

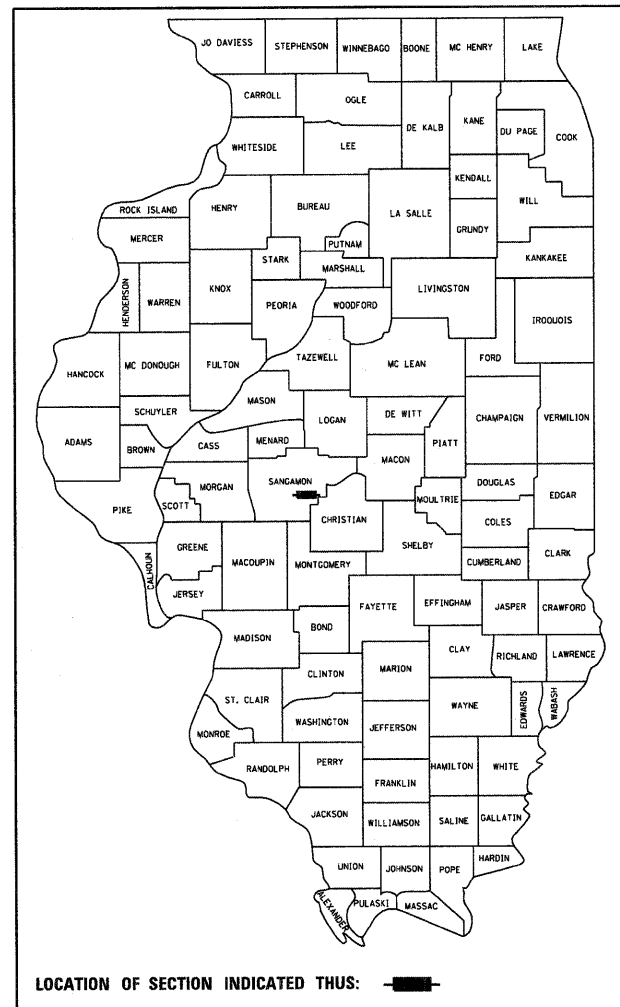
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY BRIDGE PROGRAM**

FAS ROUTE 556 - CH 4 (BUCKHART ROAD)
SECTION 08-00119-04-BR
PROJECT BRS-0556(311)
BRIDGE REPLACEMENT
SANGAMON COUNTY

C-96-202-12

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
556	08-00119-04-BR	SANGAMON	38	1
		ILLINOIS	CONTRACT NO.	



FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR (NON-URBAN)
DESIGN SPEED = 50 MPH
2031 ADT = 2985

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES AND SUMMARY OF QUANTITIES
- 3 TYPICAL SECTIONS AND ENTRANCE DETAILS
- 4-5 PLAN AND PROFILE SHEETS
- 6-7 EROSION CONTROL SHEETS
- 8-18 STRUCTURE PLANS
- 19-25 CROSS SECTIONS
- 26-38 EXISTING STRUCTURE PLANS

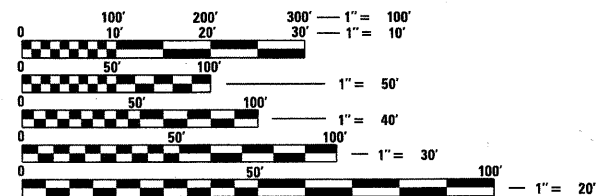
HIGHWAY STANDARDS

- 000001-06 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
- 280001-05 TEMPORARY EROSION CONTROL SYSTEMS
- 515001-03 NAME PLATE FOR BRIDGES
- 630001-09 STEEL PLATE BEAM GUARDRAIL
- 630301-05 SHOULDER WIDENING FOR TYPE I (SPECIAL) GUARDRAIL TERMINALS
- 631032-06 TRAFFIC BARRIER TERMINAL, TYPE 6A
- 635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 701306-03 LANE CLOSURE, 2L, 2W SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
- 701901-01 TRAFFIC CONTROL DEVICES
- 780001-02 TYPICAL PAVEMENT MARKINGS
- BLR21- 8 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
- BLR24-2 MAILBOX TURNOUT FOR LOCAL ROADS
- 701306-03 LANE CLOSURE, 2L 2W, SLOW MOVING OPERATIONS - DAY ONLY, FOR SPEEDS ≥ 45 MPH

UTILITY COMPANIES

POWER COMPANY
AMEREN
MR. GEORGE SOMMER
825 N. McARTHUR BLVD.
SPRINGFIELD, IL 62702
PH (217) 753-6458

TELEPHONE COMPANY
ATA&T
MR. MARK MILLER
529 S. 7TH STREET
FLOOR 3B
SPRINGFIELD, IL 62703
PH (217) 789-8367



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

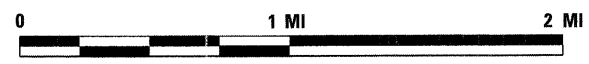
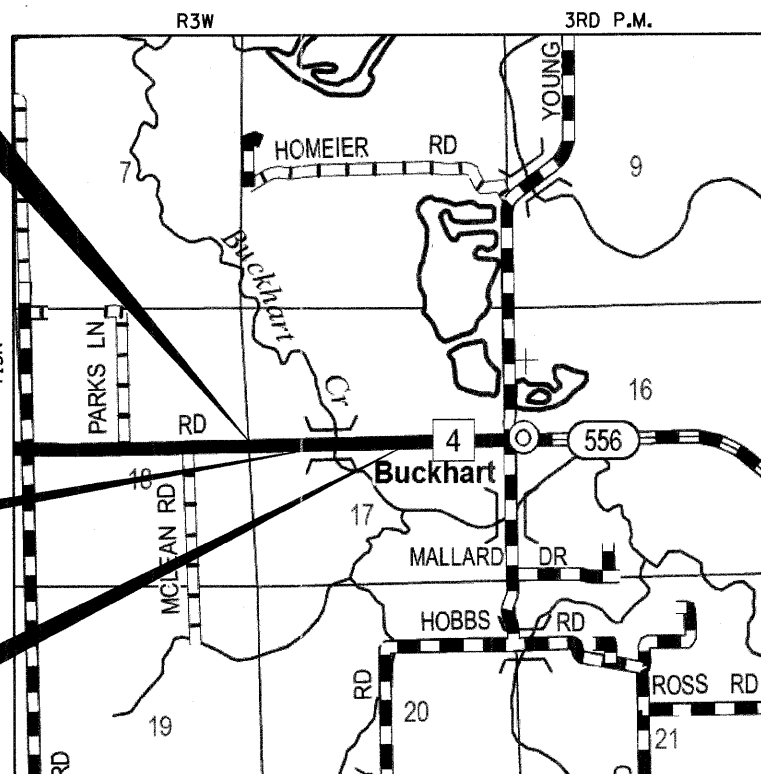
PROJECT ENGINEER: JAMES A. COLBROOK JR., P.E.
PROJECT MANAGER: SCOTT D. SANFORD, S.E., P.E.

WHKS & CO. ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

**BEGIN IMPROVEMENT
STA. 97 + 17.00**

**BRIDGE REPLACEMENT
STA. 99 + 96.00
EXIST SN 084-0080
PROP SN 084-0480**

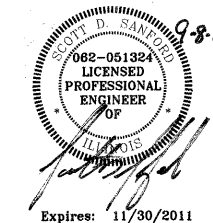
**END IMPROVEMENT
STA. 103 + 63.00**



LOCATION MAP SCALE
LOCATION MAP

TOTAL LENGTH = 646.00 FEET (0.122 MI)
NET LENGTH = 646.00 FEET (0.122 MI)

BRIDGE REPLACEMENT WITH A 3-SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE ON CONCRETE PILE BENT ABUTMENTS AND PIERS, 2" (MIN.) HMA WEARING SURFACE, 227'-9" BACK TO BACK OF ABUTMENTS, 33'-0" FACE TO FACE OF RAIL AND 0° SKEW.



APPROVED Sept. 8 20 11
Tom C. Zander
COUNTY ENGINEER

PASSED Jane H. Fortin 20 11
September 15, 2011
DISTRICT SIX ENGINEER OF
LOCAL ROADS AND STREETS

Ron Beaubeau 9-15-11
DISTRICT SIX ENGINEER OF
CONSTRUCTION

Released For
Bid Based on
Limited Review September 15 20 11
Roger S. Liskel
DEPUTY DIRECTOR OF HIGHWAYS
REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CONTRACT NO. 93556

Revised 11-8-11

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

SUMMARY OF QUANTITIES

CODE NUMBER	PAY ITEM	UNIT	TOTAL
20101000	TEMPORARY FENCE	FOOT	815
20200100	EARTH EXCAVATION	CU YD	113
20300100	CHANNEL EXCAVATION	CU YD	320
28000400	PERIMETER EROSION BARRIER	FOOT	1,180
28100109	STONE RIPRAP, CLASS A5	SQ YD	770
28200200	FILTER FABRIC	SQ YD	770
35101400	AGGREGATE BASE COURSE, TYPE B	TON	36
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	35
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	20
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	30
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	137
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	10
44000100	PAVEMENT REMOVAL	SQ YD	186
48100500	AGGREGATE SHOULDERS, TYPE A 6"	SQ YD	627
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	287
50300225	CONCRETE STRUCTURES	CU YD	116.9
50300280	CONCRETE ENCASEMENT	CU YD	5.8
50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	7,467
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	13,470
50901050	STEEL RAILING, TYPE SM	FOOT	456
51200959	FURNISHING METAL SHELL PILES 14" X 0.312"	FOOT	1,690
51202305	DRIVING PILES	FOOT	1,690
51203200	TEST PILE METAL SHELLS	EACH	2
51500100	NAME PLATES	EACH	1
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	830
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	1,360
59300100	CONTROLLED LOW-STRENGTH MATERIAL	CU YD	70.3
63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	225.0
63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1
63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	3
63200310	GUARDRAIL REMOVAL	FOOT	304
67100100	MOBILIZATION	L SUM	1
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	558
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	3
X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.5
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1
X5080600	MECHANICAL SPLICERS	EACH	56

* SPECIAL PROVISION Δ SPECIALTY ITEMS CONSTRUCTION TYPE CODE: 0011
BRIDGE TYPE CODE: X080

GENERAL NOTES

- WHERE PERMANENT SURVEY MARKERS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE DISTURBED. THE CONTRACTOR SHALL PROTECT AND PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER AND AN AUTHORIZED SURVEYOR HAS WITNESSED OR OTHERWISE REFERENCED THE LOCATION.
- THE ENGINEER SHALL NOT GUARANTEE THE WORK OF ANY CONTRACTOR OR SUBCONTRACTOR, SHALL HAVE NO SUPERVISION OF THE PERSONS DOING THE WORK, SHALL HAVE NO CHARGE OF THE WORK, SHALL NOT BE RESPONSIBLE FOR SAFETY IN, ON, OR ABOUT THE JOB SITE OR HAVE ANY CONTROL OF THE SAFETY OR ADEQUACY OF ANY EQUIPMENT, BUILDING COMPONENT, SCAFFOLDING, SUPPORT, FORMS OR OTHER WORK AIDS.
- THE FOLLOWING RATES WERE USED IN CALCULATION QUANTITIES FOR THIS PROJECT:
 AGGREGATE SHOULDERS: 2.05 TONS/CU YD
 AGGREGATE BASE AND SURFACE COURSE: 2.05 TONS/CU YD
 BITUMINOUS MATERIALS (COVER AND SEAL COAT): 0.35 GAL/SQ YD
 BITUMINOUS MATERIALS (PRIME COAT): 0.10 GAL/SQ YD
 0.30 GAL/SQ YD
 SEAL COAT AGGREGATE: 23 LBS/SQ YD
 HOT MIX ASPHALT: 112 LBS/SQ YD/INCH
- CONTRACTOR SHALL FOLLOW CONSTRUCTION REQUIREMENTS OF SECTION 611 WHEN EXISTING FIELD TILE IS ENCOUNTERED UNLESS DIRECTED OTHERWISE BY THE ENGINEER. THIS WORK WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL REPLACE ALL STREET SIGNS REMOVED DURING CONSTRUCTION AS NEAR AS POSSIBLE TO THEIR ORIGINAL LOCATION OR AS DETERMINED BY THE ENGINEER. THIS WORK SHALL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICES FOR THE WORK ITEMS SPECIFIED.
- THE PROPOSED GRADE ELEVATIONS SHOWN ON THE PLAN AND PROFILE SHEETS AND CROSS SECTION SHEETS ARE THE ELEVATIONS FOR THE FINISHED SURFACE AT THE LOCATIONS INDICATED.
- UTILITIES ARE SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION AND THEIR TRUE LOCATION IS NOT GUARANTEED TO BE AS SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF THE UTILITIES AND CARRY ON HIS/HER WORK OPERATIONS ACCORDINGLY.
- SEE SPECIAL PROVISIONS FOR DETOUR PLAN.

