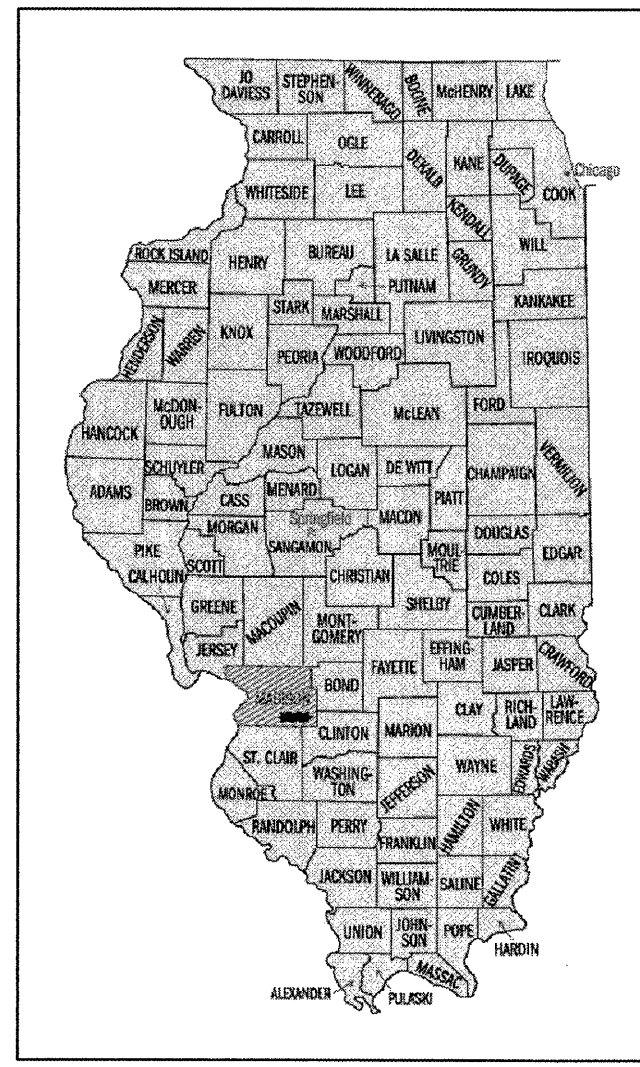


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 305A	06-11114-00-BR	MADISON	25	1

CONTRACT NO. 97461
FEDERAL AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
BRIDGE REPLACEMENT AND REHABILITATION PROGRAM
MADISON COUNTY
SECTION 06-11114-00-BR
TR-305A MICHAEL ROAD
OVER SUGAR CREEK
HELVETIA TOWNSHIP
PROJECT BROS-119(069)
JOB NO. C-98-343-10
OSWALD BRIDGE



INDEX OF SHEETS

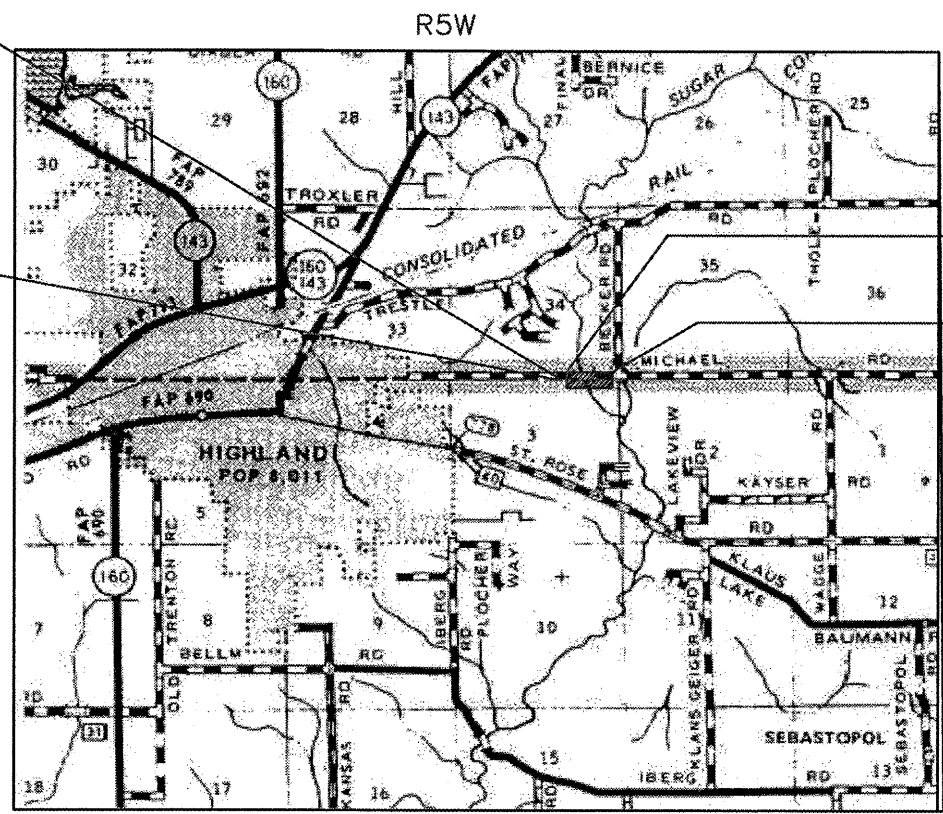
1	COVER SHEET
2	GENERAL NOTES & SUMMARY OF QUANTITIES
3	TYPICAL SECTIONS
4	QUANTITY SCHEDULES
5	PLAN AND PROFILE
6	TRAFFIC CONTROL PLAN
7	EROSION AND SEDIMENT CONTROL
8-21	STRUCTURAL SHEETS
22-25	CROSS SECTIONS

HIGHWAY STANDARDS

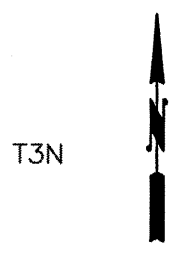
280001-05	701901-01
515001-03	BLR 21-08
635006-03	
635011-02	

EXISTING STRUCTURE: SN. 060-3161, BUILT IN 1937
65'-0" c. TO c. END BEARINGS, 20'-0" o. TO o. DECK
WIDTH, PRATT PONY TRUSS - RIVETED, SINGLE-SPAN ON
CONCRETE ABUTMENTS.

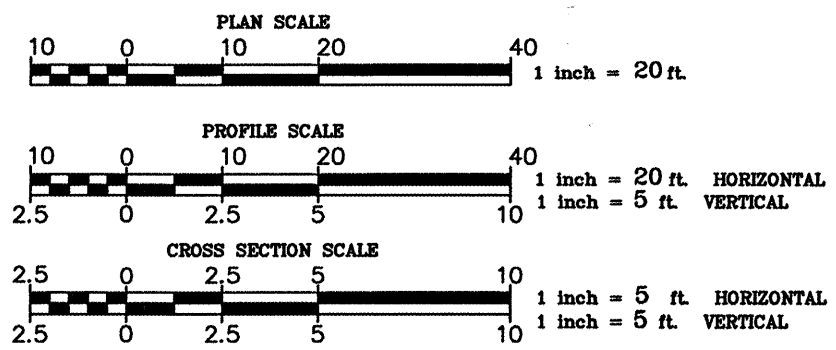
PROPOSED STRUCTURE: SN. 060-3346, 3-SPAN PRECAST
PRESTRESSED CONCRETE DECK BEAMS WITH
SPILL-THROUGH ABUTMENTS ON CONCRETE PIER AND
ABUTMENT CAPS ON STEEL H-BEAM PILING.



T4N
BEGINNING STA. 22+15.04
ENDING STA. 25+26.96



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



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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Approved 2-8-11
Randy R. Kelly
Highway Commissioner

Approved 2-8-11
Gary F. Stahlhut
Madison County Engineer

Passed 2-15-11
Chris M. ...
DISTRICT 8 PROJECT IMPLEMENTATION ENGINEER

Released for Bid Based
on Limited Review 2-15-11
Mary C. ...
Deputy Director of Highways, Region 5 Engineer

Gary F. Stahlhut 2-8-11
DATE
GARY F. STAHLHUT, P.E. No. 062-041472
MADISON COUNTY HIGHWAY DEPARTMENT
7037 MARINE ROAD
EDWARDSVILLE, IL 62025
PHONE: (618) 692-7040
FAX: (618) 692-7049



LOCATION MAP
SCALE: 1" = 5,000'
NET LENGTH OF PROJECT: 0.059 MILES = 311.5 FEET
DESIGN DESIGNATION: RURAL TWO-LANE LOCAL ROAD
FUNCTIONAL CLASSIFICATION: LOCAL ROAD
DESIGN SPEED: 30 MPH
2006 ADT = 375

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 305A	06-11114-00-BR	MADISON	25	2

CONTRACT NO. 97461

GENERAL NOTES

- THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED JANUARY 1, 2007", SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JANUARY 1, 2011 AND THE SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL BE REQUIRED TO COMPLY WITH THE PROVISIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER PERMIT AND IMPLEMENT THE EROSION CONTROL PLAN INCLUDED IN THESE PLANS, AS SPECIFIED IN ARTICLE 107.23, THE ENGINEER MUST GIVE PRIOR APPROVAL BEFORE DISTURBANCE OF ANY AREA CAN BEGIN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.39 OF THE STANDARD SPECIFICATION, THE J.U.L.I.E. NUMBER IS 1-800-892-0123.
THE FOLLOWING UTILITY COMPANIES HAVE FACILITIES NEAR OR WITHIN THE PROJECT LIMITS:

AMEREN ILLINOIS - 2600 N. CENTER, MARYVILLE, IL 62062	618-346-1210
CITY OF HIGHLAND - 2610 PLAZA DRIVE, HIGHLAND, IL 62249	618-654-7511
FRONTIER COMMUNICATIONS - 111 E. STATE ST., MASCOUTAH, IL 62258	618-566-9815
- IN ADDITION TO FIELD SURVEYS, PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING FACILITIES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION DUE TO A CHANGE IN THE SCOPE OF WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
- ALL STATION AND OFFSET REFERENCES ARE TO THE PROPOSED ROADWAY CENTERLINE, UNLESS OTHERWISE NOTED. THE STATE PLANE COORDINATE SYSTEM HAS BEEN USED FOR THE HORIZONTAL CONTROL.
- ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM.
- IF ASH TREES ARE REMOVED ON THE PROJECT, THE CONTRACTOR SHALL BECOME FAMILIAR WITH AND COMPLY WITH MEASURES SPECIFIED BY THE ILLINOIS DEPARTMENT OF AGRICULTURE (IDOA) TO PREVENT THE SPREAD OF THE EMERALD ASH BORER. THE IDOA INFORMATION FOR ASH TREE REMOVAL CAN BE FOUND ON THE IDOA WEBSITE AT WWW.AGR.STATE.IL.US/EAB.
- CONTRACTOR SHALL ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED FROM THE ROADWAY DITCHES TO THE CHANNEL. ANY EXTRA REQUIRED GRADING SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- GRADING SHALL BE DONE BY HAND AROUND LIGHT POLES, UTILITY POLES, SIGN POSTS, SHRUBS, TREES OR OTHER NATURAL OR MAN-MADE OBJECTS WHERE SHALLOW FILLS OR CUTS ARE ADJACENT TO THE ITEMS. IT IS THE INTENT THAT THE LIMITS OF CONSTRUCTION BE SUCH AS TO PRESERVE, IN THE ORIGINAL STATE, AS MUCH AREA AS POSSIBLE. THE DECISION AS TO ITEMS TO REMAIN IN PLACE SHALL BE DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR EARTH EXCAVATION, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- REMOVAL OF EXISTING AGGREGATE AND OIL & CHIP SURFACE WILL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE FOR EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

112 LBS / SQ YD - IN	HMA SURFACE COURSE
2.05 TONS / CU YD	AGGREGATE SURFACE COURSE
90:90:90 LBS / ACRE	SEEDING FERTILIZER RATIO (NIT:PHOS:POT)
100 LBS / ACRE	TEMPORARY EROSION CONTROL SEEDING
- ONLY THOSE TREES APPROVED FOR REMOVAL BY THE ENGINEER SHALL BE REMOVED. THE CONTRACTOR SHALL PROTECT ALL REMAINING TREES, PLANTS, AND WETLANDS FROM DAMAGE. ALL TREES AND STUMPS INDICATED ON THE PLANS FOR REMOVAL SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
- ONLY PRECOATED GALVANIZED CORRUGATED STEEL CULVERT PIPE WILL BE ALLOWED FOR CLASS C PIPE CULVERTS.

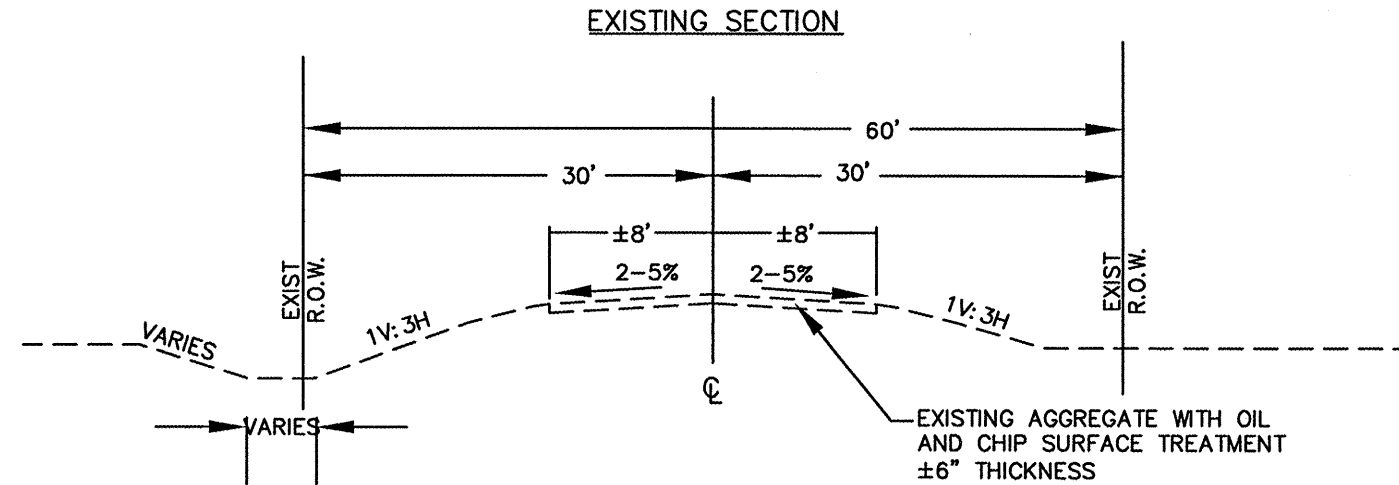
SUMMARY OF QUANTITIES		CONSTRUCTION CODE	
ITEM NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
20200100	EARTH EXCAVATION	CU YD	907
25000200	SEEDING, CLASS 2	ACRE	0.4
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	36
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	36
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	36
25100115	MULCH, METHOD 2	ACRE	0.4
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	40
28000305	TEMPORARY DITCH CHECKS	FOOT	24
28000400	PERIMETER EROSION BARRIER	FOOT	261
28100109	STONE RIPRAP, CLASS A5	SQ YD	410
28200200	FILTER FABRIC	SQ YD	410
40200100	AGGREGATE SURFACE COURSE, TYPE A	TON	187
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	39
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU YD	131
50300280	CONCRETE ENCASEMENT	CU YD	10
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	3293
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	15100
* 50901050	STEEL RAILING, TYPE SM	FOOT	224
51201600	FURNISHING STEEL PILES HP 12 X 53	FOOT	576
51201800	FURNISHING STEEL PILES HP 14 X 73	FOOT	720
51202305	DRIVING PILES	FOOT	1296
51203600	TEST PILE STEEL HP 12 X 53	EACH	2
51203800	TEST PILE STEEL HP 14 X 73	EACH	2
51204650	PILE SHOES	EACH	22
51500100	NAME PLATES	EACH	1
542C5497	PIPE CULVERTS, CLASS C, TYPE 1, EQUIVALENT ROUND-SIZE 42"	FOOT	174
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	366
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	988
67100100	MOBILIZATION	L SUM	1
70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1
* 78200410	GUARD RAIL MARKERS, TYPE A	EACH	4
* 78202000	TERMINAL MARKER - POST MOUNTED	EACH	4
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION- LOCATION 1	EACH	1
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION- LOCATION 2	EACH	1
X5080600	MECHANICAL SPLICERS	EACH	56

* - DENOTES SPECIALTY ITEM

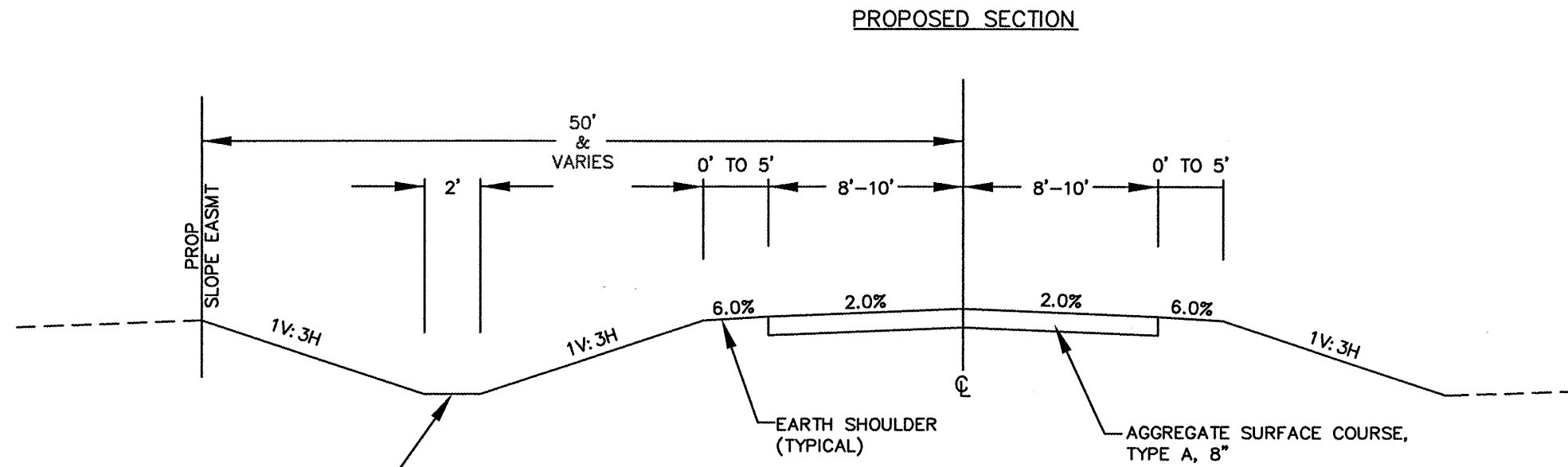
TYPICAL SECTIONS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 305A	06-11114-00-BR	MADISON	25	3

CONTRACT NO. 97461



EXISTING TYPICAL SECTION
MICHAEL ROAD
STA. 22+00 TO STA. 26+00
(NOT TO SCALE)



