

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

CONSTRUCTION PLAN FOR GRADING, STABILIZED BASE, BITUMINOUS SURFACING

County State Aid Highway No. _____

Between C.S.A.H. # 22 And C.S.A.H. # 26

From A POINT 1070' NORTH & 1060' WEST OF THE EAST CORNER, SEC. 8, T. 33, R. 22 To THE NORTHEAST CORNER OF THE SOUTH-EAST QUARTER OF THE NORTHEAST QUARTER OF SEC. 5, T. 33, R. 22
Give proper reference to Sections, Township and Range

GROSS LENGTH 5855 FEET 1.11 MILES
BRIDGES-LENGTH 0 FEET 0 MILES
EXCEPTIONS-LENGTH 0 FEET 0 MILES
NET LENGTH 5855 FEET 1.11 MILES

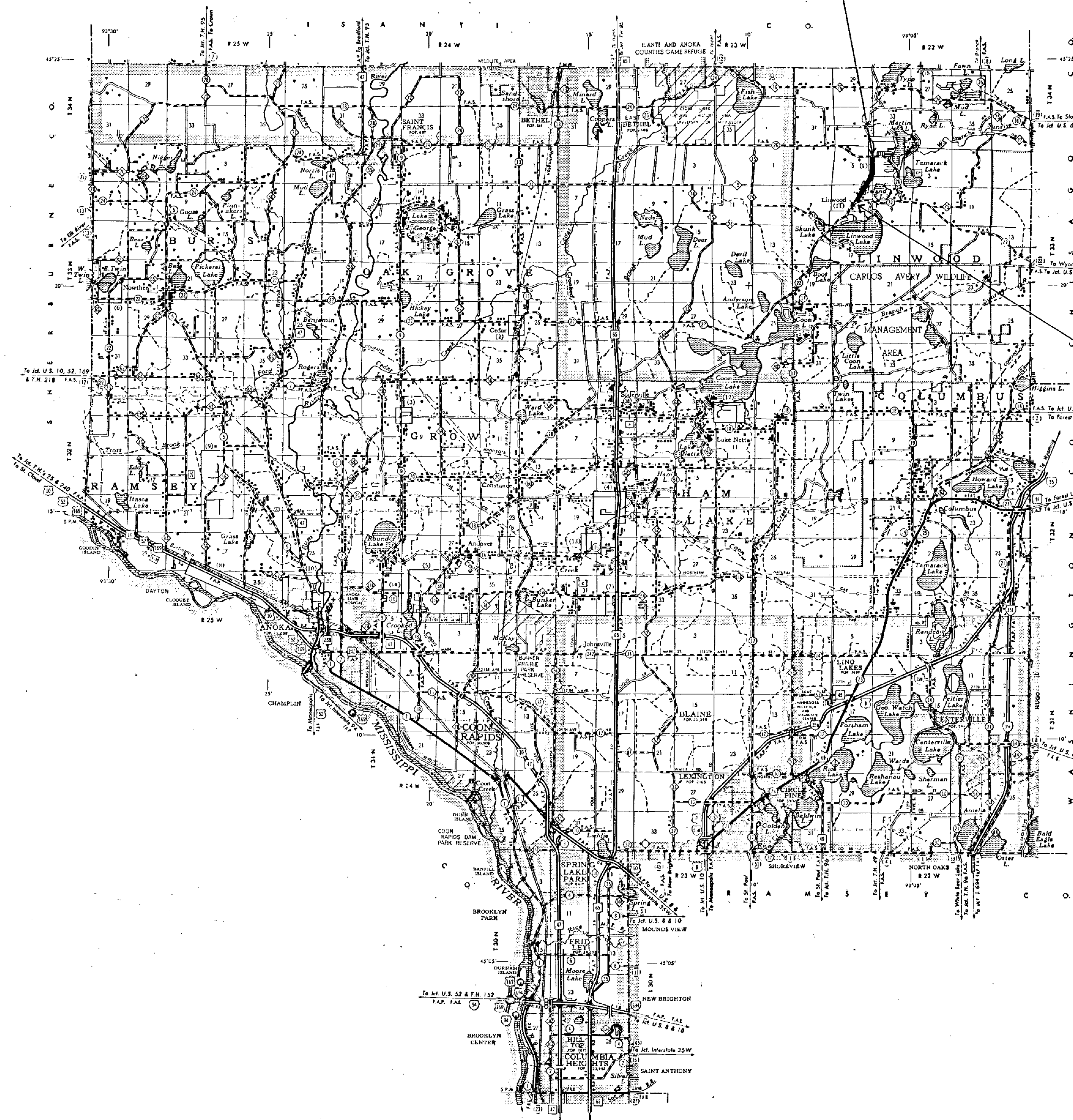
INDEX OF SHEETS

- Sheet No. 1. Title Sheet & Layout Map
- No. 2-4 Est. Quantities & Typical Sec.
- No. 5 To 6 Plan & Profile
- No. 7 To 11 Cross Sections
- No. 12 Road Approach, Profile & Cross-Sections
- No. 13 Rt. Turn & By-Pass Lane Cross-Sections

SCALE: PLAN 1" = 100'
PROFILE - VERT. 1" = 5'
X-SECT 1" = 10'

