

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 109	07-03126-00-BR	BUREAU	61	1
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 87528		

INDEX OF SHEETS 03-08-13 LETTING 037

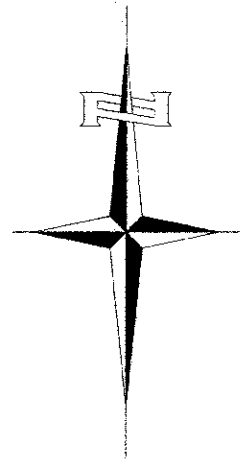
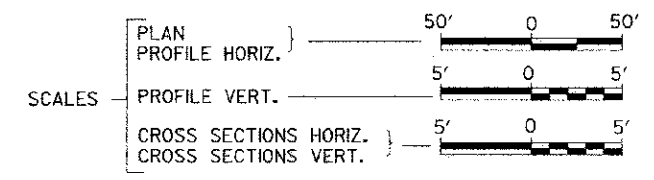
SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	GENERAL NOTES, DETAILS, TYPICAL SECTIONS
3.	SUMMARY OF QUANTITIES, SCHEDULES OF QUANTITIES
4.-7.	TRAFFIC CONTROL PLAN SHEETS
8.-10.	EROSION CONTROL PLAN SHEETS
11.-13.	PLAN AND PROFILE SHEETS
14.-24.	STRUCTURE PLANS SN 006-4553
25.-35.	STRUCTURE PLANS SN 006-4088
36.-46.	STRUCTURE PLANS SN 006-4089
47.-61.	CROSS SECTIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
HIGHWAY BRIDGE PROGRAM
BUREAU COUNTY
BUREAU & DOVER ROAD DISTRICTS
SECTION 07-03126-00-BR
TOWNSHIP ROAD 109 OVER WEST BUREAU CREEK
TOWNSHIP ROAD 109 OVER LIME CREEK TRIBUTARIES
PROJECT NO. BROS-0011(087)
JOB NUMBER C-93-089-12



REQUIRED HIGHWAY STANDARDS

000001-06
280001-07
515001-03
542401-01
635006-03
701901-02
BLR 21-9



EXISTING STRUCTURE SN 006-4075
SINGLE SPAN REINFORCED CONCRETE SLAB W/
CONCRETE RAIL ON CONCRETE CLOSED ABUTMENTS
±33'-0" BK TO BK, AND ±22'-0" O TO O DECK,
NO SKEW (TO BE REMOVED)

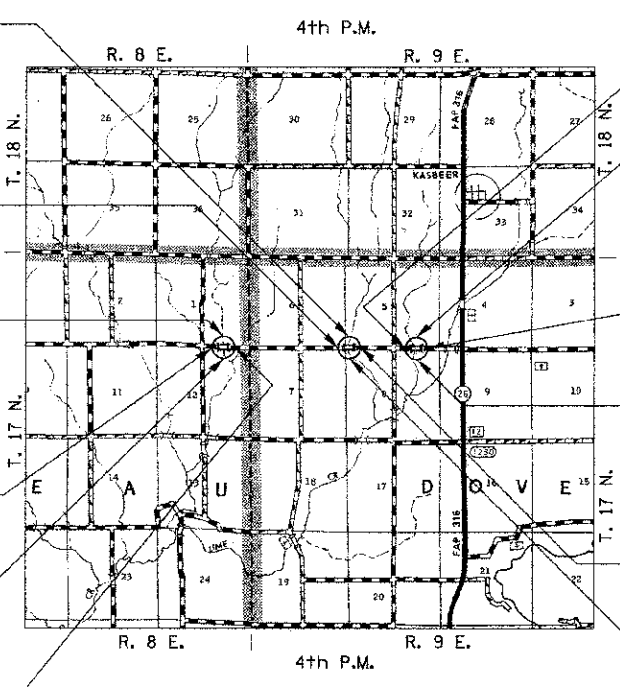
SN 006-4088
IMPROVEMENT BEGINS
STATION 37+75.00

EXISTING STRUCTURE SN 006-4039
SINGLE SPAN REINFORCED CONCRETE SLAB W/
CONCRETE RAIL ON CONCRETE CLOSED ABUTMENTS
±33'-0" BK TO BK, AND ±22'-0" O TO O DECK,
NO SKEW (TO BE REMOVED)

SN 006-4553
IMPROVEMENT BEGINS
STATION 19+00.00

PROPOSED STRUCTURE SN 006-4553
SINGLE SPAN 27" PPC DK BM STRUCTURE ON
CONCRETE SPILL-THRU PILE BENT ABUTMENTS
68'-0" BK TO BK, AND 24'-0" O TO O DECK,
NO SKEW

SN 006-4553
IMPROVEMENT ENDS
STATION 21+00.00



SN 006-4089
IMPROVEMENT BEGINS
STATION 57+75.00

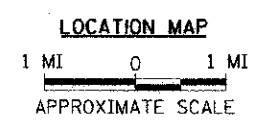
EXISTING STRUCTURE SN 006-4076
SINGLE SPAN REINFORCED CONCRETE SLAB W/
CONCRETE RAIL ON CONCRETE CLOSED ABUTMENTS
±22'-0" BK TO BK, AND ±21'-0" O TO O DECK,
NO SKEW (TO BE REMOVED)

SN 006-4089
IMPROVEMENT ENDS
STATION 61+25.00

PROPOSED STRUCTURE SN 006-4089
SINGLE SPAN 21" PPC DK BM STRUCTURE ON
CONCRETE SPILL-THRU PILE BENT ABUTMENTS
49'-6" BK TO BK, AND 24'-0" O TO O DECK,
NO SKEW

SN 006-4088
IMPROVEMENT ENDS
STATION 42+25.00

PROPOSED STRUCTURE SN 006-4088
SINGLE SPAN 21" PPC DK BM STRUCTURE ON
CONCRETE SPILL-THRU PILE BENT ABUTMENTS
52'-0" BK TO BK, AND 24'-0" O TO O DECK,
NO SKEW



NET LENGTH OF PROJECT = 1,000.00 FEET = 0.189 MILES
 DESIGN CLASSIFICATION: LOCAL ROAD (NON-URBAN)
 DESIGN ADT: 170 (13)
 DESIGN SPEED: 30 MPH

UTILITY COMPANIES

FRONTIER COMMUNICATIONS
ROSEVILLE, ILLINOIS

COMMONWEALTH EDISON CO.
ROCKFORD, ILLINOIS

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

BUREAU & DOVER ROAD DISTRICTS
CONTRACT NO. 87528

Hutchison Engineering, Inc.
 JACKSONVILLE-SHOREWOOD-PEORIA

2012 JOB#3156, 3184 & 3185

REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS
 58333
 2/21/2008
Li Eng. 11/3/2008
 SIGNATURE
 ENGINEERS SEAL

PLANS DESIGNED IN ACCORDANCE WITH BUREAU OF LOCAL ROADS AND STREETS MANUAL GUIDELINES FOR TWO LANE RURAL LOCAL ROADS - RECONSTRUCTION

APPROVED Jan 3 2013
D. J. ...
 BUREAU ROAD DISTRICT
 HIGHWAY COMMISSIONER

APPROVED Jan 3 2013
...
 DOVER ROAD DISTRICT
 HIGHWAY COMMISSIONER

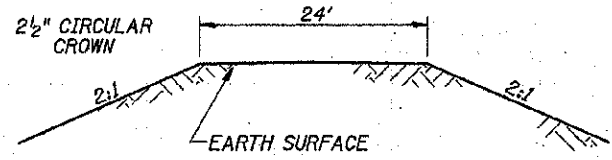
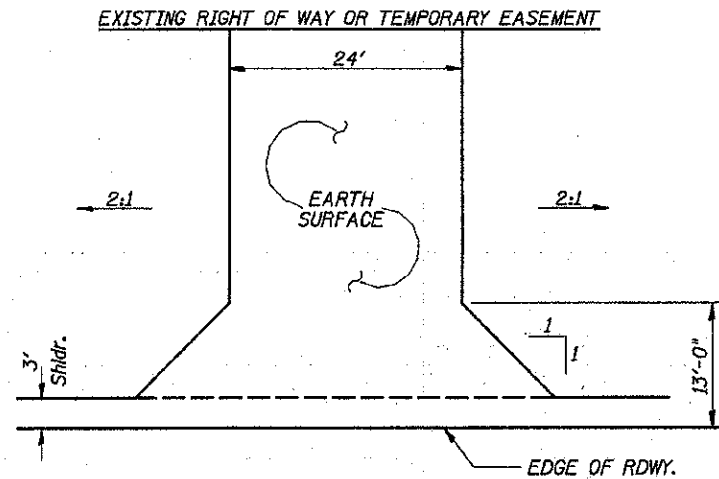
APPROVED Jan 3 2013
John C. ...
 BUREAU COUNTY ENGINEER

PASSED 1-3 2013
Donald R. ...
 LOCAL ROADS & STREETS ENGINEER

Released For Bid Based on Limited Review 1-3 2013
Paul ...
 DEPUTY DIRECTOR OF HIGHWAYS,
 REGION TWO ENGINEER

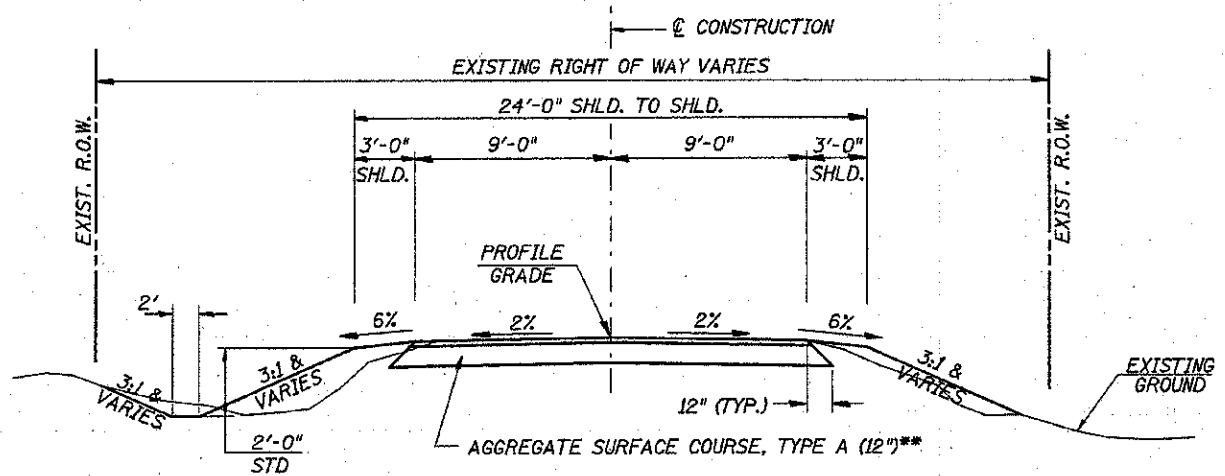
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

3156E001



PROPOSED FIELD ENTRANCES

STA 38+25 RT
STA 38+29 LT



PROPOSED TYPICAL SECTION

STA. 19+00.00 TO STA. 19+68.75
 STA. 20+36.75 TO STA. 21+00.00
 STA. 37+75.00 TO STA. 39+71.25
 STA. 40+23.25 TO STA. 42+25.00
 STA. 57+75.00 TO STA. 59+75.25
 STA. 60+24.75 TO STA. 61+25.00

BRIDGE OMISSIONS
 STA. 19+68.75 TO STA. 20+36.75
 STA. 39+71.25 TO STA. 40+23.25
 STA. 59+75.25 TO STA. 60+24.75

**TOP 3" CA-6 GRADATION
 BOTTOM 9" CA-2 GRADATION

GENERAL NOTES

THE REMOVAL OF EXISTING OIL & CHIP SURFACE AND GRAVEL OR CRUSHED STONE BASE COURSE WHICH MAY BE NECESSARY FOR THE CONSTRUCTION OF THE PROJECT SHALL BE REMOVED AS EARTH EXCAVATION AND NO COMPENSATION WILL BE ALLOWED FOR ADDITIONAL LABOR OR EQUIPMENT REQUIRED.

ALL WASTE OR UNDESIRABLE MATERIAL AS IDENTIFIED BY THE ENGINEER SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY AT THE CONTRACTOR'S EXPENSE.

ALL EXISTING PRIVATELY OWNED UTILITIES REQUIRING ADJUSTMENT WILL BE MADE BY THE UTILITY COMPANY INVOLVED. WHERE NO PROVISIONS HAVE BEEN MADE FOR ADJUSTMENTS ON THE PLANS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED DUE TO DELAYS OR INCONVENIENCES CAUSED BY THE SAID UTILITY ADJUSTMENTS.

THE PROFILE GRADE ELEVATIONS SHOWN ON THE PLAN AND PROFILE SHEETS AND IN THE STATION CROSS SECTIONS ARE TO THE TOP OF THE FINISHED SURFACE.

ALL EXISTING DRAINAGE STRUCTURES NOT BEING REMOVED BY THE CONTRACTOR THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION

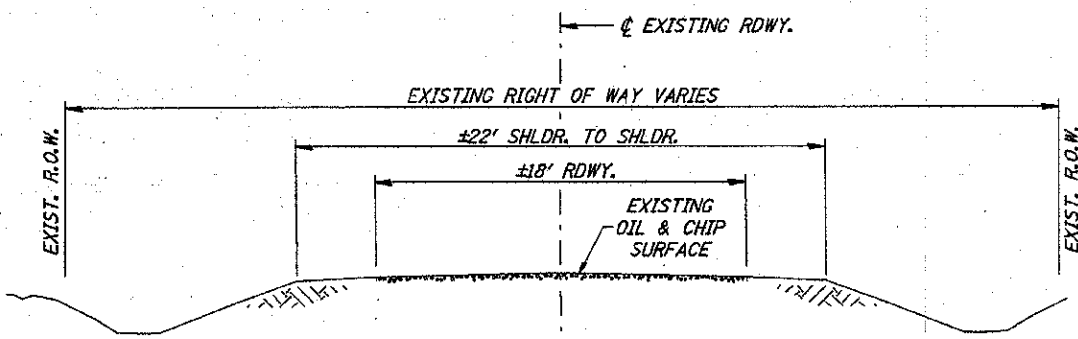
THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS REPRESENTS THE BEST KNOWLEDGE OF THE COUNTY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF UNDERGROUND INSTALLATIONS BEFORE STARTING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL INDEMNIFY THE COUNTY, ITS OFFICERS AND EMPLOYEES AGAINST ALL CLAIMS DUE TO DAMAGE TO CORPORATE OR PRIVATE PROPERTY RESULTING FROM HIS CONSTRUCTION OPERATIONS AS DESCRIBED IN ARTICLES 107.20 AND 107.26 OF THE STANDARD SPECIFICATIONS.

THE CONTRACTOR MAY BE REQUIRED TO CONDUCT SOME OF HIS GRADING AND TRENCHING OPERATIONS AROUND TRANSMISSION POLES AND UNDER TRANSMISSION LINES. THE ADDED COST OF SO DOING SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE PROPERTY MARKERS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT, HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

THE FINAL SURFACE OF ALL DISTURBED/EMBANKMENT AREAS SHALL BE SEED. THE TOP 4 INCHES OF THE SEEDED AREAS SHALL BE COHESIVE VEGETATION SUSTAINING SOIL SUBJECT TO THE APPROVAL OF THE ENGINEER. THE COST OF SHAPING THE SLOPES AND PROVIDING VEGETATION SUSTAINING SOIL WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. TOPSOIL MAY BE STRIPPED AND STOCKPILED FROM THE SITE OR HAULED IN FROM AN ALTERNATE LOCATION AS APPROVED BY THE ENGINEER.

ALL ELEVATIONS SHOWN REFER TO AN U.S.G.S. MEAN SEA LEVEL DATUM.



EXISTING TYPICAL SECTION

FILE NAME *	USER NAME = jautohton	DESIGNED -	REVISED -	BUREAU COUNTY TOWNSHIP ROAD 109 OVER WEST BUREAU CREEK & LIME CREEK TRIBUTARIES	GENERAL NOTES, TYPICAL SECTIONS, DETAILS	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
W:\bridge\3156-Bureau\3156-04-051901.dgn	PLLOT SCALE = 2,000 FT / IN.	DRAWN -	REVISED -			TR 109	07-03126-00-BR	BUREAU	61	2
PLLOT DATE = 1/8/2013	DATE -	CHECKED -	REVISED -			SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. 19+00.00 TO STA. 61+25.00	FED. ROAD DIST. NO. 7 (ILLINOIS)	FED. AID PROJECT BR05-0011087
		DATE -	REVISED -							CONTRACT NO. 87528

SUMMARY OF QUANTITIES

CODE NO.	ITEM	UNIT	SN 006-4553 IMPROVEMENTS	SN 006-4088 IMPROVEMENTS	SN 006-4089 IMPROVEMENTS	TOTAL QUANTITIES
20200100	EARTH EXCAVATION	CU YD	85	235	200	520
20300100	CHANNEL EXCAVATION	CU YD	400	120	190	710
① 20700220	POROUS GRANULAR EMBANKMENT	CU YD	27.6	22.6	22.6	72.8
25100630	EROSION CONTROL BLANKET	SQ YD	636	2,066	1,426	4,128
28000305	TEMPORARY DITCH CHECKS	FOOT	24	36	12	72
28000400	PERIMETER EROSION BARRIER	FOOT	245	620	640	1,505
28000500	INLET AND PIPE PROTECTION	EACH	—	2	—	2
③ 28300400	AGGREGATE DITCH	TON	7	—	9	16
40200100	AGGREGATE SURFACE COURSE, TYPE A	TON	175	532	400	1,107
② 50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1	—	—	1
② 50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	—	1	—	1
① 50100500	REMOVAL OF EXISTING STRUCTURES NO. 3	EACH	—	—	1	1
50105220	PIPE CULVERT REMOVAL	FOOT	—	87	—	87
50300223	CONCRETE STRUCTURES	CU YD	21.0	19.8	19.8	60.6
50300280	CONCRETE ENCASEMENT	CU YD	2.6	2.6	2.6	7.8
① 50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	—	1,204	1,144	2,348
① 50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1,588	—	—	1,588
50800105	REINFORCEMENT BARS	POUND	2,380	2,300	2,300	6,980
Δ 50900205	STEEL RAILING, TYPE S1	FOOT	136	104	99	339
51200957	FURNISHING METAL SHELL PILES 12"X0.250"	FOOT	256	256	224	736
51202305	DRIVING PILES	FOOT	256	256	224	736
51203200	TEST PILE METAL SHELLS	EACH	2	2	2	6
51204650	PILL SHOES	EACH	10	10	10	30
51500100	NAME PLATES	EACH	1	1	1	3
54200220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	—	74	—	74
54215550	METAL END SECTIONS 15"	EACH	—	4	—	4
67100100	MOBILIZATION	L SUM	0.33	0.33	0.33	1
① X2501100	SEEDING, CLASS 3 (SPECIAL)	ACRE	0.1	0.4	0.3	0.8
① X2810208	STONE RIPRAP, CLASS A4 (SPECIAL)	TON	375	275	260	910
① XT010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	0.33	0.33	0.33	1
① Z0013798	CONSTRUCTION LAYOUT	L SUM	0.33	0.33	0.33	1
28000250	TEMPORARY EROSION CONTROL SEEDING	LB	200	200	200	600

Δ SPECIALTY ITEMS

① SEE SPECIAL PROVISIONS

EARTHWORK SUMMARY

STATION TO STATION	EARTH EXCAVATION		CHANNEL EXCAVATION		STRUCTURE EXCAVATION		FILL		WASTE (SHORTAGE)	
	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD
SN 006-4553 IMPROVEMENTS										
RDWY 19+00.00 - 19+68.75	43						44		(12)	
RDWY 20+36.75 - 21+00.00	42						13		19	
CHANNEL			400							
STRUCTURE					65					
SN 006-4088 IMPROVEMENTS										
RDWY 37+75.00 - 39+71.25	153						101		14	
RDWY 40+23.25 - 42+25.00	80						37		23	
CHANNEL			120							
STRUCTURE					60					
SN 006-4089 IMPROVEMENTS										
RDWY 57+75.00 - 59+75.25	122						27		65	
RDWY 60+24.75 - 61+25.00	76						21		36	
CHANNEL			190							
STRUCTURE					60					
TOTAL	516		710		185		243		145	
USE	520		710		*185		-		145	

(@ 25% SHRINKAGE)

*STRUCTURE EXCAVATION SHALL BE COMPLETED IN ACCORDANCE WITH SECTION 502 OF THE STANDARD SPECIFICATIONS. INDIVIDUAL PAYMENT FOR STRUCTURE EXCAVATION WILL NOT BE MADE, BUT SHALL BE IN ACCORDANCE WITH SECTION 502.13.

EROSION CONTROL BLANKET

STATION TO STATION	SIDE	WIDTH	LENGTH	AREA (SQ YD)
SN 006-4553 IMPROVEMENTS				
19+00 - 19+69	LEFT	VARIES	69'	168
19+00 - 19+69	RIGHT	VARIES	69'	157
20+37 - 21+00	LEFT	VARIES	63'	154
20+37 - 21+00	RIGHT	VARIES	63'	157
SN 006-4088 IMPROVEMENTS				
37+75 - 39+71	LEFT	VARIES	196'	478
37+75 - 39+82	RIGHT	VARIES	207'	649
40+23 - 42+25	LEFT	VARIES	202'	510
40+23 - 42+25	RIGHT	VARIES	202'	429
SN 006-4089 IMPROVEMENTS				
57+75 - 59+75	LEFT	VARIES	200'	465
57+75 - 59+75	RIGHT	VARIES	200'	508
60+25 - 61+25	LEFT	VARIES	100'	218
60+25 - 61+25	RIGHT	VARIES	100'	235
TOTAL				4,128

AGGREGATE SURFACE COURSE, TYPE A

STATION TO STATION	WIDTH	LENGTH	TON
SN 006-4553 IMPROVEMENTS			
19+00.00 - 19+50.00	18.85' AVG.	50.00'	66
19+50.00 - 19+68.75	19.00'	18.75'	25
20+36.75 - 20+50.00	19.00'	13.25'	18
20+50.00 - 21+00.00	18.87' AVG.	50.00'	66
SN 006-4088 IMPROVEMENTS			
37+75.00 - 38+25.00	19.16' AVG.	50.00'	67
38+25.00 - 39+71.25	19.00'	146.25'	195
40+23.25 - 41+75.00	19.00'	151.75'	202
41+75.00 - 42+25.00	19.56' AVG.	50.00'	68
SN 006-4089 IMPROVEMENTS			
57+75.00 - 58+25.00	19.20' AVG.	50.00'	67
58+25.00 - 59+75.25	19.00'	150.25'	200
60+24.75 - 60+75.00	19.00'	50.25'	67
60+75.00 - 61+25.00	18.89' AVG.	50.00'	66
TOTAL			1,107

PIPE CULVERTS, CLASS D, TYPE 1 15"

STATION	SIDE	FOOT
SN 006-4088 IMPROVEMENTS		
38+25	RIGHT	36
38+29	LEFT	38
TOTAL		74

PERIMETER EROSION BARRIER

STATION TO STATION	SIDE	FOOT
SN 006-4553 IMPROVEMENTS		
19+00 - 19+69	LEFT	85
20+37 - 21+00	LEFT	80
20+37 - 21+00	RIGHT	80
SN 006-4088 IMPROVEMENTS		
37+75 - 38+00	LEFT	25
38+07 - 38+44	RIGHT	40
38+09 - 38+48	LEFT	40
39+00 - 39+71	LEFT	85
40+23 - 42+25	LEFT	220
40+23 - 42+25	RIGHT	210
SN 006-4089 IMPROVEMENTS		
57+75 - 59+75	LEFT	215
57+75 - 59+75	RIGHT	235
60+25 - 61+25	RIGHT	115
60+50 - 61+25	LEFT	75
TOTAL		1,505

INLET AND PIPE PROTECTION

STATION	SIDE	EACH
SN 006-4088 IMPROVEMENTS		
38+07	RIGHT	1
38+09	LEFT	1
TOTAL		2

AGGREGATE DITCH

STATION TO STATION	SIDE	WIDTH	TON
SN 006-4553 IMPROVEMENTS			
19+50 - 19+69	RIGHT	6'	7
SN 006-4089 IMPROVEMENTS			
60+25 - 60+50	LEFT	6'	9
TOTAL			16

METAL END SECTIONS 15"

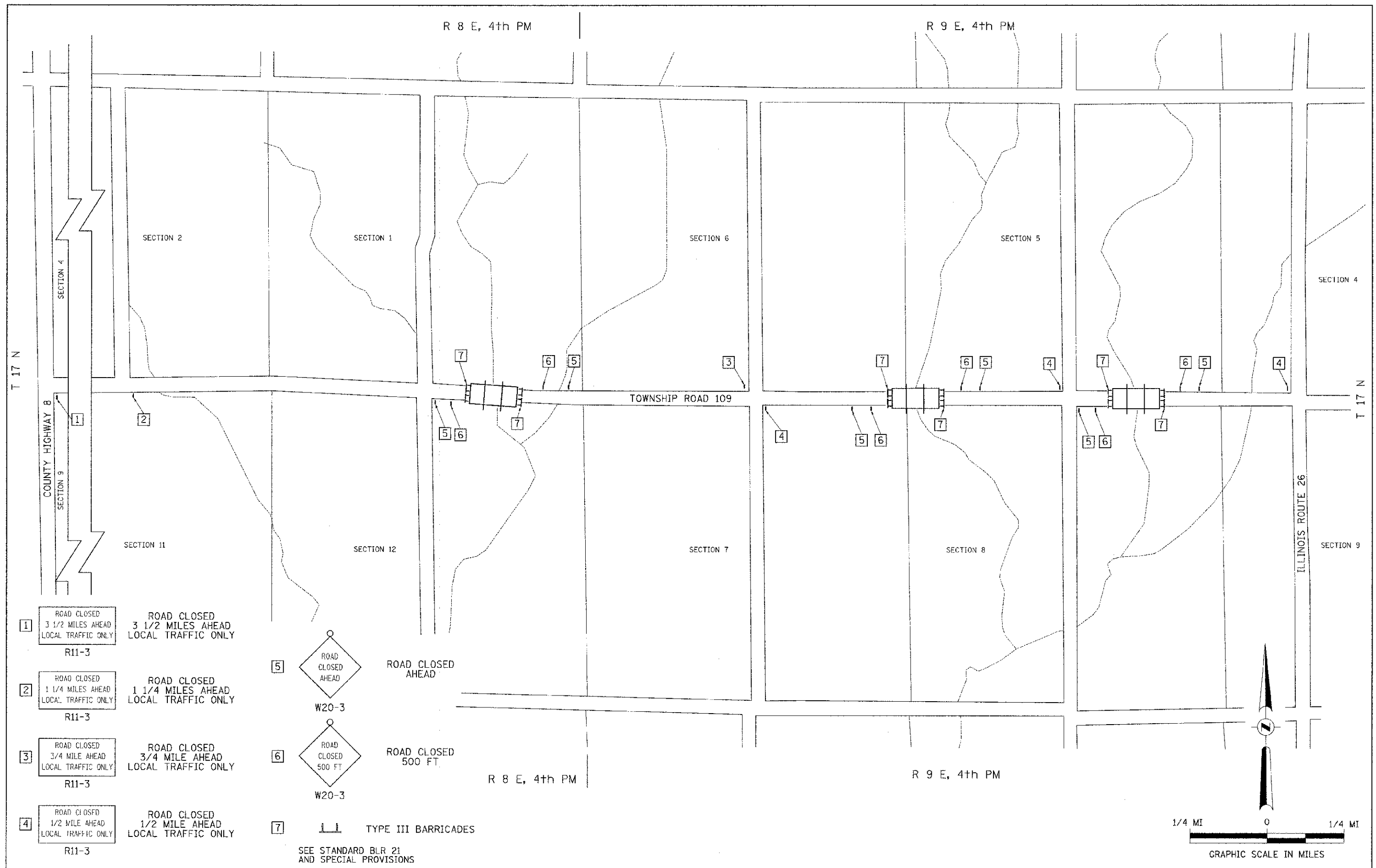
STATION	SIDE	EACH
SN 006-4088 IMPROVEMENTS		
38+08	RIGHT	1
38+09	LEFT	1
38+43	RIGHT	1
38+47	LEFT	1
TOTAL		4

TEMPORARY DITCH CHECKS

STATION	SIDE	FOOT
SN 006-4553 IMPROVEMENTS		
19+45	RIGHT	12
19+75	RIGHT	12
SN 006-4088 IMPROVEMENTS		
39+00	LEFT	12
39+15	RIGHT	12
39+82	RIGHT	12
SN 006-4089 IMPROVEMENTS		
60+15	LEFT	12
TOTAL		72

PIPE CULVERT REMOVAL

STATION	SIZE	SIDE	FOOT
SN 006-4088 IMPROVEMENTS			
38+25	18"/12"	RIGHT	50
38+29	12"	LEFT	20
39+70	36"	LEFT	17
TOTAL			87



- 1** ROAD CLOSED
3 1/2 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
- 2** ROAD CLOSED
1 1/4 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
- 3** ROAD CLOSED
3/4 MILE AHEAD
LOCAL TRAFFIC ONLY
R11-3
- 4** ROAD CLOSED
1/2 MILE AHEAD
LOCAL TRAFFIC ONLY
R11-3

- 5** ROAD CLOSED AHEAD
W20-3
- 6** ROAD CLOSED 500 FT.
W20-3

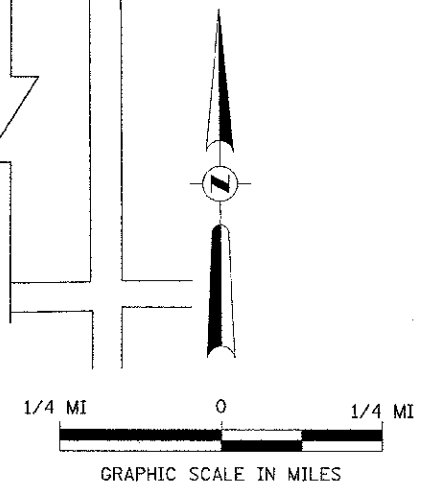
7 TYPE III BARRICADES
SEE STANDARD BLR 21
AND SPECIAL PROVISIONS

FILE NAME = Y:\bridge\3158-Bureau\3158-04-05\001.dgn	USER NAME = jhutchison	DESIGNED -	REVISED -	BUREAU COUNTY TOWNSHIP ROAD 109 OVER WEST BUREAU CREEK & LIME CREEK TRIBUTARIES	TRAFFIC CONTROL PLAN CONCURRENT CLOSURE	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLCT SCALE = 1/8" = 1' / 11/16"	DRAWN -	REVISED -			TR 109	07-03126-CO-BR	BUREAU	61	4
	PLCT DATE = 12/20/2012	CHECKED -	REVISED -			CONTRACT NO. 87528				
		DATE -	REVISED -			FED. ROAD DIST. NO. 7 [ILLINOIS]			FED. AID PROJECT BROS-0011087	
				SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. 19+00.00 TO STA. 61+25.00				



- 1 ROAD CLOSED
2 1/2 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
- 2 ROAD CLOSED
1 1/4 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
- 3 ROAD CLOSED
3/4 MILE AHEAD
LOCAL TRAFFIC ONLY
R11-3
- 4 ROAD CLOSED
AHEAD
W20-3
- 5 ROAD CLOSED
500 FT
W20-3
- 6 TYPE III BARRICADES

SEE STANDARD BLR 21
AND SPECIAL PROVISIONS



FILE NAME = V:\Bridge\3156-Bureau\3156h801.cgn	USER NAME = jhutahson	DESIGNED -	REVISED -	BUREAU COUNTY TOWNSHIP ROAD 109 OVER WEST BUREAU CREEK	TRAFFIC CONTROL PLAN INDIVIDUAL CLOSURE SN 006-4553	RTE. TR 109	SECTION 07-03126-00-BR	COUNTY BUREAU	TOTAL SHEETS 61	SHEET NO. 5
PLOT SCALE = 1/8000" = 1" IN.	CHECKED -	DATE - 9/01/12	REVISED -	SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA. 19+00.00 TO STA. 21+00.00	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BRDS-0013087	
PLOT DATE = 12/28/2012	DATE -						CONTRACT NO. 87528			

R 8 E, 4th PM

R 9 E, 4th PM

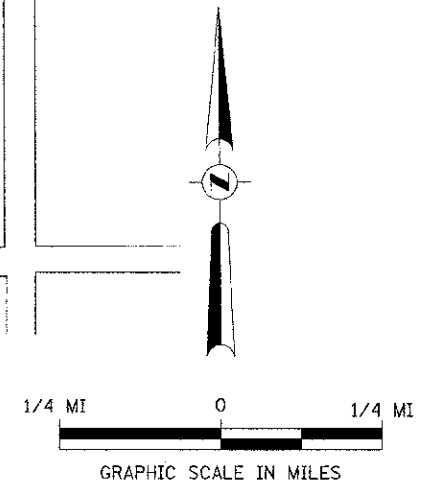
T 17 N

T 17 N



- 1 ROAD CLOSED
1 1/4 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3
- 2 ROAD CLOSED
1/2 MILE AHEAD
LOCAL TRAFFIC ONLY
R11-3
- 3 ROAD CLOSED
AHEAD
W20-3
- 4 ROAD CLOSED
500 FT
W20-3
- 5 TYPE III BARRICADES

SEE STANDARD BLR 21 AND SPECIAL PROVISIONS



FILE NAME * Y:\Bridges\3184-Bureau\3184\001.dgn	USER NAME * jhutchison	DESIGNED -	REVISED -	BUREAU COUNTY TOWNSHIP ROAD 109 OVER LIME CREEK TRIBUTARY	TRAFFIC CONTROL PLAN INDIVIDUAL CLOSURE SN 006-4088			RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE * 1:8000 / IN.	DRAWN -	REVISED -		TR 109	07-03126-00-BR	BUREAU	61	6			
	PLOT DATE * 12/28/2012	CHECKED -	REVISED -		CONTRACT NO. 87528							
		DATE -	REVISED -		SCALE: NONE SHEET NO. 1 OF 1 SHEETS STA. 37+75.00 TO STA. 42+25.00			FED. ROAD DIST. NO. 7 [ILLINOIS] FED. AID PROJECT BROS-00110871				

R 8 E, 4th PM

R 9 E, 4th PM



- 1

ROAD CLOSED 1 1/4 MILES AHEAD LOCAL TRAFFIC ONLY	ROAD CLOSED 1 1/4 MILES AHEAD LOCAL TRAFFIC ONLY
R11-3	
- 2

ROAD CLOSED 1/2 MILE AHEAD LOCAL TRAFFIC ONLY	ROAD CLOSED 1/2 MILE AHEAD LOCAL TRAFFIC ONLY
R11-3	
- 3

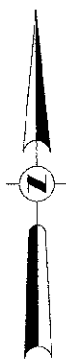
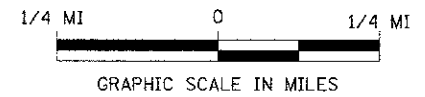
	ROAD CLOSED AHEAD
W20-3	
- 4

	ROAD CLOSED 500 FT
W20-3	
- 5
 TYPE III BARRICADES

SEE STANDARD BLR 21 AND SPECIAL PROVISIONS






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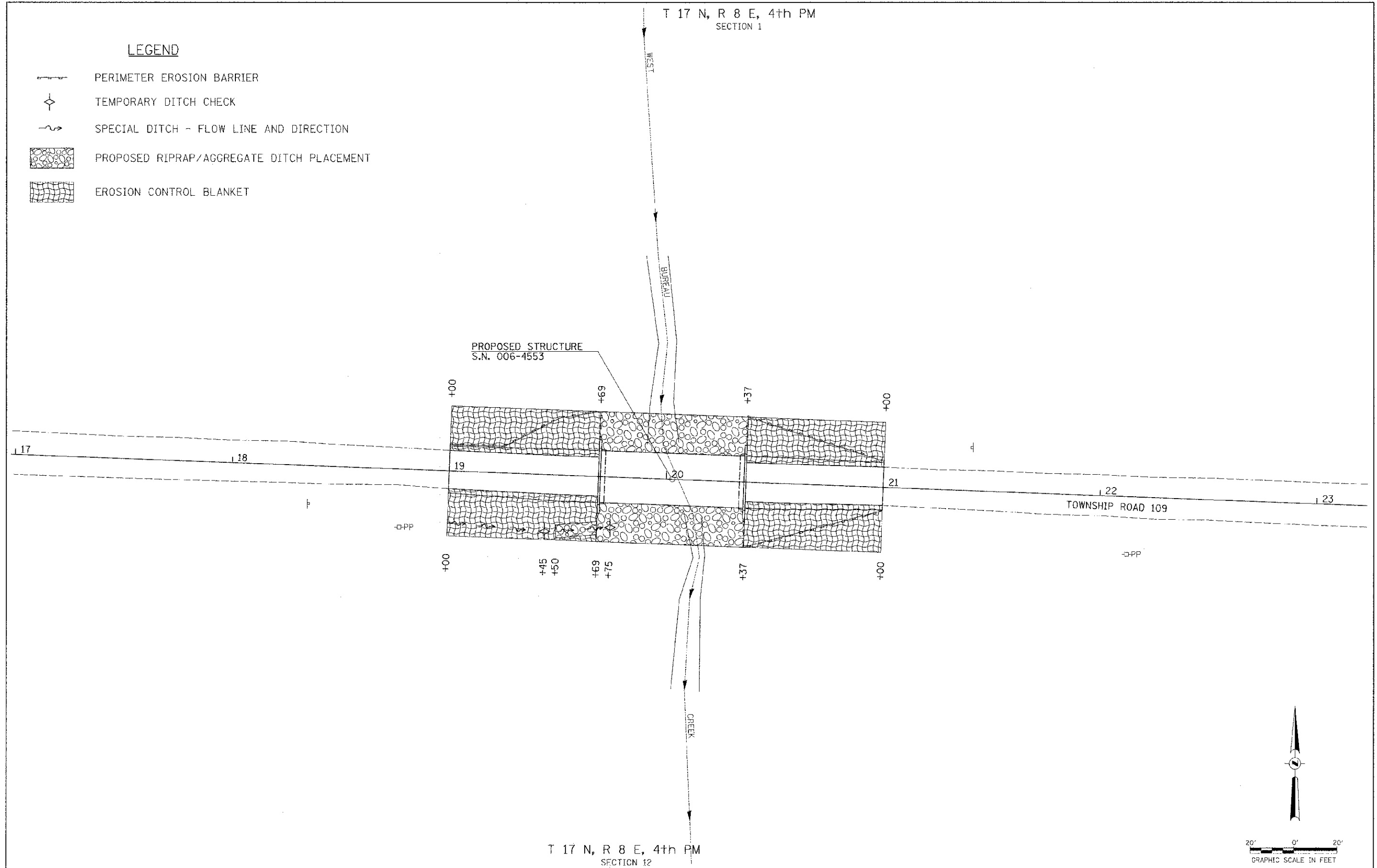
R 9 E, 4th PM



