.
2. For details of piles and reinforcement of Concrete Encasement, see sheet S24 of S41.
3. For details of Bar Splicers, see sheet S25 of S41.

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	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PIER 2 DETAILS
STRUCTURE NO. 038-0222/0223
SHEET NO. S23 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	38
		CONTRACT NO. 66948		
	ILLINOIS	FED. AID PROJECT		

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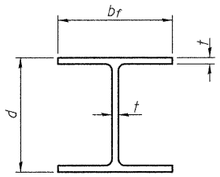
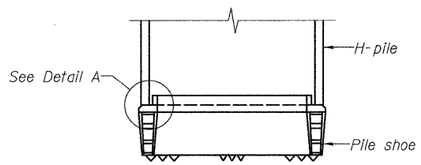
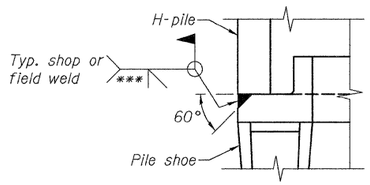


STEEL PILE TABLE

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

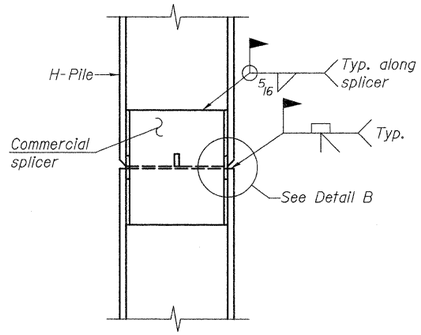


ELEVATION

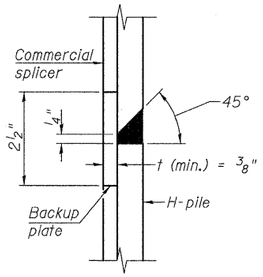


DETAIL A

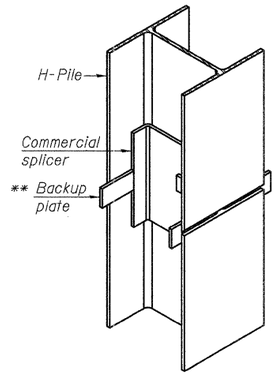
H-PILE SHOE ATTACHMENT



ELEVATION

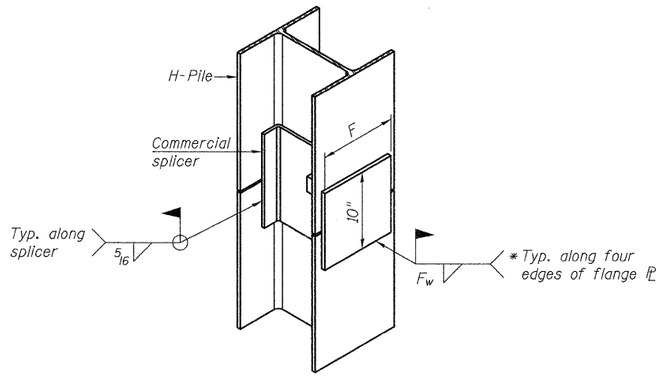


DETAIL "B"



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



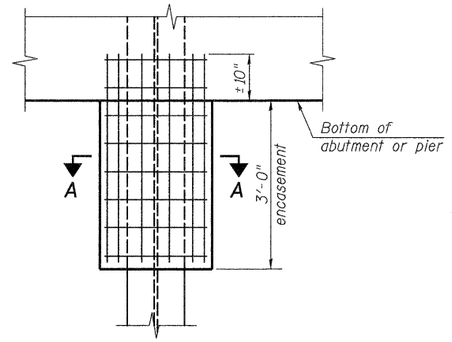
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

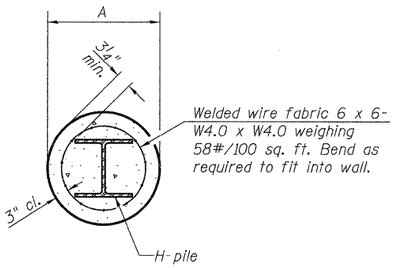
* Interrupt welds 1/4" from end of web and/or each flange.

** Remove portions of backup plates that extend outside the flanges.

*** Weld size per pile shoe manufacturer (5/16" min.).



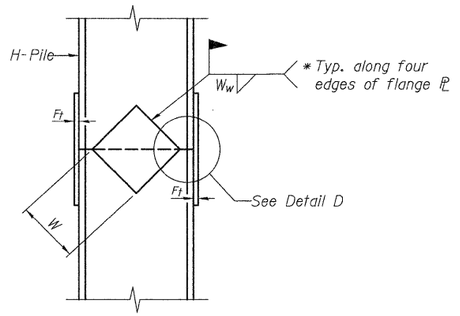
ELEVATION



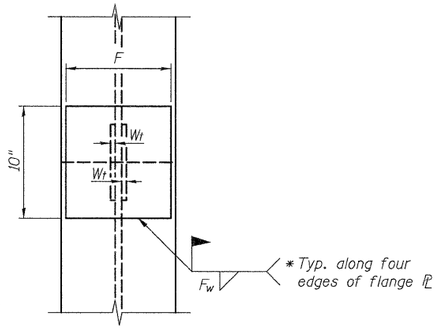
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

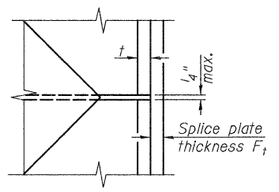
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

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

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F-HP 7-1-10

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	PLOT DATE = Ø8\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 038-0222Ø223
SHEET NO. S24 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	39
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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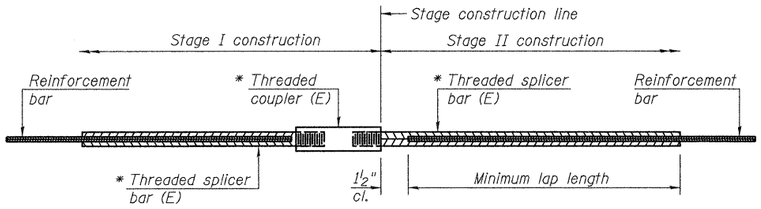


STANDARD BAR SPLICER ASSEMBLY

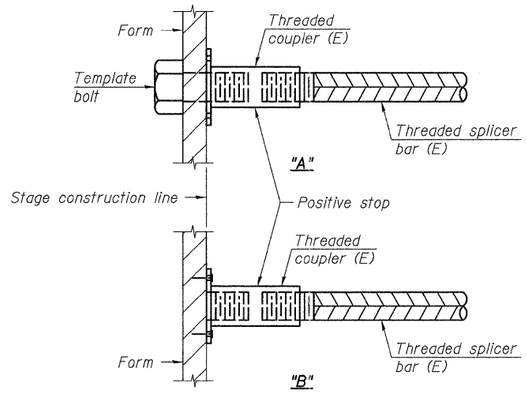
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

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

Threaded splicer bar length = min. lap length + 1½" + thread length

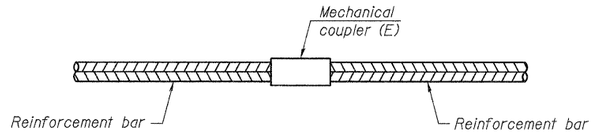
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	820	3'-3"
Abut. Diaphragm	#6	32	3'-4"
Approach Slab	#4	100	2'-3"
Approach Slab	#5	184	2'-7"
Approach Footing	#5	160	2'-7"
Abutment	#7	32	4'-8"
Pier Cap	#8	32	6'-2"
Pier Cap	#7	8	4'-8"
Pier Wall	#5	104	2'-10"



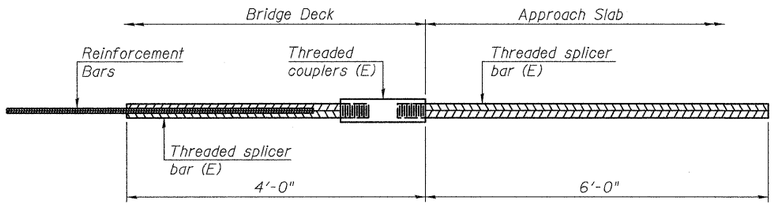
INSTALLATION AND SETTING METHODS

"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.



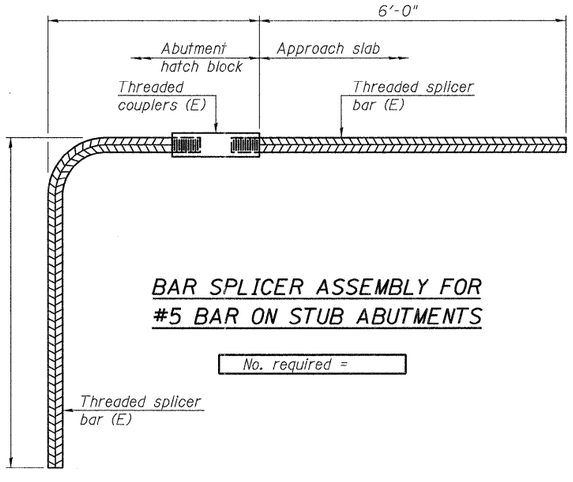
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required



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

No. required = 184



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.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
STRUCTURE NO. 038-0222/0223
SHEET NO. S25 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	40
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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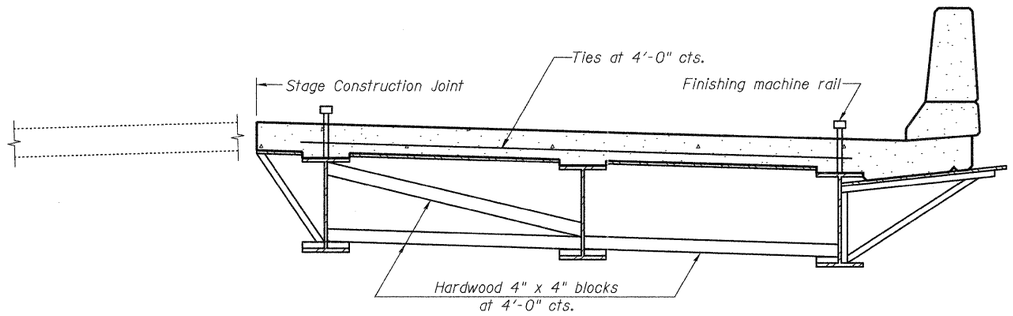
When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.

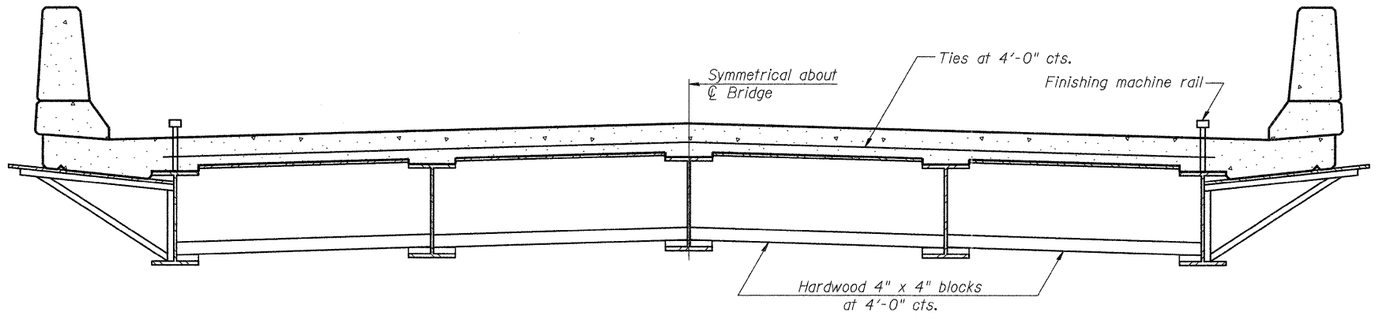
The finishing machine rails shall be placed on the top flange of the exterior beams.

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

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



FORM BRACES FOR
STAGE CONSTRUCTION



FORM BRACES FOR
STAGE CONSTRUCTION

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CANTILEVER FORMING BRACKETS FOR SUPERSTRUCTURES WITH W27 BEAMS AND SMALLER STRUCTURE NO. 038-0222/0223

SHEET NO. S26 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	41
		CONTRACT NO. 66948		
	ILLINOIS	FED. AID PROJECT		

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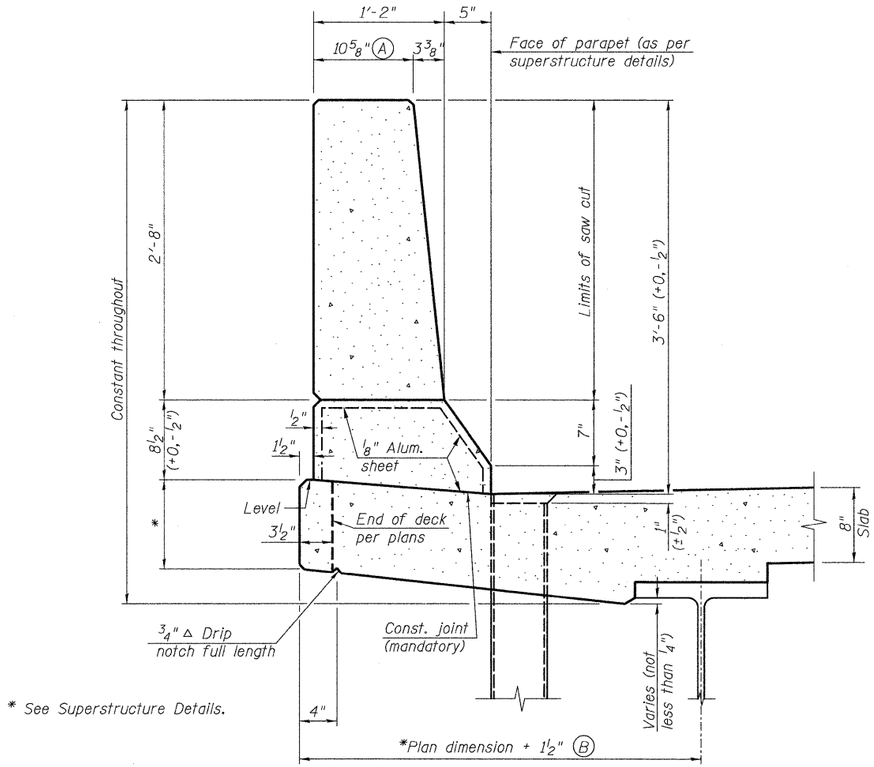
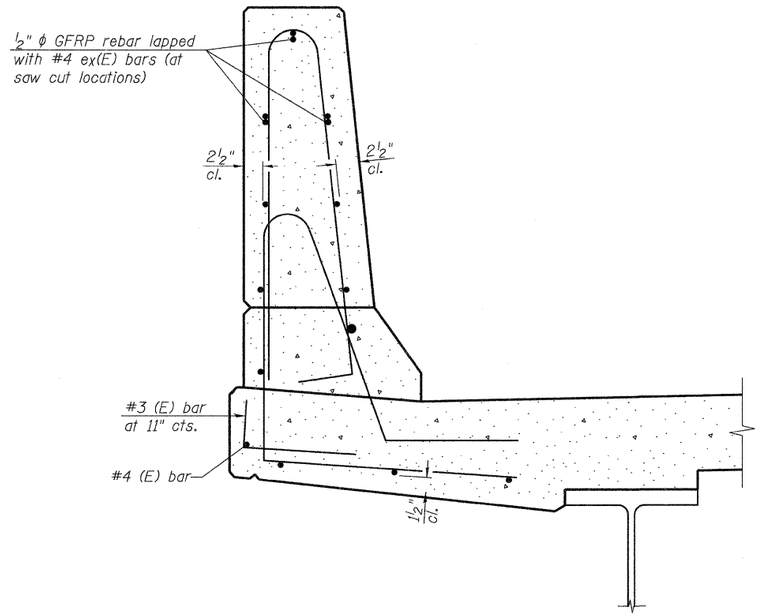


* See Superstructure Details.

SECTION
(Showing dimensions)



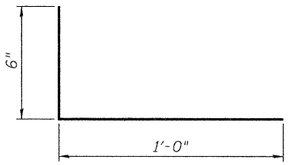
SECTION
(Showing reinforcement clearances for slip forming and additional reinforcement bars)

GENERAL NOTES

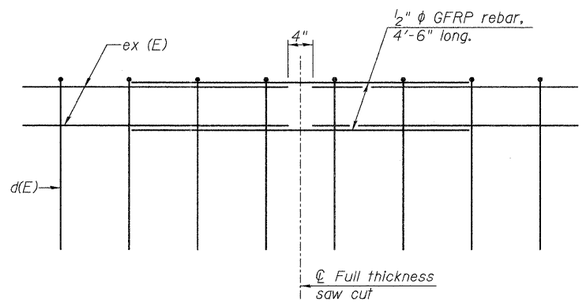
All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0273 cu. yds./ft. of parapet.

Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler.

Steel superstructure shown. Other superstructure types similar.



#3 (E) BAR



GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section at each parapet joint location.)

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DEPARTMENT OF TRANSPORTATION

CONCRETE PARAPET SLIPFORMING OPTION
STRUCTURE NO. 038-0222/0223
SHEET NO. S27 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	42
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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FORM NO. B.D. 122 REV. 5-65

Sh. 1 of 2 Sh.

BRIDGE FOUNDATION BORING LOG

PROJECT I-57-6
ROUTE F.A.I. 57
SEC. 38-8B
COUNTY Iroquois
S. Abut. W. Bridge
Boring No. #1
Station 1358+04.5
Offset 61.6' Rt.

BRIDGE F.A.I. Route 57 over Spring Creek
STA. 1357+52

Date March 4, 1965
Bored By C. I. Bassing
Checked By J. E. Safranski

Surface Water El. 691.00
Groundwater El. at Completion 688.25
After 20 Hours 691.75

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 702.25	0		
Stiff Brownish Black SILTY CLAY (Spoil Bank)			
696.25	---	---	---
Very Stiff Brownish Black to Dark Gray SILTY CLAY	-5 8	1.2 B	26
690.75	15	3.5 S	23
Loose Dark Gray Angular SAND & FINE GRAVEL	-10 9	2.9 S	18
689.25	6	---	---
Hard Gray CLAY (Till)	-15 25	6.8 S	19
	27	5.4 B	16
	-20 23	4.3 B	18
Hard Gray CLAY (Till)	-21	4.1 B	18
678.75			
Very Stiff Gray CLAY (Till)*	-25 18	2.3 B	22
	19	Lost Sample	
	-30 17	3.9 B	23
	14	2.9 B	23
666.25	-35 13	3.1 B	27
Stiff Gray CLAY (Till)*	9	1.6 B	29
	-40 8	2.1 B	29
	-45		

*from 668.75 to 663.75 the clay is clear (no till)

N – Standard Penetration Test – Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu – Unconfined Compressive Strength – t/sf

w – Water Content – percentage of oven dry weight – %.

Type failure: B – Bulge Failure, S – Shear Failure, E – Estimated Value, P – Penetrometer

FORM NO. B.D. 122 REV. 5-65

Sh. 2 of 2 Sh.

BRIDGE FOUNDATION BORING LOG

PROJECT I-57-6
ROUTE F.A.I. 57
SEC. 38-8 B
COUNTY Iroquois
S. Abut. W. Bridge
Boring No. #1
Station 1358+04.5
Offset 61.6' Rt.

BRIDGE FAI Route 57 over Spring Creek
STA. 1357+52

Date March 4, 1965
Bored By C. I. Bassing
Checked By J. E. Safranski

Surface Water El. 691.00
Groundwater El. at Completion 688.25
After 20 Hours 691.75

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 702.25	0		
Stiff Gray CLAY (Till)			
658.75	-5 11	1.9 S	22
Hard Olive - Gray CLAY LOAM (Till)	23	6.2 S	14
653.75	-10 33	8.0 S	13
Stiff Gray SILTY CLAY	11	1.2 B	16
651.25	-15 31	6.6 S	12
Hard Gray SILTY CLAY (Till)	33	5.2 S	12
646.25	-20 10	0.8 B	13
Medium Gray SILTY CLAY (Till)			
643.75	-25		
Medium Light Brown Sub-Angular SAND *	-30 30	----	---
641.75	-35		
	-40		
	-45		

* Sand pushed up into Hollow Stem Auger approx. 3 feet

N – Standard Penetration Test – Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu – Unconfined Compressive Strength – t/sf

w – Water Content – percentage of oven dry weight – %.

Type failure: B – Bulge Failure, S – Shear Failure, E – Estimated Value, P – Penetrometer

FORM NO. B.D. 122 REV. 5-65

Sh. 1 of 2 Sh.

BRIDGE FOUNDATION BORING LOG

PROJECT I-57-6
ROUTE FAI 57
SEC. 38-8B
COUNTY Iroquois
S. Abut. E. Bridge
Boring No. #2
Station 1358+07.5
Offset 30' Lt.

BRIDGE FAI Route 57 over Spring Creek
STA. 1357+52

Date March 10, 1965
Bored By C. I. Bassing
Checked By J. E. Safranski

Surface Water El. 691.00
Groundwater El. at Completion None
After 19 Hours 652.75

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 698.75	0		
Stiff Brownish Black & Yellow SILTY CLAY TO CLAY			
690.25	-5 13	1.3 S	20
Very Stiff Gray CLAY (Till)	9	1.0 E	23
665.25	-10 10	1.9 B	21
Stiff Gray CLAY (Till)*	13	3.3 S	22
	-15 11	2.1 B	23
	17	3.1 B	19
	14	3.3 B	19
	-20 14	3.3 B	20
Very Stiff Gray CLAY (Till)	-25 12	2.3 B	20
	10	2.3 B	25
	11	2.5 B	24
		2.1B	25
	-30 12	2.5 S	23
	9	2.1 B	28
	-35 9	1.5 B	29
	8	1.4 B	26
	-40 14	2.7 B	15
	-45		

* 667.75 to 662.75 Clay contains no Till

N – Standard Penetration Test – Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu – Unconfined Compressive Strength – t/sf

w – Water Content – percentage of oven dry weight – %.

