

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
HIGHWAY BRIDGE PROGRAM
GRADE CROSSING PROTECTION FUND

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 505B	06-10118-00-BR	JEFFERSON	18	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 99325		

- INDEX OF SHEETS**
1. COVER SHEET
 2. SUMMARY OF QUANTITIES AND TYPICAL SECTIONS
 3. EROSION CONTROL PLAN
 4. PLAN AND PROFILE
 - 5.-10. STATION CROSS SECTIONS
 - 11.-17. BRIDGE PLANS
 18. BORINGS

HIGHWAY STANDARDS

- 000001-05 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERN
- 280001-04 TEMPORARY EROSION CONTROL
- 515001-02 NAME PLATE FOR BRIDGES
- 630301-04 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- 701901 TRAFFIC CONTROL DEVICES
- BLR 21-7 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
- BLR 27 TRAFFIC BARRIER TERMINAL 5A

UTILITIES

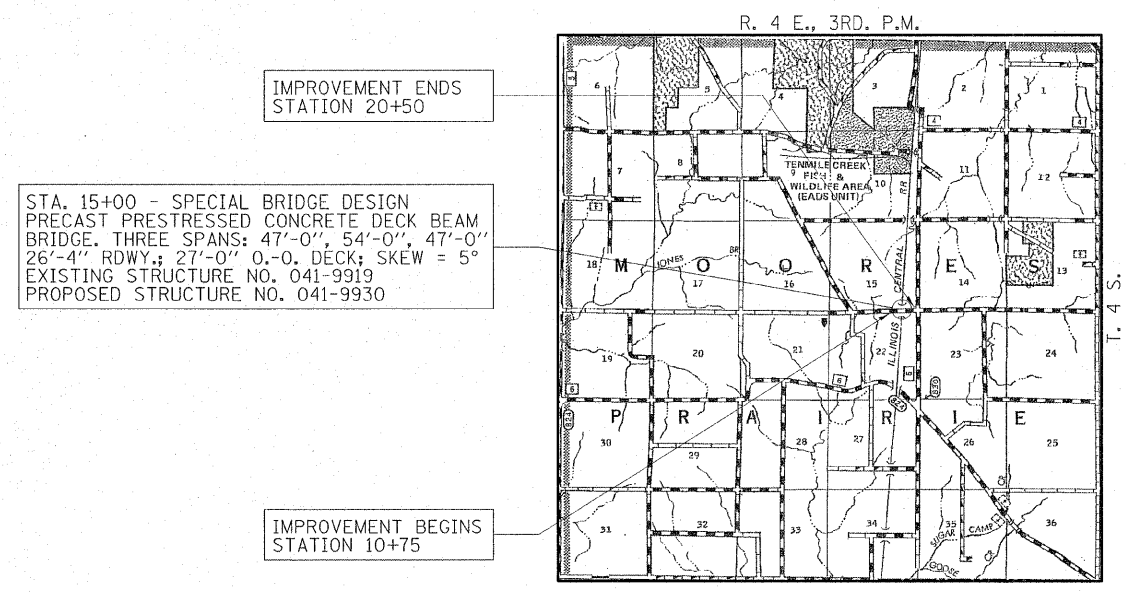
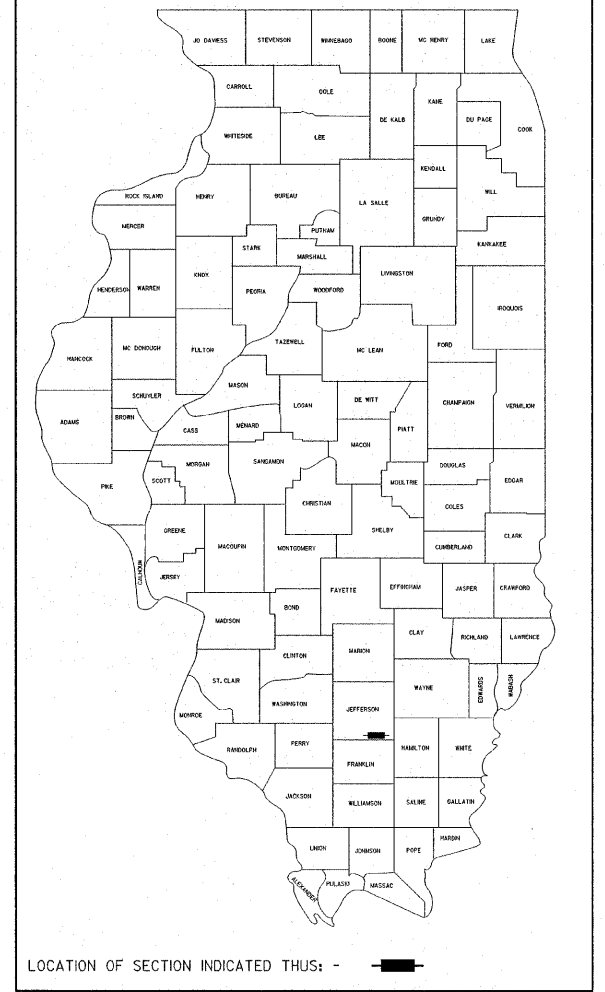
TRI-COUNTY ELECTRIC COOPERATIVE
P.O. BOX 309
3906 BROADWAY STREET
MOUNT VERNON, ILLINOIS 62864
ATTN: SUE ECHOLS
618-244-5151

- SCALES**
- PLAN 0" = 50'
 - PROFILE HORIZ. 0" = 50'
 - PROFILE VERT. 0" = 5'
 - CROSS SECTIONS 0" = 5'

DESIGN FUNCTIONAL CLASSIFICATION:
LOCAL ROAD (0-250 ADT)
DESIGN TRAFFIC: 30 ADT
DESIGN SPEED: 30 M.P.H.

CONTRACT NO. 99325

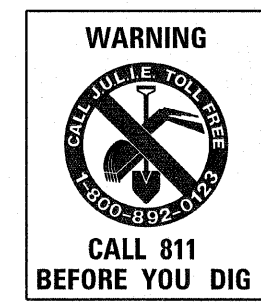
PROJECT BROS-081(55)
SECTION 06-10118-00-BR
MOORE'S PRAIRIE ROAD DISTRICT
JEFFERSON COUNTY
STRAZA RD. / T.R. 505B
OVER C.N. / I.C. RAILROAD AT M.P. 51.90
C-99-512-07



LAYOUT

APPROXIMATE SCALE: 0" = 1 MILE

NET LENGTH OF SECTION = 975 FEET = 0.185 MILES



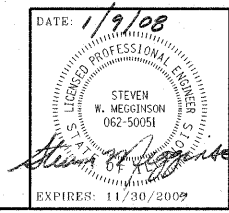
AGENCY RESPONSIBLE FOR LETTING

APPROVED 1-14 2008
Steve Schnake
COUNTY ENGINEER

APPROVED 1-14 2008
Suzanne E. Sisk
ROAD DISTRICT COMMISSIONER

PASSED Jan. 28 2008
Dennis W. Hill
DISTRICT NINE ENGINEER OF
LOCAL ROADS & STREETS

Releasing For
Bid Based on
Limited Review Jan 28 2008
Mr. Sami
DEPUTY DIRECTOR OF HIGHWAYS,
REGION FIVE ENGINEER
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



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

HLR

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

ELGIN • SPRINGFIELD

DATE: 1/9/08
EXPIRES: 11/30/2009

PROJECT NUMBER: 12-49-0008-1 DATE: 01/08/08

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 505B	06-10118-00-BR	JEFFERSON	18	2
FED. ROAD DIST. NO.	ILLINOIS CONTRACT NO. 99325			

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	QUANTITY
20100110	TREE REMOVAL (6-15 UNITS-DIAMETER)	UNIT	175
20200100	EARTH EXCAVATION	CU YD	175
20200200	ROCK EXCAVATION	CU YD	10.0
20400800	FURNISHED EXCAVATION	CU YD	5,145
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	1,000
25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	1.0
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	200
28000400	PERIMETER EROSION BARRIER	FOOT	2,000
28100807	STONE DUMPED RIPRAP, CLASS A4	TON	390
40200100	AGGREGATE SURFACE COURSE, TYPE A	TON	770
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	124
50300225	CONCRETE STRUCTURES	CU YD	147.0
50300280	CONCRETE ENCASEMENT	CU YD	2.8
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	3,996
50800105	REINFORCEMENT BARS	POUND	32,510
50900205	STEEL RAILING, TYPE S1	FOOT	305
51201400	FURNISHING STEEL PILES HP10X42	FOOT	176
51202305	DRIVING PILES	FOOT	176
51500100	NAME PLATES	EACH	1
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	35
* 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
* 63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4
> 67100100	MOBILIZATION	L SUM	1
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
> X0321781	MECHANICAL SPLICE	EACH	192
> Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1

SEE SPECIAL PROVISIONS
* SPECIALTY ITEMS

GENERAL NOTES

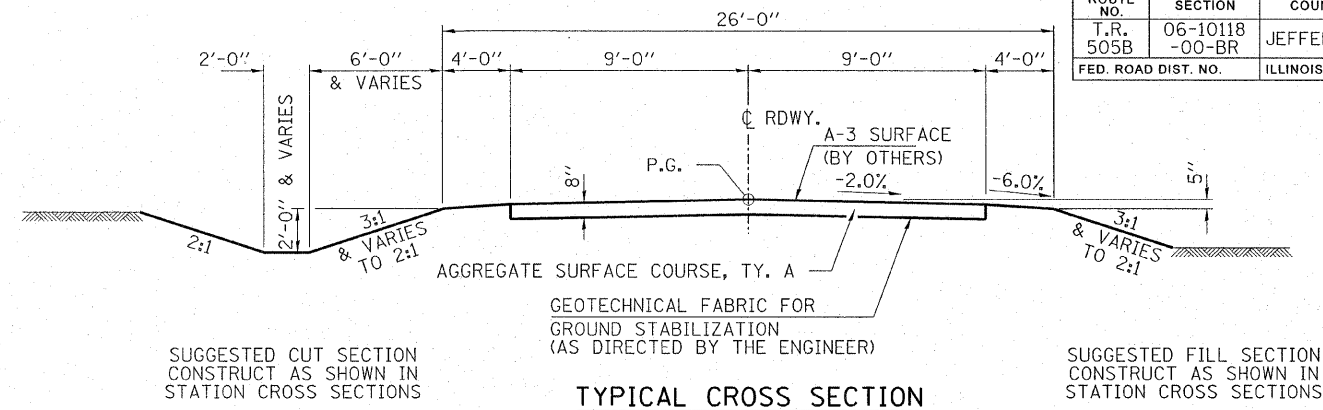
- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2007," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- ALL CLEARING AND GRUBBING AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN CONTRACT. THE REMOVAL OF THE EXISTING AGGREGATE BASE COURSE AND A-3 SURFACE WILL BE PAID FOR AS EARTH EXCAVATION. ALL BITUMINOUS MATERIAL SHALL BE PROPERLY DISPOSED OF AS APPROVED BY THE ENGINEER.
- THE LOCATIONS OF EXISTING 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.
- THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL SECTION OR SUBSECTION MONUMENTS UNTIL THE OWNER, HIS AGENT, PROFESSIONAL LAND SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- THE REVISION NUMBER INDICATED FOR THE STANDARDS LISTED IN THE INDEX OF SHEETS SHALL BE USED IN THE CONSTRUCTION OF THIS SECTION.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES

AGGREGATE BASE CSE.	2.05	TON/CU YD
RIPPAP SPECIAL	1.75	TON/CU YD
- THE AREA TO BE SEEDDED SHALL CONSIST OF ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. ESTIMATED QUANTITY: SEEDING, CLASS 2 (SPECIAL) = 1.0 ACRES
- TREES WITHIN THE RIGHT-OF-WAY WHICH INTERFERE WITH CONSTRUCTION SHALL BE REMOVED ONLY AT THE DIRECTION OF THE ENGINEER. ESTIMATED QUANTITY: TREE REMOVAL (6-15 UNITS) = 175 UNITS

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION (CU YD)	SHRINKAGE FACTOR	PERCENT USED	AVAILABLE EXCAVATION (CU YD)	EMBANKMENT REQUIRED (CU YD)	EARTHWORK BALANCE (CU YD)
STA. 10+75 TO STA. 14+25.25	29	25%	100%	22	1898	-1876
STA. 14+25.25 TO STA. 15+74.75	114	25%	100%	85	258	-172
STA. 15+74.75 TO STA. 20+50	31	25%	100%	24	3095	-3071
CHANNEL EXCAVATION ENTRANCES	(0)	25%	70%	-	25	-25
TOTAL	174			131	5274	-5145
USE:	175					5,145

* AVAILABLE EXCAVATION = EXC. x (1-SHRINKAGE FACTOR) x 1/2 USED (FURN. EXC.)

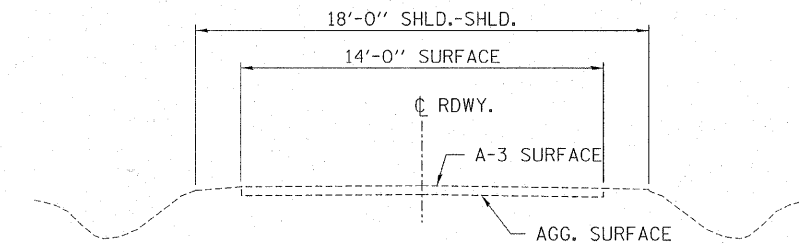


TYPICAL CROSS SECTION

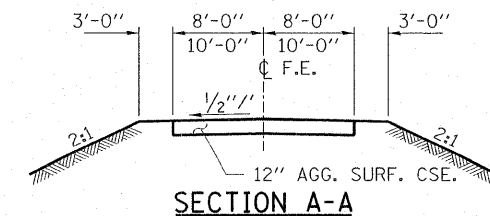
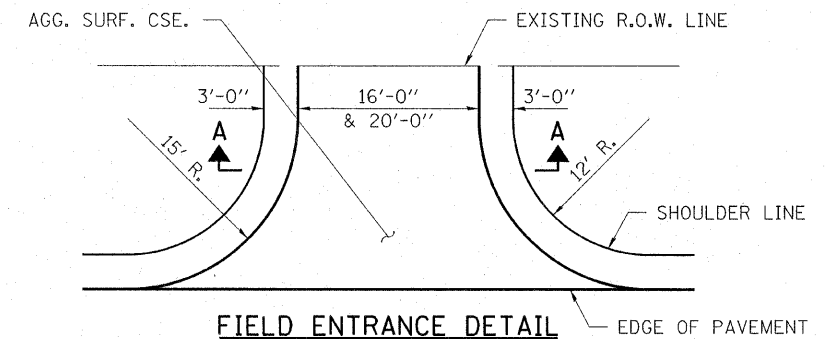
STA. 10+75 TO 20+50

TRANSITION FROM THE PROPOSED ROADWAY TO THE EXISTING ROADWAY IS TO BE CONSTRUCTED FROM STA. 10+75 TO 11+25 AND STA. 20+00 TO 20+50. SEE SHEET 11 FOR TRANSITION AT BRIDGE.

