06-14-2024 LETTING ITEM 157

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED SUPERSTRUCTURE REPLACEMENT LOCAL BRIDGE FORMULA PROGRAM

INDEX OF SHEETS

- 1 COVER SHEET
- GENERAL NOTES AND COMMITMENTSALIGNMENT, TIES, AND BENCHMARKS
- 5 SUMMARY OF QUANTITIES
- 6 SCHEDULE OF QUANTITIES
- TYPICAL SECTIONS
- 8 PLAN & PROFILE
- 9-19 STRUCTURE PLANS

HIGHWAY STANDARDS

000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

001001-02 AREAS OF REINFORCEMENT BARS 001006 DECIMAL OF AN INCHAND OF A FOOT 515001-04 NAME PLATE FOR BRIDGES

701901-09 TRAFFIC CONTROL DEVICES
725001-01 OBJECT AND TERMINAL MARKERS

BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

TR 312 OVER STREAM SECTION 23-17132-00-BR ODGEN TOWNSHIP CHAMPAIGN COUNTY PROJECT XBDF(524)

C-95-012-25

WORK CONSISTS OF THE REMOVAL OF EXISTING PRECAST DECK BEAMS AND REPLACEMENT WITH PPC DECK BEAMS, SUBSTRUCTURE

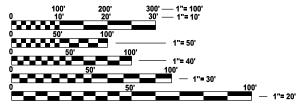
REHABILITATION, AND THE NECESSARY BACKFILL AND INCIDENTAL APPROACH WORK FOR S.N. 010-4028 AT STA. 9+90.00.

UTILITIES

AMEREN ILLINOIS – NORTH (GAS) CONTACT: NATHAN HILL PHONE: 618-301-5305

AT&T DISTRIBUTION CONTACT: G05256@ATT.COM PHONE: 630-573-6414

AMEREN ILLINOIS (ELECTRIC)
CONTACT: LESLIE CROWNOVER
PHONE: 618-343-8221



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.

JULIE

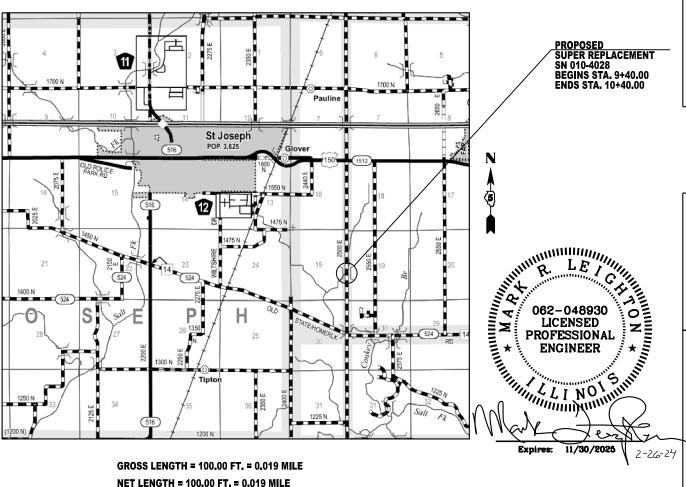
 \circ

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION 1-800-892-0123
OR 811

PROJECT MANAGER: MARK R. LEIGHTON, P.E., P.L.S.

CONTRACT NO. 91647





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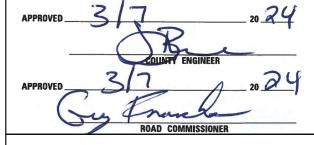
RANKAKEE

FORD

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LUNOIS CONTRACT NO. 91647

FUNCTIONAL CLASSIFICATION
LOCAL ROAD
ADT = 200 (2021)
DESIGN SPEED = 30 MPH



ssed March 27 ₂₀ 24

Kensil A. Garnett

DISTRICT FIVE ENGINEER OF
LOCAL ROADS AND STREETS

eleased For d Based on mited Beview

March 27

REGION THREE ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

- 1. EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.
- 2. ALL ELEVATIONS ARE BASED ON NAVD 88-DATUM.
- 3. 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.
- 4. THE FOLLOWING APPLICATION RATES HAVE BEEN USED IN CALCULATING PLAN QUANTITIES: TEMPORARY EROSION CONTROL SEEDING: 100 LB/ACRE AGGREGATE BASE COURSE: 2.05 TONS/CU YD AGGREGATE SURFACE COURSE: 2.05 TONS/CU YD RIPRAP: 1.75 TONS/CU YD
- 5. 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.
- 6. 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.
- 7. 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.
- 8. 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.
- 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. EMBANKMENTS ON HILLSIDES OR SLOPES SHALL BE CONSTRUCTED ACCORDING TO ARTICLE 205.03.
- 11. CONTRACTOR SHALL VERIFY THE LENGTH OF REQUIRED PIPE CULVERTS AND PIPE DRAINS PRIOR TO ORDERING.
- 12. 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.
- 13. 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.
- 14. A UNIFORMLY STRAIGHT SAW CUT SHALL BE MADE AT LOCATIONS WHERE PROPOSED CONTROLLED LOW-STRENGTH MATERIAL LIMITS MEET THE EXISTING OIL & CHIP SURFACES. THE SAW CUT SHALL BE MADE FULL DEPTH THROUGH THE EXISTING SURFACE. THIS WORK WILL BE CONSIDERED INCLUDED IN THE COST OF THE CONTRACT ITEMS INVOLVED AND NO EXTRA COMPENSATION WILL BE ALLOWED.

COMMITMENTS

1. THERE ARE NO COMMITMENTS ON THIS PROJECT.

SER NAME = bjohnson	DESIGNED - BJJ	REVISED -
	DRAWN - BJJ	REVISED -
LOT SCALE = 0.16666633 '/ In.	CHECKED - MRL	REVISED -
LOT DATE = 1/29/2024	DATE -	REVISED -



SCALE: 1"=50'

GENERAL NOTES AND COMMITMENTS TR 312 OVER STREAM	ENTS	TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
	TR 312	OVER ST	DEVM.		312	23-17132-00-BR	CHAMPAIGN	19	2
	111 312	OVENSI	INEAIII			•	CONTRACT	NO. 91	647
SHEET	OF	SHEETS	STA.	TO STA.		ILLINOIS FED	AID PROJECT		

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USER NAME = bjohnson DESIGNED - BJJ REVISED -DRAWN - BJJ REVISED -CHECKED - MRL REVISED -PLOT DATE = 2/15/2024 DATE -REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES, AND BENCHMARKS **TR 312 OVER STREAM** OF SHEETS STA. TO STA.

SCALE: 1"=50'

COUNTY SHEETS NO.

CHAMPAIGN 19 3 TR RTE. SECTION 23-17132-00-BR CONTRACT NO. 91647

CP-2 -10+00

BM-1 SPIKE IN W. FACE OF 1ST POWERPOLE NORTH OF BRIDGE ELEVATION = 664.89

CP-1 SET MAG NAIL OPPOSITE 2ND POWERPOLE SOUTH OF BRIDGE +/-2' FROM E. EDGE O/C 2500E ROAD (+/-STA. 6+70) ELEVATION = 665.54

CP-2 SET MAG NAIL +/-2' FROM E. EDGE O/C 2500E ROAD (+/-STA. 14+00) ELEVATION = 664.68

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				BRIDGE		
CODE			TOTAL	0013		
NO.	ITEM	UNIT	QUANTITY	S.N. 010-4028		
20200100	EARTH EXCAVATION	CUYD	20	20		
20300100	CHANNEL EXCAVATION	CUYD	37	37		

35101400	AGGREGATE BASE COURSE, TYPE B	TON	46	46		
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	1		
				, , , , , , , , , , , , , , , , , , , ,		
50102400	CONCRETE REMOVAL	CUYD	0.1	0.1		
50200100	STRUCTURE EXCAVATION	CUYD	27	27		
60300225	CONCRETE STRUCTURES	CUYD	3.0	3,0		
50400405	DDECAST DDESTDESSED CONCDETE DECK DE AMO (2411 DEDT.)					
0400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)	SQ FT	1224	1224		
0800205	REINFORCEMENT BARS, EPOXY COATED	POUND	340	340		
0900205	STEEL RAILING, TYPE S1	FOOT	102	102		
1500100	NAME PLATES	EACH	1	1		

