

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 3A	05-00065-00-BR	BROWN	24	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 93509	

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS**

**PLANS FOR PROPOSED  
AMERICAN RECOVERY & REINVESTMENT ACT**

**PROJECT ARA-1583(103)  
SECTION 05-00065-00-BR  
C.H. 3A /FAS 1583  
BROWN COUNTY  
EXISTING STRUCTURE NO. 005-3006  
C-96-228-07**

**INDEX OF SHEETS**

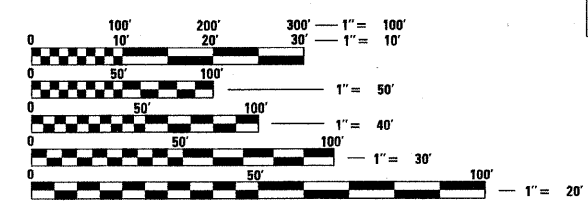
SHEET NO.	DESCRIPTION
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES AND GENERAL NOTES
3.	TYPICAL SECTIONS
4.	PLAN AND PROFILE
5.-11.	STATION CROSS SECTIONS
12.-24.	BRIDGE PLANS

**HIGHWAY STANDARDS:**

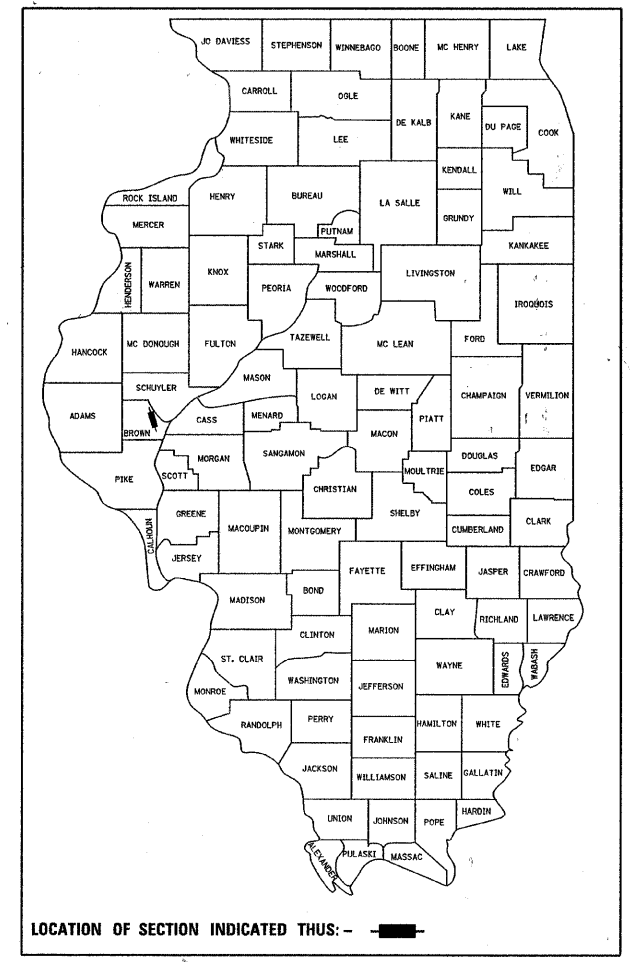
000001-05	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
515001-03	NAME PLATE FOR BRIDGES
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-06	TRAFFIC BARRIER TERMINAL, TYPE 2
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
701901-01	TRAFFIC CONTROL DEVICES
BLR 21-8	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 23-3	TRAFFIC BARRIER TERMINAL, TYPE 1
BLR 26-2	STEEL PLATE BEAM GUARDRAIL, 27 1/2" HEIGHT
BLR 27-1	TRAFFIC BARRIER TERMINAL, TYPE 5A

**UTILITIES**

RIPLEY WATER SYSTEM  
  
VERIZON, NORTH  
110 EAST MONROE  
PO BOX 2675  
BLOOMINGTON, IL 61701-2675  
  
ADAMS ELECTRIC COOP  
US 24 EAST  
CAMP POINT, IL 62320

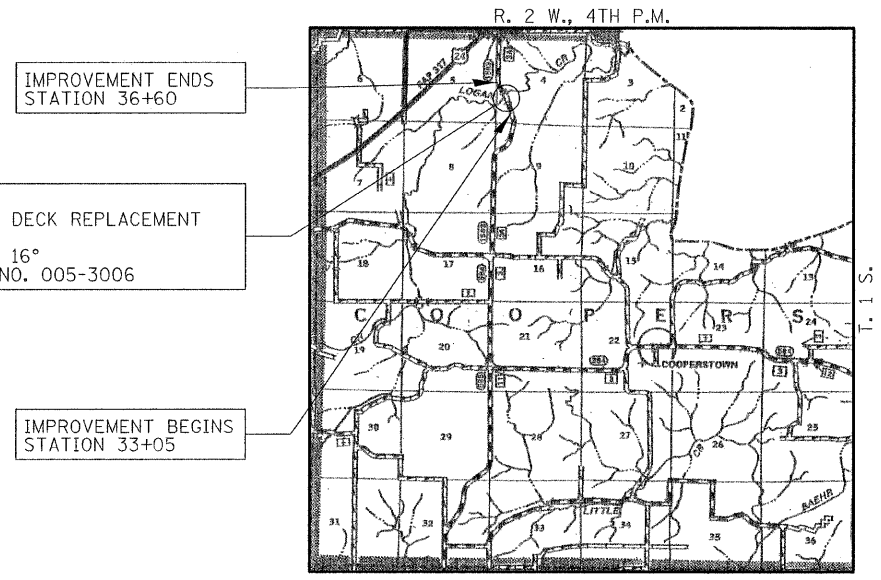


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.



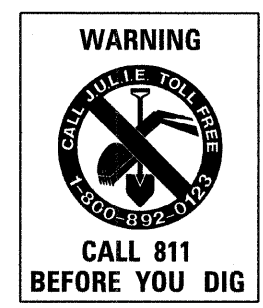
FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR (NON-URBAN)  
DESIGN SPEED: 30 MPH  
DESIGN TRAFFIC: 315 ADT (2029)

AGENCY RESPONSIBLE FOR LETTING	
APPROVED	<u>H-16</u> 20 09 <u>Howard L. Simmons</u> COUNTY ENGINEER
PASSED	<u>Nov 24</u> 20 09 <u>John Z. L.</u> DISTRICT SIX ENGINEER OF LOCAL ROADS & STREETS
PASSED	<u>November 23</u> 20 09 <u>Ron Duchambeau</u> DISTRICT SIX ENGINEER OF CONSTRUCTION
Releasing For Bid Based on Limited Review	<u>Nov 24</u> 20 09 <u>Roger D. Drubbell</u> III DEPUTY DIRECTOR OF HIGHWAYS REGION FOUR ENGINEER STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

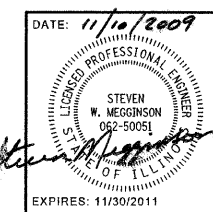


**LOCATION MAP**

APPROXIMATE SCALE: 0 1 MILE  
NET LENGTH OF SECTION = 355.00 FEET = 0.067 MILES



**CONTRACT NO. 93509**



**HAMPTON, LENZINI AND RENWICK, INC.**  
CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS  
**HLR**  
3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
217.546.3400 www.hlrengineering.com  
184.000959  
ILLINOIS PROFESSIONAL DESIGN FIRM L3 / PE / SE CORPORATION  
PROJECT NUMBER: 08.0204.130 DATE: 11/10/09

SUMMARY OF QUANTITIES			
CODE NO.	ITEM	UNIT	TOTAL CONSTRUCTION TYPE CODE X071-2A
20200100	EARTH EXCAVATION	CU YD	137
20300100	CHANNEL EXCAVATION	CU YD	100
A 20900310	POROUS GRANULAR BACKFILL	TON	70
A 25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.2
28000400	PERIMETER EROSION BARRIER	FOOT	600
A 28101700	RIPRAP, SPECIAL	TON	100
35101400	AGGREGATE BASE COURSE, TYPE B	TON	280
48101200	AGGREGATE SHOULDERS, TYPE B	TON	105
A 50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	4
50300255	CONCRETE SUPERSTRUCTURE	CU YD	64
50300300	PROTECTIVE COAT	SQ YD	272
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1,060
50500505	STUD SHEAR CONNECTORS	EACH	1,152
A 50501130	STRUCTURAL STEEL REPAIR	POUND	1,030
* A 50600300	CLEANING AND PAINTING STEEL BRIDGE	L SUM	1
* A 50806400	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	13,650
* 50900205	STEEL RAILING, TYPE S1	FOOT	171
51500100	NAME PLATES	EACH	1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	27
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	16
52100520	ANCHOR BOLTS, 1"	EACH	32
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	113
* A 63000135	STEEL PLATE BEAM GUARD RAIL, TYPE B (SPECIAL)	FOOT	13
* 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	2
* A 63100175	TRAFFIC BARRIER TERMINAL, TYPE 2 (SPECIAL)	EACH	1
63200310	GUARDRAIL REMOVAL	FOOT	160
A 67100100	MOBILIZATION	L SUM	1
A 70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
* A 78200405	GUARDRAIL MARKERS	EACH	10
* A 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
* LR631020	TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	1
A 20032300	JACKING EXISTING SUPERSTRUCTURE	L SUM	1

A SEE SPECIAL PROVISIONS \* SPECIALTY ITEMS

SEEDING TABLE	
LOCATION	CLASS 2 (SPECIAL) ACRE
CH 3A	
STA 33+70.00 TO STA 36+60.00	0.20
TOTAL	0.20
USE	0.20

HORIZONTAL ALIGNMENT		
LOCATION	NORTHING	EASTING
P.O.B. STA 22+45.33	2119.7167	1487.3253
P.C. STA 26+88.67	1773.8555	1209.9629
P.I. STA 30+24.28	1512.0390	1000.0000
P.T. STA 33+34.13	1176.4316	1000.0000
P.O.T. STA 35+10.56	1000.0000	1000.0000
P.C. STA 35+81.28	929.2836	1000.0000
P.I. STA 37+25.60	784.9600	1000.0000
P.T. STA 38+66.99	649.3400	181.4889
P.O.T. STA 40+10.47	514.5091	901.5654

**GENERAL NOTES**

- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2007," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- ALL CLEARING AND GRUBBING, FENCE REMOVAL AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION. THE REMOVAL OF THE EXISTING BITUMINOUS SURFACE WILL BE PAID FOR AS EARTH EXCAVATION. ALL BITUMINOUS MATERIAL SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR IN A METHOD APPROVED BY THE ENGINEER. PROPER DISPOSAL OF BITUMINOUS MATERIAL SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- THE LOCATION OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTION.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES.  
 AGGREGATE SURFACE COURSE 2.05 TON/CU YD  
 POROUS GRANULAR BACKFILL 2.00 TON/CU YD  
 STONE RIPRAP 1.75 TON/CU YD
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE R.O.W. AS DIRECTED BY THE ENGINEER.

EARTHWORK SCHEDULE							
LOCATION	EARTH EXCAVATION	CHANNEL EXCAVATION	SHRINKAGE FACTOR	PERCENT USED	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT REQUIRED	EARTHWORK BALANCE
	CU.YD.	CU.YD.			CU.YD.	CU.YD.	CU.YD.
CH 3A							
STA 33+70.00 TO STA 34+67.81	56		25.00%	100.00%	42	24	18
STA 35+55.31 TO STA 36+60.00	81		25.00%	100.00%	61	2	59
CHANNEL EXCAVATION		100	25.00%	100.00%	75		75
ENTRANCE						20	-20
TOTAL	137	100			178	46	132
TOTAL USE	137						132

WASTE = 132 CU YDS

GUARDRAIL TABULATION									
LOCATION	GUARDRAIL REMOVAL	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT)	TRAFFIC BARRIER TERMINAL TYPE 1	TRAFFIC BARRIER TERMINAL TYPE 2 (SPECIAL)	TRAFFIC BARRIER TERMINAL TYPE 5A	SPBGR TYA 6 FOOT POSTS	SPBGR TYB, SPL (12.5' RAD)	TERMINAL MARKER DIRECT APPLIED	GUARDRAIL MARKERS
	FOOT	EACH	EACH	EACH	EACH	FOOT	FOOT	EACH	EACH
LT & RT STA 34+24.3 TO 34+71.7	80								
LT & RT STA 35+48.3 TO 35+95.7	80								
RT STA 33+58.5 TO RT STA 34+08.5		1						1	
RT STA 35+95.1 TO RT STA 36+45.1		1						1	
LT STA 34+13.5 TO 34+38.5			1					1	
LT STA 35+98.2 TO STA 36+00.2				1				1	
LT & RT STA 34+51.0 TO 34+71.7					2				
LT & RT STA 35+49.4 TO 35+70.1					2				
LT STA 34+38.5 TO LT STA 34+51.0						12.5			
RT STA 34+08.5 TO 34+58.5						50			
LT STA 35+62.6 TO LT STA 35+87.6						25			
RT STA 35+70.1 TO RT STA 36+95.1						25			
LT STA 35+87.6 TO LT STA 35+98.2							12.5		
TOTAL	160	2	1	1	4	112.5	12.5	4	10

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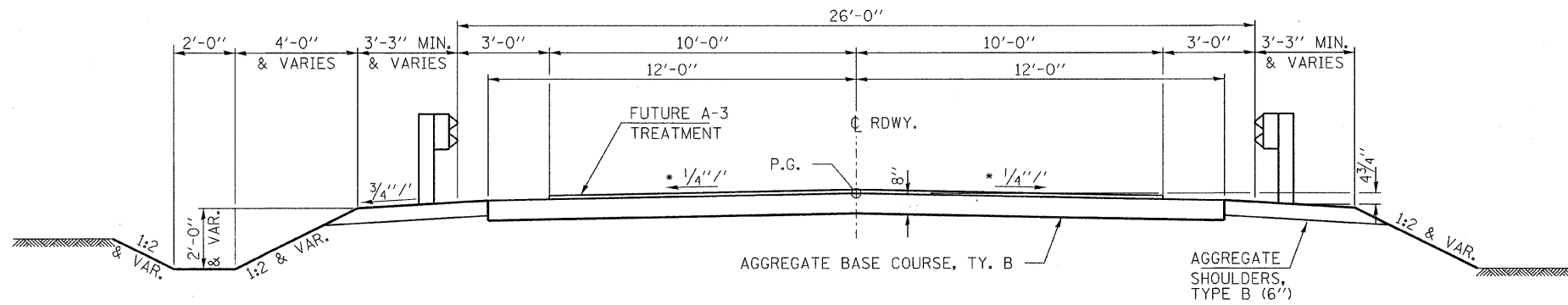
STATE OF ILLINOIS  
BROWN COUNTY HIGHWAY DEPARTMENT