Type failure: B – Bulge Failure, S – Shear Failure, E – Estimated Value, P – Penetrometer

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (1 OF 5)
STRUCTURE NO. 038-0222/0223
SHEET NO. S28 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	43
		CONTRACT NO. 66948		
		ILLINOIS	FED. AID PROJECT	

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BRIDGE FOUNDATION BORING LOG

PROJECT I-57-6 | BRIDGE FAI Route 57 over Spring Creek | Date March 10, 1965
ROUTE FAI 57 | Bored By C. I. Bassing
SEC 38-8B | STA 1357+52 | Checked By J. E. Safranski
COUNTY Iroquois
S. Abut. E. Bridge
Boring No. #2
Station 1358+07.5
Offset 30' Lt.

Surface Water El. 691.00
Groundwater El. at Completion None
After 19 Hours 652.75

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 698.75			
Stiff Gray CLAY (Till) 657.75			
Hard Olive Gray CLAY LOAM (Till)	30	7.8 S	12
652.75	28	7.2 S	12
Very Stiff Gray Clay LOAM (Till)	16	2.3 B	15
650.25			
Hard Gray LOAM (Till)	51	10.0 S	10
648.25			

N – Standard Penetration Test – Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30"

Qu – Unconfined Compressive Strength – t/sf

w – Water Content – percentage of oven dry weight – %

Type failure
B – Bulge Failure
S – Shear Failure
E – Estimated Value
P – Penetrometer

BRIDGE FOUNDATION BORING LOG

PROJECT I-57-6 | BRIDGE FAI Route 57 over Spring Creek | Date March 11, 1965
ROUTE FAI 57 | Bored By C. I. Bassing
SEC 38-8B | STA 1357+52 | Checked By J. E. Safranski
COUNTY Iroquois
W. Bridge Pier #2
Boring No. #3
Station 1357+71.75
Offset 60' Rt.

Surface Water El. 691.00
Groundwater El. at Completion None
After 21 Hours 690.85

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 693.25			
Medium Brownish Black to Yellowish Brown SILTY CLAY	4	1.0 B	24
687.25	4	1.0 B	22
Hard Brown to Gray CLAY (Till)	13	7.4 B	17
	18	6.2 B	16
	17	5.4 B	15
677.75	18	4.7 B	16

NOTE: This pier was inaccessible to the Foundation Boring Machine. Standard Test Results were obtained through the use of tripod, drive-casing, motorized cathead, and a suspended McCulloch engine to clean out casing

N – Standard Penetration Test – Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30"

Qu – Unconfined Compressive Strength – t/sf

w – Water Content – percentage of oven dry weight – %

Type failure
B – Bulge Failure
S – Shear Failure
E – Estimated Value
P – Penetrometer

BRIDGE FOUNDATION BORING LOG

PROJECT I-57-6 | BRIDGE FAI Route 57 over Spring Creek | Date March 12, 1965
ROUTE FAI 57 | Bored By C. I. Bassing
SEC 38-8B | STA 1357+52 | Checked By J. E. Safranski
COUNTY Iroquois
N. Abut. E. Bridge
Boring No. #4
Station 1356+99.5
Offset 56' Lt.

Surface Water El. 691.00
Groundwater El. at Completion None
After 76 Hours 663.35

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 699.35			
Hard Brown to Gray CLAY (Till)	28	7.9 S	16
683.35	27	6.1 S	17
Very Stiff Gray CLAY (Till)	25	6.0 S	16
	32	6.8 S	18
	28	7.0 B	17
	20	4.7 B	17
	17	3.9 B	18
	16	3.7 B	20

Elevation	N	Qu t/s.f.	w (%)
Very Stiff Gray CLAY (Till)	15	2.9 B	23
673.35	11	2.3 B	24
Stiff Gray CLAY (Till)	9	1.5 B	26
670.85			
Hard Gray SILTY CLAY (Till)	15	3.9 B	21
665.85	17	6.0 B	18
Stiff Gray CLAY (Clear)*	8	1.9 B	31
663.35			
Hard Olive-Gray CLAY LOAM (Till)	15	4.1 B	15
660.85			
Very Stiff Olive Gray CLAY LOAM (Till)	14	2.9 B	16
658.85			

* No Till

N – Standard Penetration Test – Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30"

Qu – Unconfined Compressive Strength – t/sf

w – Water Content – percentage of oven dry weight – %

Type failure
B – Bulge Failure
S – Shear Failure
E – Estimated Value
P – Penetrometer

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FILE NAME = 0380222&0223_66948_029_borlog2.dgn	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
		CHECKED - AAY	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 06\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (2 OF 5)
STRUCTURE NO. 038-0222/0223
SHEET NO. S29 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	44
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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Sh. 1 of 1 Sh.

BRIDGE FOUNDATION BORING LOG

PROJECT I-57-6
ROUTE FAI 57
SEC. 38-8B
COUNTY Iroquois
N. Abut. E. Bridge
Boring No. #5
Station 1357+04
Offset 34.5' Rt.

BRIDGE FAI Route 57 over Spring Creek
STA 1357+52

Date March 16, 1965
Bored By C. I. Bassing
Checked By J. E. Safranski

Surface Water El. 691.00
Groundwater El. at Completion After 24 Hours: None / None

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 700.75			
Very Stiff Yellowish Brown LOAM (Till)(Friable)	15	2.0+ E	11
697.25			
Hard Brown CLAY LOAM (Till)	41	10.9 S	14
692.25			
Hard Brownish Gray to Gray CLAY (Till)	48	9.3 S	15
	33	7.2 S	16
	24	6.8 B	17
	18	4.7 B	16
682.25			
Very Stiff Gray CLAY (Till)	15	3.5 B	17
Very Stiff Gray CLAY (Till)	16	3.7 B	17
	15	3.7 B	18
	15	2.7 B	18
	14	3.1 B	20
	17	3.3 B	23
667.25			
Very Stiff to Stiff Gray CLAY (Clear)*	13	2.7 B	27
* No Till	10	1.6 S	30
660.25	10	1.9 B	27

N – Standard Penetration Test – Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".

Qu – Unconfined Compressive Strength – t/sf

w – Water Content – percentage of oven dry weight – %.

Type failure: B – Bulge Failure, S – Shear Failure, E – Estimated Value, P – Penetrometer

Sh. 1 of 2 Sh.

BRIDGE FOUNDATION BORING LOG

PROJECT I-57-6
ROUTE F.A.I. 57
SEC. 38-8B
COUNTY Iroquois
E. Bridge Pier #1
Boring No. #6
Station 1357+27.75
Offset 53' Lt.

BRIDGE FAI Route 57 over Spring Creek
STA 1357+52

Date March 16, 1965
Bored By C. I. Bassing
Checked By J. E. Safranski

Surface Water El. 691.00
Groundwater El. at Completion After 20 Hours: None / 667.25

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 700.25			
Stiff Yellowish Brown LOAM (Till) (Friable)	10	1.7 S	18
696.75			
Stiff Brown CLAY LOAM (Till) (Friable)	37	1.8 S	12
694.25			
Hard Brown CLAY LOAM (Till)	33	7.0 S	16
691.75			
Hard Brown to Gray CLAY (Till)	30	8.5 S	16
	32	6.6 S	16
	27	6.0 B	17
	19	4.1 B	17
681.75			
Very Stiff Gray CLAY (Till)	15	2.9 B	18
679.25			
Hard Gray CLAY (Till)	18	4.3 B	18
676.75			
Stiff Gray CLAY (Till)	14	1.9 S	25
674.25			
Medium Gray SILTY CLAY (Till)	9	0.9 B	13
671.75			
Stiff Gray CLAY (Till)*	11	1.8 B	24
	8	1.2 B	30
664.25	9	1.6 B	30
Medium Gray CLAY (Till)*	7	0.9 B	29
661.75			
Very Stiff Olive SILTY CLAY (Till)	12	2.1 B	15

* 666.75 to 663.75 the clay is clear (no till)

N – Standard Penetration Test – Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30"

Qu – Unconfined Compressive Strength – t/sf

w – Water Content – percentage of oven dry weight – %.

Type failure: B – Bulge Failure, S – Shear Failure, E – Estimated Value, P – Penetrometer

Sh. 2 of 2 Sh.

BRIDGE FOUNDATION BORING LOG

PROJECT I-57-6
ROUTE FAI 57
SEC. 38-8B
COUNTY Iroquois
E. Bridge Pier #1
Boring No. #6
Station 1357+27.75
Offset 53' Lt.

BRIDGE FAI Route 57 over Spring Creek
STA 1357+52

Date March 16, 1965
Bored By C. I. Bassing
Checked By J. E. Safranski

Surface Water El. 691.00
Groundwater El. at Completion After 20 Hours: None / 667.25

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 700.25			
Very Stiff Olive SILTY CLAY (Till)			
699.25			
Stiff Olive CLAY LOAM (Till)	14	1.8 B	17
696.75			
Medium Olive SILTY CLAY LOAM (Till)	7	0.7 B	17
694.25			
Hard Olive to Gray CLAY LOAM (Till)	18	5.6 S	14
649.75	17	4.7 S	14

N – Standard Penetration Test – Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30"

Qu – Unconfined Compressive Strength – t/sf

w – Water Content – percentage of oven dry weight – %

Type failure: B – Bulge Failure, S – Shear Failure, E – Estimated Value, P – Penetrometer

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FILE NAME = 0380222&0223_66948_030_borlog3.dgn	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
		CHECKED - AAY	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (3 OF 5)
STRUCTURE NO. 038-02220223
SHEET NO. S30 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	45
		CONTRACT NO. 66948		
	ILLINOIS	FED. AID PROJECT		

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Sh. 1 of 1 Sh.

BRIDGE FOUNDATION BORING LOG

PROJECT I-57-6 BRIDGE FAI Route 57 Date March 18, 1965
ROUTE FAI 57 over Spring Creek Bored By C. I. Bassing
SEC 38-8 B STA. 1357+52 Checked By J. E. Safranski
COUNTY Iroquois
E. Bridge Pier #2
Boring No. #7
Station 1357+64.25
Offset 59' Lt.

Surface Water El. 691.00
Groundwater El at Completion 678.75
After -- Hours --

Elevation	N	Qu t/s.f.	w (%)
Ground Surface 693.25			
Stiff Brownish Black SILTY CLAY	5	1.3 S	28
689.75			
Very Stiff Brown & Gray CLAY (Till)(First 6" of sample was gravelly)	9	3.5 S	17
687.25			
Hard Brown to Gray CLAY (Till)	26	6.2 S	19
682.25	17	4.5 B	18
Very Stiff Gray CLAY (Till)	15	3.3 B	18
677.75	16	3.5 B	19

NOTE: This pier was inaccessible to the Foundation Boring Machine Standard Test
Results were obtained through the use of tripod, drive-casing, motorized cathead, and a suspended McCulloch engine to clean out casing.

N – Standard Penetration Test – Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30"

Qu – Unconfined Compressive Strength – t/sf

w – Water Content – percentage

Type failure
B – Bulge Failure
S – Shear Failure
E – Estimated Value

Illinois Department of Transportation
Division of Highways
District #3, Ottawa

SOIL BORING LOG

Page 1 of 2
Date 8/11/09

ROUTE I-57 DESCRIPTION I-57 (S.B.) over Spring Creek, 2.5 miles South of the Buckley Interchange LOGGED BY LM
SECTION 38-8B LOCATION S.W. 1/4 of N.W. 1/4, SEC. 3, TWP. 24N, RNG. 10E, 3rd PM
COUNTY Iroquois DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 038-0147 (Exist.)
Station 1357+52.48
BORING NO. 1 (S.W. Quad.)
Station 1358+24.48
Offset 67.00ft Rt.
Ground Surface Elev. 703.10 ft

Surface Water Elev. 687.92 ft
Stream Bed Elev. 687.68 ft
Groundwater Elev.:
First Encounter 644.6 ft ▼
Upon Completion 658.1 ft ▽
After ___ Hrs. ___ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Augered Black, Gray, Brown Silty Clay Loam Fill			
700.60	3		
Very Stiff to Stiff Black, Brown, Gray Silty Clay Loam Till Fill	4	3.0	21.4
	5	P	
-5	3		
	2	1.5	18.9
	3	P	
695.60	3		
Very Stiff Dark Gray Silty Clay/Silty Clay Loam	4	2.6	26.8
	5	S	
-10	3		
	4	2.8	20.0
	5	S	
691.10	3		
Stiff to Very Stiff Gray Silty Clay Loam Till with layers of Sand/Fine Gravel & Loam	3	2.0	21.8
	3	P	
688.60			
Hard Gray Silty Clay Loam Till -15	3		
	6	6.1	15.9
	12	S	
	4		
	8	5.7	15.0
-20	10	S	

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Hard Gray Silty Clay Loam Till (continued)	6		
	9	7.0	15.8
	12	S	
	5		
	8	6.8	16.9
	12	S	
-25	5		
678.10	8	5.4	19.2
Hard Gray Clay Till	11	S	
	4		
	6	4.5	21.2
	9	S	
-30	4		
671.10	5	4.1	23.5
Stiff to Very Stiff Gray Clay Tillish - mainly Clay with minor Fine Gravel & Silt	2	S	
	3		
	4	3.3	24.4
	5	B	
-35	2		
	4	2.3	26.9
	5	B	
	1		
	4	2.3	27.1
-40	4	B	

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

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District #3, Ottawa

SOIL BORING LOG

Page 2 of 2
Date 8/11/09

ROUTE I-57 DESCRIPTION I-57 (S.B.) over Spring Creek, 2.5 miles South of the Buckley Interchange LOGGED BY LM
SECTION 38-8B LOCATION S.W. 1/4 of N.W. 1/4, SEC. 3, TWP. 24N, RNG. 10E, 3rd PM
COUNTY Iroquois DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 038-0147 (Exist.)
Station 1357+52.48
BORING NO. 1 (S.W. Quad.)
Station 1358+24.48
Offset 67.00ft Rt.
Ground Surface Elev. 703.10 ft

Surface Water Elev. 687.92 ft
Stream Bed Elev. 687.68 ft
Groundwater Elev.:
First Encounter 644.6 ft ▼
Upon Completion 658.1 ft ▽
After ___ Hrs. ___ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Stiff to Very Stiff Gray Clay Tillish - mainly Clay with minor Fine Gravel & Silt (continued)	1		
	3	2.1	25.4
	4	B	
	1		
	3	1.9	19.6
	3	B	
658.60			
Very Stiff Gray Silty Clay Loam Till ▽-45	8		
*Large Rock @ 46'	100/4"	2.5	14.8
		P	
	4		
	6	3.7	22.3
	9	S	
653.60			
Hard Gray Silty Clay Loam/Silty Loam Till -50	9		
	10	4.3	12.2
	11	S	
-55	11		
	15	9.2	10.4
	31	S	
644.60 ▼			
Dense to Very Dense Brown Fine Sand to Coarse Gravel with Free Water -60			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Dense to Very Dense Brown Fine Sand to Coarse Gravel with Free Water (continued)	15		
	22		12.6
	38		
	16		
	31		10.1
639.10	42		
End of Boring			
-65			
-70			
-75			
-80			

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

BBS, from 137 (Rev. 8-99)

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	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (4 OF 5)
STRUCTURE NO. 038-0222/0223
SHEET NO. S31 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	46
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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Illinois Department of Transportation
Division of Highways
District #3, Ottawa

SOIL BORING LOG

Date 8/13/09

ROUTE I-57 DESCRIPTION I-57 (S.B.) over Spring Creek, 2.5 miles South of the Buckley Interchange LOGGED BY LM

SECTION 38-8B LOCATION S.W. 1/4 of N.W. 1/4, SEC. 3, TWP. 24N, RNG. 10E, 3rd PM

COUNTY Iroquois DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 038-0147 (Exist.)
Station 1357+52.48

BORING NO. 2 (N.E. Quad.)
Station 1356+92.48
Offset 17.00ft Rt.
Ground Surface Elev. 703.50 ft

Surface Water Elev. 687.92 ft
Stream Bed Elev. 687.68 ft

Groundwater Elev.:
First Encounter 641.0 ft ▼
Upon Completion 658.5 ft ▽
After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Augered Brown Silty Clay Loam Till Fill			
701.00			
Hard to Very Stiff Brown Silty Clay Loam Till Fill	9		
	6 8	>4.5 P	17.4
-5	3		
	3 2	2.5 P	24.7
696.50			
Hard Grayish Brown Silty Clay Loam Till Fill	7		
	9 13	9.0 S	16.2
-10	7		
	8 12	8.5 S	16.0
	9		
	12 16	9.6 S	15.0
-15	5		
	7 9	6.8 S	16.1
686.50			
Hard Gray Silty Clay Loam Till	5		
	9 11	5.0 S	16.8
684.00			
Very Stiff Gray Silty Clay Loam Till			
-20			
Very Stiff Gray Silty Clay Loam Till *(continued)*			
	5		
	6 8	3.5 B	16.3
	4		
	4 7	3.7 B	17.1
-25	3		
	4 7	3.5 B	17.5
	3		
	4 7	3.5 B	17.6
674.00			
Very Stiff Gray Clay Till - mainly Clay	3		
-30			
	4 6	3.5 S	16.0
	3		
	4 7	3.5 S	23.2
-35	4		
	5 8	3.5 S	18.3
	3		
	5 8	3.5 S	30.3
-40			

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

BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District #3, Ottawa

SOIL BORING LOG

Date 8/13/09

ROUTE I-57 DESCRIPTION I-57 (S.B.) over Spring Creek, 2.5 miles South of the Buckley Interchange LOGGED BY LM

SECTION 38-8B LOCATION S.W. 1/4 of N.W. 1/4, SEC. 3, TWP. 24N, RNG. 10E, 3rd PM

COUNTY Iroquois DRILLING METHOD Hollow Stem Auger HAMMER TYPE CME Automatic

STRUCT. NO. 038-0147 (Exist.)
Station 1357+52.48

BORING NO. 2 (N.E. Quad.)
Station 1356+92.48
Offset 17.00ft Rt.
Ground Surface Elev. 703.50 ft

Surface Water Elev. 687.92 ft
Stream Bed Elev. 687.68 ft

Groundwater Elev.:
First Encounter 641.0 ft ▼
Upon Completion 658.5 ft ▽
After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Very Stiff Gray Clay Till - mainly Clay *(continued)*	3		
	4 7	3.5 S	21.5
	3		
	5 8	3.5 S	27.3
659.00			
Very Stiff Grayish Brown Silty Clay Loam Till ▽ -45	4		
	5 8	3.5 S	15.9
	5		
	6 8	3.5 S	16.6
654.00			
Very Stiff Grayish Brown Silty Clay Loam/Silty Loam Till with Silt Layers -50	5		
	5 8	3.5 S	22.8
	5		
	6 9	3.5 S	18.0
649.00			
Hard Grayish Brown Silty Loam Till - Brittle -55	9		
	11 13	7.3 S	8.6
	10		
	14 14	7.1 S	20.0
-60			
Hard Grayish Brown Silty Loam Till - Brittle *(continued)*	11		
	11 15	7.1 S	12.6
641.00 ▼			
Dense to Very Dense Brown Fine Sand to Coarse Gravel with Free Water 639.50	12		
	24 31		12.8
End of Boring -65			
-70			
-75			
-80			

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

BBS, from 137 (Rev. 8-99)

