

85531

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
 FEDERAL AID PROJECT
 HIGHWAY BRIDGE PROGRAM**

**FAS ROUTE 78 (N BOLTON ROAD)
 SECTION 10-06118-00-BR
 PROJECT ER-0177(038)
 STRUCTURE REPLACEMENT
 STEPHENSON COUNTY**

C-92-059-11



LOCATION OF SECTION INDICATED THUS: - [shaded box] -

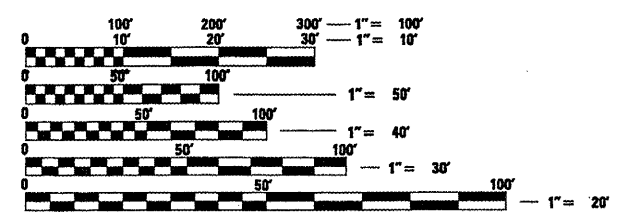
- INDEX OF SHEETS**
- 1 = COVER SHEET
 - 2 = SUMMARY OF QUANTITIES
 - 3-4 = GENERAL NOTES, SCHEDULES AND TYPICAL SECTIONS
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 - 10 = RIPRAP & PILING DETAILS
 - 11 = DOUBLE BARREL BOX CULVERT DETAILS
 - 12 = STEEL SHEET PILING DETAILS
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- STANDARDS**
- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
 - 280001-05 TEMPORARY EROSION CONTROL SYSTEMS
 - 420001-07 PAVEMENT JOINTS
 - 420101-04 24' (7.2 m) JOINTED PCC PAVEMENT
 - 515001-03 NAME PLATES FOR BRIDGES
 - 665001-02 WOVEN WIRE FENCE
 - 701006-03 OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
 - 701201-03 LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 M.P.H.
 - 701301-04 LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
 - 701901-01 TRAFFIC CONTROL DEVICES
 - 720011-01 METAL POSTS FOR SIGNS, MARKERS, AND DELINEATORS
 - 728001-01 TELESCOPING STEEL SIGN SUPPORT
 - 729001-01 APPLICATIONS OF TYPE A & B METAL POSTS (FOR SIGNS & MARKERS)
 - B.L.R. 21-8 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
 - B.L.R. 22-6 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

UTILITIES:

VERIZON (FRONTIER COM.)
 112 ELM STREET
 SYCAMORE, IL 60178
 PH: 815-895-1538
 ATTN: GARRETT BURT

COM ED
 1910 S. BRIGGS ST.
 JOLIET, IL 60433-9599
 PH: 630-437-3313
 ATTN: CRAIG WEBER



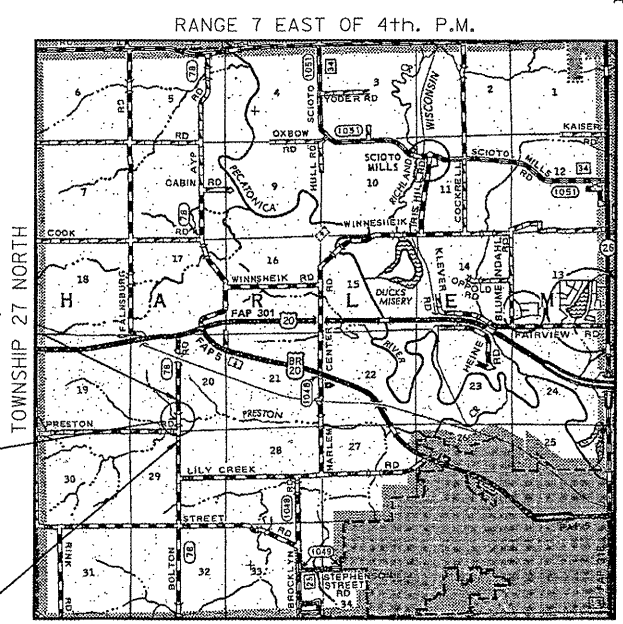
FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

**PROJECT ENGINEER
 PROJECT MANAGER**

CONTRACT NO. 85531

HIGHWAY CLASSIFICATION: MAJOR COLLECTOR (NON-URBAN)
 DESIGN SPEED: 40 M.P.H.
 ADT = 1070; 6% Trucks
 3R POLICY



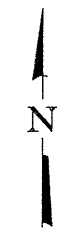
LOCATION MAP

SECTION ENDS AT STA. 23+00

SECTION BEGINS AT STA. 17+00

PROPOSED STRUCTURE (S.N. 089-5138)
 A DOUBLE BARREL (13'-6" x 10'-6")
 R.C. BOX CULVERT @ STA. 20+00,
 SKEWED 10° RT. AHEAD.

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



1-800-892-0123



Brian K. Converse
 DATE: 2/1/2011
 EXPIRES 11/30/11

STEPHENSON COUNTY HIGHWAY DEPARTMENT	
APPROVED	2-1-2011 <i>Mark Bratton</i> HARLEM ROAD DISTRICT COMMISSIONER
APPROVED	2-1-2011 <i>Chris Smith</i> STEPHENSON COUNTY ENGINEER
PASSED	FEB 14, 2011 <i>[Signature]</i> DISTRICT 2 ENGINEER OF LOCAL ROADS & STREETS
RELEASING FOR BID BASED ON LIMITED REVIEW	FEB 14, 2011 <i>[Signature]</i> DEPUTY DIRECTOR OF HIGHWAYS, REGION 2 ENGINEER
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	

**WILLETT,
 HOFMANN &
 ASSOCIATES, INC.**
CONSULTING ENGINEERS
 Land Surveying - Transportation - Structural
 Environmental - Architecture

809 East Second Street Dixon, Illinois 61021
 Phone 815.284.3381 Fax 815.284.3385
 Design Firm #184-000918
 www.willetthofmann.com
 WHA #1120D10

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SUMMARY OF QUANTITIES

CONSTRUCTION TYPE CODE: 0011

ITEM NO.	CODE NO.	ITEM	UNIT	TOTAL QUANTITY
1	20700220	POROUS GRANULAR EMBANKMENT	CU YD	151
2	25100630	EROSION CONTROL BLANKET	SQ YD	5,405
3	28000250*	TEMPORARY EROSION CONTROL SEEDING	POUND	112
4	28000305*	TEMPORARY DITCH CHECKS	FOOT	134.5
5	28000400	PERIMETER EROSION BARRIER	FOOT	24
6	28000500	INLET AND PIPE PROTECTION	EACH	1
7	28100109	STONE RIPRAP, CLASS A5	SQ YD	502
8	28200200	FILTER FABRIC	SQ YD	502
9	31101000*	SUBBASE GRANULAR MATERIAL, TYPE B	TON	1,092
10	40600100*	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	733
11	40603080*	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	440
12	40603310*	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	123
13	48101498*	AGGREGATE SHOULDERS, TYPE B 4"	SQ YD	506
14	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
15	50800105	REINFORCEMENT BARS	POUND	27,960
16	51500100	NAME PLATES	EACH	1
17	54003000	CONCRETE BOX CULVERTS	CU YD	166.4
18	54200235	PIPE CULVERTS, CLASS D, TYPE 1 30"	FOOT	30
19	54213885	STEEL END SECTIONS 30"	EACH	2
20	67100100	MOBILIZATION	L. SUM	1
21	X0323013*	TUBULAR STEEL GATE	EACH	1
22	X2020410*	EARTH EXCAVATION (SPECIAL)	CU YD	2,000
23	X2501000*	SEEDING, CLASS 2 (SPECIAL)	ACRE	1.12
24	X4020700*	AGGREGATE SURFACE COURSE, TYPE B 8"	SQ YD	94
25	X5121800*	PERMANENT STEEL SHEET PILING	SQ FT	2,088
26	X6650200*	WOVEN WIRE FENCE SPECIAL	FOOT	575
27	X7010216*	TRAFFIC CONTROL AND PROTECTION SPECIAL	L. SUM	1

* INDICATES SPECIAL PROVISION, GENERAL NOTE, OR DETAIL

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REV.	DATE	BY	REMARKS

DRAWN	R.D.A.
CHECKED	M.A.C.
APPROVED	B.K.C.

STEPHENSON COUNTY
CULVERT REPLACEMENT
F.A.S. 78 (N. BOLTON ROAD) OVER PRESTON CREEK
2010



SUMMARY OF QUANTITIES

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 78	10-06118-00-BR	Stephenson	18	2
STA. 17+00.00 - STA. 23+00.00				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT ER-0177(03B)		

GENERAL NOTES

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.

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 and approved by the Engineer.

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

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

All telephone and electric 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 this 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:

ComEd Verizon (Frontier Com.)
Attn: Craig Weber Attn: Garrett Burt
1910 S. Briggs St. 112 Elm Street
Joliet, IL 60433-9599 Sycamore, IL 60178
Ph: 630-437-3313 Ph: 815-895-1538

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

A Nationwide 404 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).

Where the proposed construction meets an existing bituminous surface, or where sawing is stated on the plans, the existing shall be sawed in a neat, straight line. Cost of sawing to be included in the contract unit price bid per Cubic Yard for Earth Excavation (Special).

SCHEDULE OF QUANTITIES (CONT)

TEMPORARY DITCH CHECKS

Table with columns: LOCATION, FOOT, REMARKS. Rows include RT. STA. 17+50, 17+75, 18+00, 18+25, 18+50, 19+50, 19+50, 20+50, 20+50, 22+00, 22+00.

TOTAL 134.5 FOOT

28000305*

PERIMETER EROSION BARRIER

Table with columns: LOCATION, FOOT, REMARKS. Rows include LT. STA. 19+73, 19+90, RT. STA. 19+90, 20+02.

TOTAL 24 FOOT

28000400

INLET AND PIPE PROTECTION

Table with columns: LOCATION, EACH, REMARKS. Row: RT. STA. 19+08 AT 30' P CUL

TOTAL 1 EACH

28000500

SUBBASE GRANULAR MATERIAL, TYPE B

Table with columns: LOCATION, TON, REMARKS. Rows include STA. 17+00 - 17+28.96, 17+28.96 - 22+76.68, 22+76.68 - 23+00.

TOTAL 1,092 TON

31101000*

BITUMINOUS MATERIALS (PRIME COAT)

Table with columns: LOCATION, GALLON, REMARKS. Rows include STA. 17+00 - 17+28.96, 17+28.96 - 22+76.68, 22+76.68 - 23+00, 17+00 - 17+28.96, 17+28.96 - 22+76.68, 22+76.68 - 23+00.

TOTAL 733 GALLON

40600100*

HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50

Table with columns: LOCATION, TON, REMARKS. Rows include STA. 17+00 - 17+28.96, 17+28.96 - 22+76.68, 22+76.68 - 23+00.

TOTAL 440 TON

40603080*

HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50

Table with columns: LOCATION, TON, REMARKS. Rows include STA. 17+00 - 17+28.96, 17+28.96 - 22+76.68, 22+76.68 - 23+00.

TOTAL 123 TON

40603310*

SCHEDULE OF QUANTITIES (CONT)

85531

AGGREGATE SHOULDERS, TYPE B 4"

Table with columns: LOCATION, SQ YD, REMARKS. Rows include LT. STA. 17+00 - 17+19.51, 17+19.51 - 22+79.61, 22+79.61 - 23+00, 17+00 - 17+22.15, 17+22.15 - 19+10.23, 19+10.23 - 22+77.76, 22+77.76 - 23+00.

TOTAL 506 SQ YD

48101498*

PIPE CULVERTS, CLASS D, TYPE 1 30"

Table with columns: LOCATION, FOOT, REMARKS. Row: FER 19+26 ACROSS FIELD ENTRANCE

TOTAL 30 FOOT

542D0235

STEEL END SECTIONS 30"

Table with columns: LOCATION, EACH, REMARKS. Row: FER 19+26 ACROSS FIELD ENTRANCE

TOTAL 2 EACH

54213885

TUBULAR STEEL GATE

Table with columns: LOCATION, EACH, REMARKS. Row: FER 19+26 ACROSS FIELD ENTRANCE

TOTAL 1 EACH

X0323013*

EARTH EXCAVATION (SPECIAL)

Table with columns: LOCATION, CU YD, REMARKS. Row: STA. 17+00 - 23+00

TOTAL 2,000 CU YD

X2020410*

SEEDING, CLASS 2 (SPECIAL):

Table with columns: LOCATION, ACRE, REMARKS. Rows include LT. STA. 17+00 - 23+00, RT. STA. 17+00 - 23+00.