SUMMARY OF QUANTITIES AND GENERAL NOTES  
COUNTY HIGHWAY 3A

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

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1583	05-00065-00-BR	BROWN	24	2
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 9309	

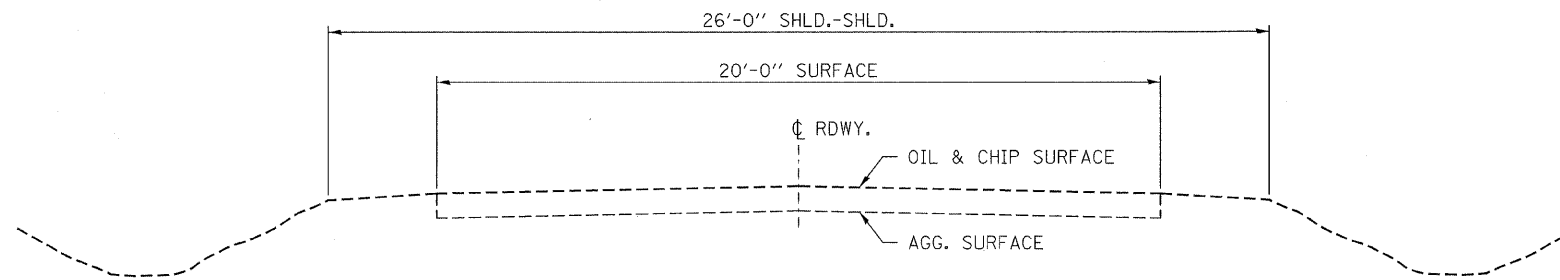


SUGGESTED CUT SECTION  
CONSTRUCT AS SHOWN IN  
STATION CROSS SECTIONS

**TYPICAL CROSS SECTION**

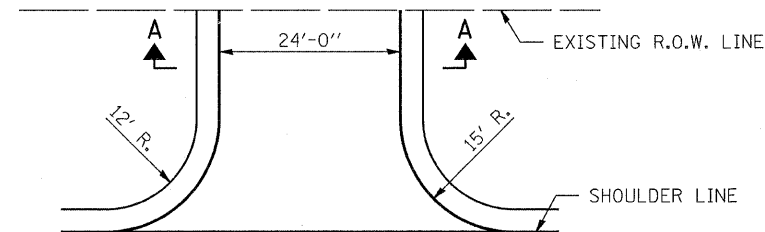
STA. 33+70 TO 36+60  
TRANSITION FROM THE PROPOSED ROADWAY TO THE EXISTING  
ROADWAY IS TO BE CONSTRUCTED FROM STA. 33+70 TO 34+20 AND  
STA. 36+10 TO 36+60. SEE SHEET 12 FOR TRANSITION AT BRIDGE.  
\* (S.E. TRANSITION STA. 35+60 TO STA. 36+50)

SUGGESTED FILL SECTION  
CONSTRUCT AS SHOWN IN  
STATION CROSS SECTIONS

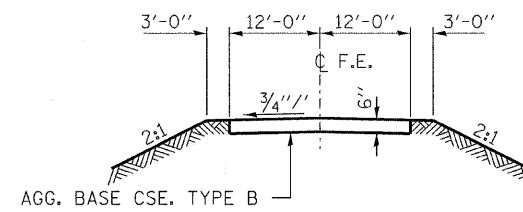


**EXISTING CROSS SECTION**

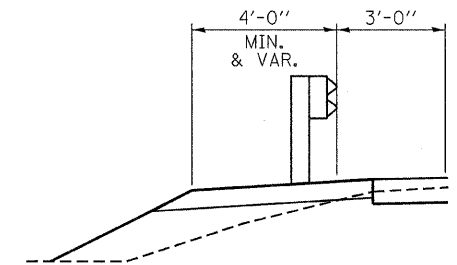
STA. 33+70 TO 36+60



**FIELD ENTRANCE DETAIL**



**SECTION A-A**



**SHOULDER WIDENING FOR  
GUARDRAIL & T.B.T.**  
SEE STD. 631301 FOR DETAILS.  
RT. STA. 33+05 TO STA. 33+70

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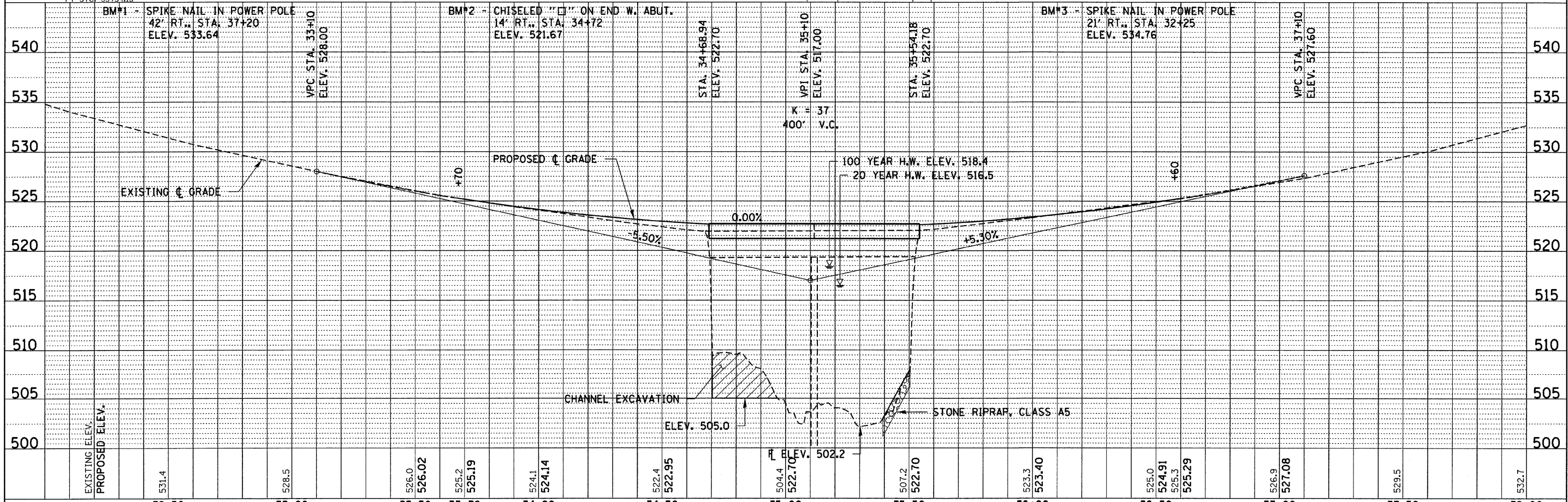
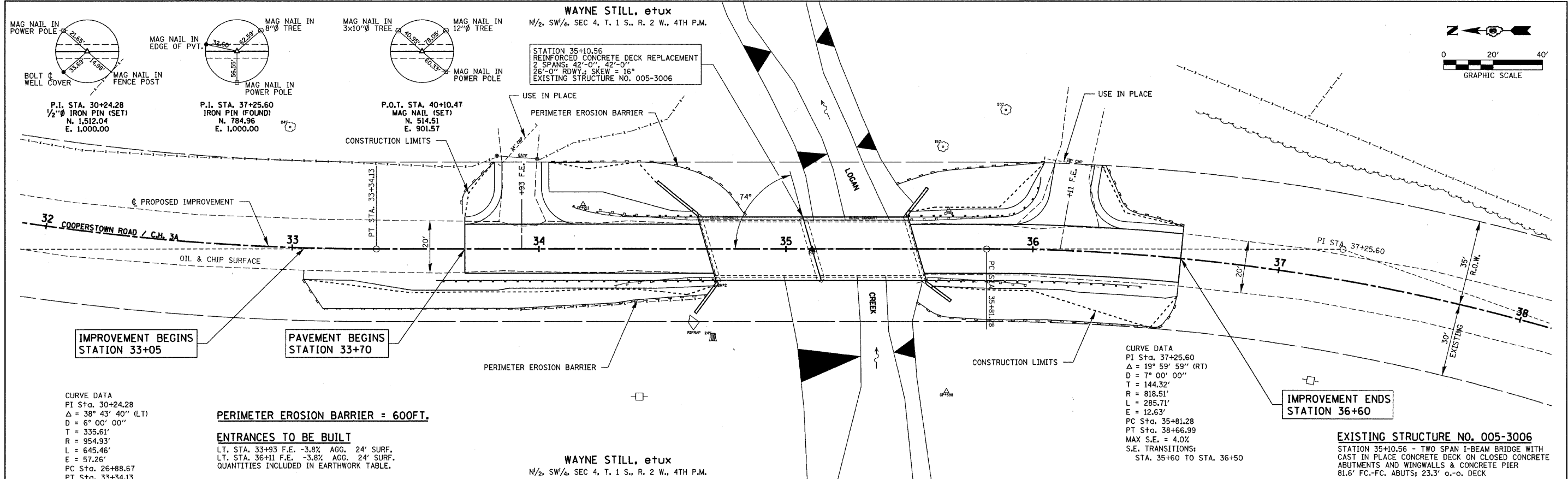
STATE OF ILLINOIS  
BROWN COUNTY HIGHWAY DEPARTMENT



TYPICAL CROSS SECTIONS  
COUNTY HIGHWAY 3A

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

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1583	05-00065-00-BR	BROWN	24	3
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		CONTRACT NO. 93509		



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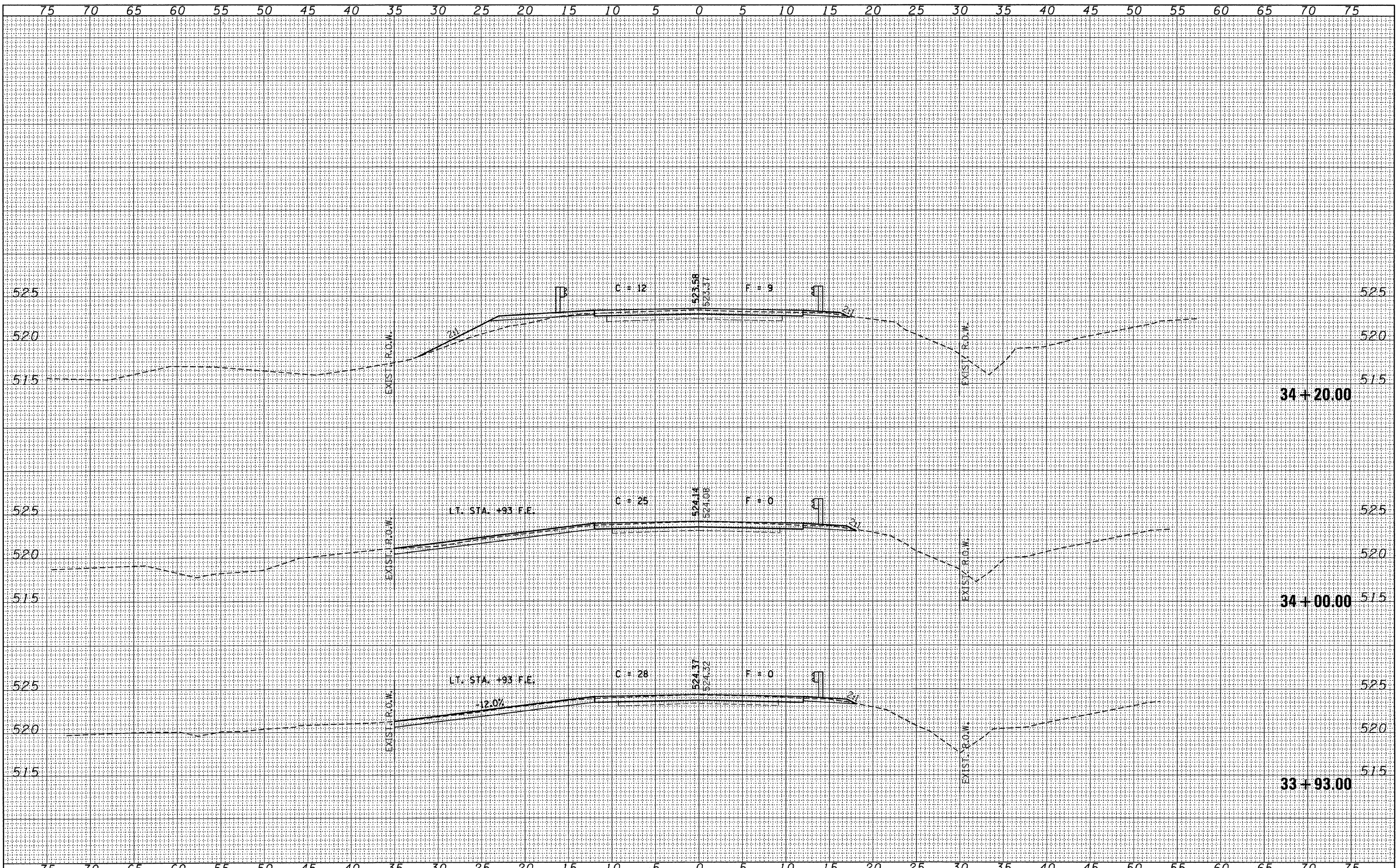
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PLOT SCALE =	CHECKED - S.W.M.	REVISED -	1583			05-00065-00-BR	BROWN	24	4			
PLOT DATE = 11/10/2009	DATE = 11/10/09	REVISED -	CONTRACT NO. 93509									
						SCALE: 20H:5V	SHEET NO. 1 OF 1 SHEETS	STA. 32+00 TO STA. 38+00	FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		



DATE	
BY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL	
SURVEY	
NOTE BOOK	
AREAS CHECKED	
NO.	