END PROJECT C.P. 76-10-00
STA. 99+88

BEGIN PROJECT C.P. 76-10-00
STA. 41+33



CONVENTIONAL SIGNS

- STATE LINE
- COUNTY LINE
- TOWNSHIP OR RANGE LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- RIGHT OF WAY LINE
- PRESIDENT RIGHT OF WAY LINE
- CENTRE OF ACCESS LINE
- PROPERTY LINE (Except Land Lines)
- UNCLER PLATTED PROPERTY
- CORPORATE OR CITY LIMITS
- TRUNK HIGHWAY CENTER LINE
- RETAINING WALL
- RAILROAD
- BACKSLOPE RIGHT OF WAY LINE
- RIVER OR CREEK
- DRY RUN
- DRAINAGE DITCH
- ELECTRIC POWER LINE
- TELEPHONE OR TELEGRAPH LINE
- JOINT TELEPHONE AND POWER
- CONDUIT
- TELEPHONE CABLE AERIAL
- TELEPHONE CABLE UNDERGROUND
- POWER CABLE UNDERGROUND
- DAK MAIN
- CONCRETE
- DROP INLET
- GUARD RAIL
- BAMBER WIRE FENCE
- WOVEN WIRE FENCE
- CHAIN LINK FENCE
- SALICORN SHOW FENCE
- STONE WALL OR FENCE
- HEDGE
- WATER PIPE
- SEWER PIPE
- DRAIN TILE
- SPEAKER
- MARSH
- TIMBER
- ORCHARD
- DRUSH
- NURSERY
- CATCH BASIN
- MANHOLE
- FIRE HYDRANT
- STREET LIGHT
- RAILROAD CROSSING SIGN
- RAILROAD CROSSING BELL
- ELECTRIC WARNING SIGN
- CROSSING GATE
- CATTLE GUARD
- DYEPASS (Highway Over)
- UNDERPASS (Highway Under)
- BRIDGE
- BUILDING (One Story Frame)
- F FRAME
- CONCRETE
- STONE
- TILE
- BRICK
- ST. STRUCT
- IRON PIPE OR ROD
- MONUMENT (STONE, CONCRETE, OR METAL)
- WOODEN POST
- GRAVEL PIT
- SAND PIT
- SHADOW PIT
- ROCK QUARRY
- MEANER CORNER

DESIGN DESIGNATION

ADT (CURRENT YEAR) 330
ADT (FUTURE YEAR) 749 (20 YEARS)
T (HEAVY COMMERCIAL)
7 ULT. 9 Ton Design A-3 Soil Factor
Design Speed 50 MPH
Design Speed not achieved at:
STA. _____ TO STA. _____ MPH
STA. _____ TO STA. _____ MPH

SPECIFICATIONS

THE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", DATED JAN. 1, 1974,
AS AMENDED BY "SUPPLEMENTAL SPECIFICATIONS" DATED APRIL 1, 1976 SHALL GOVERN.

ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITH, IN THE CONSTRUCTION OF THIS PROJECT.

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.

Paul K. Rind
COUNTY ENGINEER DATE 9/24/76

ANOKA COUNTY REG. NO. 6549

RECOMMENDED FOR APPROVAL _____ 19
DISTRICT ENGINEER

RECOMMENDED FOR APPROVAL _____ 19

APPROVED _____ 19
STATE AID ENGINEER

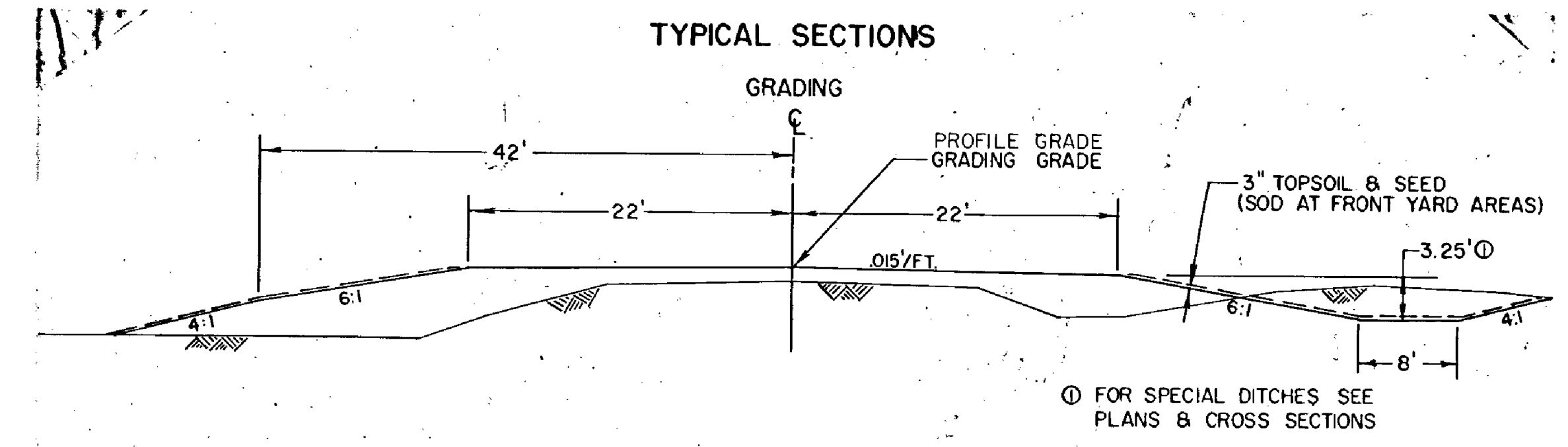
Minn. Proj. No. _____ County Proj. No. 76-10-00

