

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

ERI-6-14.93
M-BRM-6C00(I)
ERIE COUNTY
ERI-6-14.93

ERI - 6 - 14.93
HURON TOWNSHIP
ERIE COUNTY

M-BRM-6C00(I)

DESIGN DESIGNATION	° DESIGN EXCEPTIONS APPROVED 5/17/89		
	EXCEPTION ITEM	STANDARD REQUIRED	DESIGN PROVIDED
CURRENT ADT (1989) = 9680 DESIGN YEAR ADT(2009)= 11620			
D.H.V. = 1160	SUPERELEVATION	0.083 %	0.077 %
D = 55%			
T = 2%	HOR. STOPPING SIGHT DISTANCE	450'	355'
°V = 55 m.p.h.			
LEGAL SPEED = 55 m.p.h. FUNCTIONAL = Urban Principal CLASSIFICATION = Arterial	HORIZONTAL ALIGNMENT	6°	8°-45'

CONVENTIONAL SIGNS

County Line	-----	Limited Access (only)	-----	LA
Township Line	-----	Right of Way (only)	-----	RW
Section Line	-----	Limited Access & Right of Way	-----	LA & RW
Corporation Line	----- or -----	Existing Right of Way	-----	
Fence Line (existing)	---x---x---	Property Line (in existing fence)	---x---	
Center Line	----- 352 ----- 353 -----	Railroad	----- or -----	
Trees, Stumps, (to be removed)	---x---	Guardrail (existing)	----- (proposed) -----	
Utility Poles: Telephone, Power, Light	---o---			

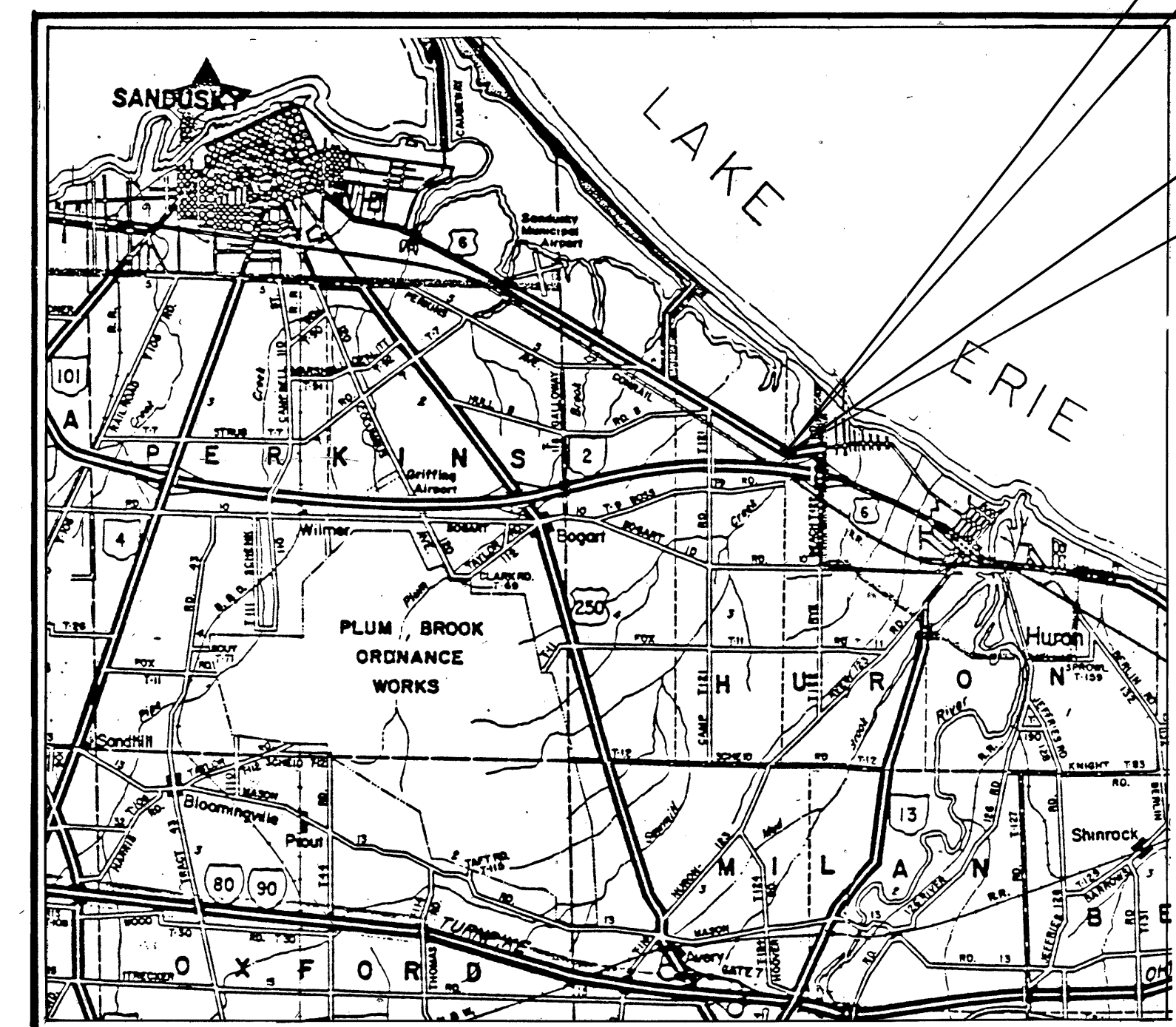
INDEX OF SHEETS

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LINE DATA

	BRM-6C00(I)	M-6C00(I)	TOTAL
BEGIN PROJECT	STA 788+54.70	STA 790+50	STA 788+54.70
END PROJECT	STA 790+50	STA 791+68.97	STA 791+68.97
LENGTH OF PROJECT	195.30 L.F. 0.037 MI.	118.97 L.F. 0.023 MI.	314.27 L.F. 0.060 MI.
BEGIN WORK	STA 787+25	STA 790+50	STA 787+25
END WORK	STA 790+50	STA 794+00	STA 794+00
LENGTH OF WORK	325.00 L.F. 0.062 MI.	350.00 L.F. 0.066 MI.	675.00 L.F. 0.128 MI.

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
Call--800-362-2764 (Toll free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

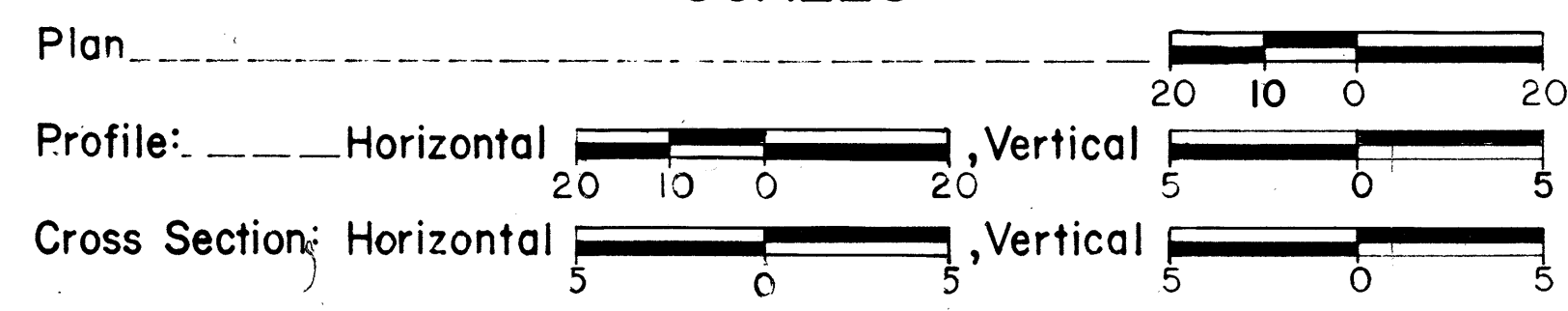


LOCATION MAP



Portion to be improved: _____
State & Federal Routes: _____
Other Roads: _____

SCALES



SUPPLEMENTAL SPECIFICATIONS	
802	5-4-88
847	10-17-83
849	12-24-85
944	6-24-89
947	10-17-83
949	9-29-86

Approved: *Harry M. Lane*
Date: 8/11/89 District Deputy Director of Transportation

Approved: *B.D. Henschelmann*
Date: 9/18/89 Engineer, Bureau of Bridges and Structural Design

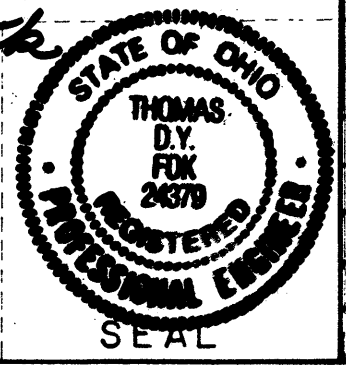
Approved: *Charles J. Still*
Date: 10/4/89 Chief Engineer, Planning and Design

Approved: *Bernard B. Hurst*
Date: 10/1/89 Director, Department of Transportation

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS					
BP-1	6-1-85	MC-1	6-13-69		
BP-3	12-6-76	MC-4	7-26-76	HW-4B	4-1-80 AS-1-81 11-27-81
BP-4	10-1-87				
BP-5	10-1-87	MC-II	8-1-78	MH-1	12-18-84 DBR-2-73 4-10-73
				MH-3	12-18-84
GR-1	1-11-85	HW-4A	4-1-80	MH-5	6-12-75 EXJ-2-81 4-2-84
GR-2B	2-5-82				
GR-3	1-21-85			MT-99.10	11-14-86 SD-1-69 6-12-69
GR-4	2-5-82			TC-41.10	8-29-84
				TC-41.20	3-26-79

STRUCTURE PLANS REVIEWED BY:
Burgess & Niple, Limited
Columbus, Ohio

Plan Prepared By: *Thomas Fok*
THOMAS FOK & ASSOCIATES
3896 MAHONING AVENUE
YOUNGSTOWN, OHIO 44515



Project: ERI-6-14.93 ERIE CO.
Date of Letting: 19__ Contract No. _____
LD0300 Rev. 1-1-81

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: _____
DIVISION ADMINISTRATOR DATE

MICROFILMED
SEP 17 1982

§ SURVEY CURVE DATA
 $\Delta = 36^{\circ}31'30''$
 $R = 654.19'$
 $D_c = 8^{\circ}45'30''$
 $L = 417.03'$
 $T = 215.88'$
 $C = 410.01'$
 $e = 34.70'$
 PC STA. 787+51.94
 PI STA. 789+67.82
 PT STA. 791+68.97
 $V_D = 55$ MPH
 $V_{ACT} = 47$ MPH
 $SSD = 355'$

LIMITS OF ITEM 254
PAVEMENT PLANING, BITUMINOUS

§ STA. 789+04 USR L= CHANNEL @ STA. 10+00

Calculated	WS	5/89	BY DATE	
Checked	J.T.	5/89		

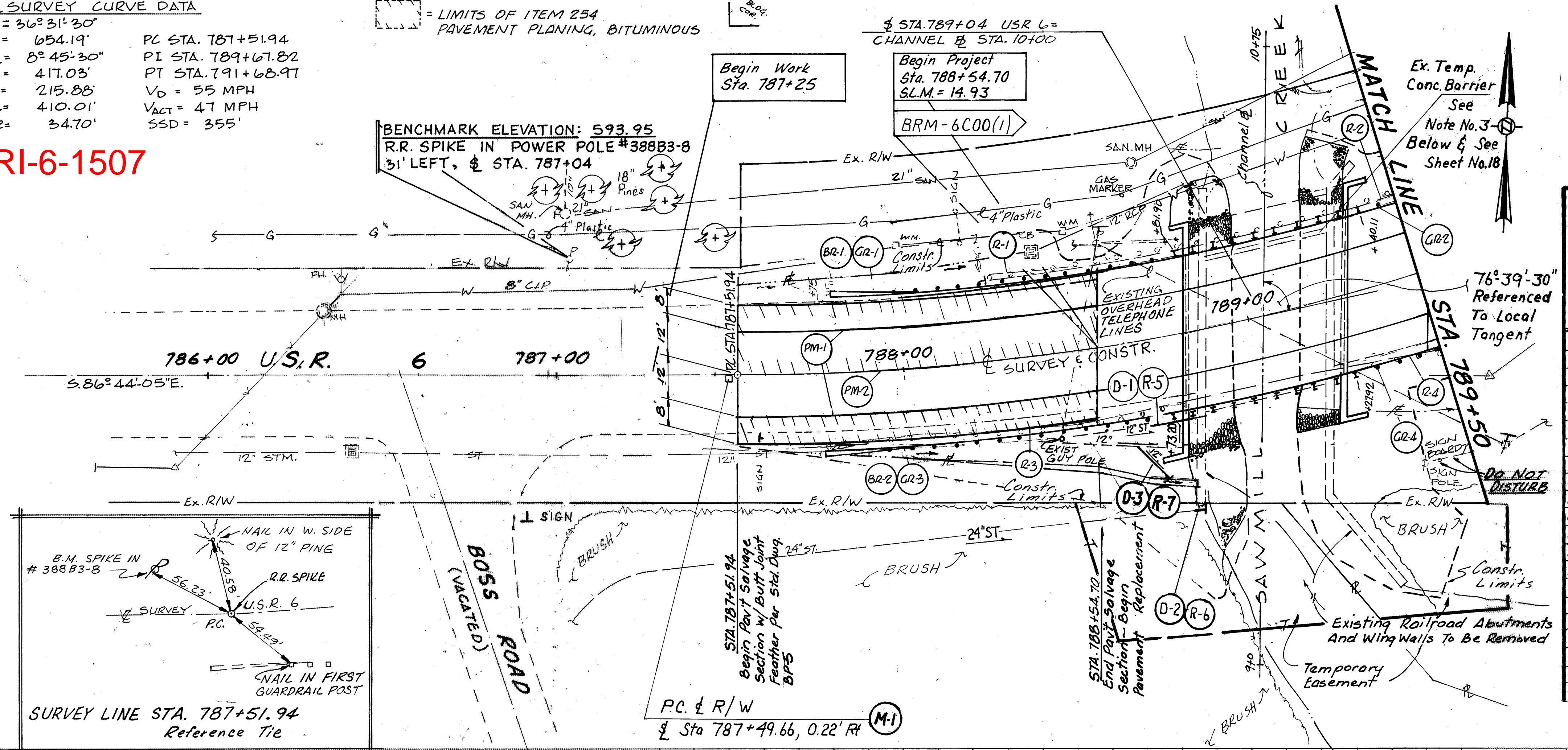
REGION	STATE	PROJECT
5	OHIO	M.B.M-6C00(1)

ERIE COUNTY
ERI-6-14.93

ERI-6-1507

BENCHMARK ELEVATION: 593.95
R.R. SPIKE IN POWER POLE #388B3-8
31' LEFT, § STA. 787+04

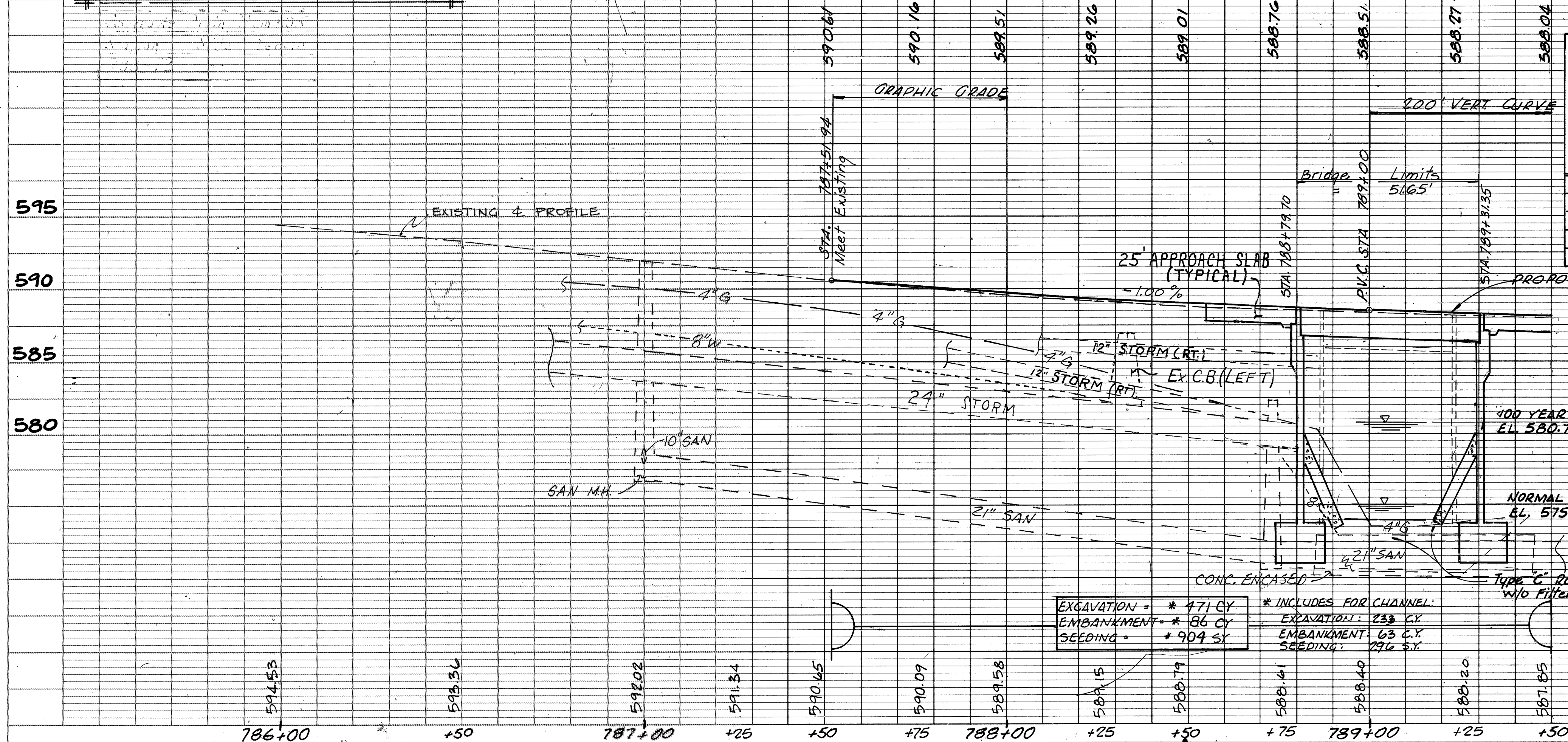
DATE: _____
BY: _____
SURVEYED: _____
NOTE BOOK: _____
NO. _____
CHECKED: _____
BY: _____
DATE: _____



Ref. No.	Station to Station	Side	202		604		202		802		606		621		621	
			GUARDRAIL REMOVED	MONUMENT ASSEMBLY, R.F.P.	PIPE REMOVED 64" AND UNDER	BARRIER REEL. TYPE A	BARRIER REEL. TYPE A2	GUARDRAIL TYPE 5	ANCHOR ASSEMB. TYPE A	BRIDGE TERM. ASSEMB. TYPE B	EDGE LINES WHITE	CENTER LINES SOLID DOUBLE				
R-1	788+16 TO 788+91	L	75													
R-2	789+30 TO 789+50	L	20													
R-3	787+83 TO 788+83	R	100													
R-4	789+18 TO 789+50	R	32													
M-1	787+49.66	R		1												
R-5	788+75	R			12											
R-6	788+75	R			2											
R-7	788+75	R			14											
GR-1	787+78.42 TO 788+81.90	L							75	1	1					
GR-2	789+40.11 TO 789+50	L							95.6							
GR-3	787+76.45 TO 788+73.20	R							75	1	1					
GR-4	789+27.92 TO 789+50	R							22.82							
BR-1	787+78.42 TO 789+50	L														
BR-2	787+76.45 TO 789+50	R														
PM-1	787+51 TO 789+50	L/R												3.98	LF	
PM-2	787+51 TO 789+50	±														1.99
TOTALS (BRM)			227	1	28	4	4	182.38	2	4	0.08	0.04				

Contractor Note
 1. For D-1, D-2, & D-3, refer to cross section sheets 13 & 14.
 2. Any existing high signs within the work limits shall be removed under Item 203, Excavation not Including Embankment.
 3. Removal of existing temporary concrete barrier shall be included in the cost of structure removal.