TOTAL 1.12 ACRE

X2501000*

AGGREGATE SURFACE COURSE, TYPE B 8"

Table with columns: LOCATION, SQ YD, REMARKS. Row: FER 19+26 FIELD ENTRANCE

TOTAL 94 SQ YD

X4020700*

WOVEN WIRE FENCE SPL

Table with columns: LOCATION, FOOT, REMARKS. Rows include R 17+00 TO 19+20, R 19+36 TO 19+83, R 20+12 TO 23+00.

TOTAL 575 FOOT

X6650200*

SCHEDULE OF QUANTITIES

EROSION CONTROL BLANKET

Table with columns: LOCATION, SQ YD, REMARKS. Rows include LT. STA. 17+00 - 23+00, RT. STA. 17+00 - 23+00.

TOTAL 5,405 SQ YD

25100630

TEMPORARY EROSION CONTROL SEEDING

Table with columns: LOCATION, POUND, REMARKS. Rows include LT. STA. 17+00 - 23+00, RT. STA. 17+00 - 23+00.

TOTAL 112 POUND

28000250*

Table with columns: REV., DATE, BY, REMARKS, DRAWN, CHECKED, APPROVED.

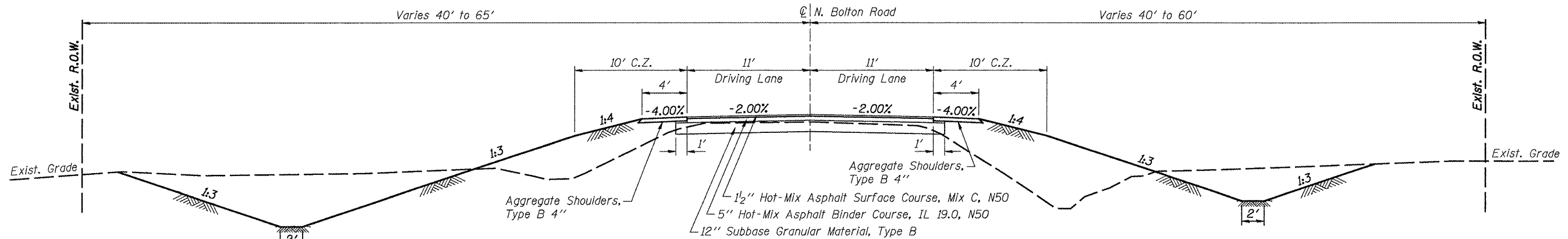
STEPHENSON COUNTY CULVERT REPLACEMENT F.A.S. 78 (N. BOLTON ROAD) OVER PRESTON CREEK 2010

WILLET, HOFMANN & ASSOCIATES, INC. CONSULTING ENGINEERS

GENERAL NOTES, SCHEDULES AND TYPICAL SECTIONS

Table with columns: ROUTE NO., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., F.A.S., STA. 17+00.00 - STA. 23+00.00, FED. ROAD DIST. NO. 7, ILLINOIS, FED. AID PROJECT ER-0177(038)

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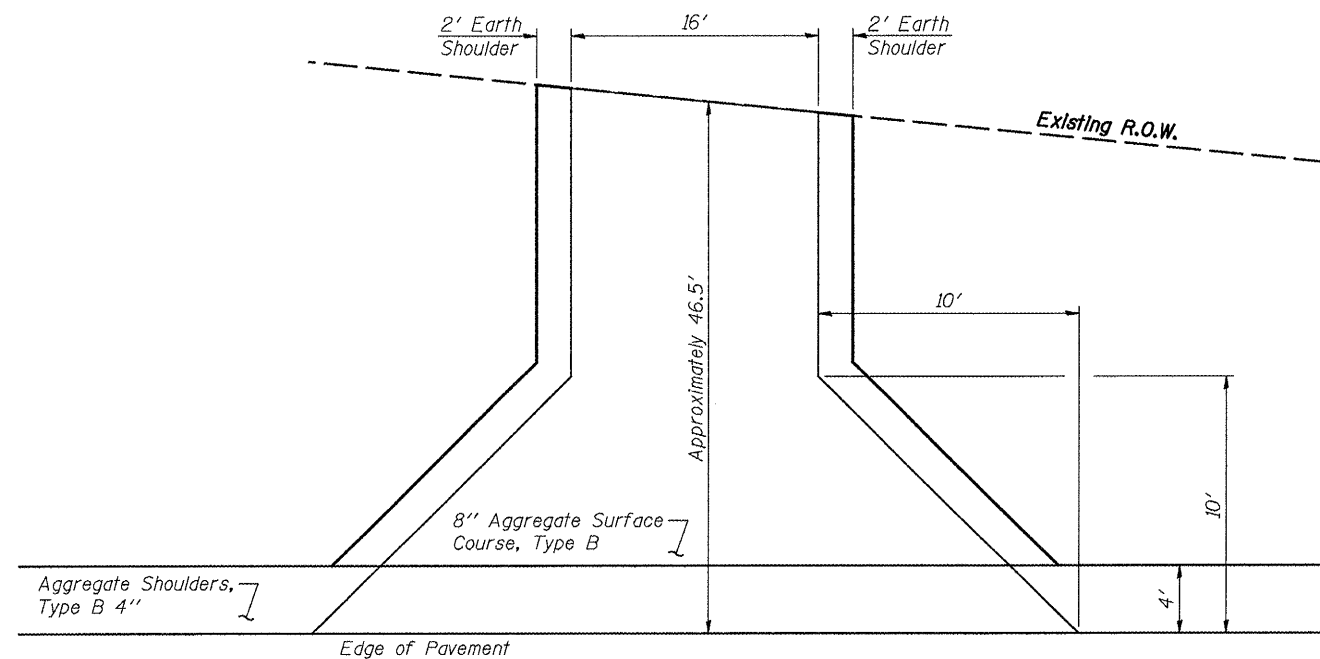


* Dimensions and Cross-Slopes vary from Stations 17+00 to 17+50 and 22+50 to 23+00 due to transition to match existing roadway

N. BOLTON ROAD
(Sta. 17+00.00 to Sta. 23+00.00)

PAVEMENT MIXTURE REQUIREMENTS

	Construction	
	Binder	Surface
PG:	PG 64-22	PG 64-22
Design Air Voids	4.0 @ N50	4.0 @ N50
Mixture Composition (Gradation Mixture)	IL 19.0	IL 12.5 or 9.5
Friction Aggregate	—	C
ESALS	0.5	0.5



N. BOLTON ROAD
FIELD ENTRANCE
(Sta. 19+26)

PAVEMENT STRUCTURAL DESIGN
N. BOLTON ROAD

Structural Design Traffic (S.D.T.) = Year 2020 (3R Guidelines)
 Class III Street
 80,000# Truck Design
 $E_{RI} = (\text{Assumed}) 2 \text{ ksi}$
 $TF = 0.36$
 HMA Mix Temp. 77°F
 HMA $E_{AC} = 625 \text{ ksi}$
 HMA Design Strain 190 microstrain

USE:
 1/2" Hot-Mix Asphalt Surface Course, Mix "C", N50
 5" Hot-Mix Asphalt Binder Course, IL-19.0, N50
 12" Subbase Granular Material, Type B

P.V. 1,150
 S.U. 92
 M.U. 66
 1,306 ADT

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REV.	DATE	BY	REMARKS

DRAWN
R.D.A.
CHECKED
M.A.C.
APPROVED
B.K.C.


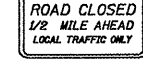
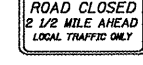



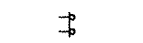
STEPHENSON COUNTY
CULVERT REPLACEMENT
F.A.S. 78 (N. BOLTON ROAD) OVER PRESTON CREEK
2010

WILLET, HOFMANN & ASSOCIATES, INC.
CONSULTING ENGINEERS
Land Surveying - Transportation - Structural
Environmental - Architecture
800 East Second Street Dixon, Illinois 61021
Phone 815.294.3391 Fax 815.294.3385
Design Firm #184-000918
www.willett-hofmann.com

GENERAL NOTES, SCHEDULES AND TYPICAL SECTIONS

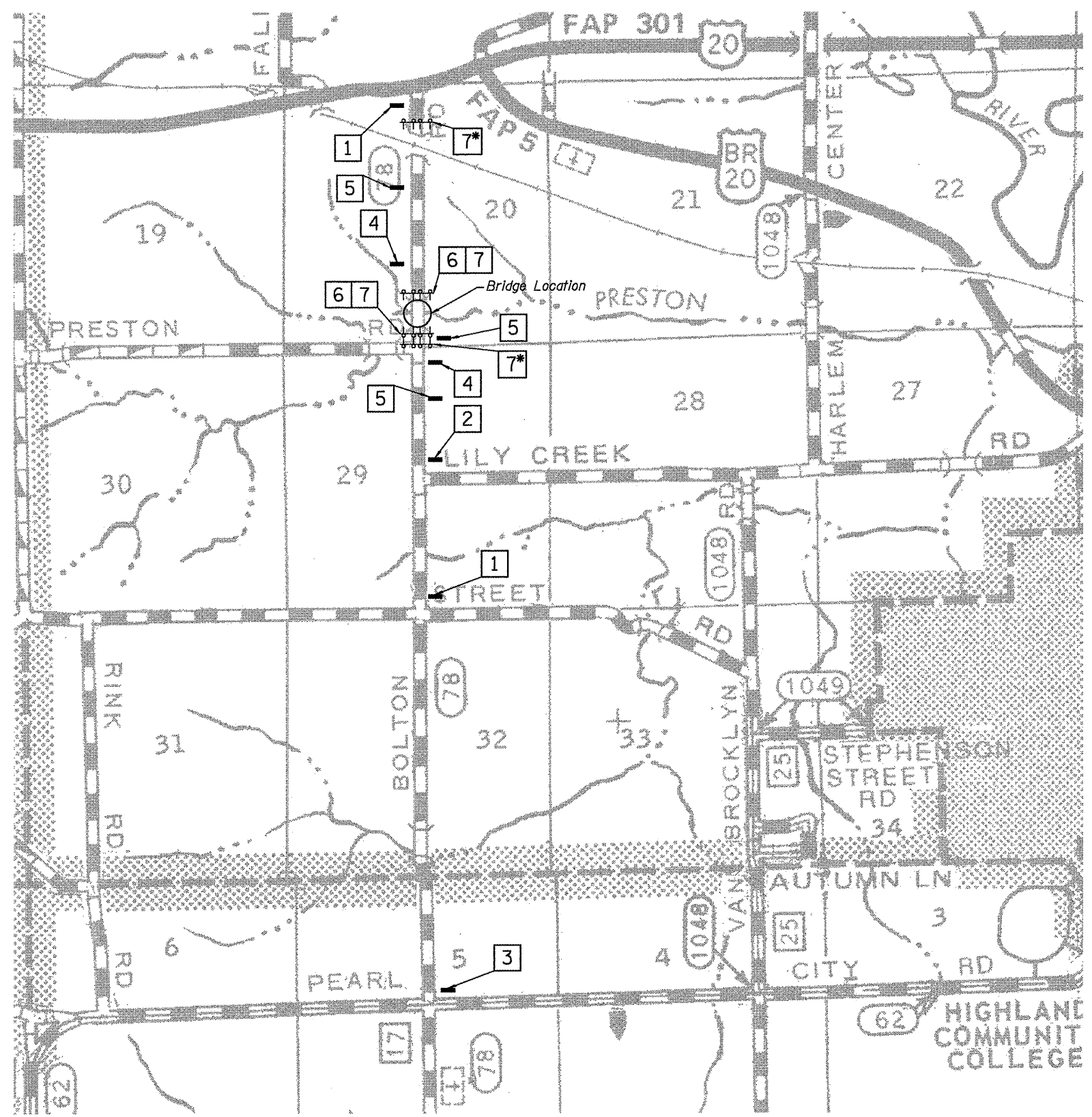
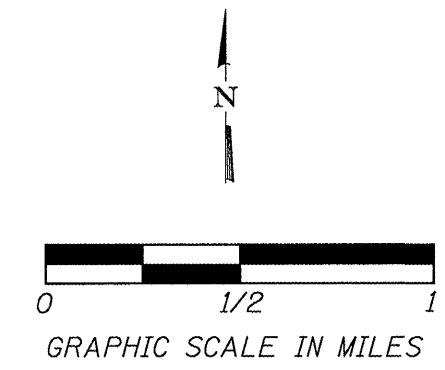
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 78	10-06118-00-BR	Stephenson	18	4
STA. 17+00.00 - STA. 23+00.00				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT ER-0177(038)				

SIGN LEGEND

- ①  ROAD CLOSED
1 MILE AHEAD
LOCAL TRAFFIC ONLY R11-3a, 60" X 30"
(2 REQ'D)
- ②  ROAD CLOSED
1/2 MILE AHEAD
LOCAL TRAFFIC ONLY R11-3a, 60" X 30"
(1 REQ'D)
- ③  ROAD CLOSED
1/2 MILE AHEAD
LOCAL TRAFFIC ONLY R11-3a, 60" X 30"
(1 REQ'D)
- ④  ROAD CLOSED
500 FT W20-3, 48" X 48" **
(2 REQ'D)
- ⑤  ROAD CLOSED
AHEAD W20-3, 48" X 48" **
(3 REQ'D)
- ⑥  ROAD CLOSED R11-2, 48" X 30"
(2 REQ'D)
- ⑦  TYPE III BARRICADES WITH TWO
FLASHING LIGHTS EACH.
HIGHWAY STANDARD 701901
(8 REQ'D)

NOTES:

- * Staggered barricades to allow local traffic access to their properties.
- ** See the applicable standards for use of flags and flashing lights.



