

64H77

PROJECT ENGINEER - REBECCA MARUFFO

SQUAD LEADER - PAUL DREZEN (815) - 284 - 5915

INDEX

06-15-12 LETTING ITEM 207

STATE OF ILLINOIS

VARIOUS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	D2 SAFETY 2012-2	**	151	1
FED. ROAD DIST. NO.		ILLINOIS CONTRACT NO. 64H77		
* 74, 80, 88 & 280				
** HENRY / ROCK ISLAND / WHITESIDE				

D-92-052-12

#20

- 1 COVER SHEET
- 2 - 3 SUMMARY OF QUANTITIES
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- 117 - 118 TRAFFIC BARRIER TERMINAL, TYPE 6B (SPECIAL) (90.1)
- 119 - 151 CROSS SECTIONS

100%
06-24-2013

DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAI ROUTE 74,80, 88 & 280 (VARIOUS LOCATIONS)
SECTION D2 SAFETY 2012-2
PROJECT: HSIP-000S(903)

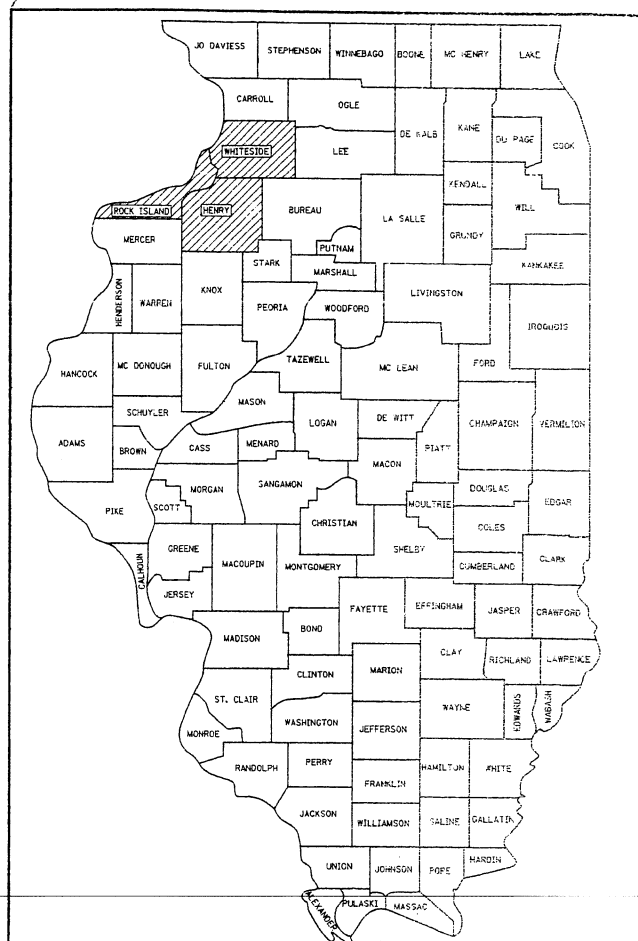
HENRY, ROCK ISLAND AND WHITESIDE COUNTIES

C-92-134-12

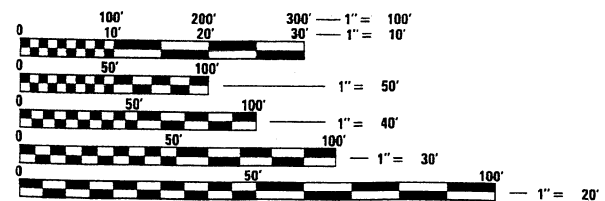
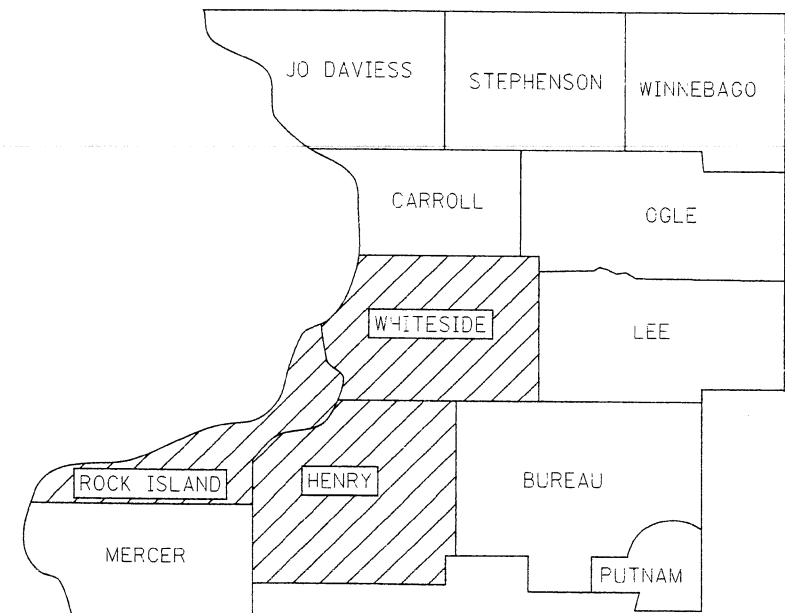


STATE STANDARDS

- 280001-06 TEMPORARY EROSIONS CONTROL SYSTEMS
- 542526-03 INLET BOX TYPE 24 (600) F
- 601001-04 SUBSURFACE DRAINS
- 601101-01 CONCRETE HEADWALL FOR PIPE DRAIN
- 602401-03 MANHOLE TYPE A
- 604036-02 GRATE TYPE 8
- 630001-10 STEEL PLATE BEAM GUARDRAIL
- 630301-05 SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- 631011-08 TRAFFIC BARRIER TERMINAL, TYPE 2
- 635001-01 DELINEATORS
- 635006-03 REFLECTOR AND TERMINAL MARKER PLACEMENT
- 635011-02 REFLECTOR MARKER AND MOUNTING DETAILS
- 643001 SAND MODULE IMPACT ATTENUATORS
- 701101-02 OFF-RD OPERATIONS, MULTILANE, 15' (4.5 M) TO 24" (600 mm) FROM PAVEMENT EDGE
- 701106-02 OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 M) AWAY
- 701400-05 APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
- 701406-06 LANE CLOSURE, FREEWAY/EXPRESSWAY, DAY OPERATIONS ONLY
- 701411-08 LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXIT RAMP, FOR SPEEDS ≥ 45 MPH
- 701426-04 LANE CLOSURE, MULTILANE, INTERMITTANT OR MOVING OPER., SPEEDS ≥ 45 mph
- 701456-02 PARTIAL EXIT RAMP CLOSURE FREEWAY/EXPRESSWAY
- 701901-02 TRAFFIC CONTROL DEVICES
- 000001-04 STANDARD SYMBOLS, ABBREVIATIONS, & PATTERNS
- 001001 AREAS OF REINFORCEMENT BARS
- 001006 DECIMAL OF AN INCH & OF A FOOT



LOCATION OF SECTION INDICATED THIS: - [shaded area] -



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

CONTRACT NO. 64H77 098-0065

GROSS LENGTH = 373,375 FT. = 70.72 MILE
NET LENGTH = 12,418 FT. = 2.35 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED May 1 20 12
Eric S. Thubitzer
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

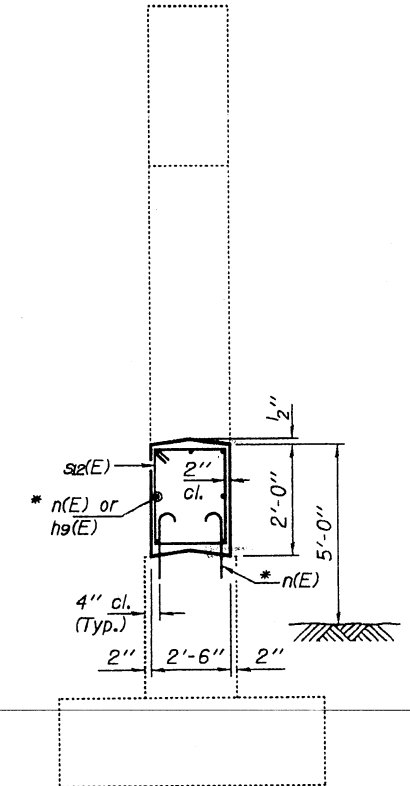
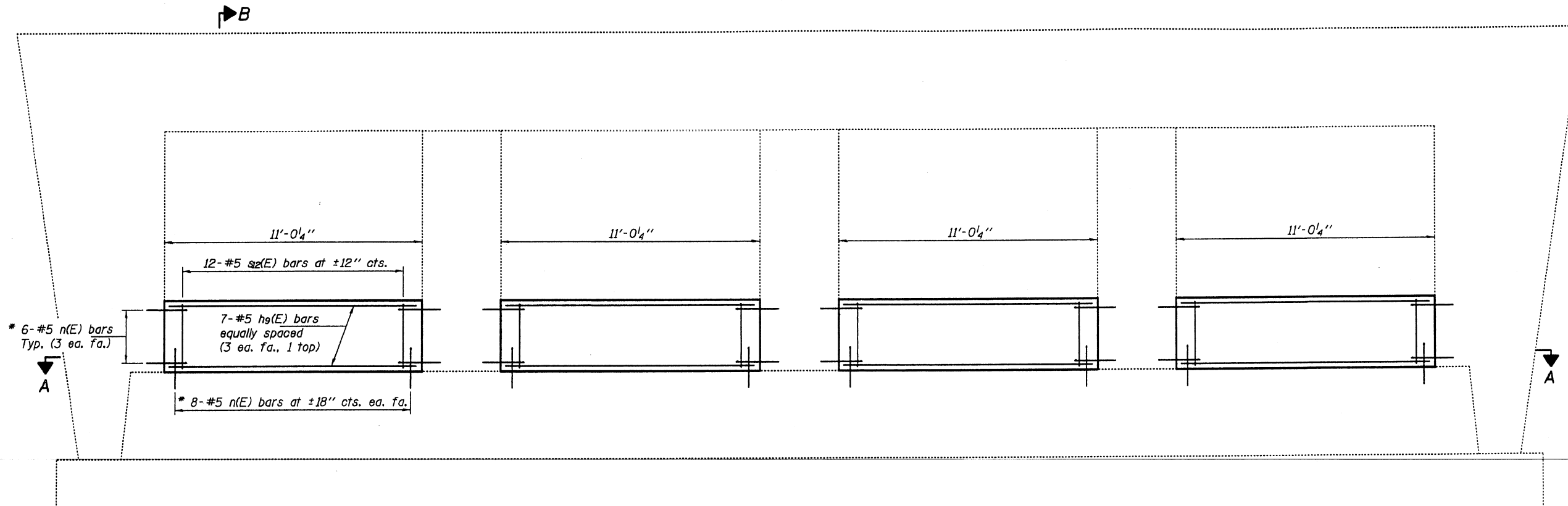
May 11 20 12
John D. Baranelli P.E. Ia
Acting ENGINEER OF DESIGN AND ENVIRONMENT

May 11 20 12
William R. Frey Ia
Acting DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS

NOTES

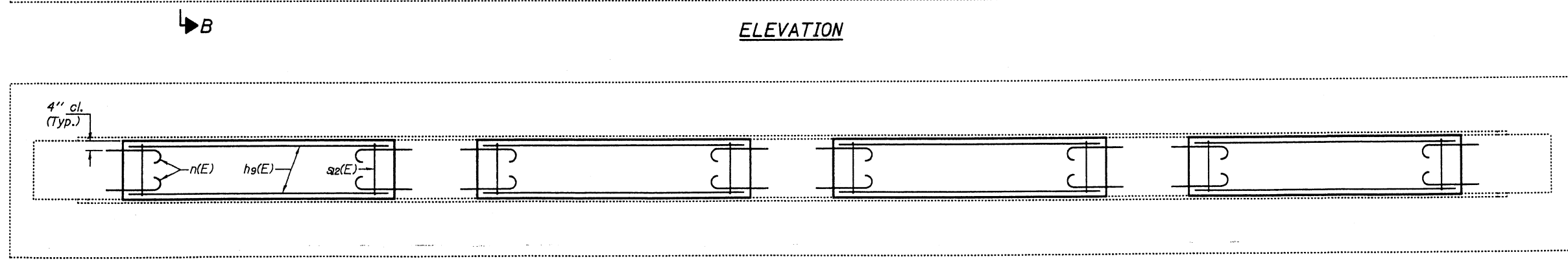
The cost of epoxy grouting threaded rods shall be included with Reinforcement Bars, Epoxy Coated.
 Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work. Reinforcement bars designated (E) shall be epoxy coated.



ELEVATION

SECTION B-B

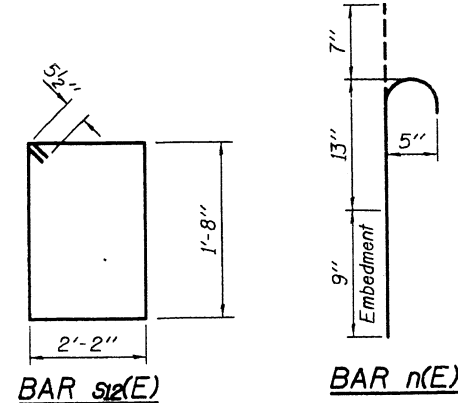
* Epoxy grout n(E) bars in 9" min. holes according to Article 584 of the Standard Specifications.



SECTION A-A

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₉ (E)	28	#5	10'-8"	—
n(E)	112	#5	2'-5"	⊔
s ₂ (E)	48	#5	8'-7"	□
Concrete Structures			Cu. Yd.	8.2
Reinforcement Bars, Epoxy Coated			Pound	1020



EXPIRES 11-30-2012

35

99.9%
10-12-2002

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FAI ROUTE 88 (I-88)
SECTION (195-1-1, 195-1-2)RS
PROJECT NO. NHI-88-1(9)18
WHITESIDE COUNTY
PATCHING & RESURFACING

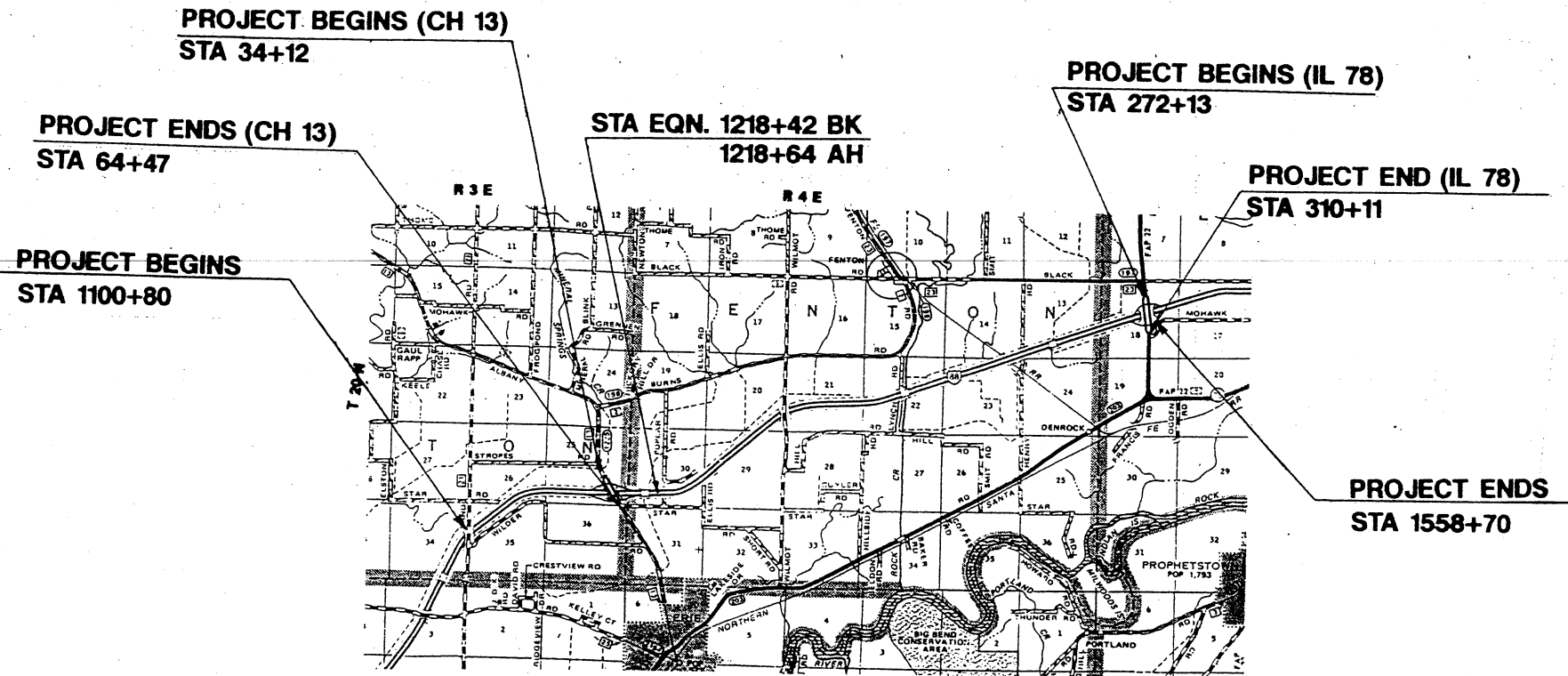
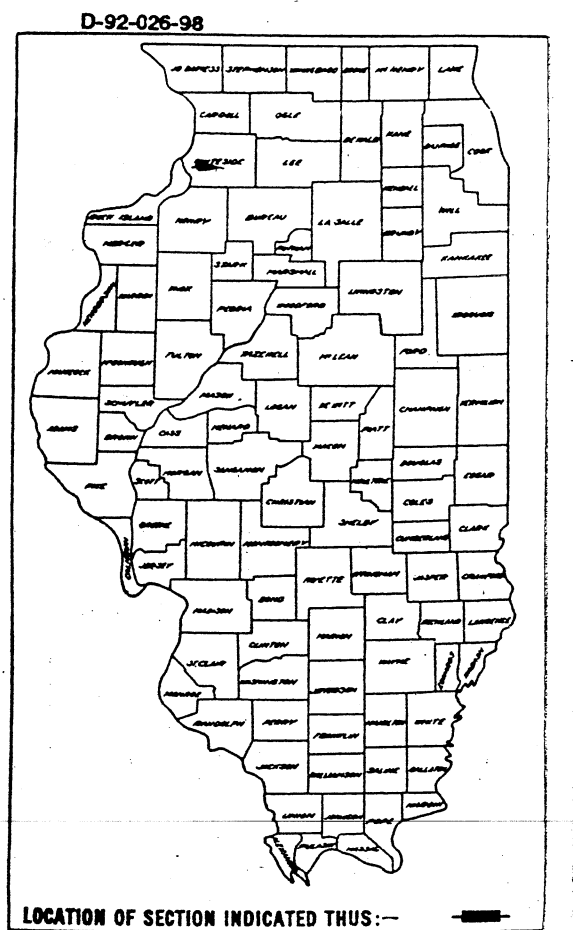
RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 88	*	WHITESIDE	135	1

* (195-1-1, 195-1-2)RS

INDEX OF SHEETS
SEE SHEET NO.2

STANDARDS
SEE SHEET NO.2

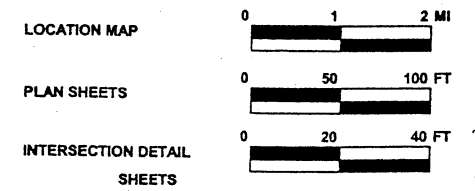
C-92-063-01



098-0065

TOWNSHIP
LYNDON
FENTON
NEWTON

SECTION
18, 19, 20, 21, 22, 23, 29, 30
25, 26, 35



FAI 88	Gross	45,768 ft. = 8.67 miles
	Net	45,768 ft. = 8.67 miles
C.H. 13	Gross	3,035 ft. = 0.57 mile
	Net	3,035 ft. = 0.57 mile
DIRT RD	Gross	3,798 ft. = 0.72 mile
	Net	3,798 ft. = 0.72 mile
TOTAL	Gross	52,601 ft. = 9.96 mile
	Net	52,601 ft. = 9.96 mile

"CALL J.U.L.I.E.
BEFORE YOU DIG"
800-892-0123

098-0065

CONTRACT NO. 64286

NET LENGTH = 45,292 FT = 8.59 MILES
GROSS LENGTH = 45,790 FT = 8.67 MILES

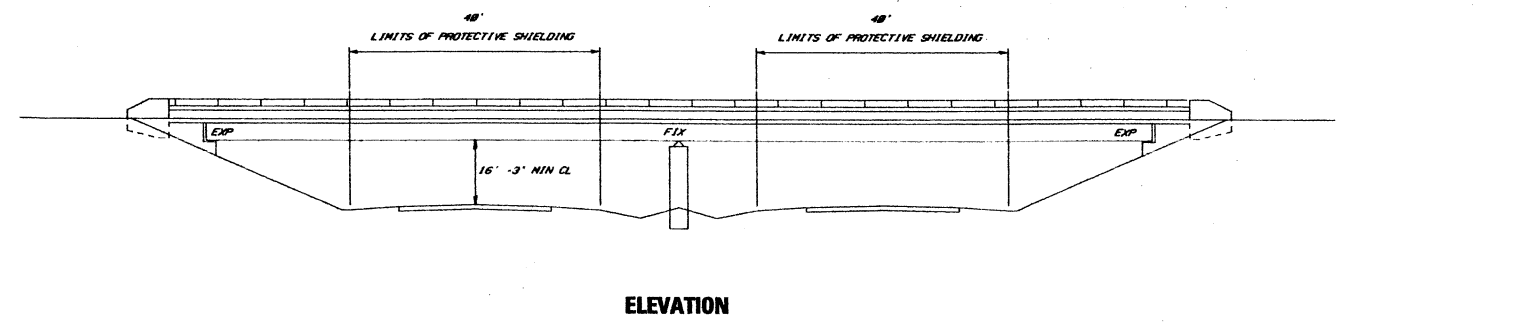
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED 8 February 20 01
EXAMINED _____ 20 _____
PASSED March 23, 20 01
APPROVED March 23, 20 01

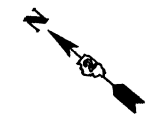
DISTRICT 2
DIXON, IL

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STATE OF ILLINOIS

2-242



ELEVATION



GENERAL NOTES

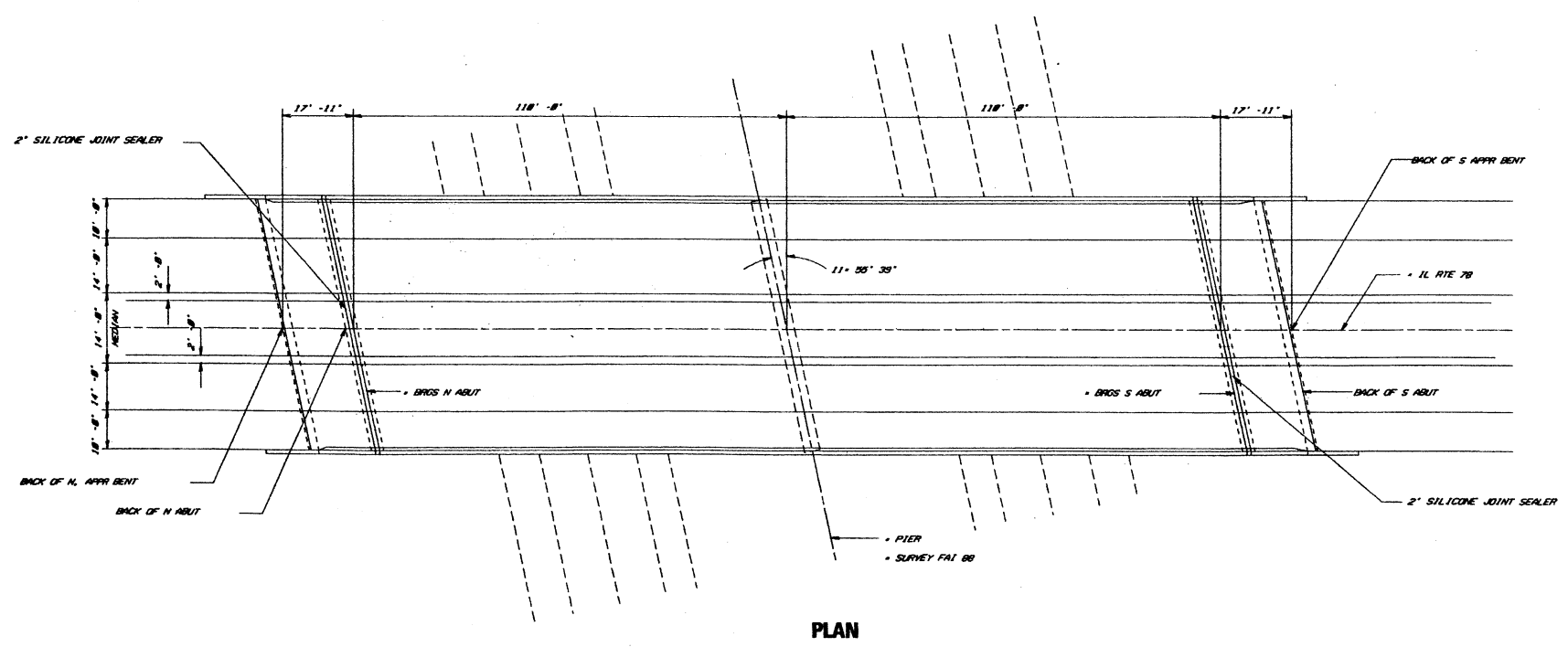
Reinforcement bars shall conform to the requirements of AASHTO M31, M42 or M53 Grade 60.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The existing structural steel coating contains lead. The contractor should take appropriate precautions to deal with the presence of lead on this project.