* SPECIALTY ITEMS

sign firm . 184001036	whks
engireen	+ planners + land surveyors

	USER NAME = bjohnson	DESIGNED	-	BJJ	REVISED	-
		DRAWN	-	BJJ	REVISED	-
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	PLOT DATE = 1/26/2024	DATE	-		REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: 1"=50"

SUMMARY OF QUANTITIES		TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
TR 312 OVER STREAM		312	23-17132-00-BR	CHAMPAIGN	19	4			
	111 0 12	OTEN O	IVEA:II)				CONTRACT	NO. 916	547
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				BRIDGE		
CODE			TOTAL	0013		
NO.	ITEM	UNIT	QUANTITY	S.N. 010-402		
		OM	QOARTITI	3.14. 010-402		
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CUYD	58.8	58.8		
50100060	CONCRETE HEADWALLS FOR PIPE DRAINS	EACH	2	2		
0103400	PIPE DRAINS, CORRUGATED STEEL 10"	FOOT	20	20		
0103700	PIPE DRAINS, CORRUGATED STEEL 18"	FOOT	40	40		
7100100	MOBILIZATION	L SUM	1	1		
2501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4		
2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.25	0.25		
2810206	STONE RIPRAP, CLASS A3 (SPECIAL)	TON	222	222		
6110073	EXISTING FIELD TILE REMOVAL	FOOT	40	40		
7011800	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	1		

* SPECIALTY ITEMS

esign firm o. 184001036	whks
unghees	- planners - land surveyors

USER NAME = bjohnson	DESIGNED - BJJ	REVISED -
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PLOT DATE = 2/15/2024	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES									
	TR 312 OVER STREAM								
SCALE: 1"=50"	SHEET	OF	SHEETS	STA.	TO STA.				

CONSTR. CODE

TR RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
312	23-17132-00-BR		CHAMPAIGN	19	5
			CONTRACT	NO. 916	347
	ILLINOIS	FEO. AII	PROJECT		

	20200100	20300100	FOR INFORMATION OF	NLY	
LOCATION			EXCAVATION TO BE		EARTHWORK
	EARTH	CHANNEL	USED IN EMBANKMENT	EMBANKMENT	BALANCE
	EXCAVATION	EXCAVATION	(ADJUSTED FOR SHRINKAGE)	(FILL)	WASTE(+) AND
			(EXC. x 0.75)		SHORTAGE (-)
	CU. YD.	CU. YD.	CU. YD.	CU.YD.	CU. YD.
STA. 9+40.00 TO STA. 9+63.56	10		8	15	- 7
STA. 9+63.56 TO STA. 10+16.44		37	* 14		14
STA. 10+16.44 TO STA. 10+40.00	10		8	15	-7
TOTAL	20	37	30	30	0

EARTH EXCAVATION SHRINKAGE FACTOR = 25%

*CHANNEL EXCAVATION USED IN EMBANKMENT= 50%

35101400 AGGREGATE BASE COURSE, TYPE B

TR 312						TON
CL	9+40.00	TO	CL	9+63.56		23
CL	10+16.44	TO	CL	10+40.00		23
					TOTAL	46

60100060 CONCRETE HEADWALLS FOR PIPE DRAINS

TR 312			EACH
18' LT	9+85.00		1
18' RT	9+95.00		1
		TOTAL	2

60103400 PIPE DRAINS, CORRUGATED STEEL 10"

TR 312						FOOT
19' LT	10+09.00	TO	LT	10+29.00		20
					TOTAL	20

60103700 PIPE DRAINS, CORRUGATED STEEL 18"

TR 312						FOOT
19' LT	9+65.00	TO	LT	9+85.00		20
17' RT	9+70.00	TO	RT	9+90.00		20
					TOTAL	40

67100100 MOBILIZATION

TR 312		L SUM
	TOTAL	1
-		

X2501000 SEEDING, CLASS 2 (SPECIAL)

TR 312						ACRE
LT	9+40.00	TO	LT	9+63.56		0.03
LT	10+16.44	TO	LT	10+40.00		0.03
RT	9+40.00	TO	RT	9+63.56		0.03
RT	10+16.44	TO	RT	10+40.00		0.03
* TOTAL	PER MIN. [DEGRE	E OF ACC	CURACY	TOTAL	0.25

X6110073 EXISTING FIELD TILE REMOVAL

TR 312						FOOT
19' LT	9+65.00	TO	LT	9+85.00		20
17' RT	9+70.00	ТО	RT	9+90.00		20
					TOTAL	40

X7011800 TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21						
TR 312			L SUM			
		TOTAL	1			

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	DRAWN -	BJJ	REVISED -	1
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LOT DATE = 1/26/2024	DATE -		REVISED -	i

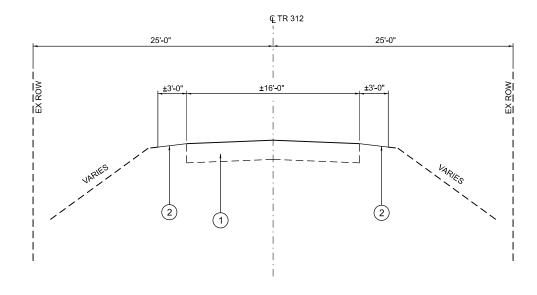
	SCHEDULE OF QUANTITIES			TR RTE.	SEC	TION		COUNTY	TOTAL SHEETS	SHEET NO.			
				312	312 23-17132-00-BR		CHAMPAIGN	19	6				
											CONTRACT	NO. 91	647
	SCALE: 1"=50'	SHEET	OF	SHEETS	STA.	TO STA.			ILLINOIS	FED. All	D PROJECT		

LEGEND

- 1 EX OIL AND CHIP
- 2 EX EARTH SHOULDER
- 3 PR AGGREGATE BASE COURSE, TYP B (8")
- 4 PR EARTH SHOULDERS



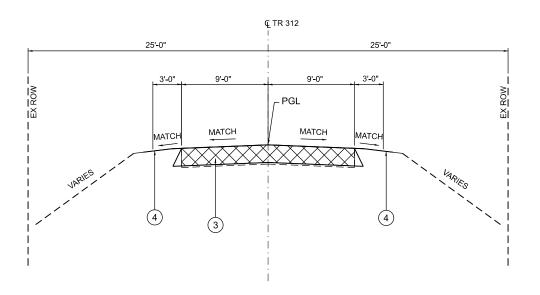
TO BE REMOVED (COST INCLUDED IN STRUCTURE EXCAVATION)



BRIDGE OMMISSION STA. 9 + 63.56 TO 10 + 16.44

EXISTING TYPICAL SECTION

STA. 9+40.00 TO STA. 9+63.56 STA. 10+16.44 TO STA. 10+40.00 (LOOKING EAST)



PROPOSED TYPICAL SECTION

STA. 9+40.00 TO STA. 9+63.56 STA. 10+16.44 TO STA. 10+40.00 (LOOKING EAST)

SCALE: 1"=5'

