PLANS SYMBOLS

STATE LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT-OF-WAY LINE
PRESENT RIGHT OF WAY LINE
CONTROL OF ACCESS LINE
PROPERTY LINE (Except Land Lines)
VACATED PLATTED PROPERTY
CORPORATE OR CITY LIMITS
TRUNK HIGHWAY CENTER LINE
RETAINING WALL
RAILROAD
RAILROAD RIGHT-OF-WAY LINE
RIVER OR CREEK
DRY RUN
DRAINAGE DITCH
DRAIN TILE
CULVERT
DROP INLET
GUARD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
RAILROAD SNOW FENCE
STONE WALL OR FENCE
HEDGE
RAILROAD CROSSING SIGN
RAILROAD CROSSING BELL
ELECTRIC WARNING SIGN
CROSSING GATE
MEANDER CORNER
SLOPE EASEMENT (CONST. LIMITS) — SE —

SPRINGS
MARSH
TIMBER — DECIDUOUS / CONIFEROUS
ORCHARD
BRUSH
NURSERY
CATCH BASIN — C.B.
FIRE HYDRANT
CATTLE GUARD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BUILDING (One Story Frame)
F FRAME C CONCRETE
S STONE T TILE
B BRICK ST STUCCO
IRON PIPE OR ROD
MONUMENT (STONE, CONCRETE, OR METAL)
WOODEN HUB
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY

UTILITIES SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE AND POWER ON POWER POLES
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (TELEPHONE CABLE TERMINAL)
GAS MAIN — G —
WATER MAIN — I —

CONDUIT
TELEPHONE CABLE IN CONDUIT — T —
ELECTRIC CABLE IN CONDUIT — P —
TELEPHONE MANHOLE — T
ELECTRIC MANHOLE — P
BURIED TELEPHONE CABLE — T-BUR —
BURIED ELECTRIC CABLE — P-BUR —
AERIAL TELEPHONE CABLE — T-AE —
SEWER, (SANITARY OR STORM) —>—
SEWER MANHOLE —>—O—>—

NOTE SECTION NUMBERS READ FROM THE SOUTH

CENTER OF SECTION 35 T10N R22W

T10N R22W 35 36 2 1 R21W T9N

THE 1988 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" AS AMENDED BY THE JANUARY 2, 1991 SUPPLEMENTAL SPECIFICATIONS SHALL GOVERN.

DESIGN DESIGNATION

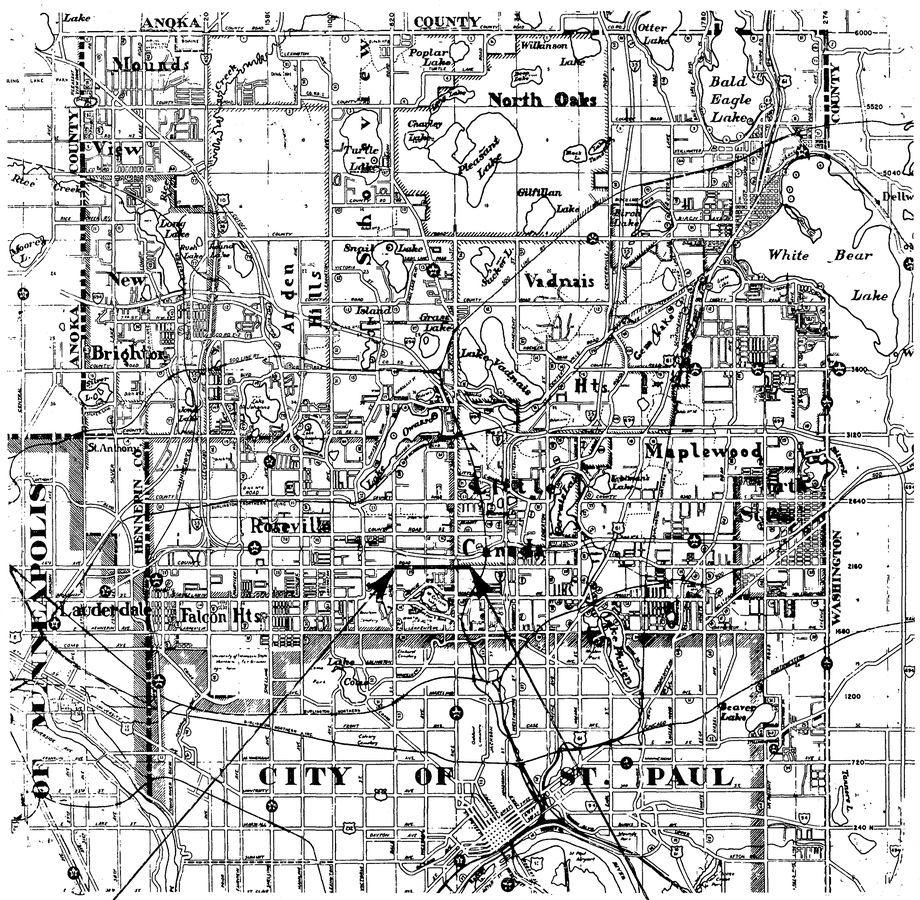
	DALE ST. to RICE ST.	EAST of RICE ST.
PRESENT ADT (YEAR 1990)	5815	8090
PROJECTED ADT (YEAR 2010)	9290	12920

FUNCTIONAL CLASSIFICATION: LOW DENSITY ARTERIAL
NO. OF TRAFFIC LANES: 2 NO. OF PARKING LANES: 1
(FROM SANDHURST DR. TO WEST OF RICE ST.)

PLAN	0 15 30 60	1" = 30'
PROFILE HORIZ.	0 15 30 60	1" = 30'
PROFILE VERT.	0 5 10	1" = 5'
CROSS SECTION HORIZ.	0 5 10 20	1" = 10'
CROSS SECTION VERT.	0 5 10 20	1" = 10'

S.A.P. NO. 62-625-19

	FEET	MILES
PROJECT GROSS LENGTH	6550.0	1.24
BRIDGE LENGTH	0	0
EXCEPTION	0	0
NET LENGTH	6550.0	1.24



BEGIN S.A.P. NO. 62-625-19
STA. 2+00.00

END S.A.P. NO. 62-625-19
STA. 67+50.00

10 TON DESIGN
R-VALUE: 40 (W/ 1' MINIMUM SUBGRADE EXCAVATION)
N 18 FACTOR: 731,350 (DALE ST. TO RICE ST.)
1,020,000 (EAST OF RICE ST.)

* DESIGN SPEED: 40 MPH

* BASED ON MINIMUM STOPPING SIGHT DISTANCE
HEIGHT OF EYE: 3.5 FEET
HEIGHT OF OBJECT: 0.5 FEET

NOT ATTAINED AT: - DALE ST. INTERSECTION
STA. 2+00 TO STA. 6+00 (35 MPH ÷)
- RICE ST. INTERSECTION
STA. 53+10 TO STA. 53+90 (30 MPH ÷)

ASBUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: Buck el
DATE: 15 JAN 93

RAMSEY COUNTY
DEPARTMENT OF PUBLIC WORKS

CONSTRUCTION PLAN FOR: GRADING, SANITARY SEWER, WATERMAIN, STORM SEWER, WALLS, AGGREGATE BASE, BITUMINOUS PAVEMENT, CURB AND GUTTER AND SIDEWALK.

COUNTY ROAD B (C.S.A.H. 25)

FROM DALE STREET TO 1251' EAST OF RICE STREET

S.A.P. NO. 62-625-19

FROM: THE S.W. CORNER OF SECTION 12, T29N, R23W
TO: A POINT APPROXIMATELY 1251 FEET EAST OF THE NW CORNER OF SECTION 18, T29N, R22W.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2-4	SUMMARY OF ESTIMATED QUANTITIES AND STANDARD PLATES
5	EARTHWORK SUMMARY AND CONSTRUCTION NOTES
6-10	QUANTITY TABULATIONS
11-11A-12A	TRAFFIC CONTROL
13-15	TYPICAL SECTIONS AND CONSTRUCTION DETAILS
16	ALIGNMENT PLAN AND TABULATION
17-24	PLAN AND PROFILES
25	SIDE STREET PROFILES
26-27	RETAINING WALL PLAN AND DETAILS
28-33	STANDARD PLANS
34-40	SANITARY SEWER AND WATERMAIN RELOCATION PLAN AND PROFILES
41	SEDIMENTATION POND PLAN
42	SEDIMENTATION POND LANDSCAPE PLAN
43-46A	SIGNAL PLANS
47-103	CROSS SECTIONS

THIS PLAN SET CONTAINS 106 SHEETS.

DESIGN SQUAD _____ DATE _____
DRAWN BY _____ DATE _____
CHECKED BY _____ DATE _____

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 12/17/90 REG. NO. 20770 ENGR. Scott V. Samuelson

RAMSEY COUNTY

RECOMMENDED FOR APPROVAL DES TRAFFIC ENGR. DATE 12/19/90
RECOMMENDED FOR APPROVAL KMR ENV. ENGR. DATE 12/19/90
RECOMMENDED FOR APPROVAL DJS MAINT. ENGR. DATE 12/20/90
RECOMMENDED FOR APPROVAL RHP CONST. ENGR. DATE 12-19-90
RECOMMENDED FOR APPROVAL LKF DESIGN ENGR. DATE 12-20-90
RECOMMENDED FOR APPROVAL _____ R.O.W. ENGR. DATE _____
RECOM'D _____ COORDINATING ENGR. DATE 12-19-90
RECOM'D _____ ASSISTANT CO. ENGINEER DATE 12/19/90

RECOMMENDED FOR APPROVAL Paul K. Kilgore Ken Weltin COUNTY ENGINEER DATE 4/15/91
APPROVED Howard A. Mongard CHAIR. OF THE RAMSEY COUNTY BOARD DATE 4/16/91
APPROVED Steven D. Mathis CITY OF ROSEVILLE DATE 12/18/90
APPROVED Kent D. Hesse CITY OF MAPLEWOOD DATE 11/9/91
APPROVED _____ CITY OF LITTLE CANADA DATE _____

PLAN REVISIONS		
DATE	SHEET NO.	BY

RECOMMENDED FOR APPROVAL _____ DH MN/DOT TRAFFIC ENGINEER DATE 4/91
RECOMMENDED FOR APPROVAL _____ STATE AID PLANS ENGINEER DATE 4/9/91
RECOMMENDED FOR APPROVAL _____ DISTRICT STATE AID ENGINEER DATE 2/25/91
APPROVAL _____ STATE AID ENGINEER DATE 4-9-91

S.A.P. 62-625-19 28-113 **Sheet No. 1 of 103 Sheets**

Fed. Proj. No.

STATEMENT OF ESTIMATED QUANTITIES

CHART LETTER	ITEM NO.	ITEM	UNIT	TOTALS		S.A.P. 62-659-19				NON-PARTICIPATING		STORM SEWER S.A.P. 62-625-19 (3)					
						RAMSEY COUNTY		CITY OF ROSEVILLE		CITY OF ROSEVILLE		CITY OF ROSEVILLE		CITY OF MAPLEWOOD		SEDIMENTATION POND	
				ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES
	2021.501	MOBILIZATION	LUMP SUM	1		1											
	2031.501	FIELD OFFICE, TYPE D	EACH	1		1											
C	2101.501 (P)	CLEARING	ACRE	0.80		0.77										0.03	
C	2101.502	CLEARING	TREE	103		45										58	
C	2101.506 (P)	GRUBBING	ACRE	0.80		0.77										0.03	
C	2101.507	GRUBBING	TREE	96		38										58	
B	2104.501	REMOVE PIPE CULVERTS	LIN FT	433								408		25			
B	2104.501	REMOVE PIPE SEWERS	LIN FT	737								426		311			
B	2104.501	REMOVE CURB AND GUTTER	LIN FT	1122		1122											
B	2104.501	REMOVE CONCRETE CURB	LIN FT	376		376											
F	2104.501	REMOVE WATERMAIN	LIN FT	1630		1630											
B	2104.503	REMOVE RETAINING WALL	SQ FT	173		173											
B	2104.503	REMOVE BITUMINOUS WALK	SQ FT	6061		6061											
B	2104.503	REMOVE CONCRETE SIDEWALK	SQ FT	919		919											
B	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	27066		27066											
B	2104.505	REMOVE BITUMINOUS DRIVEWAY PAVEMENT	SQ YD	4374		4374											
B	2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT	SQ YD	69		69											
	2104.505	REMOVE BIT. DRIVEWAY PAVEMENT (PRIVATE)	SQ YD	700						700							
	2104.505	REMOVE CONCRETE DRIVEWAY PAVEMENT (PRIVATE)	SQ YD	300						300							
B,F,G	2104.509	REMOVE MANHOLES OR CATCH BASINS	EACH	21		17				4							
F	2104.509	REMOVE CURB BOX	EACH	2						2							
B	2104.511	SAWING CONCRETE PAVEMENT	LIN FT	61		61											
B	2104.513	SAWING BITUMINOUS PAVEMENT	LIN FT	1740		1740											
B	2104.521	SALVAGE WOODEN FENCE	LIN FT	66		66											
B	2104.521	SALVAGE CHAIN LINK FENCE	LIN FT	2944		2631										313	
B	2104.523	SALVAGE SIGN TYPE 1	EACH	2		2											
B	2104.523	SALVAGE SIGN TYPE 2	EACH	2		2											
F	2104.525	ABANDON WATER SERVICE	EACH	2						2							
A	2105.501 (P)	COMMON EXCAVATION	CU YD	27155		25935										1220	
A	2105.501 (P)	COMMON EXCAVATION (PIT MATERIAL)	CU YD	20793		9457										11336	
A	2105.505	MUCK EXCAVATION	CU YD	3280		3280											
A	2105.507 (P)	SUBGRADE EXCAVATION	CU YD	16203		16203											
A	2105.522	SELECT GRANULAR BORROW MOD 10% (LV)	CU YD	30126		30126											
A	2105.522	SELECT GRANULAR BORROW MOD 10% (LV)(SIDEWALK)	CU YD	734		194				540							
A	2105.525	TOPSOIL BORROW (LV)	CU YD	1000		1000											
J	2118.502	AGGREGATE SURFACING, CLASS 2	CU YD	76		76											
	2130.501	WATER	MGAL	200		200											
J	2211.503 (P)	AGGREGATE BASE PLACED, CLASS 6	CU YD	6673		5947		726 (1)									
J	2331.508	TYPE 31 WEARING COURSE MIXTURE	TON	340		340											
J	2331.508	TYPE 61 WEARING COURSE MIXTURE	TON	1758		1518		240 (1)									
J	2331.510	TYPE 31 BINDER COURSE MIXTURE	TON	3516		3037		479 (1)									
J	2331.514	TYPE 31 BASE COURSE MIXTURE	TON	6191		5472		719 (1)									
	0331.601	BIT. DRIVEWAY REPLACEMENT (PRIVATE)	SQ YD	700						700							
J	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GALLONS	3351		2915		436 (1)									
L	0402.604	PIPE RAILING	LIN FT	153				153 (4)(1)									
N	2411.501	STRUCTURE CONCRETE (1A43)	CU YD	333		333											
N	2411.501	STRUCTURE CONCRETE (3Y43)	CU YD	343		343											
A	2411.511	STRUCTURE EXCAVATION CLASS U	CU YD	4760		4760											
N	2411.541	REINFORCEMENT BARS	POUND	22644		22644											
N	2411.541	REINFORCEMENT BARS (EPOXY COATED)	POUND	27100		27100											
L	0411.603	MASONRY BLOCK RETAINING WALL	SQ FT	930				930 (1)									
	2451.511	COARSE FILTER AGGREGATE (CV)	CU YD	91				91 (1)									
D	2501.515	18" CM PIPE APRON	EACH	2												2	
D	2501.515	15" RC PIPE APRON	EACH	1								1					
D	2501.515	18" RC PIPE APRON	EACH	2		1						1					
D	2501.515	21" RC PIPE APRON	EACH	1										1			
D	2501.515	24" RC PIPE APRON	EACH	4		1						3					
D	2501.561	18" RC PIPE CULVERT DESIGN 3006, CL V	LIN FT	100		100											
D	2501.561	24" RC PIPE CULVERT DESIGN 3006, CL III	LIN FT	36		36											
N	2502.541	4" PERFORATED TP PIPE DRAIN	LIN FT	552		552											
E	2502.541	4" PE CORRUGATED PERFORATED PIPE DRAIN	LIN FT	10843		10693		150 (1)									

(1) PARKING LANE AND MASONRY WALL ITEMS

(2) WATERMAIN REPLACEMENT ITEMS

(3) DRAINAGE SPLIT IS 100% S.A.P. 62-625-19 BASED ON THE HYDRAULICS MEMORANDUM DATED DECEMBER 11, 1990

(4) S.A.P. PARTICIPATION LIMITED TO $10.00 PER FOOT FOR THE UNIT PRICE BID FOR THIS ITEM.

STATEMENT OF ESTIMATED QUANTITIES

CHART LETTER	ITEM NO.	ITEM	UNIT	TOTALS		S.A.P. 62-659-19				NON-PARTICIPATING		STORM SEWER S.A.P. 62-625-19 (3)					
						RAMSEY COUNTY		CITY OF ROSEVILLE		CITY OF ROSEVILLE		CITY OF ROSEVILLE		CITY OF MAPLEWOOD		SEDIMENTATION POND	
				ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES
G	2503.511	10" PVC PIPE SEWER 0'-10' DEPTH	LIN FT	537						537							
G	2503.511	10" PVC PIPE SEWER 10'-12' DEPTH	LIN FT	70						70							
G	2503.511	10" PVC PIPE SEWER 12'-14' DEPTH	LIN FT	60						60							
G	2503.511	10" PVC PIPE SEWER 14'-16' DEPTH	LIN FT	70						70							
G	2503.511	10" PVC PIPE SEWER 16'-18' DEPTH	LIN FT	60						60							
G	2503.511	10" PVC PIPE SEWER 18'-20' DEPTH	LIN FT	115						115							
G	2503.511	10" PVC PIPE SEWER OVER 20' DEPTH	LIN FT	235						235							
G	2503.511	8" DIP CL 50 PIPE SEWER	LIN FT	60						60							
D	2503.511	18" CS PIPE SEWER	LIN FT	78												78	
D	2503.541	15" RC PIPE SEWER, DES 3006, CL V	LIN FT	3125								2127		998			
D	2503.541	18" RC PIPE SEWER, DES 3006, CL V	LIN FT	1683								1473		210			
D	2503.541	21" RC PIPE SEWER, DES 3006, CL III	LIN FT	662								618		44			
D	2503.541	24" RC PIPE SEWER, DES 3006, CL III	LIN FT	335								335					
D	2503.541	48" RC PIPE SEWER, DES 3006, CL III	LIN FT	60								60					
G	0503.602	CONNECT TO EXISTING SANITARY MANHOLE	EACH	4						4							
G	0503.602	CONNECT TO EXISTING SANITARY SEWER	EACH	4						4							
G	0503.602	CONNECT TO EXISTING SANITARY SEWER SERVICE	EACH	25						25							
G	0503.602	CONNECT TO EXISTING TEE	EACH	2						2							
G	0503.602	REPAIR WYE	EACH	2						2							
G	0503.602	CONSTRUCT MANHOLE 0'-10' DEPTH	EACH	6						6							
G	0503.602	CONSTRUCT DROP MANHOLE 0'-10' DEPTH	EACH	1						1							
G	0503.602	10"X4" PVC WYE	EACH	3						3							
G	0503.602	10"X6" PVC WYE	EACH	3						3							
G	0503.602	CLEANOUT	EACH	4						4							
G	0503.602	8"X4" SADDLE	EACH	1						1							
G	0503.603	REPAIR SANITARY SEWER	LIN FT	85						85							
G	0503.603	CONSTRUCT EXTRA DEPTH MANHOLE >10' DEPTH	LIN FT	14						14							
G	0503.603	4" PVC SANITARY SERVICE PIPE	LIN FT	711						711							
G	0503.603	6" PVC SANITARY SERVICE PIPE	LIN FT	277						277							
G	0503.603	ROCK TRENCH STABILIZATION	LIN FT	720						720							
F	0504.602	CONNECT TO EXISTING WATERMAIN	EACH	7		7											
F	0504.602	OFFSET WATERMAIN	EACH	2		2											
F	0504.602	AIR VENT	EACH	2						2							
F	0504.602	HYDRANT 8'-6" BURY	EACH	1						1							
F	0504.602	SALV/REINSTALL HYDRANT	EACH	3		3											
F	0504.602	ADJUST CURB STOP	EACH	55		55											
H	0504.602	ADJUST VALVE BOX	EACH	25		25											
F	0504.602	6" GATE VALVE AND BOX	EACH	6						6							
F	0504.602	8" GATE VALVE AND BOX	EACH	1						1							
F	0504.602	12" BUTTERFLY VALVE AND BOX	EACH	1						1							
F	0504.602	16" BUTTERFLY VALVE AND BOX	EACH	4						4							
F	0504.602	3/4" CORPORATION STOP	EACH	6				5 (2)		1							
F	0504.602	1-1/2" CORPORATION STOP	EACH	2				2 (2)									
F	0504.602	2" CORPORATION STOP	EACH	1				1 (2)									
F	0504.602	3/4" CURB STOP AND BOX	EACH	1						1							
F	0504.602	12"X6" TEE AND GATE VALVE (WET TAP)	EACH	1		1											
F	0504.603	6" DIP WATERMAIN	LIN FT	425		10		396 (2)		19							
F	0504.603	8" DIP WATERMAIN	LIN FT	60				60 (2)									
F	0504.603	12" DIP WATERMAIN	LIN FT	125				125 (2)									
F	0504.603	16" DIP WATERMAIN	LIN FT	1140				1140 (2)									
F	0504.603	3/4" COPPER SERVICE	LIN FT	63				10 (2)		53							
F	0504.603	1-1/2" COPPER SERVICE	LIN FT	30				30 (2)									
F	0504.603	2" COPPER SERVICE	LIN FT	15				15 (2)									
F	0504.603	HYDRANT EXTENSION	LIN FT	10		10											
D,F,G	0504.605	2" POLYSTYRENE INSULATION	SQ YD	1065		897				76		78		14			
F	0504.620	DIP MJ FITTINGS	POUND	10867		24		10255 (2)		588							
D	2506.508	CONSTRUCT MANHOLE 48" DIAMETER	EACH	16								13		2		1	
D	2506.508	CONSTRUCT MANHOLE 60" DIAMETER	EACH	2		1						1					
D	2506.508	CONSTRUCT MANHOLE 72" DIAMETER	EACH	1								1					
D	2506.509	CONSTRUCT CATCH BASIN, DESIGN SD	EACH	2								2					
D	2506.509	CONSTRUCT CATCH BASIN, DESIGN BOX	EACH	2										2			
D	2506.509	CONSTRUCT CATCH BASIN, DESIGN LPI	EACH	43								37		6			
H	2506.511	RECONSTRUCT MANHOLE	LIN FT	26.9		21.2						5.7					
H	2506.522	ADJUST FRAME AND RING CASTING	EACH	19		19											
D	0506.602	CONNECT INTO EXISTING STORM SEWER MANHOLE	EACH	10								10					
D	0506.602	CONST MANHOLE OVER EXISTING STORM SEWER	EACH	1								1					
D	0506.602	18" SLIDE GATE	EACH	1												1	

(1) PARKING LANE AND MASONRY WALL ITEMS

(2) WATERMAIN REPLACEMENT ITEMS

(3) DRAINAGE SPLIT IS 100% S.A.P. 62-625-19 BASED ON THE HYDRAULICS MEMORANDUM DATED DECEMBER 11, 1990

Fed. Proj. No.

STATEMENT OF ESTIMATED QUANTITIES

CHART LETTER	ITEM NO.	ITEM	UNIT	TOTALS		S.A.P. 62-659-19				NON-PARTICIPATING		STORM SEWER S.A.P. 62-625-19 (3)					
						RAMSEY COUNTY		CITY OF ROSEVILLE		CITY OF ROSEVILLE		CITY OF ROSEVILLE		CITY OF MAPLEWOOD		SEDIMENTATION POND	
				ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES	ESTIMATED QUANTITIES	FINAL QUANTITIES
M	2511.501	RANDOM RIPRAP, CL III	CU YD	107												85	
M	0511.601	EROSION MAT	SQ YD	335								6		16		335	
I	2521.501	4" CONCRETE WALK	SQ FT	26406		6980				19426							
I	2531.501	CONCRETE CURB AND GUTTER, DES B612	LIN FT	491		491											
I	2531.501	CONCRETE CURB AND GUTTER, DES B618	LIN FT	128		128											
I	2531.501	CONCRETE CURB AND GUTTER, DES B624	LIN FT	12808		12808											
I	2531.501	CONCRETE CURB AND GUTTER, DES D418	LIN FT	158		158											
I	2531.502	CONCRETE CURB, DES B6	LIN FT	451		451											
I	2531.507	6" CONCRETE DRIVEWAY PAVEMENT	SQ YD	943		943											
I	2531.507	8" CONCRETE DRIVEWAY PAVEMENT	SQ YD	234		234											
	2531.507	6" CONCRETE DRIVEWAY PAVEMENT (PRIVATE)	SQ YD	300						300							
L	2557.501	WIRE FENCE DESIGN 60-9322	LIN FT	658		658											
	0557.602	INSTALL SALVAGED SIGN TYPE I	EACH	2		2											
	0557.602	INSTALL SALVAGED SIGN TYPE 2	EACH	2		2											
L	0557.603	INSTALL SALVAGED CHAIN LINK FENCE	LIN FT	2944		2428										516	
L	0557.603	INSTALL SALVAGED WOODEN FENCE	LIN FT	66		66											
	0563.601	TRAFFIC CONTROL	LUMP SUM	1		1											
	0563.602	TYPE I BARRICADES	UNIT DAY	100		100											
	0563.602	TYPE III BARRICADES	UNIT DAY	100		100											
	0563.602	FLASHER TYPE A (LOW INTENSITY)	UNIT DAY	100		100											
	0563.602	48"X48" SIGN	UNIT DAY	100		100											
	0563.602	48"X48" SIGN WITH SUPPORTS	UNIT DAY	100		100											
	0565.601	SALVAGE SIGNAL SYSTEM B	LUMP SUM	1		1											
	0565.602	PVC HANDHOLE (CONCRETE COVER)	EACH	7		7											
	0565.603	1.25" RIGID STEEL CONDUIT	LIN FT	360		360											
	0565.603	4" RIGID STEEL CONDUIT	LIN FT	157		157											
	0565.604	REVISE SIGNAL SYSTEM A	SYSTEM	1		1											
	0565.604	TEMPORARY SIGNAL SYSTEM C	SYSTEM	1		1											
O	2571.502	F&P WILLOW, LAUREL LEAF (2-1/2" B+B)	TREE	11												11	
O	2571.502	F&P OAK, SWAMP WHITE (2-1/2" B+B)	TREE	9												9	
O	2571.503	SERVICEBERRY, ALLEGHENY (36" POTTED)	TREE	5												5	
O	2571.503	PLUM, WILD (6' HIGH B+B)	TREE	20												20	
	0571.601	LANDSCAPE RESTORATION	LUMP SUM	1		1											
M	2573.501	BALE CHECK	EACH	40								16		24			
M	2573.502	SILT FENCE, HEAVY DUTY	LIN FT	1200		1200											
K	2575.501	ROADSIDE SEEDING	ACRE	2.88		1.18										1.7	
K	2575.502	SEED, MIXTURE 100	POUND	68												68	
K	2575.502	SEED, MIXTURE 500	POUND	60		60											
K	2575.505	SODDING, LAWN TYPE	SQ YD	15759		15759											
K	2575.505	SODDING, EROSION TYPE	SQ YD	5346		5311										35	
K	2575.511	MULCH MATERIAL, TYPE I	TON	5.8		2.4										3.4	
K	2575.532	COMMERCIAL FERTILIZER ANALYSIS 10-20-20	POUND	2492		1894										598	
	2580.502	TEMPORARY LANE MARKING	LIN FT	2000		2000											

(1) PARKING LANE AND MASONRY WALL ITEMS

(2) WATERMAIN REPLACEMENT ITEMS

(3) DRAINAGE SPLIT IS 100% S.A.P. 62-625-19 BASED ON THE HYDRAULICS MEMORANDUM DATED DECEMBER 11, 1990

(4) S.A.P. PARTICIPATION LIMITED TO $10.00 PER FOOT FOR THE UNIT PRICE BID FOR THIS ITEM.

THE FOLLOWING STANDARD PLATES APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT:

STANDARD PLATES

ITEM	DESCRIPTION
0005A	SPECIFICATION REFERENCE TO STANDARD PLATES
3000L	REINFORCED CONCRETE PIPE
3006F	GASKET JOINT FOR R.C. PIPE
3040F	CORRUGATED METAL PIPE CULVERT
3100G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3123J	METAL APRON FOR C.S. PIPE
3124B	METAL APRON CONNECTION
3133B	RIPRAP AT RCP OUTLETS
3134B	RIPRAP AT CMP OUTLETS
3145E	CONCRETE PIPE TIES
3221C	CORRUGATED STEEL PIPE COUPLING BAND
4021D	PRECAST CURB OPENING CATCH BASIN
4108E	MANHOLE ADJUSTING RINGS
4110E	COVER CASTING FOR MANHOLE
4180H	MANHOLE OR CATCH BASIN STEP
7020J	CONCRETE CURB
7035J	CONCRETE WALK
7036C	PEDESTRIAN CURB RAMP
7100F	CONCRETE CURB AND GUTTER
7102H	CONCRETE CURB AND GUTTER
8000I	STANDARD BARRICADES
9102C	SODDING AT PIPE CULVERT ENDS
9322J	CHAIN LINK FENCE

SEE SIGNAL PLANS FOR ADDITIONAL STANDARD PLATES

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Q3

Fed. Proj. No.

CONSTRUCTION NOTES

(1) ALL USES OF THE WORD "INCIDENTAL" IN THESE CONSTRUCTION DOCUMENTS SHALL BE CONSTRUED TO MEAN INCIDENTAL WORK FOR WHICH NO DIRECT COMPENSATION WILL BE MADE.

(2) WATER, GAS, ELECTRIC, TELEPHONE, SEWER AND T.V. CABLE LINES SHOWN ON THE PLANS ARE PLOTTED FROM THE BEST INFORMATION AVAILABLE AT THE TIME OF PLAN PREPARATION. BUT MAY NOT REFLECT ACTUAL LOCATIONS OR ELEVATIONS. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL UTILITIES BEFORE COMMENCING CONSTRUCTION. SEE SPECIAL PROVISIONS AND SECTION 1507 IN THE STANDARD SPECIFICATIONS.

(3) THE CONTRACTOR SHALL SCHEDULE HIS CONSTRUCTION OPERATIONS IN COOPERATION WITH UTILITY COMPANIES. SEE SPECIAL PROVISIONS.

(4) THE CONTRACTOR WILL BE REQUIRED TO COORDINATE CONSTRUCTION OF THE ROADWAY AND UTILITY IMPROVEMENTS WITH THE RECONSTRUCTION OF THE SIGNAL SYSTEM AND OVERLAY PROJECT, DONE BY OTHERS, AT THE INTERSECTION OF COUNTY ROAD B AND RICE STREET.

(5) CONTRACTOR SHALL NOTIFY PROPERTY OWNERS 24 HOURS IN ADVANCE OF DISRUPTION TO SANITARY SEWER, WATER AND OTHER SERVICES.

(6) CONTRACTOR SHALL MINIMIZE INTERRUPTION OF SANITARY SEWER AND WATER SERVICE TO ADJACENT PROPERTIES. ANY PROPERTY OUT OF SERVICE LONGER THAN 8 HOURS MUST BE PROVIDED WITH TEMPORARY SERVICE.

(7) ALL WATERMAIN SHUT OFFS SHALL BE DONE BETWEEN 11 PM AND 5 AM.

(8) BLOCKING OF WATERMAIN WILL NOT BE PERMITTED.

(9) THE CONTRACTOR SHALL MAINTAIN A MINIMUM CLEARANCE OF ONE FOOT BETWEEN CROSSINGS OF EXISTING MINOR WATER LINES AND PROPOSED STORM SEWER LINES. WHERE CONFLICTS OCCUR, THE WATER LINE SHALL BE RELOCATED WHERE DIRECTED BY THE ENGINEER.

(10) ALL BYPASS PUMPING OF THE SANITARY SEWER IS INCIDENTAL.

(11) ANY USE OF TRENCH BOX, SHEETING, SHORING OR OTHER METHODS OR MEANS OF CONSTRUCTION NECESSARY TO COMPLETE CONSTRUCTION WITHIN THE CONSTRUCTION LIMITS OR SLOPE EASEMENTS SHOWN IS INCIDENTAL TO COMMON EXCAVATION.

(12) WHEN EXCAVATING ADJACENT TO AN INPLACE PAVEMENT, NO MATERIAL SHALL BE REMOVED FROM INSIDE AN APPROXIMATE 1/2:1 SLOPED LINE DRAWN DOWNWARD AND OUTWARD FROM THE BOTTOM OF THE INPLACE PAVEMENT. THESE EXCAVATIONS SHALL BE BACKFILLED PROMPTLY TO AVOID UNDERMINING.

(13) SOME EXCAVATED MATERIAL ON THIS PROJECT MAY BE UNSUITABLE FOR USE IN NEW CONSTRUCTION AS DETERMINED BY THE ENGINEER. UNSUITABLE MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN UNDESIGNATED WASTE AREA. PAYMENT FOR THIS WORK SHALL BE INCIDENTAL TO EXCAVATION ITEMS.

(14) ANY DEWATERING REQUIRED FOR CONSTRUCTION IS INCIDENTAL TO THE WORK OF THE PROJECT.

(15) **ALL CONCRETE AND BITUMINOUS PAVEMENTS REMOVED ON THE PROJECT SHALL BE HAULED TO AN AGGREGATE RECYCLING PLANT FOR FURTHER PROCESSING INTO REUSABLE MATERIEL.**

(16) WHEN CONNECTION TO EXISTING BITUMINOUS PAVEMENT IS REQUIRED, THE EDGE OF THE EXISTING PAVEMENT SHALL BE CUT TO A NEAT LINE PRIOR TO CONSTRUCTING ASPHALT SURFACING.

(17) SELECT EXCAVATED MATERIALS ON THIS PROJECT SHALL CONSIST OF MATERIAL THAT IS APPROVED BY THE ENGINEER FOR USE IN EMBANKMENT CONSTRUCTION AND SHALL EXCLUDE TOPSOIL, DEBRIS, ORGANIC SOIL, AND OTHER UNSTABLE SOILS.

(18) SELECT GRANULAR BORROW MODIFIED (10%) SHALL MEET THE REQUIREMENTS OF THE SPECIAL PROVISIONS.

(19) COMPACTION ON GRADING ITEMS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH SPEC 2105.3F2 "ORDINARY COMPACTION METHOD". THE BOTTOM OF ALL EXCAVATIONS SHALL BE COMPACTED WITH A MINIMUM OF FOUR PASSES OF AN APPROVED COMPACTING DEVICE.

(20) USE TACK COAT BETWEEN ALL BITUMINOUS PAVEMENT LIFTS.

(21) COMPACTION OF ALL BITUMINOUS ITEMS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE "SPECIFIED DENSITY METHOD".

(22) STRIP AND REUSE TOPSOIL WHERE PRESENT IN AREAS TO BE DISTURBED BY CONSTRUCTION, AS DIRECTED BY THE ENGINEER.

(23) NO TREES SHALL BE REMOVED UNTIL CONTRACTOR HAS VERBALLY BEEN TOLD TO DO SO BY THE ENGINEER. TREES SHALL BE MARKED FOR REMOVAL BY THE ENGINEER. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT TREES DESIGNATED BY THE ENGINEER.

(24) ALL. STREET SIGNS ON THE PROJECT WILL BE REMOVED BY OTHERS.

(25) PERMANENT STRIPING AND LOCATING OF PERMANENT STREET SIGNING WILL BE DONE BY OTHERS.

(26) ELEVATIONS OF SPECIAL DITCH GRADES ARE SHOWN FOR PROPOSED TOP OF TOPSOIL.

(27) INSTALLATION OF SALVAGED FENCE SHALL BE LOCATED AS DIRECTED BY THE ENGINEER.

(28) PEDESTRIAN CURB RAMPS SHALL BE INCIDENTAL TO THE SIDEWALK CONSTRUCTION AND SHALL CONFORM TO THE REQUIREMENTS OF STANDARD PLATE 7036 WHERE APPLICABLE.

(29) LOCATION OF DRIVEWAY ENTRANCES SHALL BE VERIFIED WITH THE ENGINEER PRIOR TO CONSTRUCTION.

(30) NEW SANITARY SEWER AND WATER SERVICE LOCATIONS ON THE PLANS SHALL BE VERIFIED BY THE ENGINEER PRIOR TO CONSTRUCTION. SERVICE LOCATIONS MAY BE ADJUSTED AS REQUESTED BY THE ENGINEER.

EARTHWORK SUMMARY (A) (1)

STATION	EXCAVATION (EV)						EMBANKMENT (CV)				BORROW (LV)
	STRUCT. EXC. CLASS U (2)	MUCK (6)	COMMON (2)	COMMON (PIT) (4)	SUBGRADE (2)	TOPSOIL (3)	GRADING (5)	GRADING (PIT) (4)	SELECT GRANULAR MOD. 10%	TOPSOIL	SELECT GRANULAR MOD. 10% (8)
	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.
2+00 TO 13+00	4760	3280	5138		1629	802	2561	3039	5046	409	7569
13+00 TO 48+00			7518		11801	2425	3718	3622	8942	1069	13413
SEDIMENTATION POND (44+00 TO 46+65)				11336		1220				589	
48+00 TO 53+99.47			55		6	742	3354	1792	2038	348	3057
54+47.99 TO 67+50			7361	9457	2767	1894	5661	4318	4058	1080	6087
CONC SIDEWALK (2+00 TO 53+99.47)									489		734
TOTALS	4760	3280	20072	20793	16203	7083	15294	12771	20573	3495	30860

ASSUMED MATERIAL BREAKDOWN (7)(8):

GRADING MATERIAL:

AVAILABLE - 20,072 CY (COMMON) + 16,203 CY (SUBGRADE) + 4,760 CY (CLASS U) = 41,035 CY
REQUIRED - (15,294 CY)(1.3) = 19,882 CY

TOTAL = 21,153 CY EXCESS (6)

PIT GRADING MATERIAL:

AVAILABLE - = **20,793 CY**
REQUIRED - (12,771 CY + 3,039 CY X 0.50)(1.3) = 18,578 CY

TOTAL = **2,215** CY EXCESS (6)

(3,039 CY X 0.50) — ADJUSTMENT OF BACKFILL IN MUCK AREA

TOPSOIL:

AVAILABLE - = 7,083 CY
REQUIRED - (3,495 CY)(1.3) — 1000 CY (TOPSOIL BORROW) = 3,544 CY

TOTAL = 3,539 CY EXCESS (6)

(1) SIDE STREET QUANTITIES ARE INCLUDED IN THE ADJACENT MAINLINE STATION SECTIONS.

(2) THIS MATERIAL SHALL BE USED AS FILL BEHIND THE CURB AND GUTTER AS DIRECTED BY THE ENGINEER. ANY EXCESS MATERIAL SHALL BE HAULED OFF THE PROJECT LIMITS.

(3) TOPSOIL EXCAVATION SHALL BE INCIDENTAL AND SHALL BE INCLUDED IN ITEM 2105.501, COMMON EXCAVATION, FOR PAYMENT.

(4) THE PLAN IDENTIFIES THIS MATERIAL AS BEING OBTAINED FROM **TWO LOCATIONS: 1) SEDIMENTATION POND EXC. 2) EXC. (OUTSIDE OF EX. R.O.W.) OF SIDEHILL NORTH AND EAST OF CO. RD. B / RICE ST. INTERSECTION. ALL SUITABLE MATERIAL FROM THESE AREAS SHALL BE INCORPORATED UNDER THE ROADWAY SECTION AS SHOWN IN THE TYPICAL SECTIONS.**

(5) MATERIAL USED TO FILL THE RESIDENTIAL YARD AT STA. 43+50 AND ERODED AREA AT STA. 66+75 SHALL BE INCIDENTAL.

(6) ALL EXCESS MATERIAL TO BE DISPOSED OF OUTSIDE OF THE PROJECT LIMITS IN ACCORDANCE WITH A DISPOSAL PLAN APPROVED BY THE ENGINEER.

(7) SHRINKAGE FACTOR OF 130% USED FOR NORMAL GRADING (EV TO CV).

(8) ADJUSTMENT FACTOR OF 150% USED FOR TRUCK HAUL BORROW (LV TO CV).

CONSTRUCTION NOTES AND EARTHWORK SUMMARY

BEARTH

Fed. Proj. No.

REMOVALS AND SALVAGES (B)

MAINLINE STATION	REM. BIT. PVMT. (3)	REM. BIT. DRWY PVMT.	REM. CONC. DRWY PVMT.	REM. BIT. WALK	REM. CONC. WALK	REM. CURB AND GUTTER	REM. CONC. CURB	REM. MH. OR CB. (1)	REM. PIPE SEWER (1)	REM. PIPE CULVERT (1)	REM. INP. RETAINING WALL	SALV. WOODEN FENCE	SALV. CHAIN LINK FENCE	SALV. SIGN (2)	SAW BIT. PVMT.	SAW CONC. PVMT.	REMARKS
	SQ. YD.	SQ. YD.	SQ. YD.	SQ. FT.	SQ. FT.	LIN. FT.	LIN. FT.	EACH	LIN. FT.	LIN. FT.	SQ. FT.	LIN. FT.	LIN. FT.	EACH	LIN. FT.	LIN. FT.	
2+00 TO 3+00	707	60			557		75	1	14						200	6	
3+00 TO 4+00	439	372		194	326	55	53					46		(4) 1	130	5	
4+00 TO 5+00	387	447	45	435											70	10	
5+00 TO 6+00	382	69		480			42							(4) 1	23		
6+00 TO 7+00	372	214		517			42								41		
7+00 TO 8+00	378			600													
8+00 TO 9+00	378			600													
9+00 TO 10+00	378			627													
10+00 TO 11+00	378	124		692		50	43								30		
11+00 TO 12+00	505	82		570		55			32						18		
12+00 TO 13+00	577			646	36	49		3	85						30		INCLUDES SANDHURST DRIVE
13+00 TO 14+00	378			700					53								
14+00 TO 15+00	367							1	29								
15+00 TO 16+00	378	167								32		20					
16+00 TO 17+00	486							1	93						8		INCLUDES PORTION OF COHANSEY BLVD.
17+00 TO 18+00	689					70		6	120						55		INCLUDES PORTION OF COHANSEY BLVD.
18+00 TO 19+00	378	34													11		
19+00 TO 20+00	557	73				48									40		INCLUDES PORTION OF BOSSARD DRIVE
20+00 TO 21+00	465					48									10		INCLUDES PORTION OF BOSSARD DRIVE
21+00 TO 22+00	367	89								14					32		
22+00 TO 23+00	358	16								11							
23+00 TO 24+00	516					33									29		INCLUDES IRENE STREET
24+00 TO 25+00	368	156													50		
25+00 TO 26+00	432	111													38		
26+00 TO 27+00	344	34													17		
27+00 TO 28+00	462					89									9		INCLUDES PORTION OF WESTERN AVENUE
28+00 TO 29+00	799					88									50		INCLUDES PORTION OF WESTERN AVENUE
29+00 TO 30+00	356	75													26		
30+00 TO 31+00	372	101	7								20				24	18	
31+00 TO 32+00	535	43													30		INCLUDES HAND AVENUE
32+00 TO 33+00	399	72	17												12	22	
33+00 TO 34+00	628					93				46					30		INCLUDES FARRINGTON STREET
34+00 TO 35+00	344									20							
35+00 TO 36+00	348	34															
36+00 TO 37+00	344	7								6							
37+00 TO 38+00	344	30								53			35		14		
38+00 TO 39+00	344	94									52		100		20		
39+00 TO 40+00	356	64											108		22		
40+00 TO 41+00	344	8											82				
41+00 TO 42+00	356	99									101				21		
42+00 TO 43+00	643														29		INCLUDES WILLIAM STREET
43+00 TO 44+00	344												122				
44+00 TO 45+00	379	44								20			108		13		
45+00 TO 46+00	344	8								4			100				
46+00 TO 47+00	344	63								80			414		12		
47+00 TO 48+00	362	87											100		30		
48+00 TO 49+00	350									92			100				
49+00 TO 50+00	322									30			106				
50+00 TO 51+00	322	69											100		10		
51+00 TO 52+00	322	78											100		9		
52+00 TO 53+00	333	94											100		13		
53+00 TO 54+00	476	57											44		144		
54+00 TO 55+00	491	36					35							(5) 1	197		
55+00 TO 56+00	492	370					60						100		100		
56+00 TO 57+00	517	18				3	26						103	(5) 1	7		
57+00 TO 58+00	452	300				181							102		28		
58+00 TO 59+00	374												101				
59+00 TO 60+00	314									25			104				
60+00 TO 61+00	344												100				
61+00 TO 62+00	344												100				
62+00 TO 63+00	387												100				
63+00 TO 64+00	470							1	156				100				
64+00 TO 65+00	305	462				253		2	105				180		28		
65+00 TO 66+00	305	13				7			50				100				
66+00 TO 67+00	289												35				
67+00 TO 67+50	146														30		
TOTALS	27066	4374	69	6061	919	1122	376	15	737	433	173	66	2944	4	1740	61	

CLEARING AND GRUBBING (C)

STATION	LOCATION LT	LOCATION RT	DESCRIPTION	CLEAR TREE	CLEAR ACRE	GRUB TREE	GRUB ACRE
3+00 TO 4+00		X	2-3"	2		2	
4+00 TO 5+00	X		1-6"	1		1	
6+00 TO 7+00	X		1-12"	1		1	
7+00 TO 8+00	X		TWIN 12", TRIPLE 12"	5		2	
8+00 TO 9+00	X		TWIN 10"	2		1	
9+00 TO 10+00	X		TRIPLE 12", 1-28"	4		2	
10+00 TO 11+00	X		TWIN 24"	2		1	
12+00 TO 13+00	X		1-6"	1		1	
15+00 TO 16+00		X	1-10"	1		1	
19+00 TO 20+00		X	1-10"	1		1	
23+00 TO 24+00	X				0.01		0.01
24+00 TO 25+00	X				0.01		0.01
26+00 TO 27+00	X		1-5"	1		1	
31+00 TO 32+00	X		1-14"	1		1	
34+00 TO 35+00	X				0.03		0.03
35+00 TO 36+00	X		1-3"	1		1	
36+00 TO 37+00	X		1-12"	1		1	
40+00 TO 41+00	X		1-4"	1		1	
44+00 TO 45+00	X		29 VARIOUS SIZES	29		29	
45+00 TO 46+00	X		30 VARIOUS SIZES	30		30	
46+00 TO 47+00	X		1-6"	1	0.03	1	0.03
47+00 TO 48+00	X				0.03		0.03
48+00 TO 49+00	X				0.05		0.05
49+00 TO 50+00	X	X	1-3", 1-4", 2-6", 2-8", 2-10"	8	0.01	8	0.01
50+00 TO 51+00	X	X	1-14"	1	0.01	1	0.01
51+00 TO 52+00	X	X	1-8"	1	0.03	1	0.03
52+00 TO 53+00	X	X	1-4"	1	0.04	1	0.04
53+00 TO 54+00	X				0.02		0.02
55+00 TO 56+00	X	X	1-4", 1-6", 2-14"	4	0.03	4	0.03
56+00 TO 57+00	X		3-14"	3	0.05	3	0.05
57+00 TO 58+00	X				0.06		0.06
58+00 TO 59+00	X				0.06		0.06
59+00 TO 60+00	X		1-48"		0.01		0.01
60+00 TO 61+00	X		1-20"		0.06		0.06
61+00 TO 62+00	X				0.07		0.07
62+00 TO 63+00	X				0.03		0.03
63+00 TO 64+00	X				0.03		0.03
64+00 TO 65+00	X	X			0.04		0.04
65+00 TO 66+00	X				0.08		0.08
66+00 TO 67+00	X				0.01		0.01
TOTALS				103	0.80	96	0.80

NOTES:

1.) INCLUDES ITEMS FOR INPLACE STORM SEWER SYSTEM ONLY.
2.) SEE SPECIAL PROVISIONS FOR REPLACEMENT OF SIGNS.
3.) REMOVAL OF BITUMINOUS CURB SHALL BE INCIDENTAL TO BIT. PAVEMENT REMOVAL.
4.) TYPE 1 SIGN (SEE SPECIAL PROVISIONS)
5.) TYPE 2 SIGN (SEE SPECIAL PROVISIONS)

REMOVALS, SALVAGES, CLEARING, AND GRUBBING TABULATION

BREMOVAL

Fed. Proj. No.

STORM SEWER (D)

STATION	LOCATION	STRUCTURE NO.	CONSTRUCT C.B. AND M.H.				PIPE SEWERS						REMARKS
			DESIGN	TOP OF CASTING ELEV.	OUTLET ELEV.	PAY HEIGHT (6) LIN. FT.	DIAMETER	R.C. PIPE SEWER LENGTH LIN. FT.	PIPE CLASS	R.C. PIPE APRON EACH	DRAINS TO STRUC. NO.	GRADE %	INVERT ELEV.	
2+67	25' RT	CBA1	LP1	890.94	884.50	6.44	15	36	V		EX MH	2.00	883.78	EX MH STA 2+35
2+90	25' LT	CBA2	LP1	891.53	886.50	5.03	15	66	V		EX MH	1.00	885.84	EX MH STA 2+35
8+50	25' LT	CBA3	LP1	883.81	878.78	5.03	15	39	V		STMHA1	1.00	878.39	
8+50	25' RT	CBA4	LP1	883.81	875.50	8.31	15	15	V		STMHA1	1.00	875.35	
8+50	12' RT	STMHA1	4' DIA	883.44	875.25	8.19	15	217	V		STMHB1	1.18	872.69	
10+59	40' LT	STMHB6	4' DIA	879.00	871.00	8.00	15	54	V		STMHB1	2.56	869.62	128 SF INSL, DITCH GRATE, NEENAH R4342 CASTING
10+67	12' RT	STMHB1	4' DIA	878.53	869.36	9.17	18	104	V		STMHB2	1.00	868.32	
11+71	25' LT	CBB2	LP1	878.01	869.70	8.31	18	39	V		STMHB2	2.00	868.92	128 SF INSL, DOUBLE CATCH BASIN (9)
11+71	12' RT	STMHB2	4' DIA	877.64	867.57	10.07	24	15	III		CBB1	2.00	867.27	
11+71	25' RT	CBB1	LP1	878.01	866.27	11.74	24	26	III		STMHB3	2.12	865.72	64 SF INSL
12+88	17' LT	CBB3	LP1	878.69	874.16	5.03	15	52	V		EX MH	1.00	873.64	EX MH STA 12+36
12+36	3' LT	EX MH					48	60	III		STMHB3	1.08	864.50	
11+95	40' RT	STMHB3	6' DIA	876.50	864.46	12.04								CONSTRUCT OVER EX 54" CMP
14+70	50' LT	RCP APRON					24	54	III	1-24"	EX MH	2.00	876.65	EX MH STA 15+03, 64 SF INSL
14+75	51' RT	RCP APRON					15	60	V	1-15"	EX MH	2.00	874.68	EX MH STA 15+03
16+91	50' RT	CBB4	LP1	892.23	887.20	5.03	15	40	V		CBB5	1.00	886.80	
17+28	50' RT	CBB5	LP1	892.23	886.55	5.68	15	21	V		STMHB4	1.00	886.34	
17+60	25' RT	CBB7	LP1	893.74	888.71	5.03	15	32	V		STMHB4	1.00	886.90	
17+28	25' RT	STMHB4	4' DIA	892.80	881.50	11.30	18	28	V		STMHB5	1.00	881.22	
17+60	17' LT	CBB6	LP1	893.90	888.87	5.03	15	38	V		STMHB5	3.82	887.42	
17+28	℄	STMHB5	4' DIA	892.10	880.50	11.60	24	62	III		EX MH	2.42	879.00	EX MH STA 16+67
19+78	50' LT	CBC1	LP1	905.78	901.29	4.49	15	38	V		CBC2	0.50	901.10	
20+16	50' LT	CBC2	LP1	905.78	901.00	4.78	15	50	V		STMHC1	1.00	900.50	64 SF INSL
20+16	25' RT	CBC3	LP1	906.09	900.00	6.09	15	28	V		STMHC1	1.00	899.73	
20+48	17' LT	CBC4	LP1	907.86	902.83	5.03	15	38	V		STMHC1	4.00	901.31	
20+16	℄	STMHC1	5' DIA	906.02	899.00	6.02	21	288	III		STMHB5	4.20	886.90	
22+98	50' LT	CBC5	LP1	923.75	918.72	5.03	15	38	V		CBC6	1.00	918.34	
23+36	50' LT	CBC6	LP1	923.75	918.09	5.66	18	50	V		STMHC2	2.00	917.09	
23+36	25' RT	CBC7	LP1	924.78	917.00	7.78	15	28	V		STMHC2	1.00	916.72	
23+65	17' LT	CBC8	LP1	926.77	921.74	5.03	15	36	V		STMHC2	5.00	919.94	
23+36	℄	STMHC2	4' DIA	924.75	916.22	8.53	18	320	V		STMHC1	4.72	901.12	
27+91	50' LT	CBD1	LP1	942.16	937.13	5.05	15	36	V		CBD2	1.00	936.77	
28+27	50' LT	CBD2	LP1	942.16	936.50	5.66	15	50	V		STMHD1	2.00	935.50	64 SF INSL
28+45	℄	STMHD1	4' DIA	940.89	935.40	5.49	15	230	V		STMHD2	1.80	931.26	
30+55	17' LT	CBD3	LP1	938.70	933.67	5.03	15	32	V		STMHD2	1.00	933.35	64 SF INSL
30+75	25' RT	CBD4	LP1	938.05	931.40	6.65	15	27	V		STMHD2	1.00	931.13	
30+75	℄	STMHD2	4' DIA	937.90	931.01	6.89	15	215	V		STMHD3	2.10	926.49	
32+90	17' LT	CBD5	LP1	933.44	928.90	4.54	15	21	V		STMHD3	1.00	928.69	64 SF INSL
32+90	25' RT	CBD6	LP1	933.40	927.00	6.40	15	27	V		STMHD3	1.00	926.73	
32+90	℄	STMHD3	4' DIA	933.20	926.25	6.95	18	320	V		STMHE1	1.25	922.25	
36+10	17' LT	CBE1	LP1	929.48	925.51	5.03	15	19	V		STMHE1	1.00	925.32	
36+10	25' RT	CBE2	LP1	929.32	922.50	6.82	15	27	V		STMHE1	1.00	922.21	
36+10	℄	STMHE1	4' DIA	929.20	922.15	7.05	18	300	V		STMHE2	2.00	916.15	
39+05	25' RT	CBE3	LP1	923.72	916.00	7.72	15	27	V		STMHE2	1.00	915.73	
39+10	℄	STMHE2	4' DIA	923.40	915.33	8.07	18	19	V		CBE6	2.20	914.91	64 SF INSL
39+12	17' LT	CBE6	LP1	923.70	914.71	8.99	21	330	III		EX MH	1.60	909.43	EX MH STA 42+42 27' LT
41+85	25' RT	CBE4	LP1	916.23	911.20	5.03	15	60	V		EX MH	1.00	910.60	EX MH STA 42+42 40' RT
42+27	25' RT	CBE5	LP1	915.63	911.50	4.13	15	15	V		EX MH	1.00	911.35	EX MH STA 42+42 27' LT
46+45	25' RT	CBF1	LP1	911.54	905.48	6.06	18	48	V		CBF6	1.00	905.00	DOUBLE CATCH BASIN (9)
46+45	17' LT	CBF6	LP1	911.70	903.69	8.01	24	88	III	1-24"	FES	0.50	903.25	6 CY RIPRAP
48+30	43' RT	RCP APRON			909.50		18	60	V	1-18"	STMHF1	1.00	908.90	
48+30	23' LT	STMHF1	4' DIA	913.90	908.70	5.20	18	185	V		CBF6	2.00	905.00	
48+48	60' LT	RCP APRON			902.13		24	90	III	1-24"	EX MH	0.40	901.77	EX MH STA 48+48 36' RT
50+00	25' LT	CBF2	LP1	920.03	914.30	5.73	15	170	V		STMHF1	3.06	909.09	
50+00	25' RT	CBF3	LP1	919.94	914.90	5.04	15	50	V		CBF2	1.00	914.41	
51+10	43' RT	CBF4	SD	920.00	915.99	4.01	15	110	V		CBF3	0.90	915.00	
51+95	43' RT	CBF5	SD	924.00	920.00	4.00	15	85	V		CBF4	4.60	916.09	
54+95	25' RT	CBG1	LP1	938.13	933.10	5.03	15	72	V		CBG2	0.64	932.64	
55+15	37' LT	CBG2	LP1	937.98	932.53	5.45	15	231	V		STMHG1	0.50	931.38	
57+47	47' LT	STMHG1	4' DIA	938.31	931.28	7.03	15	305	V		CBG4	2.04	925.06	
60+50	22' RT	CBG3	LP1	929.04	924.01	5.03	15	48	V		CBG4	1.00	923.53	
60+50	22' LT	CBG4	LP1	929.09	923.00	6.09	15	250	V		STMHH1	4.00	913.00	
63+00	26' LT	STMHH1	4' DIA	917.09	912.46	4.63	18	210	V		CBH4	2.08	908.09	
64+50	45' RT	CBH1	BOX	914.63	910.63	4.00	15	30	V		CBH2	0.50	910.48	
64+80	45' RT	CBH2	BOX	914.63	910.38	4.25	15	38	V		STMHH2	15.48	904.50	
65+10	22' RT	CBH3	LP1	915.07	910.04	5.03	15	24	V		STMHH2	23.08	904.50	
65+10	22' LT	CBH4	LP1	915.07	908.00	7.07	21	44	III	1-21"	FES	2.00	907.00	8 CY RIPRAP, 64 SF INSL
65+60	45' LT	RCP APRON			907.00		18(10)	100	V	1-18"	STMHH2	7.51	899.04	64 SF INSL
65+18	50' RT	STMHH2	5' DIA	908.50	898.90	9.60	24(10)	36	III	1-24"	FES	0.95	898.50	8 CY RIPRAP, DITCH GRATE, NEENAH R4342 CASTING
POND		CMP APRON			902.00		18 (5)	46		1-18"(11)	STMHP1	1.02	901.55	
		STMHP1	4' DIA	907.50	901.45	6.05	18 (5)	32		1-18"(11)	FES	1.00	901.13	SLIDE GATE IN STMHP 1, 5 CY RIPRAP
TOTAL			66 (1)(7)			412.28		6079 (2)		10 (3)(4)				

4" PE PERFORATED PIPE DRAIN (E)

DRAIN FROM STRUC./STA.	DRAIN TO STRUC./STA.	LOCATION LT./RT.	QUANTITY LIN. FT.
4+41	CBA2	LT	151
4+41	CBA1	RT	174
4+41	CBA3	LT	409
4+41	CBA4	RT	409
CBA3	CBB2	LT	321
CBA4	CBB1	RT	321
CBB6	CBB3	LT	472
CBB3	CBB2	LT	117
CBB7	CBB1	RT	589
CBC4	CBB6	LT	288
CBC3	CBB7	RT	1256
CBC8	CBC4	LT	317
CBC7	CBC3	RT	320
28+53	CBC8	LT	488
28+53	CBC7	RT	517
28+53	CBD3	LT	202
28+53	CBD4	RT	222
CBD3	CBD5	LT	235
CBD4	CBD6	RT	215
CBD5	CBE1	LT	320
CBD6	CBE2	RT	320
CBE1	CBE6	LT	302
CBE2	CBE3	RT	295
CBE6	CBE5	LT	315
CBE3	CBE4	RT	280
CBE5	CBF6	LT	418
CBE4	CBF1	RT	460
48+50	CBF6	LT	205
48+50	CBF1	RT	205
WALL C	CBF4	RT	60
WALL D	CBF5	RT	90
56+45	CBG2	LT	130
56+45	CBG1	RT	150
56+45	CBG4	LT	405
56+45	CBG3	RT	405
CBG3	CBH3	RT	460
TOTALS			10843

NOTES:

(1) TOTALS INCLUDE:
- 43 - CB DES LPI
- 2 - CB DES BOX
- 2 - CB DES SD
- 16 - 48" MANHOLES
- 2 - 60" MANHOLES (1 - STORM SYSTEM, 1 - CULVERT SYSTEM)
- 1 - 72" MANHOLE

(2) TOTALS INCLUDE:
- 3125' - 15" RCP
- 1683' - 18" RCP
- 662 - 21" RCP
- 335' - 24" RCP
- 60' - 48" RCP
- 78' - 18" CS PIPE
- 100' - 18" RCP (CULVERT SYSTEM)
- 36' - 24" RCP (CULVERT SYSTEM)

(3) TOTALS INCLUDE:
- 1 - 15" RC PIPE APRON
- 2 - 18" RC PIPE APRON (1 - STORM SYSTEM, 1 - CULVERT SYSTEM)
- 1 - 21" RC PIPE APRON
- 4 - 24" RC PIPE APRON (3 - STORM SYSTEM, 1 - CULVERT SYSTEM)
- 2 - 18" CM PIPE APRON

(4) TRASH GUARDS AND PIPE TIES SHALL BE INCIDENTAL TO THE PIPE APRON.

