TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	1
	ILLINOIS	CONTRACT NO. 91666		

D-9#-XXX-XX

11-06-2026 LETTING ITEM 080

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED SUPERSTRUCTURE REPLACEMENT LOCAL BRIDGE FORMULA PROGRAM

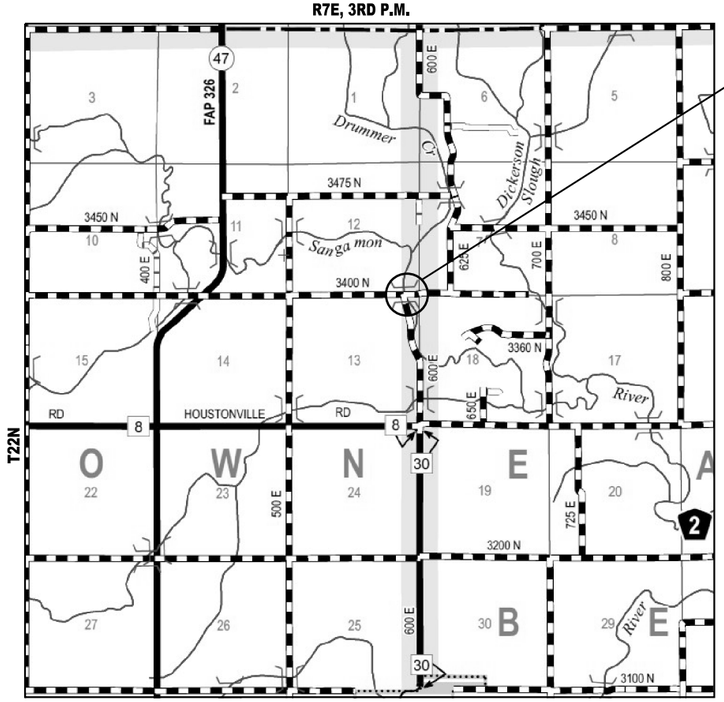
FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR HIGHWAY STANDARDS, SEE SHEET NO. 2

TR 25 OVER SANGAMON RIVER
SECTION 24-02145-00-BR
BROWN TOWNSHIP
CHAMPAIGN COUNTY
PROJECT ACUX(932)

C-95-005-27

R7E, 3RD P.M.



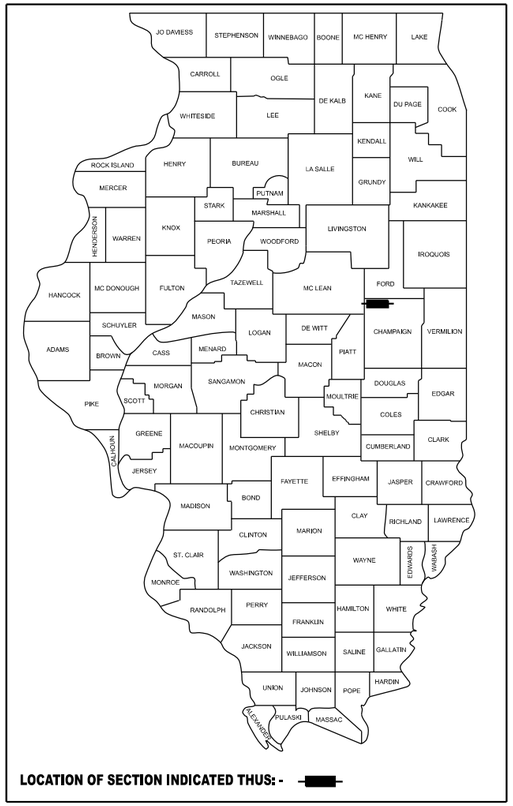
PROPOSED
SUPERSTRUCTURE REPLACEMENT
SN 010-4172
BEGINS STA. 9+00.00
ENDS STA. 11+08.00

N

GROSS LENGTH = 208.00 FT. = 0.039 MILE

NET LENGTH = 208.00 FT. = 0.039 MILE

THE WORK CONSISTS OF THE REMOVAL OF EXISTING PRECAST PRESTRESSED DECK BEAMS AND REPLACEMENT WITH PPC DECK BEAMS, SUBSTRUCTURE REHABILITATION, AND THE NECESSARY BACKFILL AND INCIDENTAL APPROACH WORK FOR S.N. 010-4172 AT STA. 10+00.00.



LOCATION OF SECTION INDICATED THUS: -

FUNCTIONAL CLASSIFICATION: LOCAL ROAD
ADT = 50 (2021)
DESIGN SPEED = 30 MPH
3R GUIDELINES

APPROVED August 27 20 26
COUNTY ENGINEER

APPROVED August 27 20 26
ROAD COMMISSIONER

PASSED 08/31 20 26
Avoree S. Gore
DISTRICT FIVE ENGINEER OF LOCAL ROADS AND STREETS

Released For Bid Based on Limited Review 0831 20 26
Kensil A. Garnett
REGION THREE ENGINEER

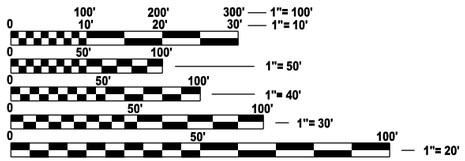
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MARK R. LEIGHTON
062-048930
LICENSED PROFESSIONAL ENGINEER
ILLINOIS
Expires: 11/30/2027 8-28-26

UTILITIES

EASTERN ILLINI ELECTRIC COOPERATIVE
PO BOX 96
PAXTON, ILLINOIS 60957
PHONE: (800)-824-5102
EMAIL: JEANNINE.SMITH@EIEC.COOP

FRONTIER COMMUNICATIONS
PHONE: (815)-895-1515
CONTACT:KALIN HINSHAW
EMAIL: KALIN.HINSHAW@FTR.COM



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

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: BRIAN J. JOHNSON, P.E.
PROJECT MANAGER: MARK R. LEIGHTON, P.E., P.L.S.

CONTRACT NO. 91666

design firm no. 184001036
whks
engineers + planners + land surveyors

INDEX OF SHEETS

1	COVER SHEET
2	INDEX, GENERAL NOTES & COMMITMENTS
3	ALIGNMENT, TIES & BENCHMARKS
4-5	SUMMARY OF QUANTITIES
6	SCHEDULE OF QUANTITIES
7	TYPICAL SECTIONS
8	PLAN & PROFILE
9-22	STRUCTURE PLANS

HIGHWAY STANDARDS

000001-09	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
515001-04	NAME PLATE FOR BRIDGES
701901-11	TRAFFIC CONTROL DEVICES
725001-01	OBJECT AND TERMINAL MARKERS
BLR 21-9	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
BLR 27-1	TRAFFIC BARRIER TERMINAL TYPE 5A

COMMITMENTS

1. THERE ARE NO COMMITMENTS FOR THIS PROJECT.

GENERAL NOTES

1. UNLESS NOTED OTHERWISE, STATIONS AND OFFSETS REFER TO CENTERLINE OF PROJECT.

2. ALL SIGNS AND DELINEATORS CONFLICTING WITH TRAFFIC CONTROL OR CONSTRUCTION SHALL BE REMOVED AND REPLACED BY THE CONTRACTORS. THIS WORK WILL BE INCLUDED WITH THE COST FOR TRAFFIC CONTROL ON THE PROJECT. IN ADDITION, THE COST TO RELOCATE SIGNS DESIGNATED ON THE PLAN SHEETS WILL ALSO BE INCIDENTAL TO THE TRAFFIC CONTROL FOR THOSE AREAS.

3. LAYOUT OF RIPRAP MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.

   EXISTING RIPRAP SHALL BE INCORPORATED INTO THE PROPOSED RIPRAP LAYOUT TO THE DISCRETION OF THE ENGINEER. PROPOSED RIPRAP QUANTITY SHALL BE DETERMINED AND PAID FOR BASED ON THE QUANTITY PLACED TO COMPLETE THE LIMITS AS REQUIRED BY THE ENGINEER. LARGE SIZE ROCK THAT EXISTS ON THE CHANNEL SLOPES SHALL BE REMOVED AS DESCRIBED IN SPECIAL PROVISIONS. SEE REMOVAL OF EXISTING SUPERSTRUCTURES.

4. REMOVED GUARDRAIL THAT IS NOT REPLACED ON THE SAME DAY MUST BE DELINEATED WITH LIGHTED BARRICADES. NO LOCATIONS WILL BE LEFT WITHOUT EITHER LIGHTED BARRICADES OR RESTORED GUARDRAIL AT ANY TIME.

5. EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.

6. ALL ELEVATIONS ARE BASED ON NAVD 88-DATUM.

7. WHERE PERMANENT SURVEY MARKERS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE DISTURBED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER AND AN AUTHORIZED SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THE LOCATION.

8. ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF CONTRACT ITEMS INVOLVED.

9. THE LOCATIONS OF EXISTING WATER MAINS, GAS MAINS, SEWERS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON THE BEST INFORMATION AVAILABLE, BUT THEY ARE NOT GUARANTEED. UNLESS ELEVATIONS ARE SHOWN. ALL UTILITY LOCATIONS SHOWN ON THE CROSS SECTIONS ARE BASED ON THE APPROXIMATE DEPTH SUPPLIED BY THE UTILITY COMPANY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE UTILITY COMPANIES AND BY FIELD INSPECTION.

10. THE CONTRACTOR'S OPERATIONS AND TEMPORARY STORAGE ACTIVITIES SHALL BE LIMITED TO THE WORK AREA AND/OR CONSTRUCTION LIMITS. ANY ADDITIONAL STAGING AREAS ADJACENT TO THE PROJECT AREA ARE SUBJECT TO PRIOR APPROVAL BY THE ENGINEER AND MUST NOT CONFLICT WITH EXISTING SIDE ROADS, INTERSECTIONS, DRIVEWAYS, OR DRAINAGE. ALL OPERATIONS SHALL BE SUBJECT TO REGULATORY REQUIREMENTS PERMITTED FOR THIS PROJECT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR COMPLIANCE WITH THE ABOVE REQUIREMENTS.

11. DISTURBED AREAS SHALL RECEIVE PERMANENT STABILIZATION WITHIN 7 DAYS OF COMPLETION OF CONSTRUCTION ACTIVITIES. TEMPORARY STABILIZATION OF WORK AREAS IS REQUIRED FOR ALL AREAS REMAINING UNDISTURBED FOR 14 DAYS, UNLESS WORK RESUMES PRIOR TO 21 DAYS. TEMPORARY STABILIZATION MUST BE APPROVED BY THE ENGINEER.

12. THE CONTRACTOR SHALL USE CARE IN ALL REMOVAL ACTIVITIES NEAR ALL EXISTING ITEMS WHICH WILL REMAIN. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

13. CONTRACTOR SHALL FOLLOW CONSTRUCTION REQUIREMENTS OF SECTION 611 WHEN EXISTING FIELD TILE IS ENCOUNTERED. ALL FIELD TILES ENCOUNTERED SHALL BE CAREFULLY PRESERVED, REPAIRED AND CONNECTED TO THE PROPOSED DRAINAGE STRUCTURES, SEWERS OR DITCHES AS DIRECTED BY THE ENGINEER. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS DRAINAGE ITEMS OR AS DIRECTED BY THE ENGINEER.

14. THE CONTRACTOR SHALL RELOCATE OR REMOVE AND REPLACE ALL SIGNS THAT INTERFERE WITH THE CONSTRUCTION OPERATIONS AND TEMPORARILY RESET ALL SUCH SIGNS DURING ALL STAGES OF CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE ENGINEER WILL DETERMINE THE PERMANENT LOCATION FOR EXISTING SIGNS TO BE RE-ERECTED.

15. THE FOLLOWING APPLICATION RATES HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:
    AGGREGATE SURFACE COURSE 2.05 TONS/CU YD
    TEMPORARY EROSION CONTROL SEEDING: 100 LB/ACRE
    RIPRAP: 1.50 TONS/CU YD

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design firm no. 184001036
whks
engineers + planners + land surveyors

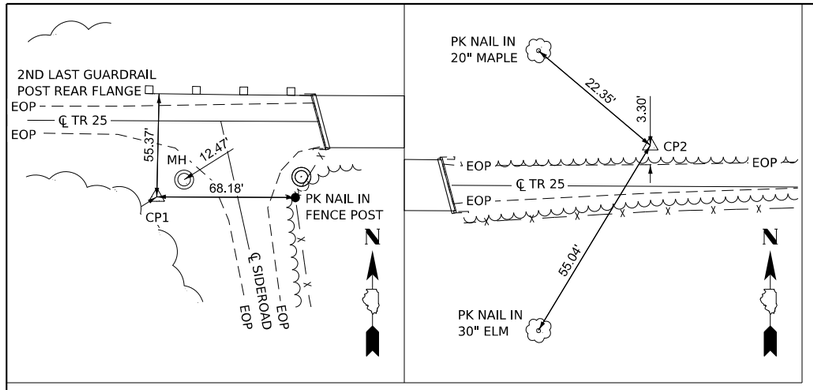
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PLOT DATE = 1/27/2026		DATE -		REVISED -	

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

INDEX, GENERAL NOTES & COMMITMENTS
TR 25 OVER SANGAMON RIVER

SCALE: 1"=50' | SHEET 1 OF 1 SHEETS | STA. | TO STA.

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	2
		CONTRACT NO. 91666		
	ILLINOIS FED. AID PROJECT			



CONTROL PT1 (PT #1)

IRON PIN SET
STA. 8+32.44, 40.08' RT.
N: 1348387.664
E: 979782.946

CONTROL PT2 (PT #147)

IRON PIN SET
STA. 12+04.76, 15.53' LT.
N: 1348441.568
E: 980155.517

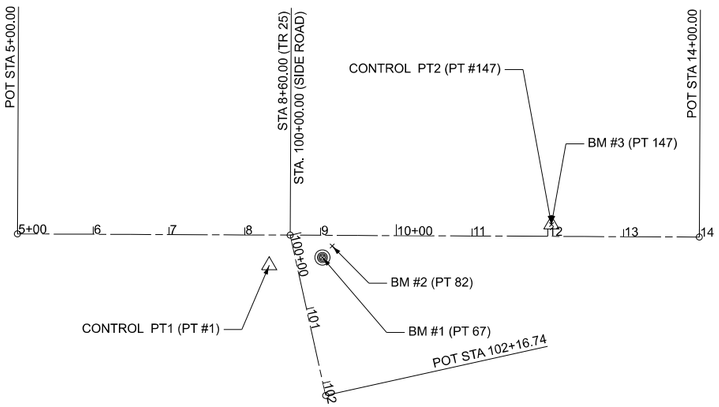
HORIZONTAL ALIGNMENT

* ALIGNMENT NAME: TR_25
* ALIGNMENT DESCRIPTION:
* ALIGNMENT STYLE: ALIGNMENT\GE_EX_CENTERLINE
*

	STATION	NORTHING	EASTING
ELEMENT: LINEAR			
START(START)	5+00.00 R1	1348429.27	979450.69
END (END)	14+00.00 R1	1348425.14	980350.68
TANGENTIAL DIRECTION:	S89°44'12"E		
TANGENTIAL LENGTH:	900.00		

* ALIGNMENT NAME: SIDEROAD
* ALIGNMENT DESCRIPTION:
* ALIGNMENT STYLE: ALIGNMENT\GE_EX_CENTERLINE
*

	STATION	NORTHING	EASTING
ELEMENT: LINEAR			
START(START)	100+00.00 R1	1348427.62	979810.69
END (END)	102+16.74 R1	1348216.00	979857.54
TANGENTIAL DIRECTION:	S12°29'02"E		
TANGENTIAL LENGTH:	216.74		



BENCHMARKS

BM #1 (PT 67) - CENTER OF APEX BEEHIVE MANHOLE LID
ELEV = 710.37
STA. 9+02.65, 29.20' RT.

BM #2 (PT 82) - CHISLED "□" IN SW WINGWALL
ELEV = 715.14
STA. 9+15.60, 14.16' RT.

BM #3 (PT 147) - IRON PIN IN NORTH SHOULDER (CP2)
ELEV = 712.76
STA. 12+04.76, 15.53' LT.

N

0 100 200 300
SCALE IN FEET

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design firm no. 184001036 whks engineers + planners + land surveyors

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	DRAWN - GSJ	REVISED -	
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PLOT DATE = 7/13/2026	DATE -	REVISED -	

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

ALIGNMENT, TIES & BENCHMARKS
TR 25 OVER SANGAMON RIVER

SCALE: | SHEET 1 OF 1 SHEETS | STA. | TO STA.

