

GENERAL NOTES

INDEX OF SHEETS table with columns: Sheet Number, Sheet Title. Rows include COVER, INDEX OF SHEETS, GENERAL NOTES, AND SOQ, TYPICAL SECTIONS, etc.

- 1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE DETAILS IN THE PLANS...
2. BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT 1-800-892-0123...
3. LOCATIONS OF PUBLIC OR PRIVATE UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE...
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND OR SURFACE UTILITIES...
5. THE CONTRACTOR SHALL NOTIFY THE COUNTY A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCEMENT OF WORK.
6. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH THE ENGINEER.
7. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL SECTION OR SUBSECTION MONUMENTS...
8. MAINTAINING DRAINAGE: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN POSITIVE DRAINAGE...
8.1. THE PLAN SHALL NOT CAUSE ANY DAMAGE UPSTREAM, NOR TO ANY ADJACENT WATERSHED.
8.2. THE PLAN SHALL BE SUBMITTED TO THE COUNTY AND THE ENGINEER OF RECORD A MINIMUM OF TWO (2) WEEKS PRIOR TO THE COMMENCEMENT OF WORK.
8.3. THE COST OF MAINTAINING FLOW SHALL NOT BE PAID FOR SEPARATELY AND SHALL BE CONSIDERED AS INCLUDED IN THE VARIOUS PAY ITEMS IN THE CONTRACT.
9. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURES HAVE BEEN TAKEN FROM FIELD MEASUREMENTS AND AS-BUILT PLANS...
10. ALL WORK SHALL BE COMPLETED WITHIN THE PUBLIC RIGHT-OF-WAY WITH NO EQUIPMENT OR MATERIALS STORAGE ON PRIVATE PROPERTY.
11. THE CONTRACTOR'S OPERATIONS AND TEMPORARY STORAGE ACTIVITIES SHALL BE LIMITED TO THE WORK AREA AND/OR CONSTRUCTION LIMITS.
12. COORDINATE ANY REQUIRED SIGN REMOVAL WITH THE COUNTY ONE (1) WEEK PRIOR TO THE COMMENCEMENT OF WORK.
13. NO CHANNEL GRADING OR BRIDGE CONSTRUCTION ACTIVITIES WILL BE ALLOWED IN STANDING WATER OR DURING PERIODS OF HIGH FLOWS AND EXCESSIVE CHANNEL FLOW VELOCITIES.
14. THE FOLLOWING BMPS SHALL BE IMPLEMENTED TO CONTROL RESIDUAL CONCRETE, CONCRETE SEDIMENTS, AND RINSE WATER.
14.1. TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED FOR RINSING OUT CONCRETE TRUCKS...
14.2. THE CONTRACTOR SHALL HAVE THE LOCATION OF TEMPORARY CONCRETE WASHOUT FACILITIES APPROVED BY THE RESIDENT ENGINEER.
14.3. ALL TEMPORARY CONCRETE WASHOUT FACILITIES ARE TO BE INSPECTED BY THE CONTRACTOR AFTER EACH USE AND ALL SPILLS MUST BE REPORTED TO THE RESIDENT ENGINEER AND CLEANED UP IMMEDIATELY.
14.4. CONCRETE WASTE SOLIDS/LIQUIDS SHALL BE DISPOSED OF PROPERLY.
15. THE ADJACENT ROADWAY SHALL BE KEPT FREE OF MUD AND DEBRIS DURING CONSTRUCTION.
16. THE CONTRACTOR SHALL ASSUME MAINTENANCE RESPONSIBILITIES FOR A PERIOD OF THIRTY (30) DAYS FOR ALL SEEDED AREAS, INCLUDING: WATERING, WEEDING, RE-SEEDING (WASH-OFFS), REPLACEMENT (SOD), OR OTHER OPERATIONS NECESSARY TO OBTAIN A SATISFACTORY STRAIN OF GRASS...

SUMMARY OF QUANTITIES table with columns: CODE NUMBER, PAY ITEM, UNIT, TOTAL. Includes items like TREE REMOVAL, CHANNEL EXCAVATION, POROUS GRANULAR EMBANKMENT, etc.

