

ROUTE NO. T.R. 50	SECTION 98-02120 -00-BR	COUNTY DOUGLAS	TOTAL SHEETS 26	SHEET NO. 1
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CONTRACT NO. 91314

# STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANS FOR PROPOSED BRIDGE REPLACEMENT AND REHABILITATION PROGRAM

### INDEX OF SHEETS

1. COVER SHEET
2. SUMMARY OF QUANTITIES AND GENERAL NOTES
3. TYPICAL CROSS SECTIONS
4. EROSION CONTROL PLAN
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- 7.-18. STATION CROSS SECTIONS
- 19.-25. BRIDGE PLANS
26. BORINGS

SEE PROPOSAL BOOKLET FOR STANDARDS:

- 000001-04 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 280001-02 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-02 NAME PLATE FOR BRIDGES
- 630001-06 STEEL PLATE BEAM GUARDRAIL
- 630301-03 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- 631026-02 TRAFFIC BARRIER TERMINAL, TYPE 5 AND 5A
- 635006-02 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 702001-06 TRAFFIC CONTROL DEVICES
- BLR 21-6 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

### UTILITIES

ILLINOIS CONSOLIDATED TELEPHONE COMPANY  
121 SOUTH 17th STREET  
MATTOON, ILLINOIS 61938

EASTERN ILLINOIS ELECTRIC CO-OP  
330 WEST OTTAWA STREET  
P.O. BOX 96  
PAXTON, ILLINOIS 60957

WEST PRAIRIE WATER COMPANY  
118 WEST MAIN STREET  
ARCOLA, ILLINOIS 61910

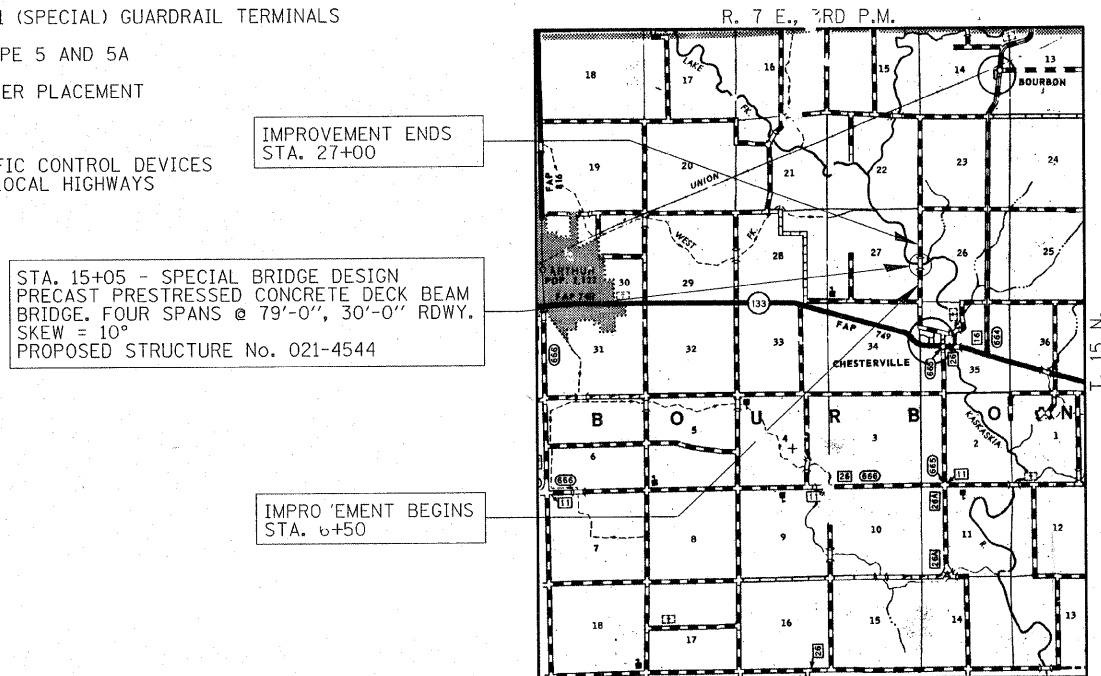
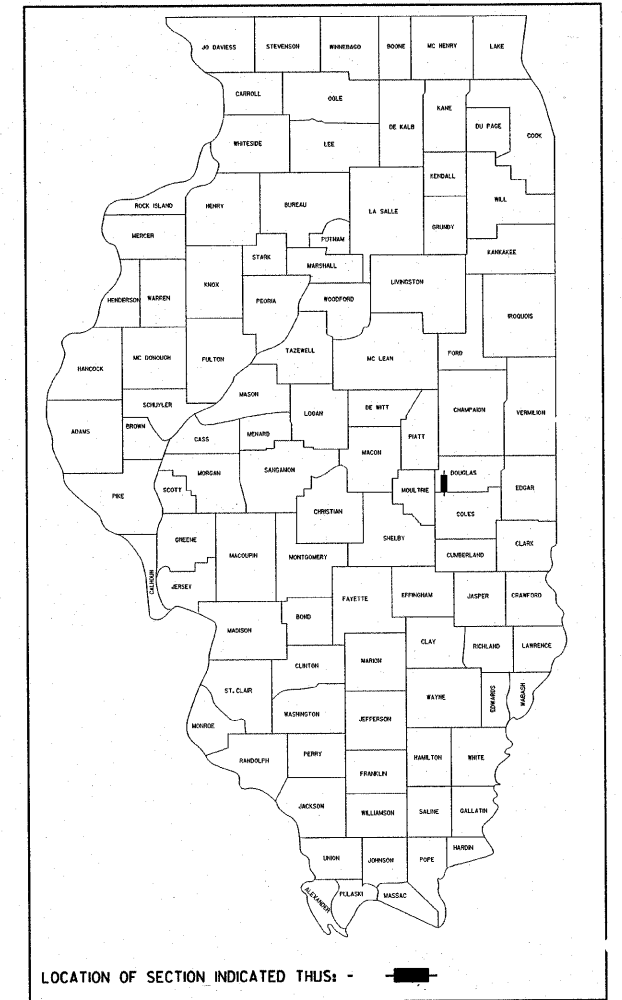
DESIGN FUNCTIONAL CLASSIFICATION:  
LOCAL ROAD 0-250 ADT  
DESIGN TRAFFIC: 125 ADT  
DESIGN SPEED: 30 M.P.H.

CONTRACT NO. 91314

SCALES

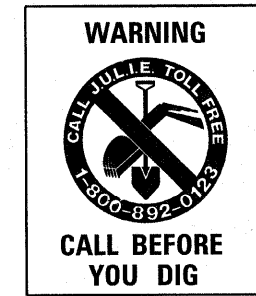
PLAN	0' = 50'
PROFILE HORIZ.	0' = 50'
PROFILE VERT.	0' = 5'
CROSS SECTIONS	0' = 5'

## SECTION 98-02120-00-BR BOURBON ROAD DISTRICT DOUGLAS COUNTY T.R. 50 PROJECT BR-OS-041(86) C-95-314-04



### LAYOUT

APPROXIMATE SCALE: 0 1 MILE  
NET LENGTH OF SECTION = 2,050 FEET = 0.388 MILES



APPROVED 01/30/2006 2006  
ROAD DISTRICT COMMISSIONER

APPROVED JSC 2006  
COUNTY ENGINEER

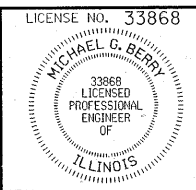
PASSED 2/15 2006  
David A. Ed  
DISTRICT FIVE ENGINEER OF LOCAL ROADS & STREETS

Feb 15 2006  
Joseph E. Lince  
DEPUTY DIRECTOR OF HIGHWAYS  
REGION THREE ENGINEER  
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DATE: 1/19/06

BY: Michael G. Berry

LICENSE EXPIRES: NOVEMBER 30, 2007



**HLR**  
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618-790-4637  
Account Number 12-30-0008-1

**SUMMARY OF QUANTITIES**

CODE NO	ITEM	CONSTRUCTION CODE X081-2A	
		UNIT	QUANTITY
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	120
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	120
20100500	TREE REMOVAL, ACRES	ACRE	1.0
20200100	EARTH EXCAVATION	CU YD	805
> 20300300	CHANNEL EXCAVATION	CU YD	2,850
20400800	FURNISHED EXCAVATION	CU YD	8,500
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	5,394
> 25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	1.9
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	190
28000300	TEMPORARY DITCH CHECKS	EACH	12
28000400	PERIMETER EROSION BARRIER	FOOT	1,250
> 28101700	RIPRAP, SPECIAL	TON	1,700
> 40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	2,075
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
> 50300225	CONCRETE STRUCTURES	CU YD	185.9
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	9,480
50800105	REINFORCEMENT BARS	POUND	12,770
50900205	STEEL RAILING, TYPE S1	FOOT	641
51201600	FURNISHING STEEL PILE HP12X53	FOOT	1,160
51202700	DRIVING STEEL PILES	FOOT	1,160
> 51203600	TEST PILE STEEL HP12X53	EACH	2
51500100	NAME PLATES	EACH	1
54200220	PIPE CULVERTS, CLASS D, TYPE 1, 15"	FOOT	270
54200223	PIPE CULVERTS, CLASS D, TYPE 1, 18"	FOOT	74
> 63000135	STEEL PLATE BEAM GUARDRAIL, TYPE B (SPECIAL)	FOOT	12.5
63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	3
> 63100205	TRAFFIC BARRIER TERMINAL, TYPE 5A (SPECIAL)	EACH	1
> 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)	EACH	3
67100100	MOBILIZATION	L SUM	1
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	3
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1
X5020503	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 3	EACH	1

> SEE SPECIAL PROVISIONS

**EARTHWORK SCHEDULE**

LOCATION	EARTH EXCAVATION (CU YD)	SHRINKAGE FACTOR	PERCENT USED	AVAILABLE* EXCAVATION (CU YD)	EMBANKMENT REQUIRED (CU YD)	EARTHWORK BALANCE (CU YD)
STA. 6+50 TO STA. 13+46.22	457	25%	100%	343	1,470	-1,127
STA. 13+46.22 TO STA. 16+63.78	-	25%	100%	-	-	-
STA. 16+63.78 TO STA. 27+00	348	25%	100%	261	8,838	-8,577
CHANNEL EXCAVATION ENTRANCE	2,850	25%	70%	1,496	300	1,496 -300
TOTAL	805			2,100	10,608	-8,508
USE:	805					-8,500

\* AVAILABLE EXCAVATION = EXC. x (1-SHRINKAGE FACTOR) x % USED

**TREE REMOVAL, ACRES**

LOCATION	ACRES
STA. 13+20 TO 14+10, 20' RT. TO 40' RT.	0.05
STA. 13+50 TO 14+40, 20' LT. TO 40' LT.	0.04
STA. 15+20 TO 18+00, 20' RT. TO 60' RT.	0.26
STA. 15+40 TO 18+00, 20' LT. TO 60' LT.	0.24
STA. 18+00 TO 19+80, 20' RT. TO R.O.W.	0.13
STA. 18+00 TO 20+20, 20' LT. TO R.O.W.	0.17
RT. STA. 19+54 TEMPORARY EASEMENT	0.06
TOTAL	0.95
USE	1.0

**GENERAL NOTES**

- ALL WORK SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION," ADOPTED JANUARY 1, 2002 (HEREINAFTER REFERRED TO AS THE STANDARD SPECIFICATIONS); THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS," ADOPTED JANUARY 1, 2002; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE "DETAILS" IN THE PLANS AND THE "SPECIAL PROVISIONS" INCLUDED IN THE CONTRACT DOCUMENTS.  
  
ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED AS THE LATEST STANDARD OF THE DEPARTMENT.
- ALL CLEARING AND GRUBBING AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. THE REMOVAL OF THE EXISTING PAVEMENT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNIT PRICE PER CUBIC YARD FOR EARTH EXCAVATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF ALL UTILITIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF ALL UTILITY EQUIPMENT. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY OWNERS AS PROVIDED FOR IN THE STANDARD SPECIFICATIONS IF UTILITY RELOCATION, ADJUSTMENT OR PROTECTION IS NECESSARY.  
  
THE LOCATION ON THE PLANS OF EXISTING DRAINAGE STRUCTURES, TELEPHONE LINES, ELECTRIC LINES AND WATER SERVICE LINES IS APPROXIMATE AND THEIR EXACT LOCATION IS TO BE DETERMINED IN THE FIELD AS INCIDENTAL TO THE CONTRACT.  
  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND OR SURFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER. THIS WORK SHALL BE THE CONTRACTOR'S EXPENSE.
- 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 SURFACE CSE., TY. B	2.05 TON/CU YD
RIPRAP, SPECIAL	1.75 TON/CU YD
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.
- TREES WITHIN THE RIGHT-OF-WAY WHICH INTERFERE WITH CONSTRUCTION SHALL BE REMOVED AT THE DIRECTION OF THE ENGINEER.
- ALL TRAFFIC CONTROL AND OTHER ADVISORY SIGNS NEEDED FOR CONSTRUCTION ARE TO BE FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH SECTION 107.14 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING CONSTRUCTION OF THE PROJECT.
- THE CONTRACTOR SHALL CONSULT THE ENGINEER IN REGARD TO THE EXACT LENGTH OF PIPE CULVERTS BEFORE ORDERING THESE ITEMS.

TRAFFIC BARRIER TERMINAL, TYPE 5A	
LOCATION	EACH
RT. STA. 13+29.02 TO STA. 13+42.27	1
RT. STA. 16+62.44 TO STA. 16+75.69	1
LT. STA. 16+67.73 TO STA. 16+80.98	1
TOTAL	3

TRAFFIC BAR. TERM, TY 1, SPL. (TANGENT)	
LOCATION	EACH
RT. STA. 12+79.02 TO STA. 13+29.02	1
RT. STA. 16+75.69 TO STA. 17+25.69	1
LT. STA. 16+80.98 TO STA. 17+30.98	1
TOTAL	3

TRAFFIC BARRIER TERMINAL, TYPE 5A (SPECIAL)	
LOCATION	EACH
CONNECT TO STEEL BRIDGE RAIL, TYPE S1 AT LT. STA. 13+47.56 FABRICATE TO 15' RADIUS	1
TOTAL	1

STEEL PLATE BEAM GUARDRAIL, TYPE B (SPECIAL)	
LOCATION	FOOT
SOUTHWEST CORNER, CONNECT TO END OF TBT, T5A (SPL) FABRICATE TO 15' RADIUS	12.5
TOTAL	12.5

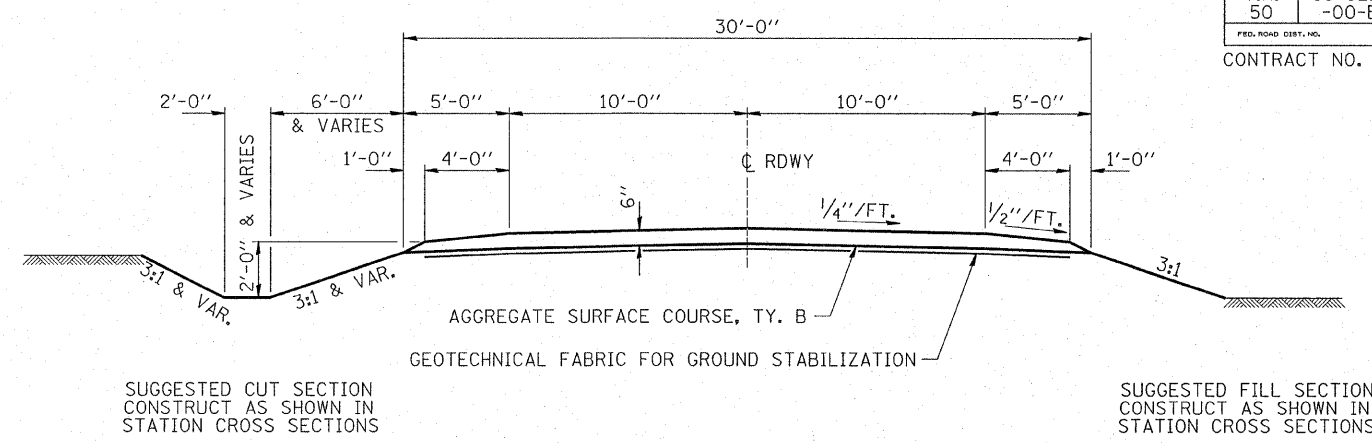
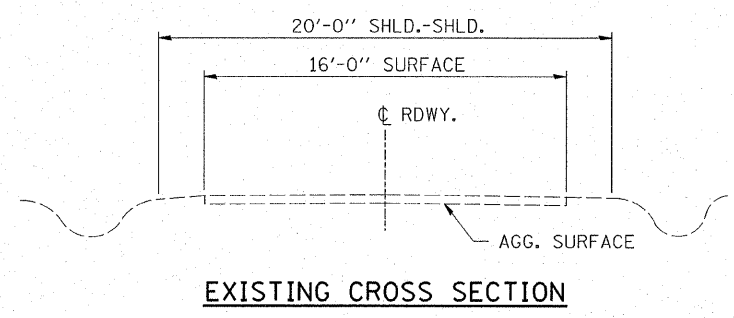


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Account Number  
12-30-0008-1  
Date: 01-05-06  
DESIGNED: S.W.M. CHECKED: T.P.L. DRAWN: D.B.

**SUMMARY OF QUANTITIES AND GENERAL NOTES**  
SECTION 98-02120-00-BR  
BOURBON ROAD DISTRICT  
DOUGLAS COUNTY  
STATION 15+05

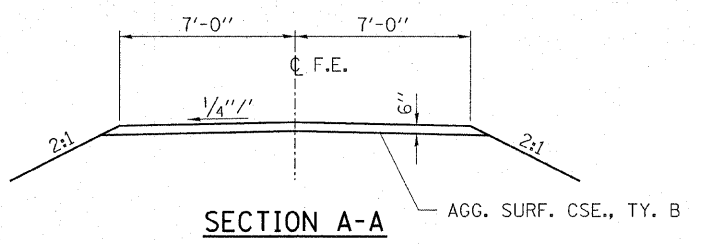
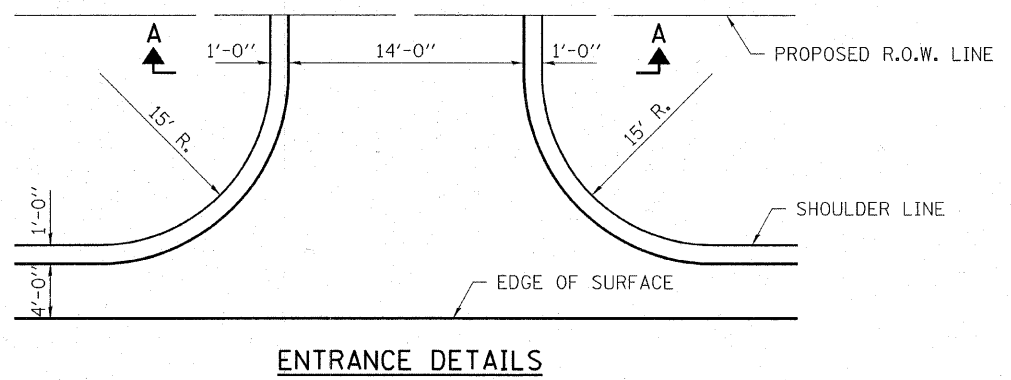
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 50	98-02120-00-BR	DOUGLAS	26	3

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT: BR-02-041001  
 CONTRACT NO. 91314



**PROPOSED TYPICAL CROSS SECTION**  
 STA. 7+00 TO STA. 26+50

TRANSITION FROM PROPOSED ROADWAY TO THE EXISTING ROADWAY IS TO BE CONSTRUCTED FROM STA. 6+50 TO STA. 7+00 AND FROM STA. 26+50 TO STA. 27+00. SEE SHEET 19 FOR TRANSITION AT THE BRIDGE.