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	3
		CONTRACT NO. 91666		
		ILLINOIS	FED. AID PROJECT	

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE BRIDGE 0013 S.N. 010-4172
	20300100	CHANNEL EXCAVATION	CU YD	610	610
	40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	26	26
	50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	1
	50102400	CONCRETE REMOVAL	CU YD	0.8	0.8
	50200100	STRUCTURE EXCAVATION	CU YD	10	10
	50300225	CONCRETE STRUCTURES	CU YD	0.8	0.8
	50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	5022	5022
*	50900205	STEEL RAILING, TYPE S1	FOOT	373	373
	51500100	NAME PLATES	EACH	1	1
	58600101	GRANULAR BACKFILL FOR STRUCTURES	CU YD	9.4	9.4
*	63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	1	1
*	63200310	GUARDRAIL REMOVAL	FOOT	13	13
	67100100	MOBILIZATION	L SUM	1	1
*	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	3	3

* SPECIALTY ITEM

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design firm no. 184001036 whks engineers + planners + land surveyors

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PLOT DATE = 7/13/2026	DATE -	REVISED -	

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

SUMMARY OF QUANTITIES
TR 25 OVER SANGAMON RIVER

SCALE: 1"=50' | SHEET 1 OF 2 SHEETS | STA. | TO STA.

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	4
		CONTRACT NO. 91666		
		ILLINOIS | FED. AID PROJECT		

	CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE BRIDGE 0013 S.N. 010-4172
	X2810210	STONE RIPRAP, CLASS A5 (SPECIAL)	TON	764	764
	X7011800	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	1
	Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	40	40
*	Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1
*	Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1

* SPECIALTY ITEM

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PLOT DATE = 1/27/2026	DATE -	REVISED -	

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

SUMMARY OF QUANTITIES
TR 25 OVER SANGAMON RIVER

SCALE: 1"=50' | SHEET 1 OF 2 SHEETS | STA. | TO STA.

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	5
		CONTRACT NO. 91666		
		ILLINOIS | FED. AID PROJECT		

40200800 AGGREGATE SURFACE COURSE, TYPE B

TR 25						TON
CL	9+00.00	TO	CL	9+11.22		15
CL	10+98.78	TO	CL	11+08.00		11
					TOTAL	26

63100075 TRAFFIC BARRIER TERMINAL, TYPE 5A

TR 25						EACH
LT	8+90.04	TO	LT	9+03.29		1
					TOTAL	1

63200310 GUARDRAIL REMOVAL

TR 25						FOOT
LT	8+90.04	TO	LT	9+03.29		13
					TOTAL	13

67100100 MOBILIZATION

TR 25		L SUM
	TOTAL	1

X7011800 TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21

TR 25		L SUM
	TOTAL	1

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design firm no. 184001036 whks engineers + planners + land surveyors

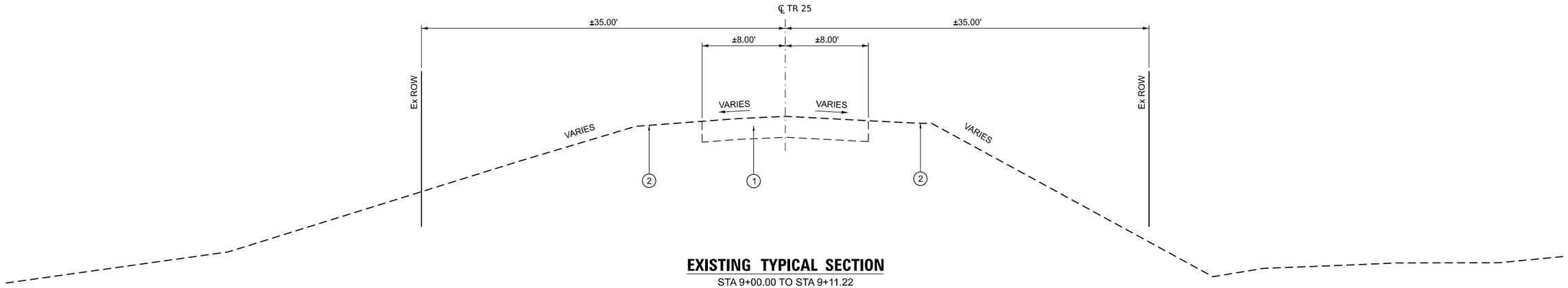
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PLOT DATE = 7/13/2026		DATE -		REVISED -	

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

SCHEDULE OF QUANTITIES
TR 25 OVER SANGAMON RIVER

SCALE: 1"=50' | SHEET 1 OF 1 SHEETS | STA. | TO STA.

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	6
		CONTRACT NO. 91666		
	ILLINOIS FED. AID PROJECT			



EXISTING TYPICAL SECTION

STA 9+00.00 TO STA 9+11.22
STA 10+98.78 TO STA 11+08.00

LEGEND

(1) EXISTING PAVEMENT

(2) EXISTING EARTH SHOULDER

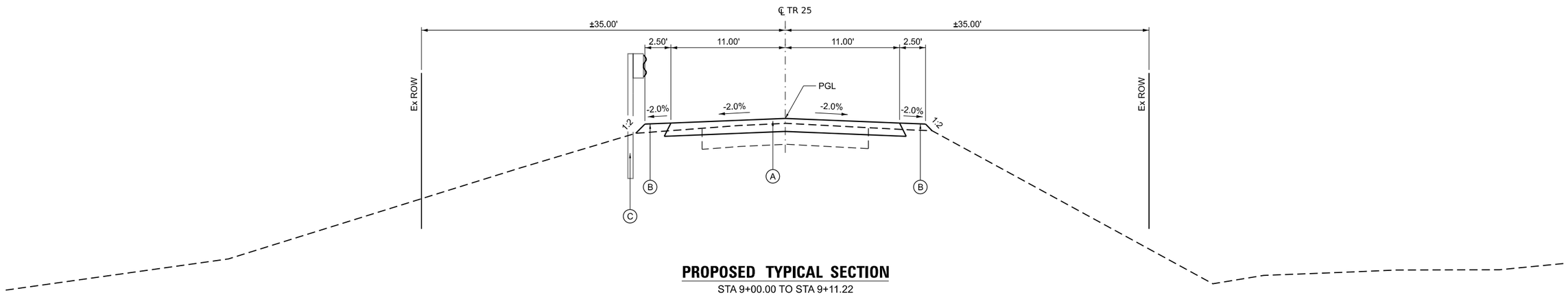
(A) PROPOSED AGGREGATE SURFACE COURSE (8")

(B) PROPOSED EARTH SHOULDER

(C) PROPOSED TRAFFIC BARRIER TERMINAL, TYPE 5A

BRIDGE OMISSION

STA 9+11.22 TO STA 10+98.78



PROPOSED TYPICAL SECTION

STA 9+00.00 TO STA 9+11.22
STA 10+98.78 TO STA 11+08.00

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design firm no. 184001036 whks engineers + planners + land surveyors

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PLOT SCALE = 0.16666633 ' / In.	CHECKED - MRL	REVISED -	
PLOT DATE = 7/13/2026	DATE -	REVISED -	

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

TYPICAL SECTIONS
TR 25 OVER SANGAMON RIVER

SCALE: 1"=5' | SHEET 1 OF 1 SHEETS | STA. | TO STA.

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	7
		CONTRACT NO. 91666		
	ILLINOIS FED. AID PROJECT			

* NOTE: PROPOSED TRAFFIC BARRIER TERMINAL SHALL BE CONNECTED TO THE EXISTING RAIL IN SUCH A MANNER TO ENSURE STRUCTURAL INTEGRITY AND CRASHWORTHINESS. THE TRANSITION AND CONNECTION SHALL ALIGN WITH THE EXISTING RAIL, ADHERE TO STANDARD BLR 26-3, AND BE APPROVED BY THE ENGINEER.

RANKIN NEVA TRUST

RUDIN ANDREW & JENISE

N

0 20 40
SCALE IN FEET

*PROPOSED TRAFFIC BARRIER TERMINAL, TYPE 5A

℄ PROP. STRUCTURE STA 10+05.00
SUPERSTRUCTURE REPLACEMENT
PPC DECK BEAMS
3 SPAN @ 60'-9 1/2" C.-C. BRGS
27'-0" RDWY, SKEW 15 RT. FWD.
SN 010-4172 (E)

IMPROVEMENT ENDS
11+08.00

EX ROW

EX ROW

EX ROW

EX ROW

EX ROW

EX ROW

40.00'

70.00'

2.50'

11.00'

17.00'

11.00'

11.00'

2.50'

2.50'

40.00'

7

8

℄ TR 25

9

10+00

11

12

BM #3

BM #2

IMPROVEMENT BEGINS
9+00.00

10+00

BM #1

SANGAMON RIVER

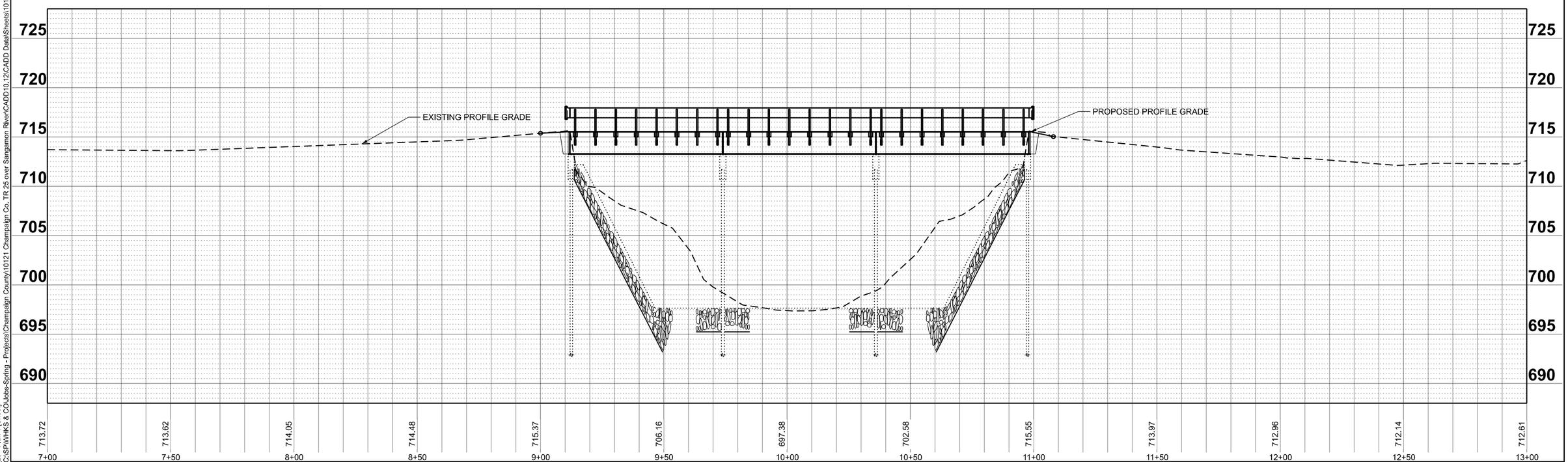
℄ EXIST. STRUCTURE
STA. 10+05.00
PPC DECK BEAM BRIDGE
ON SPILL THRU PILE BENT CONC. ABUTS.
AND PILE BENT CONC. PIERS,
3 SPAN @ 60'-9 1/2" C.-C. BRGS.
27'-0" RDWY, SKEW 15 RT. FWD.
SN 010-4172 (E)

APPROACH ROADWAY TO BE REMOVED BEYOND THE STRUCTURE EXCAVATION LIMITS SHALL TRANSITION TO THE BARE DECK AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICE FOR AGGREGATE SURFACE COURSE, TYPE B AND COMPLETED TO THE SATISFACTION OF THE ENGINEER.

FAIRFIELD DONALD

FAIRFIELD DONALD

FAIRFIELD GREG & MITZIE



MODEL: TR_25 - Plan 1 [Sheet]
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design firm no. 184001036
whks
engineers + planners + land surveyors

USER NAME = bjohnson	DESIGNED - GSJ/BJJ	REVISED -
	DRAWN - GSJ	REVISED -
PLOT SCALE = $SCALE$	CHECKED - MRL	REVISED -
PLOT DATE = 8/28/2026	DATE -	REVISED -

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

PLAN & PROFILE
TR 25 OVER SANGAMON RIVER

SCALE: 1"=20' | SHEET 1 OF 1 SHEETS | STA. 7+00.00 | TO STA. 13+00.00

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	8
		CONTRACT NO. 91666		
	ILLINOIS	FED. AID PROJECT		

Benchmark: *See Roadway Plans*

Existing Structure: *SN 010-4172 was built in 1981 as Section 79-02528-05-BR, Station 10+05. The structure is a three-span precast prestressed concrete deck beam bridge on open abutments and pile bent piers founded on concrete filled metal shell piles. The bridge is 187'-6¾" back-to-back of abutments with an out-to-out width of 27'-0". The superstructure is to be removed and replaced. Road is to be closed and traffic detoured during construction.*

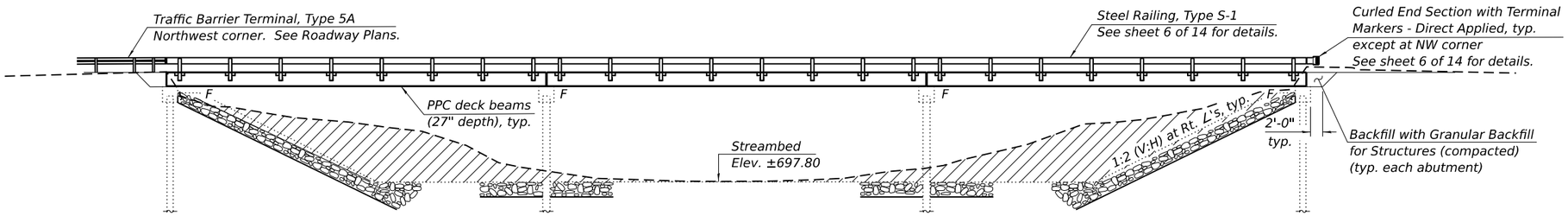
Salvage: *None*

SCOPE OF WORK

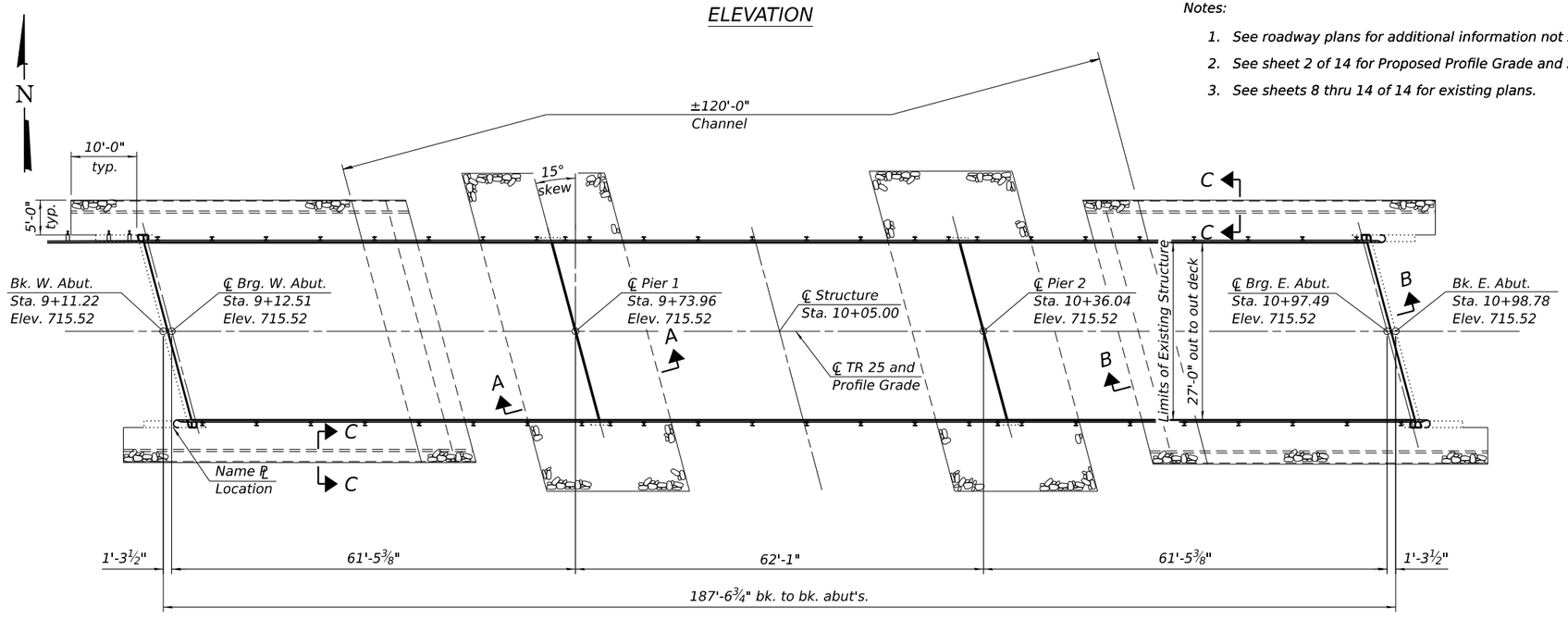
1. *Remove and replace existing superstructure with nine (9) new 27" x 36" Precast Prestressed Concrete (PPC) Deck Beams in each of the three (3) spans.*
2. *Install new Type S-1 steel railing.*
3. *Approach pavement to be removed to match lower profile of new superstructure.*
4. *Modify wingwalls to accommodate new superstructure.*
5. *Clean and coat exposed pier piles with a corrosion protection system.*
6. *Abutment embankments and streambed around the piers to be armored with stone riprap.*