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HIGHWAY STANDARDS

- 001006 DECIMAL OF AN INCH AND OF A FOOT
280001-07 TEMPORARY EROSION CONTROL SYSTEMS
515001-04 NAME PLATE FOR BRIDGES
631026-06 TRAFFIC BARRIER TERMINAL, TYPE 5
701011-04 OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701901-09 TRAFFIC CONTROL DEVICES
725001-01 OBJECT AND TERMINAL MARKERS
728001-01 TELESCOPING STEEL SIGN SUPPORT
729001-01 APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
BLR 22-7 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

CONVERSION FACTORS FOR PLAN QUANTITY CALCULATIONS table with columns: ITEMS, RATE OF APPLICATION. Includes RIPRAP (2.05 TONS / CU YD) and AGGREGATE BASE COURSE, TYPE B (2.05 TONS / CU YD).

BENCHMARKS table with columns: BENCHMARK #, DESCRIPTION, ELEVATION, NORTHING, EASTING. Includes entries for COTTON SPINDLE IN NE SIDE OF PP, SET ON WINGWALL AT SW CORNER OF BRIDGE, etc.

EARTHWORK SCHEDULE table with columns: LOCATION, EXCAVATION* (CY), EMBANKMENT (CY), NET = EMBANKMENT - EXCAVATION. Includes stationing ranges like STA. 18+89 to 19+25, etc.

EXCAVATION AND EMBANKMENTS CALCULATED AS AVERAGE BETWEEN LISTED STATIONS
EARTHWORK EXCLUDES STRUCTURE EXCAVATION AT ABUTMENTS
*EXCAVATION SHRINKAGE FACTOR ASSUMED TO BE 25%

Plot Date: 20 October 2023 | File Name: H:\P1\2023\1023\Supplemental\Quantity\089-3299\089-3299_Sheets\1\089-3299_Sheet1.dwg

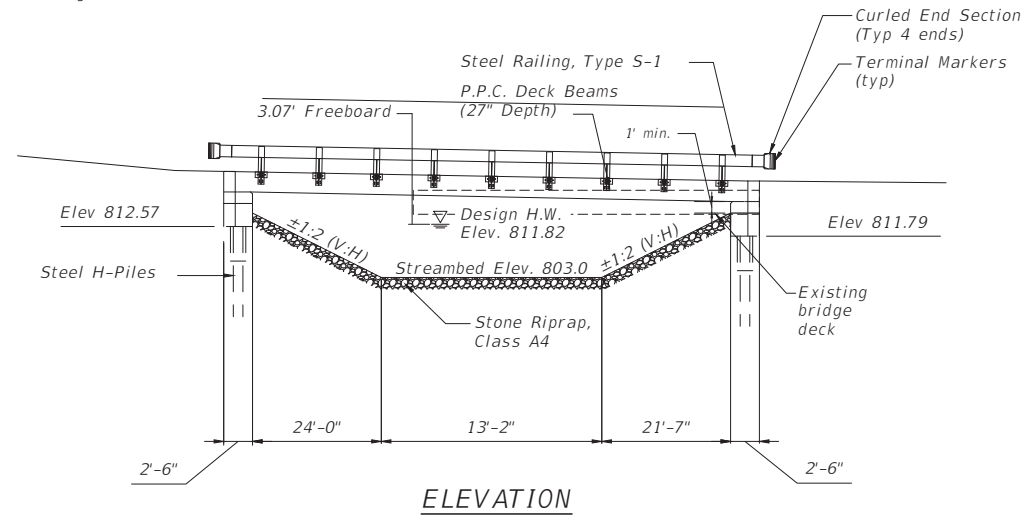
Revision table with columns: USER NAME, DESIGNED, DRAWN, CHECKED, PLOT DATE, REVISIONS (REVISED, DATE).

CHASTAIN & ASSOCIATES LLC CONSULTING ENGINEERS logo and contact information for DECATUR, SCHAUMBURG, ROCKFORD.

INDEX OF SHEETS, GENERAL NOTES, AND SOQ table with columns: RTE., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., SCALE, SHEET NO. 2 OF 20 SHEETS, STA., PROJ. HYNE (852) ILLINOIS, STRUCTURE 089-3299.

