

IOWA  
DEPARTMENT OF TRANSPORTATION  
**Highway Division**

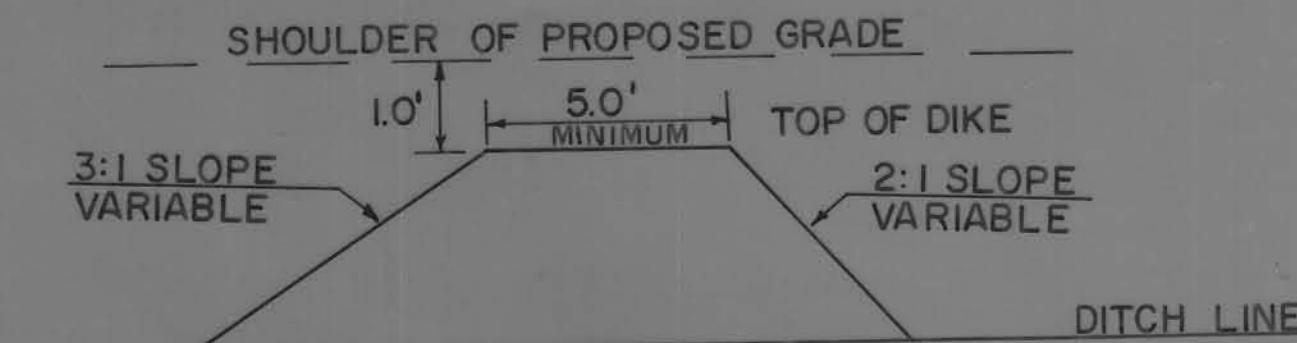
PLANS OF PROPOSED IMPROVEMENT ON THE  
**FARM TO MARKET SYSTEM  
CRAWFORD COUNTY**

PROJECT NO. BROS-9024(I)--5F-24  
ALTERNATES "A, B, & C" 33'-2" X 20'-1" X 142' SEMI-ELLIPTICAL STRUCTURAL-PLATE PIPE  
ALTERNATE "D" 125'-0" X 30'-0" CONTINUOUS CONCRETE SLAB BRIDGE

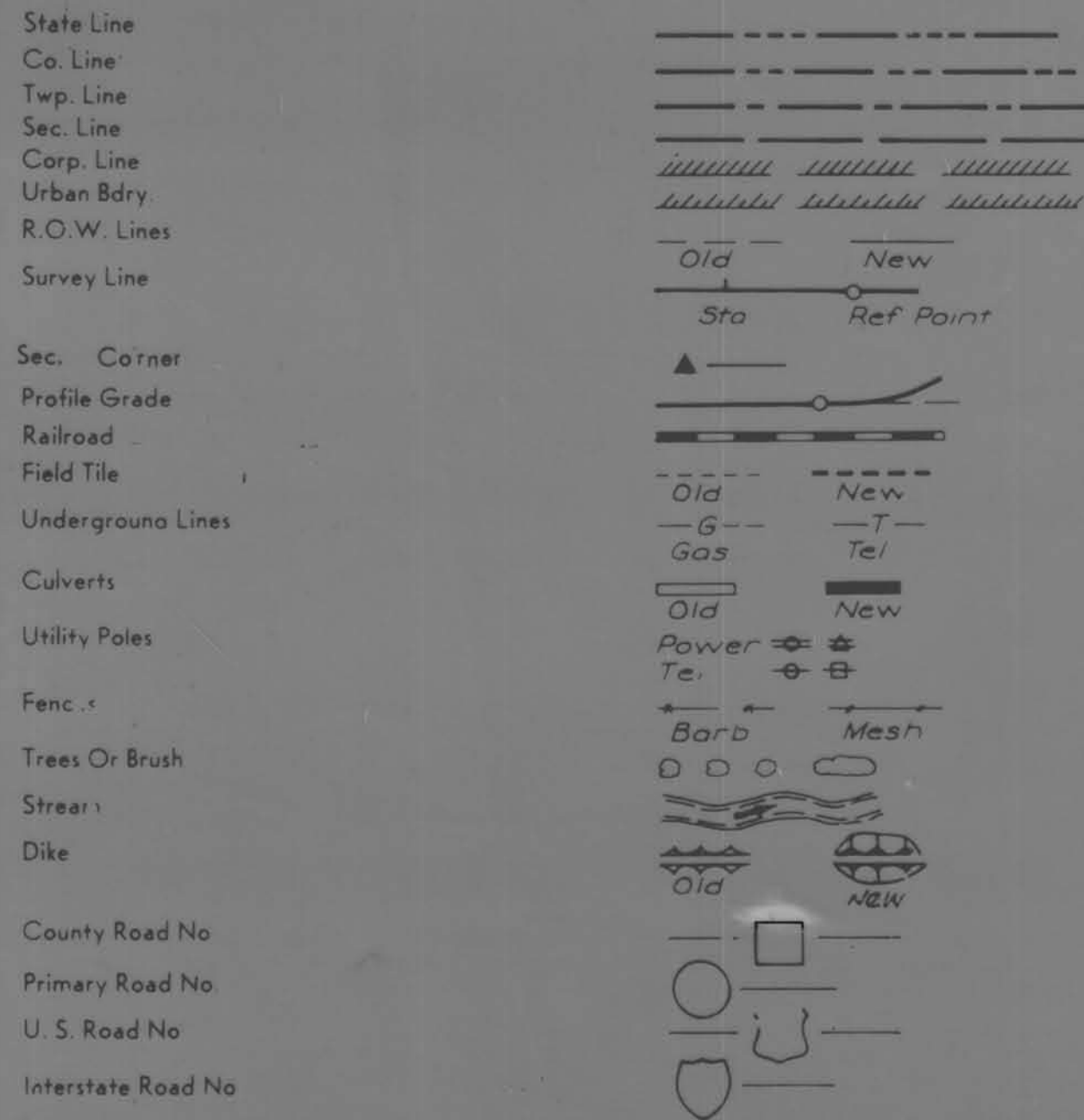
THE STANDARD SPECIFICATIONS, SERIES OF 1977,  
OF THE IOWA DEPARTMENT OF TRANSPORTATION,  
SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT

PLUS CURRENT SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS

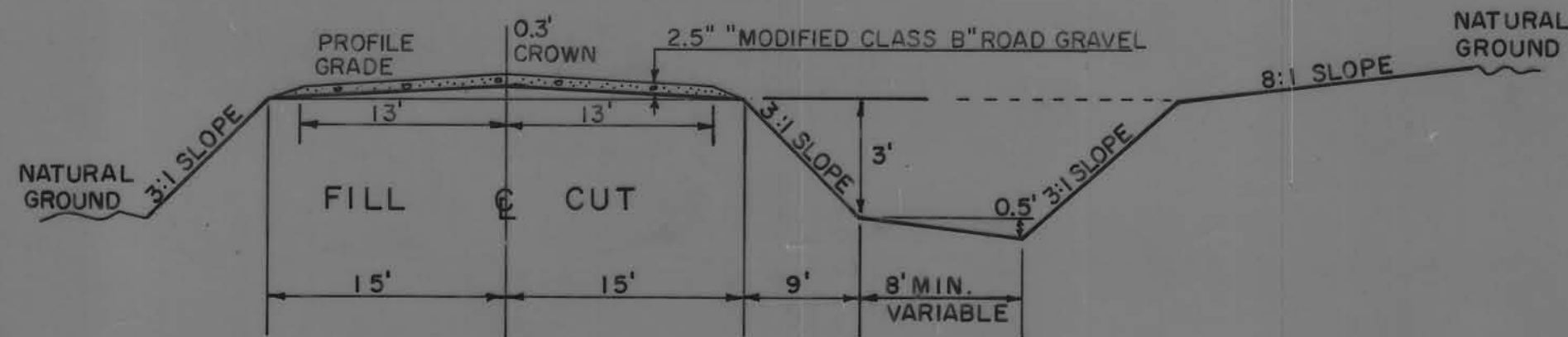
TYPICAL DIKE SECTION



CONVENTIONAL SIGNS



TYPICAL CROSS SECTION

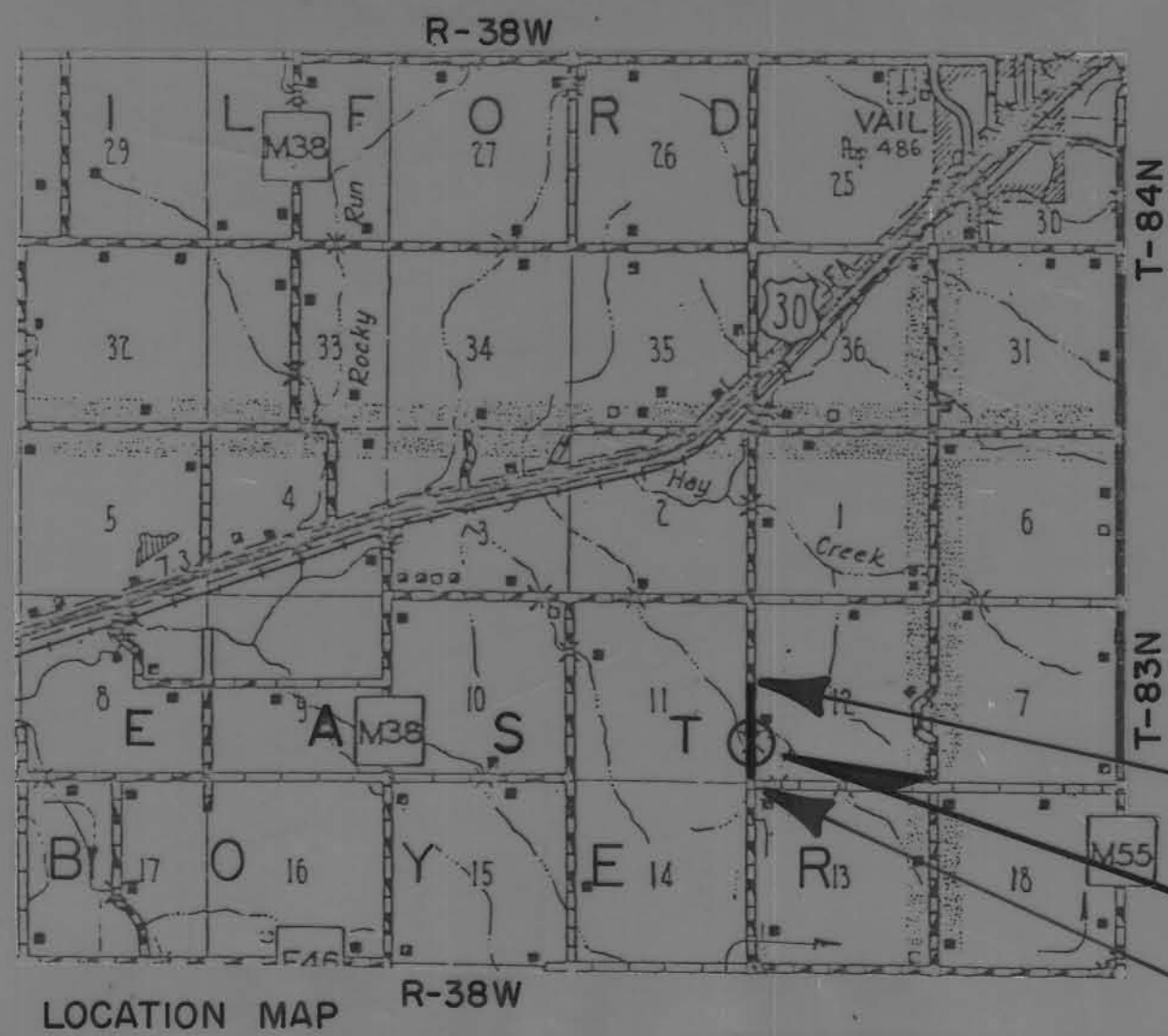


NOTE: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIAL WHICH IS NOT DESIRABLE TO BE INCORPORATED IN THE WORK INVOLVED ON THIS PROJECT. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES.

NOTE: GRADING CONTRACTOR TO COORDINATE HIS WORK WITH UTILITIES COMPANY TO EXPEDITE ENTIRE PROJECT. ANY EXTRA WORK INCURRED BY THE ROAD CONTRACTOR IN THE RELOCATION OF UNDERGROUND TELEPHONE LINES, TO BE PAID FOR BY EXTRA WORK ORDER, ACCORDING TO SECTION 109.04, IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, SERIES 1977. ANY INCONVENIENCE INCURRED BY THE ROAD CONTRACTOR IN THE RELOCATION OF UTILITIES SHALL BE CONSIDERED INCIDENTAL TO CLASS "10" ROADWAY AND BORROW.

NOTE: EROSION CONTROL CHECK DAMS TO BE CONSTRUCTED BY ROAD CONTRACTOR, IN SIDE DITCHES, AT LOCATIONS SHOWN ON PLANS. PLACING OF CHECK DAMS SHALL BE CONSIDERED INCIDENTAL TO CLASS "10" ROADWAY AND BORROW.

NOTE: PERMANENT EROSION CONTROL WORK TO BE DONE BY OTHERS.



APPROVED

*Tracy E. Anderson*

*John H. Weiss*

*LeRoy A. Hansson*

*Don H. Jensen*

*Martin Spiegel*  
BOARD OF SUPERVISORS

IOWA DEPARTMENT OF TRANSPORTATION  
HIGHWAY DIVISION  
AUTHORIZED FOR LETTING

DISTRICT LOCAL SYSTEMS DATE  
ENGINEER

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED UNDER MY SUPERVISION AND THAT ENGINEERING DECISIONS WITH REGARD TO THE DESIGN WERE MADE BY ME OR BY OTHER DULY REGISTERED PROFESSIONAL ENGINEERS UNDER THE LAWS OF THE STATE OF IOWA.

*H. Bob Wright* Oct 15, 1980  
IOWA REGISTRATION NUMBER 5798 DATE



AUTHORIZED FOR LETTING  
*Tracy E. Anderson* April 1, 1981  
DEPUTY CHIEF ENGINEER DATE

U.S. DEPT. TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION  
APPROVED

DIVISION ENGINEER DATE

INDEX OF SHEETS	
NO.	DESCRIPTION
1	TITLE PAGE, INCLUDING CONVENTIONAL SIGNS, LOCATION MAP, MILEAGE SUMMARY, AND TYPICAL CROSS SECTION, REMOVALS, STANDARD PLANS
2	ESTIMATE OF QUANTITIES
3	PLAN AND PROFILE SHEET
4-6	STRUCTURAL PLATE DETAILS AND DESIGN CRITERIA, ALTERNATES "A, B, & C"
7	BRIDGE DETAILS AND DESIGN CRITERIA, ALTERNATE "D"
8-17	CROSS SECTIONS AVAILABLE AT COUNTY ENGINEERS OFFICE

PROJECT TRAFFIC CONTROL PLAN  
This road will be closed to through traffic during construction. Local traffic to adjacent properties will be maintained as provided for in Article 1107.08, 1977 Standard Specifications. Traffic control devices, procedures and layout shall be as provided for by supplemental specifications for traffic controls for street and highway construction and maintenance operations, Specification 854.

MILEAGE SUMMARY			
DIV.	LOCATION	LIN. FT.	MILES
	STA. 1+00 TO STA. 26+23.4	2523.4	0.478
	STA. 1+00 TO STA. 26+23.4 DEDUCT BRIDGE STA. 15+10.5	2523.4 128.0	0.478 0.024
	TOTAL NET MILEAGE	2395.4	0.454

REMOVALS  
20' WOOD, 38' I-BEAM X 16' BRIDGE AS PER PLAN

STANDARD PLANS					
The following Standard Plans shall be considered applicable to construction work on this project. (may be obtained at bridge design services)					
IDENT.	ISSUED	LATEST REVISION	IDENT.	ISSUED	LATEST REVISION
J30C-79	7-9-79		RF-32	6-8-73	
J30C5, 11, 13,					
22-79	7-9-79	2-4-80			
J30C6, 7, 8, 14	7-9-79				
BRIDGE ONLY					

-120-

BROS-9024(I)--5F-24  
ALTERNATES "A, B, & C" 33'-2" X 20'-1" X 142' SEMI-ELLIPTICAL STRUCTURAL-PLATE PIPE CULVERT  
ALTERNATE "D" 125'-0" X 30'-0" CONTINUOUS CONCRETE SLAB BRIDGE

**CRAWFORD COUNTY**  
LETTING DATE: APRIL 28, 1981

MASTERS PRINTED



ALTERNATE "D"					
125'-0" X 30'-0" CONCRETE SLAB BRIDGE					
ESTIMATED QUANTITIES					
ITEM NO.	ITEM	UNIT	SUPER STRUCTURE	ABUTMENTS	TOTAL
1	CONCRETE, STRUCTURAL	CU.YDS	263.7	21.2	284.9
2	STEEL, REINFORCING	LBS.	73,190	3118	76,308
3	RAIL, CONCRETE BARRIER	LIN.FT.	272.0	—	272.0
4	PILING, PIA TYPE 4, 16" (20@ 55')	LIN.FT.	1,100	—	1,100
5	PILING, CREOSOTED (8@ 45')(8@ 50')	LIN.FT.	—	760	760
6	PREBORED HOLES	LIN.FT.	—	128	128
7	EXCAVATION, CLASS 10 CHANNEL	CU.YDS	—	—	1,170
8	EXCAVATION, CLASS 20	CU.YDS.	—	32	32
9	REMOVALS	LUMP SUM	—	—	LUMP SUM
			TOTAL		
10	EXCAVATION, CLASS 10, ROADWAY & BORROW	CU.YDS.	33,587		
11	OVERHAUL	STA. YDS.	23,010		
12	TOPSOIL, STRIP, SALVAGE, AND SPREADING	CU.YDS.	2,563		
13	CLEARING & GRUBBING	% OF SCHEDULE	\$ 666.00		
14	GRANULAR MATERIAL, RECLAIM, STOCKPILE, & SPREAD	CU.YDS.	365		
15	GRANULAR SURFACING, ON ROAD, CLASS "B" MODIFIED - GRAVEL	TONS.	738		
16	CULVERT, CORR. METAL ENTRANCE PIPE 24" DIA.	LIN.FT.	106		
17	CULVERT, CORR. METAL ENTRANCE PIPE 48" DIA.	LIN.FT.	44		

In Letting of April 28, 1981

- ITEM NO.
- CLASS "C" CONCRETE (21.2 CU.YDS.) FOR ABUTMENTS.
  - CLASS "D" CONCRETE (263.7 CU.YDS.) FOR SUPERSTRUCTURE.
  - CLASS 3, SPECIAL SURFACE FINISH, SHALL BE REQUIRED.
- 10 TYPE "A" COMPACTION WILL BE REQUIRED.
- 12 ON ALL BORROW BEYOND 45' R.O.W. SALVAGE TOPSOIL 8" AND RESPREAD AFTER GRADING IS COMPLETED.
- 14 LOCATIONS FOR STOCKPILING OF RECLAIMED GRANULAR MATERIAL TO BE PROVIDED BY GRADING CONTRACTOR, WITH APPROVAL OF COUNTY ENGINEER. PRESENT SURFACING MATERIAL SHALL BE RECLAIMED ACCORDING TO SECTION 2126 I.D.O.T. STANDARD SPECIFICATIONS SERIES 1977.
- 15 GRAVEL SHALL MEET THE REQUIREMENTS OF CLASS "B" GRAVEL IN ACCORDANCE WITH ARTICLE 4120.02 AND A MAXIMUM OF 25% PASSING THE NO. 30 SIEVE. GRAVEL TO BE PLACED AS EACH MILE IS COMPLETED, AS DIRECTED BY COUNTY ENGINEER, SHALL INCLUDE THE COST OF THE SPREADING OF GRAVEL ON ROAD SURFACE.