FILE NAME * V:\Design\3165 Bureau\31651201.dgn	USER NAME * jhutchison	DESIGNED -	REVISED -	BUREAU COUNTY TOWNSHIP ROAD 109 OVER LIME CREEK TRIBUTARY	TRAFFIC CONTROL PLAN INDIVIDUAL CLOSURE SN 006-4089	RT# TR 109	SECTION 07-03126-00-BR	COUNTY BUREAU	TOTAL SHEETS 61	SHEET NO. 7
PLOT SCALE = 1:3000 @ 1/4" = 1/4 MI		CHECKED -	REVISED -	SCALE: NONE		SHEET NO. 1 OF 1 SHEETS		STA. 57+75.00 TO STA. 61+25.00		CONTRACT NO. 87528
PLOT DATE = 12/20/2012		DATE -	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BROS-0011087		

LEGEND

-  PERIMETER EROSION BARRIER
-  TEMPORARY DITCH CHECK
-  SPECIAL DITCH - FLOW LINE AND DIRECTION
-  PROPOSED RIPRAP/AGGREGATE DITCH PLACEMENT
-  EROSION CONTROL BLANKET

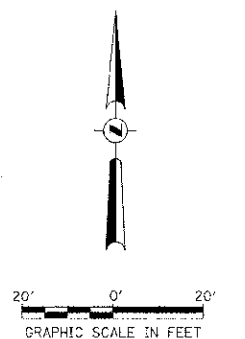


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		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

**BUREAU COUNTY
TOWNSHIP ROAD 109 OVER
WEST BUREAU CREEK**

EROSION CONTROL PLAN SN 006-4553	
SCALE: 1" = 20'	SHEET NO. 1 OF 1 SHEETS STA. 19+00.00 TO STA. 21+00.00







RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 109	07-03126-00-BR	BUREAU	61	8
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT BROS-0011087	

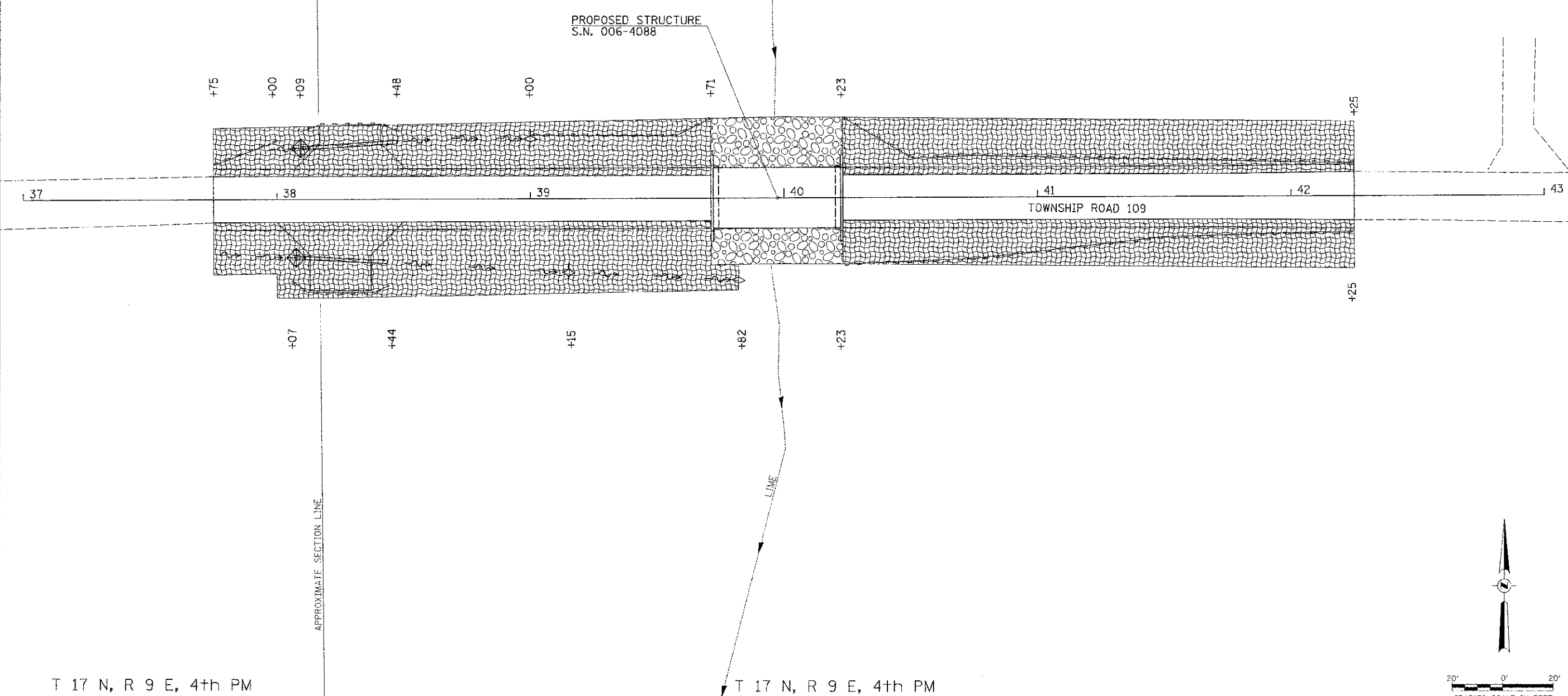


T 17 N, R 9 E, 4th PM
SECTION 6

T 17 N, R 9 E, 4th PM
SECTION 5

LEGEND

-  PERIMETER EROSION BARRIER
-  TEMPORARY DITCH CHECK
-  INLET & PIPE PROTECTION
-  SPECIAL DITCH - FLOW LINE AND DIRECTION
-  PROPOSED RIPRAP PLACEMENT
-  EROSION CONTROL BLANKET



T 17 N, R 9 E, 4th PM
SECTION 7

T 17 N, R 9 E, 4th PM
SECTION 8

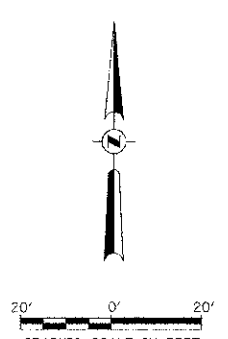
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		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

**BUREAU COUNTY
TOWNSHIP ROAD 109 OVER
LIME CREEK TRIBUTARY**

**EROSION CONTROL PLAN
SN 006-4088**

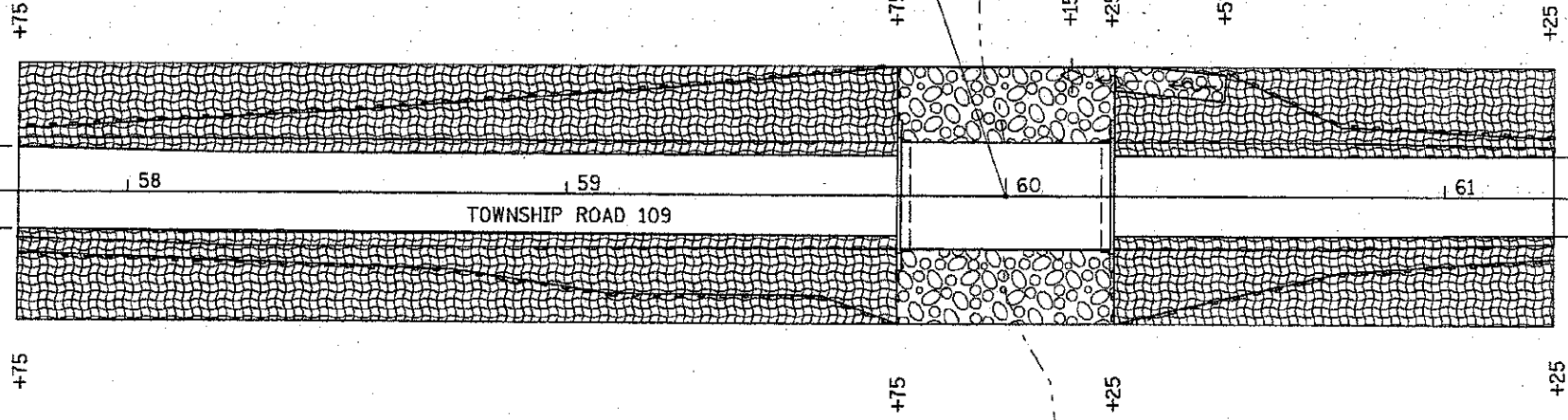
SCALE: 1" = 20' SHEET NO. 1 OF 1 SHEETS STA. 37+75.00 TO STA. 42+25.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 109	07-03126-00-BR	BUREAU	61	9
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT BROS-0011087	








T 17 N, R 9 E, 4th PM
SECTION 5

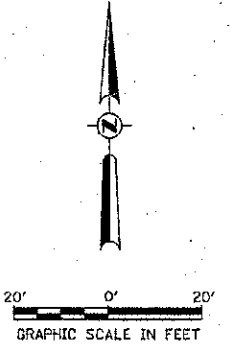
PROPOSED STRUCTURE
S.N. 006-4089



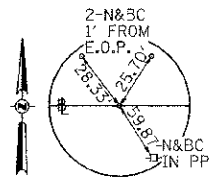
LEGEND

-  PERIMETER EROSION BARRIER
-  TEMPORARY DITCH CHECK
-  SPECIAL DITCH - FLOW LINE AND DIRECTION
-  PROPOSED RIPRAP/AGGREGATE DITCH PLACEMENT
-  EROSION CONTROL BLANKET

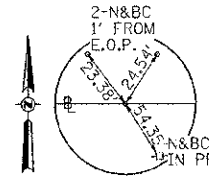
T 17 N, R 9 E, 4th PM
SECTION 8



FILE NAME * VA:Bridge\3185-Bureau\3185S08L.dgn	USER NAME * _hutohian	DESIGNED -	REVISED -	BUREAU COUNTY TOWNSHIP ROAD 109 OVER LIME CREEK TRIBUTARY	EROSION CONTROL PLAN SN 006-4089			RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 48.0000' / IN.	DRAWN -	REVISED -					TR 109	07-03126-00-BR	BUREAU	61	10
	PLOT DATE = 1/8/2013	CHECKED -	REVISED -					CONTRACT NO. 87528				
	DATE -	REVISED -		SCALE: 1" = 20'	SHEET NO. 1 OF 1 SHEETS	STA. 57+75.00 TO STA. 61+25.00	FED. ROAD DIST. NO. 7 ILLINOIS	FED. AID PROJECT BR05-0010071				



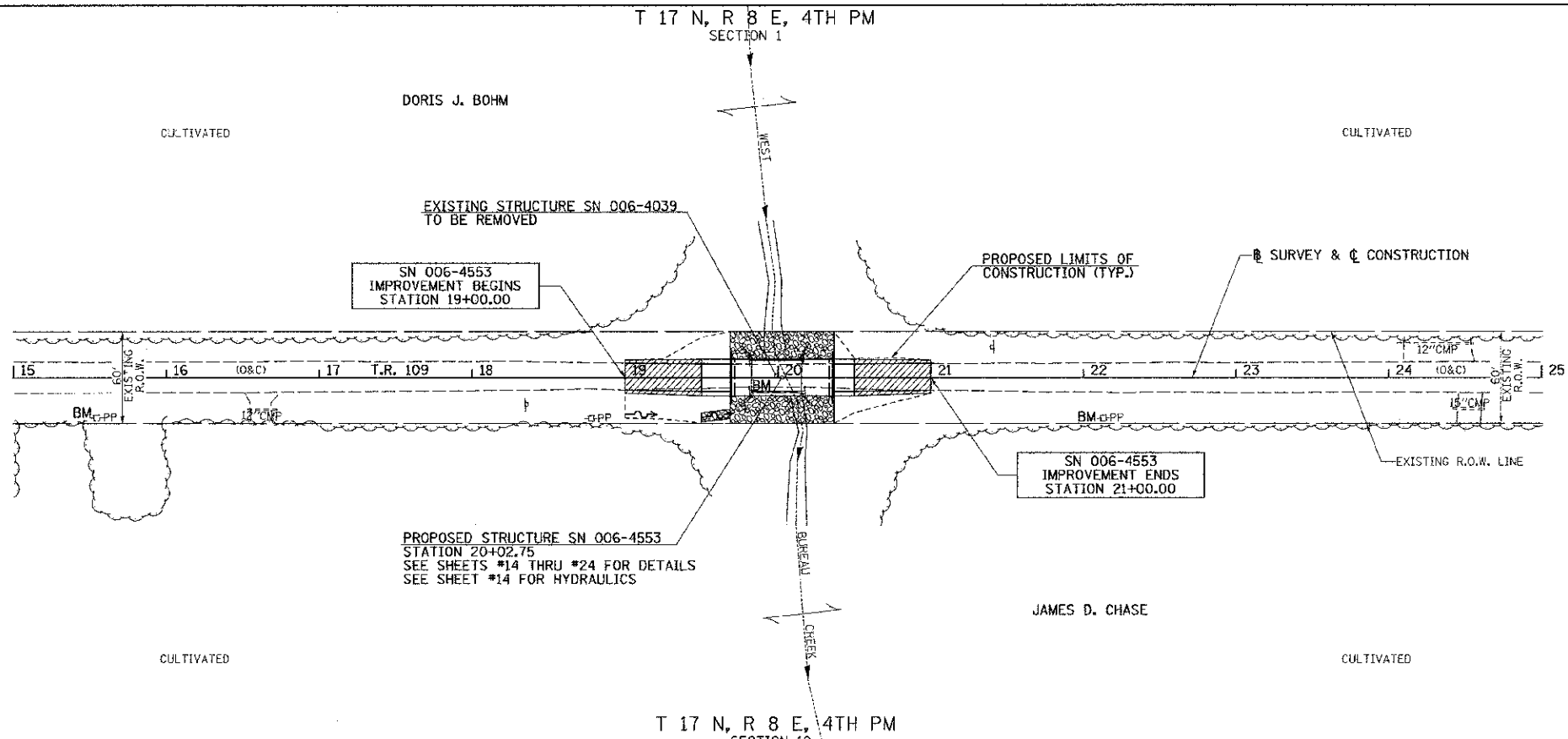
PT STA 14+99.66
SURVEY SPIKE



PT STA 25+00.46
SURVEY SPIKE

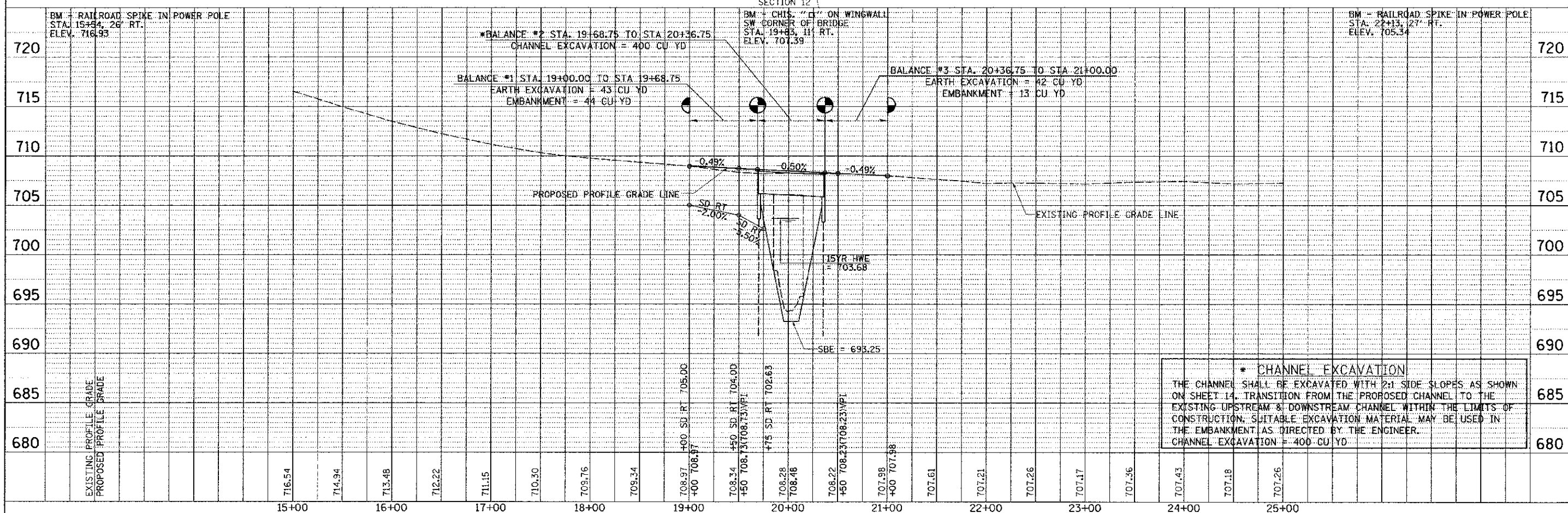
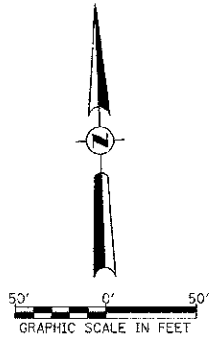
DATE	
BY	
REVISIONS	
NO.	
DATE	
BY	
DESCRIPTION	
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DESCRIPTION	

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REVISIONS	
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DESCRIPTION	



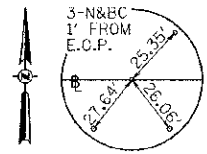
LEGEND

- TRANSITION TO OR FROM EXISTING TO PROPOSED TYPICAL PAVEMENT
- PROPOSED RIPRAP PLACEMENT
- SPECIAL DITCH WITH FLOW DIRECTION

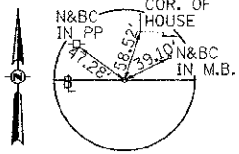


*** CHANNEL EXCAVATION**
THE CHANNEL SHALL BE EXCAVATED WITH 2:1 SIDE SLOPES AS SHOWN ON SHEET 14. TRANSITION FROM THE PROPOSED CHANNEL TO THE EXISTING UPSTREAM & DOWNSTREAM CHANNEL WITHIN THE LIMITS OF CONSTRUCTION. SUITABLE EXCAVATION MATERIAL MAY BE USED IN THE EMBANKMENT AS DIRECTED BY THE ENGINEER.
CHANNEL EXCAVATION = 400 CU YD

FILE NAME =	USER NAME = cthomas	DESIGNED -	REVISED -	BUREAU COUNTY TOWNSHIP ROAD 109 OVER WEST BUREAU CREEK	PLAN AND PROFILE SN 006-4553		RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
V:\Bridges\3156-Bureau\3156.dwg		DRAWN -	REVISED -		TR 109	07-03126-00-BR	BUREAU	61	11			
SHT_PLNPROF		CHECKED -	REVISED -		SCALE: 1"=50'		SHEET 1 OF 1 SHEETS		STA. 19+00.00 TO STA. 21+00.00		CONTRACT NO. 87528	
		DATE -	REVISED -		FED. ROAD DIST. NO. 7 [ILLINOIS]		FED. AID PROJECT DROS-0011007					

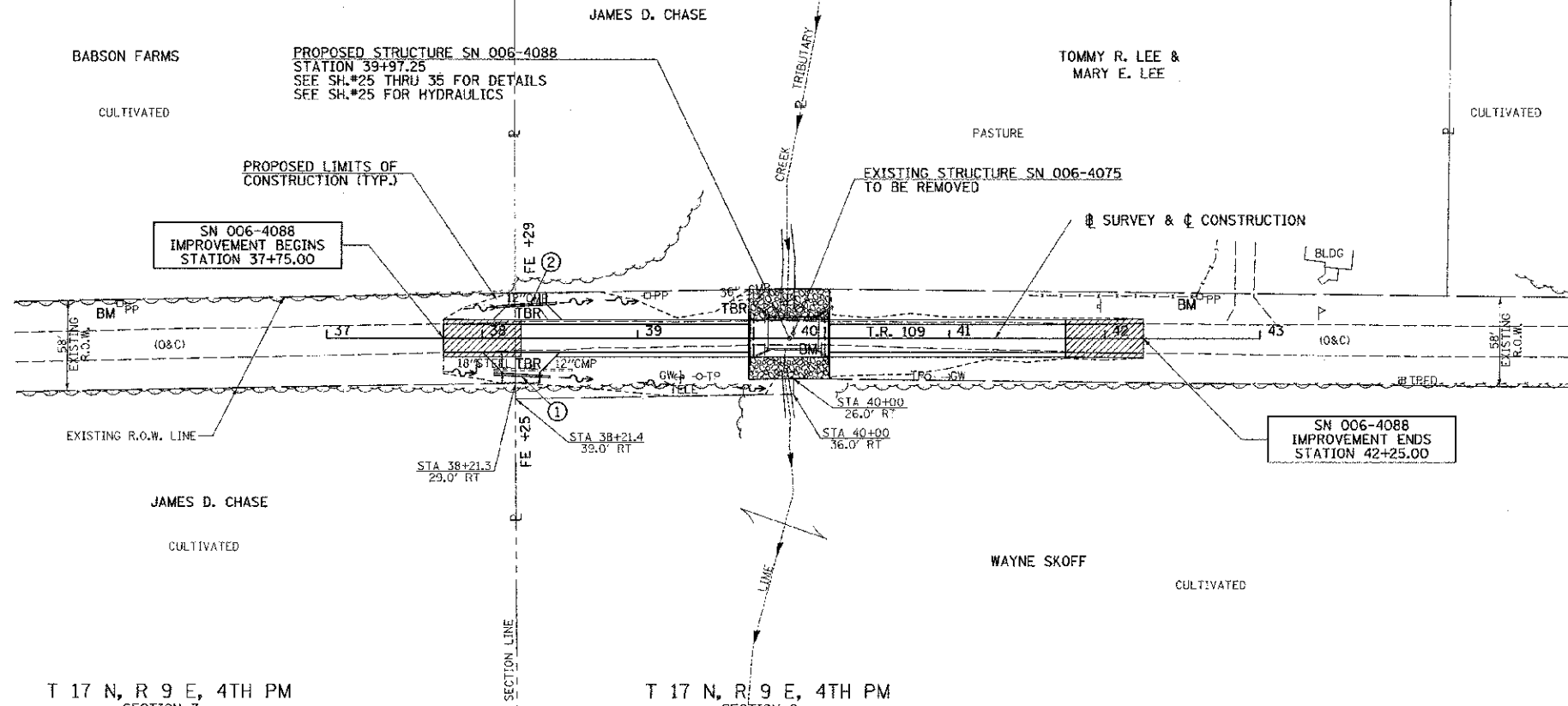


POT STA 37+00.00
SURVEY SPIKE



POT STA 43+00.00
SURVEY SPIKE

T 17 N, R 9 E, 4TH PM SECTION 6
T 17 N, R 9 E, 4TH PM SECTION 5

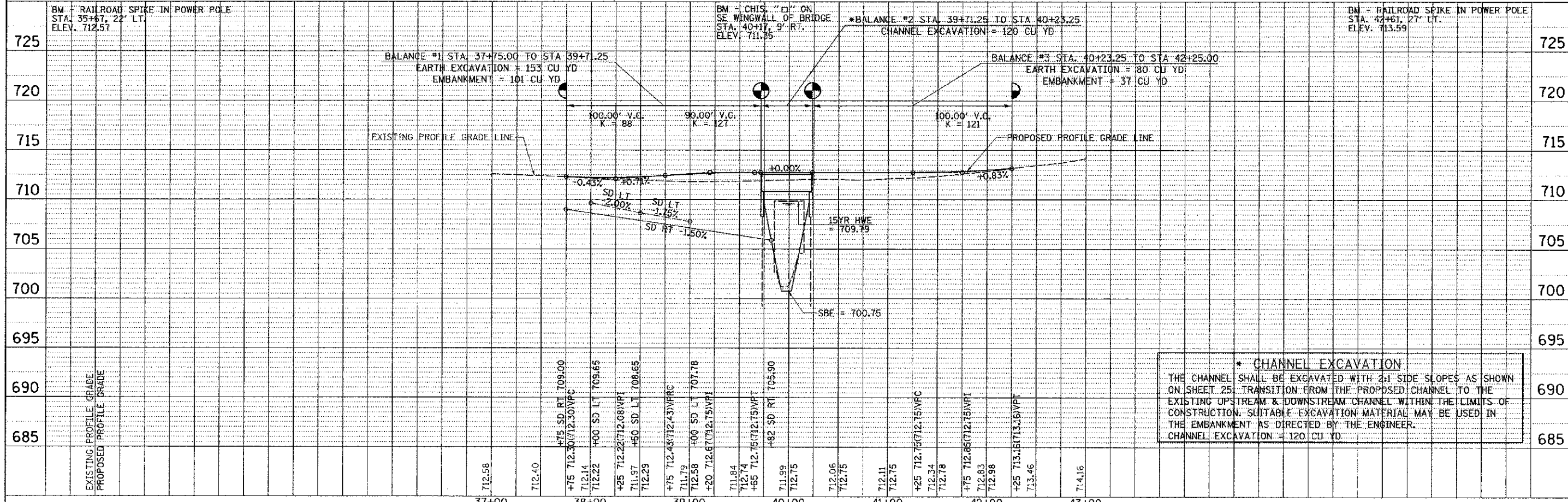


- ① PROPOSED PIPE CULVERT
2 - METAL END SEC., STD. 542401
CLASS D, TYPE 1, 15"x36"
USFL 708.51, STA 38+07.53, 23.0' RT
DSFL 707.97, STA 38+43.49, 24.8' RT
- ② PROPOSED PIPE CULVERT
2 - METAL END SEC., STD. 542401
CLASS D, TYPE 1, 15"x36"
USFL 709.46, STA 38+09.48, 20.2' LT
DSFL 708.70, STA 38+47.40, 22.6' LT

LEGEND

- TRANSITION TO OR FROM EXISTING TO PROPOSED TYPICAL PAVEMENT
- PROPOSED RIPRAP PLACEMENT
- SPECIAL DITCH WITH FLOW DIRECTION

T 17 N, R 9 E, 4TH PM SECTION 7
T 17 N, R 9 E, 4TH PM SECTION 8

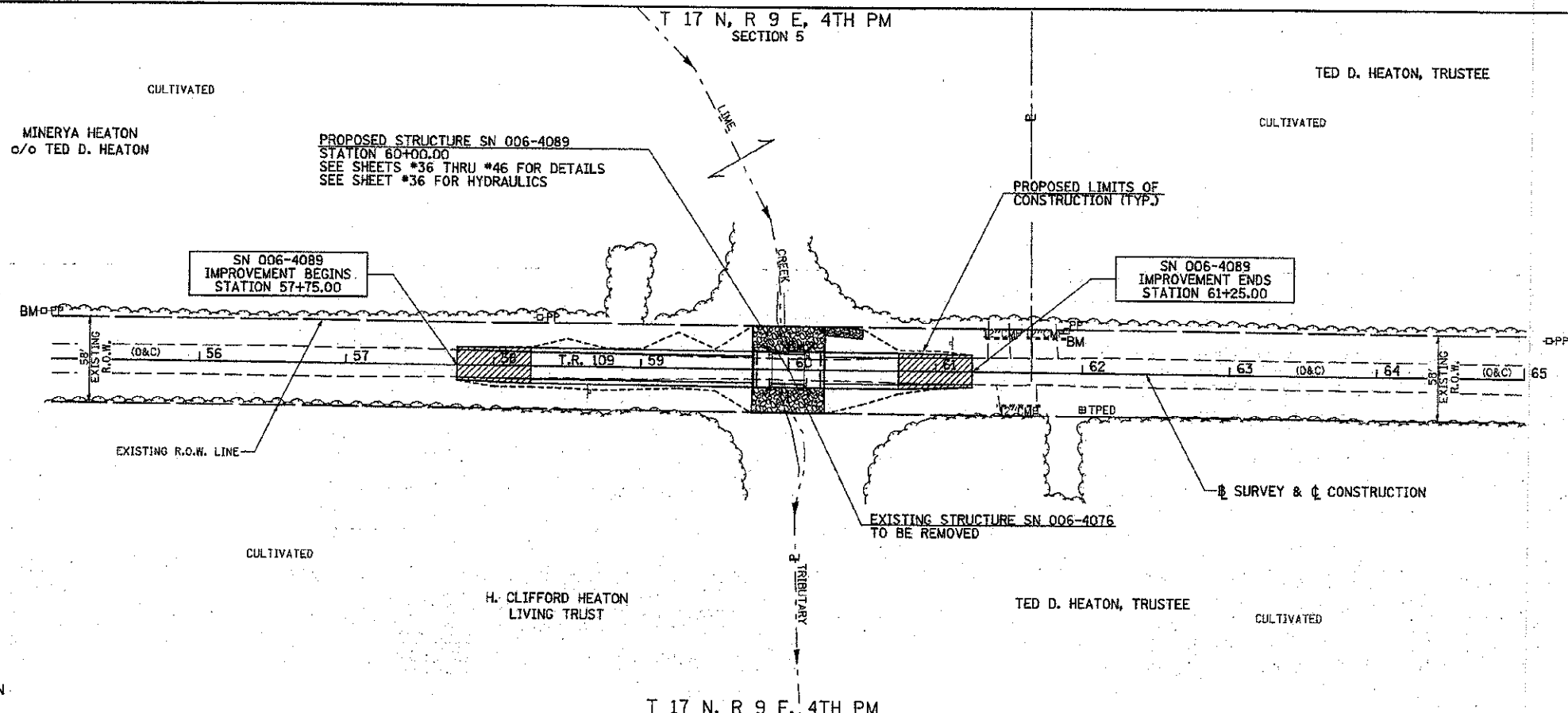
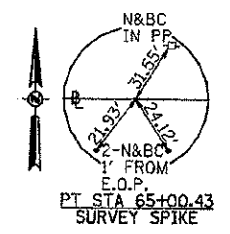
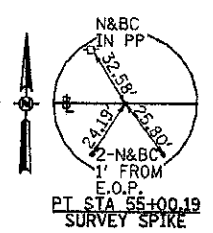


*** CHANNEL EXCAVATION**
THE CHANNEL SHALL BE EXCAVATED WITH 2:1 SIDE SLOPES AS SHOWN ON SHEET 25. TRANSITION FROM THE PROPOSED CHANNEL TO THE EXISTING UPSTREAM & DOWNSTREAM CHANNEL WITHIN THE LIMITS OF CONSTRUCTION. SUITABLE EXCAVATION MATERIAL MAY BE USED IN THE EMBANKMENT AS DIRECTED BY THE ENGINEER.
CHANNEL EXCAVATION = 120 CU YD.