TREE REMOVAL (6-15 UNITS)	
LOCATION	UNIT
25' RT. STA. 12+91.1	5
25' RT. STA. 12+92.5	7
22' RT. STA. 13+89.6	6
24' RT. STA. 13+92.6	6
19' RT. STA. 13+97.4	5
29' RT. STA. 13+95.9	6
35' RT. STA. 14+03.0	6
26' RT. STA. 14+03.8	6
25' RT. STA. 14+09.5	6
30' RT. STA. 14+23.9	6
28' RT. STA. 14+28.8	6
28' RT. STA. 14+31.3	6
25' RT. STA. 14+31.6	10
25' RT. STA. 14+36.5	10
21' RT. STA. 14+47.2	5
19' RT. STA. 15+59.8	5
27' RT. STA. 15+53.0	8
28' RT. STA. 15+55.5	8
38' RT. STA. 15+40.4	18
37' RT. STA. 15+57.8	5
23' RT. STA. 16+51.4	5
23' RT. STA. 16+70.3	10
TOTAL	155
USE	175



EXISTING CROSS SECTION



HAMPTON, LENZINI & RENWICK, INC.
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 LAND SURVEYORS

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

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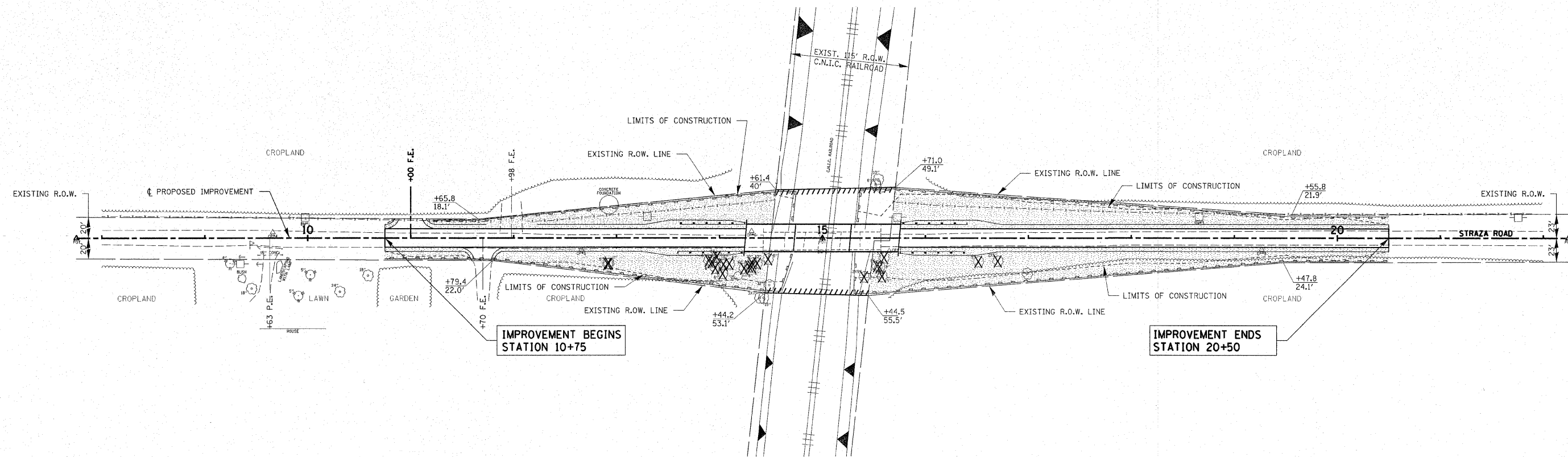
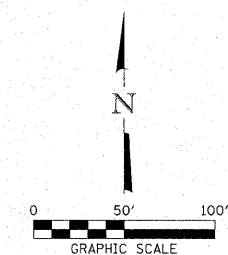
PROJECT NUMBER: 12-49-0008-1 DATE 01/08/08
 DESIGNED: J.W.F. CHECKED: S.W.M. DRAWN: D.T.M.

SUMMARY OF QUANTITIES AND GENERAL NOTES
 SECTION 06-10118-00-BR
 MOORES PRAIRIE ROAD DISTRICT
 JEFFERSON COUNTY

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 505B	06-10118-00-BR	JEFFERSON	18	3
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 99325		

EROSION CONTROL PLAN & STORMWATER POLLUTION PREVENTION PLAN

THIS PROJECT DISTURBS 1.6 ACRES OF TOTAL LAND AREA. COMPLIANCE WITH THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER PERMIT IS ONLY NECESSARY IF A PROJECT DISTURBS 1 OR MORE ACRES OF TOTAL LAND AREA; AN NPDES STORMWATER PERMIT WILL BE REQUIRED FOR THIS PROJECT.



GENERAL NOTES FOR SOIL EROSION CONTROL

- SOIL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF UPLAND DISTURBANCE. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY OR PERMANENT MEASURES.
- THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL ALSO TAKE SPECIAL NOTE TO THE CONTRACT SPECIAL PROVISION "EROSION CONTROL PLAN". ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER. ALL MEASURES SHALL BE IN PLACE WITHIN 4 DAYS OF DISTURBANCE.
- ALL TEMPORARY EROSION CONTROL MEASURES MUST BE MAINTAINED AND IMMEDIATELY REPLACED AS NEEDED AND AS DIRECTED BY THE ENGINEER. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL INSPECTION AND REPAIR. THE CONTRACTOR SHALL INSPECT AND COMPLETE MAINTENANCE OF ALL ITEMS A MINIMUM OF EVERY 7 DAYS AND WITHIN 24 HOURS OF A ONE-HALF INCH RAINFALL. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SEEDING IS ACHIEVED.
- PERIMETER EROSION BARRIER SHALL BE INSTALLED AT LOCATIONS SPECIFIED IN THE PLANS AT 5 FEET OUTSIDE THE TOE OF SLOPE OR INSIDE THE RIGHT-OF-WAY WHICHEVER IS CLOSER TO THE CENTERLINE, OR AS DIRECTED BY THE ENGINEER PRIOR TO THE START OF ANY EARTHWORK, CULVERT, OR STORM SEWER CONSTRUCTION. STAKES SHALL BE PLACED AT A MINIMUM OF 5 FOOT INTERVALS. SEE STD. 280001.
- THE PERIMETER EROSION BARRIER SHALL BE REMOVED WITHIN 30 DAYS AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED WITH VEGETATION. AFTER THE PERIMETER EROSION BARRIER IS REMOVED, ALL AREAS DAMAGED BY THE FENCE INSTALLATION SHALL BE RESTORED BY THE CONTRACTOR.
- THE FENCE INSTALLATION, MAINTENANCE, REMOVAL AND THE RESTORATION OF THE AREA DISTURBED BY THE FENCE INSTALLATION IS INCLUDED IN COST OF THE PAY ITEM PERIMETER EROSION BARRIER.
- TEMPORARY DITCH CHECKS SHALL BE CONSTRUCTED AS PER CONTRACT SPECIAL PROVISIONS ON 100 FEET CENTERS AS SHOWN HEREON OR AS DIRECTED BY THE ENGINEER. THE DITCH CHECKS SHALL BE INSTALLED IMMEDIATELY AS GRADING PROGRESSES THROUGH THE PROJECT. THE PAY ITEM FOR TEMPORARY DITCH CHECK SHALL INCLUDE THE COST OF INSTALLATION, MAINTENANCE AND REMOVAL. ONLY AGGREGATE DITCH CHECKS SHALL BE USED. SEE STD. 28001.
- REMOVAL OF TRAPPED SEDIMENT SHALL BE PAID FOR AS EARTH EXCAVATION. SEDIMENT SHALL BE REMOVED WHEN SILTATION REACHES 50% CAPACITY OF STRUCTURE. SEE APPLICABLE STANDARDS, SPECIFICATIONS, AND CONTRACT SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL CLEAN UP AND GRADE THE WORK AREA AS THE PROJECT PROGRESSES TO ELIMINATE THE CONCENTRATION OF RUNOFF. THE PAVEMENT SHALL BE CLEANED DAILY TO REMOVE EARTH MATERIAL TO THE SATISFACTION OF THE ENGINEER.
- THE CONTRACTOR SHALL CONTACT THE COUNTY HIGHWAY DEPARTMENT AS SOON AS INITIAL EROSION CONTROL PRACTICES ARE INSTALLED.
- TEMPORARY SEEDING SHALL BE COMPLETED ACCORDING TO THE ITEM TEMPORARY EROSION CONTROL SEEDING ON ALL AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH CONSTRUCTION WILL BE STOPPED FOR A PERIOD OF MORE THAN 15 WORKING DAYS.
- THE COST OF ALL REQUIRED TEMPORARY SEEDING SHALL BE PAID FOR AS PER THE ITEM TEMPORARY EROSION CONTROL SEEDING.
- ALL DISTURBED AREAS SHALL BE SEEDS AS DIRECTED BY THE ENGINEER. FINAL SEEDING SHALL CONFORM TO SEEDING CLASS 2 (SPECIAL) AS PER IDOT STANDARD SPECIFICATIONS AND CONTRACT SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL MAINTAIN AND PRESERVE ANY EXISTING SUB SURFACE DRAINAGE SYSTEMS (i.e. FIELD TILES) ACCORDING TO SECTION 611 OF THE IDOT STANDARD SPECIFICATIONS.

- LEGEND**
- PERIMETER EROSION BARRIER
 - TEMPORARY DITCH CHECKS
 - SEEDING, CLASS 2 SPECIAL

SEEDING, CLASS 2 SPECIAL

THE AREA TO BE SEEDS SHALL CONSIST OF ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. EST. QUANTITY = 1.0 ACRES

TEMPORARY EROSION CONTROL SEEDING

2 APPLICATIONS 100LB/ACRE EST. QUANTITY = 200 POUNDS

PERIMETER EROSION BARRIER

LT. STA. 10+75 TO 14+60 = 500 FT
 RT. STA. 10+75 TO 14+50 = 500 FT
 LT. STA. 15+60 TO 20+50 = 500 FT
 RT. STA. 15+50 TO 20+50 = 500 FT
 TOTAL = 2000 FT

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

HLR

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

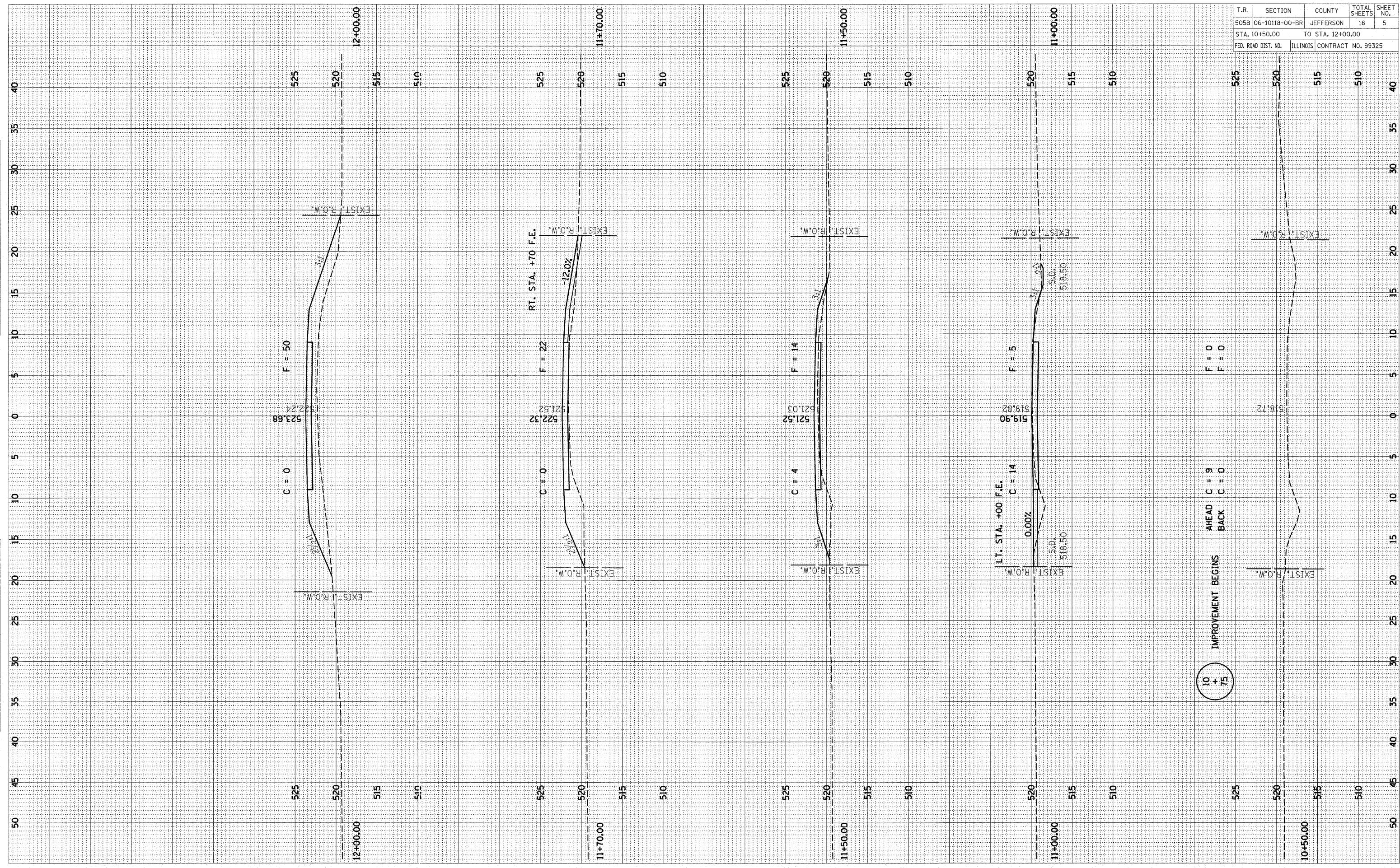
ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-49-0008-1 DATE: 01/08/08
 DESIGNED: J.W.F. CHECKED: S.W.M. DRAWN: D.T.M.