DATE: _____
BY: _____
SURVEYED: _____
NOTE BOOK: _____
NO. _____
CHECKED: _____
BY: _____
DATE: _____



Ref. No.	Station to Station	Side	PROPOSED & PROFILE GRADE			
			CONCRETE MASONRY	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	24" CONDUIT, TYPE C
0-1	788+72± TO 788+81±	Rt.	9			
0-2	788+78± TO 788+82±	Rt.	0.5			4
0-3	788+65± TO 788+72±	Rt.	0.2		15	
TOTALS (BRM)			0.7	9	15	4

ITEM 605, AGGREGATE DRAINS		
STATION	SIZE	LENGTH
788+80±	12"	8
789+45±	12"	8
TOTALS (BRM)		
		16

EXCAVATION = * 471 CY * INCLUDES FOR CHANNEL
 EMBANKMENT = * 86 CY EXCAVATION: 233 CY
 SEEDING = * 904 SY EMBANKMENT: 63 CY
 SEEDING: 296 SY

EXISTING STRUCTURE
 SINGLE SPAN CONCRETE BEAM
 TYPE: WITH CONCRETE DECK ON HIGH WALL ABUTMENTS
 SPANS: 34'-0" CLEAR
 ROADWAY: 51' f/f GUARDRAIL
 SKEW: 13° 26' L.F.
 ALIGNMENT: $D_c = 8^{\circ}45'30''$ CURVE LEFT

PROPOSED STRUCTURE
 SINGLE SPAN COMPOSITE A588
 TYPE: STEEL BEAMS WITH REINFORCED CONC. DECK & HIGHWALL ABUT.
 SPANS: 47'-0" c/c BEARINGS
 ROADWAY: 44'-0" f/f GUARDRAIL
 SKEW: 13° 30' L.F. (Meas. Along Ref. Chord)
 DESIGN LOADING: HS 20-44 AND ALTERNATE MILITARY LOADING
 APPROACH SLAB: 45'-1-81 (25'-0")
 ALIGNMENT: $D_c = 8^{\circ}45'30''$ CURVE LEFT
 SUPERELEVATION: 0.0770 f/f
 WEARING SURFACE: MONOLITHIC CONC.
 AVG. DAILY TRAFFIC: 1989 ADT 9680
 2009 ADT 11626
 8009 ADTT. 232

BENCHMARK ELEVATION: 582.92
RR SPIKE IN POWER POLE #388B3-10
LEFT, & STA. 790+10 ±

	BY	DATE
Calculated	WS	5/89
Checked	JT	5/89

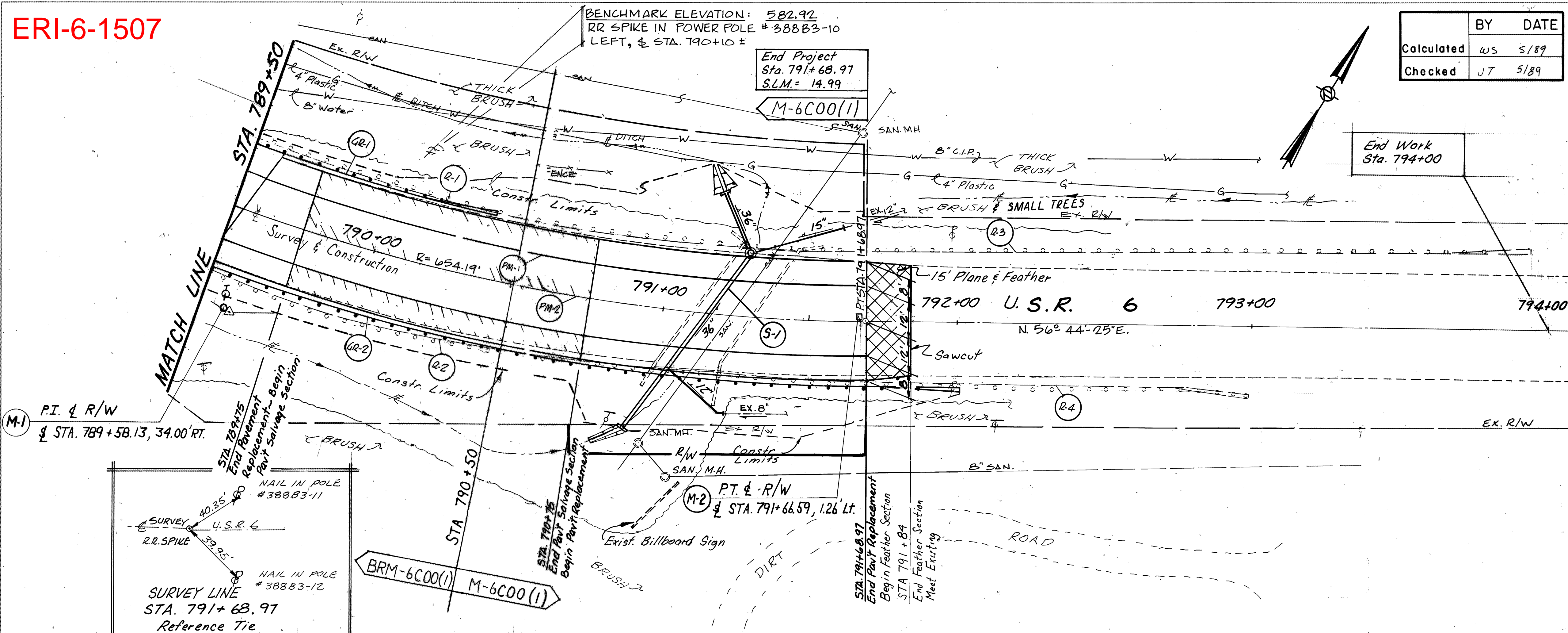
REGION	STATE	PROJECT
5	OHIO	M-DRM-6C00(1)

8
29

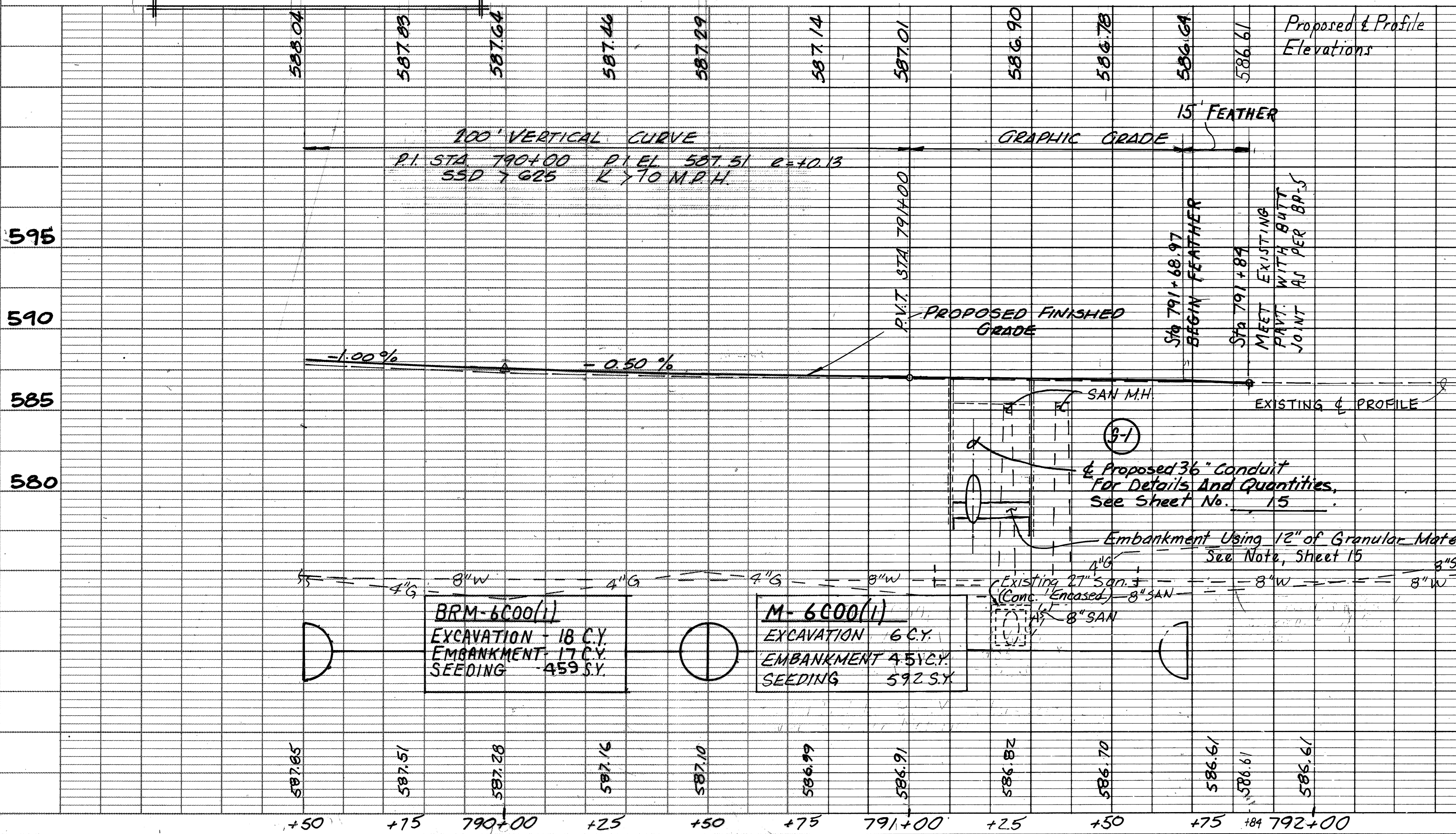
ERI COUNTY
ERI-6-14.93

PLAN
SURVEYED, PLOTTED, NOTE BOOK, ALIGNMENT CHECKED, R/W OF WAY CHECKED, No.

PROFILE
SURVEYED, PLOTTED, NOTE BOOK, GRADES CHECKED, STRUCTURE NOTATIONS CHECKED, No.



End Work
Sta. 794+00



Ref. No.	Station	Side	GUARDRAIL REMOVED		EDGE LINES WHITE	CENTER LINES SOLID DOUBLE	BARRIER REF. TYPE A2	ANCHOR ASSEM. TYPE A	MONUMENT ASSEMBLY, AS PER PLAN
			L.F.	L.F.					
R-1	790+50 to 791+24	L	74						
R-2	790+50 to 790+98	R	48						
R-3	791+45 to 793+95	L	250						
R-4	791+19 to 792+94	R	175						
GR-2	790+50 to 792+01.06	R		13007			3	1	
PM-1	790+50 to 791+84	L/R			268				
PM-2	790+50 to 791+84	L			134				
M-2	791+66.59	L						1	
TOTALS			547	13007	0.05	0.02	3	1	1

Station	Ref. No.	Item	Quantity	Unit	Price	Total
BRM-6C00(1)	R-1	GUARDRAIL REMOVED	74	L.F.		
	R-2	GUARDRAIL REMOVED	48	L.F.		
	R-3	GUARDRAIL REMOVED	250	L.F.		
	R-4	GUARDRAIL REMOVED	175	L.F.		
	GR-2	GUARDRAIL REMOVED	13007	L.F.		
	PM-1	ANCHOR ASSEM. TYPE A	3	EA.		
	PM-2	ANCHOR ASSEM. TYPE A	1	EA.		
	M-2	MONUMENT ASSEMBLY	1	EA.		
TOTALS						200

EXISTING STRUCTURE

TYPE: SINGLE SPAN CONCRETE SLAB ON CONC. ABUTMENT

SPANS: 19'±

ROADWAY: 49'±

SKEW: 31° 34'±

ALIGNMENT: 8° 45' 30" CURVE LT.

PROPOSED STRUCTURE

TYPE: 36" CULVERT, TYPE A

SPANS: N/A

ROADWAY: N/A

SKEW: N/A

DESIGN LOADING: N/A

APPROACH SLAB: N/A

ALIGNMENT: N/A

SUPERELEVATION: N/A

WEARING SURFACE: N/A

AVG. DAILY TRAFFIC: N/A

Contractor Note
Any existing signs within the work limits shall be removed under Item 203 Excavation not including Embankment Construction.

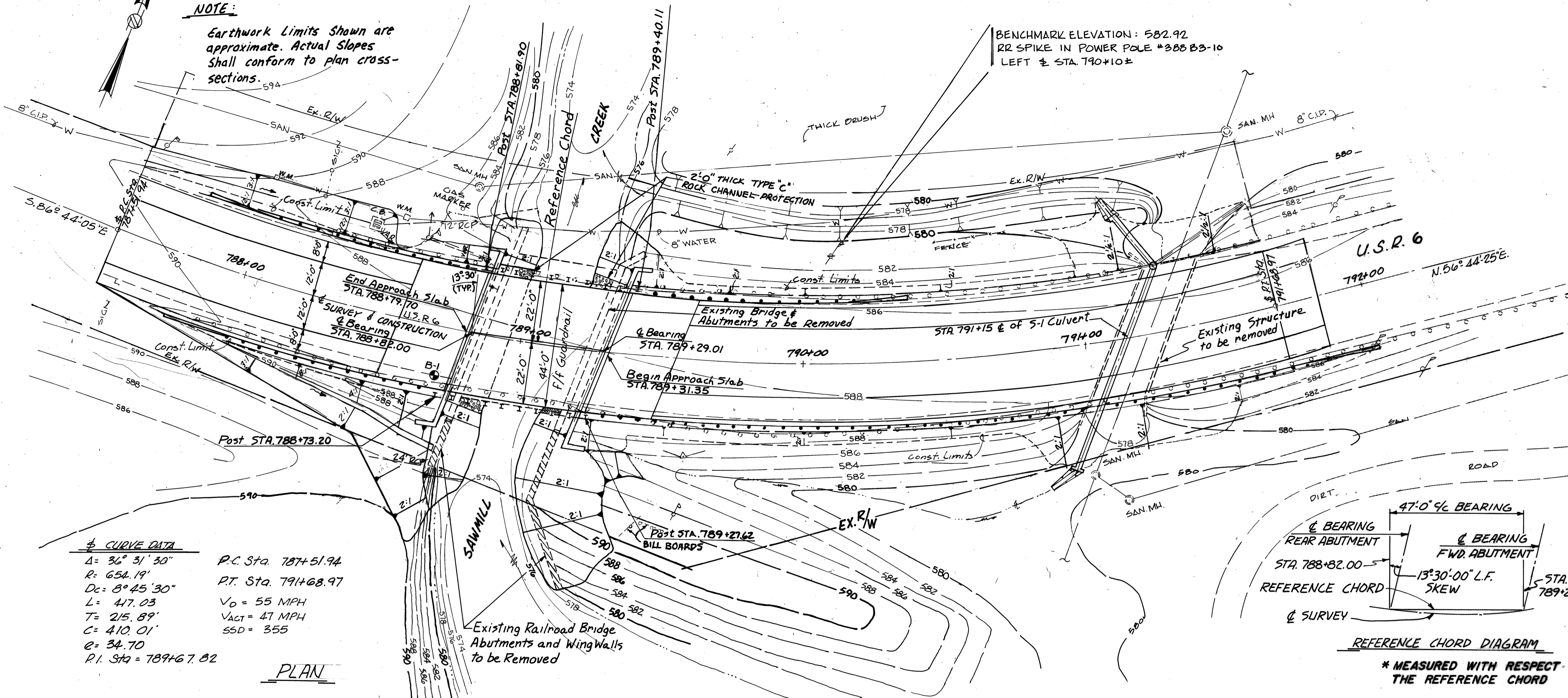
Aggregate Drains, Item 605

Station	Side	Length
BRM 789+70	Left	15 L.F.
M 791+00	Left	15 L.F.
M 791+25	Left	15 L.F.
M 791+50	Left	15 L.F.
TOTALS ~ BRM = 15 L.F. M = 45 L.F.		

NOTE:

Earthwork Limits Shown are approximate. Actual Slopes shall conform to plan cross-sections.

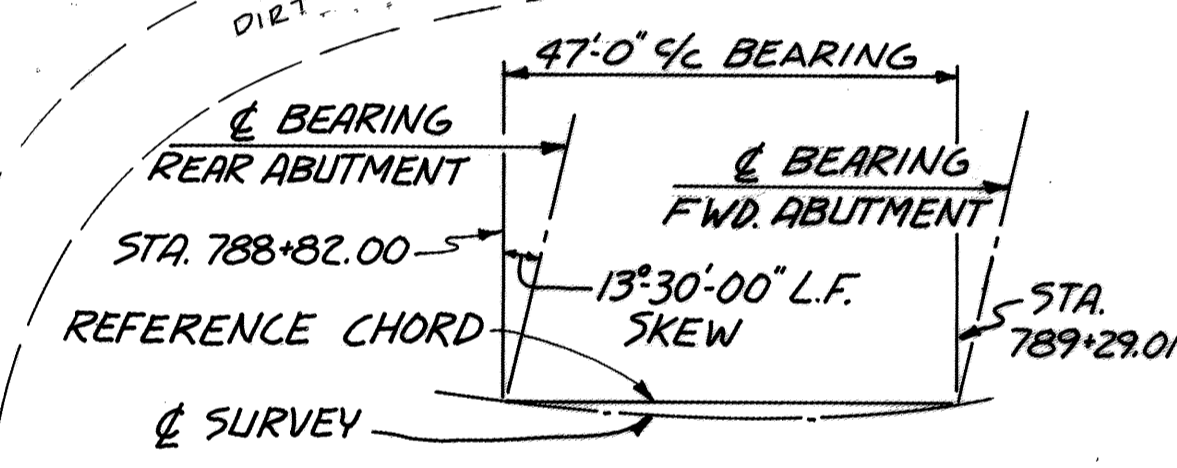
BENCHMARK ELEVATION: 582.92
RR SPIKE IN POWER POLE #388 B3-10
LEFT ± STA. 790+10±



CURVE DATA

Δ = 36° 31' 30"	P.C. Sta. 787+51.94
R = 654.19'	P.T. Sta. 791+68.97
Dc = 8° 45' 30"	V _o = 55 MPH
L = 47.03	V _{act} = 47 MPH
T = 215.89'	SSD = 355
C = 410.01'	
e = 34.70	
P.I. Sta. = 789+67.82	

PLAN



REFERENCE CHORD DIAGRAM
* MEASURED WITH RESPECT TO THE REFERENCE CHORD

HYDRAULIC DATA

INTERVAL (YEAR)	ELEV. (FT.)	Q (C.F.S.)	V (FT./SEC.)
25	580.56	1724	7.50
100	580.76	2327	9.76

DRAINAGE AREA = 13.89 SQ. MI.

EXISTING STRUCTURE

TYPE: SINGLE SPAN CONCRETE BEAM WITH CONCRETE DECK ON HIGH WALL ABUTMENTS

SPANS: 34'-0" ± CLEAR

ROADWAY: 51' f/f PARAPET

SKIEW: 13°-26' L.F.

ALIGNMENT: 8°-45'-30" CURVE LEFT

STRUCTURE FILE NO. 2201771

PROPOSED STRUCTURE

TYPE: SINGLE SPAN COMPOSITE A588 STEEL BEAMS WITH REINFORCED CONC. DECK & WALL TYPE ABUT.

SPAN: 47'-0" c/c BEARINGS

ROADWAY: 44'-0" f/f GUARDRAIL

SKIEW: 13°-30' L.F. *

DESIGN LOADING: HS 20-44 AND ALTERNATE MILITARY LOADING

APPROACH SLAB: AS-1-81 (25'-0")

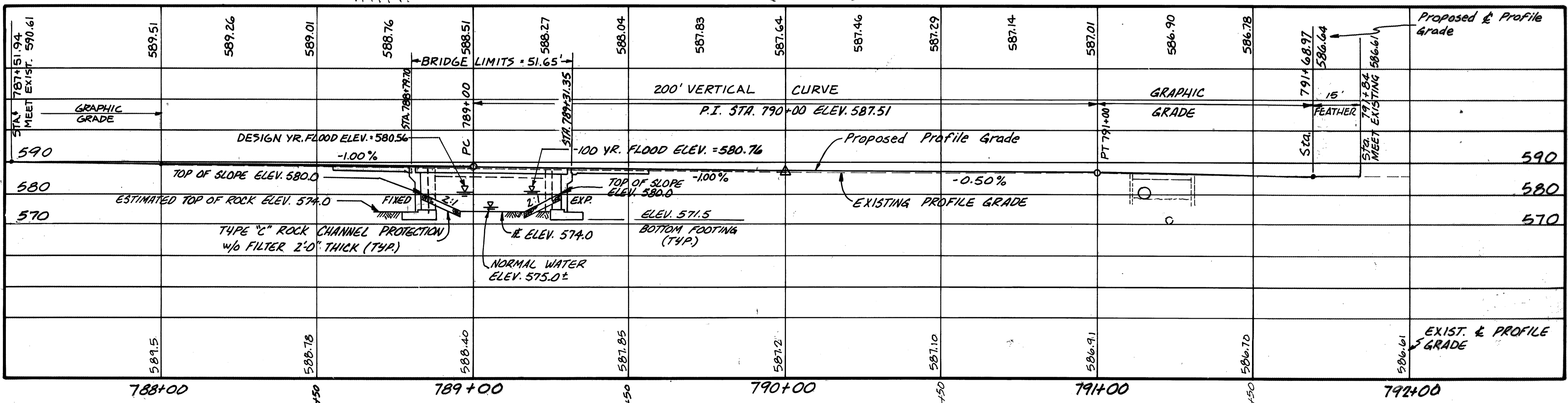
ALIGNMENT: 8°-45'-30" CURVE LEFT

SUPERELEVATION: 0.0770 ft./ft.

WEARING SURFACE: MONOLITHIC CONC.