(5) 18" CS PIPE SEWER.

(6) FOR INFORMATION ONLY.

(7) SEE SPECIAL PROVISIONS FOR TYPES OF CASTING ASSEMBLIES TO BE USED WITH EACH STRUCTURE. THE CASTING ASSEMBLIES SHALL BE INCIDENTAL TO THE INDIVIDUAL STRUCTURES.

(8) PAYMENT FOR INSULATION SHALL BE COMPUTED IN SQUARE YARDS. THIS TABULATION INCLUDES 92 SQ YDS OF INSULATION.

(9) DOUBLE CATCH BASIN SHALL BE PAID FOR AS 2 CATCH BASINS.

(10) INCLUDED AS CULVERT IN PAY ITEMS.

(11) 18" CM PIPE APRON

STORM SEWER AND P.E. PIPE DRAIN TABULATION

S.A.P. 62-625-19 28-113 Sheet No. 7 of 103 Sheets

BDRAIN

Fed. Proj. No.

SUMMARY OF WATERMAIN QUANTITIES (F)

WATERMAIN ITEM	UNIT	SHEET 34			SHEET 35			SHEET 36			SHEET 37			SHEET 38			SHEET 39			SHEET 40			TOTALS			
		100% CO.	50% CITY 50% CO	100% CITY	100% CO.	50% CITY 50% CO	100% CITY	100% CO.	50% CITY 50% CO	100% CITY	100% CO.	50% CITY 50% CO	100% CITY	100% CO.	50% CITY 50% CO	100% CITY	100% CO.	50% CITY 50% CO	100% CITY	100% CO.	50% CITY 50% CO	100% CITY	100% CO.	50% CITY 50% CO	100% CITY	PROJECT
REMOVE WATERMAIN	LF	540			400						325			215			150						1630			1630
REMOVE MANHOLE	EA										2												2			2
REMOVE CURB BOX	EA						2																		2	2
ABANDON SERVICE	EA			1			1																		2	2
CONNECT TO EXISTING WATERMAIN	EA	1			1						4			1									7			7
OFFSET WATERMAIN	EA							2															2			2
AIR VENT	EA												1			1									2	2
HYDRANT 8'-6" BURY	EA			1																					1	1
SALV/REINSTALL HYDRANT	EA	2																		1			3			3
ADJUST CURB STOP	EA	5			4			16			12			13			5						55			55
6" GATE VALVE AND BOX	EA			3			1									1			1					6	6
8" GATE VALVE AND BOX	EA												1												1	1
12" BUTTERFLY VALVE & BOX	EA												1												1	1
16" BUTTERFLY VALVE & BOX	EA			1			1						2												4	4
3/4" CORPORATION STOP	LF		3									2	1											5	1	6
1-1/2" CORPORATION STOP	EA		2																					2		2
2" CORPORATION STOP	EA					1																		1		1
6" DIP WATERMAIN	LF		31	19										215				150		10			10	396	19	425
8" DIP WATERMAIN	LF											60												60		60
12" DIP WATERMAIN	LF											125												125		125
16" DIP WATERMAIN	LF		550			410			40			140												1140		1140
3/4" COPPER SERVICE	LF											10	53											10	53	63
1-1/2" COPPER SERVICE	EA		30																					30		30
2" COPPER SERVICE	LF					15																		15		15
HYDRANT EXTENSION	LF				2												4			4			10			10
2" POLYSTYRENE INSULATION (1)	SF	920									5760			200			1192						8072			8072
DIP MJ FITTINGS	LB		1805	588		1745			3496			2963			24			222		24			24	10255	588	10867
3/4" CURB STOP AND BOX	EA												1												1	1
12"X6" TEE & GV (WET TAP)	EA																			1			1			1

(1) PAYMENT FOR INSULATION SHALL BE COMPUTED IN SQUARE YARDS.
THIS TABULATION CONTAINS 897 SQ YD OF INSULATION.

SUMMARY OF SANITARY SEWER QUANTITIES (G)

SANITARY SEWER	UNIT	EX. MH TO MH 1	MH 1 TO MH 2	MH 2 TO MH 3	MH 3 TO MH 4	MH 4 TO MH 5	MH 5 TO MH 6	MH 6 TO STA. 17+50	SHEET 36	SHEET 37	SHEET 38	SHEET 39	TOTALS
REMOVE EXISTING MANHOLE	EA	1	1	1			1						4
10" PVC PIPE SEWER 0'-10' DEPTH	LF		110	75	240	17	40	55					537
10" PVC PIPE SEWER 10'-12' DEPTH	LF		70										70
10" PVC PIPE SEWER 12'-14' DEPTH	LF		60										60
10" PVC PIPE SEWER 14'-16' DEPTH	LF		70										70
10" PVC PIPE SEWER 16'-18' DEPTH	LF		60										60
10" PVC PIPE SEWER 18'-20' DEPTH	LF	95	20										115
10" PVC PIPE SEWER OVER 20' DEPTH	LF	235											235
8" DIP CL 50 PIPE SEWER	LF										10	50	60
CONNECT TO EXISTING SANITARY MANHOLE	EA	1							1	1		1	4
CONNECT TO EXISTING SANITARY SEWER	EA							1			1	2	4
CONNECT TO EXISTING SAN SEWER SERVICE	EA	4	3	1			2		5 (2)	5 (2)	5 (2)		25
CONNECT TO EXISTING TEE	EA										1	1	2
REPAIR WYE	EA								1	1			2
CONSTRUCT MANHOLE 0'-10' DEPTH	EA	1	1	1	1	1	1						6
CONSTRUCT DROP MANHOLE 0'-10' DEPTH	EA											1	1
10"X4" PVC WYE	EA	2	1										3
10"X6" PVC WYE	EA	2	1										3
CLEANOUT	EA		1	1			2						4
8"X4" SADDLE	EA											1	1
REPAIR SANITARY SEWER	LF								50	15	10	10	85
CONSTRUCT EXTRA DEPTH MH >10' DEPTH	LF	10										4	14
4" PVC SANITARY SERVICE PIPE	LF	72	39						200 (2)	200 (2)	200 (2)		711
6" PVC SANITARY SERVICE PIPE	LF	80	74	37			86						277
ROCK TRENCH STABILIZATION	LF	330	390										720
2" POLYSTYRENE INSULATION (1)	SF				680								680

(1) PAYMENT FOR INSULATION SHALL BE COMPUTED IN SQUARE YARDS.
THIS TABULATION CONTAINS 76 SQ YD OF INSULATION.

(2) LOCATION OF SANITARY SEWER SERVICE REPLACEMENTS TO BE FURNISHED BY THE CITY OF ROSEVILLE.

EX. M.H. & WATER VALVE BOX ADJUSTMENT (H)

TYPE	STATION	LOCATION	RECONST. MANHOLE	ADJUST FRAME & RING CASTING	ADJUST VALVE BOX-WATER
			LIN. FT.	EACH	EACH
STM SEW	2+35	8' RT		1	
WATER	11+86	23' RT			1
STM SEW	12+37	4' LT	1.1		
WATER	13+35	36' LT			1
SAN SEW	13+46	12' LT		1	
STM SEW	13+74	4' LT		1	
STM SEW	15+05	4' LT		1	
STM SEW	16+67	4' LT		1	
WATER	16+94	36' LT			1
WATER	16+96	39' RT			1
SAN SEW	17+05	23' RT		1	
SAN SEW	17+15	14' LT	-1.1		
WATER	17+25	38' LT			1
STM SEW	17+33	4' LT		1	
SAN SEW	19+35	27' RT		1	
WATER	19+84	37' LT			1
SAN SEW	19+95	29' RT	-1.5		
SAN SEW	21+06	29' RT	1.2		
WATER	23+06	39' LT			1
SAN SEW	23+15	27' RT		1	
SAN SEW	24+26	25' RT	2.1		
SAN SEW	24+95	11' LT	1.1		
SAN SEW	24+95	26' RT	1.8		
SAN SEW	26+98	27' RT		1	
GAS	27+68	23' RT			1
GAS	28+25	37' RT			1
GAS	28+25	39' RT			1
SAN SEW	28+84	26' RT	-1.4		
SAN SEW	31+05	25' RT		1	
WATER	31+15	47' RT			1
GAS	31+36	43' RT			1
GAS	31+36	39' RT			1
GAS	33+39	23' RT			1
SAN SEW	33+48	23' RT		1	
GAS	35+74	26' RT			1
SAN SEW	36+25	27' RT		1	
WATER	37+27	20' LT			1
SAN SEW	39+31	25' RT		1	
WATER	42+21	47' RT			1
SAN SEW	42+29	26' RT		1	
STM SEW	42+40	27' LT		1	
STM SEW	42+40	40' RT		1	
GAS	42+41	20' RT			1
SAN SEW	44+23	27' RT		1	
STM SEW	44+40	27' LT		1	
SAN SEW	48+20	23' RT	2.3		
STM SEW	48+47	35' RT	4.6		
SAN SEW	52+11	26' RT	5.3		
WATER	53+10	13' LT			1
SAN SEW	53+27	25' RT	3.4		
GAS	53+66	9' LT			1
GAS	53+72	6' LT			1
GAS	53+81	11' LT			1
GAS	54+97	23' RT			1
WATER	64+95	60' RT			1
WATER	65+00	23' LT			1
TOTALS			26.9	19	25

(+) DENOTES PROPOSED RIM IS HIGHER THAN EXISTING RIM ELEVATION.
(-) DENOTES PROPOSED RIM IS LOWER THAN EXISTING RIM ELEVATION.

WATERMAIN, SANITARY SEWER, AND ADJUSTMENT TABULATION

BWATER

Fed. Proj. No.

CONCRETE SUMMARY (I) (1)

STATION	DESCRIPTION	CURB AND GUTTER (2)					4" CONC. WALK (3)	DRIVEWAY	
		B624	B618	B612	B6	D418		6"	8"
		LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	SQ. FT.	SQ. YD.	SQ. YD.
2+00 TO 9+00	MAINLINE	1387					3446		
2+68	DRIVEWAY LT				42				11.0
3+31	DRIVEWAY RT			42					40.1
3+33	DRIVEWAY LT				69				13.8
3+71	DRIVEWAY LT				14				11.1
4+60	DRIVEWAY RT							21.3	
4+62	DRIVEWAY LT				56				18.9
4+87	DRIVEWAY RT							51.0	
5+85	DRIVEWAY RT							23.3	
6+10	DRIVEWAY LT				82				18.9
6+57	DRIVEWAY RT							20.7	
9+00 TO 18+00	MAINLINE	1845				46	4819		
10+78	DRIVEWAY LT				30				16.2
11+05	DRIVEWAY RT			50					42.5
15+18	DRIVEWAY RT							23.0	
15+64	DRIVEWAY LT							33.7	
16+51	DRIVEWAY RT							21.9	
18+00 TO 27+00	MAINLINE	1860	62				4488		
18+26	DRIVEWAY RT							15.1	
18+46	DRIVEWAY RT							15.1	
19+26	DRIVEWAY RT							15.1	
19+58	DRIVEWAY RT							15.1	
20+43	DRIVEWAY RT							15.1	
20+97	DRIVEWAY RT							15.1	
21+75	DRIVEWAY LT							8.9	
21+96	DRIVEWAY RT							17.3	
23+16	DRIVEWAY RT							15.1	
24+15	DRIVEWAY RT							19.6	
24+23	DRIVEWAY LT							9.6	
24+75	DRIVEWAY LT							5.8	
25+07	DRIVEWAY LT							8.9	
25+59	DRIVEWAY RT							21.8	
26+42	DRIVEWAY LT							8.9	
26+87	DRIVEWAY RT							19.6	
27+00 TO 36+00	MAINLINE	1858	66			112	4069		
27+25	DRIVEWAY RT							19.6	
29+89	DRIVEWAY RT							26.2	
29+98	DRIVEWAY LT							8.9	
30+74	DRIVEWAY LT							32.4	
30+93	DRIVEWAY LT							8.7	
32+31	DRIVEWAY LT							11.1	
32+37	DRIVEWAY RT							15.1	
32+53	DRIVEWAY LT							23.2	
33+30	DRIVEWAY RT							19.6	
33+89	DRIVEWAY RT							21.8	
34+45	DRIVEWAY RT							15.1	
35+08	DRIVEWAY LT							5.8	
35+31	DRIVEWAY RT							28.0	
35+89	DRIVEWAY RT							15.1	
36+00 TO 45+00	MAINLINE	1810					4800		
36+51	DRIVEWAY LT							5.8	
36+62	DRIVEWAY RT							15.1	
37+04	DRIVEWAY RT							17.3	
37+16	DRIVEWAY LT							5.8	
37+73	DRIVEWAY LT							5.8	
38+35	DRIVEWAY LT							5.6	
38+50	DRIVEWAY LT							5.6	
39+25	DRIVEWAY RT							15.1	
39+33	DRIVEWAY LT							5.8	
39+90	DRIVEWAY LT							11.6	
41+15	DRIVEWAY LT							14.4	
42+07	DRIVEWAY LT							5.8	
42+91	DRIVEWAY LT							8.0	
44+45	DRIVEWAY RT							16.2	
45+00 TO 53+99.49	MAINLINE	1834					4784 (4)		
46+00	DRIVEWAY LT							5.8	
46+05	DRIVEWAY RT							15.1	
46+63	DRIVEWAY RT							15.1	
47+26	DRIVEWAY RT							21.8	
47+91	DRIVEWAY RT							15.1	
50+94	DRIVEWAY RT							15.1	
51+71	DRIVEWAY RT							15.1	
52+84	DRIVEWAY RT							15.1	
53+02	DRIVEWAY RT							15.1	
54+47.49 TO 62+00	MAINLINE	1564							
55+27	DRIVEWAY RT				158				17.8
57+32	DRIVEWAY RT			164					19.8
62+00 TO 65+25	MAINLINE	650							
64+65	DRIVEWAY RT			235					23.6
TOTALS		12808	128	491	451	158	26406	942.8	233.7

(1) SIDE ROAD QUANTITIES ARE INCLUDED IN THE ADJACENT MAINLINE ROADWAY QUANTITIES.

(2) TRANSITIONS FROM B624 TO B618 AND D418 SHALL BE PAID FOR AS B624 CURB AND GUTTER.

(3) 14 PEDESTRIAN RAMPS SHALL BE INCIDENTAL TO SIDEWALK CONSTRUCTION.

(4) INCLUDES 125 SQ FT FOR CONCRETE PLACED BETWEEN THE SIDEWALK AND THE MASONRY WALL.

AGGREGATE AND BITUMINOUS SUMMARY (J)

STATION	DESCRIPTION	AGGREGATE SURFACING CLASS 2	AGGREGATE BASE CLASS 6	WEARING COURSE MIXTURE TYPE 31		WEARING COURSE MIXTURE TYPE 61		BINDER COURSE MIXTURE TYPE 31		BASE COURSE MIXTURE TYPE 31		BITUMINOUS MATERIAL FOR TACK COAT
				DEPTH	TOTAL	DEPTH	TOTAL	DEPTH	TOTAL	DEPTH	TOTAL	
		CU. YD.	CU. YD.	IN.	TON	IN.	TON	IN.	TON	IN.	TON	GAL.
2+00 TO 9+00	MAINLINE		693.7			1	207.9	2	415.8	3	623.7	378.0
2+68	DRIVEWAY LT		9.2	2	4.9					4	9.8	2.2
3+31	DRIVEWAY RT		21.2	2	9.6					4	19.1	4.4
3+33	DRIVEWAY LT		17.8	2	10.3					4	20.5	4.7
3+71	DRIVEWAY LT		14.5	2	8.3					4	16.7	3.8
4+60	DRIVEWAY RT		11.9	2	5.5					2	5.5	2.5
4+62	DRIVEWAY LT		42.6	2	26.1					4	52.1	11.8
4+87	DRIVEWAY RT		8.5									
5+85	DRIVEWAY RT		5.7	2	1.2					2	1.2	0.6
6+10	DRIVEWAY LT		24.2	2	13.9					4	27.8	6.3
6+57	DRIVEWAY RT		7.1	2	2.4					2	2.4	1.1
9+00 TO 18+00	MAINLINE		854.2			1	253.2	2	506.4	3	759.7	460.4
10+78	DRIVEWAY LT		9.1	2	4.2					4	8.4	1.9
11+05	DRIVEWAY RT		19.7	2	8.3					4	16.7	3.8
15+18	DRIVEWAY RT		24.2	2	13.4					2	13.4	6.1
15+64	DRIVEWAY LT		5.6									
16+51	DRIVEWAY RT	22.8	3.7									
18+00 TO 27+00	MAINLINE		796.9			1	233.9	2	467.7	3	701.6	425.2
18+26	DRIVEWAY RT		4.6	2	1.4					2	1.4	0.6
18+46	DRIVEWAY RT	2.0	2.5									
19+26	DRIVEWAY RT		5.6	2	1.9					2	1.9	0.9
19+58	DRIVEWAY RT		5.6	2	2.0					2	2.0	0.9
20+43	DRIVEWAY RT	6.6	2.5									
20+97	DRIVEWAY RT	7.1	2.5									
21+75	DRIVEWAY LT		6.1	2	3.1					2	3.1	1.4
21+96	DRIVEWAY RT		7.8	2	3.2					2	3.2	1.5
23+16	DRIVEWAY RT	7.2	2.5									
24+15	DRIVEWAY RT		13.6	2	6.8					2	6.8	3.1
24+23	DRIVEWAY LT		4.7	2	2.0					2	2.0	0.9
24+75	DRIVEWAY LT		2.8	2	1.2					2	1.2	0.6
25+07	DRIVEWAY LT		4.5	2	2.0					2	2.0	0.9
25+59	DRIVEWAY RT		8.6	2	3.3					2	3.3	1.5
26+42	DRIVEWAY LT		2.7	2	0.8					2	0.8	0.4
26+87	DRIVEWAY RT		3.3									
27+00 TO 36+00	MAINLINE		875.3			1	258.0	2	516.0	3	774.0	469.1
27+25	DRIVEWAY RT		3.3									
29+89	DRIVEWAY RT		8.4	2	2.7					2	2.7	1.2
29+98	DRIVEWAY LT		9.8	2	5.5					2	5.5	2.5
30+74	DRIVEWAY LT		5.4									
30+93	DRIVEWAY LT		6.1	2	3.1					2	3.1	1.4
32+31	DRIVEWAY LT		1.8									
32+37	DRIVEWAY RT		5.9	2	2.2					2	2.2	1.0
32+53	DRIVEWAY LT		3.9									
33+30	DRIVEWAY RT		3.3									
33+89	DRIVEWAY RT		3.6									
34+45	DRIVEWAY RT		2.5									
35+08	DRIVEWAY LT	4.1	1.0									
35+31	DRIVEWAY RT		4.7									
35+89	DRIVEWAY RT		2.5									
36+00 TO 45+00	MAINLINE		739.4			1	216.6	2	433.1	3	649.7	393.7
36+51	DRIVEWAY LT	3.4	1.0									
36+62	DRIVEWAY RT	1.0	2.5									
37+04	DRIVEWAY RT		3.1	2	1.7					2	1.7	0.8
37+16	DRIVEWAY LT	1.8	1.0									
37+73	DRIVEWAY LT	3.6	1.0									
38+35	DRIVEWAY LT		5.8	2	3.2					2	3.2	1.5
38+50	DRIVEWAY LT		6.0	2	3.4					2	3.4	1.5
39+25	DRIVEWAY RT	4.5	2.5									
39+33	DRIVEWAY LT	3.1	1.0									
39+90	DRIVEWAY LT		7.2	2	3.5					2	3.5	1.6
41+15	DRIVEWAY LT		14.9	2	8.2					2	8.2	3.7
42+07	DRIVEWAY LT	2.8	1.0									
42+91	DRIVEWAY LT	3.7	1.3									
44+45	DRIVEWAY RT		6.3	2	2.4					2	2.4	1.1
45+00 TO 53+99.49	MAINLINE		785.8			1	231.5	2	463.1	3	694.6	421.0
46+00	DRIVEWAY LT	1.8	1.0									
46+05	DRIVEWAY RT		10.3	2	5.1					2	5.1	2.3
46+63	DRIVEWAY RT		2.5									
47+26	DRIVEWAY RT		5.3	2	1.1					2	1.1	0.5
47+91	DRIVEWAY RT		8.1	2	3.7					2	3.7	1.7
50+94	DRIVEWAY RT		11.7	2	6.1					2	6.1	2.8
51+71	DRIVEWAY RT		11.3	2	5.8					2	5.8	2.6
52+84	DRIVEWAY RT		9.9	2	4.9					2	4.9	2.2
53+02	DRIVEWAY RT		16.0	2	7.5					2	7.5	3.4
54+47.49 TO 62+00	MAINLINE		781.3			1	234.5	2	468.9	4	937.9	425.8
55+27	DRIVEWAY RT		69.0	2	43.6					4	87.2	19.8
57+32	DRIVEWAY RT		46.4	2	28.4					4	56.9	12.9
62+00 TO 65+25	MAINLINE		270.6			1	79.4	2	158.9	4	317.8	144.4
64+65	DRIVEWAY RT		97.9	2	62.0					4	124.1	28.2
65+25 TO 67+50	MAINLINE		164.4			1	43.1	2	86.3	4	172.5	78.4
TOTALS		75.5	6672.7		339.9		1758.1		3516.2		6191.1	3350.6

(1) SIDE ROAD QUANTITIES ARE INCLUDED IN THE ADJACENT MAINLINE ROADWAY QUANTITIES.

(2) BASIS FOR PLAN QUANTITIES:

- TYPE 31 WEARING COURSE - 110 LBS/SQ YD/INCH OF DEPTH
- TYPE 61 WEARING COURSE - 110 LBS/SQ YD/INCH OF DEPTH
- TYPE 31 BINDER COURSE - 110 LBS/SQ YD/INCH OF DEPTH
- TYPE 31 BASE COURSE - 110 LBS/SQ YD/INCH OF DEPTH
- BITUMINOUS MATERIAL FOR TACK - 0.05 GAL/SQ YD
- AGGREGATE BASE (CLASS 6) THICKNESS - 6 INCHES
- AGGREGATE SURFACING (CLASS 2) THICKNESS - 6 INCHES

AGGREGATE, BITUMINOUS, AND CONCRETE SUMMARY

BCONC

Fed. Proj. No.

TURF ESTABLISHMENT (K)

STATION	LOCATION	ROADSIDE SEEDING	SEEDING MIXTURE 500 (1)	SEEDING MIXTURE 100 (5)	SODDING		MULCH TYPE 1 (2)	FERTILIZER 10-20-20 (3)
					LAWN	EROSION		
		ACRE	(LB.)	(LB.)	SQ. YD.	SQ. YD.	TON	POUND
2+00 TO 9+00	LT				768	632 (4)		101
2+00 TO 9+00	RT				827			60
9+00 TO 18+00	LT				1774	317 (4)		108
9+00 TO 18+00	RT				1547			112
18+00 TO 27+00	LT				1047			76
18+00 TO 27+00	RT				1063			77
27+00 TO 36+00	LT				1278			92
27+00 TO 36+00	RT				773			56
36+00 TO 45+00	LT				1003	845 (6)		134
36+00 TO 45+00	RT				917			66
SEDIMENTATION POND	LT	1.70		68		35	3.4	598
45+00 TO 53+99.49	LT	0.38	19			965 (7)	0.8	203
45+00 TO 53+99.49	RT				1464			106
54+47.49 TO 62+00	LT	0.61	31			809 (7)	1.2	272
54+47.49 TO 62+00	RT				2185			158
62+00 TO 67+50	LT	0.19	10		111 (8)	525 (7)	0.4	112
62+00 TO 67+50	RT				1002	1218 (9)		161
TOTALS		2.88	60	68	15759	5346	5.8	2492

(1) SEED MIXTURE 500 APPLICATION RATE = 50 LBS/ACRE.

(2) MULCH APPLICATION RATE = 2 TON/ACRE.

(3) FERTILIZER APPLICATION RATE = 350 LBS/ACRE.

(4) EROSION SOD PLACED BEHIND WALL A AND WALL B.

(5) SEED MIXTURE 100 APPLICATION RATE = 40 LBS/ACRE.

(6) EROSION SOD PLACEMENT ON LEFT SIDE BEGINNING AT STA. 43+00.

(7) A 10 FOOT WIDE SECTION OF EROSION SOD SHALL BE LAID NEXT TO CURB.

(8) LAWN TYPE SOD PLACED ADJACENT TO PROFESSIONAL BUILDING.

(9) EROSION SOD TO BE PLACED IN DITCH AREA.

EROSION CONTROL (M)

STATION	LOCATION	RANDOM RIPRAP CLASS III (1)	SILT FENCE HEAVY DUTY (2)	BALE CHECK	EROSION MAT
		CU. YD.	LIN. FT.	EACH	SQ. YD.
APRON AT STA. 14+70	50' LT			4	
APRON AT STA. 14+70	54' RT			4	
SEDIMENTATION POND	NO. DITCH	40			
SEDIMENTATION POND	SO. DITCH	40			
APRON AT STA. 45+76	83' LT	6			
APRON AT STA. 46+56	260' LT	5			
STA. 46+07 TO 46+67	290' LT				335
STA. 46+00 TO 54+00	LT		800		
APRON AT STA. 48+30	43' RT			4	
APRON AT STA. 48+48	60' LT			4	
APRON AT STA. 65+25	90' RT	8			
APRON AT STA. 65+60	45' LT	8			
DITCH AT STA. 66+75	RT			24	
STA. 63+00 TO 67+00	LT		400		
TOTALS		107	1200	40	335

(1) GEOTEXTILE FABRIC SHALL BE INCIDENTAL TO RIPRAP MATERIAL.

(2) LOCATION OF SILT FENCE SHALL BE APPROVED BY THE ENGINEER.

FENCING, MASONRY WALLS, RAILINGS (L)

STATION	LOCATION	INSTALL SALVAGED C-L FENCE	INSTALL SALVAGED WOODEN FENCE	MASONRY RET. WALL	WIRE FENCE DESIGN 60-9322	PIPE RAILING
		LIN. FT.	LIN. FT.	SQ. FT.	LIN. FT.	LIN. FT.
3+47 TO 3+58	RT		46			
5+00 TO 5+88	LT/WALL A				99 (4)	
6+32 TO 10+68	LT/WALL B				447 (4)	
15+33 TO 15+45	RT		20			
37+70 TO 40+78	RT	318 (2)				
44+00 TO 46+25	LT	870 (2)(3)			112 (1)	
46+25 TO 53+50	LT	738				
51+06 TO 51+62	RT/WALL C			370		59
51+83 TO 52+74	RT/WALL D			560		94
55+00 TO 66+30	LT	1130				
TOTALS		3056	66	930	658	153

(1) CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING 112 LIN FT OF NEW CHAIN LINK FENCE DUE TO SHORTAGE OF SALVAGED CHAIN LINK FENCE.

(2) INSTALLATION OF VEHICULAR GATE SHALL BE INCIDENTAL TO INSTALLATION OF THE FENCE.

(3) INCLUDES FENCE TO BE INSTALLED ADJACENT TO SEDIMENTATION POND.

(4) FENCE IS LOCATED ON TOP OF THE WALL. (SEE WALL PLANS)

MISCELLANEOUS TABULATIONS

BTURF

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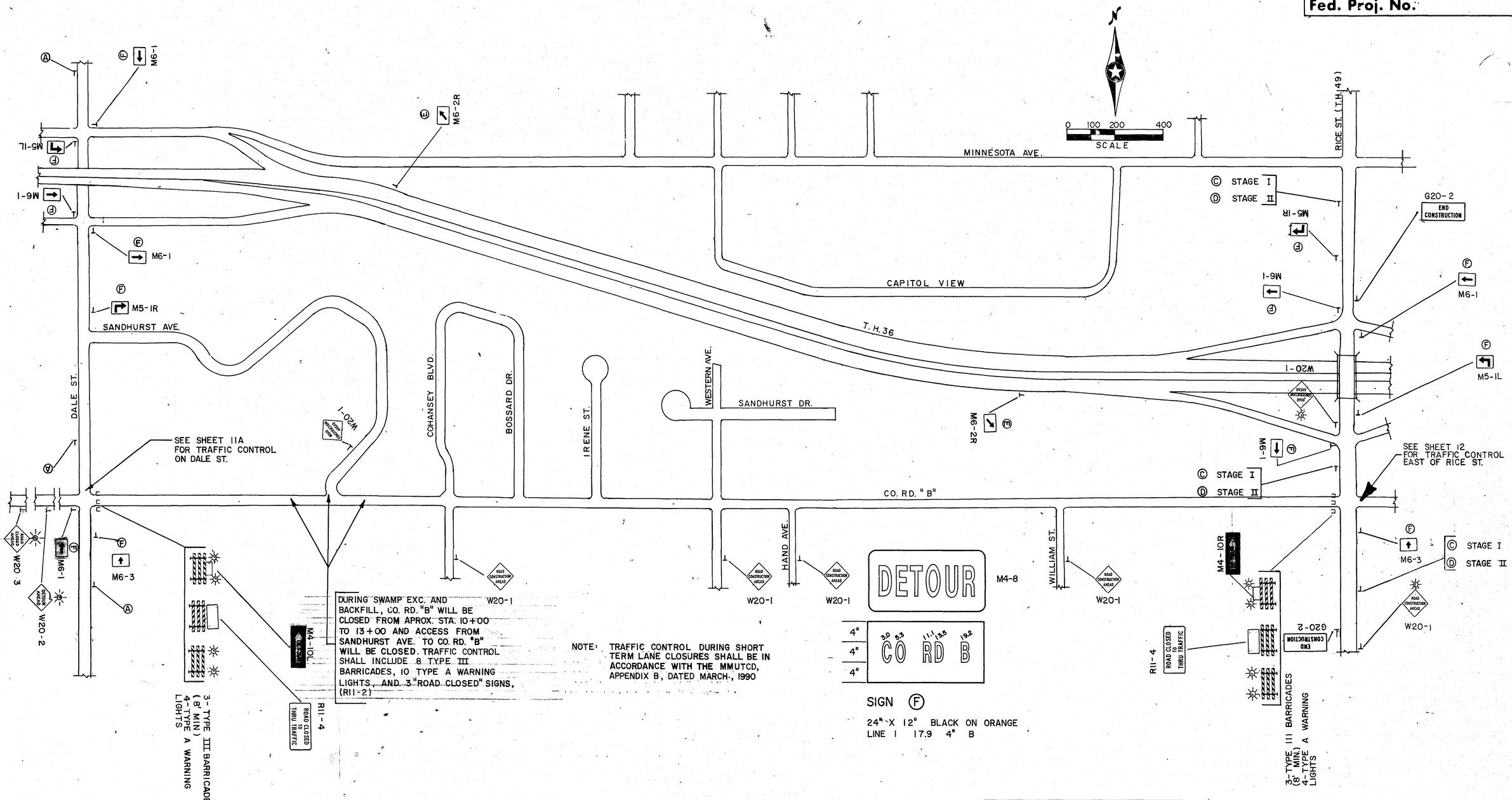

SIGN Ⓐ

60" X 30" BLACK ON ORANGE
LINE 1 51.2" 4" E
LINE 2 28.9" 5" E
LINE 3 50.1" 4" D

SIGN Ⓒ

60" X 30" BLACK ON ORANGE
LINE 1 51.2" 4" E
LINE 2 28.9" 5" E
LINE 3 35.1" 4" E

SIGN Ⓓ

60" X 30" BLACK ON ORANGE
LINE 1 51.2" 4" E
LINE 2 28.9" 5" E
LINE 3 48.4" 4" D

SIGN Ⓔ

36" X 12" BLACK ON ORANGE
LINE 1 30.9 6" C

SIGN Ⓕ

24" X 12" BLACK ON ORANGE
LINE 1 17.9 4" B

TRAFFIC CONTROL PLAN

S.A.P. 62-625-19 28-113 **Sheet No. 11 of 103 Sheets**

TRAFFIC

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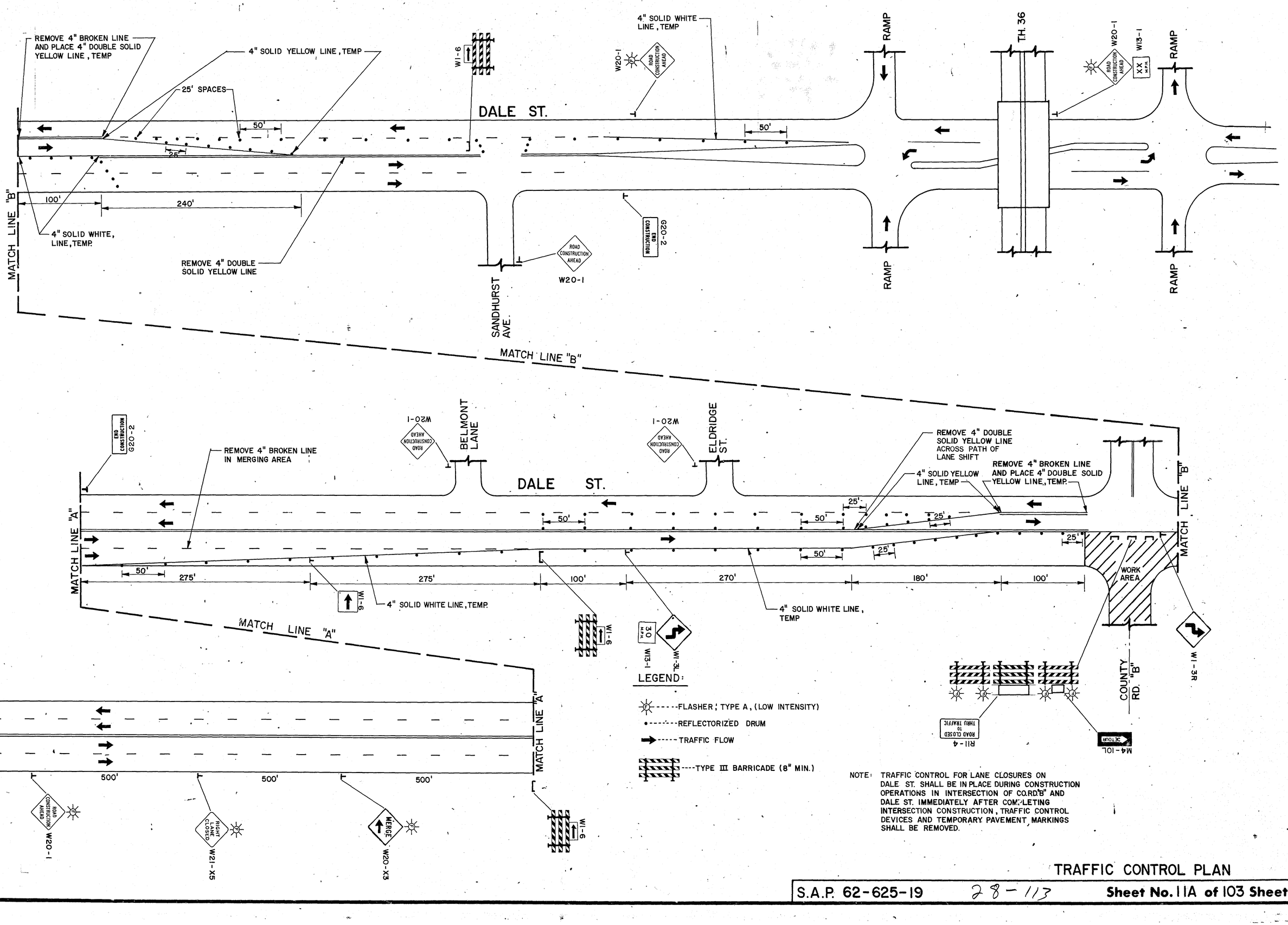


LEGEND:

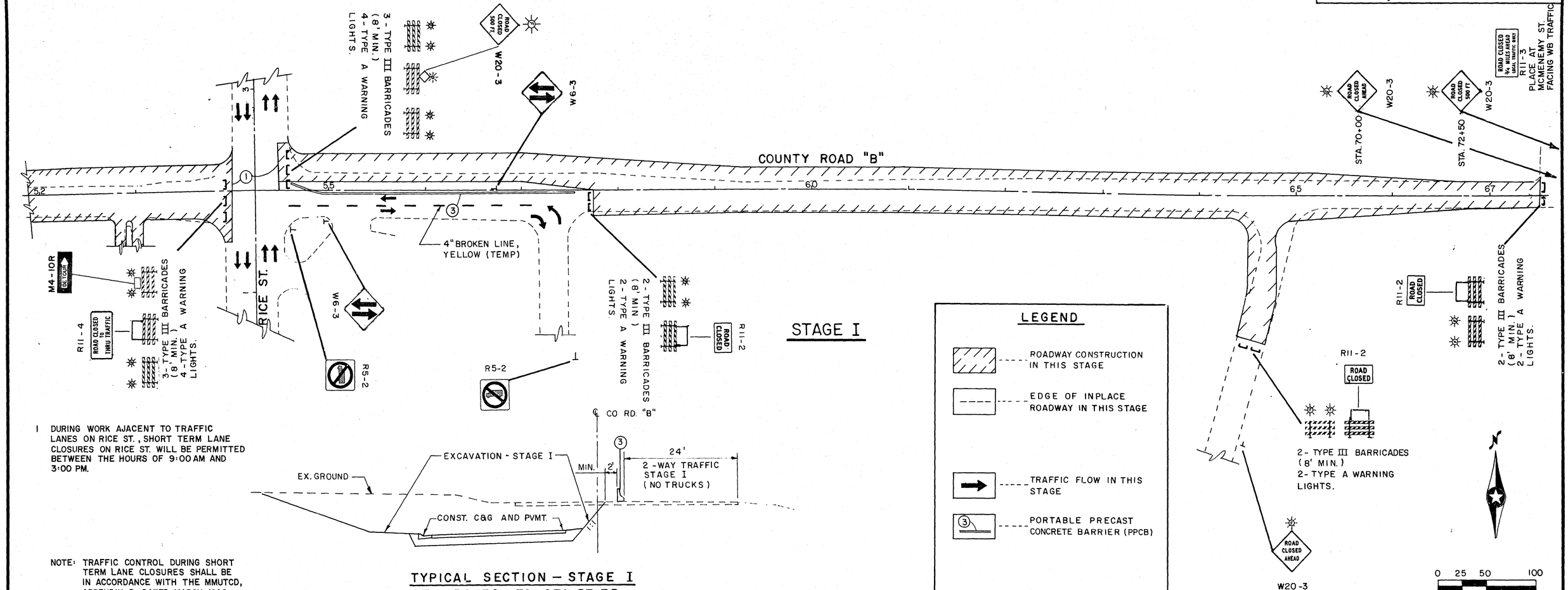
- FLASHER, TYPE A, (LOW INTENSITY)
- REFLECTORIZED DRUM
- TRAFFIC FLOW
- TYPE III BARRICADE (8" MIN.)

NOTE: TRAFFIC CONTROL FOR LANE CLOSURES ON DALE ST. SHALL BE IN PLACE DURING CONSTRUCTION OPERATIONS IN INTERSECTION OF CO.RD."B" AND DALE ST. IMMEDIATELY AFTER COMPLETING INTERSECTION CONSTRUCTION, TRAFFIC CONTROL DEVICES AND TEMPORARY PAVEMENT MARKINGS SHALL BE REMOVED.

TRAFFIC CONTROL PLAN

S.A.P. 62-625-19 28-113 **Sheet No. 11A of 103 Sheets**

Fed. Proj. No.



1 DURING WORK AJACENT TO TRAFFIC LANES ON RICE ST., SHORT TERM LANE CLOSURES ON RICE ST. WILL BE PERMITTED BETWEEN THE HOURS OF 9:00 AM AND 3:00 PM.

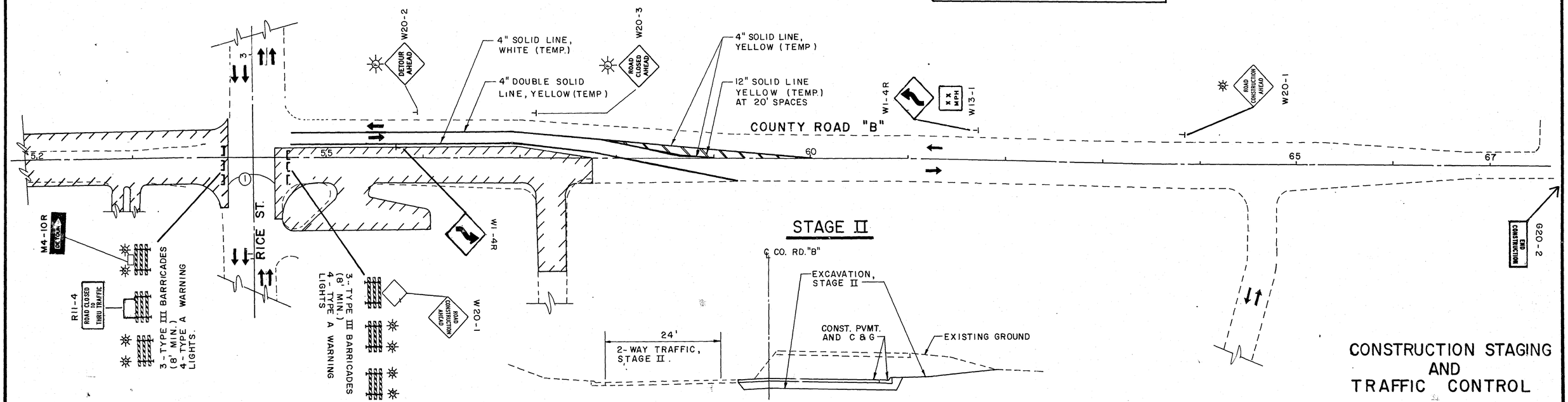
NOTE: TRAFFIC CONTROL DURING SHORT TERM LANE CLOSURES SHALL BE IN ACCORDANCE WITH THE MMUTCD, APPENDIX B, DATED MARCH, 1990.

TYPICAL SECTION – STAGE I
STA. 54+70 TO STA. 57+75

LEGEND

- ROADWAY CONSTRUCTION IN THIS STAGE
- EDGE OF INPLACE ROADWAY IN THIS STAGE
- TRAFFIC FLOW IN THIS STAGE
- (3) PORTABLE PRECAST CONCRETE BARRIER (PPCB)

0 25 50 100
SCALE



TYPICAL SECTION - STAGE II
STA. 54+70 TO STA. 57+75

CONSTRUCTION STAGING AND TRAFFIC CONTROL

S.A.P. 62-625-19 28-113 **Sheet No. 12 of 103 Sheets**

532020

Fed. Proj. No.

TRAFFIC CONTROL DEVICES FOR TRAFFIC CONTROL (0563.501)

ITEM	SIGN NO. OR TYPE OF DEVICE	SIZE AND COLOR	QUANTITY (EACH)			
			COUNTY ROAD "B"			DALE ST.
			WEST OF RICE ST.	EAST OF RICE ST.		
				STAGE 1	STAGE 2	
ROAD CLOSED	R11-2	48"X30" BLACK ON WHITE		3		
ROAD CLOSED ¼ MILES AHEAD LOCAL TRAFFIC ONLY	R11-3	60"X30" BLACK ON WHITE		1		
ROAD CLOSED TO THRU TRAFFIC	R11-4	60"X30" BLACK ON WHITE	2			
	W1-3L	30"X30" BLACK ON ORANGE				1
	W1-3R	30"X30" BLACK ON ORANGE				1
	W1-4R	30"X30" BLACK ON ORANGE			2	
	W1-6	48"X24" BLACK ON ORANGE				4
	W6-3	48"X48" BLACK ON ORANGE		2		
XX M.P.H.	W13-1	24"X24" BLACK ON ORANGE			1	2
ROAD CONSTRUCTION AHEAD	W20-1	48"X48" BLACK ON ORANGE	6		2	6
DETOUR AHEAD	W20-2	48"X48" BLACK ON ORANGE	1		1	
ROAD CLOSED AHEAD	W20-3	48"X48" BLACK ON ORANGE	1	2		
ROAD CLOSED 500FT	W20-3	48"X48" BLACK ON ORANGE		2		
MERGE	W20-X3	48"X48" BLACK ON ORANGE				1

TRAFFIC CONTROL DEVICES FOR TRAFFIC CONTROL (0563.501)

ITEM	SIGN NO. OR TYPE OF DEVICE	SIZE AND COLOR	QUANTITY (EACH)			
			COUNTY ROAD "B"			DALE ST.
			WEST OF RICE ST.	EAST OF RICE ST.		
				STAGE 1	STAGE 2	
RIGHT LANE CLOSED	W21-X5	48"X48" BLACK ON ORANGE				1
DETOUR	M4-8	24"X12" BLACK ON ORANGE	15			
DETOUR	M4-10L	48"X18" BLACK LEGEND, ORANGE ARROW ON BLACK	1			
DETOUR	M4-10R	48"X18" BLACK LEGEND, ORANGE ARROW ON BLACK	1			
	M5-1L	21"X15" BLACK ON WHITE	2			
	M5-1R	21"X15" BLACK ON WHITE	2			
	M6-1	21"X15" BLACK ON WHITE	7			
	M6-2R	21"X15" BLACK ON WHITE	2			
	M6-3	21"X15" BLACK ON WHITE	2			
END CONSTRUCTION	G20-2	60"X24" BLACK ON ORANGE	2		1	2
	TYPE III BARRICADE	8' ORANGE AND WHITE	6	9	3	3
	FLASHER, TYPE "A"		11	14	7	5
COUNTY ROAD B CLOSED EAST OF DALE ST	SPECIAL "A" (SEE LAYOUT)	60"X30" BLACK ON ORANGE	3			

TRAFFIC CONTROL DEVICES FOR TRAFFIC CONTROL (0563.501)

ITEM	SIGN NO. OF DEVICE	SIZE AND COLOR	QUANTITY (EACH)			
			COUNTY ROAD "B"			DALE ST.
			WEST OF RICE ST.	EAST OF RICE ST.		
				STAGE 1	STAGE 2	
COUNTY ROAD B CLOSED AT RICE STREET	SPECIAL "C" (SEE LAYOUT)	60"X30" BLACK ON ORANGE	3			
COUNTY ROAD B CLOSED WEST OF RICE ST	SPECIAL "D" (SEE LAYOUT)	60"X30" BLACK ON ORANGE	3			
CO RD B	SPECIAL "E" (SEE LAYOUT)	36"X12" BLACK ON ORANGE	2			
CO RD B	SPECIAL "F" (SEE LAYOUT)	24"X12" BLACK ON ORANGE	13			
	R5-2	24"X12" ①		2		
	REFLECTORIZED DRUM	ORANGE ON WHITE				91

① BLACK TRUCK AND BORDER ON WHITE. RED BAND AND SLASH

PORTABLE TRAFFIC BARRIERS AND TEMPORARY PAVEMENT MARKING

ITEM	LOCATION AND LENGTH			
	COUNTY ROAD "B"			DALE ST.
	STA TO STA.		LIN. FT.	LIN. FT.
PORTABLE PRECAST CONC. BARRIER	54+65	57+55	290	
4" SOLID LINE, WHITE (TEMP)	54+80	59+25	445	1710
4" BROKEN LINE, YELLOW (TEMP)	54+60	57+10	250	
4" SOLID LINE, YELLOW (TEMP)	57+85	60+00	430	420
4" DOUBLE SOLID LINE, YELLOW (TEMP)	54+65	57+85	320	200
12" SOLID LINE, YELLOW (TEMP)	57+85	60+00	68	

NOTE:

ALL TRAFFIC CONTROL DEVICES, PORTABLE PRECAST CONCRETE BARIERS AND TEMPORARY PAVEMENT MARKINGS LISTED ON THIS SHEET SHALL BE CONSTRUED TO BE INCLUDED IN THE SINGLE LUMP SUM PAYMENT MADE FOR ITEM 563.601 (TRAFFIC CONTROL).

TRAFFIC CONTROL

S.A.P. 62-625-19 28-113 Sheet No. 12A of 103 Sheets

TRAFFIC PLOTTED ON 01 FEB 1991

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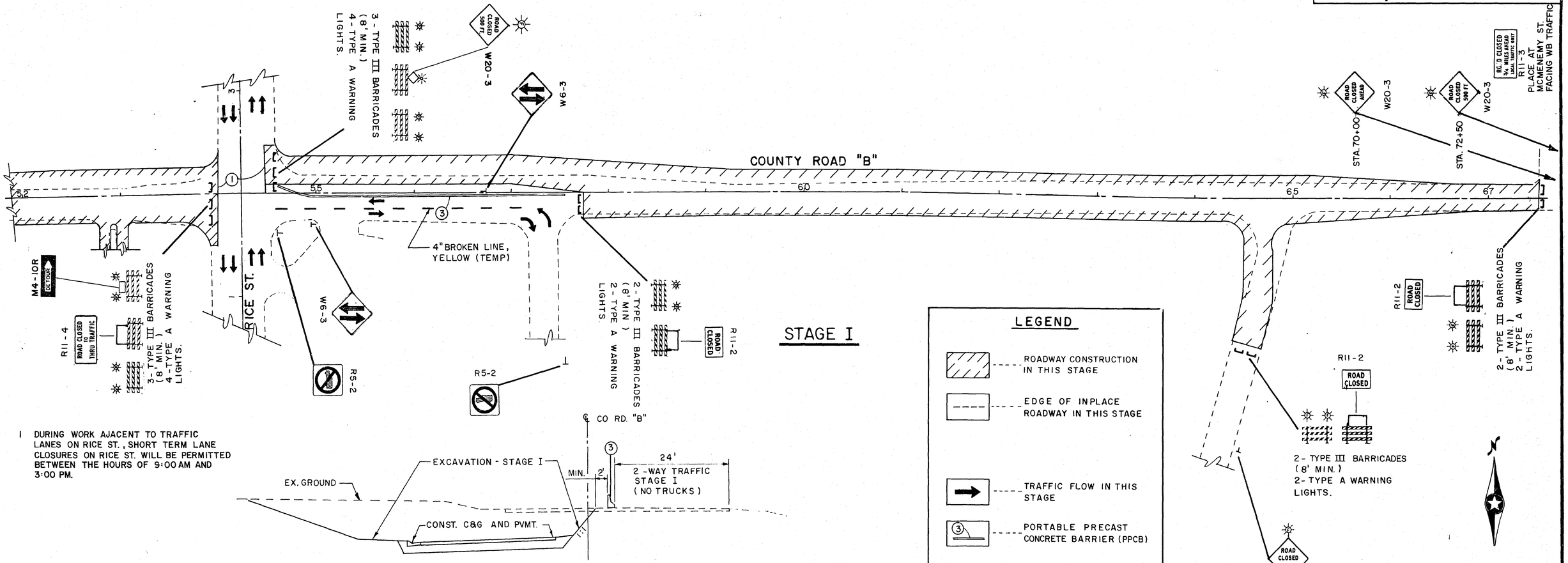
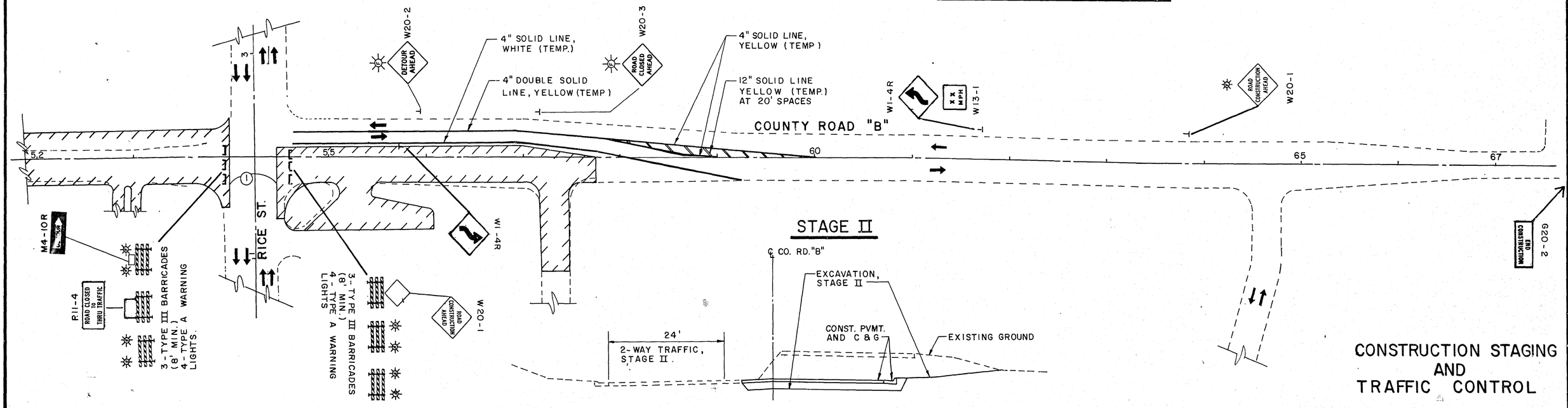


1 DURING WORK AJACENT TO TRAFFIC LANES ON RICE ST., SHORT TERM LANE CLOSURES ON RICE ST. WILL BE PERMITTED BETWEEN THE HOURS OF 9:00 AM AND 3:00 PM.

