

**INDEX OF SHEETS**

1-20-2012 LETTING ITEM 095

**STATE OF ILLINOIS**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	1
		ILLINOIS	CONTRACT NO. 78049	

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**DEPARTMENT OF TRANSPORTATION**

**DIVISION OF HIGHWAYS**

**PROPOSED  
HIGHWAY PLANS**

**FAP ROUTE 686 (IL 4)  
SECTION 114B-1  
JACKSON COUNTY  
STRUCTURE REPLACEMENT  
IL 4 OVER BEAUCOUP CREEK  
SN 039-0042 (E)  
SN 039-0074 (P)**

**C-99-033-08**

**PROJECT ACF-0686(012)**

D-99-022-08



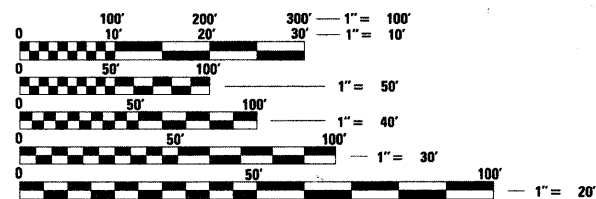
**TRAFFIC DATA**

2009 ADT = 1600  
7.8% TRUCKS  
POSTED SPEED = 55 MPH

PROPOSED PROJECT BEGINS  
STA 1108+00

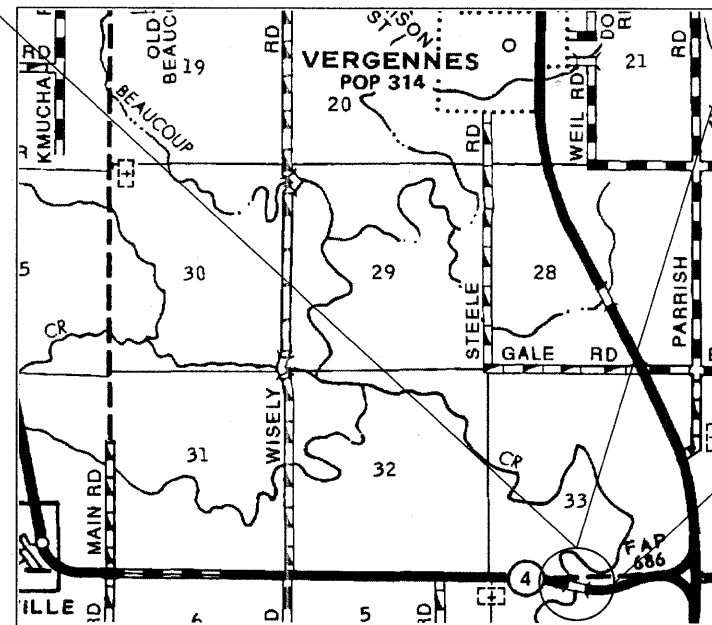
PROPOSED PROJECT ENDS  
STA 1127+00

**VERGENNES TOWNSHIP**



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



PROPOSED PROJECT LOCATION  
STA 1120+00  
SN 039-0042 (EXISTING)  
SN 039-0074 (PROPOSED)  
IL 4 OVER BEAUCOUP CREEK

**PROJECT ENGINEER: T. WAYNE HALSTEAD (618) 351-5228**  
**PROJECT MANAGER: DAVID PICHE (618) 351-5227**

**CONTRACT NO. 78049**

GROSS LENGTH = 1900 FT.  
NET LENGTH = 1900 FT.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED Oct 13<sup>th</sup> 20 11

Debra J. ...  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 9 20 11  
Scott E. Stitt, P.E.  
ENGINEER OF DESIGN AND ENVIRONMENT

December 9 20 11  
William R. Freyler  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

FILE NAME = c:\pwork\beaucoup\pwr-travel\mtr-49708\78049-struct-pln.dgn

**GENERAL NOTES**

1) THE THICKNESS OF HOT-MIX ASPHALT MIXTURE 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 HOT-MIX ASPHALT MIXTURE IS PLACED.

2) FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:  
 ALL HOT-MIX ASPHALT: 2.016 TONS / CU YD  
 HOT-MIX ASPHALT MATERIALS ON PAVEMENT: 0.09 GAL / SQ YD  
 AGGREGATE (PRIME COAT): 0.0015 TONS / SQ YD  
 ALL AGGREGATE: 2.05 TONS / CU YD  
 RIP RAP: 1.50 TONS / CU YD

3) IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16 THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECK AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURES. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 107.17 REGARDLESS IF TRACK MOUNTED OR WHEELED.

4) ALL OBSTRUCTIONS WHICH ARE WITHIN THE CLEAR ZONE SHOWN ON THE TYPICAL SECTION, AND ARE NOT SHIELDED BY THE PROPOSED GUARDRAIL, SHALL BE REMOVED WITHIN PROJECT LIMITS. TYPICAL OBSTRUCTIONS ARE HEADWALLS, FOUNDATIONS, ETC. WHICH PROJECT 4 INCHES OR MORE ABOVE THE GROUND LINE; AND TREES WHICH WILL MATURE TO A DIAMETER OF 100 mm (4 IN) OR GREATER.

5) TREES SHALL BE PRESERVED THROUGHOUT THIS SECTION AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. GENERALLY, TREES OUTSIDE THE CLEAR ZONE, AND WHICH DO NOT INTERFERE WITH CONSTRUCTION, SHALL NOT BE DISTURBED.

6) PRIOR TO THE PLACEMENT OF THE FINAL PAVEMENT MARKINGS, THE RESIDENT ENGINEER SHOULD CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.

7) ATTAINMENT OF PROPER CROWN SHALL BE FULLY ACCOMPLISHED WITH THE HOT-MIX ASPHALT BINDER COURSE.

8) IF SO DIRECTED BY THE ENGINEER, DITCHES ADJACENT TO EMBANKMENTS SHALL BE CONSTRUCTED PRIOR TO STARTING THE CONSTRUCTION OF THE EMBANKMENT FILL.

9) THE ALGEBRAIC DIFFERENCE BETWEEN THE PAVEMENT AND SHOULDER SLOPES SHALL NOT EXCEED 8%. THE SHOULDER ON THE OUTSIDE OF SUPERELEVATED CURVES SHALL BE FLATTENED ACCORDINGLY.

10) THE ONLY TEMPORARY EASEMENT THAT MAY BE USED BY THE CONTRACTOR IS THE TEMPORARY EASEMENT SHOWN ON THE PLAN/PROFILE SHEETS (SHEETS 13-15) AND THE ROW SHEETS (SHEETS 21, 22).

11) THE REMOVAL OF EXISTING ENTRANCE PIPE CULVERTS ENCASED IN CONCRETE WILL BE CONSIDERED INCLUDED IN THE OTHER ITEMS OF CONSTRUCTION IF ONLY THE ENDS OF THE CULVERT (2 FT OR LESS) ARE ENCASED. IF MORE THAN 2FT AT THE ENDS OF THE CULVERT ARE ENCASED IN CONCRETE, THE REMOVAL WILL BE PAID FOR ACCORDING TO ARTICLE 109.04.

12) THE ENGINEER SHALL BE THE SOLE JUDGE AS TO THE FINAL PLACEMENT OF ALL PROPOSED TREE PLANTINGS.

13) TO MINIMIZE THE TIME THAT THE EMBANKMENT IS EXPOSED, THE REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL FROM STA 1116+00 TO STA 1117+75 SHALL BE COMPLETED IN ONE CONTINUOUS OPERATIONS WITH NO LENGTHY PERIODS OF SHUTDOWN ALLOWED.

14) COMMITMENTS: AS AGREED TO WITH THE PROPERTY OWNER AND AS DETAILED IN THE PLANS, "A NEW ENTRANCE AND CULVERT WILL BE CONSTRUCTED AT ± STA. 1127+50 RT. AND A NEW CULVERT WILL BE CONSTRUCTED UNDER THE EXISTING ENTRANCE AT ± STA. 1130+00 RT. THE SIDE DITCH WOULD ALSO BE GRADED/SHAPED FROM STA. 1127+00 RT. TO STA. 1131+00 RT.

**MIXTURE REQUIREMENTS**

LOCATION(S):	HOT-MIX ASPHALT SURFACE COURSE, IL 4
MIXTURE USE(S):	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX C, N90
AC/PG:	SBS PG76-22
RAP% (MAX):	0
DESIGN AIR VOIDS:	4.0%, 90 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5 MM OR 12.5 MM
FRICITION AGGREGATE:	C SURFACE

LOCATION(S):	HOT-MIX ASPHALT SHOULDERS, IL 4 & DETOUR
MIXTURE USE(S):	HOT-MIX ASPHALT SHOULDER, N30
AC/PG:	PG58-22
RAP% (MAX):	50
DESIGN AIR VOIDS:	2.0%, 30 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	HMA SHOULDERS
FRICITION AGGREGATE:	NONE

LOCATION(S):	HOT-MIX ASPHALT BINDER COURSE (TOP LIFT), IL 4
MIXTURE USE(S):	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE, N90, IL-19.0
AC/PG:	SBS PG76-22
RAP% (MAX):	0
DESIGN AIR VOIDS:	4.0%, 90 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-19.0
FRICITION AGGREGATE:	NONE

LOCATION(S):	HOT-MIX ASPHALT BINDER COURSE (LOWER LIFTS), IL 4
MIXTURE USE(S):	HOT-MIX ASPHALT BINDER COURSE, N90, IL-19.0
AC/PG:	PG64-22
RAP% (MAX):	10
DESIGN AIR VOIDS:	4.0%, 90 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-19.0
FRICITION AGGREGATE:	NONE

LOCATION(S):	LEVELING BINDER, HMA SURFACE, DETOUR
MIXTURE USE(S):	LEVELING BINDER (MACHINE METHOD), N90
AC/PG:	PG64-22
RAP% (MAX):	10%
DESIGN AIR VOIDS:	4.0%, 90 GYRATION DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5 MM OR 12.5 MM
FRICITION AGGREGATE:	C SURFACE

**STANDARDS**

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
- 280001-06 TEMPORARY EROSION CONTROL SYSTEMS
- 420001-07 PAVEMENT JOINTS
- ~~420401-08 BRIDGE APPROACH PAVEMENT CONNECTOR~~
- 482001-02 HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
- 482006-03 HMA SHOULDER ADJACENT TO RIGID PAVEMENT
- 515001-03 NAME PLATES FOR BRIDGES
- 542401-01 METAL END SECTIONS FOR CULVERTS
- ~~60101-01 CONCRETE HEADWALL FOR PIPE DRAIN~~
- 630001-10 STEEL PLATE BEAM GUARDRAIL
- 630201-06 PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
- 630301-05 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- 631031-10 TRAFFIC BARRIER TERMINAL, TYPE 6
- 635006-03 REFLECTOR AND TERMINAL MARKER REPLACEMENT
- 635011-02 REFLECTOR MARKER AND MOUNTING DETAILS
- 666001-01 RIGHT OF WAY MARKERS
- 701001-02 OFF-RD OPERATIONS, 2L, 2W, MORE THAN 4.5m (15') AWAY
- 701006-03 OFF-RD OPERATIONS, 2L, 2W, 4.5m (15') TO 600mm (24") FROM PVT. EDGE
- 701011-02 OFF RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
- 701201-04 LANE CLOSURE, 2L, 2W, DAY ONLY FOR SPEEDS > 45 MPH
- 701311-03 LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY
- 701326-04 LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS > 45 MPH
- 701901-02 TRAFFIC CONTROL DEVICES
- 780001-03 TYPICAL PAVEMENT MARKINGS
- BLR 21-9 TYP. APP. OF TRAFFIC CONTROL DEVICES FOR CONSTR. ON RURAL LOCAL HIGHWAYS.

Prepared By: Joe Zdaniewicz  
 DISTRICT STUDIES & PLANS ENGINEER

Examined By: James Travis Emery  
 DISTRICT LAND ACQUISITION ENGINEER

Examined By: Conni Nelson  
 DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: Neil Wiley  
 DISTRICT OPERATIONS ENGINEER

Examined By: K. P. [Signature]  
 DISTRICT CONSTRUCTION ENGINEER

Examined By: Brian [Signature]  
 DISTRICT MATERIALS ENGINEER

Approved By: Nancy [Signature]  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

DATE: Oct 18<sup>th</sup> 2011

FILE NAME: c:\newwork\pavdocs\hls\hlsreadm.dms\1726\78049-ahf\p\p.dgn

USER NAME = halsteadw	DESIGNED -	REVISED -
PLDT SCALE = 50,0000 / in	DRAWN -	REVISED -
PLDT DATE = 10/14/2011	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**MIX REQUIREMENTS, GENERAL NOTES, STANDARDS**

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

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 2
				CONTRACT NO. 78049
ILLINOIS FED. AID PROJECT				

# SUMMARY OF QUANTITIES

		RURAL - JACKSON COUNTY HBP FUNDING 80% FEDERAL; 20% STATE CONSTRUCTION TYPE CODE 0011 SN 039-0074	
CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	544
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	221
20200100	EARTH EXCAVATION	CU YD	651
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	1500
20300100	CHANNEL EXCAVATION	CU YD	1950
20400800	FURNISHED EXCAVATION	CU YD	6810
* 25000200	SEEDING, CLASS 2	ACRE	2.2
* 25000350	SEEDING, CLASS 7	ACRE	2.2
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	282
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	198
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	198
* 25000700	AGRICULTURAL GROUND LIMESTONE	TON	4.4
25100115	MULCH, METHOD 2	ACRE	4.4
25100630	EROSION CONTROL BLANKET	SQ YD	3455
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	420
28000305	TEMPORARY DITCH CHECKS	FOOT	216
28000400	PERIMETER EROSION BARRIER	FOOT	3625
28000500	INLET AND PIPE PROTECTION	EACH	3
28100107	STONE RIPRAP, CLASS A4	SQ YD	1584
28200200	FILTER FABRIC	SQ YD	1584
31100100	SUBBASE GRANULAR MATERIAL, TYPE A	TON	4213
40200100	AGGREGATE SURFACE COURSE, TYPE A	TON	452
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	12063
40600645	LEVELING BINDER (MACHINE METHOD), N90	TON	1731
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	1023
40603090	HOT - MIX ASPHALT BINDER COURSE, IL - 19.0, N90	TON	5211
40603240	POLYMERIZED HOT - MIX ASPHALT BINDER COURSE, IL - 19.0, N90	TON	476
40603320	HOT - MIX ASPHALT SURFACE COURSE, MIX "C", N90	TON	5018
40603520	POLYMERIZED HOT - MIX ASPHALT SURFACE COURSE, MIX "C", N90	TON	396
44000100	PAVEMENT REMOVAL	SQ YD	219
44000400	GUTTER REMOVAL	FOOT	551
44004250	PAVED SHOULDER REMOVAL	SQ YD	298
48100100	AGGREGATE SHOULDERS, TYPE A	TON	391
48203029	HOT - MIX ASPHALT SHOULDERS, 8"	SQ YD	1340
48203100	HOT-MIX ASPHALT SHOULDERS	TON	1894
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	372
50200300	COFFERDAM EXCAVATION	CU YD	1386

		RURAL - JACKSON COUNTY HBP FUNDING 80% FEDERAL; 20% STATE CONSTRUCTION TYPE CODE 0011 SN 039-0074	
CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
50201121	COFFERDAM (TYPE 2) (LOCATION-1)	EACH	1
50201122	COFFERDAM (TYPE 2) (LOCATION-2)	EACH	1
50300100	FLOOR DRAINS	EACH	52
50300225	CONCRETE STRUCTURES	CU YD	634.1
50300255	CONCRETE SUPERSTRUCTURE	CU YD	617.3
50300260	BRIDGE DECK GROOVING	SQ YD	1688
50300265	SEAL COAT CONCRETE	CU YD	462
50300280	CONCRETE ENCASMENT	CU YD	12
50300300	PROTECTIVE COAT	SQ YD	2200
50500305	ERECTING STRUCTURAL STEEL	L SUM	1
50500505	STUD SHEAR CONNECTORS	EACH	4104
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	291,710
50800515	BAR SPLICERS	EACH	84
51201800	FURNISHING STEEL PILES HP 14 x 73	FOOT	2590
51202305	DRIVING PILES	FOOT	2590
51203800	TEST PILE STEEL HP 14 x 73	EACH	4
51204650	PILE SHOES	EACH	46
51500100	NAME PLATES	EACH	1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	87.5
52100220	ERECTING ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	12
52100510	ANCHOR BOLTS, 3/4"	EACH	24
52100530	ANCHOR BOLTS, 1 1/4"	EACH	24
54248510	CONCRETE COLLAR	CU YD	1
54215559	METAL END SECTION 24"	EACH	6
542D0229	PIPE CULVERTS, CLASS D, TYPE 124"	FOOT	200
58700300	CONCRETE SEALER	SQ FT	1280
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	78
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	512.5
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2
* 63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	2
63200310	GUARDRAIL REMOVAL	FOOT	530
68600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	16
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12
67100100	MOBILIZATION	L SUM	1

\*SPECIALTY ITEM

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

USER NAME = portercw  
PLOT SCALE = 50.0000 / in.  
PLOT DATE = 11/3/2011

DESIGNED -  
DRAWN -  
CHECKED -  
DATE -

REVISED -  
REVISED -  
REVISED -  
REVISED -

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

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 3
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

FILE NAME = C:\pwworkspace\AutoCAD\portercw\Drawings\78049.dwg

# SUMMARY OF QUANTITIES

RURAL - JACKSON COUNTY  
HBP FUNDING  
80% FEDERAL; 20% STATE  
CONSTRUCTION TYPE CODE 0011  
SN 039-0074

CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	3
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1
70300100	SHORT - TERM PAVEMENT MARKING	FOOT	4957
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	110986
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2755
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	110986
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	25
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	14
* 78200520	BARRIER WALL MARKERS, TYPE B	EACH	12
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
* A2002714	TREE, CARYA OVATA (SHAGBARK HICKORY), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	18
* A2006514	TREE, QUERCUS BICOLOR (SWAMP WHITE OAK), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	15
* A2006914	TREE, QUERCUS PALUSTRIS (PIN OAK), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	12
* A2016814	TREE, QUERCUS SHUMARDII (SHUMARD RED OAK), 1-3/4" CALIPER, BALLED AND BURLAPPED	EACH	15
X2020110	GRADING AND SHAPING SHOULDERS	UNIT	510
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	174
X542A497	PIPE CULVERTS, CLASS A, TYPE 1 EQUIVALENT ROUND-SIZE 42" TEMPORARY	FOOT	11
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	132
Z0018002	DRAINAGE SCUPPERS, DS-11	EACH	2
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	107
Z0055905	TEMPORARY CONSTRUCTION FENCE	FOOT	1100
+ Z0076600	TRAINEES	HOUR	1000
+ 0042			
* SPECIALTY ITEM			

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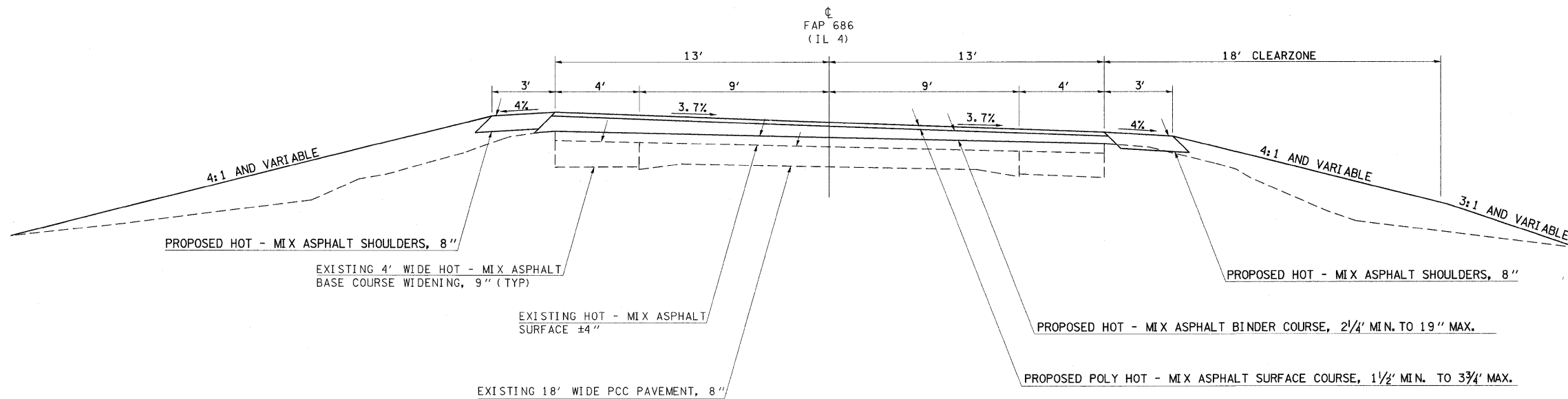
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

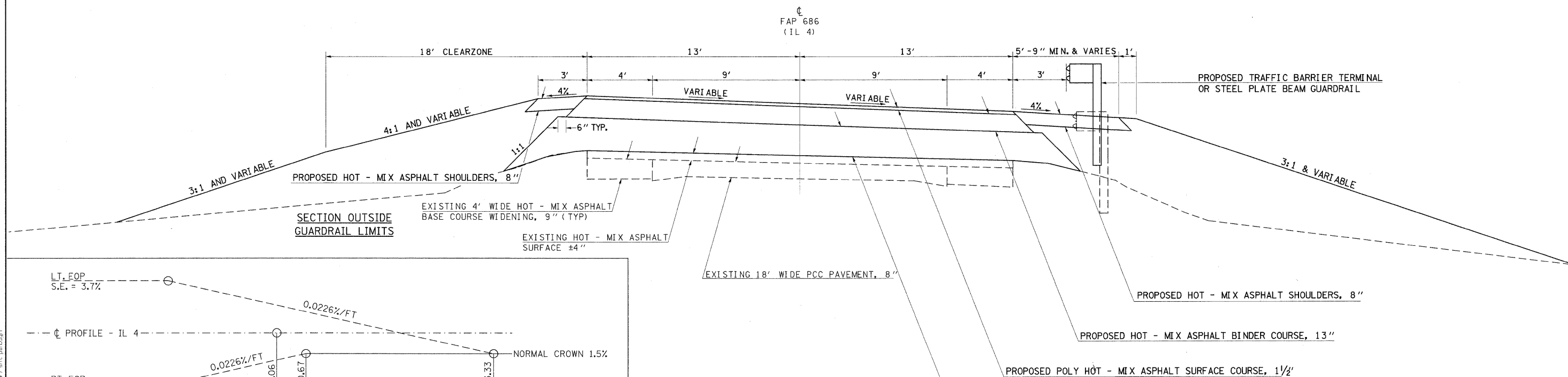
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	4
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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



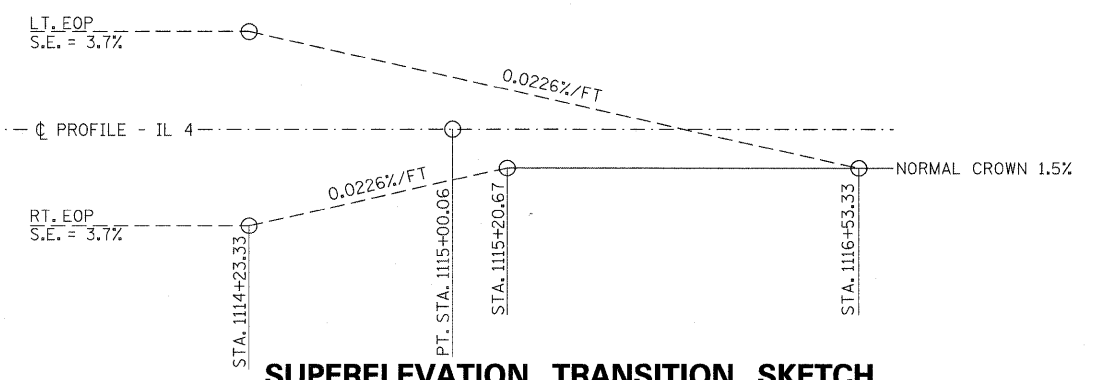
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TO BE USED:  
STA. 1108+00 TO STA. 1111+50



**TYPICAL SECTION**

TO BE USED:  
STA. 1111+50 TO STA. 1116+00



**SUPERELEVATION TRANSITION SKETCH**

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

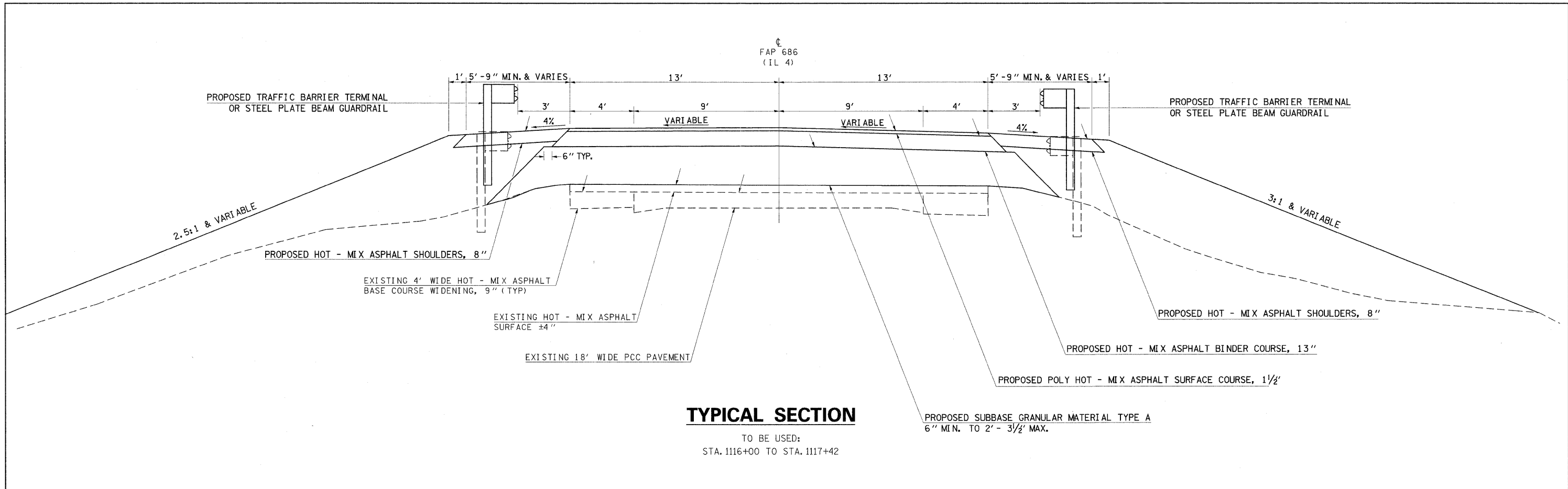
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F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 5
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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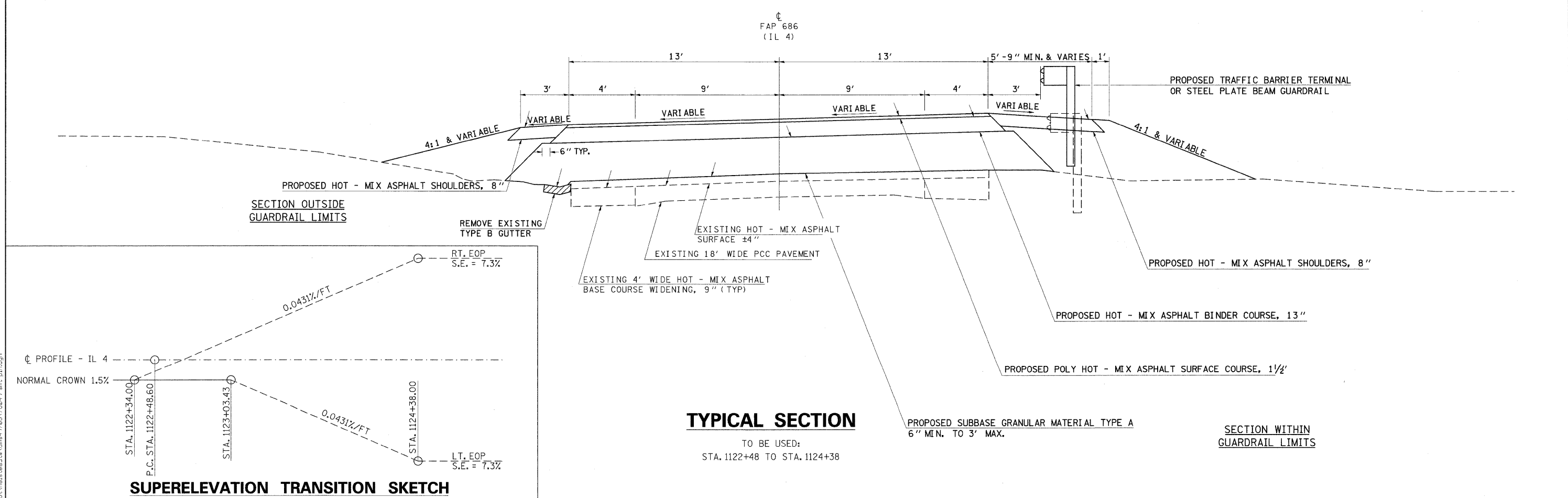
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	DATE -	REVISED -

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



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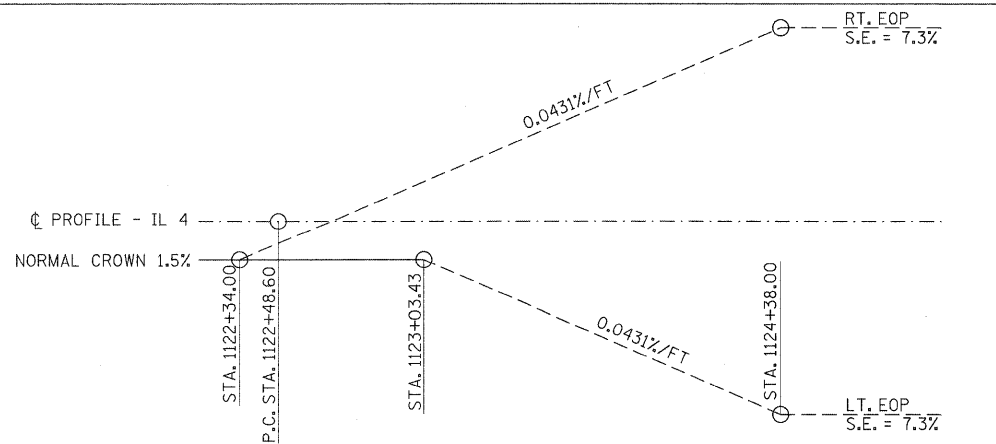
TO BE USED:  
STA. 1116+00 TO STA. 1117+42



**TYPICAL SECTION**

TO BE USED:  
STA. 1122+48 TO STA. 1124+38

**SUPERELEVATION TRANSITION SKETCH**



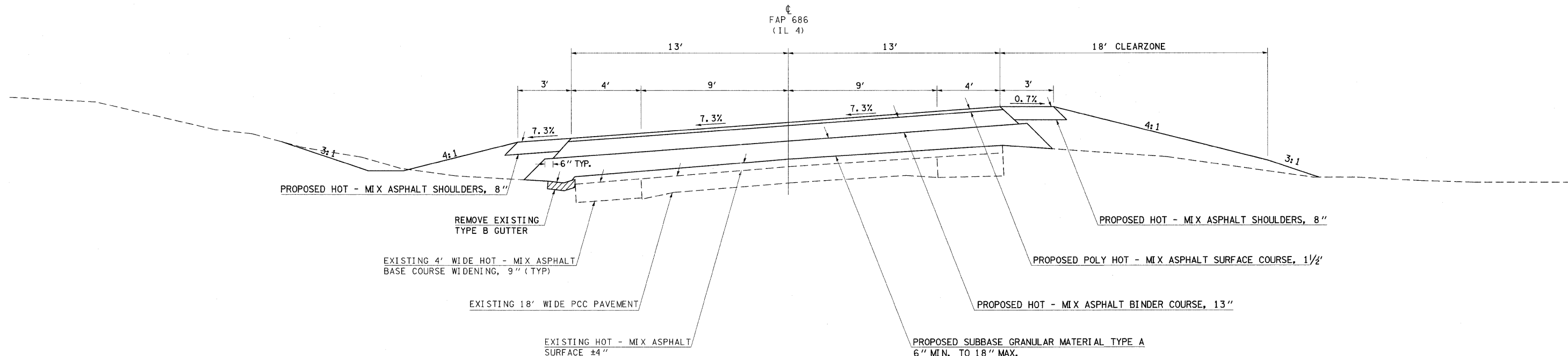
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

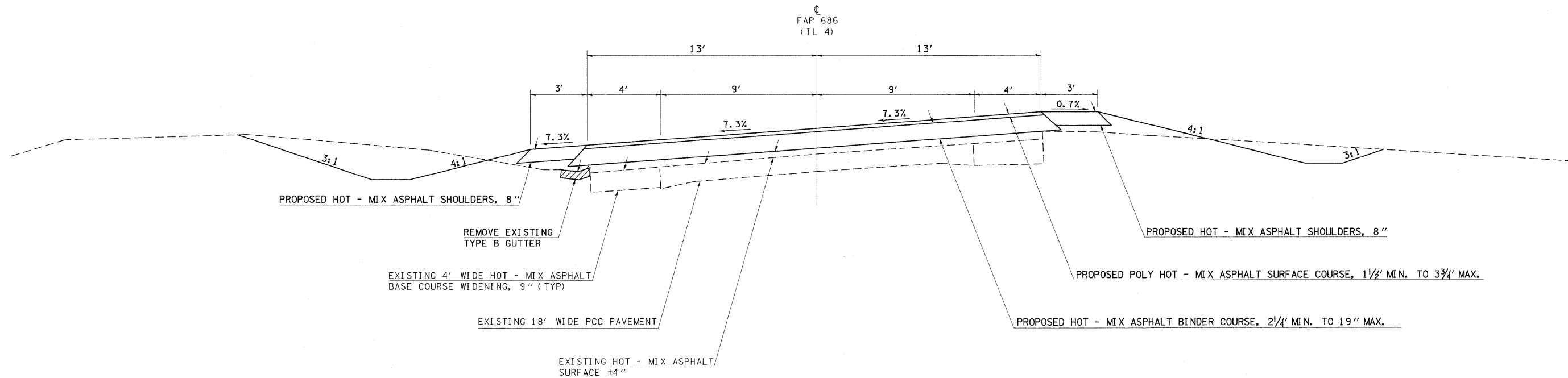
<b>TYPICAL SECTIONS IL RTE 4</b>	
SCALE:	SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 6
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				



**TYPICAL SECTION**

TO BE USED:  
STA. 1124+38 TO STA. 1125+50



**TYPICAL SECTION**

TO BE USED:  
STA. 1125+50 TO STA. 1127+45

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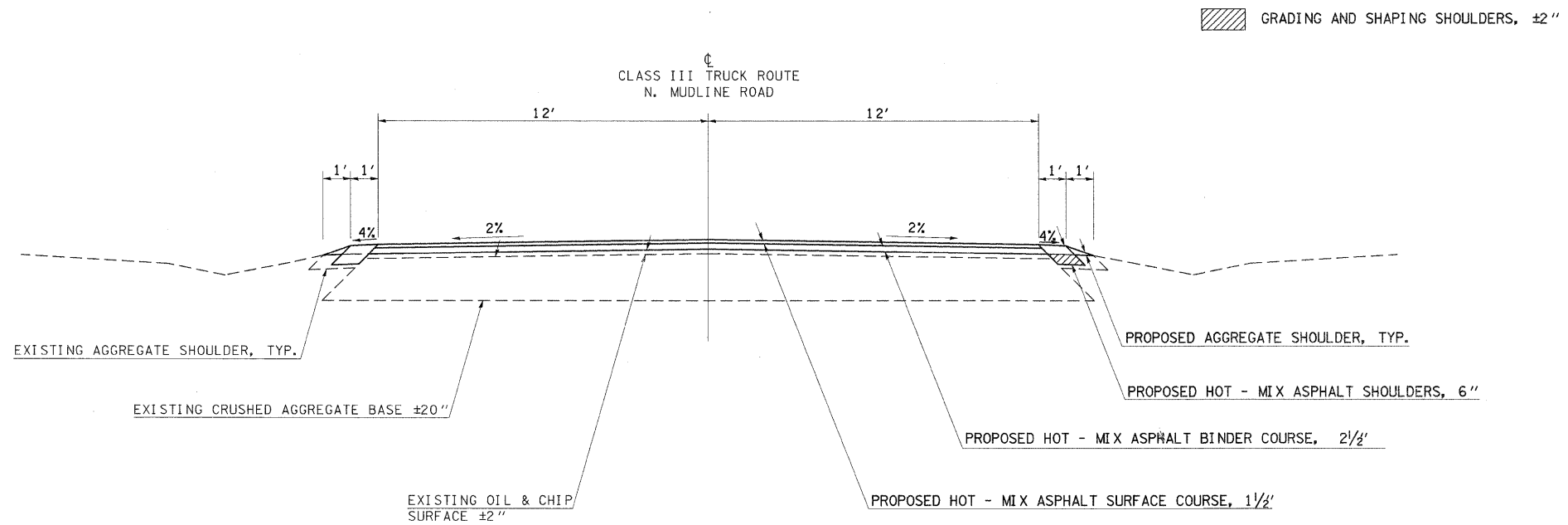
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PLOT DATE = 10/18/2011	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS IL RTE 4**

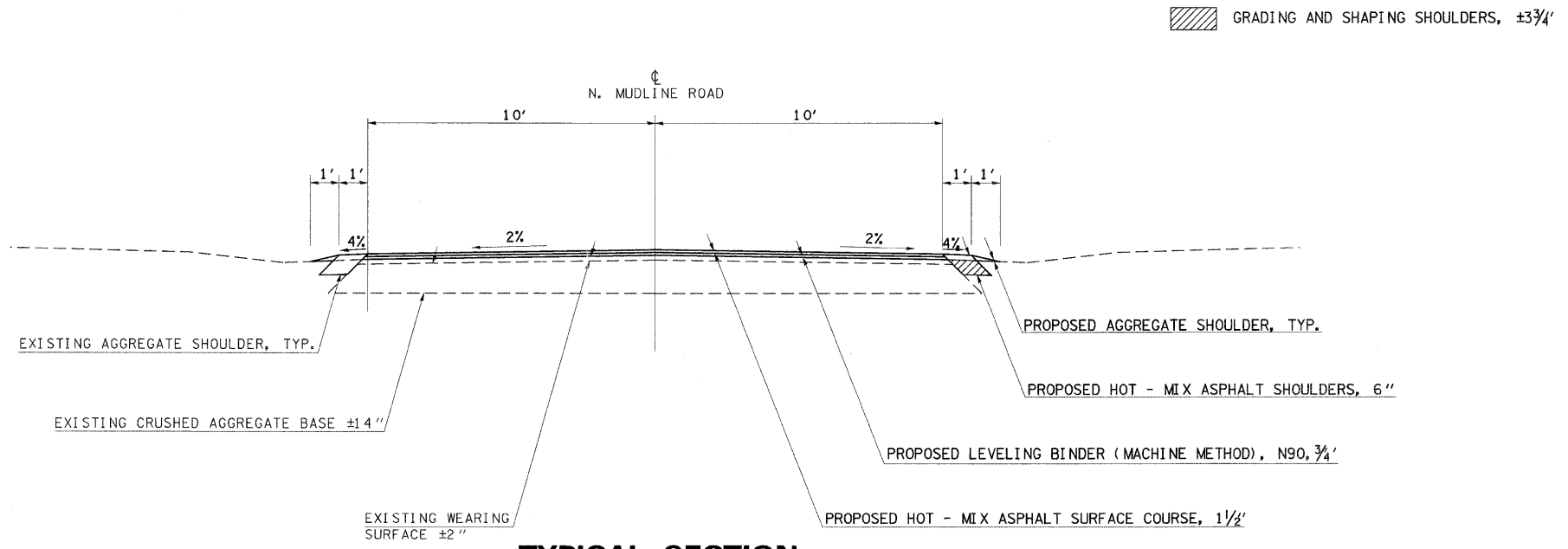
SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 7
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				



**TYPICAL SECTION**

TO BE USED:  
MUDLINE RD. TRUCK ROUTE PORTION  
APPROXIMATE LENGTH = 1.3 MILES



**TYPICAL SECTION**

TO BE USED:  
MUDLINE RD. NON-TRUCK ROUTE PORTION  
APPROXIMATE LENGTH = 0.3 MILES

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	DRAWN -	REVISED -
PLOT SCALE = 50.0000' / 1"	CHECKED -	REVISED -
PLOT DATE = 11/3/2011	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS DETOUR RD**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	8
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

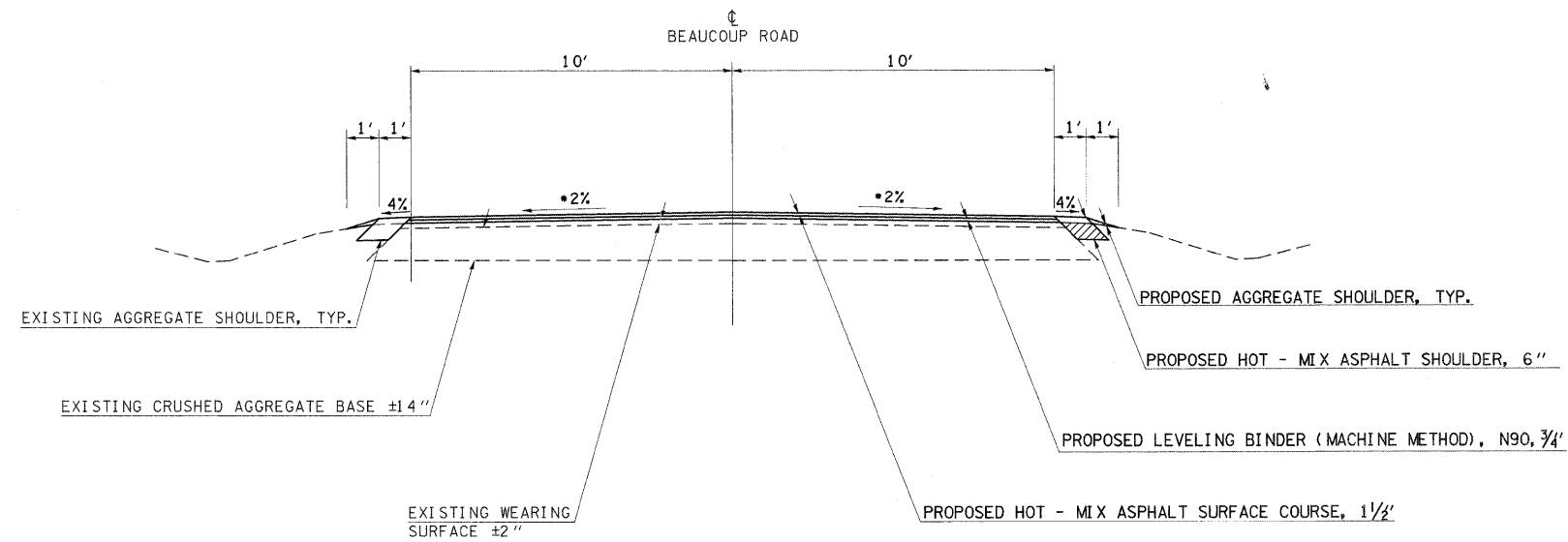


GRADING AND SHAPING SHOULDERS, ±3/4'

\* MATCH EXISTING SLOPES FOR TRANSITIONS AND S.E.  
 @ STRUCTURE 039-3182 @ STA 14+50.04

TRANSITION 1  
 STA 7+43.08 TO STA 8+68.08  
 S.E. = .023' /'

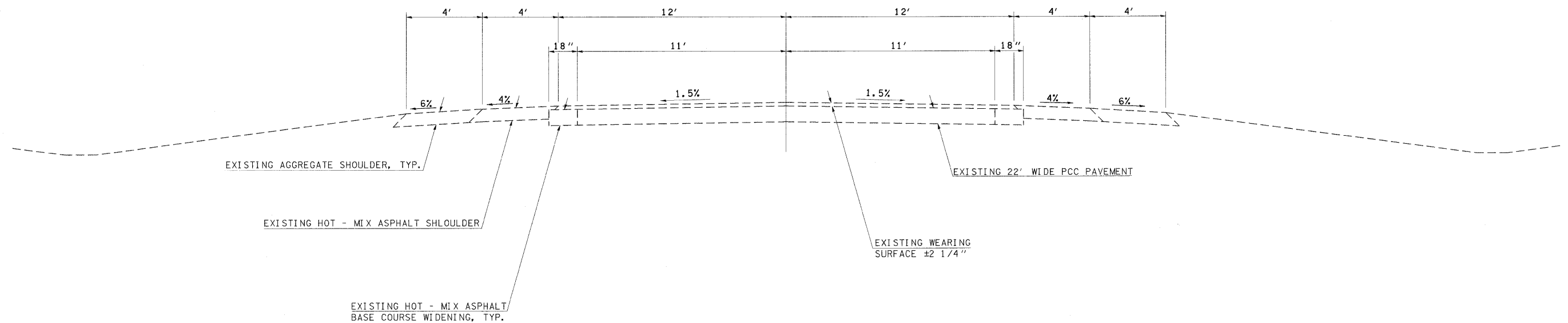
TRANSITION 2  
 STA 29+69.50 TO STA 30+94.50  
 S.E. = .045' /'  
 STA 32+18.12 TO STA 33+43.12



**TYPICAL SECTION**

TO BE USED:  
 BEAUCOUP RD.  
 APPROXIMATE LENGTH = 3.2 MILES  
 • EXCEPT WHERE NOTED

FAP 42  
 (IL 13/127)



**TYPICAL SECTION**

TO BE USED:  
 IL 13/127

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	DRAWN -	REVISED -
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PLOT DATE = 11/3/2011	DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS DETOUR RD**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	9
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

# TREE REMOVAL SCHEDULE

LOCATION IL 4	TREE REMOVAL TO 15 UNITS DIAMETER	TREE REMOVAL OVER 15 UNITS DIAMETER
	UNIT	UNIT
<b>NORTHWEST QUADRANT</b>		
STA. 1113+53 .50' LT		25.5
STA. 1113+61 .48' LT	15	
STA. 1113+66 .51' LT	7	
STA. 1113+70 .51' LT	12.5	
STA. 1113+89 .51' LT	7.5	
STA. 1113+96 .40' LT	9	
STA. 1114+07 .40' LT		17
STA. 1114+11 .47' LT	5.25	
STA. 1114+17 .51' LT	10.75	
STA. 1114+25 .45' LT	7.25	
STA. 1114+29 .46' LT	7.75	
STA. 1114+29 .36' LT	9.5	
STA. 1114+34 .45' LT	6	
STA. 1114+41 .43' LT	10	
STA. 1114+42 .43' LT	11.5	
STA. 1114+42 .43' LT		15.5
STA. 1114+50 .47' LT	8.5	
STA. 1114+50 .50' LT	9.75	
STA. 1114+59 .53' LT	11.75	
STA. 1114+63 .47' LT	6.25	
STA. 1114+66 .48' LT	9	
STA. 1114+71 .48' LT	6	
STA. 1114+71 .48' LT	7.5	
STA. 1114+79 .41' LT	8.25	
STA. 1114+80 .53' LT	13.5	
STA. 1114+82 .53' LT		34.75
STA. 1114+85 .50' LT	9.5	
STA. 1114+93 .51' LT	6.5	
STA. 1115+10 .43' LT	13.5	
STA. 1115+10 .43' LT	13	
STA. 1115+10 .43' LT	8.5	
STA. 1115+10 .50' LT	8.5	
STA. 1115+13 .52' LT	7.25	
STA. 1115+17 .52' LT	9.5	
STA. 1115+21 .41' LT	6	
STA. 1115+30 .41' LT	8.5	
STA. 1115+36 .47' LT	8.5	
STA. 1115+37 .43' LT	9.5	
STA. 1115+45 .45' LT	11.25	
STA. 1115+47 .46' LT	11	
STA. 1115+50 .45' LT	6	
STA. 1115+66 .47' LT	6.5	
STA. 1115+67 .50' LT	9.5	
STA. 1115+73 .32' LT	8.75	
STA. 1115+82 .36' LT	8	
STA. 1115+84 .67' LT		37.75
STA. 1115+91 .67' LT	6	
STA. 1115+94 .64' LT	7.5	
STA. 1116+00 .57' LT	9.75	
STA. 1116+07 .57' LT	8.75	
STA. 1116+07 .57' LT	7.5	
STA. 1117+43 .51' LT	8.5	
STA. 1117+44 .63' LT	8.25	
STA. 1117+43 .67' LT	7.25	
STA. 1117+50 .62' LT		16.5
STA. 1117+54 .60' LT	9.5	
STA. 1117+66 .63' LT	6.5	
STA. 1117+67 .62' LT	7	
STA. 1117+68 .62' LT	7	
STA. 1117+68 .62' LT	7	
STA. 1117+35 .70' LT	14	
<b>NORTHEAST QUADRANT</b>		
STA. 1126+41 .35' LT		30
<b>SOUTHWEST QUADRANT</b>		
STA. 1113+50 .57' RT	10	
STA. 1113+17 .52' RT		18.5
STA. 1116+56 .63' RT	14	
STA. 1116+58 .67' RT	14	
STA. 1116+61 .66' RT	7.25	
STA. 1116+63 .66' RT	7.25	
<b>SOUTHEAST QUADRANT</b>		
STA. 1123+75 .36' RT		25
STA. 1123+92 .35' RT	7	
<b>TOTALS</b>	<b>544</b>	<b>221</b>

# PROPOSED TREE SCHEDULE

LOCATION IL 4	A2002714 (SHAGBARK HICKORY)	A2006514 (SWAMP WHITE OAK)	A2006914 (PIN OAK)	A2016814 (SHUMARD RED OAK)
	EACH	EACH	EACH	EACH
<b>NORTHWEST QUADRANT</b>				
STA. 1112+00 .52' LT		1		
STA. 1112+15 .54' LT	1			
STA. 1112+30 .46' LT				1
STA. 1112+45 .60' LT			1	
STA. 1112+60 .51' LT	1			
STA. 1112+75 .46' LT			1	
STA. 1112+90 .54' LT				1
STA. 1113+05 .49' LT		1		
STA. 1113+20 .51' LT	1			
STA. 1113+35 .45' LT			1	
STA. 1113+50 .48' LT				1
STA. 1113+65 .44' LT	1			
STA. 1113+80 .47' LT		1		
STA. 1113+95 .44' LT	1			
STA. 1114+10 .49' LT			1	
STA. 1114+25 .43' LT	1			
STA. 1114+40 .50' LT				1
STA. 1114+55 .45' LT		1		
STA. 1114+70 .49' LT	1			
STA. 1114+85 .44' LT			1	
STA. 1115+00 .55' LT	1			
STA. 1115+15 .48' LT		1		
STA. 1115+30 .54' LT				1
STA. 1115+45 .44' LT			1	
STA. 1115+60 .48' LT				1
STA. 1115+75 .58' LT	1			
STA. 1115+90 .52' LT		1		
STA. 1116+00 .50' LT				1
<b>SOUTHWEST QUADRANT</b>				
STA. 1113+00 .44' RT		1		
STA. 1113+15 .48' RT			1	
STA. 1113+30 .45' RT	1			
STA. 1113+45 .52' RT				1
STA. 1113+60 .44' RT		1		
STA. 1113+75 .49' RT		1		
STA. 1113+90 .44' RT	1			
STA. 1114+05 .45' RT				1
STA. 1114+20 .50' RT				1
STA. 1114+35 .46' RT			1	
STA. 1114+50 .45' RT		1		
STA. 1115+45 .44' RT	1			
STA. 1115+60 .46' RT	1			
STA. 1115+75 .49' RT			1	
STA. 1115+90 .45' RT				1
STA. 1116+05 .48' RT		1		
STA. 1116+20 .51' RT	1			
STA. 1116+35 .44' RT		1		
STA. 1116+50 .61' RT	1			
STA. 1116+65 .54' RT		1		
STA. 1116+80 .48' RT				1
STA. 1116+95 .64' RT		1		
STA. 1117+10 .56' RT				1
STA. 1117+25 .62' RT	1			
STA. 1117+40 .53' RT	1			
STA. 1117+55 .65' RT			1	
STA. 1117+70 .50' RT			1	
STA. 1117+70 .70' RT				1
<b>SOUTHEAST QUADRANT</b>				
STA. 1123+95 .45' RT			1	
STA. 1124+10 .55' RT	1			
STA. 1124+25 .45 RT				1
STA. 1124+50 .43 RT			1	
<b>TOTALS</b>	<b>18</b>	<b>15</b>	<b>12</b>	<b>15</b>

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PLOT DATE = 10/18/2011	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SCHEDULES OF QUANTITIES**

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

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 10
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

# SHOULDER SCHEDULE

LOCATION	HOT MIX ASPHALT SHOULDERS, 8"
IL 4	SQ YD
<b>NORTHWEST QUADRANT</b>	
STA. 1108+00 LT TO STA. 1113+23 LT	175
STA. 1113+23 LT TO STA. 1117+43 LT	267
<b>NORTHEAST QUADRANT</b>	
STA. 1122+20 LT TO STA. 1122+63 LT	29
STA. 1122+63 LT TO STA. 1123+06 LT	34
STA. 1123+06 LT TO STA. 1123+12 LT	5
STA. 1123+12 LT TO STA. 1127+42 LT	152
<b>SOUTHWEST QUADRANT</b>	
STA. 1108+00 RT TO STA. 1115+02 RT	227
STA. 1115+02 RT TO STA. 1115+10 RT	5
STA. 1115+10 RT TO STA. 1115+66 RT	42
STA. 1115+66 RT TO STA. 1117+72 RT	115
<b>SOUTHEAST QUADRANT</b>	
STA. 1122+47 RT TO STA. 1123+28 RT	56
STA. 1123+28 RT TO STA. 1123+68 RT	36
STA. 1123+68 RT TO STA. 1124+50 RT	84
STA. 1124+50 RT TO STA. 1124+66 RT	11
STA. 1124+66 RT TO STA. 1127+74 RT	102
<b>TOTALS</b>	<b>1340</b>

# TERMINALS AND GUARDRAIL

LOCATION STATION TO STATION	TRAFFIC BARRIER TERMINAL			SPBGR TYPE A (6' POSTS)	GUARDRAIL REMOVAL FOOT	TERM. MARKER D. A. EACH	GUARDRAIL MARKER TYPE A EACH	BAR. WALL MARKER TYPE B EACH
	TYPE 1 SPECIAL		TYPE 6 EACH					
	TANGENT EACH	FLARED EACH						
LT STA 1122+63 TO 1123+06		1				1		
RT STA 1123+28 TO 1123+68		1				1		
LT STA 1113+31 TO 1113+87	1					1		
RT STA 1115+10 TO 1115+66	1					1		
LT STA 1113+87 TO 1116+99				312.5				
RT STA 1115+66 TO 1117+28				162.5				
RT STA 1122+90 TO 1123+28				37.5				
LT STA 1116+99 TO 1117+43			1					
RT STA 1117+28 TO 1117+72			1					
LT STA 1122+20 TO 1122+63			1					
RT STA 1122+47 TO 1122+90			1					
NW QUAD					113		6	
NE QUAD					201		2	
SW QUAD					90		4	
SE QUAD					126		2	
STA 1117+60 TO STA 1122+04								12
<b>TOTALS</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>512.5</b>	<b>530</b>	<b>4</b>	<b>14</b>	<b>12</b>

# DETOUR SCHEDULE

LOCATION	EARTH EXCAVATION (CUTS)	*FURNISHED EXCAVATION (FILLS = 64)	SEEDING, CLASS 2	SEEDING, CLASS 7	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	AGRI. GROUND LIMESTONE	EROSION CONTROL BLANKET	MULCH, METHOD 2	TEMP. DITCH CHECKS	BITUMINOUS MATERIALS (PRIMECOAT)	HMA SURFACE REMOVAL BUTT JOINT
	CU YD	CU YD	ACRE	ACRE	POUND	POUND	POUND	TON	SQ YD	ACRE	FOOT	GAL	SQ YD
END OF CONCRETE APRON AT MUDLINE - IL 4													80
MUDLINE RD (TRUCK ROUTE PORTION)												3295	160
SN 039-3226												634	134
MUDLINE RD (NON-TRUCK ROUTE PORTION)												6759	134
SN 039-3182												129	67
BEAUCUOP RD												70	274
SN 039-3168												10887	849
MUDLINE - BEAUCUOP RD INTERSECTION													
IL 13/127 - BEAUCUOP RD INTERSECTION	68	13	0.1	0.1	9	9	9	0.2	210	0.2	48	70	274
REMOVAL @ IL 13/127 - BEAUCUOP RD	33												
<b>TOTALS</b>	<b>101</b>	<b>13</b>	<b>0.1</b>	<b>0.1</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>0.2</b>	<b>210</b>	<b>0.2</b>	<b>48</b>	<b>10887</b>	<b>849</b>

\* CUTS - SHRINKAGE(25%) - FILLS = FURNISHED EXCAVATION  
68 - 17 - 64 = -13

# DETOUR SCHEDULE

LOCATION	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90	HOT-MIX ASPHALT		PAVED SHOULDER REMOVAL	HOT-MIX ASPHALT SHOULDERS	AGGERATE SHOULDERS, TYPE A	PIPE CULVERTS, CLASS A, TYPE 1 EQUIVALENT ROUND SIZE 42" TEMPORARY	CONCRETE COLLAR	TC&P, STD. 701201	GRADING & SHAPING SHLDRS	PAINT PAVEMENT MARKING LINE 4"	TEMPORARY PAVEMENT MARKING-LINE 4"	SHORT-TERM PAVEMENT MARKING
		SURFACE	LEVELING										
	TON	TON	TON	SQ YD	TON	TON	FOOT	CU YD	L SUM	UNITS	FOOT	FOOT	FOOT
MUDLINE RD (TRUCK ROUTE PORTION)	2785	1546			513	105				138	27456	27456	1283
MUDLINE RD (NON-TRUCK ROUTE PORTION)		298	149		119	25				32	6336	6336	295
BEAUCUOP RD		3174	1582		1262	257				340	67584	67584	3103
MUDLINE - BEAUCUOP RD INTERSECTION	19					1					888	888	41
IL 13/127 - BEAUCUOP RD INTERSECTION	181			46		3	11	1			654	654	30
REMOVAL @ IL 13/127 - BEAUCUOP RD				252									
<b>TOTALS</b>	<b>2985</b>	<b>5018</b>	<b>1731</b>	<b>298</b>	<b>1894</b>	<b>391</b>	<b>11</b>	<b>1</b>	<b>1</b>	<b>510</b>	<b>102918</b>	<b>102918</b>	<b>4752</b>

# EARTHWORK SCHEDULE

LOCATION STATION TO STATION	REMOVAL AND DISPOSAL OF UNSUIT. MATERIAL	CHANNEL EXCAVATION (UNSUITABLE)	*EARTH EXCAVATION	SHRINKAGE FACTOR, FOR EARTH EXCAVATION	EARTH EXCAVATION TO BE USED IN EMBANKMENT, ADJUSTED FOR SHRINKAGE	**EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)	FURNISHED EXCAVATION
	CU YD	CU YD	CU YD	%	CU YD	CU YD	CU YD	CU YD
RT STA 1115+75 TO STA 1118+00 EAST ABUTMENT	1500							
WEST ABUTMENT		450						
STA 1107+50 TO STA 1118+00		1500						
STA 1122+20 TO STA 1132+00			70	25	53	6460	-6407	6407
			480	25	360	750	-390	390
<b>TOTALS</b>	1500	1950	550	50	413	7210	-6797	6797

\*CUTS FROM CROSS SECTIONS  
\*\*FILLS FROM CROSS SECTIONS

## EROSION CONTROL SCHEDULE

LOCATION IL 4	PERIMETER EROSION BARRIER	EROSION CONTROL BLANKET	DITCH CHECKS	INLET & PIPE PROTECTION
	FOOT	SQ YD	FOOT	EACH
<b>NORTHWEST QUADRANT</b>				
LT STA. 1107+80 TO STA 1111+15	366			
LT STA. 1111+33 TO STA. 1112+88	159			
LT STA. 1113+01 TO STA. 1120+24	765			
LT STA. 11130+00 TO STA. 1117+43		1647		
<b>SOUTHWEST QUADRANT</b>				
RT STA. 1107+50 TO STA. 1111+11	344			
RT STA. 1111+24 TO STA. 1120+24	836			
RT. STA. 1160+00 TO STA. 1179+70		954		
<b>NORTHEAST QUADRANT</b>				
LT STA. 1120+64 TO STA. 1123+04	360			
LT STA. 1126+68 TO STA. 1128+19	153			
LT STA. 1122+77			12	
LT STA. 1122+59			12	
LT STA. 1122+37			12	
LT STA. 1123+87			12	
LT STA. 1124+32			12	
LT STA. 1125+19			12	
LT STA. 1125+79			12	
LT STA. 1126+17			12	
LT STA. 1126+50			12	
LT STA. 1126+77			12	
LT STA. 1127+25			12	
LT STA. 1127+73			12	
LT STA. 1127+91			12	
LT STA. 1121+42 TO STA. 1123+12		177		
LT STA. 1123+53 TO STA. 1127+58		181		
LT STA. 1123+58				1
<b>SOUTHEAST QUADRANT</b>				
RT STA. 1120+64 TO STA 1124+00	339			
RT STA. 1124+10 TO STA. 1127+24	301			
RT STA. 1128+80			12	
RT. STA. 1122+00 TO STA. 1123+00		146		
RT. STA. 1127+75 TO STA. 1129+69		140		
RT STA. 1127+77				1
RT STA. 1130+85				1
<b>TOTALS</b>	3625	3245	168	3

## HOT-MIX ASPHALT SCHEDULE

LOCATION IL 4	POLYMERIZED HOT-MIX ASPHALT BINDER COURSE IL-19, N90	SUBBASE GRANULAR MATERIAL, TYPE A	HOT-MIX ASPHALT BINDER COURSE IL-19, N90	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90	BITUMINOUS MATERIAL (PRIMECOAT)	AGGREGATE SURFACE COURSE, TYPE A
	TON	TON	TON	TON	GALLON	TON
STA 1111+50 TO STA 1117+63		2814				
STA 1122+27 TO STA 1125+50		1399				
STA 1108+78 TO STA 1117+45	316		1494	212		
STA 1122+48 TO STA 1126+87	160		732	107		
STA 1107+55 TO STA 1108+78				48		
STA 1126+87 TO STA 1127+72				29		
STA 1107+55 TO STA 1111+50					307	
STA 1111+50 TO STA 1117+45					465	
STA 1122+48 TO STA 1125+50					235	
STA 1125+50 TO STA 1127+75					169	
FE STA 1111+20						35
PE STA 1111+30						52
PE STA 1112+90						113
PE STA 1123+25						91
PE STA 1124+00						80
CE STA 1127+45						43
FE STA 1130+25						39
<b>TOTALS</b>	476	4213	2226	396	1176	452

## PAVEMENT REMOVAL AND MISC. SCHEDULE

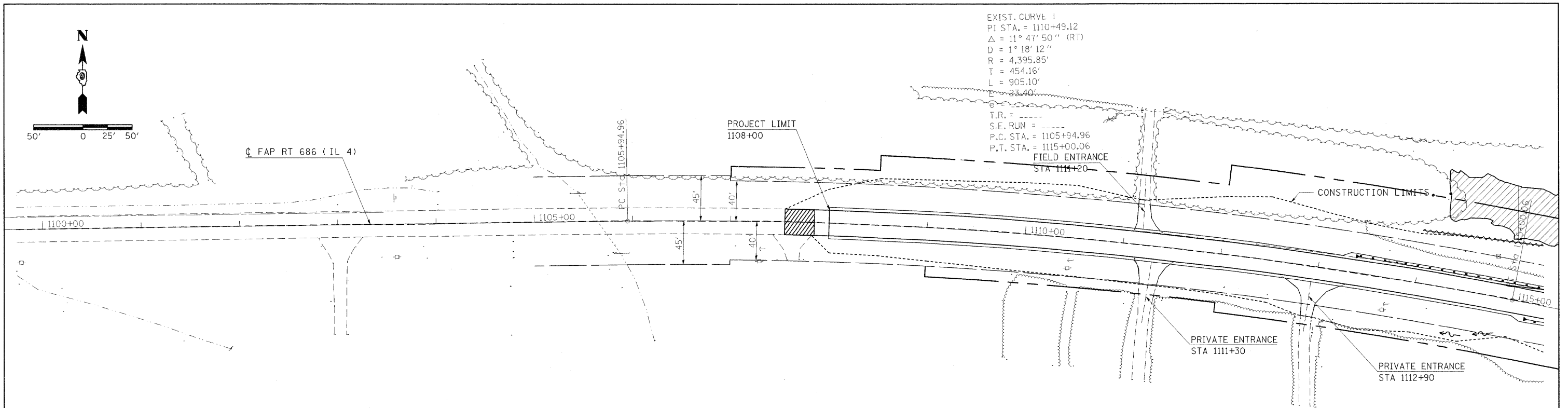
LOCATION IL 4	PAVEMENT REMOVAL	HMA SURFACE REMOVAL BUTT JOINT
	SQ YD	SQ YD
STA 1117+62 TO STA 1117+93	109	
STA 1122+07 TO STA 1122+38	110	
STA 1107+55 TO STA 1107+85		87
STA 1127+42 TO STA 1127+72		87
<b>TOTALS</b>	219	174

## SEEDING SCHEDULE

LOCATION IL 4	SEEDING CLASS 2	SEEDING CLASS 7	NITROGEN (N)	PHOSPHORUS (P)	POTASSIUM (K)	MULCH METHOD 2	AGRICULTURAL GROUND LIMESTONE	TEMPORARY EROSION CONTROL SEEDING
	ACRE	ACRE	LBS	LBS	LBS	ACRE	TON	POUND
NW QUAD	0.8	0.8	104	72	72	1.6	1.6	160
SW QUAD	0.7	0.7	90	62	62	1.4	1.4	140
NE QUAD	0.2	0.2	27	19	19.0	0.4	0.4	40
SE QUAD	0.4	0.4	52	36	36.0	0.8	0.8	80
<b>TOTALS</b>	2.1	2.1	273	189	189	4.2	4.2	420

DATE	
BY	
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BY	
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NO.	

DATE	
BY	
PROF. FILE	
NO.	



NOTES:

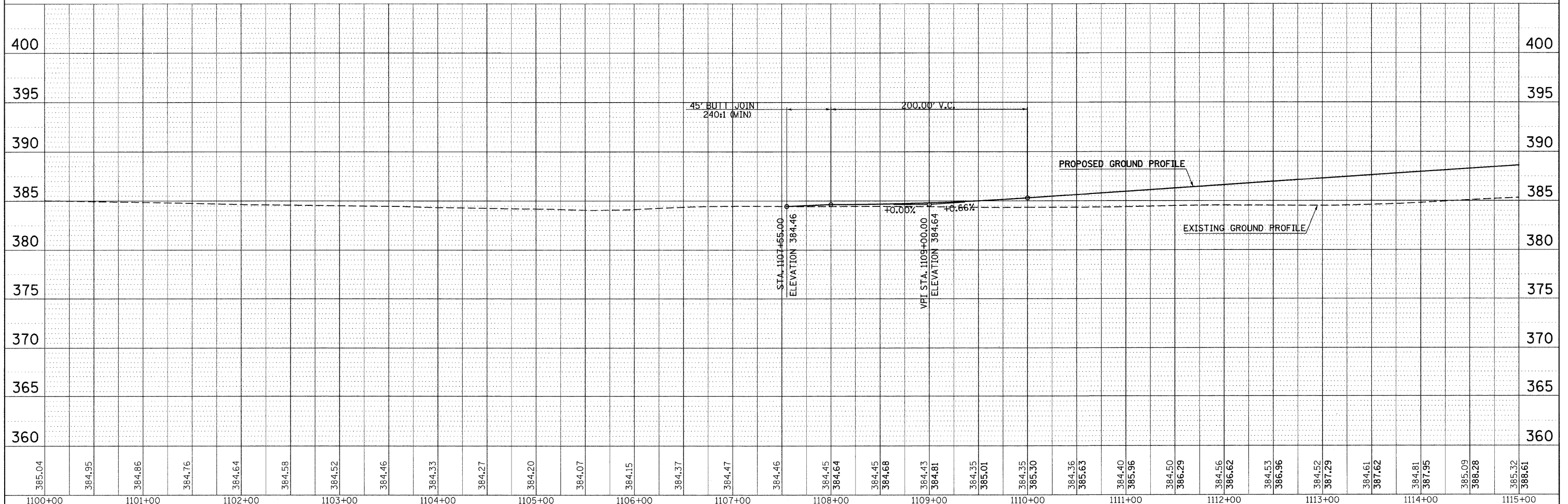
TEMP. ORANGE CONSTR. FENCING SHALL BE PLACED ADJACENT TO ALL WETLANDS.



WETLANDS



TEMP. ORANGE CONSTR. FENCING



FILE NAME =	USER NAME = halsteadtw	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL 4 OVER BEAUCOUP CREEK PLAN PROFILE</b>	F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
es:\pw\work\p\midot\halsteadtw\dms49788\78099-shr-pln.dgn		DRAWN -	REVISED -			686	114B-1	JACKSON	114	13
PLOT SCALE = 50.0000' / in.		CHECKED -	REVISED -			CONTRACT NO. 78049				
PLOT DATE = 10/18/2011		DATE -	REVISED -			SCALE: 1"=50'	SHEET NO. OF SHEETS	STA. 1100+00.00 TO STA. 1115+00.00	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT

NOTES:

TEMP. ORANGE CONSTR. FENCING SHALL BE PLACED ADJACENT TO ALL WETLANDS.

PIPE CULVERT, CLASS D  
TYPE 1, 24"  
USFL = 386.78  
RT STA 1123+48  
DSFL = 385.01  
RT STA 1122+98  
METAL END SECTIONS 24"

PROPOSED STRUCTURE NO. 039-0074  
448'-0" BK TO BK ABUTMENTS, 35'-2" OUT TO OUT  
STA 1119+95.00 (IL 4)

PRIVATE ENTRANCE  
STA 1123+25

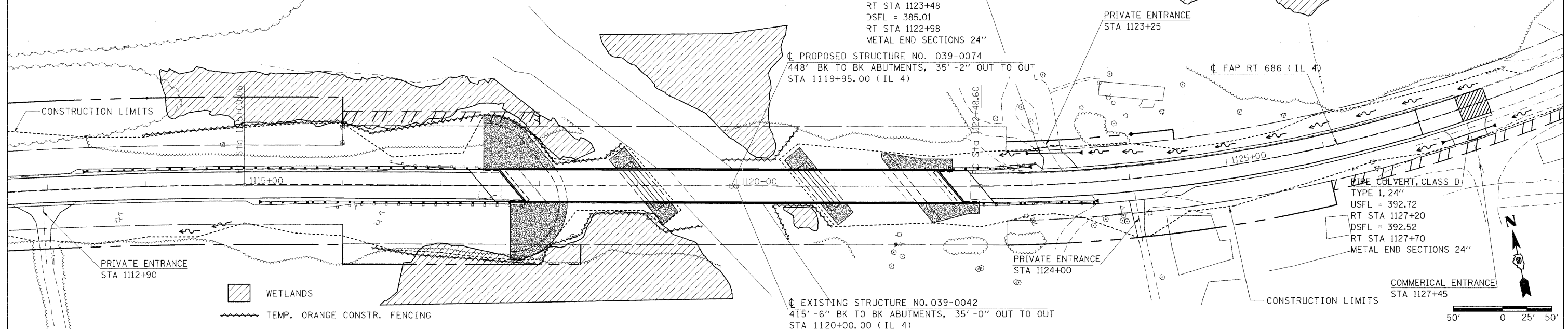
FAP RT 686 (IL 4)

PIPE CULVERT, CLASS D  
TYPE 1, 24"  
USFL = 392.72  
RT STA 1127+20  
DSFL = 392.52  
RT STA 1127+70  
METAL END SECTIONS 24"

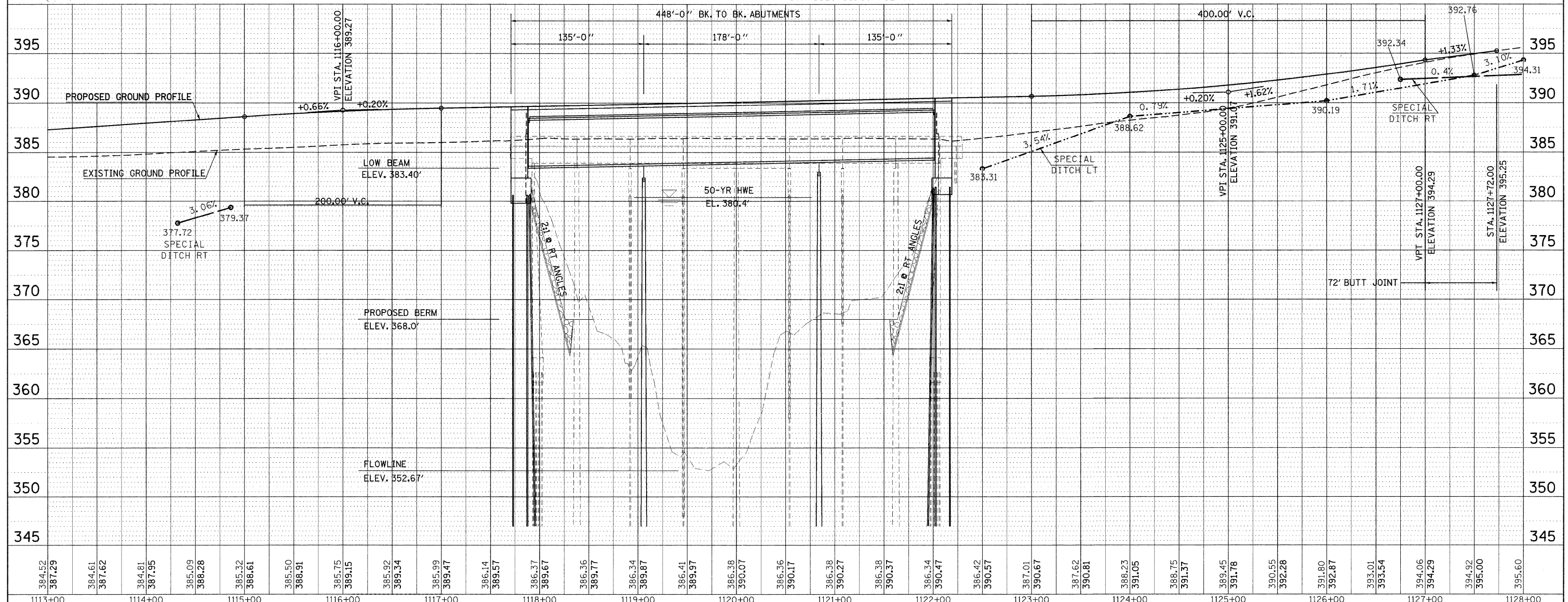
EXISTING STRUCTURE NO. 039-0042  
415'-6" BK TO BK ABUTMENTS, 35'-0" OUT TO OUT  
STA 1120+00.00 (IL 4)

COMMERCIAL ENTRANCE  
STA 1127+45

PLAN	SURVEYED	DATE
	PLOTTED	
	GRADED	
	REVISIONS	
	NO. OF WAY CHECKED	
	CADD FILE NAME	
	NO.	



PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADED	
	REVISIONS	
	NO. OF WAY CHECKED	
	STRUCTURE NOTATIONS	
	NO.	



384.52	387.29	384.61	387.62	384.81	387.95	385.09	388.28	385.32	388.61	385.50	388.91	385.75	389.15	385.92	389.34	385.99	389.47	386.14	389.57	386.37	389.67	386.36	389.77	386.34	389.87	386.41	389.97	386.38	390.07	386.36	390.17	386.38	390.27	386.38	390.37	386.34	390.47	386.42	390.57	387.01	390.67	387.62	390.81	388.23	391.05	388.75	391.37	389.45	391.78	390.55	392.28	391.80	392.87	393.01	393.54	394.06	394.29	394.92	395.00	395.60
1113+00	1114+00	1115+00	1116+00	1117+00	1118+00	1119+00	1120+00	1121+00	1122+00	1123+00	1124+00	1125+00	1126+00	1127+00	1128+00																																													

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 CHECKED -  
 DATE -  
 PLOT SCALE = 50.0000' / 1"  
 PLOT DATE = 10/18/2011

DESIGNED -  
 REVISIONS -  
 REVISIONS -  
 REVISIONS -  
 REVISIONS -

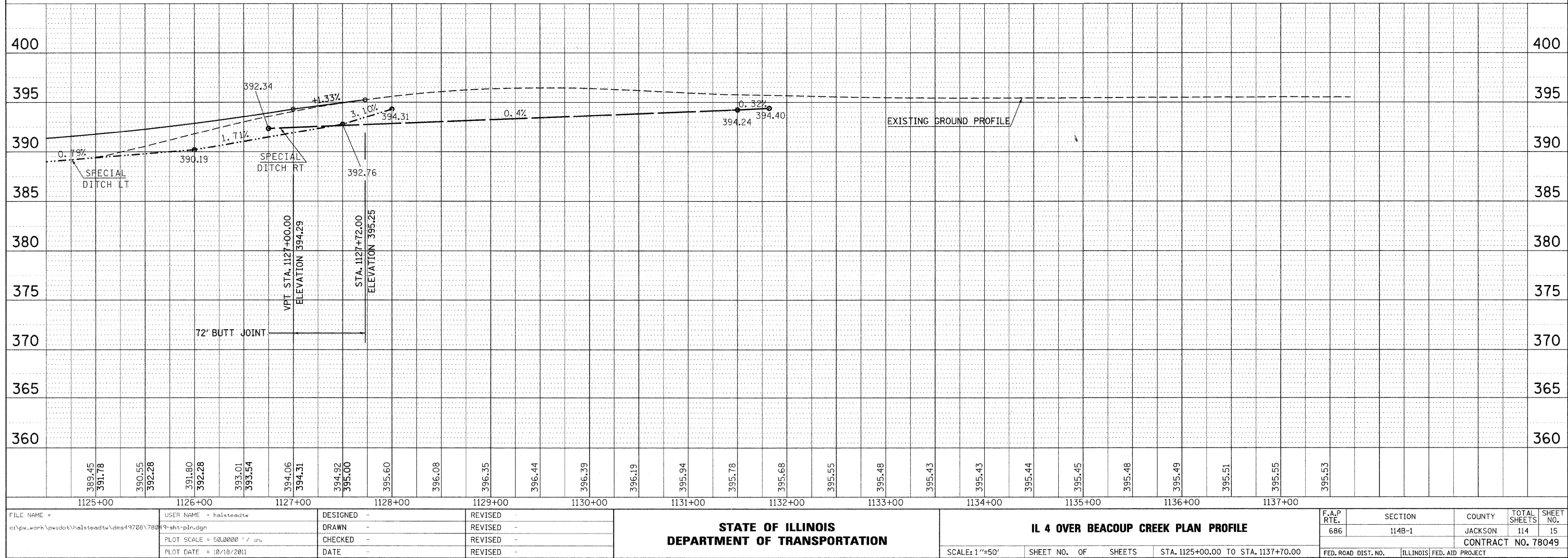
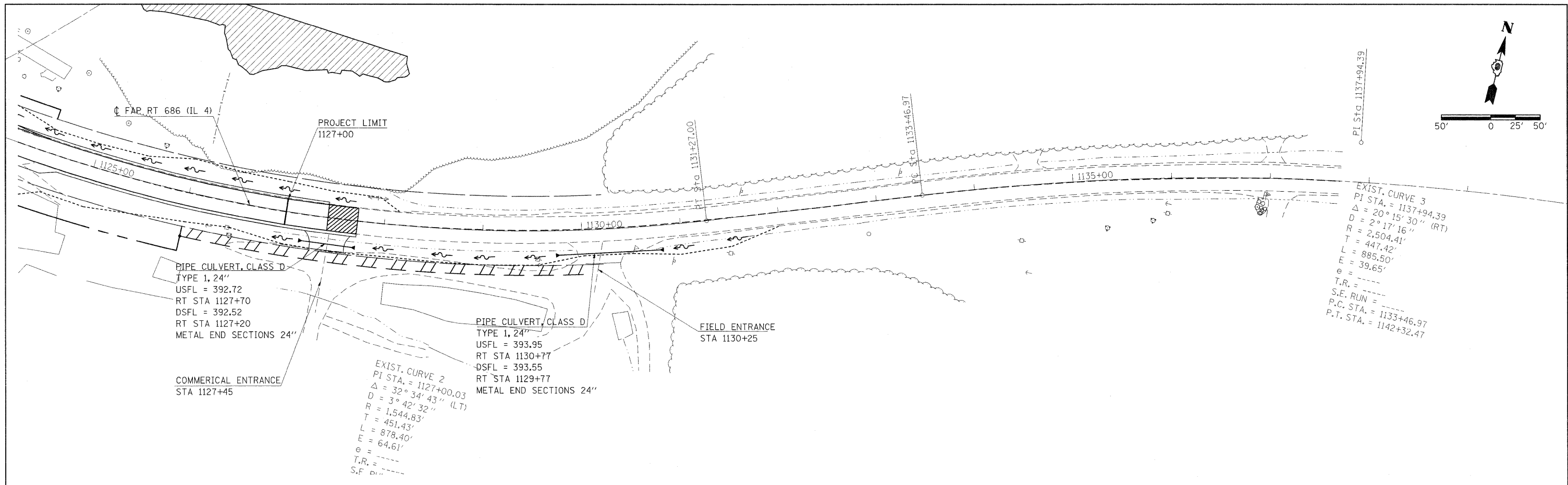
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

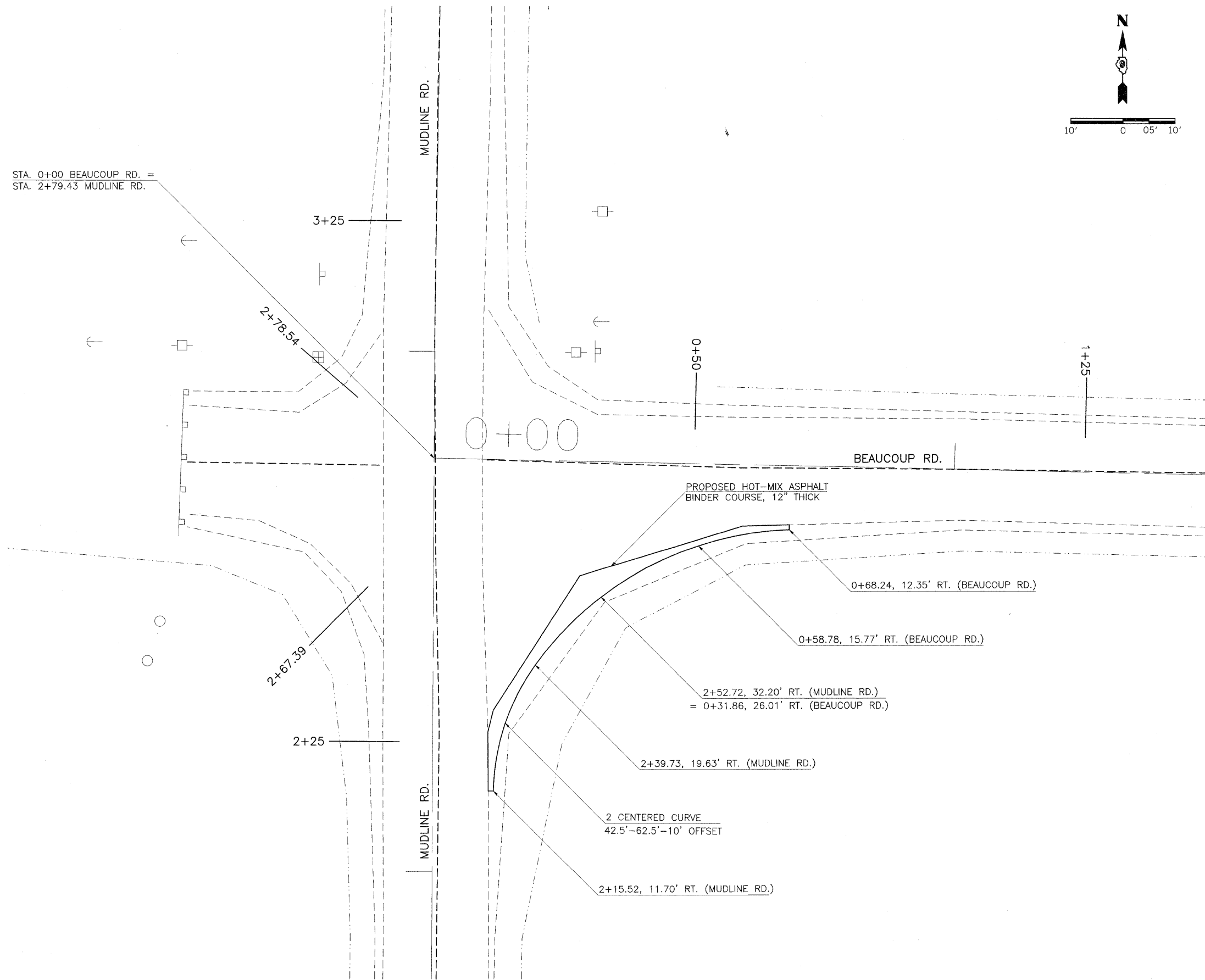
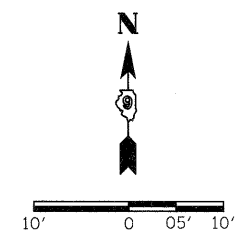
**IL 4 OVER BEAUCOUP CREEK PLAN PROFILE**  
 SCALE: 1"=50'  
 SHEET NO. OF SHEETS  
 STA. 1113+00.00 TO STA. 1128+00.00

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 14
CONTRACT NO. 78049			ILLINOIS FED. AID PROJECT	

DATE BY  
 DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

DATE BY  
 DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -





FILE NAME =	USER NAME = halsteadtw	DESIGNED -	REVISED -
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PLOT DATE = 10/18/2011		DATE -	REVISED -

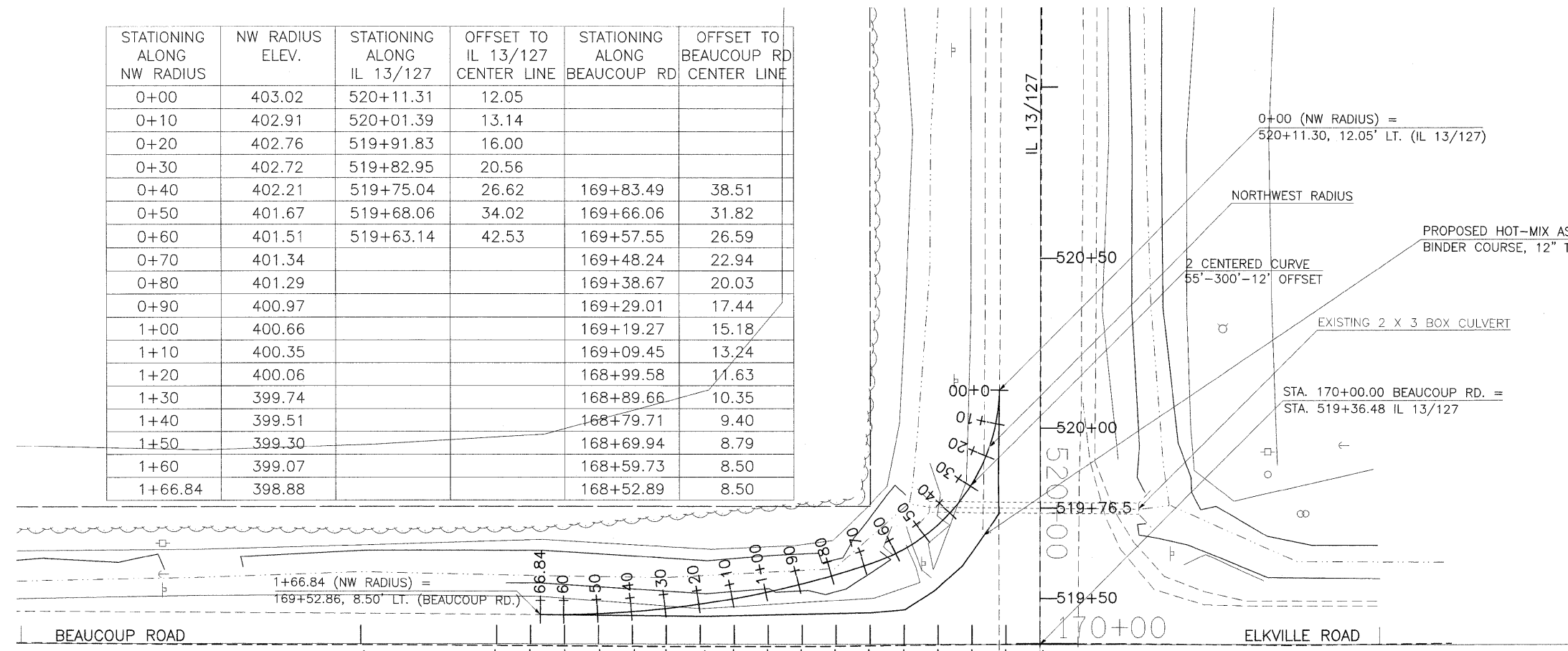
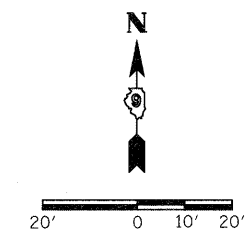
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>MUDLINE ROAD - BEAUCOUP ROAD INTERSECTION IMPROVEMENT</b>			
SCALE:	SHEET NO. OF	SHEETS	STA. TO STA.

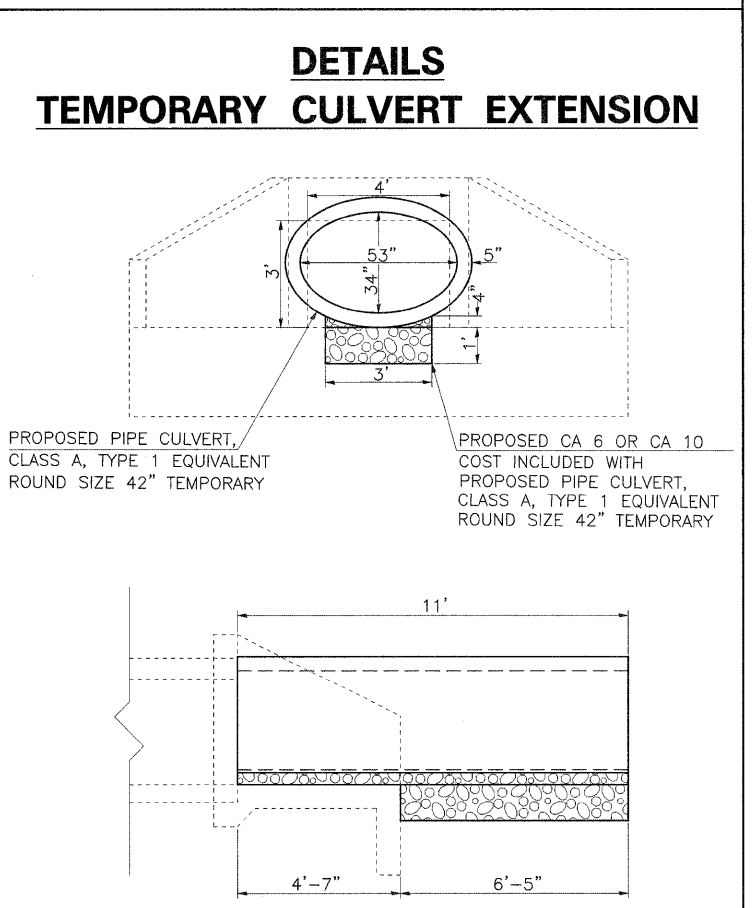
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	16
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				



STATIONING ALONG NW RADIUS	NW RADIUS ELEV.	STATIONING ALONG IL 13/127	OFFSET TO IL 13/127 CENTER LINE	STATIONING ALONG BEAUCOUP RD	OFFSET TO BEAUCOUP RD CENTER LINE
0+00	403.02	520+11.31	12.05		
0+10	402.91	520+01.39	13.14		
0+20	402.76	519+91.83	16.00		
0+30	402.72	519+82.95	20.56		
0+40	402.21	519+75.04	26.62	169+83.49	38.51
0+50	401.67	519+68.06	34.02	169+66.06	31.82
0+60	401.51	519+63.14	42.53	169+57.55	26.59
0+70	401.34			169+48.24	22.94
0+80	401.29			169+38.67	20.03
0+90	400.97			169+29.01	17.44
1+00	400.66			169+19.27	15.18
1+10	400.35			169+09.45	13.24
1+20	400.06			168+99.58	11.63
1+30	399.74			168+89.66	10.35
1+40	399.51			168+79.71	9.40
1+50	399.30			168+69.94	8.79
1+60	399.07			168+59.73	8.50
1+66.84	398.88			168+52.89	8.50

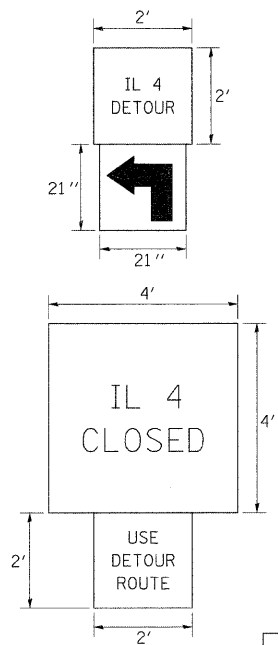


STATIONING ALONG SW RADIUS	SW RADIUS ELEV.	STATIONING ALONG BEAUCOUP RD	OFFSET TO BEAUCOUP RD CENTER LINE	STATIONING ALONG IL 13/127	OFFSET TO IL 13/127 CENTER LINE
0+00	400.84	169+26.24	12.05		
0+10	401.15	169+36.10	13.59		
0+20	401.37	169+45.52	16.90		
0+30	401.65	169+54.18	21.85		
0+40	401.94	169+61.80	28.29	519+08.25	38.09
0+50	402.24	169+38.13	36.01	519+00.53	31.78
0+60	402.54	169+72.96	44.74	518+91.79	26.93
0+70	402.85			518+82.34	23.65
0+80	403.14			518+72.69	20.99
0+90	403.40			518+62.96	18.67
1+00	403.70			518+53.15	16.68
1+10	403.87			518+43.29	15.04
1+20	403.99			518+33.37	13.77
1+30	404.09			518+23.41	12.82
1+40	404.18			518+13.43	12.15
1+44.06	404.22			518+09.37	12.07



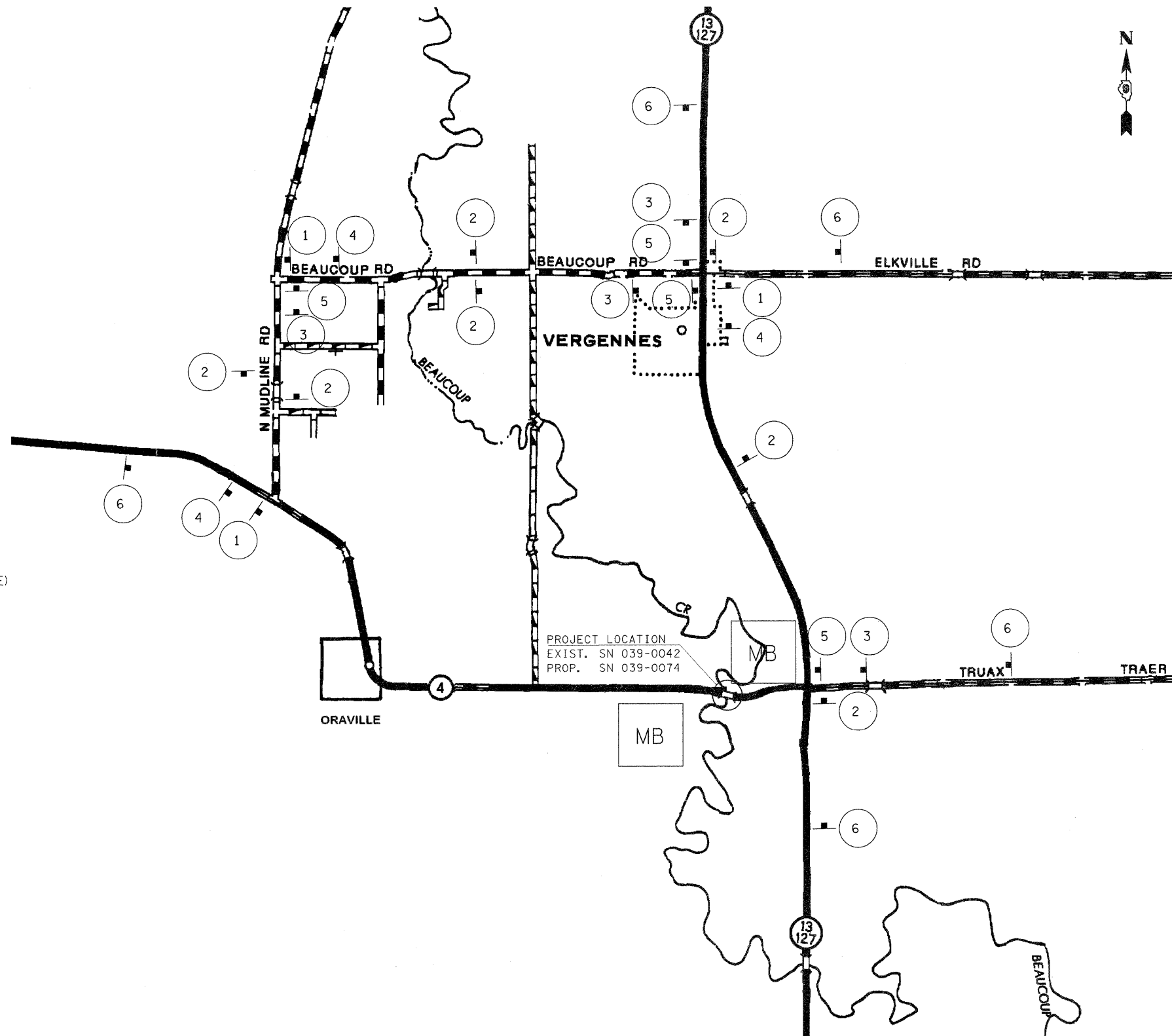
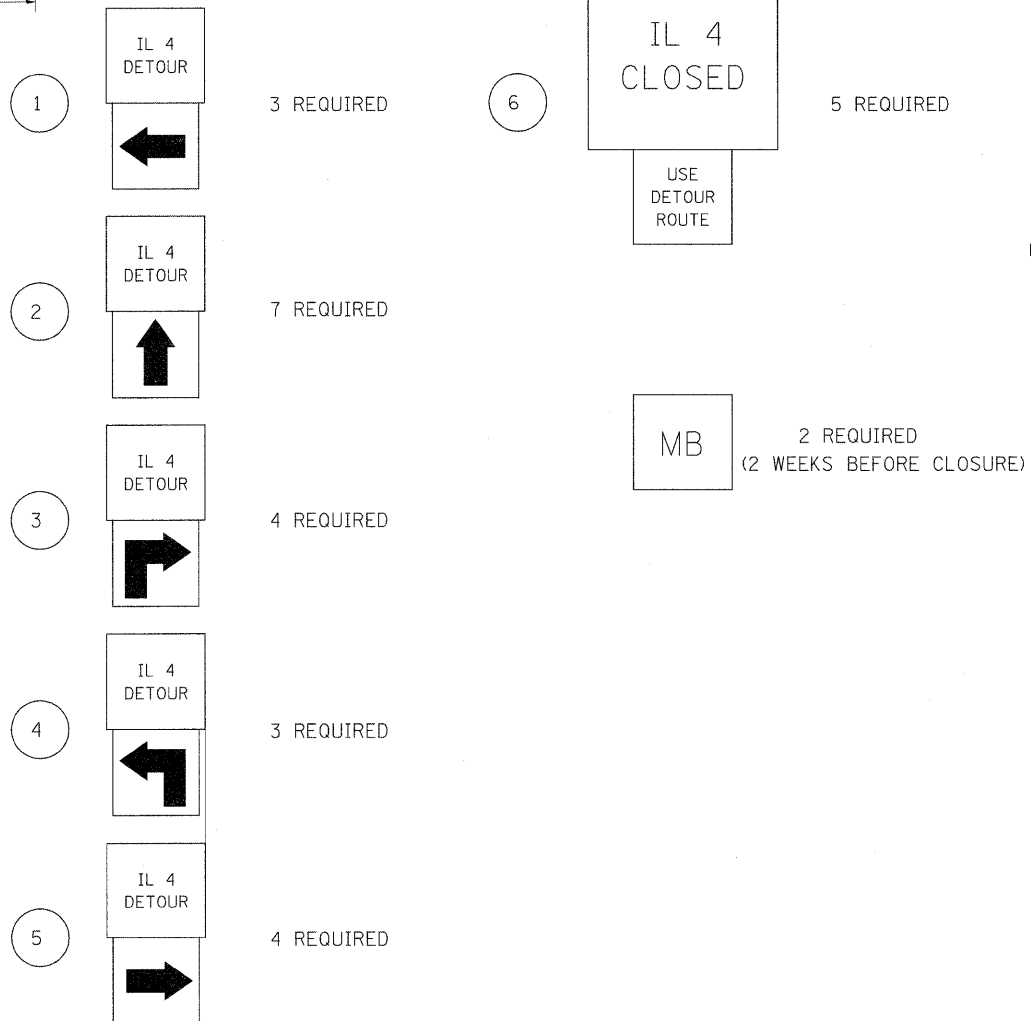
# DETOUR SIGNING PLAN

## SIGN DETAIL



### NOTES:

1. THE CONTRACTOR HAS THE OPTION OF USING METAL POSTS INSTEAD OF WOOD.
2. ALL SIGNS SHALL BE BLACK ON ORANGE. THE POSTS SHALL BE PLACED 12 FEET FROM THE EDGE OF PAVEMENT AS DIRECTED BY THE ENGINEER.
3. ALL SIGNS AND HARDWARE REQUIRED TO INSTALL THE DETOUR ROUTE SIGNING SHALL BE INCLUDED IN COST OF TRAFFIC CONTROL AND PROTECTION, BLR 21.
4. SIGNS SHALL BE REMOVED ON COMPLETION OF THE CONTRACT AT THE DIRECTION OF THE ENGINEER. THIS WORK SHALL BE COMPLETED ACCORDING TO SECTION 724 OF THE STANDARD SPECIFICATIONS. THIS WORK WILL NOT BE PAID FOR. THE SIGNS AND POSTS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
5. THE RELOCATING, MAINTENANCE OR REPLACEMENT OF SIGNS SHALL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04.
6. EXACT SIGN PLACEMENT WILL BE DETERMINED BY THE ENGINEER.
7. THE DISTRICT 9 OPERATIONS ENGINEER SHALL BE CONTACTED 10 DAYS PRIOR TO THE ERECTION OF SIGNS.



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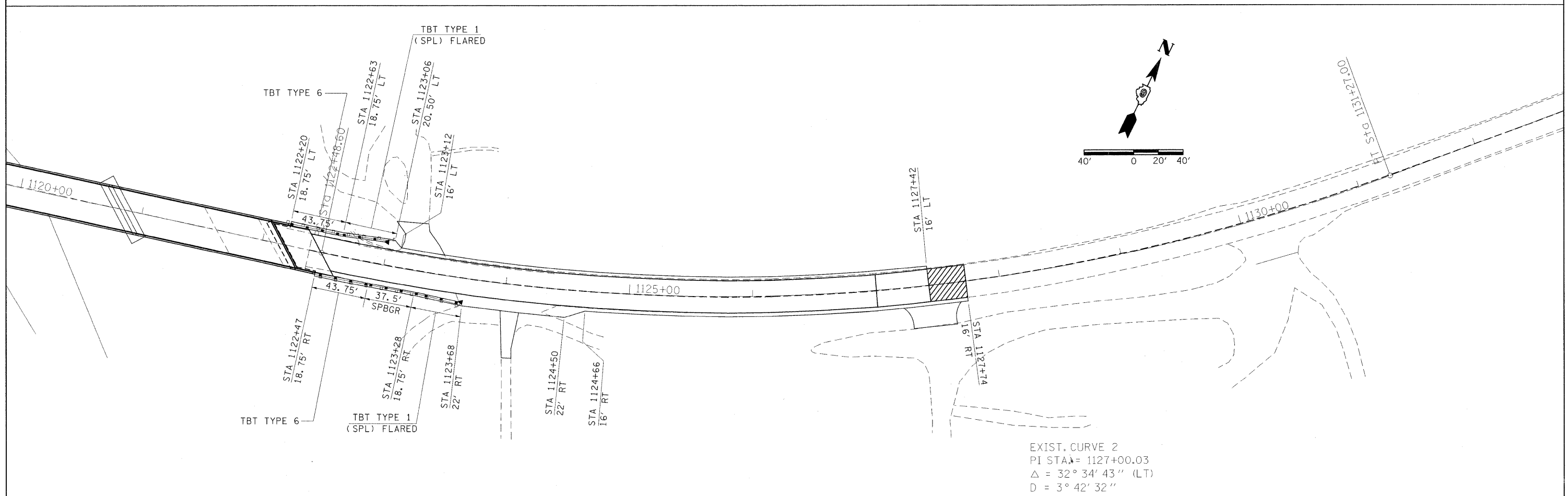
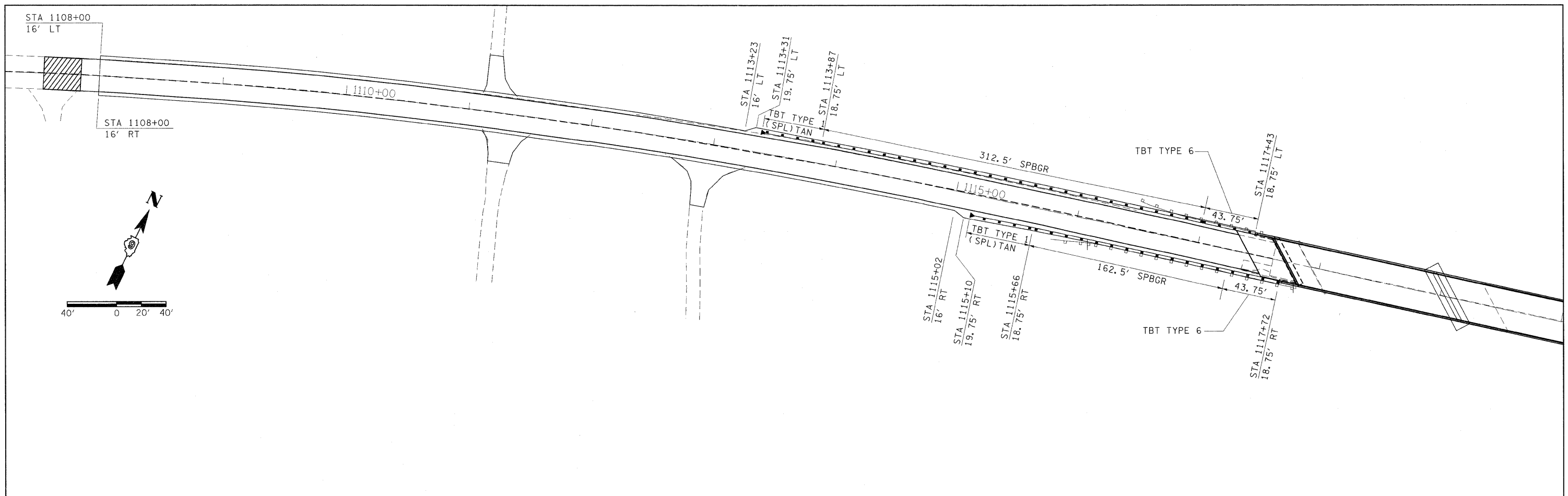
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	DRAWN -	REVISED -
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PLOT DATE = 11/3/2011	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**DETOUR SIGNING SHEET**

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

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 18
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				



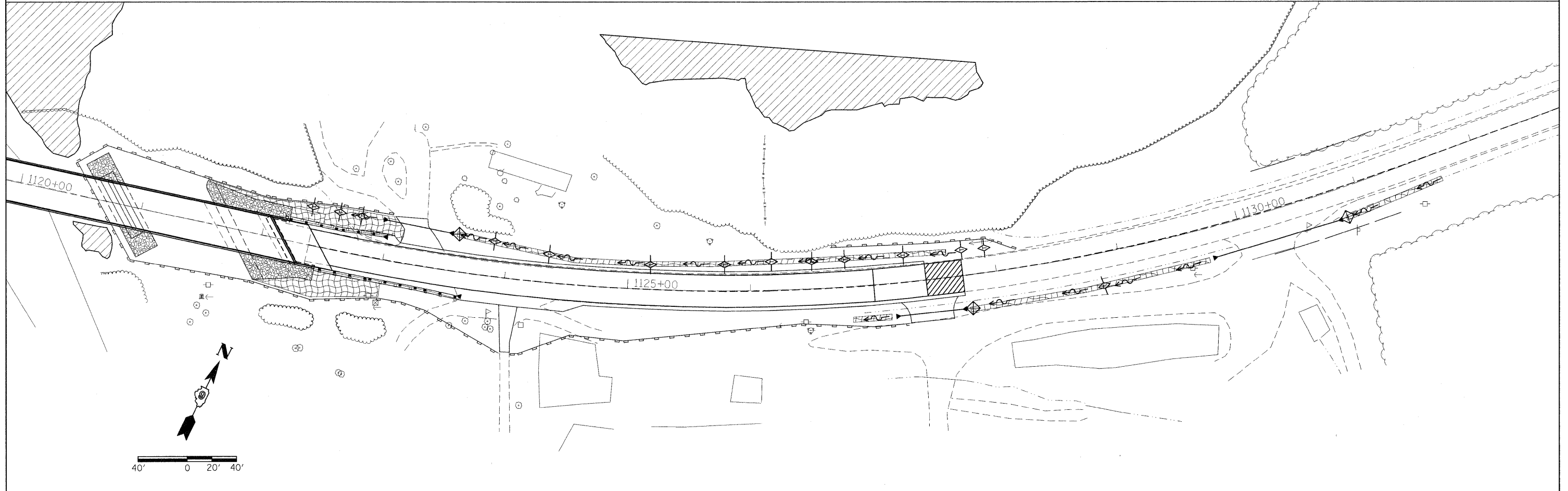
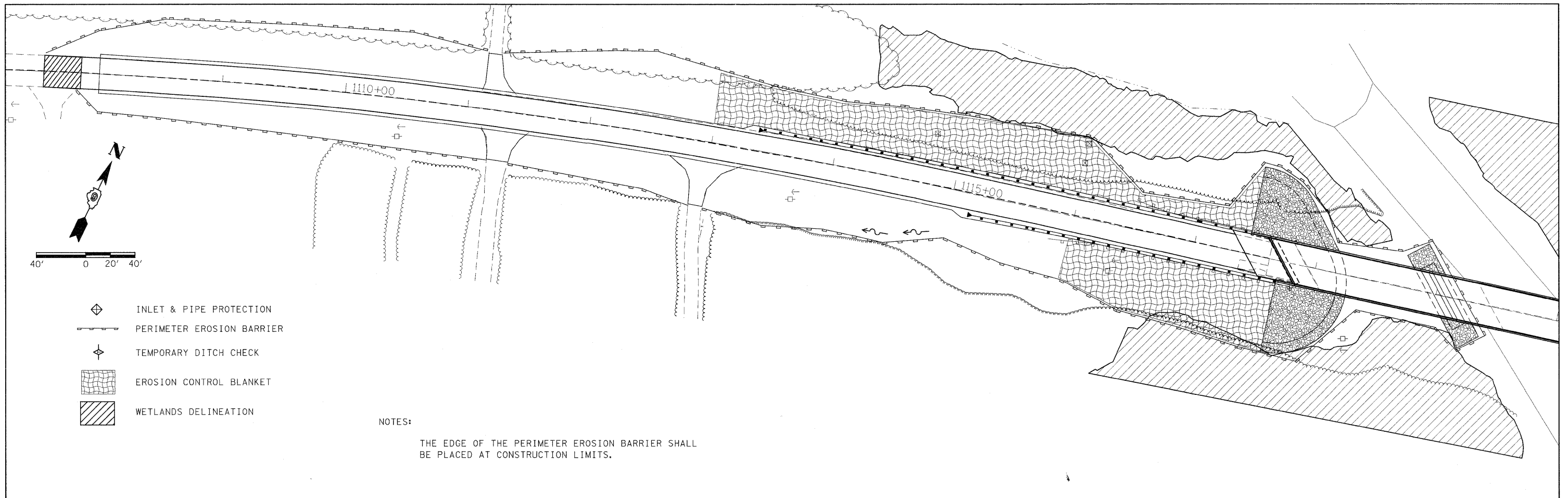
EXIST. CURVE 2  
 PI STA = 1127+00.03  
 $\Delta = 32^\circ 34' 43''$  (LT)  
 $D = 3^\circ 42' 32''$

FILE NAME =	USER NAME = halsteadtw	DESIGNED -	REVISED -
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PLOT SCALE = 40,0000' / in.		CHECKED -	REVISED -
PLOT DATE = 10/18/2011		DATE -	REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

<b>PROPOSED HMA SHOULDER &amp; GUARDRAIL LAYOUT</b>			
SCALE:	SHEET NO. OF	SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	19
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				



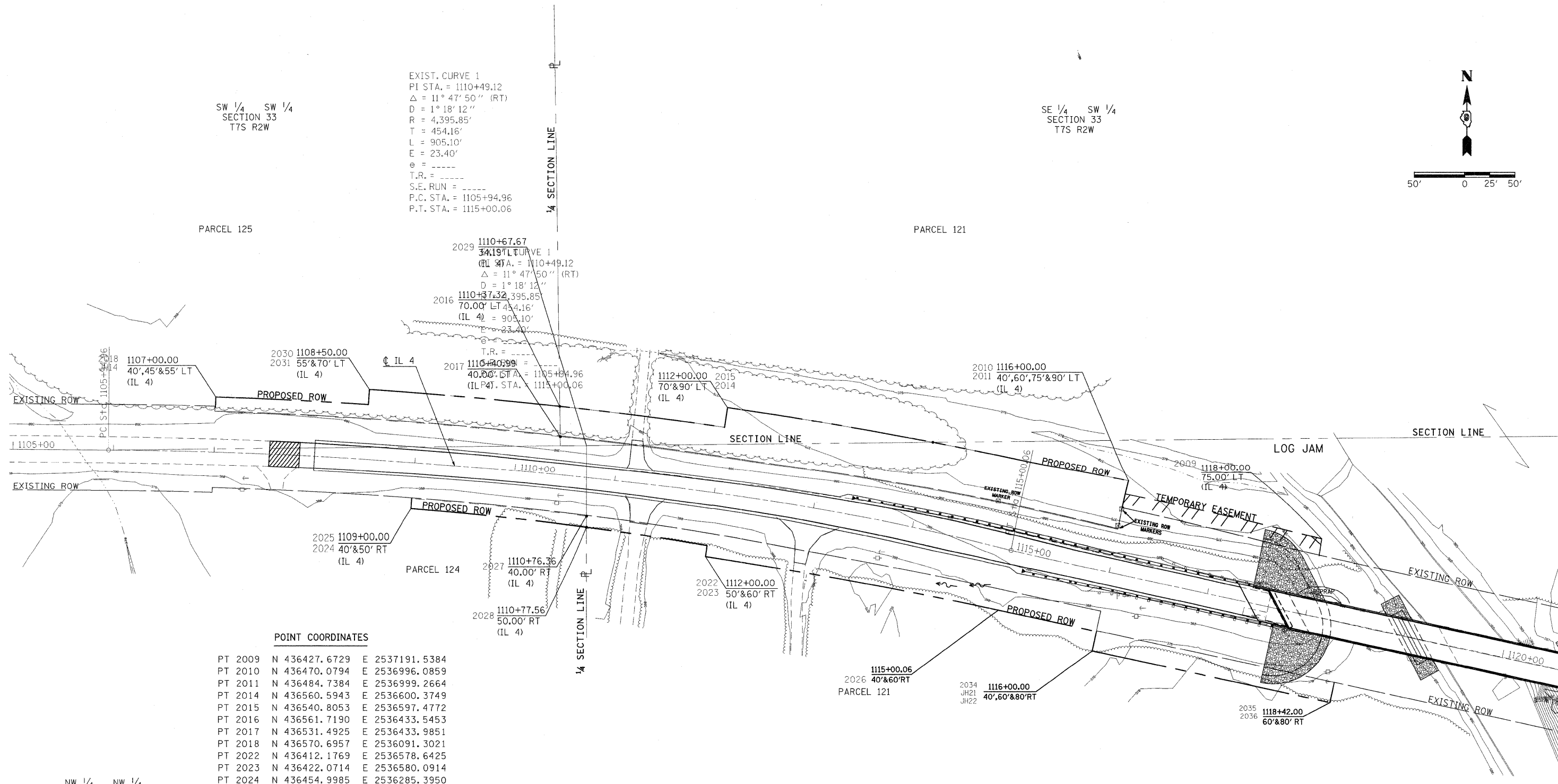
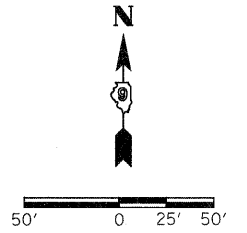
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cs:\pw_work\pwidot\halsteadw\dms49788\78049-sht-pln.dgn	PLOT SCALE = 40,0000 ' / in.	DRAWN -	REVISED -					686	114B-1	JACKSON	114	20
	PLOT DATE = 10/19/2011	CHECKED -	REVISED -		CONTRACT NO. 78049			ILLINOIS FED. AID PROJECT				
		DATE -	REVISED -		SCALE:	SHEET NO. OF	SHEETS	STA.	TO STA.			

PARCEL NO.	PROPERTY OWNER	PURPOSE	ACREAGE
121	PURLE ALSTAT	ROW / T. E.	1.020 / 0.839
124	STACEY R. AND TONI WRIGHT	ROW	0.040
125	SCOTT EVANS	ROW	0.184

SW 1/4 SW 1/4  
SECTION 33  
T7S R2W

SE 1/4 SW 1/4  
SECTION 33  
T7S R2W

EXIST. CURVE 1  
PI STA. = 1110+49.12  
 $\Delta = 11^\circ 47' 50''$  (RT)  
D = 1° 18' 12"  
R = 4,395.85'  
T = 454.16'  
L = 905.10'  
E = 23.40'  
e = -----  
T.R. = -----  
S.E. RUN = -----  
P.C. STA. = 1105+94.96  
P.T. STA. = 1115+00.06



**POINT COORDINATES**

PT 2009	N	436427.6729	E	2537191.5384
PT 2010	N	436470.0794	E	2536996.0859
PT 2011	N	436484.7384	E	2536999.2664
PT 2014	N	436560.5943	E	2536600.3749
PT 2015	N	436540.8053	E	2536597.4772
PT 2016	N	436561.7190	E	2536433.5453
PT 2017	N	436531.4925	E	2536433.9851
PT 2018	N	436570.6957	E	2536091.3021
PT 2022	N	436412.1769	E	2536578.6425
PT 2023	N	436422.0714	E	2536580.0914
PT 2024	N	436454.9985	E	2536285.3950
PT 2025	N	436464.9688	E	2536286.1657
PT 2026	N	436359.3388	E	2536869.7971
PT 2027	N	436448.0086	E	2536460.0891
PT 2028	N	436437.9389	E	2536460.0918
PT 2029	N	436522.7091	E	2536460.0688
PT 2030	N	436563.3008	E	2536242.9914
PT 2031	N	436578.2684	E	2536243.9773
PT 2034	N	436318.6037	E	2536963.2209
PT 2035	N	436267.2918	E	2537199.7184
PT 2036	N	436286.8371	E	2537203.9590
PT JH14	N	436555.7032	E	2536090.8274
PT JH21	N	436338.1490	E	2536967.4615
PT JH22	N	436357.6942	E	2536971.7022

NW 1/4 NW 1/4  
SECTION 4  
T8S R2W

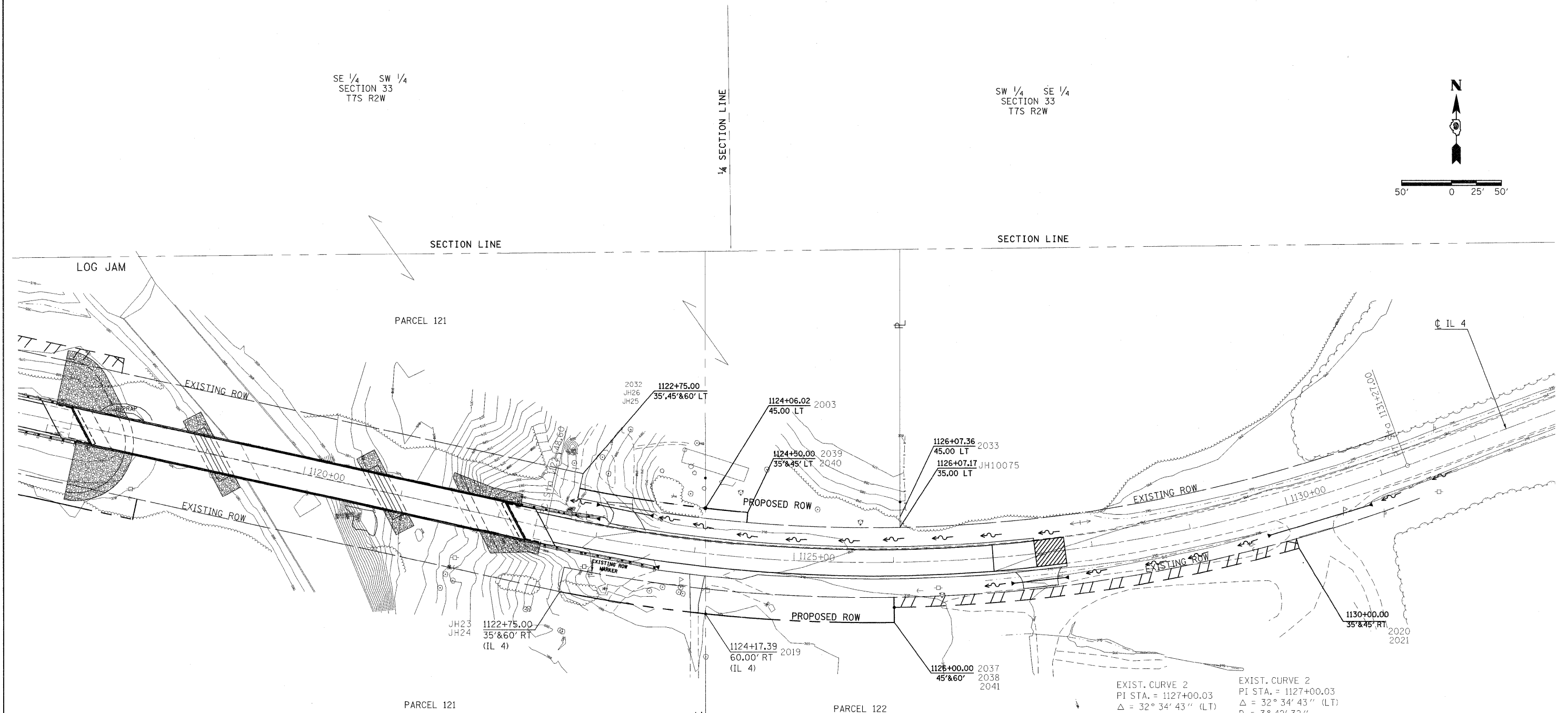
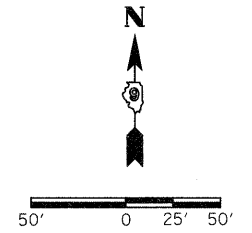
NE 1/4 NW 1/4  
SECTION 4  
T8S R2W

FILE NAME =	USER NAME = halsteadtw	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL 4 OVER BEACOUPE CREEK RIGHT OF WAY PLAN</b>	F.A.P. RTE. =	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
ci:\pw\work\p\dot\halsteadtw\dms49753\01609_sht_row.dgn		DRAWN -	REVISED -			686	114B-1	JACKSON	114	21	
		CHECKED -	REVISED -			R-99-016-09		CONTRACT NO. 78049		ILLINOIS FED. AID PROJECT	
		DATE -	REVISED -			SCALE: 1"=50'	SHEET NO. OF SHEETS	STA. 1105+00.00 TO STA. 1120+00.00			

PARCEL NO.	PROPERTY OWNER	PURPOSE	ACREAGE
121	PURLE ALSTAT	ROW / T. E.	1.020 / 0.839
122	DANIEL ALSTAT	ROW / T. E.	0.111 / 0.094

SE 1/4 SW 1/4  
SECTION 33  
T7S R2W

SW 1/4 SE 1/4  
SECTION 33  
T7S R2W



EXIST. CURVE 2  
PI STA. = 1127+00.03  
Δ = 32° 34' 43" (LT)  
D = 3° 42' 32"  
R = 1,544.83'  
T = 451.43'  
L = 878.40'  
E = 64.61'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 1122+48.60  
P.T. STA. = 1131+27.00

EXIST. CURVE 2  
PI STA. = 1127+00.03  
Δ = 32° 34' 43" (LT)  
D = 3° 42' 32"  
R = 1,544.83'  
T = 451.43'  
L = 878.40'  
E = 64.61'  
e = ----  
T.R. = ----  
S.E. RUN = ----  
P.C. STA. = 1122+48.60  
P.T. STA. = 1131+27.00

POINT COORDINATES

PT 2003	N 436278.4900	E 2537774.3228
PT 2019	N 436172.8716	E 2537774.3585
PT 2020	N 436169.0819	E 2538067.5136
PT 2021	N 436194.0048	E 2538065.5520
PT 2032	N 436298.0168	E 2537648.6709
PT 2033	N 436269.3930	E 2537969.4501
PT 2039	N 436264.3678	E 2537815.9909
PT 2040	N 436274.3331	E 2537816.8828
PT 2037	N 436189.2135	E 2537963.4142
PT 2038	N 436164.2873	E 2537963.7585
PT 2041	N 436179.2859	E 2537963.5514
PT JH23	N 436195.0388	E 2537628.1640
PT JH24	N 436219.5574	E 2537633.0466
PT JH25	N 436288.2094	E 2537646.7179
PT JH26	N 436312.7279	E 2537651.6005
PTJH10075	N 436259.3913	E 2537969.4531

NE 1/4 NW 1/4  
SECTION 4  
T8S R2W

NW 1/4 NE 1/4  
SECTION 4  
T8S R2W

FILE NAME =	USER NAME = halsteadw	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL 4 OVER BEACOUPE CREEK RIGHT OF WAY PLAN</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pwwork\pwwork\halsteadw\dms49753\01609_sht_row.dgn		DRAWN -	REVISED -			686	114B-1	JACKSON	114	22	
	PLOT SCALE = 50.0000' / in.	CHECKED -	REVISED -			R-99-016-09 CONTRACT NO. 78049					
	PLOT DATE = 10/18/2011	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
					SCALE: 1"=50'	SHEET NO. OF	SHEETS	STA. 1118+00.00 TO STA. 1132+00.00			

# SEEDING & MULCHING

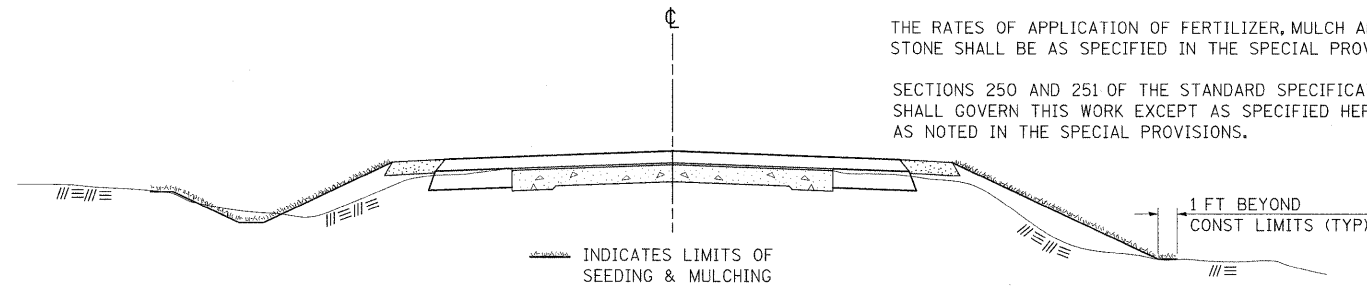
## GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS.

FERTILIZER NUTRIENTS AND LIMESTONE SHALL BE APPLIED TO ALL SEEDDED AREAS.

THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS.

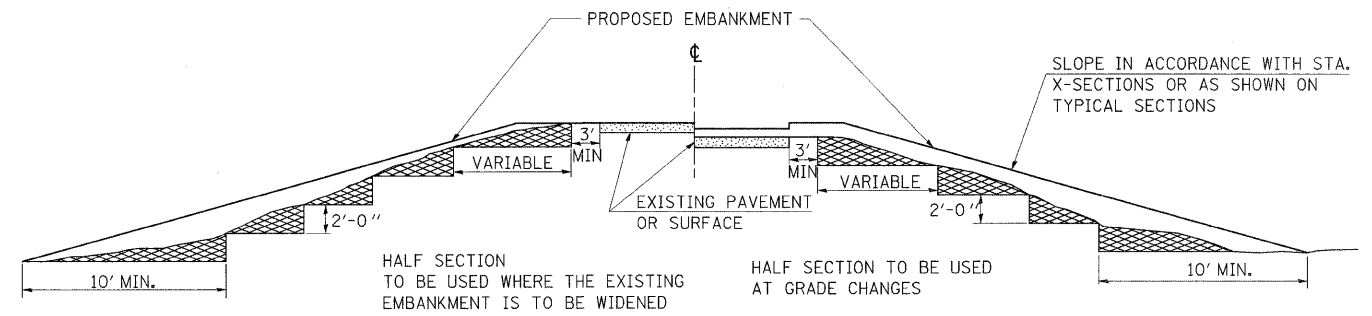
SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.



REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	3-27-08

STD. 9-12

# TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL

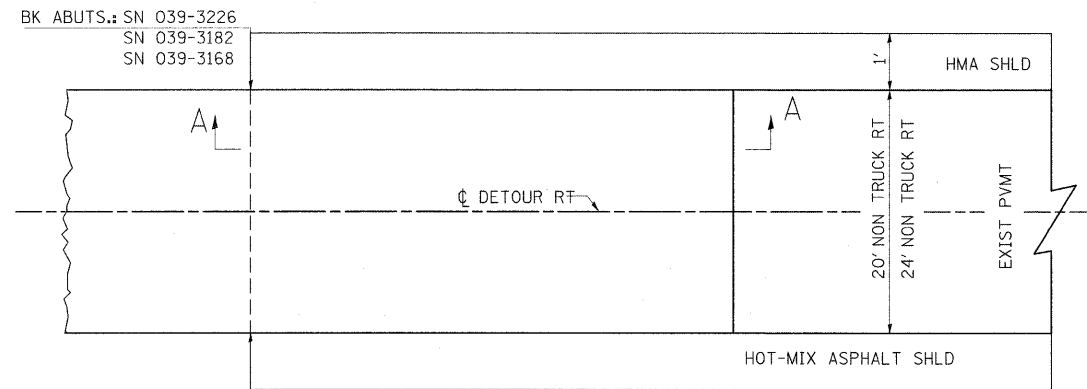


MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

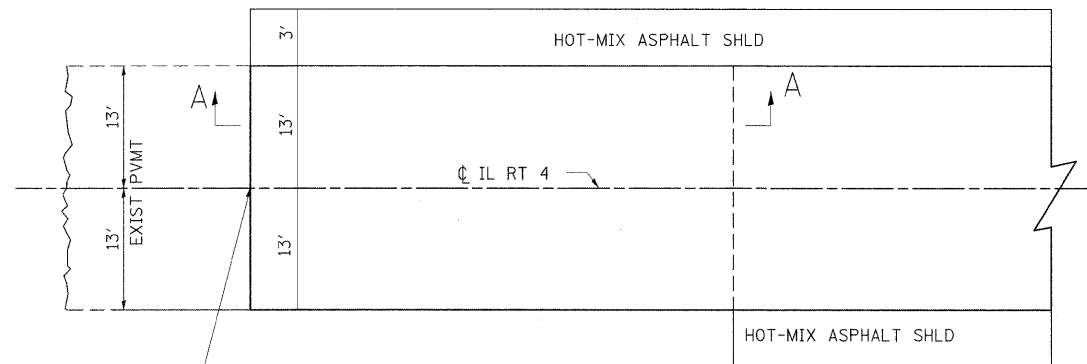
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STD. 9-16

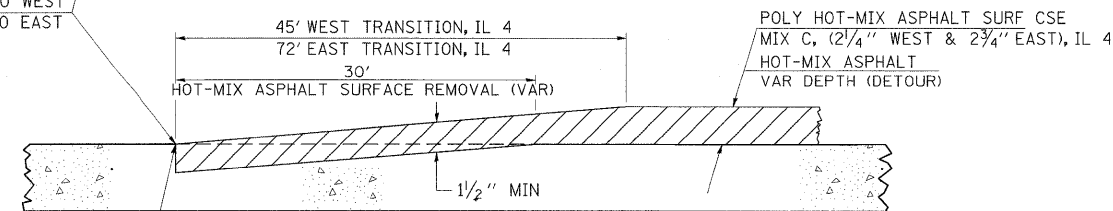
# BUTT JOINT



N. OF INTERSECTION OF MUDLINE & BEAUCOUP RD.,  
END OF CONC. APRON (MUDLINE & IL 4)  
& AT END OF BEAUCOUP RD AND IL 13/127



STA 1107+55.00 WEST  
STA 1127+72.00 EAST



EXIST PVMT (IL 4 & DETOUR)  
OR BK OF BRIDGE ABUT (DETOUR)

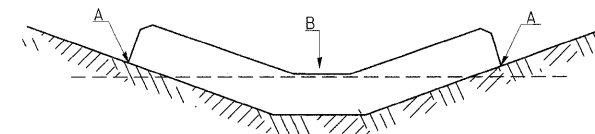
## SECTION A-A

STD. 9-86

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REVISED	3-25-08
REVISED	

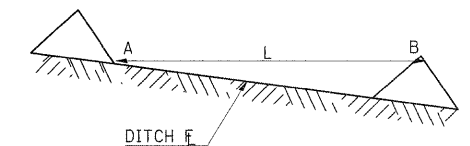
# TEMPORARY DITCH CHECKS

## PLACEMENT OF TEMPORARY DITCH CHECK IN DRAINAGE WAY



POINTS A SHOULD BE HIGHER THAN POINT B

## SPACING BETWEEN TEMPORARY DITCH CHECKS



L = THE DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION

B = THE LOW POINT IN CENTER OF CHECK

REVISIONS	
DRAWN	9-01-99
REVISED	10-3-01
RESIZED	5-8-08
REVISED	05-04-10

STD. 9-108

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	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DISTRICT STANDARDS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	23
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

# RURAL SIDE APPROACH DETAILS

## PRIVATE AND COMMERCIAL ENTRANCES

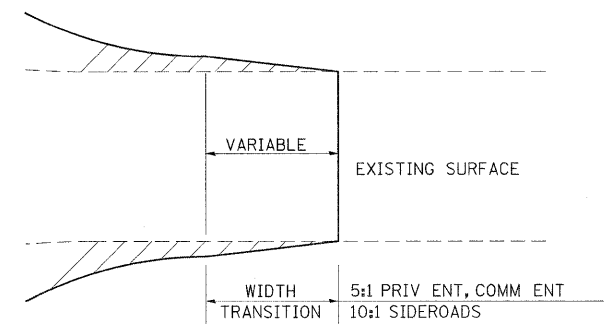
## SIDERROADS

### SIDEROAD DIMENSIONS (MIN.)

ADT	A (FT)	B (FT)
0 TO 250	18'	2'
250 TO 400	20'	2'
GREATER THAN 400	22'	4'

### WIDTH TRANSITION DETAIL TO EXISTING

(IF APPLICABLE)

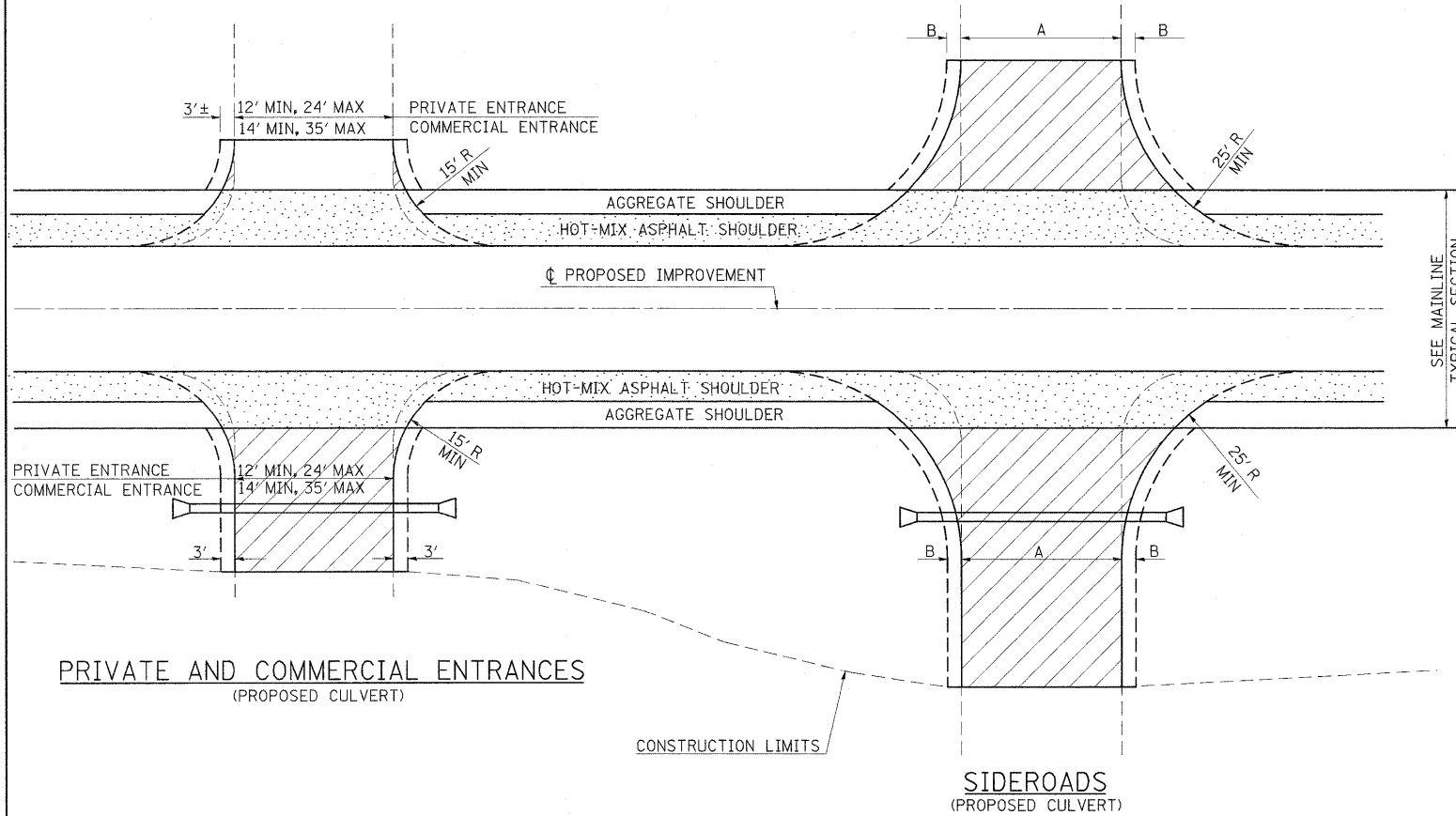
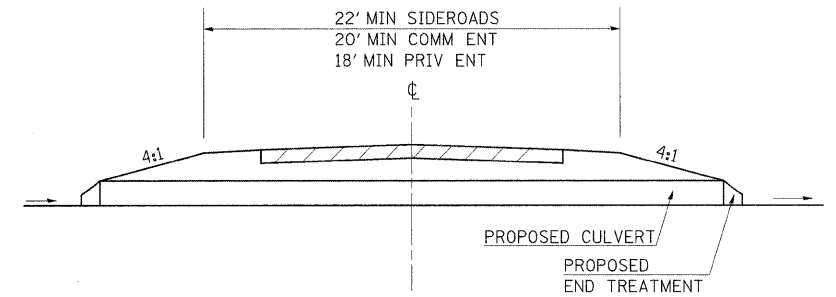


### FIELD ENTRANCE TREATMENT

CONSTRUCT MAINLINE HOT-MIX ASPHALT AND AGGREGATE SHOULDERS THROUGH FIELD ENTRANCES.

IF A PIPE IS REQUIRED, PROVIDE A 22' WIDE EARTH EMBANKMENT WITH 15' RADII AT THE INTERSECTION.

### DETAIL FOR CALCULATING CULVERT LENGTH



### LEGEND

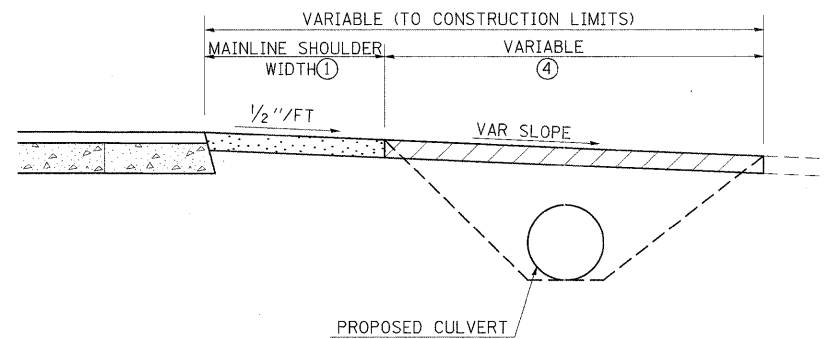
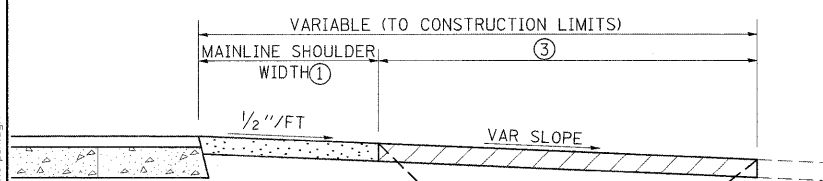
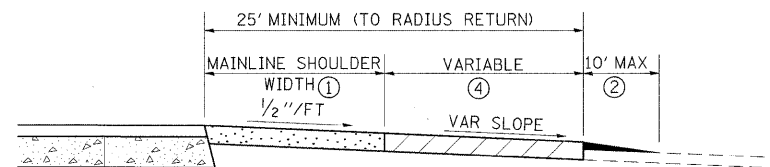
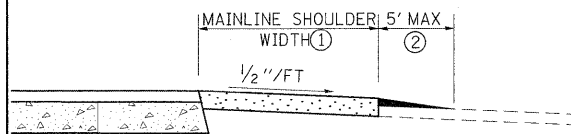
- ① CONSTRUCT HOT-MIX ASPHALT SHOULDER "FULL SHOULDER WIDTH" THROUGH ENTRANCE/INTERSECTION UNLESS OTHERWISE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- ② IF REQUIRED, AGGREGATE TAPER FOR EXISTING GRAVEL SURFACE; HOT-MIX ASPHALT TAPER FOR EXISTING HIGHER TYPE SURFACES.
- ③ 6" AGGREGATE SURFACE COURSE FOR EXISTING GRAVEL SURFACE; 2" HOT-MIX ASPHALT RESURFACING ON 4" AGGREGATE BASE COURSE FOR EXISTING HOT-MIX ASPHALT SURFACE; PCC DRIVEWAY PAVEMENT (6" - PE; 7" - CE) FOR EXISTING CONCRETE SURFACE.
- ④ 3" MINIMUM HOT-MIX ASPHALT RESURFACING ON 8" MINIMUM AGGREGATE BASE COURSE FOR EXISTING GRAVEL SURFACE OR OIL & CHIP SURFACE; MATCH EXISTING FOR EXISTING HIGHER TYPE SURFACES.

### GENERAL NOTES

1. ENTRANCE LOCATIONS ARE TO COMPLY WITH IDOT'S POLICY "ACCESS TO STATE HIGHWAYS".
2. IN GENERAL, RELOCATED PRIVATE ENTRANCES ARE TO HAVE A 16' WIDE SURFACE WITH 3' WIDE SHOULDERS (22' WIDE EMBANKMENT).
3. SEE PLANS FOR PROPOSED PROFILE GRADES AT ENTRANCES/SIDERROADS. THE DESIRABLE MAXIMUM PROFILE GRADE FOR ENTRANCES ARE 12% FOR PE; 10% FOR CE.
4. ENTRANCE PIPE CULVERTS ARE TO BE A MINIMUM 15" DIAMETER AND NORMALLY REPLACED IN KIND; SIDEROAD PIPE CULVERTS ARE GENERALLY TO BE CONCRETE (18" MINIMUM DIAMETER).
5. THE INTERSECTION RADII OF SIDERROADS CONSTRUCTED TO FULL POLICY STANDARDS SHOULD COMPLY WITH THAT NOTED IN THE BUREAU OF LOCAL ROADS ADMINISTRATIVE POLICIES MANUAL (5-8-13).

