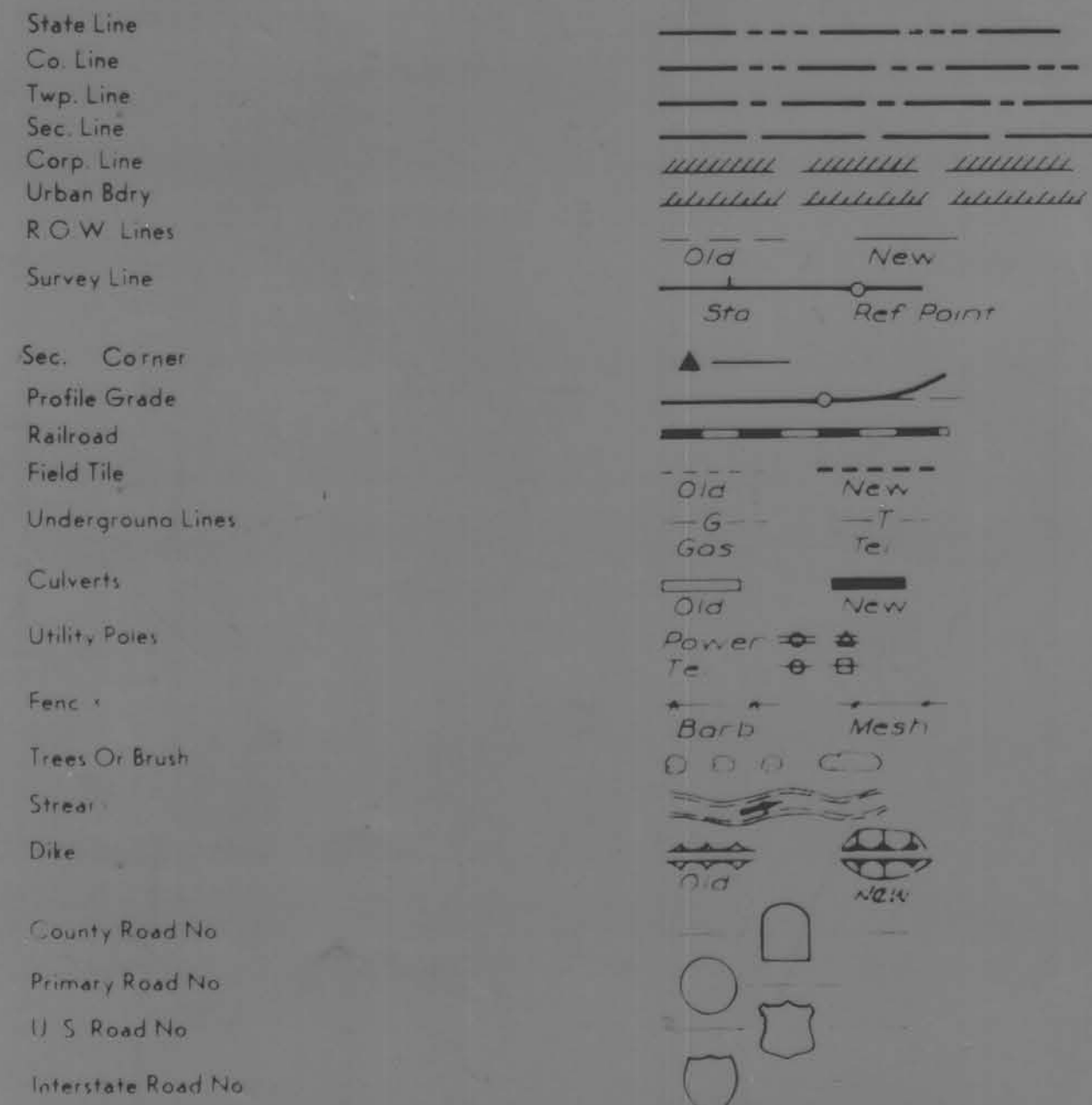


CRAWFORD COUNTY
PROJECT NO. BROS-9024(22)--8J-24 BRIDGE
LETTING DATE March 29, 1988

CONVENTIONAL SIGNS



IOWA
DEPARTMENT OF TRANSPORTATION
Highway Division

F.H.W.A. NO. 126890

PROJECT NO. BROS-9024(22)--8J-24

PLANS OF PROPOSED IMPROVEMENT ON THE
SECONDARY ROAD SYSTEM
CRAWFORD COUNTY

PROJECT NO. BROS-9024(22)--8J-24
138'-10" X 24'-0" PRETENSIONED PRESTRESSED
CONCRETE BEAM BRIDGE & APPROACH GRADING

INDEX OF SHEETS	
NO.	DESCRIPTION
1.	TITLE SHEET, INCLUDING CONVENTIONAL SIGNS, LOCATION MAP, MILEAGE SUMMARY.
2.	ESTIMATE OF QUANTITIES, TRAFFIC CONTROL PLAN.
3.	PLAN AND PROFILE, TYPICAL CROSS SECTION
4.	DESIGN FOR 138'-10" X 24'-0" PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE.
5.	520-26 SIGNING FOR TEMPORARY ROAD CLOSURES IN RURAL AREAS.

SCALES AS NOTED
THE STANDARD SPECIFICATIONS, SERIES OF 1984
OF THE IOWA DEPARTMENT OF TRANSPORTATION,
SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT
PLUS CURRENT SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS

MILEAGE SUMMARY			
DIV.	LOCATION	LIN. FT.	MILES
	STA. 0+00 TO STA. 8+00	800.0	0.152
	DEDUCT FOR BRIDGE AT STA. 3+57	141.83	0.027
	TOTAL NET MILEAGE	658.17	0.125

STANDARD PLANS					
The following Standard Plans shall be considered applicable to construction work on this project.					
IDENT	DATE	IDENT	DATE	IDENT	DATE
RE-2A	2/17/87	RE-12A	5/13/86	RE-48A	8/20/85
RE-7	5/13/86	RE-47	11/10/87	RE-52	7/21/87
		RE-49	1/19/88	RE-59	1/19/88

THE FOLLOWING STANDARDS MAY OBTAINED AT BRIDGE DESIGN SERVICE AMES
 H24-87 JAN. 87 H24-1-87 JAN. 87 H24-2-87 JAN. 87
 H24-3-87 JAN. 87 H24-10-87 JAN. 87 H24-13-87 JAN. 87
 H24-14-87 JAN. 87 P 10 A (Rev. Nov. 84) H24-16-87 JAN. 87