AVG. DAILY TRAFFIC: 1989 ADT 9680
2009 ADT 11620

2009 ADTT = 232



PROFILE ON & SURVEY

REVIEWED BY BURGESS & NIPLE LTD.
T.J.K. 8-11-89

THOMAS FOK & ASSOCIATES, LIMITED
CONSULTING ENGINEER, SURVEYOR & PLANNER
3896 MAHONING AVE. YOUNGSTOWN, OHIO

SITE PLAN
BRIDGE NO. ERI-6-1494
OVER SAWMILL CREEK
ERIE COUNTY STA. 788+79.70
STA. 789+31.35

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
J.F.	A.E.L.	J.V.	J.V.	K.R.M.	T.F.
10/88	12/88	2-89	2-89	2-89	4-89

MICROFILMED

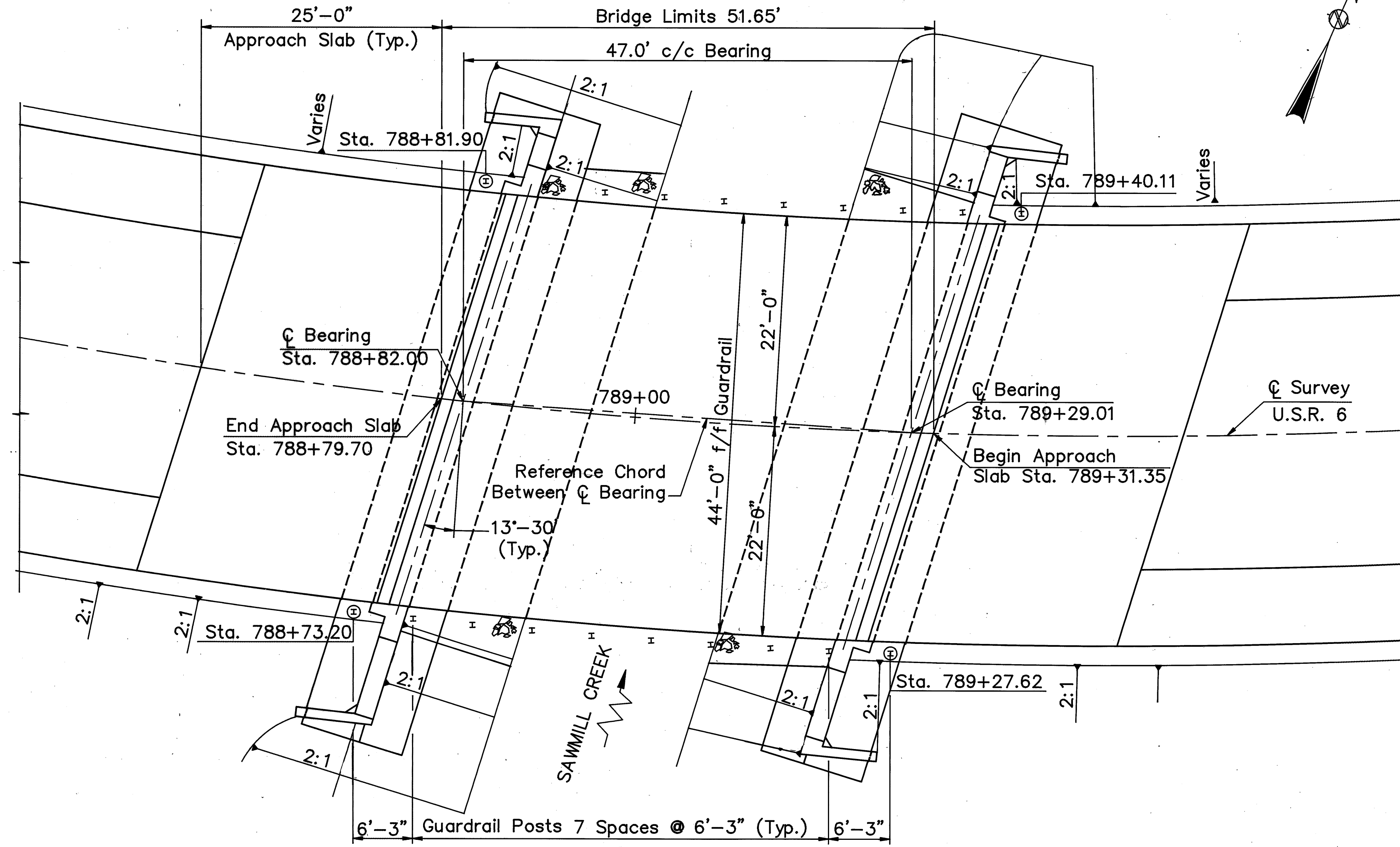
SEP 17 1982

ERI-6-1507

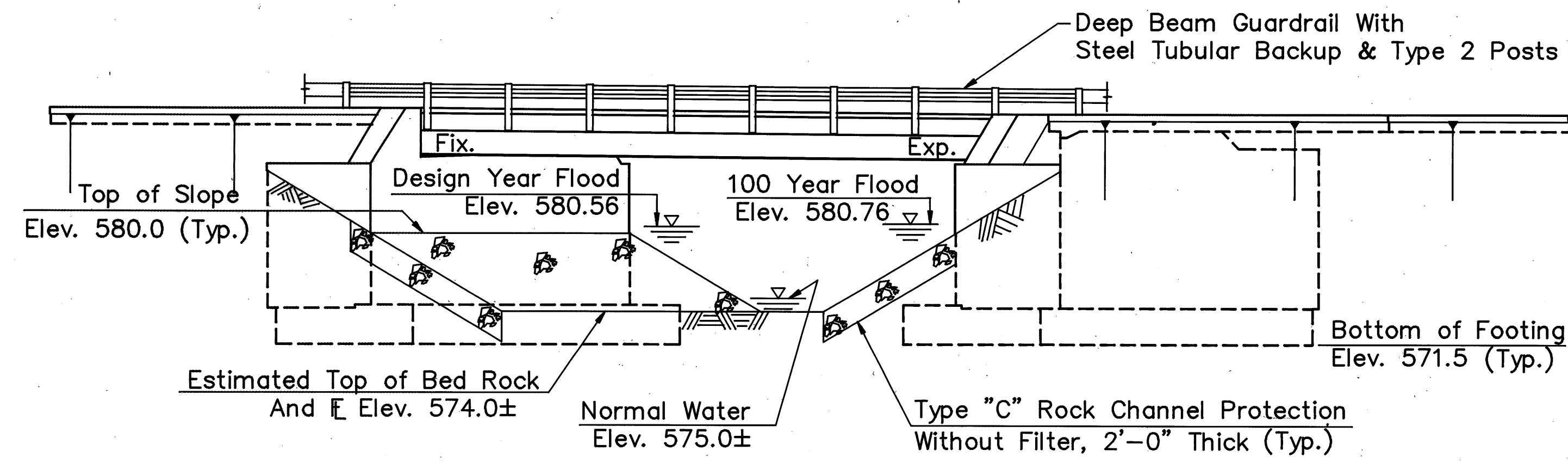
REGION	STATE	PROJECT	
5	OHIO		

17
29

ERIE COUNTY
ERI-6-14.93



PLAN



ELEVATION

2 / 11

THOMAS FOK & ASSOCIATES, LIMITED
 CONSULTING ENGINEERS, SURVEYORS & PLANNERS
 3896 MAHONING AVE. YOUNGSTOWN, OHIO

GENERAL PLAN
 BRIDGE NO. ERI-6-1494
 OVER SAWMILL CREEK
 ERIE COUNTY OHIO

SURVEYED	DESIGNED	DRAWN	CHECKED	REVIEWED	REVISED
	A.L.	A.L.	J.V.	T.F.	
	5/89	5/89	5/89	5/89	

GENERAL NOTES

REFERENCE shall be made to Standard Drawings
AS-1-81 Dated 11-27-81
DBR-2-73 Dated 4-10-73
EXJ-2-81 Dated 4-2-84
(Modified as shown on SHT. 8/11)
SD-1-69 Dated 6-12-69

and to Supplemental Specifications:

849 Dated 12-24-85
949 Dated 9-29-86

DESIGN SPECIFICATIONS:

This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1983, including the 1984, 1985, 1986, 1987, and 1988 Interim Specifications and the Ohio "Supplement" to these specifications.

DESIGN DATA:

DESIGN LOADING:

Design Loading - HS20-44, Case II and the Alternate Military Loading

DESIGN STRESSES:

Concrete Class S - compressive strength 4500 p.s.i. (Superstructure)
Concrete Class C - compressive strength 4000 p.s.i. (Substructure)

Reinforcing Steel - ASTM A615, A616, A617 - Grade 60 minimum yield strength 60,000 p.s.i.

Structural Steel ASTM A588 - Yield strength 50,000 p.s.i.

DECK PROTECTION METHOD:

- Epoxy coated reinforcing steel, top and bottom mats.
- Sealing of concrete surfaces.
- Concrete drip strip

Monolithic wearing surface is assumed for design purposes, to be 1" thick.

FOUNDATION BEARING PRESSURE:

Abutment and wingwall footings, as designed, produce a maximum bearing pressure of 2.2 tons per sq. ft.

FOOTINGS shall extend a minimum of 3 inches into bedrock or to the elevation shown, whichever is lower.

A CONCRETE SEALER shall be applied to the following concrete surfaces: to deck fascias as shown in deck section and abutment bridge seat as shown on abutment detail plan. See the proposal for surface preparation requirements, application rates, materials requirements, and application procedures.

ITEM 202, STRUCTURES REMOVED:

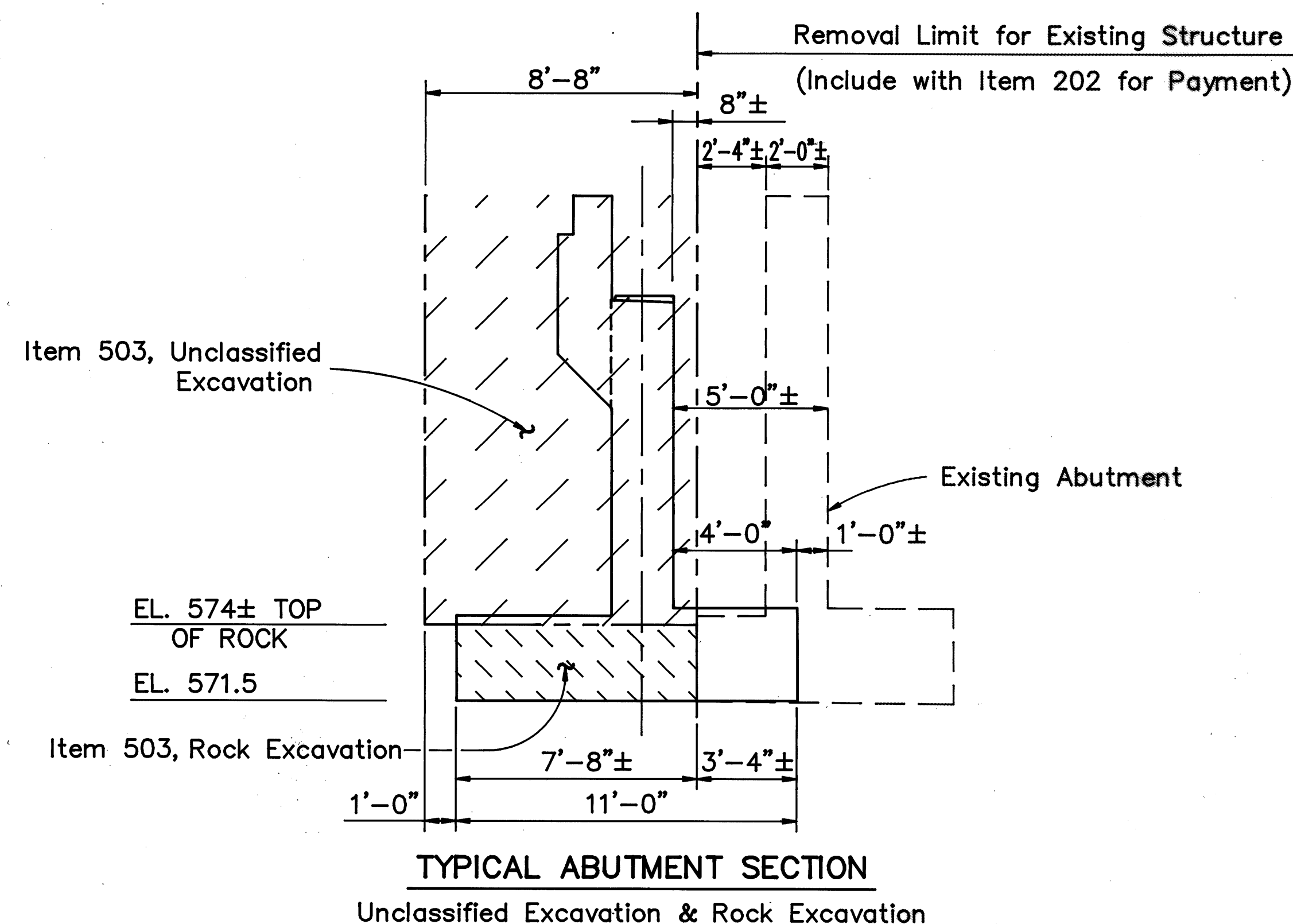
Removal of the existing superstructure and abutments, of the temporary concrete barrier, of temporary supports for the damaged stringer, and of the railroad abutments and wingwalls shall be included for payment in the lump sum bid for Item 202, Structures Removed.

UTILITY LINES: All expense involved in relocating (installing) the affected utility lines shall be borne by the owner(s). The contractor and the owner(s) are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

COARSE AGGREGATE for class C concrete shall be limestone or slag.

BRM FUNDS

CALC. BY <i>J.D.V.</i>		ESTIMATED QUANTITIES				CHK'D BY <i>A.L.</i>	
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT.	GEN'L
202		Lump		Structures Removed			Lump
503		Lump		Cofferdams, Cribbs & Sheeting			Lump
503		635	Cu.Yd.	Unclassified Excavation		635	
503		99	Cu.Yd.	Rock Excavation		99	
509		15,377	Lb.	Reinforcing Steel, Grade 60		15,377	
509		22,701	Lb.	Epoxy Coated Reinforcing Steel, Grade 60	17,084	5617	
511		160	Cu.Yd.	Class C Concrete, Abutment Above Footing, as per plan.		160	
511		162	Cu.Yd.	Class C Concrete, Abutment Footing, as per plan.		162	
511		62	Cu.Yd.	Class "S" Concrete, Superstructure, as per plan.	62		
512		9	Sq.Yd.	Type B Waterproofing		9	
513		37,400	Lb.	Structural Steel, ASTM-A588 (A.I.S.C. Category I) See proposal note.	37,400		
513		684	Each	Welded Stud Shear Connectors	684		
514		16,076	Lb.	Field Painting of New Structural Steel, System A	16,076		
516		32	Sq.Ft.	1" Preformed Expansion Joint Filler		32	
516		90.9	Lin.Ft.	Structural Expansion Joints, Including Elastomeric Compression Seal	90.9		
516		6	Each	Laminated Elastomeric Bearings (1 1/8" x 7" x 11" Elastomeric Pad with 1 1/2" x 8" x 1'-6 1/2" Steel Load Plate)		6	
516		6	Each	Laminated Elastomeric Bearings (1 1/8" x 7" x 10" Elastomeric Pad with 1 1/2" x 8" x 1'-0" Steel Load Plate)		6	
517		112.5	Lin.Ft.	Railing (Deep Beam Rail With Steel Tubular Backup, Type 2 Steel Posts & Bolts) (See Proposal Note)	112.5		
518		90	Cu.Yd.	Porous Backfill, as per Plan		90	
Special		51	Sq.Yd.	Sealing of Concrete Surfaces (See Proposal Note)	51		
Special		30	Sq.Yd.	Sealing of Concrete Surfaces (Epoxy) (See Proposal Note)		30	



3/11

THOMAS FOK & ASSOCIATES, LIMITED
CONSULTING ENGINEERS, SURVEYORS & PLANNERS
3896 MAHONING AVE. YOUNGSTOWN, OHIO

GENERAL NOTES & ESTIMATED QUANTITIES
BRIDGE NO. ERI-6-1494
OVER SAWMILL CREEK

ERIE COUNTY OHIO

SURVEYED	DESIGNED	DRAWN	CHECKED	REVIEWED	REVISED
	<i>A.L.</i>	<i>A.L.</i>	<i>J.D.V.</i>	<i>T.F.</i>	
	5/89	5/89	5/89	5/89	

GENERAL NOTES

REGION	STATE	PROJECT
5	OHIO	

ERIE COUNTY
ERI - 6 - 14.93

ITEM 511 - CLASS S CONCRETE, AS PER PLAN

IN LIEU OF THE PROPORTIONING SPECIFIED IN 499.03 AND 511.02, THE FOLLOWING TABLE SHALL BE USED TO ESTABLISH THE QUANTITIES PER CUBIC YARD FOR CONCRETE. THE COARSE AGGREGATE SHALL BE LIMESTONE.

QUANTITIES PER CUBIC YARD (USING NO. 8 LIMESTONE)

FINE (LB)	AGGREGATE COARSE (LB)	TOTAL (LB)	CEMENT CONTENT (LB)	WATER/ CEMENT RATIO
1591	1127	2718	715	0.40

AIR CONTENT - 8% PLUS OR MINUS 2%

HIGH RANGE WATER REDUCER (SUPERPLASTICIZER) MAY BE USED AT THE OPTION OF THE CONTRACTOR IF REQUIRED FOR PLACEMENT. THE DOSAGE RATE WILL BE DETERMINED BY THE CONTRACTOR BASED ON THE MANUFACTURER'S RECOMMENDATION TO ACHIEVE THE DESIRED WORKABILITY LEVEL.

HIGH RANGE WATER REDUCER SHALL CONFORM TO 705.12, ASTM-C494 TYPE F AND SHALL NOT CONTAIN CALCIUM CHLORIDE.

TYPE A OR D CHEMICAL ADMIXTURE CONFORMING TO 705.12 ASTM TYPE F AND NOT CONTAINING CALCIUM CHLORIDE SHALL BE ADDED TO THE CONCRETE AT THE PLANT.

ALL ADDITIVES, INCLUDING AIR ENTRAINMENT, SHALL BE MANUFACTURED BY THE SAME COMPANY AND CERTIFIED AS COMPATIBLE BY THE MANUFACTURING COMPANY.

THE CEMENT CONTENT SHALL BE MAINTAINED AND A MAXIMUM WATER-CEMENT RATIO OF 0.40 SHALL NOT BE EXCEEDED. THE SLUMP OF THE UNPLASTICIZED CONCRETE DELIVERED TO THE JOB SITE SHALL BE 1-1/2" PLUS OR MINUS 1/2".

THE SUPERPLASTICIZING ADMIXTURE SHALL BE ADDED AT THE JOB SITE AND MIXED A MINIMUM OF FIVE (5) MINUTES. AFTER THE SUPERPLASTICIZER HAS BEEN ADDED, THE SLUMP SHALL BE 6" PLUS OR MINUS 1". THE CONTRACTOR SHALL FURNISH A VOLUMERIC DISPENSER FOR THE SUPERPLASTICIZER.

CONCRETE MIXTURES CONTAINING A HIGH RANGE WATER REDUCER SHALL MEET THE SAME REQUIREMENTS FOR ENTRAINED AIR CONTENT, MINIMUM STRENGTH, AND MAXIMUM WATER-CEMENT RATIO AS REQUIRED FOR THE RESPECTIVE GRADE OF CONCRETE WITHOUT A HIGH RANGE WATER REDUCER.

SAMPLING AND TESTING FOR ENTRAINED AIR CONTENT AND MINIMUM STRENGTH SHOULD BE TAKEN FROM THE CONCRETE THAT HAS BEEN TREATED WITH A HIGH RANGE WATER REDUCER.

ALL INITIAL TESTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THESE TESTS SHALL BE PERFORMED BY A COMPETENT CONCRETE TECHNICIAN. THIS INFORMATION SHALL BE PROVIDED TO THE PROJECT ENGINEER. THE PROJECT ENGINEER SHALL MAKE ONLY THE FINAL TESTS AS THE CONCRETE IS PLACED ON THE DECK.

THE CONTRACTOR SHALL MAKE ONE OR MORE TRIAL BATCHES OF THE SUPERPLASTICIZED DENSE CONCRETE OF THE SIZE TO BE HAULED AT LEAST FOUR DAYS BEFORE THE DECK IS TO BE PLACED. HE SHALL CAST ONE OR MORE TEST SLABS, E.G. 8 FT. LONG X A WIDTH WHICH IS WIDE ENOUGH TO ACCOMMODATE HIS TILING EQUIPMENT X 4 INCHES THICK, FOR TEXTURING ACCORDING TO 511.16 AND SHALL PREPARE OTHER SAMPLES AND SPECIMENS AS DIRECTED BY THE PROJECT ENGINEER. THE CONTRACTOR SHALL FURNISH THE REQUIRED MATERIALS AND SAMPLES WITHOUT CHARGE TO THE STATE AS PER 106.03. THE PROJECT ENGINEER SHALL BE NOTIFIED SEVEN (7) DAYS IN ADVANCE OF THE TEST BATCH PREPARATION AND HE WILL CONDUCT ALL OF THE REQUIRED TESTS.

CURING:

AN EVAPORATION RETARDANT AND FINISHING AID SHALL BE USED AT THE CONTRACTORS OPTION PRIOR TO THE TILING OPERATION. ANY PRODUCT USED FOR SUCH PURPOSE SHALL BE SPECIFICALLY MARKETED FOR SAID USE. (PLAIN WATER IS NOT ACCEPTABLE) THE APPLICATION RATE SHALL NOT EXCEED THE HOURLY SURFACE EVAPORATION RATE AS DETERMINED BY FIGURE 1.

IMMEDIATELY AFTER THE TILING OPERATION THE CONTRACTOR SHALL SPRAY AN EVAPORATION RETARDANT OVER THE TEXTURED AREA. THE APPLICATION RATE SHALL BE AS PER THE MANUFACTURER'S RECOMMENDATIONS. THE WET BURLAP CURE SHALL FOLLOW THIS OPERATION AS CLOSELY AS POSSIBLE.

CURING SHALL BE IN ACCORDANCE WITH 511.14 TYPE A WATER CURING. BY THE CONTINUOUS SPRINKLING METHOD ONLY. SUPPLEMENTAL SPECIFICATION 836 CONCRETE CURING MEMBRANE SHALL NOT BE USED FOR THIS ITEM.

PLACEMENT:

PLACEMENT OF CONCRETE SHALL BE COMPLETED UNDER FAVORABLE ATMOSPHERIC CONDITIONS. FAVORABLE ATMOSPHERIC CONDITIONS EXIST WHEN THE SURFACE EVAPORATION RATE AS AFFECTED BY THE AMBIENT AIR TEMPERATURE, CONCRETE TEMPERATURE, RELATIVE HUMIDITY, AND WIND VELOCITY IS 0.1 POUNDS PER SQUARE FOOT PER HOUR OR LESS. FIGURE (1) SHALL BE USED TO DETERMINE GRAPHICALLY THE SURFACE EVAPORATION RATE. FAVORABLE ATMOSPHERIC CONDITIONS MAY REQUIRE PLACEMENT AT NIGHT.

