

INDEX OF SHEETS

04-27-12 LETTING ITEM 181

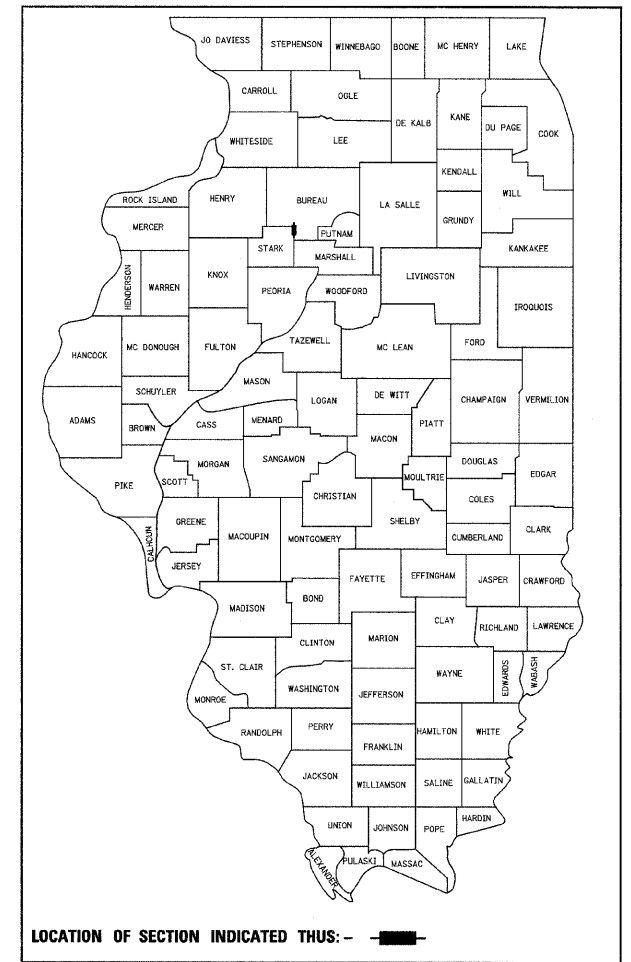
STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
FEDERAL AID PROJECT
HIGHWAY BRIDGE PROGRAM**

- 1 = COVER SHEET
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- 4 = TYPICAL SECTIONS
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- 10 = RIPRAP & PILE LAYOUT
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- 12 = 33" x 36" DECK BEAM DETAILS
- 13 = SOUTH ABUTMENT DETAILS
- 14 = NORTH ABUTMENT DETAILS
- 15 = STEEL RAILING, TYPE S1 DETAILS
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- 17 = BORING LOGS
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TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	1
		ILLINOIS	CONTRACT NO. 87498	

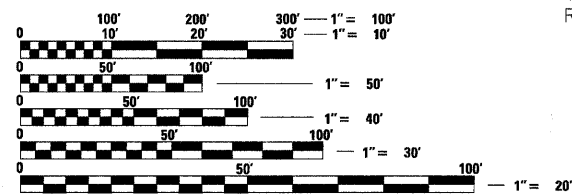


STANDARDS

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
- 280001-06 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-03 NAME PLATE FOR BRIDGES
- 542301-03 PRECAST REINFORCED CONCRETE FLARED END SECTION
- 542401-01 METAL END SECTION FOR PIPE CULVERTS
- 701901-02 TRAFFIC CONTROL DEVICES
- 720011-01 METAL POSTS FOR SIGNS, MARKERS & DELINEATORS
- 728001-01 TELESCOPING STEEL SIGN SUPPORT
- 729001-01 APPLICATIONS OF TYPE 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
- B.L.R. 24-2 MAILBOX TURNOUT FOR LOCAL ROADS

TR ROUTE 136 (1125 E. ST.)
SECTION 10-16115-00-BR
PROJECT BROS-0011(084)
STRUCTURE REPLACEMENT
BUREAU COUNTY
MILO ROAD DISTRICT
C-93-005-12

LOCATION MAP SCALE 0 1 2 4 MILES



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

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

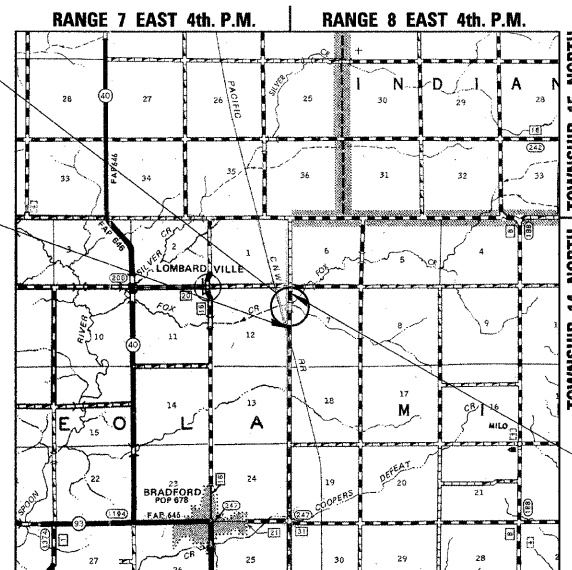
PROJECT ENGINEER - MCW
PROJECT MANAGER - BKC

CONTRACT NO. 87498

PROPOSED STRUCTURE: S.N. 006-4235
A SINGLE SPAN (1082'-8") PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE ON PILE BENT SPILL THRU ABUTMENTS @ STA. 20+05. SKEWED 20° RIGHT AHEAD.

UTILITIES:
VERIZON (FRONTIER COM.)
Attn: Garrett Burt
112 Elm Street
Sycamore, IL 60178
815-895-1538
AMEREN CILCO
Attn: John Relck
8420 N. University
Peoria, IL 61615
309-693-4697

FUNCTIONAL CLASSIFICATION
LOCAL ROAD (NON-URBAN)
DESIGN SPEED 30 MPH
2012 ADT = 55
3R GUIDELINES



GROSS LENGTH = 700 FT. = 0.133 MILE
NET LENGTH = 600 FT. = 0.114 MILE

CONSTRUCTION BEGINS STATION 17+00

CONSTRUCTION ENDS STATION 24+00

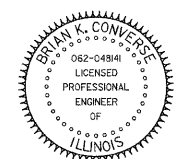
BUREAU COUNTY HIGHWAY DEPARTMENT

APPROVED *February 8th 2012* 2012
BUREAU COUNTY ENGINEER

APPROVED *February 20th 2012* 2012
MILO ROAD COMMISSIONER

PASSED *02 - 24 - 2012* 2012
DISTRICT 3 PROJECT IMPLEMENTATION ENGINEER

RELEASING FOR BID BASED ON LIMITED REVIEW *02 - 24 - 2012* 2012
DEPUTY DIRECTOR OF HIGHWAYS, REGION 2 ENGINEER



Brian K. Converse
DATE: 7/7/2012
EXPIRES 11/30/2013

WILLET HOFMANN & ASSOCIATES INC.
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3381 DESIGN FIRM: #184-000918

FILE # S:\PROJECTS\2010\1286012_BureauCo_TR136_DESIGN\DRAWINGS\1286012R\Cover.dgn

SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE: 0011

PAY CODE	QUANTITY	UNIT	ITEM
20100500	0.74	Acre	Tree Removal, Acres
20300100	637	Cu. Yd.	Channel Excavation
25100630	2,671	Sq. Yd.	Erosion Control Blanket
28000305	63	Foot	Temporary Ditch Checks
28000400	318	Foot	Perimeter Erosion Barrier
28000500	3	Each	Inlet and Pipe Protection
*40200100	780	Ton	Aggregate Surface Course, Type A
*40200800	85	Ton	Aggregate Surface Course, Type B
*50100100	1	Each	Removal of Existing Structures
50105220	189	Foot	Pipe Culvert Removal
*50300225	33.8	Cu. Yd.	Concrete Structures
50400605	1,984	Sq. Ft.	Precast Prestressed Concrete Deck Beams (33" Depth)
50800105	4,260	Pound	Reinforcement Bars
Δ50900205	168	Foot	Steel Railing, Type S1
51200957	216	Foot	Furnishing Metal Shell Piles 12" x 0.250"
51202305	216	Foot	Driving Piles
51203200	2	Each	Test Pile Metal Shells
51500100	1	Each	Name Plates
542A0220	82	Foot	Pipe Culverts, Class A, Type 1 15"
542D0217	74	Foot	Pipe Culverts, Class D, Type 1 12"
54213660	1	Each	Precast Reinforced Concrete Flared End Sections 15"
54213867	4	Each	Steel End Sections 12"
67100100	1	L. Sum	Mobilization
Z0013798	1	L. Sum	Construction Layout
*X2020410	565	Cu. Yd.	Earth Excavation (Special)
*X2070302	194	Ton	Porous Granular Embankment, Special
*X2501100	0.55	Acre	Seeding, Class 3 (Special)
*X2810210	1,178	Ton	Stone Riprap, Class A5 (Special)
*X7010216	1	L. Sum	Traffic Control and Protection, (Special)

*See B.L.R. 11310 in the contract documents for Special Provisions.

Δ Specialty Items

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DESIGNED - MICHAEL WAGNER	REVISED -
CHECKED - BRIAN CONVERSE	REVISED -
DRAWN - MICHAEL WAGNER	REVISED -
CHECKED - MEGAN CACKLEY	REVISED -

BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20 + 05

SUMMARY OF QUANTITIES
STRUCTURE NO. 006-4235

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	2
WHA# 1286D10		CONTRACT NO. 87498		
[ILLINOIS] FED. AID PROJECT BR05-0011(084)				

GENERAL NOTES

All elevations shown on the plans are established from U.S.G.S. mean sea level datum.

Existing structures (Including foundations, walls, cisterns, wells or other underground structures) within the right-of-way shall be removed in accordance with Article 501.04 and 501.05 of the Standard Specifications, without additional compensation, unless otherwise noted in the Plans or Special Provisions.

The Contractor shall seed all disturbed areas within the project limits.

No overhaul has been computed and none shall be paid for from any source.

The final top four inches of soil in any right-of-way area disturbed by the Contractor must be a cohesive soil capable of supporting vegetation complying with Section 211 of the Standard Specification for top soil.

The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications.

All utility poles, gas pipes, etc. in the way of the improvements shall be moved by the utilities prior to construction and shall not be included in the contract. The Contractor shall notify the respective utilities to make the necessary adjustments prior to construction.

The location and elevation of the various underground utilities as shown on the plans are not to be taken as exact. The Contractor shall use special care when conducting construction operations near them to prevent damage.

The utilities located within the project limits or immediately adjacent to the project construction limits include:

Verizon (Frontier Com.)	Ameren Ilco
Attn: Garrett Burt	Attn: John Reick
112 Elm Street	8420 N. University
Sycamore, IL 60178	Peoria, IL 61615
(815) 895-1538	(309) 693-4697

A minimum of 48 hours advance notice is required for non-emergency work.

A Regional 38 Permit has been issued for this project and the conditions of that Permit must be adhered to.

Where section or subsection monuments are encountered, the Engineer shall be notified before such monuments are removed. The Contractor shall protect and carefully preserve all property markers, monuments and right-of-way pins until the Owner, an Authorized Surveyor, or Agent has witnessed or otherwise referenced their location.

Existing mail boxes, street signs and traffic signs that are within the construction limits shall be removed and reset by the Contractor. Cost of removing and resetting to be included in the contract unit price bid per Cubic Yard for Earth Excavation (Special).

SCHEDULE OF QUANTITIES

TREE REMOVAL, ACRES			
LOCATION	UNIT	REMARKS	
LT. STA. 17+00 - 20+05	0.15		
LT. STA. 20+05 - 23+00	0.15		
RT. STA. 17+00 - 20+05	0.19		
RT. STA. 20+05 - 24+00	0.25		
TOTAL	0.74 Unit		20100500

EROSION CONTROL BLANKET			
LOCATION	SQ. YD.	REMARKS	
LT. STA. 17+00 - 23+00	1,142		
RT. STA. 17+00 - 24+00	1,529		
TOTAL	2,671 SQ. YD.		25100630

TEMPORARY DITCH CHECKS			
LOCATION	FOOT	REMARKS	
LT. STA. 18+00	9		
LT. STA. 18+50	13		
LT. STA. 19+06	10		
RT. STA. 18+00	15		
RT. STA. 18+50	9		
RT. STA. 22+00	7		
TOTAL	63 FOOT		28000305

PERIMETER EROSION BARRIER			
LOCATION	FOOT	REMARKS	
LT. STA. 20+52 - 21+02	50		
RT. STA. 20+60 - 21+00	73		
RT. STA. 20+77 - 22+10	195		
TOTAL	318 FOOT		28000400

INLET AND PIPE PROTECTION			
LOCATION	EACH	REMARKS	
LT. STA. 22+90	1		
RT. STA. 18+87	1		
RT. STA. 22+94	1		
TOTAL	3 EACH		28000500

AGGREGATE SURFACE COURSE, TYPE A				
LOCATION	TON	REMARKS		
STA. 17+00.00 - 17+38.20	54	12" (TAPER)		
STA. 17+38.20 - 19+62.96	346	12"		
STA. 20+47.04 - 22+62.68	327	12"		
STA. 22+62.68 - 23+00.00	53	12" (TAPER)		
TOTAL	780 TON			*40200100

AGGREGATE SURFACE COURSE, TYPE B				
LOCATION	TON	REMARKS		
F. E. L. 22+75	28	8"		
P. E. R. 19+06	25	8"		
F. E. R. 22+75	32	8"		
TOTAL	85 TON			*40200800

PIPE CULVERT REMOVAL				
LOCATION	FOOT	REMARKS		
LT. STA. 20+27 - 20+49	22			
LT. STA. 21+41 - 21+61	20			
RT. STA. 18+87 - 19+77	90			
RT. STA. 20+33 - 20+55	22			
RT. STA. 22+57 - 22+92	35			
TOTAL	189 FOOT			50105220

PIPE CULVERTS, CLASS A, TYPE 1 15"				
LOCATION	FOOT	REMARKS		
P. E. R. 19+06	82			
TOTAL	82 FOOT			542A0220

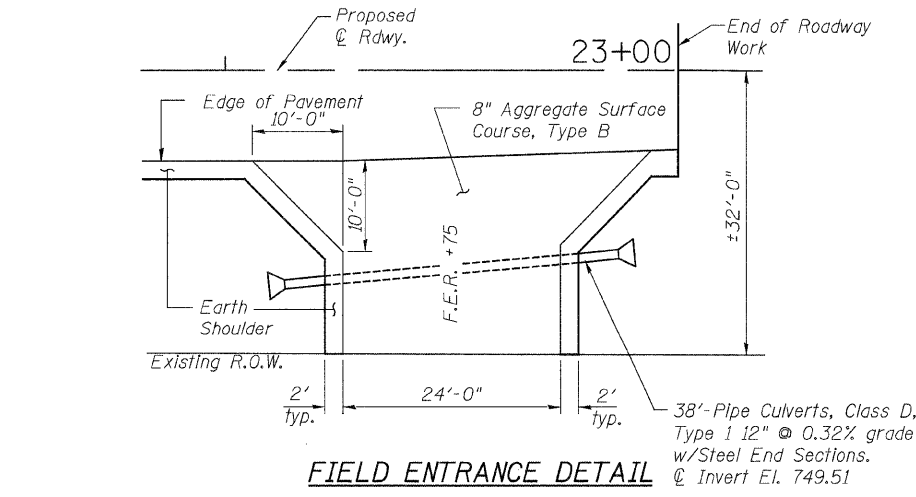
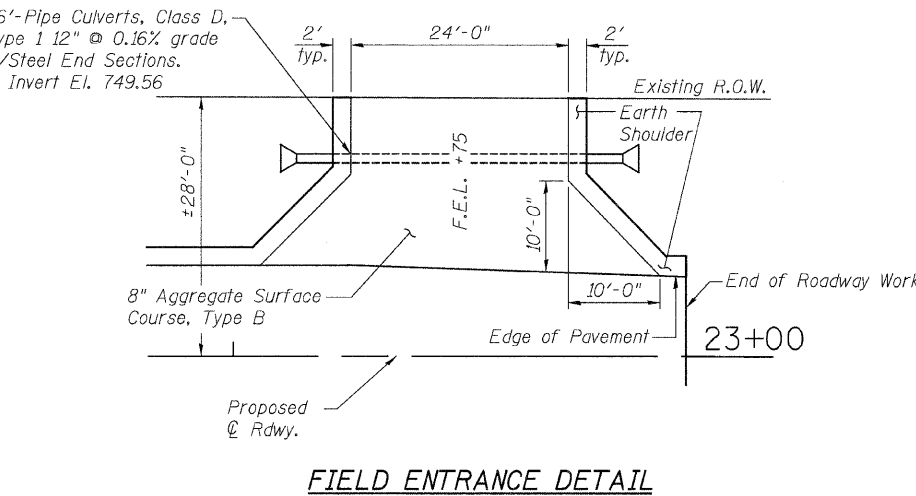
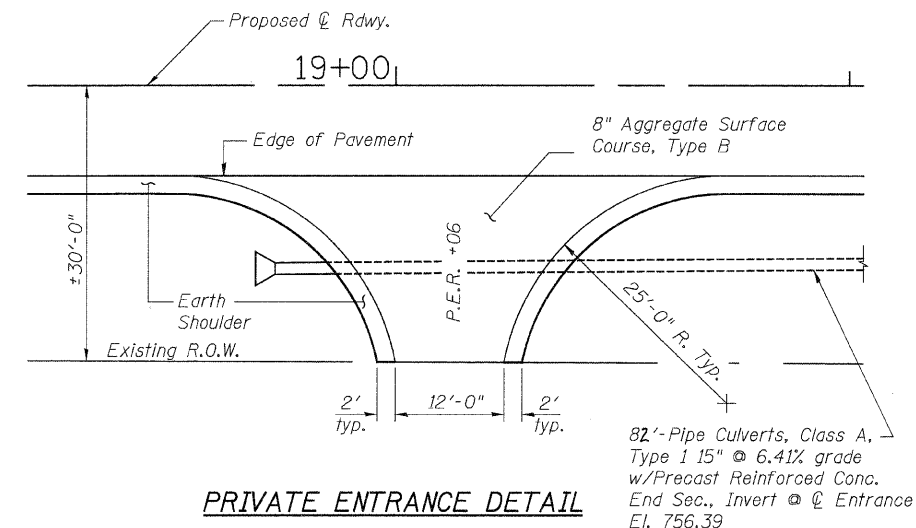
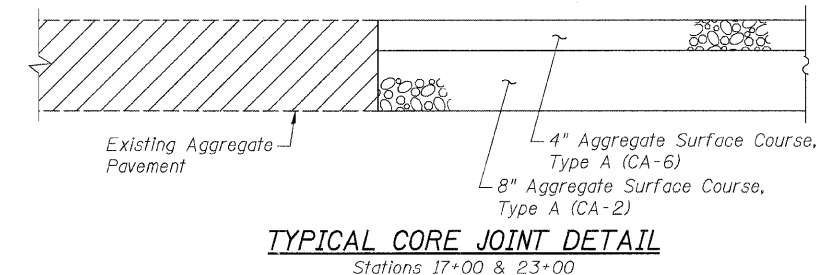
PIPE CULVERTS, CLASS D, TYPE 1 12"				
LOCATION	FOOT	REMARKS		
F. E. L. 22+75	36			
F. E. R. 22+75	38			
TOTAL	74 FOOT			542D0217

PRECAST REINFORCED CONCRETE FLARED END SECTIONS 15"				
LOCATION	EACH	REMARKS		
P. E. R. 19+06	1			
TOTAL	1 EACH			54213660

STEEL END SECTIONS 12"				
LOCATION	EACH	REMARKS		
F. E. L. 22+75	2			
F. E. R. 22+75	2			
TOTAL	4 EACH			54213867

EARTH EXCAVATION (SPECIAL)				
LOCATION	CU. YD.	REMARKS		
STA. 17+00 - 24+00	565			
TOTAL	565 CU. YD.			X2020410

SEEDING, CLASS 3 (SPECIAL)				
LOCATION	ACRE	REMARKS		
LT. STA. 17+00 - 23+00	0.23			
RT. STA. 17+00 - 24+00	0.32			
TOTAL	0.55 ACRE			*X2501100



