

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
823	21B-1	Edwards	24	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO.	74213	

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

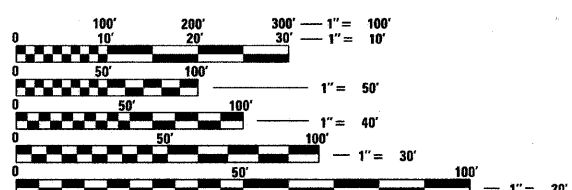
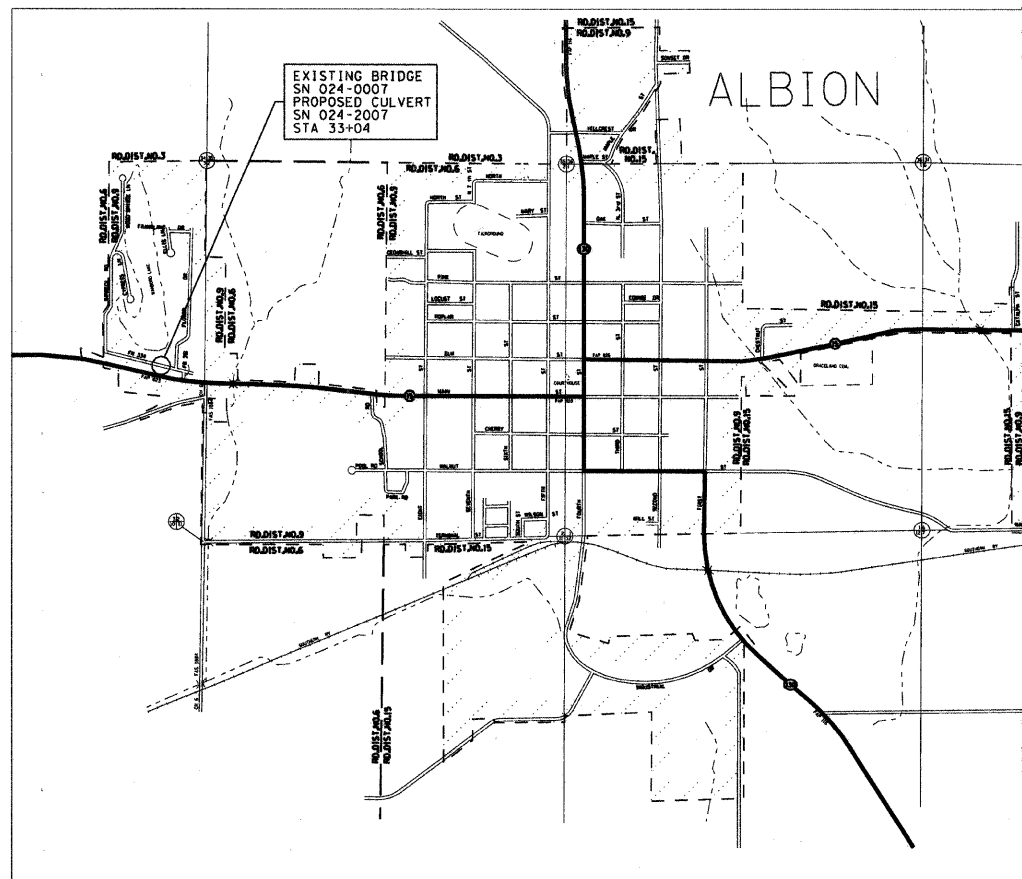
**PROPOSED  
HIGHWAY PLANS**

FAP ROUTE 823 (OLD IL 15)  
SECTION 21B-1  
PROJECT: ACF-0823(011)  
BRIDGE REPLACEMENT WITH BOX CULVERT  
EDWARDS COUNTY

C-97-144-06

FOR INDEX OF SHEETS, SEE SHEET NO. 2

ADT (2007) = 225



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

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

PROJECT ENGINEER: MARK DAUGHERTY  
PROJECT MANAGER: BRIAN J. BIERMAN

CONTRACT NO. 74213

GROSS LENGTH = 507 FT. = 0.10 MILE  
NET LENGTH = 507 FT. = 0.10 MILE

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED March 20 2009

Roger L. Suddell  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 8, 2009  
Charles J. Ingersoll  
ENGINEER OF DESIGN AND ENVIRONMENT

May 8, 2009  
Christine M. Reed  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

GENERAL NOTES

PERIMETER EROSION BARRIER IS FOR PLACEMENT AT THE TOE OF THE PROPOSED FILL SLOPE ALONG THE TOTAL LENGTH OF THE PROJECT. EROSION CONTROL BLANKET IS FOR PLACEMENT ON ALL NEW SLOPE CONSTRUCTION.

THE TOTAL QUANTITY OF PAINT PAVEMENT MARKING-LINE 4 INCH CONSISTS OF 92 FEET OF WHITE AND 30 FEET OF YELLOW.

AGGREGATE FOR AGGREGATE SHOULDERS, TYPE B SHALL BE CRUSHED STONE, CRUSHED CONCRETE OR RAP.

THE REMOVAL OF ALL EARTHWORK, SUB-GRADE AND PAVEMENT WITHIN THE LIMITS OF THE EXISTING BRIDGE STRUCTURE SHALL BE INCLUDED IN THE COST OF THE PAY ITEM REMOVAL OF EXISTING STRUCTURES.

ALL EARTHWORK AND SUB-GRADE REMOVAL NECESSARY TO FACILITATE THE REMOVAL OF THE EXISTING BRIDGE STRUCTURE WHILE MAINTAINING SLOPE STABILITY (1:1 MINIMUM) SHALL BE INCLUDED IN THE COST OF THE PAY ITEM REMOVAL OF EXISTING STRUCTURES. ALL PAVEMENT REMOVAL IN THESE AREAS WILL BE PAID FOR AS PAVEMENT REMOVAL.

THE LOCATIONS AND/OR DEPTHS OF UNDERGROUND UTILITIES SHOWN HAVE BEEN TAKEN FROM INFORMATION FURNISHED BY THE UTILITY OWNERS AND MUST BE CONSIDERED APPROXIMATE. FIELD MARKINGS OF UTILITIES IN CRITICAL AREAS MAY BE OBTAINED BY PROVIDING A MINIMUM OF 96 HOURS ADVANCE NOTICE THROUGH THE J.U.L.I.E. SYSTEM BY CALLING 800-892-0123.

INDEX OF SHEETS

SHEET NO.	TITLE
1	COVER SHEET
2	GENERAL NOTES, INDEX OF SHEETS, LIST OF HIGHWAY STANDARDS
3	SUMMARY OF QUANTITIES
4-5	TYPICAL SECTIONS
6	PLAN SHEET
7	TRAFFIC CONTROL PLAN
8	RIPRAP DETAILS
9-11	BOX CULVERT DETAILS
12	SOIL BORING
13-24	CROSS SECTIONS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED FOLLOWING THE LAST NUMBERED SHEET OF THE PLANS.

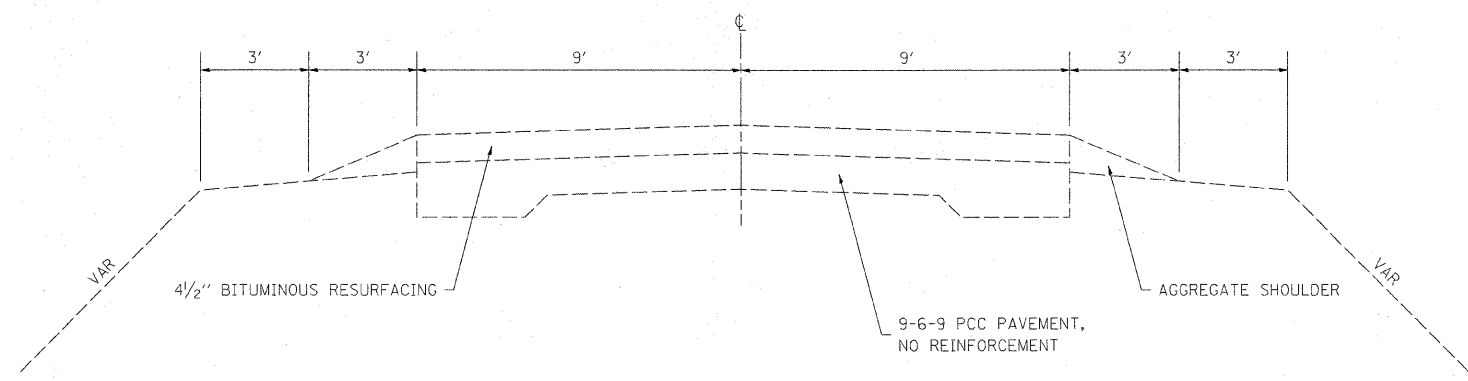
STD. NO.	DESCRIPTION
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
420001-07	PAVEMENT JOINTS
420101-04	24' JOINTED PCC PAVEMENT
515001-03	NAME PLATE FOR BRIDGES
630001-08	STEEL PLATE BEAM GUARDRAIL
630101-08	GUARDRAIL MOUNTED ON EXISTING CULVERTS
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-03	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-02	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701301-03	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE 2L, 2W MOVING OPERATIONS-DAY ONLY
701901-01	TRAFFIC CONTROL DEVICES
780001-02	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

FILE NAME =	USER NAME = *USER*	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL NOTES, INDEX OF SHEETS, &amp; LIST OF HIGHWAY STANDARDS</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
*FILEL*		DRAWN -	REVISED -			823	21B-1	Edwards	24	2	
	PLOT SCALE = *SCALE*	CHECKED -	REVISED -			CONTRACT NO. 74213					
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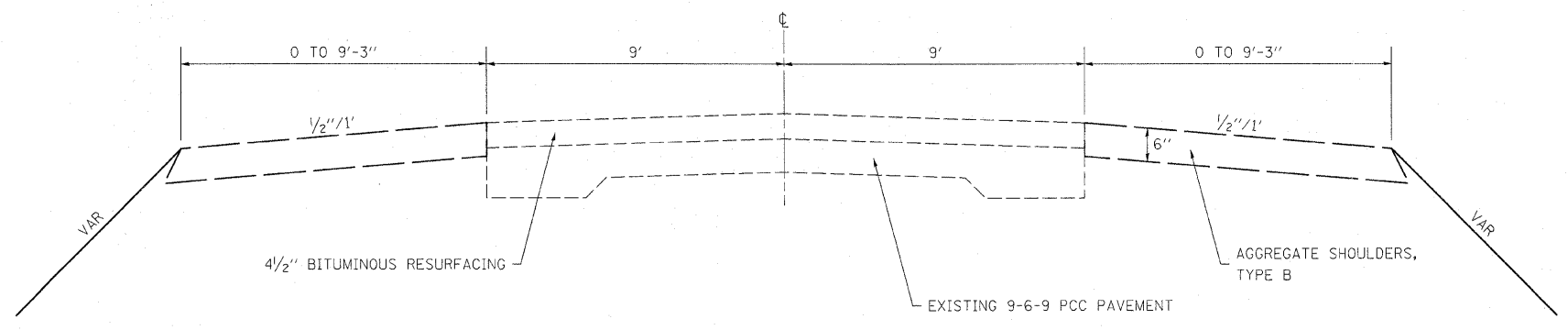
SUMMARY OF QUANTITIES			RURAL TOTAL QUANTITIES 80% FED. 20% STATE	CONSTRUCTION TYPE CODE	
CODE NO	ITEM	UNIT		Y007	
20200100	EARTH EXCAVATION	CU YD	145	145	
20700220	POROUS GRANULAR EMBANKMENT	CU YD	397	397	
25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.2	0.2	
25100630	EROSION CONTROL BLANKET	SQ YD	597	597	
28000400	PERIMETER EROSION BARRIER	FOOT	752	752	
28100109	STONE RIPRAP, CLASS A5	SQ YD	300	300	
28200200	FILTER FABRIC	SQ YD	546	546	
31101000	SUB-BASE GRANULAR MATERIAL, TYPE B	TON	30	30	
42000500	PORTLAND CEMENT CONCRETE PAVEMENT 10"	SQ YD	146	146	
44000100	PAVEMENT REMOVAL	SQ YD	52	52	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	239	239	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1	
51500100	NAME PLATES	EACH	1	1	
54001000	BOX CULVERT END SECTIONS	EACH	2	2	
54011212	PRECAST CONCRETE BOX CULVERT 12' X 12'	FOOT	42.5	42.5	
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	312.5	312.5	
* 63000025	STEEL PLATE BEAM GUARD RAIL, ATTACHED TO STRUCTURES	FOOT	37.5	37.5	
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4	
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	4	4	
67100100	MOBILIZATION	L SUM	1	1	
70101800	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1	
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	122	122	
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	4	4	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	

\* Specialty Items

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILEL#		DRAWN -	REVISED -			823	21B-1	Edwards	24	3	
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EXISTING ROADWAY TYPICAL SECTION

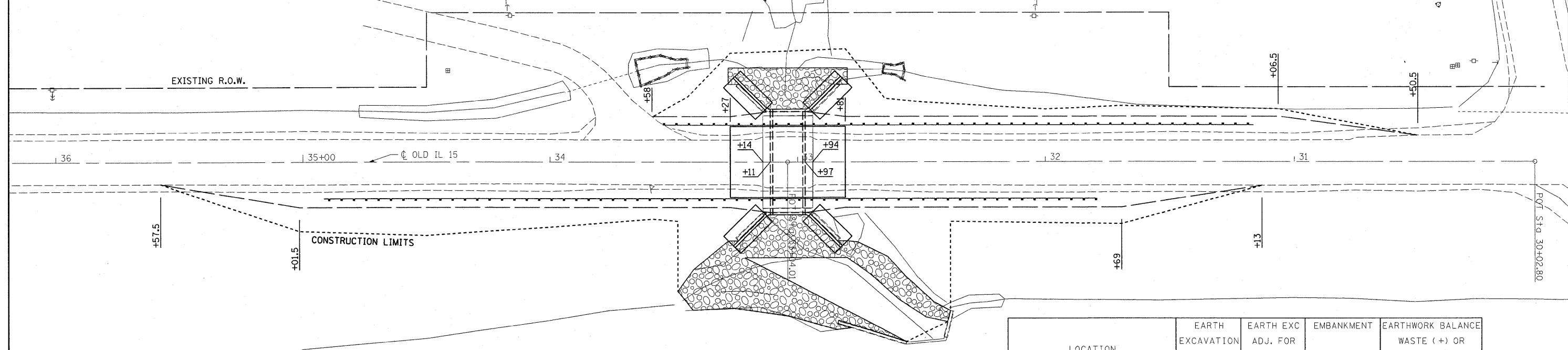


PROPOSED TYPICAL SECTION  
 STA 30+50.5 TO STA 32+81  
 STA 33+27 TO STA 35+57.5

FILE NAME =	USER NAME = steffennk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TYPICAL SECTIONS</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ct:\pv_work\PW100T\STEFFENK\dms52291\	74213-shit-tyo.dgn	DRAWN -	REVISED -					823	21B-1	Edwards	24	4
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	PLOT DATE = 3/19/2009	DATE -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		