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REV.	DATE	BY	REMARKS

DRAWN R.D.A.	STEPHENSON COUNTY CULVERT REPLACEMENT F.A.S. 78 (N. BOLTON ROAD) OVER PRESTON CREEK 2010
CHECKED M.A.C.	
APPROVED B.K.C.	

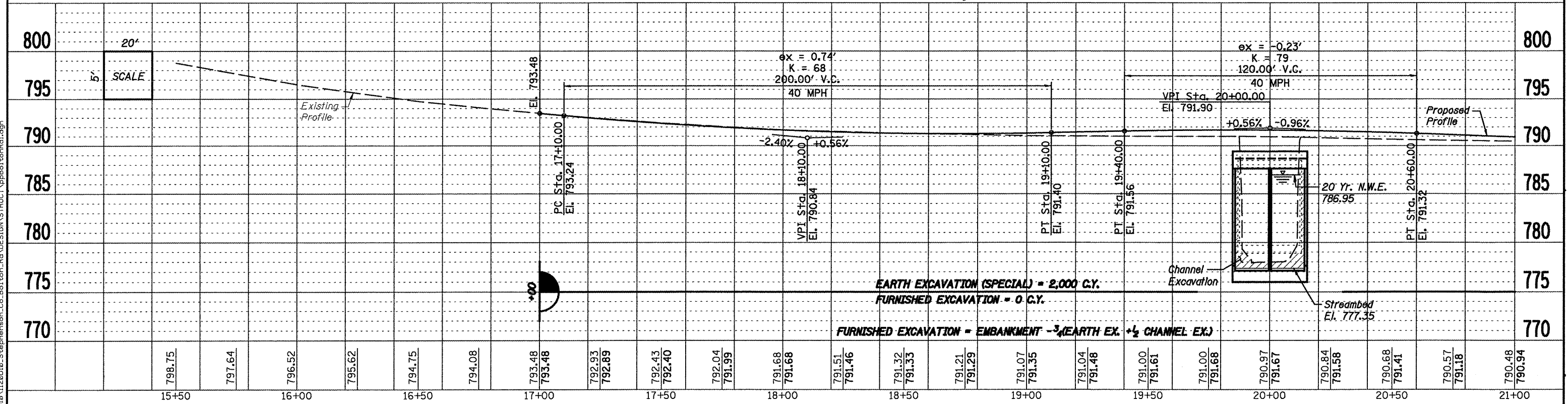
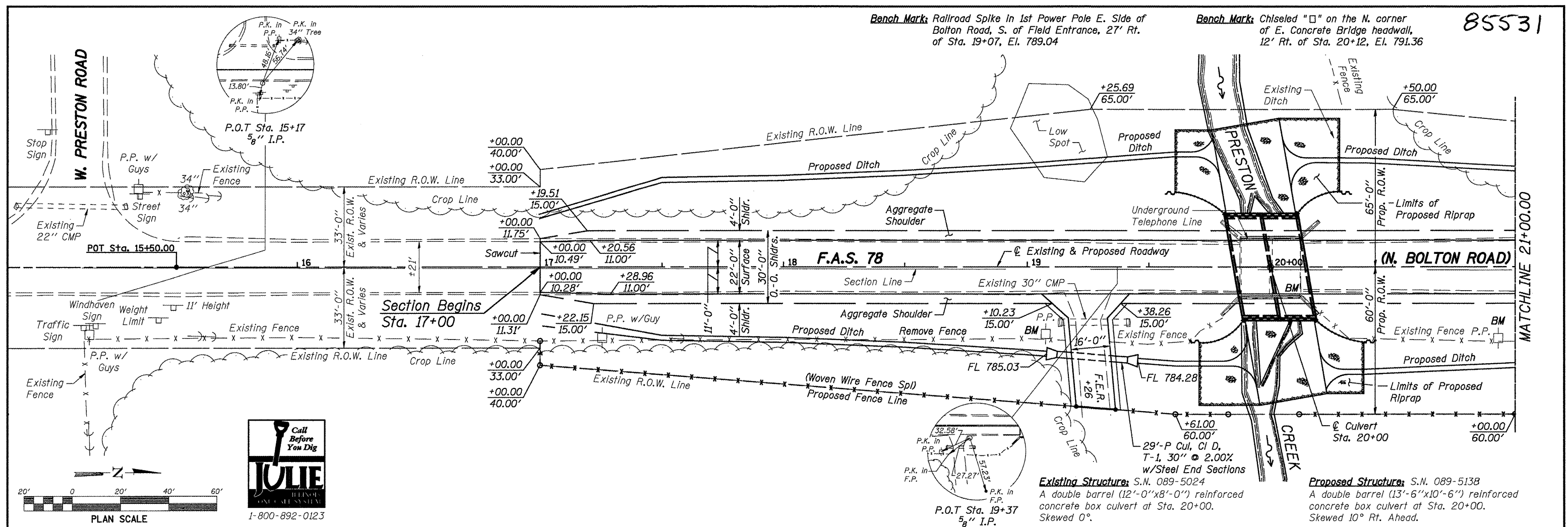
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808 East Second Street, Dixon, Illinois 61021
Phone 815.284.3381 Fax 815.284.3385
Design Firm #164-000918
www.willett-hofmann.com

TRAFFIC CONTROL PLAN

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 78	10-06118-00-BR	Stephenson	18	5
STA. 17+00.00 - STA. 23+00.00				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT ER-0177(038)				

Bench Mark: Railroad Spike in 1st Power Pole E. Side of Bolton Road, S. of Field Entrance, 27' Rt. of Sta. 19+07, El. 789.04

Bench Mark: Chiseled "□" on the N. corner of E. Concrete Bridge headwall, 12' Rt. of Sta. 20+12, El. 791.36



REV.	DATE	BY	REMARKS

**STEPHENSON COUNTY
CULVERT REPLACEMENT
F.A.S. 78 (N. BOLTON ROAD) OVER PRESTON CREEK
2010**

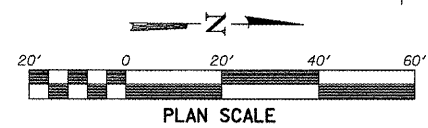
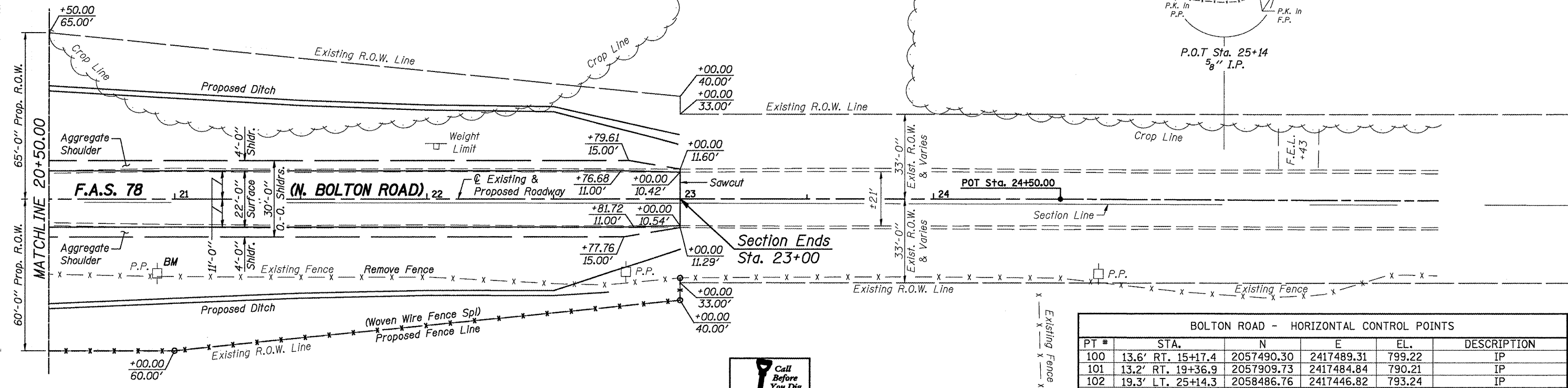
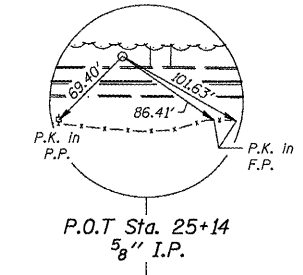
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809 East Second Street Dixon, Illinois 61021
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PLAN & PROFILE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 78	10-06118-00-BR	Stephenson	18	6
STA. 15+50.00 - STA. 21+00.00				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT ER-0177(03B)				

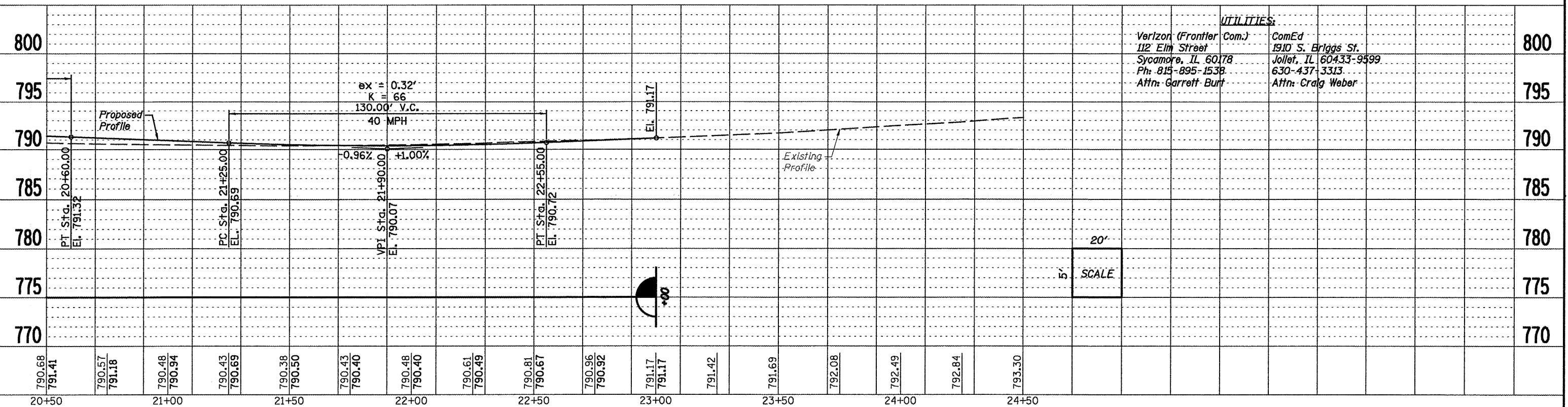
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Bench Mark: Railroad Spike in Power Pole E. Side of Bolton Road, N. of Bridge, 29' Rt. of Sta. 20+93, El. 788.23