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 PLOT DATE = 11/10/2009

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DRAWN - D.T.M.	REVISED -
CHECKED - S.W.M.	REVISED -
DATE - 11/10/09	REVISED -

STATE OF ILLINOIS  
 BROWN COUNTY HIGHWAY DEPARTMENT



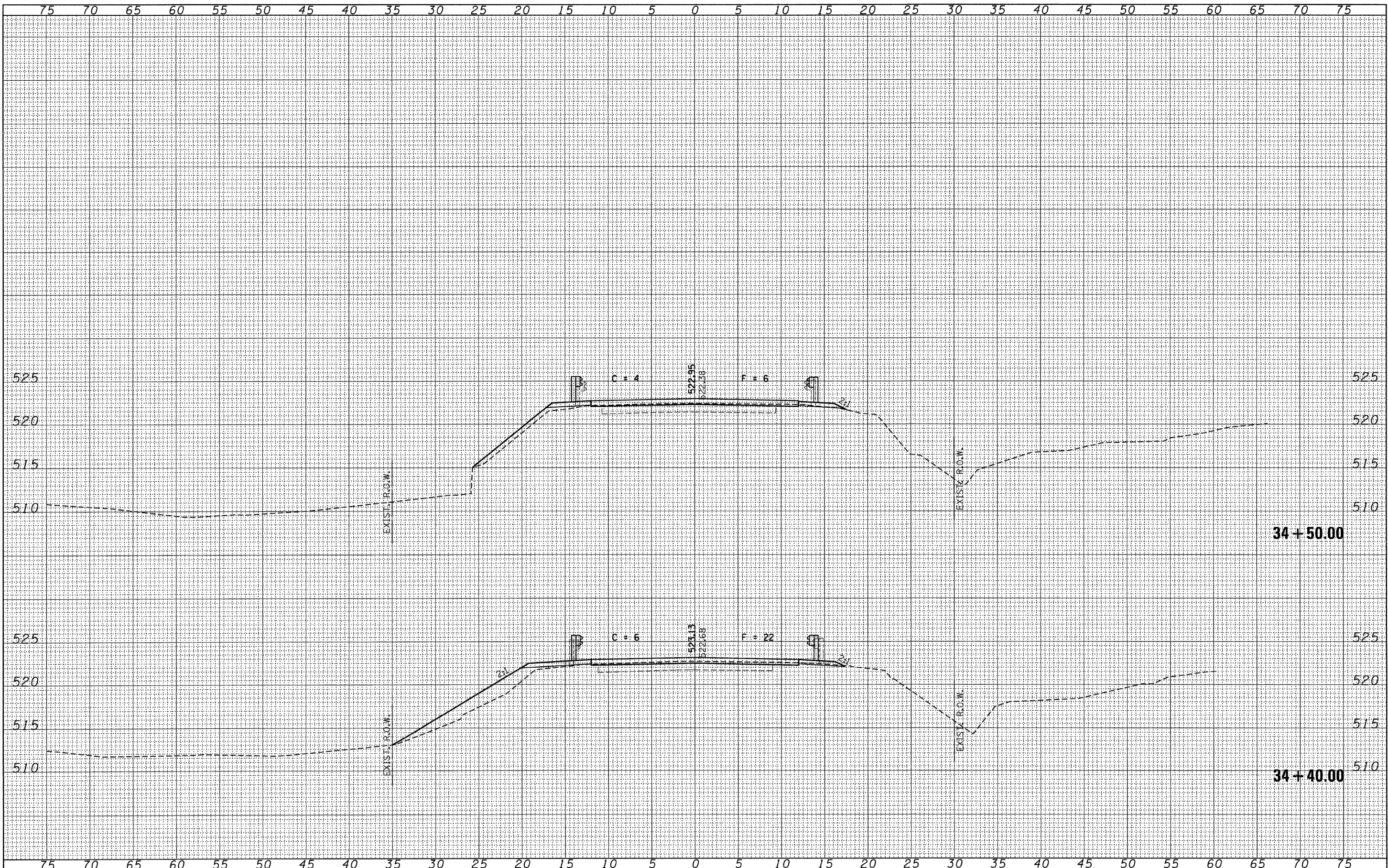
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 SHEET NO. OF SHEETS STA. 33+93.00 TO STA. 34+20.00

CROSS SECTIONS  
 COOPERSTOWN ROAD

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1583	05-00065-00-BR	BROWN	24	6
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 93509	

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NOTE BOOK	
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DATE	
BY	
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
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DATE - 11/10/09	REVISED -

STATE OF ILLINOIS  
 BROWN COUNTY HIGHWAY DEPARTMENT



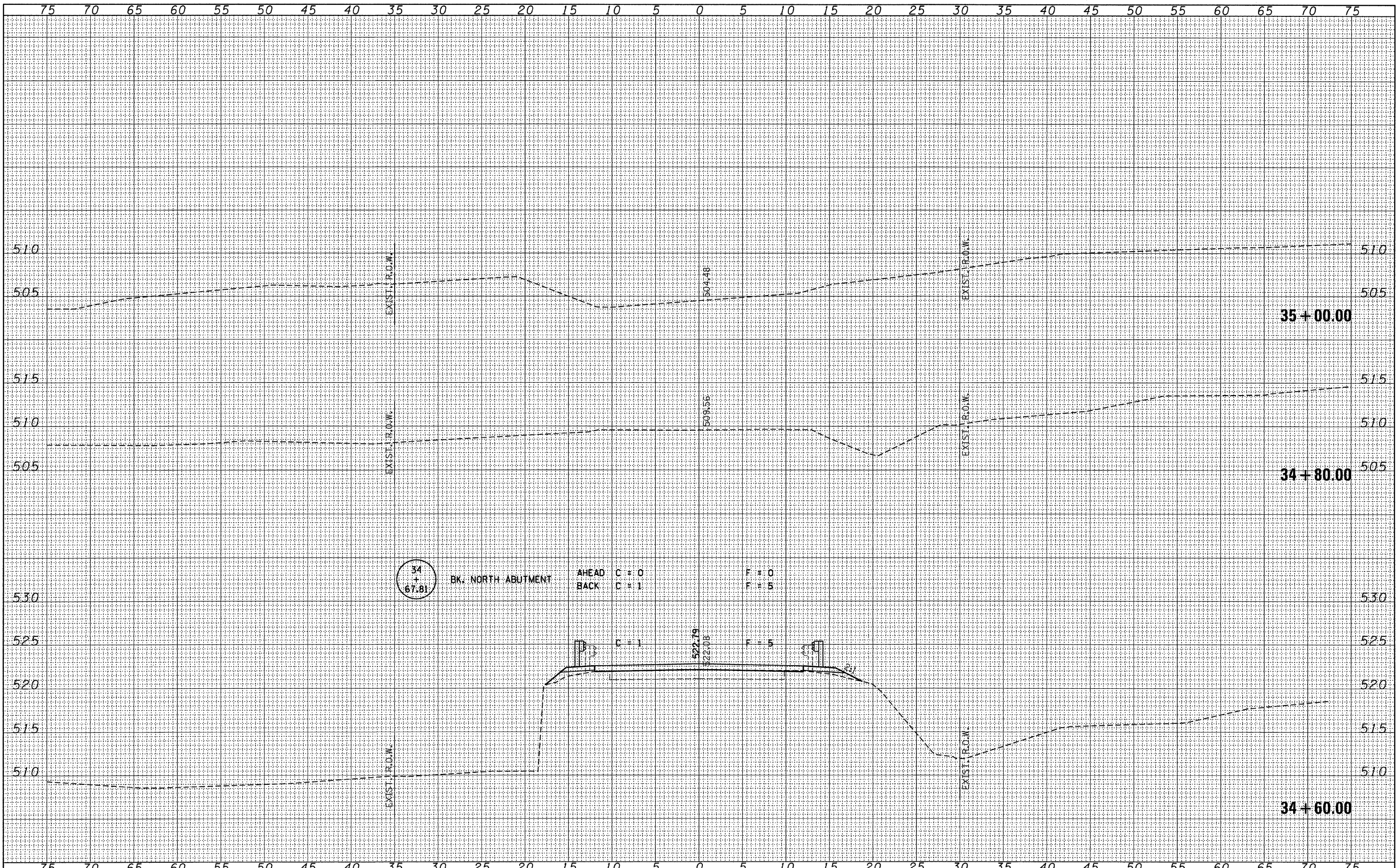
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CROSS SECTIONS  
 COOPERSTOWN ROAD

F.A.S. 1583	SECTION 05-00065-00-BR	COUNTY BROWN	TOTAL SHEETS 24	SHEET NO. 7
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 93509	

DATE	
BY	
FINAL SURVEY	
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NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
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NOTE BOOK	
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 PLOT DATE = 11/10/2009

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DRAWN - D.T.M.	REVISED -
CHECKED - S.W.M.	REVISED -
DATE - 11/10/09	REVISED -

STATE OF ILLINOIS  
 BROWN COUNTY HIGHWAY DEPARTMENT



SCALE: 5H:5V  
 SHEET NO. OF SHEETS STA. 34+60.00 TO STA. 35+00.00

CROSS SECTIONS  
 COOPERSTOWN ROAD

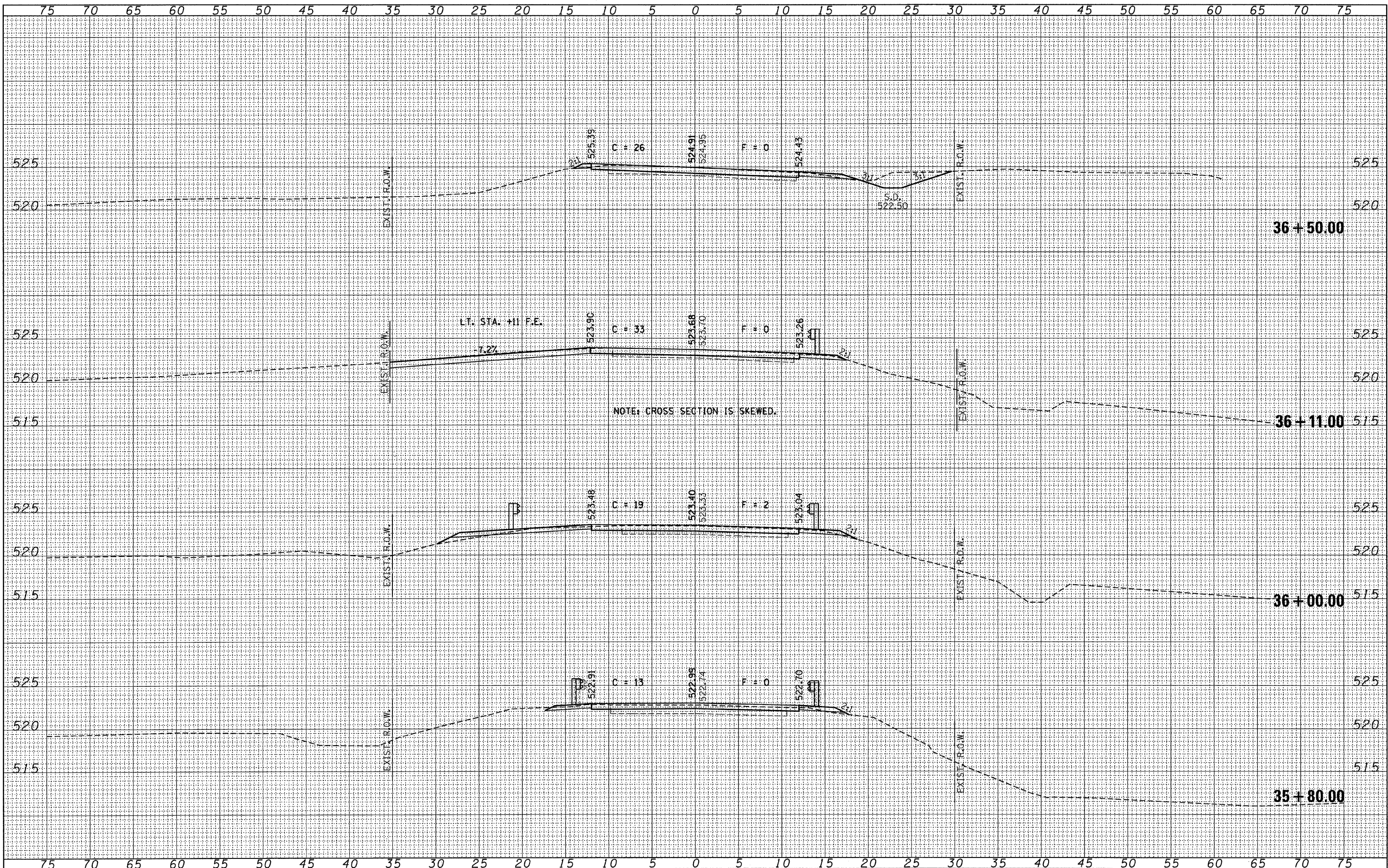
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1583	05-00065-00-BR	BROWN	24	8
CONTRACT NO. 93509			ILLINOIS FED. AID PROJECT	





DATE \_\_\_\_\_  
 BY \_\_\_\_\_  
 SURVEYED \_\_\_\_\_  
 PLOTTED \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_  
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 NO. \_\_\_\_\_

DATE \_\_\_\_\_  
 BY \_\_\_\_\_  
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DRAWN - D.T.M.	REVISED -
CHECKED - S.W.M.	REVISED -
DATE - 11/10/09	REVISED -

