

MINNESOTA DEPARTMENT OF TRANSPORTATION

CONSTRUCTION PLAN FOR TURN LANES

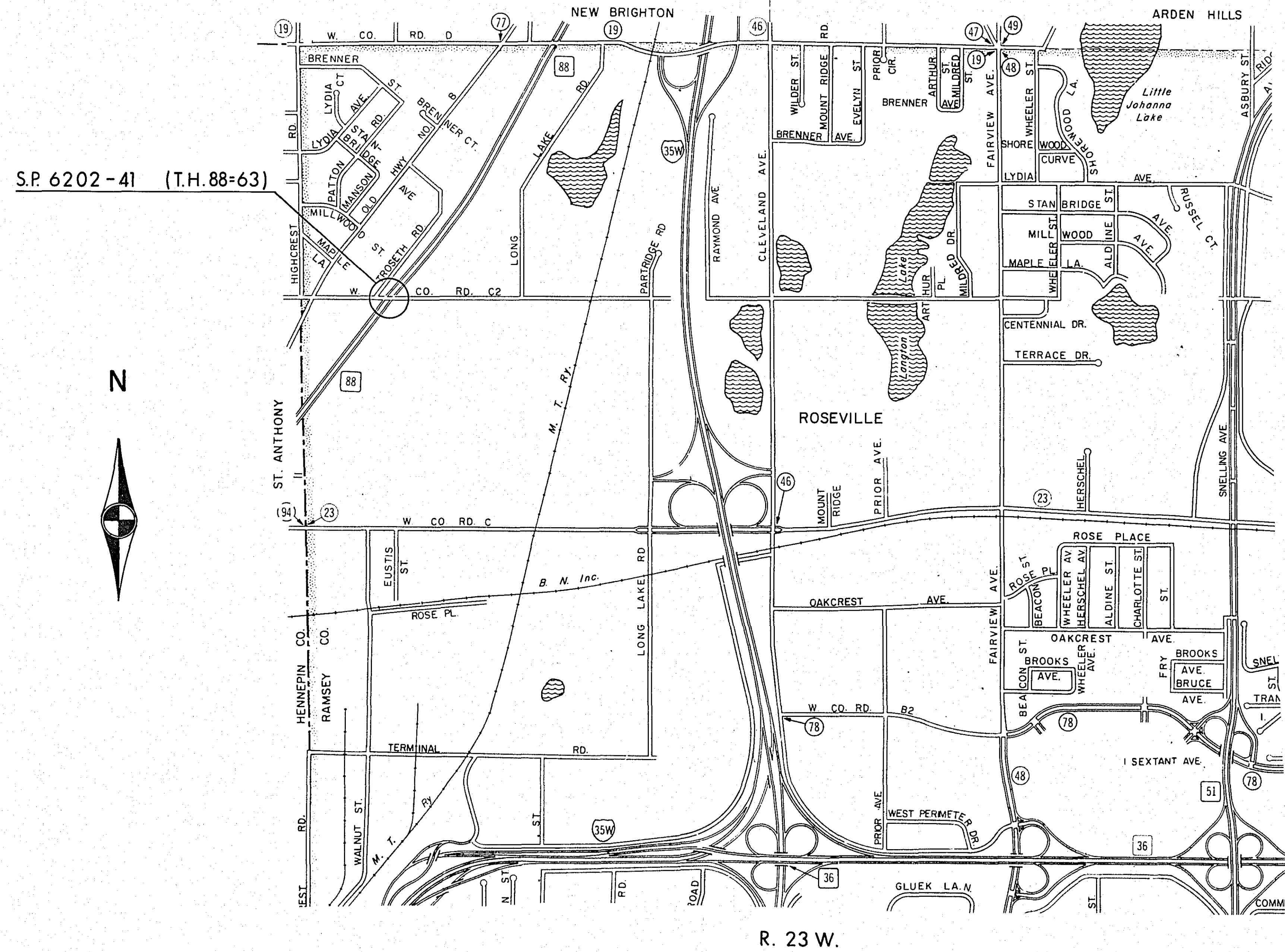
LOCATED ON T.H. 88 AT COUNTY ROAD C2 IN ROSEVILLE

STATE PROJ. NO. 6202-41 (T.H. 88-63)
MINN. PROJ. NO.

GROSS LENGTH FEET MILES
BRIDGES-LENGTH FEET MILES
EXCEPTIONS-LENGTH FEET MILES
NET LENGTH FEET MILES
MILE POINT TO MILE POINT

STATE PROJ. NO.
MINN. PROJ. NO.

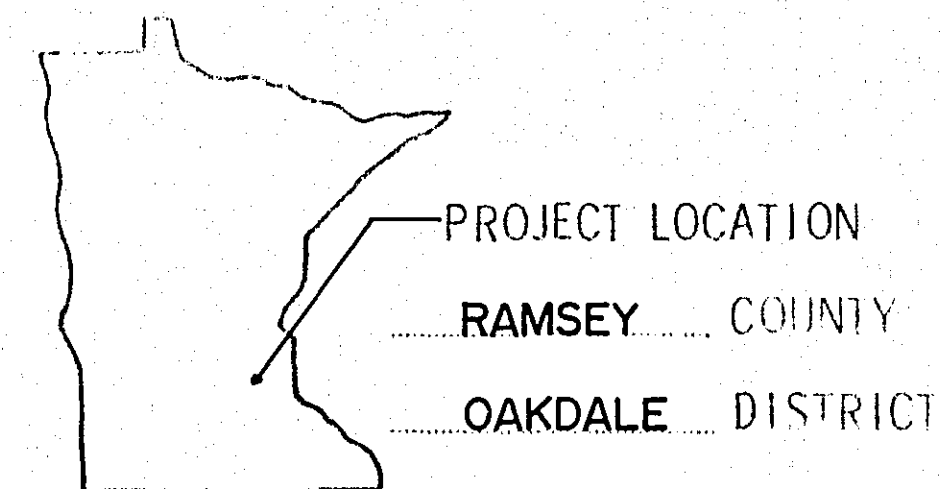
GROSS LENGTH FEET MILES
BRIDGES-LENGTH FEET MILES
EXCEPTIONS-LENGTH FEET MILES
NET LENGTH FEET MILES
MILE POINT TO MILE POINT



SCALES
PLAN 50'
PROFILE
INDEX MAP
GENERAL LAYOUT 1000'

PLAN REVISIONS		
DATE	SHEET NO.	APPROVED BY

DESIGN DESIGNATION
 ADT (Current Year) = 12,700 Design Speed 50 MPH
 ADT (Future Year) 2001 = 14,500 Based on STOPPING Sight Distance
 DHV (Design Hr. Vol.) = 1450 Height of eye 3.75' Height of object 0.5'
 D (Directional Distr.) = 60/40% Design Speed not achieved at:
 T (Heavy Commercial) = 3%
 STA. TO STA. MPH
 STA. TO STA. MPH



FED. PROJ. NO. STATE FUNDS

GOVERNING SPECIFICATIONS

THE 1978 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" SHALL GOVERN

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ESTIMATED QUANTITIES STANDARD PLATES CONSTRUCTION NOTES TYPICAL SECTIONS
3	EROSION CONTROL DETAILS
4	PUBLIC UTILITIES
5	MISC. TABULATIONS INPLACE TOPOGRAPHY ALIGNMENT PLAN SHEET
6-7	CROSS SECTIONS

THIS PLAN CONTAINS 7 SHEETS

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 5-12-81 REG. NO. 7541 ENGR. Donald Voelker

DESIGN SQUAD W. KNUDSEN

Right of Way Approval *[Signature]* 6-8-1981
DIRECTOR, RIGHT OF WAY OPERATIONS

Recommended for Approval *[Signature]* 5/12/1981
DISTRICT ENGINEER

Recommended for Approval *[Signature]* June 5 1981
TRANSPORTATION PLANS ENGINEER

Recommended for Approval *[Signature]* 6-8-1981
DESIGN SERVICES DIRECTOR

Recommended for Approval 19

Approved 6/8 1981 *[Signature]* for *[Signature]*
DIRECTOR, OFFICE OF ENGINEERING SERVICES

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED
DIVISION ADMINISTRATOR DATE

FOR PLANS AND UTILITIES SYMBOLS SEE TECHNICAL MANUAL

STATE PROJ. NO. AREA JOB
6202-41 (T.H. 88-63)

I HEREBY CERTIFY THAT THE FINAL FIELD REVISIONS, IF ANY, OF THIS PLAN WERE MADE BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