BOLTON ROAD - HORIZONTAL CONTROL POINTS					
PT #	STA.	N	E	EL.	DESCRIPTION
100	13.6' RT. 15+17.4	2057490.30	2417489.31	799.22	IP
101	13.2' RT. 19+36.9	2057909.73	2417484.84	790.21	IP
102	19.3' LT. 25+14.3	2058486.76	2417446.82	793.24	IP

BOLTON ROAD - VERTICAL CONTROL POINTS					
PT #	STA.	EL.	DESCRIPTION		
400	12.0' RT. 20+12	791.36	CHIS. "□" ON COR. OF EX. BRIDGE HEADWALL		
401	26.8' RT. 19+07	789.04	RAILROAD SPIKE IN PP		
402	29.1' RT. 20+93	788.23	RAILROAD SPIKE IN PP		



UTILITIES:
 Verizon (Frontier Com.)
 112 Elm Street
 Sycamore, IL 60178
 Ph: 815-895-1538
 Attn: Garrett Burt
 ComEd
 1910 S. Briggs St.
 Joliet, IL 60433-9599
 630-437-3313
 Attn: Craig Weber

REV.	DATE	BY	REMARKS

**STEPHENSON COUNTY
 CULVERT REPLACEMENT
 F.A.S. 78 (N. BOLTON ROAD) OVER PRESTON CREEK
 2010**

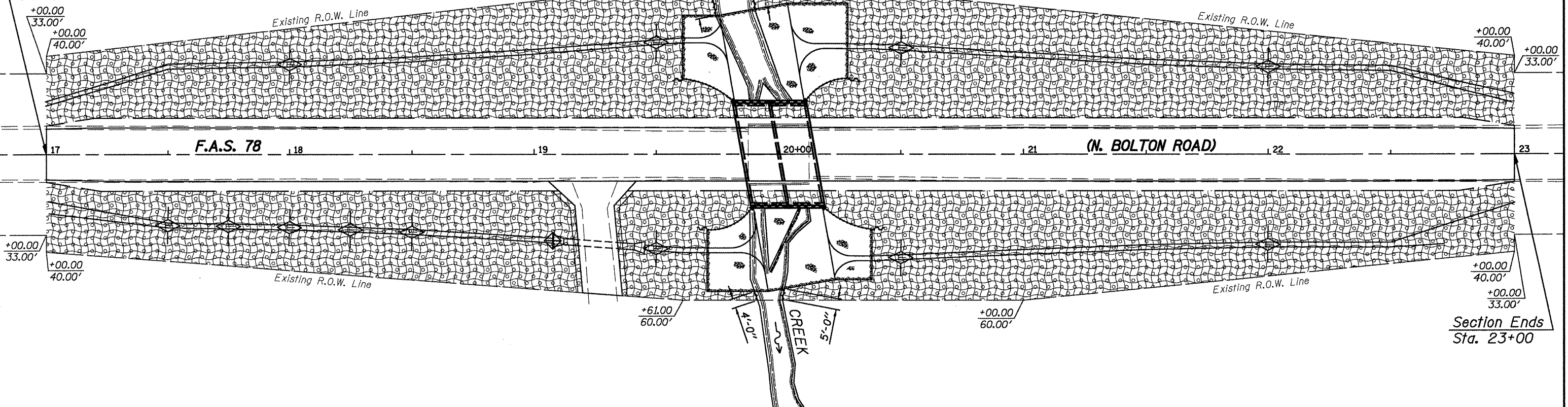


PLAN & PROFILE

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 78	10-06118-00-BR	Stephenson	18	7
STA. 20+50.00 - STA. 24+50.00				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT ER-0177(038)				

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Section Begins
Sta. 17+00



Section Ends
Sta. 23+00

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 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 2 (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.

The Use Of Asphalt As A Binder Is Not Acceptable.

Temporary Ditch Checks Shall Comply With Section 280 Of The Standard Specifications For Road And Bridge Construction And Standard 280001-05 Located In The Plans.

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 Three (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.

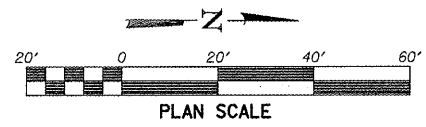
All Adjacent Streets Must Be Kept Clear Of Debris. Inspected Daily And Cleaned When Necessary.

BILL OF MATERIAL

Item	Unit	Quantity
Erosion Control Blanket	Sq. Yd.	5,405
Temporary Erosion Control Seeding	Pound	112
Temporary Ditch Checks	Foot	134.5
Perimeter Erosion Barrier	Foot	24
Inlet & Pipe Protection	Each	1
Seeding, Class 2 (Special)	Acre	1.12

LEGEND

- Seeding, Class 2 (Special)
- Erosion Control Blanket
- Temporary Ditch Checks
- Inlet & Pipe Protection
- Perimeter Erosion Barrier
- Drainage Flow



REV.	DATE	BY	REMARKS

DRAWN
R.D.A.
CHECKED
M.A.C.
APPROVED
B.K.C.

**STEPHENSON COUNTY
CULVERT REPLACEMENT
F.A.S. 78 (N. BOLTON ROAD) OVER PRESTON CREEK
2010**

WILLET, HOFMANN & ASSOCIATES, INC.
CONSULTING ENGINEERS
Land Surveying - Transportation - Structural
Environmental - Architecture
800 East Second Street Dixon, Illinois 61021
Phone 815.284.3381 Fax 815.284.3386
Design Firm #184-000918
www.wilsetholfmann.com

EROSION CONTROL PLAN

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 78	10-06118-00-BR	Stephenson	18	8
STA. 17+00.00 - STA. 23+00.00				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT ER-0177(038)		

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STORM WATER POLLUTION PREVENTION PLAN EROSION CONTROL PLAN

85531

THE FOLLOWING PLAN WAS ESTABLISHED AND INCLUDED IN THESE PLANS TO DIRECT THE CONTRACTOR IN THE PLACEMENT OF TEMPORARY EROSION CONTROL SYSTEMS AND TO PROVIDE A STORM WATER POLLUTION PREVENTION PLAN FOR COMPLIANCE UNDER NPDES.

THE PURPOSE OF THIS PLAN IS TO MINIMIZE SILTATION WITHIN THE CONSTRUCTION ZONE AND TO ELIMINATE SEDIMENTS FROM ENTERING AND LEAVING THE CONSTRUCTION ZONE BY UTILIZING PROPER TEMPORARY EROSION CONTROL SYSTEMS AND PROVIDING GROUND COVER WITHIN A REASONABLE AMOUNT OF TIME.

CERTAIN ITEMS, AS SHOWN IN THIS PLAN AND REFERENCED BY THE LEGEND, SHALL BE PLACED BY THE CONTRACTOR AT THE BEGINNING OF CONSTRUCTION. OTHER ITEMS SHALL BE PLACED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER ON A CASE BY CASE SITUATION RESULTING FROM THE CONTRACTOR'S SEQUENCE OF ACTIVITIES, TIME OF YEAR, AND EXPECTED WEATHER CONDITIONS.

THE CONTRACTOR SHALL PLACE PERMANENT EROSION CONTROL SYSTEMS AND SEEDING WITHIN A REASONABLE AMOUNT OF TIME; THEREFORE, REDUCING THE AMOUNT OF AREA BEING OPEN TO THE POSSIBILITY OF EROSION AND REDUCING THE AMOUNT OF TEMPORARY SEEDING. THE RESIDENT ENGINEER WILL DETERMINE IF TEMPORARY EROSION CONTROL SYSTEMS SHOWN IN THE PLAN CAN BE DELETED, THE PROPER METHOD OF INSTALLATION, AND IF ANY ADDITIONAL TEMPORARY EROSION CONTROL SYSTEMS SHALL BE ADDED WHICH ARE NOT INCLUDED IN THE PLANS. THE CONTRACTOR SHALL PERFORM ALL WORK AS DIRECTED BY THE ENGINEER AND AS SHOWN IN STANDARD 280001 OF THE PLANS.

SITE DESCRIPTION

DESCRIPTION OF CONSTRUCTION ACTIVITY: COMPLETE RECONSTRUCTION OF 600' OF NORTH BOLTON ROAD (FAS 78) FROM STATION 17+00 TO 23+00 (INCLUDING CULVERT REPLACEMENT).

THIS PROJECT CONSISTS OF PAVEMENT REMOVAL, EARTH EXCAVATION, EXISTING CULVERT REMOVAL AND REPLACEMENT, VARIOUS PAVEMENT ITEMS, AND OTHER MISCELLANEOUS ITEMS OF CONSTRUCTION.

DESCRIPTION OF INTENDED SEQUENCE OF ACTIVITIES:

THE SEQUENCE OF EVENTS ARE AS FOLLOWS: PAVEMENT AND CULVERT REMOVAL, EARTH EXCAVATION, CULVERT CONSTRUCTION, AGGREGATE BASE, BITUMINOUS SURFACE AND RELATED APPURTENANCES, PLACEMENT OF PERMANENT EROSION CONTROL INCLUDING SEEDING.

TOTAL CONSTRUCTION SITE (CONSTRUCTION LIMIT TO CONSTRUCTION LIMIT) 1.48 ACRES
PROPOSED WORK PERMIT AND PERMANENT EASEMENT AREA 1.48 ACRES
DISTURBED SOIL BY EXCAVATION (SEED AREA) 1.12 ACRES

SUPPORTING REPORTS AND PLANS

THE FOLLOWING ASSISTED IN DEVELOPING THE EROSION CONTROL PLAN AS REFERENCED DOCUMENTS:

USGS DRAINAGE MAPS, PROJECT PLAN DOCUMENTS

DRAINAGE TRIBUTARIES RECEIVING WATER FROM CONSTRUCTION SITE:
PRESTON CREEK

EROSION CONTROLS AND SEDIMENT CONTROL PROCEDURES
STABILIZATION PRACTICES AT THE BEGINNING OF CONSTRUCTION:
SILT FENCE INSTALLATION

STABILIZATION PRACTICES DURING CONSTRUCTION:

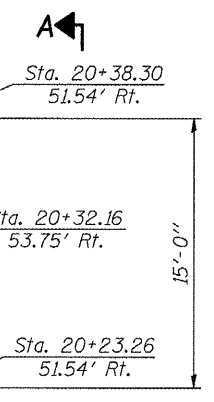
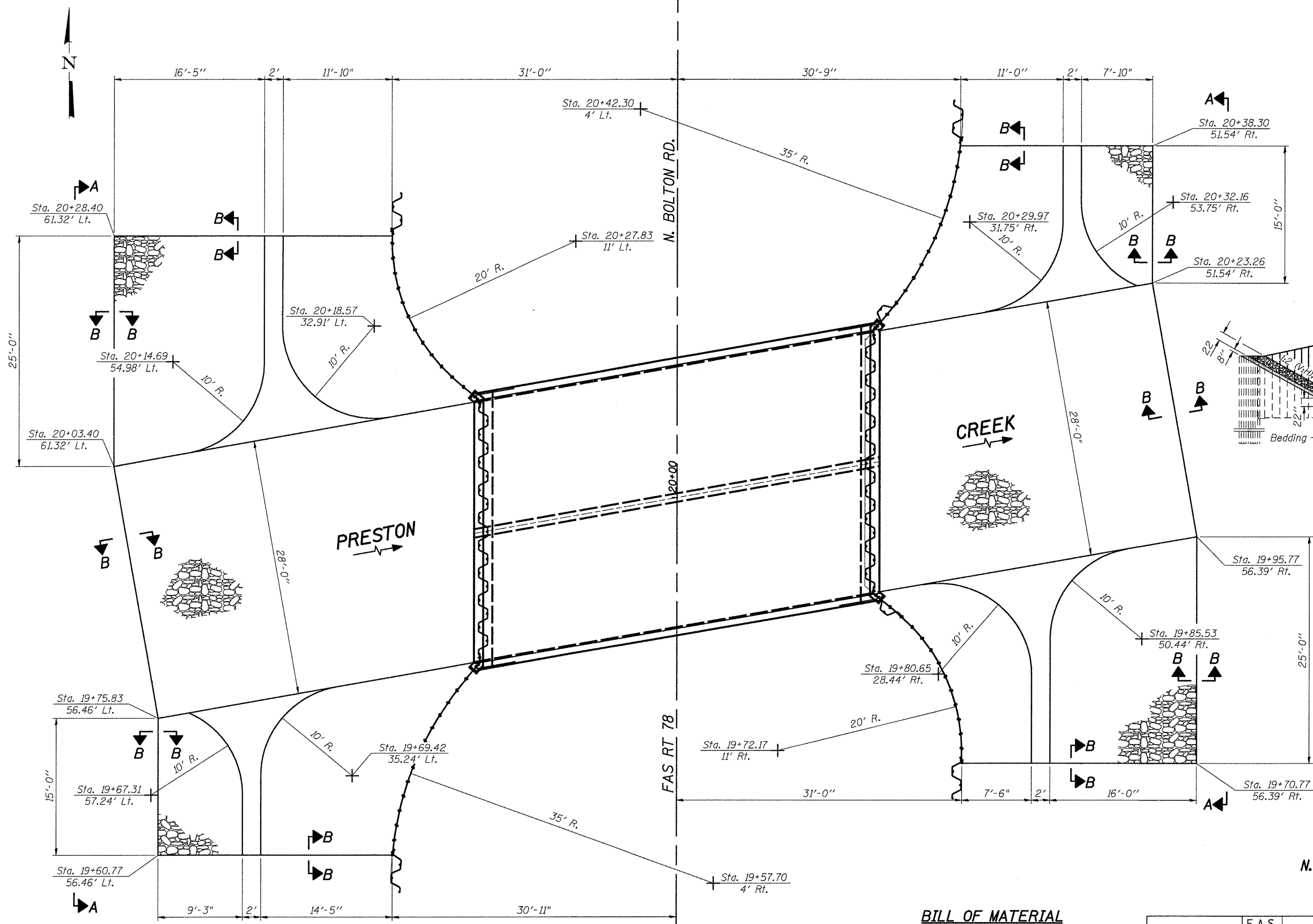
- (a) WITHIN THE CONSTRUCTION LIMITS, AREAS WHICH MAY BE SUSCEPTIBLE TO EROSION AS DETERMINED BY THE ENGINEER SHALL REMAIN UNDISTURBED UNTIL FULL SCALE CONSTRUCTION IS UNDERWAY TO PREVENT UNNECESSARY SOIL EROSION.
- (b) EARTH STOCKPILES SHALL BE TEMPORARILY SEEDED IF THEY ARE TO REMAIN UNUSED FOR MORE THAN FOURTEEN DAYS.
- (c) AS CONSTRUCTION PROCEEDS, THE CONTRACTOR SHALL INSTITUTE THE FOLLOWING AS DIRECTED BY THE ENGINEER:
 - I. PLACE TEMPORARY EROSION CONTROL FACILITIES AT LOCATIONS SHOWN ON THE PLANS.
 - II. TEMPORARILY SEED ERODABLE BARE EARTH ON A WEEKLY BASIS TO MINIMIZE THE AMOUNT OF ERODABLE SURFACE AREA WITHIN THE CONTRACT LIMITS.
- (d) EXCAVATED AREAS AND EMBANKMENT SHALL BE TEMPORARILY SEEDED BY CONTRACTOR. PERMANENT SEEDING SHALL BE DONE BY COUNTY.
- (e) CONSTRUCTION EQUIPMENT SHALL BE STORED AND FUELED ONLY AT DESIGNED 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.
- (f) THE RESIDENT ENGINEER SHALL INSPECT THE PROJECT DAILY DURING CONSTRUCTION ACTIVITIES. INSPECTION SHALL ALSO BE DONE WEEKLY AND AFTER RAINS OF 1/2 INCH 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.
- (g) 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).
- (h) THE TEMPORARY EROSION CONTROL SYSTEM SHALL BE REMOVED BY THE COUNTY AFTER USE IS NO LONGER NEEDED OR NO LONGER FUNCTIONING.

MAINTENANCE AFTER FINAL GRADING

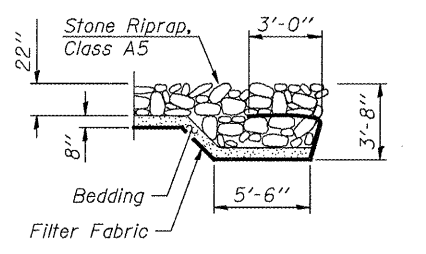
TEMPORARY EROSION CONTROL SYSTEMS SHALL BE LEFT IN PLACE WITH PROPER MAINTENANCE UNTIL PERMANENT EROSION CONTROL IS IN PLACE AND WORKING PROPERLY AND ALL PROPOSED TURF AREAS SEEDED AND ESTABLISHED WITH THE PROPER STAND. SEED SHALL BE WATERED ACCORDING TO THE SPECIFICATIONS AND ADDITIONAL WATERINGS SHALL BE USED AS DIRECTED BY THE ENGINEER.

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REV.	DATE	BY	REMARKS	DRAWN	STEPHENSON COUNTY CULVERT REPLACEMENT F.A.S. 78 (N. BOLTON ROAD) OVER PRESTON CREEK 2010		<h2 style="margin: 0;">STORM WATER POLLUTION PREVENTION PLAN</h2>	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
				R.D.A.				78	10-06118-00-BR	Stephenson	18	9	
								STA. 17+00.00 - STA. 23+00.00					
								FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT ER-0177(038)	



SECTION A-A



SECTION B-B

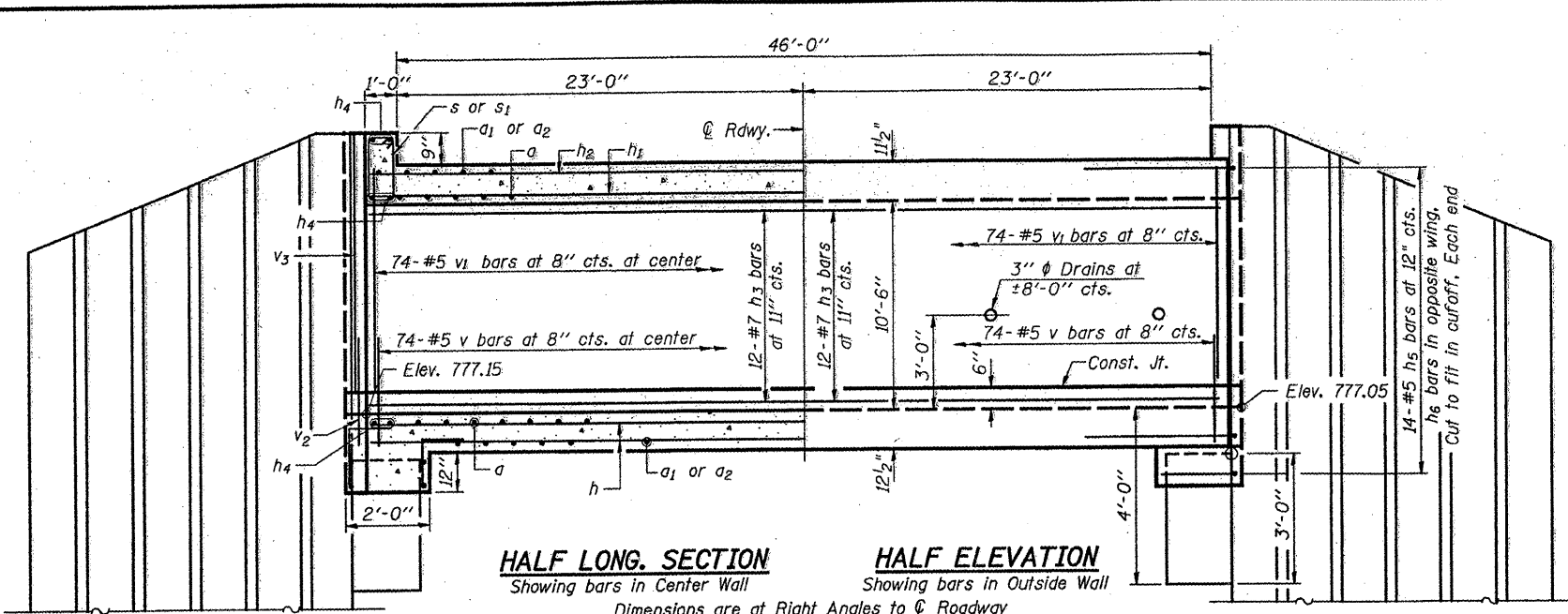
**RIPRAP & PILE LAYOUT
N. BOLTON ROAD OVER PRESTON CREEK
STATION 20+00
S.N. 089-5138**

BILL OF MATERIAL

Item	Unit	Quantity
Stone Riprap, Class A5	Sq. Yd.	502
Filter Fabric	Sq. Yd.	502

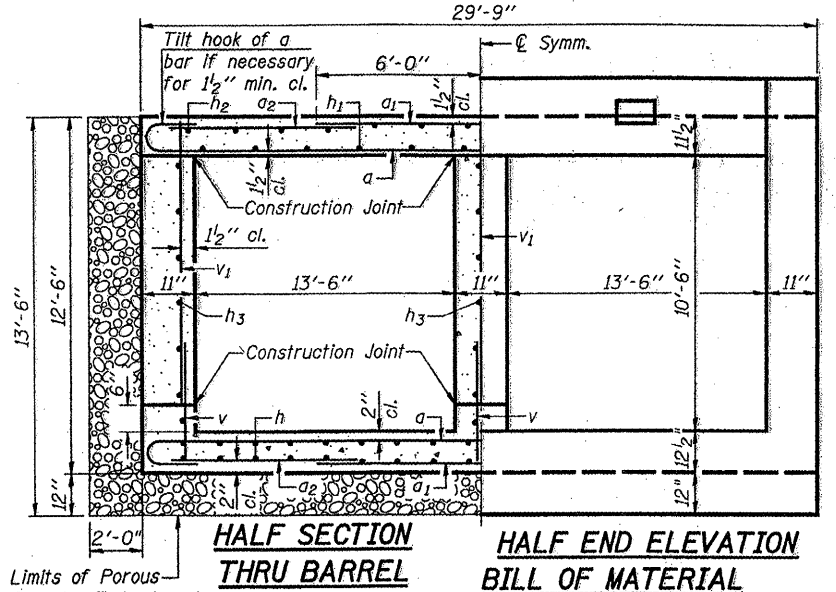
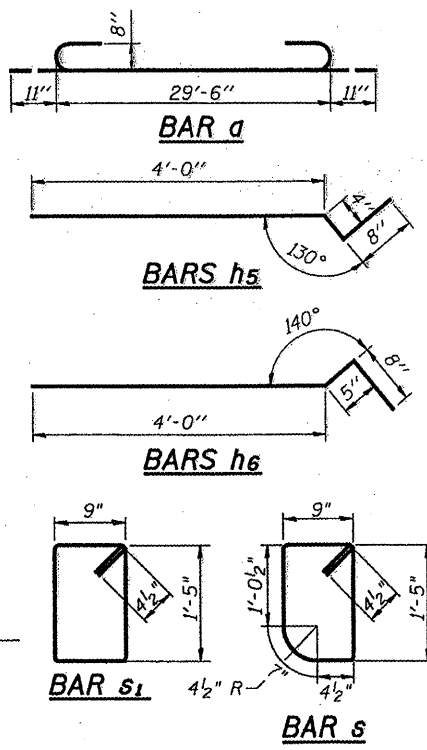
STRUCTURAL SHEET NO. 1 OF 4 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	78	10-06188-00-BR	STEPHENSON	18	10
	CONTRACT NO. 85531				
WHA # 1120D10 ILLINOIS FED. AID PROJECT ER-0177(038)					

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HALF LONG SECTION
Showing bars in Center Wall
Dimensions are at Right Angles to \bar{C} Roadway