WHERE APPLICABLE, SEE
CROSS-SECTIONS FOR DITCH
LOCATIONS

PROPOSED TYPICAL SECTION
MICHAEL ROAD
STA. 22+15.04 TO STA. 23+15.04
STA. 24+26.96 TO STA. 25+26.96
(NOT TO SCALE)

PIPE CULVERT SCHEDULE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 305A	06-11114-00-BR	MADISON	25	4

CONTRACT NO. 97461

LOCATION	PIPE CULVERT, CLASS C, TYPE 1, EQRS 42" (FOOT)
LT STA. 22+70 TO 23+60	90
LT STA. 24+02 TO 24+86	84
TOTAL	174

RIPRAP SCHEDULE

LOCATION	STONE RIPRAP, CLASS A5 (SQ YD)	FILTER FABRIC (SQ YD)
LT STA. 23+60 TO 23+66	6	6
LT STA. 23+96 TO 24+02	6	6
STA. 23+16 TO 24+26	398	398
TOTAL	410	410

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION (CU YD)	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE (25%) (CU YD)	EMBANKMENT (CU YD)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CU YD)
STA. 22+15.25 TO 25+26.75	907	680	426	254
TOTAL	907	680	426	254

EROSION CONTROL SCHEDULE

LOCATION	TEMPORARY DITCH CHECKS (FOOT)	PERIMETER EROSION BARRIER (FOOT)
RT STA. 22+15 TO 23+50		135
RT STA. 24+00 TO 25+26		126
LT STA. 22+65	12	
LT STA. 24+91	12	
TOTAL	24	261

MIX REQUIREMENTS - SUPERPAVE PROJECT

MIXTURE USE	SURFACE
AC/PG	PG 64-22
RAP % (MAX)	SEE SPEC.
DESIGN AIR VOIDS	4% @ Ndes =50
MIX COMPOSITION (GRADATION MIXTURE)	MIX COMPOSITION IL 12.5/9.5
FRICITION AGGREGATE	MIXTURE "C"

REFLECTOR & TERMINAL MARKER SCHEDULE

LOCATION	GUARD RAIL MARKERS, TYPE A (EACH)	TERMINAL MARKER - POST MOUNTED (EACH)
RT & LT STA. 23+15		2
RT & LT STA. 24+27		2
RT & LT STA. 23+34	2	
RT & LT STA. 24+08	2	
TOTAL	4	4

02-1-18-34-00-000-021
DONALD C. & RUTH RICHTER

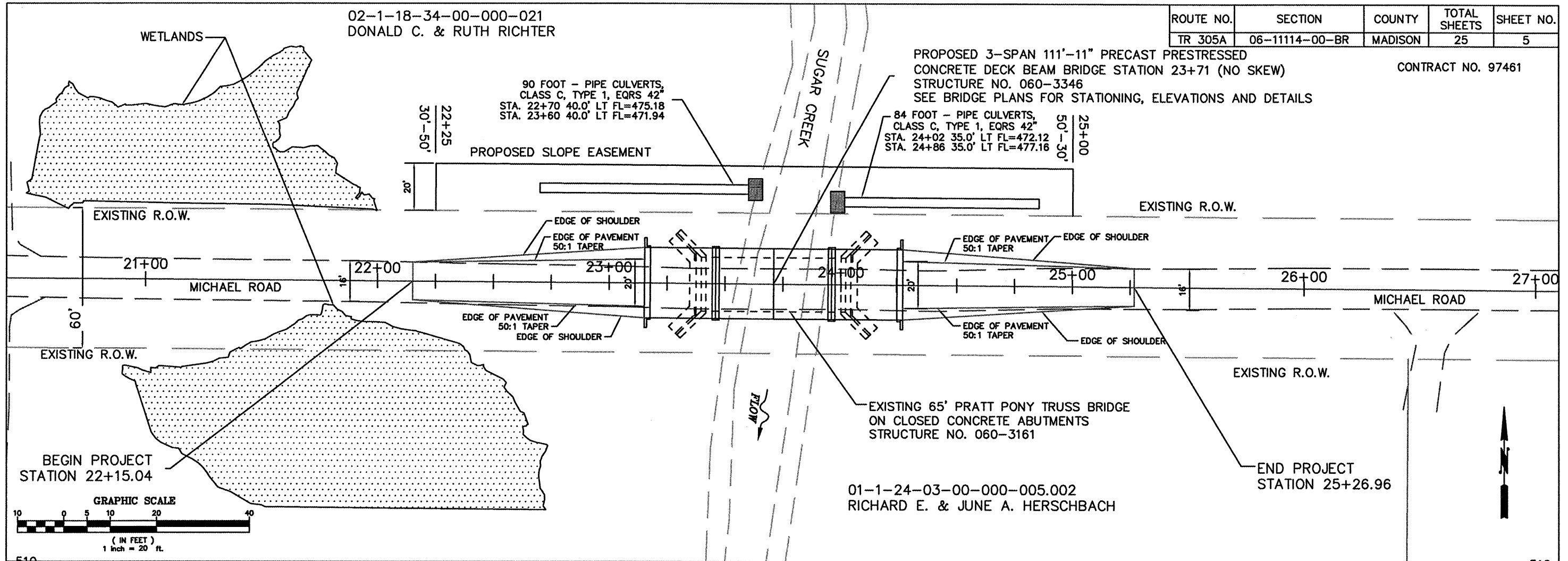
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 305A	06-11114-00-BR	MADISON	25	5

CONTRACT NO. 97461

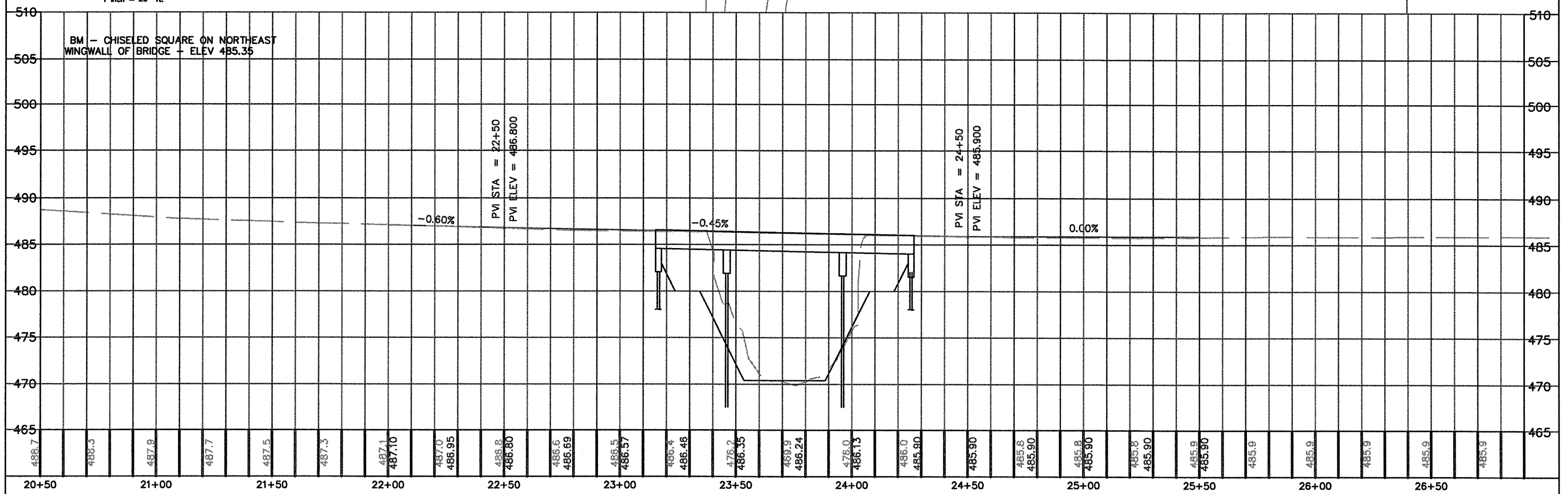
PROPOSED 3-SPAN 111'-11" PRECAST PRESTRESSED
CONCRETE DECK BEAM BRIDGE STATION 23+71 (NO SKEW)
STRUCTURE NO. 060-3346
SEE BRIDGE PLANS FOR STATIONING, ELEVATIONS AND DETAILS

84 FOOT - PIPE CULVERTS,
CLASS C, TYPE 1, EQRS 42"
STA. 24+02 35.0' LT FL=472.12
STA. 24+86 35.0' LT FL=477.16

90 FOOT - PIPE CULVERTS,
CLASS C, TYPE 1, EQRS 42"
STA. 22+70 40.0' LT FL=475.18
STA. 23+60 40.0' LT FL=471.94



01-1-24-03-00-000-005.002
RICHARD E. & JUNE A. HERSCHBACH

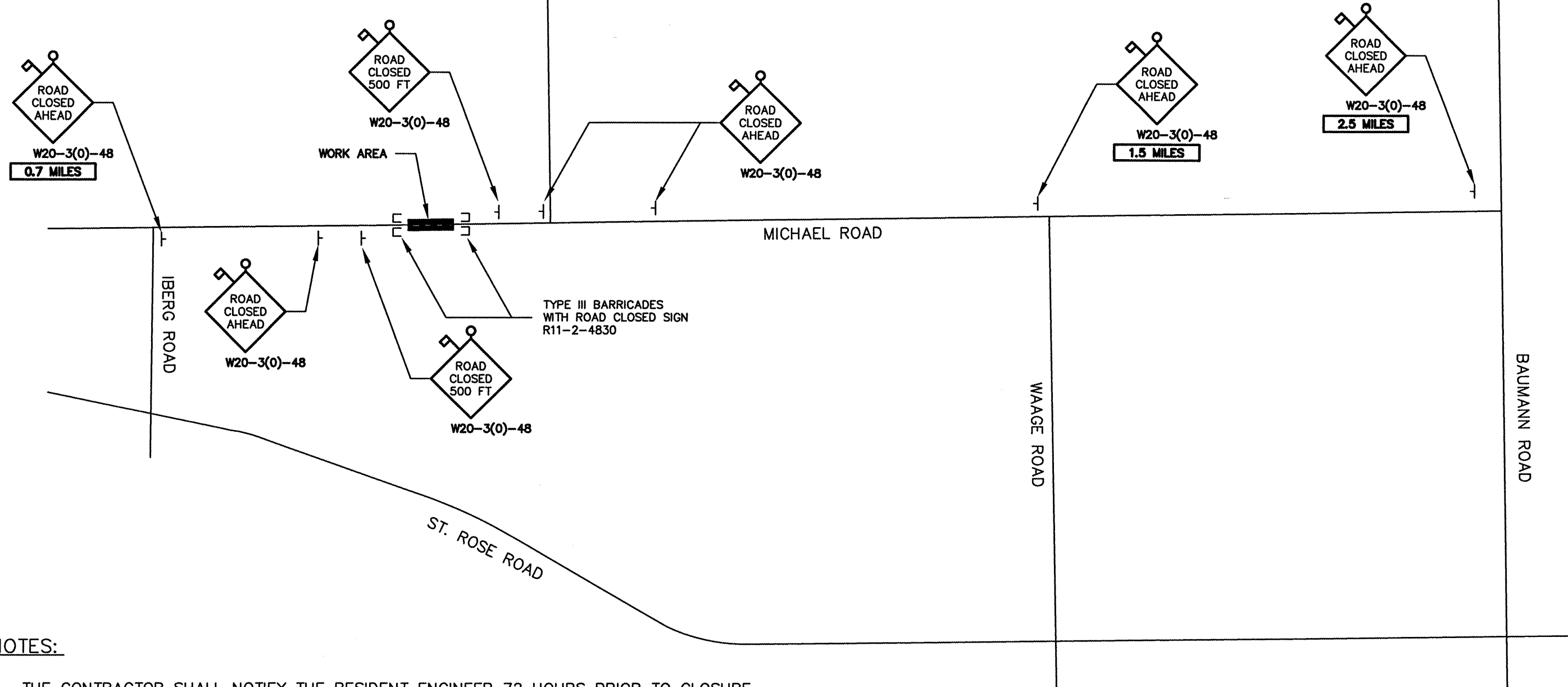


PLAN & PROFILE SHEET

TRAFFIC CONTROL PLAN

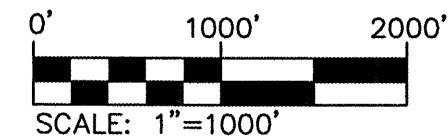
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 305A	06-11114-00-BR	MADISON	25	6

CONTRACT NO. 97461



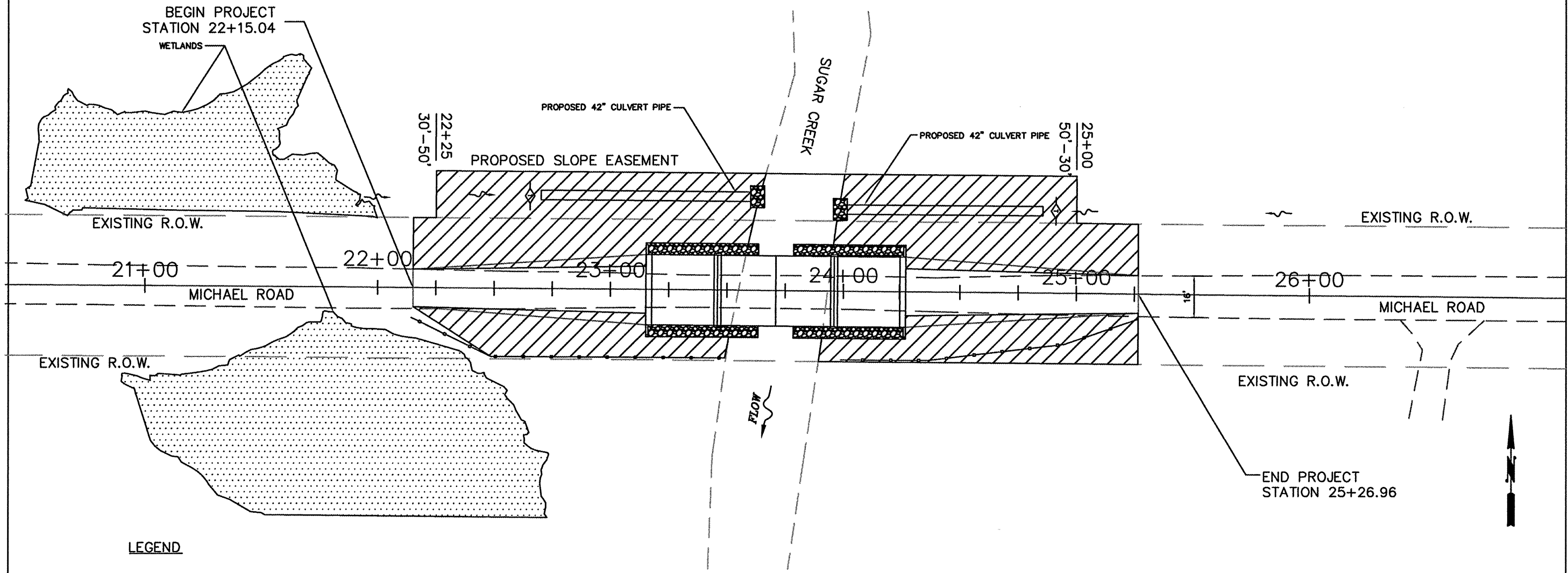
NOTES:

1. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER 72 HOURS PRIOR TO CLOSURE.
2. ALL TRAFFIC CONTROL DEVICES SHALL INCLUDE LOW INTENSITY FLASHING LIGHTS.
3. LOCATION OF TRAFFIC CONTROL DEVICES SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.
4. FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.
5. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PRIVATE ENTRANCES AT ALL TIMES.
6. TRAFFIC CONTROL SHALL CONFORM TO IDOT HIGHWAY STANDARDS: 701901-01, B.L.R. 21-8.








ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 305A	06-11114-00-BR	MADISON	25	7

CONTRACT NO. 97461



LEGEND

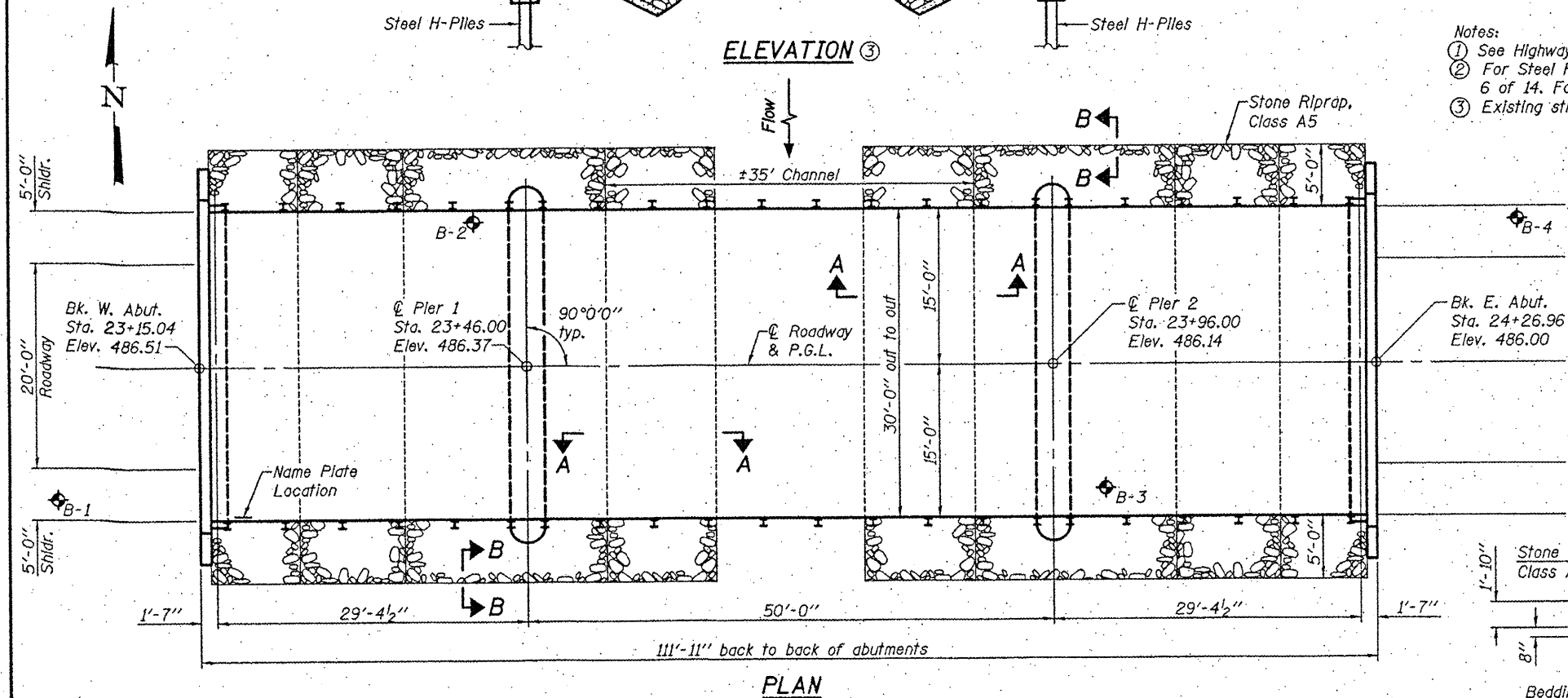
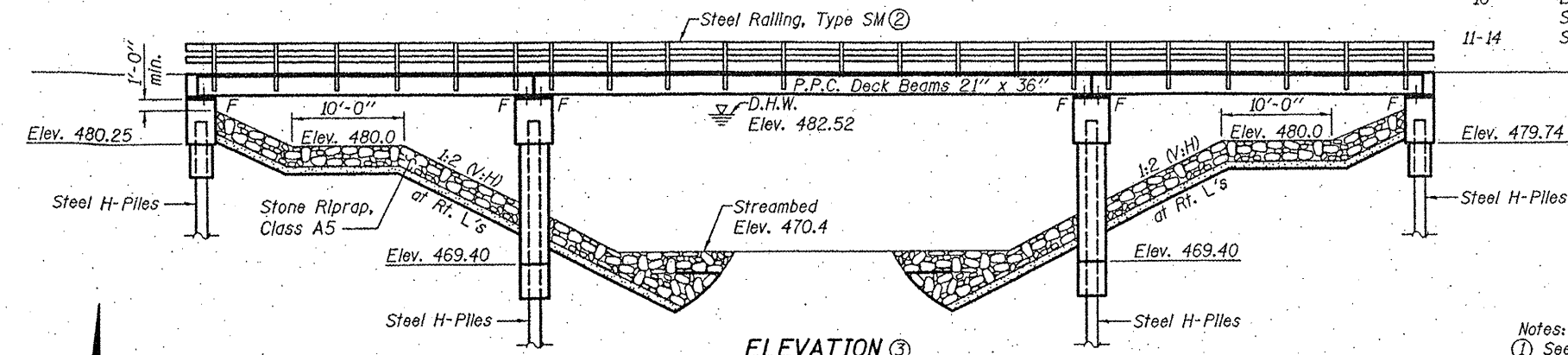
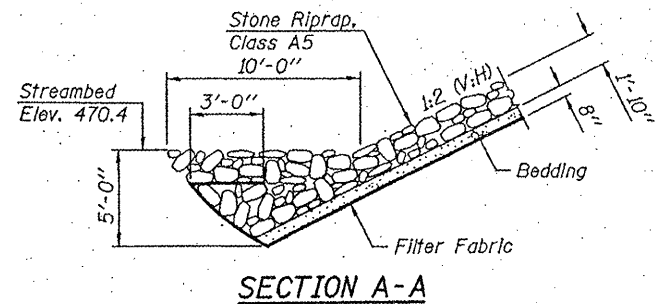
-  TEMPORARY DITCH CHECK
-  PERIMETER EROSION BARRIER
-  RIPRAP, CLASS A5
-  SEEDING, CLASS 2
-  WETLANDS



Existing Structure: SN 060-3161 constructed in 1937 is a riveted steel Pratt pony truss measuring 68'-0" back-to-back abutments, 20'-0" out-to-out deck, with a 0° skew. The superstructure is supported by closed abutments.