HOT-MIX ASPHALT MIXTURE REQUIREMENTS			
ITEM	AGGREGATE COMPOSITION	ASPHALT GRADE	DESIGN AIR VOIDS
HMA SURFACE CSE	IL-9.5 OR 12.5 MIX "C"	PG 64-22	4.0% @ N50

HOT-MIX ASPHALT QUANTITIES BASED ON 112 LB./SQ. YD./INCH

GUARDRAIL SCHEDULE

LOCATION	63000001 STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS (FOOT)	63100045 TRAFFIC BARRIER TERMINAL, TYPE 2 (EACH)	63100087 TRAFFIC BARRIER TERMINAL, TYPE 6A (EACH)	63100167 TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT (EACH)
STA. 97+50.88 TO STA. 98+00.88, LT				1
STA. 98+00.88 TO STA. 98+38.38, LT	37.5			
STA. 98+38.38 TO STA. 98+82.13, LT			1	
STA. 98+19.48 TO STA. 98+20.73, RT		1		
STA. 98+20.73 TO STA. 98+38.38, RT	25.0			
STA. 98+38.38 TO STA. 98+82.13, RT			1	
STA. 101+09.88 TO STA. 101+53.63, LT			1	
STA. 101+53.63 TO STA. 102+78.63, LT	125.0			
STA. 102+78.63 TO STA. 103+28.63, LT				1
STA. 101+09.88 TO STA. 101+53.63, RT			1	
STA. 101+53.63 TO STA. 101+91.13, RT	37.5			
STA. 101+91.13 TO STA. 102+41.13, RT				1
TOTAL	225.0	1	4	3

EARTHWORK SCHEDULE

LOCATION	20200100	23000100	FOR INFORMATIONAL ONLY		20400800
	EARTH EXCAVATION	CHANNEL EXCAVATION	EXCAVATION TO BE USED IN EMBANKMENT (ADJUSTED FOR SHRINKAGE) (EXC. x 0.75)	EMBANKMENT (FILL)	EMBANKMENT (FILL)
	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.
STA. 97+17.00 TO STA. 98+82.13	71		53	92	-39
STA. 98+82.13 TO STA. 101+09.88		320	240		240
STA. 101+09.88 TO STA. 103+63.00	42		32	153	-121
TOTAL	113	320	325	245	80

EARTH EXCAVATION SHRINKAGE FACTOR = 25%

USER NAME = dhaberling	DESIGNED -	REVISED - Δ 11-8-11
FILE NAME = D612345-shr-general	CHECKED -	REVISED -
PLOT DATE = 9/7/2011	DRAWN -	REVISED -
PLOT TIME = 11:08:33 AM	CHECKED -	REVISED -

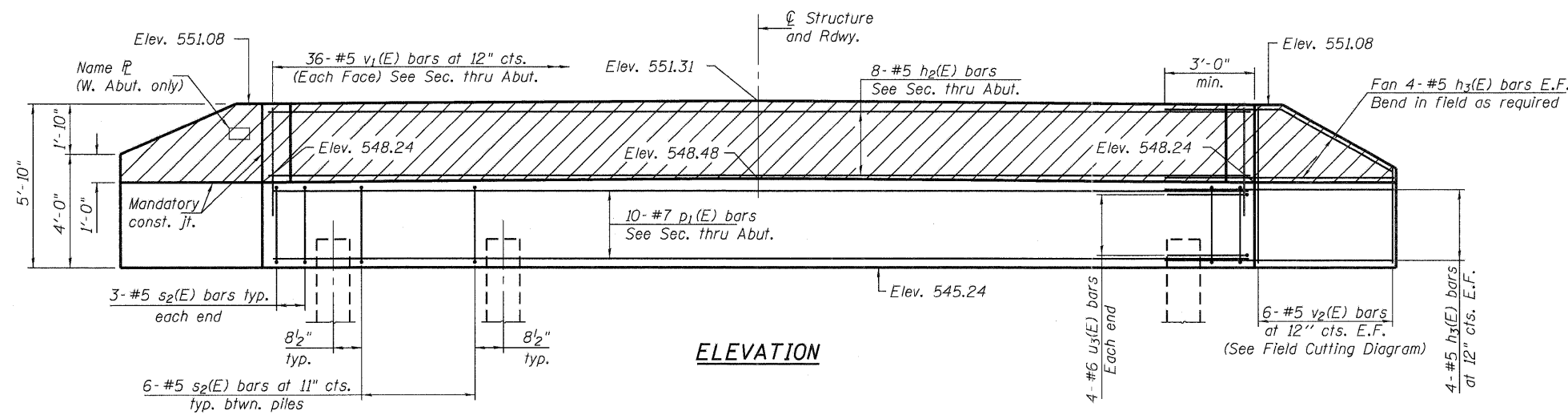
WHKS & CO.
ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

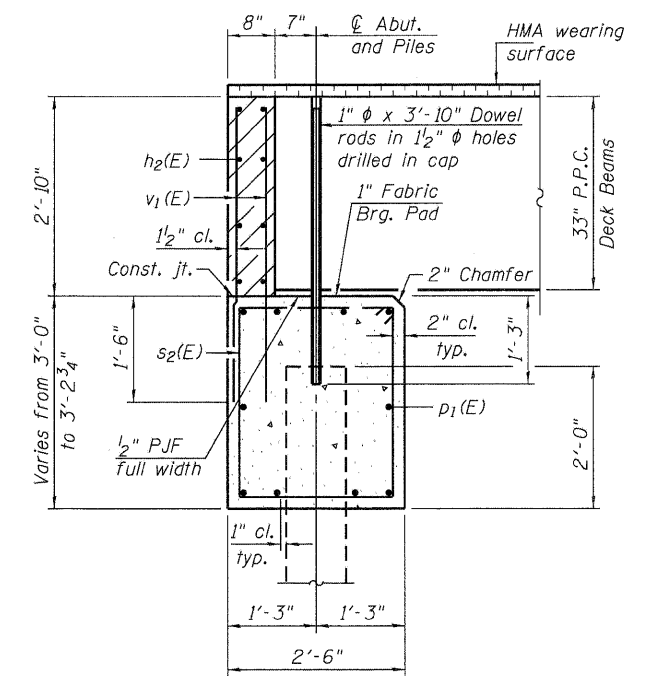
**GENERAL NOTES AND SUMMARY OF QUANTITIES
CH 4 OVER BUCKART CREEK**

SCALE: NTS SHEET NO. 1 OF 1 SHEETS STA. TO STA.

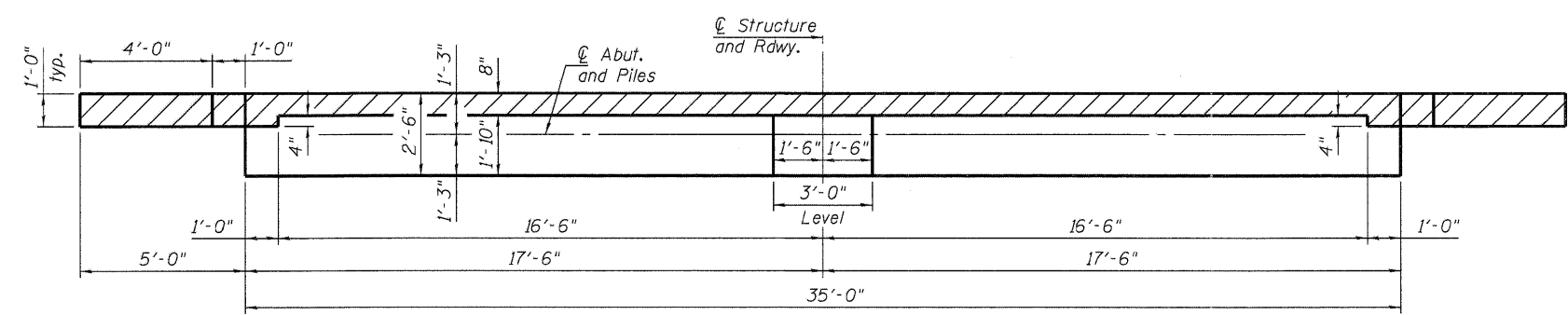
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
556	08-00119-04-BR	SANGAMON	25	2
SN 084-0480			CONTRACT NO. 93556	
ILLINOIS FED. AID PROJECT				



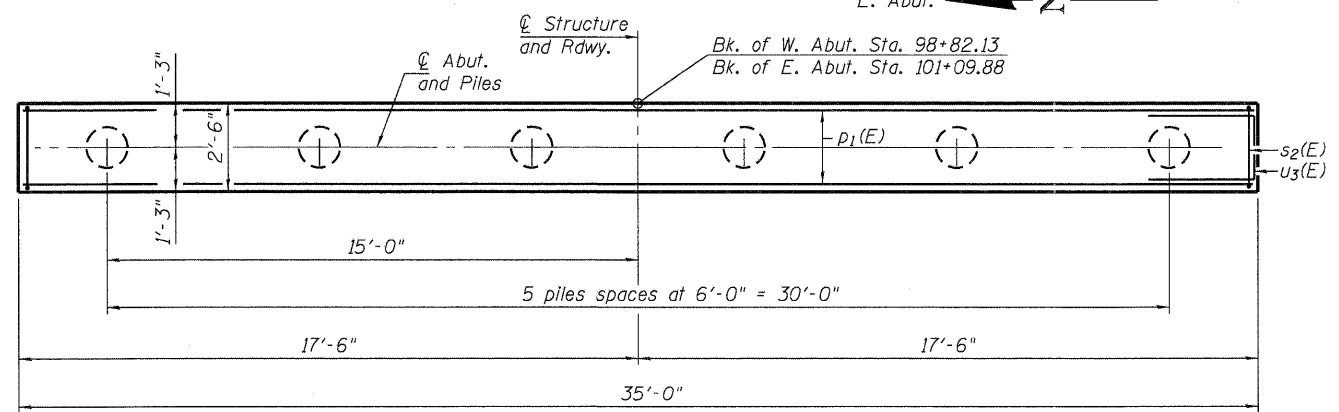
ELEVATION



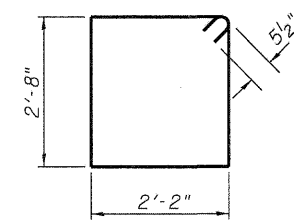
SECTION THRU ABUTMENT



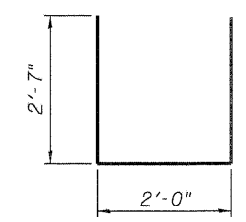
TOP VIEW



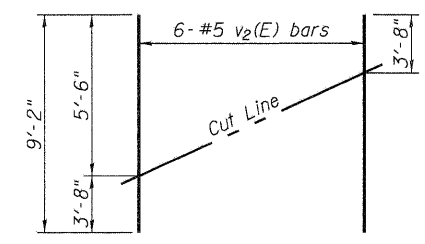
PLAN



BAR s2(E)



BAR u3(E)



FIELD CUTTING DIAGRAM

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

**BILL OF MATERIAL
TWO ABUTMENTS**

Bar	No.	Size	Length	Shape
h2(E)	16	#5	34'-9"	—
h3(E)	64	#5	8'-6"	—
p1(E)	20	#7	34'-9"	—
s2(E)	72	#5	10'-7"	□
u3(E)	16	#6	7'-2"	U
v1(E)	144	#5	4'-2"	—
v2(E)	24	#5	9'-2"	—
Structure Excavation		Cu. Yd.	210	
Concrete Structures		Cu. Yd.	28.0	
Reinforcement Bars, Epoxy Coated		Pound	4,390	
Furnishing Metal Shell Piles 14" x 0.312"		Foot	565	
Driving Piles		Foot	565	
Test Pile Metal Shells		Each	1	

PILE DATA - W. ABUT.

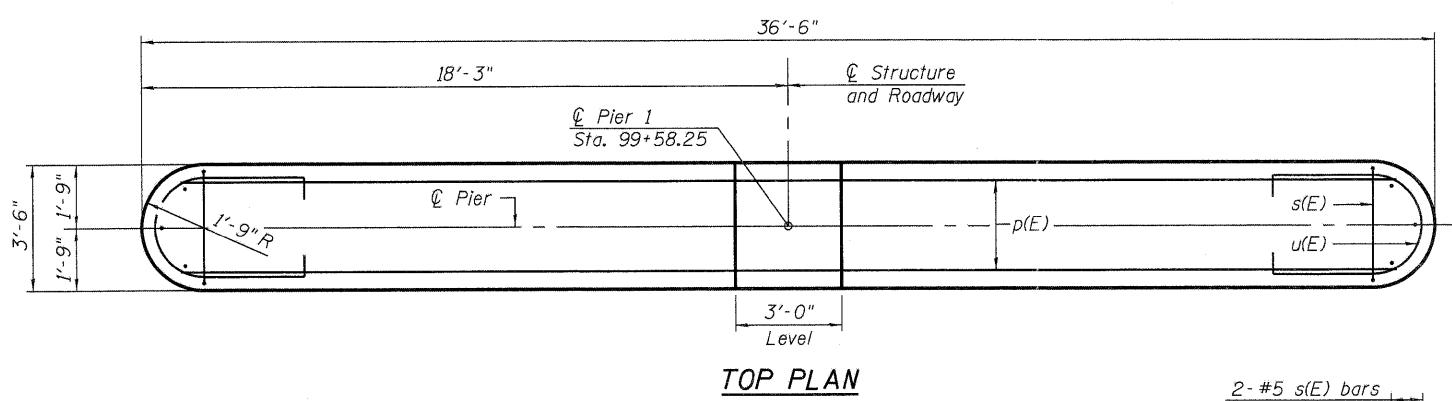
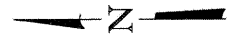
Type: Metal Shell 14" φ x 0.312" walls
 Nominal Required Bearing: 291 kips
 Factored Resistance Available: 160 kips
 Est. Length: 53 ft.
 No. Production Piles: 5
 No. Test Piles: 1

PILE DATA - E. ABUT.

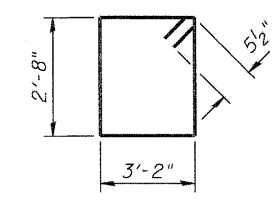
Type: Metal Shell 14" φ x 0.312" walls
 Nominal Required Bearing: 291 kips
 Factored Resistance Available: 160 kips
 Est. Length: 50 ft.
 No. Production Piles: 6
 No. Test Piles: 0

Notes:

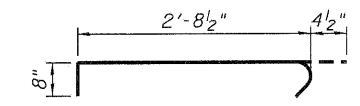
The hatched area shall be poured after the beams are in place. The backwall shall be cast against the beams. Cast top of wingwall flush with exterior beam face after beams have been erected.
 Dowel rods to be grouted after beams are in place and allowed to cure (Min. 24 hrs.) prior to grouting the shear keys. Cost shall be included in the cost of Precast Prestressed Concrete Deck Beams (33" Depth).
 For details of piles and Concrete Encasement, see sheet 9 of 11.
 If pile interferes with dowel embedment, reduce dowel embedment so dowel is at the top of the pile (min. embedment = 1'-0").