APPROVED

Madeline C. Kopas

Don Jensen

LeRoy A. Hansohn

David E. Anderson

Eileen Heider

BOARD OF SUPERVISORS

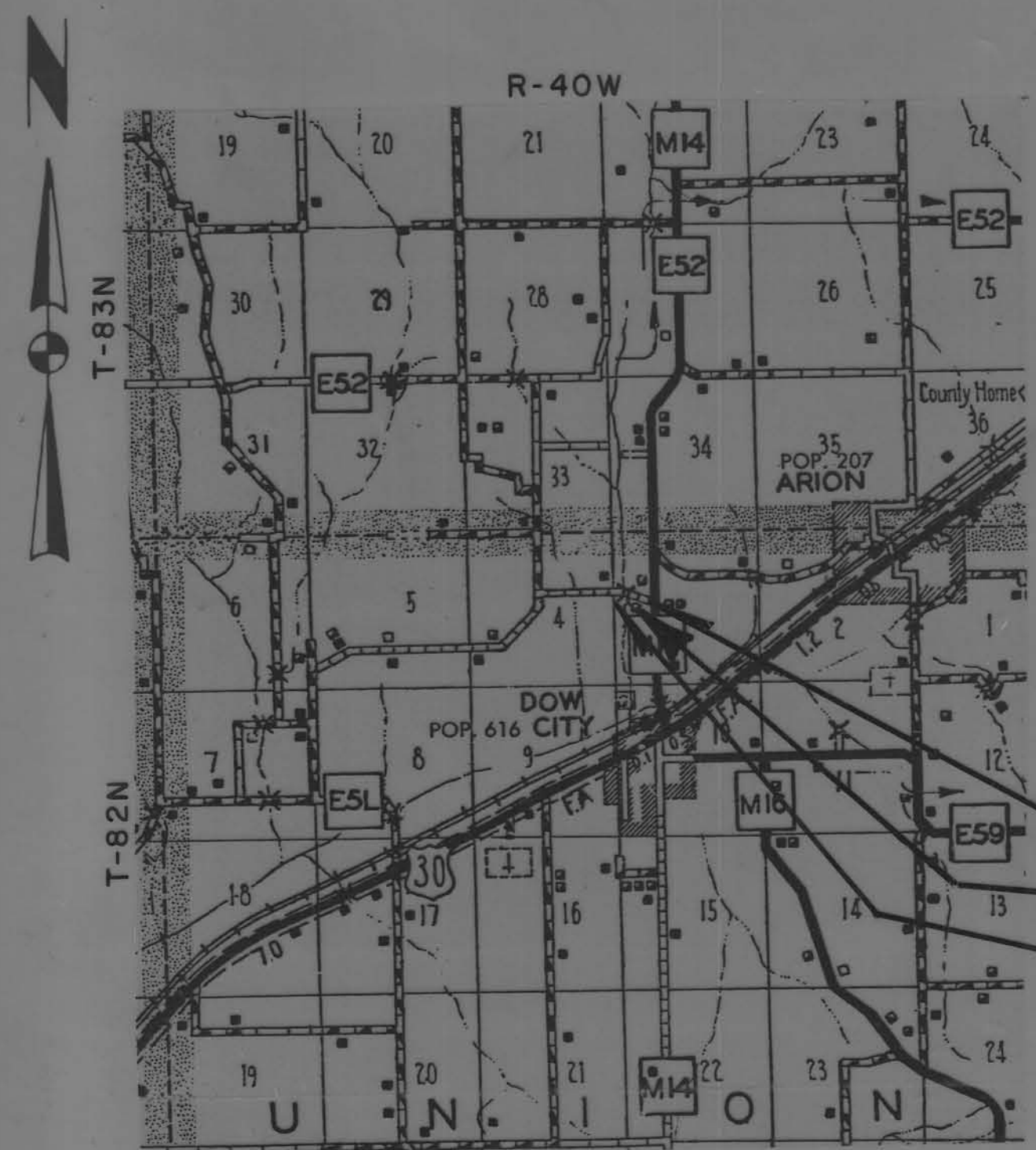
IOWA DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

DISTRICT LOCAL SYSTEMS ENGINEER DATE

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. Dale Wright March 10, 1988
IOWA REGISTRATION NUMBER 5798 DATE

DEPARTMENT OF TRANSPORTATION
IOWA
AUTHORIZED FOR LETTING
D. J. Anderson 2-5-88
DEPUTY CHIEF ENGINEER DATE

U.S. DEPT. TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ENGINEER DATE



STA. 8+00 End of Project
STA. 3+57 Centerline Pretensioned Prestressed Conc. Beam Bridge
STA. 0+00 Beginning of Project
Design No. 5487