Traffic Control: Bridge will be closed during construction.

Salvage: None



INDEX OF SHEETS

Sheet No.	Description
1	General Plan
2	Superstructure
3	21" x 36" PPC Deck Beam (Span 1 & 3)
4	21" x 36" PPC Deck Beam (Span 2)
5	21" x 36" PPC Deck Beam Details
6	Steel Railing, Type SM With Hot-Mix Asphalt Wearing Surface
7	Abutments
8	Piers
9	HP Pile Details
10	Bar Splicer Assembly and Mechanical Splicer Details
11-14	Soil Borling Logs

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
 Reinforcement bars designated (E) shall be epoxy coated.
 The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
 Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
 Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure.
 The pay item for Underwater Structure Excavation Protection - Location 1 is to be used for Pier 1 construction. The pay item for Underwater Structure Excavation Protection - Location 2 is to be used for Pier 2 construction.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2008 and 2009 Interims
LOADING HL-93
 Allow 50#/sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
PRECAST PRESTRESSED UNITS
 $f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " ϕ low-lax strands)
 $f_{pbt} = 201,960$ psi ($\frac{1}{2}$ " ϕ low-lax strands)

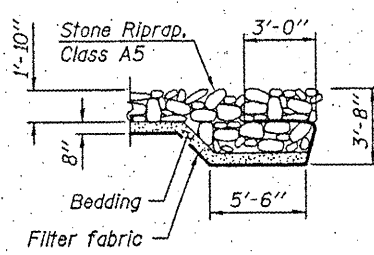
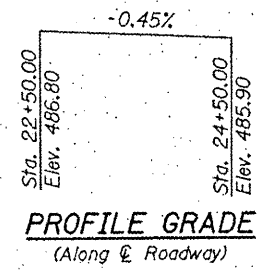
SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.25g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.57g
 Soil Site Class = D

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.	-	398	398
Filter Fabric	Sq. Yd.	-	398	398
Hot-Mix Asphalt Surface Course, Mix "C", N50	Ton	39	-	39
Removal of Existing Structures	Each	-	-	1
Concrete Structures	Cu. Yd.	-	131.0	131.0
Concrete Encasement	Cu. Yd.	-	10.0	10.0
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	3,293	-	3,293
Reinforcement Bars, Epoxy Coated	Pound	-	15,100	15,100
Steel Railing, Type SM	Foot	224	-	224
Furnishing Steel Piles HP12x53	Foot	-	576	576
Furnishing Steel Piles HP14x73	Foot	-	720	720
Driving Piles	Foot	-	1,296	1,296
Test Pile Steel HP12x53	Each	-	2	2
Test Pile Steel HP14x73	Each	-	2	2
Pile Shoes	Each	-	22	22
Name Plates	Each	-	-	1
Waterproofing Membrane System	Sq. Yd.	366	-	366
Portland Cement Mortar Fairing Course	Foot	988	-	988
Underwater Structure Excavation Protection - Location 1	Each	-	1	1
Underwater Structure Excavation Protection - Location 2	Each	-	1	1
Mechanical Splicers	Each	-	56	56

- Notes:
 ① See Highway Standard 515001.
 ② For Steel Railing, Type SM details, see sheet 6 of 14. For rail post spacing, see sheet 2 of 14.
 ③ Existing structure not shown.



DESIGN SCOUR ELEVATION TABLE

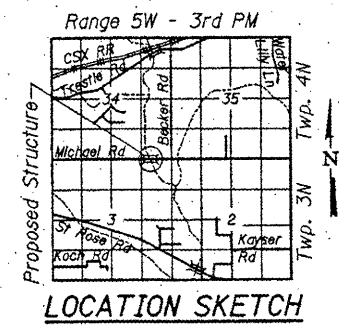
Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	480.3	454.2	454.2	479.7

WATERWAY INFORMATION

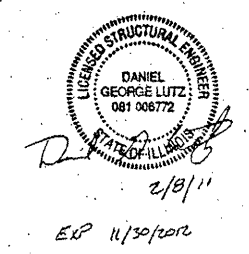
Drainage Area = 26.07 Sq. Mi. Low Grade Elev. 483.73 at Sta. 24+24.09

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.	
Design	25	4490	612	732	482.52	1.34	1.13	483.86	483.65
Base	100	6250	653	795	483.16	1.50	1.38	484.66	484.54
Overtopping Max Calc.	500	8420			483.83				487.23

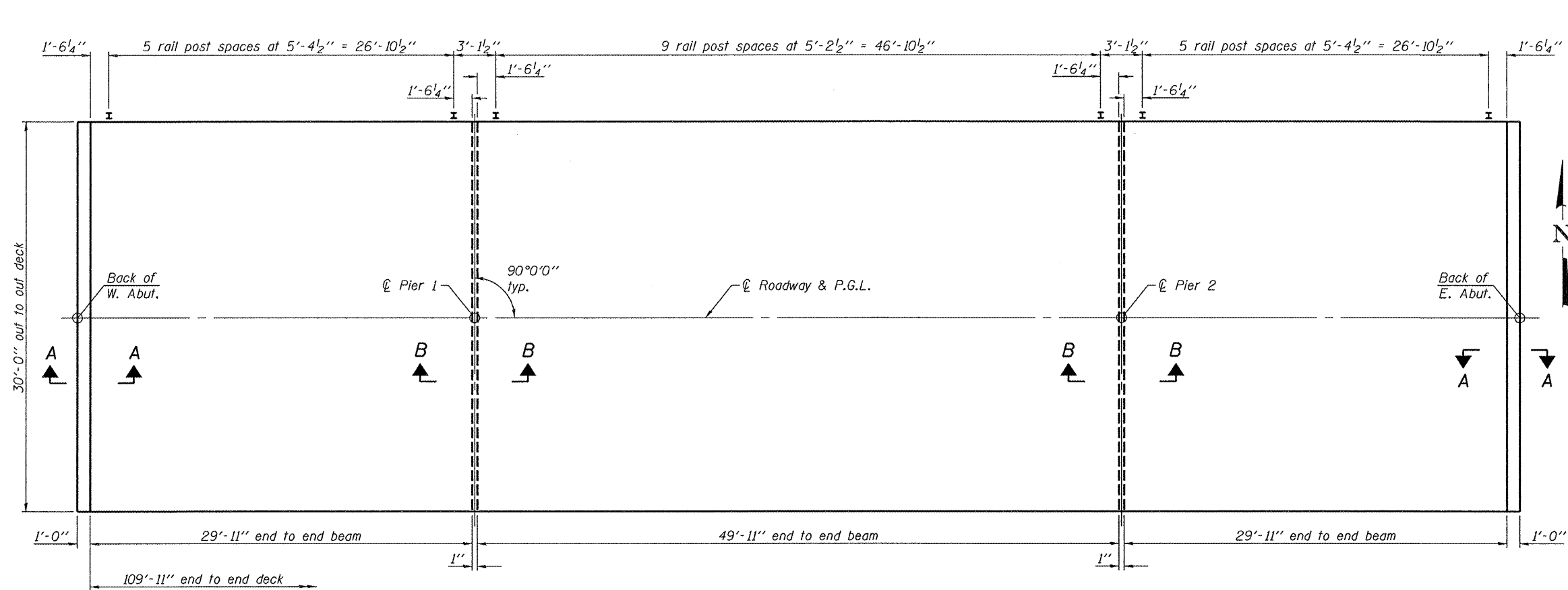
NAME PLATE ①
 SUGAR CREEK
 BUILT 2011 BY
 MADISON COUNTY
 SEC. 06-11114-00-BR
 STATION 23+71
 STR. NO. 060-3346 LOADING HL-93



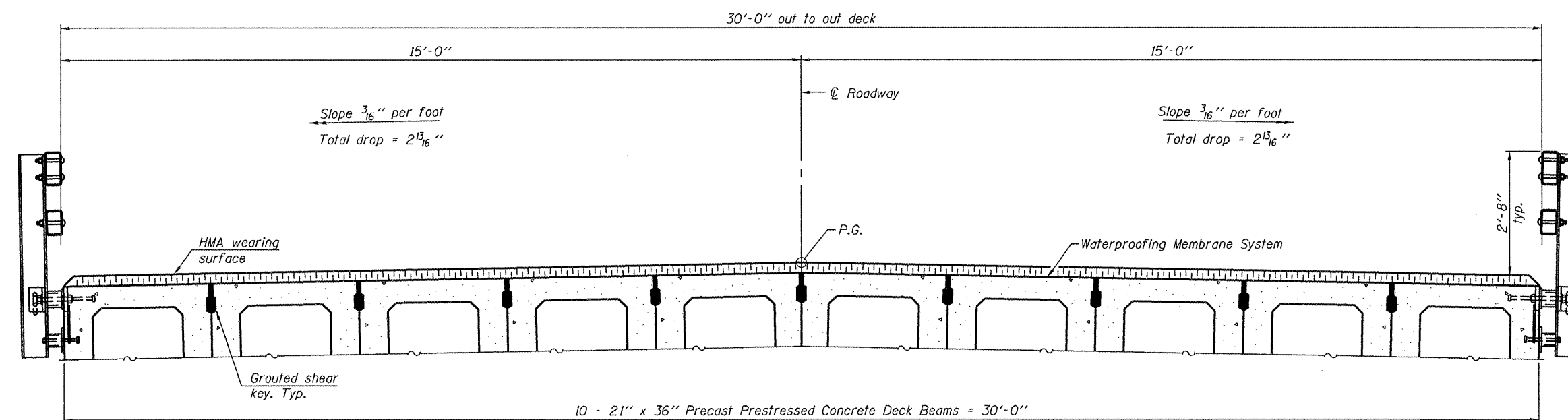
I certify that to the best of knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AASHTO LRFD Bridge Design Specifications.



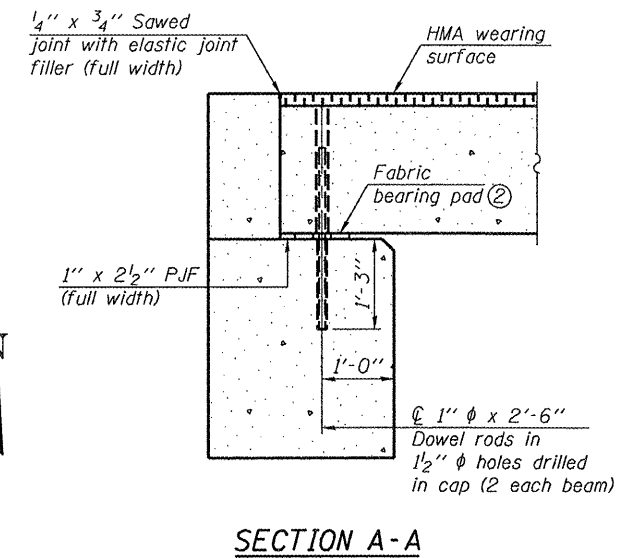
**MICHAEL ROAD (T.R. 305A)
 OVER SUGAR CREEK
 SECTION 06-11114-00-BR
 MADISON COUNTY
 STATION 23+71.00**



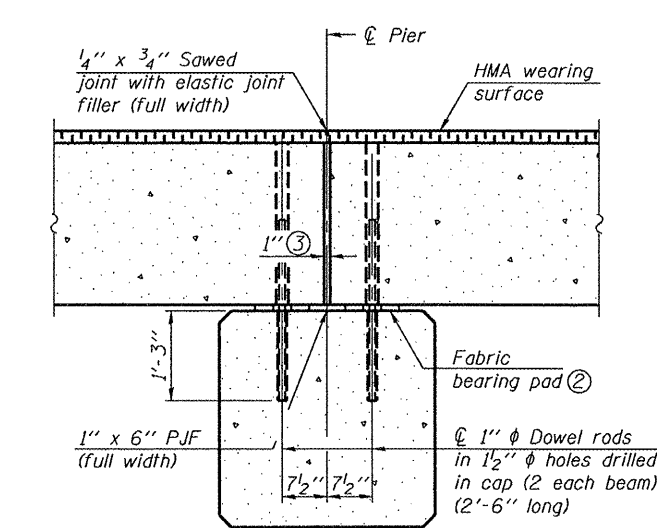
PLAN



CROSS SECTION
(Looking East)



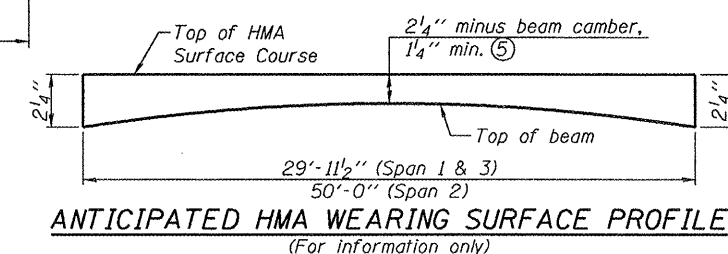
SECTION A-A



SECTION B-B

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Hot-Mix Asphalt Surface Course, Mix "C", N50	Tons	39
Waterproofing Membrane System	Sq. Yd.	366
Portland Cement Mortar Fairing Course	Foot	988



- Notes:
- For PPC Deck Beam details and Bill of Material, see sheet 5 of 14.
 - For fabric bearing pad details, see sheet 5 of 14.
 - Joint shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.
 - For Steel Railing, Type SM details, see sheet 6 of 14.
 - Span 1 & 3 anticipated camber is 3/8" and Span 2 anticipated camber is 1".

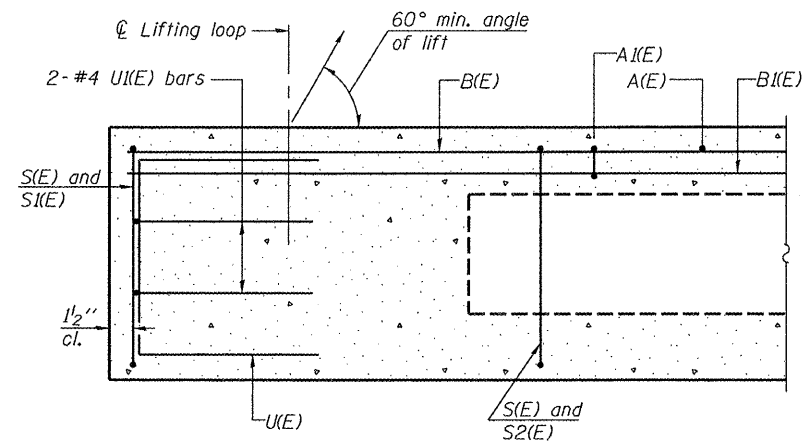


USER NAME =	DESIGNED - JAD	REVISED -
PLOT SCALE =	CHECKED - MAG	REVISED -
PLOT DATE =	DRAWN - JAD	REVISED -
	CHECKED - MAG	REVISED -

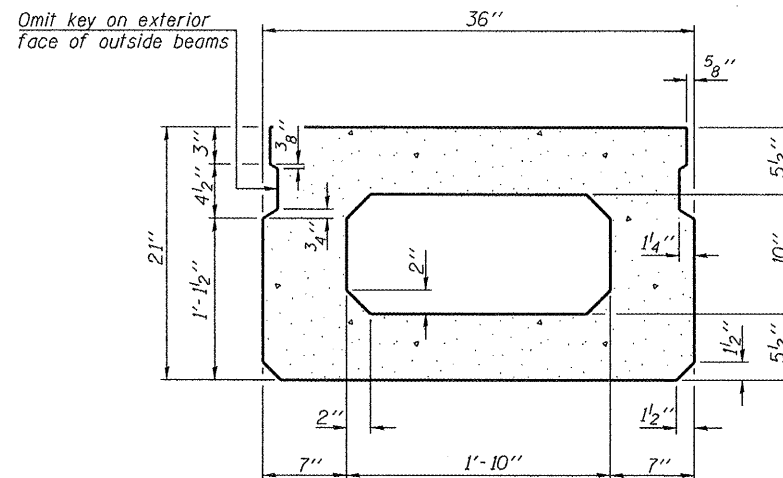
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 060-3346
SHEET NO. 2 OF 14 SHEETS