Prior to pouring the new concrete for the deck, all loose rust, loose mill scale, and all other loose, potentially detrimental foreign material shall be removed from the surfaces of beams or girders in contact with concrete. The cost of this work shall be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams or girders in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04 of the Standard Specifications.

Joint openings shall be adjusted according to Article 503.10(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.

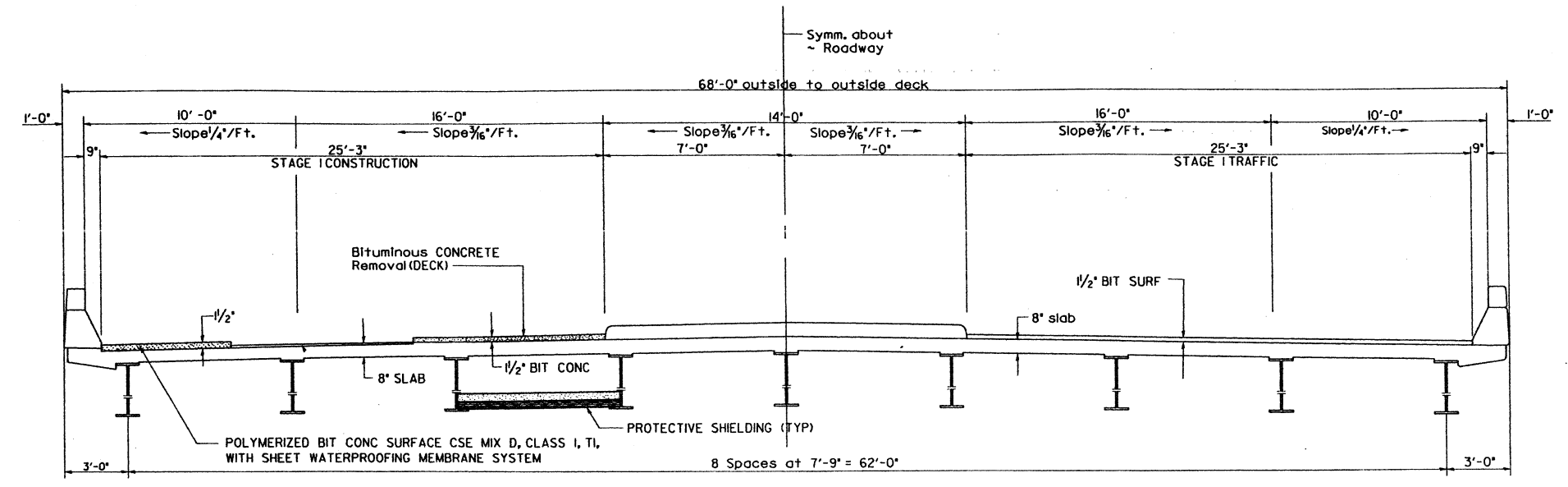


PLAN

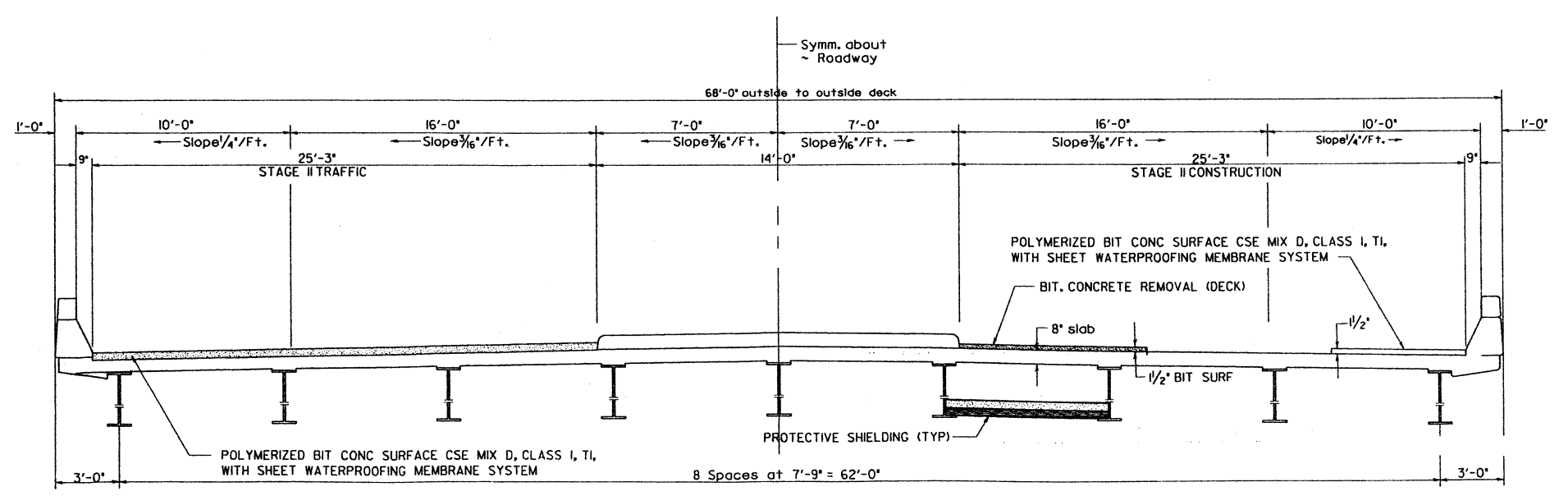
TOTAL BILL OF MATERIALS

ITEM	UNIT	QUANTITY
BITUMINOUS CONCRETE REMOVAL (DECK)	SQ YD	1426
CONCRETE REMOVAL	CU YD	15
CONCRETE SUPERSTRUCTURE	CU YD	16
REINFORCEMENT BARS, EPOXY COATED	POUND	1500
PROTECTIVE SHIELD	SQ YD	564
POLYMER CONCRETE	CU FT	20
SILICONE JOINT SEALER	FOOT	280
DECK SLAB REPAIR (FD-T1)	SQ YD	16
DECK SLAB REPAIR (FD-T2)	SQ YD	16
DECK SLAB REPAIR (PART.)	SQ YD	220
SHEET WATERPROOFING MEMBRANE SYSTEM	SQ YD	1392
POLYMERIZED BIT CONC SURFACE CSE MIX D, CLASS I, TI	TON	156

GENERAL PLAN
 IL RTE 78 OVER FAI RTE 88
 WHITESIDE COUNTY
 FAI 88 SECT. 195-24B
 SN 098-0065



CROSS SECTION
Looking North
Stage I

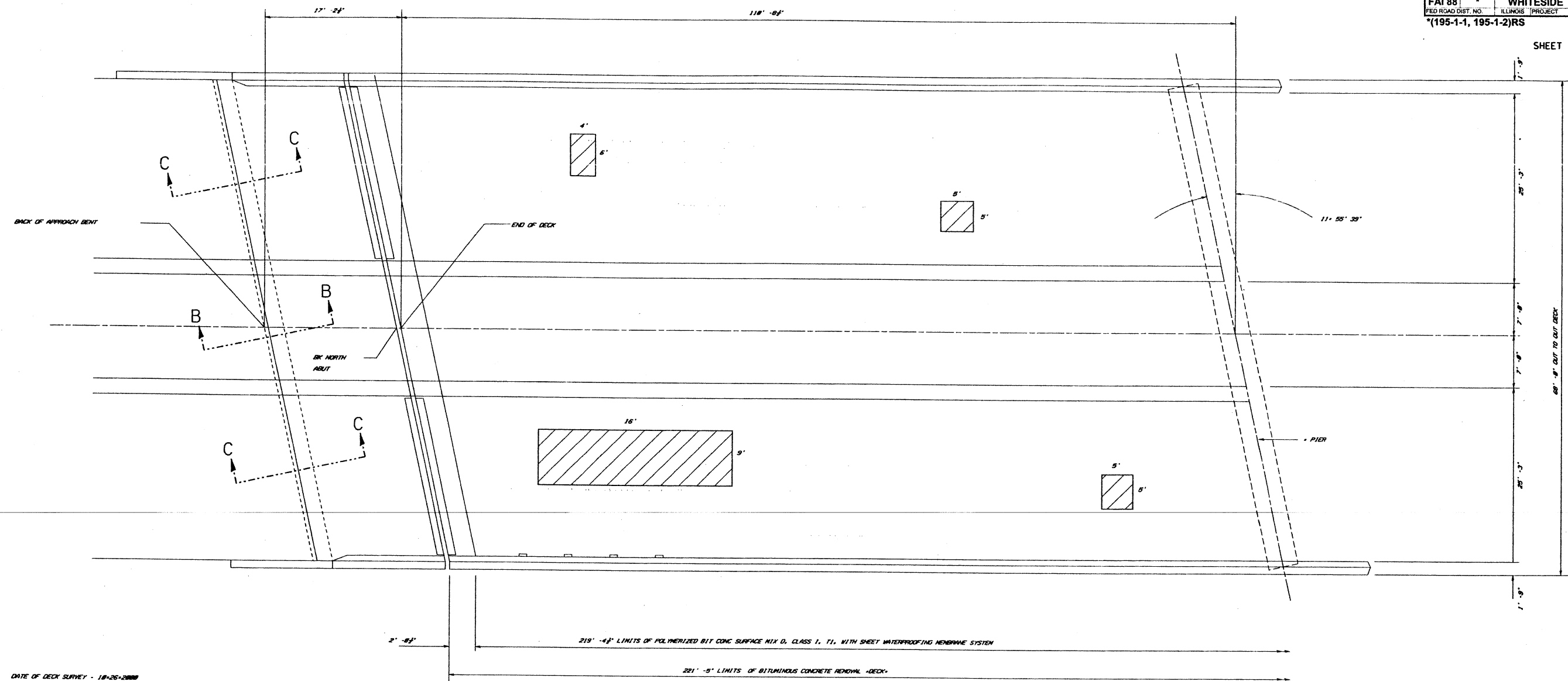


CROSS SECTION
Looking North
Stage II

GENERAL PLAN
IL RTE 78 OVER FAI RTE 88
WHITESIDE COUNTY
FAI 88 SECT. 195-24B
SN 038-0065

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 88	*	WHITESIDE	135	104
FED ROAD DIST. NO.	ILLINOIS PROJECT			
*(195-1-1, 195-1-2)RS				

SHEET 3 OF 6



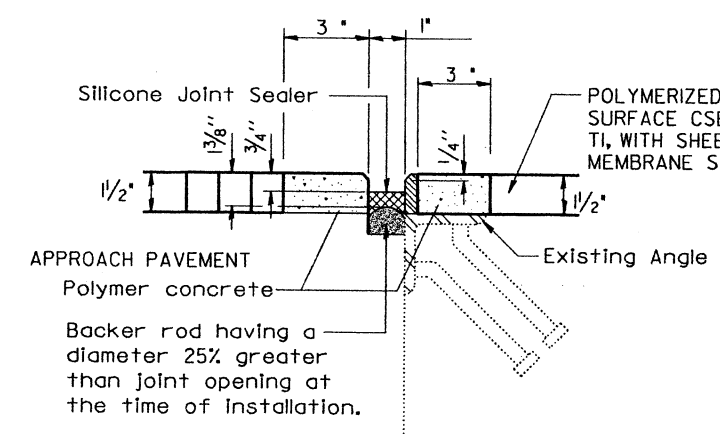
DATE OF DECK SURVEY - 10-26-2000

ESTIMATED AREAS OF FULL DEPTH PATCHING TYPE I & TYPE II

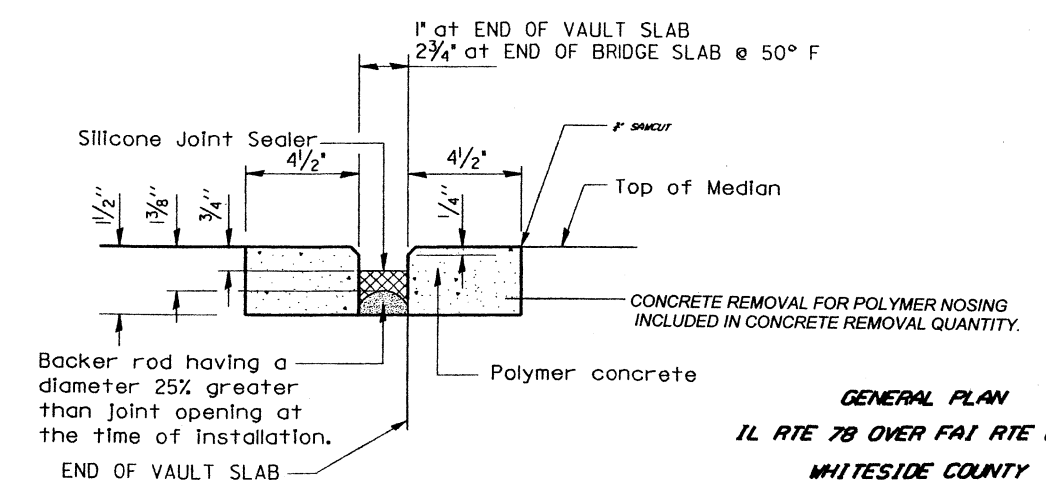
ACTUAL REPAIR LOCATIONS SHALL BE SHOWN IN THE AS-BUILT PLANS.

NOTE: AREAS OF PARTIAL DEPTH & FULL DEPTH PATCHES WILL BE DETERMINED BY THE RE UPON REMOVAL OF THE WEARING SURFACE

HALF DECK PLAN



SECTION C-C

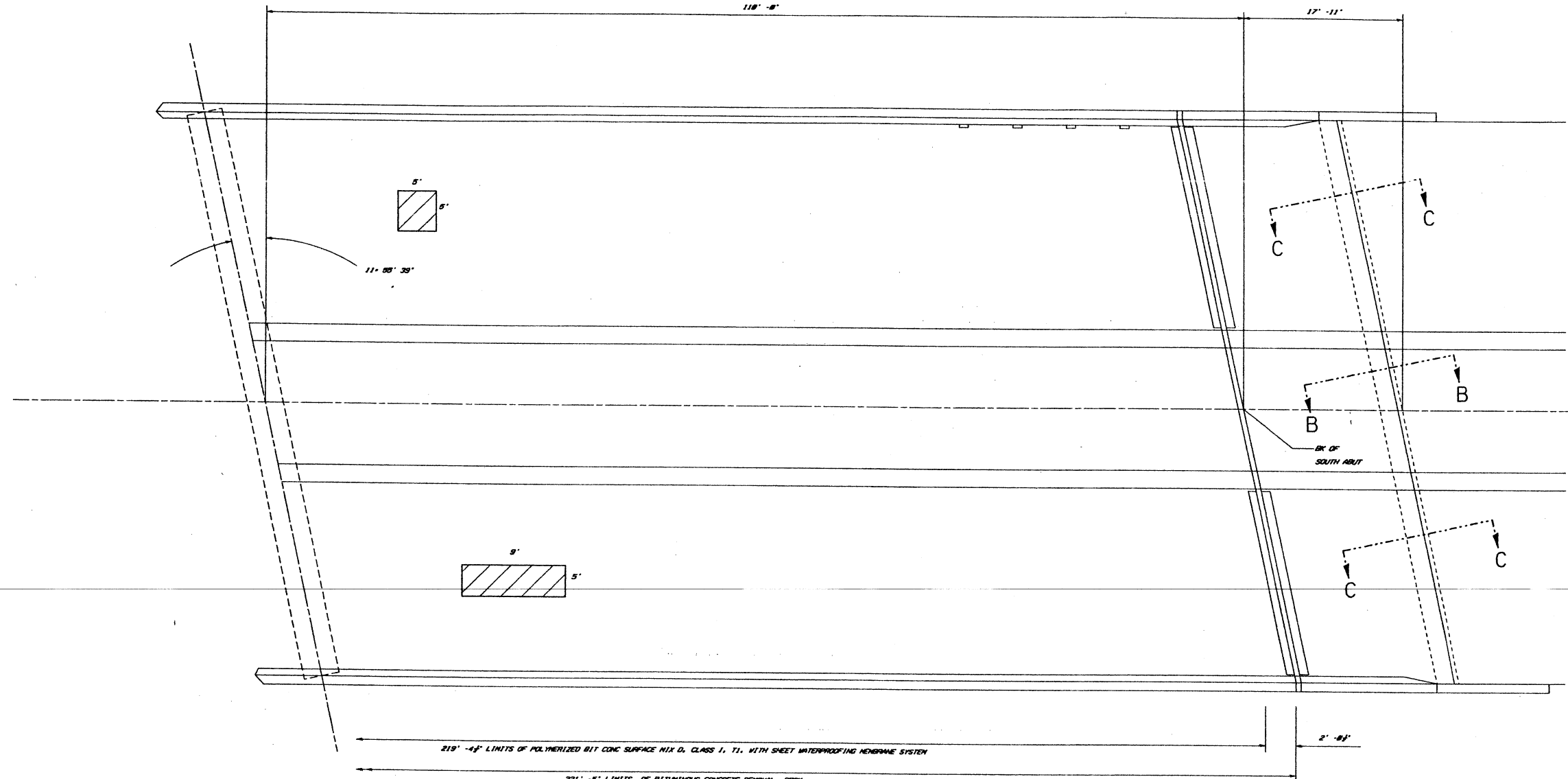


SECTION B-B

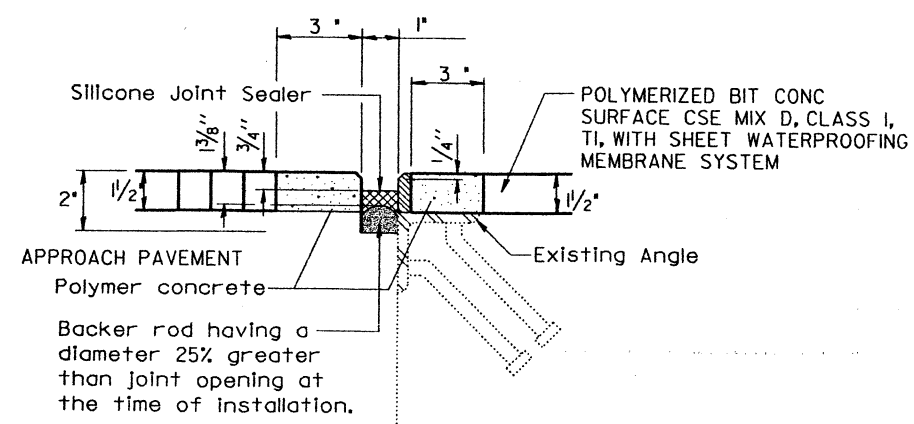
GENERAL PLAN
 IL RTE 78 OVER FAI RTE 88
 WHITESIDE COUNTY
 FAI 88 SECT. 195-24B
 SN 030-0065

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 88	*	WHITESIDE	135	106
FED ROAD DIST NO.		ILLINOIS PROJECT		
*(195-1-1, 195-1-2)RS				

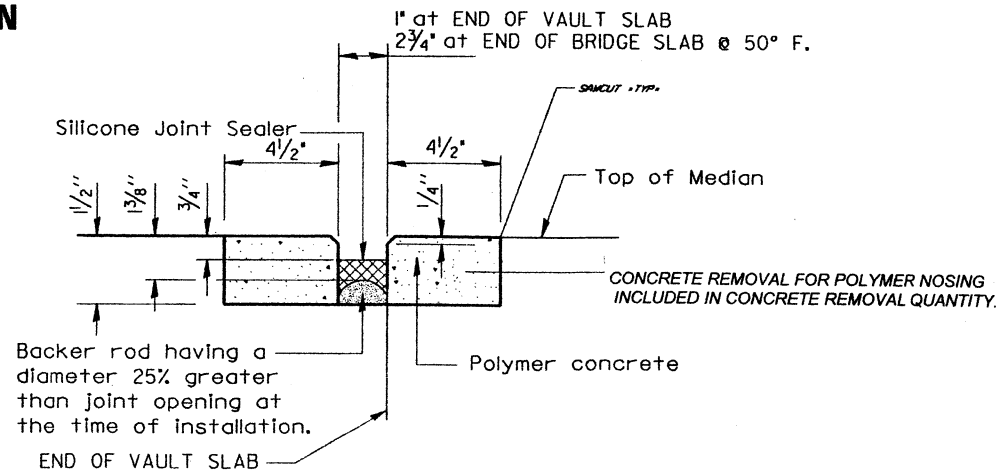
SHEET 4 OF 6



HALF DECK PLAN




SECTION C-C



SECTION B-B

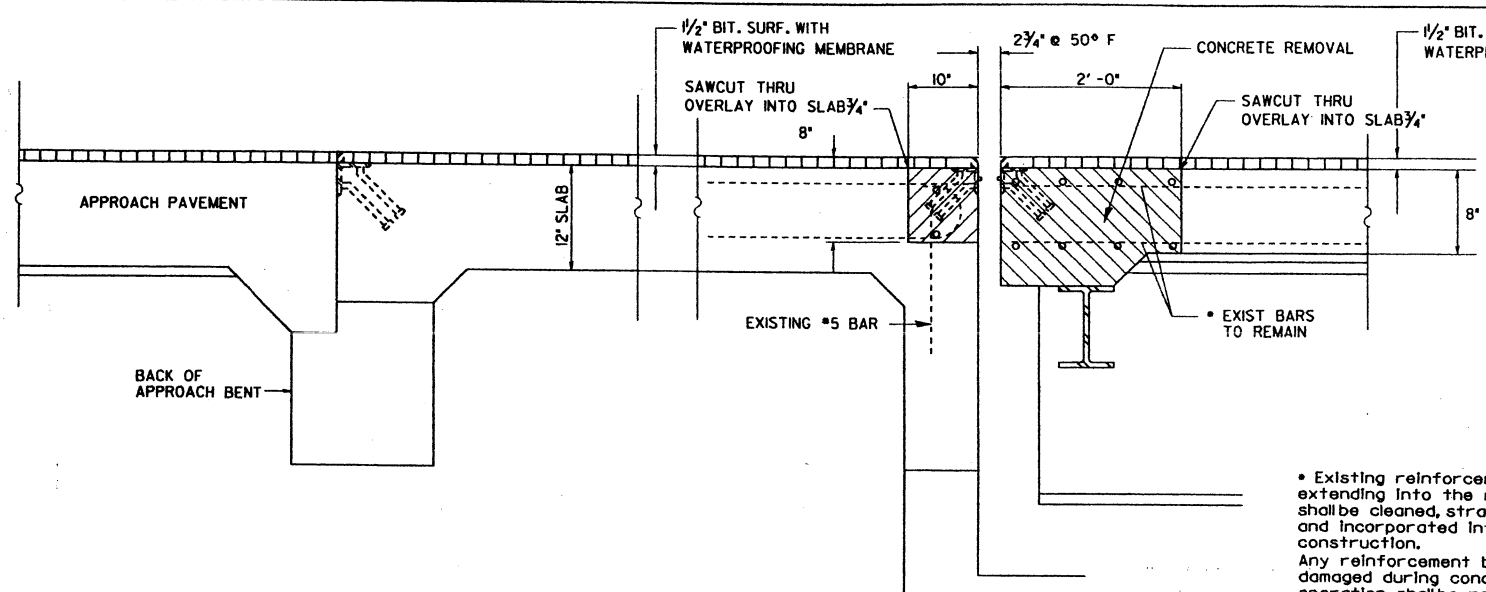
DATE OF DECK SURVEY - 10-26-2000

 ESTIMATED AREAS OF FULL DEPTH PATCHING TYPE I & TYPE II

ACTUAL REPAIR LOCATIONS SHALL BE SHOWN IN THE AS-BUILT PLANS.