State Proj. No. _____ S.A.P. _____

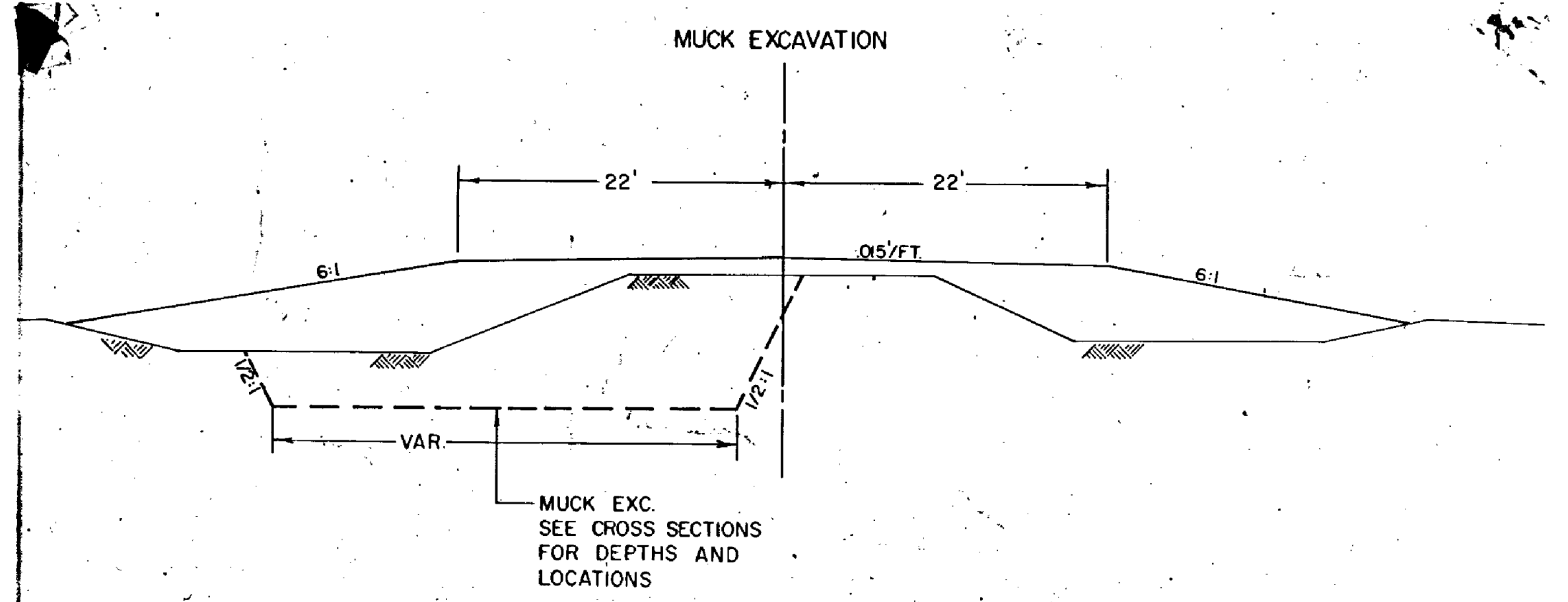
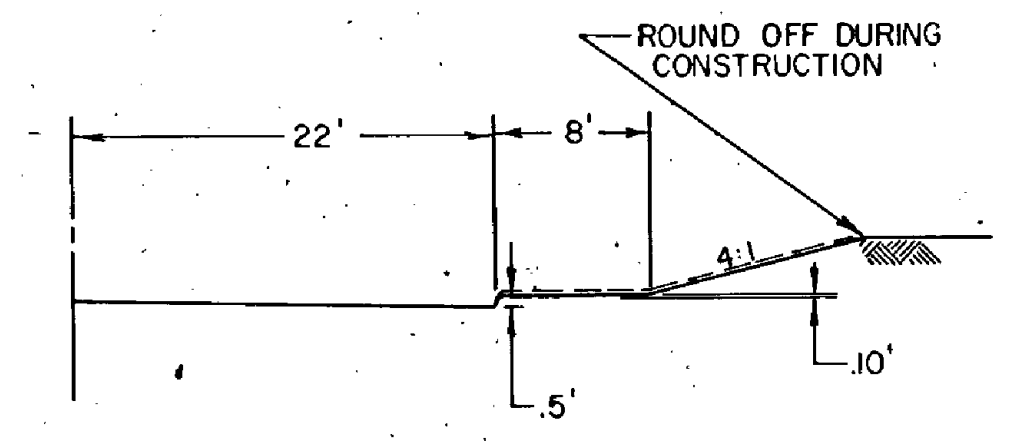
FORM MHD 21165 - 10 - 58