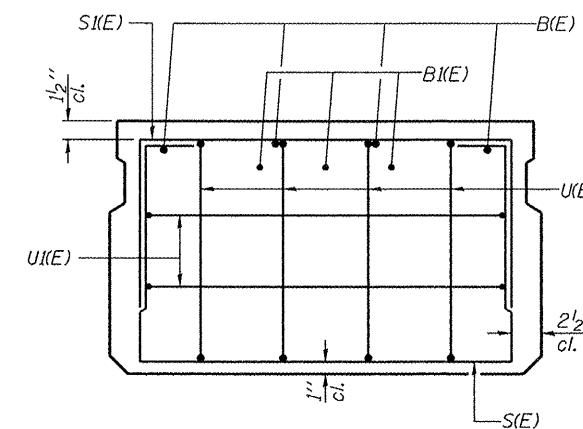
TWP Road	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305A	06-11114-00-BR	MADISON	25	9
CONTRACT NO.			[ILLINOIS] FED. AID PROJECT	



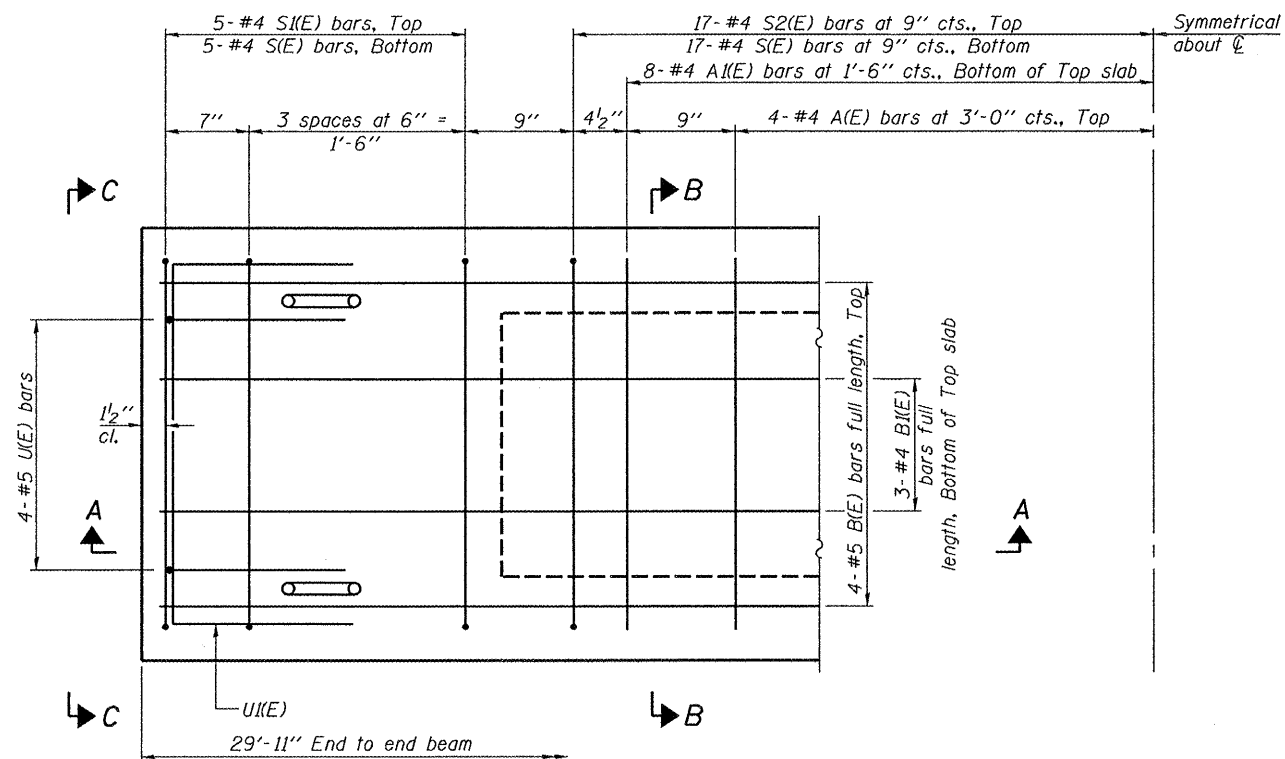
SECTION A-A



SECTION B-B
(Showing dimensions)

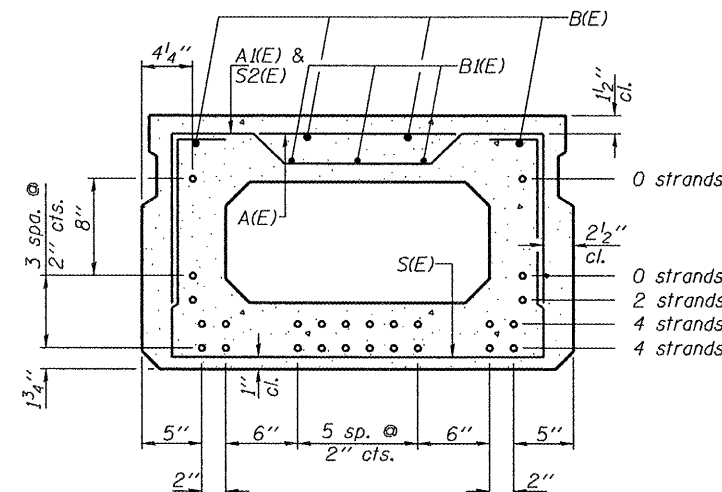


VIEW C-C



PLAN VIEW

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



SECTION B-B

(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

DESIGN STRESSES

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pu} = 270,000$ psi ($1/2$ " ϕ low-lax strands)
 $f_{pbt} = 201,960$ psi ($1/2$ " ϕ low-lax strands)

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	8	#4	2'-7"	—
A(E)	16	#4	2'-10"	—
B(E)	4	#5	29'-8"	—
B(E)	3	#4	29'-8"	—
S(E)	44	#4	6'-5"	U
S1(E)	10	#4	4'-11"	U
S2(E)	34	#4	5'-2"	U
U(E)	8	#5	4'-0"	U
U(E)	4	#4	5'-0"	U

Note: See sheet 5 of 14 for additional details and Bill of Material.

MINIMUM BAR LAP

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

PD-2136-0

7-1-10



USER NAME =	DESIGNED - JAD	REVISED -
	CHECKED - MAG	REVISED -
PLOT SCALE =	DRAWN - JAD	REVISED -
PLOT DATE =	CHECKED - MAG	REVISED -

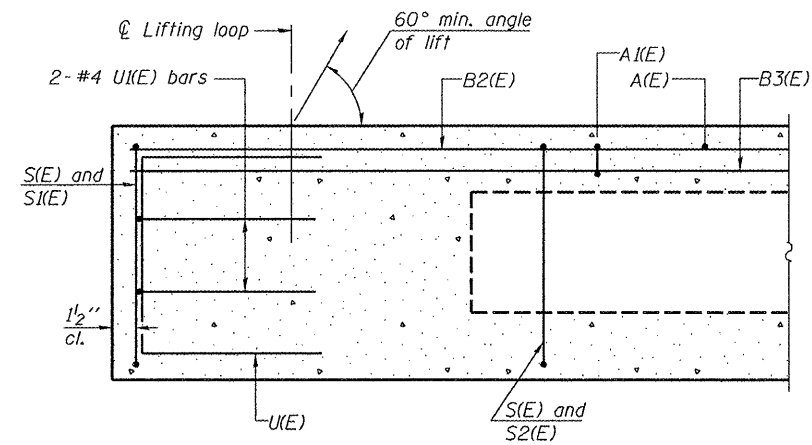
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

21" x 36" PPC DECK BEAM (SPAN 1 & 3)
STRUCTURE NO. 060-3346

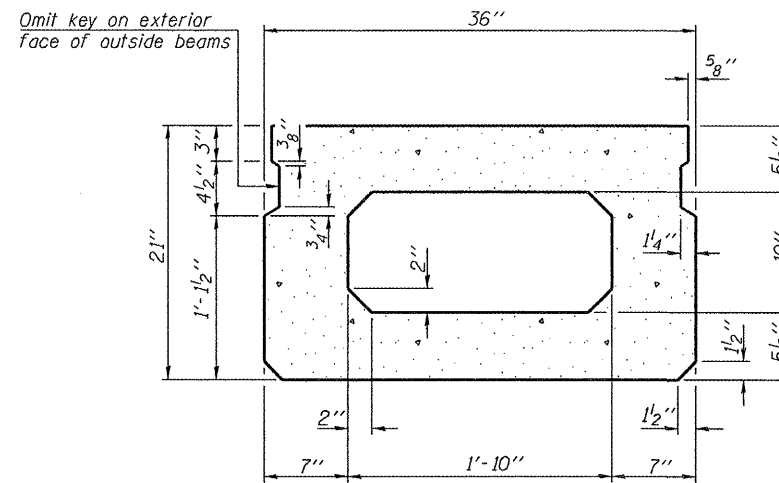
SHEET NO. 3 OF 14 SHEETS

TWP Road	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305A	06-11114-00-BR	MADISON	25	10
CONTRACT NO.				

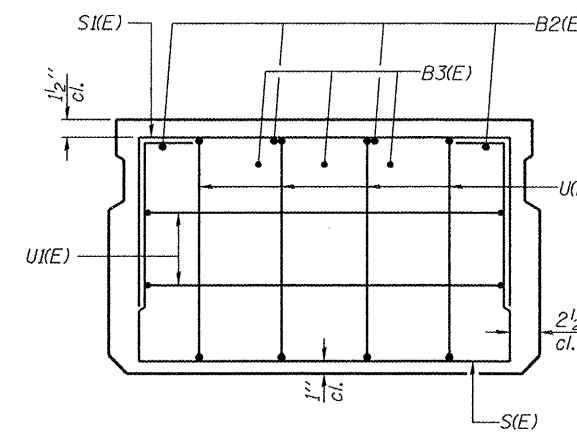
ILLINOIS FED. AID PROJECT



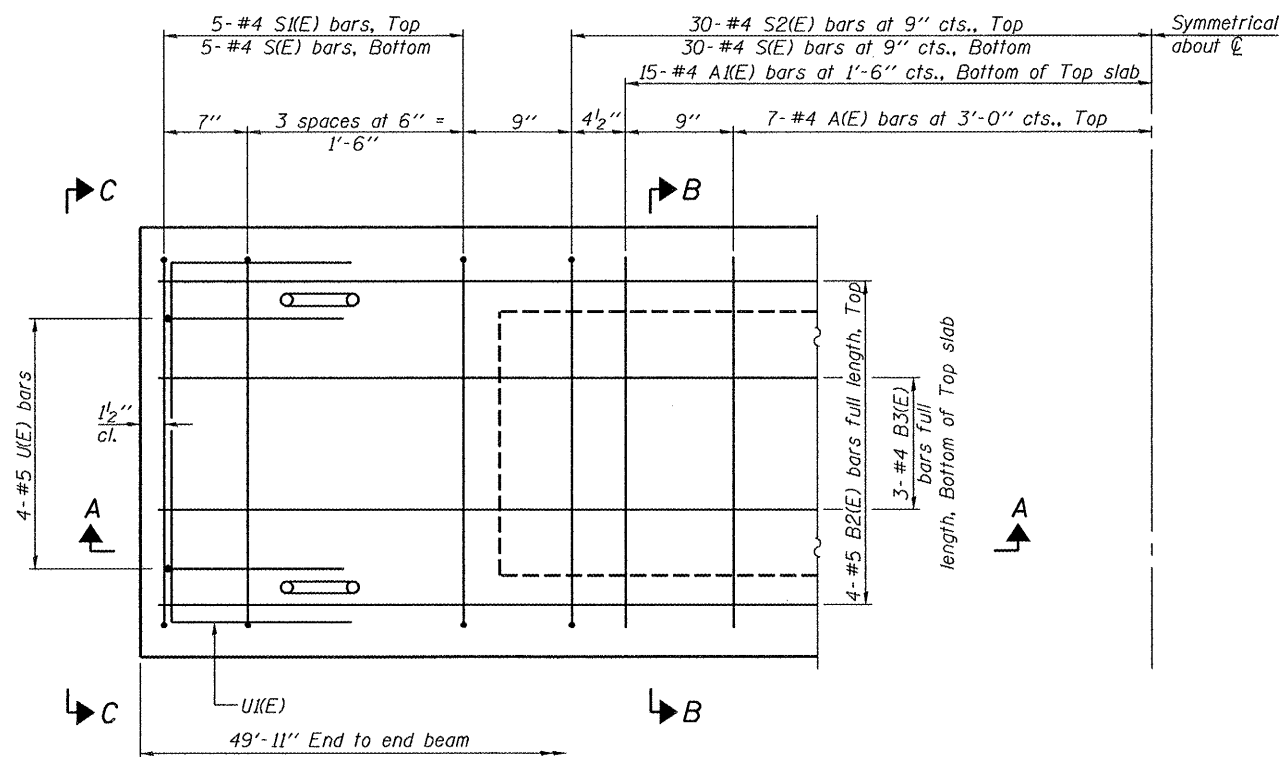
SECTION A-A



SECTION B-B
(Showing dimensions)

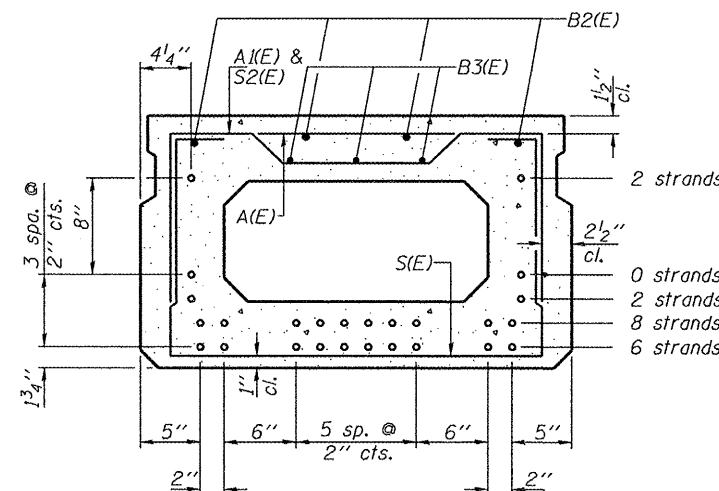


VIEW C-C



PLAN VIEW

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



SECTION B-B
(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

MINIMUM BAR LAP

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

DESIGN STRESSES

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pu} = 270,000$ psi ($1/2"$ ϕ low-lax strands)
 $f_{pbt} = 201,960$ psi ($1/2"$ ϕ low-lax strands)

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	14	#4	2'-7"	—
A1(E)	30	#4	2'-10"	—
B2(E)	4	#5	49'-8"	—
B3(E)	3	#4	49'-8"	—
S(E)	70	#4	6'-5"	U
S1(E)	10	#4	4'-11"	U
S2(E)	60	#4	5'-2"	U
U(E)	8	#5	4'-0"	U
U1(E)	4	#4	5'-0"	U

Note: See sheet 5 of 14 for additional details and Bill of Material.

PD-2136-0

7-1-10



USER NAME =	DESIGNED - JAD	REVISED -
PLOT SCALE =	CHECKED - MAG	REVISED -
PLOT DATE =	DRAWN - JAD	REVISED -
	CHECKED - MAG	REVISED -

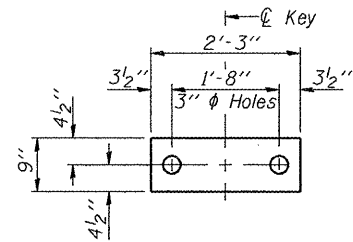
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

21" x 36" PPC DECK BEAM (SPAN 2)
STRUCTURE NO. 060-3346

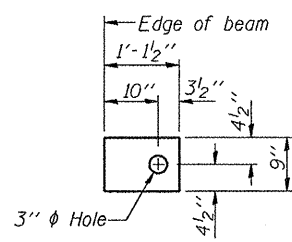
SHEET NO. 4 OF 14 SHEETS

TWP Road	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305A	06-11114-00-BR	MADISON	25	11
CONTRACT NO.				

ILLINOIS FED. AID PROJECT



FABRIC BEARING PAD
(Interior)

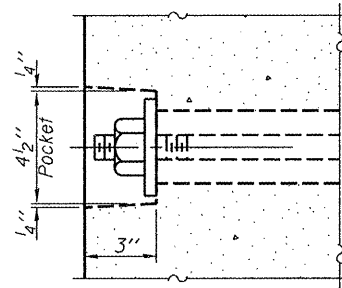


FABRIC BEARING PAD
(Exterior)

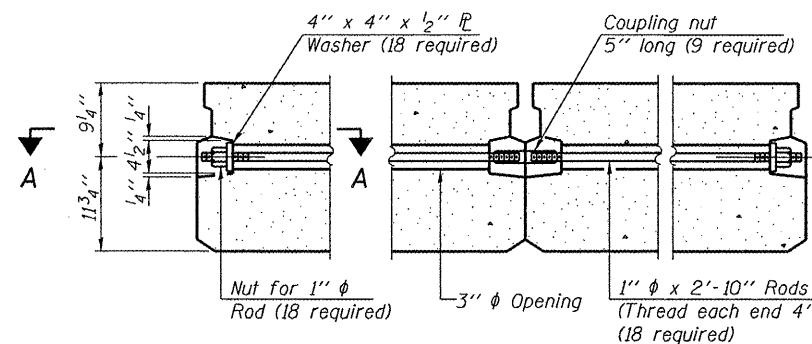
FIXED

Notes:

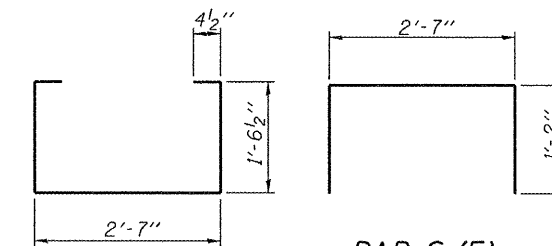
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



SECTION A-A

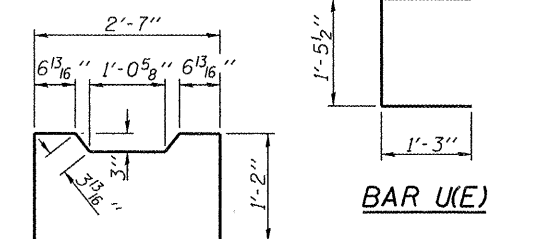


TYPICAL TRANSVERSE TIE ASSEMBLY



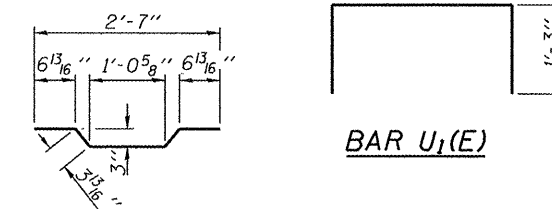
BAR S1(E)

BAR S2(E)



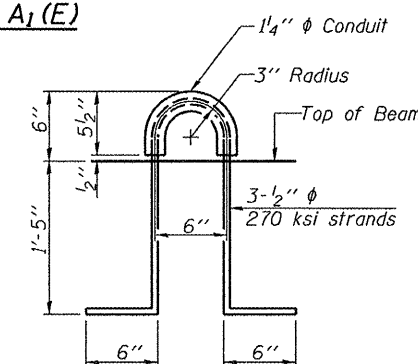
BAR U1(E)

BAR U2(E)

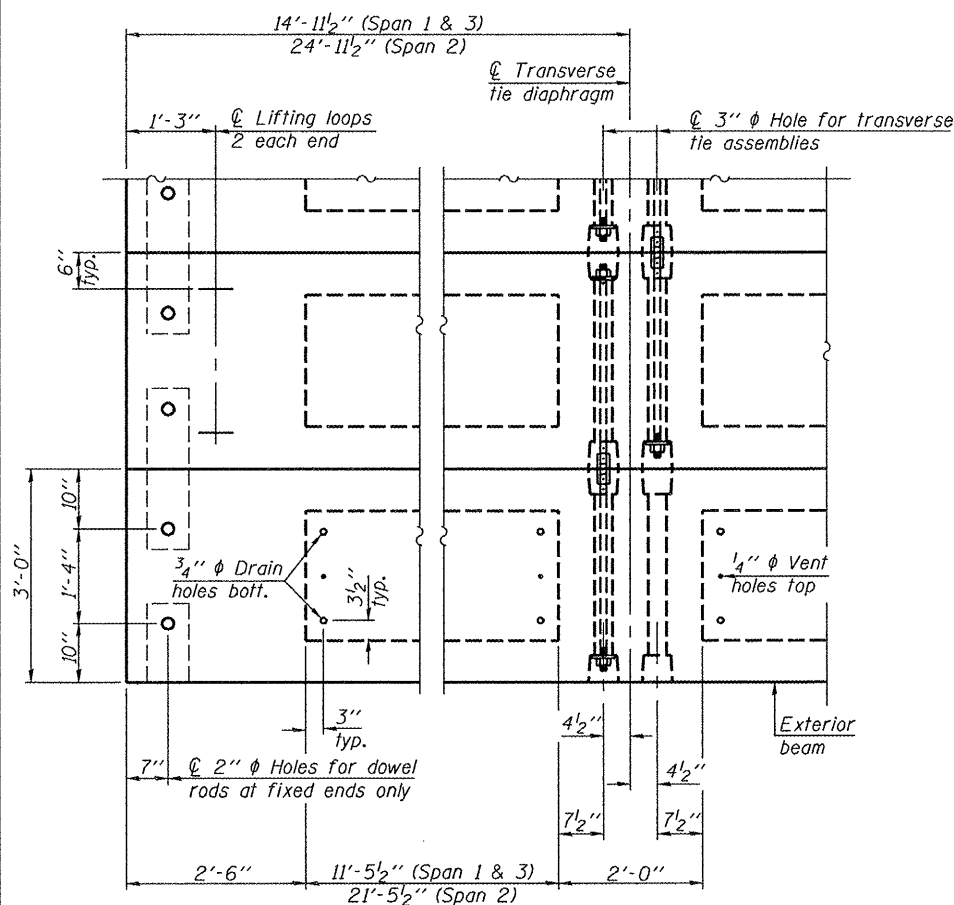


BAR A1(E)

BAR A2(E)



LIFTING LOOP DETAIL



PLAN VIEW

NOTES

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

Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).