INDEX OF SHEETS

1. *General Plan and Elevation*
2. *General Data*
3. *27" x 36" PPC Deck Beam*
4. *27" x 36" PPC Deck Beam Details*
5. *Superstructure Details*
6. *Steel Railing, Type S-1*
7. *Substructure Details*
8.-14. *Existing Plans (For information only)*



ELEVATION



PLAN

Notes:

1. *See roadway plans for additional information not shown herein.*
2. *See sheet 2 of 14 for Proposed Profile Grade and Sections A-A, B-B and C-C.*
3. *See sheets 8 thru 14 of 14 for existing plans.*

LOADING HL-93 (New Construction)

Allow 25#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS (New Construction)

2024 AASHTO LRFD Bridge Design Specifications, 10th Edition

DESIGN STRESSES

FIELD UNITS (New Construction)

f'c = 3,500 psi (Substructure)
fy = 60,000 psi (Reinforcement)

FIELD UNITS (Existing)

fc = 1,400 psi
fs = 20,000 psi (Reinforcement)

PRECAST UNITS (New Construction)

f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (½" low lax strands)
fpbt = 201,960 psi (½" low lax strands)

SEISMIC DATA

2023 AASHTO Seismic Hazard
Seismic Design Category (SDC) = A
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.138g
Soil Site Class = D
Performance Level = Life Safety
Latitude = 40.35 N Longitude = 88.35 W

LICENSED STRUCTURAL ENGINEER
BRENTON R. DAVIS
081-007742
STATE OF ILLINOIS

Expires: 11/30/2026

DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.) W. Abut.	Pier 1	Pier 2	E. Abut.	Item 113
Q100		690.90	690.90		8
Q200		690.25	690.25		
Design	710.30	690.90	690.90	710.30	
Check	710.30	690.25	690.25	710.30	

Design Scour Elevation Table provided for information only for the design of the scour countermeasures.

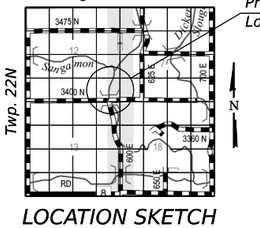
SANGAMON RIVER
RE-BUILT BY
CHAMPAIGN COUNTY
SECTION 24-02145-00-BR
TR 25 STATION 10+05
STR. NO. 010-4172 LOADING HL93

NAME PLATE

See Std. 515001

New Name Plate shall be located next to existing Name Plate on the SW wing wall. Cost included with Name Plates.

Range 7E, 3rd P.M.



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
TR 25 OVER SANGAMON RIVER
SECTION 24-02145-00-BR
CHAMPAIGN COUNTY
STATION 10+05.00
STRUCTURE NO. 010-4172

FILENAME: C:\SP\WHKS & CO\Jobs-Spring - Projects\Champaign County\10121 Champaign Co. TR 25 over Sangamon River\CADD\10.12\CADD Data\Bridge\SN 010_4172.dgn

design firm no. 184001036 — whks engineers • planners • land surveyors

USER NAME = gbugg	DESIGNED - GEB	REVISED -	
	CHECKED - BRD	REVISED -	
PLOT SCALE = 0.16666633 ' / In.	DRAWN - DLH	REVISED -	
PLOT DATE = 9/3/2026	CHECKED - GEB/BRD	REVISED -	

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

STRUCTURE NO. 010-4172
SHEET 1 OF 14 SHEETS

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	9
		CONTRACT NO. 91666		
		ILLINOIS	FED. AID PROJECT	

GENERAL NOTES

1. Reinforcement bars designated (E) shall be epoxy coated.
2. Plan dimensions and details relative to the existing structure have been taken from existing plans and are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
3. Elevations shown have been taken from the field survey and adjusted for a 2" field measured wearing surface. These elevations are subject to field verification and adjustment during construction.
4. Layout of the slope and pier protection system may be varied in the field to suit ground conditions as directed by the Engineer.
5. The Contractor shall be responsible for diverting the water flow from the construction area using a method meeting the approval of the Engineer. This shall not be paid for separately but shall be included in the cost of the Contract.
6. Cleaning and painting of the existing exposed pile steel shall be as specified in the special provisions for Cleaning and Painting Existing Steel Structures except where otherwise noted herein. Piles shall be painted to the limits defined herein and according to the requirements of the Paint System 2 - PS/EM/U or System 4 - PS/EM/AC. Surface preparation shall be accomplished by Commercial Grade Power Tool Cleaning according to the requirements of the SSPC-SP15. The color of the final finish coat shall be Gray, Munssel No. 5B 7/1.
The bridge owner has the option to omit the top finish coat. If this is desired the intermediate aluminum epoxy mastic coat shall no longer be a spot coat but a full coat.
7. Granular Backfill behind the abutments shall be compacted according to Article 205.06 of the Standard Specifications.
8. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to address the presence of lead on this project.

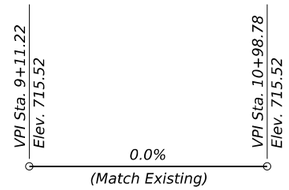
TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Channel Excavation	Cu. Yd.		610	610
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		0.8	0.8
Structure Excavation	Cu. Yd.		10	10
Concrete Structures	Cu. Yd.		0.8	0.8
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	5,022		5,022
Steel Railing, Type S1	Foot	373		373
Name Plates	Each	1		1
Granular Backfill for Structures	Cu. Yd.		9.4	9.4
Terminal Marker - Direct Applied	Each	3		3
Asbestos Bearing Pad Removal	Each		40	40
Containment and Disposal of Lead Paint Cleaning Residues No. 1	L. Sum		1	1
Cleaning and Painting Steel Bridge No. 1	L. Sum		1	1
Stone Riprap, Class A5 (Special)	Ton		764	764

* See Roadway Plans

** Cost included with Stone Riprap, Class A5 (Special). See Special Provisions.

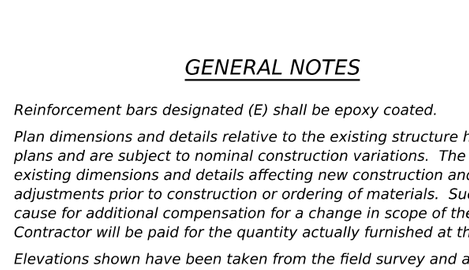
*** Estimated limits of exposed metal shell piles. Contractor to field verify prior to commencing work.



PROPOSED PROFILE GRADE

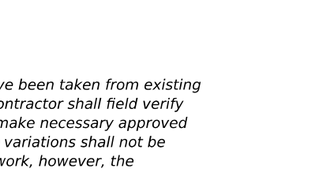
(Along ℄ TR 25)

See general note 3 regarding elevation.

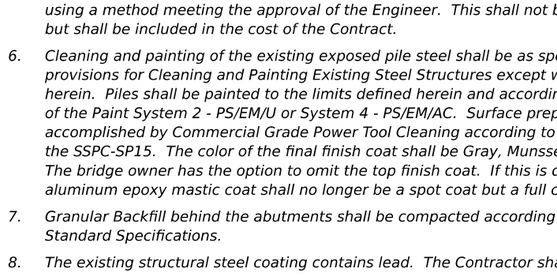


SECTION A-A

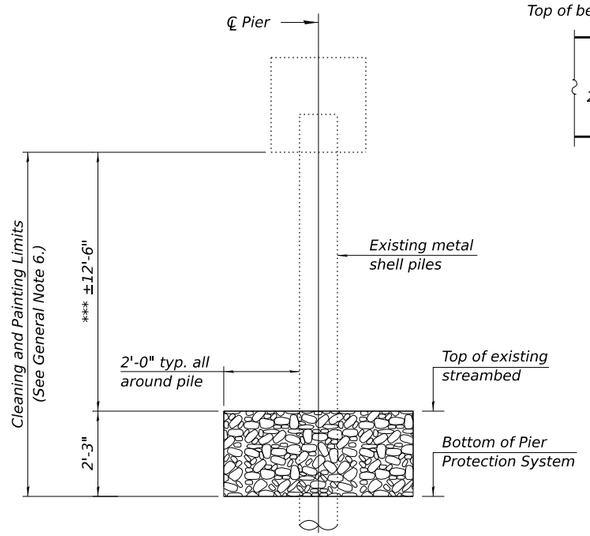
(Showing Pier Protection System)



SECTION C-C



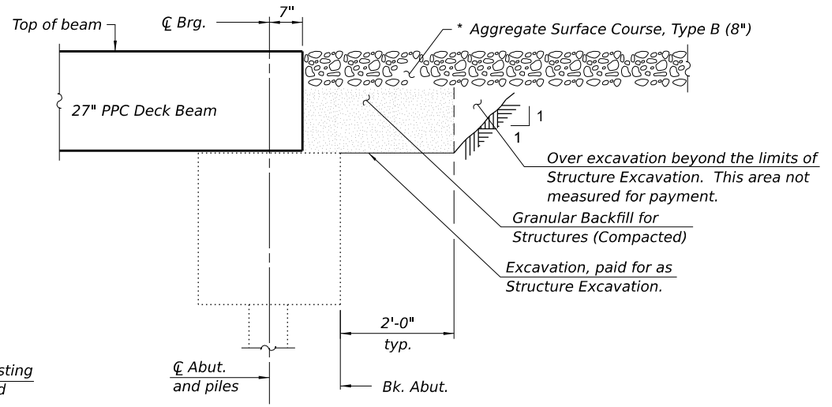
SECTION B-B



SECTION

CORROSION PROTECTION DETAIL

(Required 12 - 12" Ø piles)



SECTION AT ABUTMENT

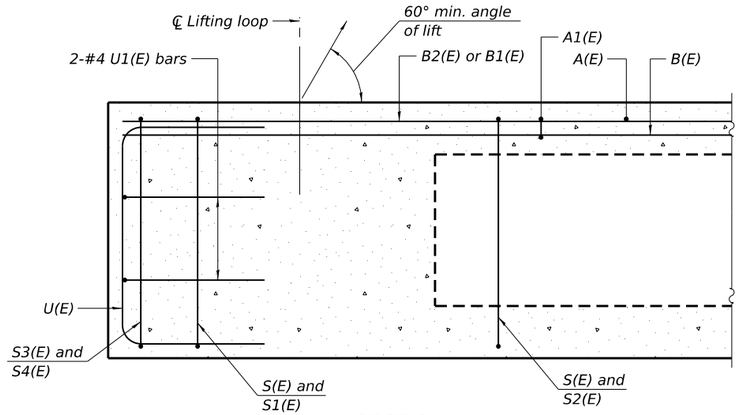
(Dimensions are at Rt. 4's)

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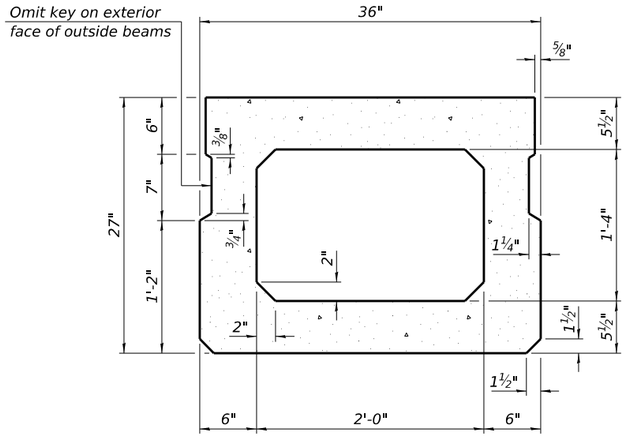
design firm no. 184001036 — whks engineers + planners + land surveyors

USER NAME = gbugg	DESIGNED - GEB	REVISED -	CHAMPAIGN COUNTY HIGHWAY DEPARTMENT	GENERAL DATA STRUCTURE NO. 010-4172 SHEET 2 OF 14 SHEETS
	CHECKED - BRD	REVISED -		
PLOT SCALE = 0.167 ' / In.	DRAWN - DLH	REVISED -		
PLOT DATE = 9/3/2026	CHECKED - GEB/BRD	REVISED -		

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	10
		CONTRACT NO. 91666		
	ILLINOIS	FED. AID PROJECT		

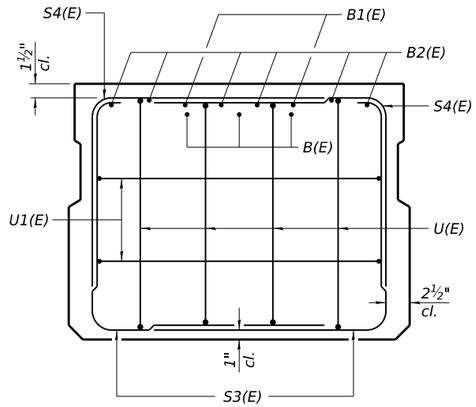


SECTION A-A

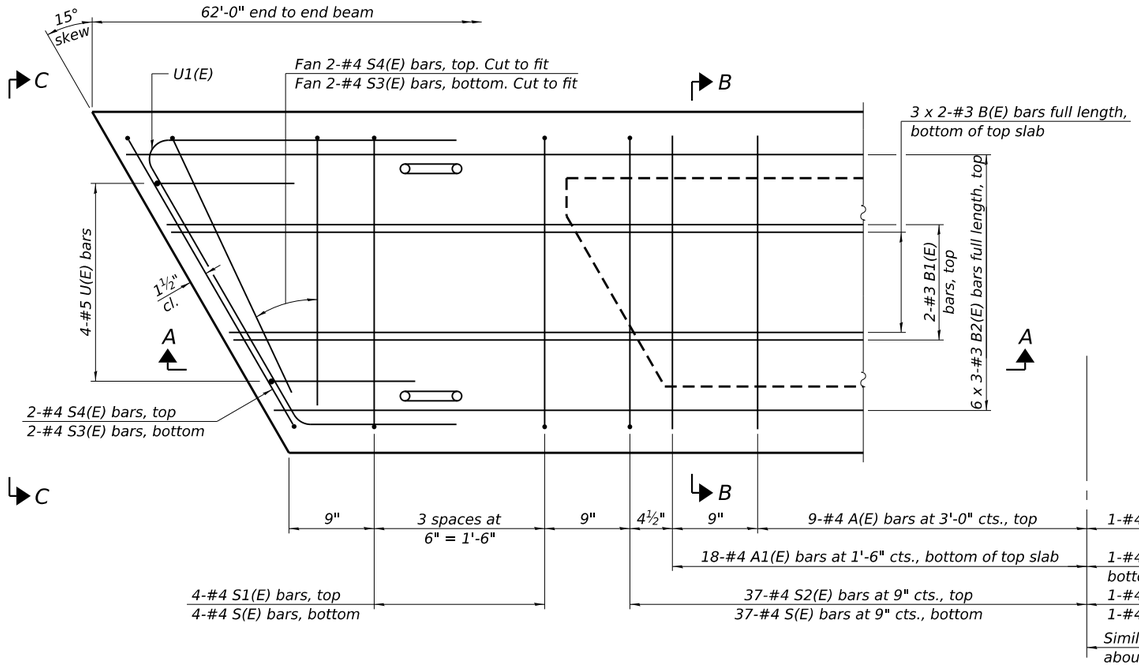


SECTION B-B

(Showing dimensions)

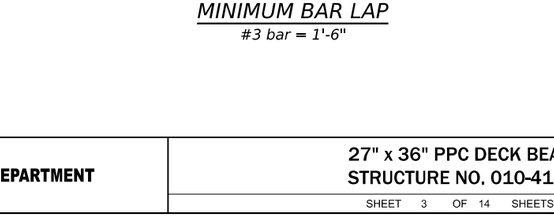


VIEW C-C



PLAN VIEW

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)

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

BAR LIST

ONE BEAM ONLY

(For information only)

Bar	No.	Size	Length	Shape
A(E)	19	#4	2'-7"	——
A1(E)	37	#4	2'-10"	~~
B(E)	6	#3	31'-8"	——
B1(E)	4	#3	10'-0"	——
B2(E)	18	#3	21'-7"	——
S(E)	83	#4	7'-5"	⊔
S1(E)	8	#4	5'-11"	⊓
S2(E)	75	#4	6'-2"	⊓
S3(E)	8	#4	4'-10"	⌋
S4(E)	8	#4	4'-1"	⌋
U(E)	8	#5	4'-6"	⊏
U1(E)	4	#4	5'-9"	⊏

Note:
See sheet 4 of 14 for additional details and Bill of Material.