## PRIVATE AND COMMERCIAL ENTRANCES

## SIDERROADS



PROPOSED CULVERT

PROPOSED CULVERT

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DISTRICT STANDARDS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	24
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

STD. 9-83

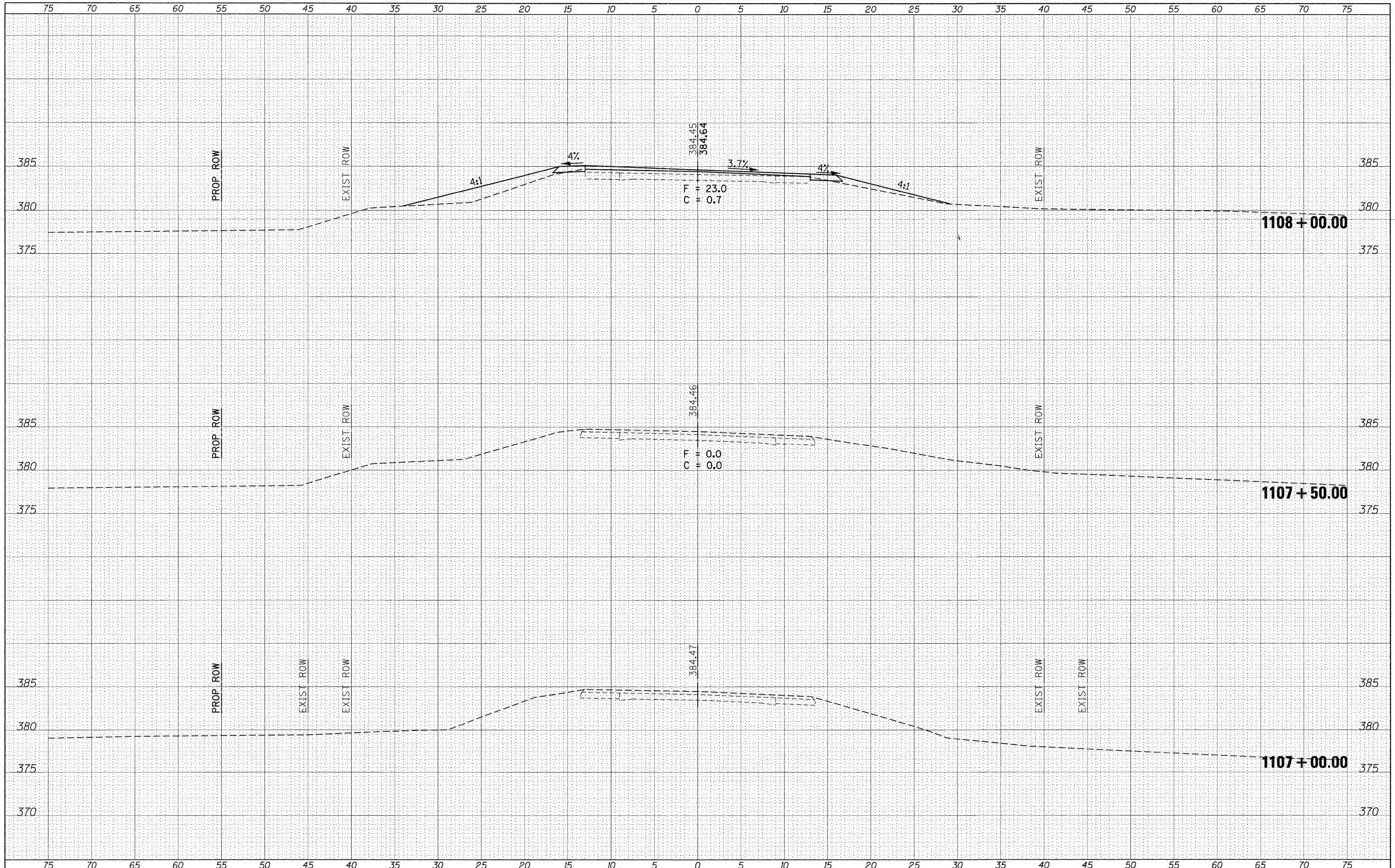
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REVISED	01-11-07
RESIZED	5-7-08

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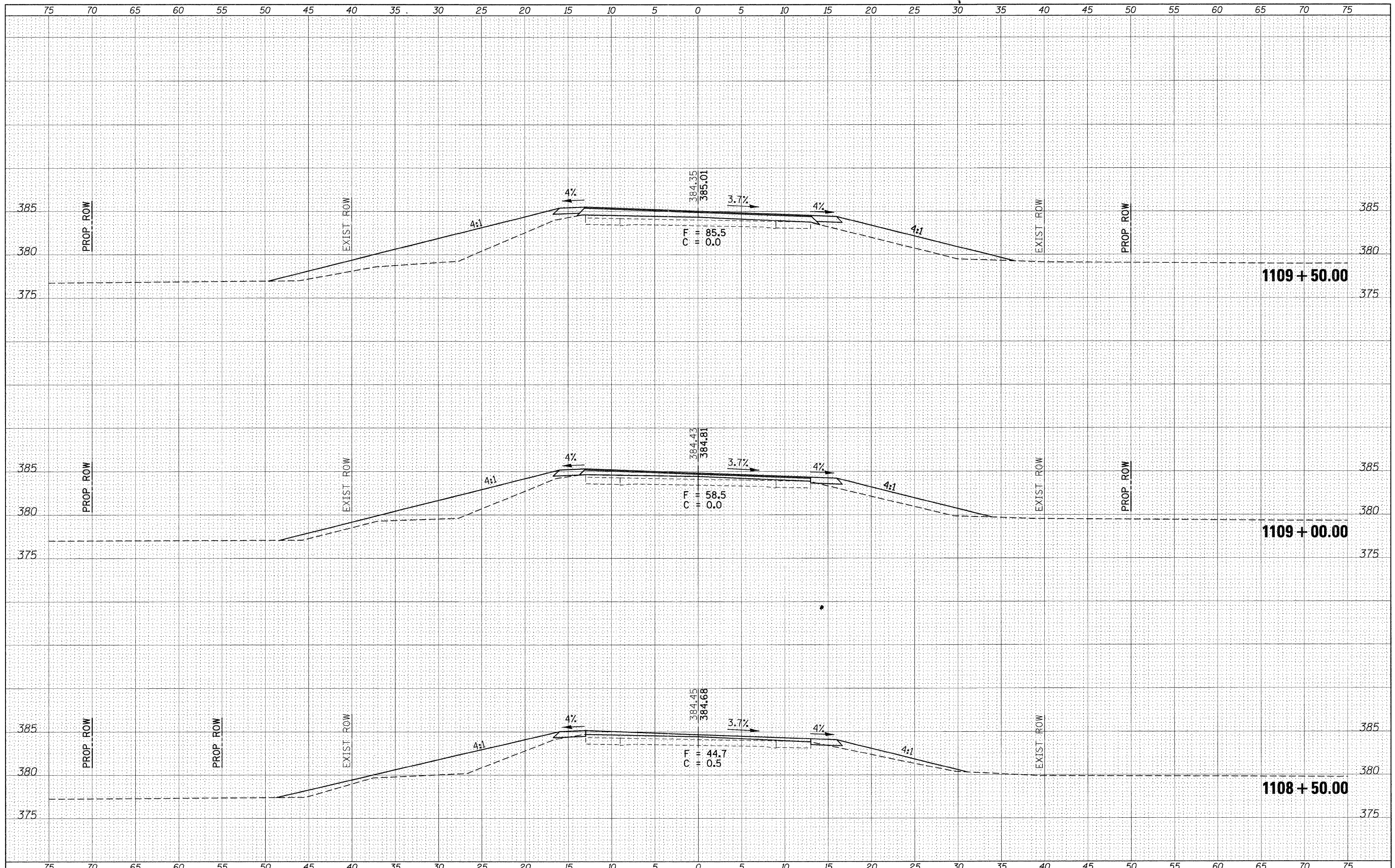
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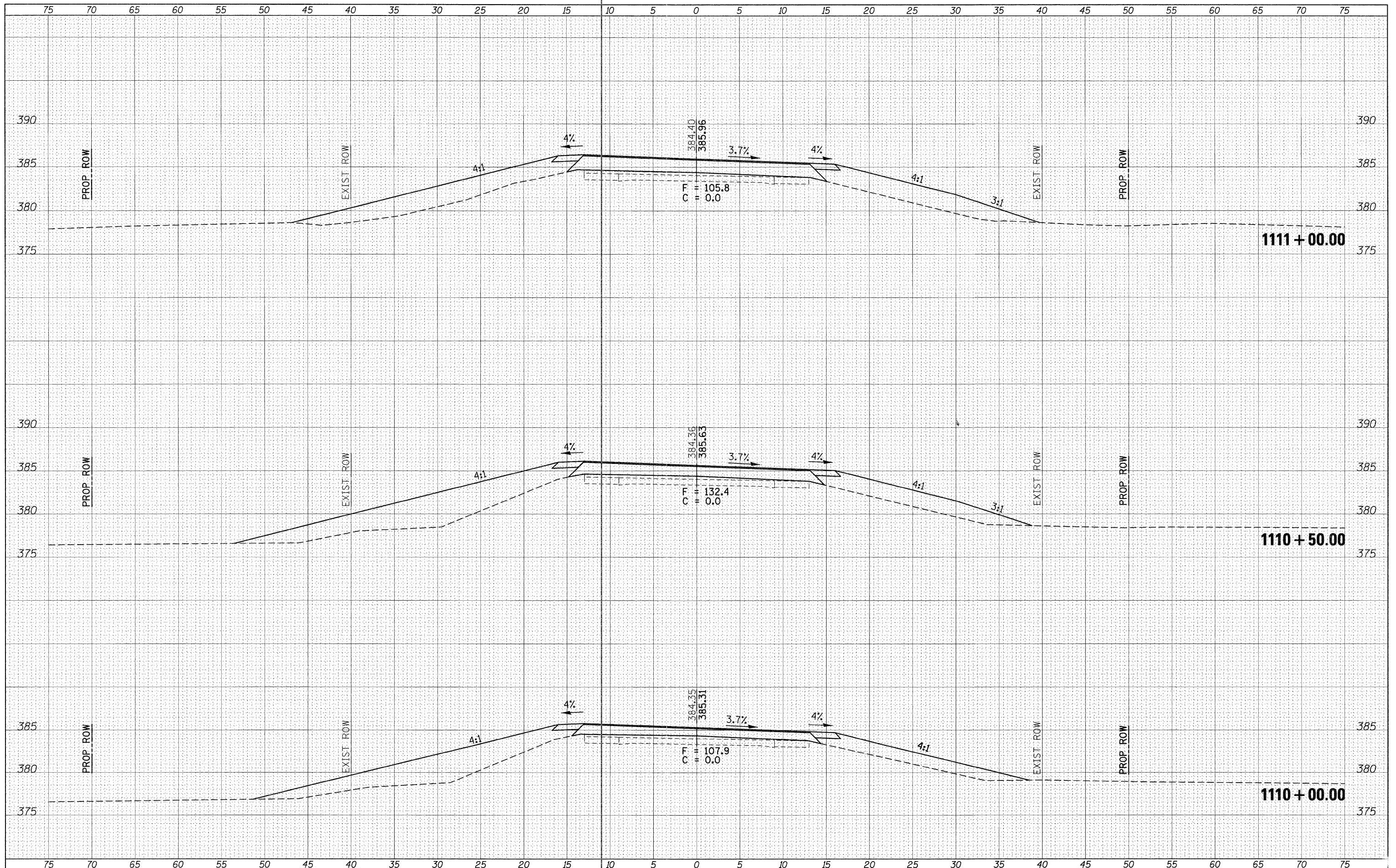
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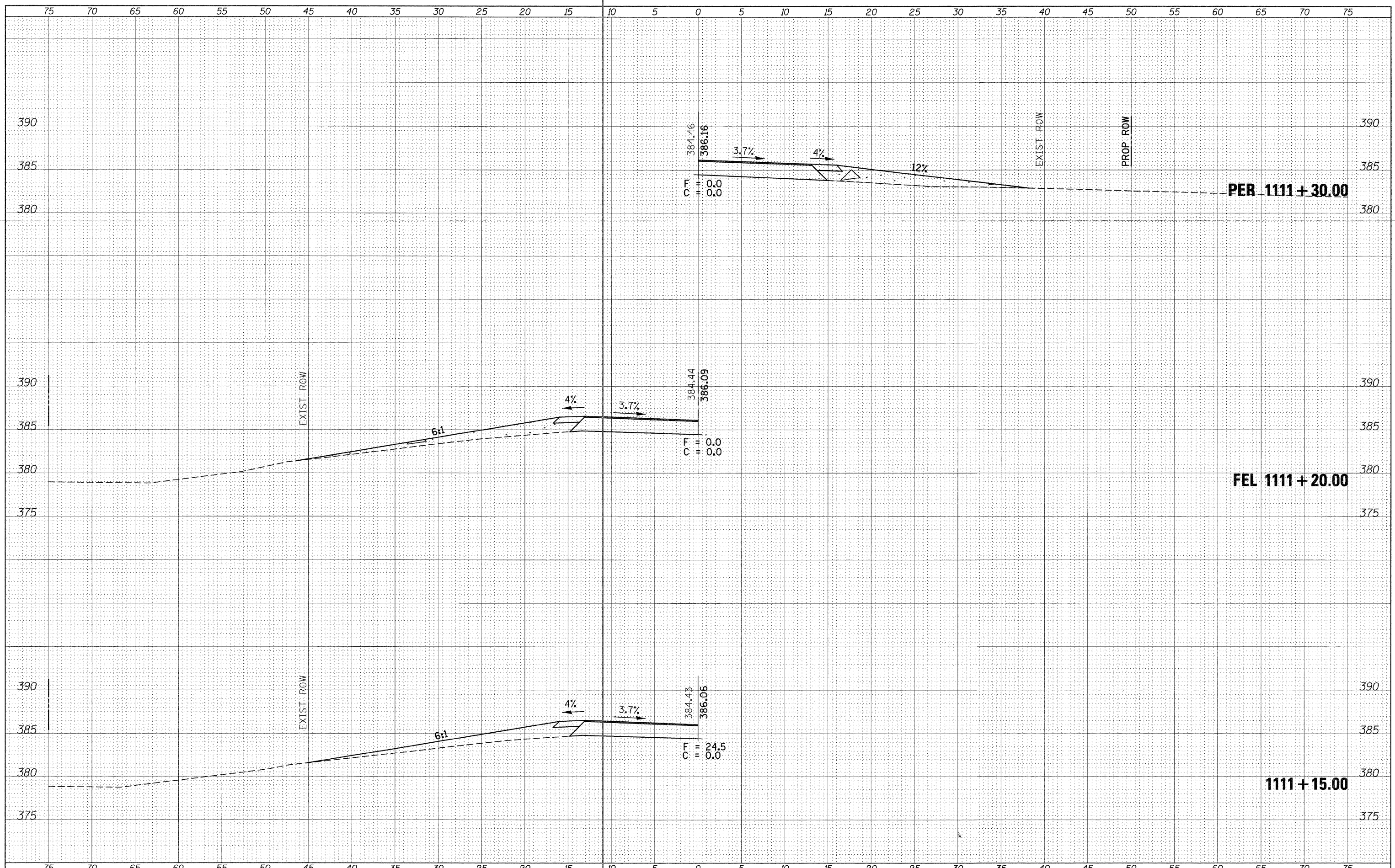
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL RTE. 4**  
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	27
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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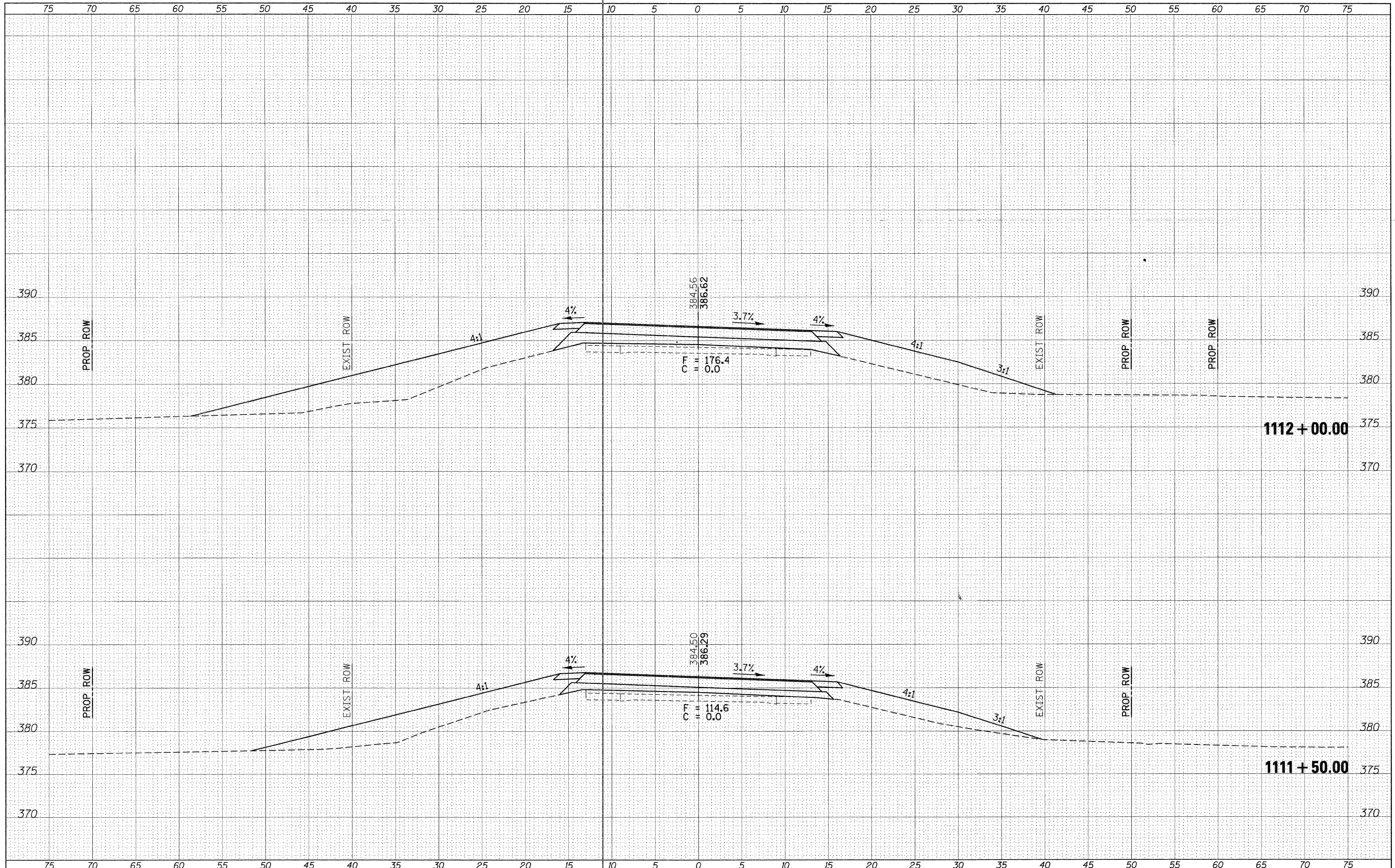
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL RTE. 4**  
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	28
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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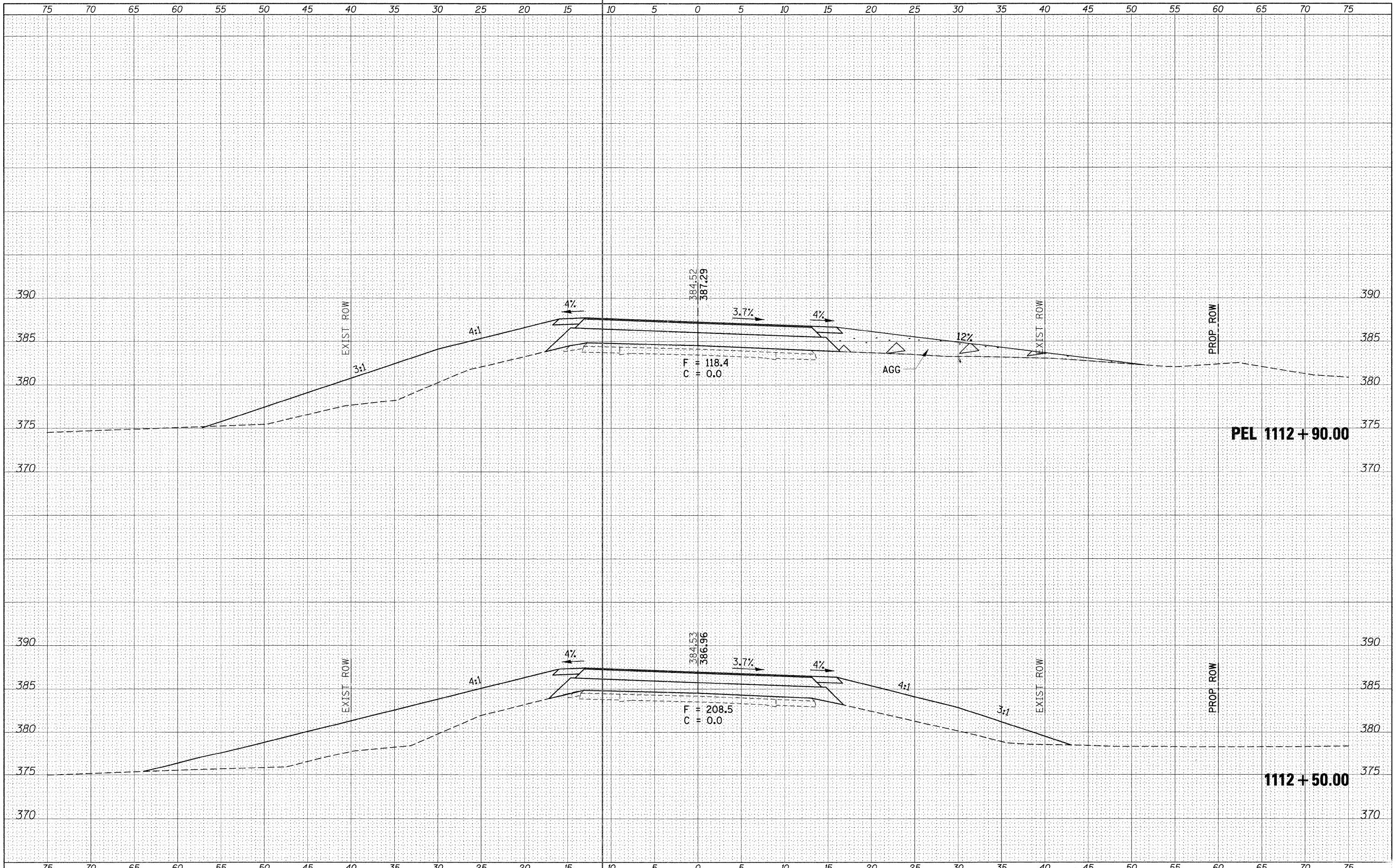
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL RTE. 4**  
 SCALE: SHEET OF SHEETS STA. 1111+50.00 TO STA. 1112+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				



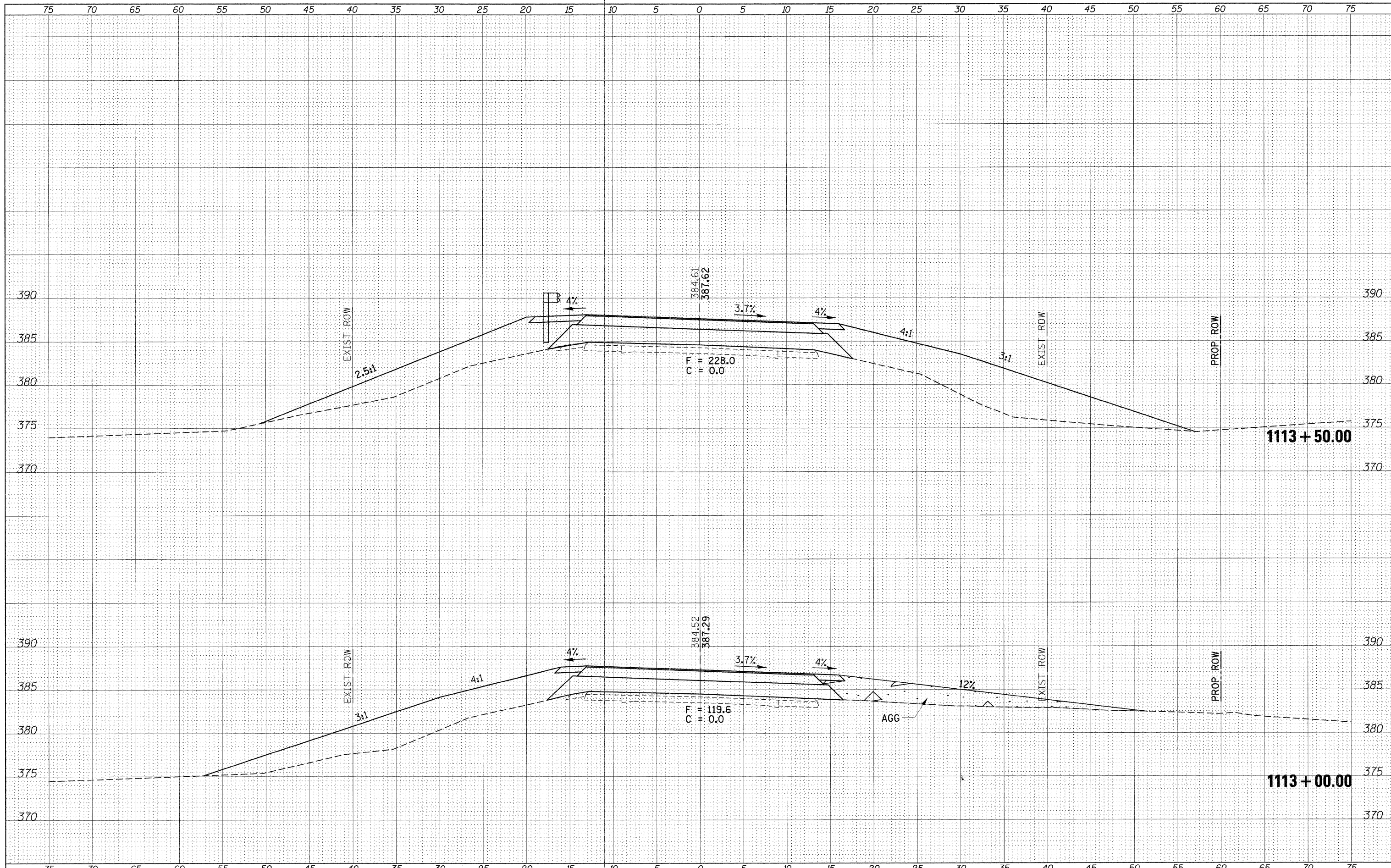
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NOTE BOOK	PLOTTED
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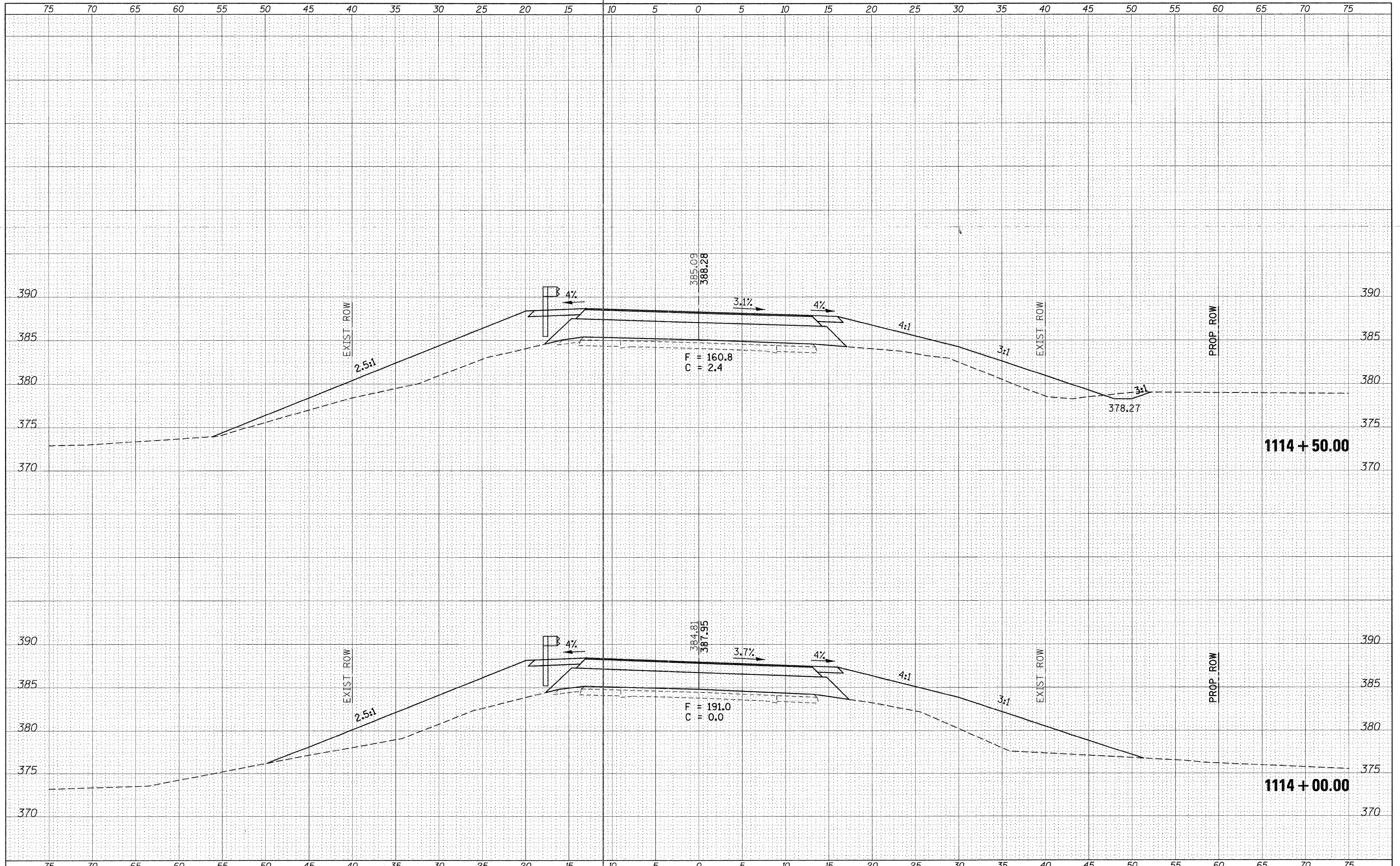
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL RTE. 4**  
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F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 31
				CONTRACT NO. 78049
ILLINOIS FED. AID PROJECT				

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

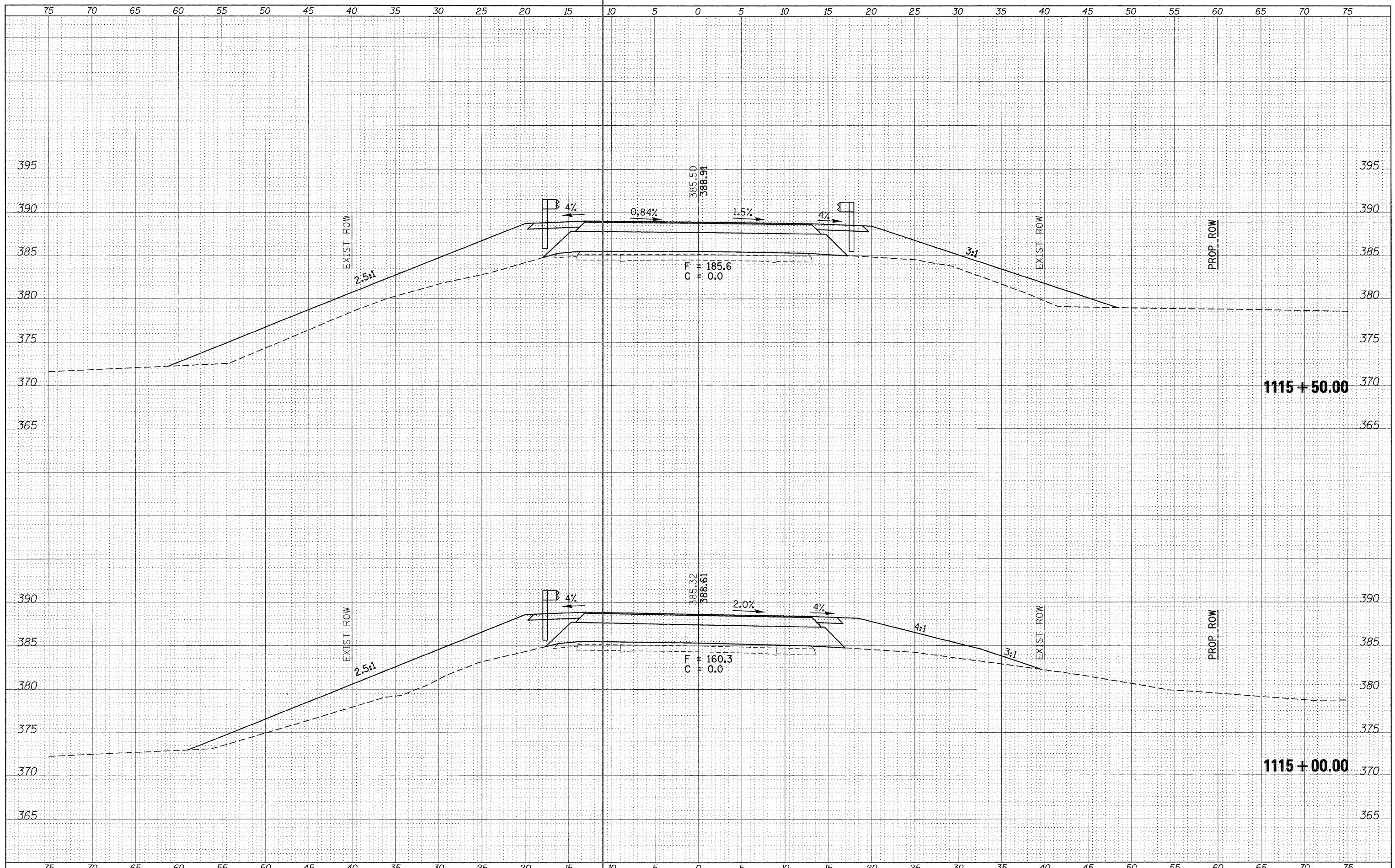
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CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				



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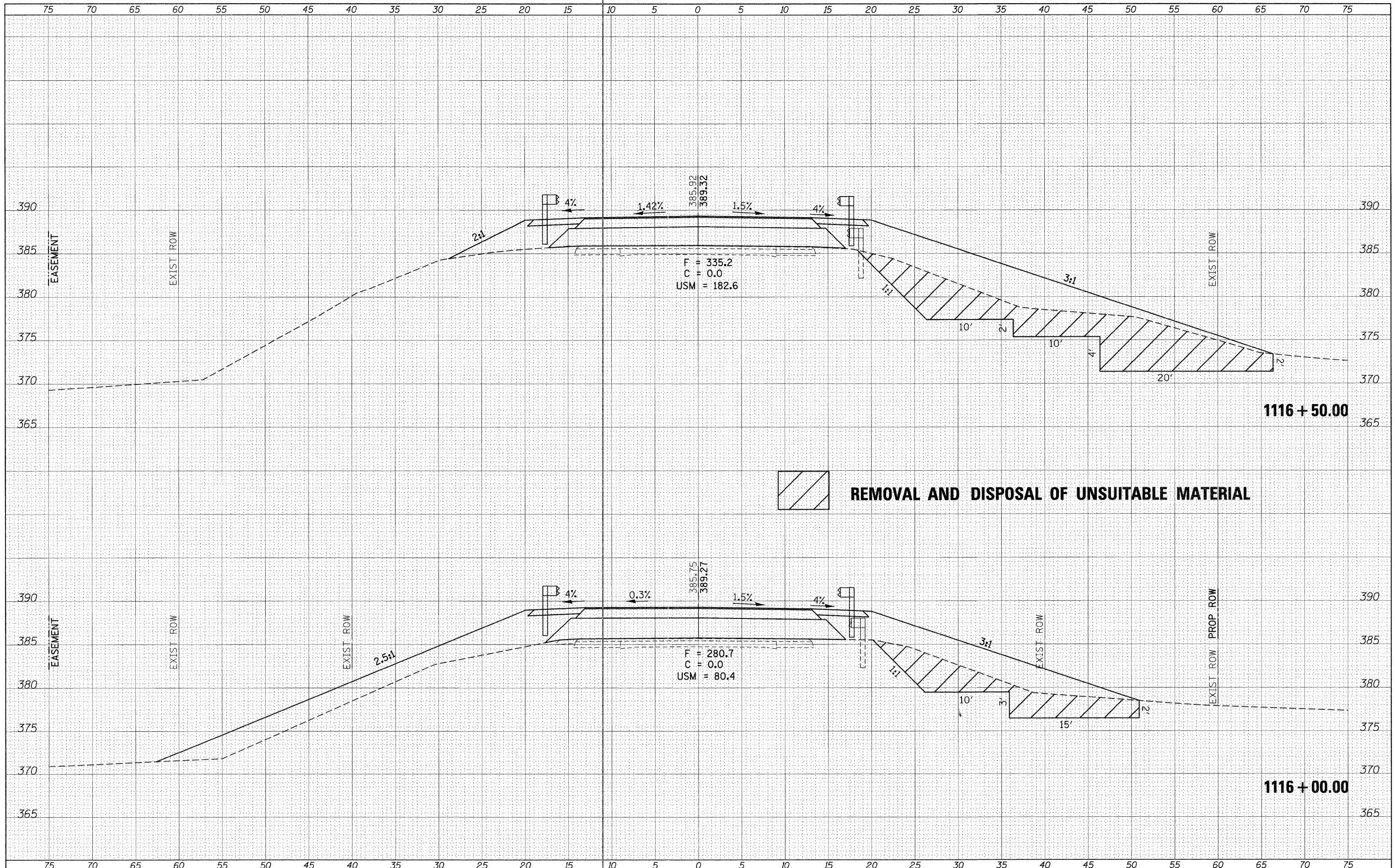
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL RTE. 4**  
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	33
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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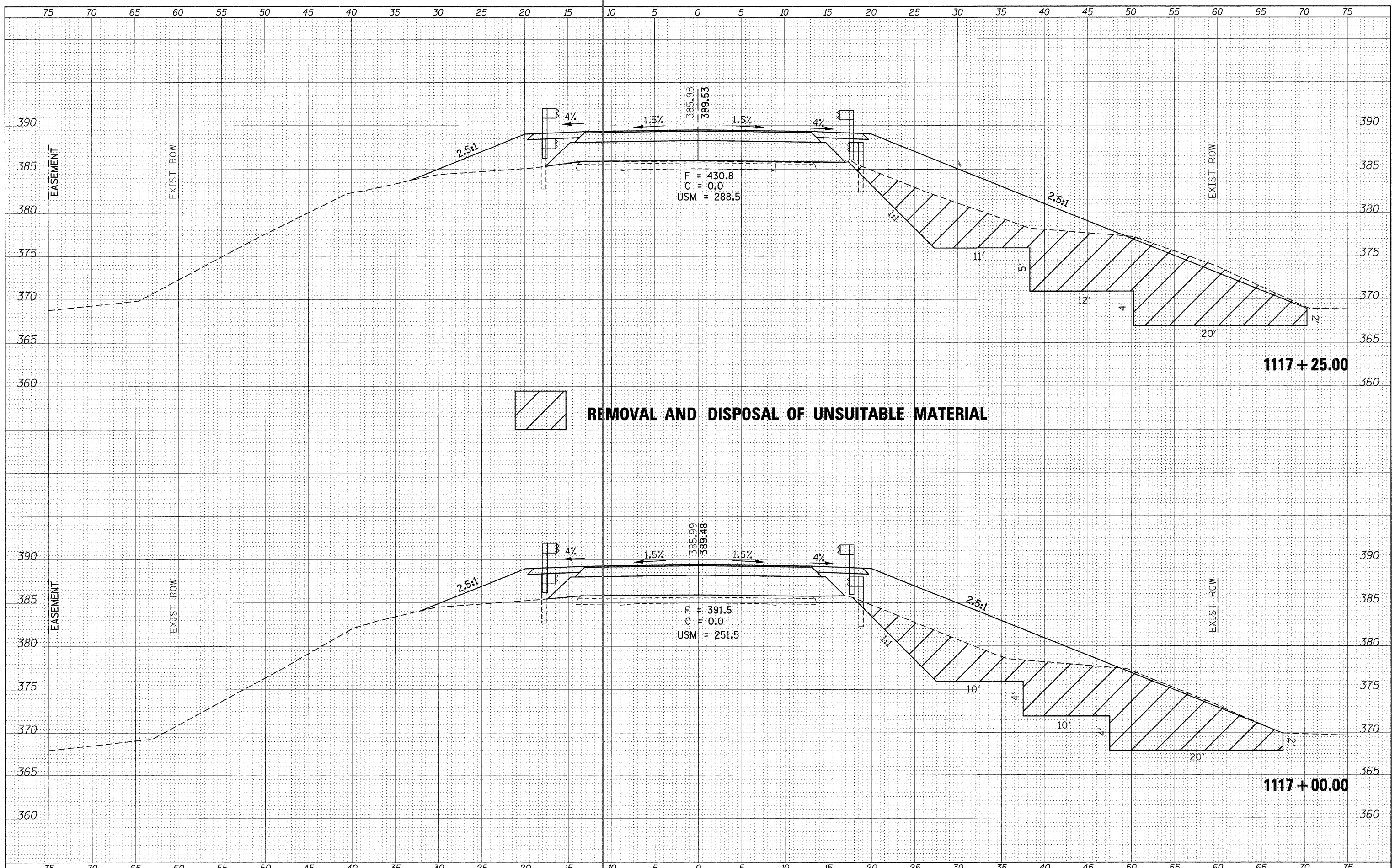
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

IL RTE. 4  
 SCALE: SHEET OF SHEETS STA. 1116+00.00 TO STA. 1116+50.00

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CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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NO.	TEMPLATE
	AREAS CHECKED



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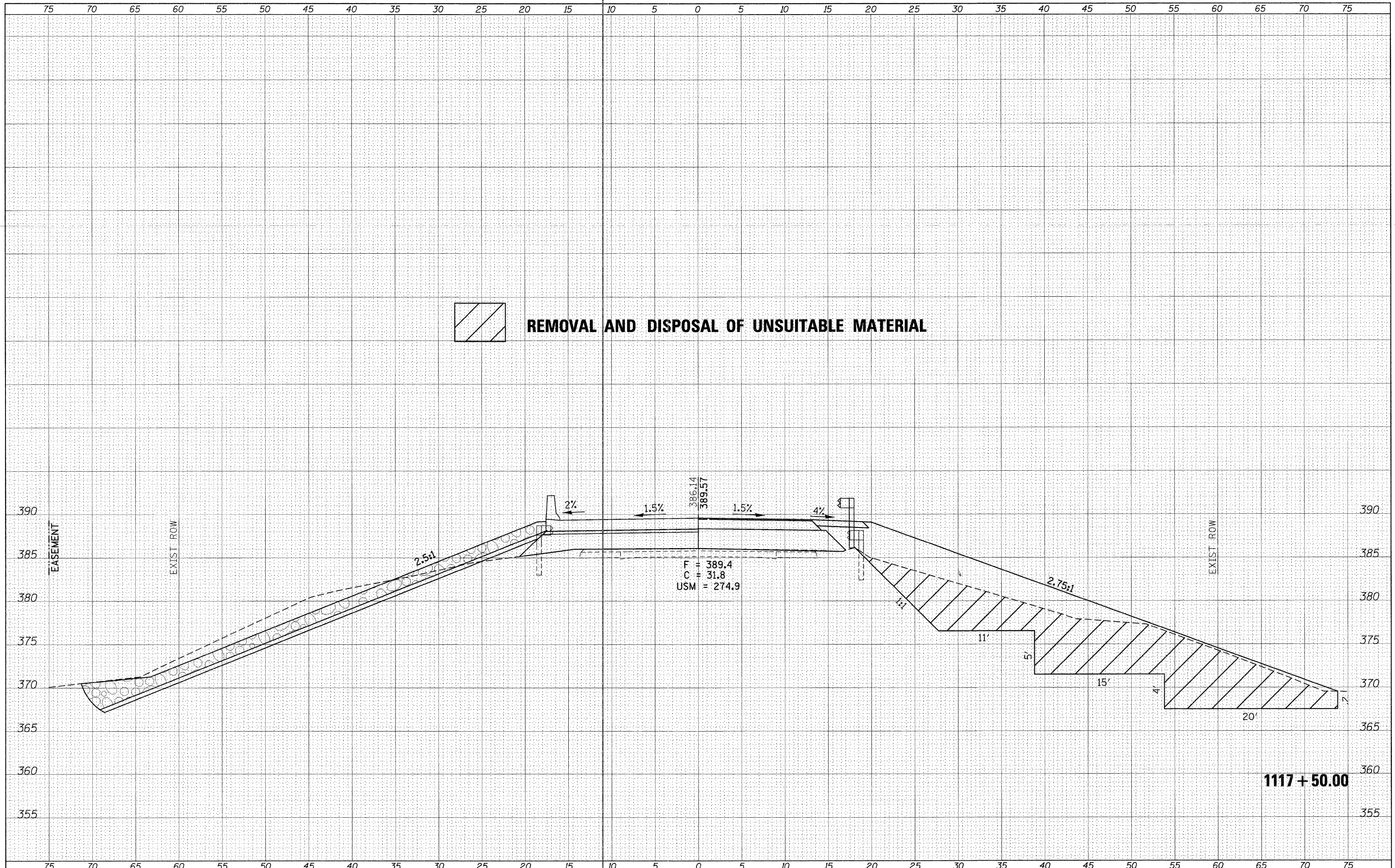
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL RTE. 4**  
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686	114B-1	JACKSON	114	35
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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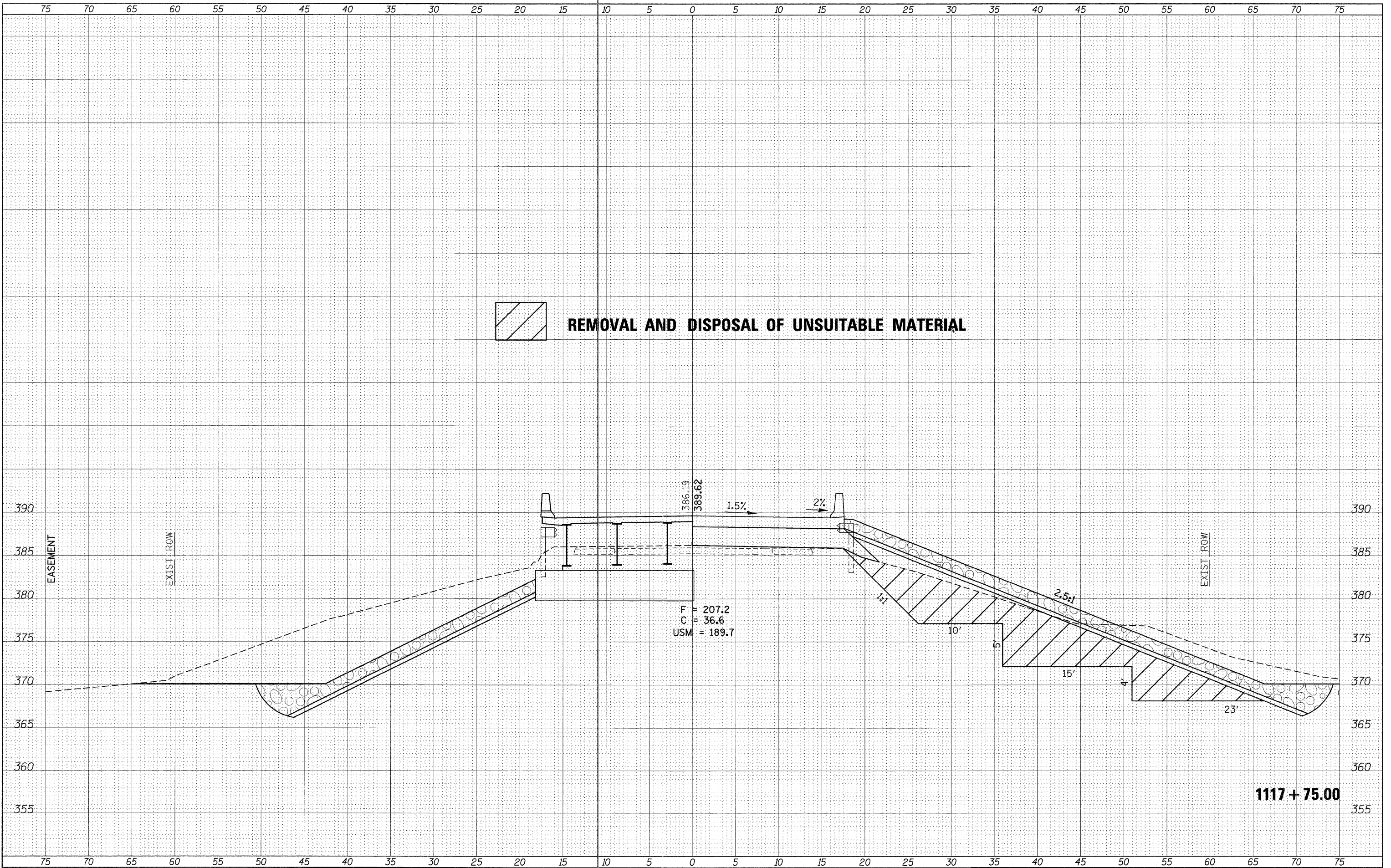
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

SCALE: SHEET OF SHEETS STA. 1117+50.00 TO STA. 1117+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	36
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

FINAL	SURVEYED	DATE
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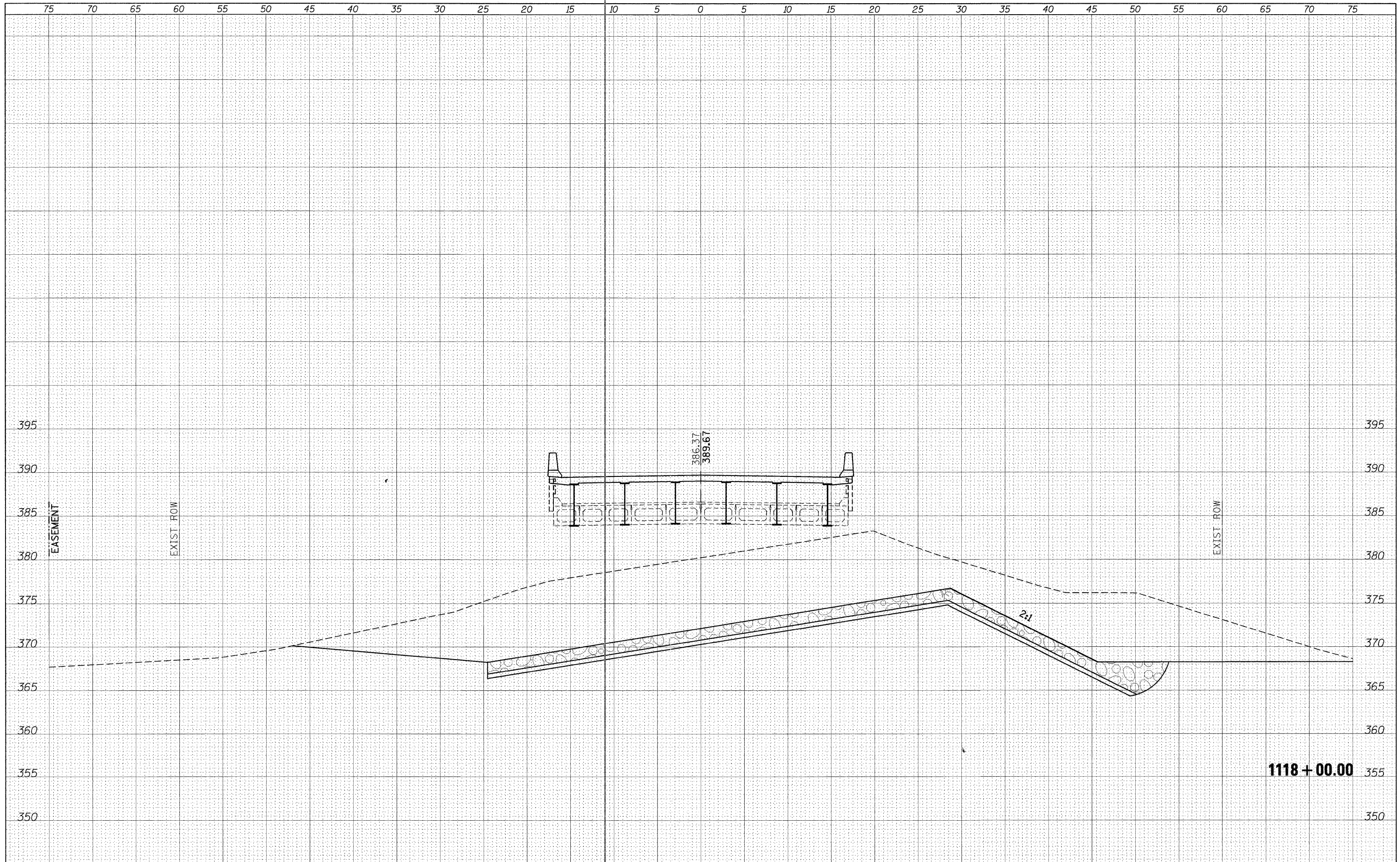
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						CONTRACT NO. 78049 ILLINOIS FED. AID PROJECT				

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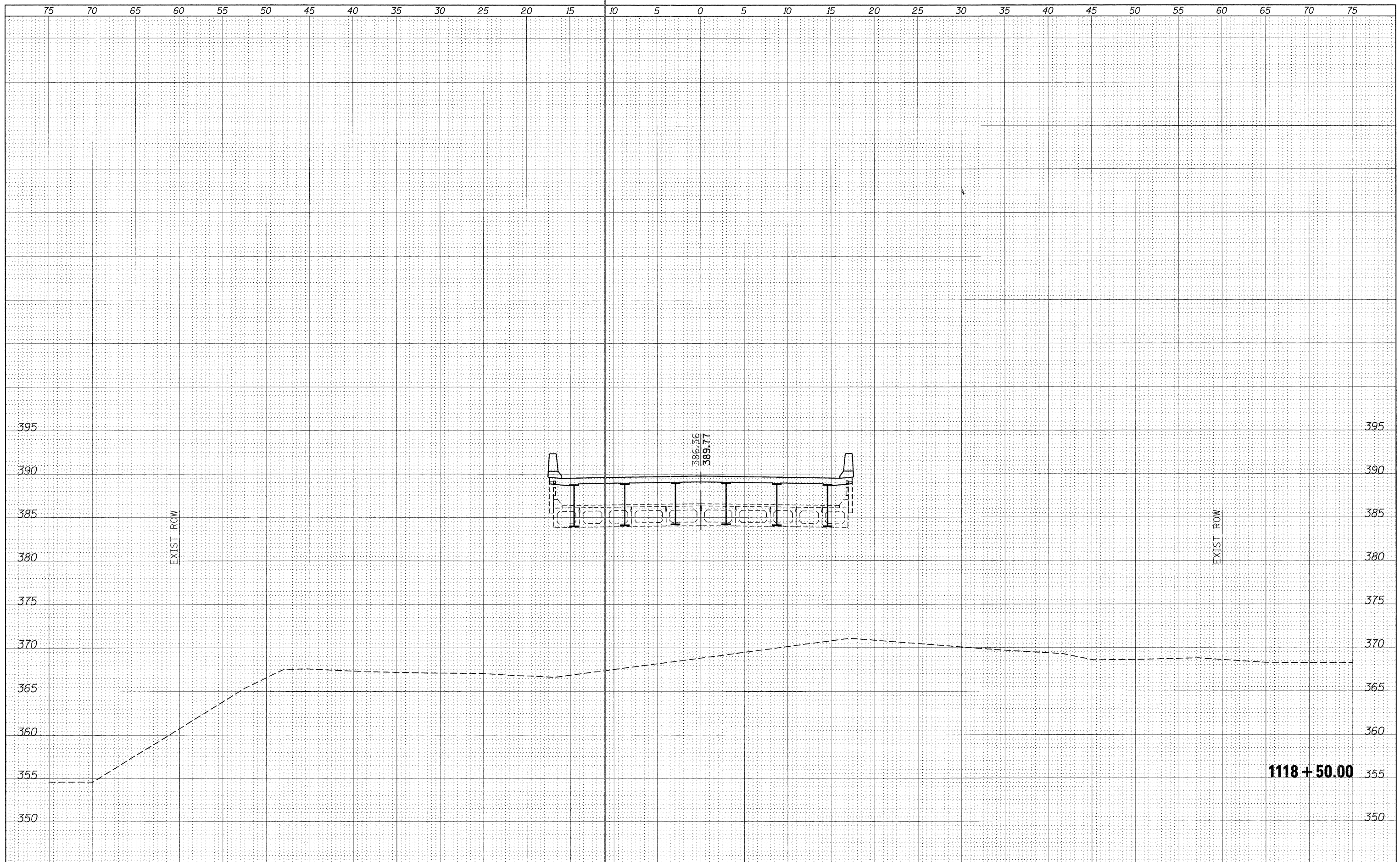
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

SCALE: SHEET OF SHEETS STA. 1118+00.00 TO STA. 1118+00.00

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 38
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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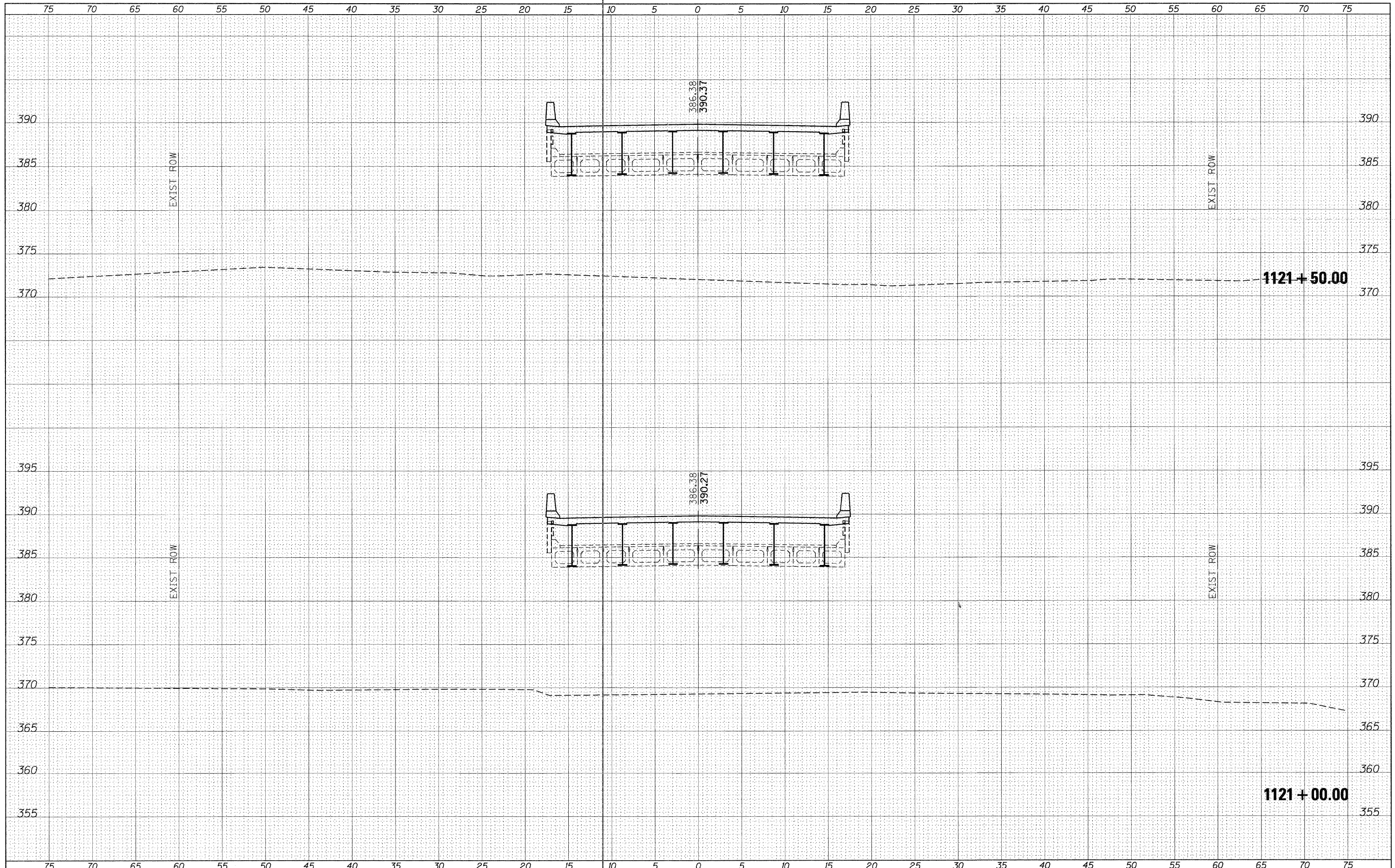
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ORIGINAL SURVEY	
NOTE BOOK	
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FILE NAME =	USER NAME = halsteadtw	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL RTE. 4</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ca:\pw_work\pwsdot\halsteadtw\dms49753\78049-xssheet81611.dgn	DRAWN -	REVISED -	686			114B-1	JACKSON	114	39	
PLOT SCALE = 5,0000 ' / 1in.	CHECKED -	REVISED -	CONTRACT NO. 78049							
PLOT DATE = 10/18/2011	DATE -	REVISED -	SCALE:			SHEET	OF	SHEETS	STA. 1118+50.00	TO STA. 1118+50.00

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

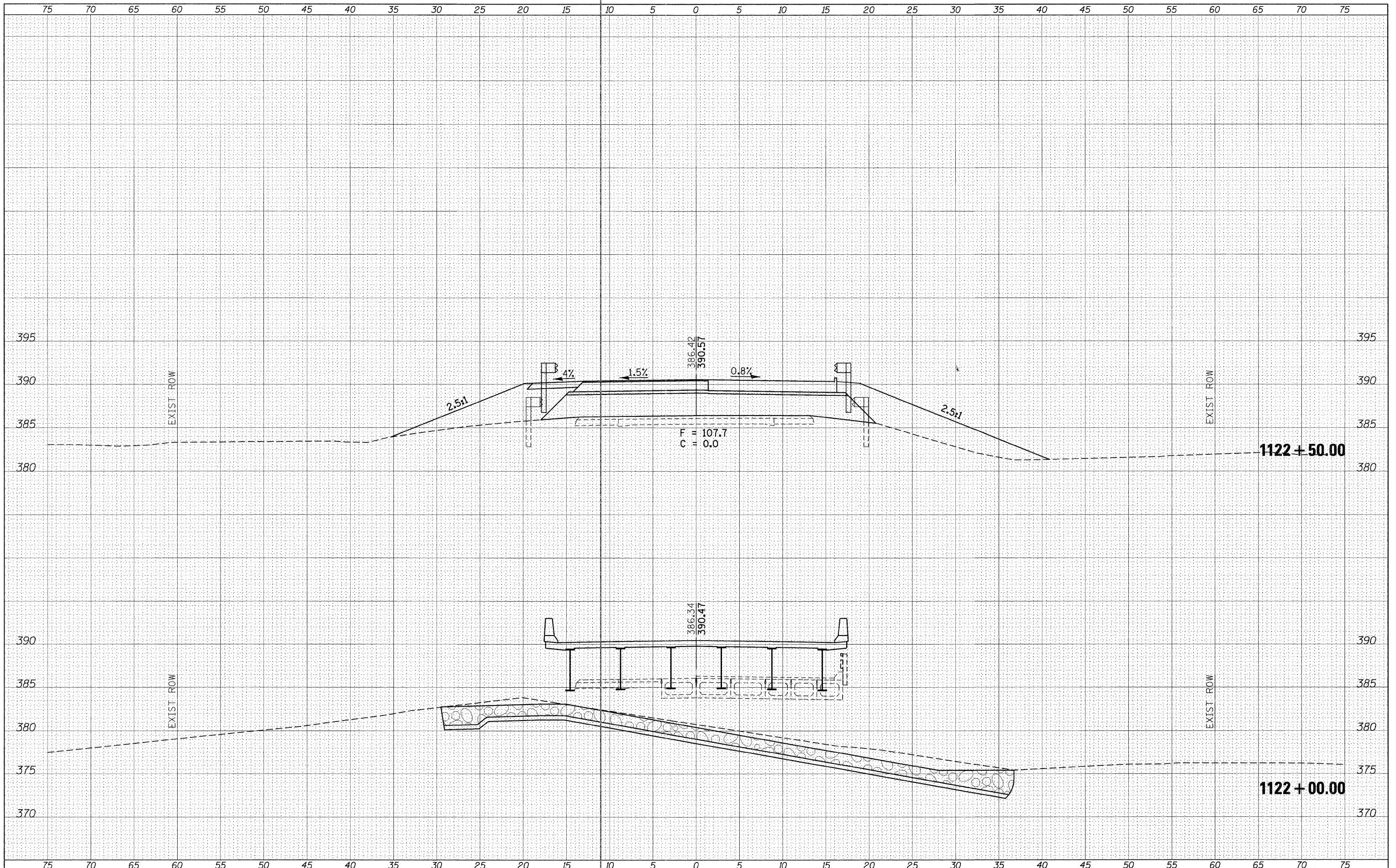
**IL RTE. 4**  
 SCALE: SHEET OF SHEETS STA. 1121+00.00 TO STA. 1121+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	40
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				



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NOTE BOOK	
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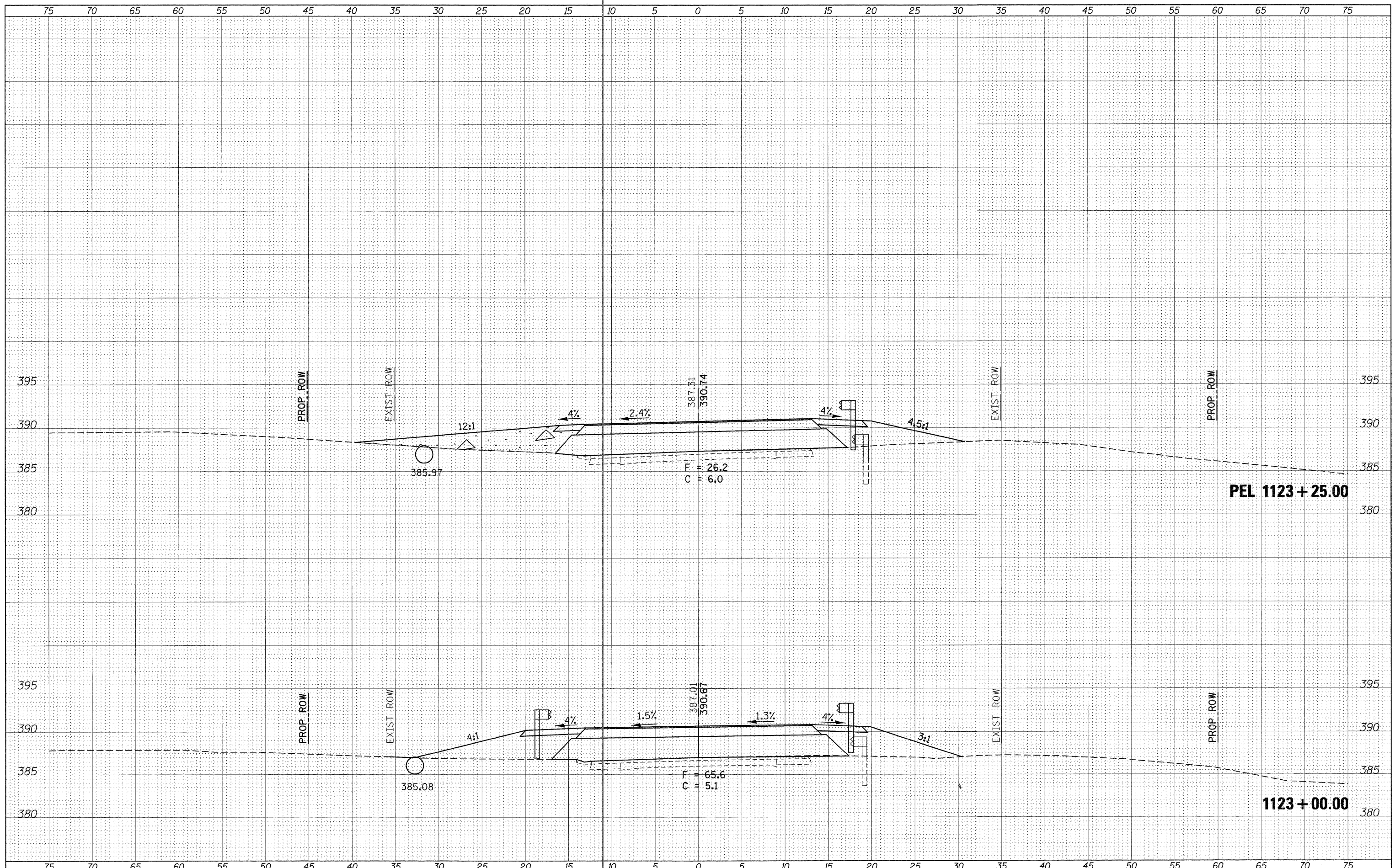
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

SCALE: SHEET OF SHEETS STA. 1122+00.00 TO STA. 1122+50.00

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 41
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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PLOTTED	
TEMPLATE	
NOTE BOOK	
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NOTE BOOK	
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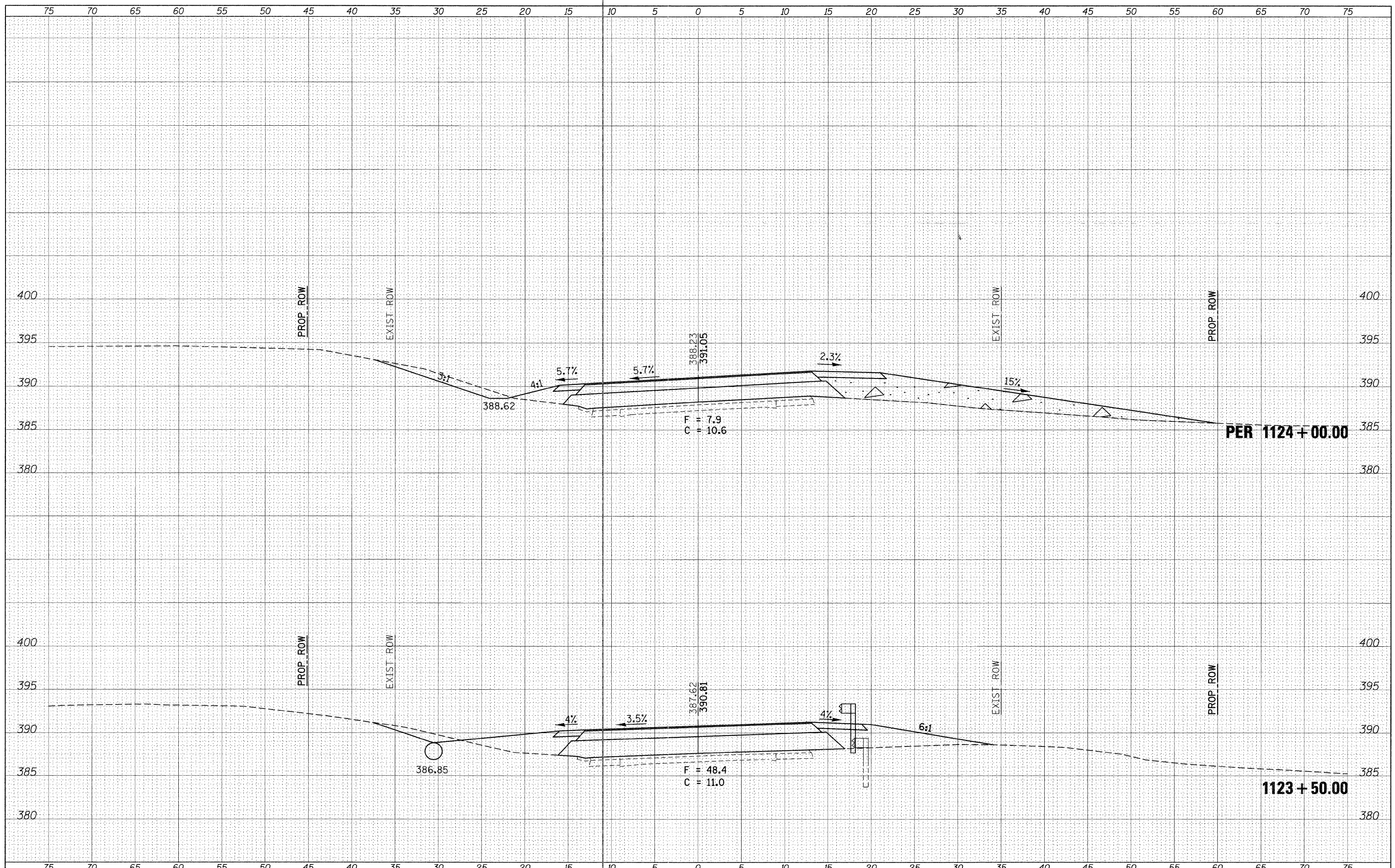
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

SCALE: SHEET OF SHEETS STA. 1123+00.00 TO STA. 1123+25.00

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 42
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	FLOTTED	BY
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ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	FLOTTED	BY
NO.	TEMPLATE	
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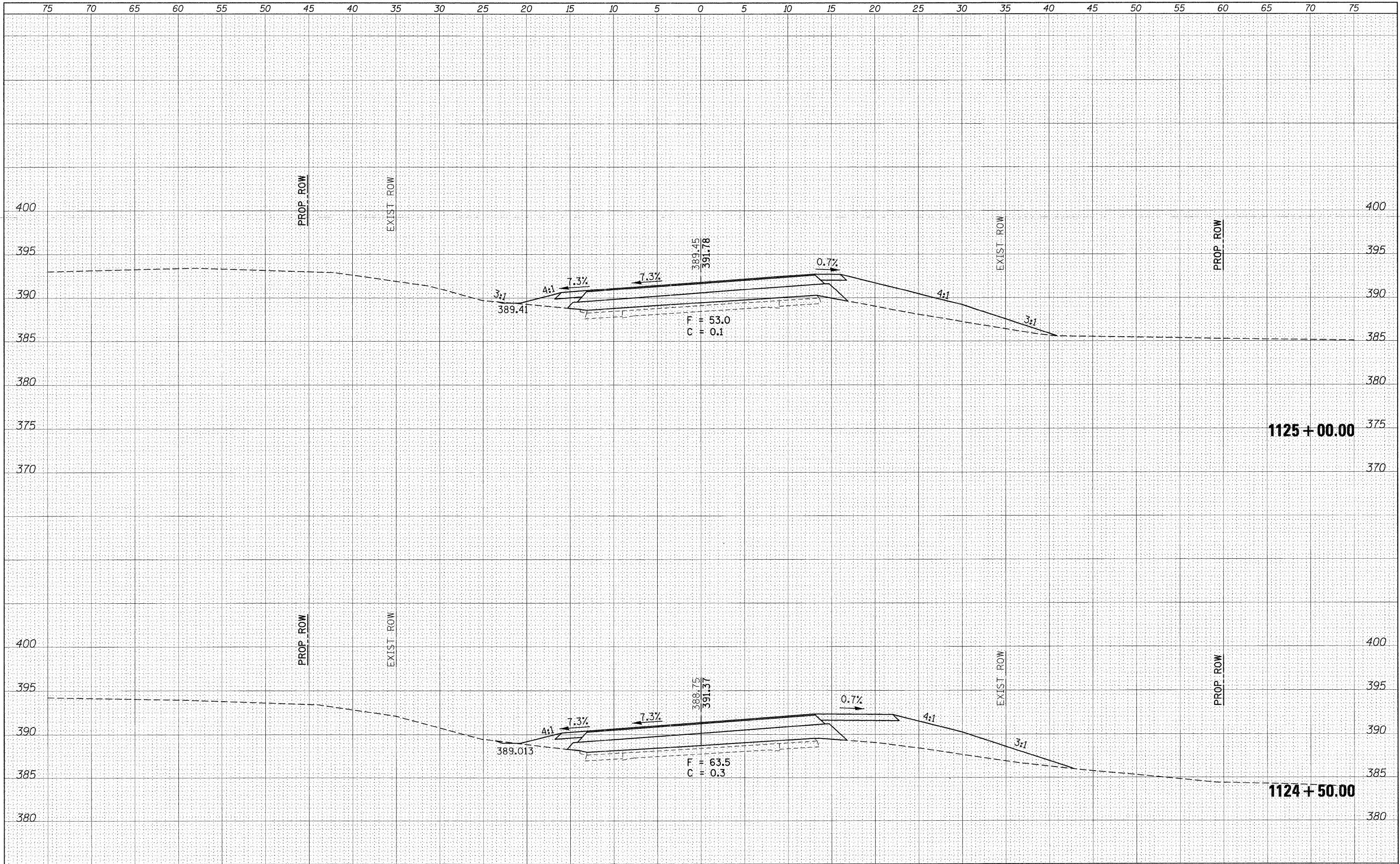
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL RTE. 4**  
 SCALE: SHEET OF SHEETS STA. 1123+50.00 TO STA. 1124+00.00

