

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
FEDERAL AID PROJECT
LOCAL BRIDGE
FORMULA PROGRAM**

T.R. 3 (600 N AVE) OVER SILVER CREEK
SECTION 16-14122-00-BR
PROJECT NUMBER L3V3(662)
STRUCTURE REPLACEMENT
MACON TOWNSHIP
BUREAU COUNTY
C-93-005-21

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	1
WHA# 1458019		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				



LOCATION OF SECTION INDICATED THUS:

- INDEX OF SHEETS:**
- 1 COVER SHEET
 - 2 HIGHWAY STANDARDS & GENERAL NOTES
 - 3 SUMMARY OF QUANTITIES
 - 4 TYPICAL SECTIONS
 - 5 SCHEDULE OF QUANTITIES
 - 6 PLAN AND PROFILE
 - 7 EROSION CONTROL SHEET
 - 8-9 GENERAL PLAN AND ELEVATION
 - 10 RIPRAP LAYOUT
 - 11 27"x36" PPC DECK BEAM
 - 12 27"x36" PPC DECK BEAM DETAILS
 - 13 ABUTMENT DETAILS
 - 14 STEEL RAILING, TYPE SM
 - 15 METAL SHELL PILE DETAILS
 - 16-19 BORING LOGS
 - 20-23 CROSS SECTIONS

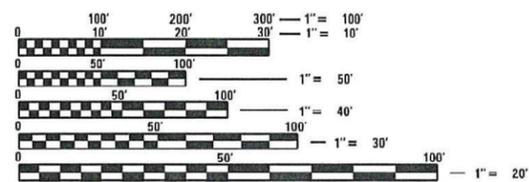
FOR HIGHWAY STANDARDS
SEE SHEET NO. 2

UTILITIES:
SEE SHEET NO. 2

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OF THE STATE OF ILLINOIS**

FUNCTIONAL CLASSIFICATION
LOCAL ROAD (RURAL)
DESIGN SPEED 30 MPH
2024 ADT - 76

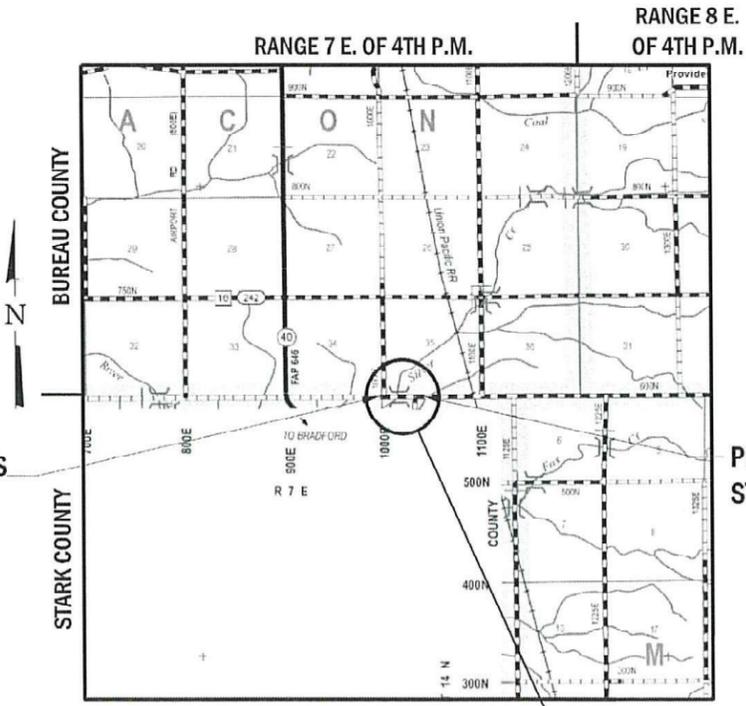
DESIGN CRITERIA
3R GUIDELINES



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. X233600589
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER – MICHAEL C. WAGNER, P.E.
PROJECT MANAGER – MICHAEL R. LESLIE, S.E., P.E.
CONTRACT NO. 87738



PROJECT BEGINS
STATION 18+75

PROJECT ENDS
STATION 21+45

PROPOSED STRUCTURE: S.N. 006-4190
A SINGLE SPAN (1 @ 70'-0") PCC DECK BEAM BRIDGE ON SPILL
THRU ABUTMENTS AT STA: 20+00. 10' LEFT AHEAD

GROSS LENGTH = 270 FT. = 0.05 MILE
NET LENGTH = 270 FT. = 0.05 MILE



DATE: 12/16/2024
EXPIRES 11/30/25

MACON TOWNSHIP ROAD DISTRICT	
APPROVED	12-19 2024 <i>Kent Babner</i> MACON TOWNSHIP ROAD COMMISSIONER
BUREAU COUNTY HIGHWAY DEPARTMENT	
APPROVED	December 20 th 2024 <i>John C. Shan</i> BUREAU COUNTY ENGINEER
PASSED	January 3, 2025 <i>[Signature]</i> DISTRICT 3 LOCAL ROADS & STREETS ENGINEER
RELEASING FOR BID BASED ON LIMITED REVIEW	January 3, 2025 <i>Julia Thompson</i> REGION 2 ENGINEER



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GENERAL NOTES

THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL PROPERTY MARKS, SECTION OR SUBSECTION MONUMENTS ENCOUNTERED, UNTIL AN OWNER OR AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. ANY PROPERTY MARKS, SECTION OR SUBSECTION MONUMENTS UNLESS REFERENCED, DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

THE CONTRACTOR SHALL COOPERATE WITH THE COUNTY AND ADJACENT LANDOWNERS WITH REGARDS TO ACCESS TO PRIVATE PROPERTY, AS WELL AS THE U.S. POSTAL SERVICE FOR MAIL DELIVERY.

FINAL INSPECTION OF THE WORK PERFORMED UNDER THIS CONTRACT WILL BE DONE BY THE ENGINEER AND COUNTY PRIOR TO FINAL ACCEPTANCE. DEFECTS SHALL BE CORRECTED BY THE CONTRACTOR WITHOUT COST TO THE COUNTY PRIOR TO ISSUANCE OF THE FINAL PAYMENT.

THE LOCATION AND ELEVATION OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE NOT TO BE TAKEN AS EXACT. THE CONTRACTOR SHALL VERIFY AND LOCATE ALL EXISTING UTILITIES ON OR ADJACENT TO THE SITE. PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES, CONTACT J.U.L.I.E. AT 1-800-892-0123 AND THE CITY FOR EXACT FIELD LOCATION OF UTILITIES. THE CONTRACTOR SHALL USE SPECIAL CARE WHEN CONDUCTING CONSTRUCTION OPERATIONS NEAR THEM TO PREVENT DAMAGE. DAMAGE, AND THE COST TO REPAIR SAID DAMAGE, SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

GENERAL NOTES CONT.:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING UTILITY PROPERTY DURING CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.39 OF THE STANDARD SPECIFICATIONS. A MINIMUM OF 48 HOURS ADVANCE NOTICE IS REQUIRED FOR NON-EMERGENCY WORK. THE JULIE NUMBER IS 800-892-0123. NO UTILITIES WERE LOCATED WITHIN THE PROJECT LIMITS OR IMMEDIATELY ADJACENT TO THE PROJECT CONSTRUCTION LIMITS THAT ARE MEMBERS OF JULIE:

FRONTIER COMMUNICATIONS KYLE BOHM (779)-212-2329 kyle.bohm@ftr.com	AMEREN ELECTRIC (815)-252-8372 illinoisconstruction@ameren.com	CORN BELT ENERGY CORP. (888)-659-4540 JULIE@cornbeltenergy.com
-----------------------------------------------------------------------------	----------------------------------------------------------------------	----------------------------------------------------------------------

EXISTING MAIL BOXES, MONUMENTS, AND ANY MISC. SIGNS THAT ARE WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED AND RESET BY THE CONTRACTOR. COST OF THE REMOVING AND RESETTING TO BE INCLUDED IN THE CONTRACT UNIT PRICE BID PER UNIT FOR EARTH EXCAVATION (SPECIAL).

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 48 HOURS PRIOR TO THE START OF CONSTRUCTION IN ORDER TO ARRANGE FOR APPROPRIATE CONSTRUCTION INSPECTION. WORK PERFORMED OR MATERIALS AND EQUIPMENT INSTALLED WITHOUT INSPECTION MAY BE CONSIDERED UNACCEPTABLE AT THE DISCRETION OF THE ENGINEER AND MY HAVE TO BE REPLACED AT NO COST TO THE ENGINEER OR OWNER.

EXISTING STRUCTURES (INCLUDING FOUNDATIONS, WALLS, CISTERNS, TANKS, WELLS OR OTHER UNDERGROUND STRUCTURES) WITHIN THE RIGHT-OF-WAY SHALL BE REMOVED IN ACCORDANCE WITH ARTICLE 501.04 OF THE STANDARD SPECIFICATIONS, WITHOUT ANY ADDITIONAL COMPENSATION, UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIAL PROVISIONS.

ALL BORROW / WASTE / USE SITES MUST BE APPROVED BY THE DEPARTMENT / OWNER PRIOR TO REMOVING ANY MATERIAL FROM THE PROJECT OR INITIATING ANY EARTH MOVING ACTIVITIES, INCLUDING TEMPORARY STOCKPILING OUTSIDE THE LIMITS OF CONSTRUCTION.

DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL INSURE POSITIVE SITE DRAINAGE AT THE CONCLUSION OF EACH DAY. SITE DRAINAGE MAY BE ACHIEVED BY DITCHING, PUMPING OR ANY OTHER METHOD ACCEPTABLE TO THE ENGINEER. THE CONTRACTOR'S FAILURE TO PROVIDE THE ABOVE WILL PRECLUDE ANY POSSIBLE ADDED COMPENSATION REQUIRED DUE TO DELAYS OR UNSTABLE MATERIALS CREATED AS A RESULT THEREOF.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL MEASURES THROUGHOUT THE COURSE OF THE PROJECT. THE COST FOR ALL MAINTAINED AND ADJUSTMENTS TO THE EROSION CONTROL MEASURES SHALL BE INCLUDED IN THE CONTRACT UNIT BID PRICE FOR EACH EROSION CONTROL DEVICE.

HIGHWAY STANDARDS

- 000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 001001-02 AREAS OF REINFORCEMENT BARS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
- 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-04 NAME PLATE FOR BRIDGES
- 701001-02 OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 M) AWAY
- 701006-05 OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
- 701201-05 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45MPH
- 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
- 701311-03 LANE CLOSURE, 2L, 2W MOVING OPERATIONS - DAY ONLY
- 701901-10 TRAFFIC CONTROL DEVICES
- 720001-01 SIGN PANEL MOUNTING DETAILS
- 720006-04 SIGN PANEL ERECTION DETAILS
- 720011-01 METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
- 725001-01 OBJECT AND TERMINAL MARKERS
- 729001-01 APPLICATIONS OF TYPES A & B METAL POSTS (FOR SIGNS & MARKERS)
- B.L.R. 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
- B.L.R. 22-7 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

REVISION	DATE	BY	REMARKS

DESIGNED	ATK
DRAWN	DAN
REVIEWED	ATK
APPROVED	MRL

**BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00**



GENERAL NOTES
SHEET NO. 1 OF 1 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	2
WHA# 1458D19		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES

PAY CODE	PAY ITEM	UNIT	TOTAL QUANTITY
20300100	CHANNEL EXCAVATION	CUYD	228
25100630	EROSION CONTROL BLANKET	SQ YD	977
28000305	TEMPORARY DITCH CHECKS	FOOT	80
28000400	PERIMETER EROSION BARRIER	FOOT	620
35101400	AGGREGATE BASE COURSE, TYPE B	TON	202
40200100	AGGREGATE SURFACE COURSE, TYPE A	TON	91
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CUYD	112
50300225	CONCRETE STRUCTURES	CUYD	26.8
50300280	CONCRETE ENCASEMENT	CUYD	5.5
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1680
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3390
* 50901050	STEEL RAILING, TYPE SM	FOOT	143
51200959	FURNISHING METAL SHELL PILES 14" X 0.312"	FOOT	248
51202305	DRIVING PILES	FOOT	248

PAY CODE	PAY ITEM	UNIT	TOTAL QUANTITY
51203200	TEST PILE METAL SHELLS	EACH	2
51204650	PILE SHOES	EACH	10
51500100	NAME PLATES	EACH	1
58600101	GRANULAR BACKFILL FOR STRUCTURES	CUYD	62
67100100	MOBILIZATION	L SUM	1
* 72501100	TERMINAL MARKER - POST MOUNTED	EACH	4
* 72900100	METAL POST - TYPE A	FOOT	40
Z0013798	CONSTRUCTION LAYOUT	L SUM	1
X2020410	EARTH EXCAVATION (SPECIAL)	CUYD	174
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.21
X2810208	STONE RIPRAP, CLASS A4 (SPECIAL)	TON	484
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1

* SPECIALTY ITEM

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REVISION	DATE	BY	REMARKS

DESIGNED	ATK
DRAWN	CJI
REVIEWED	GBG
APPROVED	GFS

BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00



WILLET HOFMANN & ASSOCIATES INC
 ENGINEERING ARCHITECTURE LAND SURVEYING
 809 EAST 2ND STREET, DIXON, IL 61021-0367
 T: 815-284-3381 DESIGN FIRM #: 84-000918

SUMMARY OF QUANTITIES

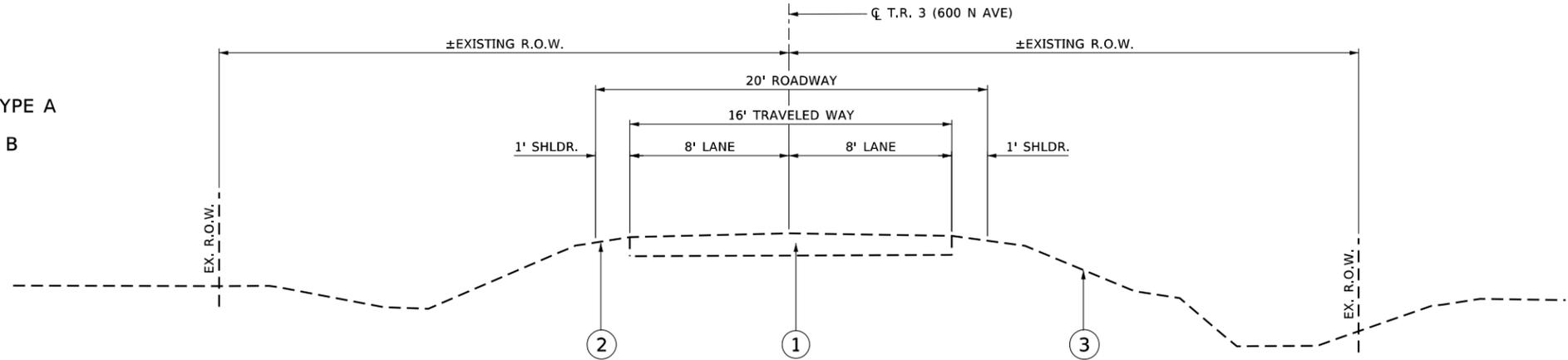
SHEET 1 OF 1

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	3
WHA* 1458D19		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				

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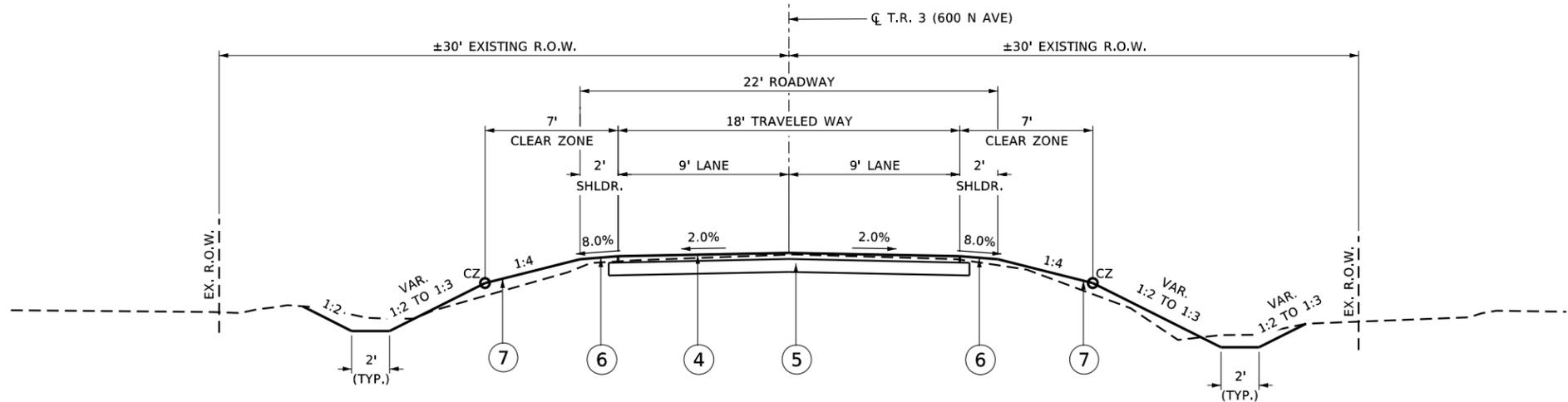
LEGEND