IF PLACEMENT OF THE CLASS S CONCRETE IS TO BE MADE AT NIGHT, THE CONTRACTOR SHALL SUBMIT A PLAN WHICH PROVIDES ADEQUATE LIGHTING FOR THE WORK AREA AT LEAST FIFTEEN (15) CALENDER DAYS IN ADVANCE AND RECEIVE WRITTEN APPROVAL FROM THE ENGINEER BEFORE PLACING THE CONCRETE. THE LIGHTS SHALL BE SO DIRECTED THAT THEY DO NOT AFFECT OR DISTRACT APPROACHING TRAFFIC.

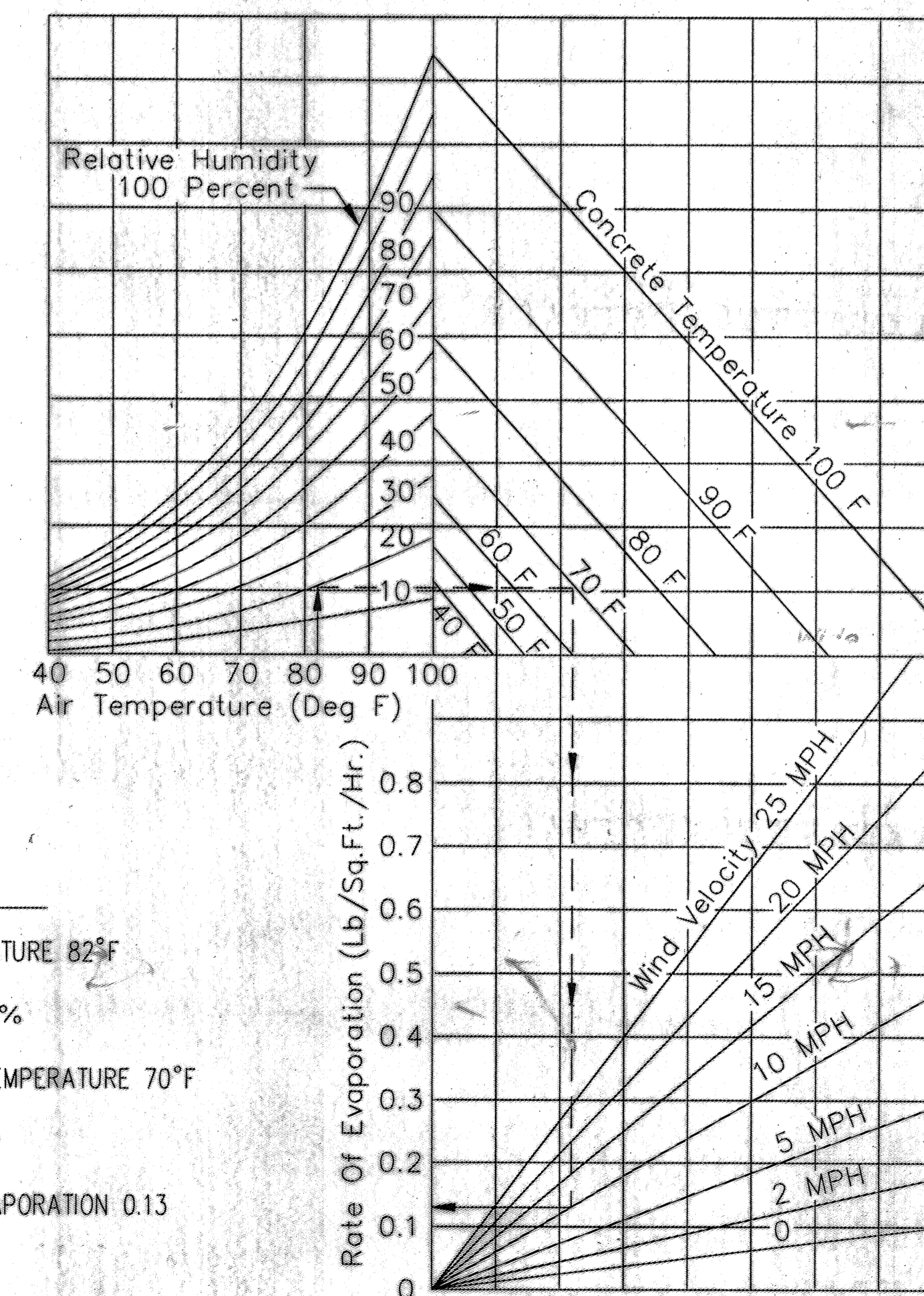
ALL OTHER PROVISIONS OF 511 SHALL REMAIN IN EFFECT.

PAYMENT FOR THE ABOVE COMPLETED AND ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT BID PRICE FOR:

ITEM	UNIT	DESCRIPTION
511	CU.YD.	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN

FIGURE NO. 1

- TO USE THIS CHART:
1. ENTER WITH AIR TEMPERATURE, MOVE UP TO RELATIVE HUMIDITY.
 2. MOVE RIGHT TO CONCRETE TEMPERATURE.
 3. MOVE DOWN TO WIND VELOCITY.
 4. MOVE LEFT, READ APPROX. RATE OF EVAPORATION.

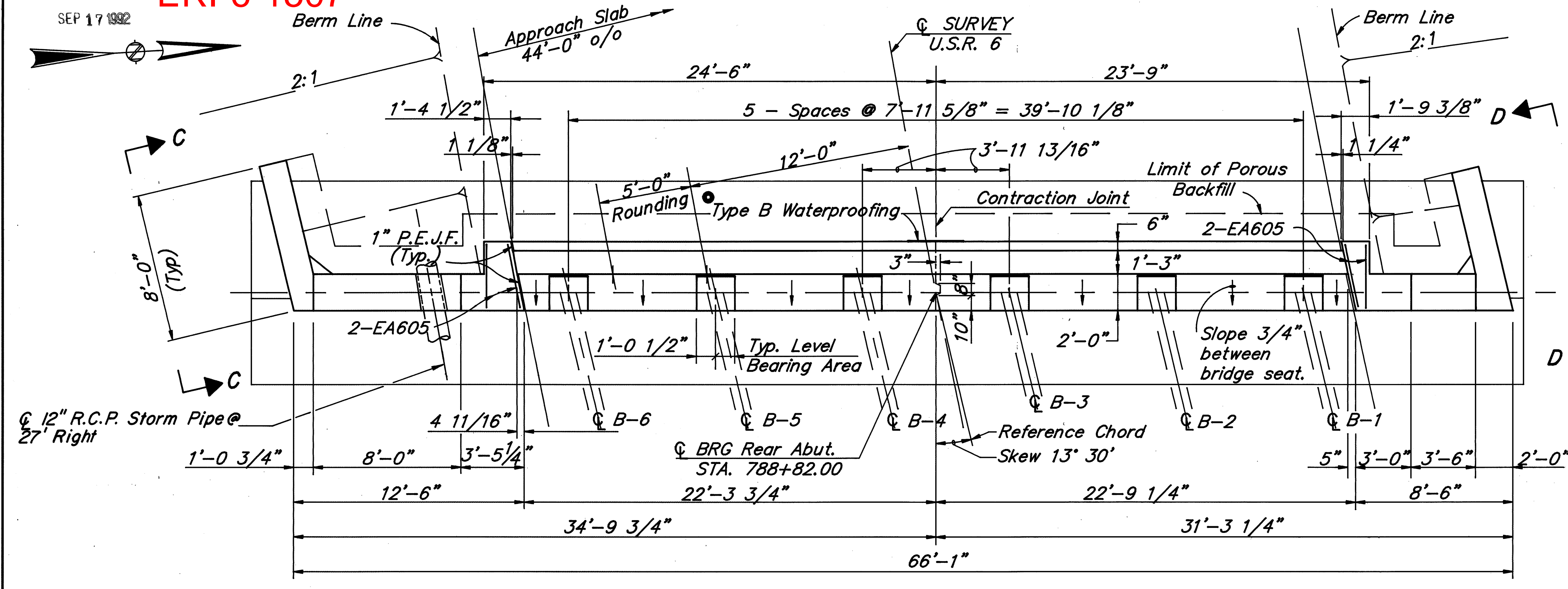


EXAMPLE

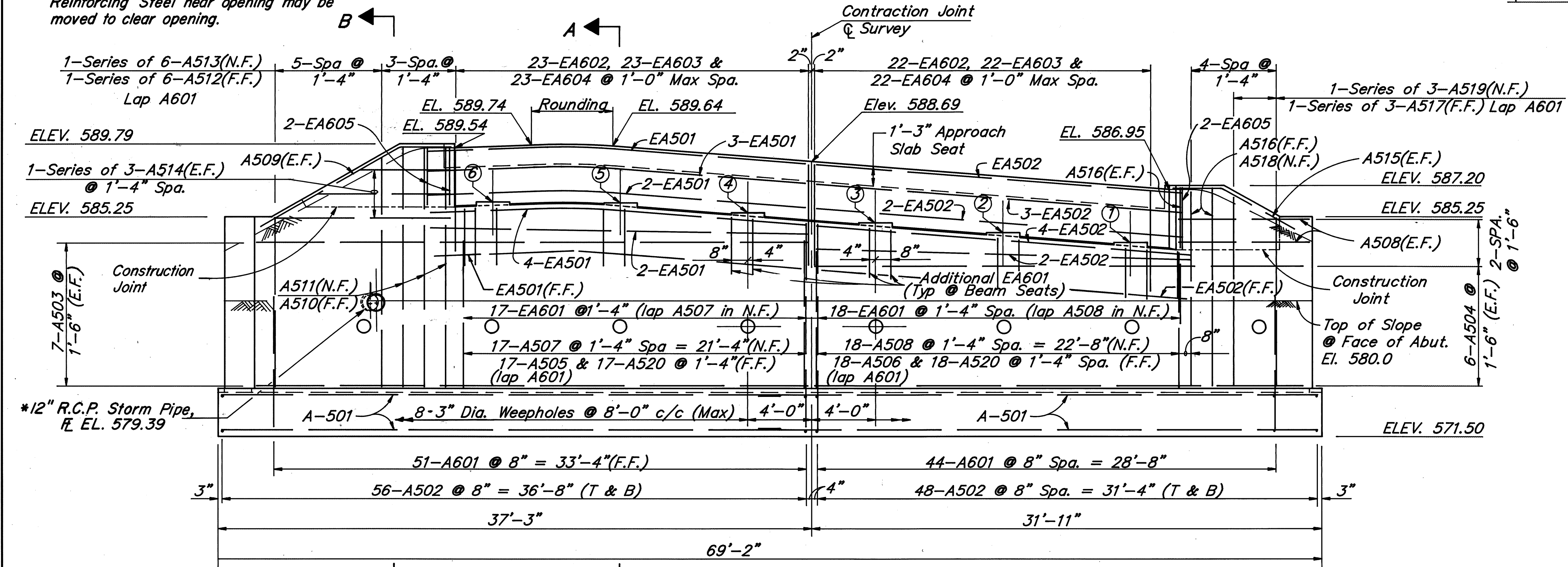
1. AIR TEMPERATURE 82°F
2. HUMIDITY 20%
3. CONCRETE TEMPERATURE 70°F
4. WIND 10 MPH
5. RATE OF EVAPORATION 0.13

REGION	STATE	PROJECT
5	OHIO	

ERIE COUNTY
ERI-6-14.93

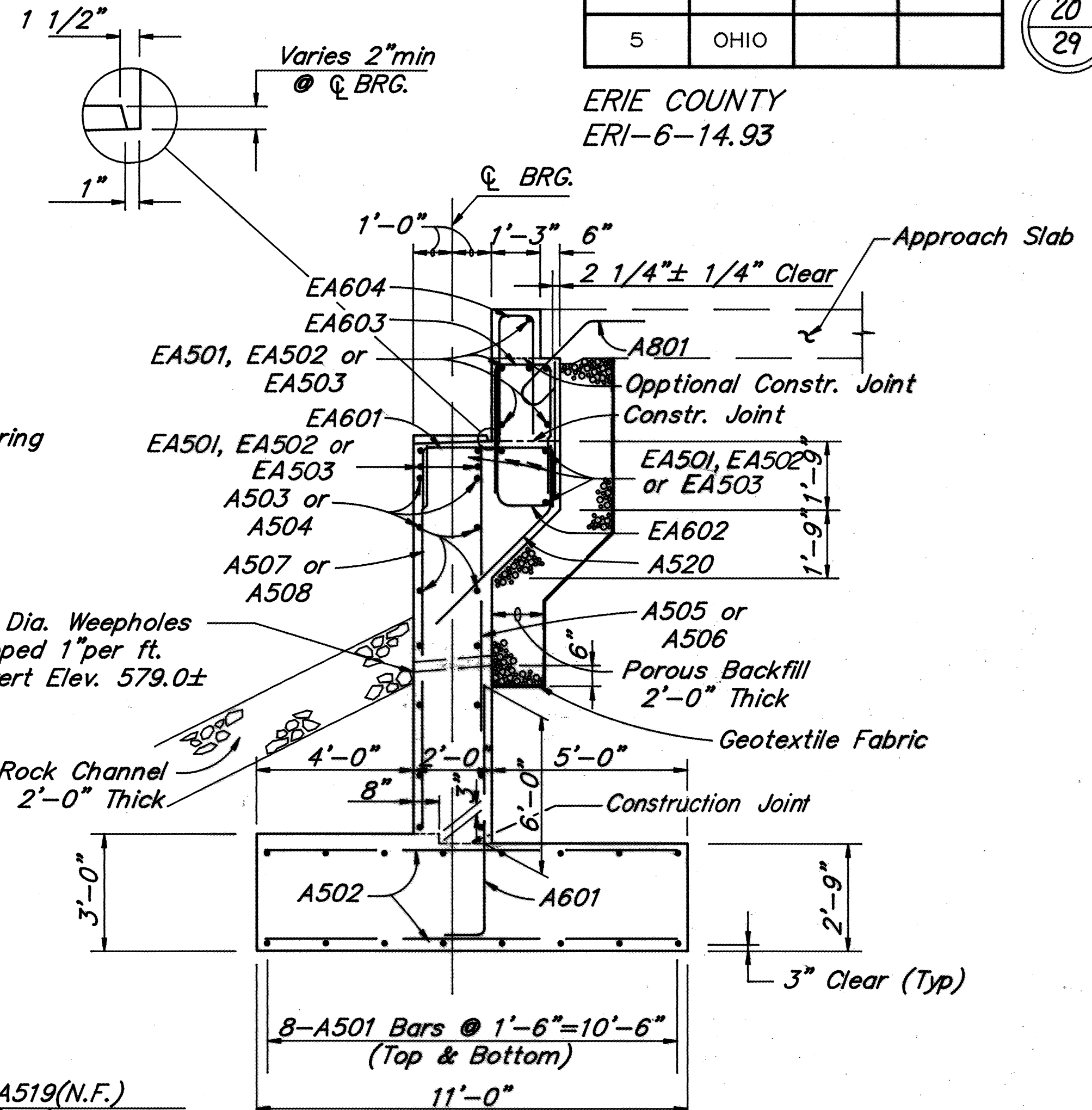


*Provide opening in wingwall for 12" R.C.P. Storm Pipe. Actual location and elevation to be field verified prior to pouring wingwall. Reinforcing Steel near opening may be moved to clear opening.



NOTE: Reinforcing Steel Minimum Laps: 1'-8" for NO. 5 Bars.

Field bend "EA"-Bars in Beam Seat and backwall to fit rounding. Bending to be included with item 509 for payment. Epoxy coated bars damaged by field bending shall be repaired as directed by the Engineer or shall be replaced.



BEAM SEAT ELEVATIONS						
BEAM NUMBER	1	2	3	4	5	6
B - BEAM SEAT	583.68	584.29	584.91	585.53	586.15	586.16

LEGEND

F.F. = Far Face

N.F. = Near Face

E.F. = Each Face

T & B = Top and Bottom

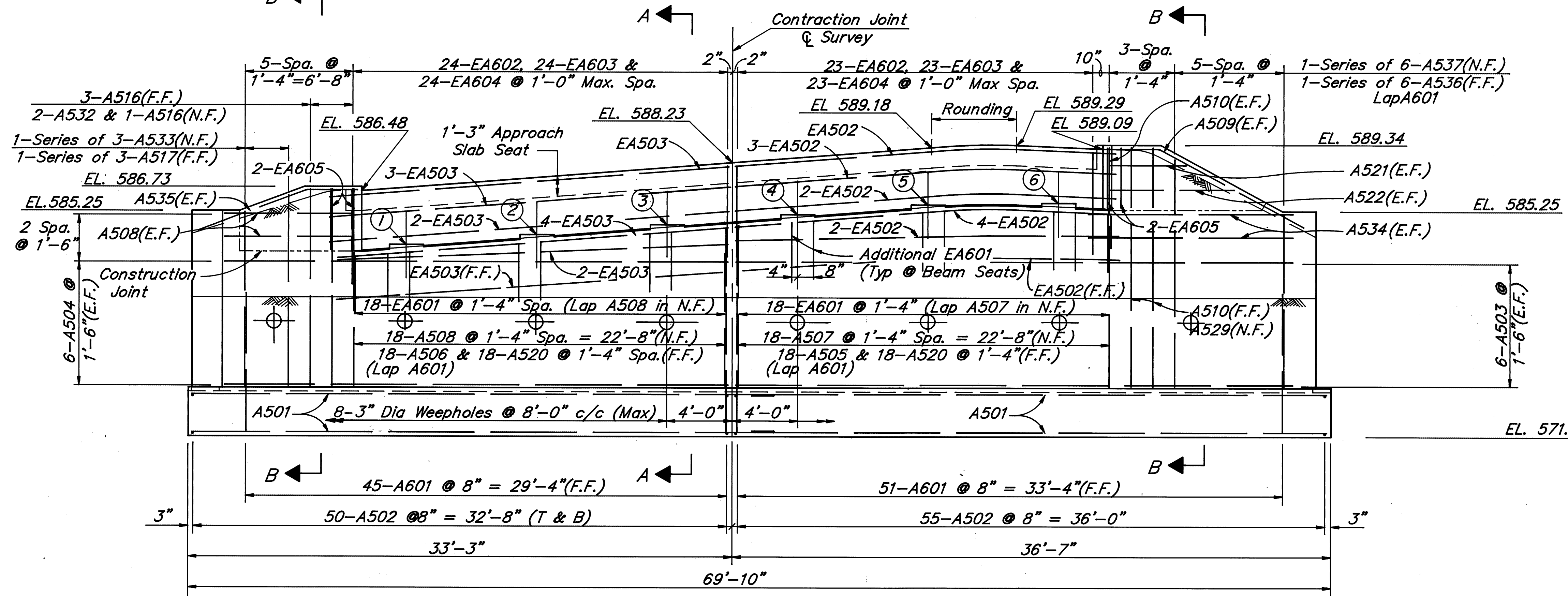
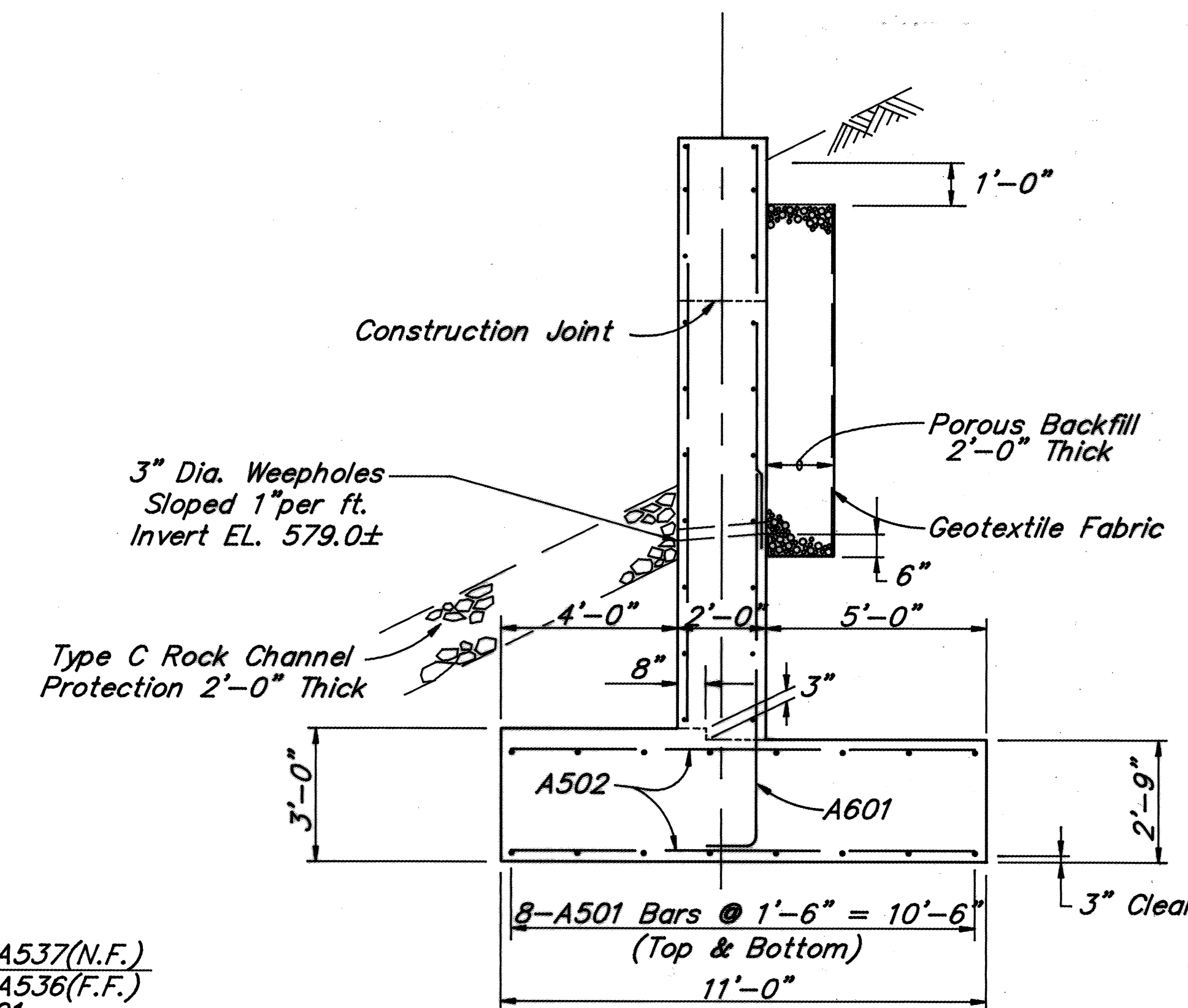
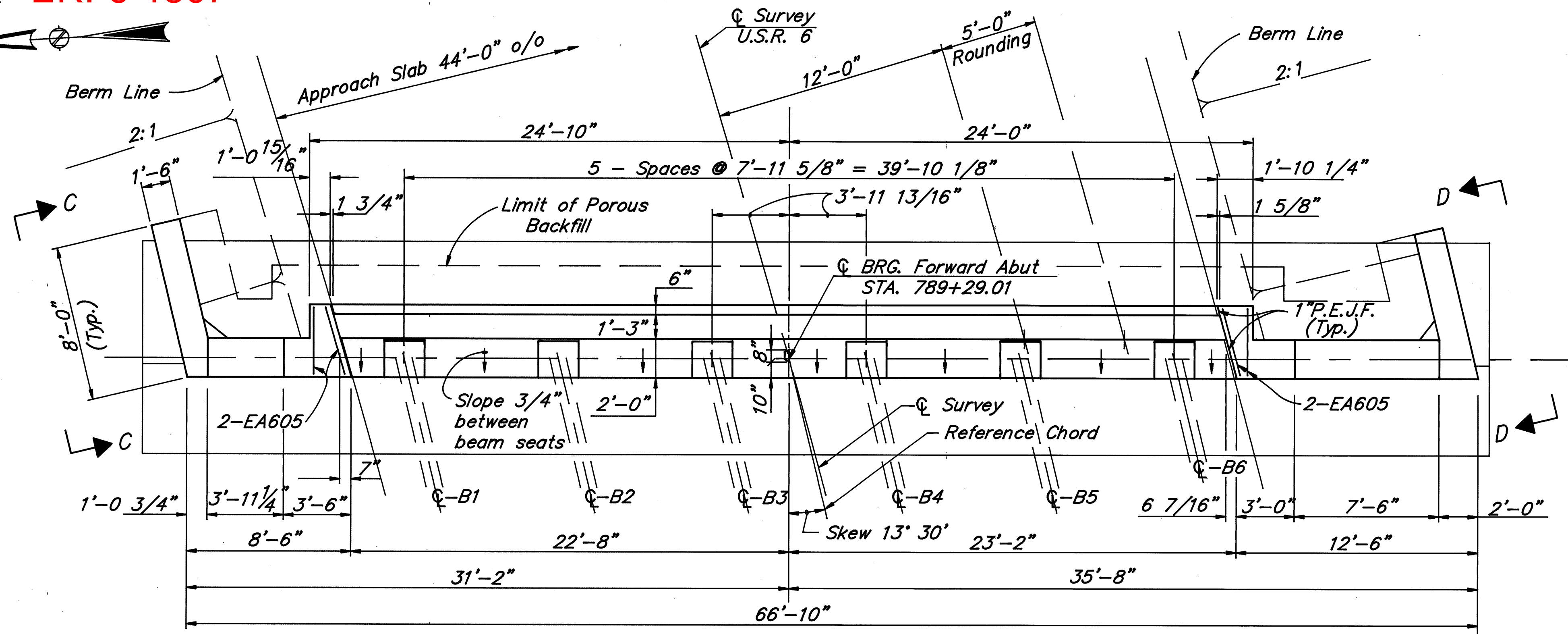
P.E.J.F. = Preformed Expansion Joint Filler