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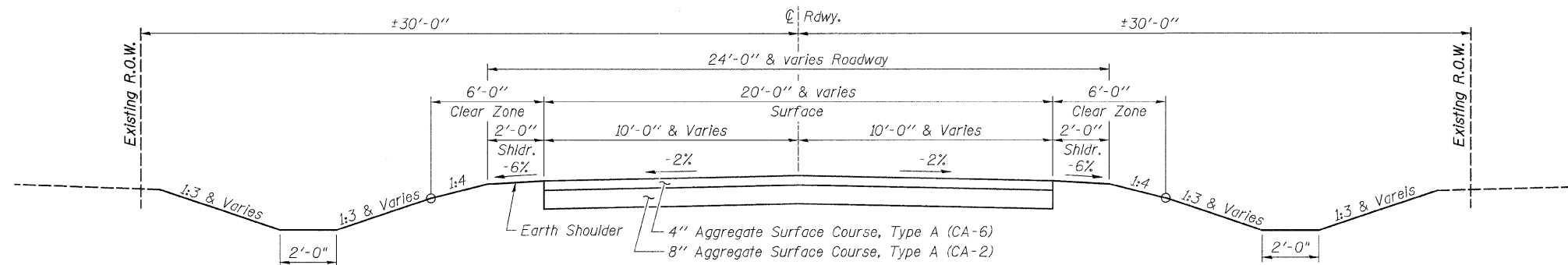


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CHECKED - BRIAN CONVERSE	REVISED -
DRAWN - MICHAEL WAGNER	REVISED -
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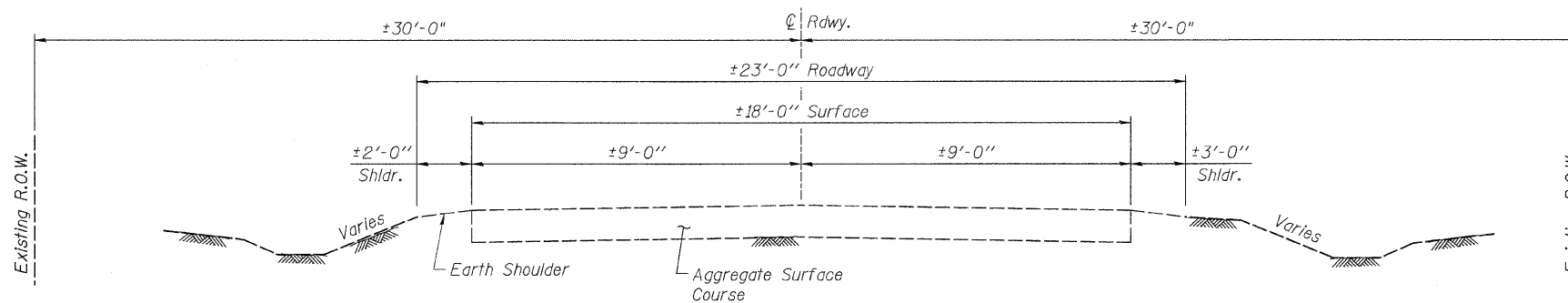
BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20+05

GENERAL NOTES, SCHEDULE OF QUANTITIES & DETAILS
STRUCTURE NO. 006-4235

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	3
WHA* 1286D10		CONTRACT NO. 87498		
ILLINOIS FED. AID PROJECT BROS-0011084				



PROPOSED ROADWAY TYPICAL SECTION
STA. 17+00 - STA. 23+00
 (Looking North)



EXISTING ROADWAY TYPICAL SECTION
 (Looking North)

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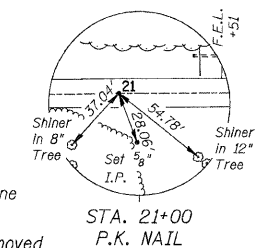
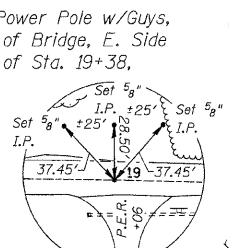
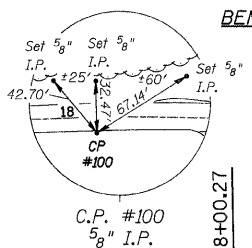
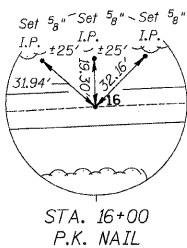


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CHECKED - MEGAN CACKLEY	REVISED -

BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20 + 05

TYPICAL SECTIONS
STRUCTURE NO. 006-4235

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	4
WHA# 1286D10		CONTRACT NO. 87498		
ILLINOIS FED. AID PROJECT BR05-0011(084)				

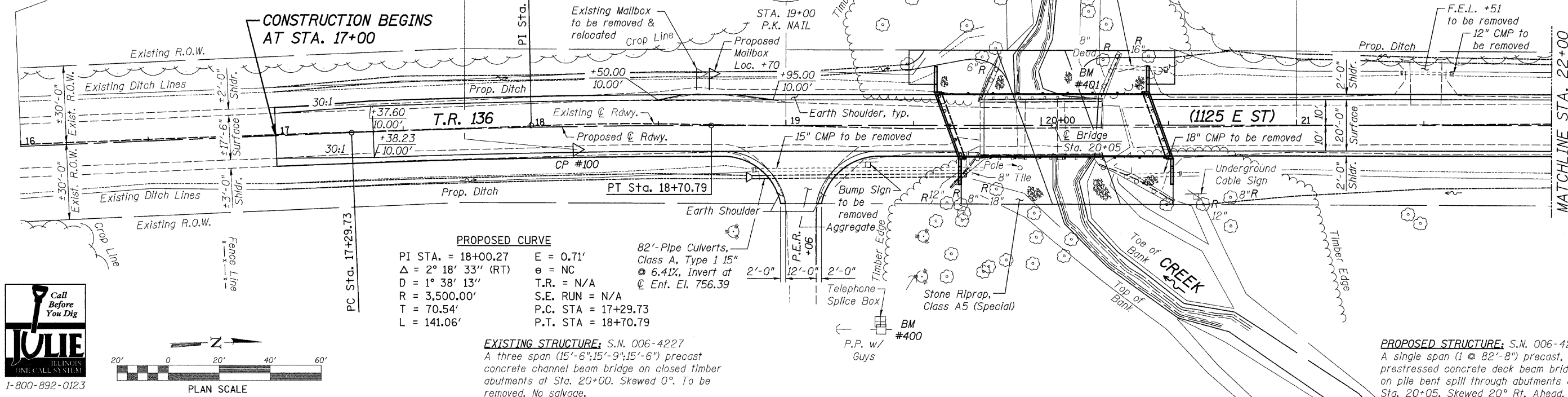


BENCH MARK #400: Railroad Spike in Power Pole w/Guys, 1st Power Pole S. of Bridge, E. Side of Street, 79' Rt. of Sta. 19+38, El. 761.81

BENCH MARK #401: Chis. "□" on the Northwest Corner of Hub Guard of Existing Bridge, 10' Lt. of Sta. 20+24, El. 755.42

DATE	
BY	
REVISIONS	
NO.	DESCRIPTION

DATE	
BY	
REVISIONS	
NO.	DESCRIPTION

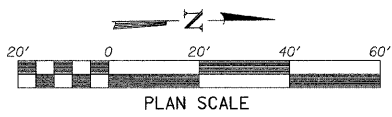


PROPOSED CURVE

PI STA. = 18+00.27	E = 0.71'
Δ = 2° 18' 33" (RT)	e = NC
D = 1° 38' 13"	T.R. = N/A
R = 3,500.00'	S.E. RUN = N/A
T = 70.54'	P.C. STA. = 17+29.73
L = 141.06'	P.T. STA. = 18+70.79

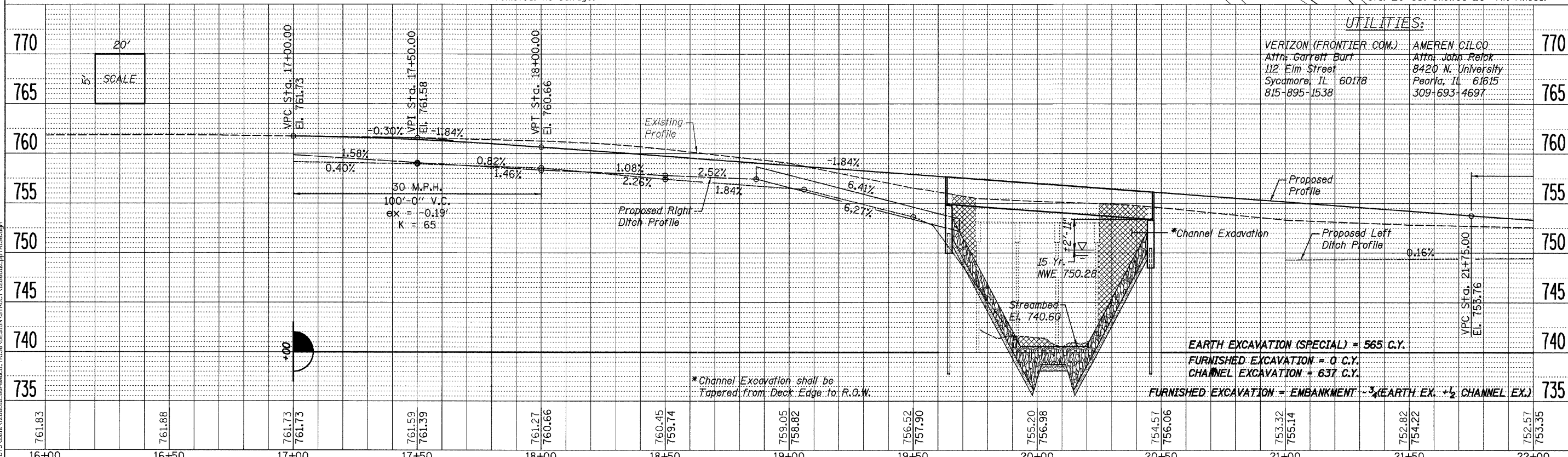
EXISTING STRUCTURE: S.N. 006-4227
A three span (15'-6"; 15'-9"; 15'-6") precast concrete channel beam bridge on closed timber abutments at Sta. 20+00. Skewed 0°. To be removed. No salvage.

PROPOSED STRUCTURE: S.N. 006-4235
A single span (1 @ 82'-8") precast, prestressed concrete deck beam bridge on pile bent spill through abutments at Sta. 20+05. Skewed 20° Rt. Ahead.



UTILITIES:

VERIZON (FRONTIER COM.) Attn: Garrett Burt 112 Elm Street Sycamore, IL 60178 815-895-1538	AMEREN CILCO Attn: John Reick 8420 N. University Pearla, IL 61615 309-693-4697
---	--



EARTH EXCAVATION (SPECIAL) = 565 C.Y.
FURNISHED EXCAVATION = 0 C.Y.
CHANNEL EXCAVATION = 637 C.Y.
FURNISHED EXCAVATION = EMBANKMENT (1/2 EARTH EX. + 1/2 CHANNEL EX.)



DESIGNED - MICHAEL WAGNER	REVISED -
CHECKED - BRIAN CONVERSE	REVISED -
DRAWN - MICHAEL WAGNER	REVISED -
CHECKED - MEGAN CACKLEY	REVISED -

BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20+05

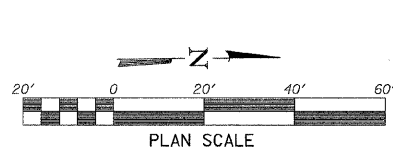
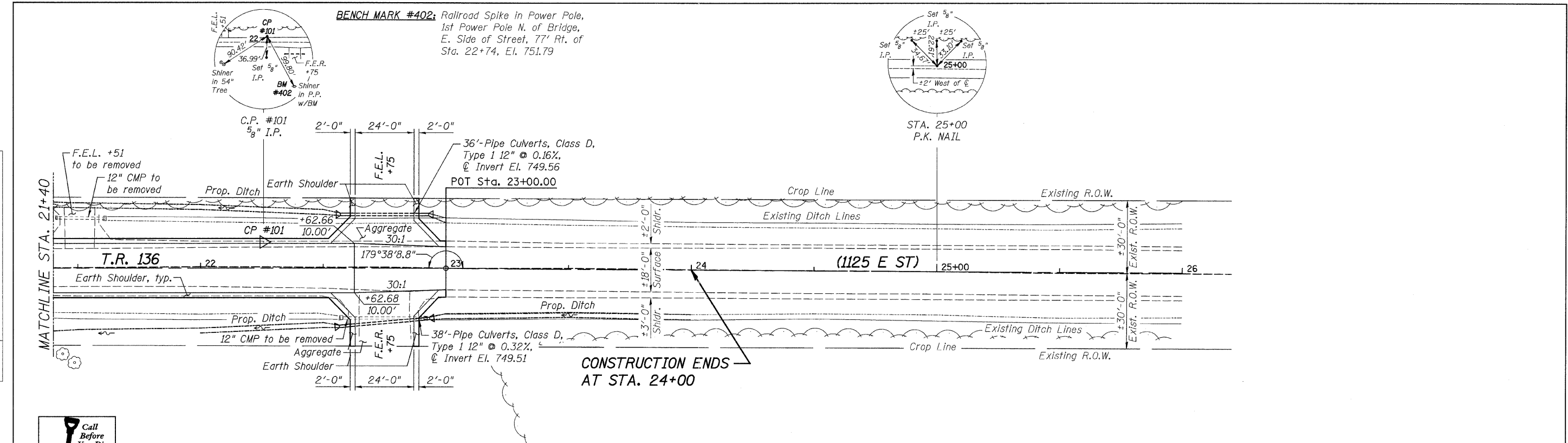
PLAN & PROFILE
STRUCTURE NO. 006-4235

SCALE: 1" = 20'-0" SHEET NO. 1 OF 2 SHEETS STA. 16+00.00 TO STA. 22+00.00

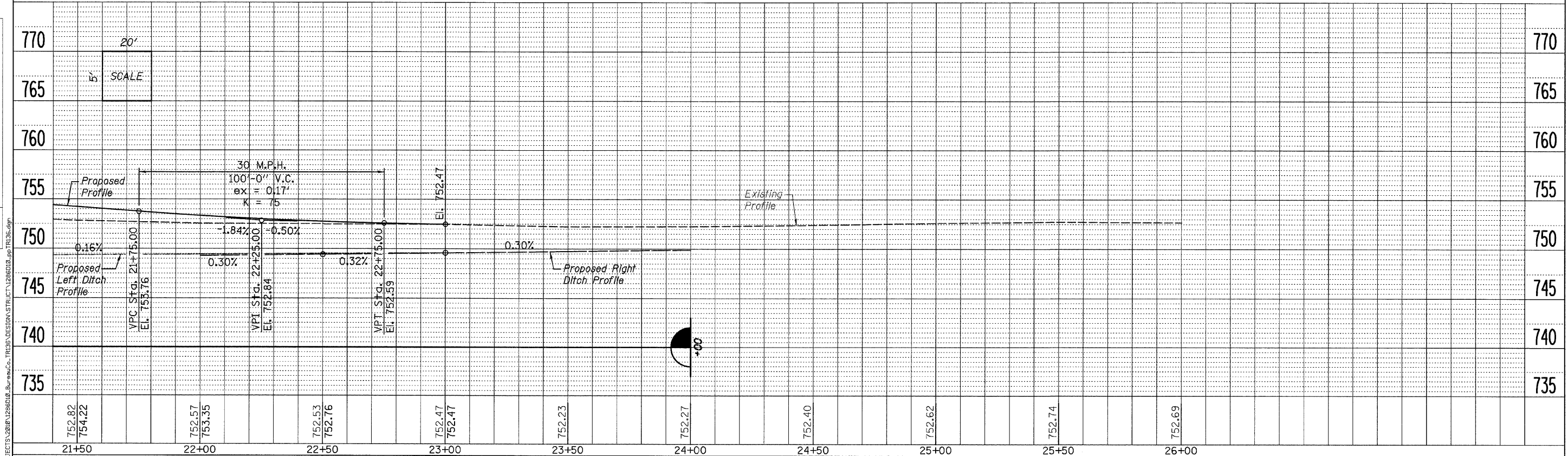
TWP. & R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	5
WHA# 1286010			CONTRACT NO. 87498	
ILLINOIS FED. AID PROJECT BR05-0011084				

DATE	
BY	
REVISIONS	
PLANNED	
ALIGNED	
CHECKED	
NO. _____	
NO. _____	
NO. _____	

DATE	
BY	
REVISIONS	
PROFILING	
GRADES	
CHECKED	
NO. _____	
NO. _____	
NO. _____	



PT. #	STA.	N	E	EL.	DESCRIPTION
100	9.0' RT. 18+18.0	1657682.29	2441829.00	760.76	I.P.
101	10.6' LT. 22+25.7	1658090.01	2441813.40	751.93	I.P.



WILLET HOFMANN & ASSOCIATES INC.
ENGINEERING ARCHITECTURE LAND SURVEYING
839 EAST 12ND STREET, DIXON, IL 61021 9367
T: 815-284-3381 DESIGN FIRM: #184-000918

DESIGNED - MICHAEL WAGNER	REVISED -
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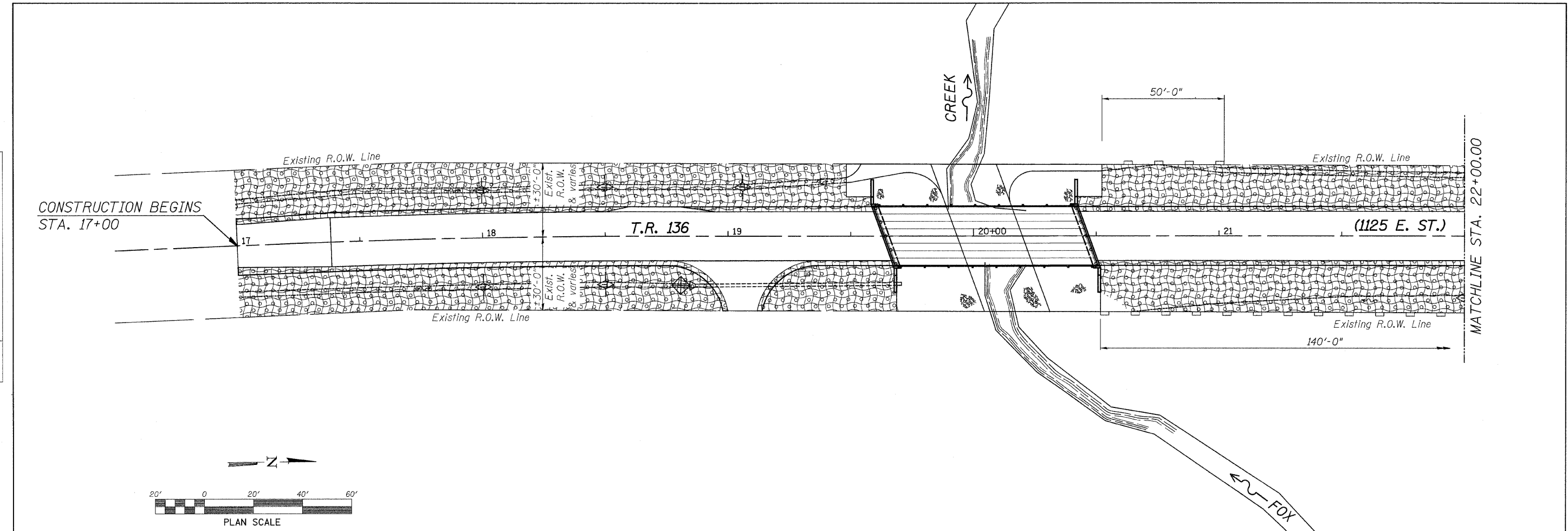
BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20+05

PLAN & PROFILE
STRUCTURE NO. 006-4235
SCALE: 1" = 20'-0" SHEET NO. 2 OF 2 SHEETS STA. 21+40.00 TO STA. 26+00.00

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	6
WHA* 1286D10		CONTRACT NO. 87498		
ILLINOIS FED. AID PROJECT BROS-0011084				

DATE	
BY	
EXAMINED	
PLANNED	
ALIGNED	
CHECKED	
PAID FILE NAME	
PLAN	
NOTE BOOK	
NO.	

DATE	
BY	
EXAMINED	
PLANNED	
ALIGNED	
CHECKED	
PAID FILE NAME	
PROFILE	
NOTE BOOK	
NO.	



