

BROS-9024(26)--5F-24

CULVERT

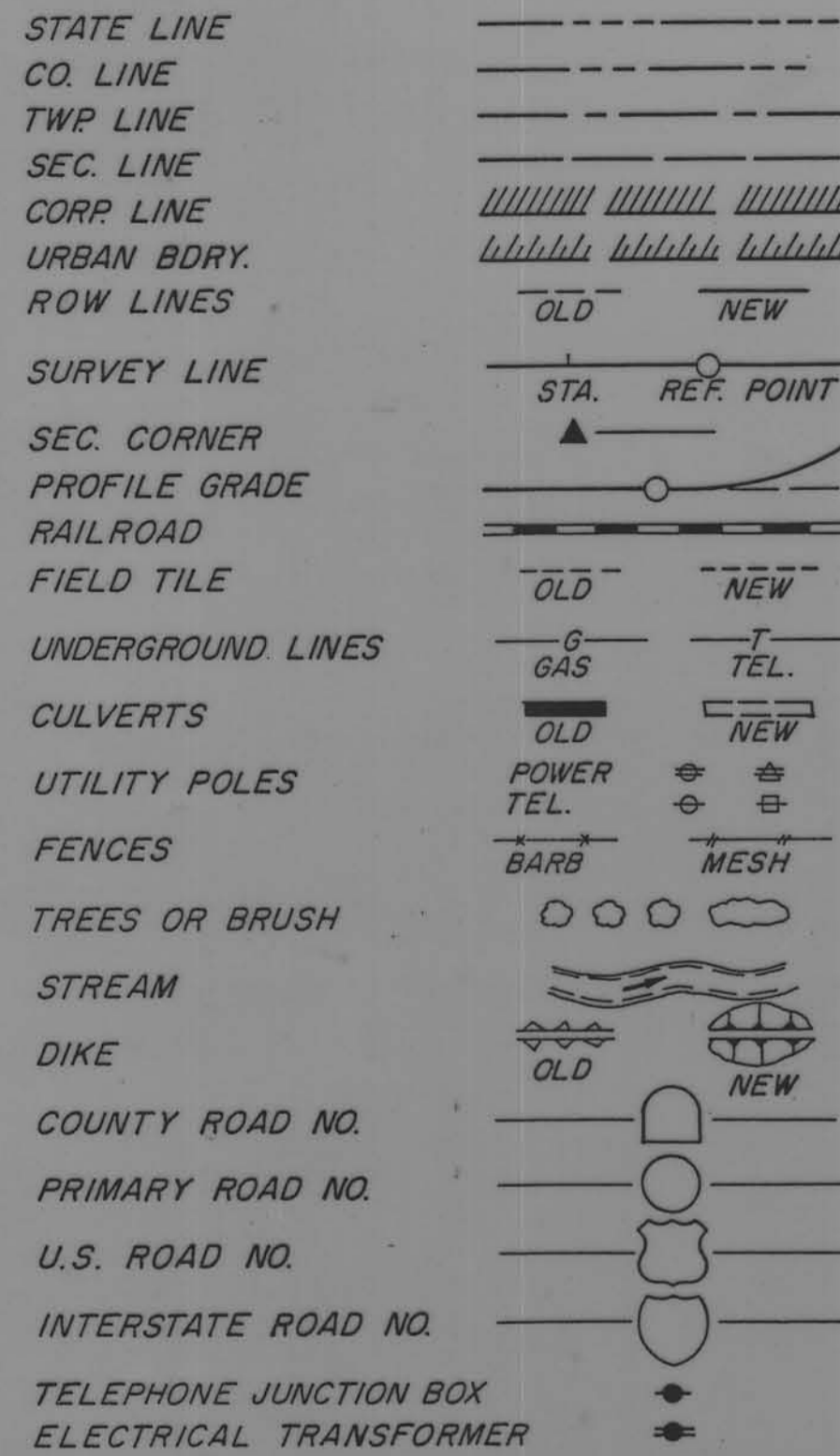
CRAWFORD COUNTY

Letting Date June 2, 1992

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REVISED 7-11-91

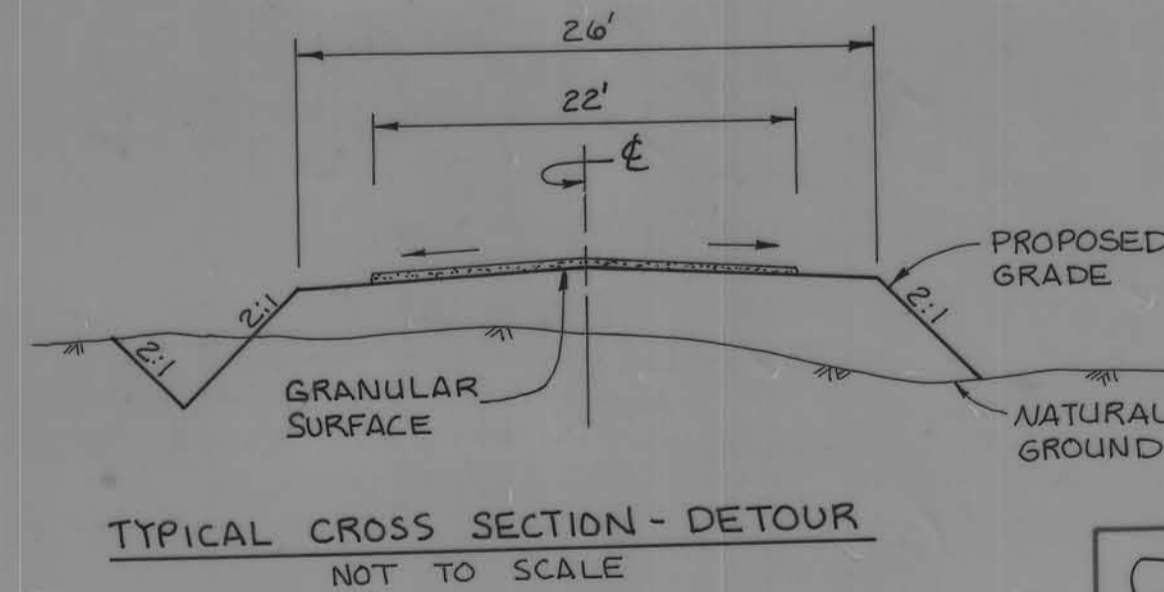
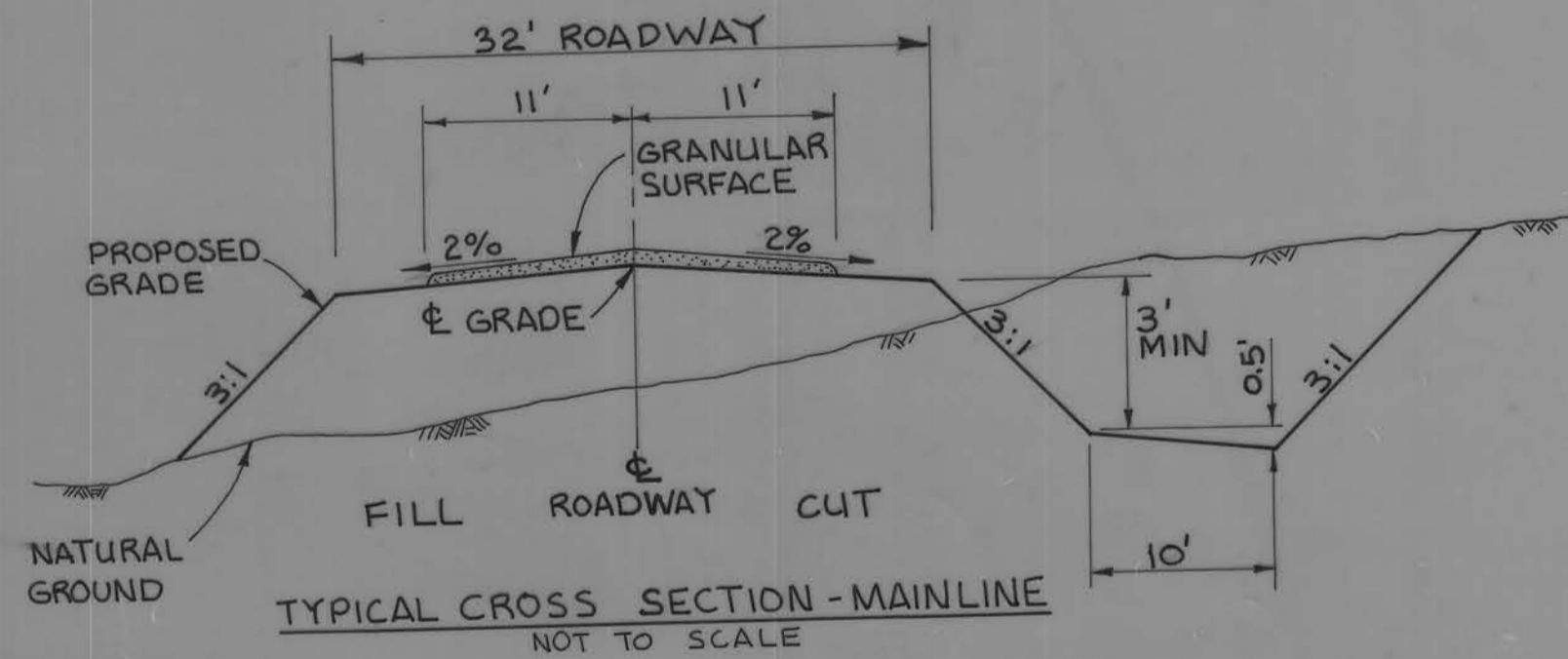
CONVENTIONAL SIGNS



IOWA DEPARTMENT OF TRANSPORTATION Highway Division PLANS OF PROPOSED IMPROVEMENT ON THE SECONDARY ROAD SYSTEM CRAWFORD COUNTY RCB CULVERT

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

Scales: As Noted



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, 1984 STANDARD SPECIFICATIONS. TRAFFIC CONTROL DEVICES, PROCEDURES AND LAYOUTS SHALL BE AS PROVIDED FOR BY SUPPLEMENTAL SPECIFICATIONS FOR TRAFFIC CONTROLS FOR STREET AND HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS SPECIFICATION 5025.

SEE DETAIL SHEET 520-26 "SIGNING FOR TEMPORARY ROAD CLOSURES IN RURAL AREAS".