THOMAS FOK & ASSOCIATES, LIMITED
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3896 MAHONING AVE. YOUNGSTOWN, OHIO

REAR ABUTMENT DETAILS
BRIDGE NO. ERI - 6 - 1494
OVER SAWMILL CREEK

ERIE COUNTY OHIO

SURVEYED	DESIGNED	DRAWN	CHECKED	REVIEWED	REVISED
	J.V.	Z.C.	A.L.	T.F.	
	5/82	5/82	5/82	5/82	



See Sheet 7/11 for Abutment Notes.
See Sheet 5/11 for Section A-A.
See Sheet 7/11 for Views C-C, D-D & Anchor Rod Detail.

BEAM SEAT ELEVATIONS						
BEAM NUMBER	1	2	3	4	5	6
B - BEAM SEAT	583.23	583.84	584.45	585.07	585.68	585.73

NOTE: Reinforcing Steel Minimum Laps: 1'-8" for NO. 5 Bars
Field bend EA Bars in Beam Seat and backwall to fit rounding. Bending to be included with item 509 for payment. Epoxy coated bars damaged by field bending shall be repaired as directed by the Engineer or shall be replaced.

LEGEND

F.F. = Far Face
N.F. = Near Face
E.F. = Each Face
T & B = Top and Bottom
P.E.J.F. = Preformed Expansion Joint Filler

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3896 MAHONING AVE. YOUNGSTOWN, OHIO

FORWARD ABUTMENT DETAILS
BRIDGE NO. ERI - 6 - 1494
OVER SAWMILL CREEK

ERIE COUNTY OHIO

SURVEYED	DESIGNED	DRAWN	CHECKED	REVIEWED	REVISD
	J.V.	D/C	A.L.	T.F.	
	5/89	5/89	5/89	5/89	

ERIE COUNTY
ERI-6-14.93

ABUTMENT NOTES

POROUS BACKFILL: 2'-0" Thick Shall Extend Upward to the Plane of the Subgrade, to 1'-0" Below the Embankment Surface, and Laterally to the End of the Wingwalls. The Porous Backfill Shall be Encased With Geotextile Fabric, Type A per 712.09. Geotextile Fabric to be Included With Item 518, Porous Backfill for Payment.

Porous Backfill Shall be Solely Composed of Gravel.

BRIDGE SEAT REINFORCING: Reinforcing Steel in the Vicinity of the Bridge Seat Shall be Accurately Placed to Avoid Interference With the Drilling of Bearing Anchor Holes or the Pre-setting of Bearing Anchors.

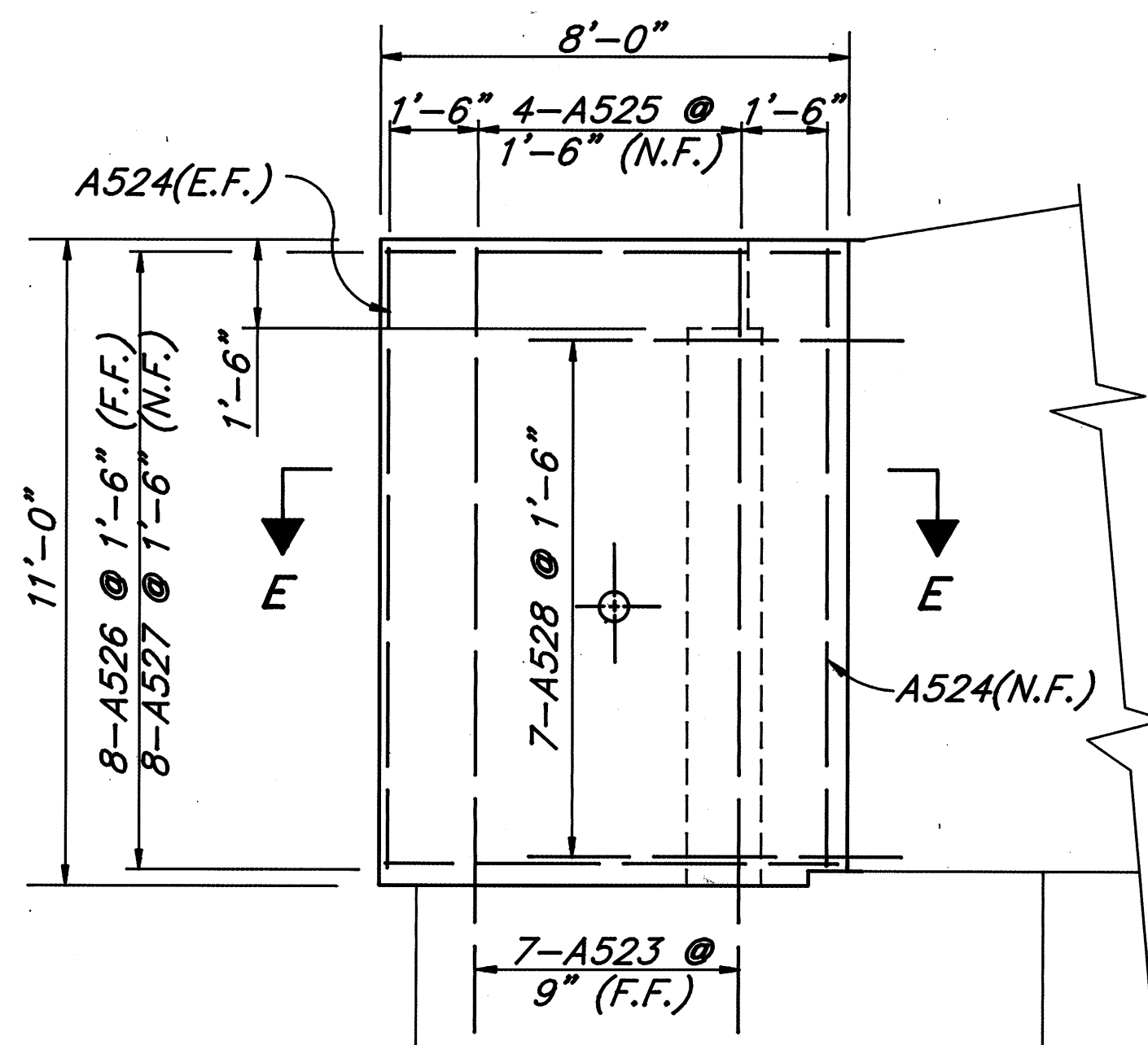
FOOTINGS: Shall Extend a Minimum of 3" into Bedrock or to the Elevation Shown, Whichever is Lower.

BEARING ANCHORS: At the Option of the Contractor, Bearing Anchors, Located and Supported by Templates, May be Cast in Place.

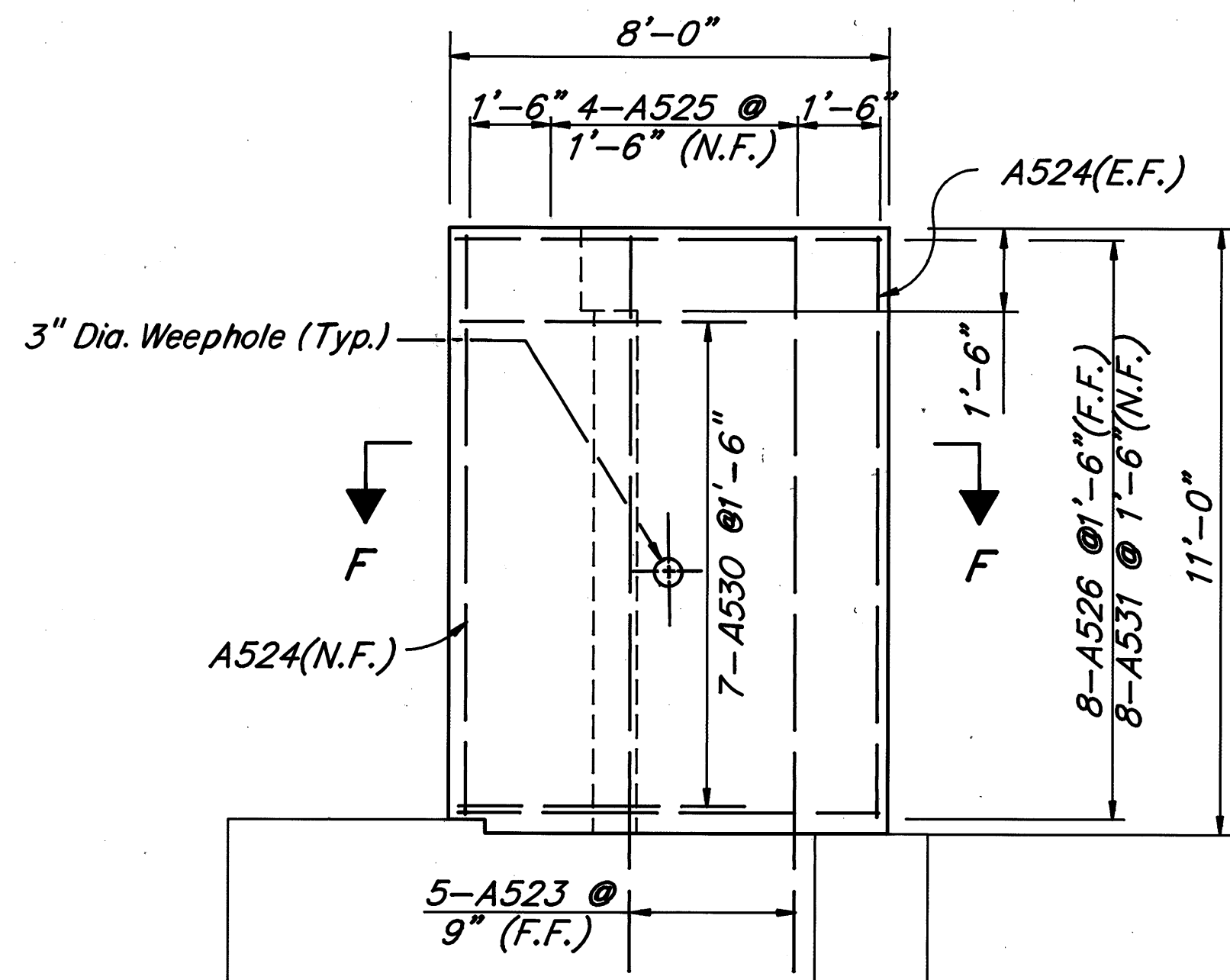
For Reinforcing Bending Schedules See Sheet 10 10

Concrete Shall be Class "C".

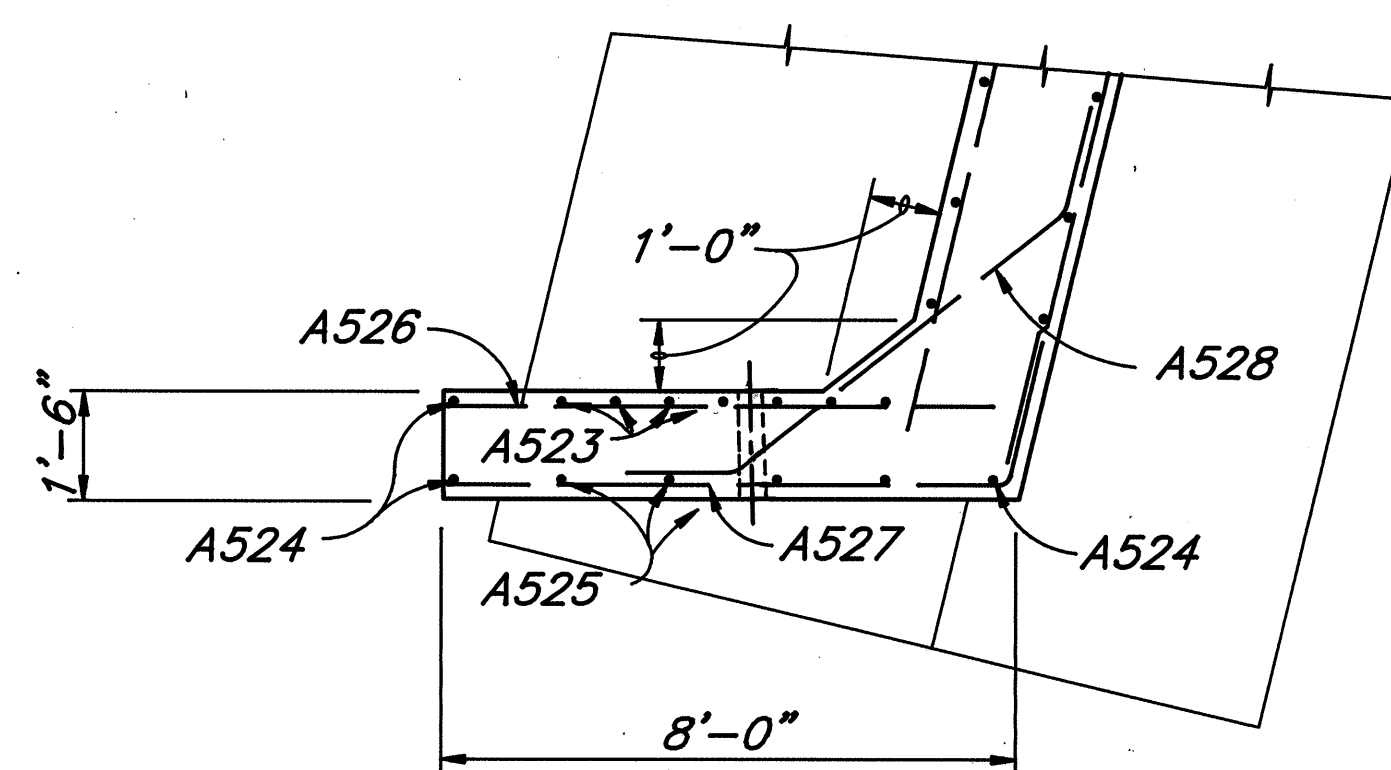
A801 Bars Shall be Installed Parallel With ϕ Roadway.