EROSION CONTROL PLAN
SECTION 06-10118-00-BR
MOORES PRAIRIE ROAD DISTRICT
JEFFERSON COUNTY

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

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



T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505B	06-10118-00-BR	JEFFERSON	18	5
STA. 10+50.00		TO STA. 12+00.00		
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 99325		

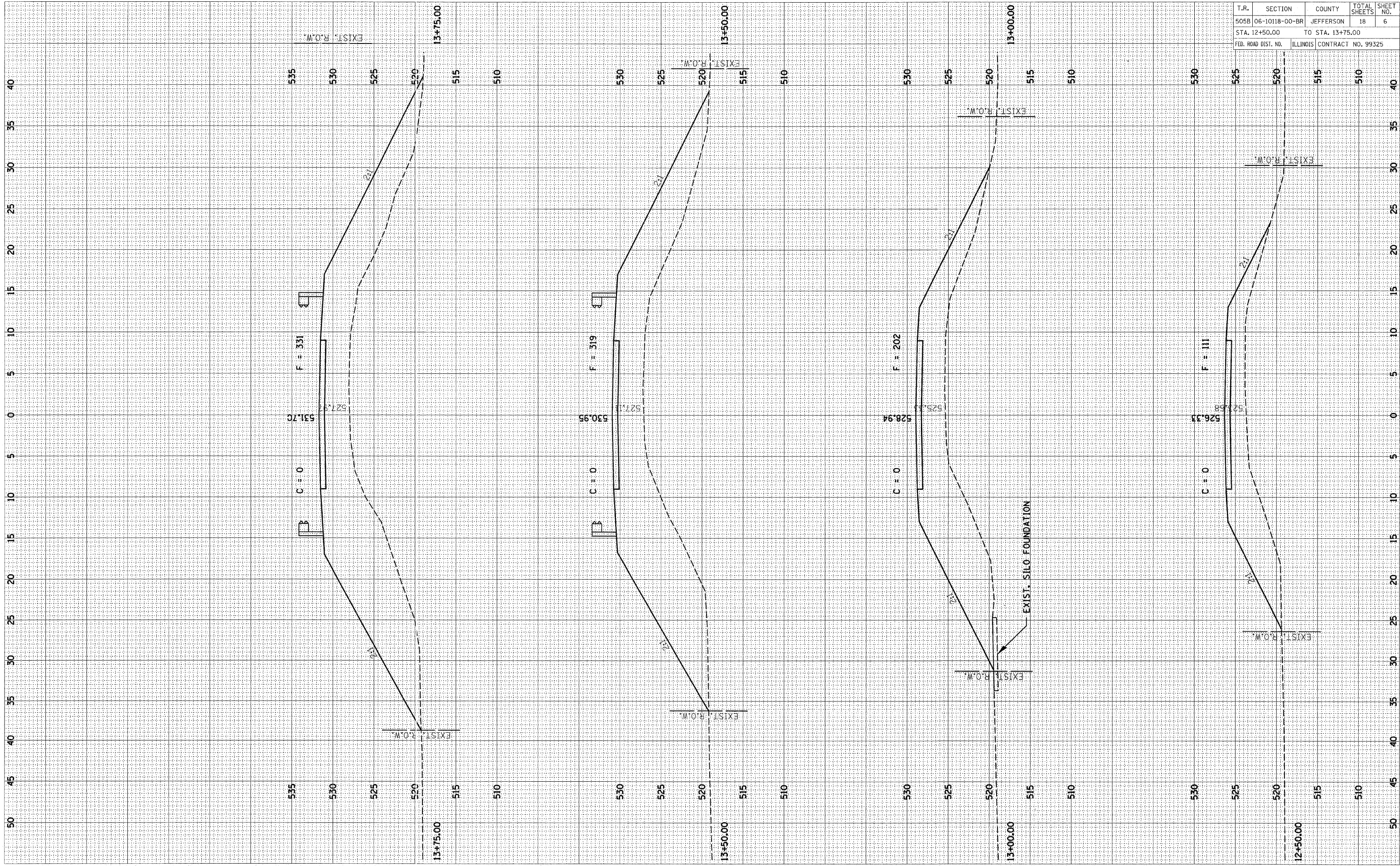
10 + 75

IMPROVEMENT BEGINS
 AHEAD C = 9
 BACK C = 0

T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505B	06-10118-00-BR	JEFFERSON	18	6
STA. 12+50.00		TO STA. 13+75.00		
FED. ROAD DIST. NO.	ILLINOIS CONTRACT NO. 99325			

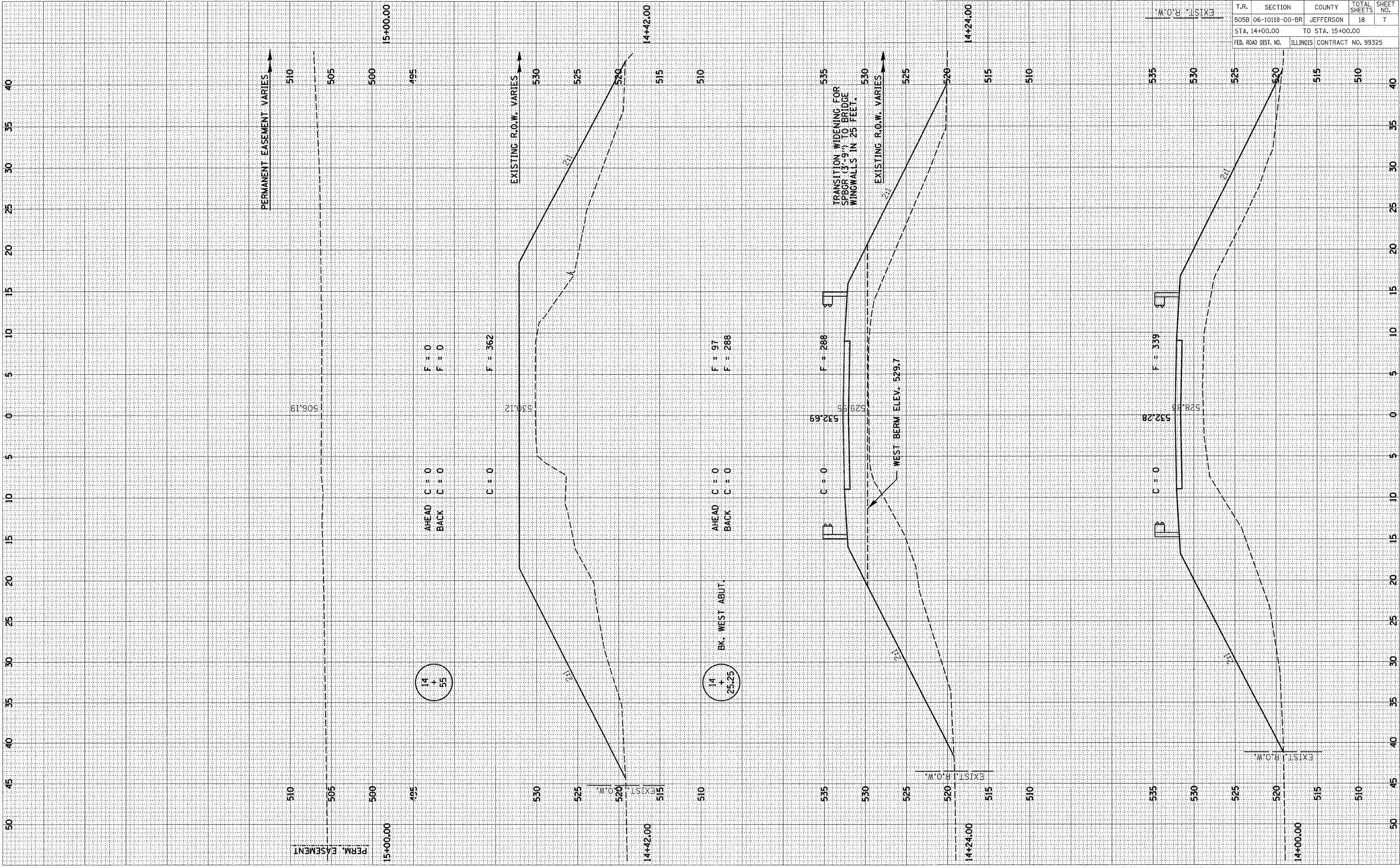
FINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
NO.	

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



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

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

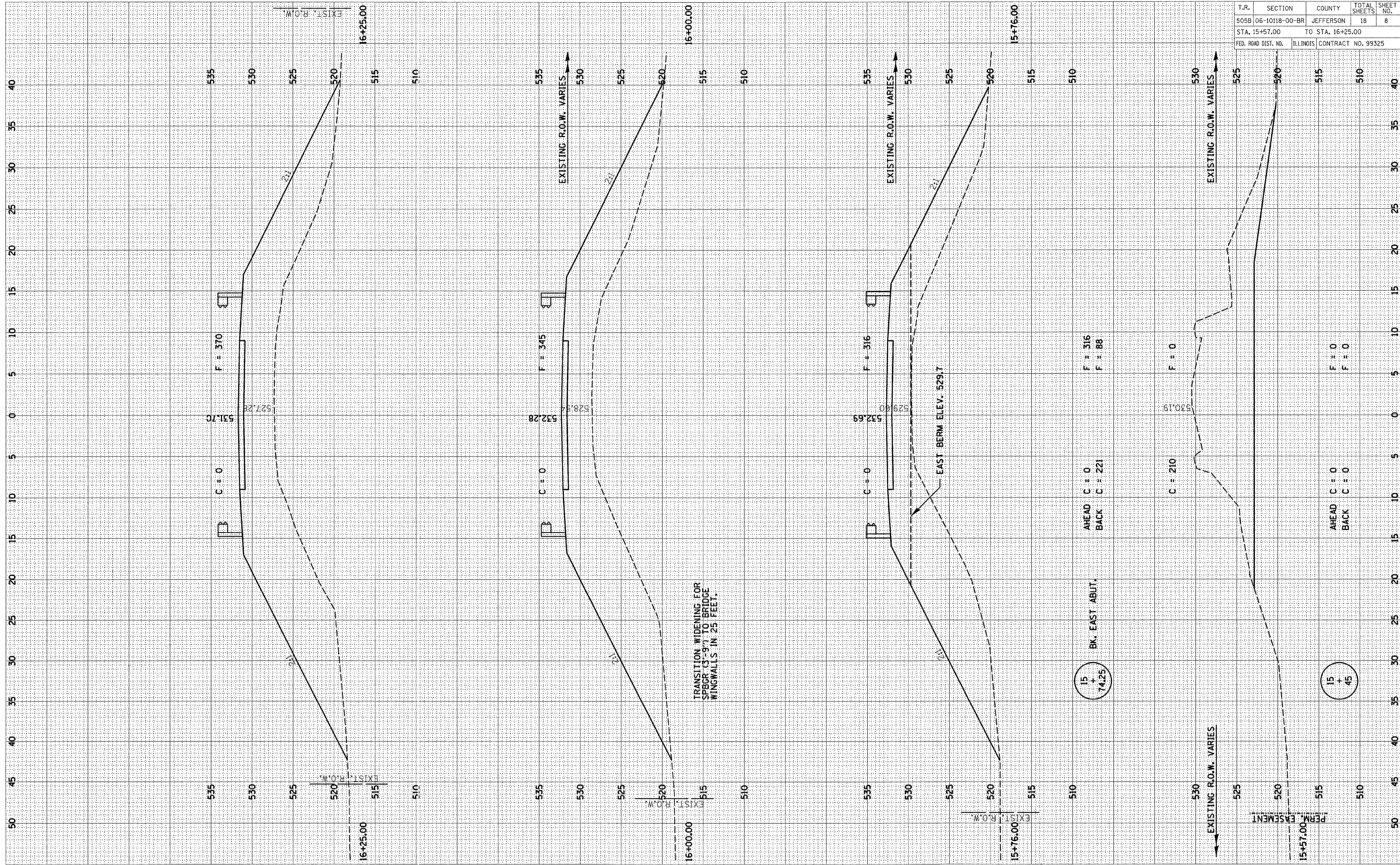


T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505B	06-10118-00-BR	JEFFERSON	18	7
STA. 14+00.00		TO STA. 15+00.00		
FED. ROAD DIST. NO.	ILLINOIS CONTRACT NO. 99325			

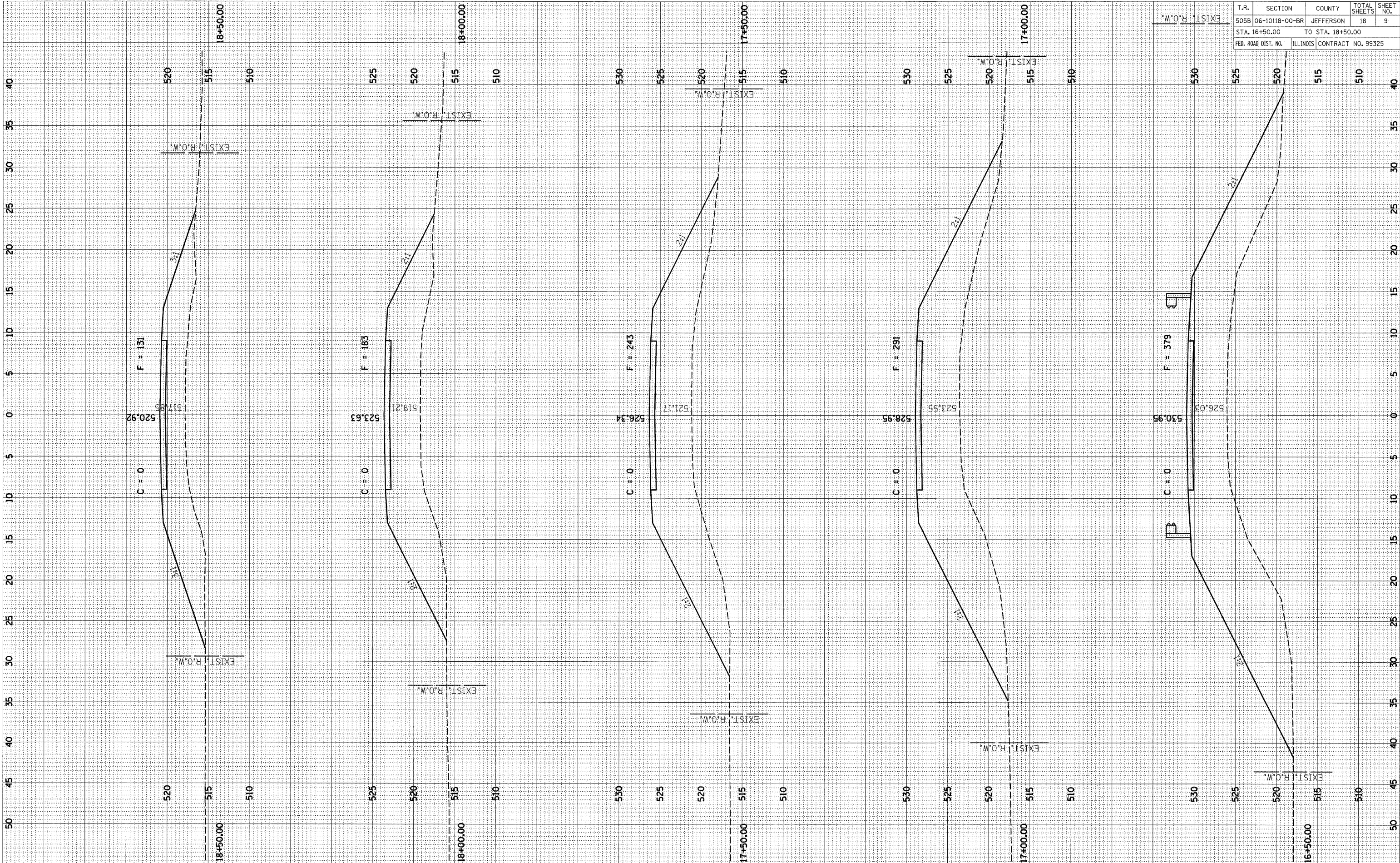
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505B	06-10118-00-BR	JEFFERSON	18	8
STA. 15+57.00		TO STA. 16+25.00		
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 99325		