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

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

Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

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

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

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

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (21" depth)	Sq. Ft.	3,293

PD-2136-0D

7-1-10



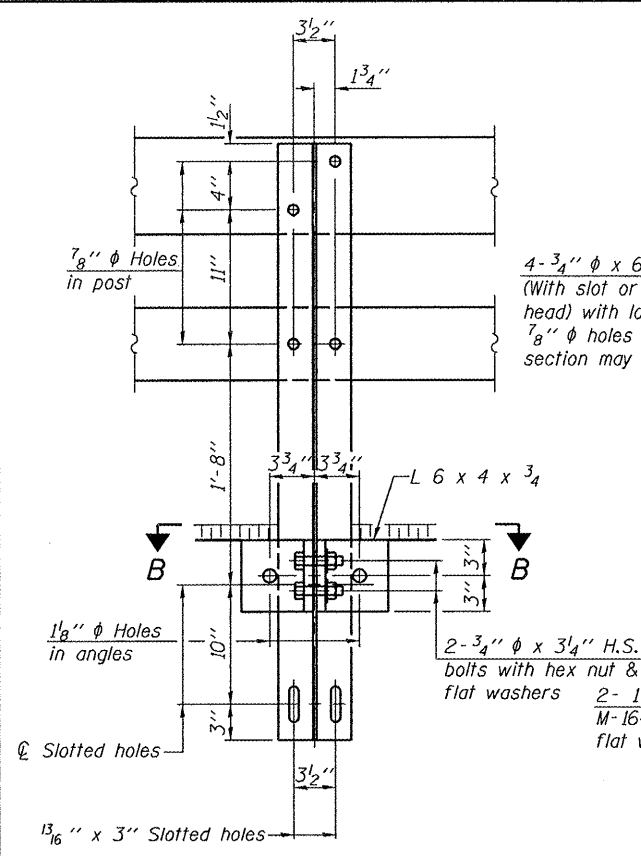
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	CHECKED - MAG	REVISIONS -
PLOT SCALE =	DRAWN - JAD	REVISIONS -
PLOT DATE =	CHECKED - MAG	REVISIONS -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

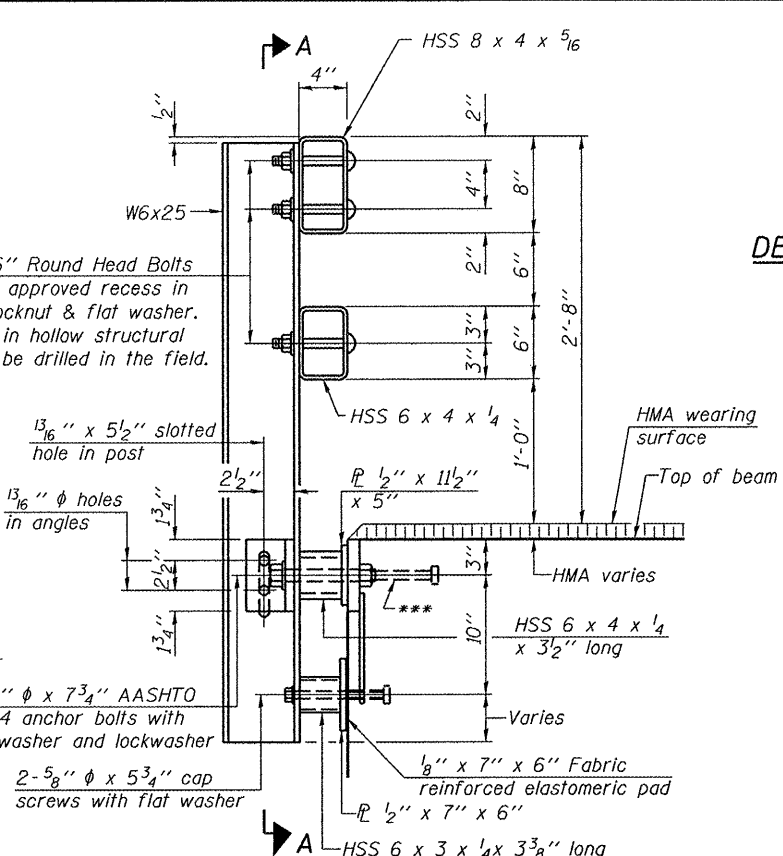
21" x 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 060-3346

SHEET NO. 5 OF 14 SHEETS

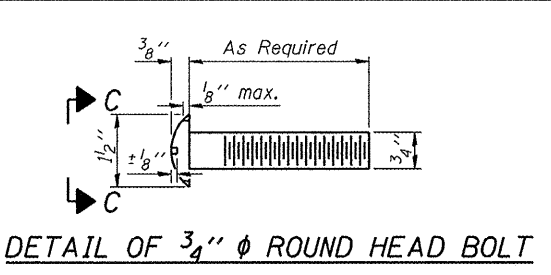
TWP Road 305A	SECTION 06-11114-00-BR	COUNTY MADISON	TOTAL SHEETS 25	SHEET NO. 12
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



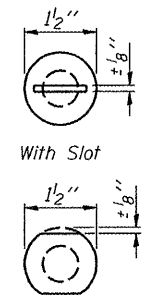
SECTION A-A



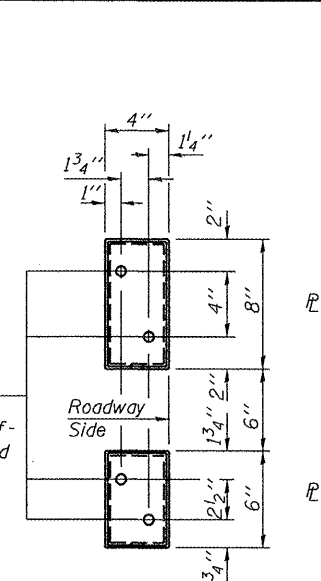
SECTION AT RAIL POST



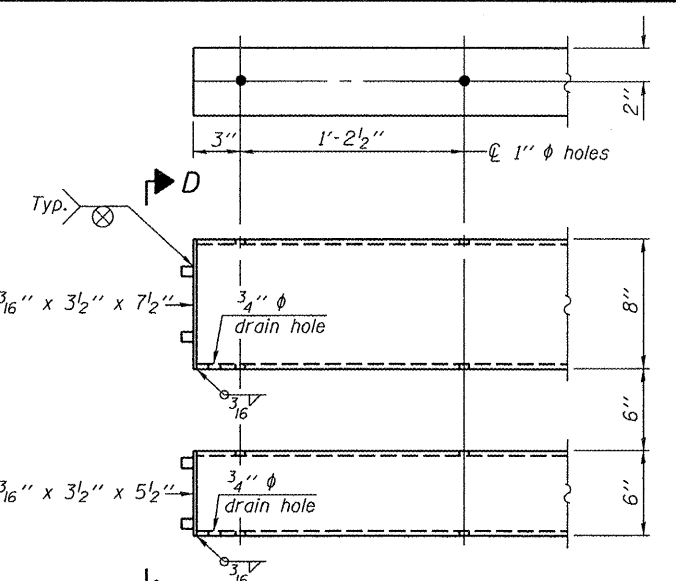
DETAIL OF 3/4" ϕ ROUND HEAD BOLT



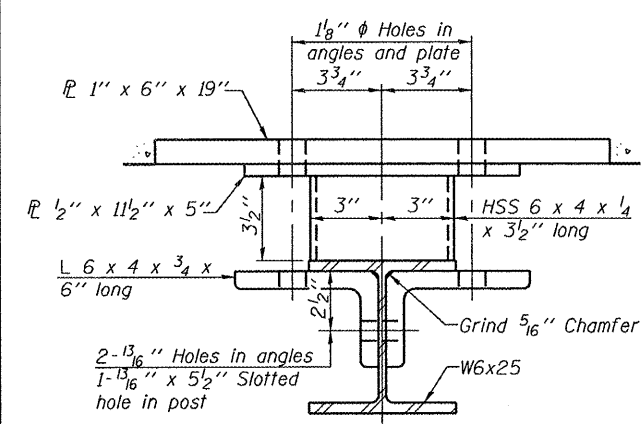
VIEW C-C



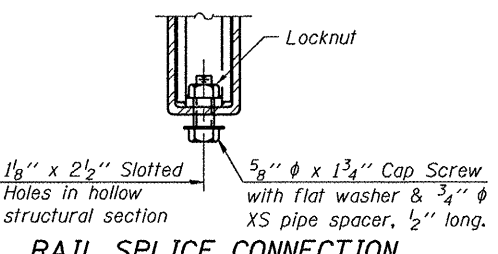
VIEW D-D



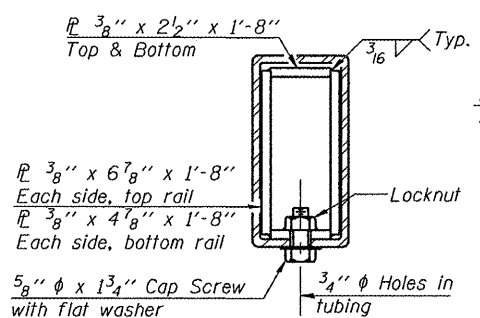
END OF RAIL DETAILS



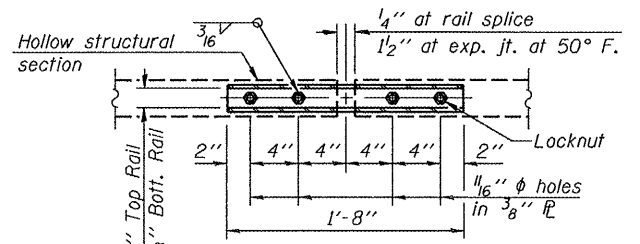
SECTION B-B



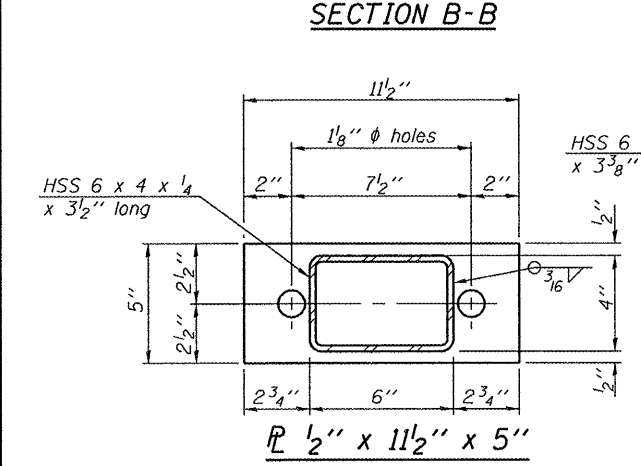
RAIL SPLICE CONNECTION AT EXPANSION JT.



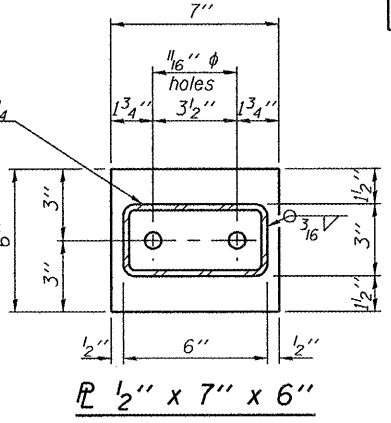
SECTION AT RAIL SPLICE



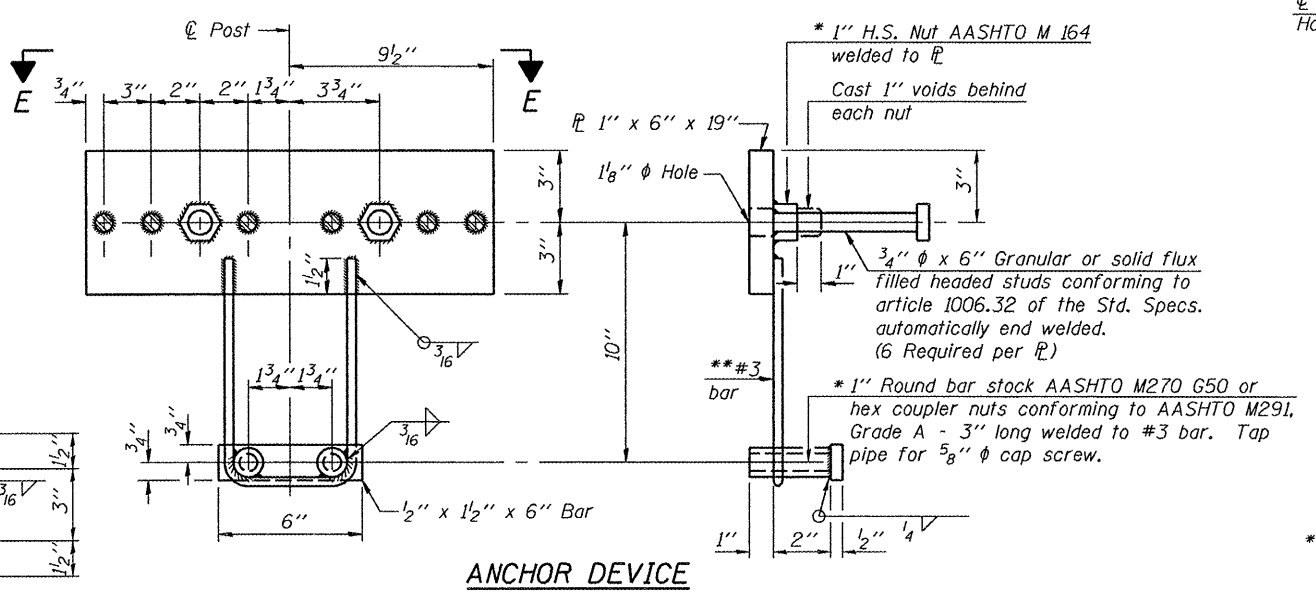
PLAN-BOTT. SPLICE R TYPICAL



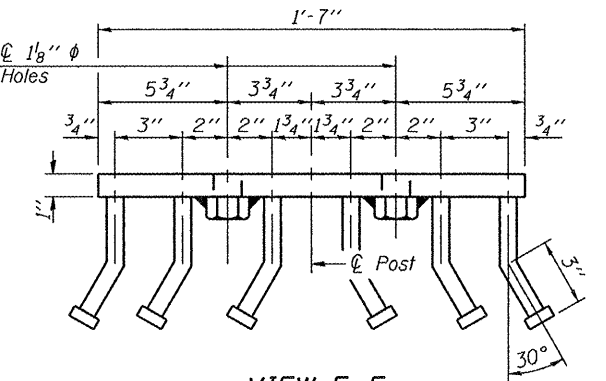
SECTION B-B



Anchor device detail



ANCHOR DEVICE



VIEW E-E

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

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	224

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

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

R-34HMAWS

7-1-10 (6'-3" Maximum Post Spacing) (1/4" minimum to 3/8" maximum HMA thickness)



CLIENT: Illinois Dept. of Transportation
 PROJECT: Steel Railing, Type SM
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: [Date]

DESIGNED	REVISIONS
[Name]	1. [Description]
[Name]	2. [Description]
[Name]	3. [Description]
[Name]	4. [Description]
[Name]	5. [Description]
[Name]	6. [Description]
[Name]	7. [Description]
[Name]	8. [Description]
[Name]	9. [Description]
[Name]	10. [Description]

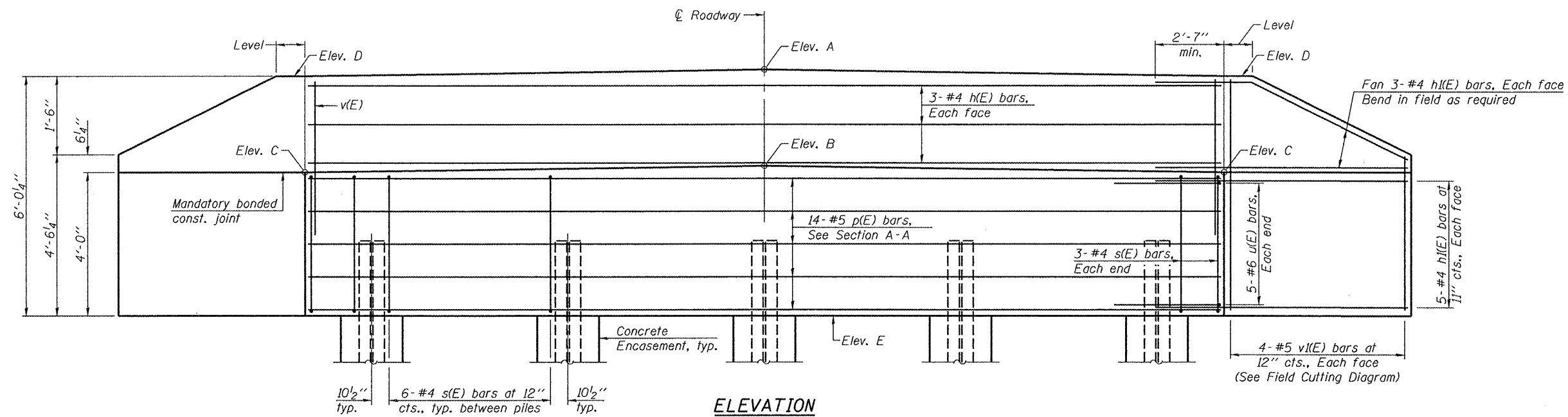
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