Existing Structure (089-3087):
Single span concrete deck bridge
on closed abutments

Road to be closed during construction



BRUSH CREEK TRIBUTARY BRIDGE
BUILT 20 BY
STEPHENSON COUNTY
SEC. 21-01132-00-BR
TR 59 STA. 20+12.50
STR. NO. 089-3299 LOADING HL-93

NAME PLATE
See Std. 515001

LOADING HL-93

DESIGN SPECIFICATIONS
2018 AASHTO LRFD Bridge Design
Specifications, 8th Edition with 2018 Interims

DESIGN STRESSES
FIELD UNITS

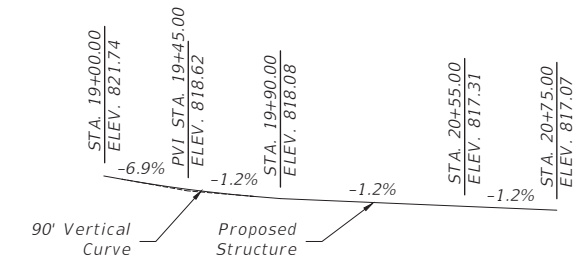
$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

PRECAST PRESTRESSED UNITS

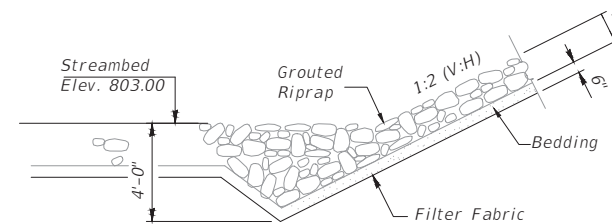
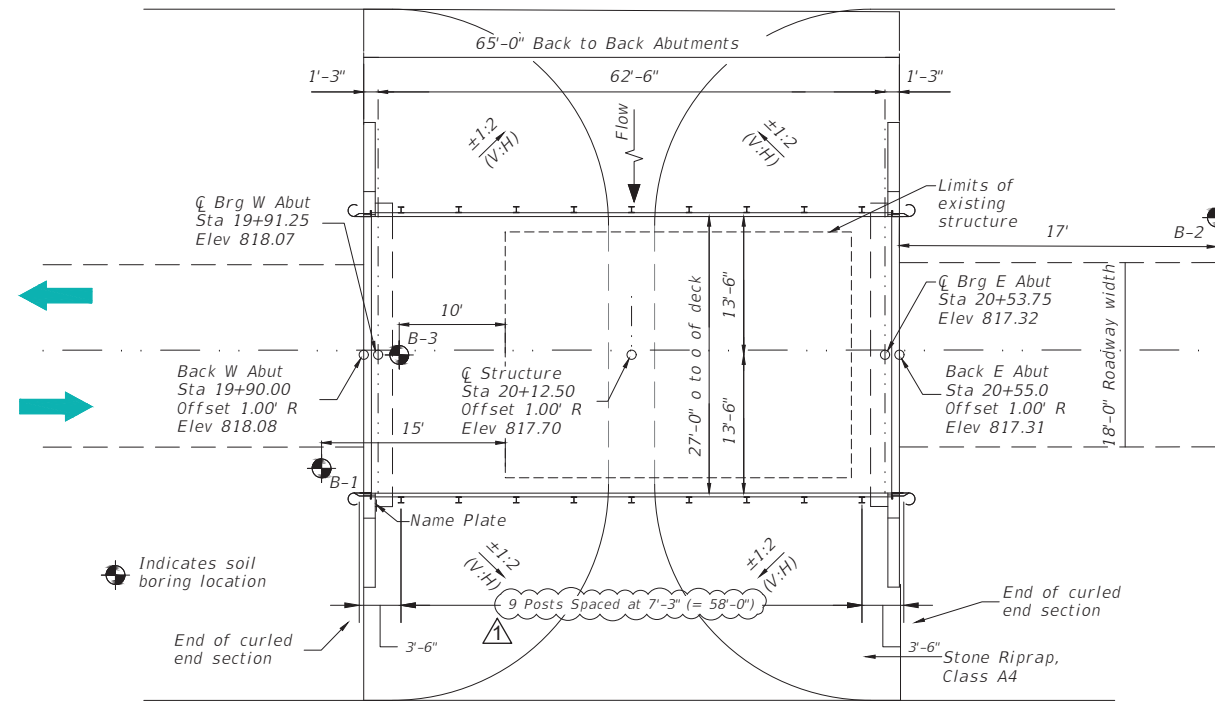
$f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f'_s = 270,000$ psi ($\frac{1}{2}$ \emptyset low-relaxation strands)
 $f'_{si} = 202,000$ psi ($\frac{1}{2}$ \emptyset low-relaxation strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec (S_s) = 0.0985
Design Spectral Acceleration at 0.2 sec (S_1) = 0.0519
Soil Site Class = D