STATEMENT OF ESTIMATED QUANTITIES

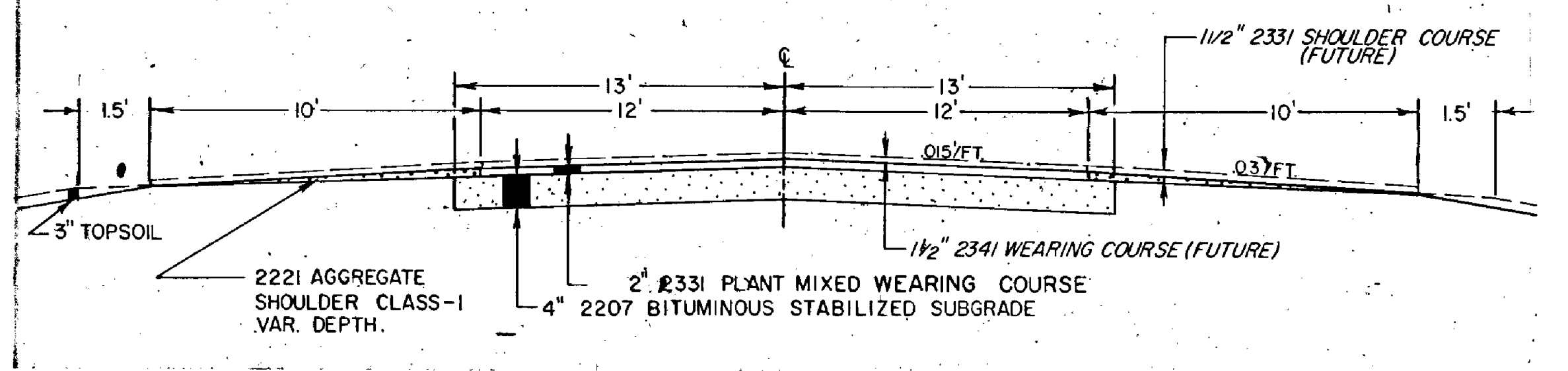
ITEM NO.	ITEM	UNIT	TOTAL ESTIMATED QUANTITIES	TOTAL FINAL QUANTITIES
2031.503	FIELD LABORATORY TYPE B	EACH	1	
2101.501	CLEARING	ACRE	8.30	
2101.502	CLEARING	TREE	15	
2101.506	GRUBBING	ACRE	- 8.30	
2101.507	GRUBBING	TREE	15	
2104.521	SALVAGE CULVERT PIPE	LIN. FT.	36	
2104.521	SALVAGE FENCE	LIN. FT.	3470	
557.604	INSTALL FENCE	LIN. FT.	3052	
2105.501	COMMON EXCAVATION	CU. YD.	35220 P	
2105.505	MUCK EXCAVATION	CU. YD.	806	
2123.503	MOTOR GRADER	HOUR	4	
2123.509	DOZER	HOUR	4	
2130.501	WATER	M - GAL	100	
2207.503	BITUMINOUS MATERIAL FOR MIXTURE	GALLON	58000	
2207.512	BITUMINOUS STABILIZED SUBGRADE 4" THICK	SQ. YD.	19900	
2221.501	AGGREGATE SHOULDERING CLASS 1	TON	1470	
2331.504	BITUMINOUS MATERIAL FOR MIXTURE	TON	132	
2331.508	WEARING COURSE MIXTURE	TON	2030	
2501.501	CULVERT EXCAVATION CLASS U	CU. YD.	135	
2501.511	15" C.M. PIPE CULVERT	LIN. FT.	364	
2501.511	24" C.M. PIPE CULVERT	LIN. FT.	234	
2501.515	15" C.M. PIPE APRONS	EACH	20	
2501.515	24" C.M. PIPE APRONS	EACH	6	
2571.541	TRANSPLANT WHITE SPRUCE 4"	TREE	1	
2571.541	TRANSPLANT COLORADO BLUE SPRUCE 3", 4", 6"	TREE	3	
2575.501	ROADSIDE SEEDING	ACRE	13.3 P	
2575.502	SEED MIXTURE NO. 5	POUND	666	
2575.505	SODDING	SQ. YD.	1311	
2575.511	MULCH MATERIAL TYPE 1	TON	27	
2575.519	DISC ANCHORING	ACRE	13.3 P	
2575.531	COMMERCIAL FERTILIZER ANALYSIS 10-10-10	TON	2.7	
(1)				
(2)	FOR OBLITERATION OF OLD ROAD OUTSIDE OF THE GRADING AREA, FOR DUST CONTROL.			
(3)	INCLUDES 2587 GAL. FOR ROAD APPROACH.			
(4)	INCLUDES 76 TON FOR ROAD APPROACH.			
(5)	INCLUDES 94 TON FOR ROAD APPROACH.			
(3)	INCLUDES 4260 GAL. FOR RT. TURN & BY-PASS LANE			
(5)	INCLUDES 162 TON FOR RT. TURN & BY-PASS LANE			



BERM SECTION



TYPICAL BITUMINOUS SECTION



BASIS OF PLANNED QUANTITIES

- 2207 BITUMINOUS STABILIZED SUBGRADE
BITUMINOUS MATERIAL FOR MIXTURE 0.5 GAL. PER S.Y. PER INCH THICKNESS
BITUMINOUS MATERIAL FOR FOG 0.10 GAL. PER S. Y.
- 2221 AGGREGATE SHOULDERING CLASS 1, 140 LBS. PER CU. FT. COMPACTED
- 2331 PLANT MIXED WEARING COURSE
BITUMINOUS MIXTURE 220 LBS. PER S. Y. PER 2" THICKNESS
BITUMINOUS MATERIAL FOR MIXTURE 6.5% BY WEIGHT

MHD 21166 (9/73)
The following Standard Plates, approved by the Federal Highway Administration, shall apply on this project.