NOTE: TRAFFIC CONTROL DURING SHORT TERM LANE CLOSURES SHALL BE IN ACCORDANCE WITH THE MMUTCD, APPENDIX B, DATED MARCH, 1990.

TYPICAL SECTION – STAGE I
STA. 54+70 TO STA. 57+75



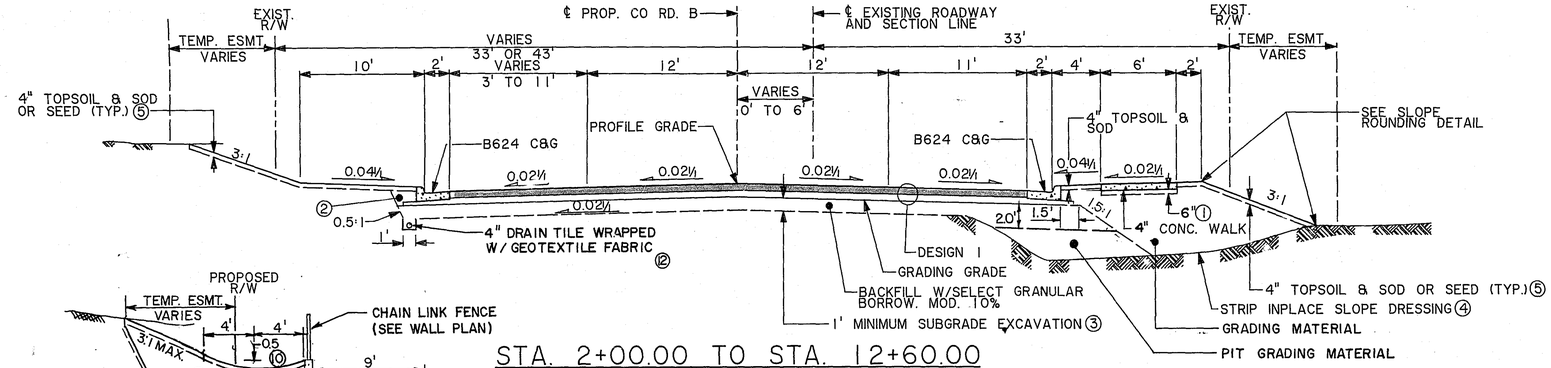
TYPICAL SECTION - STAGE II
STA. 54+70 TO STA. 57+75

CONSTRUCTION STAGING AND TRAFFIC CONTROL

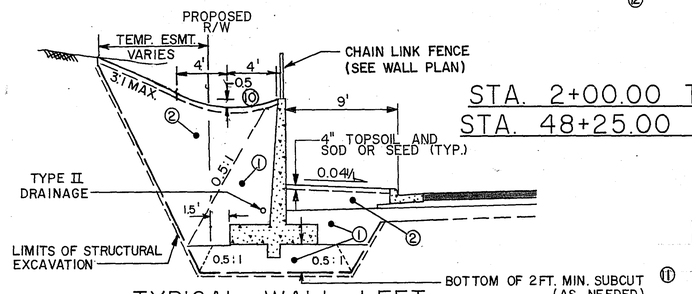
S.A.P. 62-625-19 28-113 **Sheet No. 12 of 103 Sheets**

532020

Fed. Proj No.

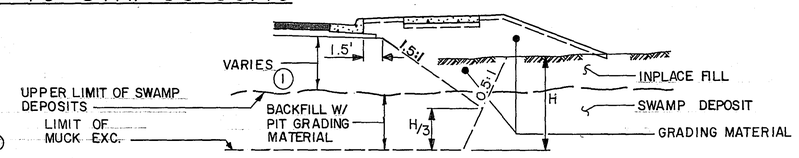


STA. 2+00.00 TO STA. 12+60.00
STA. 48+25.00 TO STA. 53+99.49



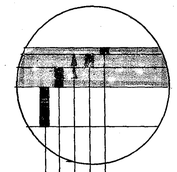
TYPICAL WALL LEFT

STA. 5+00 TO STA 5+88
STA. 6+32 TO STA 10+68



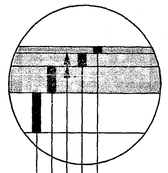
TYPICAL MUCK EXCAVATION

STA. 10+00±TO STA 13+00±.



DESIGN 1

1" BITUMINOUS WEARING COURSE TYPE 61
2" BITUMINOUS BINDER COURSE TYPE 31
TACK COAT
3" BITUMINOUS BASE COURSE TYPE 31
6" AGGREGATE BASE, CL. 6



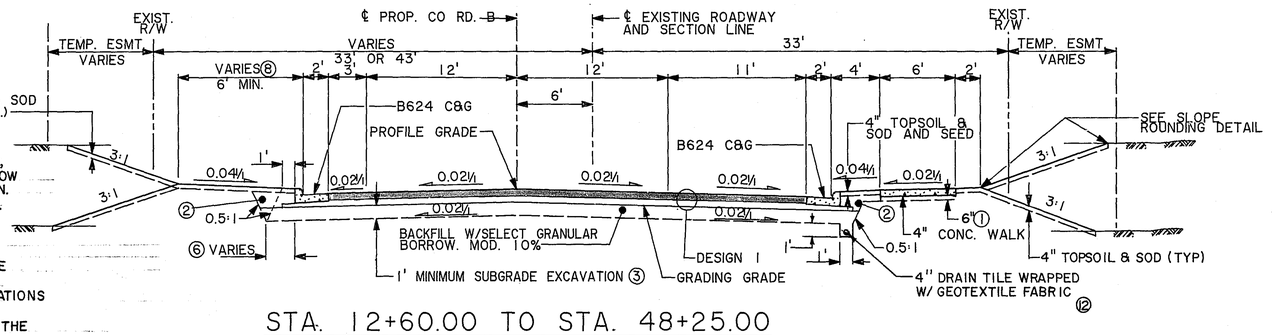
DESIGN 2

1" BITUMINOUS WEARING COURSE TYPE 61
2" BITUMINOUS BINDER COURSE TYPE 31
TACK COAT
4" BITUMINOUS BASE COURSE TYPE 31
6" AGGREGATE BASE, CL. 6

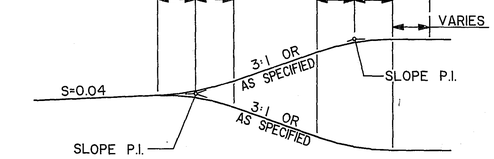
NOTE: DETAILS SHOWN ON RIGHT OR LEFT OF SECTION ARE NOT INTENDED TO APPLY EXCLUSIVELY TO THE SIDE OF ROADWAY SHOWN, BUT MAY BE APPLICABLE TO THE OTHER SIDE OF THE ROADWAY. SEE PLAN SHEETS AND CROSS SECTIONS.

NOTE:
IN FILL SITUATIONS OR 4FT. SUBCUT AREAS, THE UPPER 2 FT. OF BACKFILL DIRECTLY BELOW THE GRADING GRADE SHALL BE SELECT GRAN. BORROW MOD. 10% MATERIAL, AS A MINIMUM. PIT GRADING MATERIAL SHALL BE PLACED BELOW THIS 2 FT. SECTION.

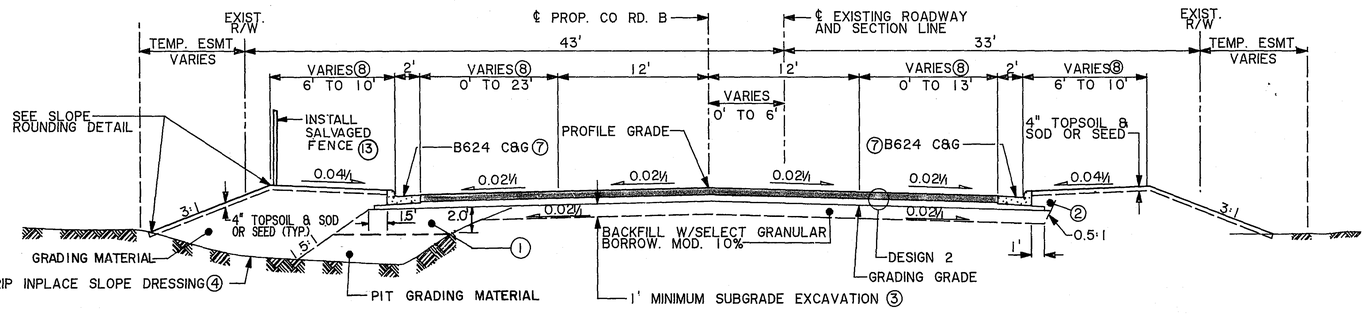
IT IS THE INTENT OF THIS PLAN THAT THE MATERIAL REFERENCED AS PIT GRADING MATERIAL BE OBTAINED FROM THE EXCAVATIONS OF THE SEDIMENTATION POND AND THE EXCAVATION (OUTSIDE OF EXISTING R.O.W.) OF THE SIDEHILL LOCATED NORTH OF CO. RD. "B" AND EAST OF RICE STREET.



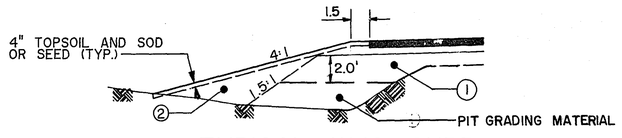
STA. 12+60.00 TO STA. 48+25.00



SLOPE ROUNDING DETAIL



STA. 54+47.49 TO STA. 66+75.00



TYPICAL W/O CURB ⑨

⑪ THE SUBCUT SHALL BE 2 FT. MINIMUM BELOW THE FOOTING. IF ORGANIC SOILS ARE PRESENT UNDER THE FOOTING, THEY SHALL BE REMOVED TO THE EXTENTS DETERMINED BY THE ENGINEER AND AS SHOWN. BACKFILL SHALL BE COMPACTED TO 100% STANDARD PROCTOR.

⑫ WHERE SUBGRADE EXCAVATION IS PROPOSED TO BE GREATER THAN 2 FT., THE 4" DRAIN TILE WRAPPED IN FABRIC SHALL BE PLACED IN THE BOTTOM CORNER OF THE SUBGRADE EXCAVATION.

⑬ SEE PLAN SHEETS FOR LOCATION

NOTES:

① BACKFILL WITH SELECT GRANULAR BORROW MOD. 10%.

② BACKFILL WITH GRADING MATERIAL.

③ SUBCUT FOR UNIFORMITY AND COMPACTION OR REMOVAL OF UNSUITABLE MATERIAL. SEE PROFILE AND CROSS SECTIONS FOR PLANNED LOCATIONS AND DEPTHS GREATER THAN THE ONE FOOT MINIMUM.

④ REMOVE EXISTING TOPSOIL AND VEGETATION BEFORE PLACING EMBANKMENT. TOPSOIL SHALL BE SALVAGED AND USED AS SLOPE DRESSING TO THE EXTENT THAT IT IS AVAILABLE.

⑤ SEE TABULATION FOR LOCATION OF SOD. ALL OTHER DISTURBED AREAS SHALL HAVE SEED.

⑥ DISTANCE WILL VARY IN THIS AREA DEPENDING ON THE PROPOSED SUBGRADE EXCAVATION DEPTHS.

⑦ B624 CURB AND GUTTER ENDS AT STATION 65+25.00.

⑧ SEE PLAN SHEETS AND CROSS SECTION FOR WIDTH VARIATIONS.

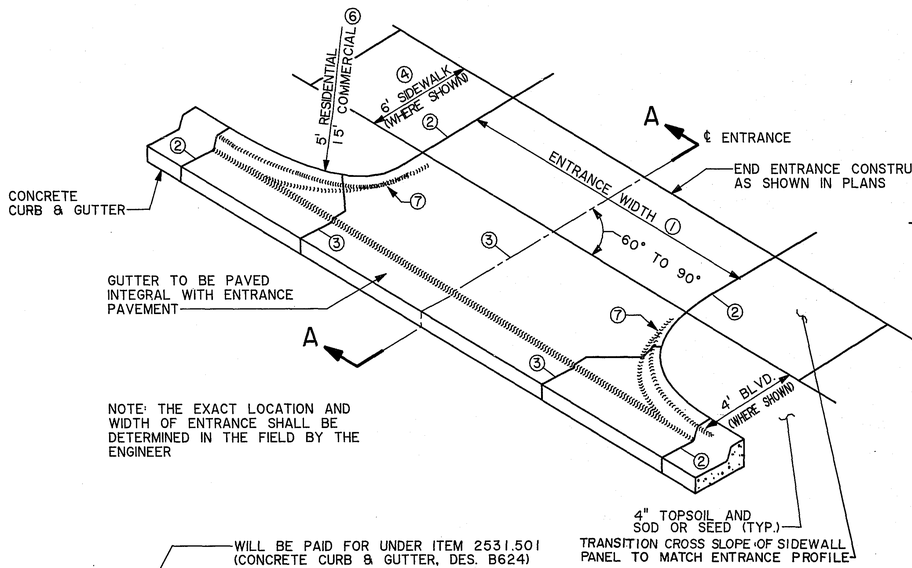
⑨ STATION 65+25.00 TO 66+75.00 DOES NOT HAVE CURB AND GUTTER ON EITHER SIDE OF ROADWAY.

⑩ SWALE BEHIND THE WALL SHALL BE AN 8 FT. WIDE ROUNDED SWALE, 0.5 FT. DEEP. EROISION SOD SHALL BE USED.

* ADDITIONAL NOTES ARE LOCATED TO LEFT

TYPICAL SECTIONS

Fed. Proj. No.



NOTE: THE EXACT LOCATION AND WIDTH OF ENTRANCE SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER

NOTES

① SEE PLANS FOR ENTRANCE WIDTH.

② ½" EXPANSION JOINT.

③ PLACE JOINTS AS REQUIRED FOR CONCRETE CONSTRUCTION.

④ SEE PLANS FOR LOCATION OF SIDEWALK

⑤ REPLACE DRIVEWAY WITH THE SAME SURFACE TYPE AS INPLACE DRWY. SURFACING SHALL BE AS FOLLOW:

A.) RESIDENTIAL

1.) CONCRETE SURFACE
- 6" DRIVEWAY CONCRETE
- 6" AGGREGATE BASE, CL6

2.) BITUMINOUS SURFACE
- 2" BIT WEARING COURSE TYPE 31
- 2" BIT BASE COURSE TYPE 31
- 6" AGGREGATE BASE, CL.6

3.) AGGREGATE SURFACE
- 6" AGGREGATE SURFACING, CL 2

B.) COMMERCIAL

1.) CONCRETE SURFACE
- 8" DRIVEWAY CONCRETE
- 6" AGGREGATE BASE, CL 6

2.) BITUMINOUS SURFACE
- 2" BIT WEARING COURSE TYPE 31
- 4" BIT BASE COURSE TYPE 31
- 6" AGGREGATE BASE, CL 6

⑥ 5' (RESIDENTIAL) AND 15' (COMMERCIAL) RADIUS TYPICALLY, UNLESS STATED DIFFERENTLY IN THE PLANS.

⑦ FOR COMMERCIAL DRIVEWAYS, CURB FACE CONTINUES AROUND RADIUS. MATCHING EXISTING DRIVEWAY TYPE BEGINS AT END OF CONCRETE APRON FOR PAYMENT PURPOSES.

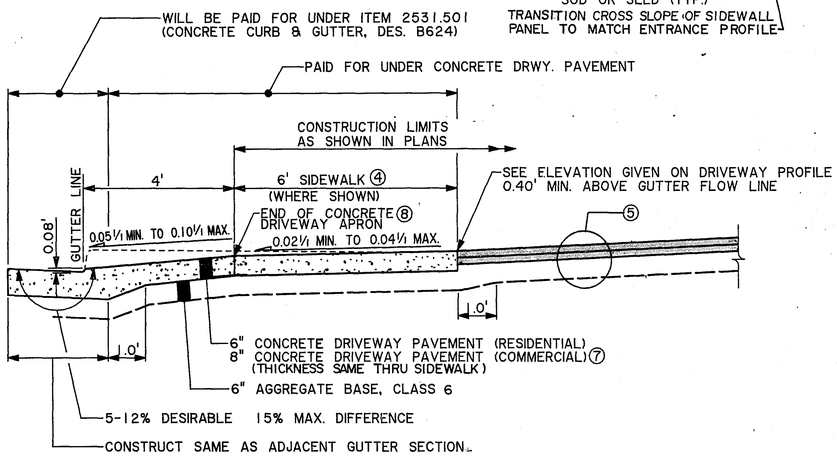
⑧ FOR COMMERCIAL AND RESIDENTIAL DRIVEWAYS WITHOUT SIDEWALKS, THE BITUMINOUS OR AGGREGATE SURFACING SHALL BEGIN AT THE END OF THE CONCRETE APRON.

⑨ BACKFILL WITH GRADING MATERIAL.

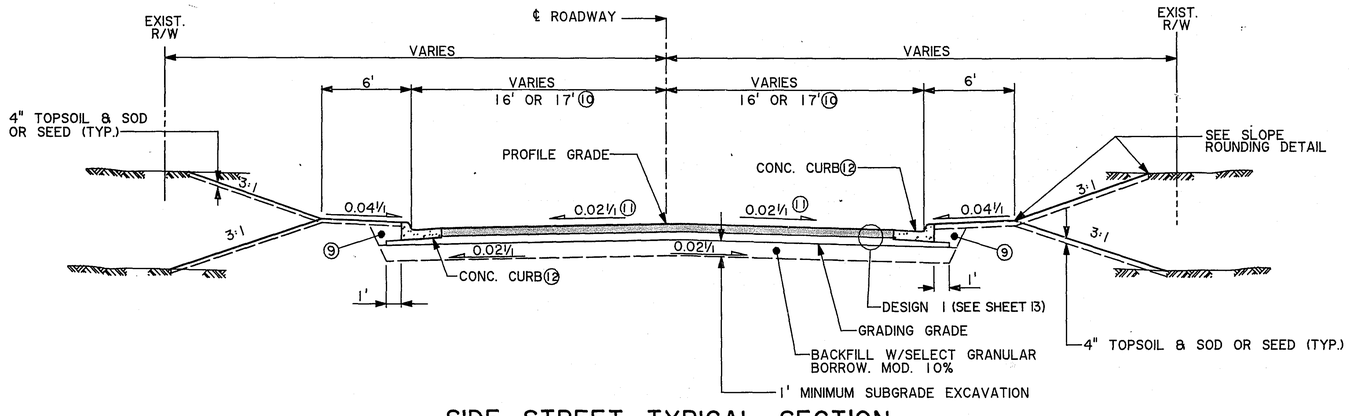
⑩ WESTERN AVENUE SOUTH IS 34' WIDE. ALL OTHER SIDE STREETS ARE TO BE 32' WIDE.

⑪ SLOPES MAY VARY TO MATCH EXISTING CONDITIONS.

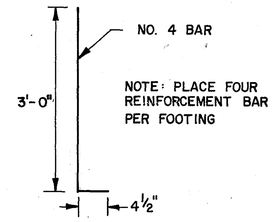
⑫ MATCH INPLACE CURB AND GUTTER TYPE. SEE PLAN SHEETS FOR CURB TRANSITION LOCATIONS.



SECTION A-A

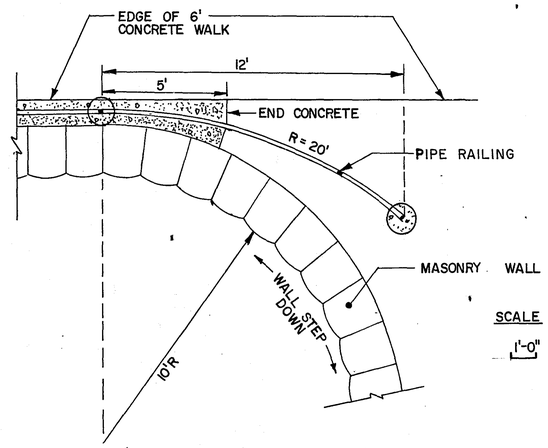


SIDE STREET TYPICAL SECTION

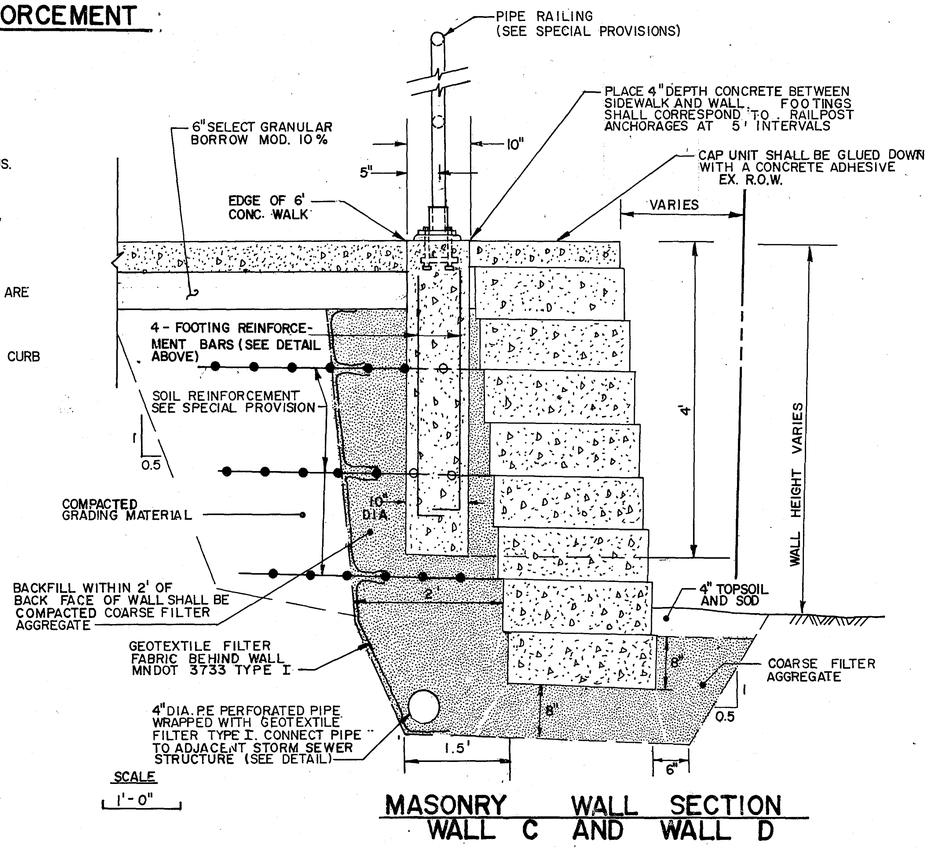


NOTE: PLACE FOUR REINFORCEMENT BAR PER FOOTING

FOOTING REINFORCEMENT



MASONRY WALL & RAILING END TREATMENT



MASONRY WALL SECTION WALL C AND WALL D

CONSTRUCTION DETAILS

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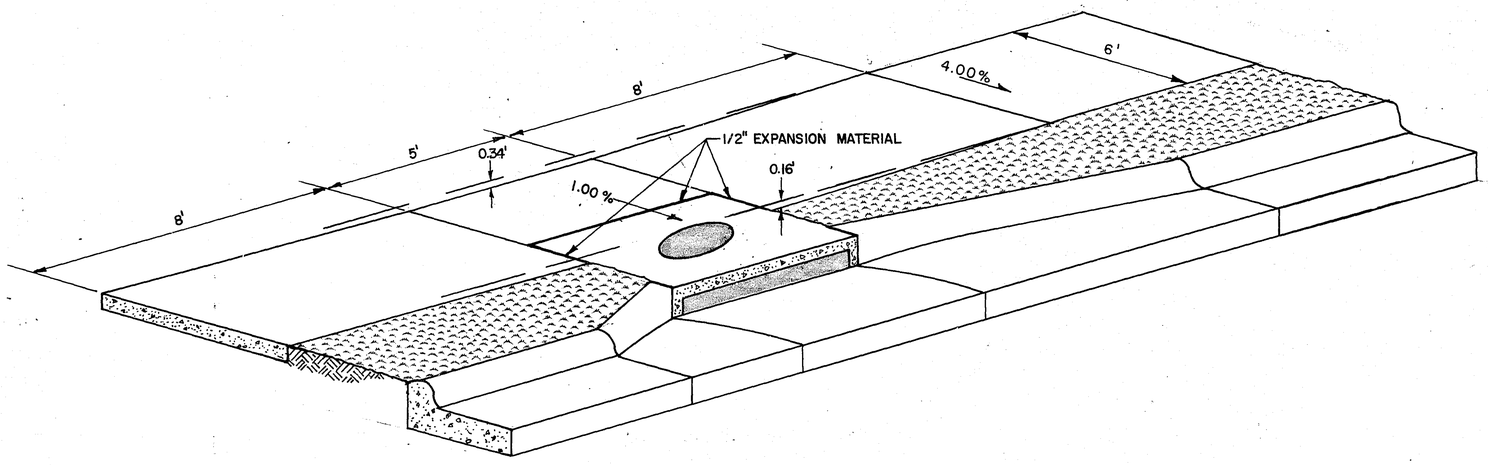
DETAIL

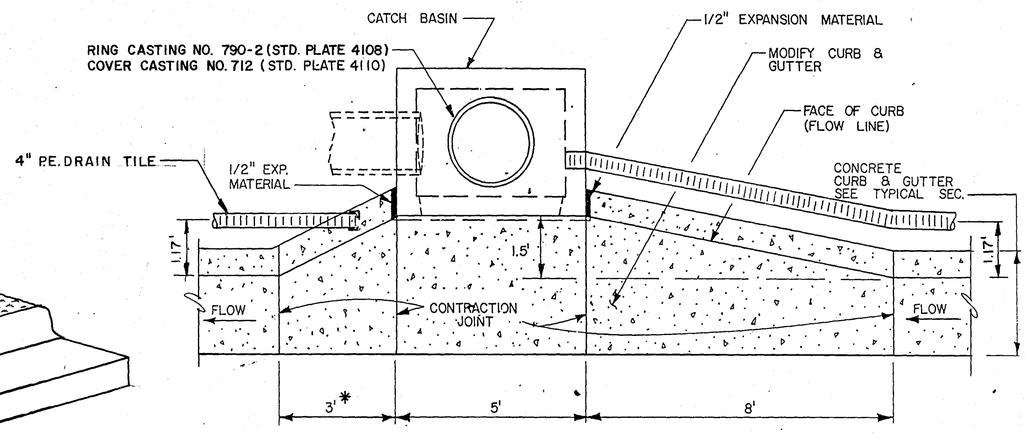
Fed. Proj. No.

LP CATCH BASIN IN SIDEWALK

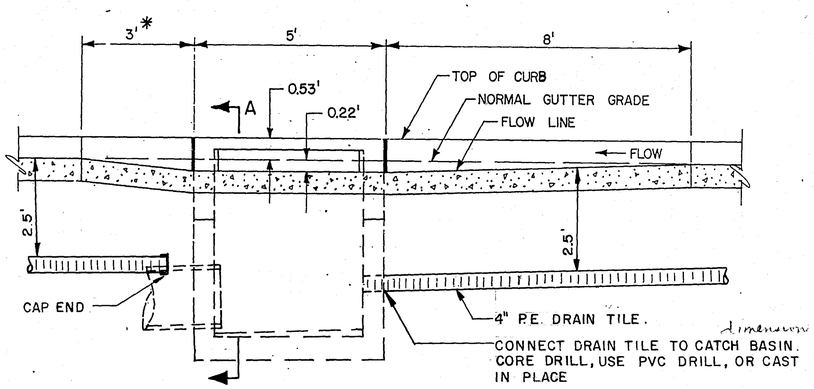
NOTE DEPRESS SIDEWALK GRADE TO MATCH TOP OF CATCH BASIN. TRANSITION FROM 4% CROSS SLOPE (TYPICAL) TO 1% AT STRUCTURE.



CURB OPENING CATCH BASIN - DESIGN LP INSTALLATION DETAIL

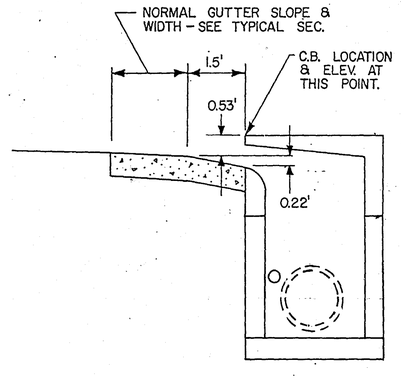


PLAN VIEW



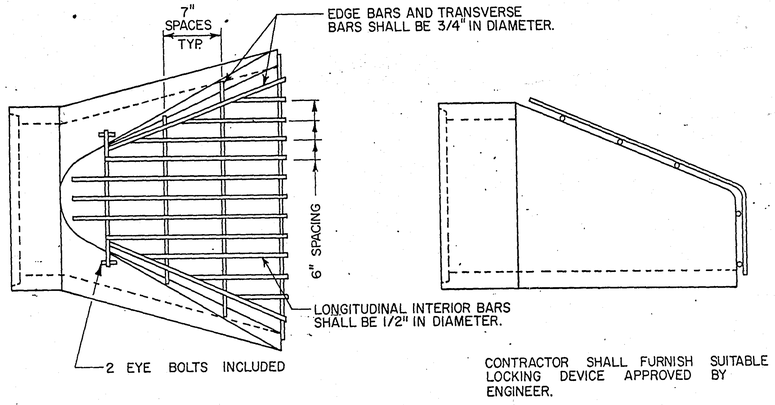
ELEVATION (AT FLOW LINE).

* NOTE: THIS DIMENSION SHALL BE 8' WHEN CATCH BASIN IS INSTALLED AT THE LOW POINT.



SECTION A-A

NOTE:
TRASH GUARD SHALL BE FABRICATED IN ACCORDANCE WITH MnDOT 2471 AND THE FOLLOWING:
A.) USE MnDOT 3306 STEEL
B.) WELD ALL BAR INTERSECTIONS
C.) GALVINIZE BARS AND HARDWARE IN ACCORDANCE WITH MnDOT 3392 AND 3394 AS APPLICABLE.



TRASH GUARD (GALVANIZED)

(FOR CONCRETE APRON)

CONSTRUCTION DETAILS
STORM SEWER

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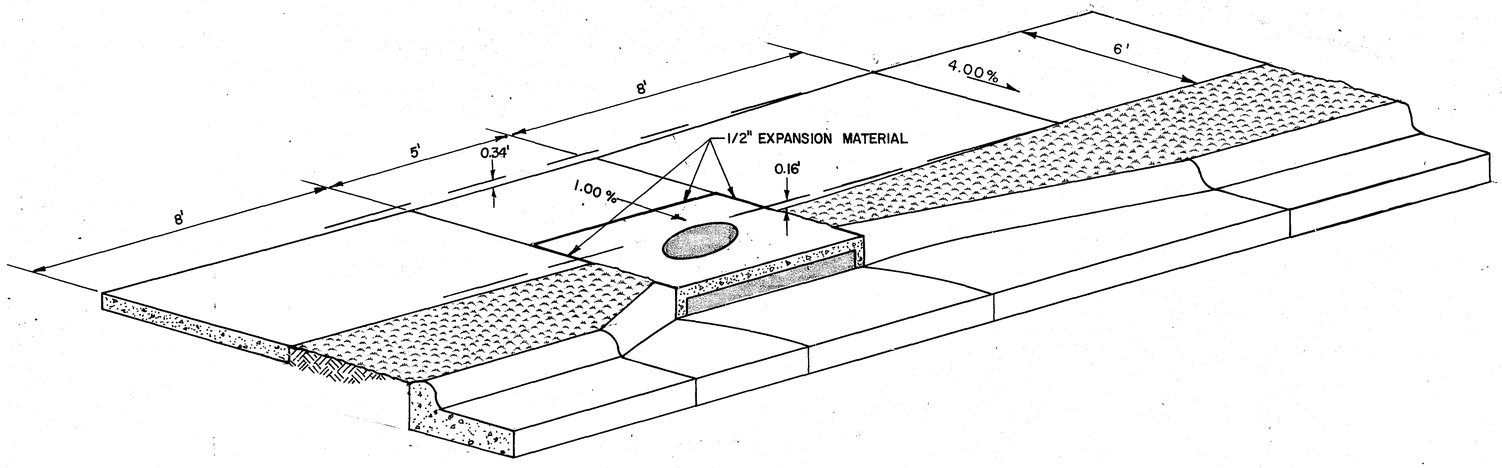
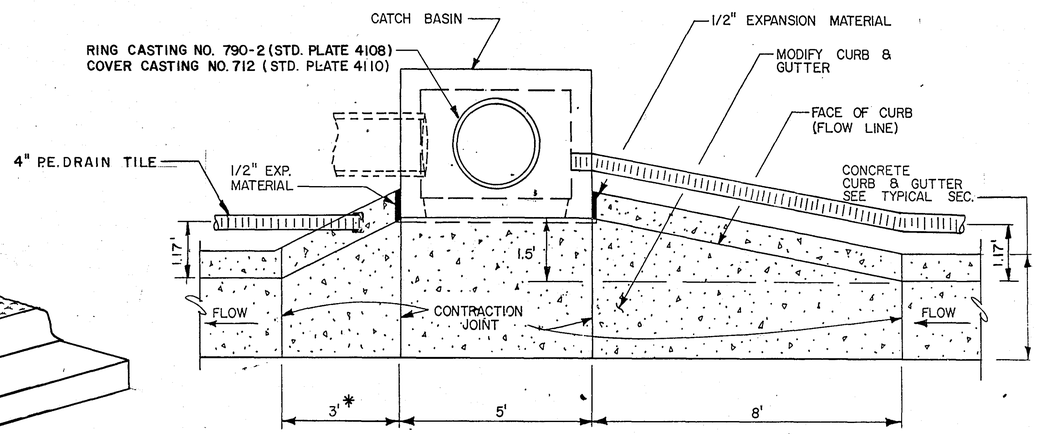
Fed. Proj. No.

LP CATCH BASIN IN SIDEWALK

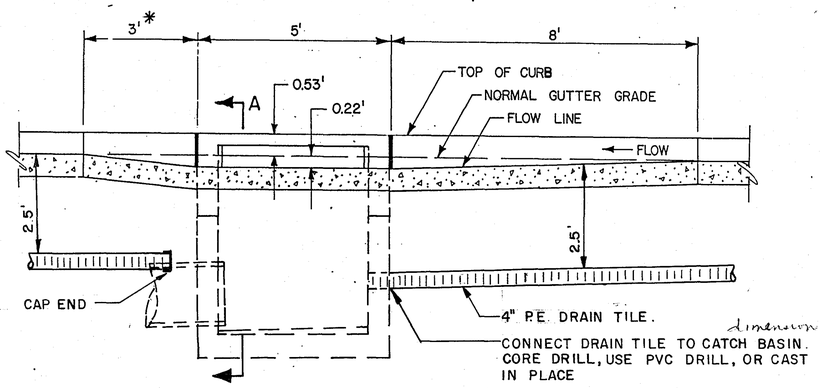
NOTE DEPRESS SIDEWALK GRADE TO MATCH TOP OF CATCH BASIN. TRANSITION FROM 4% CROSS SLOPE (TYPICAL) TO 1% AT STRUCTURE.



CURB OPENING CATCH BASIN - DESIGN LP INSTALLATION DETAIL

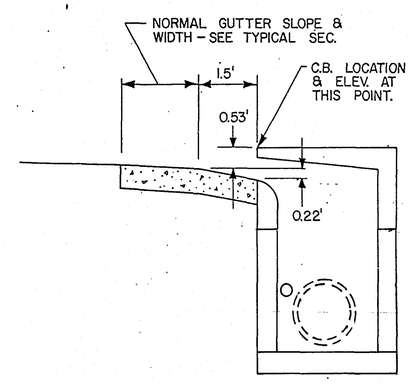


PLAN VIEW



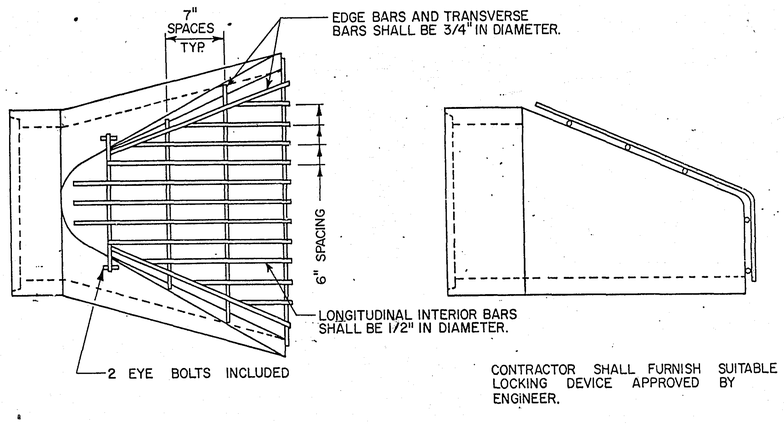
ELEVATION (AT FLOW LINE).

* NOTE: THIS DIMENSION SHALL BE 8' WHEN CATCH BASIN IS INSTALLED AT THE LOW POINT.



SECTION A-A

NOTE:
TRASH GUARD SHALL BE FABRICATED IN ACCORDANCE WITH MnDOT 2471 AND THE FOLLOWING:
A.) USE MnDOT 3306 STEEL
B.) WELD ALL BAR INTERSECTIONS
C.) GALVINIZE BARS AND HARDWARE IN ACCORDANCE WITH MnDOT 3392 AND 3394 AS APPLICABLE.

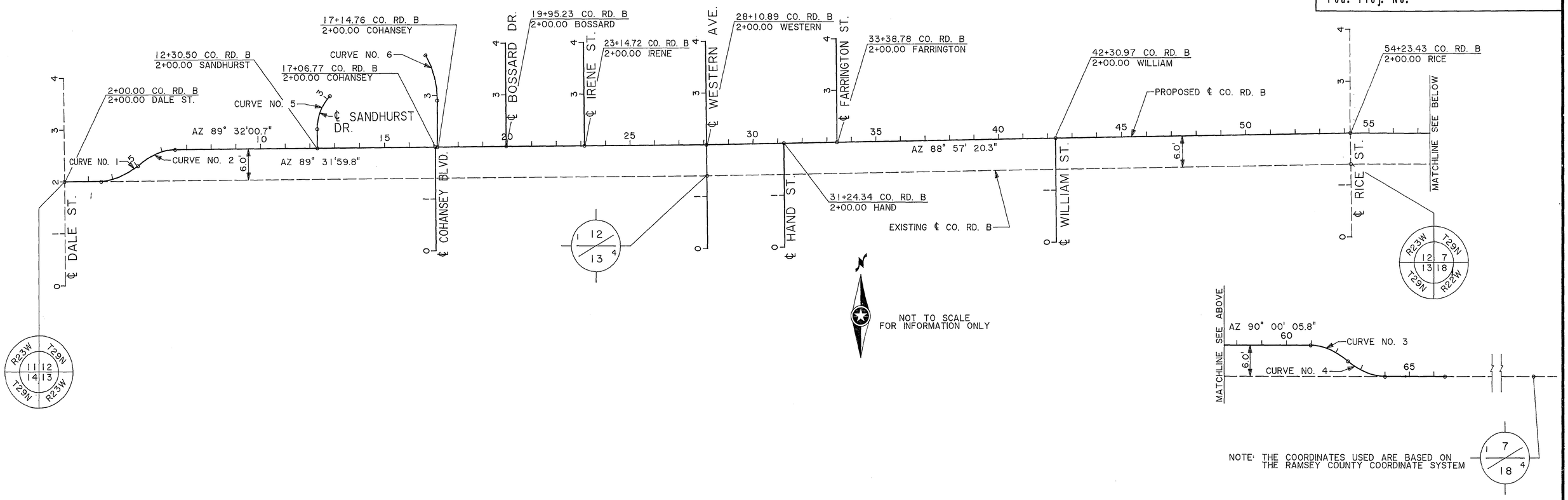


TRASH GUARD (GALVANIZED)
(FOR CONCRETE APRON)

CONSTRUCTION DETAILS
STORM SEWER

S.A.P. 62-625-19 28-113 **Sheet No. 15 of 103 Sheets**

Fed. Proj. No.



NOTE: THE COORDINATES USED ARE BASED ON THE RAMSEY COUNTY COORDINATE SYSTEM

ALIGNMENT TABULATION CHART

CURVE NO.	POINT TYPE	STATION	CURVE DATA Δ	D	R	T	L	COORDINATES NORTH	EAST	AZIMUTH
℄ COUNTY ROAD B										
	P.O.T.	BEGIN CONST. 2+00.00						178512.365	566521.944	89°31'59.8"
	P.C.	3+50.00						178513.587	566671.939	
1	P.I.	4+25.71	2°16'15.5"	1°30'00"	3819.72	75.71	151.40	178514.204	566747.646	
	P.R.C.	5+01.40						178517.820	566823.268	87°15'44.3"
2	P.I.	5+77.11	2°16'15.5"	1°30'00"	3819.72	75.71	151.40	178521.436	566898.891	
	P.T.	6+52.80						178522.053	566974.597	89°31'59.8"
	P.O.T.	KINK PT. ℄ WESTERN 28+10.64						178539.630	569132.366	88°57'20.3"
	P.O.T.	KINK PT. ℄ RICE 54+23.41						178587.251	571744.703	90°00'05.8"
	P.C.	60+97.20						178587.232	572418.500	
3	P.I.	61+72.91	2°16'15.5"	1°30'00"	3819.72	75.71	151.40	178587.230	572494.208	
	P.R.C.	62+48.60						178584.228	572569.858	92°16'21.3"
4	P.I.	63+24.31	2°16'15.5"	1°30'00"	3819.72	75.71	151.40	178581.226	572645.507	
	P.T.	64+00.00						178581.223	572721.216	90°00'05.8"
	P.O.T.	END CONST. 64+75.00						178581.216	572996.216	
EXISTING ℄ COUNTY ROAD B										
	P.O.T.	MONUMENT ⊙ DALE ST/CO RD B						178512.365	566521.944	89°31'59.8"
	P.O.T.	MONUMENT ⊙ WESTERN AVE/CO RD B						178533.630	569132.445	88°57'20.3"
	P.O.T.	MONUMENT ⊙ RICE ST/CO RD B						178581.251	571744.758	90°00'05.8"
	P.O.T.	MONUMENT EAST OF RICE ST						178581.183	574152.313	
EXISTING ℄ DALE STREET										
	P.O.T.	0+00.00						178312.377	566524.149	359°22'06.3"
	P.O.T.	2+00.00						178512.365	566521.944	359°22'48.3"
	P.O.T.	4+00.00						178712.353	566519.780	
℄ SANDHURST DRIVE										
	P.O.T.	2+00.00						178526.758	567552.286	359°34'56.1"
	P.C.	2+37.18						178563.935	567552.015	
5	P.I.		43°51'25.0"	62°19'56.0"	91.92	37.01	70.36	178600.939	567551.745	
	P.T.	3+07.54						178627.808	567577.189	43°26'21.1"
℄ COHANSEY BOULEVARD										
	P.O.T.	0+00.00						178330.644	568030.054	359°33'51.9"
	P.O.T.	2+00.00						178530.638	568028.534	
	P.O.T.	2+00.00						178530.703	568036.529	359°57'21.0"
	P.C.	2+90.17						178620.872	568036.460	
6	P.I.		30°00'00.0"	32°47'00.7"	174.77	46.83	91.51	178667.701	568036.424	
	P.T.	3+81.68						178708.238	568012.978	329°57'21.0"

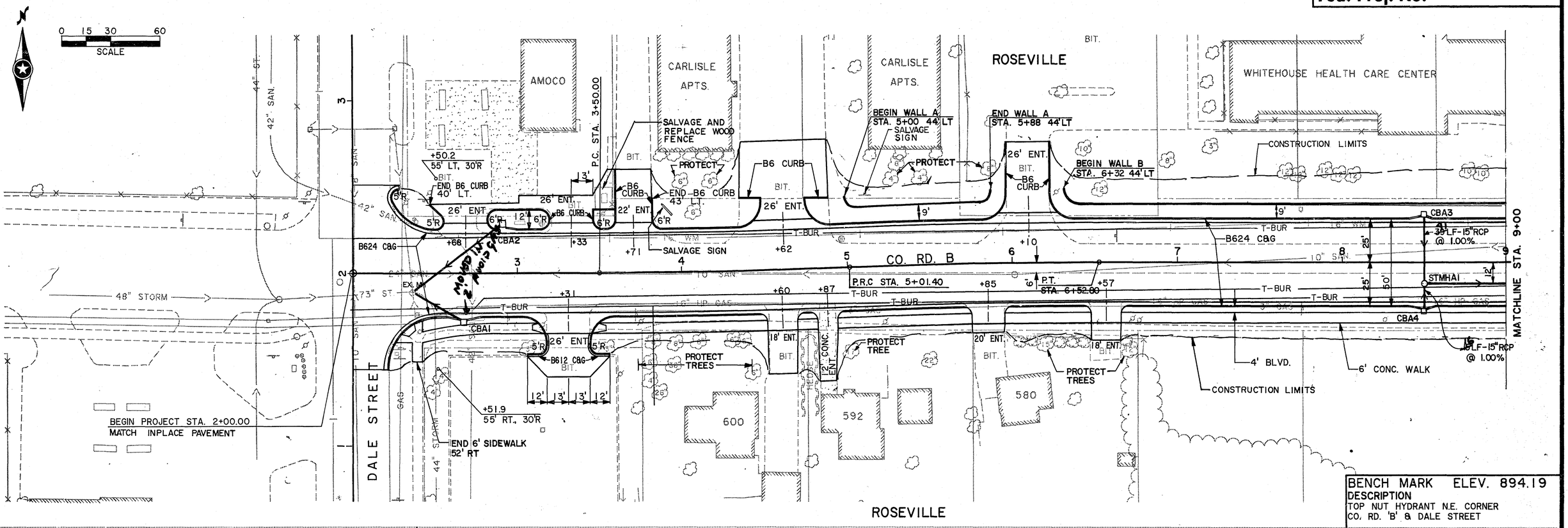
ALIGNMENT TABULATION CHART

CURVE NO.	POINT TYPE	STATION	CURVE DATA Δ	D	R	T	L	COORDINATES NORTH	EAST	AZIMUTH
℄ BOSSARD DRIVE										
	P.O.T.	2+00.00						178532.988	568317.014	359°33'03.0"
	P.O.T.	4+00.00						178732.982	568315.446	
℄ IRENE STREET										
	P.O.T.	2+00.00						178535.590	568636.461	359°24'22.3"
	P.O.T.	4+00.00						178735.579	568634.388	
℄ WESTERN AVENUE										
	P.O.T.	0+00.00						178339.645	569134.663	359°24'51.7"
	P.O.T.	2+00.00						178539.634	569132.619	359°25'55.1"
	P.O.T.	4+00.00						178739.624	569130.636	
℄ HAND STREET										
	P.O.T.	0+00.00						178345.354	569447.594	359°32'50.5"
	P.O.T.	2+00.00						178545.347	569446.014	
℄ FARRINGTON STREET										
	P.O.T.	2+00.00						178549.256	569660.423	359°36'21.0"
	P.O.T.	4+00.00						178749.251	569659.047	
℄ WILLIAM STREET										
	P.O.T.	0+00.00						178365.526	570554.302	359°28'23.4"
	P.O.T.	2+00.00						178565.517	570552.463	
EXISTING ℄ RICE STREET										
	P.O.T.	0+00.00						178387.264	571747.019	359°19'56.6"
	P.O.T.	KINK PT. 1+94.00						178581.251	571744.758	359°39'40.3"
	P.O.T.	2+00.00						178587.251	571744.723	
	P.O.T.	4+00.00						178787.248	571743.540	

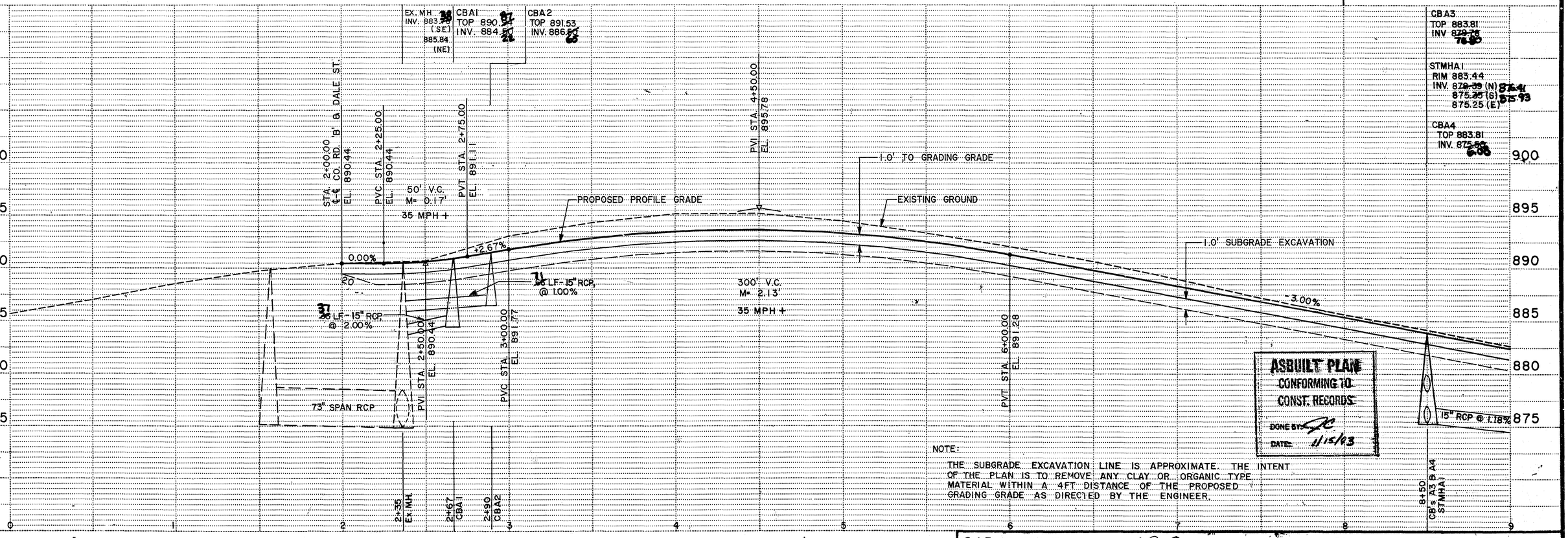
ALIGNMENT PLAN AND TABULATION

S.A.P. 62-625-19 28-113 Sheet No. 16 of 103 Sheets

Fed. Proj. No.



BENCH MARK ELEV. 894.19
DESCRIPTION
TOP NUT HYDRANT N.E. CORNER
CO. RD. 'B' & DALE STREET



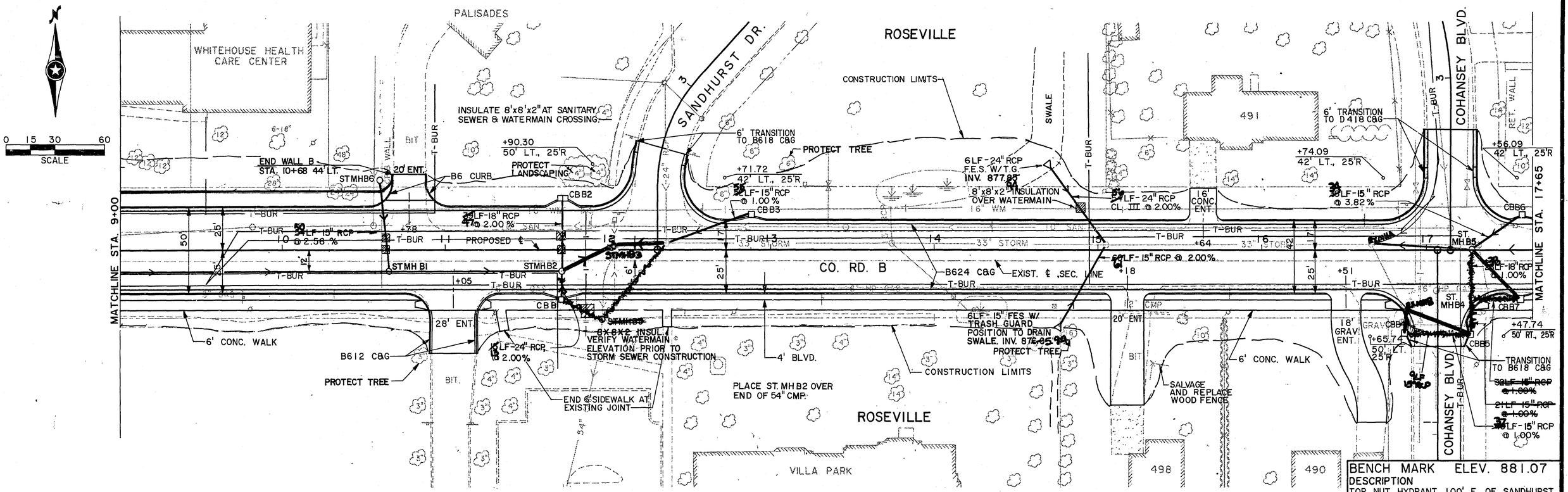
ASBUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: JC
DATE: 11/15/03

NOTE:
THE SUBGRADE EXCAVATION LINE IS APPROXIMATE. THE INTENT OF THE PLAN IS TO REMOVE ANY CLAY OR ORGANIC TYPE MATERIAL WITHIN A 4FT DISTANCE OF THE PROPOSED GRADING GRADE AS DIRECTED BY THE ENGINEER.

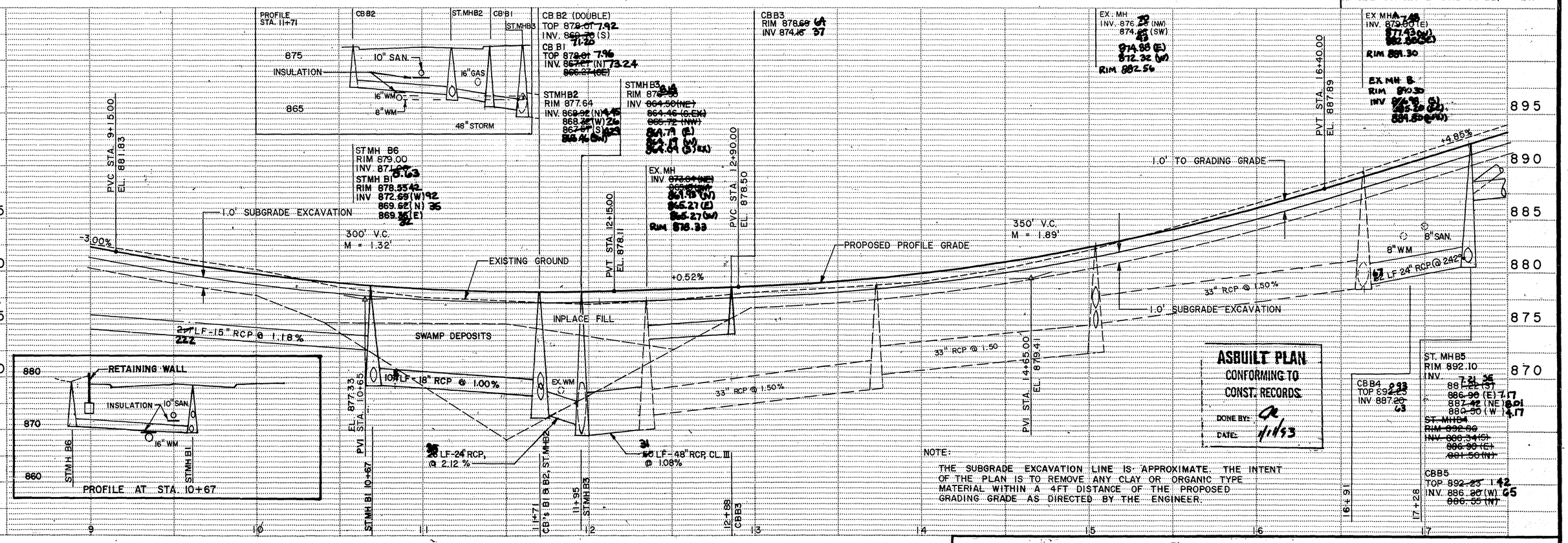
S.A.P. 62-625-19 28-113 Sheet No. 17 of 103 Sheets

MINNESOTA BLUEPRINT, ASMARA

Fed. Proj. No.