PLAN	DATE
BY	
CHECKED	
DATE	

PROFILE	DATE
BY	
CHECKED	
DATE	

FILE NAME =	USER NAME = cthomas	DESIGNED -	REVISED -	BUREAU COUNTY TOWNSHIP ROAD 109 OVER LIME CREEK TRIBUTARY	PLAN AND PROFILE SN 006-4088	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
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		DATE -	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BROS-00110871		CONTRACT NO. 87528	

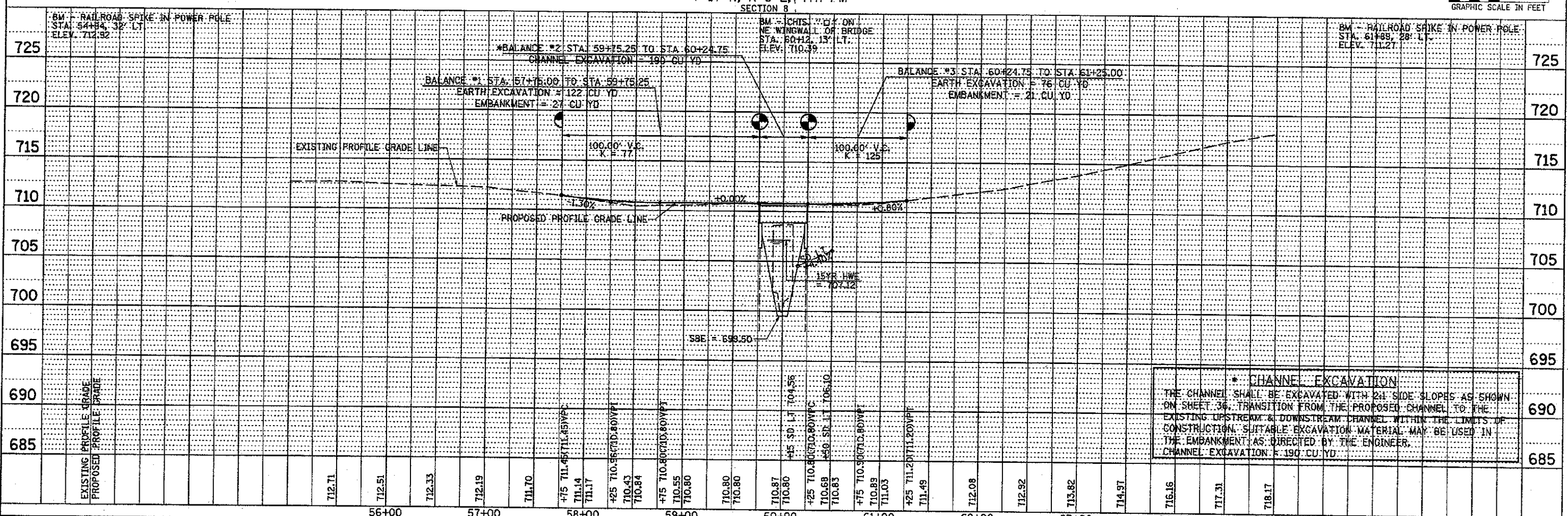


LEGEND

- TRANSITION TO OR FROM EXISTING TO PROPOSED TYPICAL PAVEMENT
- PROPOSED RIPRAP PLACEMENT
- SPECIAL DITCH WITH FLOW DIRECTION

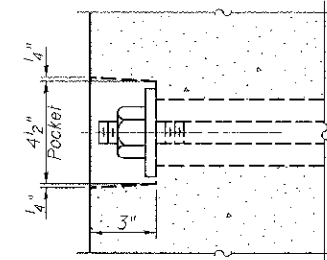
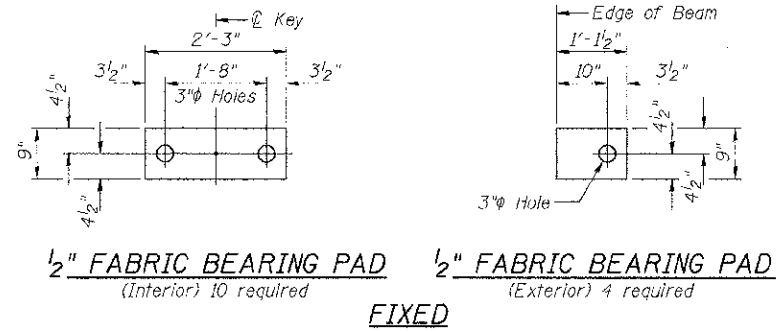
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PROFILE	DATE
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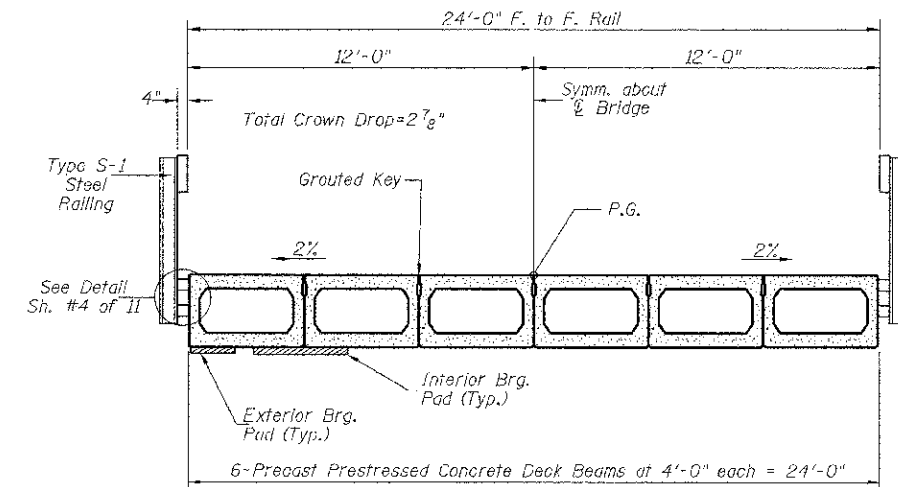
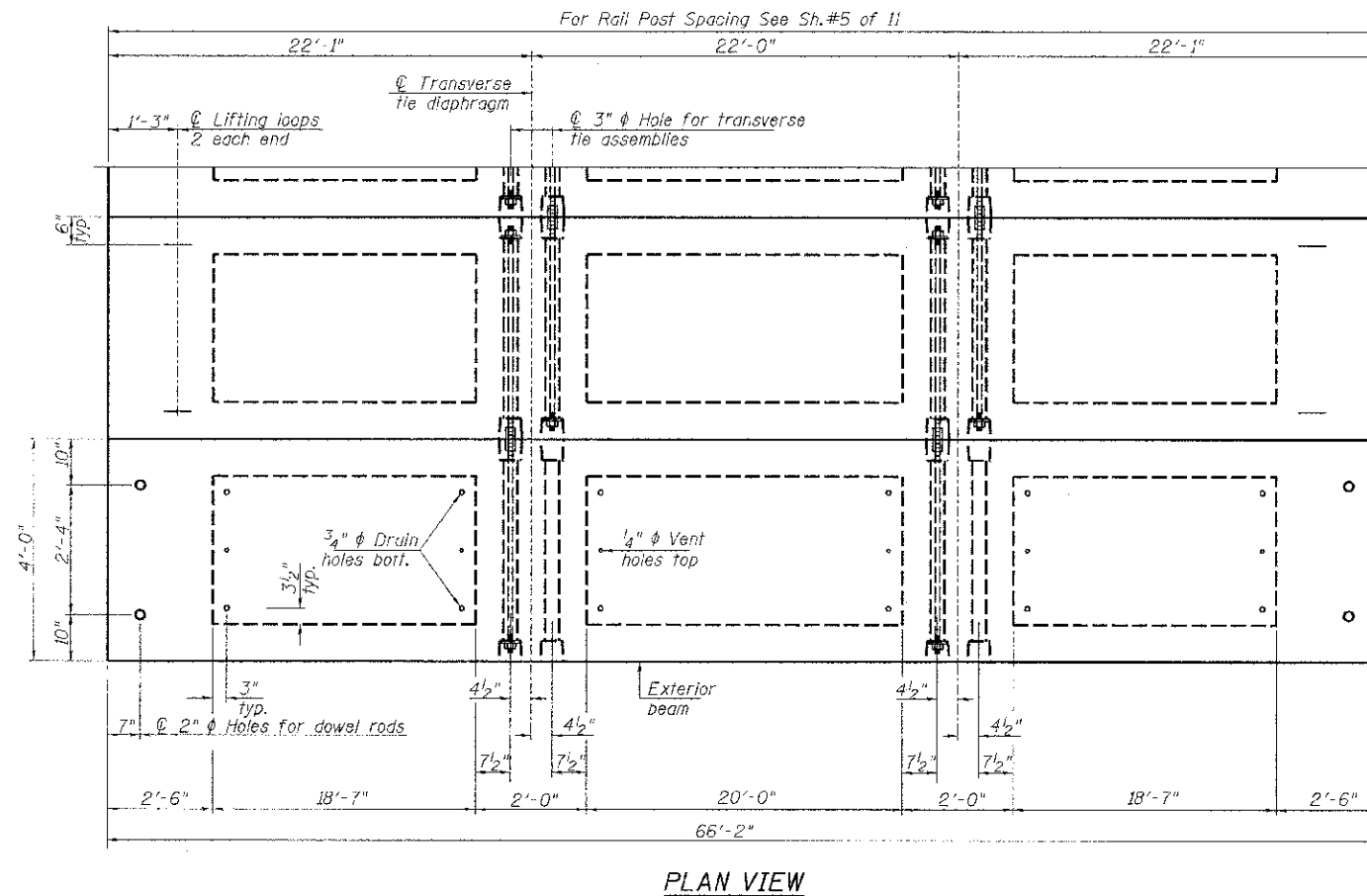
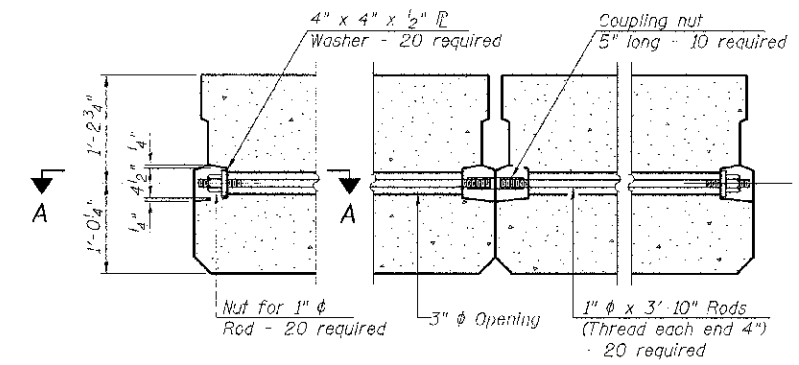


*** CHANNEL EXCAVATION**
 THE CHANNEL SHALL BE EXCAVATED WITH 2:1 SIDE SLOPES AS SHOWN ON SHEET 36. TRANSITION FROM THE PROPOSED CHANNEL TO THE EXISTING UPSTREAM & DOWNSTREAM CHANNEL WITHIN THE LIMITS OF CONSTRUCTION. SUITABLE EXCAVATION MATERIAL MAY BE USED IN THE EMBANKMENT AS DIRECTED BY THE ENGINEER.
 CHANNEL EXCAVATION = 190 CU YD

FILE NAME =	USER NAME = jhutchison	DESIGNED -	REVISED -	BUREAU COUNTY TOWNSHIP ROAD 109 OVER LIME CREEK TRIBUTARY	PLAN AND PROFILE SN 006-4089	SCALE: 1"=50'	SHEET 1 OF 1 SHEETS	STA. 57+75.00 TO STA. 61+25.00	RT. 07-03126-00-BR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
V:\Bridges\3185-Bureau\3185P201.plt		DRAWN -	REVISED -			CONTRACT NO. 87528							
SHT_PLNPROF		CHECKED -	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS							
		DATE -	REVISED -			FED. AID PROJECT BR03-C011087							



SECTION A-A



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
① Precast Prestressed Concrete Deck Beams (27" Depth)	SQ FT	1,588
② See Special Provisions		

Note: Connect beams in pairs with the transverse tie configuration shown.

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" diameter rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Reinforcement bars shall conform to ASTM A 706, Grade 60.

Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.

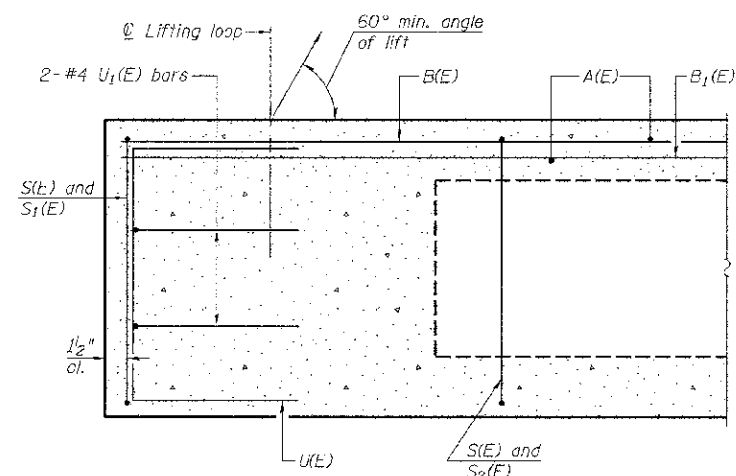
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'c, shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

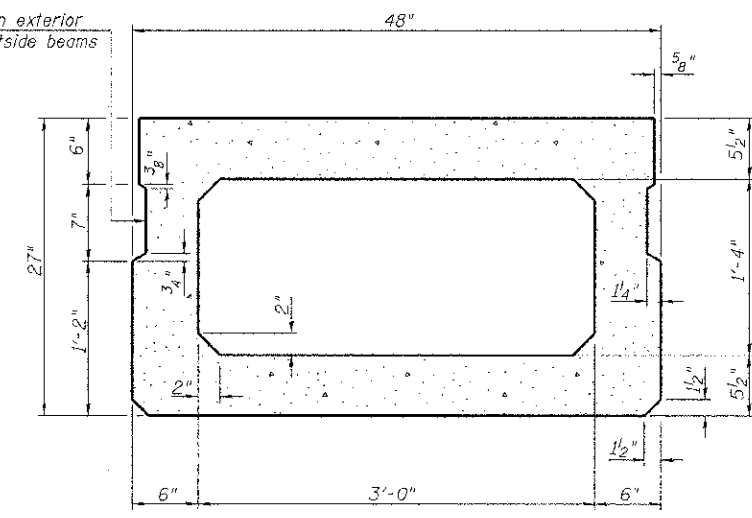
SUPERSTRUCTURE
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER WEST BUREAU CREEK

SHEET NO. 2 11 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	15
	S.N. 006-4553		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BR05-011(087)			

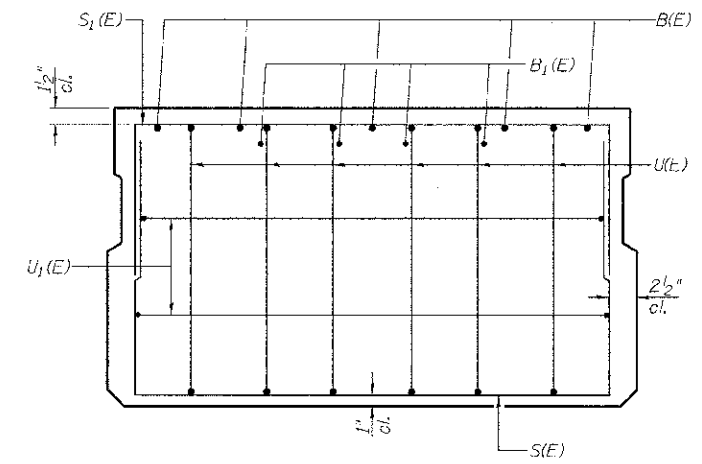


SECTION C-C

**Omit key on exterior face of outside beams

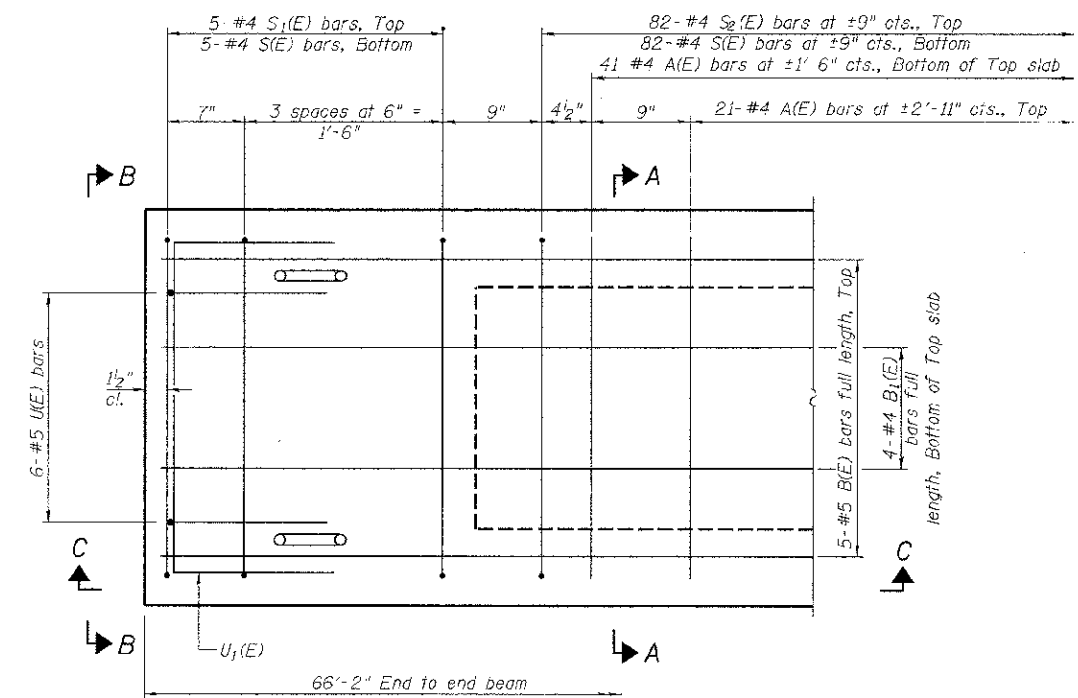


SECTION A-A
(Showing dimensions)



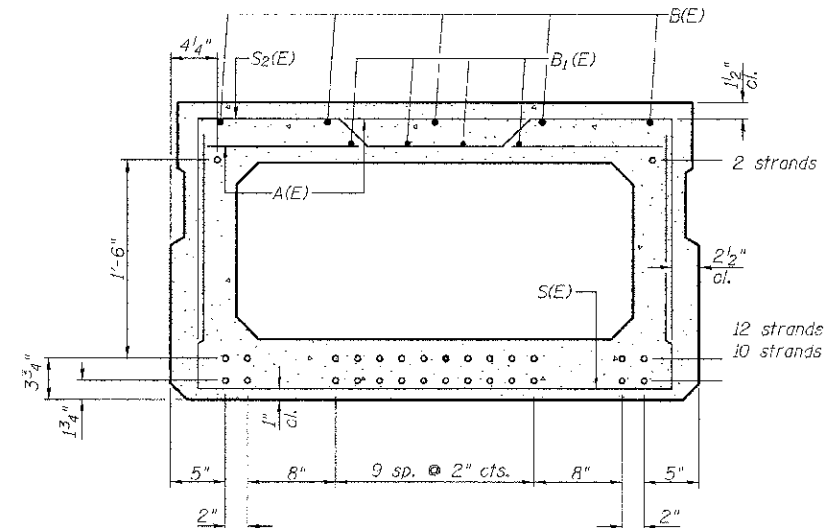
VIEW B-B

**Rail post anchor devices (Sheet 4 of 11) to be cast into exterior face of outside beams.



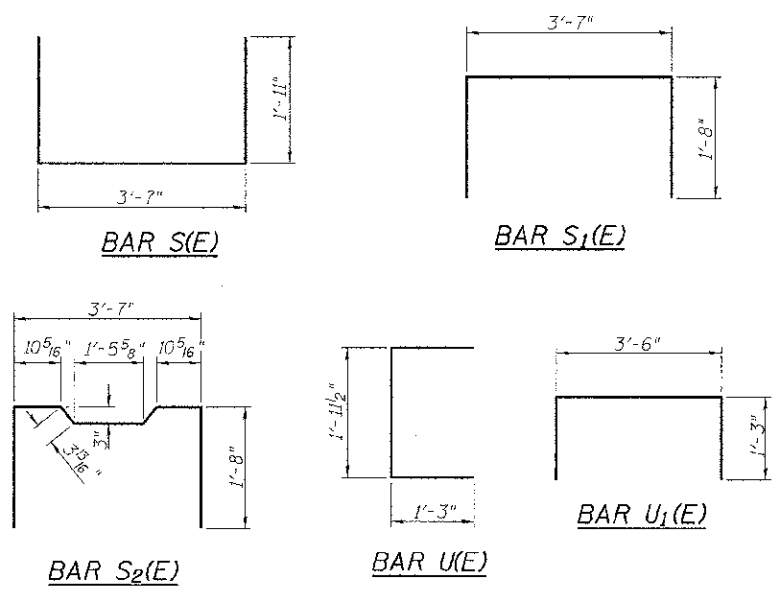
END PLAN

Note: Spacing of S1(E) and S2(E) bars may be adjusted up to 4\"/>



SECTION A-A

24-1/2" Strands Each Strand Stressed to 30,900 Lbs.
10-Strands 1 3/4" up, 12-Strands 3 3/4" up, 2-Strands 1'-9 3/4" up
Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.



BAR LIST-ONE BEAM ONLY

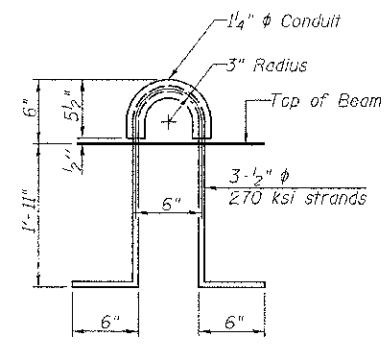
BAR	NO.	SIZE	LENGTH	SHAPE
A(E)	62	#4	3'-7"	—
B(E)	5	#5	*65'-11"	—
B1(E)	4	#4	*65'-11"	—
S(E)	92	#4	7'-5"	⌈
S1(E)	10	#4	6'-11"	⌈
S2(E)	82	#4	7'-2"	⌈
U(E)	12	#5	4'-6"	⌈
U1(E)	4	#4	6'-0"	⌈

* Total Length, Lap as necessary

Note: See sheet 2 of 11 for additional details and Bill of Material.

MIN. BAR LAP

#4 bar = 2'-0"
#5 bar = 2'-6"

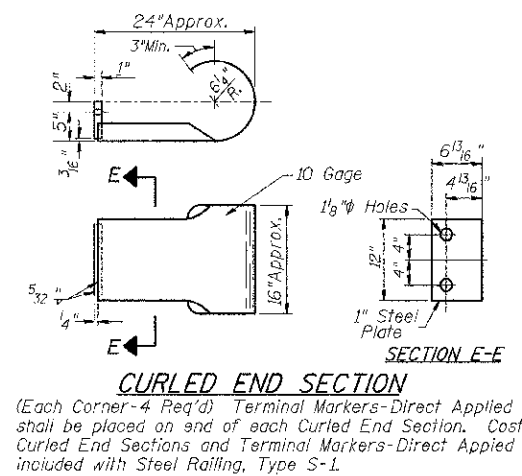
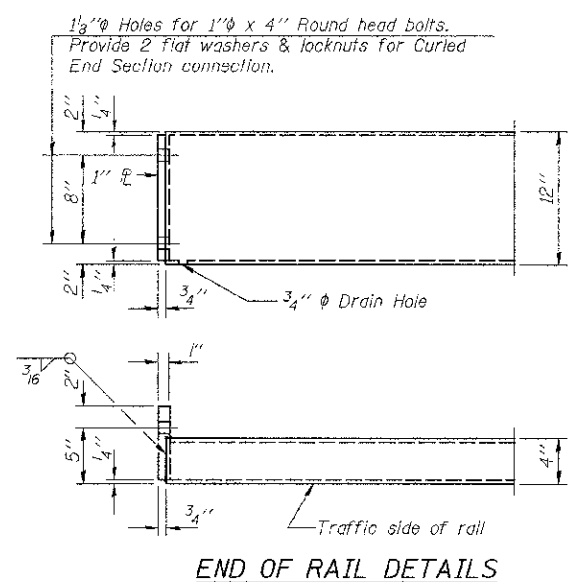
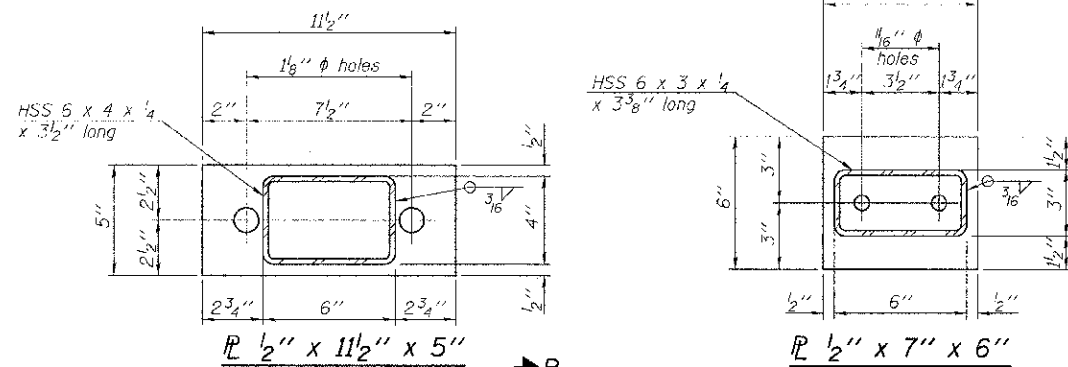
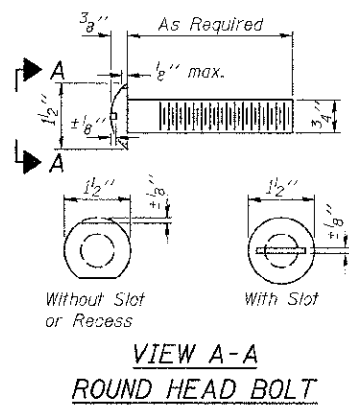


LIFTING LOOP DETAIL

SUPERSTRUCTURE DETAILS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER WEST BUREAU CREEK

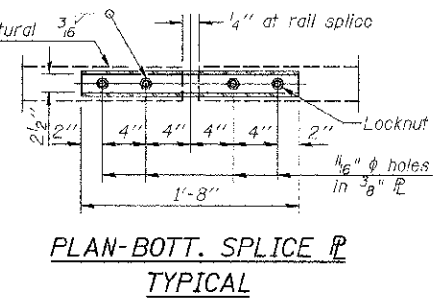
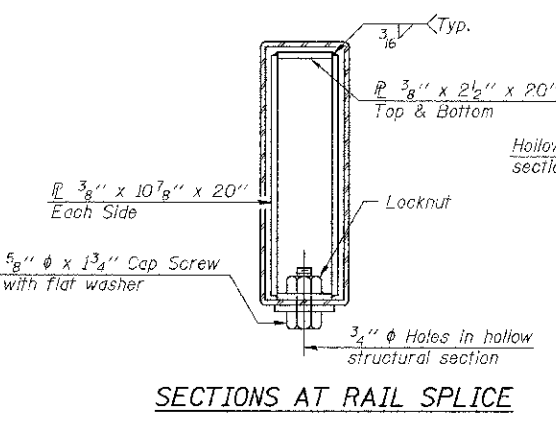
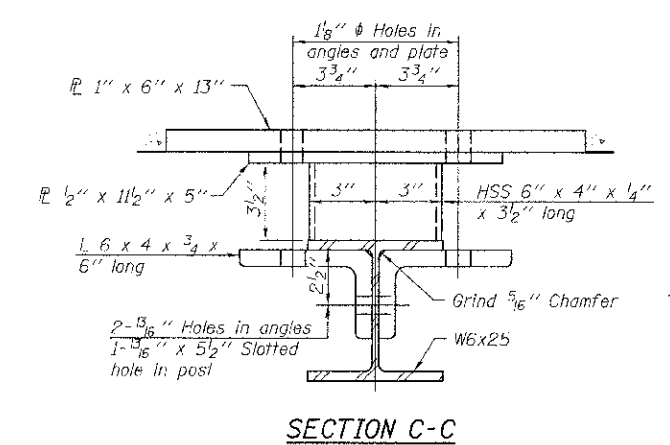
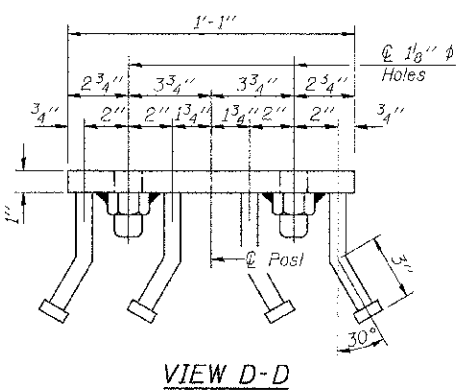
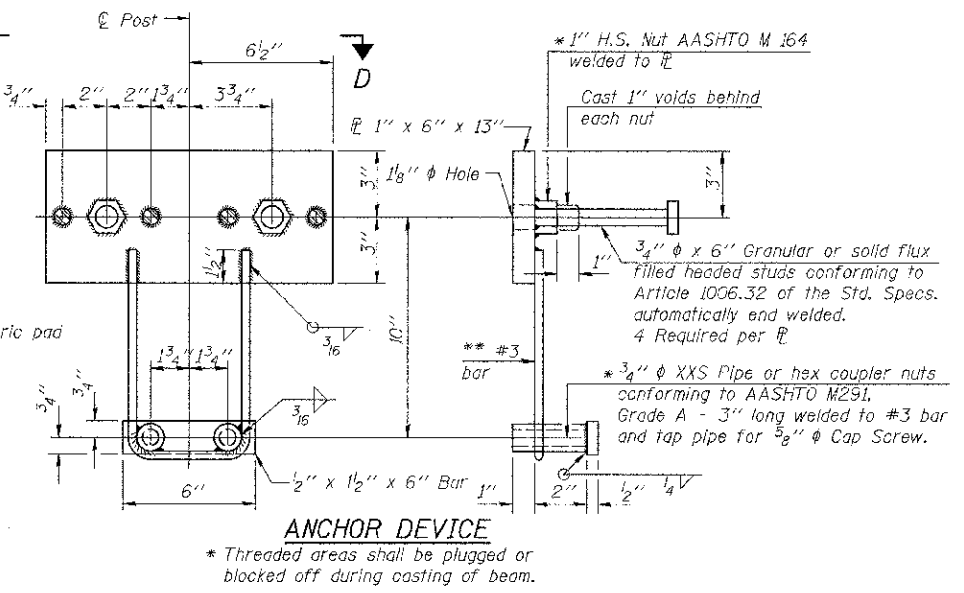
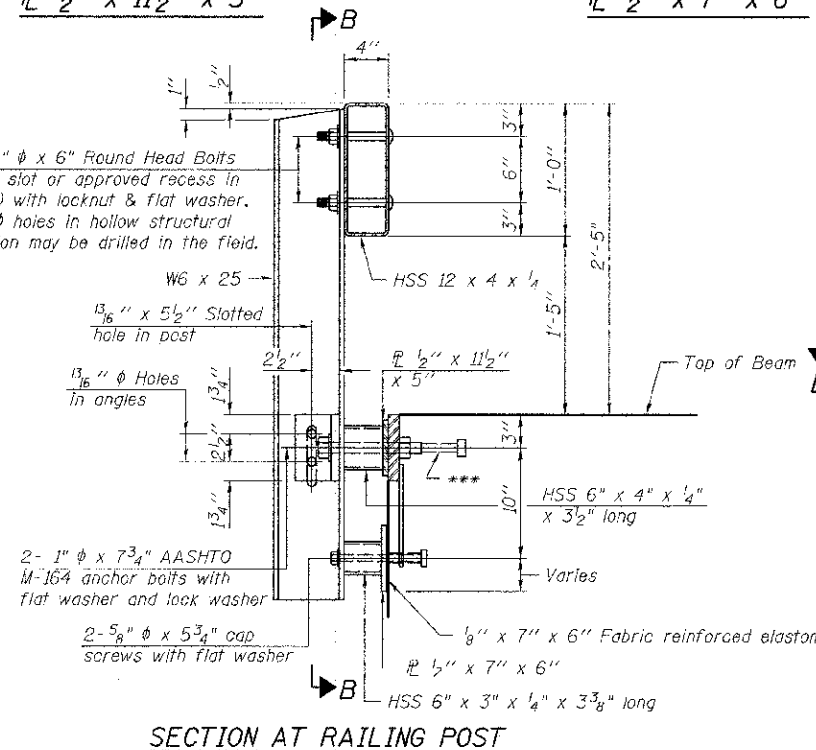
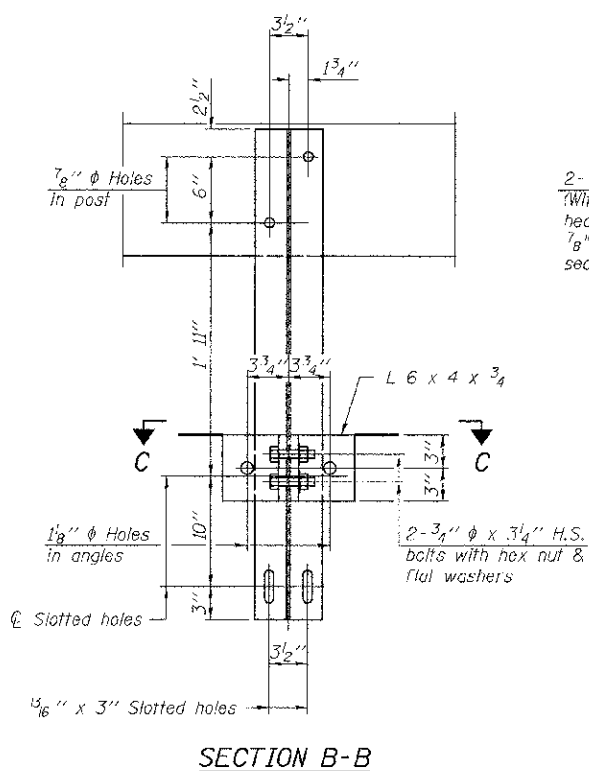
SHEET NO. 3 11 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	16
	S.N. 006-4553		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BR05-0011(087)			

FOR RAIL POST SPACING SEE SH.#5 OF 11



NOTES

All field drilled holes shall be coated with an approved zinc rich paint before erection.
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
 All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
 *** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 2".

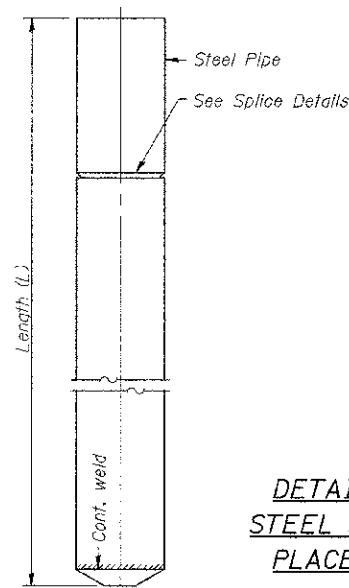
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Steel Railing, Type S-1	FOOT	136

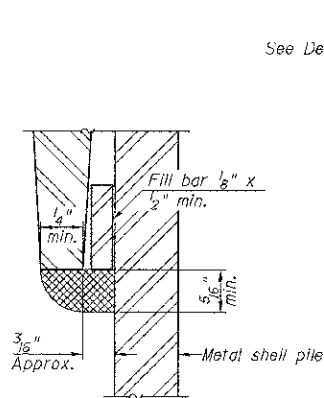
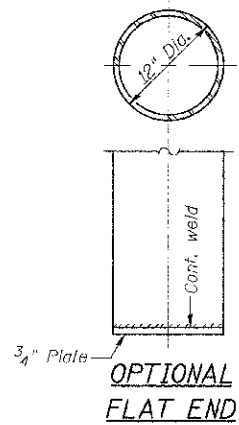
STEEL RAILING, TYPE S-1
 BUREAU COUNTY
 SECTION 07-03126-00-BR
 T.R. 109 OVER WEST BUREAU CREEK

SHEET NO.	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
4	109	07-03126-00-BR	BUREAU	61	17
11 SHEETS	S.N. 006-4553		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT BROS-0011(097)		

Notes: Driving and bearing ends of pipe shall be cut square. The thickness of the shell shall be 0.25 inches with a tolerance of 5%. The shell shall be according to Article 1006.05(a) of the Standard Specifications, and shall be ASTM A252 Grade 3.



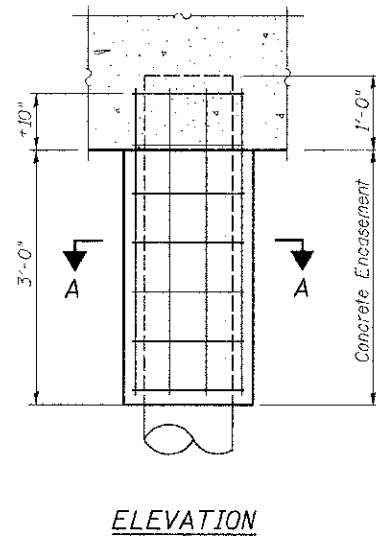
DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



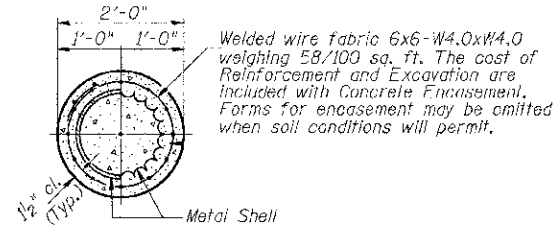
DETAIL C

WELDED COMMERCIAL SPLICE

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

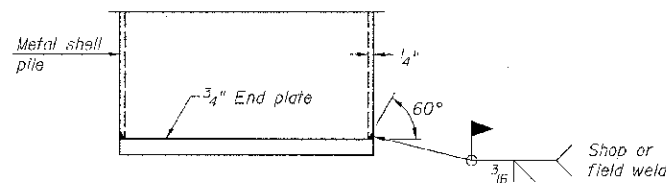


ELEVATION

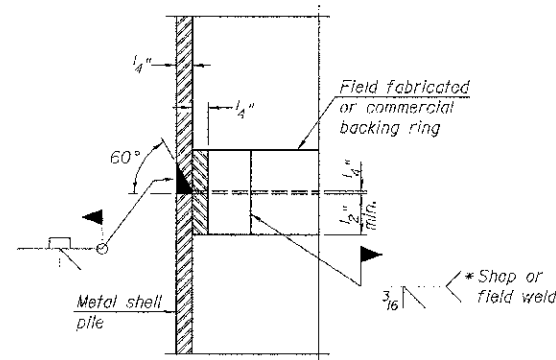


SECTION A-A

DETAIL OF METAL SHELL PILE ENCASEMENT AT ABUTMENTS

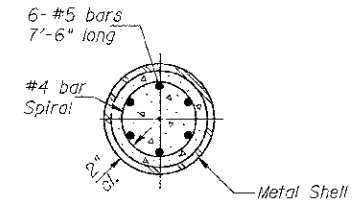
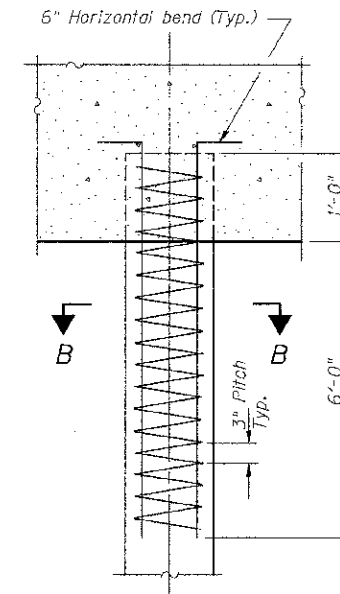


END PLATE ATTACHMENT



COMPLETE PENETRATION WELD SPLICE

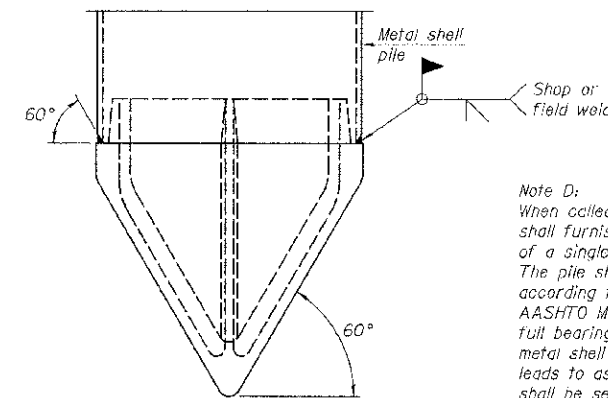
* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



SECTION B-B

The cost of Reinforcement is included with Furnishing Metal Shell Piles 12"x0.250"

DETAIL OF REINFORCEMENT FOR METAL SHELLS AT ABUTMENTS



METAL SHELL PILE SHOE ATTACHMENT

(See Note D)

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

METAL SHELL PILE DETAILS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER WEST BUREAU CREEK

SHEET NO. 7 11 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	20
	S.N. 006-4553		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BR05-0011(087)			



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 1 of 4

Phone: 815-223-6696
Fax: 815-223-6659
E-mail: mts377@comcast.net

Client: Hutchison Engineering, Inc.
Project Name: TR-109 Section 07-03126-00-BR
Project Site: Bureau Rd District Bureau County, Illinois

Boring No. B-1
Surface Elev. 708.00
Auger Depth 66' Rotary Depth NA
Start Date 10/17/12 Finish Date 10/17/12

Location: 6' Right of Station 20+25

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in Feet	SAMPLES						DRILLED BY	
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Blow / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
708.00										Randy Safirnski Diedrich D-120	
707.00	Medium Brown Sandy Loam (Fill)		1	SS	12	10					
706.00											
705.00	Stiff Black And Brown Silty Clay (Fill)		2	SS	1.1	6	S	18			
704.00											
703.00	Stiff Black Silty Clay		3	SS	1.4	8	B	15			
702.00											
701.00	Stiff Brownish Gray Sandy Clay		4	SS	1.8	11	B	22			
700.00											
699.00	Medium Brown And Gray Fine Sand To Coarse Gravel		5	SS	1.3	7	S	20			
698.00											
697.00	Very Stiff Brownish Gray Clay Till		6	SS	20						
696.00											
695.00			7	SS	16						
694.00											
693.00			8	SS	2.1	12	B	16			
692.00											
691.00											
690.00											
689.00											
688.00											