1988 ADT 50 V.P.D.



FILE NO. 54504 DESIGN NO. 5491 CRAWFORD County

Project Number: BROS-9024(26)--5F-24

INDEX OF SHEETS

Table with 2 columns: No. and Description. Lists sheets A.01 through W.01-5.

MILEAGE SUMMARY

Table with 4 columns: Div., Location, Lin. Ft., Miles. Shows STA. 10+00 TO STA. 23+50 with 1350.00 Lin. Ft. and 0.2557 Miles.

ROAD STANDARD PLANS

The following Standard Plans shall be considered applicable to construction work on this project.

Table with 6 columns: Identification, Date, Identification, Date, Identification, Date. Lists standard plans like RF-7, RF-30A, etc.

BRIDGE STANDARDS

(May be obtained at Bridge Design Services)

Table with 6 columns: Standard, Date Issued, Latest Revision, Standard, Date Issued, Latest Revision. Lists bridge standards like TWRCB-GI-87, etc.

Signatures of John P. Lawler, Le Roy A. Hansohn, Ron Jensen, Nigel E. Pedersen, Eileen Heiden, and Board of Supervisors.

APPROVED section with signature of H. Dale Wight, P.E., Iowa Registration Number 5707, Date 5-23-91.

Iowa Department of Transportation Highway Division. Authorized for Letting by George F. Hanson, Deputy Chief Engineer. U.S. Department of Transportation Federal Highway Administration Approved. Division Engineer.

Project Number: BROS-9024(26)--5F-24

Sheet No. A.01

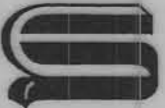
ESTIMATE REFERENCE INFORMATION:

2. SPECIAL BACKFILL MATERIAL SHALL BE FURNISHED BY THE CONTRACTOR AND SHALL MEET THE REQUIREMENTS OF STANDARD SPECIFICATION 4132.02. REMOVAL OF UNSUITABLE OR UNSTABLE SOIL AND PLACEMENT OF SPECIAL BACKFILL MATERIAL SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION 2402.04.
3. TO BE CLASS "C" STRUCTURAL CONCRETE. INCLUDES ALL CONCRETE NECESSARY TO CONSTRUCT TWIN 12'x10'x118' RCB CULVERT, BELL JOINTS AND FLARED WING HEADWALLS @ STA. 16+45.
- 4., 5. ALL METAL PIPE SHALL BE RIVETED PIPE WITH ANNULAR & 16. CORRUGATIONS, BANDS TO BE 24" WIDE.
6. INCLUDES TOTAL CONSTRUCTION AND REMOVAL OF TEMPORARY CROSSING IN ACCORDANCE WITH DETAILED PLANS.
- BLADING AND SHAPING AS WELL AS ANY OTHER INCIDENTAL WORK IN PREPARATION FOR AND MAINTENANCE OF CONSTRUCTION DETOUR SHALL BE CONSIDERED INCIDENTAL TO OTHER WORK ON THE PROJECT. SURFACING AND ADDITIONAL SURFACING NEEDED FOR CONSTRUCTION DETOUR DURING CONSTRUCTION SHALL BE FURNISHED AND SPREAD BY THE COUNTY.
- ALSO INCLUDES CONSTRUCTION, REMOVAL AND SALVAGING OF A TEMPORARY BRIDGE FOR STREAM CROSSING. BRIDGE SHALL BE 30'x20' I-BEAM. SUPER STRUCTURE SHALL INCLUDE 7 I-BEAMS AND DOUBLE WOOD DECK. EACH ABUTMENT SHALL CONSIST OF 6 TIMBER PILE 30' LONG. ALL I-BEAMS, TIMBER PILING, TIMBER DECKING AND OTHER MATERIAL REQUIRED FOR CONSTRUCTION OF THE TEMPORARY BRIDGE SHALL BE FURNISHED BY THE COUNTY. CONTRACTOR SHALL TRANSPORT ALL MATERIALS TO THE PROJECT SITE FROM THE COUNTY YARD IN DENISON.
- PROJECT ROAD WILL BE CLOSED TO THRU TRAFFIC BUT CONSTRUCTION DETOUR SHALL REMAIN OPEN AT ALL TIMES FOR EMERGENCY VEHICLES AND LOCAL TRAFFIC.
8. QUANTITY INCLUDES ALL EXCAVATION NECESSARY TO CONSTRUCT TWIN 12'x10'x118' RCB CULVERT, BELL JOINTS AND FLARED WING HEADWALLS AND PLACEMENT OF SPECIAL BACKFILL AT STA. 16+45. SUITABLE CLASS 10 CHANNEL EXCAVATION MAY BE USED IN ADJACENT ROADWAY EMBANKMENT. UNSUITABLE MATERIAL SHALL BE DISPOSED OF AS DIRECTED BY THE ENGINEER.
9. TYPE "A" COMPACTION WILL BE REQUIRED. CONTRACTOR TO BLOCK TERRACES CUT BY EXCAVATION OR BORROW. MATERIAL MAY BE OBTAINED FROM ADJACENT CUT AND BORROW AREAS WITHIN BALANCE POINTS AS DIRECTED BY THE ENGINEER. COST TO BE INCLUDED IN AND CONSIDERED INCIDENTAL TO OTHER WORK ON THE PROJECT.
10. QUANTITY INCLUDES ALL EXCAVATION NECESSARY TO CONSTRUCT TWIN 12'x10'x118' RCB CULVERT, BELL JOINTS, FLARED WING HEADWALLS AND PLACEMENT OF SPECIAL BACKFILL AT STA. 16+45, ACTUAL QUANTITY WILL BE DETERMINED BY FINAL CROSS SECTIONS.
11. SHALL MEET ARTICLE 4196.01B TO BE PLACED PRIOR TO PLACEMENT OF SPECIAL BACKFILL. SEE SHEET V.01 FOR DETAILS.
13. SHALL BE 5 GAGE STEEL SHEETING, SECTION MODULUS 3.36 (IN³) PER FT. ARMCO OR EQUAL, IN ACCORDANCE WITH STD. SPECIFICATION 2501.07. STEEL SHEET PILING TO BE FIELD BURNED OR DRILLED TO ACCOMMODATE BARS 5t1 IN CURTAIN WALL. SUCH WORK TO BE INCIDENTAL TO THIS ITEM.
14. INCLUDES EXISTING 16'x60' PONY TRUSS BRIDGE WITH TIMBER APPROACHES & TIMBER PILE PIERS AT STA. 16+47.15.
15. QUANTITY INCLUDES ALL REINFORCING STEEL NECESSARY TO CONSTRUCT TWIN 12'x10'x118' RCB CULVERT, BELL JOINTS AND FLARED WING HEADWALLS AT STA. 16+45.
16. NO EXTRA PAYMENT WILL BE MADE FOR EXCAVATION & BACKFILL NECESSARY TO INSTALL SUBDRAINS. COST OF EXCAVATION AND BACKFILL TO BE INCLUDED IN AND CONSIDERED INCIDENTAL TO THESE BID ITEMS.
17. GRANULAR SURFACE SHALL MEET THE REQUIREMENT OF CLASS "C" GRAVEL IN ACCORDANCE WITH ARTICLE 4120, GRADATION NO. 10 AND SHALL INCLUDE THE COST OF SPREADING GRANULAR SURFACING ON ROADWAY SURFACE.
18. INCLUDES ALL ADVANCED WARNING SIGNS, TYPE III BARRICADES AND OTHER TRAFFIC CONTROL DEVICES FOR THIS PROJECT WHICH SHALL BE LOCATED AT THE BEGINNING AND THE END OF THE PROJECT, AND WHERE THE ROAD FOR CONSTRUCTION INTERSECTS OTHER PUBLIC ROADS. ALSO SHALL INCLUDE ALL OTHER BARRICADES AND WARNING SIGNS NECESSARY TO PROTECT THE CONTRACTOR'S WORK AND EQUIPMENT AND 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" 1988.
- INCLUDES FURNISHING, INSTALLING, MAINTAINING, REPAIRING AND RELOCATING ALL THE SIGNS AND BARRICADES AS SHOWN ON THE TRAFFIC CONTROL PLAN. FULL PAYMENT FOR THIS WORK SHALL BE THE LUMP SUM PRICE IN THE CONTRACT.

ESTIMATE OF QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITY
1	BACKFILL, COMPACTING ADJACENT TO BRIDGES, CULVERTS OR STRUCTURES	CY	175
2	BACKFILL, SPECIAL	TONS	2379
3	CONCRETE, STRUCTURAL	CY	541.7
4	CULVERT, CORRUGATED METAL ENTRANCE PIPE, 24 IN. DIA.	LF	40
5	CULVERT, CORRUGATED METAL ENTRANCE PIPE, 18 IN. DIA.	LF	36
6	DETOUR, CONSTRUCTION AND REMOVAL OF	LUMP SUM	LUMP SUM
7	DIAPHRAGM, CORRUGATED METAL PIPE, 24 IN. DIA.	ONLY	2
8	EXCAVATION, CLASS 10, CHANNEL	CY	2190
9	EXCAVATION, CLASS 10, ROADWAY & BORROW	CY	3348
10	EXCAVATION, CLASS 20	CY	6680
11	FABRIC, ENGINEERING	SY	1905
12	MOBILIZATION	LUMP SUM	LUMP SUM
13	PILING, STEEL SHEET	SF	1050
14	REMOVAL OF EXISTING STRUCTURES	LUMP SUM	LUMP SUM
15	STEEL, REINFORCING	LBS	74264
16	SUBDRAIN, CORRUGATED METAL PIPE, 24 IN. DIA.	LF	40
17	SURFACING, GRANULAR, CLASS C GRAVEL - ON ROAD	TONS	421.9
18	TRAFFIC CONTROL	LUMP SUM	LUMP SUM
19	CLEARING AND GRUBBING	UNITS	264.45

PLACEMENT QUANTITIES					
TWIN 12' x 10' x 118'					
LOCATION	CONCRETE IN PARTS CU. YDS.				REINFORCING STEEL (LBS.)
	SLAB	WALLS	FLOORS	TOTAL	
HEADWALL (2)	5.40	35.40	94.40	135.20	16,176
BARREL (118')	118.24	104.90	144.79	367.92	53,057
BELL JOINT (3)	13.64	8.39	16.55	38.58	5,031
TOTAL	137.271	148.693	255.74	541.70	74,264

FILE NO. 64504 DESIGN NO. 54-9/1
 PROJ. NO. BROS-9024(26)--5F-24

 SUNDQUIST ENGINEERING, P.C. CONSULTING ENGINEERS 1417 Broadway Denison, IA 51442	
Project No.: 30270	Date:
Approved By: SAS	Drawn By: TTK
Client: CRAWFORD COUNTY	
Description: ESTIMATE OF QUANTITIES, ESTIMATE REF. INFORMATION	Sheet C.01

GENERAL NOTES:

202-1
ALL ITEMS DESIGNATED TO BE SALVAGED SHALL BE LOADED ON COUNTY TRUCKS AT THE TIME OF REMOVAL OR AT A LATER TIME TO BE DESIGNATED BY THE COUNTY. COST TO BE INCLUDED IN AN CONSIDERED INCIDENTAL TO OTHER WORK ON THE PROJECT.