MINIMUM BAR LAP

#3 bar = 1'-6"

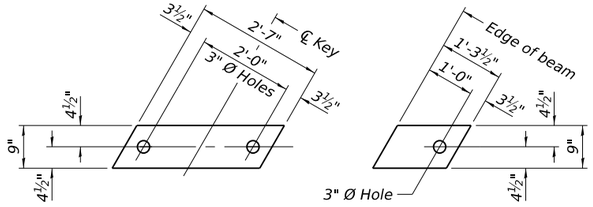
PD-2736-R 5-15-2023

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design firm no. 184001036 — whks engineers + planners + land surveyors

USER NAME = gbugg	DESIGNED - GEB	REVISED -	CHAMPAIGN COUNTY HIGHWAY DEPARTMENT	27" x 36" PPC DECK BEAM STRUCTURE NO. 010-4172
	CHECKED - BRD	REVISED -		
PLOT SCALE = 0.167 ' / In.	DRAWN - DLH	REVISED -		SHEET 3 OF 14 SHEETS
PLOT DATE = 9/3/2026	CHECKED - GEB/BRD	REVISED -		

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	11
		CONTRACT NO. 91666		
	ILLINOIS	FED. AID PROJECT		

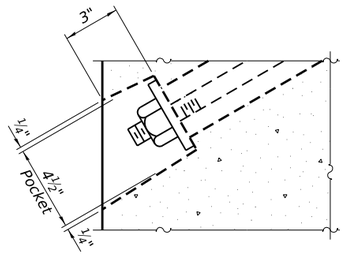


FABRIC BEARING PAD
(Interior)

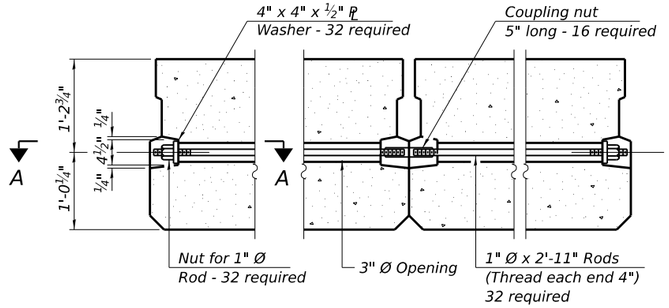
FABRIC BEARING PAD
(Exterior)

FIXED

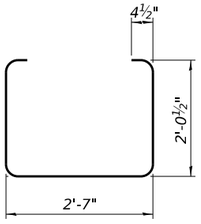
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pads shall be bonded to the substructure.



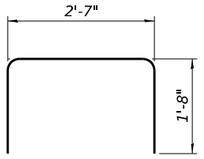
SECTION A-A



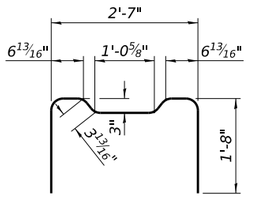
TYPICAL TRANSVERSE TIE ASSEMBLY



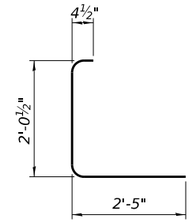
BAR S(E)



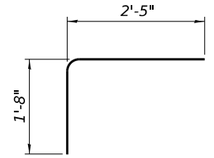
BAR S1(E)



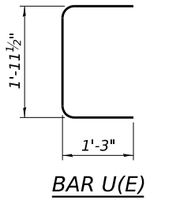
BAR S2(E)



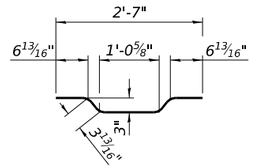
BAR S3(E)



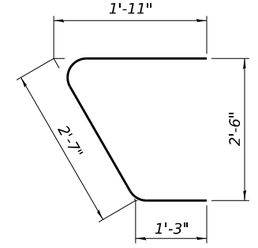
BAR S4(E)



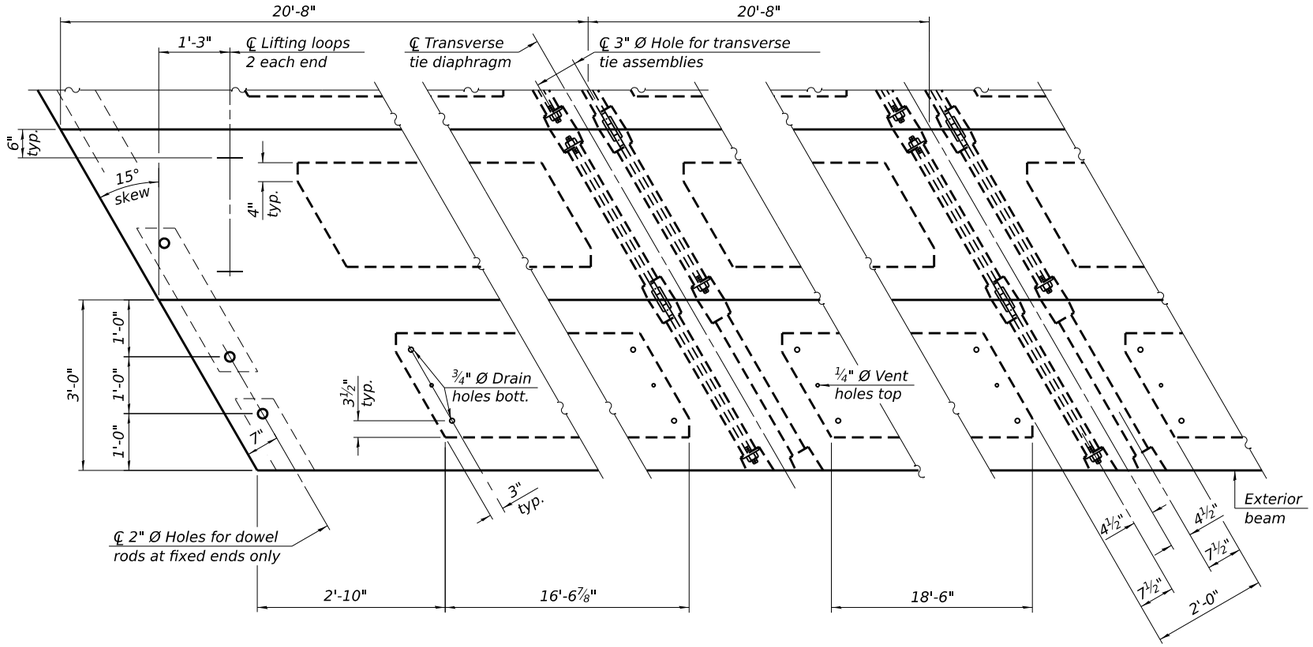
BAR U(E)



BAR A1(E)

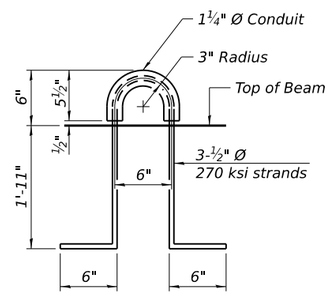


BAR U1(E)



PLAN VIEW

Connect beams in pairs with the transverse tie configuration shown.



LIFTING LOOP DETAIL

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

The 1" Ø 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.

Two ⅛" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 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.

BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	5,022

FILENAME: C:\SP\WHKS & CO\Jobs-Spring - Projects\Champaign County\10121 Champaign Co. TR 25 over Sangamon River\CADD10.12\CADD Data\Bridge\SN 010_4172.dgn

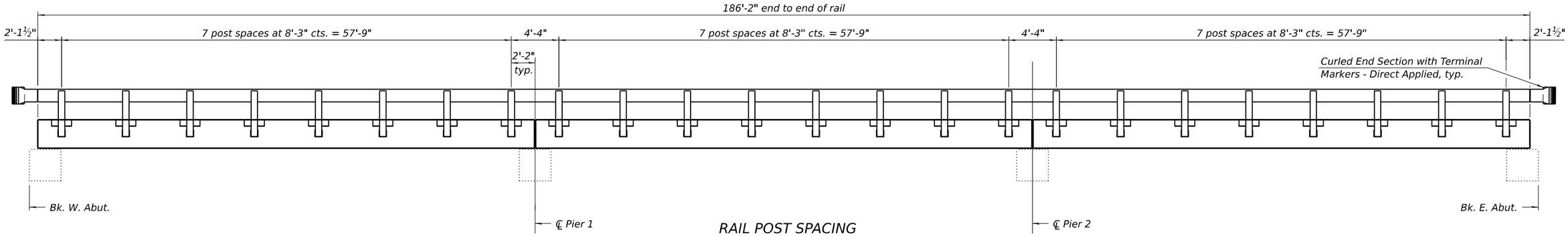
design firm no. 184001036
whks engineers + planners + land surveyors

USER NAME = gbugg	DESIGNED -	GEB	REVISED -	
	CHECKED -	BRD	REVISED -	
PLOT SCALE = 0.167 ' / In.	DRAWN -	DLH	REVISED -	
PLOT DATE = 9/3/2026	CHECKED -	GEB/BRD	REVISED -	

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

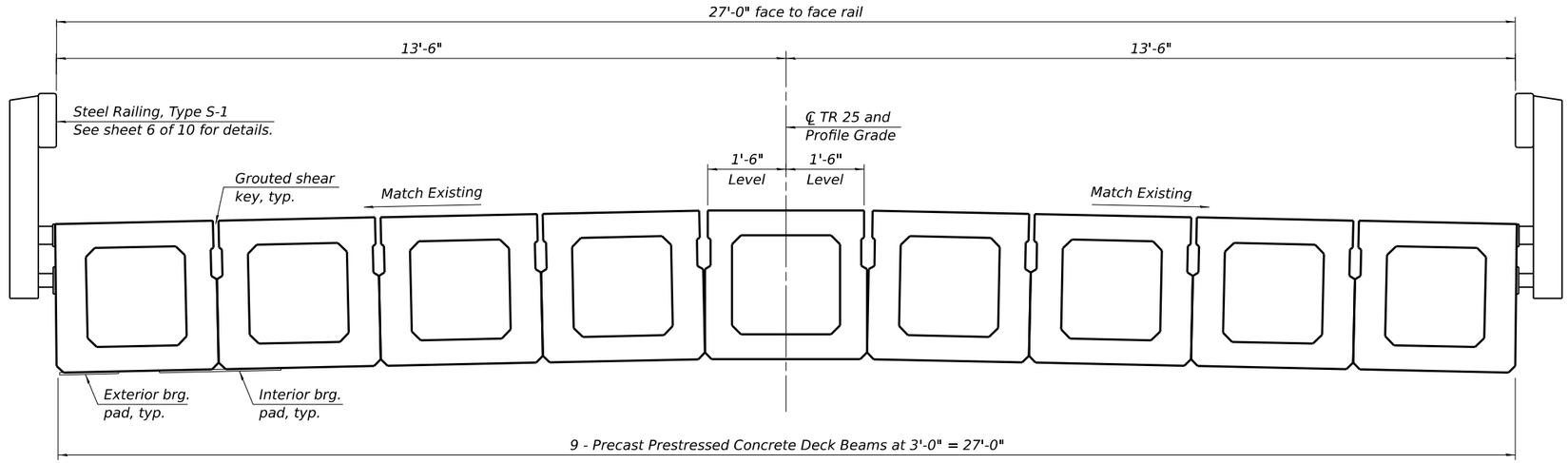
27" x 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 010-4172
SHEET 4 OF 14 SHEETS

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	12
		CONTRACT NO. 91666		
	ILLINOIS	FED. AID PROJECT		



RAIL POST SPACING

(South rail shown. North rail similar.)

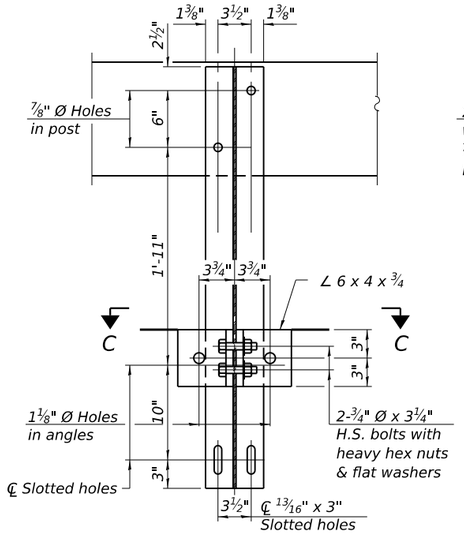


CROSS SECTION

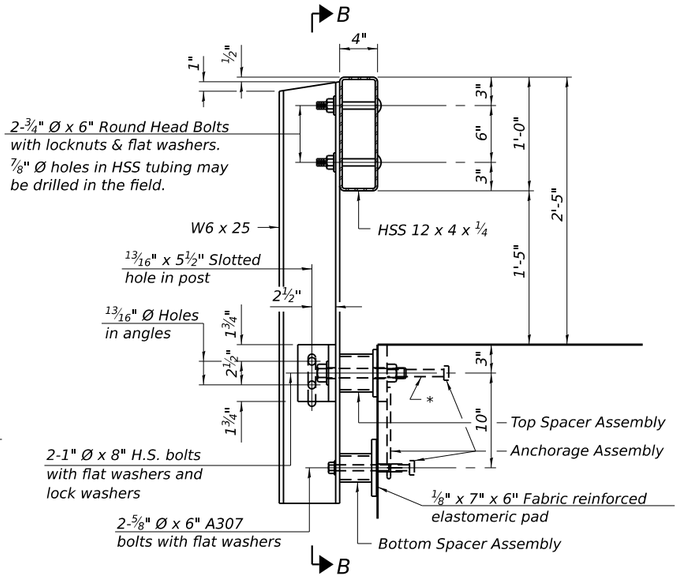
(Looking East)

FILENAME: C:\SP\WHKS & CO\Jobs-Spring - Projects\Champaign County\10121 Champaign Co. TR 25 over Sangamon River\CADD\10.12\CADD Data\Bridge\SN 010_4172.dgn

design firm no. 184001036 whks engineers + planners + land surveyors	USER NAME = gbugg	DESIGNED - GEB	REVISED -	CHAMPAIGN COUNTY HIGHWAY DEPARTMENT	SUPERSTRUCTURE DETAILS STRUCTURE NO. 010-4172	TR RTE. 25 / SECTION 24-02145-00-BR / COUNTY CHAMPAIGN / TOTAL SHEETS 22 / SHEET NO. 13
		CHECKED - BRD	REVISED -			CONTRACT NO. 91666
	PLOT SCALE = 0.167 ' / In.	DRAWN - DLH	REVISED -		SHEET 5 OF 14 SHEETS	ILLINOIS / FED. AID PROJECT
	PLOT DATE = 9/3/2026	CHECKED - GEB/BRD	REVISED -			