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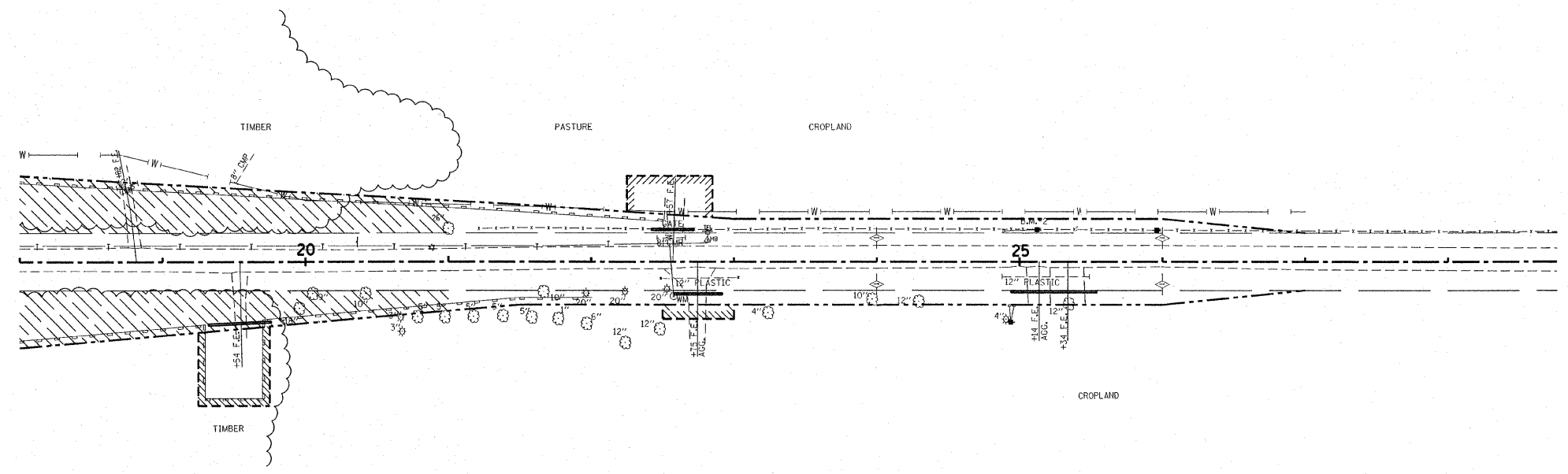
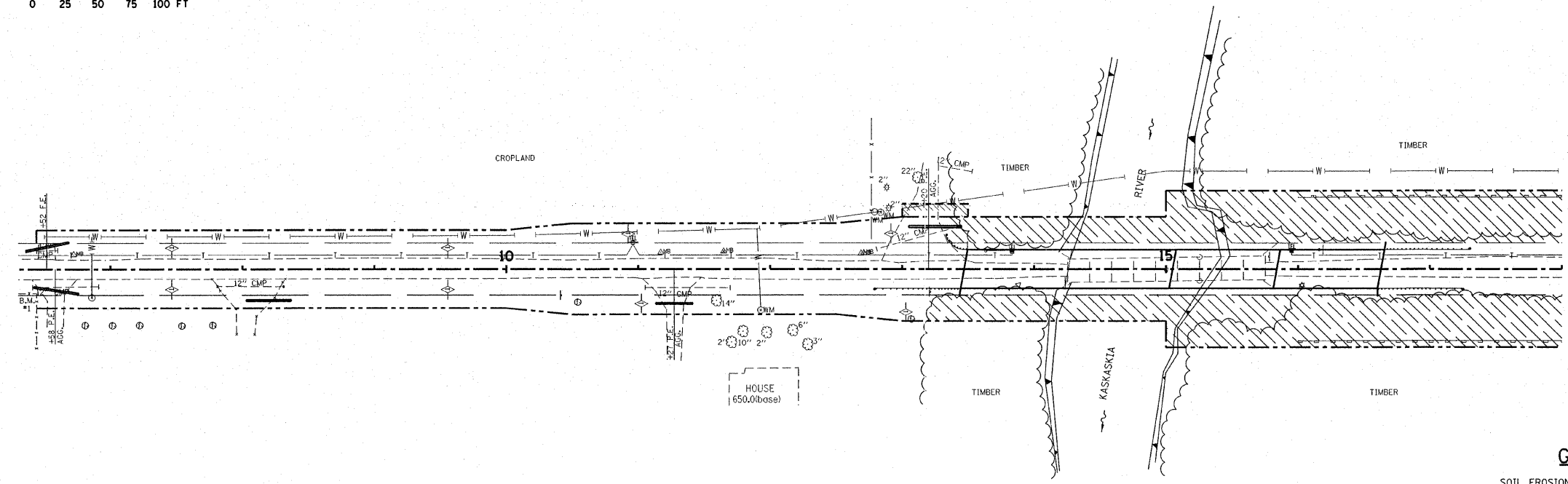
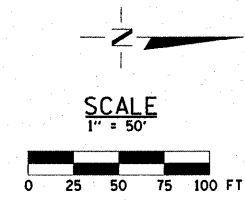
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 Date: 01-05-06  
 DESIGNED: S.W.M. | CHECKED: T.P.L. | DRAWN: D.B.

**TYPICAL SECTIONS**  
 SECTION 98-02120-00-BR  
 BOURBON ROAD DISTRICT  
 DOUGLAS COUNTY  
 STATION 15+05

# EROSION CONTROL PLAN & STORMWATER POLLUTION PREVENTION PLAN

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
T.R. 50	98-02120-00-BR	DOUGLAS	26	4
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT: 98-02-041(B)	

CONTRACT NO. 91314



### 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 REPLACE 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. PROVIDE DOCUMENTATION OF INSPECTIONS AND CORRECTIVE MEASURES TAKEN.

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.

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 PERIMETER BARRIER INSTALLATION RESTORED.

THE PERIMETER BARRIER INSTALLATION, MAINTENANCE, REMOVAL AND THE RESTORATION OF THE AREA DISTURBED BY THE PERIMETER BARRIER INSTALLATION IS INCLUDED IN COST OF THE PAY ITEM PERIMETER EROSION BARRIER.

TEMPORARY DITCH CHECKS SHALL BE CONSTRUCTED AS PER CONTRACT SPECIAL PROVISIONS ON 200 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.

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 SPECIAL PROVISIONS FOR:

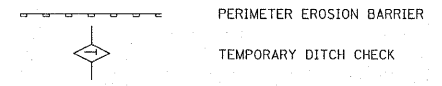
EROSION AND SEDIMENT CONTROL  
IDOT HIGHWAY STANDARD 280001

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.

ALL DISTURBED AREAS SHALL BE SEEDING AS DIRECTED BY THE ENGINEER. SEEDING SHALL CONFORM TO SEEDING CLASS 2 (SPECIAL) AS PER IDOT STANDARD SPECIFICATIONS AND CONTRACT SPECIAL PROVISIONS. THE CONTRACTOR SHALL NOT DELAY PERMANENT SEEDING IF DISTURBED AREAS ARE SHAPED TO FINAL GRADE AND WEATHER CONDITIONS ARE FAVORABLE.

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



**SEEDING, CLASS 2 (SPECIAL)**  
ESTIMATED QUANTITY - 1.9 ACRES

**PERIMETER EROSION BARRIER**  
RT. STA. 16+00 TO STA. 22+00 = 600 FEET  
LT. STA. 16+00 TO STA. 22+50 = 650 FEET  
TOTAL = 1,250 FEET

**TEMPORARY EROSION CONTROL SEEDING**  
ESTIMATED QUANTITY - 190 POUNDS  
(1 APPLICATION)

**TEMPORARY DITCH CHECK**  
12 EACH  
FINAL LOCATION TO BE APPROVED BY THE ENGINEER

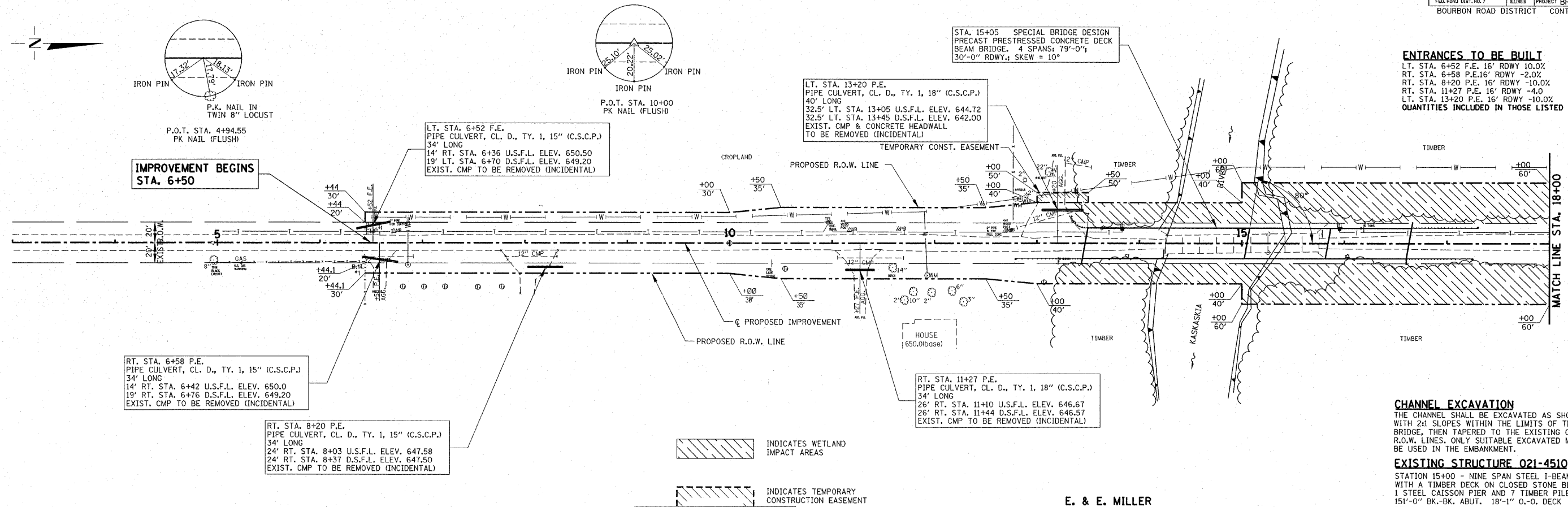
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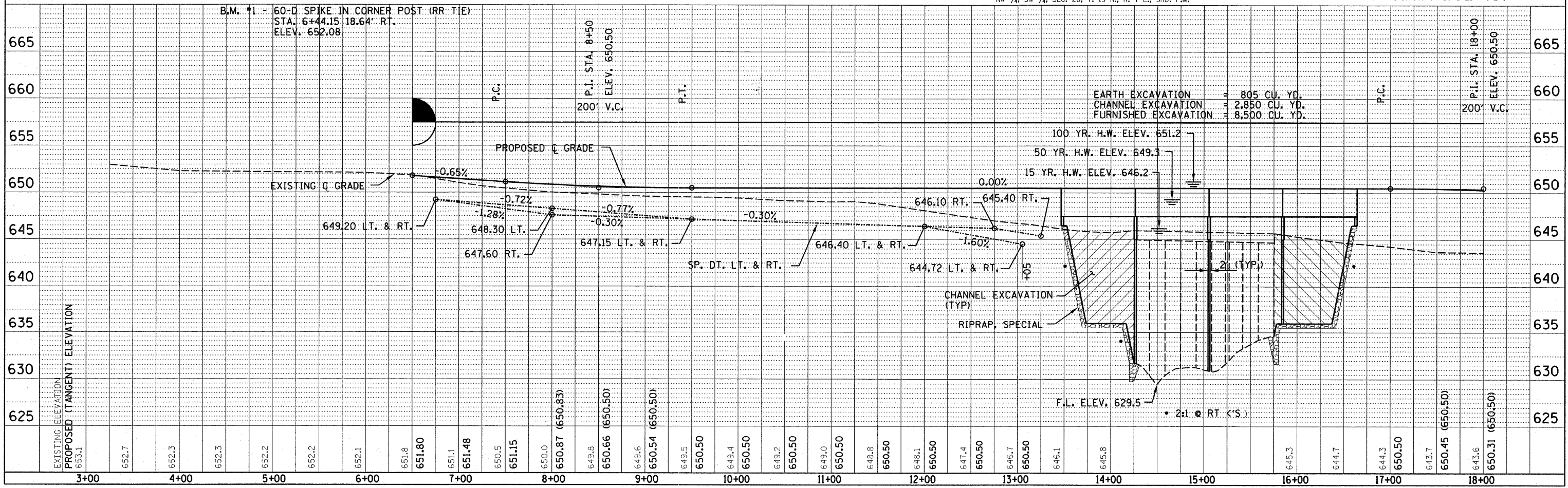
DESIGNED: S.W.M. | CHECKED: M.G.B. | DRAWN: D.B.

**EROSION CONTROL PLANS**  
**SECTION 98-02120-00-BR**  
**BOURBON ROAD DISTRICT**  
**DOUGLAS COUNTY**  
**STATION 15+05**





SCALES:  
 1" = 50' HOR  
 1" = 5' VER



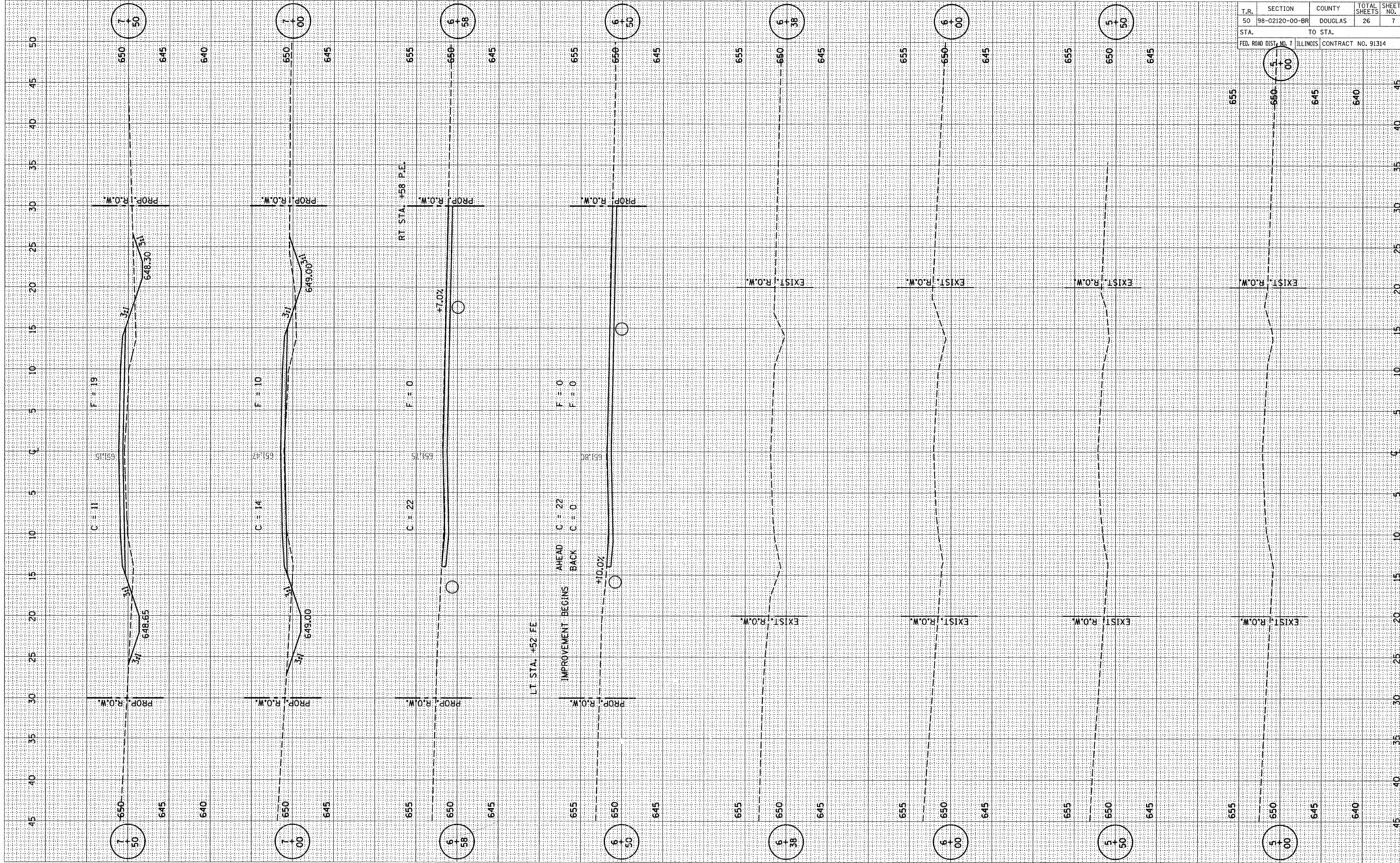




ORIGINAL SURVEY PLOTTED  
 SURVEY PLOTTED  
 NOTE BOOK TEMPLATE  
 NO. AREAS CHECKED

FINAL SURVEY PLOTTED  
 SURVEY PLOTTED  
 NOTE BOOK TEMPLATE  
 NO. AREAS CHECKED

BY DATE



T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
50	98-02120-00-BR	DOUGLAS	26	7
STA.	TO STA.			
	FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 91314	