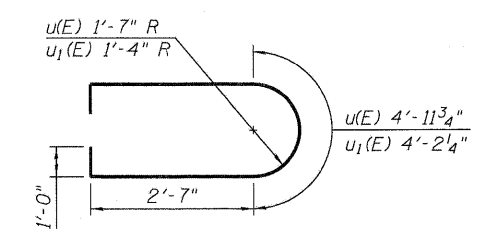
TOP PLAN



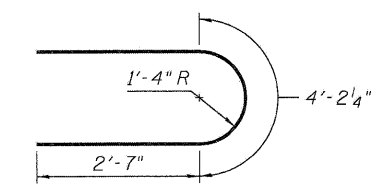
BAR s(E)



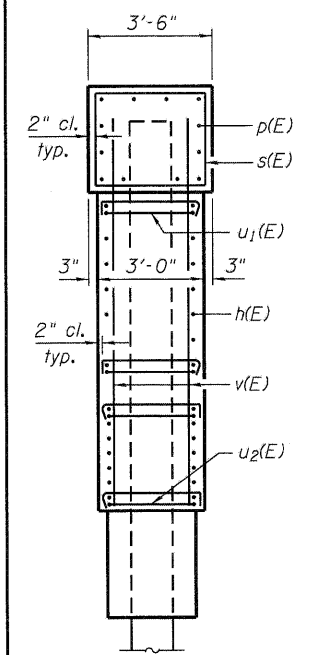
BAR s1(E)



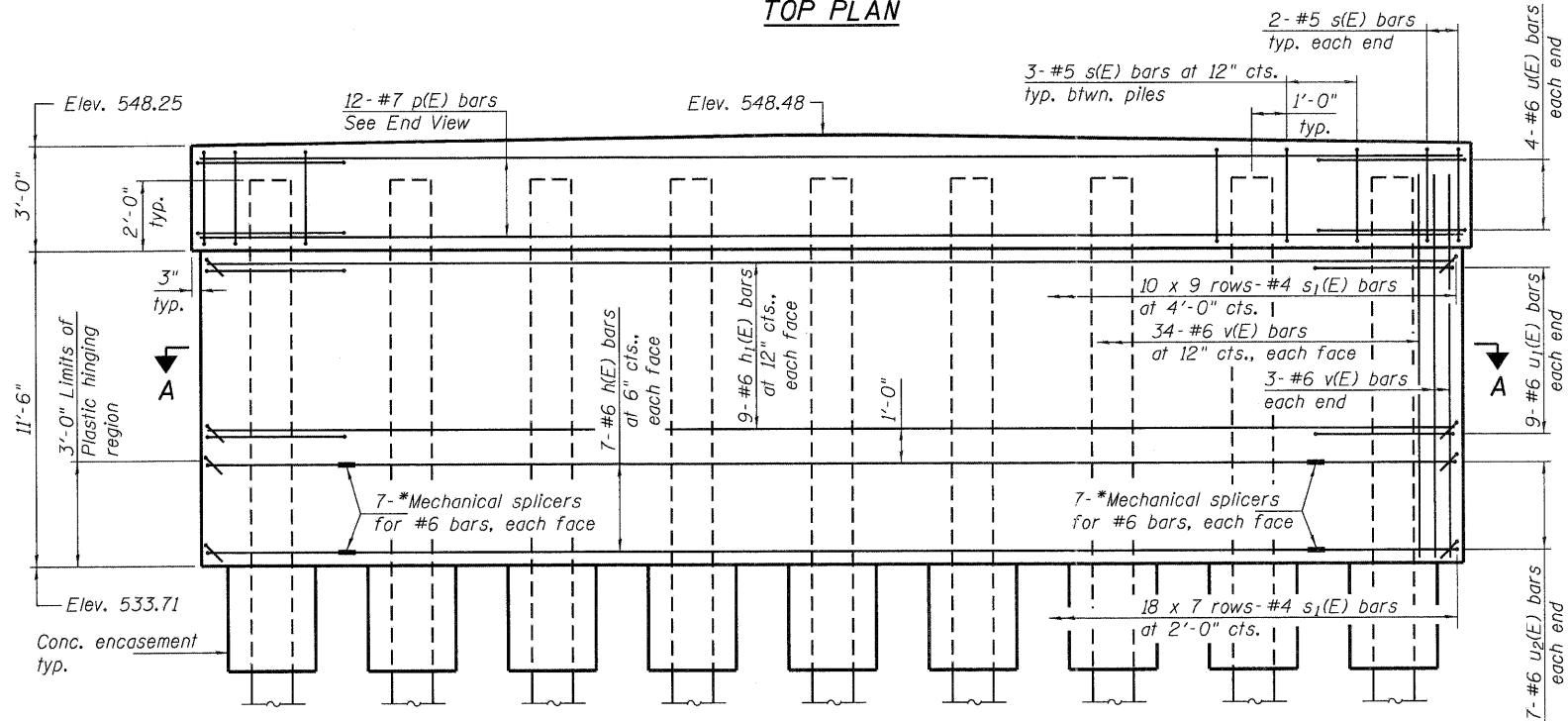
BARS u(E) & u1(E)



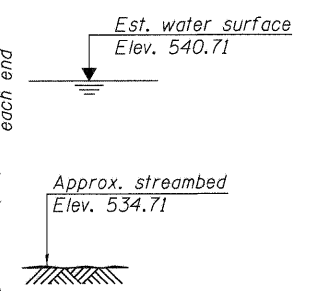
BARS u2(E)



END VIEW



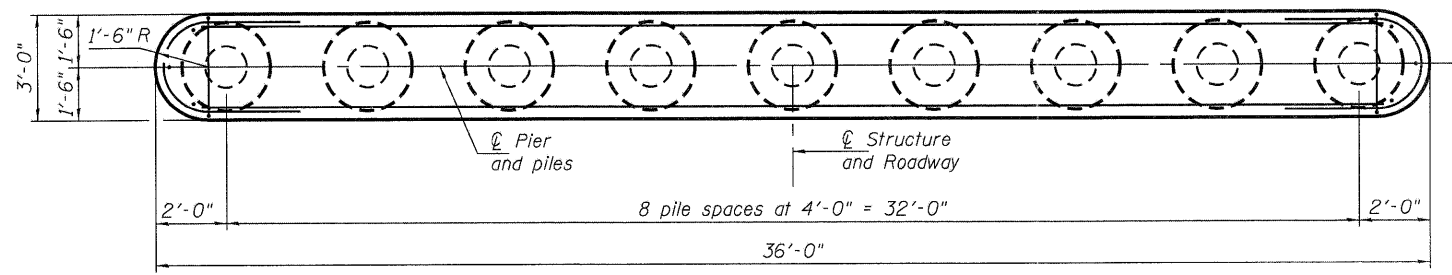
ELEVATION



**PIER 1
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	14	#6	27'-10"	—
h1(E)	18	#6	33'-0"	—
p(E)	12	#7	33'-0"	—
s(E)	28	#5	12'-7"	□
s1(E)	216	#4	3'-9"	┌
u(E)	8	#6	12'-2"	U
u1(E)	18	#6	11'-5"	U
u2(E)	14	#6	9'-5"	U
v(E)	74	#6	13'-5"	—
Structure Excavation			Cu. Yd.	6.7
Concrete Structures			Cu. Yd.	54.7
Concrete Encasement			Cu. Yd.	2.9
Reinforcement Bars, Epoxy Coated			Pound	5,340
Furnishing Metal Shell Piles 14" x 0.312"			Foot	549
Driving Piles			Foot	549
Underwater Structure Excavation Protection Location 1			Each	1
Mechanical Splicers			Each	28

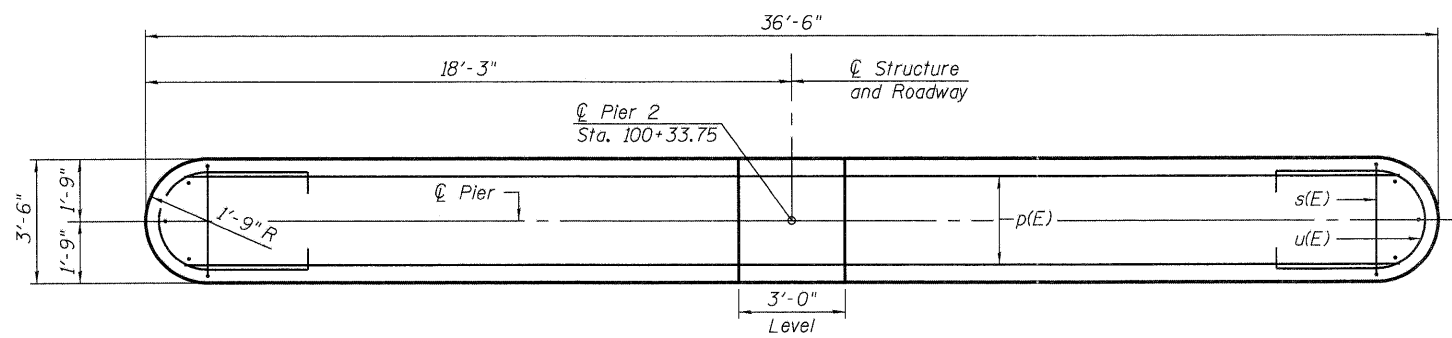
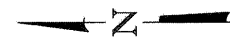
* As an alternate to the Mechanical splicers shown, the Contractor may provide shop welded splices in accordance with AWS D1.4.



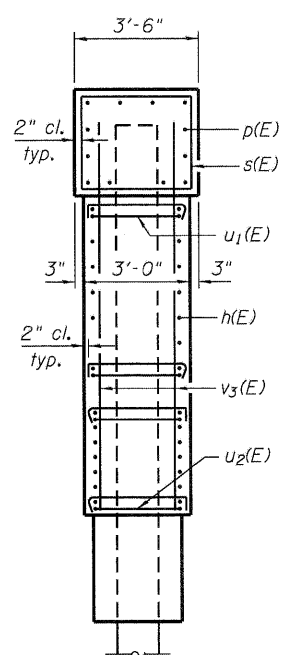
SECTION A-A

PILE DATA

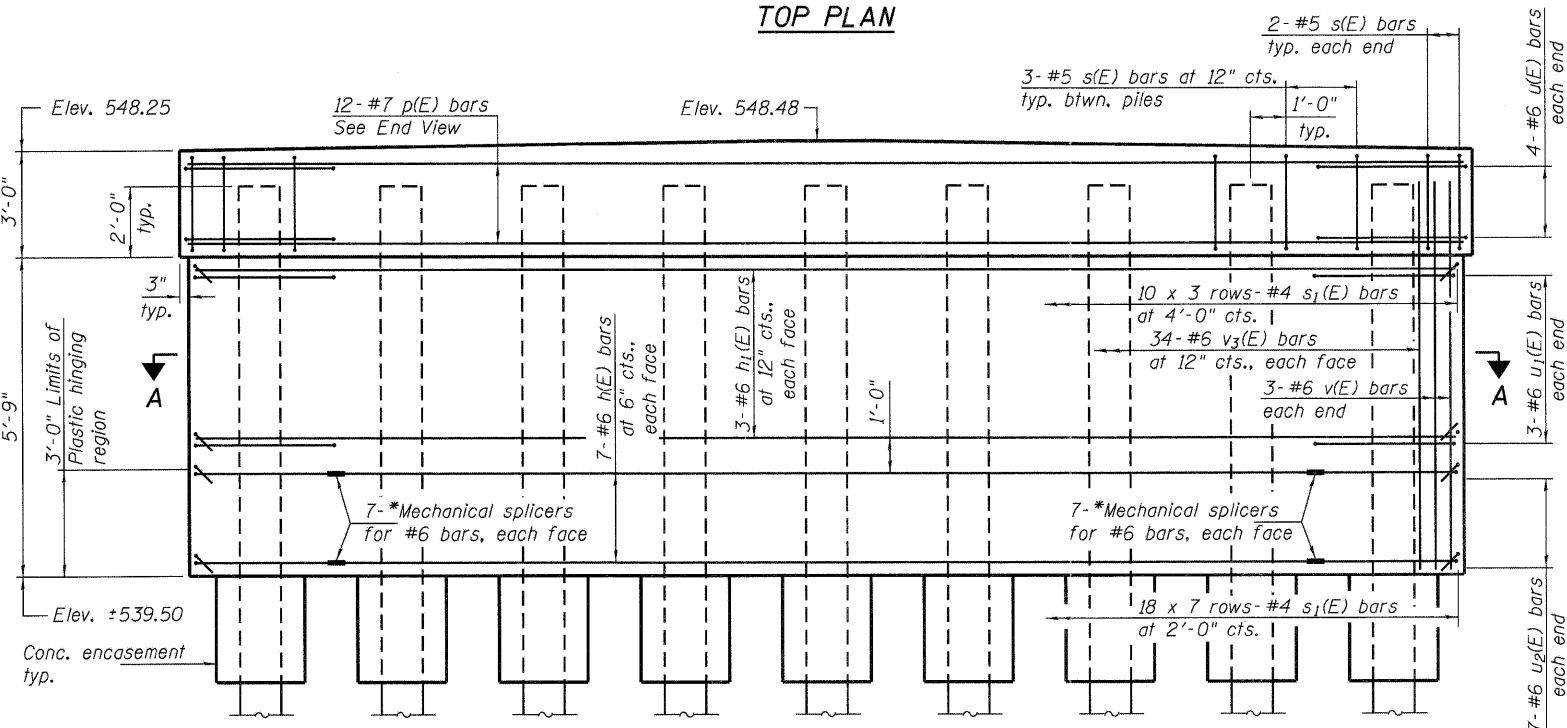
Type: Metal Shell - 14" ϕ x 0.312" walls
 Nominal Required Bearing: 412 kips
 Factored Resistance Available: 221 kips
 Est. Length: 61 ft.
 No. Production Piles: 9
 No. Test Piles: 0



TOP PLAN

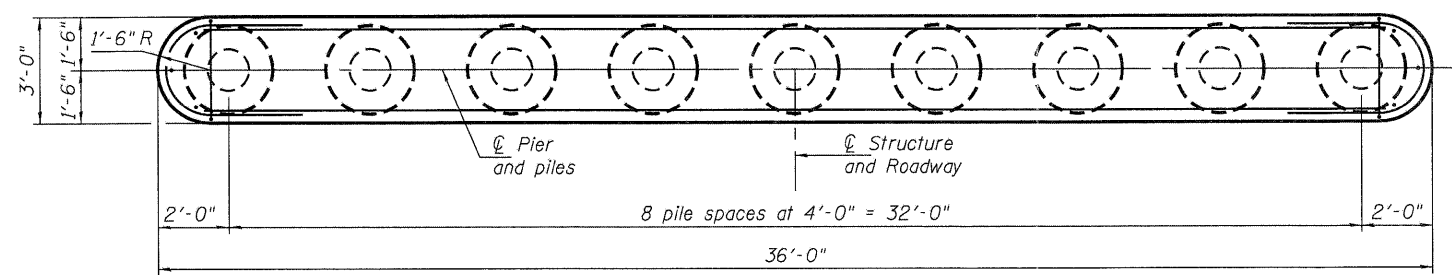


END VIEW

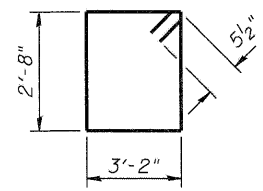


ELEVATION

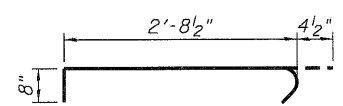
* As an alternate to the Mechanical splicers shown, the Contractor may provide shop welded splices in accordance with AWS D1.4.