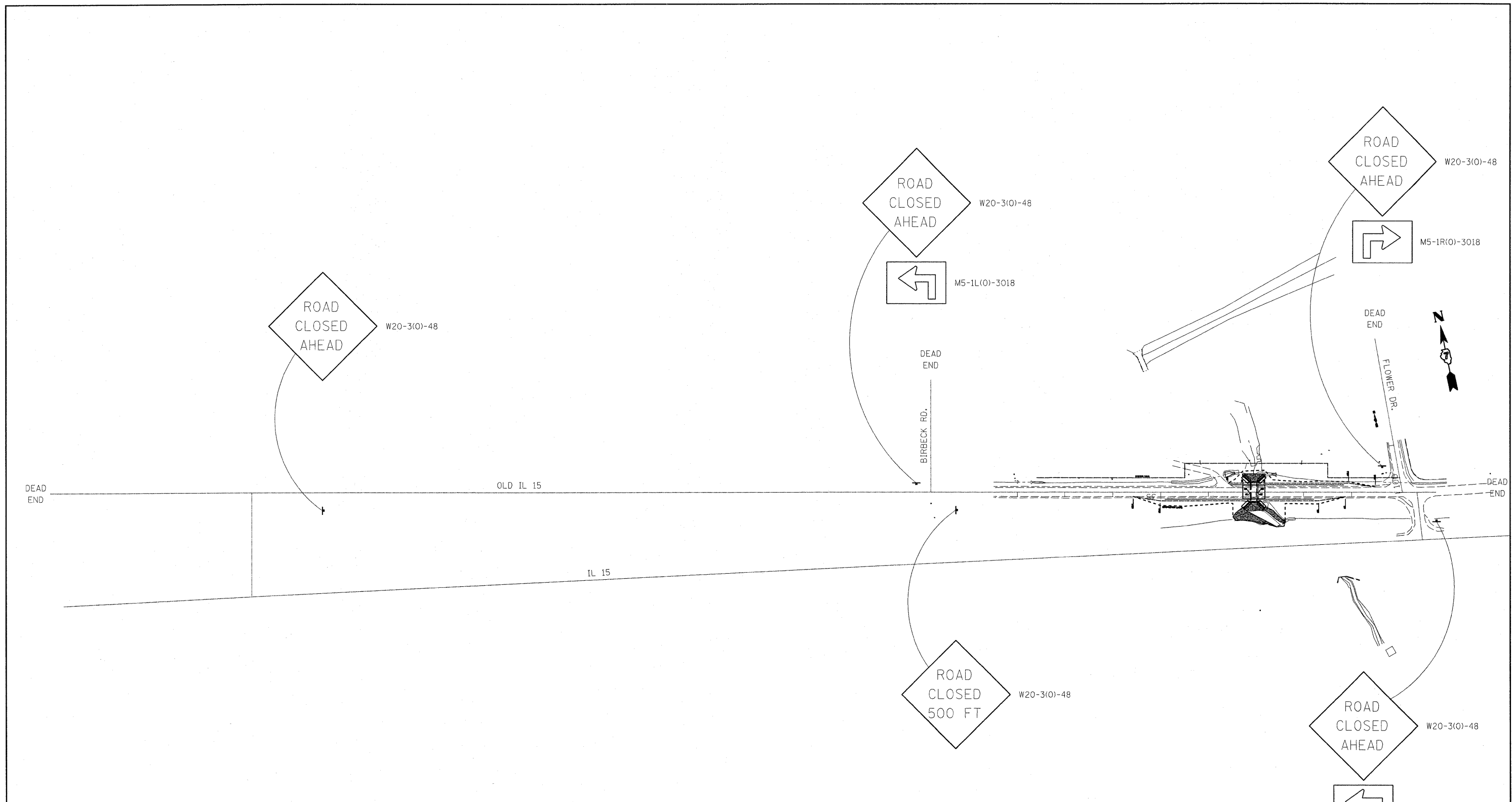
PAVEMENT SCHEDULE									
STATION TO STATION		LENGTH	AVE PAVT WIDTH		SUB-BASE GRANULAR MATERIAL, TYPE B	PCC PAVEMENT 10"		PAVEMENT REMOVAL	AGGREGATE SHOULDERS, TYPE B
			FEET	SQ YD		SQ YD	SQ YD		
30+50.5	TO	32+81.0	231	18.0	461	0.0	0.0	0.0	120.3
32+81.0	TO	32+94.0	13	28.5	41	8.2	41.2	26.0	10.1
32+94.0	TO	32+97.0	3	28.5	10	1.9	9.5	0.0	2.3
32+97.0	TO	33+11.0	14	28.5	44	10.1	44.3	0.0	12.2
33+11.0	TO	33+14.0	3	28.5	10	1.9	9.5	0.0	2.3
33+14.0	TO	33+27.0	13	28.5	41	8.2	41.2	26.0	10.1
33+27.0	TO	33+58.0	31	18.0	62	0.0	0.0	0.0	21.8
33+58.0	TO	35+57.5	200	18.0	399	0.0	0.0	0.0	60.2
TOTALS:			507		1068	30	146	52	239



GUARDRAIL SCHEDULE								
STATION TO STATION		SIDE	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS		TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)	GUARDRAIL MARKER, TYPE A	TERMINAL MARKER, DIRECT APPLIED	
			FOOT	FOOT				
31+16.5	TO	31+66.5	RT		1	1	1	
31+66.5	TO	32+91.5	RT	125				
32+91.5	TO	33+04.0	RT		12.5			
33+04.0	TO	33+54.0	RT			1	1	
31+79.0	TO	32+29.0	LT			1	1	
32+29.0	TO	32+91.5	LT	62.5				
32+91.5	TO	33+16.5	LT		25			
33+16.5	TO	34+41.5	LT	125				
34+41.5	TO	34+91.5	LT			1	1	
TOTALS:				312.5	37.5	4	4	4

LOCATION	EARTH EXCAVATION (cu+)	EARTH EXC ADJ. FOR SHRINKAGE	EMBANKMENT (fill)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD
STA 30+50.5 TO STA 31+06.5	3.62	2.71	0.64	2.08
STA 31+06.5 TO STA 31+13.0	0.86	0.65	0.15	0.49
STA 31+13.0 TO STA 31+69.0	11.66	8.74	2.71	6.03
STA 31+69.0 TO STA 32+00.0	8.11	6.08	2.48	3.60
STA 32+00.0 TO STA 32+50.0	12.14	9.11	3.95	5.16
STA 32+50.0 TO STA 32+65.0	3.84	2.88	1.07	1.81
STA 32+65.0 TO STA 32+83.0	21.05	15.79	9.07	6.72
STA 32+83.0 TO STA 32+97.0	14.49	10.87	6.56	4.31
STA 32+97.0 TO STA 33+11.0	CULVERT OMISSION			
STA 33+11.0 TO STA 33+25.0	15.77	11.82	0.51	11.31
STA 33+25.0 TO STA 33+44.0	23.32	17.49	2.12	15.37
STA 33+44.0 TO STA 33+58.0	3.25	2.44	1.51	0.94
STA 33+58.0 TO STA 34+00.0	7.93	5.95	5.05	0.90
STA 34+00.0 TO STA 34+50.0	5.80	4.35	11.90	-7.55
STA 34+50.0 TO STA 35+01.5	5.84	4.38	12.48	-8.11
STA 35+01.5 TO STA 35+57.5	3.07	2.30	5.16	-2.86
TOTAL =	140.8	105.6	65.4	40.2

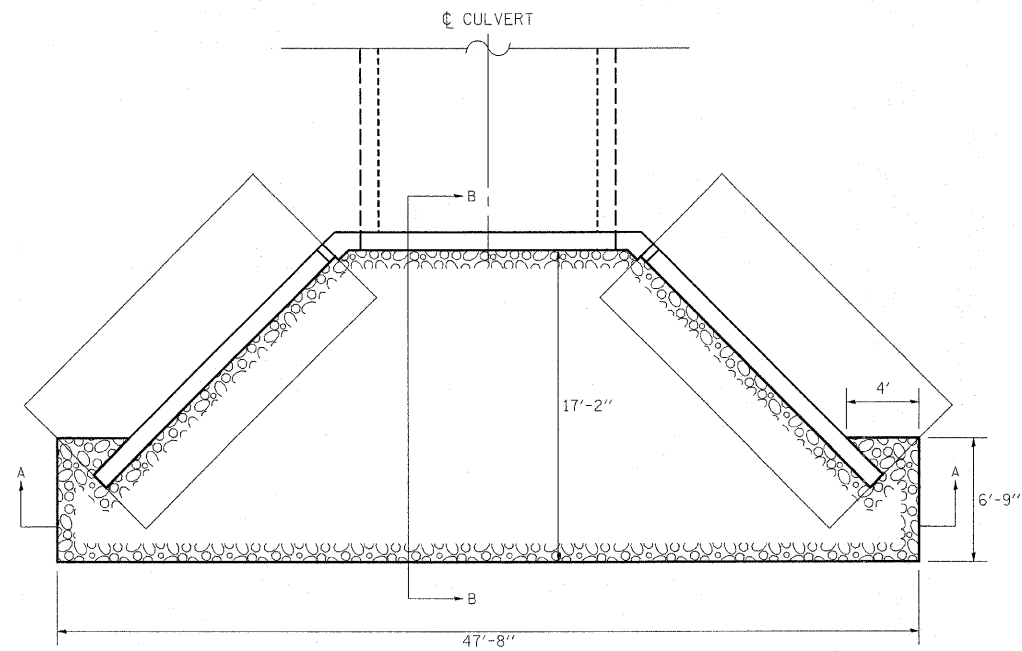
PAY ITEM: EARTH EXCAVATION 145 CU YD



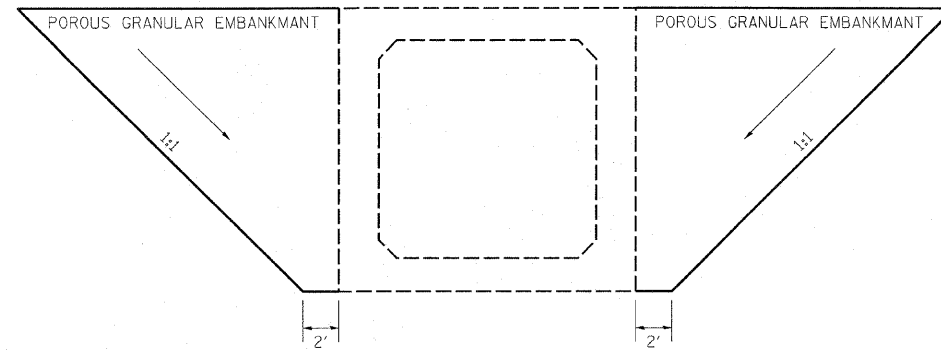
NOTES: ALL SIGNAGE SHALL BE POST MOUNTED AND FITTED WITH FLASHING MONO-DIRECTIONAL LIGHTS.

TWO (2) TYPE III BARRICADES WITH FLASHING BI-DIRECTIONAL LIGHTS SHALL BE PLACED SIDE BY SIDE ON EACH END OF THE STRUCTURE AND AT STATIONS 30+25.5 AND 35+82.5 AS SHOWN ON STANDARD 701901.