STATE OF ILLINOIS  
 BROWN COUNTY HIGHWAY DEPARTMENT



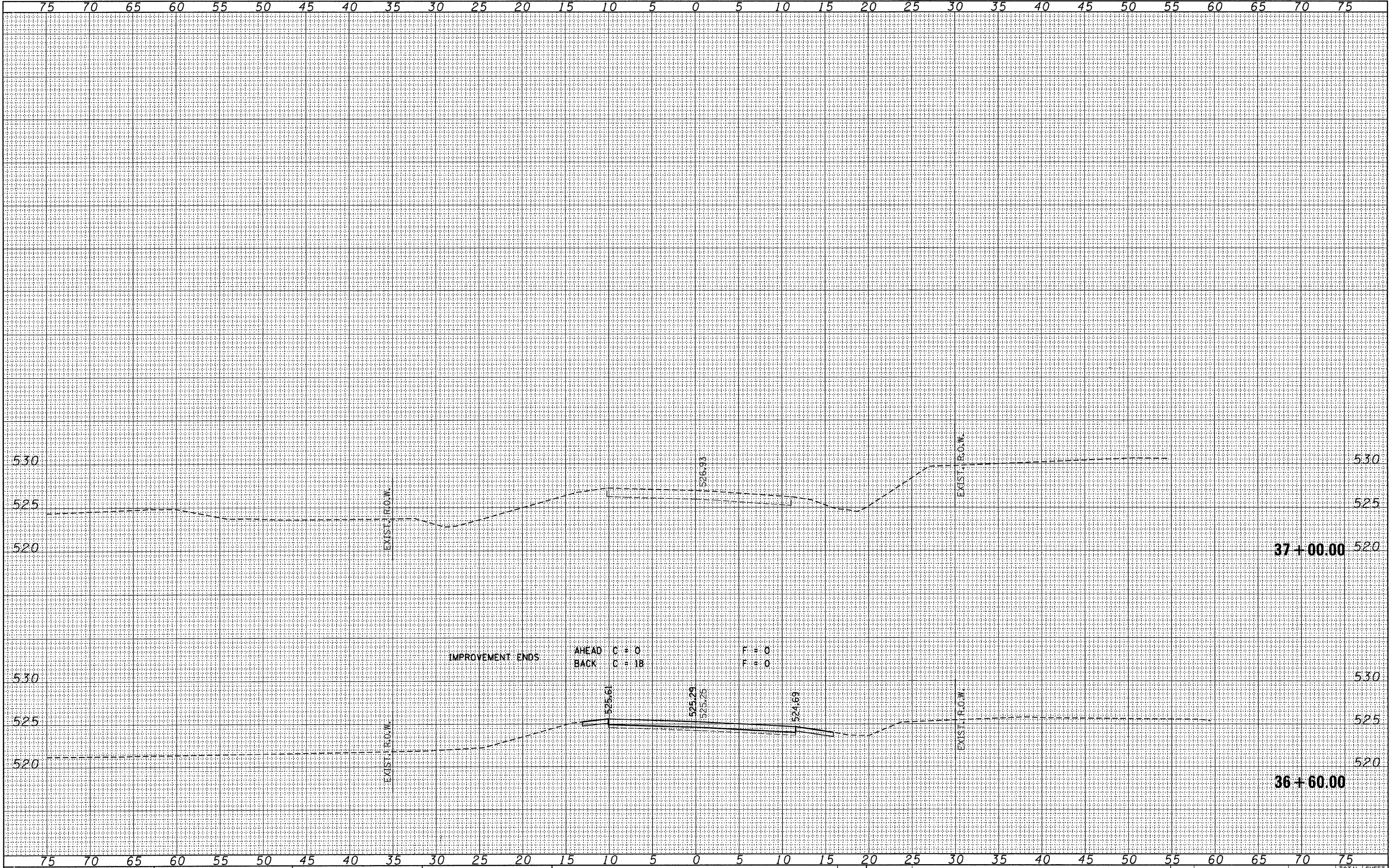
CROSS SECTIONS  
 COOPERSTOWN ROAD  
 SCALE: 5H:5V  
 SHEET NO. OF SHEETS STA. 35+80.00 TO STA. 36+50.00

F.A.S.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1583	05-00065-00-BR	BROWN	24	10
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	

CONTRACT NO. 93509

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

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



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CHECKED - S.W.M.	REVISED -
DATE - 11/10/09	REVISED -

STATE OF ILLINOIS  
 BROWN COUNTY HIGHWAY DEPARTMENT



SCALE: 5H:5V  
 SHEET NO. OF SHEETS STA. 36+60.00 TO STA. 37+00.00

CROSS SECTIONS  
 COOPERSTOWN ROAD

F.A.S. 1583	SECTION 05-00065-00-BR	COUNTY BROWN	TOTAL SHEETS 24	SHEET NO. 11
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 93509				

**GENERAL NOTES**

All proposed construction activity shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.

Plan dimensions and details relative to existing structure have been taken from field survey and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The Contractor shall excavate behind the abutments to the elevations shown prior to the removal of the existing deck. The excavation shall be backfilled with Porous Granular Backfill after superstructure rehabilitation has been completed. The excavation required behind the abutments shall be included with Porous Granular Backfill.

Removal of existing bridge rail, concrete deck and backwalls shall be included in the pay item Removal of Existing Concrete Deck.

Fasteners shall be high strength bolts. (AASHTO M164, Type 3 in unpainted areas and mechanically galvanized AASHTO M 164, Type 1 or 2 in painted areas). Bolts 3/4"φ, open holes 5/8"φ, unless otherwise noted.

Field welding of construction accessories to beams will not be permitted. Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60.

Protective Coat shall be applied to the bridge surface and fascia.

All construction joints shall be bonded, except as noted.

Painting of existing steel when entire structure will be blast cleaned; Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures".

All existing steel shall be cleaned per Near White Blast Cleaning - SSPC-SP10. All existing steel shall be painted according to the requirements of Paint System 1 - OZ/E/U. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Gray, Munsell No 5B 7/1.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete. As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that can not be removed by grinding 3/16" deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project. The SSPC-QP1 and SSPC-QP2 Painting Contractor Certifications will be required for this bridge.

The Contractor shall excavate behind the abutments to the elevations shown prior to the removal of the existing deck. The excavation shall be backfilled with Porous Granular Backfill after superstructure rehabilitation has been completed. The excavation required behind the abutments shall be included with Porous Granular Backfill.

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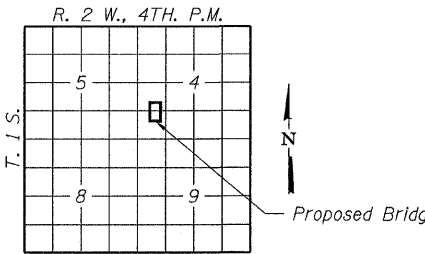
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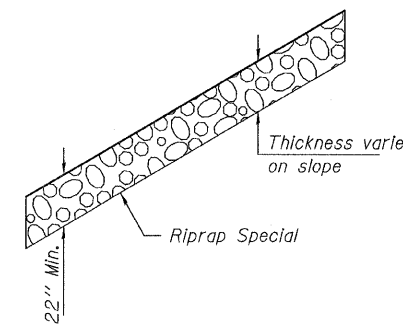


**LOCATION SKETCH**

LOGAN CREEK  
BUILT 200\_ BY  
BROWN COUNTY  
SEC. 05-00065-00-BR  
C.H. 3A / FAS 1583  
STR. NO. 005-3006  
LOADING HL-93

**NAME PLATE**

See Std. 515001



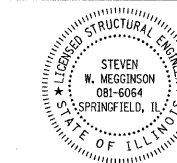
**SECTION A-A**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.			100
Porous Granular Backfill	Ton		70	70
Riprap Special	Ton			100
Removal of Existing Concrete Deck	Each	1		1
Concrete Structures	Cu. Yd.		3.8	3.8
Concrete Superstructure	Cu. Yd.	64.2		64.2
Protective Coat	Sq. Yd.	272		272
Furnishing and Erecting Structural Steel	Pound	1,060		1,060
Structural Steel Repair	Pound	1,030		1,030
Stud Shear Connectors	Each	1,152		1,152
Cleaning and Painting Steel Bridge	L. Sum	1		1
Containment and Disposal of Lead Paint Residues	L. Sum	1		1
Reinforcement Bars, Epoxy Coated	Pound	13,360	290	13,650
Steel Railing, Type S1	Foot	171		171
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	27		27
Elastomeric Bearing Assembly, Type 1	Each	16		16
Anchor Bolts, 1"	Each	32		32
Jacking Existing Superstructure	L. Sum	1		1

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 LRFD Specifications."

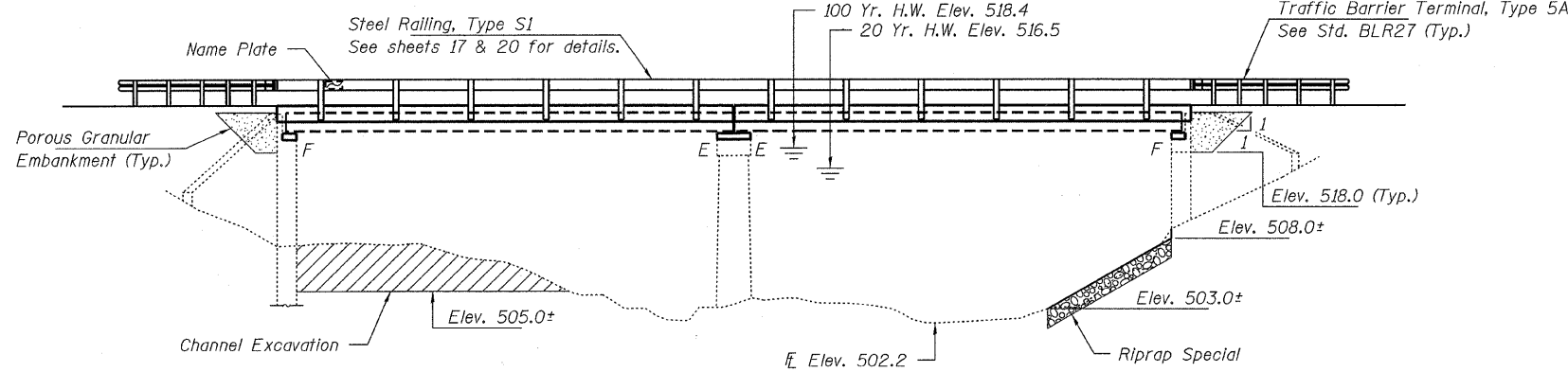
*Steven W. Megginson* 12/30/2009  
ILLINOIS STRUCTURAL NO. 081-6064



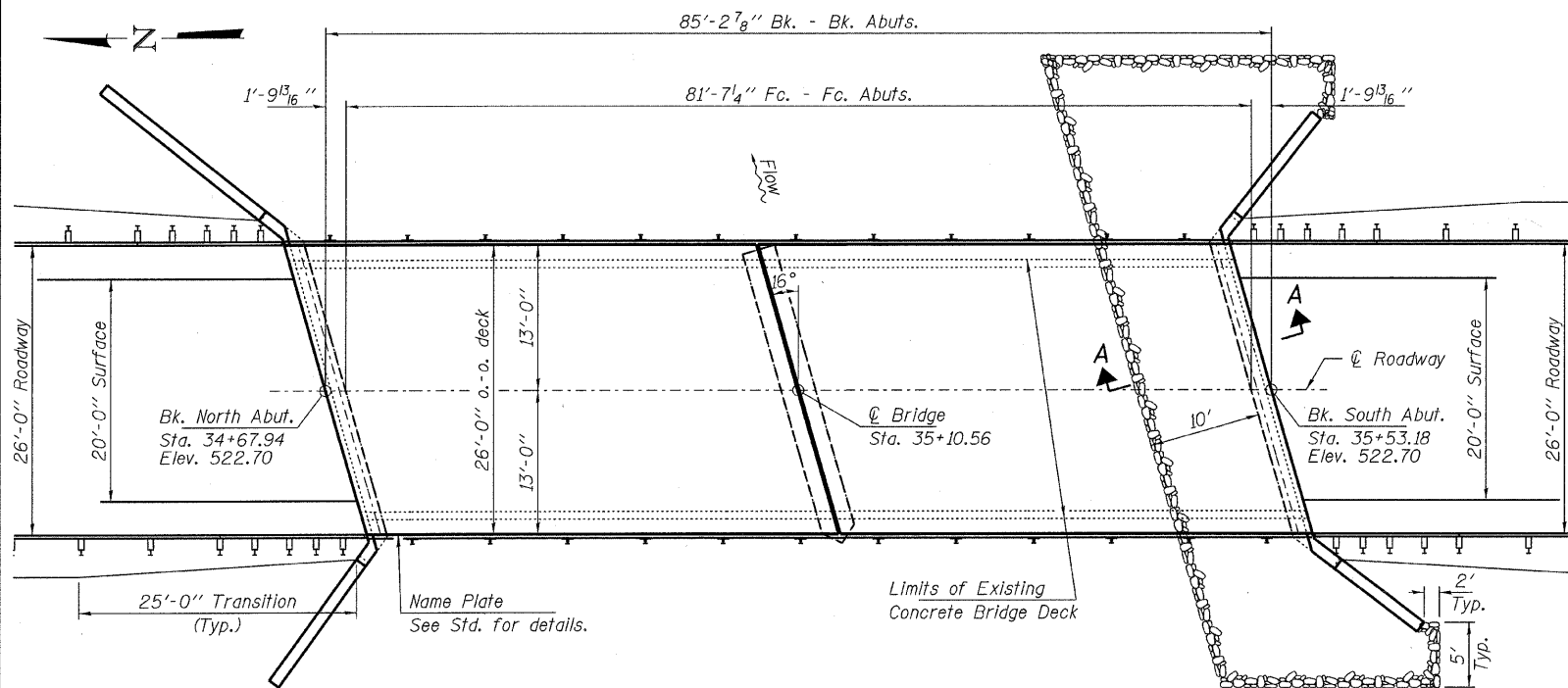
Expires 11-30-2010

**GENERAL PLAN AND ELEVATION  
STRUCTURE NO. 005-3006**

PROJECT NUMBER: 08.0204.130	DATE: 11/10/09	C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		3A	05-00065-00-BR	BROWN	24	12
CONTRACT NO. 93509					FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT ARA 1583(103)	



**ELEVATION**



**PLAN**

**DESIGN STRESSES**

FIELD UNITS

f'c = 3,500 psi  
fy = 60,000 psi (Reinf.)  
fy = 33,000 p.s.i. (Existing Structural Steel)  
n = 9

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.053g  
Design Spectral Acceleration at 0.2 sec. (SD5) = 0.129g  
Soil Site Class = B

**LOADING HL-93 (SLAB)**

Design Specifications: 2007 AASHTO LRFD with all applicable interims.  
50#/Sq. Ft. included in dead load for future wearing surface.

**WATERWAY INFORMATION**

Drainage Area = 15.4 Sq. Mi.		Existing Low Grade Elev. 522.0 @ Sta. 35+10.56		Proposed Low Grade Elev. 522.7 @ Sta. 35+10.56		
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Natural H.W.E.	Head - Ft.	Headwater El.
			Exist. Prop.	Exist. Prop.	Exist. Prop.	Exist. Prop.
Design	10	2410	720 720	515.11	0.27 0.27	515.38 515.38
Base	20	3020	820 820	516.51	0.38 0.38	516.89 516.89
Max. Calc.	100	4500	970 970	518.37	0.60 0.60	518.97 518.97
	500	6080	1030 1030	519.71	0.41 0.41	520.12 520.12
			10 Year Velocity through Existing Bridge = 3.3 fps		10 Year Velocity through Proposed Bridge = 3.3 fps	

DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - S.W.M.



