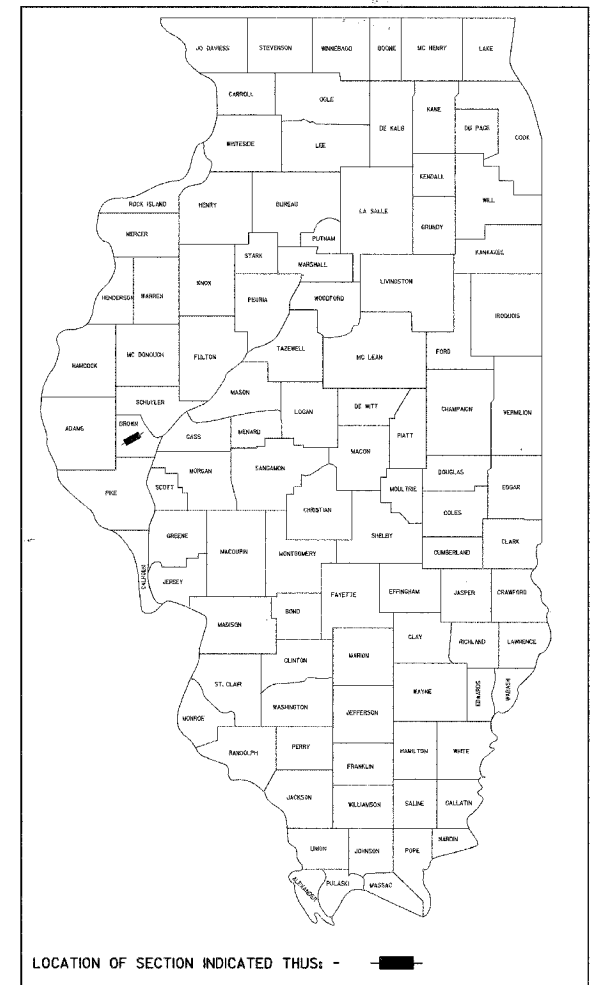


STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANS FOR PROPOSED BRIDGE REPLACEMENT AND REHABILITATION PROGRAM

ROUTE NO. F.A.S. 585	SECTION 02-00063 -00-BR	COUNTY BROWN	TOTAL SHEETS 16	SHEET NO. 1
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT - BHS-585(104)	
CONTRACT NO. 93399				



- INDEX OF SHEETS**
1. COVER SHEET
 2. SUMMARY OF QUANTITIES AND TYPICAL CROSS SECTIONS
 3. PLAN AND PROFILE
 - 4.-7. STATION CROSS SECTIONS
 - 8.-16. BRIDGE PLANS

SCALES

PLAN	0' = 20'
PROFILE HORIZ.	0' = 20'
PROFILE VERT.	0' = 5'
CROSS SECTIONS	0' = 5'

PROJECT BHS-585(104) SECTION 02-00063-00-BR BROWN COUNTY C.H. 11 / F.A.S. 585 C-96-231-04

HIGHWAY STANDARDS:

- 280001-02 TEMPORARY EROSION CONTROL ITEMS
- 515001-02 NAME PLATE FOR BRIDGES
- 630001-05 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
- 702001-05 TRAFFIC CONTROL DEVICES
- BLR 21-6 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

UTILITIES

ADAMS ELECTRIC CO-OPERATIVE
U.S. HIGHWAY 24 EAST
P.O. BOX 247
CAMP POINT, IL 62320-0247

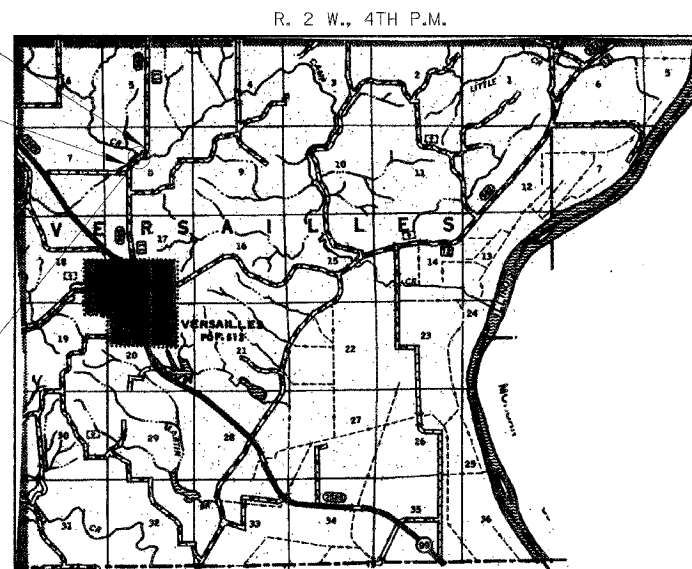
VERIZON
300 WEST BEECHER
JACKSONVILLE, IL 62650

DESIGN FUNCTIONAL CLASSIFICATION:
MAJOR COLLECTOR (NON-URBAN)
DESIGN TRAFFIC: 350 ADT
DESIGN SPEED: 40 M.P.H.

IMPROVEMENT ENDS
STATION 12+40

IMPROVEMENT BEGINS
STATION 8+50

STATION 10+00 - SPECIAL BRIDGE DESIGN
REINFORCED CONCRETE DECK REPLACEMENT
SINGLE SPAN @ 37'-2", 25'-6" RDWY.
SKEW = 25°
EXISTING STRUCTURE NO. 005-3020



LAYOUT

APPROXIMATE SCALE: 0 = 1 MILE
GROSS LENGTH = NET LENGTH OF SECTION = 390 FEET = 0.074 MILES



APPROVED: *Julie A. ...* 20 05
COUNTY ENGINEER

PASSED: *July 31, 20 05*
DISTRICT SIX ENGINEER OF LOCAL ROADS & STREETS

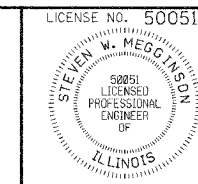
PASSED: *July 21, 20 05*
W.R. ...
DISTRICT SIX ENGINEER OF CONSTRUCTION

Releasing For Bid Based on Limited Review
July 21, 20 05
Christine M. ...
DEPUTY DIRECTOR OF HIGHWAYS
REGION FOUR ENGINEER
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE: *June 10, 2005*

BY: *Steven W. ...*

LICENSE EXPIRES: NOVEMBER 30, 2005



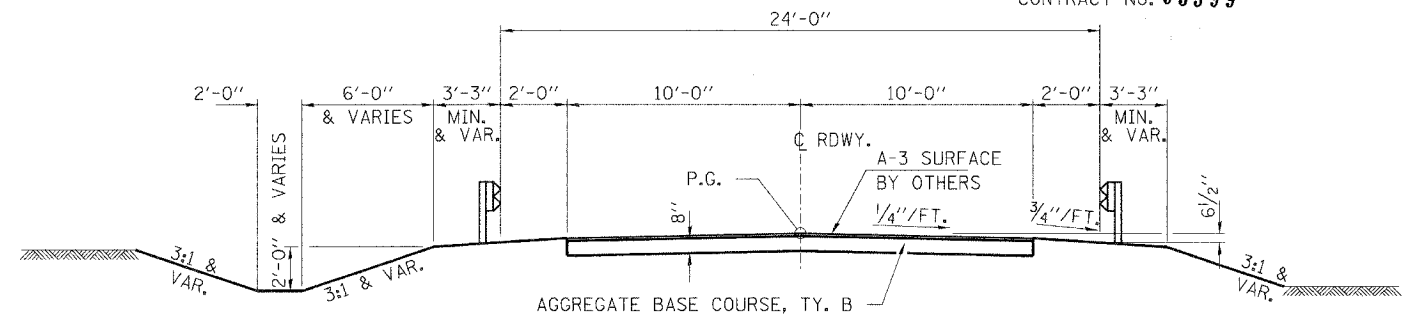
HLR
Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
Civil & Structural Engineers
801 S. Durkin Drive
Springfield, Illinois 62704
217-546-3400
P.O. Box 1036
DuQuoin, Illinois 62832
618-790-4637

ROUTE NO.	SECTION	COUNTY	SHEET	TOTAL SHEETS
F.A.S. 585	02-00063-00-BR	BROWN	16	2
FED. ROAD DIST. NO.	ILL. ROAD DIST. NO.	FED. AID PROJECT	BHS-585(104)	

CONTRACT NO. 93399

SUMMARY OF QUANTITIES			
CODE NO	ITEM	UNIT	QUANTITY
20200100	EARTH EXCAVATION	CU YD	25
20400800	FURNISHED EXCAVATION	CU YD	20
> 20900310	POROUS GRANULAR BACKFILL	TON	60
> 25001000	SEEDING CLASS 2 (SPECIAL)	ACRE	0.2
> 28000400	PERIMETER EROSION BARRIER	FOOT	510
> 28101700	RIPRAP, SPECIAL	TON	50
35101400	AGGREGATE BASE COURSE, TYPE B	TON	65
> 50102400	CONCRETE REMOVAL	CU YD	3.4
> 50104720	REMOVAL OF EXISTING CONCRETE DECK	EACH	1
50300255	CONCRETE SUPERSTRUCTURE	CU YD	30.9
50300260	BRIDGE DECK GROOVING	SQ YD	112
50300300	PROTECTIVE COAT	SQ YD	124
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
50500505	STUD SHEAR CONNECTORS	EACH	540
> 50600300	CLEANING AND PAINTING STEEL BRIDGE	L SUM	1
> 50606400	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	7,945
50900205	STEEL RAILING, TYPE S1	FOOT	86
51500100	NAME PLATES	EACH	1
63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	250
63100075	TRAFFIC BARRIER TERMINAL TYPE 5A	EACH	4
> 63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	3
> 70101830	TRAFFIC CONTROL AND PROTECTION STANDARD BLR 21	L SUM	1
> 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	3
> XX005543	STEEL PLATE BEAM GUARDRAIL REMOVAL AND SALVAGE	FOOT	161
67100100	MOBILIZATION	L SUM	1

SEE SPECIAL PROVISIONS

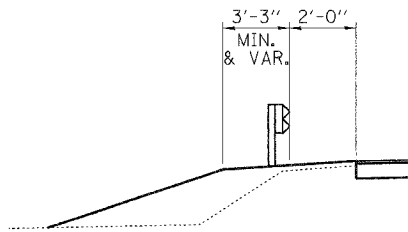


SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

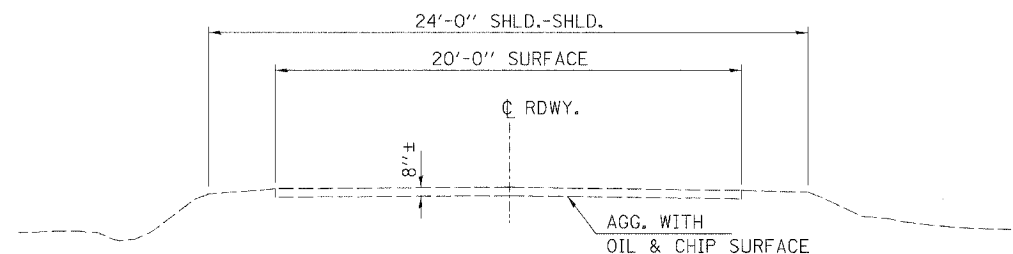
ROAD CLASSIFICATION - MAJOR COLLECTOR (NON-URBAN)
CURRENT ADT 325
DESIGN SPEED: 40 M.P.H.

SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

TYPICAL CROSS SECTION
STA. 9+50 TO 10+50



SHOULDER WIDENING FOR
GUARDRAIL & T.B.T.
SEE STD. 631031 FOR DETAILS.
STA. 8+50 TO STA. 9+50
STA. 10+50 TO STA. 12+40



EXISTING CROSS SECTION

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2002," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- ALL CLEARING AND GRUBBING AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. REMOVAL OF EXISTING PAVEMENT MATERIAL SHALL BE PAID FOR AS EARTH EXCAVATION.
- 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, OR A 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. 2.05 TON/CU YD
 POROUS GRANULAR BACKFILL 2.00 TON/CU YD
 STONE RIPRAP 1.75 TON/CU YD
- REMOVAL OF EXISTING CONCRETE DECK WILL INCLUDE CONCRETE DECK AND BRIDGE RAIL. SEE SPECIAL PROVISIONS.
- THE AREA TO BE SEEDDED SHALL CONSIST OF ALL DISTURBED EARTH SURFACES WITHIN THE RIGHT OF WAY AS DIRECTED BY THE ENGINEER. ESTIMATED QUANTITY = 0.2 ACRES

EARTHWORK SCHEDULE						
LOCATION	EARTH EXCAVATION (CU YD)	SHRINKAGE FACTOR	PERCENT USED	AVAILABLE EXCAVATION (CU YD)	EMBANKMENT REQUIRED (CU YD)	EARTHWORK BALANCE (CU YD)
STA. 8+25 TO STA. 9+80.05	13	25%	100%	10	10	-1
STA. 9+80.05 TO STA. 10+20.53	-	25%	100%	-	-	-
STA. 10+20.53 TO STA. 12+40	11	25%	100%	8	19	-11
CHANNEL EXCAVATION ENTRANCES	0	25%	70%	0	-	0
TOTAL	24			18	30	-12
USE:	25					20

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

TRAFFIC BARRIER TERMINAL, TYPE 5A	
LOCATION	EACH
LT. STA. 9+59.5 TO STA. 9+72.7	1
RT. STA. 9+71.4 TO STA. 9+84.6	1
LT. STA. 10+15.9 TO STA. 10+29.1	1
RT. STA. 10+41.0 TO STA. 10+27.8	1
TOTAL	4

STEEL PLATE BEAM GUARD RAIL, TYPE A	
LOCATION	FOOT
LT. STA. 9+09.5 TO STA. 9+59.5	50
RT. STA. 9+46.4± TO STA. 9+71.4 **	25
LT. STA. 10+29.1 TO STA. 11+54.1	125
RT. STA. 10+41.0 TO STA. 10+91.0	50
TOTAL	250

TRAFFIC BARRIER TERMINAL, TY 1, SPL (TANG)	
LOCATION	EACH
LT. STA. 8+59.5 TO STA. 9+09.5	1
LT. STA. 11+54.1 TO STA. 12+04.1	1
RT. STA. 10+91.0 TO STA. 11+41.0	1
TOTAL	3

** CONNECTION TO EXISTING STEEL PLATE BEAM GUARDRAIL INCLUDED IN COST OF STEEL PLATE BEAM GUARDRAIL, TYPE A.

S.P.B. GUARDRAIL REMOVAL & SALVAGE	
LOCATION	FOOT
LT. STA. 9+33.79 TO STA. 9+74.60	41
RT. STA. 9+46.35± TO STA. 9+84.75	38
LT. STA. 10+14.59 TO STA. 10+55.29	41
RT. STA. 10+25.31 TO STA. 10+66.05	41
TOTAL	161

HLR
 Rice, Berry and Associates
 A Division of Hampton, Lenzini and Renwick, Inc.
 Civil & Structural Engineers
 801 S. Durkin Drive
 Springfield, Illinois 62704
 217-546-3400
 P.O. Box 1036
 DuQuoin, Illinois 62832
 618-790-4637
 Account Number 12-16-0017-1
 Date: 06/10/05
 DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.T.M.

SUMMARY OF QUANTITIES AND TYPICAL SECTIONS
 SECTION 02-00063-00-BR
 C.H. 11 / F.A.S. 585
 BROWN COUNTY

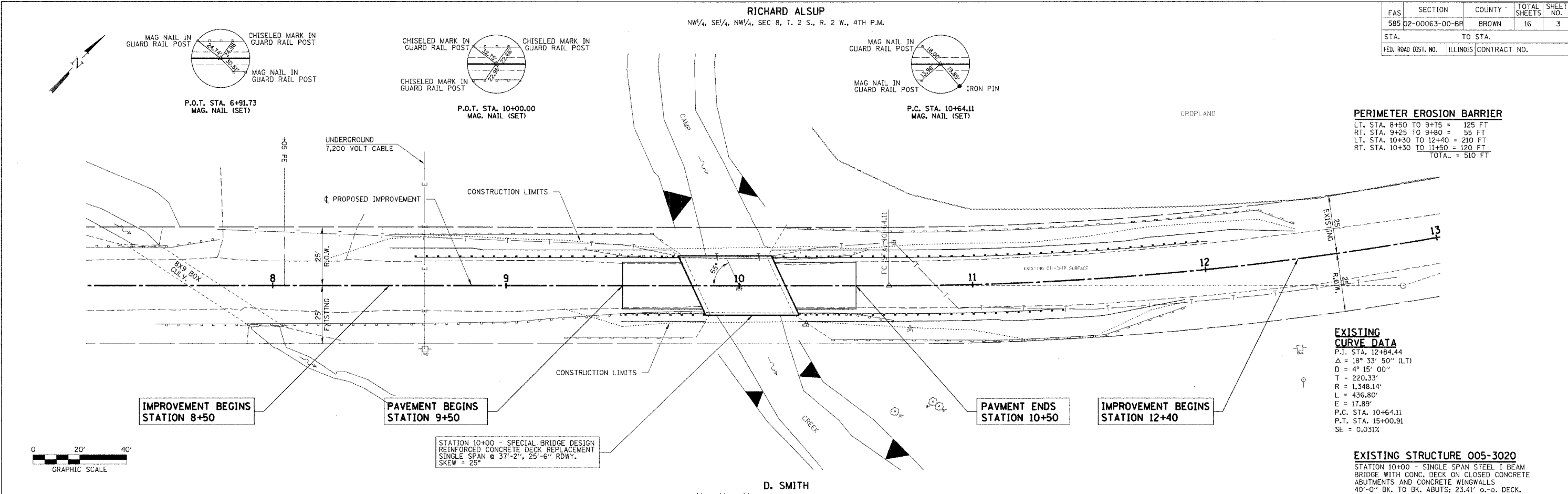
FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
585 02-00063-00-BR	BROWN	16	3	
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO.		

RICHARD ALSUP
 NW 1/4, SE 1/4, NW 1/4, SEC 8, T. 2 S., R. 2 W., 4TH P.M.

D. SMITH
 SE 1/4, SE 1/4, NW 1/4, SEC 8, T. 2 S., R. 2 W., 4TH P.M.

DATE: _____ BY: _____
 SURVEYED: _____
 ALIGNED: _____
 CHECKED: _____
 NOTE BOOK: _____
 NO. OF PAGES: _____

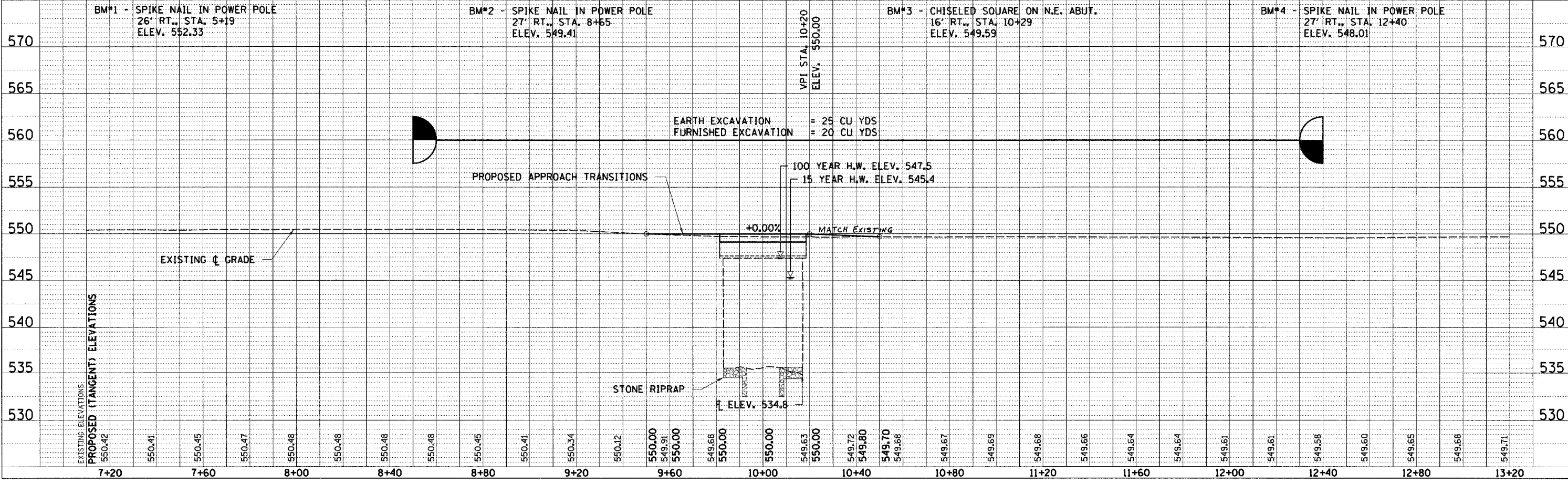
DATE: _____ BY: _____
 PROFILE SURVEYED: _____
 GRADES CHECKED: _____
 NOTE BOOK: _____
 NO. OF PAGES: _____



PERIMETER EROSION BARRIER
 LT. STA. 8+50 TO 9+75 = 125 FT
 RT. STA. 9+25 TO 9+80 = 55 FT
 LT. STA. 10+30 TO 12+40 = 210 FT
 RT. STA. 10+30 TO 11+50 = 120 FT
TOTAL = 510 FT

EXISTING CURVE DATA
 P.I. STA. 12+84.44
 $\Delta = 18^\circ 33' 50''$ (LT)
 $D = 4^\circ 15' 00''$
 $T = 220.33'$
 $R = 1,348.14'$
 $L = 436.80'$
 $E = 17.89'$
 P.C. STA. 10+64.11
 P.T. STA. 15+00.91
 $SE = 0.031\%$

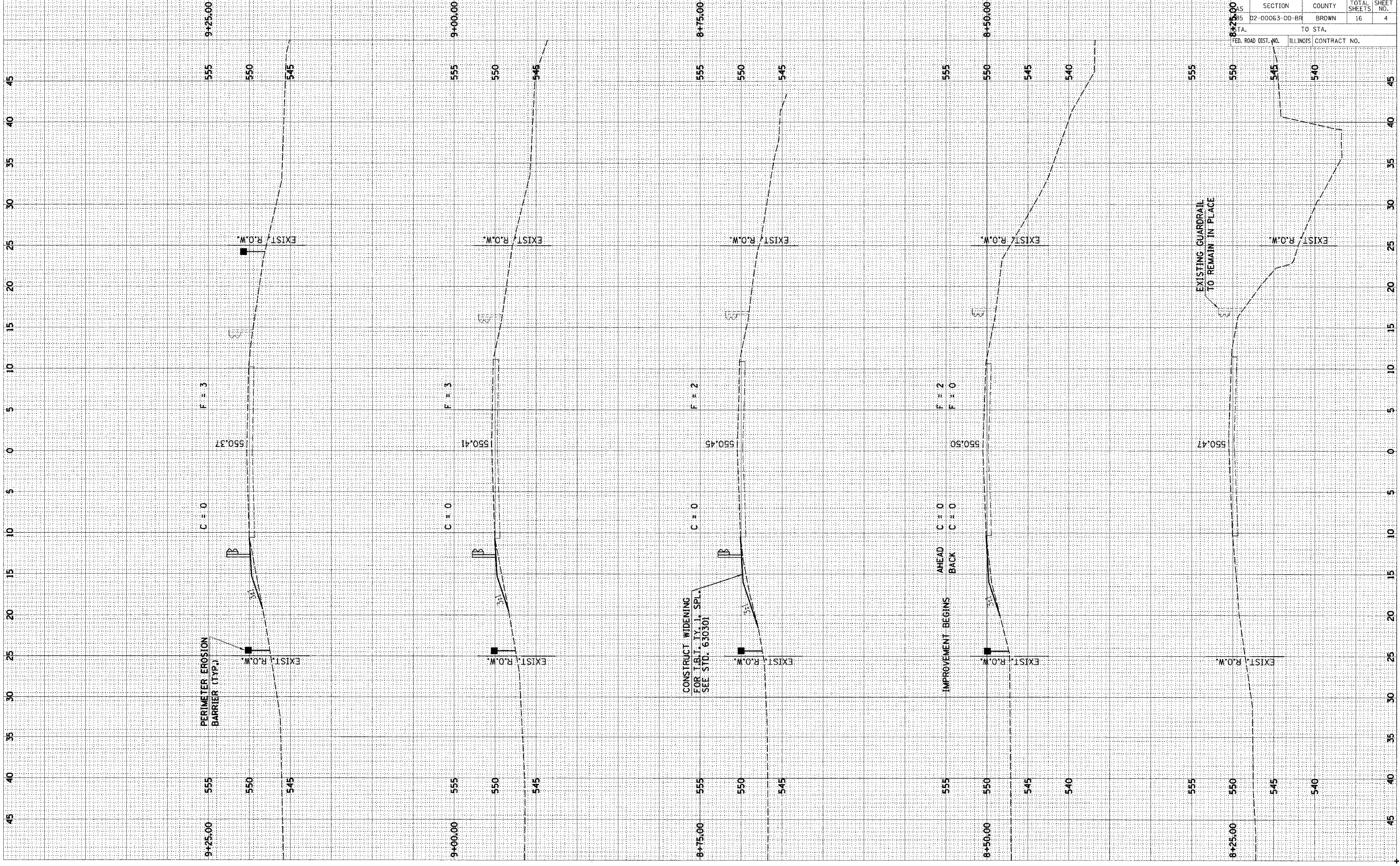
EXISTING STRUCTURE 005-3020
 STATION 10+00 - SINGLE SPAN STEEL I BEAM
 BRIDGE WITH CONC. DECK ON CLOSED CONCRETE
 ABUTMENTS AND CONCRETE WINGWALLS
 40'-0" BK. TO BK. ABUTS; 23.41' o.-o. DECK.
 REMOVAL OF EXISTING CONCRETE DECK = 1 EACH



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
02-00063-00-BR	BROWN	16	4
TO STA.			
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO.	