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		CHECKED - AAY	REVISED -
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	PLOT DATE = Ø8\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS (5 OF 5)
STRUCTURE NO. 038-0222/0223
SHEET NO. S32 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	47
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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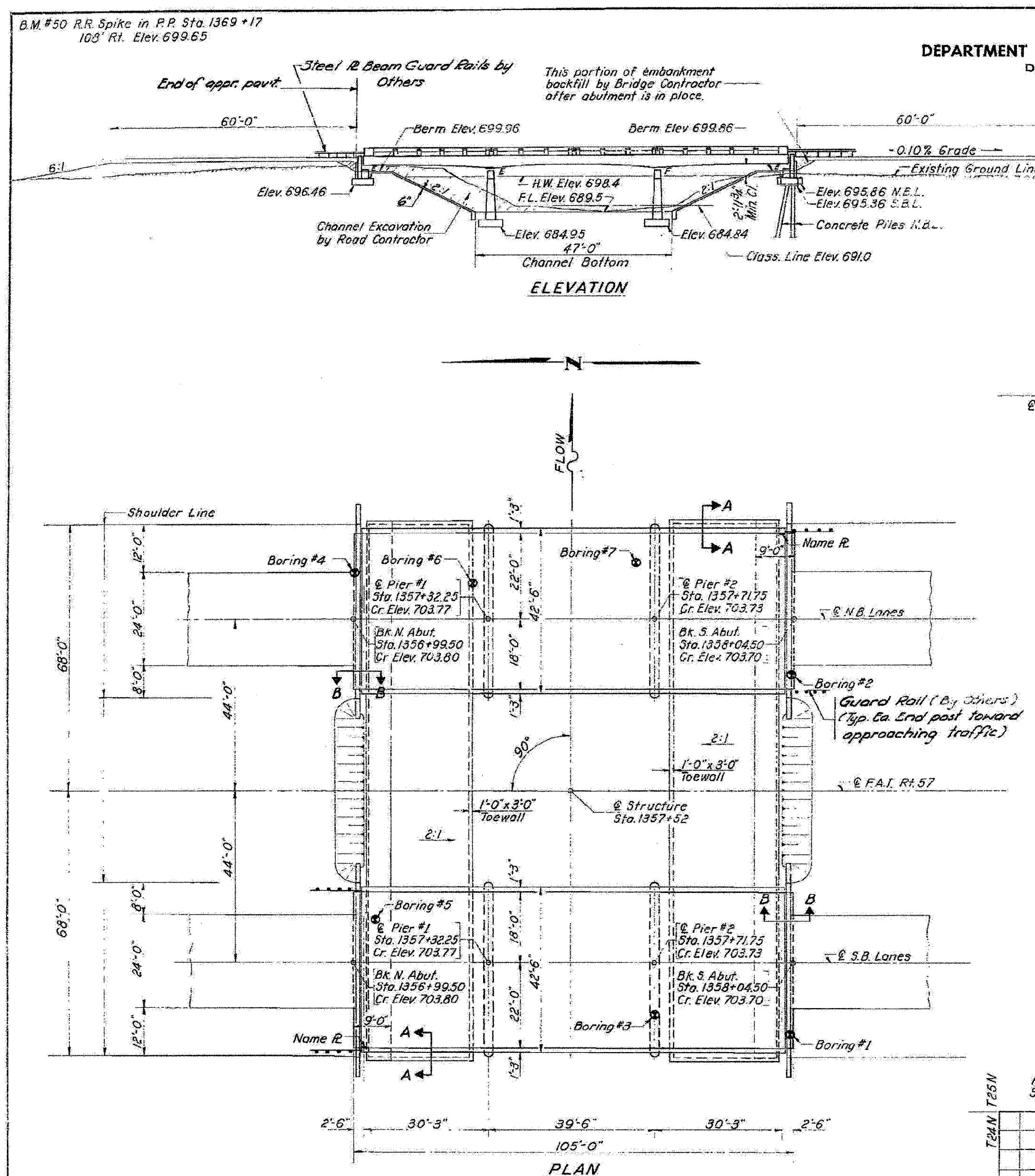
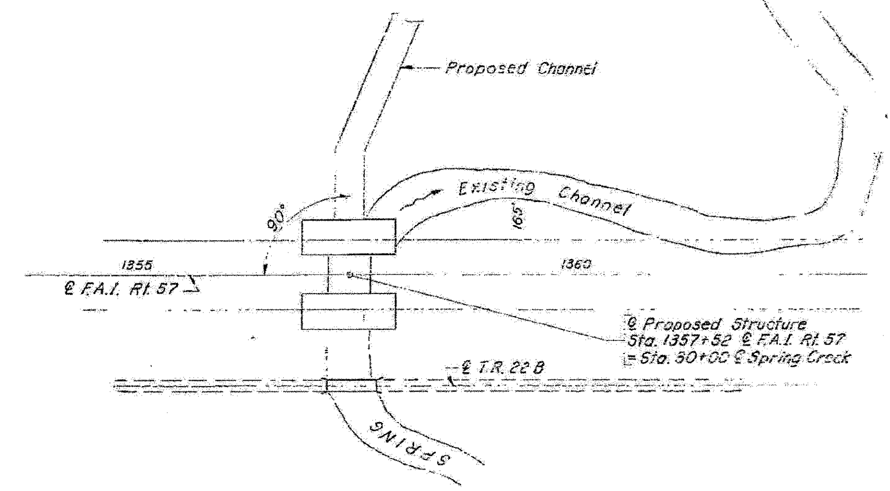
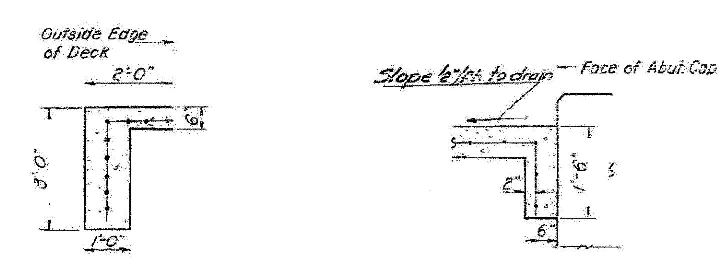
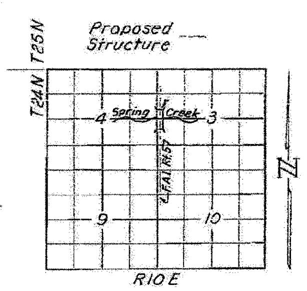
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

B.M. #50 R.R. Spike in P.P. Sta. 1369+17 108' Rt. Elev. 699.65









ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
I-57	*	Iroquois	113	27

FED. ROAD DIST. NO. — I-IG-57-6(53) 26

* 38-8B

GENERAL NOTES

Coarse aggregate to be used in wing walls must be free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications.

Slope Wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58# per 100 Sq.Ft.

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

The handrail concrete in the rail post and railing shall be poured in separate operations.

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

The exposed surfaces of the expansion guard shall be given two shop coats of red lead paint. The contact surfaces shall be given one coat of red lead paint. Anchor studs shall not be painted.

All structural steel shall conform to A.S.T.M. Specifications Designation A-36.

Expansion guards are included in quantity of Structural Steel. Estimated Weight = 4400 Lbs.

Structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint.

The Contractor shall drive one concrete test pile in a permanent location at the S. Abut. N. Bound Structure, as directed by the Engineer before ordering the remainder of the piles.

Permanent forms will not be permitted in forming the concrete slab.

STATION 1357+52
BUILT 195_ BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. 38-8B
F.A. PROJ. I-IG-57-6(53)
LOADING HS 20 & ALT.

NAME PLATE LETTERING
See Standard 2113-1

TOTAL BILL OF MATERIAL

	Item	Unit	Super	Sub	Total
**	Class A Excavation for Structures	Cu. Yds.		330	330
**	Class B Excavation for Structures	Cu. Yds.		340	340
	Structural Steel	Lbs.	19,540		19,540
	Handrail Concrete	Cu. Yds.	18.8		[illegible]
	Class X Concrete	Cu. Yds.	354.6	139.7	494.3
	Class A Concrete	Cu. Yds.		246.8	246.8
	Reinforcement Bars	Lbs.	122700	32,670	45,370
	Concrete Piles	Lin. Ft.		240	240
	Test Piles Concrete	Each		1	1
	Name Plates	Each	2		2
	Slope Wall (6")	Sq. Yds.		1040	1040
	[illegible]	[illegible]	[illegible]		[illegible]
*	Bridge Seat Sealant	Lump Sum		0.5	0.5

* Bridge Seat Sealant shall be used at Abutments only.
** Class A & B Excavation for Structures includes excavation for Slope Wall.

FOR INFORMATION ONLY

WATERWAY INFORMATION

Drainage Area — 18,500 Acres
Character — Level & Cultivated
Required Opening (50 Yr. Fl.) — 540 Sq. Ft.
Proposed Opening — 540 Sq. Ft.
Ordinary Water Elev. 692.5
Low Water Elev. 690.0
Design frequency discharge, Q50 = 2700 c.f.s.

DESIGN STRESSES

fc = 1400 psi. Super & Sub
Vc = 75 psi. Ftgs.
fs = 20,000 psi. Reinf.
n = 10

LOADING HS 20-44 & ALT.

GENERAL PLAN & ELEVATION
F.A.I. RT. 57 OVER SPRING CREEK
F.A.I. RT. 57 SEC. 38-8B
IROQUOIS COUNTY
STA. 1357+52

DESIGNED	I. Kaspar
CHECKED	J.B.R.
DRAWN	J.L. Armstrong
CHECKED	J.B.R.

June 7 1965
EXAMINED — Engineer of Bridge and Traffic Structures
PASSED — H.J. Alton, Engineer of Design
APPROVED — V.E. Staff, Chief Highway Engineer

Rev. 4/10/68 JBN/I.K.

Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 3938.09

benesch — engineers · scientists · planners

FILE NAME =	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
0380222&0223_66948_033_Exist_Plan_1.dgn	PLOT SCALE =	CHECKED - AAY	REVISED -
	PLOT DATE = 08\18\2011	DRAWN - RMG	REVISED -
		CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (1 OF 9)
STRUCTURE NO. 038-0222/0223
SHEET NO. S33 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	48

CONTRACT NO. 66948
ILLINOIS FED. AID PROJECT

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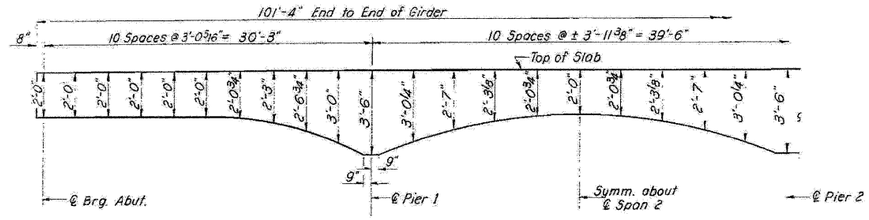
The Contractor shall determine the elevations of the bottom surface of each girder by subtracting the girder ordinates from the Top of Slab Elevations Adjusted for Dead Load Deflection given on sheet #4



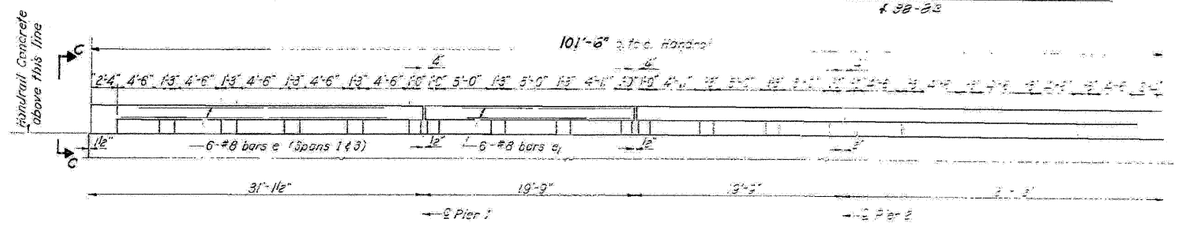
GIRDER ORDINATES (ALL GIRDERS)

Note: For End of Slab Detail See Sheet #5

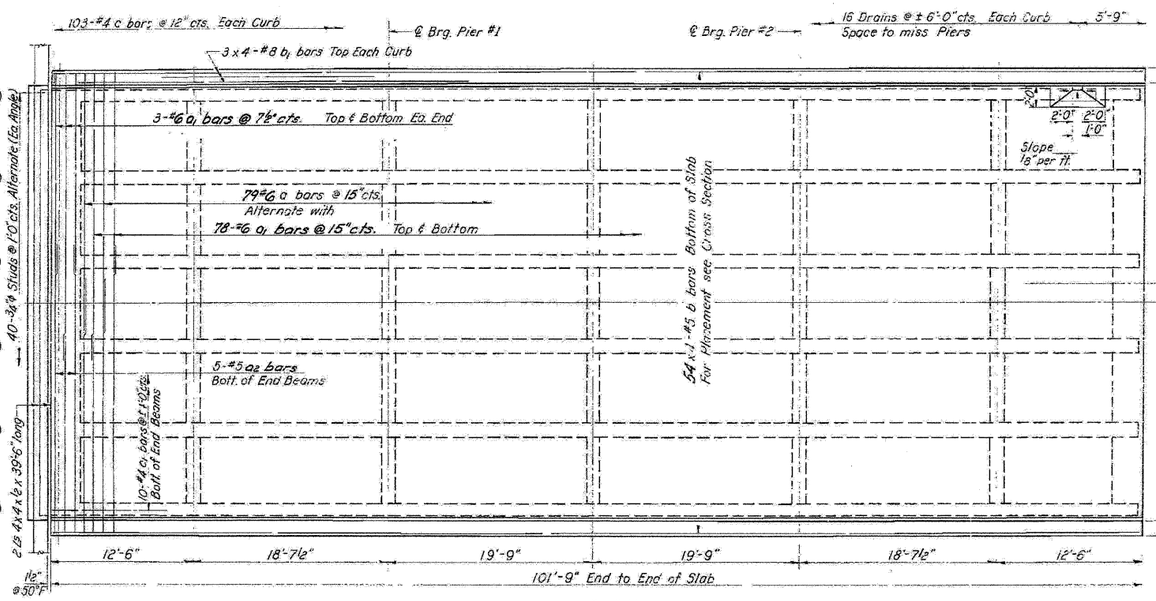
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO. 2
NO SHEETS

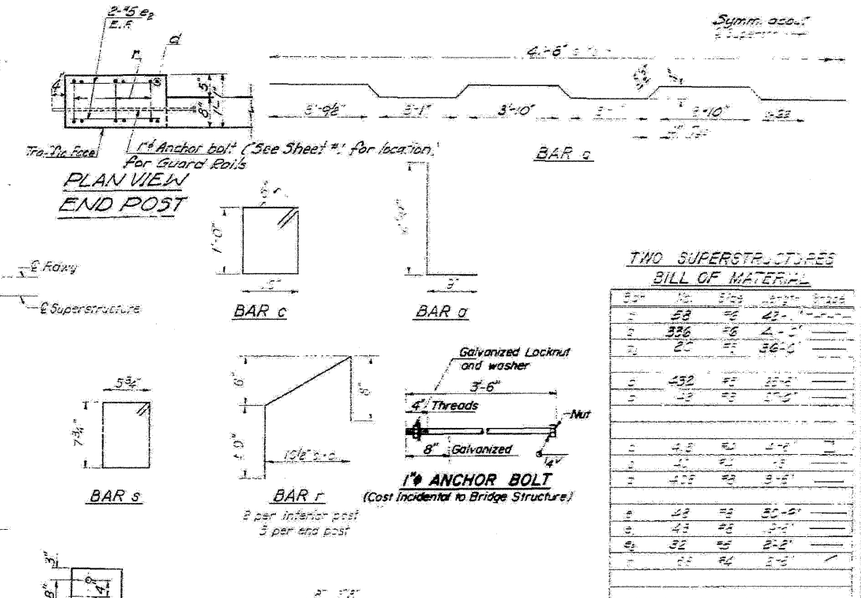
F.A.P. # 3120(XXX) 28
F.A.S. # 38-83



RAIL POST SPACING
(See Stn. 207+10 RC for Details)

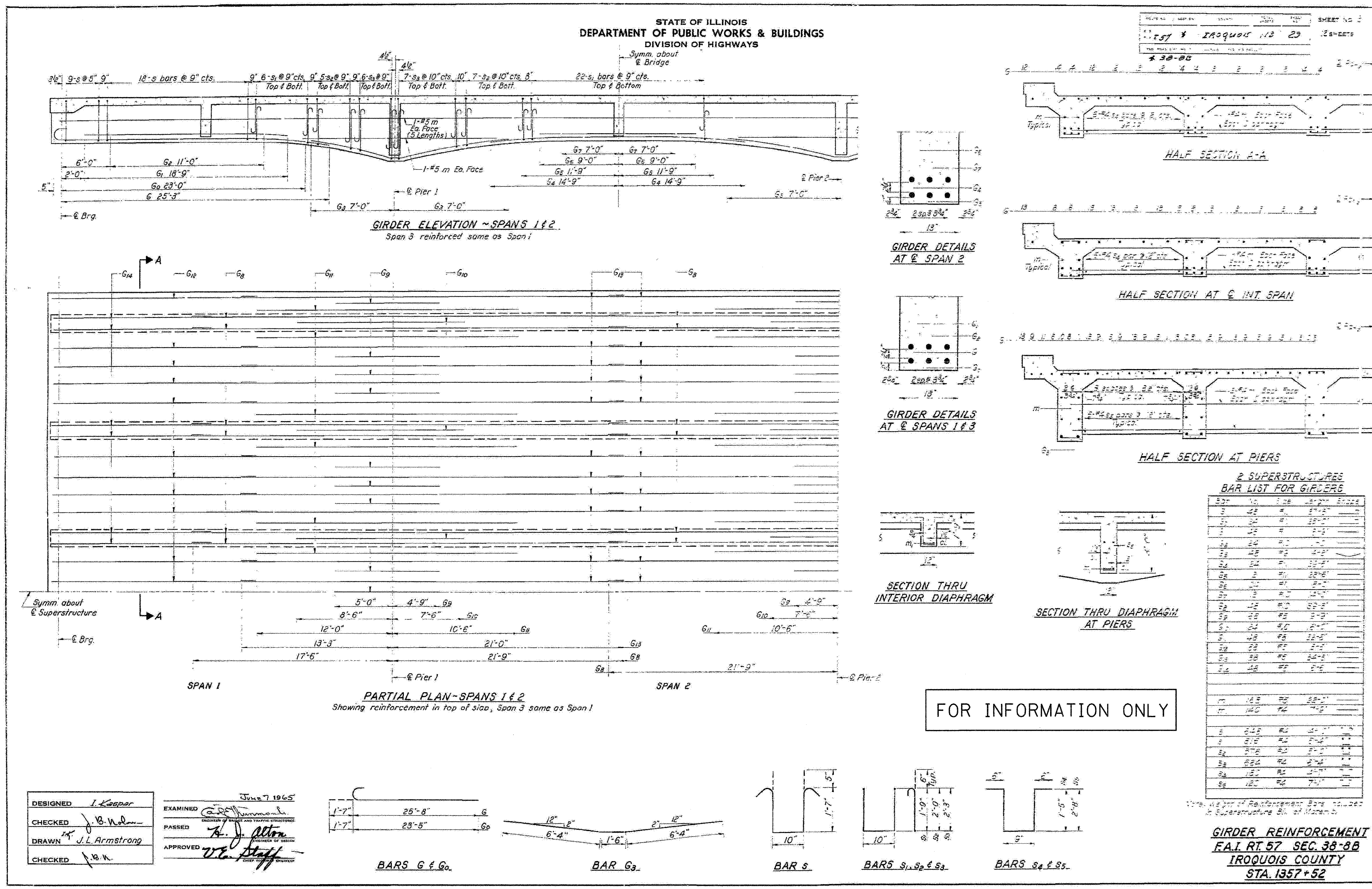


PLAN
South Bound Structure



TWO SUPERSTRUCTURES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	58	#6	42'-6"	
a	336	#6	4'-3"	
a1	20	#6	36'-0"	
a	432	#5	35'-6"	
a2	12	#5	3'-0"	
a	4.6	#3	3'-6"	
a1	4	#3	1'-8"	
a	4.6	#4	3'-6"	
a1	4.6	#4	1'-8"	
a	43	#6	3'-6"	
a1	32	#6	2'-8"	
a	22	#6	2'-6"	
a	43	#6	30'-2"	
a1	43	#6	3'-6"	
a	32	#6	2'-8"	
a	22	#6	2'-6"	
a	4.6	#3	3'-6"	
a1	4	#3	1'-8"	
a	4.6	#4	3'-6"	
a1	4.6	#4	1'-8"	
a	432	#5	35'-6"	
a2	12	#5	3'-0


STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS
GIRDER ELEVATION ~ SPANS 1 & 2
Span 3 reinforced same as Span 1
GIRDER DETAILS AT ℄ SPAN 2
GIRDER DETAILS AT ℄ SPANS 1 & 3
HALF SECTION A-A
HALF SECTION AT ℄ INT. SPAN
HALF SECTION AT PIERS
PARTIAL PLAN - SPANS 1 & 2
Showing reinforcement in top of slab, Span 3 same as Span 1
SPAN 1
SPAN 2
SECTION THRU INTERIOR DIAPHRAGM
SECTION THRU DIAPHRAGM AT PIERS
2 SUPERSTRUCTURES
BAR LIST FOR GIRDERS
BARS G & G0
BAR G3
BAR S
BARS S1, S2 & S3
BARS S4 & S5
GIRDER REINFORCEMENT
F.A.I. RT. 57 SEC. 38-8B
IROQUOIS COUNTY
STA. 1357+52
DESIGNED I. Kaspar
CHECKED J. B. Nolan
DRAWN J. L. Armstrong
EXAMINED
PASSED
APPROVED
June 7 1965

FOR INFORMATION ONLY

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Alfred Benesch & Company
205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 3938.09

FILE NAME =	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
0380222&0223_66948_035_Exist_Plan_3.dgn	PLOT SCALE =	CHECKED - AAY	REVISED -
	PLOT DATE = 08\18\2011	DRAWN - RMG	REVISED -
		CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (3 OF 9)
STRUCTURE NO. 038-0222/0223

SHEET NO. S35 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	50
		CONTRACT NO. 66948		
		ILLINOIS FED. AID PROJECT		

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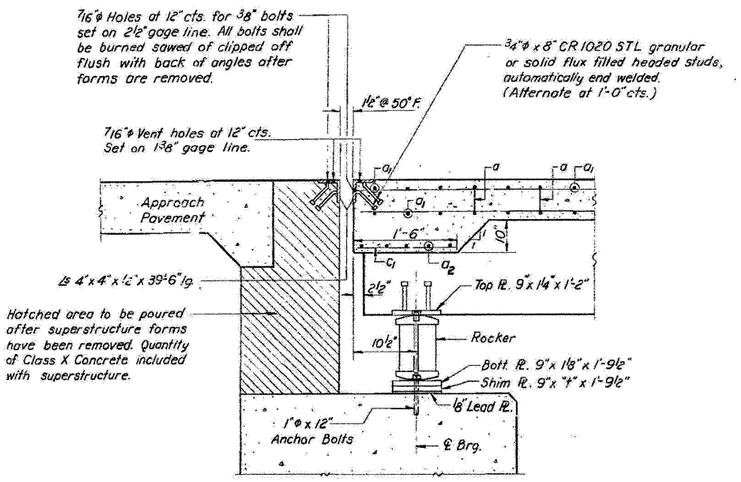
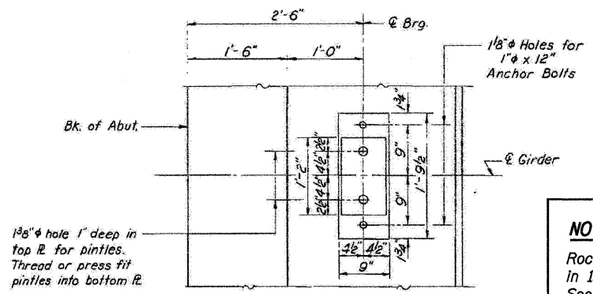
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RT. 57	*	IROQUOIS	113	31
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT		

SHEET NO. 5
18 SHEETS

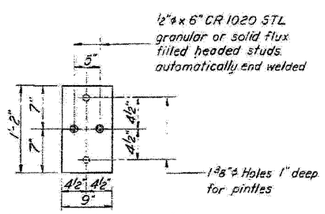


SECTION AT ABUTMENTS
(24 Brgs. Required)

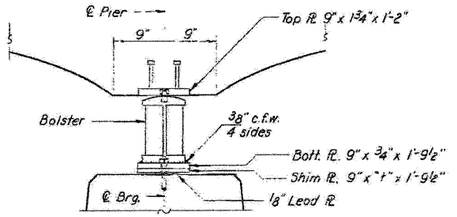


PLAN

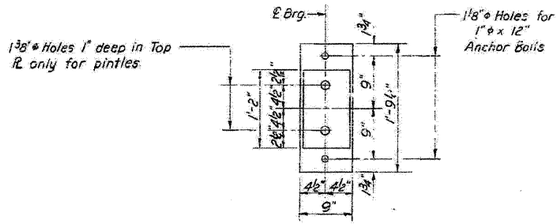
NOTE:
Rocker bearings at abutments were replaced in 1999 with Type I Elastomeric Bearings. See Sheet S37 of S41 for details.