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	43
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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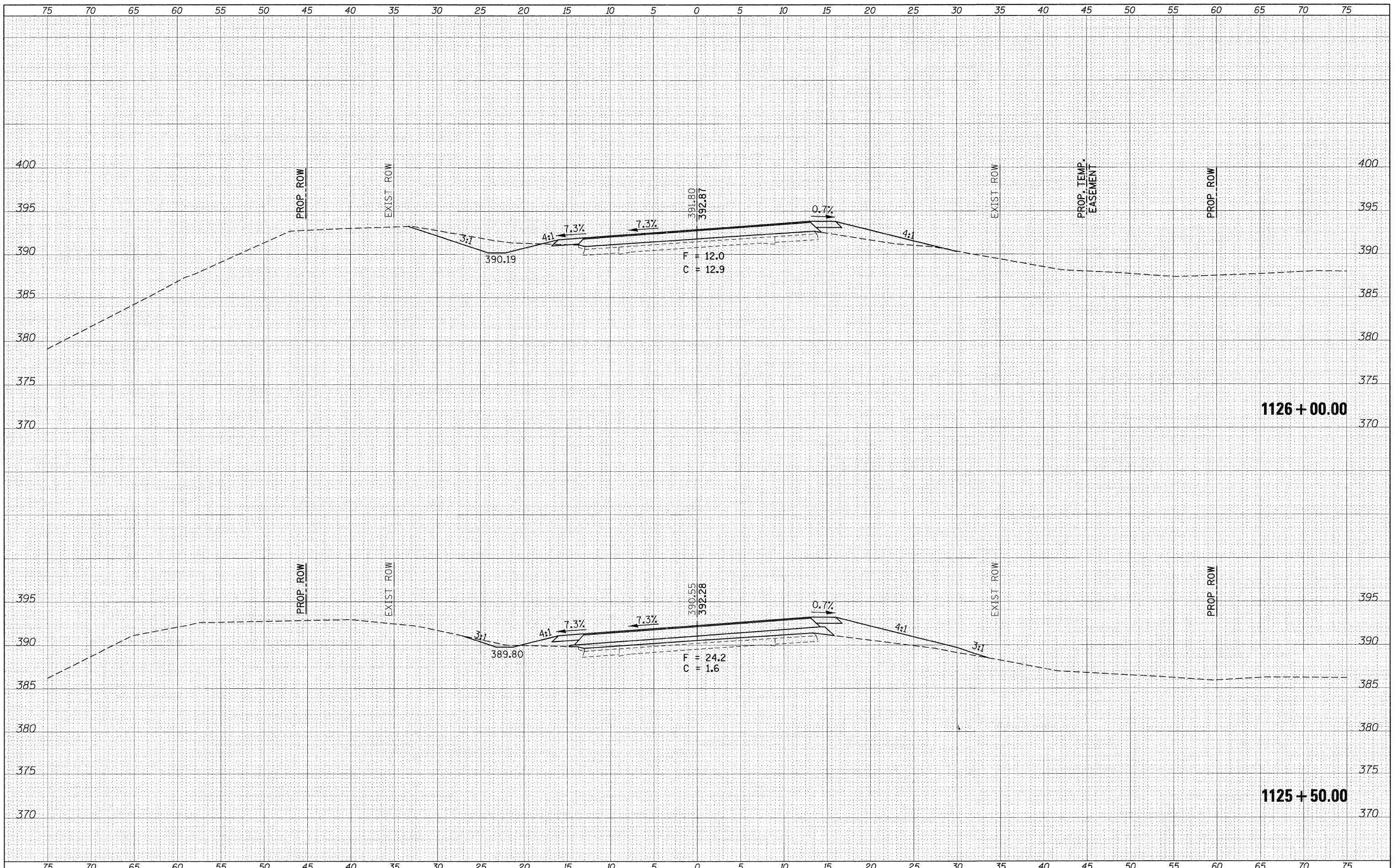
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

SCALE: SHEET OF SHEETS STA. 1124+50.00 TO STA. 1125+00.00

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	44
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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	AREAS CHECKED

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NOTE BOOK	PLOTTED
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

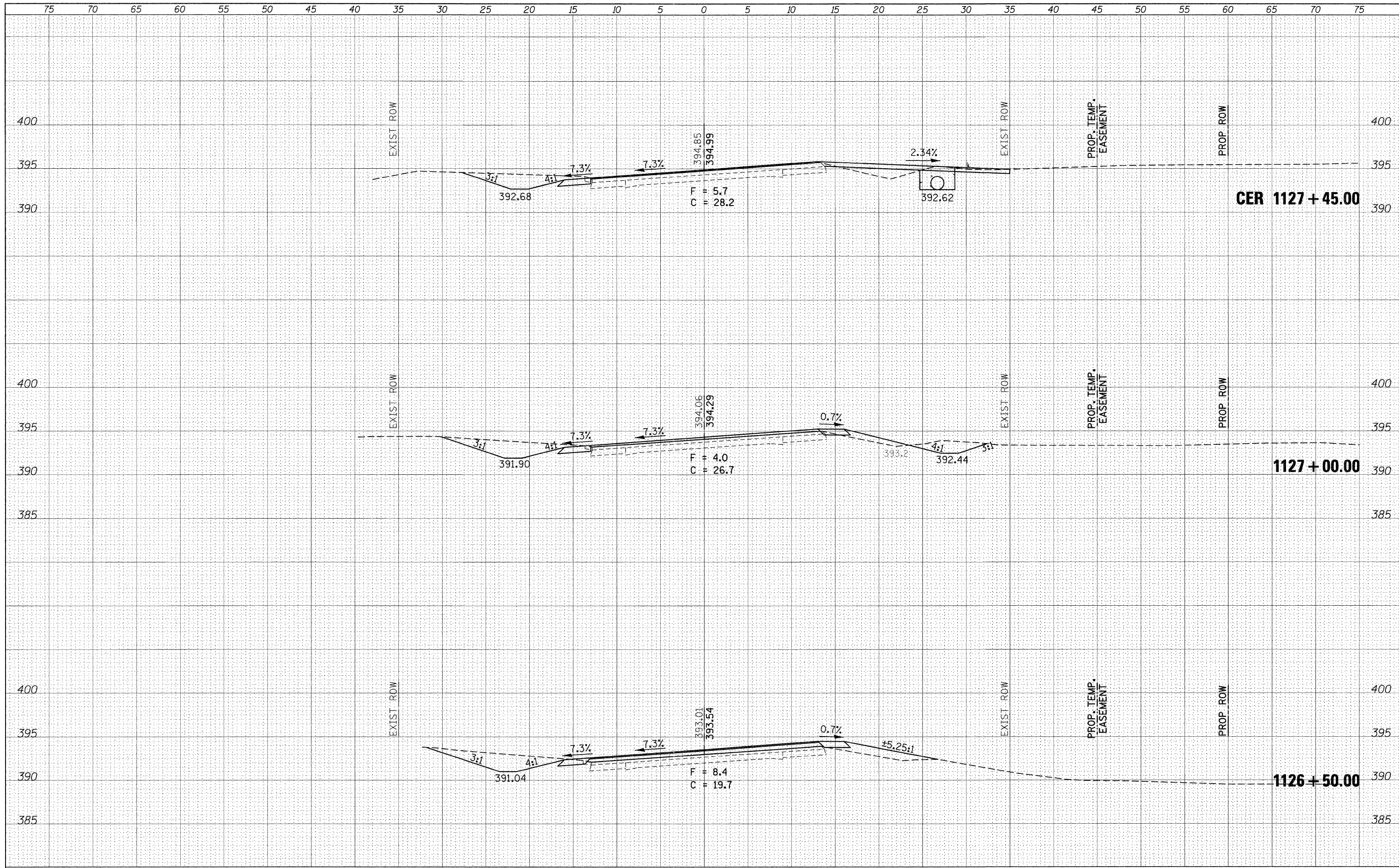
**IL RTE. 4**

SCALE: SHEET OF SHEETS STA. 1125+50.00 TO STA. 1126+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	45
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

BY	DATE
FINAL SURVEY	SURVEYED
NOTE BOOK	FLOTTED
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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	FLOTTED
NO.	TEMPLATE
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

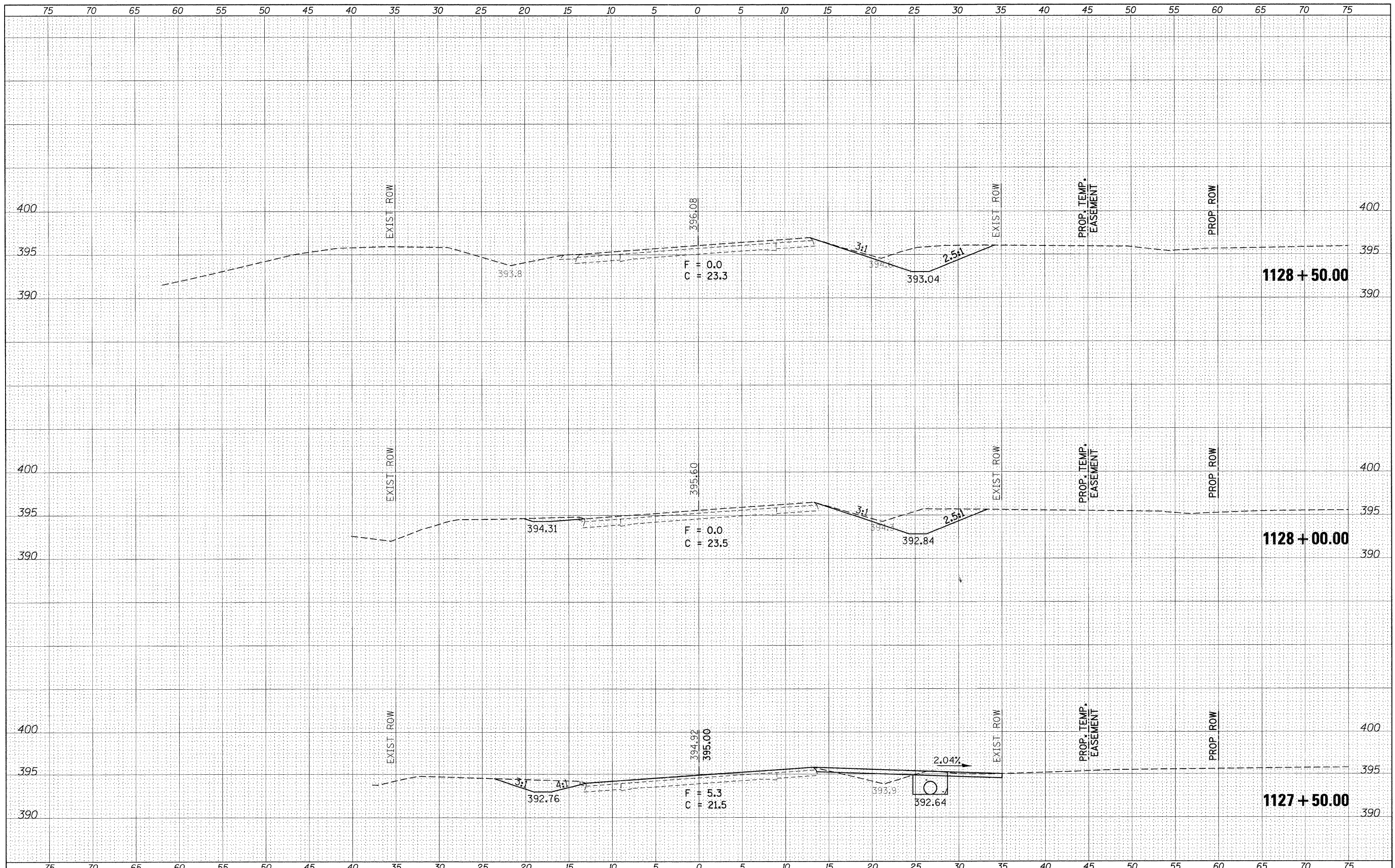
**IL RTE. 4**

SCALE: SHEET OF SHEETS STA. 1126+50.00 TO STA. 1127+45.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	1148-1	JACKSON	114	46
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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NOTE BOOK	PLOTTED
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

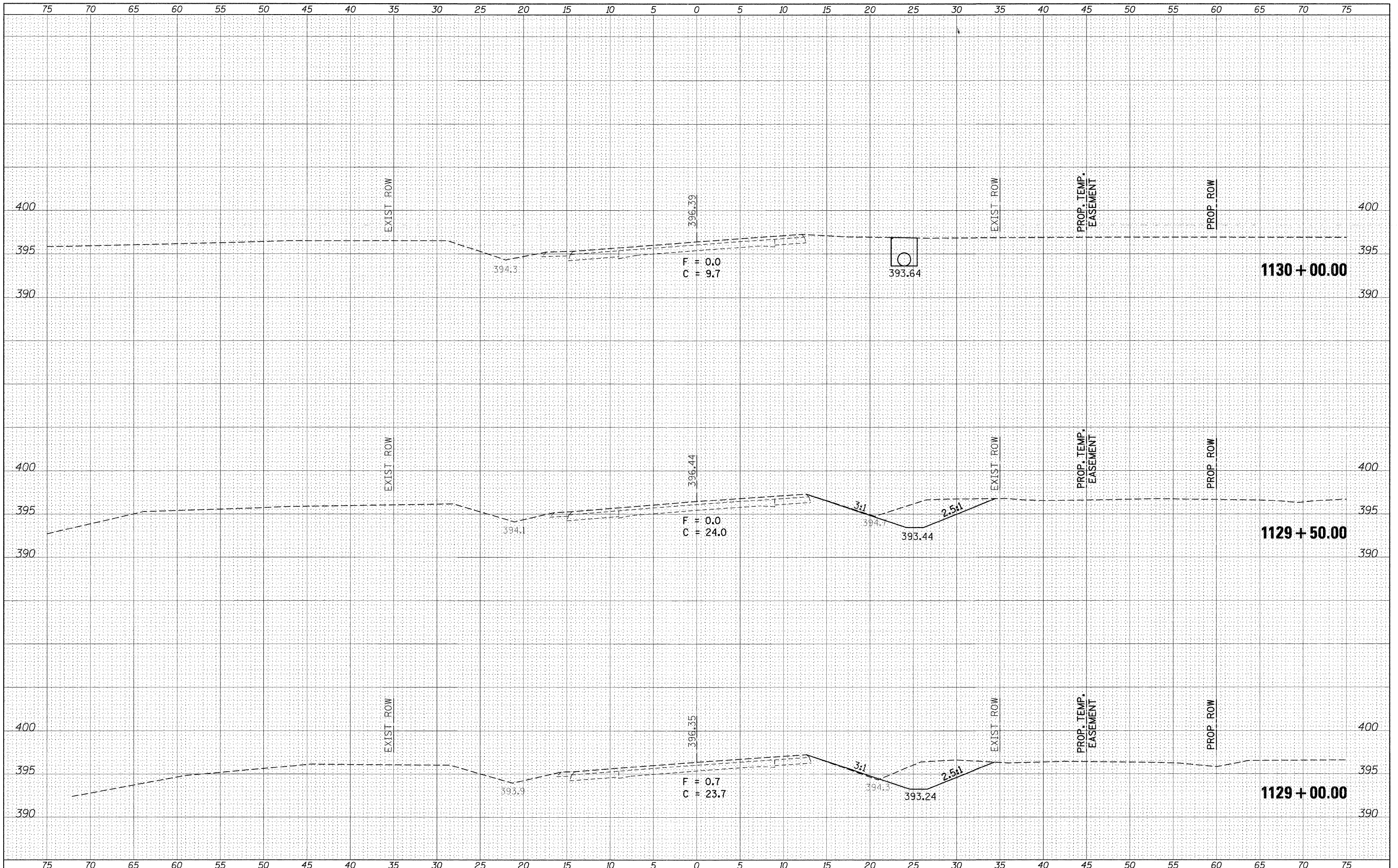
**IL RTE. 4**

SCALE: SHEET OF SHEETS STA. 1127+50.00 TO STA. 1128+50.00

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 47
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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NOTE BOOK	NOTE BOOK
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

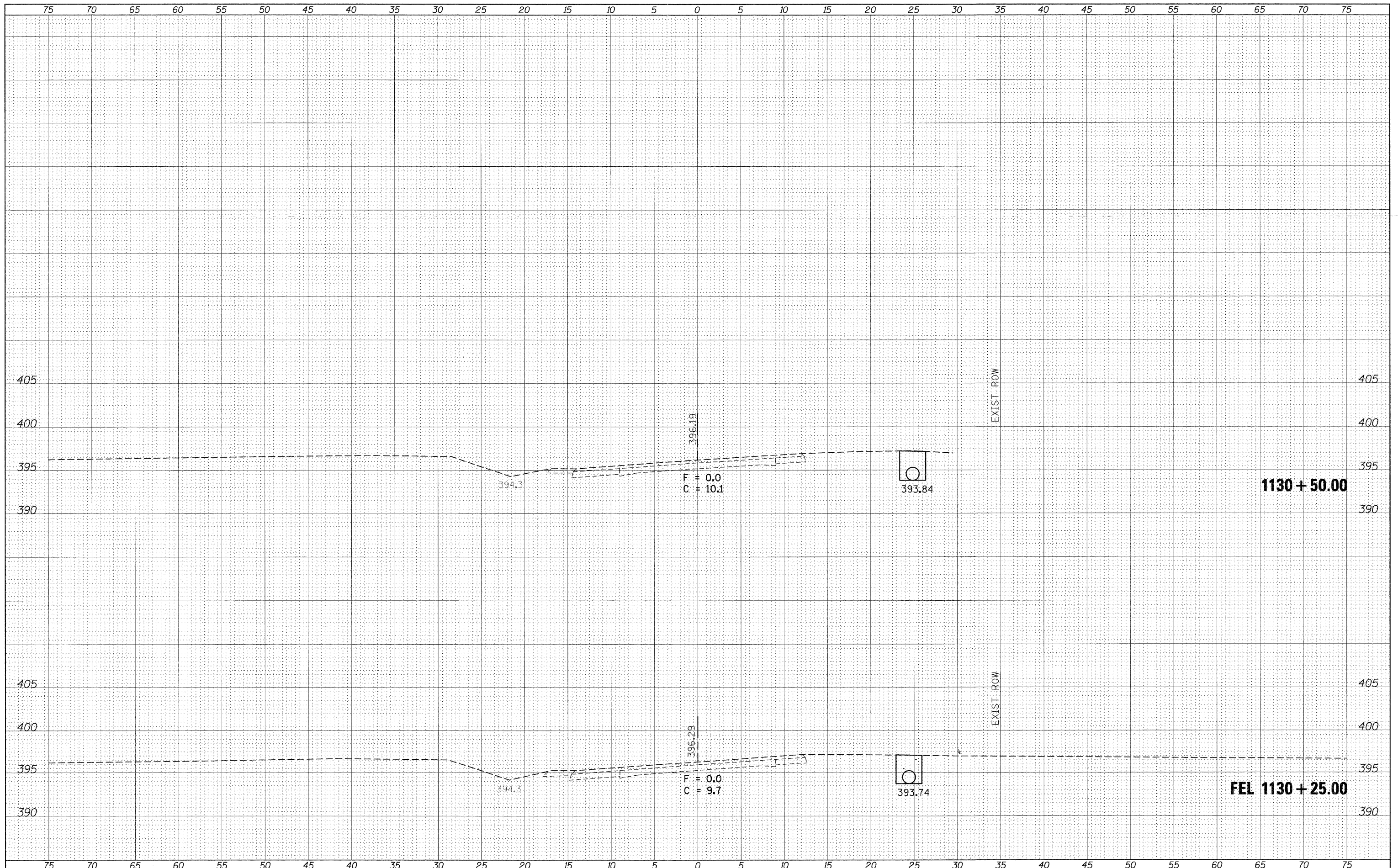
SCALE:	SHEET	OF	SHEETS	STA. 1129+00.00	TO	STA. 1130+00.00
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	48
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				



FINAL SURVEY	SURVISED	BY	DATE
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

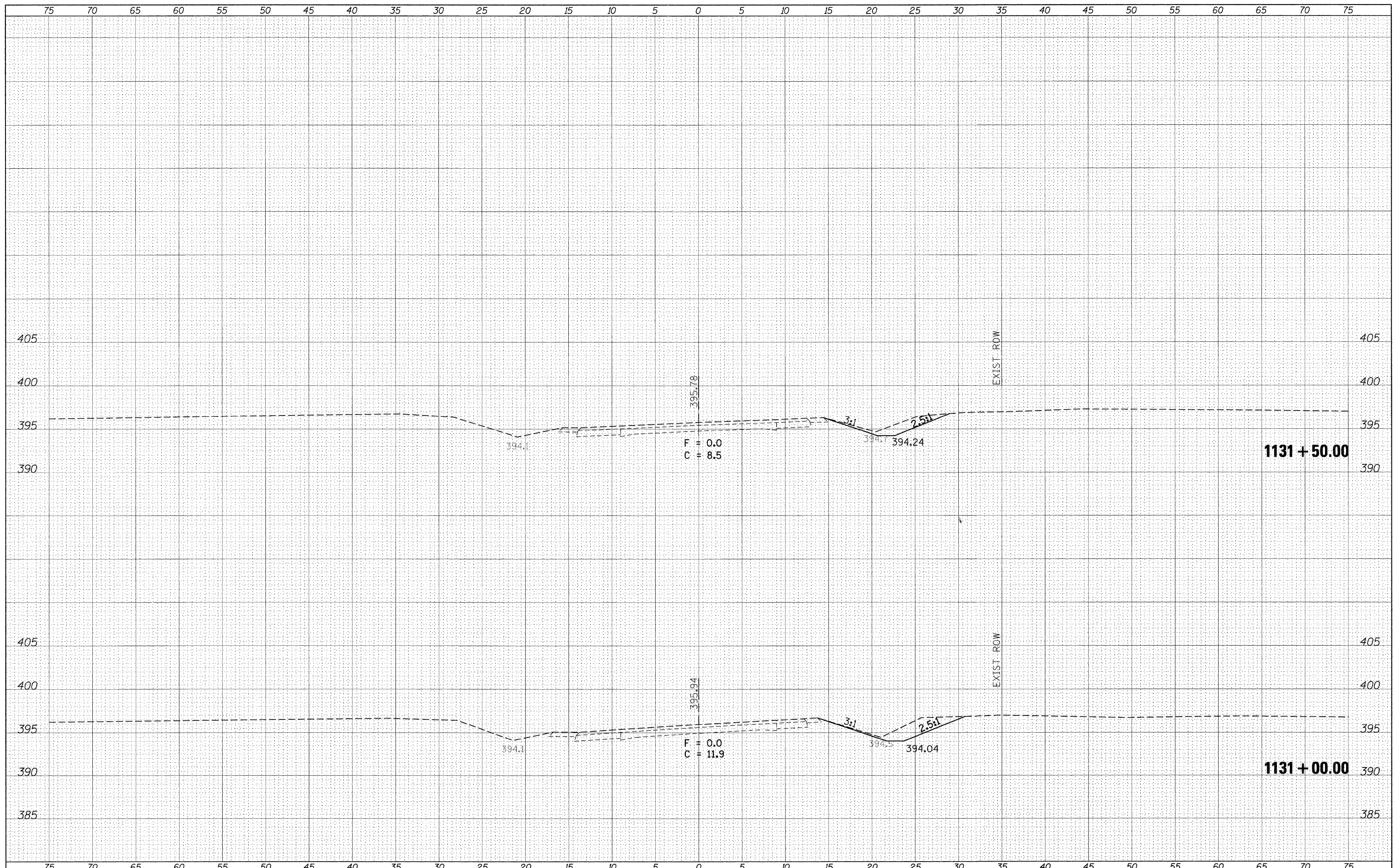
**IL RTE. 4**

SCALE: SHEET OF SHEETS STA. 1130+25.00 TO STA. 1130+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	49
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED	BY	DATE
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

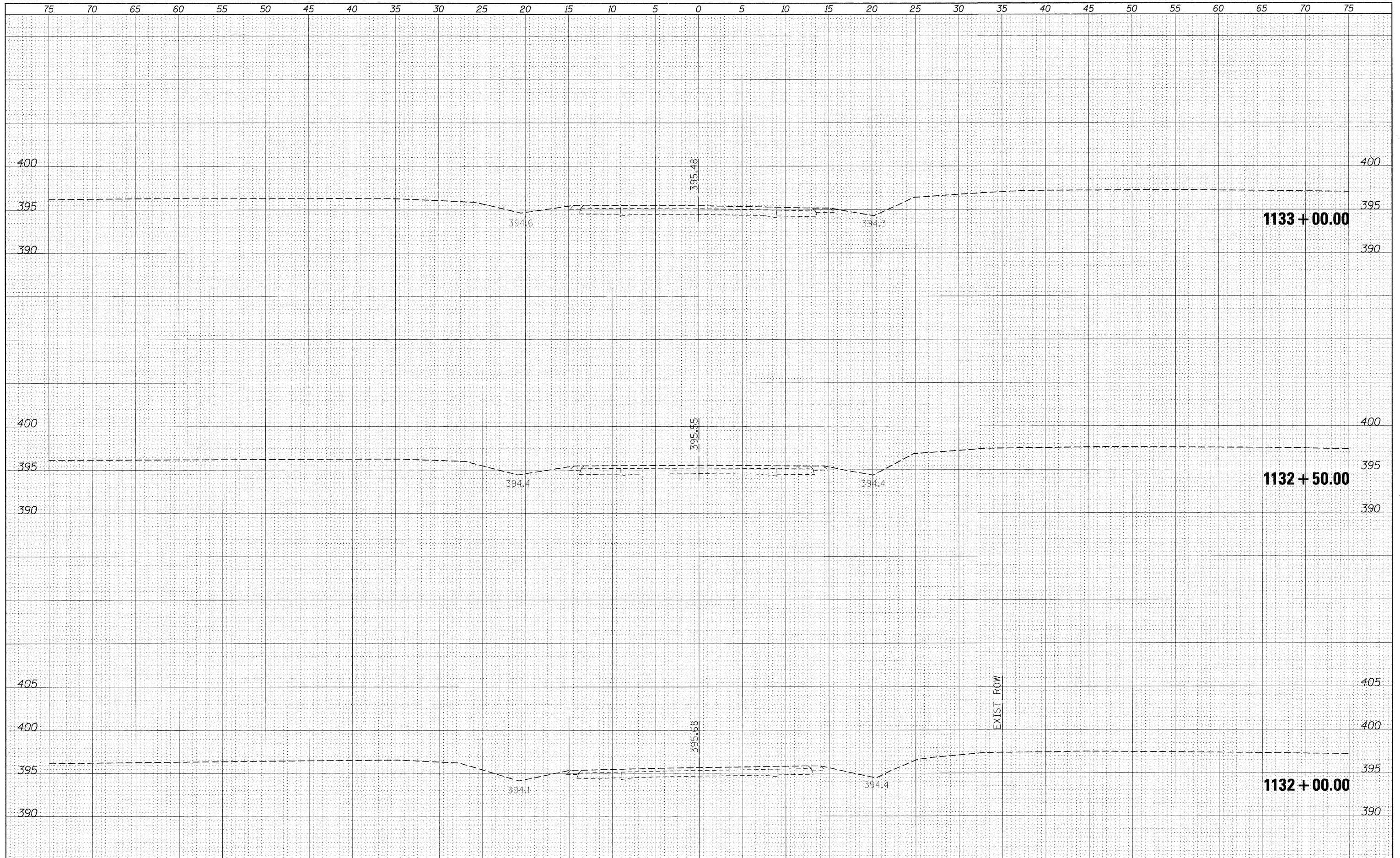
**IL RTE. 4**

SCALE: SHEET OF SHEETS STA. 1131+00.00 TO STA. 1131+50.00

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 50
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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FILE NAME =	USER NAME = halsteadtw	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL RTE. 4</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

FINAL SURVEY	SURVEYED	BY	DATE
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1 + 25.00

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75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

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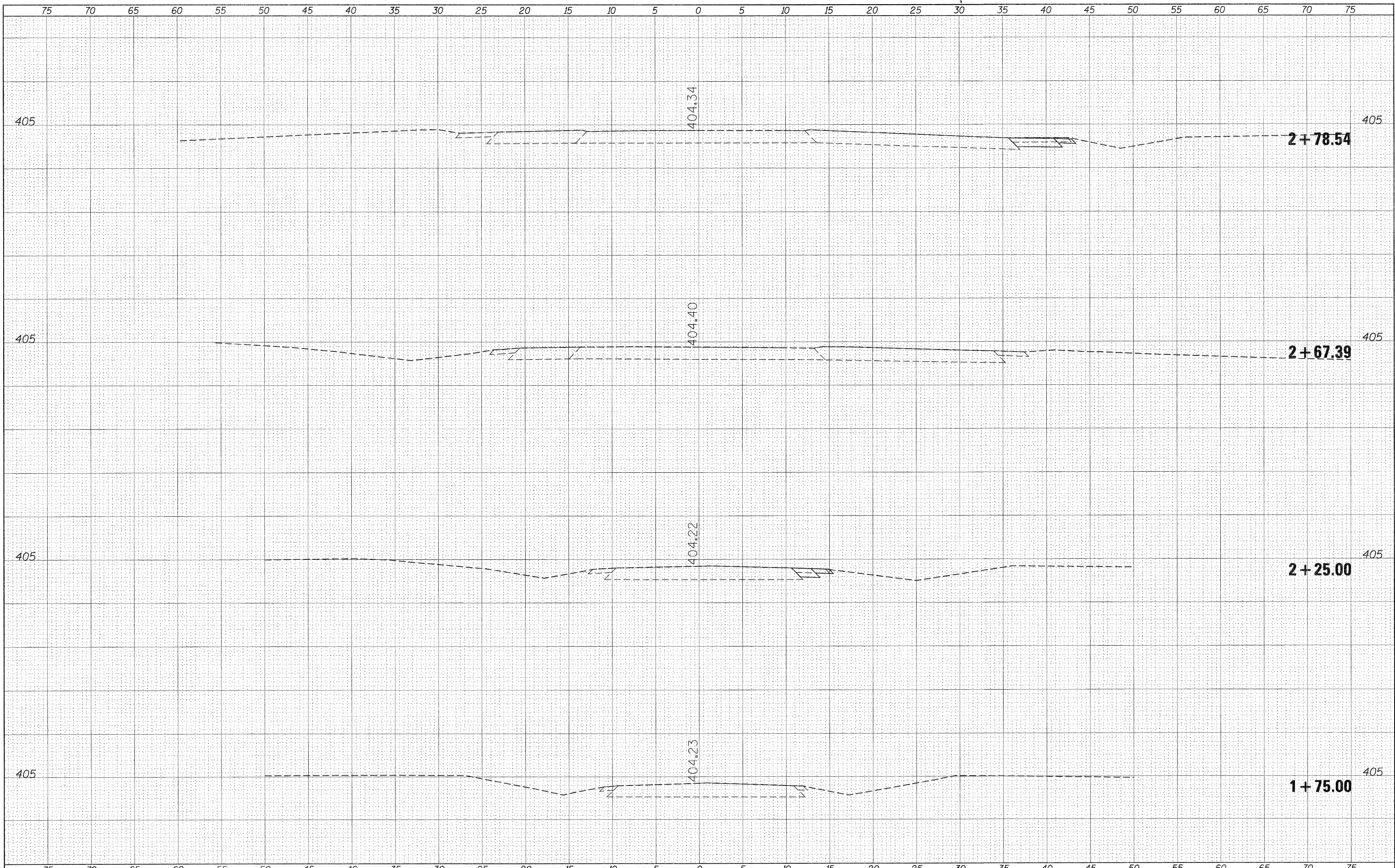
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**MUDLINE RD.-BEAUCOUP RD. INTERSECTION  
 ALONG BEAUCOUP RD.**

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. +50.00 TO STA. 1+25.00

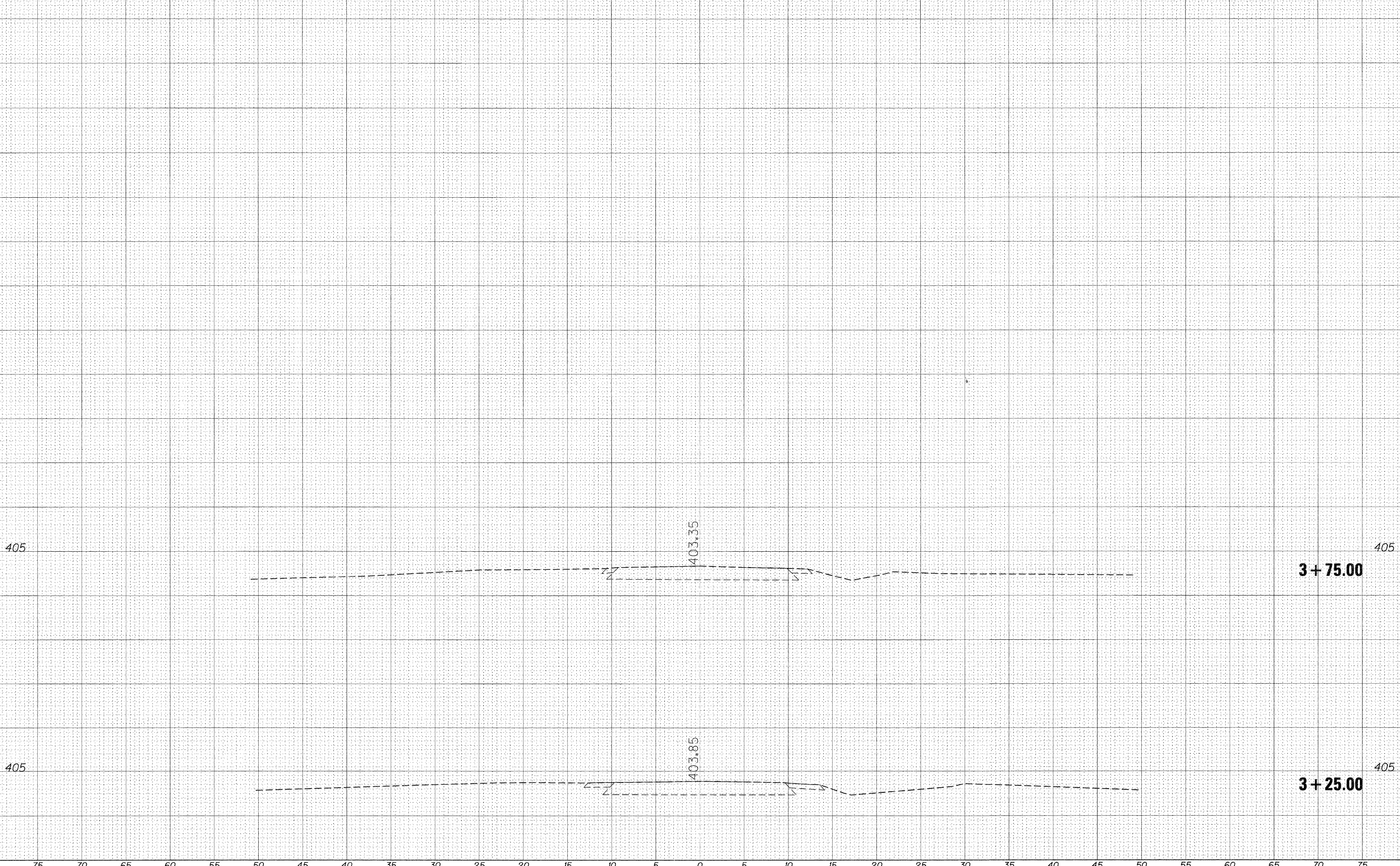
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	52
			CONTRACT NO. 78049	
ILLINOIS FED. AID PROJECT				



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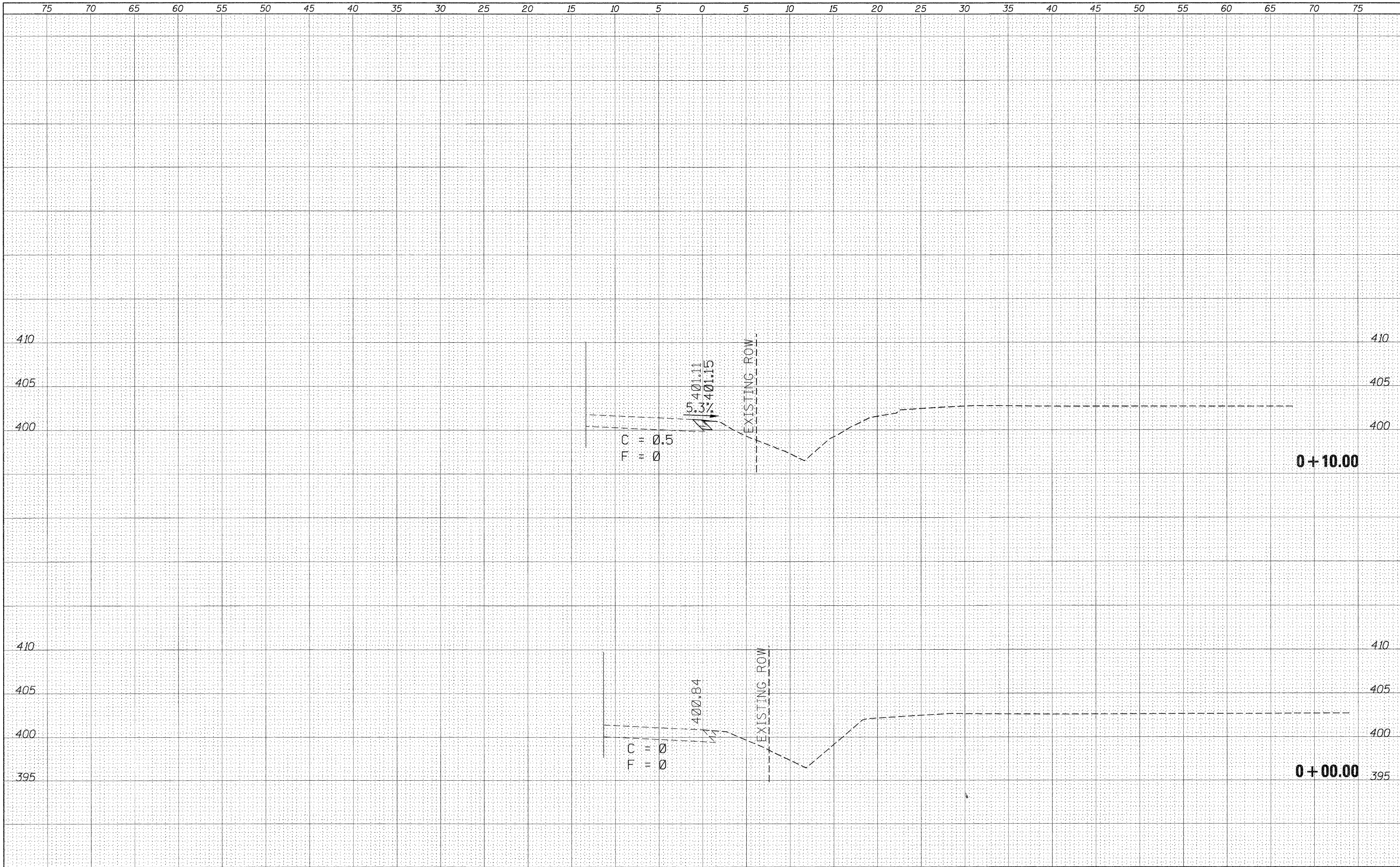
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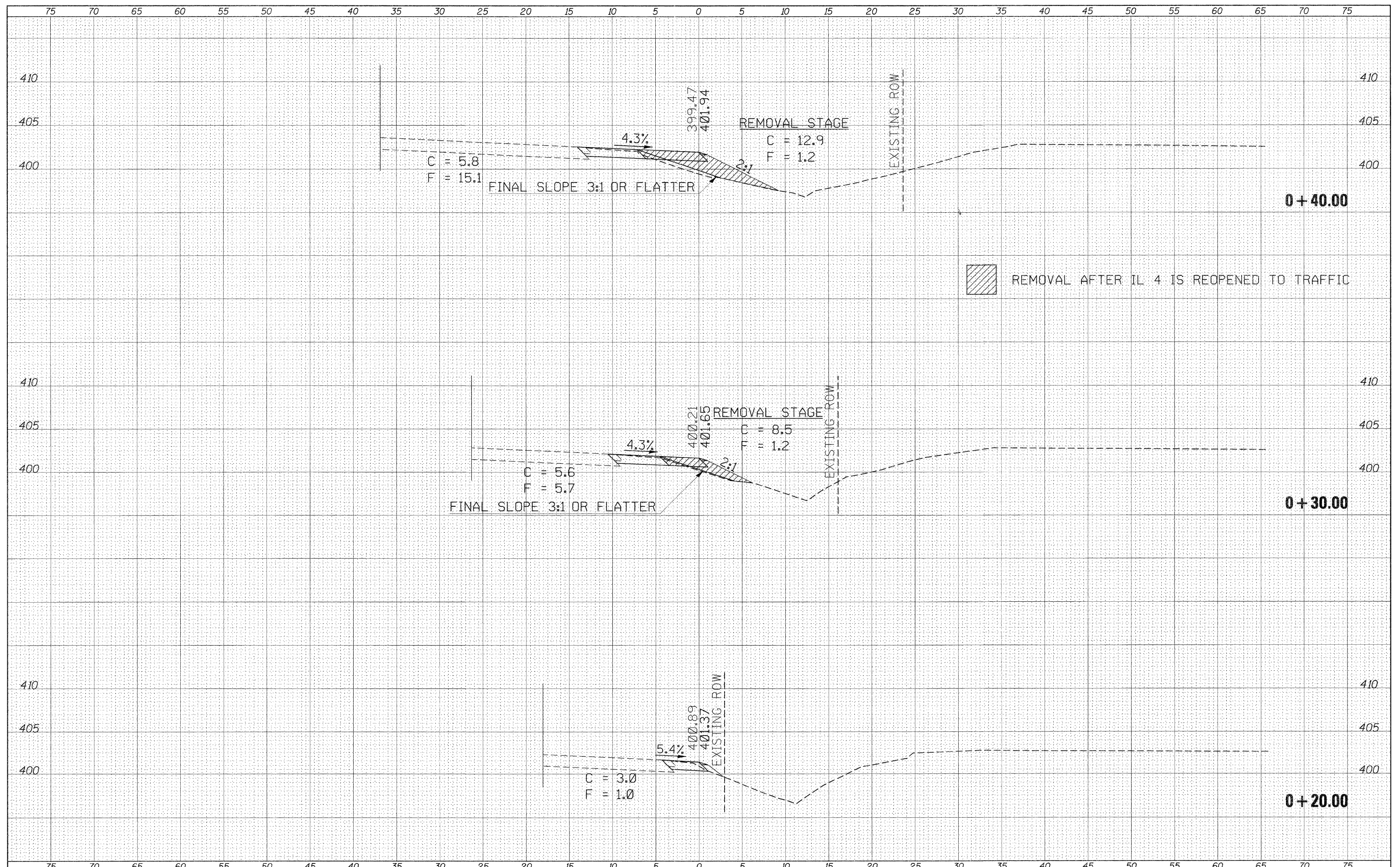
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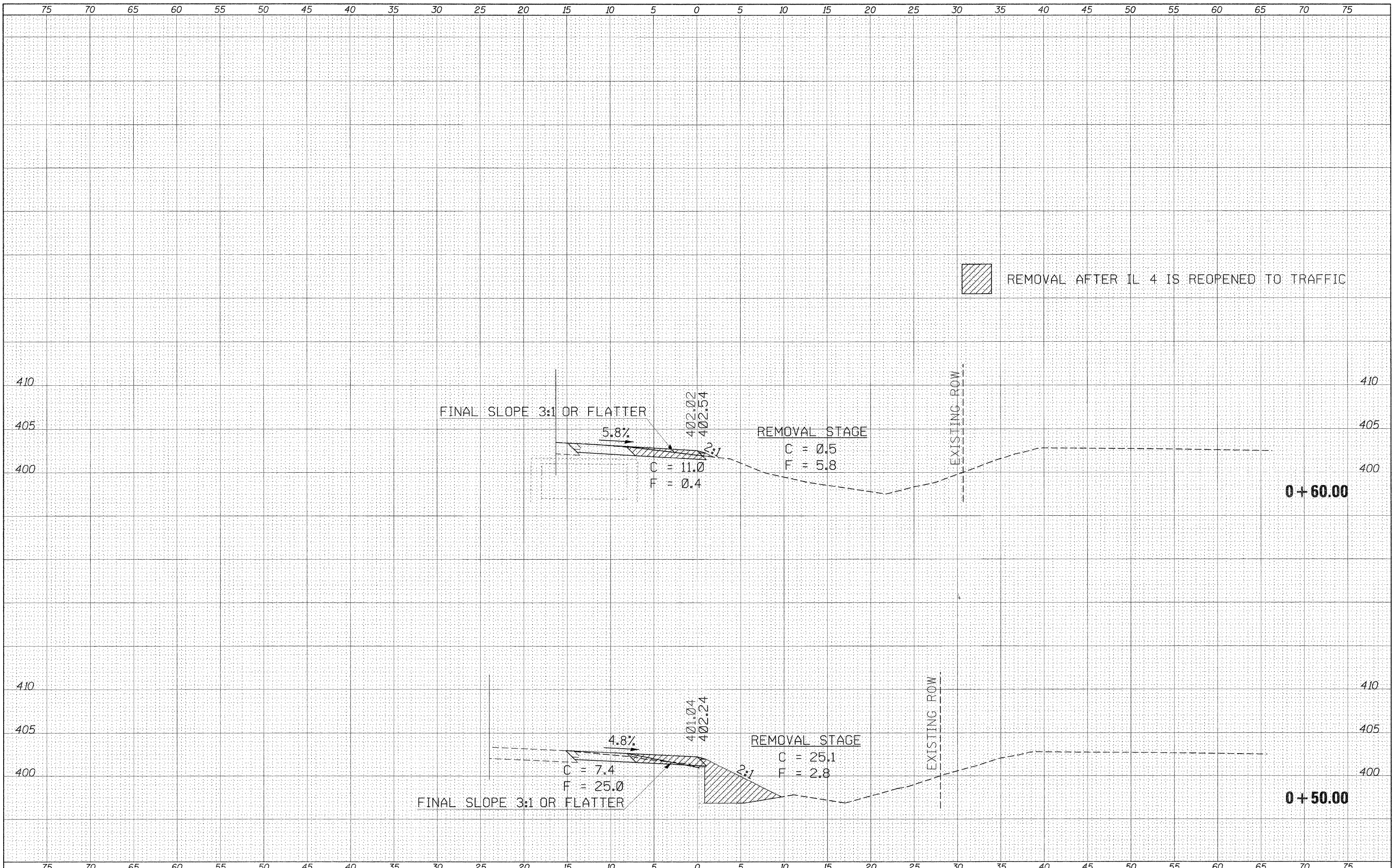
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
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FINAL SURVEY	
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ORIGINAL SURVEY	
NOTE BOOK	
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 REMOVAL AFTER IL 4 IS REOPENED TO TRAFFIC

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 13/127-BAUCOUP RD. INTERSECTION  
 SOUTHWEST QUADRANT**

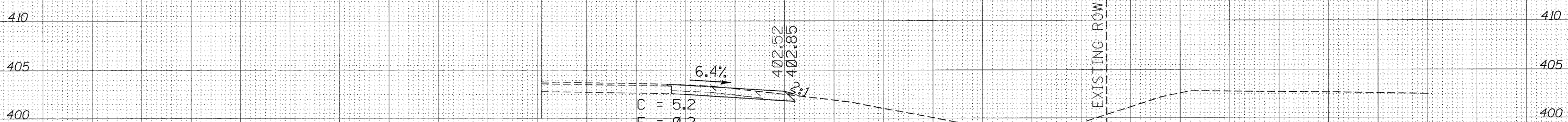
SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. +50.00 TO STA. +60.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	57
CONTRACT NO. 78049				
[ILLINOIS] FED. AID PROJECT				

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



0 + 80.00



0 + 70.00

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

FINAL SURVEY	DATE
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ORIGINAL SURVEY	DATE
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**IL 13127-BEAUCOUP RD. INTERSECTION  
SOUTHWEST QUADRANT**

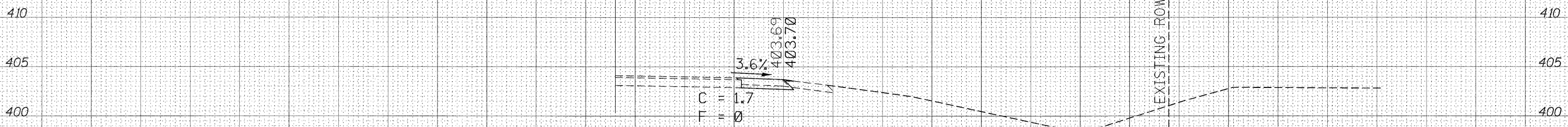
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F.A.P.  
RTE.  
686

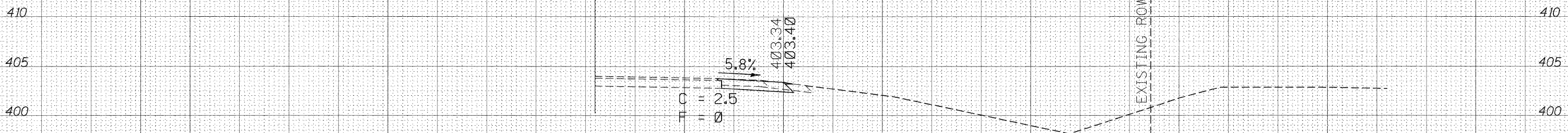
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
114B-1	JACKSON	114	58
CONTRACT NO. 78049			

[ILLINOIS] FED. AID PROJECT

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



1+00.00



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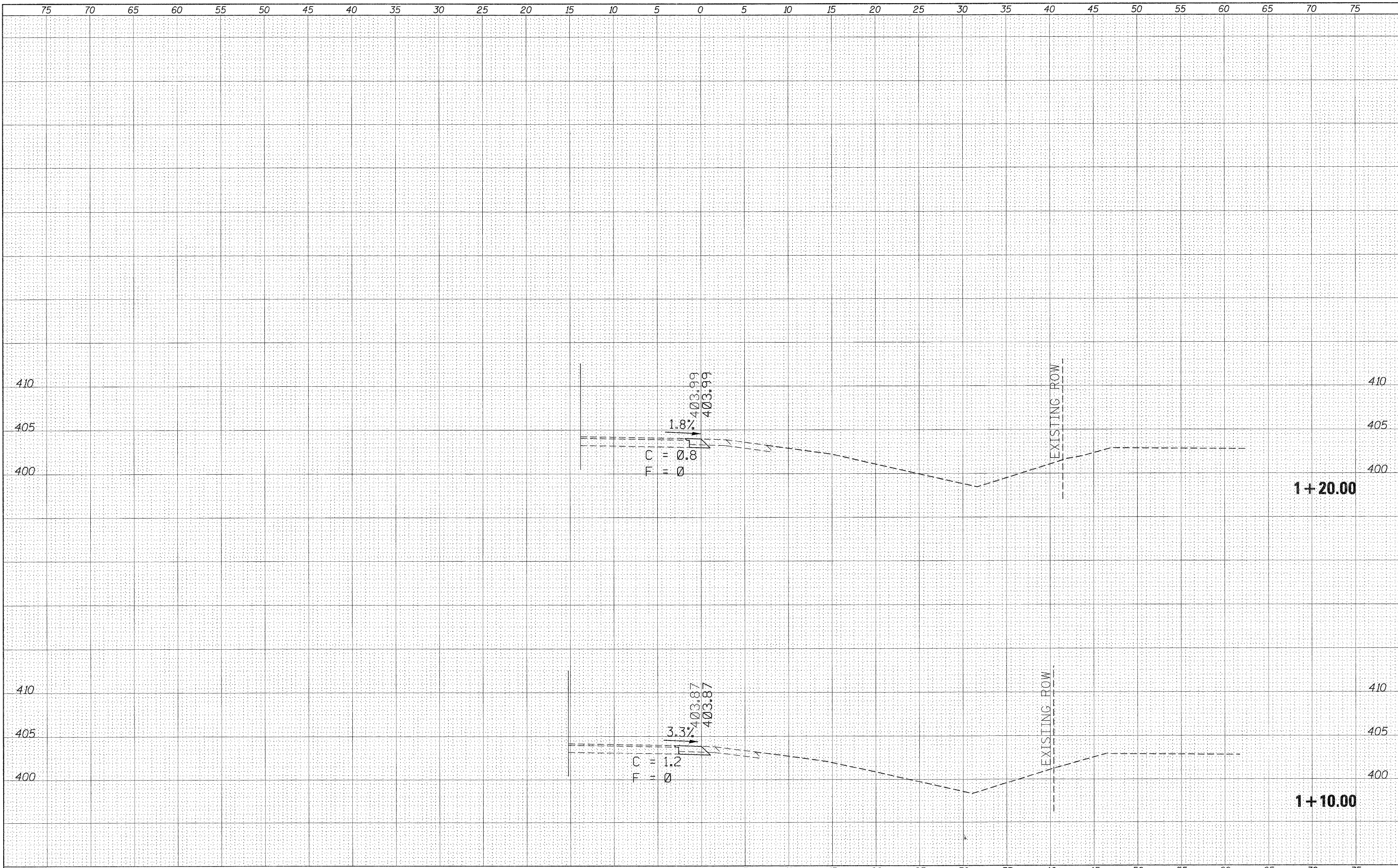
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DATE	-	REVISED	-

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 13127-BEAUCOUP RD. INTERSECTION  
 SOUTHWEST QUADRANT**

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. +90.00 TO STA. 1+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	59
				CONTRACT NO. 78049
ILLINOIS FED. AID PROJECT				



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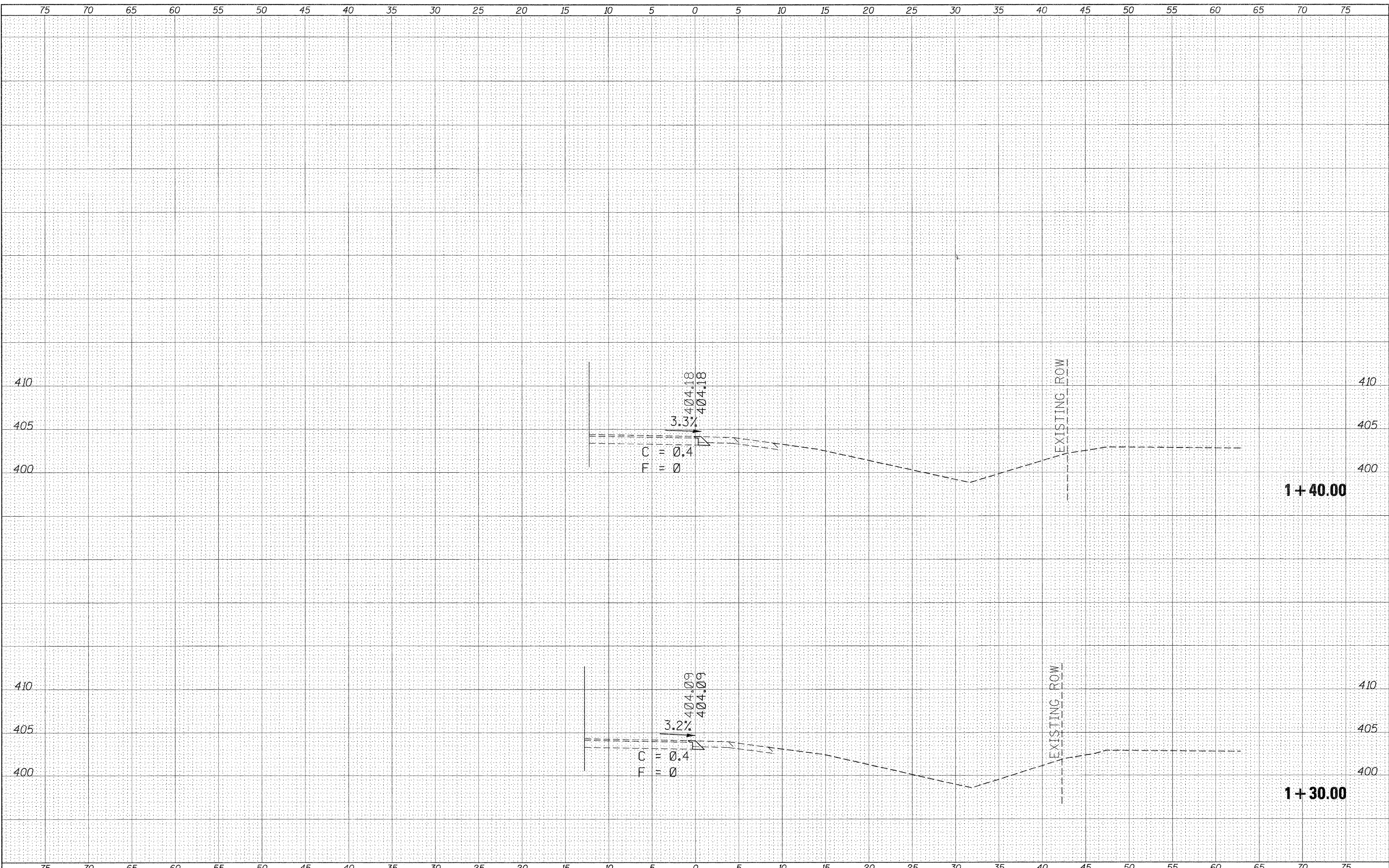
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 13127-BEAUCOUP RD. INTERSECTION  
 SOUTHWEST QUADRANT**

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. 1+10.00 TO STA. 1+20.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	60
			CONTRACT NO. 78049	
[ILLINOIS] FED. AID PROJECT				



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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 13127-BEAUCOUP RD. INTERSECTION  
 SOUTHWEST QUADRANT**

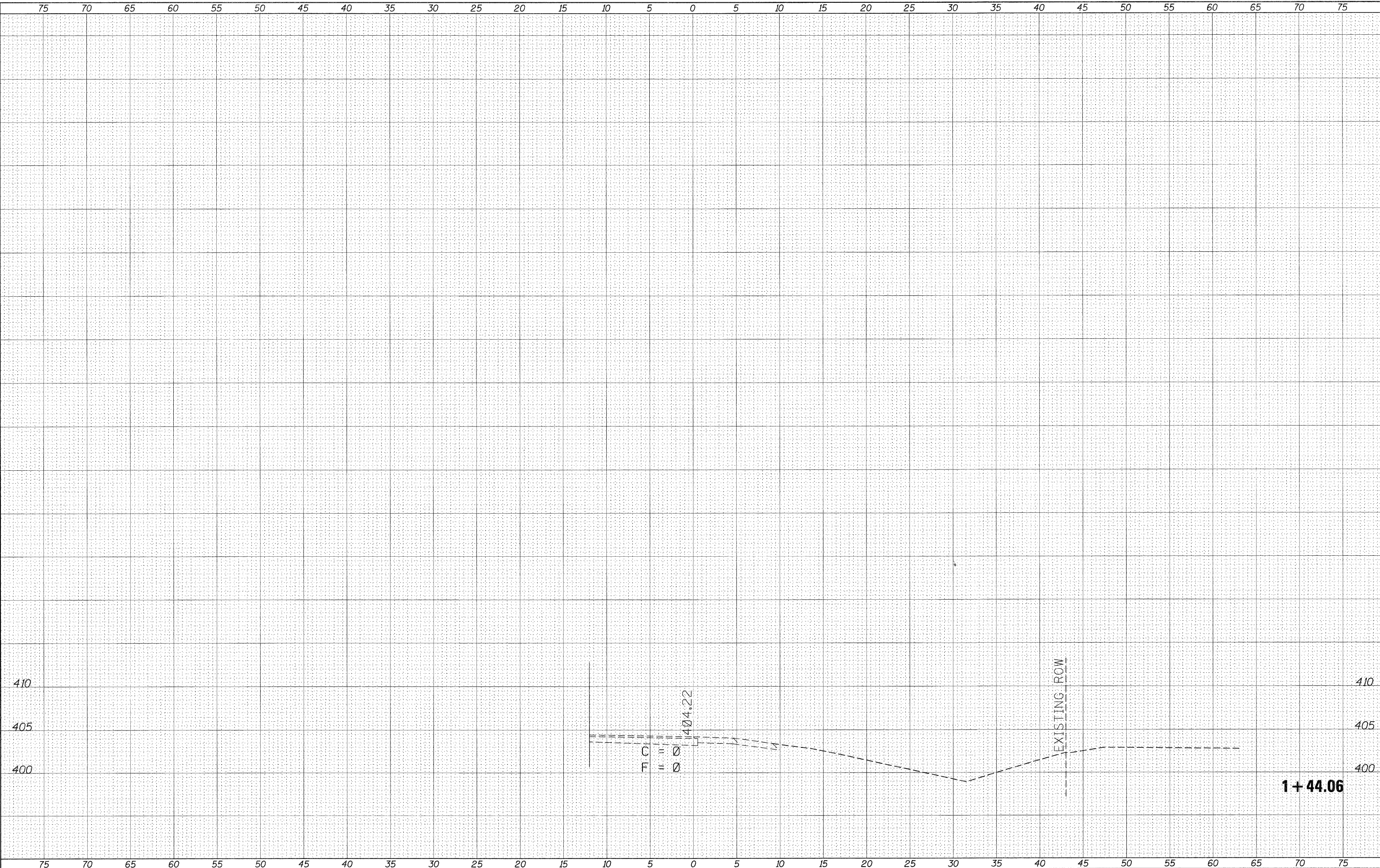
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F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 61
			CONTRACT NO. 78049	
ILLINOIS FED. AID PROJECT				

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

FINAL SURVEY	DATE
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ORIGINAL SURVEY	DATE
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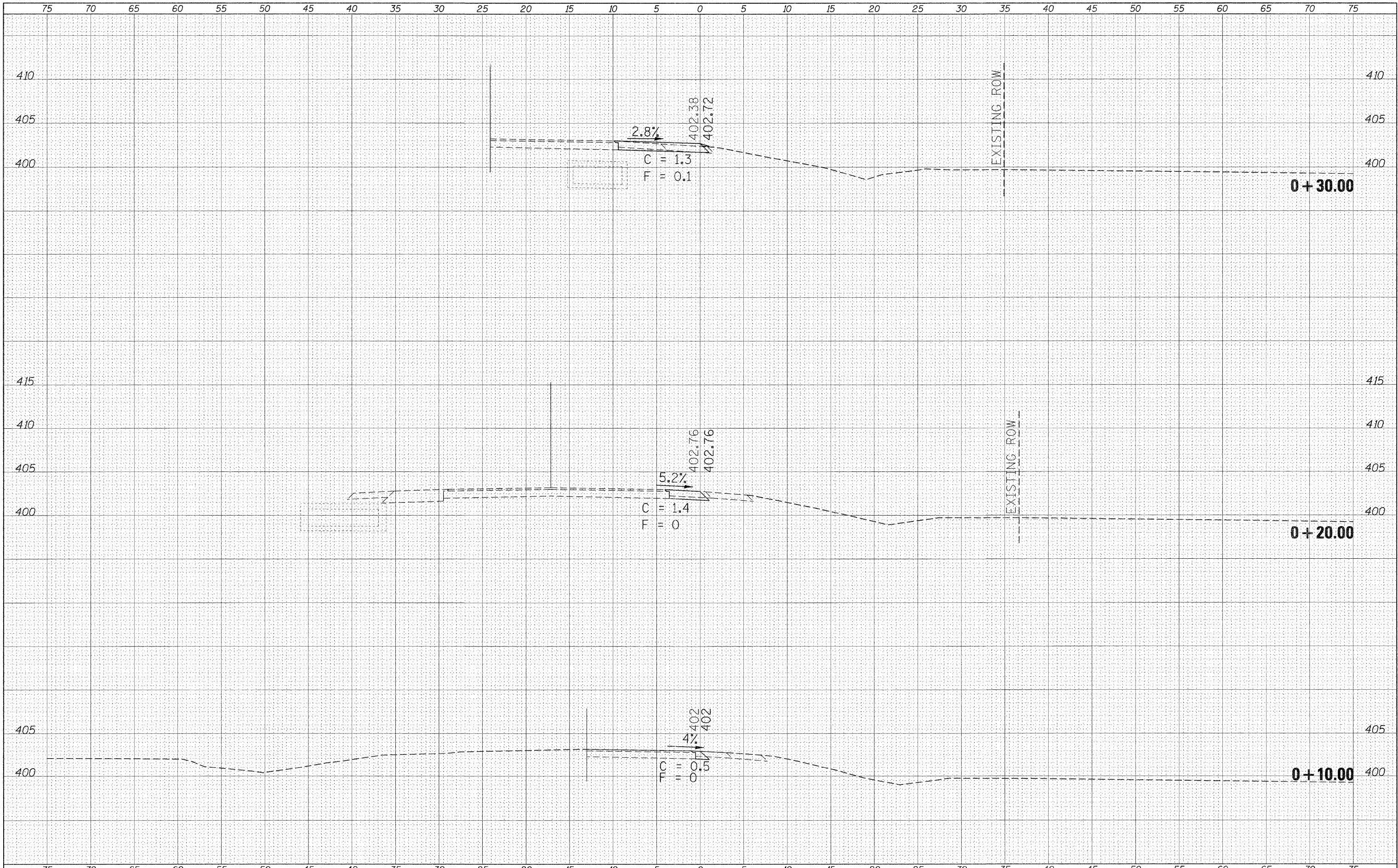


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PLOT DATE = 11/3/2011		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

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 REVIEWED \_\_\_\_\_  
 SURVEY PLOTTED \_\_\_\_\_  
 ORIGINAL SURVEY PLOTTED \_\_\_\_\_  
 NOTE BOOK NO. \_\_\_\_\_  
 TEMPLATE AREAS CHECKED \_\_\_\_\_

DATE \_\_\_\_\_ BY \_\_\_\_\_  
 REVIEWED \_\_\_\_\_  
 SURVEY PLOTTED \_\_\_\_\_  
 ORIGINAL SURVEY PLOTTED \_\_\_\_\_  
 NOTE BOOK NO. \_\_\_\_\_  
 TEMPLATE AREAS CHECKED \_\_\_\_\_



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 PLOT DATE = 11/3/2011

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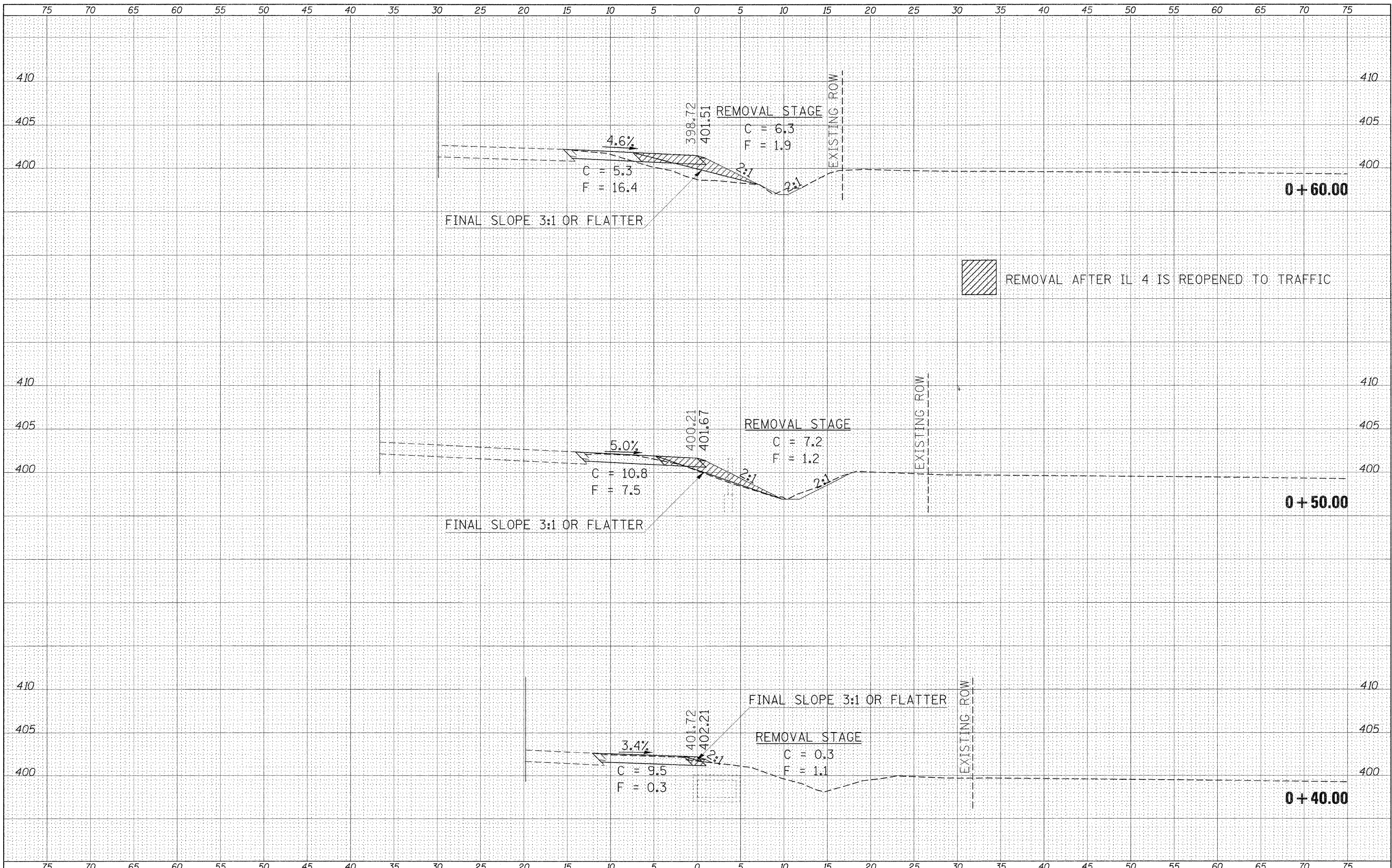
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

IL 13127-BEAUCOUP RD. INTERSECTION  
 NORTHWEST QUADRANT

SCALE: \_\_\_\_\_ SHEET \_\_\_\_ OF \_\_\_\_ SHEETS STA. -10.00 TO STA. +30.00

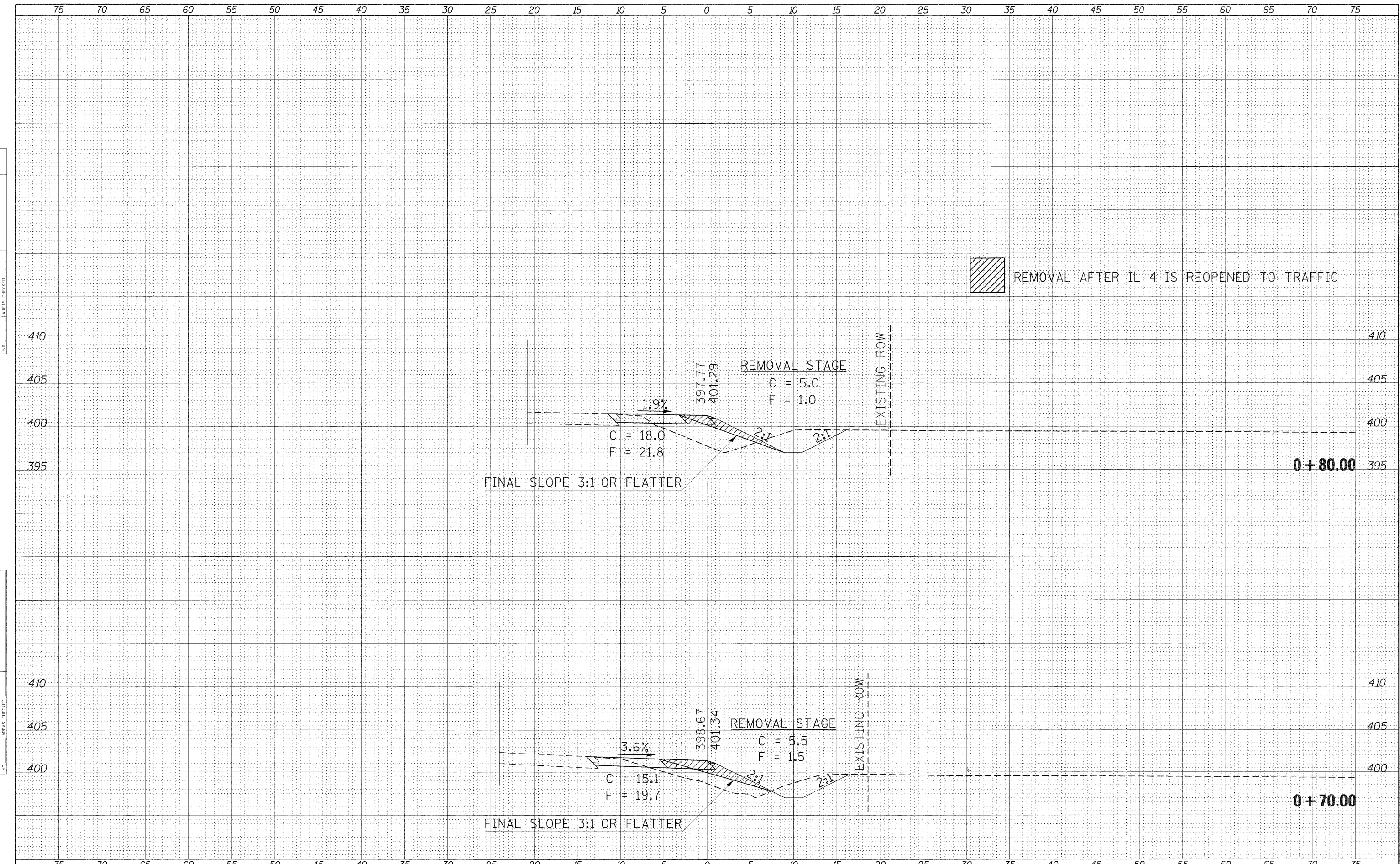
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	63
				CONTRACT NO. 78049
				ILLINOIS FED. AID PROJECT