880 539
002 326

041
SJK

1984 AADT 160 V.P.D.

LETTING DATE: MARCH 29, 1988

FILE NO. 53503

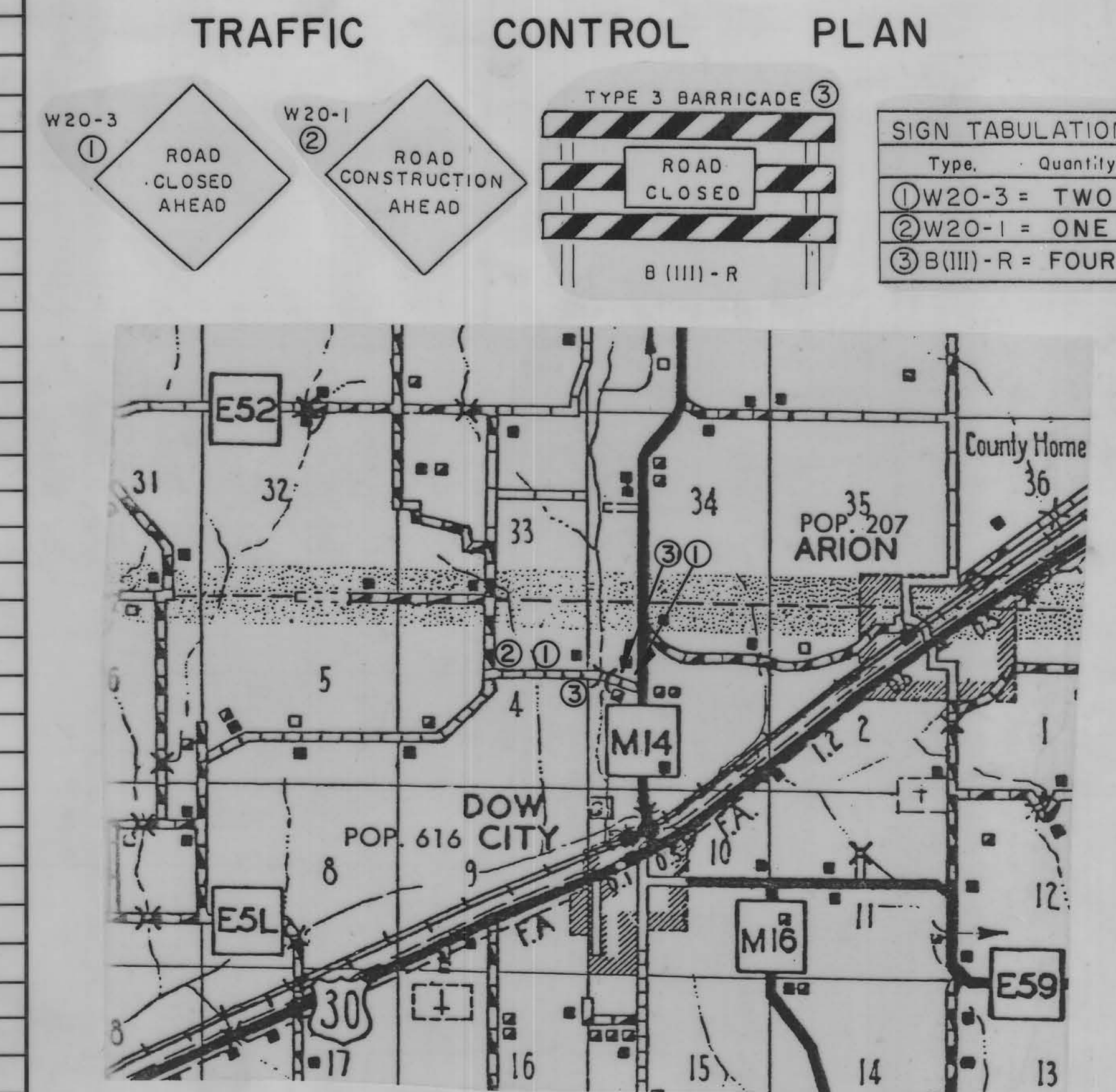
DESIGN NO. 5487

CRAWFORD COUNTY

PROJECT NO. BROS-9024(22)--8J-24

SHEET No. 1 of 5

138'-10" X 24'-0" PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE						
ITEM NO.	ESTIMATE OF QUANTITIES					
	ITEM	UNITS	ABUTMENTS	PIERS	SUPERSTRUCTURE	TOTAL
1	CONCRETE, STRUCTURAL	C.Y.	21.6	17.8	127.7	167.1
2	STEEL, REINFORCING	LBS.		2,016	38,454	40,470
3	BEAMS, PRETENSIONED	A 42 NO.			8	8
4	PRESTRESSED CONCRETE	A 50R NO.			4	4
5	RAIL, CONCRETE BARRIER	L.F.			311.7	311.7
6	PILING	FURNISH 8 AT 60'	L.F.	480'		480'
7	STEEL BEARING	DRIVE 8 AT 60'	L.F.	480'		480'
8	PILING	FURNISH 12 AT 60'	L.F.	720'		720'
9	STEEL BEARING	DRIVE 12 AT 60'	L.F.	720'		720'
10	HP 12 X 53	ENCASE 12 AT 25'	L.F.	300'		300'
11	PREBORED HOLES - AS PER PLAN	L.F.	8 at 8'			64'
12	STEEL, STRUCTURAL	LBS.			2,945	2,945
13	GUARDRAIL, FORMED STEEL BEAM (CASE M)	L.F.				125'
14	GUARDRAIL, POSTS BEAM	NO.				26
15	GUARDRAIL, END ANCHORAGES, BEAM (RE-52)	NO.				2
16	OBJECT MARKERS, TYPE 3 (OM-3R & OM-3L)	NO.				4
17	OBJECT MARKERS, TRIPLE YELLOW (OM2-3YV)	NO.				4
18	REVTMENT, CLASS E RIP RAP	TONS				1,050
19	EXCAV., CLASS 10 ROADWAY & BORROW	C.Y.				3,014
20	EXCAV., CLASS 10 CHANNEL	C.Y.				1,900
21	EXCAV., CLASS 20	C.Y.	65			65
22	CULVERT, CORR. METAL ENTRANCE (24" DIA.)	L.F.				64
23	SURFACING, GRANULAR, ON ROAD, C.I.A. Crushed Stone	TONS				150
24	CLEARING AND GRUBBING	UNITS				169.40
25	REMOVAL OF EXISTING STRUCTURE	L.S.				LUMP SUM
26	MOBILIZATION	L.S.				LUMP SUM
27	TRAFFIC CONTROL	L.S.				LUMP SUM



- SUPERSTRUCTURE (127.7) CU. YDS. TO BE CLASS "D" CONCRETE, PAVING BLOCKS (0.9) CU. YDS. MAY BE CLASS "C", ABUTMENTS (21.6) CU. YDS., AND PIERS (17.8) CU. YDS. TO BE CLASS "C" CONCRETE.
- 6-10"x10" POSTS WITH SPACERS, 16-8"x8" POSTS WITH SPACERS, 4-6"x8" POSTS, 6' LENGTH MIN.
- FURNISHING AND PLACING 3,680 SQ. YDS. OF ENGINEERING FABRIC, SHALL BE CONSIDERED INCIDENTAL TO REVETMENT CLASS "E" RIP RAP.
- TYPE "A" COMPACTION SHALL BE REQUIRED, NO OVERHAUL WILL BE ALLOWED.
- 16 GAGE, RIVETED PIPE ONLY, 2' BANDS REQUIRED.
- GRANULAR SURFACING SHALL MEET THE REQUIREMENTS OF CLASS "A" CRUSHED STONE IN ACCORDANCE WITH ARTICLE 4120.04, OR CLASS "B" CRUSHED STONE IN ACCORDANCE WITH ARTICLE 4120.05 BID PRICE SHALL INCLUDE THE COST OF SPREADING THE GRAVEL ON THE ROAD SURFACE.