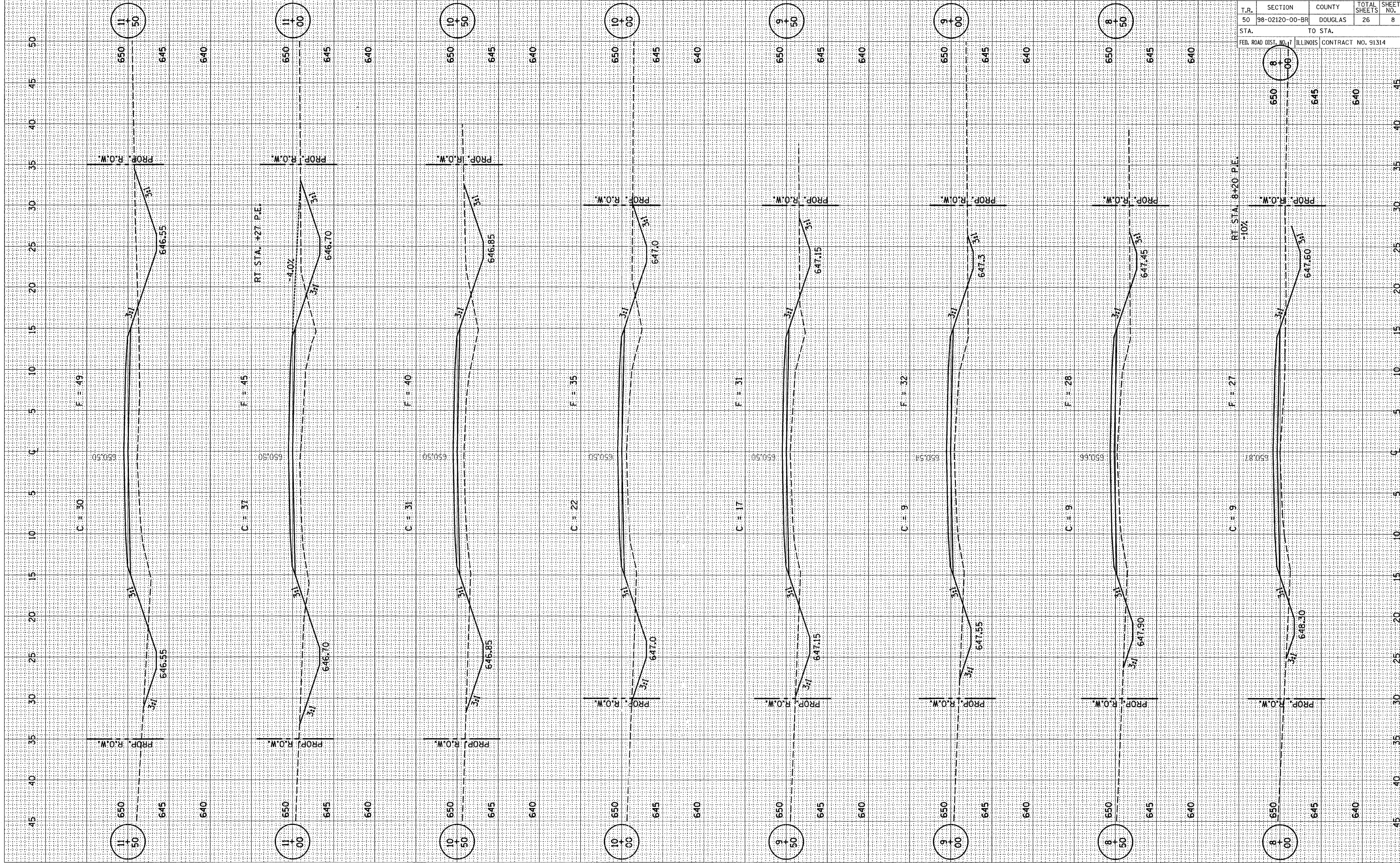


ORIGINAL SURVEY PLOTTED TEMPLATE NO. AREAS CHECKED

BY \_\_\_\_\_ DATE \_\_\_\_\_

FINAL SURVEY PLOTTED TEMPLATE NO. AREAS CHECKED

BY \_\_\_\_\_ DATE \_\_\_\_\_



T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
50	98-02120-00-BR	DOUGLAS	26	8
STA.	TO STA.			
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT NO. 91314	

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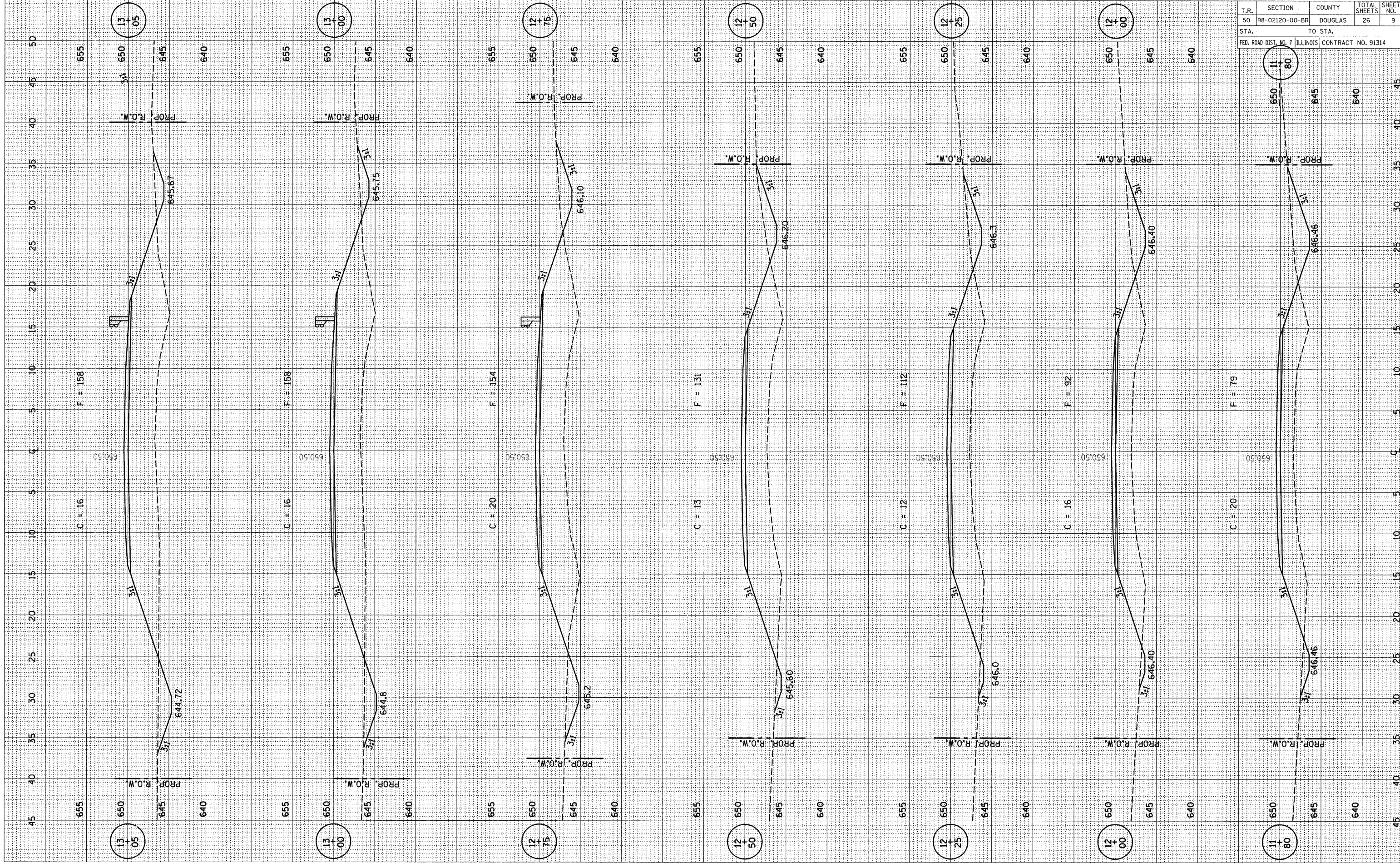
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ORIGINAL SURVEY SURVEYED BY DATE  
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 TEMPLATE NO. NO.  
 AREAS CHECKED

FINAL SURVEY SURVEYED BY DATE  
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 TEMPLATE NO. NO.  
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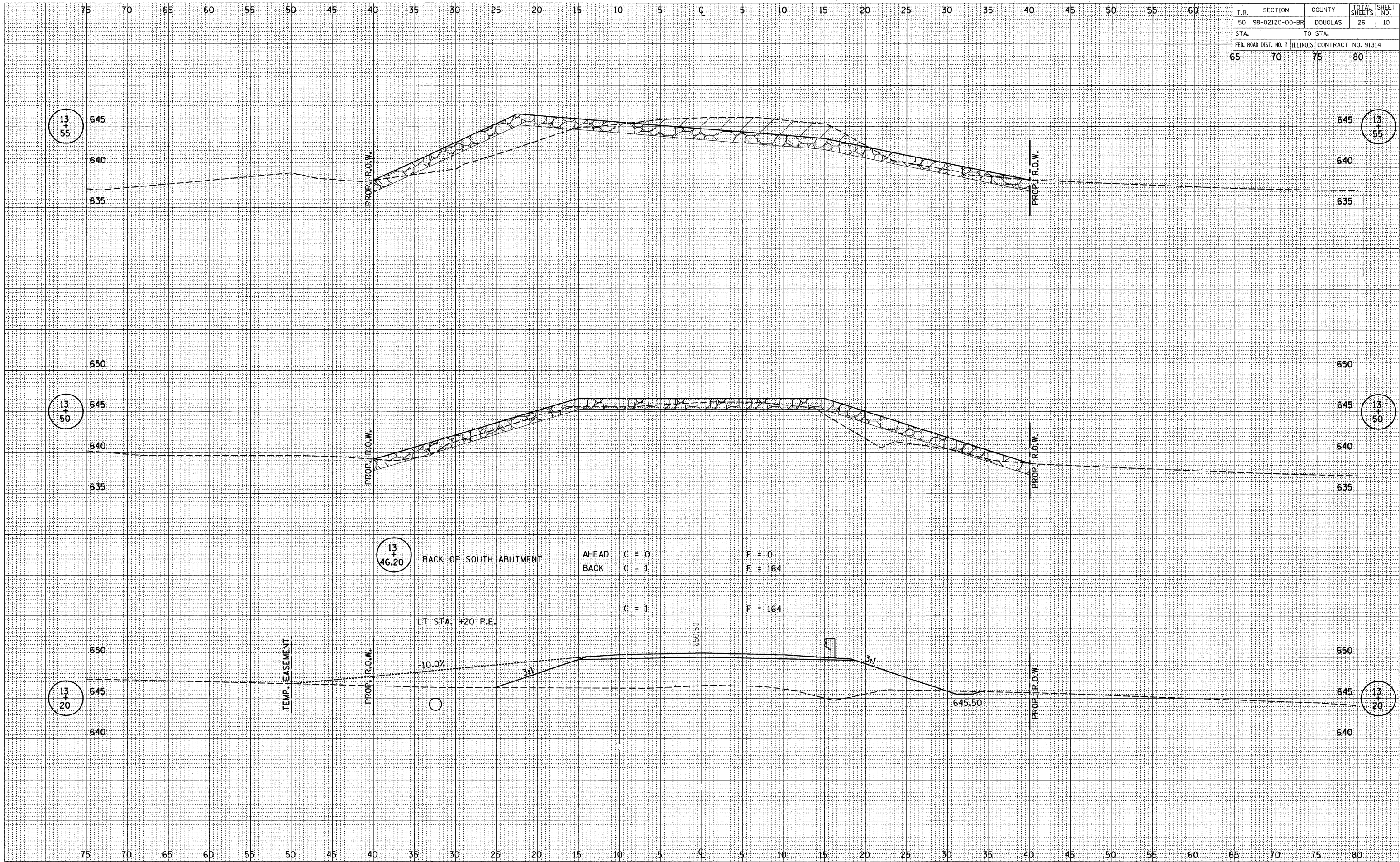
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50	98-02120-00-BR	DOUGLAS	26	9
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 91314		



T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
50	98-02120-00-BR	DOUGLAS	26	10
STA.		TO STA.		
65		80		
FED. ROAD DIST. NO. 7 ILLINOIS CONTRACT NO. 91314				

BY	DATE
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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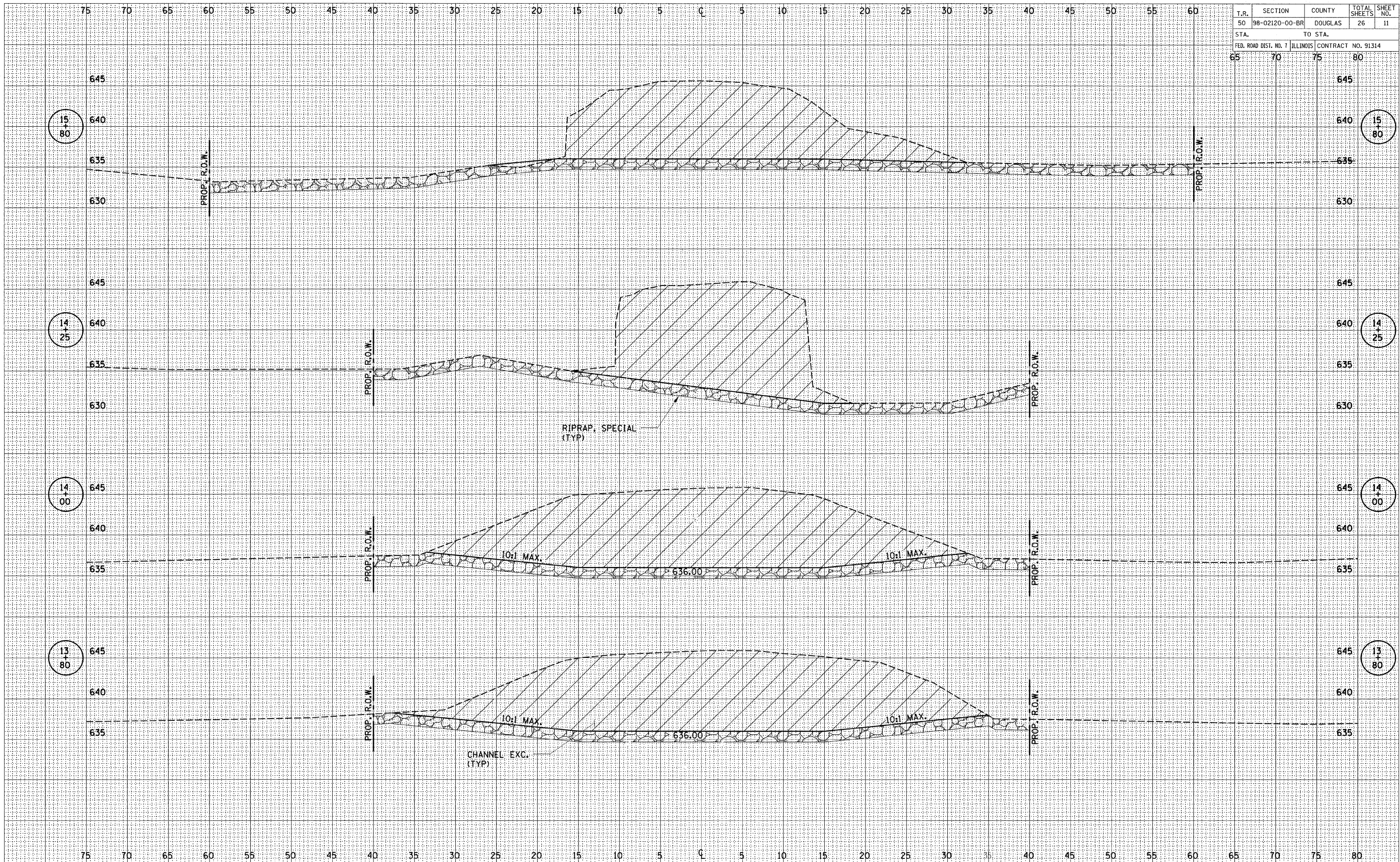




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50	98-02120-00-BR	DOUGLAS	26	11
STA. 65		TO STA. 70		
FED. ROAD DIST. NO. 7		ILLINOIS		CONTRACT NO. 91314

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

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NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

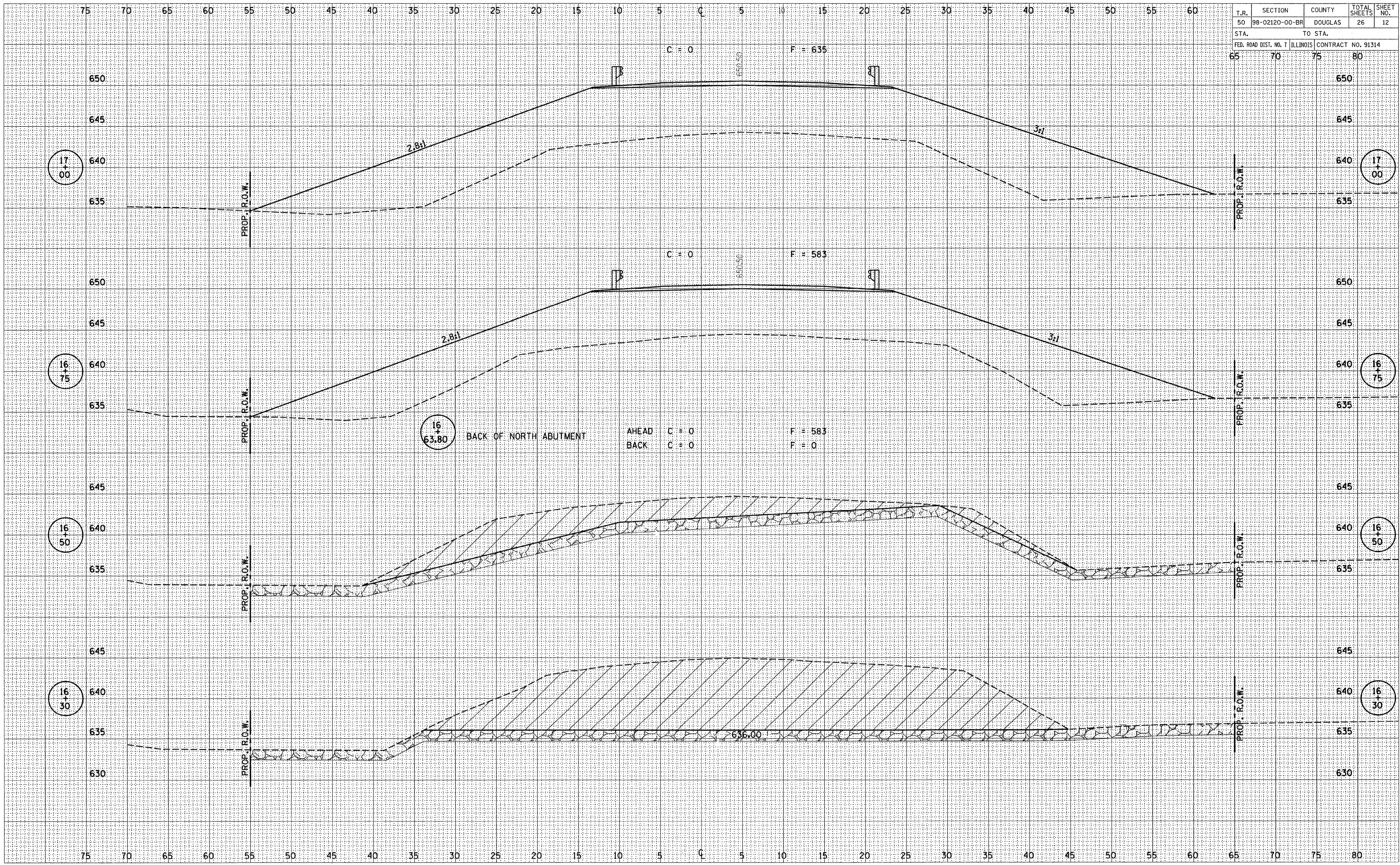




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50	98-02120-00-BR	DOUGLAS	26	12
STA.	TO STA.			
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT NO. 91314	