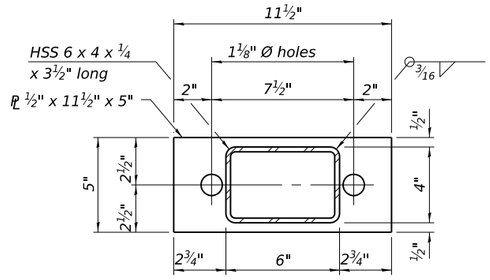


SECTION B-B

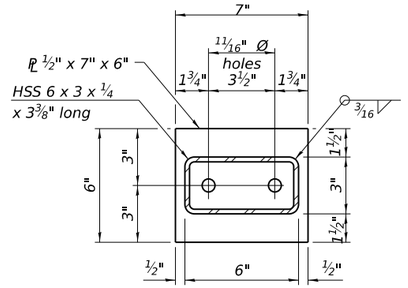


SECTION AT RAILING POST

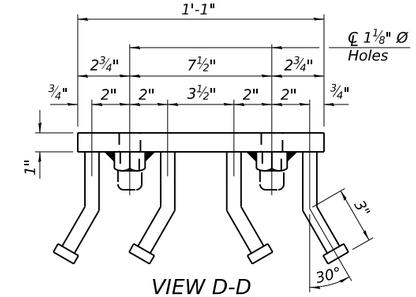
* *The outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchorage assembly. The anchorage studs may be bent down ½" to accommodate the top reinforcement bar placement.*



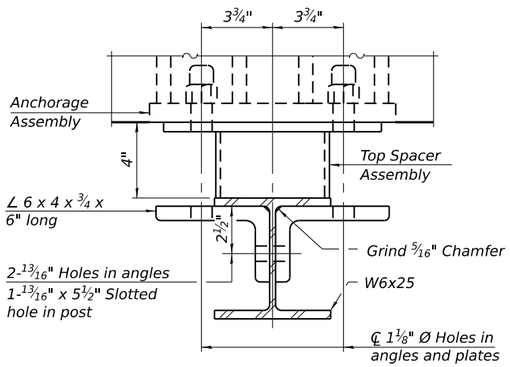
TOP SPACER ASSEMBLY



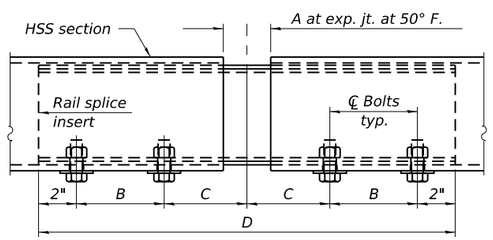
BOTTOM SPACER ASSEMBLY



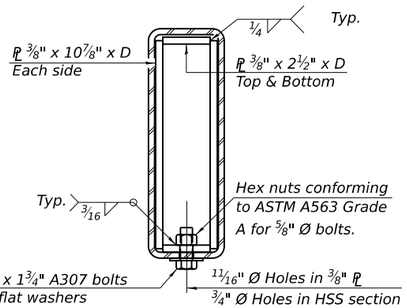
VIEW D-D



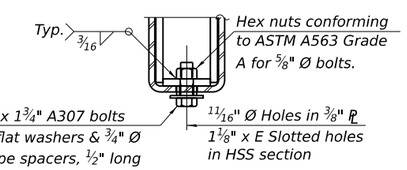
SECTION C-C



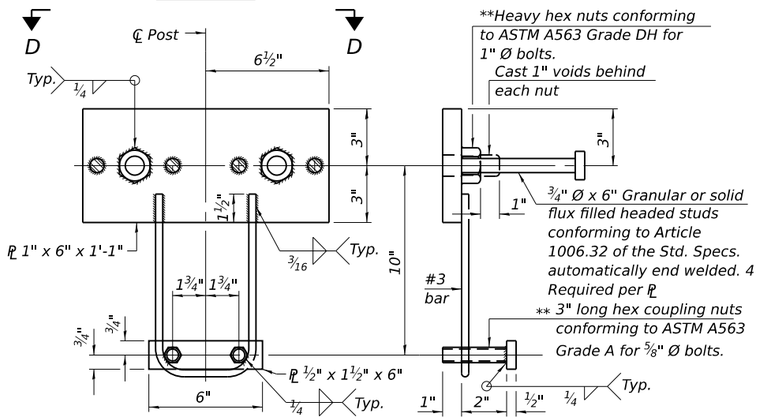
RAIL SPLICE ELEVATION



SECTION AT RAIL SPLICE



RAIL SPLICE CONNECTION AT EXPANSION JT.



**Heavy hex nuts conforming to ASTM A563 Grade DH for 1" Ø bolts. Cast 1" voids behind each nut

ANCHORAGE ASSEMBLY

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

Notes:

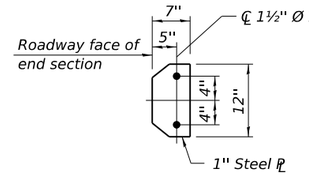
A sufficient number of shims of various thicknesses, sized to fit behind the top spacer assembly, 5" x 11½", and bottom spacer assembly, 6" x 7", shall be provided to adjust posts for proper alignment. If the summation of shims is greater than ¼" (top) or ½" (bottom), longer bolts are required. Cost included with Steel Railing, Type S-1.

All steel rail elements including shims shall be galvanized according to Article 509.05 of the Standard Specifications.

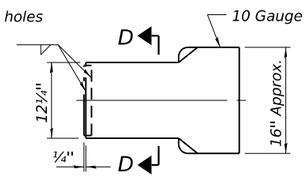
All HSS tubing serving as railing shall be CVN tested according to Article 1006.34(b) of the Standard Specifications.

Rail splice inserts may be built out of 2 -⅜" bent plates in lieu of the 4 plate rail splice inserts shown, provided the outside dimensions are matched.

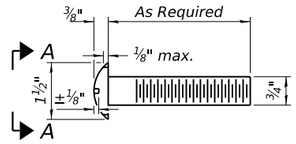
All round head bolts shall be ASTM A307 with locknuts according to ASTM A563 grade A.



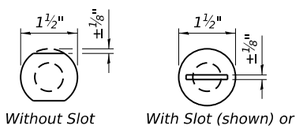
SECTION D-D



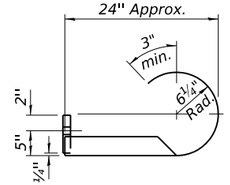
ELEVATION



ROUND HEAD BOLT DETAIL



VIEW A-A

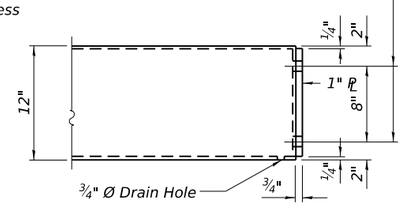


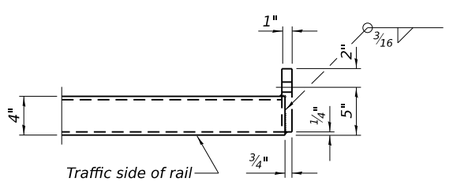
PLAN

CURLED END SECTION DETAILS

Cost of curled end sections is included with Steel Railing. (3 Required)

1⅛" Ø Holes for 1" Ø x 4" Round head bolts. Provide 2 flat washers & locknuts for Curled End Section connection.





END OF RAIL DETAILS

RAILING CRITERIA

NCHRP 350 Test Level	2
Railing Weight (plf)	50
Max Post Spacing	10'-9"
HMA thickness range (in)	1¼ - 3⅛

SPLICE DIMENSIONS

Location	T	A	B	C	D	E
All locs. not over exp. jts.	0	¼"	4"	4"	1'-8"	-
Over Strip Seal Jt.	≤4"	2½"	4⅝"	4⅜"	1'-10"	3 1/16"
Over Finger or Modular Jt.	≤9½"	5½"	7⅜"	7¼"	2'-9¼"	5 13/16"
Over Finger or Modular Jt.	≤15"	8¼"	10⅛"	10"	3'-8¼"	8 9/16"

T = ; total movement along centerline of roadway at expansion joint.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	373

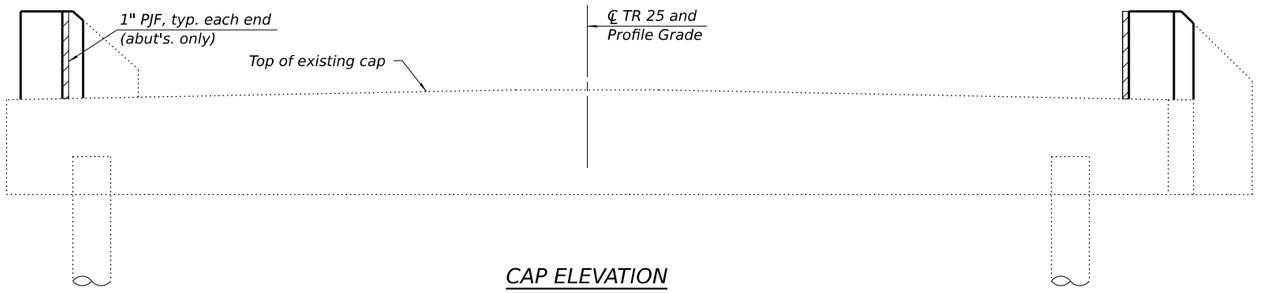
LR-23A-CES 4-4-2025

FILENAME: C:\SP\WHKS & CO\Jobs-Spring - Projects\Champaign County\10121 Champaign Co. TR 25 over Sangamon River\CADD\10.12\CADD Data\Bridge\SN 010_4172.dgn

design firm no. 184001036 whks engineers + planners + land surveyors

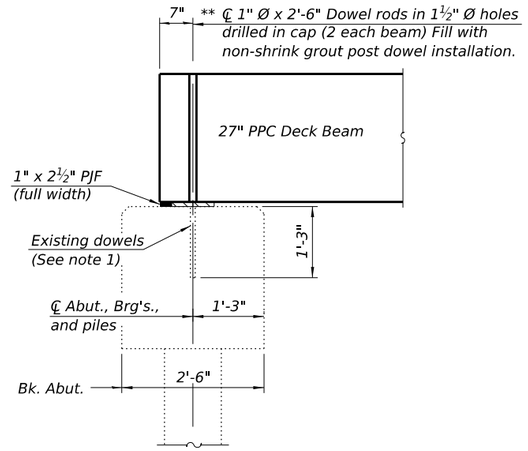
USER NAME = gbugg	DESIGNED - GEB	REVISED -	CHAMPAIGN COUNTY HIGHWAY DEPARTMENT	STEEL RAILING, TYPE S-1 STRUCTURE NO. 010-4172
	CHECKED - BRD	REVISED -		
PLOT SCALE = 0.2 '' / In.	DRAWN - DLH	REVISED -		SHEET 6 OF 14 SHEETS
PLOT DATE = 9/3/2026	CHECKED - GEB/BRD	REVISED -		

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	14
		CONTRACT NO. 91666		
	ILLINOIS FED. AID PROJECT			



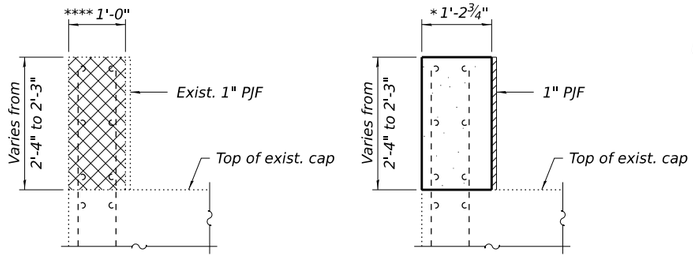
CAP ELEVATION

(Abutments shown)



SECTION THRU ABUTMENT

Dimensions are at Rt. ∠'s



Section Showing Removal — Section Showing New Construction

WINGWALL DETAILS

(Showing East Abutment. West Abutment Similar.)
(Dimensions are at Rt. ∠'s to the wing walls.)

Notes:

1. Burn existing dowels flush with top of cap. Grind existing dowels smooth and seal with epoxy. Epoxy used shall be approved by the Engineer. Cost is included with Removal of Existing Superstructure.
2. Existing reinforcement shall be cleaned and incorporated into the new construction, unless noted otherwise. Cost included with Concrete Removal.
3. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.
4. Cast wingwalls after beams have been erected.

* Dimensions are estimated and may vary in the field based on manufacturing and/or erection tolerances

** If the Contractor encounters any conflicts with existing dowel rods, contact the Engineer of Record for further disposition.

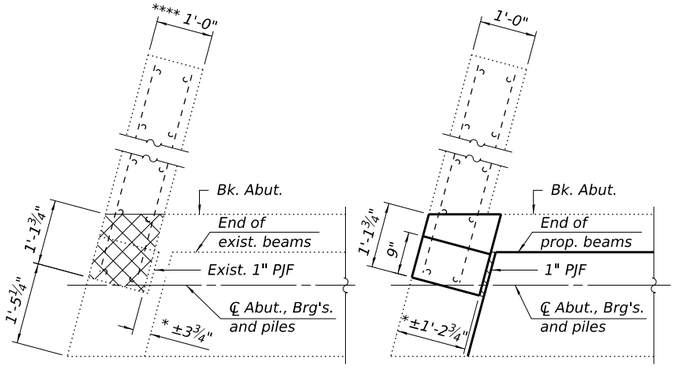
*** 1" joint shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam length.

**** Field inspection indicates the wing wall thickness was thickened near the beams during construction. An additional 2¾" of wall thickness was included in the Concrete Removal Quantity.

LEGEND

1" Preformed Joint Filler (PJF)

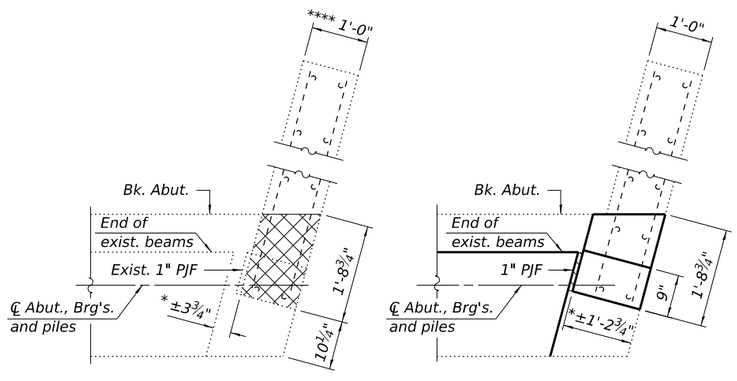
Limits of Concrete Removal. Existing #4 vertical and #5 horizontal bars to remain. (See notes 2 and 3).



Plan Showing Removal — Plan Showing New Construction

WINGWALL DETAILS

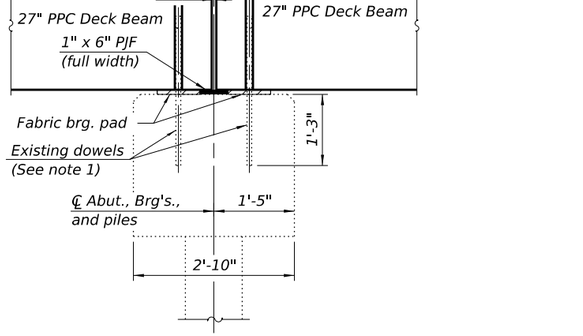
(Showing West Abutment, South Wingwall. East Abutment, North Wingwall similar.)



Plan Showing Removal — Plan Showing New Construction

WINGWALL DETAILS

(Showing West Abutment, North Wingwall. East Abutment, South Wingwall similar.)