[Signature]
DATE 1/22/85 REG. NO. 9328

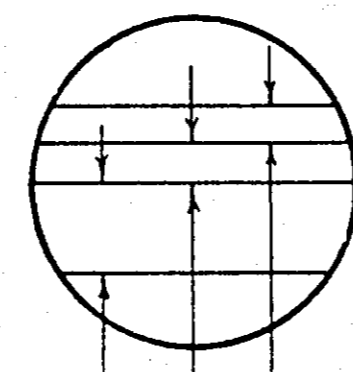
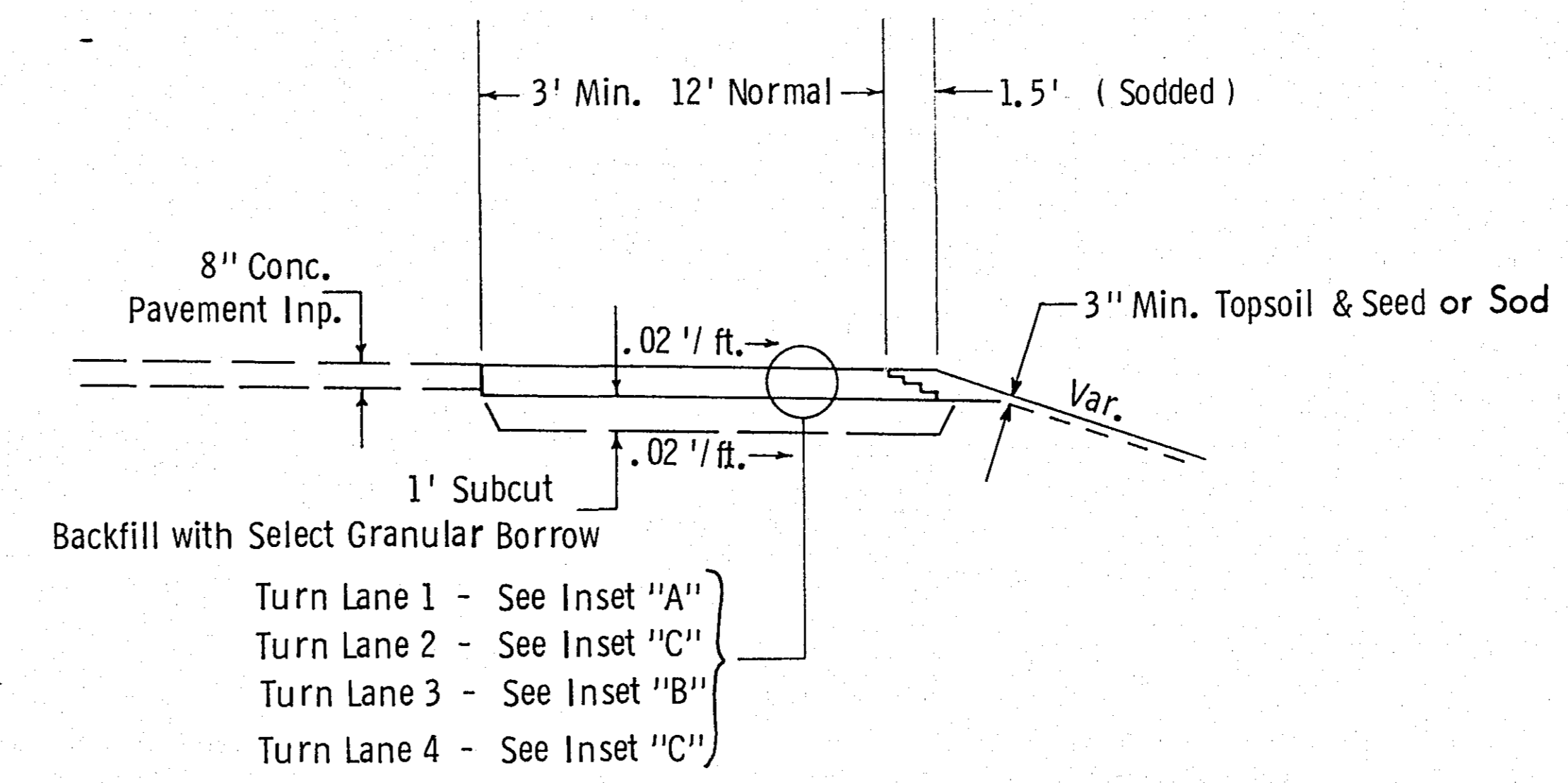
STATE PROJ. NO. 6202-41 (T.H. 88-63)

SHEET NO. 1 OF 7 SHEETS

STATEMENT OF ESTIMATED QUANTITIES

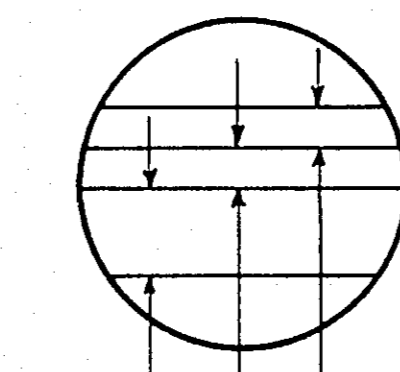
ITEM NO	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES
2021.501	Mobilization	Lump Sum	1	1
2104.505	Remove Bituminous Pavement	(4) Sq. Yd.	1120 (P)	1120
2104.509	Remove Handhole	Each	3	3
2104.523	Salvage Concrete Aprons	Each	1	1
2105.501	Common Excavation	Cu. Yd.	463 (P)	463
2105.507	Subgrade Excavation	Cu. Yd.	794 (P)	794
2105.522	Select Granular Borrow L.V.	Cu. Yd.	1373	1566
2105.525	Topsoil Borrow L.V.	Cu. Yd.	362	129
2331.504	Bituminous Material for Mixture	Ton	48	45.8
2331.510	Binder Course Mixture	Ton	197	176
2331.514	Base Course Mixture	Ton	900	832
2331.603	Counterj Bituminous Pavement Surface	Lin. Ft.	137	142
2341.504	Bituminous Material for Mixture	Ton	12	12.9
2341.508	Wearing Course Mixture	Ton	189	228
2357.502	Bituminous Material for Tack Coat	Gallon	360	466
2501.511	18" RC Pipe Culvert, Class III	Lin. Ft.	6	6
2501.573	Install Concrete Aprons	Each	1	1
565.602	Concrete Handhole	Each	3	3
565.603	3" Rigid Steel Conduit	Lin. Ft.	38	32
2575.501	Roadside Seeding	Acre	0.4 (P)	0.4
2575.502	Seed Mixture 5	Pound	20	20
2575.505	Sodding	(1) Sq. Yd.	2116	2116
2575.511	Mulch Material, Type 1	Ton	0.8	1.2
2575.519	Disc Anchoring	Acre	0.4 (P)	0.4
575.602	Hay or Straw Bales	(2) Each	25	0.0
575.607	Commercial Fert. Analysis 20 - 10 - 10	(3) Pound	293	350

- (1) Includes 70 Sq. Yds. to be used as directed by the engineer
- (2) To be used as directed by the engineer.
- (3) Apply at the rate of 350 lbs/acre.
- (4) Approx. 6" thick.



INSET "A"

- 1 1/2" Bituminous Wearing Course Spec. 2341
- 1 1/2" Bituminous Binder Course Spec. 2331
- 6 1/2" Bituminous Base Course Spec. 2331



INSET "B"

- 1 1/2" Bituminous Wearing Course Spec. 2341
- 1 1/2" Bituminous Binder Course Spec. 2331
- 5 1/2" Bituminous Base Course Spec. 2331

CONSTRUCTION NOTES

Strip topsoil from all areas to be disturbed by construction for replacement later as slope dressing.

The top of the "grading grade" is defined as the top of the select granular borrow or the bottom of the bituminous base course.

Bituminous pavement removal and excess excavation shall be disposed of outside the right of way as arranged for by the contractor.

Provide for a tack coat, Spec. 2357.2A, between all bituminous courses.

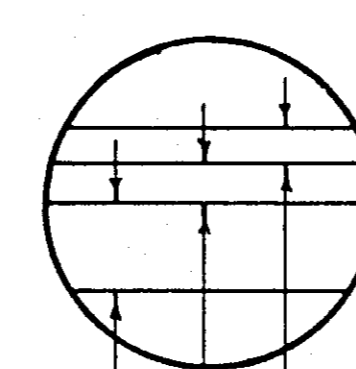
No penetration prime is required of this project.

Test rolling will not be required.

Compaction of all construction materials shall be by the method of "Ordinary Compaction".

Provide 20 : 1 end tapers where applicable with vertical notches equal to the depth of the proposed pavement.

The contractor shall obtain from the utility companies, the exact location of any underground utilities which he may encounter in the performance of his work.



INSET "C"

- 1 1/2" Bituminous Wearing Course Spec. 2341
- 1 1/2" Bituminous Binder Course Spec. 2331
- 7 1/2" Bituminous Base Course Spec. 2331