PLATE NO.	DESCRIPTION
0002 A	SPECIFICATION REFERENCE TO STANDARD PLATES
3040 D	CORRUGATED METAL PIPE
3123 G	METAL APRON FOR C.M. PIPE
8000 D	STANDARD BARRICADES
9000 B	APPROACHES AND ENTRANCES
9102 C	SODDING AT PIPE CULVERT ENDS

DRAINAGE																
STATION	LOCATION	IN PLACE	REMARKS	SALVAGE PORTABLE CULVERT	REMOVE					PORTABLE CULVERTS						
					PORT. CULV.	CONC. STRUCT.	EXC.	SOD-DING	RIP-RAP	15" C.M.P.	24" C.M.P.					
					LIN.FT.	CU.YD.	CU.YD.	SQ.YD.	CU.YD.	LIN.FT.	AP.	LIN.FT.	AP.	LIN.FT.	AP.	LIN.FT.
41+72	EX-CULV										100	2				
48+00	LT.		NO CULV REQ.													
49+60	LT.		HOUSE ENT.							38	2					
54+17	LT.		HOUSE ENT.							34	2					
55+17	LT.		HOUSE ENT.							34	2					
57+02	RT.		HOUSE ENT.							38	2					
58+47	RT.		HOUSE ENT.							38	2					
59+00	EX-CULV										64	2				
65+52	RT.		FIELD ENT.							40	2					
72+82	RT.		HOUSE ENT.							34	2					
73+50	RT.		HOUSE ENT.							34	2					
77+28	RT.		NO CULV REQ.													
79+87	EX-CULV			36							70	2				
83+43	LT.		HOUSE ENT.							36	2					
86+67	LT.		NO CULV REQ.													
88+52	RT.		NO CULV REQ.													
93+00	LT.		HOUSE ENT.							38	2					
			TOTALS	36						364	20	234	6			

SALVAGE & TRANSPLANT				
STATION	LOC.	SIZE	SPECIES	NO.
52+83	35' LT.	4"	WHITE SPRUCE	1
53+70	35' LT.	6"	COLORADO BLUE SPRUCE	1
54+00	51' LT.	3"	COLORADO BLUE SPRUCE	1
54+07	60' LT.	4"	COLORADO BLUE SPRUCE	1

CLEARING AND GRUBBING					
STATION (TO STATION)	LOC.	CLEARING		GRUBBING	
		TREE	ACRE	TREE	ACRE
43+48 - 54+45	0 - 92 LT.		1.00		1.00
43+48 - 54+45	0 - 80 RT.		1.70		1.70
48+00 ROAD APPROACH	LT.		0.40		0.40
54+87	56 - RT.	1		1	
55+07 - 55+24	54-57 RT.	2		2	
55+29 - 55+79	54-82 LT.		0.05		0.05
55+29 - 65+54	2 - 88 RT.		1.50		1.50
57+40 - 59+95	36-83 LT.		0.20		0.20
64+60 - 65+80	70-105 LT.		0.10		0.10
65+95	65 - LT.			1	
66+85	60 - LT.			1	
69+60	21 - RT.	3		1	
70+47	30 - RT.	1		1	
69+20 - 74+95	8 - 80 LT.		0.55		0.55
75+25 - 76+55	15-64 LT.		0.10		0.10
77+40 - 78+25	15-60 LT.		0.10		0.10
79+06 - 82+76	15-72 RT.		0.30		0.30
80+55 - 83+35	20-81 LT.		0.30		0.30
83+00 - 85+35	10-83 LT.		0.30		0.30
86+03 - 88+00	7 - 37 RT.		0.15		0.15
86+40	55 - RT.	1		1	
88+32	24 - LT.	1		1	
88+85	52 - LT.	1		1	
89+04	40 - RT.	1		1	
89+14	42 - RT.	1		1	
89+18	30 - RT.	1		1	
89+43	31 - RT.	1		1	
89+56	31 - RT.	1		1	
86+73 - 92+85	35-72 LT.		0.40		0.40
89+74 - 99+64	25-85 RT.		0.85		0.85
95+30 - 99+00	40-100LT.		0.30		0.30
	TOTALS	15	8.30	15	8.30