STORM WATER POLLUTION PREVENTION PLAN

The following plan is established and incorporated in the project to direct the Contractor in the placement of temporary erosion control systems and to provide a storm sewer water pollution prevention plan for compliance under NPDES.

The purpose of this plan is to minimize erosion within the construction site and to limit sediments from leaving the construction site by utilizing proper temporary erosion control systems and providing ground cover within a reasonable amount of time.

Certain erosion control facilities shall be installed by the Contractor at the beginning of construction. Other items shall be installed by the Contractor as directed by the Engineer on a case by case situation depending on the Contractor's sequence of activities, time of year, and expected weather conditions.

The Contractor shall install permanent erosion control systems and seeding within a time frame specified herein and as directed by the Engineer, therefore minimizing the amount of area susceptible to erosion and reducing the amount of temporary seeding. The Engineer will determine if any temporary erosion control systems shown in the plan can be deleted and if any additional temporary erosion control systems, which are not included in this plan, shall be added. The Contractor shall perform all work as directed by the Engineer and as shown in this plan and in Standard 280001-06.

Section 280, Temporary Erosion Control, of the Standard Specifications additionally supplements this plan.

SITE DESCRIPTION
DESCRIPTION OF CONSTRUCTION ACTIVITY:

- The project consists of bridge replacement on Twp. Route 136 over Fox Creek & approach roadway realignment work thereon.
- Construction includes pavement removal, earth excavation, entrances, channel excavation, various pavement items, bridge items and other miscellaneous items of construction.

DESCRIPTION OF INTENDED SEQUENCE FOR MAJOR CONSTRUCTION ACTIVITIES WHICH WILL DISTURB SOILS FOR MAJOR PORTIONS OF THE CONSTRUCTION SITE:

- Pavement removal and earth excavation
- Channel excavation
- Furnished excavation
- Aggregate surface and related appurtenances
- Placement of permanent erosion control, including seeding

AREA OF CONSTRUCTION SITE:

The total area of the construction site is estimated to be 1.07 acres of which 1.01 acres will be disturbed by excavation, grading, and other activities.

OTHER REPORTS, STUDIES AND PLANS WHICH AID IN THE DEVELOPMENT OF THE STORM WATER POLLUTION PREVENTION PLAN AS REFERENCED DOCUMENTS:

- Information of the soils and terrain within the site was obtained from soil borings that were utilized for the development of the proposed temporary erosion control systems.
- Project plan documents, specifications and special provisions, and plan drawings indicating drainage patterns and approximate slopes anticipated after grading activities were utilized for the proposed placement of the temporary erosion control systems.

CONTROLS - EROSION CONTROLS AND SEDIMENT CONTROL
DESCRIPTION OF STABILIZATION PRACTICES AT THE BEGINNING OF CONSTRUCTION:

- The drawings, specifications and special provisions will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Stabilization practices include: temporary seeding, permanent seeding, perimeter erosion barrier, and other appropriate measures as directed by the Engineer. Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.
 - Areas of existing vegetation (wood and grasslands) outside the proposed construction limits shall be identified by the Engineer for preserving and shall be protected from construction activities.
 - Dead, diseased, or unsuitable vegetation within the site shall be removed as directed by the Engineer, along with required tree removal.
 - As soon as reasonable access is available to all locations where water drains away from the project, temporary ditch checks and perimeter erosion barrier shall be installed as called out in this plan and directed by the Engineer.
 - Bare and sparsely vegetated ground in highly erodible areas as determined by the Engineer shall be temporarily seeded at the beginning of construction where no construction activities are expected within 7 days.
 - At locations where a significant amount of water drains into the construction zone from outside areas (adjacent landowners), temporary ditch checks will be utilized to locally divert water, reduce flow rates, and collect outside siltation inside the right-of-way line.
- Establishment of these temporary erosion control measures will have additional benefits to the project. Desirable grass seed will become established in these areas and will spread seeds onto the construction site until permanent seeding/mowing and over seeding can be completed.

DESCRIPTION OF STABILIZATION PRACTICES DURING CONSTRUCTION:

- During construction, areas outside the construction limits as outlined previously herein shall be protected. The Contractor shall not use this area for staging (except as described on the plans and directed by the Engineer), parking of vehicles or construction equipment, storage of materials, or other construction related activities.
 - Within the construction limits, areas which may be susceptible to erosion as determined by the Engineer shall remain undisturbed until full scale construction is underway to prevent unnecessary soil erosion.
 - Earth stockpiles shall be temporarily seeded if they are to remain unused for more than 14 days.
 - As construction proceeds, the Contractor shall institute the following as directed by the Engineer:
 - Place temporary erosion control facilities at locations shown on the plans.
 - Temporarily seed erodible bare earth on a weekly basis to minimize the amount of erodible surface area within the contract limits.
 - Excavated areas and embankment shall be permanently seeded immediately after final grading. If not, they shall be temporarily seeded if no construction activity in the area is planned for 7 days.
 - Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall be taken to contain any fuel or other pollutant in accordance with EPA water quality regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site.

- The Resident Engineer shall inspect the project daily during construction activities. Inspection shall also be done weekly and after rains of 1/2" or greater or equivalent snowfall and during the winter shutdown period. The project shall additionally be inspected by the Construction Field Engineer on a bi-weekly basis to determine that erosion control efforts are in place and effective and if other erosion control work is necessary.
- Sediment collected during construction of the various temporary erosion control systems shall be disposed of on the site on a regular basis as directed by the Engineer. The cost of this maintenance shall be included in the unit bid price for Earth Excavation (Special).
- The temporary erosion control systems shall be removed as directed by the Engineer after use is no longer needed or no longer functioning. The cost of this removal shall be included in the unit bid price for various temporary erosion control pay items.

DESCRIPTION OF STRUCTURAL PRACTICES AFTER FINAL GRADING

- Temporary erosion control systems shall be left in place with proper maintenance until permanent erosion control is in place and working properly and all proposed turf areas seeded and established.
- Once permanent erosion control systems as proposed in the plans are functional and established, temporary items shall be removed, cleaned up, and disturbed turf reseeded.

MAINTENANCE AFTER CONSTRUCTION

- Construction is complete after acceptance by IDOT final inspection. Maintenance up to this date will be by the Contractor.

MISCELLANEOUS:

- Temporary erosion control seeding shall be applied at a rate of 100 lbs./acre.
- Temporary ditch checks shall comply with Section 280 of the Standard Specifications for Road and Bridge Construction and Standard 280001-06 located in the plans.
- All erosion control products furnished shall be specifically recommended by the manufacturer for the use specified in the erosion control plan. Prior to the approval and use of the product, the Contractor shall submit to the Engineer a notarized certification by the producer stating the intended use of the product and that the physical properties required for this application are met or exceeded. The Contractor shall provide manufacturer installation procedures to facilitate the Engineer in construction inspection.

This plan has been prepared to comply with the provisions of the NPDES permit number ILR10, issued by the Illinois Environmental Protection Agency for storm water discharges from construction site activities.



LEGEND

- Perimeter Erosion Barrier
- Seeding, Class 3 (Special)
- Temporary Ditch Checks
- Erosion Control Blanket
- Inlet and Pipe Protection

FILE # 54-PROJECTS-2800-1286D10-Bureau-C... TR136 DESIGN DRAWINGS 1286D10E-erosion.cad



DESIGNED -	MICHAEL WAGNER	REVISED -	
CHECKED -	BRIAN CONVERSE	REVISED -	
DRAWN -	MICHAEL WAGNER	REVISED -	
CHECKED -	MEGAN CACKLEY	REVISED -	

BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20+05

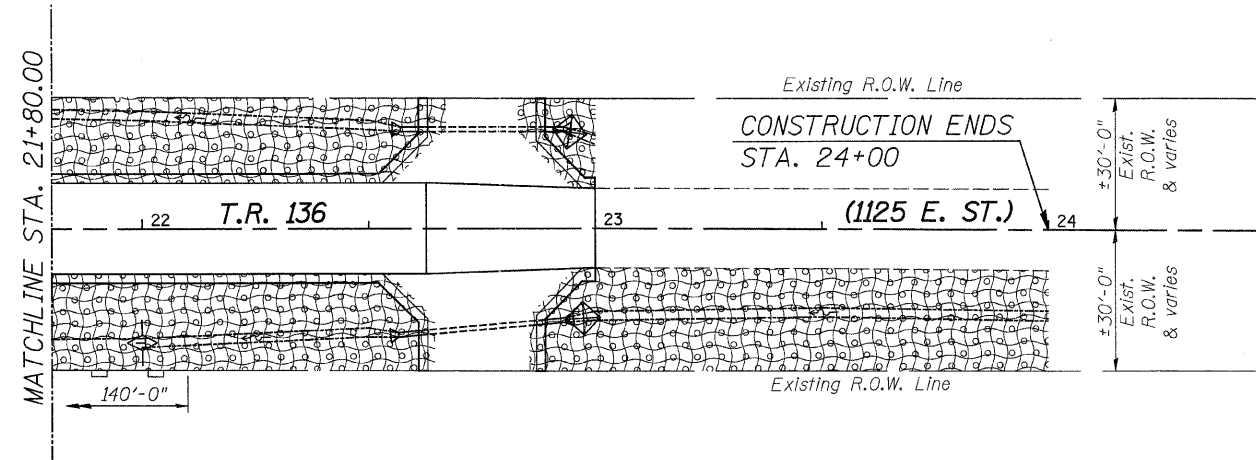
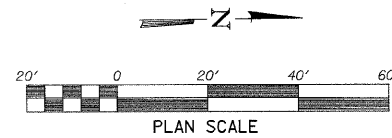
EROSION CONTROL PLAN
STRUCTURE NO. 006-4235

SCALE: 1" = 20' SHEET NO. 1 OF 2 SHEETS STA. 17+00 TO STA. 22+00

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	7
WHA* 1286D10			CONTRACT NO. 87498	
ILLINOIS FED. AID PROJECT BRGS-0011084				

DATE	
BY	
PLAN	
SURVEYED	
PLOTTED	
DESIGNED	
RT. OF WAY CHECKED	
NOTE BOOK	
NO.	
CADD FILE NAME	

DATE	
BY	
PROFILE	
DESIGNED	
GRADES CHECKED	
NOTE BOOK	
NO.	
STRUCTURE NOTATIONS OTHER	



1-800-892-0123

EROSION CONTROL NOTES

The soil erosion and sediment control practices will be inspected weekly and after ½" 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 the Erosion Control Plan and in accordance with stations shown on the Schedule of Quantities sheet or as directed by the Engineer.

Silt fence shall be installed following the completion and stabilization of all areas adjacent to the on-site drainages. the silt fence will remain in place until the contributing area is stabilized.

For Seeding, Class 3 (Special) see Special Provisions.

Erosion control blanket shall be placed in ditches and to 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.


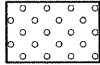

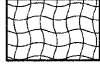

Temporary ditch checks shall comply with Section 280 of the Standard Specifications for Road and Bridge Construction and Standard 280001-06 located in the Proposal.

Temporary ditch checks shall be placed at stations called out in the Schedule of Quantities or as directed by the Engineer.

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
-  Seeding, Class 3 (Special)
-  Temporary Ditch Checks
-  Erosion Control Blanket
-  Inlet and Pipe Protection

BILL OF MATERIAL

Item	Unit	Quantity
Erosion Control Blanket	Sq. Yd.	2,671
Temporary Ditch Checks	Foot	63
Perimeter Erosion Barrier	Foot	318
Inlet and Pipe Protection	Each	3
Seeding, Class 3 (Special)	Acre	0.55



DESIGNED -	MICHAEL WAGNER	REVISED -	
CHECKED -	BRIAN CONVERSE	REVISED -	
DRAWN -	MICHAEL WAGNER	REVISED -	
CHECKED -	MEGAN CACKLEY	REVISED -	

BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20 + 05

EROSION CONTROL PLAN
STRUCTURE NO. 006-4235
 SCALE: 1" = 20'
 SHEET NO. 2 OF 2 SHEETS
 STA. 21+80 TO STA. 24+00

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	8
WHA #1286D10		CONTRACT NO.		87498
ILLINOIS FED. AID PROJECT BROS-0011084)				

FILE # SA-PROJECTS-2008-1286D10_Bureau.ctb, TR136 DESIGN DRAWINGS\1286D10E-08.dwg

EXISTING STRUCTURE NO. 006-4227

The existing structure was originally built in 1959. The existing structure is a three span (15'-6"; 15'-9"; 15'-6") precast concrete channel beam bridge on closed abutments and piers. 50'-0" back to back of abutments and 22'-0" out to out of deck. Structure to be removed and replaced. Road shall be closed to traffic during construction.

No salvage.

BENCH MARK: Chiseled "□" on the northwest corner of hub guard of exist. bridge, Elev. 755.42

INDEX OF SHEETS

- 1 General Plan and Elevation
- 2 Riprap & Pile Layout
- 3 33" x 36" PPC Deck Beam
- 4 33" x 36" PPC Deck Beam Details
- 5 South Abutment Details
- 6 North Abutment Details
- 7 Steel Railing, Type S-1 Details
- 8 Metal Shell Pile Details
- 9 Boring Logs

BILL OF MATERIAL - BRIDGE

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu. Yd.		637	637
Removal of Existing Structures	Each		1	1
Concrete Structures	Cu. Yd.		33.8	33.8
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	1,984		1,984
Reinforcement Bars	Pound		4,260	4,260
Steel Railing, Type S-1	Foot	168		168
Furnishing Metal Shell Piles 12" x 0.250"	Foot		216	216
Driving Piles	Foot		216	216
Test Pile Metal Shells	Each		2	2
Name Plates	Each		1	1
Porous Granular Embankment, Special	Ton		194	194
Stone Riprap, Class A5 (Special)	Ton		1,178	1,178

LOADING HL-93

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

DESIGN SPECIFICATIONS

2010 AASHTO LRFD Bridge Design Specifications, 5th. Edition & 2011 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
 $f_{pu} = 270,000$ psi ($\frac{1}{2}$ " ϕ Low Lax Strands)
 $f_{pbt} = 201,960$ psi ($\frac{1}{2}$ " ϕ Low Lax Strands)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.070g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.117g
 Soil Site Class = C

GENERAL NOTES

* See Special Provisions.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage 1 removal to ensure the remaining portion will not be prematurely damaged.

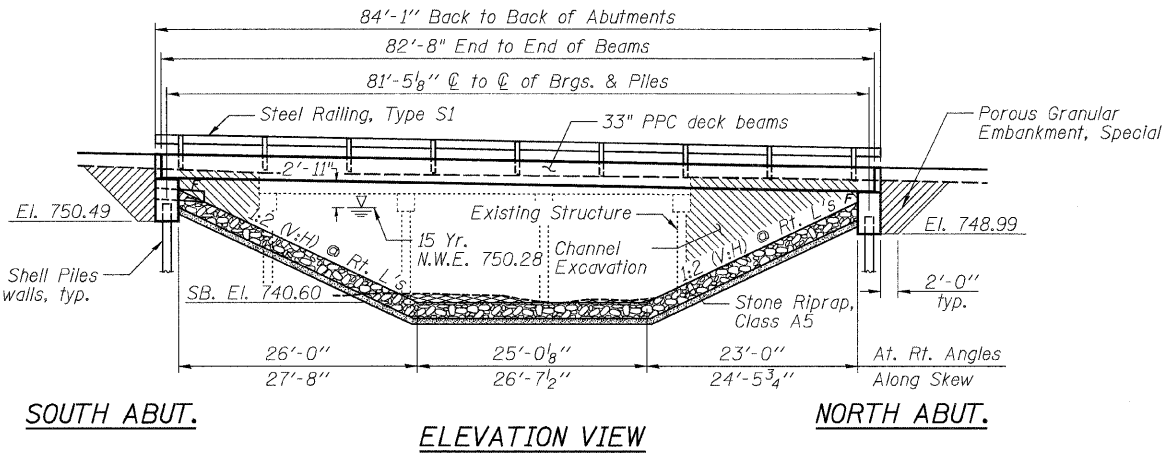
WATERWAY INFORMATION

Drainage Area = 7.37 sq. mi. Low Grade Elev. 752.23 @ Sta. 23+50

Flood	Freq. Yr.	a C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	15	2,420	389	430	750.28	1.11	1.03	751.39	751.31
Base	100	3,940	457	529	751.76	2.72	2.56	754.48	754.32

DESIGN SCOUR ELEVATION TABLE

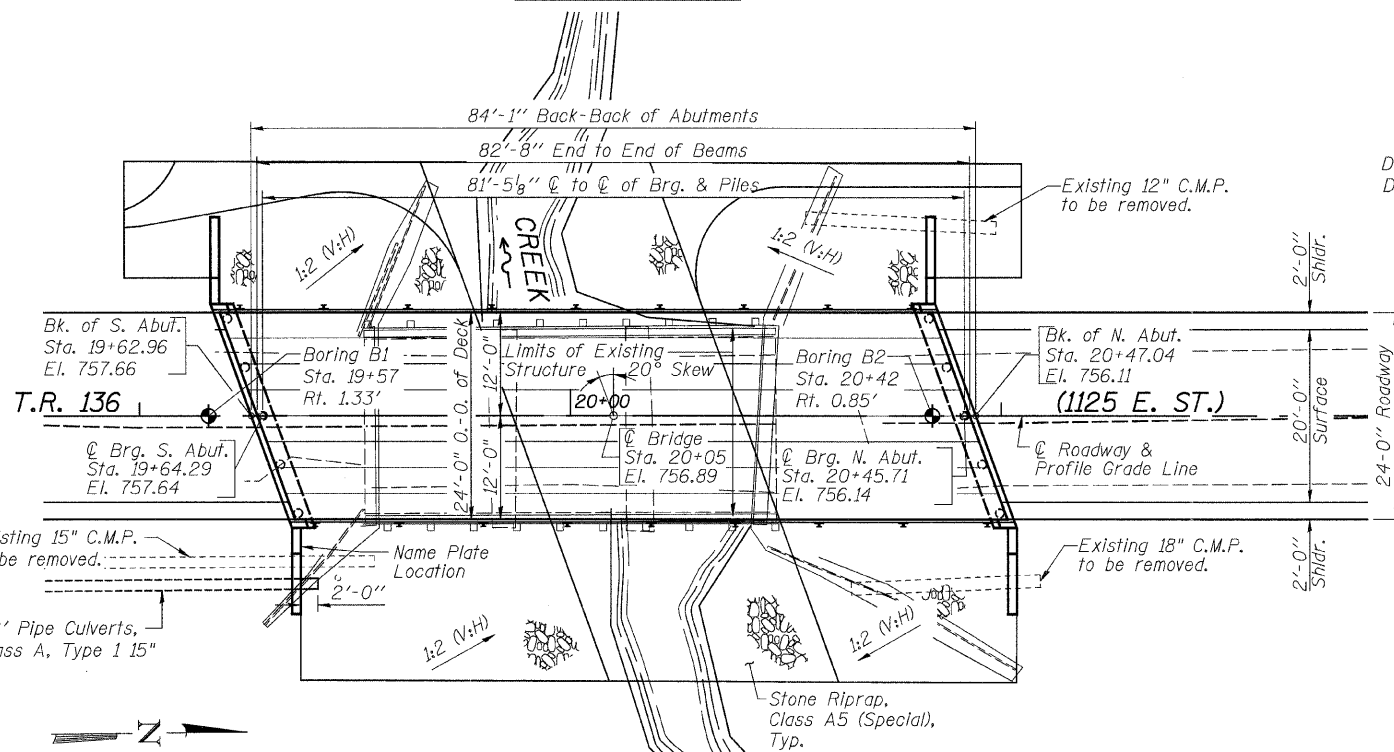
Design Scour Elevation (ft.)	S. Abut.	N. Abut.
	750.49	748.99



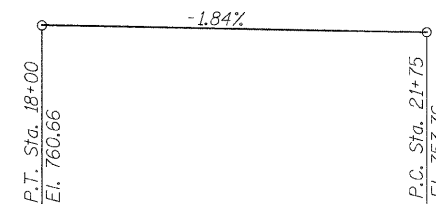
SOUTH ABUT.

ELEVATION VIEW

NORTH ABUT.