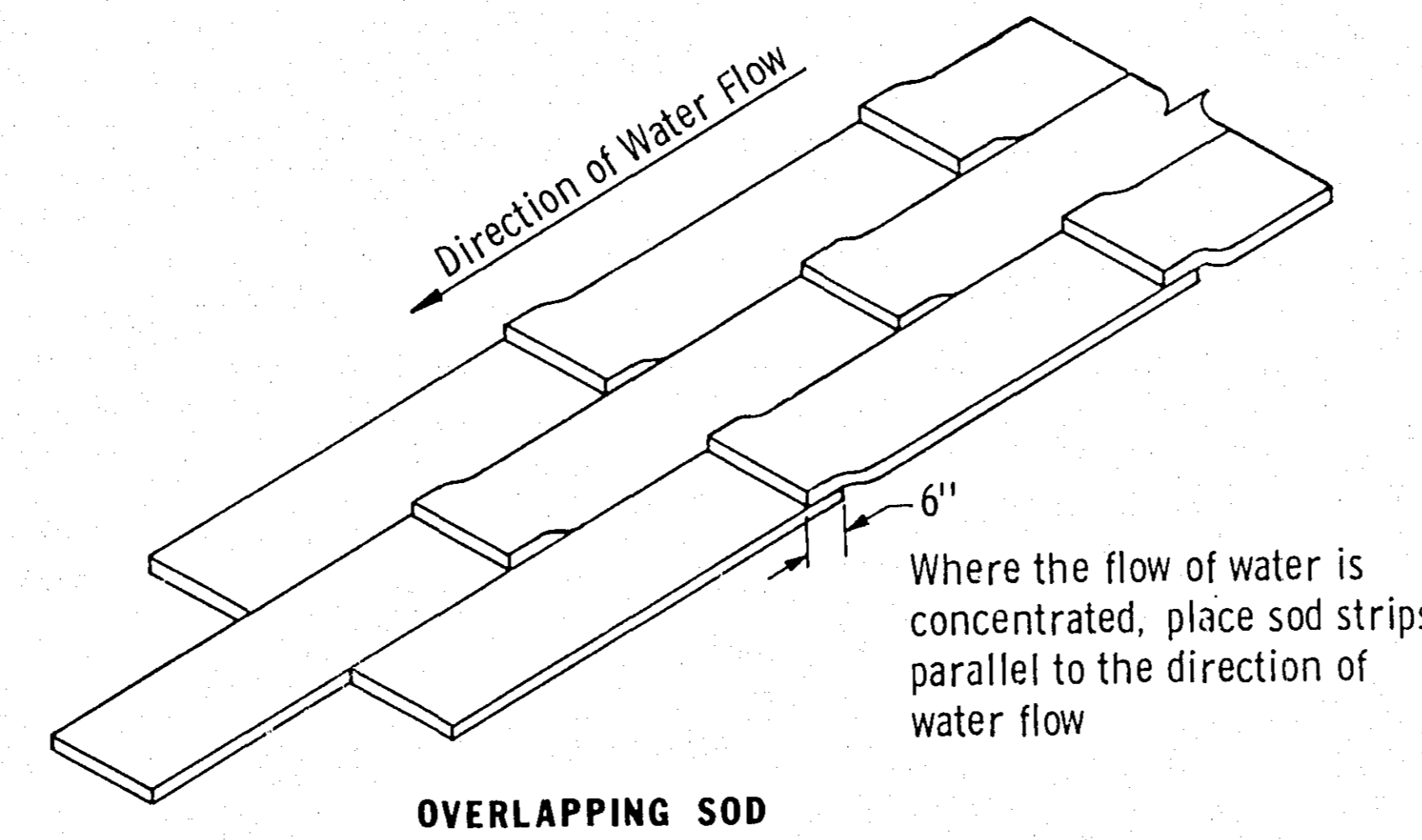
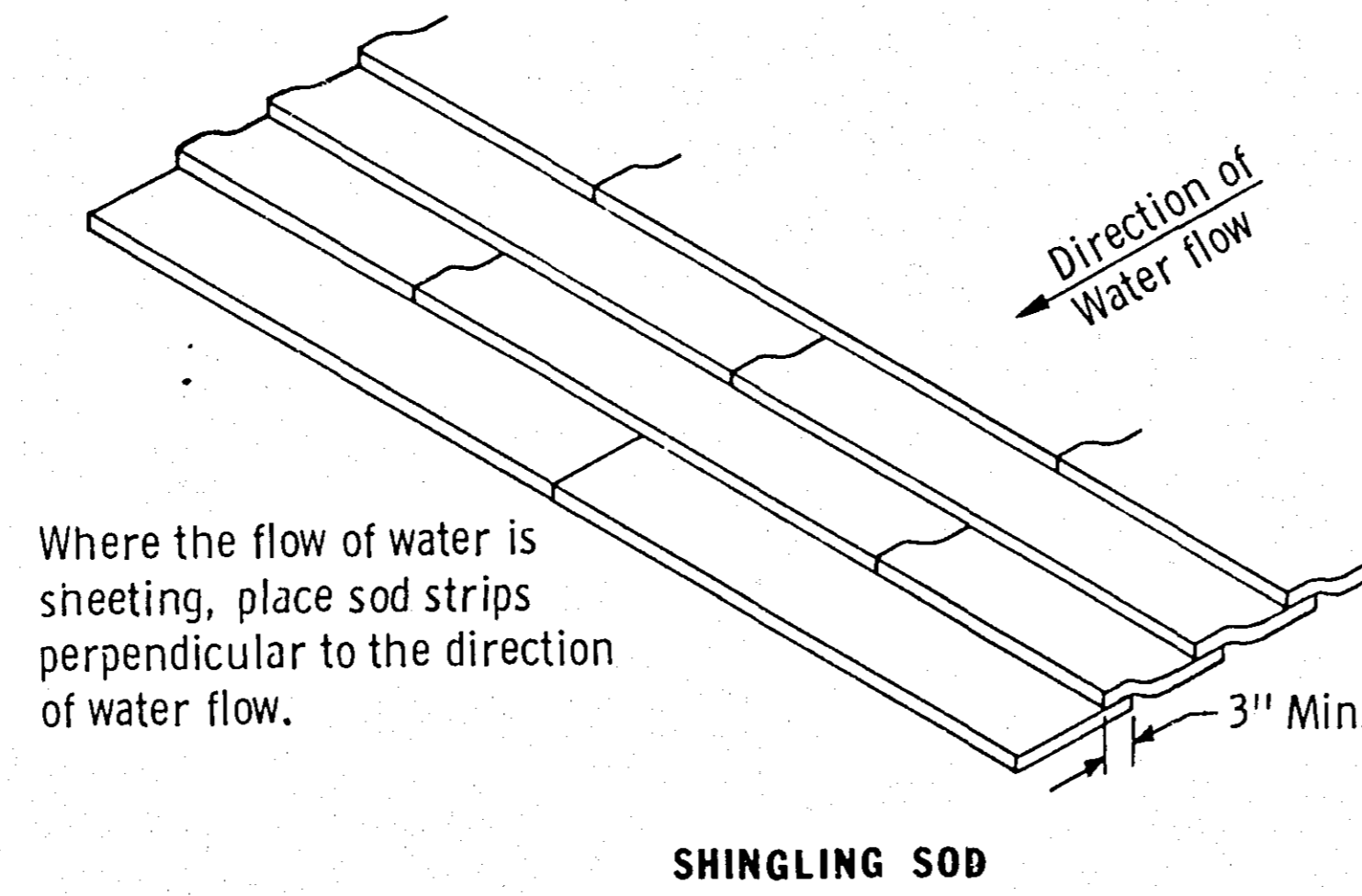
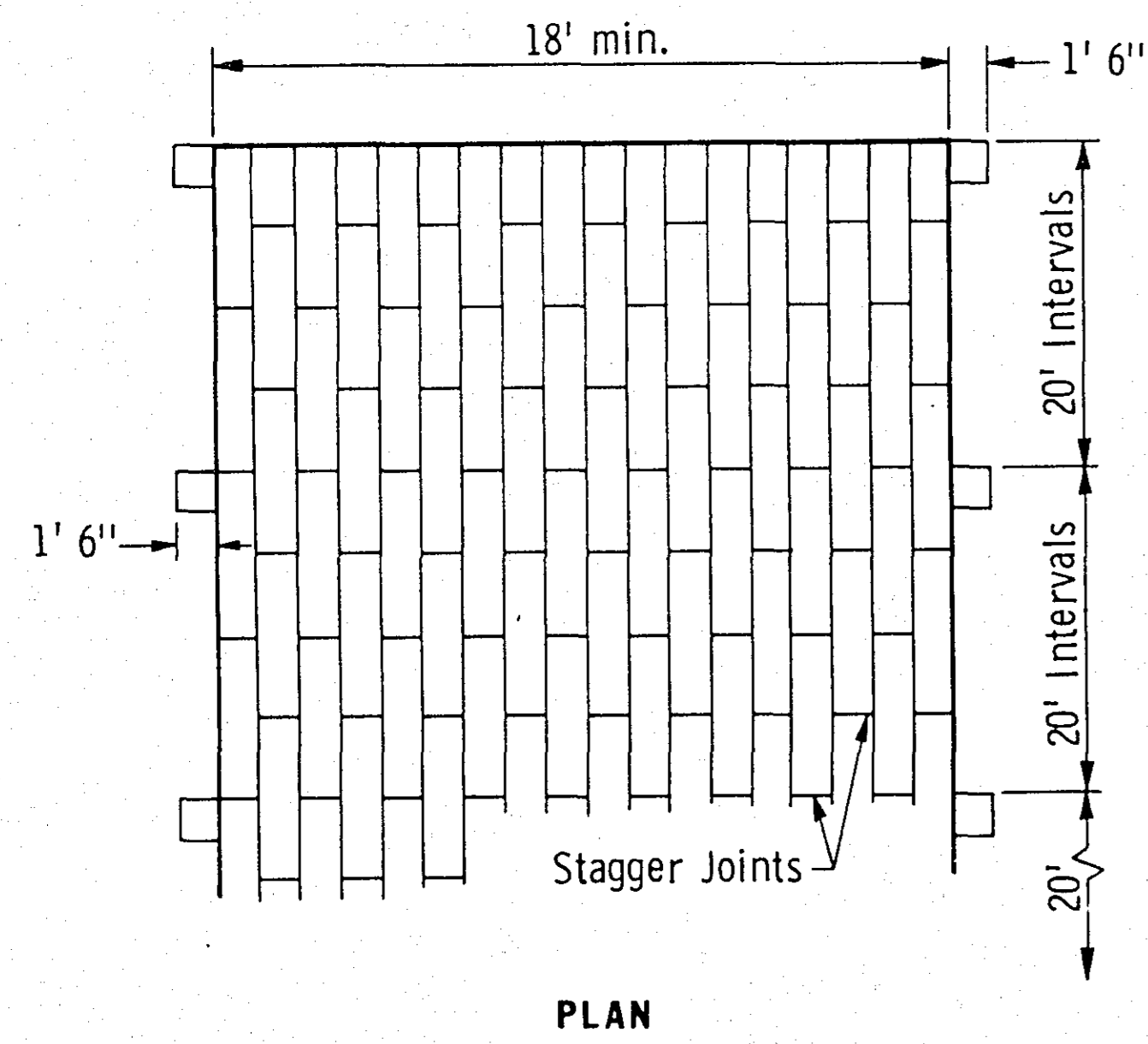
The following Standard Plates, approved by the Federal Highway Administration, shall apply on this project.

PLATE NO.	DESCRIPTION
0003 A	Specification Reference to Stand. Plates
3000 I	Reinforced Concrete Pipe
3145 A	Concrete Pipe Joint Ties
8000 H	Standard Barricades
8117 F	Precast Concrete Handhole
9102 C	Sodding at Pipe Culvert Ends

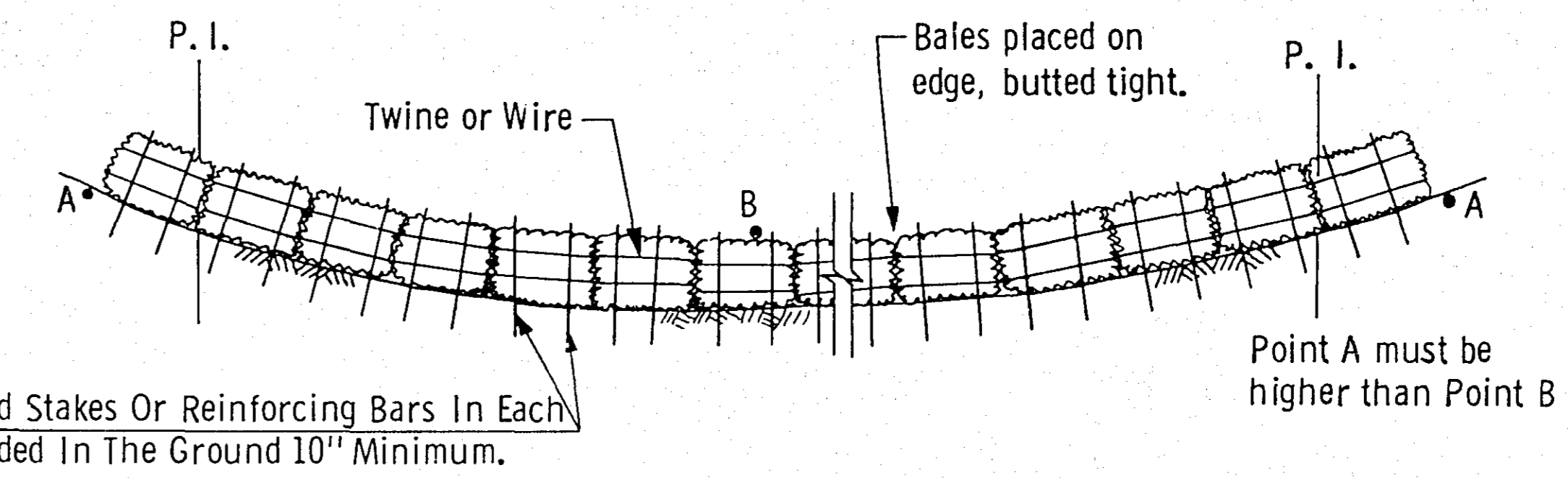
STANDARD PLATES, ESTIMATED QUANTITIES, TYPICAL SECTIONS, & CONSTRUCTION NOTES

ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW, DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROFILMING SERVICES UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO FILED PROCEDURES FOR THIS DOCUMENT.