NOTE: IT SHALL BE THE CONTRACTORS 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.

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 1984 STANDARD SPECIFICATION SERIES. TRAFFIC CONTROL DEVICES, PROCEDURES AND LAYOUTS SHALL BE AS PER PLAN SPECIFICATIONS FOR TRAFFIC CONTROL FOR STREET AND HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS, SPECIFICATION SS-1037.

ALL ADVANCED WARNING SIGNS, TYPE III BARRICADES, AND OTHER TRAFFIC CONTROL DEVICES FOR THIS PROJECT SHALL BE LOCATED AT THE BEGINNING AND END OF THE PROJECT, AND WHERE THE ROAD FOR CONSTRUCTION INTERSECTS OTHER PUBLIC ROADS, AND SHALL INCLUDE ALL OTHER BARRICADES AND WARNING SIGNS NECESSARY TO PROTECT THE CONTRACTOR'S WORK AND EQUIPMENT, FOR THE PROVIDING FOR THE SAFETY OF THE TRAVELING PUBLIC. ALL SIGNS, BARRICADES, AND OTHER TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", 1978.

THE LUMP SUM BID PRICE FOR TRAFFIC CONTROL SHALL INCLUDE THE FURNISHING, AND PLACING, MAINTENANCE AND REMOVAL BY THE CONTRACTOR.

Maurice Putnam

UNION TOWNSHIP
T-82N R-40W
SEC. 4

Maurice Putnam

UNION TOWNSHIP
T-82N R-40W
SEC. 3

Walter S. Elizabeth L. Truitt

Hydraulic Data:

Drainage Area	37.6 Sq. mi.
Design Discharge	8,840 c.f.s.
Design High Water	1128.8
Reach Slope	13.99 ft./mi.
Basin Slope	20.87 ft./mi.
Bridge Waterway Area	12.06 Sq. ft.
Design Velocity	7.33 f.p.s.
Q ₅₀	8,054 c.f.s. Stage 1128.8
Q ₁₀₀	9,665 c.f.s. Stage 1130.6
Q ₅₀₀	14,900 c.f.s. Stage 1135.3
Extreme H. Water (1972)	13,970 c.f.s. Stage 1134.7

Ditch Borrow
Sta. -1+85 Farm Ent. Lt.
30" x 32" C.M.P. U.A.C.

STA. 0+00 B.O.P.

Removal

Sta. 3+54.7 & Present 75' x 20' Pony Truss Bridge, wood Piling, Steel Caps, Plank floor. Contractor to remove. The Pony Truss Bridge is to be removed for re-erection & remain the Property of Crawford Co., match mark as directed by Co. Engineer. The planks are to be salvaged & remain the Property of Crawford Co. The remainder of the bridge to be junked & disposed of by Contr. Disposal site to be provided by Contr. with the approval of the Co. Engineer. The Pony Truss Bridge & Planks shall be stockpiled neatly within 300 ft. of site & loaded by Contr. on County trucks at County's convenience, as directed by Co. Engineer. Contr. to also dispose of garbage, miscellaneous appliances and broken concrete, within the construction area.

Wilma Green
Charles Green
Richard Green

Wilma Green
Charles Green
Richard Green

Sta. 4+20 Field Ent. Lt.
24" x 32" C.M.P. Contr. to remove. At Sta. 5+50 furnish & Place 24" x 32" C.M.P., 20' Top, Slope to ends of Pipe.

STA. 8+00 E.O.P.

Sta. 6+10 Farm Ent. Lt. (Dry)
Contr. to remove, and construct a dry ent., 26' Top, 2:1 Fore slopes.

Sta. 0+28 Field Ent. Lt. (dry)
Contr. to remove, Furnish & Place 24" x 32" C.M.P., 20' Top, slope to ends of Pipe.

Bartlett N.
Charolette J.
Carstens

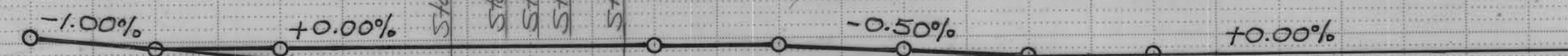
Crawford County to construct a Temporary Stream Crossing. Crossing to be maintained by Contr. County or Contractor may place up to 1200 cu. yds. of fill material below elev. 1111.6 in order to construct a temporary stream crossing and/or accomplish other work necessary to complete construction. Additional fill material may be placed above elev. 1111.6 as necessary to complete the work.