- ① EXISTING 1 FT AGGREGATE ROADWAY, WITH A CHIP SEAL SURFACE
- ② EXISTING EARTH SHOULDER
- ③ EXISTING GROUND
- ④ PROPOSED 4" OF AGGREGATE SURFACE COURSE, TYPE A
- ⑤ PROPOSED 8" OF AGGREGATE BASE COURSE, TYPE B
- ⑥ PROPOSED EARTH SHOULDER
- ⑦ PROPOSED FINISHED GRADE LINE



EXISTING ROADWAY TYPICAL SECTION

STA: 18+00 - 22+00
OMITS BRIDGE STA: 19+65 - 20+35



PROPOSED ROADWAY TYPICAL SECTION

T.R. 3 STA: 18+75 - 21+45
OMITS BRIDGE STA: 19+65 - 20+35

REVISION	DATE	BY	REMARKS

DESIGNED	ATK
DRAWN	C.J.I
REVIEWED	GBG
APPROVED	GFS

BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00



TYPICAL SECTIONS

SHEET 1 OF 1

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	4
WHA# 1458019		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				

SCHEDULE OF QUANTITIES

SEEDING, CLASS 2 (SPECIAL)		
STATION	ACRE	REMARKS
T.R. 3 (600 N. Avenue)		
LT 18+75 - 19+66	0.06	
RT 18+75 - 19+62	0.05	
LT 20+37 - 21+45	0.05	
RT 20+33 - 21+45	0.05	
PROJECT TOTAL	0.21	
*X2501000		

PERIMETER EROSION BARRIER		
STATION	FOOT	REMARKS
T.R. 3 (600 N. Avenue)		
LT 18+75 - 19+57	159	
RT 18+75 - 19+52	152	
LT 20+48 - 21+45	156	
RT 20+44 - 21+45	153	
PROJECT TOTAL	620	
28000400		

METAL POST - TYPE A		
STATION	FOOT	REMARKS
T.R. 3 (600 N. Avenue)		
LT 19+60	10	
RT 19+60	10	
LT 20+40	10	
RT 20+40	10	
PROJECT TOTAL	40	
72900100		

EROSION CONTROL BLANKET		
STATION	SQ YD	REMARKS
T.R. 3 (600 N. Avenue)		
LT 18+75 - 19+66	269	
RT 18+75 - 19+62	235	
LT 20+37 - 21+45	232	
RT 20+33 - 21+45	241	
PROJECT TOTAL	977	
25100630		

AGGREGATE BASE COURSE, TYPE B		
STATION	TON	REMARKS
T.R. 3 (600 N. Avenue)		
18+75 - 21+45	202	MAINLINE
PROJECT TOTAL	202	205 TON / CU YD
*35101400		

AGGREGATE SURFACE COURSE, TYPE A		
STATION	TON	REMARKS
T.R. 3 (600 N. Avenue)		
18+75 - 21+45	91	MAINLINE
PROJECT TOTAL	91	205 TON / CU YD
*40200100		

TEMPORARY DITCH CHECKS		
STATION	FOOT	REMARKS
T.R. 3 (600 N. Avenue)		
24.5' LT 19+00	10	
26.8' RT 19+25	10	
25.0' LT 19+50	10	
25.0' LT 20+25	10	
28.0' LT 20+50	10	
26.5' LT 20+75	10	
25.2' LT 21+00	10	
24.2' LT 21+25	10	
PROJECT TOTAL	80	
28000305		

TERMINAL MARKER - POST MOUNTED		
STATION	EACH	REMARKS
T.R. 3 (600 N. Avenue)		
LT 19+60	1	
RT 19+60	1	
LT 20+40	1	
RT 20+40	1	
PROJECT TOTAL	4	
72501100		

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION (SPECIAL) X2020410 (Cu Yd)	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE 25%	EMBANKMENT	EARTH BALANCE WASTE (+) OR FURNISHED EXCAVATION (-) 20400800 (Cu Yd)
T.R. 3 (600 N. Avenue)	174	131	108	23
TOTALS	174	131	108	23

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REVISION	DATE	BY	REMARKS

DESIGNED	ATK
DRAWN	CJI
REVIEWED	GBG
APPROVED	MRL

BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00



SCHEDULE OF QUANTITIES
SHEET 1 OF 1

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	5
WHA# 1458D19		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				

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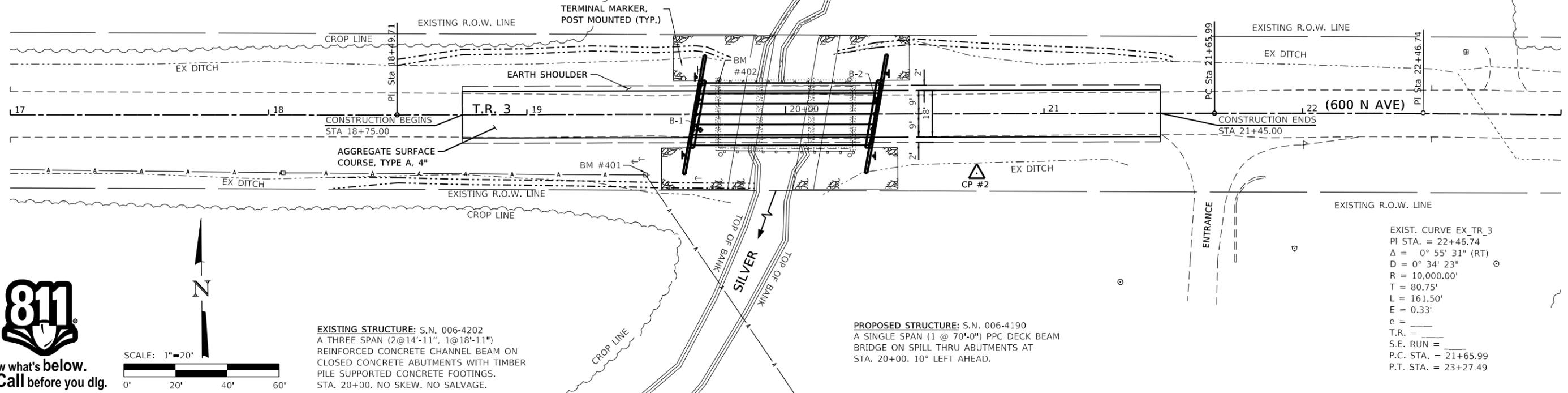
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BENCH MARK #400: RR SPIKE IN 3RD PP W. OF STRUCTURE
(NOT SHOWN) ±21' RT. OF STA. ±15+23
EL. 734.23

BENCH MARK #401: RR SPIKE IN 1ST PP W. OF STRUCTURE
±23' RT. OF STA. ±19+46
EL. 732.81

BENCH MARK #402: CHIS. "□" NW CORNER HUB GUARD
±11' LT. OF STA. ±19+74
EL. 735.99

T.R. 3 (600 N AVE.) - HORIZONTAL CONTROL POINTS					
PT #	STA	N	E	ELEV.	DESCRIPTION
1	13.6' LT. 15+20.74	1663778.15	2435142.67	735.40	3/4" IP w/CAP (NOT SHOWN)
2	22.8' RT. 19+74.19	1663745.45	2435596.10	732.58	3/4" IP w/CAP (NOT SHOWN)
3	12.6' LT. 24+00.34	1663782.52	2436022.24	744.24	3/4" IP w/CAP (NOT SHOWN)



Know what's below.
Call before you dig.

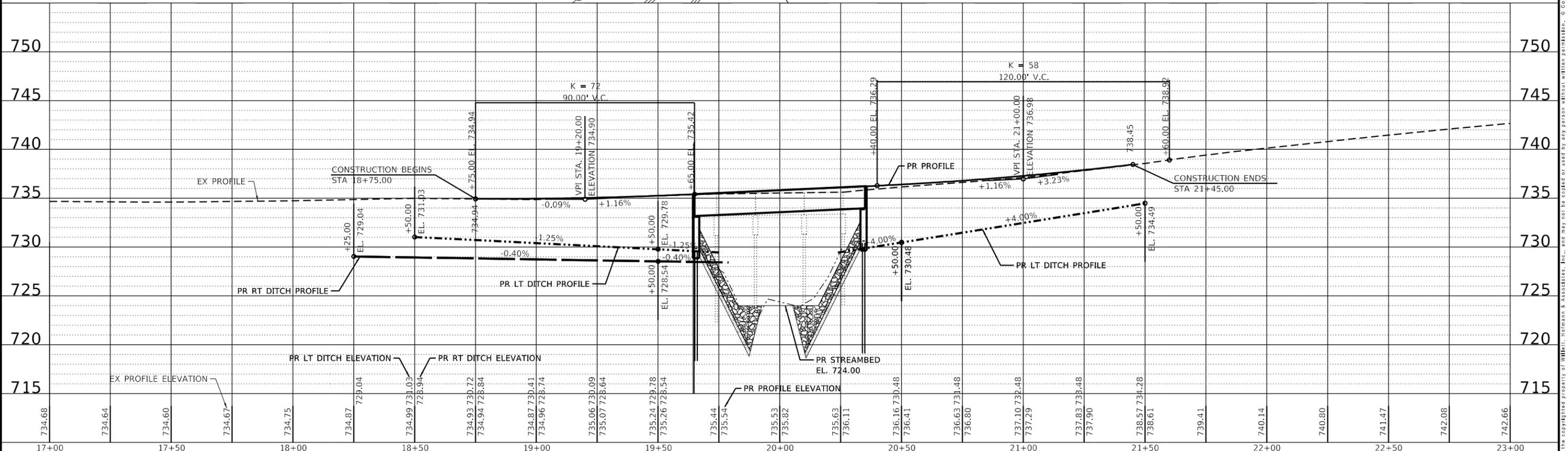


EXISTING STRUCTURE: S.N. 006-4202
A THREE SPAN (2@14'-11", 1@18'-11")
REINFORCED CONCRETE CHANNEL BEAM ON
CLOSED CONCRETE ABUTMENTS WITH TIMBER
PILE SUPPORTED CONCRETE FOOTINGS.
STA. 20+00. NO SKEW. NO SALVAGE.

PROPOSED STRUCTURE: S.N. 006-4190
A SINGLE SPAN (1 @ 70'-0") PPC DECK BEAM
BRIDGE ON SPILL THRU ABUTMENTS AT
STA. 20+00. 10° LEFT AHEAD.

EXIST. CURVE EX_TR_3
PI STA. = 22+46.74
Δ = 0° 55' 31" (RT)
D = 0° 34' 23"
R = 10,000.00'
T = 80.75'
L = 161.50'
E = 0.33'
e = _____
T.R. = _____
S.E. RUN = _____
P.C. STA. = 21+65.99
P.T. STA. = 23+27.49

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REVISION	DATE	BY	REMARKS

DESIGNED	MRL
DRAWN	DAL
REVIEWED	GBG
APPROVED	MRL

BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00



WILLET HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: # 84-000918

PLAN AND PROFILE

SHEET NO: 1 OF 1 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	6
WHA# 1458D19		CONTRACT NO. 87738		
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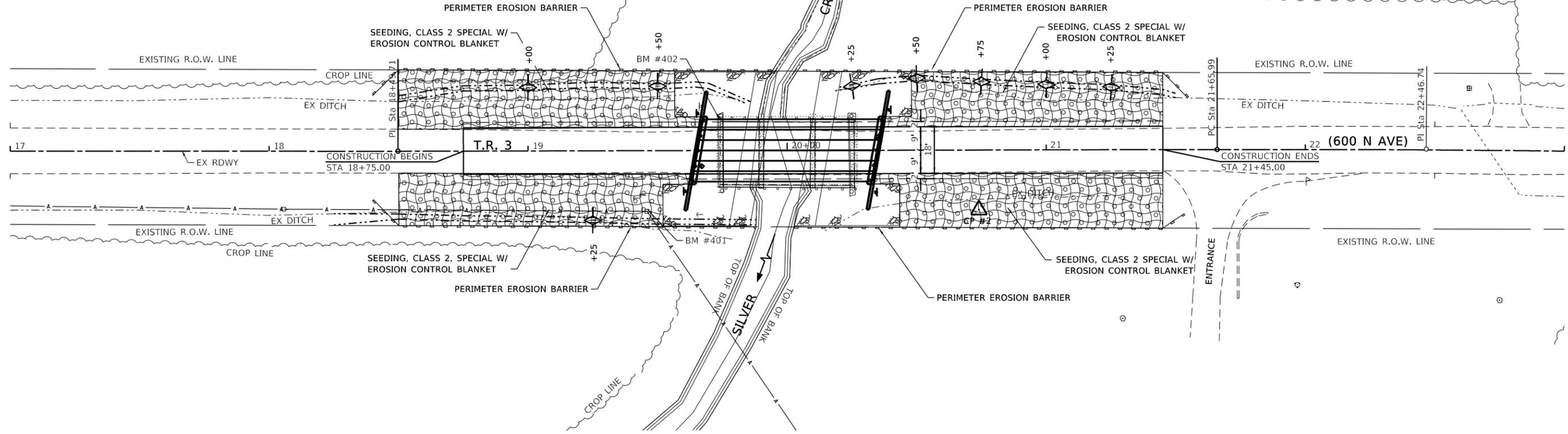
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BENCH MARK #400: RR SPIKE IN 3RD PP W. OF STRUCTURE
(NOT SHOWN) ±21' RT. OF STA. ±15+23
EL. 734.23

BENCH MARK #401: RR SPIKE IN 1ST PP W. OF STRUCTURE
±23' RT. OF STA. ±19+46
EL. 732.81

BENCH MARK #402: CHIS. "□" NW CORNER HUB GUARD
±11' LT. OF STA. ±19+74
EL. 735.99

T.R. 3 (600 N AVE.) - HORIZONTAL CONTROL POINTS					
PT #	STA	N	E	ELEV.	DESCRIPTION
1	13.6' LT. 15+20.74	1663778.15	2435142.67	735.40	3/8" IP W/CAP (NOT SHOWN)
2	22.8' RT. 19+74.19	1663745.45	2435596.10	732.58	3/8" IP W/CAP (NOT SHOWN)
3	12.6' LT. 24+00.34	1663782.52	2436022.24	744.24	3/8" IP W/CAP (NOT SHOWN)



EROSION CONTROL NOTES

THE SOIL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE INSPECTED WEEKLY AND AFTER 1/2" OF RAIN OR MORE BY THE INDIVIDUAL ON SITE IN CHARGE OF SOIL EROSION AND SEDIMENT CONTROL DURING THE CONSTRUCTION OF THE PROJECT.

PERIMETER EROSION BARRIER SHALL COMPLY WITH SECTION 280 OF THE STANDARD SPECIFICATIONS AND SHALL BE PLACED AS SHOWN ON THIS EROSION CONTROL PLAN AND IN ACCORDANCE WITH STATIONS SHOWN ON THE SCHEDULE OF QUANTITIES SHEET OR AS DIRECTED BY THE ENGINEER.

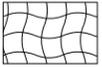
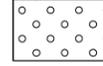
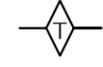
EROSION CONTROL BLANKET SHALL BE PLACED ON ALL DISTURBED AREAS AS SHOWN ON THIS EROSION CONTROL PLAN SHEET AND IN ACCORDANCE WITH SECTION 251 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE USE OF GREEN DYE IN THE EROSION CONTROL BLANKET IS NOT ACCEPTABLE.

STOCKPILES OF SOIL AND OTHER BUILDING MATERIALS TO REMAIN IN PLACE MORE THAN 3 DAYS SHALL BE FURNISHED WITH EROSION AND SEDIMENT CONTROL MEASURES (I.E. PERIMETER SILT FENCE). STOCKPILES TO REMAIN IN PLACE FOR 14 DAYS OR MORE SHALL RECEIVE TEMPORARY SEEDING.

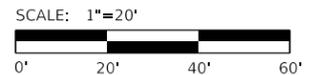
ALL ADJACENT STREETS MUST BE KEPT CLEAR OF DEBRIS, INSPECTED DAILY, AND CLEANED WHEN NECESSARY.

LEGEND

-  PERIMETER EROSION BARRIER
-  EROSION CONTROL BLANKET
-  SEEDING, CLASS 2 (SPECIAL)
-  STONE RIPRAP, CLASS A4, SPECIAL
-  TEMPORARY DITCH CHECK



Know what's below.
Call before you dig.



FILE = S:\PROJECTS\2019\1458019_BCH\DESIGN\CAD_SHEETS\1458019_Erosion_Control.dgn

REVISION	DATE	BY	REMARKS

DESIGNED	MRL
DRAWN	C.J.I.
REVIEWED	GBG
APPROVED	MRL

BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00

WILLET HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM#: 84-000918

EROSION CONTROL PLAN

SHEET NO: 1 OF 1 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	7
WHA# 1458D19		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				

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PRINT_ORGANIZER_BW.pltcfgr 12/16/2024 10:15:21 AM - PLOTTED

Existing Structure: S.N. 006-4202 A three span (2 @ 14'-11"; 1 @ 18'-11") Reinforced Concrete Channel Beam bridge on Closed Concrete Abutments supported by timber piles.

Bench Mark: WHA #402 Chiseled "C" in N.W. corner of hub guard. Elevation 735.99

No Salvage.