ALL CORRUGATED METAL PIPE ON THIS PROJECT SHALL BE RIVETED PIPE. NO "SPIRAL" PIPE WILL BE ALLOWED. ALL BANDS SHALL BE 24" BANDS.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ALL NECESSARY ARRANGEMENTS WITH ADJACENT PROPERTY OCCUPANTS FOR RESTRAINING LIVESTOCK FROM ENTERING THE RIGHT OF WAY.

202-1
THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT ARCHAEOLOGICAL REMAINS MAY BE UNCOVERED ON THIS PROJECT. REFER TO SECTION 2102.10 OF THE STANDARD SPECIFICATIONS. THE ENGINEER SHALL NOTIFY BOTH THE OFFICE OF THE STATE ARCHAEOLOGIST IN IOWA CITY AND THE OFFICE OF PROJECT PLANNING, IOWA DOT A MINIMUM OF ONE WEEK PRIOR TO THE EXPECTED DATE OF THE START OF CONSTRUCTION ACTIVITIES.

ANY INCONVENIENCE OR DELAY INCURRED BY THE ROAD CONTRACTOR DUE TO ARCHAEOLOGICAL WORK SHALL BE CONSIDERED INCIDENTAL TO "CLASS 10 EXCAVATION, ROADWAY AND BORROW".

ROAD CONTRACTOR IS TO USE DUE CAUTION IN WORKING OVER AND AROUND ALL TILE LINES. BREAKS IN THE TILE LINE DUE TO THE CONTRACTOR'S CARELESSNESS ARE TO BE REPLACED AT HIS EXPENSE WITHOUT COST TO THE COUNTY. ANY TILE LINES BROKEN OR DISTURBED BY CUT LINES WILL BE REPLACED AS DIRECTED BY THE ENGINEER IN CHARGE OF CONSTRUCTION AND AT THE COUNTY'S EXPENSE.

212-1
SOUNDING AND TEST BORING DATA SHOWN ON PLANS WERE ACCUMULATED FOR DESIGNING AND ESTIMATING PURPOSES. THEIR APPEARANCE ON THE PLAN DOES NOT CONSTITUTE A GUARANTEE THAT CONDITIONS OTHER THAN THOSE INDICATED WILL NOT BE ENCOUNTERED.

213-1
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIAL (EXCAVATED MATERIAL OR BROKEN CONCRETE) WHICH IS NOT DESIRABLE TO BE INCORPORATED INTO THE WORK INVOLVED ON THIS PROJECT. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES. NO MATERIAL SHALL BE PLACED WITHIN THE RIGHT OF WAY, UNLESS SPECIFICALLY STATED IN THE PLANS OR APPROVED BY THE ENGINEER.

213-2
THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FOLLOWING CONSIDERATION IN REGARD TO REMOVAL AND REPLACEMENT OF TOPSOIL IN BORROW AREAS:

QUANTITIES ESTIMATED FOR TOPSOIL ARE CALCULATED ON THE BASIS OF A UNIFORM REMOVAL OF TOPSOIL TO A DEPTH OF 12 INCHES. THE MATERIAL REMOVED IS TO BE SPREAD UNIFORMLY TO A MINIMUM DEPTH OF 8 INCHES OVER THE BORROW AREA UPON COMPLETION OF EXCAVATION WORK.

213-3
ALL BORROW AREAS, STOCKPILE AREAS, HAUL ROADS AND AREAS USED FOR MANEUVERING EQUIPMENT ON THIS PROJECT WILL REQUIRE SUBSOIL TILLAGE TO AN AVERAGE DEPTH OF 16 TO 20 INCHES PRIOR TO PLACEMENT OF TOPSOIL AND/OR STABILIZING CROP SEEDING. SUCH TILLAGE SHALL BE ACCOMPLISHED ON MAXIMUM OF THREE FOOT CENTERS AND AT RIGHT ANGLES TO THE FINISHED SLOPE OF THE BORROW.

EQUIPMENT USED TO ACCOMPLISH THE TILLAGE SHALL BE EQUIPPED WITH AN ARROWHEAD-TYPE SHOE SO AS TO PROVIDE LATERAL DISPLACEMENT AND LIMIT THE MOVEMENT OF THE SUBSOIL TO THE SURFACE. IT SHALL BE APPROVED BY THE ENGINEER FOR THE USE INTENDED. THIS WORK WILL BE CONSIDERED INCIDENTAL TO OTHER WORK ON THE PROJECT AND NO PAYMENT WILL BE ALLOWED.

IT IS INTENDED THAT FOLLOWING SUBSOIL TILLAGE, THE AREA REMAINS IN A "LOOSENEED" CONDITION. ADDITIONAL COMPACTION OR THE OPERATION OF HEAVY EQUIPMENT, OTHER THAN REQUIRED FOR TOPSOIL PLACEMENT AND SHAPING SHALL NOT BE ALLOWED ON AREAS WHICH HAVE RECEIVED SUBSOIL TILLAGE.

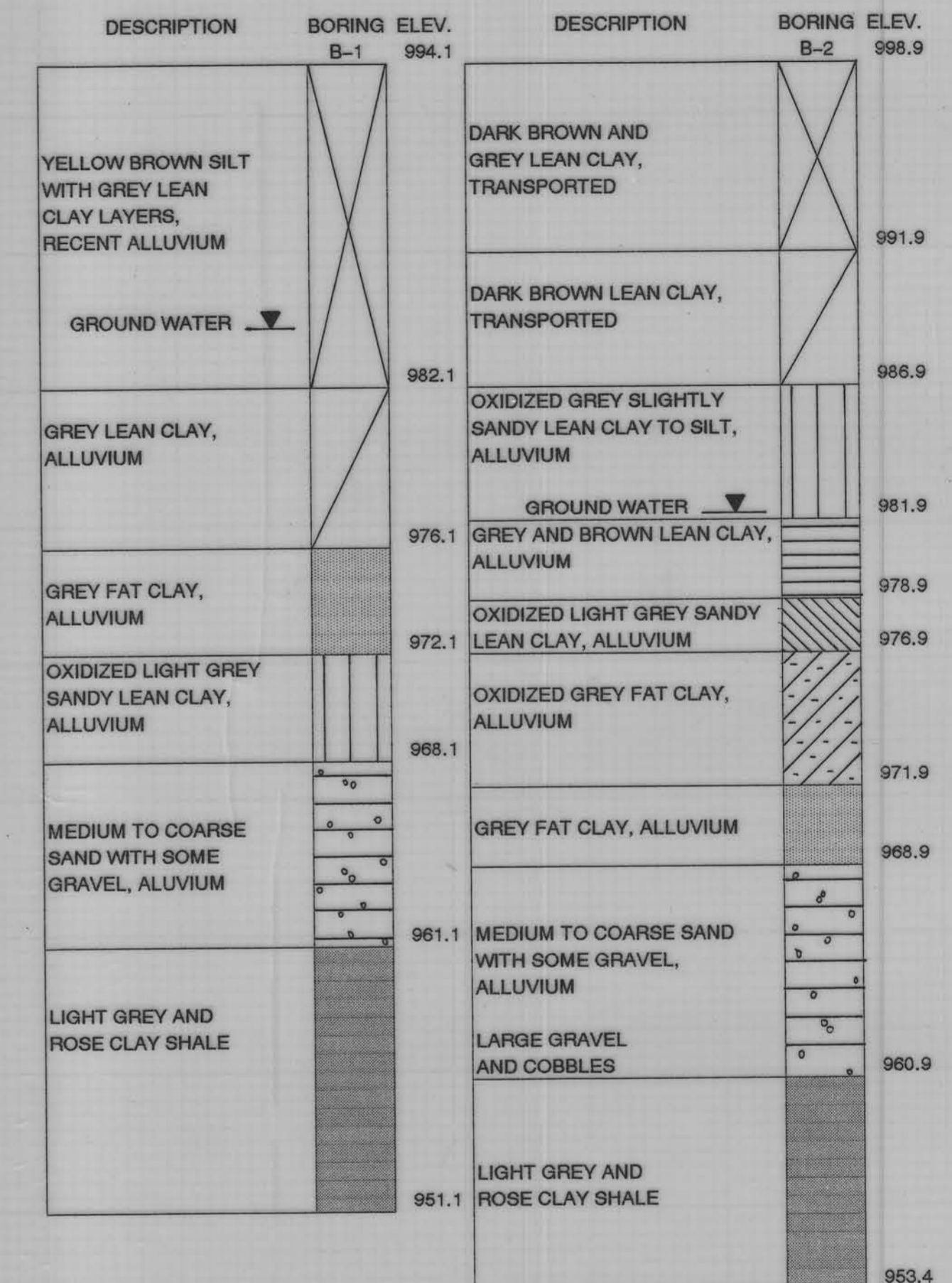
251-1
THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN ACCESS TO INDIVIDUAL PROPERTIES DURING CONSTRUCTION.

RELOCATED ACCESS SHALL BE COMPLETED TO INDIVIDUAL PROPERTIES PRIOR TO REMOVAL OF EXISTING ACCESS.

IF THE PERMANENT ACCESS CANNOT BE COMPLETED PRIOR TO REMOVAL OF THE EXISTING ACCESS, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AN ALTERNATE ACCESS. TEMPORARY GRANULAR SURFACING WILL BE PAID FOR AS A CONTRACT ITEM OR BY EXTRA WORK.


261-1
WHERE PUBLIC UTILITY FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE OWNERS OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL AFFORD ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS, AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK.