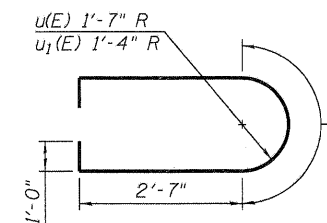
SECTION A-A



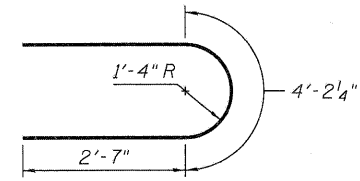
BAR s(E)



BAR s1(E)



BARS u(E) & u1(E)



BARS u2(E)

**PIER 2
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	14	#6	27'-10"	—
h1(E)	6	#6	33'-0"	—
p(E)	12	#7	33'-0"	—
s(E)	28	#5	12'-7"	□
s1(E)	156	#4	3'-9"	└┘
u(E)	8	#6	12'-2'	U
u1(E)	6	#6	11'-5"	U
u2(E)	14	#6	9'-5"	U
v3(E)	74	#6	7'-7"	—
Structure Excavation		Cu. Yd.	10	
Concrete Structures		Cu. Yd.	34.2	
Concrete Encasement		Cu. Yd.	2.9	
Reinforcement Bars, Epoxy Coated		Pound	3,740	
Furnishing Metal Shell Piles 14" x 0.312"		Foot	576	
Driving Piles		Foot	576	
Test Pile Metal Shells		Each	1	
Mechanical Splicers		Each	28	

PILE DATA

Type: Metal Shell - 14" ϕ x 0.312" walls
 Nominal Required Bearing: 386 kips
 Factored Resistance Available: 198 kips
 Est. Length: 72 ft.
 No. Production Piles: 8
 No. Test Piles: 1

COUNTY OF SANGAMON STATE OF ILLINOIS PLAN AND PROFILE OF PROPOSED STATE AID HIGHWAY

RT. 4, SEC'S. 14 & 14-B-15D

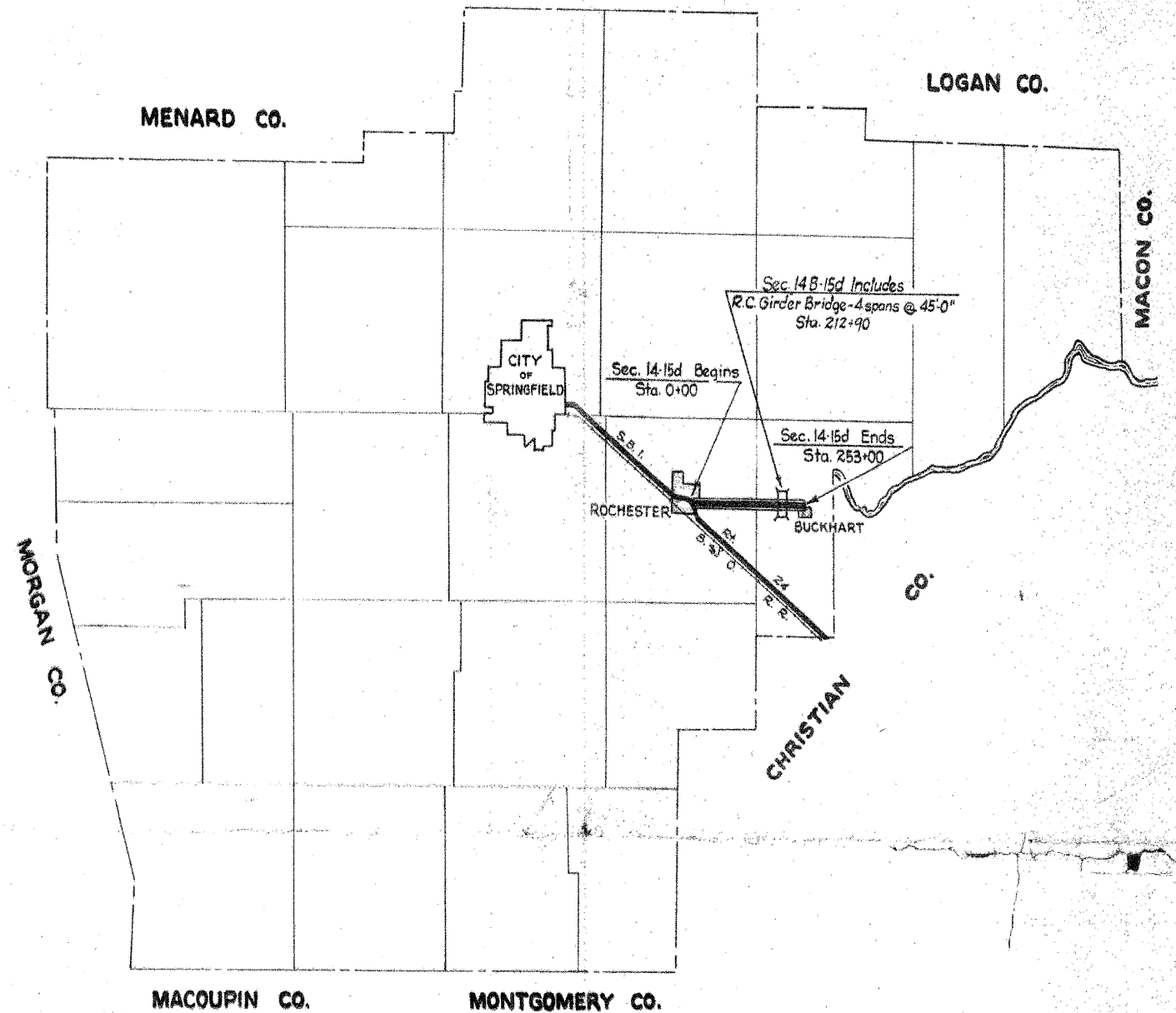
This section begins 307 feet west of the S.W. corner of the S.E. 1/4 of the N.W. 1/4 of Section 15, T.15N, R.5 W. of the 3rd P.M., and extends in an easterly direction to Buckhart.

INDEX to SHEETS

Sheet No.	Title Page
2	Plan & Profile Sta. 0+00 to Sta. 60+00
3	60+00 - 120+00
4	120+00 - 180+00
5	180+00 - 240+00
6	240+00 - 253+00
7-19	Inclusive Cross Sections
20	Standard Pavement Cross Section
20	Gutter Section (Type B)
21	Special Culvert Design Sta. 81+36
22	131+10
23	135+47
24	167+26
25	176+63
26	Bridge Design Sta. 212+90 (Sheet of 3 sheets)
27	2 - 3
28	3 - 3
29	Standards No. 1435, 1203, 1373
30	1174

SUMMARY of QUANTITIES

Sec. 14-15d Includes	
103.52 Units	Hedge Pulling
30450 Cu. Yds.	Class A Excavation
30000 Cu. Yds.	Borrow
43400 Cu. Yds.	Settlement of Embankments
36160 Sq. Yds.	Earth Shoulders
45242 Sq. Yds.	P.C.C. Pavement
120 Lin. Ft.	Pipe Culverts Corrugated Metal 12 inch
200 Lin. Ft.	Pipe Culverts Precast Conc. 18 inch
300 Lin. Ft.	Pipe Culverts Precast Conc. 15 inch
138.2 Cu. Yds.	Class X Concrete
20020 Lbs.	Reinforcement Bars
3700 Lin. Ft.	Plain Concrete Gutter Type B
8640 Lin. Ft.	Wire Road Guard
Sec. 14-B-15d Includes	
198.2 Cu. Yds.	Class A Concrete
476.2 Cu. Yds.	Class X Concrete
94830 Lbs.	Reinforcement Bars
1520 Lbs.	Structural Steel
4040 Lbs.	Rackers & Plates
4160 Lin. Ft.	Furnishing Untreated Piles 20 ft. long
4160 Lin. Ft.	Driving Piles 20 ft. long
1 Each	Name Plate



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PLOT DATE = 11/8/2011	DRAWN - DLH	REVISED -
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WHKS & CO.
ENGINEERING

7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

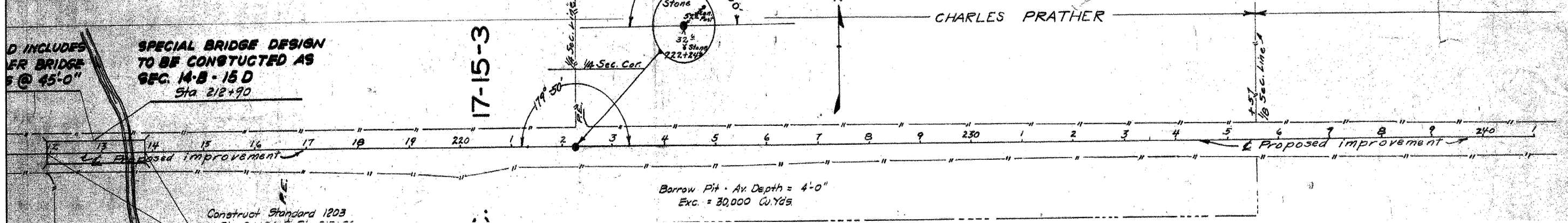
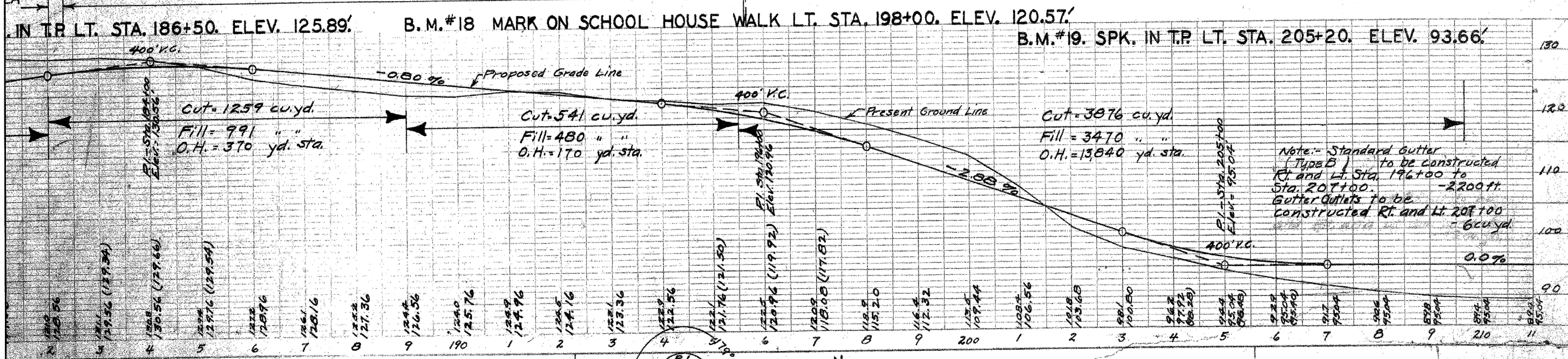
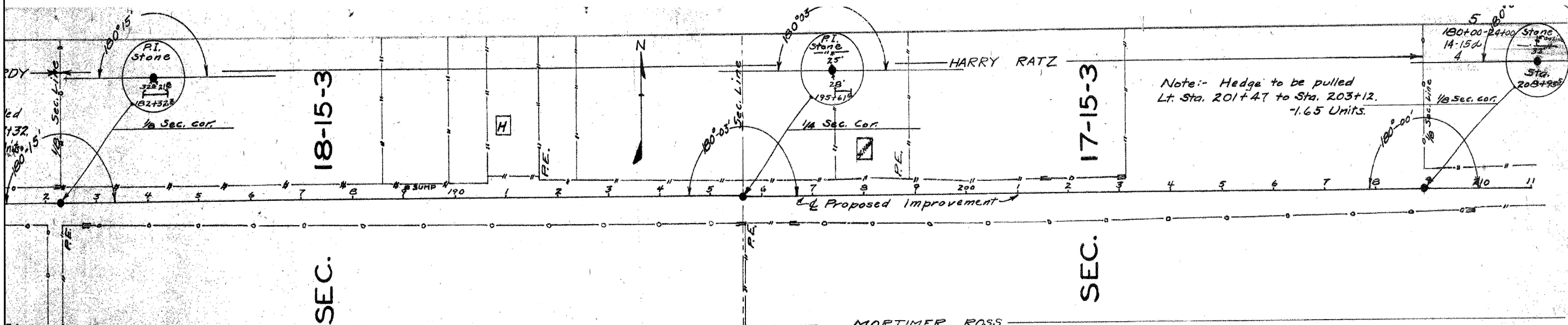
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS

SHEET NO. OF SHEETS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
556	08-00119-04-BR	SANGAMON	26	26

CONTRACT NO. 93556
[ILLINOIS] FED. AID PROJECT



D INCLUDES
 BRIDGE
 @ 45'-0"