ALTERNATES "A", "B", & "C"				
SEMI-ELLIPTICAL STRUCTURAL-PLATE PIPE CULVERT ALTERNATES "A", "B", & "C"				
ESTIMATED QUANTITIES				
ITEM NO.	ITEM	UNIT	TOTAL	
1	CULVERT, 33'-2" X 20'-1" SEMI-ELLIPTICAL STRUCTURAL-PLATE PIPE	LIN.FT.	142	
2	BACKFILL, GRANULAR	CU.YDS.	2,859	
3	BEDDING, GRANULAR	CU.YDS.	220	
4	CONCRETE, STRUCTURAL	CU.YDS.	26.4	
5	STEEL, REINFORCING	LBS.	1,678	
6	EXCAVATION, CLASS 10 ROADWAY & BORROW	CU.YDS.	33,587	
7	EXCAVATION, CLASS 20	CU.YDS.	2,835	
8	REMOVALS	LUMP SUM	LUMP SUM	
9	OVERHAUL	STA. YDS.	23,010	
10	TOPSOIL, STRIP, SALVAGE, AND SPREADING	CU.YDS.	2,563	
11	CLEARING & GRUBBING	% OF SCHEDULE	\$ 666.00	
12	GRANULAR MATERIAL, RECLAIM, STOCKPILE, & SPREAD	CU.YDS.	365	
13	GRANULAR SURFACING, ON ROAD, CLASS "B" MODIFIED - GRAVEL	TONS	738	
14	CULVERT, CORR. METAL ENTRANCE PIPE 24" DIA.	LIN.FT.	106	
15	CULVERT, CORR. METAL ENTRANCE PIPE 48" DIA.	LIN.FT.	44	

In Letting of April 28, 1981

- ITEM NO.
- IF CONTRACTOR BIDS ALTERNATE STRUCTURE "A" (ARMCO STRUCTURAL PLATE SUPER SPAN) THE THRUST BEAM MATERIAL (STRUCTURAL CONCRETE, REINFORCING STEEL, AND THREADED RODS) ARE TO BE INCLUDED IN & CONSIDERED INCIDENTAL TO THE BID PRICE OF THE STRUCTURAL PLATE SUPER SPAN. 48" Saddle Tee Shall Also Be Considered Incidental To The Bid Price of The Structural Plate Super Span.
  - BASED ON GRANULAR END AREA 627.5 SQ.FT. @ 123 FT. @ 1.7 TON PER CU.YD. = 4,860 TON
  - BASED ON GRANULAR END AREA 34.5 SQ.FT. @ 172 FT. @ 1.7 TON PER CU.YD. = 374 TON
  - TYPE "A" COMPACTION WILL BE REQUIRED.
  - ON ALL BORROW BEYOND 45' R.O.W. SALVAGE TOPSOIL 8" AND RESPREAD AFTER GRADING IS COMPLETED.
  - LOCATIONS FOR STOCKPILING OF RECLAIMED GRANULAR MATERIAL TO BE PROVIDED BY GRADING CONTRACTOR, WITH APPROVAL OF COUNTY ENGINEER. PRESENT SURFACING MATERIAL SHALL BE RECLAIMED ACCORDING TO SECTION 2126 I.D.O.T. STANDARD SPECIFICATIONS SERIES 1977.
  - GRAVEL SHALL MEET THE REQUIREMENTS OF CLASS "B" GRAVEL IN ACCORDANCE WITH ARTICLE 4120.02 AND A MAXIMUM OF 25% PASSING THE NO. 30 SIEVE. GRAVEL TO BE PLACED AS EACH MILE IS COMPLETED, AS DIRECTED BY COUNTY ENGINEER, SHALL INCLUDE THE COST OF THE SPREADING OF GRAVEL ON ROAD SURFACE.



Sta. 0+00 Ref. To Sec. Cor.  
1/2" Bolt 8" Deep.

EAST BOYER TOWNSHIP  
T-83N R-38W  
SEC. 12

Sta. 26+23.4 Ref. To Sec. Cor.  
1/2" Bolt 8" Deep  
STA. 26+23.4 END OF PROJECT

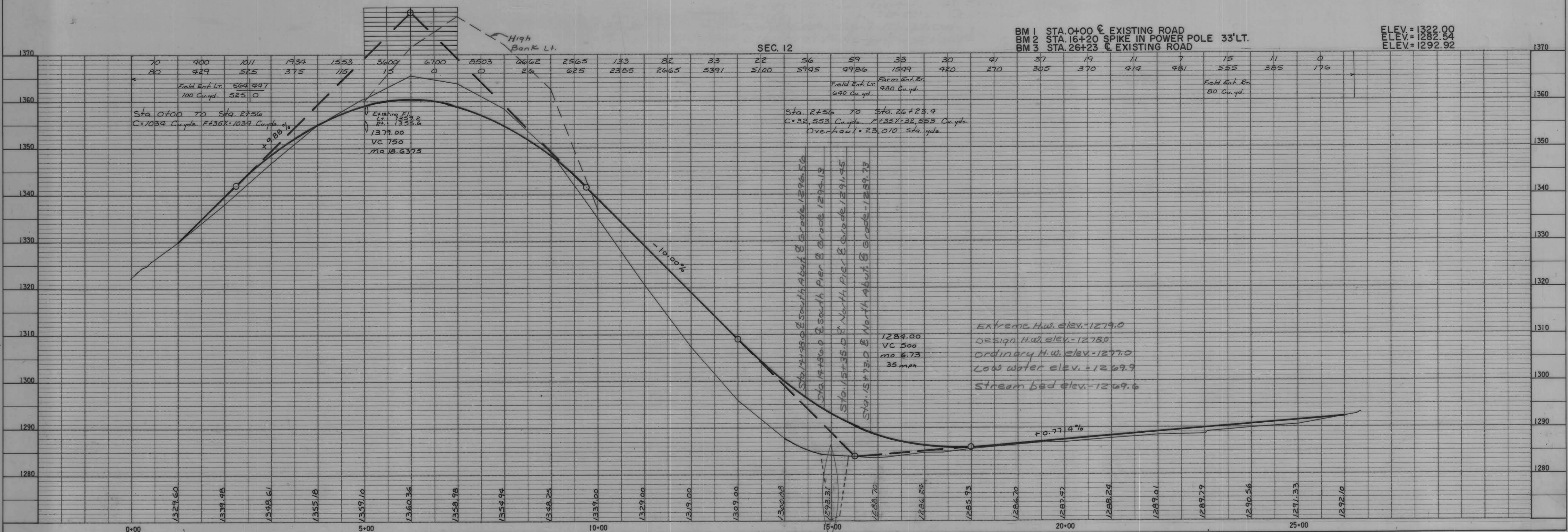
STA. 1+00 BEGINNING OF PROJECT

DATE  
BY  
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NO.