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FINAL SURVEY	
NOTE BOOK	
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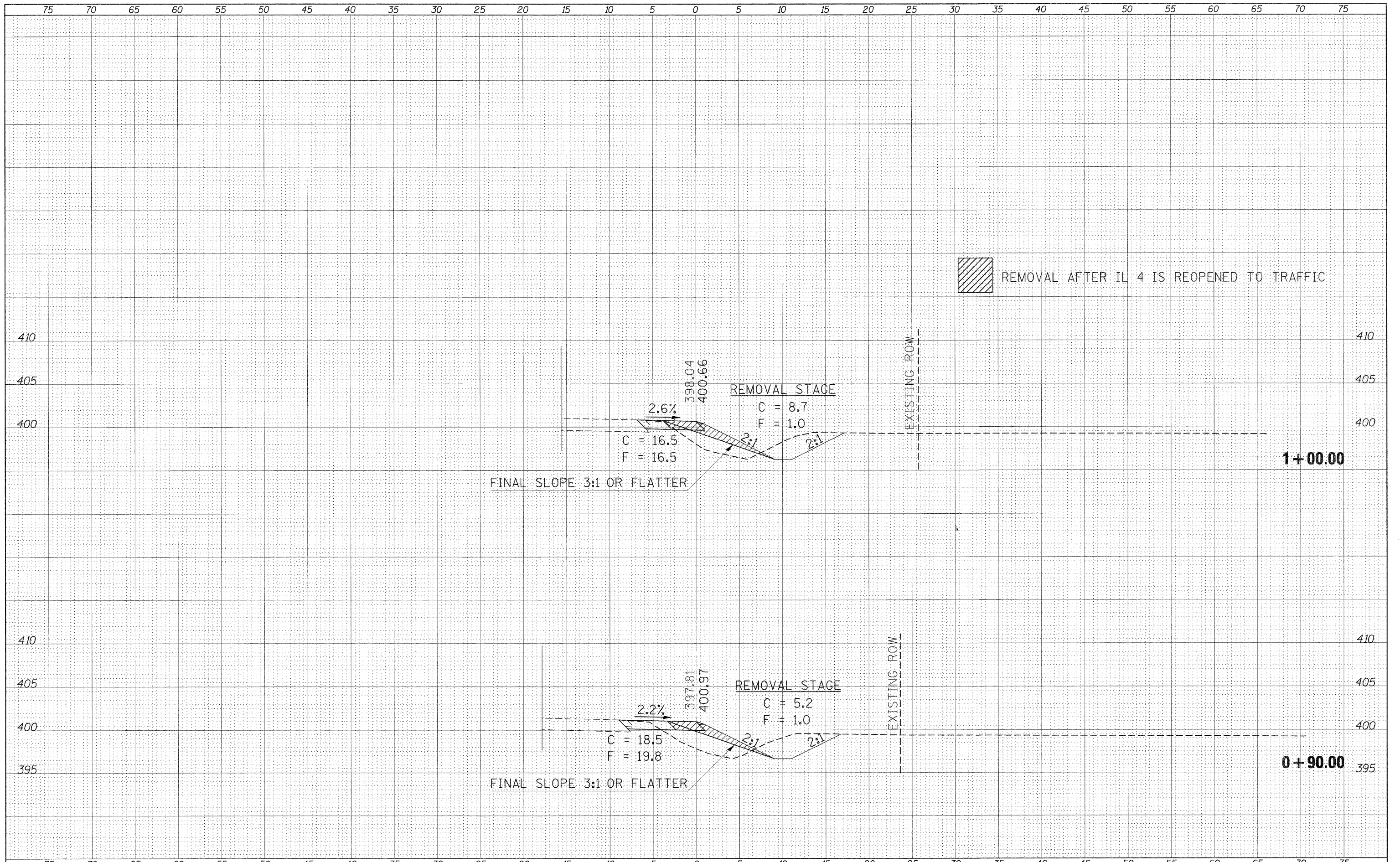
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FILE NAME =	USER NAME =	DESIGNED =	REVISED =	<b>STATE OF ILLINOIS          DEPARTMENT OF TRANSPORTATION</b>	<b>IL 13127-BEAUCOUP RD. INTERSECTION          NORTHWEST QUADRANT</b>	F.A.P. RTE. =	SECTION =	COUNTY =	TOTAL SHEETS =	SHEET NO. =
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PLOT SCALE = 5.0000' / 1" =		CHECKED =	REVISED =			CONTRACT NO. 78049				
PLOT DATE = 11/3/2011		DATE =	REVISED =			ILLINOIS FED. AID PROJECT				

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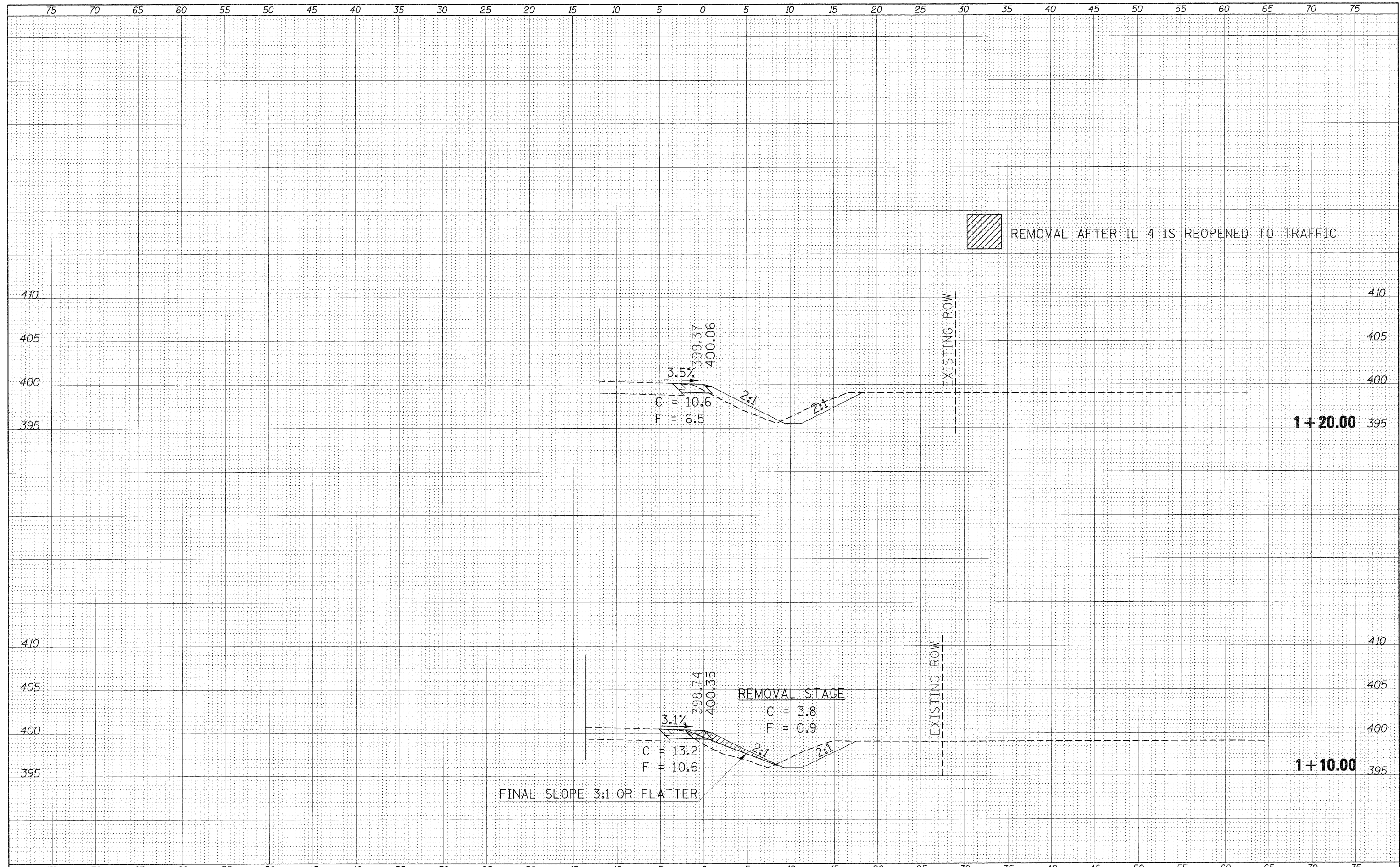
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 13127-BEAUCOUP RD. INTERSECTION  
 NORTHWEST QUADRANT**

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. +90.00 TO STA. 1+00.00

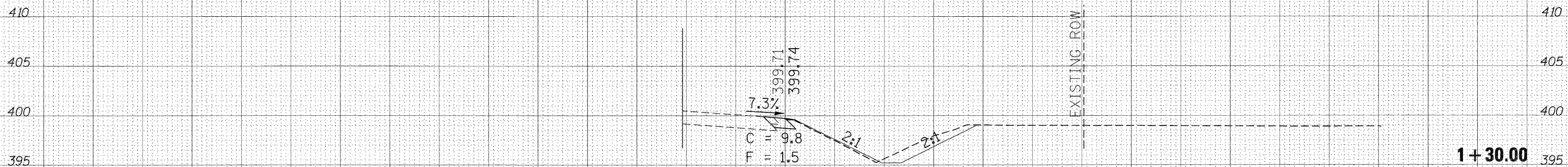
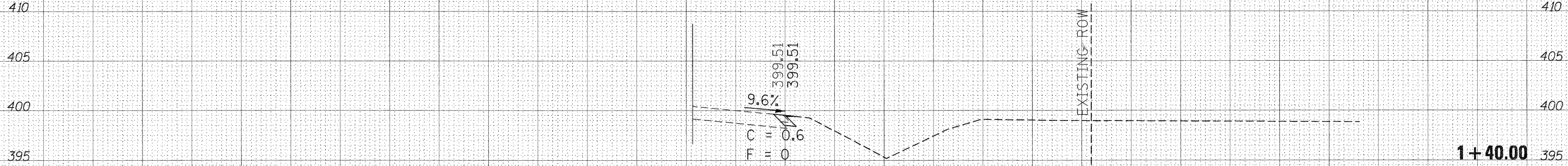
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	66
CONTRACT NO. 78049			[ILLINOIS] FED. AID PROJECT	



DATE	BY	DESIGNED	CHECKED
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DATE	BY	DESIGNED	CHECKED
ORIGINAL SURVEY	NOTED	PLOTTED	TEMPLATE
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75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

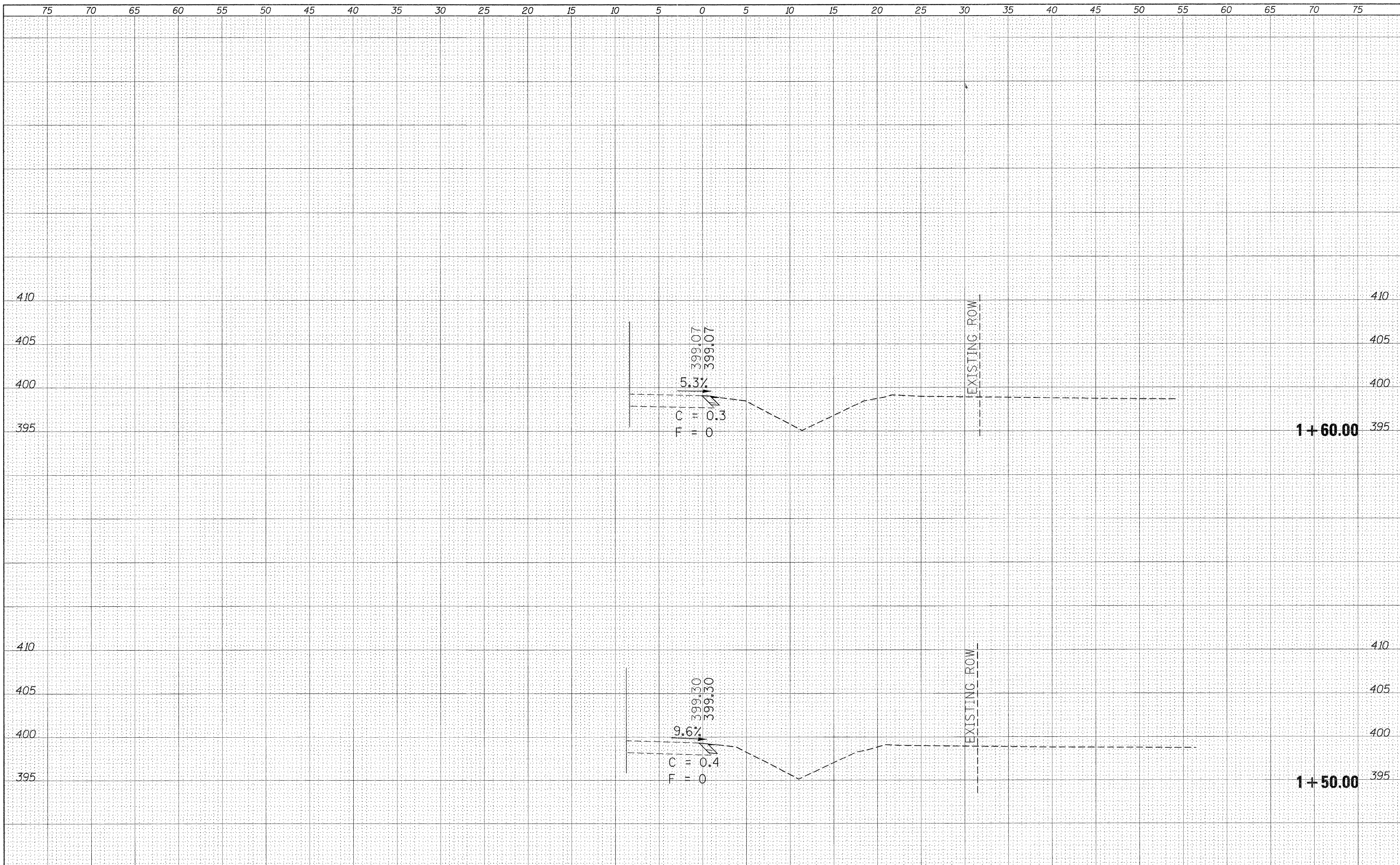
**IL 13127-BEAUCOUP RD. INTERSECTION  
 NORTHWEST QUADRANT**

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS | STA. 1+30.00 TO STA. 1+40.00

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 68
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	BY	DATE
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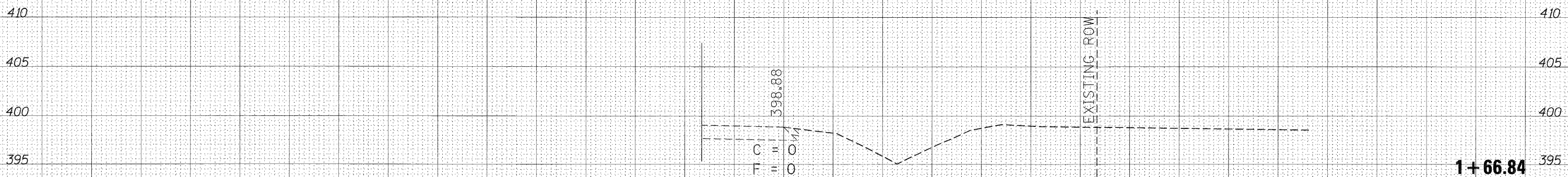


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PLOT DATE = 11/3/2011		DATE -	REVISED -			ILLINOIS FED. AID PROJECT				
SCALE: _____ SHEET _____ OF _____ SHEETS STA. 1+50.00 TO STA. 1+60.00										

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

FINAL SURVEY	SURVEYED	DATE
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

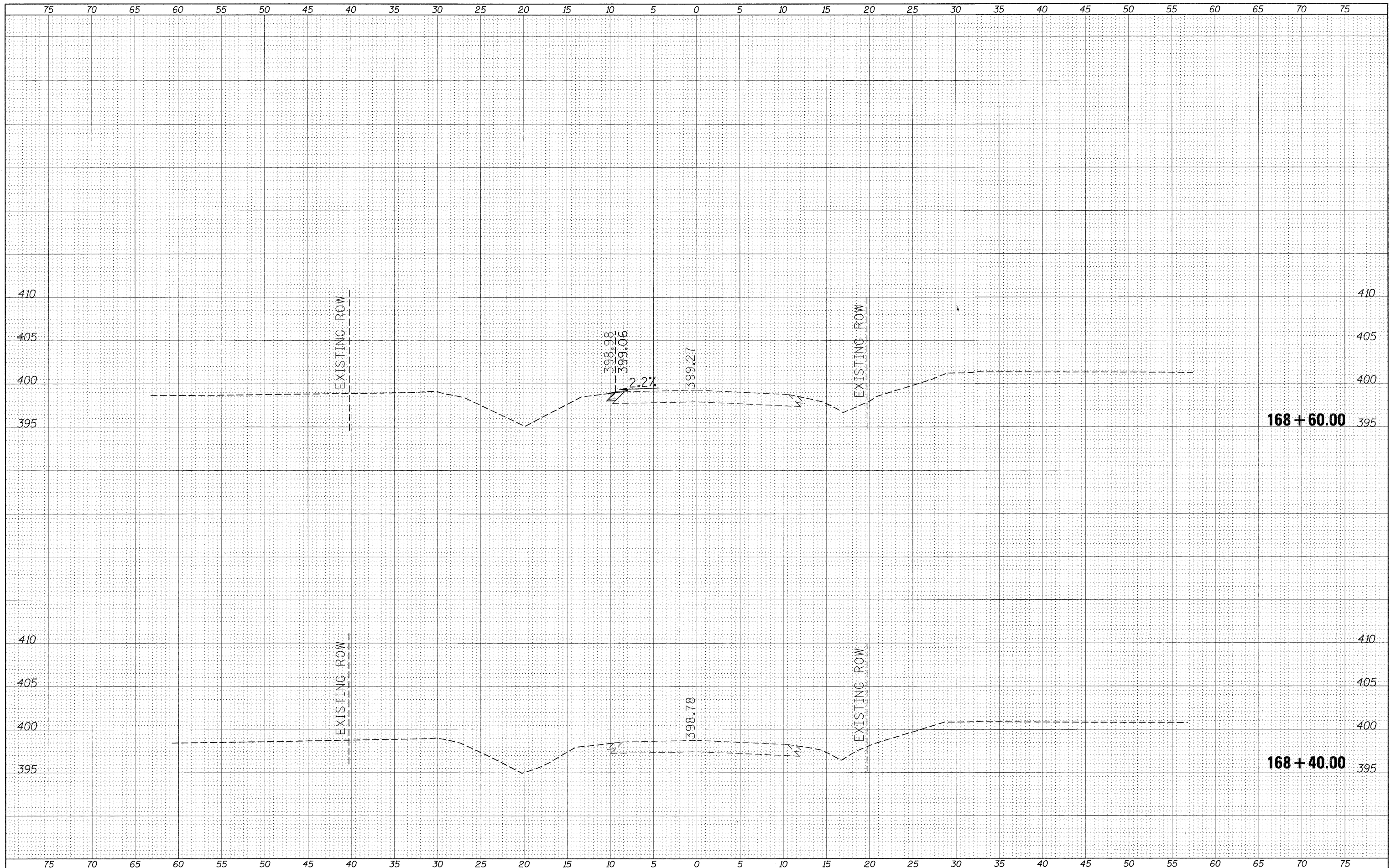
**IL 13127-BEAUCOUP RD. INTERSECTION  
 NORTHWEST QUADRANT**

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. 1+66.84 TO STA. 1+66.84

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	70
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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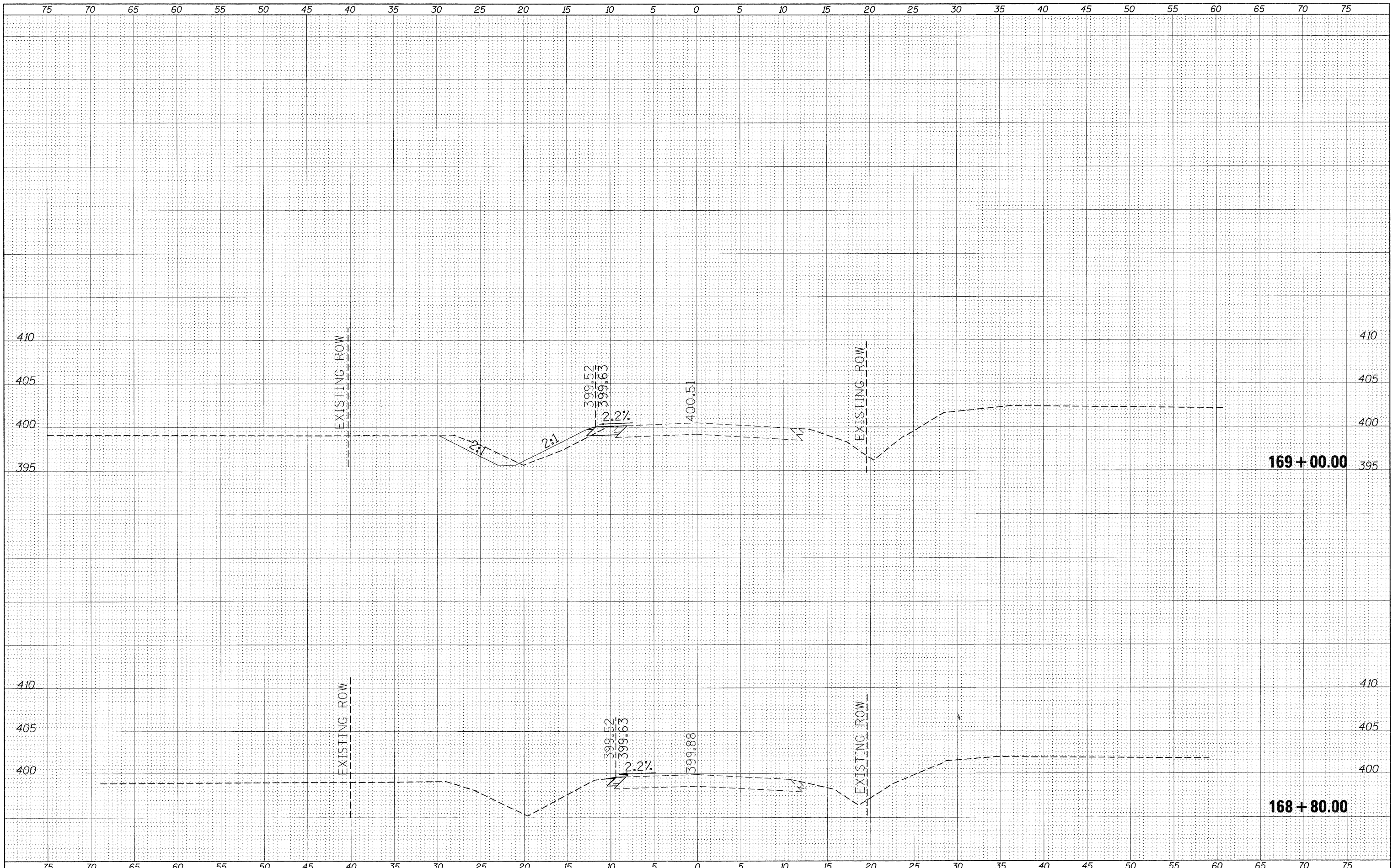
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**IL 13127-BEAUCOUP RD. INTERSECTION**  
**ALONG BEAUCOUP RD.**  
 SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. 168+40.00 TO STA. 168+60.00

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 71
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 13/127-BEAUCOUP RD. INTERSECTION  
 ALONG BEAUCOUP RD.**

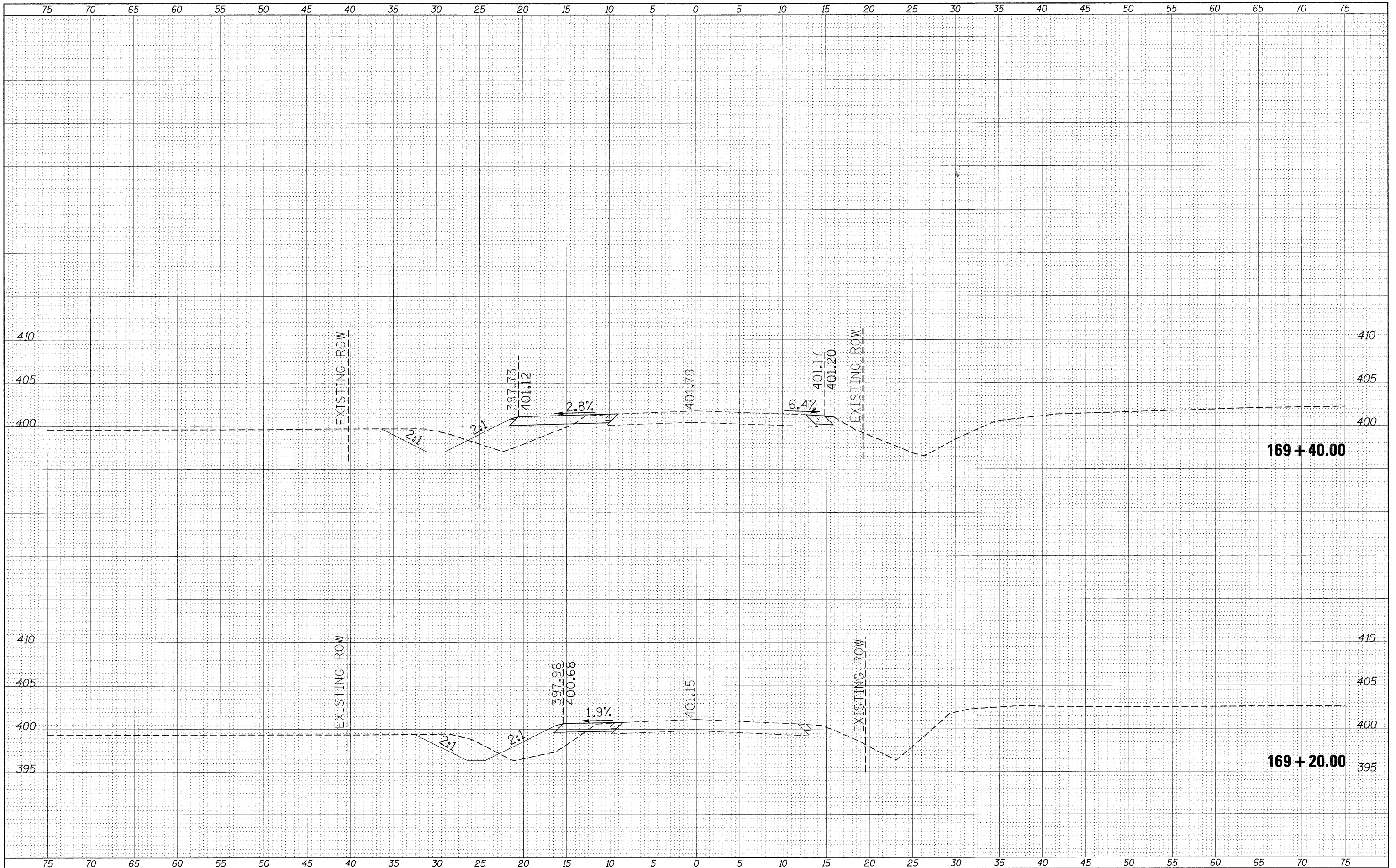
SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. 168+80.00 TO STA. 169+00.00

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 72
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				



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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

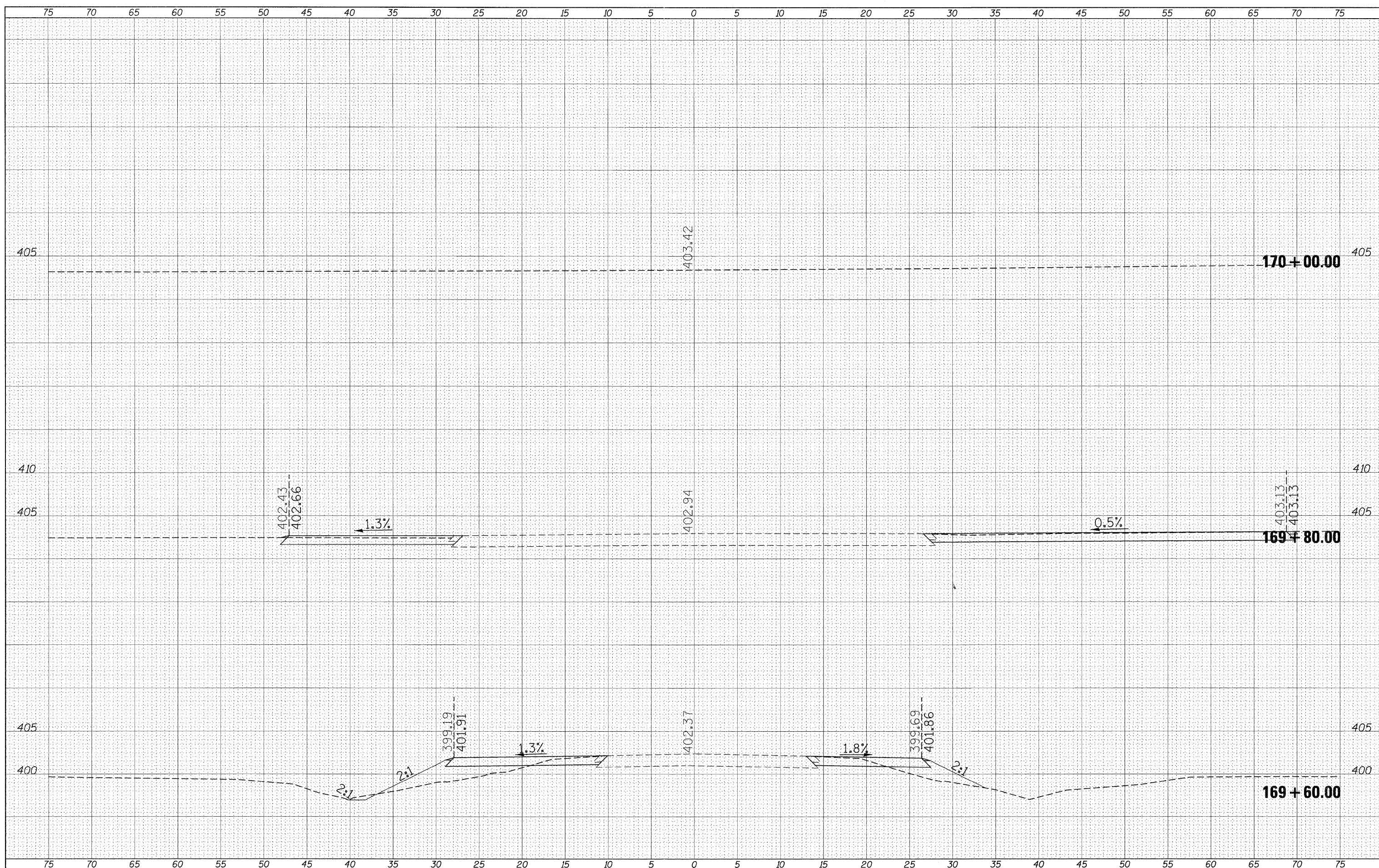
**IL 13127-BEAUCOUP RD. INTERSECTION  
 ALONG BEAUCOUP RD.**

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. 169+20.00 TO STA. 169+40.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	73
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

IL 13/127-BEAUCOUP RD. INTERSECTION  
 ALONG BEAUCOUP RD.  
 SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. 169+60.00 TO STA. 170+00.00

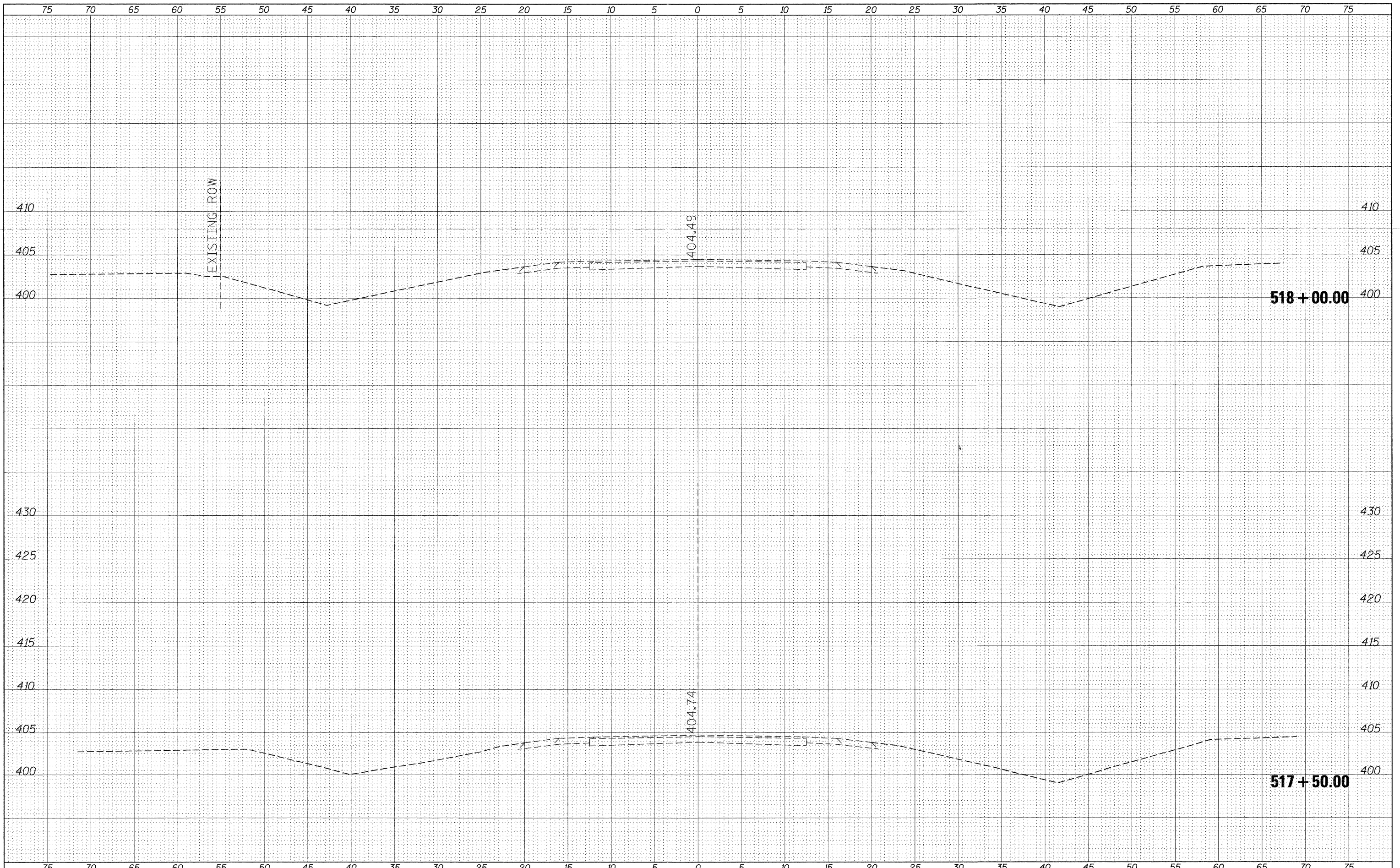
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	74

CONTRACT NO. 78049  
 ILLINOIS FED. AID PROJECT

CONTRACT NO. 78049  
 ILLINOIS FED. AID PROJECT

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**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

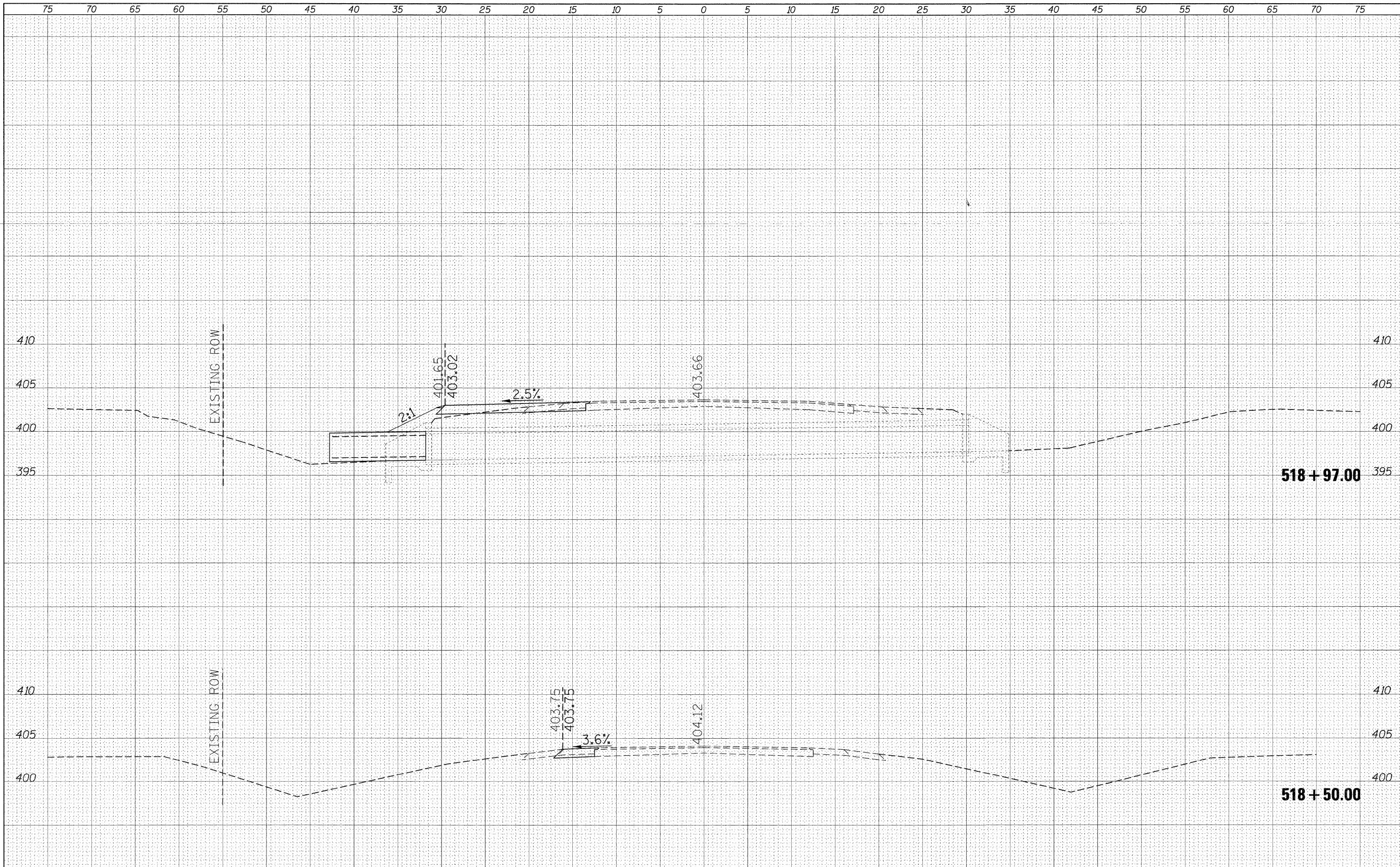
**IL 13127-BEAUCOUP RD. INTERSECTION**  
**ALONG IL 13127**

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. 517+50.00 TO STA. 518+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	75
CONTRACT NO. 78049			ILLINOIS FED. AID PROJECT	

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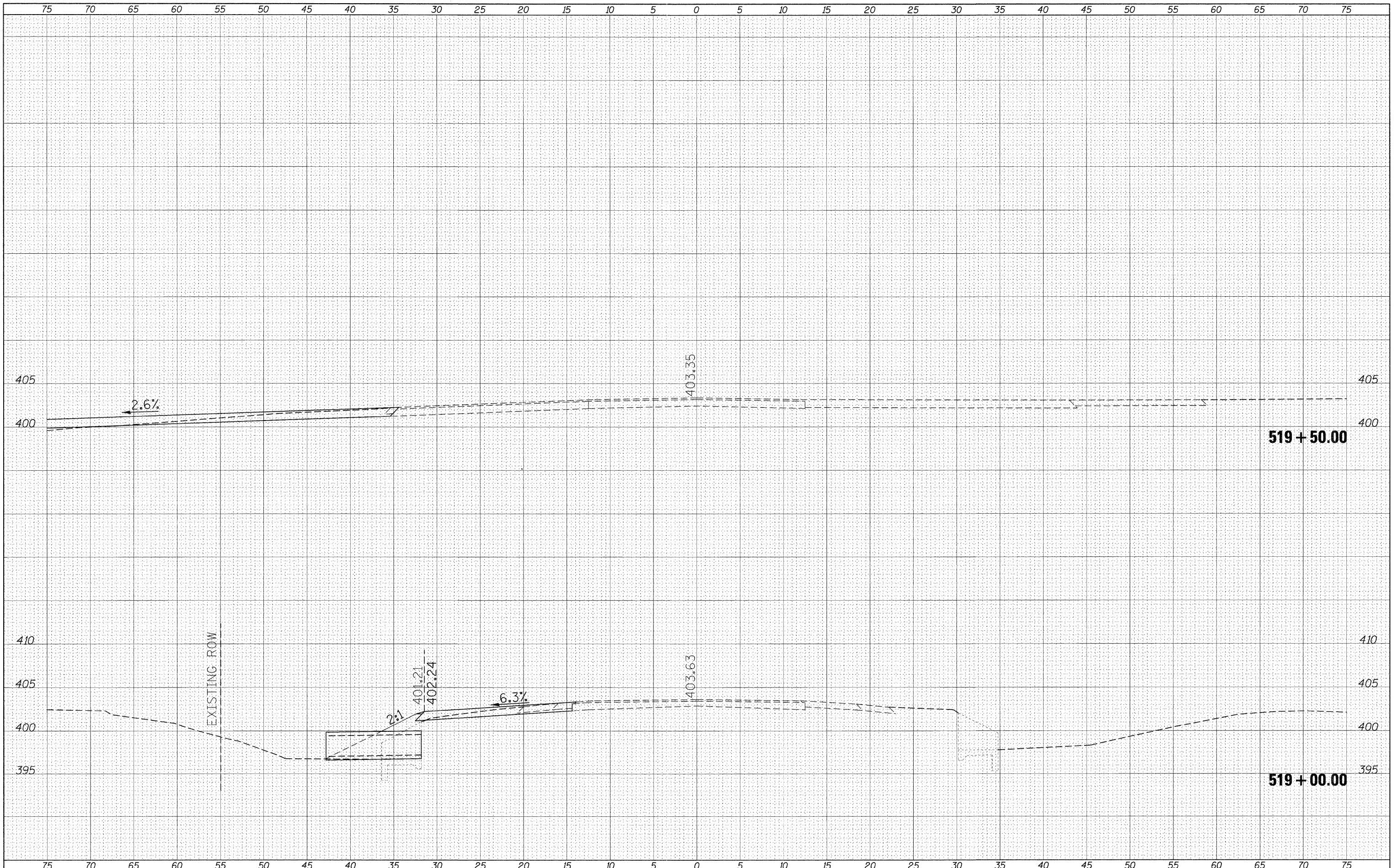
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AREAS CHECKED	



FILE NAME =	USER NAME = por terwc	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>IL 13127-BEAUCOUP RD INTERSECTION ALONG IL13127</b>			F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 76
ct:\pw\work\p\dot\por-terwc\dms49753\detour1127	xsah.dgn	DRAWN -	REVISED -		SCALE: _____	SHEET _____	OF _____	SHEETS	STA. 518+50.00	TO STA. 518+97.00	CONTRACT NO. 78049	
	PLOT SCALE = 5.0000' / 1in.	CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT							
	PLOT DATE = 10/18/2011	DATE -	REVISED -									

DATE	
BY	
SURVEYED	
PLOTTED	
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NOTE BOOK	
AREAS CHECKED	

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DESIGNED -  
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

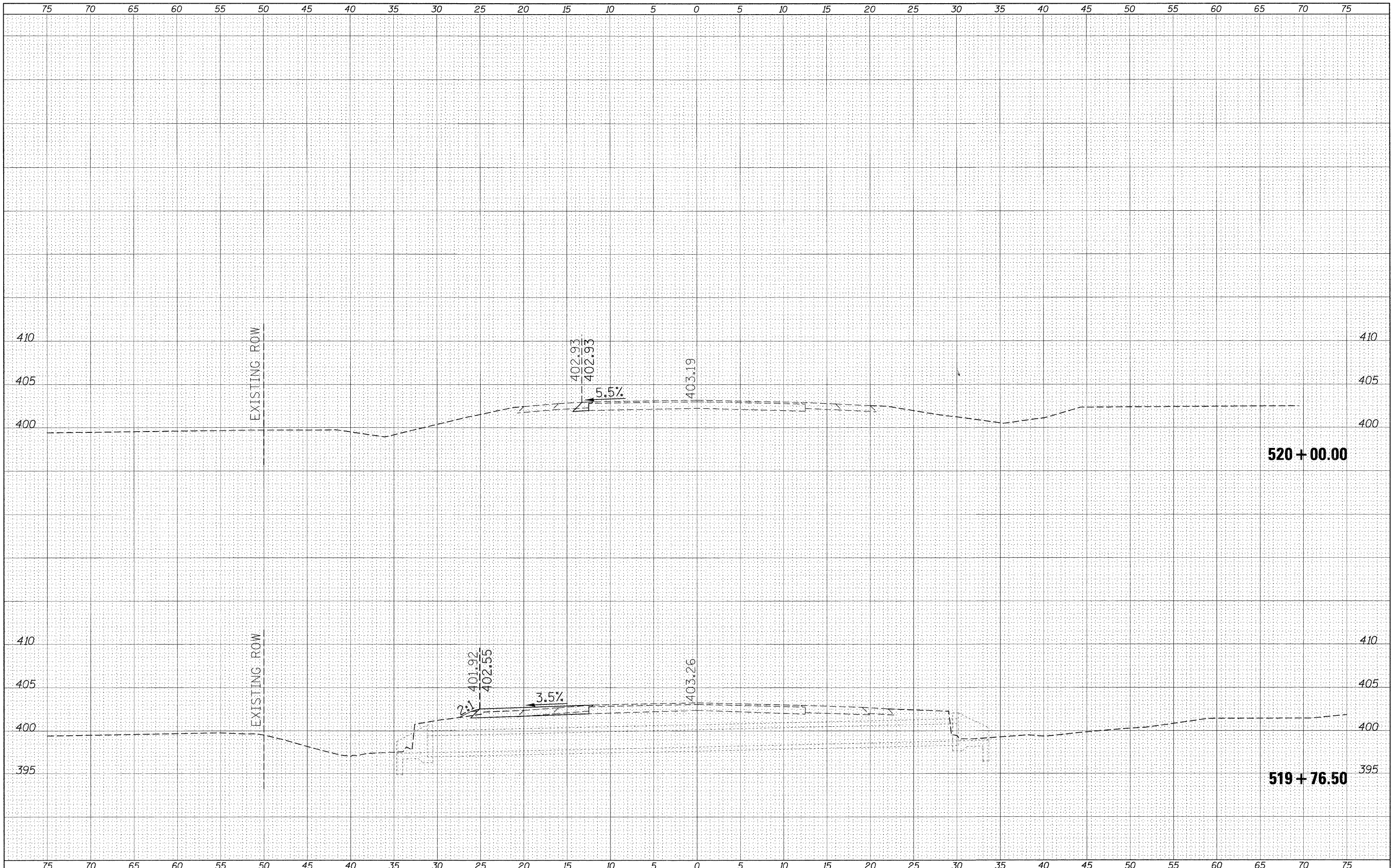
**IL 13127-BEAUCOUP RD. INTERSECTION  
 ALONG IL 13127**

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. 519+00.00 TO STA. 519+50.00

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 77
CONTRACT NO. 78049				ILLINOIS FED. AID PROJECT

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



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 PLOT DATE = 10/18/2011

DESIGNED -  
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**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

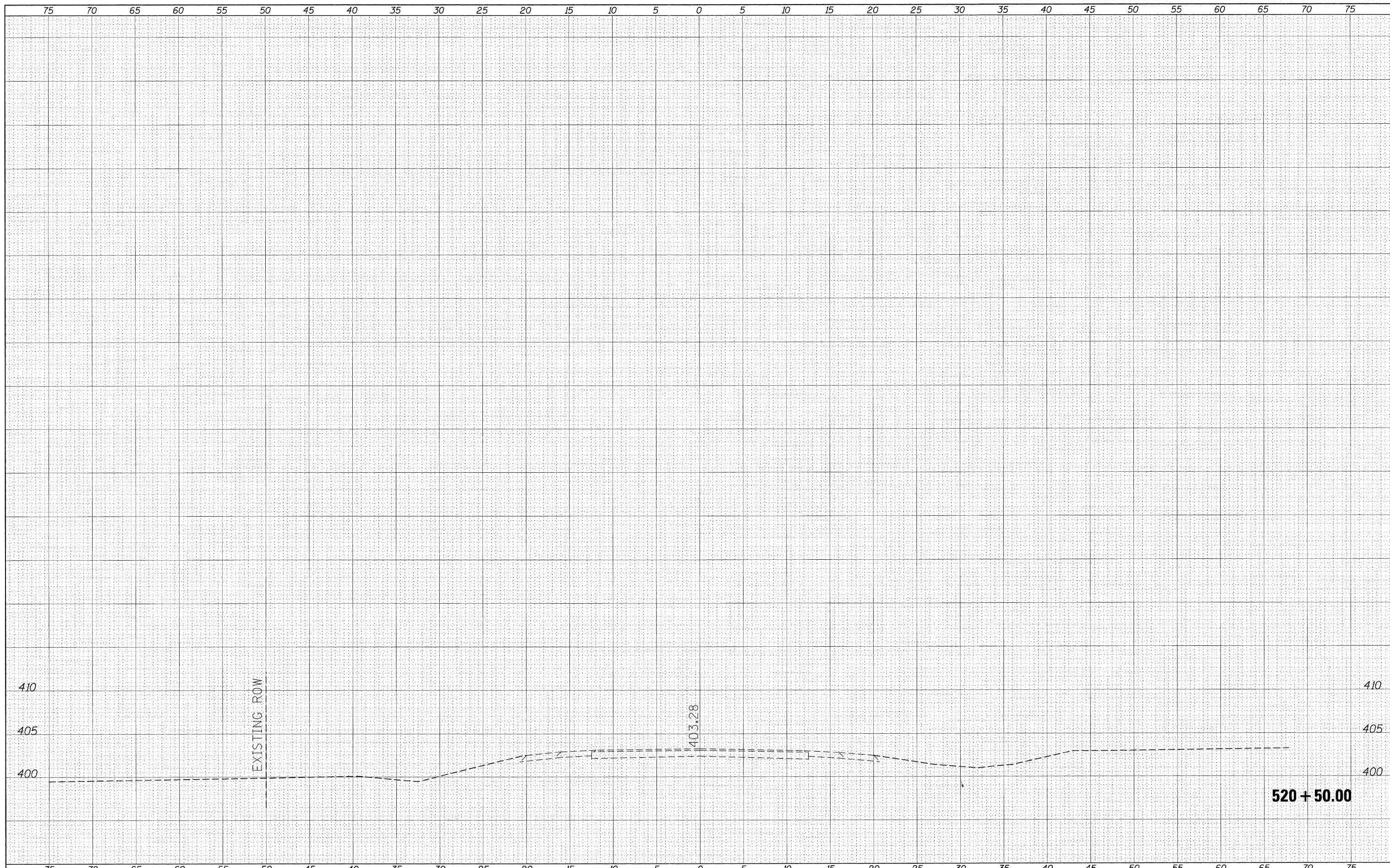
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 ALONG IL 13127**

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F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 114	SHEET NO. 78
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

DATE	BY	SURVEYED	PLOTTED
		NOTE BOOK	TEMPLATE
		AREAS CHECKED	
		NO.	

DATE	BY	SURVEYED	PLOTTED
		NOTE BOOK	TEMPLATE
		AREAS CHECKED	
		NO.	



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 PLOT DATE = 10/18/2011

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**IL 13127-BEAUCOUP RD. INTERSECTION  
 ALONG IL 13127**

SCALE: \_\_\_\_\_ SHEET \_\_\_\_\_ OF \_\_\_\_\_ SHEETS STA. 520+50.00 TO STA. 520+50.00

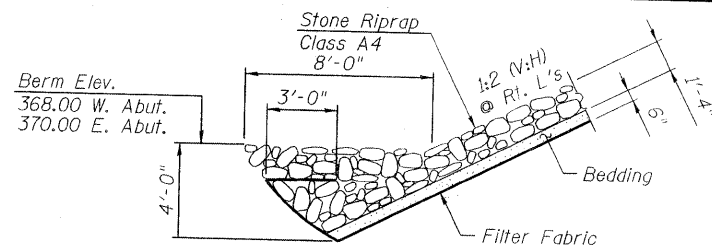
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	114	79
CONTRACT NO. 78049				
ILLINOIS FED. AID PROJECT				

Bench Mark: Chiseled square in N.E. corner of SN 039-0042, approx. 0.5 miles west from intersection of Rte. 4/Rte. 127  
 "88" Elev. = 384.28

Existing Structure: SN 039-0042 was originally built in 1931. The structure consisted of 2-160' Penn trusses with 2-40' RCDG approach spans, 21' roadway on RC spill-thru abutments and solid concrete piers supported on timber piles. In 1983, the superstructure and part of substructure was replaced and four new wall piers were constructed to create an 8 simple-span PPC deck beam bridge. The structure is approximately 415'-6" back to back abutments and 35'-0" out to out deck width. The structure is to be removed and replaced. Traffic is to be detoured. No salvage.

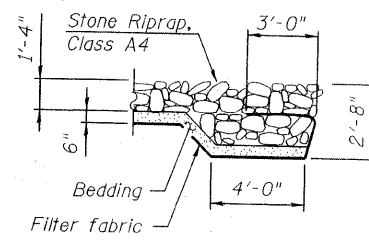
**DESIGN SCOUR ELEVATION TABLE**

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	379.8	355.4	362.5	380.7



**SECTION A-A**

Typical at edges of Abutment Riprap Protection

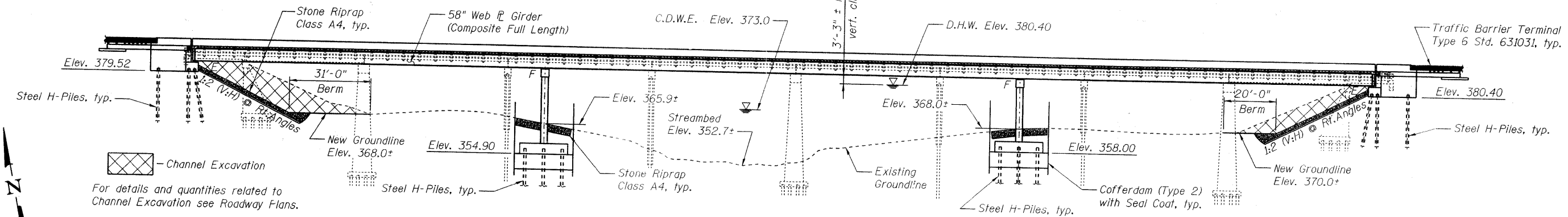


**SECTION B-B**

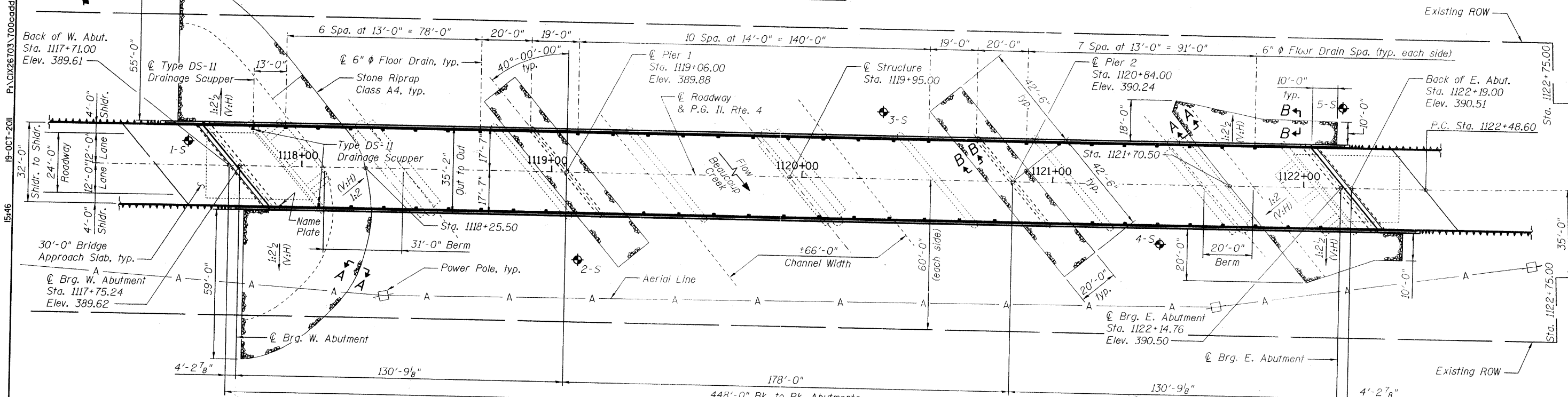
Typical at edges of Pier Riprap Protection

STATION 1119+95  
 BUILT 2011 BY  
 STATE OF ILLINOIS  
 F.A.P. ROUTE 686 SEC. 114B-1  
 LOADING HL-93  
 STRUCTURE NO. 039-0074

**NAME PLATE**  
 See Std. 515001



**ELEVATION**



**PLAN**

**WATERWAY INFORMATION**

Drainage Area = 517 Sq Mi		Ex. Low Grade Elev. 384.07 @ Sta. 1105+50		Pr. Low Grade Elev. 384.07 @ Sta. 1105+50	
Flood Yr.	Q C.F.S.	Opening Sq. Ft.	Nat. H.W.E.	Head - Ft. Exist.	Headwater El. Prop.
10	14900	3410.0	3937.0	377.5	378.3
Design	50	22100	4192.0	4843.0	380.4
Base	100	25100	4642.0	5357.0	382.0
Overtopping		31880	5075.0	5847.0	383.5

10 Year Velocity through Existing Bridge = 4.37 fps.  
 10 Year Velocity through Proposed Bridge = 3.8 fps.

**DESIGN SPECIFICATIONS**

2010 AASHTO LRFD Bridge Design Specifications, Customary U.S. Units, 5th Edition

**LOADING HL 93**

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

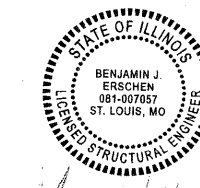
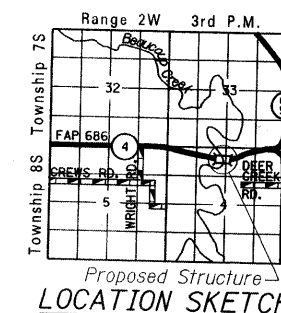
**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 3  
 Design Spectral Acc. at 1.0 sec (SD1) = 0.334g  
 Design Spectral Acc. at 0.2 sec (SDS) = 0.780g  
 Soil Site Class D

**DESIGN STRESSES**

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

Note: See Sheet No. 2 of 35 for Curve Data and Profile Grade Along & Roadway.



BENJAMIN J. ERSCHEN  
 ST. LOUIS, MISSOURI  
 ILLINOIS LICENSED STRUCTURAL  
 ENGINEER NO. 081-007057  
 EXPIRES NOV. 30, 2012

**APPROVED**  
 FOR STRUCTURAL ADEQUACY ONLY

*Benjamin J. Erschen*  
 ENGINEER OF BRIDGES AND STRUCTURES

**GENERAL PLAN AND ELEVATION**  
**IL ROUTE 4 OVER BEAUCOUP CREEK**  
**FAP ROUTE 686 - SECTION 114B-1**  
**JACKSON COUNTY**  
**STATION 1119+95.00**  
**STRUCTURE NO. 039-0074**

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION**  
**STRUCTURE NO. 039-0074**

SHEET NO. 1 OF 35 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	80	114
CONTRACT NO. 78049				ILLINOIS FED. AID PROJECT

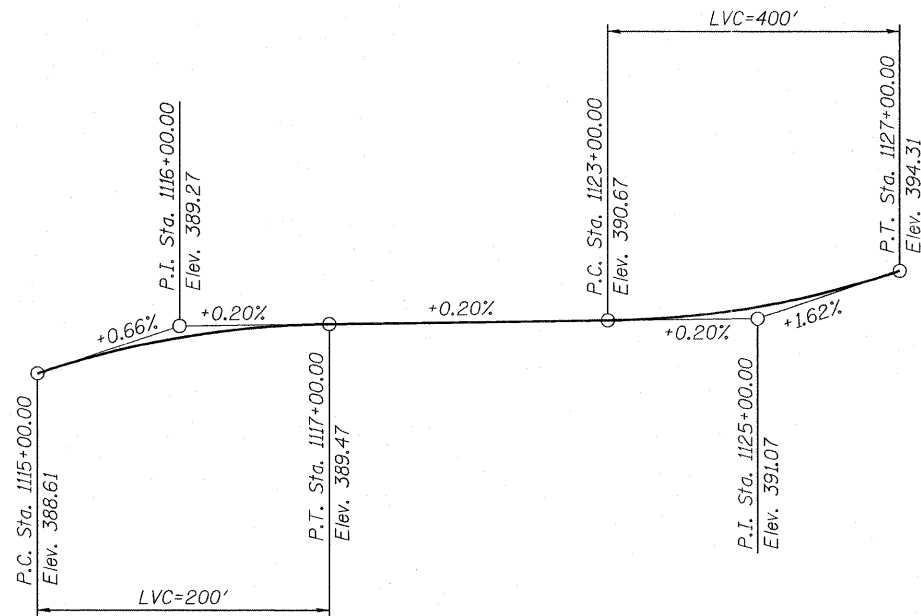
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USER NAME =	DESIGNED - B. ERSCHEN	REVISED -
PLOT DATE = 19-OCT-2011	CHECKED - R. NIEMIETZ	REVISED -
FILE NAME = 039-007498049-Plan & Elevation.dgn	DRAWN - C. SALLADE	REVISED -
	CHECKED - B. ERSCHEN	REVISED -



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**PROFILE GRADE**  
(Along Centerline Roadway)

**CURVE DATA**

(II. Rte. 4)  
 D= 3°-42'-32" S.E. = 7.3%  
 R= 1544.83' P.C. Sta. = 1122+48.60  
 L= 878.40' P.T. Sta. = 1131+27.00  
 T= 451.43'  
 E= 64.41'

Note: Transition from normal crown to full superelevation is attained linearly from Sta. 1122+34.00 to Sta. 1124+38.00.

**GENERAL NOTES**

- \* Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts 7/8 in.  $\phi$ , holes 1/16 in.  $\phi$  unless otherwise noted.
- \* Calculated weight of Structural Steel = 636,850 lbs.
- \* All structural steel shall be AASHTO M270 Grade 50W except expansion joints which shall be AASHTO M270 Grade 50. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".  
 No field welding is permitted except as specified in the contract documents. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.  
 Reinforcement bars designated (E) shall be epoxy coated.  
 If the Contractor elects to use cantilever forming brackets on the exterior girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specification. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior girder at each of these additional bracket locations.  
 Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of 1/8 inch (0.01 ft). Adjustment shall be made either by grinding the surface or by shimming the bearings.  
 Concrete Sealer shall be applied to the designated areas of the East and West Abutments.
- \* All structural steel and exposed surfaces of bearings within a distance of 10 ft. each way from the deck joints shall be painted as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".  
 Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.  
 Seal coat thickness design is based on the Cofferdam Design Water Elevation (CDWE). Cofferdam design details and proposed changes in seal coat thickness shall be submitted to the Engineer for approval with the cofferdam design.  
 Slipforming of parapets is not allowed.

Dynamic Pile Monitoring will be required for all test piles. See Special Provisions.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	Sq. Yd.		1584	1584
Filter Fabric	Sq. Yd.		1584	1584
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		372	372
Cofferdam Excavation	Cu. Yd.		1386	1386
Cofferdam (Type 2) (Location - 1)	Each		1	1
Cofferdam (Type 2) (Location - 2)	Each		1	1
Floor Drains	Each	52		52
Concrete Structures	Cu. Yd.		634.1	634.1
Concrete Superstructure	Cu. Yd.	617.3		617.3
Bridge Deck Grooving	Sq. Yd.	1688		1688
Seal Coat Concrete	Cu. Yd.		462.0	462.0
Concrete Encasement	Cu. Yd.		12.0	12.0
Protective Coat	Sq. Yd.	2200		2200
Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	4104		4104
Reinforcement Bars, Epoxy Coated	Pound	153,240	138,530	291,770
Bar Splicers	Each		84	84
Furnishing Steel Piles HP14x73	Foot		2590	2590
Driving Piles	Foot		2590	2590
Test Pile Steel HP14x73	Each		4	4
Pile Shoes	Each		46	46
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	87.5		87.5
Erecting Elastomeric Bearing Assembly, Type II	Each	12		12
Anchor Bolts, 3/4"	Each	24		24
Anchor Bolts, 1/4"	Each	24		24
Concrete Sealer	Sq. Ft.		1280	1280
Geocomposite Wall Drain	Sq. Yd.		78	78
Porous Granular Embankment, Special	Cu. Yd.		174	174
Asbestos Bearing Pad Removal	Each	132		132
Drainage Scuppers, DS-11	Each	2		2
Pipe Underdrains for Structures 4"	Foot		107	107

**INDEX OF SHEETS**

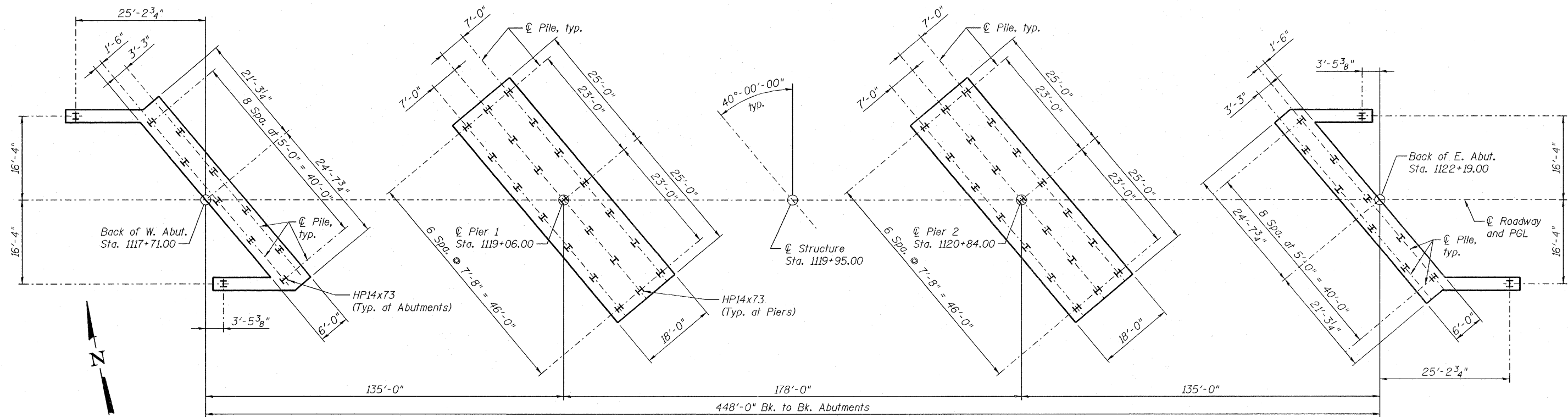
1	General Plan and Elevation
2	General Structure Data
3	Foundation Layout
4-7	Top of Slab Elevations
8	Top of W. Approach Slab Elevations
9	Top of E. Approach Slab Elevations
10	Superstructure Plan and Section
11	Superstructure Details
12-13	Bridge Approach Slab Details
14	Slab Pouring Sequence
15	Drainage Scupper, DS-11
16	Preformed Joint Strip Seal
17	Framing Plan and Design Data
18-20	Girder and Cross Frame Details
21	Bearing Details
22-23	West Abutment Details
24-25	East Abutment Details
26	Pier 1 Plan and Elevation
27	Pier 2 Plan and Elevation
28	Pier Details
29	Bar Splicer Assembly and Mechanical Splice Details
30	HP Pile Details
31-35	Boring Logs

\* FOR INFORMATION ONLY

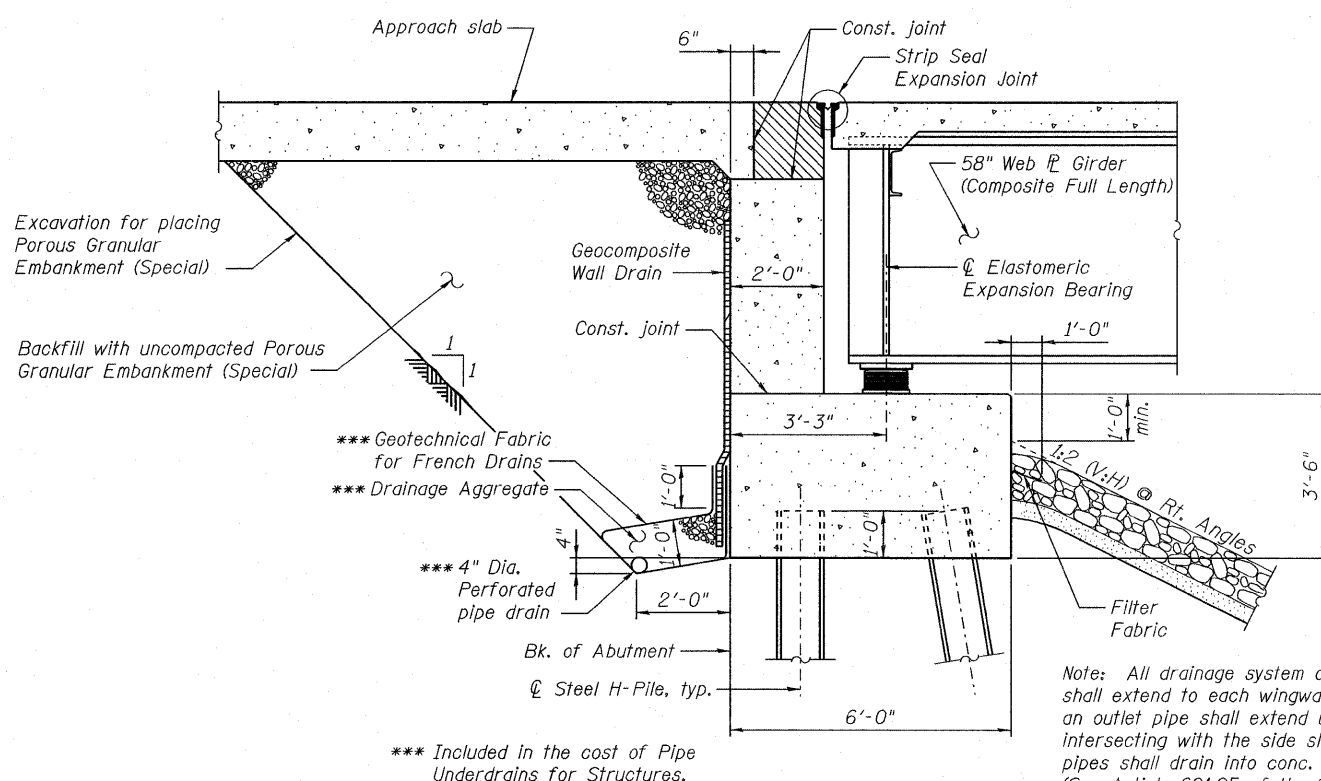
Structural steel and bearings were furnished in Contract 78283.

<b>JACOBS</b>	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL STRUCTURE DATA</b> <b>STRUCTURE NO. 039-0074</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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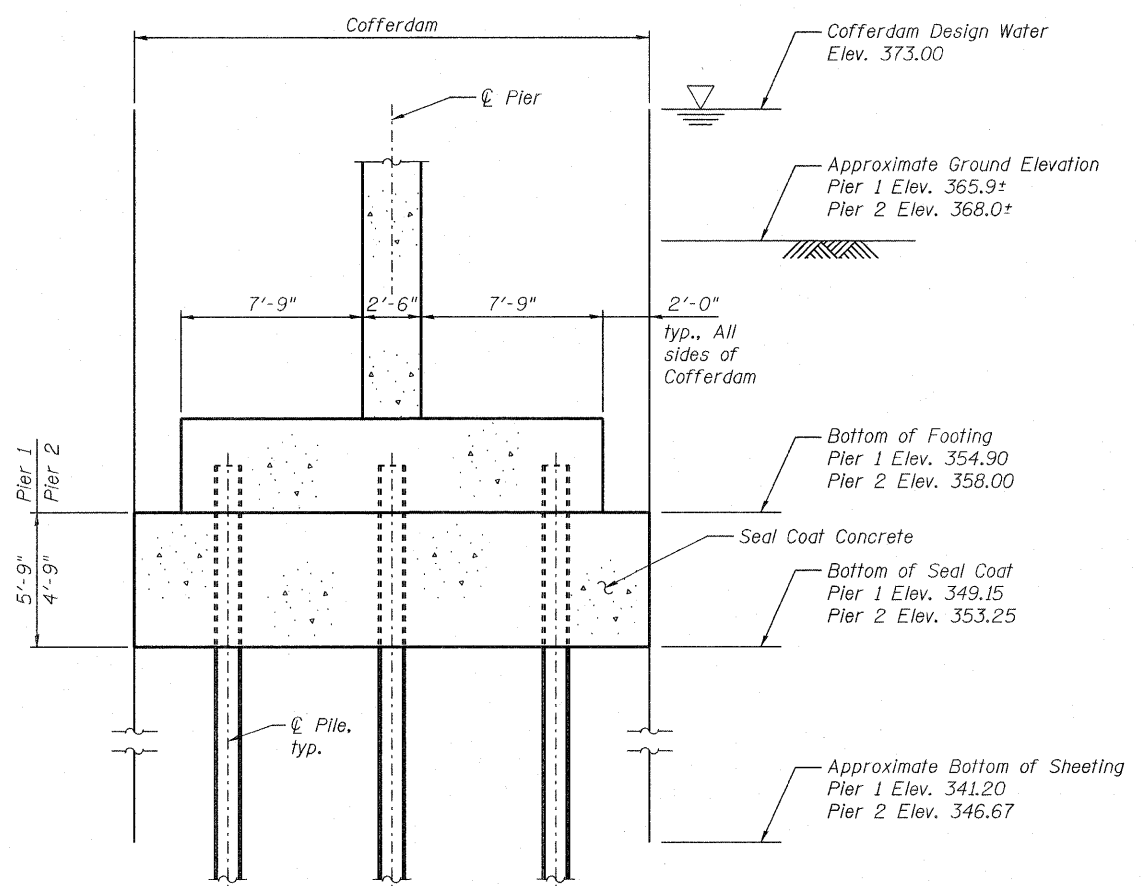


**FOUNDATION LAYOUT**



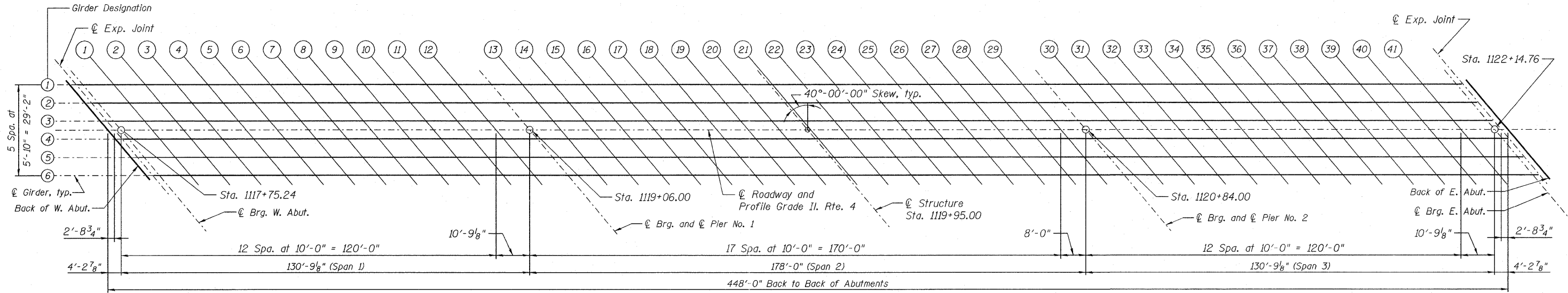
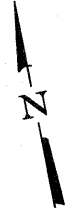
**SECTION THRU ABUTMENT**  
(Horiz. dim. @ Rt. L's)

Note: All drainage system components shall extend to each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into conc. headwalls (See Article 601.05 of the Std. Spec's and Hwy. Std. 60110).