STEEL RAILING, TYPE SM WITH HOT-MIX ASPHALT WEARING SURFACE
 STRUCTURE NO. 060-3346

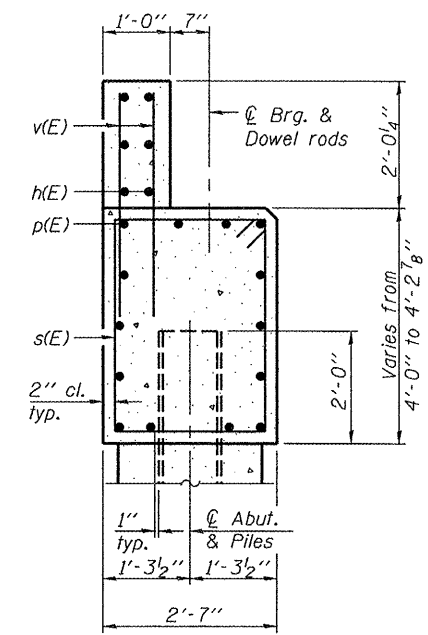
SHEET NO. 6 OF 14 SHEETS

TWP	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305A	06-11114-00-BR	MADISON	25	13

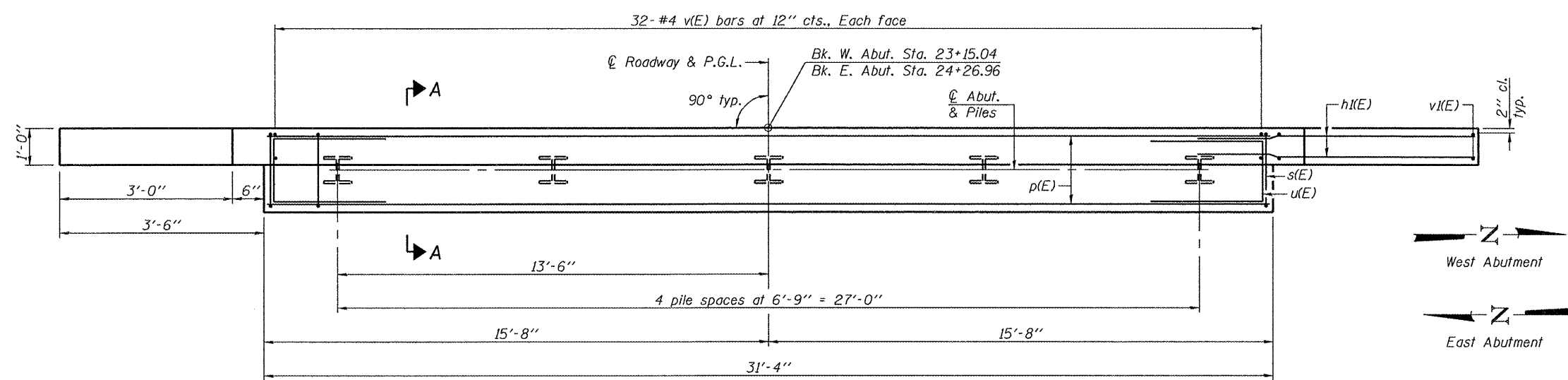
ILLINOIS FED. AID PROJECT



ELEVATION



SECTION A-A



PLAN

BILL OF MATERIAL
(Two Abutments)

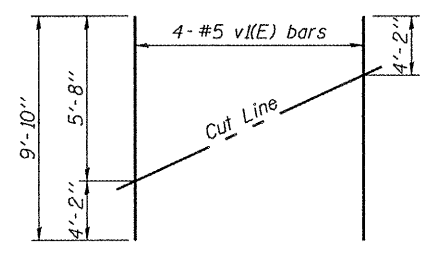
Bar	No.	Size	Length	Shape
h(E)	12	#4	31'-0"	—
h(E)	64	#4	5'-11"	—
p(E)	28	#5	31'-0"	—
s(E)	60	#4	12'-7"	□
u(E)	20	#6	11'-0"	□
v(E)	128	#4	3'-5"	—
v(E)	16	#5	9'-10"	—
Concrete Structures	Cu. Yd.		32.2	
Concrete Encasement	Cu. Yd.		3.5	
Reinforcement Bars, Epoxy Coated	Pound		2,700	
Furnishing Steel Piles HP12x53	Foot		576	
Driving Piles	Foot		576	
Test Pile Steel HP12x53	Each		2	
Pile Shoes	Each		10	

PILE DATA

(Two Abutments)
 Type: HP12x53 with Pile Shoes
 Nominal Required Bearing: 419 kips
 Factored Resistance Available: 209 kips
 Est. Length: 72'
 No. Production Piles: 8
 No. Test Piles: 2

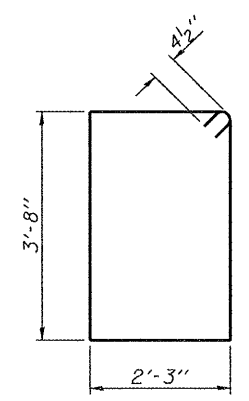
ELEVATION TABLE

	A	B	C	D	E
W. Abut.	486.51	484.49	484.25	486.27	480.25
E. Abut.	486.00	483.98	483.74	485.76	479.74

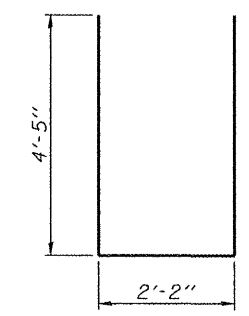


FIELD CUTTING DIAGRAM

Order v(E) bars full length. Cut as shown and use remainder of bars in opposite face.



BAR s(E)



BAR u(E)

Notes:

- For details of piles and Concrete Encasement, see sheet 9 of 14.
- Space reinforcement in cap to miss dowel rods.
- The backwall and portion of the wingwall above the mandatory bonded construction joint shall be cast against the in-place beam.
- One test pile shall be driven at each abutment in a production pile location specified by the Engineer and incorporated into the structure.

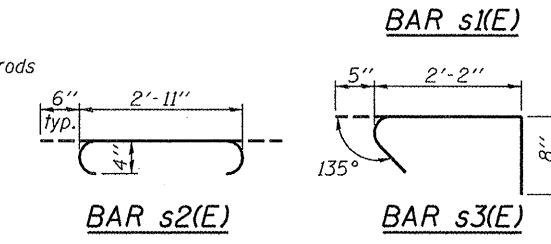
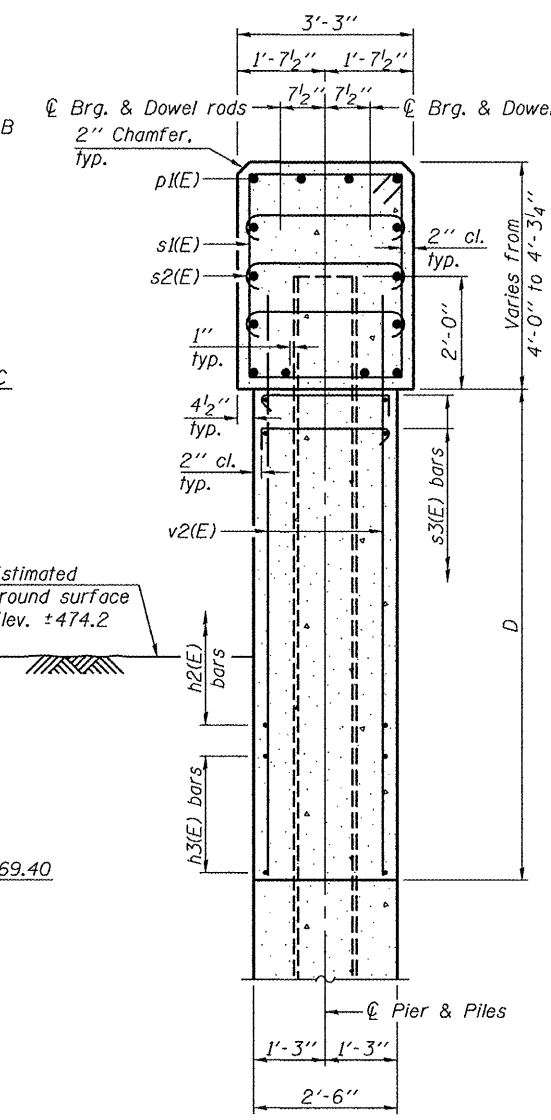
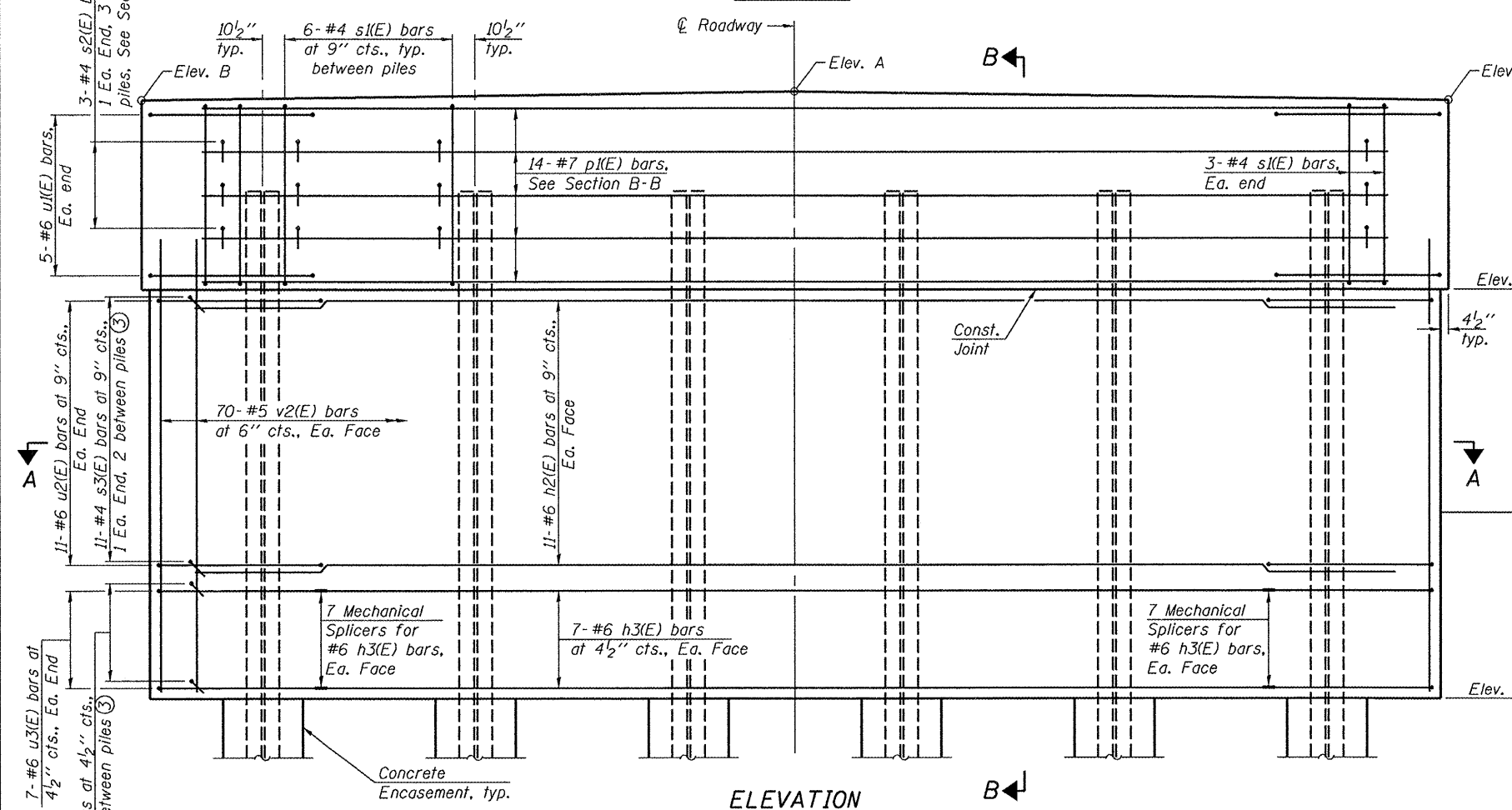
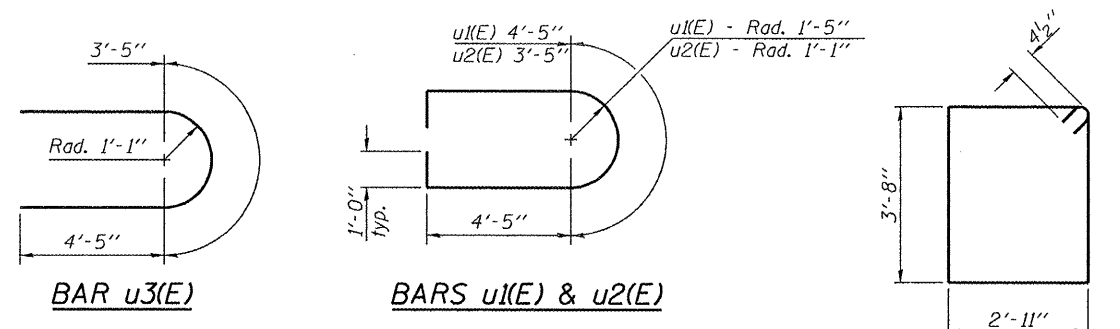
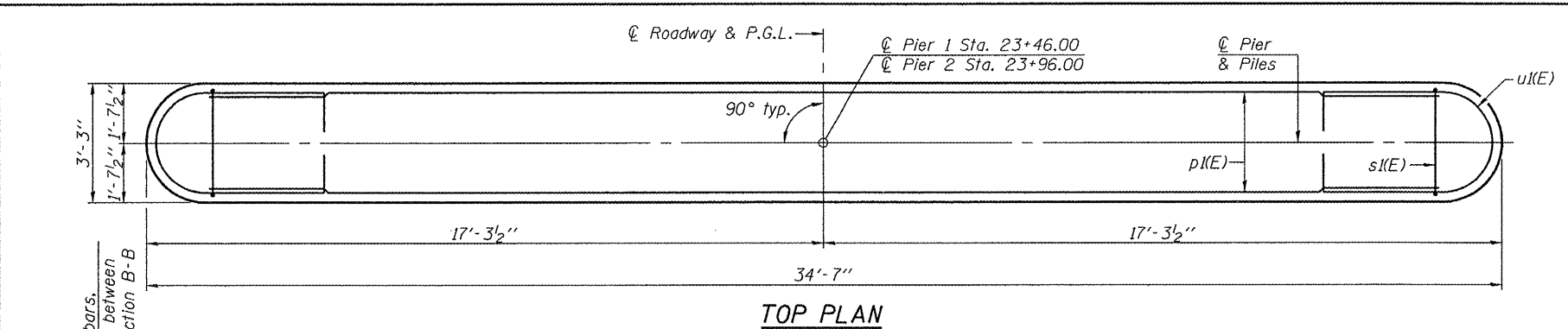


USER NAME =	DESIGNED - JAD	REVISED -
PLOT SCALE =	CHECKED - DGL	REVISED -
PLOT DATE =	DRAWN - JAD	REVISED -
	CHECKED - DGL	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

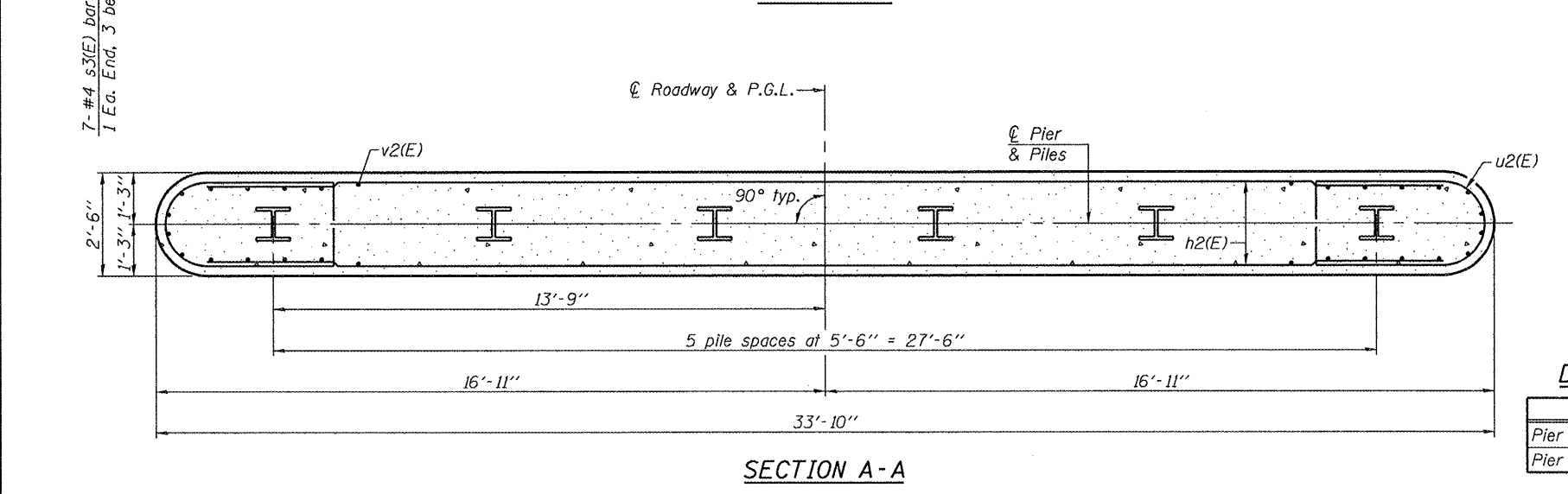
ABUTMENTS
STRUCTURE NO. 060-3346
 SHEET NO. 7 OF 14 SHEETS

TWP Road	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305A	06-11114-00-BR	MADISON	25	14
CONTRACT NO.			ILLINOIS FED. AID PROJECT	



BILL OF MATERIAL
(Two Piers)

Bar	No.	Size	Length	Shape
h2(E)	44	#6	31'-4"	—
h3(E)	28	#6	22'-6"	—
p1(E)	28	#7	31'-4"	—
s1(E)	72	#4	13'-11"	□
s2(E)	102	#4	3'-11"	U
s3(E)	502	#4	3'-3"	U
u1(E)	20	#6	15'-3"	U
u2(E)	44	#6	14'-3"	U
u3(E)	28	#6	12'-3"	U
v2(E)	280	#5	12'-6"	—
Concrete Structures		Cu. Yd.	98.8	
Concrete Encasement		Cu. Yd.	6.5	
Reinforcement Bars, Epoxy Coated		Pound	12,400	
Furnishing Steel Piles HP14x73		Foot	720	
Driving Piles		Foot	720	
Test Pile Steel HP14x73		Each	2	
Pile Shoes		Each	12	
Underwater Structure Excavation Protection - Location 1		Each	1	
Underwater Structure Excavation Protection - Location 2		Each	1	
Mechanical Splicers		Each	56	



PILE DATA
(Two Piers)

Type: HP14x73 with Pile Shoes
 Nominal Required Bearing: 578 kips
 Factored Resistance Available: 289 kips
 Est. Length: 72'
 No. Production Piles: 10
 No. Test Piles: 2

Notes:

- For details of piles and Concrete Encasement, see sheet 9 of 14.
- Space reinforcement in cap to miss dowel rods.
- Alternate s3(E) bars end for end as shown in Section B-B.
- For details of Mechanical Splicers, see sheet 10 of 14.
- One test pile shall be driven at each pier in a production pile location specified by the Engineer and incorporated into the structure.
- If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.