BY	DATE
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
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	AREAS CHECKED



75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80







T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
50	98-02120-00-BR	DOUGLAS	26	14
STA. TO STA.		FED. ROAD DIST. NO. 7 ILLINOIS CONTRACT NO. 91314		

BY	DATE

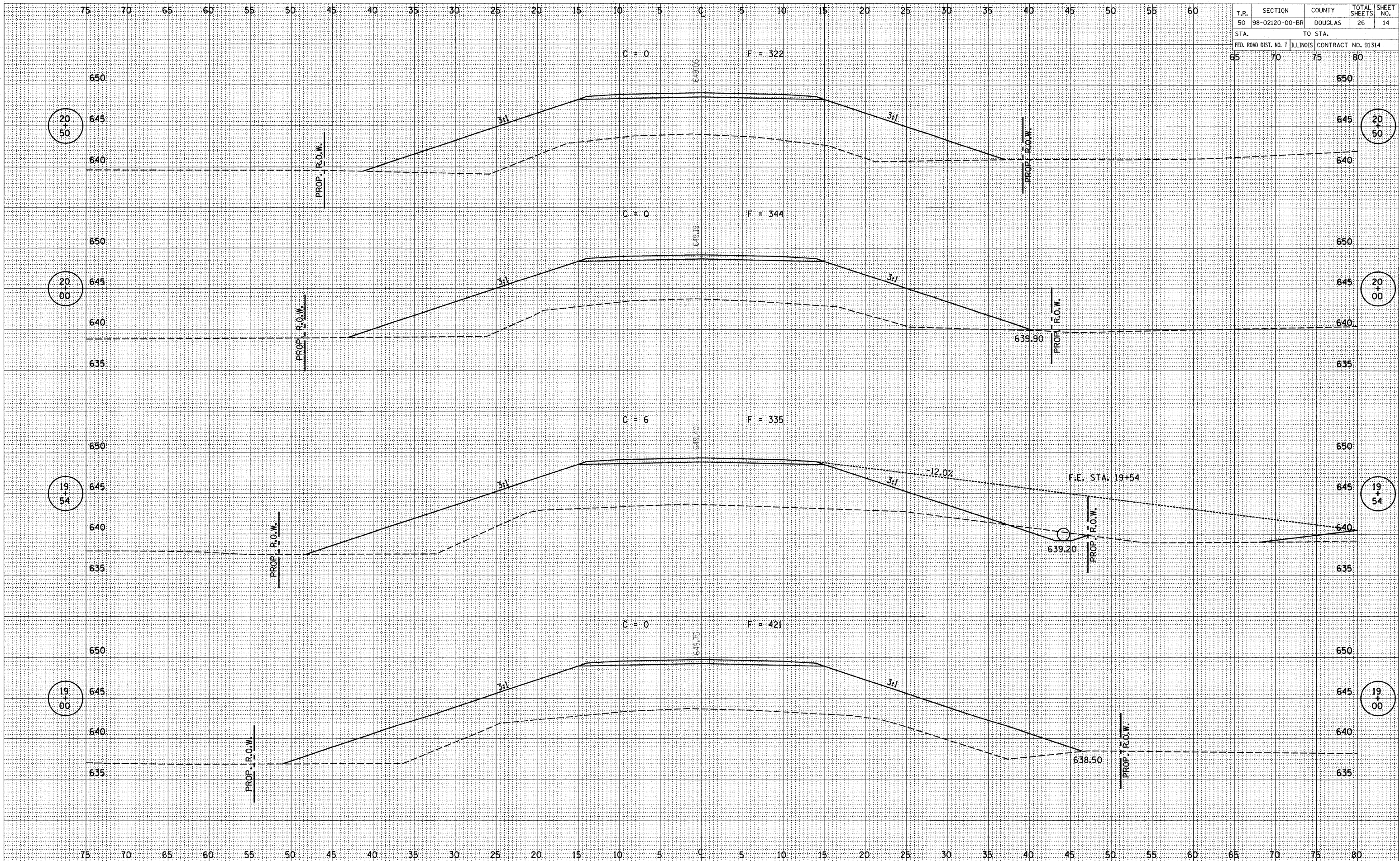
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NO.	AREAS CHECKED

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ORIGINAL SURVEY	DATE

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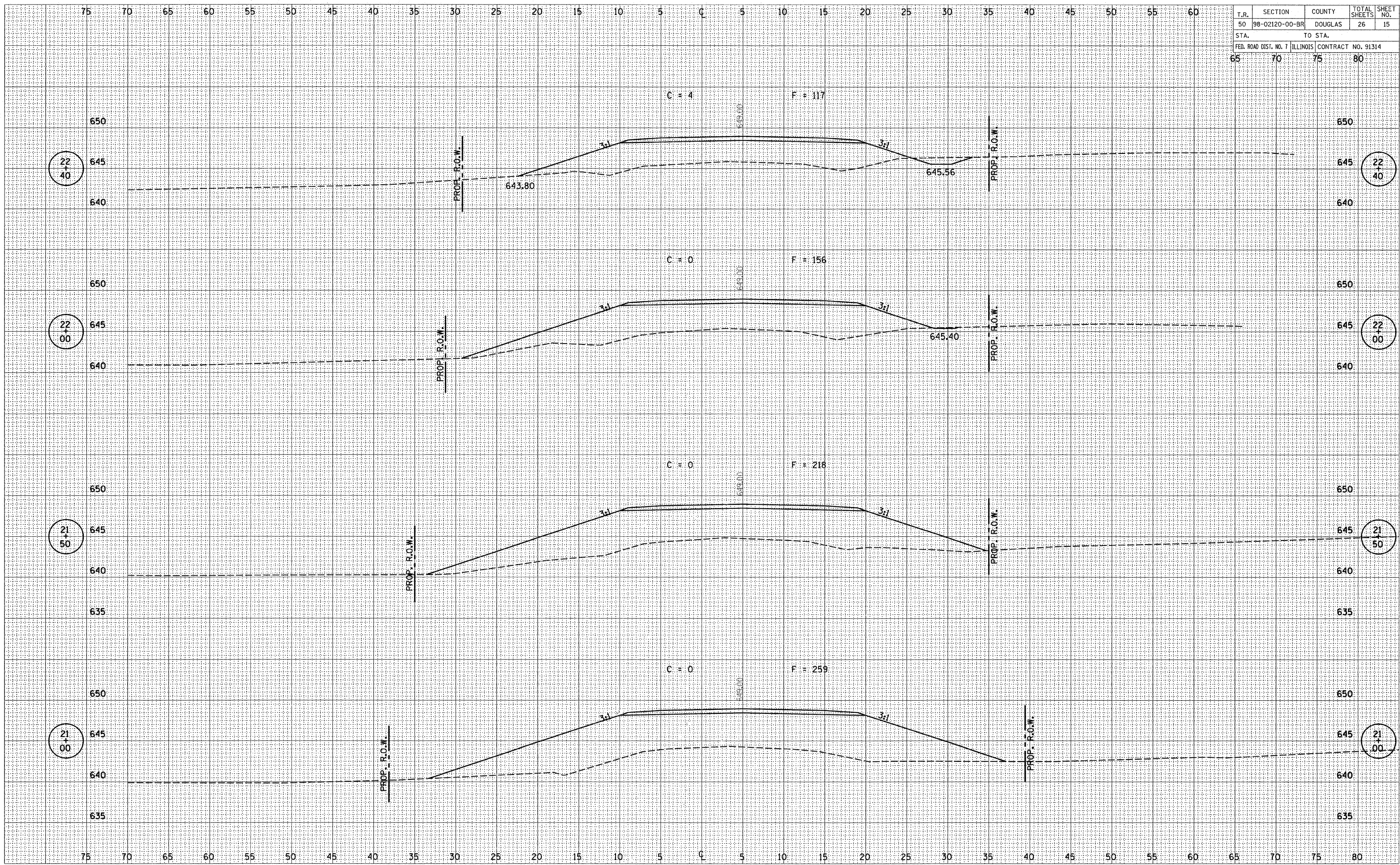




T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
50	98-02120-00-BR	DOUGLAS	26	15
STA.	TO STA.			
65	70	75	80	
FED. ROAD DIST. NO. 7 ILLINOIS			CONTRACT NO. 91314	

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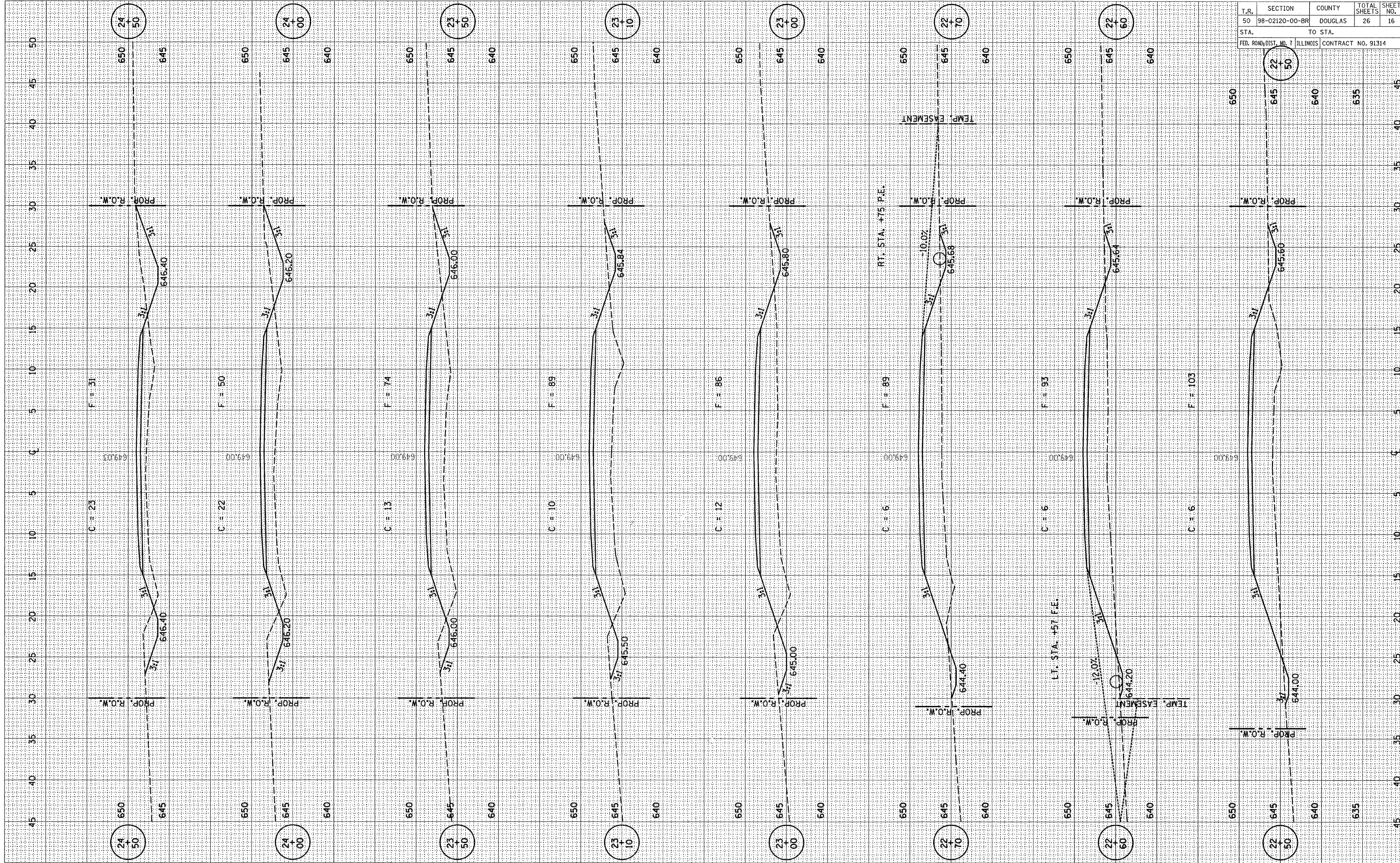
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ORIGINAL SURVEY BY DATE  
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FINAL SURVEY BY DATE  
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 NO. AREAS CHECKED



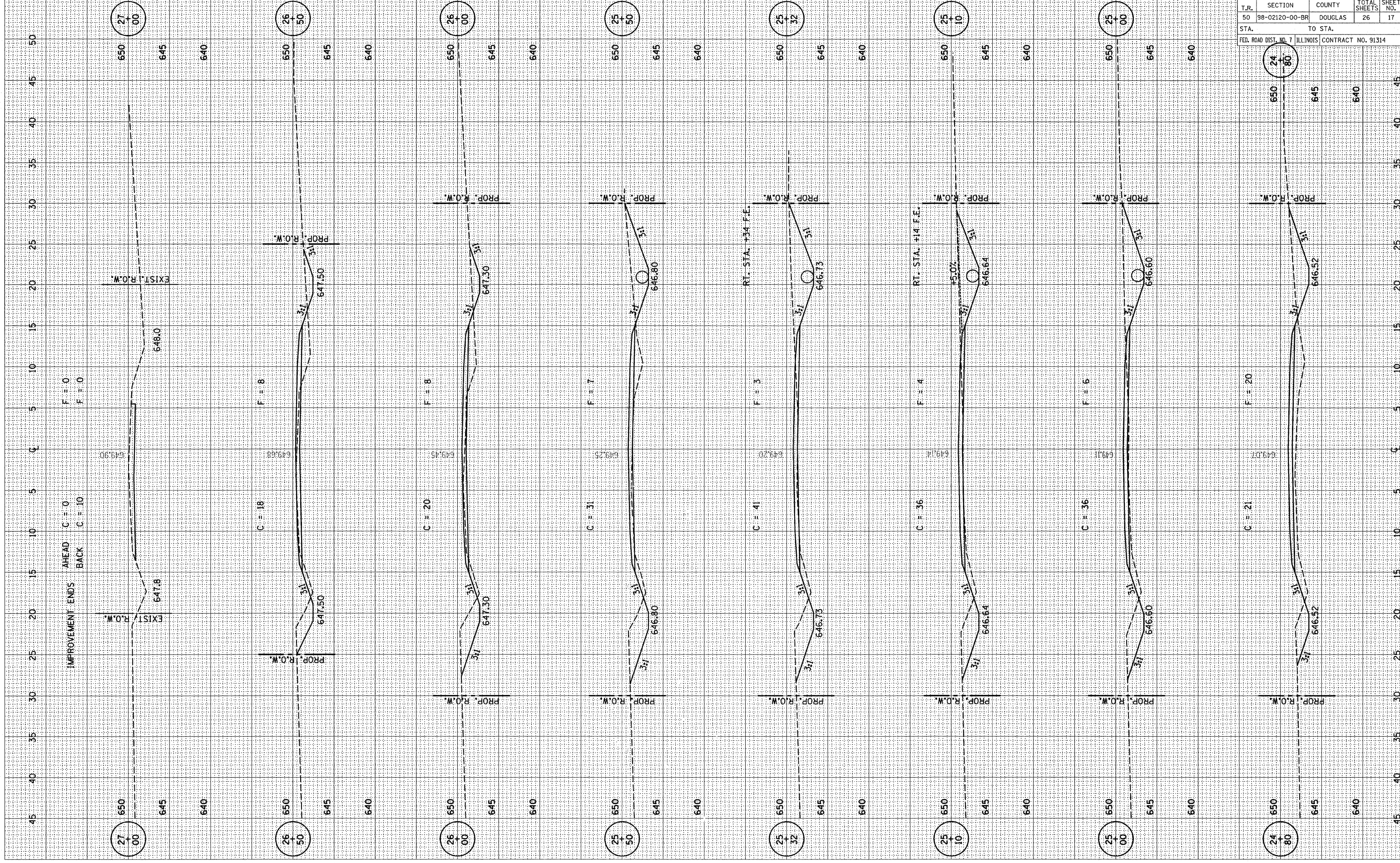
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50	98-02120-00-BR	DOUGLAS	26	16
STA.	TO STA.			
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 91314		