BENCH MARK ELEV. 881.07
DESCRIPTION
TOP NUT HYDRANT 100' E. OF SANDHURST N. SIDE CO. RD. 'B' STA. 13+22, 39'LT.



ASBUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: a
DATE: 1/14/93

NOTE:
THE SUBGRADE EXCAVATION LINE IS APPROXIMATE. THE INTENT OF THE PLAN IS TO REMOVE ANY CLAY OR ORGANIC TYPE MATERIAL WITHIN A 4FT DISTANCE OF THE PROPOSED GRADING GRADE AS DIRECTED BY THE ENGINEER.

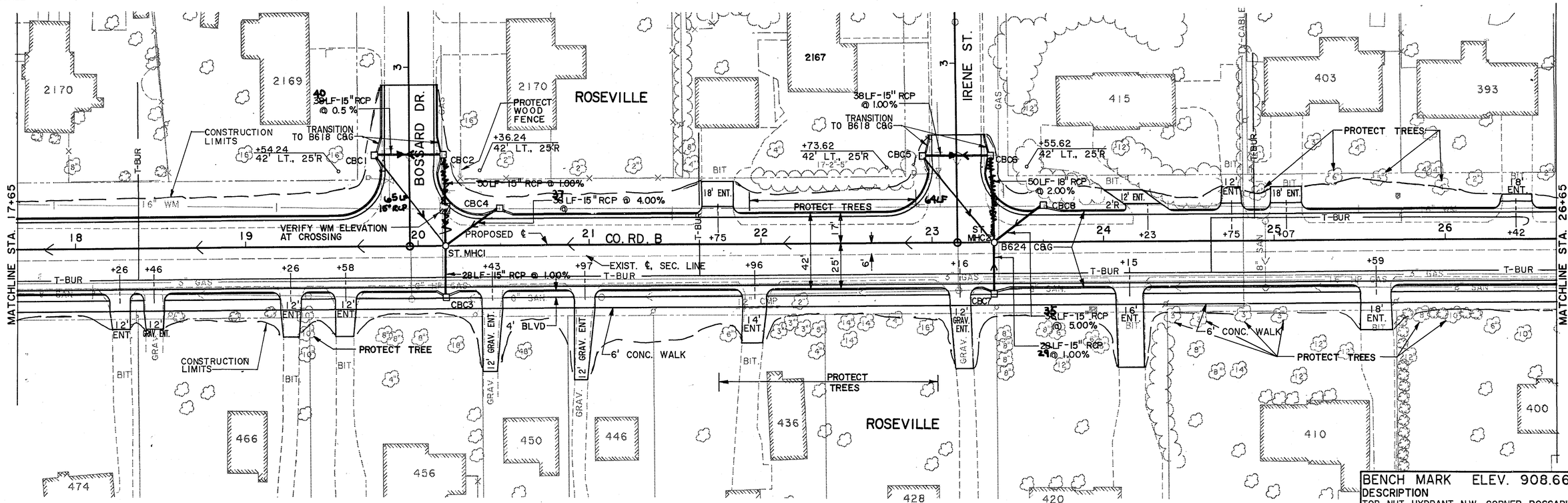
S.A.P. 62-625-19 28-113

Sheet No. 18 of 103 Sheets

MINNESOTA BLUEPRINT 536868

Fed. Proj. No.

0 15 30 60
SCALE



BENCH MARK ELEV. 908.66
DESCRIPTION
TOP NUT HYDRANT N.W. CORNER BOSSARD ST. & CO. RD. 'B' 19+17, 39'LT.

CBC1 19
TOP 905.78
INV. 901.20 E 45
901.43 (SE)

CBC2 64
TOP 905.78 45
INV. 901.10(W) 901.00(S)

CBC4 77
TOP 907.86
INV. 902.63 384

CBC5 11
TOP 923.75
INV. 918.72 E 68
918.68

CBC6 122
TOP 923.75 97
INV. 918.34 (W) 918.69 (S)

CBC8 55
TOP 926.71
INV. 921.79 3.11

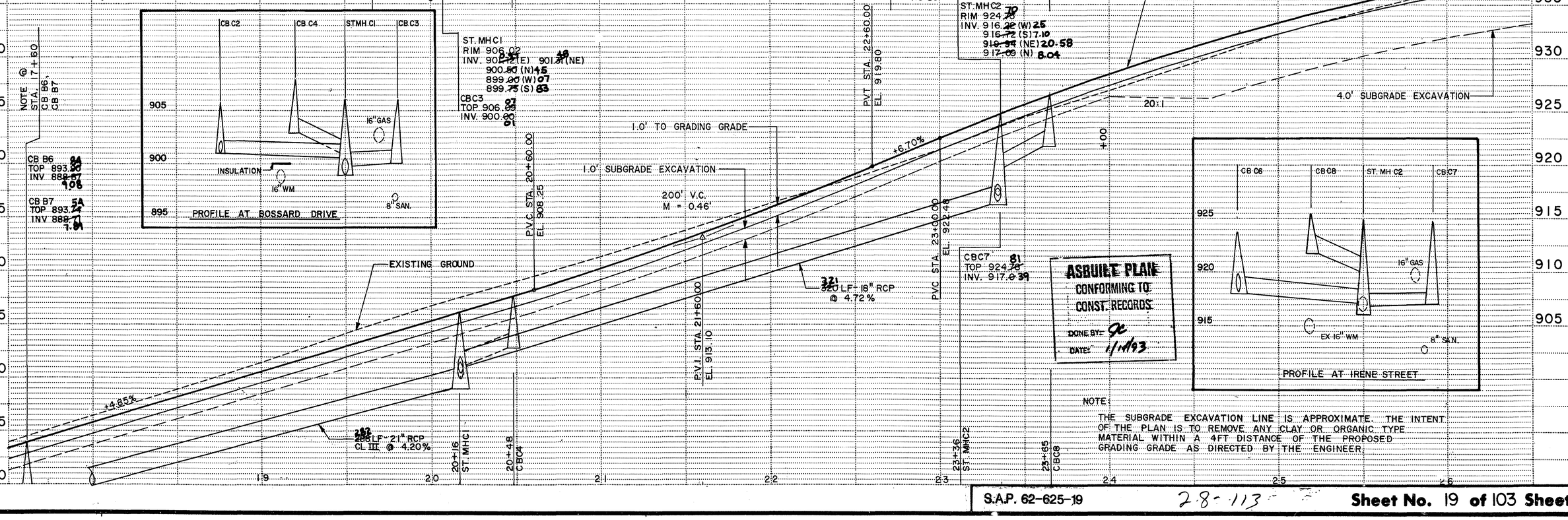
ST. MHC1
RIM 906.02
INV. 901.22(E) 901.37(NE)
900.50 (N) 45
899.00 (W) 07
899.75 (S) 83

CBC3
TOP 906.00 07
INV. 900.00 01

NOTE @ STA. 17+60
CB B6, CB B7

CB B6 84
TOP 893.30
INV. 888.67 4.08

CB B7 54
TOP 893.24
INV 888.71 1.84



CBC6 B22
CBC8 B55
ST. MHC2 B0
RIM 924.75
INV. 916.22(W) 25
916.72 (S) 7.10
919.34 (NE) 20-58
917.09 (N) 8.04

CBC7 81
TOP 924.75
INV. 917.039

ASBUILT PLANS
CONFORMING TO CONST. RECORDS
DONE BY: SC
DATE: 1/11/93

NOTE:
THE SUBGRADE EXCAVATION LINE IS APPROXIMATE. THE INTENT OF THE PLAN IS TO REMOVE ANY CLAY OR ORGANIC TYPE MATERIAL WITHIN A 4FT DISTANCE OF THE PROPOSED GRADING GRADE AS DIRECTED BY THE ENGINEER.

MINNESOTA BLUEPRINT, 53882-J

Fed. Proj. No.

ROSEVILLE

GRADE CHANGE SEE SHEET 25

Keystone wall MBSC

WESTERN AVE.

FARRINGTON ST.

HAND AVE.

CO. RD. B

MATCHLINE STA. 26+65

MATCHLINE STA. 35+50

+69.82 42' LT., 25'R

CB D1

TRANSITION TO D418 C&G +52.24 42' LT., 25'R

CBD2

REMOVE PORTION OF RET. WALL

CONSTRUCTION LIMITS

PROTECT TREE

REMOVE BIT.

18' ENT.

16' CONC. ENT.

CBD3

PROTECT FENCE

+98.25 42' LT., 25'R

12' CONC ENT.

8'x8'x2" INSULATION (TYP.)

CBD5

6' TRANSITION TO B618 C&G +80.24 42' LT., 25'R

12' GRAV ENT.

SCALE 0 15 30 60

ST. MHD1

B624 C&G

ST. MHD2

ST. MHD3

ST. MHD3A

PROPOSED ℄

EXIST ℄, SEC. LINE

32 LF-15" RCP @ 1.00%

27 LF-15" RCP @ 1.00%

21 LF-15" RCP @ 1.00%

T-BUR

4' BLVD.

22' ENT.

CBD4

CBD6

16' ENT.

12' ENT.

+69.99 50' RT., 25'R

6' TRANSITION TO B618 C&G

+47.51 50' RT., 25'R

+83.20 50' RT., 25'R

6' TRANSITION TO B618 C&G

REMOVE BIT. +65.20 50' RT., 25'R

PROTECT TREES

6' CONC. WALK

CONTRACTOR SHALL VERIFY LOCATION OF DRWY. WITH THE CITY OF ROSEVILLE PRIOR TO PLACEMENT.

16' CONC. ENT.

CONSTRUCTION LIMITS

BENCH MARK ELEV. 945.00
DESCRIPTION
TOP NUT HYDRANT S.W. CORNER WESTERN ST. & CO. RD. 'B' 27+84, 41' RT.

PVI STA. 27+00.00
EL. 949.28

+6.70% -3.00%

CBD1 1.79
TOP 942.16
INV. 937.13(E) 16

CBD2 1.74
TOP 942.16
INV. 936.27(W) 81
936.30(S) 72

STMHD1 1.20
RIM 940.89
INV 935.50(N) 91
935.40(E) 90

CBD3
TOP 938.20 90
INV 933.67 4.06

STMHD2 8.09
RIM 937.90
INV 933.30(NW) 93
931.15(S) 0.99
931.26(W) 3.76
931.01(E) 0.93

CBD4 7.93
TOP 939.60
INV 931.40(N) 36

CBD5
TOP 933.34 24
INV. 928.80 4.07

ST. MHD3 34
RIM 933.20
INV. 928.68(N) 82
926.23 (E) 7.04
926.73 (S) 7.28
926.49 (W) 8.65

CBD6
TOP 933.40 20
INV 927.00 67

ST MH D3A
RIM 932.82
INV 925.82 (E)
926.58 (W)

PROPOSED PROFILE GRADE

EXISTING GROUND

1.0' TO GRADING GRADE

800' V.C.
M = 9.70'

36 LF-15" RCP @ 1.00%
39

58 LF-15" RCP @ 2.00%
60

4.0' SUBGRADE EXCAVATION

227 LF-15" RCP @ 1.80%
228

-3.00%

200' V.C.
M = 0.46'

PVRC STA. 31+00
EL. 937.28

215 LF-15" RCP @ 2.10%

PVI STA. 32+00
EL. 934.28

PVT STA. 33+00.00
EL. 933.13

1.15%

20:1

1.0 SUBGRADE EXCAVATION

48 LF 18" RCP

320
274 LF-18" RCP @ 1.25%

ST. MH D3 & CB D5

CBD6 & CB D6

ST MH D3A

ASBUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: JC
DATE: 1/15/97

NOTE:
THE SUBGRADE EXCAVATION LINE IS APPROXIMATE. THE INTENT OF THE PLAN IS TO REMOVE ANY CLAY OR ORGANIC TYPE MATERIAL WITHIN A 4FT DISTANCE OF THE PROPOSED GRADING GRADE AS DIRECTED BY THE ENGINEER.

MINNESOTA BLUEPRINT, 634858

S.A.P. 62-625-19 28-113

Sheet No. 20 of 103 Sheets

Fed. Proj. No.

MATCHLINE STA. 35+50

MATCHLINE STA. 44+65

ROSEVILLE

ROSEDALE CEMETERY

ROSEVILLE

WILLIAM ST.

CO. RD. B

PROTECT TREE

21 LF-15" RCP @ 1.00%

CBE1

12' GRAV. ENT.

ST. MHE1

PROTECT TREES

REMOVE RET. WALL

PROTECT TREE

30 LF-18" RCP @ 2.20%

CBE6

22' ENT.

28' ENT.

PROTECT TREES AND SHRUBS

REMOVE RET. WALL

EX. ST. MH

19 LF-21" RCP @ 1.00%

CBE5

ST. MHE2

PROPOSED ℄

EXIST. ℄, SEC LINE

VARIES

B624 C&G

ST. MHE3

CBE2

64 LF 12" PVC

27 LF-15" RCP @ 1.00%

SDE2A

CBE3

27 LF-15" RCP @ 1.00%

4' BLVD.

CBE4

6' CONC. WALK

CONSTRUCTION LIMITS

INSTALL VEHICULAR GATE

INSTALL SALVAGE FENCE

MATCH INTO INPL. FENCE

PROTECT TREES

PROTECT WOOD FENCE

MATCH INTO INPLACE FENCE

INSTALL SALVAGED FENCE

INSTALL CHAIN LINK FENCE SEE POND EXC. SHEET

CONST. LIMITS

REPLACE WITH EROSION TYPE SOD

GRADE TO DRAIN TO EX. DITCH. FILL TO MIN. EL.=910.0 (INCIDENTAL)

EX. ST. MH

RET. WALL

PROTECT TREE

6' TRANSITION TO B618 C&G

+89.51 50' RT., 25'R

+71.51 50' RT., 25'R

T-BUR

SCALE 0 15 30 60

BENCH MARK ELEV. 918.47

DESCRIPTION

TOP NUT HYDRANT S.W. CORNER WILLIAM ST. & CO RD. 'B' 42+06, 51'RT.

CBE6
TOP 923.67 ~~923.70~~
INV. ~~914.71~~ (E)
~~914.91~~ (S)
8.96

ST. MHE2
RIM 923.~~40~~62
INV. ~~915.33~~ (N) 7.34
~~915.73~~ (S) 7.43
~~916.16~~ (W) 8.97
~~916.20~~ (E)

CBE4
TOP 916.~~23~~11
INV. 911.20
46

EX. ST. MH (27' LT)
RIM 915.09
INV. 907.83 (E)
~~911.35~~ (SW) 0.95
~~909.43~~ (W)

EX. ST. MH (40' RT.)
RIM ~~914.80~~ 5.41
INV. ~~910.80~~ (W) 1.06
~~908.60~~ (N) 3.33
~~910.39~~ (S)

ST MH E3
RIM 915.63
INV 911.23 (W)
911.22 (N)

CBE5
TOP 915.~~83~~56
INV. ~~911.50~~
911.11 (S)
911.09 (NE)

CBE1
TOP 928.~~38~~87
INV. ~~925.38~~
4.45

ST. MHE1
RIM 929.~~20~~95
INV. ~~922.21~~ (S) 1.47
~~922.15~~ (E) 1.35
~~925.32~~ (N) AAD
~~922.25~~ (W) 3.30

CBE2
TOP 928.~~32~~89
INV. ~~923.50~~
923.01 (N)
923.68 (SE)

SDE2A
RIM 924.84
INV 924.18

PVC STA. 36+75.00
EL 928.81

PVI STA. 37+50.00
EL 927.95

PVT STA. 38+25.00
EL 925.89

PVC STA. 41+25.00
EL 917.64

PVI STA. 42+00.00
EL 916.58

PVT STA. 42+75.00
EL 914.83

150' V.C.
M = 0.30'

300 LF-18" RCP CL V @ 2.00 %
296

1.0' TO GRADING GRADE

PROPOSED PROFILE GRADE

1.0' SUBGRADE EXCAVATION.

EXISTING GROUND

-1.15%

-2.75%

150' V.C.
M = 0.33'

313
330 LF-21" RCP CL III @ 1.60%

57
60 LF-15" RCP @ 1.00%

-1.00%

30" RCP

NOTE:
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ASBUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: BE
DATE: 11/1/93

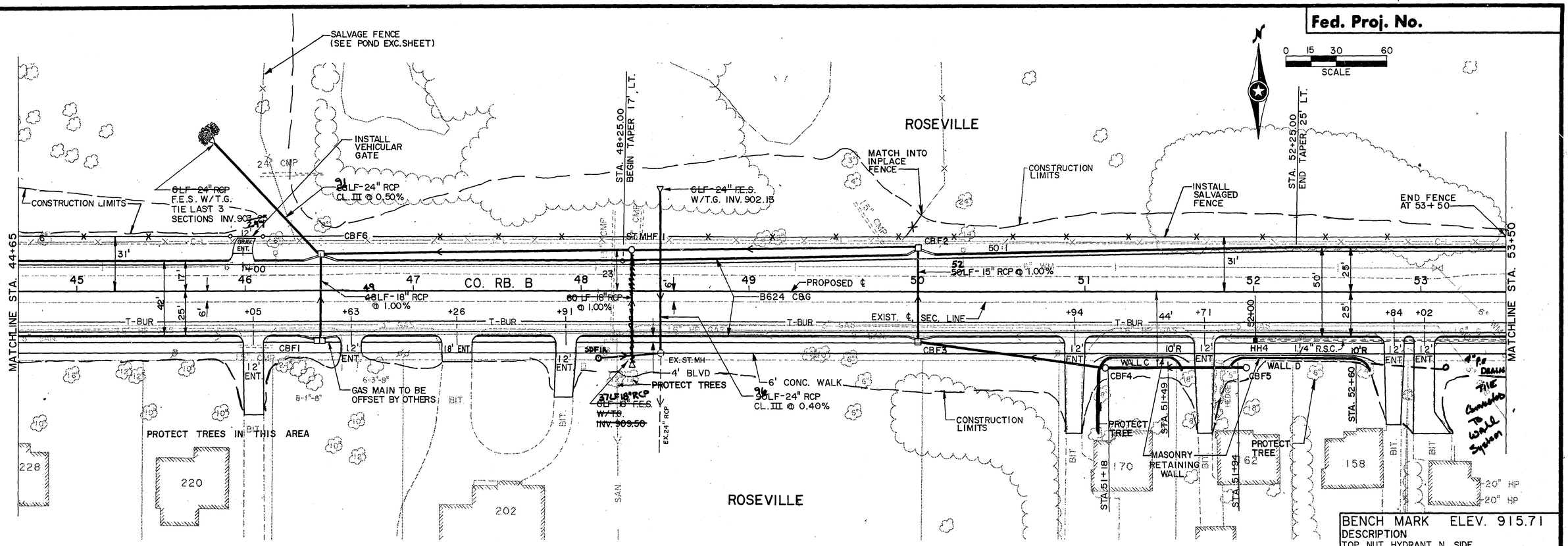
S.A.P. 62-625-19

28-113

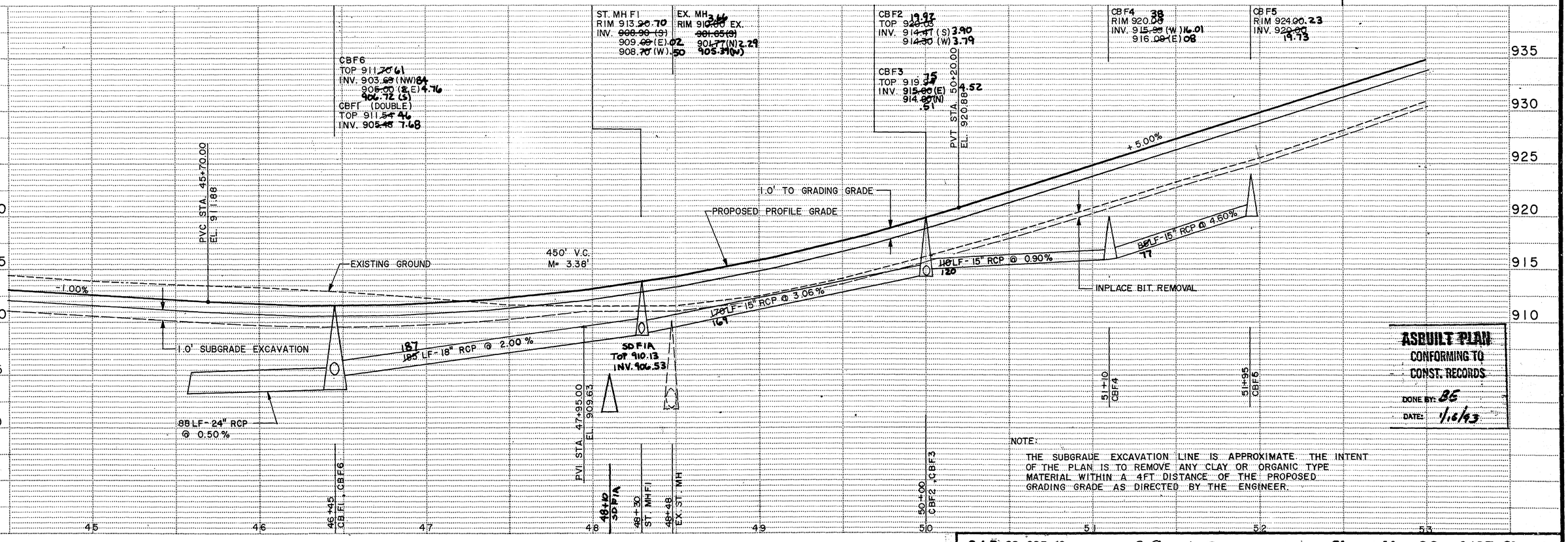
Sheet No. 21 of 103 Sheets

MINNESOTA BLUEPRINT, 338848

Fed. Proj. No.



BENCH MARK ELEV. 915.71
DESCRIPTION
TOP NUT HYDRANT N. SIDE
CO. RD. 'B' STA. 46+18, 22'LT.



ASBUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY: BE
DATE: 1/16/93

NOTE:
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S.A.P. 62-625-19 28-113 **Sheet No. 22 of 103 Sheets**

MINNESOTA BLUEPRINT, 83888

Fed. Proj. No.

ROSEVILLE

LITTLE CANADA

MAPLEWOOD

ROSEVILLE

+66.02
60' LT., 35'R

B624 C&G
(BUILT BY OTHERS)

+06.80
87' LT., 50'R

INPLACE SIGNAL POLE

BEGIN FENCE
AT 55+00

INSTALL
SALVAGED
FENCE

STA. 57+00.00
END TAPER 37' LT.

STA. 59+25.00
END TAPER 22' LT. & RT.

CONSTRUCTION
LIMITS

P.C. STA. 60+97.20

SCALE 0 15 30 60

INSTALL
SALVAGED
FENCE

HH1
HH5
CBG2
HH7
ST.MHG1
CBG4
HH3
HH2
CBG1
HH6
CBG3

1¼" R.S.C.

INPL. SIGNAL POLE

STA. 53+50
MATCHLINE

STA. 53+99.49
MATCH INPL. PAV'T.

STA. 54+47.46
MATCH INPL. PAV'T.

CO. RD. B

MATCHLINE STA. 62+00

72 LF-15" RCP
@ 0.64%

48 LF-15" RCP
@ 1.00%

B624 C&G

T-BUR

20" HP GAS

25" HP GAS

INPLACE SIGNAL POLE

SALVAGE
SIGN

10'R
5'R

32' ENT.

B6 CURB

+89.17
60' RT., 35'R

MATCH INPL. PAV'T
70' RT.

END B624 C&G
BEGIN B6 CURB

SALVAGE
SIGN

B612
C&G

30' ENT.
.02¼ .02¼

LANDSCAPED AREA

PROTECT TREES

END 6" CONC. WALK

PROTECT TREES

+58.14
60' RT., 35'R

RICE STREET

SINCLAIR

CONSTRUCTION
LIMITS

STA. 57+75.00
BEGIN TAPER 25' RT.

CUB FOODS

B624 C&G
(BUILT BY OTHERS)

CBG1
TOP 938.~~15~~.09
INV. 933.~~10~~34

CBG2
TOP 937.~~98~~86
INV. 932.~~64~~(SW)67
932.~~95~~(E) 66

ST.MHG1
RIM 938.~~21~~65
INV. 931.~~28~~(W)43
931.~~28~~(E)39

CB G4
TOP 929.~~05~~ 8.97
INV. 923.~~53~~(S) 62
925.~~06~~(W) 3.46
923.00(E)

CBG3
TOP 929.~~04~~ 8.85
INV. 924.~~01~~07

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: B.E
DATE: 1/16/93

EXISTING GROUND

PROPOSED PROFILE GRADE

1.0' TO GRADING GRADE

PVC STA. 53+10.00
EL. 935.36

PVI STA. 53+50.00
EL. 937.38

PVI STA. 53+90.00
EL. 937.98

STA. 53+99.49 MATCH EXIST.
EL. 938.12

STA. 54+47.49 MATCH EXIST.
EL. 938.37

PVC STA. 54+50.00
EL. 938.34

80' V.C.
M= 0.35'

30 MPH +

+5.00%

+1.50%

-1.18%

+1.17%

60' V.C.
M= 0.24'

BUILT BY
OTHERS

20:1

1.0' SUBGRADE EXCAVATION

PVI STA. 54+90.00
EL. 937.87

PVC STA. 55+50
EL. 938.57

PVT STA. 55+30
EL. 938.34

231 LF-15" RCP @ 0.50%

PVI STA. 58+00.00
EL. 941.50

+50

500' V.C.
M= 3.86'

1.08' TO GRADING GRADE

305 LF-15" RCP @ 2.04%

4.0' SUBGRADE EXCAVATION

PVC STA. 61+50.00
EL. 924.00

-5.00%

15" @ 4.00%

PVT STA. 60+50.00
EL. 929.00

INPLACE BIT. REMOVAL

54+95
CBG1

55+15
CBG2

57+47
ST.MHG1

60+50
CBG3 & CBG4

950
945
940
935
930
925

53 54 56 57 58 59 60 61

NOTE:
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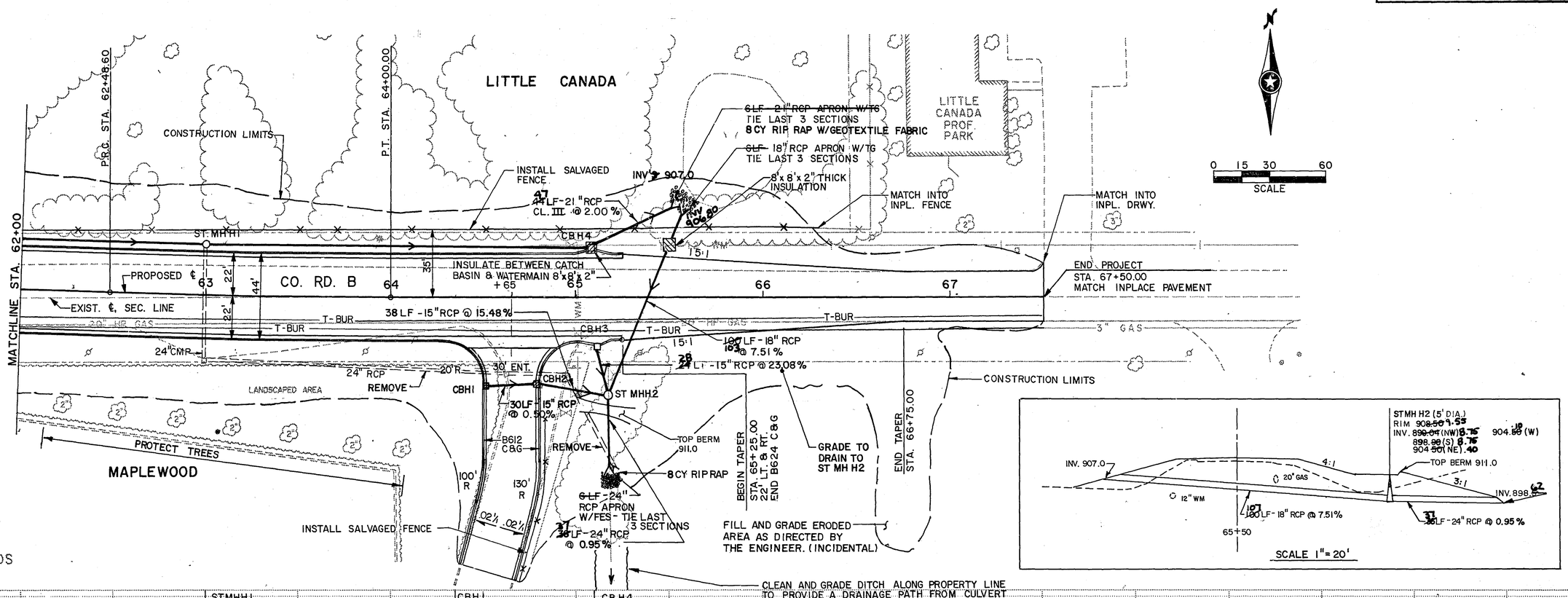
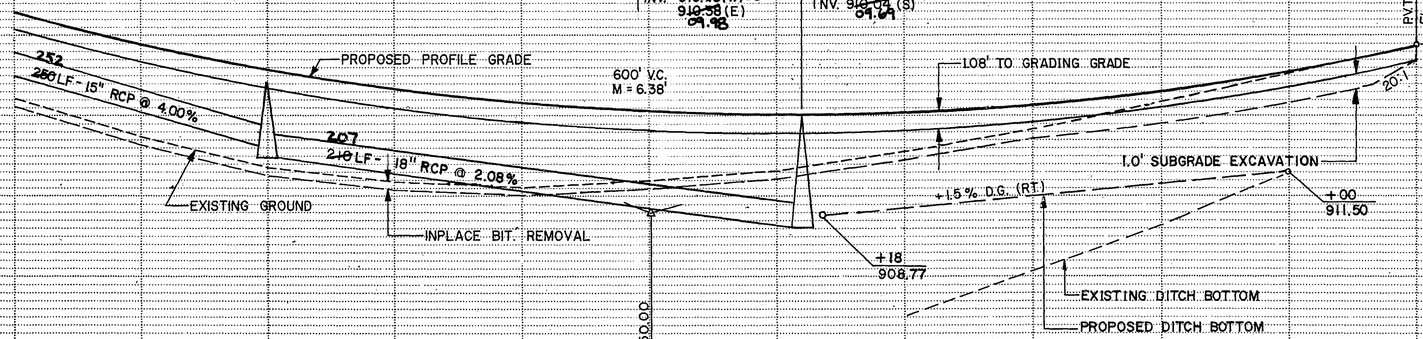
S.A.P. 62-625-19 28-113

Sheet No. 23 of 103 Sheets

MINNESOTA BLUEPRINT 338868

Fed. Proj. No.





ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: AE
DATE: 1/5/93

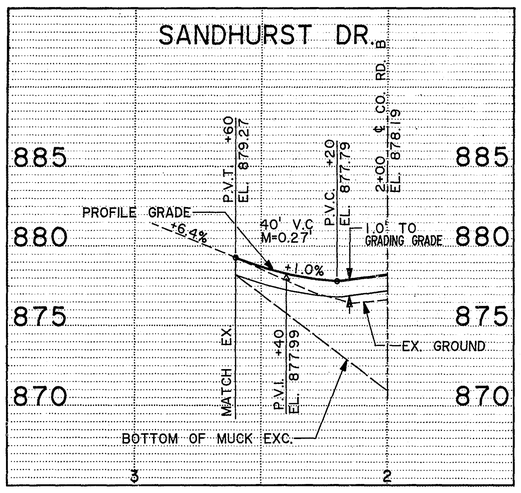
NOTE:
THE SUBGRADE EXCAVATION LINE IS APPROXIMATE. THE INTENT OF THE PLAN IS TO REMOVE ANY CLAY OR ORGANIC TYPE MATERIAL WITHIN A 4FT DISTANCE OF THE PROPOSED GRADING GRADE AS DIRECTED BY THE ENGINEER.

S.A.P. 62-625-19 28-113 **Sheet No. 24 of 103 Sheets**

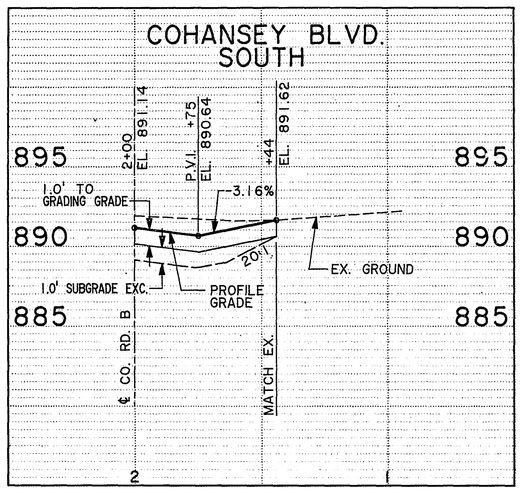
MINNESOTA BLUEPRINT S-3858

Fed. Proj. No.

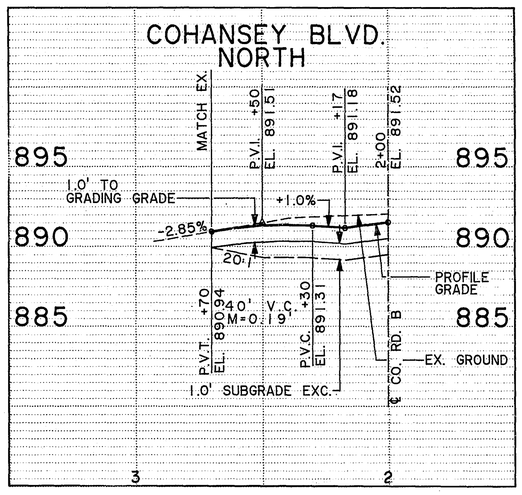
SANDHURST DR.



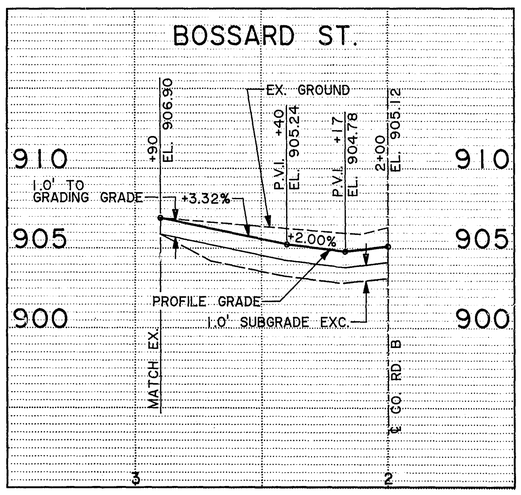
COHANSEY BLVD. SOUTH



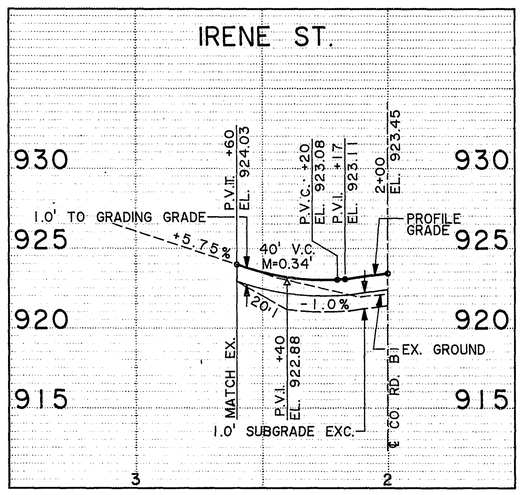
COHANSEY BLVD. NORTH



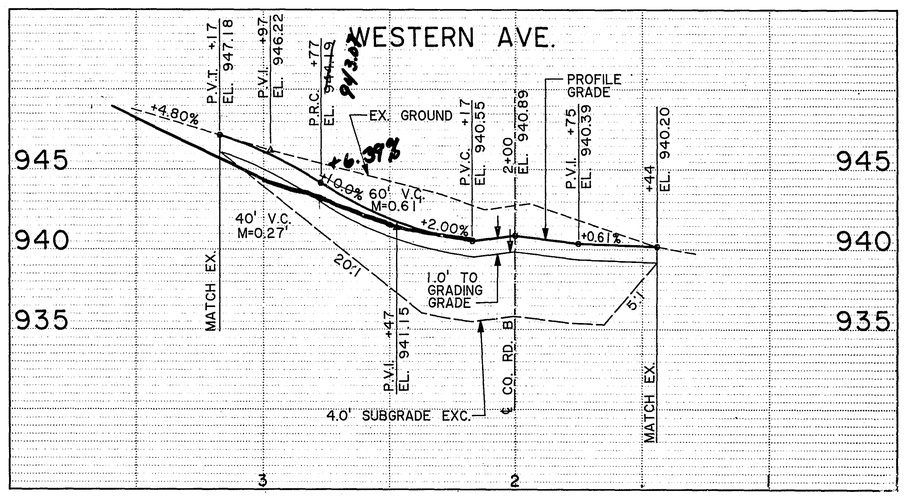
BOSSARD ST.



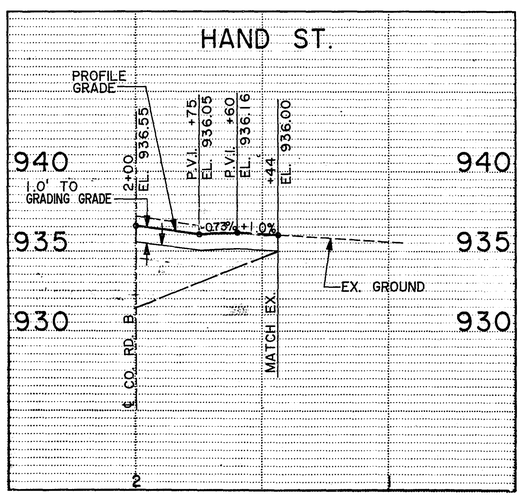
IRENE ST.



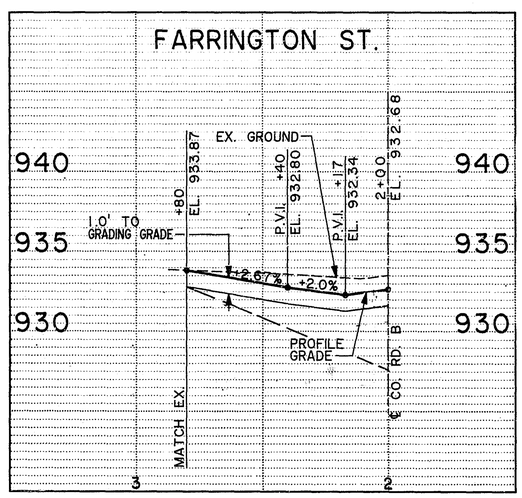
WESTERN AVE.



HAND ST.



FARRINGTON ST.



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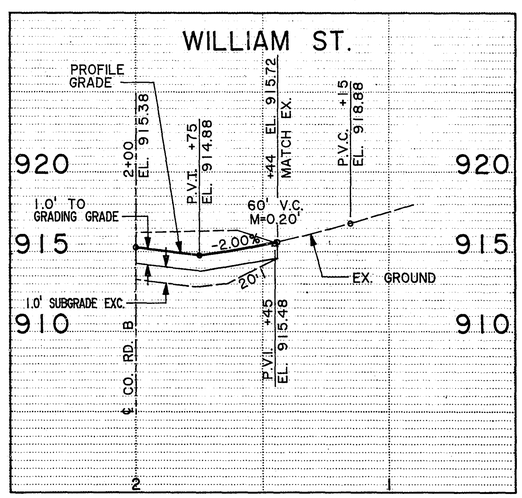

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: QC
DATE: 12/1/93

SIDE STREET PROFILES

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RIVEPRO PLOTTED ON 20 JUN 1990

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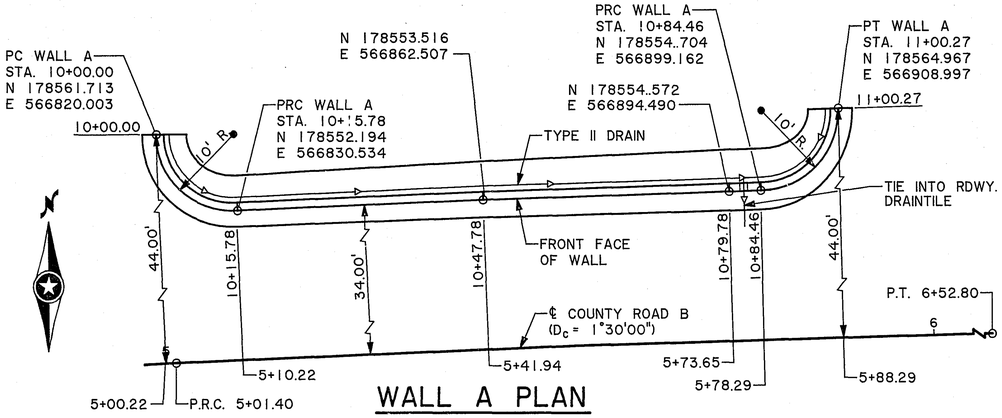
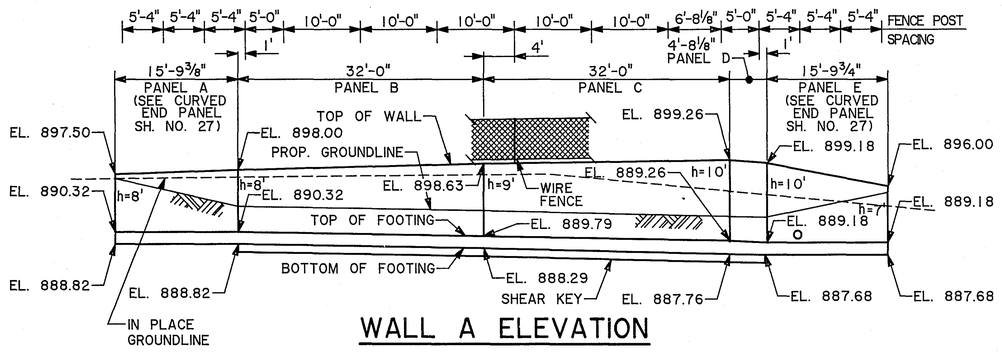
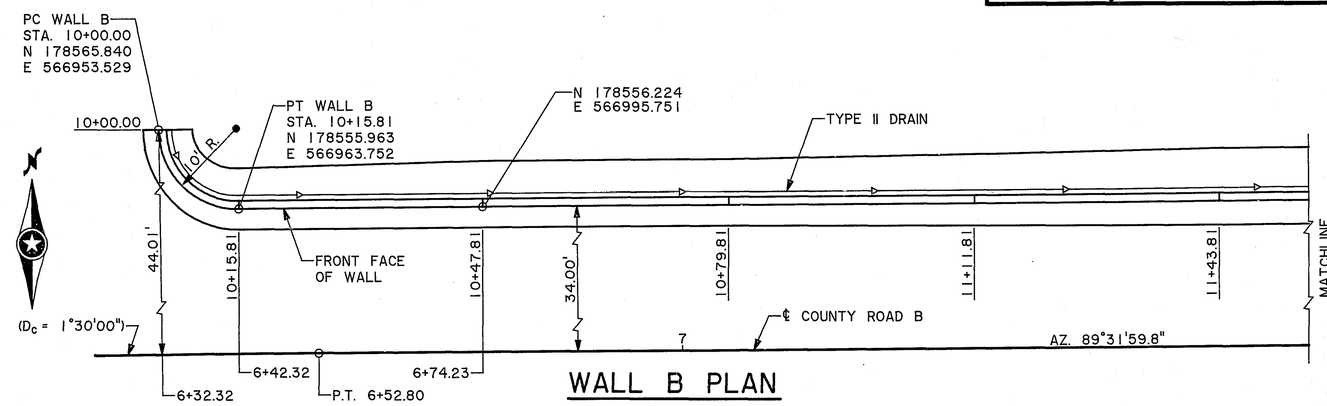


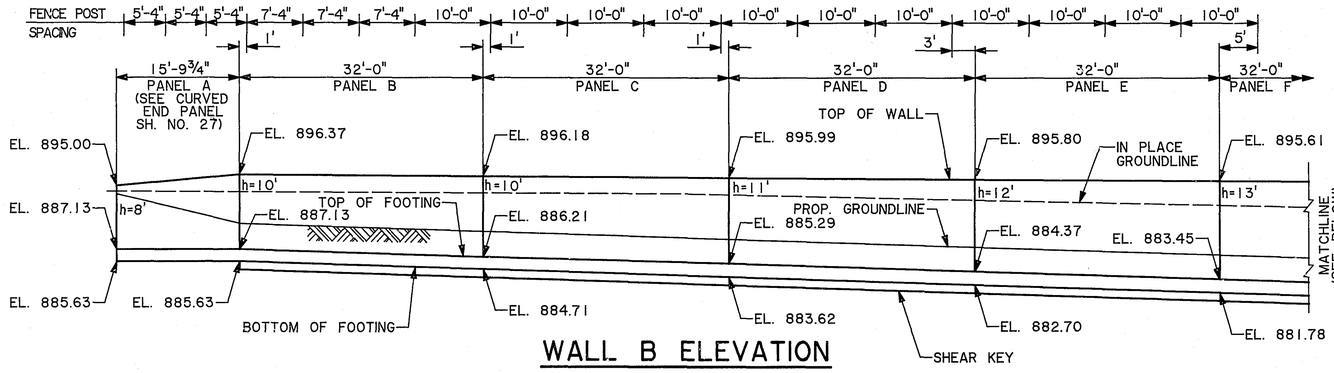
WALL A PLAN



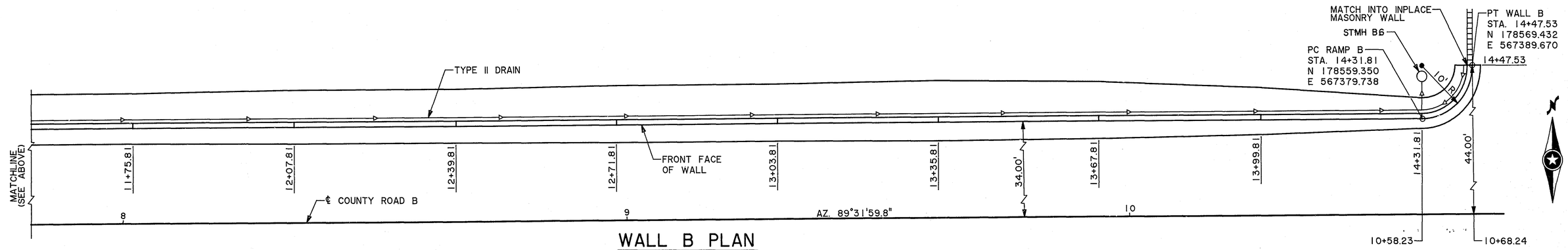
WALL A ELEVATION



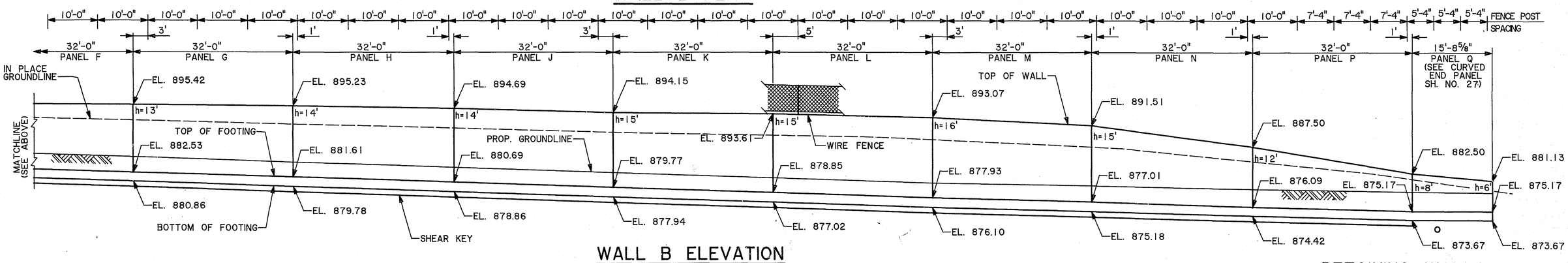
WALL B PLAN



WALL B ELEVATION



WALL B PLAN



WALL B ELEVATION

RETAINING WALLS A AND B

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Fed. Proj. No.

SUMMARY OF QUANTITIES FOR WALL A (N)(2)

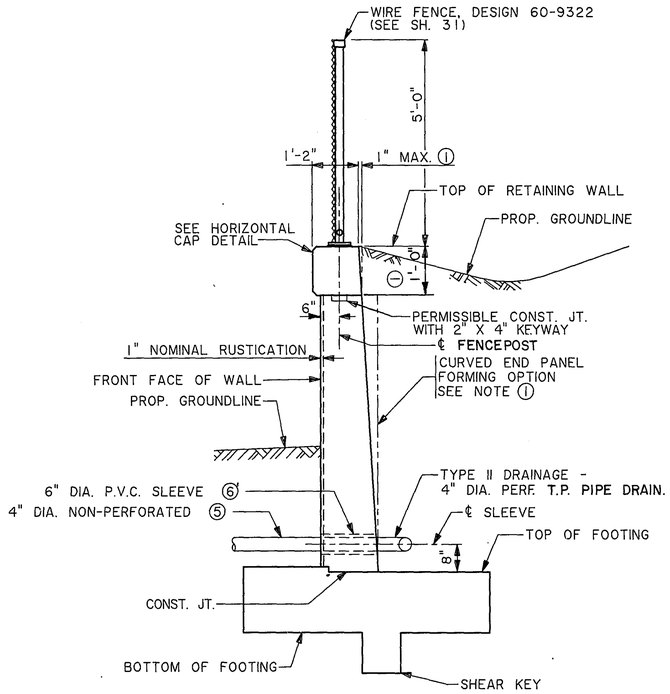
PANEL	h	LENGTH	CONCRETE		REINFORCING STEEL		4" PERFORATED T.P. PIPE DRAIN
			1A43 CU. YD.	3Y43 CU. YD.	EPOXY COATED LB.	NON-EPOXY COATED LB.	LIN. FT.
	8				58		
A		15'-9 3/8"	6.3	5.9	412	332	13
	8				117		
B		32'-0"	13.4	12.9	881	690	32
	9				136		
C		32'-0"	14.6	14.8	1018	816	32
	10				139		
D		4'-8 1/8"	2.2	2.2	156	119	5
	10				139		
E		15'-9 3/4"	6.3	6.4	531	403	22
	7				48		
TOTALS			43	43 ▲	3635	2360 ✳	104

SUMMARY OF QUANTITIES FOR WALL B (N)(2)

PANEL	h	LENGTH	CONCRETE		REINFORCING STEEL		4" PERFORATED T.P. PIPE DRAIN
			1A43 CU. YD.	3Y43 CU. YD.	EPOXY COATED LB.	NON-EPOXY COATED LB.	LIN. FT.
	8'				58		
A		15'-9 3/4"	6.9	6.9	533	403	13
	10'				139		
B		32'-0"	15.1	15.7	1018	816	32
	10'				139		
C		32'-0"	16.5	16.7	1133	914	32
	11'				159		
D		32'-0"	18.5	18.7	1281	1104	32
	12'				178		
E		32'-0"	19.8	20.8	1467	1336	32
	13'				181		
F		32'-0"	20.4	21.8	1467	1336	32
	13'				181		
G		32'-0"	22.3	22.9	1627	1526	32
	14'				202		
H		32'-0"	24.1	24.0	1633	1526	32
	14'				202		
J		32'-0"	24.8	25.1	1716	1732	32
	15'				223		
K		32'-0"	25.5	26.3	1716	1732	32
	15'				223		
L		32'-0"	26.2	27.4	1889	2264	32
	16'				226		
M		32'-0"	26.2	27.4	1889	2264	32
	15'				223		
N		32'-0"	22.3	23.0	1722	1732	32
	12'				178		
P		32'-0"	16.0	15.9	1287	1104	32
	8'				117		
Q		15'-8 5/8"	5.5	5.1	411	330	19
	6'				47		
TOTALS			290	298 ▲	23465	20119 ✳	448

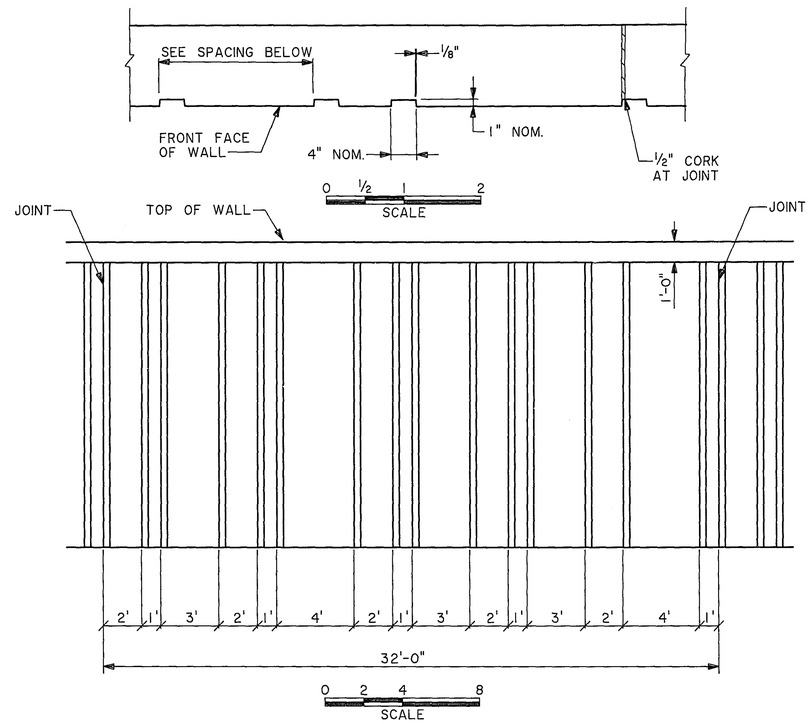
▲ THE TOTAL QUANTITY FOR CONCRETE (3Y43) INCLUDES:
43 CU.YD. (WALL A) + 298 CU.YD. (WALL B)
+ 2 CU.YD. (WALL C + D RAILPOST FOOTINGS) = 343 CU.YD.

✳ THE TOTAL QUANTITY FOR NON-EPOXY COATED STEEL INCLUDES:
2360 LBS (WALL A) + 20119 LBS (WALL B)
+ 165 LBS. (WALL C + D RAILPOST FOOTINGS) = 22644 LBS.



TYPICAL RETAINING WALL SECTION

0 1 2 4
SCALE



NOTE: GROOVES SHALL BE PROVIDED AT STEM JOINT BETWEEN PANELS.

TYPICAL REVERSE BATTEN RUSTICATION TREATMENT

RETAINING WALL NOTES:

① AT CURVED END PANELS THE CONTRACTOR MAY FORM THE BACK FACE OF WALL IN VERTICAL SEGMENTS AS SHOWN. PAYMENT FOR CONCRETE AND REINFORCEMENT BARS WILL BE BASED ON THE TAPERED DIMENSIONS SHOWN IN THE DETAILS.

② SEE SHEET 10 FOR FENCE QUANTITIES.

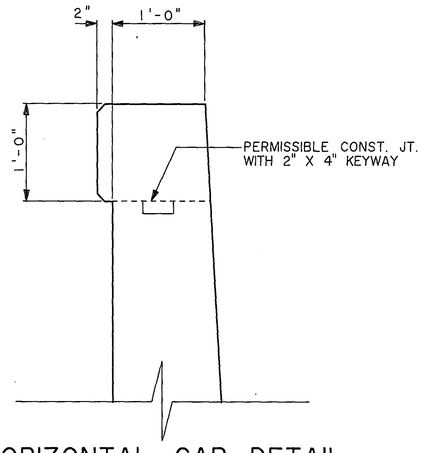
③ OMIT SHEAR KEY UNDER CURVED END PANELS.

④ FENCE POST ANCHORAGES TO BE FABRICATED WITH BASE PLATE PARALLEL TO TOP OF WALL GRADE. PIPE SLEEVES FOR FENCE POSTS SHALL BE VERTICAL. SEE DETAIL B905 IN SPECIAL PROVISIONS.