FINAL SURVEY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

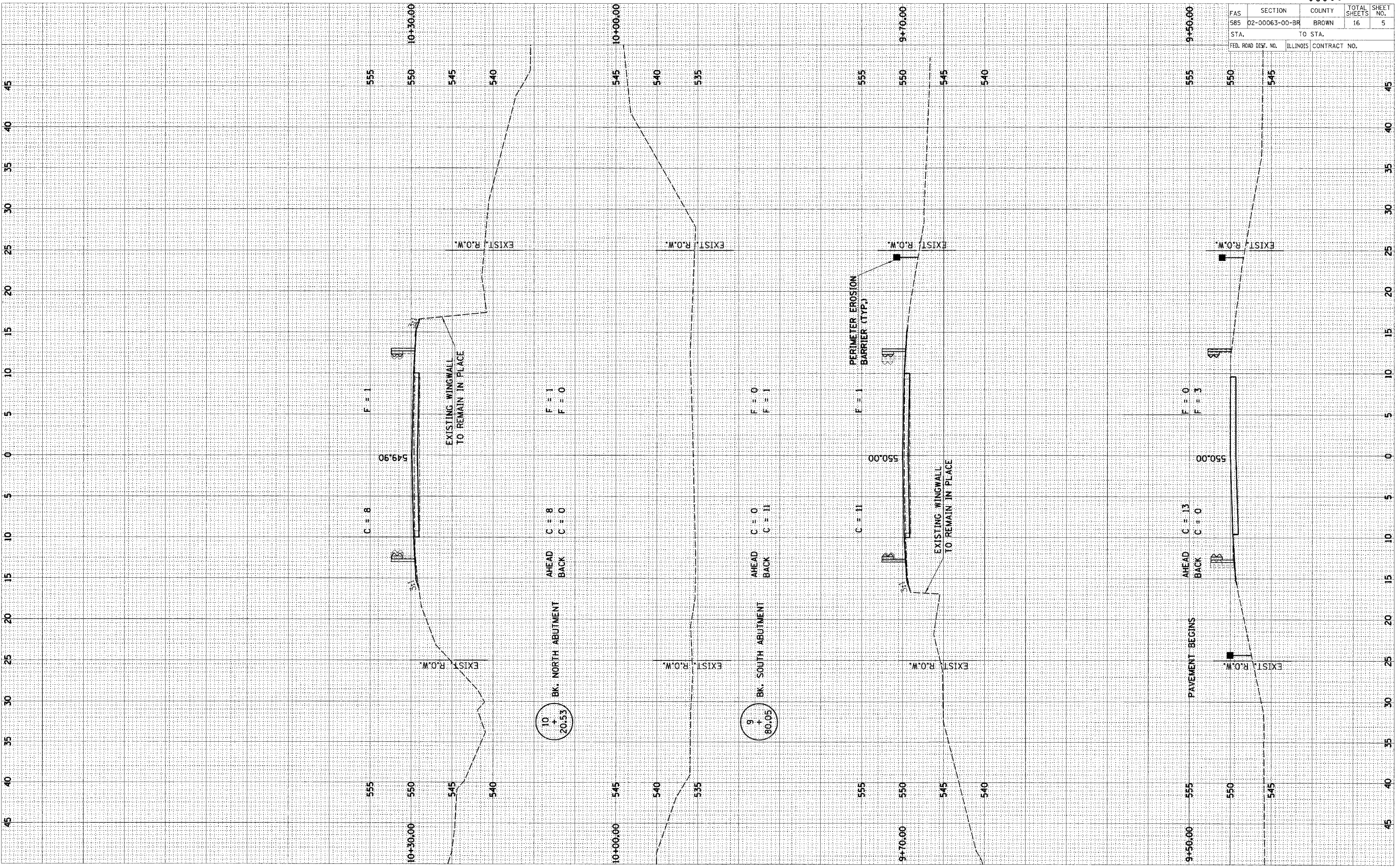
ORIGINAL SURVEY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	



FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
585	02-00063-00-BR	BROWN	16	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO.		

DATE	BY
DATE	BY

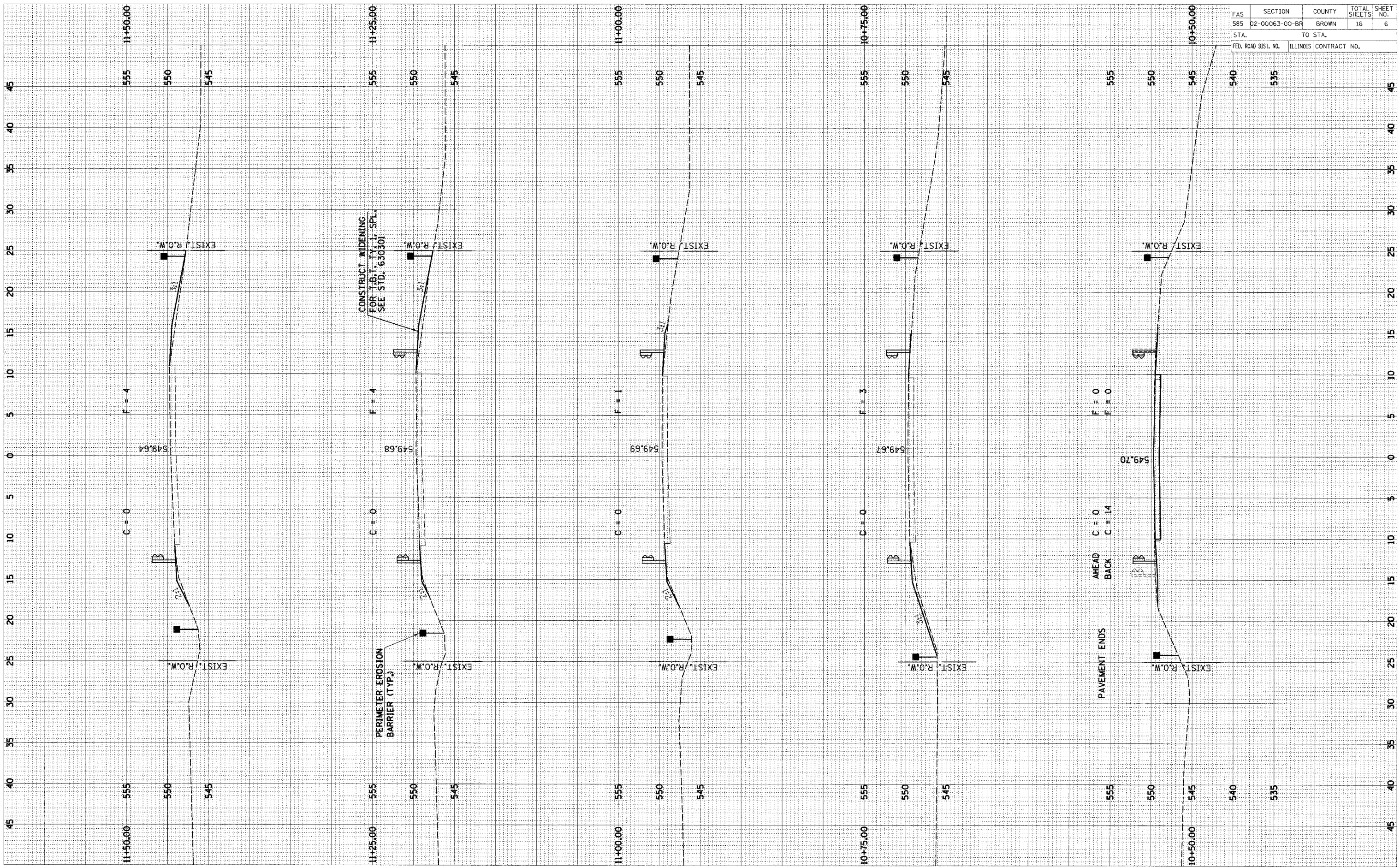
DATE	BY
DATE	BY



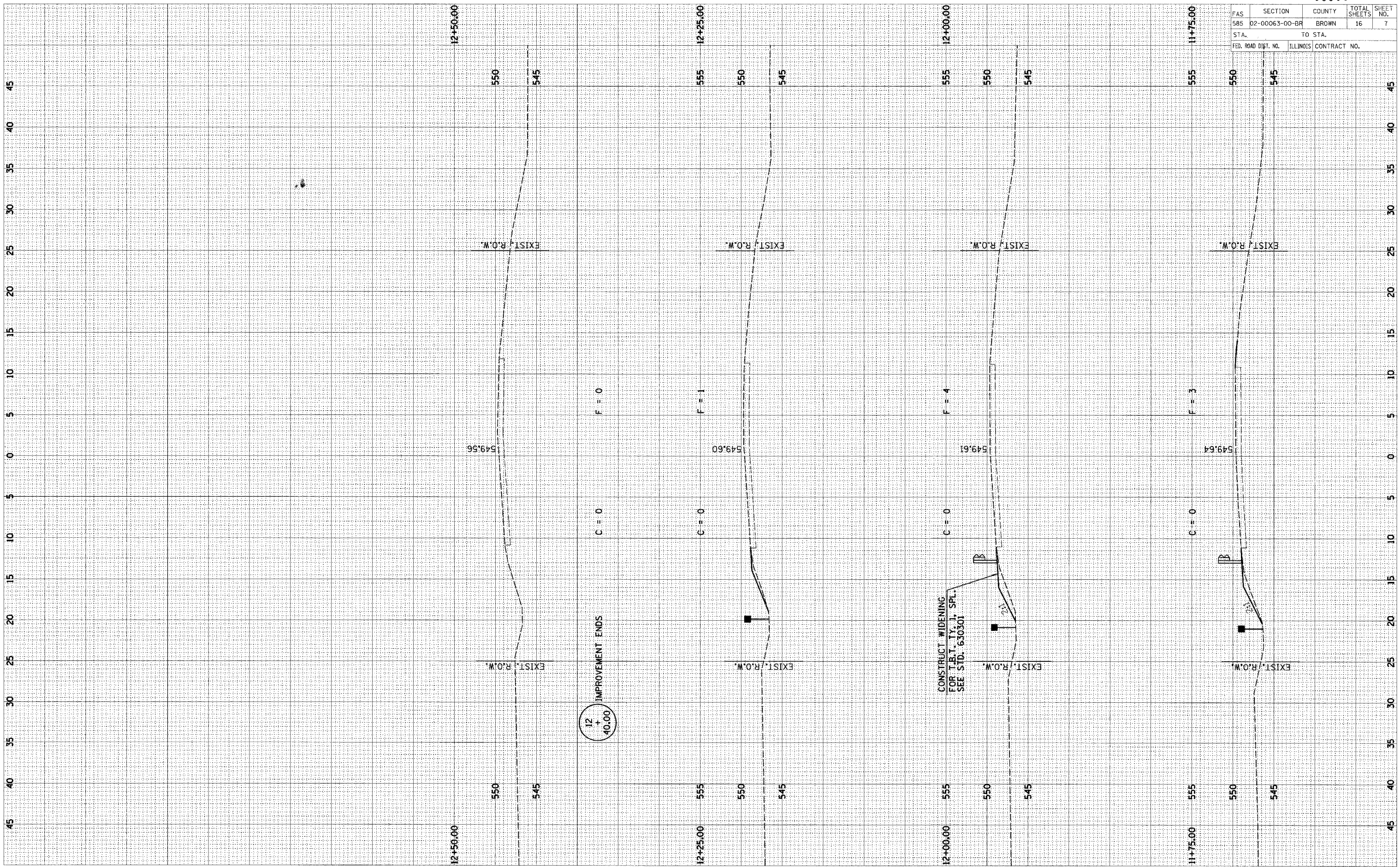
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585	02-00063-00-BR	BROWN	16	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS CONTRACT NO.			