SHEET

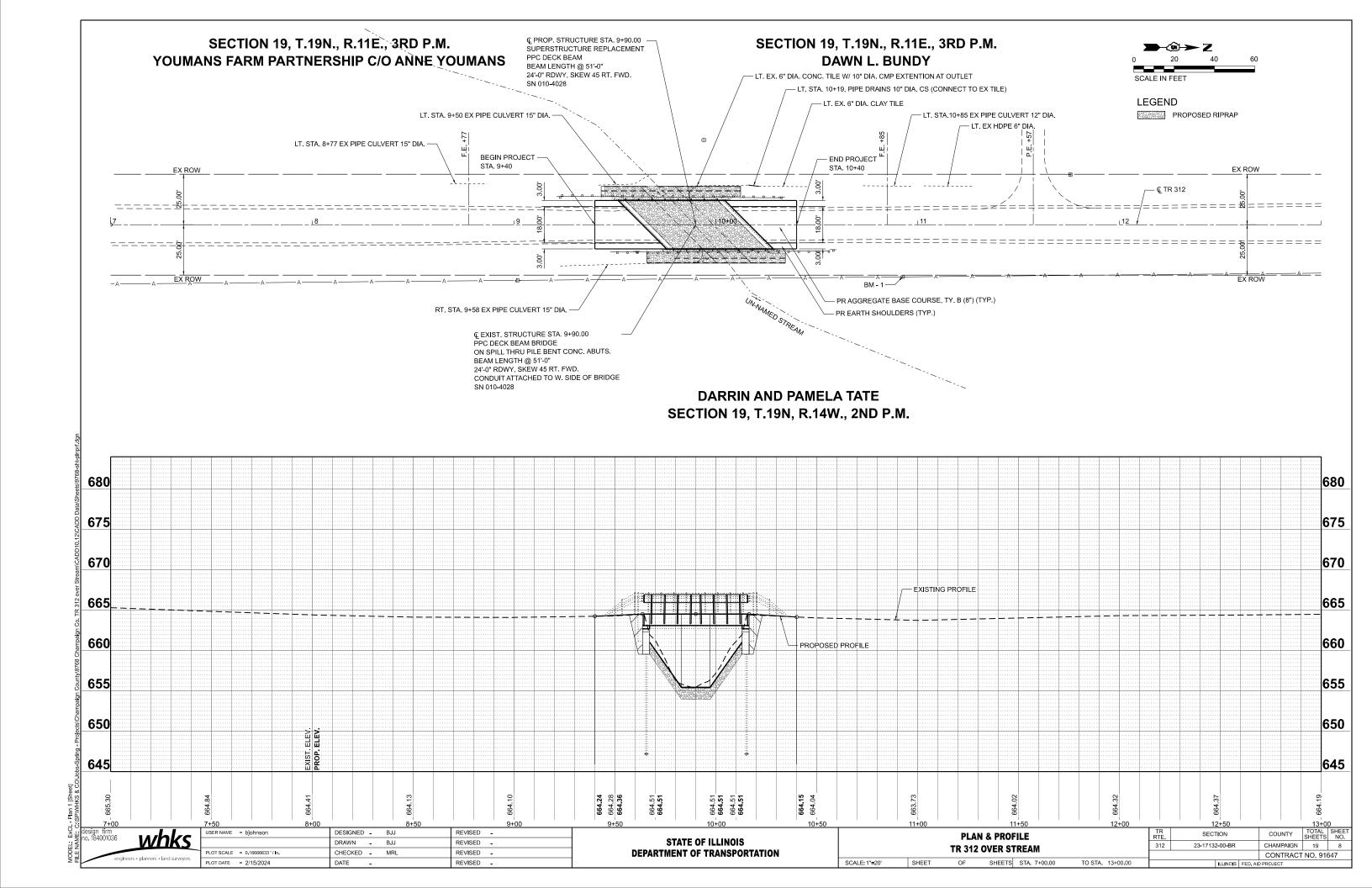
design firm no. 18400103	* whks	
	engineers + planners + land surveyors	

USER NAME = bjohnson	DESIGNED - BJJ	REVISED -
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PLOT DATE = 2/15/2024	DATE -	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS TR 312 OVER STREAM		TR RTE.	SECTION			COUNTY	TOTAL SHEETS	SHEET NO.		
		312	23-17132-00-BR			CHAMPAIGN	19	7		
						CONTRACT	NO. 916	647		
OF	SHEETS	STA.	TO STA.			ILLINOIS	FED. AII	PROJECT		

Projects/Champaign County/9768 Champaign Co. 1R 312 over S



INDEX OF SHEETS Existing Structure: SN 010-4028 was built in 1974 as Section CAB 13-73, Station 9+90. The structure is a single span precast prestressed concrete deck beam bridge on spill thru pile bent concrete abutments founded on concrete filled metal shell piling. The bridge is constructed on a 45° skew, right forward. Beam lengths are 51'-General Plan and Elevation 1. 0" each with a total bridge length of 52'-10 5/8" back-to-back of abutments. The out-to-out bridge width is 24'-5". Road is to be closed and traffic detoured General Data 2. 21" x 36" PPC Deck Beam Details Salvage: None Steel Railing, Type S-1 Curled End Section with Superstructure Details See sheet 6 for details. Terminal Markers, typ. See sheet 5 for details. Steel Railing, Type S-1 Substructure Details 8.-11. Existing Plans (for information only) PPC deck beams Elev. ±659.46 Elev. ±659.46 (21" depth), typ. DESIGN SPECIFICATIONS (New Const.) 2'-0" typ. Backfill with CLSM Streambed full width of abutment. at Rt. ∠'s 2020 AASHTO LRFD Bridge Design Speci cations Elev. 655.36 (typ. each abutment) 9th Edition Stone Riprap, Excavation, typ. SCOPE OF WORK Class A3 (Special) LOADING HL-93 (New Const.) Existing Metal Shell Piles, typ. Allow 25#/sq. ft. for future wearing surface. 1. Remove and replace existing superstructure with eight (8) new **ELEVATION** 21" x 36" Precast Prestressed Concrete (PPC) Deck Beams. **DESIGN STRESSES** 2. Add new Type S-1 steel railing. FIELD UNITS (New Construction) 3. Existing abutment caps to be raised with full width and length Existing R.O.W. f'c = 3,500 psi (Substructure) reinforced concrete cap extensions. fy = 60,000 psi (Reinforcement) 4. Modify wingwalls to accommodate new superstructure. FIELD UNITS (Existing) 10'-0" ±13'-0" 5. Streambed and bridge embankment to be armored with *B* **◀**₁ $fc = 1,400 \ psi$ typ. typ. Stone Riprap, Class A3 (Special). fs = 20,000 psi (Reinforcement) PRECAST UNITS (New Construction) B ◀ $f^{i}c =$ 6,000 psi 5,000 psi UNNAMED STREAM 270,000 psi ($\frac{1}{2}$ " low lax strands) RE-BUILT BY $f^{\prime}pbt = 201,960 \ psi \ (\frac{1}{2}" \ low \ lax \ strands$ CHAMPAIGN COUNTY SECTION 23-17132-00-BR SEISMIC DATA (Exist. Const.) TR 312 STATION 9+90 Seismic Performance Zone (SPZ) = 1 STR. NO. 010-4028 LOADING HL93 Bk. N. Abut. € Brg. S. Abut. Design Spectral Acceleration at 1.0 sec. $(S_{D1}) = 0.098g$ Sta. 9+90.00 Sta. 10+16.44 Sta. 9+65.33 Design Spectral Acceleration at 1.0 sec. $(S_{DS}) = 0.190q$ Elev. 664.51 NAME PLATE Elev. 664.51 Soil Site Class = C See Std. 515001 * 081-006565 * ANGERTALINATION OF ILLINOIS IN THE INTERIOR OF ILLINOIS I € Brg. N. Abut. Existing Name Plate shall be cleaned and relocated next to Bk. S. Abut. TR 312 and Sta. 10+14.67 new Name Plate. Cost included with Name Plates. Sta. 9+63.56 Profile Grade Elev. 664.51 Elev. 664.51 Existing approach guardrail ends to be removed, typ. ea. corner. Cost included with Removal of Existing Superstructure. See Special Provisions. 0505056 * Name plate location 25 C 2028 Telecommunications conduit attached 1'-91/4" $49'-4\frac{1}{4}"$ © brg. to © brg. 1'-91/4" to bridge railing to be relocated. $52'-10\frac{5}{8}$ " bk. to bk. abut's Expires: 11/30/2024 Existing R.O.W. Range 14W, 2nd P.M. Project Location PLAN DESIGN SCOUR ELEVATION TABLE GENERAL PLAN AND ELEVATION Design Scour Elev. (ft.) Notes: Event / Limit * Place on back side of 12" rail. TR 312 OVER UNNAMED STREAM Item 113 State S. Abut. N. Abut. 1. See roadway plans for additional information not shown herein. SECTION 23-17132-00-BR Q100 CHAMPAIGN COUNTY 2. See Sheet 2 for Proposed Profile Grade, Section A-A, and Section B-B. 0200 STATION 9+90 Design 659.46 659.46 STRUCTURE NO. 010-4028 Check 659.46 659.46 LOCATION SKETCH DESIGNED REVISED SECTION whks CHECKED GEM REVISED 23-17132-00-BR CHAMPAIGN 19 CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