FINAL SURVEY SURVEYED PLOTTED NOTE BOOK NO. BY DATE

ORIGINAL SURVEY SURVEYED PLOTTED NOTE BOOK NO. BY DATE

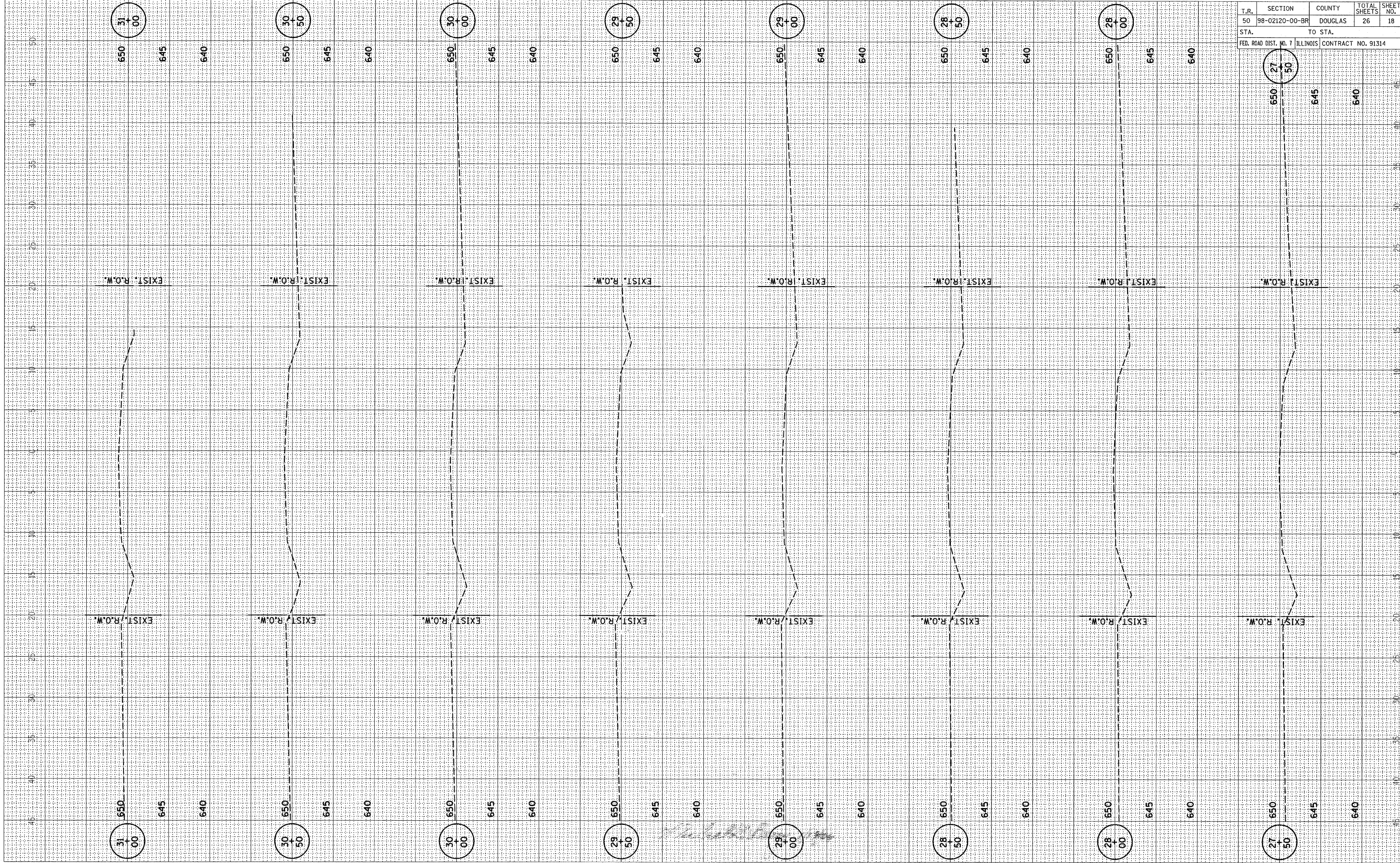
T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
50	98-02120-00-BR	DOUGLAS	26	17
STA.		TO STA.		
FED. ROAD DIST. NO. 7 ILLINOIS		CONTRACT NO. 91314		





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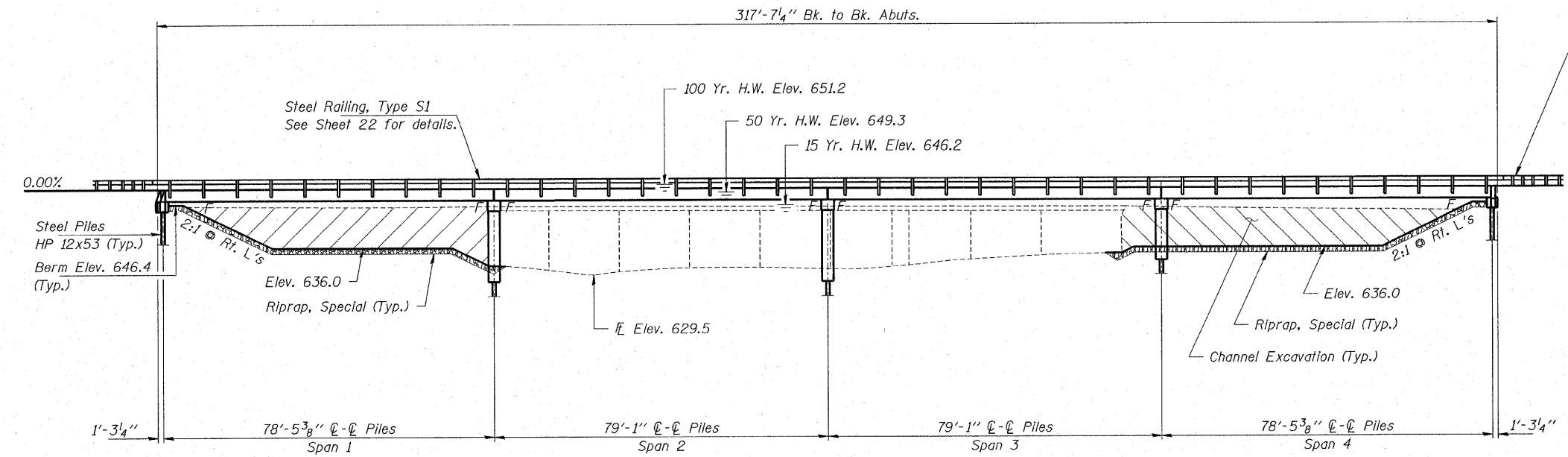
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T.R.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
50	98-02120-00-BR	DOUGLAS	26	18

FED. ROAD DIST. NO. 7 ILLINOIS CONTRACT NO. 91314

STA.	TO STA.			
650+00	650+50	645	640	



**ELEVATION**

Traffic Barrier Terminal, Type 5A  
See Std. 631026-02 (Typ.)

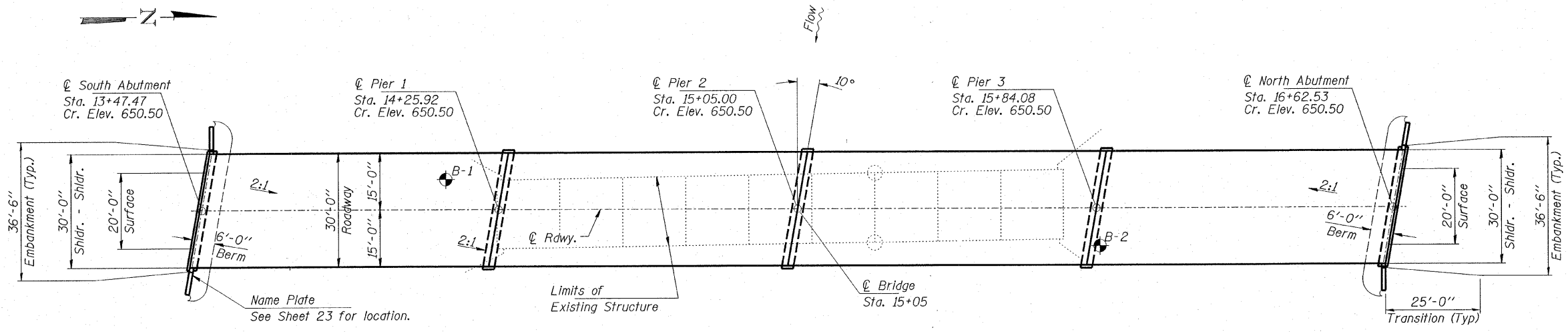
**GENERAL NOTES**

Layout of riprap may be varied in the field to suit ground conditions as directed by the Engineer.  
The Contractor shall drive two steel test piles in permanent locations, one at the South Abutment and one at Pier 3, as directed by the Engineer before ordering the remainder of the piles.  
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.  
See Sheet 26 for boring log.

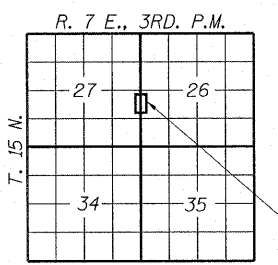
KASKASKIA RIVER  
BUILT 200 BY  
BOURBON ROAD DISTRICT  
DOUGLAS COUNTY  
SEC. 98-02120-00-BR  
F.A. PROJECT BR-05-041861  
STR. NO. 021-4544 LOADING HS 20

**NAME PLATE**

See Std. 515001



**PLAN**



**LOCATION SKETCH**

**WATERWAY INFORMATION**

Drainage Area = 355.0 Sq. Mi. Low Grade Elev. 649.0 @ Sta. 20+00 - 25+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.	
	10	10000	1820	3090	645.1	1.3	0.5	646.4	645.6
Design	15	10730	1820	3410	646.2	0.8	0.5	647.0	646.7
Base	100	15760	1820	3980	651.2	0.0	0.1	651.2	651.3
Overtopping	50	14120	1820	3980	649.3	0.2	0.2	649.5	649.5

**DESIGN STRESSES**

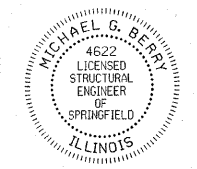
$f'_c = 5,000$  psi (Prestressed Beams)  
 $f'_{ci} = 4,000$  psi (Prestressed Beams)  
 $f_c = 1,400$  psi (Class SI Concrete)  
 $f'_s = 270,000$  psi (1/2" Low Lax. Strands)  
 $f_{si} = 201,960$  psi (1/2" Low Lax. Strands)  
 $f_s = 20,000$  psi (Reinf. Bars - Field Units)  
 $f_y = 60,000$  psi (Reinf. Bars - Precast Units)  
 $n = 9$  (Class SI Concrete)  
 Loading HS 20-44  
 Design Specifications: 2002 AASHTO and all applicable Interims  
 25#/Sq. Ft. included in dead load for future wearing surface.

**SEISMIC DATA**

Seismic Performance Category (SPC) = A  
 Bedrock Acceleration Coefficient (A) = 0.05  
 Site Coefficient (S) = 1.5

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".

*Michael G. Berry*  
 ILLINOIS STRUCTURAL NO. 4622



Expires 11-30-06

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	9,480		9,480
Concrete Structures	Cu. Yd.		185.9	185.9
Reinforcement Bars	Pound		12,770	12,770
Steel Railing, Type S1	Foot	641		641
Name Plates	Each		1	1
Riprap, Special	Ton		1,700	1,700
Steel Piles, HP 12X53	Foot		1,160	1,160
Test Pile Steel HP 12X53	Each		2	2
Underwater Structure Excavation Protection L-1	Each		1	1
Underwater Structure Excavation Protection L-2	Each		1	1
Underwater Structure Excavation Protection L-3	Each		1	1

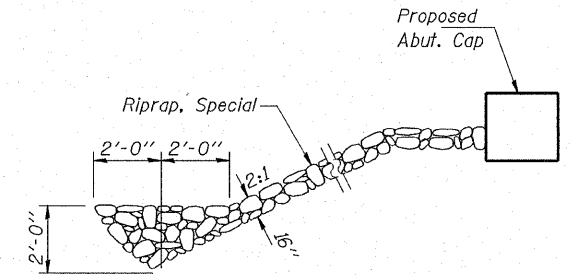
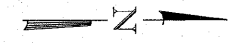
**HLR**  
 Rice, Berry and Associates  
 A Division of Hampton, Lenzini and Renwick, Inc.  
 Civil & Structural Engineers  
 3085 Stevenson Drive  
 Suite 201  
 Springfield, Illinois 62703  
 217-546-3400  
 P.O. Box 1036  
 DuQuoin, Illinois 62832  
 618-790-4637  
 Account Number 12-30-0008-1  
 Date: 01-05-06  
 DESIGNED: S.W.M. CHECKED: T.P.L. DRAWN: D.B.

**GENERAL PLAN AND ELEVATION**

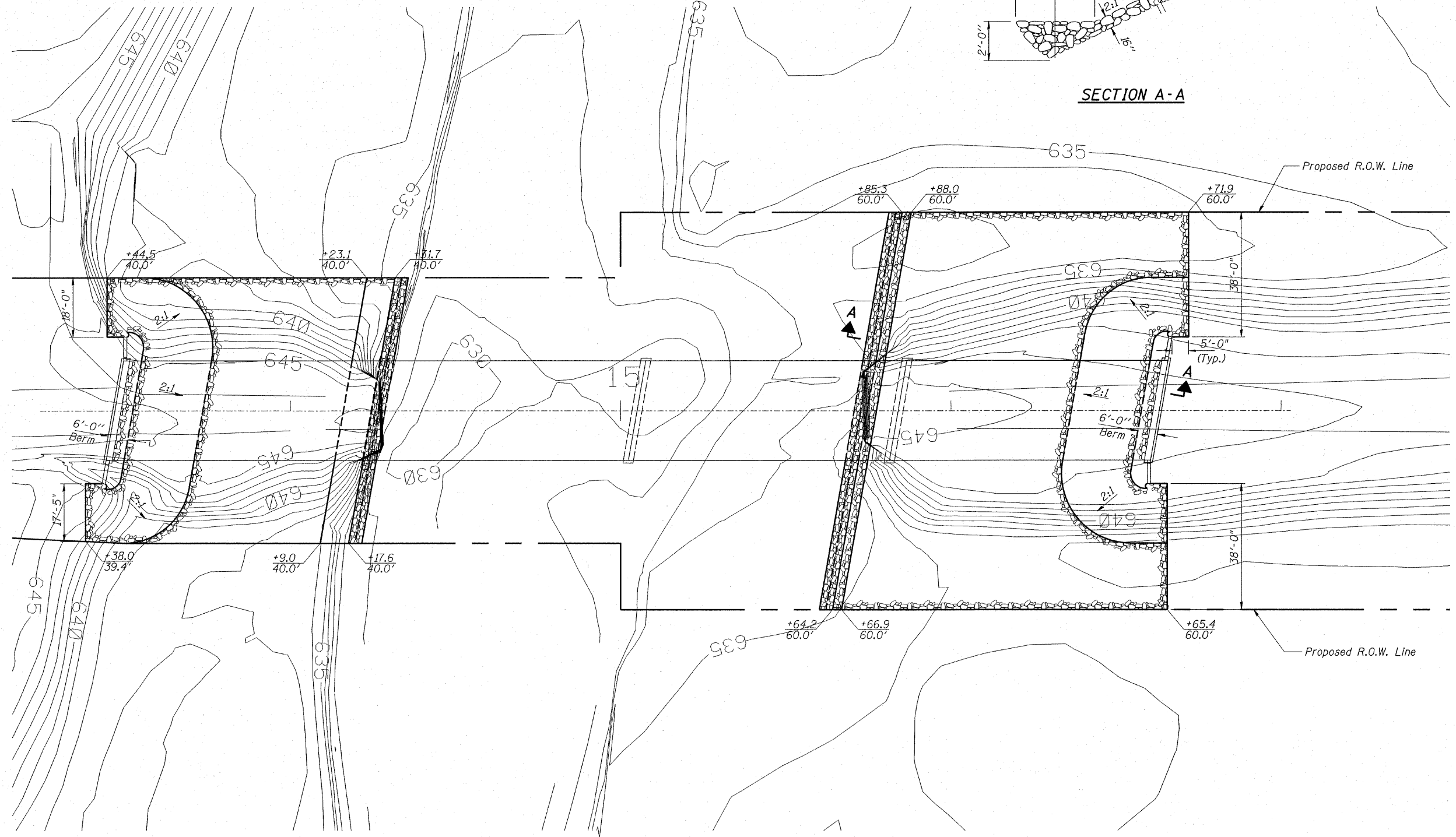
SECTION 98-02120-00-BR  
 BOURBON ROAD DISTRICT  
 DOUGLAS COUNTY  
 STATION 15+05

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 50	98-02120-00-BR	DOUGLAS	26	20
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 91314



SECTION A-A

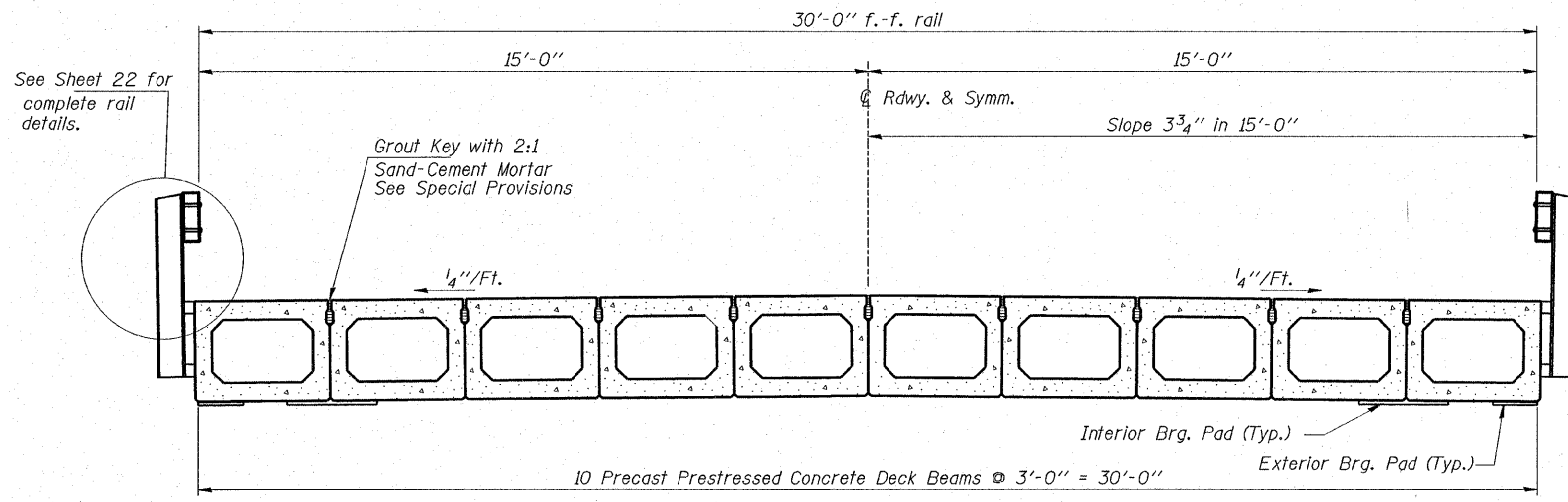


PLAN

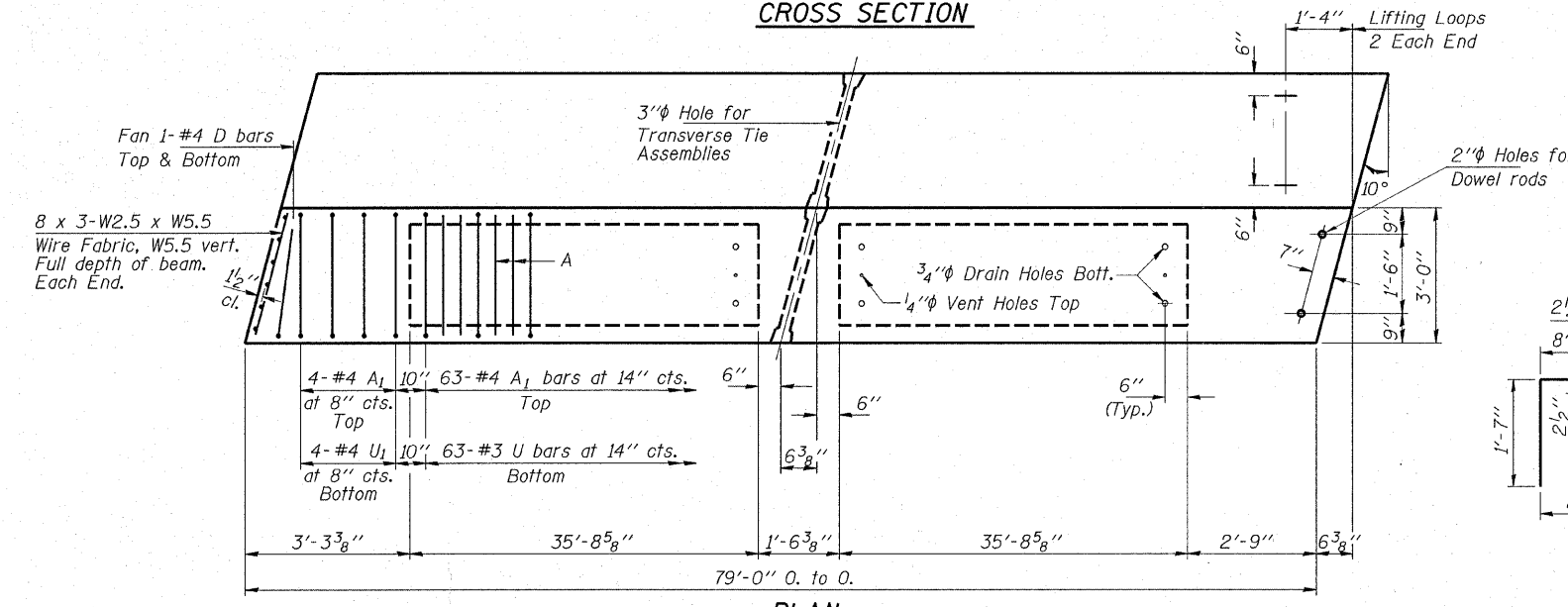
	Rice, Berry and Associates A Division of Hampton, Lenzi and Renwick, Inc. Civil & Structural Engineers 3085 Stevenson Drive Suite 201 Springfield, Illinois 62703 217-546-3400		<b>RIPRAP LAYOUT</b> <b>SECTION 98-02120-00-BR</b> <b>BOURBON ROAD DISTRICT</b> <b>DOUGLAS COUNTY</b> <b>STATION 15+05</b>
	Account Number 12-30-0008-1	P.O. Box 1036 DuQuoin, Illinois 62832 618-790-4637	
	Date: 01-05-06	DESIGNED: T.P.L.    CHECKED: S.W.M.    DRAWN: P.K.	