FILE NAME = c:\pw\work\PWIDOT\STEFFENMK\dms52291\	USER NAME = steffennik 74213-shr-trafoont.dgn	DESIGNED - DRAWN -	REVISED - REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TRAFFIC CONTROL AND PROTECTION, (SPECIAL)</b>			F.A.P. RTE. 823	SECTION 218-1	COUNTY Edwards	TOTAL SHEETS 24	SHEET NO. 7
	PLOT SCALE = 100.0000 ' / IN.	CHECKED -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.	CONTRACT NO. 74213	
	PLOT DATE = 3/19/2009	DATE -	REVISED -		ILLINOIS FED. AID PROJECT							

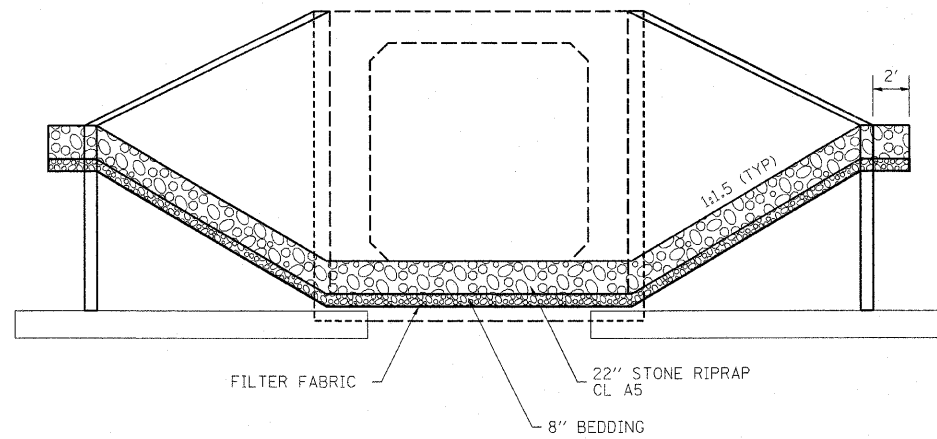


PLAN  
NORTH END SHOWN

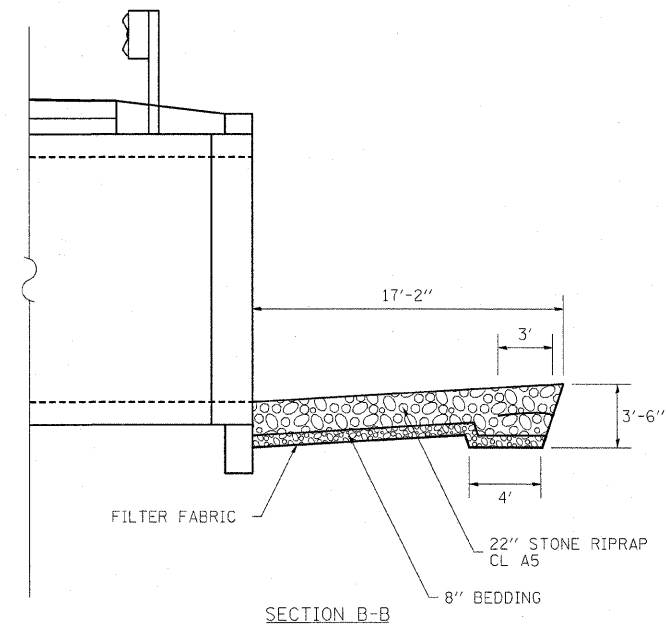


LIMITS OF POROUS GRANULAR EMBANKMENT

THE LIMITS SHALL BE AS SHOWN ABOVE OR AS DIRECTED BY THE ENGINEER.  
 THE GRANULAR MATERIAL SHALL BE COMPACTED ACCORDING TO ARTICLE 206.06, OR AS DIRECTED BY THE ENGINEER.  
 THAT PORTION OF THE PGE OUTSIDE THE AGGREGATE SHOULDERS AND BEHIND THE END SECTION WINGWALLS SHALL BE COVERED WITH A MINIMUM OF 1 FOOT OF COHESIVE MATERIAL AS DIRECTED BY THE ENGINEER. COST INCLUDED WITH POROUS GRANULAR EMBANKMENT.



SECTION A-A



SECTION B-B

NOTES

LAYOUT OF RIPRAP MAY BE VARIED TO SUIT GROUND CONDITIONS IN THE FIELD AS DIRECTED BY THE ENGINEER.

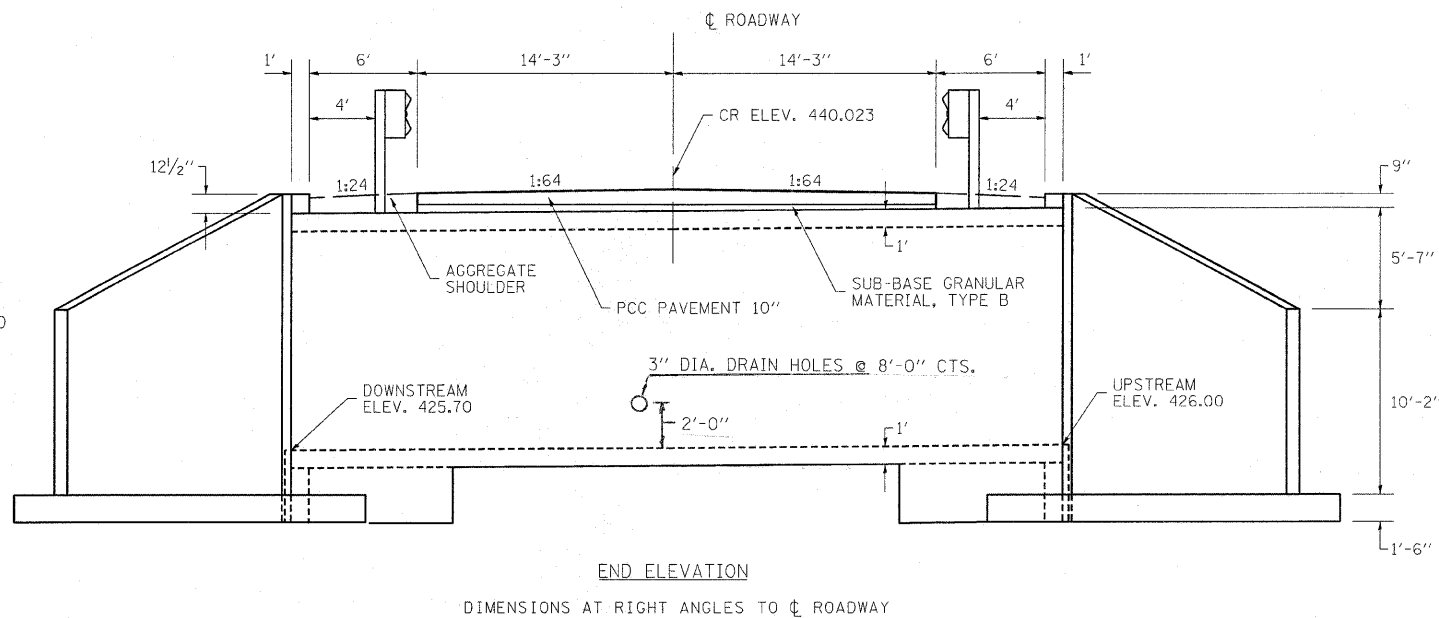
FILE NAME =	USER NAME = steffanmk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>RIPRAP DETAILS</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
c:\pwork\pwork\dot\stefanmk\dms52291\07	4213-shr-culv.dgn	DRAWN -	REVISED -			823	21B-1	Edwards	24	8	
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -			CONTRACT NO. 74213					
	PLOT DATE = 3/19/2009	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
				SCALE:	SHEET NO. OF SHEETS	STA. TO STA.					



BENCHMARK: ELEV. 440.39  
CHISELED SQUARE ON NE WINGWALL OF EXISTING STRUCTURE,  
21.5' RT STA 32+94

BENCHMARK: ELEV. 448.07  
SPIKE NAIL IN POWER POLE,  
40' RT STA 30+28

EXISTING STRUCTURE: S.N. 024-0007 WAS ORIGINALLY CONSTRUCTED  
IN 1921 UNDER SBI-5, SECTION 21-A AS A SINGLE SPAN SLAB  
SUPERSTRUCTURE ON CLOSED ABUTMENTS SUPPORTED BY SPREAD  
FOOTINGS. LENGTH OF THE EXISTING STRUCTURE IS 20'-0" AND  
THE WIDTH IS 44'-4" OUT TO OUT. THE EXISTING STRUCTURE IS  
NOT SKEWED AND IS TO BE COMPLETELY REMOVED AND REPLACED.  
THE ROAD WILL BE TEMPORARILY CLOSED DURING CONSTRUCTION.



NOTES

EXCAVATION BEHIND ABUTMENT WALLS SHALL BE PERFORMED  
TO BALANCE FRONT AND BACK SOIL PRESSURE BEFORE REMOVING  
THE SUPERSTRUCTURE.

BUILD TOPS OF HEADWALLS PARALLEL TO PROFILE GRADE.

ALL PORTIONS OF THE PRECAST BOX CULVERT IN CONTACT  
WITH THE CAST-IN-PLACE CONCRETE SHALL BE SANDBLASTED  
ACCORDING TO ART. 503.09(B).

CONCRETE AND REBAR QUANTITIES AND LENGTHS CALCULATED  
FOR THE CAST-IN-PLACE END SECTIONS WILL VARY BASED ON  
THE PRECAST BOX CULVERTS SUPPLIED.

END SECTIONS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE  
EACH FOR BOX CULVERT END SECTION, AS OUTLINED IN  
ART. 540.08, WHICH PRICE SHALL INCLUDE ALL CONCRETE,  
REBAR AND ALL OTHER ITEMS NECESSARY TO COMPLETE THE PROPOSED  
WORK. THE BOX CULVERT END SECTIONS SHALL BE BUILT IN THE FIELD  
AND A PRECAST OPTION IS NOT ALLOWED.

DRAIN HOLES SHALL BE PROVIDED IN ACCORDANCE WITH ART. 503.11.

THE JOINTS BETWEEN PRECAST BOX SECTIONS SHALL BE SEALED  
AND ALL VOIDS FILLED WITH A MASTIC JOINT SEALER. IN ADDITION,  
THE JOINTS SHALL BE EXTERNALLY SEALED ON ALL FOUR SIDES WITH  
A 13 INCH WIDE EXTERNAL SEALING BAND. THE SEAL SHALL BE  
CENTERED OVER THE JOINT, SECURED IN PLACE AND PROTECTED  
DURING THE BACKFILLING PROCESS. THE COST OF THIS WORK SHALL  
BE INCLUDED IN THE COST OF THE PRECAST BOX CULVERT.

VOIDS BETWEEN THE PRECAST CONCRETE BOX CULVERT AND THE  
CAST-IN-PLACE TOEWALL/CUTOFF WALL SHALL BE FILLED WITH  
NON-SHRINK GROUT.

DRAWINGS NOT TO SCALE.

ALL BARS SHALL CONFORM TO THE REQUIREMENTS OF  
ART. 1006.10 OF STANDARD SPECS.

CLASS SI CONCRETE SHALL BE USED THROUGHOUT.

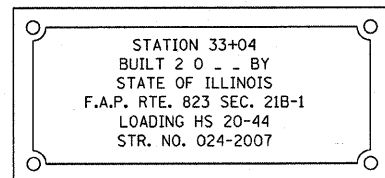
THE PRECAST CONCRETE BOX CULVERT SECTIONS SHALL CONFORM  
TO THE REQUIREMENTS OF AASHTO M273.

REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.

ALL CONSTRUCTION JOINTS SHALL BE BONDED.

EXPANSION BOLTS SHALL BE  $\frac{3}{4}$ " DIA. HOOKED BOLTS. HOOKED BOLTS  
SHALL EXTEND 6" INTO CONCRETE COLLAR. THE COST OF THE BOLTS  
SHALL BE INCLUDED IN THE COST OF BOX CULVERT END SECTION.

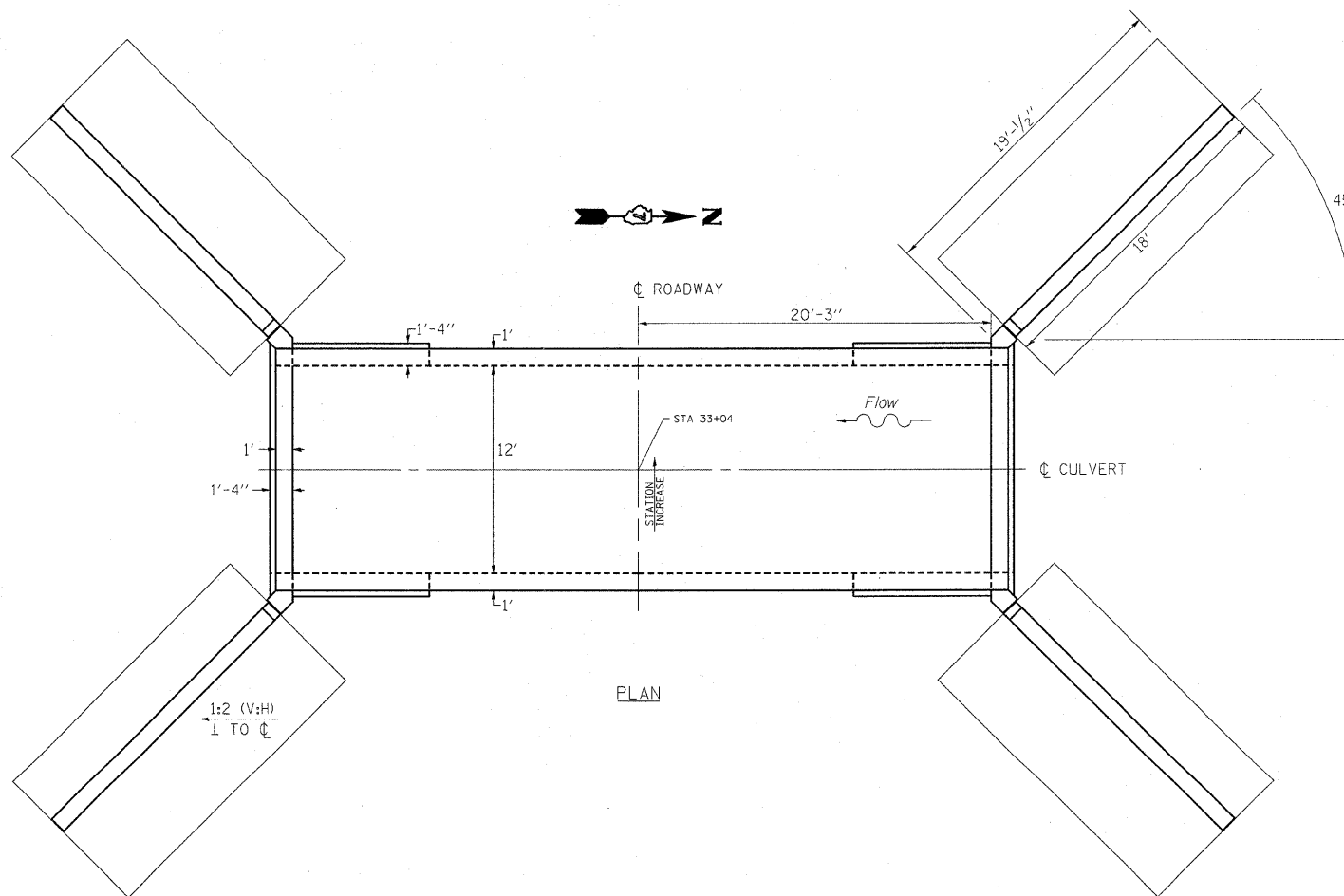
ALL DIMENSIONS ARE IN FEET(') - INCHES(") UNLESS OTHERWISE NOTED.