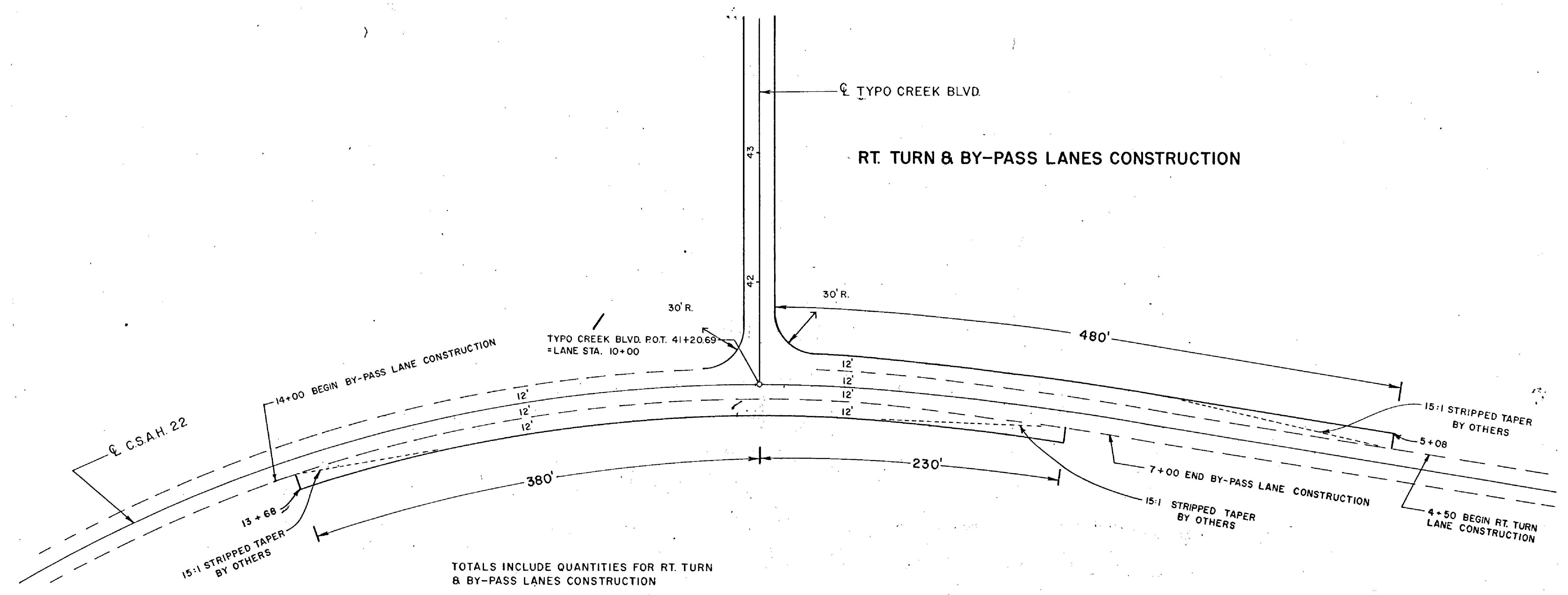
SALVAGE & INSTALL FENCE				
STATION	LOC	SALVAGE	INSTALL	REMARKS
41+86	LT, RT	123	--	EX FENCE X-ING
43+70	LT, RT	200	--	EX FENCE X-ING
50+20 - 52+50	LT	230	230	----
52+50	LT	25	15	LINE FENCE
52+50 - 54+55	LT	205	205	----
54+55	LT	30	5	LINE FENCE
58+16 - 64+24	LT	608	608	----
64+85 - 71+00	RT	615	615	----
77+87 - 79+50	RT	163	163	----
79+50	RT	30	10	LINE FENCE
79+50 - 88+29	RT	879	879	----
88+29	RT	10	5	LINE FENCE
88+73	RT	15	5	LINE FENCE
88+73 - 91+75	RT	302	302	----
91+52	RT	35	10	LINE FENCE
	TOTALS	3470	3052	

SODDING		
STATION	LOC	S.Y.
52+50 - 54+55	LT	364
72+80 - 73+50	RT	93
77+28 - 78+50	RT	244
88+70 - 89+90	RT	187
93+00 - 94+20	LT	160
PIPE CULVERT ENDS		
15" C.M.P.,	20 X 8.5 =	170
24" C.M.P.,	6 X 15.5 =	93
	TOTAL	1311