INDEX OF STRUCTURAL SHEETS

- 1 General Plan and Elevation
- 2 General Data
- 3 Riprap and Pile Layout
- 4 27" x 48" PPC Deck Beam
- 5 27" x 48" PPC Deck Beam Details
- 6 Abutment Details
- 7 Steel Railing, Type SM Details
- 8 Metal Shell Pile Details
- 9-12 Boring Logs

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications, 9th Edition

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
PRECAST PRESTRESSED UNITS
 $f'_c = 6,000$ psi
 $f'_{ci} = 5,000$ psi
 $f_{pu} = 270,000$ psi ($1/2"$ \emptyset Low Lax Strands)
 $f_{pbt} = 201,960$ psi ($1/2"$ \emptyset Low Lax Strands)

DESIGN SCOUR ELEVATION TABLE

Event / Limit	Design Scour Elevations (ft.)		Item 113
	W. Abut.	E. Abut.	
Q100	728.87	729.63	8
Q200	728.87	729.63	
Design	728.87	729.63	
Check	728.87	729.63	

HIGHWAY CLASSIFICATION

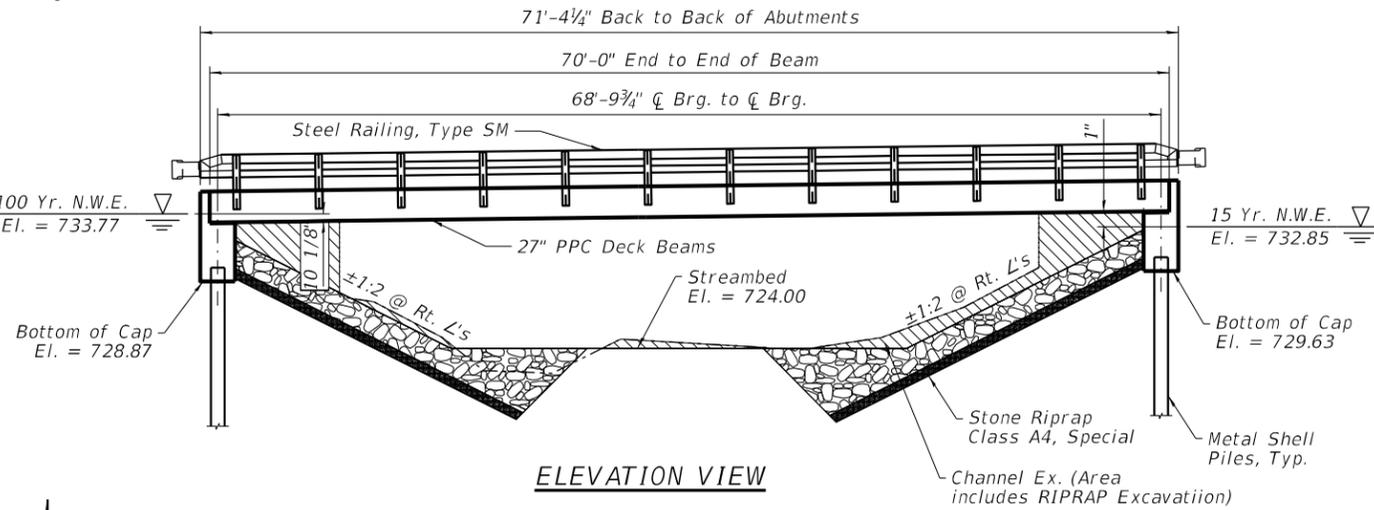
T.R. 3 - 600 N. Ave.
 Functional Class: Local Road
 ADT: 15 (2024 - Current); 75 (2024 - Design)
 ADTT: 0 (2024 - Current); 0 (2024 - Design)
 DHV: 8
 Design Speed: 30 m.p.h.
 Posted Speed: 55 m.p.h.
 Two-Way Traffic
 Directional Distribution: 50:50

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

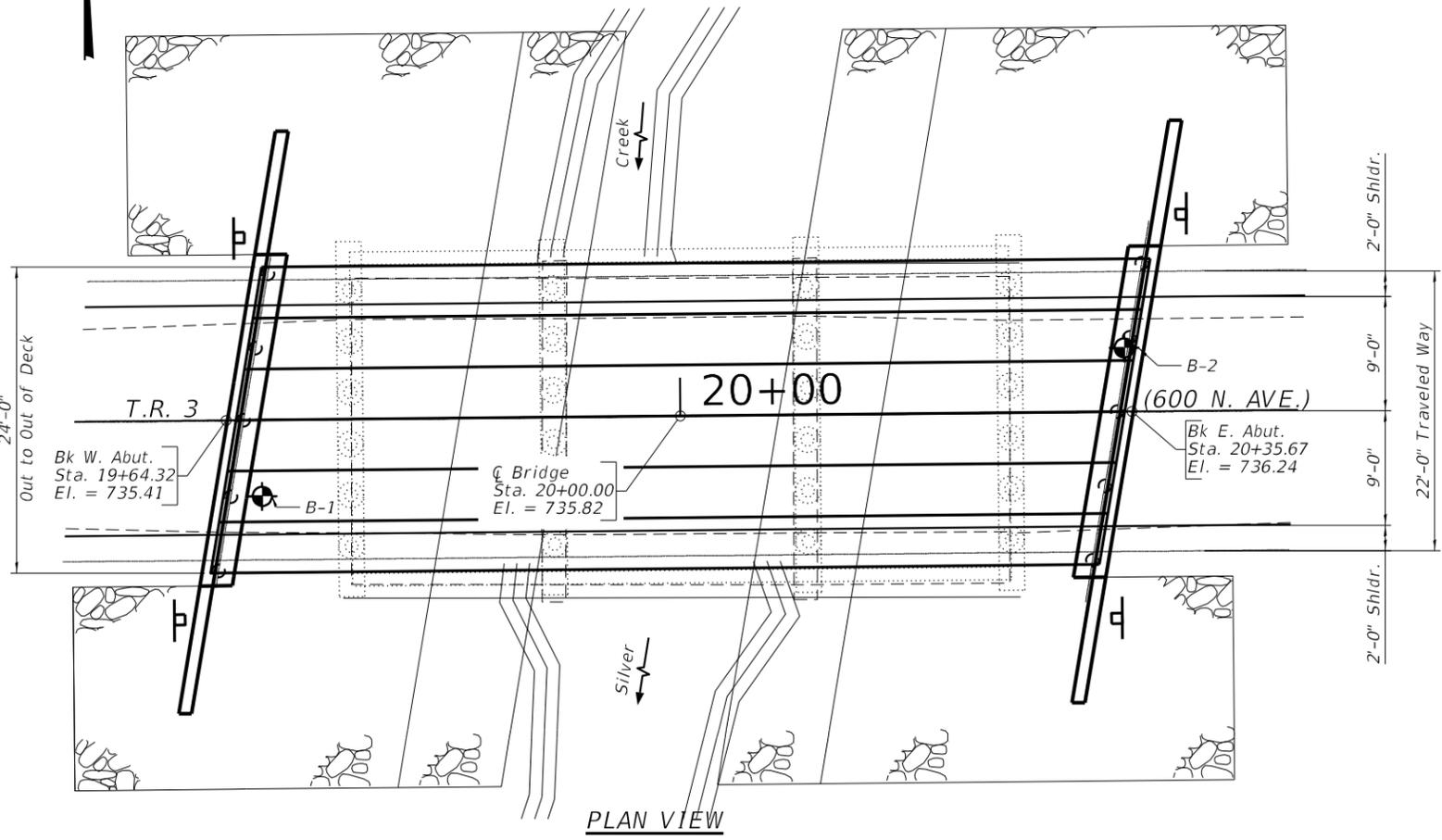
SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (SD1) = 0.301
 Design Spectral Acceleration at 0.2 sec. (SDS) = 0.303
 Soil Site Class = E



SILVER CREEK
 BUILT 20__ BY
 BUREAU COUNTY
 SECTION 16-14122-00-BR
 T.R. 3 (600 N. AVE.) STA. 20+00
 STR. NO. 006-4190 LOADING HL-93

NAME PLATE LETTERING
 Refer To Std. 515001



WATERWAY INFORMATION

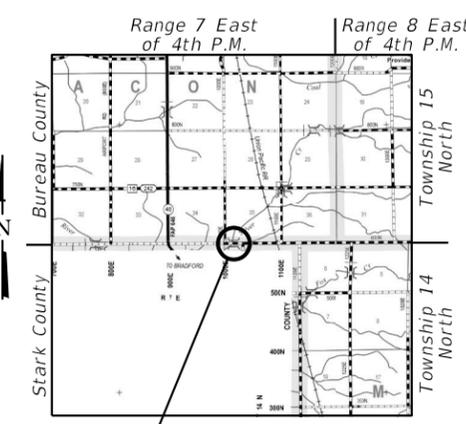
Drainage Area = 9.74 Sq. Mi. Low Grade Ex.: 734.60 @ Sta. 17+50 Pr.: 734.52 @ 17+75

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	15	2214	379	450	732.9	1.6	0.6	734.4	733.4
Base	100	3570	399	497	733.8	1.8	1.5	735.6	735.3
Scour	200	4101	399	498	734.1	2.0	1.7	736.0	735.8
Max. Calc	500	4840	399	498	734.5	2.1	1.8	736.6	736.3



DATE: 12/16/2024
 EXPIRES 11/30/26

"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."



GENERAL PLAN & ELEVATION
 T.R. 3 (600 N. AVE.)
 OVER SILVER CREEK
 SECTION 16-14122-00-BR
 EXISTING S.N. 006-4202
 PROPOSED S.N. 006-4190
 MACON TOWNSHIP
 BUREAU COUNTY
 STATION 20+00

REVISION	DATE	BY	REMARKS

DESIGNED	MCW
DRAWN	DAN
REVIEWED	MCW
APPROVED	MRL

BUREAU COUNTY HIGHWAY DEPARTMENT
 T.R. 3 (600 N AVE.) OVER SILVER CREEK
 STATION 20+00

WILLETT HOFMANN & ASSOCIATES INC
 ENGINEERING ARCHITECTURE LAND SURVEYING
 809 EAST 2ND STREET, DIXON, IL 61021-0367
 T: 815-284-3381 DESIGN FIRM#: 84-000918

STRUCTURAL SHEET NO. 1 OF 12 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	8
WHA# 1458D19		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				

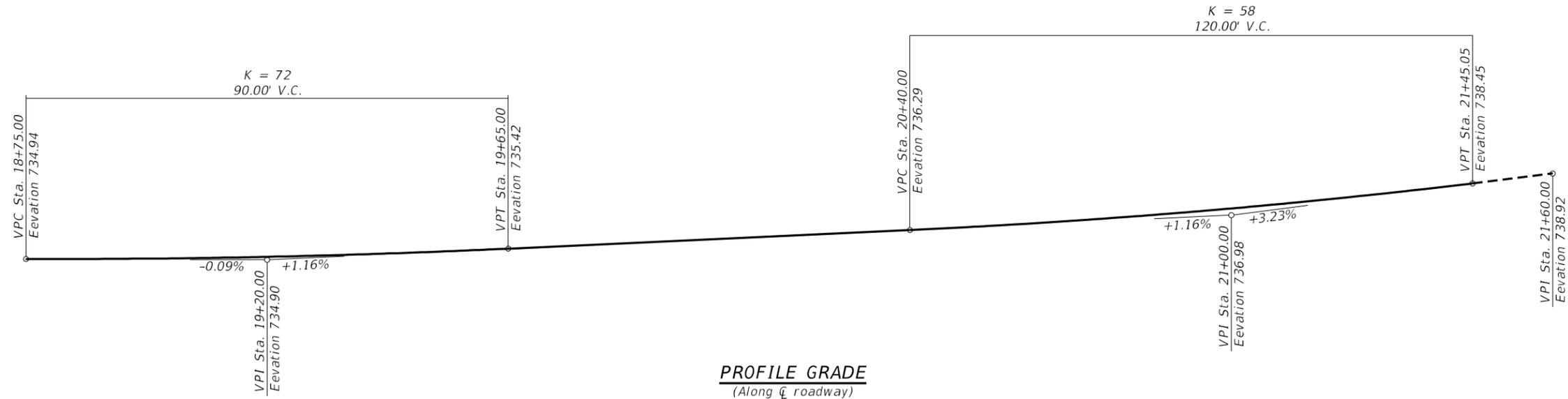
GENERAL NOTES:

Reinforcement bars designated (E) shall be epoxy coated.
 The channel shall be transitioned to fit the proposed structure inside the right of way. Cost shall be included in the Price per Cubic Yard for Channel Excavation.
 Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

BILL OF MATERIAL - BRIDGE

ITEM	UNIT	SUPER	SUB	TOTAL
CHANNEL EXCAVATION	CU YD	—	228	228
REMOVAL OF EXISTING STRUCTURES	EACH	—	—	1
STRUCTURE EXCAVATION	CU YD	—	112	112
CONCRETE STRUCTURES	CU YD	—	26.8	26.8
CONCRETE ENCASEMENT	CU YD	—	5.5	5.5
PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1680	—	1680
REINFORCEMENT BARS, EPOXY COATED	POUND	—	3390	3390
STEEL RAILING, TYPE SM	FOOT	143	—	143
FURNISHING METAL SHELL PILES 14" X 0.312"	FOOT	—	248	248
DRIVING PILES	FOOT	—	248	248
TEST PILE METAL SHELLS	EACH	—	2	2
PILE SHOES	EACH	—	10	10
NAME PLATES	EACH	—	1	1
GRANULAR BACKFILL FOR STRUCTURES	CU YD	—	62	62
*STONE RIPRAP, CLASS A4 (SPECIAL)	TON	—	484	484

*See Special Provisions.



PROFILE GRADE
 (Along \bar{C} roadway)

GENERAL DATA
 T.R. 3 (600 N. AVE.)
 OVER SILVER CREEK
 SECTION 16-14122-00-BR
 EXISTING S.N. 006-4202
 PROPOSED S.N. 006-4190
 MACON TOWNSHIP
 BUREAU COUNTY
 STATION 20+00

REVISION	DATE	BY	REMARKS

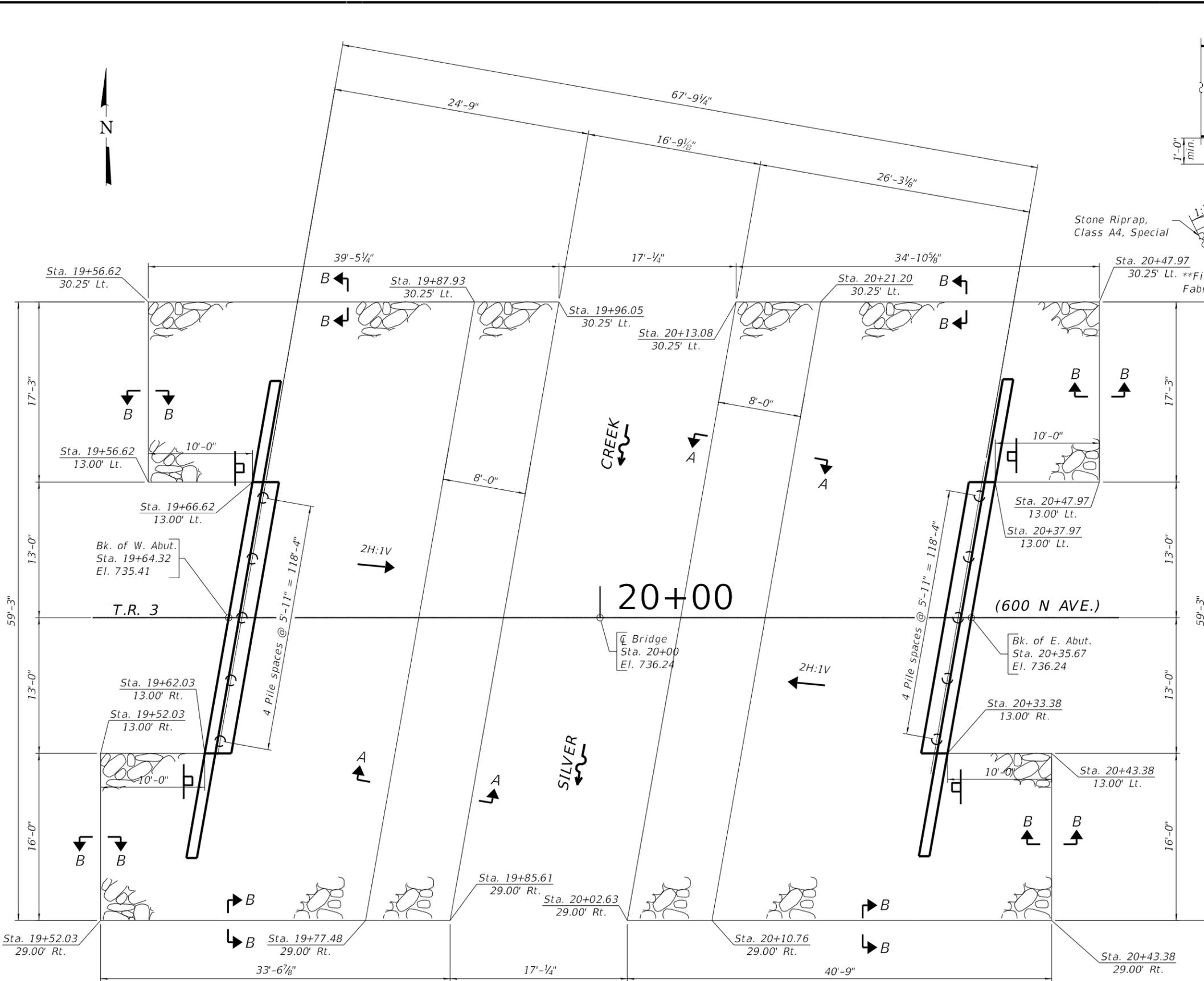
DESIGNED	MCW
DRAWN	DAN
REVIEWED	MCW
APPROVED	MRL