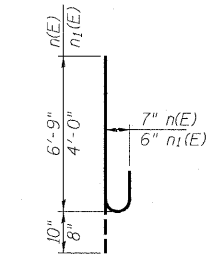
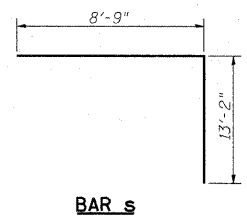
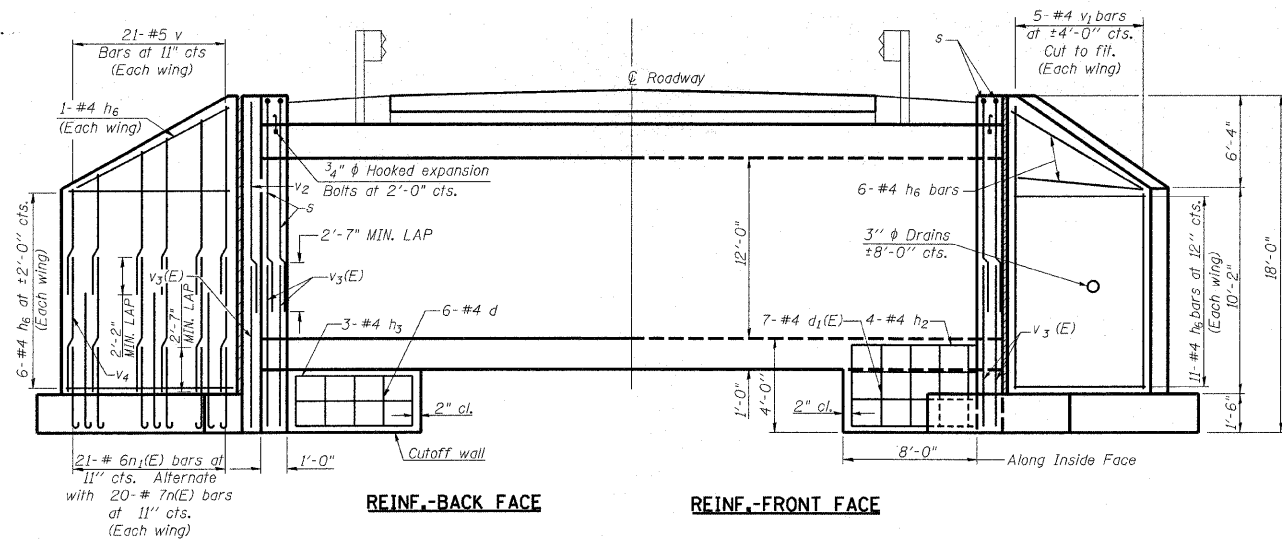
NAME PLATE

\* See Highway Standard 515001-03 for  
dimensions and placement.

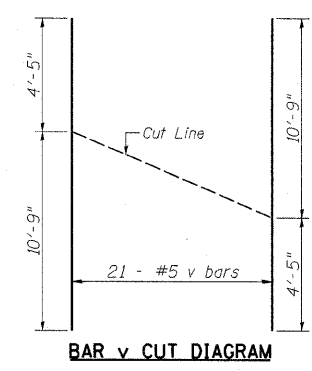
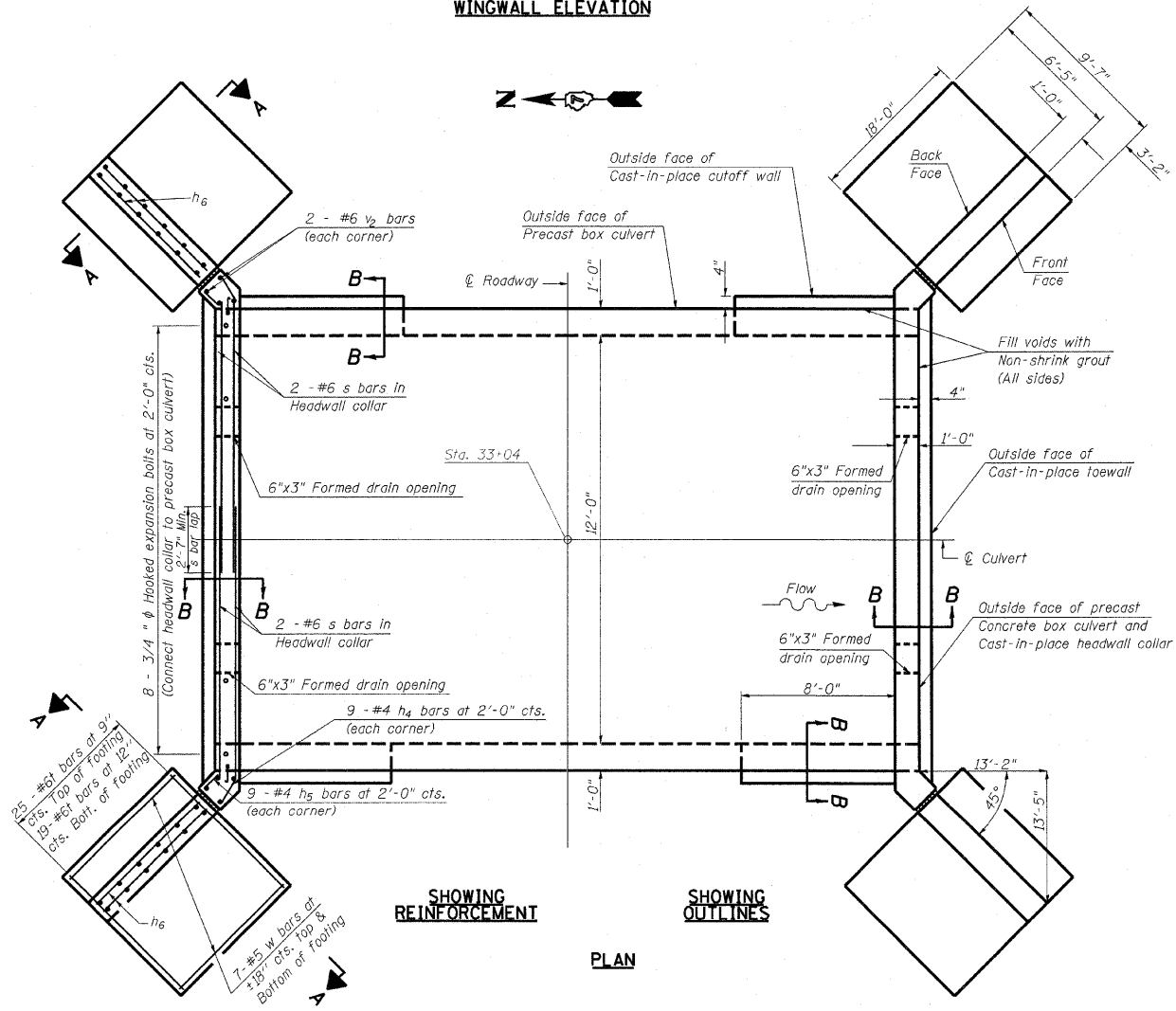
\* Name Plate will be paid for at the  
contract unit price per "EACH" for  
"NAME PLATES".



FILE NAME = c:\pwork\pwork\stef\stef\ms5229\107	USER NAME = stef.fenk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL PLAN AND ELEVATION 12'x12' PRECAST BOX CULVERT STATION 33+04 STRUCTURE NO. 024-2007</b>	F.A.P. RTE. 823	SECTION 21B-1	COUNTY Edwards	TOTAL SHEETS 24	SHEET NO. 9	
PLOT SCALE = 50,000' / IN.	CHECKED -	REVISED -	SCALE:			SHEET NO. OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT			
PLOT DATE = 3/19/2009	DATE -	REVISED -									
CONTRACT NO. 74213											



WINGWALL ELEVATION



DESIGN STRESSES

$f_y = 60,000 \text{ psi}$   
 $f'_c = 3,500 \text{ psi}$   
 Max. Soil Pressure under footing = 3522 psf

LOADING HS 20-44

BILL OF MATERIAL (ONE END SECTION)

Bar	No.	Size	Length	Shape
d	21	#4	2'-8"	—
d <sub>1</sub> (E)	23	#4	3'-8"	—
h	3	#4	13'-0"	—
h <sub>1</sub>	4	#4	14'-5"	—
h <sub>2</sub>	8	#4	8'-10"	—
h <sub>3</sub>	6	#4	8'-0"	—
h <sub>4</sub>	18	#4	1'-2"	—
h <sub>5</sub>	18	#4	9"	—
h <sub>6</sub>	48	#4	17'-8"	—
n(E)	40	#7	7'-7"	U
n <sub>1</sub> (E)	42	#6	4'-8"	U
s	4	#6	21'-11"	—
t	88	#6	9'-4"	—
v	21	#5	15'-2"	—
v <sub>1</sub>	10	#4	16'-3"	—
v <sub>2</sub>	4	#6	14'-8"	—
v <sub>3</sub> (E)	8	#6	6'-10"	—
v <sub>4</sub>	42	#5	7'-9"	—
w	28	#5	17'-6"	—
Concrete Box Culverts				Cu. Yd. 42.3
Reinforcement Bars, Epoxy Coated				Pound 1053
Reinforcement Bars				Pound 3516
Expansion Bolt 3/4" #				Each 26

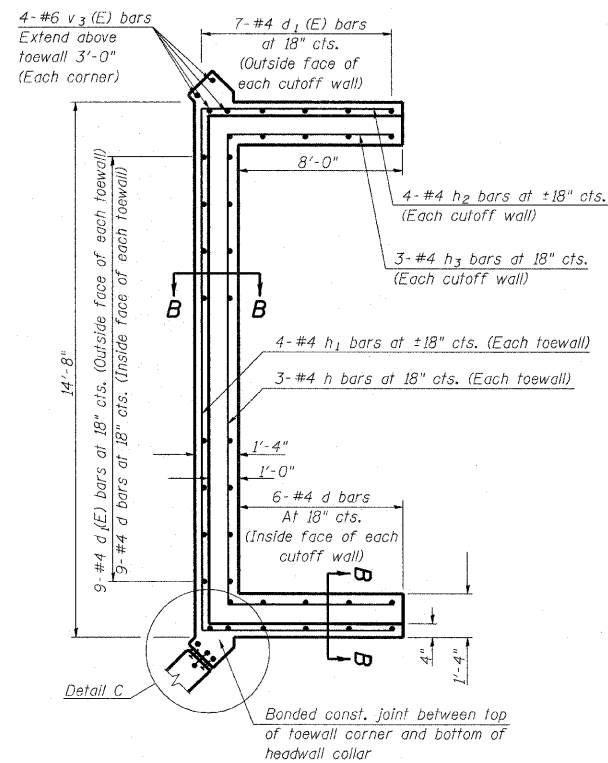
Pay Item	Unit	Qty.
Box Culvert End Sections	Each	2.0

FILE NAME =	USER NAME = stoffernk	DESIGNED -	REVISED -
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PLOT DATE = 3/19/2009		DATE -	REVISED -

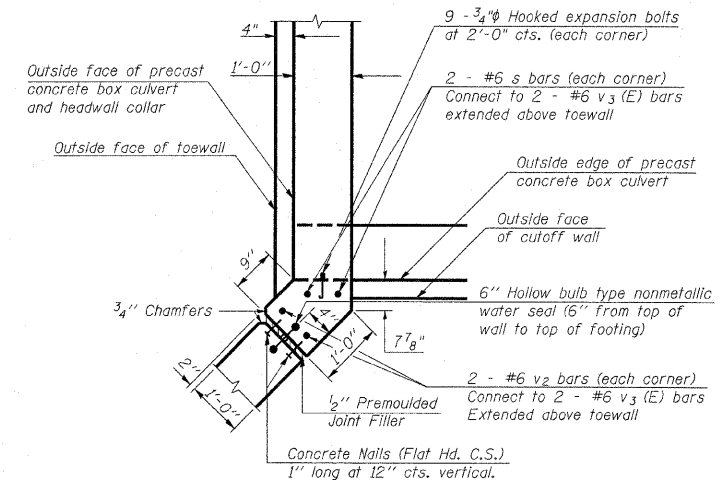
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

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

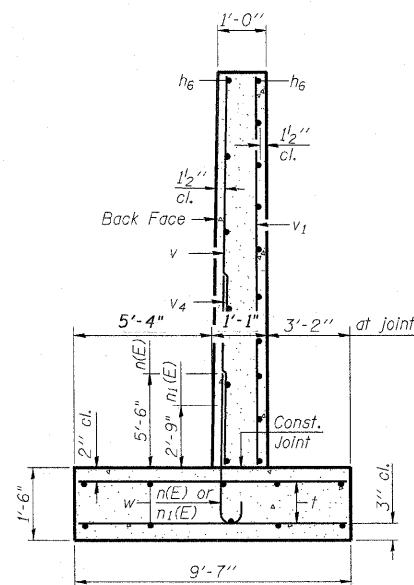
F.A.P. RTE. 823	SECTION 218-1	COUNTY Edwards	TOTAL SHEETS 24	SHEET NO. 10
CONTRACT NO. 74213				ILLINOIS FED. AID PROJECT



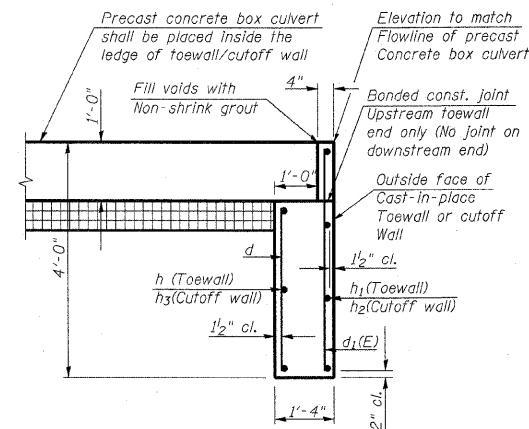
**TOEWALL / CUTOFF WALL DETAIL WITH CORNER DIMENSIONS**



**CAST-IN-PLACE CORNER DETAIL FOR HEADWALL COLLAR**

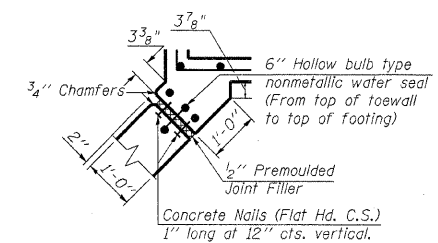


**SECTION A-A**



**SECTION B-B TOEWALL/CUTOFF WALL DETAIL ONLY**  
(SIDE WALL OF PRECAST BOX CULVERT NOT SHOWN)

Porous Granular Material - CA 7 (6")  
(Included in pay item for precast box culvert)



**CORNER DETAIL C**

FILE NAME =	USER NAME = steffennk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CULVERT DETAILS</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pw_work\pwidot\stefFennk\dms52291\07	4213-sht-culv.dgn	DRAWN -	REVISED -					823	21B-1	Edwards	24	11
	PLOT SCALE = 50.0000' / IN.	CHECKED -	REVISED -					CONTRACT NO. 74213				
	PLOT DATE = 3/19/2009	DATE -	REVISED -					ILLINOIS FED. AID PROJECT				
								SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.