**SECTION THRU COFFERDAM**

<b>JACOBS</b>	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>FOUNDATION LAYOUT STRUCTURE NO. 039-0074</b>		F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 82	SHEET NO. 114		
	PLOT DATE = 19-OCT-2011	CHECKED - N. KHATRI	REVISED -		SHEET NO. 3 OF 35 SHEETS		CONTRACT NO. 78049		ILLINOIS FED. AID PROJECT				
		DRAWN - C. SALLADE	REVISED -										
		CHECKED - J. SMITH	REVISED -										



**PLAN**

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<b>JACOBS</b>	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TOP OF SLAB ELEVATIONS STRUCTURE NO. 039-0074</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT DATE = 19-OCT-2011	CHECKED - M. CRONIN	REVISED -			686	114B-1	JACKSON	83	114
		DRAWN - C. SALLADE	REVISED -					CONTRACT NO. 78049		
		CHECKED - F. CAMBA	REVISED -					ILLINOIS FED. AID PROJECT		
FILE NAME=039-0074978049-T05-01.dgn					SHEET NO. 4 OF 35 SHEETS					

GIRDER 1

Table for GIRDER 1 with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include locations like Bk. W. Abut., Q W. Exp. Jt., Q Brg. W. Abut., Q Brg. Pier 1, Q Brg. Pier 2, Q Brg. E. Abut., and Bk. E. Abut. with stationing from 1117+58.76 to 1122+06.76.

GIRDER 2

Table for GIRDER 2 with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include locations like Bk. W. Abut., Q W. Exp. Jt., Q Brg. W. Abut., Q Brg. Pier 1, Q Brg. Pier 2, Q Brg. E. Abut., and Bk. E. Abut. with stationing from 1117+63.66 to 1122+11.66.

GIRDER 3

Table for GIRDER 3 with columns: Location, Station, Offset, Theoretical Grade Elevations, Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include locations like Bk. W. Abut., Q W. Exp. Jt., Q Brg. W. Abut., Q Brg. Pier 1, Q Brg. Pier 2, Q Brg. E. Abut., and Bk. E. Abut. with stationing from 1117+68.55 to 1122+16.55.

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USER NAME = DESIGNED - B. ERSCHEN REVISIONS - M. CRONIN  
CHECKED - M. CRONIN REVISIONS - C. SALLADE  
DRAWN - C. SALLADE REVISIONS - E. KRACK  
CHECKED - E. KRACK

PLOT DATE = 19-OCT-2011

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS STRUCTURE NO. 039-0074

Summary table with columns: F.A.P. RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO. Values: 686, 114B-1, JACKSON, 84, 114. CONTRACT NO. 78049. ILLINOIS FED. AID PROJECT.

SHEET NO. 5 OF 35 SHEETS

FILE NAME = 039-0074978049-T05-02.dgn

☉ ROADWAY AND PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1117+71.00	0.00	389.61	-
☉ W. Exp. Jt.	1117+73.73	0.00	389.62	-
☉ Brg. W. Abut.	1117+75.24	0.00	389.62	389.62
1	1117+85.24	0.00	389.64	389.68
2	1117+95.24	0.00	389.66	389.74
3	1118+05.24	0.00	389.68	389.79
4	1118+15.24	0.00	389.70	389.83
5	1118+25.24	0.00	389.72	389.86
6	1118+35.24	0.00	389.74	389.87
7	1118+45.24	0.00	389.76	389.88
8	1118+55.24	0.00	389.78	389.87
9	1118+65.24	0.00	389.80	389.87
10	1118+75.24	0.00	389.82	389.86
11	1118+85.24	0.00	389.84	389.86
12	1118+95.24	0.00	389.86	389.86
☉ Brg. Pier 1	1119+06.00	0.00	389.88	389.88
13	1119+16.00	0.00	389.90	389.92
14	1119+26.00	0.00	389.92	389.96
15	1119+36.00	0.00	389.94	390.02
16	1119+46.00	0.00	389.96	390.08
17	1119+56.00	0.00	389.98	390.14
18	1119+66.00	0.00	390.00	390.19
19	1119+76.00	0.00	390.02	390.24
20	1119+86.00	0.00	390.04	390.28
21	1119+96.00	0.00	390.06	390.31
22	1120+06.00	0.00	390.08	390.31
23	1120+16.00	0.00	390.10	390.32
24	1120+26.00	0.00	390.12	390.30
25	1120+36.00	0.00	390.14	390.29
26	1120+46.00	0.00	390.16	390.27
27	1120+56.00	0.00	390.18	390.25
28	1120+66.00	0.00	390.20	390.24
29	1120+76.00	0.00	390.22	390.24
☉ Brg. Pier 2	1120+84.00	0.00	390.24	390.24
30	1120+94.00	0.00	390.26	390.26
31	1121+04.00	0.00	390.28	390.29
32	1121+14.00	0.00	390.30	390.34
33	1121+24.00	0.00	390.32	390.38
34	1121+34.00	0.00	390.34	390.43
35	1121+44.00	0.00	390.36	390.47
36	1121+54.00	0.00	390.38	390.51
37	1121+64.00	0.00	390.40	390.54
38	1121+74.00	0.00	390.42	390.55
39	1121+84.00	0.00	390.44	390.55
40	1121+94.00	0.00	390.46	390.54
41	1122+04.00	0.00	390.48	390.53
☉ Brg. E. Abut.	1122+14.76	0.00	390.50	390.50
☉ E. Exp. Jt.	1122+16.27	0.00	390.50	-
Bk. E. Abut.	1122+19.00	0.00	390.51	-

GIRDER 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1117+73.45	2.92	389.57	-
☉ W. Exp. Jt.	1117+76.17	2.92	389.58	-
☉ Brg. W. Abut.	1117+77.69	2.92	389.58	389.58
1	1117+87.69	2.92	389.60	389.64
2	1117+97.69	2.92	389.62	389.70
3	1118+07.69	2.92	389.64	389.75
4	1118+17.69	2.92	389.66	389.79
5	1118+27.69	2.92	389.68	389.82
6	1118+37.69	2.92	389.70	389.83
7	1118+47.69	2.92	389.72	389.84
8	1118+57.69	2.92	389.74	389.83
9	1118+67.69	2.92	389.76	389.82
10	1118+77.69	2.92	389.78	389.82
11	1118+87.69	2.92	389.80	389.82
12	1118+97.69	2.92	389.82	389.82
☉ Brg. Pier 1	1119+08.45	2.92	389.84	389.84
13	1119+18.45	2.92	389.86	389.88
14	1119+28.45	2.92	389.88	389.92
15	1119+38.45	2.92	389.90	389.98
16	1119+48.45	2.92	389.92	390.04
17	1119+58.45	2.92	389.94	390.10
18	1119+68.45	2.92	389.96	390.15
19	1119+78.45	2.92	389.98	390.20
20	1119+88.45	2.92	390.00	390.24
21	1119+98.45	2.92	390.02	390.27
22	1120+08.45	2.92	390.04	390.27
23	1120+18.45	2.92	390.06	390.28
24	1120+28.45	2.92	390.08	390.26
25	1120+38.45	2.92	390.10	390.25
26	1120+48.45	2.92	390.12	390.23
27	1120+58.45	2.92	390.14	390.21
28	1120+68.45	2.92	390.16	390.20
29	1120+78.45	2.92	390.18	390.20
☉ Brg. Pier 2	1120+86.45	2.92	390.20	390.20
30	1120+96.45	2.92	390.22	390.22
31	1121+06.45	2.92	390.24	390.25
32	1121+16.45	2.92	390.26	390.29
33	1121+26.45	2.92	390.28	390.34
34	1121+36.45	2.92	390.30	390.39
35	1121+46.45	2.92	390.32	390.43
36	1121+56.45	2.92	390.34	390.47
37	1121+66.45	2.92	390.36	390.50
38	1121+76.45	2.92	390.38	390.51
39	1121+86.45	2.92	390.40	390.51
40	1121+96.45	2.92	390.42	390.50
41	1122+06.45	2.92	390.44	390.48
☉ Brg. E. Abut.	1122+17.20	2.92	390.46	390.46
☉ E. Exp. Jt.	1122+18.72	2.92	390.46	-
Bk. E. Abut.	1122+21.45	2.92	390.47	-

GIRDER 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1117+78.34	8.75	389.49	-
☉ W. Exp. Jt.	1117+81.07	8.75	389.50	-
☉ Brg. W. Abut.	1117+82.58	8.75	389.50	389.50
1	1117+92.58	8.75	389.52	389.56
2	1118+02.58	8.75	389.54	389.62
3	1118+12.58	8.75	389.56	389.67
4	1118+22.58	8.75	389.58	389.71
5	1118+32.58	8.75	389.60	389.74
6	1118+42.58	8.75	389.62	389.75
7	1118+52.58	8.75	389.64	389.75
8	1118+62.58	8.75	389.66	389.75
9	1118+72.58	8.75	389.68	389.74
10	1118+82.58	8.75	389.70	389.74
11	1118+92.58	8.75	389.72	389.74
12	1119+02.58	8.75	389.74	389.74
☉ Brg. Pier 1	1119+13.34	8.75	389.76	389.76
13	1119+23.34	8.75	389.78	389.80
14	1119+33.34	8.75	389.80	389.84
15	1119+43.34	8.75	389.82	389.90
16	1119+53.34	8.75	389.84	389.95
17	1119+63.34	8.75	389.86	390.01
18	1119+73.34	8.75	389.88	390.07
19	1119+83.34	8.75	389.90	390.12
20	1119+93.34	8.75	389.92	390.15
21	1120+03.34	8.75	389.94	390.18
22	1120+13.34	8.75	389.96	390.19
23	1120+23.34	8.75	389.98	390.19
24	1120+33.34	8.75	390.00	390.18
25	1120+43.34	8.75	390.02	390.17
26	1120+53.34	8.75	390.04	390.15
27	1120+63.34	8.75	390.06	390.13
28	1120+73.34	8.75	390.08	390.12
29	1120+83.34	8.75	390.10	390.12
☉ Brg. Pier 2	1120+91.34	8.75	390.12	390.12
30	1121+01.34	8.75	390.14	390.14
31	1121+11.34	8.75	390.16	390.17
32	1121+21.34	8.75	390.18	390.21
33	1121+31.34	8.75	390.20	390.26
34	1121+41.34	8.75	390.22	390.31
35	1121+51.34	8.75	390.24	390.35
36	1121+61.34	8.75	390.26	390.39
37	1121+71.34	8.75	390.28	390.41
38	1121+81.34	8.75	390.30	390.43
39	1121+91.34	8.75	390.32	390.43
40	1122+01.34	8.75	390.34	390.42
41	1122+11.34	8.75	390.36	390.40
☉ Brg. E. Abut.	1122+22.10	8.75	390.38	390.38
☉ E. Exp. Jt.	1122+23.62	8.75	390.38	-
Bk. E. Abut.	1122+26.34	8.75	390.39	-

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USER NAME =	DESIGNED - B. ERSCHEN	REVISED -
PLOT DATE = 19-OCT-2011	CHECKED - M. CRONIN	REVISED -
	DRAWN - C. SALLADE	REVISED -
	CHECKED - E. KRACK	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

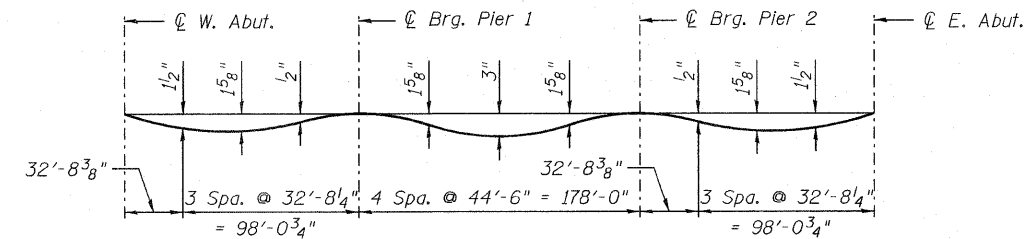
**TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 039-0074**

SHEET NO. 6 OF 35 SHEETS

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 85	SHEET NO. 114
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78049	

**GIRDER 6**

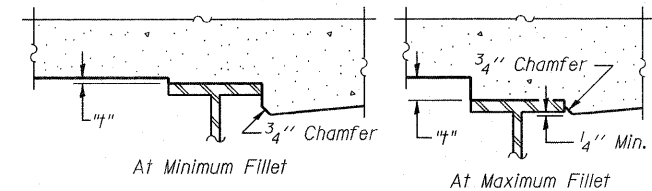
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. W. Abut.	1117+83.24	14.58	389.40	-
☉ W. Exp. Jt.	1117+85.96	14.58	389.40	-
☉ Brg. W. Abut.	1117+87.48	14.58	389.40	389.40
1	1117+97.48	14.58	389.42	389.47
2	1118+07.48	14.58	389.44	389.53
3	1118+17.48	14.58	389.46	389.58
4	1118+27.48	14.58	389.48	389.63
5	1118+37.48	14.58	389.50	389.65
6	1118+47.48	14.58	389.52	389.66
7	1118+57.48	14.58	389.54	389.67
8	1118+67.48	14.58	389.56	389.66
9	1118+77.48	14.58	389.58	389.65
10	1118+87.48	14.58	389.60	389.65
11	1118+97.48	14.58	389.62	389.64
12	1119+07.48	14.58	389.64	389.65
☉ Brg. Pier 1	1119+18.24	14.58	389.67	389.67
13	1119+28.24	14.58	389.69	389.71
14	1119+38.24	14.58	389.71	389.75
15	1119+48.24	14.58	389.73	389.81
16	1119+58.24	14.58	389.75	389.87
17	1119+68.24	14.58	389.77	389.93
18	1119+78.24	14.58	389.79	389.99
19	1119+88.24	14.58	389.81	390.04
20	1119+98.24	14.58	389.83	390.08
21	1120+08.24	14.58	389.85	390.11
22	1120+18.24	14.58	389.87	390.11
23	1120+28.24	14.58	389.89	390.11
24	1120+38.24	14.58	389.91	390.10
25	1120+48.24	14.58	389.93	390.08
26	1120+58.24	14.58	389.95	390.06
27	1120+68.24	14.58	389.97	390.04
28	1120+78.24	14.58	389.99	390.02
29	1120+88.24	14.58	390.01	390.02
☉ Brg. Pier 2	1120+96.24	14.58	390.02	390.02
30	1121+06.24	14.58	390.04	390.04
31	1121+16.24	14.58	390.06	390.08
32	1121+26.24	14.58	390.08	390.12
33	1121+36.24	14.58	390.10	390.17
34	1121+46.24	14.58	390.12	390.22
35	1121+56.24	14.58	390.14	390.26
36	1121+66.24	14.58	390.16	390.30
37	1121+76.24	14.58	390.18	390.33
38	1121+86.24	14.58	390.20	390.34
39	1121+96.24	14.58	390.22	390.34
40	1122+06.24	14.58	390.24	390.33
41	1122+16.24	14.58	390.26	390.31
☉ Brg. E. Abut.	1122+26.99	14.58	390.28	390.28
☉ E. Exp. Jt.	1122+28.51	14.58	390.29	-
Bk. E. Abut.	1122+31.24	14.58	390.29	-



**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only.)

Note:  
The above deflections are not to be used in the field if the engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" as shown on sheets 5, 6 and 7 of 35.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 4 of 35. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet numbers 5, 6 and 7 of 35, minus slab thickness, equals the fillet heights "t" above top flange of beams.

**FILLET HEIGHTS**

19-OCT-2011 15:47 F:\GX26703\100cadd\709stf\039-0074978049-T05-04.dgn

**NORTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	1117+28.23	-16.00	389.26
A1	1117+38.23	-16.00	389.28
A2	1117+48.23	-16.00	389.30
E. End of West Appr. Slab	1117+58.23	-16.00	389.32

**NORTH EDGE OF ROADWAY**

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	1117+31.58	-12.00	389.35
A1	1117+41.58	-12.00	389.37
A2	1117+51.58	-12.00	389.39
E. End of West Appr. Slab	1117+61.58	-12.00	389.41

**☉ ROADWAY AND PROFILE GRADE**

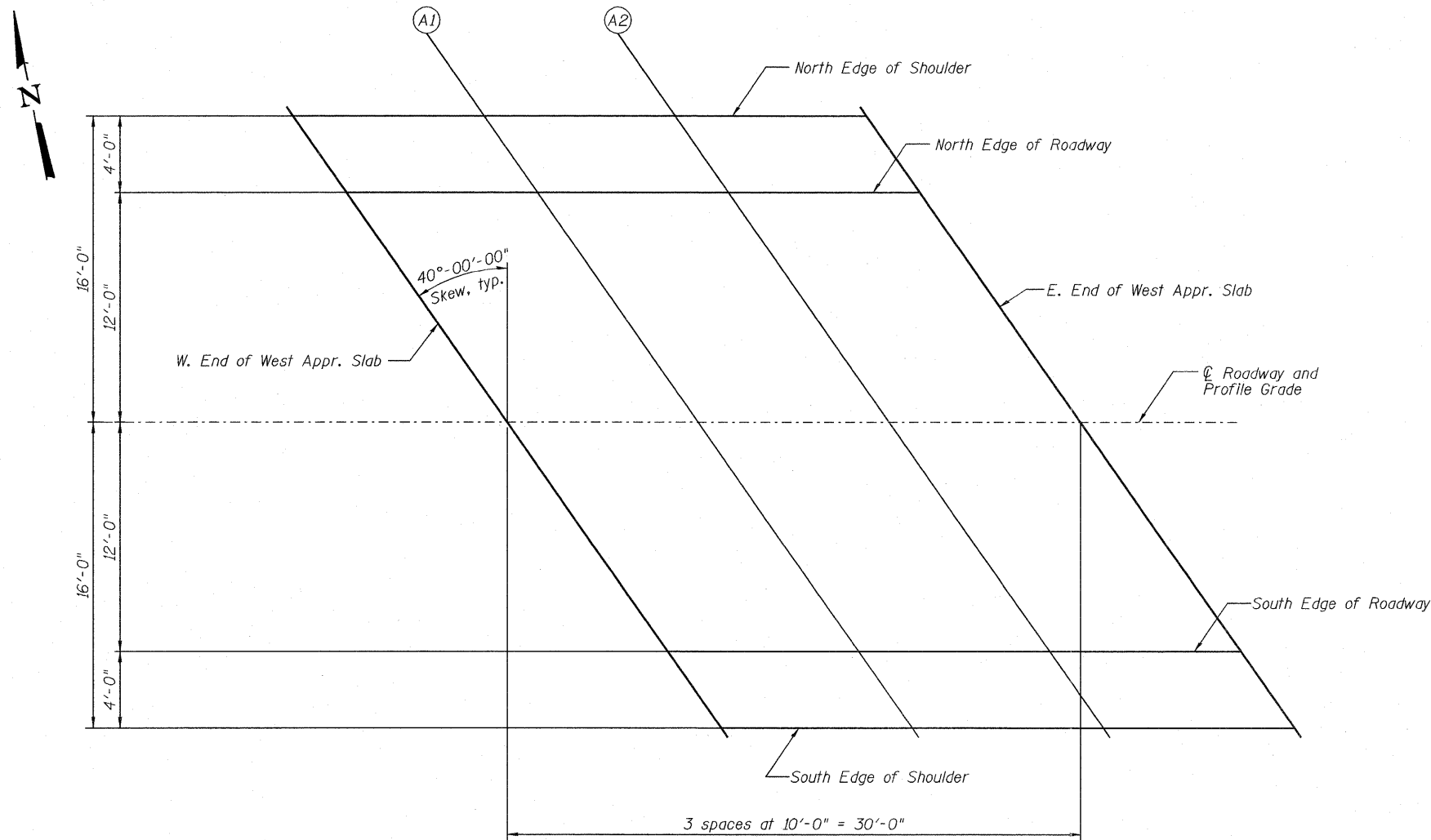
Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	1117+41.65	0.00	389.55
A1	1117+51.65	0.00	389.57
A2	1117+61.65	0.00	389.59
E. End of West Appr. Slab	1117+71.65	0.00	389.61

**SOUTH EDGE OF ROADWAY**

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	1117+51.72	12.00	389.39
A1	1117+61.72	12.00	389.41
A2	1117+71.72	12.00	389.43
E. End of West Appr. Slab	1117+81.72	12.00	389.45

**SOUTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
W. End of West Appr. Slab	1117+55.08	16.00	389.31
A1	1117+65.08	16.00	389.33
A2	1117+75.08	16.00	389.35
E. End of West Appr. Slab	1117+85.08	16.00	389.37



**PLAN**

19-OCT-2011 P:\C\26703\700cadd\709str\039-0074978049-Approach Slab Elev.dgn  
 1547

19-OCT-2011 P:\CM26703\700cadd\709str\039-0074978049-Approach Slab Elev2.dgn  
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**NORTH EDGE OF SHOULDER**

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	1122+04.92	-16.00	390.21
A3	1122+14.92	-16.00	390.23
A4	1122+24.92	-16.00	390.25
E. End of East Appr. Slab	1122+34.92	-16.00	390.27

**NORTH EDGE OF ROADWAY**

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	1122+08.28	-12.00	390.30
A3	1122+18.28	-12.00	390.32
A4	1122+28.28	-12.00	390.34
E. End of East Appr. Slab	1122+38.28	-12.00	390.36

**☉ ROADWAY AND PROFILE GRADE**

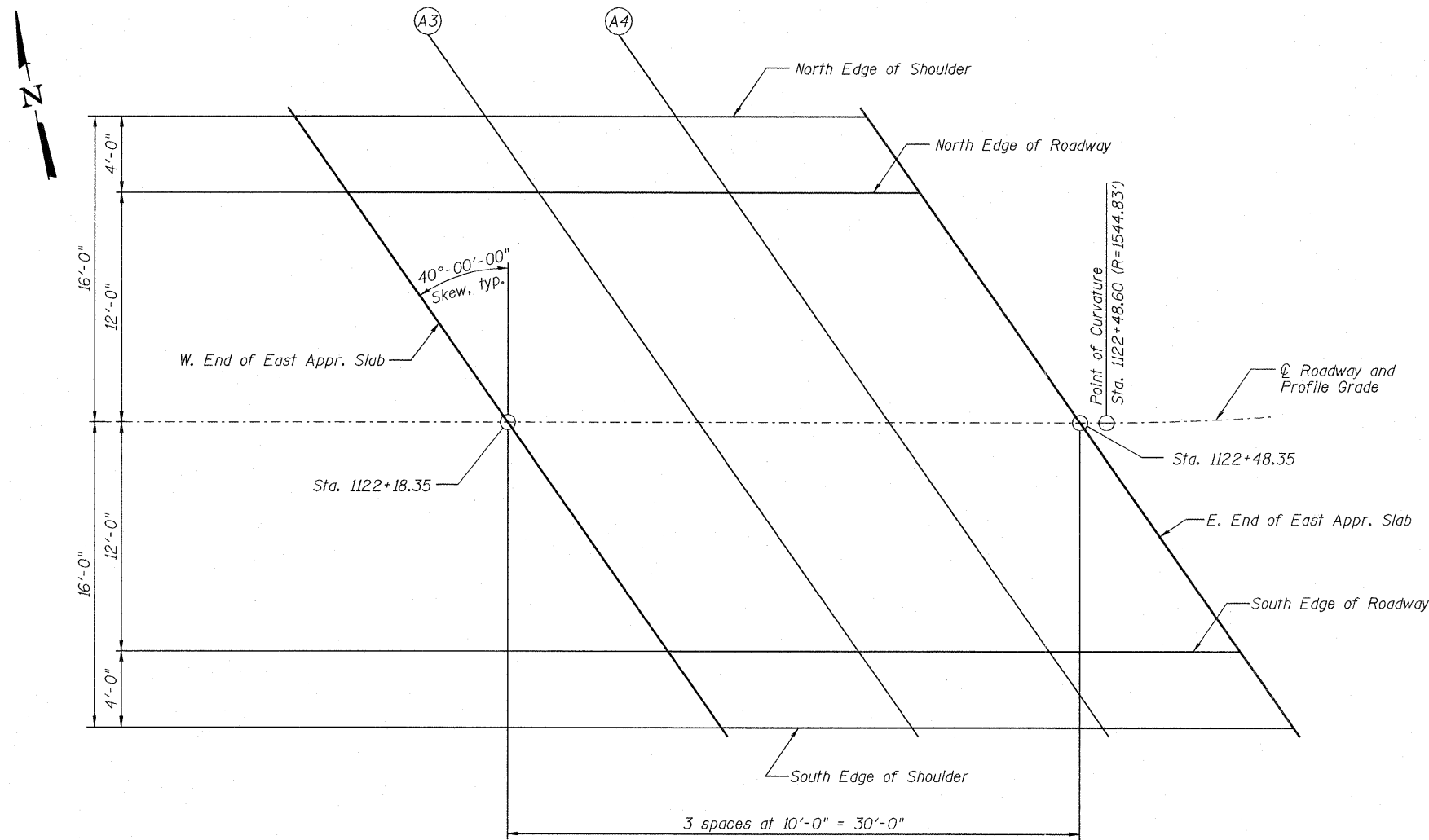
Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	1122+18.35	0.00	390.51
A3	1122+28.35	0.00	390.53
A4	1122+38.35	0.00	390.55
E. End of East Appr. Slab	1122+48.35	0.00	390.57

**SOUTH EDGE OF ROADWAY**

Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	1122+28.42	12.00	390.34
A3	1122+38.42	12.00	390.38
A4	1122+48.42	12.00	390.45
E. End of East Appr. Slab	1122+58.32	12.00	390.53

**SOUTH EDGE OF SHOULDER**

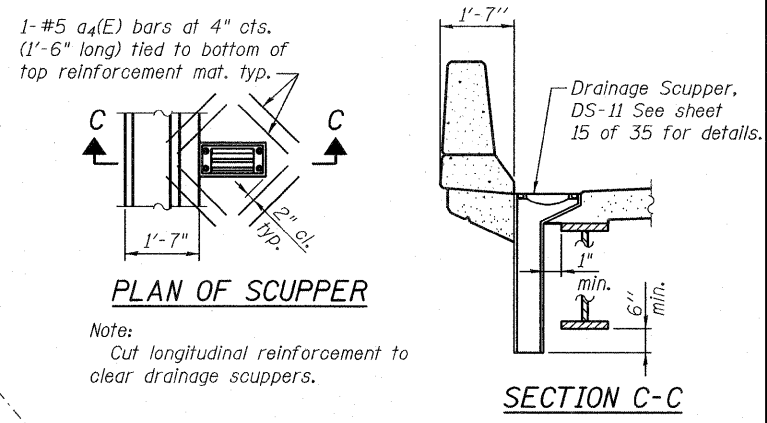
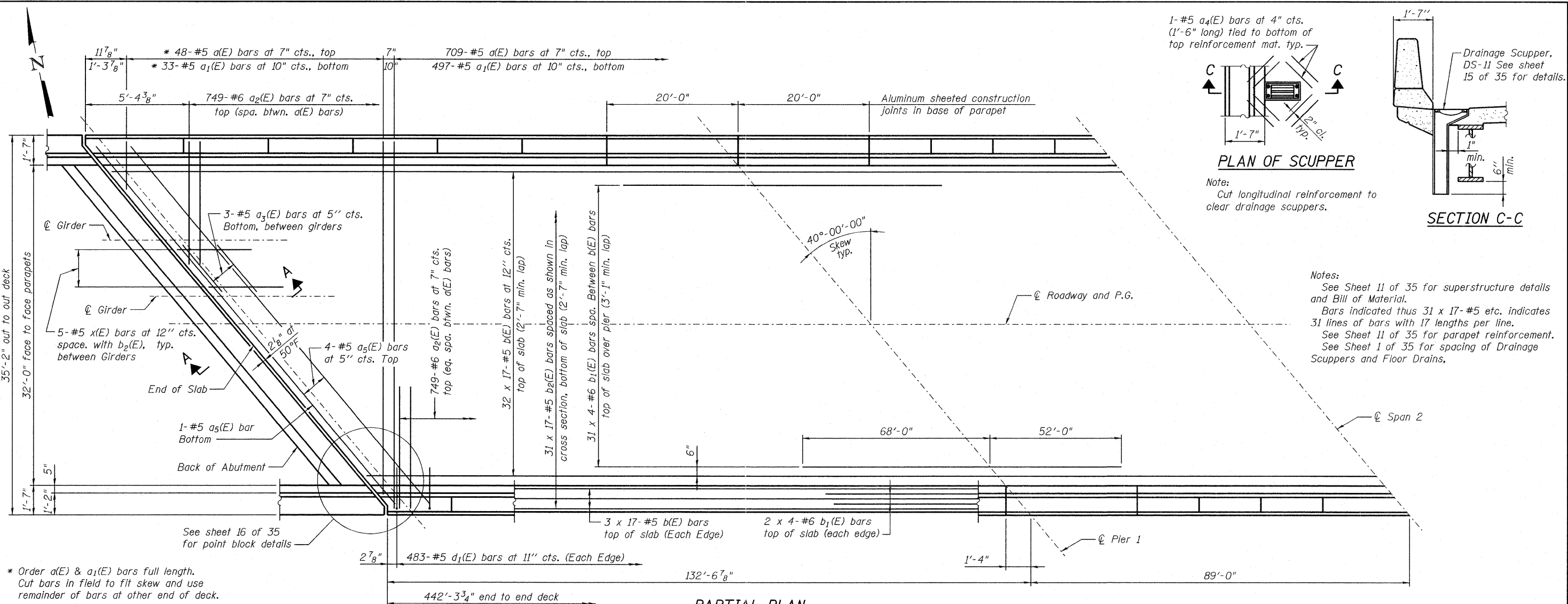
Location	Station	Offset	Theoretical Grade Elevations
W. End of East Appr. Slab	1122.31.77	16.00	390.26
A3	1122+41.77	16.00	390.32
A4	1122+51.74	16.00	390.40
E. End of East Appr. Slab	1122+61.59	16.00	390.47



**PLAN**



FILE NAME=039-0074978049-Superstructure.dgn  
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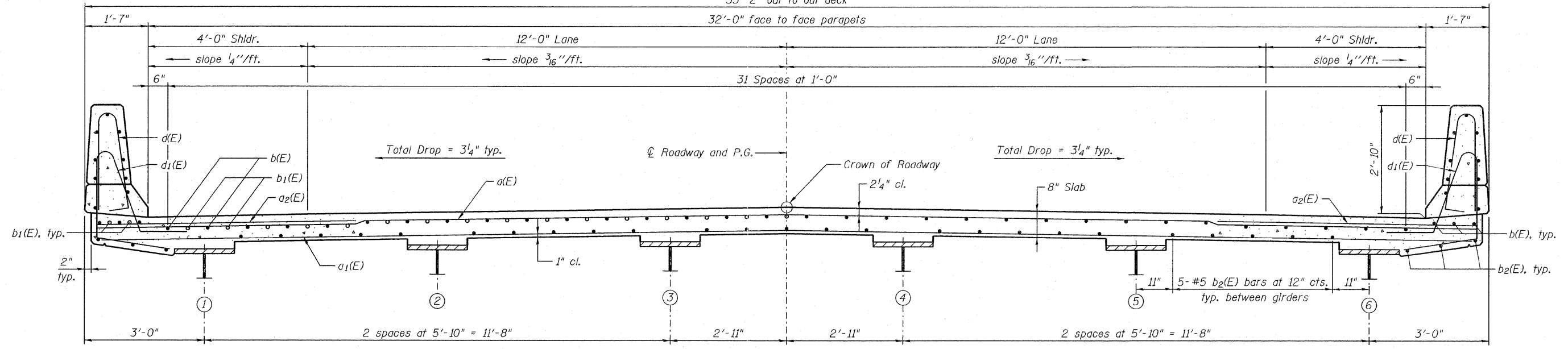


**Notes:**

- See Sheet 11 of 35 for superstructure details and Bill of Material.
- Bars indicated thus 31 x 17-#5 etc. indicates 31 lines of bars with 17 lengths per line.
- See Sheet 11 of 35 for parapet reinforcement.
- See Sheet 1 of 35 for spacing of Drainage Scuppers and Floor Drains.

\* Order a(E) & a<sub>1</sub>(E) bars full length. Cut bars in field to fit skew and use remainder of bars at other end of deck.

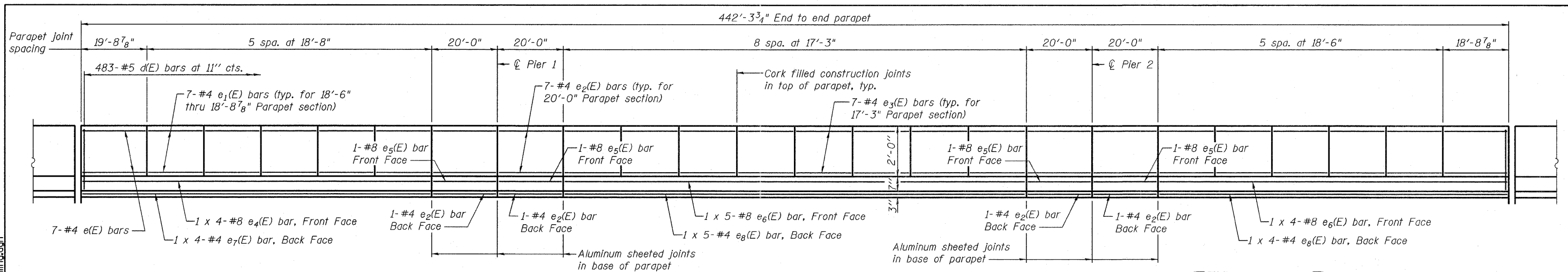
**PARTIAL PLAN**



**CROSS SECTION**  
(Looking East/Ahead Station)

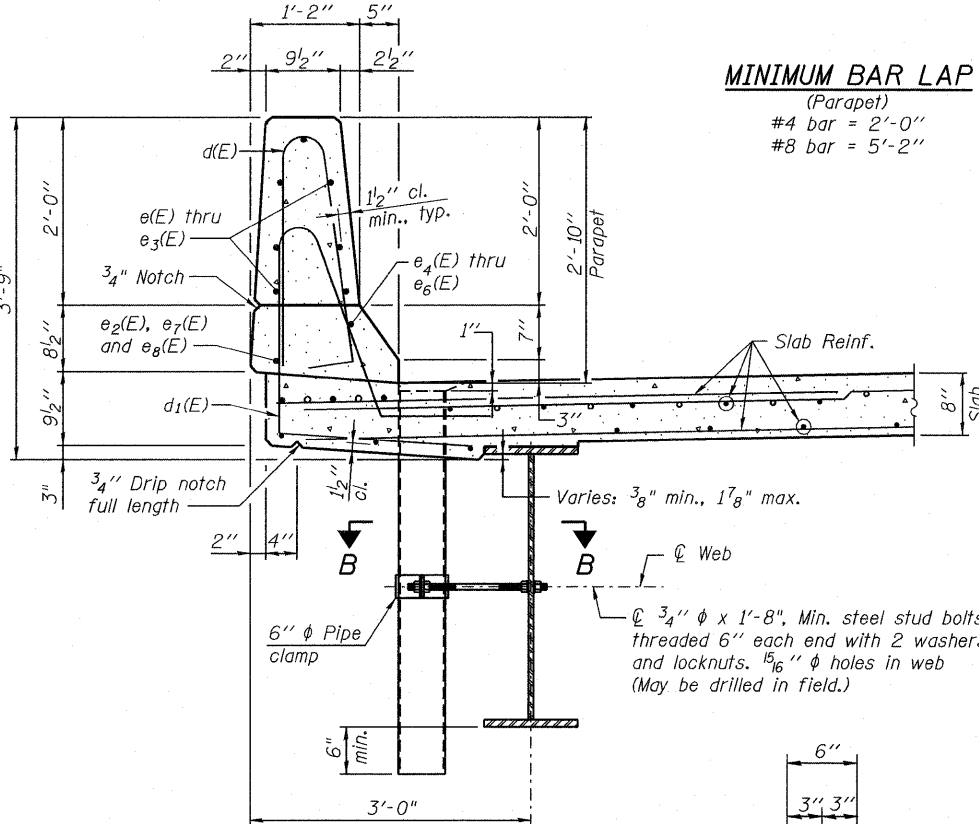
<b>JACOBS</b>	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUPERSTRUCTURE PLAN AND SECTION STRUCTURE NO. 039-0074</b>	F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 89	SHEET NO. 114
	PLOT DATE = 19-OCT-2011	CHECKED - M. CRONIN	REVISED -			CONTRACT NO. 78049				
		DRAWN - C. SALLADE	REVISED -							
		CHECKED - F. CAMBA	REVISED -							
FILE NAME=039-0074978049-Superstructure.dgn						SHEET NO. 10 OF 35 SHEETS				

[ILLINOIS] FED. AID PROJECT

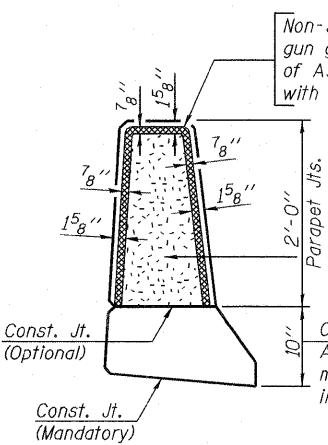


**INSIDE ELEVATION OF NORTH AND SOUTH PARAPET**

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



**SECTION THRU PARAPET**

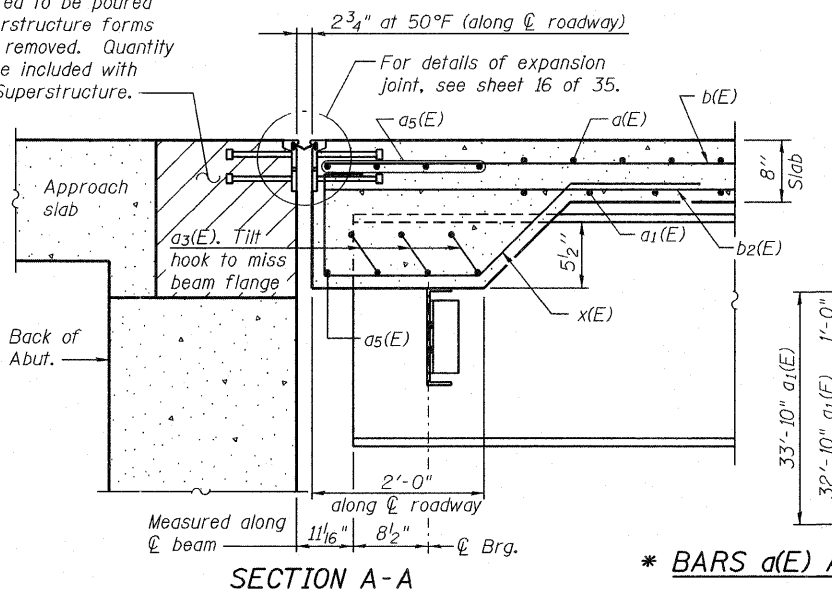


**PARAPET JOINT DETAILS**

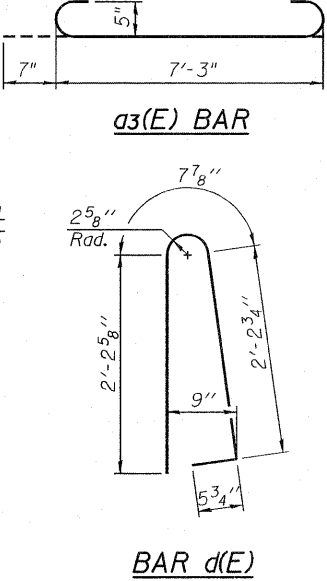
Notes:

Drains shall be located clear of all diaphragms.  
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coatings Spec. SSPC-SP1 prior to painting.  
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.  
Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains.

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



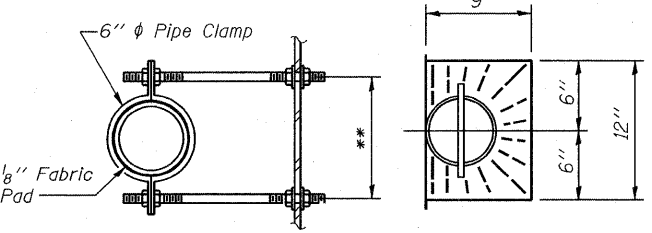
**SECTION A-A**



**SUPERSTRUCTURE BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E) *	757	#5	34'-6"	—
a1(E) *	530	#5	33'-10"	—
a2(E)	1498	#6	6'-6"	—
a3(E)	30	#5	8'-5"	—
a4(E)	16	#5	1'-6"	—
a5(E)	10	#5	45'-0"	—
b(E)	646	#5	28'-6"	—
b1(E)	280	#6	32'-6"	—
b2(E)	527	#5	28'-6"	—
d(E)	966	#5	5'-7"	—
d1(E)	966	#5	7'-9"	—
e(E)	14	#4	19'-6"	—
e1(E)	154	#4	18'-3"	—
e2(E)	64	#4	19'-9"	—
e3(E)	112	#4	17'-0"	—
e4(E)	8	#8	32'-1"	—
e5(E)	8	#8	19'-9"	—
e6(E)	18	#8	31'-9"	—
e7(E)	8	#4	29'-9"	—
e8(E)	18	#4	29'-3"	—
x(E)	50	#5	6'-8"	—
Reinforcement Bars, Epoxy Coated		Pound	130,960	
Concrete Superstructure		Cu. Yds.	517.3	

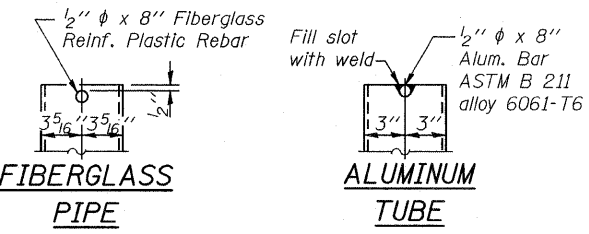
Bars indicated thus 1 x 5-#8 etc. Indicates 1 line of bars with 5 lengths per line.



**SECTION B-B**

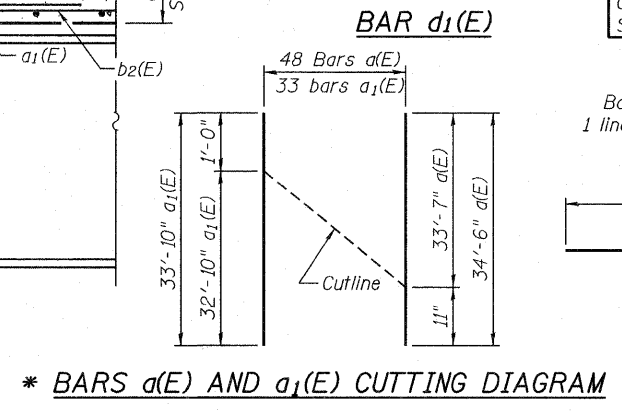
**TOP PLAN**

**FLOOR DRAIN DETAILS**  
(52 Req'd.)



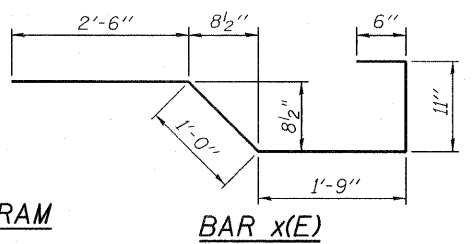
**FIBERGLASS PIPE**

**ALUMINUM TUBE**



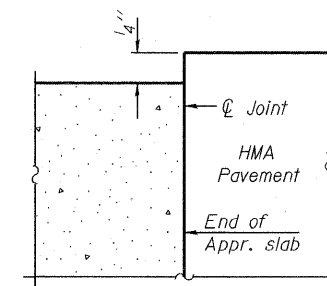
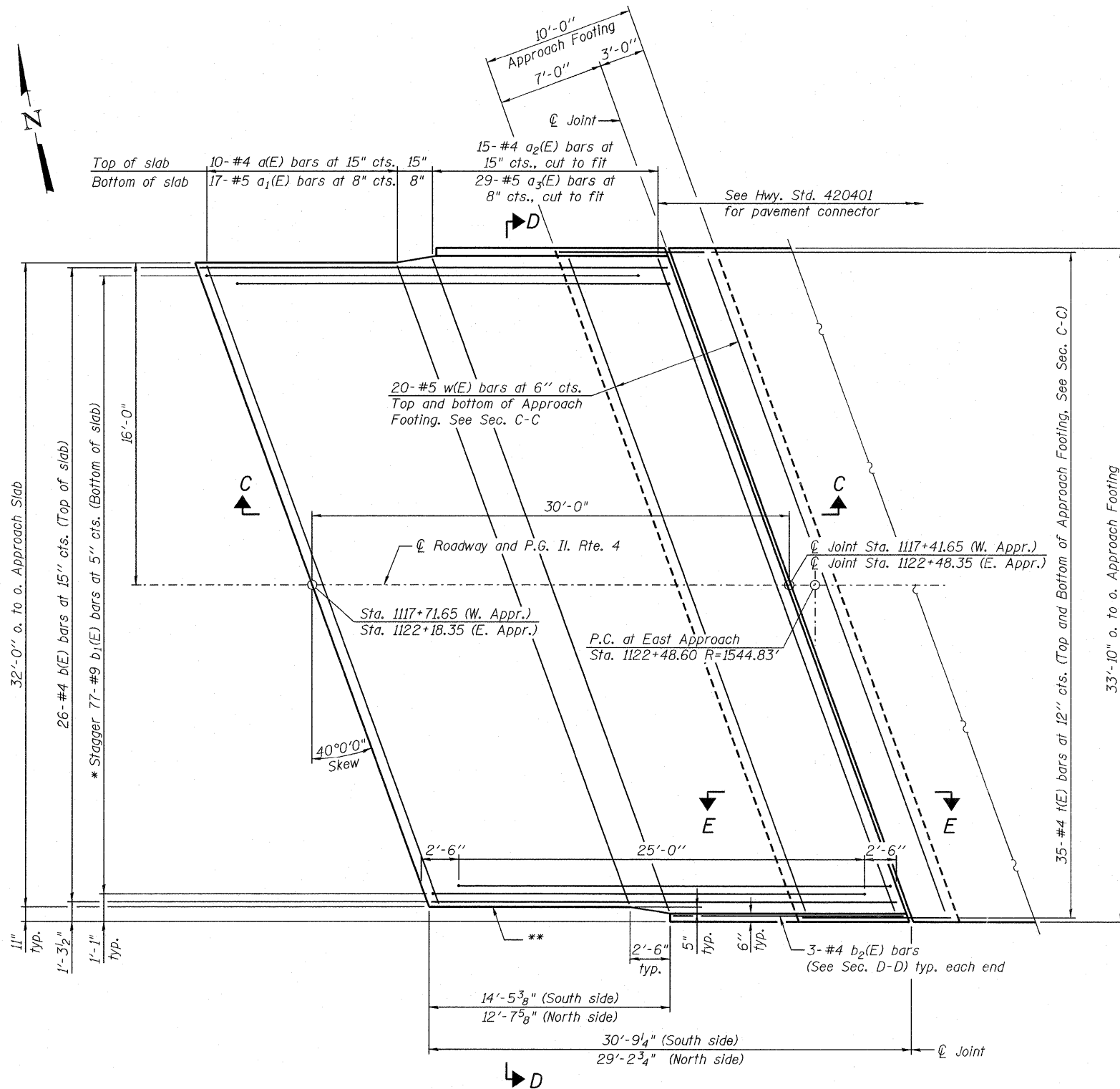
**BAR d1(E)**

**\* BARS d(E) AND a1(E) CUTTING DIAGRAM**



**BAR x(E)**

Notes:  
 See sheet 13 of 35 for Sections C-C & D-D and View E-E.  
 $a_1(E)$ ,  $a_2(E)$  and  $a_3(E)$  bar spacings measured along  $\phi$  Rdwy.  
 Order  $a_2(E)$ ,  $a_3(E)$  and  $b_1(E)$  bars full length. Cut in field to fit as needed.



**DETAIL A**

**PLAN**

(East Approach Slab shown, West Approach similar)

- \* Tilt #9  $b_1(E)$  bars as required to maintain clearance.
- \*\* Closed cell joint filler according to Article 1051.08 of the Std. Specifications; full depth of slab, full length of parapet. Typ. each parapet.

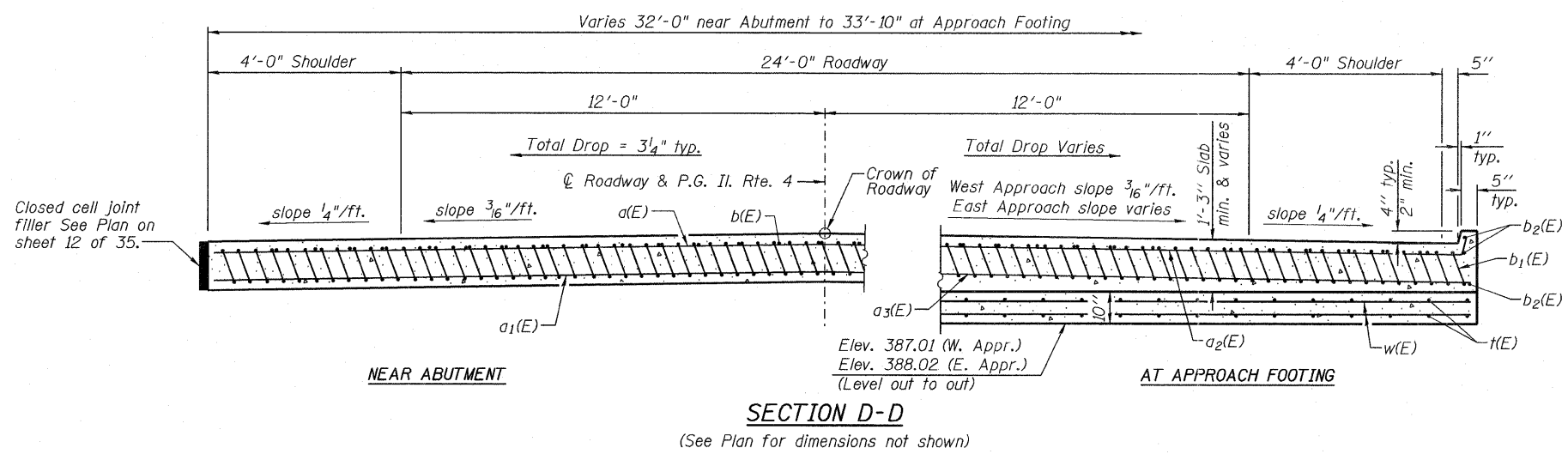
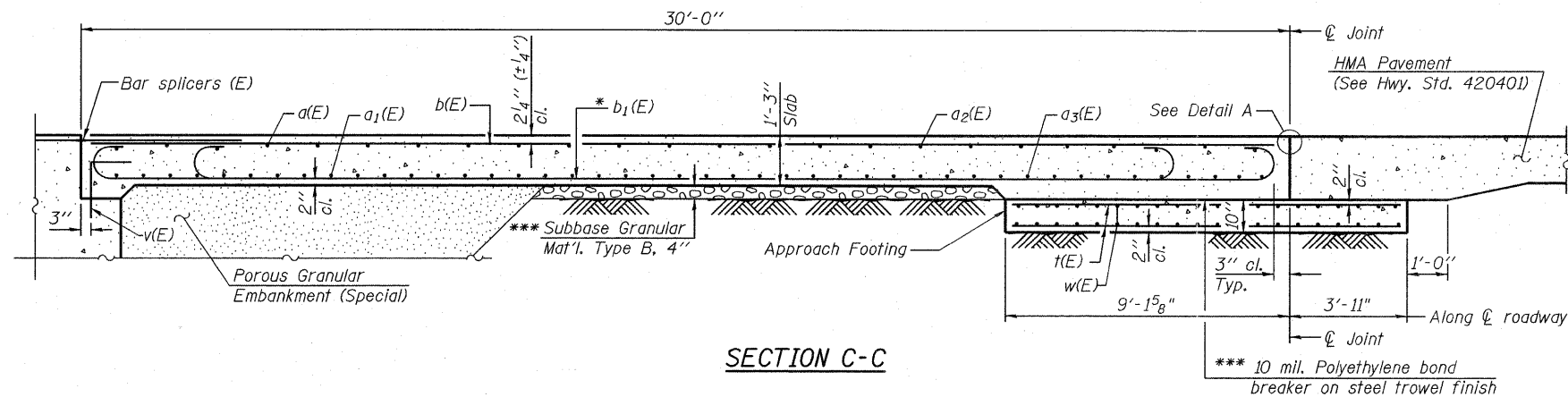
19-OCT-2011 P:\CM26703\100cadd\709str\039-0074978049-Approach Slab Details Ldgn 1547

<b>JACOBS</b>	USER NAME =	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 039-0074</b>	F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 91	SHEET NO. 114
	PLOT DATE = 19-OCT-2011	DRAWN - E. KRACK	REVISED -			CONTRACT NO. 78049				
	FILE NAME = 039-0074978049-Approach Slab Details Ldgn	CHECKED - B. ERSCHEN	REVISED -			SHEET NO. 12 OF 35 SHEETS				

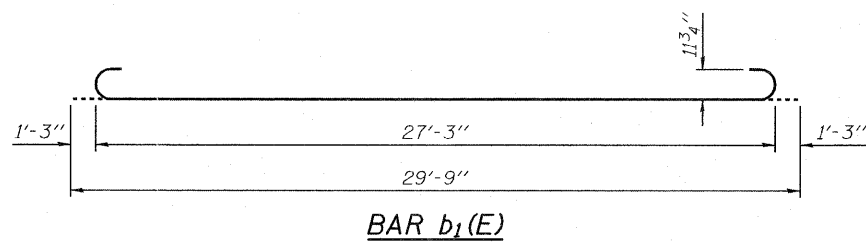
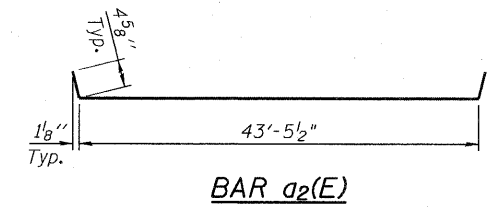
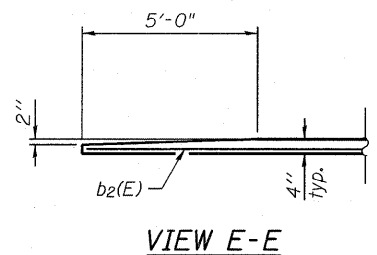
ILLINOIS FED. AID PROJECT

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**Notes:**  
 See sheet 12 of 35 for Detail A.  
 Approach Slab shall be paid for as Concrete Superstructure.  
 Approach Footing concrete shall be paid for as Concrete Structures.  
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
 For v(E) bar details, see sheet No. 22, 23, 24 and 25 of 35.  
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.  
 For bar splicer details, see sheet 29 of 35.  
 Cost of excavation for approach footing included with Concrete Structures.  
 For Porous Granular Embankment (Special) and drainage treatment details, see sheet 3 of 35.



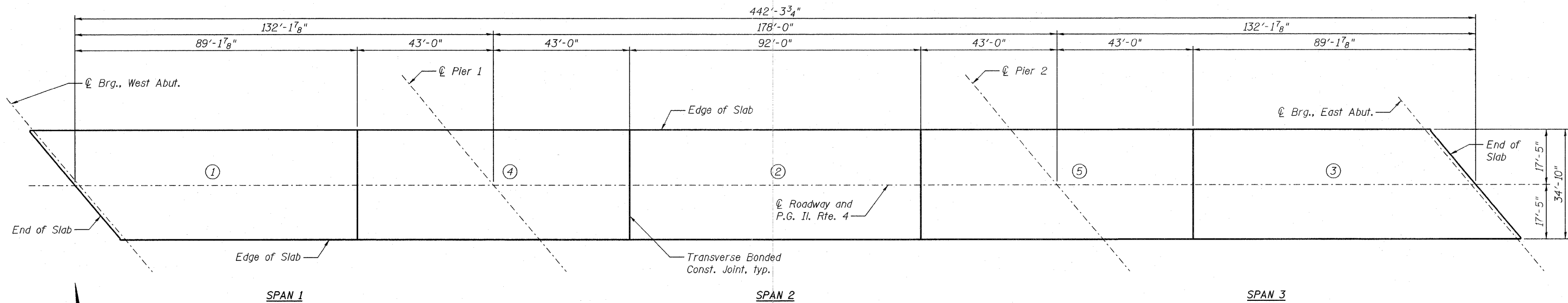
\* Tilt #9 b<sub>1</sub>(E) bars as required to maintain clearance.  
 \*\*\* Cost included with Concrete Superstructure.



**TWO APPROACHES  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	20	#4	41'-4"	—
a <sub>1</sub> (E)	34	#5	41'-4"	—
a <sub>2</sub> (E)	30	#4	44'-3"	—
a <sub>3</sub> (E)	58	#5	43'-7"	—
b(E)	52	#4	29'-8"	—
b <sub>1</sub> (E)	162	#9	29'-9"	—
b <sub>2</sub> (E)	12	#4	16'-3"	—
t(E)	140	#4	12'-7"	—
w(E)	80	#5	43'-8"	—
Concrete Superstructure			Cu. Yd.	100.0
Concrete Structures			Cu. Yd.	27.3
Reinforcement Bars, Epoxy Coated			Pound	27,100

19-OCT-2011 15:47 P:\C\26703\700cadd\709st\039-0074978049-Slab Pouring.dgn



**SLAB POURING SEQUENCE**

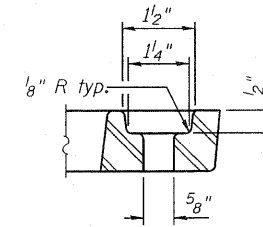
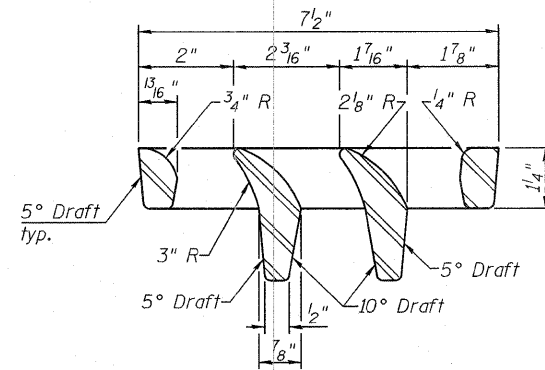
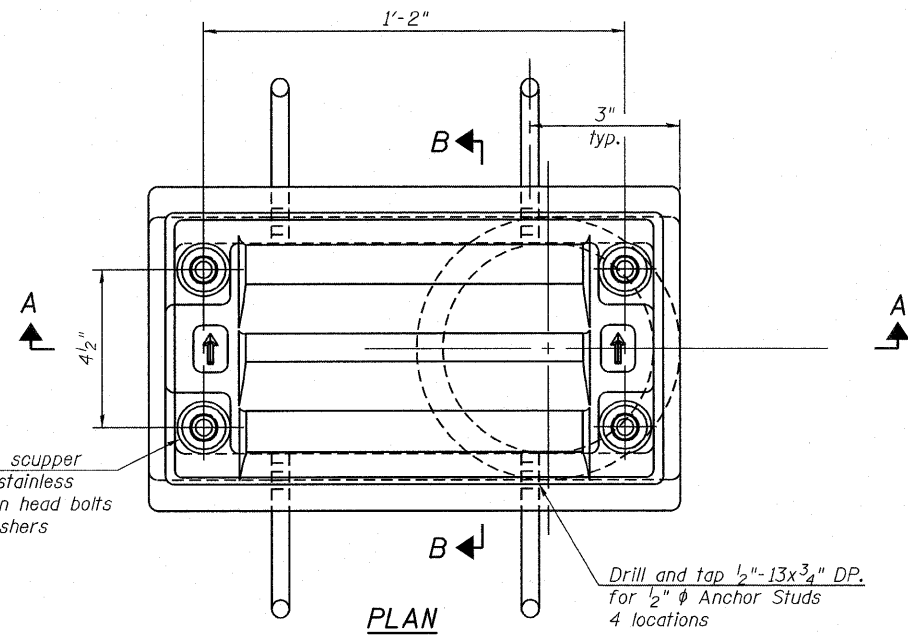
**NOTES**

When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:

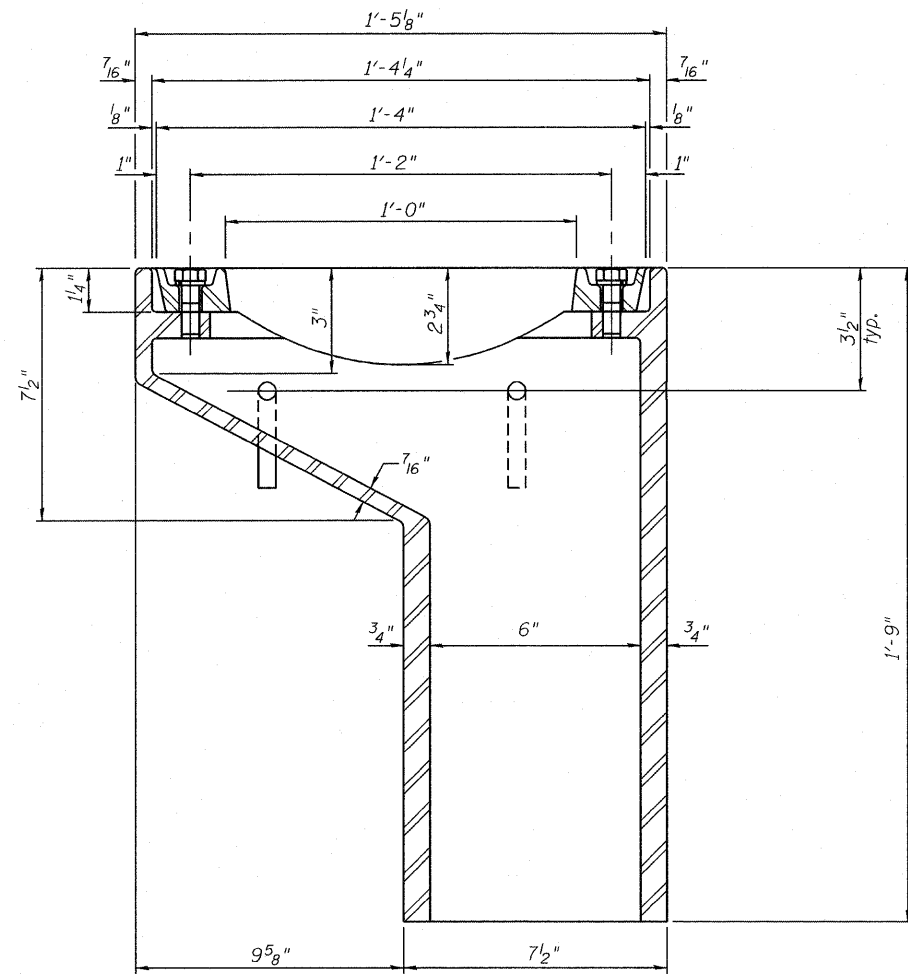
1. At least 72 hours shall have elapsed from the end of the previous pour.
2. The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3,500 psi.

<b>JACOBS</b>	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SLAB POURING SEQUENCE STRUCTURE NO. 039-0074</b>	F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 93	SHEET NO. 114		
	PLOT DATE = 19-OCT-2011	CHECKED - M. CRONIN	REVISED -			CONTRACT NO. 78049		[ILLINOIS] FED. AID PROJECT				
	FILE NAME=039-0074978049-Slab Pouring.dgn	DRAWN - E. KRACK	REVISED -									
		CHECKED - B. ERSCHEN	REVISED -	SHEET NO. 14 OF 35 SHEETS								

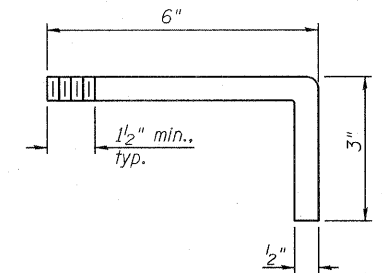
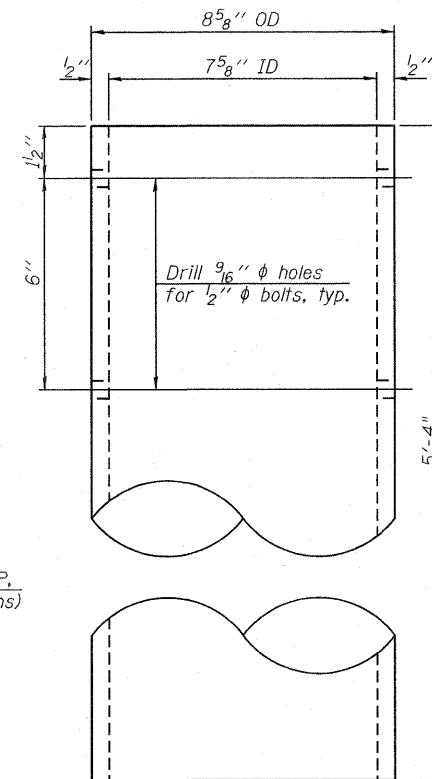
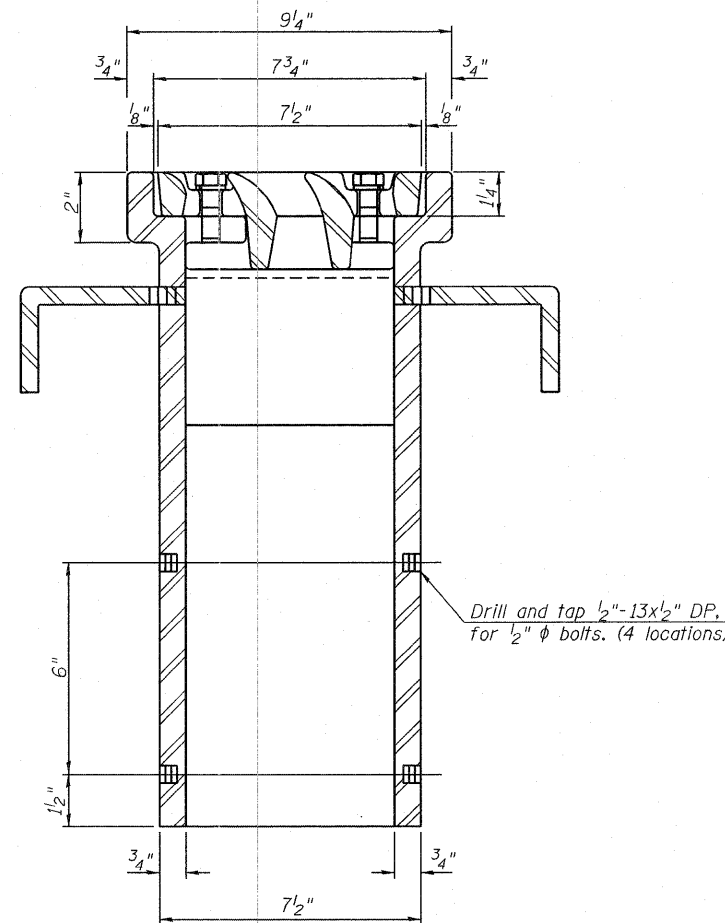
FILE NAME=039-0074978049-Drainage Scupper.dgn  
 19-OCT-2011 15:47



**Notes:**  
 All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.  
 Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.  
 Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.  
 As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.  
 Structural steel weldments of equal sections and of the same configuration may be substituted for the cast iron scupper frame. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval. Structural steel weldments shall not be substituted for the cast iron scupper grate. Structural steel frames and downspouts shall be galvanized according to AASHTO M111.  
 The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.  
 Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.  
 Alternate fiberglass downspout conforming to ASTM D 2996 with a short-time rupture strength hoop tensile stress of 30,000 psi min. may be used in lieu of the cast iron or steel equivalent.



**SECTION A-A**  
 See sheet 10 of 35 for scupper location relative to parapet.



**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	2

DS-11

7-1-10

**JACOBS**

USER NAME =  
 PLOT DATE = 19-OCT-2011

DESIGNED -  
 CHECKED -  
 DRAWN - C. SALLADE  
 CHECKED - B. ERSCHEN

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

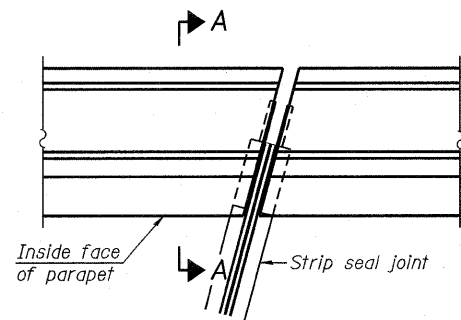
DRAINAGE SCUPPER, DS-11  
 STRUCTURE NO. 039-0074

SHEET NO. 15 OF 35 SHEETS

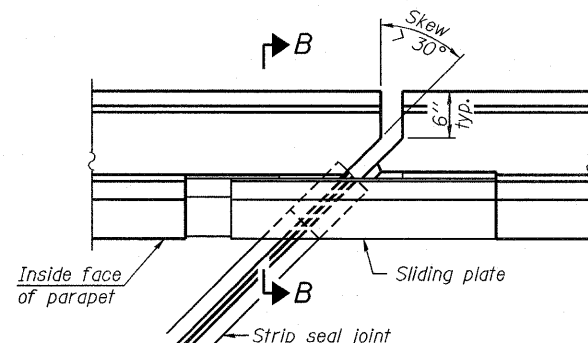
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
686	114B-1	JACKSON	94	114
ILLINOIS FED. AID PROJECT			CONTRACT NO. 78049	

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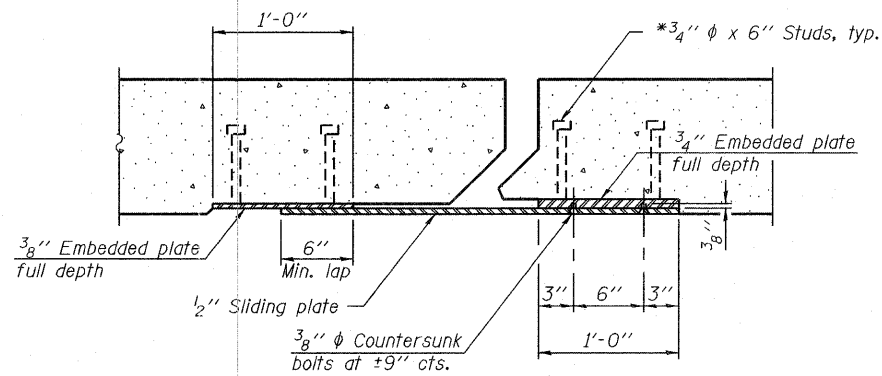
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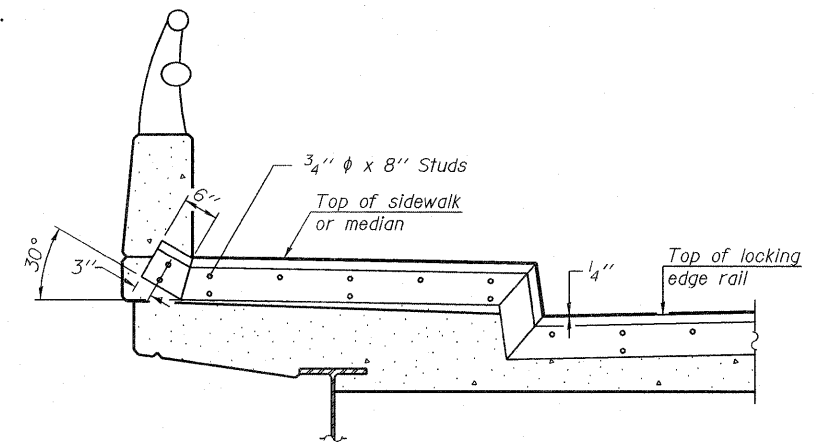
**PLAN**  
(For skews  $\leq 30^\circ$ )



**PLAN**  
(For skews  $> 30^\circ$ )  
Showing point block

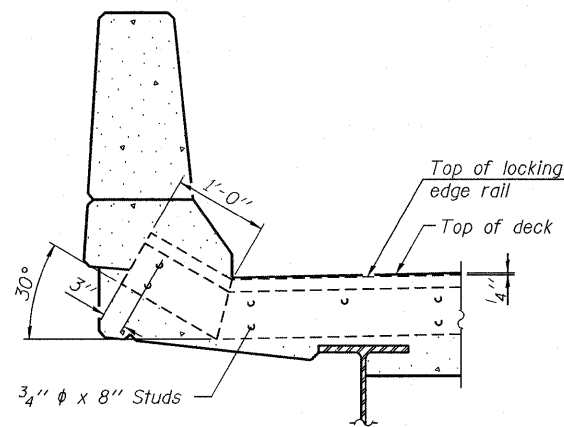


**SECTION C-C**

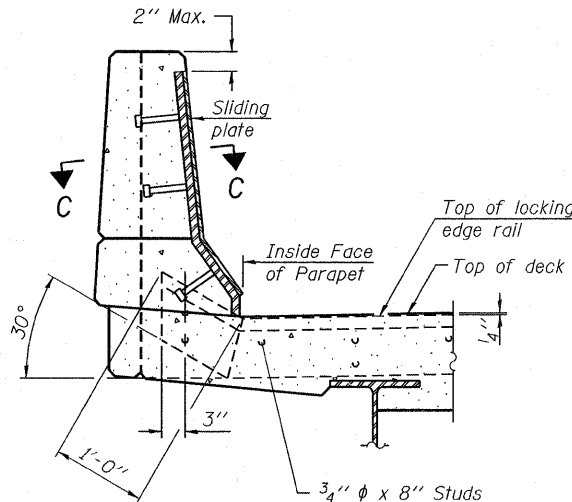


**TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN**

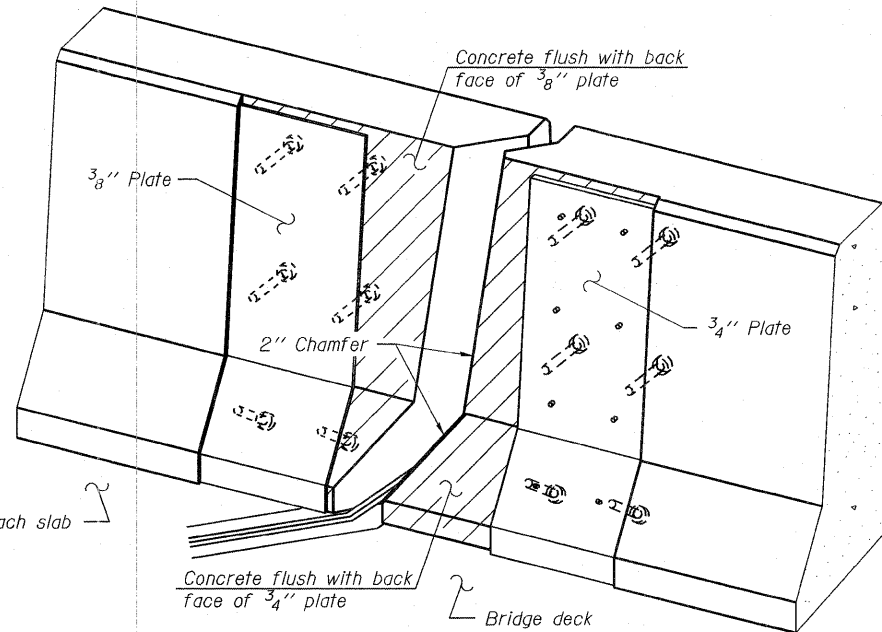
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



**SECTION A-A**



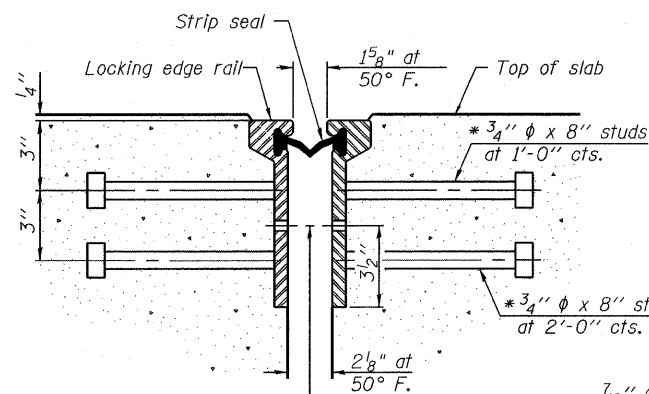
**SECTION B-B**



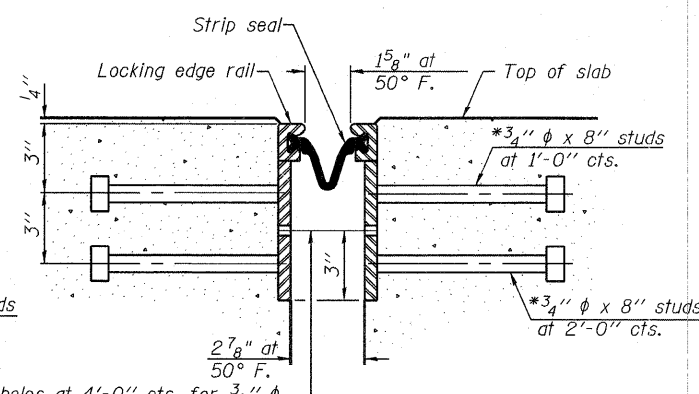
**TRIMETRIC VIEW**  
(Showing back plates only)

**Notes:**  
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.  
 The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.  
 The manufacturer's recommended installation methods shall be followed.