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

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



ORIGINAL SURVEY PLOTTED	BY	DATE
NO. _____		
AREAS CHECKED		
FINAL SURVEY PLOTTED	BY	DATE
NO. _____		
AREAS CHECKED		



FAS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
585	02-00063-00-BR	BROWN	16	7
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO.		

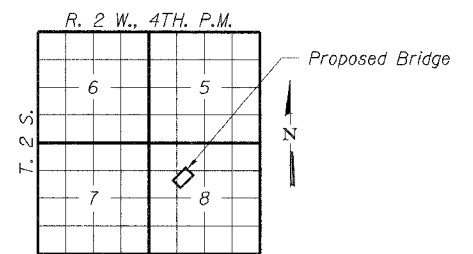
93399

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
F.A.S. 585	02-00063-00-BR	BROWN	16	8
FED. ROAD EST. NO.		ILLINOIS	FED. AID PROJECT: BHS-585(104)	

CONTRACT NO. 93399

CAMP CREEK
REBUILT 200_ BY
BROWN COUNTY
SEC. 02-00063-00-BR
C.H. 11 / F.A.S. 585
F.A. PROJ. BHS-585(104)
STR. NO. 005-3020 / LOADING HS 20

NAME PLATE
See Std. 515001



LOCATION SKETCH

GENERAL NOTES

Layout of riprap may be varied in the field to suit ground conditions as directed by the Engineer.

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

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

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

Removal of existing bridge rail will be included in the pay item Removal of Existing Concrete Deck.

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

Calculated weight of Structural Steel = 580 Lbs. This includes new anchor bolts (at both abutments) and replacement bearing plates (at both abutments. Where determined necessary by the Engineer after Concrete Removal.)

Field welding of construction accessories to beams will not be permitted.

Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.

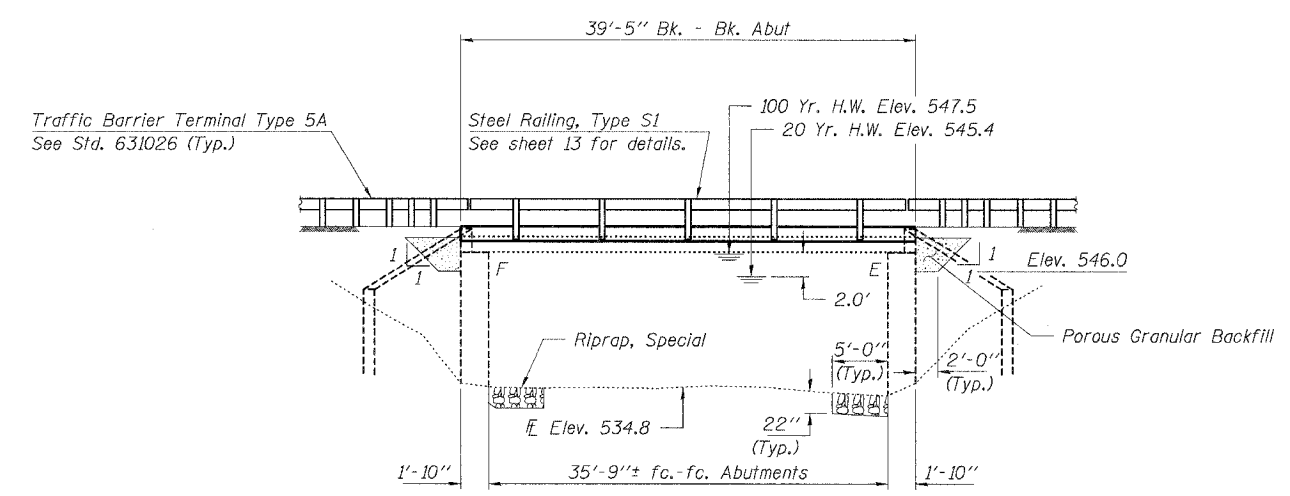
Bridge Deck Grooving shall be completed on the surface area of the bridge.

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

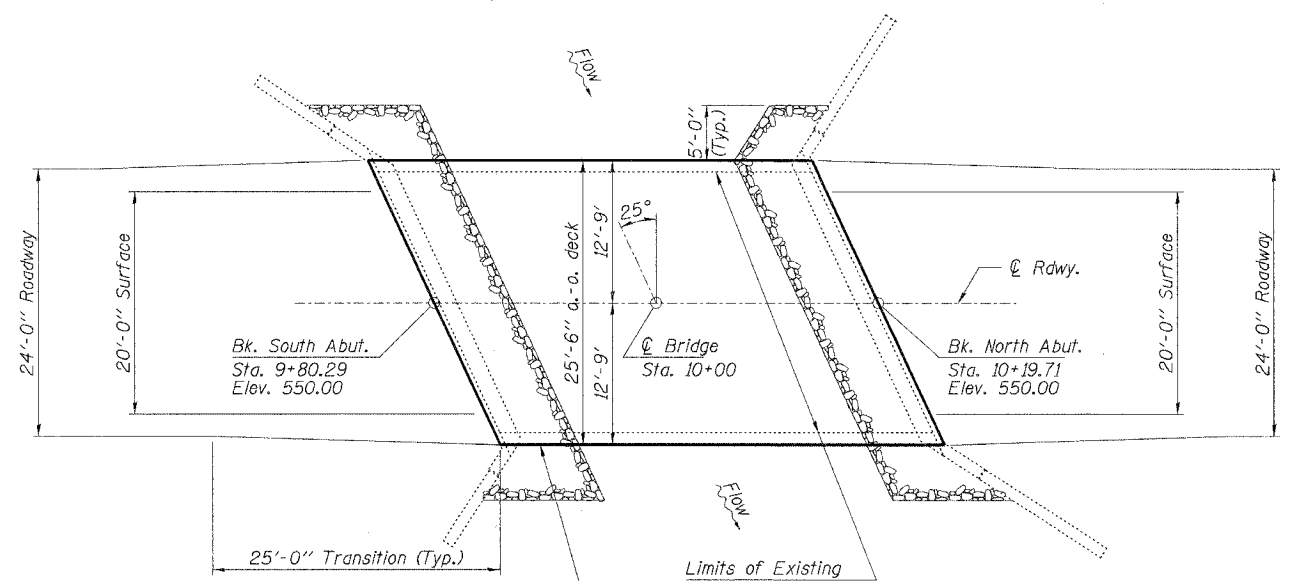
All construction joints shall be bonded.

Painting of existing steel when entire structure will be blast cleaned: Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All existing steel shall be cleaned per Near White Blast Cleaning - SSPC-SP10. All existing steel shall be painted according to the requirements of Paint System 1 - 0Z/E/U. The color of the final finish coat for all interior steel surfaces shall be Gray, Munsell No 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Gray, Munsell No 5B 7/1.

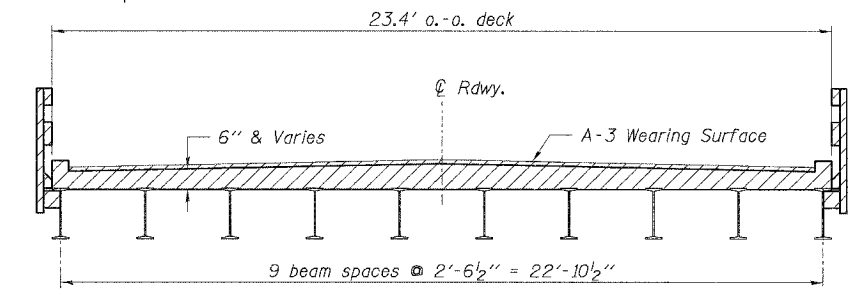
GPI and GP2 painting contractor certification are not required for this project.



ELEVATION



PLAN



EXISTING BRIDGE SECTION

Indicates limits of removal of existing concrete deck. See special provisions.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Concrete Deck	Each	1		1
Concrete Removal	Cu. Yd.		3.4	3.4
Concrete Superstructure	Cu. Yd.	30.9		30.9
Bridge Deck Grooving	Sq. Yd.	112		112
Protective Coat	Sq. Yd.	124		124
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	540		540
Cleaning and Painting Steel Bridge	L. Sum	1		1
Containment and Disposal of Lead Paint Cleaning Residues	L. Sum	1		1
Reinforcement Bars, Epoxy Coated	Pound	7,790	155	7,945
Steel Railing, Type S1	Foot	86		86
Name Plates	Each	1		1
Porous Granular Backfill	Ton		60	60
Riprap, Special	Ton		50	50

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinf.)
fy = 30,000 psi (Existing Structural Steel)
fy = 36,000 psi (Proposed Structural Steel)
n = 8

Loading HS 20-44
Design Specifications: 2002 AASHTO & all applicable interims.
25#/Sq. Ft. included in dead load for future wearing surface.

SEISMIC DATA

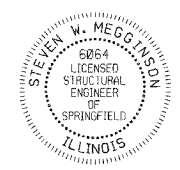
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.045g
Site Coefficient (S) = 1.0

WATERWAY INFORMATION

Drainage Area = 8.1 Sq. Mi.		Low Grade Elev. 549.65 @ Sta. 12+00						
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Natural H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	20	1,730	320	545.4	0.2	0.2	545.6	545.6
Base	100	2,650	390	547.5	0.6	0.6	548.1	548.1
Overtopping								
Max. Calc.	500	3,570	390	547.8	1.1	1.1	548.9	548.9

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. Megginson 6-10-05
ILLINOIS STRUCTURAL NO. 6064



Expires 11-30-06

HLR
Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
Civil & Structural Engineers
801 S. Durkin Drive
Springfield, Illinois 62704
217-546-3400
P.O. Box 1036
DuQuoin, Illinois 62832
618-790-4637
DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.T.M.

GENERAL PLAN AND ELEVATION
SECTION 02-00063-00-BR
C.H. 11 / F.A.S. 585
BROWN COUNTY
STRUCTURE NO. 005-3020 / STATION 10+00

CONTRACT NO. 93399

TABLE OF ELEVATIONS

LINE A	END OF DECK	C. BRG. S. ABUT.	SPAN 1			C. BRG. N. ABUT.	END OF DECK
			1	2	3		
Theoretical Grade Elevation	549.734	549.734	549.734	549.734	549.734	549.734	549.734
Theoretical Grade Elevation Adjusted for D.L. Deflection	549.734	549.734	549.770	549.784	549.770	549.734	549.734
Bottom of Slab Elevation	549.192	549.192	549.228	549.242	549.228	549.192	549.192
Top of Steel							
Fillet Height "t"							

LINE H	END OF DECK	C. BRG. S. ABUT.	SPAN 1			C. BRG. N. ABUT.	END OF DECK
			1	2	3		
Theoretical Grade Elevation	549.974	549.974	549.974	549.974	549.974	549.974	549.974
Theoretical Grade Elevation Adjusted for D.L. Deflection	549.974	549.974	550.009	550.023	550.009	549.974	549.974
Bottom of Slab Elevation	549.432	549.432	549.467	549.481	549.467	549.432	549.432
Top of Steel							
Fillet Height "t"							

LINE B	END OF DECK	C. BRG. S. ABUT.	SPAN 1			C. BRG. N. ABUT.	END OF DECK
			1	2	3		
Theoretical Grade Elevation	549.762	549.762	549.762	549.762	549.762	549.762	549.762
Theoretical Grade Elevation Adjusted for D.L. Deflection	549.762	549.762	549.797	549.811	549.797	549.762	549.762
Bottom of Slab Elevation	549.220	549.220	549.255	549.269	549.255	549.220	549.220
Top of Steel							
Fillet Height "t"							

LINE I	END OF DECK	C. BRG. S. ABUT.	SPAN 1			C. BRG. N. ABUT.	END OF DECK
			1	2	3		
Theoretical Grade Elevation	549.921	549.921	549.921	549.921	549.921	549.921	549.921
Theoretical Grade Elevation Adjusted for D.L. Deflection	549.921	549.921	549.956	549.970	549.956	549.921	549.921
Bottom of Slab Elevation	549.379	549.379	549.414	549.428	549.414	549.379	549.379
Top of Steel							
Fillet Height "t"							