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

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



T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505B	06-10118-00-BR	JEFFERSON	18	9
STA. 16+50.00		TO STA. 18+50.00		
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 99325		

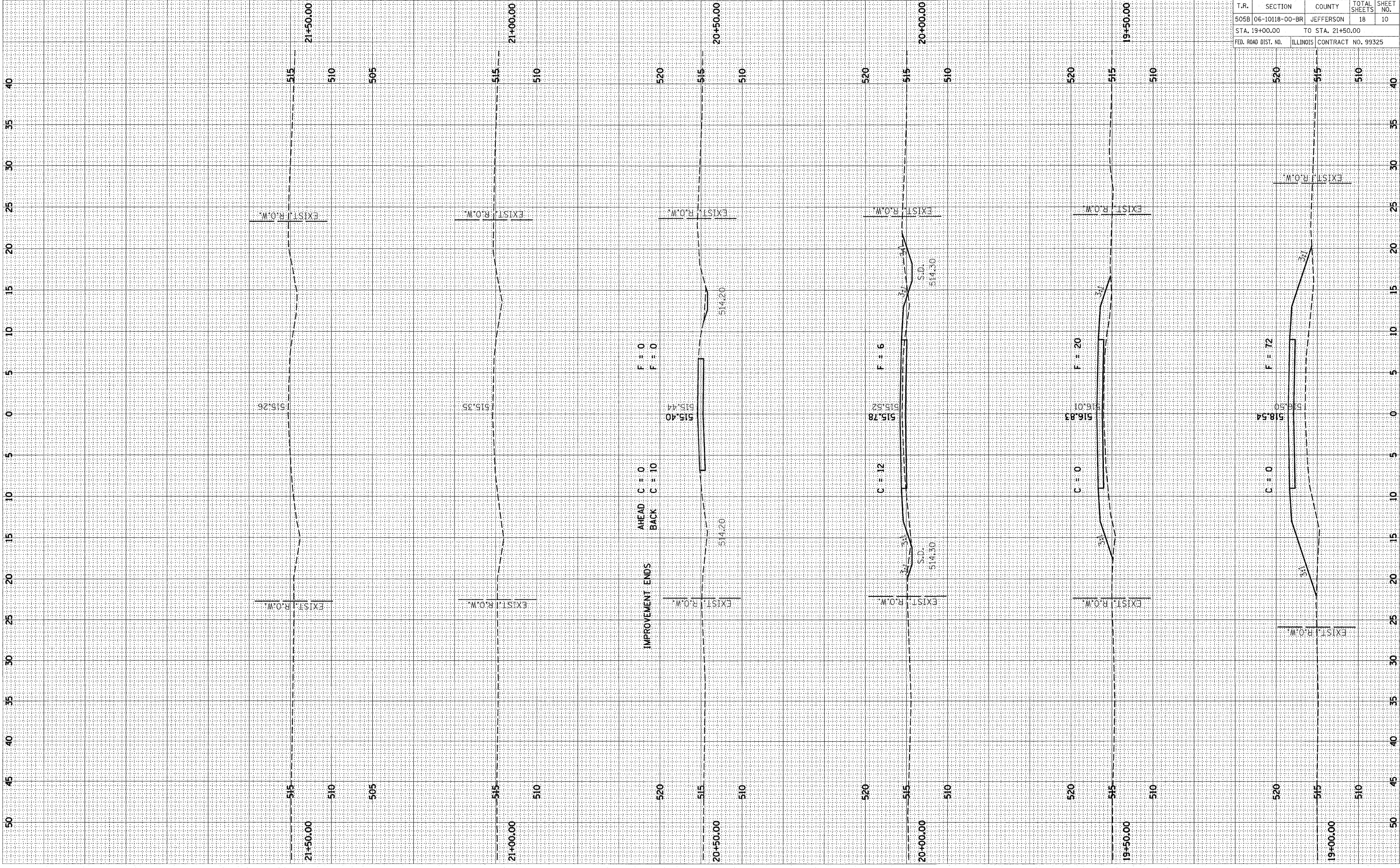


FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS CHECKED		

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

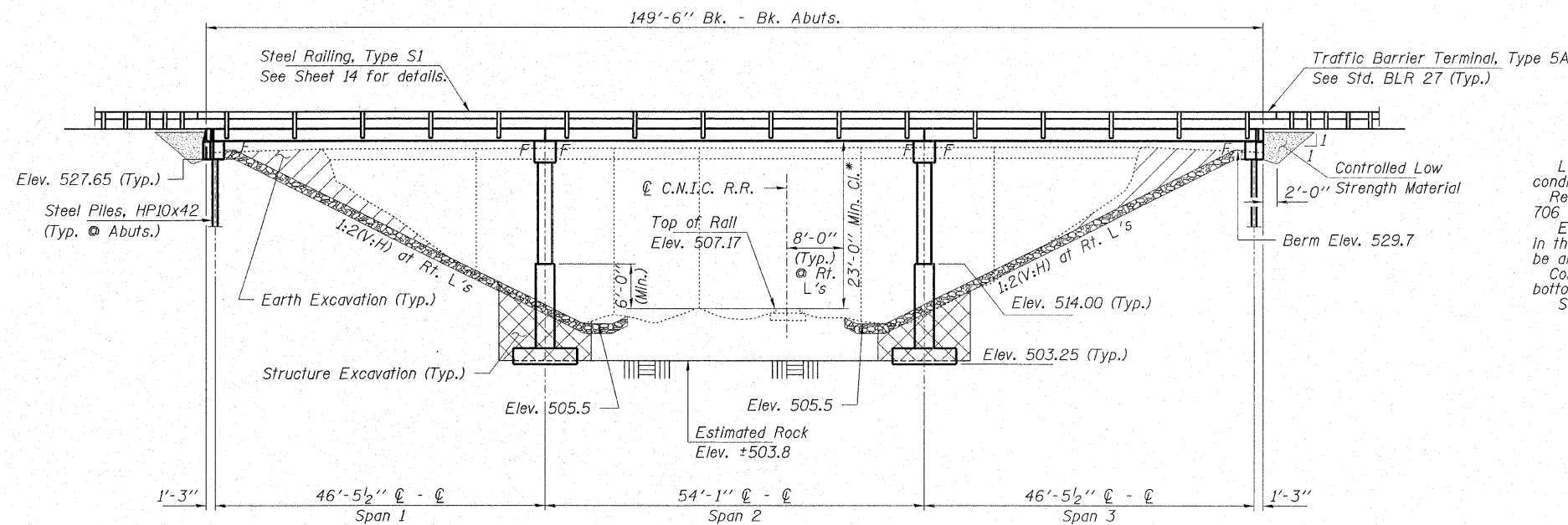
BY _____ DATE _____
 SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 NO. _____
 AREAS CHECKED _____

BY _____ DATE _____
 SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 NO. _____
 AREAS CHECKED _____



T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
505B	06-10118-00-BR	JEFFERSON	18	10
STA. 19+00.00		TO STA. 21+50.00		
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 99325		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 505B	06-10118-00-BR	JEFFERSON	18	11
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 99325	



GENERAL NOTES

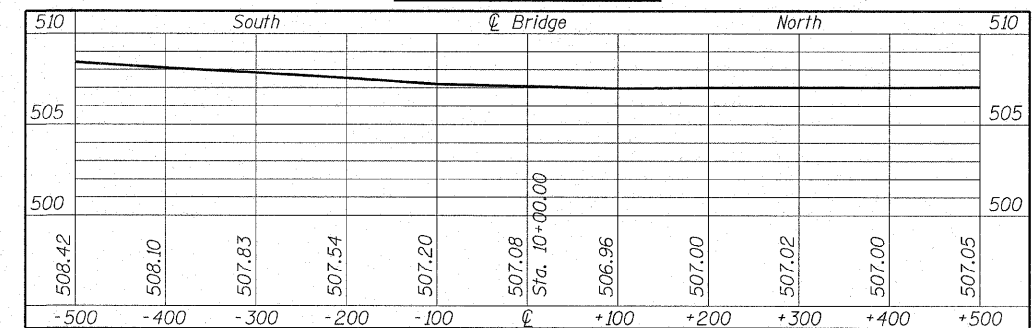
Layout of riprap may be varied in the field to suit ground conditions as directed by the Engineer.
 Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
 Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.
 Contractor shall provide 1 1/2 : 1 maximum excavated slope from bottom of the pier footing to the existing ground surface.
 See Sheet 18 for Borings.

C.N.I.C. RAILROAD
 BUILT 200_ BY
 JEFFERSON COUNTY
 SEC. 06-10118-00-BR
 STR. NO. 041-9930
 LOADING HS 20

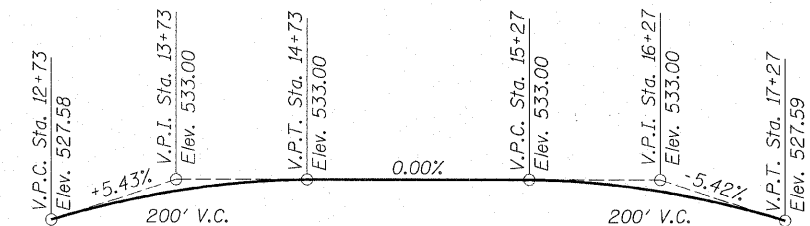
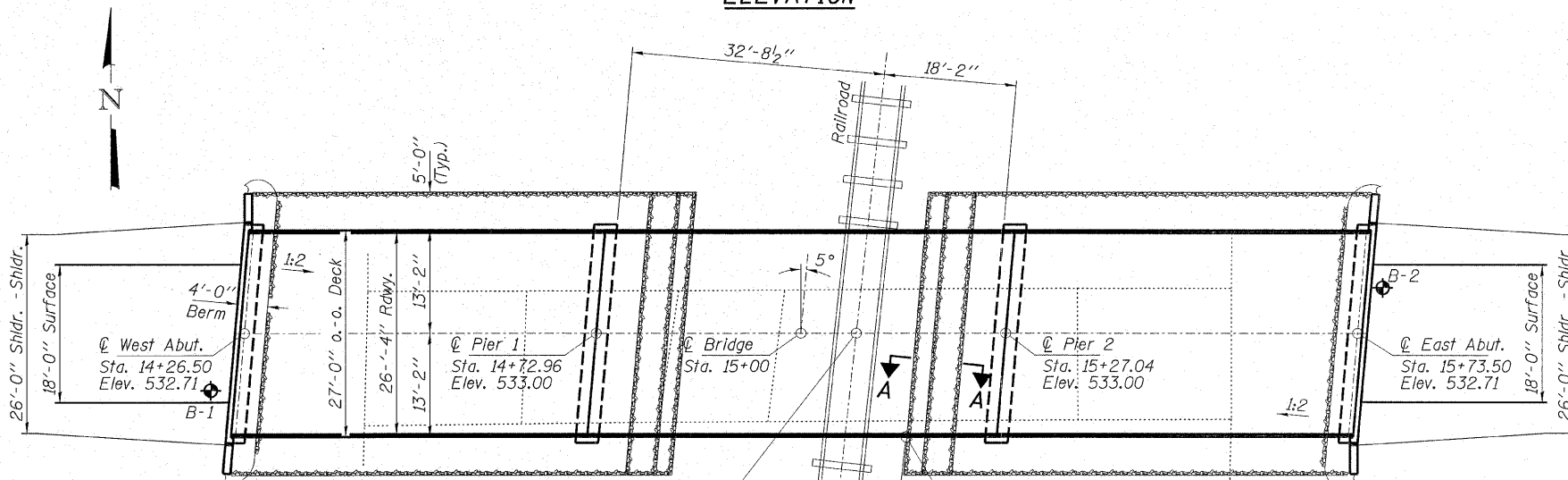
NAME PLATE

See Std. 515001
 See Sheet 15 for location.

HIGH RAIL PROFILE



ELEVATION



PROFILE GRADE

DESIGN SPECIFICATIONS

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
 fy = 60,000 psi (Reinf.)

PRECAST PRESTRESSED UNITS

SPAN 1 & 3 BEAMS

f'c = 5,000 psi
 f'ci = 4,000 psi

SPAN 2 BEAMS

f'c = 6,000 psi
 f'ci = 5,000 psi

f's = 270,000 psi (1/2 "φ low lax. strands)
 f'si = 201,960 psi (1/2 "φ low lax. strands)

fy = 60,000 psi (Reinf.)

LOADING HS 20-44

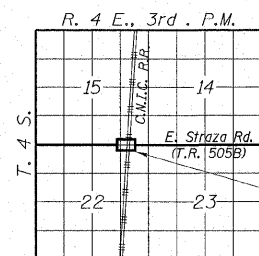
Allow 25#/Sq. Ft. for future wearing surface.