PLAN OF TOP PLATE
AT ABUTS. & PIER 2



PIER 2
(12 Required)



PLAN

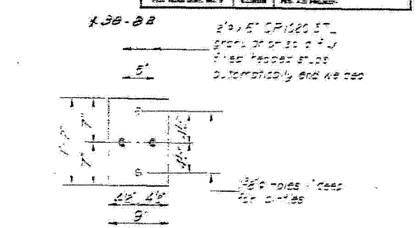
STRESS TABLES

TABLE OF MOMENTS & REACTIONS: INTERIOR BEAMS

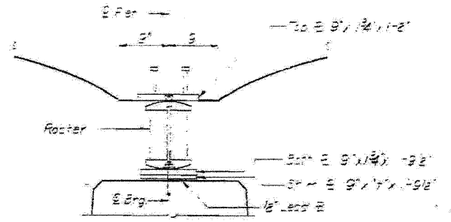
	Moments: Ft.-Kips			Reactions: Kips		Shear: Kips	
	.4 Sp. 1	Pier 1	.5 Sp. 2	Abut.	Pier	Abut.	Pier
Σ D.L.	53.0	-184.6	44.0	11.5	50.0	11.5	25.4
L.L.	147.0	-179.0	143.6	28.6	37.1	28.6	34.6
Imp.	43.8	- 53.0	43.3	8.5	15.9	8.5	10.3
Total	243.8	-416.6	230.9	48.6	103.0	48.6	70.3

PROPERTIES:

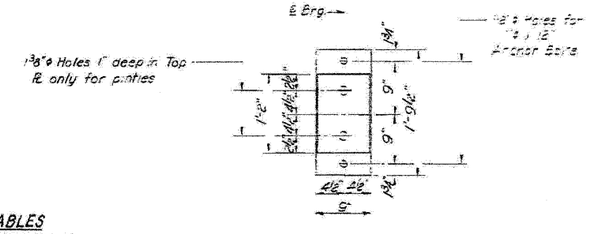
Location	Depth of T Beam	Moment of Inertia "I"
.5 Spans 1 & 2	24"	31,450 in.⁴
Piers	42"	180,180 in.⁴



PLAN OF TOP PLATE



PIER 1
(12 Required)



PLAN

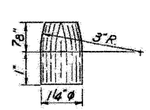
SHIM "f" DIMENSIONS

Location \ Girder	1	2	3	4	5	6
NORTH BOUND LANES						
N. Abut.	—	—	—	1/2"	3/8"	—
Pier 1	—	—	—	1/4"	3/8"	—
Pier 2	—	—	—	1/8"	3/8"	—
S. Abut.	—	—	—	1/4"	3/8"	—
SOUTH BOUND LANES						
N Abut.	—	—	—	1/4"	3/8"	—
Pier 1	—	—	—	1/4"	3/8"	—
Pier 2	—	—	—	1/4"	3/8"	—
S. Abut.	—	—	—	1/4"	3/8"	—

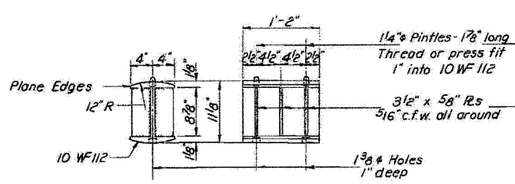
FOR INFORMATION ONLY

DESIGNED	I. Kaspar
CHECKED	J. B. Nolan
DRAWN	J. L. Armstrong
CHECKED	J. B. N.

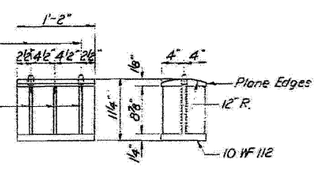
EXAMINED — JUNE 7 1965 — ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF BRIDGES
APPROVED — CHIEF ENGINEER



DETAIL OF PINTLE



DETAIL OF ROCKER
AT ABUTS & PIER 1



DETAIL OF BOLSTER
AT PIER 2

BEARING DETAILS
F.A.I. RT 57 SEC. 38-8B
IROQUOIS COUNTY
STA. 1357+52

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FILE NAME = 0380222&0223_66948_036_Exist_Plan_4.dgn	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
		CHECKED - AAY	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (4 OF 9)
STRUCTURE NO. 038-0222/0223
SHEET NO. S36 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	51
		CONTRACT NO. 66948		
	ILLINOIS	FED. AID PROJECT		

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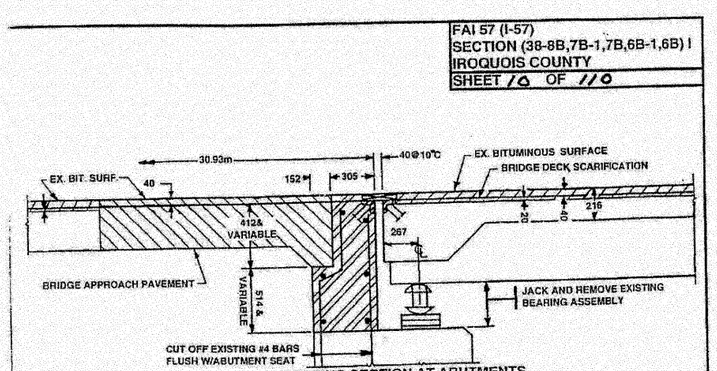
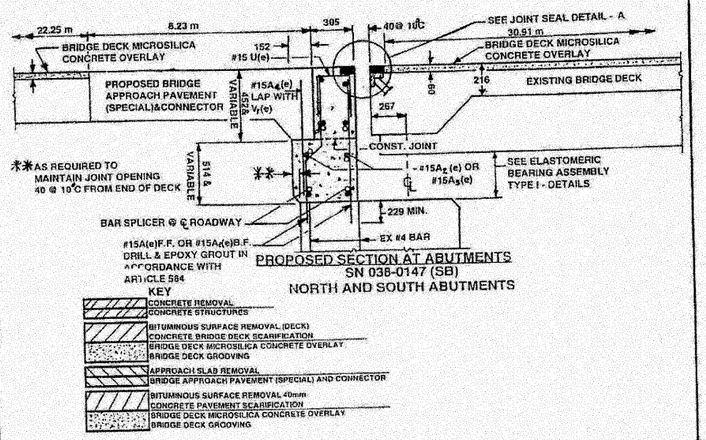
FAI 57 (I-57)
SECTION (38-8B,7B-1,7B,6B-1,6B) I
IROQUOIS COUNTY
SHEET 16 OF 110



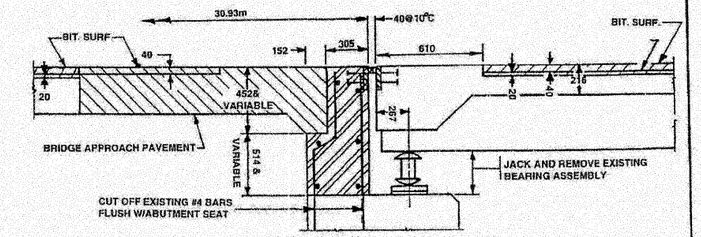
EXISTING SECTION AT ABUTMENTS
SN 038-0147 (SB)
NORTH AND SOUTH ABUTMENTS



PROPOSED SECTION AT ABUTMENTS
SN 038-0147 (SB)
NORTH AND SOUTH ABUTMENTS

KEY
- CONCRETE REMOVAL / CONCRETE STRUCTURES
- BITUMINOUS SURFACE REMOVAL (DECK) / CONCRETE BRIDGE DECK SCARIFICATION / BRIDGE DECK MICROSILICA CONCRETE OVERLAY / BRIDGE DECK GROOVING
- APPROACH SLAB REMOVAL / BRIDGE APPROACH PAVEMENT (SPECIAL) AND CONNECTOR
- BITUMINOUS SURFACE REMOVAL 40mm / CONCRETE PAVEMENT SCARIFICATION / BRIDGE DECK MICROSILICA CONCRETE OVERLAY / BRIDGE DECK GROOVING

FAI 57 (I-57)
SECTION (38-8B,7B-1,7B,6B-1,6B) I
IROQUOIS COUNTY
SHEET 17 OF 110



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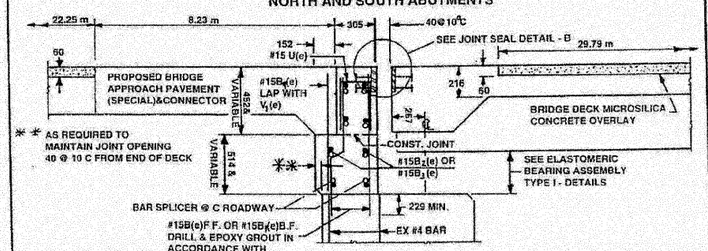
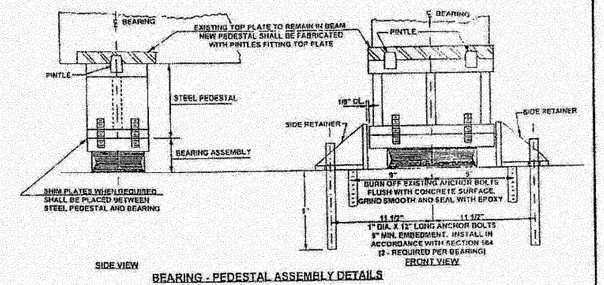
SN 038-0148 (NB)
NORTH AND SOUTH ABUTMENTS



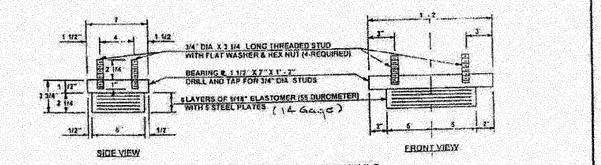
PROPOSED SECTION AT ABUTMENTS
SN 038-0148 (NB)
NORTH AND SOUTH ABUTMENTS

KEY
- CONCRETE REMOVAL / CONCRETE STRUCTURES
- BITUMINOUS SURFACE REMOVAL (DECK) / CONCRETE BRIDGE DECK SCARIFICATION / BRIDGE DECK MICROSILICA CONCRETE OVERLAY / BRIDGE DECK GROOVING
- APPROACH SLAB REMOVAL / BRIDGE APPROACH PAVEMENT (SPECIAL) AND CONNECTOR
- BITUMINOUS SURFACE REMOVAL 40mm / CONCRETE PAVEMENT SCARIFICATION / BRIDGE DECK MICROSILICA CONCRETE OVERLAY / BRIDGE DECK GROOVING

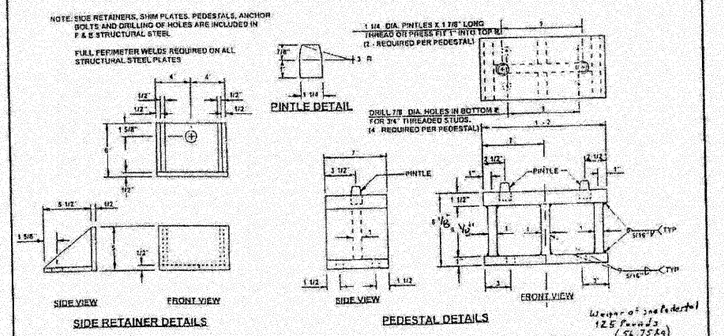
FAI 57 (I-57)
SECTION (38-8B,7B-1,7B,6B-1,6B) I
IROQUOIS COUNTY
SHEET 65 OF 110



BEARING - PEDESTAL ASSEMBLY DETAILS



ELASTOMERIC BEARING TYPE I DETAILS



ELASTOMERIC BEARING TYPE I DETAILS

ELASTOMERIC BEARING ASSEMBLY TYPE I/W PEDESTAL DETAILS

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205 North Michigan Avenue, Suite 2400
Chicago, Illinois 60601
312-565-0450 Job No. 3938.09

FILE NAME = 0380222&0223_66948_037_Exist_Plan_5.dgn	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
		CHECKED - AAY	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (5 OF 9)
STRUCTURE NO. 038-0222\0223
SHEET NO. S37 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	52
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

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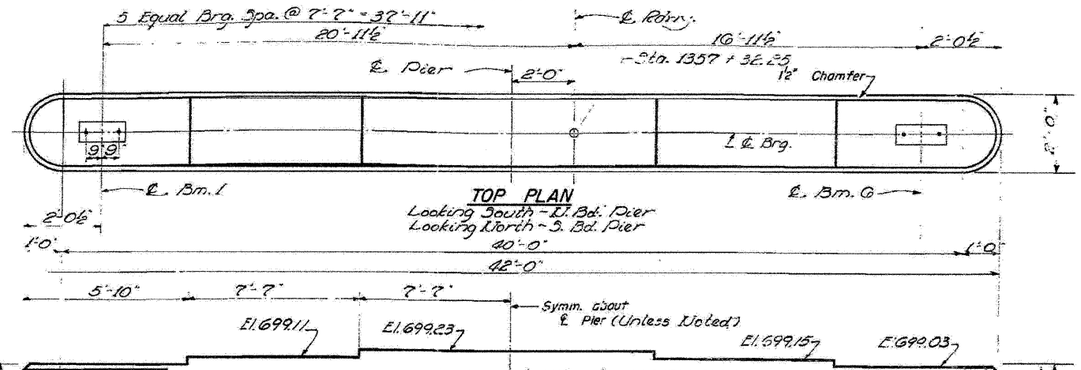
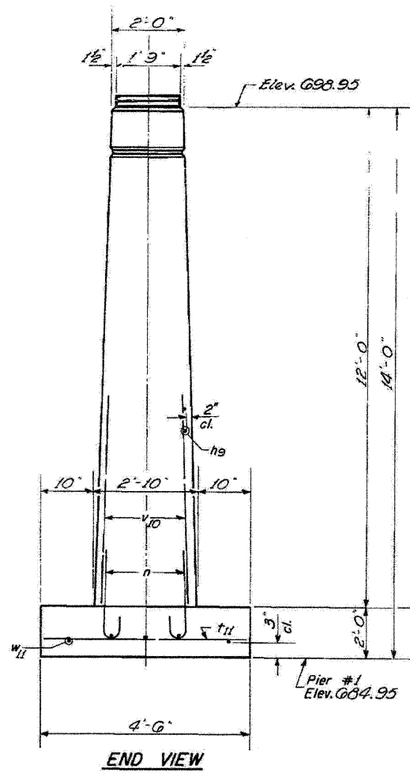
08\18\2011

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	38-8 BR & BR-1	IROQUOIS	73	32

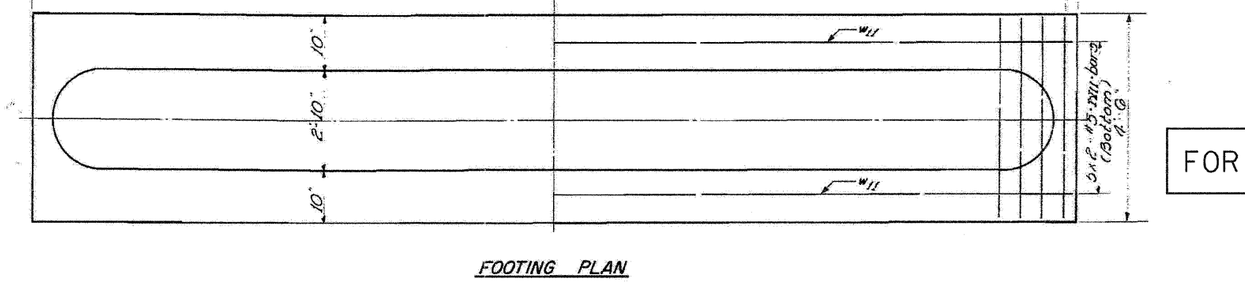
SHEET NO. 6
73 SHEETS
F.A.I. RTE. 57 - SEC. 38-8B



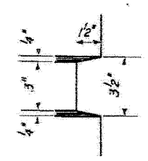


END VIEW

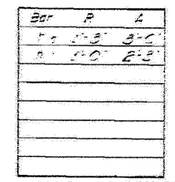
Max. Soil Pressure = 1.75 t/sq. ft.



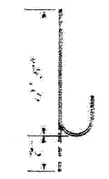
FOOTING PLAN



NOTCH DETAIL



DETAIL OF BARS
h10 & h11



BAR n

2 PIERS
BILL OF MATERIAL

Bar	No	Size	Length	Shape
h10	48	#5	3'-6"	
h11	50	#5	5'-3"	
h9	104	#5	2'-10"	
n	170	#5	2'-2"	
t11	90	#5	4'-3"	
v10	176	#5	11'-3"	
w11	80	#5	22'-9"	
Class A Concrete			Cu. Yds.	120.6
Reinforcement Bars			Lbs.	6830

DESIGNED	I. Kasper
CHECKED	W. B. Jacobs
DRAWN	I.K. W. A. Sausaman
CHECKED	W. B. J.

EXAMINED June 7 1965
PASSED
APPROVED

FOR INFORMATION ONLY

PIER 1
N. BD. & S. BD. LANES
F.A.I. RT. 57 - SEC. 38-8B
IROQUOIS COUNTY
STA. 1357 + 32

P-1 Re-drawn 7-21-59 Rev. 11-25-59

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FILE NAME = 038022&0223_66948_038_Exist_Plan_6.dgn	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
		CHECKED - AAY	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (6 OF 9)
STRUCTURE NO. 038-0222/0223
SHEET NO. S38 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	53
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

x:\3900s\3938\structures\i-57overspringcreek\final\plans\038022&0223_66948_038_Exist_Plan_6.dgn
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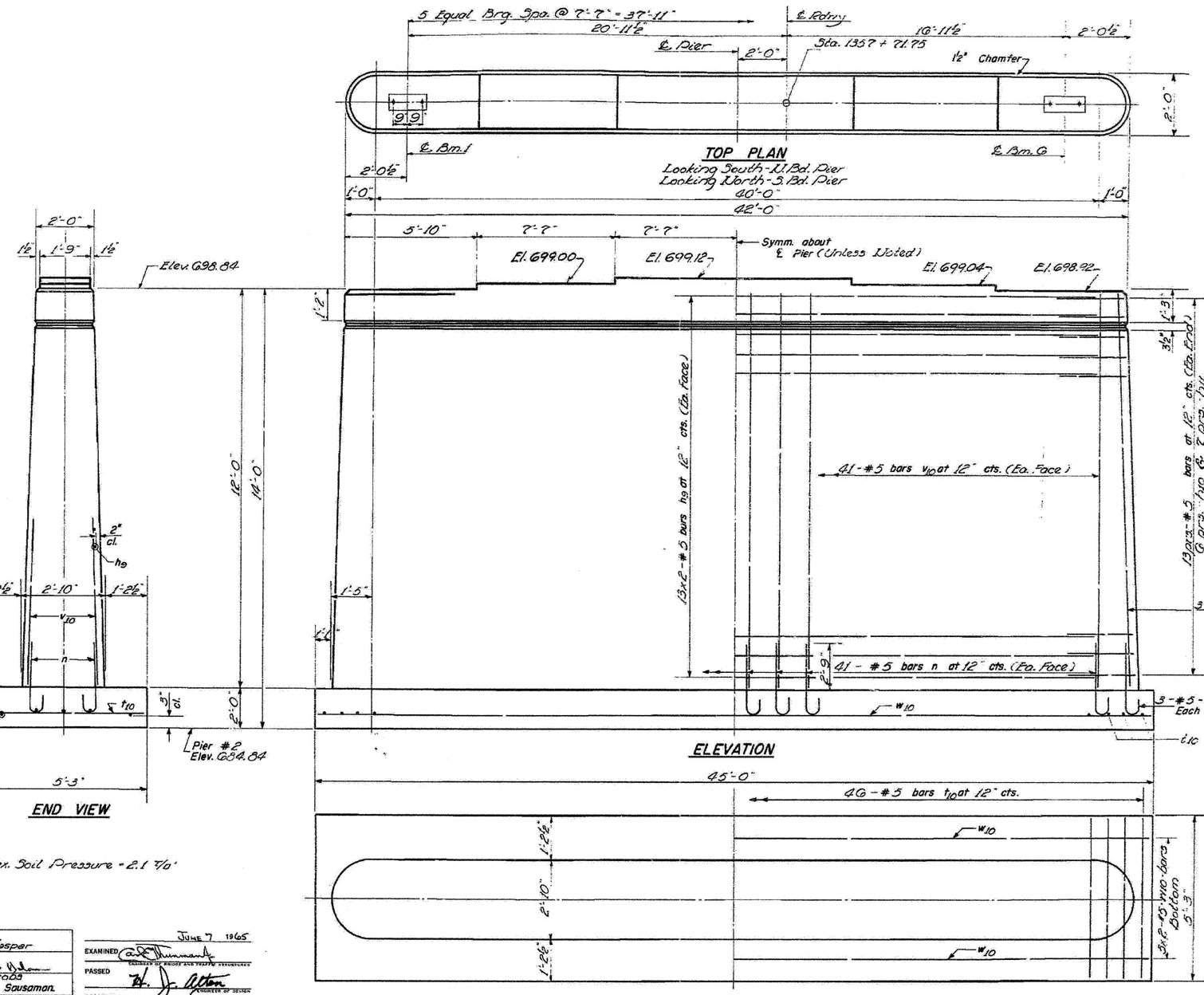
08\18\2011

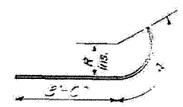
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

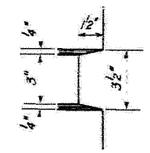
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. RTE. 57	IROQUOIS 113	33	73 SHEETS	
FED. ROAD DIST. NO.	STATE	FED. AID PROJECT		

SHEET NO. 7

* 38-8A







NOTCH DETAIL

Bar	R	L
h10	1'-3"	3'-0"
h11	1'-0"	2'-3"

DETAIL OF BARS
h10 & h11

BAR n

2 PIERS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h10	46	#5	6'-0"	
h11	56	#5	5'-3"	
h9	104	#5	21'-5"	
n	180	#5	5'-2"	
t10	92	#5	5'-0"	
v10	180	#5	1'-9"	
w10	20	#5	23'-3"	
Class A Concrete			Cu. Yds.	180.2
Reinforcement Bars			Lbs.	6320

DESIGNED	I. Kasper
CHECKED	J. B. Hall
DRAWN	I.K. Jacobs W. A. Sausaman
CHECKED	J.B.H.