**LINE A**

	End of N. Deck	C of N. Abut.	Span 1			C Pier	Span 2			C of S. Abut.	End of S. Deck
			1	2	3		4	5	6		
Theoretical Grade Elevation	522.463	522.463	522.463	522.463	522.463	522.463	522.463	522.463	522.463	522.463	522.463
Theoretical Grade Elevation Adjusted for D.L. Deflection	522.463	522.463	522.496	522.509	522.498	522.463	522.496	522.509	522.498	522.463	522.463
Bottom of Slab Elevation	521.796	521.796	521.829	521.842	521.831	521.796	521.829	521.842	521.831	521.796	521.796
Top of Steel											
Fillet Height "4"											

**LINE B**

	End of N. Deck	C of N. Abut.	Span 1			C Pier	Span 2			C of S. Abut.	End of S. Deck
			1	2	3		4	5	6		
Theoretical Grade Elevation	522.531	522.531	522.531	522.531	522.531	522.531	522.531	522.531	522.531	522.531	522.531
Theoretical Grade Elevation Adjusted for D.L. Deflection	522.531	522.531	522.563	522.577	522.566	522.531	522.563	522.577	522.566	522.531	522.531
Bottom of Slab Elevation	521.864	521.864	521.897	521.910	521.899	521.864	521.897	521.910	521.899	521.864	521.864
Top of Steel											
Fillet Height "4"											

**LINE C**

	End of N. Deck	C of N. Abut.	Span 1			C Pier	Span 2			C of S. Abut.	End of S. Deck
			1	2	3		4	5	6		
Theoretical Grade Elevation	522.598	522.598	522.598	522.598	522.598	522.598	522.598	522.598	522.598	522.598	522.598
Theoretical Grade Elevation Adjusted for D.L. Deflection	522.598	522.598	522.631	522.644	522.598	522.598	522.631	522.644	522.598	522.598	522.598
Bottom of Slab Elevation	521.932	521.932	521.964	521.978	521.932	521.932	521.964	521.978	521.932	521.932	521.932
Top of Steel											
Fillet Height "4"											

**LINE D**

	End of N. Deck	C of N. Abut.	Span 1			C Pier	Span 2			C of S. Abut.	End of S. Deck
			1	2	3		4	5	6		
Theoretical Grade Elevation	522.666	522.666	522.666	522.666	522.666	522.666	522.666	522.666	522.666	522.666	522.666
Theoretical Grade Elevation Adjusted for D.L. Deflection	522.666	522.666	522.699	522.712	522.701	522.666	522.699	522.712	522.701	522.666	522.666
Bottom of Slab Elevation	521.999	521.999	522.032	522.045	522.034	521.999	522.032	522.045	522.034	521.999	521.999
Top of Steel											
Fillet Height "4"											

**C RDWY.**

	End of N. Deck	C of N. Abut.	Span 1			C Pier	Span 2			C of S. Abut.	End of S. Deck
			1	2	3		4	5	6		
Theoretical Grade Elevation	522.700	522.700	522.700	522.700	522.700	522.700	522.700	522.700	522.700	522.700	522.700
Theoretical Grade Elevation Adjusted for D.L. Deflection	522.700	522.700	522.733	522.746	522.735	522.700	522.733	522.746	522.735	522.700	522.700
Bottom of Slab Elevation	522.033	522.033	522.066	522.079	522.068	522.033	522.066	522.079	522.068	522.033	522.033
Top of Steel											
Fillet Height "4"											

DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - S.W.M.

**SLAB ELEVATIONS  
STRUCTURE NO. 005-3006**

**HAMPTON, LENZINI & RENWICK, INC.**  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS

**HLR** 3085 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
 (217) 546-3400

PROJECT NUMBER: 08.0204.130      DATE: 11/10/09

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3A	05-00065-00-BR	BROWN	24	14
CONTRACT NO. 93509				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT ARA 1583(103)		

**LINE E**

	End of N. Deck	C of N. Abut.	Span 1			C Pier	Span 2			C of S. Abut.	End of S. Deck
			1	2	3		4	5	6		
Theoretical Grade Elevation	522.666	522.666	522.666	522.666	522.666	522.666	522.666	522.666	522.666	522.666	522.666
Theoretical Grade Elevation Adjusted for D.L. Deflection	522.666	522.666	522.699	522.712	522.701	522.666	522.699	522.712	522.701	522.666	522.666
Bottom of Slab Elevation	521.999	521.999	522.032	522.045	522.034	521.999	522.032	522.045	522.034	521.999	521.999
Top of Steel											
Fillet Height "4"											

**LINE F**

	End of N. Deck	C of N. Abut.	Span 1			C Pier	Span 2			C of S. Abut.	End of S. Deck
			1	2	3		4	5	6		
Theoretical Grade Elevation	522.598	522.598	522.598	522.598	522.598	522.598	522.598	522.598	522.598	522.598	522.598
Theoretical Grade Elevation Adjusted for D.L. Deflection	522.598	522.598	522.631	522.644	522.633	522.598	522.631	522.644	522.633	522.598	522.598
Bottom of Slab Elevation	521.932	521.932	521.964	521.978	521.967	521.932	521.964	521.978	521.967	521.932	521.932
Top of Steel											
Fillet Height "4"											

**LINE G**

	End of N. Deck	C of N. Abut.	Span 1			C Pier	Span 2			C of S. Abut.	End of S. Deck
			1	2	3		4	5	6		
Theoretical Grade Elevation	522.531	522.531	522.531	522.531	522.531	522.531	522.531	522.531	522.531	522.531	522.531
Theoretical Grade Elevation Adjusted for D.L. Deflection	522.531	522.531	522.563	522.577	522.566	522.531	522.563	522.577	522.566	522.531	522.531
Bottom of Slab Elevation	521.864	521.864	521.897	521.910	521.899	521.864	521.897	521.910	521.899	521.864	521.864
Top of Steel											
Fillet Height "4"											

**LINE H**

	End of N. Deck	C of N. Abut.	Span 1			C Pier	Span 2			C of S. Abut.	End of S. Deck
			1	2	3		4	5	6		
Theoretical Grade Elevation	522.463	522.463	522.463	522.463	522.463	522.463	522.463	522.463	522.463	522.463	522.463
Theoretical Grade Elevation Adjusted for D.L. Deflection	522.463	522.463	522.496	522.509	522.498	522.463	522.496	522.509	522.498	522.463	522.463
Bottom of Slab Elevation	521.796	521.796	521.829	521.842	521.831	521.796	521.829	521.842	521.831	521.796	521.796
Top of Steel											
Fillet Height "4"											

DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - S.W.M.

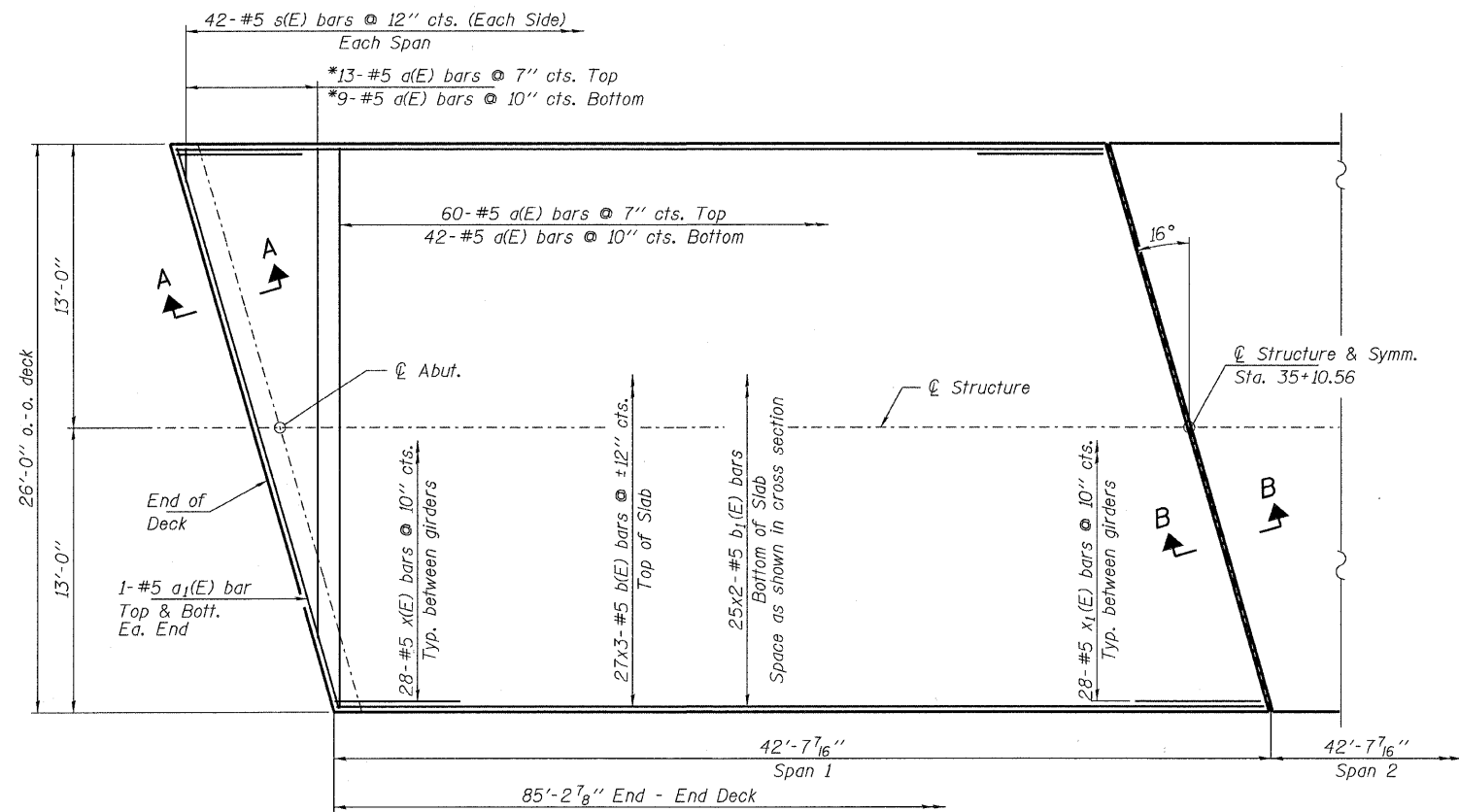
**SLAB ELEVATIONS  
STRUCTURE NO. 005-3006**

**HAMPTON, LENZINI & RENWICK, INC.**  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS

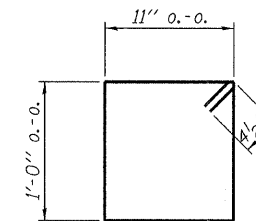
**HLR** 3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
(217) 548-3400

PROJECT NUMBER: 08.0204.130      DATE: 11/10/09

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3A	05-00065-00-BR	BROWN	24	15
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT ARA 1583(103)	
CONTRACT NO. 93509				

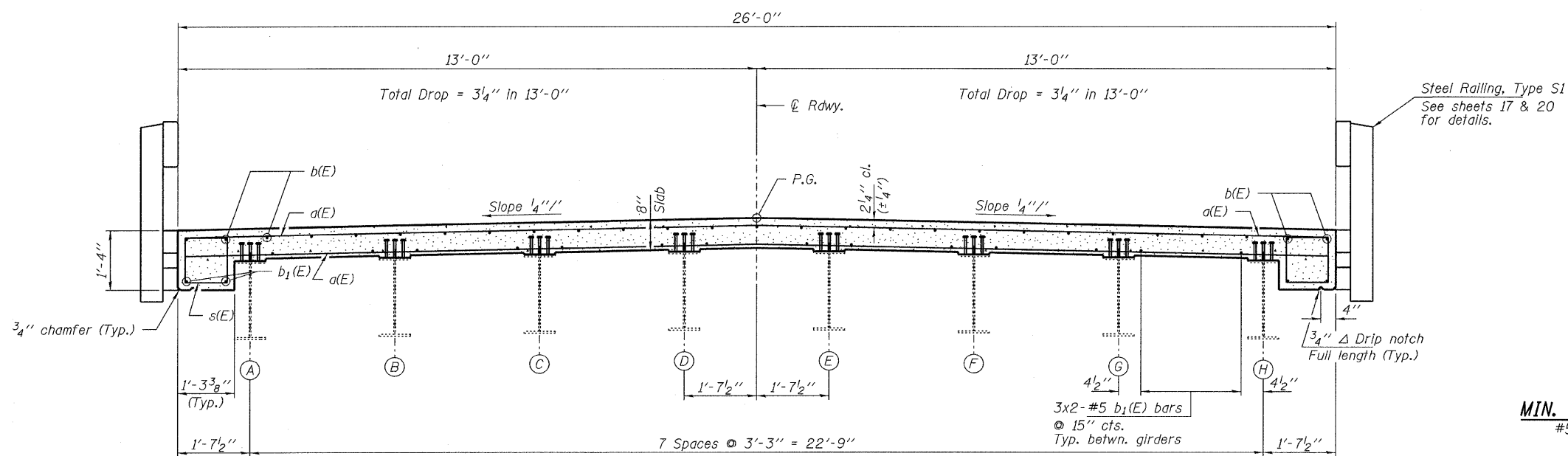


PLAN



BAR s(E)

\* a(E) - Cut to length in skewed portion and use remainder in opposite end.



CROSS SECTION  
(Looking South)

MIN. BAR LAPS  
#5 - 2'-2"

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
a(E)	248	#5	25'-8"	—
a <sub>1</sub> (E)	8	#5	26'-9"	—
b(E)	162	#5	15'-8"	—
b <sub>1</sub> (E)	100	#5	22'-5"	—
s(E)	168	#5	4'-7"	□
x(E)	56	#5	6'-5"	⌋
x <sub>1</sub> (E)	56	#5	5'-8"	⌋
Concrete Superstructure			Cu. Yd.	64.2
Structural Steel Repair			Pound	1,030
Reinforcement Bars, Epoxy Coated			Pound	13,360
Bridge Deck Grooving			Sq. Yd.	246
Protective Coat			Sq. Yd.	272
Cleaning and Painting Steel Bridge			L. Sum	1
Containment and Disposal of Lead Paint Residues			L. Sum	1
Stud Shear Connectors			Each	1,152
Name Plates			Each	1

Reinforcement bars designated (E) shall be epoxy coated. For Elevations, Sections A-A, and B-B see sheet 17.

SUPERSTRUCTURE  
STRUCTURE NO. 005-3006

DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - S.W.M.