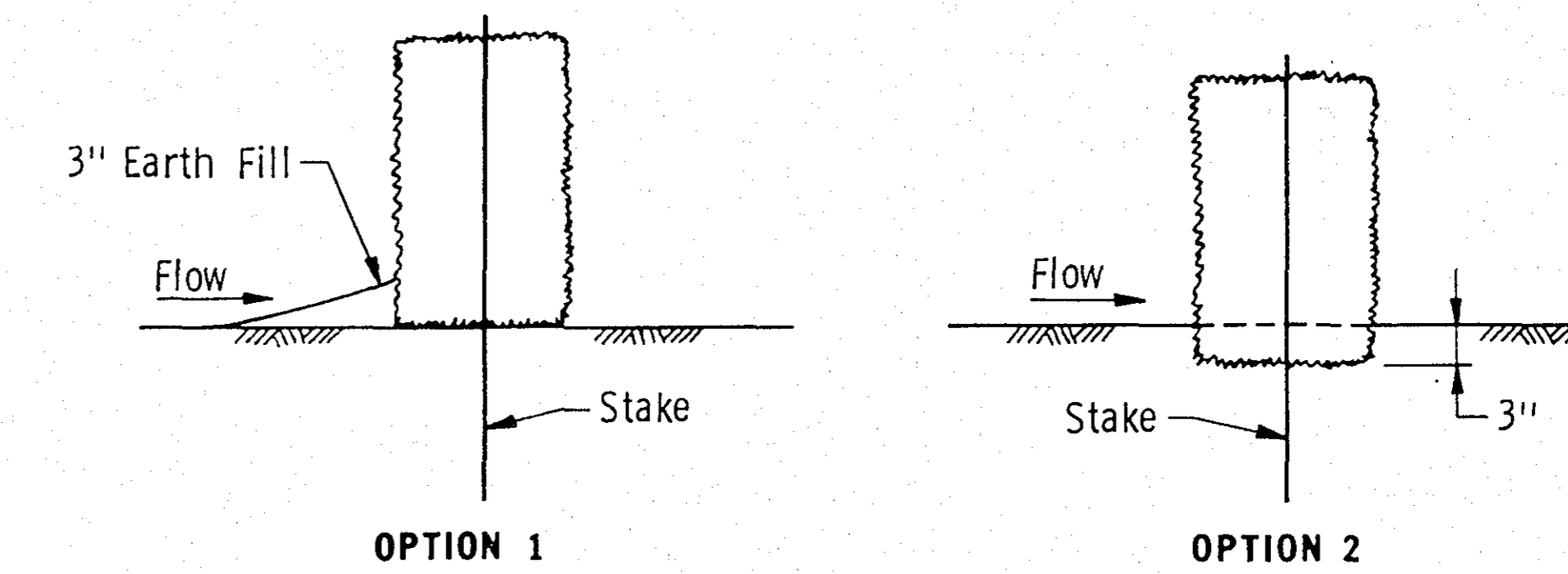
Project No. 6202-41
Sheet No. 2 of 7
Date 4/28/83