**SPECIAL BRIDGE DESIGN
 TO BE CONSTRUCTED AS
 SEC. 14-B-15 D
 Sta 212+90**

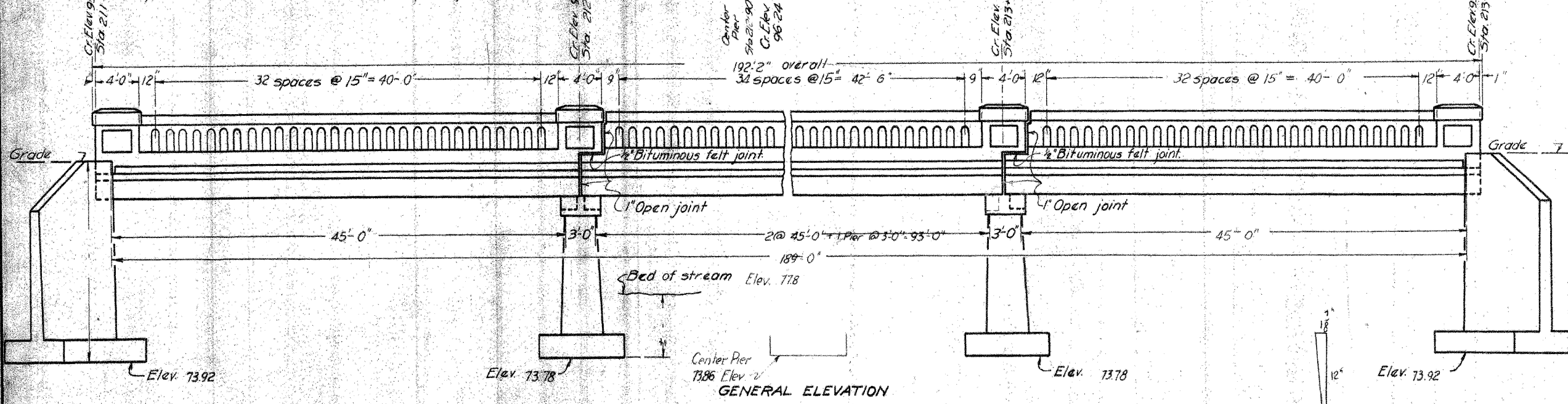
Construct Standard 1203

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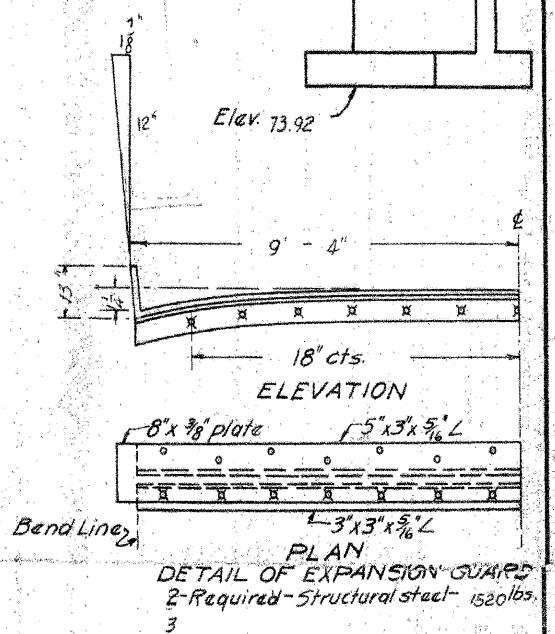
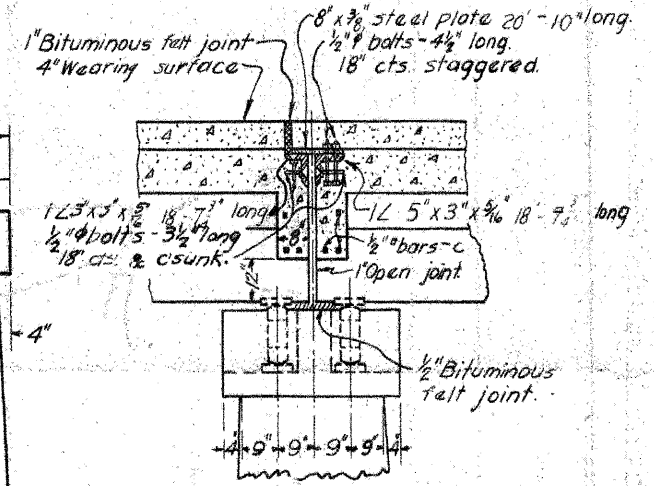
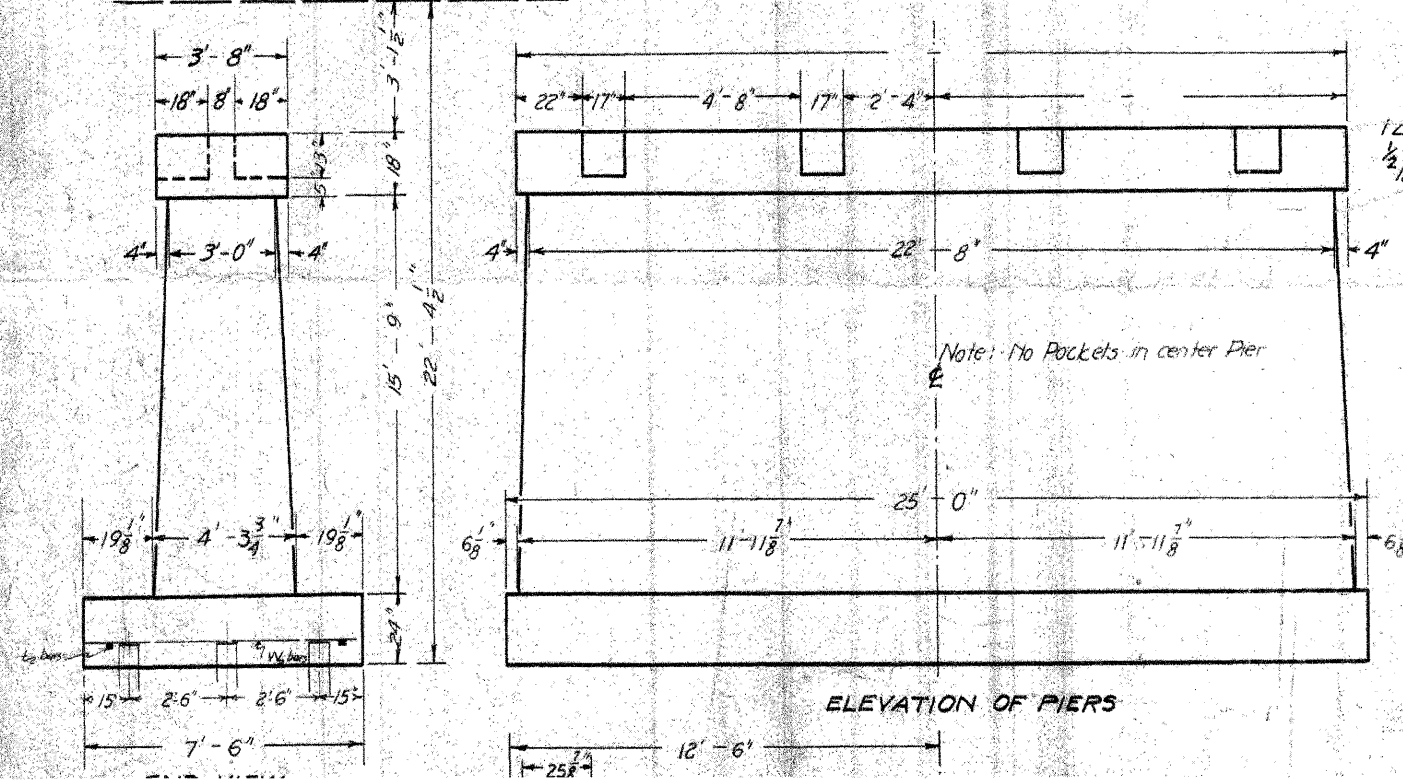
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SHEET NO. 1
3 SHEETS

BENCH MARK: #20 Spike in elm left Sta. 214+00. Elev. 85.46
EXISTING STRUCTURE: 3 span Pony Truss 150' long
Rdy. 14'0" This structure to be removed by Bridge Contractor



Crown of finished Roadway Elev.



TOTAL BILL OF MATERIAL.

Item	Super	Abuts.	Piers	Total
Class A Conc. - cu yds			198.2	198.2
Class X Conc. - cu yds	236.0	240.2		476.2
Reinforcing steel - lbs.	12720	27870	1240	41830

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WHKS & co.
ENGINEERING

7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS

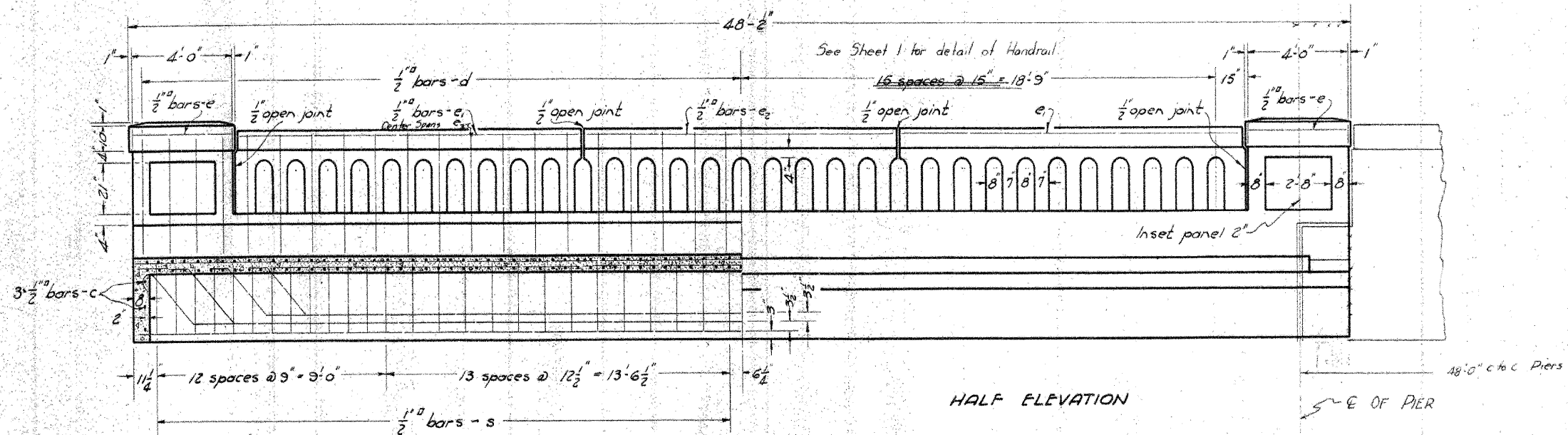
SHEET NO. OF SHEETS

F.A.S. RTE. 556	SECTION 08-00119-04-BR	COUNTY SANGAMON	TOTAL SHEETS 28	SHEET NO. 28
ILLINOIS FED. AID PROJECT			CONTRACT NO. 93556	

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

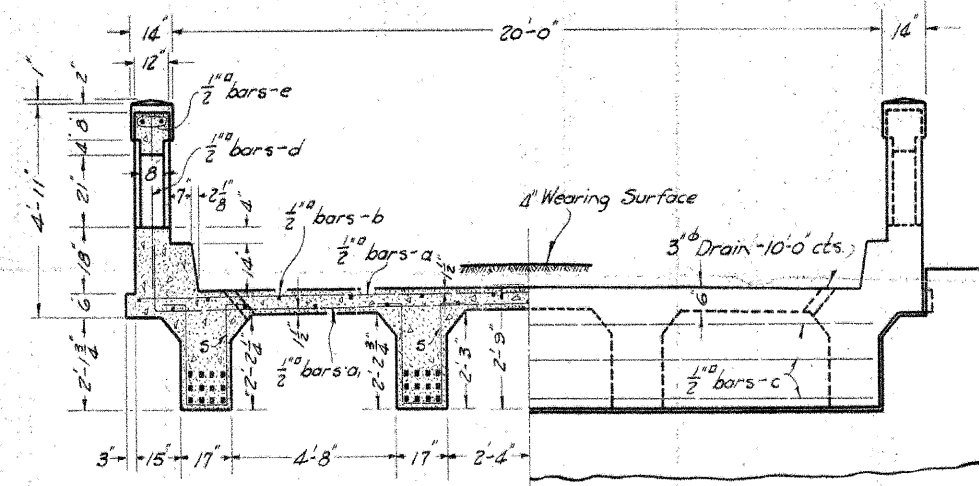
SHEET NO. 2
3 SHEETS

BENCH MARK: # 20 Spike in elm th Sta. 214+00 Elev. 85.46
EXISTING STRUCTURE Three (3) span Pony Truss Length 150'-Rdy 14'. This structure to be removed by Bridge Contractor.



HALF ELEVATION

HALF LONGITUDINAL SECTION

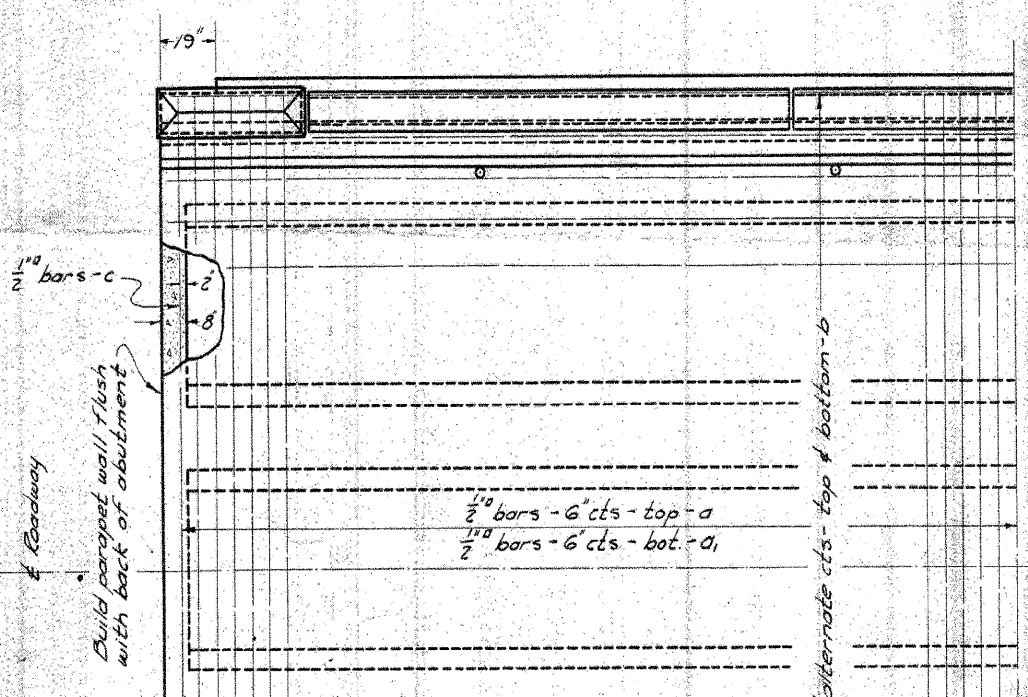


HALF CROSS SECTION

HALF END ELEVATION

4 Spans Req'd.
BILL OF MATERIAL (FOR 1 SPAN)

BARS	No	Size	LENGTH
------	----	------	--------



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WHKS & co.
ENGINEERING
7018 KINGSMILL CT.,
SPRINGFIELD, IL
(217) 483-9457
DESIGN FIRM #184001036

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING PLANS

SHEET NO. OF SHEETS

F.A.S. RTE. 556	SECTION 08-00119-04-BR	COUNTY SANGAMON	TOTAL SHEETS 29	SHEET NO. 29
ILLINOIS FED. AID PROJECT				CONTRACT NO. 93556

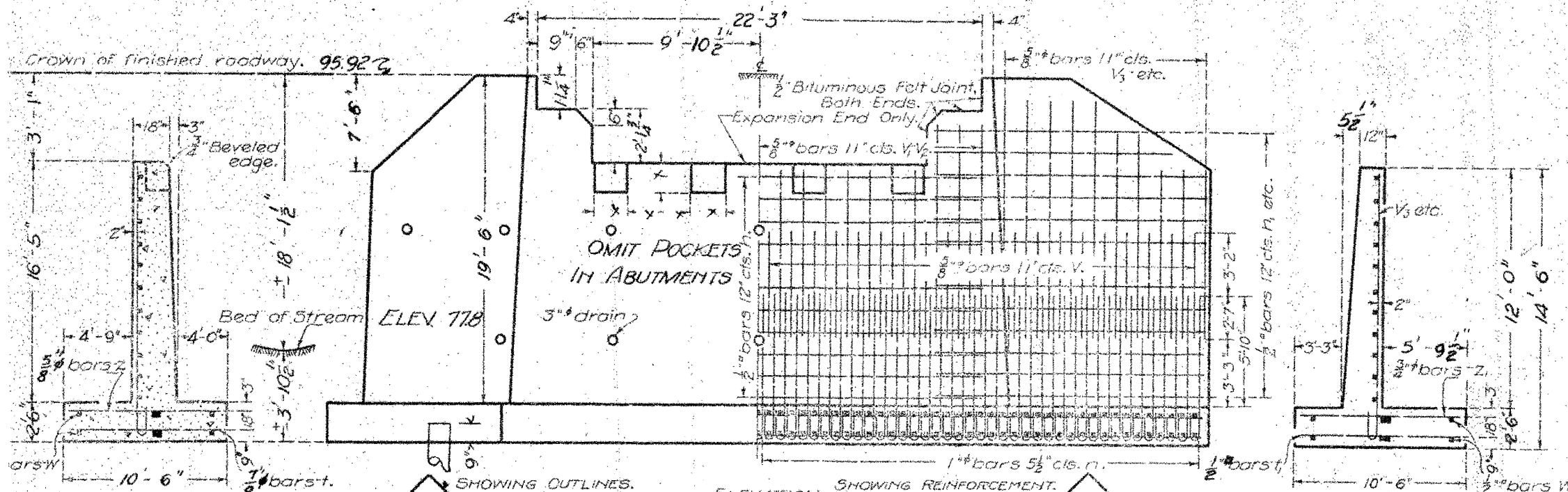
BENCH MARK: # 20 Spike in elm 1/4 Sta 214+00.
Elev. 85.46.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS

Sheet No. 3
3 Sheets.