BUREAU COUNTY HIGHWAY DEPARTMENT
 T.R. 3 (600 N AVE.) OVER SILVER CREEK
 STATION 20+00

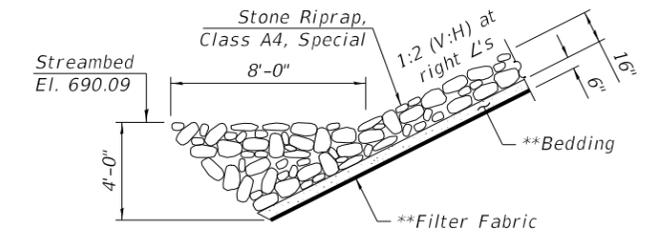
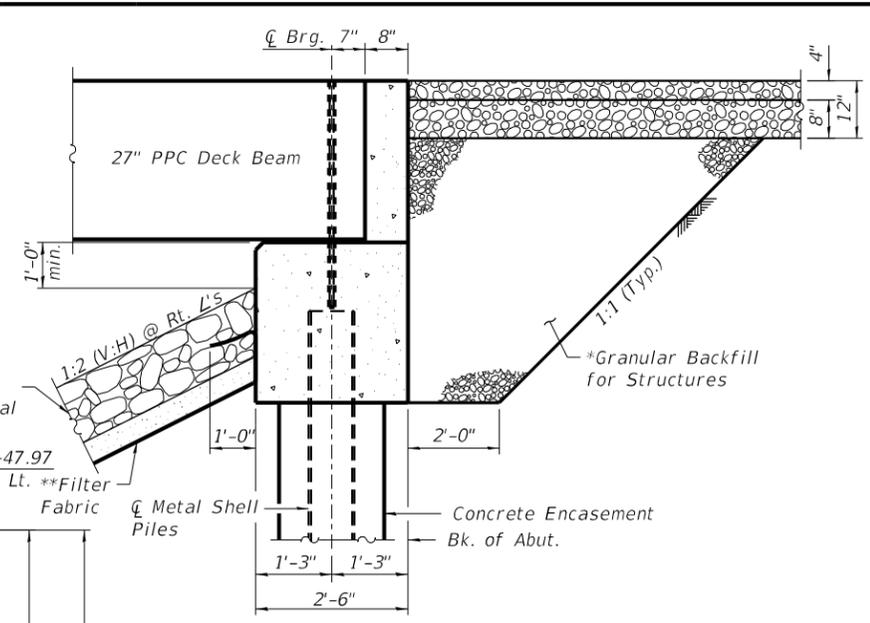


STRUCTURAL SHEET NO. 2 OF 12 SHEETS

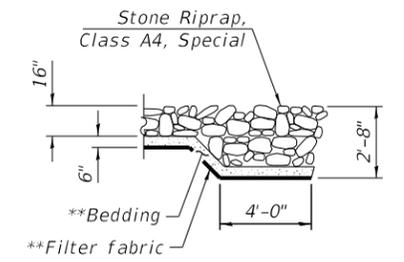
TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	9
WHA# 1458D19		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				



PLAN



SECTION A-A



SECTION B-B

BILL OF MATERIAL

Item	Unit	Quantity
Stone Riprap, Class A4, Special	Ton	484

NOTE:

* Pay Limits of Granular Backfill for Structures shall extend to 2'-0" in from the end of each wingwall.
 ** Cost included in Stone Riprap, Class A4, Special.

REVISION	DATE	BY	REMARKS

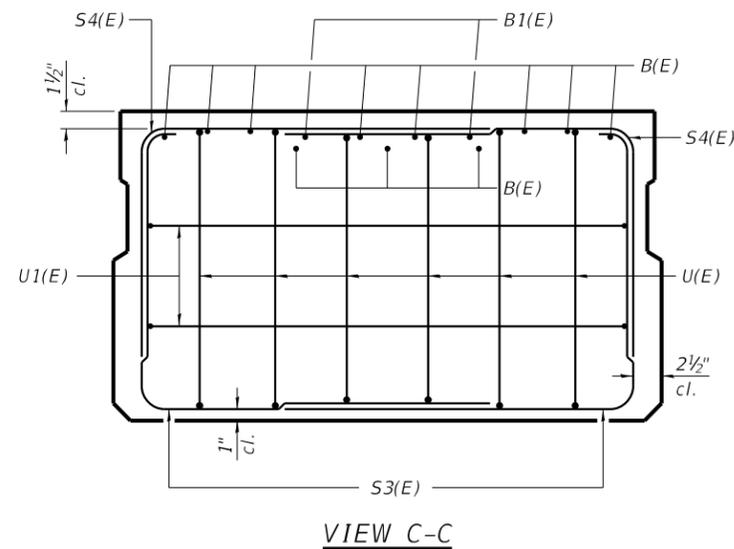
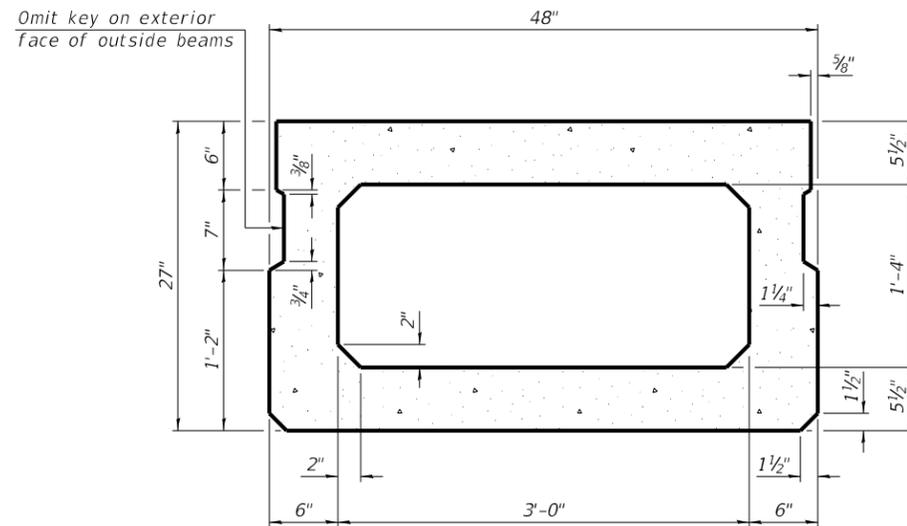
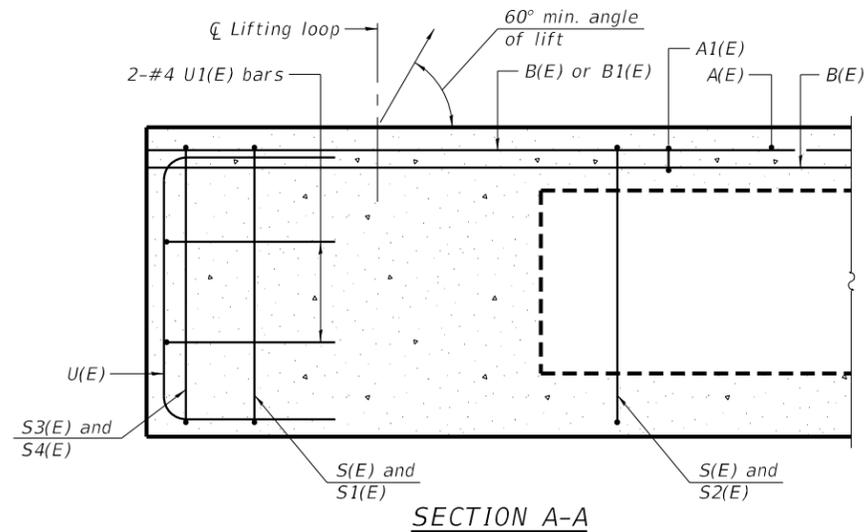
DESIGNED	MCW
DRAWN	DAN
REVIEWED	MCW
APPROVED	MRL

BUREAU COUNTY HIGHWAY DEPARTMENT
 T.R. 3 (600 N AVE.) OVER SILVER CREEK
 STATION 20+00



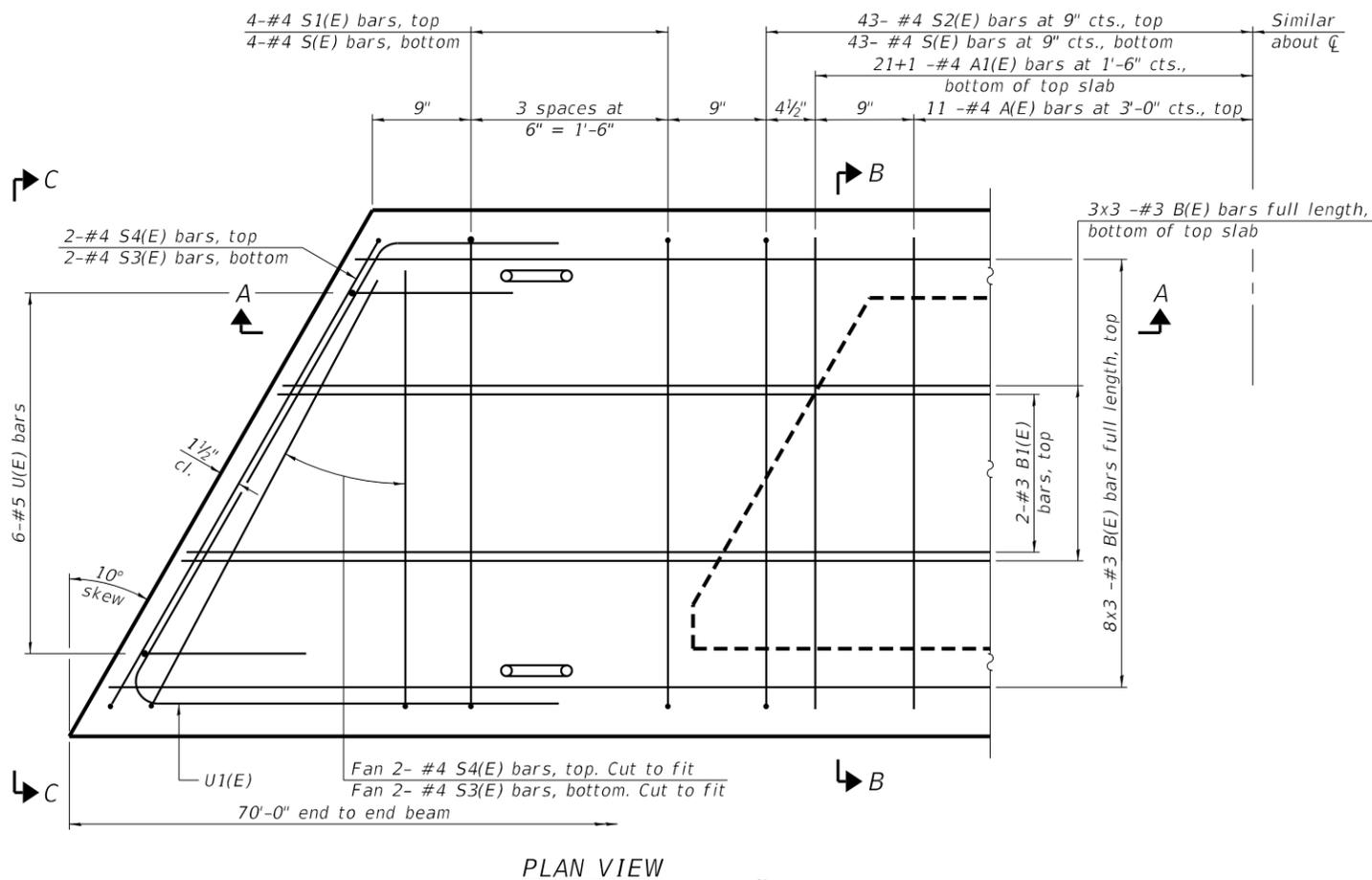
RIPRAP AND PILE LAYOUT
 STRUCTURE NO. 006-4190
 STRUCTURAL SHEET NO. 3 OF 12 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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WHA# 1458D19		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				

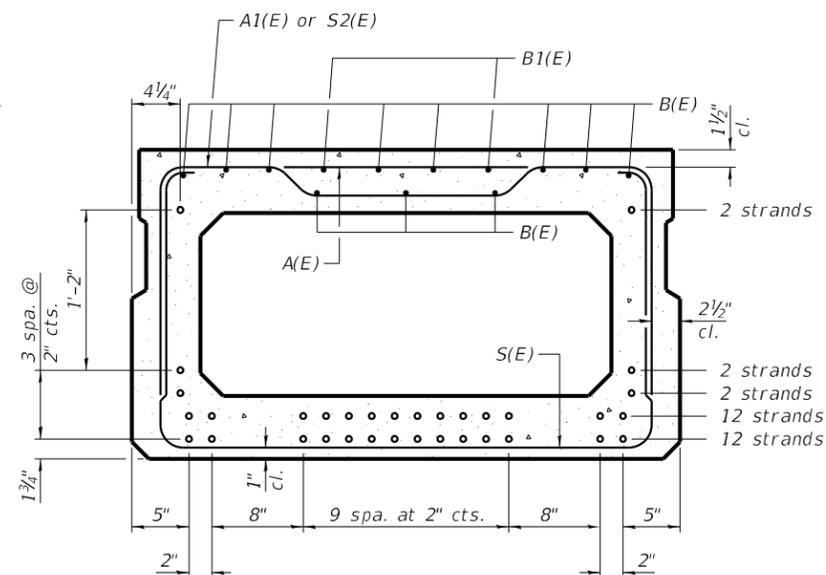


SECTION B-B
(Showing dimensions)

VIEW C-C



PLAN VIEW



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

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

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	22	#4	3'-7"	—
A1(E)	43	#4	3'-10"	~
B(E)	33	#3	24'-3"	—
B1(E)	4	#3	10'-0"	—
S(E)	94	#4	8'-5"	U
S1(E)	8	#4	6'-11"	U
S2(E)	86	#4	7'-2"	U
S3(E)	8	#4	6'-1"	U
S4(E)	8	#4	5'-4"	U
U(E)	12	#5	4'-6"	C
U1(E)	4	#4	6'-8"	C

Note:
See sheet 5 of 12 for additional details and Bill of Material.

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

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

Bars indicated 21+1 indicates 21 lines of bars each side of centerline plus 1 additional at centerline.

Bars indicated 3x3 #3 indicates 3 lines of bars with 3 lengths.