EROSION CONTROL BY OTHERS.



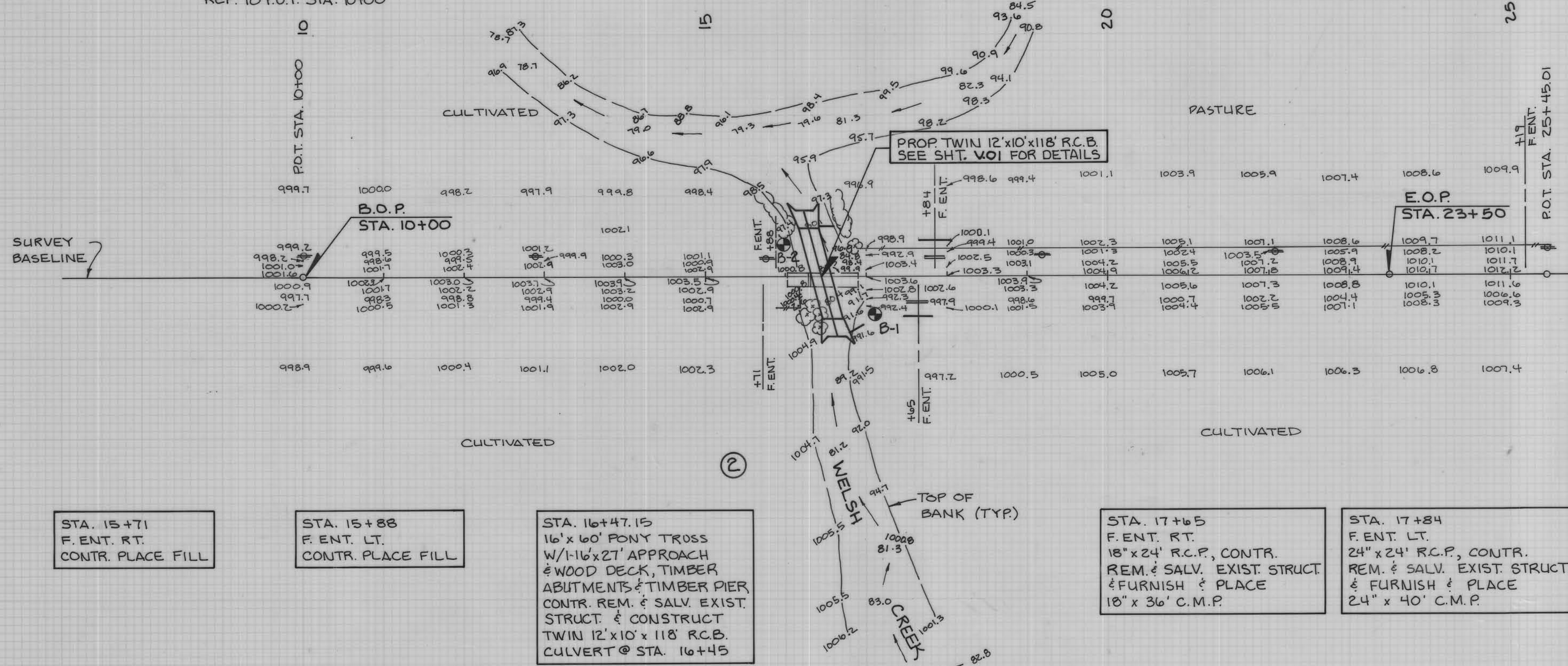
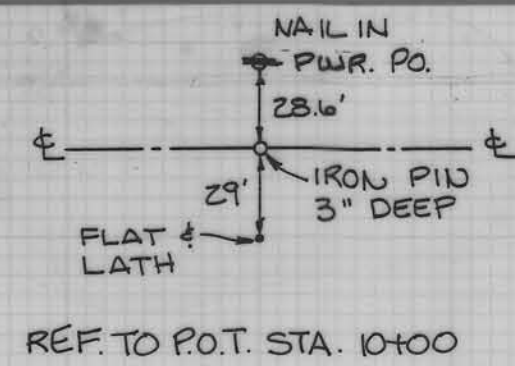
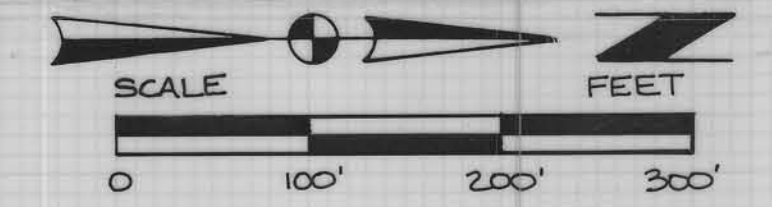
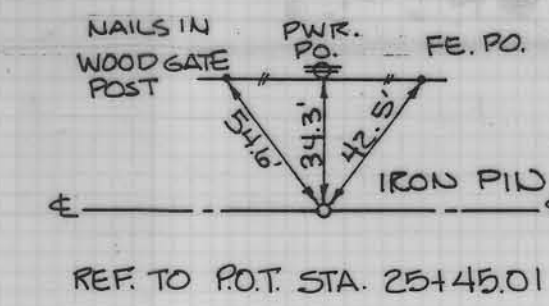
SEE PLAN AND PROFILE SHEET D.01 FOR LOCATION OF BORINGS

FILE NO. 54504 DESIGN NO. 5491
PROJ. NO. BROS-9024(26)--5F-24

 SUNDQUIST ENGINEERING, P.C. CONSULTING ENGINEERS 1417 Broadway Denison, IA 51442	
Project No.: 30210	Date: 5-23-91
Approved By: SAS	Drawn By: TKK
Client: CRAWFORD COUNTY	
Description: GENERAL INFORMATION	Sheet C.02

- ① RICHARD E. CLARK
PATSY R. CLARK
- ② CARL J. MUFF
MARYLOU MUFF

UNION TWP.
T82N R40W
SEC. 6

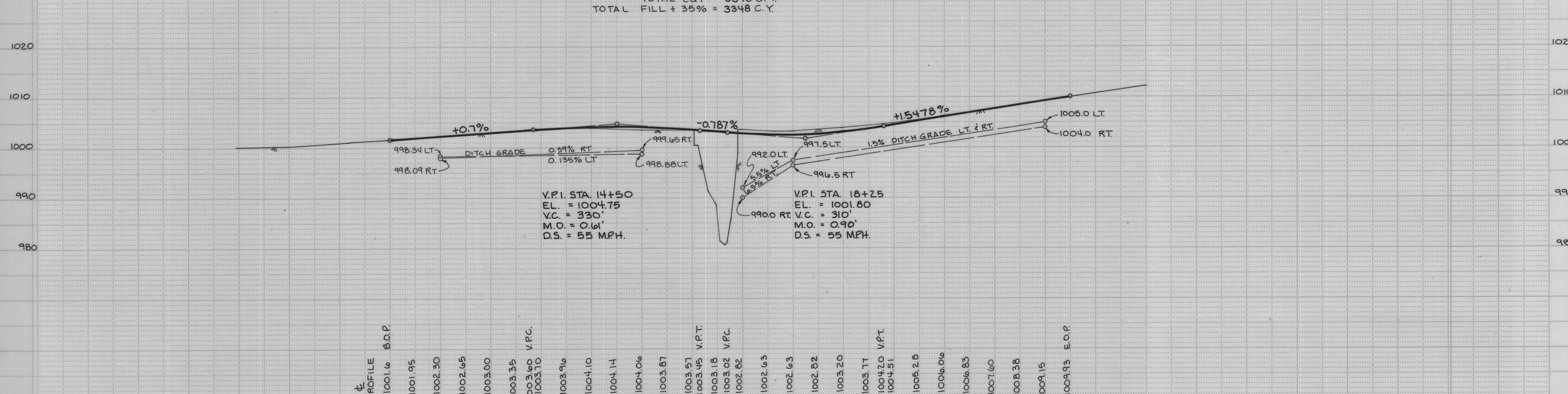


91	183	209	280	276	113	313	581	293	248	217	206	263	75
30	12	102	126	139	191	642	350	81	98	135	139	93	19

F. ENT. RT. F = 55 C.Y.
F. ENT. LT. F = 70 C.Y.

F. ENT. RT. F = 110 C.Y.
F. ENT. LT. F = 120 C.Y.

TOTAL CUT = 3348 C.Y.
TOTAL FILL + 35% = 3348 C.Y.



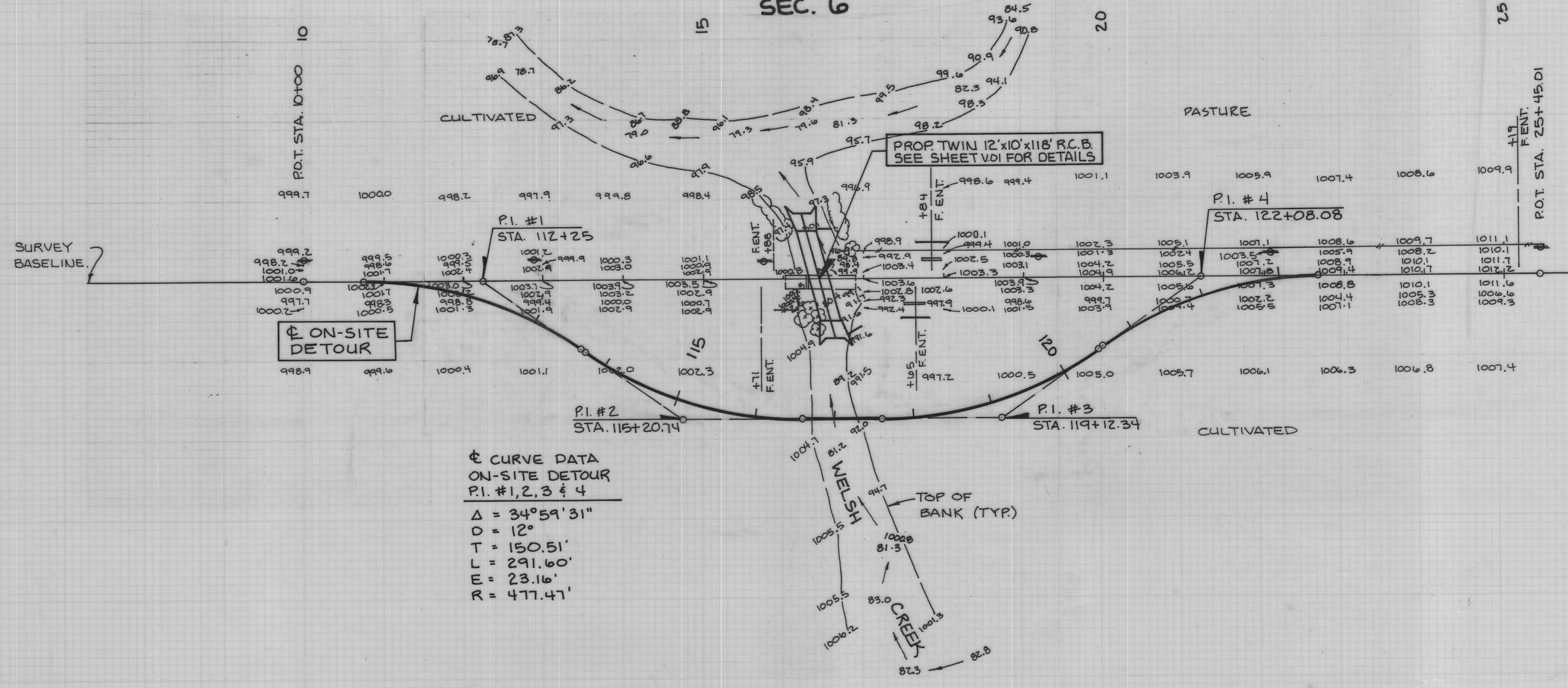
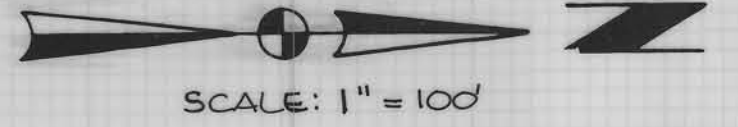
PLAN