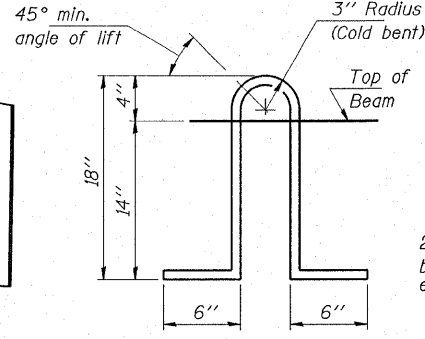
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET
T.R. 50	98-02120-00-BR	DOUGLAS	26	21
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT: BR-05-84180	



**CROSS SECTION**



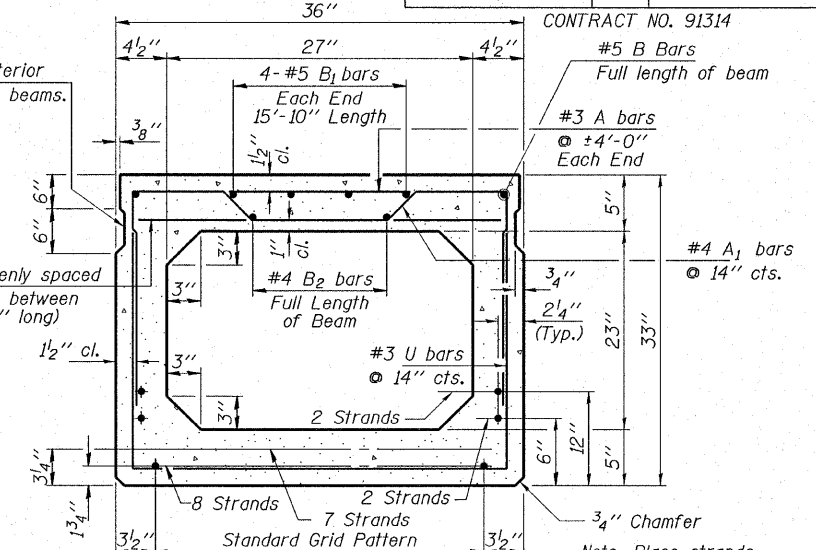
**PLAN**



**LIFTING LOOP DETAIL**

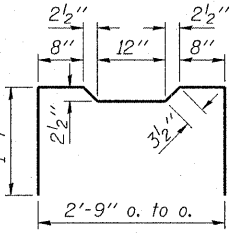
Approved alternate may be substituted for the above detail.

Note: The loop shall be formed in a manner such that all strands are engaged during lifting. Lifting Loops shall be cut and ground off. Burning of the Lifting Loops will not be allowed. Lifting Loops shall be ground off level with the surface of the deck beams and protected with a two-compound epoxy in accordance with Article 1025.03

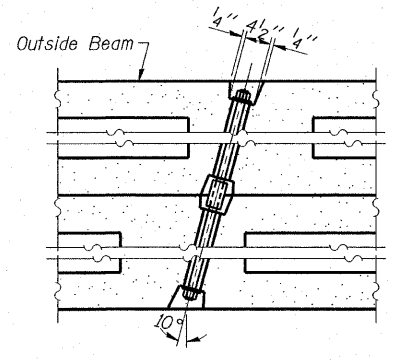


**TYPICAL SECTION**

18-1/2" Strands - Each Strand Stressed to 30,900 Lbs.  
10-Strands 1 3/4" up, 6-Strands 3/4" up,  
2-Strands 15" up,  
Expected Camber 1 1/2"



**BAR A1**

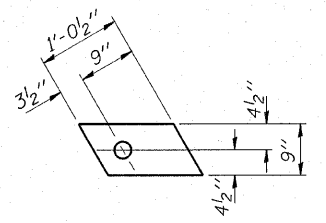


**TYPICAL TRANSVERSE TIE ASSEMBLY**

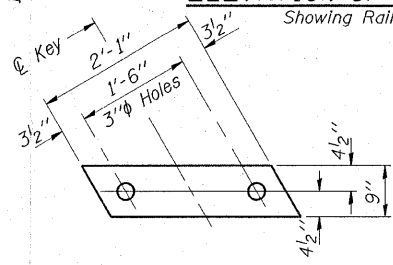
Span 1	2'-1 1/2"	9 Rail Post Spaces @ 8'-0" = 72'-0"	4'-10 1/2"
Span 2	3'-0 1/2"	9 Rail Post Spaces @ 8'-0" = 72'-0"	3'-11 1/2"
Span 3	3'-11 1/2"	9 Rail Post Spaces @ 8'-0" = 72'-0"	3'-0 1/2"
Span 4	4'-10 1/2"	9 Rail Post Spaces @ 8'-0" = 72'-0"	2'-1 1/2"

**ELEVATION OF OUTSIDE BEAMS**

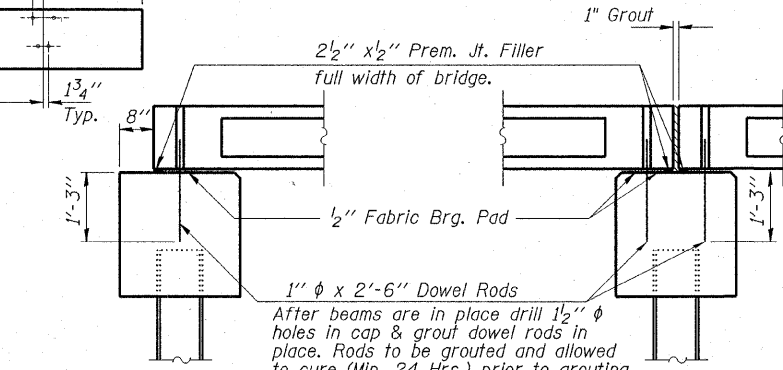
Showing Rail Post Spacing



**FABRIC BEARING PAD**  
(Exterior)  
(16 Req'd)



**FABRIC BEARING PAD**  
(Interior)  
(72 Req'd)



**SECTION AT ABUTMENTS**

**SECTION AT PIERS**

**NOTES**

Prestressing steel shall be uncoated high strength, low-relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 3-1/2" diameter 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 AASHTO M-31 or M-322 Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" 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.  
Approximate weight of one beam = 48,600 lbs.

**BILL OF MATERIAL**

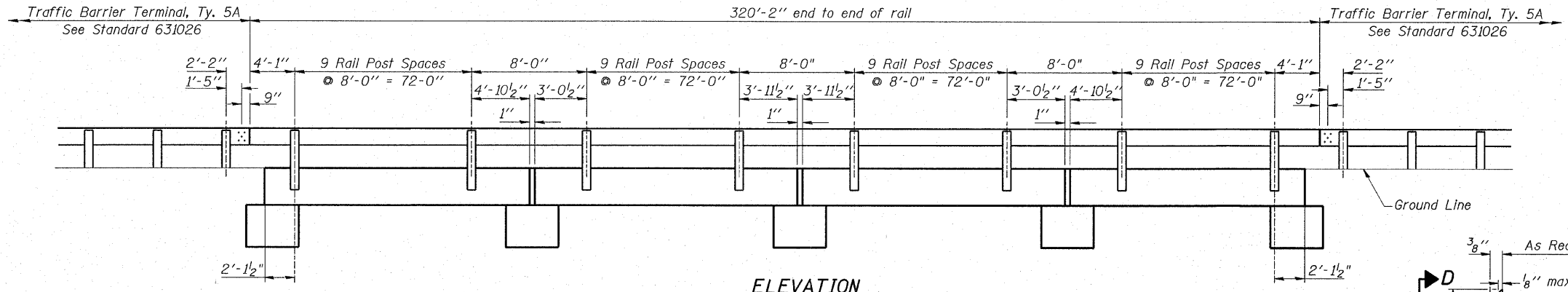
ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	9,480

**HLR**

Rice, Berry and Associates  
A Division of Hampton, Lenzini and Renwick, Inc.  
Civil & Structural Engineers  
3085 Stevenson Drive  
Suite 201  
Springfield, Illinois 62703  
217-546-3400

Account Number: 12-30-0008-1  
Date: 01-05-06  
DESIGNED: S.W.M. | CHECKED: T.P.L. | DRAWN: D.B.

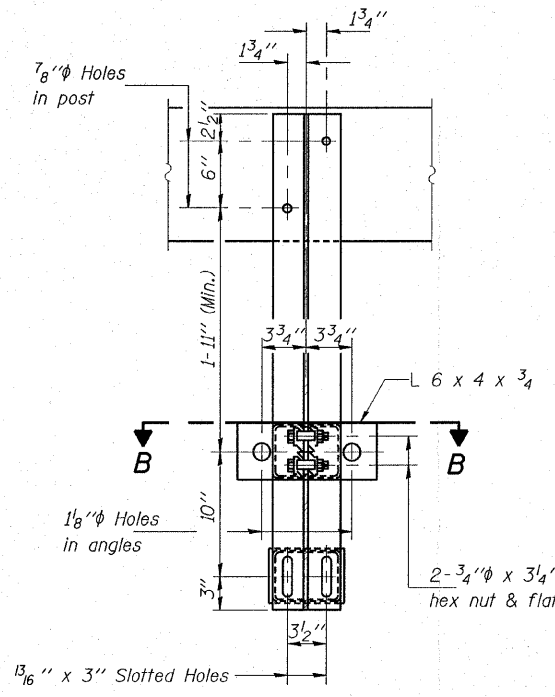
**SUPERSTRUCTURE**  
**SECTION 98-02120-00-BR**  
**BOURBON ROAD DISTRICT**  
**DOUGLAS COUNTY**  
**STATION 15+05**



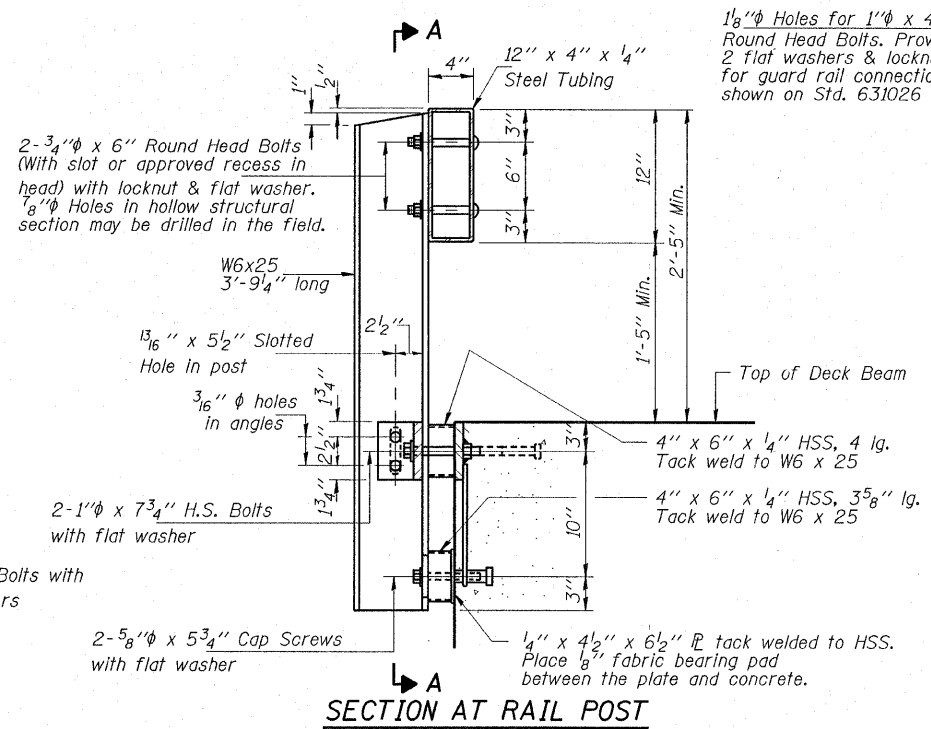
**ELEVATION**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 50	98-02120-00-BR	DOUGLAS	26	22
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT - BR-08-041081	

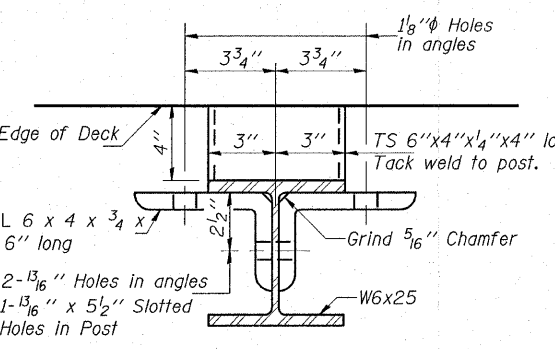
CONTRACT NO. 91314



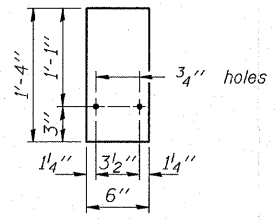
**SECTION A-A**



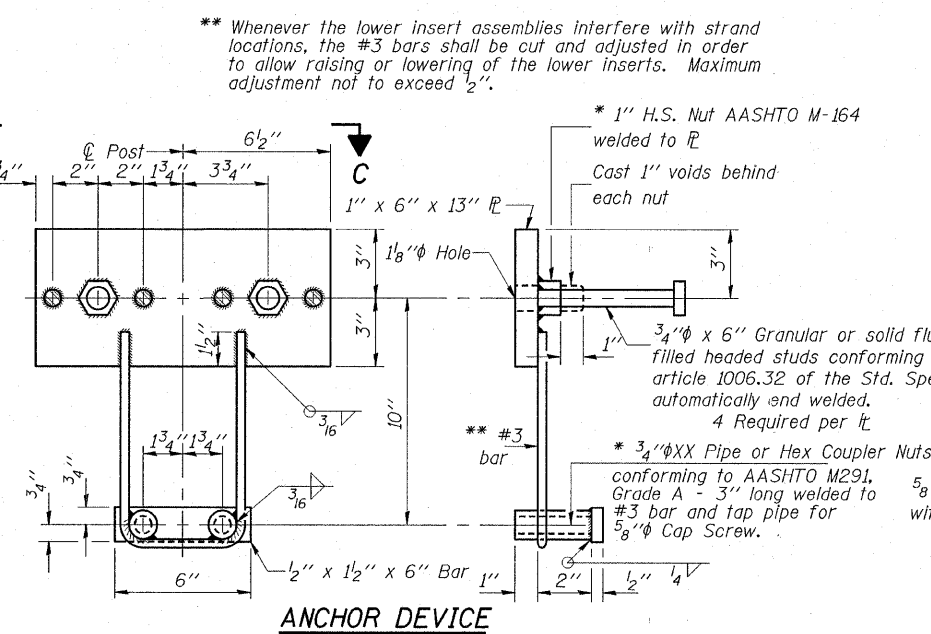
**SECTION AT RAIL POST**



**SECTION B-B**

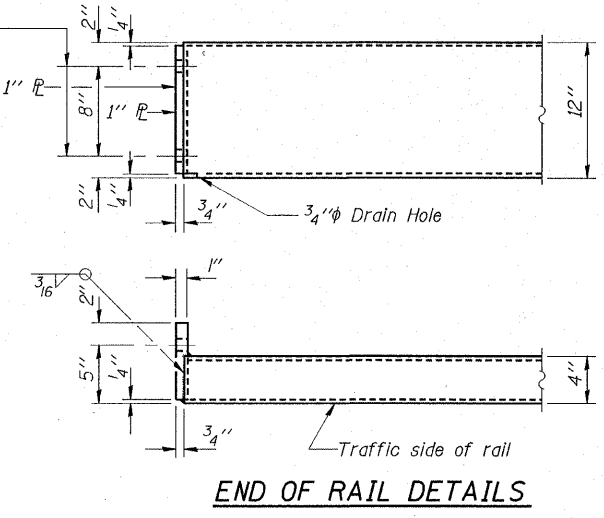


**SHIM DETAIL**

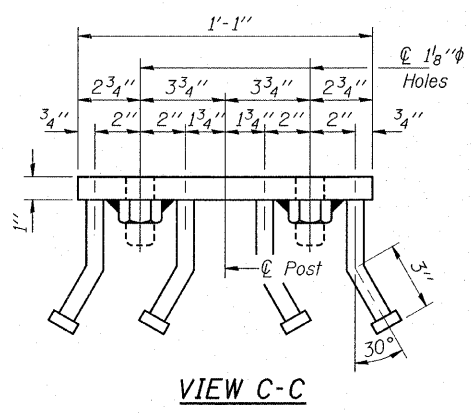


**ANCHOR DEVICE**

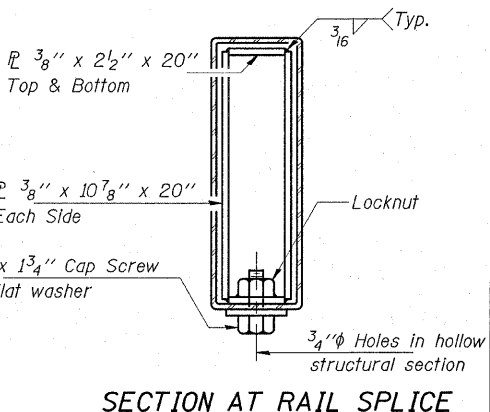
\* Threaded areas shall be plugged or blocked off during casting of beam.