DIMENSION & ELEVATION TABLE

	A	B	C	D
Pier 1	484.35	484.08	480.08	10'-8 1/8"
Pier 2	484.12	483.85	479.85	10'-5 3/8"

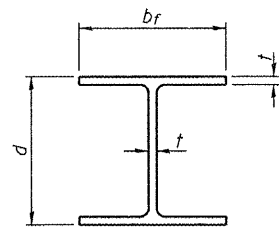


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PLOT DATE =	DRAWN - JAD	REVISED -
	CHECKED - DGL	REVISED -

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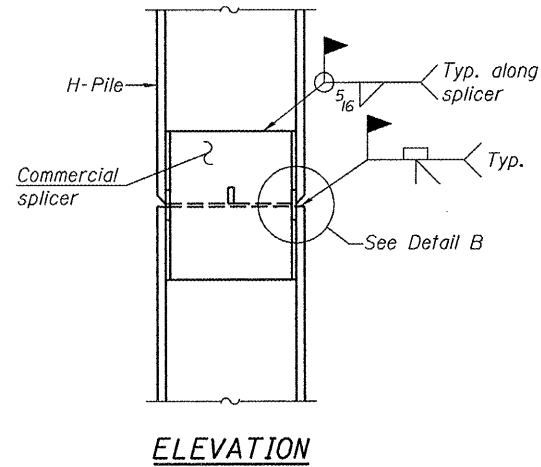
PIERS
STRUCTURE NO. 060-3346
 SHEET NO. 8 OF 14 SHEETS

TWP Road 305A	SECTION 06-11114-00-BR	COUNTY MADISON	TOTAL SHEETS 25	SHEET NO. 15
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

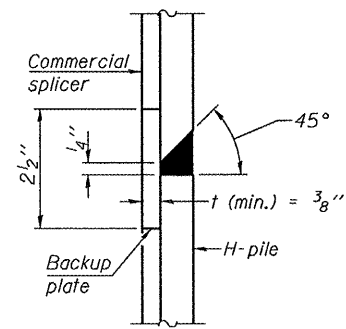


STEEL PILE TABLE

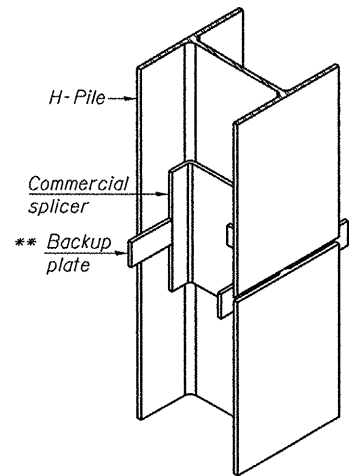
Designation	Depth d	Flange width b _f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
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

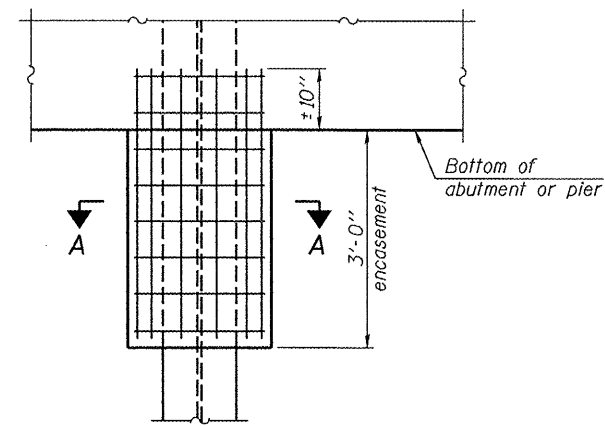


DETAIL "B"



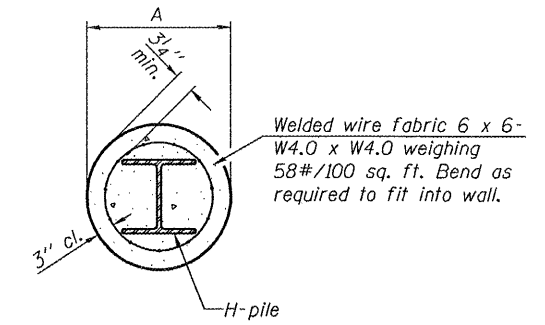
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



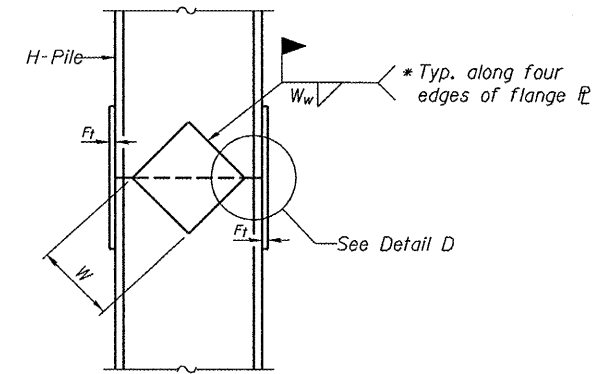
ELEVATION

PILE ENCASEMENT

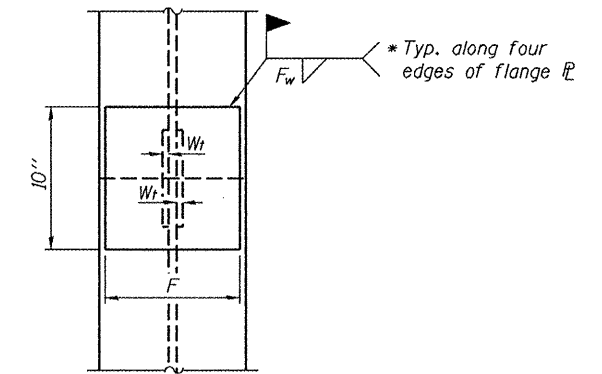


SECTION A-A

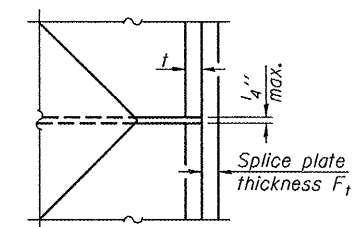
Note:
Forms for encasement may be omitted when soil conditions permit.



ELEVATION



END VIEW

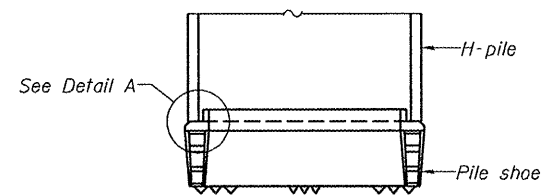


DETAIL D

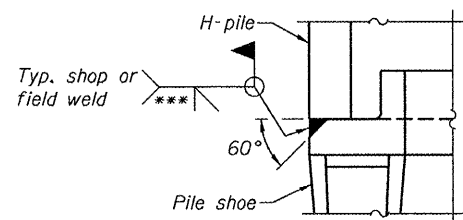
Designation	F	F _t	F _w	W	W _t	W _w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 1/2"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 1/2"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5 1/2"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 1/2"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5 1/2"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5 1/2"	1/2"
x63	10"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

WELDED PLATE FIELD SPLICE

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

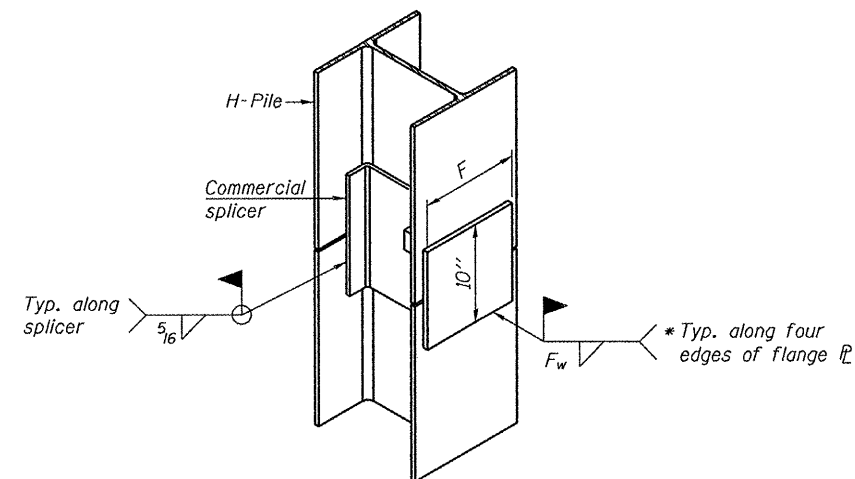


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

F-HP

7-1-10



ELPAC
Elmhurst Business Center 1
100 Larkin Court, Suite 1
Cobleville, IL 62524
Tel: 618.545.2200
Fax: 618.545.2205
www.gaterassociates.com

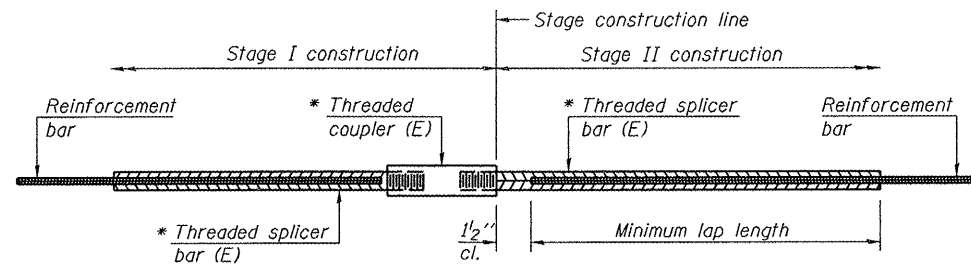
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PLOT DATE =	DRAWN -	REVISED -
	CHECKED -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**HP PILE DETAILS
STRUCTURE NO. 060-3346**

SHEET NO. 9 OF 14 SHEETS

TWP Road 305A	SECTION 06-11114-00-BR	COUNTY MADISON	TOTAL SHEETS 25	SHEET NO. 16
CONTRACT NO.			ILLINOIS FED. AID PROJECT	



STANDARD BAR SPLICER ASSEMBLY

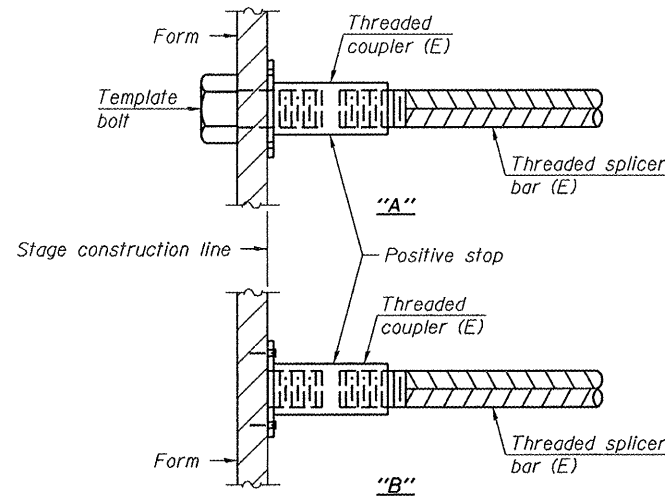
Bar size to be spliced	Minimum Lap Lengths				
	Table 1	Table 2	Table 3	Table 4	Table 5
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-3"
5	1'-9"	2'-5"	2'-7"	2'-11"	2'-10"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-4"
7	2'-9"	3'-10"	4'-2"	4'-8"	4'-6"
8	3'-8"	5'-1"	5'-5"	6'-2"	5'-10"
9	4'-7"	6'-5"	6'-10"	7'-9"	7'-5"

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Top bar lap, Class B

Threaded splicer bar length = min. lap length + 1/2" + thread length

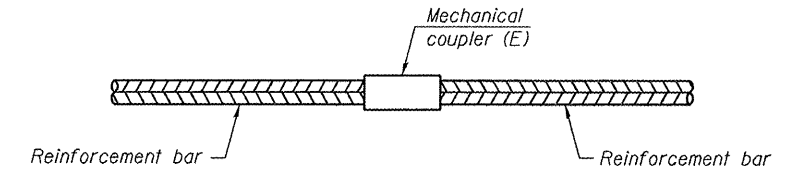
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length



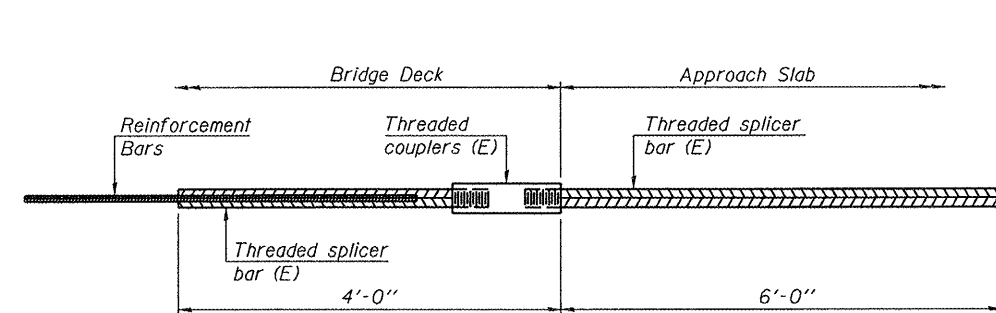
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



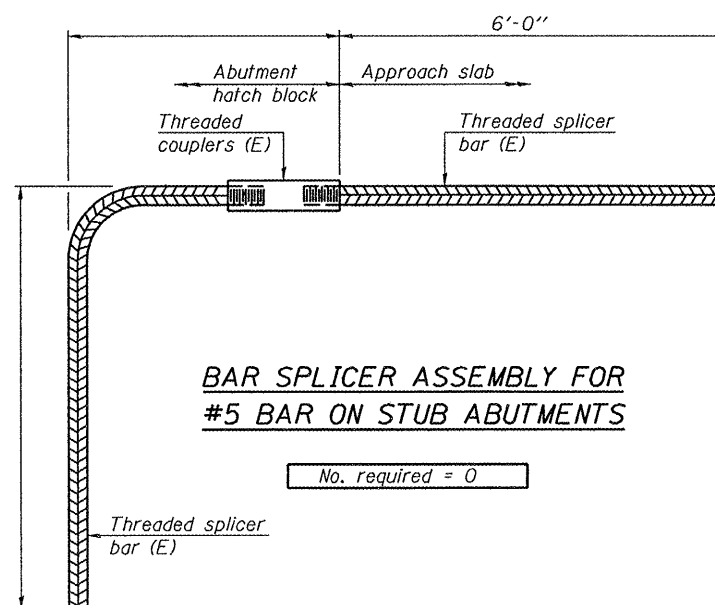
STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Piers	#6	56



BAR SPLICER ASSEMBLY FOR #5 BAR ON INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 0



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required = 0

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See special provision for Mechanical Splicers.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1 7-1-10



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BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 060-3346
 SHEET NO. 10 OF 14 SHEETS

TWP Road	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305A	06-11114-00-BR	MADISON	25	17
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



Illinois Department of Transportation

Division of Highways
Geotechnology, Inc.
Oswald Bridge over
Sugar Creek

SOIL BORING LOG

Page 1 of 2

Date 9/3/09

ROUTE Sugar Creek DESCRIPTION LOGGED BY LAH

SECTION LOCATION SEC. TWP., RNG.

COUNTY Madison County DRILLING METHOD HSA and MR HAMMER TYPE Auto

STRUCT. NO.	DEPTH	BLOWS	UCS	MOIST	Surface Water Elev.	DEPTH	BLOWS	UCS	MOIST
Station	(ft)	(/6")	(tsf)	(%)	ft	(ft)	(/6")	(tsf)	(%)
B-2 23+41					487.0				
Crushed limestone GRAVEL (FILL) - 6 inches	486.5								
Yellowish-brown, CLAY (FILL), trace sand and gravel	2 3 5			19		1 2 1	0.6 S	24	
					464.0				
Soft, brownish-gray CLAY, with sand seams	2 2 4			19		0 1 1		26	
					480.0				
Stiff, brownish-gray, SILTY CLAY						0 0 0		26	
wood fragments	1 2			28		1 0		21	
clay seam	2 4	1.1 S		20					
	2 3 4			22		0 0 0	0.4 S	24	
					471.5				
Stiff, brownish-gray CLAY	0 2 3		1.9 B	25					
					469.0				
Medium stiff, brownish-gray, CLAY LOAM	0 0			25		0 3		23	
						0 3			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used
BBS, from 137 (Rev. 8-99)



Illinois Department of Transportation

Division of Highways
Geotechnology, Inc.
Oswald Bridge over
Sugar Creek

SOIL BORING LOG

Page 2 of 2

Date 9/3/09

ROUTE Sugar Creek DESCRIPTION LOGGED BY LAH

SECTION LOCATION SEC. TWP., RNG.

COUNTY Madison County DRILLING METHOD HSA and MR HAMMER TYPE Auto

STRUCT. NO.	DEPTH	BLOWS	UCS	MOIST	Surface Water Elev.	DEPTH	BLOWS	UCS	MOIST
Station	(ft)	(/6")	(tsf)	(%)	ft	(ft)	(/6")	(tsf)	(%)
B-2 23+41					487.0				
Soft, brownish-gray CLAY, with sand seams (continued)									
Very stiff to stiff, bluish-gray CLAY	445.0								
						3 5 7		20	
					423.0				50/4"
End of Boring									10
						4 7 7	3.3 S	19	
						3 5 9	1.5 S	23	
					430.0				
Soft, bluish-gray, highly weathered SHALE						16 3		22	
						50/5"			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used
BBS, from 137 (Rev. 8-99)



Illinois Department of Transportation
Division of Highways
Geotechnology, Inc.
Oswald Bridge over
Sugar Creek

SOIL BORING LOG

Page 1 of 2

Date 9/1/09

ROUTE _____ DESCRIPTION _____ LOGGED BY MTE

SECTION _____ LOCATION SEC. TWP. RNG.