SECTION THRU PIER

Dimensions are at Rt. ∠'s

BILL OF MATERIAL

(1 Abutment)

Item	Unit	Total
Concrete Removal	Cu. Yd.	0.4
Concrete Structures	Cu. Yd.	0.4

FILENAME: C:\SP\WHKS & CO\Jobs-Spring - Projects\Champaign County\10121 Champaign Co. TR 25 over Sangamon River\CADD\10.12\CADD Data\Bridges\SN 010_4172.dgn

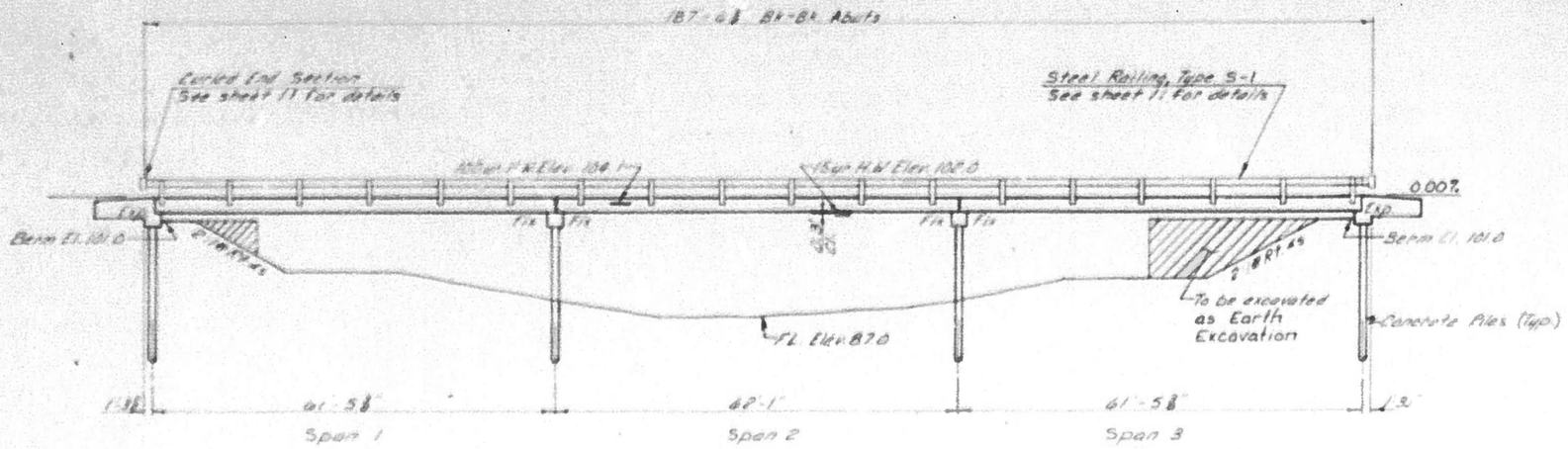
design firm no. 184001036 — whks engineers + planners + land surveyors

USER NAME = gbugg	DESIGNED -	GEB	REVISED -		
	CHECKED -	BRD	REVISED -		
PLOT SCALE = 0:2 '/ in.	DRAWN -	DLH	REVISED -		
PLOT DATE = 9/3/2026	CHECKED -	GEB/BRD	REVISED -		

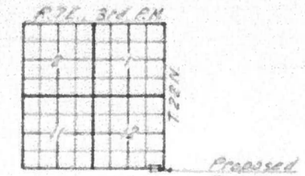
CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

SUBSTRUCTURE DETAILS
STRUCTURE NO. 010-4172
SHEET 7 OF 14 SHEETS

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	15
		CONTRACT NO. 91666		
		ILLINOIS	FED. AID PROJECT	



ELEVATION

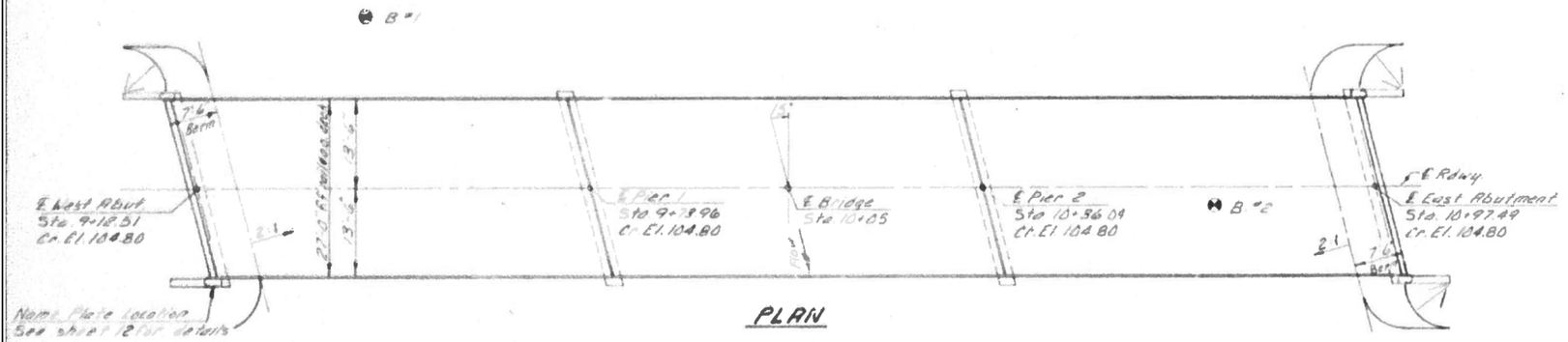


LOCATION PLAN

STRUCTURE NO 010-4172
SANGAMON RIVER
SEC 79-02528-05-BR BUILT 198__
BROWN-EAST BEND ROAD DISTRICTS
CHAMPAIGN COUNTY
LOADING H520

LETTERING FOR NAME PLATE

See Std. 2113



PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	5,022		5,022
Class X Concrete	Cu. Yd.		38.8	38.8
Reinforcement Bars	Pound		6,700	6,700
Steel Railing, Type S-1	Lin. Ft.	370		370
Name Plates	Each		1	1
Concrete Piles	Lin. Ft.		865	865
Test Pile Concrete	Each		2	2

GENERAL NOTES

Class X Concrete shall be used in the abutments and piers.
Boring Data is shown only as a guide for bidders in estimating soil conditions which may be encountered in the work.
The Contractor shall drive two concrete test piles in permanent locations, one at the West Abutment and one at Pier 2 as directed by the Engineer before ordering the remainder of the piles.

WATERWAY INFORMATION

Drainage Area = 176 Sq Mi Low Grade Elev. 101.70 @ Sta. 12+75

Flood	Freq. Yr	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Net H.W.E.	Head Ft. Exist	Head Ft. Prop.	Headwater Elev Exist	Headwater Elev Prop.
Design	15	7,700	Pier 1,300 Abut 440	1,715	102.0	0.0	0.5	102.0	102.5
Base	100	11,500	Pier 1,300 Abut 396	1,116 120	104.1	0.0	0.0	104.1	104.1
Overtopping	10	6,700	Pier 1,300 Abut 120	1,610	101.4	0.2	0.4	101.6	101.8
L. e. Calc.	500	N.A.	—	—	—	—	—	—	—

DESIGN STRESSES

f'c = 5,000 psi. (Prestressed Beams)
f'ci = 4,100 psi. (Prestressed Beams)
f'c = 1,400 psi. (Class X Concrete)
fs = 270,000 psi. (Prestressed Strands)
fsi = 189,000 psi (Prestressed Strands)
fs = 20,000 psi. (Reinforcement Bars)
n = 9 (Class X Concrete)
LOADING HS 20-44
DESIGN SPECIFICATIONS. 1977 AASHTO, 1978, 1979 & 1980 Interims
25°/Sq. Ft. included in dead load for future wearing surface.

Thad J. Stanley
Illinois Structural No. 2934

GENERAL PLAN & ELEVATION

SECTION 79-02528-05-BR
BROWN-EAST BEND ROAD DISTRICTS
CHAMPAIGN COUNTY
STATION 10+05

COLLINS AND RICE
CONSULTING ENGINEERS

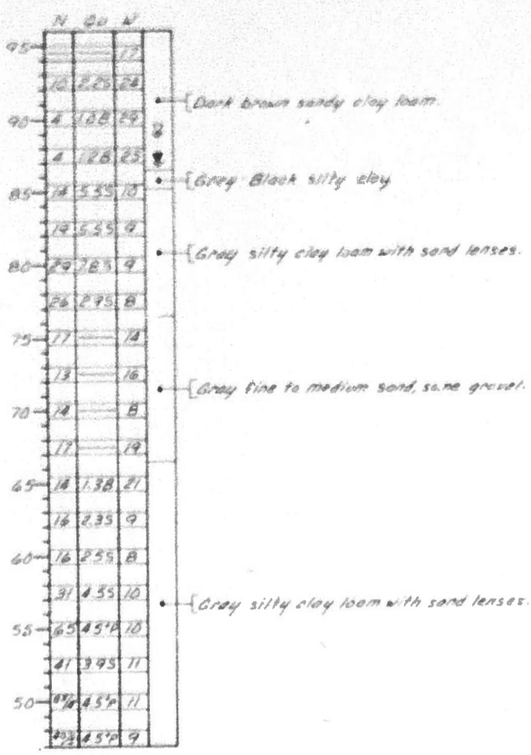
DESIGNED J.K.K. CHECKED F.S.
DRAWN R.S. DATE 12-5-80 No. 1466

design firm no. 184001036	whks engineers • planners • land surveyors	USER NAME = gbugg	DESIGNED - GEB	REVISED -	
			CHECKED - BRD	REVISED -	
		PLOT SCALE = 0:2'=1" / In.	DRAWN - DLH	REVISED -	
FILE NAME:		PLOT DATE = 9/3/2026	CHECKED - GEB/BRD	REVISED -	

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

EXISTING PLANS (FOR INFORMATION ONLY)
STRUCTURE NO. 010-4172
SHEET 8 OF 14 SHEETS

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	16
		CONTRACT NO. 91666		
		ILLINOIS	FED. AID PROJECT	



BORING "1

26' Lt Sta 9+39



BORING "2

3' Rt Sta. 10+72

BORING DATA

N=Standard Penetration Test-Blows per foot to drive 2" O.D. Split Spoon Sampler 12" with 140# hammer falling 30".
Qu=Unconfined Compressive Strength-t/sf.
W=Water Content-percentage of oven dry weight-%.
B=Bulge Failure
S=Shear Failure
P=Penetrometer
▼=Surface Water Elev
▼=Groundwater Elev at completion

BORING DATA
SECTION 79-02528-05-BR
BROWN-EAST BEND ROAD DISTRICTS
CHAMPAIGN COUNTY
STATION 10+65

COLLINS AND RICE
CONSULTING ENGINEERS

DESIGNED J.K.K. CHECKED F.S.
DRAWN R.S. DATE 12-5-80 NO. 1466

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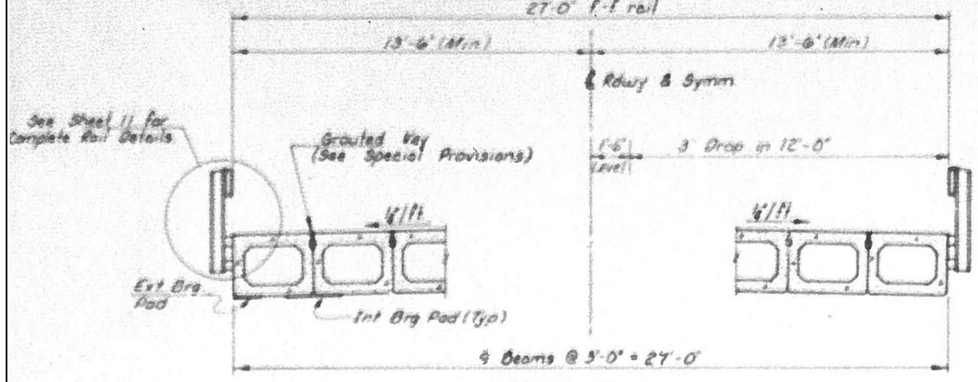
design firm no. 184001036
whks
engineers + planners + land surveyors

USER NAME = gbugg	DESIGNED - GEB	REVISED -	
	CHECKED - BRD	REVISED -	
PLOT SCALE = 0.2 '/ In.	DRAWN - DLH	REVISED -	
PLOT DATE = 9/3/2026	CHECKED - GEB/BRD	REVISED -	

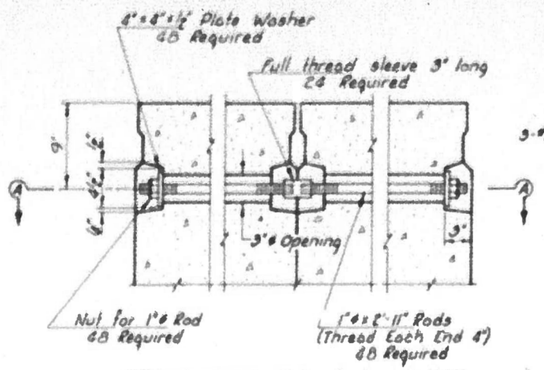
CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

EXISTING PLANS (FOR INFORMATION ONLY)
STRUCTURE NO. 010-4172
SHEET 9 OF 14 SHEETS

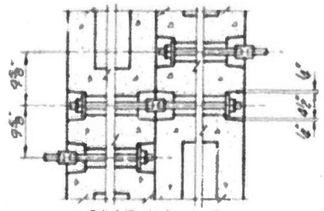
TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	17
		CONTRACT NO. 91666		
	ILLINOIS FED. AID PROJECT			



CROSS SECTION

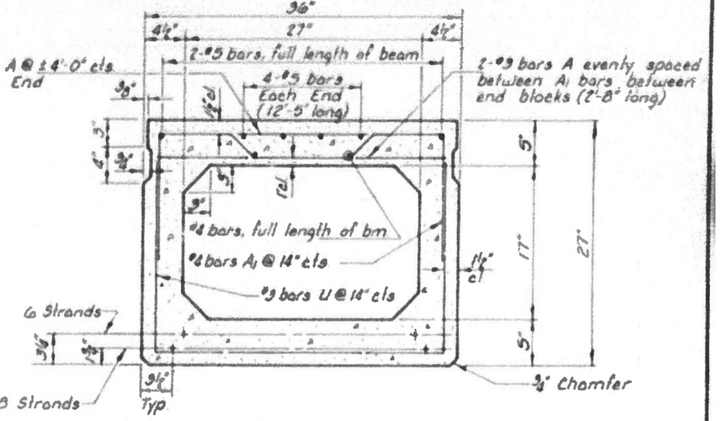


TRANSVERSE TIE ROD DETAIL



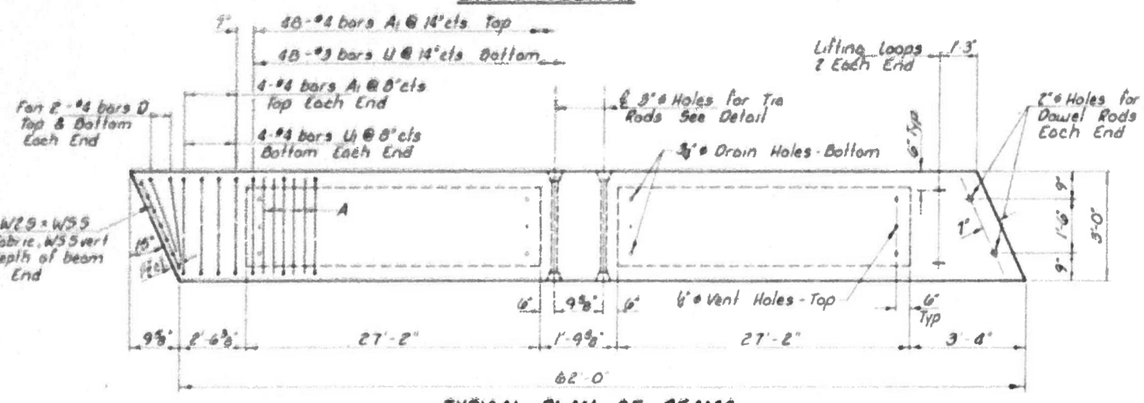
SECTION A-A

NOTE: Omit key on exterior face of outside beams

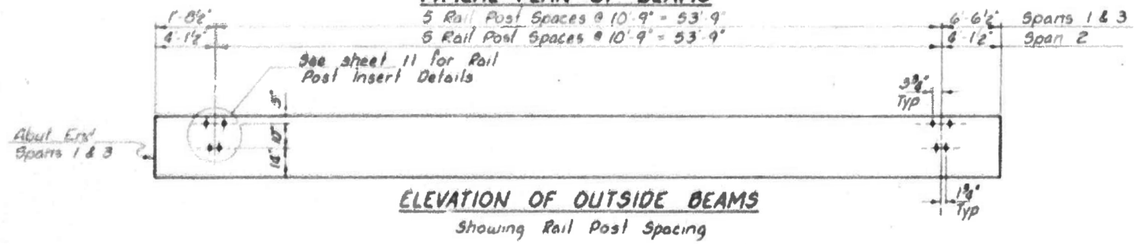


TYPICAL SECTION THRU BEAM

14 – ½"ø Strands Stressed to 28,900 Lbs Each
Place strands symmetrically about ℄ of beam
Use Standard Grid Pattern