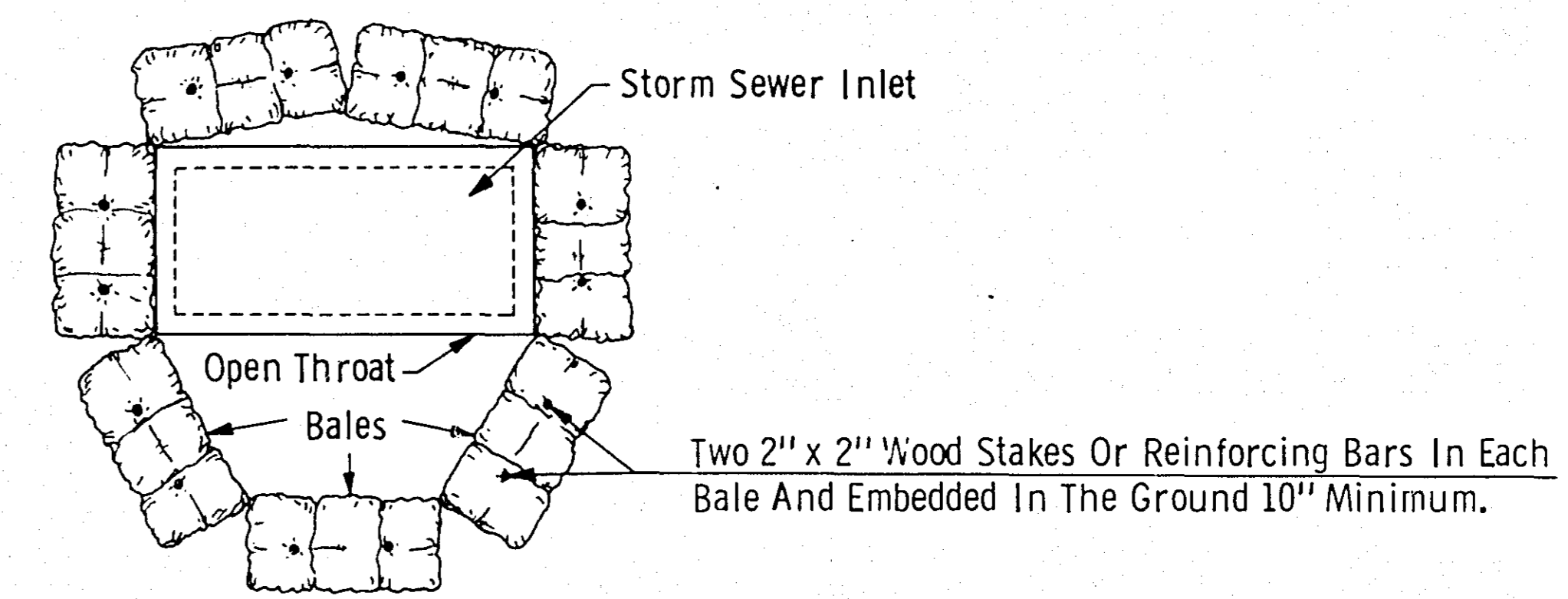
SPECIAL SOD PLACEMENT TECHNIQUES



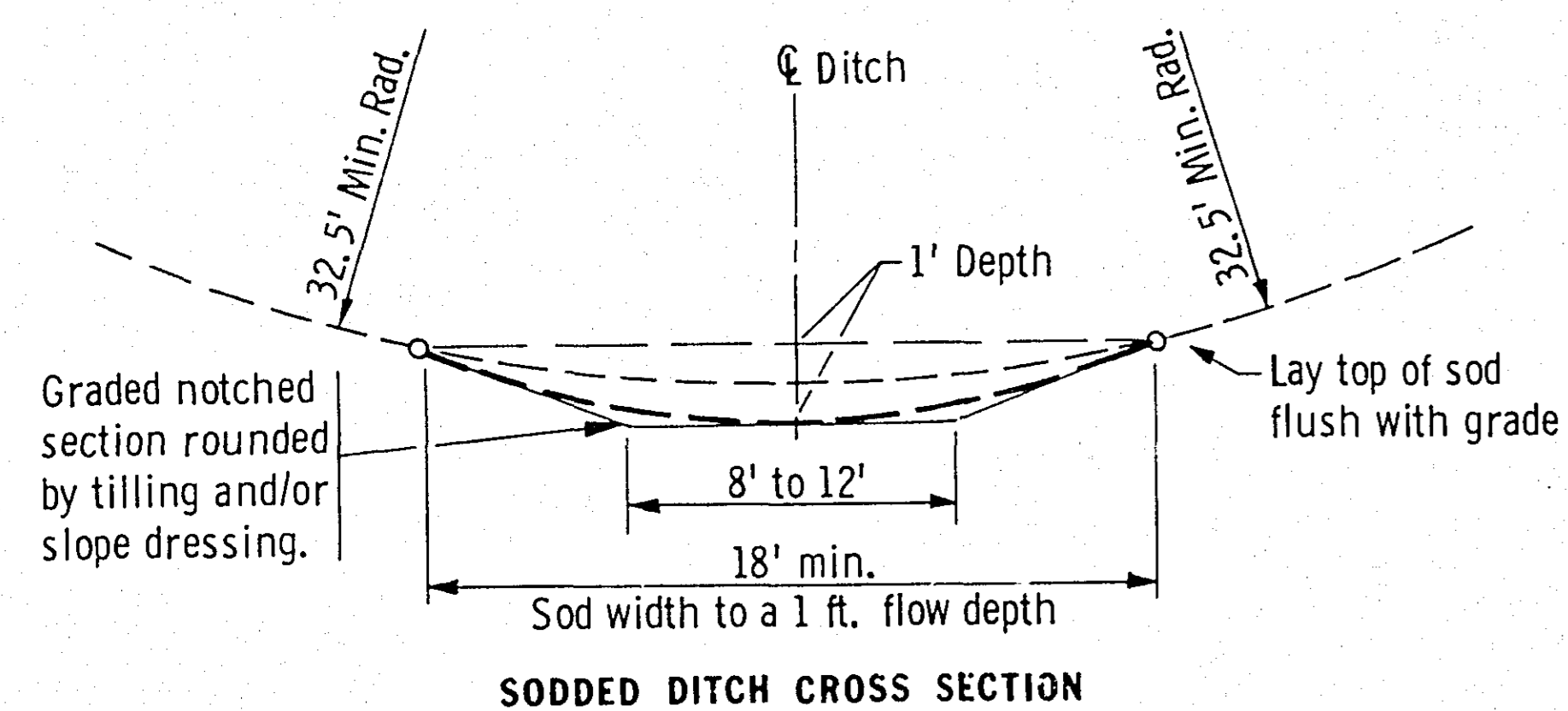
BALE HAY OR STRAW DITCH CHECK



DITCH CHECK SECTIONS

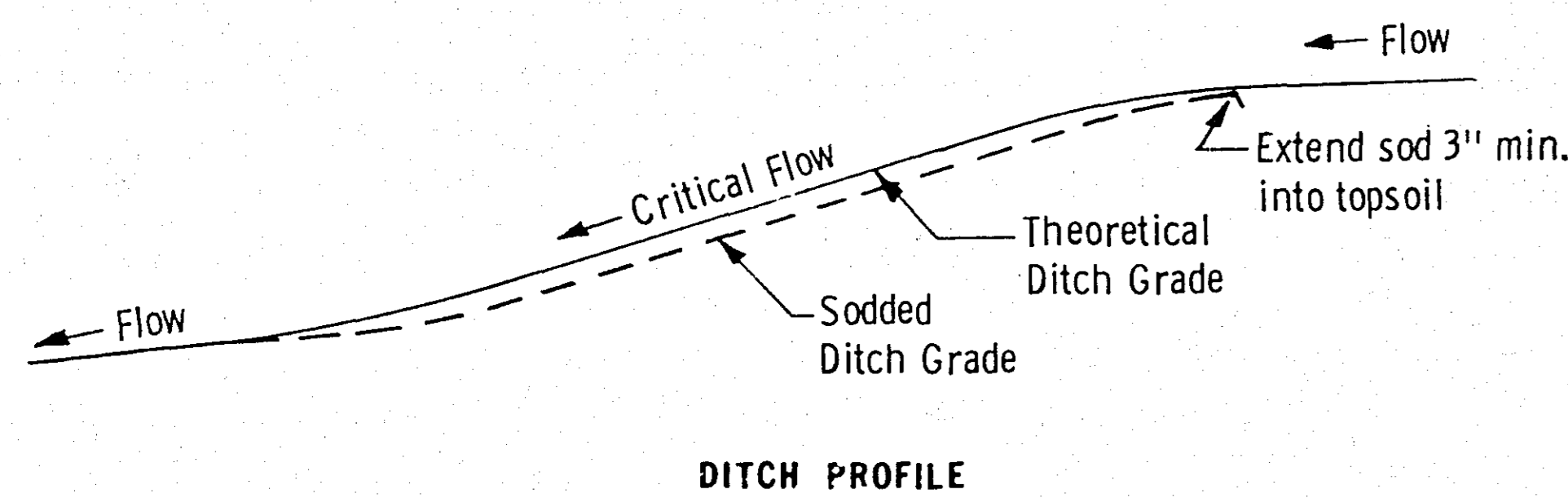


BALE DIVERSION TO PROTECT STORM SEWER INLETS



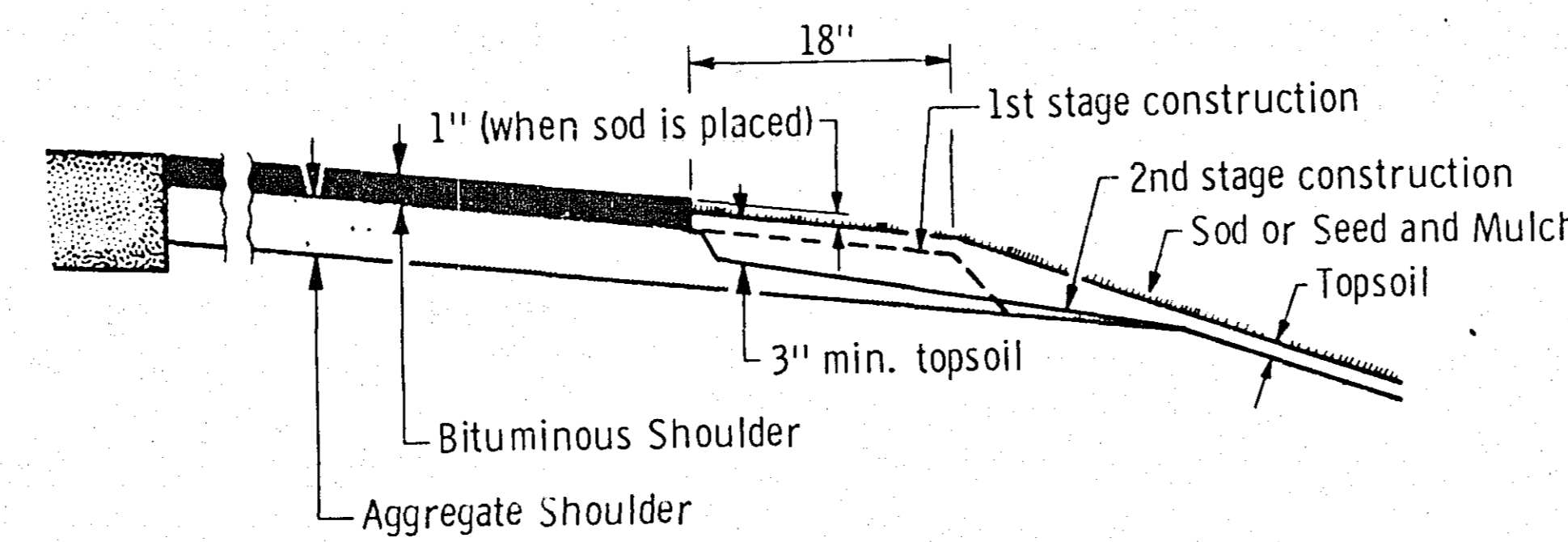
SODDED DITCH CROSS SECTION

Ditches having a minimum radius of 32.5 feet and requiring sod shall be constructed according to the above details. Where ditch radius is less than 32.5 feet, notching is not required. Sod a minimum of 18 feet in width.

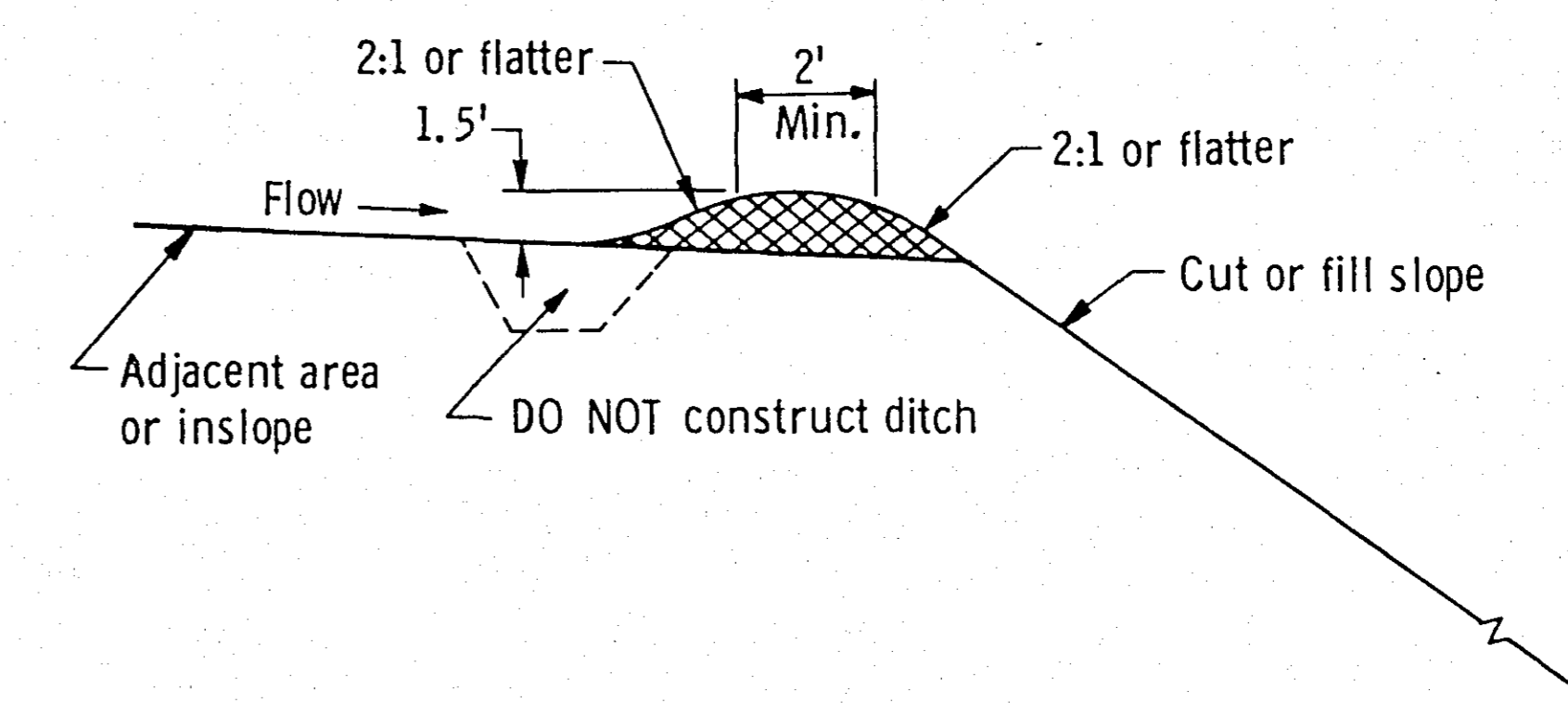


DITCH PROFILE

SODDED DITCH DETAILS



SHAPING AND TOPSOILING INSLOPES



TEMPORARY OR PERMANENT SLOPE PROTECTION DIKE

EROSION CONTROL

ADJACENT DOCUMENT WAS SUPPLIED BY AGENCY NAMED BELOW, DURING THE REGULAR COURSE OF BUSINESS, TO BE FILMED BY STATE OF MINNESOTA MICROFILM SERVICE UNIT ACCORDING TO NATIONAL BUREAU OF STANDARDS REQUIREMENTS FOR PERMANENT MICROFILM AND ACCORDING TO FILED PROCEDURES FOR THIS DOCUMENT.
 Date: 10/27/83
 Design: Tom Kiger
 Drawn: [Signature]
 362

DRAINAGE																								
LINE	LANE	STATION	LOCATION	IN PLACE	REMARKS	SALVAGE		LINE	PORTABLE CULVERTS															
						PORT. CULV.	CONC. APRON		CONC. APRON	SODDING	RIP-RAP	CHANNEL EXCAVATION	CLASS	18" R.C.P.										
						LN. FT.	EACH		EACH	SQ. YD.	CU. YD.	CU. YD.		LN. FT.	APR.	LN. FT.	APR.	LN. FT.	APR.	LN. FT.	APR.	LN. FT.	APR.	LN. FT.
1	WB	131+07 - 132+24	48' LT.	24" x 105' RCP	LEAVE AS IS			1																
2	EB	131+58	C	18" x 52' RCP	LEFT SIDE		1	2					III	6(1)										
3	EB	132+54 - 133+95	47' RT.	24" x 129 RCP	LEAVE AS IS			3																
4								4																
5								5																
6								6																
7								7																
8								8																

(1) TIE LAST 2 JOINTS PER PLATE 3145. NO DIRECT COMPENSATION WILL BE MADE FOR DRILLING HOLES THAT MAY BE NECESSARY.