REVISION	DATE	BY	REMARKS

DESIGNED	MCW
DRAWN	DAN
REVIEWED	MCW
APPROVED	MRL

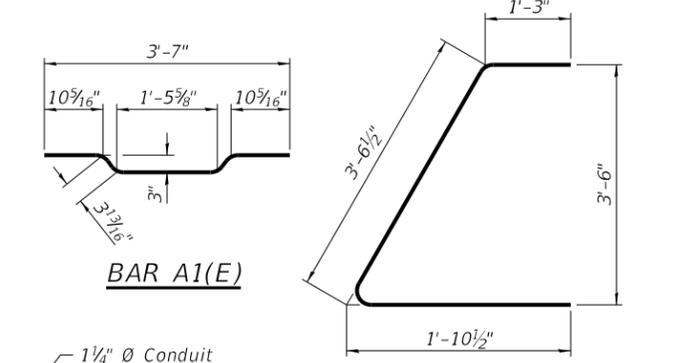
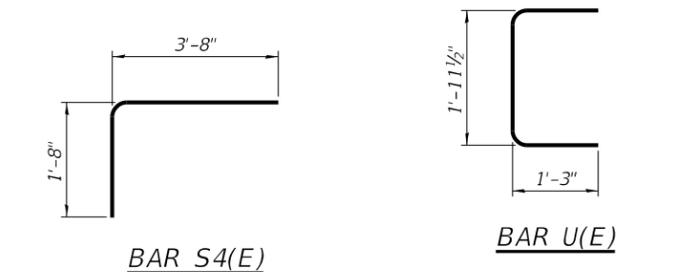
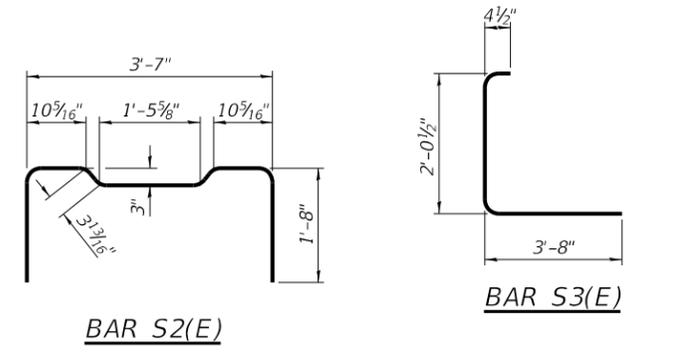
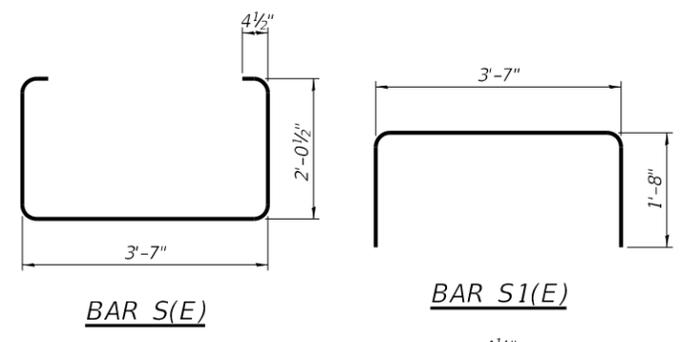
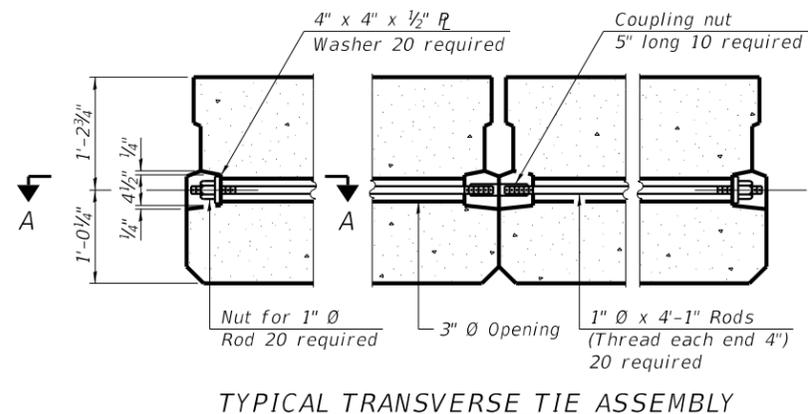
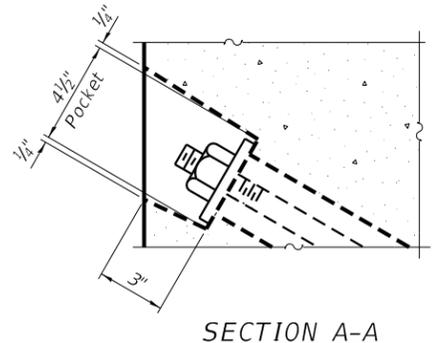
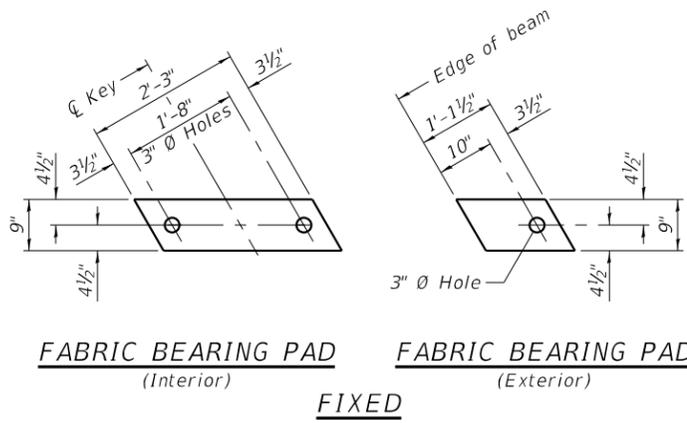
BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00



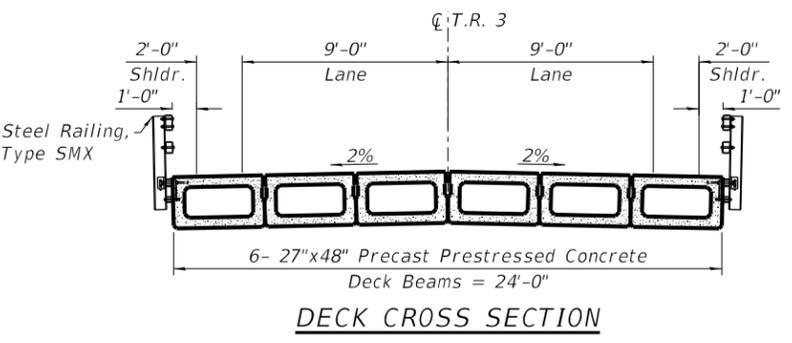
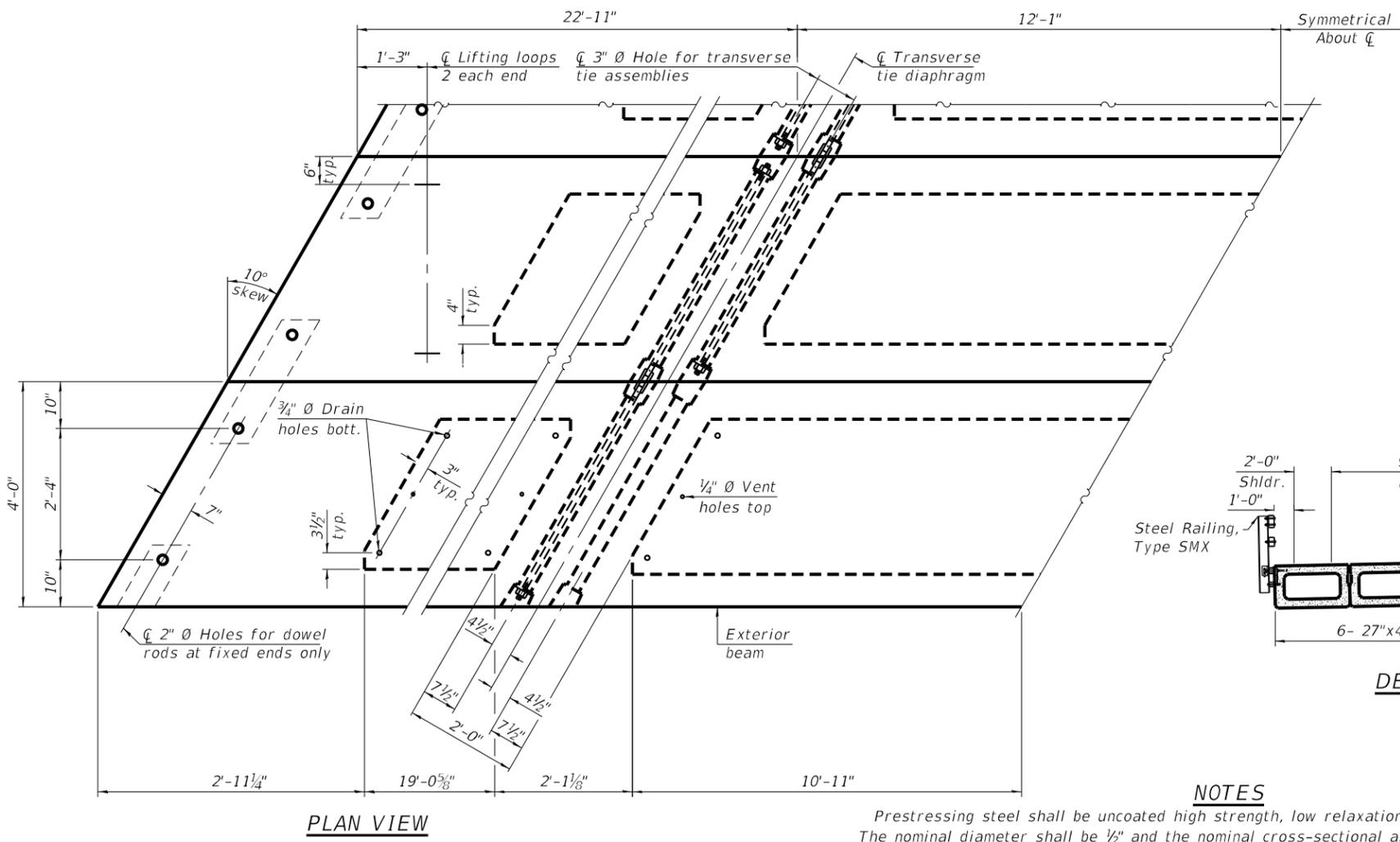
27" x 48" PPC DECK BEAM
STRUCTURE NO. 006-4190

STRUCTURAL SHEET NO. 4 OF 12 SHEETS

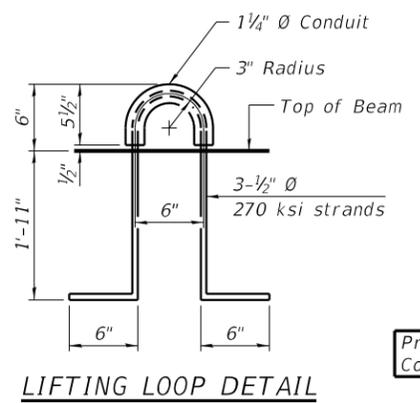
TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	11
WHA# 1458D19		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				



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



NOTES
 Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" 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 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location. A minimum 2 1/2" 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.	1,680
-------------------------------------------------	---------	-------

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

REVISION	DATE	BY	REMARKS

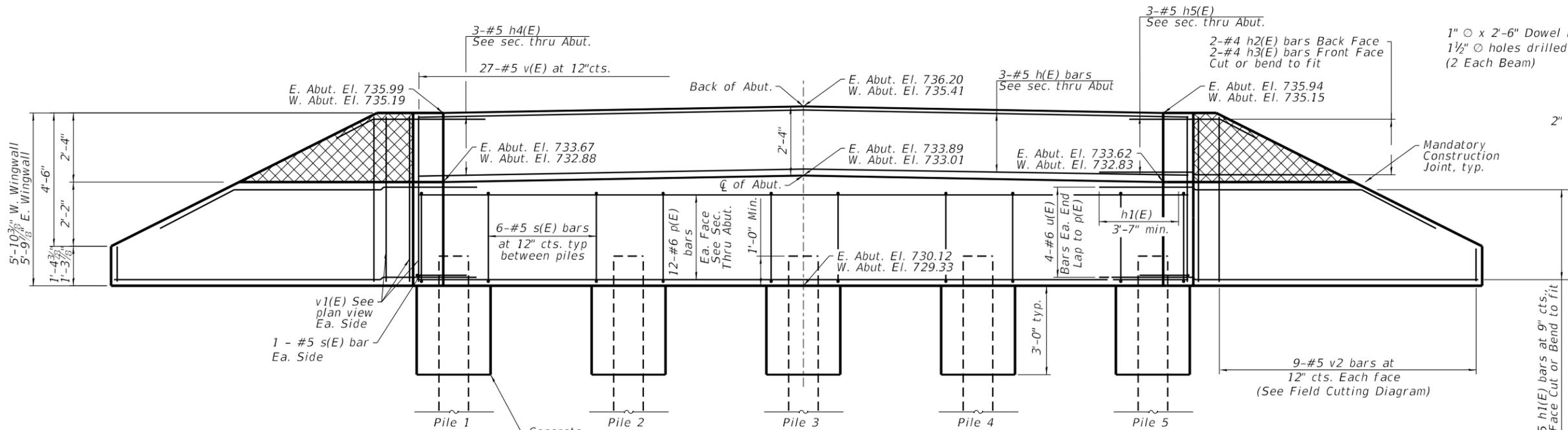
DESIGNED	MCW
DRAWN	DAN
REVIEWED	MCW
APPROVED	MRL

BUREAU COUNTY HIGHWAY DEPARTMENT
 T.R. 3 (600 N AVE.) OVER SILVER CREEK
 STATION 20+00

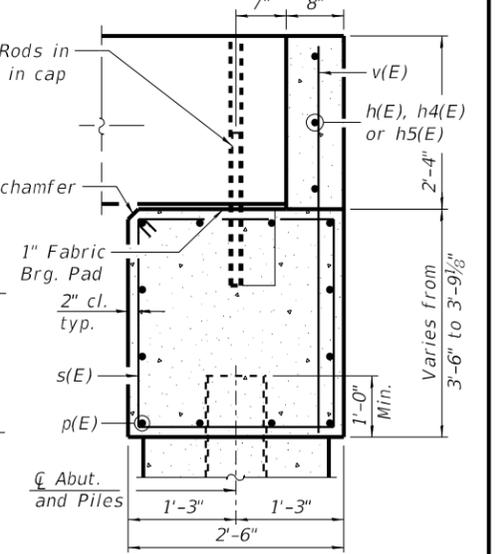
WILLETT HOFMANN & ASSOCIATES INC.
 ENGINEERING ARCHITECTURE LAND SURVEYING
 809 EAST 2ND STREET, DIXON, IL 61021-0367
 T: 815-284-3381 DESIGN FIRM: 2-84-000918

27" x 48" PPC DECK BEAM DETAILS
 STRUCTURE NO. 006-4190
 STRUCTURAL SHEET NO. 5 OF 12 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	12
WHA# 1458019		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				



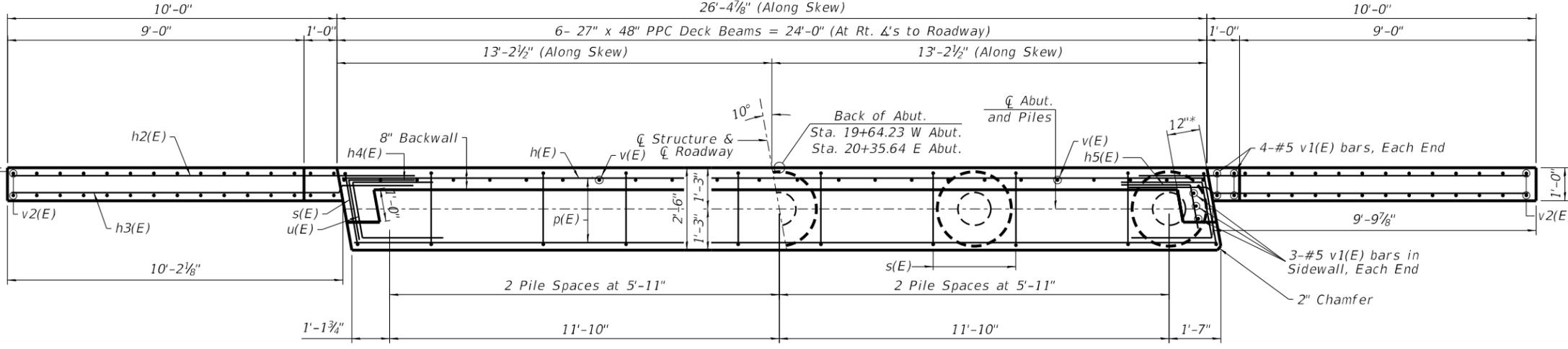
ELEVATION
(Looking East at West Abutment)
(Looking East at East Abutment)



SEC. THRU ABUT.
(Dimensions are at Rt. L's)

BILL OF MATERIAL
2 ABUTMENTS

Bar	No.	Size	Length	Shape
h(E)	6	5	26'-0"	—
h1(E)	40	5	13'-7"	—
h2(E)	8	4	9'-3"	—
h3(E)	8	4	6'-5"	—
h4(E)	6	5	4'-11"	7
h5(E)	6	5	4'-11"	7
p(E)	24	6	26'-0"	—
s(E)	52	5	11'-5"	□
u(E)	16	6	10'-11"	—
v(E)	54	5	5'-5"	—
v1(E)	24	5	5'-5"	—
v2(E)	36	5	6'-8"	—
Structure Excavation			Cu. Yd.	112
Concrete Structures			Cu. Yd.	26.8
Concrete Encasement			Cu. Yd.	5.5
Reinforcement Bars, Epoxy Coated			Pound	3390
Furnishing Metal Shell Piles 14" X 0.312"			Foot	248
Driving Piles			Foot	248
Test Pile Metal Shells			Each	2
Name Plates			Each	1
** Granular Backfill for Structures			Cu. Yd.	62
Pile Shoes			Each	10



ABOVE CONSTRUCTION JOINT
IN WINGWALL

PLAN

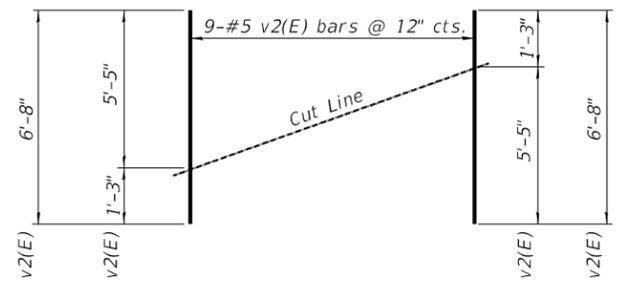
BELOW CONSTRUCTION JOINT
IN WINGWALL

PILE DATA - WEST ABUTMENT

Type: Metal Shell 14" with 0.312" Walls
Nominal Required Bearing: 339 kips
Factored Resistance Available: 186 kips
Est. Length: 30'
No. Production Piles: 4
No. Test Piles: 1
Piles Shoes: 5

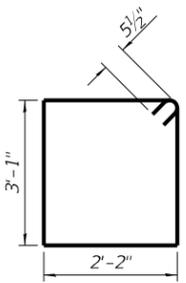
PILE DATA - EAST ABUTMENT

Type: Metal Shell 14" with 0.312" Walls
Nominal Required Bearing: 339 kips
Factored Resistance Available: 186 kips
Est. Length: 30'
No. Production Piles: 4
No. Test Piles: 1
Pile Shoes: 5

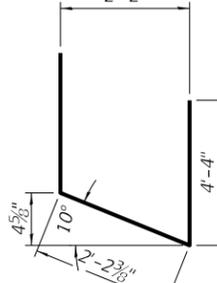


FIELD CUTTING DIAGRAM

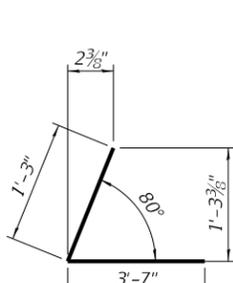
Order v2(E) bars full length.
Cut as shown and use remainder of bars in opposite face.