STRUCTURE NO. 010-4028

SHEET 1 OF 11 SHEETS

CONTRACT NO. 91647

Benchmark:

BM-1, Sta. 10+93.3, 25.39 Rt. Rail spike in West face of first power pole North of bridge, Elevation = 664.89

DT DATE = 3/11/2024

LOT DATE = 10:04:23 AM

DLH / JLM

JLM / SBC

CHECKED

REVISED

REVISED

GENERAL NOTES

- 1. Reinforcement bars designated (E) shall be epoxy coated.
- 2. Plan dimensions and details relative to existing plans 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. 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.
- 4. Layout of the slope protection system and streambed armoring shown herein may be varied to suit ground conditions in the field as directed by the Engineer.

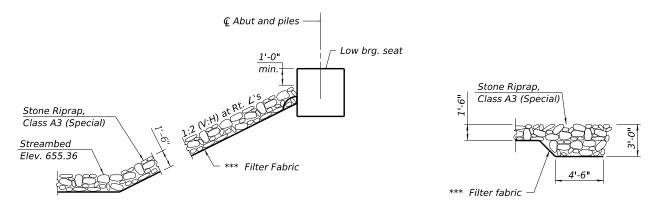
TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Channel Excavation	Cu. Yd.		37	37
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		0.1	0.1
Structure Excavation	Cu. Yd.		27	27
Concrete Structures	Cu. Yd.		3.0	3.0
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1,224		1,224
Reinforcement Bars, Epoxy Coated	Pound		340	340
Steel Railing, Type S1	Foot	102		102
Name Plates	Each	1		1
Controlled Low-Strength Material	Cu. Yd.		58.8	58.8
Terminal Marker - Direct Applied	Each		4	4
Stone Riprap, Class A3 (Special)	Ton		222	222



PROPOSED PROFILE GRADE

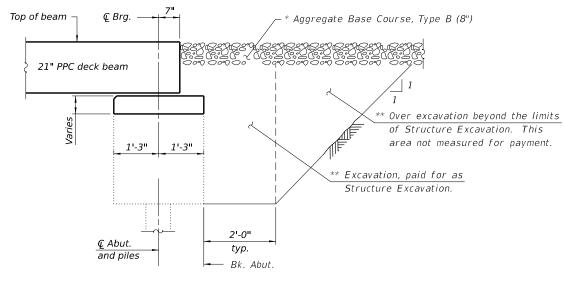
(Along © TR 312)



SECTION A-A

SECTION B-B

*** Cost included with Stone Riprap, Class A3 (Special). See Special Provisions.



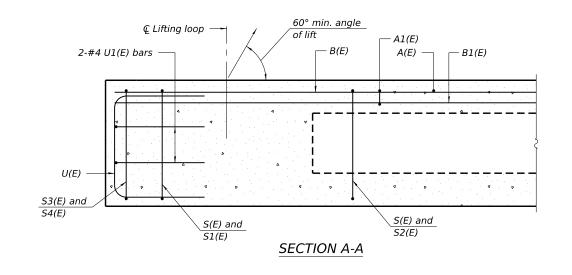
SECTION AT ABUTMENT (Dimensions are at Rt. &'s)

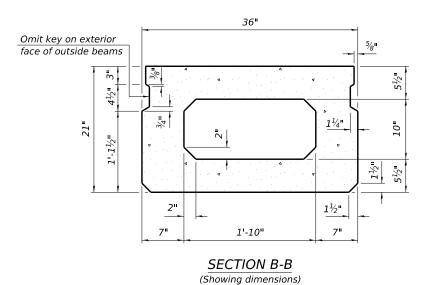
- * See Roadway Plans
- ** Backfill with Controlled Low-Strength Material (CLSM) (Mix 2) full width of abutment cap only, typ. each abutment.

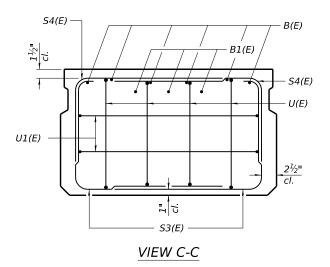


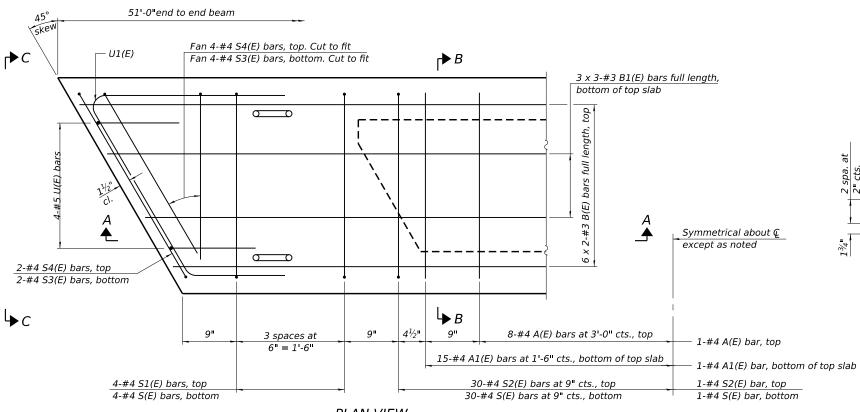
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	CHECKED	-	GEM	REVISED	÷
PLOT DATE = 3/11/2024	DRAWN	-	DLH / JLM	REVISED	÷
PLOT DATE = 10:04:56 AM	CHECKED	-	JLM / SBC	REVISED	-

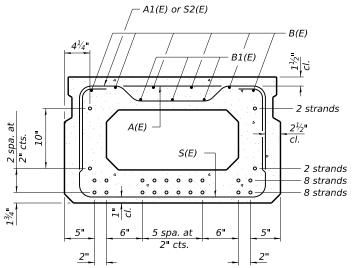
GENERAL DATA		SECTION		COUNTY	TOTAL SHEETS	SHEET NO.	
STRUCTURE NO. 010-4028	312	312 23-17132-00-BR			CHAMPAIGN	19	10
3111001011L 110.010-4020					CONTRACT	NO. 916	47
SHEET 2 OF 11 SHEETS			ILLINOIS	FED. A	D PROJECT		











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 #4 2'-7" 17 A1(E) 31 #4 2'-10" } #3 B1(E) 9 #3 17'-11" S(E) S1(E) 69 #4 6'-5" 4'-11" 8 #4 S2(E) 61 #4 5'-2" L_J #4 5'-0" S3(E) S4(E) #4 4'-3" 8 #5 4'-0" 4 #4 8'-6"

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.

- 1. See sheet 4 of 11 for additional details and Bill of Material.
- 2. Bars indicated thus 6 x 2-#3 etc. indicates 6 lines of bars with 2 lengths per line.