EXAMINED — JUNE 7 1965 — Chairman of Bridge and Grade Separations
PASSED — H. J. Alton — Engineer of Design
APPROVED — V. E. Stoffel — Chief Engineer

P-1 Re-drawn 7-21-59 Rev. 11-25-59

FOR INFORMATION ONLY

PIER 2
U.Bd. & S.Bd. LANES
F.A.I. RT. 57 - SEC. 38-8B
IROQUOIS COUNTY
STA. 1357 + 52

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FILE NAME =	USER NAME = rgrimm	DESIGNED - JLS	REVISED -
		CHECKED - AAY	REVISED -
0380222&0223_66948_039_Exist_Plan_7.dgn	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (7 OF 9)
STRUCTURE NO. 038-0222/0223
SHEET NO. S39 OF S41 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	54
		CONTRACT NO. 66948		
	ILLINOIS	FED. AID PROJECT		

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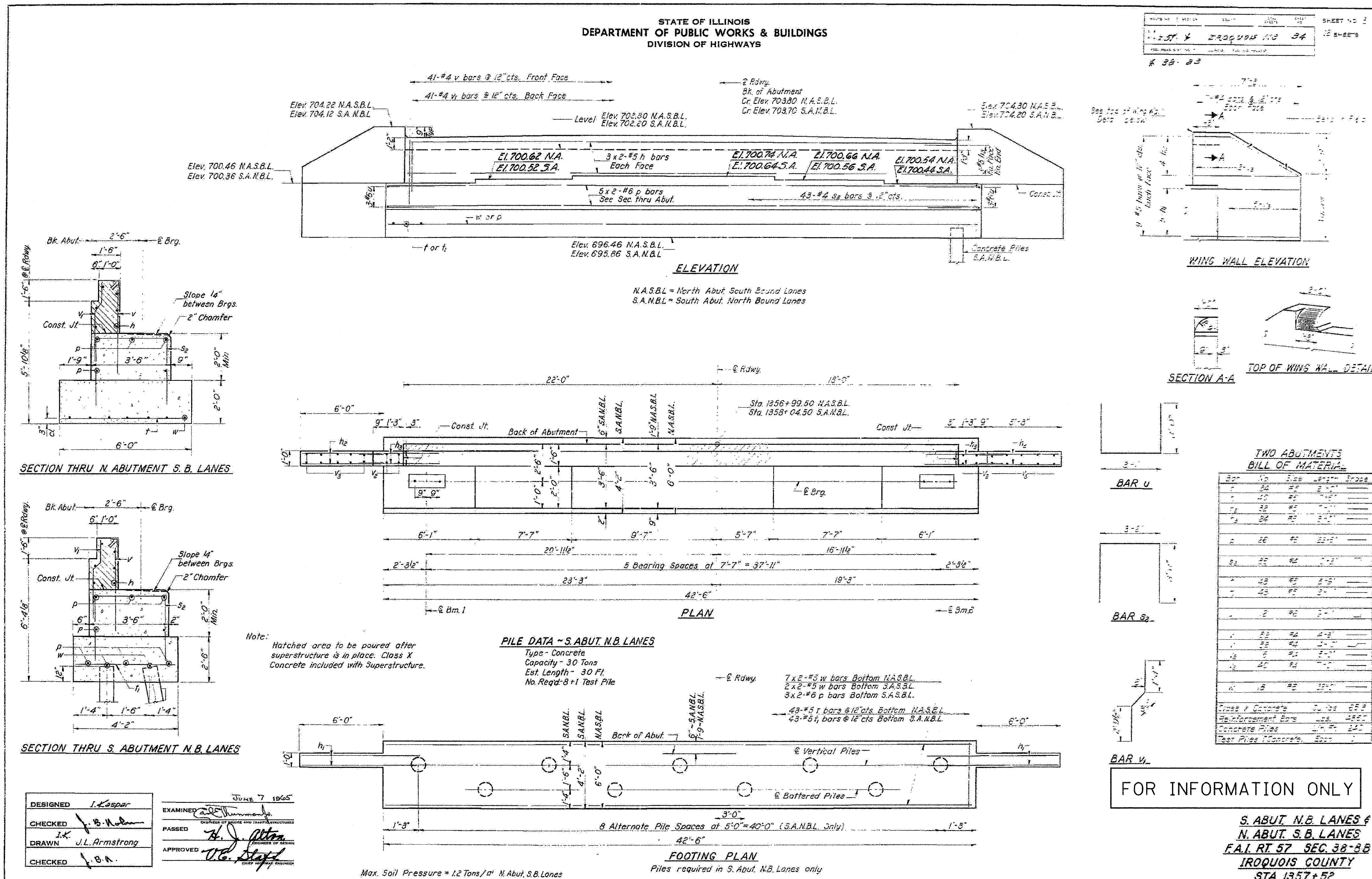
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS
41-#4 v bars @ 12" cts. Front Face
41-#4 v1 bars @ 12" cts. Back Face
Elev. 704.22 N.A.S.B.L.
Elev. 704.12 S.A.N.B.L.
Level
Elev. 702.80 N.A.S.B.L.
Elev. 702.20 S.A.N.B.L.
℄ Rdwy.
Bk. of Abutment
Cr. Elev. 703.80 N.A.S.B.L.
Cr. Elev. 703.70 S.A.N.B.L.
Elev. 700.46 N.A.S.B.L.
Elev. 700.36 S.A.N.B.L.
El. 700.62 N.A.
El. 700.52 S.A.
3x2-#5 h bars Each Face
El. 700.74 N.A.
El. 700.64 S.A.
El. 700.66 N.A.
El. 700.56 S.A.
El. 700.54 N.A.
El. 700.44 S.A.
5x2-#6 p bars See Sec. thru Abut.
43-#4 s2 bars @ 12" cts.
w or p
t or t1
Elev. 696.46 N.A.S.B.L.
Elev. 695.86 S.A.N.B.L.
Concrete Piles S.A.N.B.L.
ELEVATION
N.A.S.B.L. = North Abut. South Bound Lanes
S.A.N.B.L. = South Abut. North Bound Lanes
WING WALL ELEVATION
SECTION A-A
TOP OF WING WALL DETAIL
Bk. Abut.
2'-6"
℄ Brg.
1'-6"
6" 1'-0"
Slope 1/4" between Brgs.
2" Chamfer
Const. Jt.
5'-10 1/8"
1'-9"
3'-6"
9"
2'-0" Min.
6'-0"
SECTION THRU N. ABUTMENT S.B. LANES
6'-4 1/8"
2'-6"
1'-4"
1'-6"
4'-2"
SECTION THRU S. ABUTMENT N.B. LANES
22'-0"
13'-0"
Sta. 1356+99.50 N.A.S.B.L.
Sta. 1358+04.50 S.A.N.B.L.
Back of Abutment
Const. Jt.
6'-1"
7'-7"
9'-7"
5'-7"
20'-11 1/2"
16'-11 1/2"
5 Bearing Spaces at 7'-7" = 37'-11"
2'-3 1/2"
23'-3"
19'-3"
42'-6"
℄ Bm. 1
℄ Bm. 6
PLAN
Note:
Hatched area to be poured after superstructure is in place. Class X Concrete included with Superstructure.
PILE DATA ~ S. ABUT. N.B. LANES
Type - Concrete
Capacity - 30 Tons
Est. Length - 30 Ft.
No. Req'd - 8 + 1 Test Pile
7x2-#8 w bars Bottom N.A.S.B.L.
2x2-#5 w bars Bottom S.A.S.B.L.
3x2-#6 p bars Bottom S.A.S.B.L.
43-#5 t bars @ 12" cts. Bottom N.A.S.B.L.
43-#5 t1 bars @ 12" cts. Bottom S.A.N.B.L.
Back of Abut.
℄ Vertical Piles
℄ Battered Piles
8 Alternate Pile Spaces at 5'-0" = 40'-0" (S.A.N.B.L. Only)
FOOTING PLAN
Piles required in S. Abut. N.B. Lanes only
Max. Soil Pressure = 1.2 Tons/□' N. Abut. S.B. Lanes
BAR v
BAR s2
BAR v1
TWO ABUTMENTS BILL OF MATERIAL
FOR INFORMATION ONLY
S. ABUT. N.B. LANES &
N. ABUT. S.B. LANES
F.A.I. RT. 57 SEC. 38-8B
IROQUOIS COUNTY
STA. 1357+52
DESIGNED I. Kaspar
CHECKED
DRAWN J.L. Armstrong
CHECKED
June 7 1965
EXAMINED
PASSED
APPROVED

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312-565-0450 Job No. 3938.09

FILE NAME = 0380222&0223_66948.040_Exist_Plan_8.dgn	USER NAME = rgrimm	DESIGNED - JLS	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING PLAN INFORMATION (8 OF 9) STRUCTURE NO. 038-0222/0223	F.A.I. RTE. 57 / SECTION (38-8) BR & BR-1 / COUNTY IROQUOIS / TOTAL SHEETS 73 / SHEET NO. 55
	PLOT SCALE =	CHECKED - AAY	REVISED -			CONTRACT NO. 66948
	PLOT DATE = 08\18\2011	DRAWN - RMG	REVISED -		SHEET NO. S40 OF S41 SHEETS	ILLINOIS FED. AID PROJECT
		CHECKED - KJN	REVISED -			

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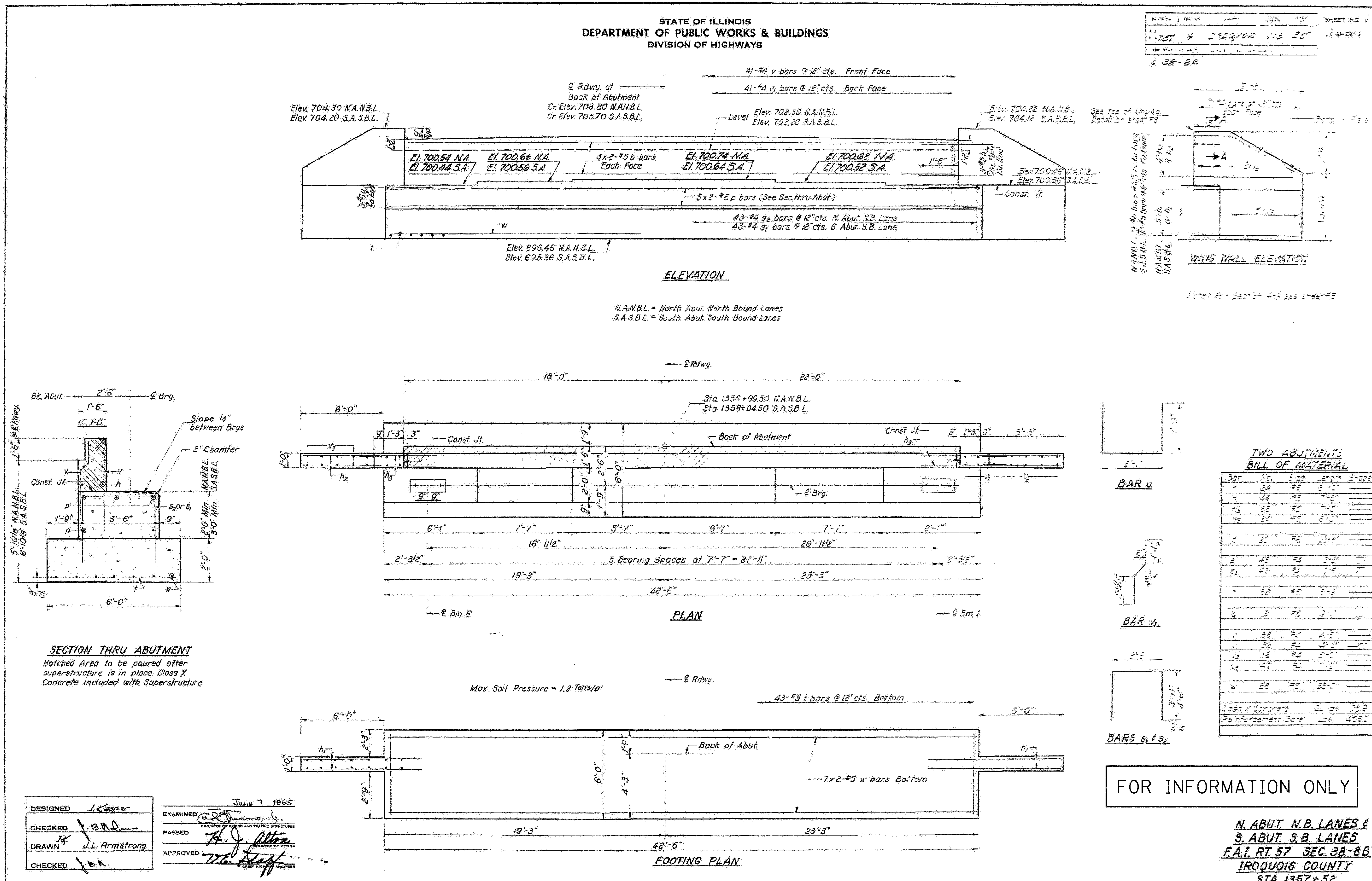
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS
41-#4 v bars @ 12" cts. Front Face
41-#4 v1 bars @ 12" cts. Back Face
℄ Rdwy. at Back of Abutment
Cr. Elev. 703.80 N.A.N.B.L.
Cr. Elev. 703.70 S.A.S.B.L.
Elev. 704.30 N.A.N.B.L.
Elev. 704.20 S.A.S.B.L.
Level
Elev. 702.30 N.A.N.B.L.
Elev. 702.20 S.A.S.B.L.
El. 700.54 N.A.
El. 700.44 S.A.
El. 700.66 N.A.
El. 700.56 S.A.
3x2-#5 h bars Each Face
El. 700.74 N.A.
El. 700.64 S.A.
El. 700.62 N.A.
El. 700.52 S.A.
5x2-#6 p bars (See Sec. thru Abut.)
43-#4 s2 bars @ 12" cts. N. Abut. N.B. Lane
43-#4 s1 bars @ 12" cts. S. Abut. S.B. Lane
Const. Jt.
Elev. 696.46 N.A.N.B.L.
Elev. 695.36 S.A.S.B.L.
ELEVATION
N.A.N.B.L. = North Abut. North Bound Lanes
S.A.S.B.L. = South Abut. South Bound Lanes
WING WALL ELEVATION
SECTION THRU ABUTMENT
Hatched Area to be poured after superstructure is in place. Class X Concrete included with Superstructure
Slope 1/4" between Brgs.
2" Chamfer
℄ Brg.
Bk. Abut.
Sta. 1356+99.50 N.A.N.B.L.
Sta. 1358+04.50 S.A.S.B.L.
Back of Abutment
5 Bearing Spaces at 7'-7" = 37'-11"
42'-6"
PLAN
Max. Soil Pressure = 1.2 Tons/□'
43-#5 t bars @ 12" cts. Bottom
Back of Abut.
7x2-#5 w bars Bottom
FOOTING PLAN
BAR u
BAR v1
BARS s1 & s2
TWO ABUTMENTS BILL OF MATERIAL
DESIGNED J. Kaspar
CHECKED J.B.H.
DRAWN J.L. Armstrong
CHECKED J.B.H.
June 7 1965
EXAMINED
PASSED
APPROVED
FOR INFORMATION ONLY
N. ABUT. N.B. LANES &
S. ABUT. S.B. LANES
F.A.I. RT. 57 SEC. 38-8B
IROQUOIS COUNTY
STA. 1357+52

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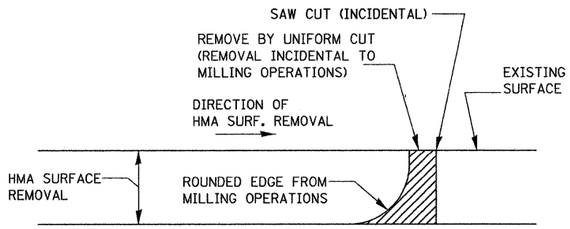
		CHECKED - AAY	REVISED -
	PLOT SCALE =	DRAWN - RMG	REVISED -
	PLOT DATE = 08\18\2011	CHECKED - KJN	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLAN INFORMATION (9 OF 9)
STRUCTURE NO. 038-0222/0223
SHEET NO. S41 OF S41 SHEETS

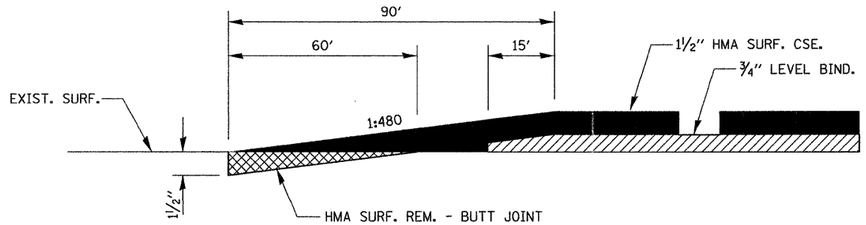
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	56
		CONTRACT NO. 66948		

ILLINOIS FED. AID PROJECT

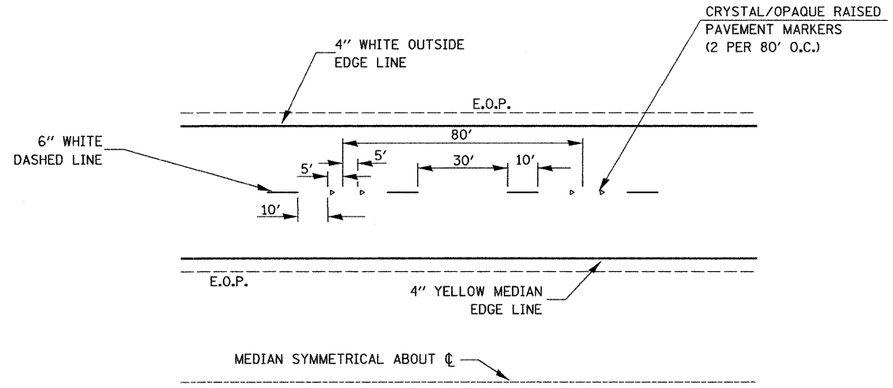


WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL

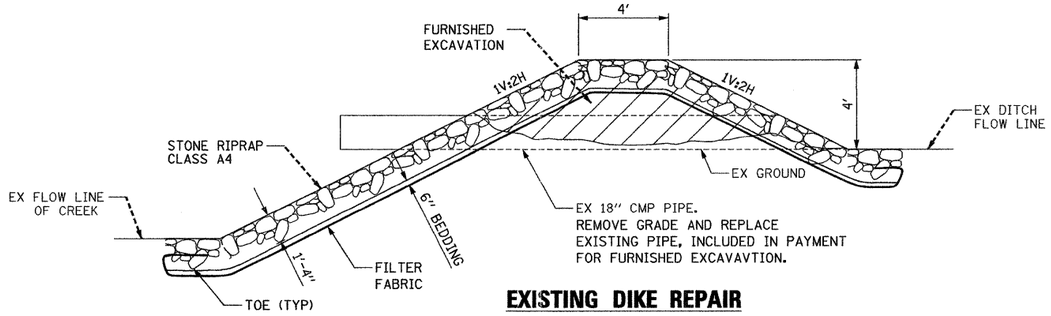
HMA DETAIL AT BUTT JOINTS



BUTT JOINT DETAIL



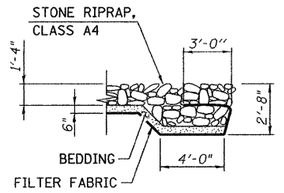
TYPICAL PAVEMENT MARKINGS



EXISTING DIKE REPAIR

APPROX WIDTH IS 10'.

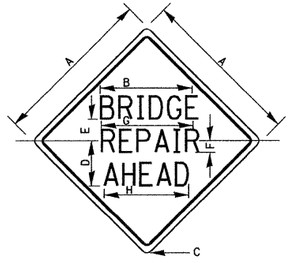
APPROX LOCATIONS:
FAI-57 STA 1357+12, 98' RT
FAI-57 STA 1357+12, 120' LT
FAI-57 STA 1357+92, 105' RT
FAI-57 STA 1357+92, 132' LT



TOE DETAIL

(ALONG SIDES AND ENDS)

ILLINOIS STANDARD
W21-1102



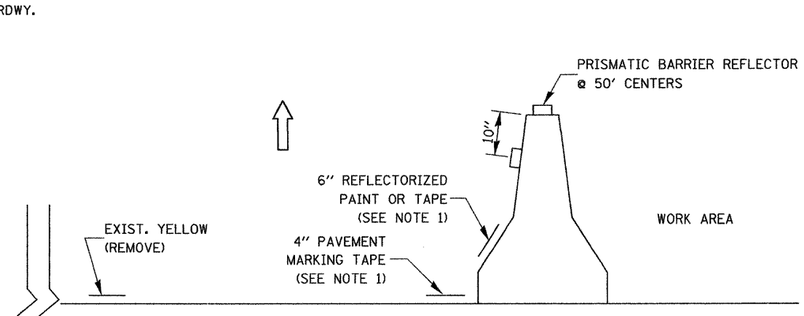
COLOR: LEGEND AND BORDER BLACK NON-REFLECTORIZED
BACKGROUND ORANGE REFLECTORIZED

SIGN SIZE	DIMENSIONS							
	A	B	C	D	E	F	G	H
36 x 36	36.0	22.3	2.25	10.8	5.6	3.0	21.9	20.7
48 x 48	48.0	26.0	3.0	14.5	7.5	3.5	25.5	24.1

SIGN SIZE	SERIES			MARGIN	BORDER	BLANK STD.
	LINES					
	1	2	3			
36 x 36	5C	5C	5C	0.6	0.8	B4-36D
48 x 48	7C	7C	7C	0.8	1.2	B4-48D

ALL DIMENSIONS IN INCHES.