SEISMIC DATA

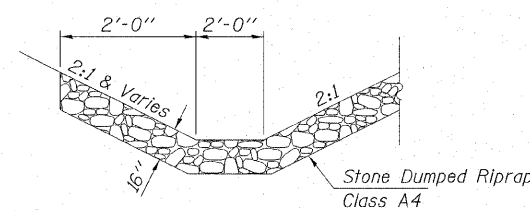
Seismic Performance Category (SPC) = B
 Bedrock Acceleration Coefficient (A) = 0.10g
 Site Coefficient (S) = 1.0

Sta. 15+07.30 (T.R. 505B)
 Sta. 100+00 (C.N.I.C. R.R.)
 M.P. 51.9

PLAN



LOCATION SKETCH



SECTION A-A

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 Specifications for Highway Bridges".

Steven W. Magnuson 1/9/08
 ILLINOIS STRUCTURAL NO. 081-6064



Expires 11-30-08

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Rock Excavation	Cu. Yd.		10.0	10.0
Stone Dumped Riprap, Class A4	Ton			390
Structure Excavation	Cu. Yd.		124	124
Concrete Structures	Cu. Yd.		147.0	147.0
Concrete Encasement	Cu. Yd.		2.8	2.8
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	3,996		3,996
Reinforcement Bars	Pound		32,510	32,510
Steel Railing, Type S1	Foot	305		305
Steel Piles HP10x42	Foot		176	176
Name Plates	Each		1	1
Controlled Low-Strength Material	Cu. Yd.		35	35
Mechanical Splice	Each		192	192

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 CIVIL & STRUCTURAL ENGINEERS
 LAND SURVEYORS
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

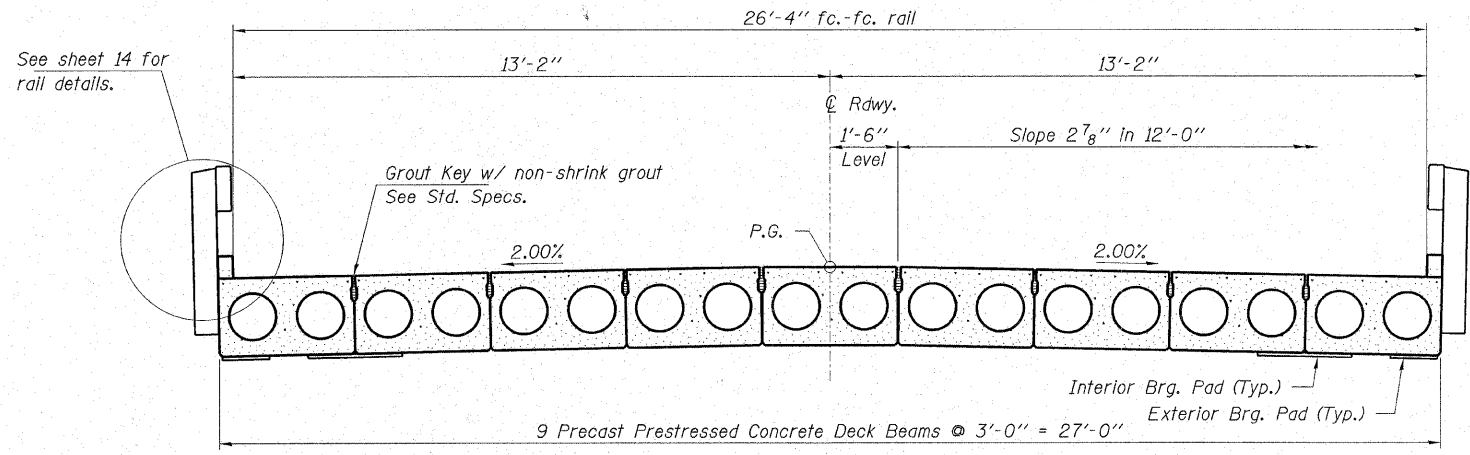
HLR
 ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-49-0008-1 DATE: 01/08/08
 DESIGNED: R.J.P. CHECKED: M.D.C. DRAWN: D.T.M.

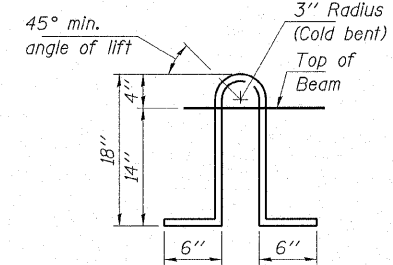
GENERAL PLAN AND ELEVATION

T.R. 505B OVER C.N.I.C. RAILROAD
 SECTION 06-10118-00-BR
 MOORES PRAIRIE ROAD DISTRICT
 JEFFERSON COUNTY
 STRUCTURE NO. 041-9930 / STATION 15+00

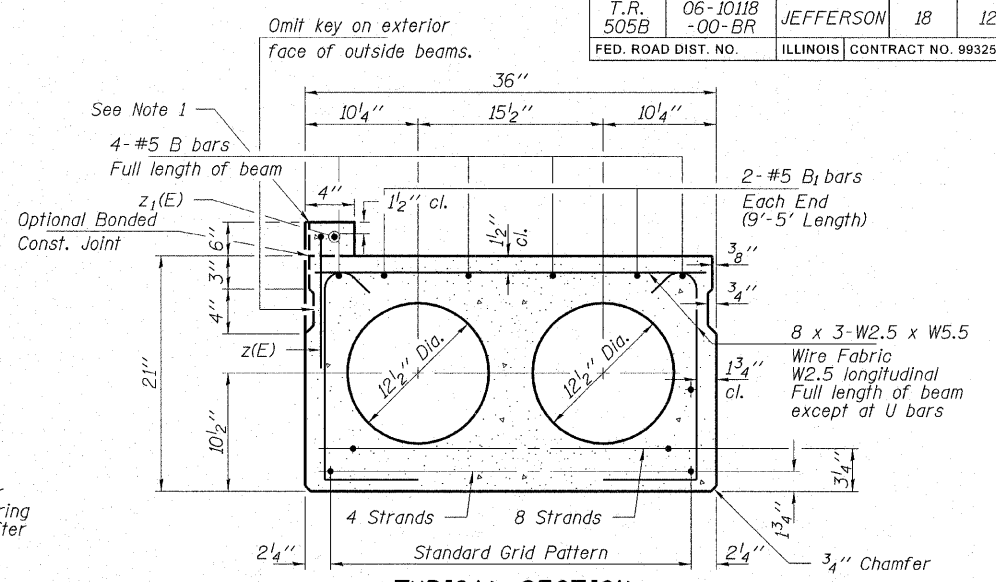
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 505B	06-10118-00-BR	JEFFERSON	18	12
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 99325	



CROSS SECTION

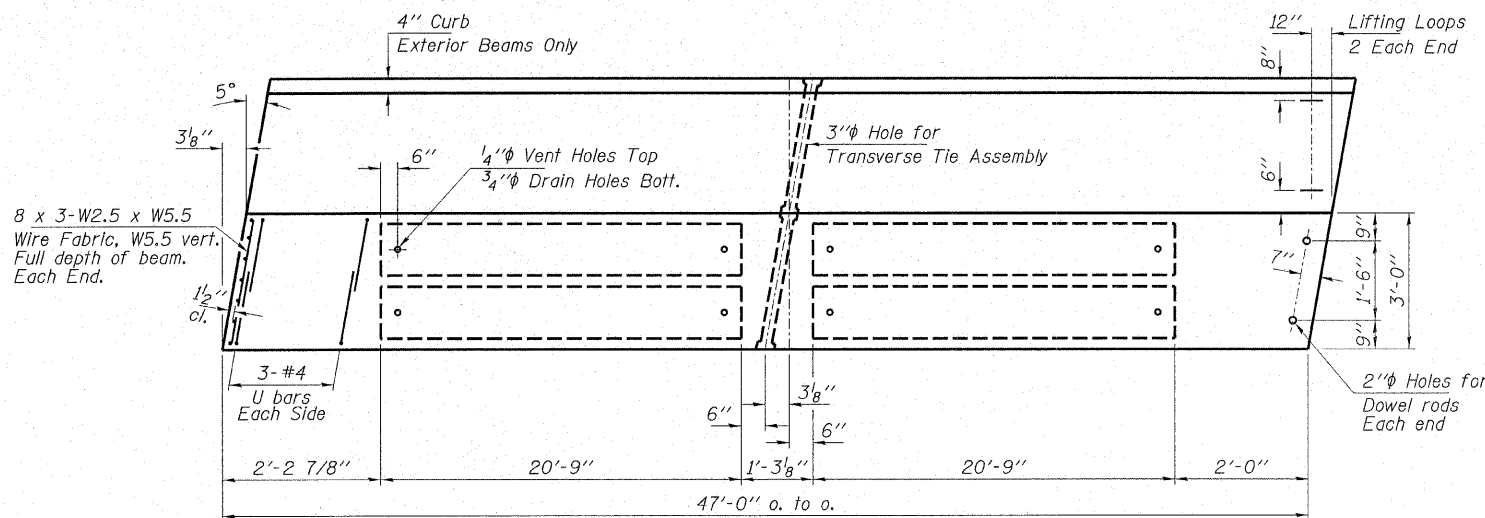


LIFTING LOOP DETAIL
Approved alternate may be substituted for the above detail.

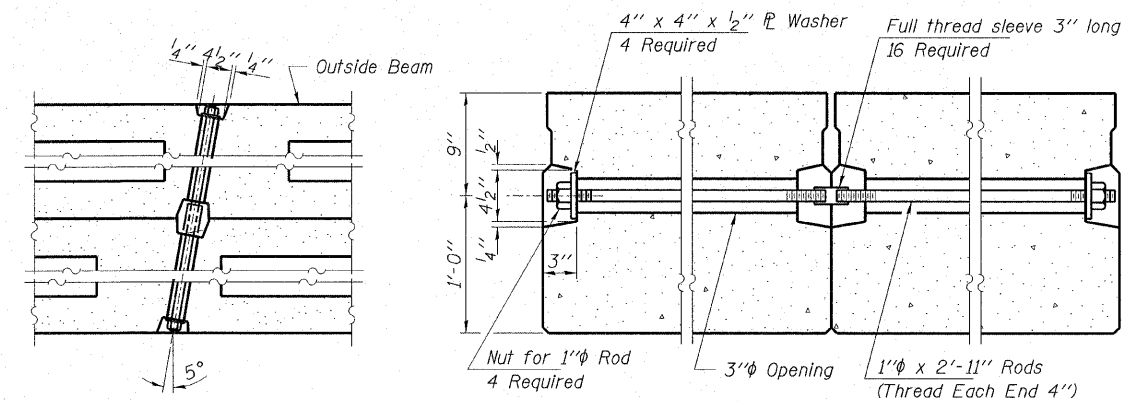


TYPICAL SECTION

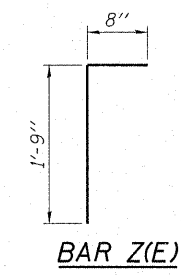
12-1/2" Dia. Strands, Each Strand Stressed to 30,900 Lbs.
4-Strands 1 3/4" up, 8-Strands 3 1/4" up
Expected Camber = 1"



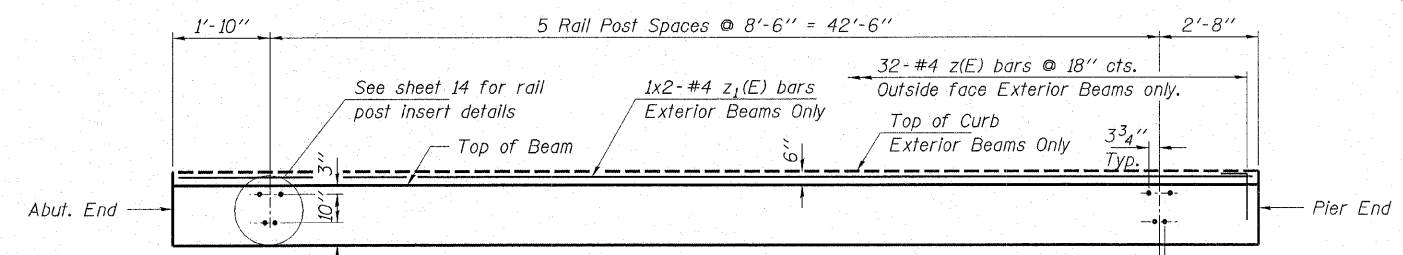
PLAN



TYPICAL TRANSVERSE TIE ASSEMBLY



BAR Z(E)

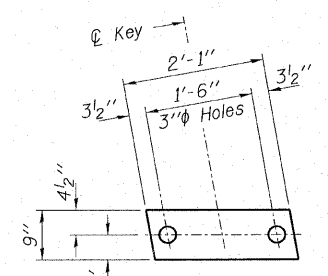


ELEVATION OF OUTSIDE BEAMS

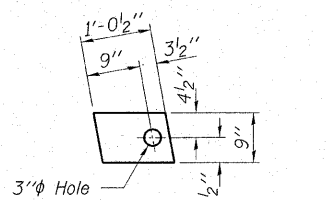
Showing Rail Post Spacing

BAR	NO.	SIZE	LENGTH	SHAPE
z(E)	128	#4	2'-5"	[Diagram]
z1(E)	8	#4	24'-0"	[Diagram]

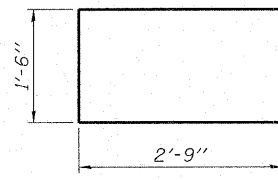
For information only.
Cost included in deck beams.