LINE C	END OF DECK	C. BRG. S. ABUT.	SPAN 1			C. BRG. N. ABUT.	END OF DECK
			1	2	3		
Theoretical Grade Elevation	549.815	549.815	549.815	549.815	549.815	549.815	549.815
Theoretical Grade Elevation Adjusted for D.L. Deflection	549.815	549.815	549.850	549.864	549.850	549.815	549.815
Bottom of Slab Elevation	549.273	549.273	549.308	549.322	549.308	549.273	549.273
Top of Steel							
Fillet Height "t"							

LINE J	END OF DECK	C. BRG. S. ABUT.	SPAN 1			C. BRG. N. ABUT.	END OF DECK
			1	2	3		
Theoretical Grade Elevation	549.868	549.868	549.868	549.868	549.868	549.868	549.868
Theoretical Grade Elevation Adjusted for D.L. Deflection	549.868	549.868	549.903	549.917	549.903	549.868	549.868
Bottom of Slab Elevation	549.326	549.326	549.361	549.375	549.361	549.326	549.326
Top of Steel							
Fillet Height "t"							

LINE D	END OF DECK	C. BRG. S. ABUT.	SPAN 1			C. BRG. N. ABUT.	END OF DECK
			1	2	3		
Theoretical Grade Elevation	549.868	549.868	549.868	549.868	549.868	549.868	549.868
Theoretical Grade Elevation Adjusted for D.L. Deflection	549.868	549.868	549.903	549.917	549.903	549.868	549.868
Bottom of Slab Elevation	549.326	549.326	549.361	549.375	549.361	549.326	549.326
Top of Steel							
Fillet Height "t"							

LINE K	END OF DECK	C. BRG. S. ABUT.	SPAN 1			C. BRG. N. ABUT.	END OF DECK
			1	2	3		
Theoretical Grade Elevation	549.815	549.815	549.815	549.815	549.815	549.815	549.815
Theoretical Grade Elevation Adjusted for D.L. Deflection	549.815	549.815	549.850	549.864	549.850	549.815	549.815
Bottom of Slab Elevation	549.273	549.273	549.308	549.322	549.308	549.273	549.273
Top of Steel							
Fillet Height "t"							

LINE E	END OF DECK	C. BRG. S. ABUT.	SPAN 1			C. BRG. N. ABUT.	END OF DECK
			1	2	3		
Theoretical Grade Elevation	549.921	549.921	549.921	549.921	549.921	549.921	549.921
Theoretical Grade Elevation Adjusted for D.L. Deflection	549.921	549.921	549.956	549.970	549.956	549.921	549.921
Bottom of Slab Elevation	549.379	549.379	549.414	549.428	549.414	549.379	549.379
Top of Steel							
Fillet Height "t"							

LINE L	END OF DECK	C. BRG. S. ABUT.	SPAN 1			C. BRG. N. ABUT.	END OF DECK
			1	2	3		
Theoretical Grade Elevation	549.762	549.762	549.762	549.762	549.762	549.762	549.762
Theoretical Grade Elevation Adjusted for D.L. Deflection	549.762	549.762	549.797	549.811	549.797	549.762	549.762
Bottom of Slab Elevation	549.220	549.220	549.255	549.269	549.255	549.220	549.220
Top of Steel							
Fillet Height "t"							

LINE F	END OF DECK	C. BRG. S. ABUT.	SPAN 1			C. BRG. N. ABUT.	END OF DECK
			1	2	3		
Theoretical Grade Elevation	549.974	549.974	549.974	549.974	549.974	549.974	549.974
Theoretical Grade Elevation Adjusted for D.L. Deflection	549.974	549.974	550.009	550.023	550.009	549.974	549.974
Bottom of Slab Elevation	549.432	549.432	549.467	549.481	549.467	549.432	549.432
Top of Steel							
Fillet Height "t"							

LINE M	END OF DECK	C. BRG. S. ABUT.	SPAN 1			C. BRG. N. ABUT.	END OF DECK
			1	2	3		
Theoretical Grade Elevation	549.734	549.734	549.734	549.734	549.734	549.734	549.734
Theoretical Grade Elevation Adjusted for D.L. Deflection	549.734	549.734	549.770	549.784	549.770	549.734	549.734
Bottom of Slab Elevation	549.192	549.192	549.228	549.242	549.228	549.192	549.192
Top of Steel							
Fillet Height "t"							

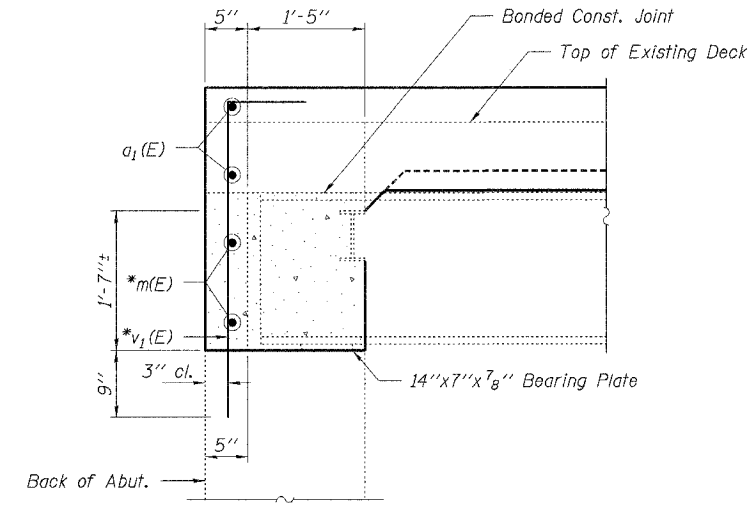
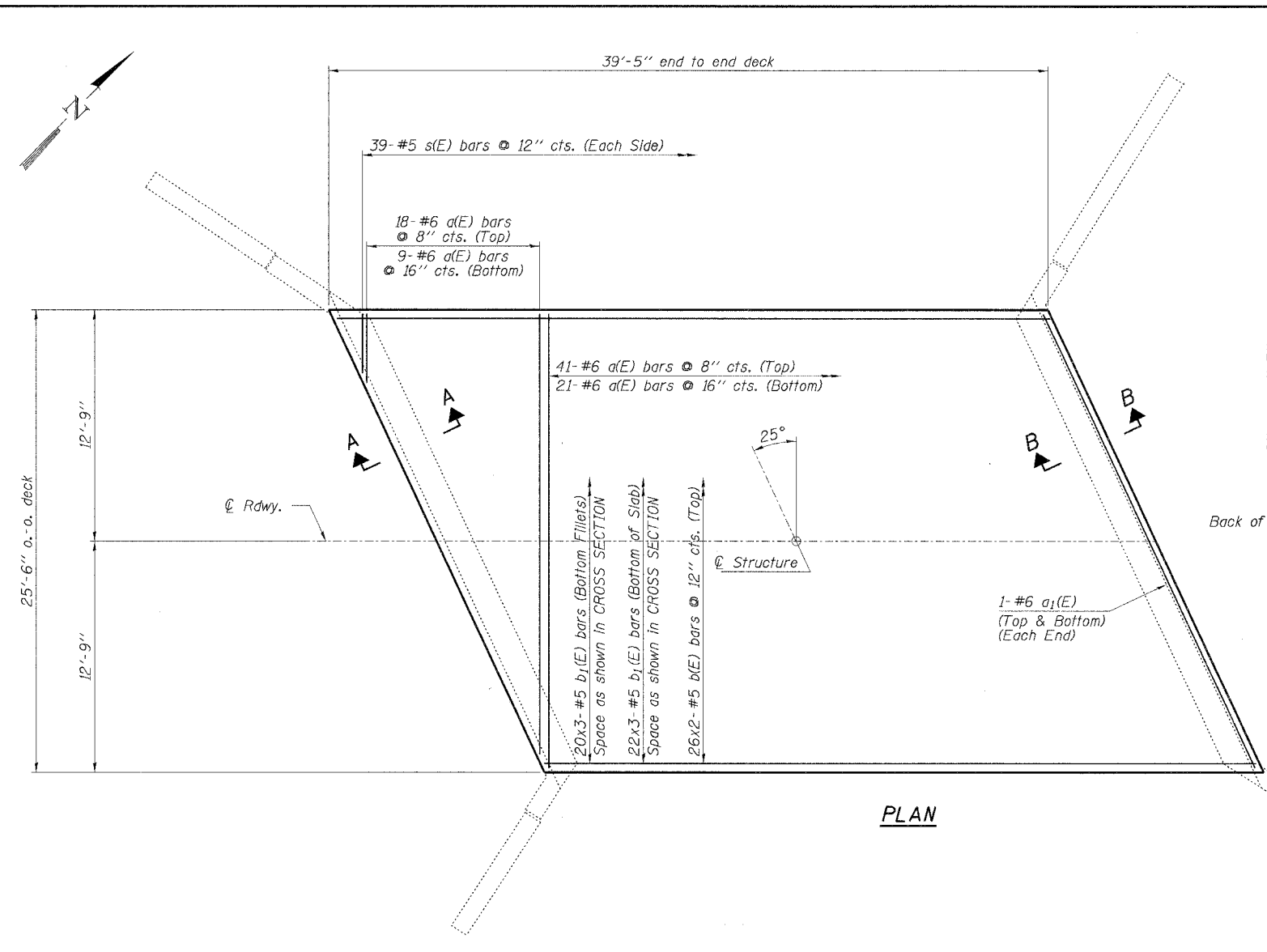
LINE G	END OF DECK	C. BRG. S. ABUT.	SPAN 1			C. BRG. N. ABUT.	END OF DECK
			1	2	3		
Theoretical Grade Elevation	550.000	550.000	550.000	550.000	550.000	550.000	550.000
Theoretical Grade Elevation Adjusted for D.L. Deflection	550.000	550.000	550.035	550.050	550.035	550.000	550.000
Bottom of Slab Elevation	549.458	549.458	549.493	549.508	549.493	549.458	549.458
Top of Steel							
Fillet Height "t"							

HLR
 Rice, Berry and Associates
 A Division of Hampton, Lenzini and Renwick, Inc.
 Civil & Structural Engineers
 801 S. Durkin Drive
 Springfield, Illinois 62704
 217-546-3400
 P.O. Box 1036
 DuQuoin, Illinois 62832
 Date: 06/10/05 618-790-4637
 Account Number 12-16-0017-1
 DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.T.M.

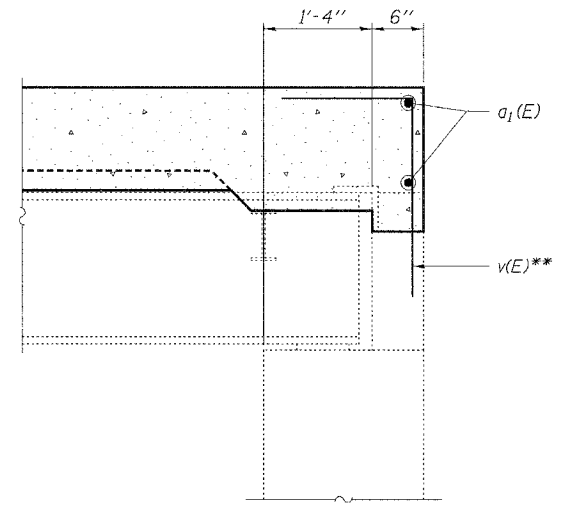
SLAB ELEVATIONS
SECTION 02-00063-00-BR
C.H. II / F.A.S. 585
BROWN COUNTY
STRUCTURE NO. 005-3020 / STATION 10+00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
F.A.S. 585	02-00063-00-BR	BROWN	16	11
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	BHS-585(104)	

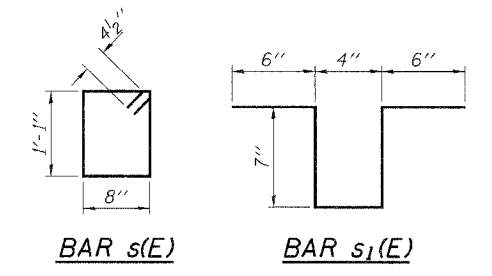
CONTRACT NO. 93399



SECTION A-A
* See sheet 14 for v1(E) bars and m(E) bars.



SECTION B-B
** See sheet 15 for v(E) bars and a1(E) bars.