B.M. No. 1 SPK in Power Pole 160' Et, Sta. 6+22 Elev. -1137.80

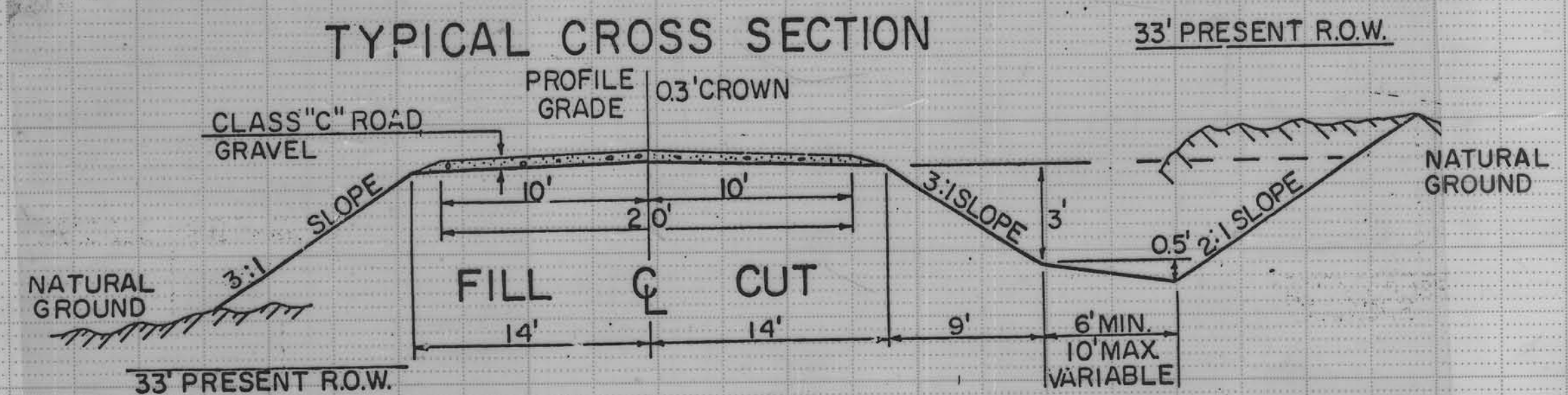
SEC. 4

SEC. 3

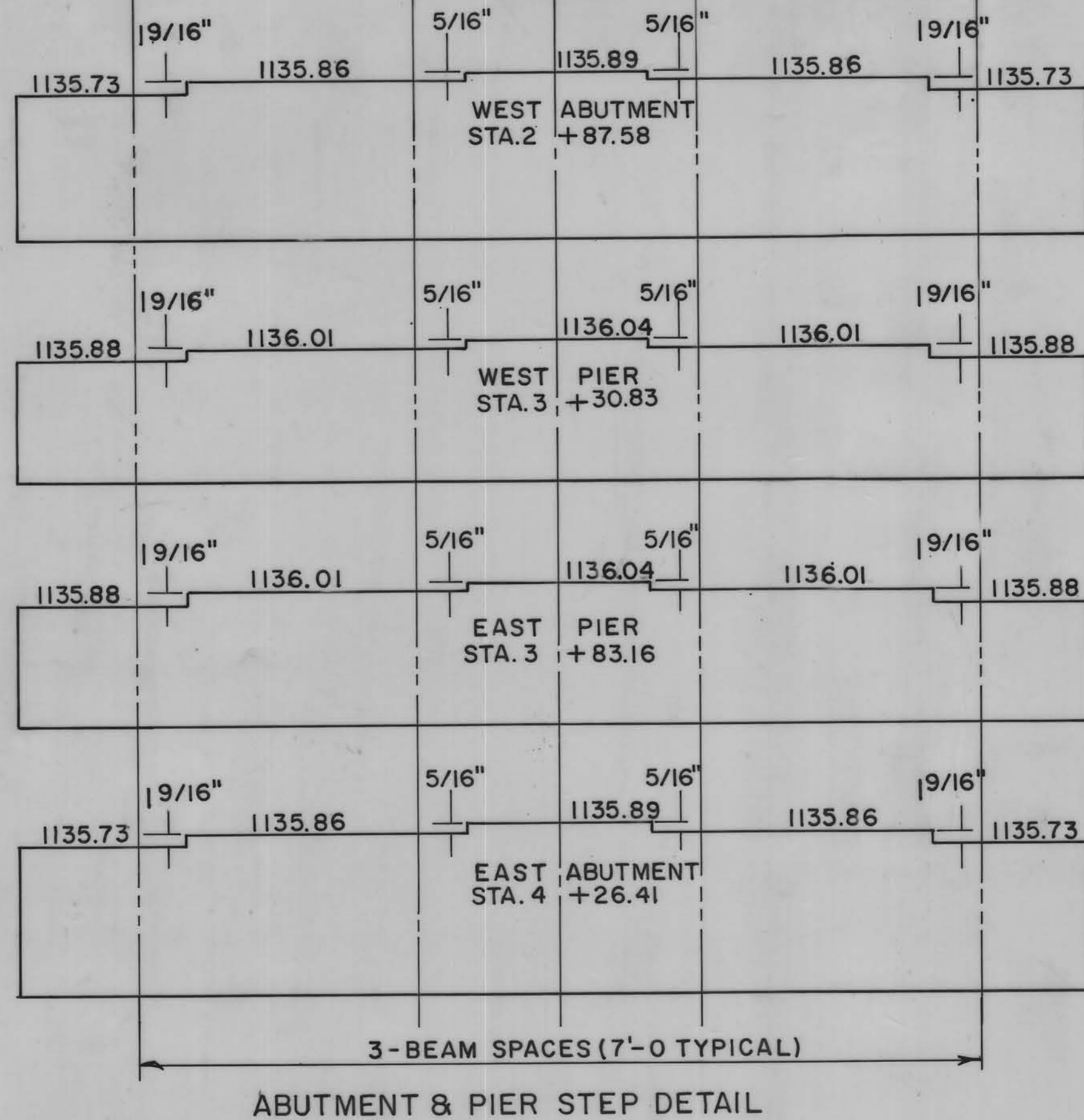
67 270	107 335	80 602	74 886	82 570	70 275	52 76
Ent. Rt. - 80c.y.			Ent. - 70c.y.			
Sta. 0+00 To Sta. 2+86 C = 254 c.y. F + 35% = 1,207 c.y. Class 10 channel excav. utilized as borrow = 953 c.y.			Sta. 4+28 To Sta. 8+00 C = 278 c.y. F + 35% = 1,807 c.y. Class 10 channel excav. utilized as borrow = 947 c.y. Ditch borrow = 582 c.y.			
Sta. 0+50 1139.50 VC = 200' MO = 0.25			Sta. 5+50 1139.50 VC = 200' MO = 0.13		Sta. 7+50 1138.50 VC = 200' MO = 0.13	