HALF ELEVATION
Showing bars in Outside Wall

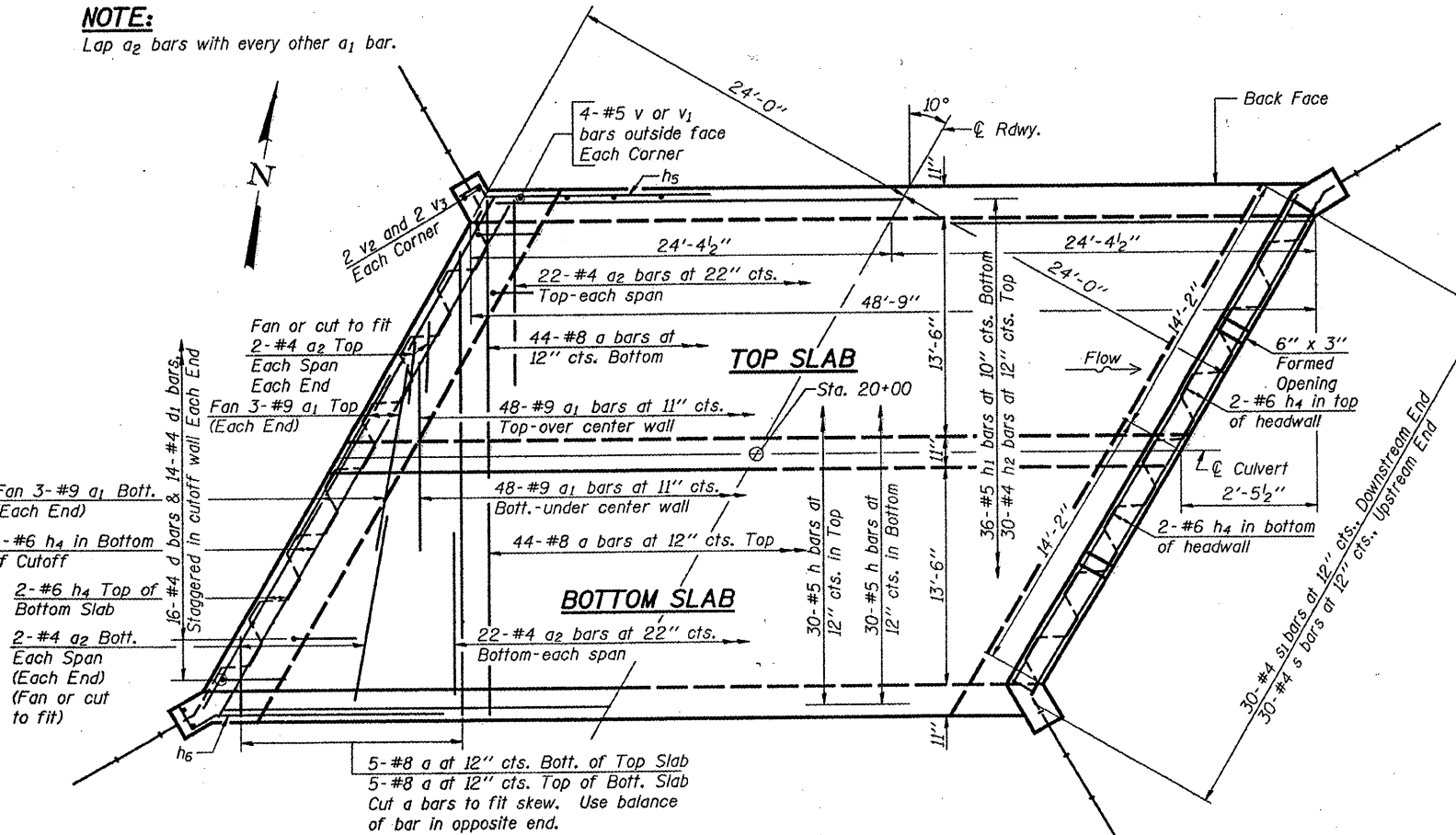


HALF SECTION THRU BARREL

HALF END ELEVATION BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	98	#8	31'-4"	C
a ₁	108	#9	12'-0"	—
a ₂	104	#4	10'-1"	—
d	32	#4	3'-5"	—
d ₁	28	#4	2'-9"	—
h	60	#5	48'-5"	—
h ₁	36	#5	48'-5"	—
h ₂	30	#4	48'-5"	—
h ₃	36	#7	48'-5"	—
h ₄	20	#6	29'-0"	—
h ₅	28	#5	5'-0"	—
h ₆	28	#5	5'-1"	—
s	30	#4	5'-1"	□
s ₁	30	#4	4'-11"	□
v	238	#5	3'-6"	—
v ₁	238	#5	11'-2"	—
v ₂	8	#5	4'-6"	—
v ₃	8	#5	11'-9"	—
Porous Granular Embankment			Cu. Yd.	151
Removal of Existing Structures			Each	1
Reinforcement Bars			Pound	27,960
Name Plates			Each	1
Concrete Box Culverts			Cu. Yd.	166.4
*Permanent Steel Sheet Piling			Sq. Ft.	2,088

NOTE:
Lap a₂ bars with every other a₁ bar.



SHOWING REINFORCEMENT PLAN

SHOWING OUTLINES

MINIMUM BAR LAP

SIZE	LAP
#4	1'-4"
#5	1'-8"
#6	2'-0"
#7	3'-5"

PRESTON CREEK
BUILT 2011 BY
HARLEM ROAD DISTRICT
SEC. 10-06118-00-BR
FAS RT. 78 STA. 20+00
STR. NO. 089-5138 LOADING HS20

NAME PLATE LETTERING
Refer To Std. 515001-03

WATERWAY INFORMATION

DRAINAGE AREA	3.88 Sq. Mi.
DESIGN DISCHARGE (20 Yr.)	1,150 CFS
EXISTING OPENING	192 Sq. Ft.
REQUIRED OPENING	284 Sq. Ft.
PROPOSED OPENING	284 Sq. Ft.
CREATED HEAD (20 Yr.)	0.52 Ft.
100 YR. DISCHARGE	1,780 CFS
CREATED HEAD (100 Yr.)	0.40 Ft.
HIGH WATER ELEV. (100 Yr.)	787.71

LOADING HS20-44

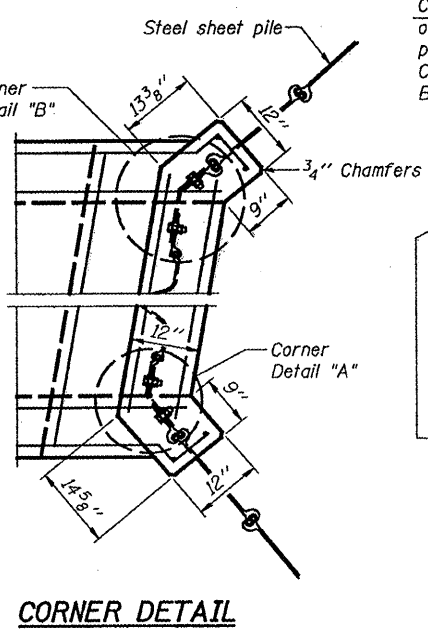
Allow for 50 #/sq. ft. future wearing surface

DESIGN STRESSES

f_y = 60,000 p.s.i.
f'c = 3,500 p.s.i.

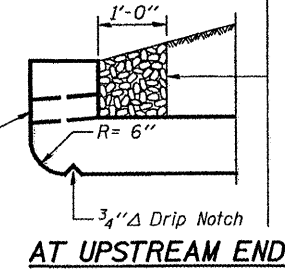
DESIGN SPECIFICATIONS

Designed in Accordance with 2002 A.A.S.H.T.O. Standard Specifications - 17th Edition

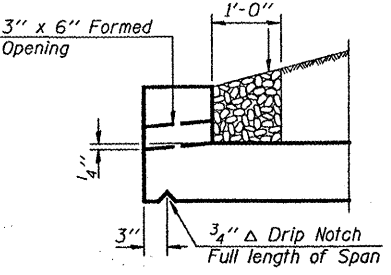


CORNER DETAIL

Coarse aggregate full length of both headwalls. To be placed by Grading Contractor. Cost included with Concrete Box Culverts.



AT UPSTREAM END



AT DOWNSTREAM END DRAIN DETAIL

NOTES:

*PZ 27 = 729 sq. ft.
PS 27.5 = 1,426 sq. ft.

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

All exposed edges shall be chamfered 3/4" unless otherwise noted.

Required channel excavation & structure excavation shall be considered incidental to concrete box culvert.

PRECAST OPTION NOT ALLOWED.

DOUBLE BARREL BOX CULVERT DETAILS

N. BOLTON ROAD OVER PRESTON CREEK

STATION 20+00

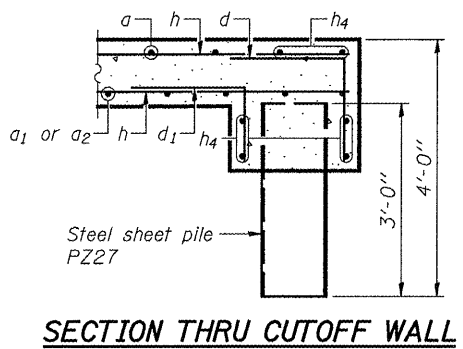
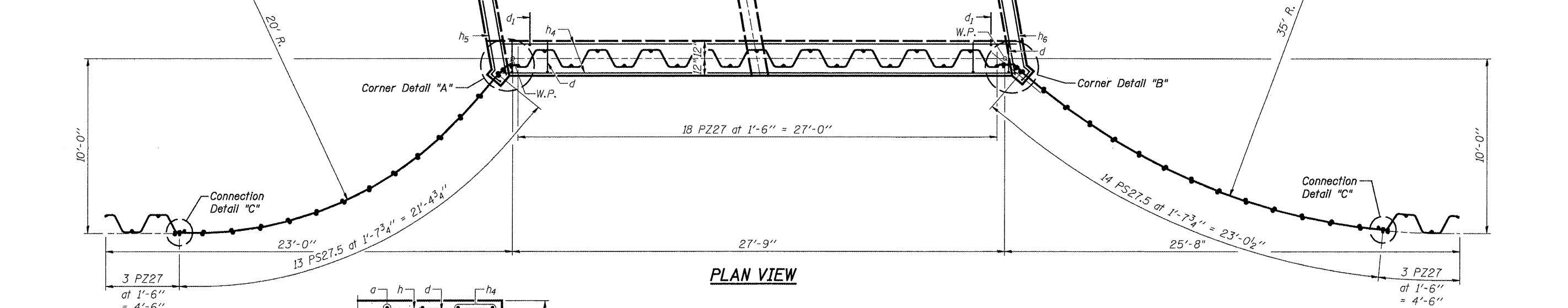
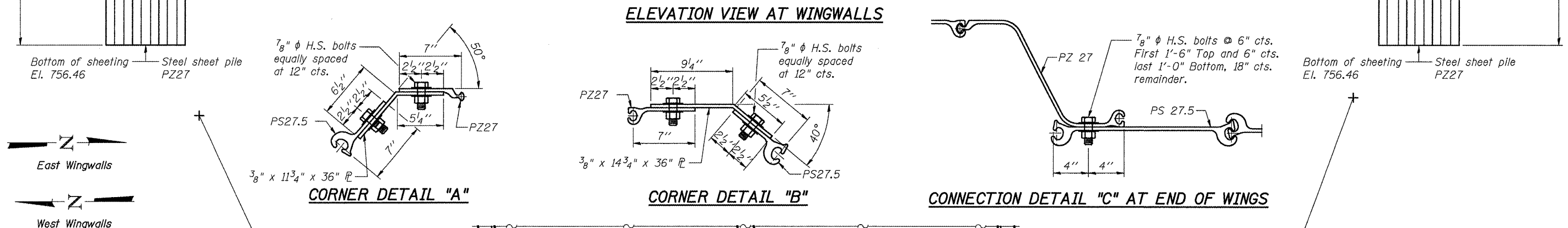
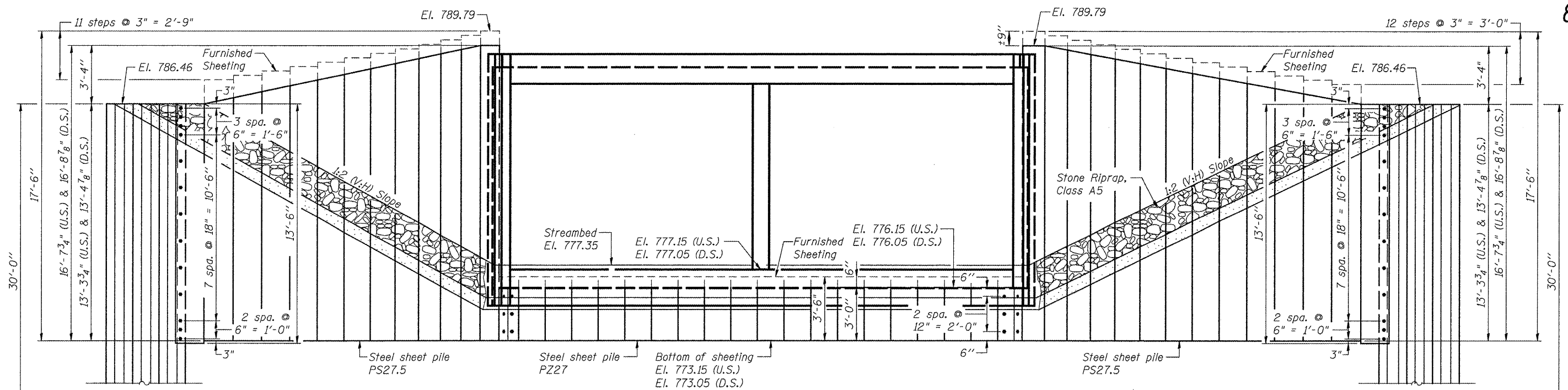
S.N. 089-5138



Bryan K. Conner
DATE: 2/1/2011
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 Complies With Requirements Of The Current "AASHTO Standard Specifications For Highway Bridges."