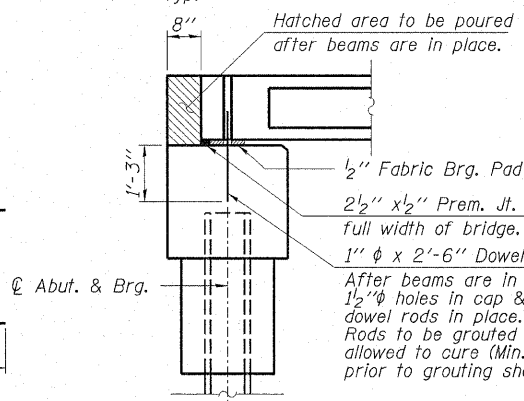
FABRIC BEARING PAD
(Interior - 32 Req'd)



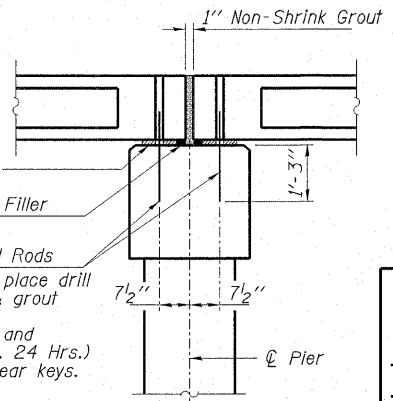
FABRIC BEARING PAD
(Exterior - 8 Req'd)



BAR U



SECTION AT ABUTMENTS



SECTION AT PIERS

NOTES

The exterior beams shall be cast with a 4" wide x 6" high concrete curb with reinforcement cast integrally with the beam. The z(E) and z1(E) bars shall be included in the unit cost for deck beams. 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. Lifting loops shall be 2-1/2" dia. 270 ksi strands, as shown.

The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 3/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.

Required Release Strength, f'ci, shall be 4,000 p.s.i.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	2,538

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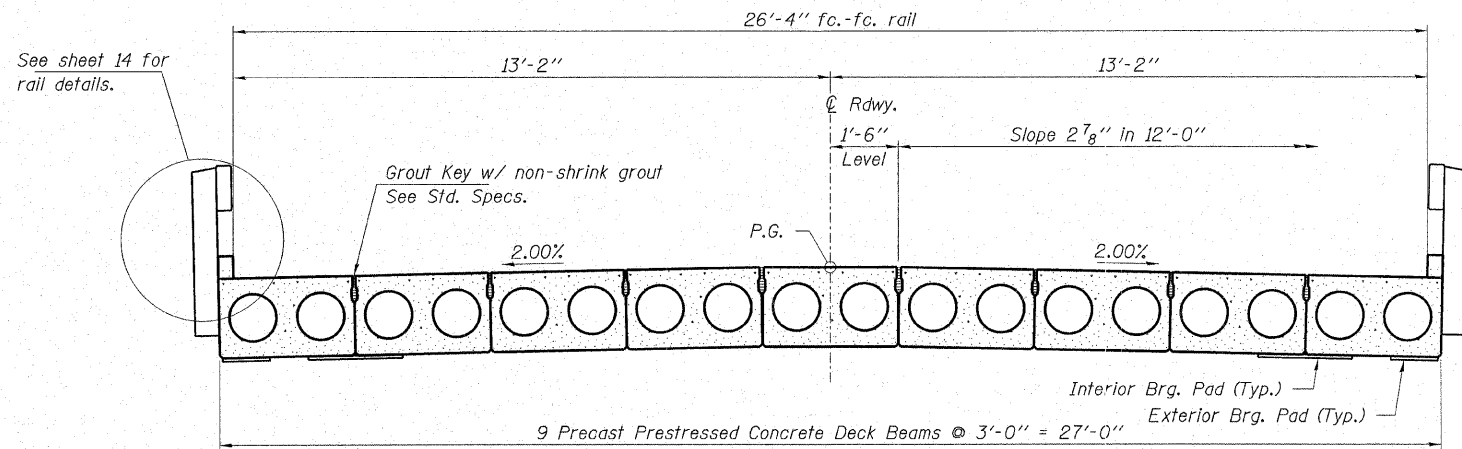
ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-49-0008-1 DATE: 01/08/08
DESIGNED: R.J.P. CHECKED: M.D.C. DRAWN: D.T.M.

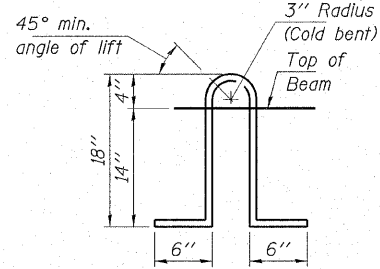
SUPERSTRUCTURE - SPANS 1 & 3

T.R. 505B OVER C.N./I.C. RAILROAD
SECTION 06-10118-00-BR
MOORES PRAIRIE ROAD DISTRICT
JEFFERSON COUNTY
STRUCTURE NO. 041-9930 / STATION 15+00

ROUTE NO. T.R. 505B	SECTION 06-10118 -00-BR	COUNTY JEFFERSON	TOTAL SHEETS 18	SHEET NO. 13
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 99325	



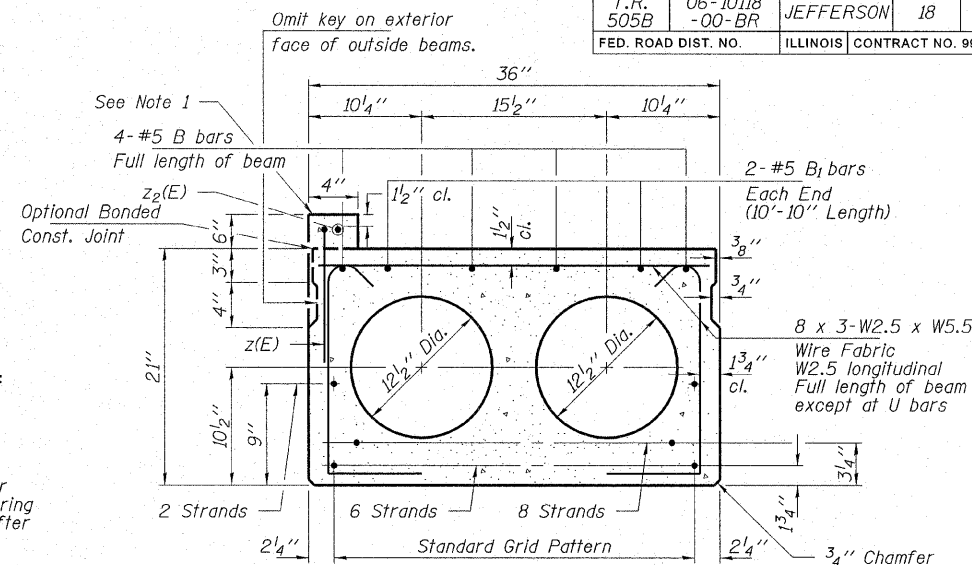
CROSS SECTION



LIFTING LOOP DETAIL

Approved alternate may be substituted for the above detail.

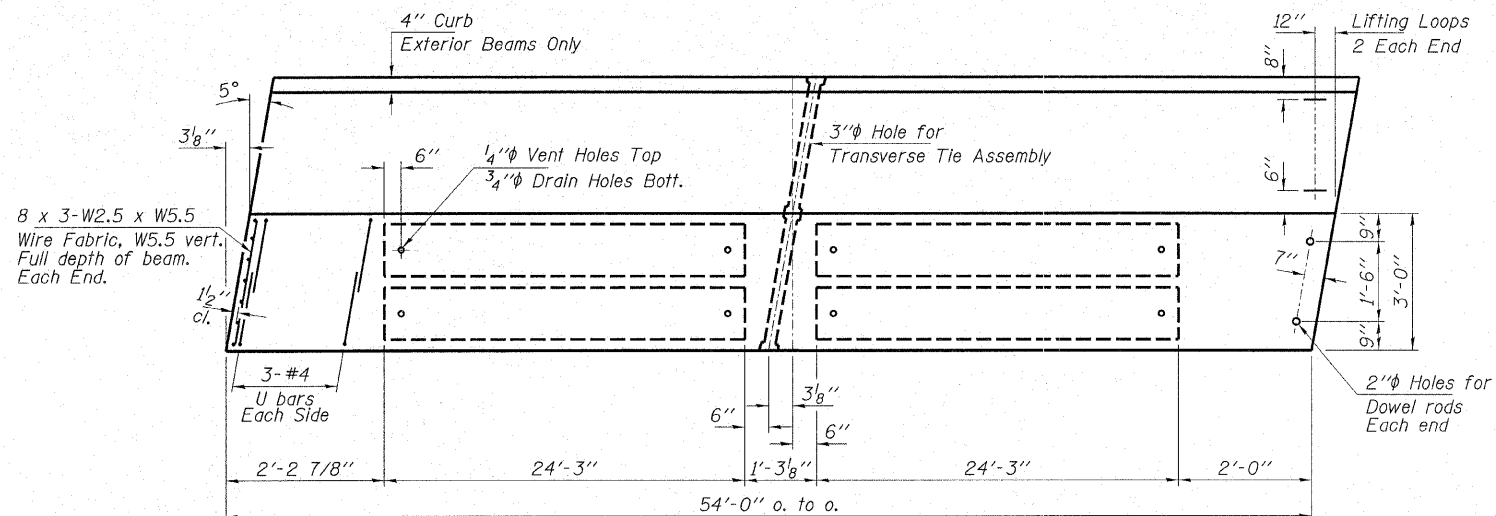
Note:
The loop shall be formed in a manner such that all strands are engaged during lifting. Loops shall be burned off after the beams have been erected.



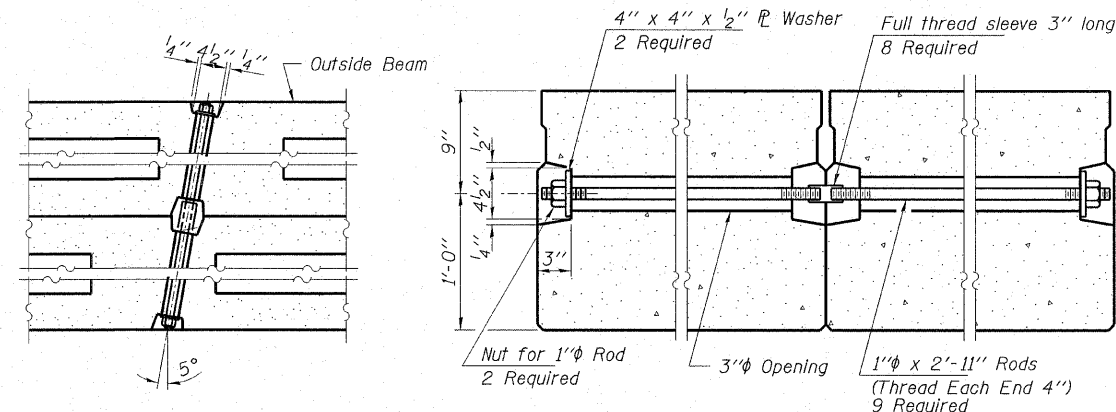
TYPICAL SECTION

16-1/2" Strands, Each Strand Stressed to 30,900 Lbs.
6-Strands 1 3/4" up, 8-Strands 3/4" up, 2-Strands 9" up
Expected Camber = 1/2"

Note: Place strands symmetrically about C of beam.



PLAN



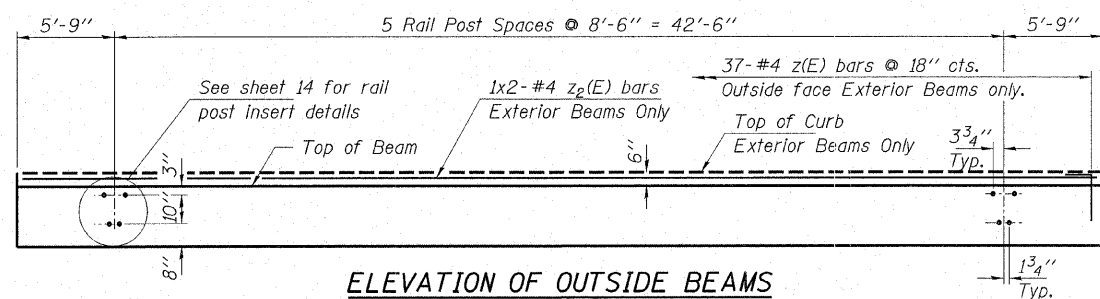
TYPICAL TRANSVERSE TIE ASSEMBLY

NOTES

The exterior beams shall be cast with a 4" wide x 6" high concrete curb with reinforcement cast integrally with the beam. The z(E) and z2(E) bars shall be included in the unit cost for deck beams. 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. Lifting loops shall be 2-1/2" 270 ksi strands, as shown. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 3/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key. Required Release Strength, f'ci, shall be 5,000 p.s.i.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,458

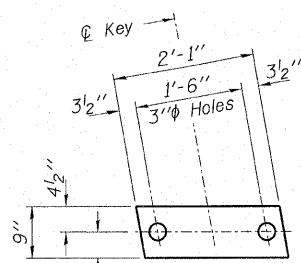


ELEVATION OF OUTSIDE BEAMS

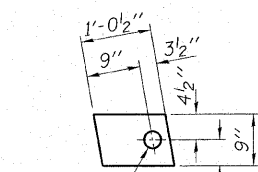
Showing Rail Post Spacing

BAR	NO.	SIZE	LENGTH	SHAPE
z(E)	74	#4	2'-5"	—
z2(E)	4	#4	27'-6"	—

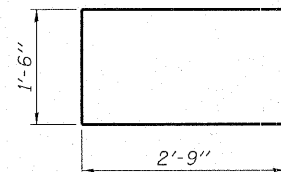
For information only.
Cost included in deck beams.