PUBLIC UTILITIES					
LINE	SHEET NO.	LOCATION	ITEM IN PLACE	REMARKS	OWNERSHIP
1		W. B. 131+00 to 138+00 (150' Lt.)	Gas Main	Leave As Is	N. S. P. Co.
2		Co. Rd. C-2 8+00 to 13+00 (10' Lt.)	Water Main	Leave As Is	City of Roseville, Minn.
3					
4					
5					
6					
7					

HANDHOLE and CONDUIT SUMMARY						
Lane	Sta. to Sta.	Location	Handhole		3" Rigid Steel Conduit	
			Remove	F. & I.		F. & I.
			Each	Each		Lin. Ft.
	T. H. 88					
E. B.	131+72	28' Lt.	1			
E. B.	131+82	39' Lt.		1		30
E. B.	132+10	23' Rt.	1			
E. B.	132+12	27' Rt.		1		4
W. B.	132+92	27' Lt.		1		4
W. B.	132+94	23' Lt.	1			

MISCELLANEOUS REMOVAL & SALVAGE						
STATION (TO STATION)	LOC.	DESCRIPTION	UNIT			
			Lin. Ft.	Sq. Yds.		
T. H. 88						
E. B. 127+85 - 132+84	Rt.	Remove Bituminous Pavement		554		
W. B. 131+91 - 137+00	Rt.	Remove Bituminous Pavement		566		

SODDING AND MULCHING			
STATION TO STATION	LOCATION	SOD	MULCH
		SQ. YD.	SQ. YD.
E. B. L.			
127+10 to 131+90	Lt.	915	
127+85 to 132+85	Rt.	83	833
W. B. L.			
131+90 to 137+00	Lt.	83	833
133+10 to 137+90	Rt.	915	

COULTERING BIT. PAVEMENT		
STATION TO STATION	LOCATION	LN. FT.
E. B. 127+10	Lt.	3
E. B. 127+85	Rt.	10
E. B. 132+55	Rt. (S. Side C-2)	48
W. B. 132+30	Lt. (N. Side C-2)	63
W. B. 137+00	Lt.	10
W. B. 137+70	Rt.	3

BITUMINOUS SCHEDULE								
Station To Station	Loc	2341 Wear		2331 Binder		2331 Base		2357 Tack
		.504	.508	.504	.510	.504	.514	.502
		Material Ton	Mixture Ton	Material Ton	Mixture Ton	Material Ton	Mixture Ton	Material Gallon
T. H. 88								
E. B. 127+10 - 131+90	Lt.	3	42	2	44	9	194	81
E. B. 127+85 - 132+84	Rt.	3	51	2	53	12	269	97
W. B. 131+91 - 137+00	Rt.	3	53	2	55	9	209	100
W. B. 133+12 - 137+90	Lt.	3	43	2	45	10	228	82

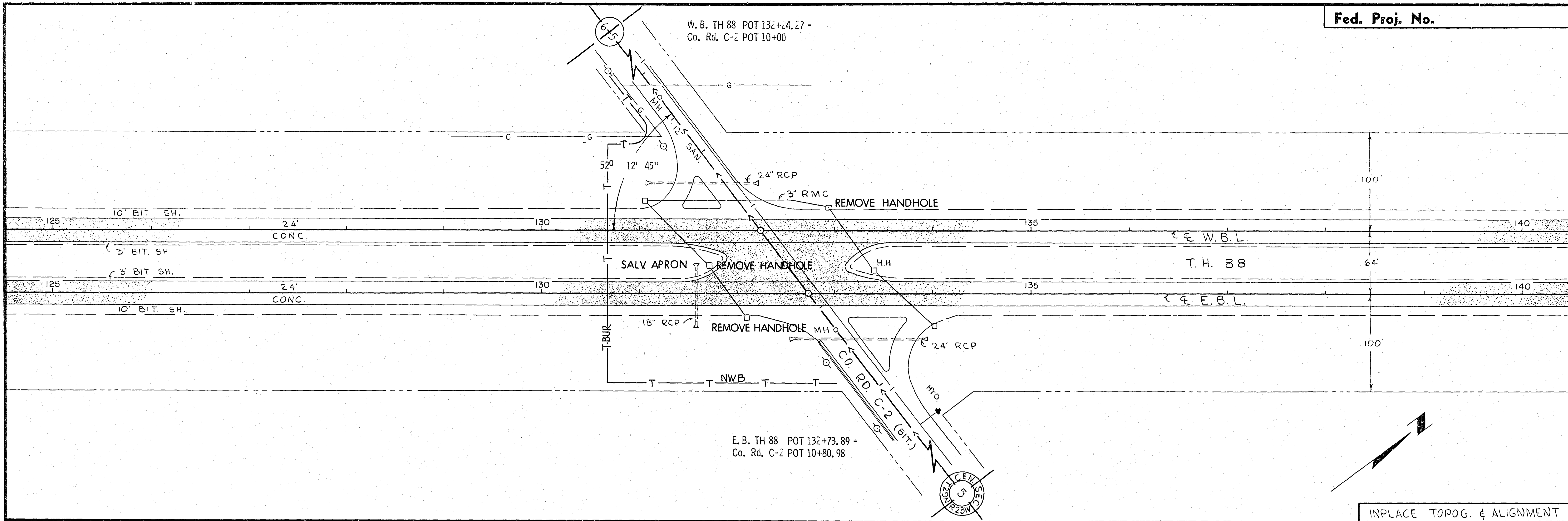
PUBLIC UTILITIES
MISC. TABULATIONS

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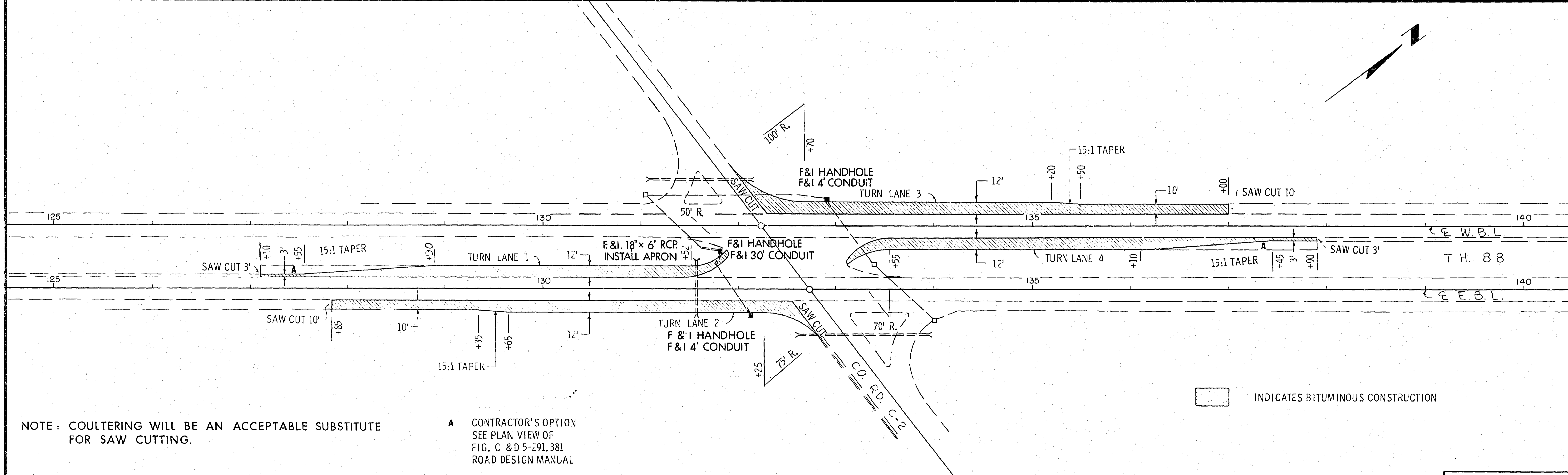
2007 Basis Design: Tom Ragan, Ryan New Peltier 4-28-23

W. B. TH 88 POT 132+24.27 =
Co. Rd. C-2 POT 10+00

E. B. TH 88 POT 132+73.89 =
Co. Rd. C-2 POT 10+80.98



INPLACE TOPOG. & ALIGNMENT



INDICATES BITUMINOUS CONSTRUCTION

NOTE: COULTERING WILL BE AN ACCEPTABLE SUBSTITUTE FOR SAW CUTTING.

A CONTRACTOR'S OPTION SEE PLAN VIEW OF FIG. C & D 5-291.381 ROAD DESIGN MANUAL

PLAN SHEET

State Proj. No. 6202-41 (T.H. 88 = 63)

Sheet No. 5 of 7 Sheets

CONTROL SECTION 6203

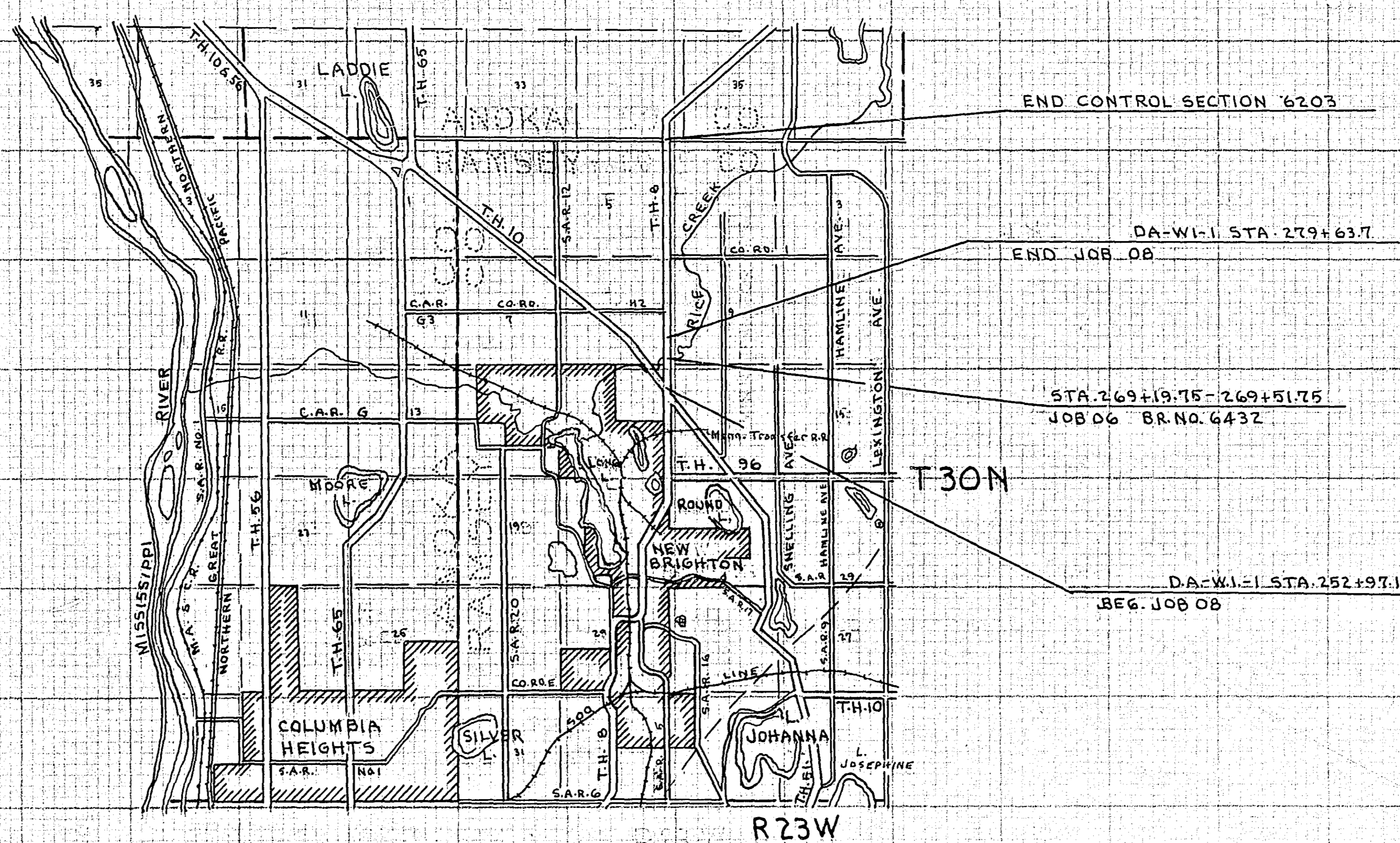
T.H. 8:63

CONSTRUCTION PROGRESS PROFILE

LOCATED BETWEEN JCT. T.H. 10-N. CO. LINE

SCALES PLAN 1"=100'
 PROFILE HORIZ. 1"=100'
 VERT. 1"=10'