DATE  
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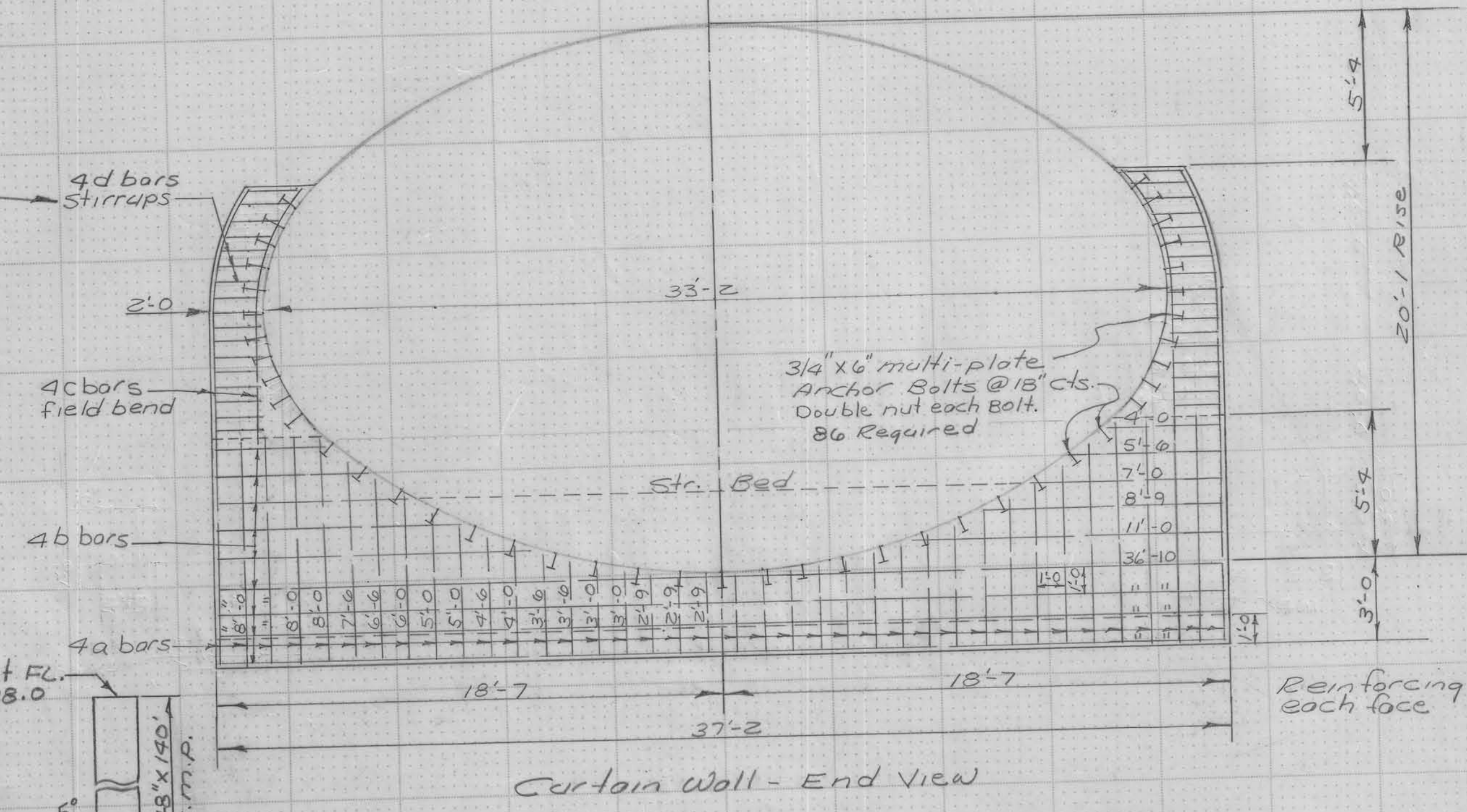
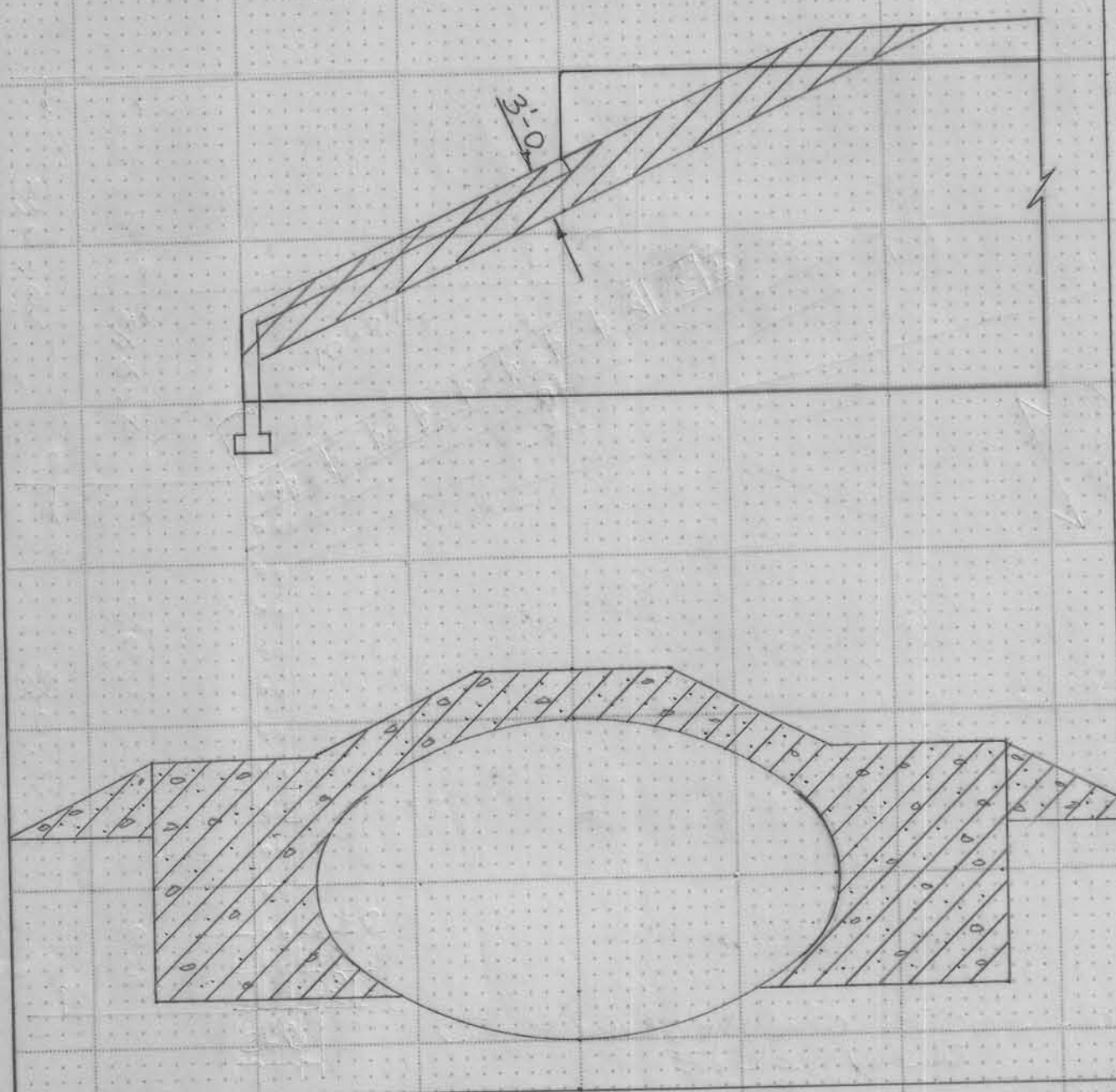
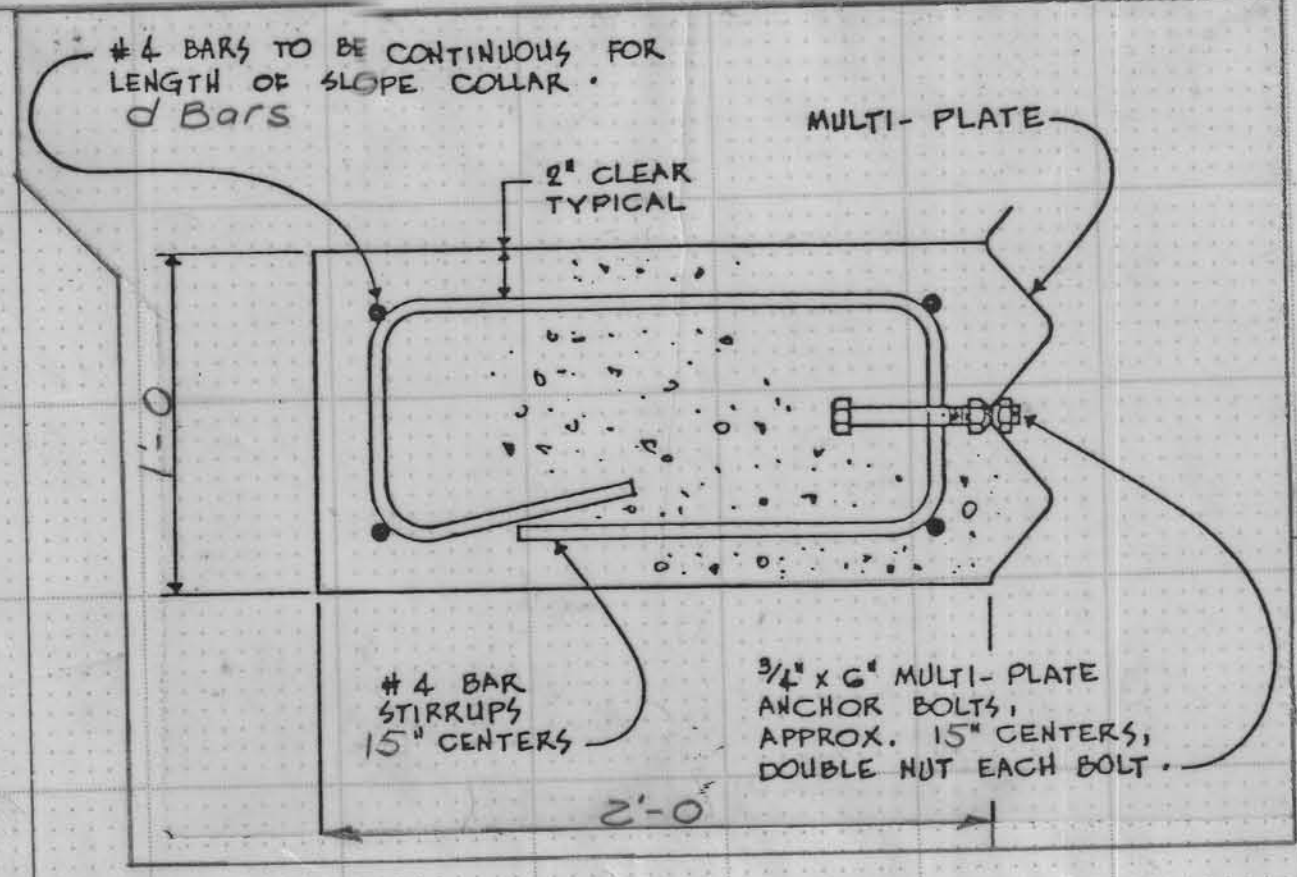
- STA. 5+05 @ 24" X 48" R.C.P. D.A. = I.A.C. CONTR. TO REMOVE. RUN WATER SOUTH.
- STA. 4+80 FIELD ENT. LT. DRY CONTR. TO REMOVE AT STA. 1+00 LT. FURNISH AND PLACE 24" X 36" C.M.P. 24' TOP SLOPE TO ENDS OF PIPE
- STA. 14+55 FIELD ENT. LT. 24" X 24" R.C.P. CONTR. TO REMOVE AND AT STA. 13+00 LT. FURNISH AND PLACE 24" X 40" C.M.P. 24' TOP SLOPE TO ENDS OF PIPE.
- STA. 15+03.5 @ 20' WOOD, 38" I-BEAM X 16' BRIDGE (Wood substructure with steel caps & wood floor)
- STA. 16+17 FARM ENT. RT. 36" X 12' R.C.P. & 36" X 24' BOILER PLATE WITH CONC. BRICK HEADWALL 7' X 5'. CONTR. TO REMOVE FURNISH AND PLACE 48" X 44" C.M.P. 26' TOP SLOPE TO ENDS OF PIPE.
- STA. 23+04 FIELD ENT. RT. DRY CONTR. TO REMOVE FURNISH AND PLACE 24" X 30' C.M.P. 24' TOP SLOPE TO ENDS OF PIPE
- STA. 26+23 FIELD ENT. LT. DRY U.A.C.





BM. No. 2 Spk in power pole, 33' Lt. Sta. 16+20 Elev. - 1282.54

3' deep glacial clay plug over entire face of granular backfill along fore slopes, each end of structural plate culvert, as shown in shaded area. Shall be considered incidental to Class 10 excavation.