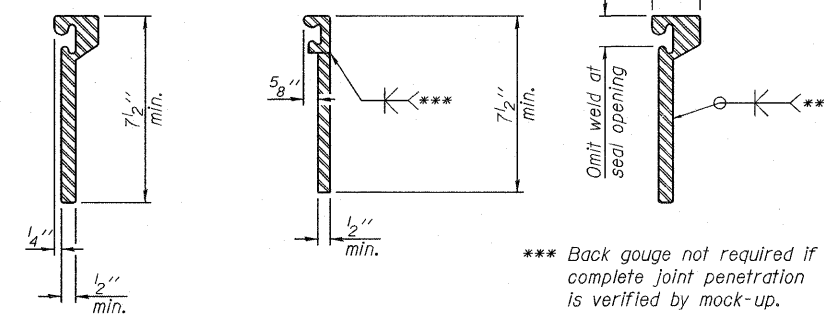
The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.  
 All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications. Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.  
 Parapet plates and anchorage studs for skews  $> 30^\circ$  included in the cost of Preformed Joint Strip Seal.



**SECTION THRU ROLLED RAIL JOINT**



**SECTION THRU WELDED RAIL JOINT**



**ROLLED EXTRUDED RAIL WELDED RAIL**

**LOCKING EDGE RAIL SPLICE**

The inside of the locking edge rail groove shall be free of weld residue.  
 Rolled rail shown, welded rail similar.

**LOCKING EDGE RAILS**

**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	87.5

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

EJ-SSJ 7-1-10

**JACOBS**

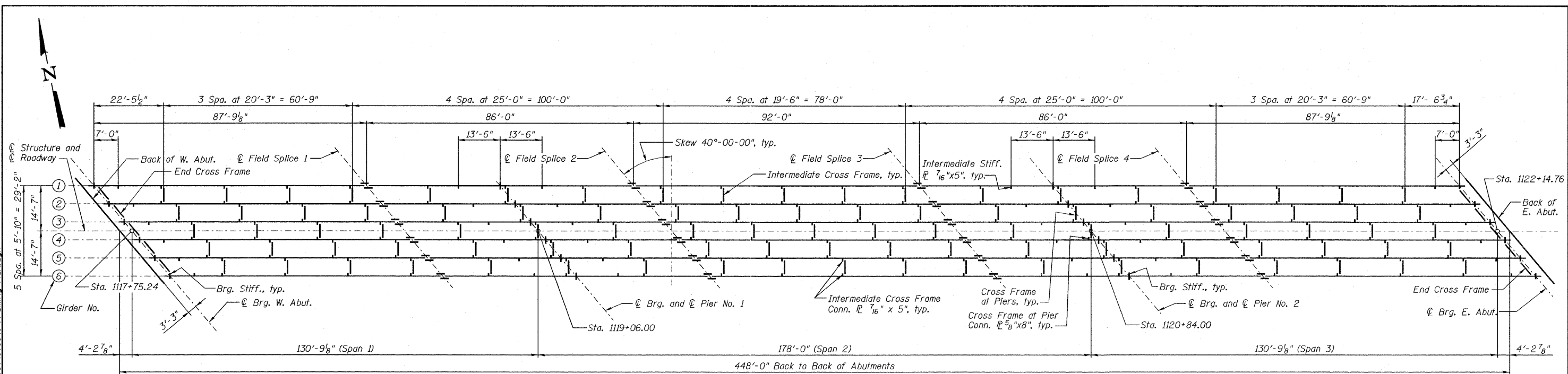
USER NAME =	DESIGNED -	REVISED -
PLOT DATE = 19-OCT-2011	CHECKED -	REVISED -
	DRAWN - C. SALLADE	REVISED -
	CHECKED - B. ERSCHEN	REVISED -

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PREFORMED JOINT STRIP SEAL  
STRUCTURE NO. 039-0074

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 95	SHEET NO. 114
SHEET NO. 16 OF 35 SHEETS			CONTRACT NO. 78049	

ILLINOIS FED. AID PROJECT



**FRAMING PLAN**

	0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2	
$I_s$	(in <sup>4</sup> )	23941	59937	24957
$I_c(n)$	(in <sup>4</sup> )	56037	67269	58529
$I_c(3n)$	(in <sup>4</sup> )	41584	67269	43041
$S_s$	(in <sup>3</sup> )	805	1868	839
$S_c(n)$	(in <sup>3</sup> )	1115	2255	1180
$S_c(3n)$	(in <sup>3</sup> )	1013	2255	1063
DC1	(k/')	0.78	0.93	0.79
M <sub>DC1</sub>	(k)	685	2428	833
DC2	(k/')	0.15	0.15	0.15
M <sub>DC2</sub>	(k)	137	428	166
DW	(k/')	0.27	0.27	0.27
M <sub>DW</sub>	(k)	244	763	296
M <sub>LL+IM</sub>	(k)	1588	2267	1660
M <sub>u</sub> (Strength I)	(k)	4137	8682	4598
$\phi_f M_n$ , $\phi_f M_{nc}$	(k)	5540	9191	5748
$f_s$ DC1	(ksi)	10.2	15.6	11.9
$f_s$ DC2	(ksi)	1.6	2.3	1.9
$f_s$ DW	(ksi)	2.9	4.1	3.3
$f_s$ 1.3(LL+IM)	(ksi)	22.2	15.7	21.9
$f_s$ (Service II)	(ksi)	36.9	37.7	39.0
V <sub>f</sub>	(k)	33.4	30.4	30.4

	Abut.	Pier
R <sub>DC1</sub>	(k) 35.5	151.2
R <sub>DC2</sub>	(k) 6.5	26.4
R <sub>DW</sub>	(k) 11.6	47.1
R <sub>LL+IM</sub>	(k) 96.1	174.2
R <sub>Total</sub>	(k) 149.7	398.9

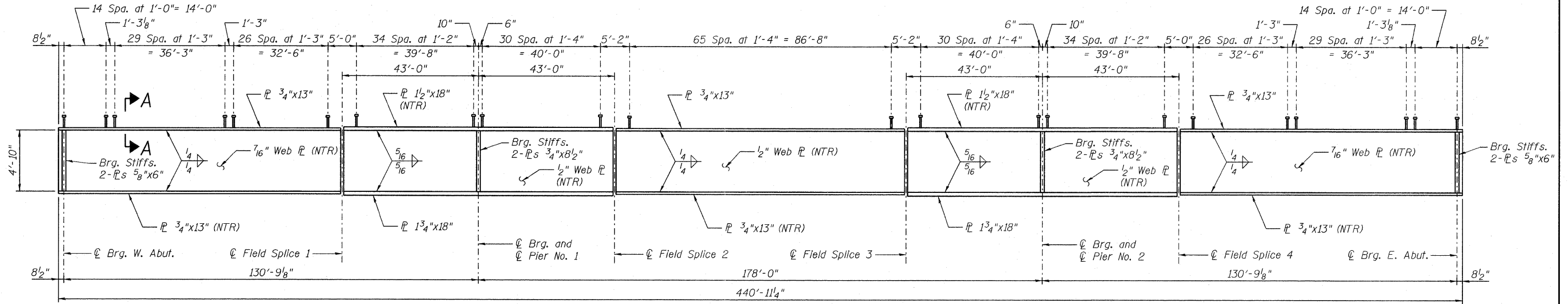
- $I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total-Strength I, and Service II) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total-Strength I, and Service II) due to short-term composite live loads in positive moment region. Composite moment of inertia and section modulus of the steel and deck reinforcing based on cracked composite section in negative moment region. (in<sup>4</sup> and in<sup>3</sup>).
- $I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads in positive moment region. Composite moment of inertia and section modulus of the steel and deck reinforcing based on cracked composite section in negative moment region. (in<sup>4</sup> and in<sup>3</sup>).
- DC1: Un-factored non-composite dead load (kips/ft.).
- M<sub>DC1</sub>: 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<sub>DC2</sub>: 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<sub>DW</sub>: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- M<sub>LL+IM</sub>: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
- M<sub>u</sub> (Strength I): Factored design moment (kip-ft.).  
1.25 (M<sub>DC1</sub> + M<sub>DC2</sub>) + 1.5 M<sub>DW</sub> + 1.75 M<sub>LL+IM</sub>
- $\phi_f M_n$ : Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
- $\phi_f M_{nc}$ : Compact composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).
- $f_s$  (Service II): Sum of stresses as computed from the moments below (ksi).  
M<sub>DC1</sub> + M<sub>DC2</sub> + M<sub>DW</sub> + 1.3 M<sub>LL+IM</sub>
- V<sub>f</sub>: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

Notes:  
All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.  
Diaphragms and connecting plates and angles shall conform to the requirements of AASHTO M270 Grade 50W.

**NOTE:**  
Structural steel was furnished in Contract 78283 and is shown for information only. Erection is included in Contract 78049.

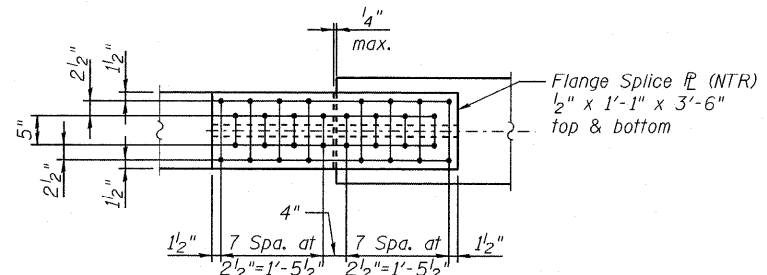


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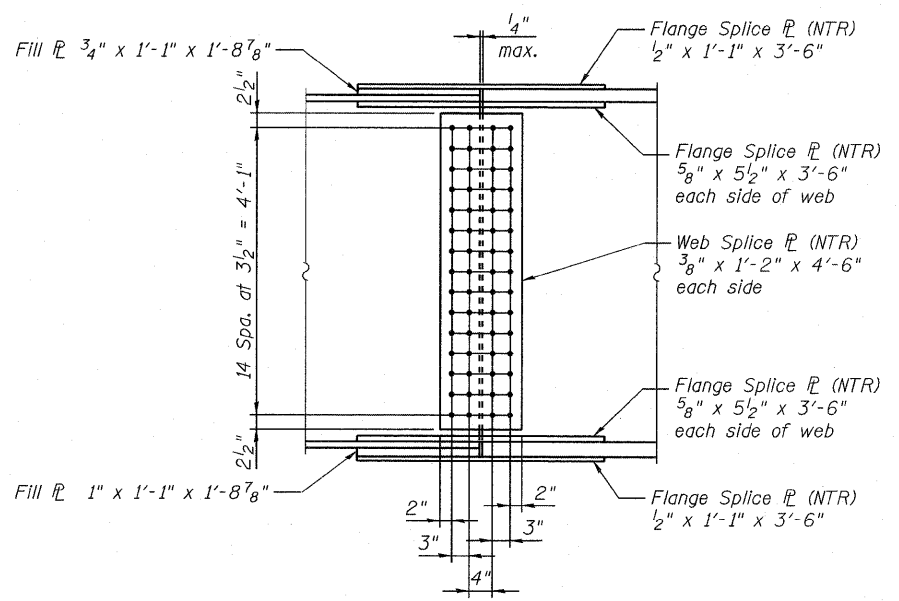
**GIRDER ELEVATION**

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

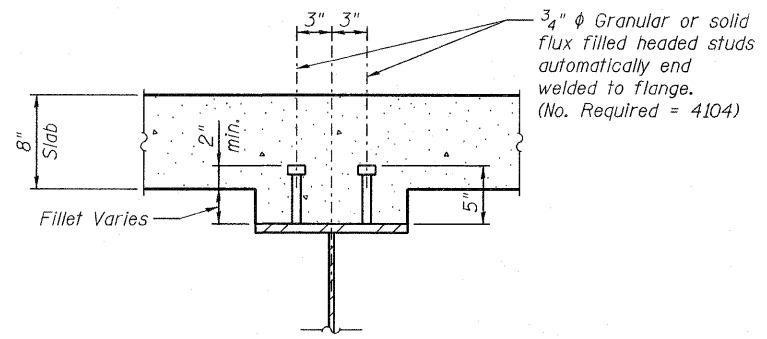


**TOP AND BOTTOM SPLICE PLATES**

**NOTE:**  
 Structural steel was furnished in Contract 78283 and is shown for information only. Stud Shear Connectors and erection are included in Contract 78049.



**SPLICE DETAIL**  
 (24 Required)



**SECTION A-A**

**Notes:**  
 Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.  
 Structural steel shall conform to the requirements of AASHTO M270 Grade 50W except as noted.  
 All bolts are 7/8" phi ASTM A325 high strength bolts in 15/16" phi holes.



USER NAME =	DESIGNED - B. ERSCHEN	REVISED -
PLOT DATE = 19-OCT-2011	CHECKED - M. CRONIN	REVISED -
	DRAWN - C. SALLADE	REVISED -
	CHECKED - J. SMITH	REVISED -

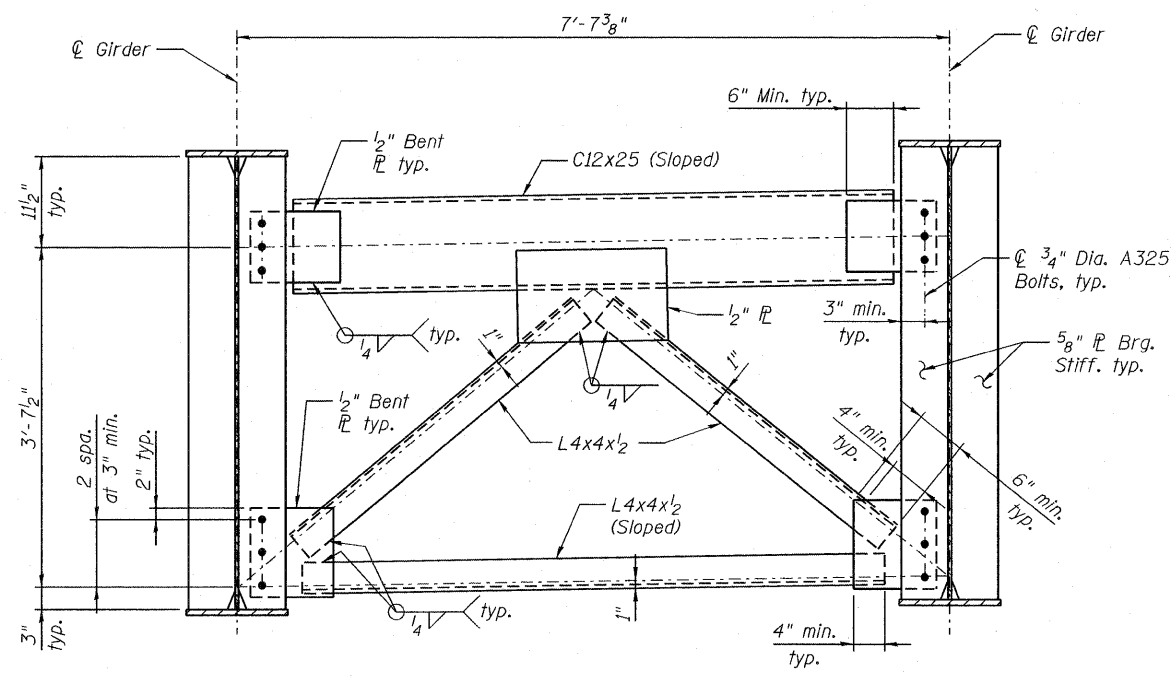
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**GIRDER DETAILS  
 STRUCTURE NO. 039-0074**

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 97	SHEET NO. 114
			CONTRACT NO. 78049	
ILLINOIS FED. AID PROJECT				

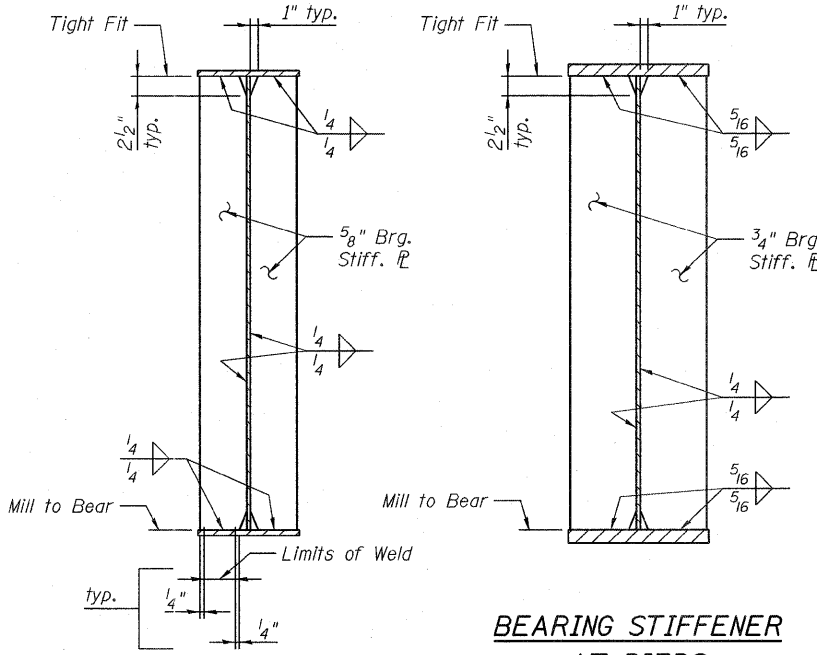
SHEET NO. 18 OF 35 SHEETS

FILE: C:\26703\700cadd\709sfr\039-0074978049-Cross Frame.dgn  
 19-OCT-2011  
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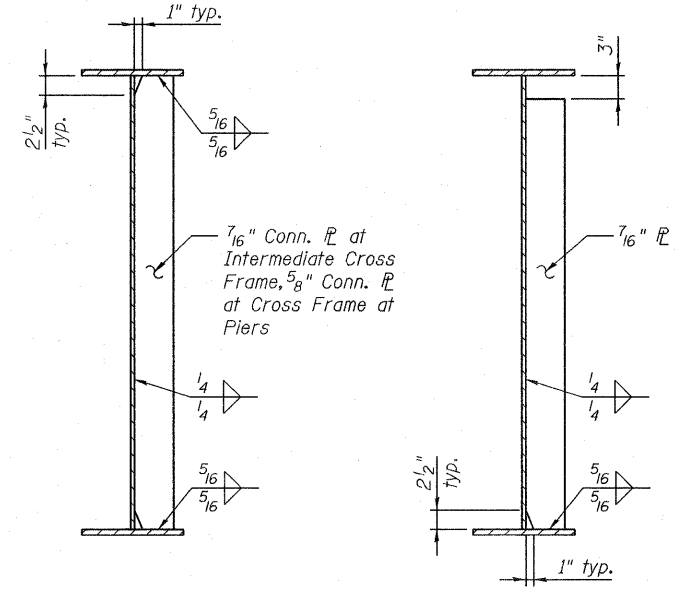


**END CROSS FRAME AT ABUTMENTS**

Two hardened washers shall be required for all oversized holes.



**BEARING STIFFENER AT ABUTMENTS**



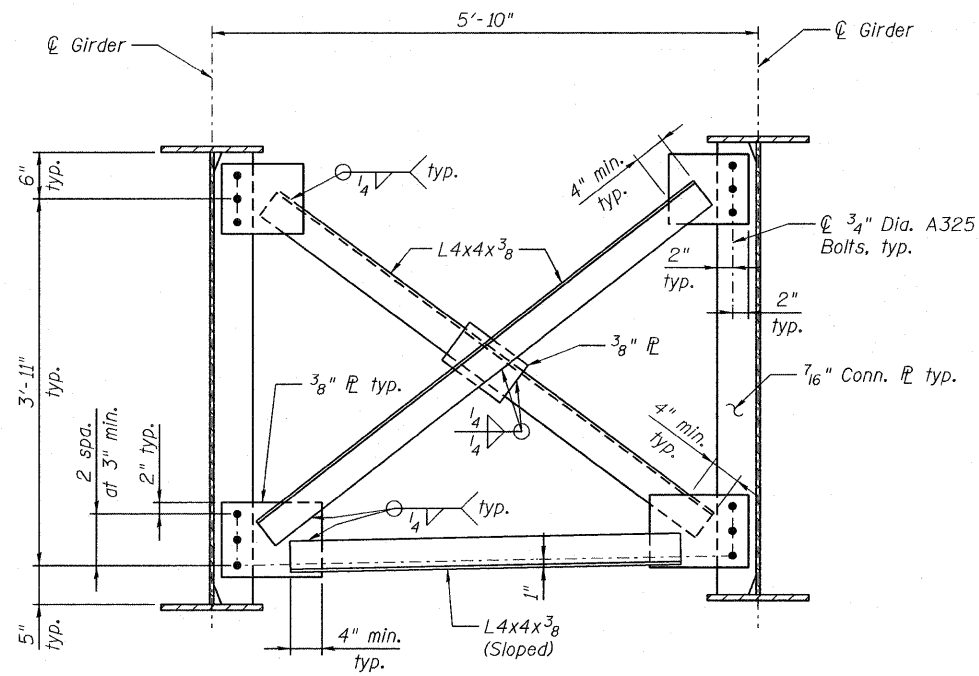
**BEARING STIFFENER AT PIERS**

**AT CROSS FRAMES**

**INTERMEDIATE STIFFENER**

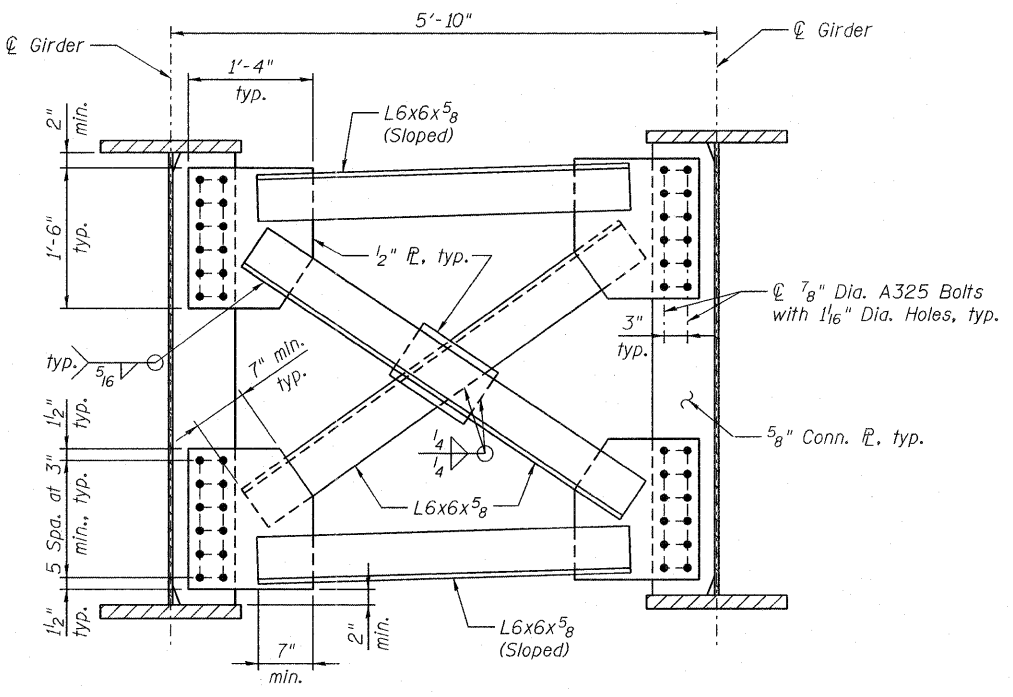
**CONNECTION PLATE DETAILS**

(Detail of Intermediate stiffener is shown near pier. Intermediate stiffener near abutment shall have a 3" gap at bottom flange)



**TYPICAL INTERMEDIATE CROSS FRAME**

Two hardened washers shall be required for all oversized holes.



**CROSS FRAME AT PIERS**

Two hardened washers shall be required for all oversized holes.

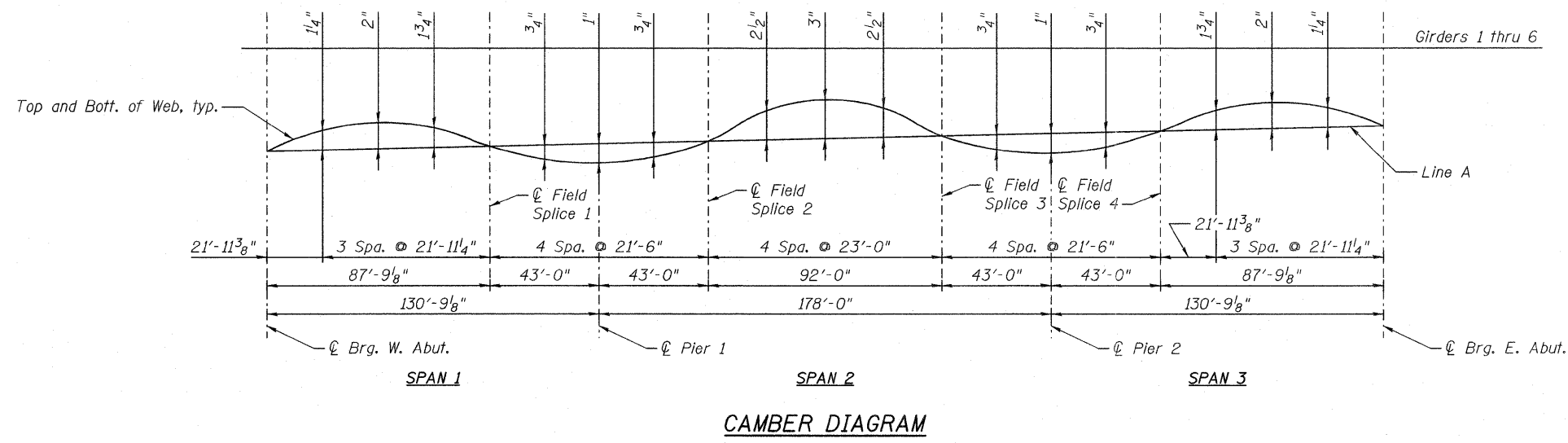
**STRUCTURAL STEEL NOTES**

All structural steel shall be AASHTO M270, Grade 50W unless otherwise noted.  
 Fasteners shall be 3/4" diameter high strength bolts with 15/16" diameter open holes unless otherwise noted.  
 High strength bolts are designed for a Class A contact surface in a standard hole for a slip-critical connection.  
 The contact surface of joints with oversized holes shall be free of paint or lacquer.  
 All bearing stiffeners shall be vertical in the completed structure.

**NOTE:**  
 Structural steel was furnished in Contract 78283 and is shown for information only. Erection is included in Contract 78049.

<b>JACOBS</b>	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	<b>STATE OF ILLINOIS</b>	<b>CROSS FRAME DETAILS</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT DATE = 19-OCT-2011	CHECKED - M. CRONIN	REVISED -			686	114B-1	JACKSON	98	114
FILE NAME=039-0074978049-Cross Frame.dgn		DRAWN - E. KRACK	REVISED -	<b>DEPARTMENT OF TRANSPORTATION</b>	<b>STRUCTURE NO. 039-0074</b>			<b>CONTRACT NO. 78049</b>		
		CHECKED - J. SMITH	REVISED -		SHEET NO. 19 OF 35 SHEETS					[ILLINOIS] FED. AID PROJECT

P:\C\26703\700cadd\709str\039-0074978049-girder Camber.dgn  
 19-OCT-2011 15:47



**\* TOP OF GIRDER WEB ELEVATIONS**

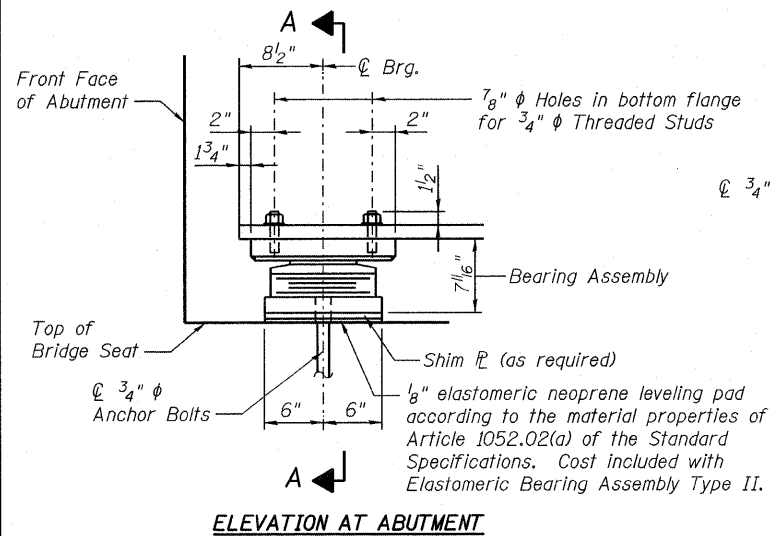
Location Girder	℄ Brg. West Abut.	℄ Field Splice 1	℄ Brg. and ℄ Pier 1	℄ Field Splice 2	℄ Field Splice 3	℄ Brg. and ℄ Pier 2	℄ Field Splice 4	℄ Brg. East Abut.
Girder 1	388.56	388.72	388.76	388.97	389.15	389.11	389.25	389.44
Girder 2	388.68	388.83	388.87	389.07	389.26	389.22	389.36	389.56
Girder 3	388.78	388.93	388.97	389.17	389.36	389.32	389.46	389.66
Girder 4	388.79	388.94	388.98	389.18	389.37	389.33	389.47	389.67
Girder 5	388.71	388.86	388.90	389.10	389.29	389.25	389.39	389.59
Girder 6	388.61	388.77	388.81	389.01	389.20	389.16	389.30	389.49

\* For fabrication only.

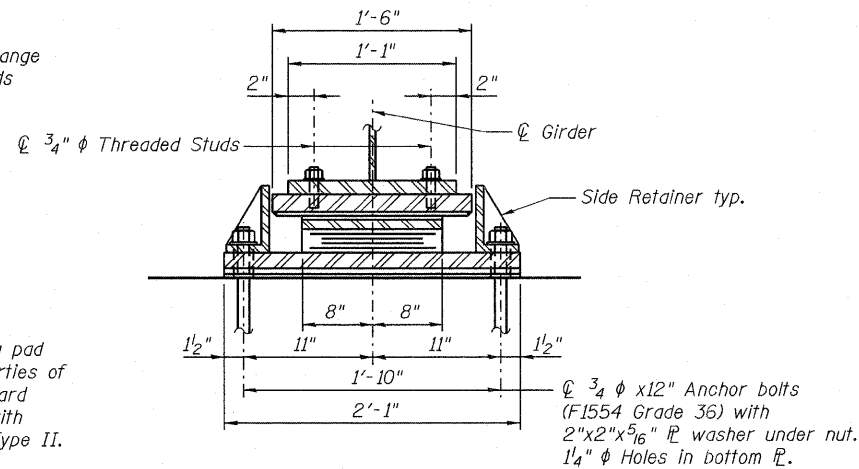
Notes:  
 Line A is a straight line at the top of web plates between ℄ bearing and ℄ field splice or from ℄ field splice to ℄ field splice.  
 Camber dimensions include correction for cross slope and vertical curve in addition to the correction for dead load.

**NOTE:**  
 Structural steel was furnished in Contract 78283 and is shown for information only. Erection is included in Contract 78049.

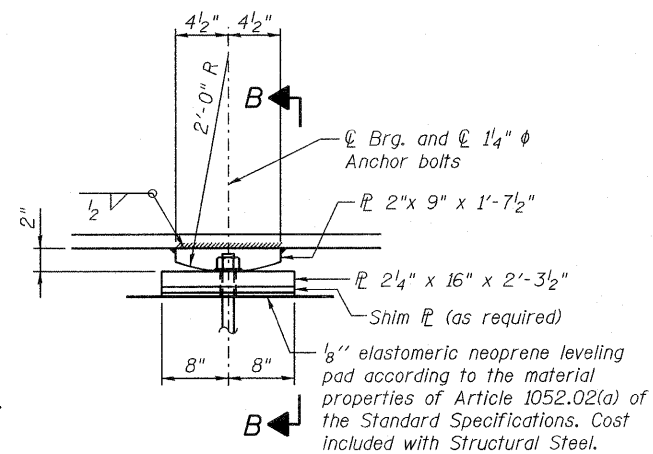
19-OCT-2011 15:47 FILENAME=039-0074978049-Bearing Details.dgn



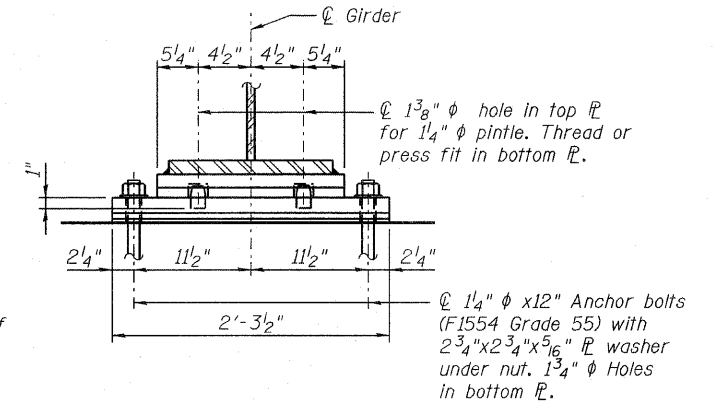
**ELEVATION AT ABUTMENT**



**SECTION A-A**



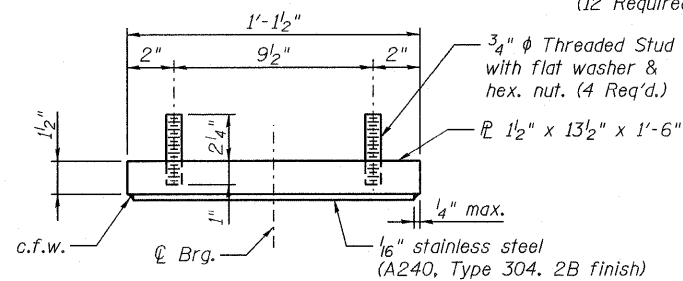
**ELEVATION AT PIER**



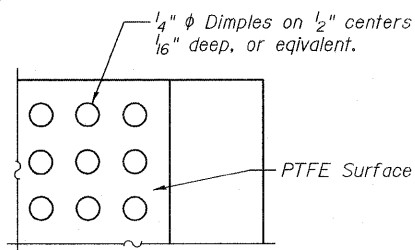
**SECTION B-B**

**TYPE II ELASTOMERIC EXPANSION BEARING  
AT WEST AND EAST ABUTMENTS**

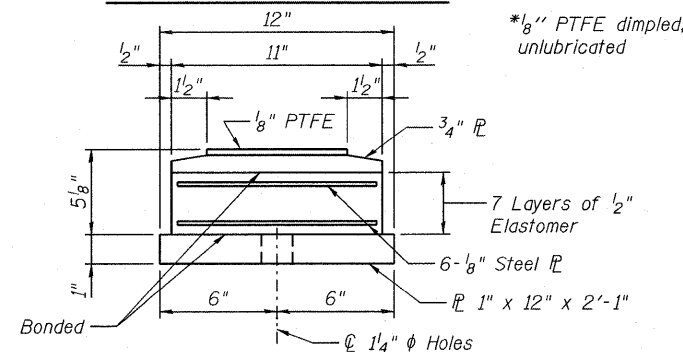
(12 Required Total)



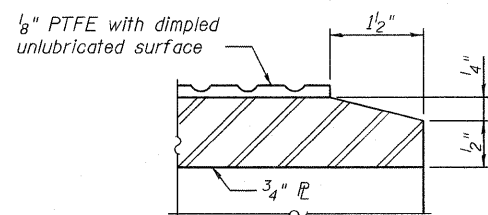
**TOP BEARING ASSEMBLY**



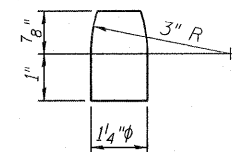
**PLAN-PTFE SURFACE**



**BOTTOM BEARING ASSEMBLY**



**SECTION THRU PTFE**



**PINTLE**

**FIXED BEARING AT PIER 1 AND PIER 2**

(12 Required Total)

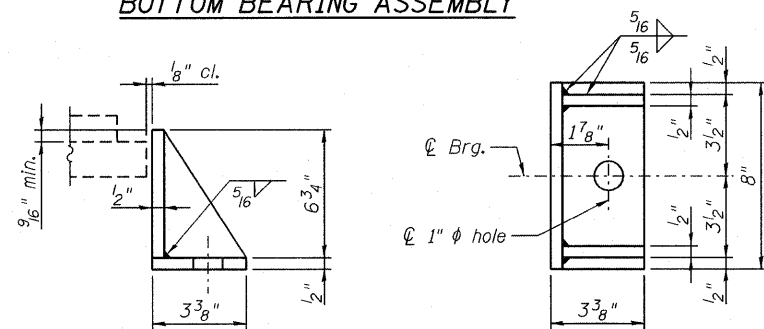
**Notes:**  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified.

The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.  
Anchor bolts for Type II bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.  
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type II.  
The 1/8 inch PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.  
Bonding of 1/8 inch PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.  
The anchor bolt sizes and grades shown constitute a calculated seismic structural fuse. Substitution of higher diameter and/or grade anchor bolts will not be allowed.  
The structural steel of the bearing assembly shall conform to the requirements of AASHTO M270 Grade 50W.  
Two 1/8 inch adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

**PLANNED SHIMS TABLE**

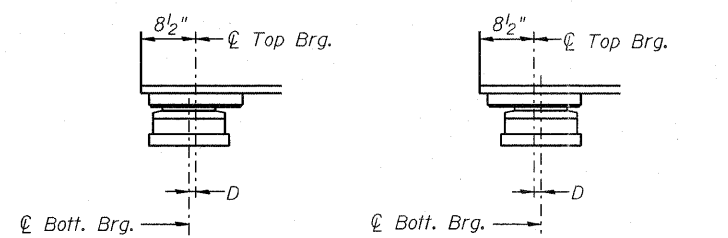
Location	G1	G2	G3	G4	G5	G6
West Abutment	-	-	-	1/8"	-	-
Pier 1	-	-	-	1/8"	-	-
Pier 2	-	-	-	1/8"	-	-
East Abutment	-	-	-	1/8"	-	-

**NOTE:**  
Structural steel was furnished in Contract 78283 and is shown for information only. Anchor Bolts and bearing erection are included in Contract 78049.



**SIDE RETAINER**

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



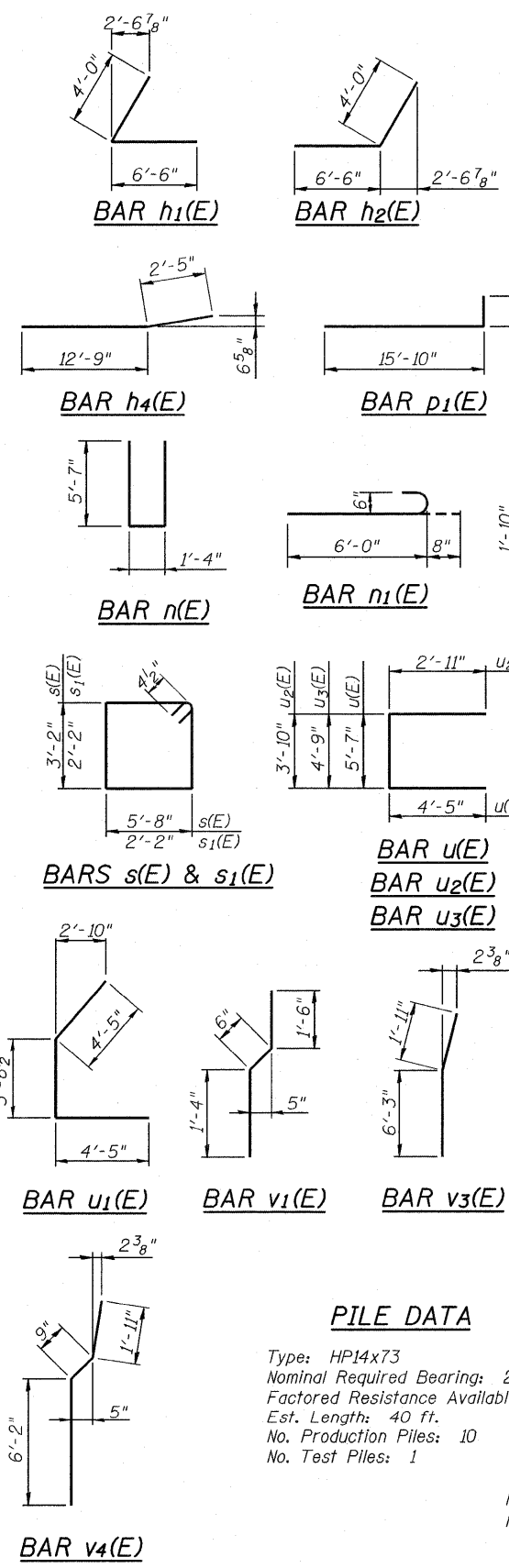
**SETTING ANCHOR BOLTS AT EXP. BRG.**

**BELOW 50°F.** (Move bott. brg. away from fixed brg.)  
**ABOVE 50°F.** (Move bott. brg. toward fixed brg.)  
D = 1/8 inch per each 100 feet of expansion for every 15 degree temp. change from the normal temp. of 50°F.

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	12
Anchor Bolts, 3/4"	Each	24
Anchor Bolts, 1 1/4"	Each	24

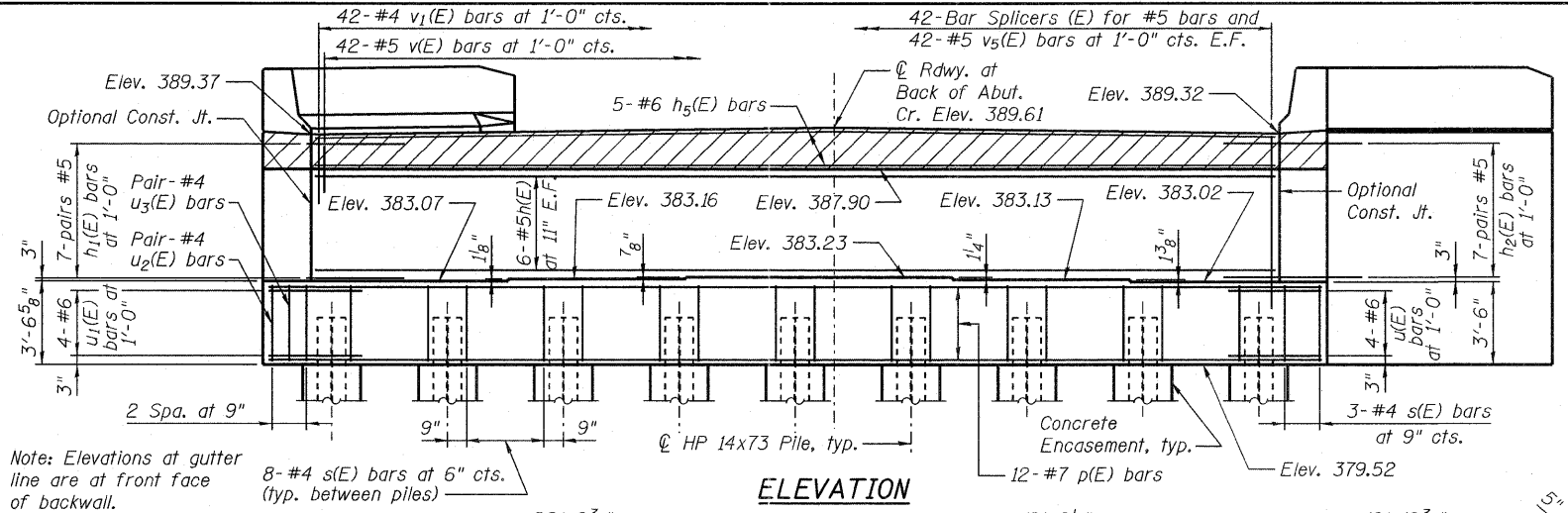
19-OCT-2011 15:47 P:\CX267031\00cadd\7098tr\039-0074978049-West Abutment.dgn



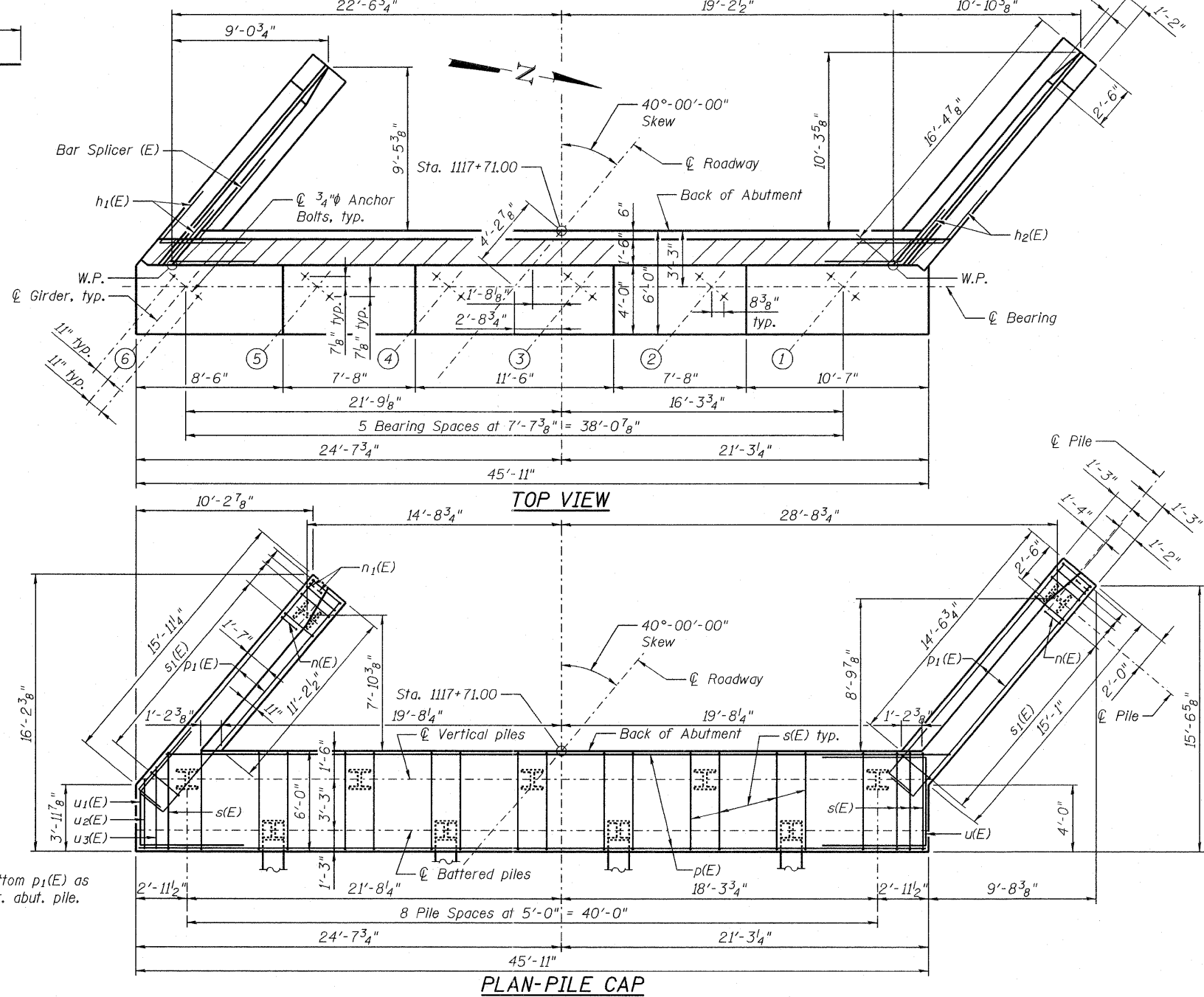
**PILE DATA**

Type: HP14x73  
 Nominal Required Bearing: 285 kips  
 Factored Resistance Available: 157 kips  
 Est. Length: 40 ft.  
 No. Production Piles: 10  
 No. Test Piles: 1

Note: Bend bottom p<sub>1</sub>(E) as required to clr. abut. pile.



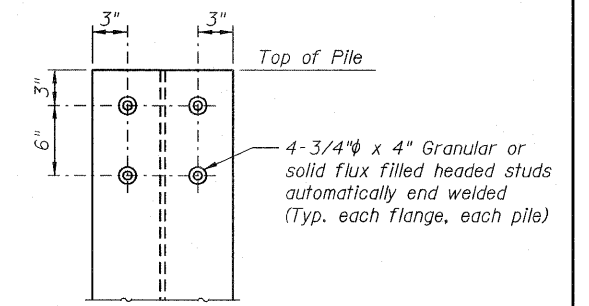
**ELEVATION**



**PLAN-PILE CAP**

**WEST ABUTMENT  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h <sub>1</sub> (E)	12	#5	41'-7"	—
h <sub>1</sub> (E)	14	#5	10'-6"	└
h <sub>2</sub> (E)	14	#5	10'-6"	└
h <sub>3</sub> (E)	26	#4	15'-3"	—
h <sub>4</sub> (E)	18	#4	15'-2"	—
h <sub>5</sub> (E)	5	#6	41'-7"	—
n(E)	26	#6	12'-6"	—
n <sub>1</sub> (E)	12	#6	6'-8"	—
p(E)	12	#7	45'-7"	—
p <sub>1</sub> (E)	12	#7	17'-6"	—
s(E)	68	#4	18'-5"	—
s <sub>1</sub> (E)	32	#4	9'-5"	—
u(E)	4	#6	14'-5"	—
u <sub>1</sub> (E)	4	#6	12'-7"	└
u <sub>2</sub> (E)	2	#4	9'-8"	└
u <sub>3</sub> (E)	2	#4	10'-7"	└
v(E)	42	#5	3'-9"	└
v <sub>1</sub> (E)	42	#4	3'-4"	└
v <sub>2</sub> (E)	32	#6	8'-10"	—
v <sub>3</sub> (E)	6	#6	8'-2"	—
v <sub>4</sub> (E)	26	#6	8'-10"	—
v <sub>5</sub> (E)	84	#5	7'-3"	—
Structure Excavation		Cu. Yd.	186	
Concrete Structures		Cu. Yd.	70.3	
Reinforcement Bars, Epoxy Coated		Pound	6,710	
Furnishing - Piles, HP14x73		Foot	400	
Driving Piles		Foot	400	
Test Pile, HP14x73		Each	1	
Concrete Encasement		Cu. Yd.	6.0	
Concrete Sealer		Sq. Ft.	640	



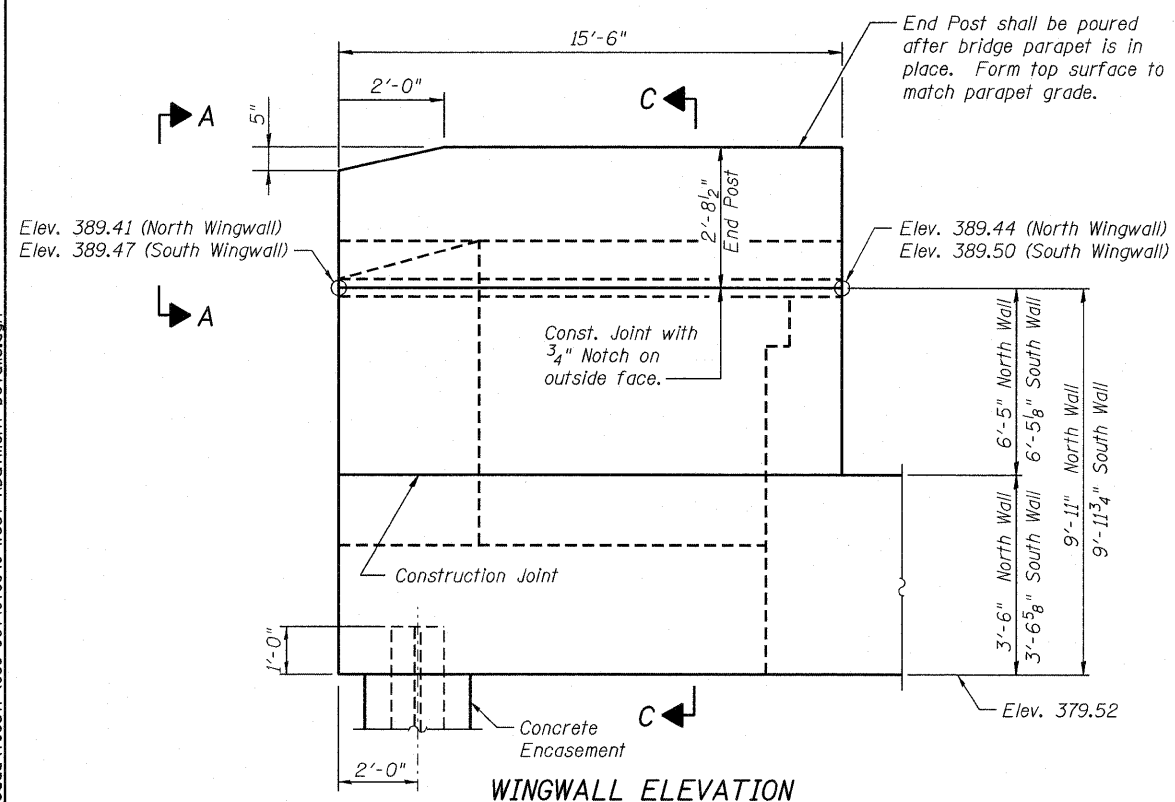
**SEISMIC PILE DETAILS**

Cost of 3/4" Studs shall be included in item "Furnishing Steel Piles, HP14x73."

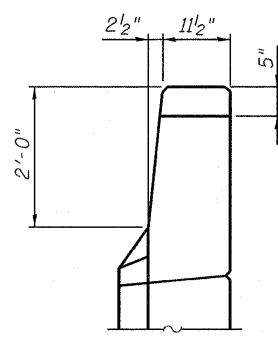
**NOTES**

Top of backwall shall conform to longitudinal grade and cross slope of roadway.  
 Pour steps monolithically with cap.  
 Space reinforcement in cap to miss anchor bolts.  
 Concrete Sealer should be applied to the designated areas of the abutment shown on sheet 23 of 35.  
 All edges shall have a standard 3/4" chamfer except as noted.  
 For details of Bar Splicers, see sheet 29 of 35.  
 For details of piles and Concrete Encasement, see sheet 30 of 35.

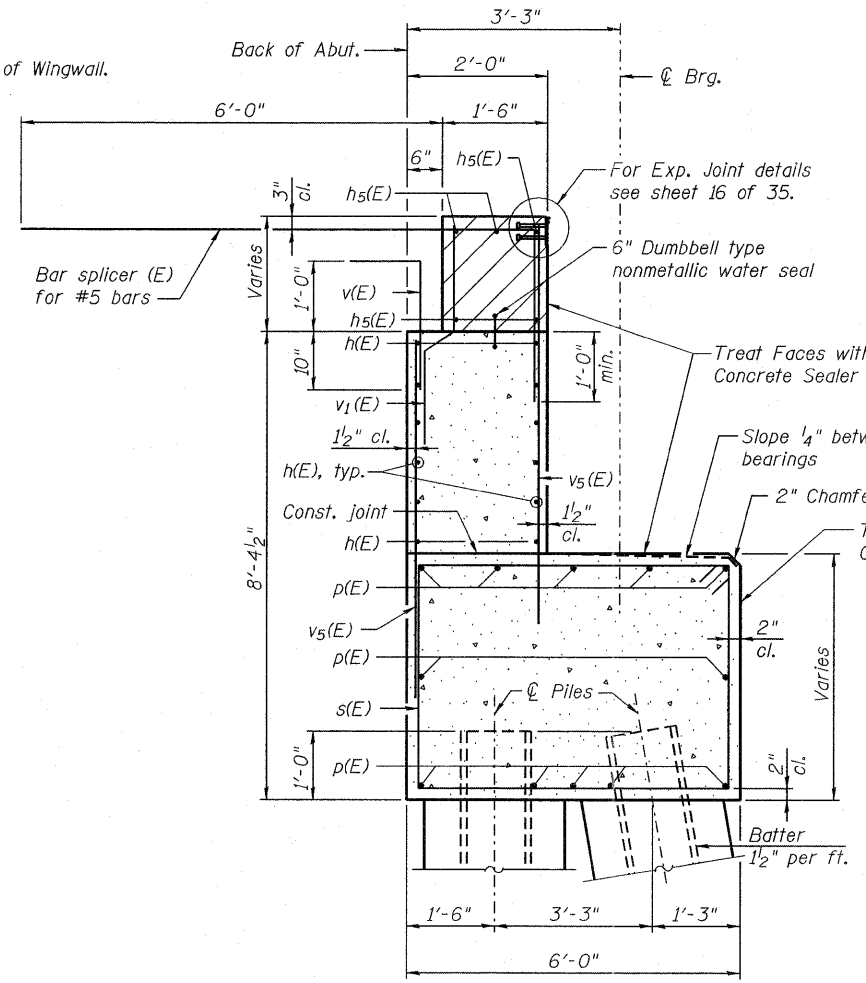
P:\C\26703\T00cadd\T09str\039-0074978049-West Abutment Details.dgn  
19-OCT-2011 15:47



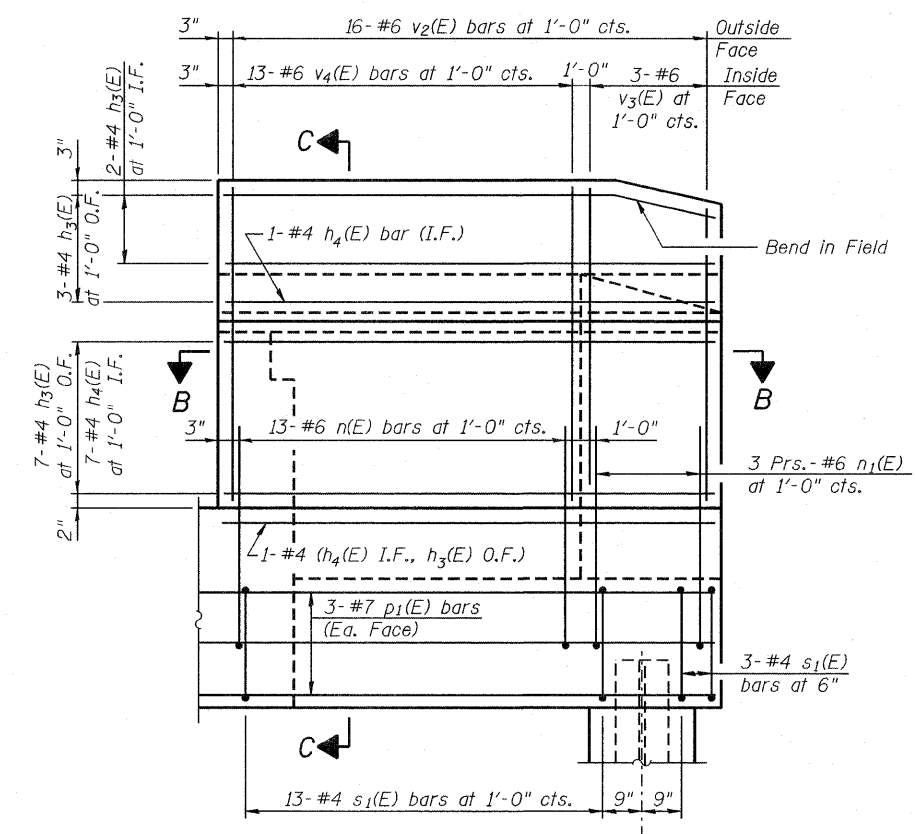
**WINGWALL ELEVATION**  
Showing Dimensions  
Note: Elevations shown are at outside face of Wingwall.



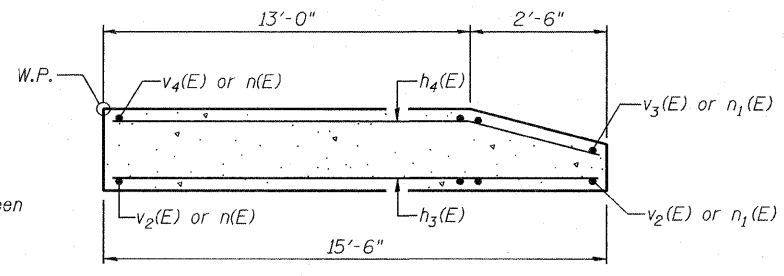
**VIEW A-A**



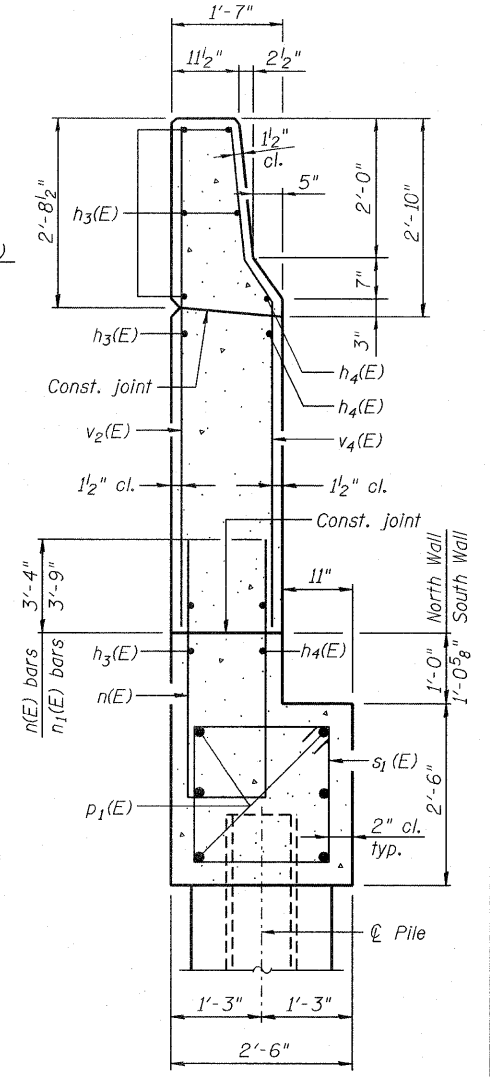
**SECTION THRU ABUTMENT**



**WINGWALL ELEVATION**  
Showing Reinforcement



**SECTION B-B**



**SECTION C-C**

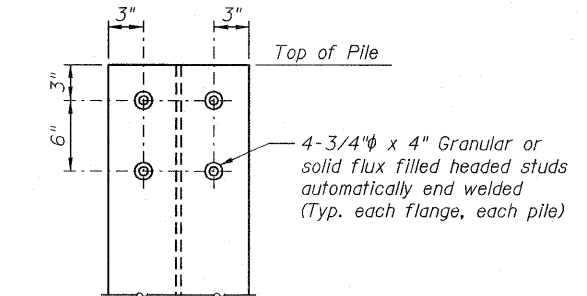
**NOTES**

Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure. Pour steps monolithically with cap. Quantity of concrete in end post included with Concrete Superstructure on sheet 11 of 35. For Concrete Encasement details, see sheet 30 of 35.

<b>JACOBS</b>	USER NAME =	DESIGNED - B. ERSCHEN	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>WEST ABUTMENT DETAILS</b> <b>STRUCTURE NO. 039-0074</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT DATE = 19-OCT-2011	CHECKED - N. KHATRI	REVISED -			686	114B-1	JACKSON	102	114
FILE NAME=039-0074978049-West Abutment Details.dgn		DRAWN - C. SALLADE	REVISED -					CONTRACT NO. 78049		
		CHECKED - F. CAMBA	REVISED -							

**EAST ABUTMENT  
BILL OF MATERIAL**

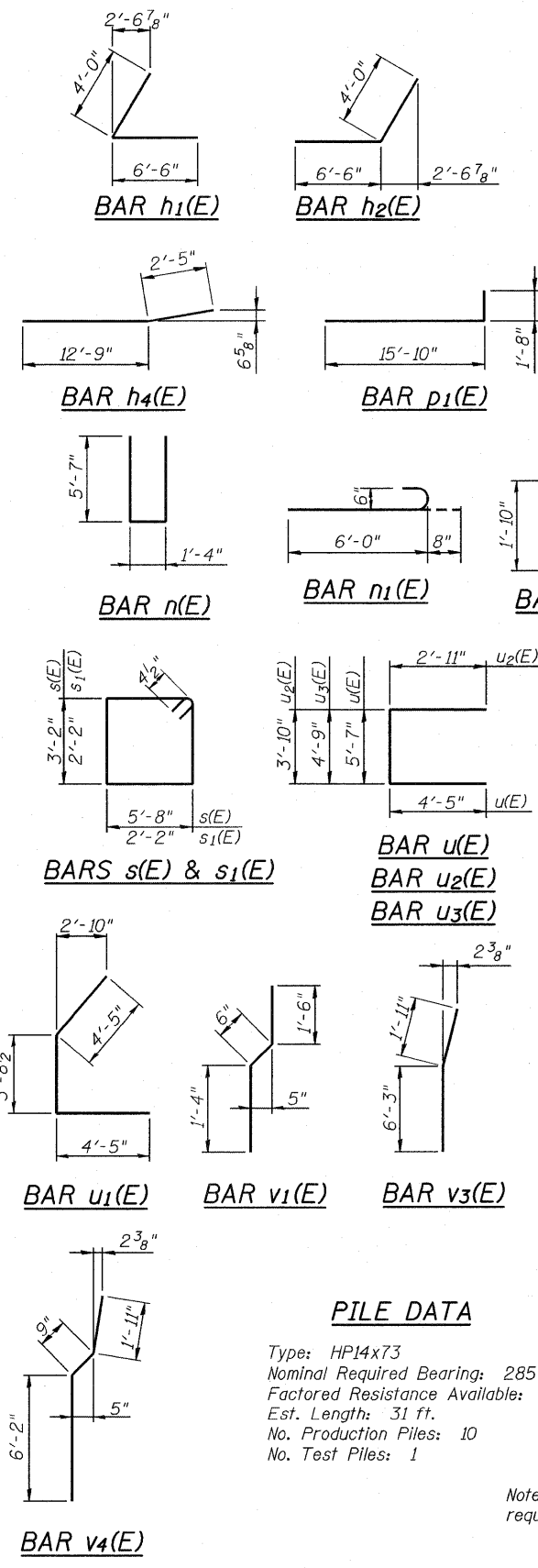
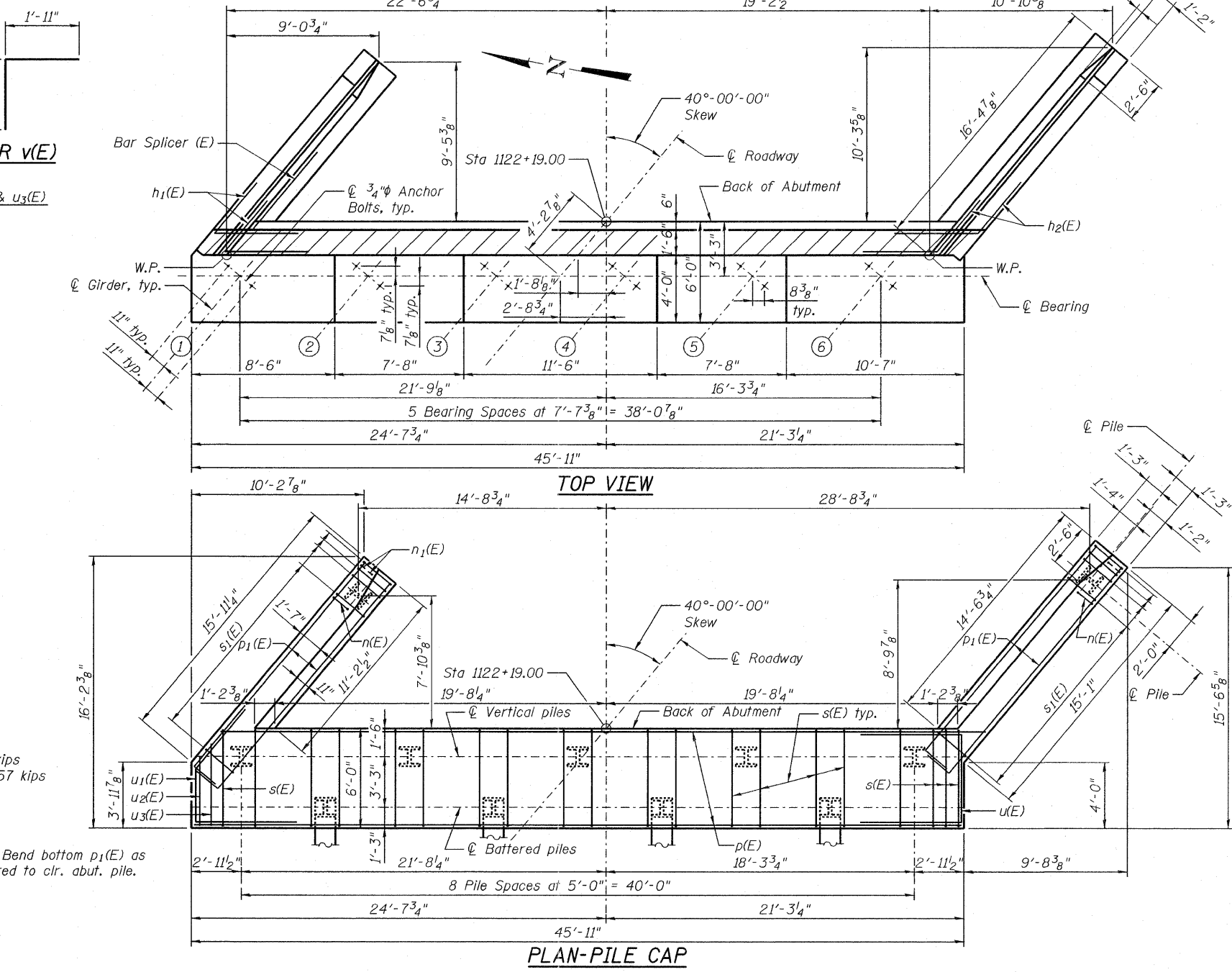
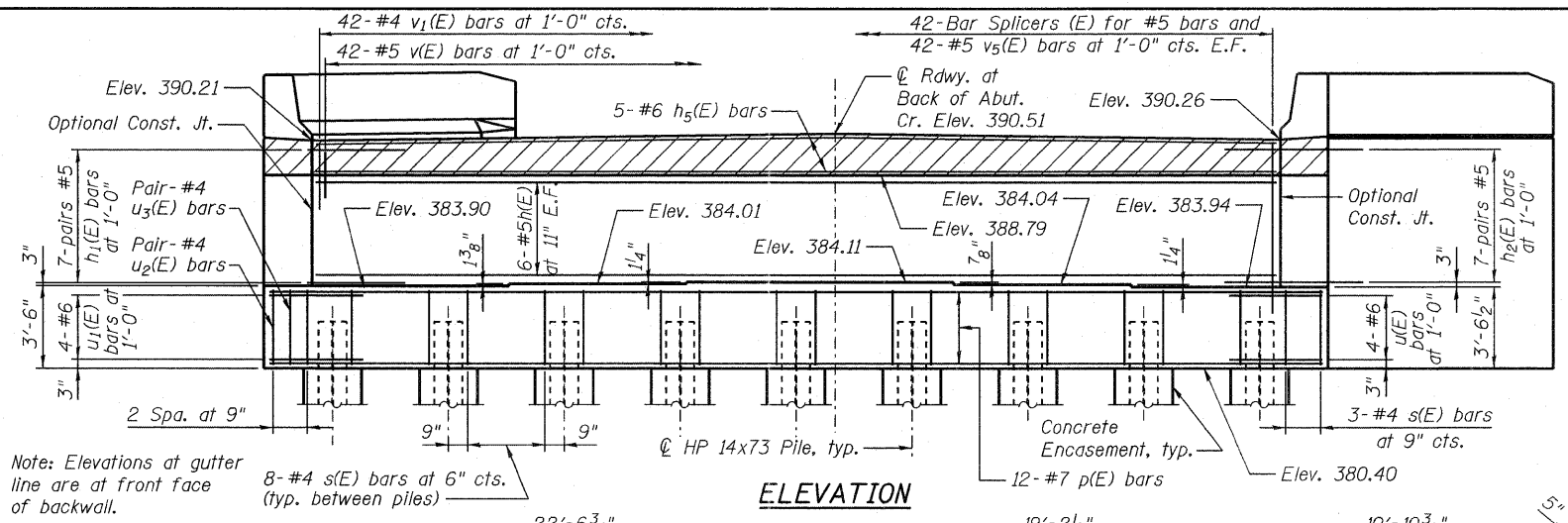
Bar	No.	Size	Length	Shape
h(E)	12	#5	41'-7"	
h1(E)	14	#5	10'-6"	
h2(E)	14	#5	10'-6"	
h3(E)	26	#4	15'-3"	
h4(E)	18	#4	15'-2"	
h5(E)	5	#6	41'-7"	
n(E)	26	#6	12'-6"	
n1(E)	12	#6	6'-8"	
p(E)	12	#7	45'-7"	
p1(E)	12	#7	17'-6"	
s(E)	68	#4	18'-5"	
s1(E)	32	#4	9'-5"	
u(E)	4	#6	14'-5"	
u1(E)	4	#6	12'-7"	
u2(E)	2	#4	9'-8"	
u3(E)	2	#4	10'-7"	
v(E)	42	#5	3'-9"	
v1(E)	42	#4	3'-4"	
v2(E)	32	#6	8'-10"	
v3(E)	6	#6	8'-2"	
v4(E)	26	#6	8'-10"	
v5(E)	84	#5	7'-3"	
Structure Excavation		Cu. Yd.	186	
Concrete Structures		Cu. Yd.	70.4	
Reinforcement Bars, Epoxy Coated		Pound	6,710	
Furnishing - Piles, HP14x73		Foot	310	
Driving Piles		Foot	310	
Test Pile, HP14x73		Each	1	
Pile Shoe		Each	4	
Concrete Encasement		Cu. Yd.	6.0	
Concrete Sealer		Sq. Ft.	640	



**SEISMIC PILE DETAILS**  
Cost of 3/4" Studs shall be included in item "Furnishing Steel Piles, HP14x73."

**NOTES**

Top of backwall shall conform to longitudinal grade and cross slope of roadway.  
Pour steps monolithically with cap.  
Space reinforcement in cap to miss anchor bolts.  
Concrete Sealer should be applied to the designated areas of the abutment shown on sheet 25 of 35.  
All edges shall have a standard 3/4" chamfer except as noted.  
For details of Bar Splicers, see sheet 29 of 35.  
For details of piles and Concrete Encasement, see sheet 30 of 35.