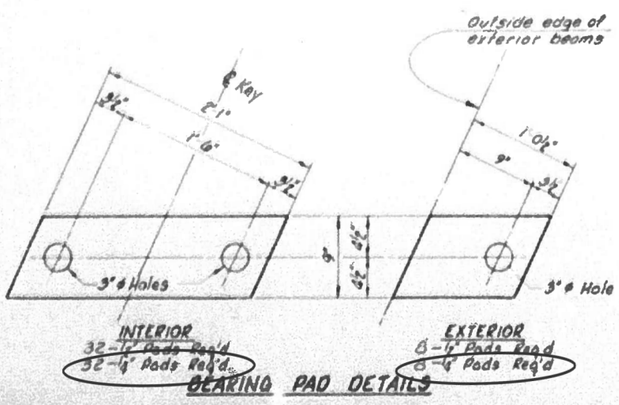


TYPICAL PLAN OF BEAMS

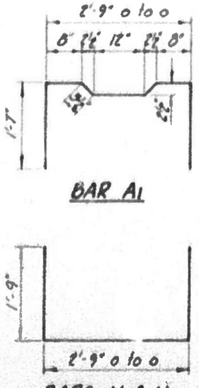


ELEVATION OF OUTSIDE BEAMS

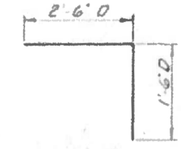
Showing Rail Post Spacing



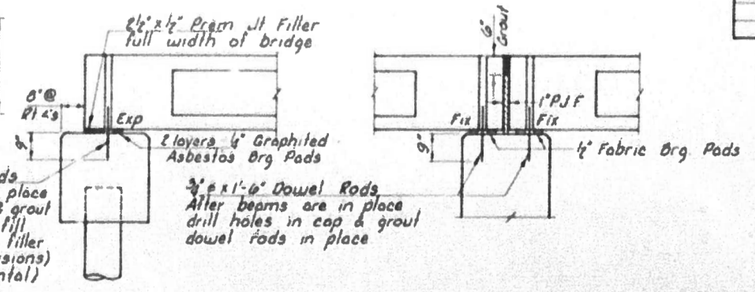
BEARING PAD DETAILS



BARS U & U1



BAR D



SECTION AT ABUTMENTS

SECTION AT PIERS

NOTES

Prestressing steel shall be non-galvinized high strength, stress-relieved 7-wire strand, Grade 270.

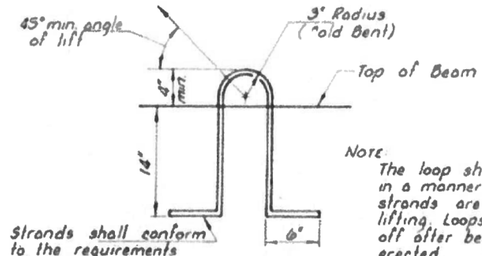
The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq in.

Lifting Loops shall be 7-wire stress-relieved, 2-½"ø-270 ksi strands.

The 1"ø rods in the transverse tie assembly shall be tightened to a snug fit & the threads set. Pockets that received tie rods on outside shall be filled with grout after ties are in place.

Reinforcement bars shall conform to AASHTO M-31 or M-53, Grade 60.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two ½" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.



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

LIFTING LOOP DETAIL

Approved alternate may be substituted for the above

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq Ft	5,022

SUPERSTRUCTURE
SECTION 79 02528 05-BR
BROWN-EAST BEND ROAD DISTRICTS
CHAMPAIGN COUNTY
STATION 10+05

COLLINS AND RICE
CONSULTING ENGINEERS
DESIGNED J.K.K. CHECKED F.S.
DRAWN T.S. DATE 12-5-80 NO. 1466

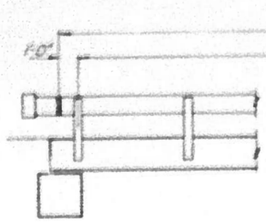
TR 25	14 02528 05-BR	CHAMPAIGN	14	10
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

design firm no. 184001036 — whks, engineers + planners + land surveyors	USER NAME = gbugg	DESIGNED - GEB	REVISED -	CHAMPAIGN COUNTY HIGHWAY DEPARTMENT
		CHECKED - BRD	REVISED -	EXISTING PLANS (FOR INFORMATION ONLY) STRUCTURE NO. 010-4172
	PLOT SCALE = 0.2 '/ In.	DRAWN - DLH	REVISED -	SHEET 10 OF 14 SHEETS
	PLOT DATE = 9/3/2026	CHECKED - GEB/BRD	REVISED -	

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	18
		CONTRACT NO. 91666		
	ILLINOIS	FED. AID PROJECT		

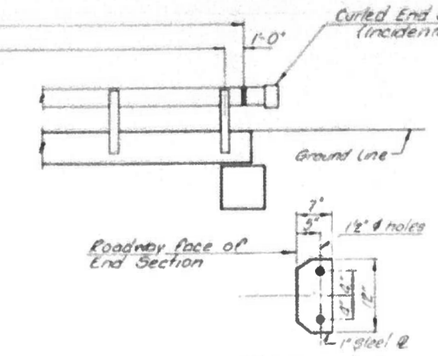
FILE NAME:

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 25	24-02528-05-BR	CHAMPAIGN	14	11
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		



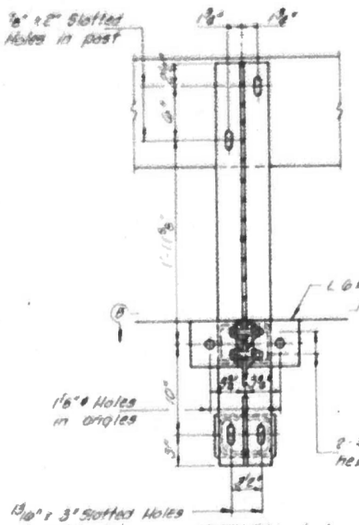
184'-9" end to end of rail
17 Rail Post Spaces @ 10'-9" = 182'-9"

ELEVATION

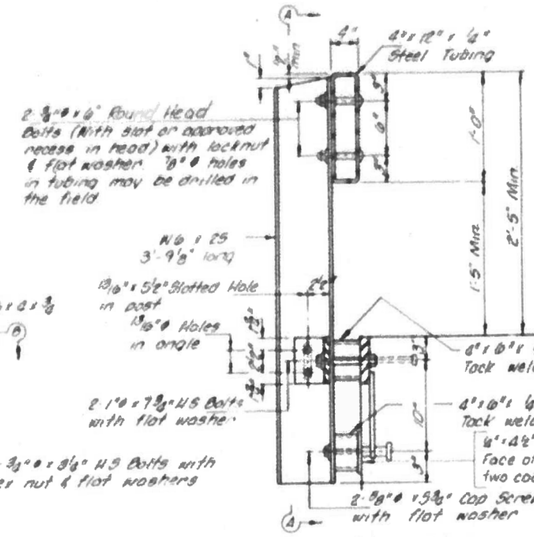


SECTION D-D

CURLED END SECTION DETAILS

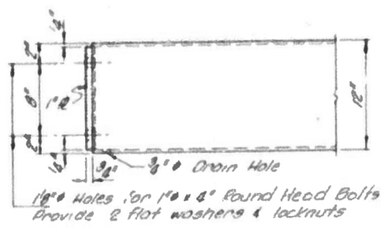


SECTION A-A

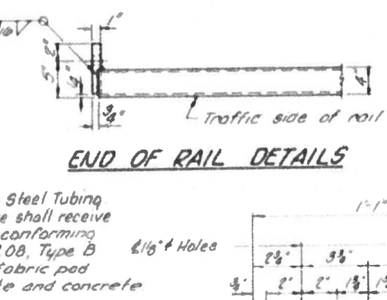


SECTION AT RAIL POST

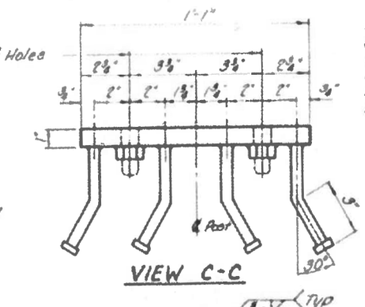
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



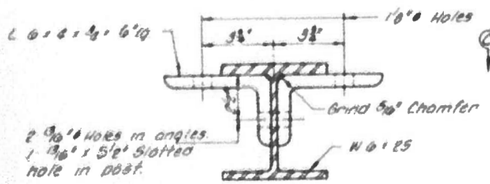
1 3/8" ϕ Holes for 1" ϕ x 8" Round Head Bolts
Provide 2 flat washers & locknuts



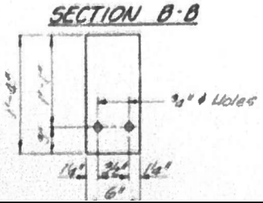
END OF RAIL DETAILS

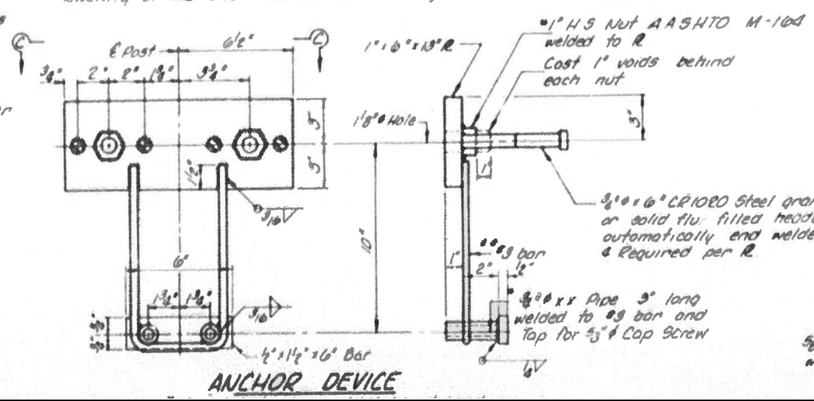


VIEW C-C

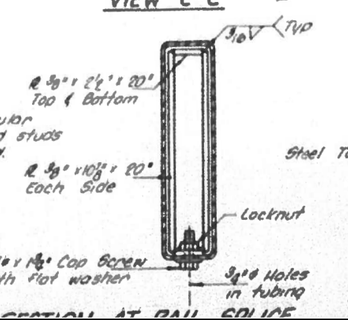


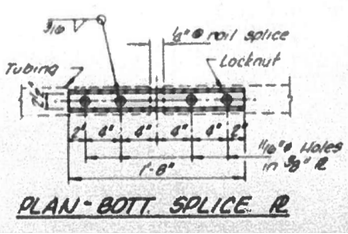
SECTION B-B





ANCHOR DEVICE





PLAN - BOTT. SPLICE ℝ

NOTES

Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500 Grade B Structural Steel Tubing.

All other steel shapes and plates shall conform to the requirements of AASHTO designation M-183 except posts and angles shall conform to AASHTO M-223, Grade 50.

Bolts, cap screws, and nuts shall conform to the requirement of ASTM designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO designation M-164.

All bolts, nuts, cap screws, washers and lockwashers shall be galvanized in accordance with AASHTO designation M-232.

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

Railing shall be in accordance with Section 508 of the Standard Specifications, except as noted, and shall be paid for at the contract unit price per lineal foot for STEEL RAILING, TYPE S-1.

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'-4" galvanized steel shims shall be provided to align rail between adjacent spans. Cost incidental to Steel Railing.

The 3/4" ϕ high strength bolts used to connect the 6" x 4" x 3/8" angles to the post shall be tightened in accordance with Art. 507.04(g)(3) of the Standard Specifications. The 1" ϕ high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn. The 5/8" ϕ cap screws in bottom of posts shall be tightened to a snug fit only after the 3/4" ϕ high strength bolts have been tightened in accordance with Article 507.04(g)(3).

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Lin Ft	370

RAILING DETAILS

SECTION 79-02528-05-BR
BROWN-EAST BEND ROAD DISTRICT 5
CHAMPAIGN COUNTY
STATION 10+06

COLLINS AND RICE
CONSULTING ENGINEERS

DESIGNED J.K.K. CHECKED F.S.

design firm no. 184001036
whks engineers + planners + land surveyors

USER NAME = gbugg	DESIGNED - GEB	REVISED -	
	CHECKED - BRD	REVISED -	
PLOT SCALE = 0.2 '' / In.	DRAWN - DLH	REVISED -	
PLOT DATE = 9/3/2026	CHECKED - GEB/BRD	REVISED -	

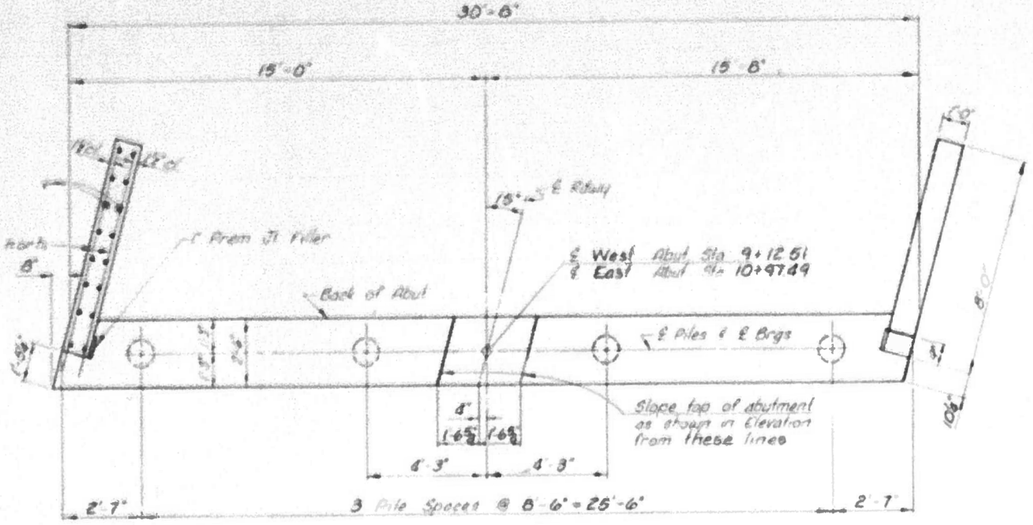
CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

EXISTING PLANS (FOR INFORMATION ONLY)
STRUCTURE NO. 010-4172
SHEET 11 OF 14 SHEETS

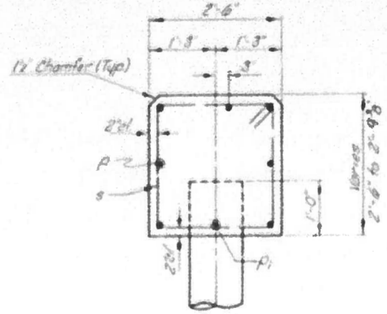
TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	19
		CONTRACT NO. 91666		
	ILLINOIS	FED. AID PROJECT		

FILE NAME:

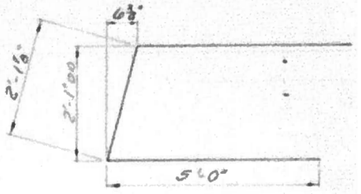
ROUTE	SECTION	COUNTY	TOTAL SHEETS
TR 25	79-02528-05-BR	CHAMPAIGN	14
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT	



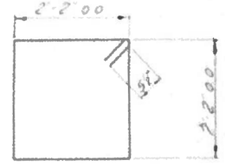
PLAN



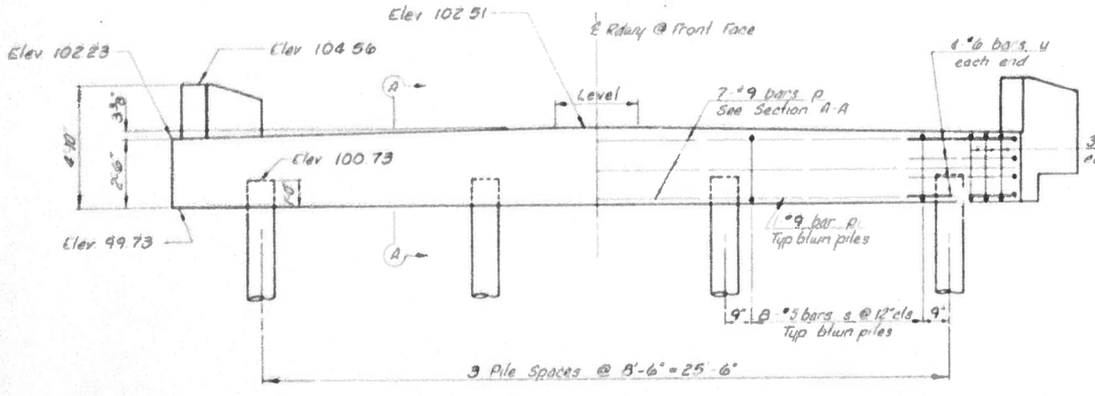
SECTION A-A



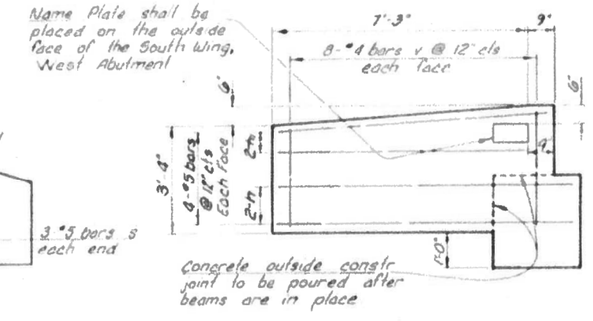
BAR u



BAR s



ELEVATION



Concrete outside constr joint to be poured after beams are in place

WING ELEVATION

PILE DATA

Type _____ Concrete
No Req'd (2 Abuts) _____ 8*
Capacity _____ 43 Tons/Pile
Est Length _____ 45 Feet/Pile (Based on 12" ø piles)
* Includes one test pile to be driven in a permanent location at the West Abutment

BILL OF MATERIAL — 2 ABUTS.