Curtain Wall - End View

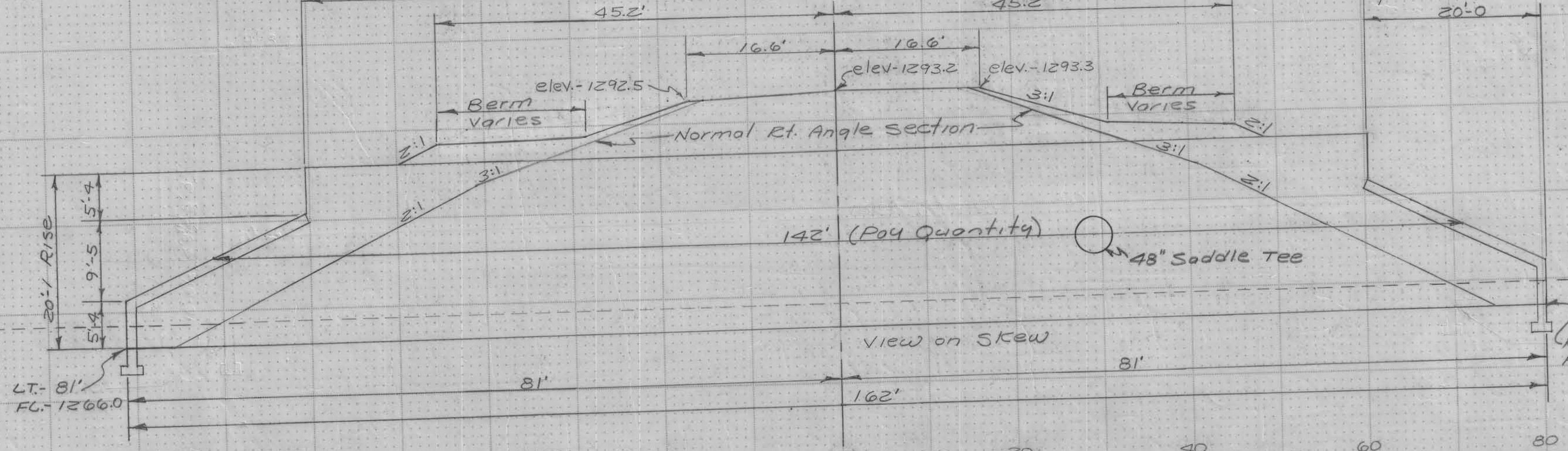
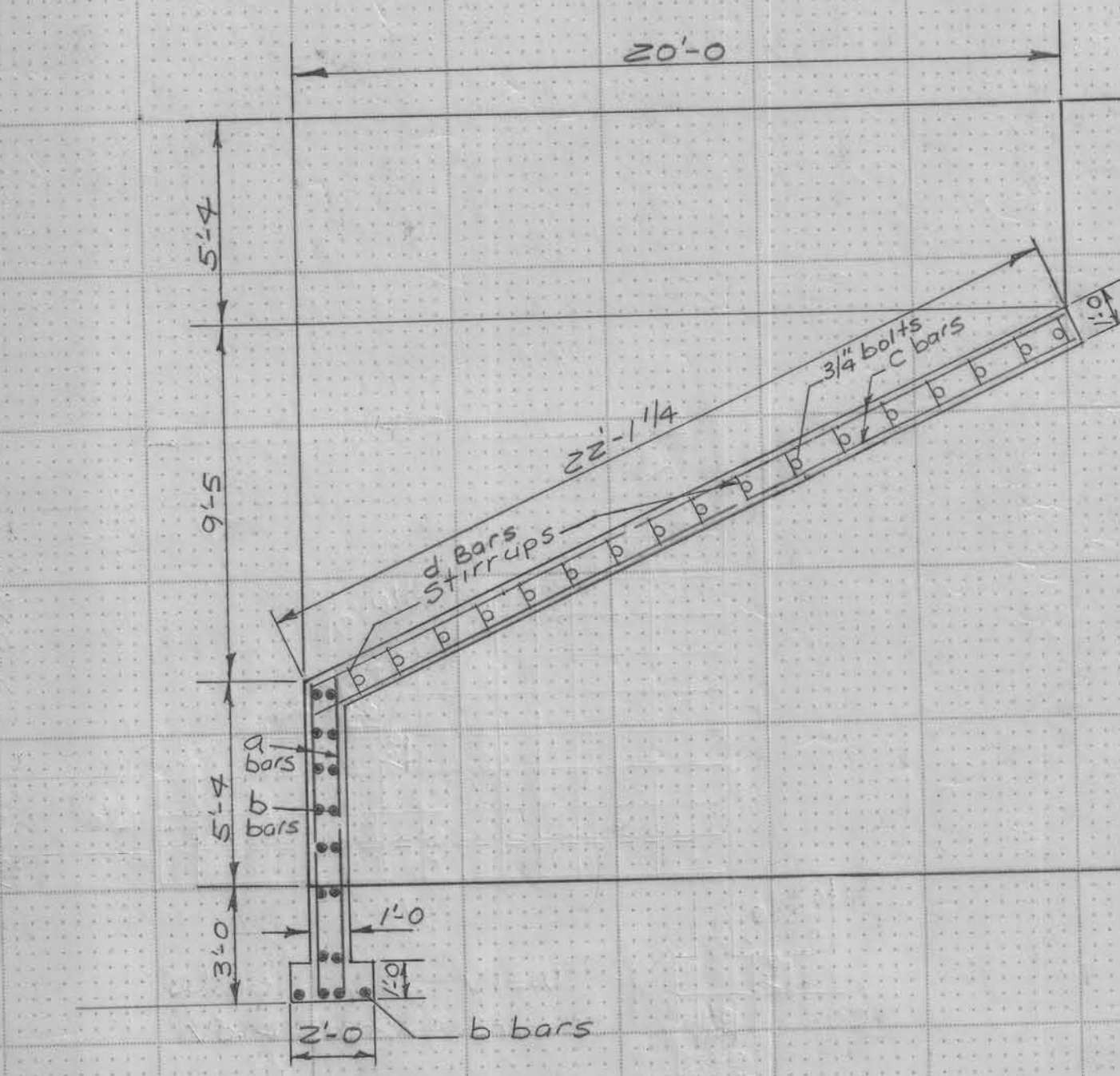
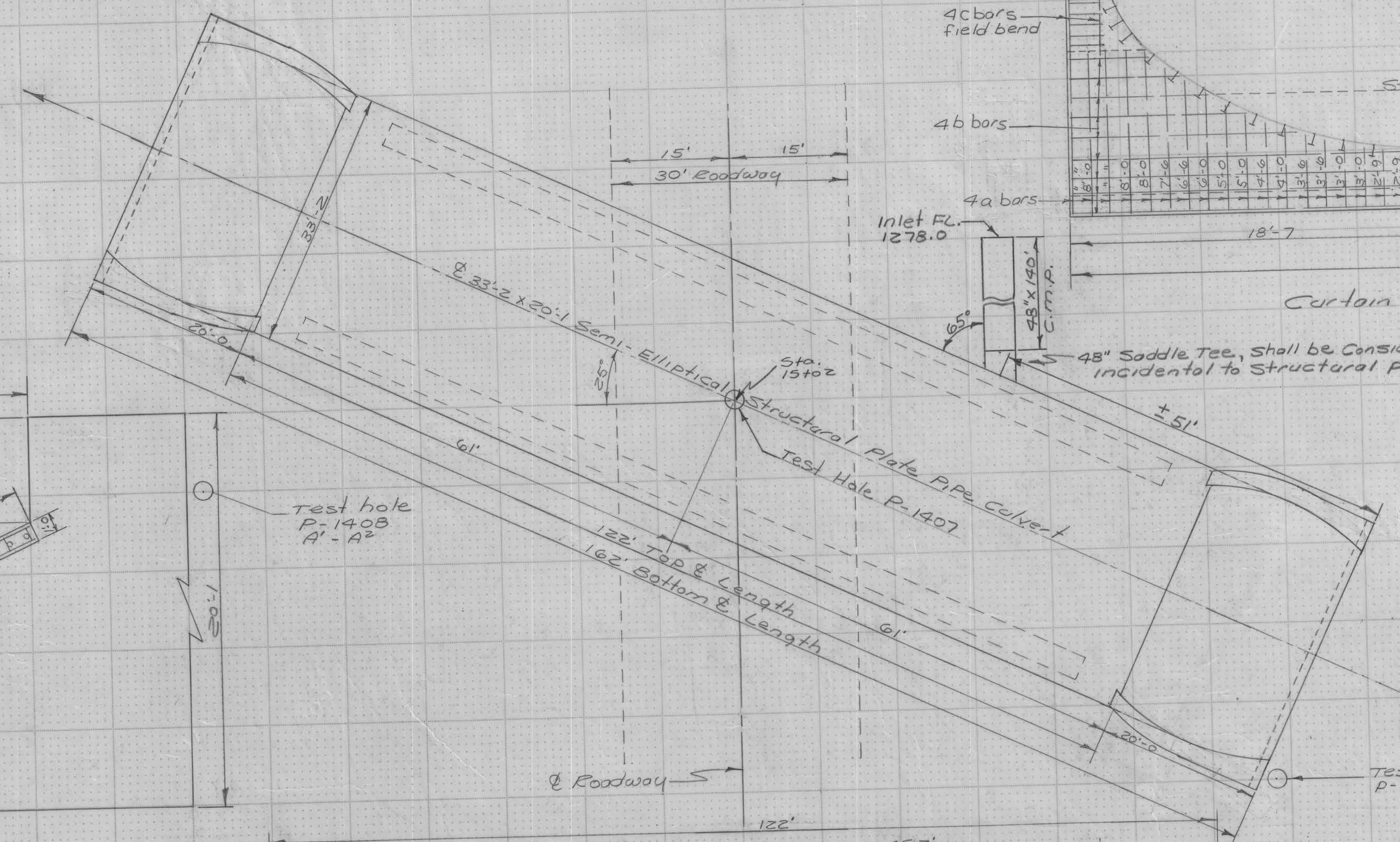
Mark	Size	No.	Shape	Length	Total Length	Weight Lb.
a	4	152	---	Shown	798'	533
b	4	60	---	shown	1027'	686
c	4	16	---	---	348'	232
d	4	68	□	5'-0"	340'	227
					Total	1678

Class "C" structural Concrete  
2-Curtain walls & slope Collars  
26.4 cu. yds.