# SOIL BORING LOG

ROUTE FAP 823 (FR 03.340) DESCRIPTION Wanboro Lake Overflow LOGGED BY E. Sandschafer

SECTION 21B-1 LOCATION E 12, SEC. 3, TWP. 2 S, RNG. 10 E, 3 PM

COUNTY Edwards DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO.	<u>024-0007</u>	D	B	U	M	Surface Water Elev.	<u>Dry</u> ft	D	B	U	M
Station	<u>33+04</u>	E	L	C	O	Stream Bed Elev.	<u>428.18</u> ft	E	L	C	O
BORING NO.	<u>1</u>	P	O	S	I	Groundwater Elev.:		P	O	S	I
Station	<u>32+72</u>	T	W	S	T	First Encounter	<u>Dry</u> ft	T	W	S	T
Offset	<u>6.00ft Rt</u>	H	S	Qu		Upon Completion	<u>Dry</u> ft	H	S	Qu	
Ground Surface Elev.	<u>440.05</u> ft	(ft)	(6")	(tsf)	(%)	After <u>48</u> Hrs.	<u>426.1</u> ft	(ft)	(6")	(tsf)	(%)

4" asphalt on 7" concrete pavement.	439.15					Benchmark: BM 2 Chiseled Square on NE wingwall of existing structure, 21.5' Rt Sta 32+94 = 440.39' elevation. Provided by Program Development.				
Tan, CLAY w/brick fragments.										
		2								
Hard, damp, gray, CLAY LOAM TILL.	437.05	3	+4.5	11						
		6	PP							
Stiff, damp, dark brown, SILTY LOAM.	435.55	4		23						
		4	1.2							
		4	PP							
Stiff, damp, brown marbled red, LOAM TILL.	433.05	3		21						
		2	1.8							
		4	PP							
Very stiff, moist, brown to gray, SANDY CLAY SHALE.	430.05	4		15						
		5	3.9							
		20	S							
		16								
		50	4.4	8						
		502"	S							
		32								
		503"		7						
		502"								
		505"								
Extent of exploration.	422.35	502"		6						
		501"								

Latitude W 88 deg 04.676 min, Longitude N 38 deg 22.665 min, Map Datum WGS 84

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

BBS, from 137 (Rev. 8-99)



# SOIL BORING LOG

ROUTE FAP 823 (FR 03.340) DESCRIPTION Wanboro Lake Overflow LOGGED BY E. Sandschafer

SECTION 21B-1 LOCATION E 12, SEC. 3, TWP. 2 S, RNG. 10 E, 3 PM

COUNTY Edwards DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO.	<u>024-0007</u>	D	B	U	M	Surface Water Elev.	<u>Dry</u> ft	D	B	U	M
Station	<u>33+04</u>	E	L	C	O	Stream Bed Elev.	<u>428.18</u> ft	E	L	C	O
BORING NO.	<u>2</u>	P	O	S	I	Groundwater Elev.:		P	O	S	I
Station	<u>33+31</u>	T	W	S	T	First Encounter	<u>Dry</u> ft	T	W	S	T
Offset	<u>7.00ft Lt</u>	H	S	Qu		Upon Completion	<u>Dry</u> ft	H	S	Qu	
Ground Surface Elev.	<u>439.98</u> ft	(ft)	(6")	(tsf)	(%)	After <u>48</u> Hrs.	<u>427.5</u> ft	(ft)	(6")	(tsf)	(%)

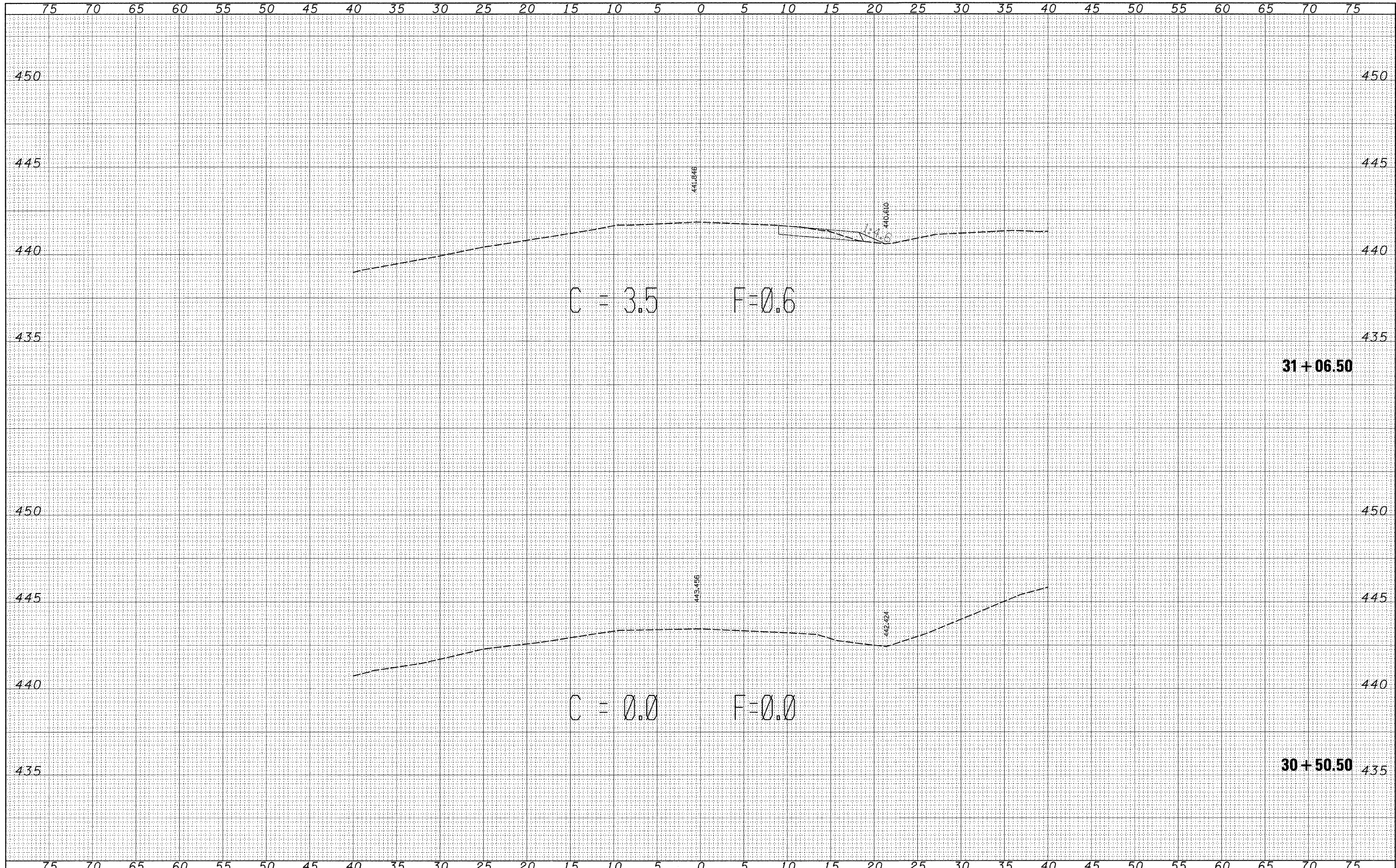
4.5" asphalt on 7" concrete pavement.	439.08					Benchmark: BM 2 Chiseled Square on NE wingwall of existing structure, 21.5' Rt Sta 32+94 = 440.39' elevation. Provided by Program Development.				
Stiff, damp, red, SANDY CLAY.										
		2								
		8	1.2	10						
		16	B							
Medium, damp, red & gray, SANDY LOAM.	435.48	2		10						
		2	0.8							
		3	S							
		2		16						
		5	0.9							
		5	S							
Stiff, damp, red marbled gray, SANDY CLAY.	430.48	2		20						
		4	1.2							
		5	B							
		3		23						
		4	0.7							
		5	B							
		11								
Hard, moist, gray & brown, SANDY CLAY SHALE.	424.98	22	5.3	11						
		38	BS							
		505"								
Extent of exploration.	422.38	501"		6						
		501"								

Latitude W 88 deg 04.686 min, Longitude N 38 deg 22.665 min, Map Datum WGS 84

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

BBS, from 137 (Rev. 8-99)

FILE NAME =	USER NAME = steffennk	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>				<b>BORING LOGS</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT DATE = 3/19/2009	DATE -	REVISED -	CONTRACT NO. 74213													



DATE	BY
ORIGINAL SURVEY NO.	DESIGNED -
SUBMITTED SURVEY NO.	DRAWN -
PLOTTED TEMPLATE	CHECKED -
AREAS CHECKED	DATE -

DATE	BY
ORIGINAL SURVEY NO.	DESIGNED -
SUBMITTED SURVEY NO.	DRAWN -
PLOTTED TEMPLATE	CHECKED -
AREAS CHECKED	DATE -

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 PLOT SCALE = 5,0002' / IN.  
 PLOT DATE = 3/19/2009

DESIGNED -	REVISED -
DRAWN -	REVISED -
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DATE -	REVISED -

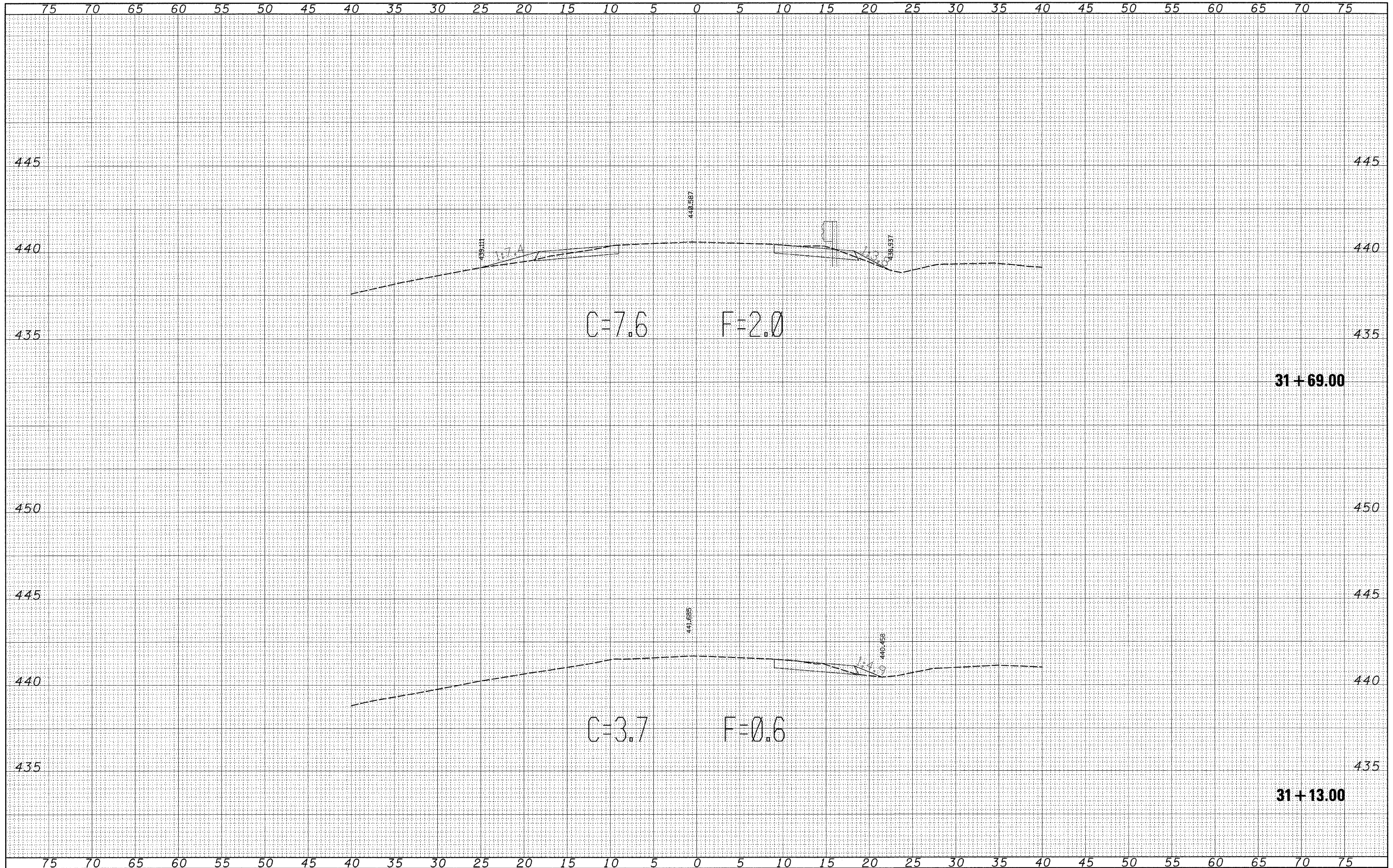
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