STRUCTURAL SHEET NO. 2 OF 4 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	78	10-06118-00-BR	STEPHENSON	18	11
CONTRACT NO. 85531					
WHA # 1120D10 ILLINOIS FED. AID PROJECT ER-0177(038)					



NOTES

Contractor shall burn hole in sheeting for h₅ & h₆ bar placement. Cost incidental to Reinforcement Bars.

The Contractor shall be paid for furnished sheeting as shown and Contractor shall drive the sheeting an extra 6" if top is not damaged, as directed by the Engineer.

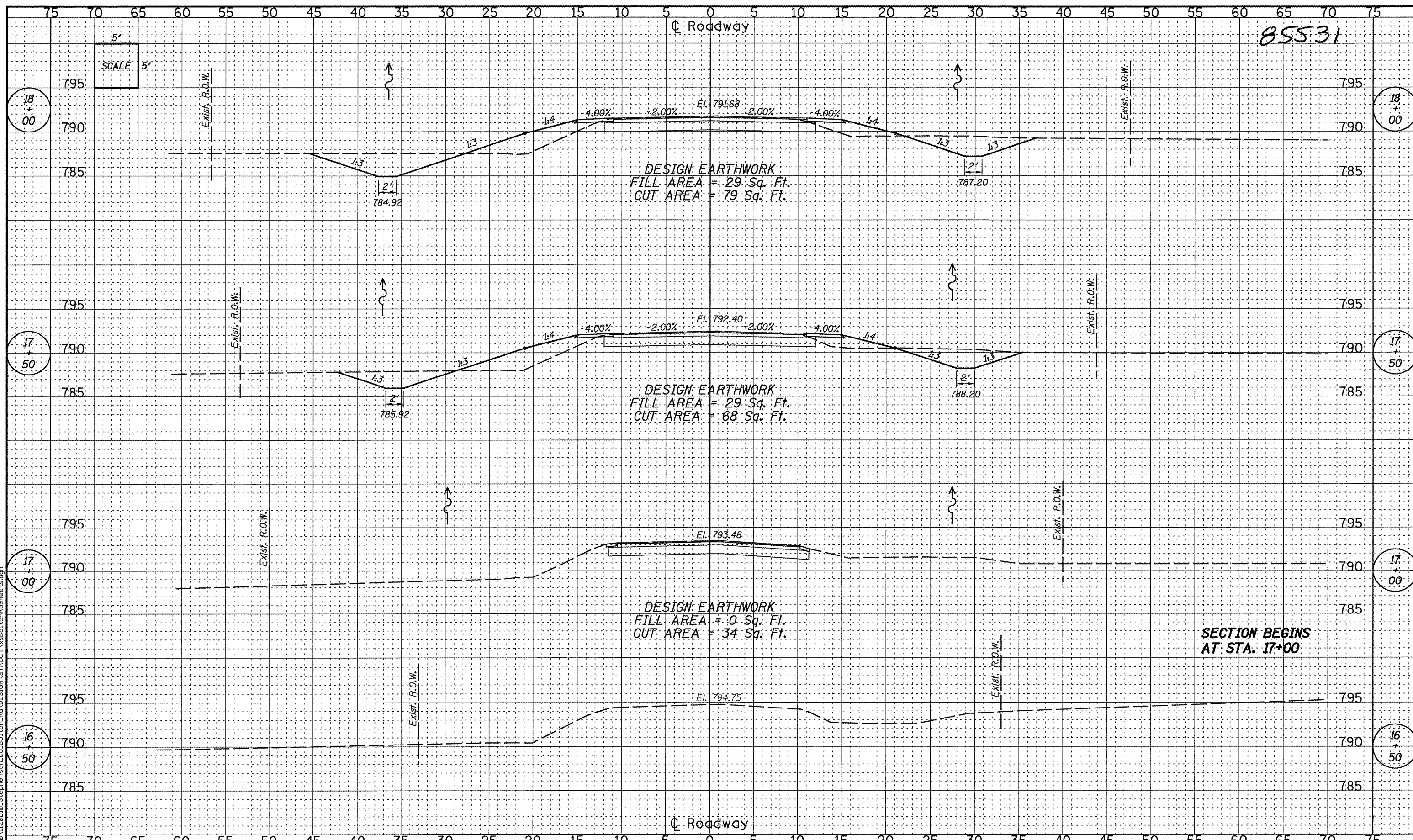
The sheeting shall be driven to the elevations shown. A ±7 foot dense layer of soil is ±6" below Streambed Elev. See Soil Borings on Structural Sheet 4 of 4.

STEEL SHEET PILING DETAILS
N. BOLTON ROAD OVER PRESTON CREEK
STATION 20+00
S.N. 089-5138

STRUCTURAL SHEET NO. 3 OF 4 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	78	10-06118-00-BR	STEPHENSON	18	12
CONTRACT NO. 85531					
WHA # 1120D10		ILLINOIS FED. AID PROJECT ER-0177(038)			

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REV.	DATE	BY	REMARKS

DRAWN
 R.D.A.
CHECKED
 M.A.C.
APPROVED
 B.K.C.

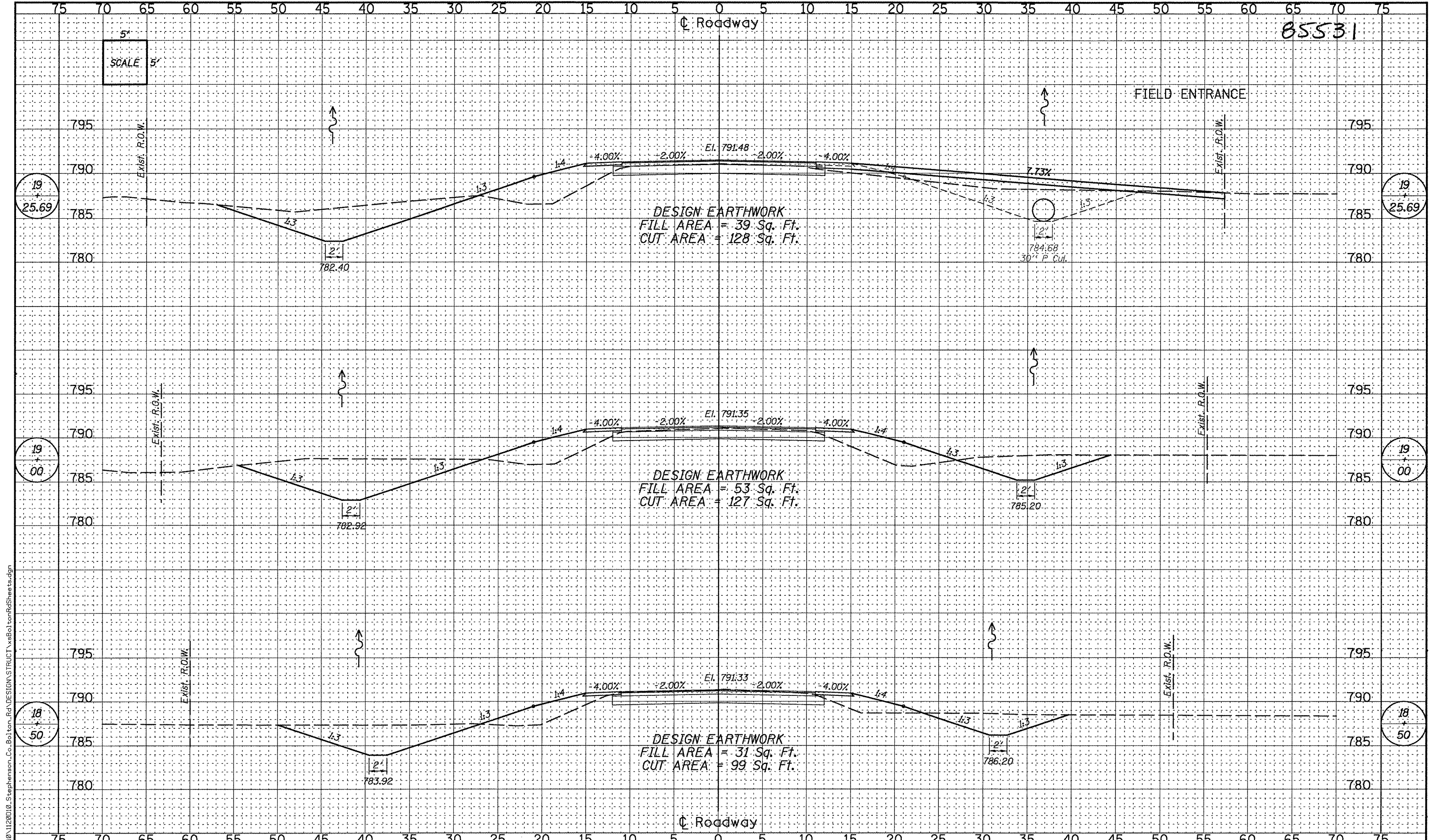
**STEPHENSON COUNTY
 CULVERT REPLACEMENT
 F.A.S. 78 (N. BOLTON ROAD) OVER PRESTON CREEK
 2010**

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 Phone 815.284.3381 Fax 815.284.3385
 Design Firm #194-000918
 www.willett-hofmann.com

CROSS SECTIONS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 78	10-06118-00-BR	Stephenson	18	14
STA. 16+50.00 - STA. 18+00.00				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT ER-0177(038)				

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85531

SCALE 5'

DESIGN EARTHWORK
 FILL AREA = 39 Sq. Ft.
 CUT AREA = 128 Sq. Ft.

DESIGN EARTHWORK
 FILL AREA = 53 Sq. Ft.
 CUT AREA = 127 Sq. Ft.

DESIGN EARTHWORK
 FILL AREA = 31 Sq. Ft.
 CUT AREA = 99 Sq. Ft.