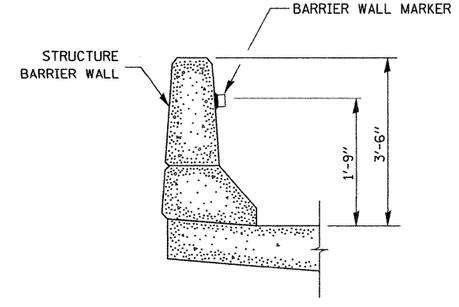
SIGN DETAIL AT BRIDGE



NOTES:

1. THE CONTRACTOR HAS THE OPTION OF USING EITHER THE LINE ON THE TEMPORARY CONCRETE BARRIER OR ON THE PAVEMENT.
2. THE COLOR OF THE REFLECTORS AND PAVEMENT/BARRIER MARKING LINE WILL VARY WITH STAGING AND SHALL MATCH THE EXISTING LINE IN THE WORK AREA.
3. THE COST OF THE REFLECTORS AND THE PAVEMENT/BARRIER MARKING LINE IS INCLUDED IN THE COST OF THE TEMPORARY CONCRETE BARRIER.

TEMPORARY BARRIER REFLECTOR DETAIL



BARRIER WALL MARKER

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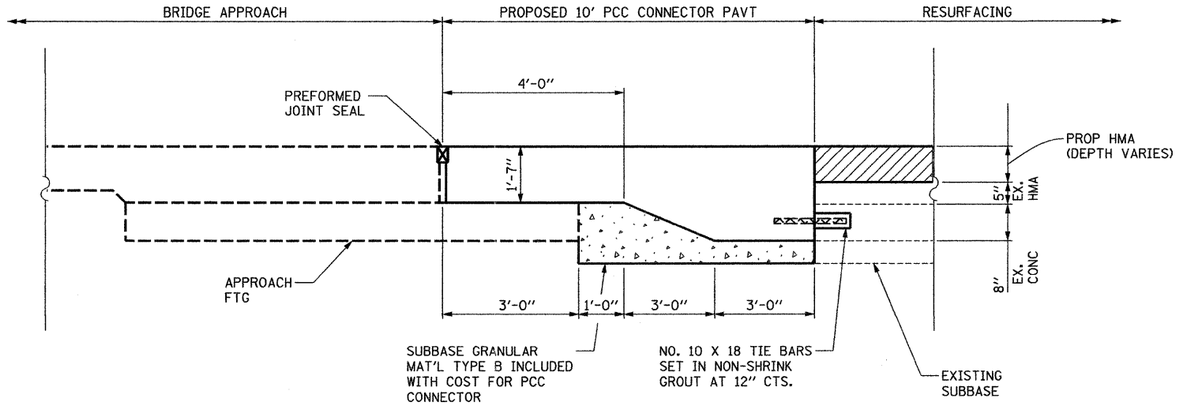
		DRAWN - PRT	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - JMS	REVISED -
	PLOT DATE = 8/19/2011	DATE - 08/19/11>>	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

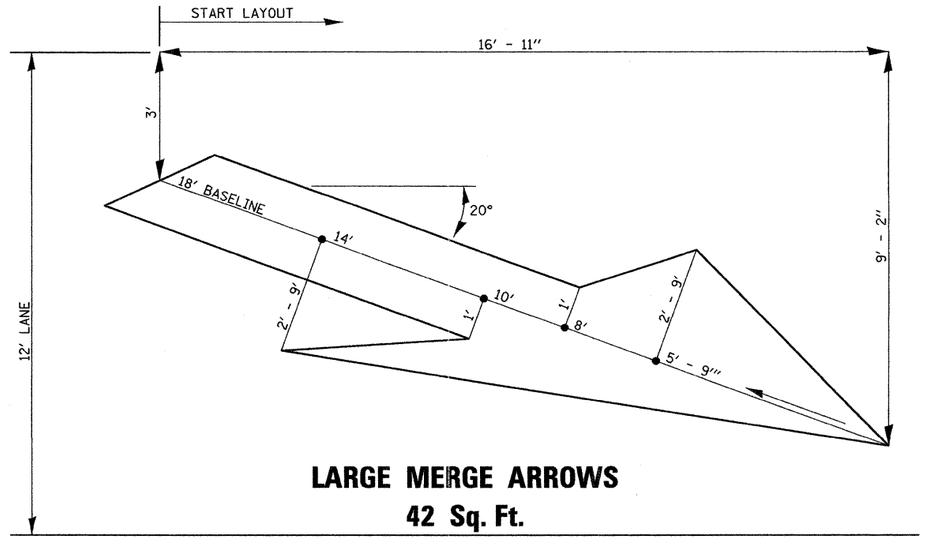
ROADWAY DETAILS

SCALE: NONE | SHEET NO. 1 OF 2 SHEETS | STA. 1352+20 TO STA. 1362+80

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	57
		CONTRACT NO. 66948		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)



LARGE MERGE ARROWS
42 Sq. Ft.

NOTES:

1. SEE HWY. STD. 420401 FOR DETAILS NOT SHOWN.
2. A LONGITUDINAL CONSTRUCION JOINT (TIE BAR GROUTED IN PLACE) AS SHOWN ON HWY. STD. 420001 SHALL BE CONSTRUCTED ALONG THE STAGE CONSTRUCTION LINE FOR THE FULL 10' LENGTH OF THE PCC CONNECTOR PAVEMENT. COST IS INCLUDED WITH "BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)".
3. SEE HWY. STD. 421001 FOR REINFORCEMENT DETAILS NOT SHOWN. REINFORCEMENT SHALL BE PAID FOR AS "PAVEMENT REINFORCEMENT".
4. THE TOP SURFACE OF THE BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) SHALL RECEIVE A PROTECTIVE COAT APPLICATION ACCORDING TO THE ARTICLE 420.18 OF THE STANDARD SPECIFICATIONS. COST IS INCLUDED WITH "PROTECTIVE COAT" (42001300).

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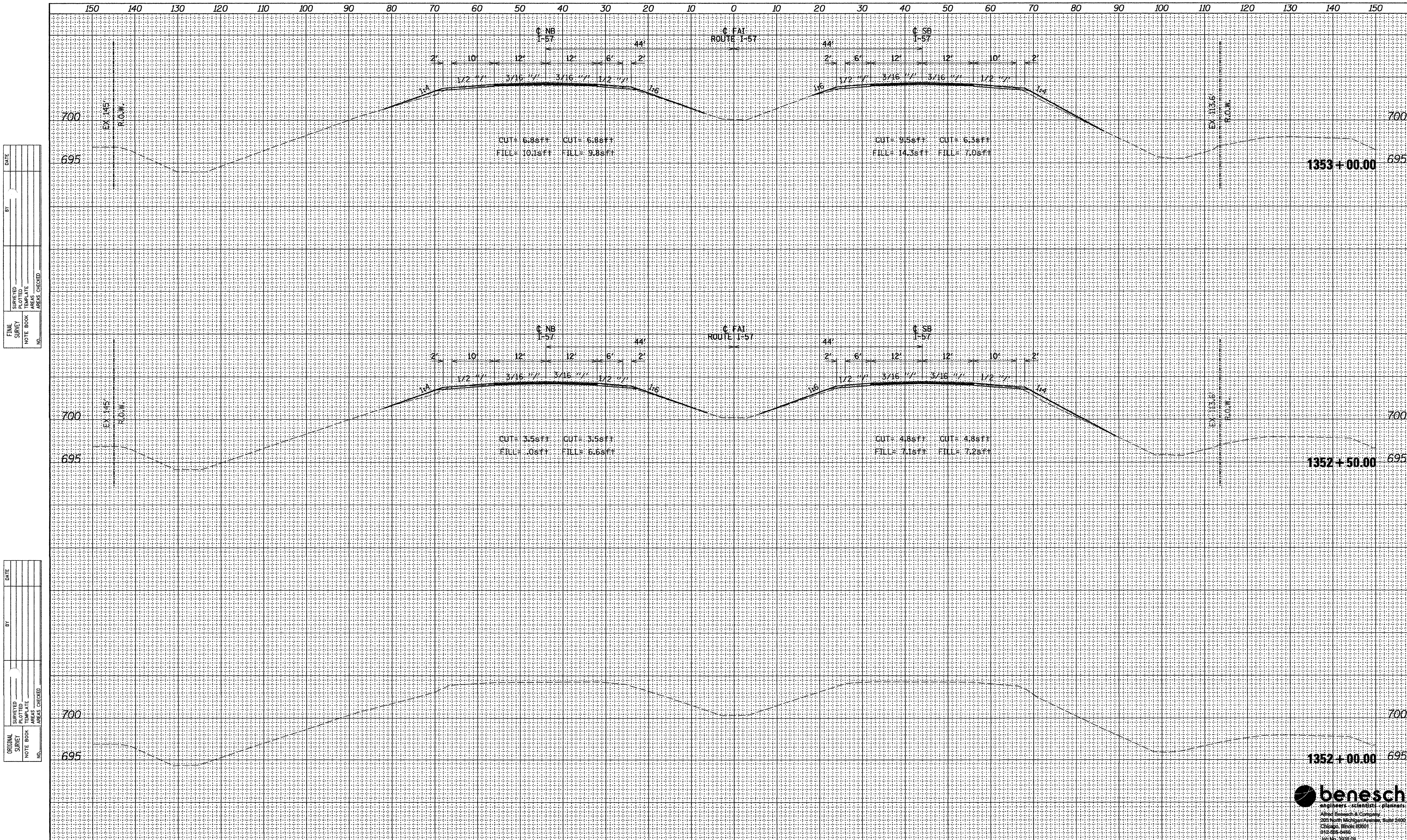
		DRAWN - PRT	REVISED -
	PLOT SCALE = #SCALE#	CHECKED - JMS	REVISED -
	PLOT DATE = 8/19/2011	DATE - 08/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROADWAY DETAILS

SCALE: NONE | SHEET NO. 2 OF 2 SHEETS | STA. 1352+20 TO STA. 1362+80

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	58
		CONTRACT NO. 66948		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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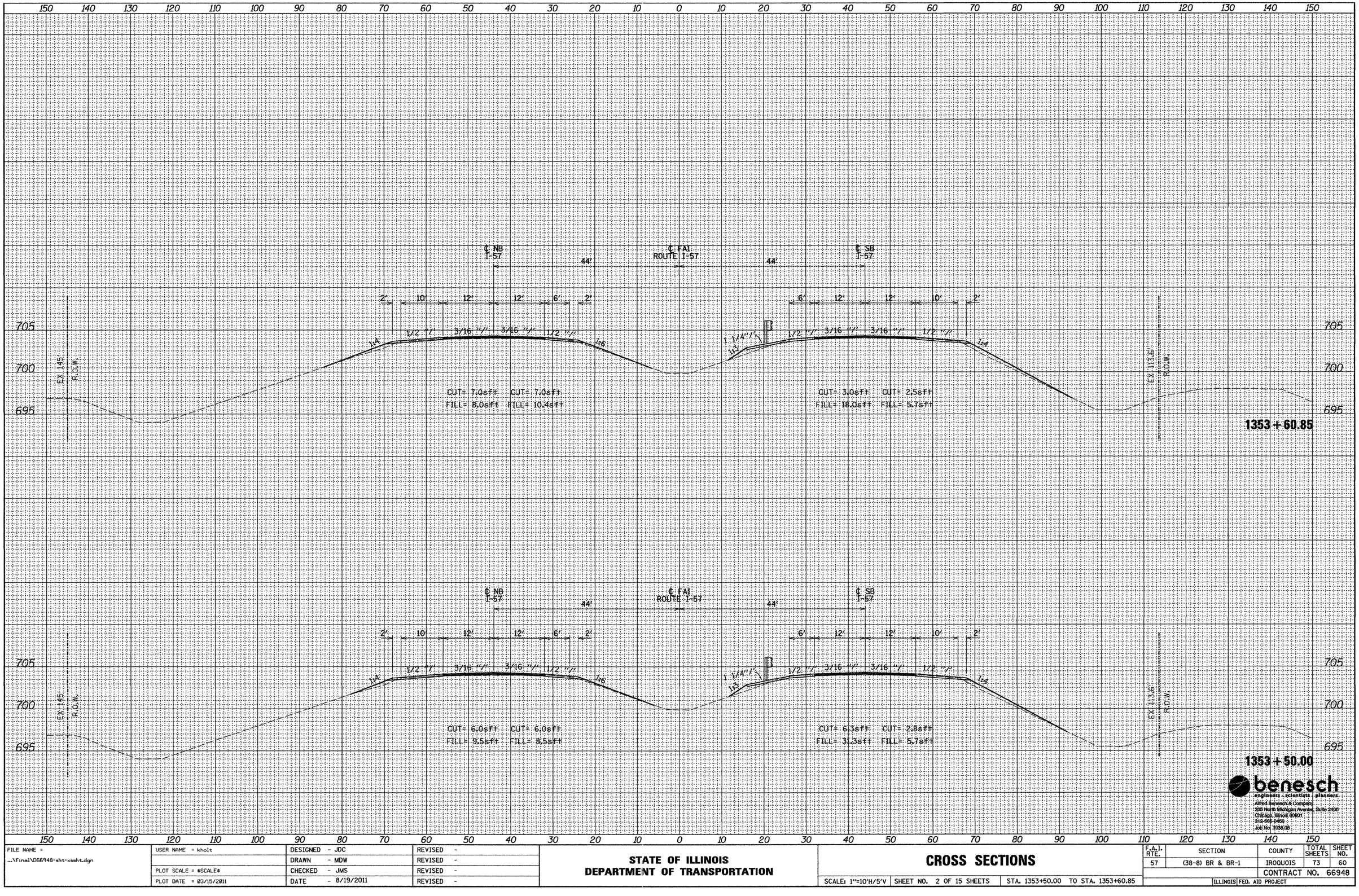
FILE NAME = ...\final\D66948-sht-xssht.dgn	USER NAME = kholt	DESIGNED - JDC	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS	
		DRAWN - MDW	REVISED -			
	PLOT SCALE = $SCALE$	CHECKED - JMS	REVISED -			
	PLOT DATE = 03/15/2011	DATE - 8/19/2011	REVISED -		SCALE: 1"=10'H/5'V	SHEET NO. 1 OF 15 SHEETS	STA. 1352+00.00 TO STA. 1353+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	59
		CONTRACT NO. 66948		
		ILLINOIS FED. AID PROJECT		

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

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



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	PLOT DATE = 03/15/2011	DATE - 8/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: 1"=10'H/5'V | SHEET NO. 2 OF 15 SHEETS | STA. 1353+50.00 TO STA. 1353+60.85

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	60
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
SURVEYED				
PLOTTED				
TOPO & UTE				
AREAS				
AREAS CHECKED				

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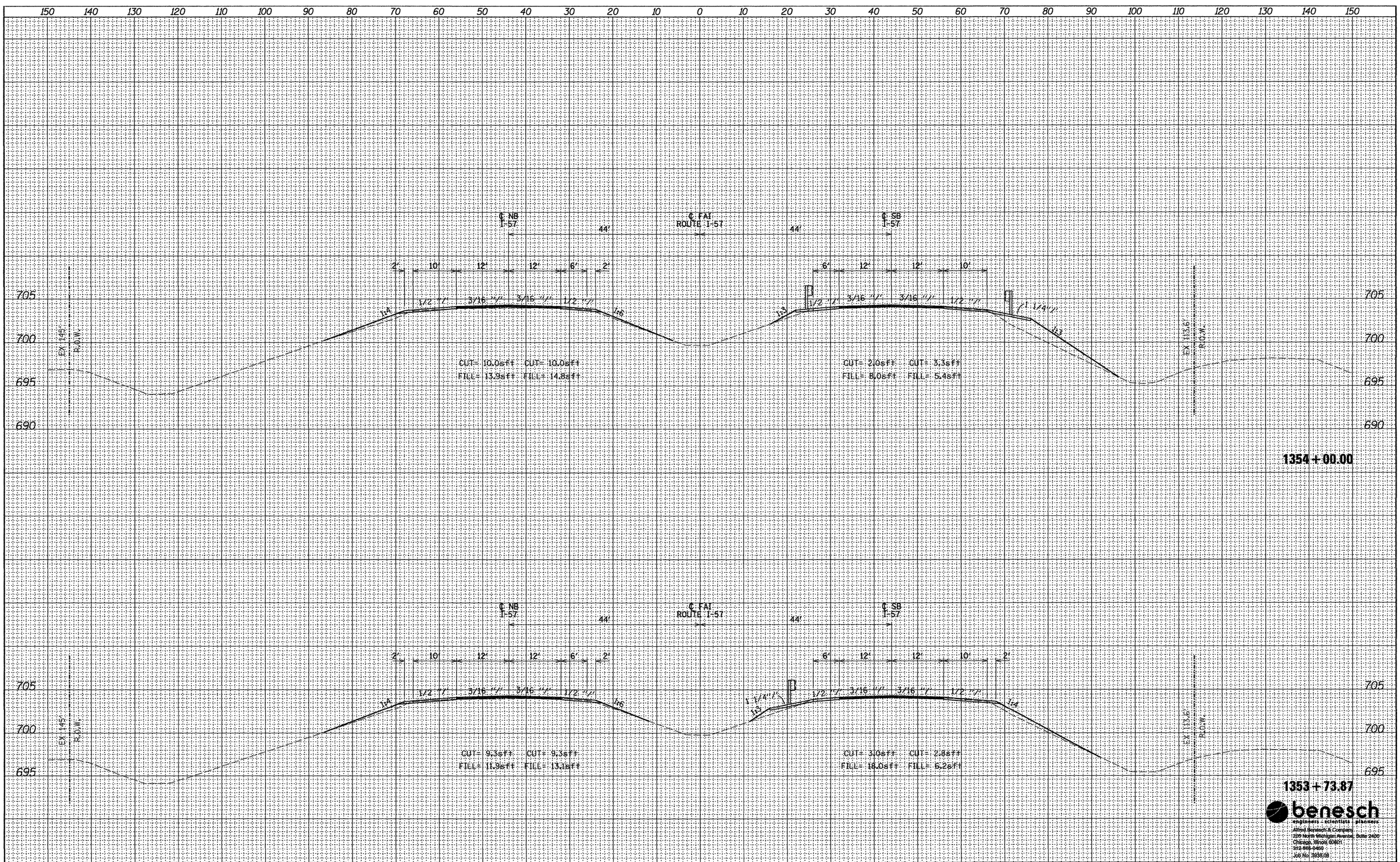
AREAS CHECKED				



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: 1"=10'H/5'V | SHEET NO. 3 OF 15 SHEETS | STA. 1353+73.87 TO STA. 1354+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	61

CONTRACT NO. 66948

ILLINOIS FED. AID PROJECT

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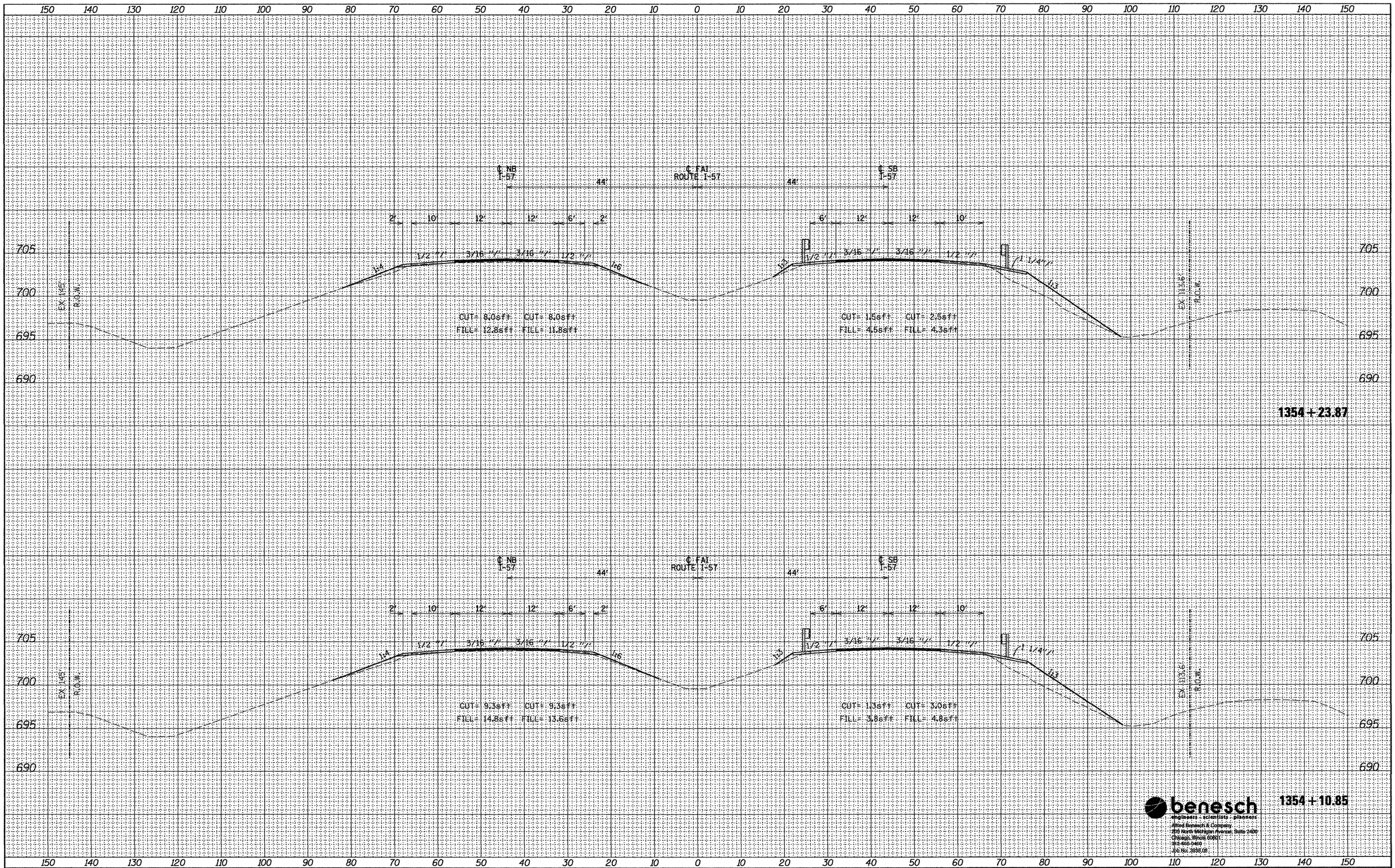
SURVEYED		
PLOTTED		
FIELD NOTE BOOK		
AREAS NO.		
AREAS CHECKED		



ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
FIELD NOTE BOOK		
AREAS NO.		
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: 1"=10'H/5'V | SHEET NO. 4 OF 15 SHEETS | STA. 1354+10.85 TO STA. 1354+23.87

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	62
		CONTRACT NO. 66948		
		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TOPO DATE		
NOTE BOOK	AREAS	
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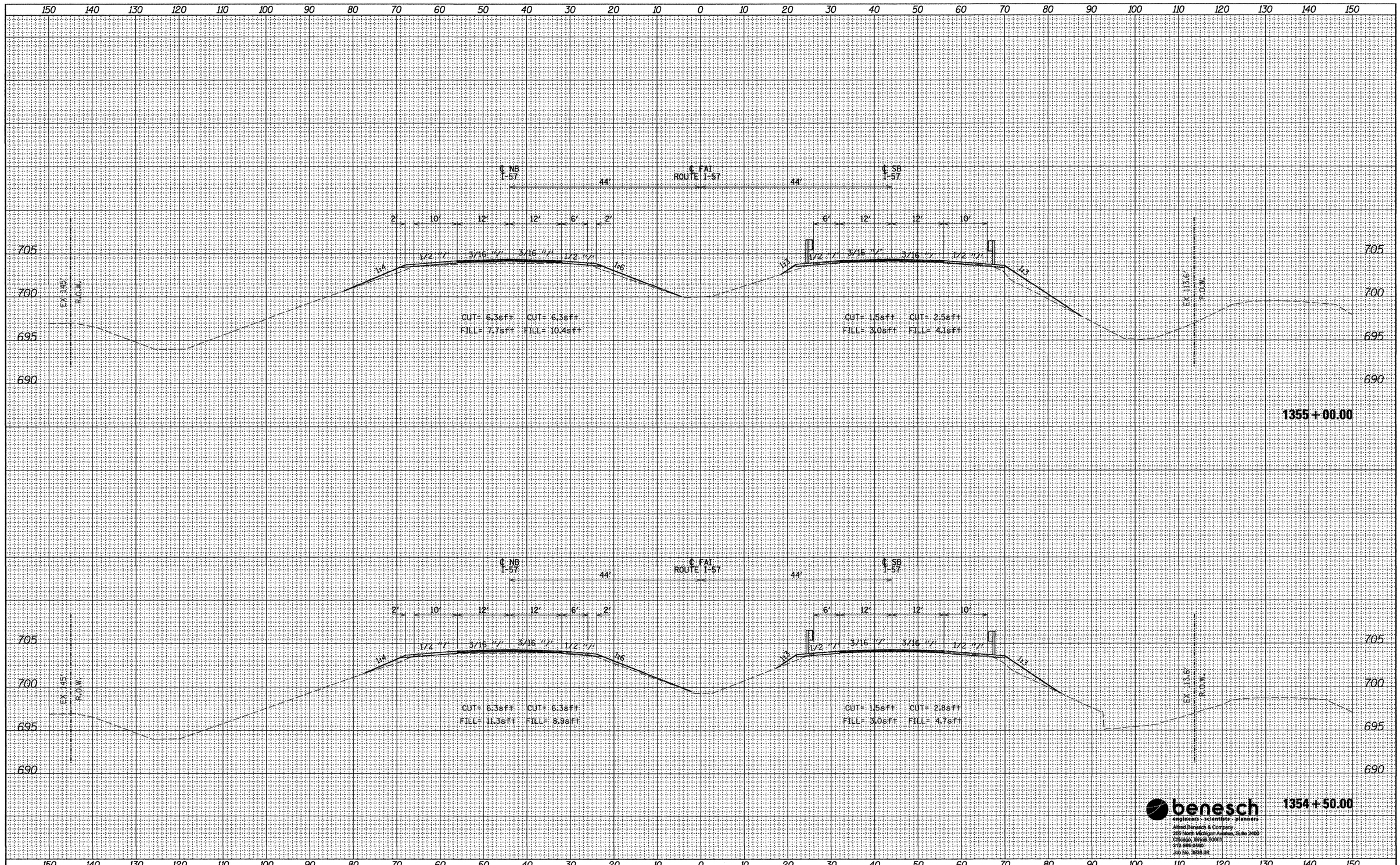

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
TOPO DATE		
NOTE BOOK	AREAS	
NO.	AREAS CHECKED	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: 1"=10'H/5'V | SHEET NO. 5 OF 15 SHEETS | STA. 1354+50.00 TO STA. 1355+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	63
		CONTRACT NO. 66948		
		ILLINOIS FED. AID PROJECT		

FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TOPSOIL AREAS	
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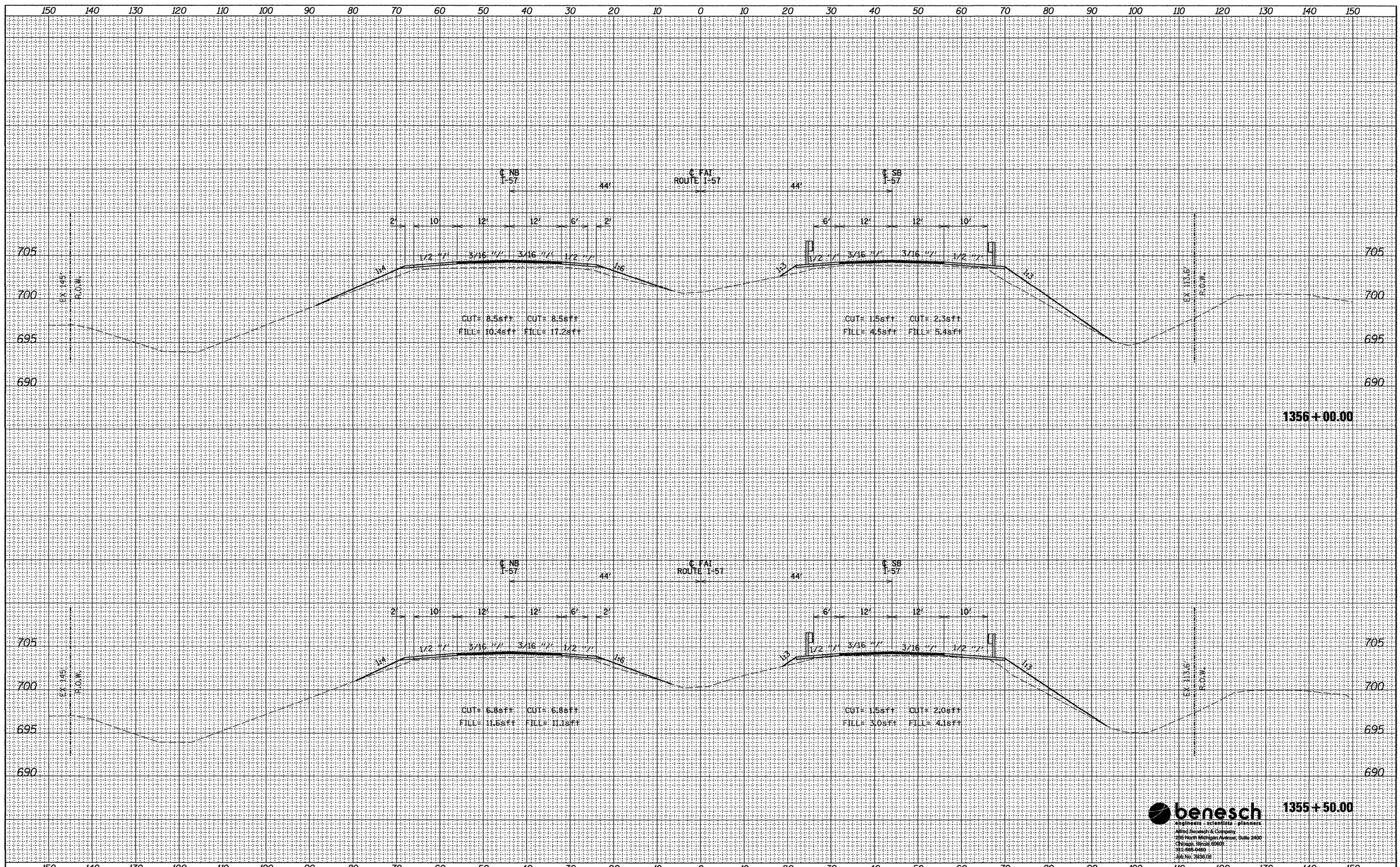

ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
	TOPSOIL AREAS	
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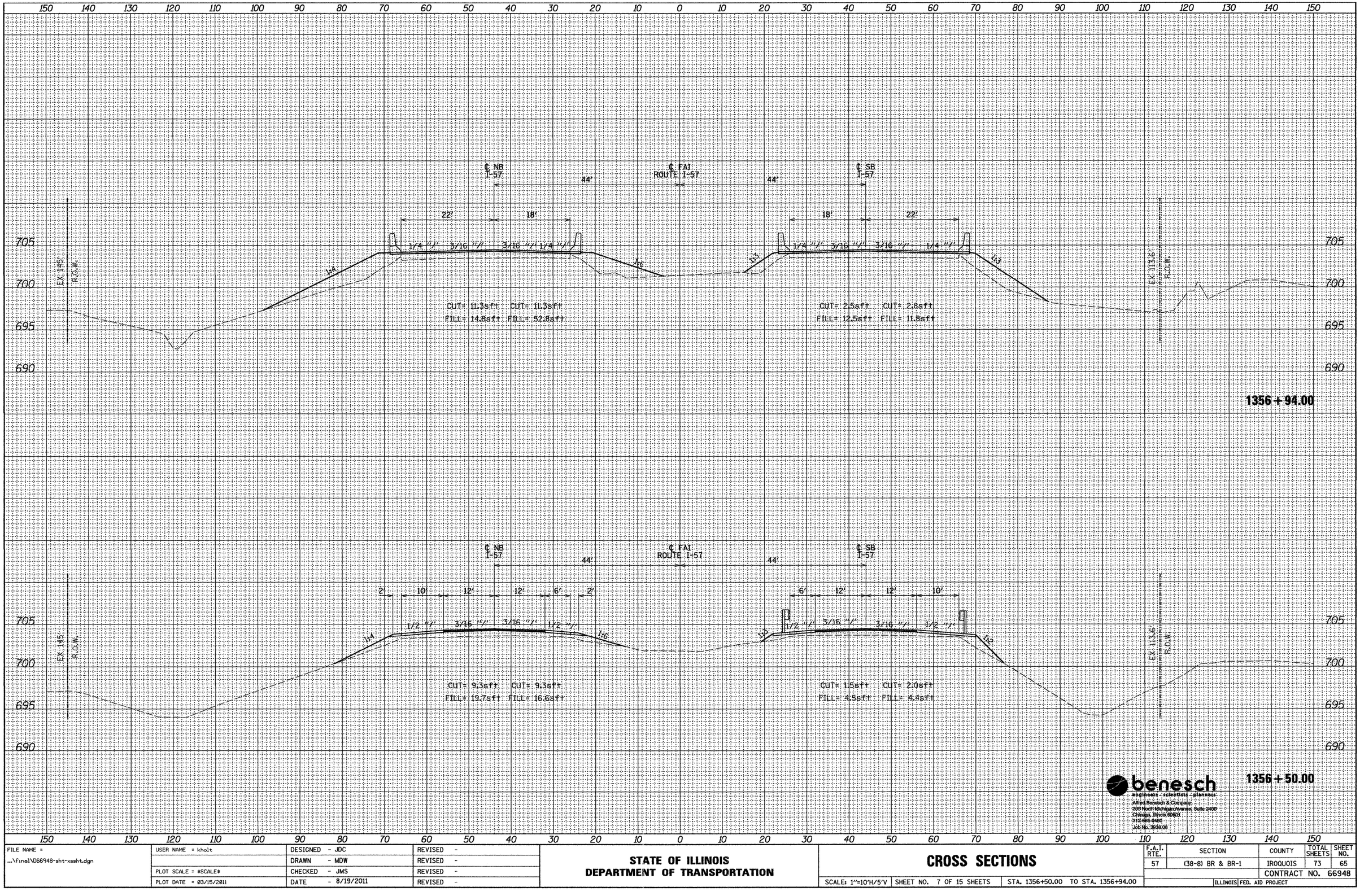
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: 1"=10'H/5'V | SHEET NO. 6 OF 15 SHEETS | STA. 1355+50.00 TO STA. 1356+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	64
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: 1"=10'H/5'V | SHEET NO. 7 OF 15 SHEETS | STA. 1356+50.00 TO STA. 1356+94.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	65
		CONTRACT NO. 66948		
		ILLINOIS FED. AID PROJECT		

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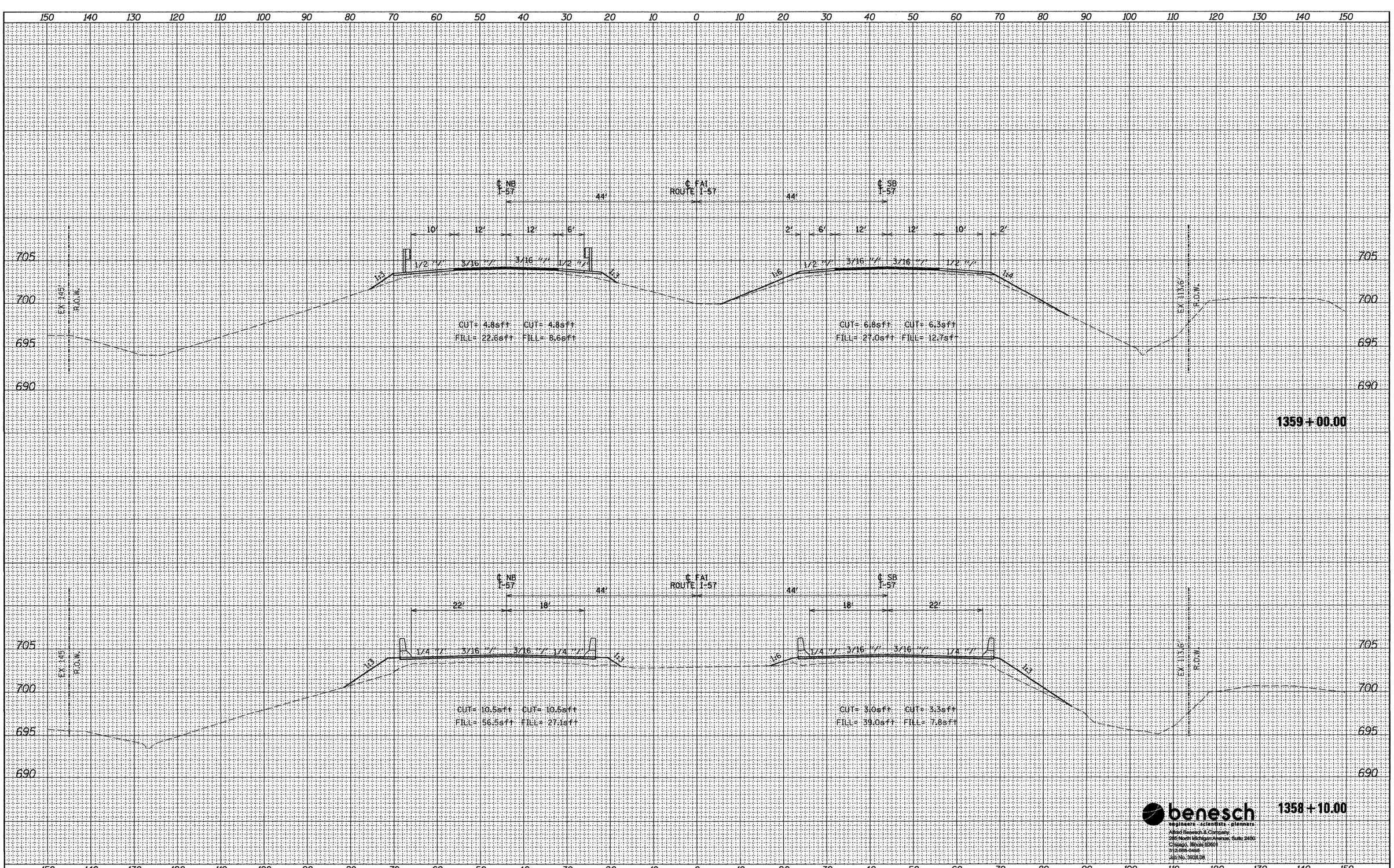

ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
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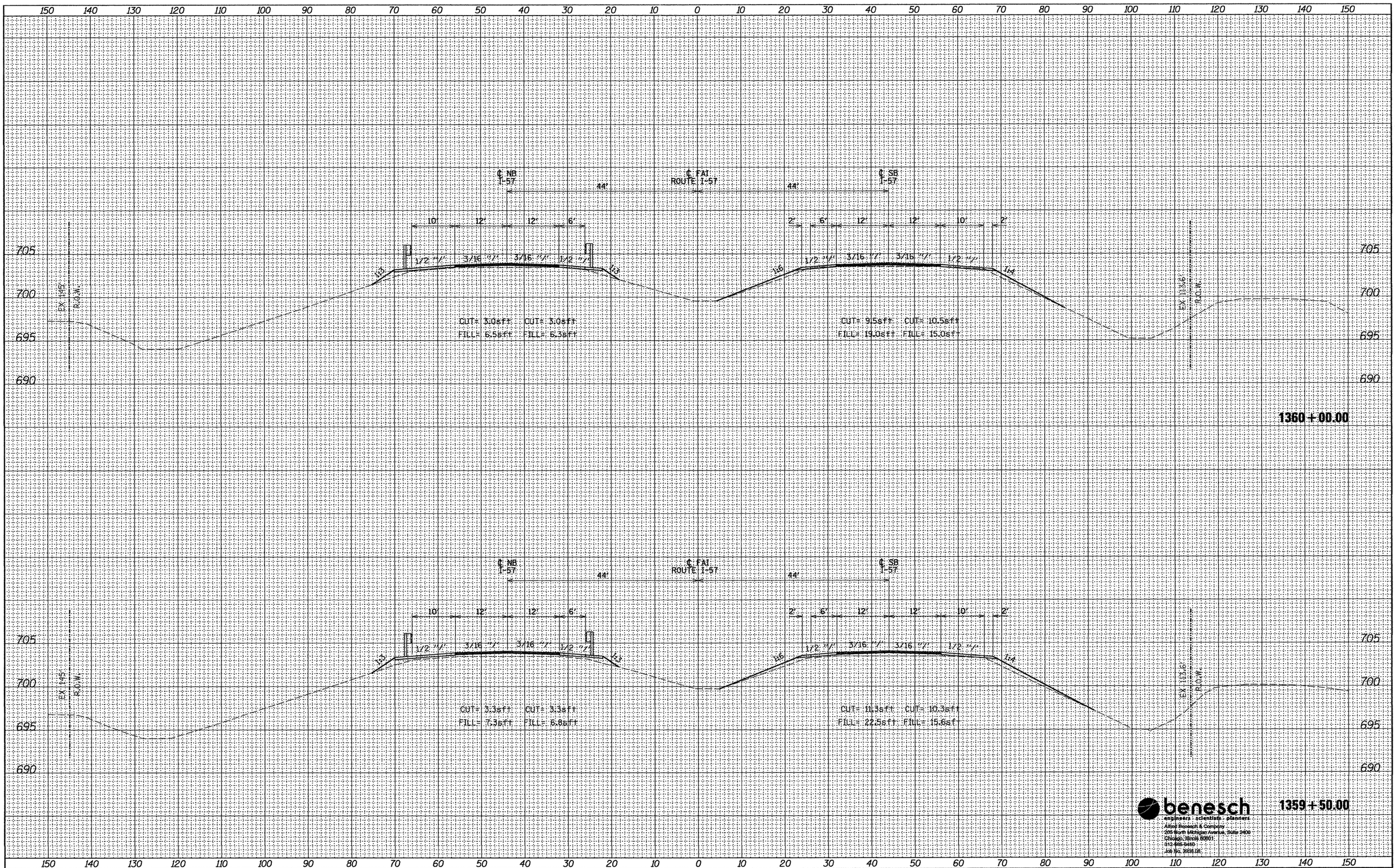
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: 1"=10'H/5'V | SHEET NO. 8 OF 15 SHEETS | STA. 1358+50.00 TO STA. 1359+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	66
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			