<b>CROSS SECTIONS</b>			
SCALE:	SHEET NO. OF SHEETS	STA. 30+50.50 TO STA. 31+06.50	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
823	21B-1	EDWARDS	24	13
ILLINOIS FED. AID PROJECT				CONTRACT NO. 74213

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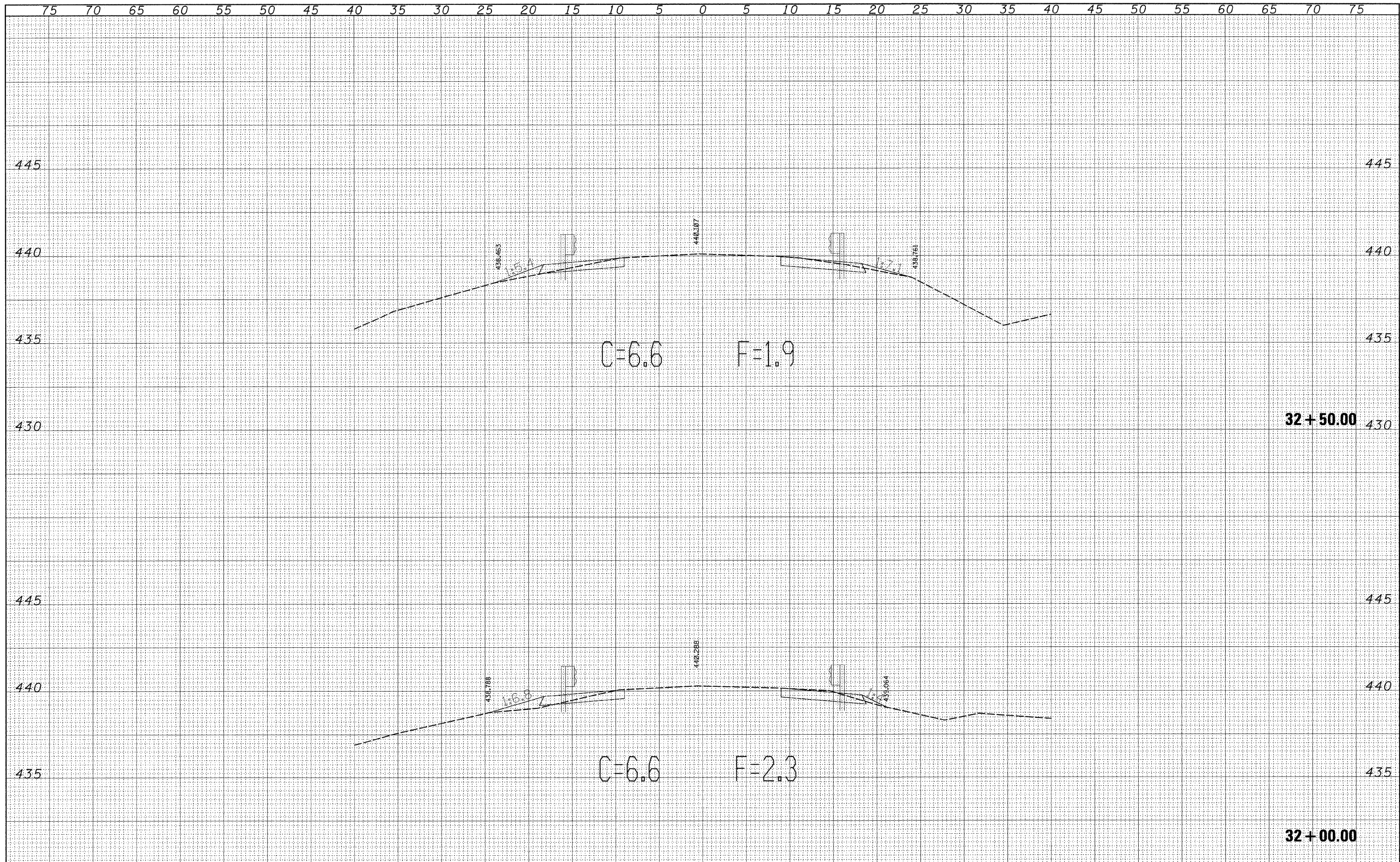
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ORIGINAL SURVEY	
NOTE BOOK	
AREAS CHECKED	



FILE NAME	USER NAME = biermanbj	DESIGNED -	REVISIONS -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b>				F.A.P. RTE. 823	SECTION 21B-1	COUNTY EDWARDS	TOTAL SHEETS 24	SHEET NO. 14
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	PLOT DATE = 3/19/2009	DATE -	REVISIONS -										

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TEMPLATE	
AREAS CHECKED	
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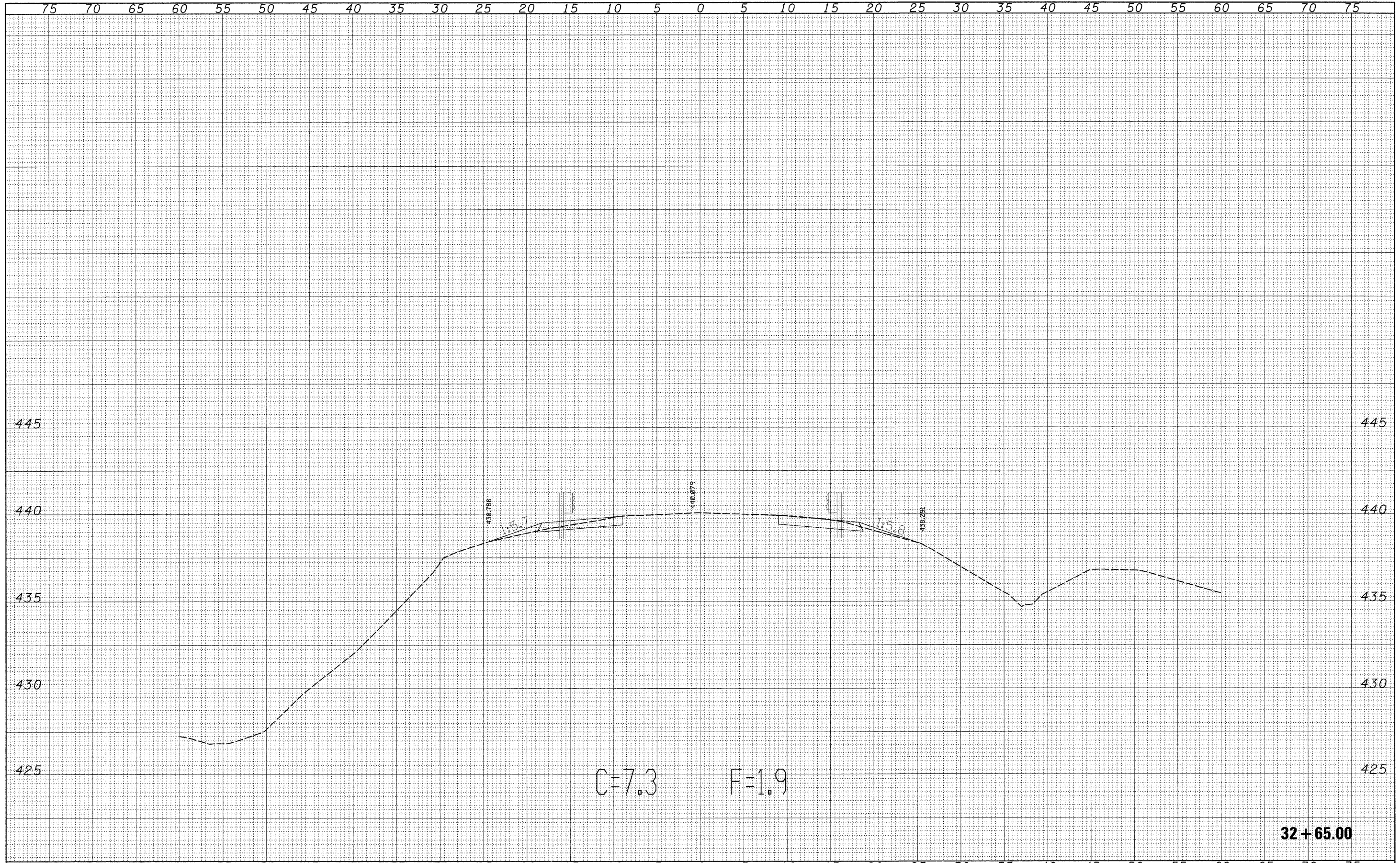
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	PLOT DATE = 3/19/2009	DATE -	REVISED -										

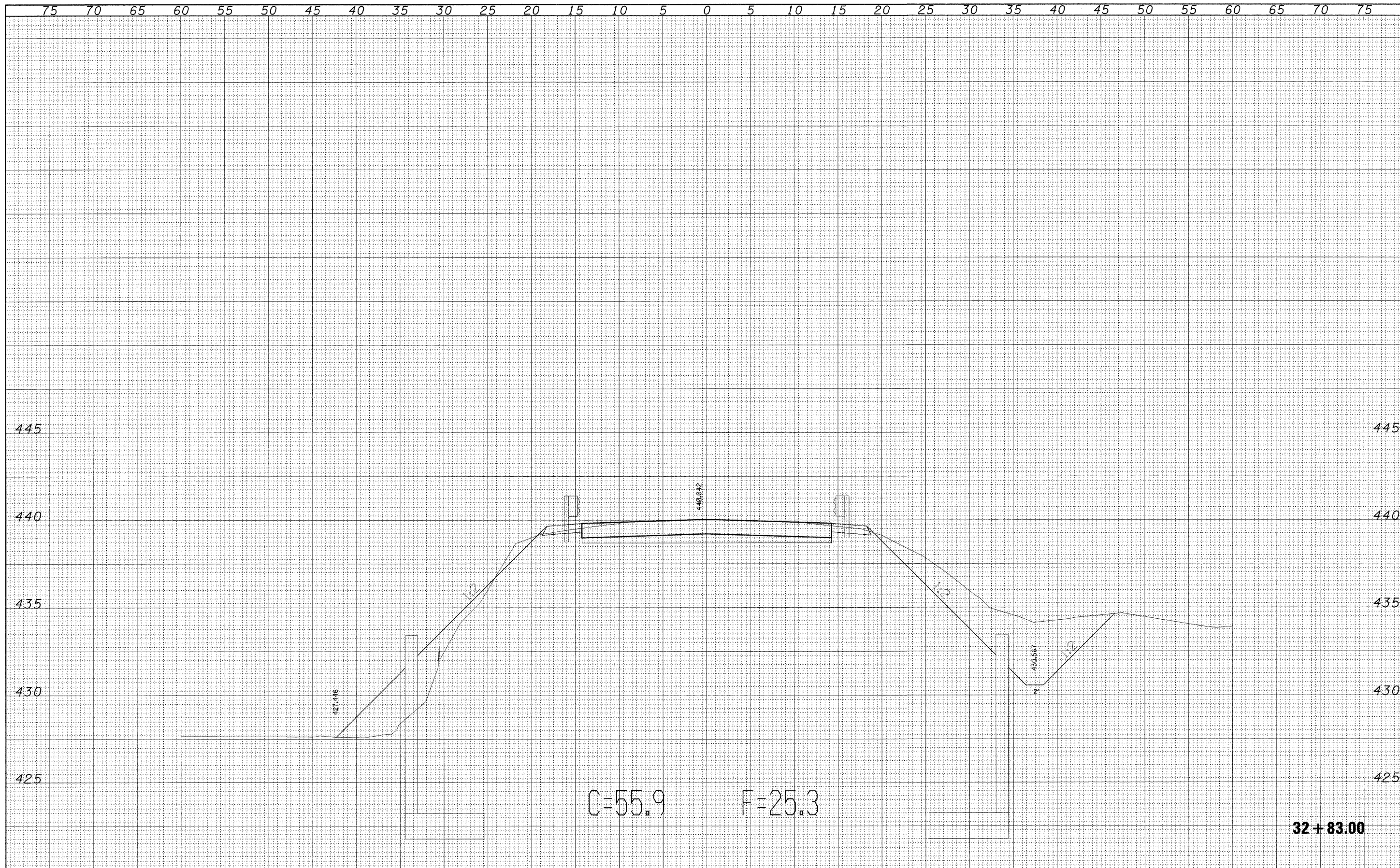
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DESIGNED	DATE
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ORIGINAL SURVEY	NO.
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FILE NAME	USER NAME = bsermanbj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 3/19/2009	DATE -	REVISED -					ILLINOIS FED. AID PROJECT				