R. C. ABUTMENTS FOR DECK GIRDER BRIDGE

HEIGHT OVER ALL 22 FEET

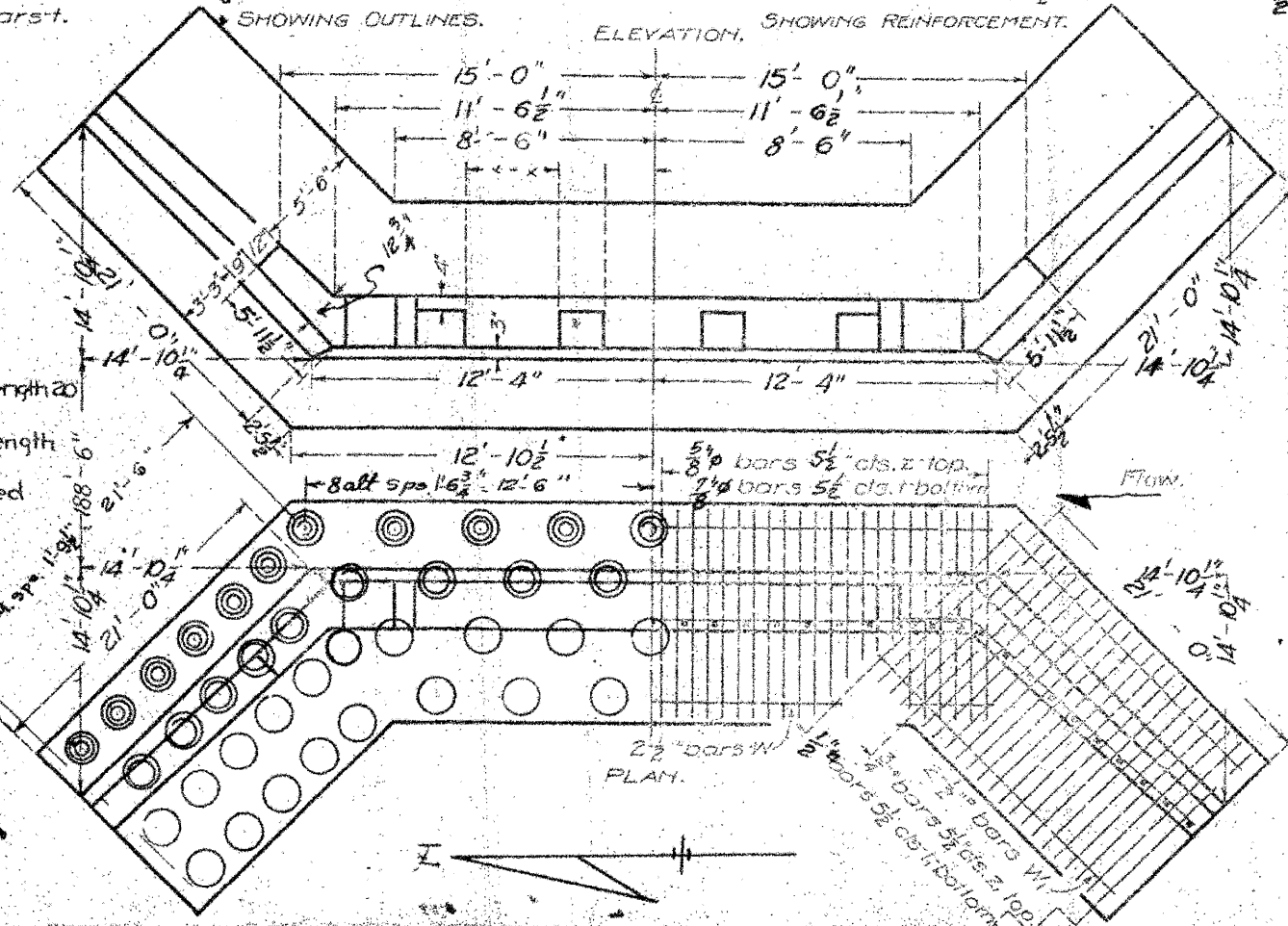


Class X concrete shall be used throughout.
All reinforcing steel all be securely wired in place before concrete is used.

- 10-T. Untr. Piling Estimated length 20' 70 Reqd.
- 12-T. Untr. Piling Estimated Length 36 Reqd.
- 15-T. Untr. Piling Estimated length 20' 42 Reqd.

COMPUTED	E. C. Wood
CHECKED	J. W. B. [unclear]
DRAWN	M. W. [unclear]
CHECKED	[unclear]
ASSEMBLED	H. B. [unclear]
CHECKED	[unclear]

6-23-10 31
A. T. [unclear]
H. E. [unclear]
Frank J. [unclear]



END OF WING.
BILL OF MATERIAL.

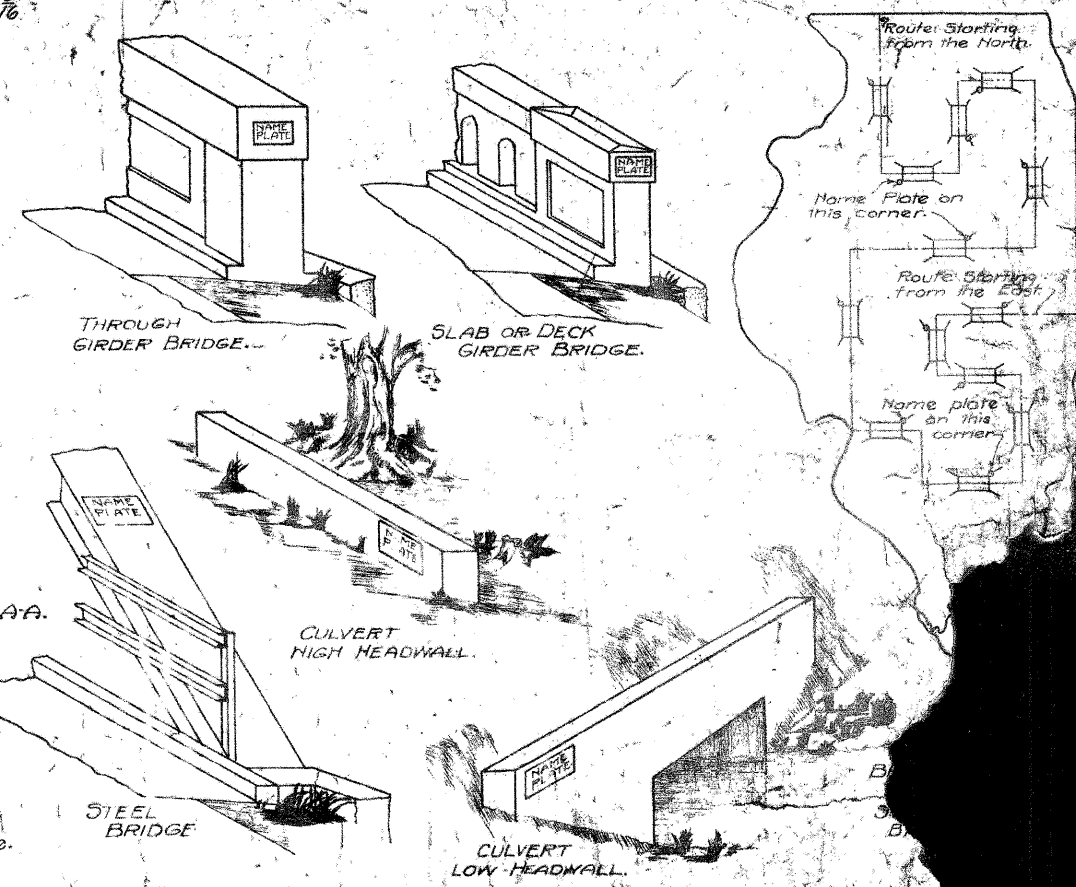
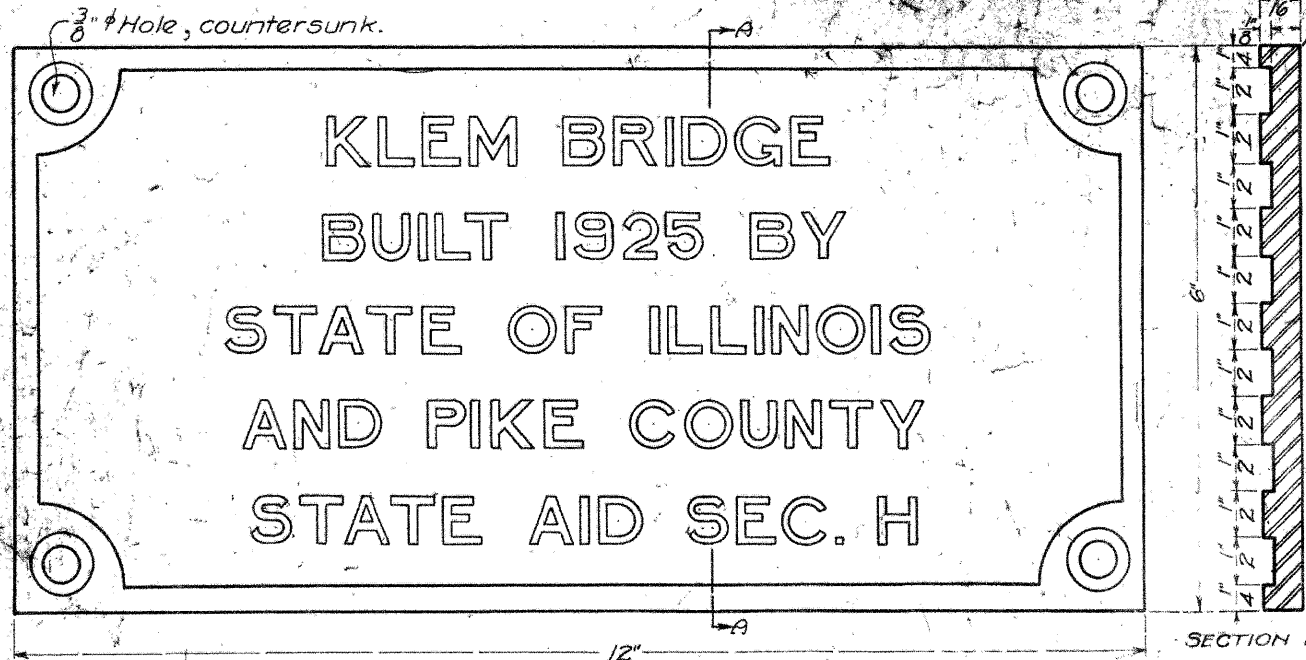
Bars	No.	Size	Length
V	140	5/8"	3'-9"
V	44	"	13'-0"
V ₂	8	"	15'-0"
V ₄	24	"	16'-0"
V ₆	8	"	14'-9"
V ₈	16	"	13'-3"
V ₁₀	12	"	11'-9"
H	34	1/2"	25'-0"
H ₁	52	"	22'-0"
H ₂	8	"	17'-3"
H ₃	8	"	15'-0"
Y ₁	12	3/8"	10'-3"
Z	200	1/4"	10'-0"
F	114	1/8"	10'-3"
H	204	1/8"	10'-3"
Z	100	5/8"	10'-3"
Z	180	3/4"	10'-3"
	16	3/8"	8'-0"
	8	1/2"	8'-0"
W	12	1/2"	26'-0"
W	24	"	23'-3"

Reinforcing Steel Lbs. 20870
Concrete Cu. Yds. 240.2

BUCK HART CREEK BRIDGE
S.A. RT. 4 SEC. 14-B-15D
SANGAMON COUNTY
STA. 212+90

1157

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



NUMBER OF PLATES: One for each bridge having a span of 100 feet or more, when built in connection with a road contract and on all structures constructed as separate bridge or culvert contracts.

MATERIAL: Best quality brass or bronze.

BORDER AND LETTERING: Raised $\frac{1}{8}$ inch. Square cut and not tapered. Top surface polished.

BOLTS: Four brass or bronze bolts with countersunk heads or four lugs cast integral with the plate. Minimum length, three inches for concrete bridges.

PLACING: On concrete bridges place inside of forms flush with concrete. On steel bridges place on end post five feet above roadway.

DESIGNED: April 1, 1925
H. J. Burch
PASSED: M. J. ...
APPROVED: Frank ...
CHIEF HIGHWAY ENGINEER

Revised, Oct 6 1930 H.L.E.