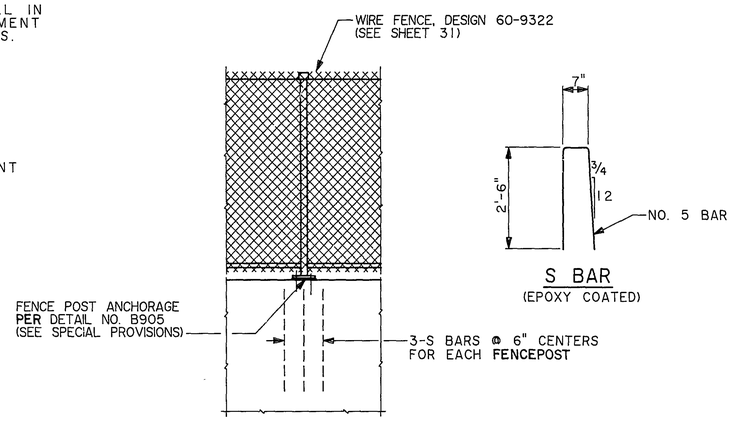
⑤ NON-PERFORATED PIPE FOR TIE INTO DRAINAGE SYSTEM INCLUDED FOR PAYMENT WITH PERFORATED DRAIN PIPE.

⑥ INCLUDED IN PRICE BID FOR OTHER ITEMS.

⑦ SEE TYPICAL SECTION SHEETS FOR EXCAVATION AND BACKFILL AT RETAINING WALLS.



HORIZONTAL CAP DETAIL



ADDITIONAL REINFORCEMENT AT FENCEPOST

0 1 2 4
SCALE

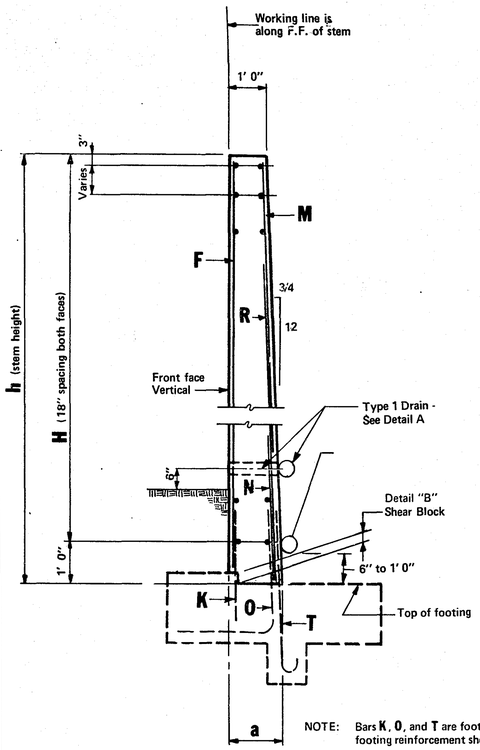
RETAINING WALL QUANTITIES AND DETAILS

APPROVED Feb. 27, 1980

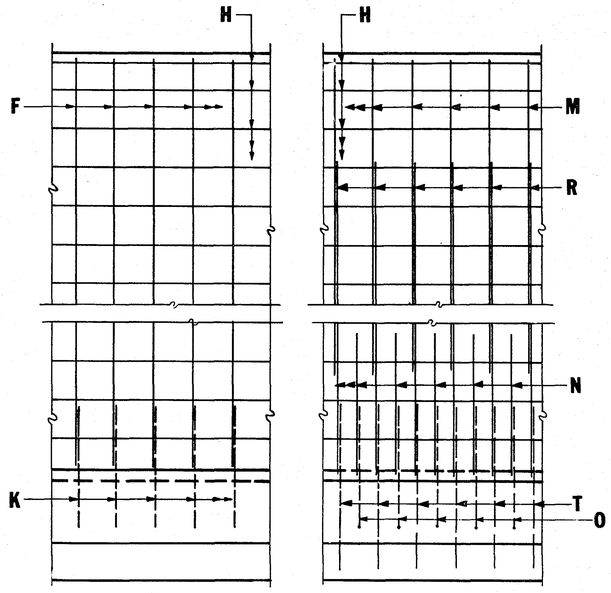
Fed. Proj. No.

A.A.S.H.T.O. DESIGN SPECIFICATIONS

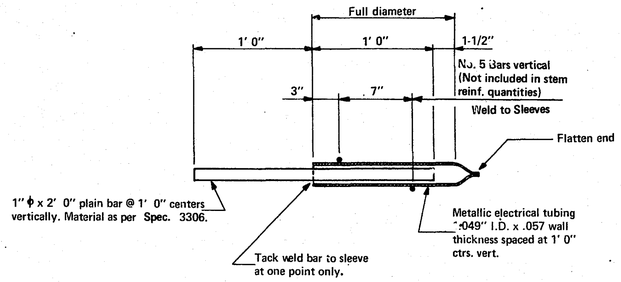
fc = 1600 p.s.i. n = 8 Concrete
fs = 24,000 p.s.i. Reinforcement



NOTE: Bars K, O, and T are footing bars. See footing reinforcement sheet for details.

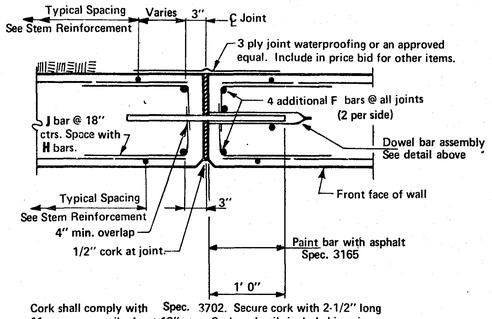


FRONT FACE ELEVATION BACK FACE ELEVATION



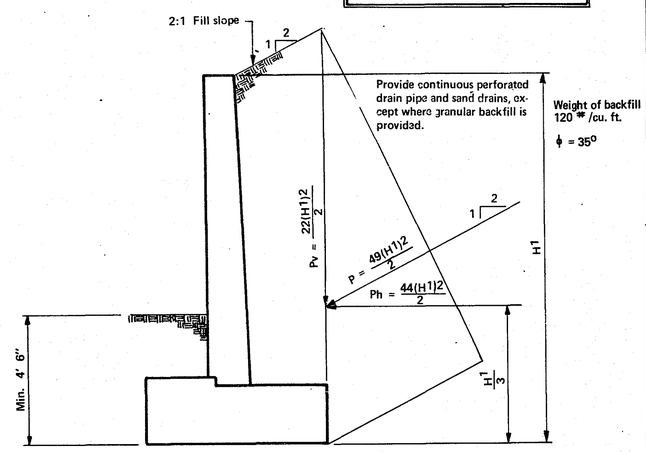
DOWEL BAR ASSEMBLY

Material and placing to be included in price bid for other items.



Cork shall comply with Spec. 3702. Secure cork with 2-1/2" long 11 ga. copper nails about 18" ctrs. Cork and nails included in price bid for other items.

TYPICAL SECTION THRU STEM JOINT



DRAINAGE: For Type II drainage provide drainage through stem every 200' ± 50' with appropriate outlet. Contact Materials Engineering Section for recommendations on the type of drainage system required.

SPREAD FTGS: If soil studies indicate that the inplace soils below the footing cannot support the base pressures shown this design shall not be used.

PILE FTGS: Lateral resistance is equal to horizontal component of battered piles plus bending resistance of:
6.0k per pile for timber with a vertical load of 24 tons.
7.5k per pile for timber with a vertical load of 30 tons.
9.0k per pile for cast-in-place with a vertical load of 40 tons.
13.0k per pile for cast-in-place with a vertical load of 60 tons.
12.0k per pile for steel with a vertical load of 55 tons.

If soil studies indicate that material in place below footing cannot offer the lateral resistance required this design shall not be used.

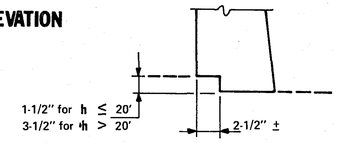
TYPICAL SECTION THRU STEM

① The smallest "C" dimension bar to be placed at the top of wall and increases downward with wall depth.

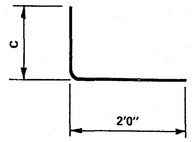
② Use "J" Bars and 4 additional "F" Bars at dowel joints. These bars are not included in quantities per lineal foot of stem. (See stem joint detail)

③ Weight includes "J" bars and four "F" bars per stem joint.

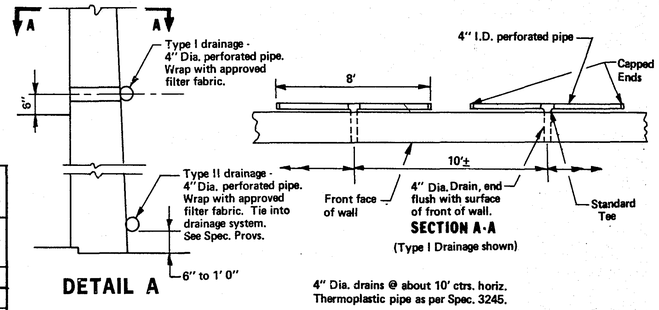
PART STEM ELEVATION



DETAIL B



J BAR



DETAIL A

SECTION A-A (Type I Drainage shown)

4" Dia. drains @ about 10' ctrs. horiz. Thermoplastic pipe as per Spec. 3245.

STEM GEOMETRICS

STEM REINFORCEMENT BARS ⑬

h HT.	a WIDTH	J(BARS) ①② SIZE	J(BARS) LENGTH	J(BARS) C 7"	J(BARS) C 10"	J(BARS) C 13"	J(BARS) C 16"	J(BARS) TOTAL WEIGHT③	F② (VERTICAL) SIZE	F② LENGTH	F② SPAC.	H ⑭ (HORIZONTAL) SIZE	H NO.	H MAX. SP.	M (VERTICAL) SIZE	M LENGTH	M SPAC.	N (VERTICAL) SIZE	N LENGTH	N SPAC.	R (VERTICAL) SIZE	R LENGTH	R SPAC.	QUANTITIES / LIN. FT. OF STEM② REINF. POUND	QUANTITIES / LIN. FT. OF STEM② CONCRETE CU. YDS.
5'	1' 3-3/4'	6	2'+C	16				74.0	4	4' 8"	12"	5	8	18"	4	4' 10"	14-1/2"							14.1	.213
6	1 4-1/2	6	2'+C	16	4			94.3	4	5 8	12	5	10	18	4	5 10	14-1/2							17.4	.263
7	1 5-1/4	6	2'+C	16	4			96.9	4	6 8	12	5	10	18	4	6 10	14-1/2							18.7	.315
8	1 6	6	2'+C	16	8			116.6	4	7 8	12	5	12	18	4	7 10	14-1/2							22.0	.369
9	1 6-3/4	6	2'+C	16	12			136.3	4	8 8	12	5	14	18	4	8 10	14-1/2							25.3	.426
10	1 7-1/2	6	2'+C	16	12			139.0	4	9 8	12	5	14	18	5	9 10	14-1/2							29.6	.485
11	1 8-1/4	6	2'+C	16	16			158.7	4	10 8	12	5	16	18	5	10 10	14-1/2							33.2	.546
12	1 9	6	2'+C	16	20			178.4	4	11 8	12	5	18	18	5	11 10	13							38.0	.610
13	1 9-3/4	6	2'+C	16	20			181.1	4	12 8	12	5	18	18	5	12 0	14-1/2				6	5' 0"	14-1/2"	43.8	.676
14	1 10-1/2	6	2'+C	16	20	4		202.2	4	13 8	12	5	20	18	5	12 0	14-1/2				7	5 0	14-1/2	48.8	.744
15	1 11-1/4	6	2'+C	16	20	8		223.4	4	14 8	12	5	22	18	5	12 0	14-1/2				7	5 0	14-1/2	51.6	.815
16	2 0	6	2'+C	16	20	8		226.1	4	15 8	12	5	22	18	5	12 0	14-1/2				8	6 0	14-1/2	57.0	.888
17	2 0-3/4	6	2'+C	16	20	12		247.3	4	16 8	12	5	24	18	5	12 0	15-1/2				8	7 0	15-1/2	60.3	.963
18	2 1-1/2	6	2'+C	16	20	16		268.5	4	17 8	12	5	26	18	5	12 0	13	6	3' 0"	13"	6	8 0	13	69.9	1.041
19	2 2-1/4	6	2'+C	16	20	16		271.2	4	18 8	12	5	26	18	5	12 0	15-1/2	7	7 0	15-1/2	6	9 0	15-1/2	70.8	1.121
20	2 3	6	2'+C	16	20	20		292.4	4	19 8	12	5	28	18	5	12 0	15-1/2	7	8 0	15-1/2	7	10 0	15-1/2	80.5	1.203
21	2 3-3/4	6	2'+C	16	20	24		312.1	4	20 6	12	5	30	18	5	12 0	15-1/2	8	8 0	15-1/2	7	11 0	15-1/2	88.6	1.287
22	2 4-1/2	6	2'+C	16	20	24		315.8	4	21 6	12	5	30	18	5	12 0	14-1/2	8	8 0	14-1/2	8	12 0	14-1/2	100.2	1.373
23	2 5-1/4	6	2'+C	16	20	24	4	338.5	4	22 6	12	5	32	18	5	12 0	14-1/2	8	9 0	14-1/2	8	13 0	14-1/2	107.4	1.462
24	2 6	6	2'+C	16	20	24	8	361.2	4	23 6	12	5	34	18	5	12 0	14-1/2	9	9 0	14-1/2	8	14 0	14-1/2	117.8	1.554
25	2 6-3/4	6	2'+C	16	20	24	8	363.9	4	24 6	12	5	34	18	5	12 0	14-1/2	9	9 0	14-1/2	9	15 0	14-1/2	129.7	1.648
26	2 7-1/2	6	2'+C	16	20	24	12	386.6	4	25 6	12	5	36	18	5	12 0	14-1/2	9	10 0	14-1/2	9	16 0	14-1/2	138.1	1.743
27	2 8-1/4	6	2'+C	16	20	24	16	409.3	4	26 6	12	5	38	18	5	12 0	13	9	10 0	13	9	17 0	13	153.6	1.842
28	2 9	6	2'+C	16	20	24	16	411.9	4	27 6	12	5	38	18	5	12 0	12	9	11 0	12	9	18 0	12	169.1	1.942
29	2 9-3/4	6	2'+C	16	20	24	20	434.6	4	28 6	12	5	40	18	5	12 0	11	9	11 0	11	9	19 0	11	185.7	2.046
30'	2' 10-1/2'	6	2'+C	16	20	24	24	457.3	4	29' 6"	12"	5	42	18	5	12' 0"	11"	10	12' 0"	11"	9	20' 0"	11"	207.7	2.151

STEM NOTES:

1. Maximum spacing of stem joints (panels) is 32 feet. Use dowel assemblies at all joints. No reinf. thru joint.
2. Concrete in stems to be Concrete Mix No. 3Y43.
3. Reinforcement bars shall be deformed billet steel bars conforming to ASTM A615 Grade 60.
4. Bar lap at authorized splices: 36 diameters for No. 4 to No. 7 bars and 40 diameters for No. 8 to No. 11 bars except as noted.
5. All reinforcement bars to have a 2" minimum cover. When 1" or less rustication is used, move front face reinf. bars in to maintain 2" cover. For rustication over 1" in depth, increase stem width to depth of rustication to maintain minimum reinforcement cover.
6. Edges of concrete on all exposed joints and top of stem wall shall be formed with 1/2" vee unless otherwise noted.
7. Construction to be in accordance with Spec. 2411 except as noted.
8. When stem heights vary by less than four feet in any panel, the rebars shall be sized and spaced for the maximum height in the panel.
9. When stem heights at the ends of any panel differ by more than four feet, but less than eight feet, the panel shall be divided into two approximately equal parts (or on some other logical basis) for rebar design. The bars for each portion of the panel shall be sized and spaced for the maximum stem height in that portion.
10. When stem heights vary by more than eight feet, the panel shall be divided into 3 parts for rebar design. The maximum stem height in each portion shall be used for determining rebar sizing and spacing in that portion.
11. When stem heights are five feet or less, the rebars shall be sized and spaced as required for h = 5 feet.
12. Vertical bars F and M in stems or varying heights and transverse bars O, P, and Q in footings of varying widths shall vary in length in accordance with the dimensions of the structure.
13. Stem reinforcement bars shall be epoxy coated.
14. Horizontal bars in curved end panels shall be shop bent.

RETAINING WALL - 2:1 FILL SLOPE

(STEM DETAILS)

FIG. 5-397.721 (1 OF 4)

S.A.P. 62-625-19

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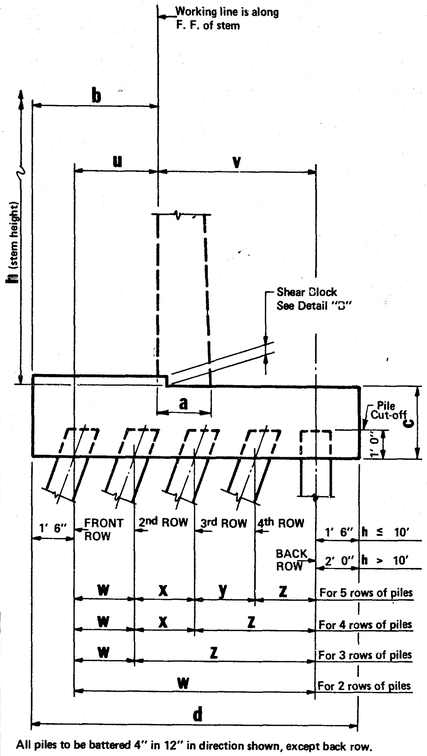
Sheet No. 28 of 103 Sheets

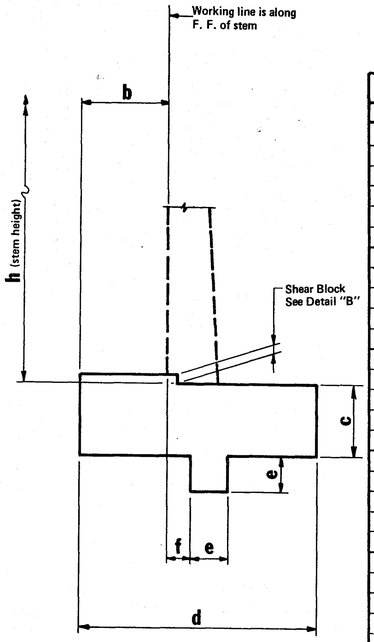
Fed. Proj. No.



All piles to be battered 4" in 12" in direction shown, except back row.

TYPICAL SECTION THRU PILE FOOTING

h HT.	a WIDTH	b OFFSET	c DEPTH	d WIDTH	u OFFSET	v OFFSET
5'	1' 3-3/4"	1' 8-1/4"	2' 1"	5' 0"	2-1/4"	1' 9-3/4"
6	1 4-1/2	1 10	2 1	5 6	4	2 2
7	1 5-1/4	1 11-3/4	2 1	6 0	5-3/4	2 6-1/4
8	1 6	2 1-1/2	2 3	6 6	7-1/2	2 10-1/2
9	1 6-3/4	2 3-1/4	2 3	7 0	9-1/4	3 2-3/4
10	1 7-1/2	2 5	2 3	7 6	11	3 7
11	1 8-1/4	2 6-3/4	2 5	8 0	1 0-3/4	3 5-1/4
12	1 9	2 8-1/2	2 5	8 6	1 2-1/2	3 9-1/2
13	1 9-3/4	2 10-1/4	2 5	9 0	1 4-1/4	4 1-3/4
14	1 10-1/2	3 0	2 7	9 6	1 6	4 6
15	1 11-1/4	3 1-3/4	2 7	10 0	1 7-3/4	4 10-1/4
16	2 0	3 3-1/2	2 7	10 6	1 9-1/2	5 2-1/2
17	2 0-3/4	3 5-1/4	2 9	11 0	1 11-1/4	5 6-3/4
18	2 1-1/2	3 7	2 9	11 6	2 1	5 11
19	2 2-1/4	3 8-3/4	2 9	12 0	2 2-3/4	6 3-1/4
20	2 3	3 10-1/2	2 11	12 6	2 4-1/2	6 7-1/2
21	2 3-3/4	4 0-1/4	2 11	13 0	2 6-1/4	6 11-3/4
22	2 4-1/2	4 2	2 11	13 6	2 8	7 4
23	2 5-1/4	4 3-3/4	3 1	14 0	2 9-3/4	7 8-1/4
24	2 6	4 5-1/2	3 1	14 6	2 11-1/2	8 0-1/2
25	2 6-3/4	4 7-1/4	3 1	15 0	3 1-1/4	8 4-3/4
26	2 7-1/2	4 9	3 3	15 6	3 3	8 9
27	2 8-1/4	4 10-3/4	3 3	16 0	3 4-3/4	9 1-1/4
28	2 9	5 0-1/2	3 3	16 6	3 6-1/2	9 5-1/2
29	2 9-3/4	5 2-1/4	3 5	17 0	3 8-1/4	9 9-3/4
30'	2' 10-1/2"	5' 4"	3' 5"	17' 6"	3' 10"	10' 2"



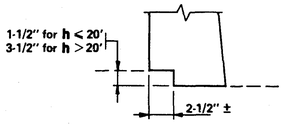
TYPICAL SECTION THRU SPREAD FOOTING

h HT.	b OFFSET	c DEPTH	d WIDTH	e BLOCK	f OFFSET	BASE PRESSURE (KIPS/SQ.FT.) AT TOE	AT HEEL	QTY./LIN. FT. OF FOOTING CONCRETE CU. YDS.
5'	1' 5-1/4"	1' 4"	4' 6"	1' 0"	10-3/4"	0.75	1.00	.267
6	1 7-1/2	1 4	5 1-/2	1 0	11-1/2	1.00	1.03	.298
7	1 9-3/4	1 4	5 9	1 0	1 0-1/4	1.22	1.07	.331
8	2 0	1 6	6 4-1/2	1 0	1 1	1.43	1.10	.402
9	2 2-1/4	1 6	7 0	1 0	1 1-3/4	1.66	1.13	.437
10	2 4-1/2	1 6	7 7-1/2	1 0	1 2-1/2	1.88	1.17	.473
11	2 6-3/4	1 8	8 3	1 0	1 3-1/4	2.10	1.22	.560
12	2 9	1 8	8 10-1/2	1 0	1 4	2.31	1.26	.599
13	2 11-1/4	1 8	9 6	1 0	1 4-3/4	2.52	1.31	.639
14	3 1-1/2	1 10	10 1-1/2	1 2	1 5-1/2	2.73	1.36	.754
15	3 3-3/4	1 10	10 9	1 2	1 6-1/4	2.95	1.42	.797
16	3 6	1 10	11 4-1/2	1 2	1 7	3.15	1.49	.840
17	3 8-1/4	2 0	12 0	1 2	1 7-3/4	3.32	1.55	.958
18	3 10-1/2	2 0	12 7-1/2	1 2	1 8-1/2	3.55	1.62	1.005
19	4 0-3/4	2 0	13 3	1 2	1 9-1/4	3.76	1.70	1.052
20	4 3	2 2	13 10-1/2	1 2	1 10	4.00	1.76	1.185
21	4 5-1/4	2 2	14 6	1 2	1 10-3/4	4.17	1.83	1.265
22	4 7-1/2	2 2	15 1-1/2	1 4	1 11-1/2	4.37	1.91	1.333
23	4 9-3/4	2 4	15 9	1 4	2 0-1/4	4.55	1.97	1.482
24	5 0	2 4	16 4-1/2	1 4	2 1	4.74	2.05	1.538
25	5 2-1/4	2 4	17 0	1 4	2 1-3/4	4.90	2.15	1.594
26	5 4-1/2	2 6	17 7-1/2	1 4	2 2-1/2	5.08	2.24	1.759
27	5 6-3/4	2 6	18 3	1 4	2 3-1/4	5.23	2.32	1.818
28	5 9	2 6	18 10-1/2	1 4	2 4	5.40	2.42	1.878
29	5 11-1/4	2 8	19 6	1 4	2 4-3/4	5.55	2.52	2.059
30'	6' 1-1/2"	2' 8"	20' 1-1/2"	1' 4"	2' 5-1/2"	5.70	2.62	2.123

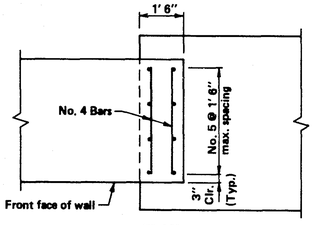
FOOTING NOTES

1. Construction joints infooting are permissable. Construction joints shall be located a min. of 2' away from stem joints. A keyway is required.
2. Pile spacing is at bottom of footing.
3. Pile spacing shown is based on a design loading of:
   24 tons per pile - timber piling
   30 tons per pile - timber piling
   See Spec. 2452.3E1
4. Concrete in footings to be Concrete Mix No. 1A 43
5. Eliminate shear key on spread footing where footing is 6" or more into rock.
6. Where sound very hard rock is encountered the footing shall be keyed into rock as directed by the Engineer.
7. Reinforcement bars shall be deformed Billet Steel bars conforming to ASTM A615 Grade 60.
8. Bar lap at authorized splices: 36 diameters for No. 4 to No. 7 bars and 40 diameters for No. 8 to No. 11 bars.
9. All reinforcement bars to have a 3" minimum cover unless noted otherwise. When rustication is used, move front face vertical dowel K in to maintain 2" cover. For rustication over 1" in depth increase stem width to depth of rustication to maintain reinforcement cover.
10. Maximum longitudinal slope on bottom of footing shall be 10 to 1. Steps shall be used for steeper slopes.
11. Pile per foot quantities listed are approximate figures.
12. Footing reinforcement to continue through joints.

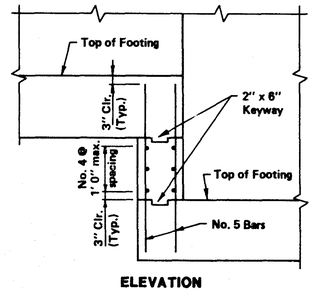
TYPICAL SECTION THRU PILE FOOTING



DETAIL B



PLAN



ELEVATION

TYPICAL STEP FOOTING DETAIL
(Footing reinforcement not shown)

h HT.	TRANSVERSE w	x	y	z	LONGITUDINAL ROW FRONT ROW	2nd ROW	3rd ROW	4th ROW	BACK ROW	QTY./LIN. FT. OF FOOTING PILES NO.	CONCRETE CU. YDS.
5'	2' 0"				12' 0"				12' 0"	0.167	.395
6	2 6				12 0				12 0	.167	.435
7	3 0				12 0				12 0	.174	.474
8	3 6				12 0				12 0	.192	.553
9	4 0				10 10				12 0	.217	.596
10	4 6				9 8				12 0	2.71	.638
11	4 6				9 6				12 0	.302	.730
12	5 0				8 6				12 0	.336	.776
13	5 6				7 6				11 0	.379	.821
14	6 0				6 6				9 9	.432	.925
15	3 0			3' 6"	7 8	11' 8"			11 0	.521	.973
16	3 0			4 0	7 0	10 2			10 2	.567	1.022
17	3 0			4 6	6 5	9 4			9 4	.623	1.139
18	3 0			5 0	5 10	8 6			8 6	.683	1.190
19	3 0			5 6	5 3	7 9			7 9	.758	1.242
20	3 0			6 0	4 8	7 0			7 0	.848	1.371
21	3 0	3' 0"		3 6	5 3	6 1	10' 9"		11 1	.918	1.452
22	3 0	3 0		4 0	5 0	5 8	9 6		10 2	.984	1.508
23	3 0	3 0		4 6	4 10	5 3	8 4		9 3	1.060	1.649
24	3 0	3 0		5 0	4 8	4 10	7 2		8 4	1.152	1.708
25	3 0	3 0		5 6	4 6	4 6	6 0		7 6	1.277	1.767
26	3 0	3 0		6 0	4 3	4 3	5 7		7 0	1.360	1.921
27	3 0	3 0	3' 0"	3 6	4 0	4 0	8 0	8' 8"	10 0	1.435	1.983
28	3 0	3 0	3 0	4 0	3 10	3 10	7 6	8 0	9 0	1.521	2.045
29	3 0	3 0	3 0	4 6	3 8	3 8	7 1	7 4	8 0	1.623	2.212
30'	3' 0"	3' 0"	3' 0"	5' 0"	3' 6"	3' 6"	6' 8"	6' 8"	7' 1"	1.750	2.277

TIMBER PILE SPACING
DESIGN LOAD 24 TONS/PILE
(See Spec. 3471 for diameter of piles)

h HT.	TRANSVERSE w	x	y	z	LONGITUDINAL ROW FRONT ROW	2nd ROW	3rd ROW	4th ROW	BACK ROW	QTY./LIN. FT. OF FOOTING PILES NO.	CONCRETE CU. YDS.
5'	2' 0"				12' 0"				12' 0"	.167	.395
6	2 6				12 0				12 0	.167	.435
7	3 0				12 0				12 0	.167	.474
8	3 6				11 6				12 0	.170	.553
9	4 0				9 4				12 0	.190	.596
10	4 6				7 3				12 0	.221	.638
11	4 6				6 9				10 4	.245	.730
12	5 0				6 3				9 2	.269	.776
13	5 6				5 6				8 2	.304	.821
14	6 0				4 9				7 3	.348	.925
15	3 0			3' 6"	6 3	6' 7"			9 7	.416	.973
16	3 0			4 0	5 8	6 3			8 8	.452	1.022
17	3 0			4 6	5 1	5 11			7 9	.495	1.139
18	3 0			5 0	4 6	5 8			6 11	.543	1.190
19	3 0			5 6	3 11	5 5			6 1	.604	1.242
20	3 0	3' 0"		3 0	4 6	4 6	7' 5"		10 5	.675	1.371
21	3 0	3 0		3 6	4 2	4 2	6 9		9 5	.724	1.452
22	3 0	3 0		4 0	3 11	3 11	6 2		8 5	.792	1.508
23	3 0	3 0		4 6	3 8	3 8	5 6		7 7	.859	1.649
24	3 0	3 0		5 0	3 6	3 6	4 10		6 9	.926	1.708
25	3 0	3 0		5 6	3 4	3 4	4 6		6 0	.989	1.767
26	3 0	3 0		6 0	3 2	3 2	4 2		5 3	1.062	1.921
27	3 0	3 0	3' 0"	3 6	3 6	3 6	3 10	5 0"	10 1	1.131	1.983
28	3 0	3 0	3 0	4 0	3 4	3 4	3 7	4 4	9 6	1.219	2.045
29	3 0	3 0	3 0	4 6	3 2	3 2	3 4	3 8	8 11	1.316	2.212
30	3' 0"	3' 0"	3' 0"	5' 0"	3' 1"	3' 1"	3' 1"	3 1"	8' 4"	1.417	2.277

TIMBER PILE SPACING
DESIGN LOAD 30 TONS/PILE
(See Spec. 3471 for diameter of piles)

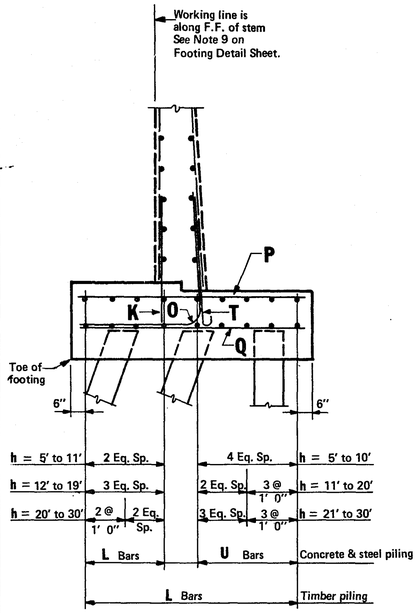
RETAINING WALL - 2:1 FILL SLOPE
(FOOTING DETAIL-SPREAD FOOTING & TIMBER PILING)

FIG. 5-397.721 (2 of 4)
Approved: November 4, 1985

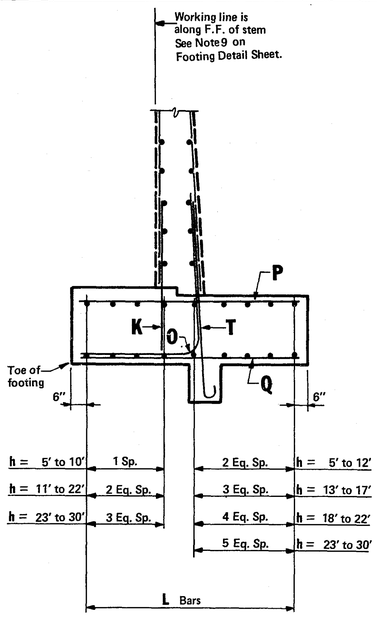
S.A.P. 62-625-19 28-113

Sheet No. 29 of 103 Sheets

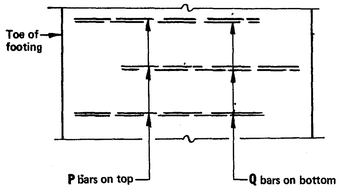
Fed. Proj. No.



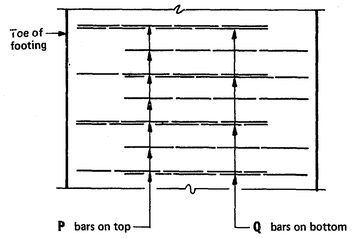
TYPICAL SECTION THRU PILE FOOTING



TYPICAL SECTION THRU SPREAD FOOTING



CASE 1



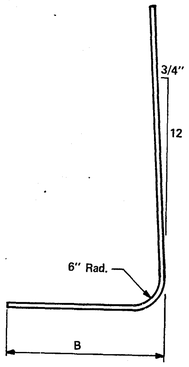
CASE 2

PART FOOTING PLAN

(SHOWING STAGGERED P AND Q BARS ONLY)

TYPE OF FOOTING	CASE 1	CASE 2
TIMBER PILING	h : 5' to 19'	h : 20' to 30'
CONCRETE PILING	h : 5' to 20'	h : 21' to 30'
STEEL PILING	h : 5' to 20'	h : 21' to 30'
SPREAD	h : 5' to 15'	h : 16' to 30'

P bars and Q bars are spaced according to wall heights



BAR O

BAR T*

* Hook bars in Spread Footing from bar size #8 and up.

h	K (FRONT DOWELS)			L (LONGIT.)		O (TOE)				P (TRANSVERSE)			Q (TRANSVERSE)			T (BACK DOWELS)			WEIGHT /LIN. FT. OF WALL
HT.	SIZE	LENGTH	SPAC.	SIZE	NO.	SIZE	LENGTH	SPAC.	B	SIZE	LENGTH	SPAC.	SIZE	LENGTH	SPAC.	SIZE	LENGTH	SPAC.	POUNDS
5'	# 4	3' 0"	12"	# 5	10					# 4	4' 0"	14-1/2"	# 4	4' 0"	14-1/2"	# 4	3' 7"	14-1/2"	19.27
6	4	3 0	12	5	10					4	4 6	14-1/2	4	4 6	14-1/2	4	3 7	14-1/2	19.82
7	4	3 0	12	5	10					4	5 0	14-1/2	4	5 0	14-1/2	4	3 7	14-1/2	20.37
8	4	3 0	12	5	10					4	5 6	14-1/2	4	5 6	14-1/2	4	3 9	14-1/2	21.02
9	4	3 0	12	5	10					4	6 0	14-1/2	4	6 0	14-1/2	4	3 9	14-1/2	21.57
10	4	3 0	12	5	10	# 4	6' 2"	14-1/2"	3' 1"	4	6 6	14-1/2	4	6 6	14-1/2	4	3 9	14-1/2	25.51
11	4	3 0	12	5	12	4	6 7	14-1/2	3 4	4	7 0	14-1/2	4	7 0	14-1/2	4	3 11	14-1/2	28.56
12	4	3 0	12	5	12	4	6 10	13	3 7	5	7 6	13	4	7 6	13	4	3 11	13	34.49
13	4	3 0	12	5	14	5	7 6	14-1/2	3 10	6	8 0	14-1/2	4	8 0	14-1/2	5	4 4	14-1/2	41.76
14	4	3 0	12	5	14	6	8 3	14-1/2	4 1	6	8 6	14-1/2	4	8 6	14-1/2	5	4 8	14-1/2	47.70
15	4	3 0	12	5	14	6	8 6	14-1/2	4 4	7	9 0	14-1/2	4	9 0	14-1/2	6	5 0	14-1/2	54.14
16	5	4 0	12	5	14	7	9 2	14-1/2	4 7	6	9 6	7	4	9 6	14-1/2	6	5 0	14-1/2	70.74
17	5	4 0	12	5	14	7	9 7	15-1/2	4 10	6	10 0	8	4	10 0	15-1/2	7	5 7	15-1/2	71.01
18	5	4 0	12	5	16	7	9 10	13	5 1	6	10 5	6-1/2	4	10 5	13	7	5 7	13	85.87
19	5	4 0	12	5	16	8	10 9	15-1/2	5 4	7	10 10	8	4	10 10	15-1/2	8	7 2	15-1/2	97.31
20	5	4 0	12	5	16	9	11 8	15-1/2	5 7	7	11 3	8	4	11 3	15-1/2	8	7 4	15-1/2	107.61
21	5	4 0	12	5	16	9	11 11	15-1/2	5 10	8	11 8	8	5	11 8	15-1/2	9	8 2	15-1/2	130.45
22	5	4 0	12	5	16	9	12 2	14-1/2	6 1	8	12 1	7	5	12 1	14-1/2	9	8 4	14-1/2	144.84
23	5	4 0	12	5	20	10	13 0	14-1/2	6 4	8	12 6	7	5	12 6	14-1/2	9	8 6	14-1/2	163.95
24	5	4 0	12	5	20	10	13 3	14-1/2	6 7	9	12 11	7	5	12 11	14-1/2	10	9 1	14-1/2	191.70
25	5	4 0	12	5	20	11	14 0	14-1/2	6 10	9	13 4	7	5	13 4	14-1/2	10	9 1	14-1/2	208.82
26	5	4 0	12	5	20	11	14 5	14-1/2	7 1	9	13 9	7	5	13 9	14-1/2	11	9 11	14-1/2	244.70
27	5	4 0	12	5	20	11	14 8	13	7 4	9	14 2	6-1/2	5	14 2	13	11	9 11	13	248.80
28	5	4 0	12	5	20	11	14 11	12	7 7	9	14 7	6	5	14 7	12	11	9 11	12	271.96
29	5	4 0	12	5	20	11	15 4	11	7 10	9	15 0	5-1/2	5	15 0	11	11	10 1	11	300.31
30'	# 5	4' 0"	12"	# 5	20	# 11	15' 7"	11"	8' 1"	# 9	15' 5"	5-1/2"	# 5	15' 5"	11"	# 11	10' 1"	11"	305.33

USE WITH SPREAD FOOTING ONLY

PILE FOOTING REINFORCEMENT BARS

h	K (FRONT DOWELS)			O (TOE)				T (BACK DOWELS)			L (LONGIT.)		P (TRANSVERSE)			Q (TRANSVERSE)			WEIGHT /LIN. FT. OF WALL
HT.	SIZE	LENGTH	SPAC.	SIZE	LENGTH	SPAC.	B	SIZE	LENGTH	SPAC.	SIZE	NO.	SIZE	LENGTH	SPAC.	SIZE	LENGTH	SPAC.	POUNDS
5'	# 4	3' 0"	12"					# 4	3' 5"	14-1/2"	# 5	16	# 4	4' 0"	14-1/2"	# 5	4' 0"	14-1/2"	26.25
6	4	3 0	12					4	3 5	14-1/2	5	16	4	4 5	14-1/2	5	4 5	14-1/2	26.84
7	4	3 0	12					4	3 5	14-1/2	5	16	4	4 10	14-1/2	6	4 10	14-1/2	29.27
8	4	3 0	12					4	3 5	14-1/2	5	16	4	5 3	14-1/2	6	5 3	14-1/2	30.01
9	4	3 0	12	# 4	6' 2"	14-1/2"	2' 11"	4	3 5	14-1/2	5	16	4	5 8	14-1/2	5	5 8	14-1/2	32.02
10	4	3 0	12	4	6 4	14-1/2	3 2	4	3 5	14-1/2	5	16	5	6 1	14-1/2	5	6 1	14-1/2	34.59
11	4	3 0	12	4	6 7	14-1/2	3 4	4	3 5	14-1/2	5	18	5	6 6	14-1/2	5	6 6	14-1/2	37.53
12	4	3 0	12	4	6 9	13	3 7	4	3 5	13	5	20	6	6 11	13	5	6 11	13	45.38
13	4	3 0	12	5	7 5	14-1/2	3 9	5	3 11	14-1/2	5	20	6	7 4	14-1/2	5	7 4	14-1/2	48.10
14	4	3 0	12	6	8 1	14-1/2	4 0	5	4 1	14-1/2	5	20	7	7 9	14-1/2	4	7 9	14-1/2	53.85
15	4	3 0	12	6	8 4	14-1/2	4 2	6	4 6	14-1/2	5	20	8	8 2	14-1/2	5	8 2	14-1/2	63.93
16	5	4 0	12	7	8 11	14-1/2	4 5	6	4 6	14-1/2	5	20	8	8 7	14-1/2	5	8 7	14-1/2	72.11
17	5	4 0	12	7	9 4	15-1/2	4 7	7	5 3	15-1/2	5	20	9	9 0	15-1/2	5	9 0	15-1/2	79.05
18	5	4 0	12	7	9 6	13	4 10	7	5 3	13	5	20	9	9 4	13	5	9 4	13	91.14
19	5	4 0	12	8	10 5	15-1/2	5 0	8	6 0	15-1/2	5	20	10	9 8	15-1/2	7	9 8	15-1/2	106.44
20	5	4 0	12	9	11 3	15-1/2	5 3	8	6 2	15-1/2	5	22	8	10 0	8	6	10 0	15-1/2	121.14
21	5	4 0	12	9	11 6	15-1/2	5 5	9	7 0	15-1/2	5	24	8	10 4	8	4	10 4	15-1/2	124.62
22	5	4 0	12	9	11 8	14-1/2	5 8	9	7 0	14-1/2	5	24	8	10 8	7	4	10 8	14-1/2	136.47
23	5	4 0	12	10	12 6	14-1/2	5 10	9	7 2	14-1/2	5	24	9	11 0	7	4	11 0	14-1/2	164.10
24	5	4 0	12	10	12 8	14-1/2	6 1	10	7 9	14-1/2	5	24	9	11 4	7	4	11 4	14-1/2	174.26
25	5	4 0	12	11	13 5	14-1/2	6 3	10	7 9	14-1/2	5	24	10	11 8	7	4	11 8	14-1/2	208.33
26	5	4 0	12	11	13 9	14-1/2	6 6	11	8 7	14-1/2	5	24	10	12 0	7	4	12 0	14-1/2	222.59
27	5	4 0	12	11	14 0	13	6 8	11	8 7	13	5	24	10	12 4	6-1/2	4	12 4	13	245.52
28	5	4 0	12	11	14 2	12	6 11	11	8 7	12	5	24	10	12 8	6	4	12 8	12	267.54
29	5	4 0	12	11	14 7	11	7 1	11	8 9	11	5	24	10	13 0	5-1/2	4	13 0	11	295.44
30'	# 5	4' 0"	12"	# 11	14' 9"	11"	7' 4"	# 11	8' 9"	11"	# 5	24	# 10	13' 4"	5-1/2"	# 5	13' 4"	11"	305.06

USE WITH ALL PILING

h	L (LONGIT.)		P (TRANSVERSE)			Q (TRANSVERSE)			WEIGHT /LIN. FT. OF WALL
HT.	SIZE	NO.	SIZE	LENGTH	SPAC.	SIZE	LENGTH	SPAC.	POUNDS
5'	# 5	6	# 4	4' 0"	14-1/2"	# 6	4' 0"	14-1/2"	32.36
6	5	6	4	4 5	14-1/2	6	4 5	14-1/2	33.11
7	5	6	4	4 10	14-1/2	7	4 10	14-1/2	36.02
8	5	6	4	5 3	14-1/2	8	5 3	14-1/2	39.68
9	5	6	4	5 8	14-1/2	8	5 8	14-1/2	44.24
10	5	6	5	6 1	14-1/2	8	6 1	14-1/2	47.38
11	5	6	5	6 6	14-1/2	8	6 6	14-1/2	51.80
12	5	8	6	6 11	13	8	6 11	13	61.28
13	5	8	6	7 4	14-1/2	8	7 4	14-1/2	63.49
14	5	8	7	7 9	14-1/2	7	7 9	14-1/2	68.18
15	5	8	8	8 2	14-1/2	8	8 2	14-1/2	80.44
16	5	8	8	8 7	14-1/2	8	8 7	14-1/2	84.73
17	5	8	9	9 0	15-1/2	7	9 0	15-1/2	91.54
18	5	8	9	9 4	13	6	9 4	13	100.60
19	5	8	10	9 8	15-1/2	7	9 8	15-1/2	111.95
20	5	10	10	10 0	15-1/2	5	10 0	15-1/2	116.35
21	5	10	8	10 4	8	6	10 4	15-1/2	137.71
22	5	10	8	10 8	7	6	10 8	14-1/2	150.26
23	5	10	9	11 0	7	4	11 0	14-1/2	170.53
24	5	10	9	11 4	7	4	11 4	14-1/2	180.69
25	5	10	10	11 8	7	4	11 8	14-1/2	214.76
26	5	10	10	12 0	7	5	12 0	14-1/2	232.74
27	5	10	10	12 4	6-1/2	7	12 4	13	267.61
28	5	10	10	12 8	6	7	12 8	12	291.30
29	5	10	10	13 0	5-1/2	6	13 0	11	314.24
30'	# 5	10	# 10	13' 4"	5-1/2"	# 8	13' 4"	11"	335.87

USE WITH CONCRETE PILING ONLY

h	L (LONGIT.)		P (TRANSVERSE)			Q ① (TRANSVERSE)			Q ② (TRANSVERSE)			U (LONGIT.)		① WEIGHT /LIN. FT. OF WALL	② WEIGHT /LIN. FT. OF WALL
HT.	SIZE	NO.	SIZE	LENGTH	SPAC.	SIZE	LENGTH	SPAC.	SIZE	LENGTH	SPAC.	SIZE	NO.	POUNDS	POUNDS
5'	# 5	6	# 4	4' 0"	14-1/2"	# 6	4' 0"	14-1/2"	7	4' 0"	14-1/2"	# 6	10	32.36	34.15
6	5	6	4	4 5	14-1/2	6	4 5	14-1/2	7	4 5	14-1/2	6	10	33.11	35.09
7	5	6	4	4 10	14-1/2	7	4 10	14-1/2	8	4 10	14-1/2	6	10	36.02	38.53
8	5	6	4	5 3	14-1/2	8	5 3	14-1/2	8	5 3	14-1/2	6	10	39.68	39.68
9	5	6	4	5 8	14-1/2	8	5 8	14-1/2	8	5 8	14-1/2	6	10	44.24	44.24
10	5	6	5	6 1	14-1/2	8	6 1	14-1/2	9	6 1	14-1/2	6	10	47.38	50.96
11	5	6	5	6 6	14-1/2	8	6 6	14-1/2	9	6 6	14-1/2	6	12	51.80	55.73
12	5	8	6	6 11	13	8	6 11	13	9	6 11	13	6	12	61.28	65.94
13	5	8	6	7 4	14-1/2	8	7 4	14-1/2	8	7 4	14-1/2	6	12	63.49	63.49
14	5	8	7	7 9	14-1/2	7	7 9	14-1/2	8	7 9	14-1/2	6	12	68.18	72.20
15	5	8	8	8 2	14-1/2	8	8 2	14-1/2	7	8 2	14-1/2	6	12	80.44	76.21
16	5	8	8	8 7	14-1/2	7	8 7	14-1/2	8	8 7	14-1/2	6	12	84.73	89.18
17	5	8	9	9 0	15-1/2	7	9 0	15-1/2	8	9 0	15-1/2	6	12	91.54	95.90
18	5	8	9	9 4	13	6	9 4	13	8	9 4	13	6	12	100.60	110.66
19	5	8	10	9 8	15-1/2	7	9 8	15-1/2	8	9 8	15-1/2	6	12	111.95	116.64
20	5	10	10	10 0	15-1/2	5	10 0	15-1/2	7	10 0	15-1/2	6	12	116.35	124.10
21	5	10	8	10 4	8	6	10 4	15-1/2	8	10 4	15-1/2	6	14	137.71	147.05
22	5	10	8	10 8	7	6	10 8	14-1/2	7	10 8	14-1/2	6	14	150.26	155.05
23	5	10	9	11 0	7	4	11 0	14-1/2	6	11 0	14-1/2	6	14	170.53	178.13
24	5	10	9	11 4	7	4	11 4	14-1/2	7	11 4	14-1/2	6	14	180.69	193.60
25	5	10	10	11 8	7	4	11 8	14-1/2	6	11 8	14-1/2	6	14	214.76	222.82
26	5	10	10	12 0	7	5	12 0	14-1/2	7	12 0	14-1/2	6	14	232.74	242.69
27	5	10	10	12 4	6-1/2	7	12 4	13	7	12 4	13	6	14	267.61	267.61
28	5	10	10	12 8	6	7	12 8	12	7	12 8	12	6	14	291.30	291.39
29	5	10	10	13 0	5-1/2	6	13 0	11	6	13 0	11	6	14	314.24	314.22
30'	# 5	10	# 10	13' 4"	5-1/2"	# 8	13' 4"	11"	# 6	13' 4"	11"	# 6	14	335.87	348.88

USE WITH STEEL PILING ONLY

h	L (LONGIT.)		P (TRANSVERSE)			Q (TRANSVERSE)			U (LONGIT.)		WEIGHT /LIN. FT. OF WALL
HT.	SIZE	NO.	SIZE	LENGTH	SPAC.	SIZE	LENGTH	SPAC.	SIZE	NO.	POUNDS
5'	# 6	6	# 4	4' 0"	14-1/2"	6	4' 0"	14-1/2"	# 7	10	40.53
6	6	6	4	4 5	14-1/2	6	4 5	14-1/2	7	10	41.28
7	6	6	4	4 10	14-1/2	7	4 10	14-1/2	7	10	44.20
8	6	6	4	5 3	14-1/2	8	5 3	14-1/2	7	10	47.86
9	6	6	4	5 8	14-1/2	8	5 8	14-1/2	7	10	52.42
10	6	6	5	6 1	14-1/2	8	6 1	14-1/2	7	10	55.55
11	6	6	5	6 6	14-1/2	8	6 6	14-1/2	7	12	54.77
12	6	8	6	6 11	13	8	6 11	13	7	12	63.99
13	6	8	6	7 4	14-1/2	6	7 4	14-1/2	7	12	66.58
14	6	8	7	7 9	14-1/2	6	7 9	14-1/2	7	12	74.88
15	6	8	8	8 2	14-1/2	7	8 2	14-1/2	7	12	86.39
16	6	8	8	8 7	14-1/2	6	8 7	14-1/2	7	12	91.05
17	6	8	9	9 0	15-1/2	7	9 0	15-1/2	7	12	101.71
18	6	8	9	9 4	13	6	9 4	13	7	12	110.77
19	6	8	10	9 8	15-1/2	5	9 8	15-1/2	7	12	114.64
20	6	10	10	10 0	15-1/2	4	10 0	15-1/2	7	12	124.55
21	6	10	8	10 4	8	4	10 4	15-1/2	7	14	143.22
22	6	10	8	10 8	7	4	10 8	14-1/2	7	14	155.07
23	6	10	9	11 0	7	4	11 0	14-1/2	7	14	182.71
24	6	10	9	11 4	7	4	11 4	14-1/2	7	14	192.87
25	6	10	10	11 8	7	4	11 8	14-1/2	7	14	226.94
26	6	10	10	12 0	7	4	12 0	14-1/2	7	14	241.20
27	6	10	10	12 4	6-1/2	4	12 4	13	7	14	264.13
28	6	10	10	12 8	6	4	12 8	12	7	14	286.14
29	6	10	10	13 0	5-1/2	4	13 0	11	7	14	314.59
30'	# 6	10	# 10	13' 4"	5-1/2"	# 5	13' 4"	11"	# 7	14	324.38

NOTE:
Reinforcement quantities for pile footings include bars K, O & T

① For Design Load 50 Tons/Pile

② For Design Load 60 Tons/Pile

FIG. 5-397.721 (4 OF 4)
Feb. 27, 1980

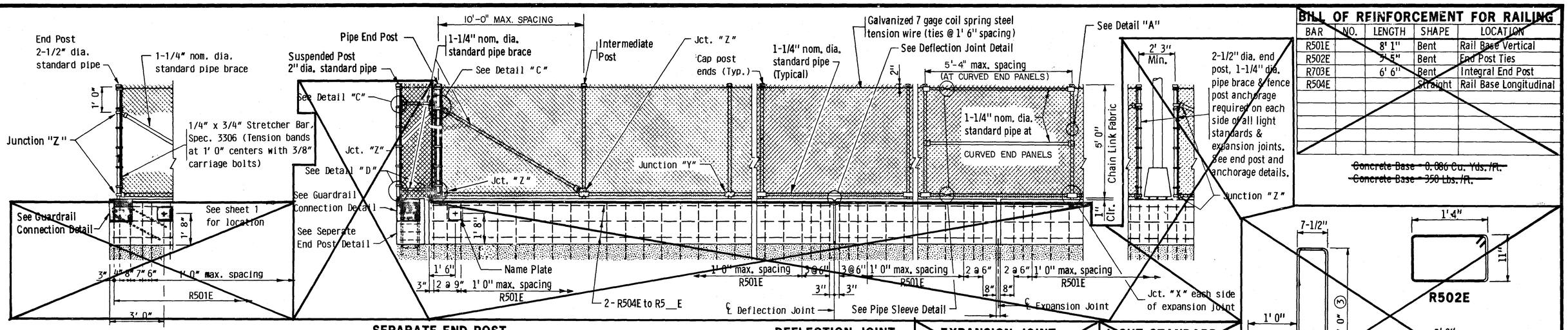
RETAINING WALL - 2:1 FILL SLOPE

(FOOTING REINFORCEMENT)

S.A.P. 62-625-19

28-113

Sheet No. 30 of 103 Sheets



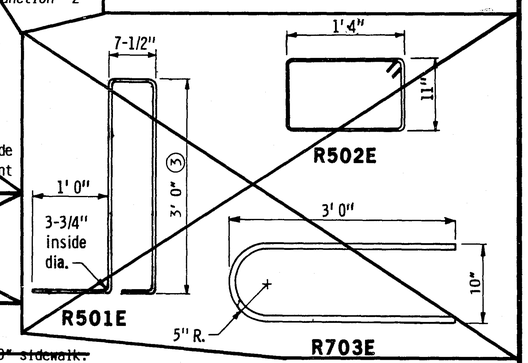
BILL OF REINFORCEMENT FOR RAILING

BAR	NO.	LENGTH	SHAPE	LOCATION
R501E		8' 1"	Bent	Rail Base Vertical
R502E		5' 5"	Bent	End Post Ties
R703E		6' 6"	Bent	Integral End Post
R504E			Straight	Rail Base Longitudinal

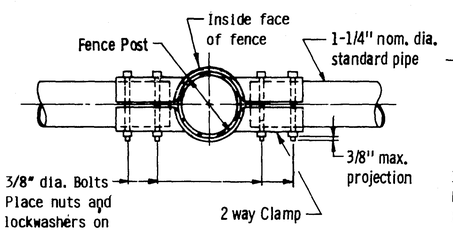
~~Concrete Base - 0.086 Cu. Yds./Ft.~~
~~Concrete Base - 350 Lbs./Ft.~~

EXPANSION JOINT
(EXPANSION DEVICE NOT SHOWN)
An expansion joint is required only if an expansion device is used. Provide pipe sleeve in span between the vertical posts at expansion joint. See Superstructure Sheets for location.

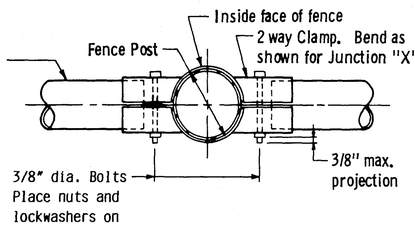
LIGHT STANDARD
See Standard Bridge Detail Sheets for light anchorage and conduit system details.