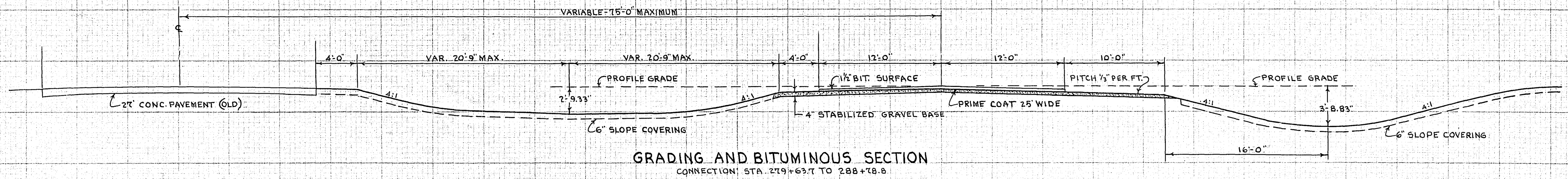
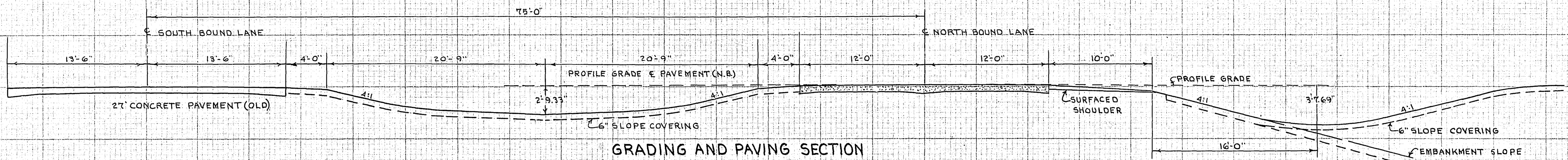
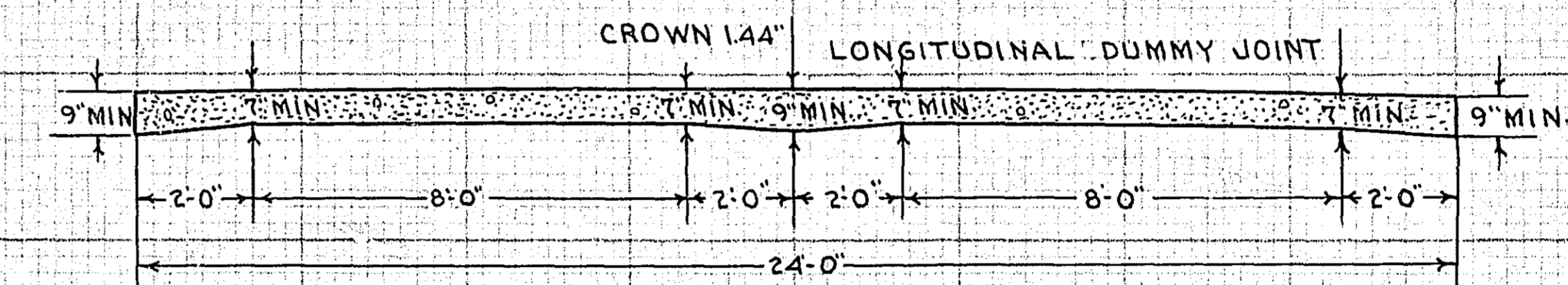
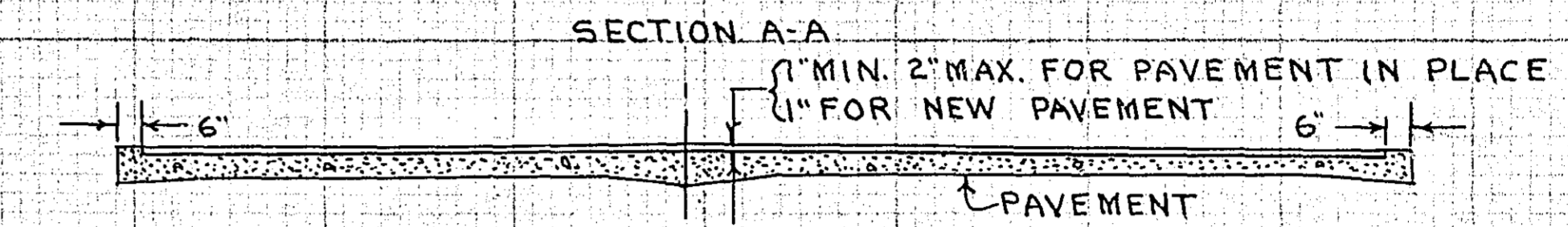
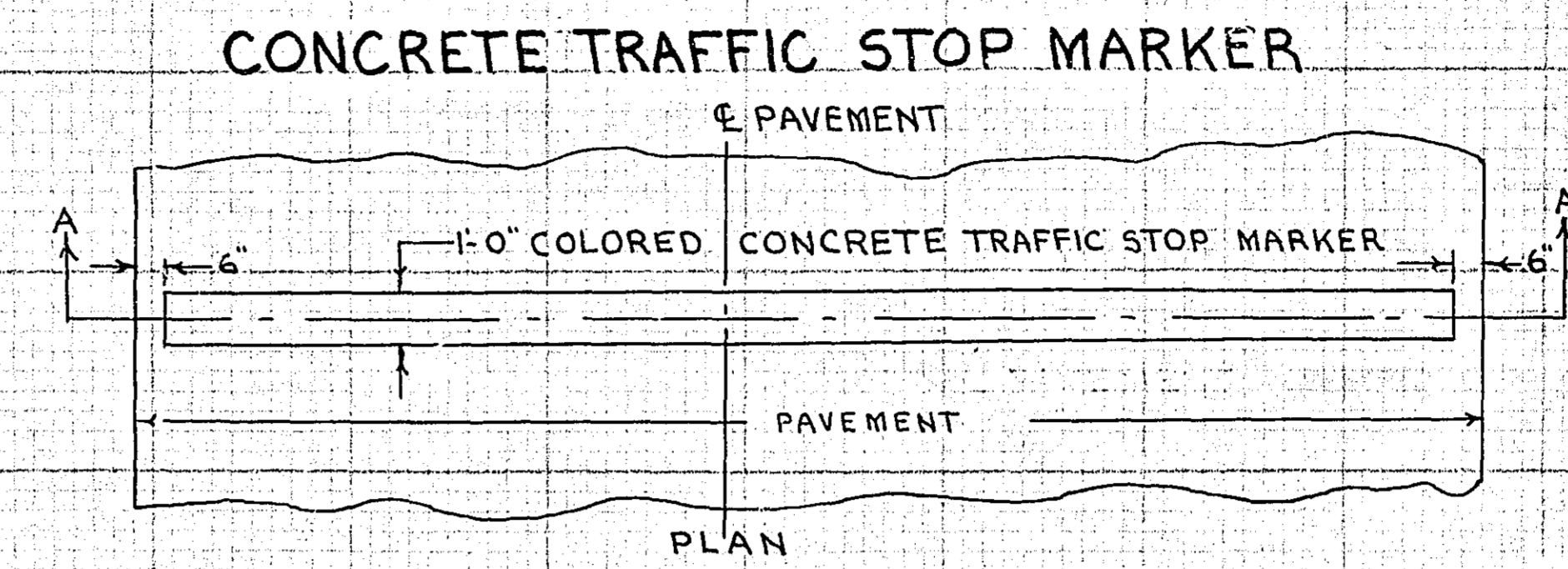
LAYOUT
 SCALE 1"=1 MILE