PD-2136-R

5-15-2023

engineers + planners + land surveyors

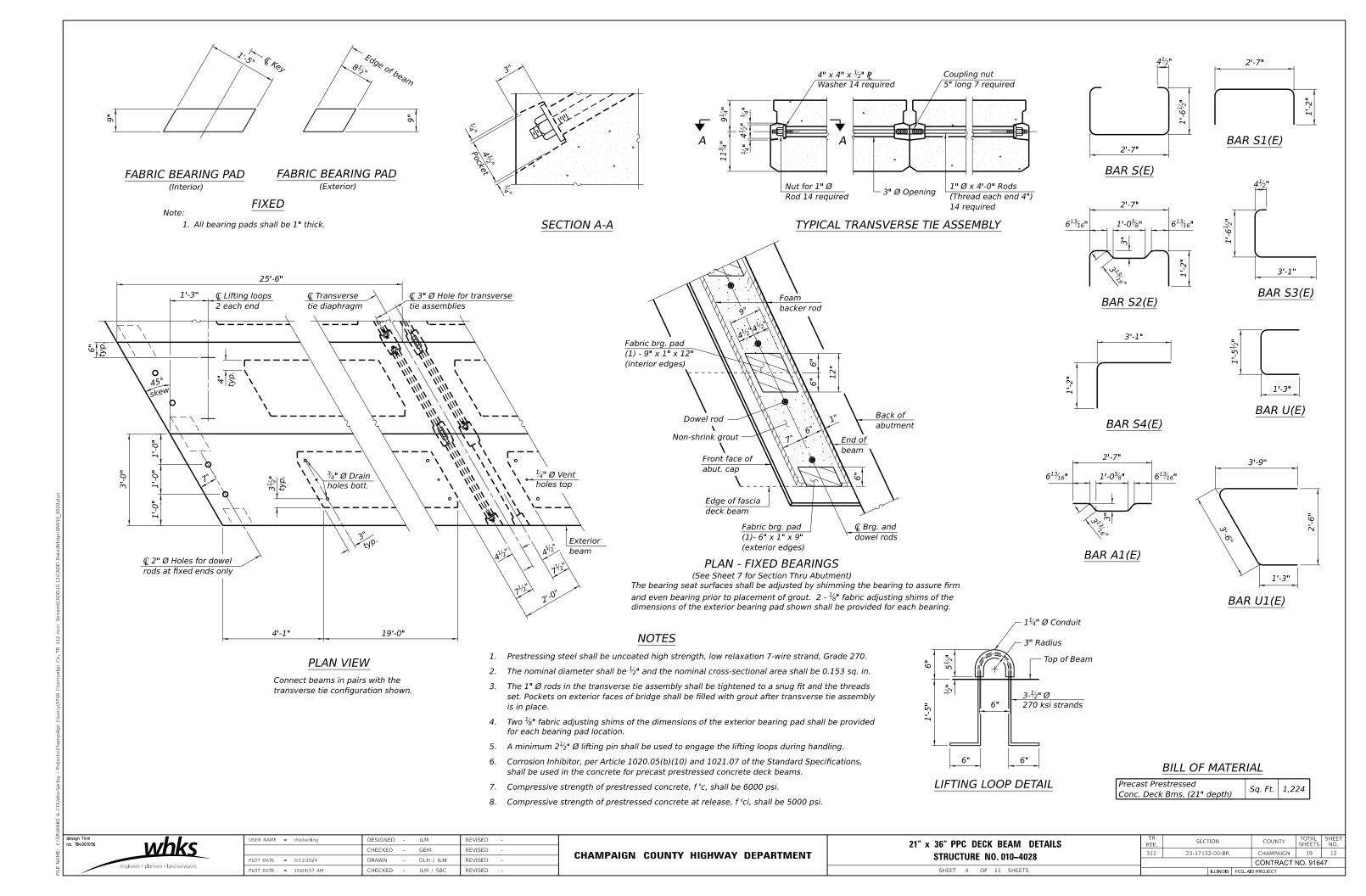
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	CHECKED	-	GEM	REVISED	=
PLOT DATE = 3/11/2024	DRAWN	-	DLH / JLM	REVISED	=
PLOT DATE = 10:04:57 AM	CHECKED	-	JLM / SBC	REVISED	=

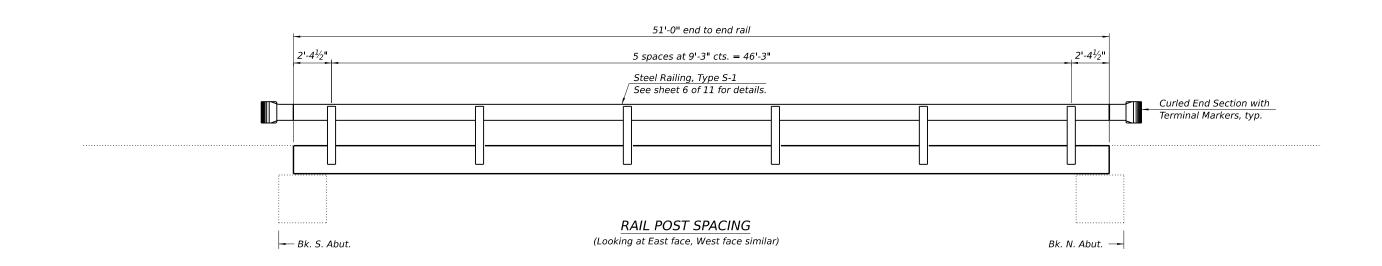
CHAMPAIGN	COUNTY	HIGHWAY	DEPARTMENT	

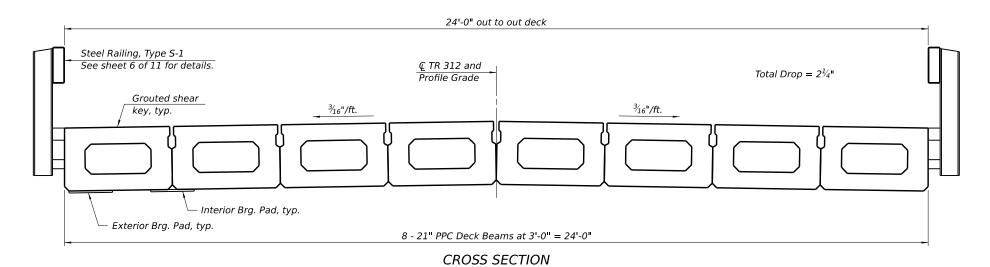
MINIMUM BAR LAP #3 bar = 1'-6"

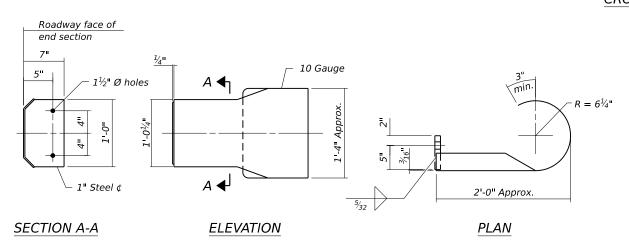
21" x 36" PPC DECK BEAM STRUCTURE NO. 010–4028		SECTI
		23-17132
31110C1011L 140.010-4020		
SHEET 3 OF 11 SHEETS		

Notes:









DETAILS OF CURLED END SECTION

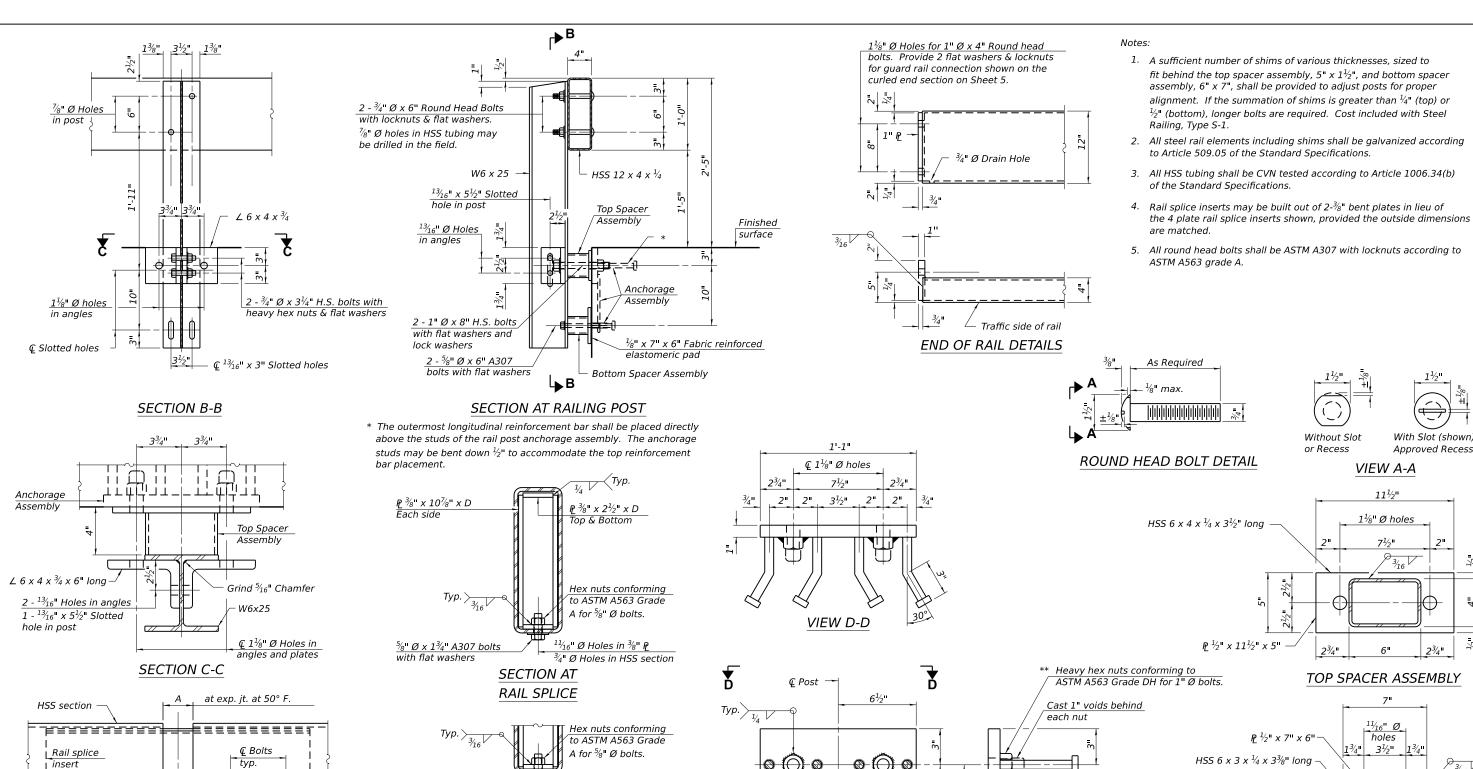
(Cost included with Steel Railing, Type S-1.)

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

USER NAME	-	aneberling	DESIGNED	-	JLM	REVISED	-
			CHECKED	-	GEM	REVISED	-
PLOT DATE	-	3/11/2024	DRAWN	-	DLH / JLM	REVISED	-
PLOT DATE	=	10:04:57 AM	CHECKED	-	JLM / SBC	REVISED	-

CHAMPAIGN	COUNTY	HIGHWAY	DEPARTMENT

SUPERSTRUCTURE DETAILS		SEC ⁻	TION		COUNTY	TOTAL SHEETS	SHEET NO.
STRUCTURE NO. 010-4028	312	23-17132-00-BR		CHAMPAIGN	19	13	
31NUCTURE INU. 010-4020					CONTRACT	NO. 9164	17
SHEET 5 OF 11 SHEETS			ILLINOIS	FED. A	D PROJECT		



 $^{11}\!\!/_{16}$ " Ø Holes in $^{3}\!\!/_{16}$ " P

1'-8"

1'-10"

2'-91/4"

3'-81/4"

*3½*16"

5¹³⁄16"

 $1\frac{1}{8}$ " x E Slotted holes

4"

4³/₈"

71/411

10"

RAIL SPLICE CONNECTION

AT EXPANSION JT.

45/811

*7*¾"

101/8"

$^{11}\!\!/_{16}$ " Ø holes 3½" \odot HSS 6 x 3 x $\frac{1}{4}$ x 3 $\frac{3}{8}$ " long $\frac{3}{4}$ " Ø x 6" Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs. automatically P_1" x 6" x 1'-1" end welded. 4 Required per P ** 3" long hex coupling nuts

BOTTOM SPACER ASSEMBLY Тур.

conforming to ASTM A563

_Grade A for ⁵⁄8" Ø bolts.

ANCHORAGE ASSEMBLY

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

BILL OF MATERIAL

Without Slot

or Recess

With Slot (shown) or

Approved Recess

VIEW A-A $11\frac{1}{2}$ "

 $1\frac{1}{8}$ " Ø holes

TOP SPACER ASSEMBLY

Steel Railing, Type S-1 F	oot	102



RAILING CRITERIA

NCHRP 350 Test Level

Railing Weight (plf)

RAIL SPLICE ELEVATION

USER NAME =	dheberling	DESIGNED	-	JLM	REVISED	-
		CHECKED	-	GEM	REVISED	-
PLOT DATE =	3/11/2024	DRAWN	-	DLH / JLM	REVISED	-
PLOT DATE =	10:04:58 AM	CHECKED	-	JLM / SBC	REVISED	-

Location

All locs. not over exp. jts.

Over Strip Seal Jt.

Over Finger or Modular Jt.

Over Finger or Modular Jt.

½" Ø x 1¾" A307 bolts

≤4"

≤9½"

≤15"

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

with flat washers & 3/4" Ø

XS pipe spacers, ½" long

SPLICE DIMENSIONS

21/211

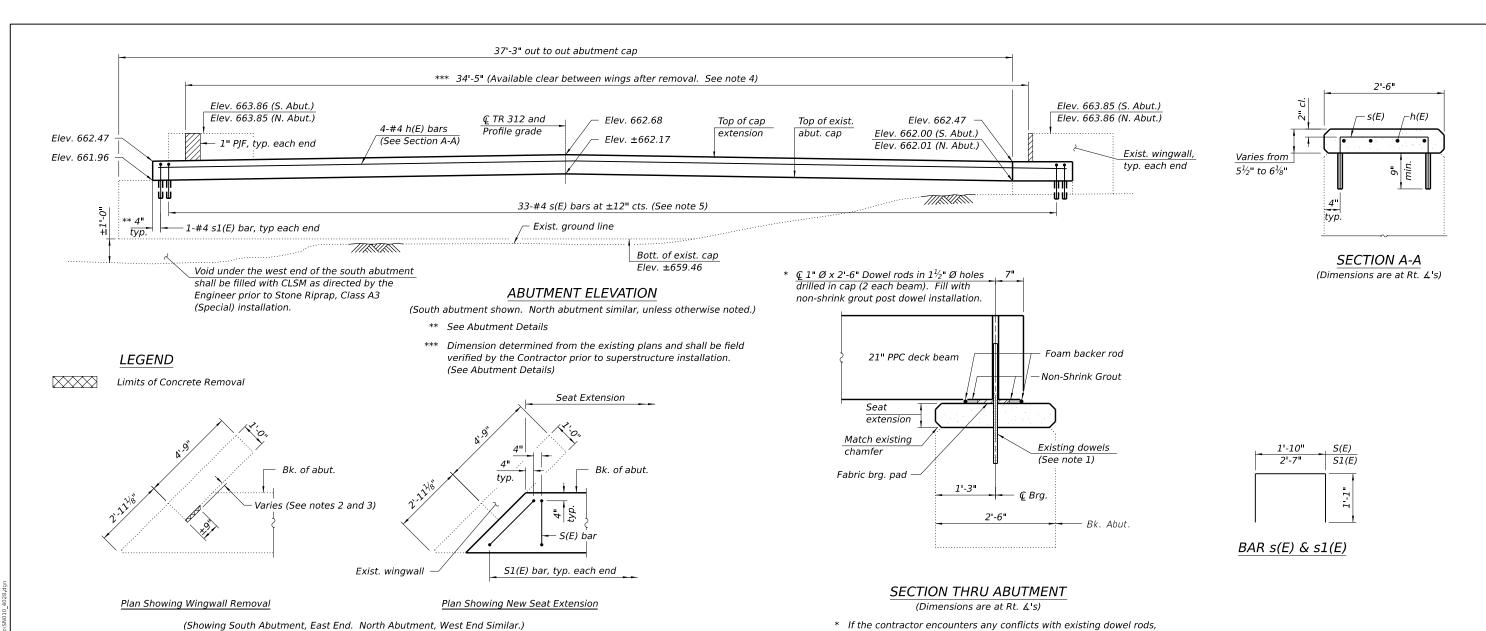
5½"

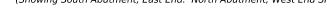
81/4"

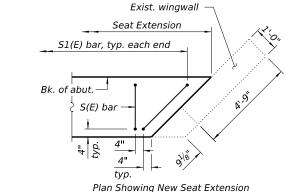
CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

STEEL RAILING, TYPE S-1	TR RTE.	SECTION
STRUCTURE NO. 010-4028	312	23-17132-00-B
0111001011E 140: 010-4020		

CHAMPAIGN CONTRACT NO. 91647







(Showing South Abutment, West End. North Abutment, East End Similar.)