Groundwater Dat: Static water level after auger removal - Elevation 695.0
Comments:



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 2 of 4

Phone: 815-223-6696
Fax: 815-223-6659
E-mail: mts377@comcast.net

Client: Hutchison Engineering, Inc.
Project Name: TR-109 Section 07-03126-00-BR
Project Site: Bureau Rd District Bureau County, Illinois

Boring No. B-1
Surface Elev. 708.00
Auger Depth 66' Rotary Depth NA
Start Date 10/17/12 Finish Date 10/17/12

Location: 6' Right of Station 20+25

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in Feet	SAMPLES						DRILLED BY	
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Blow / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
687.00										Randy Safirnski Diedrich D-120	
686.00	Very Stiff Brownish Gray Clay Till		9	SS	2.3	15	B	14			
685.00											
684.00			10	SS	2.6	17	S	13			
683.00											
682.00	Hard Brownish Gray Clay Till		11	SS	3.2	23	S	11			
681.00											
680.00			12	SS	4.3	21	B	12			
679.00											
678.00			13	SS	4.1	21	B	13			
677.00											
676.00											
675.00											
674.00											
673.00											
672.00											
671.00											
670.00											
669.00											
668.00											
667.00											

Groundwater Dat: Static water level after auger removal - Elevation 695.0
Comments:

SOIL BORINGS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER WEST BUREAU CREEK

SHEET NO. 8 11 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	21
S.N. 006-4553			CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT BROS-0011(087)		



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 3 of 4

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

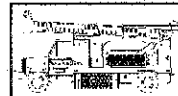
Client: Hutchison Engineering, Inc.
Project Name: TR-109 Section 07-03126-00-BR
Project Site: Bureau Rd District Bureau County, Illinois

Boring No. B-1
Surface Elev. 708.00
Auger Depth 66' Rotary Depth NA
Start Date 10/17/12 Finish Date 10/17/12

Location: 6' Right of Station 20+25

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Q _u (TSF)	N Value (Blows)	Blow / Shear	Moisture (%)		
606.00										Randy Salfanski Diedrich D-120	
665.00			43								
664.00			44								
663.00			45	14	SS	4.4	21	B	13		
662.00			46								
661.00			47								
660.00			48								
659.00			49								
658.00			50								
657.00	Hard Brownish Gray Clay Till		51	15	SS	4.2	23	S	12		
656.00			52								
655.00			53								
654.00			54								
653.00			55								
652.00			56	16	SS	4.7	26	S	11		
651.00			57								
650.00			58								
649.00			59								
648.00			60	17	SS	4.6	25	B	12		
647.00			61								
646.00			62								

Groundwater Data: Static water level after auger removal - Elevation 695.0
Comments:



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 4 of 4

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

Client: Hutchison Engineering, Inc.
Project Name: TR-109 Section 07-03126-00-BR
Project Site: Bureau Rd District Bureau County, Illinois

Boring No. B-1
Surface Elev. 708.00
Auger Depth 66' Rotary Depth NA
Start Date 10/17/12 Finish Date 10/17/12

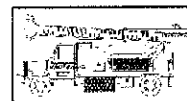
Location: 6' Right of Station 20+25

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Q _u (TSF)	N Value (Blows)	Blow / Shear	Moisture (%)		
645.00										Randy Salfanski Diedrich D-120	
614.00	Hard Brownish Gray Clay Till		64								
643.00			65								
642.00			66	18	SS	4.1	22	B	13		
641.00			67								
640.00			68								
639.00			69								
638.00			70								
637.00			71								
636.00			72								
635.00			73								
634.00			74								
633.00			75								
632.00			76								
631.00			77								
630.00			78								
629.00			79								
628.00			80								
627.00			81								
626.00			82								
625.00			83								

Groundwater Data: Static water level after auger removal - Elevation 695.0
Comments:

SOIL BORINGS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER WEST BUREAU CREEK

SHEET NO. 9 11 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	22
S.N. 006-4553			CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT BRGS-0011(087)		



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 1 of 4

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts376@comcast.net

Client: Hutchison Engineering, inc.
Project Name: TR-109 Section 07-03126-00-BR
Project Site: Bureau Rd District Bureau County, Illinois

Boring No. B-2
Surface Elev. 708.20
Auger Depth 66' Rotary Depth NA
Start Date 10/17/12 Finish Date 10/17/12

Location: 6' Left of Station 19+70

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Tag	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Q _v (TSF)	N Value (Blows)	Blow / Shear	Moisture (%)		
708.20										Randy Natanski Diedrich D-120	
707.20			1								
706.20			2								
705.20	Stiff Black And Brown Silty Clay (fill)		3	1	SS	1.1	6	B	19		
704.20			4								
703.20			5	2	SS	1.5	8	B	16		
702.20			6								
701.20			7								
700.20			8	3	SS	1.4	6	B	17		
699.20	Medium Brown Silty Loam		9								
698.20			10	4	SS	0.8	5	B	23		
697.20			11								
696.20	Stiff Brown Silty Clay		12								
695.20			13	5	SS	1.7	7	B	20		
694.20			14								
693.20	Loose Brown Silt		15	6	SS	--	6	--	22		
692.20			16								
691.20			17								
690.20	Stiff Brown Silty Clay		18	7	SS	1.2	7	B	20		
689.20			19								
688.20	Very Stiff Brownish Gray Clay Till		20	8	SS	2.7	17	B	16		

Groundwater Data: Static water level after auger removal - Elevation 694.0
Comments:



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 2 of 4

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts376@comcast.net

Client: Hutchison Engineering, inc.
Project Name: TR-109 Section 07-03126-00-BR
Project Site: Bureau Rd District Bureau County, Illinois

Boring No. B-2
Surface Elev. 708.20
Auger Depth 66' Rotary Depth NA
Start Date 10/17/12 Finish Date 10/17/12

Location: 6' Left of Station 19+70

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Tag	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Q _v (TSF)	N Value (Blows)	Blow / Shear	Moisture (%)		
708.20										Randy Natanski Diedrich D-120	
686.20	Very Stiff Brownish Gray Clay Till		22								
685.20			23	9	SS	2.1	15	B	18		
684.20			24								
683.20			25								
682.20			26	10	SS	4.4	21	B	13		
681.20			27								
680.20			28								
679.20			29								
678.20	Hard Brownish Gray Clay Till		30	11	SS	4.7	22	S	12		
677.20			31								
676.20			32								
675.20			33								
674.20			34								
673.20			35	12	SS	4.9	24	S	11		
672.20			36								
671.20			37								
670.20			38								
669.20			39								
668.20			40	13	SS	4.3	21	S	12		
667.20			41								

Groundwater Data: Static water level after auger removal - Elevation 694.0
Comments:

SOIL BORINGS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER WEST BUREAU CREEK

SHEET NO. 10	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	23
11 SHEETS	S.N. 006-4553		CONTRACT NO. 87528		
	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BROS-0011(087)		



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 3 of 4

Phone: 815-225-6696
Fax: 815-225-6659
e-mail: mts37@comcast.net

Client: Hutchison Engineering, inc.
Project Name: TR-109 Section 07-03126-00-BR
Project Site: Bureau Rd District Bureau County, Illinois

Boring No. B-2
Surface Elev. 708.20
Auger Depth 66' Rotary Depth NA
Start Date 10/17/12 Finish Date 10/17/12

Location: 6' Left of Station 19+70

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu. (LSF)	N Value (Blows)	Friction / Shear	Moisture (%)		
666.20										Randy Szafranski Diedrich D-120	
665.20			43								
664.20			44								
663.20			45								
662.20			46	14	SS	4.2	20	S	13		
661.20			47								
660.20			48								
659.20			49								
658.20			50								
657.20			51	15	SS	4.3	25	S	12		
656.20	Hard Brownish Gray Clay Till		52								
655.20			53								
654.20			54								
653.20			55								
652.20			56	16	SS	4.2	22	S	12		
651.20			57								
650.20			58								
649.20			59								
648.20			60								
647.20			61	17	SS	4.6	26	S	11		
646.20			62								

Groundwater Data: Static water level after auger removal - Elevation 694.0

Comments:



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Sheet 4 of 4

Phone: 815-225-6696
Fax: 815-225-6659
e-mail: mts37@comcast.net

Client: Hutchison Engineering, inc.
Project Name: TR-109 Section 07-03126-00-BR
Project Site: Bureau Rd District Bureau County, Illinois

Boring No. B-2
Surface Elev. 708.20
Auger Depth 66' Rotary Depth NA
Start Date 10/17/12 Finish Date 10/17/12

Location: 6' Left of Station 19+70

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu. (LSF)	N Value (Blows)	Friction / Shear	Moisture (%)		
645.20										Randy Szafranski Diedrich D-120	
644.20			64								
643.20			65								
642.20			66	18	SS	4.4	20	B	13		
641.20			67								
640.20	Hard Brownish Gray Clay Till		68								
639.20			69								
638.20			70								
637.20			71								
636.20			72								
635.20			73								
634.20			74								
633.20			75								
632.20			76								
631.20			77								
630.20			78								
629.20			79								
628.20			80								
627.20			81								
626.20			82								
625.20			83								

Groundwater Data: Static water level after auger removal - Elevation 694.0

Comments:

SOIL BORINGS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER WEST BUREAU CREEK

SHEET NO. 11	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	24
11 SHEETS	S.N. 006-4553		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT BR05-0011(087)		

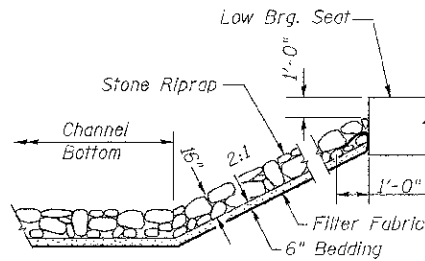
B.M.: RR Spike in Power Pole
Sta. 35+67, 22' Lt.
Elev. 712.57

RR Spike in Power Pole
Sta. 42+61, 27' Lt.
Elev. 713.59

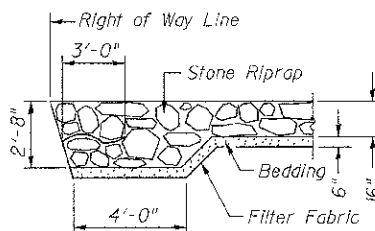
Existing Structure:
Single span reinforced concrete slab with concrete rail on concrete closed abutments. The structure is ±33' back to back of abutments, ±22' out to out deck, and is not skewed.
Str. No. 006-4075

Salvage: None

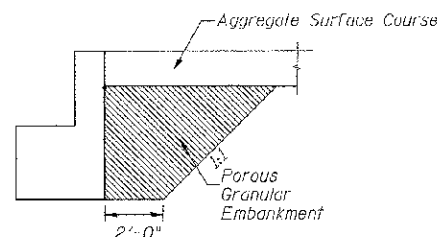
Road to be closed to traffic during construction.



STONE RIPRAP DETAIL

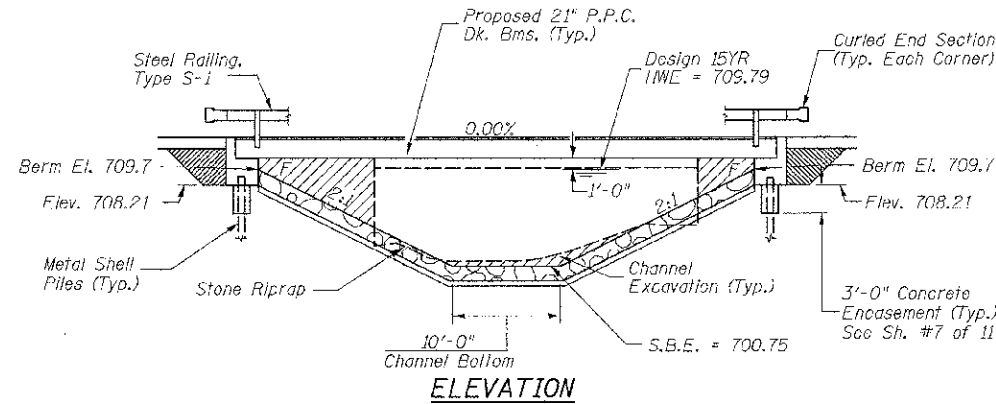
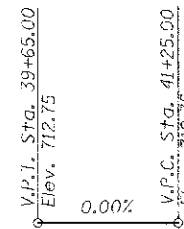


SECTION A-A

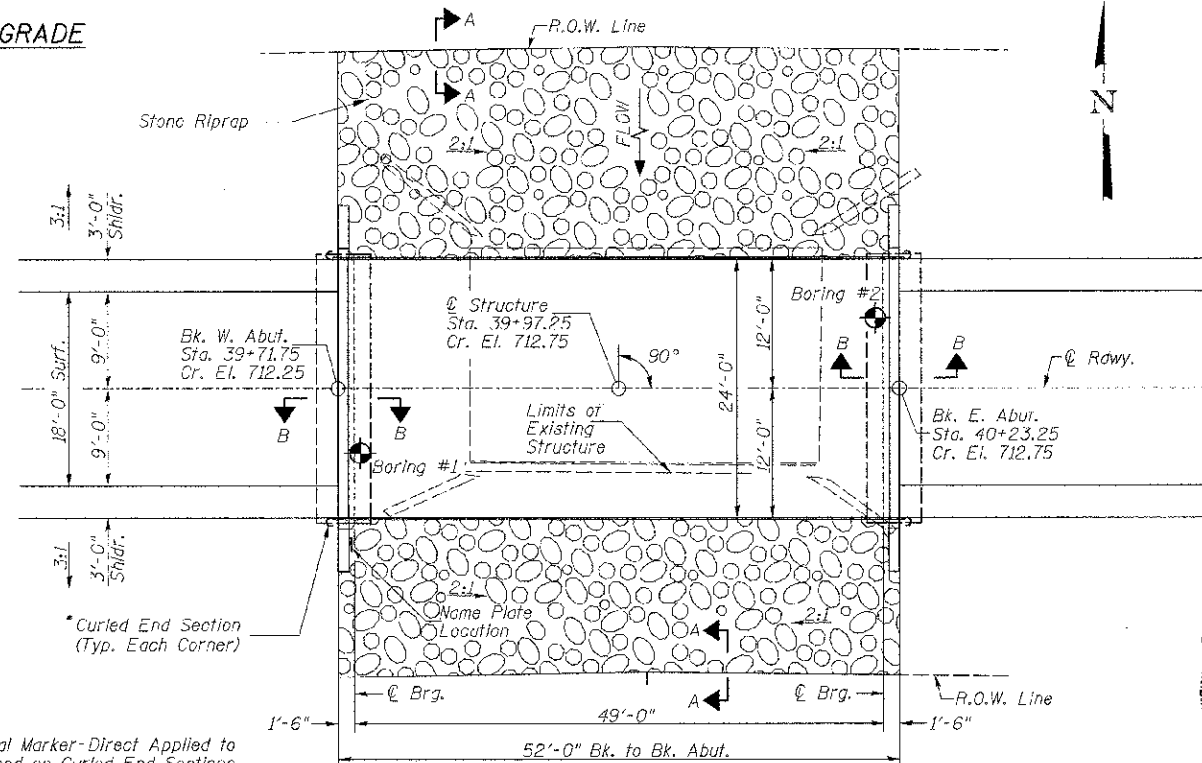


SECTION B-B

PROFILE GRADE



ELEVATION



PLAN

DESIGN SCOUR TABLE

Location	W. Abut.	E. Abut.
Design Scour Elevation	708.21	708.21

WATERWAY INFORMATION

Drainage Area = 4.81 Sq. Mi.		Low Grade Elev. = 712.21 @ Sta. 38+13.04							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Not. Prop.	H.W.E.	Exist. Prop.	Head - Ft.	Headwater El.	Exist. Prop.
Design	15	1,256	217	254	709.79	0.17	0.08	709.96	709.87
Base	100	2,090	219	284	710.44	0.77	0.46	711.21	710.90

DESIGN SPECIFICATIONS

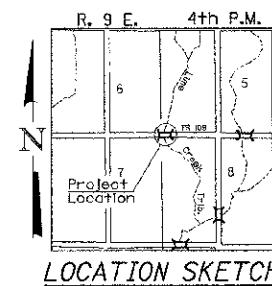
2012 AASHTO LRFD Bridge Design Specifications

DESIGN STRESSES

(FIELD UNITS) (PRECAST PRESTRESSED UNITS)
 $f'_c = 3,500$ p.s.i. $f'_c = 6,000$ p.s.i.
 $f_y = 60,000$ p.s.i. (Rein.) $f'_c = 5,000$ p.s.i.
 $f'_s = 270,000$ p.s.i. ($\frac{1}{2}$ " Strands)
 $f'_{sl} = 201,960$ p.s.i. ($\frac{1}{2}$ " Strands)

LOADING HL-93

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



LOCATION SKETCH

GENERAL NOTES

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at the substructures specified or approved by the Engineer before ordering the remainder of the piles.
 For Soil Boring Logs, See Sheets 8-11 of 11.
 A Corrosion Inhibitor shall be used in the concrete for Precast Prestressed Concrete Deck Beams according to Article 1020.05(b)(12) of the Standard Specifications.
 Reinforcement Bars shall conform to the requirements of ASTM A706 Grade 60. Reinforcement Bars designated (E) shall be epoxy coated.
 Layout of the slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
 Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
 The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

LIME CREEK TRIBUTARY
 BUILT 201. BY
 DOVER ROAD DISTRICT
 BUREAU COUNTY
 SEC. 07-0617-00-BR
 T.R. 109 STATION 39+97.25
 F.A. PROJ. BROS-0011087
 STR. NO. 006-4088 LOADING HL-93

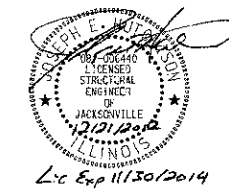
NAME PLATE

Locate Name Plate at S.W. Wingwall
 Corner of Bridge (See Std. 515001)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	CU YD	---	120	120
Stone Riprap, Class A4 (Special)	TON	---	275	275
Removal of Existing Structures No. 2	EACH	---	1	1
Concrete Structures	CU YD	---	19.8	19.8
Precast Prestressed Concrete Deck Beams (21" Depth)	SQ FT	1,204	---	1,204
Reinforcement Bars	POUND	---	2,300	2,300
Steel Railing, Type S1	FOOT	104	---	104
Furnishing Metal Shell Piles 12"x0.250"	FOOT	---	256	256
Driving Piles	FOOT	---	256	256
Test Pile Metal Shells	EACH	---	2	2
Pile Shoes	EACH	---	10	10
Concrete Encasement	CU YD	---	2.6	2.6
Name Plates	EACH	---	1	1
Porous Granular Embankment	CU YD	---	22.6	22.6

① See Special Provisions



Lic Exp 11/30/2014

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specification for Highway Bridges.
 This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.

Jeffrey E. Johnson
 Illinois Structural No. 6440
 Expires 11/30/2014

GENERAL PLAN & ELEVATION

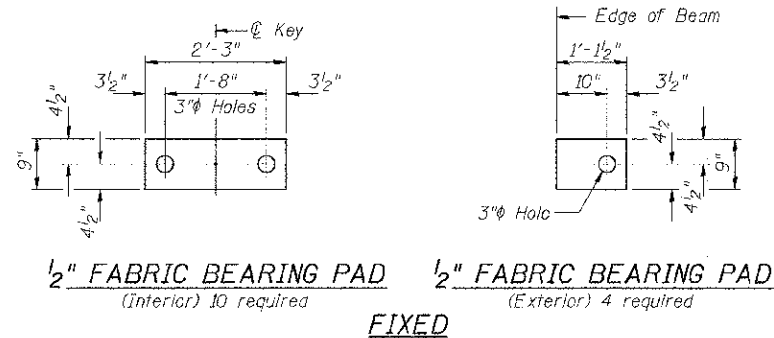
BUREAU COUNTY

SECTION 07-03126-00-BR

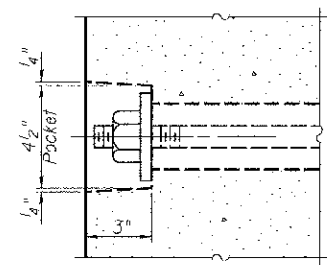
T.R. 109 OVER LIME CREEK TRIBUTARY

DESIGNED	C.T.M.
CHECKED	S.T.M./J.E.H.
DRAWN	C.T.M.
CHECKED	S.T.M./J.E.H.

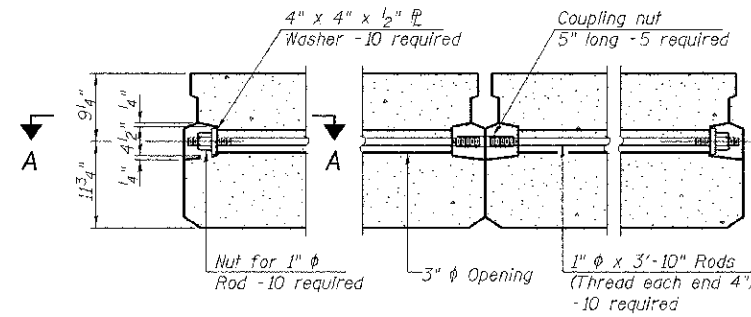
SHEET NO. 1	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
11 SHEETS	TR 109	07-03126-00-BR	BUREAU	61	25
	S.N. 006-4088		CONTRACT NO. 87528		
	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BROS-0011087		



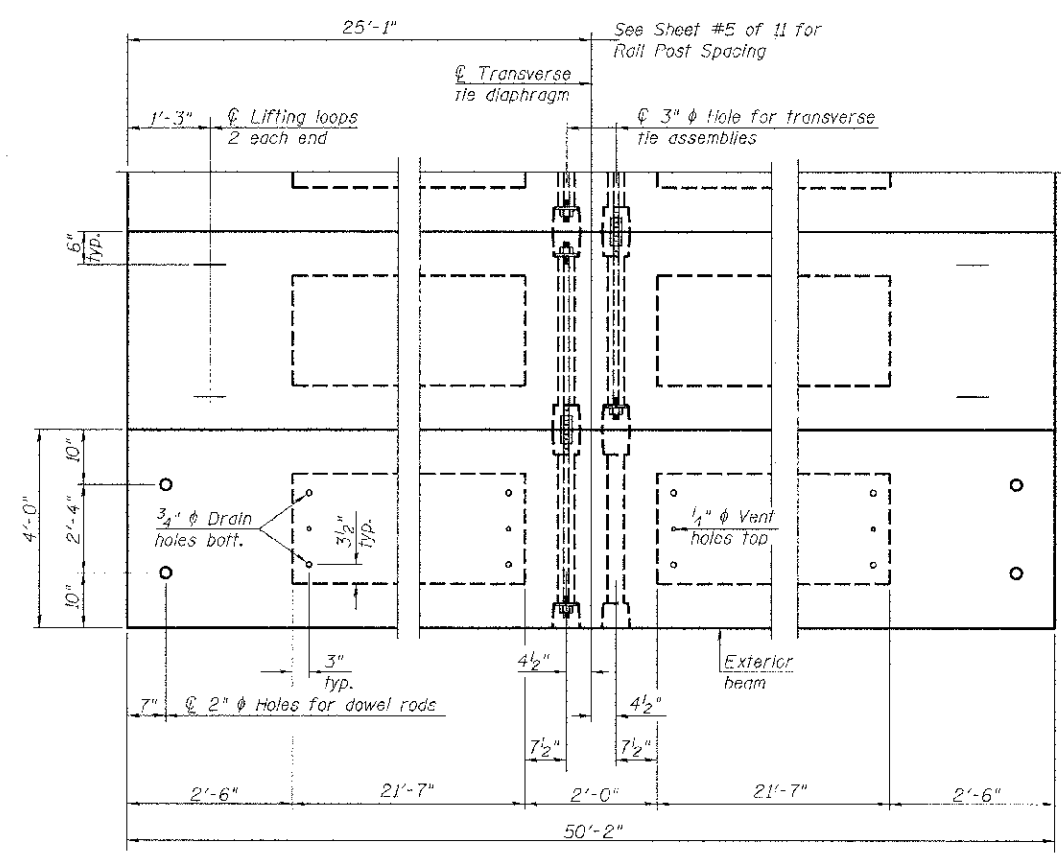
1/2" FABRIC BEARING PAD (Interior) 10 required
1/2" FABRIC BEARING PAD (Exterior) 4 required
FIXED



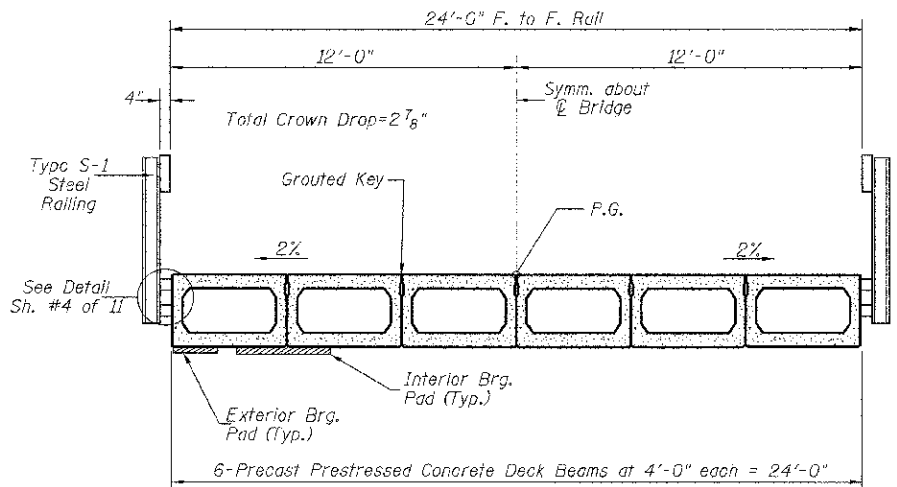
SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY



PLAN VIEW



CROSS SECTION

Note: Connect beams in pairs with the transverse tie configuration shown.

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
 Reinforcement bars shall conform to ASTM A 706, Grade 60.
 Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
 A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
 Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
 Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
 Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

BILL OF MATERIAL

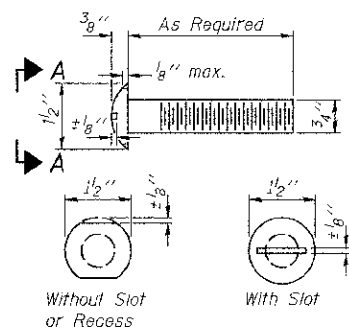
ITEM	UNIT	QUANTITY
① Precast Prestressed Concrete Deck Beams (21" Depth)	SQ FT	1,204

① See Special Provisions

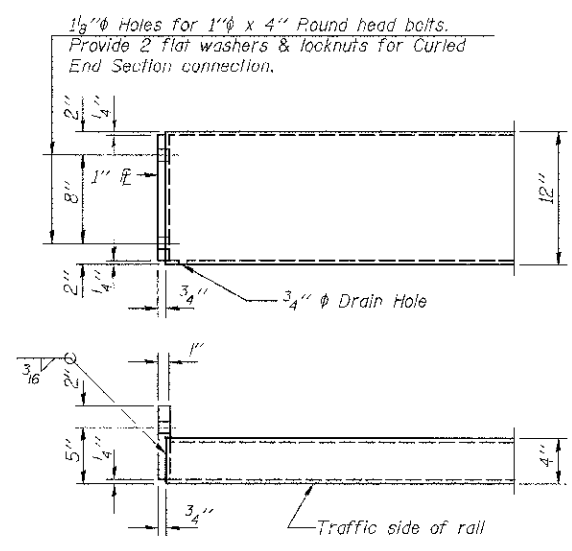
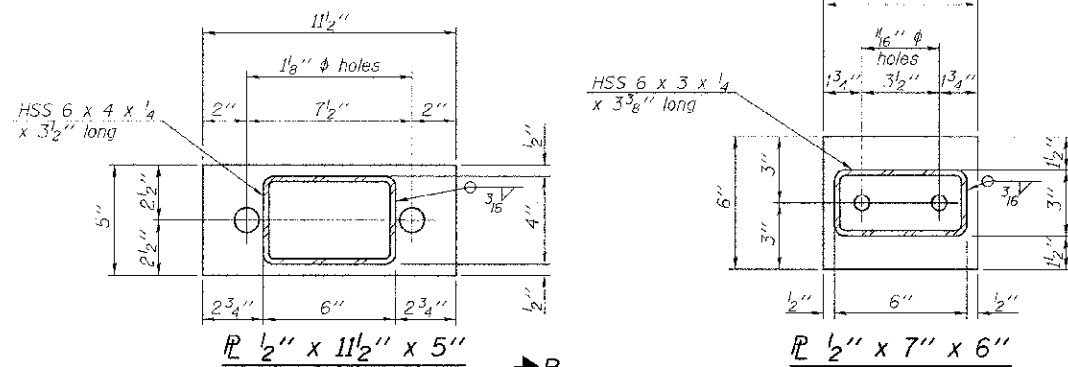
SUPERSTRUCTURE
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY

SHEET NO. 2 11 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	26
	S.N. 006-4088		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT BROS-0011(087)		

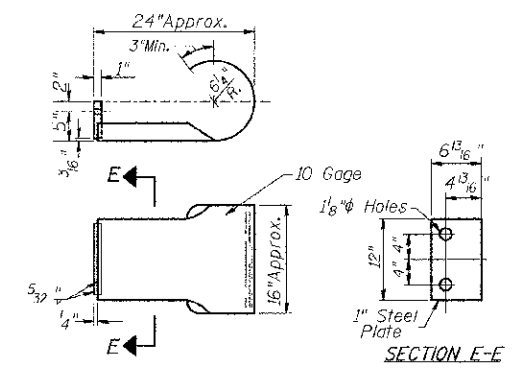
FOR RAIL POST SPACING SEE SH.#5 OF 11



VIEW A-A
ROUND HEAD BOLT



END OF RAIL DETAILS

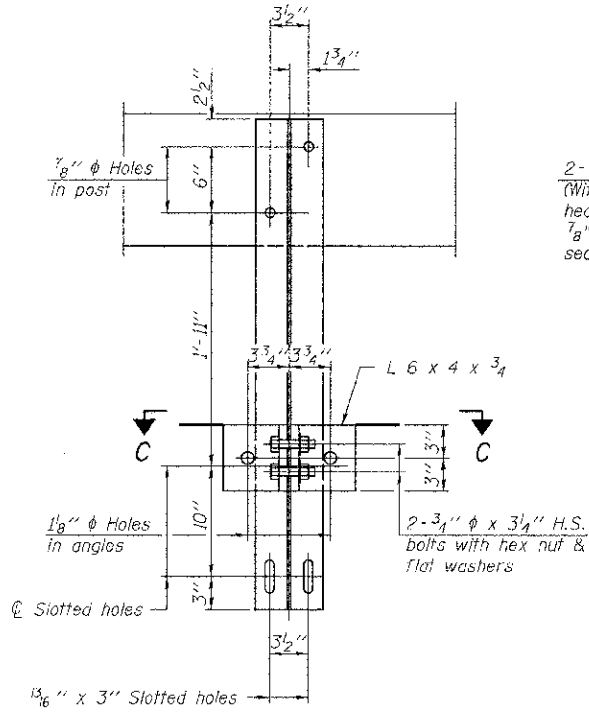


CURLED END SECTION
(Each Corner-4 Req'd) Terminal Markers-Direct Applied shall be placed on end of each Curled End Section. Cost of Curled End Sections and Terminal Markers-Direct Applied included with Steel Railing, Type S-1.

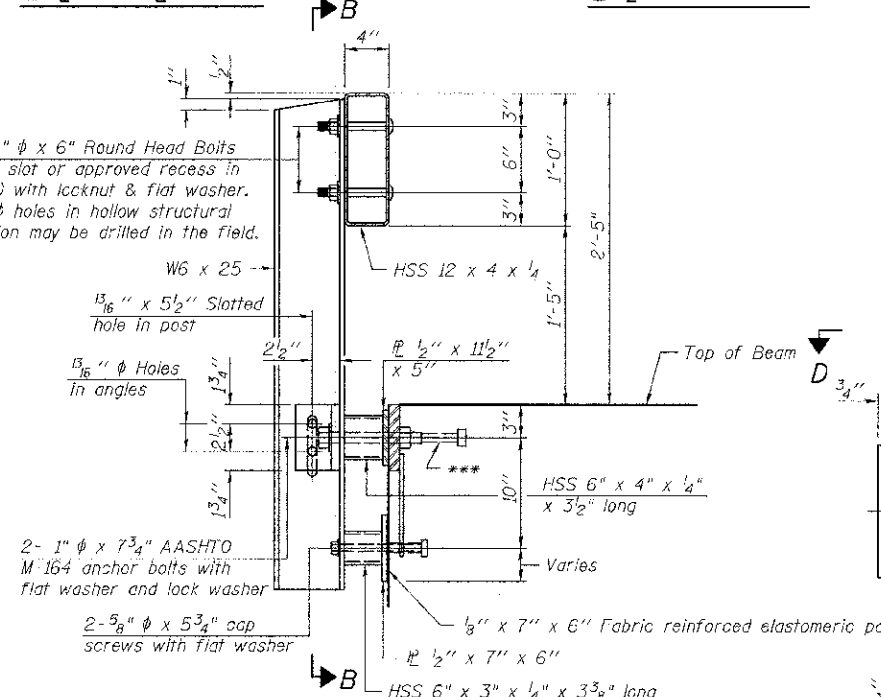
NOTES

All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4 inch x 6 inch x 1-2 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

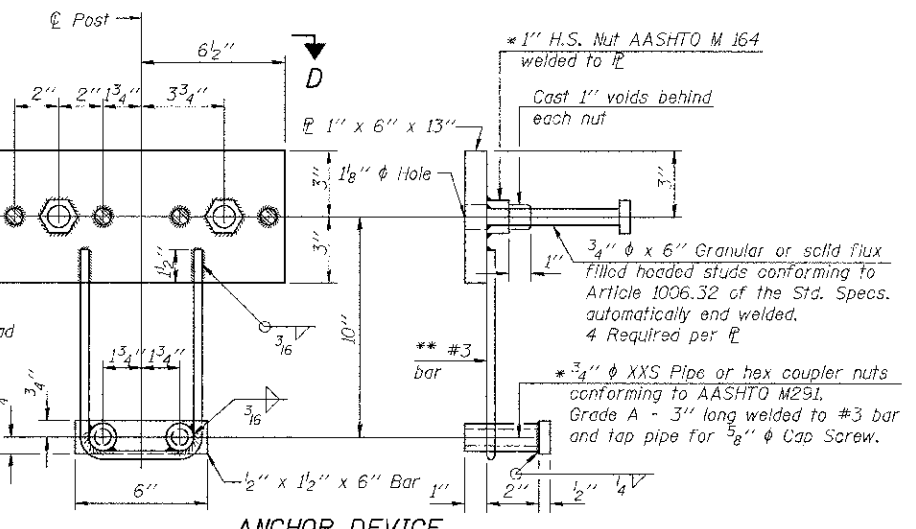
*** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



SECTION B-B

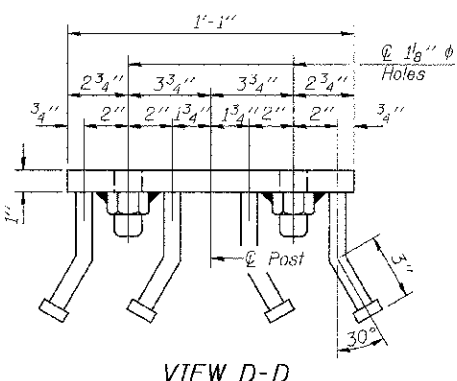


SECTION AT RAILING POST

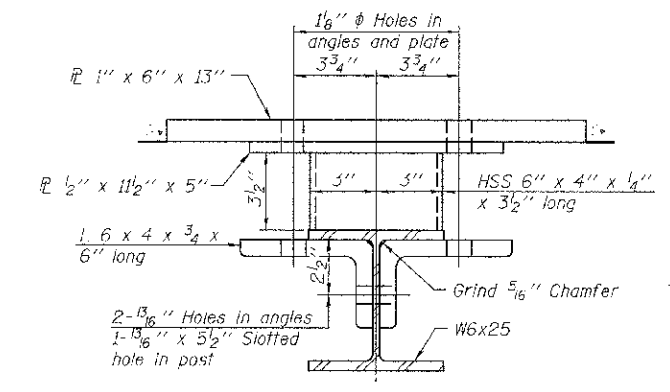


ANCHOR DEVICE

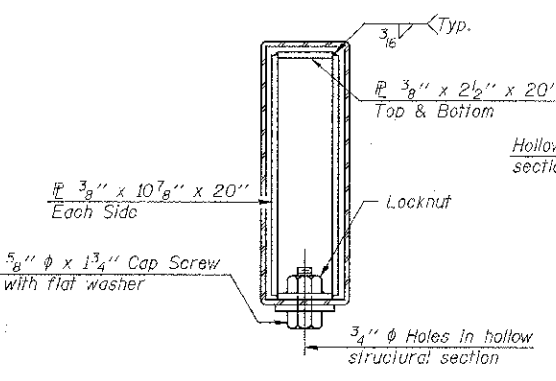
* Threaded areas shall be plugged or blocked off during casting of beam.