BAR s1(E) **BAR s2(E)**

PLAN

SUPERSTRUCTURE BILL OF MATERIAL

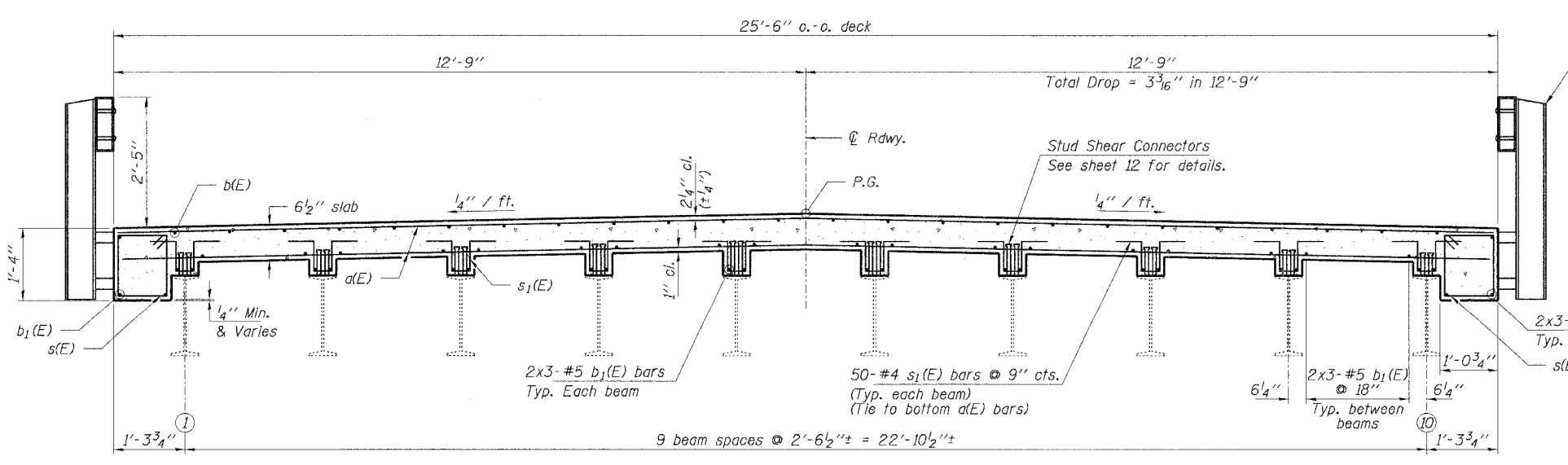
BAR NO.	SIZE	LENGTH	SHAPE
a(E)	#6	25'-2"	—
a1(E)	#6	27'-9"	—
b(E)	#5	20'-8"	—
b1(E)	#5	14'-6"	—
m(E)	#6	24'-9"	—
s(E)	#5	4'-3"	□
s1(E)	#4	2'-6"	⊥

Concrete Superstructure	Cu. Yd.	30.9
Bridge Deck Grooving	Sq. Yd.	112
Protective Coat	Sq. Yd.	124
Stud Shear Connectors	Each	540
Cleaning and Painting Steel Bridge	L. Sum	1
Reinforcement Bars, Epoxy Coated	Pound	7,790

All reinforcement bars shall be epoxy coated.
Bars Indicated thus 2x3-#4 etc. Indicates 2 lines of bars with 3 lengths per line.

MIN. BAR LAPS
#5 bars = 2'-2"
#6 bars = 2'-7"

Steel Railing, Type S1
See sheet 13 for details.



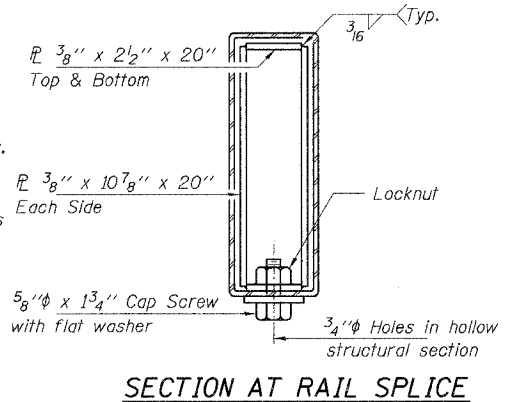
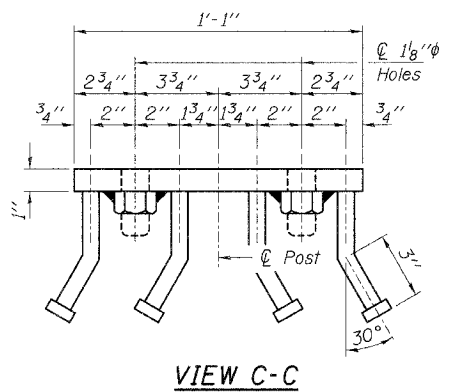
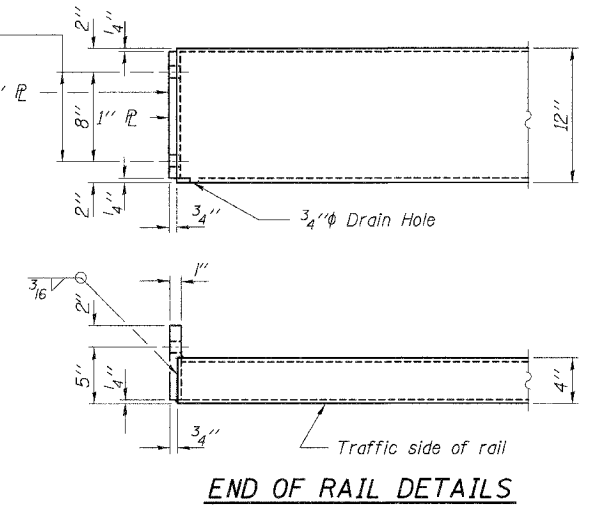
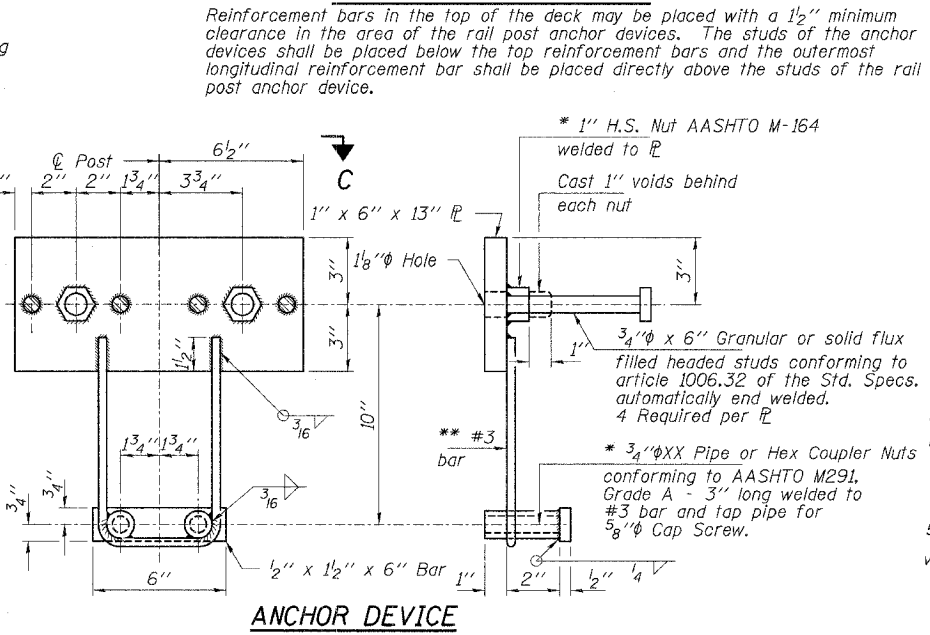
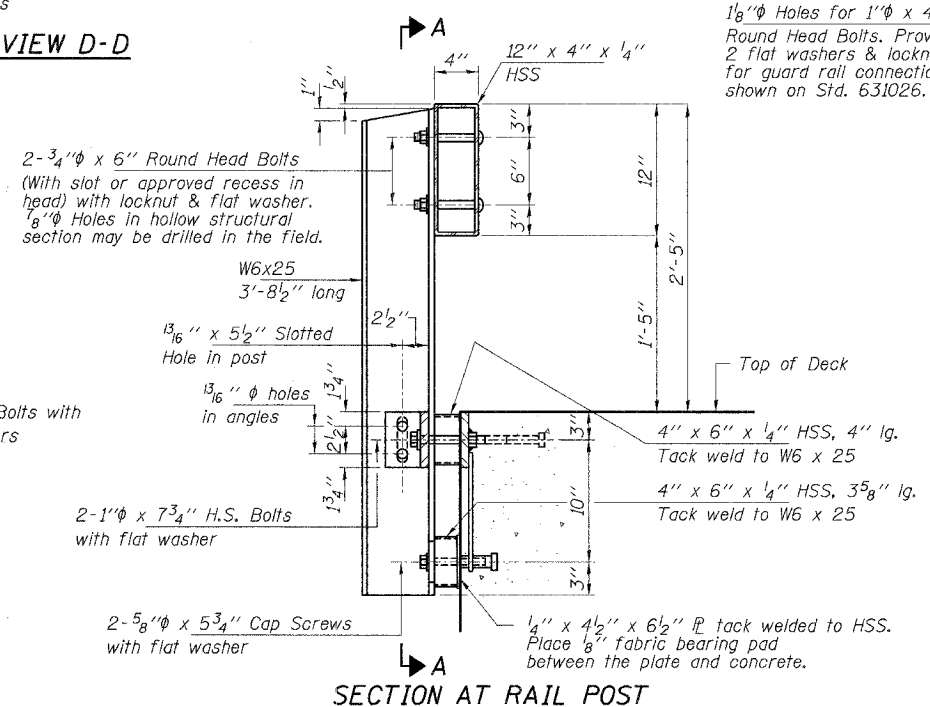
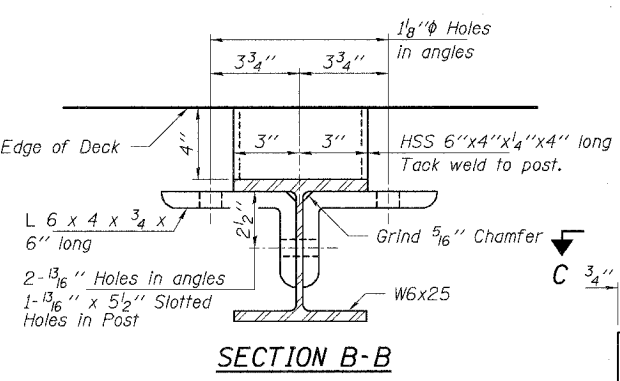
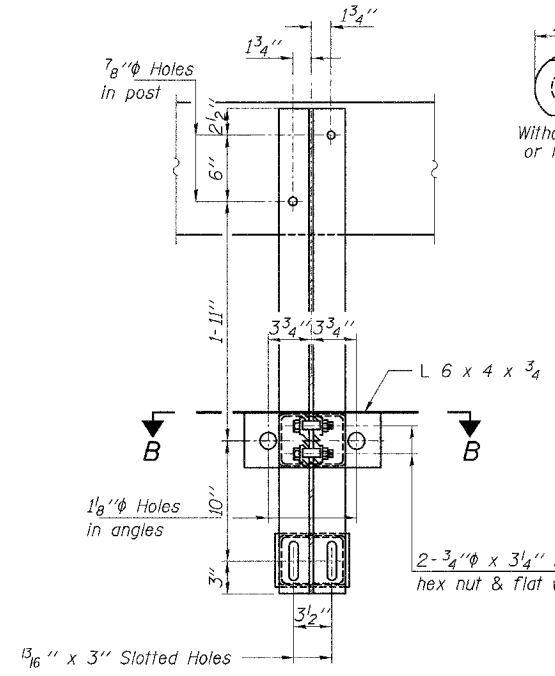
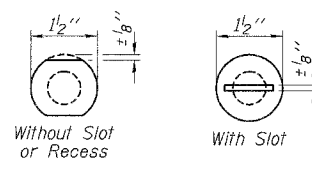
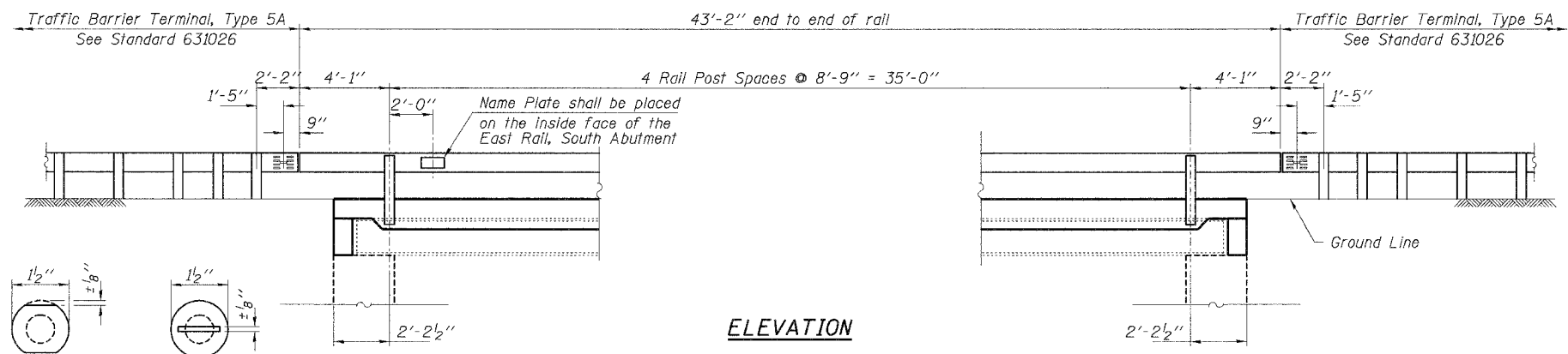
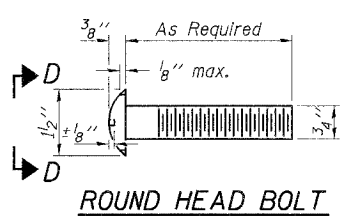
CROSS SECTION

HLR
Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
Civil & Structural Engineers
801 S. Durkin Drive
Springfield, Illinois 62704
217-546-3400
P.O. Box 1036
DuQuoin, Illinois 62832
618-790-4637
Account Number 12-16-0017-1
Date: 06/10/05
DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.T.M.