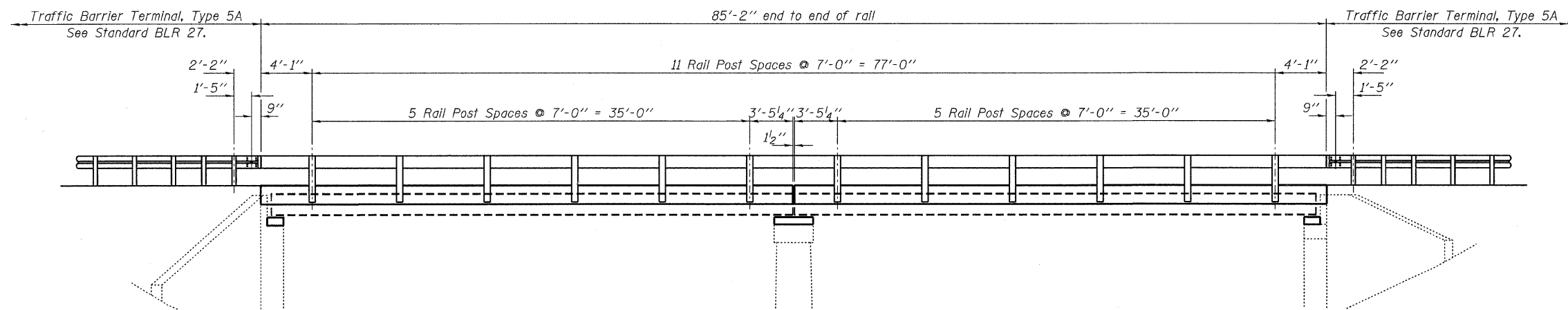
**HAMPTON, LENZINI & RENWICK, INC.**  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS

**HLR** 3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
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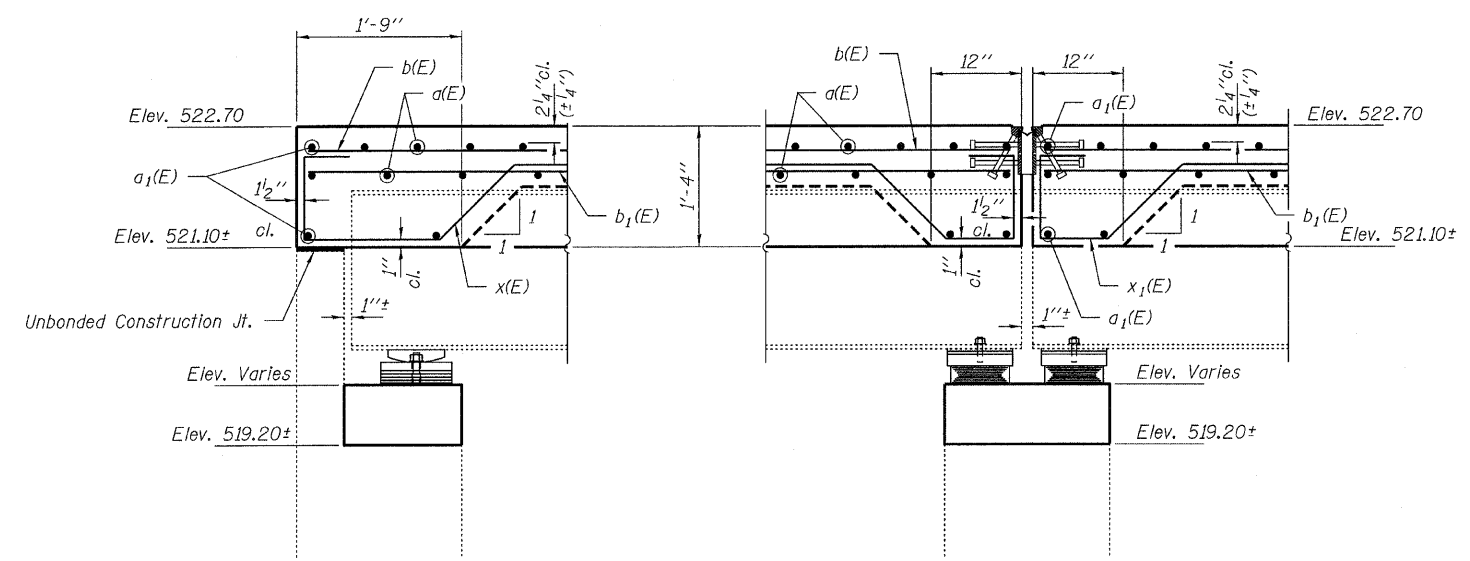
PROJECT NUMBER: 08.0204.130 DATE: 11/10/09

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3A	05-00065-00-BR	BROWN	24	16
CONTRACT NO. 93509				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT ARA 1583(103)		



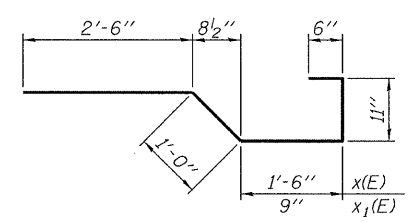


**ELEVATION**  
 Showing Rail Post Spaces  
 See sheet 20 for Railing Details.



**SECTION A-A**

**SECTION B-B**



**BAR x(E) & x1(E)**

DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - S.W.M.

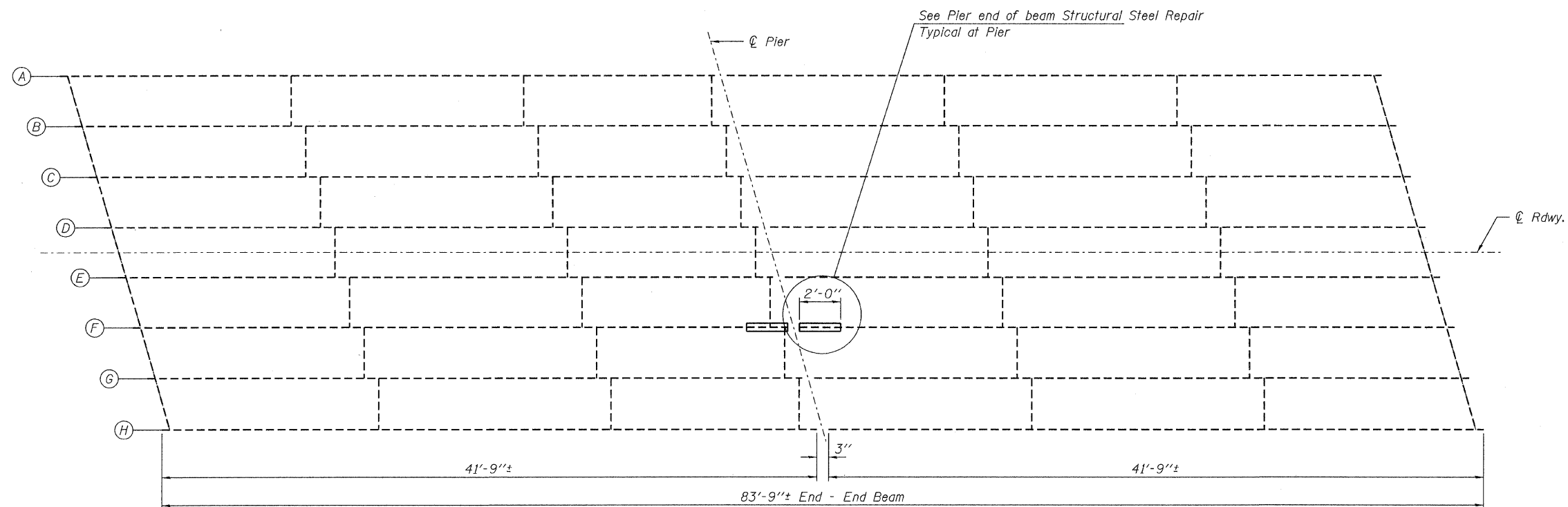
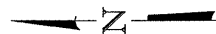
**HAMPTON, LENZINI & RENWICK, INC.**  
 CIVIL & STRUCTURAL ENGINEERS  
 LAND SURVEYORS

**HLR** 3085 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
 (217) 646-3400

PROJECT NUMBER: 08.0204.130 DATE: 11/10/09

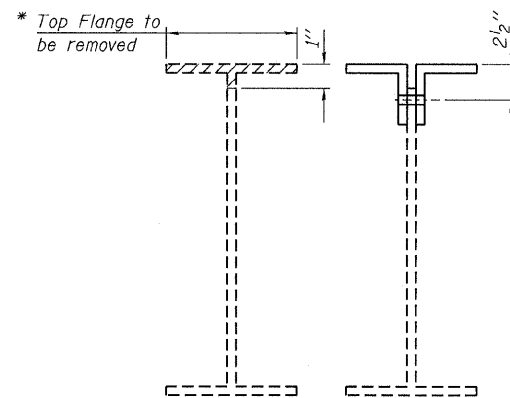
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3A	05-00065-00-BR	BROWN	24	17
CONTRACT NO. 93509				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT ARA 1583(103)				

**SUPERSTRUCTURE DETAILS**  
**STRUCTURE NO. 005-3006**

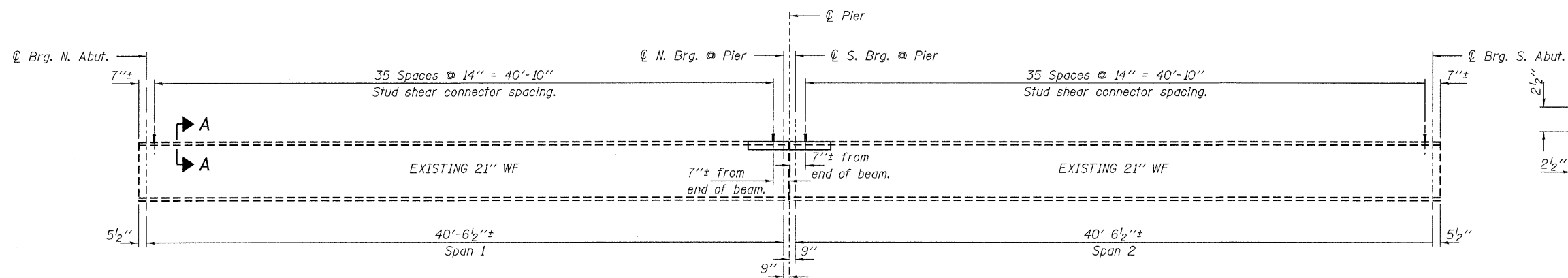


**EXISTING FRAMING PLAN**

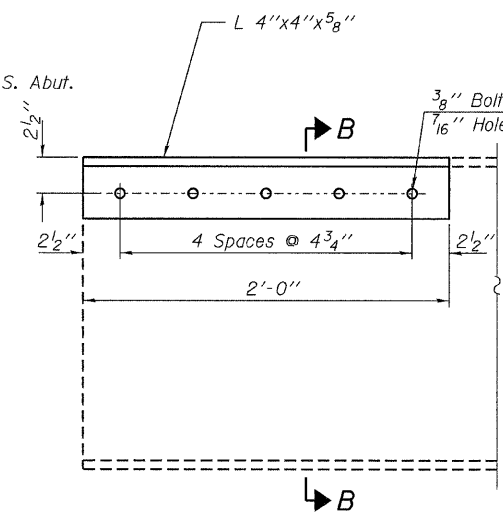
\* Top Flange to be removed and repaired if engineer determines the overall thickness of the flange is less than 1/2" for a length of 6" at the pier end.



**SECTION B-B**



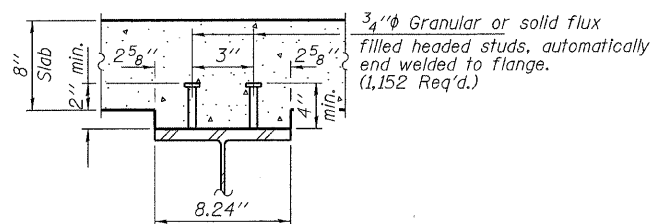
**ELEVATION**



**PIER END OF BEAM STRUCTURAL STEEL REPAIR DETAIL**

32 angles required @ 16 end of beam repairs = 1,030 lbs

**STRUCTURAL STEEL STRUCTURE NO. 005-3006**



**SECTION A-A**

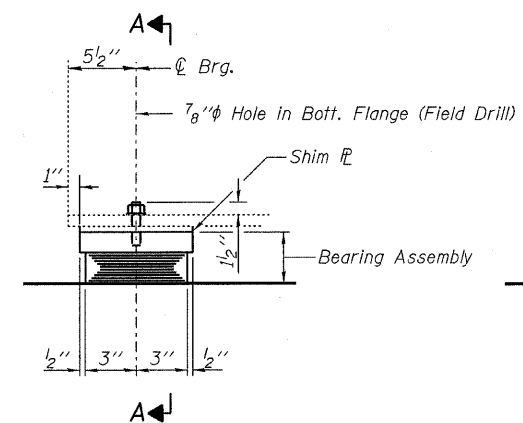
DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - S.W.M.

**HAMPTON, LENZINI & RENWICK, INC.**  
 CIVIL & STRUCTURAL ENGINEERS  
 LAND SURVEYORS

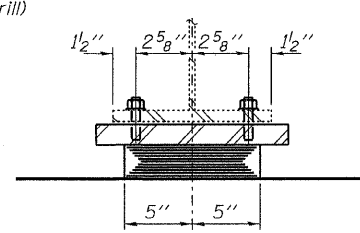
**HLR** 3085 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
 (217) 548-3400

PROJECT NUMBER: 08.0204.130 DATE: 11/10/09

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3A	05-00065-00-BR	BROWN	24	18
CONTRACT NO. 93509				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT ARA 1583(103)		

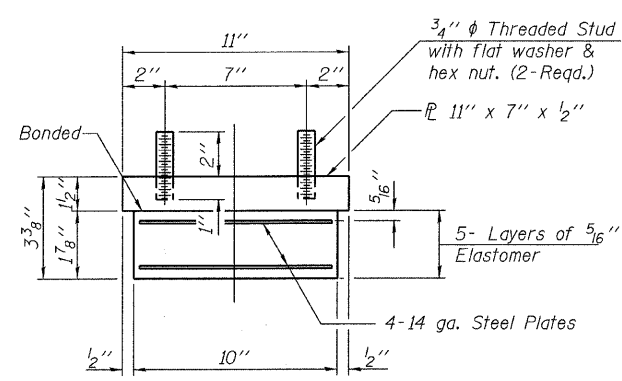


ELEVATION AT PIER



SECTION A-A

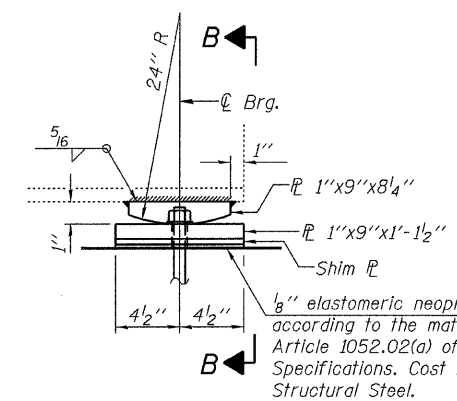
TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

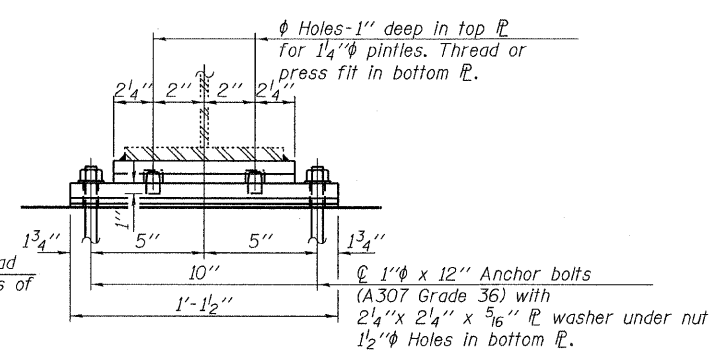
Note:  
Shim plates shall not be placed under Bearing Assembly.