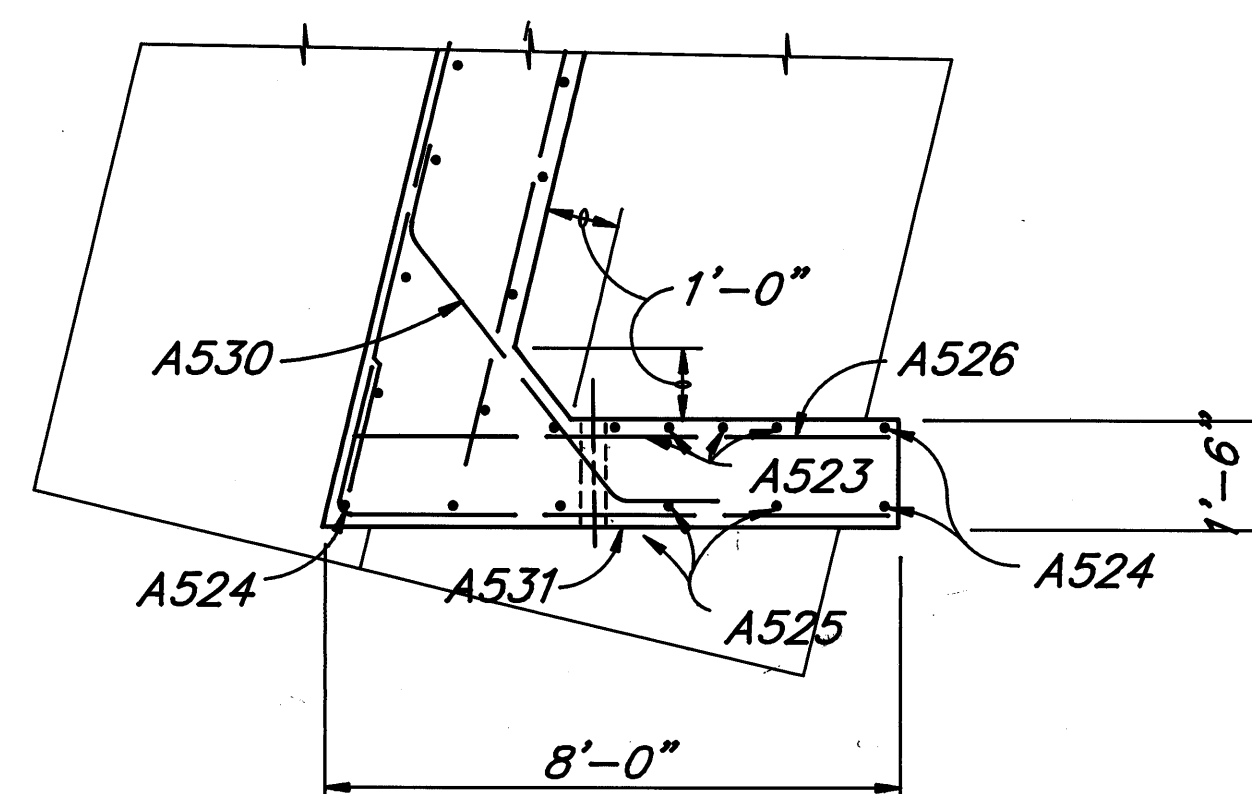
VIEW C-C



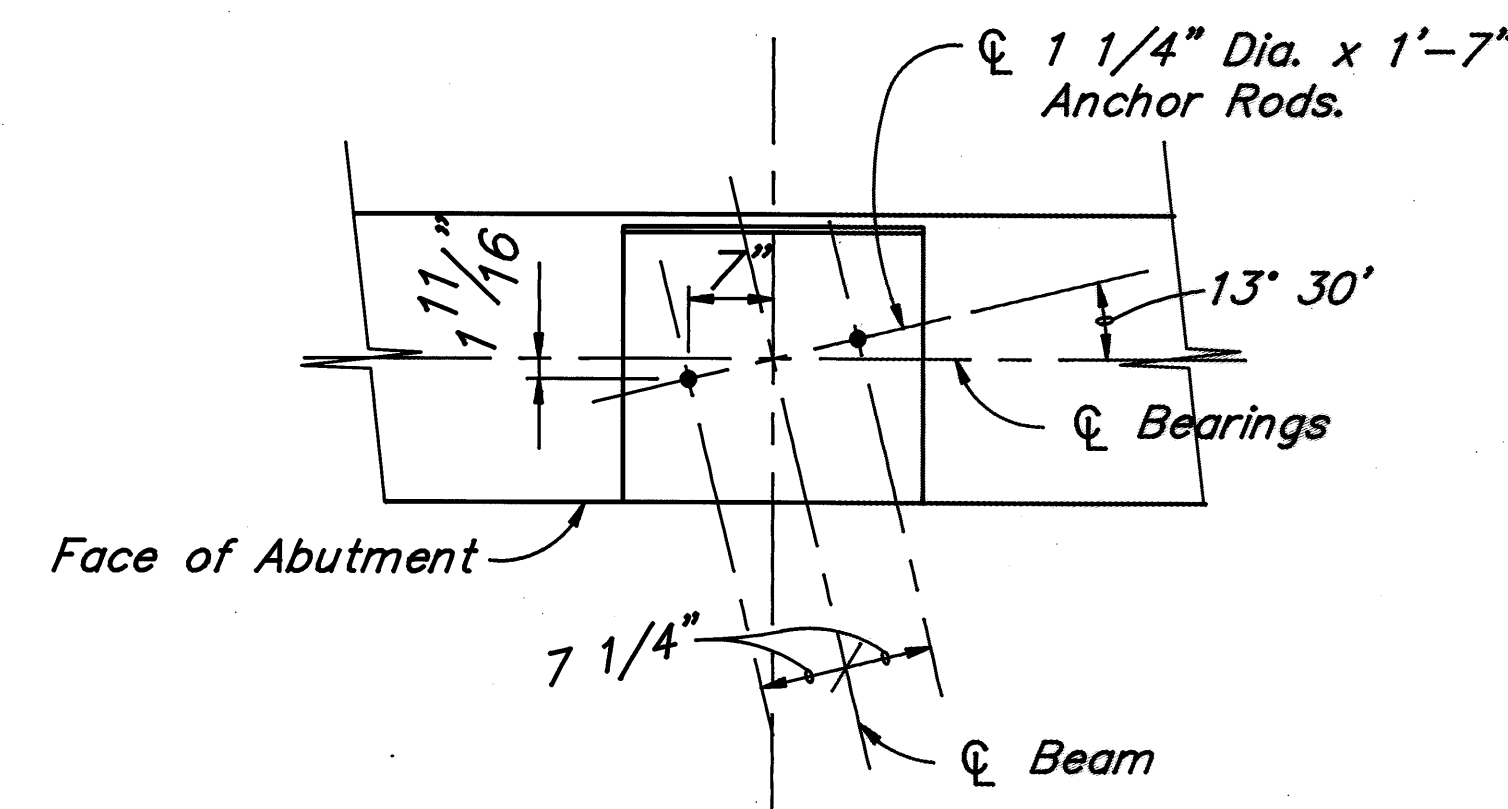
VIEW D-D



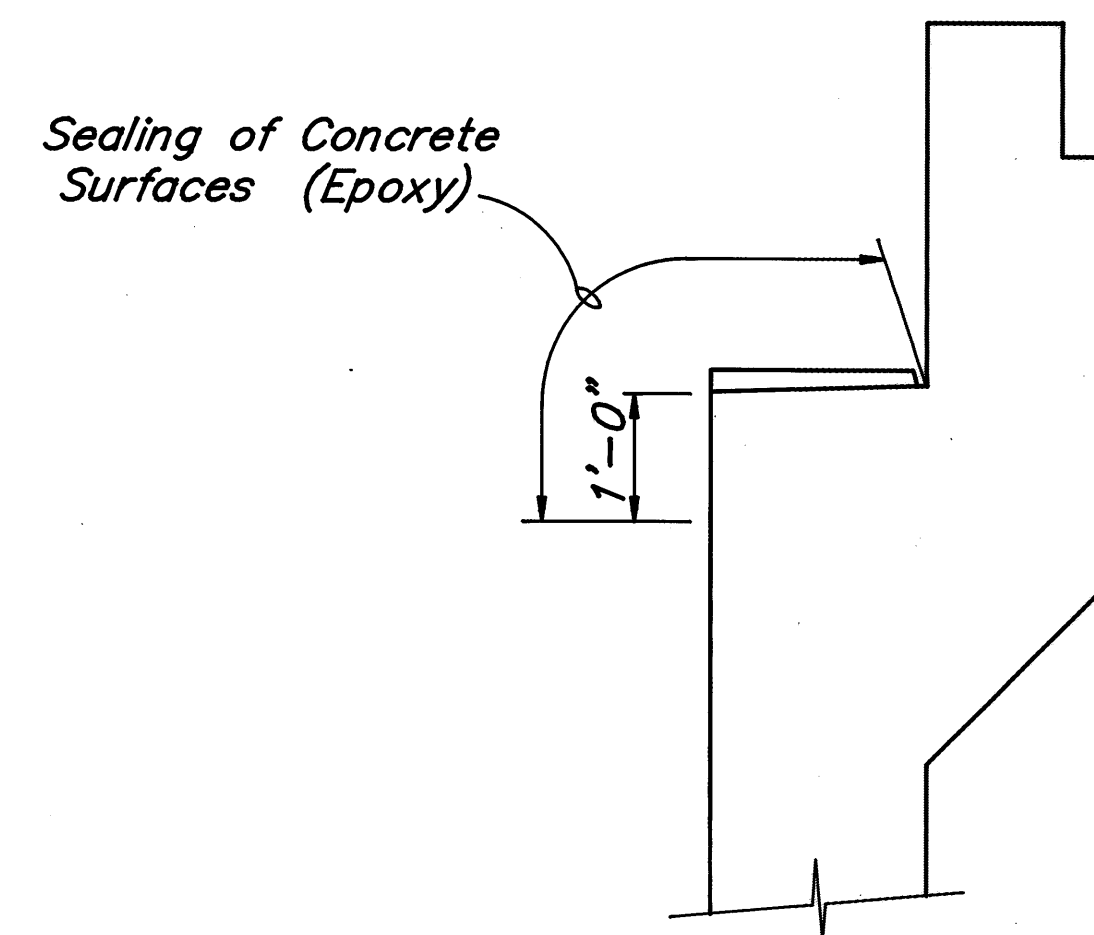
SECTION E-E



SECTION F-F



ANCHOR ROD DETAIL



SEALING OF CONCRETE SURFACES

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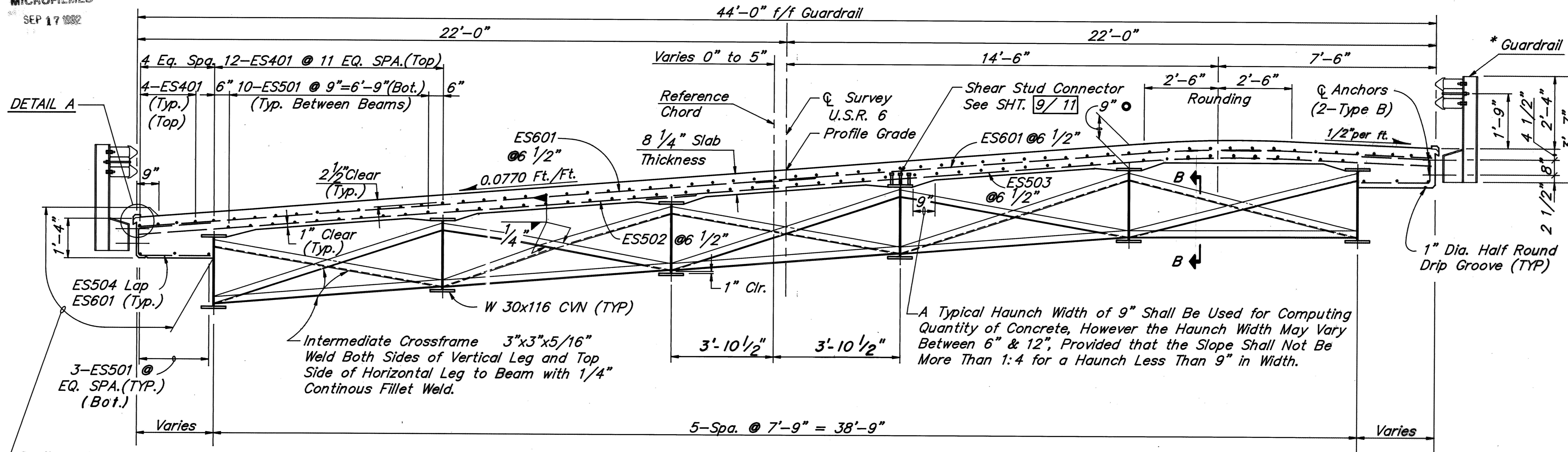
ABUTMENT DETAILS & NOTES

BRIDGE NO. ERI-6-1494
OVER SAWMILL CREEK

ERIE COUNTY OHIO

SURVEYED	DESIGNED	DRAWN	CHECKED	REVIEWED	REVISED
	J.V.	D.K.	A.L.	T.F.	
	5/89	5/89	5/89	5/89	

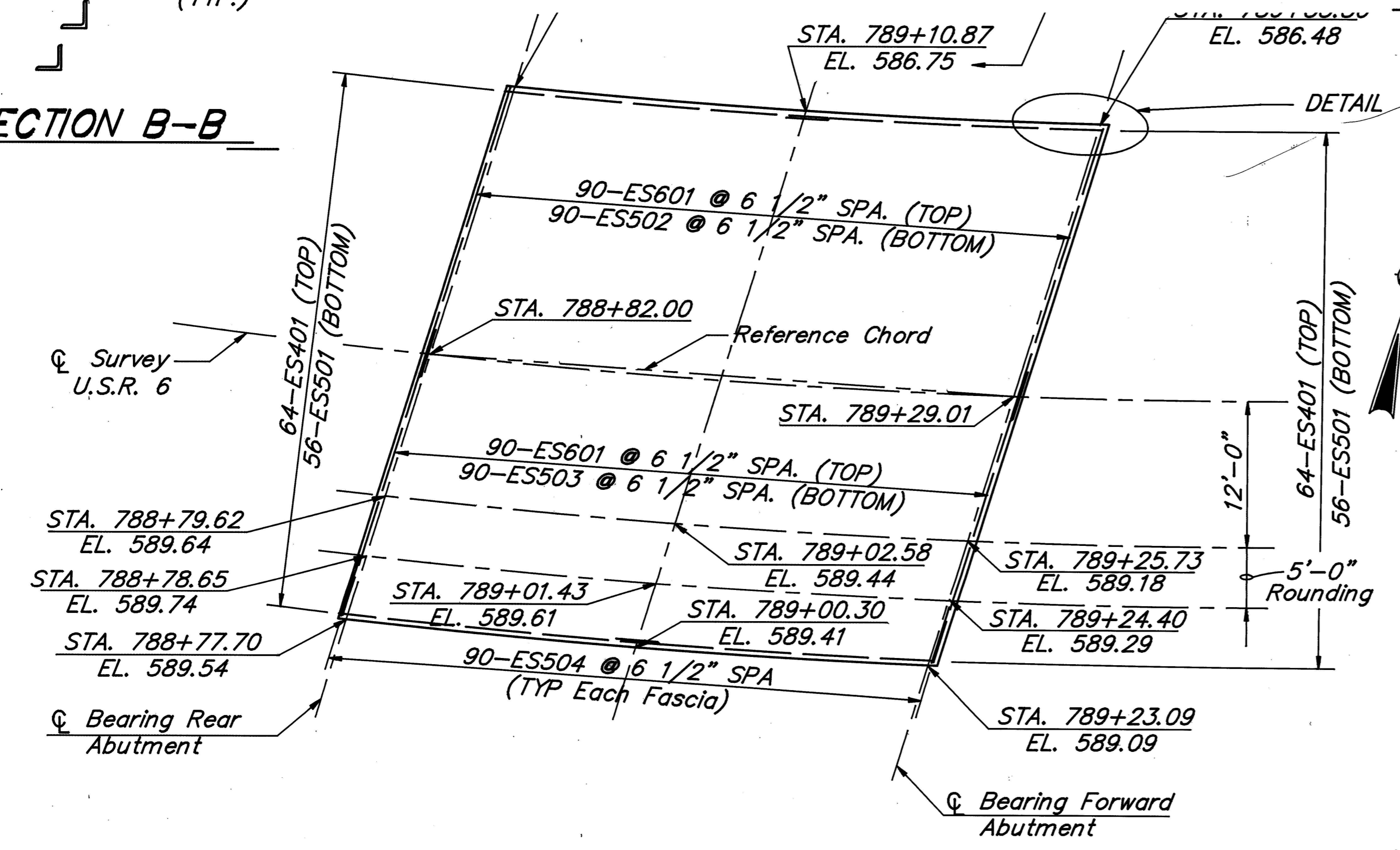
MICROFILMED
SEP 17 1982



A Typical Haunch Width of 9" Shall Be Used for Computing Quantity of Concrete, However the Haunch Width May Vary Between 6" & 12", Provided that the Slope Shall Not Be More Than 1:4 for a Haunch Less Than 9" in Width.

TRANSVERSE SECTION

SECTION B-B



SLAB PLAN

SECTION A-A

DETAIL "B"

(Typ. @ Each Side of Each Abutment)

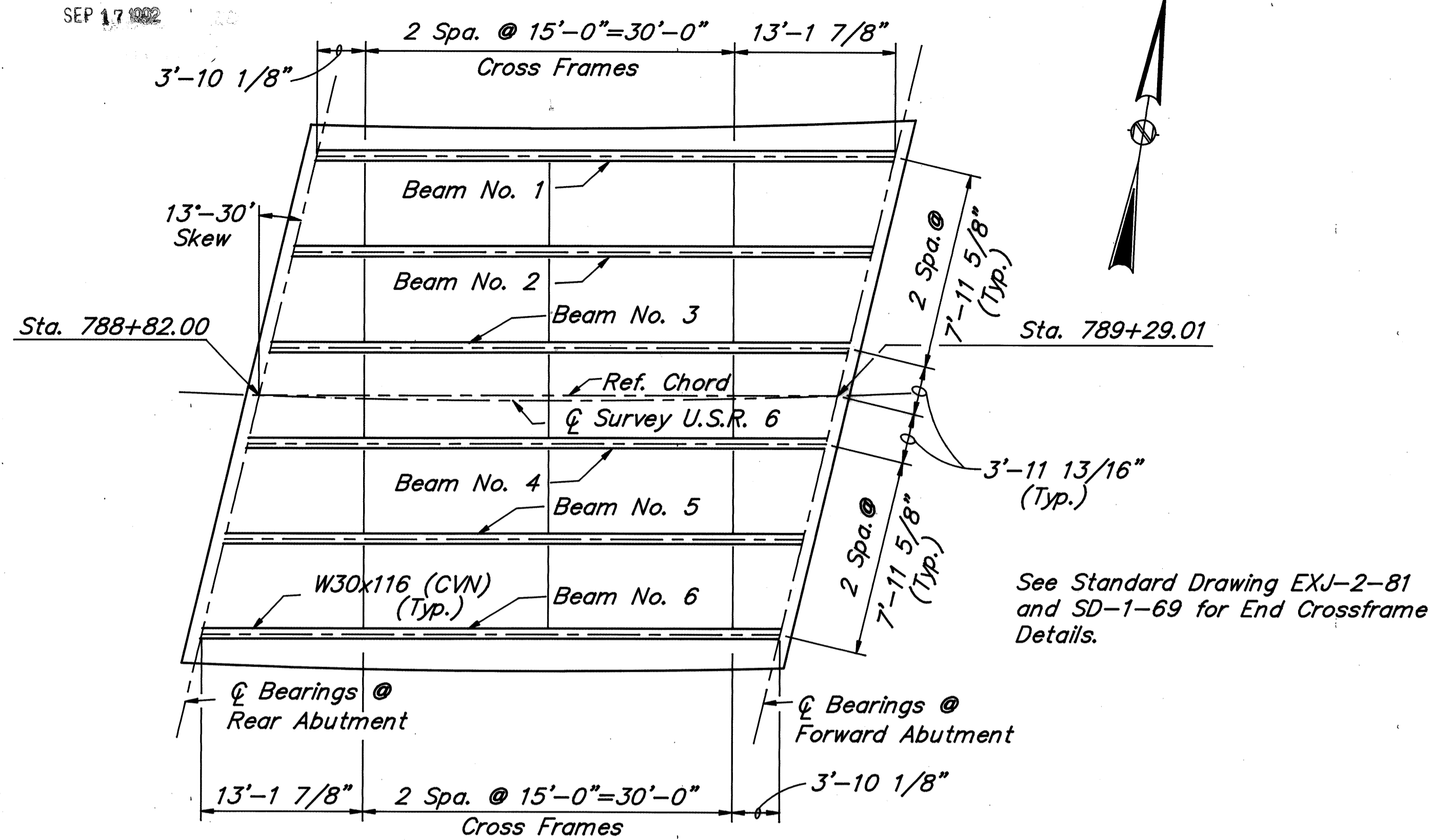
All Slab Reinforcing to be Epoxy Coated.

MINIMUM LAP LENGTHS:
1'-4" for NO. 4 Bars
1'-8" for NO. 5 Bars
2'-0" for NO. 6 Bars

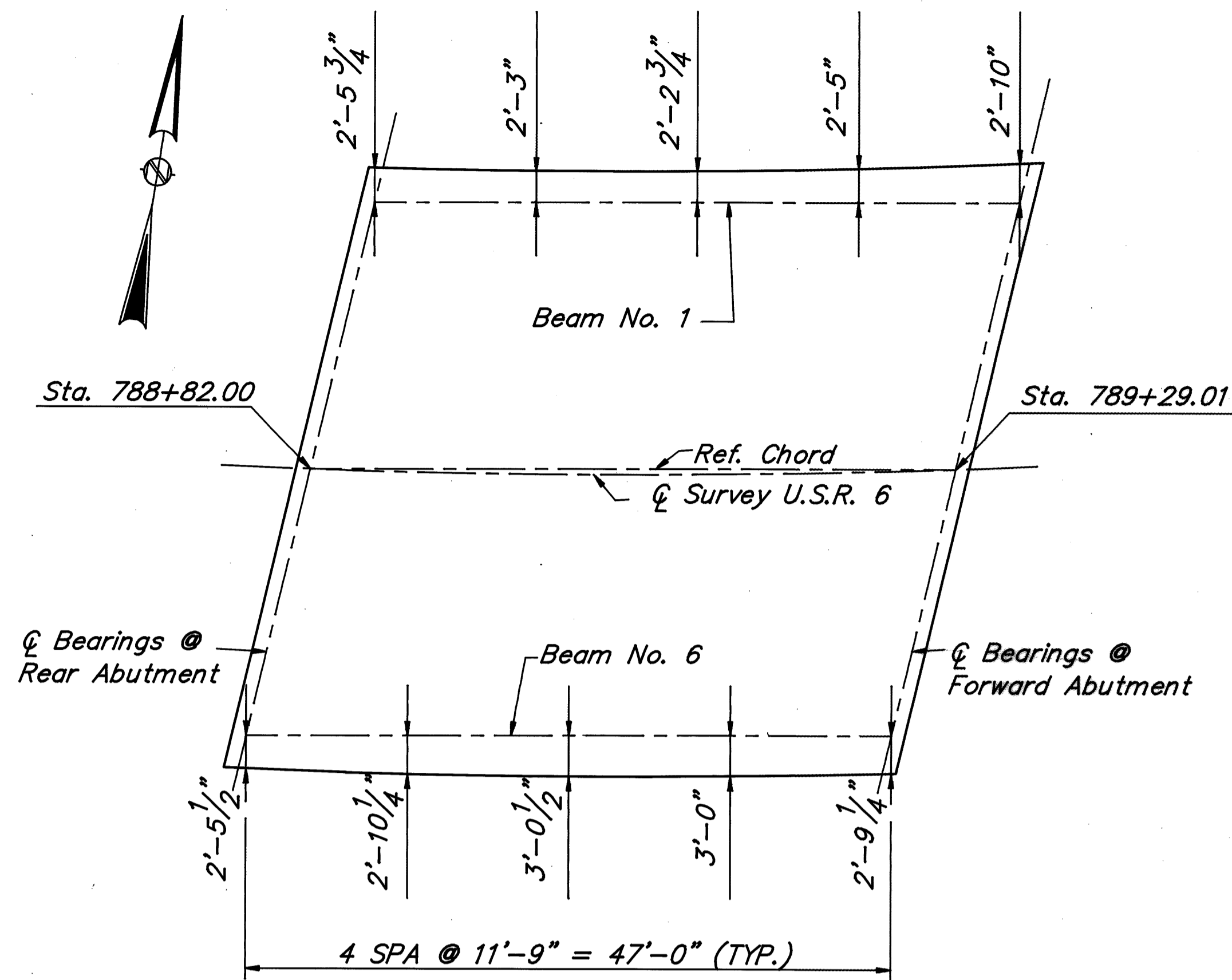
Field Bend Transverse Bars to Fit Rounding. Bending to be Included With Item 509 for Payment. Epoxy Coated Bars Damaged by Field Bending Shall be Repaired as Directed by the Engineer or Shall be Replaced.

Finishing Machine Supports: Connections May be Made at Any Point Along The Top Flange of The Fascia Beams. Fillet Welds Shall Not be Longer Than 2", Not be Closer Than 1" From The Edge of Flange, and Shall Not be Smaller Than The Minimum Size Required by A.A.S.H.T.O. / AWS.