FINAL SURVEY	CONVERTED	DATE
NOTE BOOK	PLOTTED	BY
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	AREAS CHECKED	

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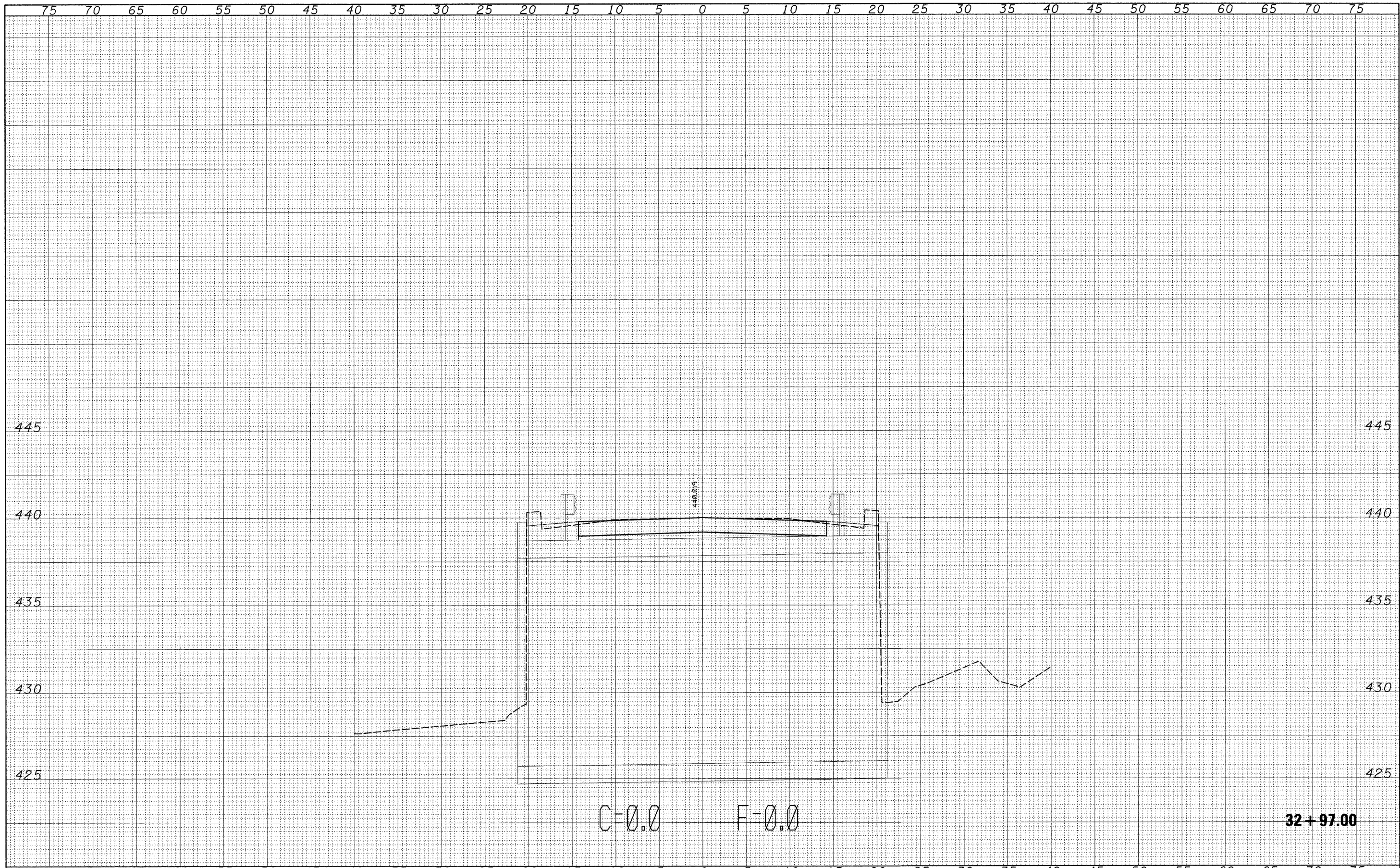
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>CROSS SECTIONS</b>			
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F.A.P. RTE. 823	SECTION 21B-1	COUNTY EDWARDS	TOTAL SHEETS 24	SHEET NO. 17
CONTRACT NO. 74213				
ILLINOIS FED. AID PROJECT				

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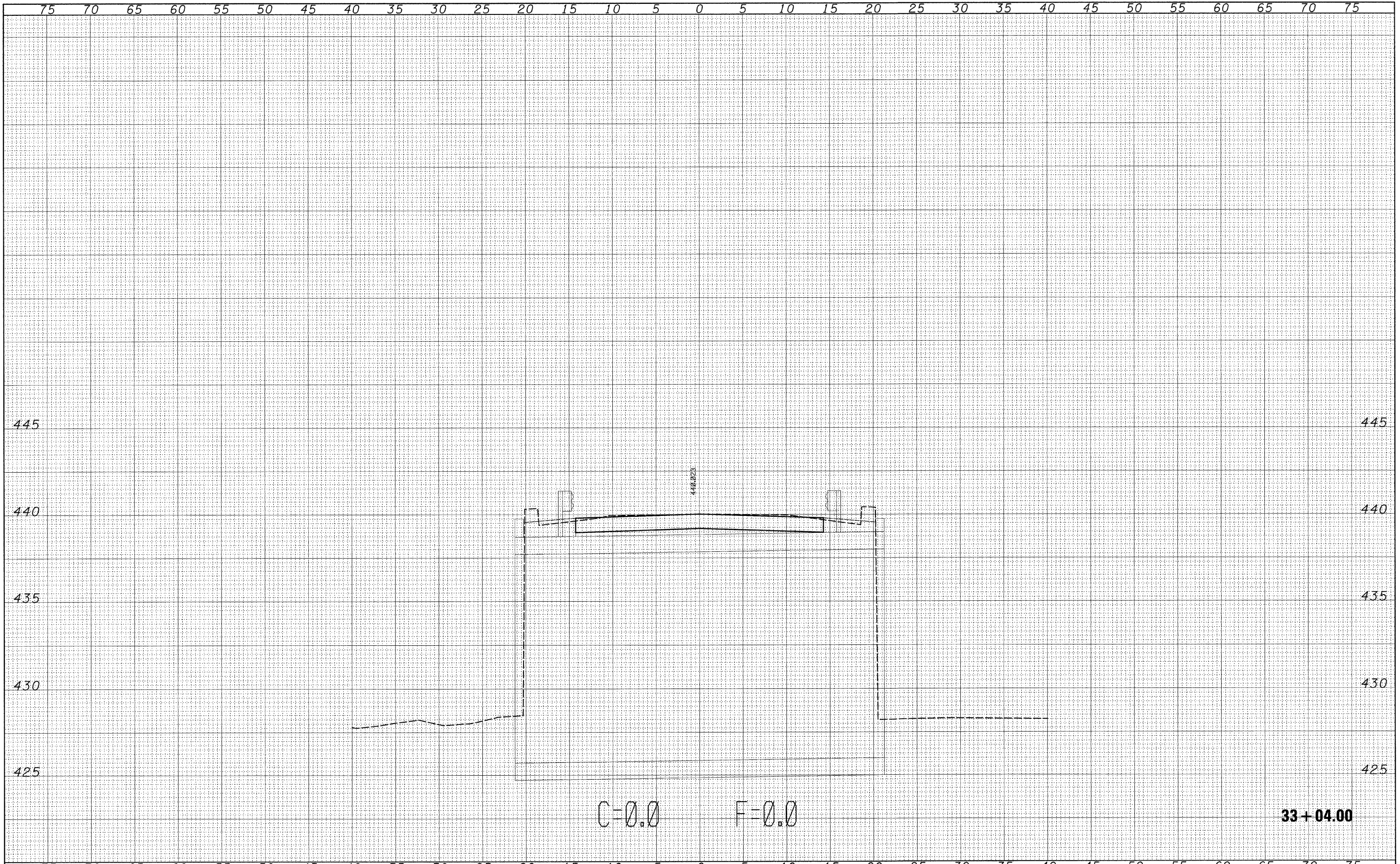
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32+97.00

FILE NAME =	USER NAME = biermanbj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b>			F.A.P. RTE. 823	SECTION 21B-1	COUNTY EDWARDS	TOTAL SHEETS 24	SHEET NO. 18
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	PLOT DATE = 3/19/2009	DATE -	REVISED -									

FINAL SURVEY	REVISIONS	DATE
NOTE BOOK NO.	PLOTTED	BY
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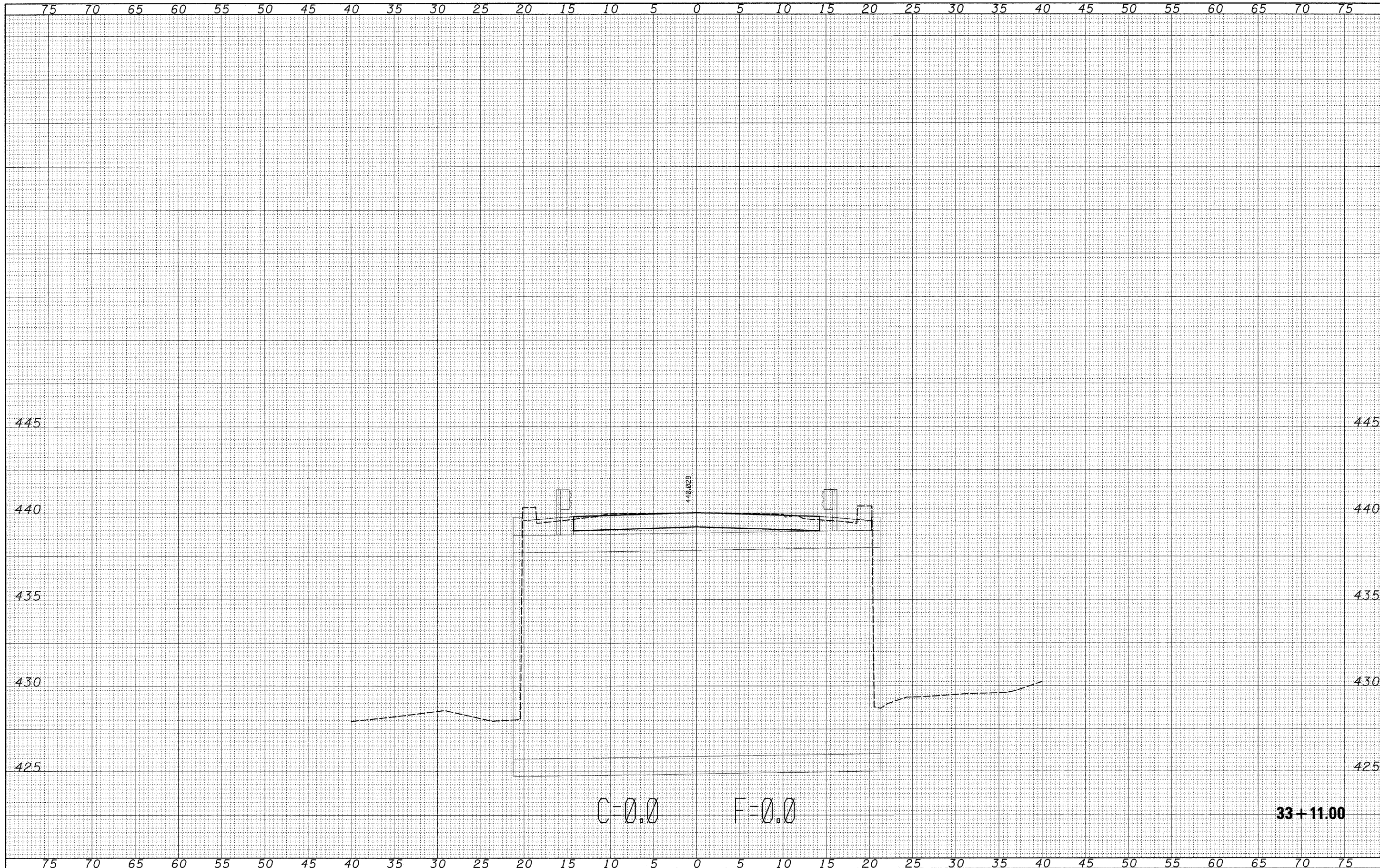
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NOTE BOOK NO.	PLOTTED	BY
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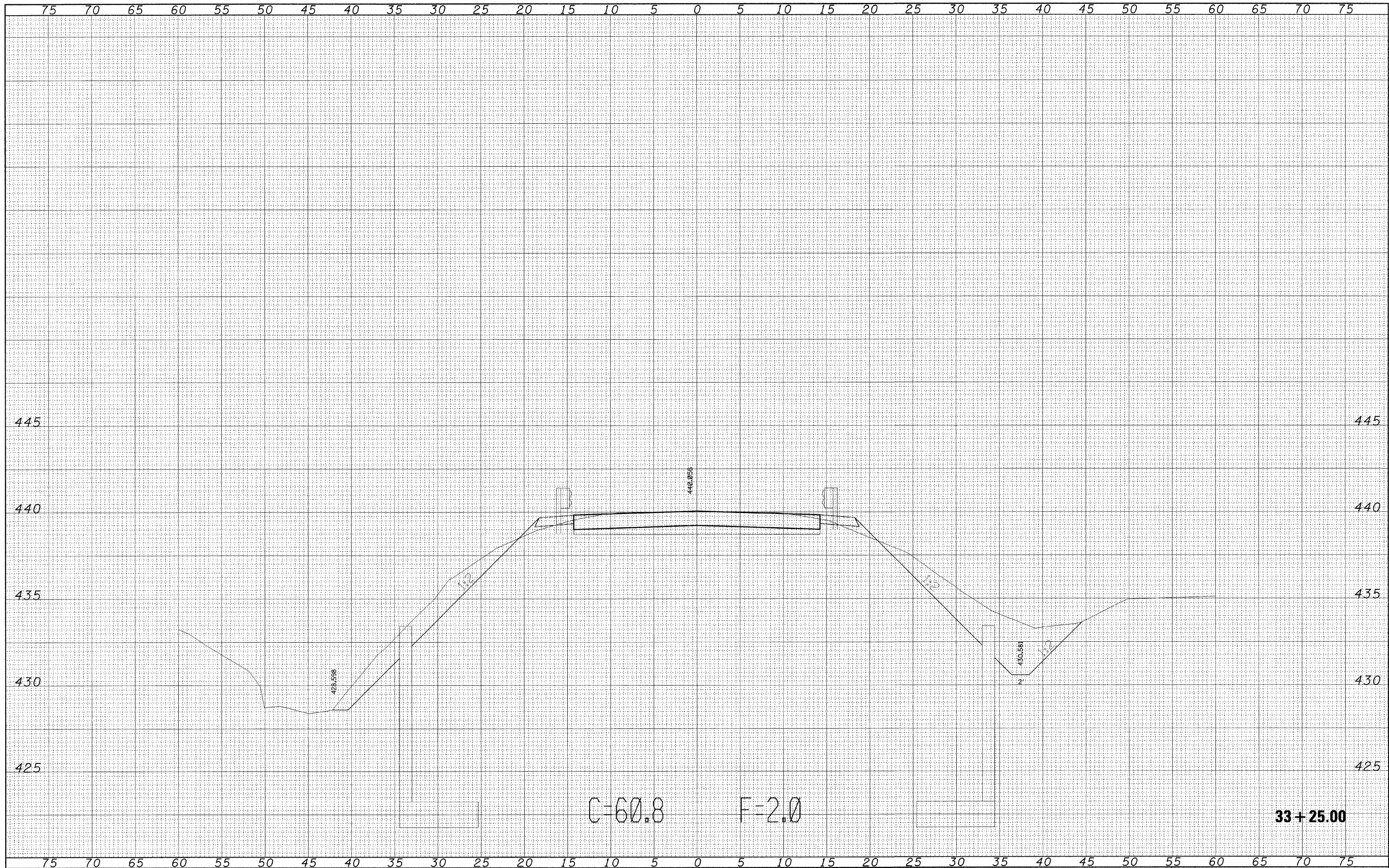
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PLOT SCALE = 5,0002' / IN.		CHECKED -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. 33+04.00 TO STA. 33+04.00				CONTRACT NO. 74213				
PLOT DATE = 3/19/2009		DATE -	REVISED -		ILLINOIS FED. AID PROJECT								