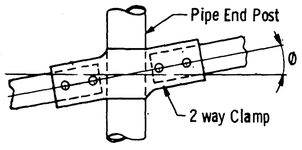
③ ~~Based on a 10" sidewalk.~~



PLAN VIEW



JUNCTION "Y"

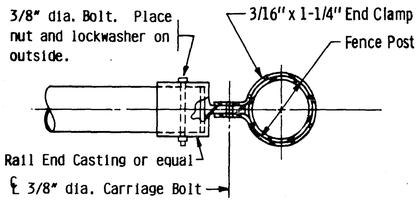


ELEVATION

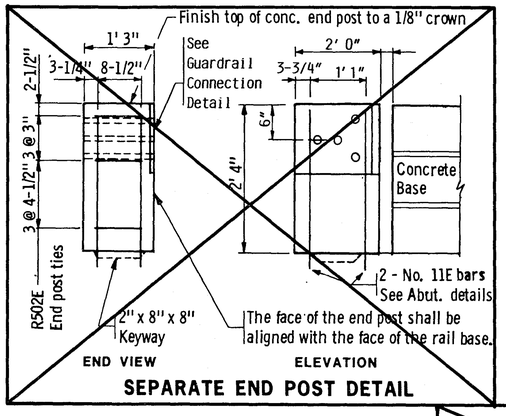
JUNCTION "X"

2-WAY CLAMP BENDING TABLE

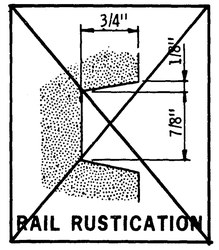
Grade of Fence	Ø
0^0 to 2^0	0^0
2^0 to 6^0	4^0
6^0 to 10^0	8^0



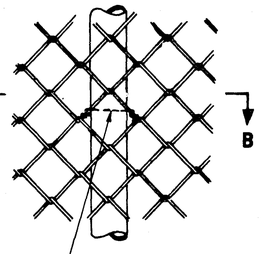
JUNCTION "Z"



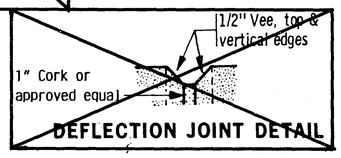
SEPARATE END POST DETAIL



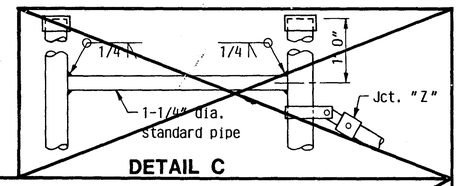
RAIL RUSTICATION



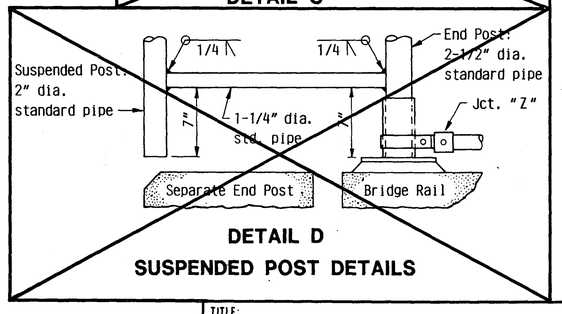
SECTION B-B
DETAIL "A"



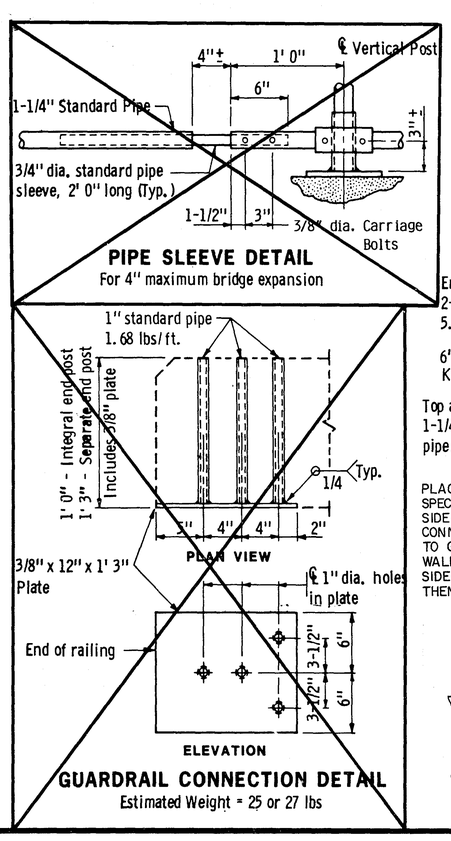
DEFLECTION JOINT DETAIL



DETAIL C

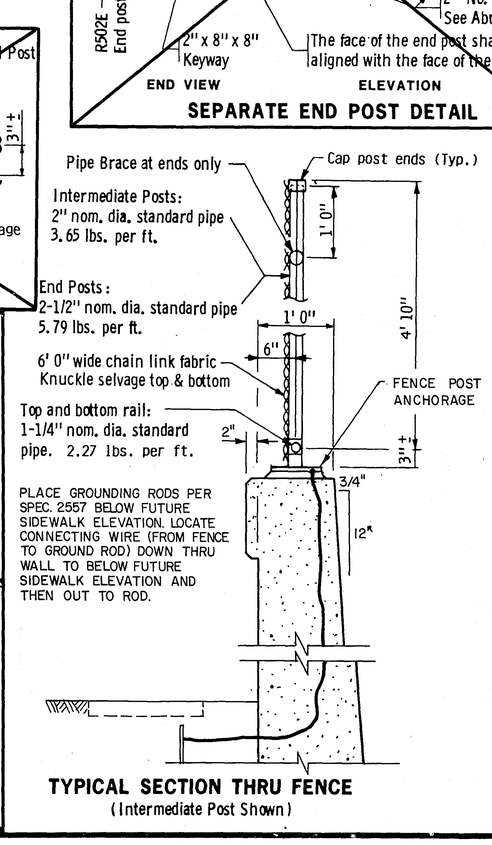


DETAIL D
SUSPENDED POST DETAILS



PIPE SLEEVE DETAIL
For 4" maximum bridge expansion

GUARDRAIL CONNECTION DETAIL
Estimated Weight = 25 or 27 lbs



TYPICAL SECTION THRU FENCE
(Intermediate Post Shown)

GENERAL NOTES:

Fence post anchorages shall be Type A.
See Standard Detail B905 "Fence Post Anchorage".

~~Bars marked with the suffix "E" shall be epoxy coated in accordance with Spec. 3301~~

All posts shall have a means to securely hold the top tension wire in position and allow for the removal and replacement of a post without damaging the top wire.

Wire ties may be 9 gage galvanized steel or 0.179" minimum aluminum alloy conforming to ASTM B211, Alloy 1100-H18. Use 12-1/2 gage galvanized hog rings for tension wire ties.

End posts and bracing shall be at 500 ft. maximum intervals.

~~Concrete in the rail base and the end posts shall be Mix No. 3X46~~

~~For spacing of fence post, joints and electrical grounds, see superstructure sheets.~~

~~All material in the concrete base and end posts is included in the superstructure quantities.~~

See special provisions for requirements not included on this sheet and for basis of payment.

℄ of fence post anchorage shall be a minimum of 6" from joints.

Fence posts and fence post anchorages shall be set vertical, unless otherwise noted.

~~The guard rail connection is included in the price bid for other items.~~

~~Maximum spacing of deflection joints shall be 20' 0"~~

~~The length of railing concrete shall be measured for payment between the outside faces of the end posts or the ends of the concrete rail base.~~

~~Guardrail connection shall be Structural Steel, Spec. 3306 and galvanized after fabrication per Spec. 3394~~

AT CURVED END PANELS PROVIDE CURVED 1¼" NOM. DIA. STANDARD PIPE AT TOP, MIDPOINT AND BOTTOM.

PRICE BID FOR WIRE FENCE, DESIGN 60-9322 INCLUDES THE FENCE POST ANCHORAGE AND ALL MATERIAL ABOVE TOP OF CONCRETE RETAINING WALL.

28-113 MODIFIED

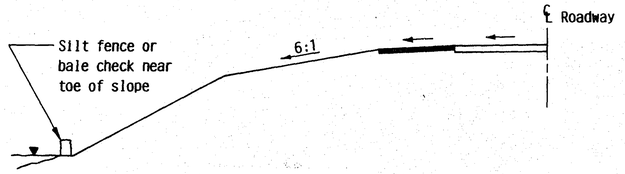
REVISED:	APPROVED: Nov. 26, 1985	FIG. 5-397.120

TITLE: MODIFIED FENCE RAILING (TYPE F)

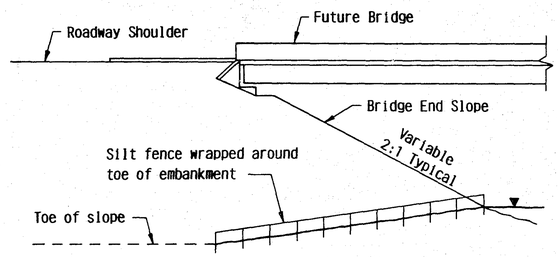
DES:	DR:	APPROVED:
CHK:	CHK:	

Sheet No. 31 of 103 Sheets

TELEPHONE POST (TYP. STD. M2092)

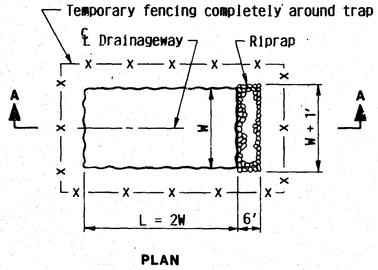


ROADWAY EMBANKMENT

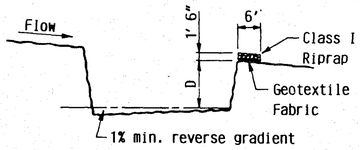


BRIDGE ABUTMENT

SILT FENCE OR BALE CHECK TO PROTECT ADJACENT CRITICAL AREAS



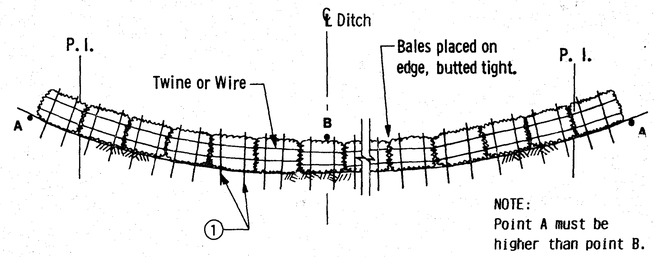
PLAN



SECTION A-A

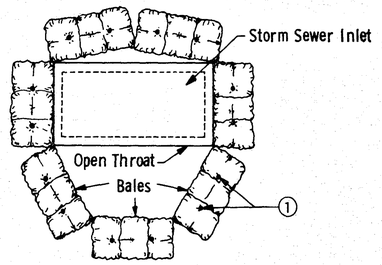
NOTE:
D = 3' min., 6' max.
W = 10' min., 20' max.

TEMPORARY SEDIMENT TRAP

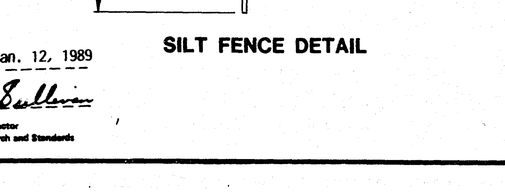


NOTE:
Point A must be
higher than point B.

BALE DITCH CHECK

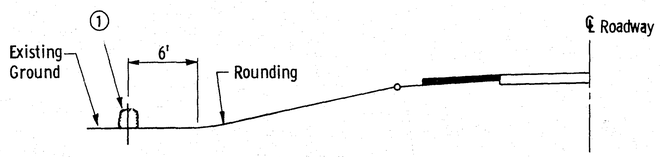


BALE CHECK TO PROTECT STORM SEWER INLETS

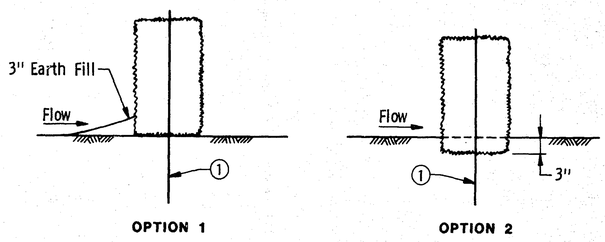


FLOATATION SILT CURTAIN

TEMPORARY DRAIN ON FILL SLOPE

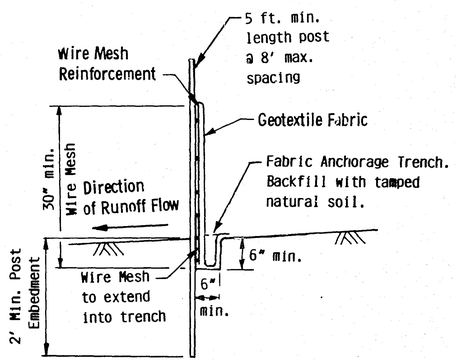


BALE DIVERSION

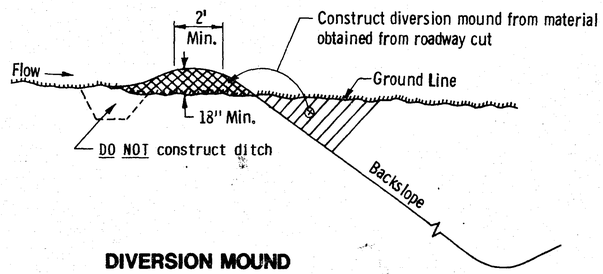


OPTION 1 OPTION 2

BALE CHECK DETAILS



SILT FENCE DETAIL



DIVERSION MOUND

NOTE:

① Two 2" x 2" Wood Stakes or Reinforcing Bars in each bale and embedded in the ground 10" minimum.

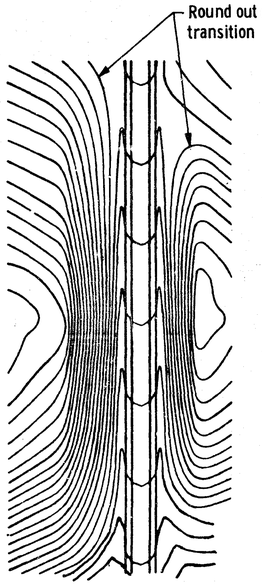
APPROVED Jan. 12, 1989
R. H. Sullivan
Director
Materials, Research and Standards

Mn/DOT NO 9 (8-82)
52113
OZALID

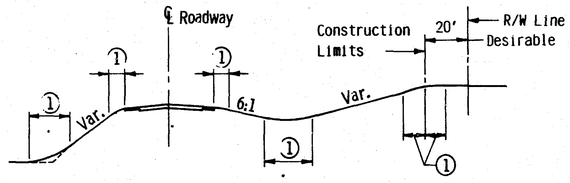
TEMPORARY EROSION CONTROL

S.A.P. 62-625-19 28-113 Sheet No. 32 of 103 Sheets

Fed. Proj. No.

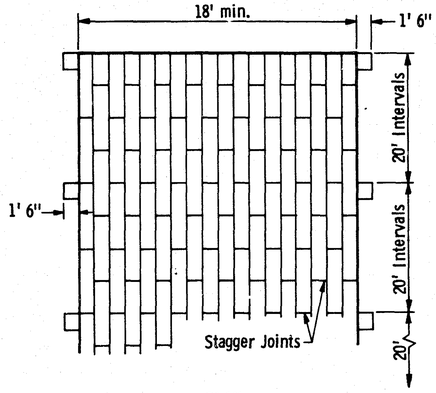


CONTOURING ROAD CUTS

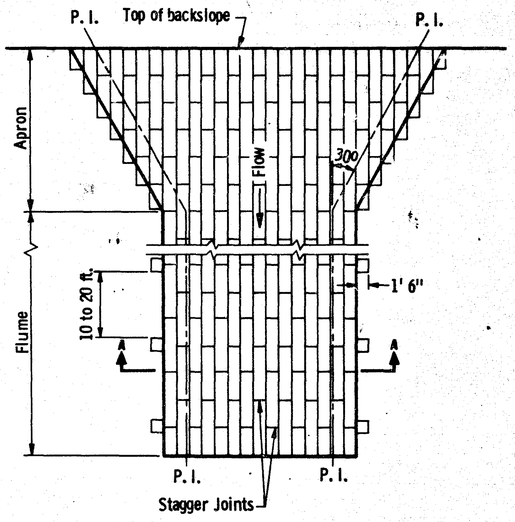


ROUNDING SHOULDERS AND BACKSLOPES

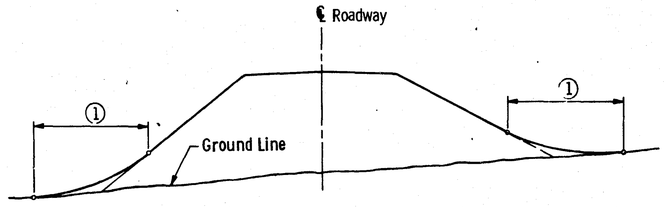
① Rounding per typical sections.



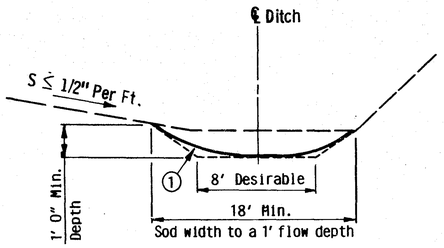
PLAN
(ENLARGED)



PLAN

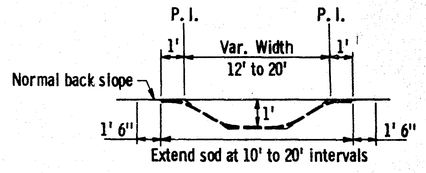


SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES

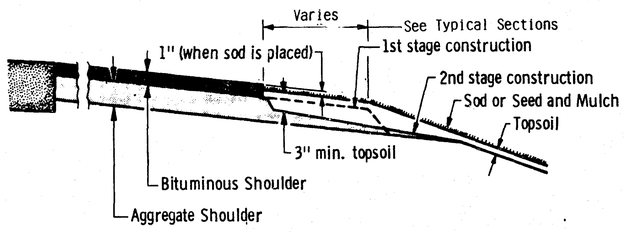


SODDED DITCH CROSS SECTION

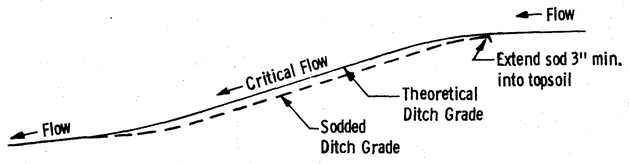
Where front or back slope is flat (less than 1/2"/ft.), first notch ditch and than provide rounding.



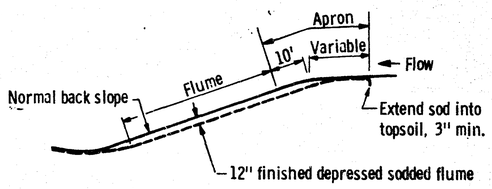
SECTION A-A



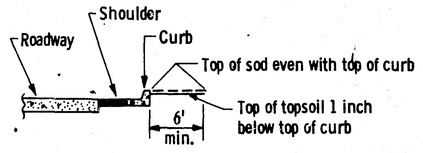
SHAPING AND TOPSOILING INSLOPES



DITCH PROFILE



LONGITUDINAL CROSS SECTION



SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED

SODDED DITCH DETAILS

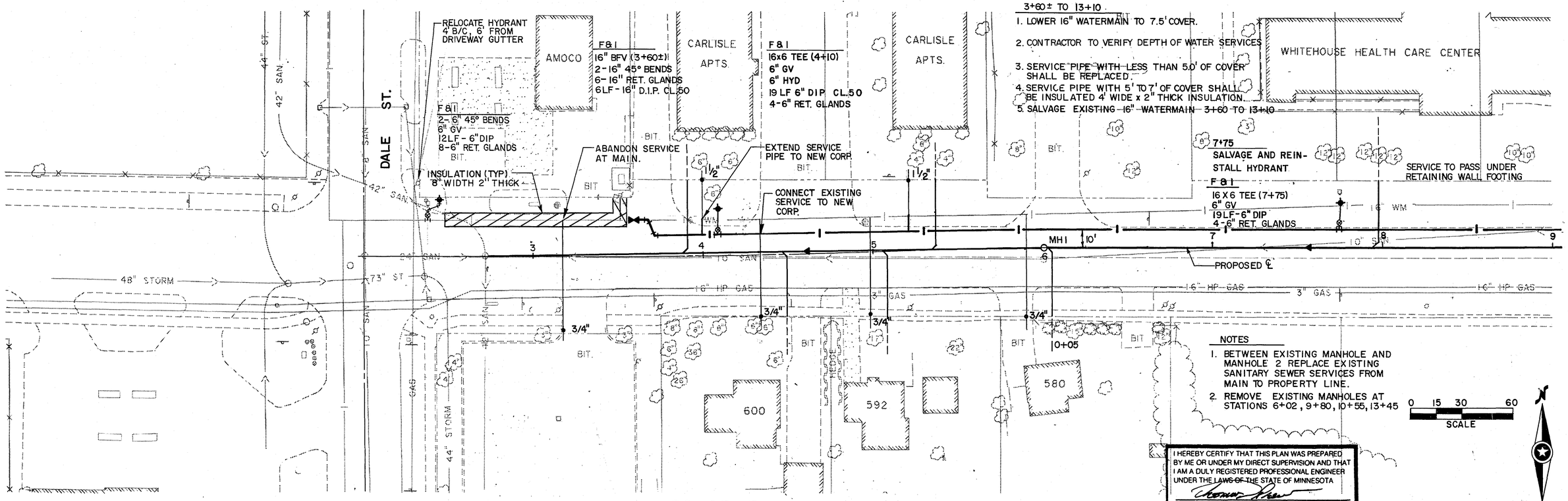
SODDED FLUME DETAILS

APPROVED January 31, 1985
R. O. Kipp
Director
OFFICE OF ENGINEERING STANDARDS

PERMANENT EROSION CONTROL

S.A.P. 62-625-19 28-113 **Sheet No. 33 of 103 Sheets**

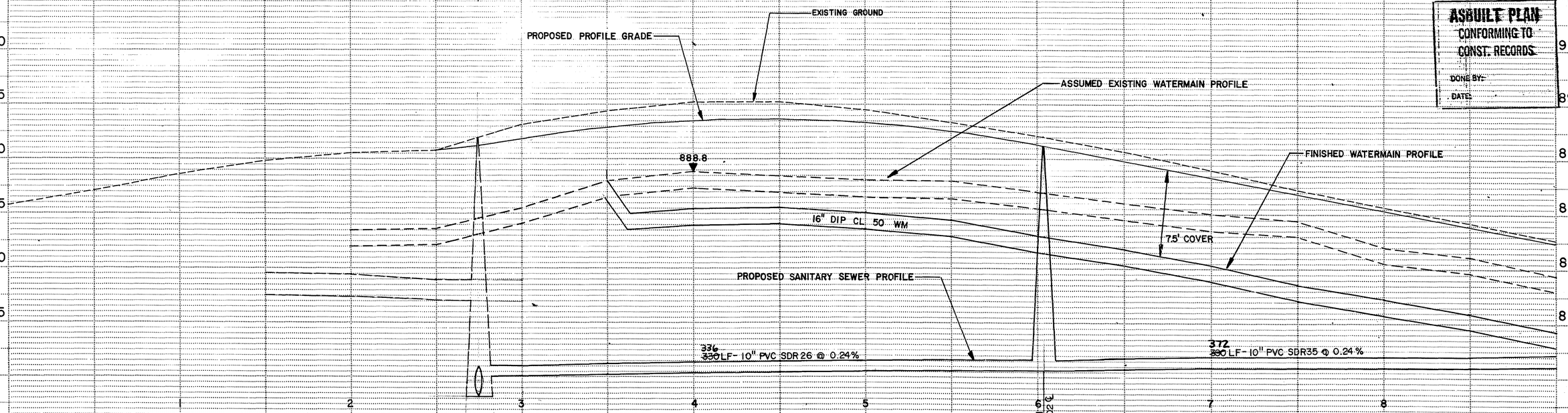
Fed. Proj. No.



CO. RD. B

EX. MH 2.96
INV. 870.4 (E)*
* VERIFY PRIOR TO CONSTRUCTION.

MH1
RIM 891.28 22
INV. 871.18(W) 15
871.24(E) 16



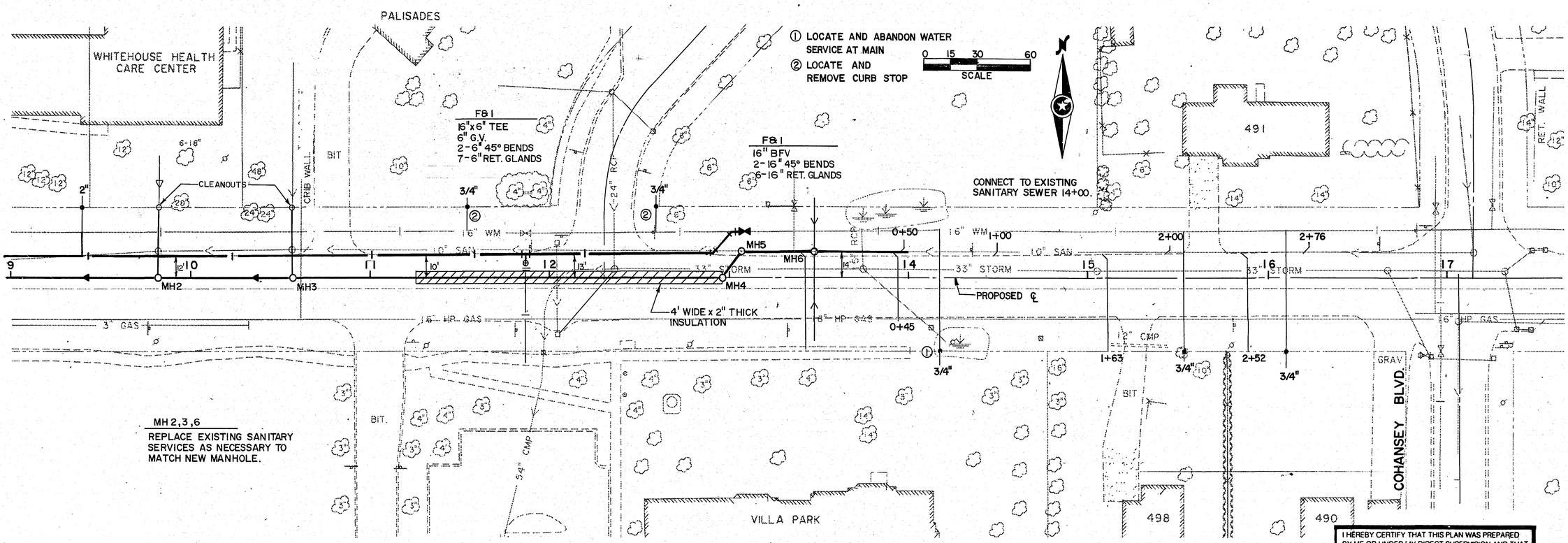
ASBUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY:
DATE:

WATERMAIN AND SANITARY SEWER

S.A.P. 62-625-19 28-113 Sheet No. 34 of 103 Sheets

MINNESOTA BLUEPRINT, 839538

Fed. Proj. No.



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 1-30-91 REG NO 19621

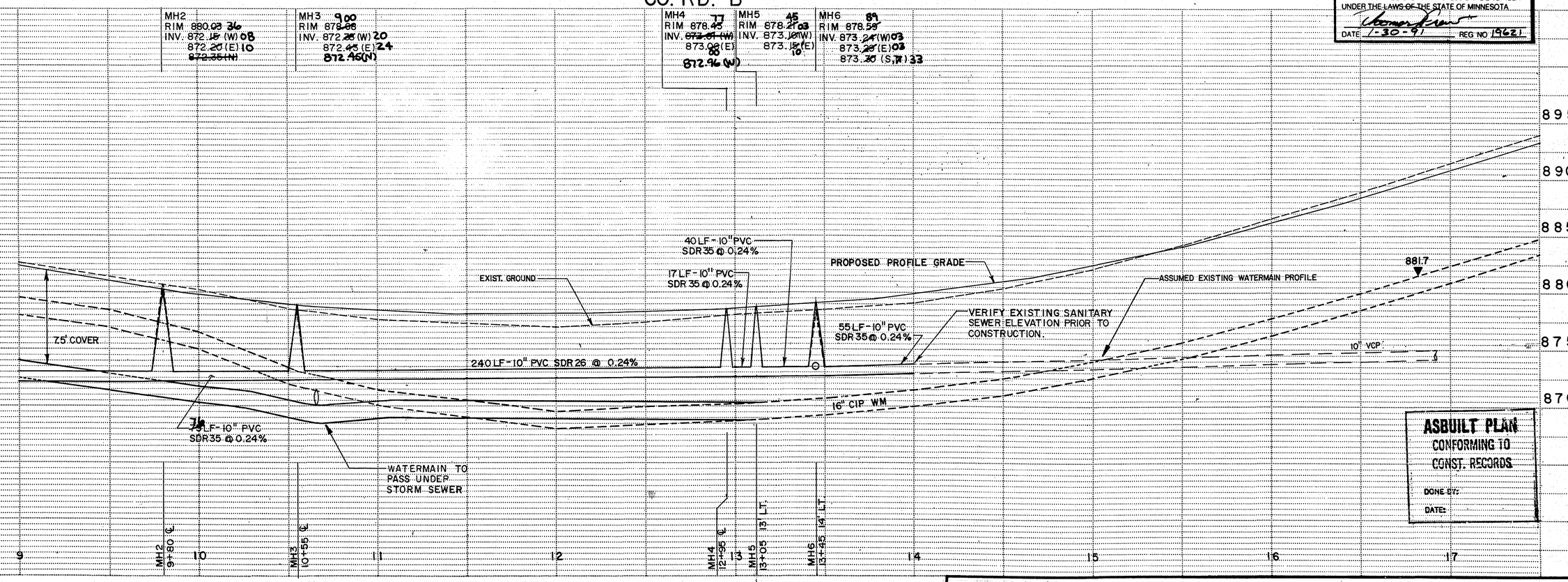
MH2
RIM 880.93 36
INV. 872.15 (W) 08
872.20 (E) 10
~~872.35 (N)~~

MH3 900
RIM ~~879.88~~
INV. 872.25 (W) 20
872.45 (E) 24
872.46 (N)

MH4 77
RIM 878.45
INV. ~~872.61 (W)~~ 873.08 (E) 88
872.96 (W)

MH5 45
RIM 878.2103
INV. 873.10 (W)
873.15 (E) 10

MH6 89
RIM 878.58
INV. 873.24 (W) 03
873.29 (E) 02
873.30 (S, W) 33

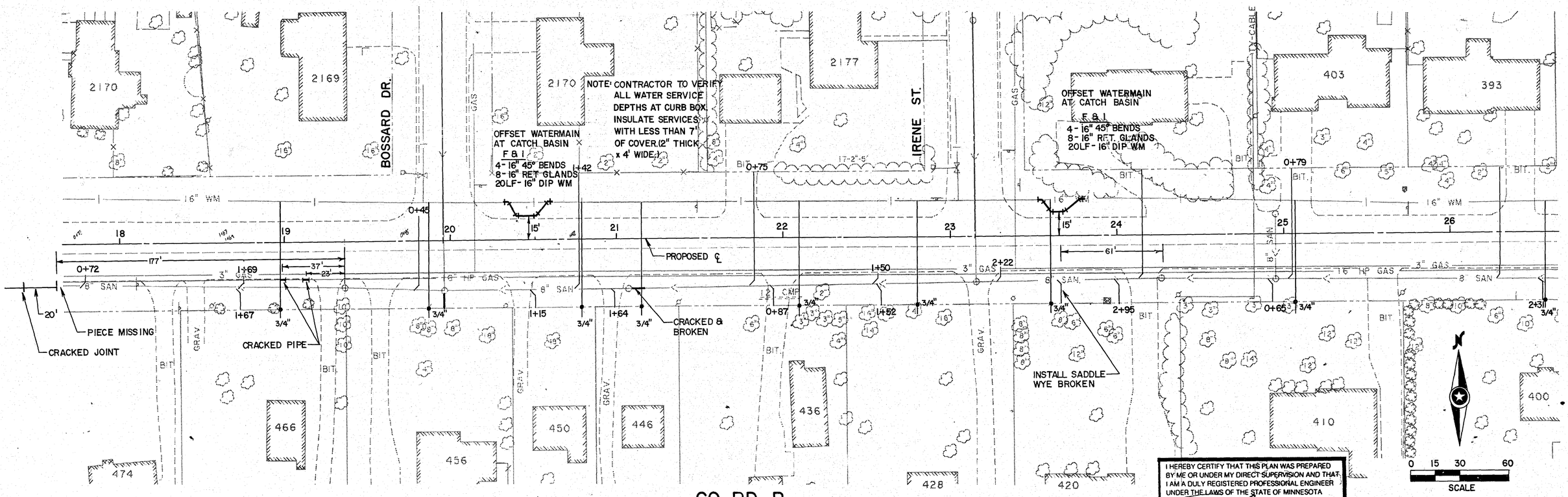


ASBUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY:
DATE:

S.A.P. 62-625-19 28-113 **Sheet No. 35 of 103 Sheets**

MINNESOTA BLUEPRINT, 434888

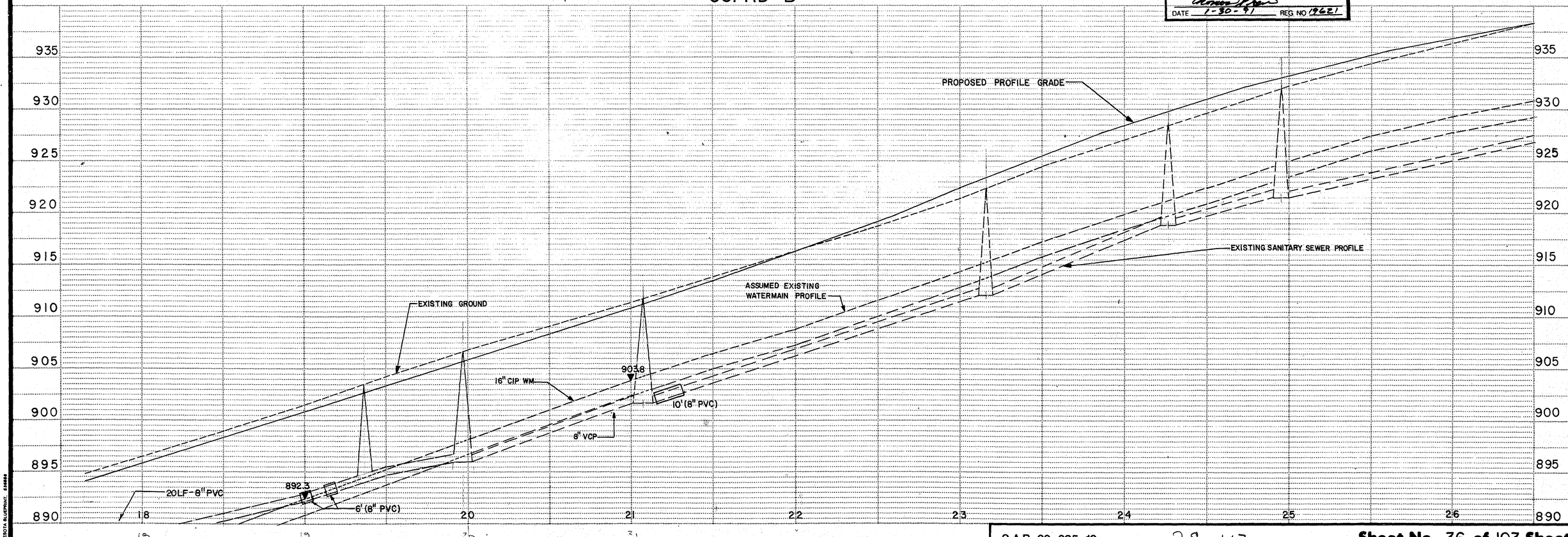
Fed. Proj. No.



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 1-30-91 REG NO 19621

CO. RD B



S.A.P. 62-625-19 28-113 **Sheet No. 36 of 103 Sheets**

MINNESOTA BLUEPRINT, 434888

Fed. Proj. No.

WESTERN AVE.

VAC.

27+25± TO 29+25±
RELAY 16", 12", & 8" WM
TO 7.5' COVER

373 365 359 351 343 335

F&I
16" BFV (80' LT)
16" SLEEVE
4-16" RET. GLANDS

AIR VENT

REMOVE MANHOLES, SALVAGE VALVES AND CASTINGS.

F&I
2-12" 45° BENDS
5 LF-12" D.I.P. CL. 50
12" BFV (29+25±)
6-12" RET. GLANDS

RET. WALL

HEDGE

31+50 TO 36+50
INSULATE WATERMAIN OR SERVICES WITH LESS THAN 7' OF COVER.
8' WIDE x 2" THICK FOR WATERMAIN.
4' WIDE x 2" THICK FOR SERVICES.

FARRINGTON ST.

F&I
16" BFV (27+20)
2-16" RCP GLANDS

F&I
16"x16" CROSS
16"x12" RED PE-MJ
16"x8" RED PE-MJ
1-8" RET. GLAND
1-12" RET. GLAND
4-16" RET. GLANDS

CONNECT TO EXIST. TEE

F&I
8" GV
2-8" 22 1/2° BENDS
7-8" RCP GLANDS

GOLF 8" DIP CL.50
7.5' COVER

PROPOSED ℄

WYE BROKEN
INSTALL SADDLE

CRACKED JOINT

HAND AVE.

400 386 372 360 344 338 324 322

27 28 29 30 31 32 33 34 35

0 15 30 60
SCALE

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 1-30-91 REG. NO 19621

CO. RD B

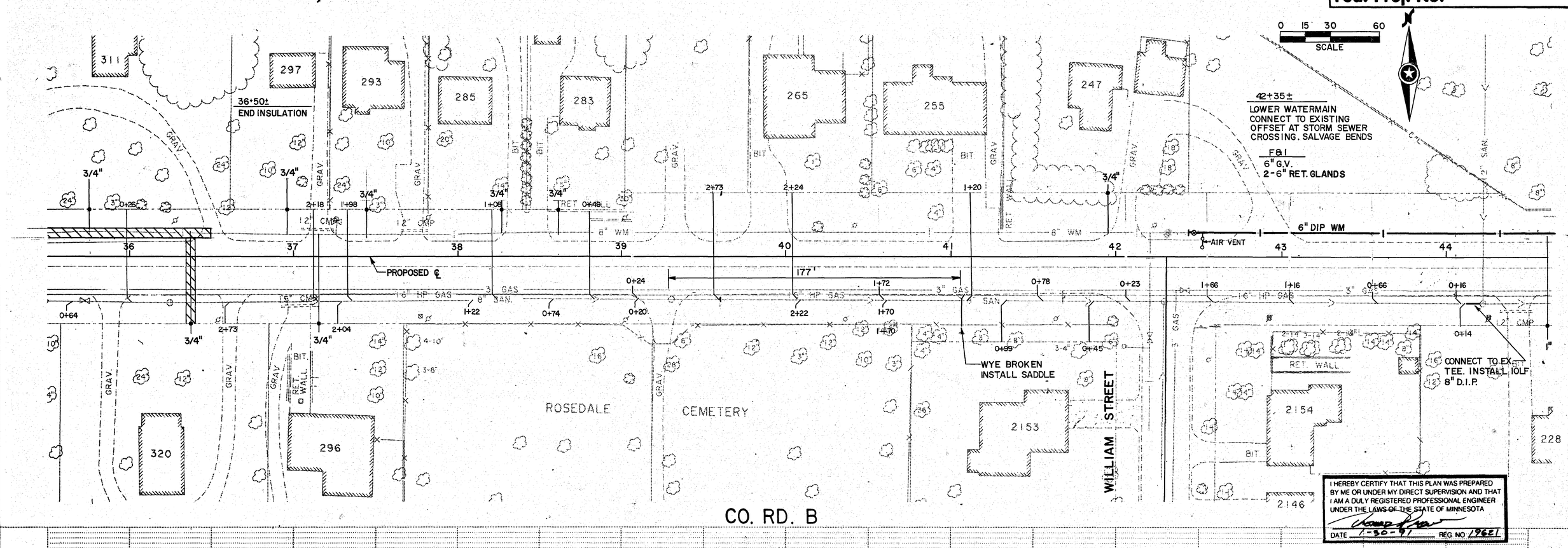
EXISTING GROUND
PROPOSED PROFILE GRADE
7.5' MIN. COVER
935.3
936.1
ASSUMED EXISTING WATERMAIN PROFILE
12" CIP WM
12" DIP WM
16" DIP WM
PROPOSED WATERMAIN PROFILE
6'
8" PVC
8" CIP WM
6.5'
926.5
8" VCP
6 LF-8" PVC
8" VCP

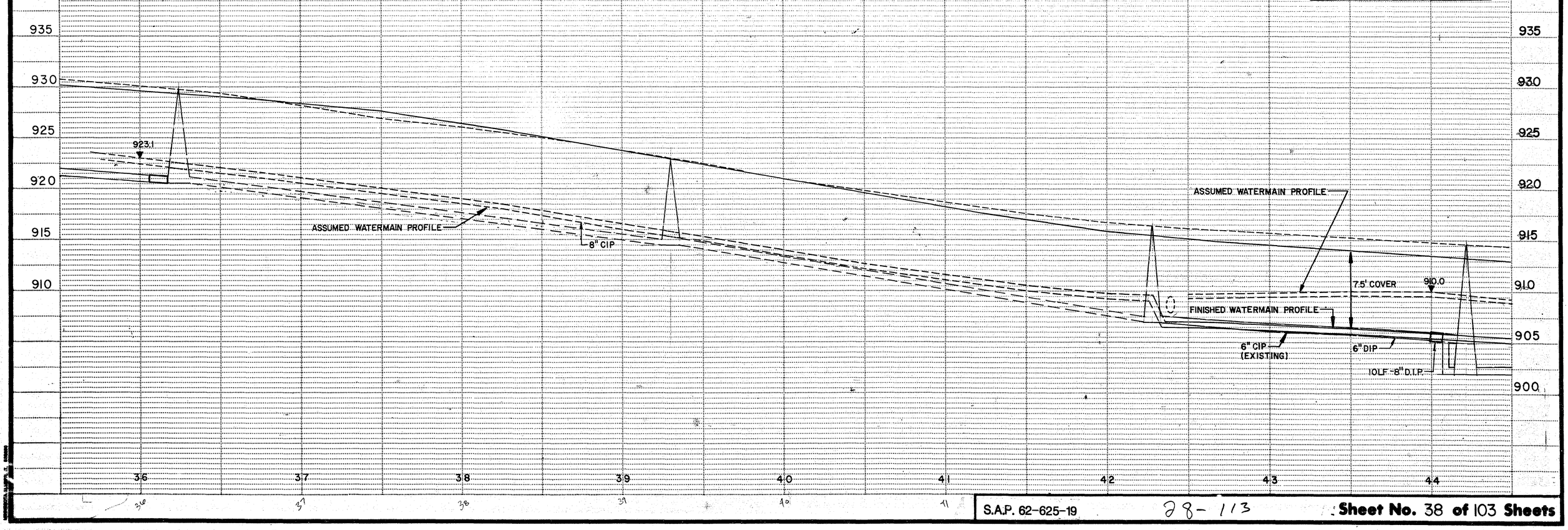
945 940 935 930 925

27 28 29 30 31 32 33 34 35

S.A.P. 62-625-19 28-113 Sheet No. 37 of 103 Sheets

Fed. Proj. No.





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 1-30-91 REG NO 19611

S.A.P. 62-625-19 28-113 Sheet No. 38 of 103 Sheets

Fed. Proj. No.

0 15 30 60
SCALE

46+00±
END 6" WM LOWERING
BEGIN 8' WIDE x 2" THICK INSULATION.

F & I
2-6" 45° BENDS (SALVAGED)
1-6" G.V.
6-6" RET. GLANDS

47+25±
END INSULATION

24" CMP

15" CMP

10" CMP

PROPOSED ℄

6" WM

8" SAN.

6" HP GAS

3" GAS

MH5

REMOVE EXISTING DROP SECTION.
CONNECT TO EXISTING MH.
CONSTRUCT MH5.

REPLACE CRACKED JOINT
REMOVE BROKEN WYE.
INSTALL NEW WYE.

CONNECT TO EXISTING TEE. 10 LF - 8" D.I.P.

20" HP

228 220 202 170 162 158

BIT

SAN

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 1-30-97 REG NO 19621

CO. RD. B

EX. MH INV. 900.89 (E)

MH 5
RIM 914.30
INV. 900.64 (W) 1.15
900.89 (E) 1.25
904.28 (E) (DROP)

ASSUMED EXISTING WATERMAIN PROFILE

PROPOSED PROFILE

24" RCP STORM SEWER

10 LF - 8" D.I.P. CL. 50

8" VCP

6" C.I.P. WM

10 LF - 8" D.I.P.

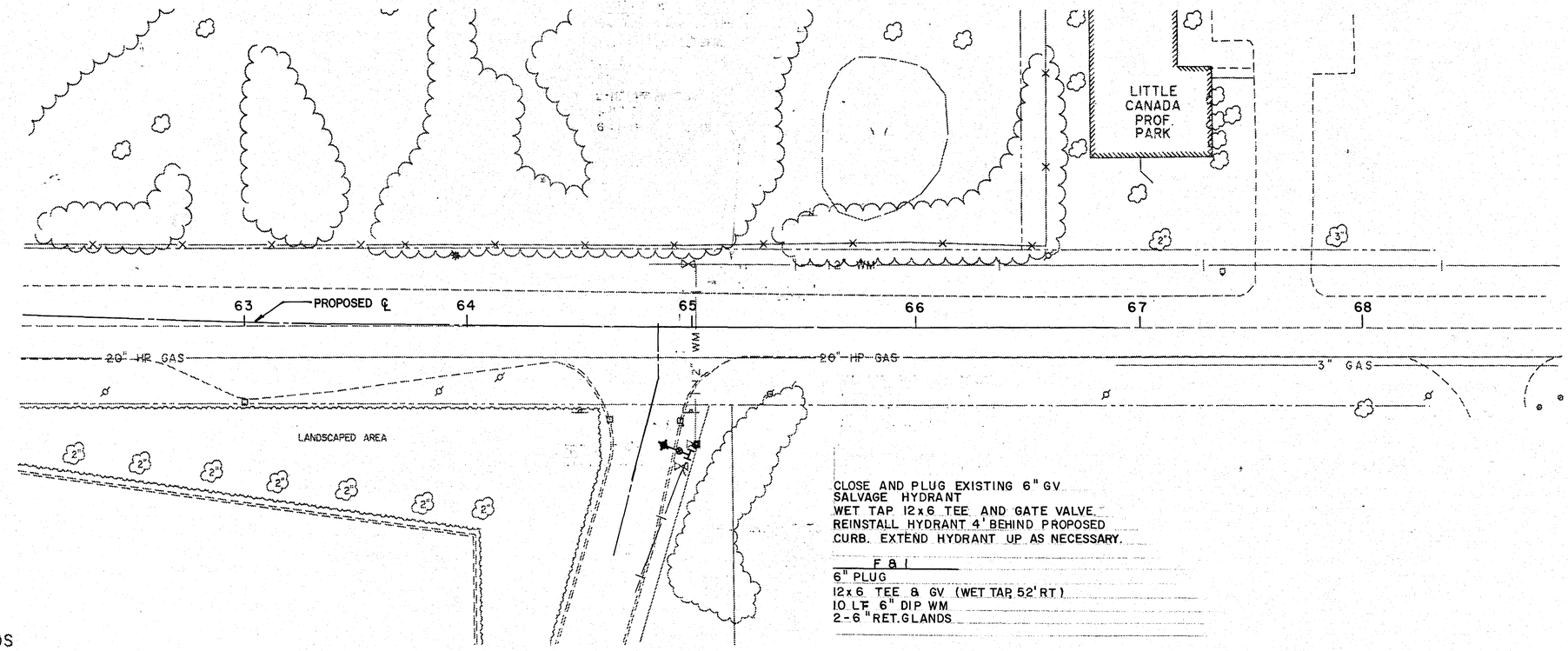
12" VCP

35 LF - 8" D.I.P. CL. 50 @ 1.00%

ASBUILT PLAN
CONFORMING TO CONST. RECORDS
DONE BY:
DATE:

S.A.P. 62-625-19 28-113 Sheet No. 39 of 103 Sheets

Fed. Proj. No.



0 15 30 60
SCALE

CLOSE AND PLUG EXISTING 6" GV
SALVAGE HYDRANT
WET TAP 12x6 TEE AND GATE VALVE.
REINSTALL HYDRANT 4' BEHIND PROPOSED CURB. EXTEND HYDRANT UP AS NECESSARY.

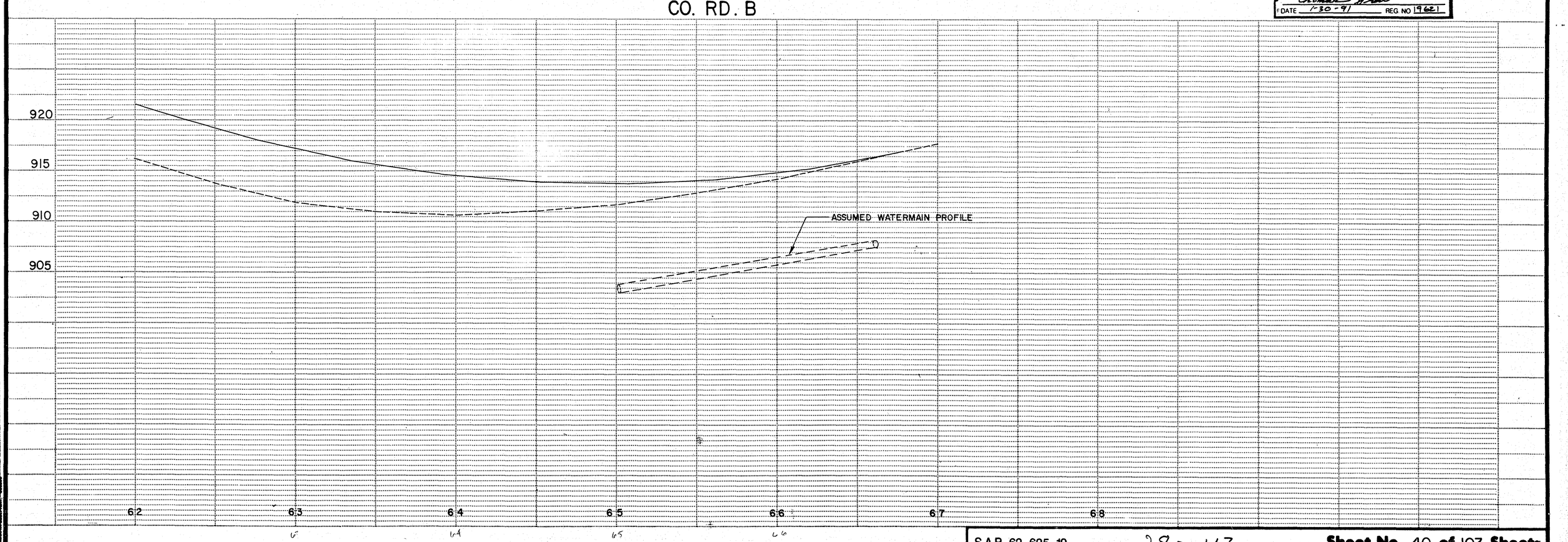
F & I
6" PLUG
12x6 TEE & GV (WET TAP 52' RT)
10 LF 6" DIP WM
2-6" RET. GLANDS

CUB FOODS

CO. RD. B

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 1-30-91 REG NO 19621

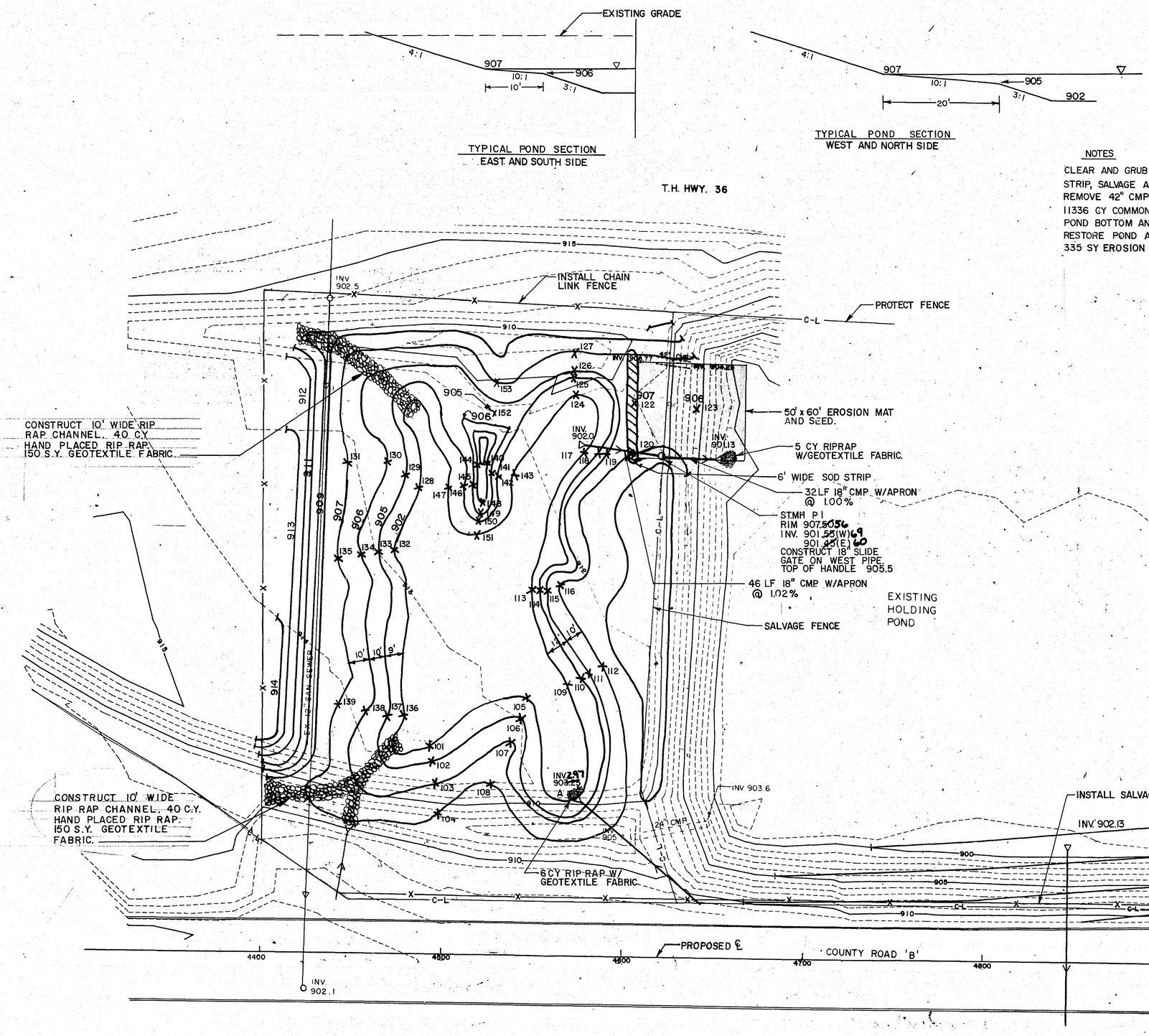


S.A.P. 62-625-19

28-113

Sheet No. 40 of 103 Sheets

Fed. Proj. No.



N

1" = 30'

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY:
DATE:

COORDINATES FOR CONTOURS		
POINT	X	Y
101	570812.3706	178680.5494
102	570814.2559	178671.7877
103	570816.9648	178660.2148
104	570818.6201	178644.2118
105	570866.3008	178706.7101
106	570862.6646	178695.8874
107	570857.8696	178682.8797
108	570847.3906	178661.0528
109	570888.3735	178714.5640
110	570896.2690	178719.1674
111	570899.9502	178720.7515
112	570907.9517	178723.7099
113	570867.6001	178763.8962
114	570871.6816	178763.9990
115	570875.0405	178763.4978
116	570883.0615	178766.6970
117	570894.5942	178837.5379
118	570902.0713	178836.3611
119	570907.3843	178836.4622
120	570921.1445	178837.1126
122	570921.2251	178864.0584
123	570955.5283	178862.3494
124	570888.3716	178867.5762
125	570887.2681	178876.3148
126	570887.7700	178880.3287
127	570887.7144	178889.1466
128	570802.8794	178815.5919
129	570795.5947	178822.2681
130	570785.7144	178829.1818
131	570762.8032	178827.6187
132	570790.4897	178782.0637
133	570781.7090	178780.9285
134	570772.0171	178779.3903
135	570758.5479	178777.0436
136	570797.7588	178695.4300
137	570788.4985	178694.9324
138	570816.9648	178660.2148
139	570760.4395	178700.5969
140	570840.8394	178829.3568
141	570842.9761	178824.1772
142	570846.8057	178823.2484
143	570855.7148	178824.1793
144	570835.0273	178828.3621
145	570785.7144	178829.1818
146	570828.4429	178817.6100
147	570819.4014	178816.3127
148	570838.5752	178808.5480
149	570837.3867	178803.1516
150	570836.7466	178799.5209
151	570835.9702	178791.7736
152	570844.4883	178856.4713
153	570844.9106	178872.3626
COORDINATES FOR FLARED ENDS		
A	570895.2856	178654.5712

NOTES

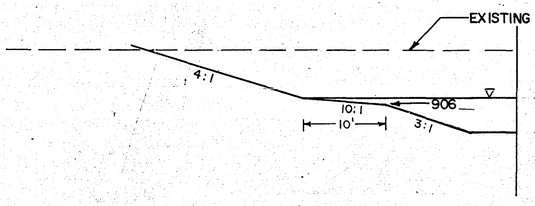
CLEAR AND GRUB TREES OVER POND AREA
STRIP, SALVAGE AND RESPREAD TOPSOIL (INCIDENTAL)
REMOVE 42" CMP (20LF) AND 24" CMP (44LF)
11336 CY COMMON (PIT) EXCAVATION FOR POND
POND BOTTOM AND SIDES TO BE IRREGULARLY SHAPED
RESTORE POND AREA WITH MNDOT SEED MIXTURE # 100.
335 SY EROSION MAT W/SEED.