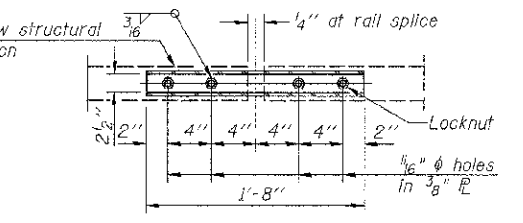
VIEW D-D



SECTION C-C



SECTIONS AT RAIL SPLICE



PLAN-BOTT. SPLICE TYPICAL

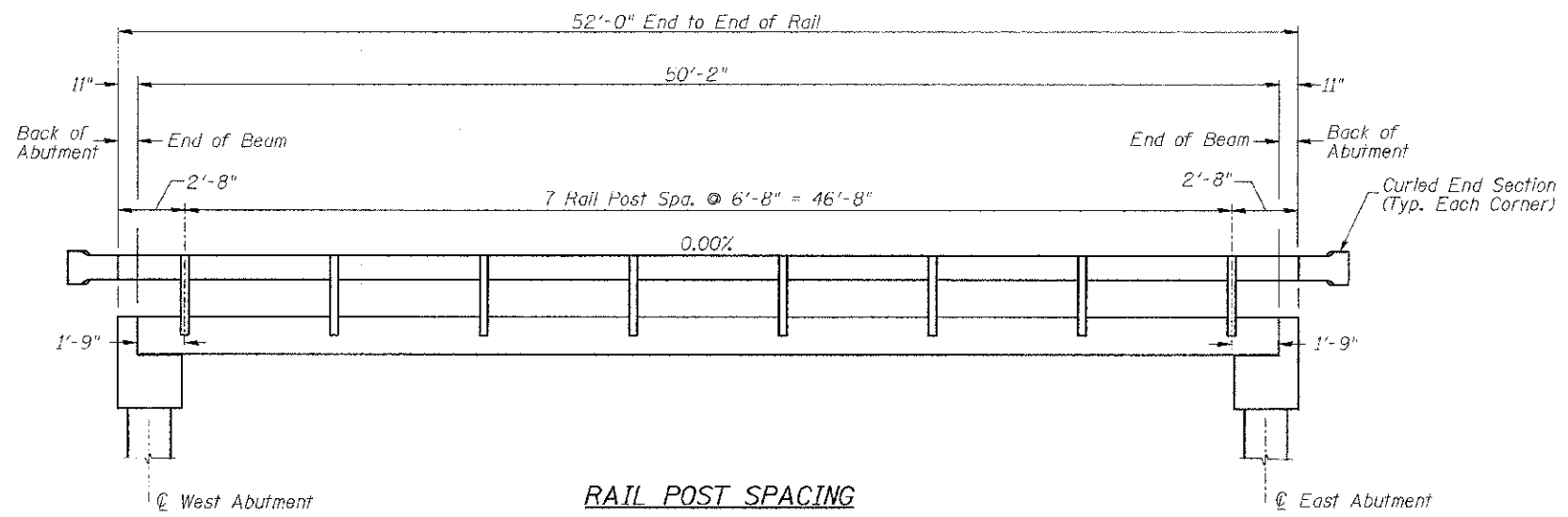
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2 inch.

BILL OF MATERIAL

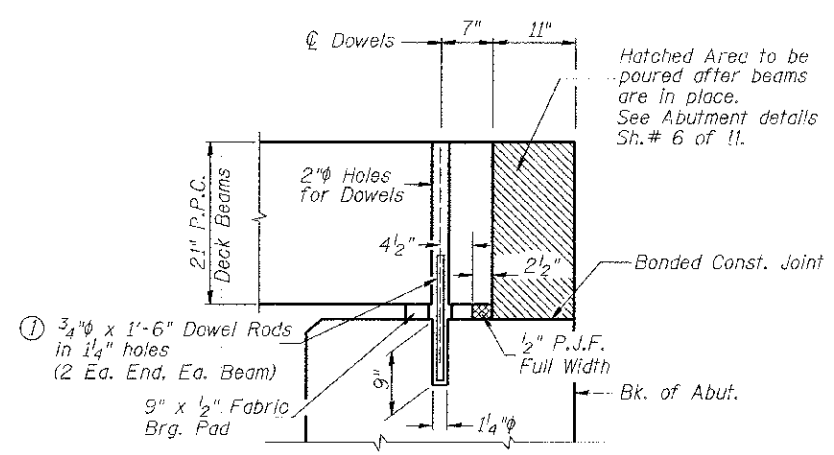
ITEM	UNIT	QUANTITY
Steel Railing, Type S-1	FOOT	104

STEEL RAILING, TYPE S-1
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY

SHEET NO. 4	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	28
11 SHEETS	S.N. 006-4088	CONTRACT NO. 87528			
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT BR05-0011(087)		



RAIL POST SPACING

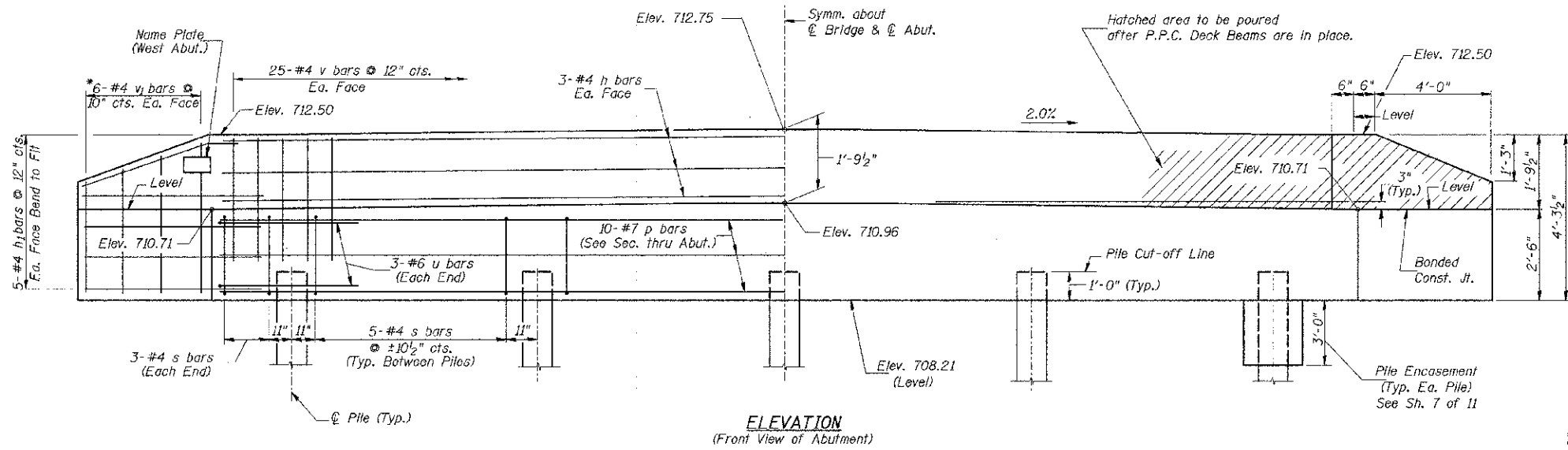
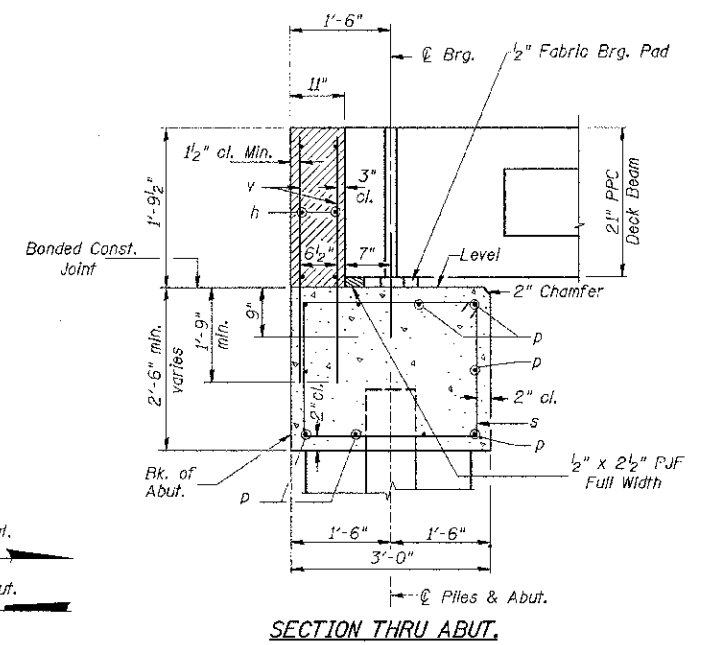
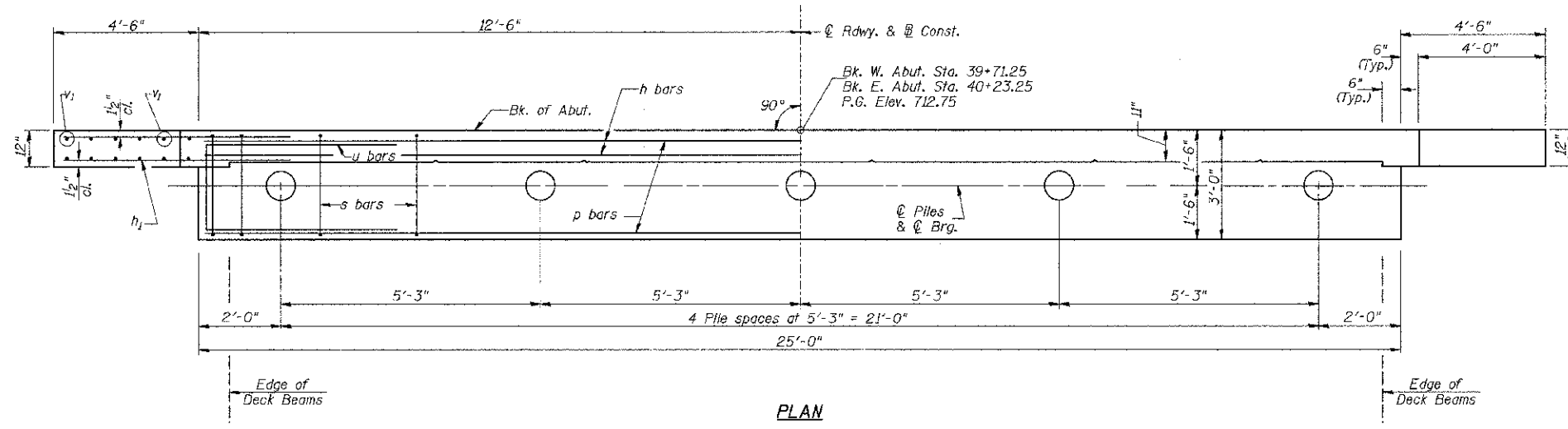


SECTION THRU ABUTMENTS

① Dowel Rods to be grouted after beams are in place and allowed to cure (Min. 24 hr.) prior to grouting the shear keys.

**RAIL POST SPACING AND
SUPERSTRUCTURE DETAILS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY**

SHEET NO. 5	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
11 SHEETS	TR 109	07-03126-00-BR	BUREAU	61	29
S.N. 006-4088			CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT BR05-001(087)		



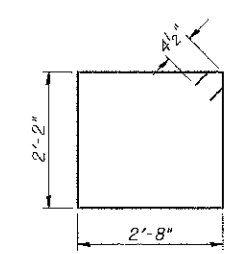
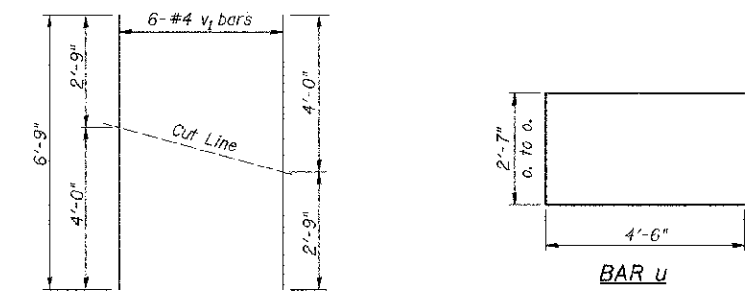
**TWO ABUTMENTS
BILL OF MATERIAL**

BAR	NO.	SIZE	LENGTH	SHAPE
h	12	#4	24'-9"	—
h ₁	40	#4	6'-6"	—
p	20	#7	24'-9"	—
s	52	#4	10'-5"	□
u	12	#6	11'-7"	□
v	100	#4	3'-6"	—
v ₁	24	#4	6'-9"	—
Concrete Structures		CU YD	19.8	
Reinforcement Bars		POUND	2,300	
Name Plates		EACH	1	
Furnishing Metal Shell Piles 12"x0.250"		FOOT	256	
Driving Piles		FOOT	256	
Test Pile Metal Shells		EACH	2	
Pile Shoes		EACH	10	
Concrete Encasement		CU YD	2.6	

DESIGN STRESSES
 $f'_c = 3,500$ p.s.i.
 $f_y = 60,000$ p.s.i.

- NOTES**
- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
 - Reinforcement bars shall conform to ASTM A706 Grade 60.

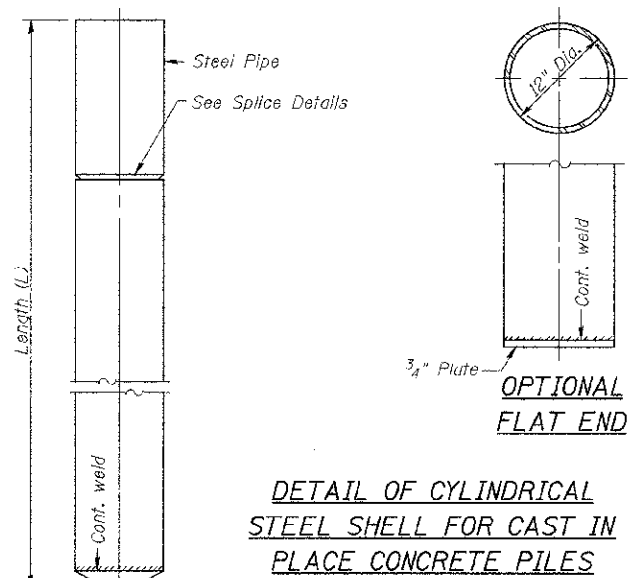
PILE DATA
 Type & Size: Metal Shell 12"x0.250" walls w/ Pile Shoes
 Nominal Required Bearing: 130 kips
 Factored Resistance Available: 105 kips
 Est. Length: 29' West Abutment
 35' East Abutment
 No. Req'd.: 10 (Includes 1 Test Pile at Each Abut.)



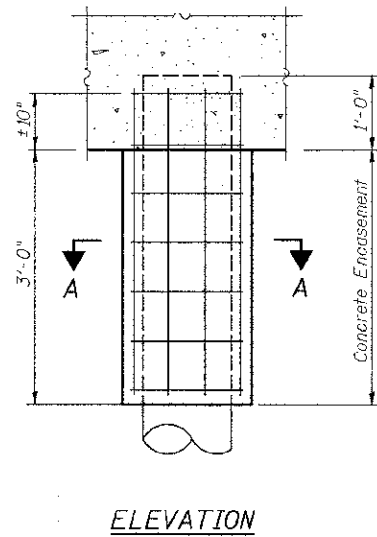
SHEET NO. 6 11 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	30
S.N. 006-4088			CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BROS-00110671			

**ABUTMENTS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY**

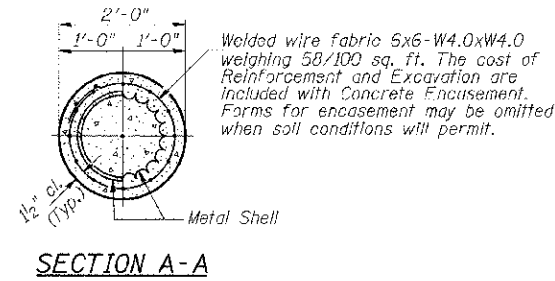
Notes: Driving and bearing ends of pipe shall be cut square. The thickness of the shell shall be 0.25 inches with a tolerance of 5%. The shell shall be according to Article 1006.05(a) of the Standard Specifications, and shall be ASTM A252 Grade 3.



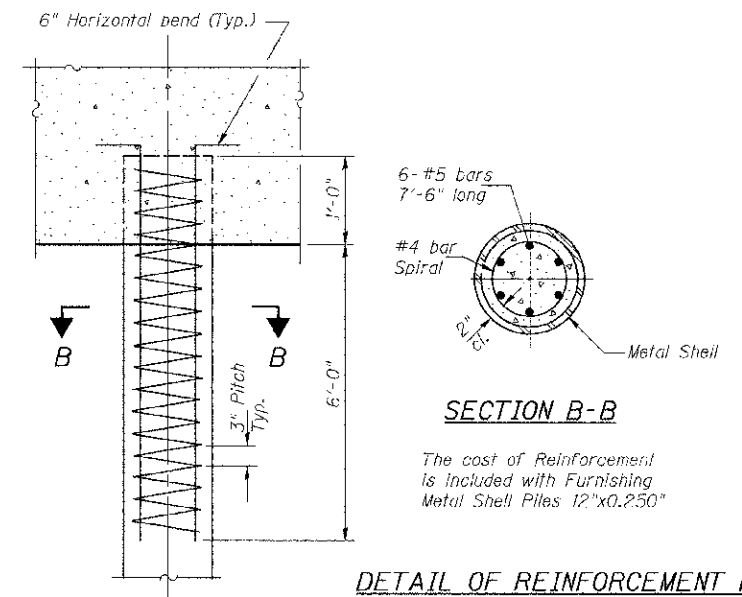
DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



ELEVATION

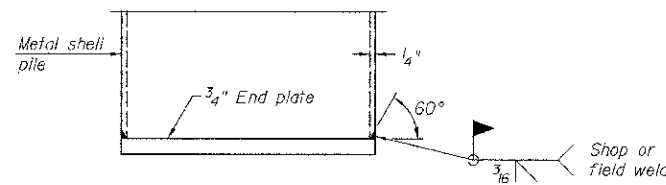


**SECTION A-A
DETAIL OF METAL SHELL PILE ENCASEMENT AT ABUTMENTS**

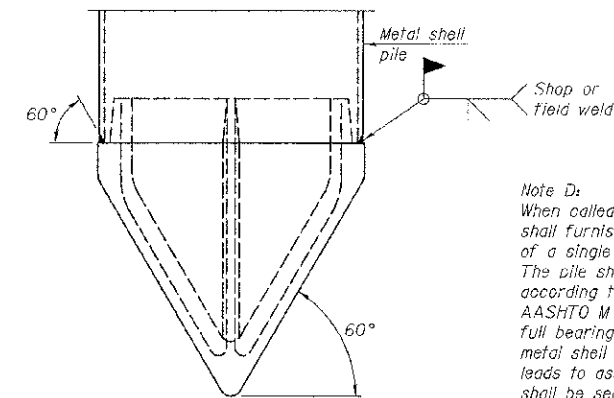


**SECTION B-B
DETAIL OF REINFORCEMENT FOR METAL SHELLS AT ABUTMENTS**

The cost of Reinforcement is included with Furnishing Metal Shell Piles 12"x0.250"

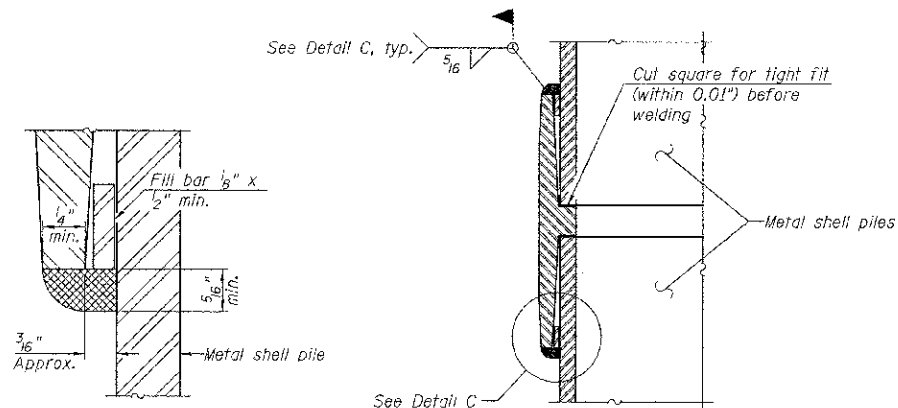


END PLATE ATTACHMENT



METAL SHELL PILE SHOE ATTACHMENT
(See Note D)

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



DETAIL C

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


WELDED COMMERCIAL SPLICE

COMPLETE PENETRATION WELD SPLICE

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

**METAL SHELL PILE DETAILS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY**

SHEET NO. 7	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
11 SHEETS	TR 109	07-03126-00-BR	BUREAU	61	31
		S.N. 006-4088		CONTRACT NO. 87528	
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BR05-001(087)		

 Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG		Phone: 815-223-6696
	Sheet <u>1</u> of <u>4</u>		Fax: 815-223-6659
			e-mail: mt637@comcast.net


Client: Hutchison Engineering, Inc.
 Project Name: TR 109 Over Lime Creek
 Project Site: Section 07-06117-00-BR
Dover Rd District, Bureau County, Illinois

Boring No. B-1
 Surface Elev. 711.95
 Auger Depth 66 FT. Rotary Depth NA
 Start Date 10/19/12 Finish Date 10/19/12

Location: 6' Right of Station 39173

DEPTH ELEV.	DESCRIPTION OF MATERIALS	Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Friction / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
711.95									
710.95									
709.95									
708.95	Stiff Brown And Black Clay (Fill)	1	SS	1.3	7	8	13		
707.95									
706.95		2	SS	1.7	12	8	15		
705.95									
704.95									
703.95	Stiff Brown And Gray Silty Clay	3	SS	1.4	11	8	17		
702.95									
701.95		4	SS	1.3	9	8	20		
700.95									
699.95	Medium Brown Fine Sand And Gravel	5	SS	—	12	—	—		
698.95									
697.95									
696.95	Very Stiff Brownish Gray Clay	6	SS	2.3	13	13	16		
695.95									
694.95									
693.95		7	SS	2.0	12	12	17		
692.95									
691.95	Medium Gray Fine Sand	8	SS	—	24	—	—		

Groundwater Data: Static water level after auger removal - Elevation 699.0.
 Comments:

 Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG		Phone: 815-223-6696
	Sheet <u>2</u> of <u>4</u>		Fax: 815-223-6659
			e-mail: mt637@comcast.net

Client: Hutchison Engineering, Inc.
 Project Name: TR 109 Over Lime Creek
 Project Site: Section 07-06117-00-BR
Dover Rd District, Bureau County, Illinois

Boring No. B-1
 Surface Elev. 711.95
 Auger Depth 66 FT. Rotary Depth NA
 Start Date 10/19/12 Finish Date 10/19/12

Location: 6' Right of Station 39173

DEPTH ELEV.	DESCRIPTION OF MATERIALS	Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Friction / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
699.95									
689.95	Medium Gray Fine Sand								
688.95		9	SS	—	17	—	—		
687.95									
686.95	Hard Brownish Gray Clay Till	10	SS	4.1	20	8	12		
685.95									
684.95									
683.95									
682.95									
681.95	Very Stiff Brownish Gray Clay Till	11	SS	3.6	18	8	13		
680.95									
679.95									
678.95									
677.95									
676.95	Hard Brownish Gray Clay Till	12	SS	3.9	18	8	13		
675.95									
674.95									
673.95									
672.95									
671.95		13	SS	4.7	25	8	12		
670.95									

Groundwater Data: Static water level after auger removal - Elevation 699.0.
 Comments:

SOIL BORINGS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY

SHEET NO. 8	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	32
11 SHEETS	S.N. 006-4088		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT BROS-0011(087)		

 Midwest Testing Services, Inc. 2705 Progress Blvd. Peori, IL 61354	BORING LOG		Phone: 815-223-6696
	Sheet <u>3</u> of <u>4</u>		Fax: 815-223-6650
		e-mail: mt377@comcast.net	


Client: Hutchison Engineering, Inc.
 Project Name: TR 109 Over Lime Creek
 Project Site: Section 07-06117-00-BR
Dover Rd District, Bureau County, Illinois

Boring No. B-1
 Surface Elev. 711.93
 Auger Depth 66 Ft. Rotary Depth NA
 Start Date 10/19/12 Finish Date 10/19/12

Location: 6' Right of Station 39+73

DEPTH ELEV. 669.95	DESCRIPTION OF MATERIALS	Sample Log	Depth in feet	SAMPLES						DRILLED BY Randy Safanski District D-120	REMARKS
				Sample No.	Sample Type	Q _u (TSF)	P Value (Blows)	Frige / Shear	Moisture (%)		
668.95	Hard Brownish Gray Clay Till		43								
667.95			44								
666.95			45	14	SS	5.0	26	S	11		
665.95			46								
664.95			47								
663.95			48								
662.95			49								
661.95			50	15	SS	4.6	24	S	12		
660.95			51								
659.95			52								
658.95		53									
657.95		54									
656.95		55	16	SS	4.4	23	S	12			
655.95		56									
654.95		57									
653.95		58									
652.95		59									
651.95		60	17	SS	4.1	24	S	11			
650.95		61									
649.95		62									

Groundwater Data: Static water level after auger removal - Elevation 659.0.
 Comments:

 Midwest Testing Services, Inc. 2705 Progress Blvd. Peori, IL 61354	BORING LOG		Phone: 815-223-6696
	Sheet <u>4</u> of <u>4</u>		Fax: 815-223-6650
		e-mail: mt377@comcast.net	

Client: Hutchison Engineering, Inc.
 Project Name: TR 109 Over Lime Creek
 Project Site: Section 07-06117-00-BR
Dover Rd District, Bureau County, Illinois

Boring No. B-1
 Surface Elev. 711.93
 Auger Depth 66 Ft. Rotary Depth NA
 Start Date 10/19/12 Finish Date 10/19/12


Location: 6' Right of Station 39+73

DEPTH ELEV. 648.95	DESCRIPTION OF MATERIALS	Sample Log	Depth in feet	SAMPLES						DRILLED BY Randy Safanski District D-120	REMARKS
				Sample No.	Sample Type	Q _u (TSF)	P Value (Blows)	Frige / Shear	Moisture (%)		
647.95	Hard Brownish Gray Clay Till		64								
646.95			65								
645.95			66	26	SS	4.7	26	S	11		
644.95			67								
643.95			68								
642.95			69								
641.95			70								
640.95			71								
639.95			72								
638.95			73								
637.95		74									
636.95		75									
635.95		76									
634.95		77									
633.95		78									
632.95		79									
631.95		80									
630.95		81									
629.95		82									
628.95		83									

Groundwater Data: Static water level after auger removal - Elevation 659.0.
 Comments:

SOIL BORINGS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY

SHEET NO. 9 11 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	33
	S.N. 006-4088		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT BROS-0011(087)		


 Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG		Phone: 815-233-6696
	Sheet <u>1</u> of <u>4</u>		Fax: 815-233-6659
			e-mail: mts37@comcast.net

Client: <u>Hitchison Engineering, Inc.</u>	Boring No. <u>B-2</u>
Project Name: <u>TR 109 Over Lime Creek</u>	Surface Elev. <u>712.03</u>
Project Site: <u>Section 07-06117-00-BR</u>	Auger Depth <u>66 FT.</u> Rotary Depth <u>NA</u>
<u>Dover Rd District, Bureau County, Illinois</u>	Start Date <u>10/19/12</u> Finish Date <u>10/19/12</u>

Location: 6' Left of Station 40+22

DEPTH E.L.V.	DESCRIPTION OF MATERIALS	Sample No.	SAMPLES				DRILLED BY	REMARKS
			Sample Type	Qc (TSU)	N Value (Blows)	Penig / Shear		
712.05								
711.05								
710.05								
709.05	Stiff Brown And Black Clay And Silty Clay (Fill)	1	SS	1.6	11	B	18	
708.05								
707.05								
706.05		2	SS	1.3	9	S	16	
705.05								
704.05	Soft Brown And Gray Silty Clay	3	SS	1.1	6	B	21	
703.05								
702.05		4	SS	1.6	12	B	17	
701.05								
700.05	Medium Brown Fine Sand And Gravel	5	SS	---	15	---	---	
699.05								
698.05								
697.05	Soft Brownish Gray Clay	6	SS	1.8	9	B	21	
696.05								
695.05								
694.05	Medium Gray Fine Sand	7	SS	---	18	---	---	
693.05								
692.05		8	SS	---	22	---	---	

Groundwater Data: Static water level after auger removal - Elevation 699.0.
 Comments:

 Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG		Phone: 815-233-6696
	Sheet <u>2</u> of <u>4</u>		Fax: 815-233-6659
			e-mail: mts37@comcast.net

Client: <u>Hitchison Engineering, Inc.</u>	Boring No. <u>B-2</u>
Project Name: <u>TR 109 Over Lime Creek</u>	Surface Elev. <u>712.03</u>
Project Site: <u>Section 07-06117-00-BR</u>	Auger Depth <u>66 FT.</u> Rotary Depth <u>NA</u>
<u>Dover Rd District, Bureau County, Illinois</u>	Start Date <u>10/19/12</u> Finish Date <u>10/19/12</u>

Location: 6' Left of Station 40+22

DEPTH E.L.V.	DESCRIPTION OF MATERIALS	Sample No.	SAMPLES				DRILLED BY	REMARKS
			Sample Type	Qc (TSU)	N Value (Blows)	Penig / Shear		
699.05								
689.05	Medium Gray Fine Sand	9	SS	---	14	---	---	
688.05								
687.05								
686.05		10	SS	---	20	---	---	
685.05								
684.05	Very Stiff Brownish Gray Clay Till							
683.05								
682.05		11	SS	2.7	16	B	14	
681.05								
680.05								
679.05								
678.05								
677.05		12	SS	3.6	20	B	13	
676.05								
675.05								
674.05	Medium Gray Fine Sand							
673.05								
672.05		13	SS	---	27	---	---	
671.05								

Groundwater Data: Static water level after auger removal - Elevation 699.0.
 Comments:

SOIL BORINGS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY

SHEET NO. 10	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	34
11 SHEETS	S.N. 006 4088		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT BROS-0011087		


 Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG		Phone: 815-223-6696
	Sheet <u>3</u> of <u>4</u>		Fax: 815-223-6659
			e-mail: mts37@comcast.net

Client: <u>Hutchison Engineering, Inc.</u>	Boring No. <u>B-2</u>
Project Name: <u>TR 109 Over Lime Creek</u>	Surface Elev. <u>712.05</u>
Project Site: <u>Section 07-06117-00-BR</u>	Auger Depth <u>66 FL</u> Rotary Depth <u>NA</u>
<u>Dover Rd District, Bureau County, Illinois</u>	Start Date <u>10/19/12</u> Finish Date <u>10/19/12</u>

Location: 6' Left of Station 40+22

DEPTH ELEV.	DESCRIPTION OF MATERIALS	Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Frags / Slugs	Moisture (%)	Dry Density (PCF)	DRILLER
									REMARKS
670.05									Randy Safanski District D-120
669.05	Hard Brownish Gray Clay Till	14	SS	5.4	26	S	11		
668.05									
667.05									
666.05									
665.05									
664.05									
663.05									
662.05		15	SS	4.7	27	S	11		
661.05									
660.05									
659.05									
658.05									
657.05									
656.05		16	SS	4.3	23	S	12		
655.05									
654.05									
653.05									
652.05									
651.05		17	SS	4.5	25	S	12		
650.05									

Groundwater Data: Static water level after auger removal - Elevation 699.0.
 Comments:

 Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG		Phone: 815-223-6696
	Sheet <u>4</u> of <u>4</u>		Fax: 815-223-6659
			e-mail: mts37@comcast.net

Client: <u>Hutchison Engineering, Inc.</u>	Boring No. <u>B-2</u>
Project Name: <u>TR 109 Over Lime Creek</u>	Surface Elev. <u>712.05</u>
Project Site: <u>Section 07-06117-00-BR</u>	Auger Depth <u>66 FL</u> Rotary Depth <u>NA</u>
<u>Dover Rd District, Bureau County, Illinois</u>	Start Date <u>10/19/12</u> Finish Date <u>10/19/12</u>

Location: 6' Left of Station 40+22

DEPTH ELEV.	DESCRIPTION OF MATERIALS	Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Frags / Slugs	Moisture (%)	Dry Density (PCF)	DRILLER
									REMARKS
649.05									Randy Safanski District D-120
648.05	Hard Brownish Gray Clay Till								
647.05		26	SS	4.4	24	S	12		
646.05									
645.05									
644.05									
643.05									
642.05									
641.05									
640.05									
639.05									
638.05									
637.05									
636.05									
635.05									
634.05									
633.05									
632.05									
631.05									
630.05									
629.05									

Groundwater Data: Static water level after auger removal - Elevation 699.0.
 Comments:

SOIL BORINGS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY

SHEET NO. 11	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	35
11 SHEETS	S.N. 006-4088		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT BROS-0011(087)		

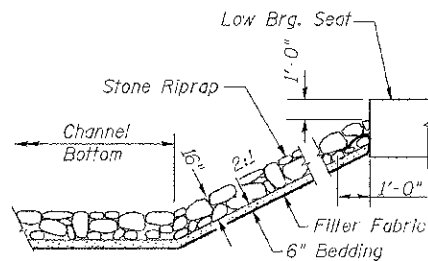
B.M.: RR Spike in Power Pole
Sta. 54+94, 32' Lt.
Elev. 712.92

RR Spike in Power Pole
Sta. 61+89, 28' Lt.
Elev. 711.27

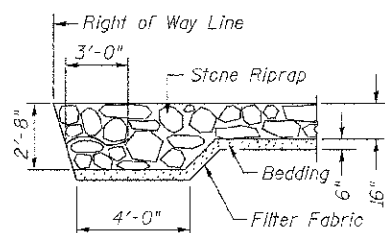
Existing Structure:
Single span reinforced concrete slab with concrete rail on concrete closed abutments. The structure is ±22' back to back of abutments, ±21' out to out deck, and is not skewed.
Str. No. 006-4076

Salvage: None

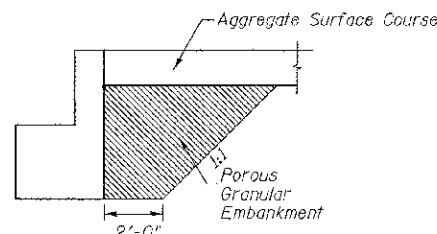
Road to be closed to traffic during construction.