FINAL SURVEY	SURVEY	DATE
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FILE NAME =	USER NAME = biermanbj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
et\pwork\pwidot\BIERMANBJ\dms38580\XS213SHE	T.74213.dgn	DRAWN -	REVISED -		823	21B-1	EDWARDS	24	20				
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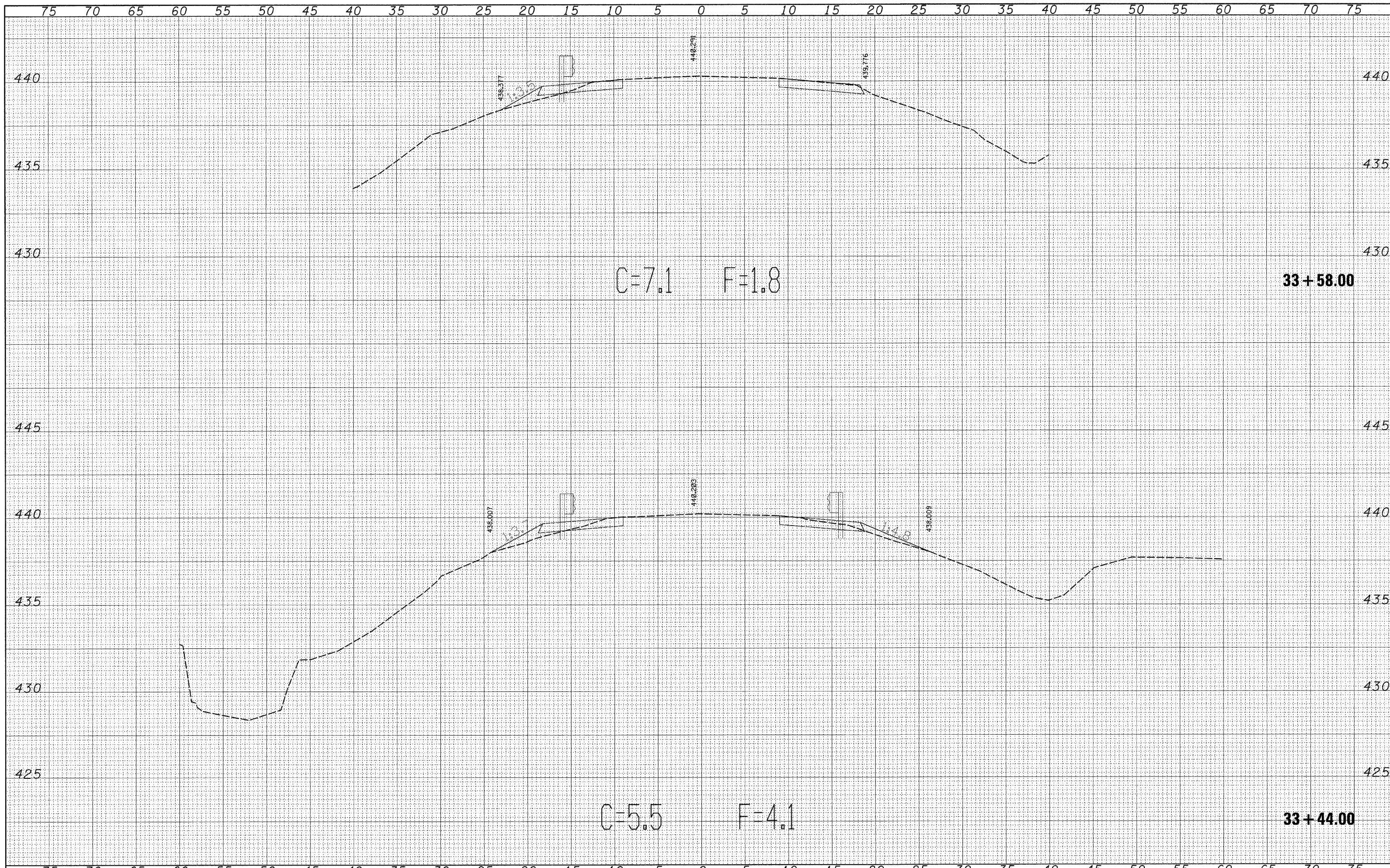
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NOTE BOOK NO.	PLOTTED	BY
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FILE NAME =	USER NAME = biermanbj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b>			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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	PLOT DATE = 3/19/2009	DATE -	REVISED -										

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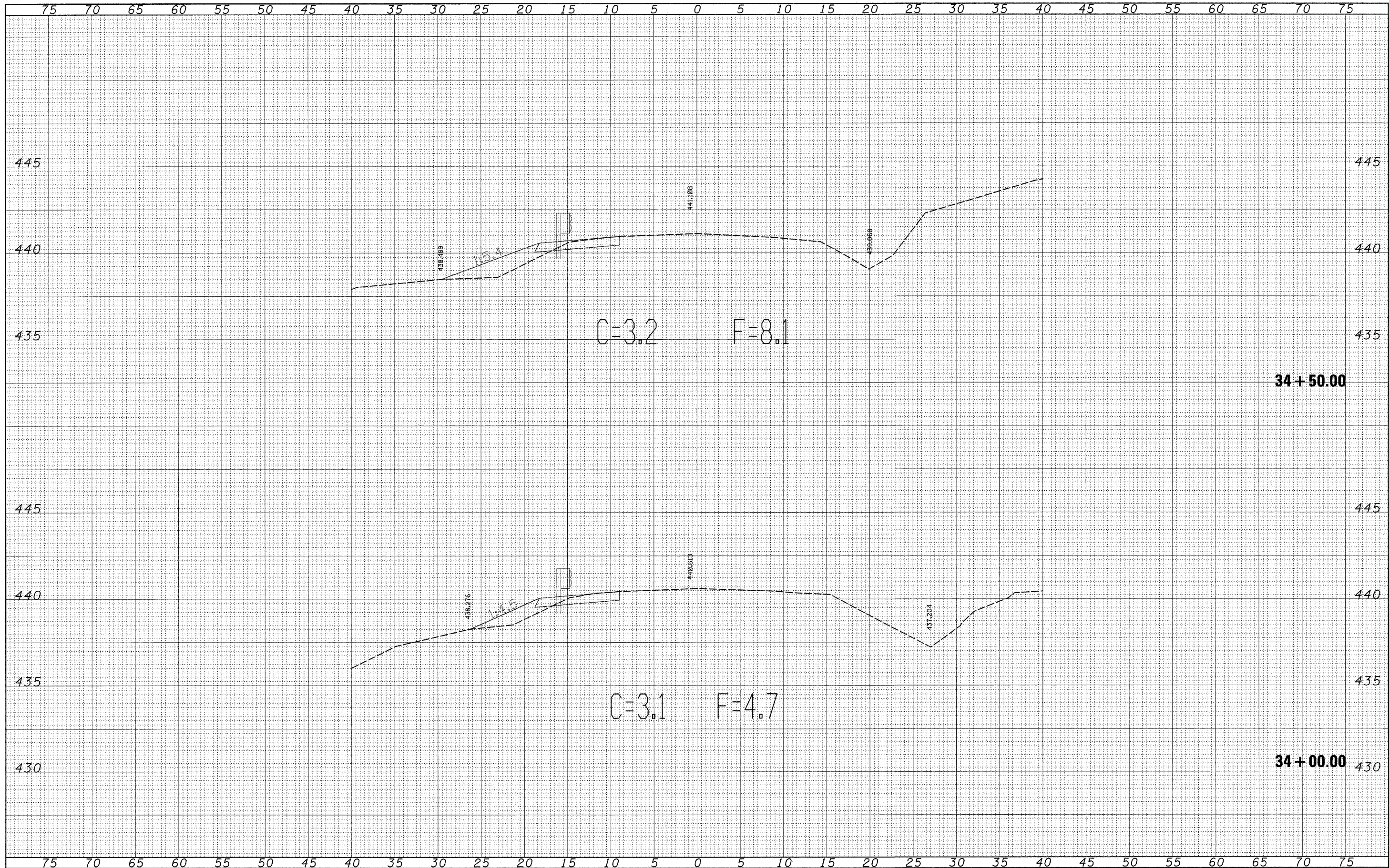
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FILE NAME =	USER NAME = biermanbj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b>	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
es:\pw_work\PKWIDOT\BIERMANBJ\dms38500\XS2135HE	T.74213.dgn	DRAWN -	REVISED -			823	21B-1	EDWARDS	24	22	
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PLOT DATE = 3/19/2009		DATE -	REVISED -			CONTRACT NO. 74213					

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AREAS CHECKED	
FINAL SURVEY	
NOTE BOOK	
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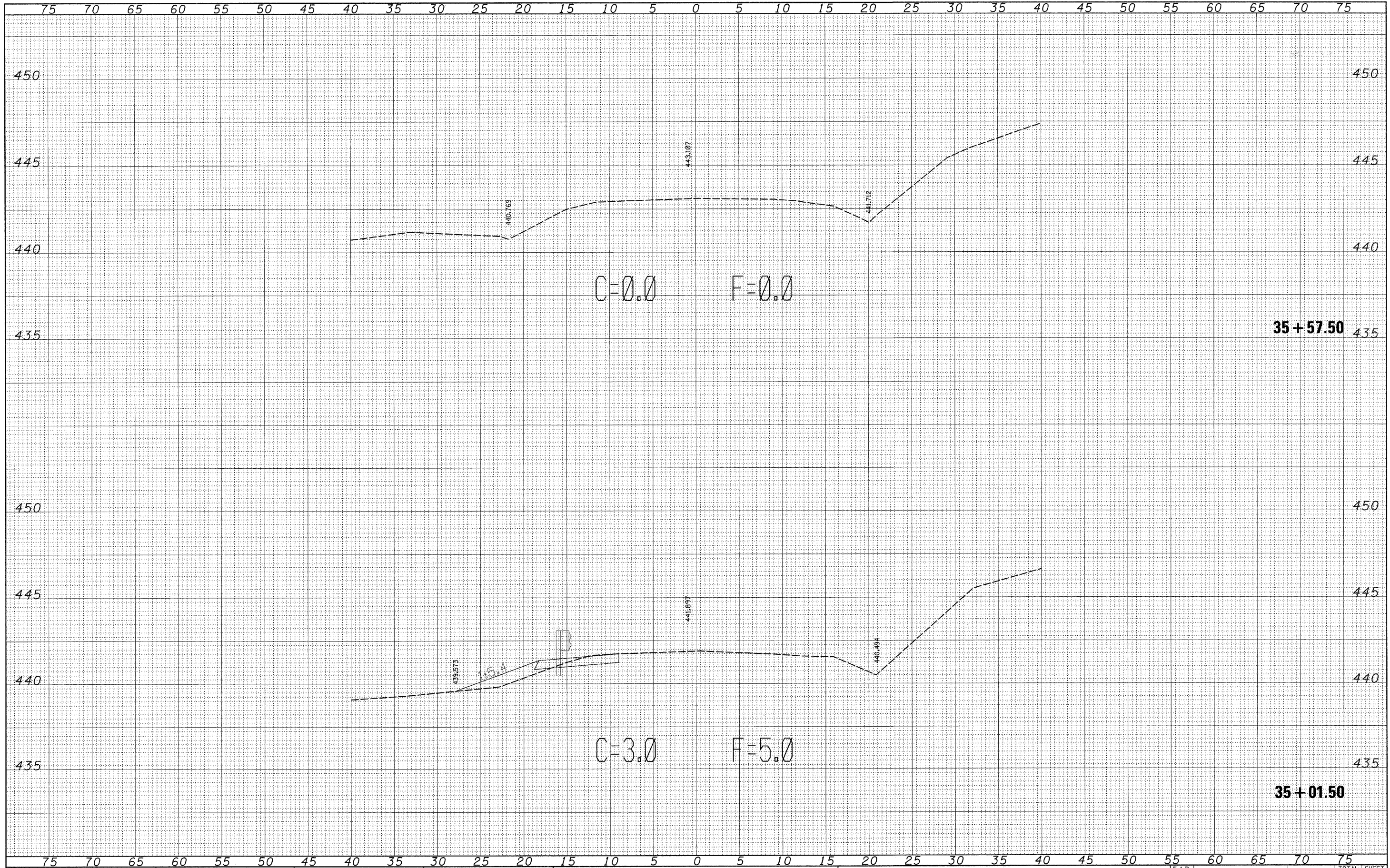
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REVISIONS	
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AREAS CHECKED	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	



FILE NAME =	USER NAME = biermanbj	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS SECTIONS</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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	PLOT DATE = 3/19/2009	DATE -	REVISED -						ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	DATE
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TEMPLATE	
AREAS CHECKED	

ORIGINAL SURVEY NO.	DATE
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 ca:\pw\work\FWKIDOT\BIERMAN\J\dms38500\XS2135HE

USER NAME = biermanbj	DESIGNED -	REVISED -
T:74213.dgn	DRAWN -	REVISED -
PLOT SCALE = 5.0002' / IN.	CHECKED -	REVISED -
PLOT DATE = 3/19/2009	DATE -	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS			
SCALE:	SHEET NO.	OF SHEETS	STA. 35+01.50 TO STA. 35+57.50

F.A.P. RTE. 823	SECTION 21B-1	COUNTY EDWARDS	TOTAL SHEETS 24	SHEET NO. 24
				CONTRACT NO. 74213
ILLINOIS FED. AID PROJECT				