NOTE: AREAS OF PARTIAL DEPTH & FULL DEPTH PATCHES WILL BE DETERMINED BY THE RE UPON REMOVAL OF THE WEARING SURFACE

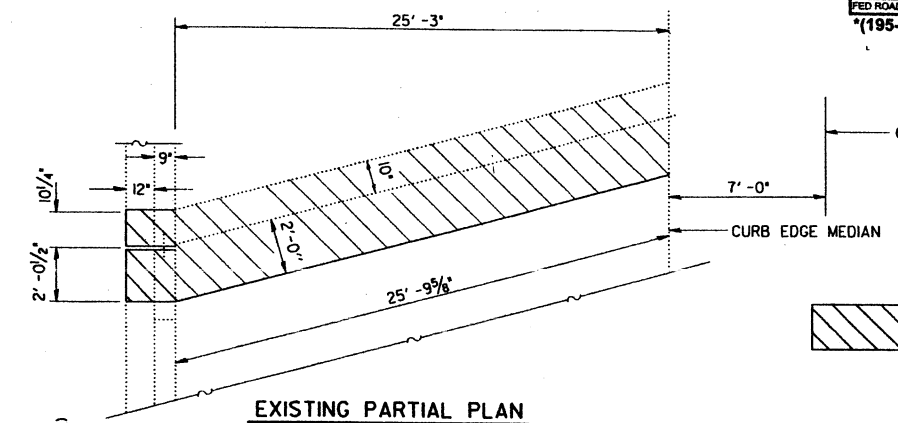
GENERAL PLAN
 IL RTE 78 OVER FAI RTE 88
 WHITESIDE COUNTY
 FAI 88 SECT. 195-24B
 SN 038-0065



EXISTING SECTION

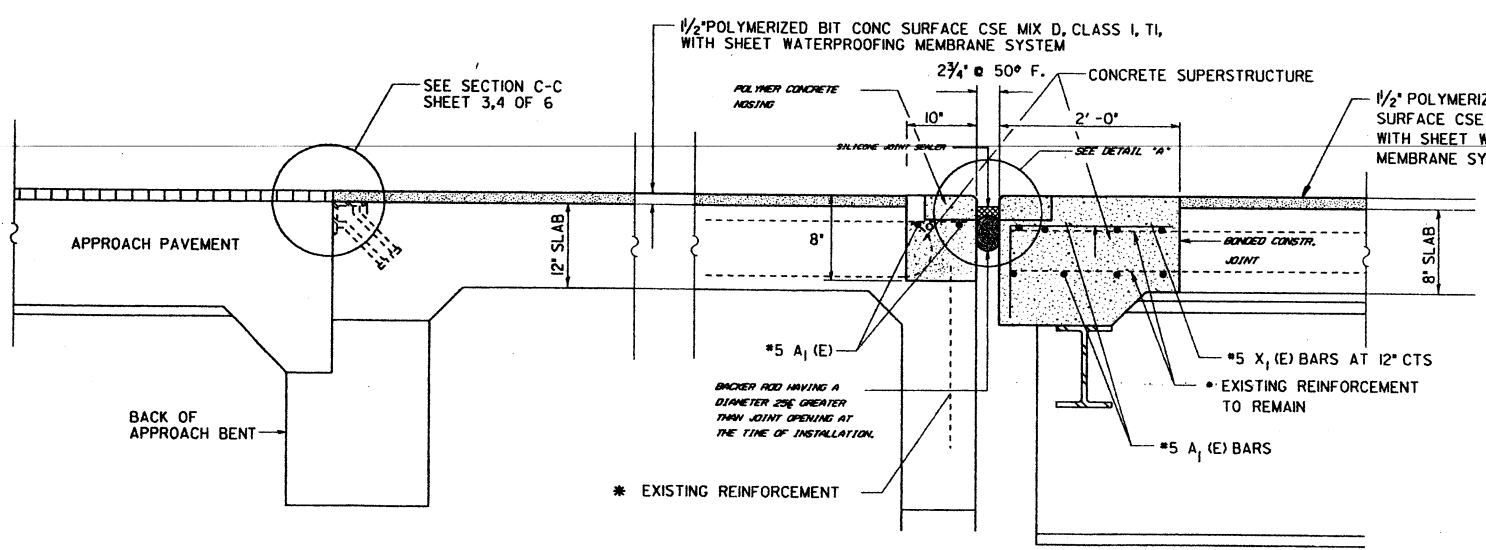
EXISTING SECTION A-A

• Existing reinforcement bars extending into the removal area shall be cleaned, straightened, and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operation shall be repaired or replaced using an approved bar splicer or anchor system. Cost included in concrete removal.



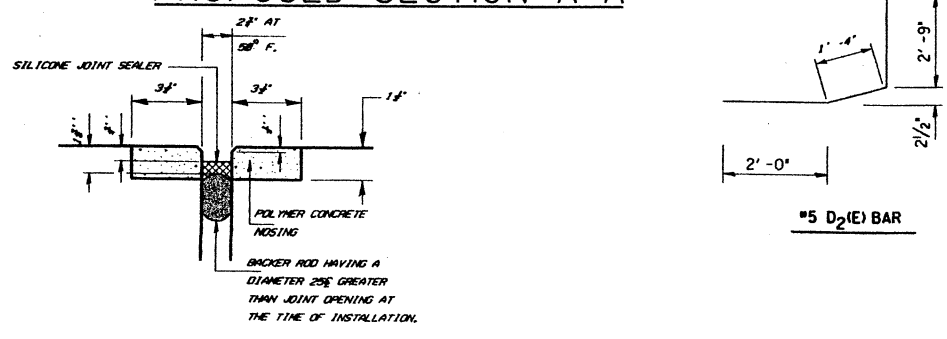
EXISTING PARTIAL PLAN

INDICATES CONCRETE REMOVAL

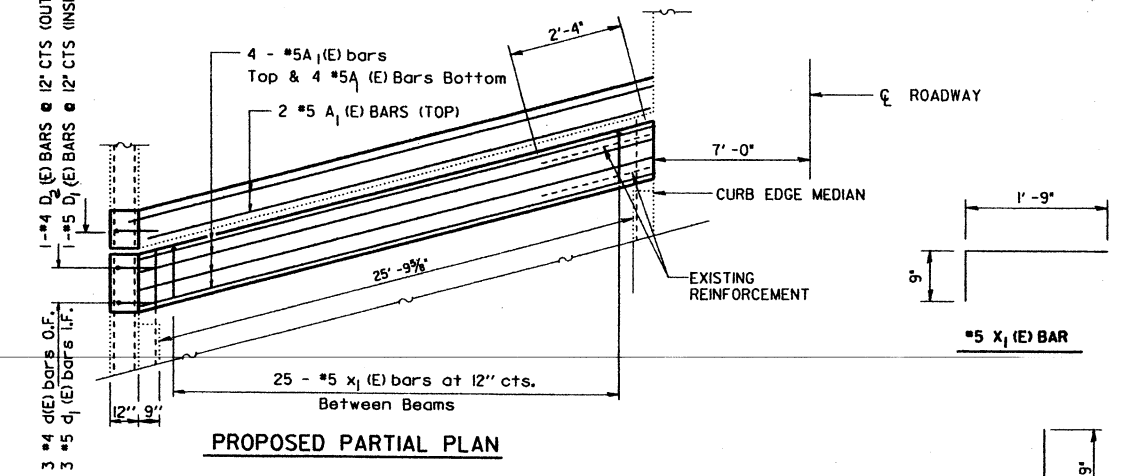


PROPOSED SECTION

PROPOSED SECTION A-A



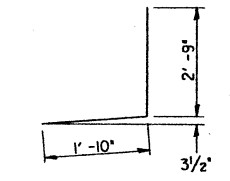
DETAIL "A"



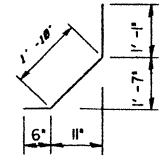
PROPOSED PARTIAL PLAN

BILL OF MATERIALS

BAR	NO.	SIZE	LENGTH	SHAPE
A1 (E)	40	5	27'-3"	—
X1 (E)	100	5	2'-6"	—
D1 (E)	12	4	4'-7"	—
D1 (E)	16	5	3'-5"	—
D2 (E)	4	4	6'-1"	—
ITEM		UNIT	QUANTITY	
BITUMINOUS CONCRETE REMOVAL (DECK)		SO YD	1426	
CONCRETE REMOVAL		CU YD	15	
CONCRETE SUPERSTRUCTURE		CU YD	16	
REINFORCEMENT BARS, EPOXY COATED		POUND	1500	
PROTECTIVE SHIELD		SO YD	564	
POLYMER CONCRETE		CU FT	20	
SILICONE JOINT SEALER		FOOT	280	
DECK SLAB REPAIR (FD-T1)		SO YD	16	
DECK SLAB REPAIR (FD-T2)		SO YD	16	
DECK SLAB REPAIR (PART.)		SO YD	220	
SHEET WATERPROOFING MEMBRANE SYSTEM		SO YD	1392	
POLYMERIZED BIT CONC SURFACE CSE MIX D, CLASS I, TI		TON	156	



#4 D (E) BAR



#5 D1 (E) BAR

GENERAL PLAN
 IL RTE 78 OVER FAI RTE 88
 WHITESIDE COUNTY
 FAI 88 SECT. 195-24B
 SN 038-0065

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FEDERAL AID ROUTE NO.	SEC.	COUNTY	SECTION	SHEET NO.
FA 403	195-2	WHITESIDE	400	1
ILLINOIS PROJECT EBF-EBFG-403-1(3)				

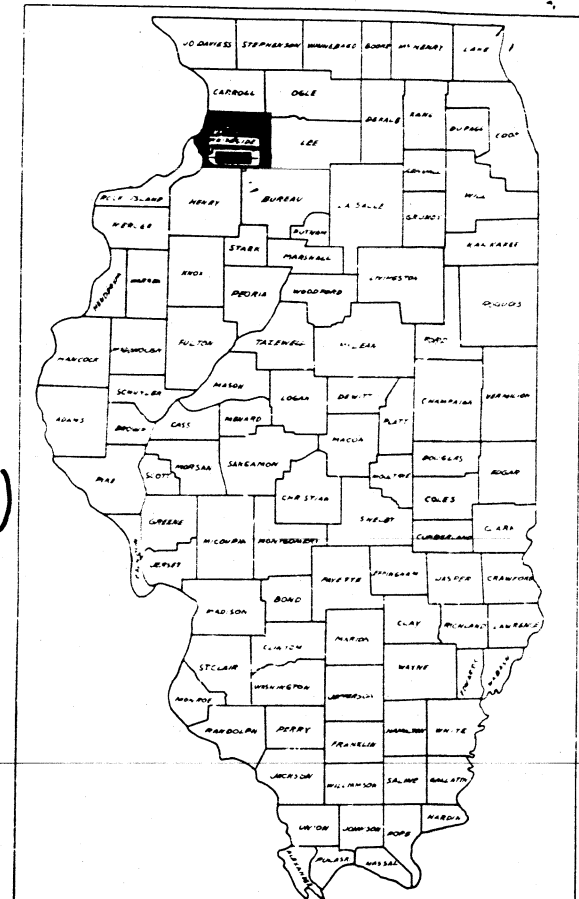
P-92-003-71 (195)

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

SCALES
 PLAN 1 INCH = 100 FT.
 PROFILE, HOR. 1 INCH = 100 FT.
 PROFILE, VERT. 1 INCH = 10 FT.
 CROSS-SECTIONS 1 INCH = 10 FT.

F.A. ROUTE 403
SECTION 195-2; 195-2 (HB, HB-1, HVB, B, HB-2, HB-3, VB)
PROJECT EBF - EBFG - 403 - 1(3)
WHITESIDE COUNTY

C-92-020-72



LOCATION OF SECTION INDICATED THUS: —

195-2B
SECTION 195-2 INCLUDES TWO 3 SPAN P.C.C.-I BEAM BRIDGES (CARRYING F.A. 403 OVER DEER CREEK) ON WALL PIERS AND PILE BENT ABUTMENTS

195-2HVB
SECTION 195-2 INCLUDES ONE 4 SPAN CONTINUOUS STEEL PLATE GIRDER BRIDGE (CARRYING TR 214 OVER F.A. 403) ON 3 COLUMN PIERS AND VAULTED ABUTMENTS

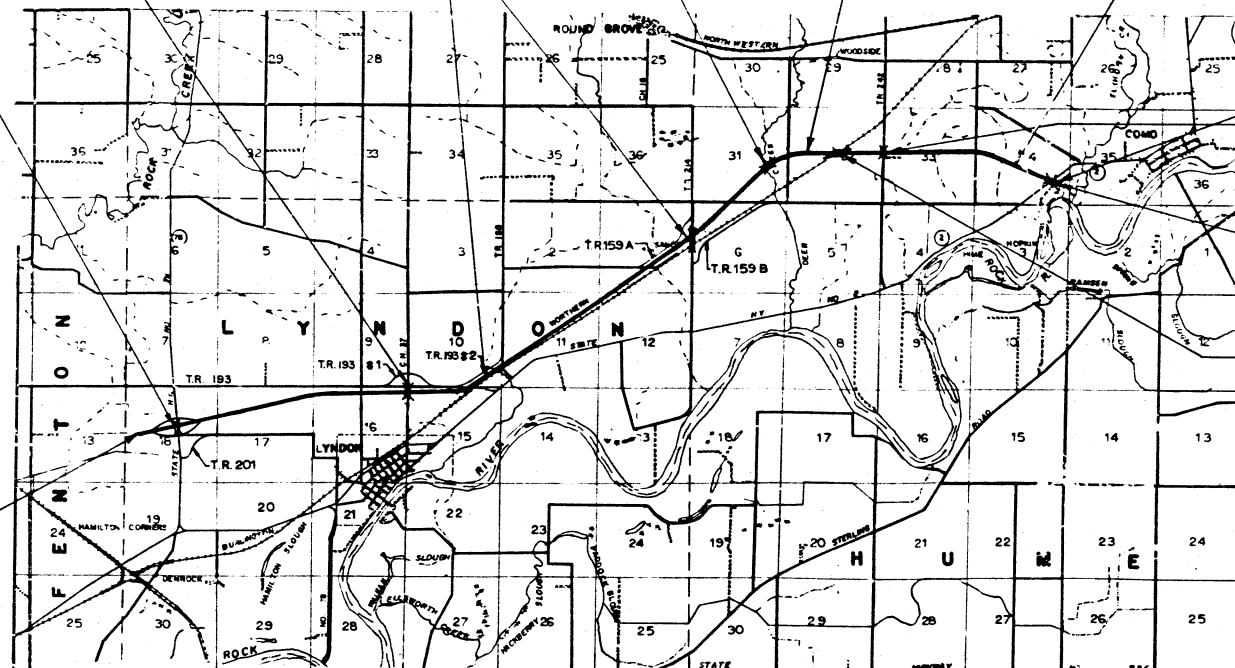
195-2HB-1
SECTION 195-2 INCLUDES ONE 2 SPAN CONTINUOUS STEEL PLATE GIRDER BRIDGE (CARRYING C.H. 37 OVER F.A. 403) ON 3 COLUMN PIERS AND VAULTED ABUTMENTS

195-2HB
SECTION 195-2 INCLUDES ONE 2 SPAN CONTINUOUS STEEL PLATE GIRDER BRIDGE (CARRYING ILL. 78 OVER F.A. 403) ON 5 COLUMN PIERS AND VAULTED ABUTMENTS

EQUATION: PT 1756+13.53 BK = STA. 1757+91.42 AHD

EQUATION: PT 1003+45.33 BK = POT 1986+7759 AHD

EQUATION: PT 2105+61.89 BK = POT 2168+1174 AHD



PROJECT FA 403 195-2
ENDS STA 2200+55

195-2HB-2
SECTION 195-2 INCLUDES TWO 2 SPAN CONTINUOUS STEEL PLATE GIRDER BRIDGE (CARRYING TR. 242 OVER F.A. 403) ON 2 COLUMN PIERS AND VAULTED ABUTMENTS

195-2HB-3
SECTION 195-2 INCLUDES TWO 1 SPAN CONTINUOUS STEEL PLATE GIRDER BRIDGE (CARRYING F.A. 403 OVER ILLINOIS ROUTE 2) WITH VAULTED ABUTMENTS

195-2VB
SECTION 195-2 INCLUDES TWO 3 SPAN PLATE GIRDER BRIDGES (CARRYING F.A. 403 OVER BURLINGTON NORTHERN RR.) ON 5 COLUMN PIER AND PILE BENT ABUTMENTS.

DESIGN DESIGNATIONS
 FA 403 ILL. 78 445 (95) TRUNK-750 (PCC-20)
 254 (95) MAJOR-050 (PCC-20)

PROJECT FA 403 195-2
BEGINS STA. 1560+00

LAYOUT
SCALE = 1" = 1 MILE

CONTRACT NO. 20250

NET LENGTH OF SECTION 57,096.00 LIN. FT.=10.814 MILES

WHITESIDE COUNTY SECTION 195-2 F. A. ROUTE 403

APPROVE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 7-31-72
DISTRICT ENGINEER

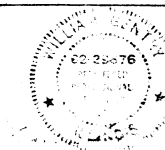
EXAMINED 9-20-72
ENGINEER OF ROAD PLANS AND CONTRACTS

PASSED 9-20-72
ENGINEER OF DESIGN

APPROVED 9-20-72
UNDER SECRETARY, CHIEF TRAFFIC ENGINEER

APPROVED 11-17-72
SECRETARY

PLANS PREPARED BY,
MACKIE ENGINEERING CO.
CONSULTING ENGINEERS

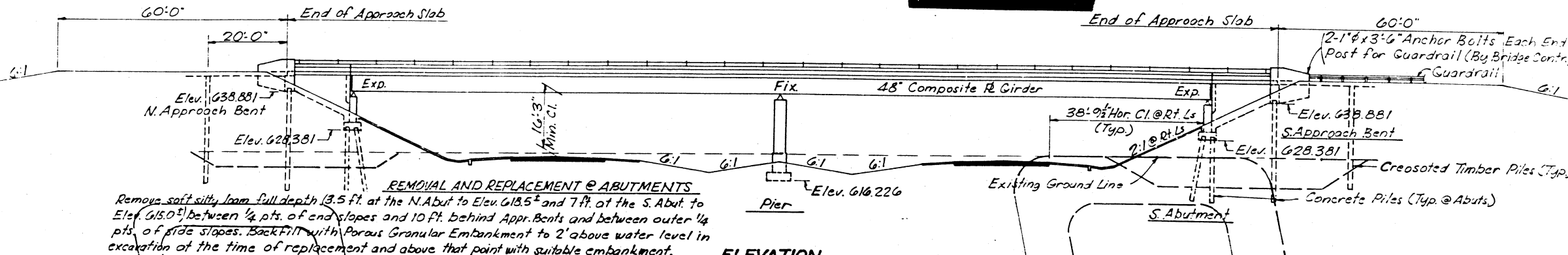


DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____ DATE _____

DIVISION ENGINEER _____

2-97



REMOVAL AND REPLACEMENT @ ABUTMENTS
 Remove soft silty loam full depth (3.5 ft. at the N. Abut. to Elev. 615.0' and 7 ft. at the S. Abut. to Elev. 615.0') between 1/4 pts. of end slopes and 10 ft. behind Appr. Bents and between outer 1/4 pts. of side slopes. Backfill with Porous Granular Embankment to 2' above water level in excavation of the time of replacement and above that point with suitable embankment.

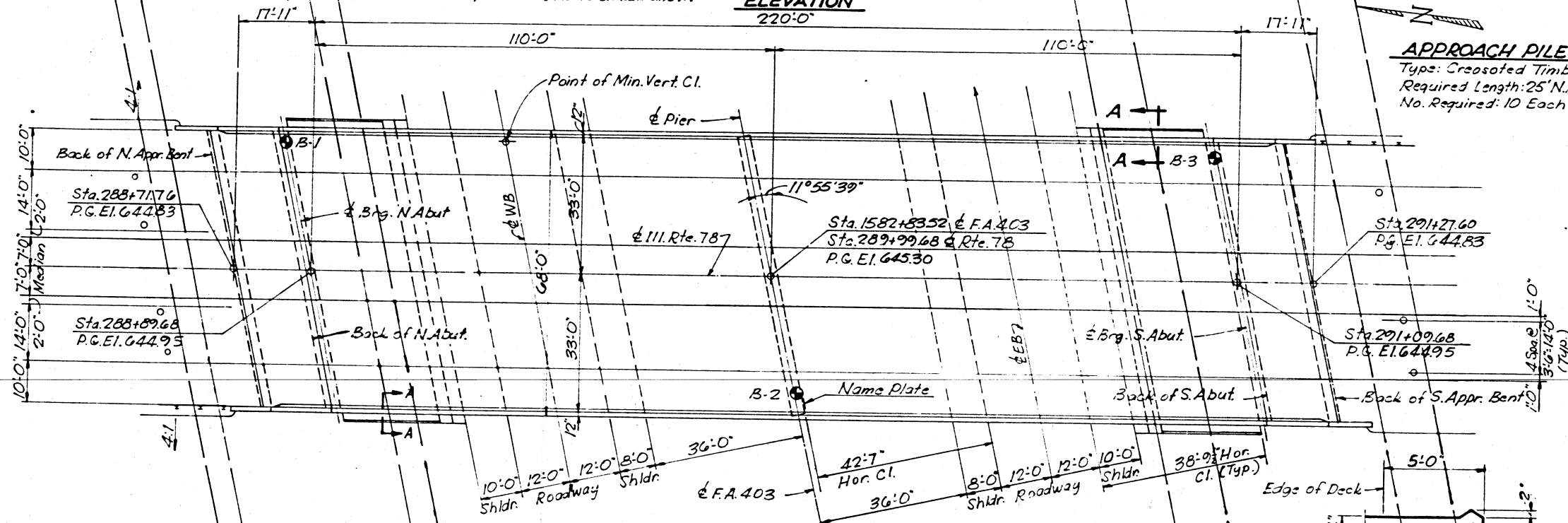
GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
 Fasteners shall be high strength bolts. Bolts 3/8" dia, open holes 1/2" dia unless otherwise noted.
 Calculated weight of Structural Steel = 542,368 lbs.
 The basic lead silicochromate paint system shall be used for shop and field painting of Structural Steel.
 Field welding of construction accessories will not be permitted to bottom of flange of girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
 Anchor bolts shall be set before bolting diaphragms over supports. Slope wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 55# per 100 sq. ft.
 The contractor shall drive one concrete test pile at each abutment in a permanent location as directed by the Engineer before ordering the remainder of piles.
 Concrete piles at abutments shall be driven in holes pre-cored through the embankment in accordance with Article 513.09(c) of the Standard Specifications.
 The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.
 Protective Coat shall not be applied to the surfaces to which Coal Tar Interlayer Protective Coat.
 The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

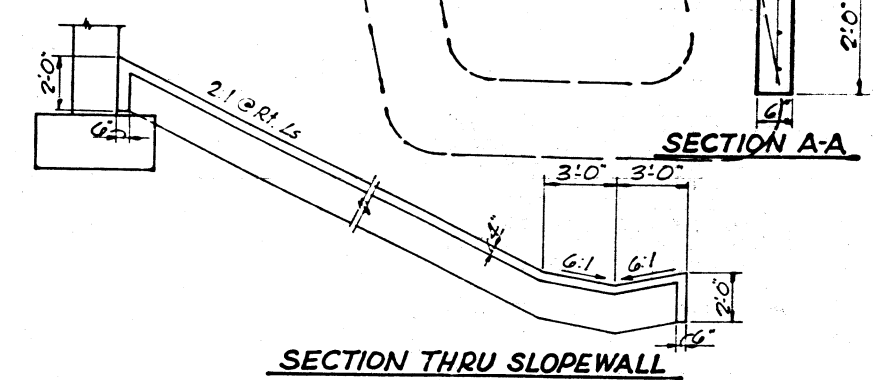
APPROACH PILE DATA

Type: Creosoted Timber
 Required Length: 25' N. Appr., 28' S. Appr.
 No. Required: 10 Each Appr.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of ± 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/2" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.