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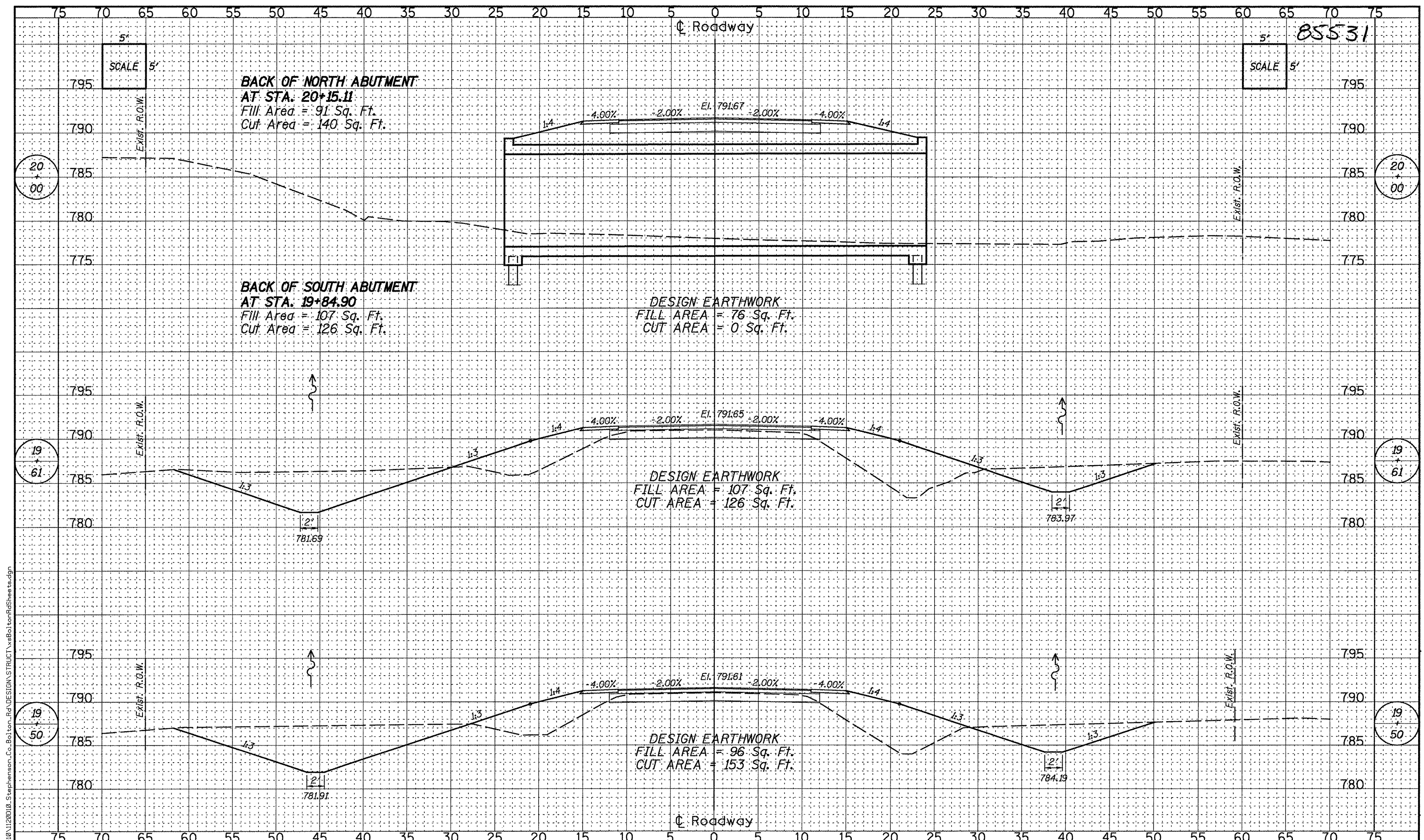
REV.	DATE	BY	REMARKS

**STEPHENSON COUNTY
 CULVERT REPLACEMENT
 F.A.S. 78 (N. BOLTON ROAD) OVER PRESTON CREEK
 2010**



CROSS SECTIONS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 78	10-06118-00-BR	Stephenson	18	15
STA. 18+50.00 - STA. 19+25.69				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT ER-0177(038)				



REV.	DATE	BY	REMARKS

DRAWN
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CHECKED
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APPROVED
 B.K.C.

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CULVERT REPLACEMENT
F.A.S. 78 (N. BOLTON ROAD) OVER PRESTON CREEK
2010

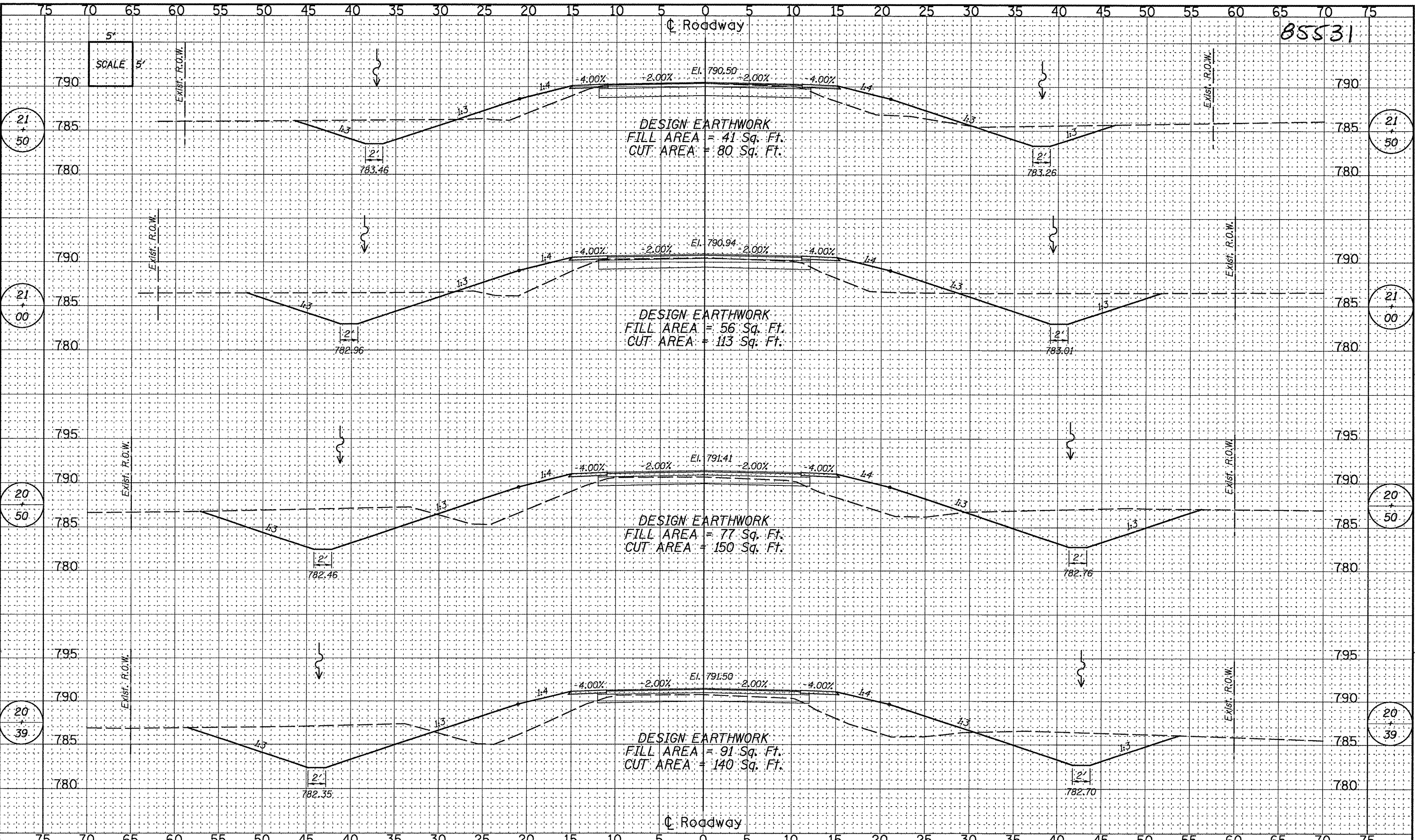


CROSS SECTIONS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 78	10-06118-00-BR	Stephenson	18	16
STA. 19+50.00 - STA. 20+00.00				
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT ER-0177(038)	

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REV.	DATE	BY	REMARKS

**STEPHENSON COUNTY
CULVERT REPLACEMENT
F.A.S. 78 (N. BOLTON ROAD) OVER PRESTON CREEK
2010**

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CROSS SECTIONS

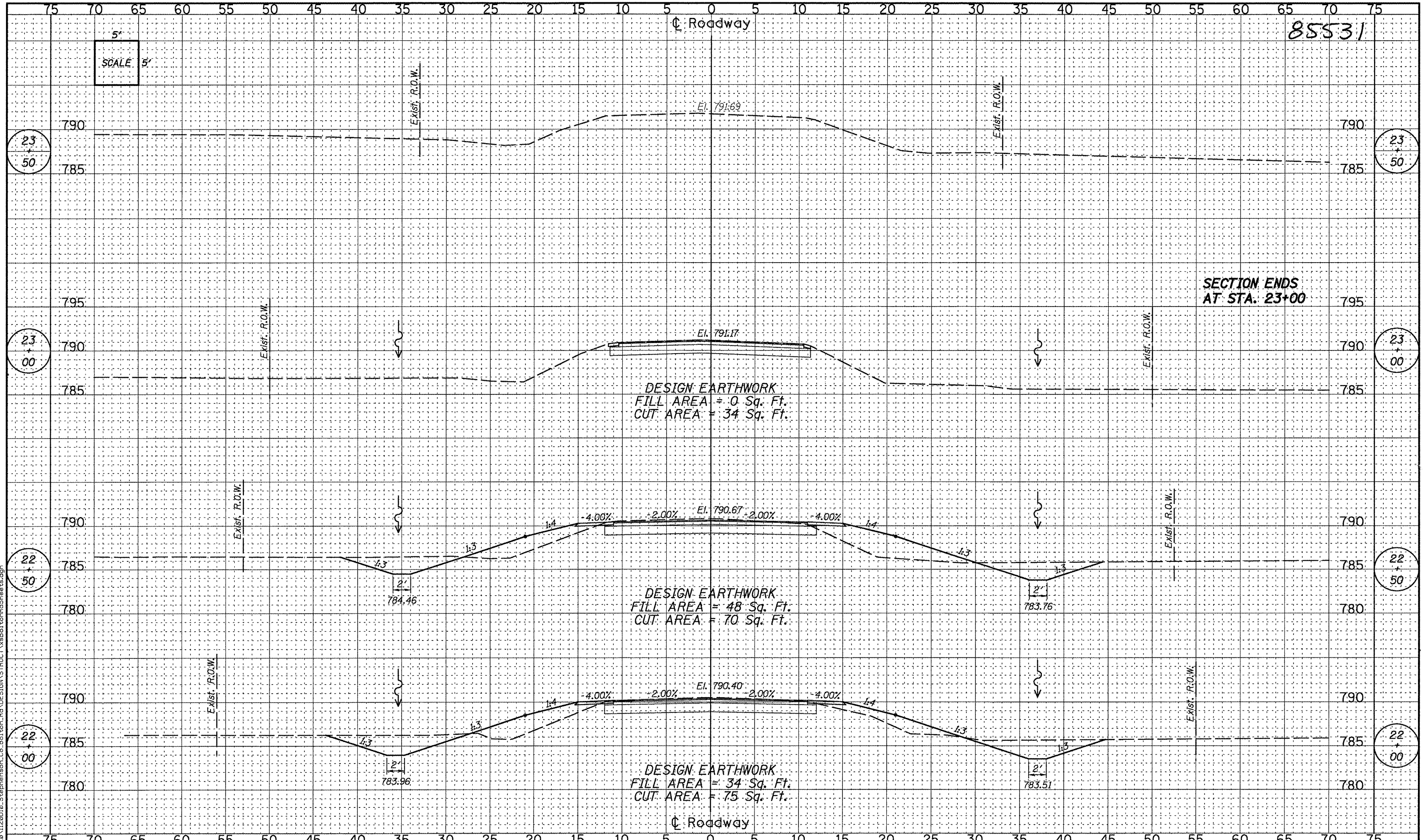
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 78	10-06118-00-BR	Stephenson	18	17
STA. 20+39.00 - STA. 21+50.00				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT ER-0177(038)				

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85531

5'
SCALE 5'

⊕ Roadway



SECTION ENDS
AT STA. 23+00

DESIGN EARTHWORK
FILL AREA = 0 Sq. Ft.
CUT AREA = 34 Sq. Ft.

DESIGN EARTHWORK
FILL AREA = 48 Sq. Ft.
CUT AREA = 70 Sq. Ft.

DESIGN EARTHWORK
FILL AREA = 34 Sq. Ft.
CUT AREA = 75 Sq. Ft.

⊕ Roadway

REV.	DATE	BY	REMARKS

**STEPHENSON COUNTY
CULVERT REPLACEMENT
F.A.S. 78 (N. BOLTON ROAD) OVER PRESTON CREEK
2010**

**WILLET,
HOFMANN &
ASSOCIATES, INC.**
CONSULTING ENGINEERS
Land Surveying - Transportation - Structural
Environmental - Architecture
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CROSS SECTIONS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 78	10-06118-00-BR	Stephenson	18	18
STA. 22+00.00- STA. 23+50.00				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT ER-0177(038)				

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