DATE	
BY	
SURVEYED	
PLOTTED	
CHECKED	
RT. OF WAY CHECKED	
NOTE BOOK NO.	

PROFILE

DATE	
BY	
SURVEYED	
PLOTTED	
CHECKED	
STRUCTURE NOTATIONS CHKD	
NOTE BOOK NO.	

UNION TWP.
T82N R40W
SEC. 6



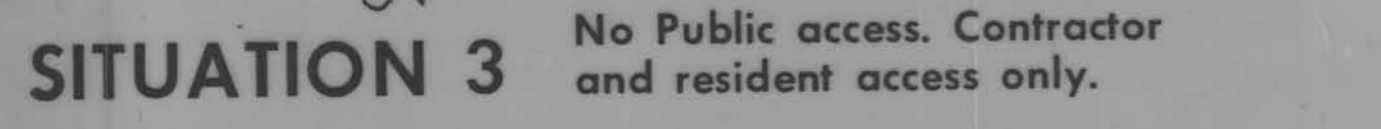
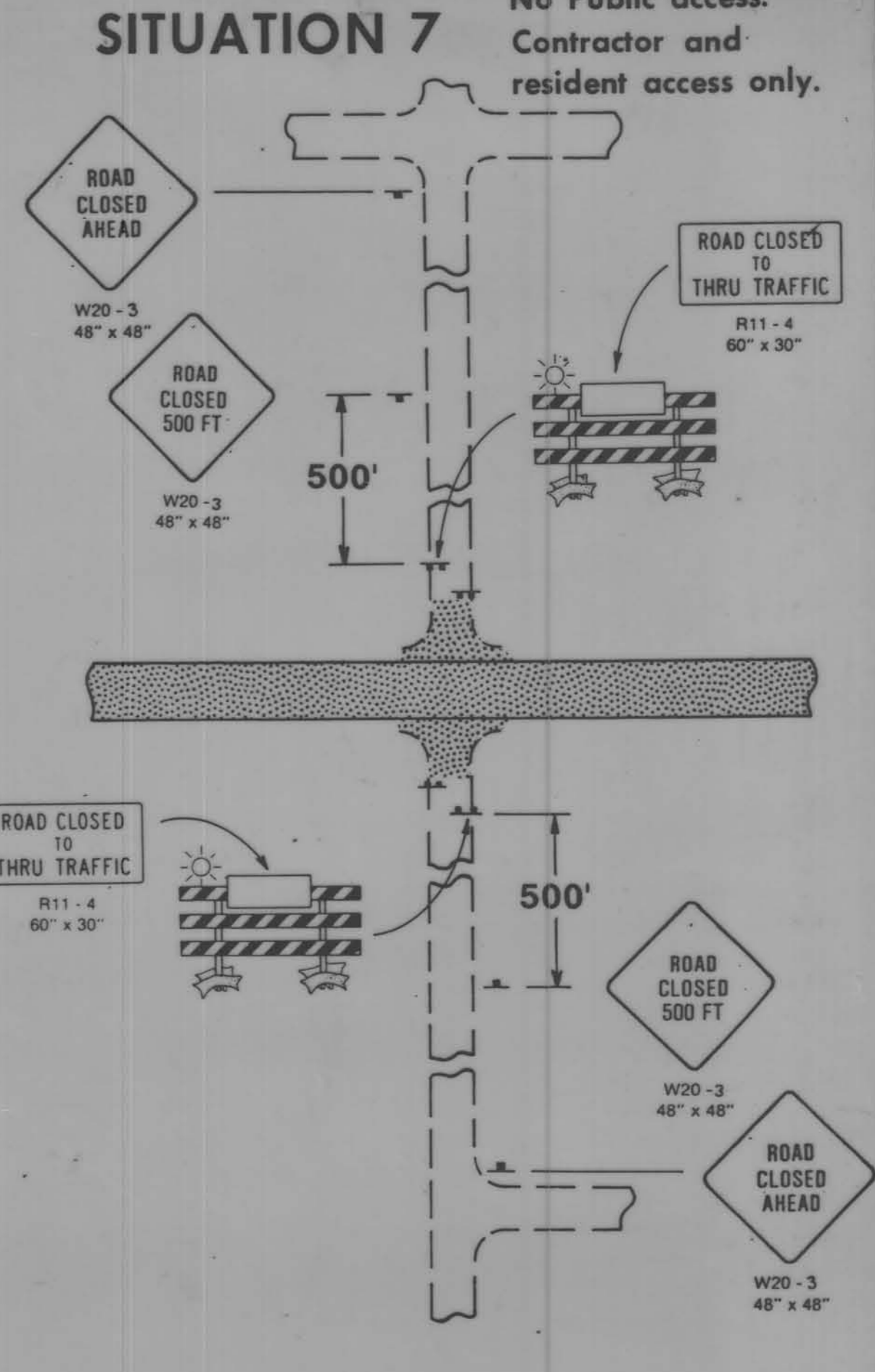
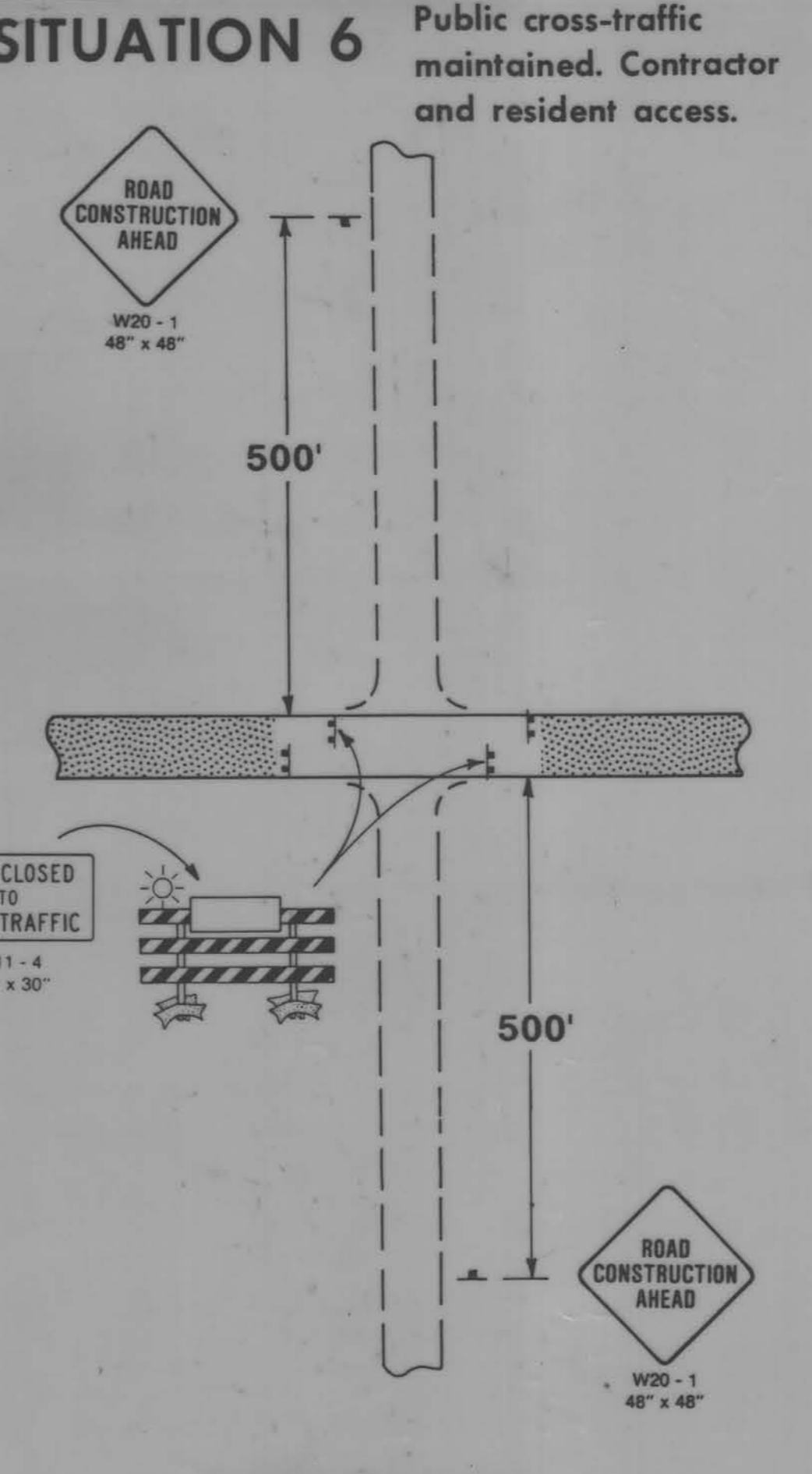
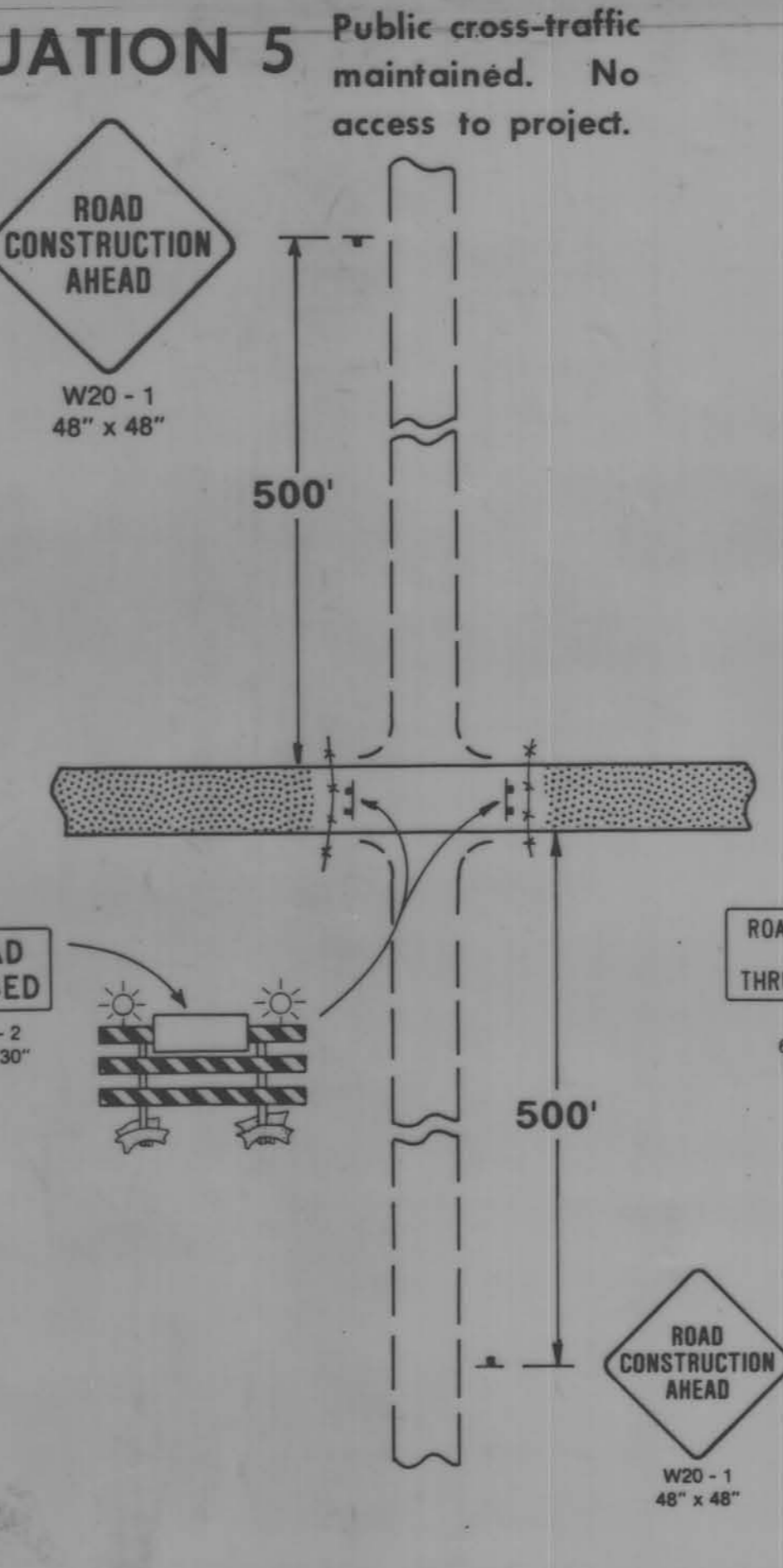
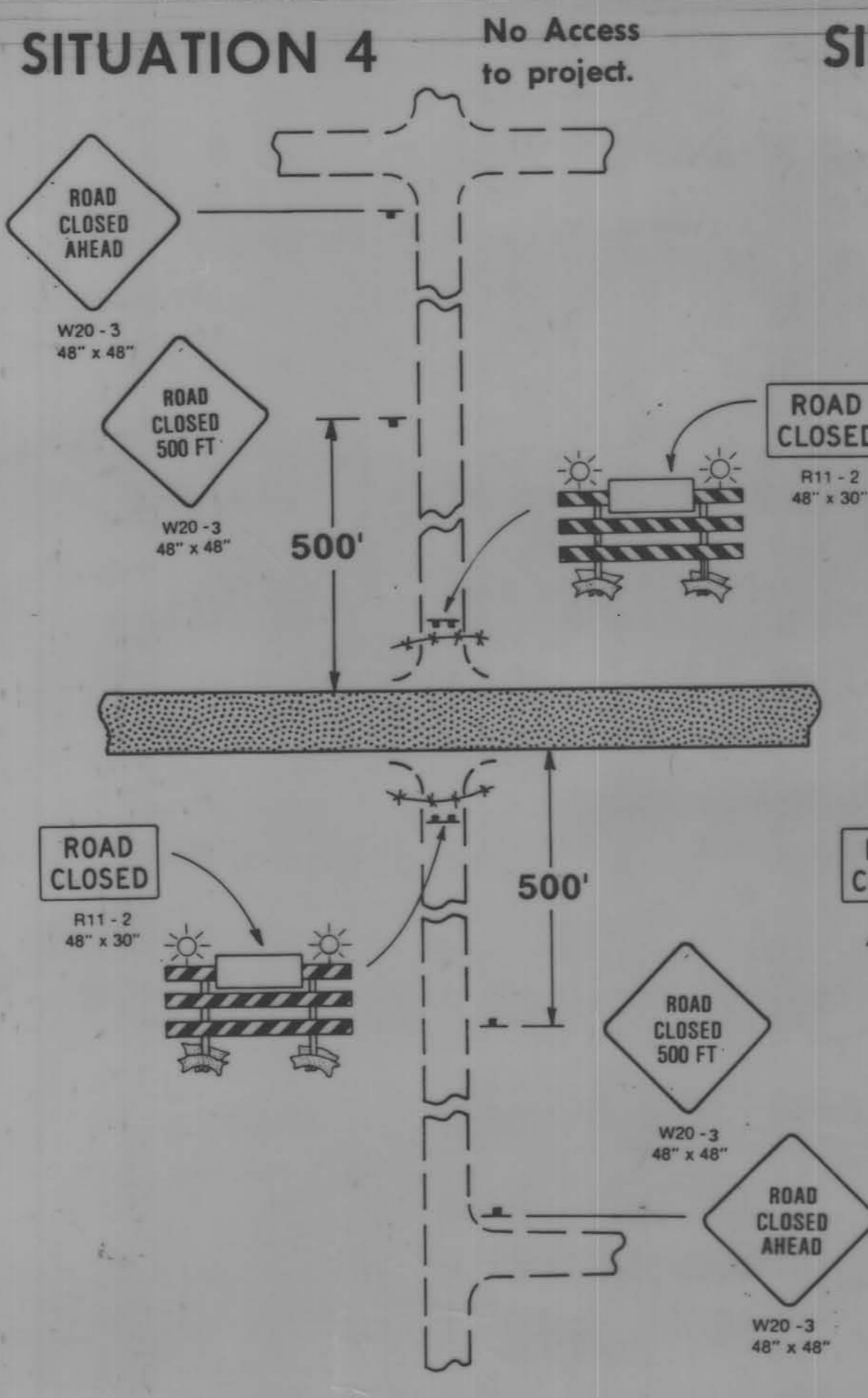
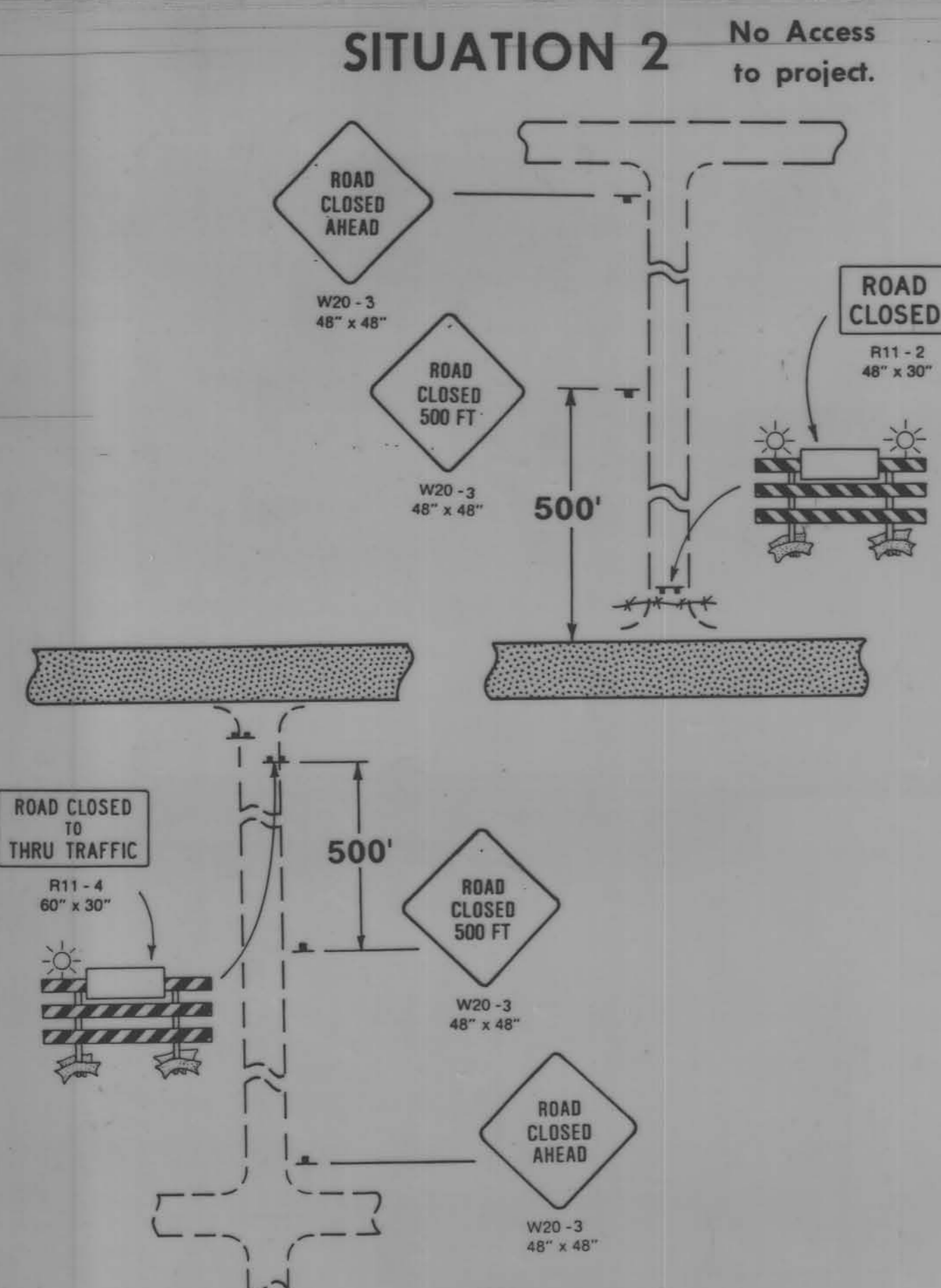
☉ CURVE DATA
ON-SITE DETOUR
P.I. #1, 2, 3 & 4