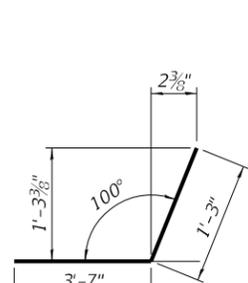
BAR s(E)



BAR u(E)



BAR h4(E)



BAR h5(E)

NOTES:

- Hatched portion of wingwalls to be poured with the backwall after the deck beams have been installed and grout has cured for a minimum of 24 hours.
- All exposed edges shall have standard 3/4" chamfers, except as noted.
- Space reinforcement in cap to miss dowel rods.
- After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure a min. of 24 hours prior to grouting the shear keys.
- For pile details, see Structural Sheet 8 of 12.
- Reinforcement bars designated (E) shall be Epoxy coated.
- * May vary due to overrun of beams.
- ** For Backfill details, see Structural Sheet 3 of 12.

REVISION	DATE	BY	REMARKS

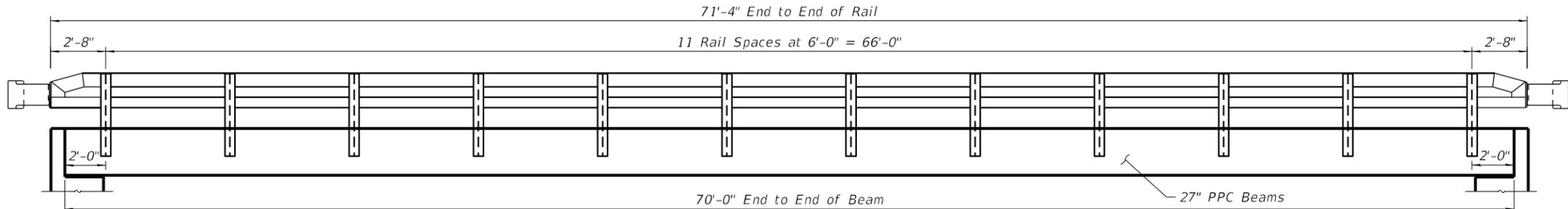
DESIGNED	ATK
DRAWN	DAL
REVIEWED	ATK
APPROVED	MRL

BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00

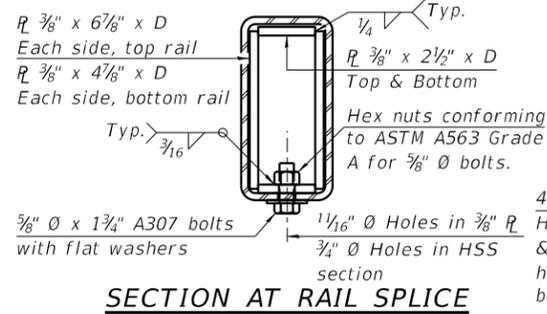


ABUTMENT DETAILS
STRUCTURE NO. 006-4284
STRUCTURAL SHEET NO. 6 OF 12 SHEETS

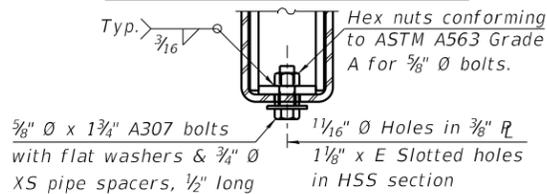
TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	13
WHA# 1458D19		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				



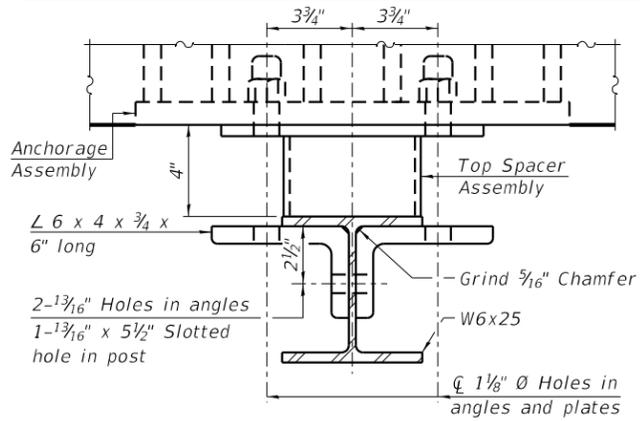
ELEVATION



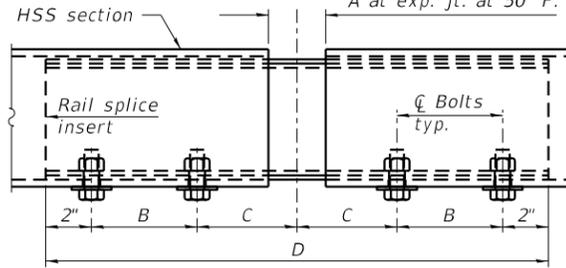
SECTION AT RAIL SPLICE



RAIL SPLICE CONNECTION AT EXPANSION JT.

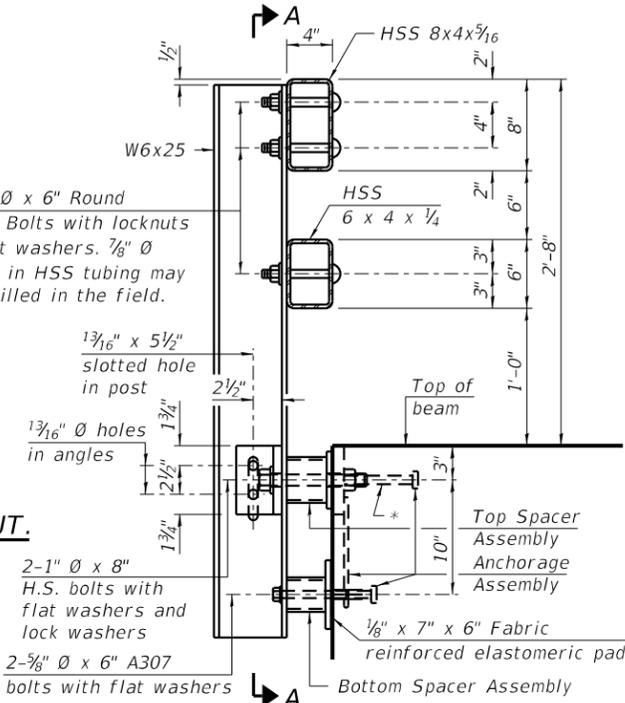


SECTION B-B



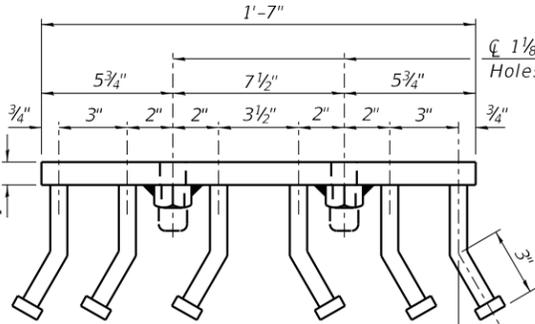
RAIL SPLICE ELEVATION
RAILING CRITERIA

MASH 2016 Test Level	2
Railing Weight (plf)	90
Min f'c (psi)	5,000
Max Post Spacing	6'-3"
HMA thickness range (in)	1 1/4" - 3 1/8"



SECTION AT RAIL POST

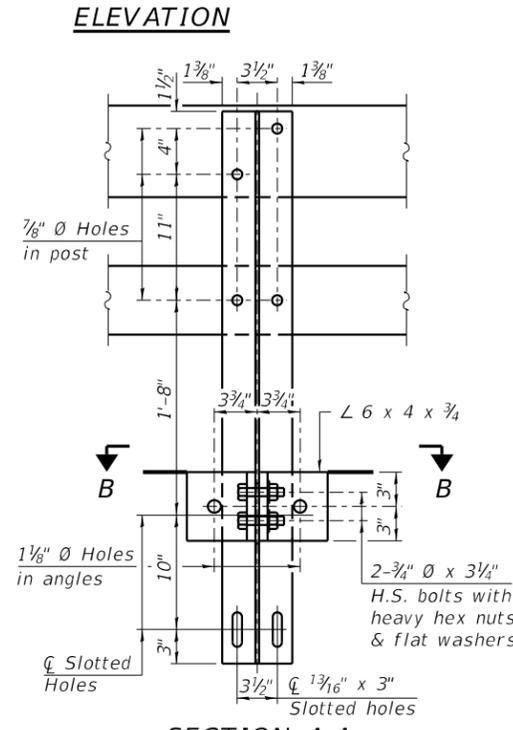
* The outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchorage assembly. The anchorage studs may be bent down 1/2" to accommodate the top reinforcement bar placement.



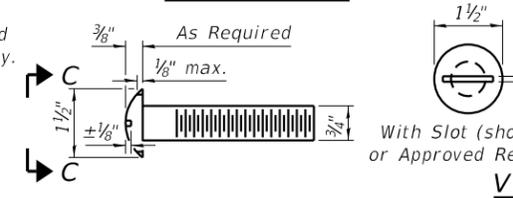
VIEW E-E
SPLICE DIMENSIONS

Location	T	A	B	C	D	E
All locs. not over exp. jts.	0	1/4"	4"	4"	1'-8"	-
Over Strip Seal Jt.	≤4"	2 1/2"	4 3/8"	4 3/8"	1'-10"	3 1/16"
Over Finger or Modular Jt.	≤9 1/2"	5 1/2"	7 3/8"	7 1/4"	2'-9 1/4"	5 1 3/16"
Over Finger or Modular Jt.	≤15"	8 1/4"	10 1/8"	10"	3'-8 1/4"	8 9/16"

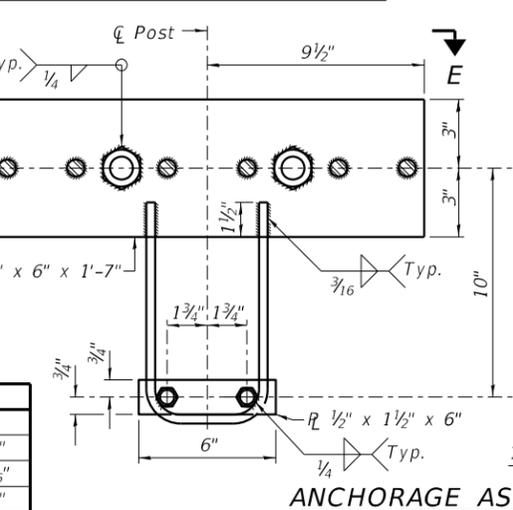
T = ; total movement along centerline of roadway at expansion joint.



SECTION A-A

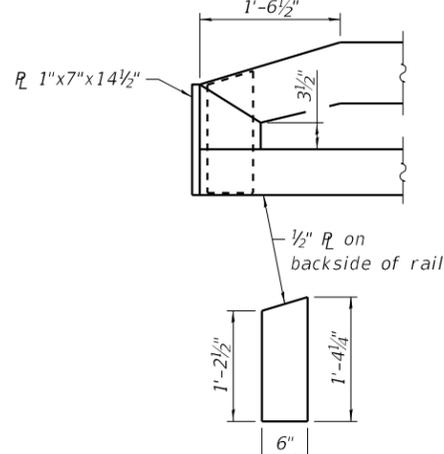


ROUND HEAD BOLT DETAIL

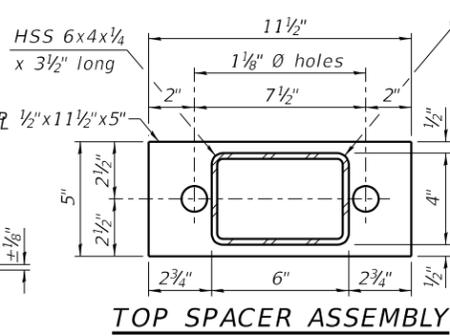


ANCHORAGE ASSEMBLY

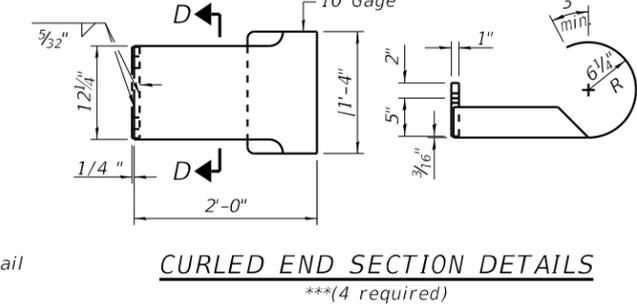
** Threaded areas shall be plugged or blocked off during casting of concrete.



END OF RAIL DETAILS

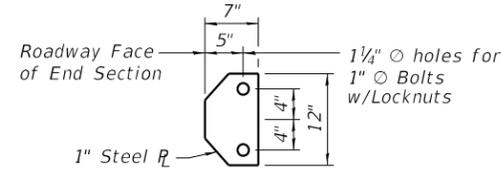


TOP SPACER ASSEMBLY

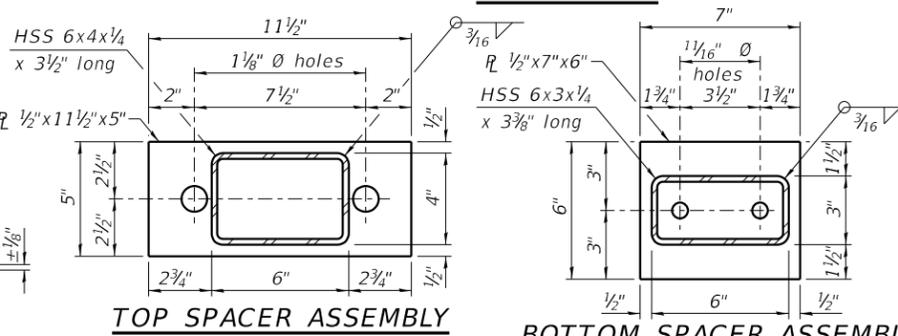


CURL ED END SECTION DETAILS

*** (4 required)



SECTION D-D



BOTTOM SPACER ASSEMBLY

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	143

NOTES:

A sufficient number of shims of various thicknesses, sized to fit behind the top spacer assembly, 5" x 11 1/2", and bottom spacer assembly, 6" x 7", shall be provided to adjust posts for proper alignment. If the summation of shims is greater than 1/4" (top) or 1/2" (bottom), longer bolts are required. Cost included with Steel Railing, Type SM.

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 - 3/8" bent R's in lieu of the 4 R 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.