PLAN



SECTION A-A

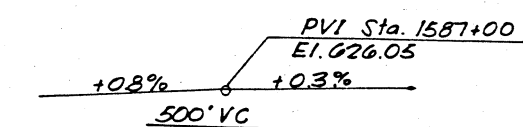
SECTION THRU SLOPEWALL

TOTAL BILL OF MATERIAL

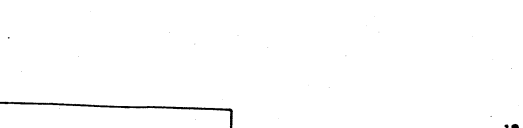
Item	Unit	Super	Sub	Total
Structure Excavation	Cu. Yds.	—	609	609
Class X Concrete	Cu. Yds.	622.0	387.7	1009.7
Structural Steel	Lump Sum	1	—	1
Reinforcement Bars	Lbs.	140,360	41,210	181,570
Concrete Piles	Lin. Ft.	—	1994	1994
Test Piles, Concrete	Ea.	—	2	2
Slope Wall 4"	Sq. Yds.	—	517	517
Bit. Surf. Class I	Tons	120	—	120
Coal Tar Inter. Prot. Coat	Sq. Yds.	1444	—	1444
Aluminum Railing	Lin. Ft.	501	—	501
Pre formed Joint Sealer	Lin. Ft.	139	—	139
Stud Shear Connectors 3/4"	Ea.	3402	—	3402
Name Plate	Ea.	—	1	1
Protective Coat	Sq. Yds.	628	—	628
* Sand Backfill	Cu. Yds.	348	—	348
Creosoted Timber Piles (2x12x35)	Lin. Ft.	—	530	530
Remove Unsuitable Material	Cu. Yds.	—	4198	4198
Porous Granular Embankment	Cu. Yds.	—	4198	4198

*See Special Provisions

PROFILE OF ILL. RTE. 78



PROFILE OF F.A. RTE. 403

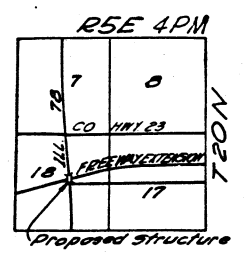


NAME PLATE
 (See Std. 2113)

STATION 1582+83.52
 BUILT 197 BY
 STATE OF ILLINOIS
 F.A. RTE. 403 SEC. 195-2HB
 F.A. PROJ. EBF-EBFG -403-1(3)
 LOADING HS 20

LOADING-HS 20-44
DESIGN STRESSES
 $f_c = 1200$ psi Deck Slab
 $f_c = 1400$ psi Curb, Parapet, & Substructure
 $V_c = 75$ psi (Ftgs)
 $n = 10$
 $f_s = 20,000$ psi Reinf.
 $f_s = 20,000$ psi Struct.
 Allowable 4" Deflection = $L/1200$
 Design Specifications 1969 AASHTO (as applicable)
 Allow 25# per Sq. Ft. for future wearing surface

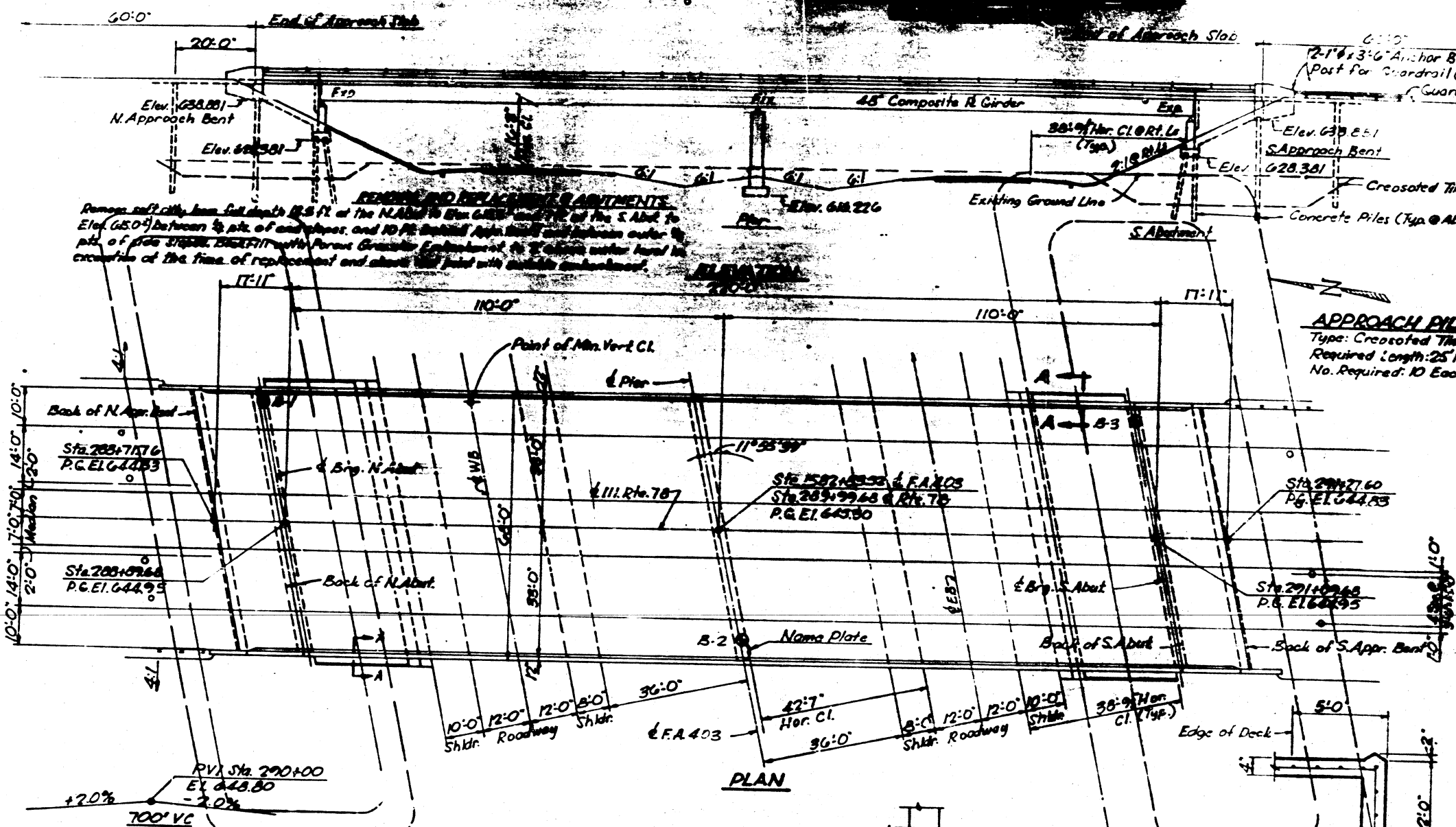
DESIGNED C.D.C.	EXAMINED	19
CHECKED H.M.W.	PASSED	
DRAWN C.D.C.	APPROVED	
CHECKED S.M.C.K.		



LOCATION SKETCH

GENERAL PLAN & ELEVATION
PROJECT F.A. 403
ILL. RTE. 78 OVER F.A. 403
FA. RTE. 403-SEC. 195-2HB
WHITESIDE COUNTY
STATION 1582+83.52

ROUTE NO.	SEC.	COUNTY	SHEET	SHEET NO.
FA 403	2HB	WHITESIDE	480	98A
TOTAL SHEETS 121 SHEETS				

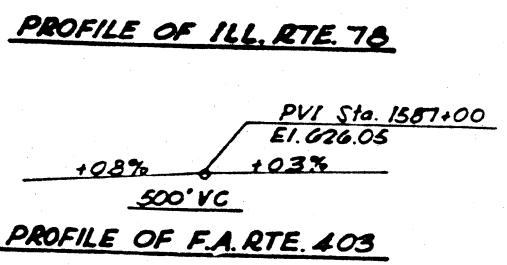


APPROACH PILE DATA
 Type: Cressed Timber
 Required Length: 25' N. Appr., 20' S. Appr.
 No. Required: 10 Each Appr.

TOTAL BILL OF MATERIAL

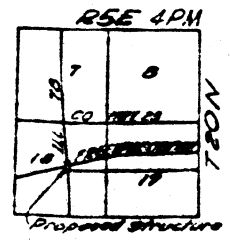
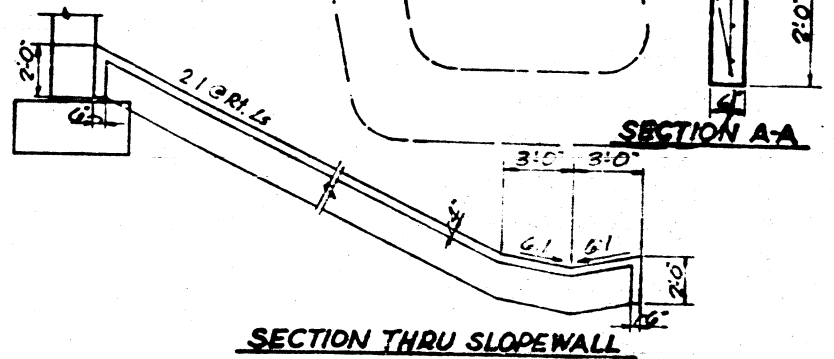
Item	Unit	Spec.	Sub	Total
Structural Excavation	Cu. Yds.		402	402
Class X Concrete	Cu. Yds.	625.0	382.7	1007.7
Structural Steel	Long Tons		1	1
Reinforcement Bars	Lbs.	143,360	41810	183,690
Concrete Piles	Lin. Ft.		1994	1994
Coal Tar Inter. Prot. Coat	Sq. Yds.		2	2
Slope Wall 4"	Sq. Yds.		517	517
Bit. Surf. Class 1	Tons	120		120
Coal Tar Inter. Prot. Coat	Sq. Yds.	1644		1644
Aluminum Roofing	Lin. Ft.	301		301
Fire Resistant Joint Sealer	Lin. Ft.	139		139
Steel Strap Connectors 3"	Ea.	3402		3402
Name Plate	Ea.		1	1
Protective Coat	Sq. Yds.	625		625
Small Round Pile	Cu. Yds.	368		368
Cressed Timber (Abutment)	Lin. Ft.		630	630
Remain. Granular Embankment	Cu. Yds.		4198	4198
Remain. Granular Embankment	Cu. Yds.		4198	4198

*See Special Provisions



NAME PLATE
 (See Std. 2113)

STATION 1582+88.52
 BUILT BY
 STATE OF ILLINOIS
 F.A. RTE. 403 SEC. 195-2HB
 F.A. PROJ. EBMG-403-(S)
 LOADING HS 20

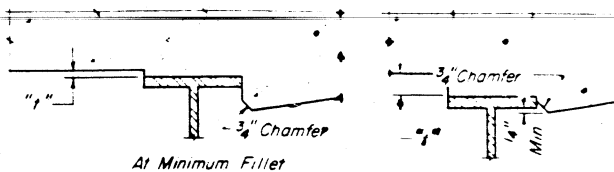
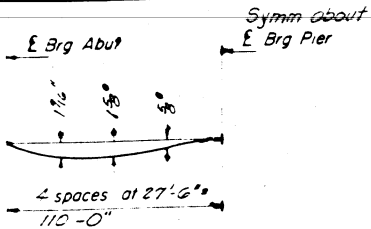


GENERAL PLAN & ELEVATION
 PROJECT FA 403
 ILL. RTE 78 OVER F.A. 403
 F.A. RTE. 403-SEC. 195-2HB
 WHITESIDE COUNTY
 STATION 1582+88.52

DESIGNED G.D.C.	EXAMINED	19
CHECKED H.M.W.	PASSED	
DRAWN G.D.C.	APPROVED	
CHECKED S.M.K.		

LOADING-HS 20-44
DESIGN STRESSES

$f_c = 1200$ psi Deck Slab
 $f_c = 1400$ psi Curb, Parapet, & Substructure
 $f_c = 75$ psi (Figs)
 $n = 10$
 $f_s = 20,000$ psi Reinf.
 $f_s = 20,000$ psi Struct.
 Allowable Δ Deflection = $L/7500$
 Design Specifications: 1969 AASHTO (as applicable)
 Allow 25# per Sq. Ft. for future wearing surface



To determine "f" After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "f" above top flange of beams.

DEAD LOAD DEFLECTION DIAGRAM

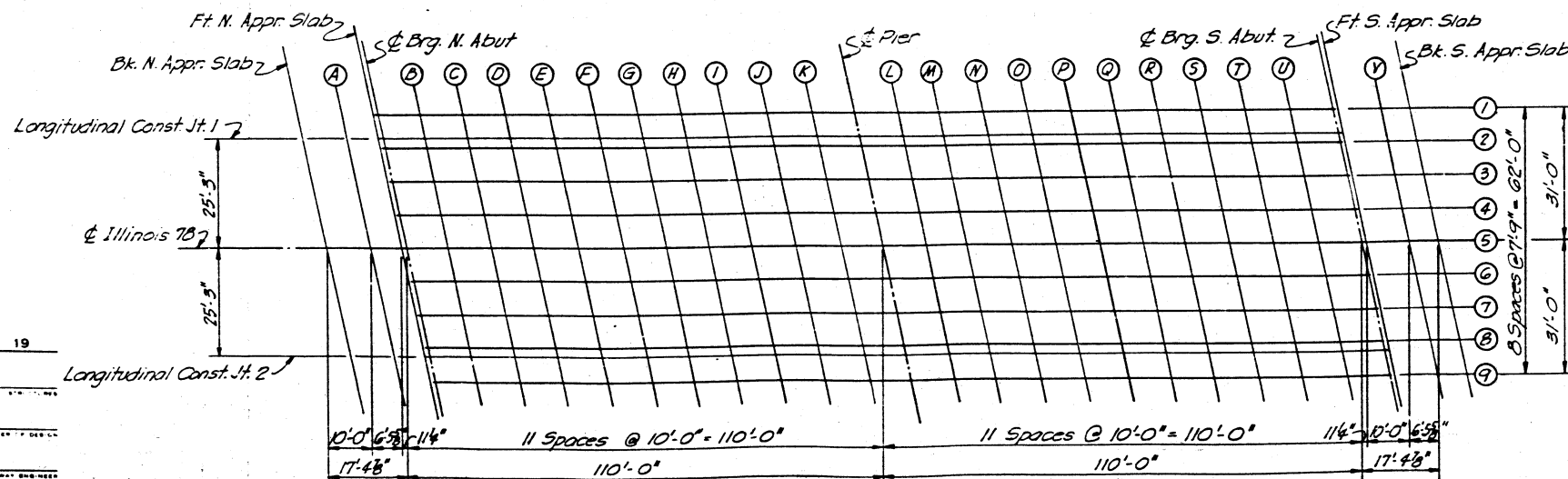
(Includes weight of concrete only)
Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown below

NOTE: Elevations are to top of concrete slab.

Location	Beam	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of N. Appr. Slab					
	⊖	288+72.270	0	644.849	644.849
A					
	⊖	288+82.270	0	644.920	644.920
Front of N. Appr. Slab					
	⊖	288+88.740	0	644.962	644.962

Location	Beam	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
⊖ Brq. N. Abut.	1	288+83.130	31.000	644.399	644.399
	Jt. 1	288+84.350	25.250	644.527	644.527
	2	288+84.770	23.250	644.572	644.572
	3	288+86.410	15.500	644.705	644.705
	4	288+88.040	7.750	644.836	644.836
	5	288+89.680	0	644.968	644.968
	6	288+91.320	7.750	644.857	644.857
	7	288+92.950	15.500	644.746	644.746
	8	288+94.590	23.250	644.634	644.634
B	Jt. 2	288+95.020	25.250	644.595	644.595
	9	288+96.230	31.000	644.482	644.482
	1	288+93.130	31.000	644.463	644.515
	Jt. 1	288+94.350	25.250	644.591	644.643
	2	288+94.770	23.250	644.635	644.687
	3	288+96.410	15.500	644.767	644.819
	4	288+98.040	7.750	644.897	644.949
	5	288+99.680	0	645.028	645.080
	6	289+01.320	7.750	644.916	644.968
C	7	289+02.950	15.500	644.804	644.856
	8	289+04.570	23.250	644.691	644.743
	Jt. 2	289+05.020	25.250	644.652	644.704
	9	289+06.230	31.000	644.538	644.590
	1	289+03.130	31.000	644.522	644.613
	Jt. 1	289+04.350	25.250	644.648	644.744
	2	289+04.770	23.250	644.692	644.788
	3	289+06.410	15.500	644.823	644.919
	4	289+08.040	7.750	644.953	645.049
D	5	289+09.680	0	645.083	645.179
	6	289+11.320	7.750	644.970	645.066
	7	289+12.950	15.500	644.857	644.953
	8	289+14.590	23.250	644.743	644.839
	Jt. 2	289+15.020	25.250	644.703	644.799
	9	289+16.230	31.000	644.589	644.685
	1	289+03.130	31.000	644.574	644.702
	Jt. 1	289+04.350	25.250	644.670	644.798
	2	289+04.770	23.250	644.744	644.872
E	3	289+06.410	15.500	644.874	645.002
	4	289+08.040	7.750	645.003	645.131
	5	289+09.680	0	645.131	645.259
	6	289+11.320	7.750	645.018	645.146
	7	289+12.950	15.500	644.904	645.032
	8	289+14.590	23.250	644.789	644.917
	Jt. 2	289+15.020	25.250	644.749	644.877
	9	289+16.230	31.000	644.634	644.762
	1	289+03.130	31.000	644.521	644.764
F	Jt. 1	289+04.350	25.250	644.746	644.889
	2	289+04.770	23.250	644.787	644.932
	3	289+06.410	15.500	644.919	645.062
	4	289+08.040	7.750	645.047	645.190
	5	289+09.680	0	645.174	645.317
	6	289+11.320	7.750	645.060	645.203
	7	289+12.950	15.500	644.945	645.088
	8	289+14.590	23.250	644.830	644.973
	Jt. 2	289+15.020	25.250	644.789	644.932
G	9	289+16.230	31.000	644.674	644.817
	1	289+03.130	31.000	644.662	644.803
	Jt. 1	289+04.350	25.250	644.786	644.927
	2	289+04.770	23.250	644.830	644.971
	3	289+06.410	15.500	644.958	645.099
	4	289+08.040	7.750	645.085	645.226
	5	289+09.680	0	645.212	645.353
	6	289+11.320	7.750	645.096	645.237
	7	289+12.950	15.500	644.981	645.122
H	8	289+14.590	23.250	644.863	645.004
	Jt. 2	289+15.020	25.250	644.823	644.964
	9	289+16.230	31.000	644.707	644.848
	1	289+03.130	31.000	644.751	644.813
	Jt. 1	289+04.350	25.250	644.873	644.935
	2	289+04.770	23.250	644.916	644.978
	3	289+06.410	15.500	645.041	645.103
	4	289+08.040	7.750	645.165	645.227
	5	289+09.680	0	645.289	645.351
I	6	289+11.320	7.750	645.182	645.249
	7	289+12.950	15.500	645.084	645.131
	8	289+14.590	23.250	644.975	645.012
	Jt. 2	289+15.020	25.250	644.875	644.972
	9	289+16.230	31.000	644.757	644.854
	1	289+03.130	31.000	644.751	644.813
	Jt. 1	289+04.350	25.250	644.873	644.935
	2	289+04.770	23.250	644.916	644.978
	3	289+06.410	15.500	645.041	645.103
J	4	289+08.040	7.750	645.165	645.227
	5	289+09.680	0	645.289	645.351
	6	289+11.320	7.750	645.171	645.233
	7	289+12.950	15.500	645.053	645.115
	8	289+14.590	23.250	644.933	644.995
	Jt. 2	289+15.020	25.250	644.872	644.954
	9	289+16.230	31.000	644.774	644.836
	1	289+03.130	31.000	644.767	644.777
	Jt. 1	289+04.350	25.250	644.891	644.919
K	2	289+04.770	23.250	644.933	644.961
	3	289+06.410	15.500	645.058	645.086
	4	289+08.040	7.750	645.181	645.209
	5	289+09.680	0	645.304	645.332
	6	289+11.320	7.750	645.185	645.213
	7	289+12.950	15.500	645.065	645.093
	8	289+14.590	23.250	644.944	644.972
	Jt. 2	289+15.020	25.250	644.903	644.931
	9	289+16.230	31.000	644.784	644.812

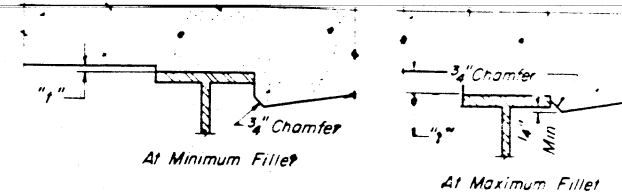
Location	Beam	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
G	1	289+03.130	31.000	644.597	644.822
	Jt. 1	289+04.350	25.250	644.821	644.946
	2	289+04.770	23.250	644.864	644.989
	3	289+06.410	15.500	644.991	645.116
	4	289+08.040	7.750	645.117	645.242
	5	289+09.680	0	645.243	645.368
	6	289+11.320	7.750	645.127	645.252
	7	289+12.950	15.500	645.010	645.135
	8	289+14.590	23.250	644.892	645.017
H	Jt. 2	289+15.020	25.250	644.852	644.977
	9	289+16.230	31.000	644.735	644.860
	1	289+03.130	31.000	644.727	644.854
	Jt. 1	289+04.350	25.250	644.850	644.977
	2	289+04.770	23.250	644.893	644.920
	3	289+06.410	15.500	645.019	645.116
	4	289+08.040	7.750	645.144	645.241
	5	289+09.680	0	645.269	645.366
	6	289+11.320	7.750	645.152	645.249
I	7	289+12.950	15.500	645.034	645.113
	8	289+14.590	23.250	644.915	645.012
	Jt. 2	289+15.020	25.250	644.875	644.972
	9	289+16.230	31.000	644.757	644.854
	1	289+03.130	31.000	644.751	644.813
	Jt. 1	289+04.350	25.250	644.873	644.935
	2	289+04.770	23.250	644.916	644.978
	3	289+06.410	15.500	645.041	645.103
	4	289+08.040	7.750	645.165	645.227
J	5	289+09.680	0	645.289	645.351
	6	289+11.320	7.750	645.171	645.233
	7	289+12.950	15.500	645.053	645.115
	8	289+14.590	23.250	644.933	644.995
	Jt. 2	289+15.020	25.250	644.872	644.954
	9	289+16.230	31.000	644.774	644.836
	1	289+03.130	31.000	644.767	644.777
	Jt. 1	289+04.350	25.250	644.891	644.919
	2	289+04.770	23.250	644.933	644.961
K	3	289+06.410	15.500	645.058	645.086
	4	289+08.040	7.750	645.181	645.209
	5	289+09.680	0	645.304	645.332
	6	289+11.320	7.750	645.185	645.213
	7	289+12.950	15.500	645.065	645.093
	8	289+14.590	23.250	644.944	644.972
	Jt. 2	289+15.020	25.250	644.903	644.931
	9	289+16.230	31.000	644.784	644.812



DESIGNED C.D.C.
CHECKED S.MCK.
DRAWN P.G. Barnett & L.R.
CHECKED S.MCK.
E-S 8-1-65

EXAMINED 19
PASSED
APPROVED

ELEVATIONS
FARTE 403 SEC. 195-2HB
WHITE SIDE COUNTY
STATION 1582+83.52



To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "f" above top flange of beams.

FILLET HEIGHTS

NOTE: Elevations are to top of concrete slab

Table K: Columns include Location, Beam, Station, Offset, Theoretical Grade Elevations, and Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include pier locations and beam stations.

Table N, O, P, Q: Columns include Location, Beam, Station, Offset, Theoretical Grade Elevations, and Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include pier locations and beam stations.

Table R, S, T, U: Columns include Location, Beam, Station, Offset, Theoretical Grade Elevations, and Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include pier locations and beam stations.

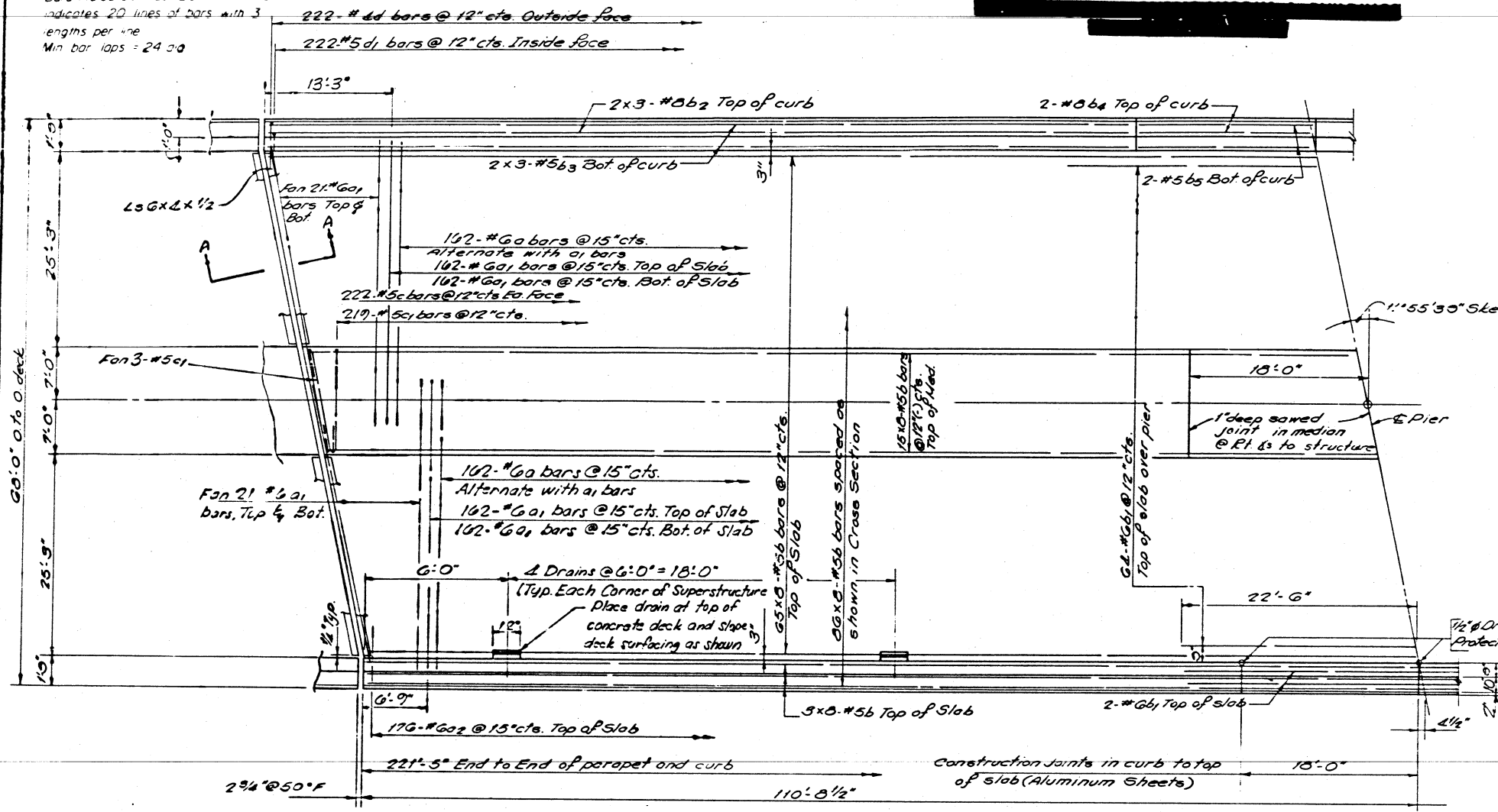
Table V: Columns include Location, Beam, Station, Offset, Theoretical Grade Elevations, and Theoretical Grade Elevations Adjusted For Dead Load Deflection. Rows include pier locations and beam stations.