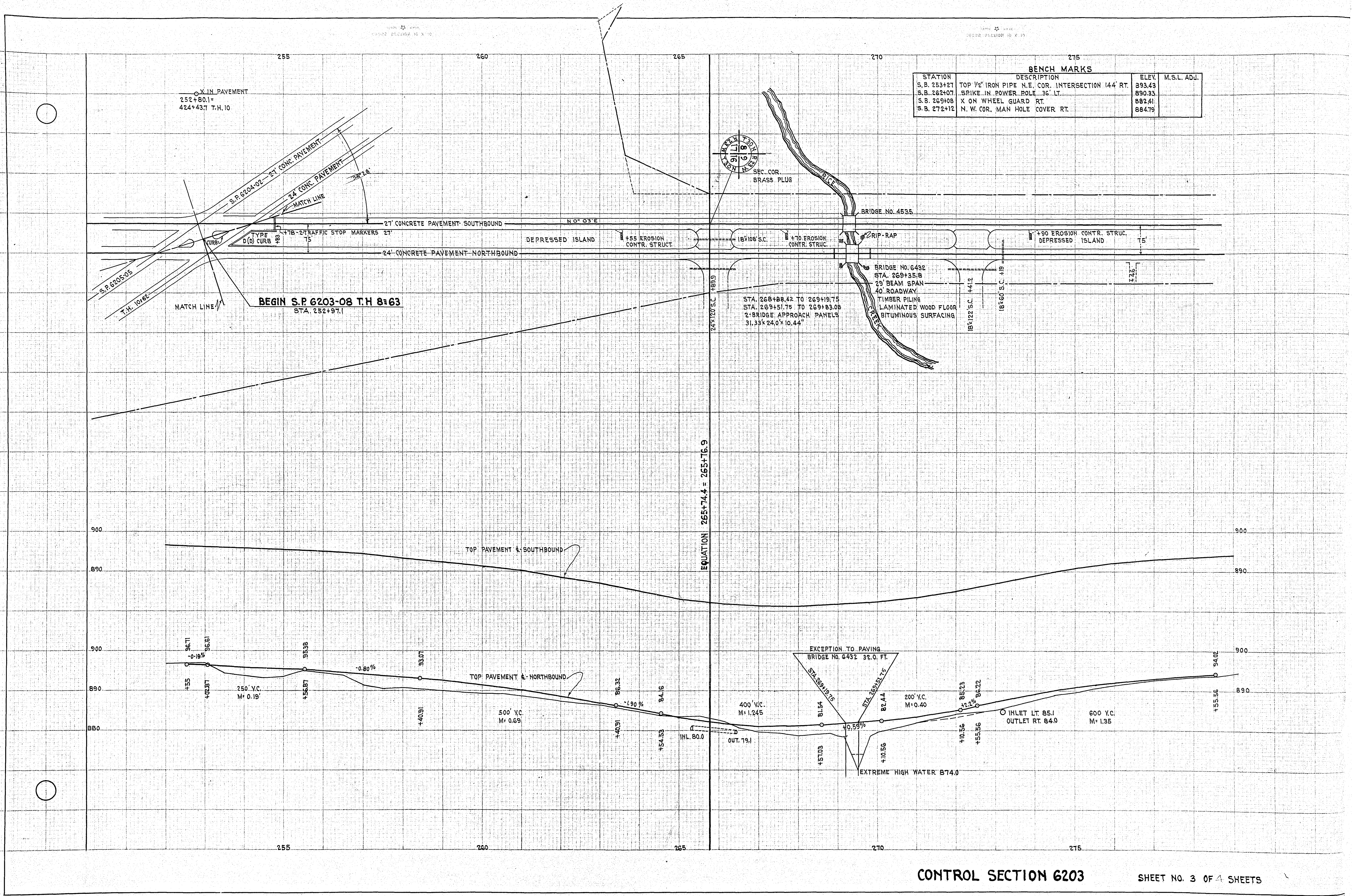
4540

CONSTRUCTION NOTES

JOB NO.	F.A.P. NO.	CLASS OF WORK	STATION TO STATION	CONTR. NO.	AMOUNT	CONTRACTOR	ENGINEER	STARTED	COMPLETED	
08 06	DA-WI-1 "STATE"	GRADING, PAVING, STAB. AGG. BASE & BIT. SURFACE BRIDGE NO. 6432	252+97.1 269+19.75	279+63.7 269+51.75	5006 4975	38505.10 5786.87	OKES CONSTR. CO. MPLS. BRIDGE CONST. CO.	J.S. McMILLAN W.L. HUNZIKER	7-27-42 2-23-42	7-8-43 4-10-42



FF1



BENCH MARKS			
STATION	DESCRIPTION	ELEV.	M.S.L. ADJ.
S.B. 253+21	TOP 1/2" IRON PIPE N.E. COR. INTERSECTION I44 RT.	893.43	
S.B. 262+07	SPIKE IN POWER POLE 36' LT.	890.33	
S.B. 269+08	X ON WHEEL GUARD RT.	882.41	
S.B. 272+12	N. W. COR. MAN HOLE COVER RT.	884.79	

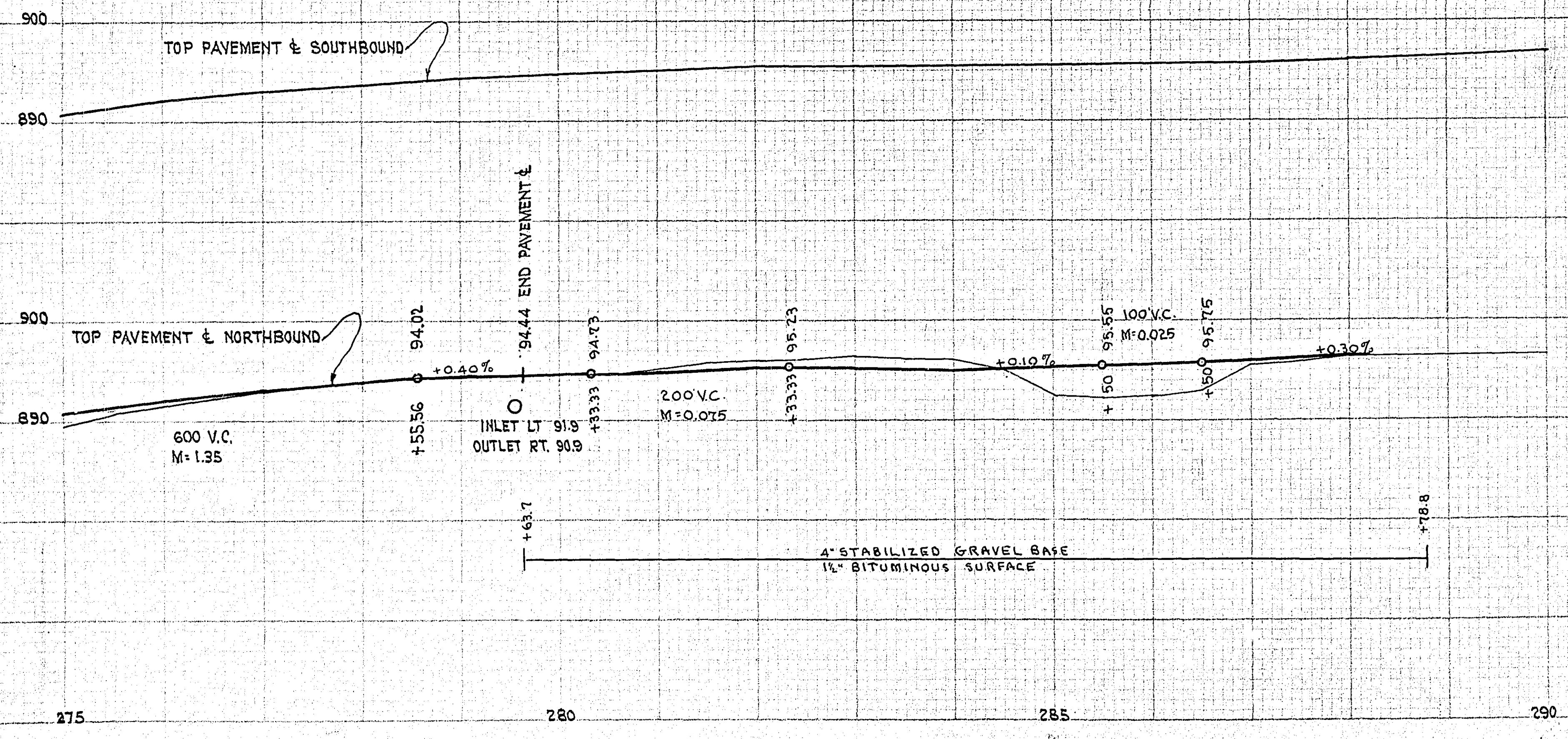
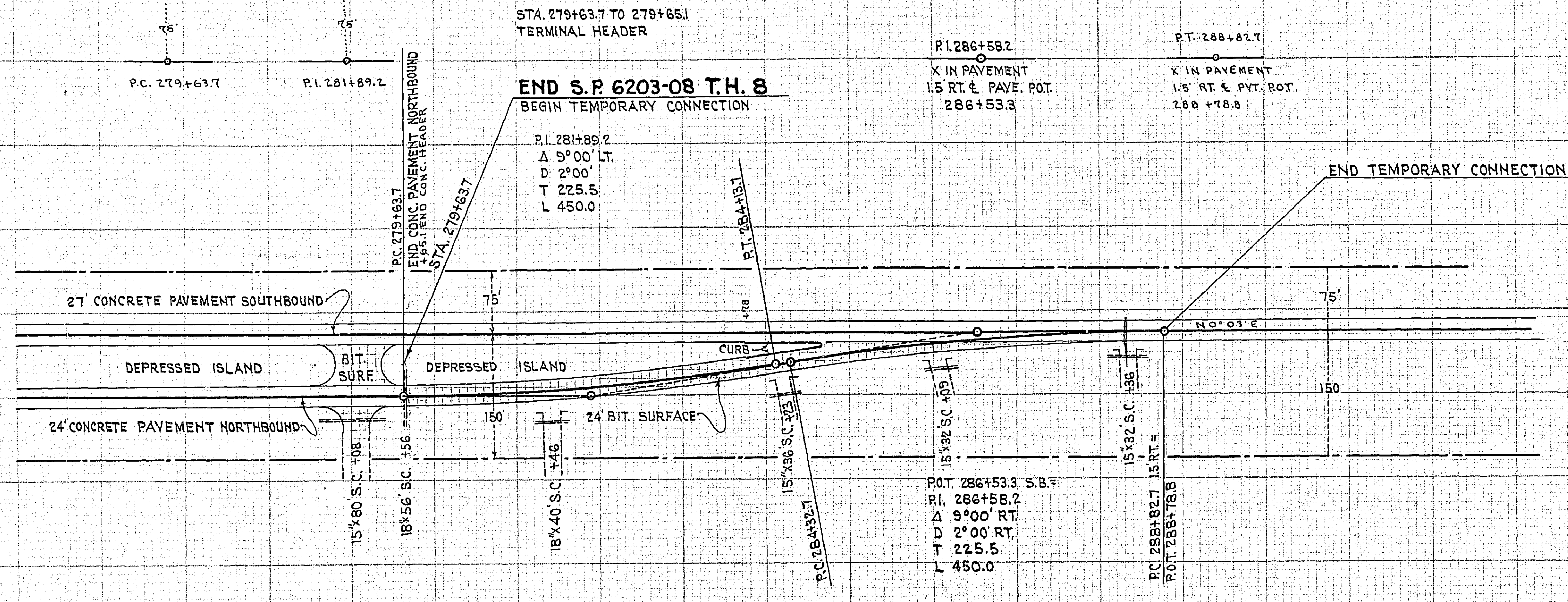
EQUATION 265+74.4 = 255+16.9

CONTROL SECTION 6203

FF1

275 280 285 290

BENCH MARKS		ELEV.	M.S.L. Adj.
STATION	DESCRIPTION		
272+12	N.W. COR. M.H. COVER RT.	884.79	
281+70	S.W. COR. BOTTOM STEP 1/2 S.F. HO. RT.	897.25	
S.B. 283+80	'SPIKE IN' 26" ELM 150' LT.	855.05	



CONTROL SECTION 6203

SHEET NO. 4 OF 4 SHEETS

H.B. HO

FFI