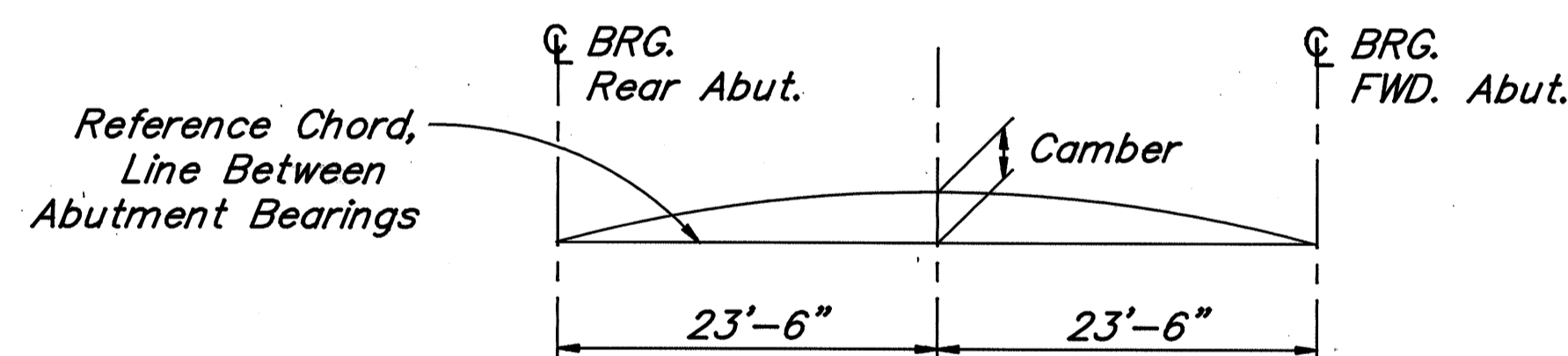
THOMAS FOK & ASSOCIATES, LIMITED CONSULTING ENGINEERS, SURVEYORS & PLANNERS 3896 MAHONING AVE. YOUNGSTOWN, OHIO					
SUPERSTRUCTURE DETAILS					
BRIDGE NO. ERI-6-1494 OVER SAWMILL CREEK					
ERIE COUNTY OHIO					
SURVEYED	DESIGNED	DRAWN	CHECKED	REVIEWED	REVISED
	J.V.	A.L.	A.L.	T.F.	
	5/89	5/89	5/89	5/89	



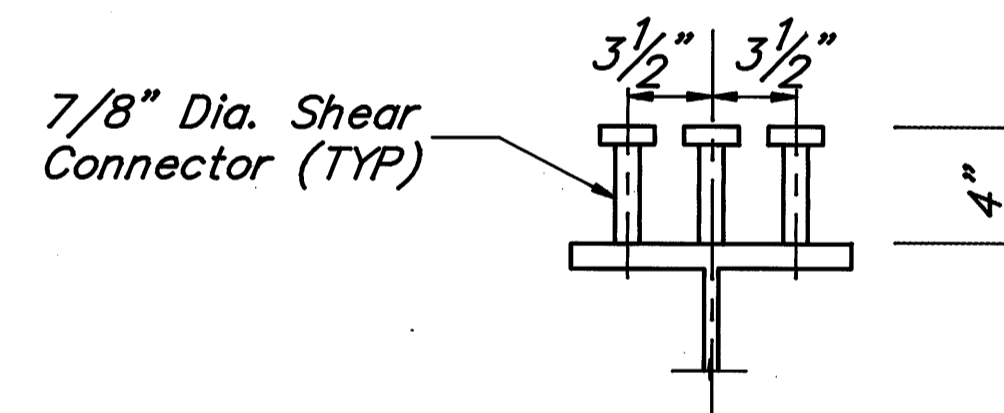
FRAMING PLAN



FASCIA OFFSET PLAN

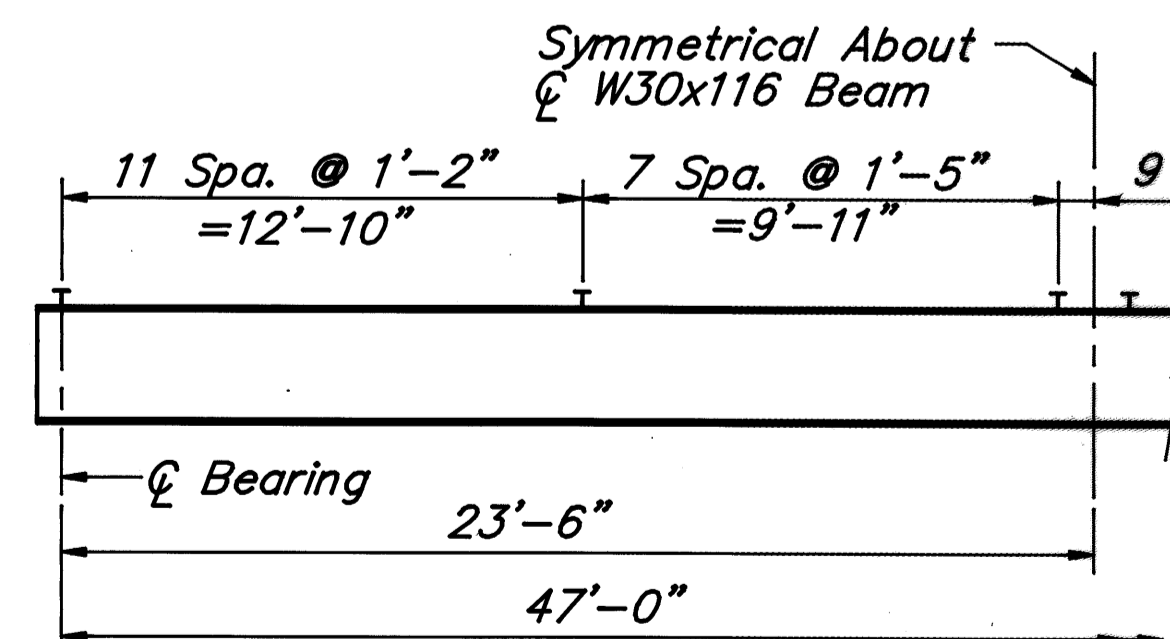


BEAM CAMBER DIAGRAM



SHEAR STUD CONNECTOR

BEAM DEFLECTION AND CAMBER						
BEAM NO.	1	2	3	4	5	6
Deflection due to Weight of Steel	+1/8"	+1/8"	+1/8"	+1/8"	+1/8"	+1/8"
Deflection due to Remaining Dead Load	+3/4"	+11/16"	+11/16"	+11/16"	+11/16"	7/8"
Adjustment for Vertical & Horizontal Curves	-3/8"	-3/8"	-3/8"	-3/8"	-3/8"	+3/16"
Required Shop Camber	1/2"	7/16"	7/16"	7/16"	7/16"	1 3/16"



BEAM ELEVATION

PARTIAL PAINTING OF A588 STEEL:

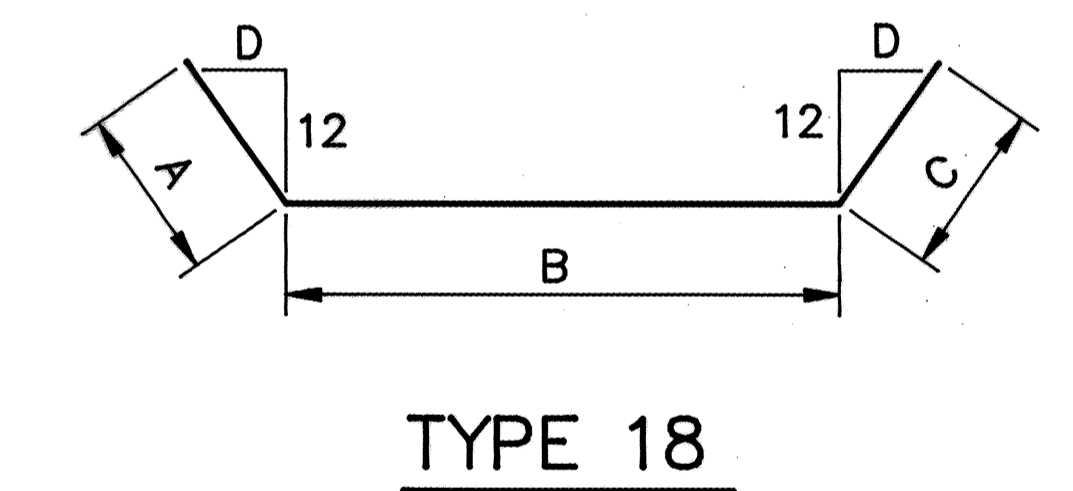
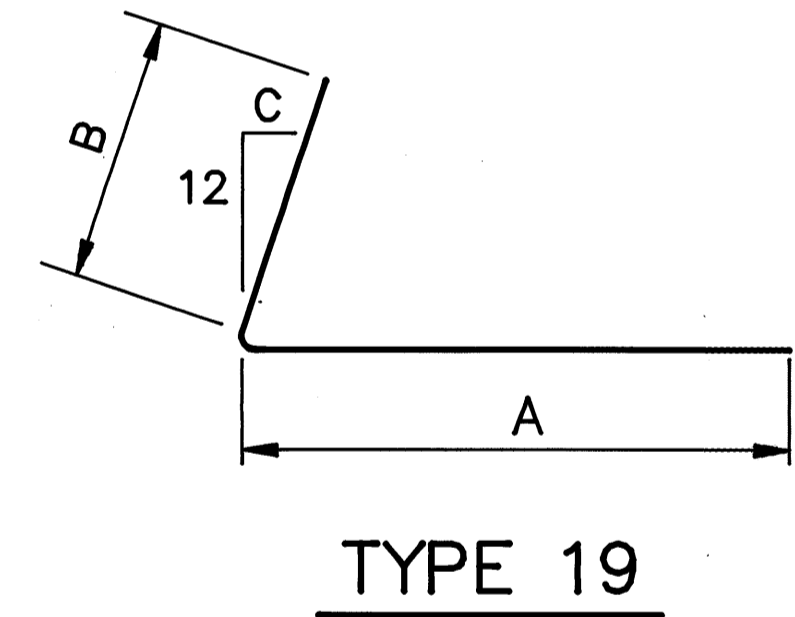
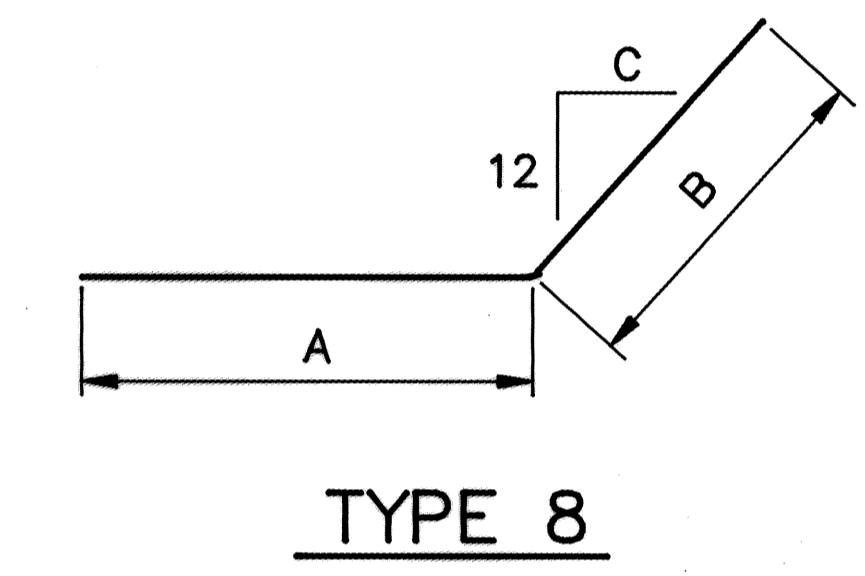
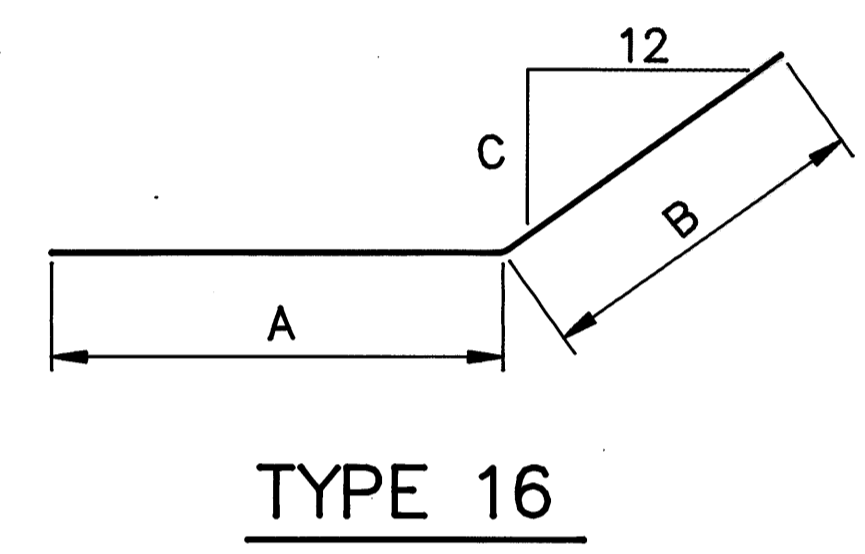
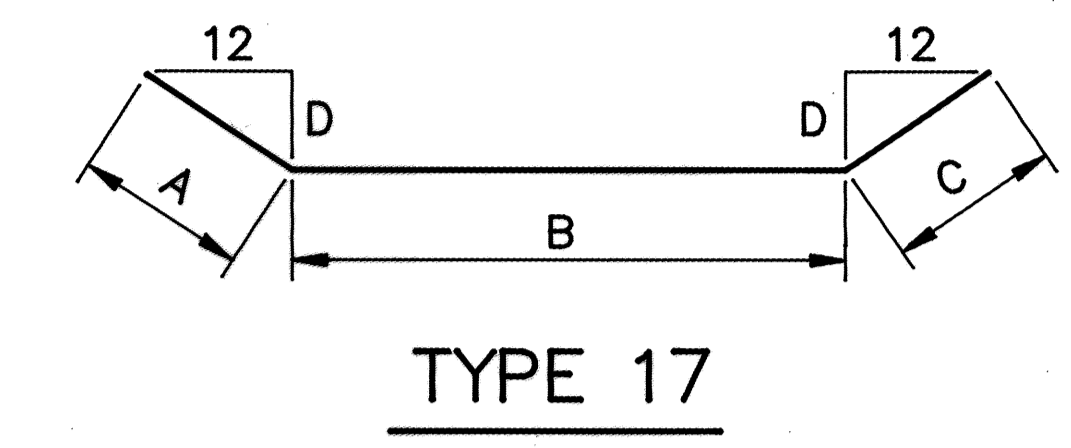
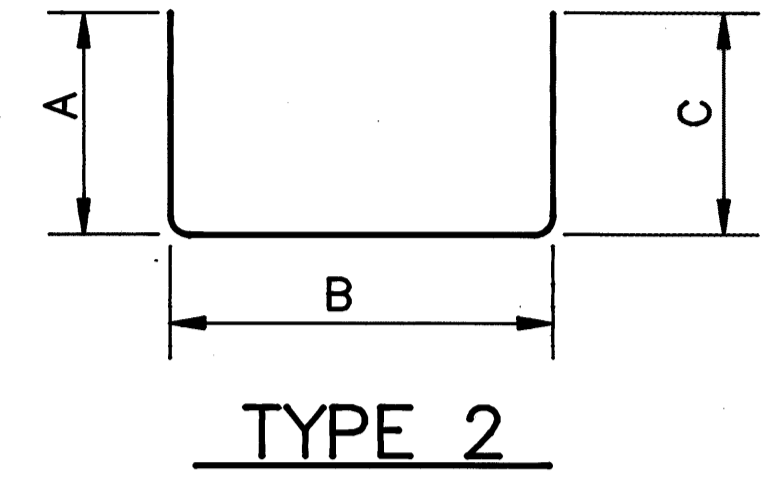
A 10 foot length of the ends of beams adjacent to abutments and all crossframes and other A588 steel within these limits shall be painted. Paint shall be 514, System A. The prime coat shall be 708.17. The top coat shall be 708.18 except that the color shall closely approach Federal Standard No. 595a-20045 or 20059.

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CONSULTING ENGINEERS, SURVEYORS & PLANNERS
3896 MAHONING AVE. YOUNGSTOWN, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE NO. ERI-6-1494
OVER SAWMILL CREEK

ERIE COUNTY						OHIO
SURVEYED	DESIGNED	DRAWN	CHECKED	REVIEWED	REVISED	
	P.D.V.	A.L.	A.L.	T.F.		
	5/89	5/89	5/89	5/89		

REINFORCING STEEL											
MARK	LENGTH	TYPE	A	B	C	D	INCR.	REAR ABT. NO.	FRWD. ABT. NO.	SUPERSTRUCTURE NO.	WEIGHT LBS.
ABUTMENTS											
A501	35'-7"	ST.						32	32		2375
A502	10'-8"	ST.						208	210		4650
A503	34'-6"	ST.						14	12		936
A504	30'-6"	ST.						12	12		764
A505	7'-3"	ST.						17	18		265
A506	6'-2"	ST.						18	18		232
A507	9'-9"	ST.						17	18		356
A508	8'-0"	ST.						22	22		367
A509	12'-8"	16	10'-2"	2'-6"	6			2	2		53
A510	11'-0"	ST.						3	4		80
A511	15'-0"	ST.						3			47
A512	10'-6" to 6'-9"	ST.					9"	1 Series of 6			54
A513	14'-3" to 10'-6"	ST.					9"	1 Series of 6			77
A514	11'-0" to 5'-0"	ST.					3'-0"	2 Series of 3			50
A515	8'-0"	16	5'-6"	2'-6"	6			2			17
A516	8'-3"	ST.						4	2		51
A517	8'-0" to 6'-6"	ST.					9"	1 Series of 3	1 Series of 3		46
A518	12'-6"	ST.						2			26
A519	11'-10" to 10'-6"	ST.					8"	1 Series of 3			35
A520	5'-7"	16	4'-0"	1'-7"	12			35	36		414
A521	3'-0"	ST.							2		6
A522	5'-0"	ST.							2		11
A523	14'-2"	2	13'-4"	11 1/2"				12	12		355
A524	10'-7"	ST.						6	6		132
A525	10'-10"	ST.						8	8		181
A526	7'-4"	ST.						16	16		245
A527	9'-2"	8	7'-8"	1'-6"	3"			8	8		153
A528	8'-10"	17	1'-6"	5'-10"	1'-6"	9 1/2"		7	7		129
A529	14'-7"	ST.							2		30
A530	7'-8"	18	1'-6"	4'-8"	1'-6"	9 1/2"		8	8		128
A531	9'-0"	19	7'-6"	1'-7 1/2"	3"			8	8		150
A532	12'-0"	ST.							2		25
A533	11'-6" to 10'-8"	ST.					5"		1 Series of 3		35
A534	13'-6"	ST.							4		56
A535	9'-4"	16	7'-0"	2'-4"	3 3/4"				2		20
A536	9'-10" to 6'-4"	ST.					7"		1 Series of 7		59
A537	13'-11" to 10'-5"	ST.					7"		1 Series of 7		89
A601	9'-4"	2	8'-6"	1'-0"				95	96		2678
<i>Total</i>											
EPOXY COATED REINFORCING STEEL											
EA501	24'-2"	ST.						13			328
EA502	23'-5"	ST.						13	13		635
EA503	24'-6"	ST.							13		332
EA601	8'-4"	2	1'-6"	3'-4"	3'-10"			47	48		1189
EA602	8'-5"	2	3'-8"	1'-5"	3'-8"			45	47		1163
EA603	5'-5"	2	2'-2"	1'-5"	2'-2"			45	47		749
EA604	7'-1"	2	3'-3"	11"	3'-3"			45	47		979
EA605	10'-1"	2	3'-6"	3'-5"	3'-6"			8	8		242
<i>Sub - Total</i>											
SUPERSTRUCTURE											
ES401	25'-3"	ST.							128		2159
ES501	25'-4"	ST.							122		3224
ES502	19'-4"	ST.							90		1815
ES503	28'-1"	ST.							90		2636
ES504	4'-5"	2	1'-10"	1'-0"	1'-10"				180		829
ES601	23'-9"	ST.							180		6421
<i>Sub - Total</i>											
<i>Total</i>											



NOTES :

BAR SIZE : The bar size is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example: A506 is No. 5 size bar and P1101 is a No. 11 size bar.