Notes:  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.  
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
All steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

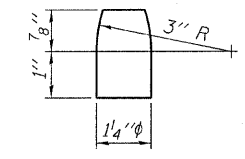


ELEVATION AT ABUT.

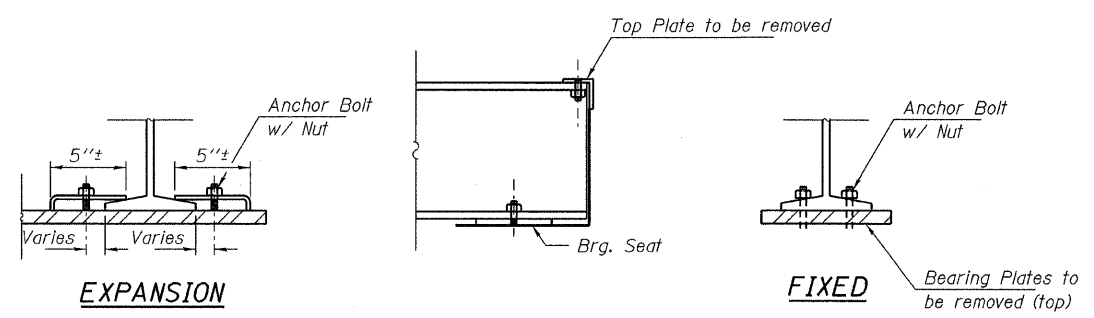
FIXED BEARING



SECTION B-B



PINTLE



EXISTING BEARING DETAIL  
Removal of Plates and Bolts shall be included in the Item Jacking Existing Superstructure

INTERIOR GIRDER MOMENT TABLE		
		0.5 Sp. 1 & 2
Is	(in <sup>4</sup> )	1,326.8
Ic (n)	(in <sup>4</sup> )	4,198.0
Ic (3n)	(in <sup>4</sup> )	2,978.7
Ss	(in <sup>3</sup> )	126.4
Sc (n)	(in <sup>3</sup> )	206.6
Sc (3n)	(in <sup>3</sup> )	182.6
D	(K/ft.)	0.438
M <sub>l</sub>	(K/ft.)	93.6
s <sub>l</sub>	(K/ft.)	0.019
M <sub>s</sub>	(K/ft.)	4.1
M <sub>t</sub>	(K/ft.)	139.9
M (Imp)	(K/ft.)	42.0
$5_3[M_L + M(Imp)]$	(K/ft.)	300.2
M <sub>a</sub>	(K/ft.)	52.1
M <sub>u</sub>	(K/ft.)	873.1
F <sub>s</sub> non-comp	(k.s.i.)	8.9
F <sub>s</sub> (comp)	(k.s.i.)	0.3
F <sub>s</sub> 5/8 (k + Imp)	(k.s.i.)	17.6
F <sub>s</sub> (Overload)	(k.s.i.)	26.8
VR	(K)	21.4

INTERIOR GIRDER REACTION TABLE		
	Abt/Pier	
R (l + s <sub>l</sub> )	(K)	9.6
R <sub>t</sub>	(K)	16.5
Imp.	(K)	5.0
R (Total)	(K)	31.1

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).  
Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.  
Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads.  
M<sub>l</sub> is the maximum Live Load + Impact shear range in span.  
M<sub>a</sub> (Applied Moment) = 1.3[M<sub>l</sub> + M<sub>s</sub> + 5/3(M<sub>t</sub> + M<sub>imp</sub>)].  
The Plastic Moment capacity (M<sub>u</sub>) is computed according to AASHTO 10.48.1 and 10.50.1.1.  
F<sub>s</sub> (Overload) is the sum of the stresses due to M<sub>l</sub> + M<sub>s</sub> + 5/3(M<sub>t</sub> + M<sub>imp</sub>).  
F<sub>s</sub> (Total) (Non-compact section) is the sum of the stresses due to 1.3[M<sub>l</sub> + M<sub>s</sub> + 5/3(M<sub>t</sub> + M<sub>imp</sub>)].

JACKING EXISTING SUPERSTRUCTURE

Existing Beam Weight = 62 lbs/ft  
Relative elevation between adjacent beams during jacking shall not be more than 1/8" when diaphragms are secure.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	16
Anchor Bolts, 1"	Each	32
Furnishing and Erecting Structural Steel	Pound	1,060
Jacking Existing Superstructure	L. Sum	1

BEARING DETAILS  
STRUCTURE NO. 005-3006

DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - S.W.M.

I-2E-1

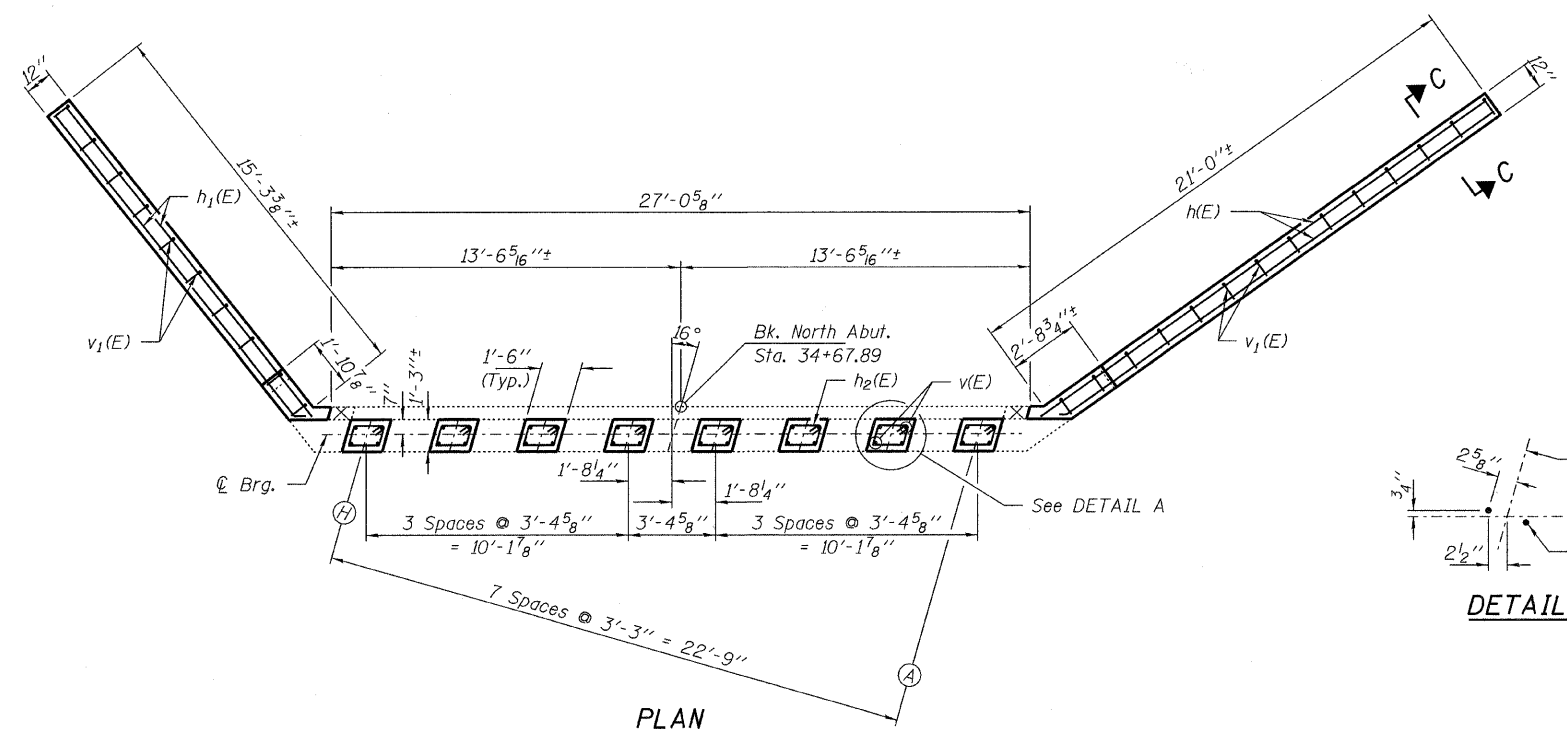
10-1-08

**HAMPTON, LENZINI & RENWICK, INC.**  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS  
**HLR**  
3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
(217) 548-3400  
PROJECT NUMBER: 08.0204.130 DATE: 11/10/09

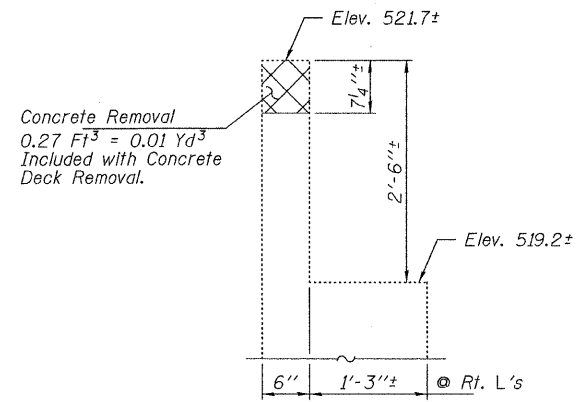
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3A	05-00065-00-BR	BROWN	24	19
				CONTRACT NO. 93509
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT ARA 1583(103)		



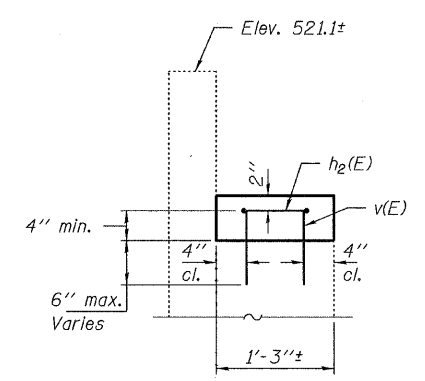




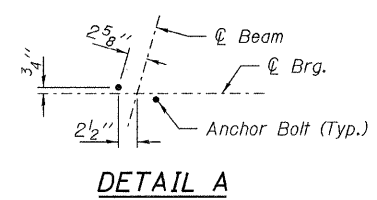
**PLAN**



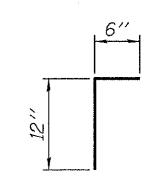
**SECTION A-A**



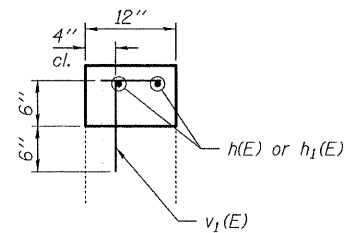
**SECTION B-B**



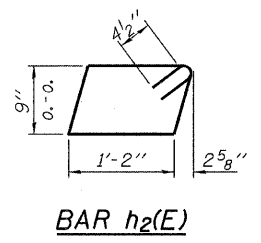
**DETAIL A**



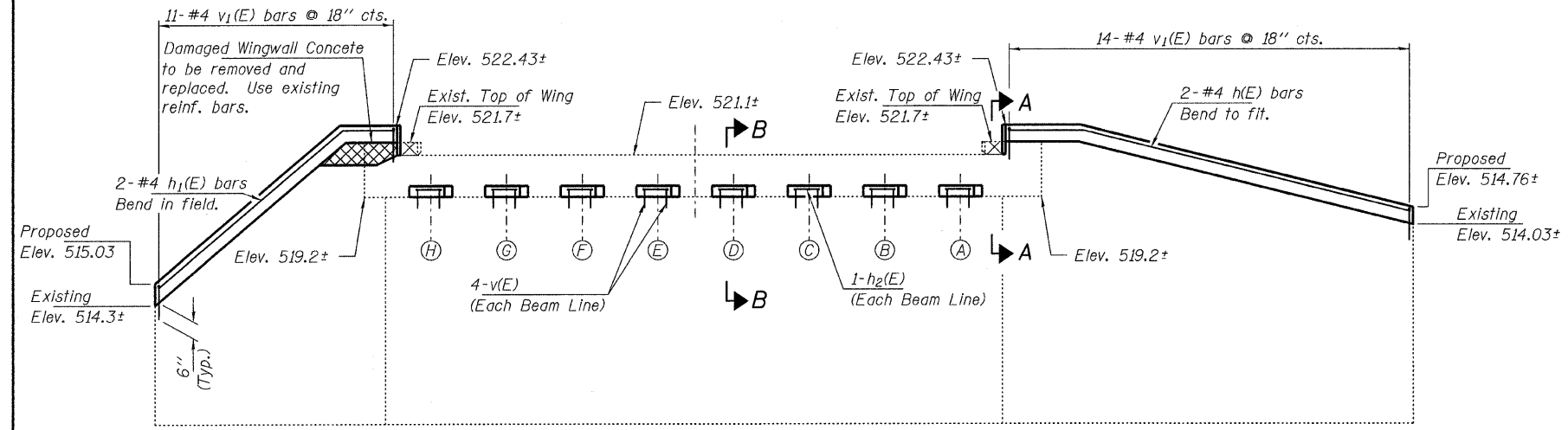
**BAR v1(E)**



**SECTION C-C**



**BAR h2(E)**



**ELEVATION**  
(Looking North)

**BEARING SEAT ELEVATIONS**

LINE	ELEVATION
A	519.83
B	519.90
C	519.97
D	520.03
E	520.03
F	519.97
G	519.90
H	519.83

**BILL OF MATERIAL - N. ABUT.**

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	2	#4	21'-2"	—
h1(E)	2	#4	15'-4"	—
h2(E)	8	#4	4'-8"	□
v(E)	32	#4	10"	—
v1(E)	25	#4	1'-6"	┌
Concrete Structures			Cu. Yd.	1.7
Reinforcement Bars, Epoxy Coated			Pound	120