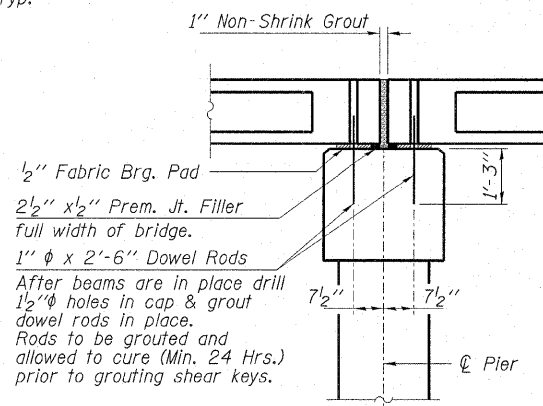
FABRIC BEARING PAD
(Interior - 16 Req'd)



FABRIC BEARING PAD
(Exterior - 4 Req'd)



BAR U



SECTION AT PIERS

@ Rt. L's

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

HLR

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SPRINGFIELD, ILLINOIS 62703
(217) 546-3400

ELGIN • SPRINGFIELD

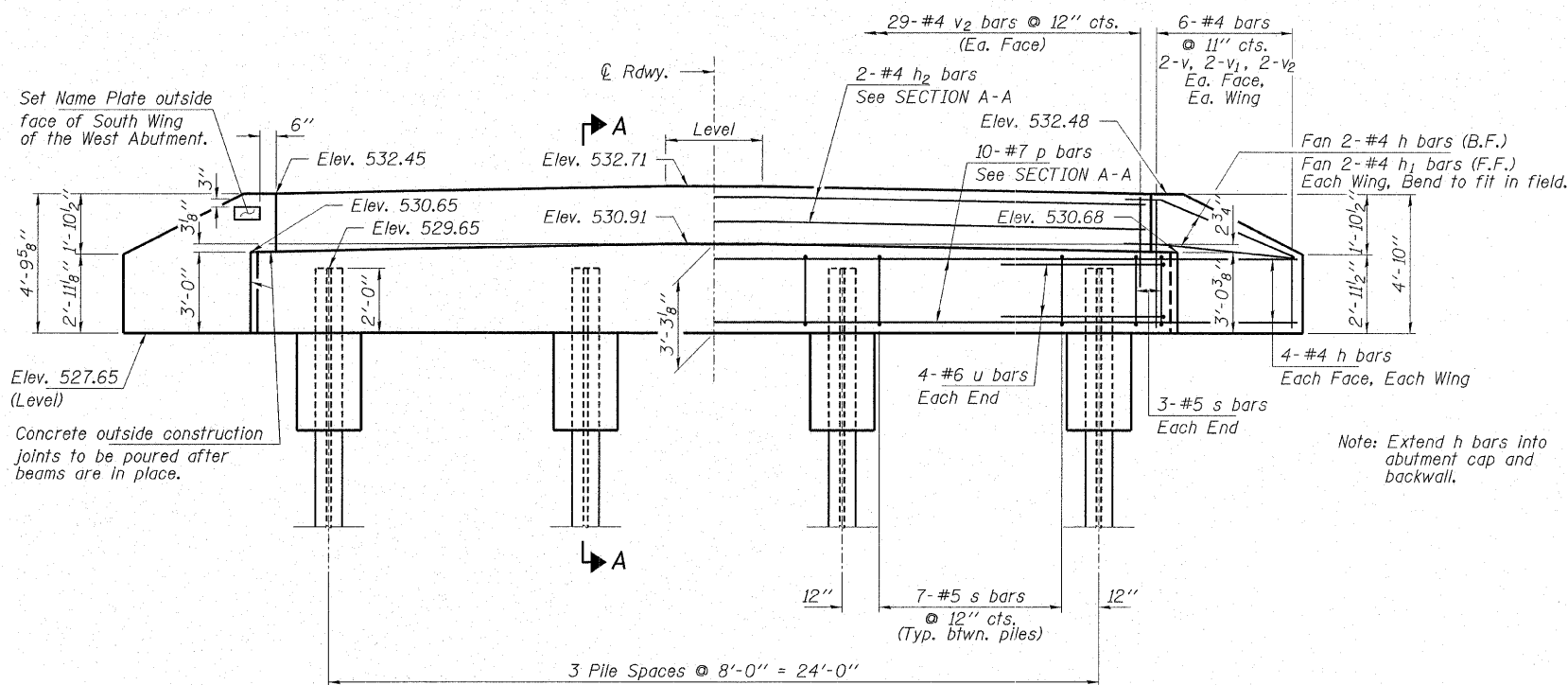
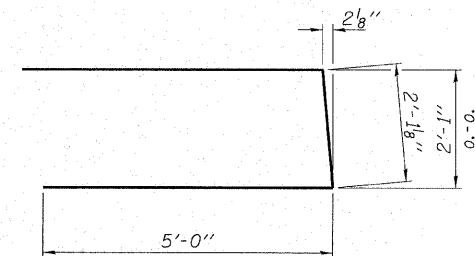
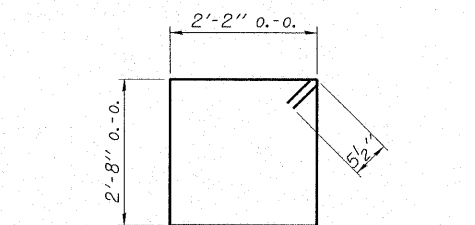
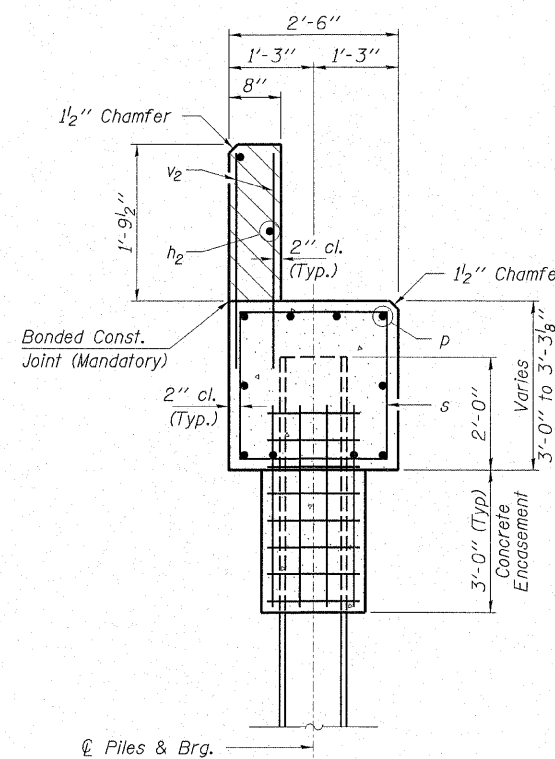
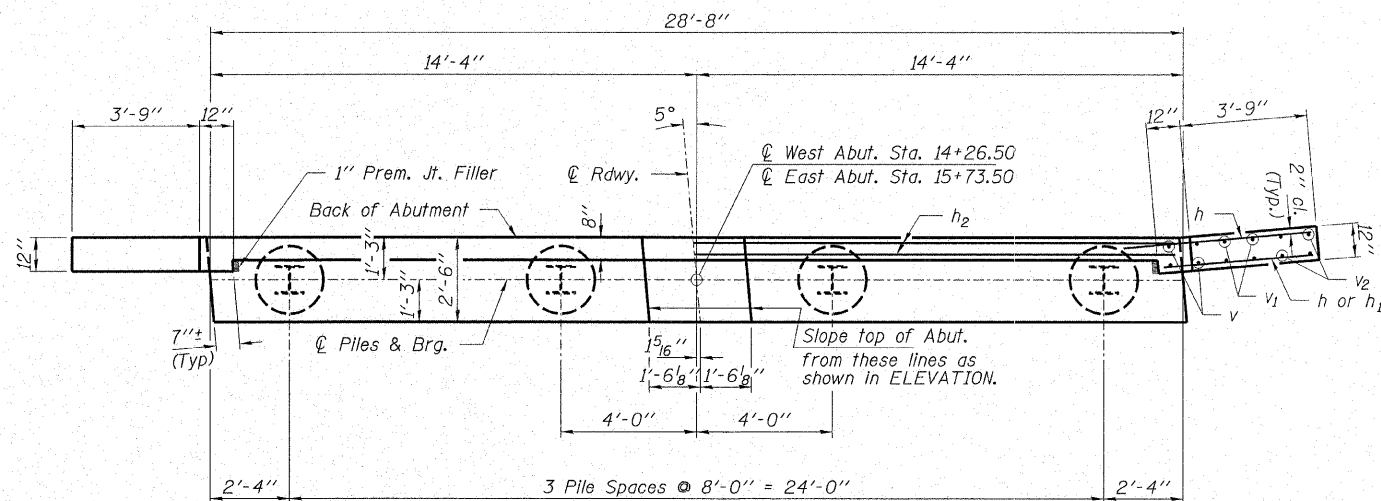
PROJECT NUMBER: 12-49-0008-1 DATE: 01/08/08
DESIGNED: R.J.P. CHECKED: M.D.C. DRAWN: D.T.M.

SUPERSTRUCTURE - SPAN 2

T.R. 505B OVER C.N./I.C. RAILROAD
SECTION 06-10118-00-BR
MOORES PRAIRIE ROAD DISTRICT
JEFFERSON COUNTY

STRUCTURE NO. 041-9930 / STATION 15+00

ROUTE NO. T.R. 505B	SECTION 06-10118 -00-BR	COUNTY JEFFERSON	TOTAL SHEETS 18	SHEET NO. 15
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 99325	



PILE DATA

Type: Steel HP10x42
 No. Req'd. (2 Abutments): 8
 Allowable Resistance Available: 112 Kips/Pile
 Nominal Req'd Bearing: 336 Kips/Pile
 Est. Length: 22 Ft/Pile

Notes: The Steel H-Piles shall be according to AASHTO M270 Grade 50.
 See Sheet 17 for pile and pile encasement details.

BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h	40	#4	6'-0"	—
h ₁	8	#4	4'-6"	—
h ₂	4	#4	28'-4"	—
p	20	#7	28'-4"	—
s	54	#5	10'-7"	□
u	16	#6	12'-2"	—
v	16	#4	4'-6"	—
v ₁	16	#4	3'-7"	—
v ₂	132	#4	2'-8"	—
Concrete Structures			Cu. Yd.	21.8
Concrete Encasement			Cu. Yd.	2.8
Reinforcement Bars			Pound	2,630
Steel Piles HP10x42			Foot	176
Name Plates			Each	1

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 (217) 546-3400

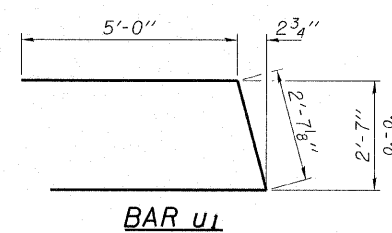
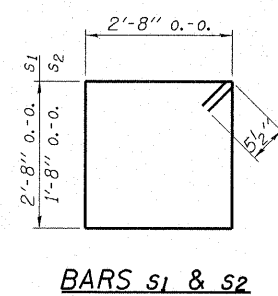
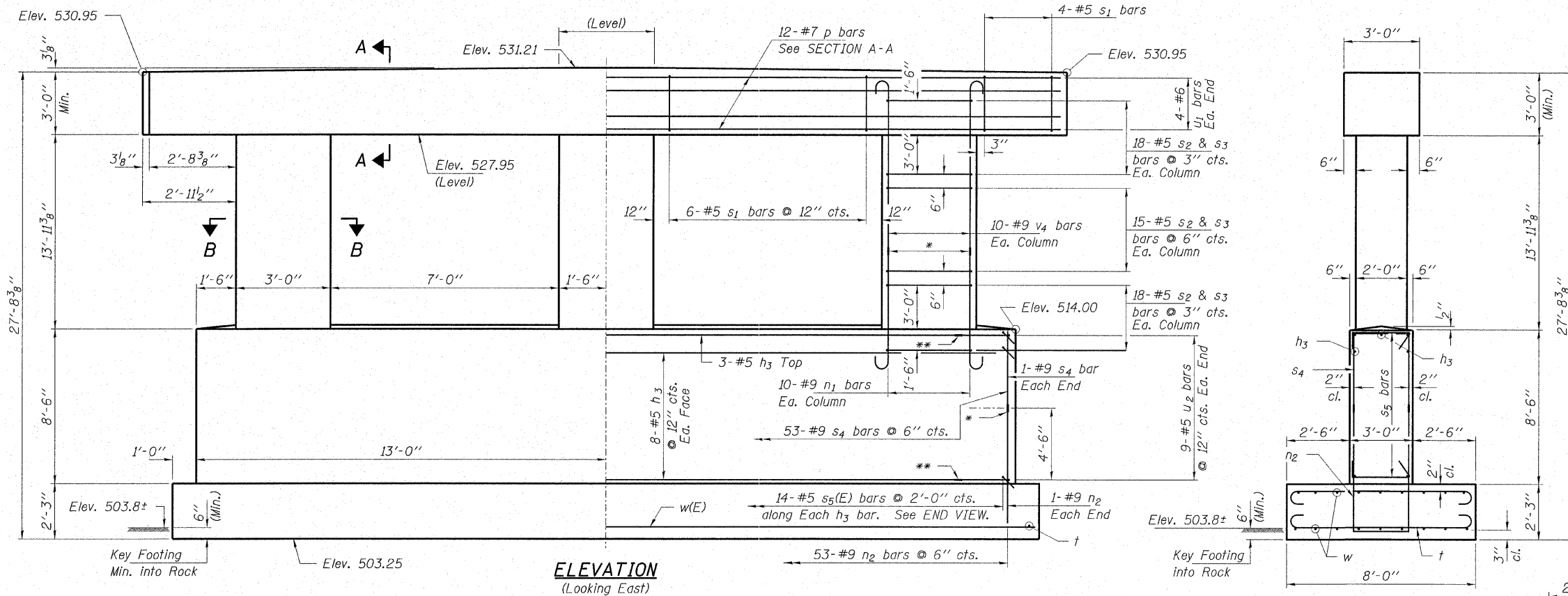
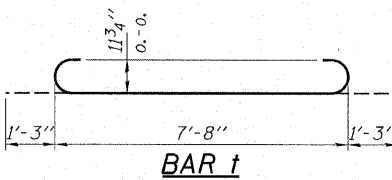
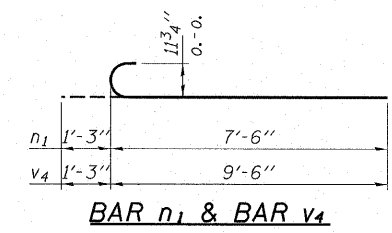
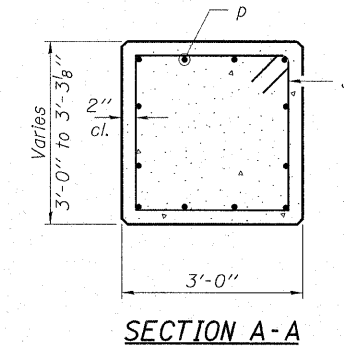
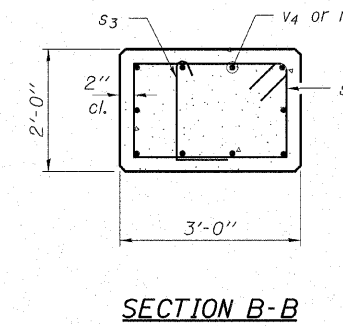
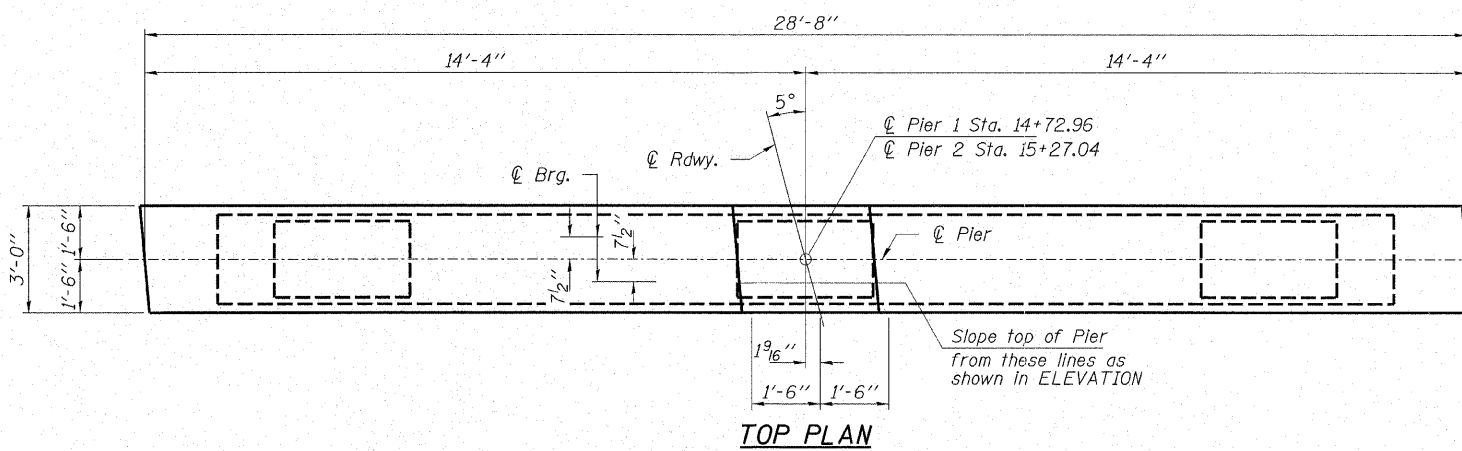
ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-49-0008-1 DATE: 01/08/08
 DESIGNED: R.J.P. CHECKED: M.D.C. DRAWN: D.T.M.