Cost of rail end sections incidental to Steel Railing, Type SM

REVISION	DATE	BY	REMARKS

DESIGNED ATK
DRAWN DAL
REVIEWED ATK
APPROVED MRL

BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00

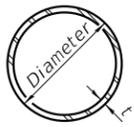
WILLET HOFMANN & ASSOCIATES INC.
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRMS: # 84-009118

STEEL RAILING, TYPE SM
STRUCTURE NO. 006-4284

STRUCTURAL SHEET NO. 7 OF 12 SHEETS

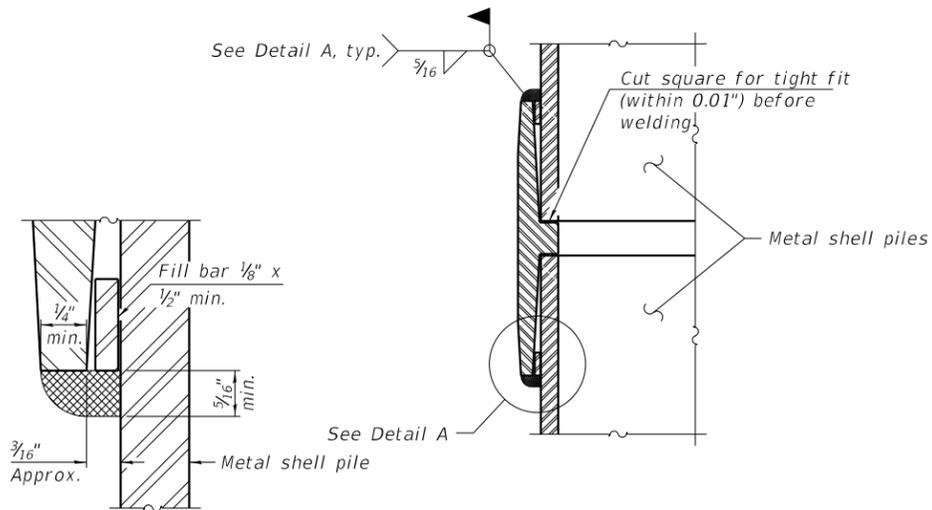
TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	14
WHA# 1458D19		CONTRACT NO. 87738		

ILLINOIS FED. AID PROJECT

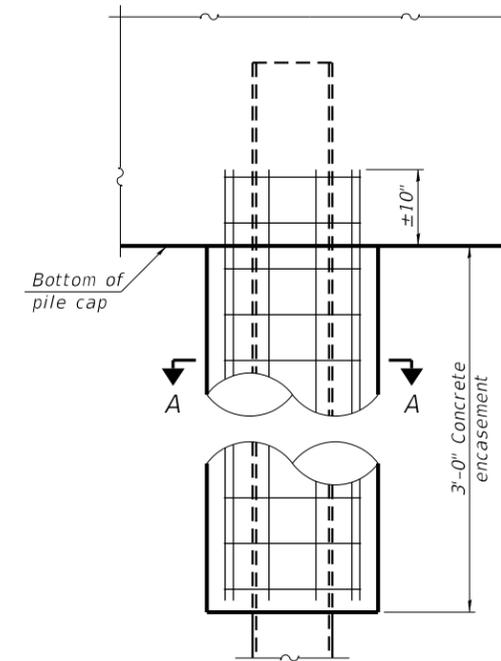


METAL SHELL PILE TABLE

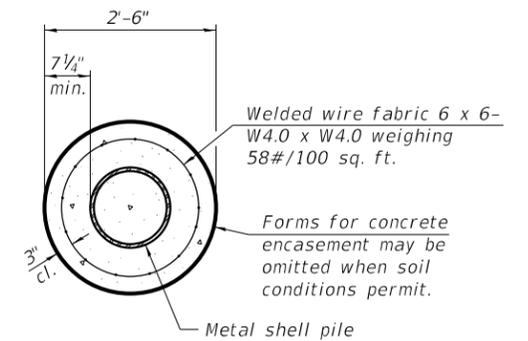
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.250"	31.40	0.0267
PP14	0.250"	36.75	0.0368
PP14	0.312"	45.65	0.0361
PP16	0.312"	52.32	0.0478
PP16	0.375"	62.64	0.0470



DETAIL A

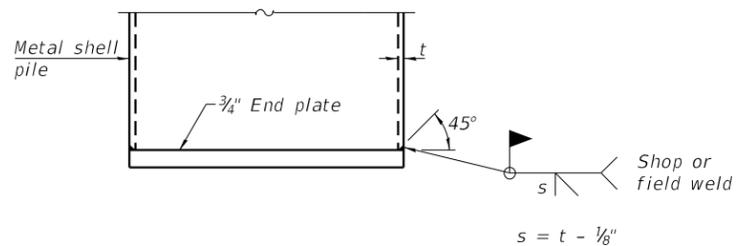


ELEVATION



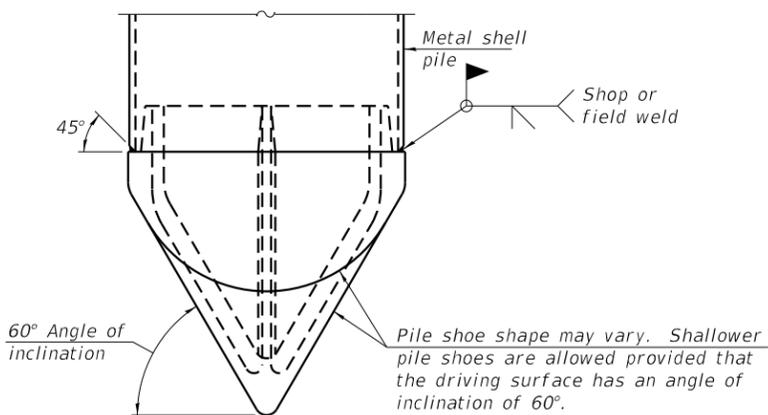
SECTION A-A

INDIVIDUAL PILE CONCRETE ENCASUREMENT
(When specified)



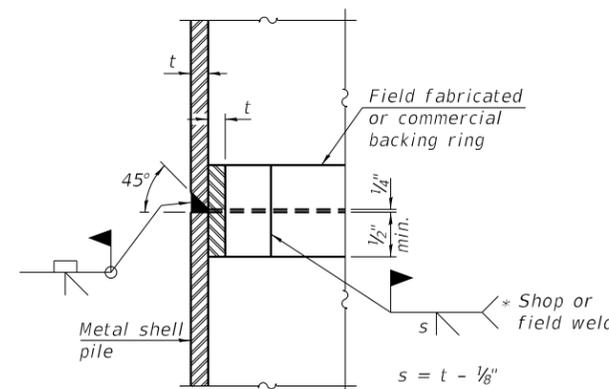
END PLATE ATTACHMENT

WELDED COMMERCIAL SPLICE
Notes:
The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.
Pile segments shall be driven to solid contact with splicer before welding.



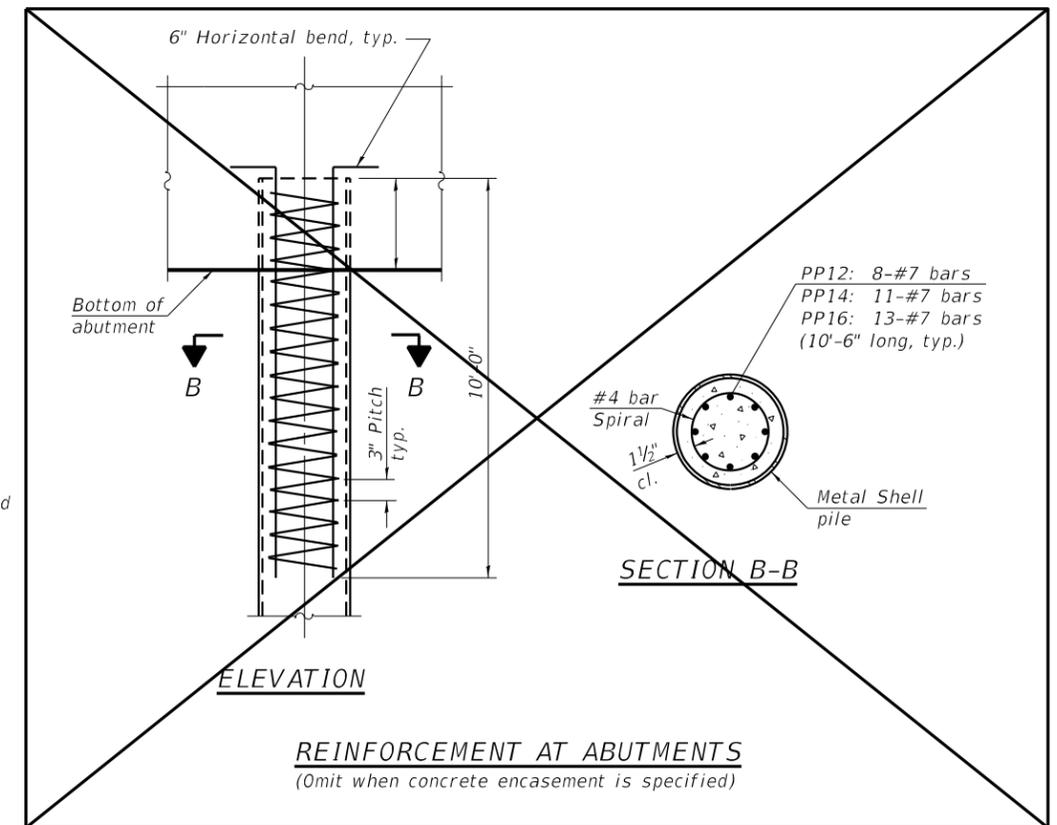
PILE SHOE ATTACHMENT

(When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 80-50 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld).



COMPLETE PENETRATION WELD SPLICE

* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION

SECTION B-B

REINFORCEMENT AT ABUTMENTS
(Omit when concrete encasement is specified)

Note:
The metal shell piles shall be according to Article 1006.05 of the Standard Specifications.

REVISION	DATE	BY	REMARKS

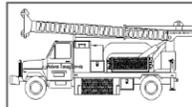
DESIGNED	MCW
DRAWN	DAN
REVIEWED	MCW
APPROVED	MRL

BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00

WILLETT HOFMANN & ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM #: 84-000918

METAL SHELL PILE DETAILS
STRUCTURE NO. 006-4190
STRUCTURAL SHEET 8 OF 12 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	15
WHA# 1458019		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

Sheet 1 of 4

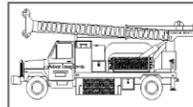
Client: Willett Hofmann & Associates, Inc.
Project Name: T.R.3 (600 N. Ave.) over Silver Creek
Project Site: Existing S. N.: 006-4202 Proposed S.N. 006-4190
Macon Township Bureau County, Illinois

Boring No. B-1
Surface Elev. 735.24
Auger Depth 76' Rotary Depth NA
Start Date 04/16/24 Finish Date 04/16/24

Location: Station: 19+67 6' RT

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						Dry Density (PCF)	DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		Randy Safranski Diedrich D-120	
735.24												
734.24	Asphalt over Aggregate		1									
733.24			2									
732.24	Stiff Black Silty Clay Fill		3	1	SS	1.2	9	B/S	19			
731.24			4									
730.24			5	2	SS	1.4	10	S	17			
729.24			6									
728.24			7									
727.24			8	3	SS	1.0	7	B	38			
726.24			9									
725.24	Medium Stiff Black Silty Clay Fill		10	4	SS	1.0	6	B	34			
724.24			11									
723.24			12									
722.24			13	5	SS	1.0	4	B	---			
721.24			14								Water	
720.24			15	6	SS	---	4	---	---			
719.24	Loose Brown Fine Sand & Gravel		16									
718.24			17									
717.24			18	7	SS	---	4	---	---			
716.24			19									
715.24	Soft Gray Silty Clay		20	8	SS	0.5	3	B	18			

Groundwater Data: Static water after auger removal, elevation 721.24.
Comments: B.M. #402, Chisel mark at Northwest corner Hub Guard elevation 735.99



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

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Sheet 2 of 4

Client: Willett Hofmann & Associates, Inc.
Project Name: T.R.3 (600 N. Ave.) over Silver Creek
Project Site: Existing S. N.: 006-4202 Proposed S.N. 006-4190
Macon Township Bureau County, Illinois

Boring No. B-1
Surface Elev. 735.24
Auger Depth 76' Rotary Depth NA
Start Date 04/16/24 Finish Date 04/16/24

Location: Station: 19+67 6' RT

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						Dry Density (PCF)	DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		Randy Safranski Diedrich D-120	
714.24												
713.24			22									
712.24	Soft Gray Silty Clay		23	9	SS	0.8	5	B	18			
711.24			24									
710.24			25									
709.24	Stiff Gray Silty Clay Loam Till		26	10	SS	1.3	10	S	16			
708.24			27									
707.24			28									
706.24			29									
705.24	Medium Dense Brown/Gray Medium Sand & Gravel		30	11	SS	---	18	---	---			
704.24			31									
703.24			32									
702.24			33									
701.24			34									
700.24			35	12	SS	---	56	---	---			
699.24			36									
698.24	Very Dense Brown/Gray Fine to Coarse Gravel		37									
697.24			38									
696.24			39									
695.24			40									
694.24	Medium Dense Brown/Gray Fine to Coarse Gravel		41	13	SS	---	27	---	---			

Groundwater Data: Static water after auger removal, elevation 721.24.
Comments: B.M. #402, Chisel mark at Northwest corner Hub Guard elevation 735.99

REVISION	DATE	BY	REMARKS

DESIGNED	MCW
DRAWN	DAN
REVIEWED	MCW
APPROVED	MRL

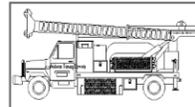
BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00



BORING LOGS
STRUCTURE NO. 006-4190

STRUCTURAL SHEET NO. 9 OF 12 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	16
WHA# 1458019		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Phone: 815-223-6696
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e-mail: mts37@comcast.net

Sheet 3 of 4

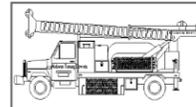
Client: Willett Hofmann & Associates, Inc.
Project Name: T.R.3 (600 N. Ave.) over Silver Creek
Project Site: Existing S. N.: 006-4202 Proposed S.N. 006-4190
Macon Township Bureau County, Illinois

Boring No. B-1
Surface Elev. 735.24
Auger Depth 76' Rotary Depth NA
Start Date 04/16/24 Finish Date 04/16/24

Location: Station: 19+67 6' RT

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
693.24										Randy Safranski Diedrich D-120	
692.24	Medium Dense Brown/Gray Fine to Coarse Gravel		43								
691.24			44								
690.24			45	14	SS	---	22	---	---		
689.24			46								
688.24	Very Stiff Gray Clay Loam Till		47								
687.24			48								
686.24			49								
685.24			50	15	SS	2.5	24	S	16		
684.24			51								
683.24	Hard Pink Clay Loam Till		52								
682.24			53								
681.24			54								
680.24			55	16	SS	4.3	35	S	14		
679.24			56								
678.24			57								
677.24			58								
676.24	Hard Pink/Gray Clay Loam Till with Sand Seams		59								
675.24			60	17	SS	5.0	37	S	12		
674.24			61								
673.24			62								

Groundwater Data: Static water after auger removal, elevation 721.24.
Comments: B.M. #402, Chisel mark at Northwest corner Hub Guard elevation 735.99



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

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Sheet 4 of 4

Client: Willett Hofmann & Associates, Inc.
Project Name: T.R.3 (600 N. Ave.) over Silver Creek
Project Site: Existing S. N.: 006-4202 Proposed S.N. 006-4190
Macon Township Bureau County, Illinois

Boring No. B-1
Surface Elev. 735.24
Auger Depth 76' Rotary Depth NA
Start Date 04/16/24 Finish Date 04/16/24

Location: Station: 19+67 6' RT

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
672.24										Randy Safranski Diedrich D-120	
671.24	Hard Pink/Gray Clay Loam Till with Sand Seams		64								
670.24			65								
669.24			66	18	SS	5.1	34	S	12		
668.24			67								
667.24			68								
666.24			69								
665.24			70	19	SS	---	31	---	13		
664.24			71								
663.24			72								
662.24			73								
661.24			74								
660.24			75								
659.24			76	20	SS	4.1	32	S	13		
658.24	Boring Terminated		77								
657.24			78								
656.24			79								
655.24			80								
654.24			81								
653.24			82								
652.24			83								

Groundwater Data: Static water after auger removal, elevation 721.24.
Comments: B.M. #402, Chisel mark at Northwest corner Hub Guard elevation 735.99

REVISION	DATE	BY	REMARKS

DESIGNED	MCW
DRAWN	DAN
REVIEWED	MCW
APPROVED	MRL

BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00

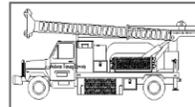


WILLETT HOFMANN & ASSOCIATES, INC.
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRMS: # 84-000918

BORING LOGS
STRUCTURE NO. 006-4190

STRUCTURAL SHEET NO. 10 OF 12 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	17
WHA# 1458019		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

Sheet 1 of 4

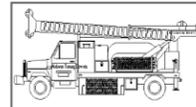
Client: Willett Hofmann & Associates, Inc.
Project Name: T.R.3 (600 N. Ave.) over Silver Creek
Project Site: Existing S. N.: 006-4202 Proposed S.N. 006-4190
Macon Township Bureau County, Illinois

Boring No. B-2
Surface Elev. 735.41
Auger Depth 76' Rotary Depth NA
Start Date 04/16/24 Finish Date 04/16/24

Location: Station: 20+35 5' LT

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
735.41										Randy Safranski Diedrich D-120	
734.41	Asphalt over Aggregate		1								
733.41			2								
732.41			3	1	SS	1.4	9	S	18		
731.41	Stiff Black/Gray Silty Clay with Cobble Fill		4								
730.41			5	2	SS	1.4	9	S	18		
729.41			6								
728.41			7								
727.41			8	3	SS	1.0	8	B	21		
726.41			9								
725.41			10	4	SS	1.0	6	B	34		
724.41			11								
723.41	Medium Stiff Gray Silty Clay with Sand Seams		12								
722.41			13	5	SS	1.0	4	B	18		
721.41			14								
720.41			15	6	SS	1.2	8	S	20		Water
719.41			16								
718.41			17								
717.41			18	7	SS	1.2	8	B	19		
716.41			19								
715.41	Stiff to Very Stiff Gray Silty Clay Loam Till with Cobbles		20								
				20	8	SS	---	30	---	11	

Groundwater Data: Static water after auger removal, elevation 721.24.
Comments: B.M. #402, Chisel mark at Northwest corner Hub Guard elevation 735.99



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Phone: 815-223-6696
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e-mail: mts37@comcast.net

Sheet 2 of 4

Client: Willett Hofmann & Associates, Inc.
Project Name: T.R.3 (600 N. Ave.) over Silver Creek
Project Site: Existing S. N.: 006-4202 Proposed S.N. 006-4190
Macon Township Bureau County, Illinois

Boring No. B-2
Surface Elev. 735.41
Auger Depth 76' Rotary Depth NA
Start Date 04/16/24 Finish Date 04/16/24