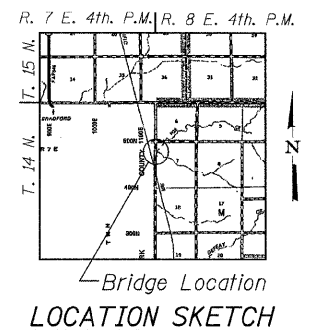
PLAN VIEW



PROFILE GRADE
(Along ϕ Roadway)

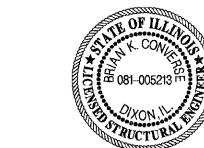
FOX CREEK
 BUILT 2012 BY
 BUREAU COUNTY
 SECTION 10-16115-00-BR
 TWP. RTE. 136 STATION 20+05
 STR. NO. 006-4235 LOADING HL-93

NAME PLATE LETTERING
Refer To Std. 515001



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
T.R. 136 (1125 E. ST.) OVER FOX CREEK
SEC. 10-16115-00-BR
BUREAU COUNTY
STATION 20+05
STRUCTURE NO. 006-4235



Brian K. Converse
 DATE: 2/12/2012
 EXPIRES 11/30/12

"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."



DESIGNED - MICHAEL WAGNER
 CHECKED - BRIAN CONVERSE
 DRAWN - MICHAEL WAGNER
 CHECKED - MEGAN CACKLEY

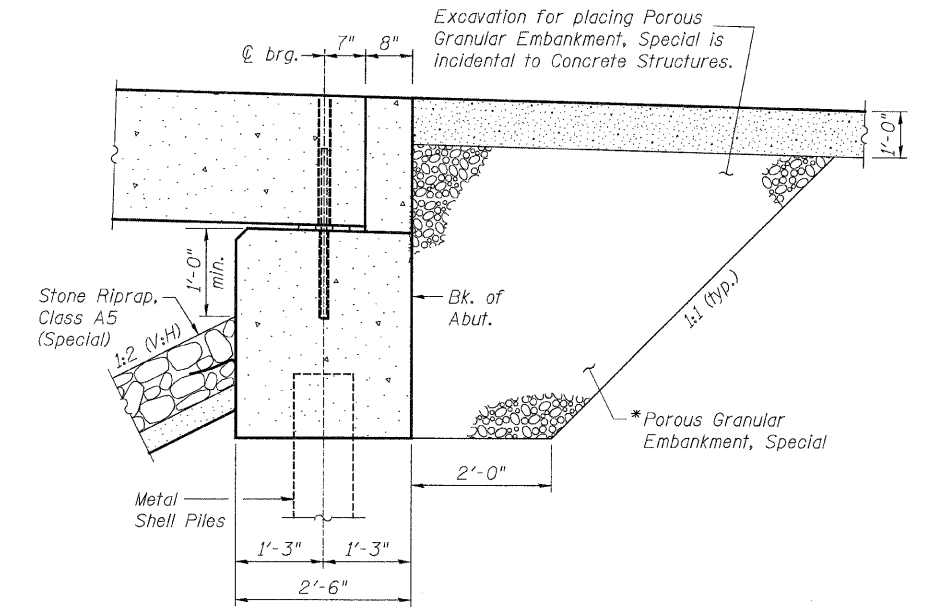
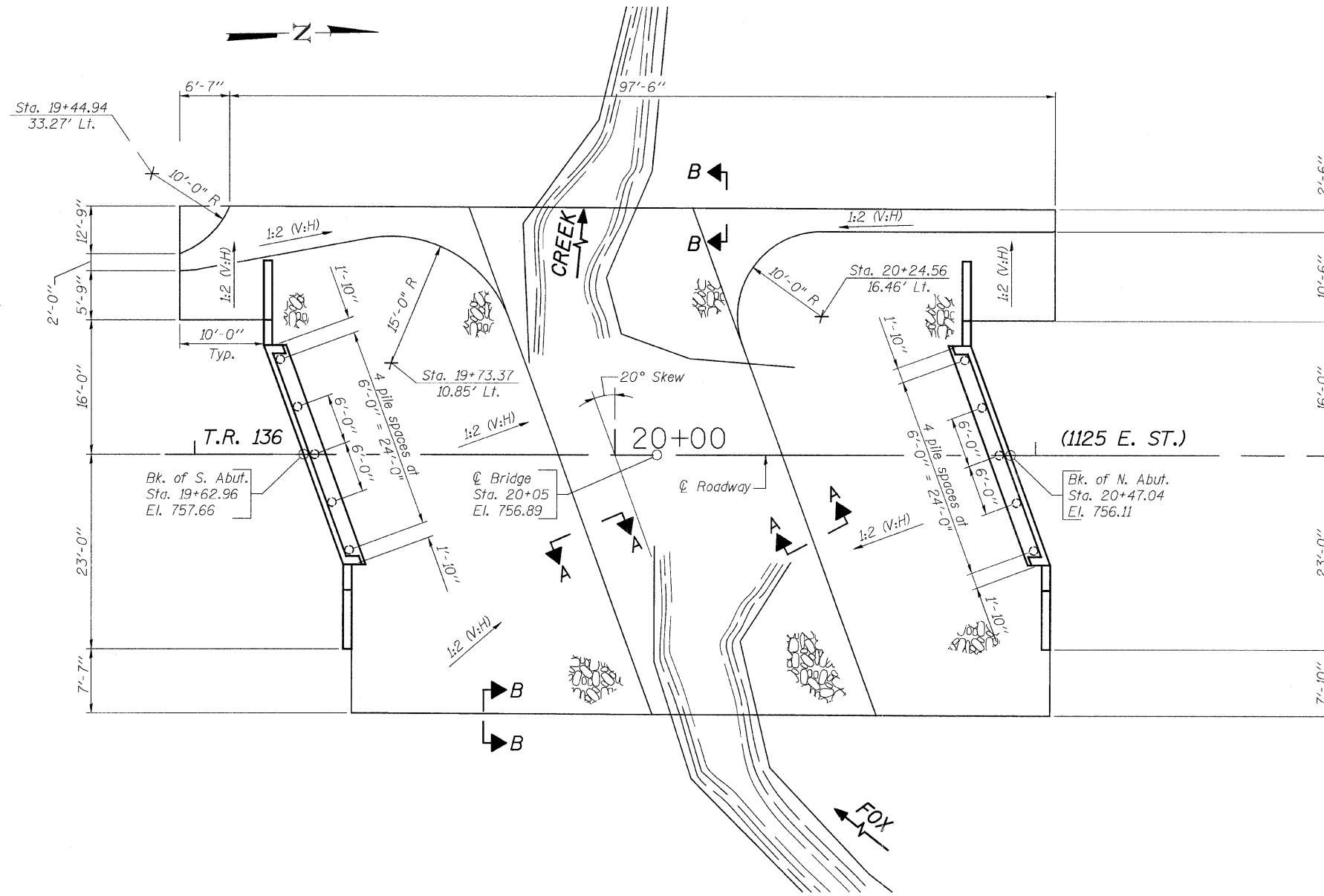
REVISED -
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 REVISED -
 REVISED -

BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20+05

STRUCTURAL SHEET NO. 1 OF 9 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	9
WHA* 1286D10		CONTRACT NO. 87498		

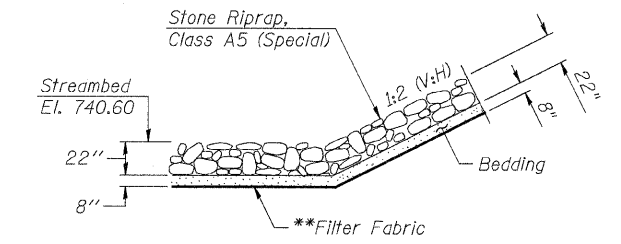
ILLINOIS FED. AID PROJECT BROS-00110841



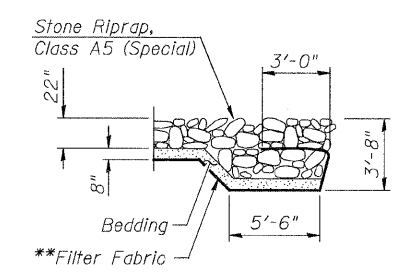
SECTION THRU ABUTMENT

(Dimensions are at Rt. L's.)

*Pay Limits of Porous Granular Embankment, Special shall extend to 2'-0" from the end of each wingwall.



SECTION A-A



SECTION B-B

BILL OF MATERIAL

Item	Unit	Quantity
Stone Riprap, Class A5 (Special)	Ton	1,178

**Included in the cost of Stone Riprap, Class A5 (Special).

NOTES:

Channel Excavation includes all the necessary excavation needed within the area shown above in the detail from the ground surface down to the top of the riprap.
Riprap excavation is included in the Stone Riprap, Class A5 (Special) pay item.

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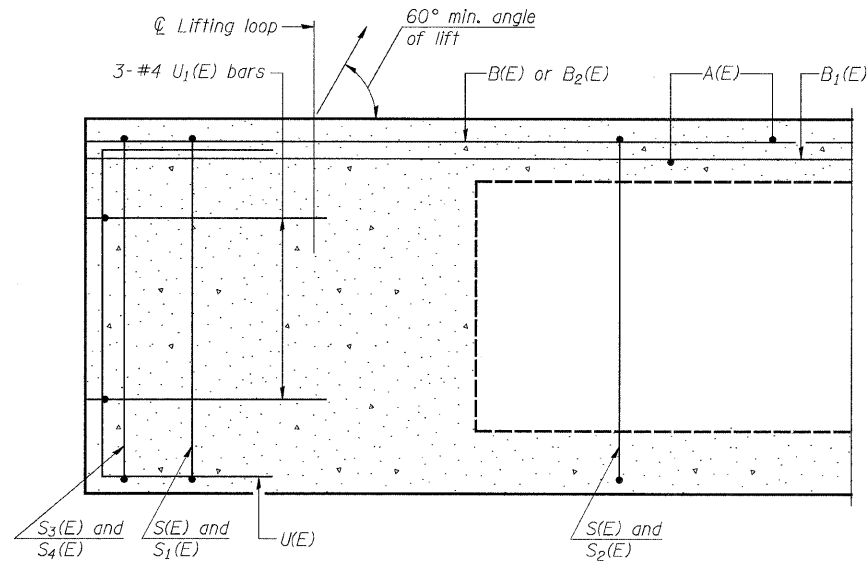
WILLET HOFMANN ASSOCIATES INC.
ENGINEERING ARCHITECTURE LAND SURVEYING
809 EAST 2ND STREET, DIXON, IL 61021-0367
T: 815-284-3361 DESIGN FIRM: #184-000916

DESIGNED - MICHAEL WAGNER	REVISED -
CHECKED - BRIAN CONVERSE	REVISED -
DRAWN - MICHAEL WAGNER	REVISED -
CHECKED - MEGAN CACKLEY	REVISED -

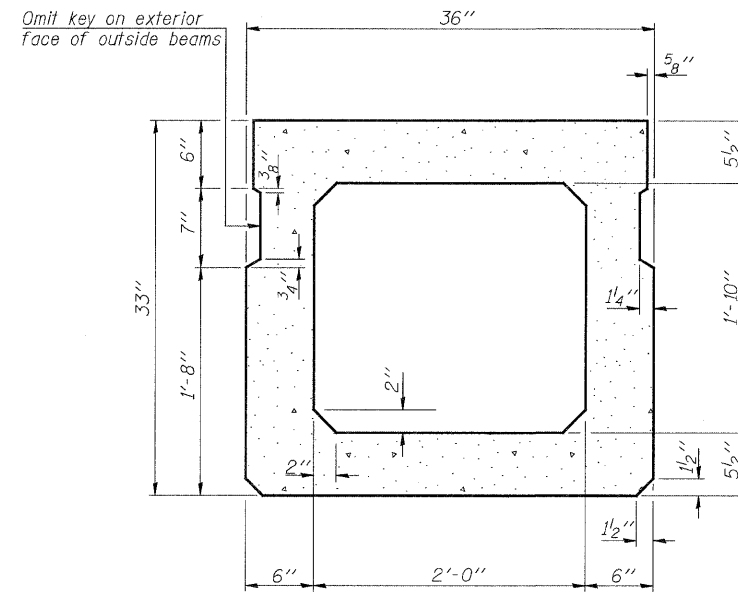
BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20 + 05

RIPRAP & PILE LAYOUT
STRUCTURE NO. 006-4235
STRUCTURAL SHEET NO. 2 OF 9 SHEETS

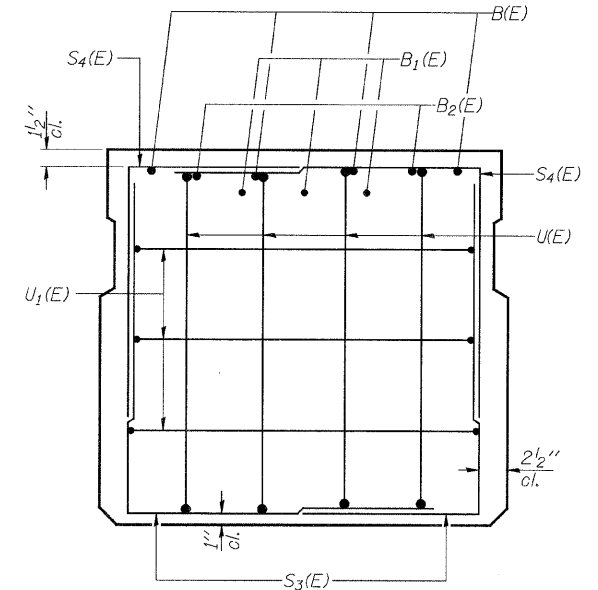
TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	10
WHA# 1286D10		CONTRACT NO. 87498		
ILLINOIS FED. AID PROJECT BR05-0011084				



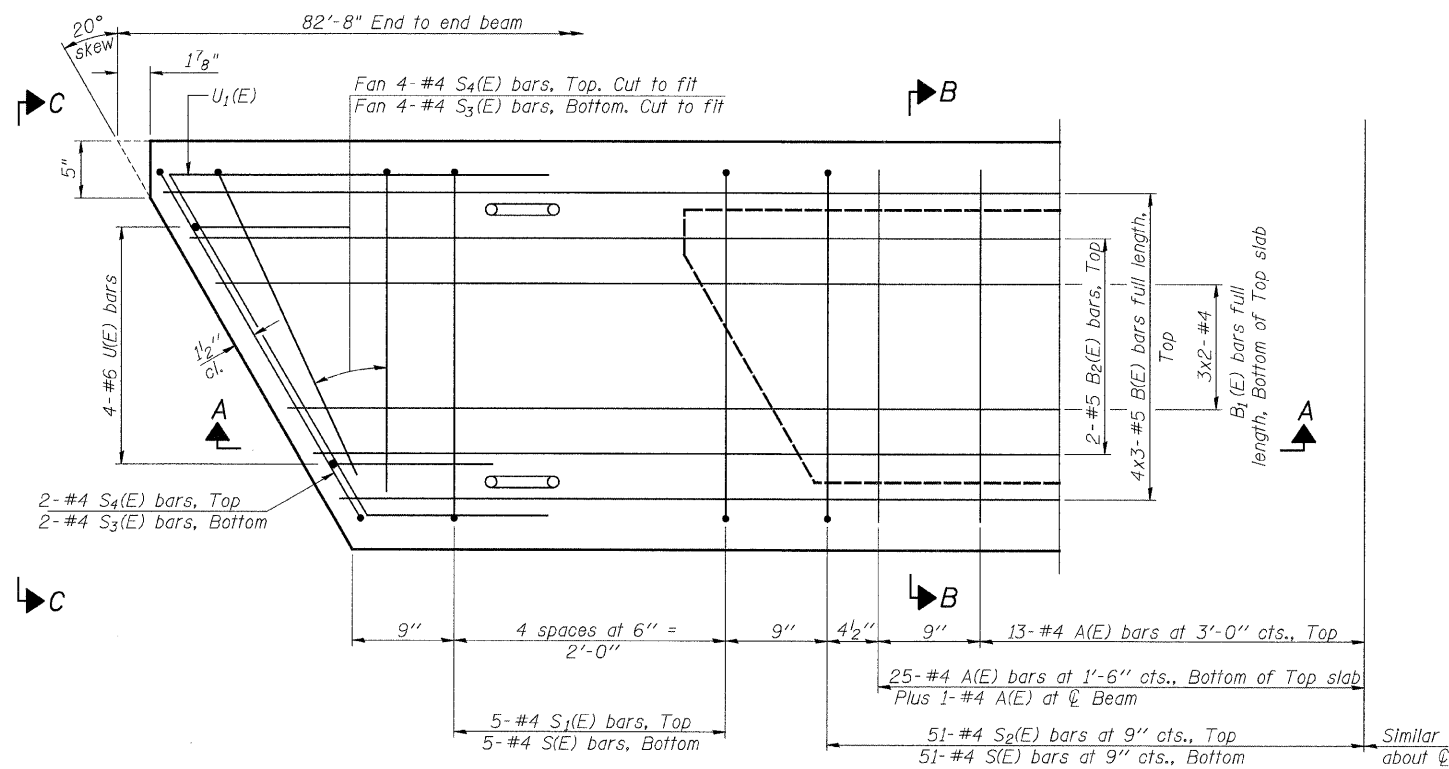
SECTION A-A



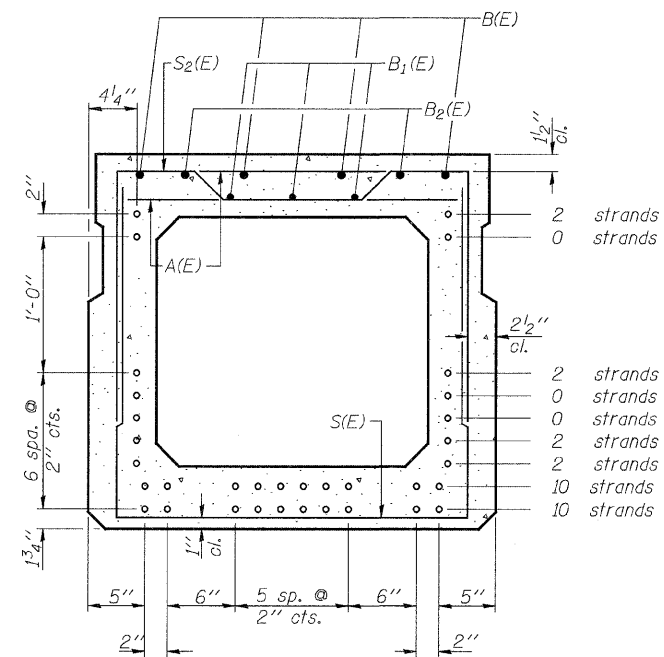
SECTION B-B
(Showing dimensions)



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)	77	#4	2'-7"	—
B(E)	12	#5	29'-2"	—
B1(E)	6	#4	42'-3"	—
B2(E)	4	#5	10'-0"	—
S(E)	112	#4	7'-5"	┌
S1(E)	10	#4	6'-3"	┌
S2(E)	102	#4	6'-6"	┌
S3(E)	8	#4	4'-9"	┌
S4(E)	8	#4	4'-2"	┌
U(E)	8	#6	5'-0"	┌
U1(E)	6	#4	6'-1"	┌

NOTES:

See Structural Sheet 4 of 9 for additional details and Bill of Material.

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 thus 4x3-#5 etc. indicates 4 lines of bars with 3 lengths per line.