PROFILE GRADE



STONE RIPRAP ANCHOR DETAIL

DESIGN SCOUR ELEVATION TABLE

Event / Limit State	Design Scour Elevations (ft.)		
	W. Abut.	E. Abut.	Item 113
Q100	812.57	811.79	
Q200	812.57	811.79	
Design	812.57	811.79	
Check	812.57	811.79	

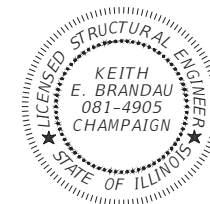
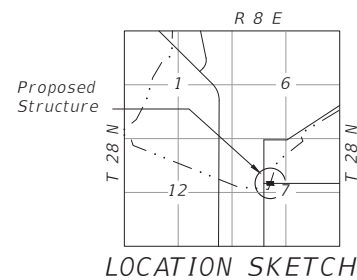
TOTAL BILL OF MATERIAL

Item	Unit	Quantity
Removal of Existing Structures	Each	1
Structure Excavation	Cu Yd	260
Concrete Structures	Cu Yd	24.1
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq Ft	1720
Reinforcement Bars	Pound	4260
Steel Railing, Type S-1	Foot	130
Furnishing Steel Piles HP 10x42	Foot	352
Driving Steel Piles HP 10x42	Foot	352
Test Pile Steel HP 10x42	Each	2
Pile Shoes	Each	10
Name Plates	Each	1
Terminal Marker - Direct Applied	Each	4
Concrete Cut-off Wall	Cu Yd	8.6
Grouted Riprap	Sq Yd	444

WATERWAY INFORMATION

Drainage Area = 7.93 sq mi		Exist. Low Grade Elev. 817.40 @ Sta. 20+45		Prop. Low Grade Elev. 817.31 @ Sta. 20+55					
Flood	Freq. Yr.	Q C.F.S.	Opening Ft ²		Nat. H.W.E.	Headwater El.		Head - Ft.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Overtopping	--	7,200	421	600	816.30	821.48	818.82	5.18	2.52
Design	15	1,750			811.17	812.19	811.82	1.02	0.65
Base	100	2,860			812.49	814.04	813.49	1.55	1.00
Max Calc Scour	200	3,320			812.97	814.77	814.10	1.80	1.13

15 Year Velocity Through Existing Bridge = 6.59 ft/s
15 Year Velocity Through Proposed Bridge = 5.75 ft/s



Keith E. Brandau
Keith E. Brandau, P.E., S.E. Date 01/04/2024
Expires 11/30/2024

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

USER NAME = TREVOR LARSON, P.E., PTOE	DESIGNED -- TWL	REVISED -- 2024 01-04
	DRAWN -- TWL	REVISED --
PLOT SCALE = ANSI FULL BLEED D (34.00 X 22.00 INCHES)	CHECKED -- TWO	REVISED --
PLOT DATE = January 8, 2024	DATE -- 2023 10-25	REVISED --



DECATUR (217) 422-8544
SCHAUMBURG (773) 714-0050
ROCKFORD (815) 489-0050
184-001397

BRIDGE PLAN AND ELEVATION

SCALE: _____	SHEET NO. 6 OF 20 SHEETS	STA. _____ TO STA. _____	RTE. _____	SECTION 20-01132-00-BR	COUNTY STEPHENSON	TOTAL SHEETS 20	SHEET NO. 6
			PROJ. HYNE (852)	ILLINOIS	CONTRACT NO. 85748 STRUCTURE 089-3299		