SEDIMENTATION POND PLAN

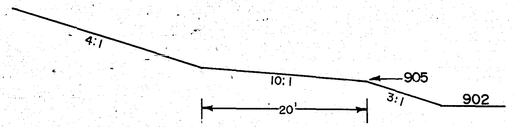
S.A.P. 62-625-19 29-113 **Sheet No. 41 of 103 Sheets**

PONDCHART 032020

Fed. Proj. No.



TYPICAL POND SECTION
EAST AND SOUTH SIDE



WEST AND NORTH SIDE

1" = 30'

T.H. HWY. 36

(4) WILD PLUM

(4) LAUREL LEAF WILLOW

(5) SWAMP WHITE OAK

(4) WILD PLUM

(2) ALLEGHANY SERVICEBERRY

(6) WILD PLUM

(7) LAUREL LEAF WILLOW

EXISTING HOLDING POND

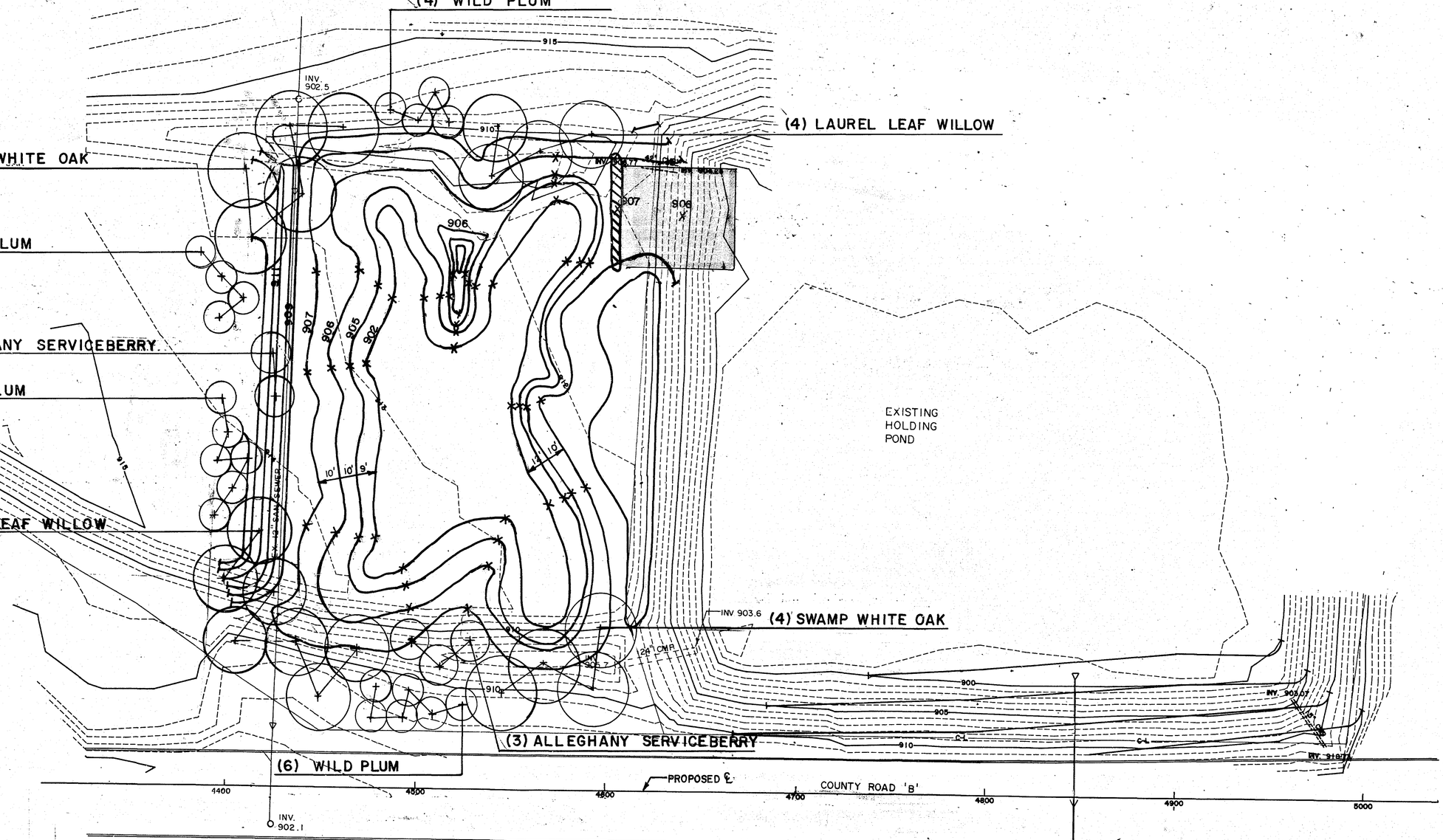
INV. 903.6 (4) SWAMP WHITE OAK

(3) ALLEGHANY SERVICEBERRY

(6) WILD PLUM

PROPOSED ℄

COUNTY ROAD 'B'



TREE SCHEDULE ⓪

QTY.	COMMON NAME	SCIENTIFIC NAME	SIZE
9	SWAMP WHITE OAK	QUERCUS BICOLOR	2½"B&B
11	LAUREL LEAF WILLOW	SALIX PENTANDRA	2½"B&B
5	ALLEGHANY SERVICEBERRY	AMELANCHIER LAEVIS	36"POTTED
20	WILD PLUM	PRUNUS AMERICANA	6'B&B

NOTE: RESTORE ALL DISTURBED AREAS WITH MNDOT SEED MIXTURE # 100.

SEDIMENTATION POND LANDSCAPING PLAN

S.A.P. 62-625-19 28-113 **Sheet No. 42 of 103 Sheets**

LEGEND OF SYMBOLS

SIGNAL BASE No. (5) (4-2)
SIGNAL FACE No.
CONTROLLER AND CABINET
CONTROLLER AND CABINET-INPLACE
HANDHOLE
HANDHOLE-INPLACE
RIGID STEEL CONDUIT (R.S.C.)
RIGID STEEL CONDUIT (R.S.C.)-INPLACE
SIGNAL FACE
SIGNAL FACE WITH BACKGROUND SHIELD
SIGNAL FACE - INPLACE
PEDESTRIAN INDICATIONS
PEDESTRIAN INDICATIONS - INPLACE
PEDESTRIAN PUSH BUTTON ON PEDESTAL OR POLE
PEDESTRIAN PUSH BUTTON STATION
TRAFFIC SIGNAL PEDESTAL
TRAFFIC SIGNAL PEDESTAL - INPLACE
TRAFFIC SIGNAL POLE AND MAST ARM
TRAFFIC SIGNAL POLE AND MAST ARM - INPLACE
MAST ARM AND LUMINAIRE
MAST ARM AND LUMINAIRE - INPLACE
WOOD POLE
WOOD POLE - INPLACE
SOURCE OF POWER
EMERGENCY VEHICLE PRE-EMPTION DETECTOR LOCATION (#)

LOOP DETECTORS

NUMBER	SIZE	FUNCTION	LOCATION	
D2-1	6' x 6'	C & E	~~230~~ 260	F&I *
D2-2	6' x 6'	C & E	260	F&I *
D2-3	2-6' x 8'	C ONLY	5	F&I *
D4-1	6' x 6'	C & E	265	
D4-2	6' x 6'	C & E	265	
D4-3	2-6' x 8'	C ONLY	5	F&I *
D6-1	6' x 6'	C & E	~~230~~ 240	
D6-2	6' x 6'	C & E	~~230~~ 240	
D6-3	2-6' x 8'	C ONLY	5	
D8-1	6' x 6'	C & E	~~265~~ 260	
D8-2	6' x 6'	C & E	~~265~~ 260	
D8-3	2-6' x 8'	C ONLY	5	

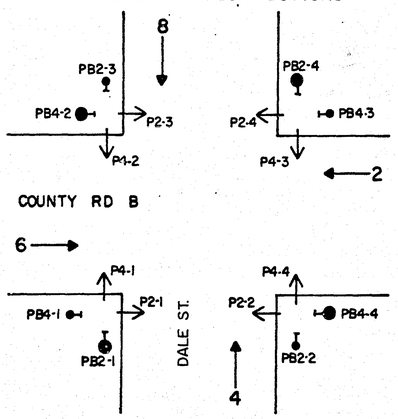
LOCATION = DISTANCE FROM STOP LINE TO DETECTOR
C = CALL
E = EXTEND

SIGNAL INDICATION CHART

FACE	PHASE	INDICATION SIZE R	Y	G
2-1	2	12"	12"	12"
2-2	2	12"	12"	12"
2-3	2	12"	12"	12"
4-1	4	12"	12"	12"
4-2	4	12"	12"	12"
4-3	4	12"	12"	12"
6-1	6	12"	12"	12"
6-2	6	12"	12"	12"
6-3	6	12"	12"	12"
8-1	8	12"	12"	12"
8-2	8	12"	12"	12"
8-3	8	12"	12"	12"

FLASH MODE = ALL RED

CONTROLLER PHASING, PEDESTRIAN INDICATIONS AND PUSH BUTTONS



② P80-A-20-T40-10
LUMINAIRE - 200 WATT HPS AT 350°
ONE-WAY SIGNAL - OVERHEAD
TYPE 20C - POLE MOUNTED 270°
9" PEDESTRIAN INDICATIONS
1 - PEDESTRIAN PUSH BUTTON
EXTEND INTO H.H. 9
3" RSC
2 - 12/C #12
2 - 3/C #12
2 - 1/C #10

1¼" RSC
2 - 2/C #14

PEDESTRIAN PUSH BUTTON STA (4" RSC)
1 - PEDESTRIAN PUSH BUTTON
EXTEND INTO H.H. 9
1¼" RSC
1 - 3/C #12

4" RSC
4 - 12/C #12
2 - 3/C #12
5 - 2/C #14
2 - 1/C #10
1 - 2/C #14 F&I *

1¼" RSC
2 - 2/C #14

EQUIPMENT PAD - TYPE X (SEE DETAILS)
6 STEEL GUARD POSTS
SERVICE CABINET
EXTEND INTO H.H. 1
1¼" RSC
3- 1/C #6
EXTEND INTO H.H. 6
1¼" RSC
2 - 1/C #10
EXTEND INTO H.H. 2
1¼" RSC
2 - 1/C #10
CONTROLLER CABINET
EXTEND TO SERVICE POLE
1" RSC WITH DRAIN TEE AND
2 - 2/C TELEPHONE DROP WIRE
EXTEND INTO H.H. 2
4" RSC
4 - 12/C #12
2 - 3/C #12
2 - 3/C #20
3 - 2/C #14
EXTEND INTO H.H. 6
4" RSC
4 - 12/C #12 1 - 2/C #14 F&I *
3 - 3/C #12
8 - 2/C #14
BETWEEN SERVICE & CONTROLLER
CABINET - 1¼" RSC
2 - 1/C #6
1 - 1/C #6 (BARE)

PEDESTRIAN PUSH BUTTON STA (4" RSC)
1 - PEDESTRIAN PUSH BUTTON
EXTEND INTO H.H. 6
1¼" RSC
1 - 3/C #12

S.O.P. AND TELEPHONE SERVICE
(N.S.P. POLE)
1¼" RSC RISER WITH WEATHER HEAD
EXTEND INTO H.H. 1
1¼" RSC
3 - 1/C #6

① P80-A-20
ONE-WAY SIGNAL - OVERHEAD
TYPE 20C - POLE MOUNTED 270°
9" PEDESTRIAN INDICATIONS
1 - PEDESTRIAN PUSH BUTTON
TWO-WAY EVP DETECTOR
AND LIGHT OVERHEAD
EXTEND INTO H.H. 2
3" RSC
2 - 12/C #12
1 - 3/C #12
1 - 3/C #20

③ P80-A-20
ONE-WAY SIGNAL - OVERHEAD
TYPE 20C - POLE MOUNTED 270°
9" PEDESTRIAN INDICATIONS
1 - PEDESTRIAN PUSH BUTTON
EXTEND INTO H.H. 12 *
3" RSC
2 - 12/C #12
2 - 3/C #12
} REMOVE & SALVAGE REINSTALL TO H.H. 12A *

3" RSC EXTEND INTO H.H. 12A *
2 - 12/C #12
1 - 3/C #12
2 - 2/C #14
} REMOVE & SALVAGE * REINSTALL INTO H.H. 12A *
1 - 2/C #14 F&I *

PEDESTRIAN PUSH BUTTON STA (4" RSC)
1 - PEDESTRIAN PUSH BUTTON
EXTEND INTO H.H. 12 *
1¼" RSC
1 - 3/C #12
} REMOVE & SALVAGE REINSTALL INTO H.H. 12A AS DIRECTED *

1¼" RSC ← REMOVE *
1 - 2/C #14 ← REMOVE & SALVAGE - REINSTALL IN NEW R.S.C. *
1¼" RSC - F&I *
1-2/C #14-USE SALV. *
1-2/C #14-F&I *

* REMOVE H.H.'S 13, 14 & 12
* F & I H.H.'S 13A, 14A & 12A

PEDESTRIAN PUSH BUTTON STA (4" RSC)
1 - PEDESTRIAN PUSH BUTTON
EXTEND INTO H.H. 3
1¼" RSC
1 - 3/C #12
} * REMOVE & SALVAGE * REINSTALL AS DIRECTED

* ADJUST H.H.3 AS DIRECTED

3" RSC
2 - 12/C #12
1 - 3/C #12
1 - 3/C #20
3 - 2/C #14
2 - 1/C #10

1¼" RSC
2 - 2/C #14

④ P80-A-20-T40-10
LUMINAIRE - 200 WATT HPS AT 350°
ONE-WAY SIGNAL - OVERHEAD
TYPE 20C - POLE MOUNTED 270°
9" PEDESTRIAN INDICATIONS
1 - PEDESTRIAN PUSH BUTTON
TWO-WAY EVP DETECTOR AND
LIGHT OVERHEAD
EXTEND INTO H.H. 3
3" RSC
2 - 12/C #12
2 - 3/C #12
1 - 3/C #20
2 - 1/C #10

NOTE:
ALL ITEMS ARE INPLACE AND SHALL BE USED INPLACE UNLESS OTHERWISE SPECIFIED
* DENOTES WORK TO BE DONE
F&I - FURNISH AND INSTALL
* THE SIGNAL SYSTEM SHALL REMAIN IN OPERATION AT ALL TIMES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

SCALE IN FEET 0 15 30 45 60 75

~~NOTES:~~
1. CONTRACTOR SHALL REMOVE AND SALVAGE INPLACE SIGNAL SYSTEM AS DIRECTED BY THE ENGINEER. SEE SPECIAL PROVISIONS.
2. POLE AND DETECTOR LOCATIONS SHALL BE VERIFIED IN THE FIELD BY THE TRAFFIC ENGINEER PRIOR TO INSTALLATION.
3. THE COUNTY SHALL FURNISH TO THE CONTRACTOR EVP DETECTORS AND ASSOCIATED CONTROL EQUIPMENT (SEE SPECIAL PROVISIONS).

NOTES:
* ALL NEW HANDHOLES SHALL BE CONCRETE WITH TYPE C COVER.

ASBUILT PLAN
CONSTRUCTED TO
CONFORM TO
DRAWN BY: JPH
DATE: Feb. 1989

REVISED
INTERSECTION LAYOUT
COUNTY RD. B & DALE ST.
SYSTEM A

S.A.P. 62-625-19 28-113 SHEET NO. 43 OF 103 SHEETS

CONTROLLER CABINET

SIGNAL SERVICE → 1

4
- RED 2-3 — 2-1 RED
- YEL 2-3 — 2-1 YEL
- GRN 2-3 — 2-1 GRN
- NEU 2-3, P2-1 — 2-2, 2-1 NEU
- WLK P2-1 — 2-2 RED
- DWK P2-1 — 2-2 YEL
- 2-2 GRN
- NEU P4-1 — NEU
- WLK P4-1
- DWK P4-1
- EQG — EQG

8

5
- RED 8-1 — 4-3 RED
- YEL 8-1 — 4-3 YEL
- GRN 8-1 — 4-3 GRN
- NEU 8-1, 8-2 — P42, 4-3 NEU
- RED 8-2 — P4-2 WLK
- YEL 8-2 — P4-2 DWK
- GRN 8-2
- NEU EVP LHT — P2-3 NEU
- EVP LHT — P2-3 WLK
- P2-3 DWK
- EQG — EQG

9

6
- RED 8-3 — 4-4 RED
- YEL 8-3 — 4-4 YEL
- GRN 8-3 — 4-4 GRN
- NEU 8-3, P4-4 — 4-2, 4-4 NEU
- WLK P4-4 — 4-2 RED
- DWK P4-4 — 4-2 YEL
- 4-2 GRN
- NEU P2-2 — NEU
- WLK P2-2
- DWK P2-2
- EQG — EQG

10

7
- RED 6-1 — 6-3 RED
- YEL 6-1 — 6-3 YEL
- GRN 6-1 — 6-3 GRN
- NEU 6-1, 6-2 — P2-4, 6-3 NEU
- RED 6-2 — P2-4 WLK
- YEL 6-2 — P2-4 DWK
- GRN 6-2
- NEU EVP LHT — P4-3 NEU
- EVP LHT — P4-3 WLK
- P4-3 DWK
- EQG — EQG

11

12 — PB2-1 NEU — EVP DETECTOR Ø4&8 → 17

13 — NEU PB4-1 — EVP DETECTOR Ø2&6 → 18

14 — PB2-2 NEU PB4-4 — TELEPHONE SERVICE → 19

15 — PB2-3 NEU PB4-2

16 — PB2-4 NEU PB4-3

20 — D4-1 — D8-1 → 26

21 — D4-2 — D8-2 → 27

22 — D4-3 — D8-3 → 28

23 — D6-1 — D2-1 → 29

24 — D6-2 — D2-3 → 30

25 — D6-3 — D2-2 → * 31

S.O.P. 19 → H.H. 1 S.O.P.

SERVICE CABINET & METER
1. SIGNAL SERVICE (METERED)
2. ST. LIGHT SERVICE (UNMETERED)
3. ST. LIGHT SERVICE (UNMETERED)
- S.O.P. 120/240V. SERVICE

H.H. 11 — D8-1 (26), D8-2 (27) — 26,27 — H.H. 10 — 26,27 — H.H. 9 D8-3 (28)

H.H. 6 D6-3 (25) — 23,24 — H.H. 7 — 23,24 — H.H. 8 D6-1 (23), D6-2 (24)

H.H. 3 D4-3 (22) — 20,21 — H.H. 4 — 20,21 — H.H. 5 D4-1 (20), D4-2 (21)

H.H. 2 — 2 — 4,5,6,7,12,14,17,18,20,21,22 — 2,6,7,14,18,20,21,22

PED. PUSH BUTTON STA. PB4-2 PB2-3 — 15 — H.H. 15 — 31 * — 3,8,9,10,11,15,16,26,27,28,29,30 — 31 *

PED. PUSH BUTTON STA. PB4-1 — 13

3 — 8,9,10,11,13,15,16,23,24,25,26,27,28,29,30,31 *

3,8,9,15 — 15

ST. LHT. PEC — 3 — BLK AC+, WH AC−, R AC+, BL AC+SW — ST. LHT. CH. SW. — LUM.

PB2-3 PB4-2 — 15 — 15

10,11,16,29,30 31 *

PED. PUSH BUTTON STA. PB4-4 PB2-2 — 14

PB2-2 PB4-4 — 14 — 14

EVP DETECTOR Ø2&6 — 18 — 6

ST. LHT PEC. — AC+ BLK, AC− WH, AC+ R, AC+SW BL — 2 — LUM — ST. LHT. CH SW

PB2-1 — 12

EVP DETECTOR Ø4&8 — 17 — 4

P4-1 P2-1 (2-3)

EVP LHT (8-2) (8-1) — 5

(1)

(2)

2-2 (2-1) — 8

P2-3 P4-2 (4-3) — 9

(3)

4-2 (4-1) — 10

P4-3 P2-4 (6-3) — 11

PB2-4 — 16 — 16

H.H. 12A — D2-3 — 30 — PED. PUSH BUTTON STA. PB4-3 — 16

* 31 — 29

H.H. 13 A

* 31 — 29

H.H. 14 A — 29 D2-1 — * 31 D2-2

P2-2 P4-4 (8-3) — 6

EVP LHT (6-2) (6-1) — 7

(4)

CONDUCTOR COLOR CODING

12/C #12: R, O, BL, WH, R/BLK, O/BLK, BL/BLK, WH/BLK, BLK, BLK/WH, G/BLK, G

- BLK — 2-1/C #6, 2-1/C #10
- R, WH, BLK — 3/C #12
- BLK, CLEAR — 2/C #14
- R OR O, WH OR YEL, BL OR BLK — 3/C #20

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

NOTE:
1. ALL CABLES ARE INPLACE UNLESS OTHERWISE INDICATED
2. * DENOTES NEW CABLE
3. ▲ DENOTES NEW CONNECTION

AS-BUILT PLAN
CONFORMING TO CONSTRUCTION RECORDS
DONE BY: JPH
DATE: Feb. 1989

REVISED FIELD WIRING DIAGRAM COUNTY RD. B & DALE ST.

SYSTEM: A

S.A.P. 62-625-19 — 28-113 — SHEET NO. 44 OF 103 SHEETS

Fed. Proj. No.

NOTES:

(1) EACH SIGNAL FACE SHALL HAVE BACKGROUND SHIELD, EXCEPT FACES 2-3, 4-3, 6-3 AND 8-3

(2) SEE SPECIAL PROVISIONS FOR MATERIALS TO BE FURNISHED BY THE MINNESOTA DEPARTMENT OF TRANSPORTATION.

(3) ALL PEDESTRIAN INDICATIONS SHALL BE 9" x 9".

(4) EACH LUMINAIRE SHALL HAVE A PHOTOELECTRIC CELL AND CHECK SWITCH.

(5) SIGNAL SYSTEM FLASH MODE SHALL BE ALL RED.

(6) SEE SHEET 23 FOR LOCATION OF INPLACE UTILITIES

(7) INPLACE SIGNAL SYSTEM SHALL REMAIN IN OPERATION UNTIL PROPOSED TEMPORARY SIGNAL SYSTEM "C" HAS BEEN INSTALLED AND IS READY FOR TURN-ON.

(8) SIGNAL HEADS MOUNTED ON SPAN WIRES SHALL BE PLACED SO THAT DRIVER'S VIEW OF INPLACE SIGNAL HEADS ON MAST ARMS IS NOT OBSTRUCTED, AT TIME OF TURNING ON TEMPORARY SIGNAL SYSTEM "C", HEADS ON SPAN WIRES SHALL BE PLACED IN PROPER LOCATION FOR STAGE I TRAFFIC CONTROL.

(9) AFTER STAGE I IS COMPLETED, SIGNAL HEADS 4-1 AND 8-1 SHALL BE RELOCATED TO LOCATION SHOWN FOR STAGE II.

(10) AFTER CONSTRUCTION IS COMPLETED, SIGNAL HEADS 4-1 AND 8-1 SHALL BE RELOCATED TO FINAL POSITION.

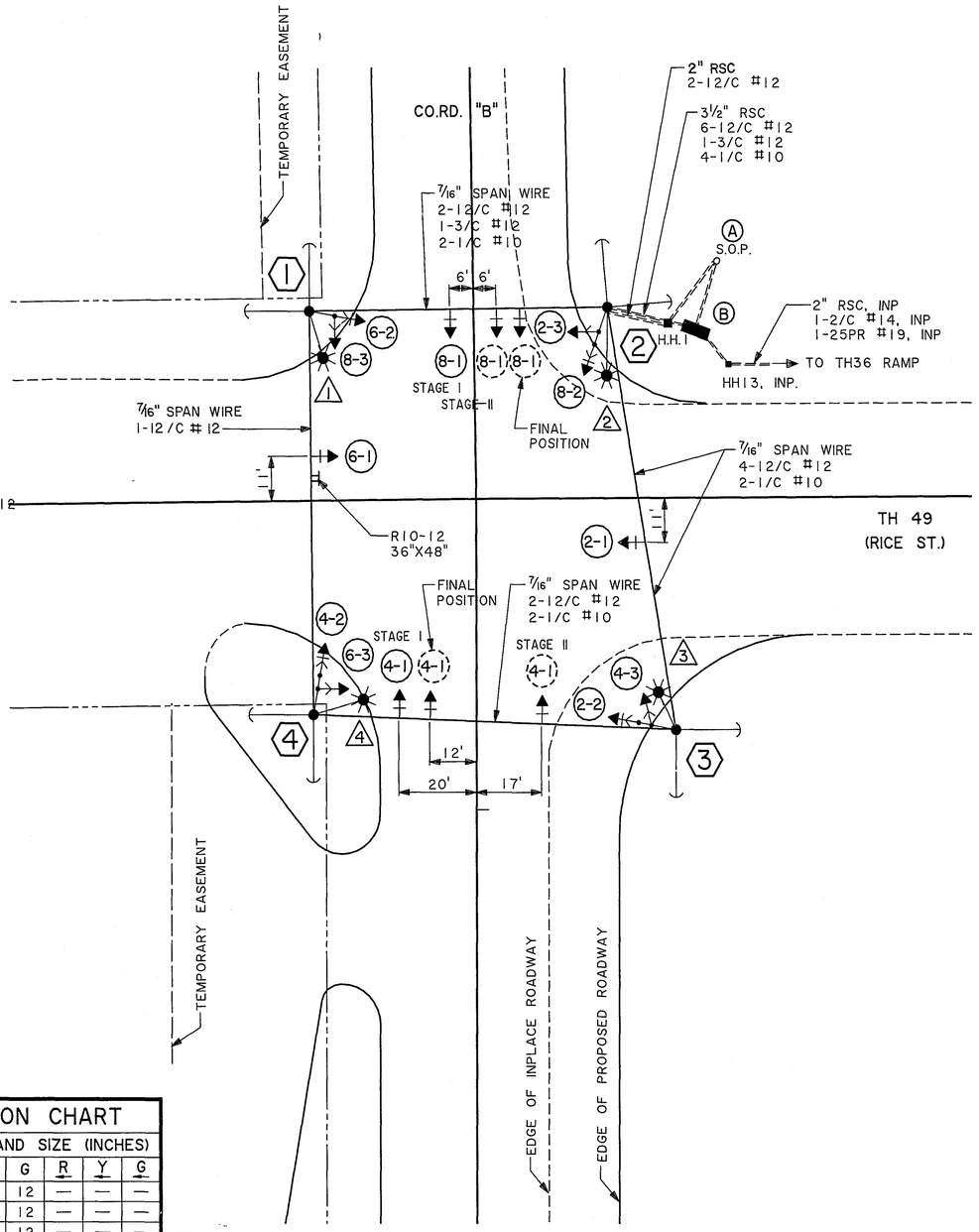
(11) CONTRACTOR SHALL REMOVE AND SALVAGE EXISTING SIGNAL SYSTEM (SEE SPECIAL PROVISIONS).

(12) RELOCATE INPLACE 1-25PR #19 BETWEEN HH13 AND INPLACE CABINET TO NEW CABINET LOCATION.

(13) PROVIDE SEPARATE NEW SERVICE EQUIPMENT FOR TEMPORARY SIGNAL SYSTEM ON INPLACE WOOD POLE.

(1) 45' WOOD POLE, 2-DOWN GUYS, GUARDS AND ANCHORS
2-TYPE 10B - WOOD POLE MOUNTED
LUMINAIRE-200 WATT H.P.S., 1" RSC RISER AND WEATHERHEAD, 2-1/C #10
METAL JUNCTION BOX
1¼" RSC RISER AND WEATHERHEAD ABOVE JUNCTION BOX, 1-12/C #12, 1-3/C #12

(4) 45' WOOD POLE, 2-DOWN GUYS, GUARDS AND ANCHORS
2-TYPE 10B-WOOD POLE MOUNTED
LUMINAIRE-200 WATT H.P.S., 1" RSC RISER AND WEATHERHEAD, 2-1/C #10
METAL JUNCTION BOX
1¼" RSC RISER AND WEATHERHEAD ABOVE JUNCTION BOX, 2-12/C #12



0 10 20 4
SCALE

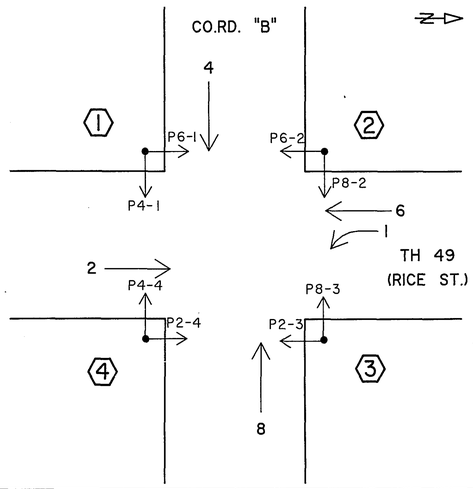
(A) 30' WOOD POLE (CLASS 2), INP.
SERVICE EQUIPMENT FOR TEMPORARY SIGNAL SYSTEM
2" RSC RISER ABOVE SERVICE EQUIPMENT WITH 3-1/C # 2
EXTEND TO CABINET:
1¼"RSC
2-1/C #6
1-1/C #6 BARE GROUND
1¼" RSC TO H.H. 1
4-1/C #10

(B) RELOCATE CONTROLLER AND CABINET
CABINET FOUNDATION
EXTEND INTO H.H. 13, INP.:
2" RSC
RELOCATED 1-25PR #19

(2) 45' WOOD POLE, 2-DOWN GUYS, GUARDS AND ANCHORS
2-TYPE 10B -WOOD POLE MOUNTED
LUMINAIRE-200 WATT H.P.S., 1" RSC RISER AND WEATHERHEAD, 2-1/C #10
METAL JUNCTION BOX
3½" RSC RISER AND WEATHERHEAD TO CONTROLLER AND CABINET,
6-12/C #12
1-3/C #12
4-1/C #10
1¼" RSC RISER AND WEATHERHEAD ABOVE JUNCTION BOX, 2-12/C #12
2" RSC RISER AND WEATHERHEAD BELOW JUNCTION BOX TO CONTROLLER AND CABINET, 2-12/C #12

(3) 45' WOOD POLE, 2-DOWN GUYS, GUARDS AND ANCHORS
2-TYPE 10B -WOOD POLE MOUNTED
LUMINAIRE-200 WATT H.P.S., 1" RSC RISER AND WEATHERHEAD, 2-1/C #10
METAL JUNCTION BOX
1¼" RSC RISER AND WEATHERHEAD ABOVE JUNCTION BOX, 2-12/C #12

CONTROLLER PHASING, PEDESTRIAN INDICATIONS



SIGNAL INDICATION CHART

SIGNAL FACE	PHASE	TYPE AND SIZE (INCHES) R	Y	G	R	Y	G
2-1	2	12	12	12	—	—	—
2-2	2	12	12	12	—	—	—
2-3	2	12	12	12	—	—	—
4-1	4	12	12	12	—	—	—
4-2	4	12	12	12	—	—	—
4-3	4	12	12	12	—	—	—
6-1	1,6	12	12	12	—	12	12
6-2	6	12	12	12	—	—	—
6-3	1,6	12	12	12	—	12	12
8-1	8	12	12	12	—	—	—
8-2	8	12	12	12	—	—	—
8-3	8	12	12	12	—	—	—

APPROVED: _____ DIRECTOR, OFFICE OF TRAFFIC ENGINEERING DATE _____

RECOMMENDED FOR APPROVAL: _____ DISTRICT ENGINEER DATE _____

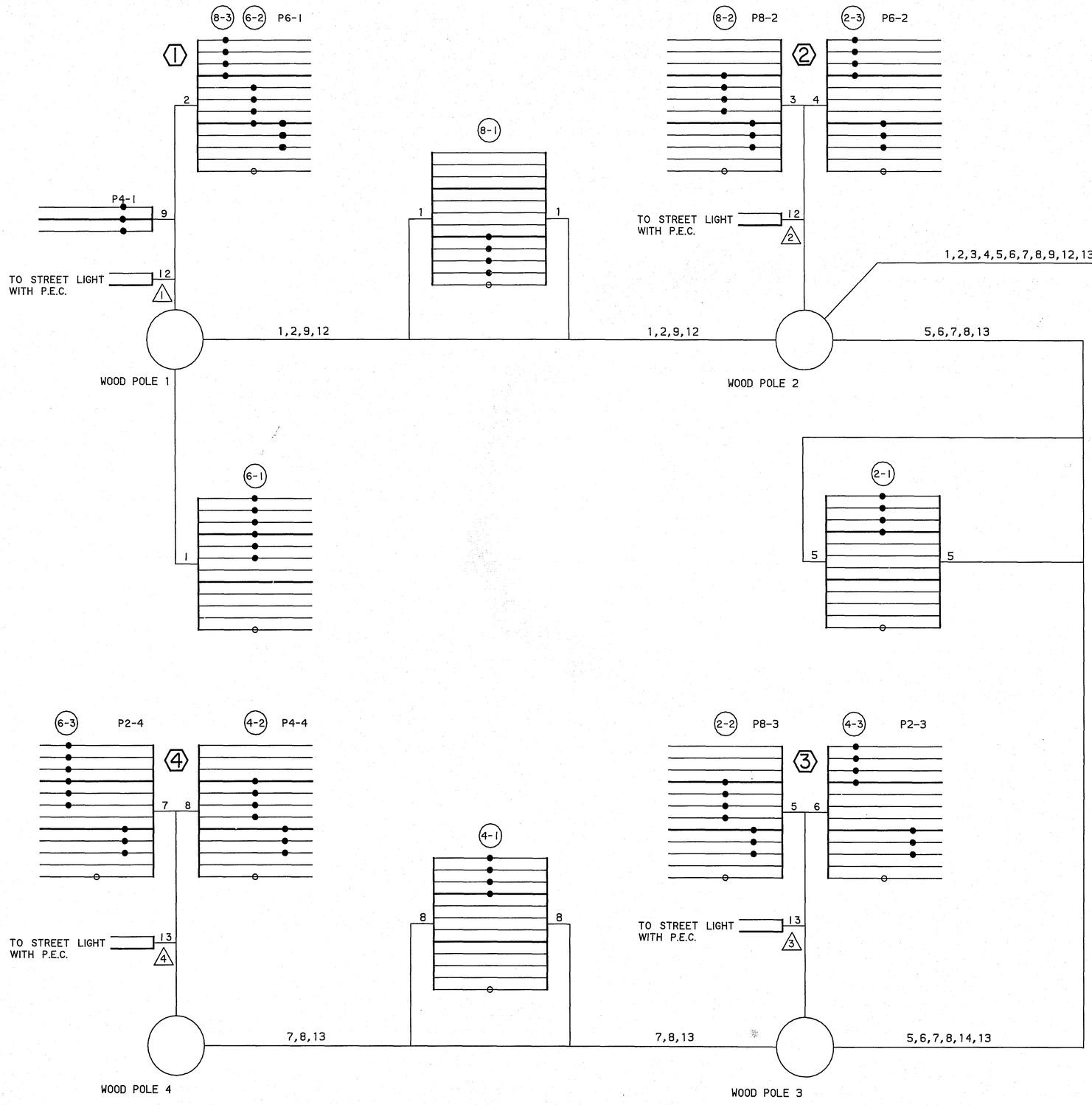
I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

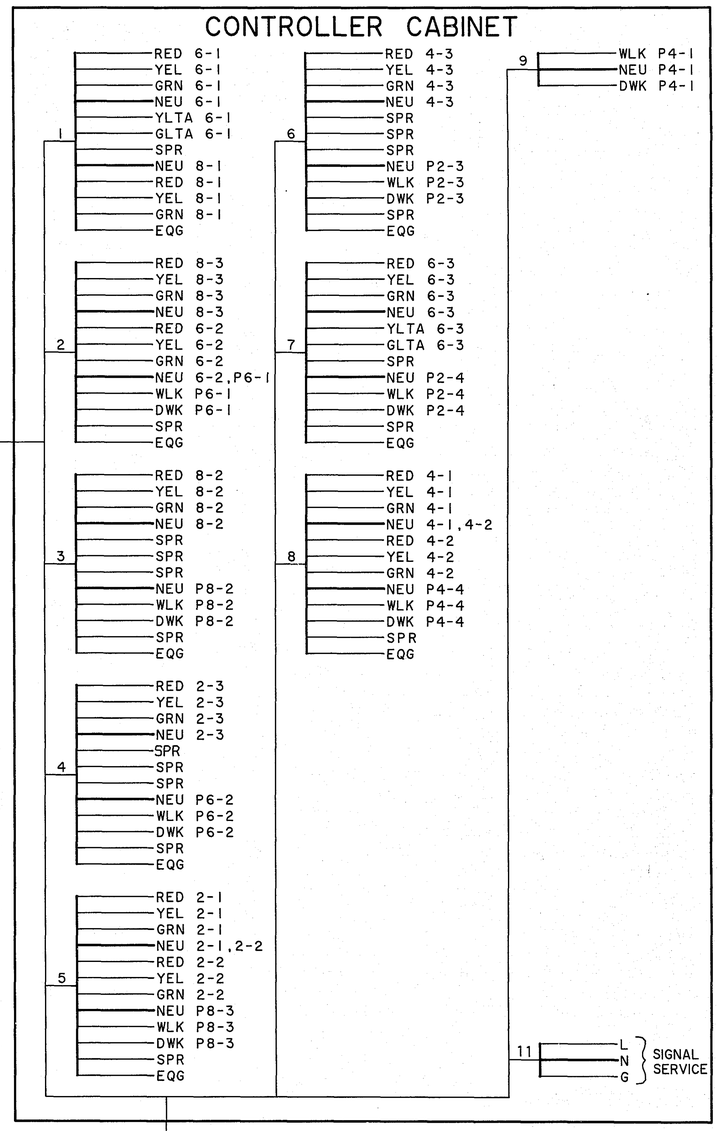
Ralph D. Clare

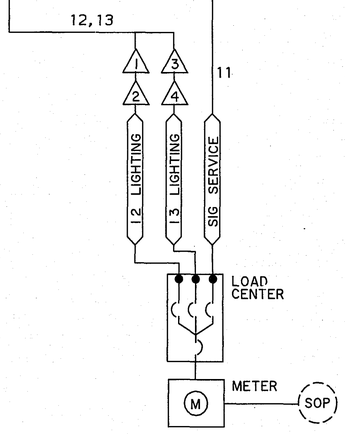
DATE APRIL 4, 1991 REG. NO. 4860

INTERSECTION LAYOUT
T.H.49 (RICE ST.) AT COUNTY ROAD "B"
TEMPORARY SIGNAL SYSTEM "C"

Fed. Proj. No.







CONDUCTOR COLOR CODING

12/C #12	R, O, BL, WH, R/BLK, O/BLK, BL/BLK, WH/BLK, BLK, BLK/WH, G/BLK, G	
2-1/C #6	BLK	
2-1/C #10	WH	
3/C #12	R, WH, BLK	

NOTE: ALL TERMINAL BLOCK CONNECTIONS SHALL BE ARRANGED AS SPECIFIED ABOVE.

FIELD WIRING DIAGRAM

T.H.49 (RICE ST.) AT COUNTY ROAD "B"
TEMPORARY SIGNAL SYSTEM "C"

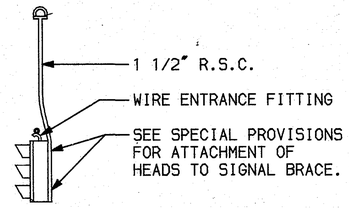
S.A.P. 62-625-19 28-113

PLOTTED ON 04 APR 1991

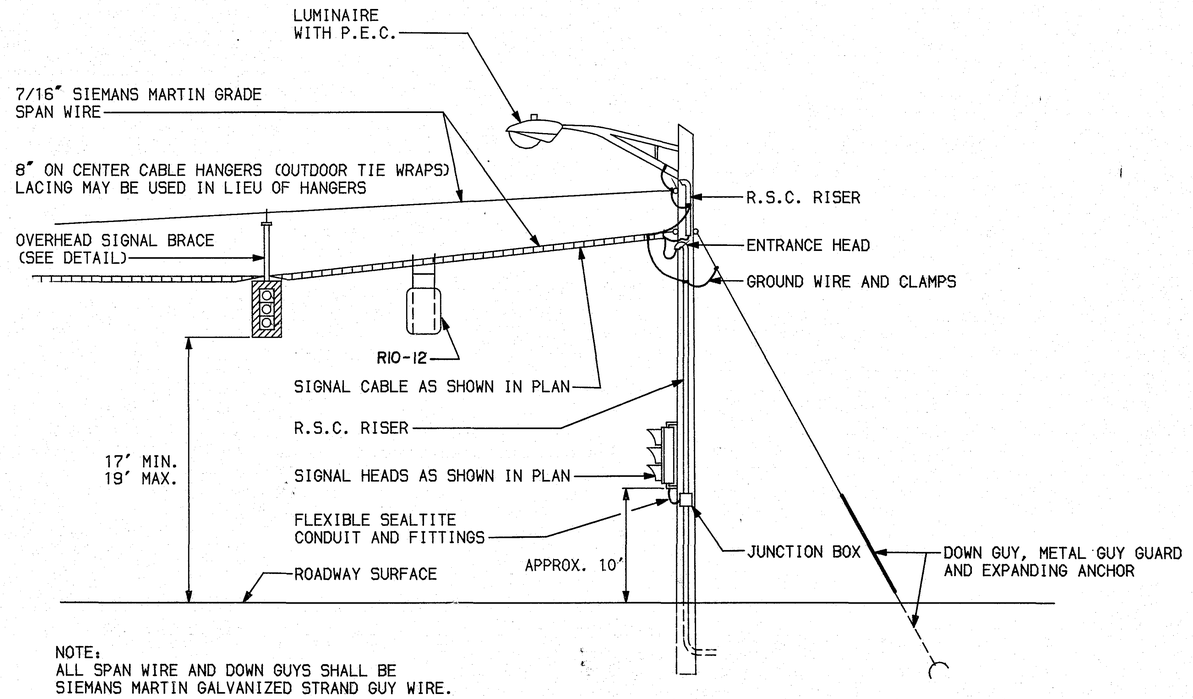
Fed. Proj No.

THE FOLLOWING STANDARD PLATES APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT:

STANDARD PLATES	
ITEM	DESCRIPTION
0r·05A	SPECIFICATION REFERENCE TO STANDARD PLATES
8110C	TRAFFIC SIGNAL BRACKETING (POLE MOUNTED)
8117F	PRECAST CONCRETE HANDHOLE (OR PULLBOX)
8116C	SERVICE EQUIPMENT AND POLE TRAFFIC CONTROL SIGNALS
8130D	SAW CUT LOOP DETECTORS



OVERHEAD SIGNAL BRACE DETAIL



NOTE:
ALL SPAN WIRE AND DOWN GUYS SHALL BE SIEMANS MARTIN GALVANIZED STRAND GUY WIRE.

TYPICAL WOOD POLE AND SPAN WIRE MOUNTED TRAFFIC SIGNALS AND SIGNS

DETAILS

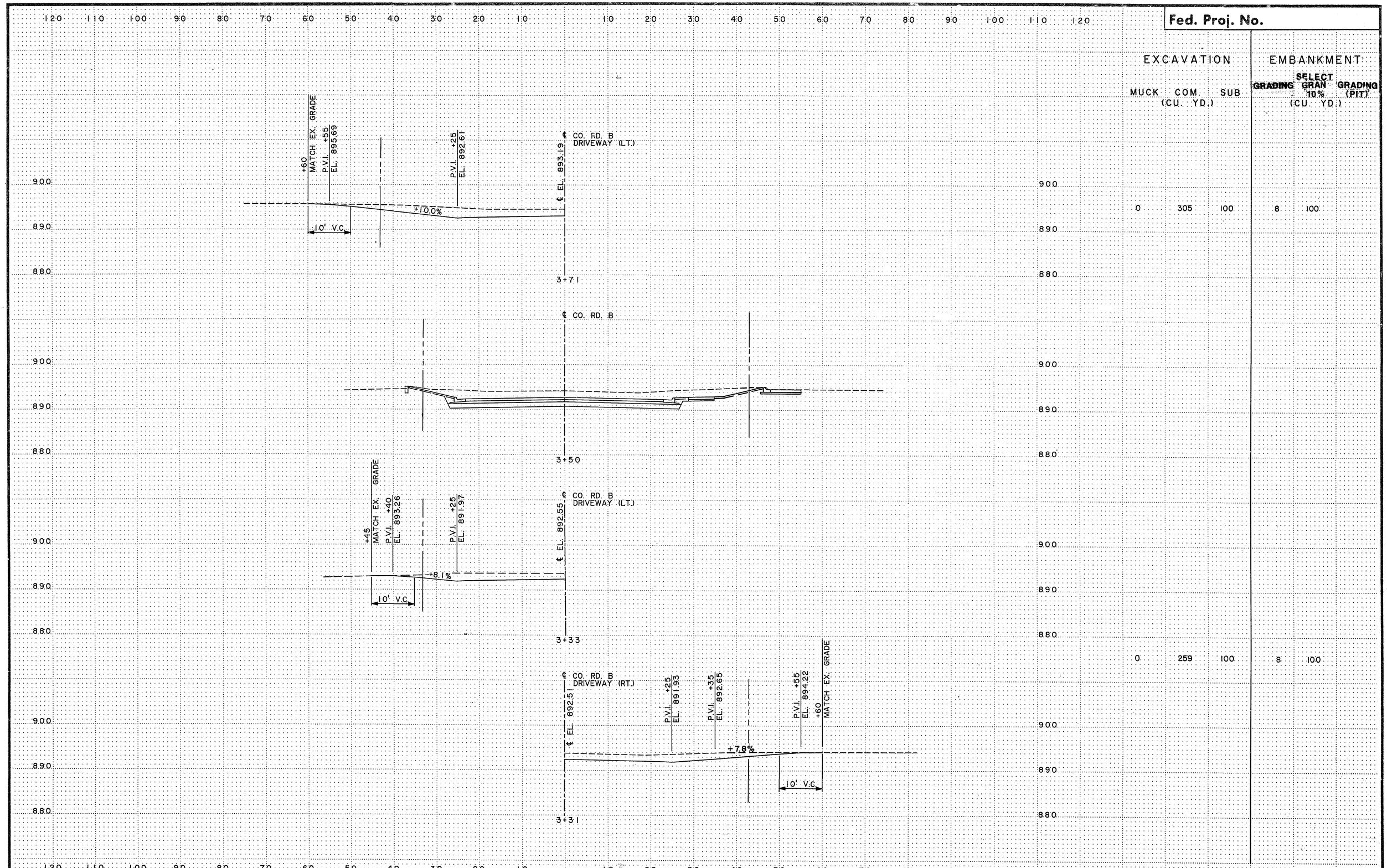
Fed. Proj. No.

	EXCAVATION		EMBANKMENT	
	MUCK (CU. YD.)	COM. SUB	SELECT GRADING GRAN 10% (CU. YD.)	GRADING (PIT)
	0	178 100	8	100
	0	48 50	4	50

CO. RD. B
STA. 2+00 TO 3+00

S.A.P. 62-625-19 28- 113 Sheet No. 47 of 103 Sheets

Fed. Proj. No.



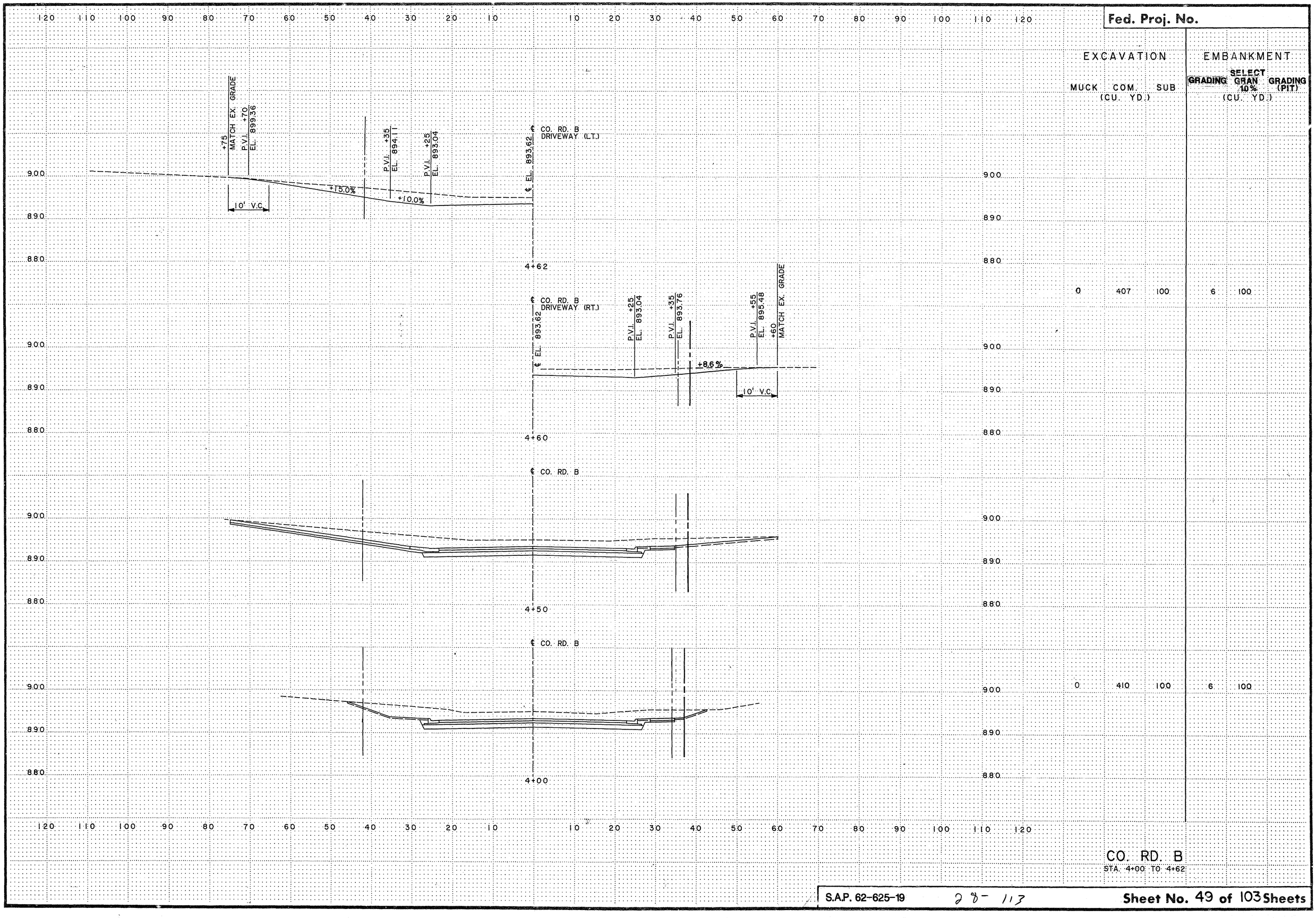
EXCAVATION			EMBANKMENT	
MUCK (CU. YD.)	COM. (CU. YD.)	SUB (CU. YD.)	GRADING	SELECT GRAN 10% (PIT) GRADING (CU. YD.)
0	305	100	8	100
0	259	100	8	100

CO. RD. B
STA. 3+31 TO 3+71

S.A.P. 62-625-19 28-113 Sheet No. 48 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.



EXCAVATION			EMBANKMENT	
MUCK (CU. YD.)	COM.	SUB	GRADING	SELECT GRAN 10% GRADING (PIT) (CU. YD.)
0	407	100	6	100
0	410	100	6	100

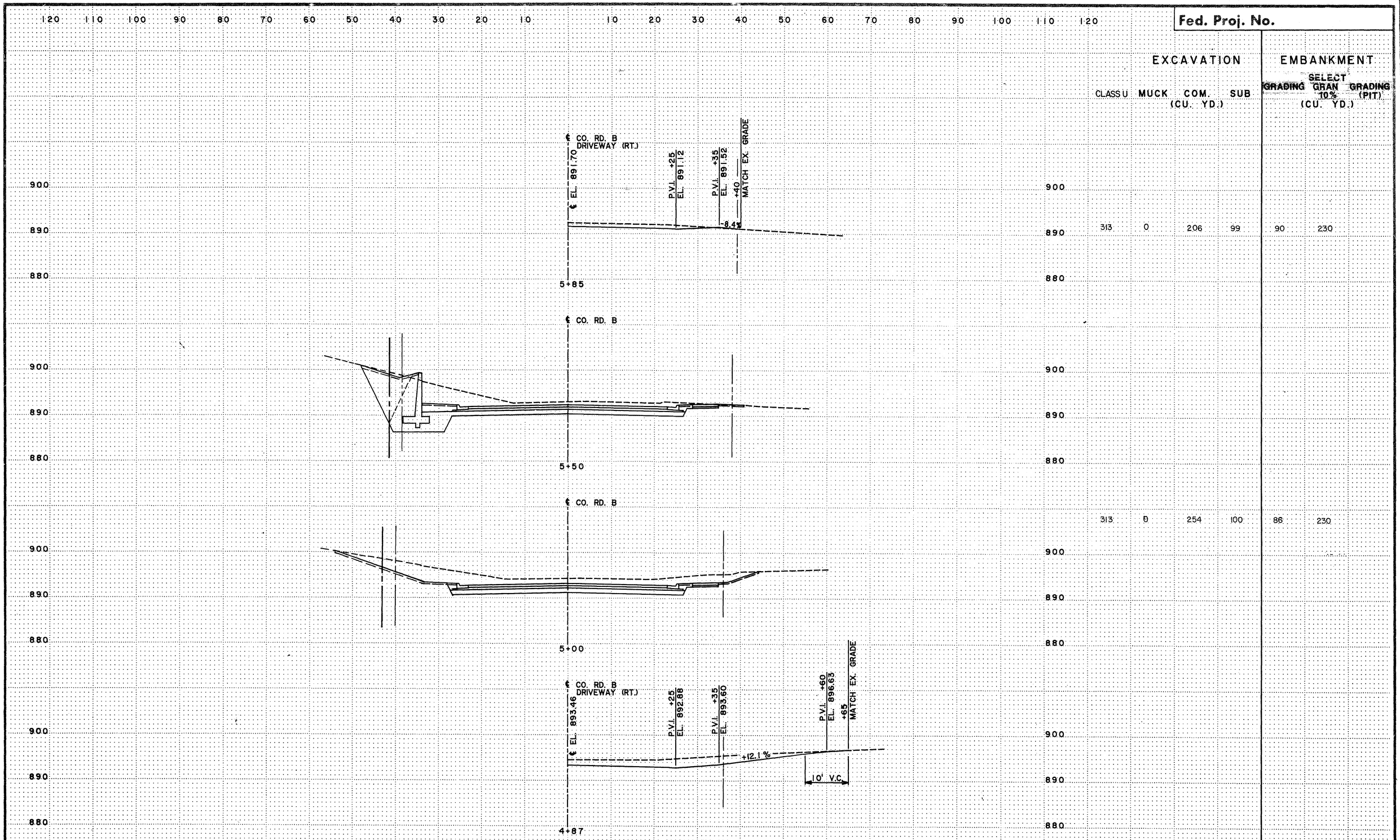
CO. RD. B
STA. 4+00 TO 4+62

S.A.P. 62-625-19 28-113

Sheet No. 49 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.