MINIMUM BAR LAP

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

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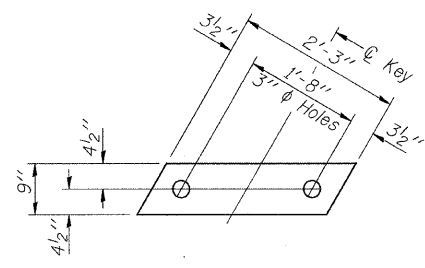
DESIGNED - MICHAEL WAGNER	REVISED -
CHECKED - BRIAN CONVERSE	REVISED -
DRAWN - MICHAEL WAGNER	REVISED -
CHECKED - MEGAN CACKLEY	REVISED -

BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20 + 05

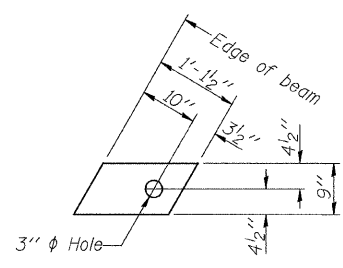
33" x 36" PPC DECK BEAM
STRUCTURE NO. 006-4235

STRUCTURAL SHEET NO. 3 OF 9 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	11
WHA# 1286D10		CONTRACT NO. 87498		
ILLINOIS FED. AID PROJECT BR05-0011084				

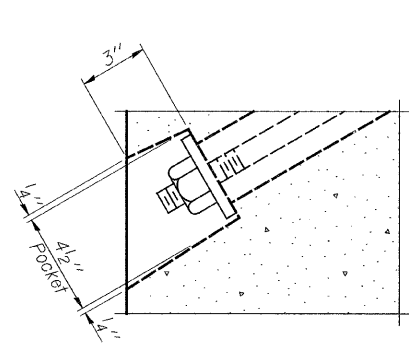


FABRIC BEARING PAD
(Interior)

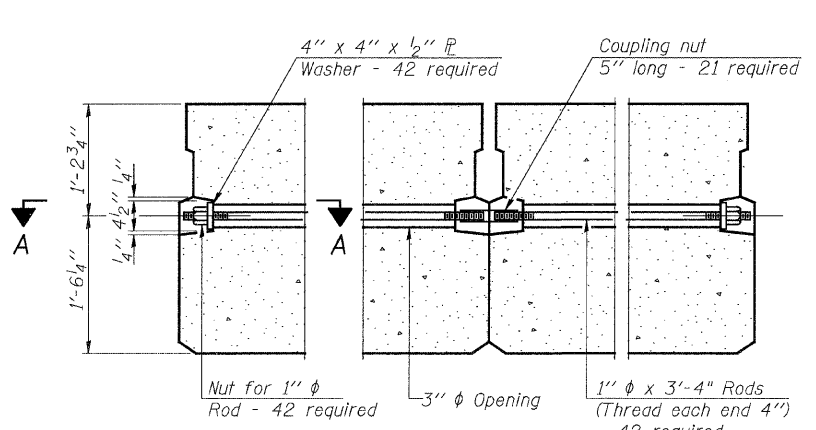


FABRIC BEARING PAD
(Exterior)

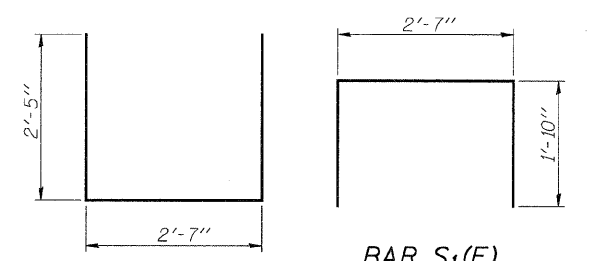
FIXED
NOTE:
All bearing pads shall be 1" thick.
Exterior bearing pads shall be used at crown break.



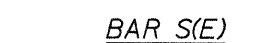
SECTION A-A



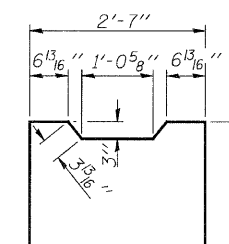
TYPICAL TRANSVERSE TIE ASSEMBLY



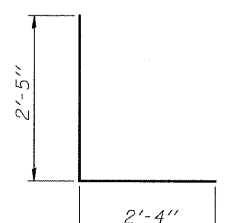
BAR S1(E)



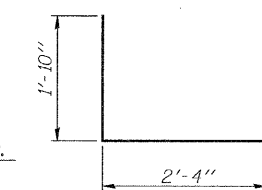
BAR S(E)



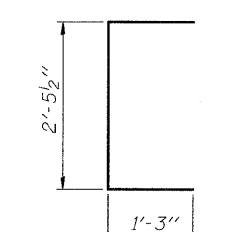
BAR S2(E)



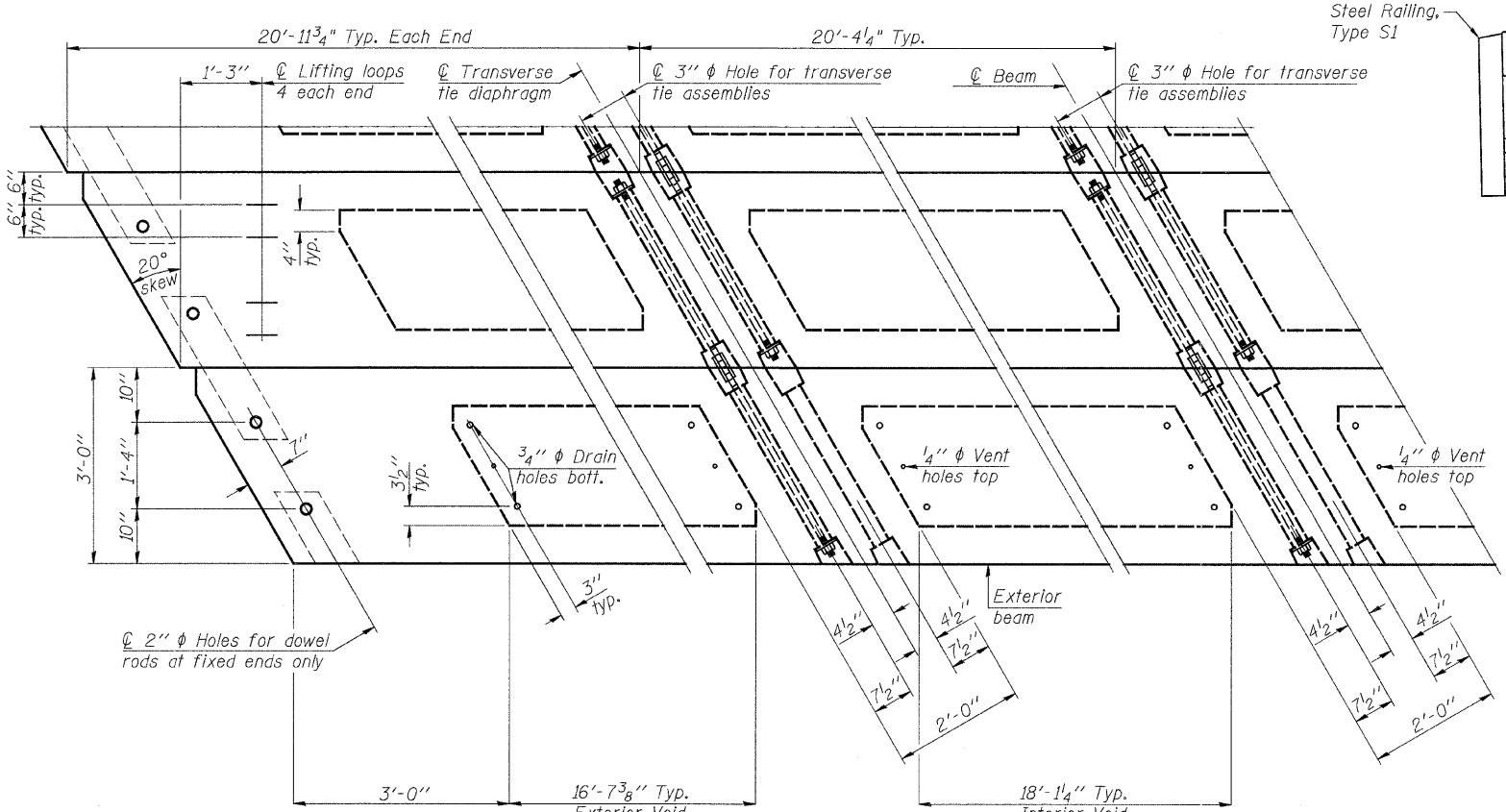
BAR S3(E)



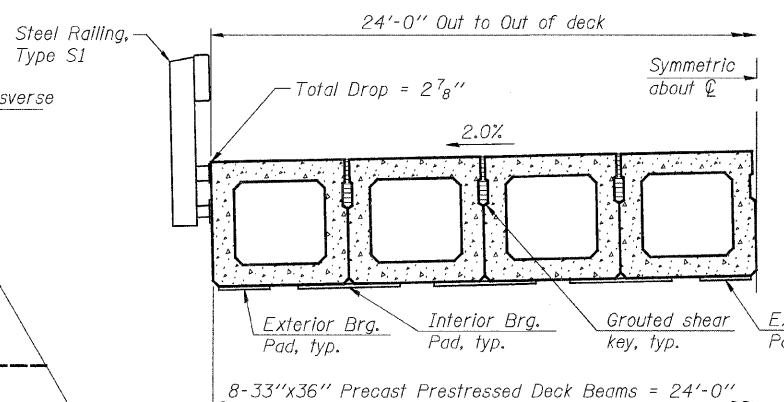
BAR S4(E)



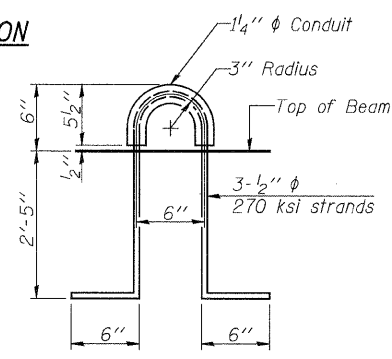
BAR U(E)



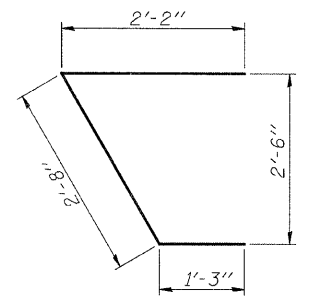
PLAN VIEW



HALF PROPOSED BRIDGE CROSS SECTION
(Looking North)

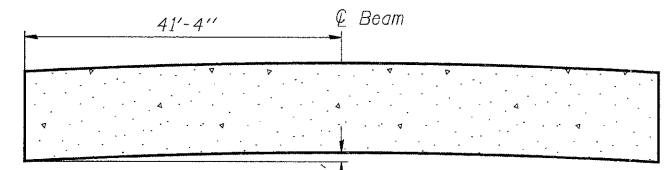


LIFTING LOOP DETAIL



BAR U1(E)

NOTE:
Connect beams in pairs with the transverse tie configuration shown.
Unused transverse tie hole on exterior beams can be omitted.



CAMBER DIAGRAM

BILL OF MATERIAL

Item	Unit	Quantity
Precast Prestressed Concrete Deck Beams (33" depth)	Sq. Ft.	1,984

NOTES:
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal ϕ shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
The 1" ϕ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling.
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
Compressive strength of prestressed concrete, $f'c$, shall be 6,000 psi.
Compressive strength of prestressed concrete at release, $f'ci$, shall be 5,000 psi.

FILE # SA-PROJECTS\2018\1286D10 - Bureau\Co. TR136\DESIGN\DRAWINGS\1286D10-DeckBeams.dgn

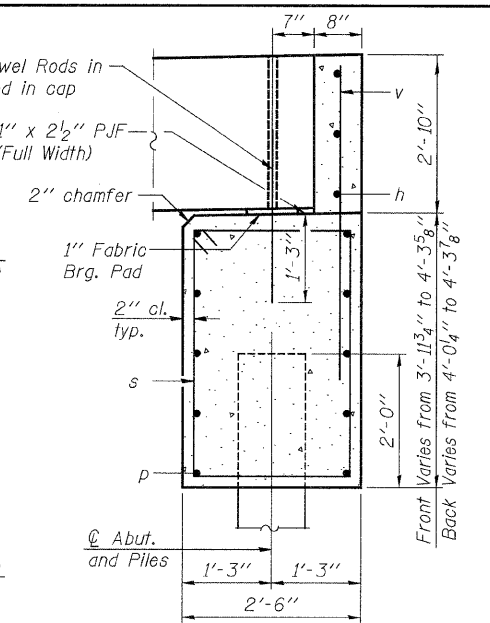
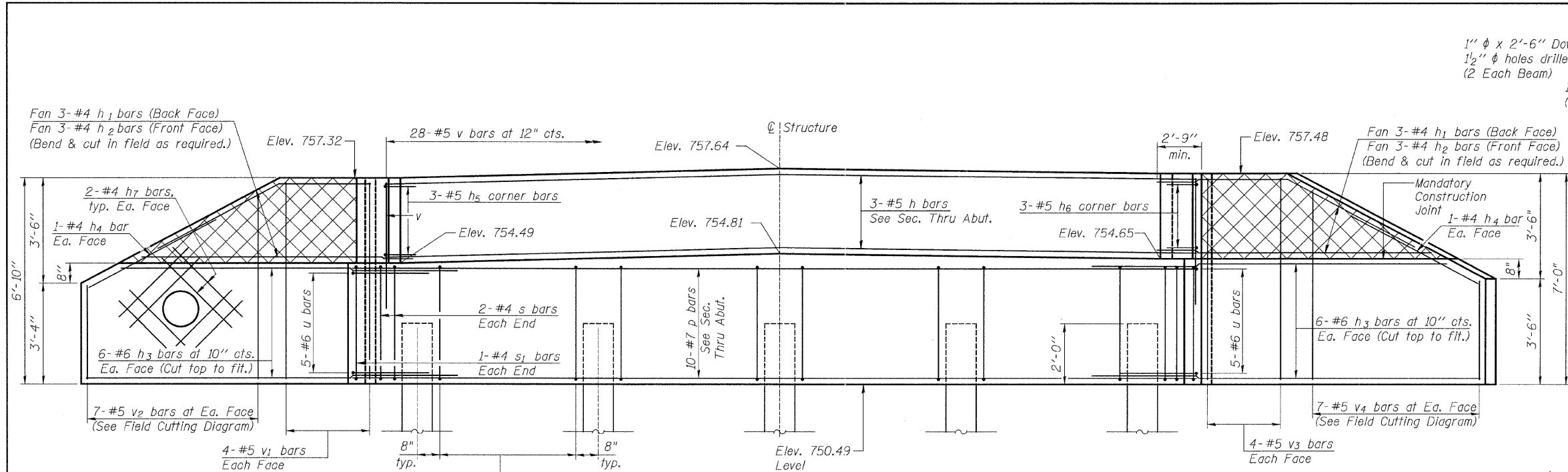
WILLETT HOFMANN
ASSOCIATES INC
ENGINEERING ARCHITECTURE LAND SURVEYING
609 EAST 2ND STREET, DICKON, IL 61031-0367
T: 815-284-3181 DESIGN FIRM: #184-010918

DESIGNED - MICHAEL WAGNER	REVISED -
CHECKED - BRIAN CONVERSE	REVISED -
DRAWN - MICHAEL WAGNER	REVISED -
CHECKED - MEGAN CACKLEY	REVISED -

BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20 + 05

33" x 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 006-4235
STRUCTURAL SHEET NO. 4 OF 9 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	12
WHA# 1286D10		CONTRACT NO. 87498		
[ILLINOIS] FED. AID PROJECT BR08-0G110849				

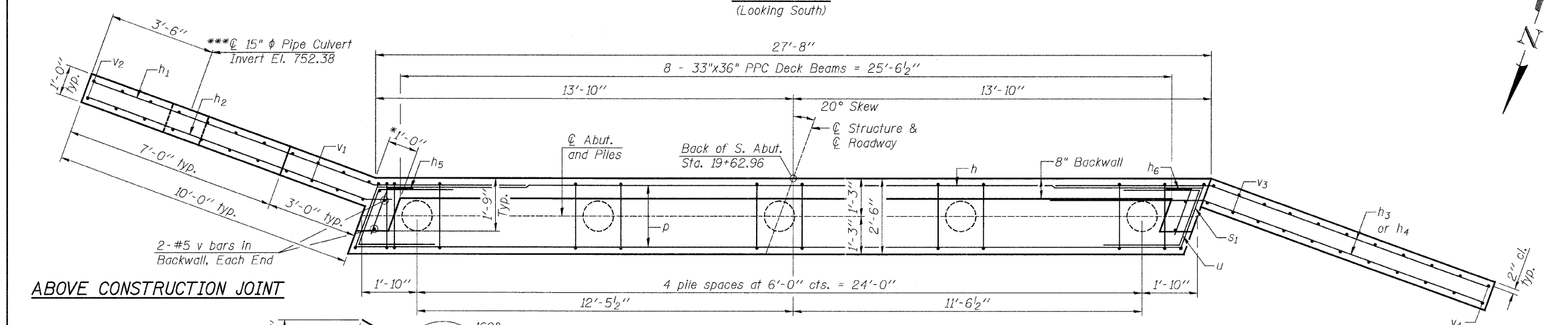


SEC. THRU ABUT.
(Dimensions are at Rt. L's)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	3	#5	27'-4"	
h1	12	#4	11'-6"	
h2	12	#4	9'-6"	
h3	24	#6	14'-0"	
h4	4	#4	4'-6"	
h5	3	#5	3'-4"	┌
h6	3	#5	3'-4"	┐
h7	16	#4	3'-3"	
p	10	#7	27'-4"	
s	28	#4	12'-3"	□
s1	2	#4	12'-5"	□
u	10	#6	7'-2"	└
v	32	#5	4'-10"	
v1	8	#5	6'-6"	
v2	7	#5	9'-0"	
v3	8	#5	6'-8"	
v4	7	#5	9'-4"	
Concrete Structures		Cu. Yd.	16.9	
Reinforcement Bars		Pound	2,150	
Furnishing Metal Shell Piles 12" x 0.250"		Foot	108	
Driving Piles		Foot	108	
Test Pile Metal Shells		Each	1	
** Porous Granular Embankment, Special		Ton	97	

ELEVATION
(Looking South)



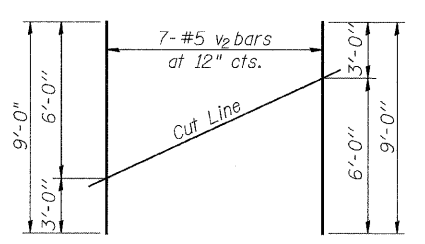
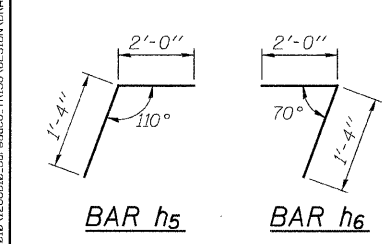
PLAN

ABOVE CONSTRUCTION JOINT

BELOW CONSTRUCTION JOINT

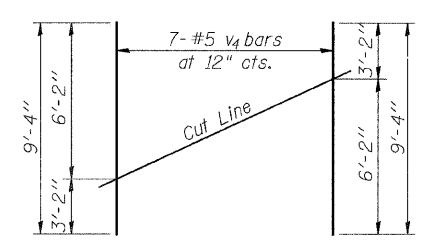
PILE DATA

Type: Metal Shell 12" ϕ x 0.250" walls
 Nominal Required Bearing: 317 k
 Factored Resistance Available: 175 k
 Est. Length: 27'
 No. Production Piles: 4
 No. Test Piles: 1



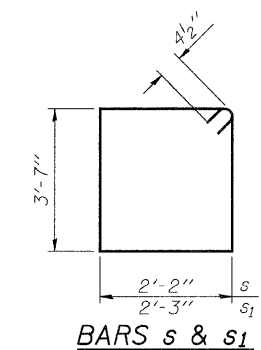
FIELD CUTTING DIAGRAM

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

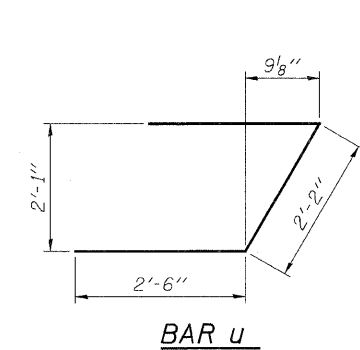


FIELD CUTTING DIAGRAM

Order v4 full length. Cut as shown and use remainder of bars in opposite face.



BARS s & s1



BAR u

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 9.
- * May vary due to overrun of beams.
- ** For drainage details, see Structural Sheet 2 of 9.
- *** v2 & h3 bars shall be cut and fit around the opening for the pipe culvert keeping a minimum 2" clearance.