USER NAME = dhebar1.rng	DESIGNED - TJZ	REVISED - 11-8-11 S.D.S.		7018 KINGSMILL CT., SPRINGFIELD, IL (217) 483-9457 DESIGN FIRM #184001036	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EXISTING PLANS SHEET NO. OF SHEETS	F.A.S. RTE. 556	SECTION 08-00119-04-BR	COUNTY SANGAMON	TOTAL SHEETS 31	SHEET NO. 31
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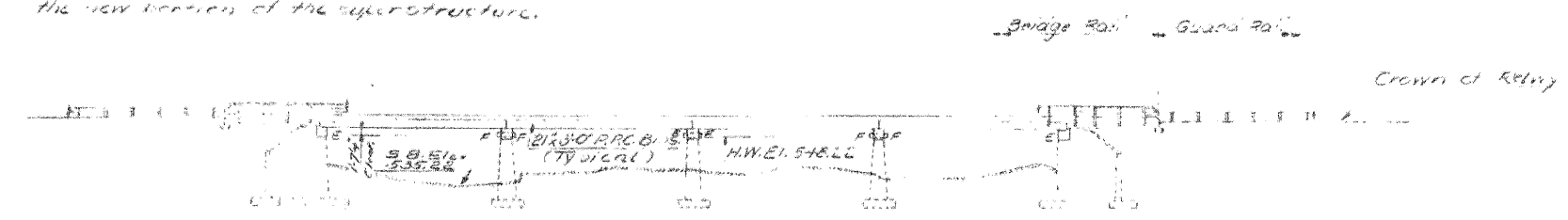
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

DATE OF SHEET	DATE OF SHEET	DATE OF SHEET	DATE OF SHEET	DATE OF SHEET
11/8/2011	11/8/2011	11/8/2011	11/8/2011	11/8/2011

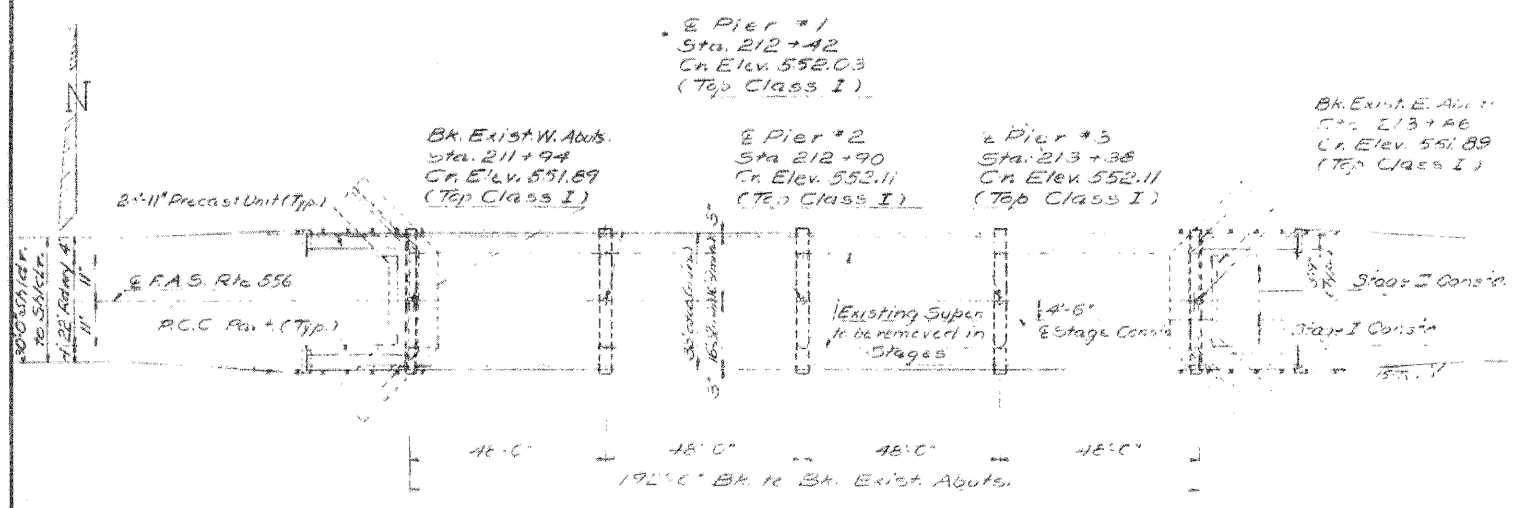
E.M.: "E"-chiseled Square on N.W. Wingwall of Bridge over Buckhart Creek on S.A. Rte. 4, Elev. 551.55
Existing structure @ Sta. 212+90 built in 1935 as S.A. Rte. 4 Sec. 14B-150 Existing R.C.C.G. superstructure to be replaced & widened as shown utilizing stage construction so as to maintain traffic over the bridge at all times Existing abutments & Piers to be widened to accommodate the new location of the superstructure.

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
It shall be the responsibility of the contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.
Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.
Expansion bolts shall consist of self-drilling expansion anchors and 3/8" hooked bolts. Hooked bolts shall extend a minimum of 12" into new concrete unless otherwise shown.
Shoulder transition to wingwall shall be chaped with broken concrete. 3:1 incidental.



ELEVATION



PLAN

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.	Total
Bituminous Concrete Surface Course, Class I	Tons	85		85
Portland Cement Concrete Pavement (10")	Sq. Yds.	51		51
Pavement Fabric	Sq. Yds.	51		51
Concrete Removal	Cu. Yds.		21	21
Expansion Bolts (3/8")	Each	60	132	192
Class X Concrete	Cu. Yds.	20.4	53.1	73.5
Precast Concrete Bridge Slab	Sq. Ft.	359		359
Precast Prestressed Concrete Deck Beams (27)	Sq. Ft.	630.4		630.4
Steel Railing, Type I	Lin. Ft.	192		192
Reinforcement Bars	Lbs.	1070	7490	8560
Pavement Removal R.C.C. Replacement, Type I (10")	Sq. Yds.	9		9
Removal of Existing Superstructures	Each	1		1
Waterproofing Membrane System	Sq. Yds.	658		658
Turn Plates	Each	1		1
Preformed Joint Sealer 2 1/2	Lin. Ft.	99		99
Temporary Guard Rail	Lin. Ft.	192		192
Protective Coat Structures, Steel	Sq. Yds.	30		30
	Lbs.	6990		6990

* 5/2 to 5/2 Existing Abutments
** See Special Provisions.

Structure # 0080

STATION 212+90.00
BUCKHART CREEK
REBUILT '19
F.A.S. RTE. 556 SEC. 14BR
LOADING H320

NAME PLATE
399 3" x 2 1/2"

DESIGNED: [Signature]
CHECKED: [Signature]
DRAWN: [Signature]
CHECKED: [Signature]

EXAMINED: [Signature]
PASSED: [Signature]
DESIGNED: [Signature]

August 17 1972

DESIGN STRESS

PRECAST PRESTR. UNITS	PRECAST UNITS
f'c = 5000 psi	f'c = 4500 psi
f'ci = 4000 psi	f'ci = 3500 psi
f'ps = 270000 psi (70% strand)	f'ps = 200000 psi (60% strand)
f'ps = 185700 psi (70% strand)	f'ps = 140000 psi (60% strand)

FIELD UNIT

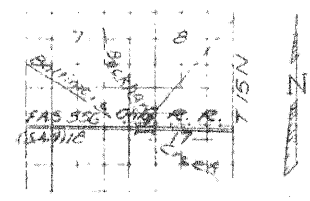
f'c = 4000 psi
f'ci = 2000 psi (50% strand)
f'ps = 100000 psi (50% strand)

WATERWAY INFORMATION

Drainage Area: 151.70 Sq. Mi.
Channel: [unclear] [unclear] [unclear]
Required Channel: [unclear] [unclear] [unclear]
Prop. Channel: [unclear] [unclear] [unclear]
Prop. Channel: [unclear] [unclear] [unclear]

SANGAMON
County Sec 73-00119-00WR

2.5W 35'PM Proposed reconstruction



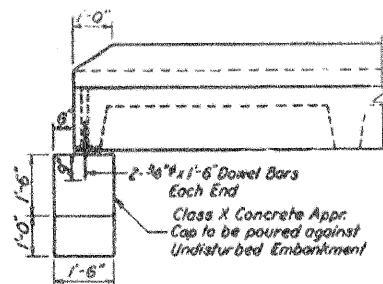
LOCATION SKETCH

GENERAL PLAN & ELEVATION
F.A.S. RTE. 556 (SARTE 4) OVER
BUCKHART CREEK
F.A.S. RTE. 556 SECTION 14BR
SANGAMON COUNTY
STA. 212+90.00

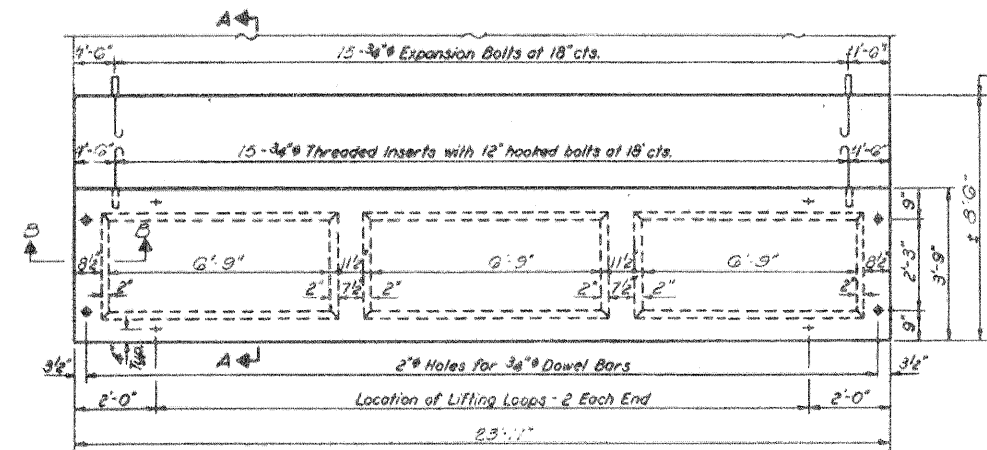
Revised 9-17-78 W.H. (Updating)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

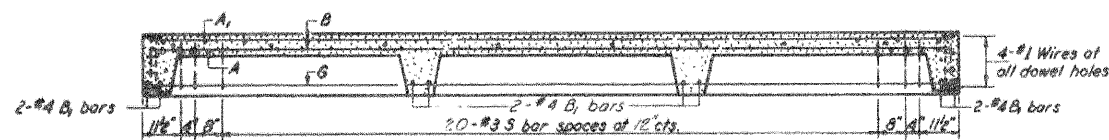
PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
556	08-00119-04-BR	SANGAMON	33	7



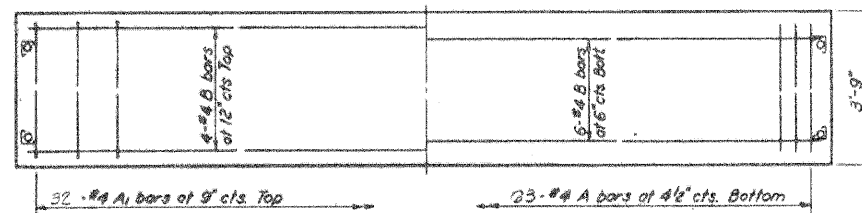
SECTION B-B



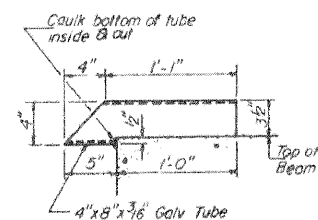
PARTIAL PLAN OF APPROACH
For location of rail post inserts
See Sheet #5



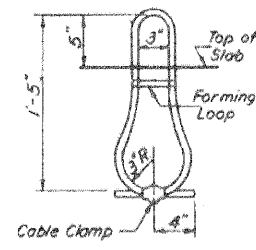
LONGITUDINAL SECTION



SLAB REINFORCEMENT

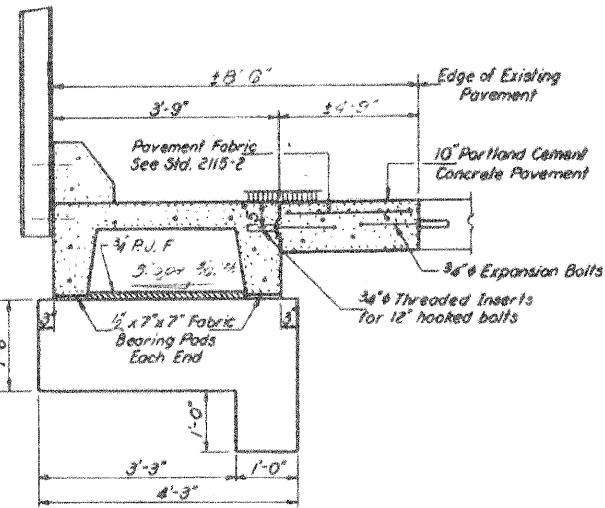


DRAIN DETAIL

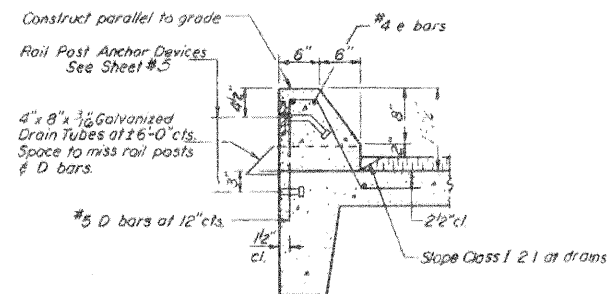


LIFTING LOOP DETAIL

W. Appn. Elev 549.50
E. Appn. Elev 549.65

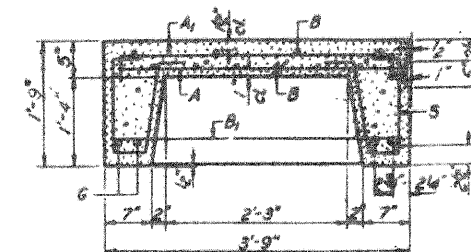


SECTION A-A



SECTION THRU CURB

Curbs shall be poured in the field.
Class X Concrete & e bars in curbs
are billed on Sheet #5

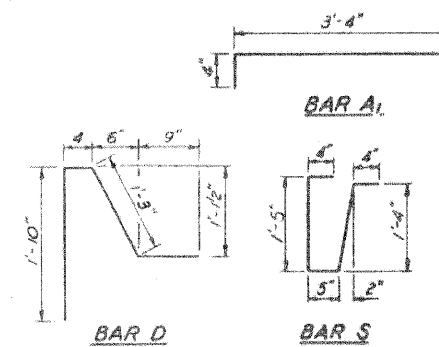


SECTION THRU PRECAST UNIT

BAR LIST - ONE UNIT

Reinforcement to be cast into slab

Bar	No	Size	Length	Shape
A	23	#4	3'-9"	—
A1	32	#4	4'-0"	—
B	10	#4	2'-6"	—
B1	8	#4	3'-6"	—
D	23	#5	4'-2"	—
E	4	#10	2'-0"	—
S	30	#8	3'-10"	—



NOTES

Unless otherwise approved by the Engineer, lifting loops shall be 1/2" 6x19 class wire rope with fiber core and shall have a minimum ultimate strength of 18,700 lbs. Loops shall be burned off after slab has been erected. Holes shall be drilled and anchor dowels grouted in place. Cost of reinforcement and accessories cast into the slab unit, bearing pads, furnishing, drilling for, placing and grouting anchor dowels and #5 hooked bolts is included in Unit bid price for "Precast Concrete Bridge Slab." The Precast Concrete Bridge Slab shall be erected and aligned with the exterior face of the exterior Deck Beam after Deck Beams are in final position.