ABUTMENT DETAILS

Notes:

 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.

contact the Engineer of Record for further disposition.

- Burn any existing reinforcement extending into the wingwall concrete removal limits flush with the remaining concrete surface. Grind existing reinforcement smooth and seal with epoxy. Epoxy used shall be approved by the Engineer. Cost included with Concrete Removal.
- 3. Removal of the wingwalls shall be completed in a manner such that the removal is the minimum necessary to allow for installation of the new superstructure as detailed herein. The Contractor shall provide sawing equipment adequate in size and horsepower to complete the required full-depth sawing operation. Chipping and/or hydraulic hammers are not allowed along the vertical wingwall removal lines. The resulting vertical surface of the wingwalls after concrete removal operations shall be smooth and plumb.
- 4. The thickness of the preformed joint filler (PJF) may be increased if the expansion gap between exterior beams and wing walls are larger then anticipate after concrete removal operations. Cost included with Precast Prestressed Concrete Deck Beams (21" Depth).
- 5. Drill and grout s(E) and s1(E) bars in accordance with Article 584 of the Standard Specification. Cost included with Reinforcing Bars, Epoxy Coated.

BILL OF MATERIAL

(1 Abutment)

	Bar	No.	Size	Length	Shape
	h(E)	4	#4	34'-1"	
	s(E) 33 #4 s1(E) 2 #4				
			2'-11"		
			#4	3'-8"	
#	# Concrete Removal			Cu. Yd.	0.1
	Concret	e Struct	ures	Cu. Yd.	1.5
	Reinford	ement l	Bars,	Pound	170
	Ероху С			round	170
			Strength	Cu. Yd.	29.4
	Material	<u>'</u>		Ca. ra.	23.4

Concrete Removal only anticipated at South Abutment.

whks

Varies (See notes 2 and 3)

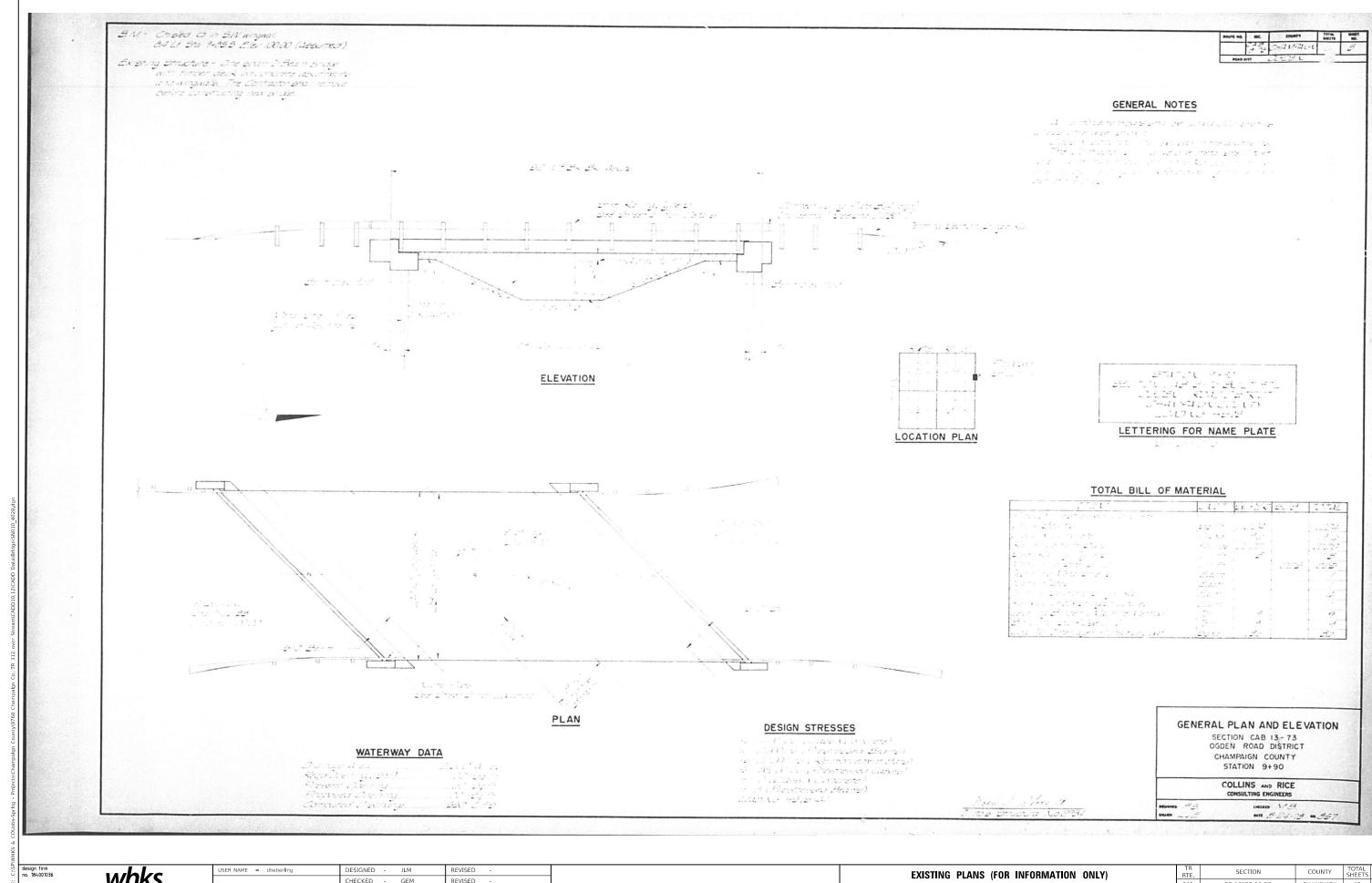
Plan Showing Wingwall Removal

Bk. of abut.-

USER NAME	=	dheberling	DESIGNED	-	JLM	REVISED	-	
			CHECKED	-	GEM	REVISED	-	
PLOT DATE	=	3/11/2024	DRAWN	-	DLH / JLM	REVISED	-	
PLOT DATE	=	10:04:58 AM	CHECKED	-	JLM / SBC	REVISED	-	

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

SUBSTRUCTURE DETAILS		SECTION		COUNTY	TOTAL SHEETS	SHEET NO.	
STRUCTURE NO. 010-4028	312 23-17132-00-BR		CHAMPAIGN	19	15		
31NUCTURE NO. 010-4020					CONTRACT	NO. 916	47
SHEET 7 OF 11 SHEETS			ILLINOIS	FED Δ	PROJECT		