$\Delta = 34^{\circ}59'31''$
 $D = 12^{\circ}$
 $T = 150.51'$
 $L = 291.60'$
 $E = 23.16'$
 $R = 477.47'$

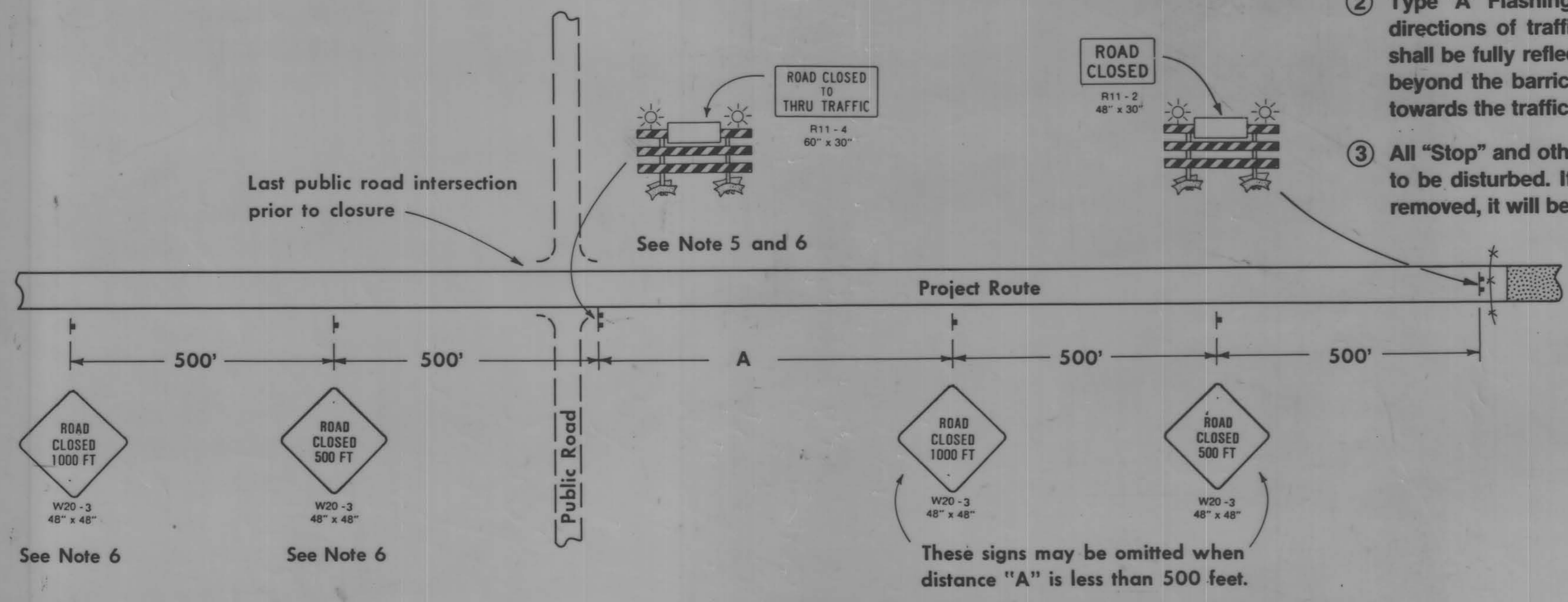
PLAN - DETOUR

PLAN	SURVEYED	DATE
	PLOTTED	
	ALIGNMENT CHECKED	
	RT. OF WAY CHECKED	
NOTE BOOK NO.		

PROFILE	SURVEYED	DATE
	GRADES CHECKED	
	B.M. NOTED	
	STRUCTURE NOTATIONS CHECKED	
NOTE BOOK NO.		



SITUATION 1 Project Route closure.



GENERAL NOTES:

- SITUATION 1 illustrates traffic control necessary to close the project route. SITUATION 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' Flashing Warning Lights shall be visible to both directions of traffic. The backside of the type III barricades shall be fully reflectorized unless there is no access permitted beyond the barricade. Stripes shall be properly sloped down towards 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 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

Iowa Department of Transportation
Highway Division

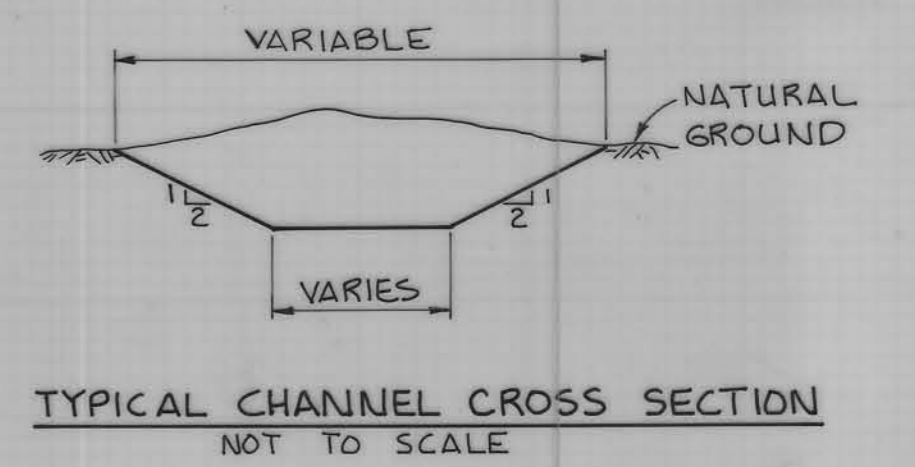
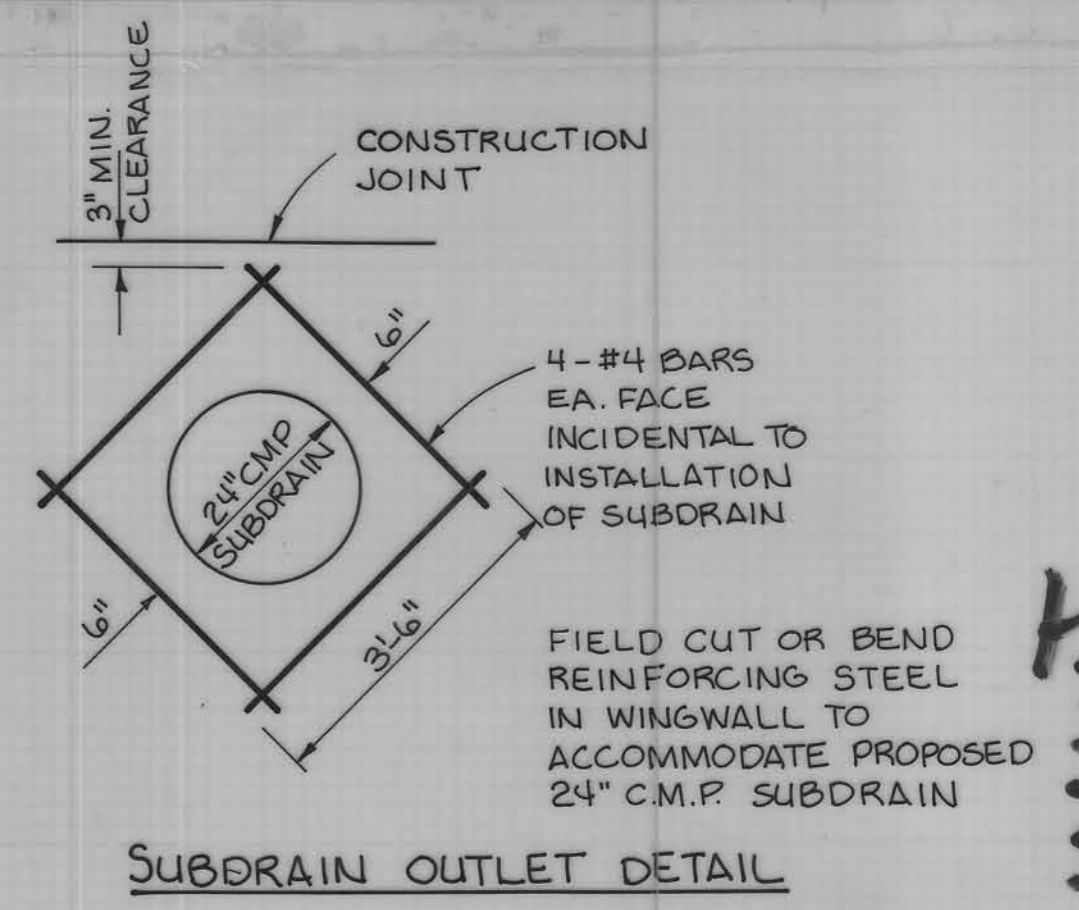
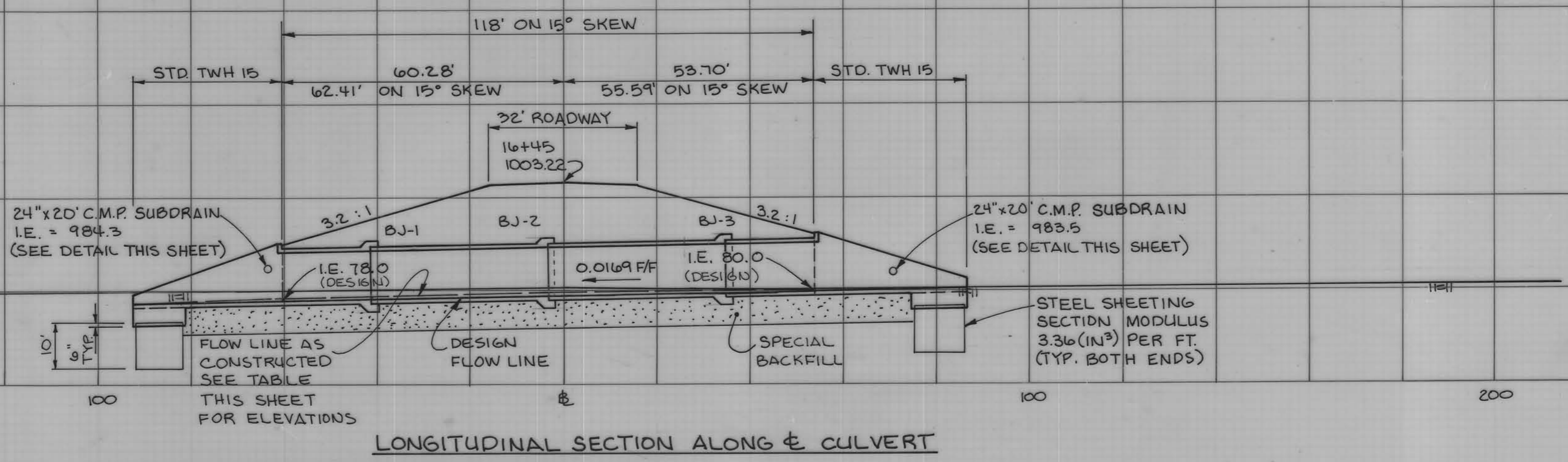
DETAIL SHEET 520-26