SUPERSTRUCTURE
SECTION 02-00063-00-BR
C.H. 11 / F.A.S. 585
BROWN COUNTY
STRUCTURE NO. 005-3020 / STATION 10+00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 585	02-00063-00-BR	BROWN	16	13
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	BHS-585(104)	

CONTRACT NO. 93399



NOTES

Hollow structural sections shall conform to the requirements of A.S.T.M. designation A-500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.

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.

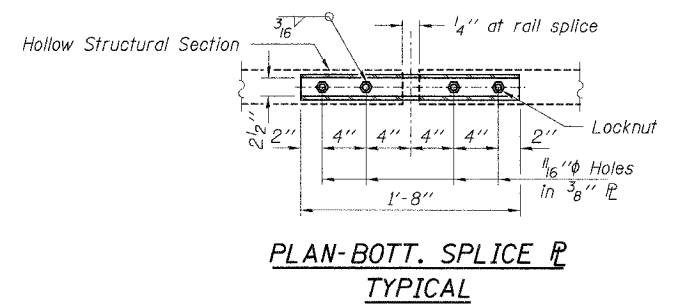
All bolts, nuts, cap screws, washers and lockwashers shall be galvanized in accordance with A.A.S.H.T.O. designation M-232.

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 3/4 inch 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(FX2) of the Standard Specifications. The 1 inch 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 inch cap screws in bottom of posts shall be tightened to a snug fit only.



BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S1	Foot	86
Name Plates	Each	1

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Rice, Berry and Associates
A Division of Hampton, Lenzini and Renwick, Inc.
Civil & Structural Engineers
801 S. Durkin Drive
Springfield, Illinois 62704
217-546-3400
P.O. Box 1036
DuQuoin, Illinois 62832
618-790-4637

Account Number: 12-16-0017-1
Date: 06/10/05
DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.T.M.

RAILING DETAILS

SECTION 02-00063-00-BR

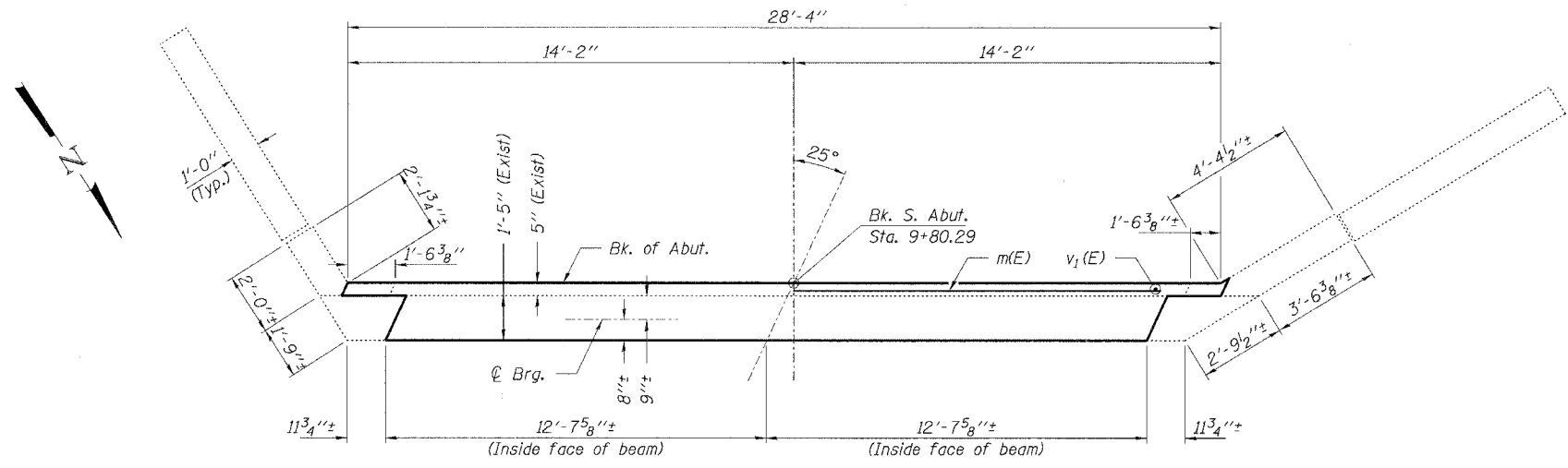
C.H. 11 / F.A.S. 585

BROWN COUNTY

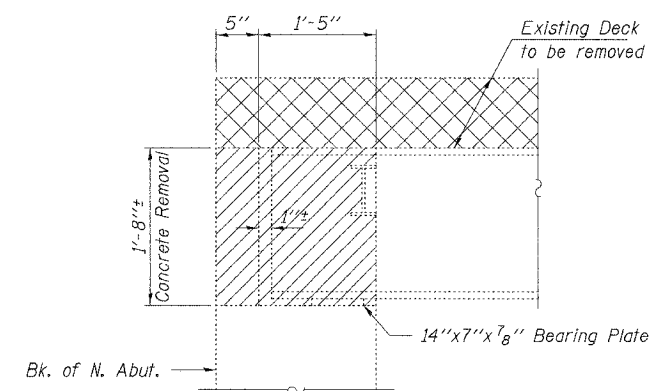
STRUCTURE NO. 005-3020 / STATION 10+00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 585	02-00063-00-BR	BROWN	16	14
FED. ROAD DIST. NO.	ILL. DIST.	FED. AID PROJECT	BHS-585(104)	

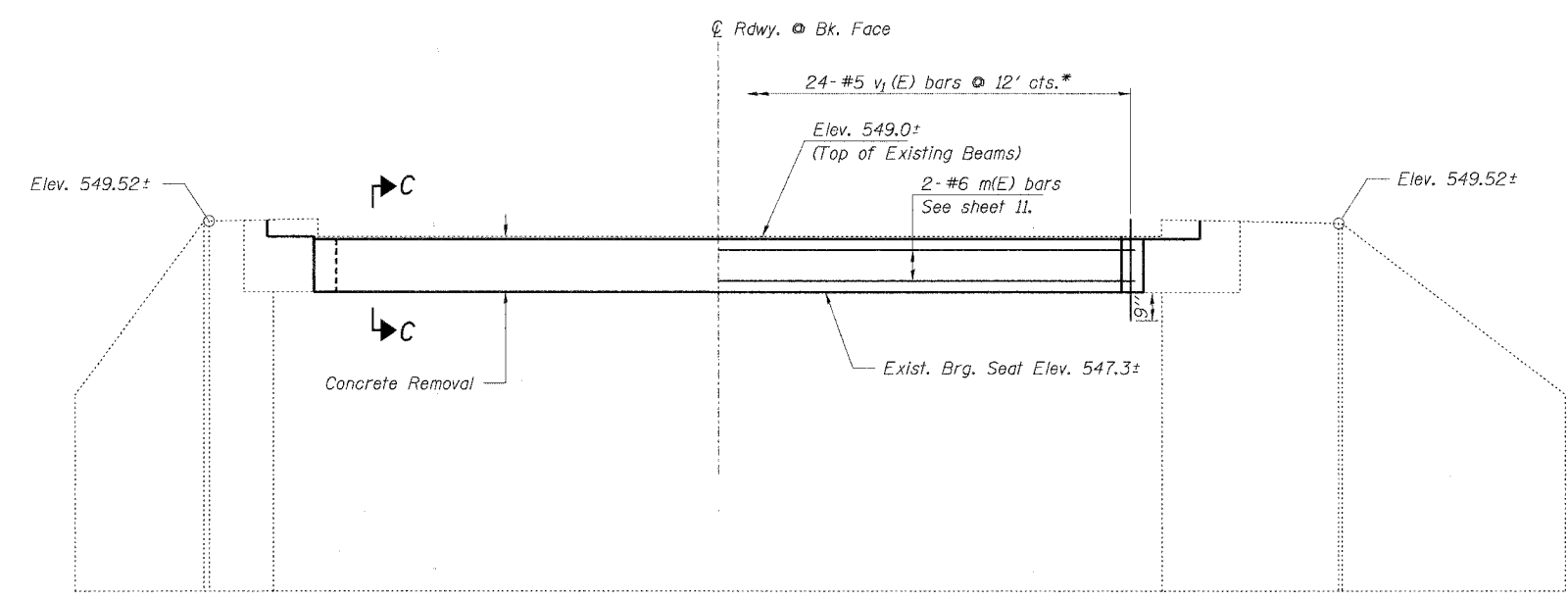
CONTRACT NO. 93399



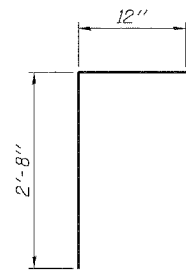
PLAN



SECTION C-C



ELEVATION
(Looking South)



BAR v1(E)

* Drill 7/8" ϕ x 9" hole. Epoxy grout v1(E) bars. Epoxy grout shall be in accordance with Section 584 of the Std. Specifications and shall be approved by the Department. Method of Grout applications shall be approved by the Engineer.

BILL OF MATERIAL - SOUTH ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE
v1(E)	24	#5	3'-8"	U
Reinforcement Bars, Epoxy Coated			Pound	90
Concrete Removal			Cu. Yd.	3.1

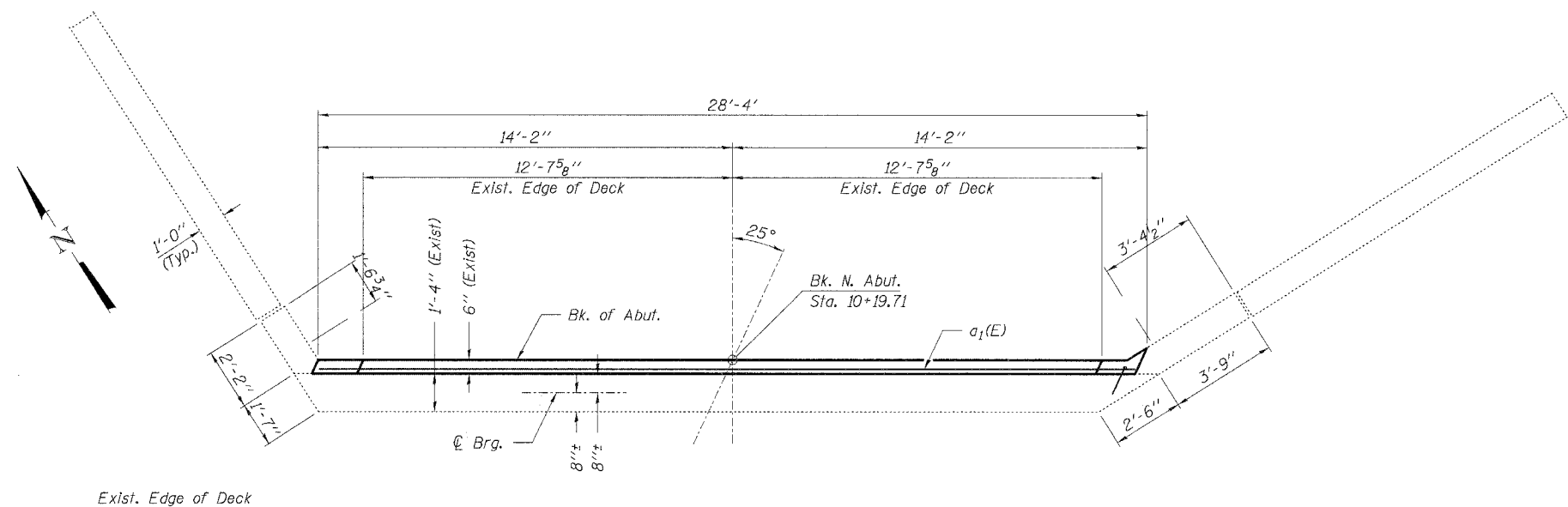
Bars designated (E) shall be epoxy coated.