DESIGNED C.D.C. CHECKED S.M.C. DRAWN P.G. Barnett & L.R. CHECKED S.M.C. E-S 8-1-65

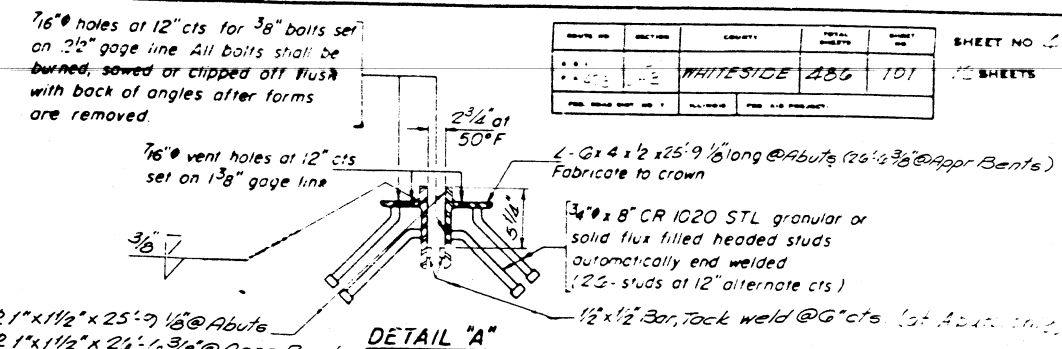
EXAMINED PASSED APPROVED

ELEVATIONS F.A.R.T.E. 403 SEC. 135-2H8 WHITESIDE COUNTY STATION 1582+83.52

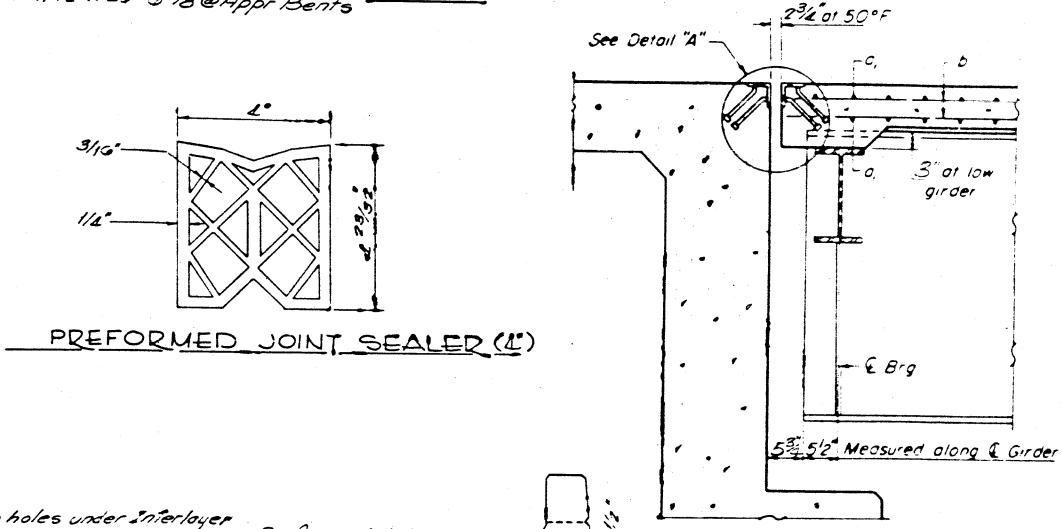
NOTE
Bars indicated thus 20 x 3 #5 etc
indicates 20 lines of bars with 3
lengths per line
Min bar laps = 24 in



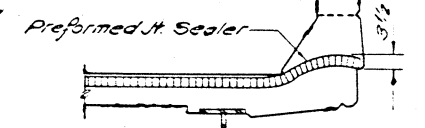
HALF PLAN



DETAIL 'A'



SECTION A-A

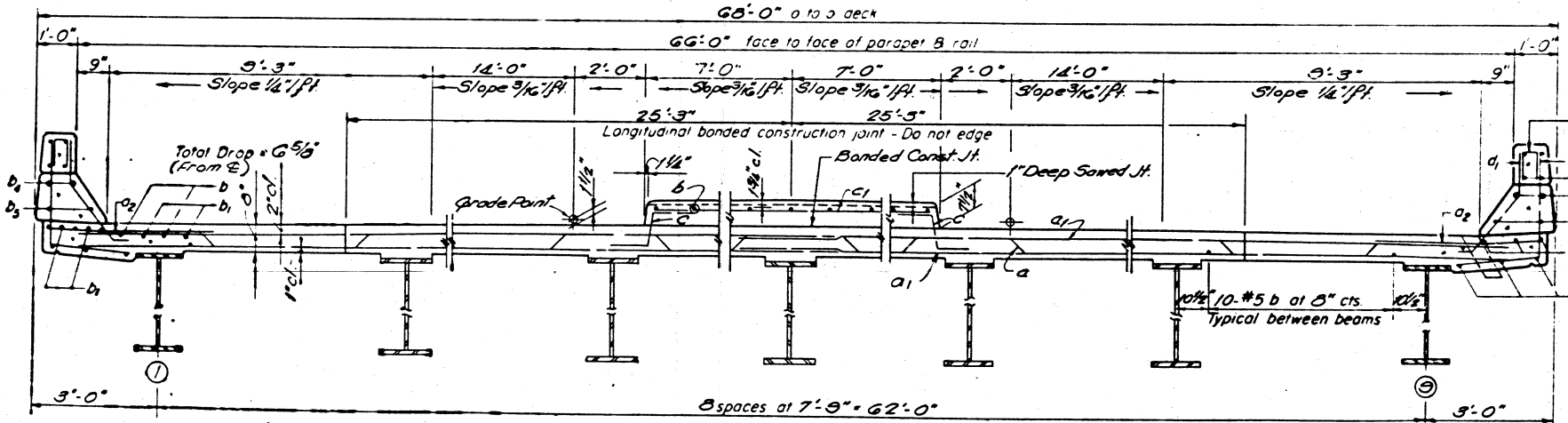


TYPICAL END OF SEALER TREATMENT

BILL OF MATERIAL

Bar	No	Size	Length	Shape
a	324	#6	35'-4"	—
a1	816	#6	32'-0"	—
a2	352	#6	4'-0"	—
b	1376	#5	28'-0"	—
b1	68	#6	45'-0"	—
b2	24	#8	32'-2"	—
b3	24	#5	31'-0"	—
b4	8	#8	17'-9"	—
b5	8	#5	17'-9"	—
c	444	#6	3'-4"	—
c1	225	#5	13'-6"	—
d	444	#4	4'-7"	J
d1	444	#5	3'-5"	J
Reinforcement Bars		Lbs	117750	
Class X Concrete		Cu Yds	445.2	

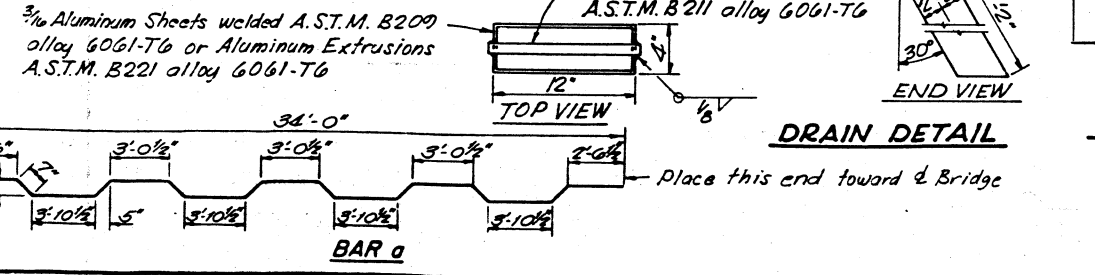
NOTE: For placement of bars d3 and e1 thru e2 see sheet #6



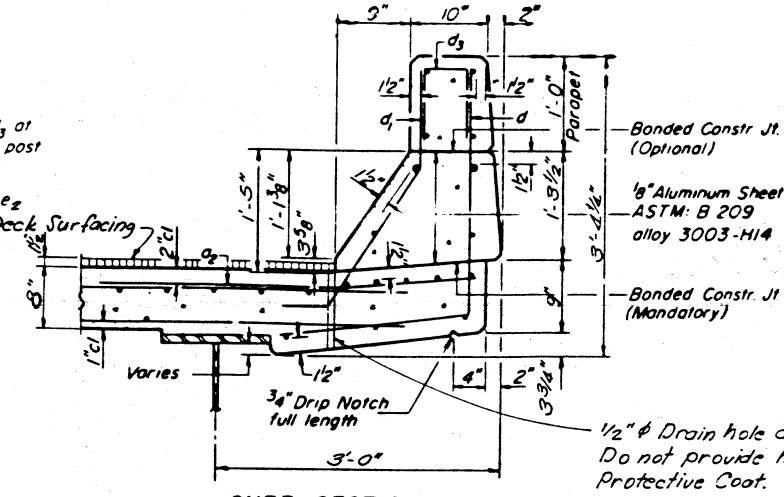
NEAR PIER

CROSS SECTION

NEAR MIDSPAN



DRAIN DETAIL



CURB SECTION

Cost of Aluminum Sheets and Drains shall be incidental to Class X Concrete.

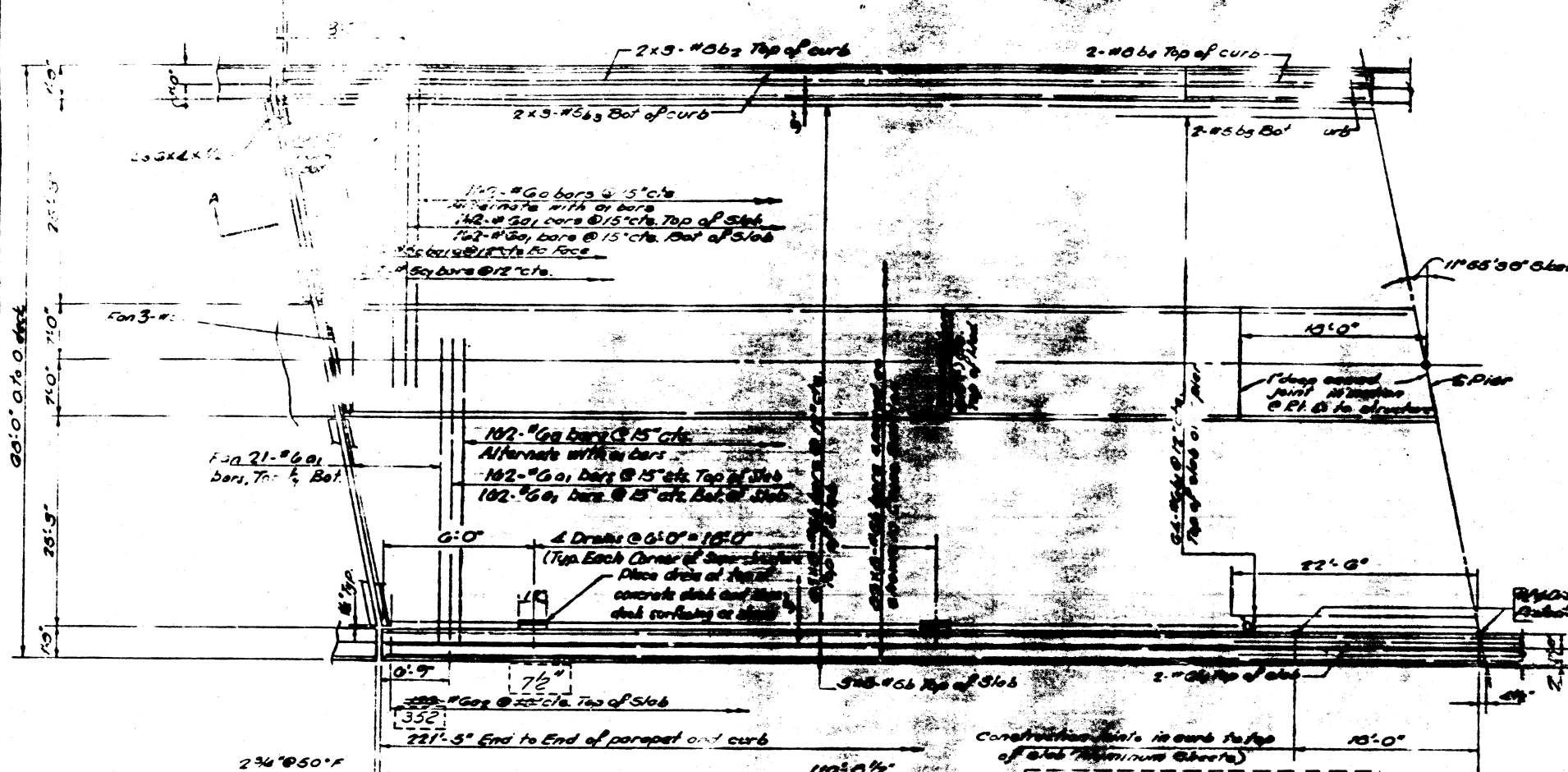
Parapet Reinforcement and Class X Concrete are billed on sheet #6.

DESIGNED	C.D.C.
CHECKED	S.M.C.K.
DRAWN	C.D.C.
CHECKED	S.M.C.K.

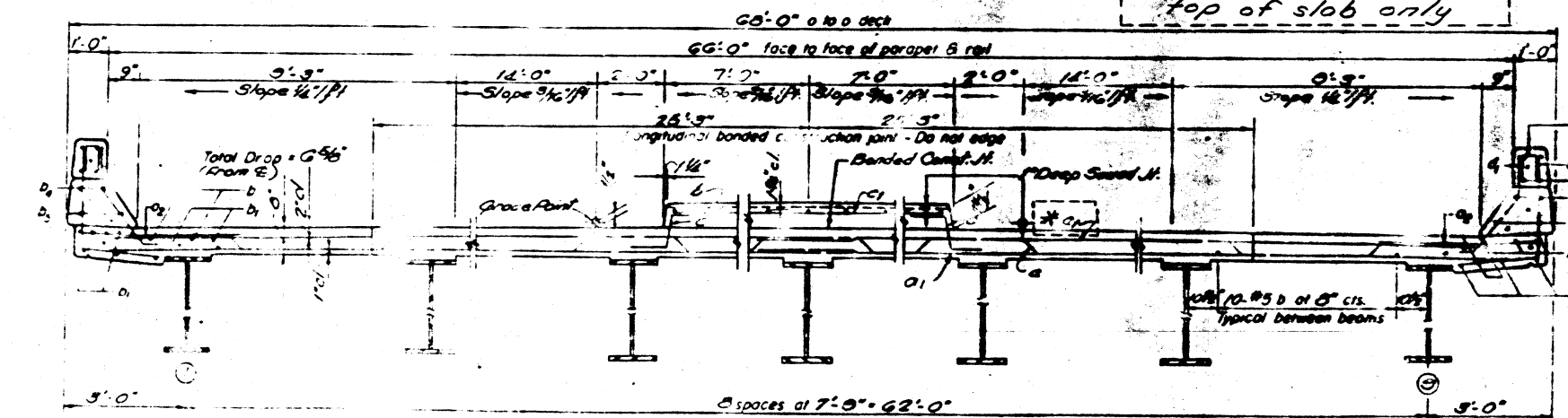
S-586-R(315) 4-22-68, 12-3-69

SUPERSTRUCTURE
F.A.R.T.E. 403 SEC. 195-2H/B
WHITESIDE COUNTY
STATION 1582+83.52

NO. 1
 Bars indicated plus 20 x 3 #5 etc.
 indicate diameters of bars with 3
 etc.
 Mr. [unclear] 12430

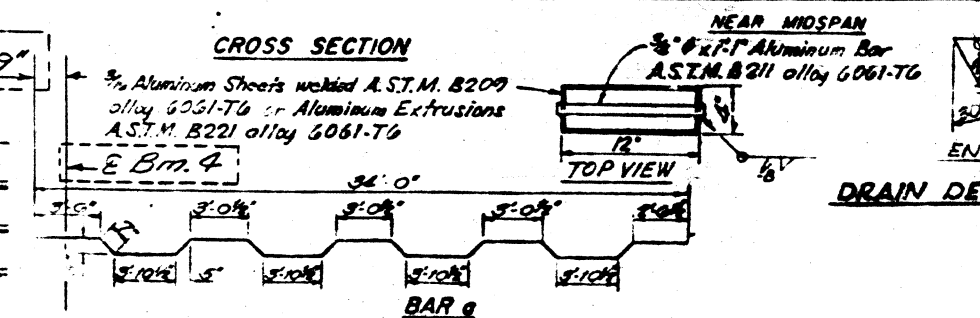


HALF PLAN

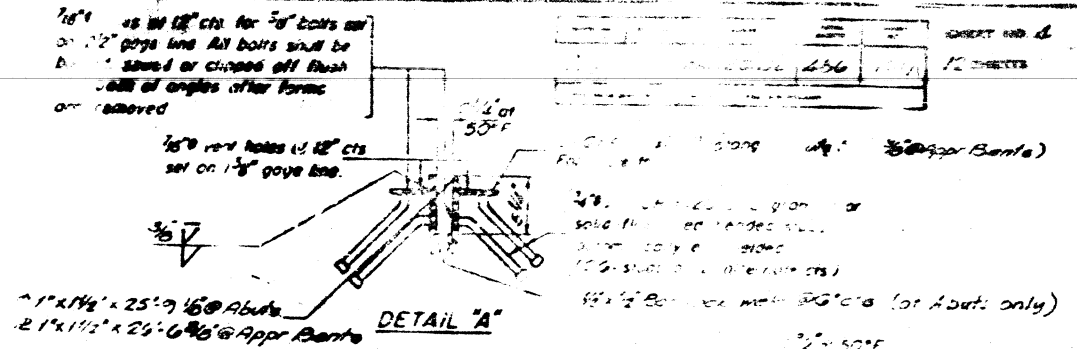


CROSS SECTION

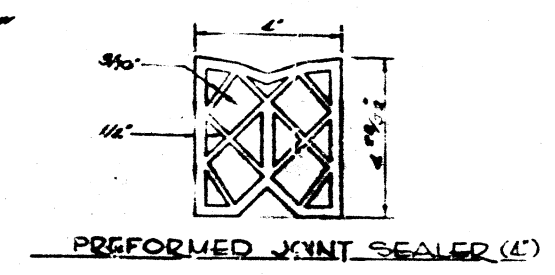
DESIGNED	19
CHECKED	S.M.K.
DRAWN	C.C.
CHECKED	S.M.K.



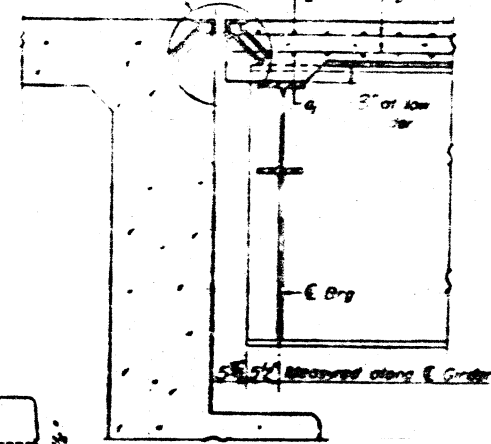
DRAIN DETAIL



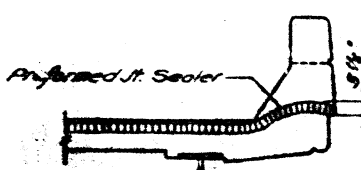
DETAIL 'A'



PREFORMED JOINT SEALER (L)