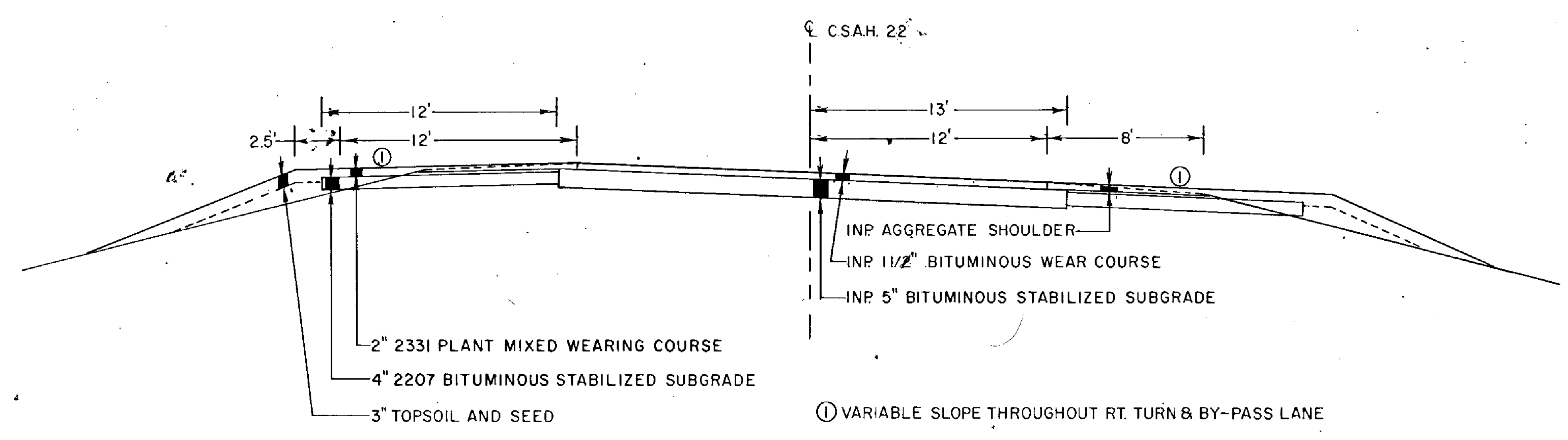
SPECIAL DETAILS

THE CONTRACTOR SHALL REMOVE SUFFICIENT TOPSOIL MATERIAL WITHIN THE EXCAVATION AREAS AND AREAS ON WHICH EMBANKMENTS WILL BE PLACED, STOCKPILE IF NECESSARY, AND USE IT FOR TOPSOIL COVERING ON THE NEW SLOPES & DITCH BOTTOMS. THIS WILL REQUIRE APPROXIMATELY 4,218 CU. YDS. TO PROVIDE A MINIMUM COVER OF 3". SALVAGING TOPSOIL SHALL BE CONSIDERED AS INCIDENTAL TO THE EXCAVATION ITEMS.

MUCK MATERIAL MAY BE STOCKPILED ADJACENT TO THE EXCAVATION AREAS DURING CONSTRUCTION OPERATIONS, BUT PRIOR TO COMPLETION OF GRADING OPERATIONS ALL EXCAVATED MATERIAL SHALL BE REMOVED BY THE CONTRACTOR FROM SWAMPS AND PEAT FIELDS TO APPROXIMATELY THE ORIGINAL ELEVATIONS. ANY EXCESS MUCK MATERIAL MAY BE SPREAD UNIFORMLY ON SLOPES OR SHALL BE DISPOSED OF BY THE CONTRACTOR, IN OTHER AREAS AS APPROVED BY THE ENGINEER.

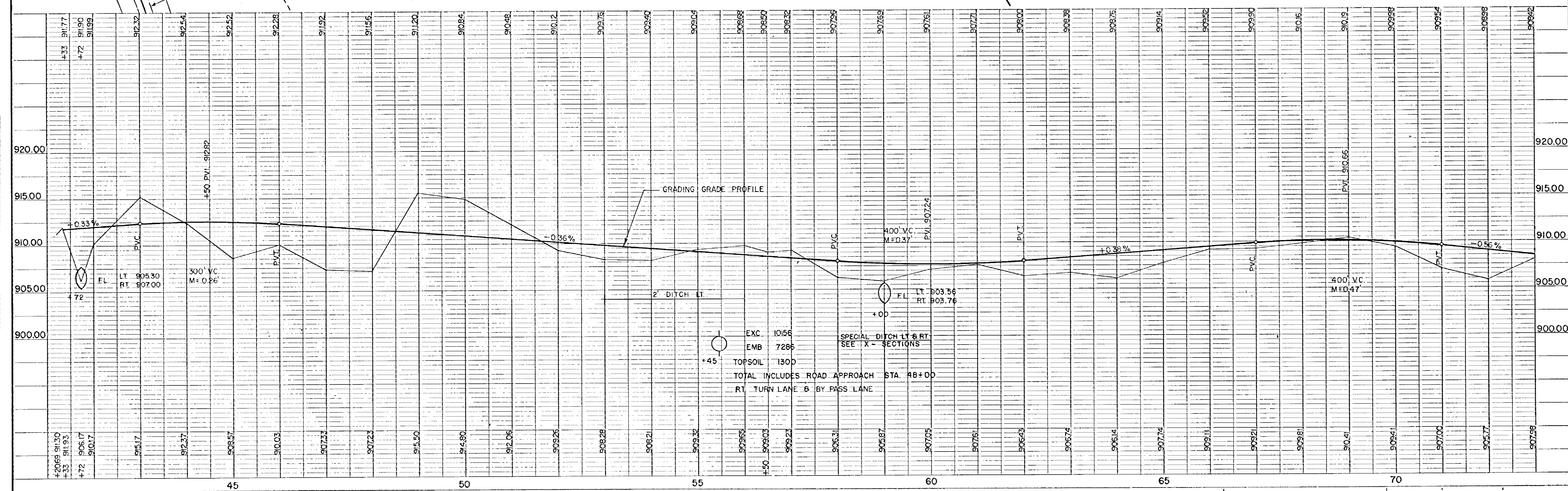
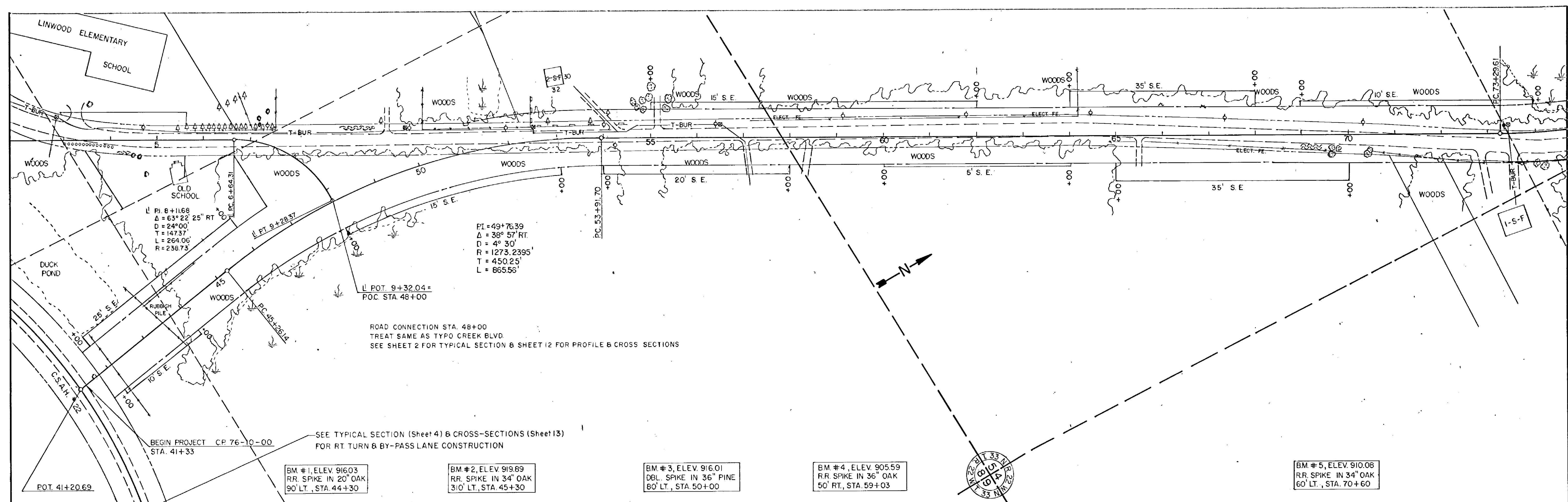