**PILE DATA**

Type: HP14x73  
Nominal Required Bearing: 285 kips  
Factored Resistance Available: 157 kips  
Est. Length: 31 ft.  
No. Production Piles: 10  
No. Test Piles: 1

Note: Bend bottom p1(E) as required to clr. abut. pile.

19-OCT-2011 P:\C\26103\700cadd\T09sitr\039-0074978049-East Abutment.dgn 15:47



USER NAME =	DESIGNED - B. ERSCHEN	REVISED -
PLOT DATE = 19-OCT-2011	CHECKED - M. CRONIN	REVISED -
	DRAWN - C. SALLADE	REVISED -
	CHECKED - F. CAMBA	REVISED -

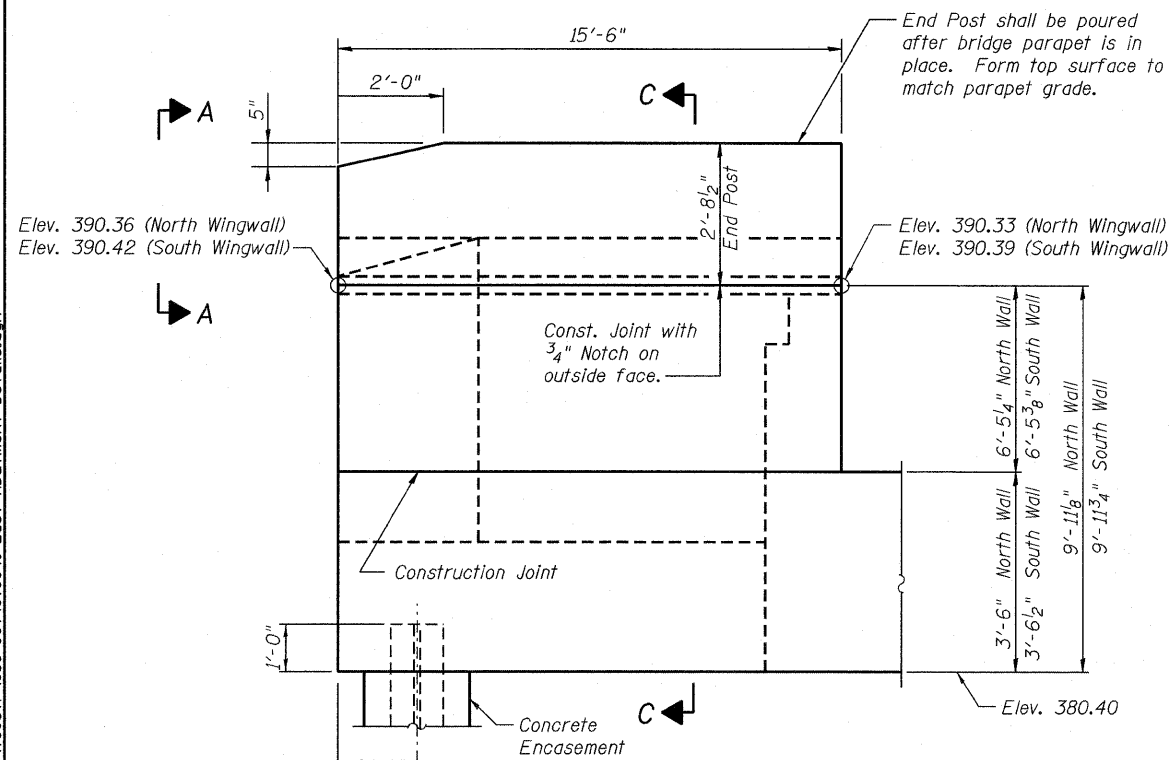
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EAST ABUTMENT  
STRUCTURE NO. 039-0074

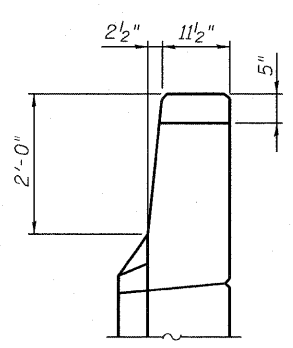
SHEET NO. 24 OF 35 SHEETS

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 103	SHEET NO. 114
			CONTRACT NO. 78049	
ILLINOIS FED. AID PROJECT				

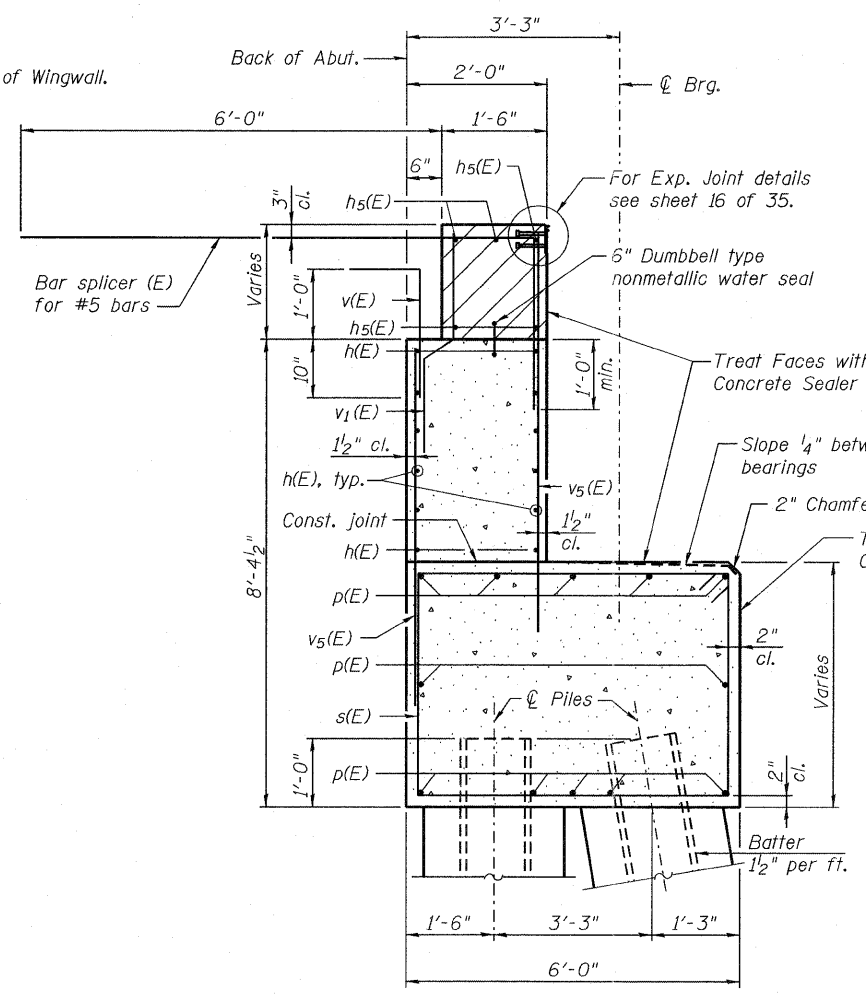
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19-OCT-2011 15:47



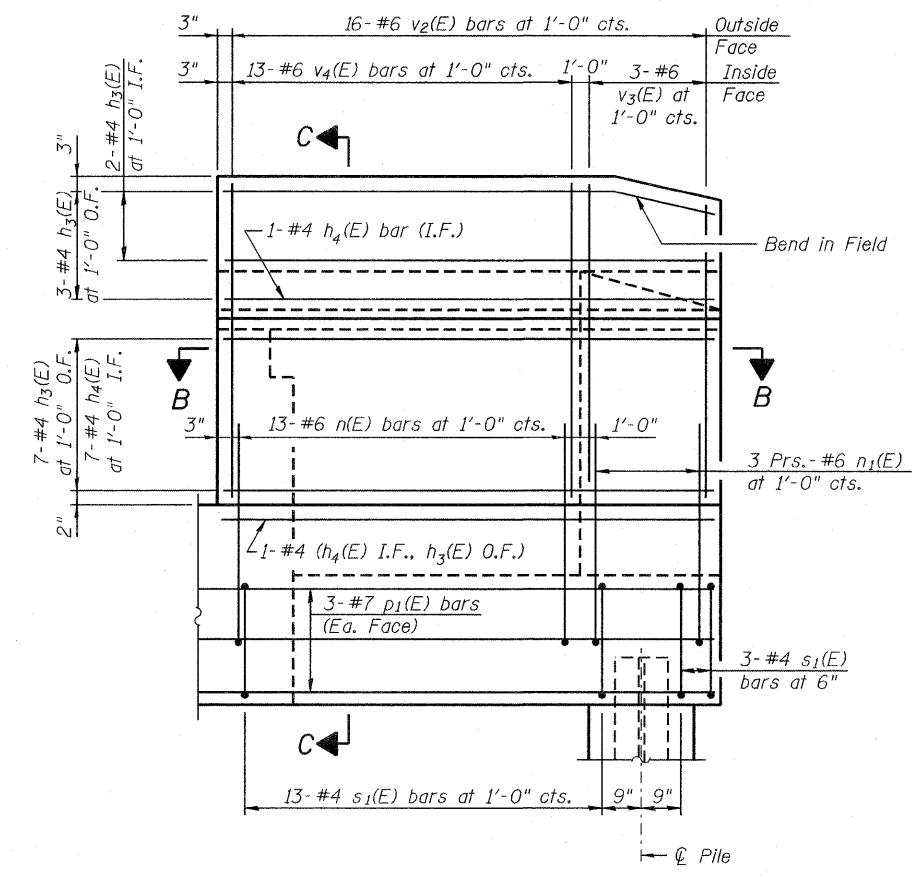
**WINGWALL ELEVATION**  
Showing Dimensions  
Note: Elevations shown are at outside face of Wingwall.



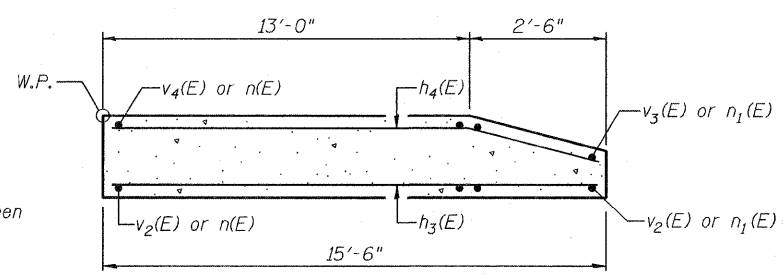
**VIEW A-A**



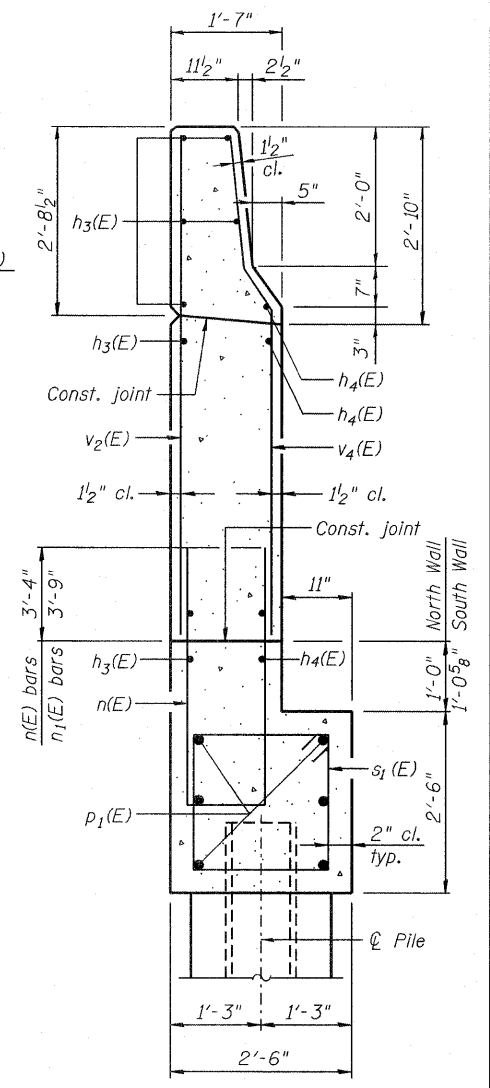
**SECTION THRU ABUTMENT**



**WINGWALL ELEVATION**  
Showing Reinforcement



**SECTION B-B**



**SECTION C-C**

**NOTES**

Hatched area to be poured after superstructure false work has been removed. Quantity of concrete included with Concrete Superstructure. Pour steps monolithically with cap. Quantity of concrete in end post included with Concrete Superstructure on sheet 11 of 35. For Concrete Encasement details, see sheet 30 of 35.



USER NAME =	DESIGNED - B. ERSCHEN	REVISED -
PLOT DATE = 19-OCT-2011	CHECKED - M. CRONIN	REVISED -
	DRAWN - C. SALLADE	REVISED -
	CHECKED - F. CAMBA	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

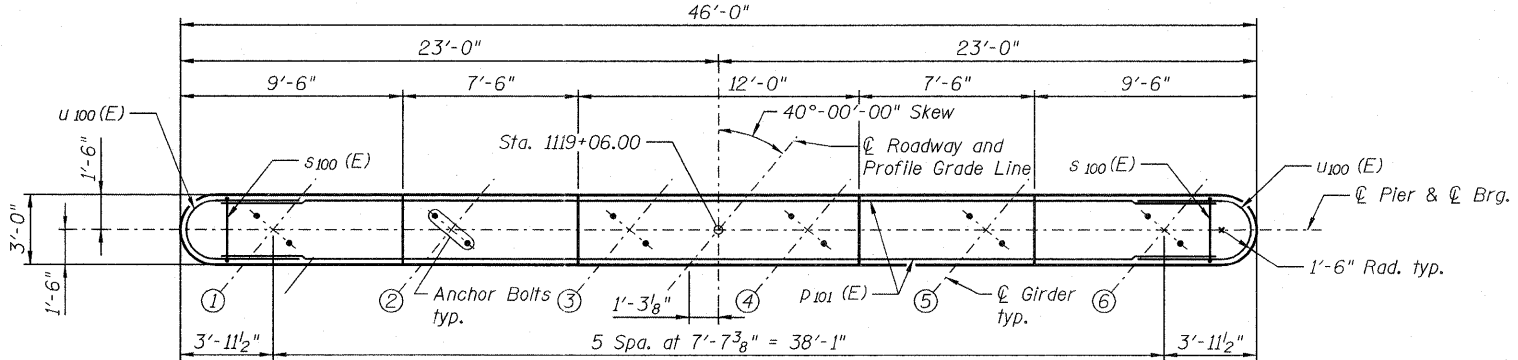
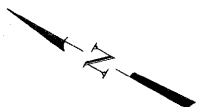
EAST ABUTMENT DETAILS  
STRUCTURE NO. 039-0074

SHEET NO. 25 OF 35 SHEETS

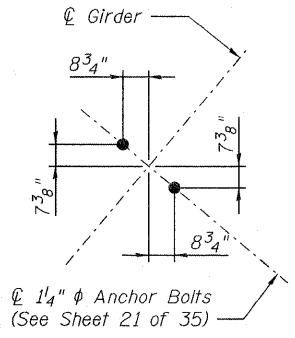
F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 104	SHEET NO. 114
CONTRACT NO. 78049			ILLINOIS FED. AID PROJECT	



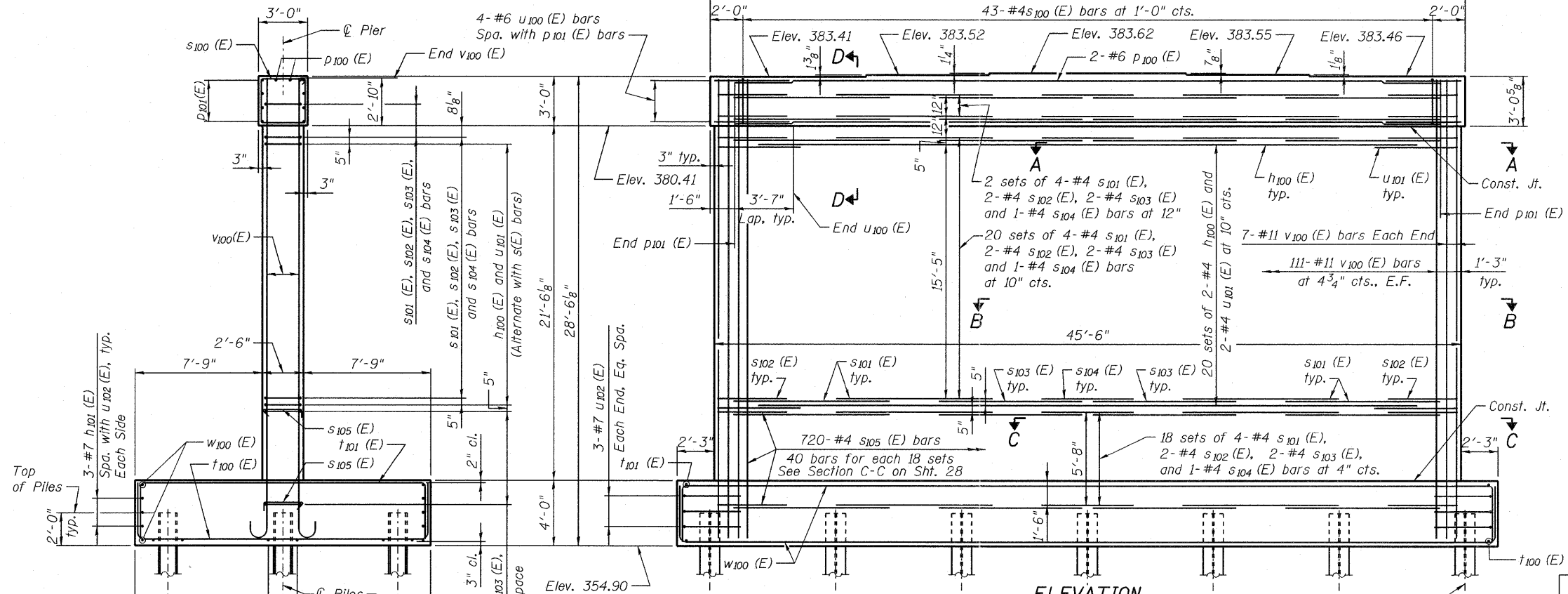
19-OCT-2011 P:\C\26703\700cead\T09str\_039-0074978049-Pier1.dgn 15:47



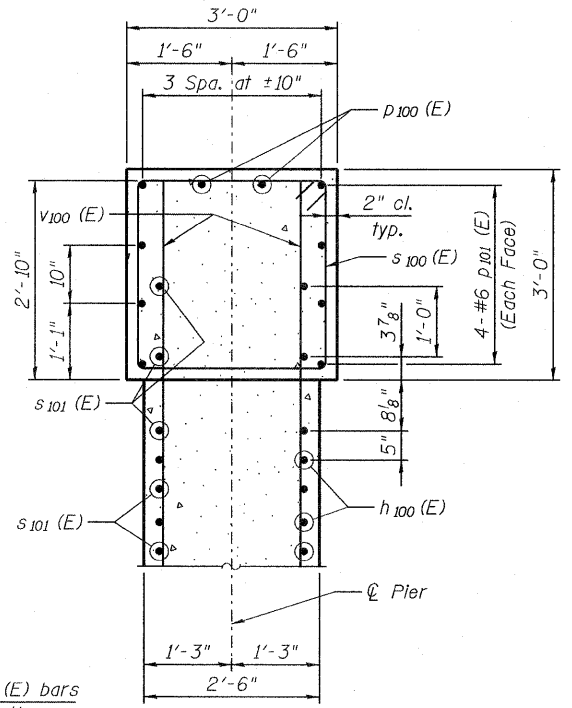
**TOP PLAN**



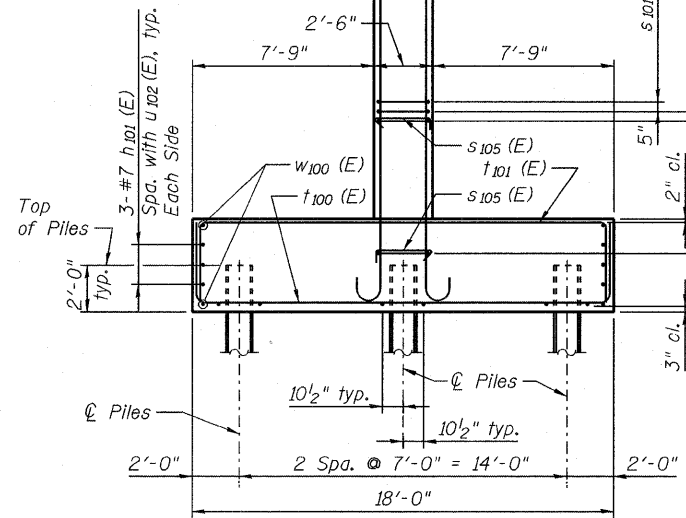
**ANCHOR BOLT LAYOUT**



**ELEVATION**  
(Looking Ahead Station)



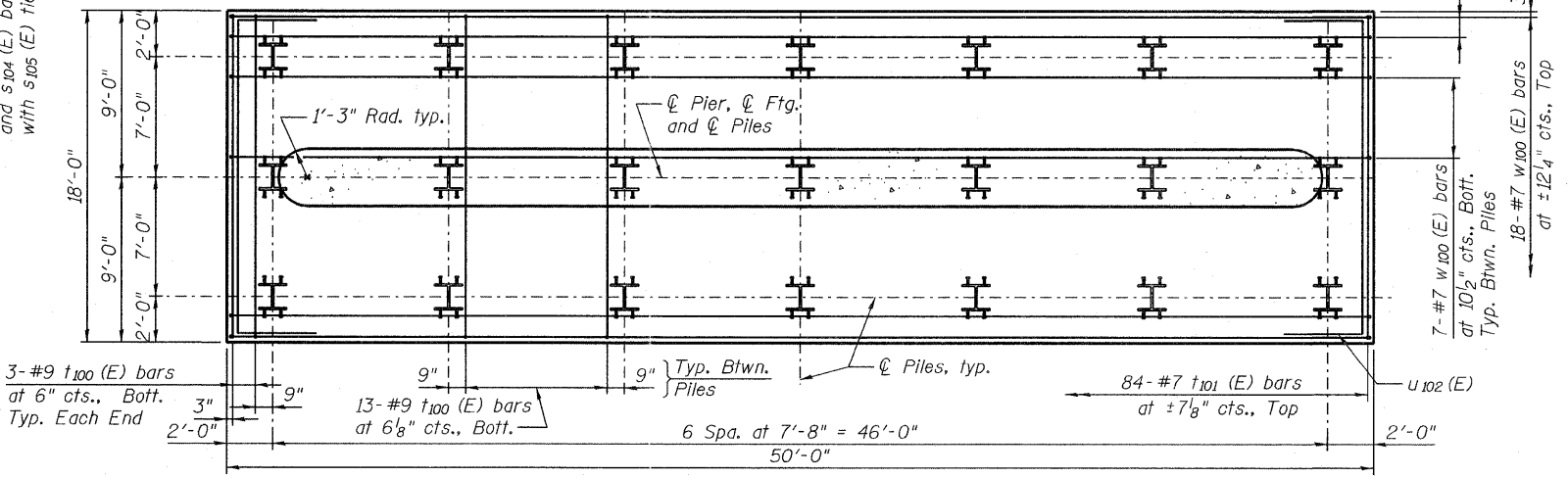
**SECTION D-D**



**END VIEW**

**PILE DATA**

Type: Steel HP14x73  
 Nominal Required Bearing: 509 kips  
 Factored Resistance Available: 280 kips  
 Est. Length: 49 ft  
 No. Production Piles: 20  
 No. Test Piles: 1



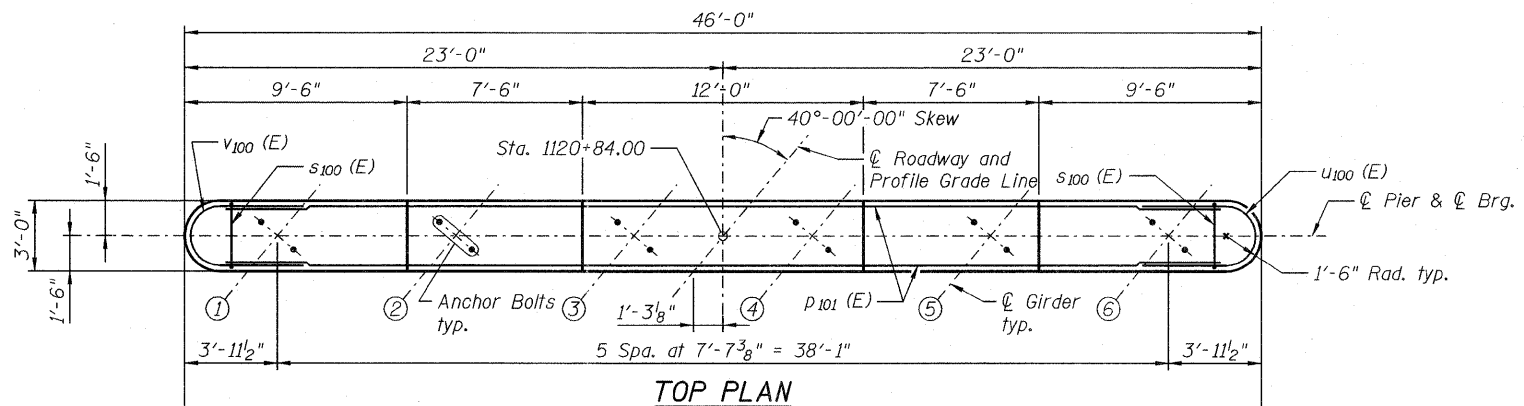
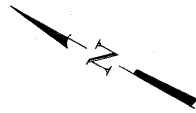
**FOOTING PLAN**

**NOTES**

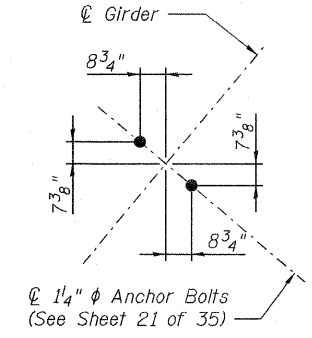
All edges shall have 3/4" chamfer.  
 Pour steps monolithically with cap.  
 Place reinforcement in cap to miss anchor bolts.  
 For details of bearings, see Sheet 21 of 35.  
 For details of piles, see Sheet 30 of 35.

<b>JACOBS</b> FILE NAME=039-0074978049-Pier1.dgn	USER NAME = _____ PLOT DATE = 19-OCT-2011	DESIGNED - B. ERSCHEN CHECKED - N. KHATRI DRAWN - C. SALLADE CHECKED - J. SMITH	REVISED - _____ REVISED - _____ REVISED - _____ REVISED - _____	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>PIER 1 PLAN AND ELEVATION</b> <b>STRUCTURE NO. 039-0074</b> SHEET NO. 26 OF 35 SHEETS	F.A.P. RTE. = 686 SECTION = 114B-1	COUNTY = JACKSON CONTRACT NO. 78049	TOTAL SHEETS = 105 SHEET NO. = 114
						ILLINOIS FED. AID PROJECT		

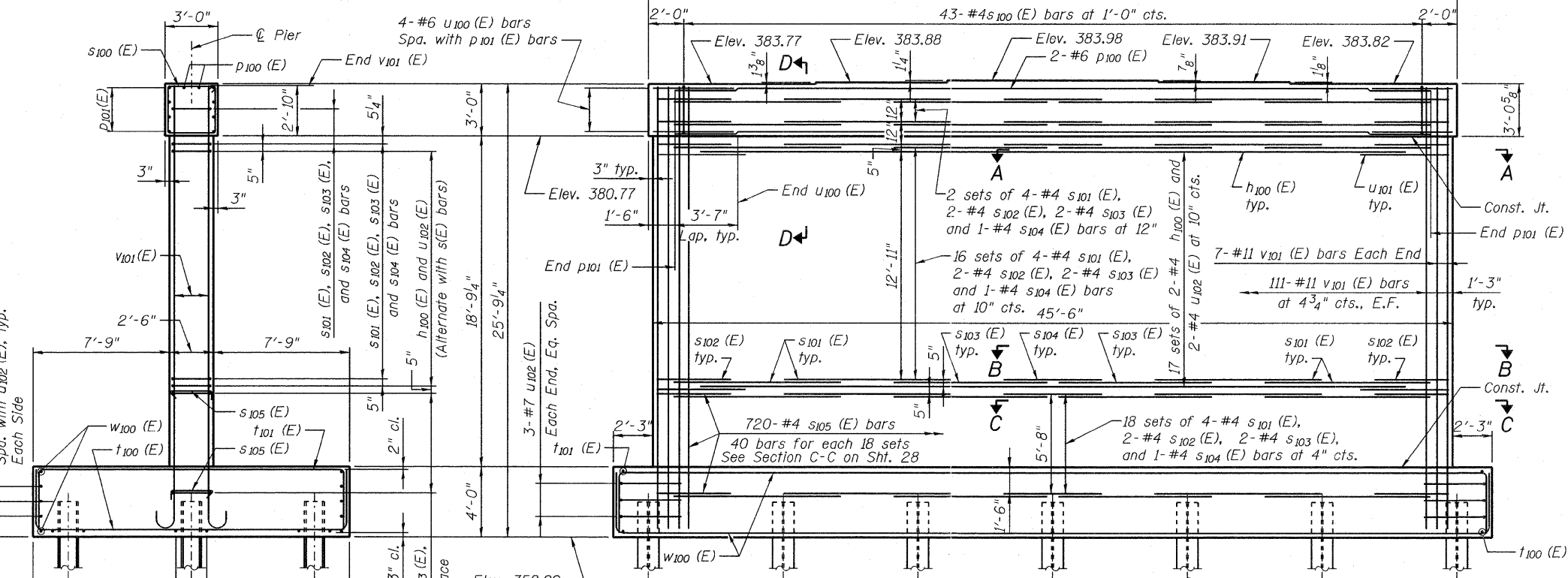
19-OCT-2011 P:\C\26703\700cadd\T09str\_039-0074978049-Pier2.dgn  
 15:47



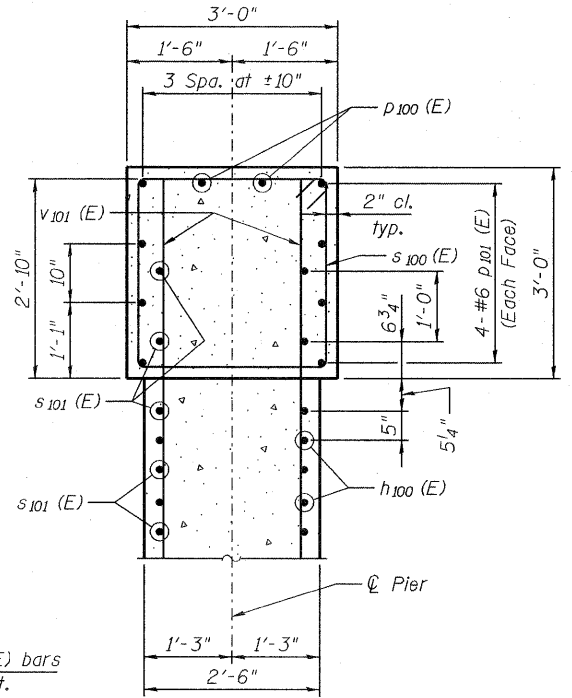
**TOP PLAN**



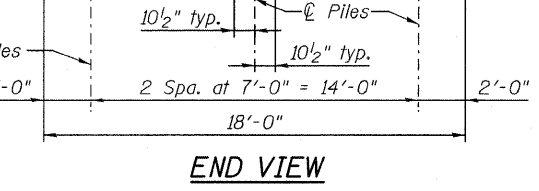
**ANCHOR BOLT LAYOUT**



**ELEVATION**  
(Looking Ahead Station)

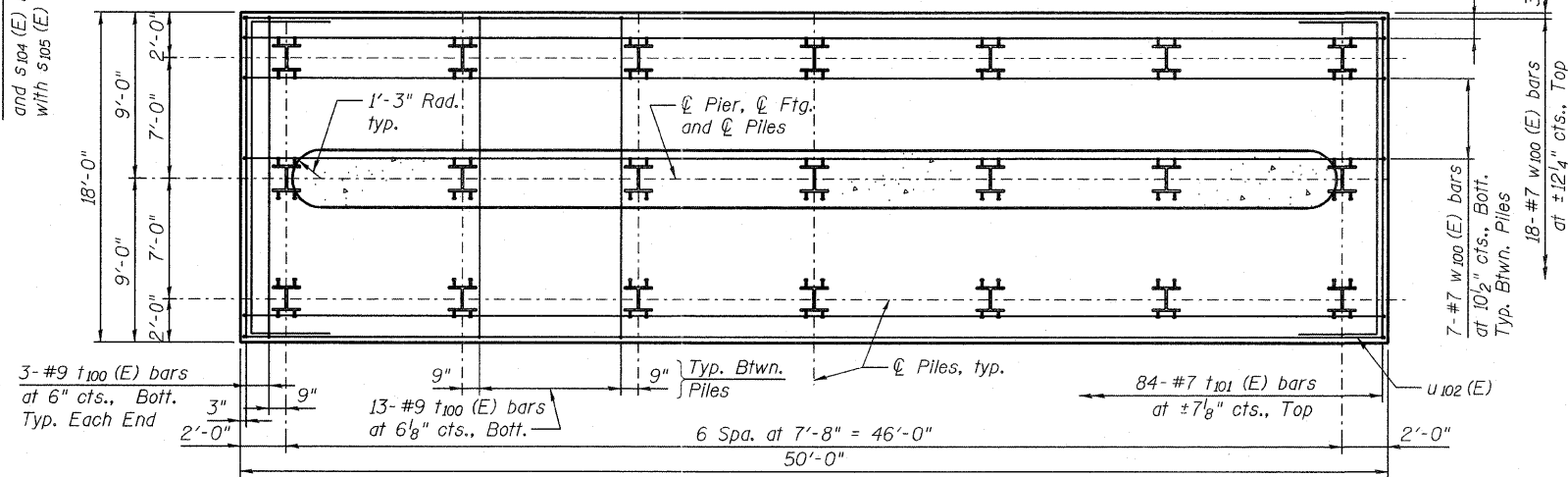


**SECTION D-D**



**END VIEW**

**PILE DATA**  
 Type: Steel HP14x73  
 Nominal Required Bearing: 500 kips  
 Factored Resistance Available: 275 kips  
 Est. Length: 45 ft  
 No. Production Piles: 20  
 No. Test Piles: 1



**FOOTING PLAN**

**NOTES**  
 All edges shall have 3/4" chamfer.  
 Pour steps monolithically with cap.  
 Place reinforcement in cap to miss anchor bolts.  
 For details of bearings, see Sheet 21 of 35.  
 For details of piles, see Sheet 30 of 35.



USER NAME =	DESIGNED - B. ERSCHEN	REVISED -
PLOT DATE = 19-OCT-2011	CHECKED - N. KHATRI	REVISED -
	DRAWN - C. SALLADE	REVISED -
	CHECKED - J. SMITH	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

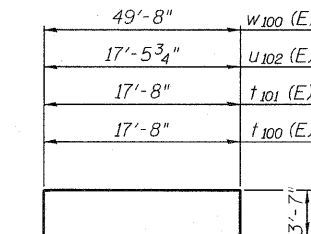
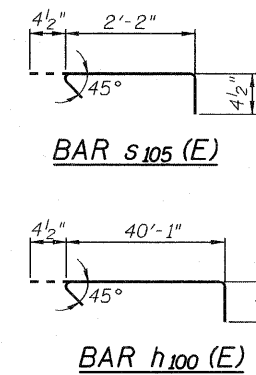
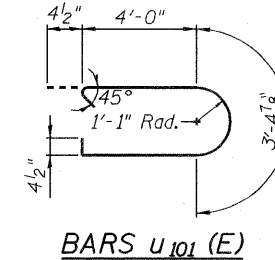
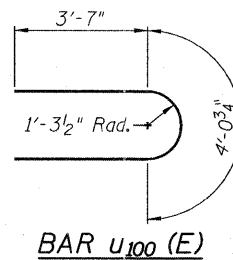
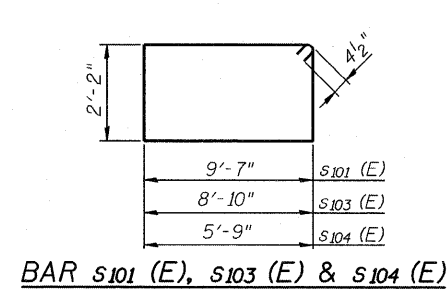
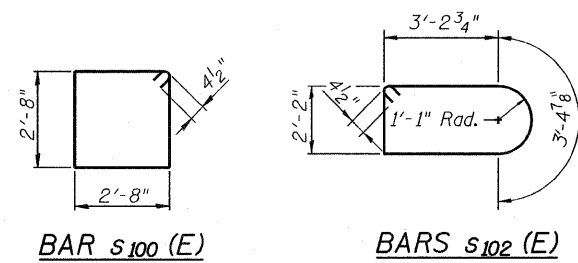
**PIER 2 PLAN AND ELEVATION**  
**STRUCTURE NO. 039-0074**

F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 106	SHEET NO. 114
CONTRACT NO. 78049			ILLINOIS FED. AID PROJECT	

SHEET NO. 27 OF 35 SHEETS

FILE NAME=039-0074978049-Pier2.dgn

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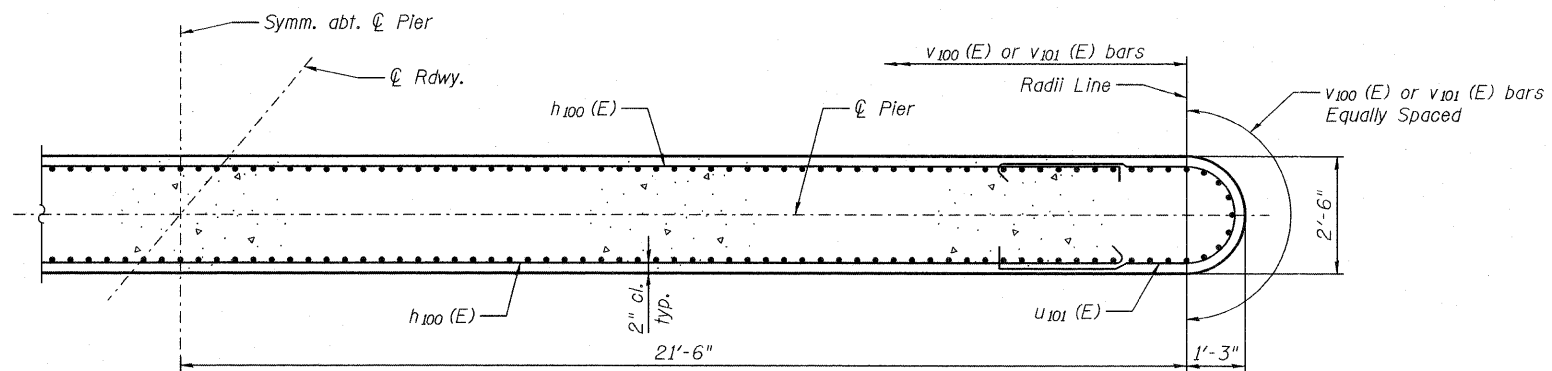


**PIER 1  
BILL OF MATERIAL**

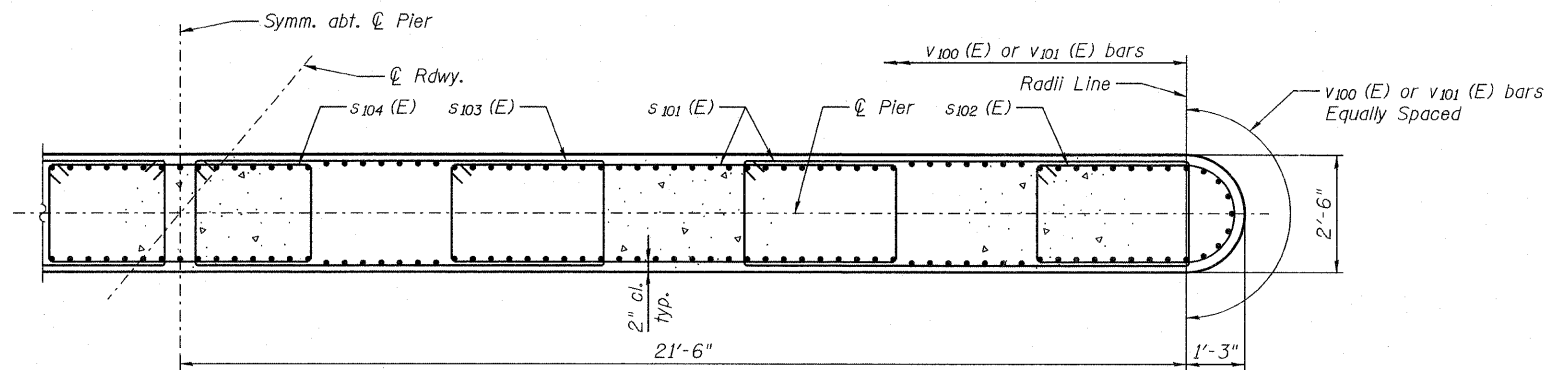
Bar	No.	Size	Length	Shape
h <sub>100</sub> (E)	40	#4	40'-10"	—
h <sub>101</sub> (E)	6	#7	49'-5"	—
p <sub>100</sub> (E)	2	#6	47'-0"	⌋
p <sub>101</sub> (E)	8	#6	43'-0"	⌋
s <sub>100</sub> (E)	43	#4	11'-5"	□
s <sub>101</sub> (E)	160	#4	24'-3"	□
s <sub>102</sub> (E)	80	#4	12'-10"	□
s <sub>103</sub> (E)	80	#4	22'-9"	□
s <sub>104</sub> (E)	40	#4	16'-7"	□
s <sub>105</sub> (E)	720	#4	2'-11"	⌋
t <sub>100</sub> (E)	84	#9	24'-10"	⌋
t <sub>101</sub> (E)	84	#7	24'-10"	⌋
u <sub>100</sub> (E)	8	#6	11'-3"	⌋
u <sub>101</sub> (E)	40	#4	12'-2"	⌋
u <sub>102</sub> (E)	6	#7	24'-8"	⌋
v <sub>100</sub> (E)	236	#11	29'-5"	⌋
w <sub>100</sub> (E)	36	#7	57'-0"	⌋
Concrete Structures		Cu. Yd.	238.8	
Reinforcement Bars, Epoxy Coated		Pound	62,220	
Furnishing - Piles, HP14x73		Foot	980	
Driving Piles		Foot	980	
Test Pile, HP14x73		Each	1	
Pile Shoes		Each	21	

**PIER 2  
BILL OF MATERIAL**

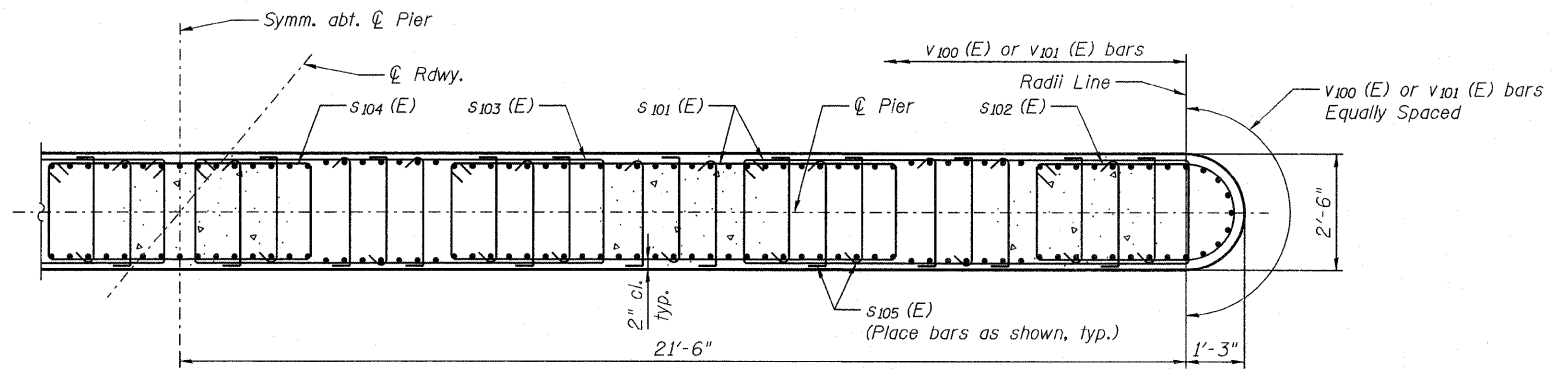
Bar	No.	Size	Length	Shape
h <sub>100</sub> (E)	34	#4	40'-10"	—
h <sub>101</sub> (E)	6	#7	49'-5"	—
p <sub>100</sub> (E)	2	#6	47'-0"	⌋
p <sub>101</sub> (E)	8	#6	43'-0"	⌋
s <sub>100</sub> (E)	43	#4	11'-5"	□
s <sub>101</sub> (E)	144	#4	24'-3"	□
s <sub>102</sub> (E)	72	#4	12'-10"	□
s <sub>103</sub> (E)	72	#4	22'-9"	□
s <sub>104</sub> (E)	36	#4	16'-7"	□
s <sub>105</sub> (E)	720	#4	2'-11"	⌋
t <sub>100</sub> (E)	84	#9	24'-10"	⌋
t <sub>101</sub> (E)	84	#7	24'-10"	⌋
u <sub>100</sub> (E)	8	#6	11'-3"	⌋
u <sub>101</sub> (E)	34	#4	12'-2"	⌋
u <sub>102</sub> (E)	6	#7	24'-8"	⌋
v <sub>101</sub> (E)	236	#11	26'-8"	⌋
w <sub>100</sub> (E)	36	#7	57'-0"	⌋
Concrete Structures		Cu. Yd.	227.3	
Reinforcement Bars, Epoxy Coated		Pound	58,070	
Furnishing - Piles, HP14x73		Foot	900	
Driving Piles		Foot	900	
Test Pile, HP14x73		Each	1	
Pile Shoes		Each	21	



**SECTION A-A**

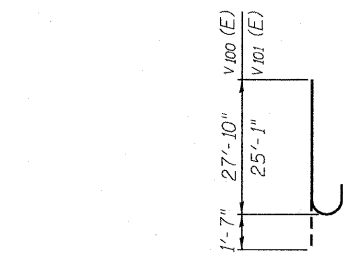


**SECTION B-B**

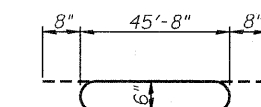


**SECTION C-C**

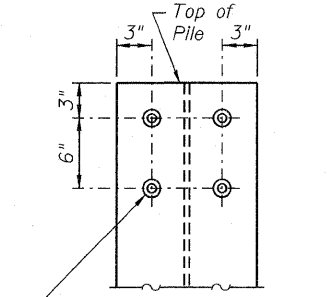
Note: Place 90° leg of s<sub>105</sub> (E) bar on opposite side of pier every other layer.



**BAR v<sub>100</sub> (E) & v<sub>101</sub> (E)**



**BAR p<sub>100</sub> (E)**

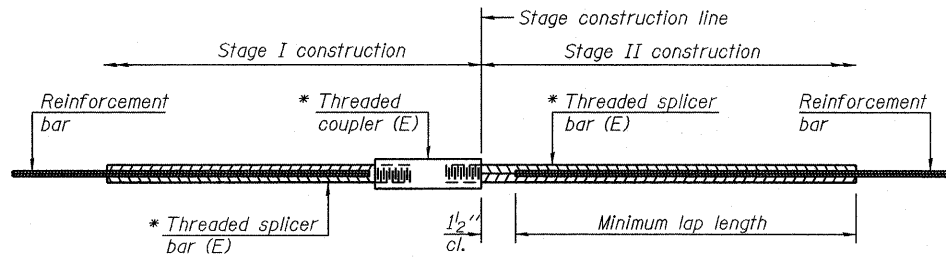


4-3/4" x 4" Granular or solid flux filled headed studs automatically end welded (Typ. each flange, each pile)

**SEISMIC PILE DETAIL**

Cost of 3/4" φ studs shall be included in item "Furnishing Steel Piles, HP14x73".

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**STANDARD BAR SPLICER ASSEMBLY**

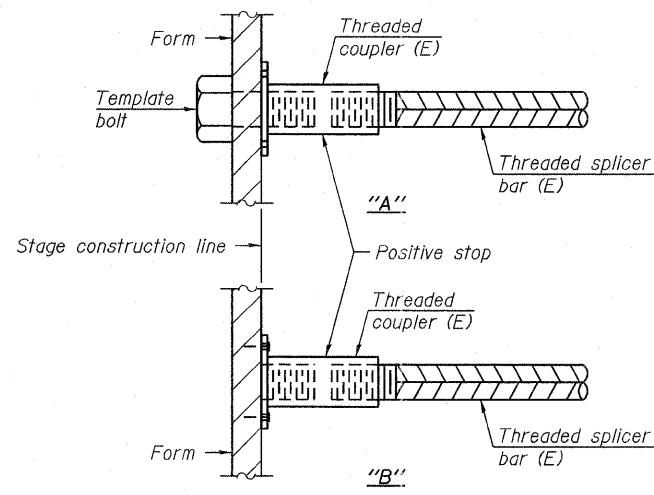
Minimum Lap Lengths					
Bar size to be spliced	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- 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 + 1/2" + thread length

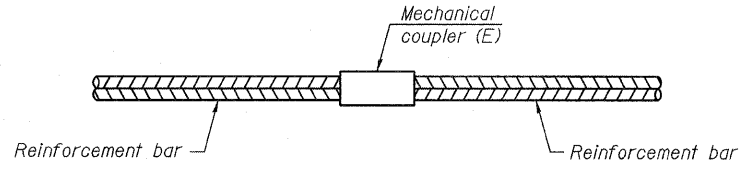
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



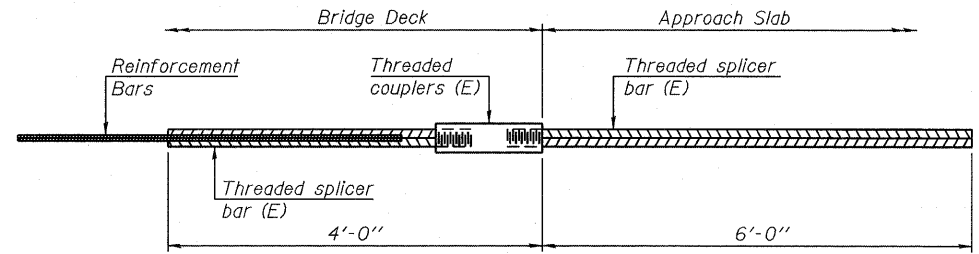
**INSTALLATION AND SETTING METHODS**

"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.



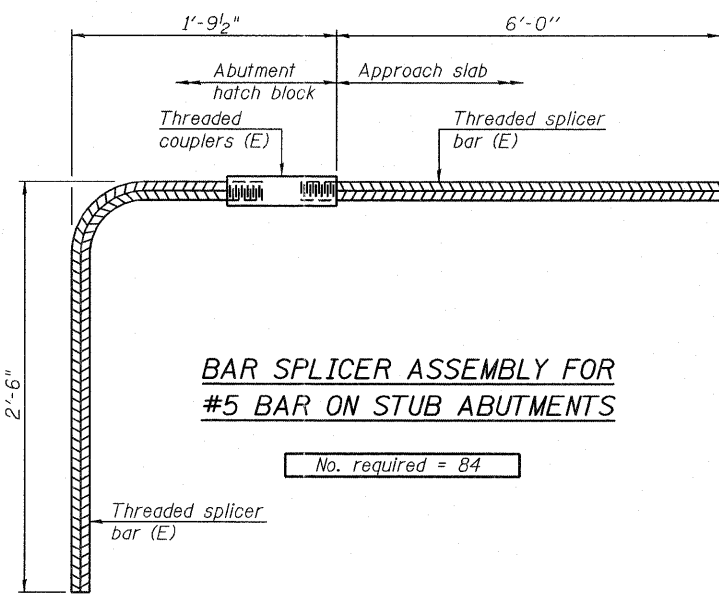
**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



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

No. required =



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

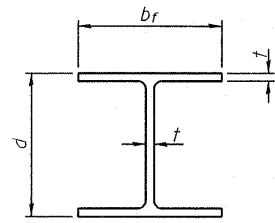
No. required = 84

**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 approved list of bar splicer assemblies and mechanical splicers for alternatives.

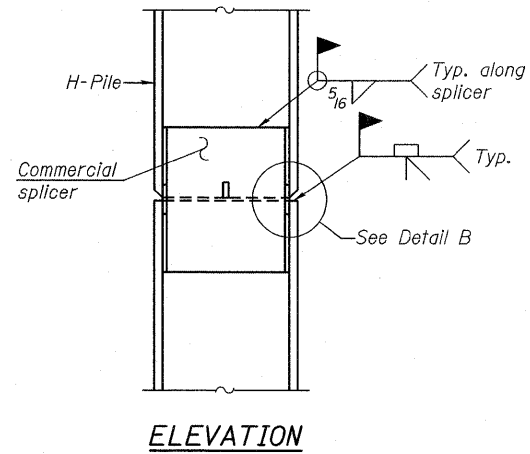
BSD-1

7-1-10

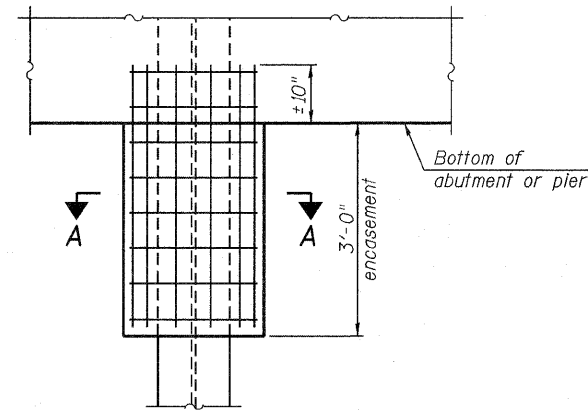


**STEEL PILE TABLE**

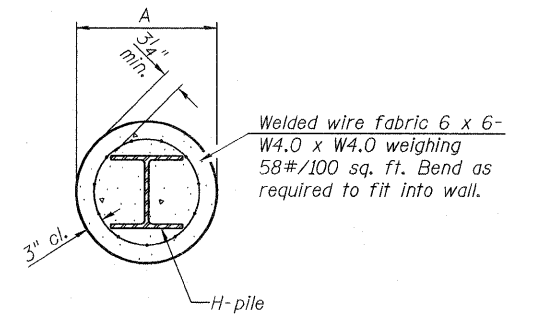
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/2"	1/2"	24"
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**



**ELEVATION**

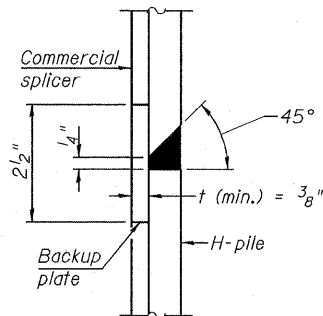


**SECTION A-A**

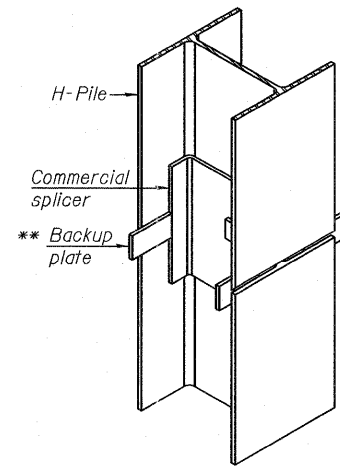
**PILE ENCASEMENT**

Pile Encasement required at West and East Abutments (22 Req'd.)

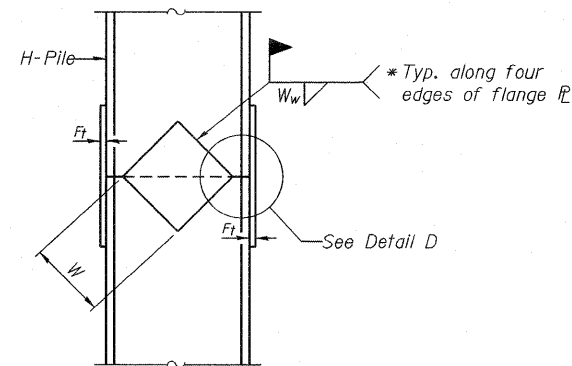
Note:  
Forms for encasement may be omitted when soil conditions permit.



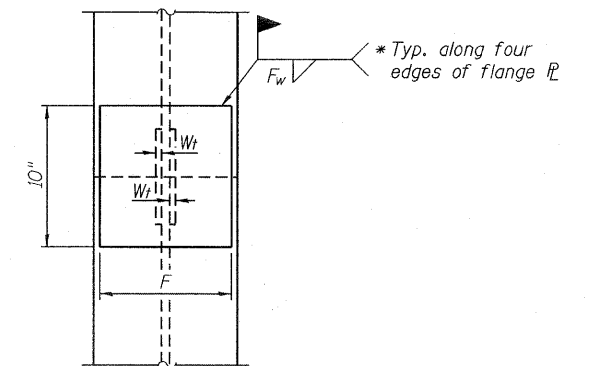
**DETAIL "B"**



**ISOMETRIC VIEW**



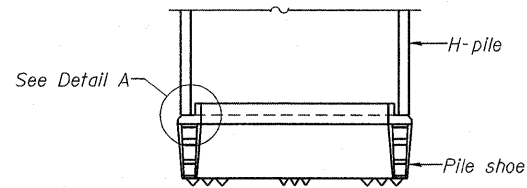
**ELEVATION**



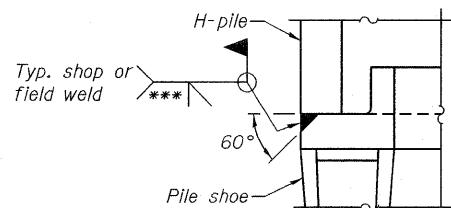
**END VIEW**

**WELDED COMMERCIAL SPLICE**

**WELDED PLATE FIELD SPLICE**



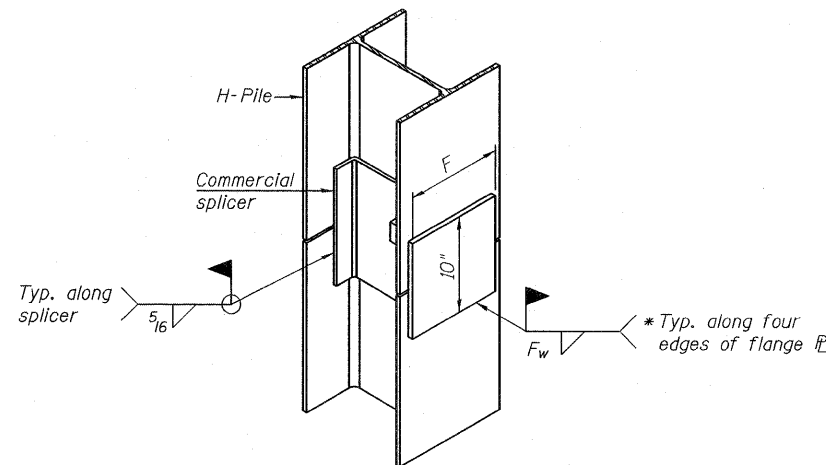
**ELEVATION**



**DETAIL A**

**H-PILE SHOE ATTACHMENT**

H-Pile Shoe Attachment required at Pier 1, Pier 2 and Battered Piles on East Abutment. (46 Req'd.)

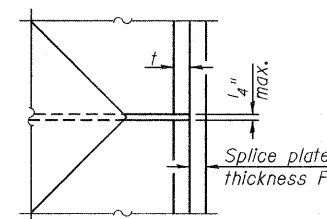


**ISOMETRIC VIEW**

**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.).

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



**DETAIL D**

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 1/2"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 1/2"	1/2"
x89	12 1/2"	3/4"	1/2"	7 3/4"	5 1/2"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 1/2"	1/2"
HP 12x84	10"	7/8"	1/2"	6 1/2"	5 1/2"	1/2"
x74	10"	7/8"	1/2"	6 1/2"	5 1/2"	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"

F-HP 7-1-10

<b>JACOBS</b>	USER NAME =	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	HP PILE DETAILS STRUCTURE NO. 039-0074	F.A.P. RTE. 686	SECTION 114B-1	COUNTY JACKSON	TOTAL SHEETS 109	SHEET NO. 114
	PLOT DATE = 19-OCT-2011	DRAWN - C. SALLADE	REVISED -			CONTRACT NO. 78049		ILLINOIS FED. AID PROJECT		
FILE NAME = 039-0074978049-Pile Details.dgn	CHECKED - B. ERSCHEN	REVISED -		SHEET NO. 30 OF 35 SHEETS						



19-OCT-2011 15:48 P:\C\26703\700cadd\709sitr\039-0074978049-BorIng\_Log2.dgn

ILLINOIS DEPARTMENT OF TRANSPORTATION District Nine Materials										Bridge Foundation Boring Log							
FA Rte 686 (IL 4) Over Beaucaup Creek					Structure Number: 039-0042					Date: 9/29/2008							
Route: A Rte 686 (IL 4)					Section: 115B, 115B-BR					Bored By: Rich Moberly							
Location: 0.5 mi West of IL Rte 13/127					Checked By: Rob Graeff					County: Jackson							
D E P T H		B L O W S		Qu tsf	W%	Surf Wat Elev: 356.4		D E P T H		B L O W S	Qu tsf	W%					
D E P T H		B L O W S		Qu tsf	W%	Ground Water Elevation when Drilling 349.4		D E P T H		B L O W S	Qu tsf	W%					
D E P T H		B L O W S		Qu tsf	W%	At Completion		D E P T H		B L O W S	Qu tsf	W%					
D E P T H		B L O W S		Qu tsf	W%	At: 72 Hrs: 364.8		D E P T H		B L O W S	Qu tsf	W%					
Very stiff, moist, brown, Silty Loam to Silty Clay Loam A-4						Very stiff, moist, grey mottled brown, Clay A7-6						356.4					
1						4						2.1B 18					
5						6											
362.4						339.9											
Medium to stiff, very moist, brown Silty Clay Loam A-4						Very stiff, moist, grey, Clay A7-6						339.9					
5.0						1						4					
3						2.1S 32						2.1B 18					
3						1.0B 24						5					
357.4						332.4											
Soft, very moist, brown mottled grey, Silty Clay A-6						Stiff, moist, grey, Clay A7-6						332.4					
10.0						1						35.0					
1						0.3B 33						4					
1						1.6B 19						6					
354.9						329.9											
Very soft, wet, brown mottled grey, Silty Clay A-6						Very stiff, moist, grey, Silty Clay A-6						329.9					
WH						1						4					
WH						0.1B 32						2.1B 18					
WH						6											
352.4						327.4											
Medium to soft, very moist, brown mottled grey, Silty Clay A-6						Stiff, moist, grey, Clay A7-6						327.4					
15.0						WH						40.0					
WH						0.5B 29						3					
WH						1.6B 19						4					
349.9						322.4											
Very soft, wet, grey mottled brown, Silty Clay A-6						Hard, moist, grey, Clay A7-6						322.4					
WH						45.0						1					
WH						0.2B 31						5					
WH						4.1B 17						10					
347.4						316.9											
Medium, very moist, grey mottled brown, Clay A7-6						Very stiff, moist, grey mottled brown, Clay A7-6						316.9					
20.0						WH						50.0					
2						0.9B 22						1					
2						2.1B 17											
344.9						316.9											
25.0						1											

N-Std Penetr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

ILLINOIS DEPARTMENT OF TRANSPORTATION District Nine Materials										Bridge Foundation Boring Log							
Route: A Rte 686 (IL 4)					Structure Number: 039-0042					Date: 9/29/2008							
Section: 115B, 115B-BR					Bored By: Rich Moberly					Checked By: Rob Graeff							
Location: 0.5 mi West of IL Rte 13/127					Checked By: Rob Graeff					County: Jackson							
D E P T H		B L O W S		Qu tsf	W%	Surf Wat Elev: 356.4		D E P T H		B L O W S	Qu tsf	W%					
D E P T H		B L O W S		Qu tsf	W%	Ground Water Elevation when Drilling 349.4		D E P T H		B L O W S	Qu tsf	W%					
D E P T H		B L O W S		Qu tsf	W%	At Completion		D E P T H		B L O W S	Qu tsf	W%					
D E P T H		B L O W S		Qu tsf	W%	At: 72 Hrs: 364.8		D E P T H		B L O W S	Qu tsf	W%					
Medium, very moist, grey, fine Sand with Clay layers						Hard, damp, grey, Clay Shale						356.4					
5						19											
10																	
70% Sand																	
16% Silt																	
14% Clay																	
362.4						286.9											
Washed 3'						80.0						100/2"					
55.0						4						79.7					
7												Free water observed at 17.5 feet					
9												Elevation referenced to BM @ NE wingwall = 384.3 feet					
307.4						307.4						To convert "N" values to "N60" values multiply by 1.25					
Washed 1'						85.0											
60.0						4											
4						6											
6						23											
10																	
307.4						307.4											
Washed 1'						90.0											
65.0						3											
4																	
10																	
286.9						286.9											
70.0						12						95.0					
100/8"																	
75.0						100/2"						100.0					

N-Std Penetr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

BORING 2-S







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ILLINOIS DEPARTMENT OF TRANSPORTATION District Nine Materials										Bridge Foundation Boring Log									
FA Rte 686 (IL 4) Over Beaucoup Creek					Structure Number: 039-0042					Date: 10/3/2008									
Route A Rte 686 (IL					Section 115B, 115B-BR					Bored By: Rich Moberly									
County: Jackson					Location: 0.5 mi West of IL Rte 13/127					Checked By: Rob Graeff									
Boring No 5-S (2008)										Surf Wat Elev: 355.1		DEPT		BLOS		Qu		W%	
Station 1122+15										Ground Water Elevation when Drilling 363.5		DEPT		BLOS		Qu		W%	
Offset 32' Lt CL										At Completion		DEPT		BLOS		Qu		W%	
Ground Surface 383.5 Ft										At:		DEPT		BLOS		Qu		W%	
Hard, damp, brown and grey, Silty Clay A-6										Medium to stiff, very moist, brown, Silty Clay Loam A-6									
										3									
These break lines are correct.										1									
The rig is elevated; 1st sample is 1.5 to 3.0										3 1.1B 18									
379.5										354.5									
Very stiff, moist, grey and brown, Silty Clay to Clay A7-6										Very stiff, moist, brown, Clay to Silty Clay A7-6									
										1									
377.0										30.0 4 2.1B 17									
Medium, very moist, grey, Clay A7-6																			
										2									
374.5										5 2.3B 16									
Very stiff, moist, grey, Clay A7-6																			
										1									
369.5										35.0 5 2.3B 17									
Stiff, moist, grey mottled brown, Clay A7-6																			
										2									
369.5										6 2.7B 16									
Very stiff, damp to moist, brown, Clay A7-6																			
										1									
364.0										40.0 5 3.1B 16									
Soft, very moist, brown mottled grey, Silty Loam A-4																			
										2									
359.5										45.0 8 3.1B 16									
Medium to stiff, very moist, brown, Silty Clay Loam A-6																			
										2									
										8 3.3B 17									

N-Std Penetr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

ILLINOIS DEPARTMENT OF TRANSPORTATION District Nine Materials										Bridge Foundation Boring Log									
Route A Rte 686 (IL 4)					Structure Number: 039-0042					Date: 10/3/2008									
Section 115B, 115B-BR					Section 115B, 115B-BR					Bored By: Rich Moberly									
County: Jackson					Location: 0.5 mi West of IL Rte 13/127					Checked By: Rob Graeff									
Boring No 5-S (2008)										Surf Wat Elev: 355.1		DEPT		BLOS		Qu		W%	
Station 1122+15										Ground Water Elevation when Drilling 363.5		DEPT		BLOS		Qu		W%	
Offset 32' Lt CL										At Completion		DEPT		BLOS		Qu		W%	
Ground Surface 383.5 Ft										At:		DEPT		BLOS		Qu		W%	
Very stiff, damp to moist, brown, Clay A7-6										Medium, moist, grey, fine Sand with Clay layers									
										10									
										14									
										80% Sand									
										16% Silt									
										4% Clay									
304.5										Washed 1'									
Very dense, moist, grey, fine Sand																			
										14									
304.5										80.0 30 23									
Stiff, moist, grey, Clay A7-6																			
										2									
324.5										55.0 7 2.5B 22									
3' blow-in																			
										2									
319.5										60.0 5 1.6B 19									
Loose, wet, grey, fine Silty Sand																			
										WH									
										4									
317.5										294.5									
Very dense, moist, grey, Silty Sand with some Gravel																			
										4									
										9									
										14									
										290.5									
Hard, damp, grey, weathered Clay Shale																			
										289.5									
Hard, dry, grey, Clay Shale																			
										100/3"									
Bottom of hole 94.3 feet																			
										95.0									
Free water observed at 20.0 ft																			
										Elevation referenced to BM @ NE wingwall = 384.3 feet									
309.5										Washed 3'									
Medium, moist, grey, fine Sand with Clay layers																			
										6									
										75.0 14									
										100.0									

N-Std Penetr Test: 2" OD Sampler, 140# Hammer, 30" Fall (Type Fail. B-Bulge S-Shear E-Estimated P-Penetrometer)

BORING 5-S

<b>JACOBS</b>	USER NAME =	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>BORING LOGS STRUCTURE NO. 039-0074</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT DATE = 19-OCT-2011	DRAWN - C. SALLADE	REVISED -			686	114B-1	JACKSON	114	114
	FILE NAME = 039-0074978049-BorIng_Log5.dgn	CHECKED - E. KRACK	REVISED -			SHEET NO. 35 OF 35 SHEETS		ILLINOIS FED. AID PROJECT		