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

NO. 2 DATE 10-02-90

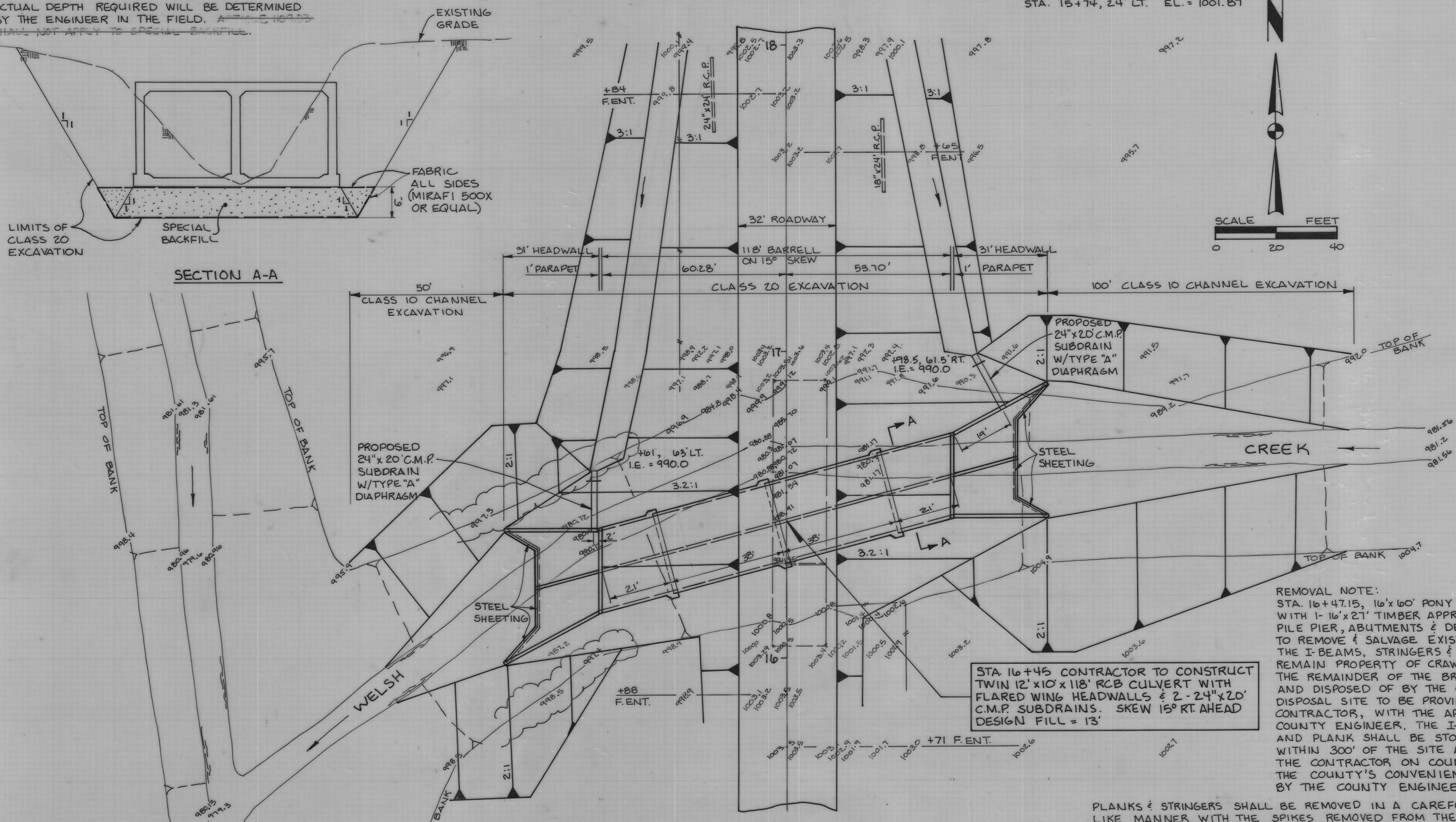
REVISION: Revised General Note no. 2.

CAMBER TABLE		
LOCATION	CAMBER	ELEV.
BACK OF PARAPET OUTLET END	0.16'	78.16
BELL JOINT-1	0.32'	78.68
BELL JOINT-2	0.60'	79.60
BELL JOINT-3	0.32'	79.96
BACK OF PARAPET INLET END	0.16'	80.16



NOTE: SPECIAL BACKFILL IS ESTIMATED TO BE 6' DEEP. ACTUAL DEPTH REQUIRED WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. THIS NOTE SHALL NOT APPLY TO SPECIAL BACKFILL.

B.M. #2 - BRIDGE SPK. IN PWR. PO.
STA. 15+74, 24' LT. EL. = 1001.87



HYDRAULIC DATA	
DRAINAGE AREA	9 SQ. MI.
DESIGN DISCHARGE (Q ₂₅)	2156 cfs
DESIGN HIGH WATER	991.6
REACH SLOPE (LOCAL)	21.57 FT./MI.
CULVERT WATERWAY AREA	246.64 FT ²
DESIGN VELOCITY	7.1 FPS
Q ₁₀ 1562 cfs	STAGE 988.2
Q ₅₀ 2606 cfs	STAGE 993.3
Q ₁₀₀ 3116 cfs	STAGE 995.3
Q ₅₀₀ 4222 cfs	STAGE 1000.2
EXTREME H. WATER 1500 cfs	STAGE 987.9 DATE 1950

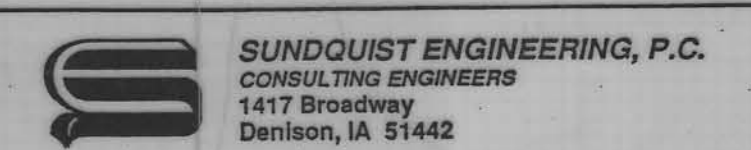
LOCATION
T-82 N R-40W
SEC. 6
UNION TWP.
OVER WELSH CREEK

DESIGN FOR:
TWIN 12'x10'x118' R.C.B. CULVERT
W/ FLARED WING HEADWALLS
STA. 16+45 SKEW 15° RT. AHEAD
CRAWFORD COUNTY
FILE NO. 54504 DESIGN NO. 5491
PROJ. NO. BROS-9024(26)--5F-24

REMOVAL NOTE:
STA. 16+47.15, 16'x60' PONY TRUSS BRIDGE WITH 1-16'x27' TIMBER APPROACH, TIMBER PILE PIER, ABUTMENTS & DECK. CONTRACTOR TO REMOVE & SALVAGE EXIST. STRUCTURE. THE I-BEAMS, STRINGERS & PLANK ARE TO REMAIN PROPERTY OF CRAWFORD COUNTY. THE REMAINDER OF THE BRIDGE TO BE JUNKED AND DISPOSED OF BY THE CONTRACTOR. DISPOSAL SITE TO BE PROVIDED BY THE CONTRACTOR, WITH THE APPROVAL OF THE COUNTY ENGINEER. THE I-BEAMS, STRINGERS & PLANK SHALL BE STOCKPILED NEATLY WITHIN 300' OF THE SITE AND LOADED BY THE CONTRACTOR ON COUNTY TRUCKS AT THE COUNTY'S CONVENIENCE AS DIRECTED BY THE COUNTY ENGINEER.

STA 16+45 CONTRACTOR TO CONSTRUCT TWIN 12'x10'x118' RCB CULVERT WITH FLARED WING HEADWALLS & 2-24'x20' C.M.P. SUBDRAINS. SKEW 15° RT. AHEAD DESIGN FILL = 13'

PLANKS & STRINGERS SHALL BE REMOVED IN A CAREFUL WORKMANSHIP LIKE MANNER WITH THE SPIKES REMOVED FROM THE PLANKS & STRINGERS BEFORE STACKING. THE CONTRACTOR SHALL REIMBURSE THE COUNTY FOR ANY PLANKS & STRINGERS WILL FULLY DAMAGED DURING THEIR REMOVAL.



Project No.: 30270	Date:
Approved By: SAS	Drawn By: TKK
Client: CRAWFORD COUNTY	
Description: SITUATION PLAN	Sheet V. 01

Bros-9024(26)--5F-24
 TWIN 12'x10'x118' RCB
 SEC. 6 UNION TWP
 15e201
 25c.p. Union Twp