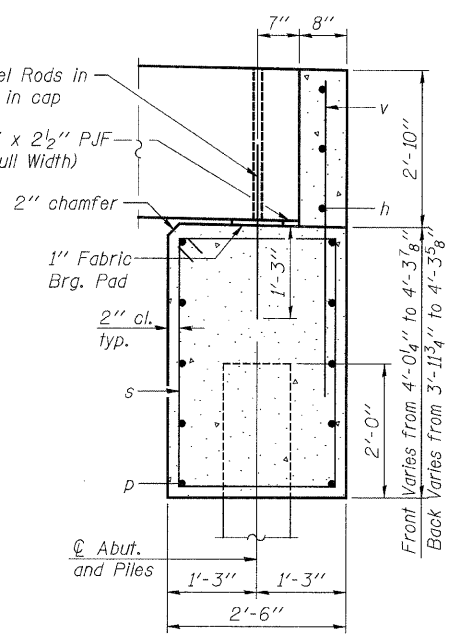
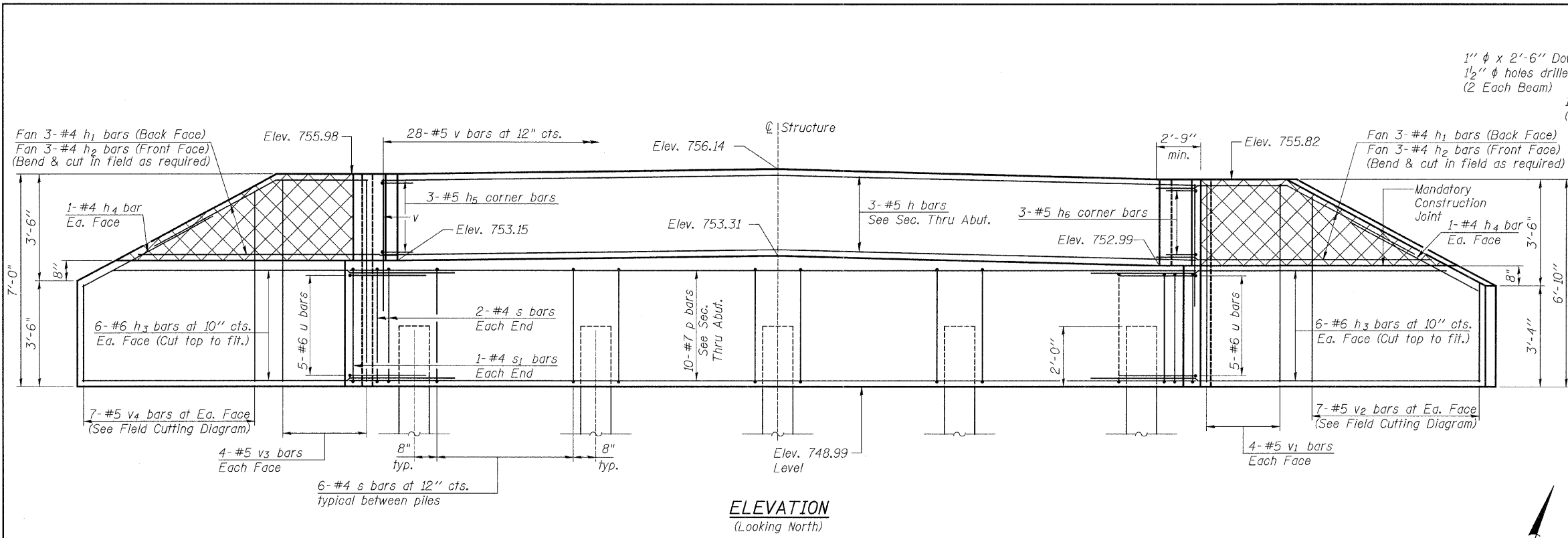
DESIGNED - MICHAEL WAGNER	REVISED -
CHECKED - BRIAN CONVERSE	REVISED -
DRAWN - MICHAEL WAGNER	REVISED -
CHECKED - MEGAN CACKLEY	REVISED -

BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20 + 05

SOUTH ABUTMENT DETAILS
STRUCTURE NO. 006-4235
 STRUCTURAL SHEET NO. 5 OF 9 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	13
WHA# 1286D10		CONTRACT NO. 87498		
[ILLINOIS] FED. AID PROJECT BR03-00110841				

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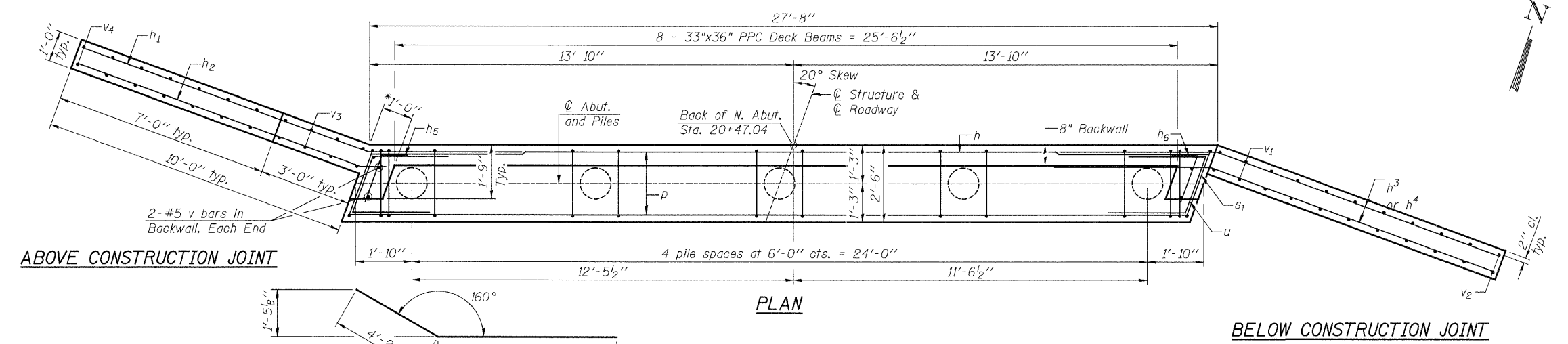


SEC. THRU ABUT.
(Dimensions are at Rt. L's)

BILL OF MATERIAL

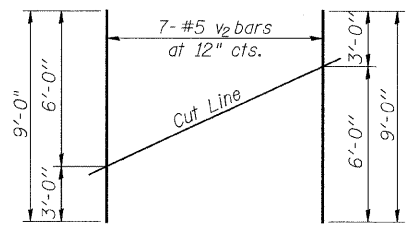
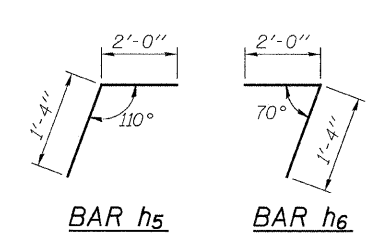
Bar	No.	Size	Length	Shape
h	3	#5	27'-4"	
h ₁	12	#4	11'-6"	
h ₂	12	#4	9'-6"	
h ₃	24	#6	14'-0"	
h ₄	4	#4	4'-6"	
h ₅	3	#5	3'-4"	┌
h ₆	3	#5	3'-4"	┐
p	10	#7	27'-4"	
s	28	#4	12'-3"	□
s ₁	2	#4	12'-5"	□
u	10	#6	7'-2"	└
v	32	#5	4'-10"	
v ₁	8	#5	6'-6"	
v ₂	7	#5	9'-0"	
v ₃	8	#5	6'-8"	
v ₄	7	#5	9'-4"	
Concrete Structures	Cu. Yd.		16.9	
Reinforcement Bars	Pound		2,110	
Furnishing Metal Shell Piles 12" x 0.250"	Foot		108	
Driving Piles	Foot		108	
Test Pile Metal Shells	Each		1	
** Porous Granular Embankment, Special	Ton		97	

ELEVATION
(Looking North)



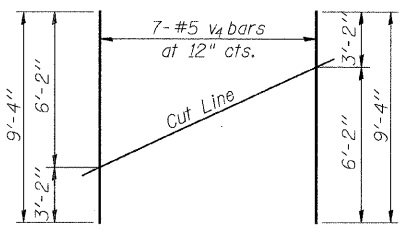
PLAN

PILE DATA
 Type: Metal Shell 12" ϕ x 0.250" walls
 Nominal Required Bearing: 317 k
 Factored Resistance Available: 175 k
 Est. Length: 27'
 No. Production Piles: 4
 No. Test Piles: 1



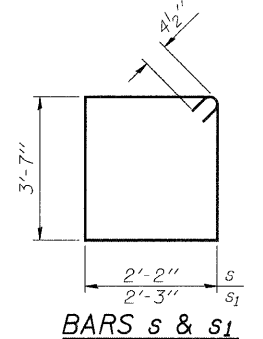
FIELD CUTTING DIAGRAM

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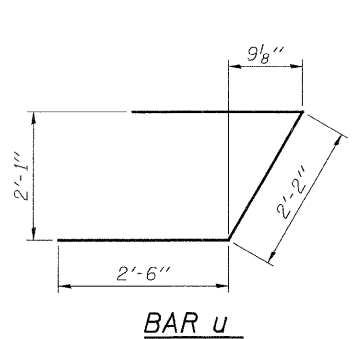


FIELD CUTTING DIAGRAM

Order v₄ full length. Cut as shown and use remainder of bars in opposite face.



BARS s & s₁



BAR u

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 $\frac{3}{4}$ " 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 9.
- * May vary due to overrun of beams.
- ** For drainage details, see Structural Sheet 2 of 9.

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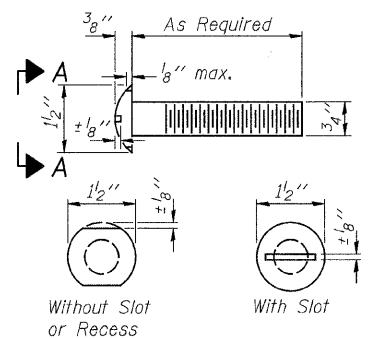


DESIGNED - MICHAEL WAGNER	REVISED -
CHECKED - BRIAN CONVERSE	REVISED -
DRAWN - MICHAEL WAGNER	REVISED -
CHECKED - MEGAN CACKLEY	REVISED -

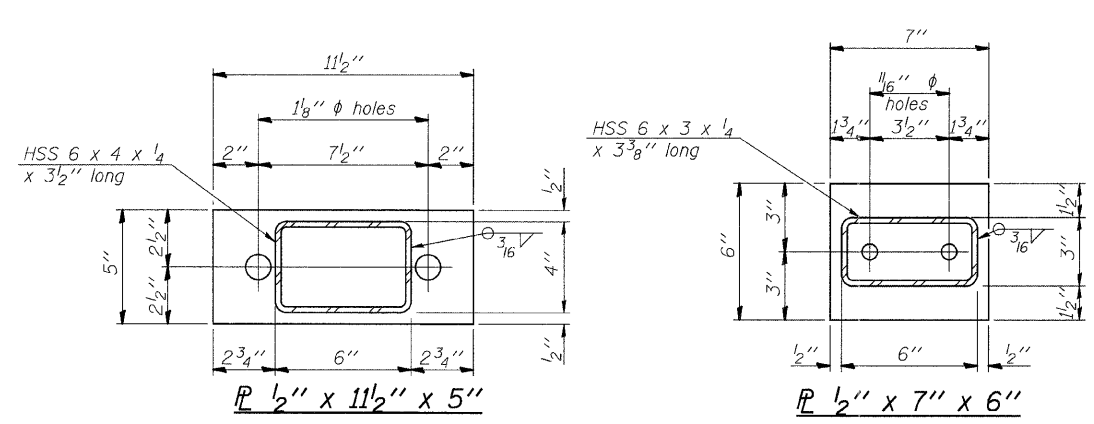
BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20 + 05

NORTH ABUTMENT DETAILS
STRUCTURE NO. 006-4235
 STRUCTURAL SHEET NO. 6 OF 9 SHEETS

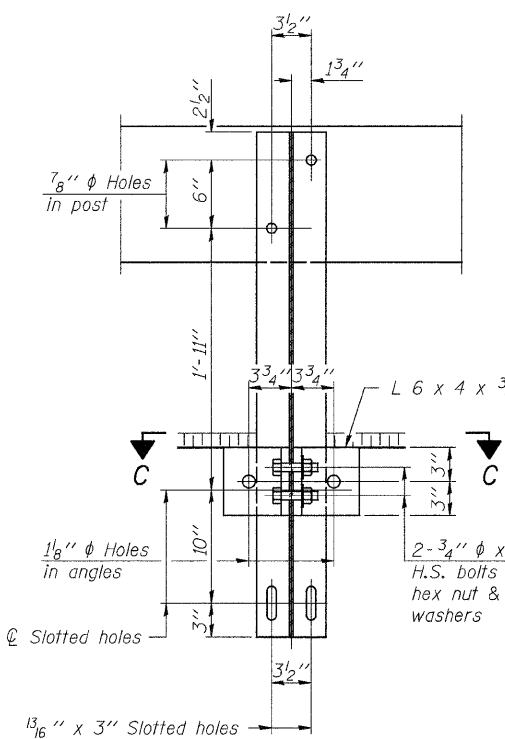
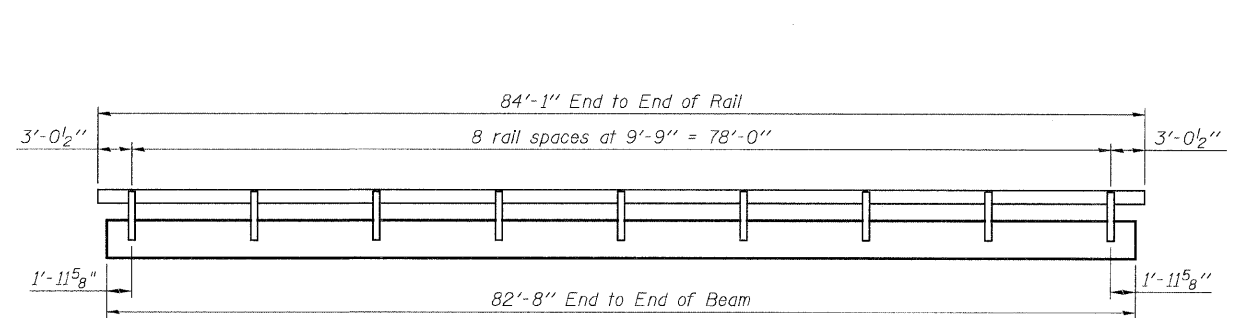
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WHA* 1286D10			CONTRACT NO. 87498	
[ILLINOIS] FED. AID PROJECT BROS-0011084				



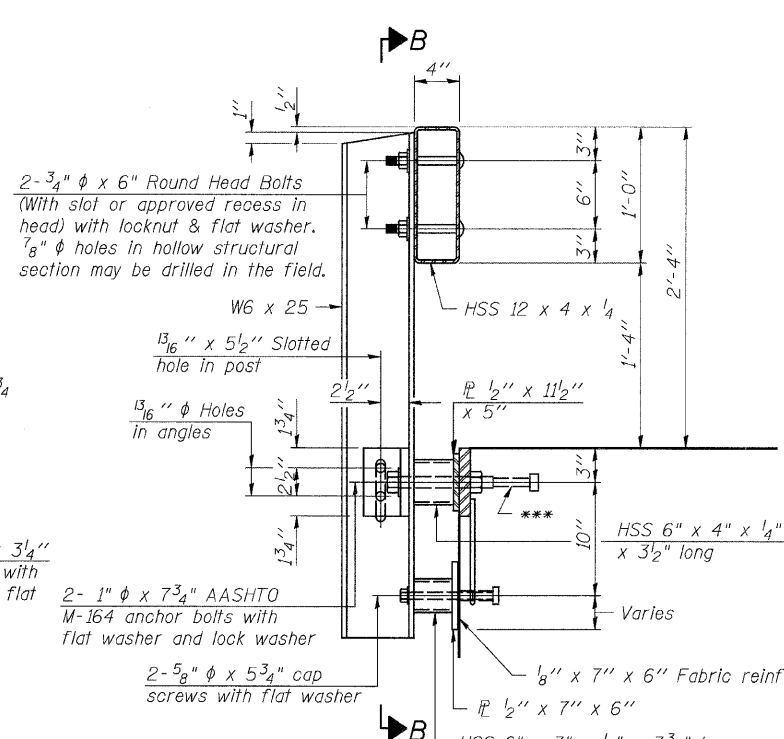
**VIEW A-A
ROUND HEAD BOLT**



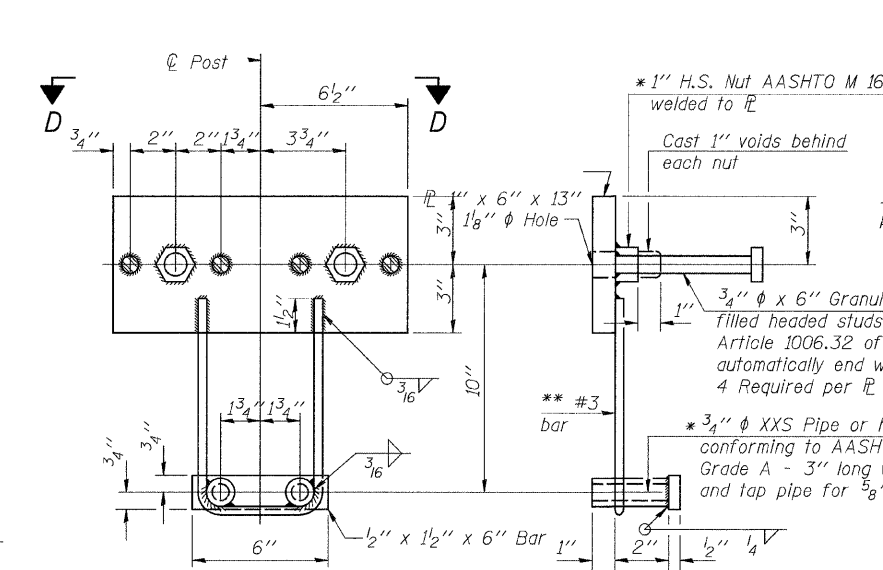
ELEVATION VIEW



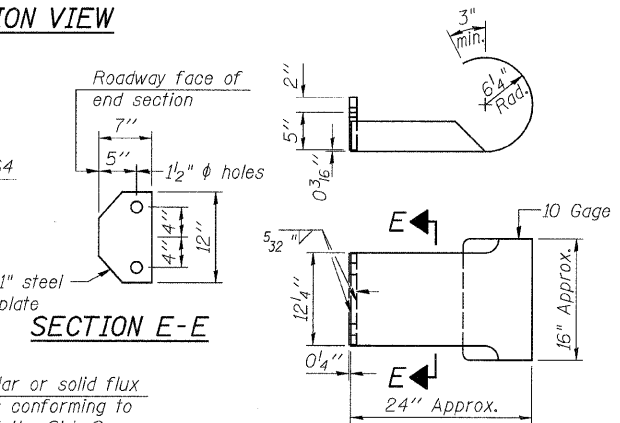
SECTION B-B



SECTION AT RAILING POST

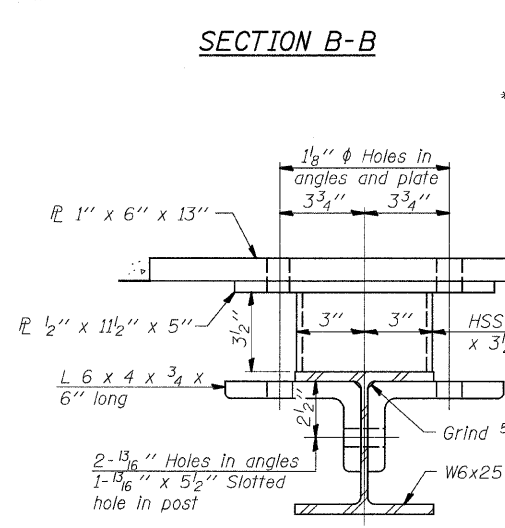


ANCHOR DEVICE

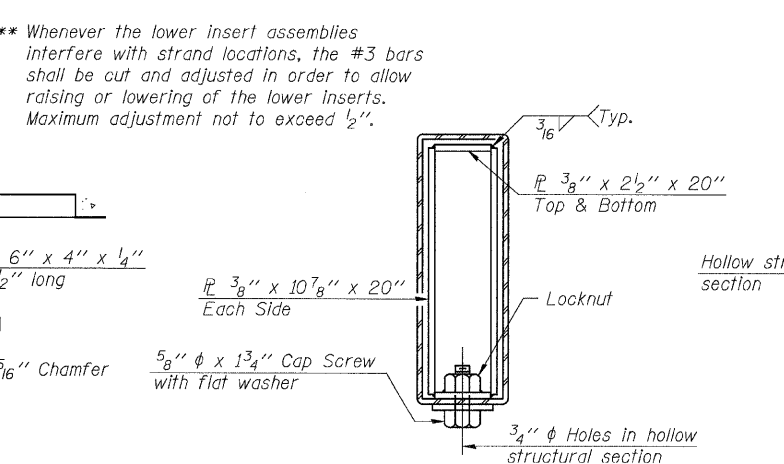


**CURLED END SECTION DETAILS
(4 required)**

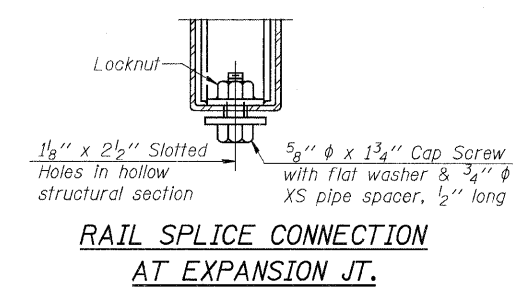
NOTES:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.
 All steel rail elements shall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