TYPICAL CROSS SECTION

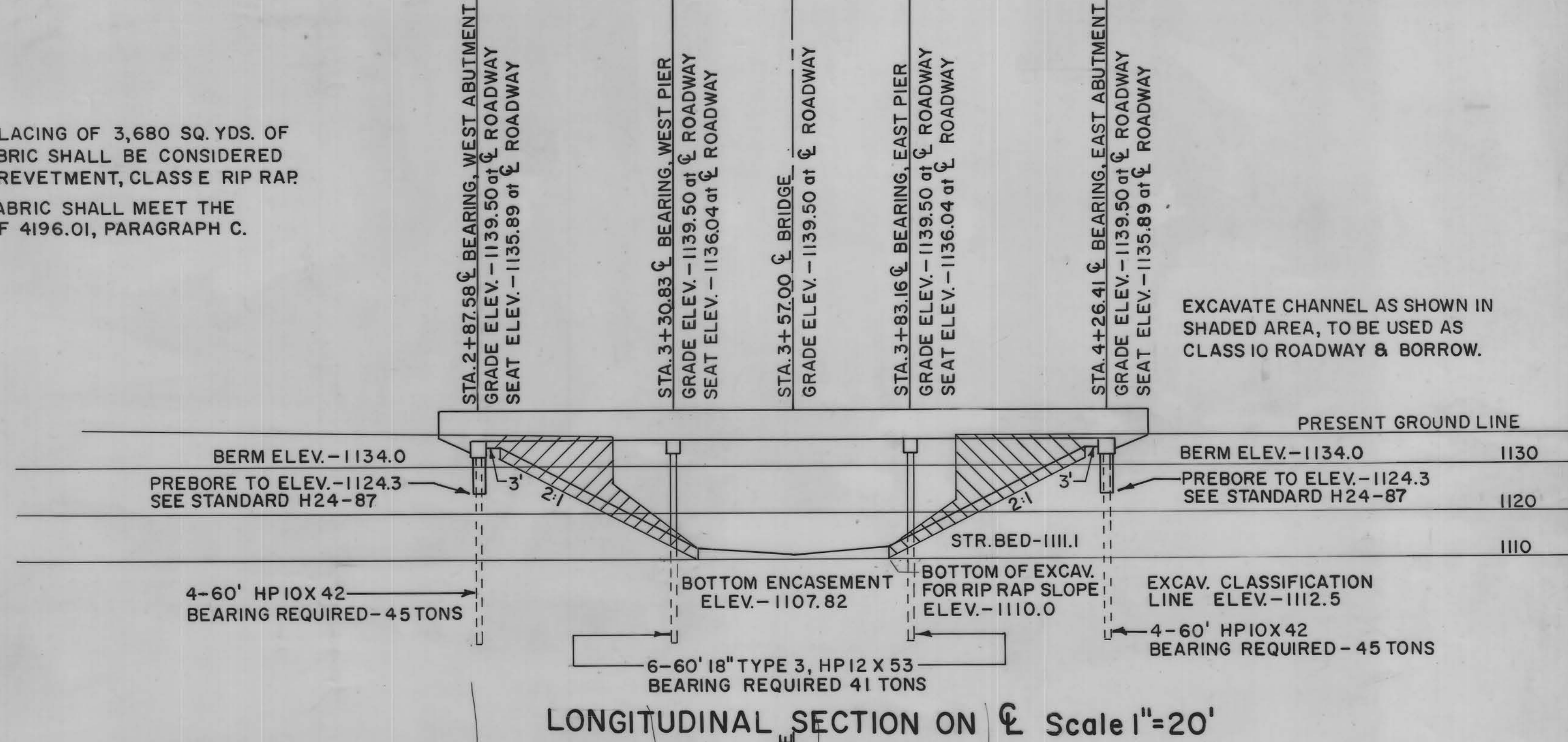


BM. NO. 1 SPK IN POWER POLE 160' RT. STA. 6+22 ELEV. -1137.80

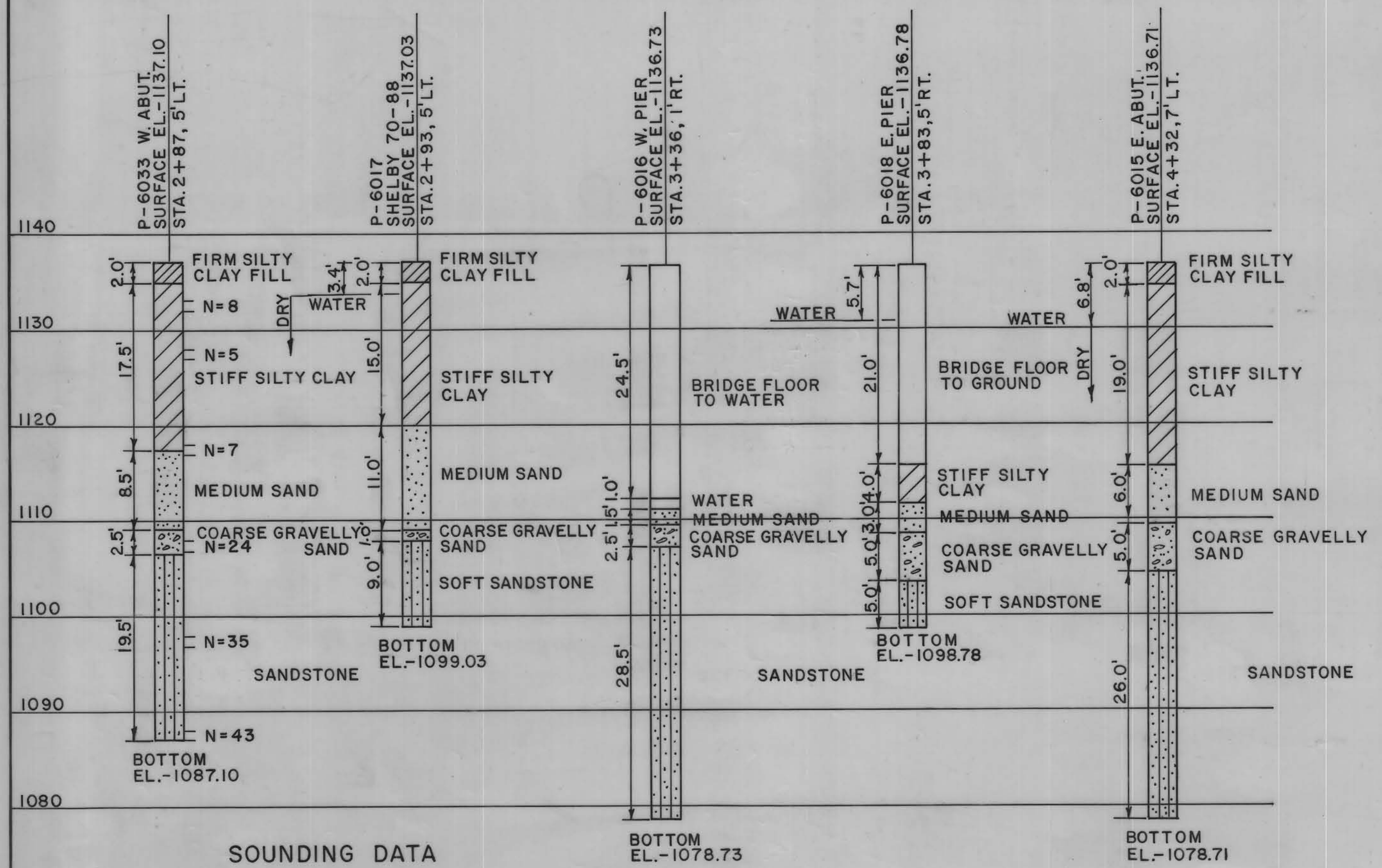


FURNISHING & PLACING OF 3,680 SQ. YDS. OF ENGINEERING FABRIC SHALL BE CONSIDERED INCIDENTAL TO REVETMENT, CLASS E RIP RAP.