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

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	PLOT DATE = 03/15/2011	DATE - 8/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: 1"=10'H/5'V | SHEET NO. 9 OF 15 SHEETS | STA. 1359+50.00 TO STA. 1360+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	67
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY	NOTE BOOK	NO.	BY	DATE
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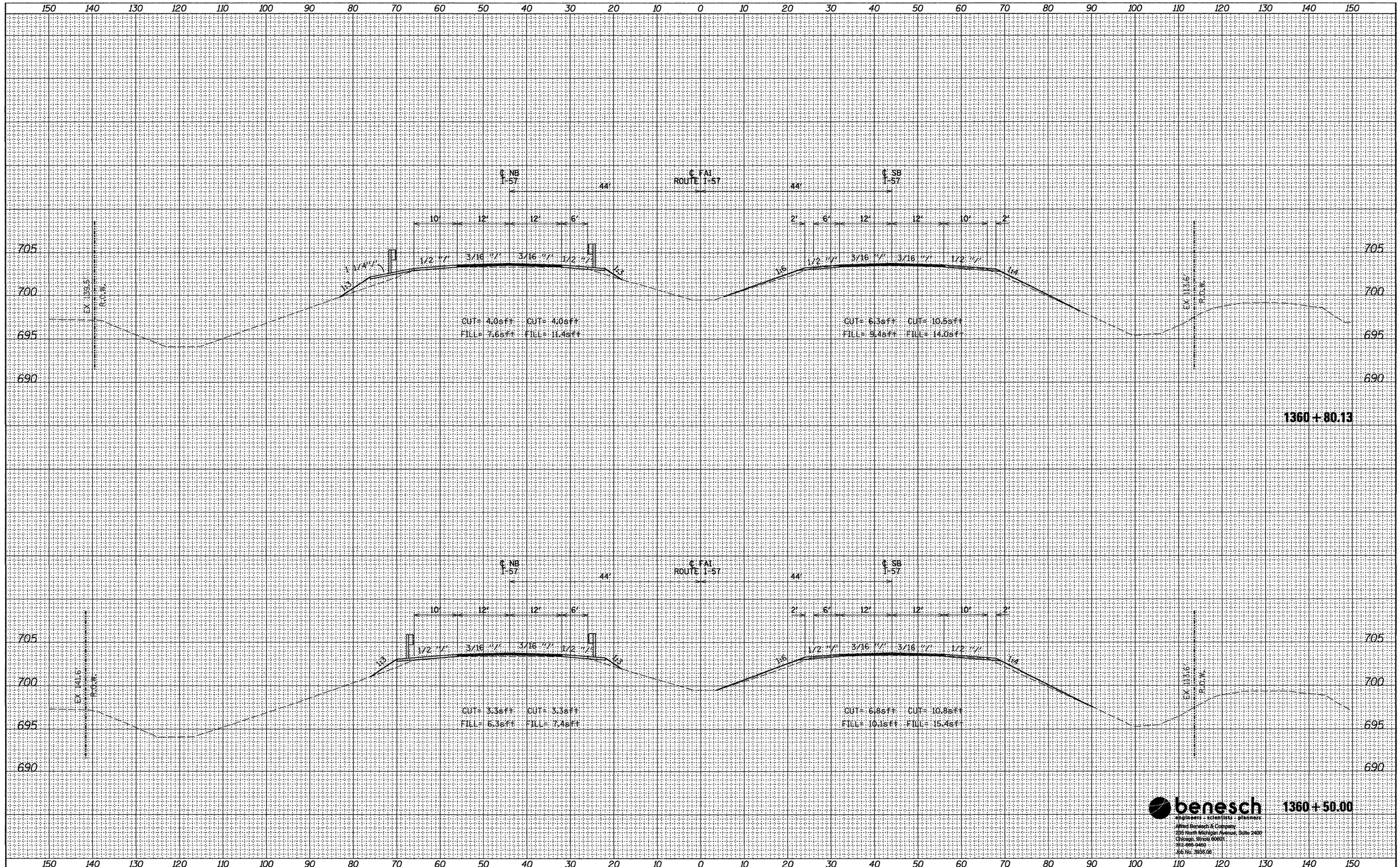

ORIGINAL SURVEY	NOTE BOOK	NO.	BY	DATE
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: 1"=10'H/5'V | SHEET NO. 10 OF 15 SHEETS | STA. 1360+50.00 TO STA. 1360+80.13

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	68
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			

FINAL SURVEY	BY	DATE
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NOTE BOOK	AREAS	AREAS CHECKED
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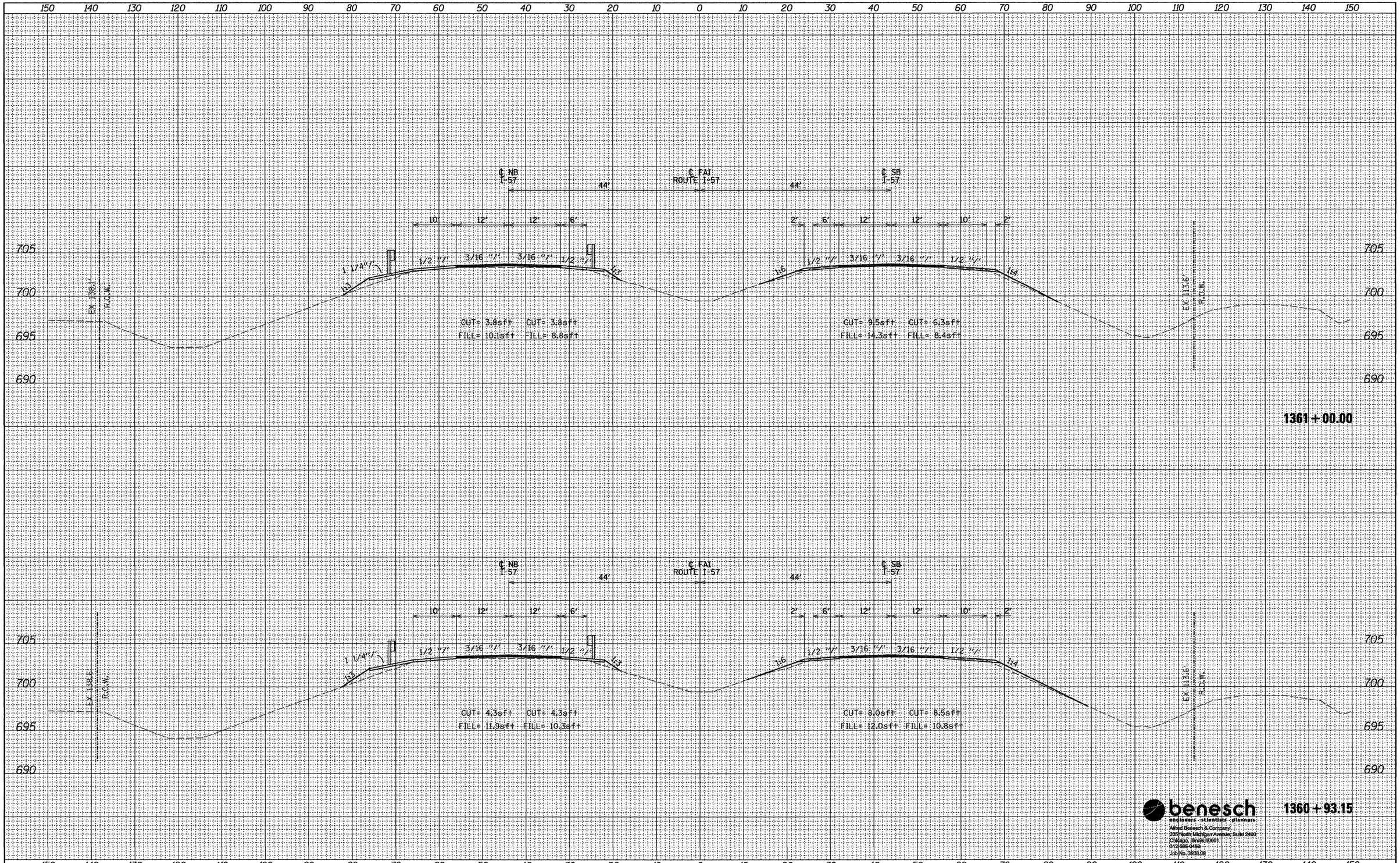

ORIGINAL SURVEY	BY	DATE
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NOTE BOOK	AREAS	AREAS CHECKED
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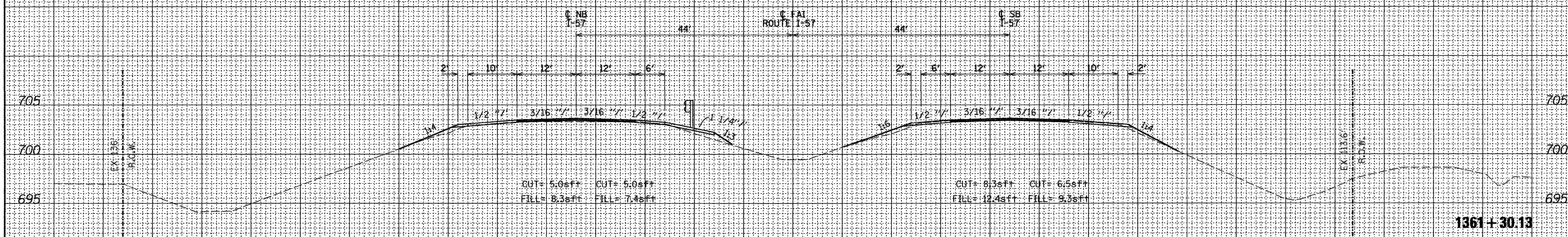
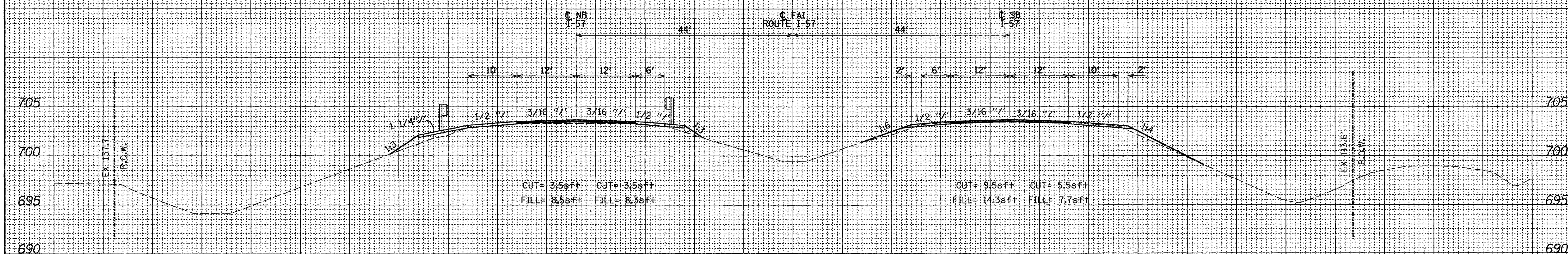
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: 1"=10'H/5'V | SHEET NO. 11 OF 15 SHEETS | STA. 1360+93.15 TO STA. 1361+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	69
		CONTRACT NO. 66948		
		ILLINOIS FED. AID PROJECT		





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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: 1"=10'H/5'V | SHEET NO. 12 OF 15 SHEETS | STA. 1361+05.74 TO STA. 1361+30.13

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	70

CONTRACT NO. 66948

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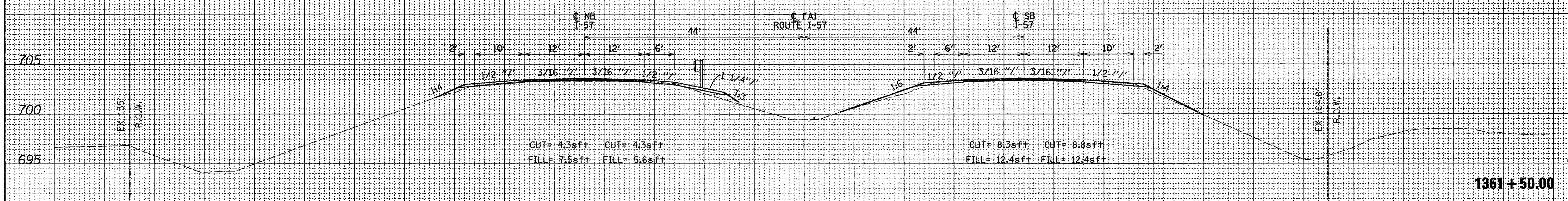

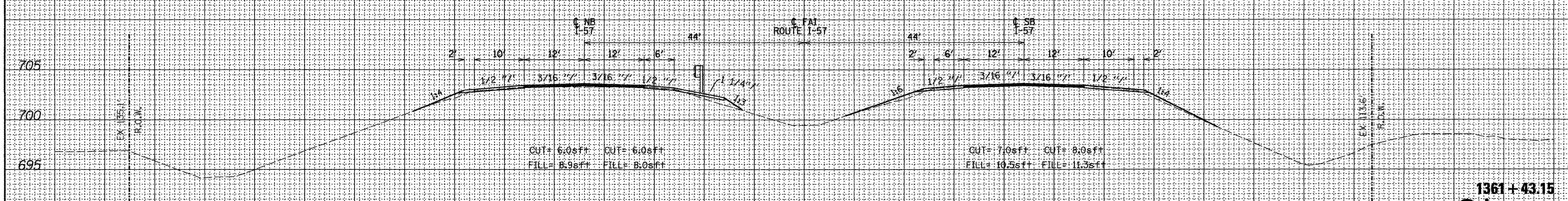

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		DRAWN - MDW	REVISED -			57	(38-8) BR & BR-1	IROQUOIS	73	71
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	PLOT DATE = 03/15/2011	DATE - 8/19/2011	REVISED -		SCALE: 1"=10'H/5'V · SHEET NO. 13 OF 15 SHEETS · STA. 1361+43.15 TO STA. 1361+50.00	ILLINOIS FED. AID PROJECT				

FINAL SURVEY / ORIGINAL SURVEY: SURVEYED · PLOTTED · TEMPLATE · AREAS · AREAS CHECKED · NOTE BOOK · NO. · BY · DATE

FINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
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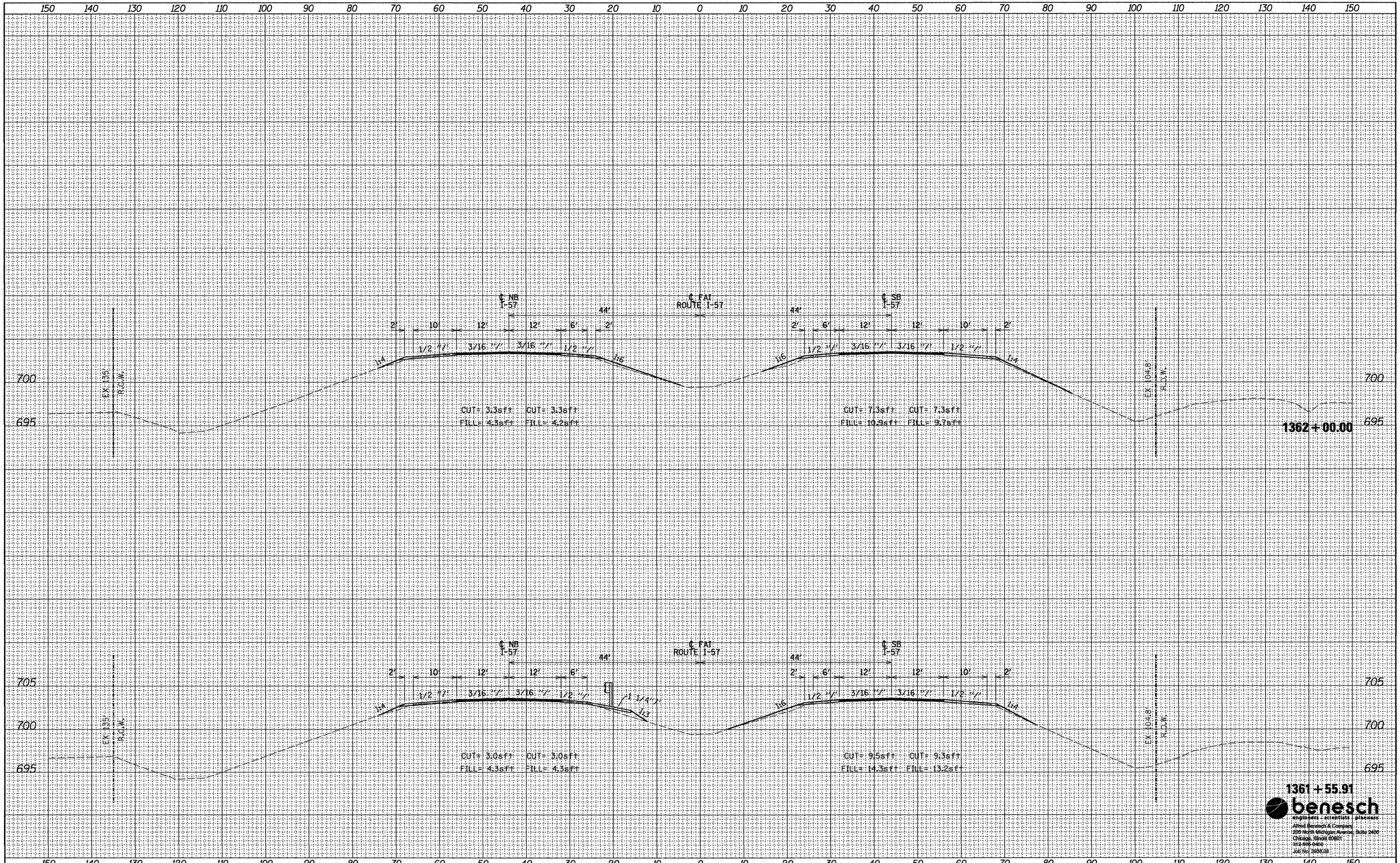

ORIGINAL SURVEY	BY	DATE
NOTE BOOK	SURVEYED	
NO.	PLOTTED	
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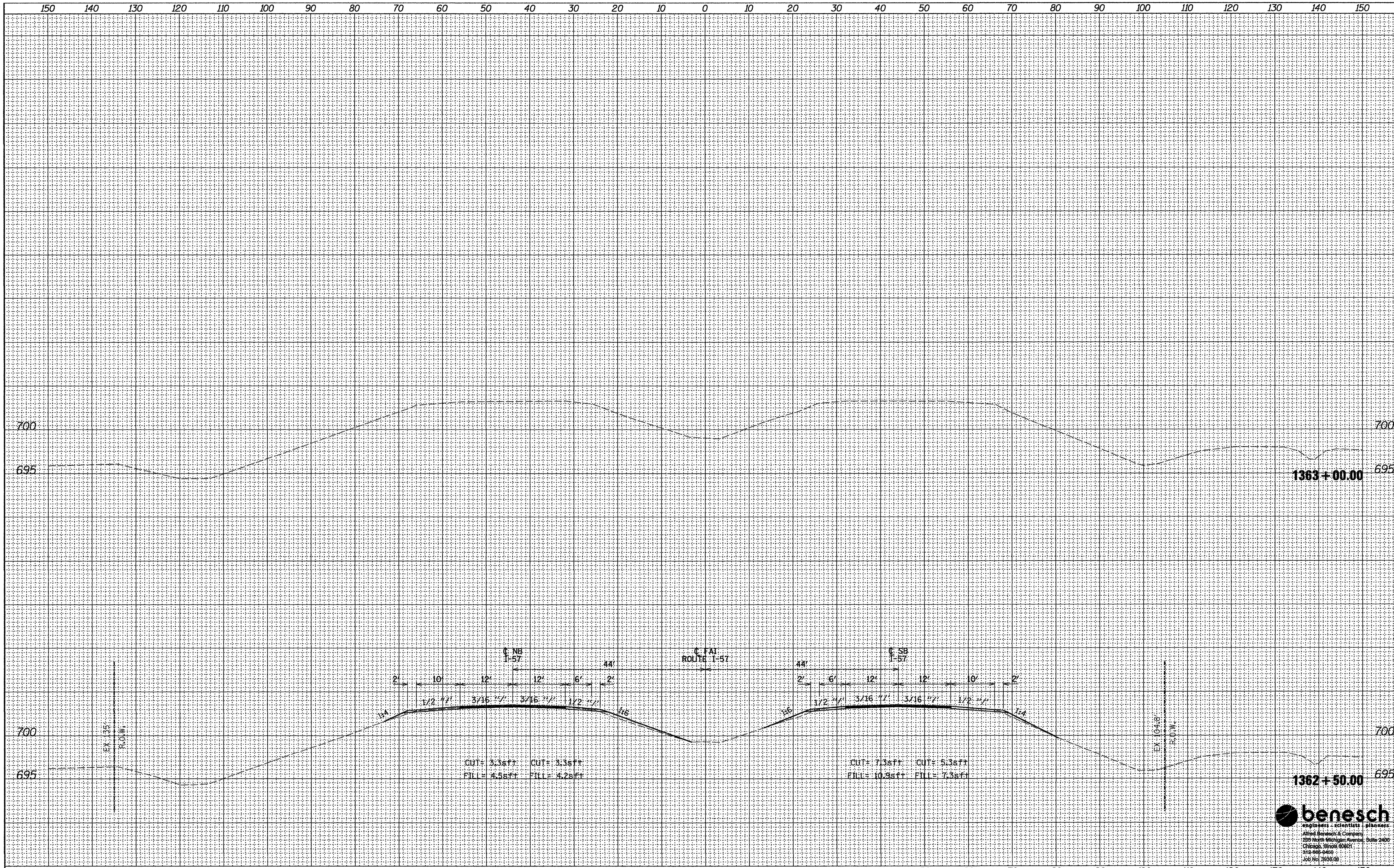
	PLOT DATE = 03/15/2011	DATE - 8/19/2011	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: 1"=10'H/5'V | SHEET NO. 14 OF 15 SHEETS | STA. 1361+55.91 TO STA. 1362+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	72
		CONTRACT NO. 66948		
	ILLINOIS FED. AID PROJECT			



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CROSS SECTIONS

SCALE: 1"=10'H/5'V | SHEET NO. 15 OF 15 SHEETS | STA. 1362+50.00 TO STA. 1363+00.00

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(38-8) BR & BR-1	IROQUOIS	73	73

CONTRACT NO. 66948

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