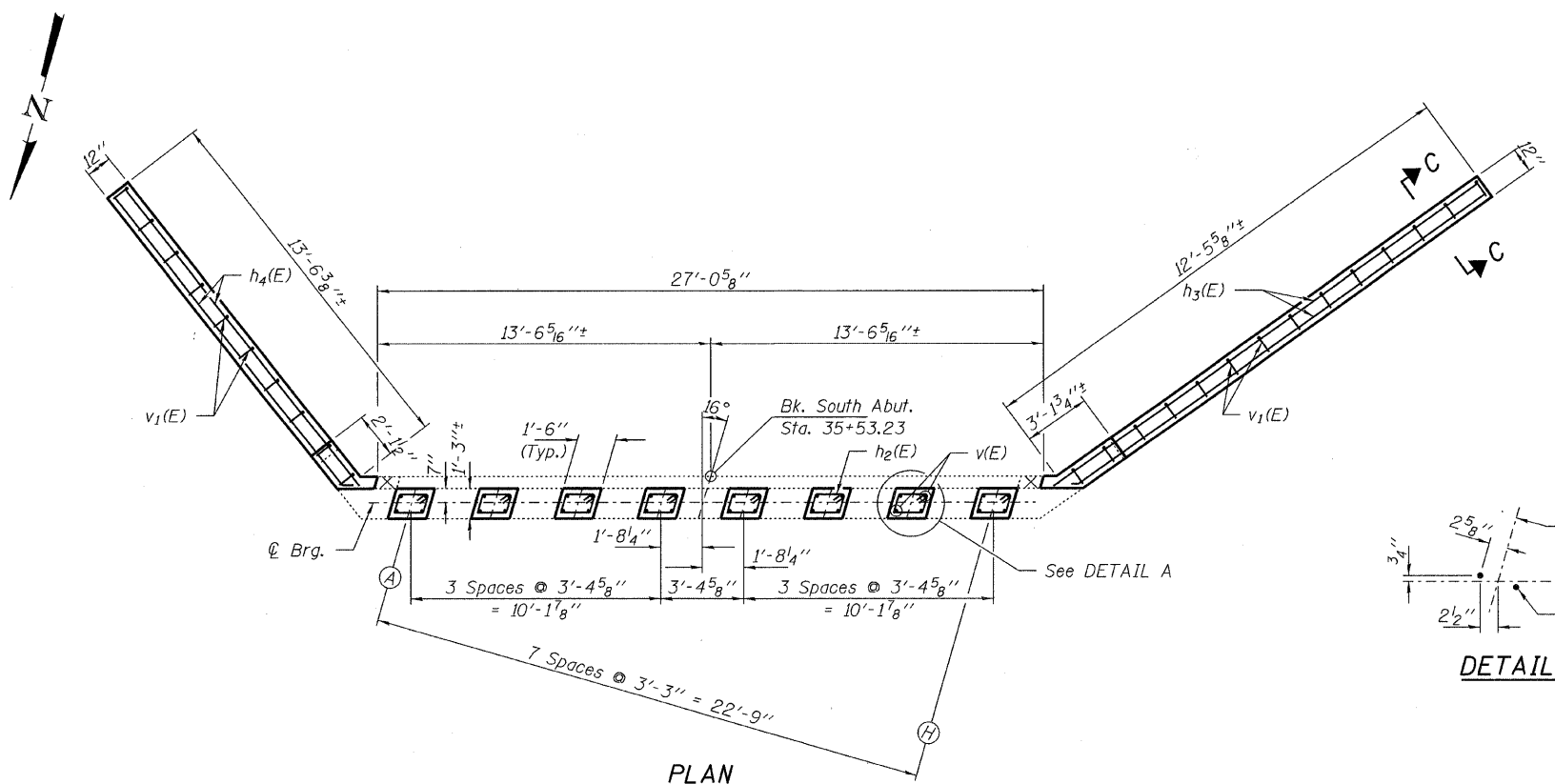
Reinforcement bars designated (E) shall be epoxy coated.

Hatched area indicates Concrete Removal. Cost included with Removal of Existing Concrete Deck.

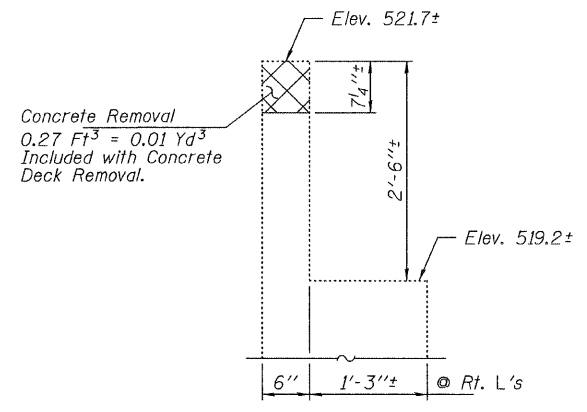
DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - S.W.M.

**HAMPTON, LENZINI & RENWICK, INC.**  
 CIVIL & STRUCTURAL ENGINEERS  
 LAND SURVEYORS  
  
 3085 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
 (217) 546-3400  
 PROJECT NUMBER: 08.0204.130 DATE: 11/10/09

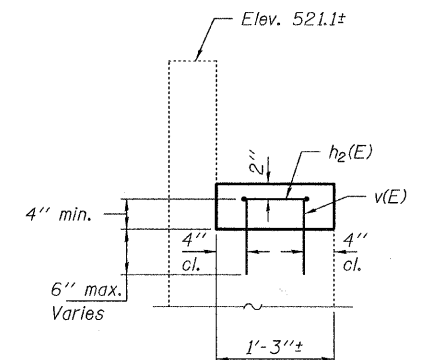
C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3A	05-00065-00-BR	BROWN	24	22
CONTRACT NO. 93509				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT ARA 1583(103)				



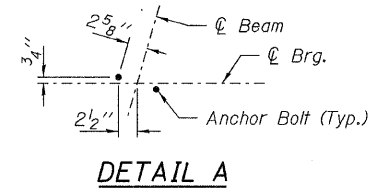
**PLAN**



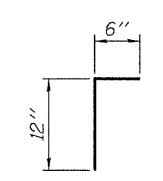
**SECTION A-A**



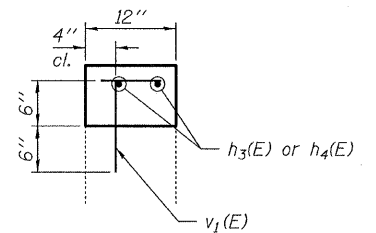
**SECTION B-B**



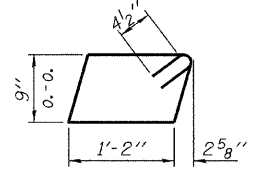
**DETAIL A**



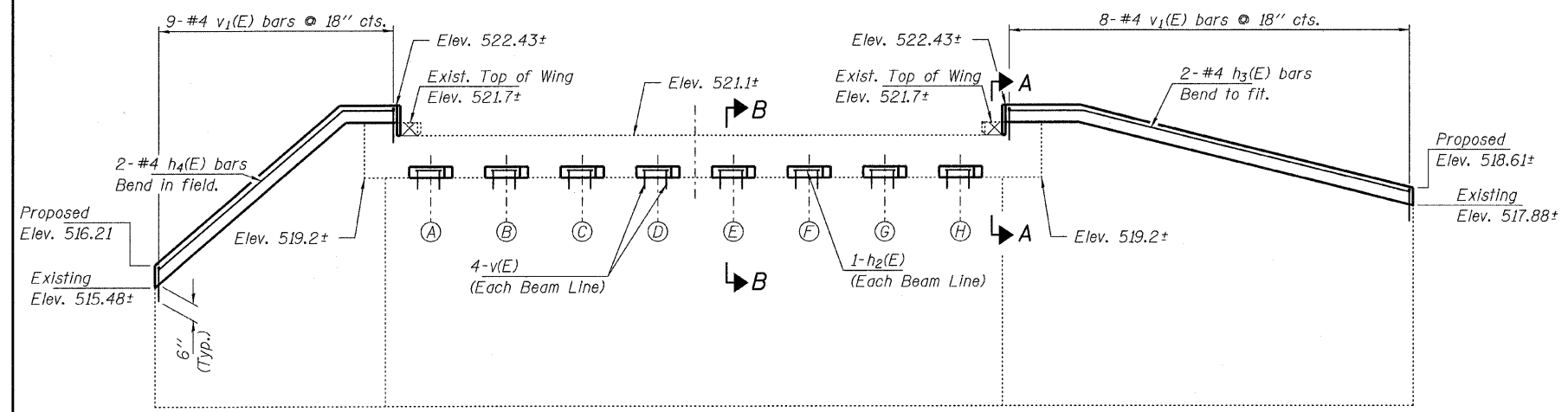
**BAR v1(E)**



**SECTION C-C**



**BAR h2(E)**



**ELEVATION**  
(Looking South)

**BEARING SEAT ELEVATIONS**

LINE	ELEVATION
A	519.83
B	519.90
C	519.97
D	520.03
E	520.03
F	519.97
G	519.90
H	519.83

**BILL OF MATERIAL - S. ABUT.**

BAR	NO.	SIZE	LENGTH	SHAPE	
h2(E)	8	#4	4'-8"	□	
h3(E)	2	#4	12'-8"	—	
h4(E)	2	#4	13'-7"	—	
v(E)	32	#4	10"	—	
v1(E)	17	#4	1'-6"	Γ	
Concrete Structures				Cu. Yd.	1.2
Reinforcement Bars, Epoxy Coated				Pound	90

Reinforcement bars designated (E) shall be epoxy coated.

**SOUTH ABUTMENT  
STRUCTURE NO. 005-3006**

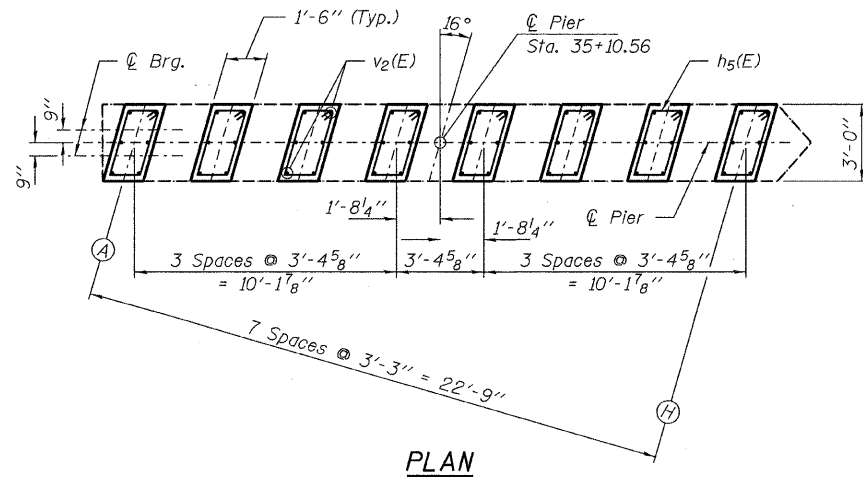
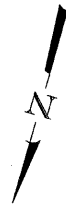
DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - S.W.M.

Hatched area indicates Concrete Removal. Cost included with Removal of Existing Concrete Deck.

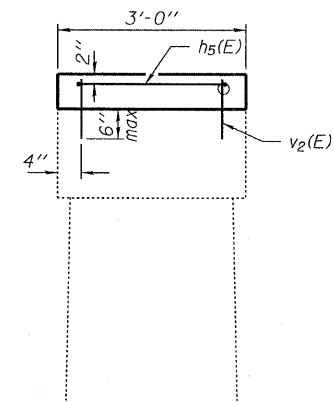
**HAMPTON, LENZINI & RENWICK, INC.**  
CIVIL & STRUCTURAL ENGINEERS  
LAND SURVEYORS  
3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
(217) 546-3400

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3A	05-00065-00-BR	BROWN	24	23
CONTRACT NO. 93509				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT ARA 1583(103)		

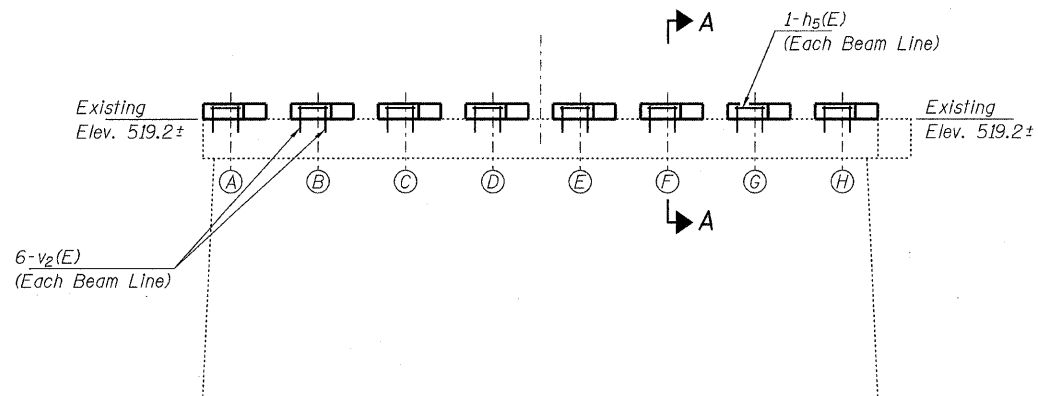
PROJECT NUMBER: 08.0204.130 DATE: 11/10/09



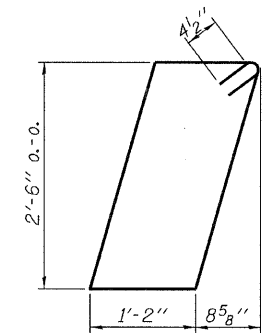
PLAN



SECTION A-A



ELEVATION  
(Looking South)



BARS  $h_5(E)$

BEARING SEAT  
ELEVATIONS

LINE	ELEVATION
A	519.72
B	519.79
C	519.86
D	519.93
E	519.93
F	519.86
G	519.79
H	519.72

BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
$h_5(E)$	8	#4	8'-3"	
$v_2(E)$	48	#4	1'-0"	
Concrete Structures			Cu. Yd.	0.9
Reinforcement Bars, Epoxy Coated			Pound	80

Reinforcement bars designated (E) shall be epoxy coated.

MIN. BAR LAPS  
#4 - 1'-8"

PIER  
STRUCTURE NO. 005-3006

DESIGNED - A.S.L.
CHECKED - S.W.M.
DRAWN - D.A.B.
CHECKED - S.W.M.

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 (217) 546-3400  
 PROJECT NUMBER: 08.0204.130 DATE: 11/19/09

C.H.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3A	05-00065-00-BR	BROWN	24	24
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT ARA 1583(103)	
CONTRACT NO. 93509				