COUNTY Madison County DRILLING METHOD HSA and MR HAMMER TYPE Auto

STRUCT. NO. Station	DEPTH H	BLOW W	UCS Qu	MOIST T	Surface Water Elev. _____ ft	Stream Bed Elev. _____ ft	Groundwater Elev.: First Encounter _____ ft	Upon Completion _____ ft	After _____ Hrs. _____ ft	DEPTH H	BLOW W	UCS Qu	MOIST T
Brown to gray, SILTY CLAY (FILL), trace gravel	3				481.5	-5				2			
	3			2						0.3	22		
	3												
				1									
Soft, brown, SILTY CLAY	1				475.5					0			
	1			1						0.6	32		
	1												
				0						0.4	28		
Stiff to medium stiff, gray CLAY, trace sand	1				468.5					0			
	3	1.3	22										
	3	B											
				1									
Soft, brownish-gray CLAY, trace sand	0				468.5					0			
	0	0.6	24										
	0	B											
				0						0.3	24		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used
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Illinois Department of Transportation
Division of Highways
Geotechnology, Inc.
Oswald Bridge over
Sugar Creek

SOIL BORING LOG

Page 2 of 2

Date 9/1/09

ROUTE _____ DESCRIPTION _____ LOGGED BY MTE

SECTION _____ LOCATION SEC. TWP. RNG.

COUNTY Madison County DRILLING METHOD HSA and MR HAMMER TYPE Auto

STRUCT. NO. Station	DEPTH H	BLOW W	UCS Qu	MOIST T	Surface Water Elev. _____ ft	Stream Bed Elev. _____ ft	Groundwater Elev.: First Encounter _____ ft	Upon Completion _____ ft	After _____ Hrs. _____ ft	DEPTH H	BLOW W	UCS Qu	MOIST T
Soft, brownish-gray CLAY, trace sand (continued)					444.5								
Very stiff to hard, brownish-gray CLAY, trace sand	4				424.5					5	2.8	19	
	9			9						B			
				6									
Soft, gray SHALE					416.5	-70							
				9						4.5	19		
				9						12	B		
SHALE - see attached core log					406.5	-80							
				5									
bluish-gray, shaley					406.5	-80							
				8						2.4	25		
				11						B			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
* Rimac attempted, not measured due to sample disturbance
** Not measured due to drilling methods used
BBS, from 137 (Rev. 8-99)



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOIL BORING LOGS
STRUCTURE NO. 060-3346
SHEET NO. 13 OF 14 SHEETS

TWP Road	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305A	06-11114-00-BR	MADISON	25	20
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



Illinois Department of Transportation

SOIL BORING LOG

Date 8/31/09

ROUTE Oswald Bridge over Sugar Creek DESCRIPTION LOGGED BY MTE

SECTION LOCATION SEC. TWP. RNG.

COUNTY Madison County DRILLING METHOD HSA and MR HAMMER TYPE Auto

Table with columns for depth, blow count, UCS, and soil description. Includes data for asphalt, silty clay, and sandy clay layers.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)



Illinois Department of Transportation

SOIL BORING LOG

Date 8/31/09

ROUTE Oswald Bridge over Sugar Creek DESCRIPTION LOGGED BY MTE

SECTION LOCATION SEC. TWP. RNG.

COUNTY Madison County DRILLING METHOD HSA and MR HAMMER TYPE Auto

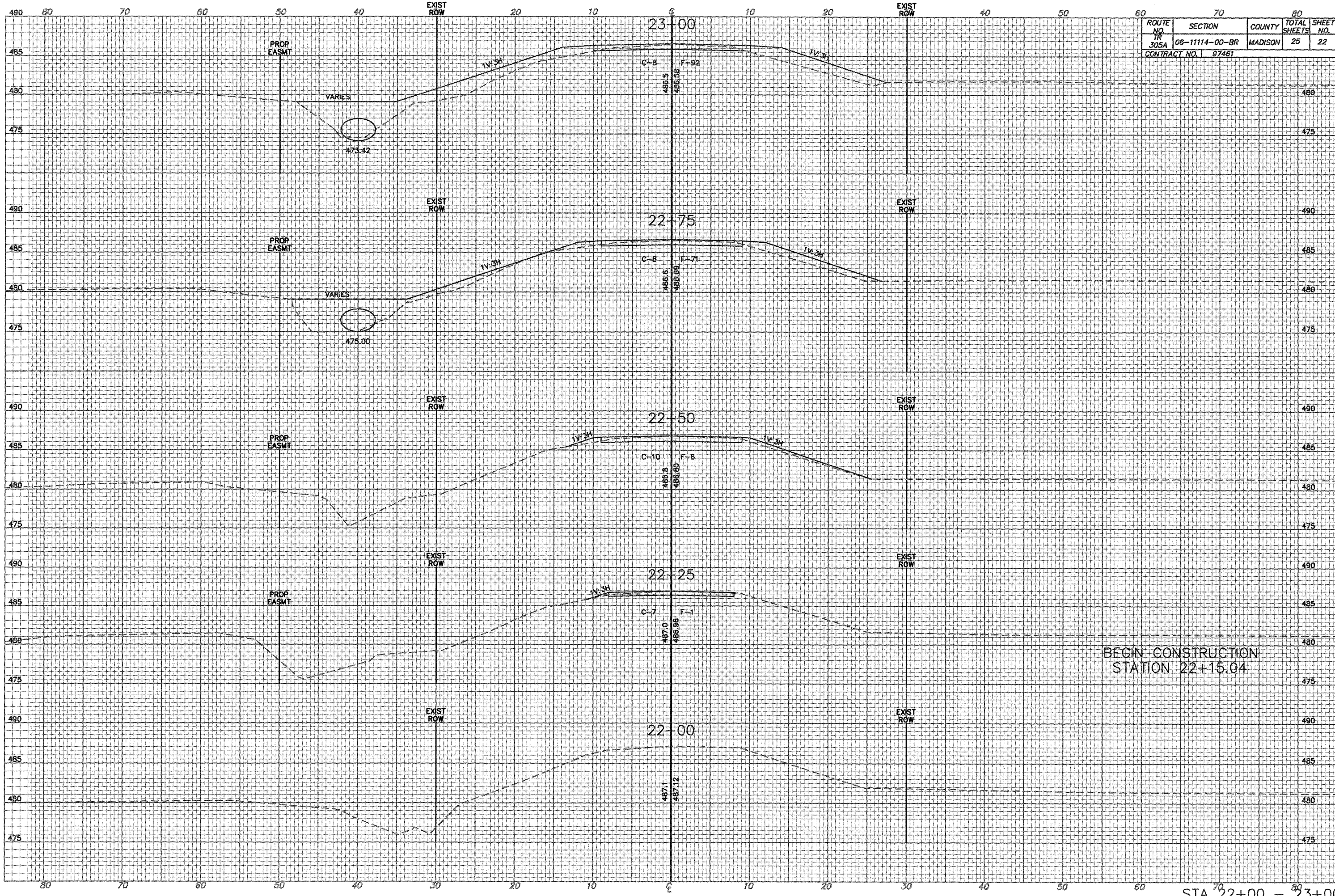
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The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer) The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

Project metadata including user name, design status, plot scale, and date.

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION SOIL BORING LOGS STRUCTURE NO. 060-3346 SHEET NO. 14 OF 14 SHEETS

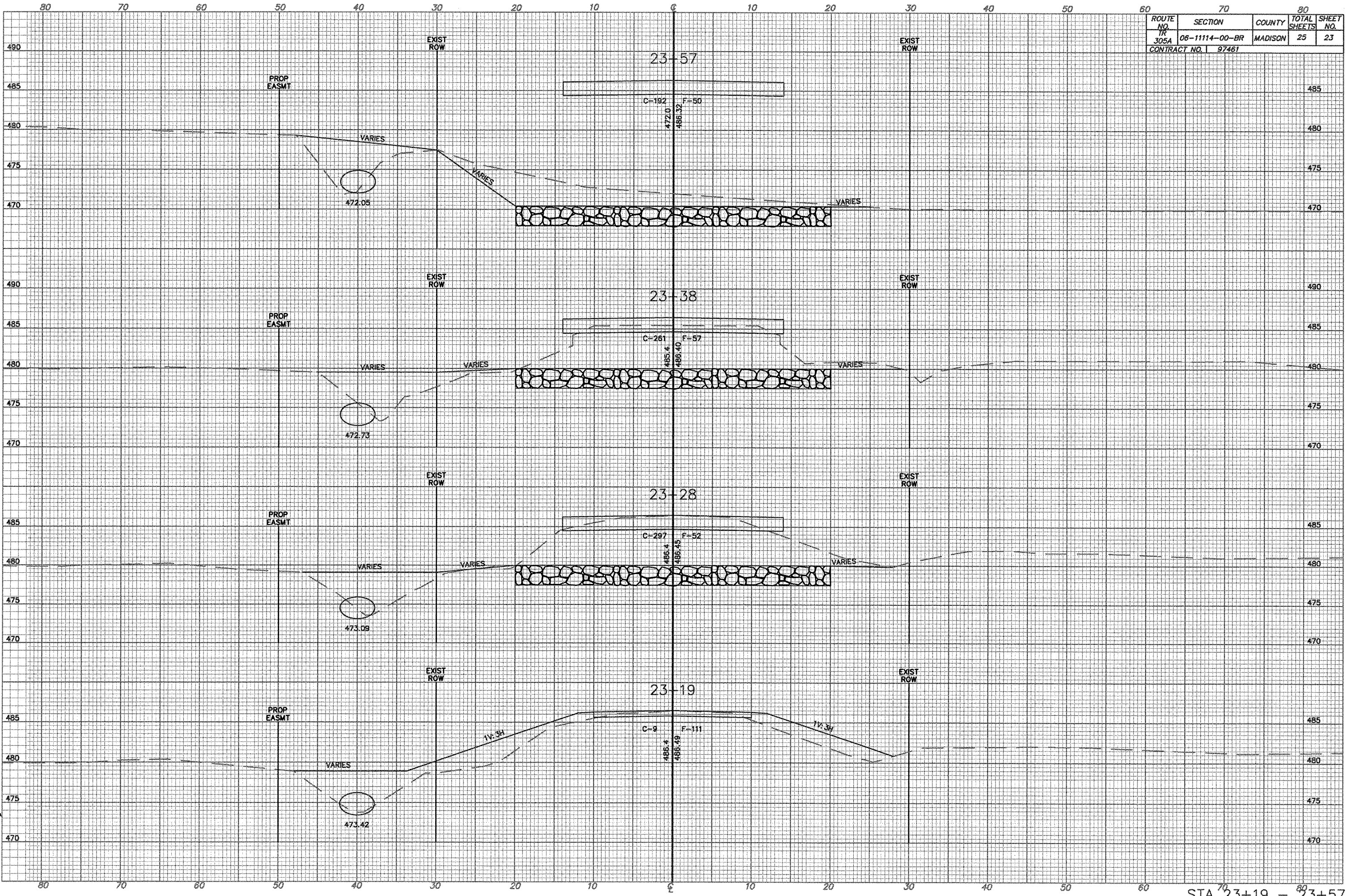
TWP Road 305A SECTION 06-11114-00-BR COUNTY MADISON TOTAL SHEETS 25 SHEET NO. 21 CONTRACT NO. ILLINOIS FED. AID PROJECT



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305A	06-11114-00-BR	MADISON	25	22
CONTRACT NO. 97461				

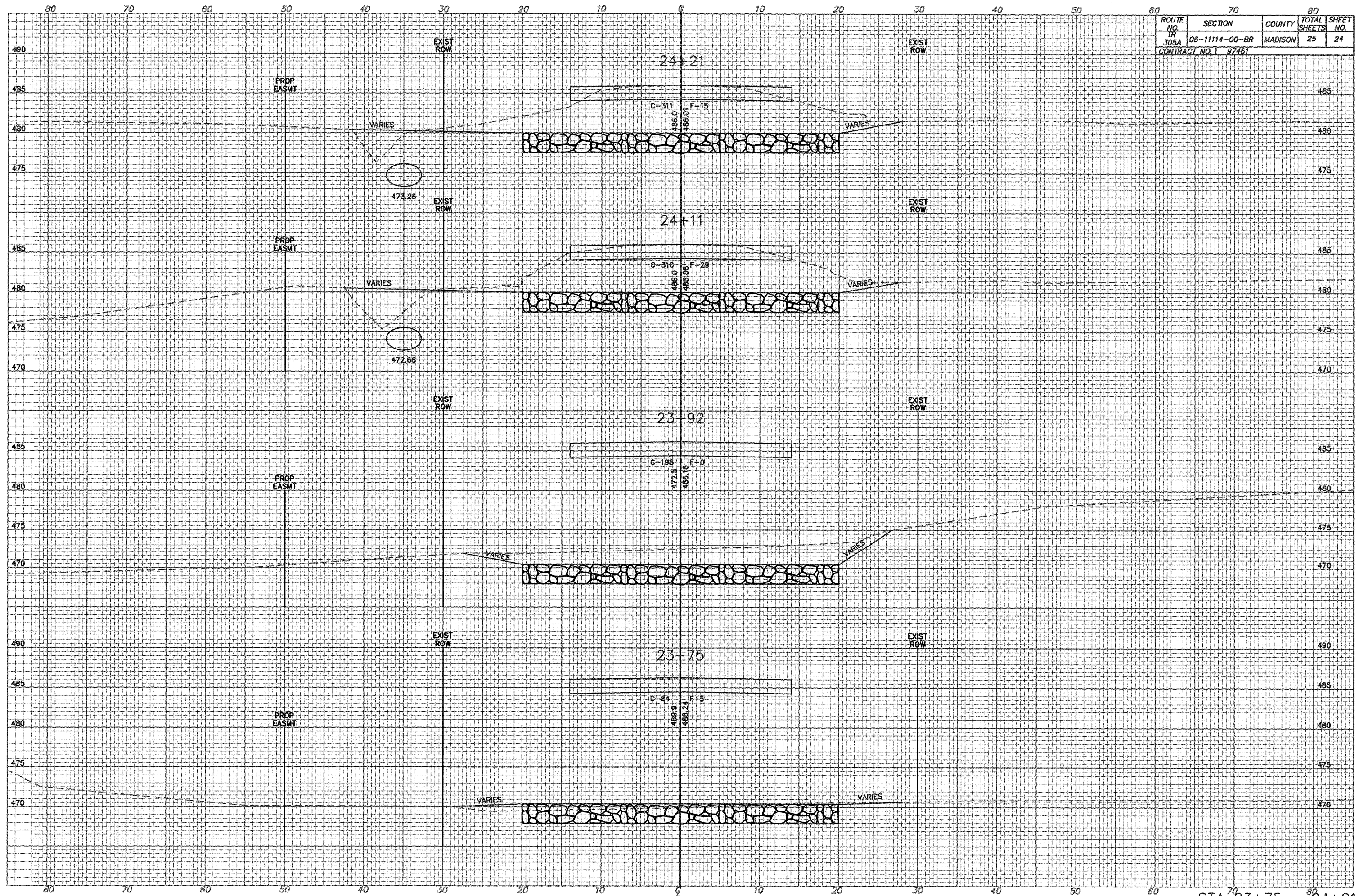
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STATION 22+15.04

ROUTE NO. 305A	SECTION 06-11114-00-BR	COUNTY MADISON	TOTAL SHEETS 25	SHEET NO. 23
CONTRACT NO. 97461				

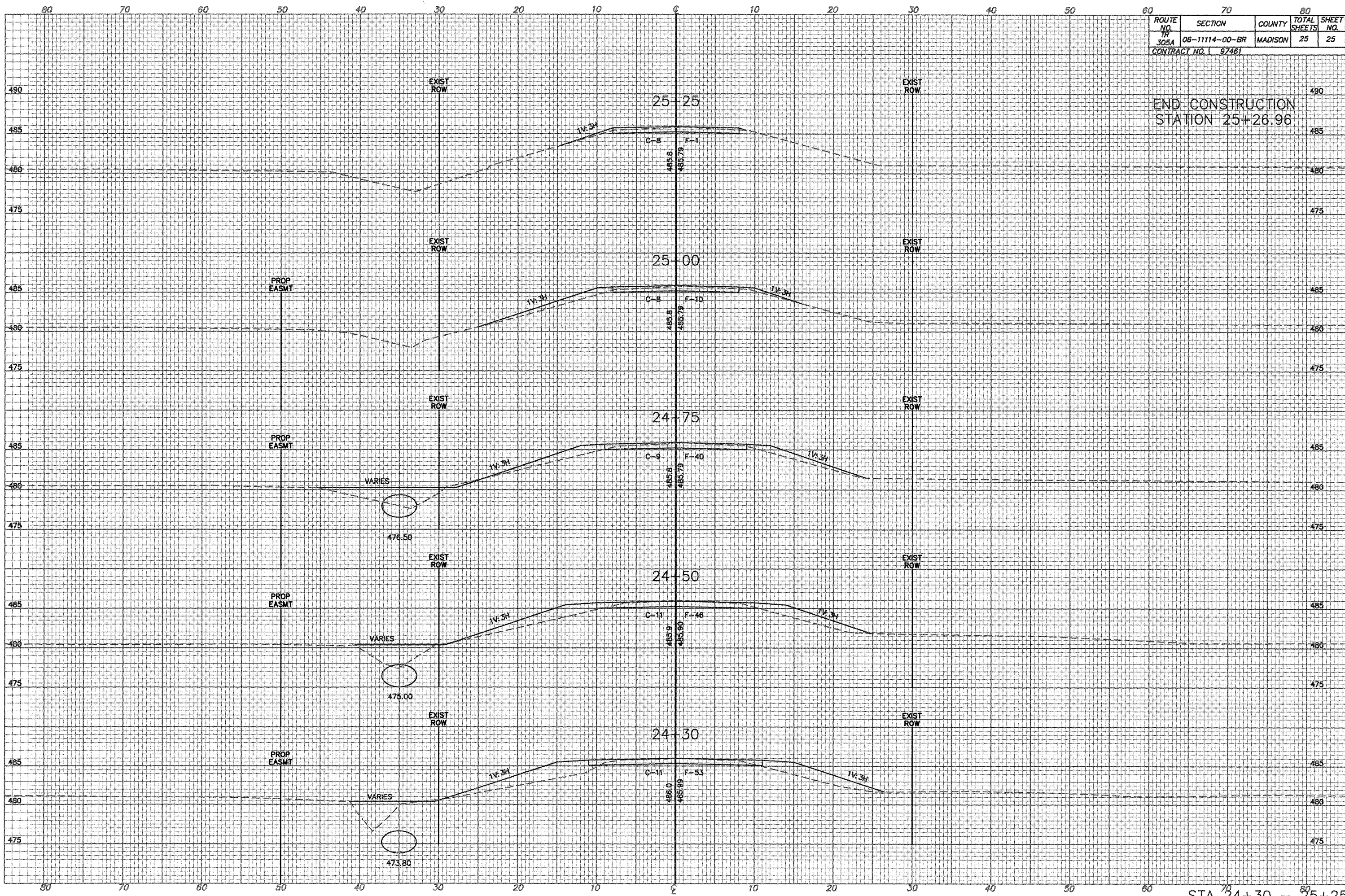


STA 23+19 - 23+57

ROUTE NO. TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305A	06-11114-00-BR	MADISON	25	24
CONTRACT NO. 97461				



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
305A	06-11114-00-BR	MADISON	25	25
CONTRACT NO. 97461				



END CONSTRUCTION
STATION 25+26.96