BAR	NO	SIZE	LENGTH	SHAPE
P	14	#9	30-4"	
P1	6	#9	7'-1"	
h	16	#5	8'-7"	
h1	16	#5	7'-9"	
v	64	#4	3'-2"	
u	16	#6	12'-2"	
s	60	#5	9'-7"	
Class X Concrete			Cu. Yd.	188
Reinforcement Bars			Pound	2,890
Name Plates			Each	1
Concrete Piles			Lin. Ft.	315
Test Pile Concrete			Each	1

See sheet 14 for pile alternates

ABUTMENTS
SECTION 79-02528-05-BR
BROWN-EAST BEND ROAD DISTRICT
CHAMPAIGN COUNTY
STATION 10+05

COLLINS AND RICE
CONSULTING ENGINEERS
DESIGNED J.K.K. CHECKED F.B.

FILE NAME:

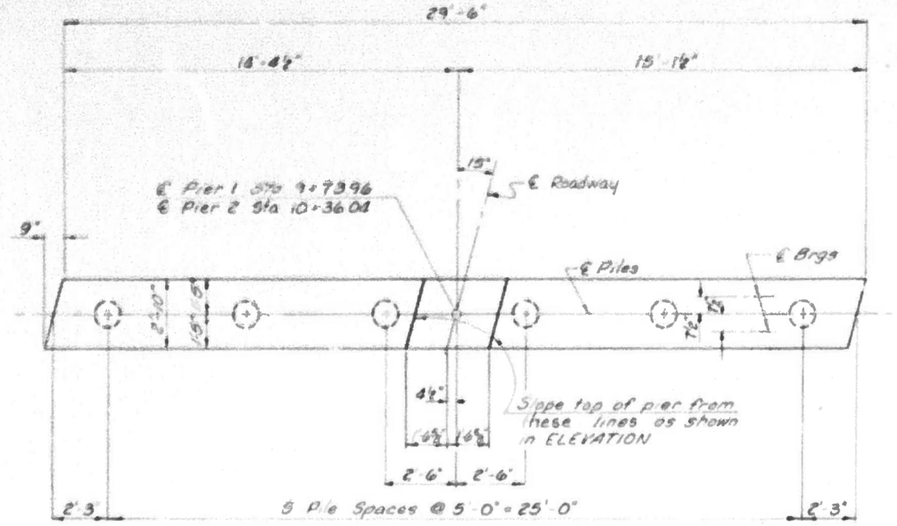
design firm no. 184001036	USER NAME = gbugg	DESIGNED - GEB	REVISED -
whks engineers + planners + land surveyors		CHECKED - BRD	REVISED -
	PLOT SCALE = 0:2'-1" / In.	DRAWN - DLH	REVISED -
	PLOT DATE = 9/3/2026	CHECKED - GEB/BRD	REVISED -

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

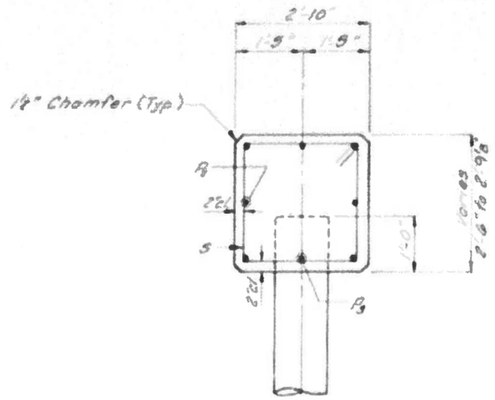
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STRUCTURE NO. 010-4172
SHEET 12 OF 14 SHEETS

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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		CONTRACT NO. 91666		
		ILLINOIS	FED. AID PROJECT	

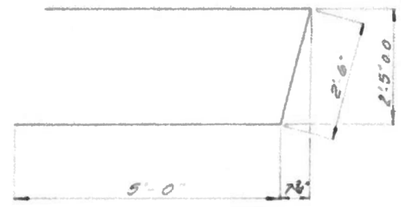
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FED. ROAD DIST. NO. 7		ILLINOIS PROJECT		



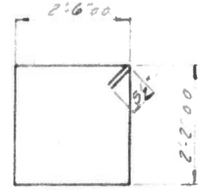
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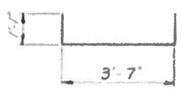
SECTION A-A



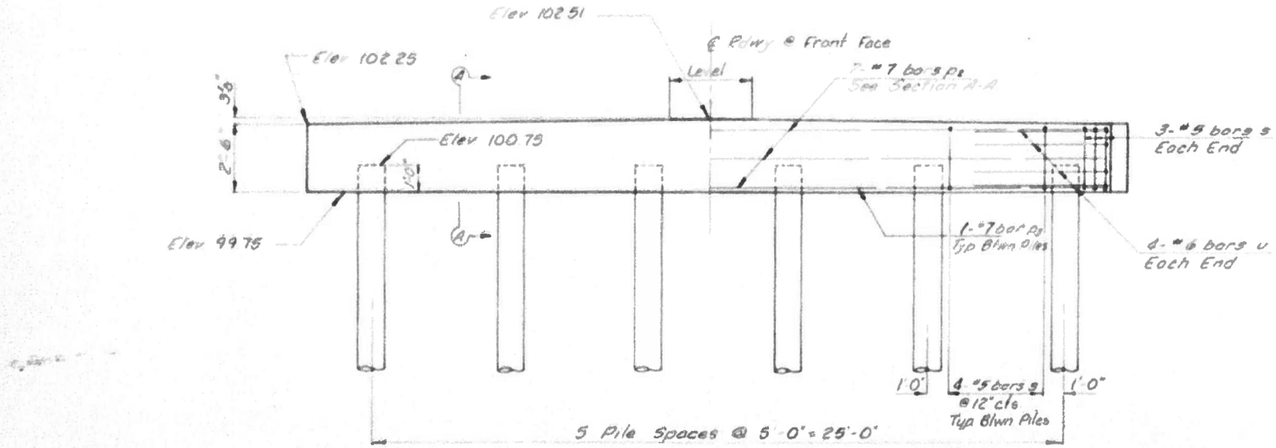
BAR u



BAR s



BAR P_3



ELEVATION

BILL OF MATERIAL - 2 PIERS

BAR	NO	SIZE	LENGTH	SHAPE
P_1	14	#7	29'-2"	
P_3	10	#7	5'-9"	
s	52	#5	10'-3"	
u	16	#6	12'-6"	
Class 'A' Concrete			Cu Yd	16.0
Reinforcement Bars			Pound	1,810
Concrete Piles			Lin Ft	550
Test Pile Concrete			Each	1

See sheet 14 for pile alternates
Precast prestressed concrete piles will not be permitted in the piers

PILE DATA

Type _____ Concrete
No Req'd (2 Piers) _____ 12*
Capacity _____ 43 Tons/Pile
Est Length _____ 50 Feet/Pile (Based on 12"ϕ piles)

* Includes one concrete test pile to be driven in a permanent location at Pier 2.

PIERS
SECTION 79 02528-05-BR
BROWN-EAST BEND ROAD DISTRICTS
CHAMPAIGN COUNTY
STATION 10+05

COLLINS AND RICE
CONSULTING ENGINEERS

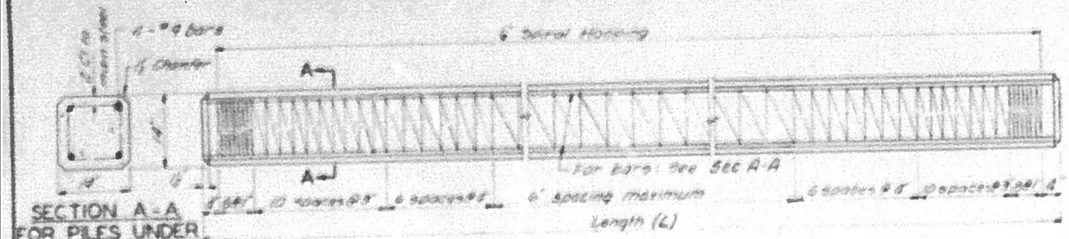
DESIGNED J.K.K CHECKED F.S.

design firm no. 184001036
whks
engineers + planners + land surveyors

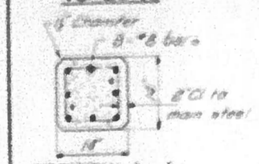
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	CHECKED - BRD	REVISED -		
PLOT SCALE = 0:2 ':' / In.	DRAWN - DLH	REVISED -		SHEET 13 OF 14 SHEETS
PLOT DATE = 9/3/2026	CHECKED - GEB/BRD	REVISED -		

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	21
		CONTRACT NO. 91666		
	ILLINOIS FED. AID PROJECT			

FILE NAME:



SECTION A-A
FOR PILES UNDER
45' LONG

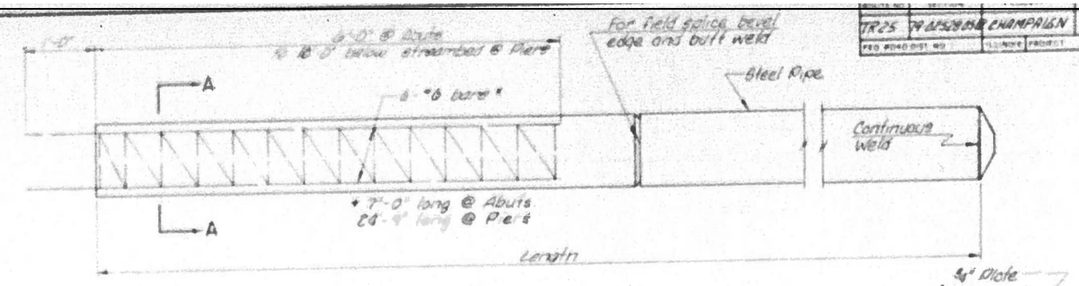


SECTION A-A
FOR PILES 45'
OR MORE

Handling:
For Pile Lengths up to 45 ft use two slings placed at a distance of 0.21L' from each end. For piles longer than 45 ft use three slings placed at a distance of 0.12L' from each end and at mid-point of pile

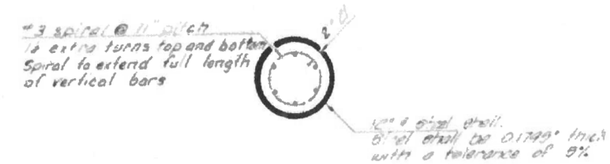
'L' = Over all length of pile to be handled

DETAIL OF PRECAST CONCRETE PILES



Note
Metal shell, the used of piers shall receive one coat of red lead paint and two coats of aluminum paint in accordance with Section 506 of the Standard Specifications after the pile forms have been removed. The paint shall extend from the bottom of the concrete cap to streambed. Painting the metal shells is incidental to the cost of furnishing the piles.

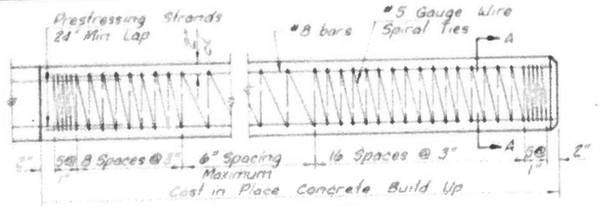
OPTIONAL FLAT END



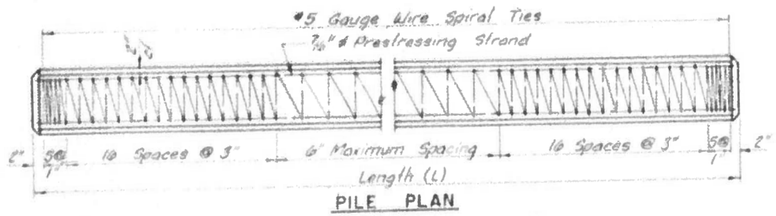
SECTION A-A

Note Cost of reinforcement in piling is incidental to the cost of furnishing piles

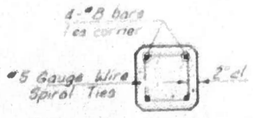
DETAIL OF CAST IN PLACE CONCRETE PILES



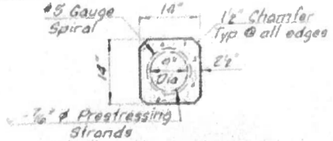
PILE BUILD UP



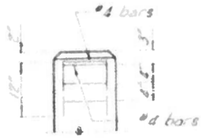
PILE PLAN



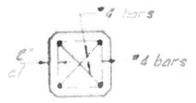
SECTION A-A



SECTION THRU PILE



ELEVATION
(End Reinforcement)



PLAN
(End Reinforcement)

DESIGN STRESSES

f'_c = 5,000 psi
f_c = 4,000 psi
f_s = 270,000 psi (31,000 lbs) — 7/16" ø
f_s = 189,000 psi (21,700 lbs)
f_s = 270,000 psi (41,300 lbs) — 1/2" ø
f_o = 189,000 psi (28,900 lbs)

NOTES

Prestressing steel shall be non-galvanized extra high strength stress-relieved 7-wire strand. The nominal diameter shall be 7/16" and the minimum nominal cross-sectional area shall be 0.115 sq in or the equivalent 6-1/2" ø strands with a cross-sectional area of 0.153 sq in may be used.

For Pile lengths up to 65', use two slings placed at a distance of 0.21L' from each end. For Piles longer than 65', use three slings place at a distance of 0.12L' from each end and at midpoint of pile.

'L' = Overall Length of Pile to be handled.

NOTE

Precast prestressed concrete piles will not be permitted in pile bent. piers.

CONCRETE PILES
SECTION 79 02528 05-BR
BROWN-EAST BEND ROAD DISTRICT
CHAMPAIGN COUNTY
STATION 10+65

COLLINS AND RICE
CONSULTING ENGINEERS

DESIGNED J.K.K. CHECKED F.S.
DRAWN R.S. DATE 12-5-80 #1466

FILE NAME:

design firm no. 184001036
whks
engineers + planners + land surveyors

USER NAME = gbugg	DESIGNED - GEB	REVISED -	CHAMPAIGN COUNTY HIGHWAY DEPARTMENT	EXISTING PLANS (FOR INFORMATION ONLY) STRUCTURE NO. 010-4172
	CHECKED - BRD	REVISED -		
PLOT SCALE = 0:2 '/ In.	DRAWN - DLH	REVISED -		SHEET 14 OF 14 SHEETS
PLOT DATE = 9/3/2026	CHECKED - GEB/BRD	REVISED -		

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
25	24-02145-00-BR	CHAMPAIGN	22	22
		CONTRACT NO. 91666		
	ILLINOIS FED. AID PROJECT			