Notes:  
1. 86- 3/4 x 6" multi-plate anchor bolts shall be considered incidental to furnishing & placing structural plate culvert.  
2. 9.04 cu. yds. structural concrete required for one curtain wall.  
4. 16 cu. yds. structural concrete required for slope collars one end.

Hydraulic Data  
D.A. = 1,765 Ac.  
Design Discharge = Q<sub>50</sub> 1,800 cfs.  
Design Highwater elev. = 1279.1  
Q = 2,727 cfs. below elev. 1279.0  
Hydraulics Approved 11-20-79,  
meets Criteria 100 year flood.

Detail of Alternate structures "A" - "B" - "C"



Removal  
Sta. 15+03.5 & 20' wood, 38' I-Beam X16' Bridge. Cont. to remove. Salvage I-Beams and wood Planks to remain property of Crawford county, stock pile neatly within 300' of site, as directed by the county engineer. Remainder of bridge to be junked.

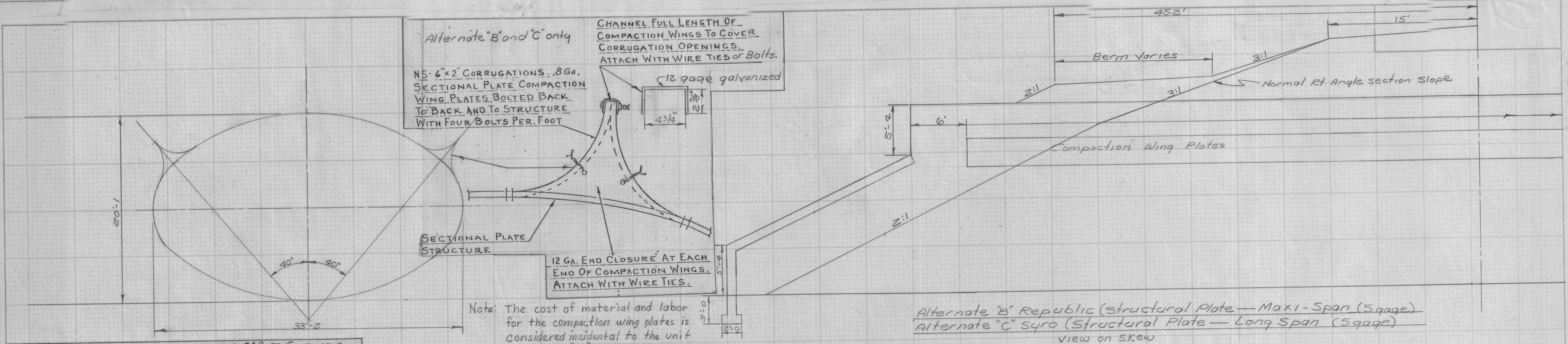
DATE  
BY  
FINAL SURVEY  
SURVEY PLOTTED  
NOTE BOOK  
NO.  
AREAS CHECKED

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



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

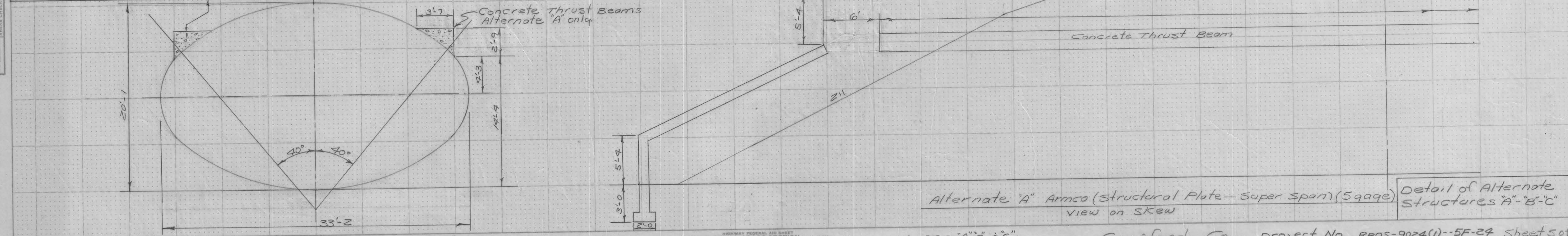
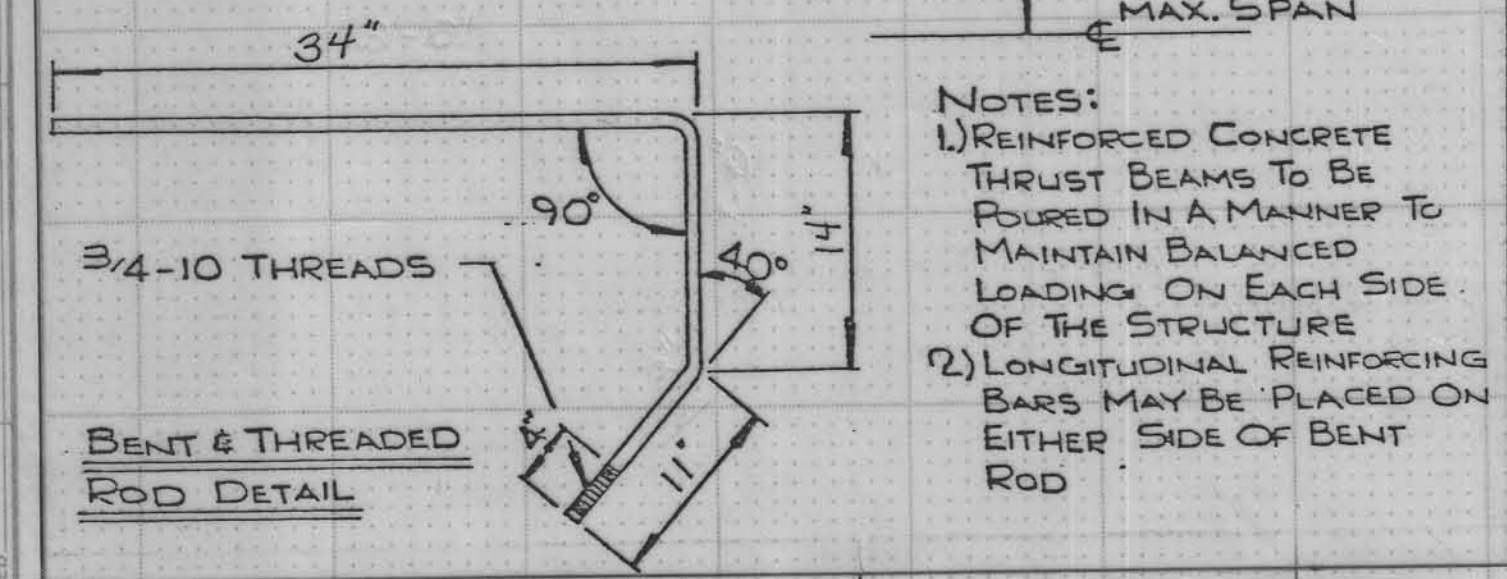
DATE \_\_\_\_\_ BY \_\_\_\_\_  
 SURVEYED \_\_\_\_\_ PLOTTED \_\_\_\_\_  
 ORIGINAL SURVEY \_\_\_\_\_ TEMPLATE \_\_\_\_\_  
 NOTE BOOK \_\_\_\_\_ AREAS CHECKED \_\_\_\_\_  
 NO. \_\_\_\_\_



Estimate of Quantities For Alternate "A" Structural Plate Super Span (only)

Reinforcing Steel - 2 Thrust Beams							Struc. Conc. - 2 Thrust Beams
Mark	Size	Shape	No.	Length	Total length	weight (lbs.)	Class "C" Cu. yds.
a	4	—	48	28'-6"	1,368'	914	40.1
3/4" Bent and Threaded Rod			148				

Notes: All quantities in this list to be included in and considered incidental to the bid price of Alternate "A" Semi-Elliptical Structural Plate Pipe.  
 Each thrust beam contains 20.05 cu. yds.

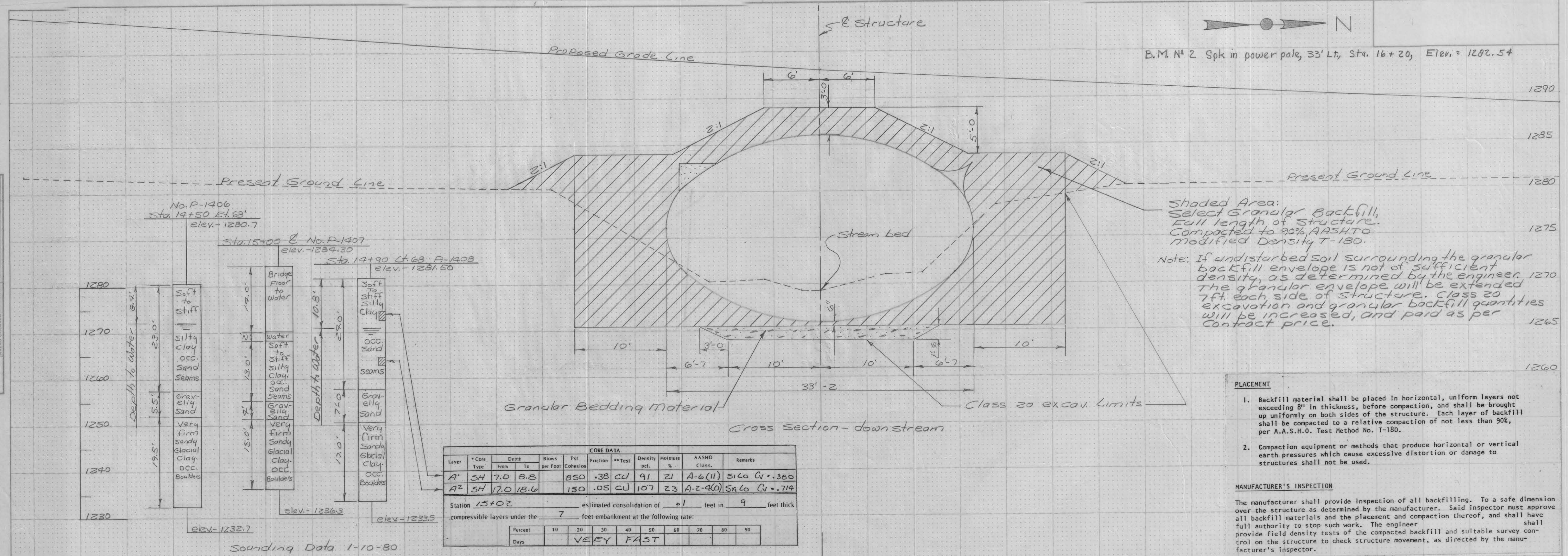




DATE  
BY  
SURVEYED  
PLOTTED  
NOTE BOOK  
TEMPLATE  
NO.  
AREAS CHECKED

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

B.M. N° 2 Spk in power pole, 33' Lt, Sta. 16+20, Elev. = 1282.54



Shaded Area:  
Select Granular Backfill,  
Full length of structure.  
Compacted to 90% AASHTO  
modified Density T-180.