ABUTMENTS

T.R. 505B OVER C.N./I.C. RAILROAD
 SECTION 06-10118-00-BR
 MOORES PRAIRIE ROAD DISTRICT
 JEFFERSON COUNTY
 STRUCTURE NO. 041-9930 / STATION 15+00

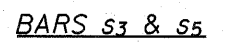
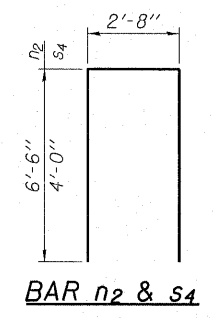
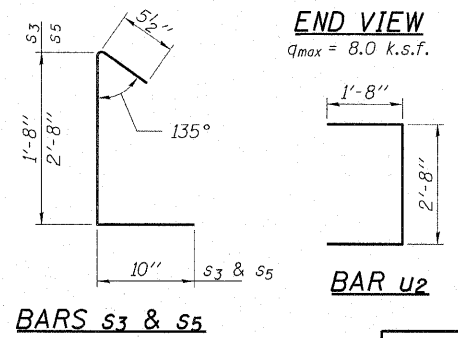
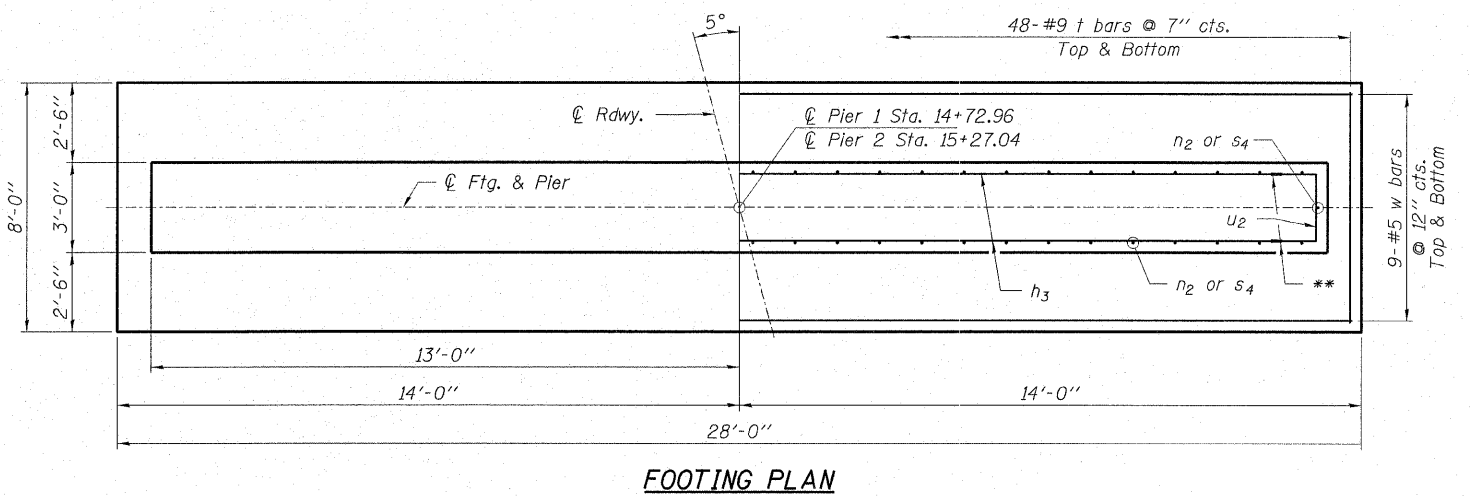
ROUTE NO. T.R. 505B	SECTION 06-10118 -00-BR	COUNTY JEFFERSON	TOTAL SHEETS 18	SHEET NO. 16
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 99325		



Notes:
Space reinforcement in cap to miss dowel rods.
All edges shall have standard 3/4" chamfer except as noted.

BILL OF MATERIAL - 2 PIERS

BAR	NO.	SIZE	LENGTH	SHAPE
h3	38	#5	23'-0"	—
n1	60	#9	8'-9"	⌋
n2	110	#9	15'-8"	⌋
p	24	#7	28'-4"	—
s1	40	#5	11'-7"	□
s2	306	#5	9'-7"	□
s3	306	#5	3'-0"	□
s4	110	#9	10'-8"	⌋
s5	252	#5	4'-0"	⌋
t	192	#9	10'-2"	⌋
u1	16	#6	12'-8"	⌋
u2	36	#5	6'-0"	⌋
v4	60	#9	10'-9"	⌋
w	36	#5	27'-8"	—
Concrete Structures			Cu. Yd.	125.2
Reinforcement Bars			Pound	29,880
Rock Excavation			Cu. Yd.	10.0
Structure Excavation			Cu. Yd.	124
Mechanical Splice			Each	192



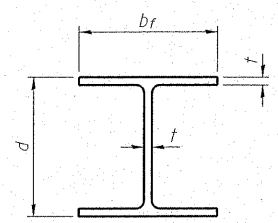
* Mechanical Splice
** Mechanical Splice, shop welded splice per AWS D1.4 or standard 90° bends.

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LAND SURVEYORS
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SPRINGFIELD, ILLINOIS 62703
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ELGIN • SPRINGFIELD

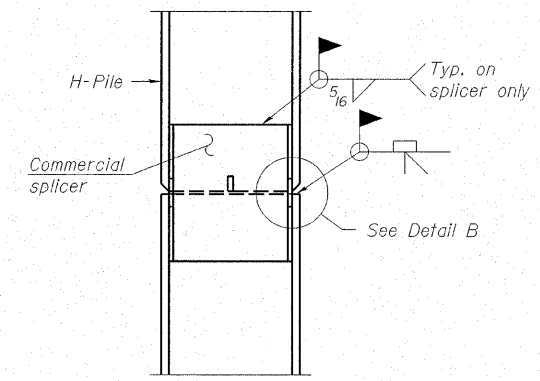
PROJECT NUMBER: 12-49-0008-1 DATE: 01/08/08
DESIGNED: R.J.P. CHECKED: M.D.C. DRAWN: D.T.M.

PIERS
T.R. 505B OVER C.N./I.C. RAILROAD
SECTION 06-10118-00-BR
MOORES PRAIRIE ROAD DISTRICT
JEFFERSON COUNTY
STRUCTURE NO. 041-9930 / STATION 15+00

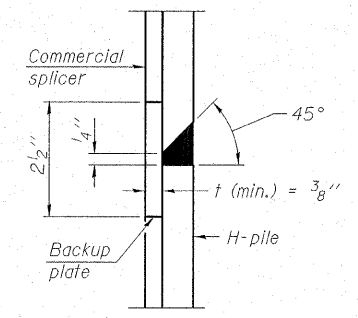


STEEL PILE TABLE

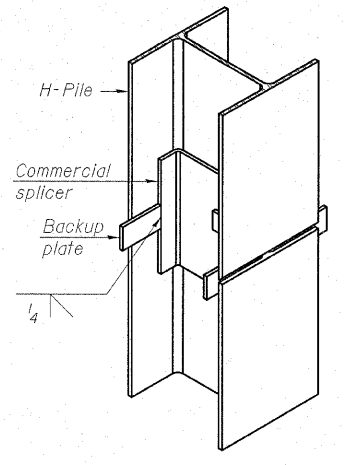
Designation	Depth <i>d</i>	Flange width <i>b_f</i>	Web and Flange thickness <i>t</i>	Encasement diameter <i>A</i>
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"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



ELEVATION

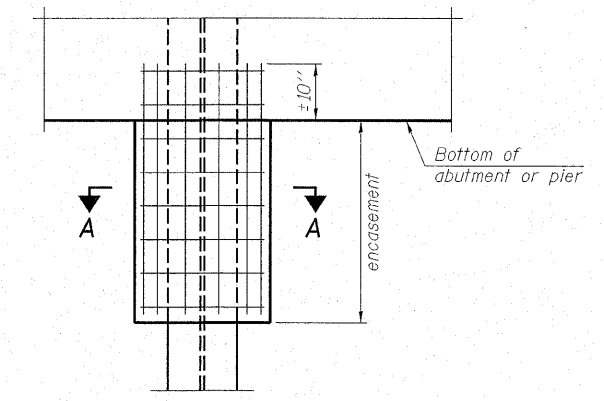


DETAIL "B"



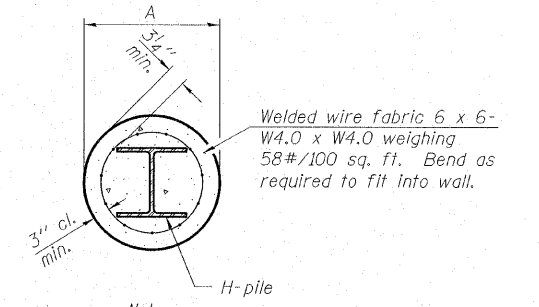
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



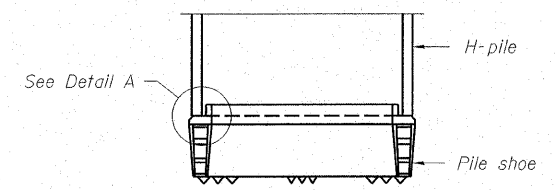
ELEVATION

PILE ENCASEMENT

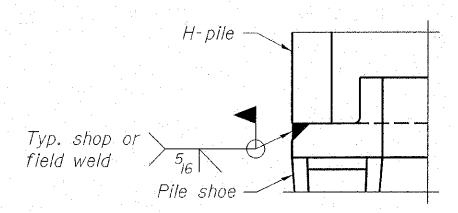


SECTION A-A

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

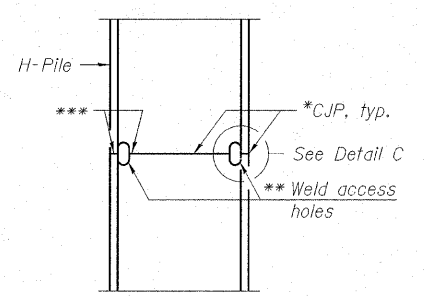


ELEVATION

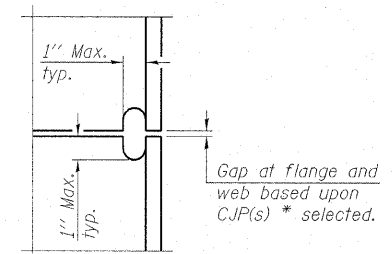


DETAIL A

H-PILE SHOE ATTACHMENT

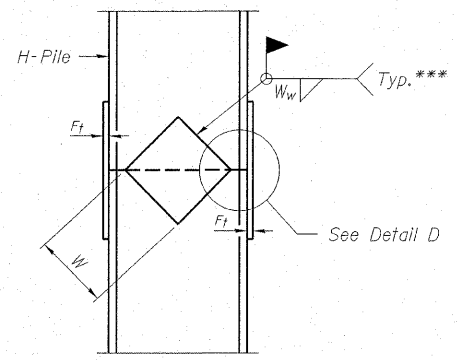


ELEVATION

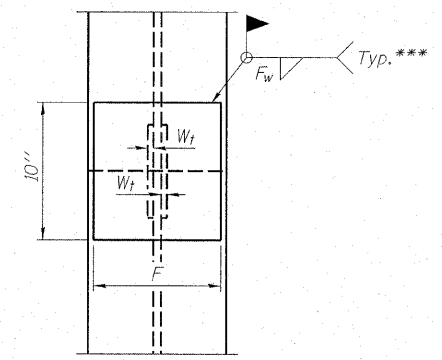


DETAIL C

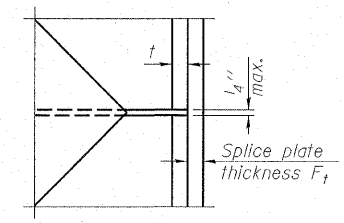
COMPLETE PENETRATION WELD SPLICE



ELEVATION



END VIEW



DETAIL D

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

WELDED PLATE FIELD SPLICE

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

- * Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
- ** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
- *** Interrupt welds 1/4" from end of each pile.

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

HLR

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 SPRINGFIELD, ILLINOIS 62703
 (217) 546-3400

ELGIN • SPRINGFIELD

PROJECT NUMBER: 12-49-0008-1 DATE: 01/08/08
 DESIGNED: R.J.P. CHECKED: M.D.C. DRAWN: D.T.M.

STEEL H-PILE DETAILS

T.R. 505B OVER C.N./I.C. RAILROAD
 SECTION 06-10118-00-BR
 MOORES PRAIRIE ROAD DISTRICT
 JEFFERSON COUNTY
 STRUCTURE NO. 041-9930 / STATION 15+00