Bars with the prefix E denote epoxy coated bars. ST. = Straight

11/11

THOMAS FOK & ASSOCIATES, LTD.
CONSULTING ENGINEERS, SURVEYORS & PLANNERS
3896 MAHONING AVE. YOUNGSTOWN, OHIO

REINFORCING STEEL LIST
BRIDGE NO. ERI-6-1494
OVER SAWMILL CREEK

ERIE COUNTY OHIO

DESIGNED J.V.	DRAWN K.R.M.	TRACED	CHECKED D.C.	REVIEWED T.F.	REVISED
5/89	5/89		5/89	5/89	

ERI-6-1507

MICROFILMED

SEP 17 1982

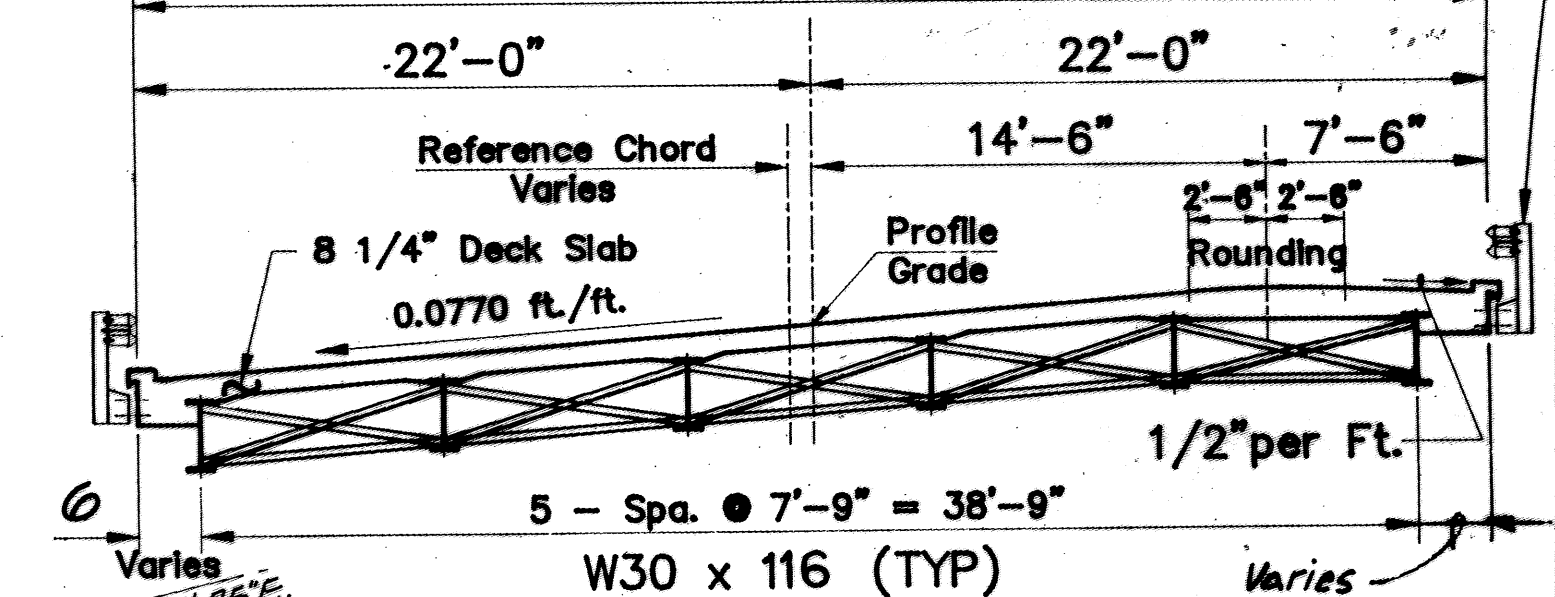
NOTE: BEDROCKS WAS OBSERVED IN CREEK BOTTOM AND EMBANKMENTS.

REGION	STATE	PROJECT
5	OHIO	

ERIE COUNTY
ERI-6-14.93

Survey U.S.R. 6
Deep Beam Guardrail W/ Type 2 Posts

44'-0" f/f Guardrail



TRANSVERSE SECTION

HYDRAULIC DATA			
INTERVAL (YEAR)	ELEV. (FT.)	Q (C.F.S.)	V (FT./SEC.)
25	580.56	1724	7.50
100	580.76	2327	9.76

DRAINAGE AREA = 13.89 SQ. MI.

EXISTING STRUCTURE

SINGLE SPAN CONCRETE BEAM
TYPE: WITH CONCRETE DECK ON HIGH WALL ABUTMENTS
SPANS: 34'-0" ± CLEAR
ROADWAY: 51' f/f PARAPET
SKEW: 13°-26' L.F.
ALIGNMENT: 8°-45'-30" CURVE LEFT
STRUCTURE FILE NO. 2201771

PROPOSED STRUCTURE

SINGLE SPAN COMPOSITE A588
TYPE: STEEL BEAMS WITH REINFORCED CONC. DECK & WALL TYPE ABUT.
SPAN: 47'-0" c/c BEARINGS
ROADWAY: 44'-0" f/f GUARDRAIL
SKEW: 13°-30' L.F. *
DESIGN LOADING: HS 20-44 AND ALTERNATE MILITARY LOADING
APPROACH SLAB: AS-1-81 (25'-0")
ALIGNMENT: 8°-45'-30" CURVE LEFT
SUPERELEVATION: 0.0770 ft./ft.
WEARING SURFACE: MONOLITHIC CONC.
AVG. DAILY TRAFFIC: 1989 ADT 9680
2009 ADT 11620
2009 ADTT = 232

OHIO DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS - TESTING LABORATORY
1600 WEST BROAD STREET COLUMBUS, OHIO 43223

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. ERI-6-1494
OVER SAWMILL CREEK
SEC. ERI-6-14.93

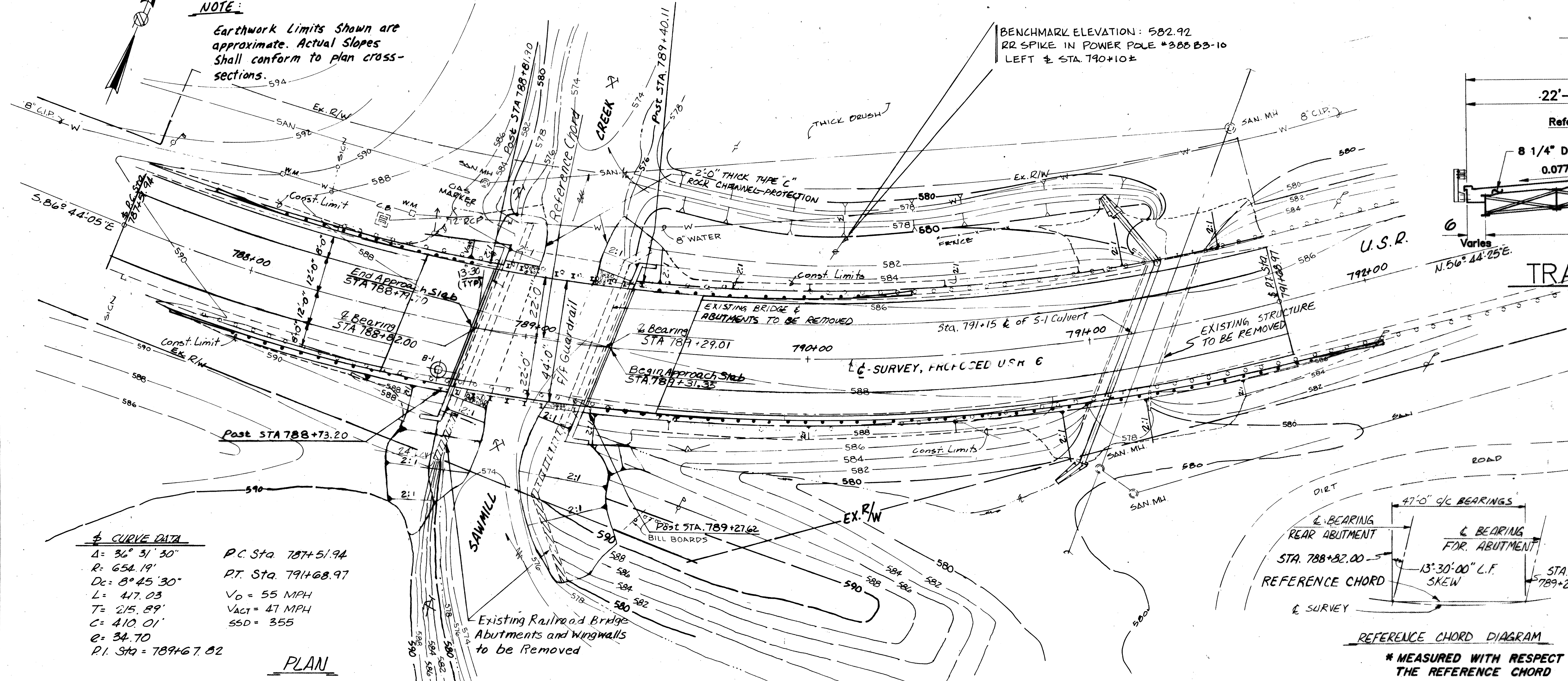
PLAN AND PROFILE

DRAFTING BY	CHECKED BY	REVIEWED BY	DATE
A.F.	A.F.	R.D.R.	6/30/87

NOTE:

Earthwork Limits Shown are approximate. Actual Slopes Shall conform to plan cross-sections.

BENCHMARK ELEVATION: 582.92
RR SPIKE IN POWER POLE #388 B3-10
LEFT ± STA. 790+10 ±

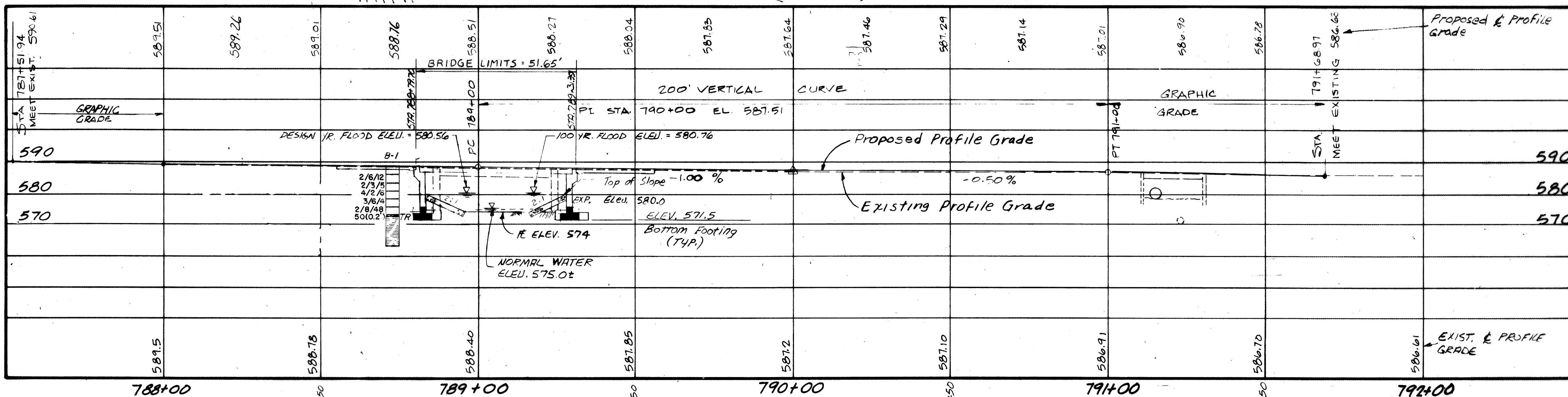


CURVE DATA

Δ = 36° 31' 30"
R = 654.19'
Dc = 8° 45' 30"
L = 417.03'
T = 215.89'
C = 410.01'
P.I. Sta = 789+67.82

PC Sta. 787+51.94
PT Sta. 791+68.97
V₀ = 55 MPH
V_{ACT} = 47 MPH
SSD = 355

PLAN

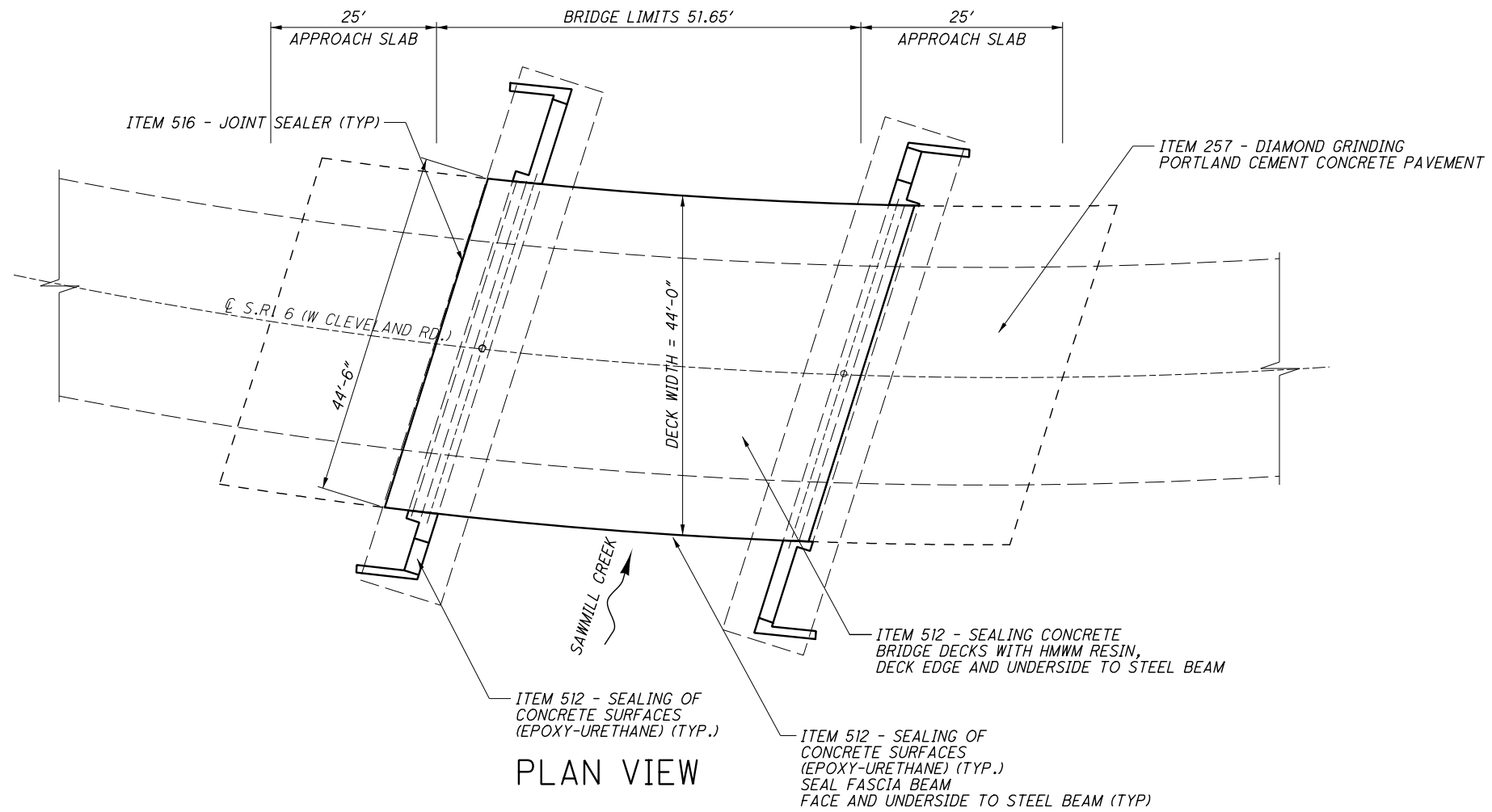


PROFILE ON & SURVEY

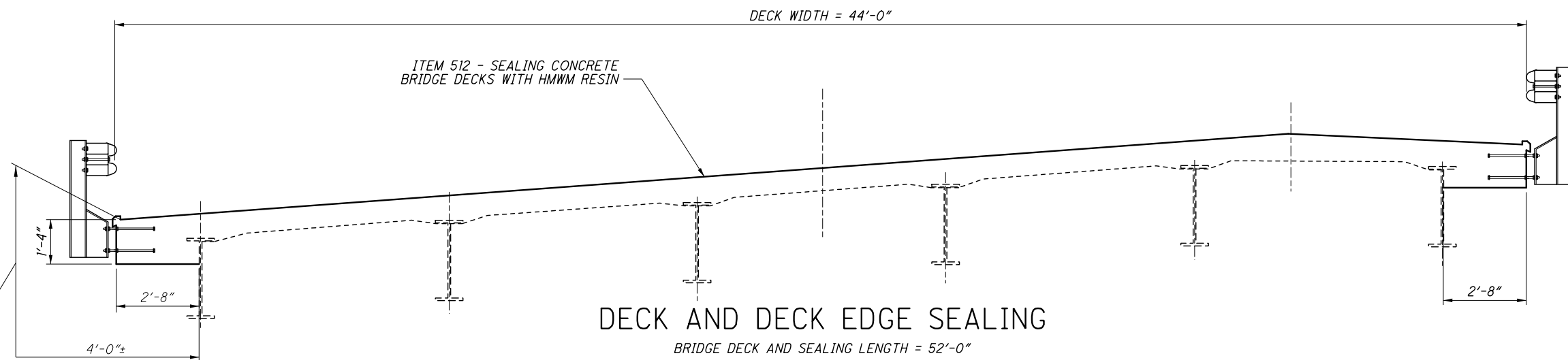
Revised 7/7/89

EP.H-0-1A3-29 PC

ERI-6-1507



PLAN VIEW



DECK AND DECK EDGE SEALING

BRIDGE DECK AND SEALING LENGTH = 52'-0"

ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) (TYP.)
SEAL FASCIA BEAM FACE AND UNDERSIDE TO STEEL BEAM (TYP)

ITEM	QUANTITY	UNIT	DESCRIPTION
257	247	SQ.YD.	DIAMOND GRINDING PORTLAND CEMENT CONCRETE PAVEMENT
512	253	SQ.YD.	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN
512	46	SQ.YD.	SEALING CONCRETE SURFACES (EPOXY-URETHANE)
516	89	FT	JOINT SEALER

- NOTES:
- 1) THE EXISTING GUARDRAIL IS NOT SHOWN.
 - 2) ITEM 512 - SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN.
 - 3) ITEM 257 SHALL BE USED TO CREATE A SMOOTH TRANSITION BETWEEN THE APPROACH SLABS AND BRIDGE DECK AND BETWEEN THE APPROACH SLABS AND APPROACH PAVEMENT.

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET.

DESIGN FILE: \\projects\88764\structures\88764\ERI_1498.dgn
WORKSTATION: salay
MODELNAME: Sheet
DATE: 11/10/2014

DESIGN AGENCY: ODOT DISTRICT THREE
OFFICE OF PLANNING & ENGINEERING

DATE: 22/01/13
STRUCTURE FILE NUMBER: 2201739

DESIGNED: GTS
CHECKED: KRB

DRAWN: GTS
REVISED:

PLAN VIEW
PLAN VIEW OVER SAWMILL CREEK

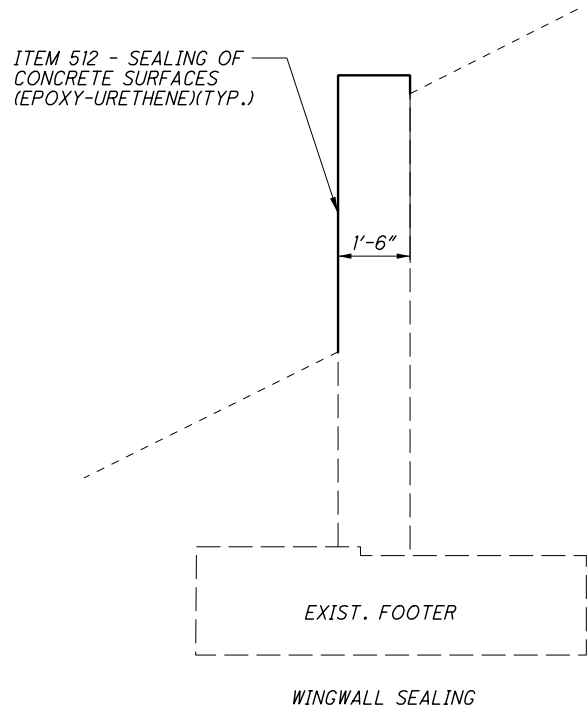
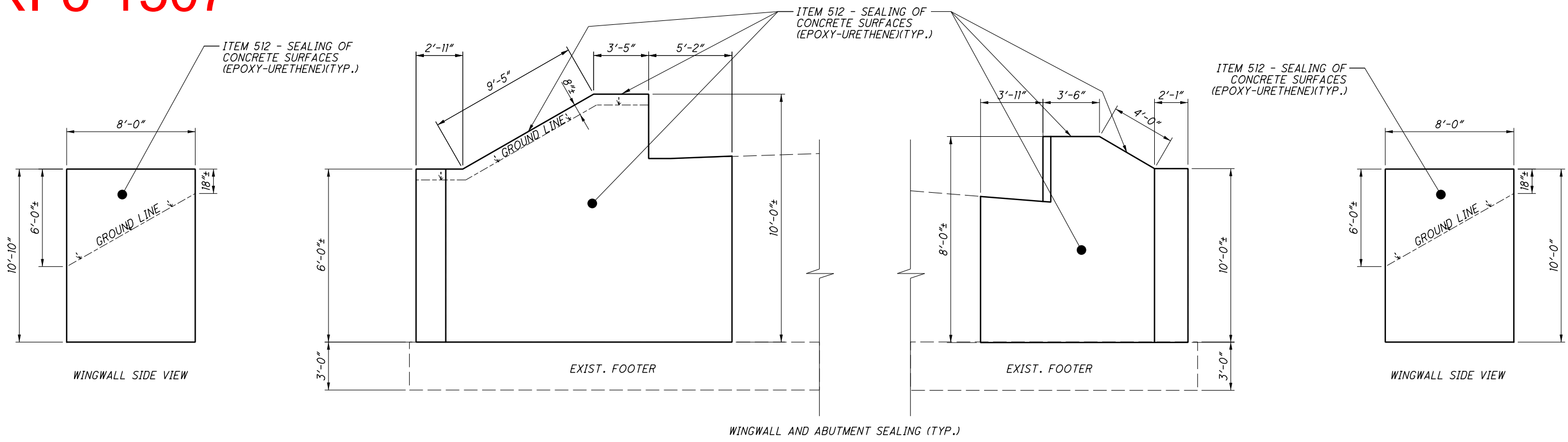
ERI-6-1498

ERI-6-11.25

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ITEM	QUANTITY	UNIT	DESCRIPTION
512	725	SQ.YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	725	SQ.YD.	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES

NOTES:
 1) THE EXISTING GUARDRAIL IS NOT SHOWN.
 2) SEAL ENTIRE WINGWALL AND ABUTMENT FACE TO FASCIA BEAM WITH ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET.

DESIGN FILE: \\projects\88764\structures\88764\ERI_1498.dgn
 MODELNAME: Sheet
 DATE: 11/10/2014

DESIGN AGENCY: ODOT DISTRICT THREE
 OFFICE OF PLANNING & ENGINEERING

DATE: 22/01/2014
 STRUCTURE FILE NUMBER: 2201739

DESIGNED: GTS
 CHECKED: KRB

DRAWN: GTS
 REVISED:

PLAN VIEW
 OVER SAWMILL CREEK

ERI-6-1498

ERI-6-11.25

2 / 2

29
33