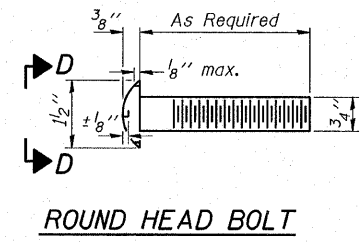
**END OF RAIL DETAILS**



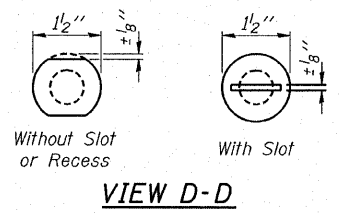
**VIEW C-C**



**SECTION AT RAIL SPLICE**



**ROUND HEAD BOLT**



**VIEW D-D**

**NOTES**

Hollow structural sections shall conform to the requirements of A.S.T.M. designation A-500 Grade B Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of A.A.S.H.T.O. designation M-270 Grade 36 except posts and angles shall conform to A.A.S.H.T.O. M-270 Grade 50.

Bolts, cap screws, and nuts shall conform to the requirements of A.S.T.M. designation A-307 except for high strength bolts, nuts and washers noted which shall conform to A.A.S.H.T.O. designation M-164.

All bolts, nuts, cap screws, washers and lockwashers shall be galvanized in accordance with A.A.S.H.T.O. designation M-232.

All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with A.S.T.M. A-385 and A.A.S.H.T.O. M-111. Galvanized rail shall not be painted.

Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per foot for STEEL RAILING, TYPE S1.

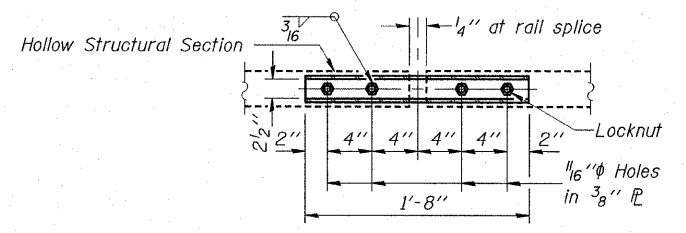
All field drilled holes shall be coated with an approved zinc rich paint before erection.

The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place 1/8" fabric bearing pad between the post and concrete.

The 3/4" diameter high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Art. 505.04(f)(3) of the Standard Specifications. The 1" diameter high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" diameter cap screws in bottom of posts shall be tightened to a snug fit only, after the 1" diameter high strength bolts have been tightened in accordance with Article 505.04(f)(3).

Hollow structural sections shall meet the longitudinal C.V.N. requirements of 15 Ft.-Lbs at 0° F.

For multi-span bridges, sufficient 1/4" x 6" x 1'-4" galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to Steel Railing.



**PLAN-BOTT. SPLICE TYPICAL**

**BILL OF MATERIAL**

Item	Unit	Quantity
Steel Railing, Type S1	Foot	641

**HLR**

Rice, Berry and Associates  
A Division of Hampton,  
Lenzini and Renwick, Inc.  
Civil & Structural Engineers  
3085 Stevenson Drive  
Suite 201  
Springfield, Illinois 62703  
217-546-3400

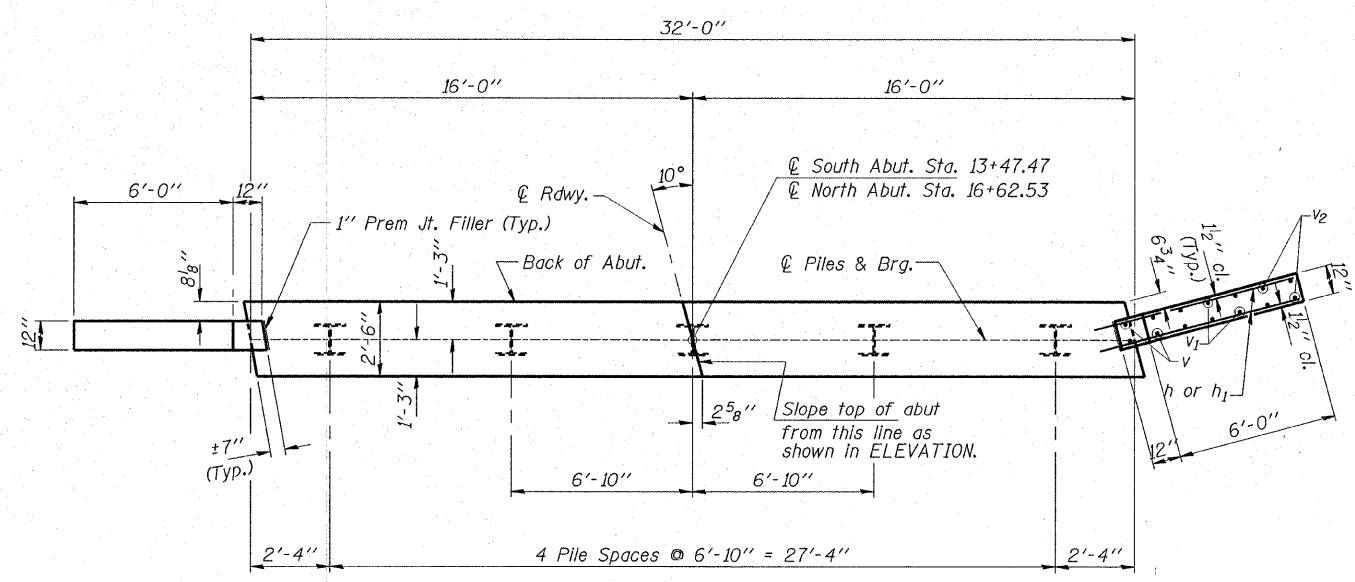
Account Number  
12-30-0008-1  
Date: 01-05-06  
DESIGNED: S.W.M. CHECKED: T.P.L. DRAWN: D.B.

**RAILING DETAILS**  
**SECTION 98-02120-00-BR**  
**BOURBON ROAD DISTRICT**  
**DOUGLAS COUNTY**  
**STATION 15+05**

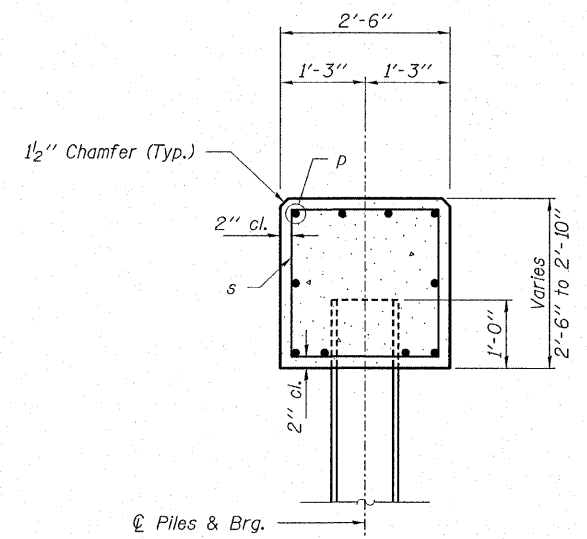


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
T.R. 50	98-02120-00-BR	DOUGLAS	26	23
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT - BR-08-841000	

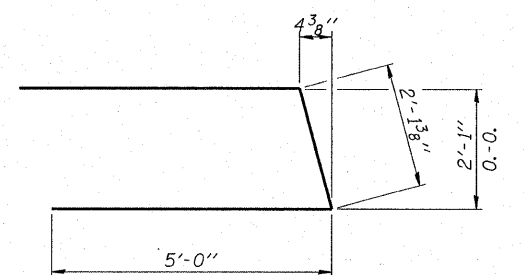
CONTRACT NO. 91314



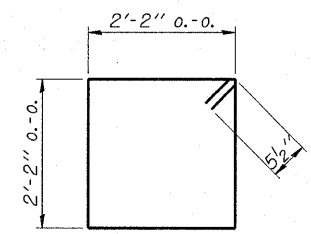
PLAN



SECTION A-A

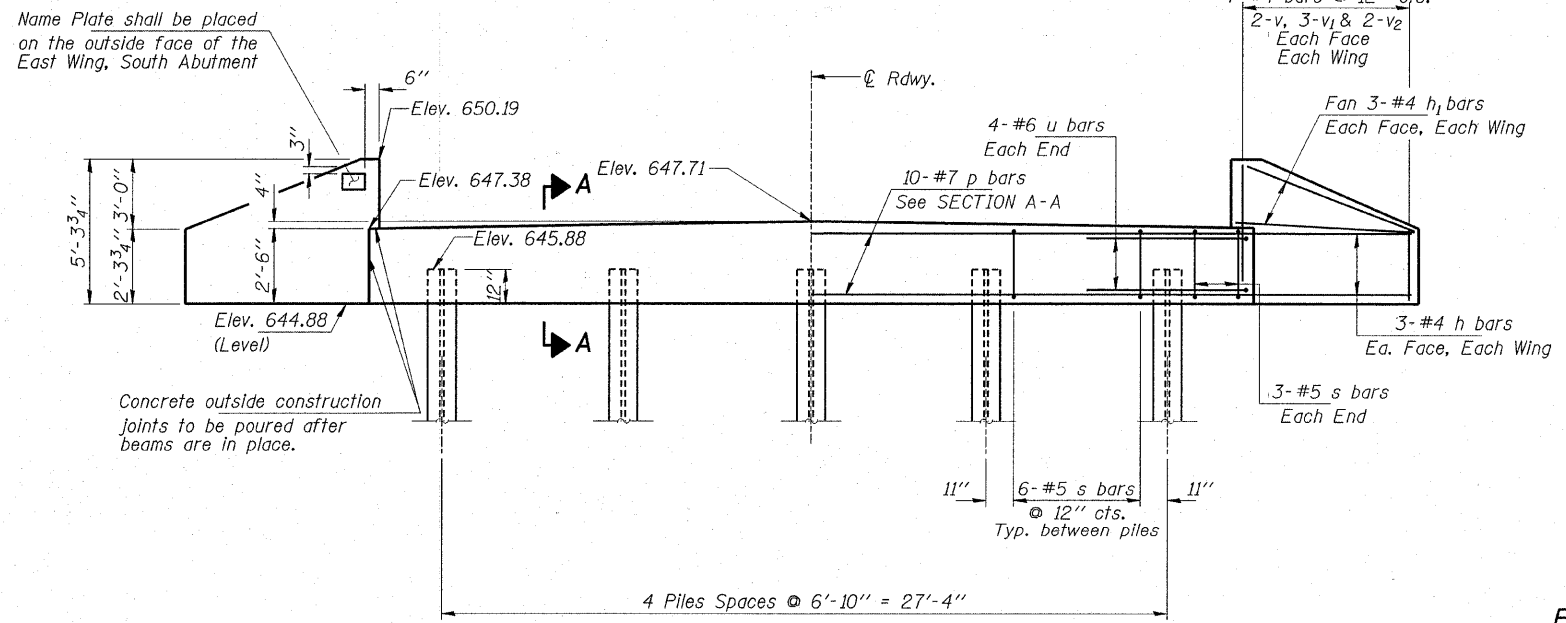


BAR u



BAR s

Note: Extend h bars into pile cap.



ELEVATION

BILL OF MATERIAL - 2 ABUTS.

BAR	NO.	SIZE	LENGTH	SHAPE
h	24	#5	7'-9"	—
h1	24	#5	6'-9"	—
p	20	#7	31'-9"	—
s	60	#5	9'-7"	□
u	16	#6	12'-1"	U
v	16	#4	4'-9"	—
v1	24	#4	3'-3"	—
v2	16	#4	2'-3"	—
Concrete Structures			Cu. Yd.	19.8
Reinforcement Bars			Pound	2,680
Steel Pile HP 12x53			Foot	360
Test Pile Steel HP 12x53			Each	1

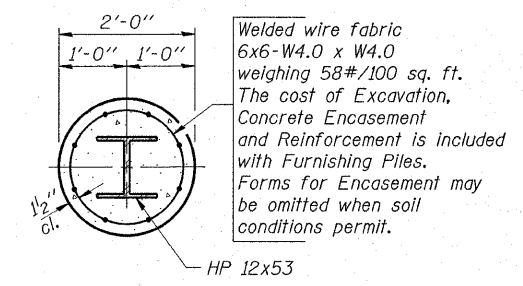
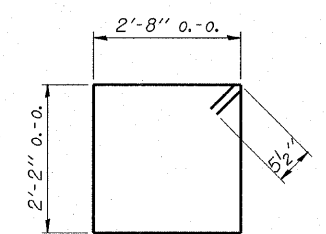
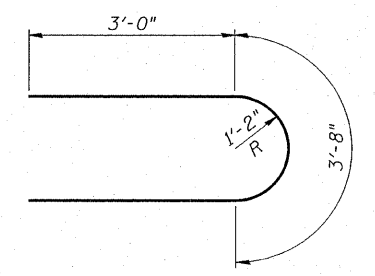
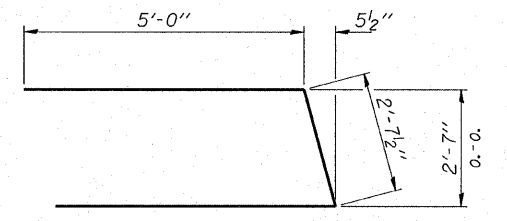
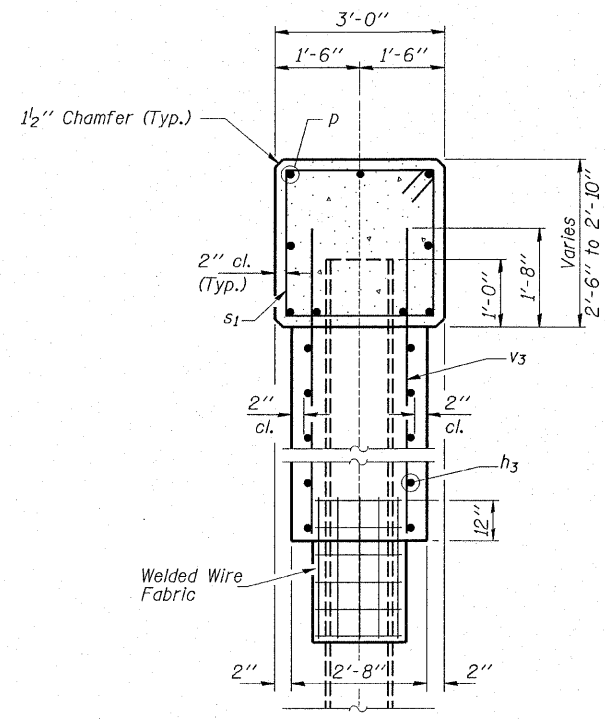
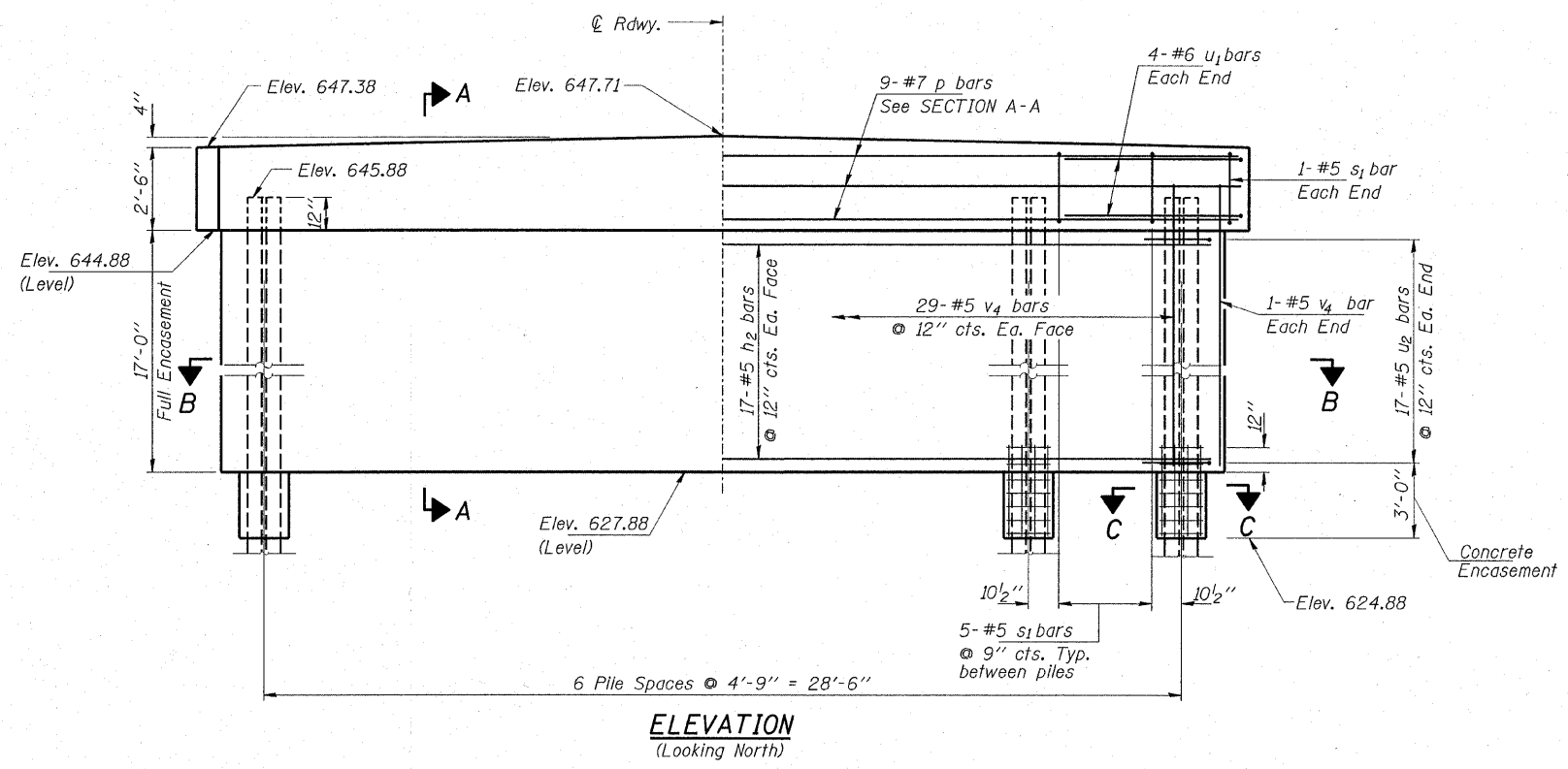
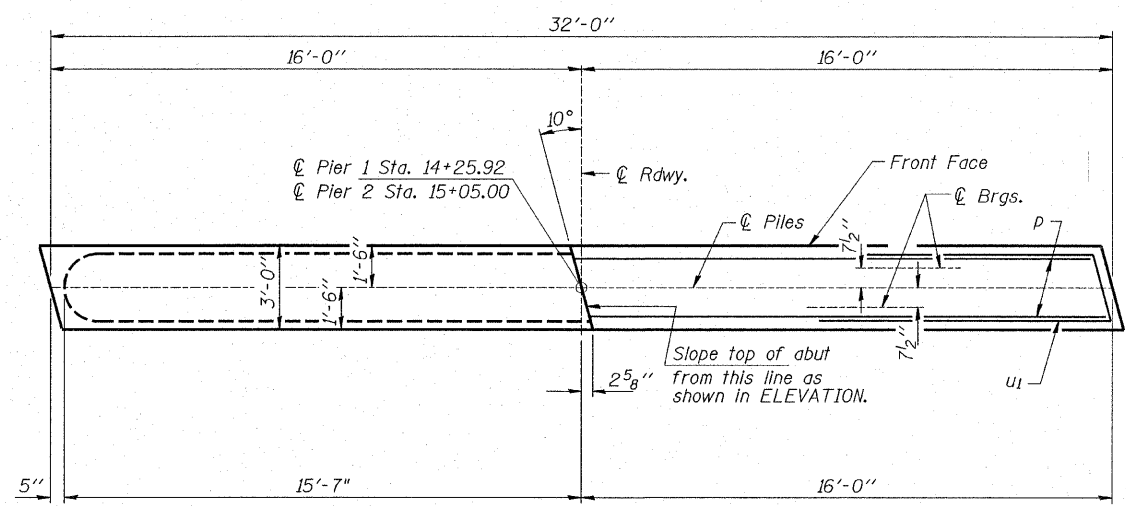
PILE DATA