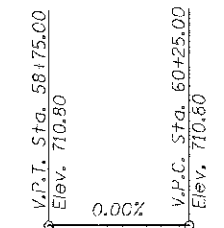
STONE RIPRAP DETAIL



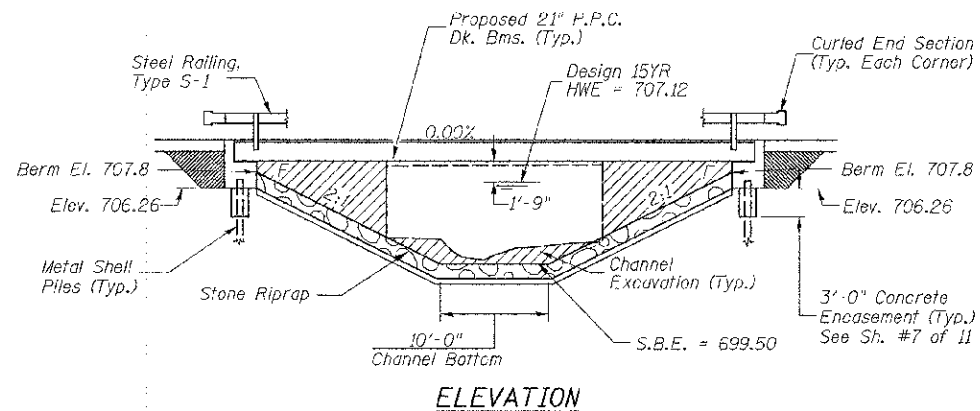
SECTION A-A



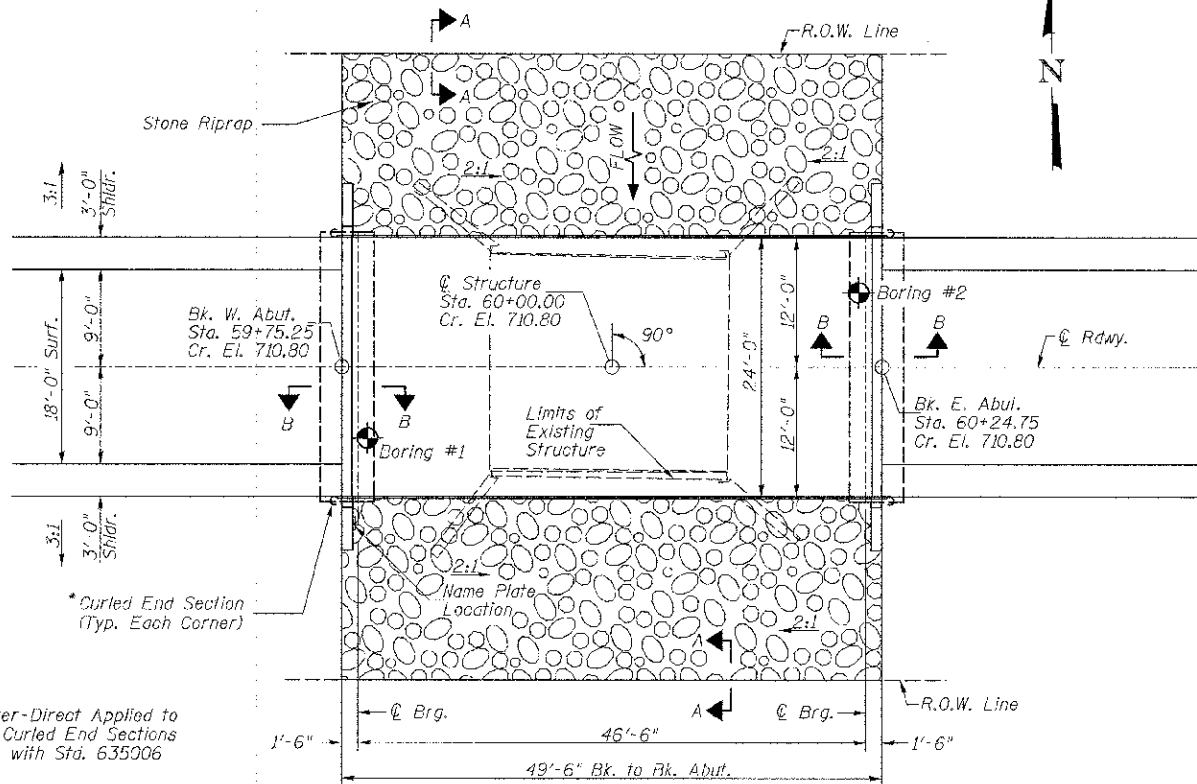
SECTION B-B



PROFILE GRADE



ELEVATION



PLAN

* Terminal Marker-Direct Applied to be placed on Curled End Sections in accordance with Sta. 635006

DESIGN SCOUR TABLE

Location	W. Abut.	E. Abut.
Design Scour Elevation	706.26	706.26

WATERWAY INFORMATION

Drainage Area = 2.77 Sq. Mi.		Low Grade Elev. = 710.80 @ Sta. 60+00.00			
Flood	Yr.	Q C.F.S.	Opening Sq. Ft.	Nat. Head - Ft.	Headwater El.
Design	15	759	119	192	707.12
Base	100	1,260	136	227	707.95

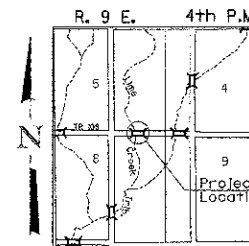
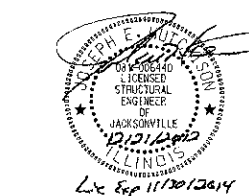
DESIGN SPECIFICATIONS
2012 AASHTO LRFD Bridge Design Specifications

DESIGN STRESSES

(FIELD UNITS) (PRECAST PRESTRESSED UNITS)
f'c = 3,500 p.s.i. f'c = 6,000 p.s.i.
fy = 60,000 p.s.i. (Rein.) f'ci = 5,000 p.s.i.
f's = 270,000 p.s.i. (1/2" Strands)
f'si = 201,960 p.s.i. (1/2" Strands)

LOADING HL-93

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



LOCATION SKETCH

GENERAL NOTES

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at the substructures specified or approved by the Engineer before ordering the remainder of the piles.
For Soil Boring Logs, See Sheets 8-11 of 11.
A Corrosion Inhibitor shall be used in the concrete for Precast Prestressed Concrete Deck Beams according to Article 1020.05(b)(12) of the Standard Specifications.
Reinforcement Bars shall conform to the requirements of ASTM A706 Grade 60. Reinforcement Bars designated (E) shall be epoxy coated.
Layout of the slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

LIME CREEK TRIBUTARY
BUILT 201 BY
DOVER ROAD DISTRICT
BUREAU COUNTY
SEC. 07-06118-00-BR
T.R. 109 STATION 60+00.00
F.A. PROJ. BROS-0011087
STR. NO. 006-4089 LOADING HL-93

NAME PLATE

Locate Name Plate at S.W. Wingwall
Corner of Bridge (See Std. 515001)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	CU YD	---	190	190
① Stone Riprap, Class A4 (Special)	TON	---	260	260
① Removal of Existing Structures No. 3	EACH	---	---	1
Concrete Structures	CU YD	---	19.8	19.8
① Precast Prestressed Concrete Deck Beams (21" Depth)	SO FT	1,144	---	1,144
Reinforcement Bars	POUND	---	2,300	2,300
Steel Railing, Type S1	FOOT	99	---	99
Furnishing Metal Shell Piles 12"x0.250"	FOOT	---	224	224
Driving Piles	FOOT	---	224	224
Test Pile Metal Shells	EACH	---	2	2
Pile Shoes	EACH	---	10	10
Concrete Encasement	CU YD	---	2.6	2.6
Name Plates	EACH	---	1	1
① Porous Granular Embankment	CU YD	---	22.6	22.6

① See Special Provisions

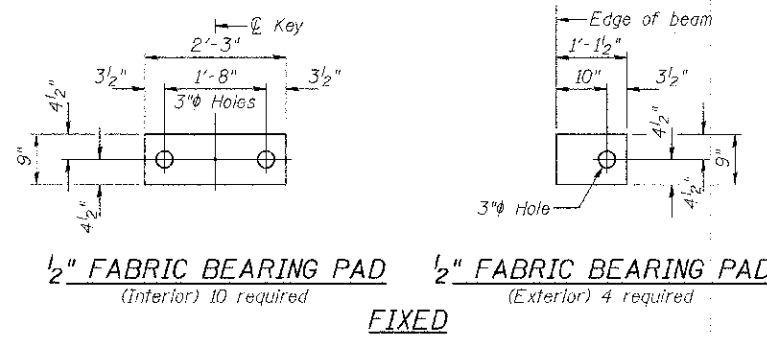
I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO Standard Specification for Highway Bridges.
This design complies with all requirements of the current AASHTO Guide Specifications for Seismic Design of highway bridges.

Joseph E. Muehle
Illinois Structural No. 6440
Expires 11/30/2014

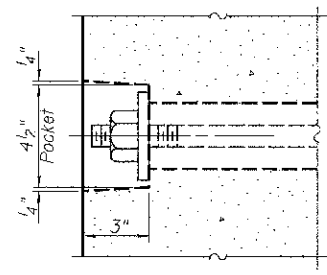
GENERAL PLAN & ELEVATION
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY

DESIGNED	C.T.M.
CHECKED	S.T.M./J.E.H.
DRAWN	C.T.M.
CHECKED	S.T.M./J.E.H.

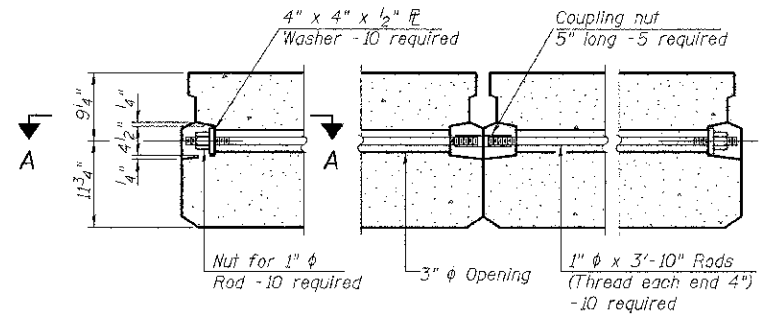
SHEET NO. 1	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
11 SHEETS	TR 109	07-03126-00-BR	BUREAU	61	36
		S.N. 006-4089		CONTRACT NO. 87528	
	FED. ROAD DIST. NO. 7	ILLINOIS		FED. AID PROJECT BROS-0011087	



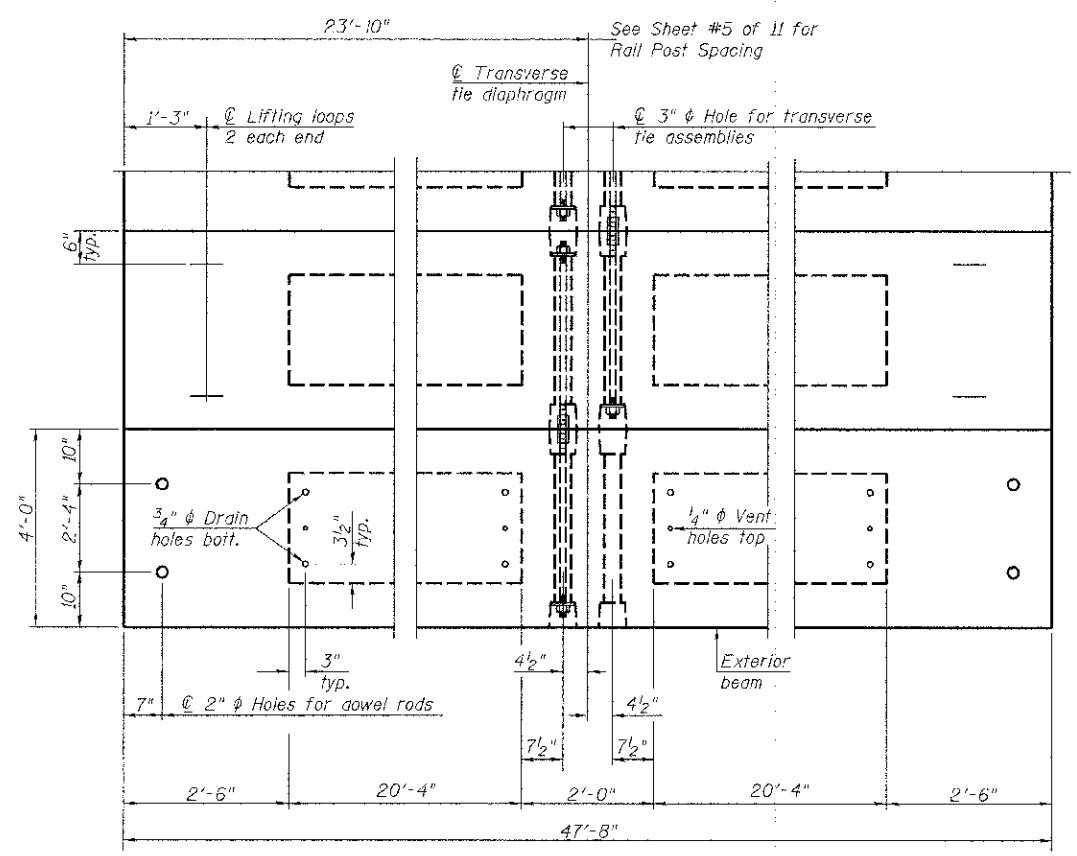
1/2" FABRIC BEARING PAD (Interior) 10 required
1/2" FABRIC BEARING PAD (Exterior) 4 required
FIXED



SECTION A-A

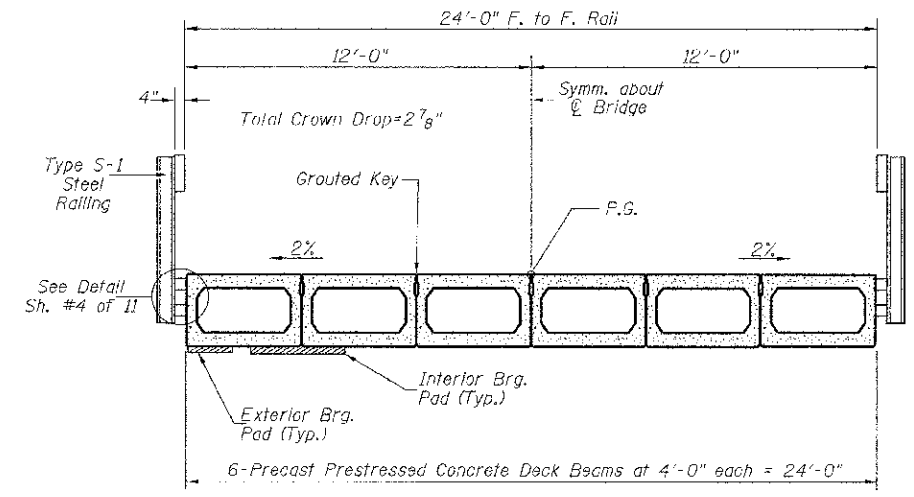


TYPICAL TRANSVERSE TIE ASSEMBLY



PLAN VIEW

Note: Connect beams in pairs with the transverse tie configuration shown.



CROSS SECTION

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
① Precast Prestressed Concrete Deck Beams (21" Depth)	SQ FT	1,144

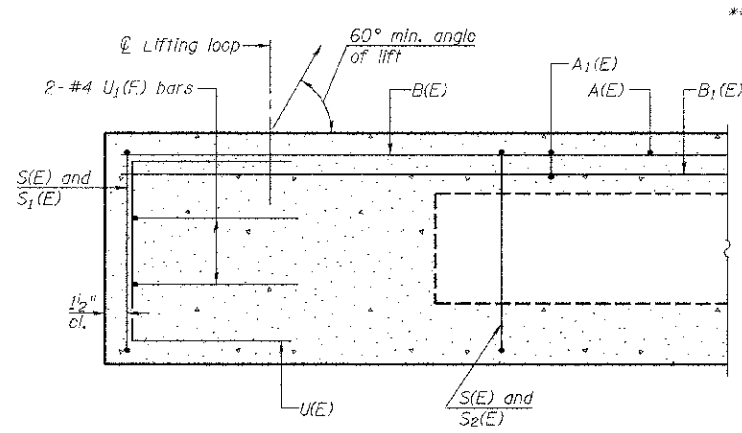
① See Special Provisions

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
 Reinforcement bars shall conform to ASTM A 706, Grade 60.
 Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
 A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.
 Corrosion inhibitor, per Article 1020.05(b)(12) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
 Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
 Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.

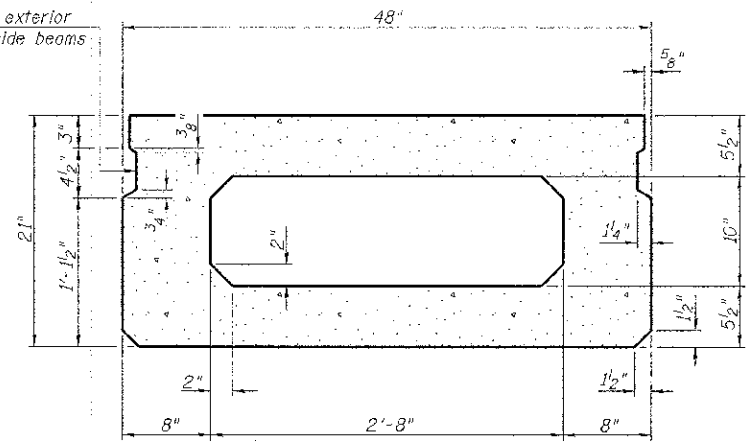
SUPERSTRUCTURE
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY

SHEET NO. 2	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	11 SHEETS	IR 109	07-03126-00-BR	BUREAU	61
S.N. 006-4089			CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT BR05-0011(087)		

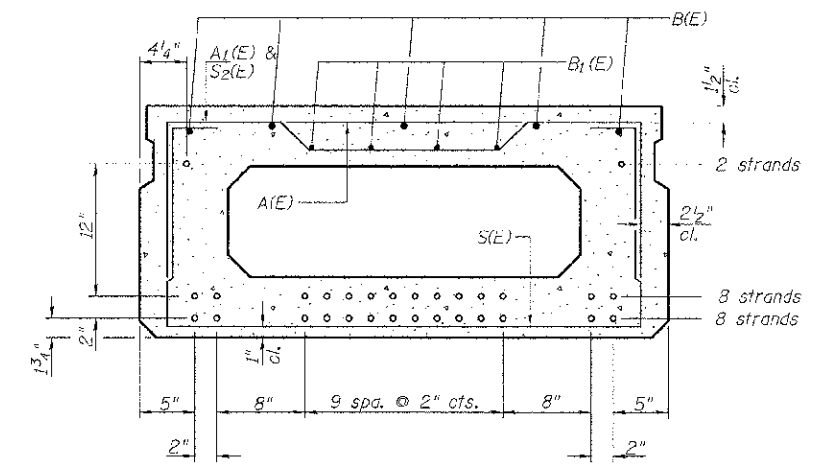


SECTION C-C

**Omit key on exterior face of outside beams

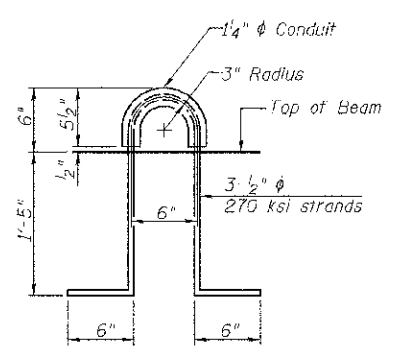


SECTION A-A
(Showing dimensions)



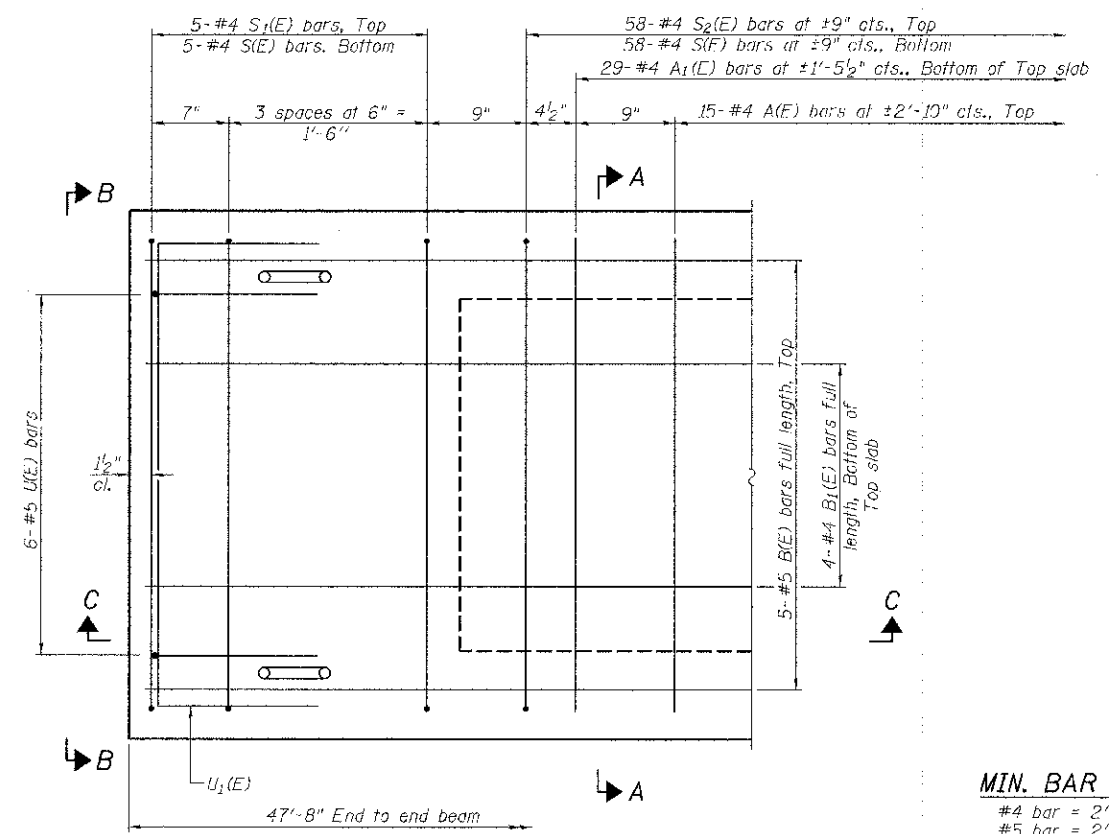
SECTION A-A

18-1/2" Strands Each Strand Stressed to 30,900 Lbs.
 8-Strands 1 3/4" up, 8-Strands 3 3/4" up, 2-Strands 1'-3 3/4"
 Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.



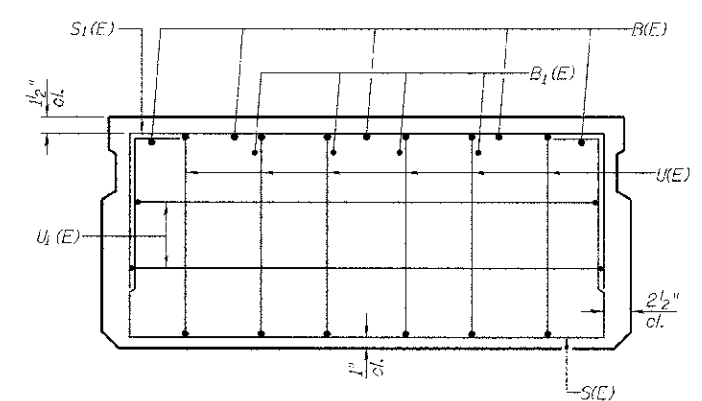
LIFTING LOOP DETAIL

**Rail post anchor devices (Sheet 4 of 11) to be cast into exterior face of outside beams.

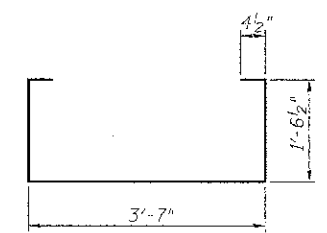


PLAN VIEW

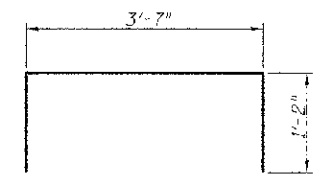
Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



VIEW B-B

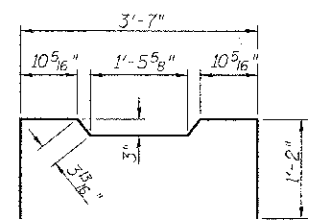


BAR S(E)

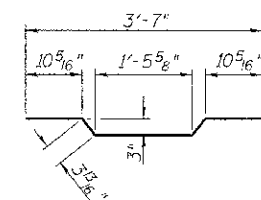


BAR S1(E)

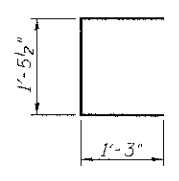
MIN. BAR LAP
 #4 bar = 2'-0"
 #5 bar = 2'-6"



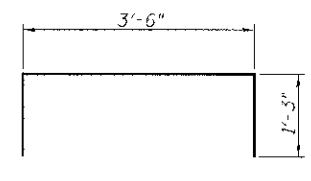
BAR S2(E)



BAR A1(E)



BAR U(E)



BAR U1(E)

BAR LIST-ONE BEAM ONLY
(For Information Only)

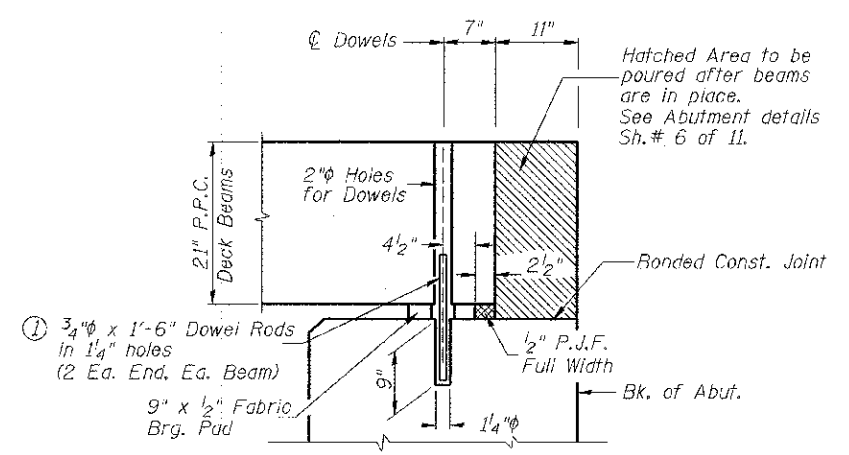
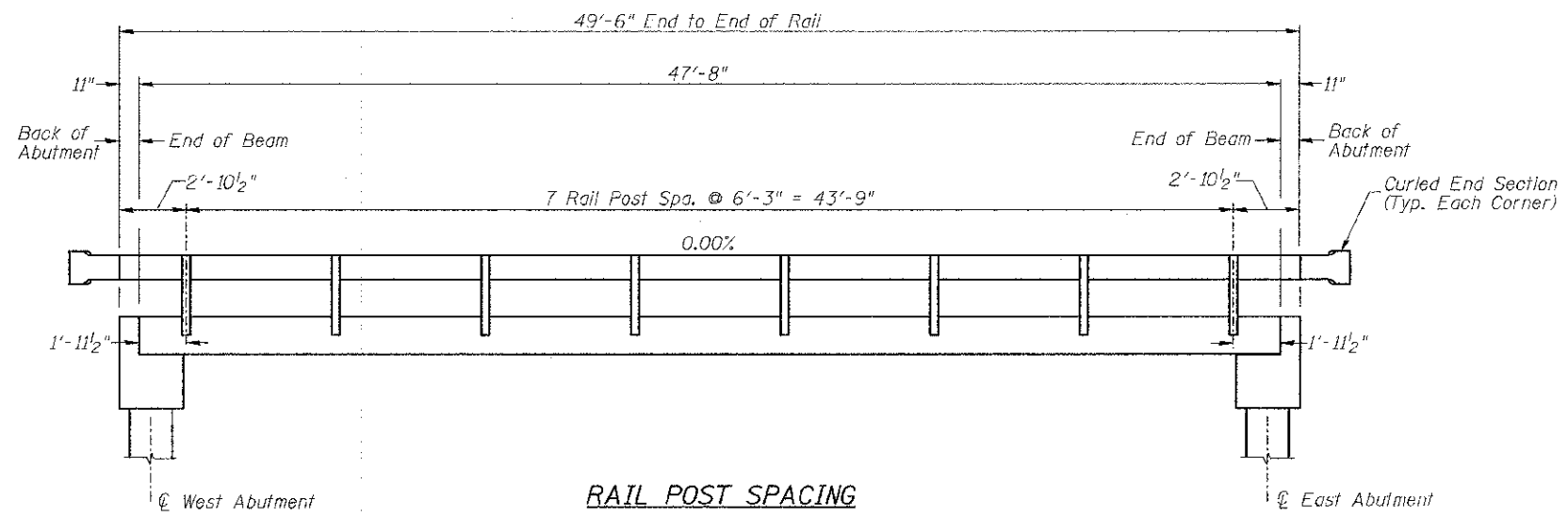
BAR NO.	SIZE	LENGTH	SHAPE
A(E)	15 #4	3'-7"	---
A1(E)	29 #4	3'-10"	---
B(E)	5 #5	*4'-5"	---
B1(E)	4 #4	*4'-5"	---
S(E)	58 #4	7'-5"	U
S1(E)	10 #4	5'-11"	U
S2(E)	58 #4	6'-2"	U
U(E)	12 #5	4'-0"	U
U1(E)	4 #4	6'-0"	U

* Total Length, Lap as necessary

Note: See sheet 2 of 11 for additional details and Bill of Material.

SUPERSTRUCTURE DETAILS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY

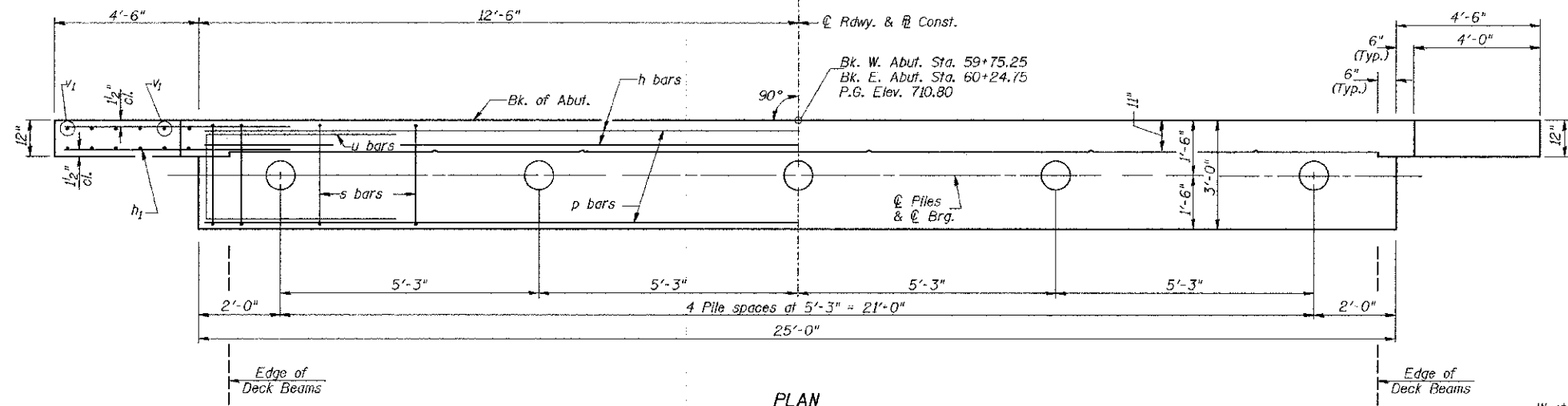
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	TR 109	07-03126-00-BR	BUREAU	61	38
	S.N. 006-4089		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BR05-0011(087)			



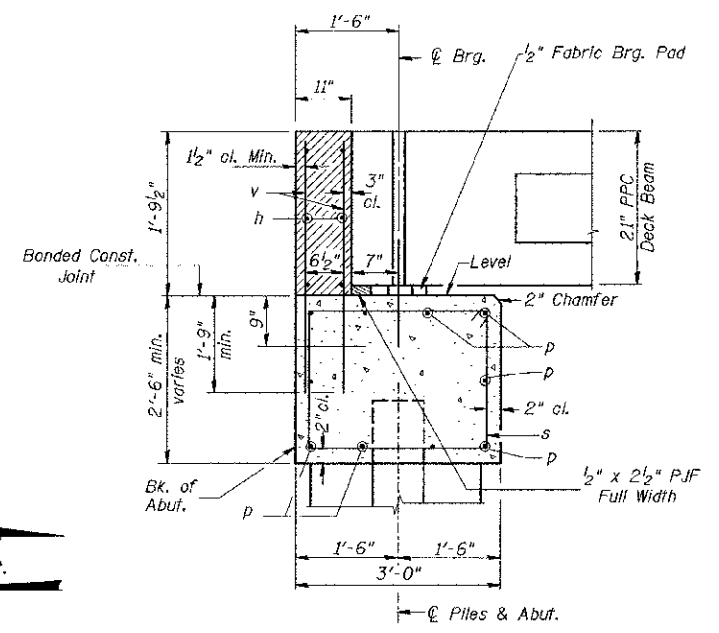
① Dowel Rods to be grouted after beams are in place and allowed to cure (Min. 24 hr.) prior to grouting the shear keys.

RAIL POST SPACING AND
 SUPERSTRUCTURE DETAILS
 BUREAU COUNTY
 SECTION 07-03126-00-BR
 T.R. 109 OVER LIME CREEK TRIBUTARY

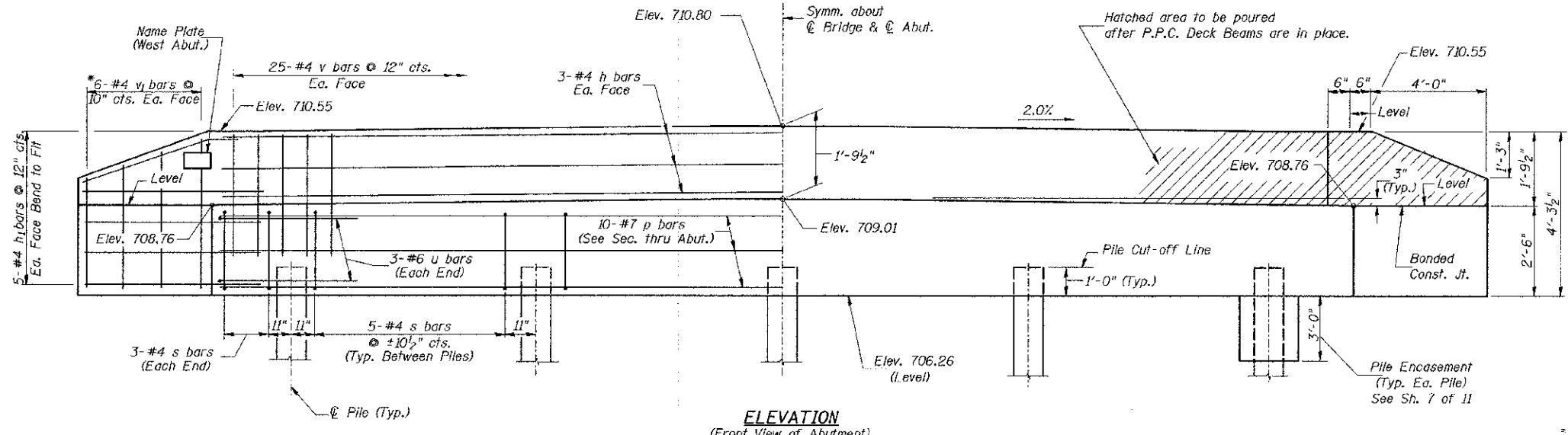
SHEET NO. 5	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
11 SHEETS	TR 109	07-03126-00-BR	BUREAU	61	40
		S.N. 006-4089	CONTRACT NO. 87528		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BROS-001(087)		



PLAN



SECTION THRU ABUT.



ELEVATION
(Front View of Abutment)

**TWO ABUTMENTS
BILL OF MATERIAL**

BAR NO.	SIZE	LENGTH	SHAPE
h	12	#4	24'-9"
h ₁	40	#4	6'-6"
p	20	#7	24'-9"
s	52	#4	10'-5"
u	12	#6	11'-7"
v	100	#4	3'-6"
v ₁	24	#4	6'-9"
Concrete Structures			CU YD 19.8
Reinforcement Bars			POUND 2,300
Name Plates			EACH 1
Furnishing Metal Shell Piles 12"x0.250"			FOOT 224
Driving Piles			FOOT 224
Test Pile Metal Shells			EACH 2
Pile Shoes			EACH 10
Concrete Encasement			CU YD 2.6

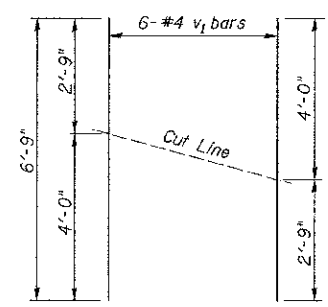
DESIGN STRESSES
 $f'_c = 3,500$ p.s.i.
 $f_y = 60,000$ p.s.i.

NOTES

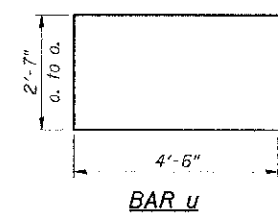
- The Backwall and the portion of the Wingwalls above the bonded construction joint shall be cast against the in-place beam.
- Reinforcement bars shall conform to ASTM A706 Grade 60.

PILE DATA

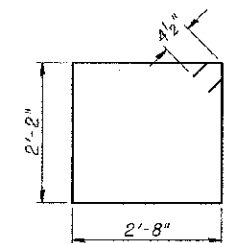
Type & Size: Metal Shell 12"x0.250" walls w/ Pile Shoes
 Nominal Required Bearing: 185 kips
 Factored Resistance Available: 100 kips
 Est. Length: 27' West Abutment
 29' East Abutment
 No. Req'd.: 10 (Includes 1 Test Pile at Each Abut.)



BAR CUTTING DIAGRAM
 *Order v₁ bars full length. Cut as shown and use remainder of bars in opposite face.



BAR u

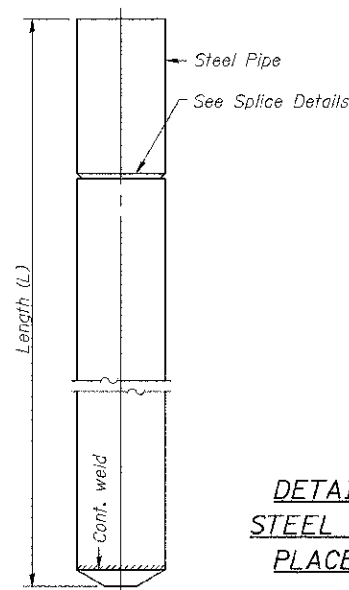


BAR s

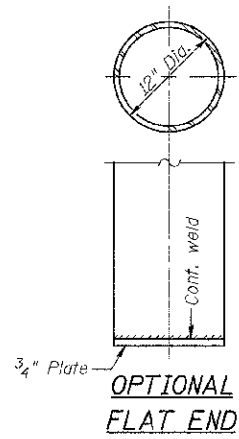
SHEET NO. 6 11 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	41
	S.N. 006-4089		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT BR05-0011(087)		

**ABUTMENTS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY**

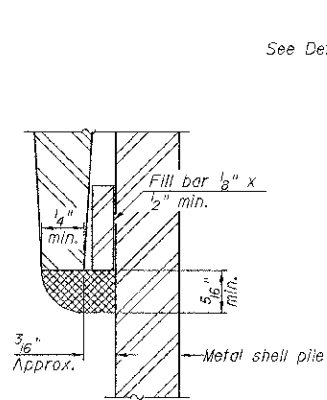
Notes: Driving and bearing ends of pipe shall be cut square. The thickness of the shell shall be 0.25 inches with a tolerance of 5%. The shell shall be according to Article 1006.05(a) of the Standard Specifications, and shall be ASTM A252 Grade 3.



DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

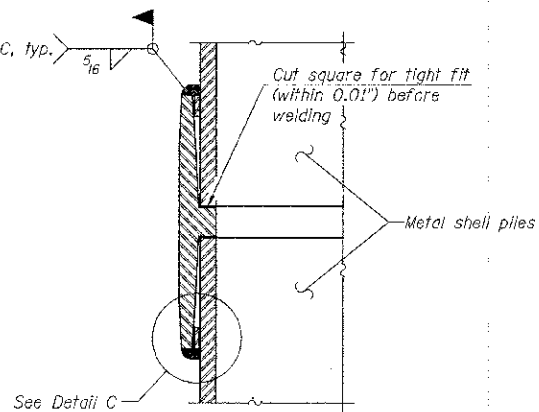


OPTIONAL FLAT END



DETAIL C

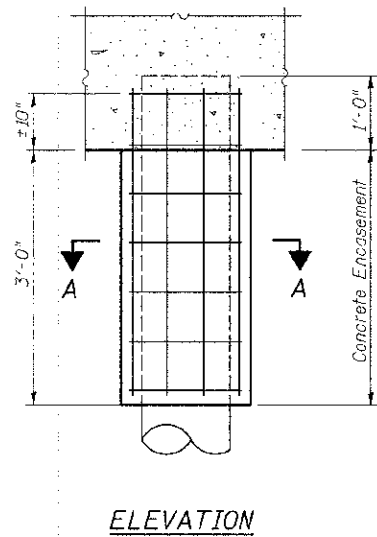
WELDED COMMERCIAL SPLICE



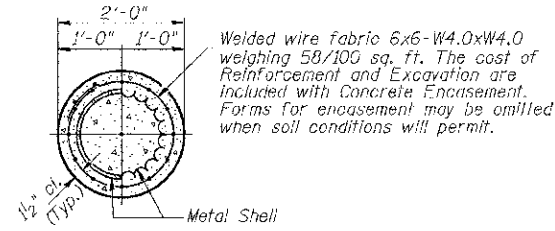
Notes:
The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.

COMPLETE PENETRATION WELD SPLICE

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

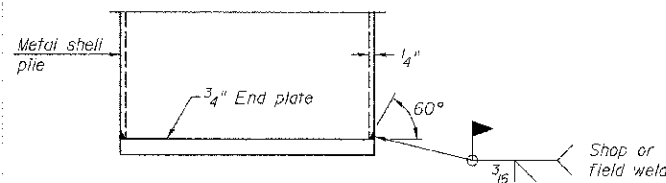


ELEVATION

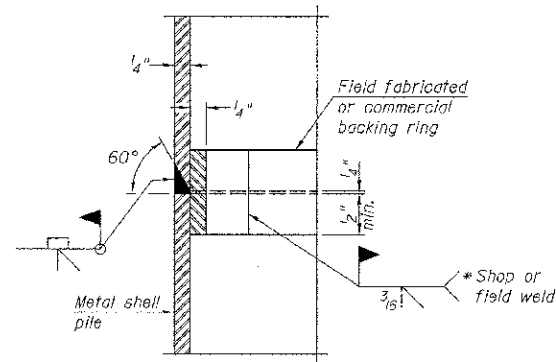


SECTION A-A

DETAIL OF METAL SHELL PILE ENCASEMENT AT ABUTMENTS

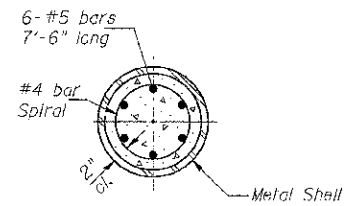
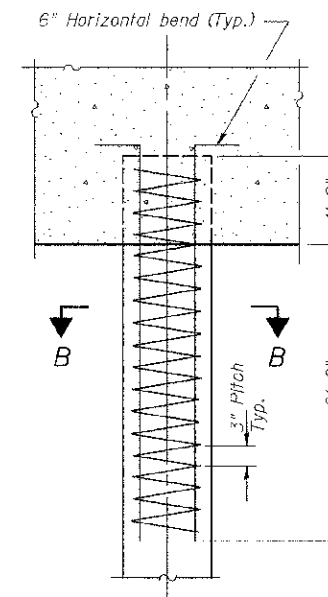


END PLATE ATTACHMENT



METAL SHELL PILE SHOE ATTACHMENT

(See Note D)



SECTION B-B

The cost of Reinforcement is included with Furnishing Metal Shell Piles 12"x0.250"

DETAIL OF REINFORCEMENT FOR METAL SHELLS AT ABUTMENTS

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

METAL SHELL PILE DETAILS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY

SHEET NO. 7 11 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	42
	S.N. 006-4089		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BROS-C011(087)			

Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG
Phone: 815-223-6696
Fax: 815-223-6639
e-mail: mts37@comcast.net

Client: Hutchinson Engineering, Inc.
Project Name: TR 109 Over Lime Creek Tributary
Project Site: Section 07-06118-00-BR
Dover Rd. District Bureau County, IL.

Sheer 1 of 4

Boring No. B-1
Surface Elev. 711.00
Auger Depth 66 ft. Rotary Depth NA
Start Date 10/20/12 Finish Date 10/20/12

Location: 6' Right of Station 39177

DEPTH ELEV.	DESCRIPTION OF MATERIALS	Sample No.	Sample Type	Q _v (TSF)	N Value (Blows)	Penetration / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
711.00									
710.00	Stiff Brown Silty Clay (Fill)								
708.00		1	SS	1.4	10	B	19		
706.00	Stiff Black Silty Clay								
705.00		2	SS	1.5	8	B	22		
704.00	Loose Brownish Gray Silt And Silty Loam								
703.00		3	SS	—	5	—	18		
701.00		4	SS	—	4	—	22		
699.00	Very Stiff Brownish Gray Clay Till								
698.00		5	SS	2.2	12	B	17		
696.00		6	SS	2.7	14	B	16		
694.00		7	SS	2.7	15	B	16		
693.00		8	SS	2.5	12	B	18		

Groundwater Data: No groundwater encountered at time of subsurface investigation.
Comments:

Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG
Phone: 815-223-6696
Fax: 815-223-6639
e-mail: mts37@comcast.net

Client: Hutchinson Engineering, Inc.
Project Name: TR 109 Over Lime Creek Tributary
Project Site: Section 07-06118-00-BR
Dover Rd. District Bureau County, IL.

Sheer 2 of 4

Boring No. B-1
Surface Elev. 711.00
Auger Depth 66 ft. Rotary Depth NA
Start Date 10/20/12 Finish Date 10/20/12


Location: 6' Right of Station 39177

DEPTH ELEV.	DESCRIPTION OF MATERIALS	Sample No.	Sample Type	Q _v (TSF)	N Value (Blows)	Penetration / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
699.00									
689.00	Very Stiff Brownish Gray Clay Till								
688.00		9	SS	3.1	13	B	17		
687.00	Very Stiff Brownish Gray Clay Till								
686.00		10	SS	3.4	16	B	17		
685.00	Hard Brownish Gray Clay Till								
684.00									
683.00		11	SS	4.3	22	B	13		
682.00	Very Stiff Brownish Gray Clay Till								
681.00									
680.00									
679.00									
678.00		12	SS	3.7	20	B	13		
677.00	Hard Brownish Gray Clay Till								
676.00									
675.00		13	SS	4.1	23	B	12		

Groundwater Data: No groundwater encountered at time of subsurface investigation.
Comments:

SOIL BORINGS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY


SHEET NO. 8	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	43
11 SHEETS	S.N. 006-4089		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT BROS-0011087		

 Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG		Phone: 815-223-6696
	Sheet <u>3</u> of <u>4</u>		Fax: 815-223-6659
			e-mail: mts37@comcast.net

Client: <u>Hutchison Engineering, Inc.</u>	Boring No. <u>B-1</u>
Project Name: <u>TR 109 Over Lime Creek Tributary</u>	Surface Elev. <u>711.00</u>
Project Site: <u>Section 07-06118-00-BR</u>	Auger Depth <u>66 Ft.</u> Rotary Depth <u>NA</u>
<u>Dover Rd. District Bureau County, IL.</u>	Start Date <u>10/20/12</u> Finish Date <u>10/20/20</u>

DEPTH ELEV.	DESCRIPTION OF MATERIALS	Sample Type	Depth in feet	SAMPLES					DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu. (TSF)	N Value (Blows)	Friction (kPa)		
669.00										
668.00			43							
667.00			44							
666.00			45	14	SS	4.5	22	B	13	
665.00			46							
664.00			47							
663.00			48							
662.00	Hard Brownish Gray Clay Till		49							
661.00			50							
660.00			51	15	SS	4.6	24	S	12	
659.00			52							
658.00			53							
657.00			54							
656.00			55							
655.00			56	16	SS	5.0	25	S	11	
654.00			57							
653.00			58							
652.00			59							
651.00	Medium To Dense Gray Silt		60							
650.00			61	17	SS	---	30	---	18	
649.00			62							

Groundwater Data: No groundwater encountered at time of subsurface investigation.
 Comments:

 Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG		Phone: 815-223-6696
	Sheet <u>4</u> of <u>4</u>		Fax: 815-223-6659
			e-mail: mts37@comcast.net

Client: <u>Hutchison Engineering, Inc.</u>	Boring No. <u>B-1</u>
Project Name: <u>TR 109 Over Lime Creek Tributary</u>	Surface Elev. <u>711.00</u>
Project Site: <u>Section 07-06118-00-BR</u>	Auger Depth <u>66 Ft.</u> Rotary Depth <u>NA</u>
<u>Dover Rd. District Bureau County, IL.</u>	Start Date <u>10/20/12</u> Finish Date <u>10/20/20</u>

DEPTH ELEV.	DESCRIPTION OF MATERIALS	Sample Type	Depth in feet	SAMPLES					DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu. (TSF)	N Value (Blows)	Friction (kPa)		
647.00			64							
646.00	Hard Brownish Gray Clay Till		65							
645.00			66	18	SS	4.5	26	S	11	
644.00			67							
643.00			68							
642.00			69							
641.00			70							
640.00			71							
639.00			72							
638.00			73							
637.00			74							
636.00			75							
635.00			76							
634.00			77							
633.00			78							
632.00			79							
631.00			80							
630.00			81							
629.00			82							
628.00			83							

Groundwater Data: No groundwater encountered at time of subsurface investigation.
 Comments:

SOIL BORINGS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY

SHEET NO. 9	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	44
11 SHEETS	S.N. 006-4089		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT BROS-0011087		

	Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG Sheet 1 of 4	Phone: 815-223-6696 Fax: 815-223-6639 e-mail: rns37@comcast.net	
	Client: <u>Hutchison Engineering, Inc.</u> Project Name: <u>TR 109 Over Lime Creek Tributary</u> Project Site: <u>Section 07-06118-00-BR</u> <u>Dover Rd. District Bureau County, IL.</u>	Boring No. <u>B-2</u> Surface Elev. <u>711.35</u> Auger Depth <u>66 PL</u> Rotary Depth <u>NA</u> Start Date <u>10/20/12</u> Finish Date <u>10/20/20</u>		
	Location: <u>7' Left of Station 60+23</u>			

Client: <u>Hutchison Engineering, Inc.</u> Project Name: <u>TR 109 Over Lime Creek Tributary</u> Project Site: <u>Section 07-06118-00-BR</u> <u>Dover Rd. District Bureau County, IL.</u>	Boring No. <u>B-2</u> Surface Elev. <u>711.35</u> Auger Depth <u>66 PL</u> Rotary Depth <u>NA</u> Start Date <u>10/20/12</u> Finish Date <u>10/20/20</u>
--	---

DEPTH ELEV.	DESCRIPTION OF MATERIALS	Coring Log	Depth in Feet	SAMPLES					DRILLED BY	REMARKS
				Sample No.	Sample Type	Q _v (TSF)	N Value (Blows)	Penetration / Shear		
711.35										
710.35	Stiff Brown And Black Silty Clay (Fill)		1							
709.35			2							
708.35			1	SS	1.2	8	B	19		
707.35			3							
706.35			2	SS	1.5	8	B	20		
705.35	Stiff Black Silty Clay		4							
704.35			3	SS	1.5	6	B	22		
703.35	Loose Brownish Gray Silt And Silty Loam		5							
702.35			4	SS	---	4	---	21		
701.35			5	SS	---	4	---	20		
700.35			6							
699.35			6	SS	1.8	10	B	18		
698.35	Stiff Brownish Gray Clay Till		7							
697.35			7	SS	2.1	12	B	18		
696.35	Very Stiff Brownish Gray Clay Till		8							
695.35			8	SS	3.1	15	B	17		

Groundwater Data: No groundwater encountered at time of subsurface investigation.
 Comments:

	Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG Sheet 2 of 4	Phone: 815-223-6696 Fax: 815-223-6639 e-mail: rns37@comcast.net	
	Client: <u>Hutchison Engineering, Inc.</u> Project Name: <u>TR 109 Over Lime Creek Tributary</u> Project Site: <u>Section 07-06118-00-BR</u> <u>Dover Rd. District Bureau County, IL.</u>	Boring No. <u>B-2</u> Surface Elev. <u>711.35</u> Auger Depth <u>66 PL</u> Rotary Depth <u>NA</u> Start Date <u>10/20/12</u> Finish Date <u>10/20/20</u>		
	Location: <u>7' Left of Station 60+23</u>			


Client: <u>Hutchison Engineering, Inc.</u> Project Name: <u>TR 109 Over Lime Creek Tributary</u> Project Site: <u>Section 07-06118-00-BR</u> <u>Dover Rd. District Bureau County, IL.</u>	Boring No. <u>B-2</u> Surface Elev. <u>711.35</u> Auger Depth <u>66 PL</u> Rotary Depth <u>NA</u> Start Date <u>10/20/12</u> Finish Date <u>10/20/20</u>
--	---

DEPTH ELEV.	DESCRIPTION OF MATERIALS	Coring Log	Depth in Feet	SAMPLES					DRILLED BY	REMARKS
				Sample No.	Sample Type	Q _v (TSF)	N Value (Blows)	Penetration / Shear		
690.35										
689.35	Very Stiff Brownish Gray Clay Till		9							
688.35			9	SS	2.7	16	B	18		
687.35			10	SS	2.9	16	B	17		
686.35			11							
685.35			11	SS	4.4	22	S	12		
684.35	Hard Brownish Gray Clay Till		12							
683.35			12	SS	4.2	22	S	13		
682.35			13	SS	4.0	20	S	14		

Groundwater Data: No groundwater encountered at time of subsurface investigation.
 Comments:

SOIL BORINGS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY


SHEET NO. 10	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	45
	S.N. 006-4089		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT BROS-0011087		

 Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG		Phone: 815-223-6696
	Sheet <u>3</u> of <u>4</u>		Fax: 815-223-6659
			e-mail: mts37@comcast.net

Client: <u>Hutchison Engineering, Inc.</u>	Boring No. <u>B-2</u>
Project Name: <u>TR 109 Over Lime Creek Tributary</u>	Surface Elev. <u>711.35</u>
Project Site: <u>Section 07-06118-00-BR</u>	Auger Depth <u>66 Ft.</u> Rotary Depth <u>NA</u>
<u>Dover Rd. District Bureau County, IL.</u>	Start Date <u>10/20/12</u> Finish Date <u>10/20/20</u>

DEPTH ELEV.	DESCRIPTION OF MATERIALS	Sample No.	Sample Type	Q _u (TSF)	N Value (Blows)	Friction / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
669.35									
668.35									
667.35									
666.35									
665.35									
664.35									
663.35									
662.35									
661.35									
660.35									
659.35									
658.35									
657.35									
656.35									
655.35									
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634.35									
633.35									
632.35									
631.35									
630.35									
629.35									
628.35									

Groundwater Data: No groundwater encountered at time of subsurface investigation.
 Comments:

 Midwest Testing Services, Inc. 3705 Progress Blvd. Peru, IL 61354	BORING LOG		Phone: 815-223-6696
	Sheet <u>4</u> of <u>4</u>		Fax: 815-223-6659
			e-mail: mts37@comcast.net

Client: <u>Hutchison Engineering, Inc.</u>	Boring No. <u>B-2</u>
Project Name: <u>TR 109 Over Lime Creek Tributary</u>	Surface Elev. <u>711.35</u>
Project Site: <u>Section 07-06118-00-BR</u>	Auger Depth <u>66 Ft.</u> Rotary Depth <u>NA</u>
<u>Dover Rd. District Bureau County, IL.</u>	Start Date <u>10/20/12</u> Finish Date <u>10/20/20</u>

DEPTH ELEV.	DESCRIPTION OF MATERIALS	Sample No.	Sample Type	Q _u (TSF)	N Value (Blows)	Friction / Shear	Moisture (%)	Dry Density (PCF)	REMARKS
648.35									
647.35									
646.35									
645.35									
644.35									
643.35									
642.35									
641.35									
640.35									
639.35									
638.35									
637.35									
636.35									
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633.35									
632.35									
631.35									
630.35									
629.35									
628.35									

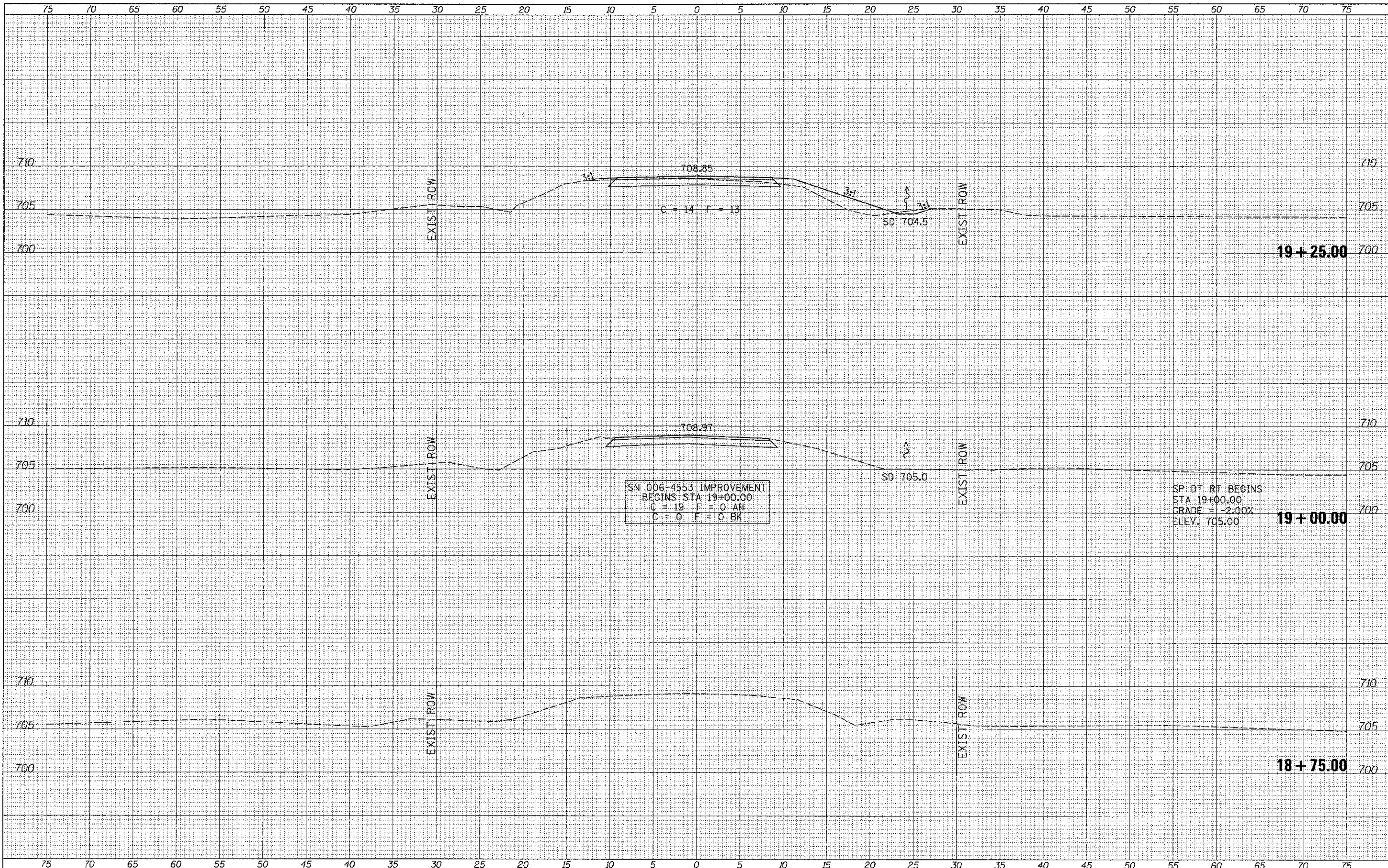
Groundwater Data: No groundwater encountered at time of subsurface investigation.
 Comments:

SOIL BORINGS
BUREAU COUNTY
SECTION 07-03126-00-BR
T.R. 109 OVER LIME CREEK TRIBUTARY

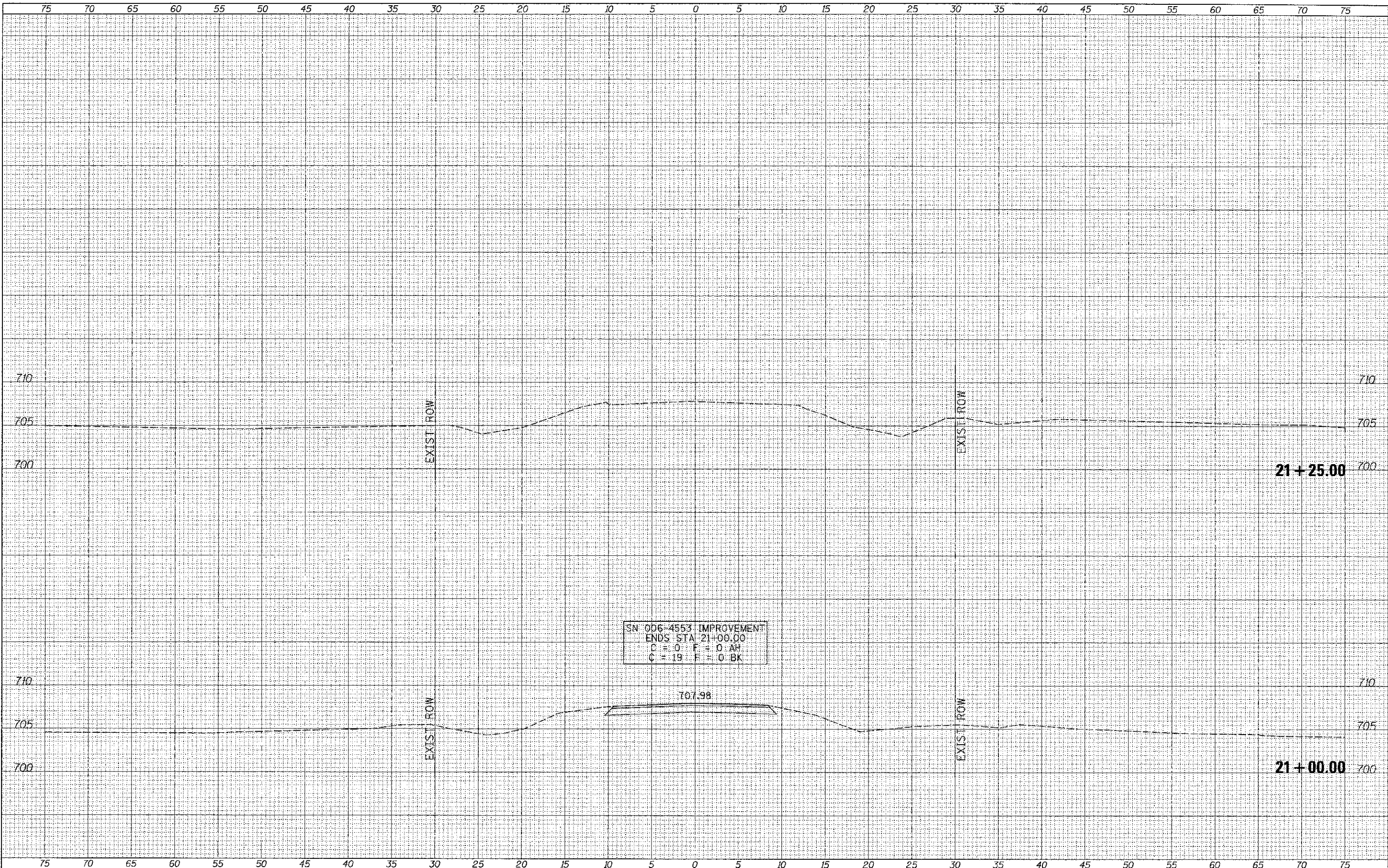
SHEET NO. 11	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 109	07-03126-00-BR	BUREAU	61	46
11 SHEETS	S.N. 006-4089		CONTRACT NO. 87528		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT BROS-00110871		

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

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



FILE NAME =	USER NAME = jhutchison	DESIGNED -	REVISED -	BUREAU COUNTY TOWNSHIP ROAD 109 OVER WEST BUREAU CREEK	CROSS SECTIONS		RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
V:\Bridge\3156-Bureau\3156khts.dgn		DRAWN -	REVISED -		TR 109	07-03126-00-BR	BUREAU	61	47		
XS_SHEET	PLOT SCALE = 5.0000' / IN.	CHECKED -	REVISED -		SCALE: 1"=5'		SHEET 1 OF 3 SHEETS		STA. 18+75.00 TO STA. 19+25.00	CONTRACT NO. 87528	
	PLOT DATE = 12/29/2012	DATE -	REVISED -		FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BR05-0010671				



DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	
REVISIONS	
NO.	
AREA	
CHECKED	
NO.	

DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	
REVISIONS	
NO.	
AREA	
CHECKED	
NO.	

FILE NAME =
 V:\Bridge\3156-Bureau\3156xhsts.dgn
 XS_SHEET

USFR NAME = jhr/shison	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 5.0000' / IN.	CHECKED -	REVISED -
PLOT DATE = 12/28/2012	DATE -	REVISED -

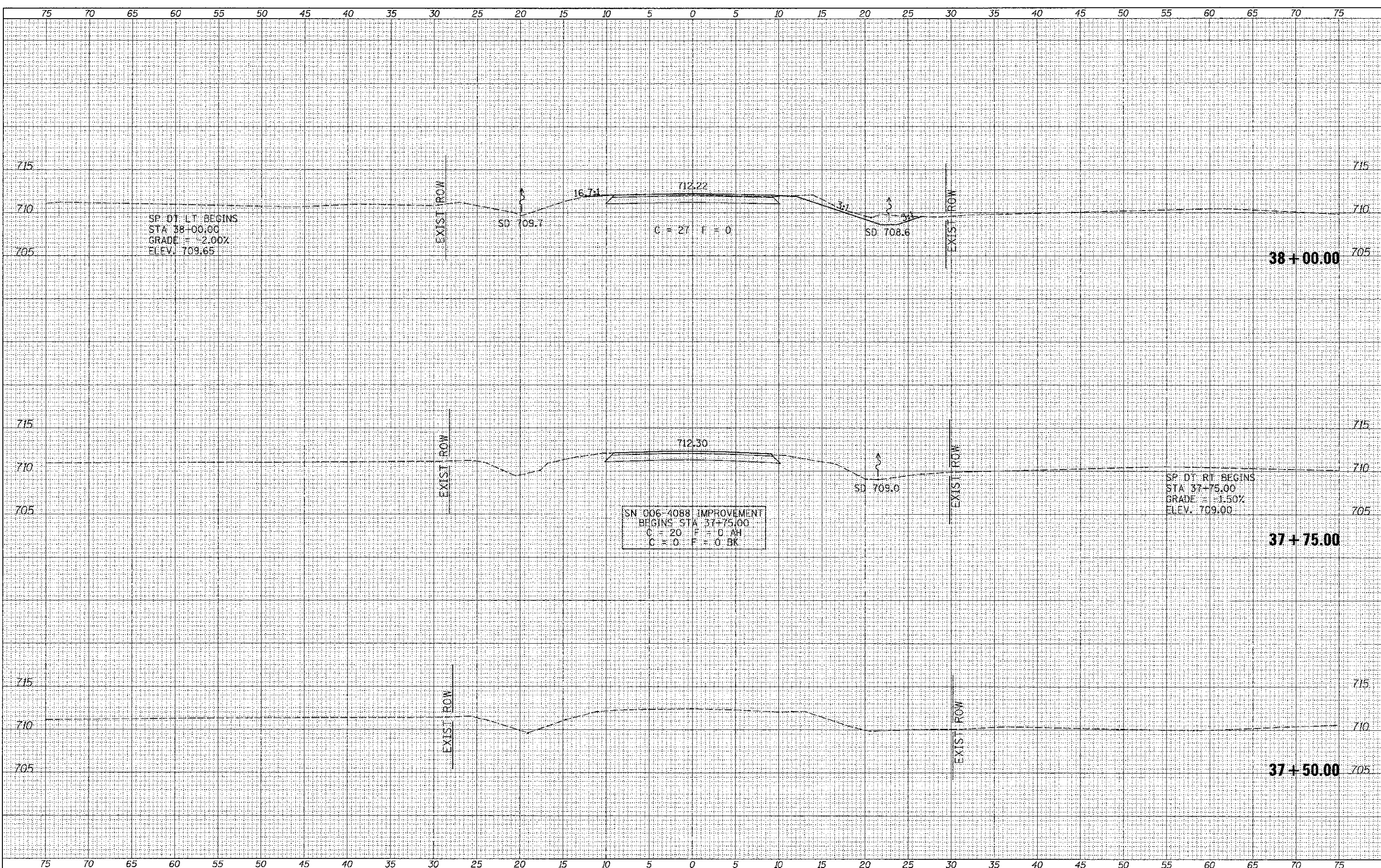
**BUREAU COUNTY
 TOWNSHIP ROAD 109 OVER
 WEST BUREAU CREEK**

CROSS SECTIONS
 SCALE: 1"=5'
 SHEET 3 OF 3 SHEETS
 STA. 21+00.00 TO STA. 21+25.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 109	07-03126-00-BR	BUREAU	61	49
CONTRACT NO. 87528				
FED. ROAD DIST. NO. 7 (ILLINOIS)			FED. AID PROJECT BR05-001G871	

DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	
FILE NAME	
USER NAME	
DESIGNED	
DRAWN	
CHECKED	
DATE	

DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	
FILE NAME	
USER NAME	
DESIGNED	
DRAWN	
CHECKED	
DATE	



SP. DT. LT. BEGINS
 STA 38+00.00
 GRADE = -2.00%
 ELEV. 709.65

SN 006-4088 IMPROVEMENT
 BEGINS STA 37+75.00
 C = 20 F = 0 AH
 C = 0 F = 0 BK

SP. DT. RT. BEGINS
 STA 37+75.00
 GRADE = -1.50%
 ELEV. 709.00

FILE NAME =
 V:\Bridge\3184-Bureau\3184\shsta.dgn

USER NAME = jhutchison	DESIGNED -	REVISED -
PLOT SCALE = 5.0000' / IN.	DRAWN -	REVISED -
PLOT DATE = 12/28/2012	CHECKED -	REVISED -
	DATE -	REVISED -

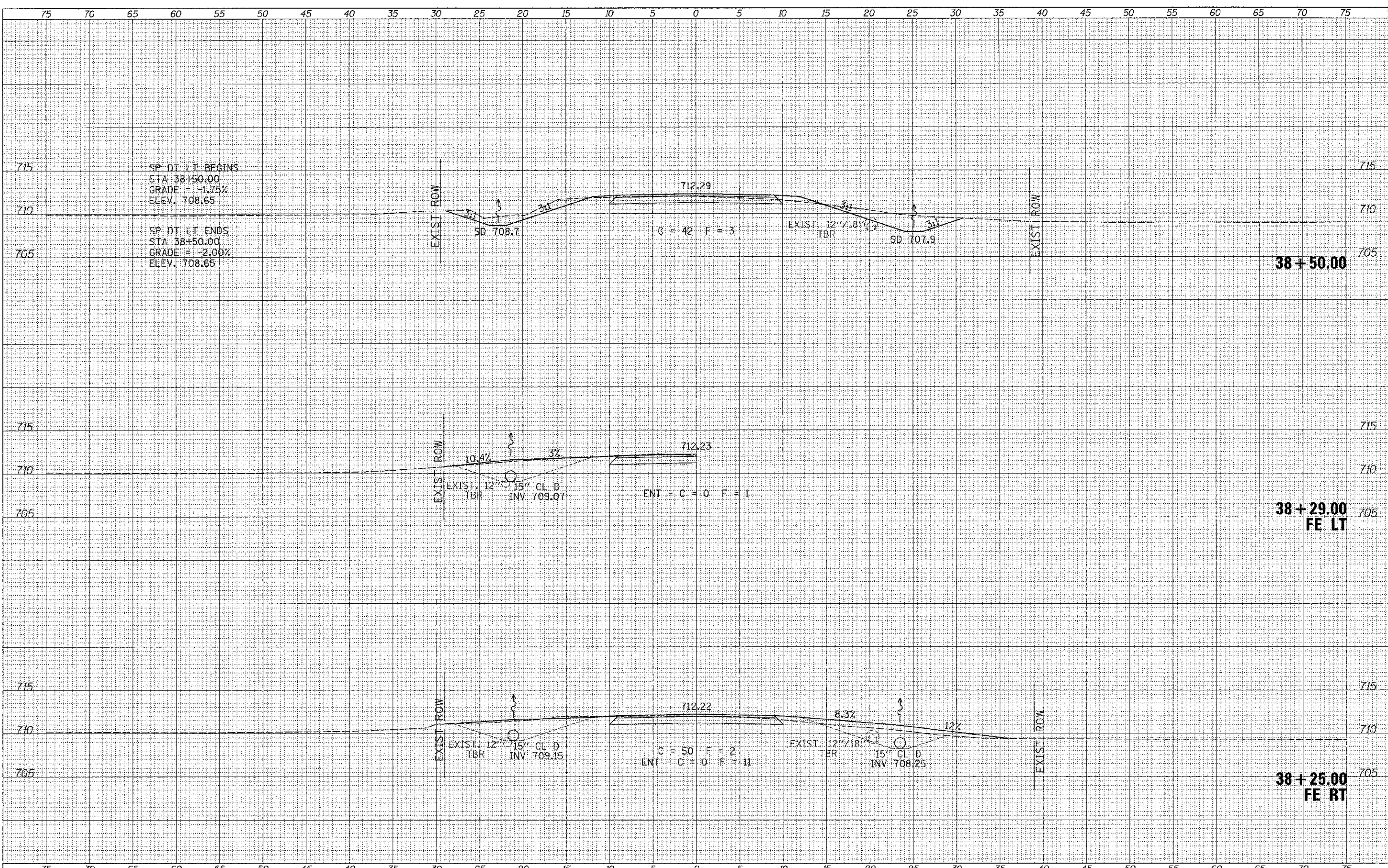
**BUREAU COUNTY
 TOWNSHIP ROAD 109 OVER
 LIME CREEK TRIBUTARY**

CROSS SECTIONS
 SCALE: 1"=5' SHEET 1 OF 7 SHEETS STA. 37+50.00 TO STA. 38+00.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 109	07-03126-00-BR	BUREAU	61	50
CONTRACT NO. 87528				
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT BR05-00110871	

DATE	
BY	
REVISIONS	
NO. E. BOOK	
NO. SHEET	

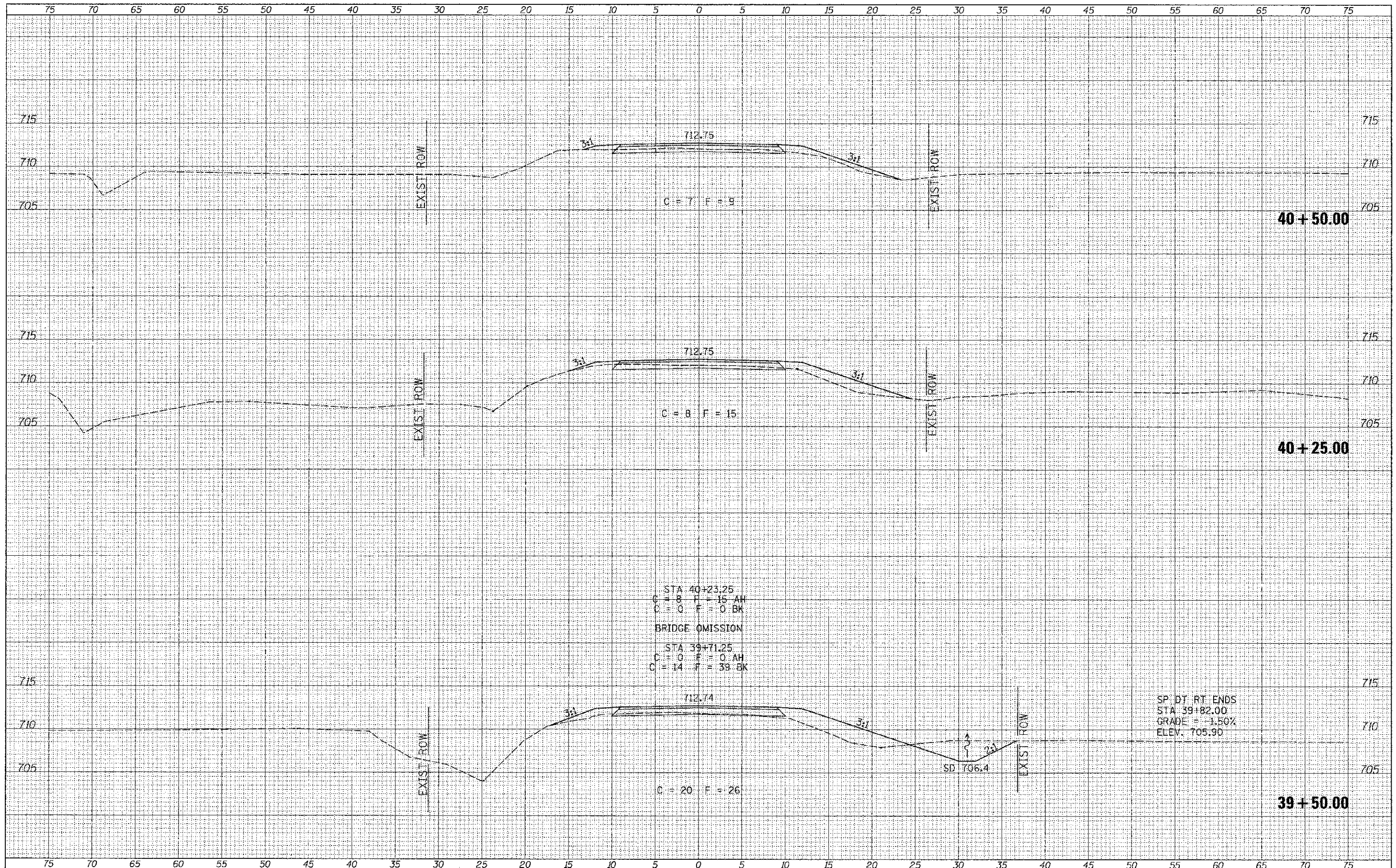
DATE	
BY	
REVISIONS	
NO. E. BOOK	
NO. SHEET	



FILE NAME =	USER NAME = jhutchison	DESIGNED -	REVISED -	BUREAU COUNTY TOWNSHIP ROAD 109 OVER LIME CREEK TRIBUTARY	CROSS SECTIONS		RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
V:\Bridge\13184-Bu-00\13184xhsta.dgn		DRAWN -	REVISED -		IR 109	07-03126-00-BR	BUREAU	61	51		
KS-SHEE1	PLD SCALE = 5.0000' / IN.	CHECKED -	REVISED -		SCALE: 1"=5'			SHEET 2 OF 7 SHEETS		STA. 38+25.00 TO STA. 38+50.00	
	PLD DATE = 12/20/2012	DATE -	REVISED -		CONTRACT NO. 87528			FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BR05-00110871	

DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	
REVISIONS	
NO.	
DATE	
BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	
REVISIONS	
NO.	
DATE	
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DESIGNED	
DRAWN	
CHECKED	
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REVISIONS	
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DRAWN	
CHECKED	
DATE	
REVISIONS	
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DATE	
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REVISIONS	
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BY	
DESIGNED	
DRAWN	
CHECKED	
DATE	
REVISIONS	
NO.	