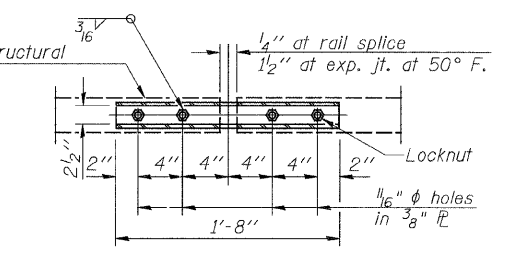
SECTION C-C



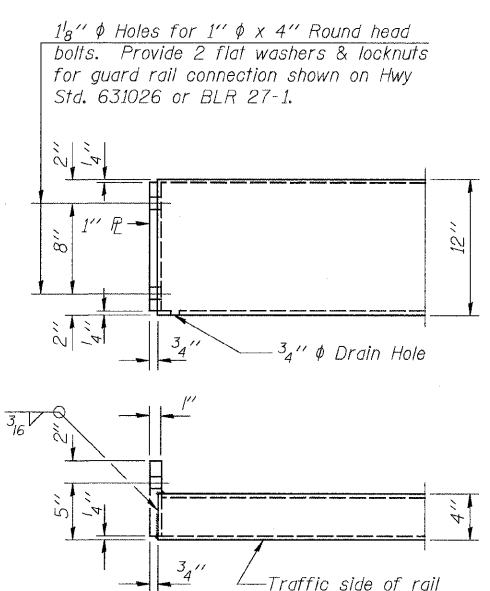
SECTIONS AT RAIL SPLICE



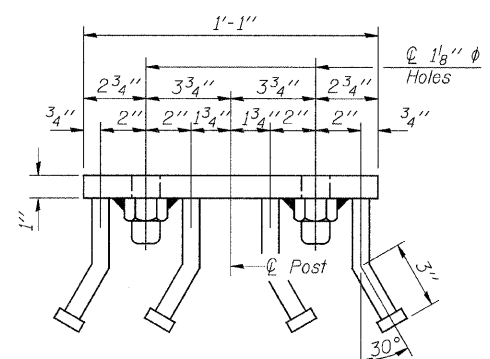
**RAIL SPLICE CONNECTION
AT EXPANSION JT.**



**PLAN-BOTT. SPLICE
TYPICAL**



END OF RAIL DETAILS



VIEW D-D

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S1	Foot	168

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

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

1 1/8 inch diameter Holes for 1 inch diameter Round head bolts. Provide 2 flat washers & locknuts for guard rail connection shown on Hwy Std. 6.31026 or BLR 27-1.

FILE - S:\PROJECTS\2018\1286D10 - Bureau Co. TR136 DESIGN DRAWINGS\1286D10Rail.dgn



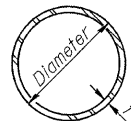
DESIGNED - MICHAEL WAGNER	REVISED -
CHECKED - BRIAN CONVERSE	REVISED -
DRAWN - MICHAEL WAGNER	REVISED -
CHECKED - MEGAN CACKLEY	REVISED -

**BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20 + 05**

**STEEL RAILING, TYPE S1 DETAILS
STRUCTURE NO. 006-4235**

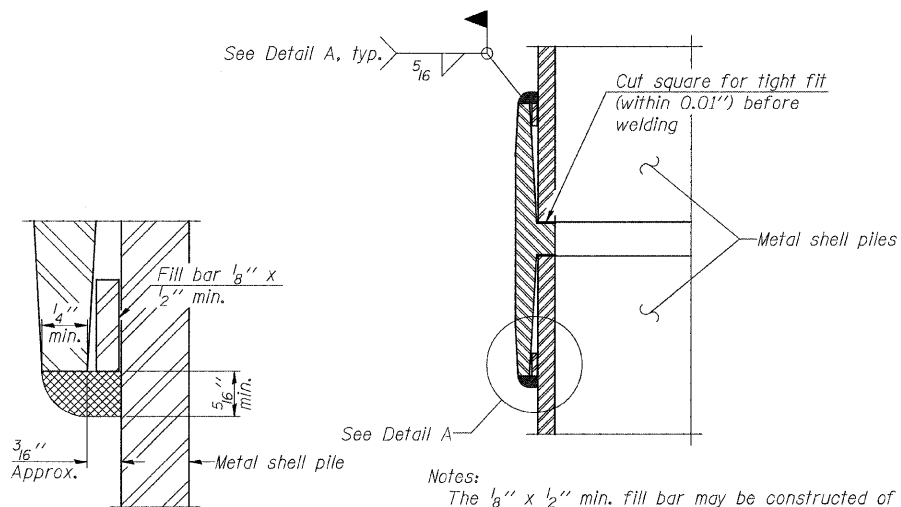
TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	15
WHA# 1286D10		CONTRACT NO. 87498		
ILLINOIS FED. AID PROJECT BR05-0011084				

STRUCTURAL SHEET NO. 7 OF 9 SHEETS



METAL SHELL PILE TABLE

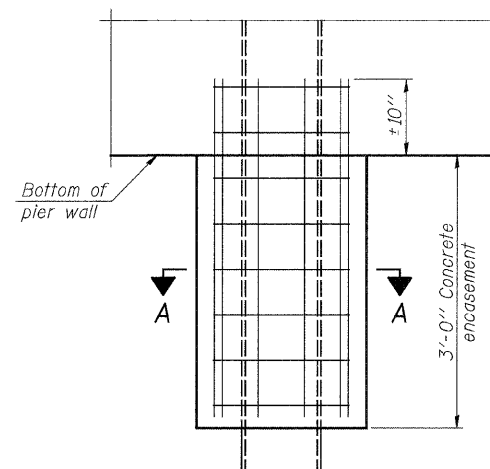
Designation and outside diameter	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)
PP12	0.179"	22.60	0.0274
PP12	0.250"	31.37	0.0267
PP14	0.250"	36.71	0.0368
PP14	0.312"	45.61	0.0361



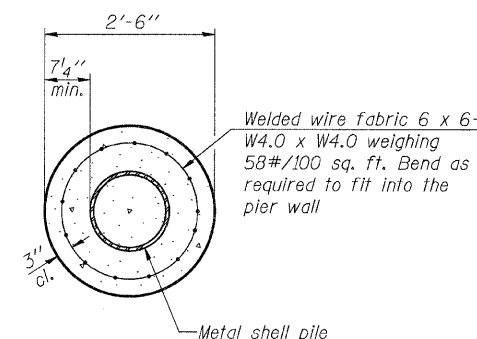
DETAIL A

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.

WELDED COMMERCIAL SPLICE



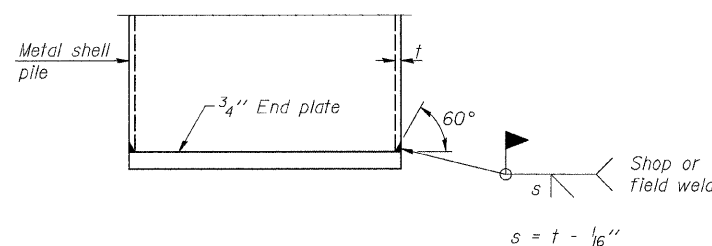
ELEVATION



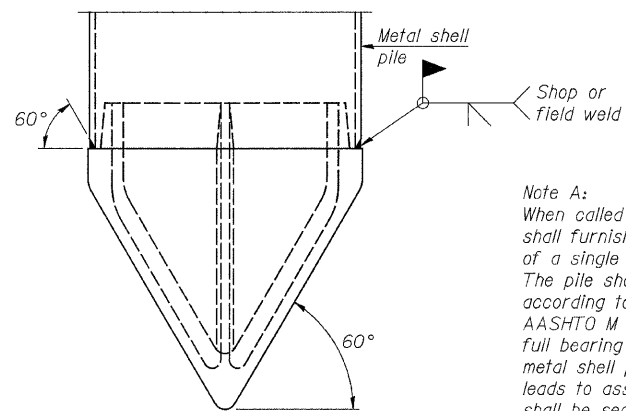
SECTION A-A

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

CONCRETE ENCASEMENT AT PIERS



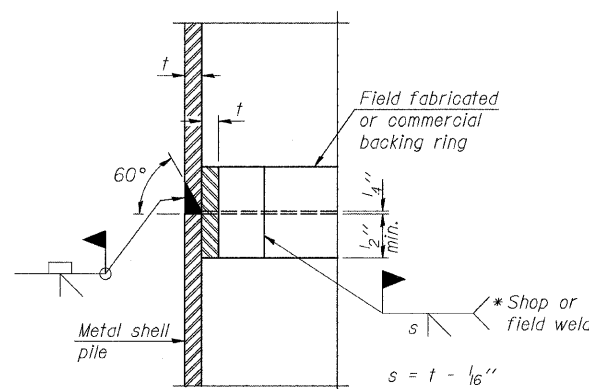
END PLATE ATTACHMENT



Note A:
 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 90-60 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.

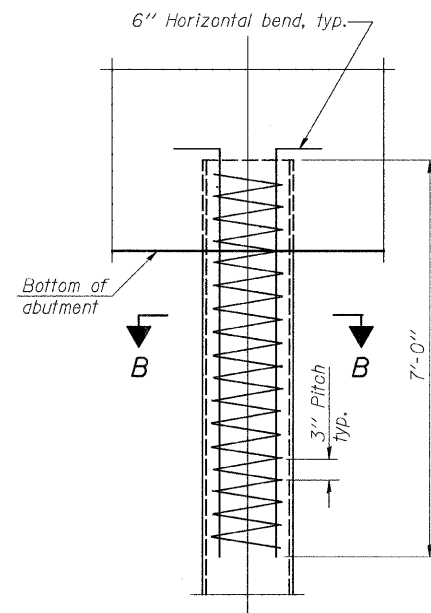
METAL SHELL PILE SHOE ATTACHMENT

(See Note A)

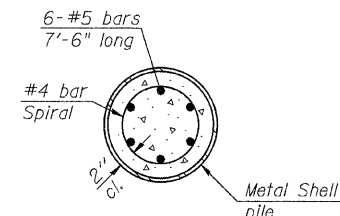


COMPLETE PENETRATION WELD SPLICE

* 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

METAL SHELL REINFORCEMENT AT ABUTMENTS

Note:
 The metal shell piles shall be according to ASTM A 252 Grade 3.

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WILLETT HOFMANN
 ASSOCIATES, INC.
 ENGINEERING ARCHITECTURE LAND SURVEYING
 809 EAST 2ND STREET, DIXON, IL 61021-0367
 T. 815-294-3381 DESIGN PRNG. #184-00015

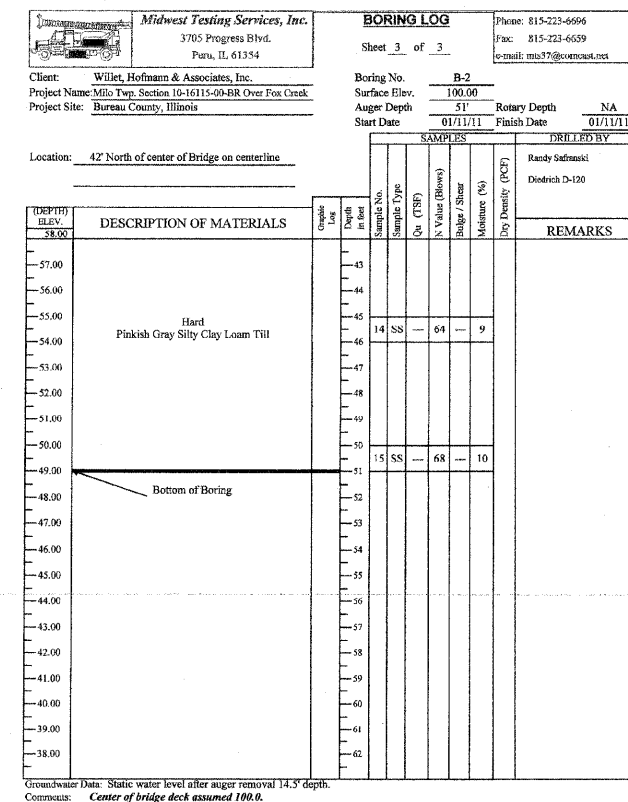
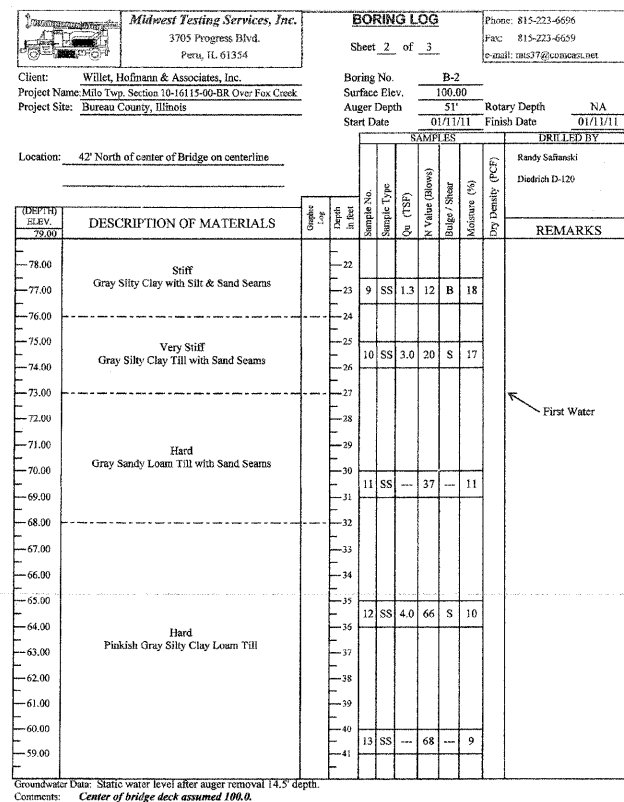
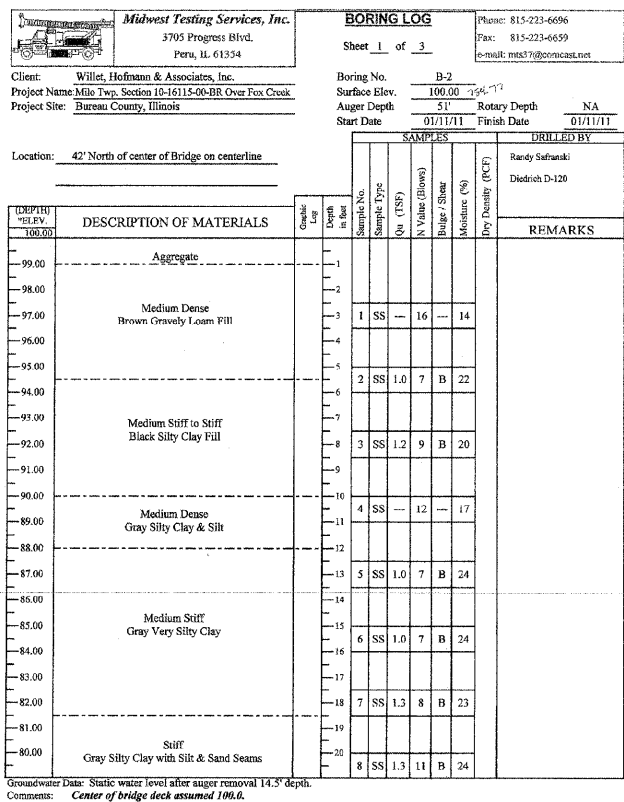
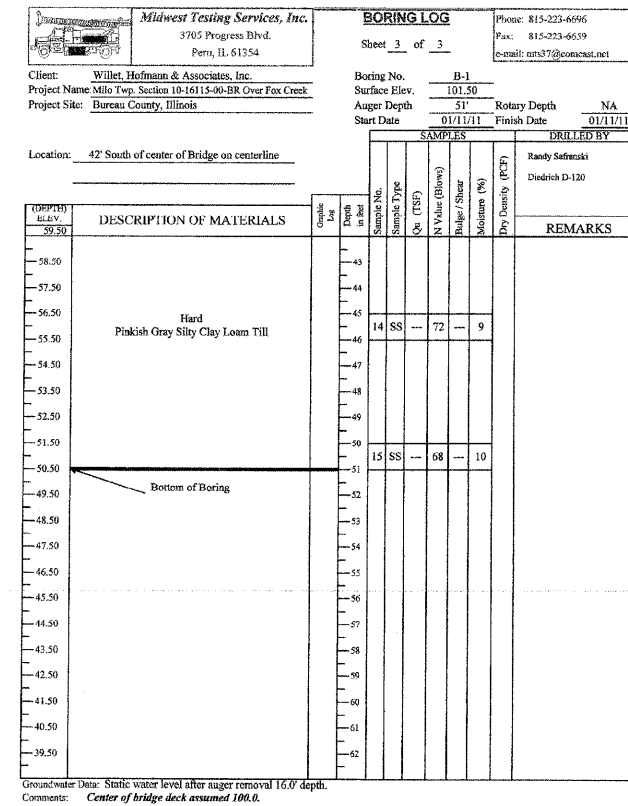
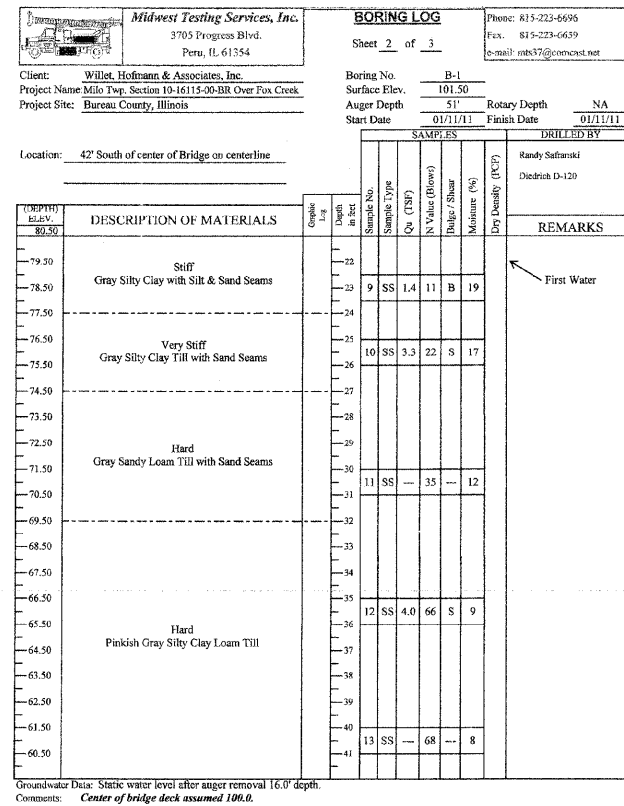
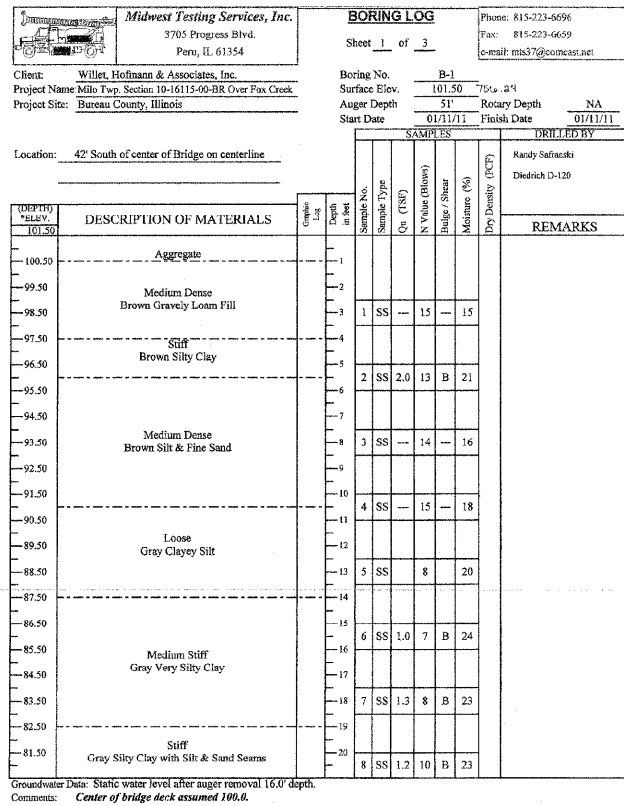
DESIGNED -	MICHAEL WAGNER	REVISED -	
CHECKED -	BRIAN CONVERSE	REVISED -	
DRAWN -	MICHAEL WAGNER	REVISED -	
CHECKED -	MEGAN CACKLEY	REVISED -	

BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20+05

METAL SHELL PILE DETAILS
STRUCTURE NO. 006-4235

STRUCTURAL SHEET NO. 8 OF 9 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	16
WHA* 1286D10		CONTRACT NO. 87498		
[ILLINOIS] FED. AID PROJECT BR05-0011084				



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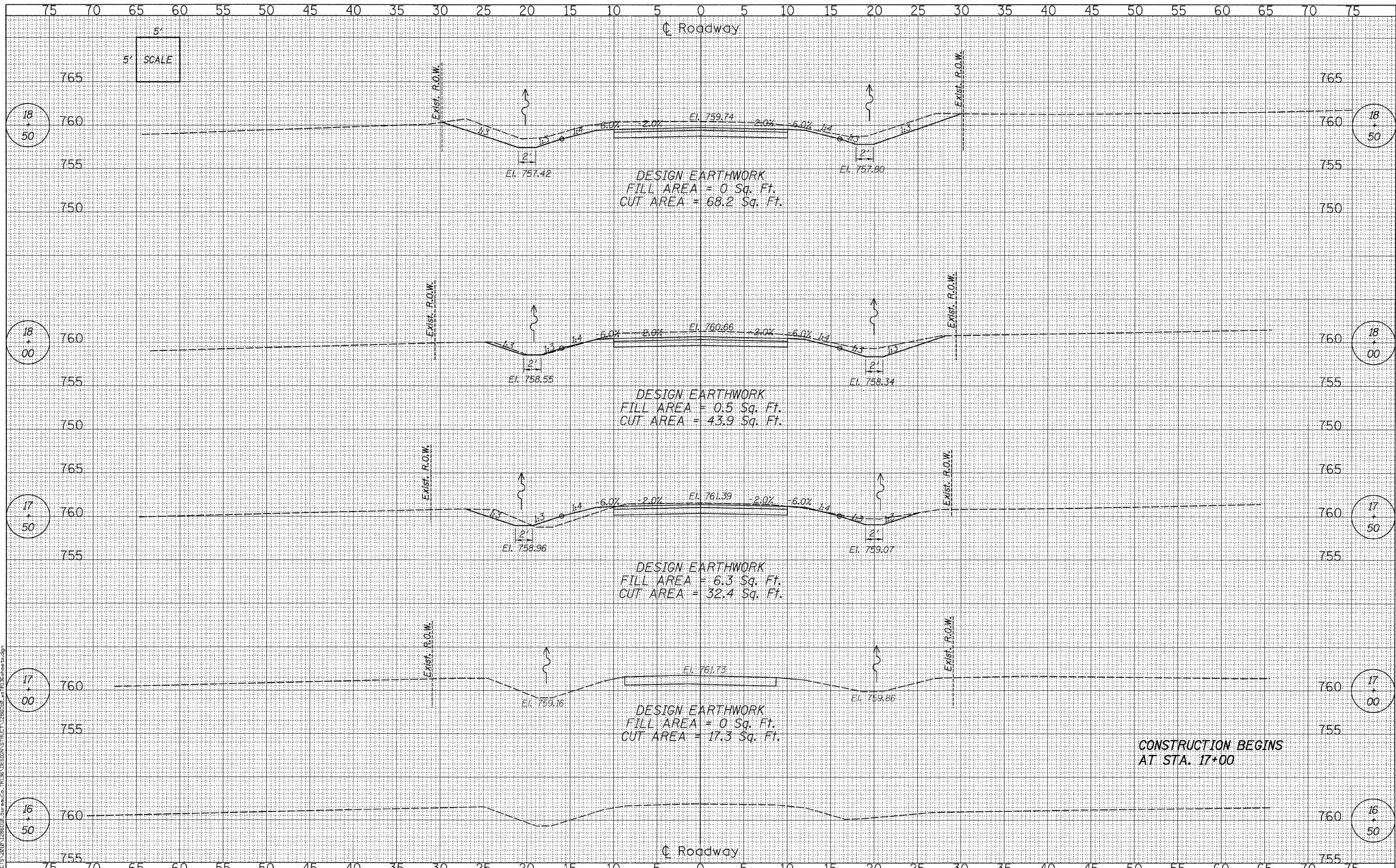


DESIGNED - MICHAEL WAGNER	REVISED -
CHECKED - BRIAN CONVERSE	REVISED -
DRAWN - MICHAEL WAGNER	REVISED -
CHECKED - MEGAN CACKLEY	REVISED -

**BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20 + 05**

**BORING LOGS
STRUCTURE NO. 006-4235**
STRUCTURAL SHEET NO. 9 OF 9 SHEETS

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	17
WHA# 1286D10			CONTRACT NO. 87498	
ILLINOIS FED. AID PROJECT BROS-0011084				



DATE	
BY	
FINAL SURVEY	
NOTE BOOK	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	

FILE # S:\PROJECTS\2010\1286010_BureauCo_TR136\DESIGN\STRUCT\20+00.dwg



DESIGNED - MICHAEL WAGNER	REVISED -
CHECKED - BRIAN CONVERSE	REVISED -
DRAWN - MICHAEL WAGNER	REVISED -
CHECKED - MEGAN CACKLEY	REVISED -

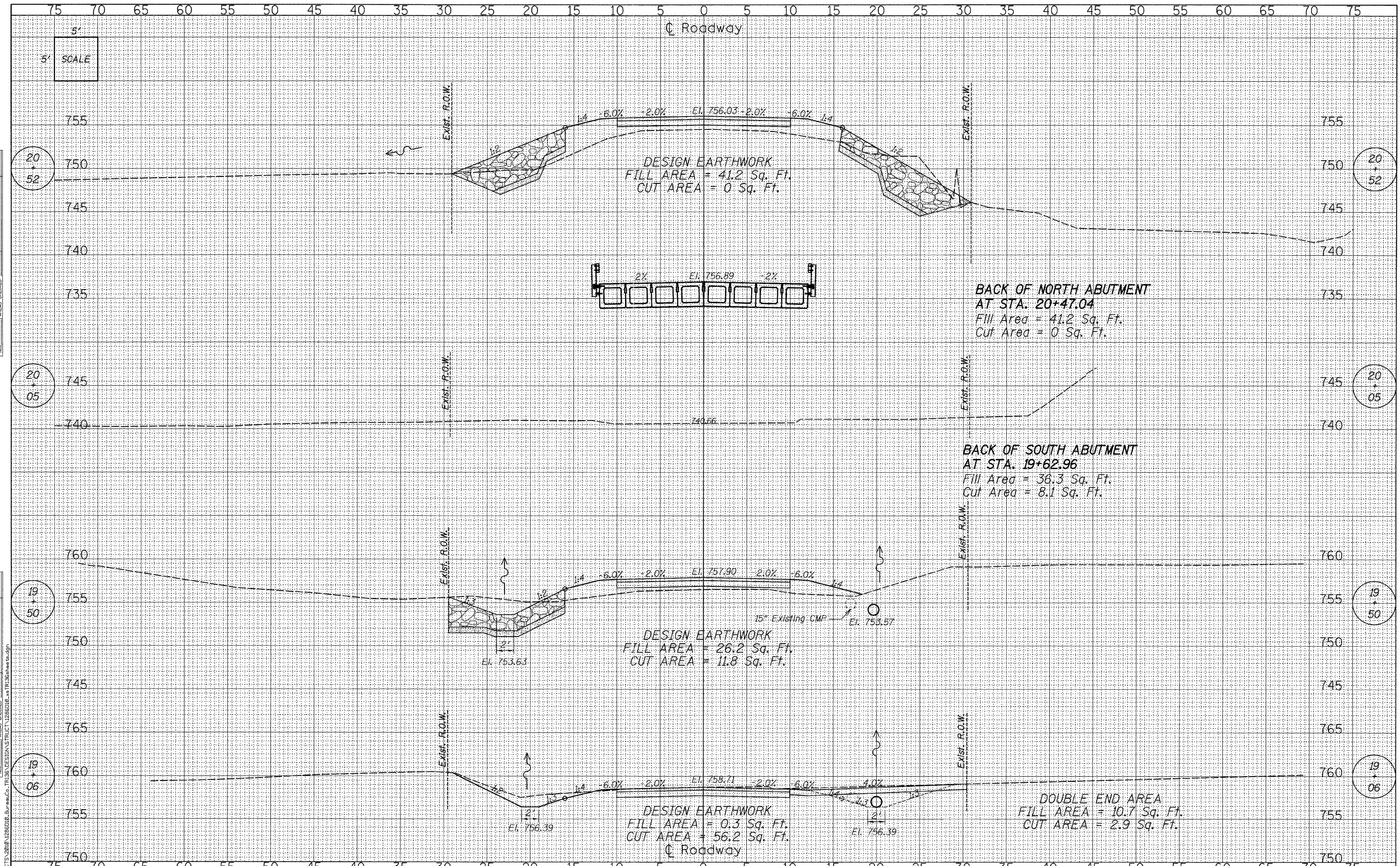
BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20+05

CROSS SECTIONS
STRUCTURE NO. 006-4235
SCALE: 1" = 5' SHEET NO. 1 OF 4 SHEETS STA. 16+50.00 TO STA. 18+50.00

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	18
WHA# 1286010		CONTRACT NO. 87498		
ILLINOIS FED. AID PROJECT BRGS-0011084				

DATE	
BY	
FINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
SURVEYED	
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	



FILE = S:\PROJECTS\2018\1286D10 - Bureau Co. TRS\DESIGN\STRUCT\2086D10 - STA 19+06 TO STA 20+06.dgn



DESIGNED -	MICHAEL WAGNER	REVISED -	
CHECKED -	BRIAN CONVERSE	REVISED -	
DRAWN -	MICHAEL WAGNER	REVISED -	
CHECKED -	MEGAN CACKLEY	REVISED -	

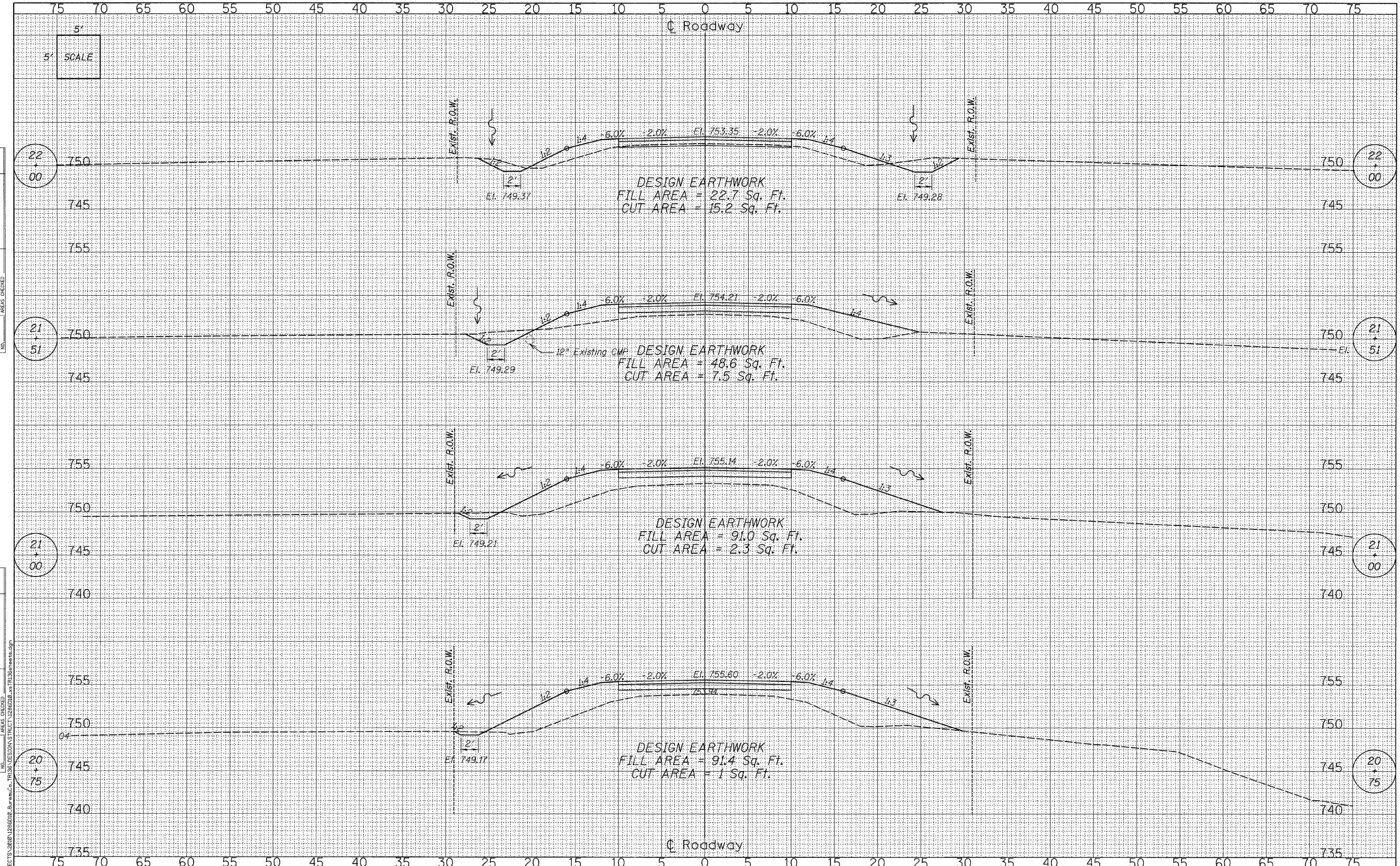
BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20 + 05

CROSS SECTIONS
STRUCTURE NO. 006-4235
 SCALE: 1" = 5' SHEET NO. 2 OF 4 SHEETS STA. 19+06.00 TO STA. 20+52.00

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	19
WHA* 1286D10		CONTRACT NO. 87498		
[ILLINOIS] FED. AID PROJECT BRGS-0011084				

DATE	
BY	
FINAL SURVEY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
SURVEYED	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	
AREAS CHECKED	
NO.	



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DESIGNED -	MICHAEL WAGNER	REVISED -	
CHECKED -	BRIAN CONVERSE	REVISED -	
DRAWN -	MICHAEL WAGNER	REVISED -	
CHECKED -	MEGAN CACKLEY	REVISED -	

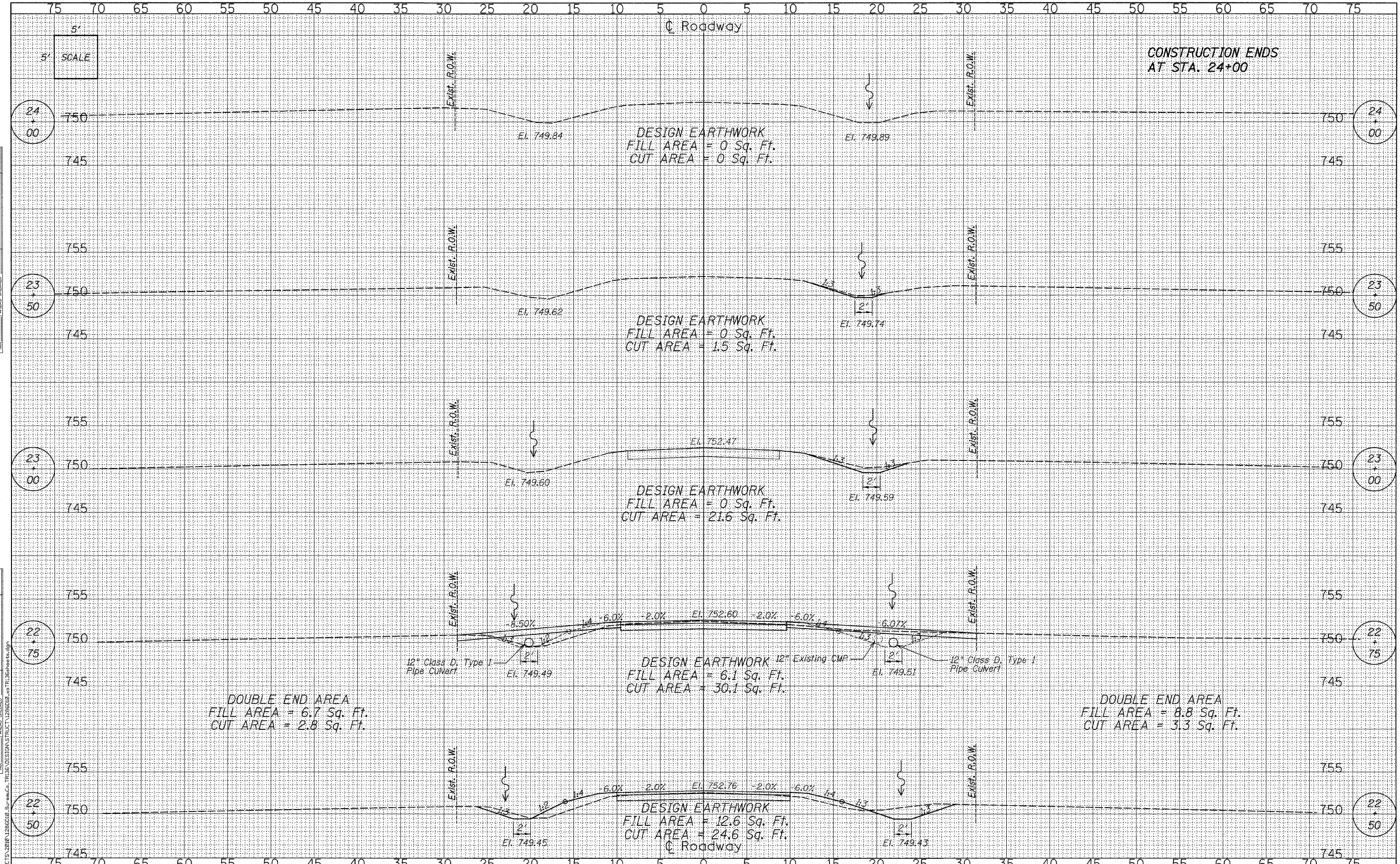
BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20 + 05

CROSS SECTIONS
STRUCTURE NO. 006-4235
SCALE: 1" = 5'
SHEET NO. 3 OF 4 SHEETS
STA. 20+75.00 TO STA. 22+00.00

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	20
WHA* 1286D10		CONTRACT NO. 87498		
ILLINOIS FED. AID PROJECT BROS-0011084				

FINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	

ORIGINAL SURVEY	DATE
SURVEYED	BY
PLOTTED	
TEMPLATE	
NOTE BOOK	
AREAS CHECKED	
NO.	



CONSTRUCTION ENDS AT STA. 24+00

FILE # SA\PROJECTS\2014\226010_BureauCo_T.R.136\DESIGN\STRUCT\226010_CrossSections.dgn



DESIGNED -	MICHAEL WAGNER	REVISED -	
CHECKED -	BRIAN CONVERSE	REVISED -	
DRAWN -	MICHAEL WAGNER	REVISED -	
CHECKED -	MEGAN CACKLEY	REVISED -	

BUREAU COUNTY
T.R. 136 (1125 E. ST.) OVER FOX CREEK
STATION 20+05

CROSS SECTIONS
STRUCTURE NO. 006-4235
 SCALE: 1" = 5' SHEET NO. 4 OF 4 SHEETS STA. 22+50.00 TO STA. 24+00.00

TWP. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
136	10-16115-00-BR	BUREAU	21	21
WHA# 1286D10		CONTRACT NO. 87498		
ILLINOIS FED. AID PROJECT BROS-0011084				