Type \_\_\_\_\_ Steel Pile HP 12x53  
 No. Req'd. \_\_\_\_\_ 10  
 Capacity \_\_\_\_\_ 46 Tons/Pile (Drive to 70 Tons)  
 Est. Length \_\_\_\_\_ 40 Feet/Pile

\* Includes one Steel HP 12x53 Test Pile to be driven in a permanent location at the South Abutment.

**HLR**  
 Rice, Berry and Associates  
 A Division of Hampton, Lenzini and Renwick, Inc.  
 Civil & Structural Engineers  
 3085 Stevenson Drive  
 Suite 201  
 Springfield, Illinois 62703  
 217-546-3400  
 Account Number 12-30-0008-1  
 Date: 01-05-06  
 P.O. Box 1036  
 DuQuoin, Illinois 62832  
 618-790-4637  
 DESIGNED: S.W.M. CHECKED: T.P.L. DRAWN: D.B.

**ABUTMENTS**  
**SECTION 98-02120-00-BR**  
**BOURBON ROAD DISTRICT**  
**DOUGLAS COUNTY**  
**STATION 15+05**



Welded wire fabric 6x6-W4.0 x W4.0 weighing 58#/100 sq. ft. The cost of Excavation, Concrete Encasement and Reinforcement is included with Furnishing Piles. Forms for Encasement may be omitted when soil conditions permit.

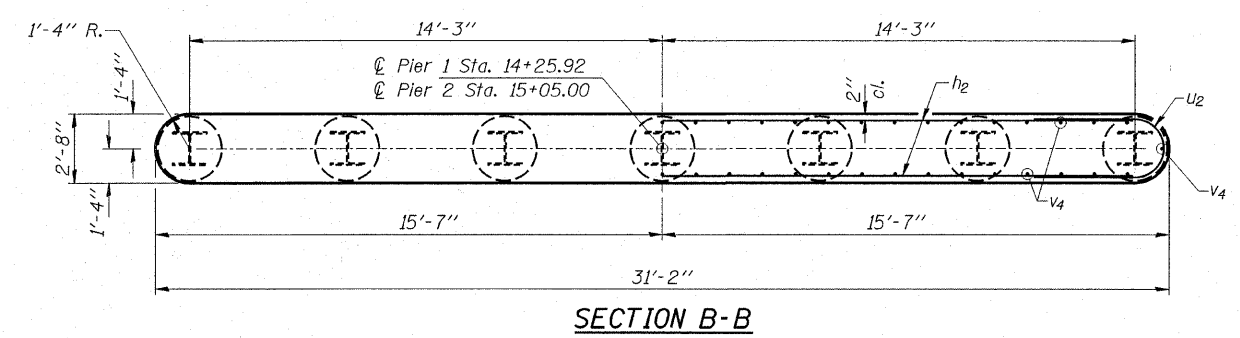
**BILL OF MATERIAL - PIER 1 & 2**

BAR	NO.	SIZE	LENGTH	SHAPE
h <sub>2</sub>	68	#5	28'-6"	
p	18	#7	31'-9"	
s <sub>1</sub>	64	#5	10'-7"	□
u <sub>1</sub>	16	#6	12'-8"	U
u <sub>2</sub>	68	#5	9'-8"	U
v <sub>3</sub>	120	#5	18'-6"	
Concrete Structures			Cu. Yd.	120.7
Reinforcement Bars			Lbs.	7,200
Steel Piles HP 12x53			Foot	560
Underwater Struct. Excavation Protection - L1			Each	1
Underwater Struct. Excavation Protection - L2			Each	1

**PILE DATA**

Type ----- Steel Pile HP12x53  
 No. Req'd. ----- 14  
 Capacity ----- 70 Tons/Pile  
 Estimated Lengths ----- 40 Feet/Pile

The Contractor shall temporarily support the piers until the beams are placed and dowel bars are grouted. Cost included in driving piles.



**HLR**

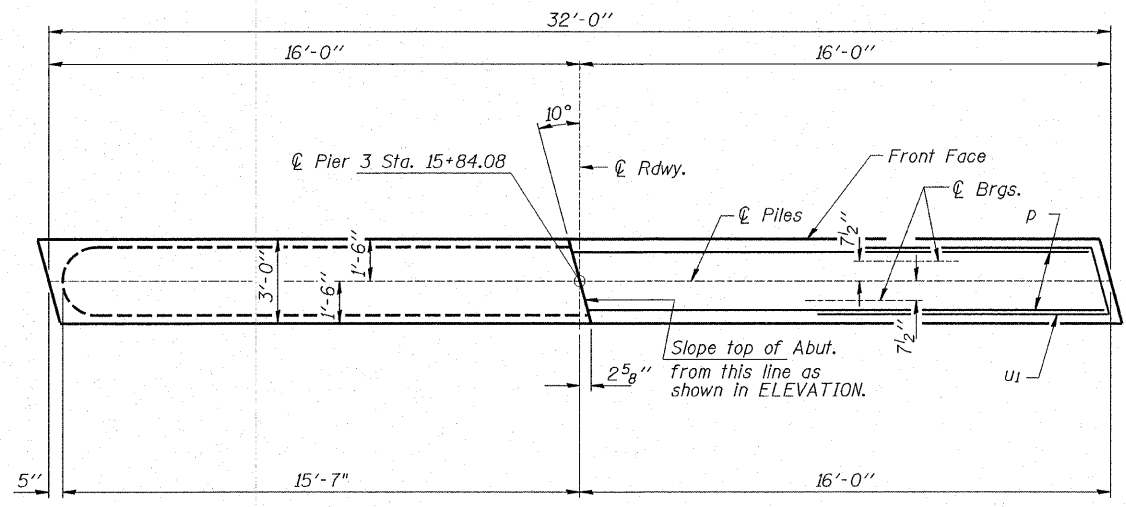
Rice, Berry and Associates  
 A Division of Hampton, Lenzini and Renwick, Inc.  
 Civil & Structural Engineers  
 3085 Stevenson Drive  
 Suite 201  
 Springfield, Illinois 62703  
 217-546-3400

Account Number: 12-30-0008-1  
 Date: 01-05-06  
 P.O. Box 1036  
 DuQuoin, Illinois 62832  
 618-790-4637

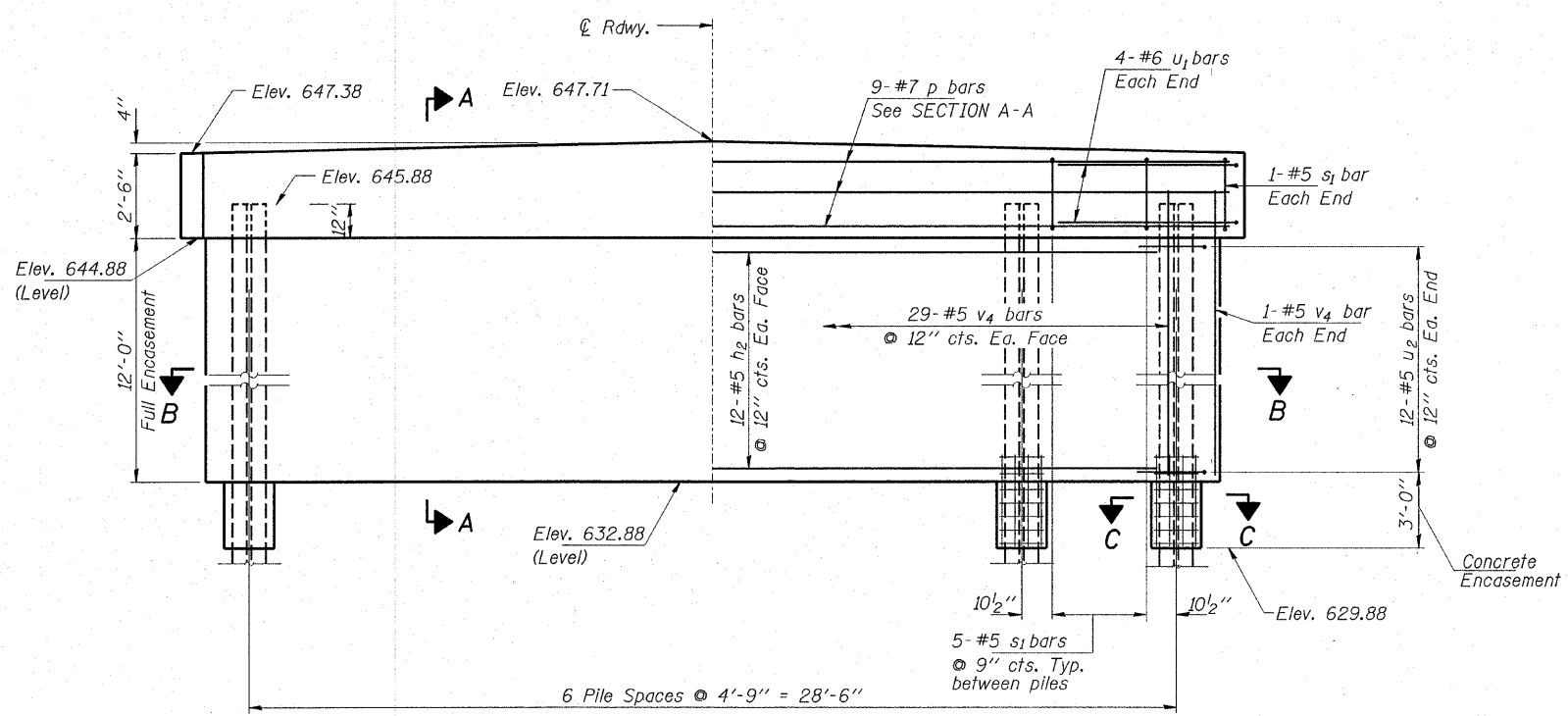
DESIGNED: S.W.M. CHECKED: T.P.L. DRAWN: D.B.

**PIERS 1 AND 2**  
**SECTION 98-02120-00-BR**  
**BOURBON ROAD DISTRICT**  
**DOUGLAS COUNTY**  
**STATION 15+05**

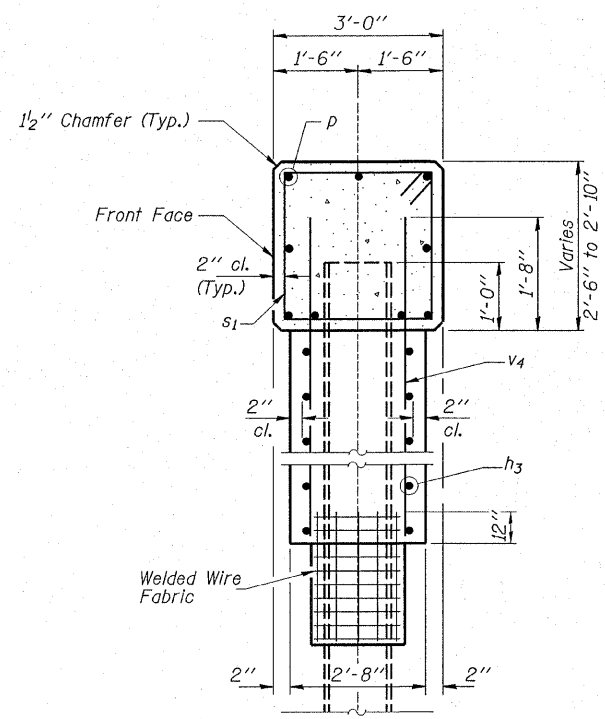
CONTRACT NO. 91314



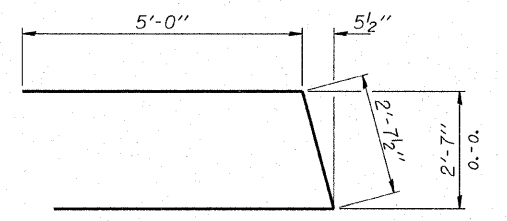
PLAN



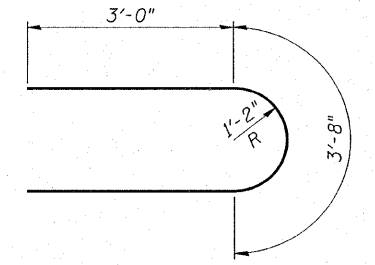
ELEVATION  
(Looking North)



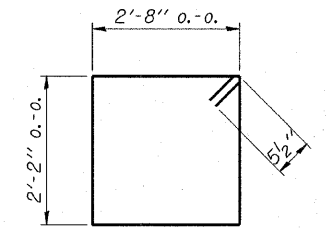
SECTION A-A



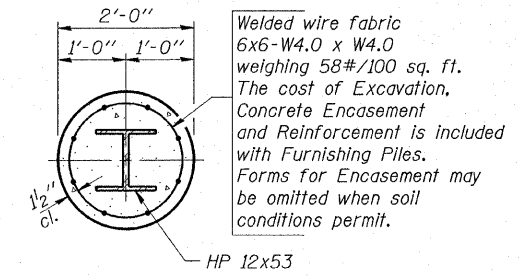
BAR u1



BAR u2



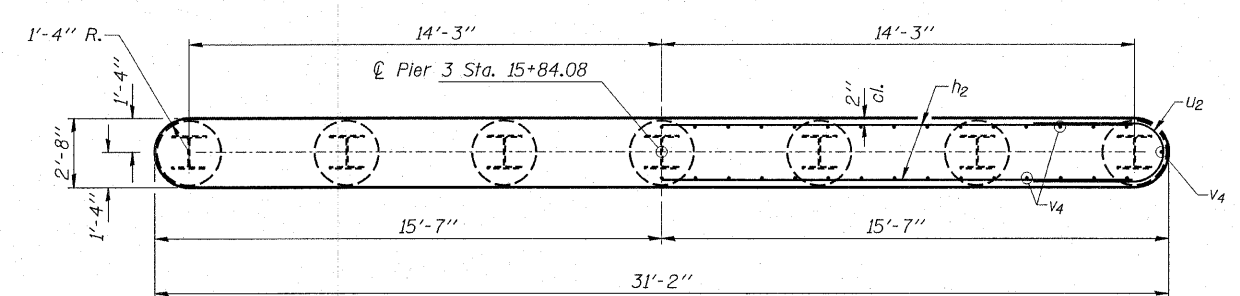
BAR s1



SECTION C-C

BILL OF MATERIAL - PIER 3

BAR	NO.	SIZE	LENGTH	SHAPE
h2	24	#5	28'-6"	
p	9	#7	31'-9"	
s1	32	#5	10'-7"	□
u1	8	#6	12'-8"	≡
u2	24	#5	9'-8"	≡
v4	60	#5	13'-6"	
Concrete Structures			Cu. Yd.	45.4
Reinforcement Bars			Lbs.	2,890
Steel Piles HP 12x53			Foot	240
Test Pile Steel HP 12x53			Each	1
Underwater Struct. Excavation Protection - L3			Each	1



SECTION B-B

PILE DATA

Type ----- Steel Pile HP12x53  
 No. Req'd ----- 7  
 Capacity ----- 70 Tons/Pile  
 Estimated Lengths ----- 40 Feet/Pile

\*Includes one Steel HP 12x53 Test Pile to be driven in a Permanent Location.

The Contractor shall temporarily support the piers until the beams are placed and dowel bars are grouted. Cost included in driving piles.

**ILR**  
 Rice, Berry and Associates  
 A Division of Hampton, Lenzi and Renwick, Inc.  
 Civil & Structural Engineers  
 3085 Stevenson Drive  
 Suite 201  
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 217-546-3400  
 Account Number: P.O. Box 1036  
 12-30-0008-1 DuQuoin, Illinois 62832  
 Date: 01-05-06 618-790-4637  
 DESIGNED: S.W.M. CHECKED: T.P.L. DRAWN: D.B.

**PIER 3**  
 SECTION 98-02120-00-BR  
 BOURBON ROAD DISTRICT  
 DOUGLAS COUNTY  
 STATION 15+05