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USER NAME = shutehason	DESIGNED -	REVISED -
PLOT SCALE = 5.0000" / IN.	DRAWN -	REVISED -
PLOT DATE = 12/20/2012	CHECKED -	REVISED -
	DATE -	REVISED -

**BUREAU COUNTY
TOWNSHIP ROAD 109 OVER
LIME CREEK TRIBUTARY**

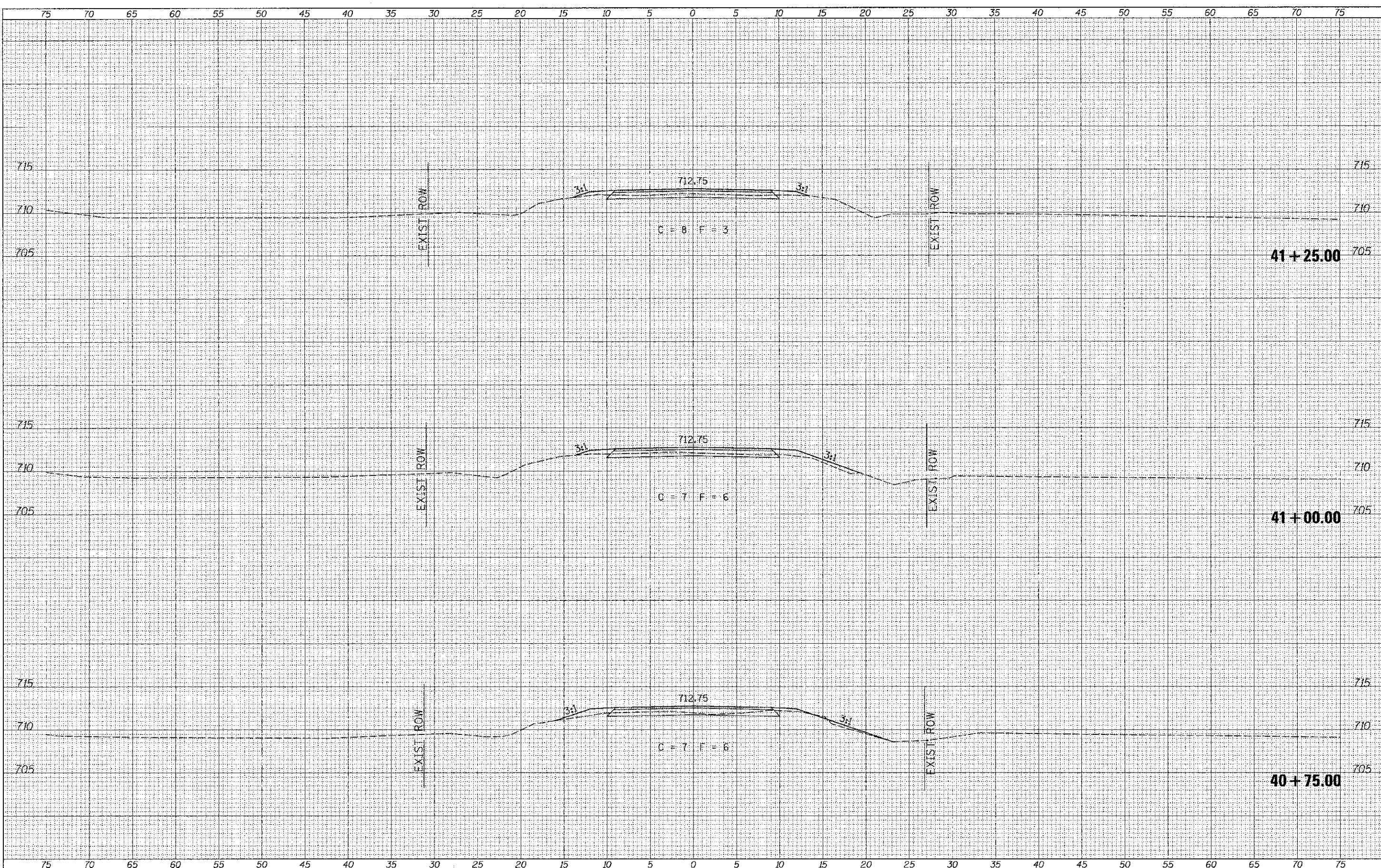
CROSS SECTIONS

SCALE: 1"=5' SHEET 4 OF 7 SHEETS: STA. 39+50.00 TO STA. 40+50.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 109	07-03126-00-BR	BUREAU	61	53
CONTRACT NO. 87528				
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT BR05-00110871	

FINAL SURVEY	DATE
SURVEYED	BY
NO'TE BOOK	
AREAS CHECKED	

ORIGINAL SURVEY	DATE
SURVEYED	BY
NO'TE BOOK	
AREAS CHECKED	



FILE NAME = v:\9-ridge\3184-Bureau\3184xhta.dgn
 XS SHEET

USER NAME = jhutchason	DESIGNED -	REVISED -
PLOT SCALE = 5/3200' / IN.	DRAWN -	REVISED -
PLOT DATE = 12/20/2012	CHECKED -	REVISED -
	DATE -	REVISED -

**BUREAU COUNTY
 TOWNSHIP ROAD 109 OVER
 LIME CREEK TRIBUTARY**

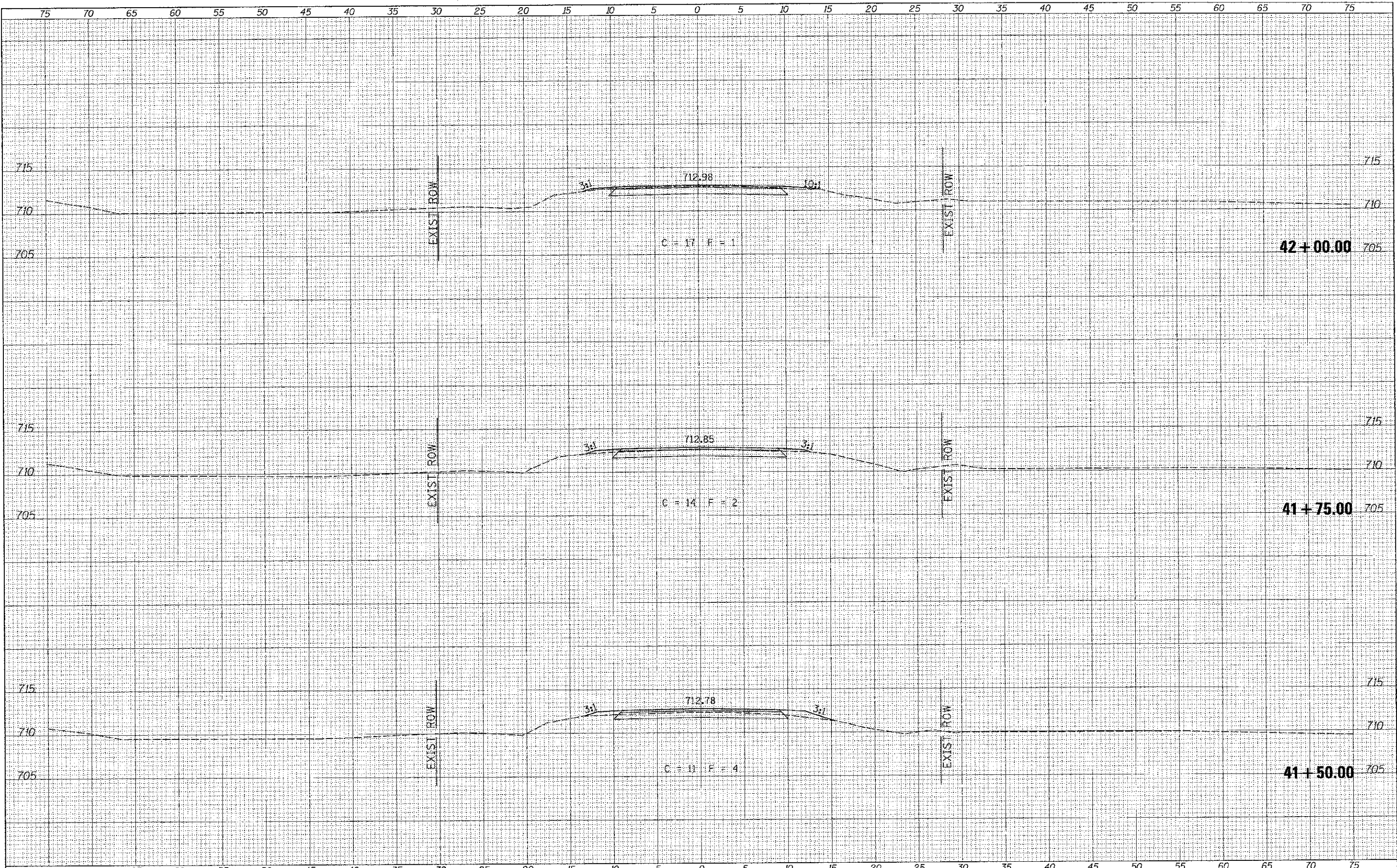
CROSS SECTIONS

SCALE: 1"=5' SHEET 5 OF 7 SHEETS STA. 40+75.00 TO STA. 41+25.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 109	07-03126-00-9R	BUREAU	61	54
FED. ROAD DIST. NO. 7 ILLINOIS			CONTRACT NO. 87528	
FED. AID PROJECT GROS-0111087				

FINAL SURVEY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

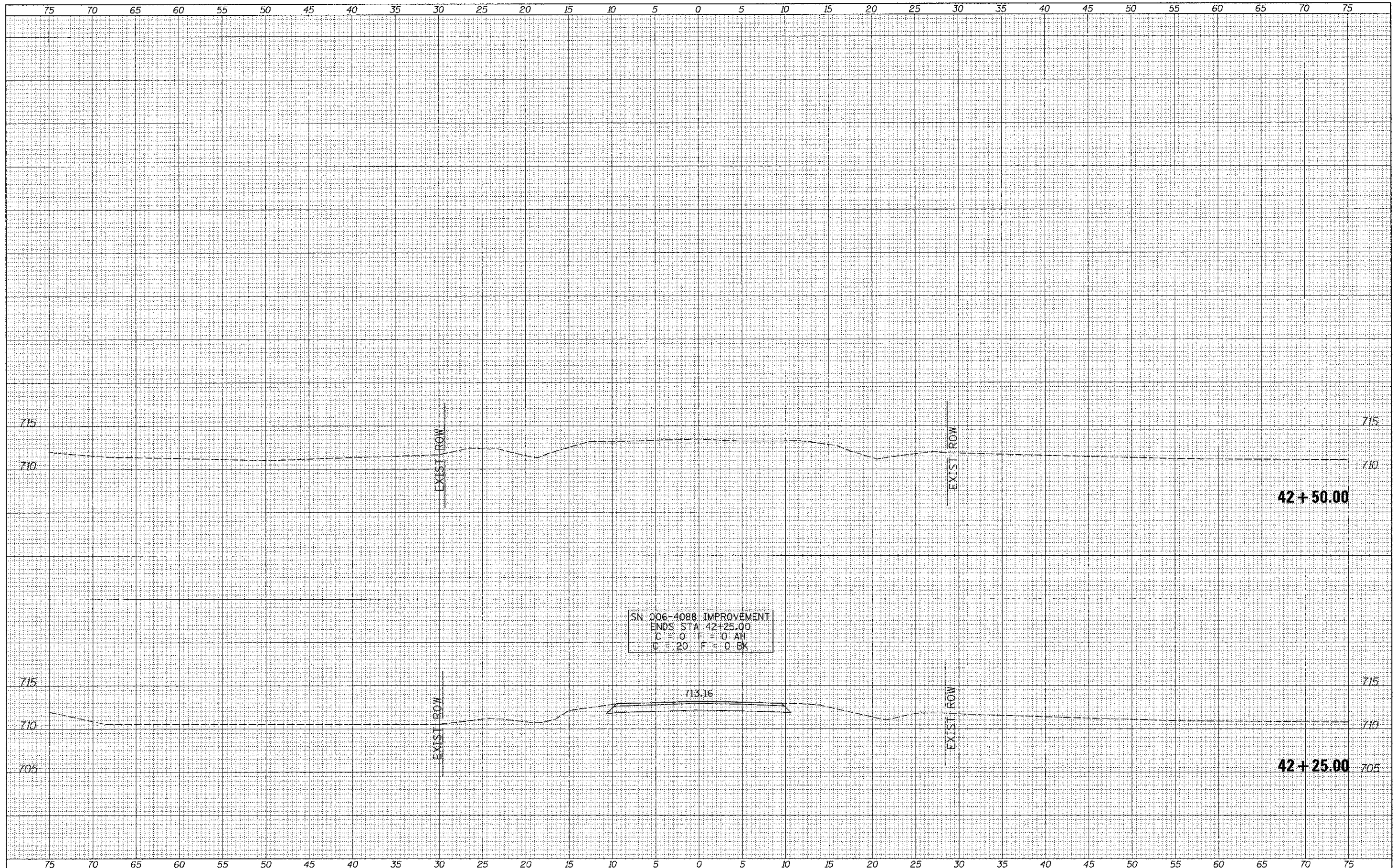
ORIGINAL SURVEY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	



FILE NAME = V:\Bridges\3184-Bureau\3184xsh1.dgn	USER NAME = jhucobson	DESIGNED -	REVISED	BUREAU COUNTY TOWNSHIP ROAD 109 OVER LIME CREEK TRIBUTARY	CROSS SECTIONS	RTE.	SECTION	COUNTY	TOTAL SHEET NO.
X5_SHEET	PLLOT SCALE = 8.0000' / IN.	DRAWN -	REVISED -			TR 109	07-03126-00-BR	BUREAU	61 55
	PLLOT DATE = 12/20/2012	CHECKED -	REVISED -			CONTRACT NO. 87528			
		DATE -	REVISED -			FED. ROAD DIST. NO. 7 ILLINOIS			
				SCALE: 1"=5'		SHEET 6 OF 7 SHEETS		STA. 41+50.00 TO STA. 42+00.00	
						FED. AID PROJECT BR05-0011087			

DATE	
BY	
SURVEYED	
NO'E BOOK	
TEMPLATE	
AREAS CHECKED	
NO.	

DATE	
BY	
SURVEYED	
NO'E BOOK	
TEMPLATE	
AREAS CHECKED	
NO.	



FILE NAME =
 Y:\Bridge\2184-Bureau\3184\khta.dgn

USER NAME = jhutchison
 PLOT SCALE = 5,0000 / IN.
 PLOT DATE = 12/20/2012

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

**BUREAU COUNTY
 TOWNSHIP ROAD 109 OVER
 LIME CREEK TRIBUTARY**

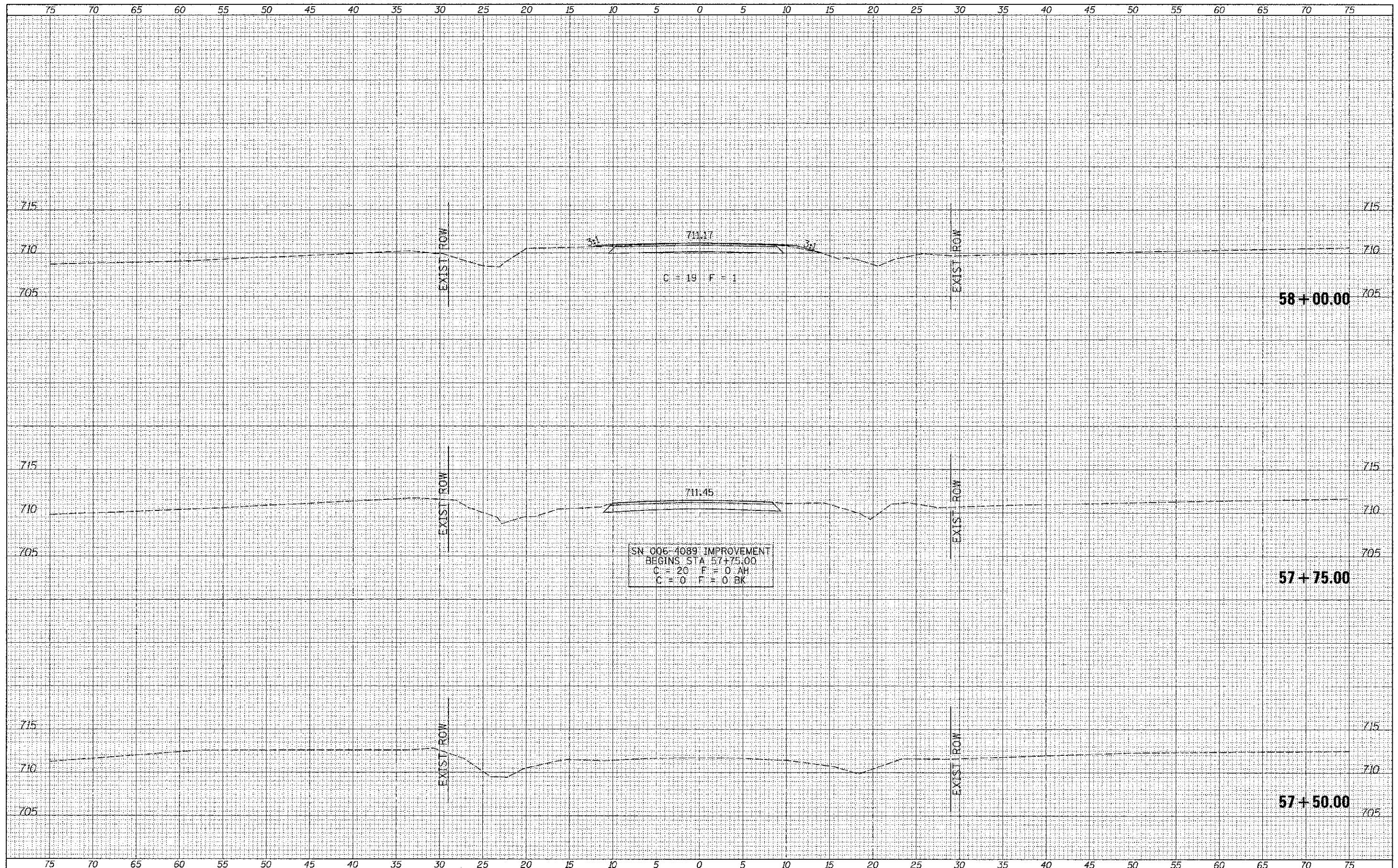
SCALE: 1"=5'
 SHEET 7 OF 7 SHEETS
 STA. 42+25.00 TO STA. 42+50.00

CROSS SECTIONS

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 109	07-03126-00-BR	BUREAU	61	56
FED. ROAD DIST. NO. 7 ILLINOIS			CONTRACT NO. 87528	
FED. AID PROJECT BR05-00110871				

DATE	
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FINAL SURVEY	
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DATE	
BY	
ORIGINAL SURVEY	
QUOTED	
NOTED	
NO. CHECKED	



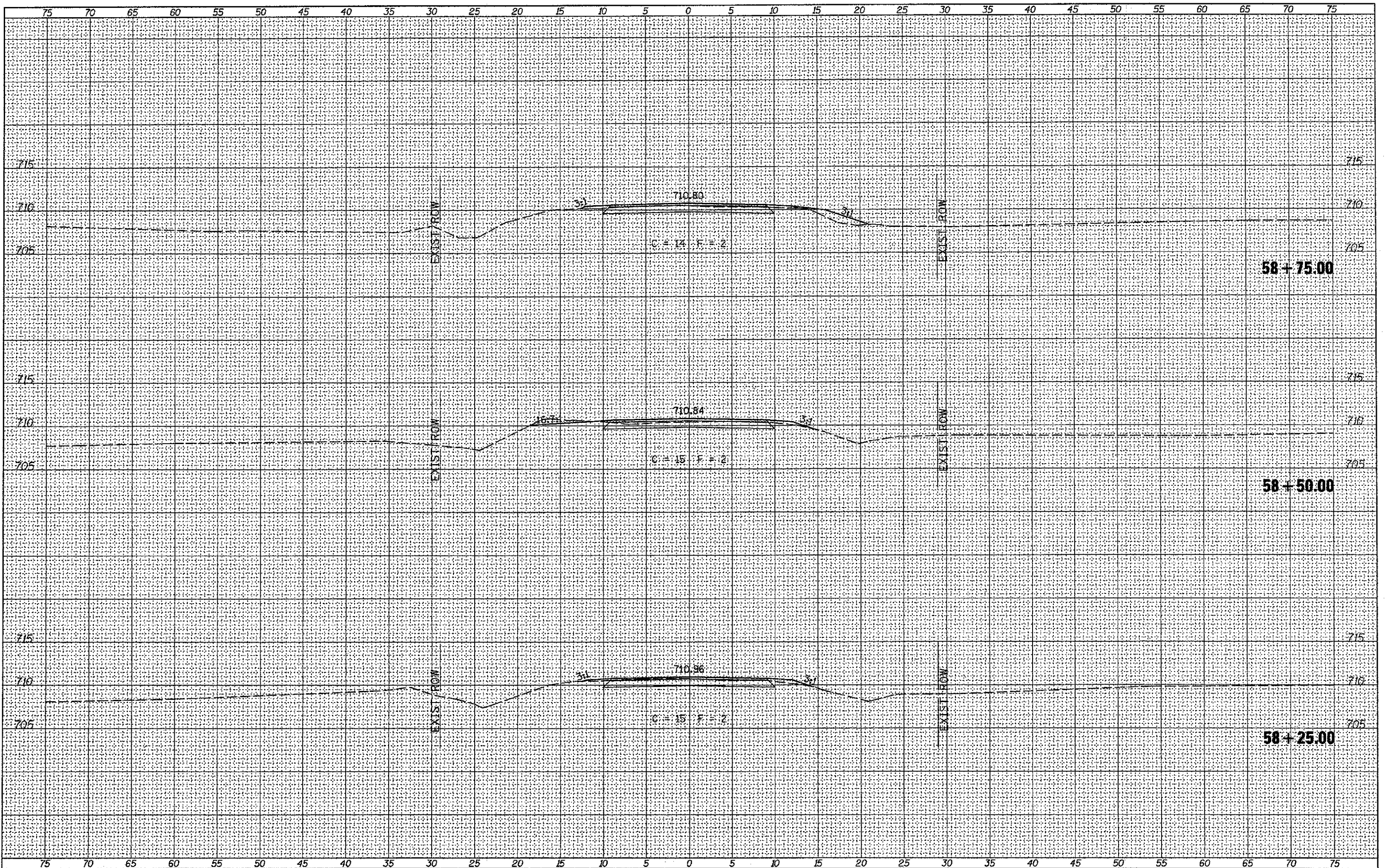
**BUREAU COUNTY
TOWNSHIP ROAD 109 OVER
LIME CREEK TRIBUTARY**

CROSS SECTIONS

FILE NAME = V:\Bridge\3.65-Bureau\3185xahrs.dgn	USER NAME = jhutchison	DESIGNED -	REVISED -	SCALE: 1"=5' SHEET 1 OF 5 SHEETS STA. 57+50.00 TO STA. 58+00.00	<table border="1"> <tr><th>RTE.</th><th>SECTION</th><th>COUNTY</th><th>TOTAL SHEETS</th><th>SHEET NO.</th></tr> <tr><td>109</td><td>07-03126-00-BR</td><td>BUREAU</td><td>61</td><td>57</td></tr> <tr><td colspan="3">CONTRACT NO. 87528</td><td colspan="2">FED. AID PROJECT BR05-01110871</td></tr> </table>	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	109	07-03126-00-BR	BUREAU	61	57	CONTRACT NO. 87528			FED. AID PROJECT BR05-01110871	
RTE.	SECTION	COUNTY	TOTAL SHEETS			SHEET NO.														
109	07-03126-00-BR	BUREAU	61			57														
CONTRACT NO. 87528			FED. AID PROJECT BR05-01110871																	
PLOT SCALE = 5.0000 / 14.	CHECKED -	REVISED -	REVISED -																	
PLOT DATE = 12/28/2012	DATE -	REVISED -	REVISED -																	
X5.SHEET																				

DATE	
BY	
FINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

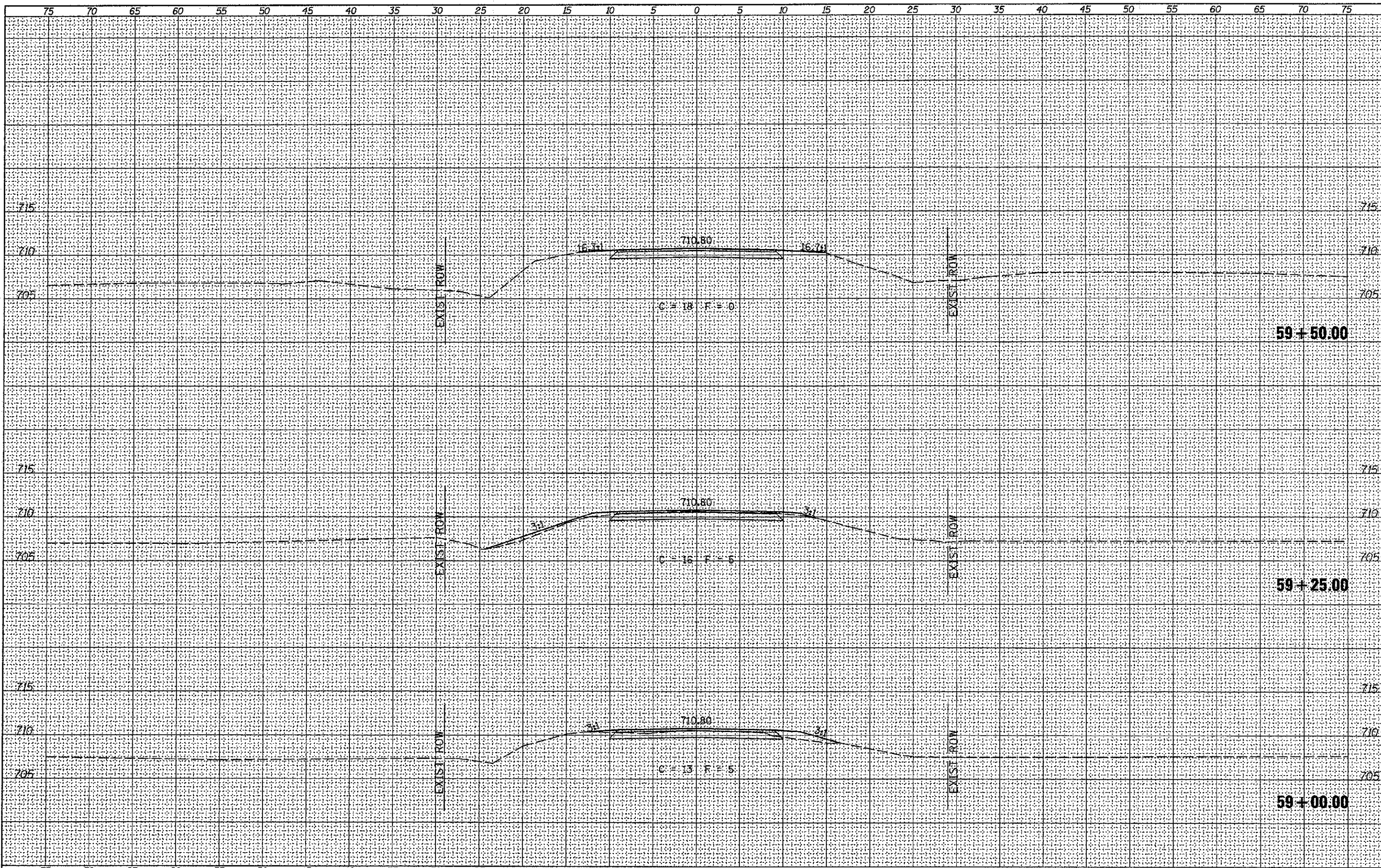
DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	



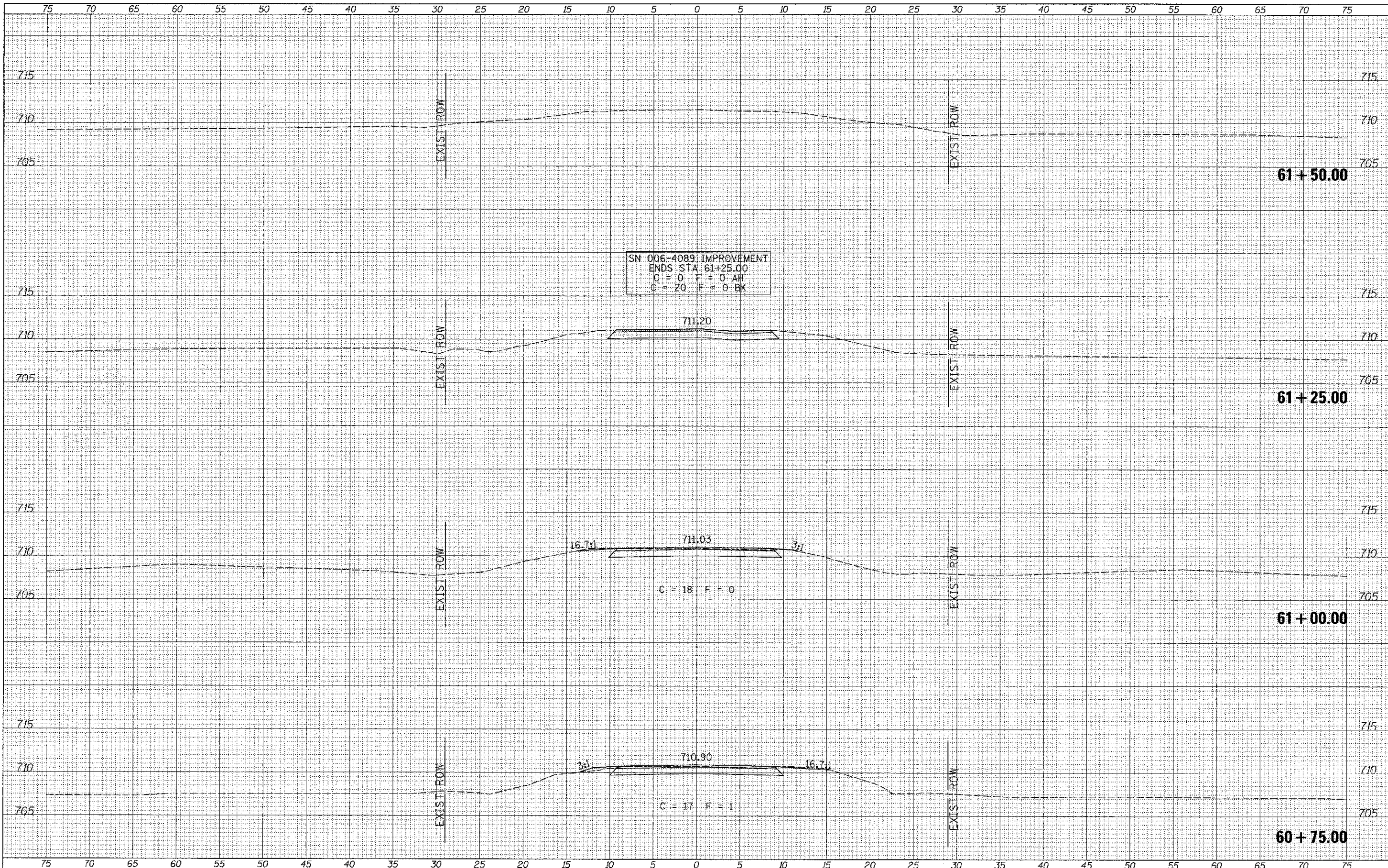
FILE NAME =	USER NAME = jhuthason	DESIGNED -	REVISED -	BUREAU COUNTY TOWNSHIP ROAD 109 OVER LIME CREEK TRIBUTARY	CROSS SECTIONS			RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
V:\Bridge\3185-Bureau\3185xhtaupdate.dgn		DRAWN -	REVISED -		TR 109	07-03126-00-BR	BUREAU	61	58			
		CHECKED -	REVISED -		SCALE: 1"=5'			SHEET 2 OF 5 SHEETS		STA. 58+25.00 TO STA. 58+75.00	CONTRACT NO. 87528	
XS.SHEET		DATE -	REVISED -		FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT BRDS-0011087					

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

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



FILE NAME *	USER NAME = jwhanson	DESIGNED -	REVISED -	BUREAU COUNTY TOWNSHIP ROAD 109 OVER LIME CREEK TRIBUTARY	CROSS SECTIONS			RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
V:\B-ridge\3185-Bureau\3185xhtaupdata.dgn		DRAWN -	REVISED -		TR 109	07-03126-00-BR	BUREAU	61	59			
XS_SHEET	PLLOT SCALE = 10.0000' / IN.	CHECKED -	REVISED -		SCALE: 1"=5'	SHEET 3	OF 5 SHEETS	STA. 59+00.00	TO STA. 59+50.00	CONTRACT NO. 87528		
	PLLOT DATE = 1/8/2013	DATE -	REVISED -		FED. ROAD DIST. NO. 7 (ILLINOIS)		FED. AID PROJECT BRCS-00110671					



SN 006-4089 IMPROVEMENT
 ENDS STA. 61+25.00
 C = 0 F = 0 AH
 C = 20 F = 0 BK

DATE	
BY	
APPROVED	
SURVEY	
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NOTE BOOK	
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AREAS CHECKED	

DATE	
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APPROVED	
SURVEY	
PLOTTED	
NOTE BOOK	
NO.	
AREAS CHECKED	

FILE NAME =
 V:\Bridges\3185-Bureau\3185ksh.ta.dgn

USER NAME = jputohason
 DESIGNED -
 DRAWN -
 CHECKED -
 DATE - 12/28/2012

REVISED -
 REVISED -
 REVISED -
 REVISED -

**BUREAU COUNTY
 TOWNSHIP ROAD 109 OVER
 LIME CREEK TRIBUTARY**

CROSS SECTIONS
 SCALE: 1"=5'
 SHEET 5 OF 5 SHEETS
 STA. 60+75.00 TO STA. 61+50.00

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 109	07-03126-00-BR	BUREAU	61	61
			CONTRACT NO. 87528	
FED. ROAD DIST. NO. 7 ILLINOIS			FED. AID PROJECT BROS-00110873	