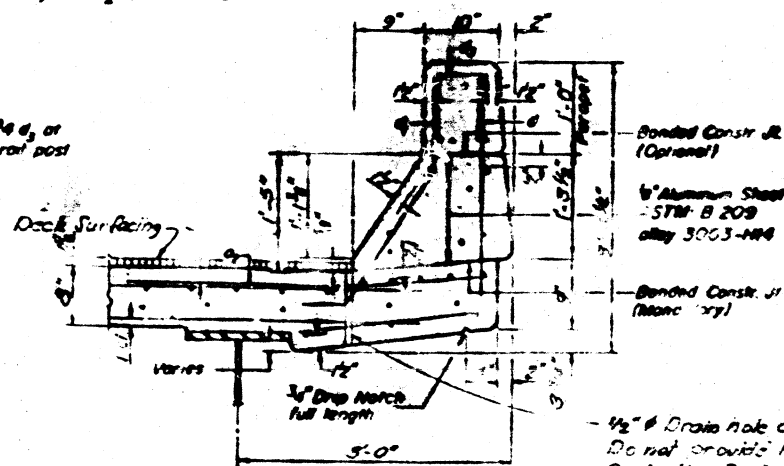


SECTION A-A



TYPICAL END OF SEALER TREATMENT

NOTE: For placement of bars d, and e, thru e, see sheet #6

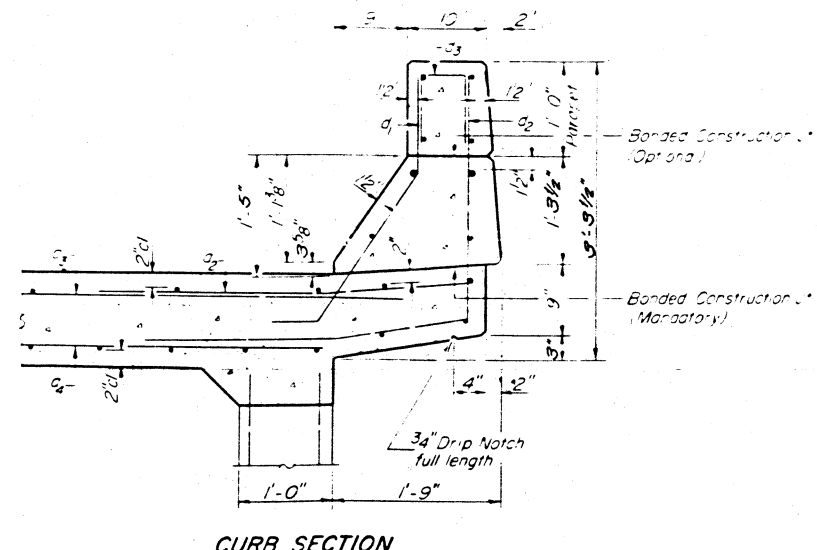
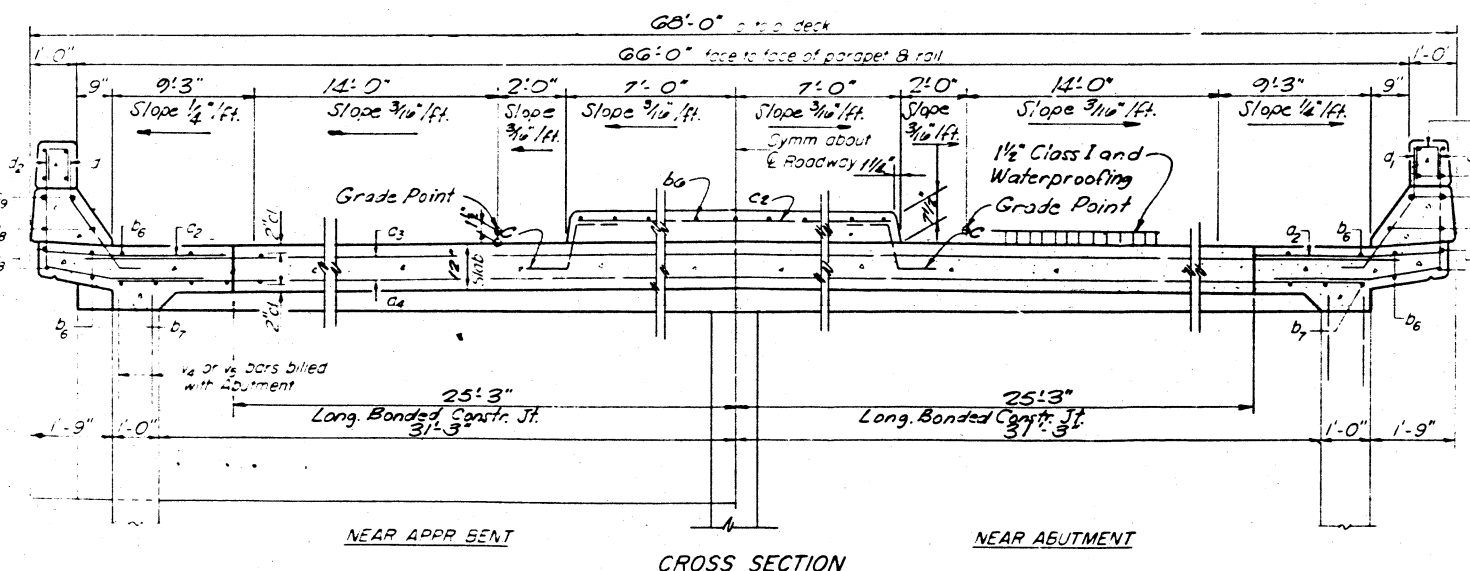
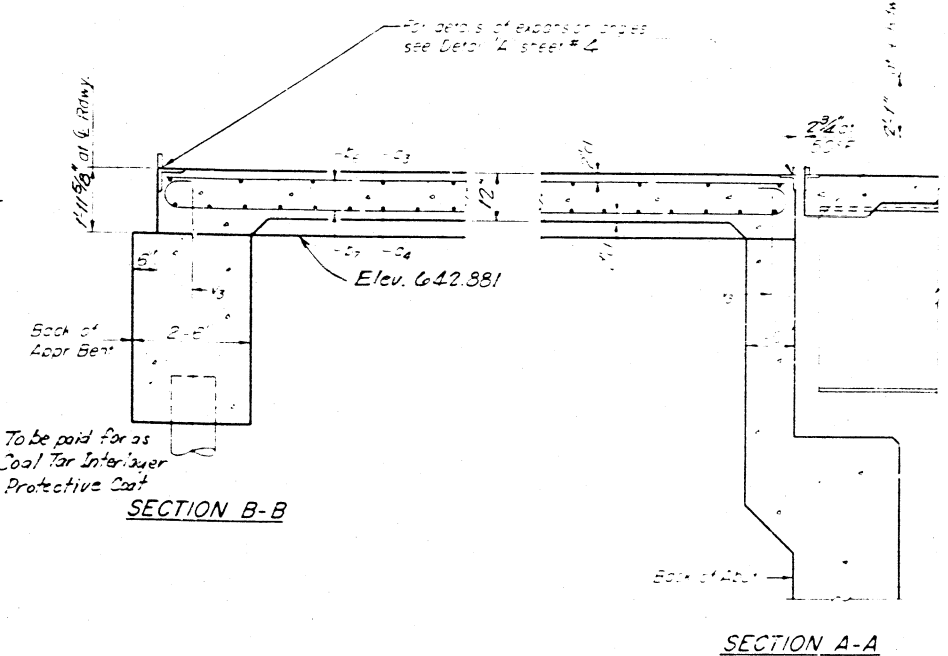
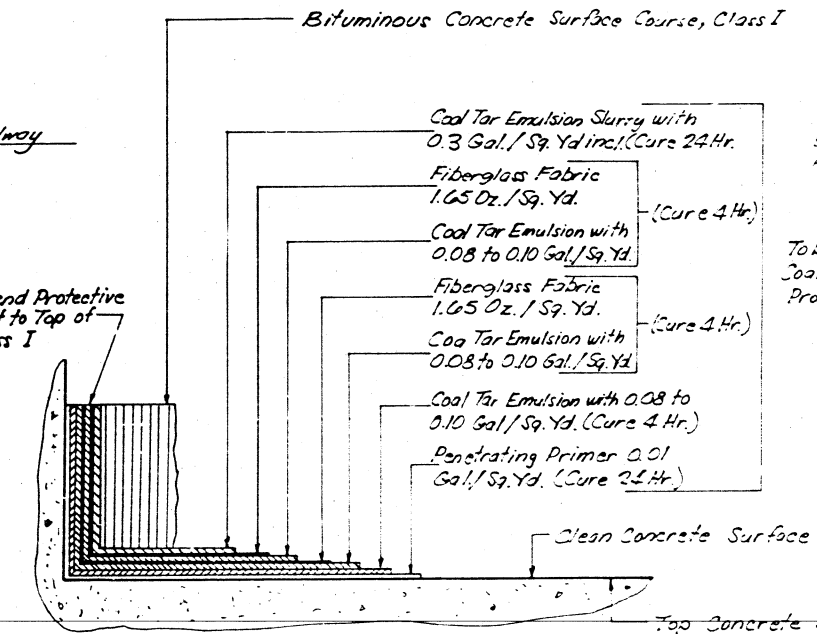
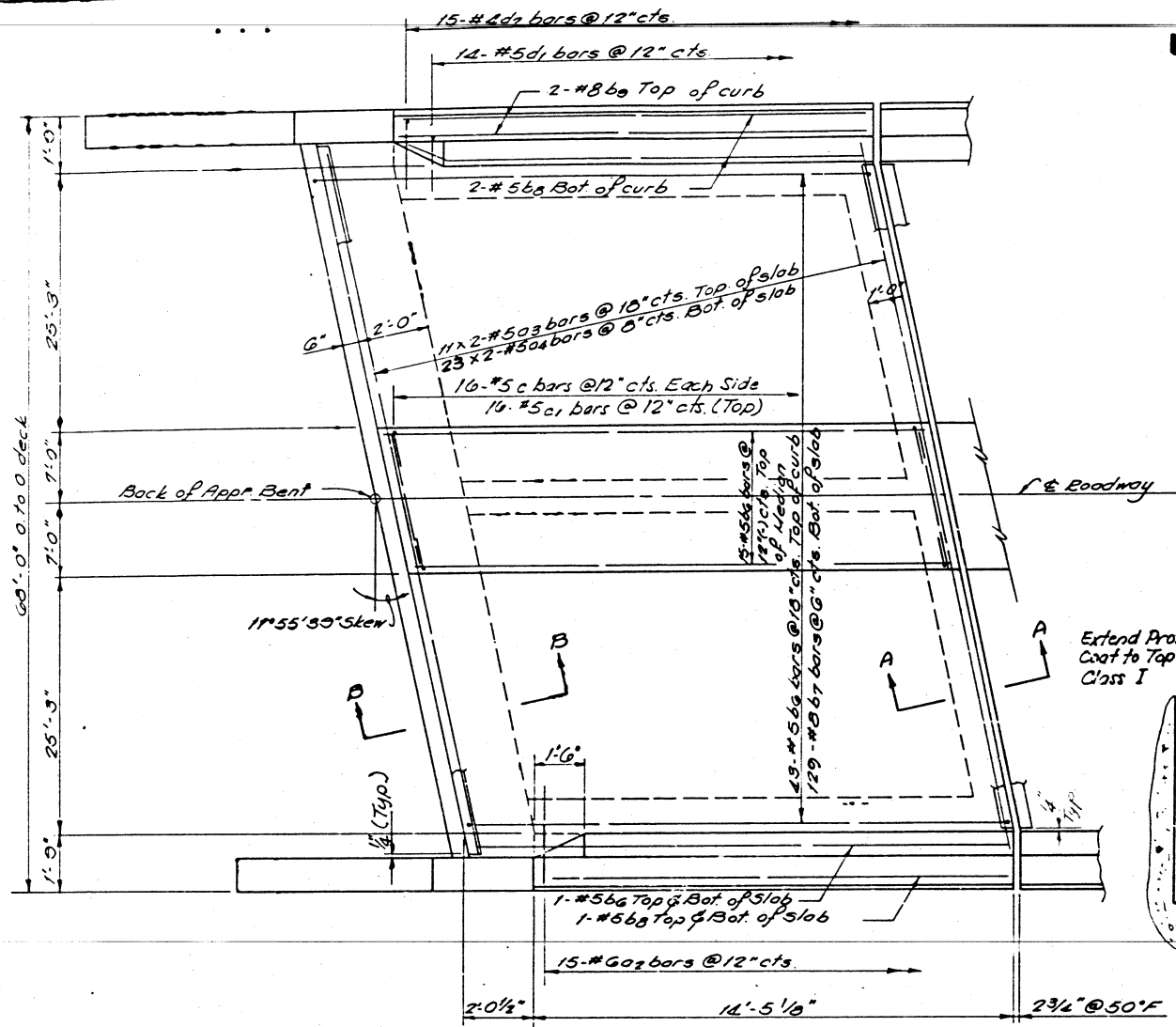


CURB SECTION

BILL OF MATERIAL				
Bar	No.	Size	Length	Shape
1	324	#6	35'-0"	
2	310	#6	32'-0"	
3	352	#6	4'-0"	
4	1378	#5	30'-0"	
5	60	#5	25'-0"	
6	32	#5	37'-0"	
7	24	#5	37'-0"	
8	0	#5	17'-0"	
9	0	#5	17'-0"	
10	275	#5	13'-0"	
11	444	#5	4'-0"	
12	444	#5	3'-0"	
				119870
Reinforcement Bars				Lbs. 23520
Class 2 Concrete				Cu Yds. 235.2

Rebar, Reinforcement and Class 2 Concrete are billed on sheet #6

SUPERSTRUCTURE
 F.R.T.E. 403 SEC. 195-24B
 WHITESIDE COUNTY
 STATION 1582+03.52

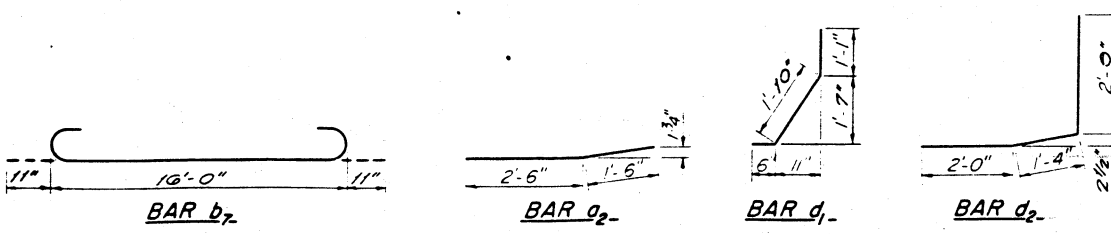


**TWO APPR. SLABS
BILL OF MATERIAL**

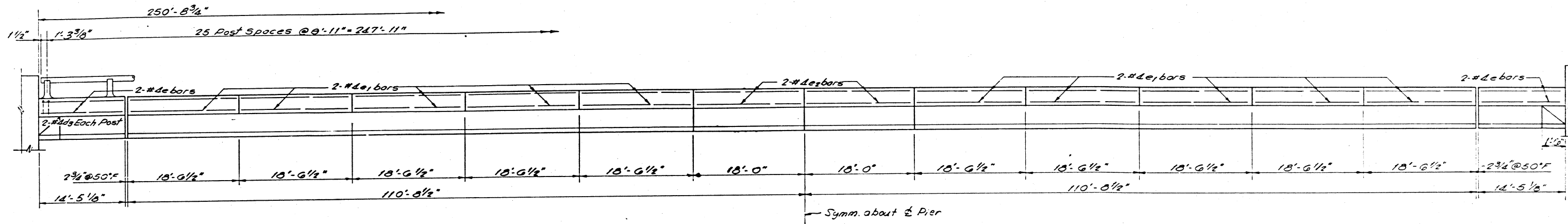
Eq.	No	Size	Length	Shape
a2	60	#6	4'-0"	
a3	44	#5	34'-3"	
a4	92	#6	33'-5"	
b6	124	#5	16'-0"	
b7	258	#8	17'-10"	
b8	16	#5	14'-1"	
b9	8	#5	14'-1"	
c1	64	#5	3'-4"	
c2	32	#5	13'-10"	
d1	56	#5	3'-5"	
d2	60	#4	6'-1"	
Reinforcement Bars			Lbs	21150
Class X Concrete			Cu Yds	105.6

*Parapet Reinforcement and Class X Concrete are billed on sheet # 4.

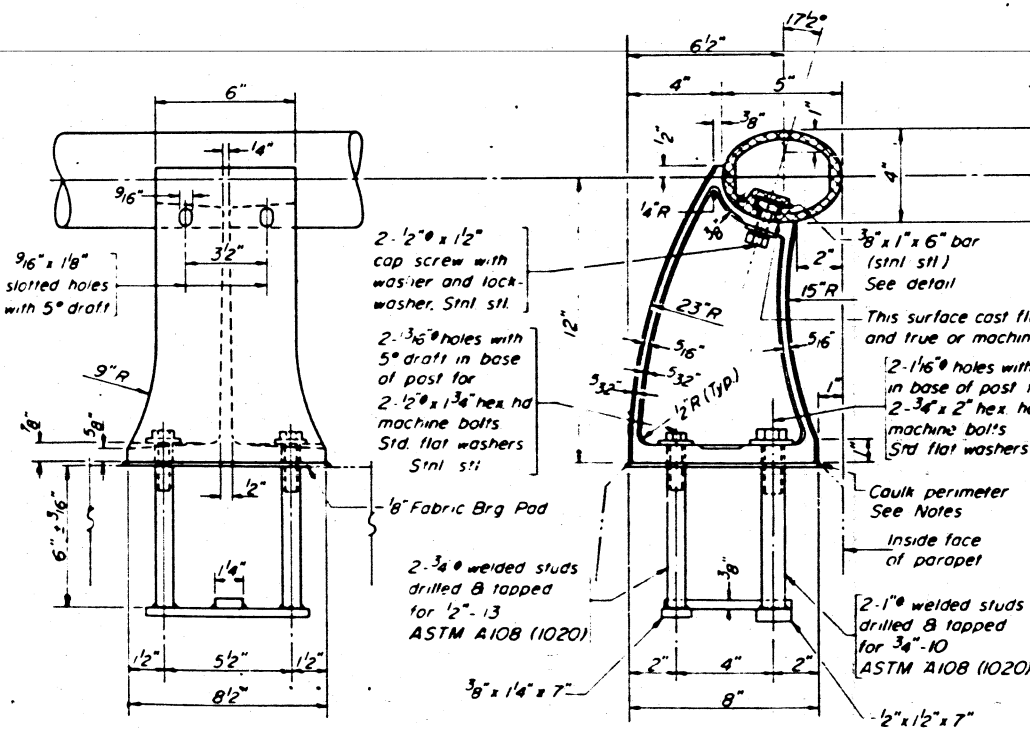
DESIGNED	C.D.C.	19
CHECKED	S.MCK.	ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
DRAWN	C.D.C.	ENGINEER OF DESIGN
CHECKED	S.MCK.	CHIEF HIGHWAY ENGINEER



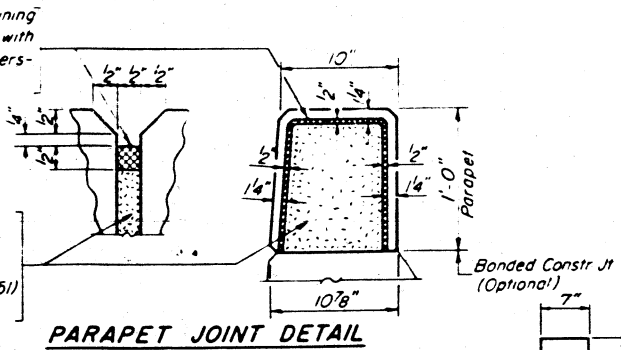
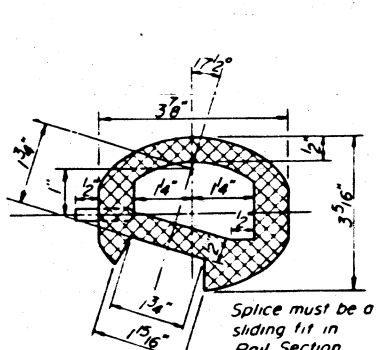
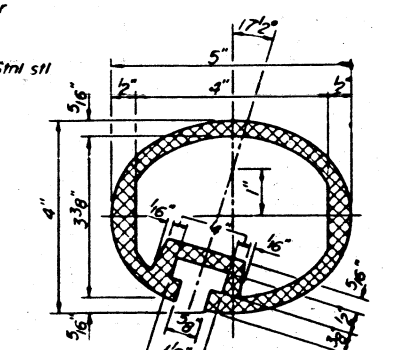
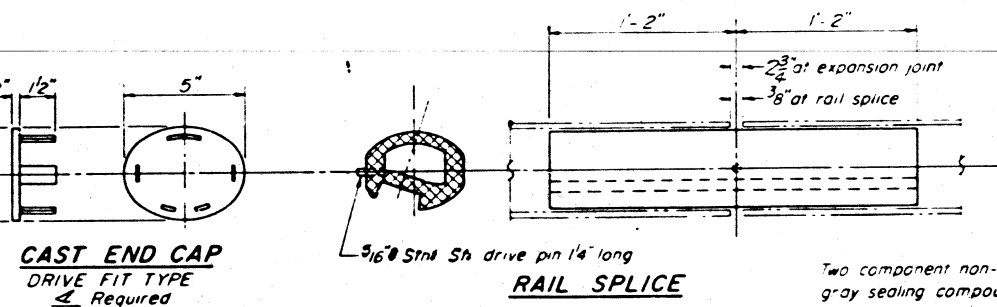
APPROACH SLABS
F.A. RTE. 403 SEC. 195- 2HB
WHITESIDE COUNTY
STATION 1582 +83.52



ELEVATION



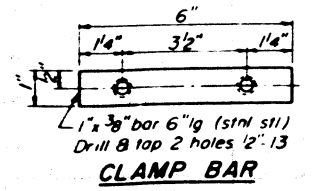
RAIL POST DETAILS



PARAPETS & RAILS
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
e	16	#4	12'-2"	—
e1	20	#4	18'-3"	—
e2	16	#4	17'-8"	—
d3	104	#4	2'-1"	□
Reinforcement Bars			Lbs	1260
Class X Concrete *			Cu Yds	51.2
Aluminum Railing			Lin Ft	501

DESIGNED C.D.C.	EXAMINED
CHECKED S.M.C.K.	PASSED
DRAWN C.D.C.	APPROVED
CHECKED S.M.C.K.	



NOTES:

All Aluminum Alloy Extruded Rail shall be supplied in modular lengths of 30 feet, except at the end of bridge or over open joints in bridge deck where the rail shall be attached to a minimum of 2 posts. If the rail is on a horizontal curve of 2300 foot radius or less, the modular lengths may be reduced but shall be attached to a minimum of 2 posts.

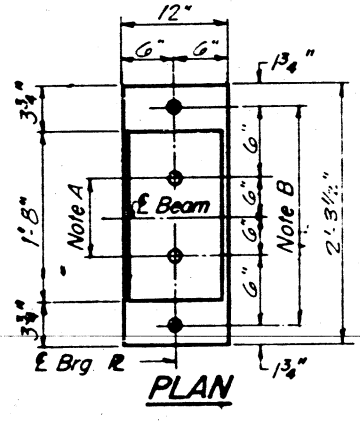
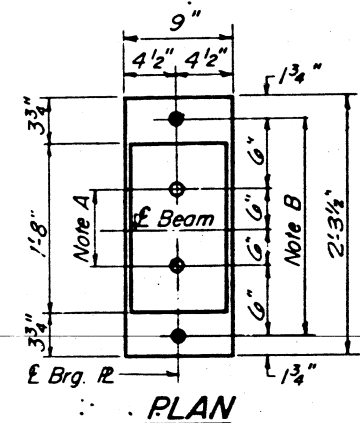
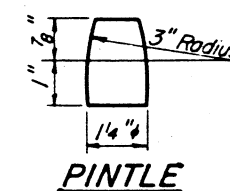
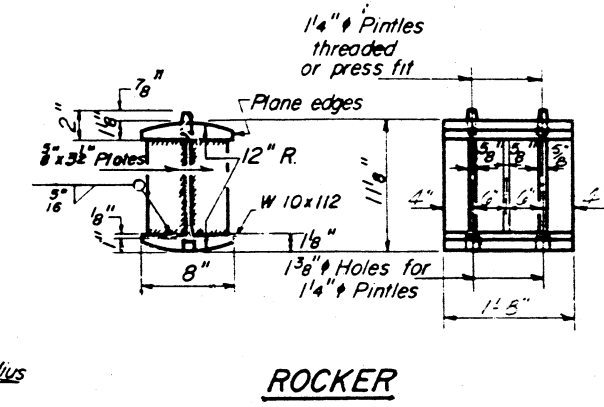
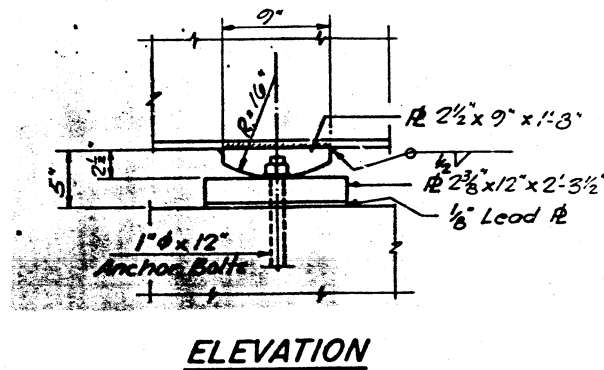
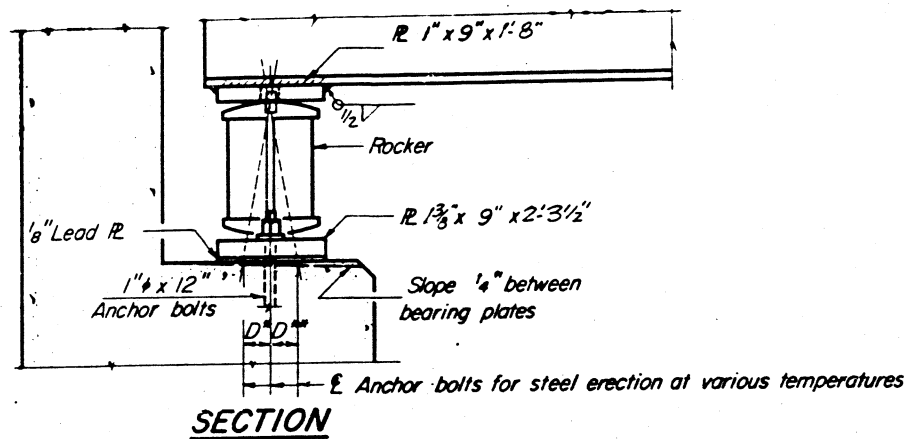
All joints in rail shall be spliced per detail.

Provide 1-1/8" and 2-1/16" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade - high spots shall be ground and low spots shimmed.

Seal perimeter of base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers, gun grade with primer. Fabric Bearing Pad shall have same dimensions as base of post.

Aluminum alloy rail shall conform to ASTM B221 alloy 6061-T6 or 6351-T5 with min yield 35 ksi, min tensile 38 ksi, and elongation of 10% in 2 inches.

*Includes Curbs and Parapets.
ALUMINUM RAILING
F.A. RTE. 403 SEC. 195-2 HB
WHITESIDE COUNTY
STATION 1582+83.52



NOTE A
 1 3/8" Holes - 1" deep in top R.
 for pintles. Thread or press fit
 pintles into bottom R.