TYPICAL RT. TURN & BY-PASS LANE SECTION



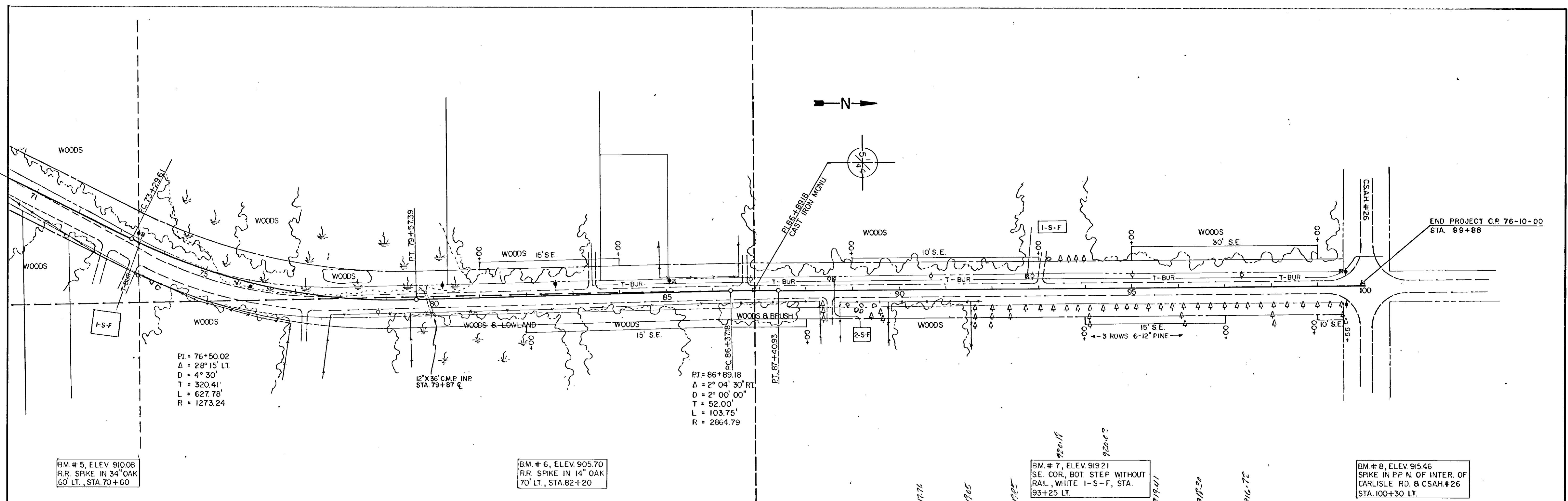
PLAN
 NOTE: P.O.C. ALTERNATE CHECKED BY: [Signature]
 P.O. OF WAY CHECKED BY: [Signature]

PROFILE
 NOTE: P.O.C. ALTERNATE CHECKED BY: [Signature]
 P.O. OF WAY CHECKED BY: [Signature]



PLAN
 DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 NO. _____

PROFILE
 DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 NO. _____



BM # 5, ELEV. 910.08
 R.R. SPIKE IN 34" OAK
 60' LT., STA. 70+60

BM # 6, ELEV. 905.70
 R.R. SPIKE IN 14" OAK
 70' LT., STA. 82+20

BM # 7, ELEV. 919.21
 S.E. COR. BOT. STEP WITHOUT
 RAIL, WHITE I-S-F, STA.
 93+25 LT.

BM # 8, ELEV. 915.46
 SPIKE IN P.P. N. OF INTER. OF
 CARLISLE RD. & CSAH #26
 STA. 100+30 LT.