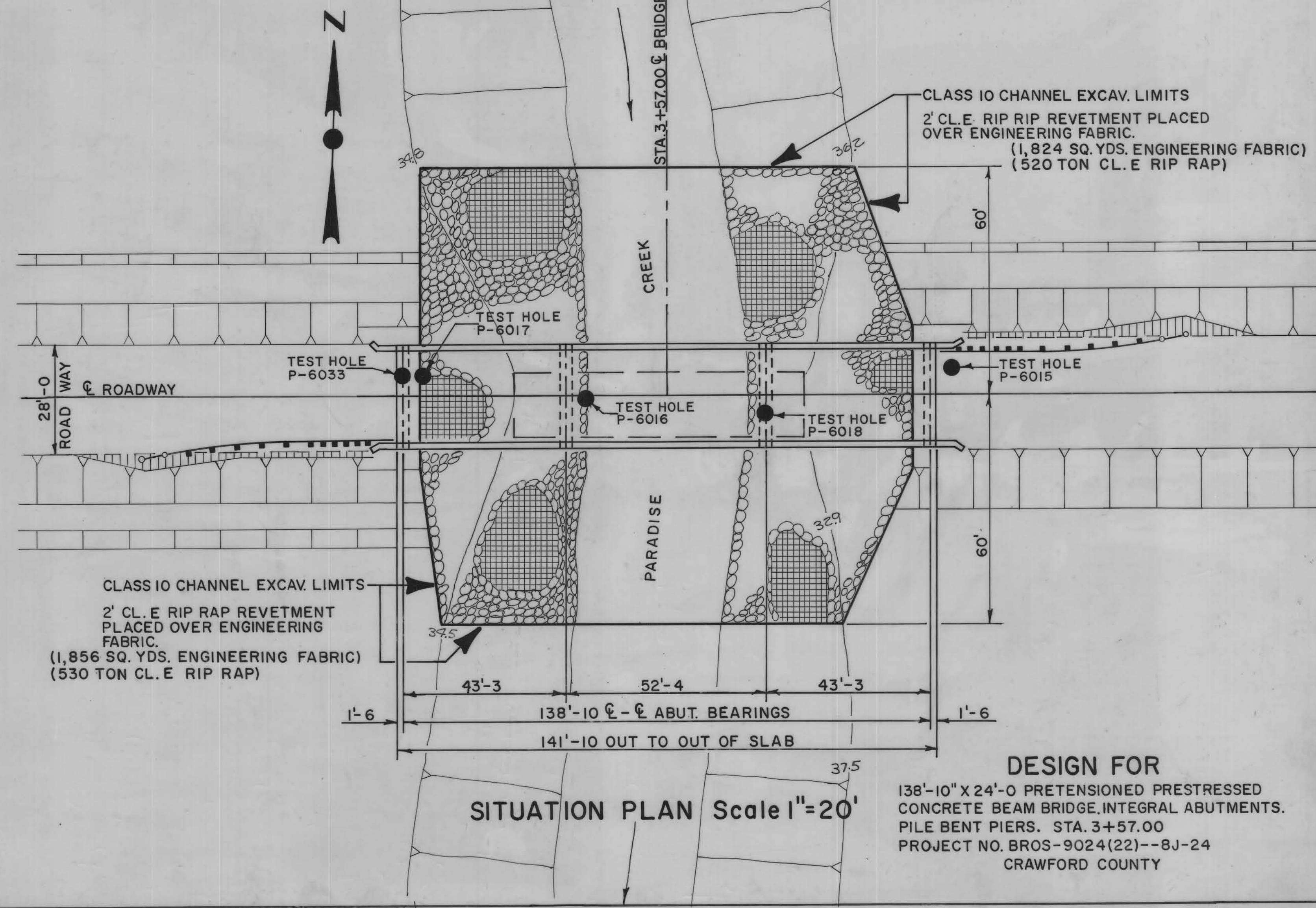
ENGINEERING FABRIC SHALL MEET THE REQUIREMENTS OF 4196.01, PARAGRAPH C.



EXCAVATE CHANNEL AS SHOWN IN SHADED AREA, TO BE USED AS CLASS 10 ROADWAY & BORROW.