BILL OF MATERIAL

Item	Unit	Quantity
Precast Concrete Bridge Slab	Sq Ft	35.0
Portland Cement Concrete Pavement (CC)	Sq Yds	5.1
Pavement Fabric	Sq Yds	5.1
Expansion Bolts 3/8" Each	Each	60
Class X Concrete	Cu Yds	1.6

STRESSES

f'c = 4,500 psi
f'c = 4,800 psi
f's = 20,000 psi
n = 8

LOADING HS-20

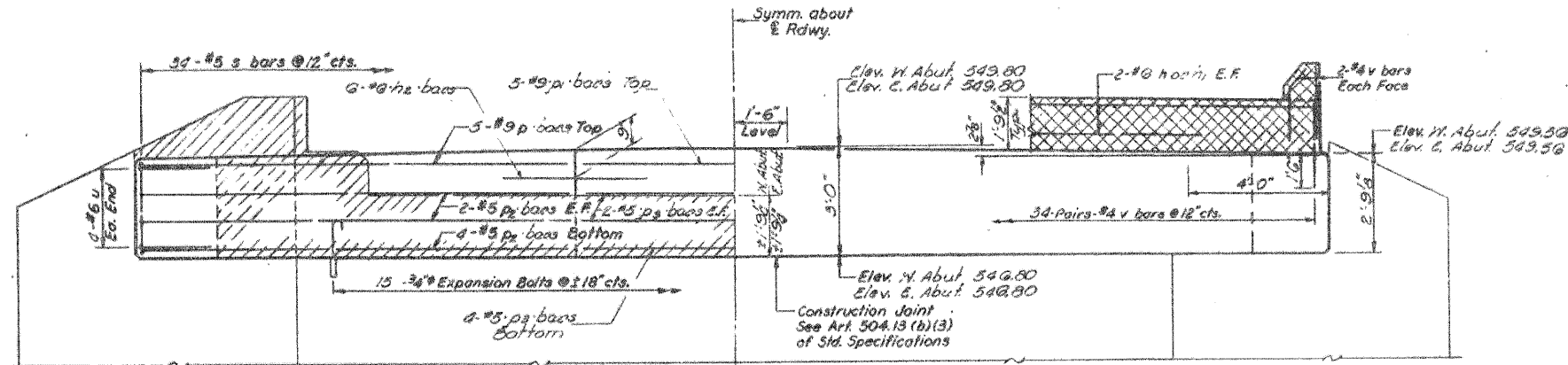
APPROACH DETAILS
F.A.S. RT. 556 SEC. 14 BR
SANGAMON COUNTY
STA. 212+90.00

DESIGNED	EXAMINED
CHECKED	APPROVED
DRAWN	
CHECKED	

W-AP-4, 20' Precast Appr. Unit (R.L.) (11-15-71)

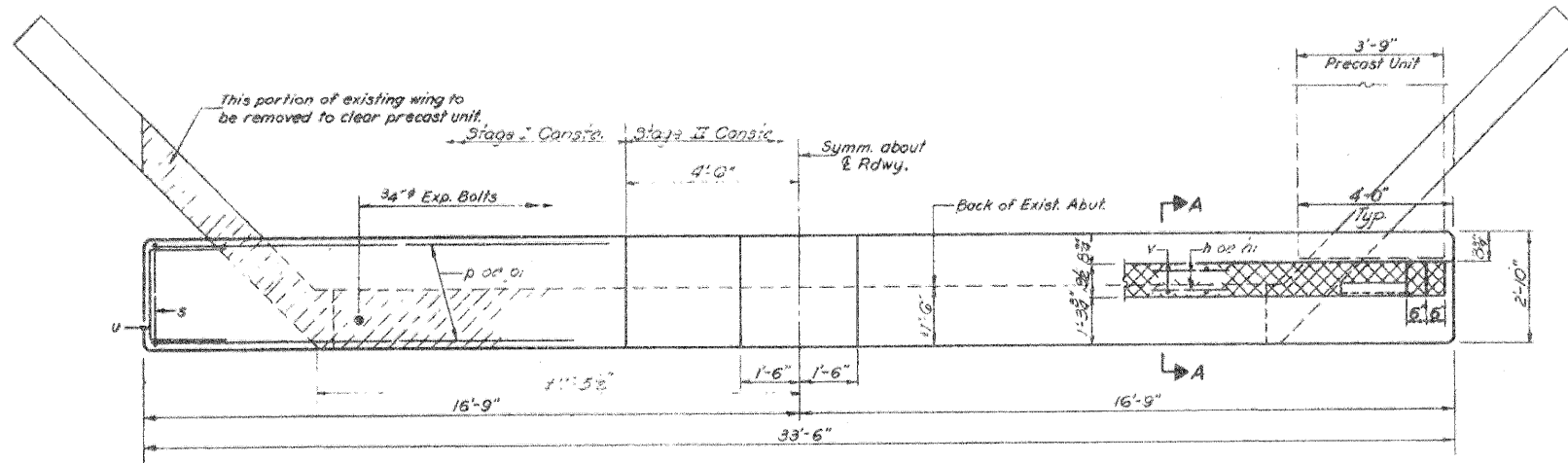
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET TITLE
1-11-556	14BR	SANGAMON	12	11	ABUTMENTS



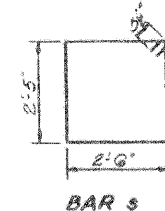
ELEVATION

See sheet #7 for temporary support of Abut. Cantilever during Stage I Const.

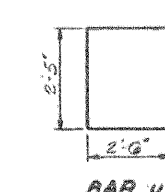


PLAN

NOTES:
Hatched area indicates Concrete Removal. Reinforcement extending into removed area shall be cleaned and incorporated into the new construction.
Cross hatched area shall be poured after beams are in place.
Expansion bolts shall be anchored in sound concrete. All edges shall have standard 3/4\"/>



BAR S



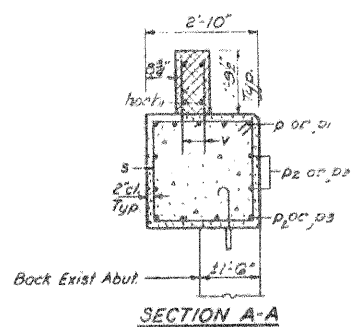
BAR U

TWO ABUTMENTS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	6	#6	11'-5"	---
h1	8	#6	20'-3"	---
h2	12	#6	4'-0"	---
D	10	#9	12'-0"	---
D1	10	#9	21'-0"	---
D2	10	#5	2'-0"	---
s	60	#5	0'-9"	PT
u	10	#6	7'-3"	E
v	152	#4	3'-0"	---
Class II Concrete				Cu Wt. 23.9
Reinforcement Bars				Lbs. 3580
Expansion Bolts 3/4"				Each 50
Concrete Removal				Cu Wt. 9

DESIGNED	TJZ
CHECKED	SDS
DRAWN	J. SCHNEIDER
CHECKED	TJZ/SDS

EXAMINED
PASSED
DESIGNED BY
CHECKED BY



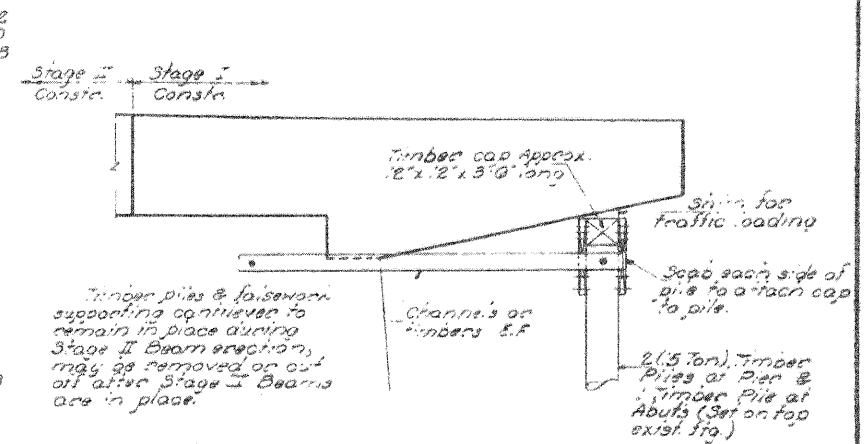
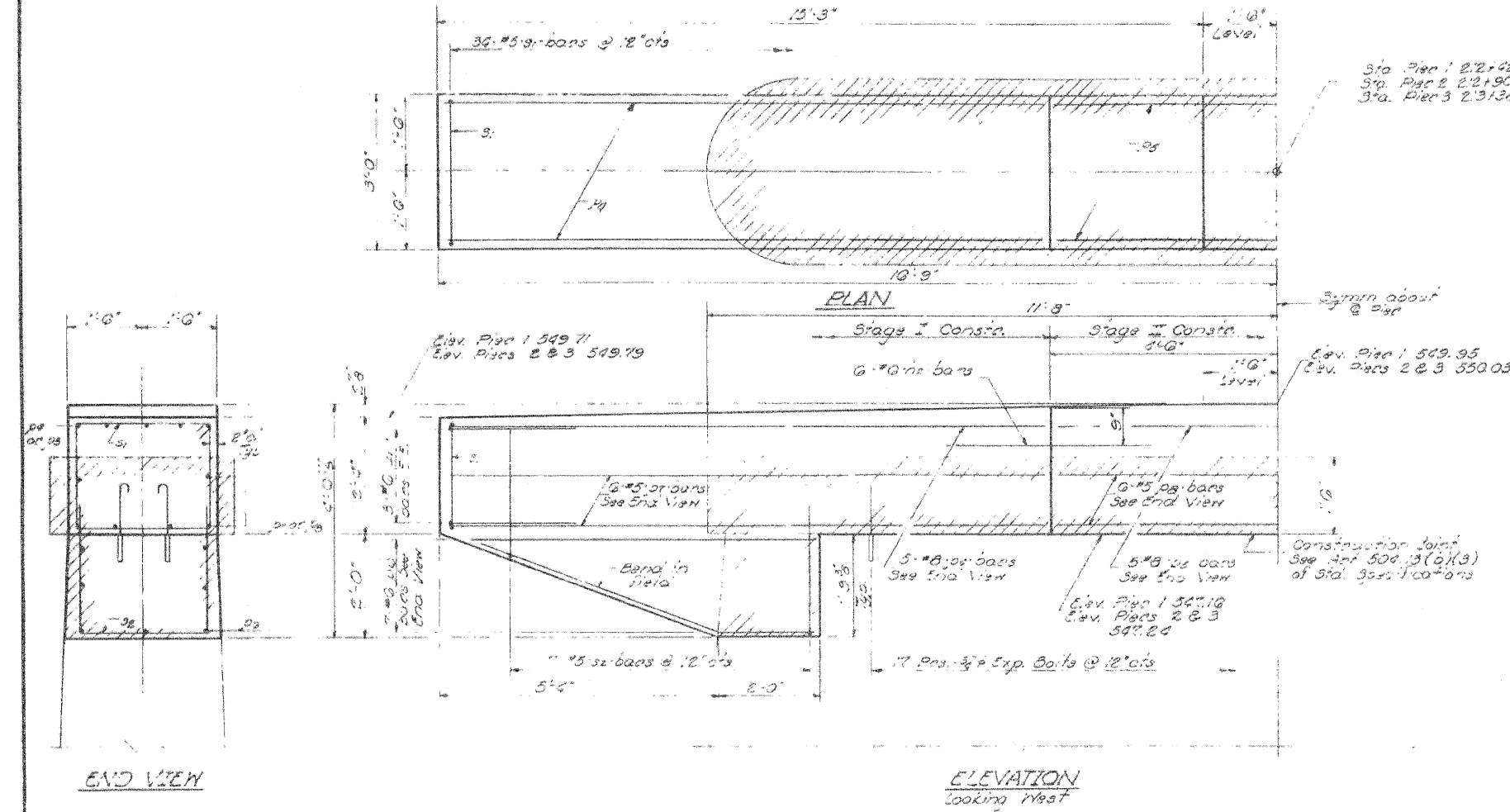
SECTION A-A

Bars shall conform to the requirements of A.S.T.M. A-615 or A-617 except the minimum yield strength shall not be less than 33,000 psi and not more than 43,000 psi.

W-A-2 (11-15-77) Expansion

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
145 550	14BR	SANGAMON	12	12
DESIGNED BY	CHECKED BY	DRAWN BY	DATE	



**TEMPORARY SUPPORT OF CAP
DURING STAGE II CONSTRUCTION**
(Cast incidental to contract)

**THREE PIERS
BILL OF MATERIAL**

Bar	No	Size	Length	Shape
he	13	#9	4'-0"	—
pe	15	#8	12'-0"	—
ps	15	#8	21'-0"	—
pp	42	#6	7'-0"	—
pr	18	#5	12'-0"	—
ps	18	#5	2'-0"	—
sr	102	#5	10'-5"	□
se	22	#5	7'-7"	E
ur	18	#9	0'-11"	E
Concrete Removal			Cu. Yds	18
Expansion Bars 3/8"			Each	102
Class X Concrete			Cu. Yds	35.2
Reinforcement Bars			Lbs	8700

For detail of he bar see sht. #9.

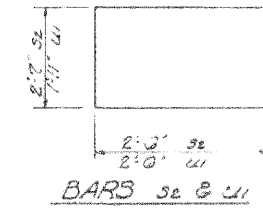
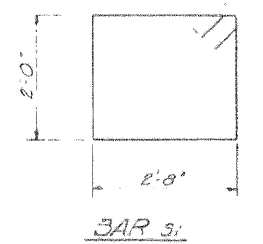
DESIGNED	T.J.Z.
CHECKED	S.D.S.
DRAWN	J. SCHNELLER
CHECKED	

Aug 17 1972

EXAMINED
PASSED
APPROVED

Richard H. Hollerman

NOTES:
Hatched area indicates Concrete Removal.
Reinforcement extending into removed area shall be cut and incorporated into the new construction.
Expansion bolts shall be anchored in sound concrete.
All edges shall have standard chamfer except as noted.



PIERS
F.A.S. RT. 556 SEC. 14BR
SANGAMON COUNTY
STA. 212190.00