engineers + planners + land surveyors

 CHECKED
 GEM
 REVISED

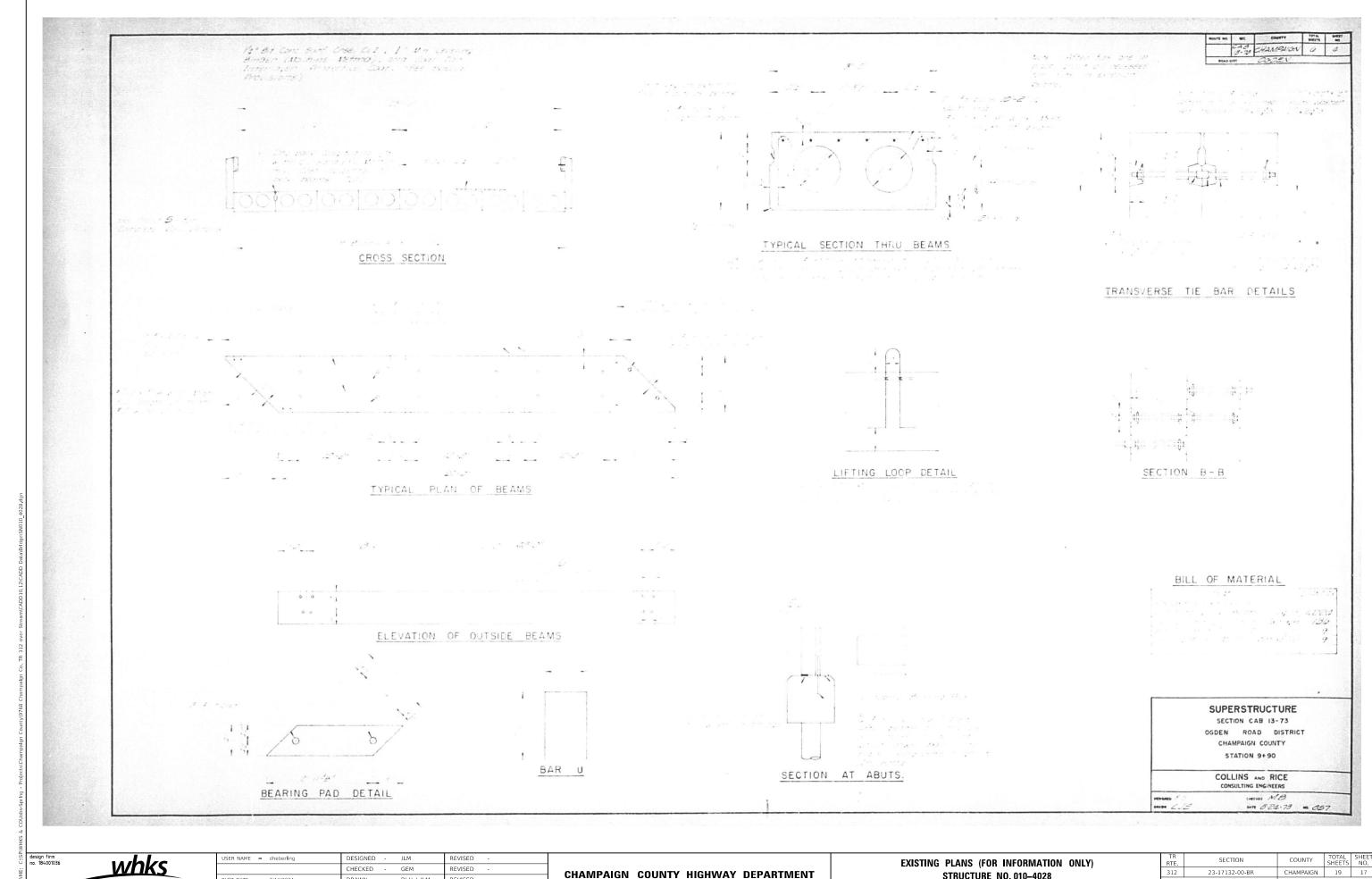
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 = 3/11/2024
 DRAWN
 DLH / JLM
 REVISED

 PLOT DATE
 = 10:04:59 AM
 CHECKED
 JLM / SBC
 REVISED

CHAMPAIGN COUNTY HIGHWAY DEPARTMENT

STING PLANS (FOR INFORMATION ONLY)
STRUCTURE NO. 010-4028

SHEET 8 OF 11 SHEETS

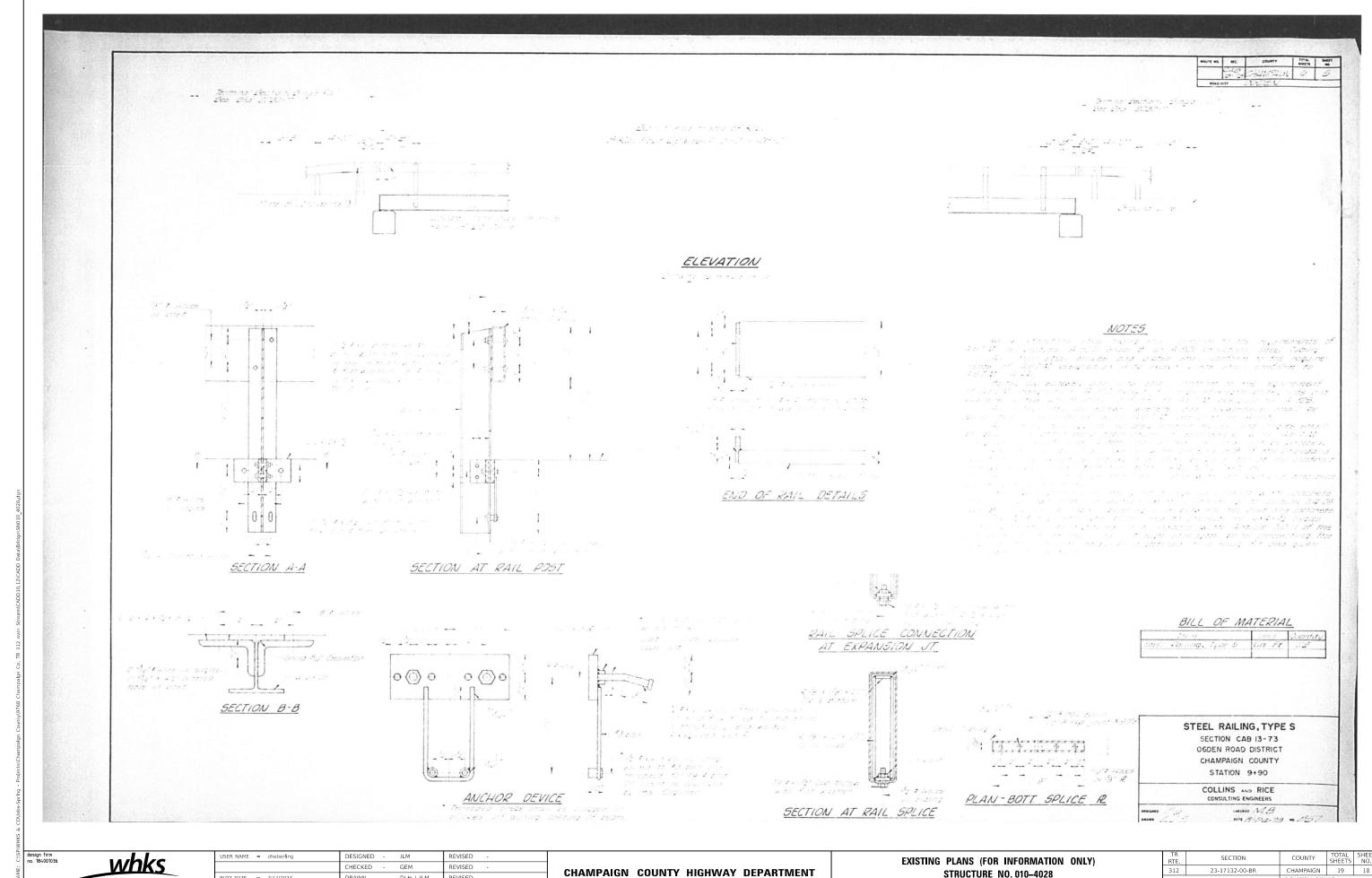




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PLOT DATE = 3/11/2024	DRAWN	-	DLH / JLM	REVISED -
PLOT DATE = 10:05:03 AM	CHECKED	-	JLM / SBC	REVISED -

STRUCTURE NO. 010-4028 SHEET 9 OF 11 SHEETS

CHAMPAIGN 19 17 23-17132-00-BR CONTRACT NO. 91647



LOT DATE = 3/11/2024 CHECKED - JLM / SBC

STRUCTURE NO. 010-4028 SHEET 10 OF 11 SHEETS

CONTRACT NO. 91647