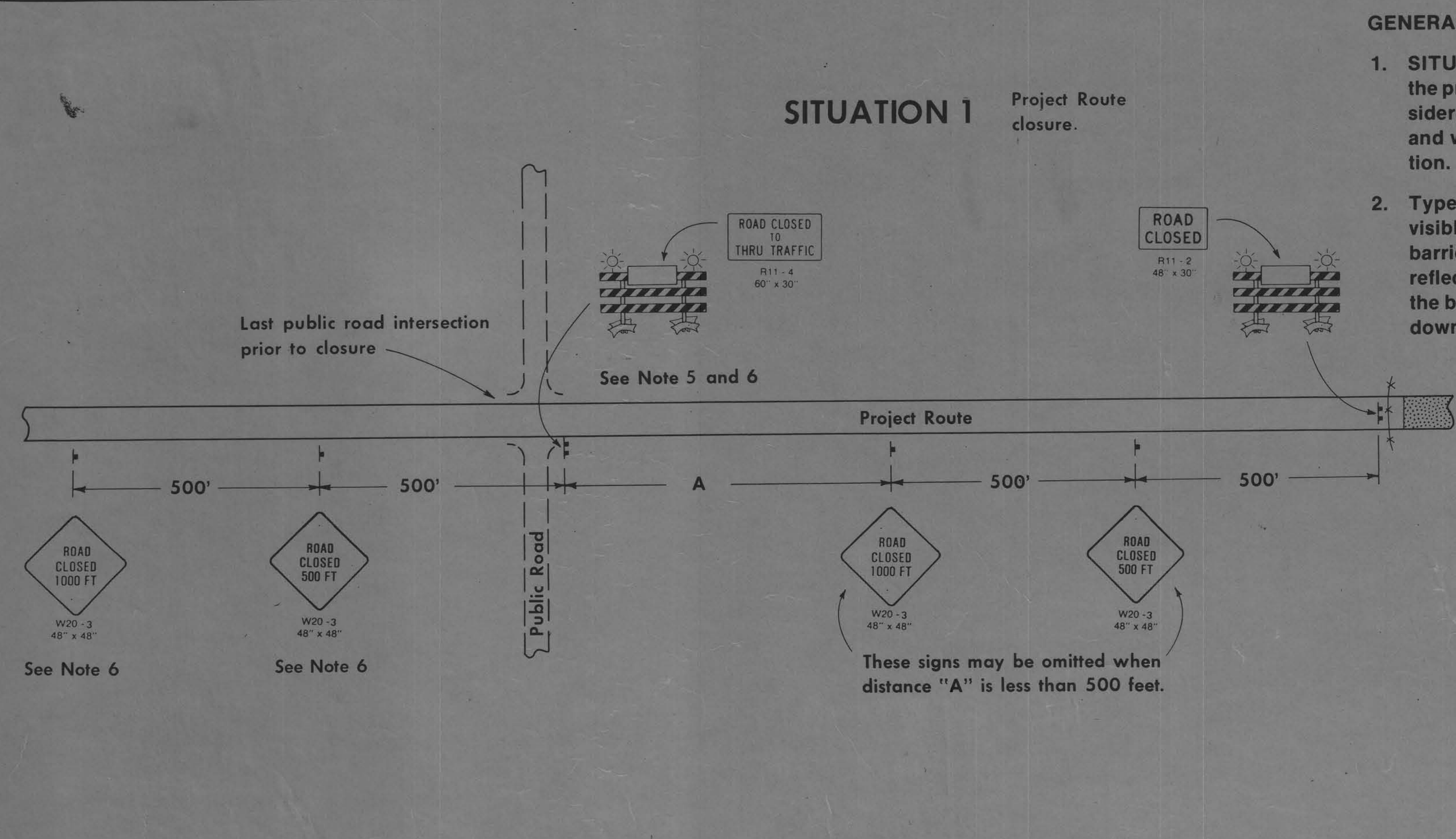
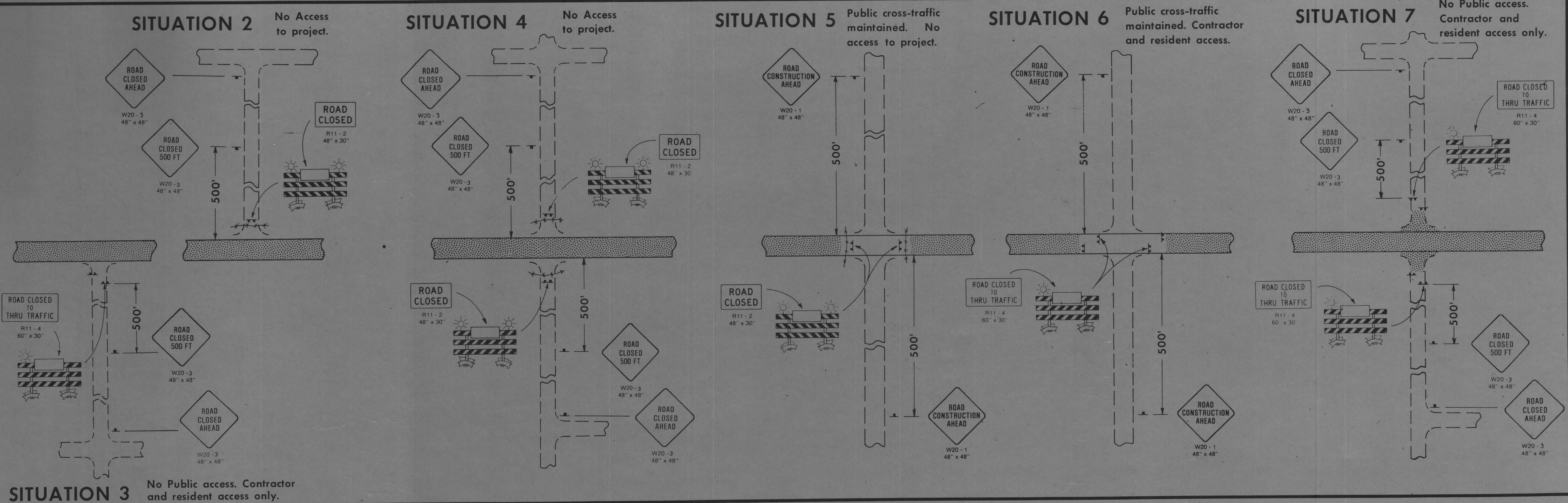


THESE SOUNDINGS WERE MADE FOR DESIGN PURPOSES AND ARE NOT GUARANTEED FOR CONSTRUCTION. (SOUNDINGS WERE TAKEN 1-30-87)



DESIGN FOR 138'-10" X 24'-0" PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE, INTEGRAL ABUTMENTS. PILE BENT PIERS. STA. 3+57.00 PROJECT NO. BROS-9024(22)--8J-24 CRAWFORD COUNTY

15851



GENERAL NOTES

- SITUATION 1 illustrates traffic control necessary to close the project route. SITUATIONS 2 through 7 are for signing of sideroads based on existing agreements and field conditions and will be selected by the engineer in charge of construction.
- Type "A" Low Intensity Flashing Warning Lights shall be visible to both directions of traffic. The back side of the barricade shall be reflectorized by a minimum of six yellow reflectors, one at each end of each rail, or at least one rail on the barricade will show reflectorized stripes properly sloped down toward the traffic side.
- All "Stop" and other regulatory signs on the sideroads are not to be disturbed. If a "Stop" or other regulatory sign must be removed, it will be relocated by the Contracting Authority.
- This layout does not include all barricades as may be required by Section 2518 of the Standard Specifications.
- In Situation 1, when distance "A" is less than 500 feet the barricade should be placed in the middle of the traffic lane approaching the work area. In this case, Note 2 shall apply. The barricade may be omitted if the distance to the work area is less than 400 feet.
- In Situation 1, if the intersection is the point of detour these two signs and barricade will become the responsibility of the contracting authority and may be modified by the contracting authority to fit detour signing.

LEGEND

- Traffic Sign
- Type III Barricade (Type "A" Low Intensity Flashing Warning Light Required for Nighttime Use)
- Type "A" Low Intensity Flashing Warning Light
- Work Area
- Slat Fence Barricade or Orange Plastic Safety Fence

DETAIL SHEET 520-26

Revision Date 1-23-85

SIGNING FOR TEMPORARY ROAD CLOSURES IN RURAL AREAS (PROJECT ROUTE CLOSED TO TRAFFIC)