Note: If undisturbed soil surrounding the granular backfill envelope is not of sufficient density, as determined by the engineer, the granular envelope will be extended 7ft. each side of structure. Class 20 excavation and granular backfill quantities will be increased, and paid as per contract price.

- PLACEMENT**
- Backfill material shall be placed in horizontal, uniform layers not exceeding 8" in thickness, before compaction, and shall be brought up uniformly on both sides of the structure. Each layer of backfill shall be compacted to a relative compaction of not less than 90%, per A.A.S.H.O. Test Method No. T-180.
  - Compaction equipment or methods that produce horizontal or vertical earth pressures which cause excessive distortion or damage to structures shall not be used.

**MANUFACTURER'S INSPECTION**

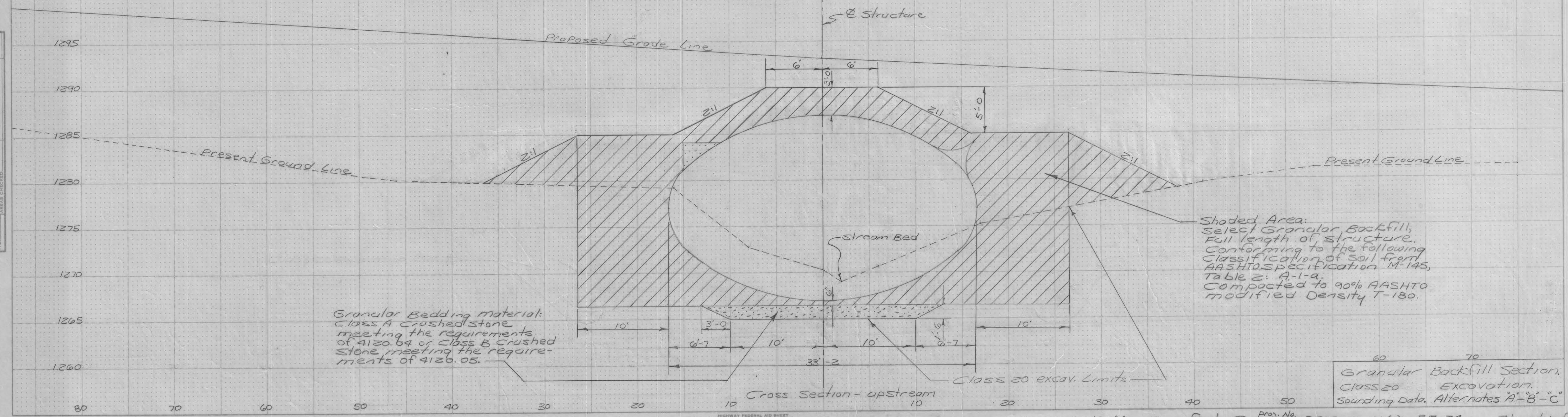
The manufacturer shall provide inspection of all backfilling. To a safe dimension over the structure as determined by the manufacturer. Said inspector must approve all backfill materials and the placement and compaction thereof, and shall have full authority to stop such work. The engineer shall provide field density tests of the compacted backfill and suitable survey control on the structure to check structure movement, as directed by the manufacturer's inspector.

CORE DATA											
Layer	* Core Type	Depth		Blows per Foot	Psf Cohesion	Friction	** Test	Density pcf.	Moisture %	AASHTO Class.	Remarks
		From	To								
A'	SH	7.0	8.8		850	.38	CU	91	21	A-6(II)	5140 Cv = .360
A''	SH	17.0	18.6		150	.05	CU	107	23	A-2(40)	5160 Cv = .714

Station 15+02 estimated consolidation of .01 feet in 9 feet thick compressible layers under the 7 feet embankment at the following rate:

Percent	10	20	30	40	50	60	70	80	90
Days			VERY	FAST					

Sounding Data 1-10-80



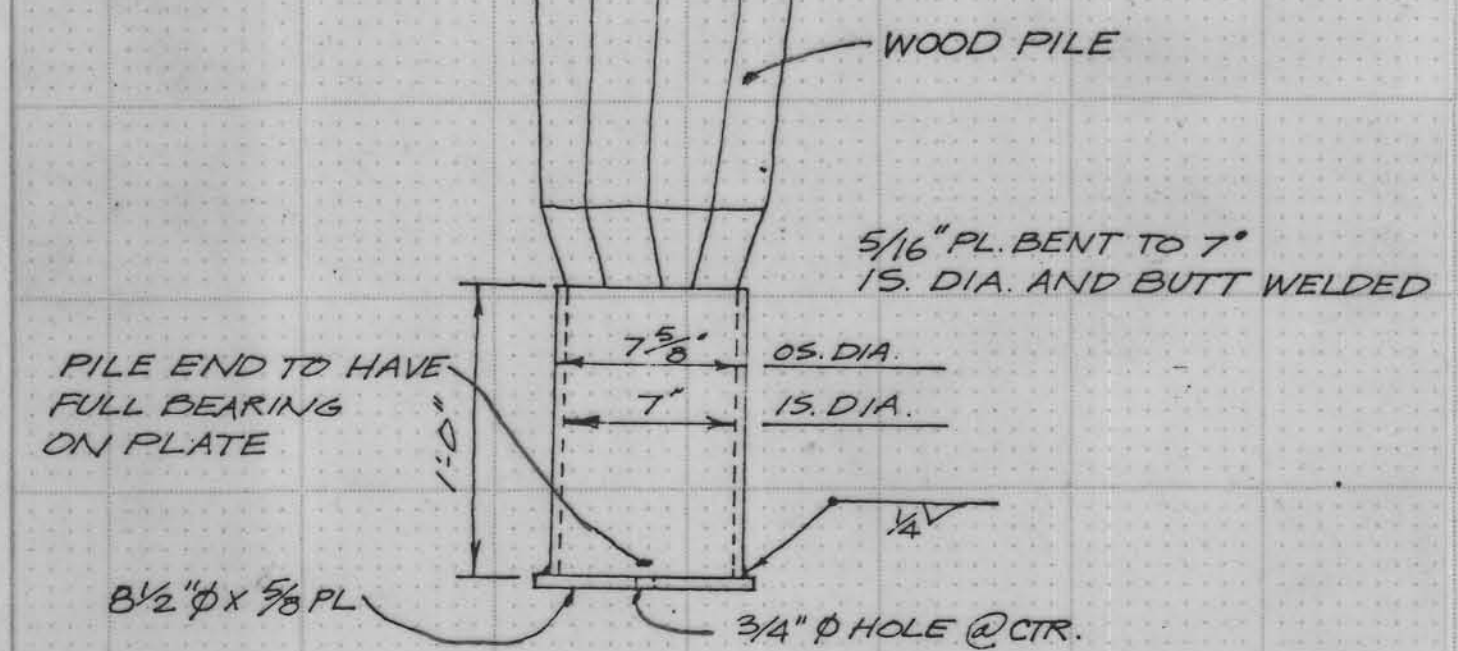
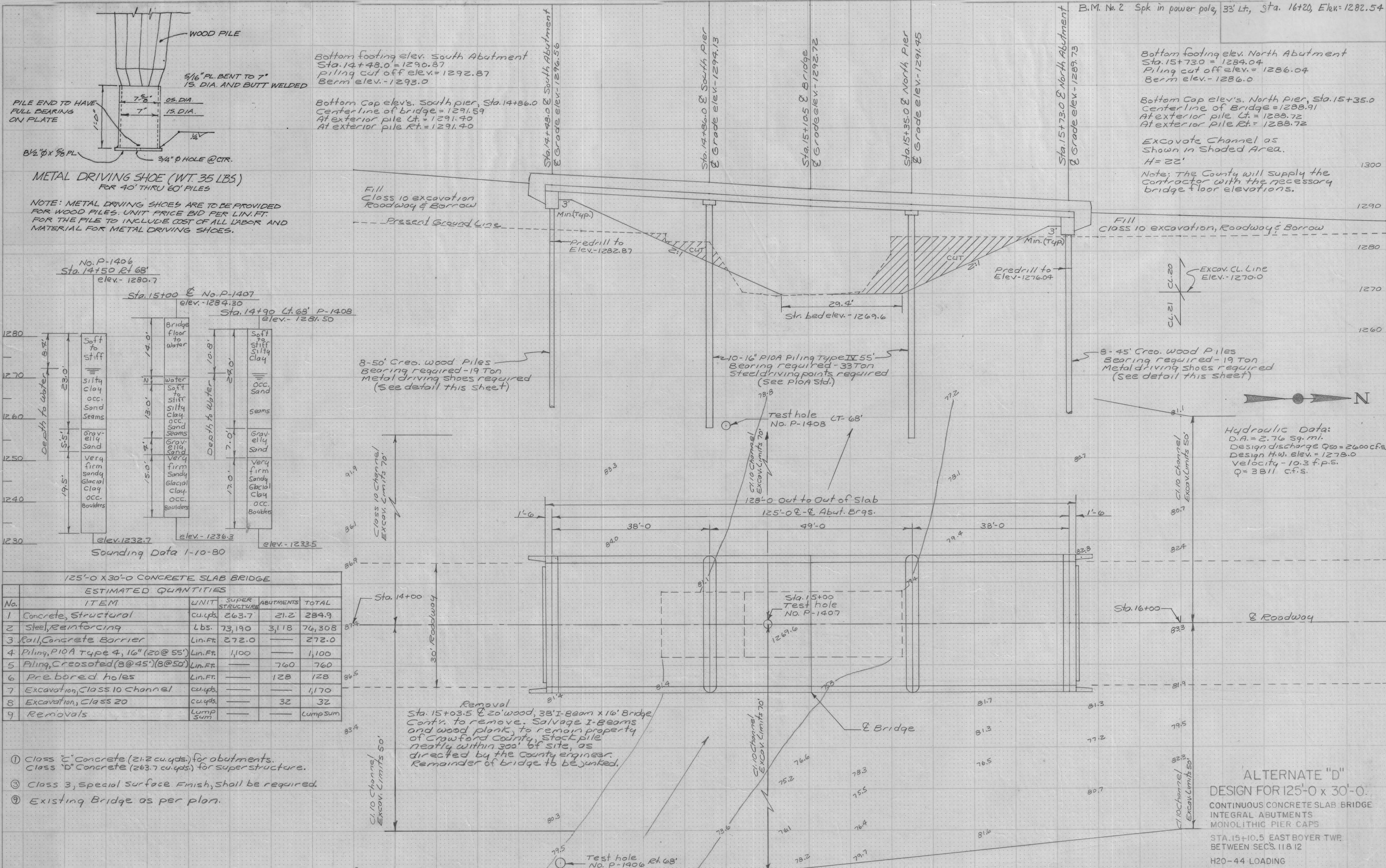
Shaded Area:  
Select Granular Backfill,  
Full length of structure.  
Conforming to the following  
Classification of soil from  
AASHTO specification M-145,  
Table 2: A-1-a.  
Compacted to 90% AASHTO  
modified Density T-180.