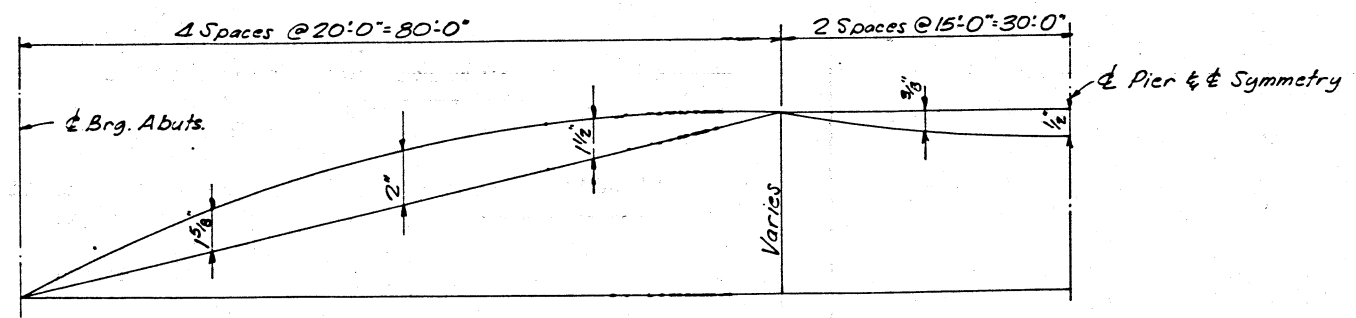
NOTE B
 1 1/2" Holes for 1" anchor bolts.
 1 3/8" x 2 1/2" x 2 1/2" R. Washers
 under nut.

NOTE C
 1 3/8" Holes 1" deep in top R.
 only for 1 1/4" pintles.

BEARING ASSEMBLY DETAILS

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

- a) D^* (Side of brg away from fixed brg)
 $D^* = \frac{1}{8}$ " per each 100' of expansion for every 15° fall below the normal temp. of 50°F
- D^{**} (Side of brg toward fixed brg)
 $D^{**} = \frac{1}{8}$ " per each 100' of expansion for every 15° rise above the normal temp. of 50°F
- b) After beams have been erected and dimensions D^* or D^{**} determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.



DESIGNED S.M.C.K.	EXAMINED
CHECKED C.D.C.	PASSED
DRAWN P.G. Barnett & C.D.C.	APPROVED
CHECKED S.M.C.K.	

SHOES
 F.A.R.T.E. 403-SEC. 195-2HB
 WHITESIDE COUNTY
 STATION 1582+83.52

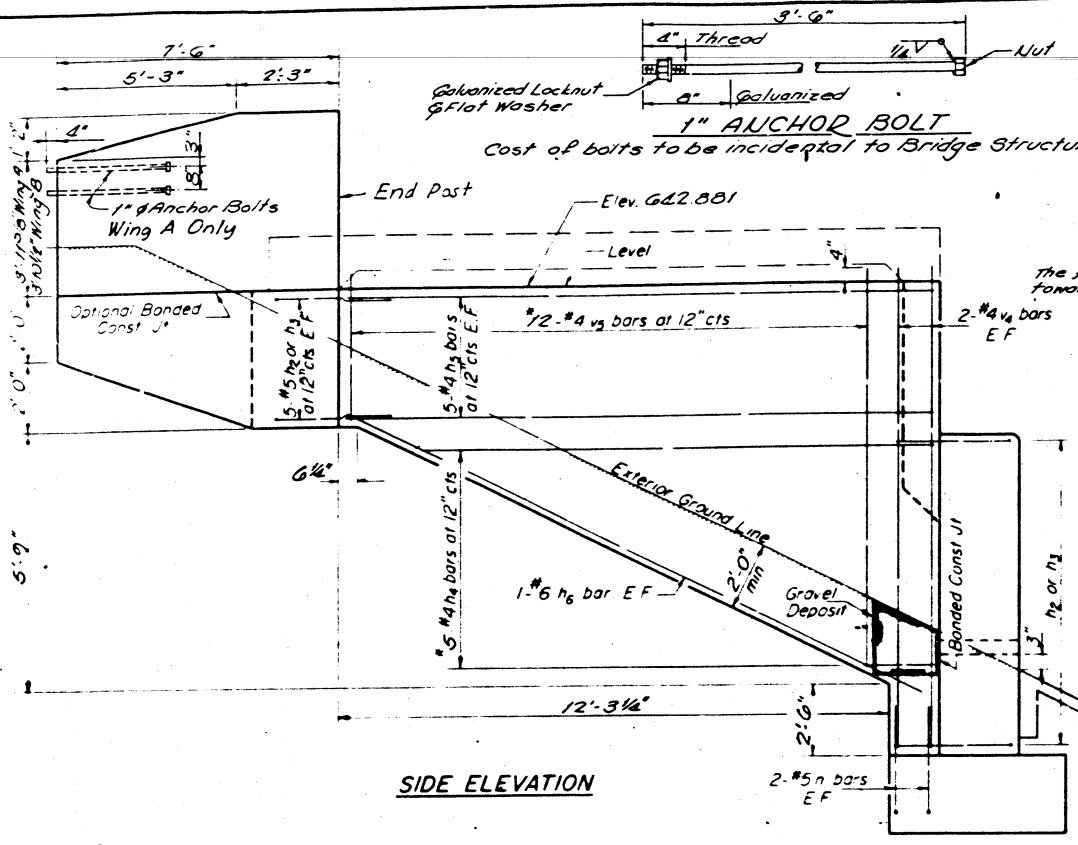
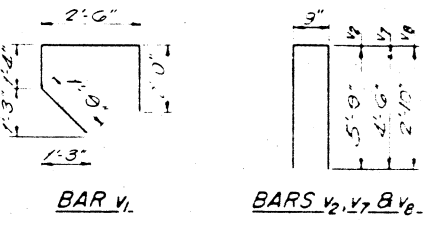
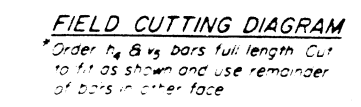
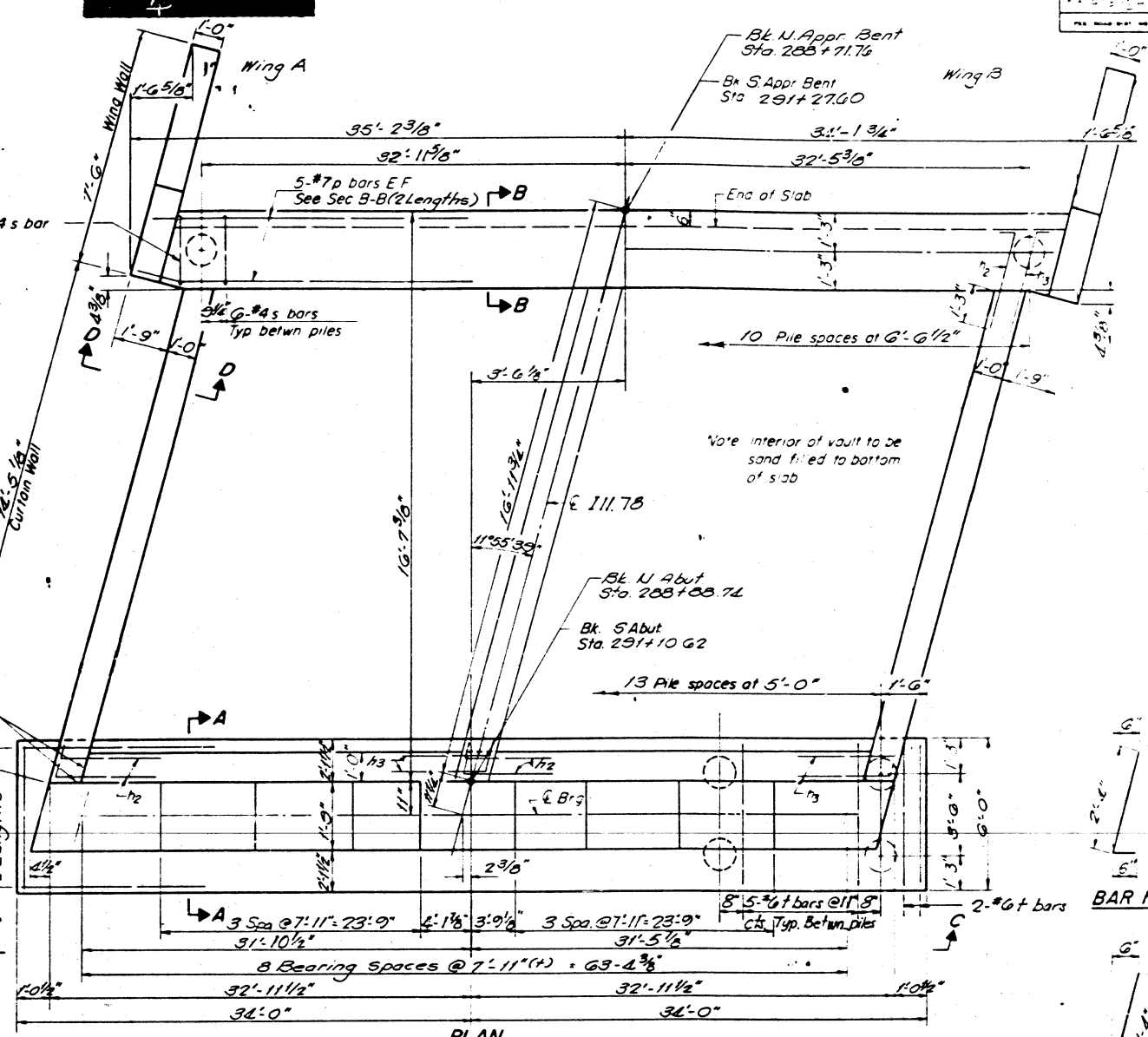


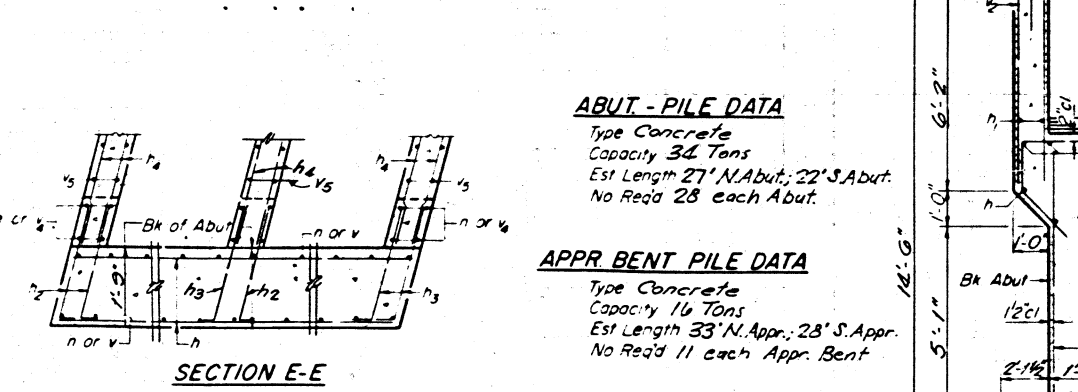
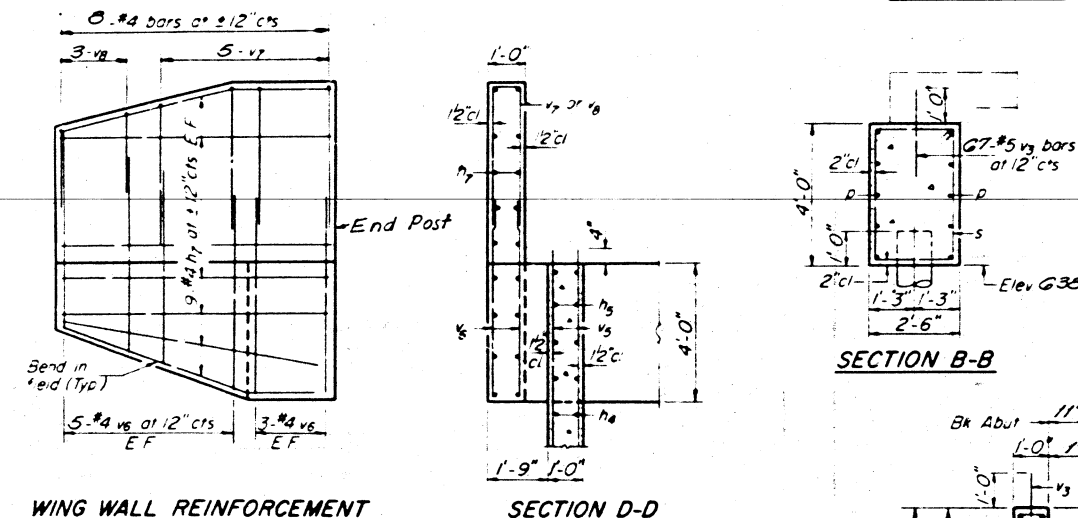
TABLE OF ELEVATIONS

Elev.	N. Abut.	S. Abut.
A	638.284	638.287
B	638.485	638.439
C	638.548	638.552
D	638.609	638.663
E	638.769	638.773
F	638.638	638.642
G	638.506	638.511
H	638.373	638.378
I	638.201	638.205



TWO ABUTMENTS
BILL OF MATERIAL

Bar	No	Size	Length	Shape
n	72	#5	33'-6"	—
n1	40	#5	31'-1"	—
n2	108	#5	2'-10"	L
n3	108	#5	2'-10"	J
n4	30	#4	15'-7"	—
n5	60	#4	14'-2"	—
n6	12	#6	15'-3"	—
n7	72	#4	7'-3"	—
p	288	#5	3'-6"	—
p1	40	#7	35'-5"	—
s	124	#4	12'-5"	—
s1	198	#6	5'-8"	—
v	264	#5	7'-5"	—
v1	128	#5	7'-7"	—
v2	128	#5	12'-3"	—
v3	262	#5	2'-3"	—
v4	24	#4	12'-7"	—
v5	72	#4	12'-1"	—
v6	64	#4	5'-8"	—
v7	20	#4	9'-9"	—
v8	72	#4	6'-5"	—
w	16	#5	34'-5"	—
Reinforcement Bars	Lbs	19,280		
Class X Concrete	Cu Yds	220.5		
Concrete Piles	Lin. Ft.	1994		
Test Piles, Concrete	Ea.	2		



DESIGNED A.K.C.

CHECKED H.M.V.

DRAWN G.D.C.

CHECKED S.M.C.

EXAMINED _____

PASSED _____

APPROVED _____

ABUTMENTS
FARTE. 403 SEC. 195-2H/B
WHITESIDE COUNTY
STATION 1582+83.52

PROJECT NO.	106
DATE	10/2/52
ENGINEER	W.H. BROWN
CHECKED	H.M.W.
DRAWN	C.D.C.
CHECKED	S.M.K.

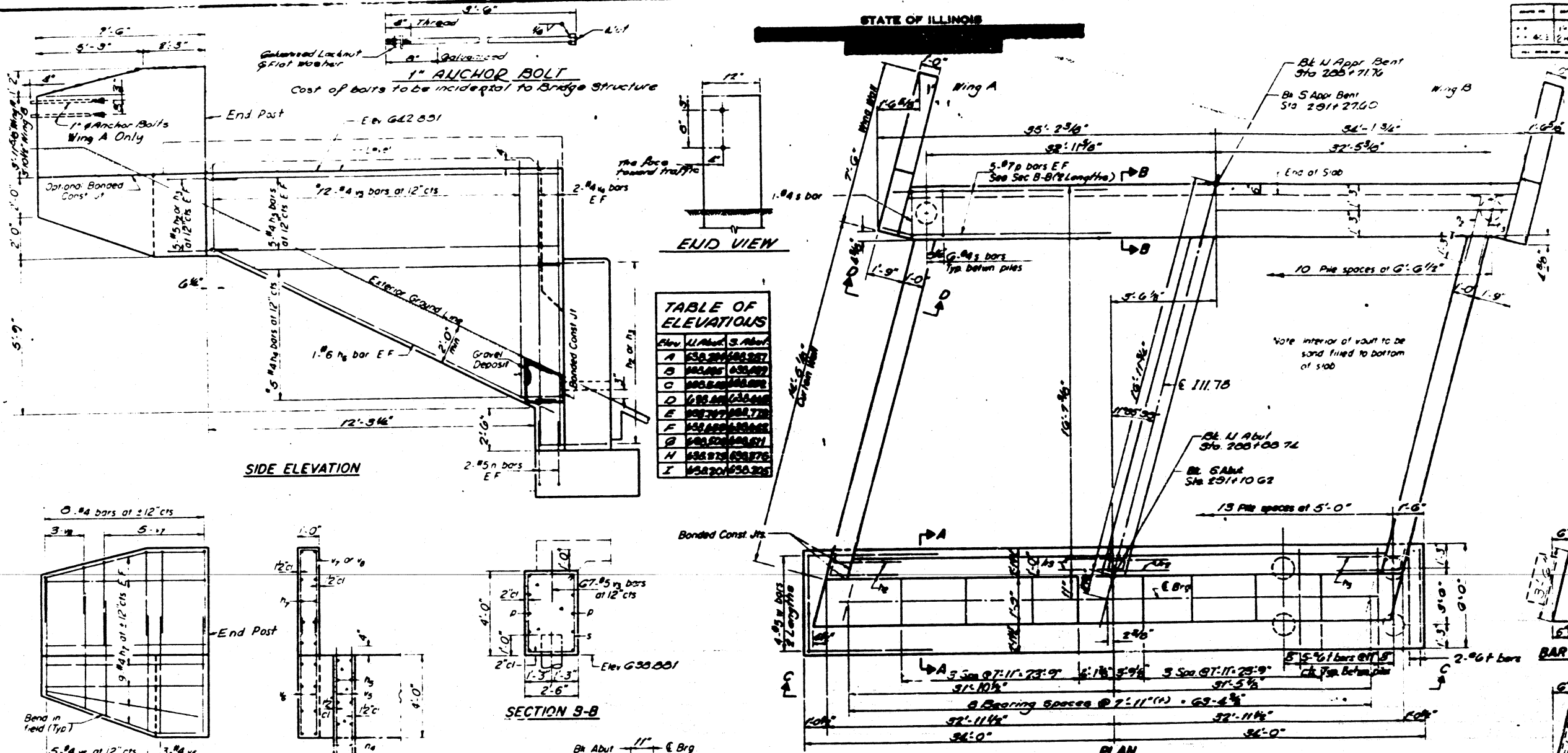


TABLE OF ELEVATIONS

Point	Elev.	Notes
A	630.20	Top of Abut. S
B	630.40	Top of Abut. N
C	630.60	Top of Abut. S
D	630.80	Top of Abut. N
E	631.00	Top of Abut. S
F	631.20	Top of Abut. N
G	631.40	Top of Abut. S
H	631.60	Top of Abut. N
I	631.80	Top of Abut. S
J	632.00	Top of Abut. N

FIELD CUTTING DIAGRAM
 Order by B by bars full length cut to fit as shown and use remainder of bars in other face

TWO ABUTMENTS ALL OF MATERIAL

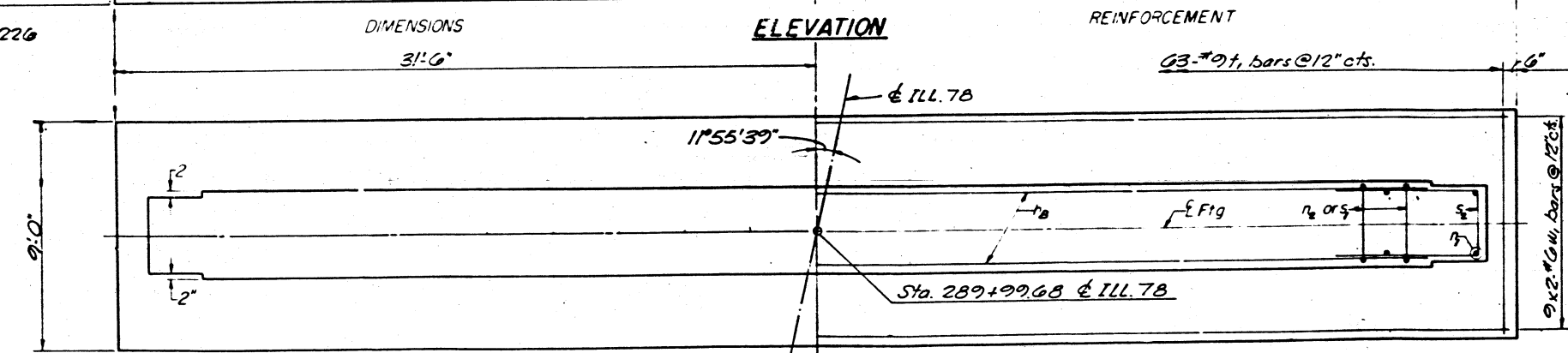
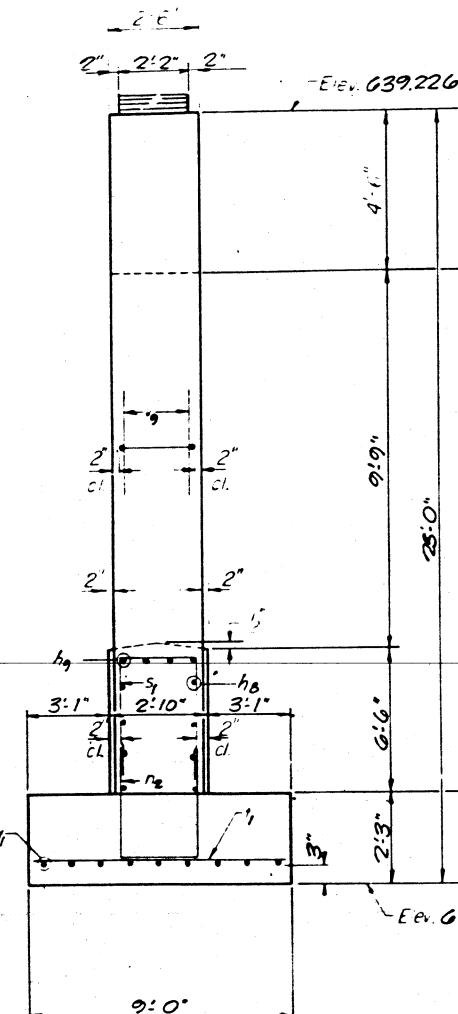
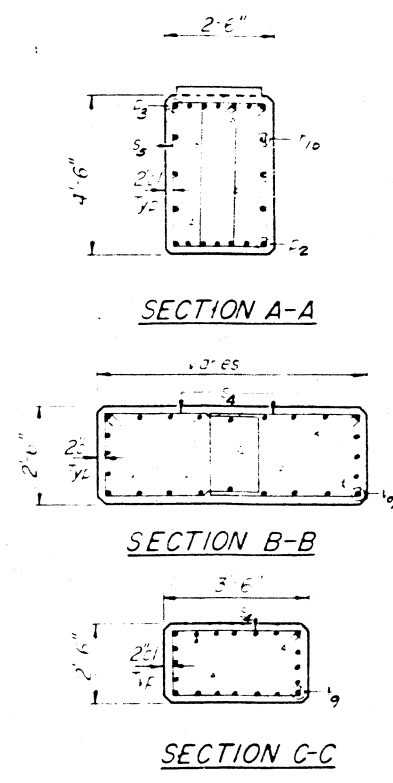
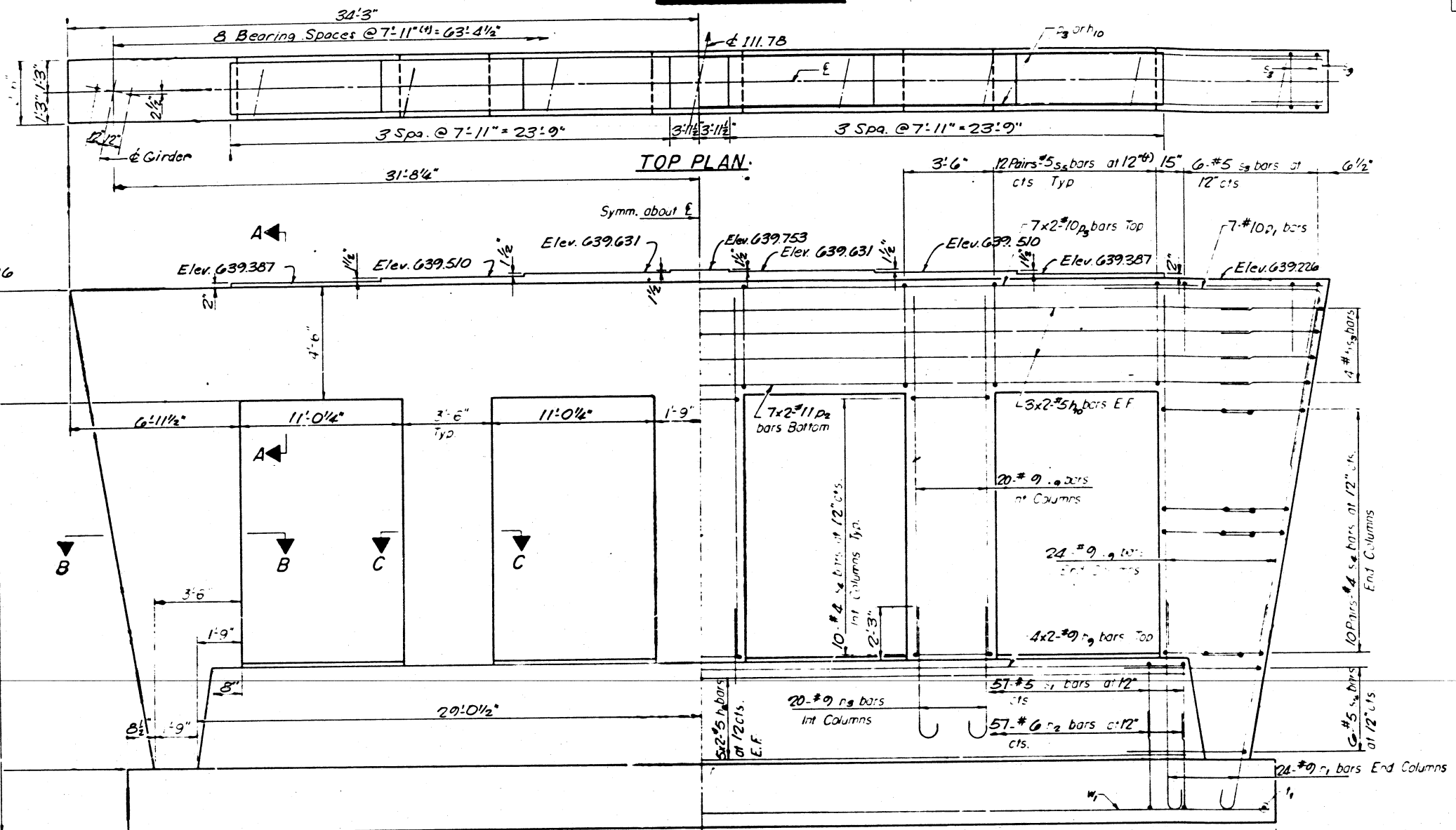
Bar	No.	Size	Length	Shape
1	78	5/8"	58'-0"	—
2	40	5/8"	36'-0"	—
3	108	5/8"	1'-0"	—
4	108	5/8"	1'-0"	—
5	30	5/8"	10'-0"	—
6	60	5/8"	10'-0"	—
7	12	5/8"	10'-0"	—
8	72	5/8"	1'-0"	—
9	208	5/8"	5'-0"	—
10	40	5/8"	36'-0"	—
11	124	5/8"	1'-0"	—
12	156	5/8"	6'-0"	—
13	204	5/8"	7'-5"	—
14	120	5/8"	7'-5"	—
15	120	5/8"	12'-0"	—
16	202	5/8"	8'-5"	—
17	86	5/8"	15'-0"	—
18	72	5/8"	10'-0"	—
19	66	5/8"	5'-0"	—
20	20	5/8"	6'-0"	—
21	12	5/8"	6'-0"	—
22	10	5/8"	36'-0"	—
Reinforcement Bars	Lin.	1951		
Class X Concrete	Co. No.	2005		
Concrete Pile	Lin. No.	1994		
Rest Pile Concrete	Co.	2		

ABUT - PILE DATA
 Type Concrete
 Capacity 34 Tons
 Est Length 27' N. Abut., 22' S. Abut.
 No Reqd 28 each Abut.