Concrete Removal

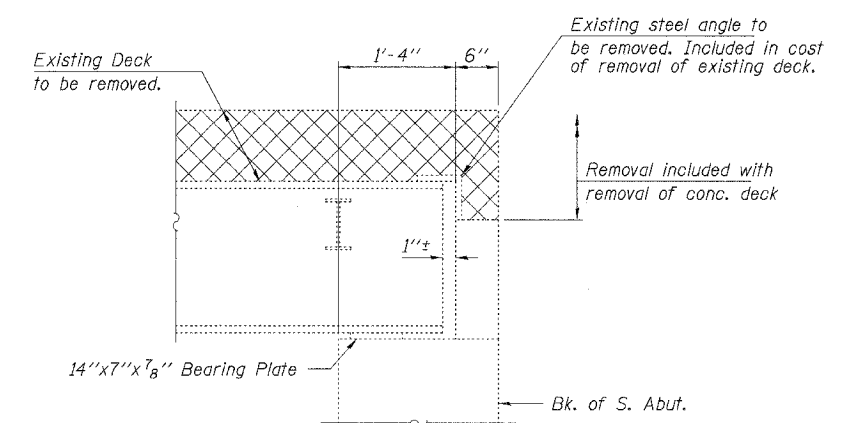
Removal of Existing Concrete Deck

	Rice, Berry and Associates A Division of Hampton, Lenzini and Renwick, Inc. Civil & Structural Engineers 801 S. Durkin Drive Springfield, Illinois 62704 217-546-3400	<p>SOUTH ABUTMENT SECTION 02-00063-00-BR C.H. II / F.A.S. 585 BROWN COUNTY STRUCTURE NO. 005-3020 / STATION 10+00</p>
	Account Number 12-16-0017-1 Date: 06/10/05	
P.O. Box 1036 DuQuoin, Illinois 62832 618-790-4637	DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.T.M.	

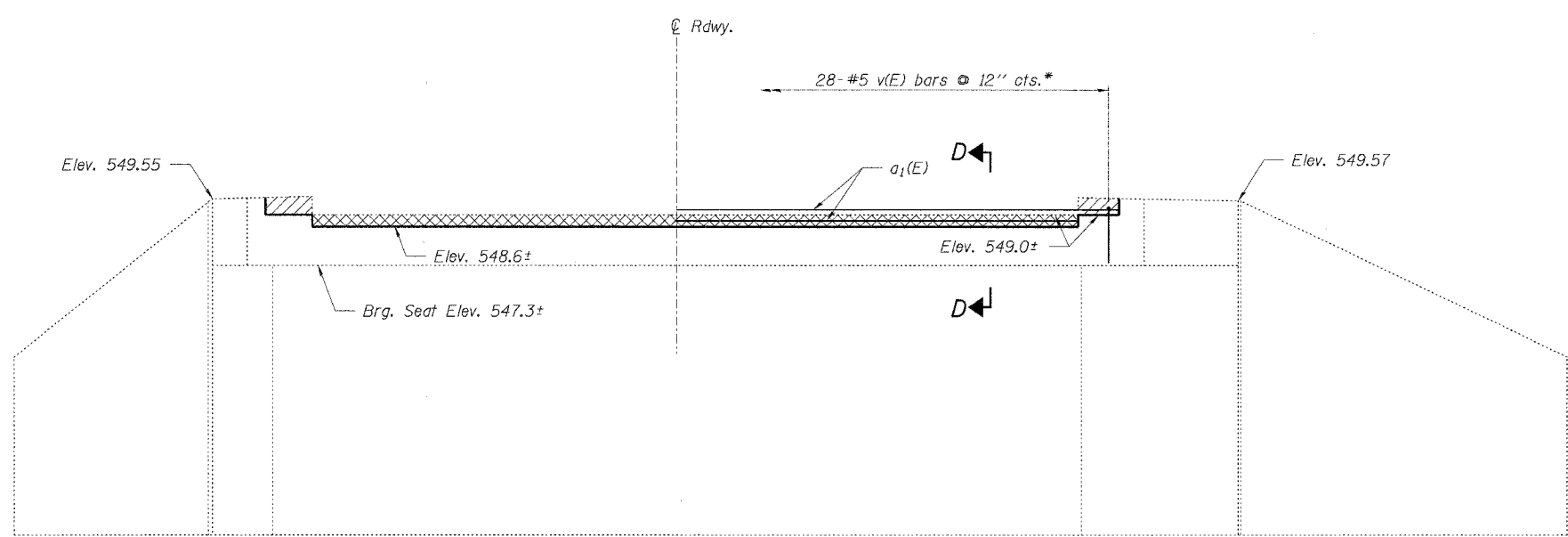
ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
F.A.S. 585	02-00063-00-BR	BROWN	16	15
FED. ROAD DIST. NO.	ILLINOIS PROJECT: DHS-585(104)		CONTRACT NO. 93399	



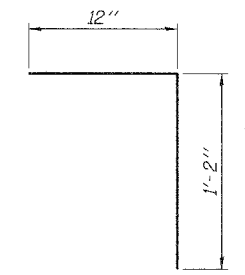
PLAN



SECTION D-D



ELEVATION
(Looking North)



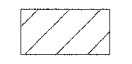
BAR v(E)

* Drill 7/8"φ x 6" hole. Epoxy grout v(E) bars. Epoxy grout shall be in accordance with Section 584 of the Std. Specifications and shall be approved by the Department. Method of Grout applications shall be approved by the Engineer.

BILL OF MATERIAL - NORTH ABUT.

BAR	NO.	SIZE	LENGTH	SHAPE
v(E)	28	#5	2'-2"	7
Reinforcement Bars, Epoxy Coated			Pound	65
Concrete Removal			Cu. Yd.	0.3

Bars designated (E) shall be epoxy coated.



Concrete Removal



Removal of Existing Concrete Deck

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 Rice, Berry and Associates
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 Civil & Structural Engineers
 801 S. Durkin Drive
 Springfield, Illinois 62704
 217-546-3400
 P.O. Box 1036
 DuQuoin, Illinois 62832
 618-790-4637
 Account Number 12-16-0017-1
 Date: 06/10/05
 DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.T.M.

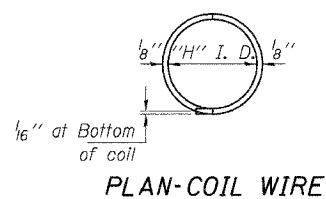
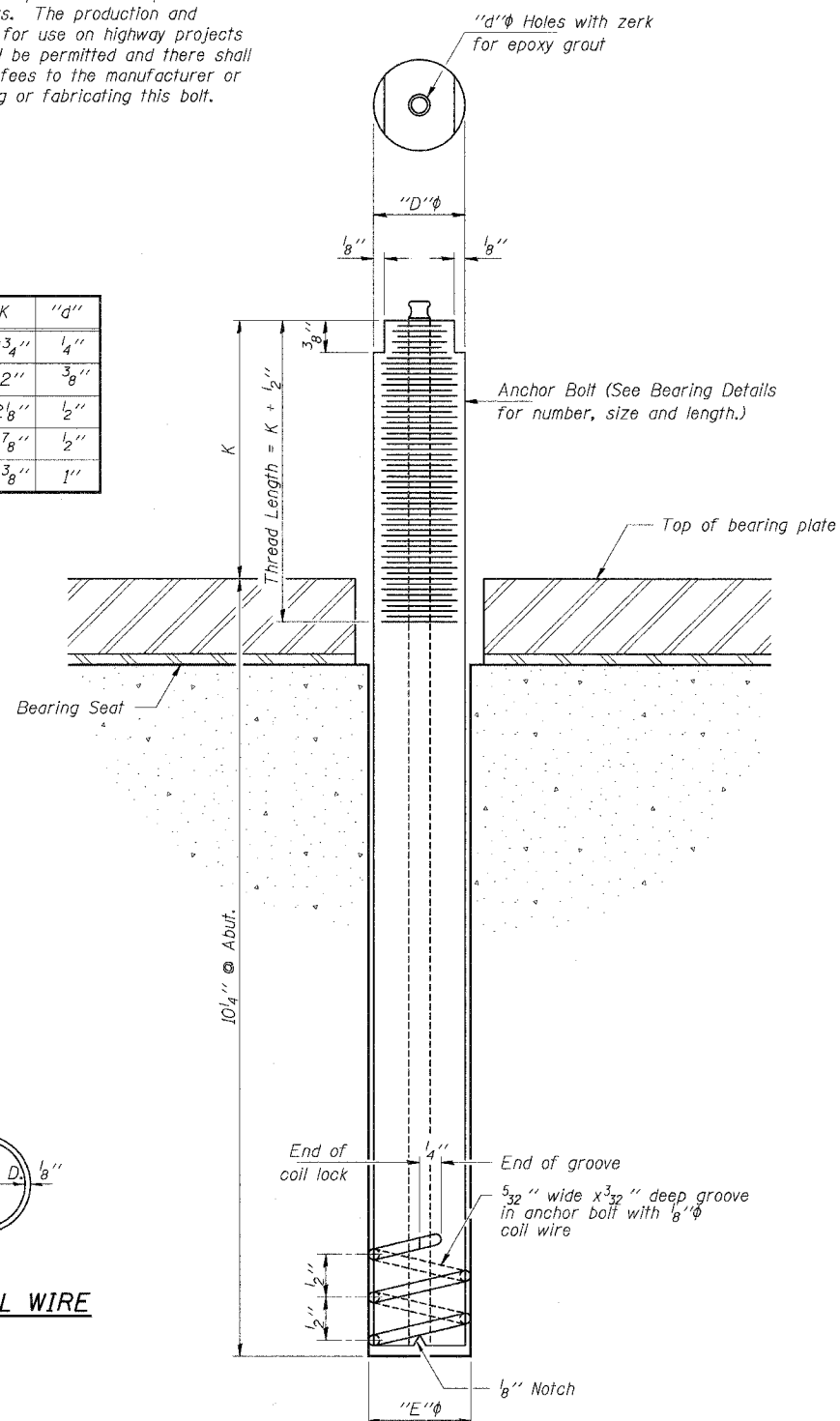
NORTH ABUTMENT
SECTION 02-00063-00-BR
C.H. II / F.A.S. 585
BROWN COUNTY
STRUCTURE NO. 005-3020 / STATION 10+00

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
F.A.S. 585	02-00063-00-BR	BROWN	16	16
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	BHS-585(104)	

CONTRACT NO. 93399

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/8"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 3/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.
 The coil wire shall be made of any suitable soft steel wire.
 The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
 The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.
 The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
 1. A threaded rod stud with nut and washer of the type specified.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
Abutments	A307

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.
 Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
 The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "Furnishing and Erecting Structural Steel".

HLR
 Rice, Berry and Associates
 A Division of Hampton,
 Lenzini and Renwick, Inc.
 Civil & Structural Engineers
 801 S. Durkin Drive
 Springfield, Illinois 62704
 217-546-3400
 P.O. Box 1036
 DuQuoin, Illinois 62832
 618-730-4637
 Account Number
 2-16-0017-1
 Date: 06/10/05
 DESIGNED: T.P.L. CHECKED: S.W.M. DRAWN: D.T.M.

ANCHOR BOLT DETAILS
 SECTION 02-00063-00-BR
 C.H. 11 / F.A.S. 585
 BROWN COUNTY
 STRUCTURE NO. 005-3020 / STATION 10+00