Granular Bedding material:  
Class A Crushed Stone  
meeting the requirements  
of 4120.64 or Class B Crushed  
Stone meeting the require-  
ments of 4120.05.

60 70  
Granular Backfill Section,  
Class 20 Excavation,  
Sounding Data, Alternates A-B-C



B.M. No. 2 Spk in power pole, 33' Lt., Sta. 16+20, Elev. 1282.54



Bottom footing elev. South Abutment  
Sta. 14+48.0 = 1290.87  
Piling cut off elev. = 1292.87  
Berm elev. = 1293.0

Bottom Cap elev's. South pier, Sta. 14+86.0  
Centerline of bridge = 1291.59  
At exterior pile Lt. = 1291.90  
At exterior pile Rt. = 1291.90

Bottom footing elev. North Abutment  
Sta. 15+73.0 = 1284.04  
Piling cut off elev. = 1286.04  
Berm elev. = 1286.0

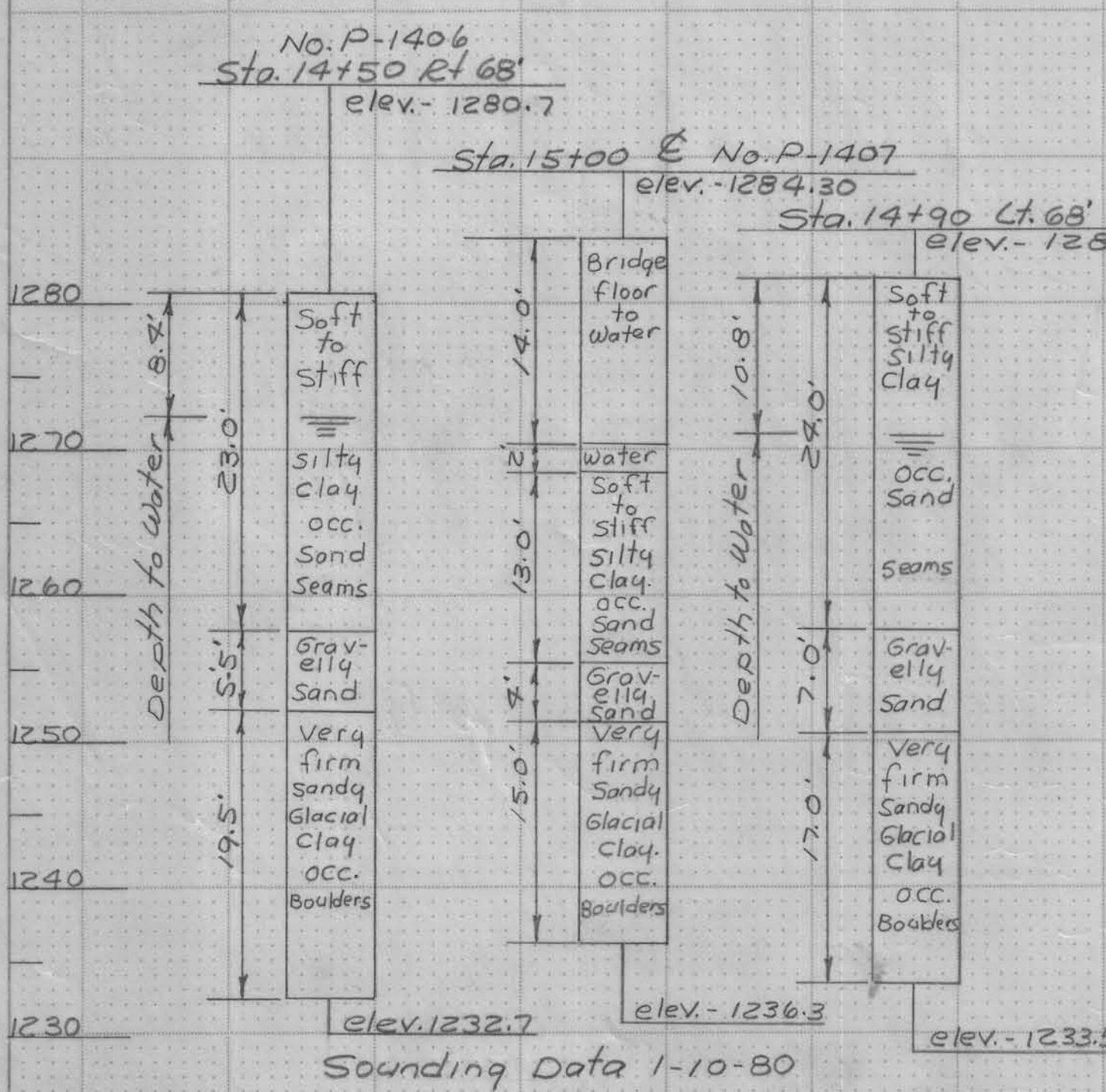
Bottom Cap elev's. North pier, Sta. 15+35.0  
Centerline of Bridge = 1288.91  
At exterior pile Lt. = 1288.72  
At exterior pile Rt. = 1288.72

**METAL DRIVING SHOE (WT. 35 LBS)**  
FOR 40" THRU 60" PILES

NOTE: METAL DRIVING SHOES ARE TO BE PROVIDED FOR WOOD PILES. UNIT PRICE BID PER LIN. FT. FOR THE PILE TO INCLUDE COST OF ALL LABOR AND MATERIAL FOR METAL DRIVING SHOES.

Fill  
Class 10 excavation  
Roadway & Borrow

Fill  
Class 10 excavation, Roadway & Borrow



8-50' Creos. wood Piles  
Bearing required - 19 Ton  
Metal driving shoes required  
(See detail this sheet)

10-16" P10A Piling Type IV 55'  
Bearing required - 33 Ton  
Steel driving points required  
(See P10A Std.)

8-45' Creos. Wood Piles  
Bearing required - 19 Ton  
Metal driving shoes required  
(See detail this sheet)

Test hole  
No. P-1408  
LT-68'

**Hydraulic Data:**  
D.A. = 2.76 sq. mi.  
Design discharge  $Q_{50} = 2600$  cfs  
Design H.W. elev. = 1278.0  
Velocity = 10.3 f.p.s.  
 $Q = 3811$  c.f.s.

125'-0" X 30'-0" CONCRETE SLAB BRIDGE

ESTIMATED QUANTITIES

No.	ITEM	UNIT	SUPER STRUCTURE	ABUTMENTS	TOTAL
1	Concrete, Structural	cu. yds.	263.7	21.2	284.9
2	Steel, Reinforcing	Lbs.	73,190	3,118	76,308
3	Wall, Concrete Barrier	Lin. Ft.	272.0	—	272.0
4	Piling, P10A Type 4, 16" (20 @ 55')	Lin. Ft.	1,100	—	1,100
5	Piling, Creosoted (8 @ 45') (8 @ 50')	Lin. Ft.	—	760	760
6	Pre-bored holes	Lin. Ft.	—	128	128
7	Excavation, Class 10 Channel	cu. yds.	—	—	1,170
8	Excavation, Class 20	cu. yds.	—	32	32
9	Removals	Lump Sum	—	—	Lump Sum

Removal  
Sta. 15+03.5 & 20' wood, 38" I-beam x 16' Bridge.  
Contr. to remove. Salvage I-beams  
and wood plank, to remain property  
of Crawford County, Stack pile  
neatly within 300' of site, as  
directed by the County engineer.  
Remainder of bridge to be junked.

- ① Class 'C' concrete (21.2 cu. yds.) for abutments.  
Class 'D' concrete (263.7 cu. yds.) for superstructure.
- ③ Class 3, special surface finish, shall be required.
- ⑨ Existing Bridge as per plan.

**ALTERNATE "D"**  
DESIGN FOR 125'-0" X 30'-0".  
CONTINUOUS CONCRETE SLAB BRIDGE  
INTEGRAL ABUTMENTS  
MONOLITHIC PIER CAPS  
STA. 15+10.5 EAST BOYER TWP.  
BETWEEN SECS. 11 & 12  
H20-44 LOADING