APPR BENT PILE DATA
 Type Concrete
 Capacity 16 Tons
 Est Length 33' N. Appr., 28' S. Appr.
 No Reqd 11 each Appr. Bent

DESIGNED	A.K.C.
CHECKED	H.M.W.
DRAWN	C.D.C.
CHECKED	S.M.K.

NOTES:
 Splice reinforcement top to miss anchor bolts.
 All edges shall have standard 4 corner bars except as noted.
 Four steps made thickly with G.C.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
n1	20	#5	28'-6"	□
n2	20	#9	29'-0"	□
n3	12	#5	32'-2"	□
s1	48	#9	10'-9"	□
s2	57	#6	12'-6"	□
s3	60	#9	5'-6"	□
p1	14	#10	15'-5"	□
p2	14	#11	34'-9"	□
s4	14	#10	35'-6"	□
s5	57	#5	11'-2"	□
s6	12	#5	12'-2"	□
s7	20	#5	9'-2"	□
s8	70	#4	11'-5"	□
s9	96	#5	12'-3"	□
n4	63	#9	8'-8"	□
n5	108	#9	13'-9"	□
n6	18	#6	32'-1"	□
Class X Concrete		Cu. Yds	138.2	
Reinforcement Bars		Lbs.	21930	

A&B DIMENSIONS

Bar	A	B
n2	2'-0"	5'-0"
s1	2'-0"	4'-4"
s2	2'-2"	5'-0"
s3	2'-2"	3'-6"

PIERS
 F.A. RTE. 403-SEC. 105-2HB
 WHITESIDE COUNTY
 STATION 1582+83.52

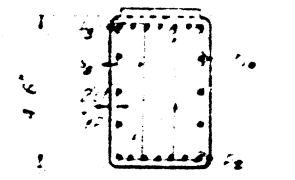
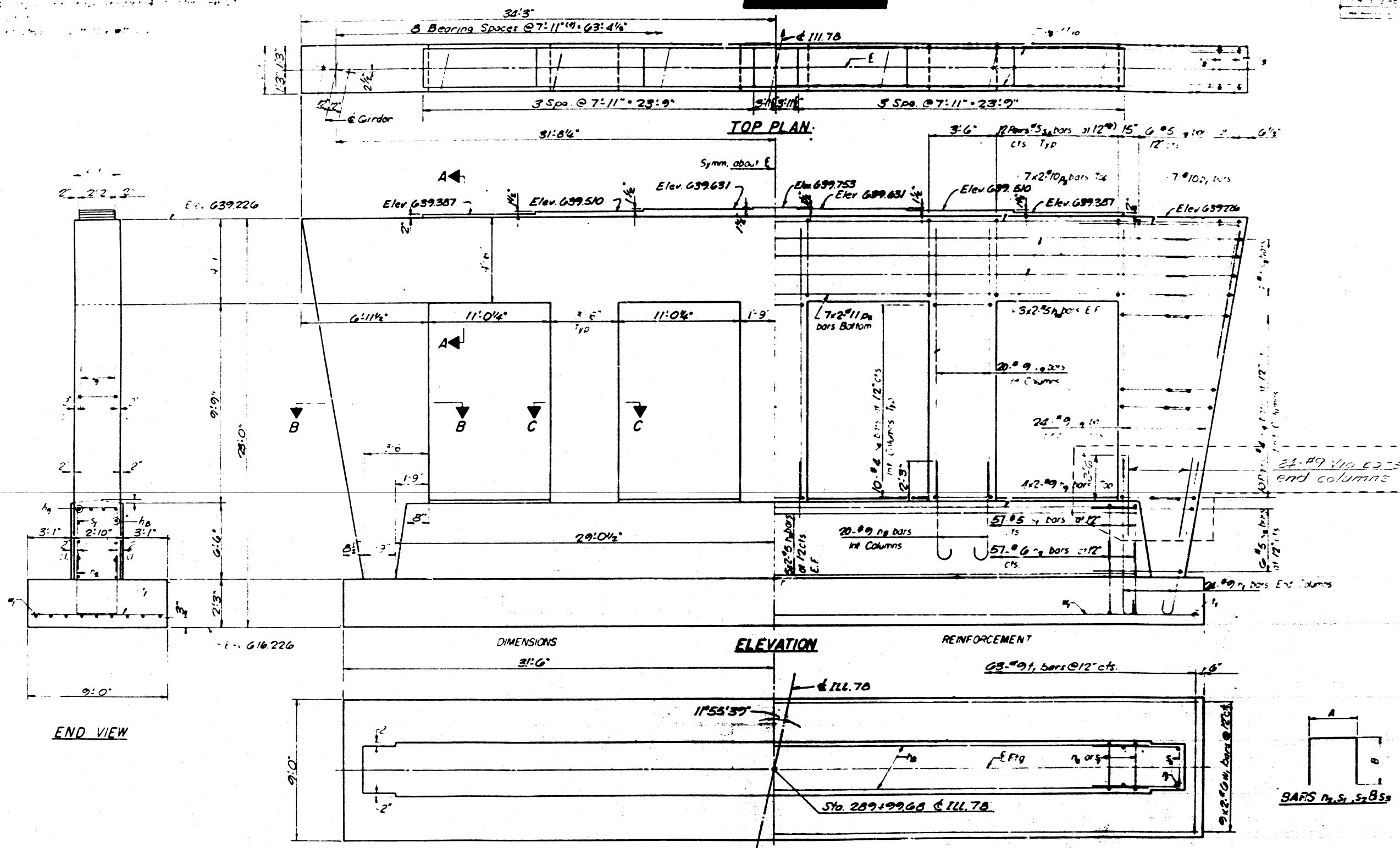
DESIGNED A.R.C.
 CHECKED H.M.W.
 DRAWN C.D.C.
 CHECKED S.M.C.

EXAMINED _____
 PASSED _____
 APPROVED _____

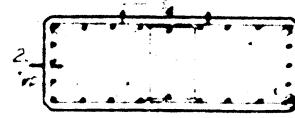
NOTES

STATE OF ILLINOIS

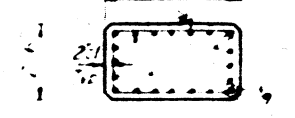
WHITESIDE CO. 107A



SECTION A-A



SECTION B-B



SECTION C-C

BILL OF MATERIAL

Bar No.	Size	Length	Shape
h	20	28'-6"	U
h	20	28'-6"	U
h	8	29'-0"	U
h	12	29'-2"	U
h	48	10'-9"	U
h	57	12'-6"	U
h	60	5'-6"	U
h	14	15'-5"	U
h	14	24'-9"	U
h	14	25'-6"	U
h	57	11'-2"	U
h	12	12'-2"	U
h	20	9'-2"	U
h	70	11'-5"	U
h	95	12'-3"	U
h	68	8'-8"	U
h	108	8'-9"	U
h	15	32'-7"	U

Class X Concrete Cu Vols 138.2
Reinforcement Bars Lbs 21930

BAR DIMENSIONS

Bar	A	B
h	2'-0"	5'-0"
h	2'-0"	4'-6"
h	2'-2"	5'-0"
h	2'-2"	4'-6"

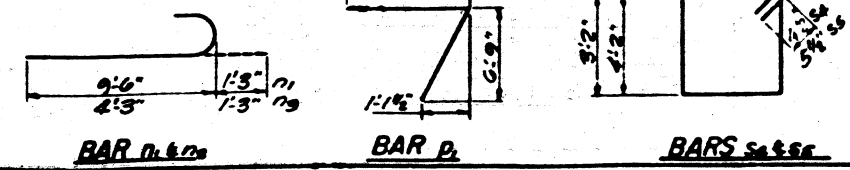
DESIGNED	A.K.C.
CHECKED	H.M.W.
DRAWN	C.D.C.
CHECKED	S.M.C.

EXAMINED	
PASSED	
APPROVED	

Additional Bill of Material

Bar	No	Size	Length	Shape
Via	48	#9	5'-0"	
Reinforcement Bars		Lbs.		816

FOOTING PLAN



DIERS
F.A. RTE. 403-SEC. 145-2NB
WHITESIDE COUNTY
STATION 152+80.00

Boring No. B-1 Station 58+84 Offset 28' Lt. S.	Elevation	N	Q _u /s.t.	v (%)	Surface Water H. Groundwater H. at Completion After Hours	Elevation	N	Q _u /s.t.	v (%)
Ground Surface	622.0	0			601.0				
Soft, Lt. Brown, Silty Loam		3	P .30	26.9	Loose, Brown, Sand (No Gravel)	-25	6		
Stiff, Lt. Brown, Silty Loam		5	B 1.16	26.6	Medium, Brown, Sand with Gravel	-12			
	615.0				592.5				
Medium, Lt. Brown, Sandy Loam		11	F .75		Very Stiff, Brown, Sandy Loam - Till (with Gravel)	-30	19	3.71	
Loose, Brown, Sand with Gravel (Clean & Dry)		8			Same as Above (Gray in Color)	-18	8	3.50	
Dense, Brown, Sand with Gravel		30			Same as Above	-35	18	3.64	
Same as Above		34			Very Dense, Brown Sand with Gravel	-9			penetration 100
Medium, Brown, Sand & Gravel (Clean & Moist)		29			(Some Brown Decayed Limestone) Same as Above	-40			11" penetration 100
Same as above		19			Same as Above	-20			10" penetration 100
Same as above		13			End of Boring	579.0			

Boring No. B-2 Station 100+06 Offset 28' Rt. S.	Elevation	N	Q _u /s.t.	v (%)	Surface Water H. Groundwater H. at Completion After Hours	Elevation	N	Q _u /s.t.	v (%)
Ground Surface	622.0	0			601.0				
Soft, Lt. Brown, Silty Loam		6	P .40	27.4	Same as Above	-25	17		
Medium, Lt. Brown, Silty Loam		11	B .87	23.9	Dense, Brown, Sand with Gravel	-35			
	617.0				592.5				
Dense, Brown, Sand with Gravel		30			Hard, Gray, GLACIAL TILL	-30	50		
Same as Above (Clean & Dry)		43			Same as Above	-59			
Same as Above		31			Same as Above	-23	65		
					586.7				
Medium, Lt. Brown Sand with Gravel		20			Very Dense, Brown, Sand & Gravel, with (Fragmented Limestone)	-100			8" penetration
Same as Above		30			Same as Above	-40			11" penetration 100
Dense, Brown, Sand with Gravel		30			(with Decayed Limestone) Same as Above	-100			6" penetration 100
					579.0				
Medium, Brown, Sand with Gravel		26			END OF BORING	579.0			

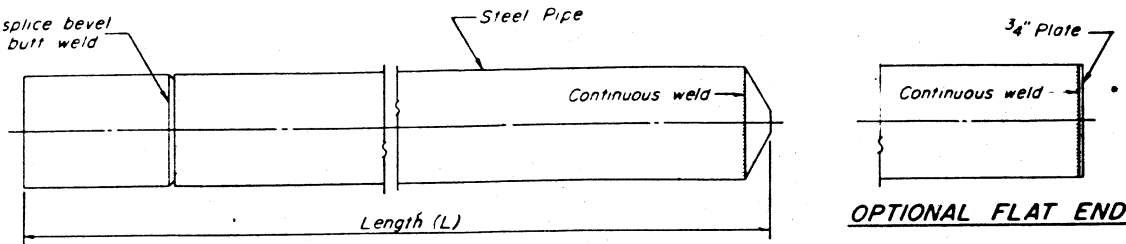
Boring No. B-3 Station 101+04 Offset 26' Lt. S.	Elevation	N	Q _u /s.t.	v (%)	Surface Water H. Groundwater H. at Completion After Hours	Elevation	N	Q _u /s.t.	v (%)
Ground Surface	622.0	0			604.0				
Very Soft, Brown, Silty Loam		4	P .20	24.7	Dense, Brown, Sand with Gravel	-25	12		
					595.5				
Soft, Brown, Silty Loam		7	B .51	29.4	Very Stiff, Grey, Sandy Loam - Till (with Gravel)	-20			P 2.5
					615.0				
Dense, Lt. Brown, Very Sand with Gravel		30			Same as Above	-30	17		P 2.0
Same as Above (Clean & Dry)		40			590.0				
Same as Above (Clean & Dry)		38			Very Dense, Brown, Sand & Gravel with Fractured Limestone	-54			
Same as Above (Clean & Dry)		34			Same as Above	-35	70		
Same as Above (Clean & Dry)		38			Same as Above	-85			
Same as Above (Clean & Dry)		38			Same as Above (Some Brown Decayed Limestone)	-40	98		
Same as Above (Clean & Dry)		40			Same as Above	-100			7" penetration
Same as Above		40			Same as Above	-100			8" penetration 100
Very Dense, Brown, Sand & Gravel with Decayed Limestone					579.0				8" penetration 100
End of Boring									

N - Standard Penetration Test - Blow per foot to drive 2" O.D. 60 lb SPT Sampler 12" with 140 lb hammer falling 25'.
 Q_u - Unconfined Compression Strength - t/ft.
 v - Water Content - percentage of oven dry weight - S.
 Type failure:
 S - Shear Failure
 C - Compression Failure
 P - Penetration

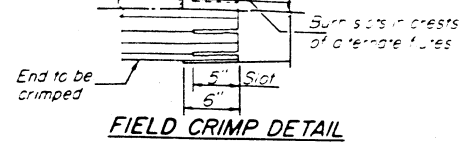
DESIGNED _____
 CHECKED _____
 DRAWN _____
 CHECKED _____
 EXAMINED _____
 PASSED _____
 APPROVED _____
 19

BORING LOGS
 F.A.R.T.E. 403-SEC.195-2HB
 WHITESIDE COUNTY
 STATION 1582+83.52

For field splice level edge and butt weld

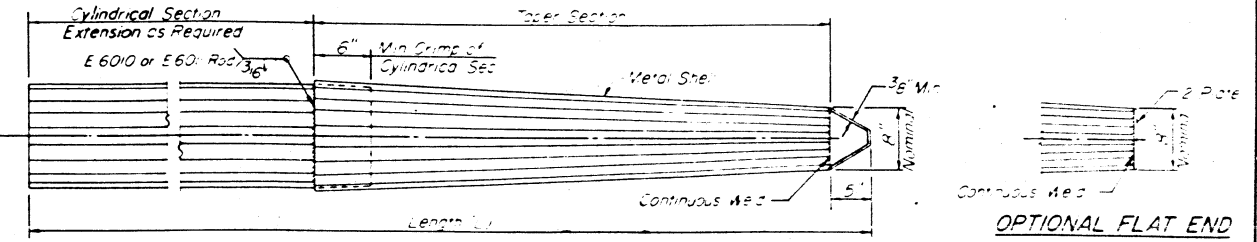


OPTIONAL FLAT END



FIELD CRIMP DETAIL

Note: 6 Crimp shall be supplied on the cylindrical section or made in the field as detailed



ALLOWABLE TAPER SECTIONS

- 0' Length - Taper in 2'-8"
- 7' Length - Taper in 4'-0"
- 25' Length - Taper in 7'-0"
- 30' Length - Taper in 7'-0"

Forms for encasement may be omitted when soil conditions will permit.

Welded wire fabric 6" x 6" mesh #4 wire - Wt. 58#/100 sq ft. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles. The thickness of the shell shall be .1793 inches with a tolerance of 5%.

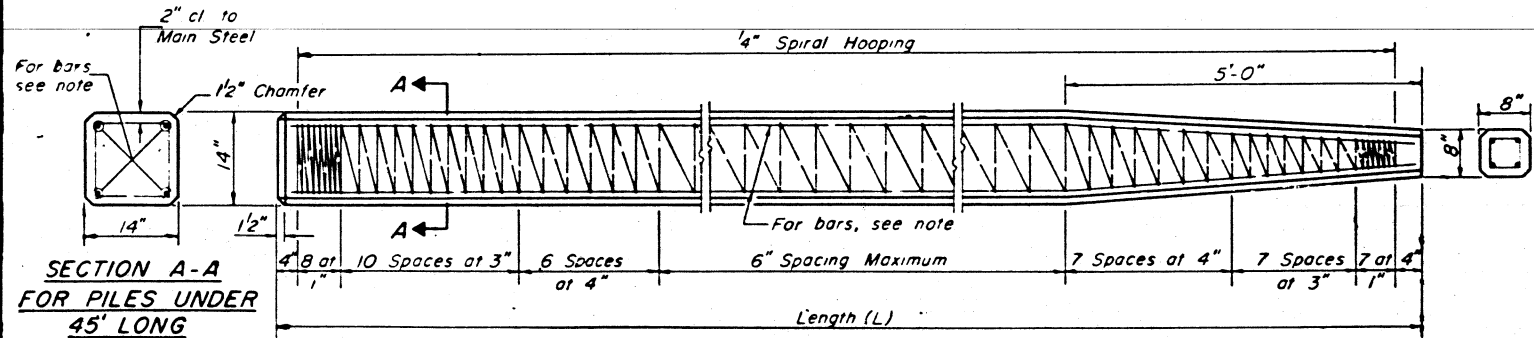
Note: Driving and bearing ends of pipe shall be cut square.

DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES

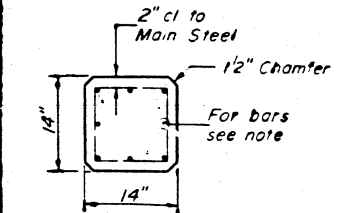
Welded wire fabric 6" x 6" mesh #4 wire - Wt. 58#/100 sq ft. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles. The thickness of the shell shall be .1793 inches with a tolerance of 5%.

Forms for encasement may be omitted when soil conditions will permit.

DETAIL OF TAPERED METAL SHELL FOR CAST IN PLACE CONCRETE PILES



SECTION A-A FOR PILES UNDER 45' LONG



SECTION A-A FOR PILES 45' OR MORE

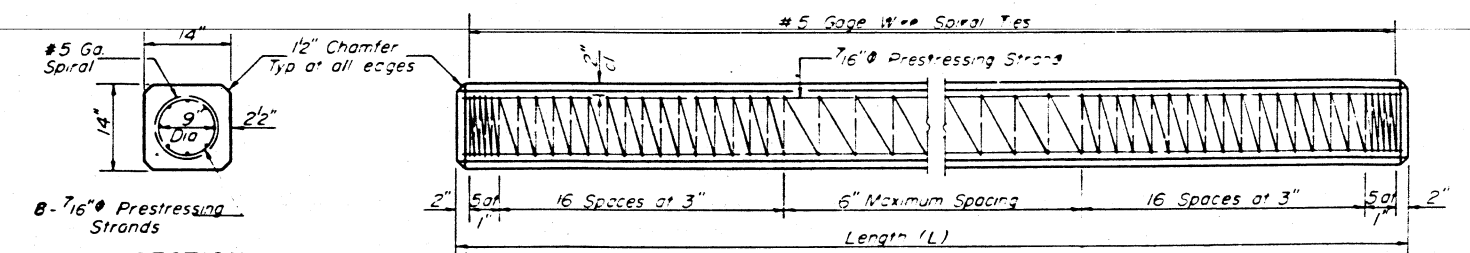
Note: For 14" Piles 45' long or more use 8-#8 bars 4 for the full length and 4 to the point of bevel. For 14" Piles under 45' long use 4-#9 bars full length.

Handling: For Pile lengths up to 45', use two slings placed at a distance of 0.21L from each end. For Piles longer than 45', use three slings placed at a distance of 0.12L from each end and at mid-point of pile.

Note: For length of piles (L) see sheet 9.

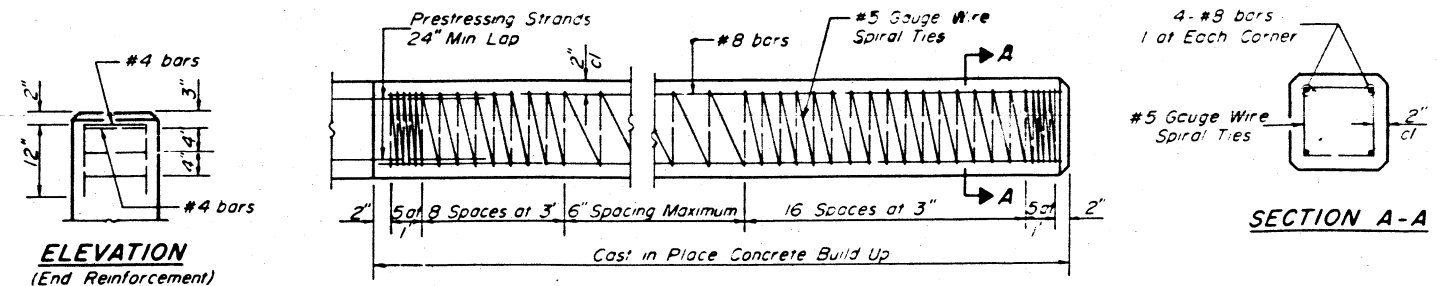
DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	APPROVED

DETAIL OF PRECAST CONCRETE PILES



SECTION THRU PILE

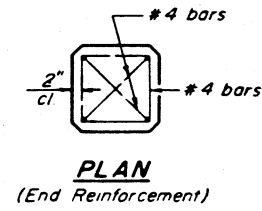
PILE PLAN



ELEVATION (End Reinforcement)

PILE BUILD UP

SECTION A-A



PLAN (End Reinforcement)

DESIGN STRESSES
 $f_c' = 5,000$ psi
 $f_{ci} = 4,000$ psi
 $f_s' = 268,000$ psi (31,000 lbs.)
 $f_{si} = 188,000$ psi (21,700 lbs.)

Note: Prestressing steel shall be non-galvanized extra high strength stress-relieved 7 wire strand. The nominal diameter shall be 7/16" and the minimum nominal cross-sectional area shall be 0.1155 square inch.

Handling: For pile lengths up to 65', use two slings placed at a distance of 0.21L from each end. For piles longer than 65', use three slings placed at a distance of 0.12L from each end at midpoint of pile.

PILE DETAILS
 FA. RTE. 403-SEC. 195-2HB
 WHITESIDE COUNTY
 STATION 1582+83.52