Location: Station: 20+35 5' LT

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
714.41										Randy Safranski Diedrich D-120	
713.41	Stiff to Very Stiff Gray Silty Clay Loam Till with Cobbles		22								
712.41			23	9	SS	---	30	---	16		
711.41	Very Stiff Gray Silty Clay Loam Till		24								
710.41			25								
709.41			26	10	SS	---	26	---	15		
708.41			27								
707.41	Dense Gray Fine Sand		28								
706.41			29								
705.41			30								
704.41			31	11	SS	---	33	---	---		
703.41			32								
702.41			33								
701.41			34								
700.41			35								
699.41	Dense Gray Fine to Coarse Gravel		36	12	SS	---	36	---	---		
698.41			37								
697.41			38								
696.41	Medium Dense Brown/Gray Fine to Coarse Sand		39								
695.41			40								
694.41			41	13	SS	---	27	---	---		
				41							

Groundwater Data: Static water after auger removal, elevation 721.24.
Comments: B.M. #402, Chisel mark at Northwest corner Hub Guard elevation 735.99

REVISION	DATE	BY	REMARKS

DESIGNED	MCW
DRAWN	DAN
REVIEWED	MCW
APPROVED	MRL

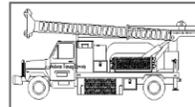
BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00



BORING LOGS
STRUCTURE NO. 006-4190

STRUCTURAL SHEET NO. 11 OF 12 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	18
WHA# 1458019		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Phone: 815-223-6696
Fax: 815-223-6659
e-mail: mts37@comcast.net

Sheet 3 of 4

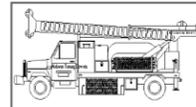
Client: Willett Hofmann & Associates, Inc.
Project Name: T.R.3 (600 N. Ave.) over Silver Creek
Project Site: Existing S. N.: 006-4202 Proposed S.N. 006-4190
Macon Township Bureau County, Illinois

Boring No. B-2
Surface Elev. 735.41
Auger Depth 76' Rotary Depth NA
Start Date 04/16/24 Finish Date 04/16/24

Location: Station: 20+35 5' LT

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
693.41										Randy Safranski Diedrich D-120	
692.41	Medium Dense Brown/Gray Fine to Coarse Sand		43								
691.41			44								
690.41			45	14	SS	---	22	---	---		
689.41			46								
688.41			47								
687.41			48								
686.41			49								
685.41			50	15	SS	4.7	31	S	14		
684.41	Hard Pinkish/Gray Clay Loam Till		51								
683.41			52								
682.41			53								
681.41			54								
680.41			55	16	SS	5.0	33	S	13		
679.41			56								
678.41			57								
677.41			58								
676.41			59								
675.41			60	17	SS	5.1	37	S	13		
674.41	Hard Pink/Gray Clay Loam Till with Sand Seams		61								
673.41			62								

Groundwater Data: Static water after auger removal, elevation 721.24.
Comments: B.M. #402, Chisel mark at Northwest corner Hub Guard elevation 735.99



Midwest Testing Services, Inc.
3705 Progress Blvd.
Peru, IL 61354

BORING LOG

Phone: 815-223-6696
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Sheet 4 of 4

Client: Willett Hofmann & Associates, Inc.
Project Name: T.R.3 (600 N. Ave.) over Silver Creek
Project Site: Existing S. N.: 006-4202 Proposed S.N. 006-4190
Macon Township Bureau County, Illinois

Boring No. B-2
Surface Elev. 735.41
Auger Depth 76' Rotary Depth NA
Start Date 04/16/24 Finish Date 04/16/24

Location: Station: 20+35 5' LT

(DEPTH) ELEV.	DESCRIPTION OF MATERIALS	Graphic Log	Depth in feet	SAMPLES						DRILLED BY	REMARKS
				Sample No.	Sample Type	Qu (TSF)	N Value (Blows)	Bulge / Shear	Moisture (%)		
672.41										Randy Safranski Diedrich D-120	
671.41			64								
670.41			65								
669.41			66	18	SS	5.1	34	S	12		
668.41			67								
667.41	Hard Pink/Gray Clay Loam Till with Sand Seams		68								
666.41			69								
665.41			70	19	SS	4.6	31	S	13		
664.41			71								
663.41			72								
662.41			73								
661.41			74								
660.41			75	20	SS	4.2	33	S	14		
659.41			76								
658.41	Boring Terminated		77								
657.41			78								
656.41			79								
655.41			80								
654.41			81								
653.41			82								
652.41			83								

Groundwater Data: Static water after auger removal, elevation 721.24.
Comments: B.M. #402, Chisel mark at Northwest corner Hub Guard elevation 735.99

REVISION	DATE	BY	REMARKS

DESIGNED	MCW
DRAWN	DAN
REVIEWED	MCW
APPROVED	MRL

BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00

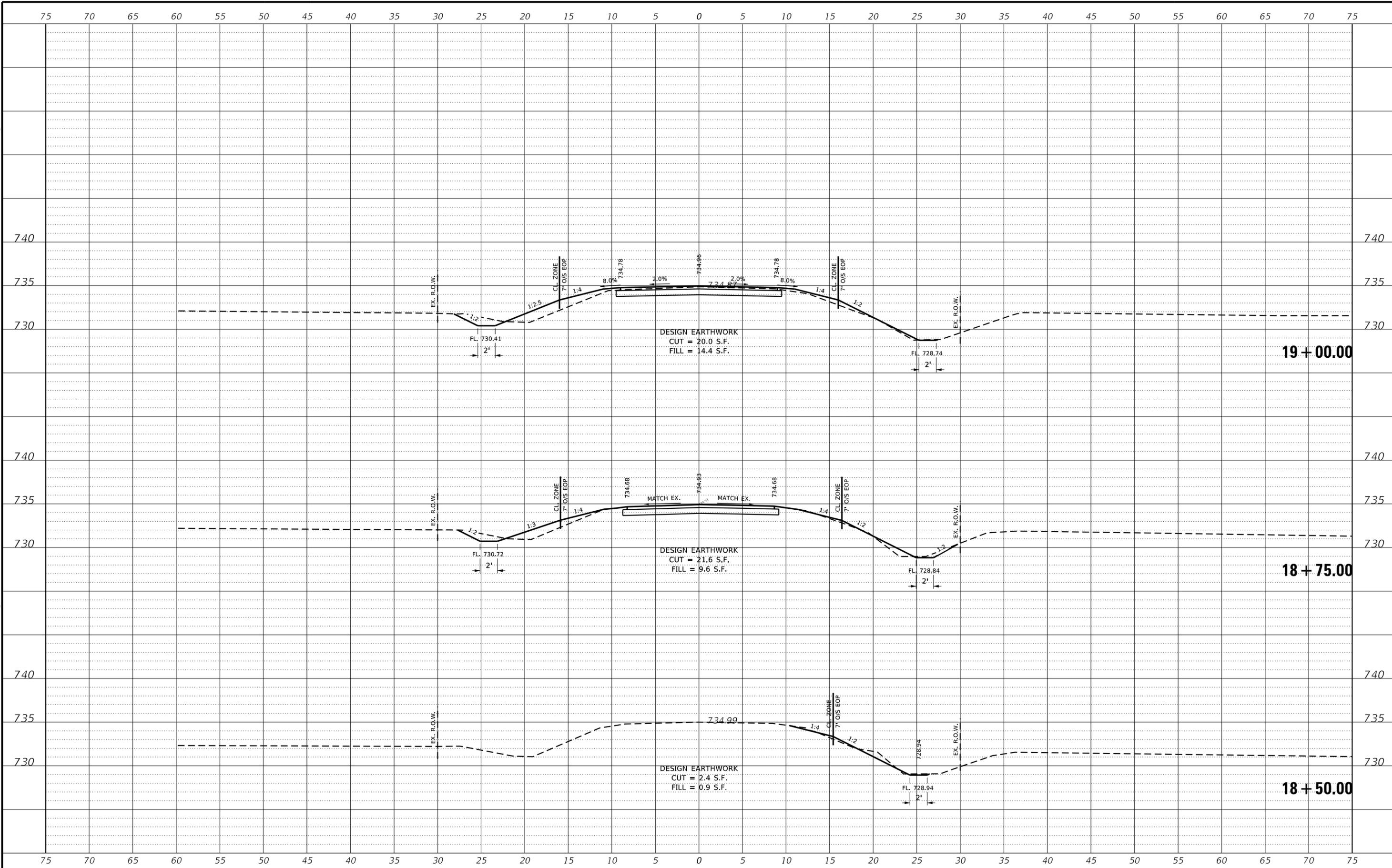


WILLETT HOFMANN & ASSOCIATES, INC.
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRMS: # 84-000918

BORING LOGS
STRUCTURE NO. 006-4190

STRUCTURAL SHEET NO. 12 OF 12 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	19
WHA# 1458019		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				



REVISION	DATE	BY	REMARKS

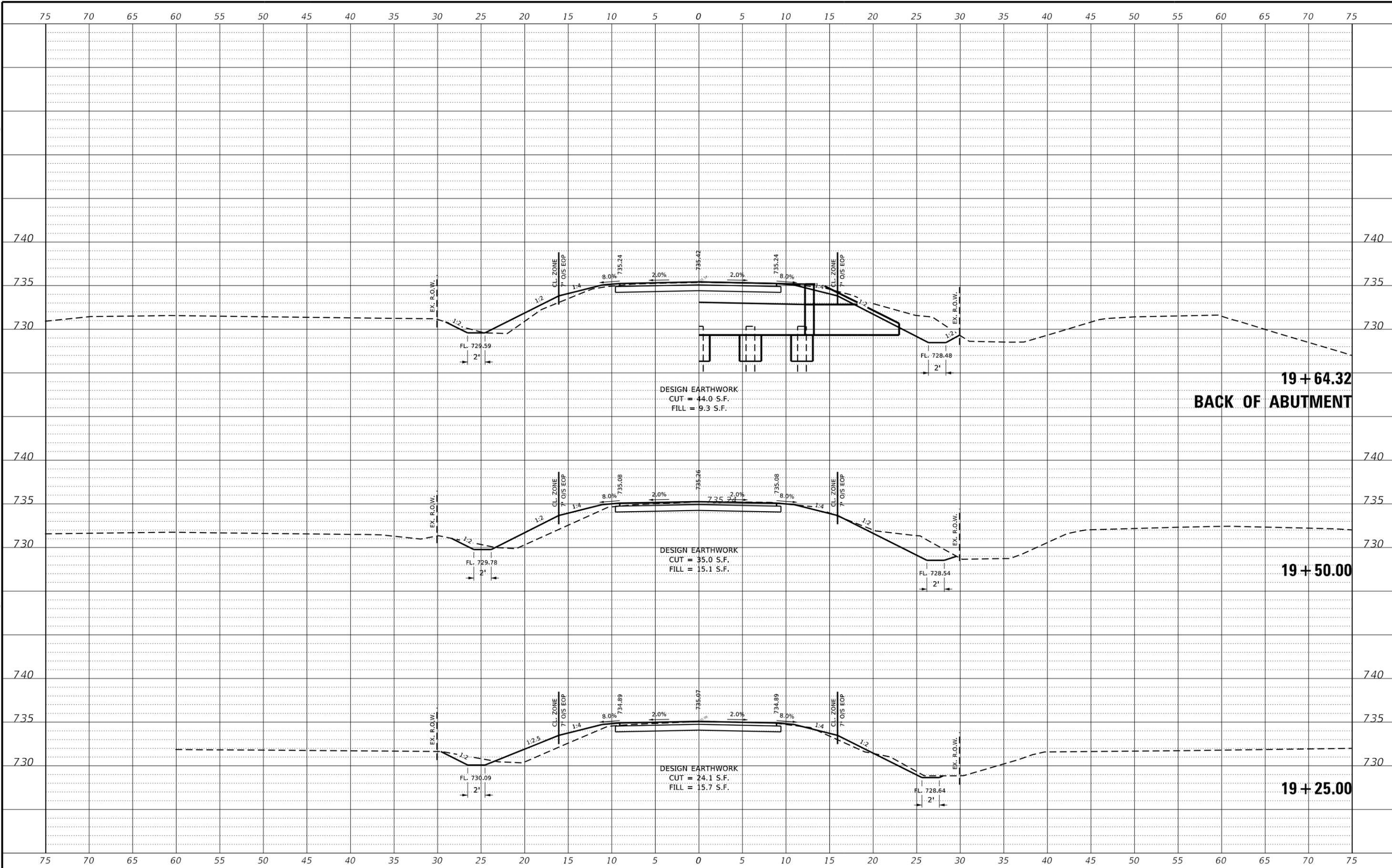
DESIGNED	ATK
DRAWN	CJI
REVIEWED	GBG
APPROVED	MRL

BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00



CROSS SECTIONS
STA. 18+50.00 - 19+00.00
SHEET 1 OF 5

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	20
WHA# 1458019		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				



REVISION	DATE	BY	REMARKS

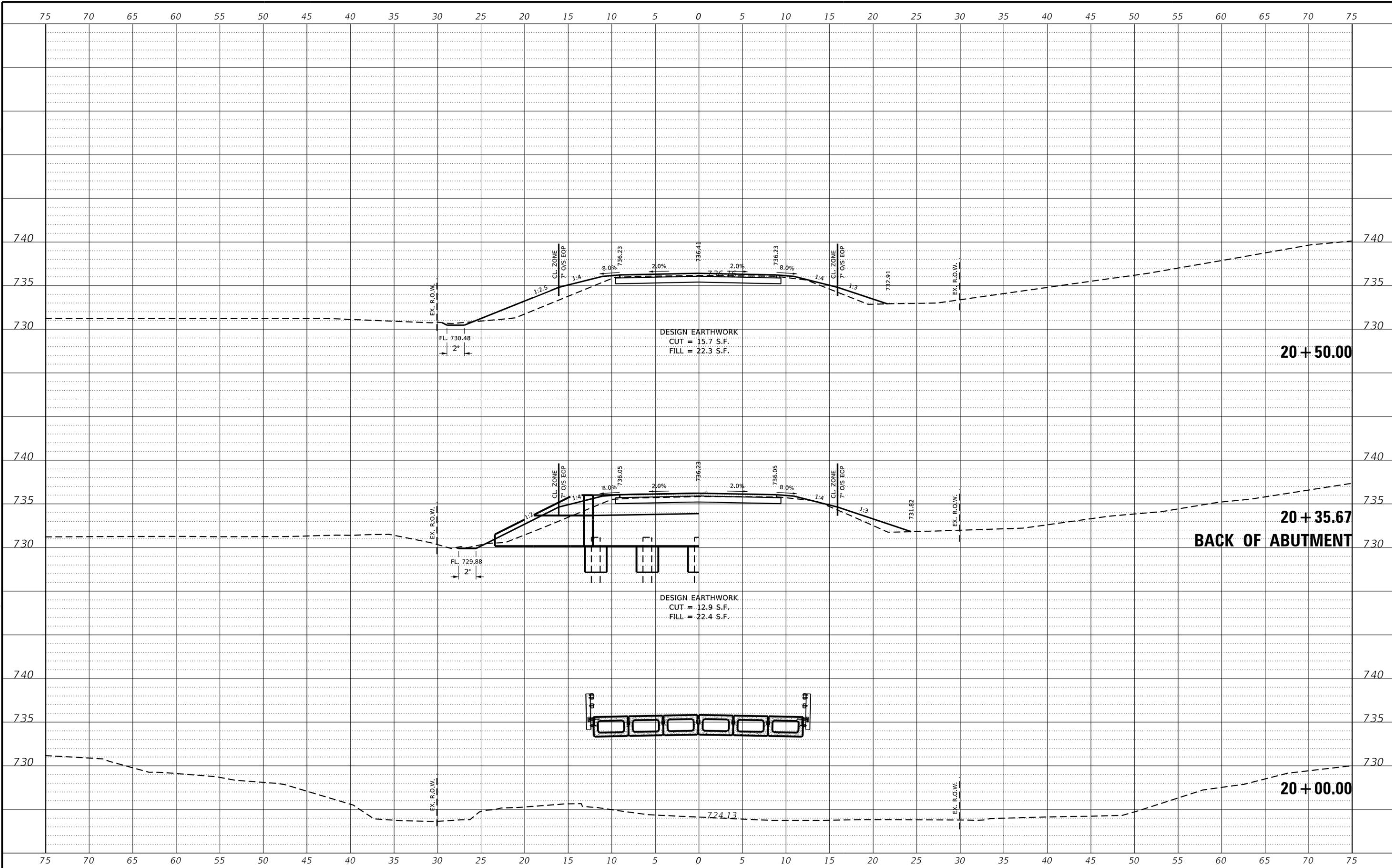
DESIGNED	ATK
DRAWN	CJI
REVIEWED	GBG
APPROVED	MRL

BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00



CROSS SECTIONS
STA. 19+25.00 - 19+65.00
SHEET 2 OF 5

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	21
WHA# 1458D19		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				



REVISION	DATE	BY	REMARKS

DESIGNED	ATK
DRAWN	CJI
REVIEWED	GBG
APPROVED	MRL

BUREAU COUNTY HIGHWAY DEPARTMENT
T.R. 3 (600 N AVE.) OVER SILVER CREEK
STATION 20+00



CROSS SECTIONS
STA. 20+00.00 - 20+50.00

SHEET 3 OF 5

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3	16-14122-00-BR	BUREAU	23	22
WHA# 1458019		CONTRACT NO. 87738		
ILLINOIS FED. AID PROJECT				