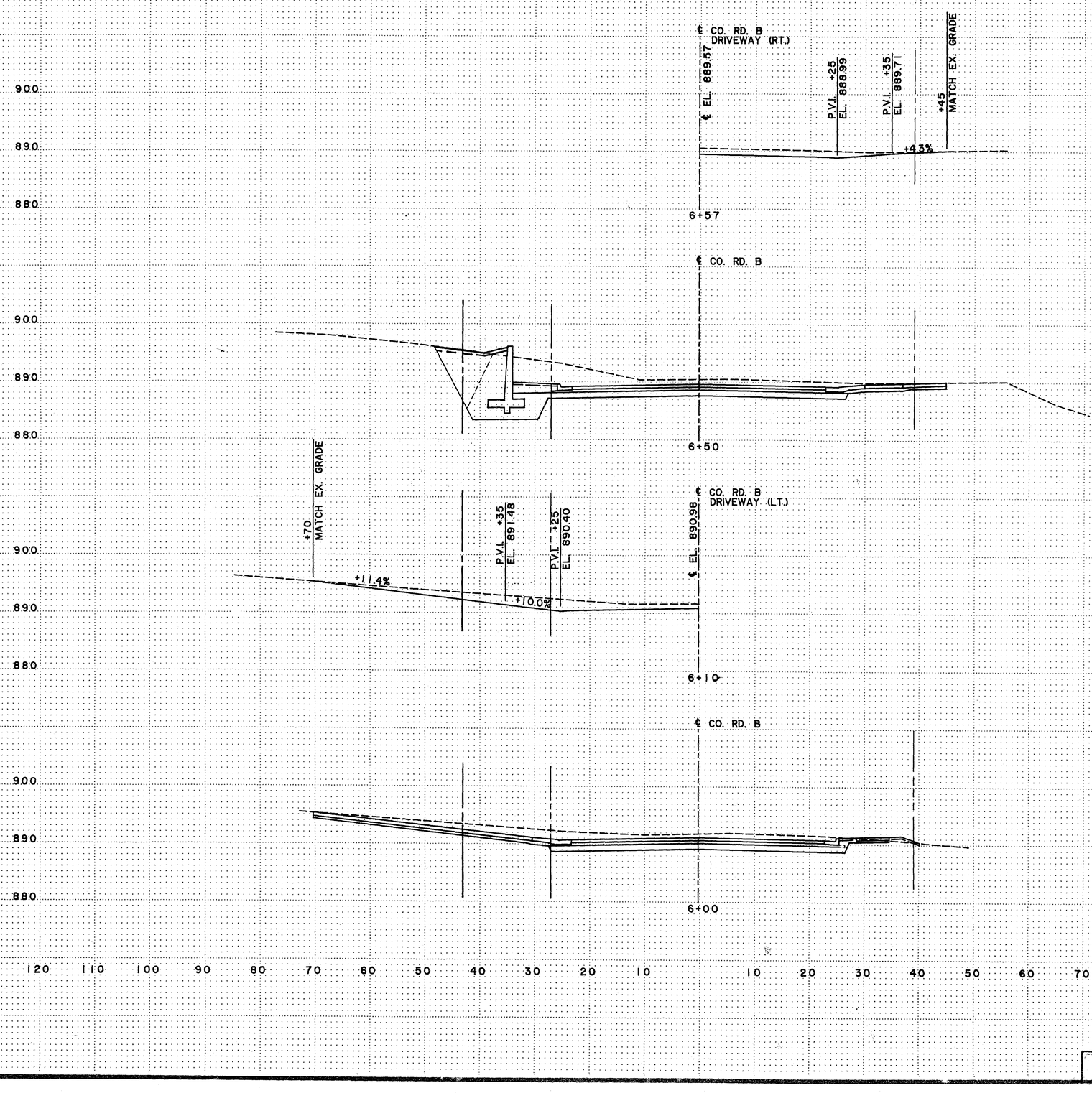
EXCAVATION				EMBANKMENT	
CLASS U	MUCK	COM. SUB (CU. YD.)		GRADING	SELECT GRAN GRADING 10% (PIT) (CU. YD.)
313	0	206	99	90	230
313	0	254	100	86	230

CO. RD. B
STA. 4+87 TO 5+85

S.A.P. 62-625-19 28- 113 Sheet No. 50 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.



EXCAVATION					EMBANKMENT	
CLASS U (CU. YD.)	MUCK	COM.	SUB		GRADING	SELECT GRAN 10% (PIT) GRADING (CU. YD.)
359	0	194	99		99	274
163	0	226	99		49	182

CO. RD. B
STA. 6+00 TO 6+57

S.A.P. 62-625-19 28 - 113 Sheet No. 51 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.

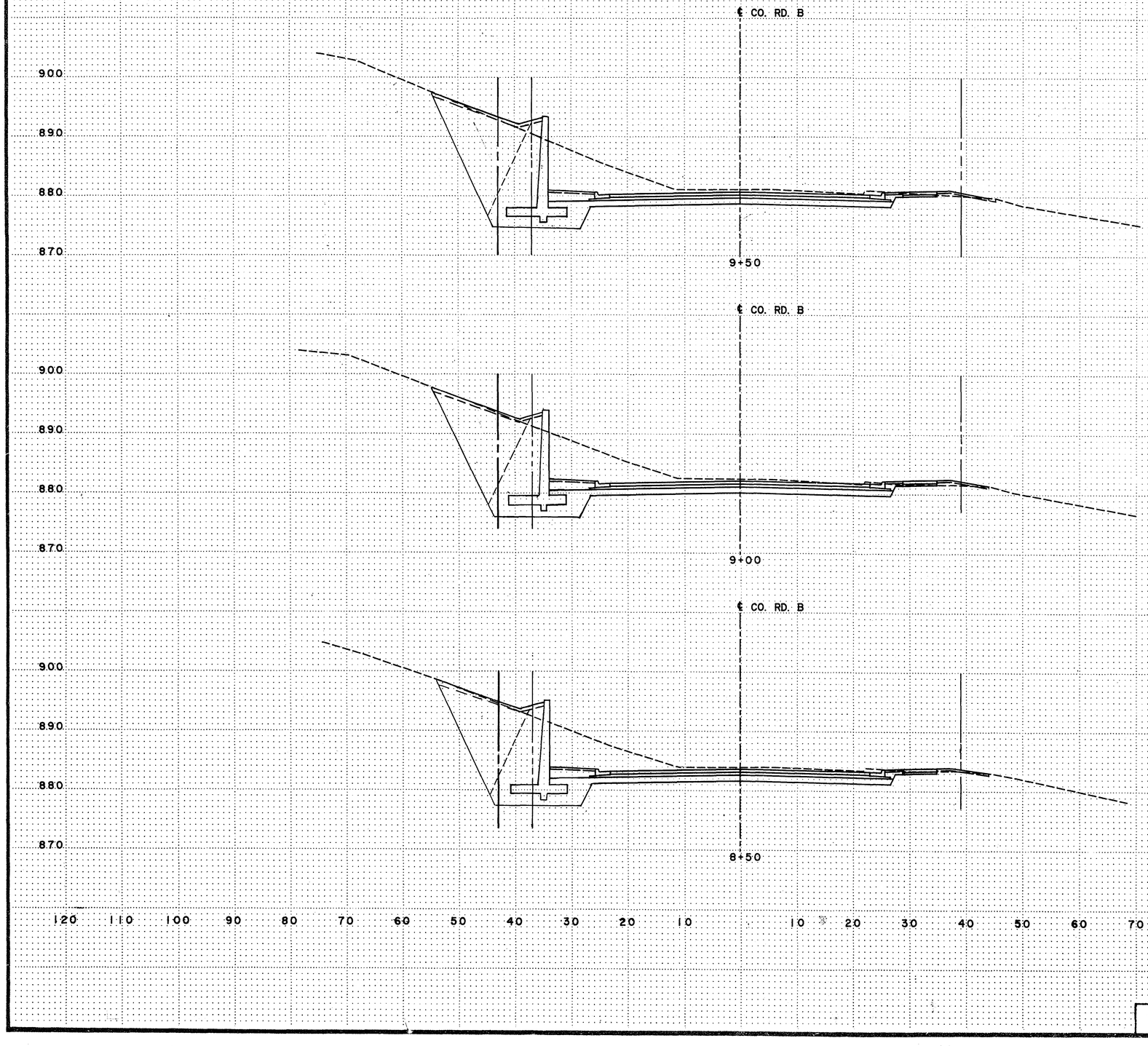
STA.	EXCAVATION CLASS U (CU. YD.)	MUCK (CU. YD.)	COM. SUB (CU. YD.)	EMBANKMENT GRADING (CU. YD.)	SELECT GRAN 10% (P.T) (CU. YD.)	GRADING (P.T) (CU. YD.)
8+00	512	0	147	99	197	308
7+50	463	0	150	99	169	286
7+00	415	0	169	99	134	283

CO. RD. B
STA. 7+00 TO 8+00

S.A.P. 62-625-19 28-113 Sheet No. 52 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.



	EXCAVATION				EMBANKMENT	
	CLASS U	MUCK	COM. SUB (CU. YD.)		GRADING	SELECT GRAN 10% GRADING (PIT) (CU. YD.)
9+50	544	0	150	99	235	297
9+00	561	0	153	99	228	324
8+50	551	0	147	99	220	328

CO. RD. B
STA. 8+50 TO 9+50

S.A.P. 62-625-19 28-113 Sheet No. 53 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.

	EXCAVATION				EMBANKMENT		
	CLASS U (CU. YD.)	MUCK (CU. YD.)	COM. (CU. YD.)	SUB	GRADING	SELECT GRAN 10% (CU. YD.)	GRADING (PIT)
	150	431	291	0	134	285	414
	415	60	220	50	195	324	60

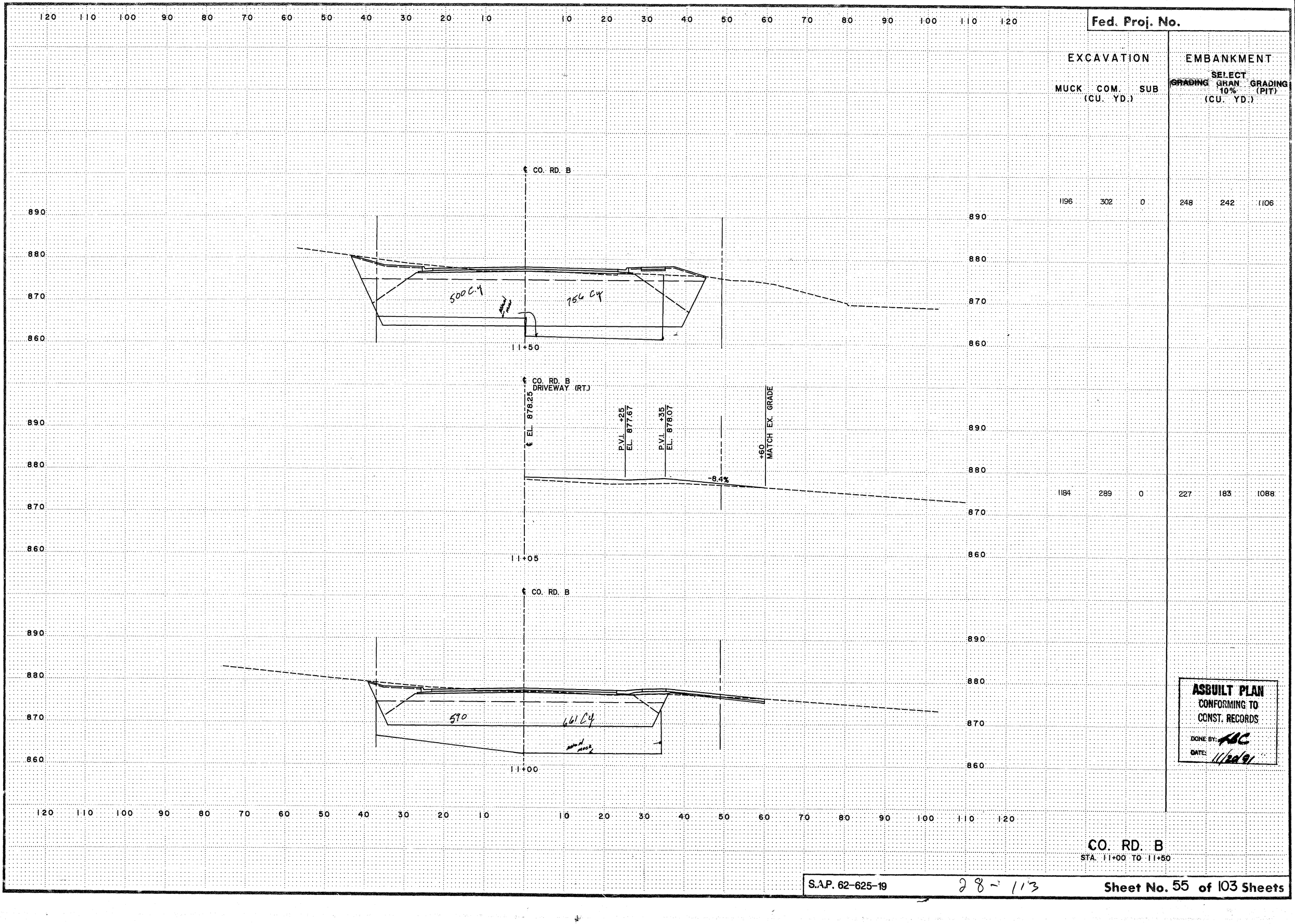
ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: RBC
DATE: 11/20/91

CO. RD. B
STA. 10+00 TO 10+78

S.A.P. 62-625-19 28-113 Sheet No. 54 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.



EXCAVATION			EMBANKMENT		
MUCK (CU. YD.)	COM.	SUB	GRADING	SELECT GRAN 10% (CU. YD.)	GRADING (PIT)
1196	302	0	248	242	1106
1184	289	0	227	183	1088

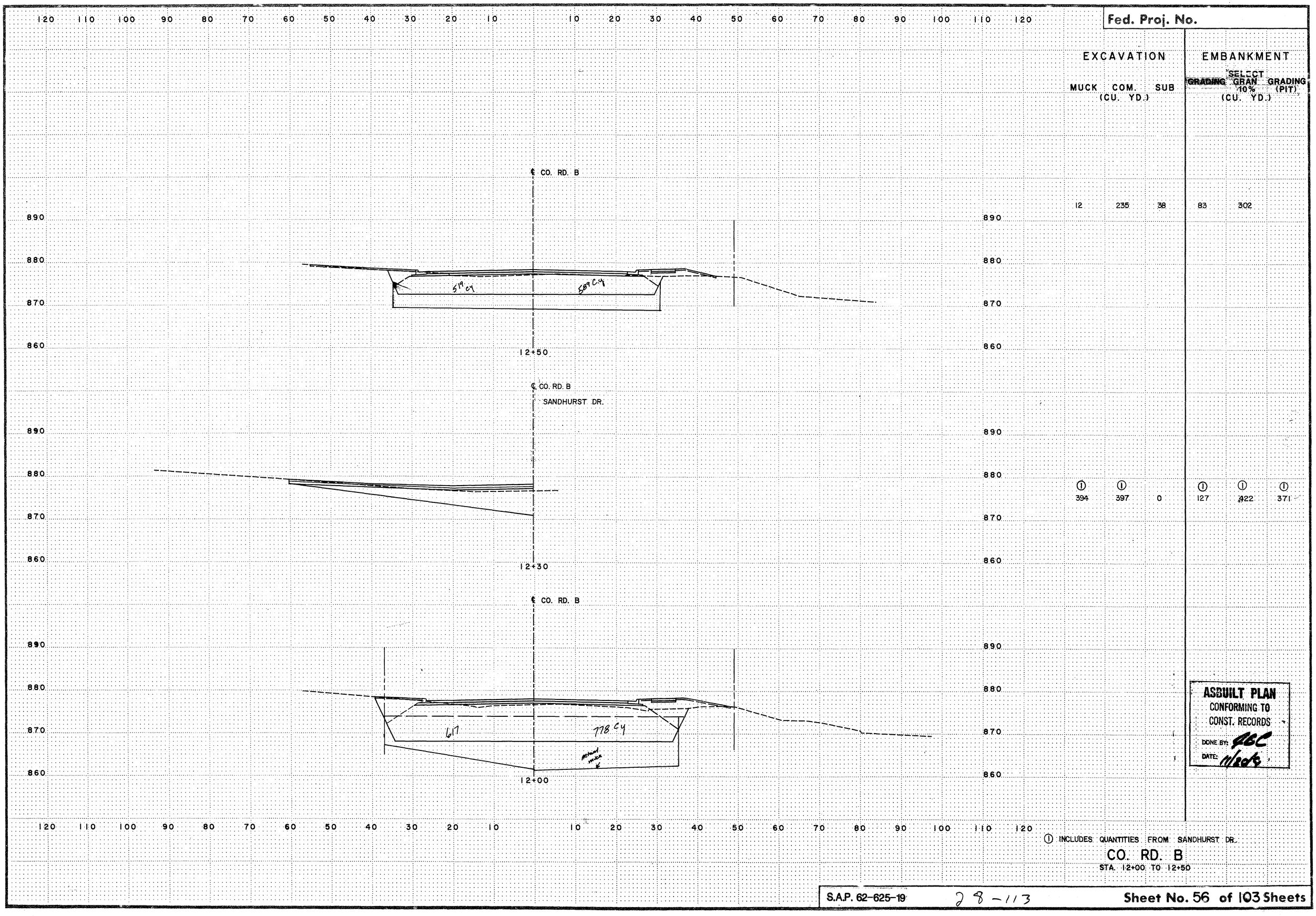
ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: ABC
DATE: 11/20/91

CO. RD. B
STA. 11+00 TO 11+50

S.A.P. 62-625-19 28-113 **Sheet No. 55 of 103 Sheets**

COPY EQUIPMENT FORM #1

Fed. Proj. No.



STATION	EXCAVATION MUCK (CU. YD.)	EXCAVATION COM. (CU. YD.)	EXCAVATION SUB (CU. YD.)	EMBANKMENT SELECT GRADING (CU. YD.)	EMBANKMENT GRAN 10% (CU. YD.)	EMBANKMENT GRADING (PIT) (CU. YD.)
12+50	12	235	38	83	302	
12+30	① 394	① 397	0	① 127	① 422	① 371
12+00						

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: ABC
DATE: 11/80

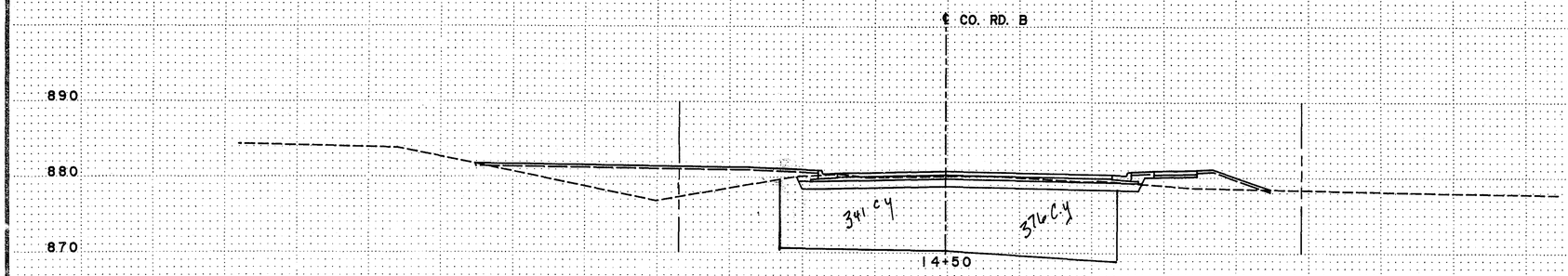
① INCLUDES QUANTITIES FROM SANDHURST DR.

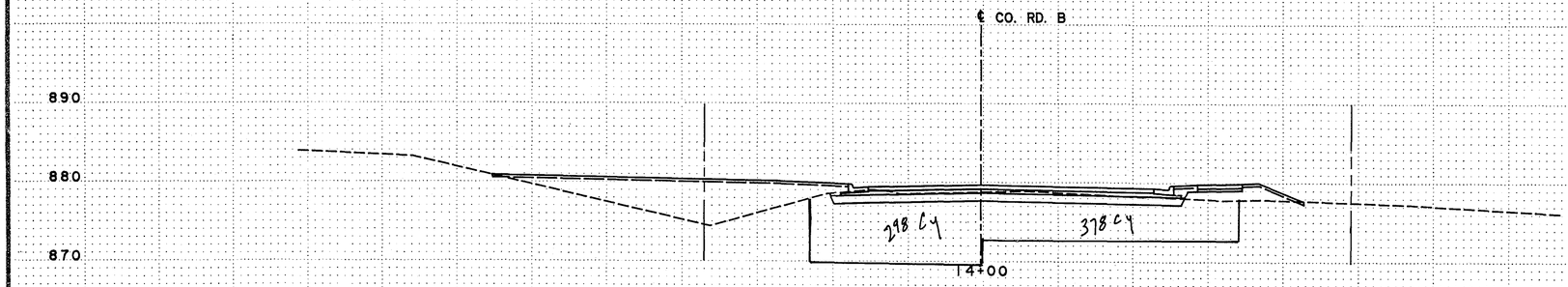
CO. RD. B
STA. 12+00 TO 12+50

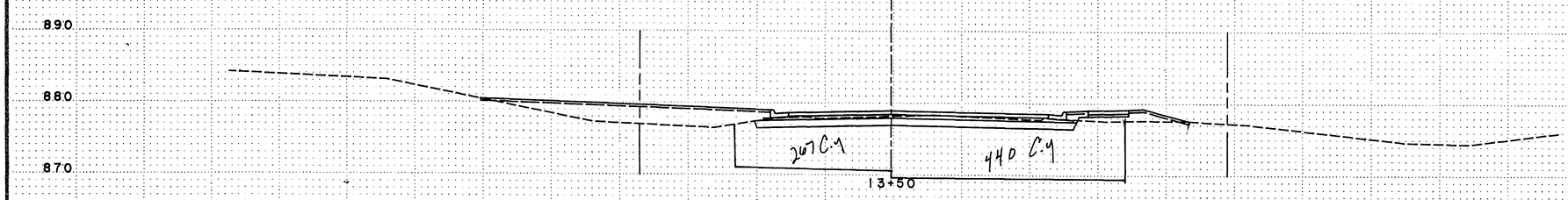
S.A.P. 62-625-19 28-113 Sheet No. 56 of 103 Sheets

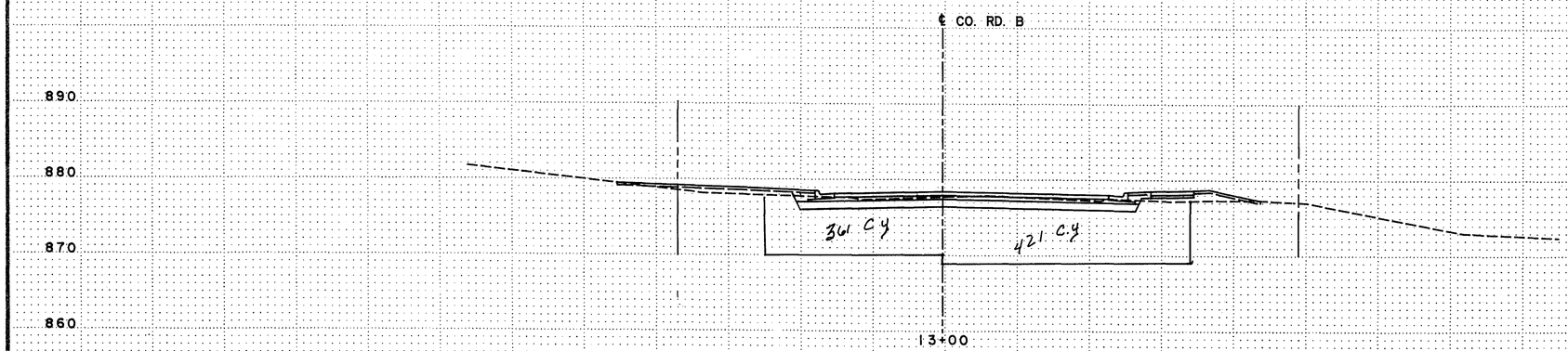
COPY EQUIPMENT FORM #1

Fed. Proj. No.









EXCAVATION			EMBANKMENT	
MUCK (CU. YD.)	COM. (CU. YD.)	SUB GRADING	SELECT GRAN 10% (CU. YD.)	GRADING (PIT)
0	11	79	272	88
0	2	65	310	87
0	1	64	268	87
0	1	73	142	87

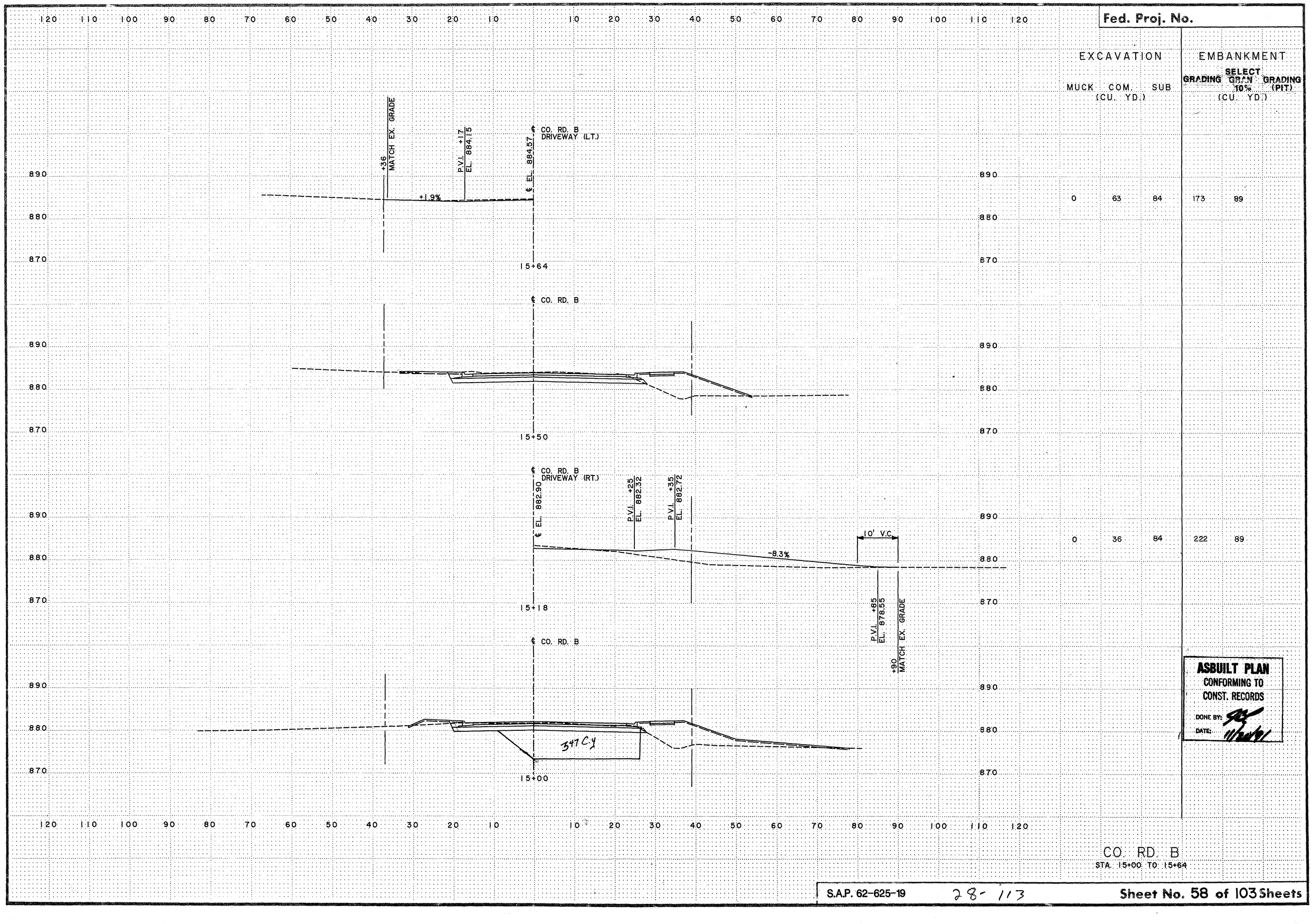
ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: RC
DATE: 11/86

CO. RD. B
STA. 13+00 TO 14+50

S.A.P. 62-625-19 28-113 Sheet No. 57 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.



EXCAVATION			EMBANKMENT	
MUCK (CU. YD.)	COM. (CU. YD.)	SUB (CU. YD.)	GRADING	SELECT GRAN 10% (PIT) GRADING (CU. YD.)
0	63	84	173	89
0	36	84	222	89

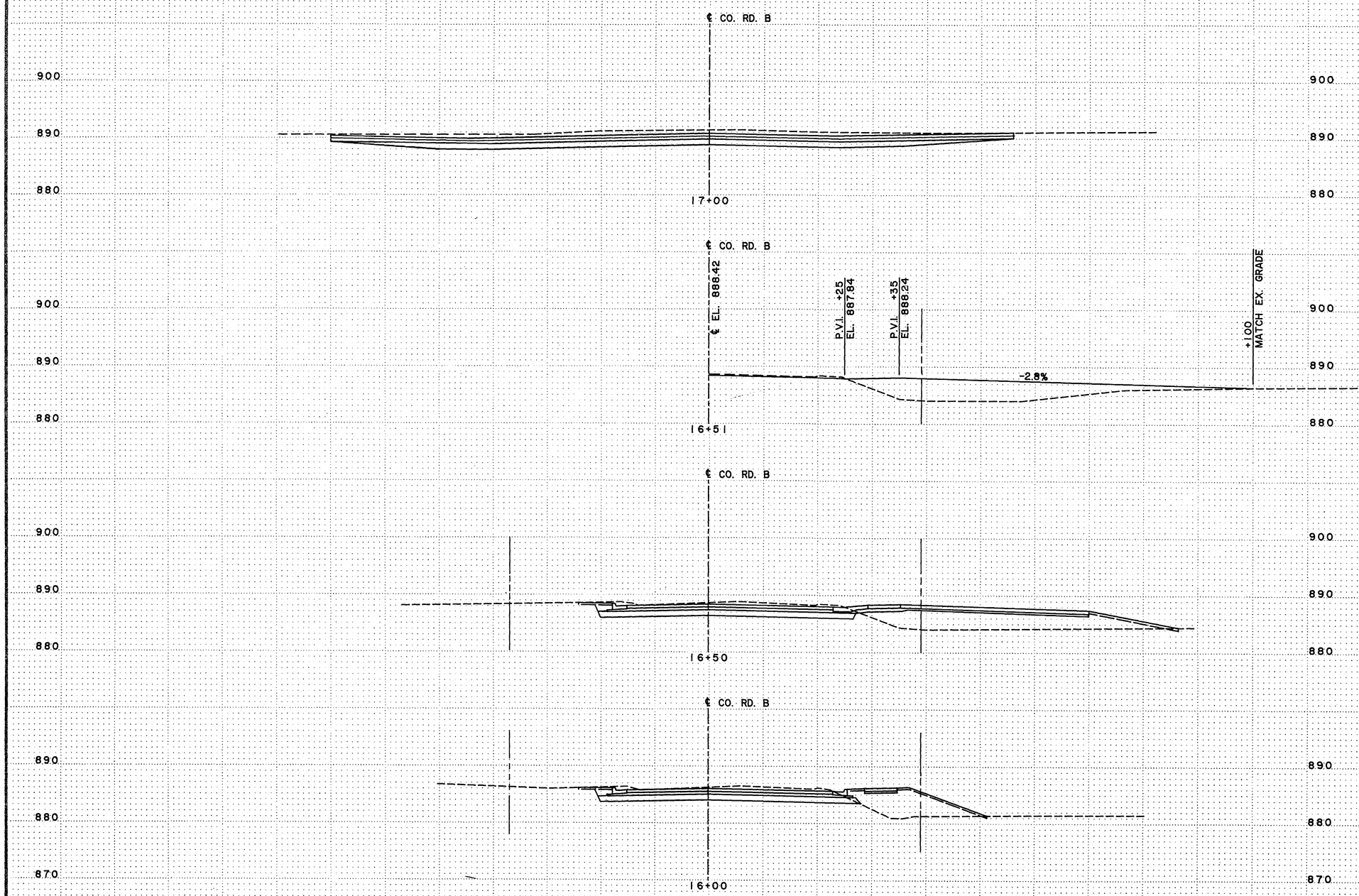
ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY:
DATE: 11-Nov-91

CO RD B
STA. 15+00 TO 15+64

S.A.P. 62-625-19 28-113 Sheet No. 58 of 103 Sheets

CDP'S EQUIPMENT FORM #1

Fed. Proj. No.



	EXCAVATION			EMBANKMENT	
	MUCK (CU. YD.)	COM. (CU. YD.)	SUB (CU. YD.)	GRADING	SELECT GRAN 10% (PIT) (CU. YD.) GRADING
		①	①	①	①
0		158	133	27	148
		133	126	150	131
		71	86	228	88

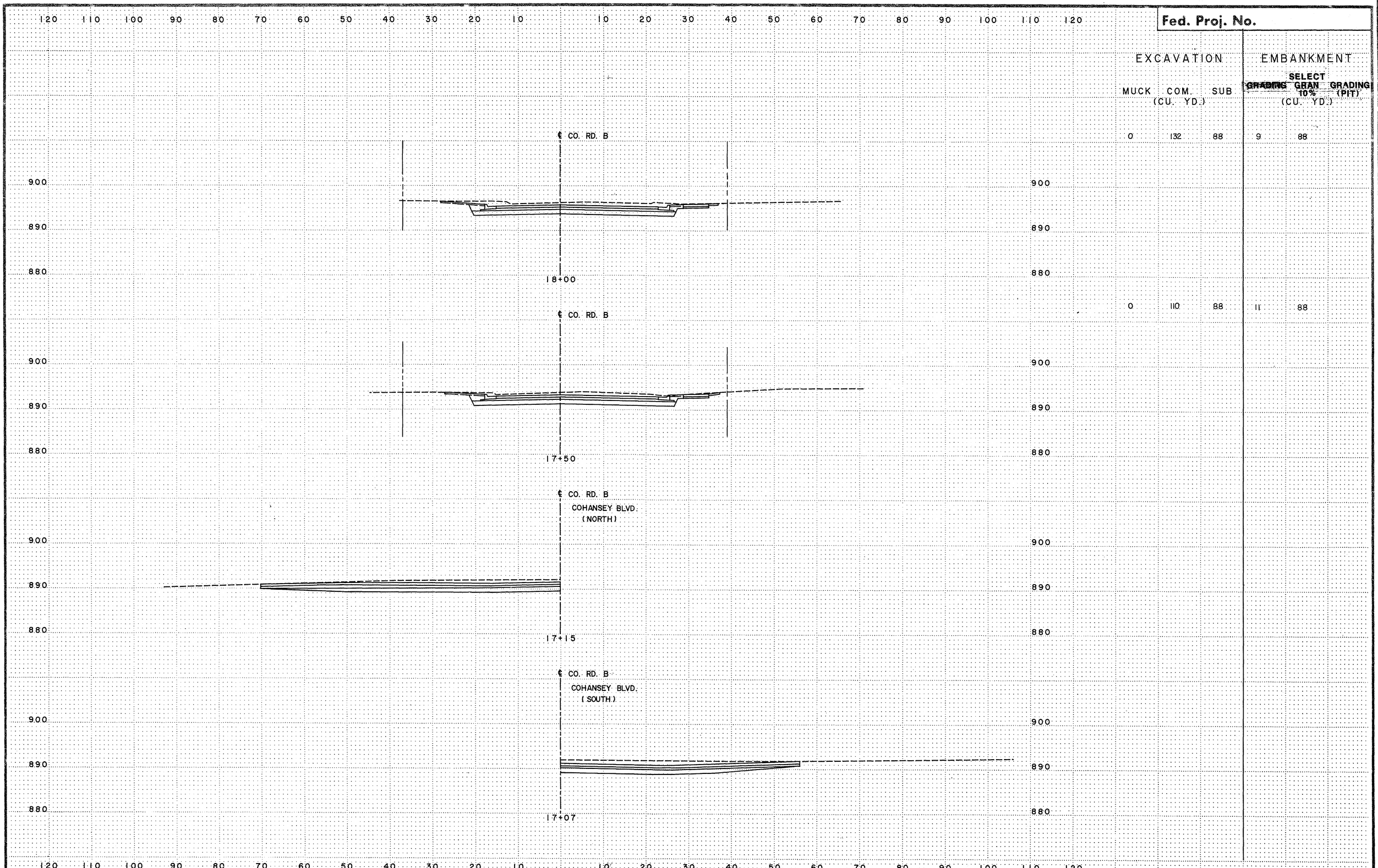
① INCLUDES QUANTITIES FROM COHANSEY BLVD.

CO. RD. B
STA. 16+00 TO 17+00

S.A.P. 62-625-19 28-113 Sheet No. 59 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.



	EXCAVATION			EMBANKMENT	
	MUCK (CU. YD.)	COM.	SUB	SELECT GRADING 10% (CU. YD.)	GRAN GRADING (PIT)
18+00	0	132	88	9	88
17+50	0	110	88	11	88

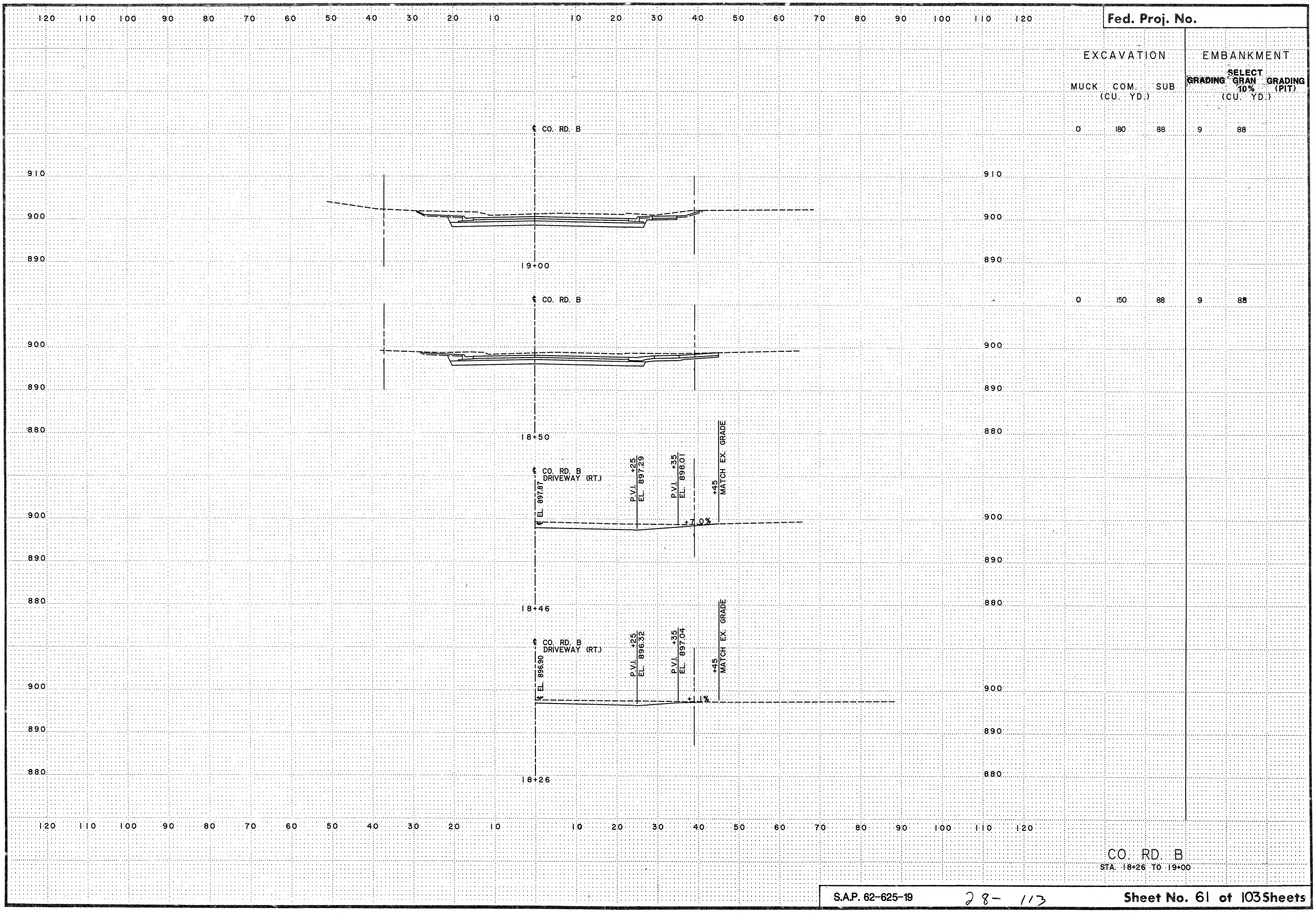
CO. RD. B
STA. 17+07 TO 18+00

S.A.P. 62-625-19 28-113 Sheet No. 60 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.

	EXCAVATION			EMBANKMENT	
	MUCK (CU. YD.)	COM. (CU. YD.)	SUB (CU. YD.)	GRADING (CU. YD.)	SELECT GRAN 10% GRADING (PIT) (CU. YD.)
	0	180	88	9	88
	0	150	88	9	88

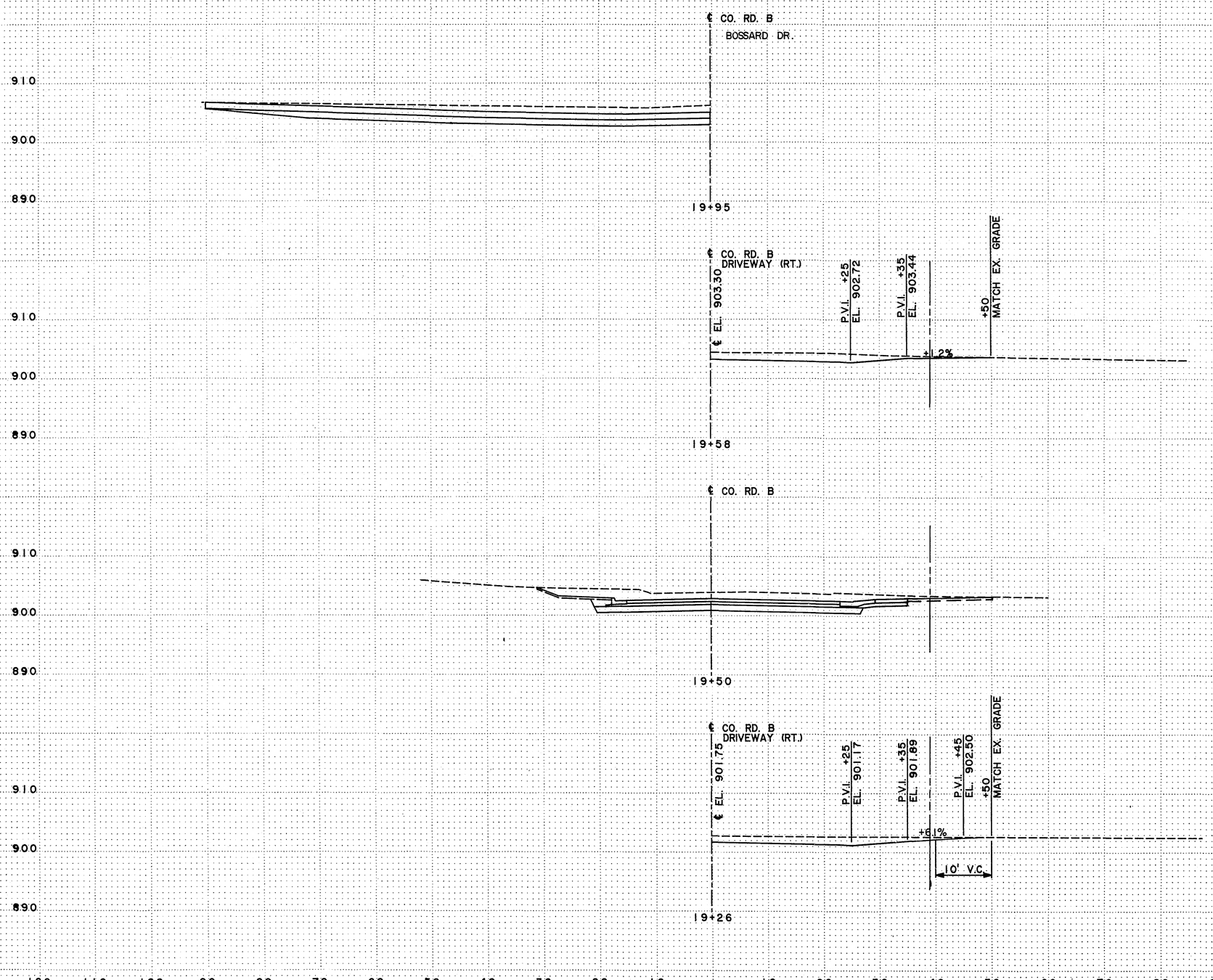


CO RD B
STA. 18+26 TO 19+00

S.A.P. 62-625-19 28- 113 Sheet No. 61 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.



EXCAVATION			EMBANKMENT	
MUCK (CU. YD.)	COM. (CU. YD.)	SUB GRADING (CU. YD.)	SELECT GRAN 10% (CU. YD.)	GRADING (PIT) (CU. YD.)
0	① 264	① 140	① 9	① 141

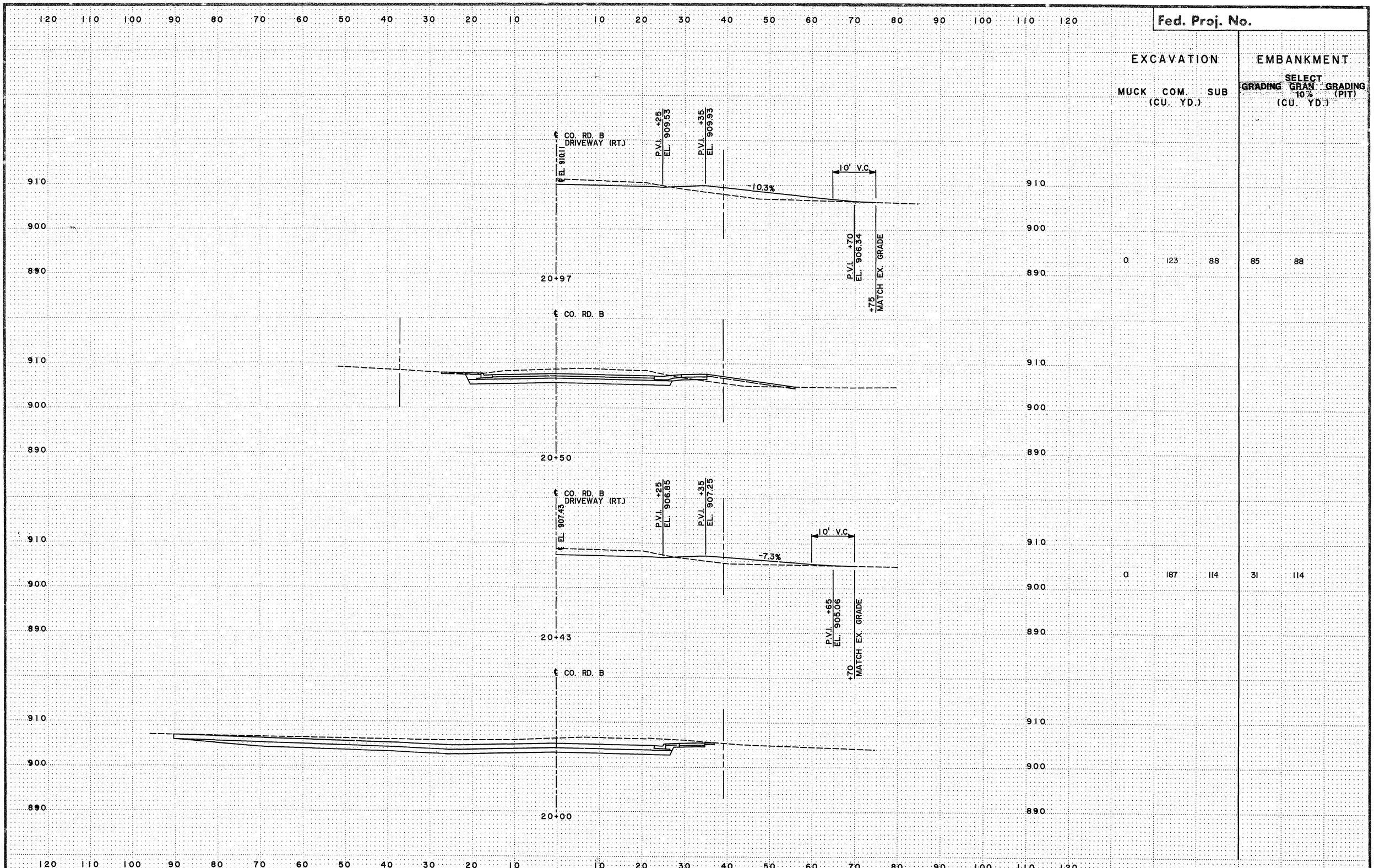
① INCLUDES QUANTITIES FROM BOSSARD DR.

CO. RD. B
STA. 19+26 TO 19+95

S.A.P. 62-625-19 28-113 Sheet No. 62 of 103 Sheets

CUPS EQUIPMENT FORM #1

Fed. Proj. No.



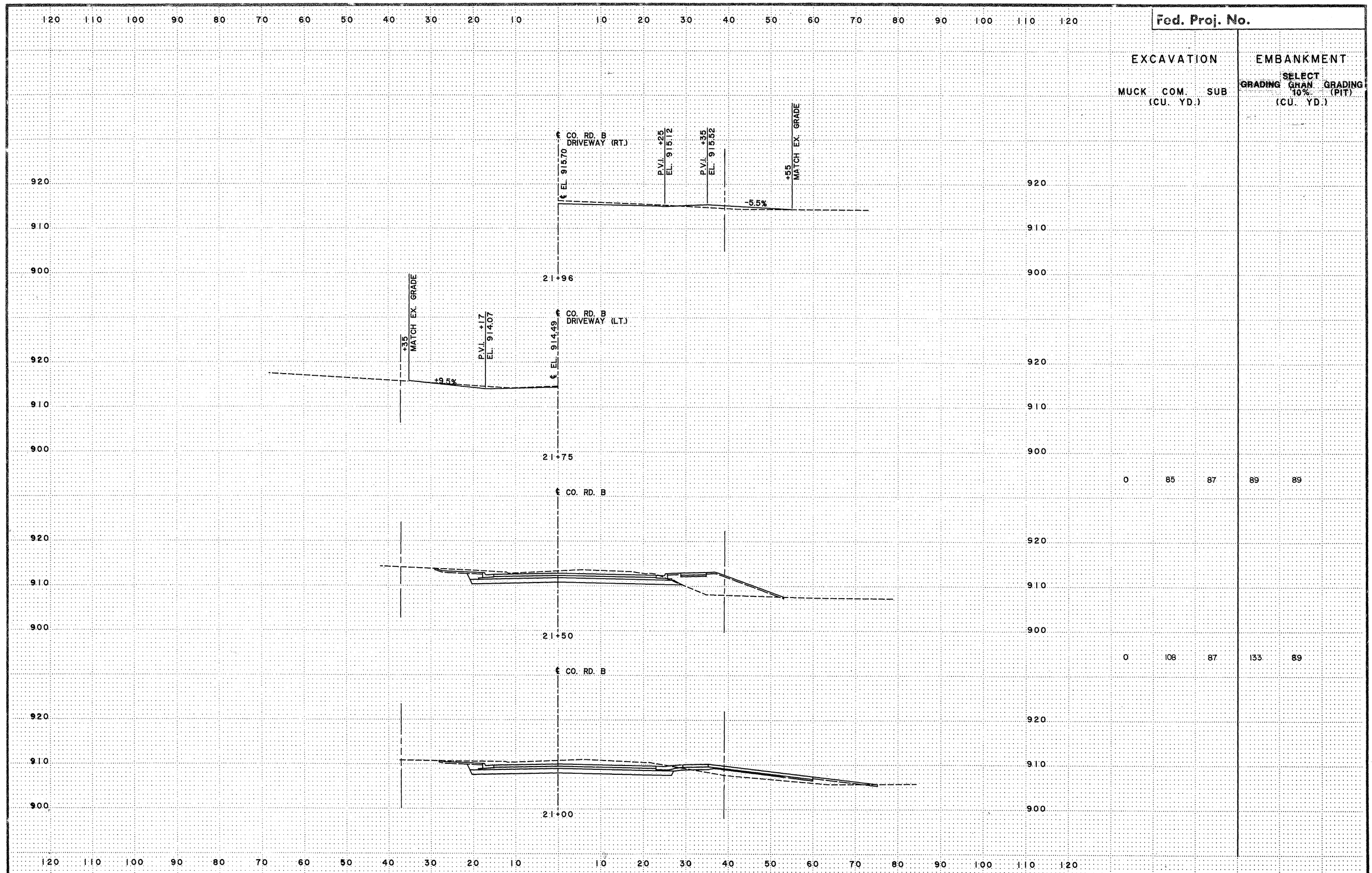
EXCAVATION			EMBANKMENT	
MUCK (CU. YD.)	COM. SUB (CU. YD.)		SELECT GRADING	GRAN GRADING 10% (PIT) (CU. YD.)
0	123	88	85	88
0	187	114	31	114

CO. RD. B
STA. 20+00 TO 20+97

S.A.P. 62-625-19 28-113 Sheet No. 63 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.



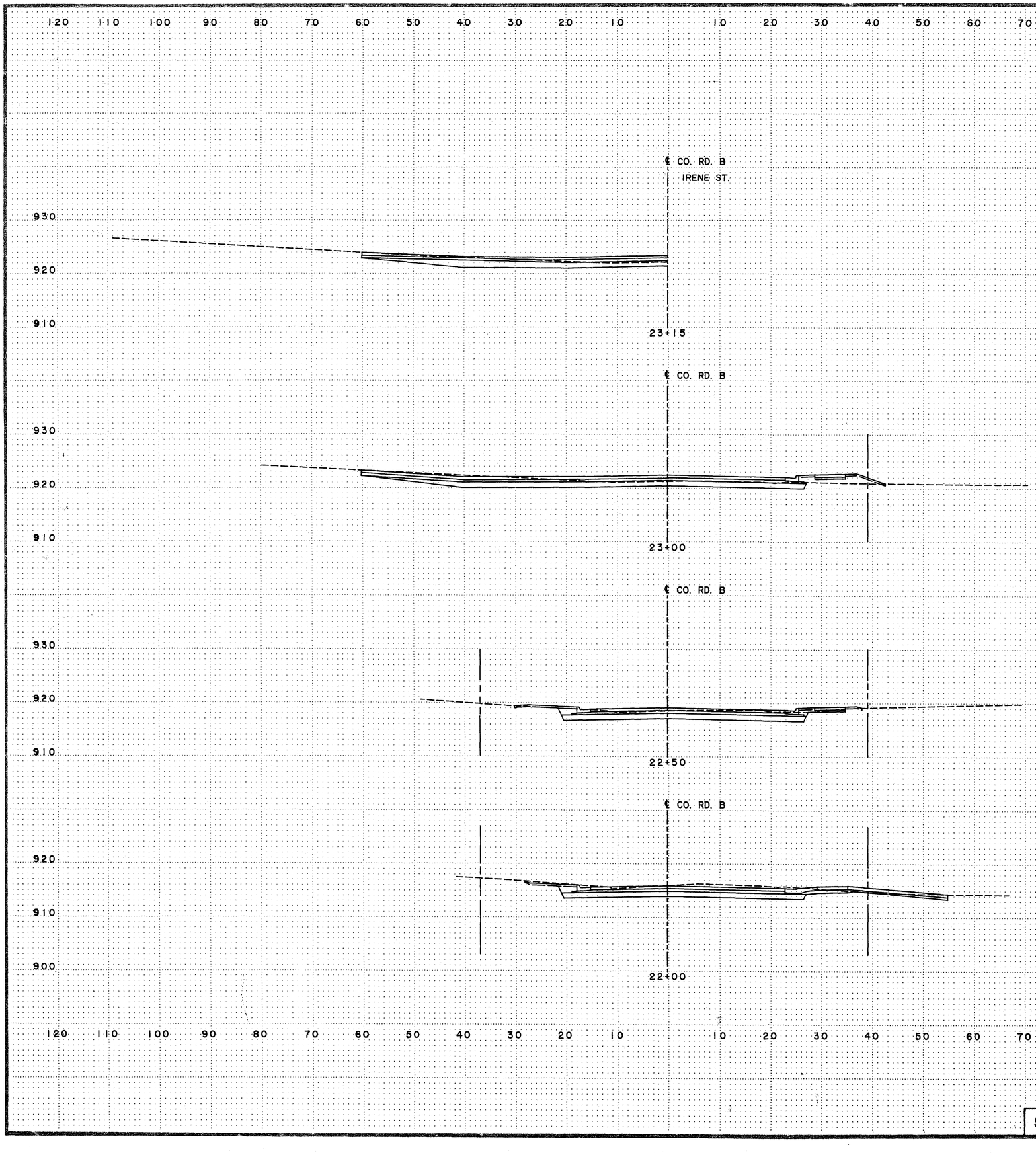
EXCAVATION			EMBANKMENT	
MUCK (CU. YD.)	COM. (CU. YD.)	SUB GRADING	SELECT GRAN 10% (CU. YD.)	GRADING (PIT)
0	85	87	89	89
0	108	87	133	89

CO. RD. B
STA. 21+00 TO 21+96

S.A.P. 62-625-19 28-113

Sheet No. 64 of 103 Sheets

Fed. Proj. No.



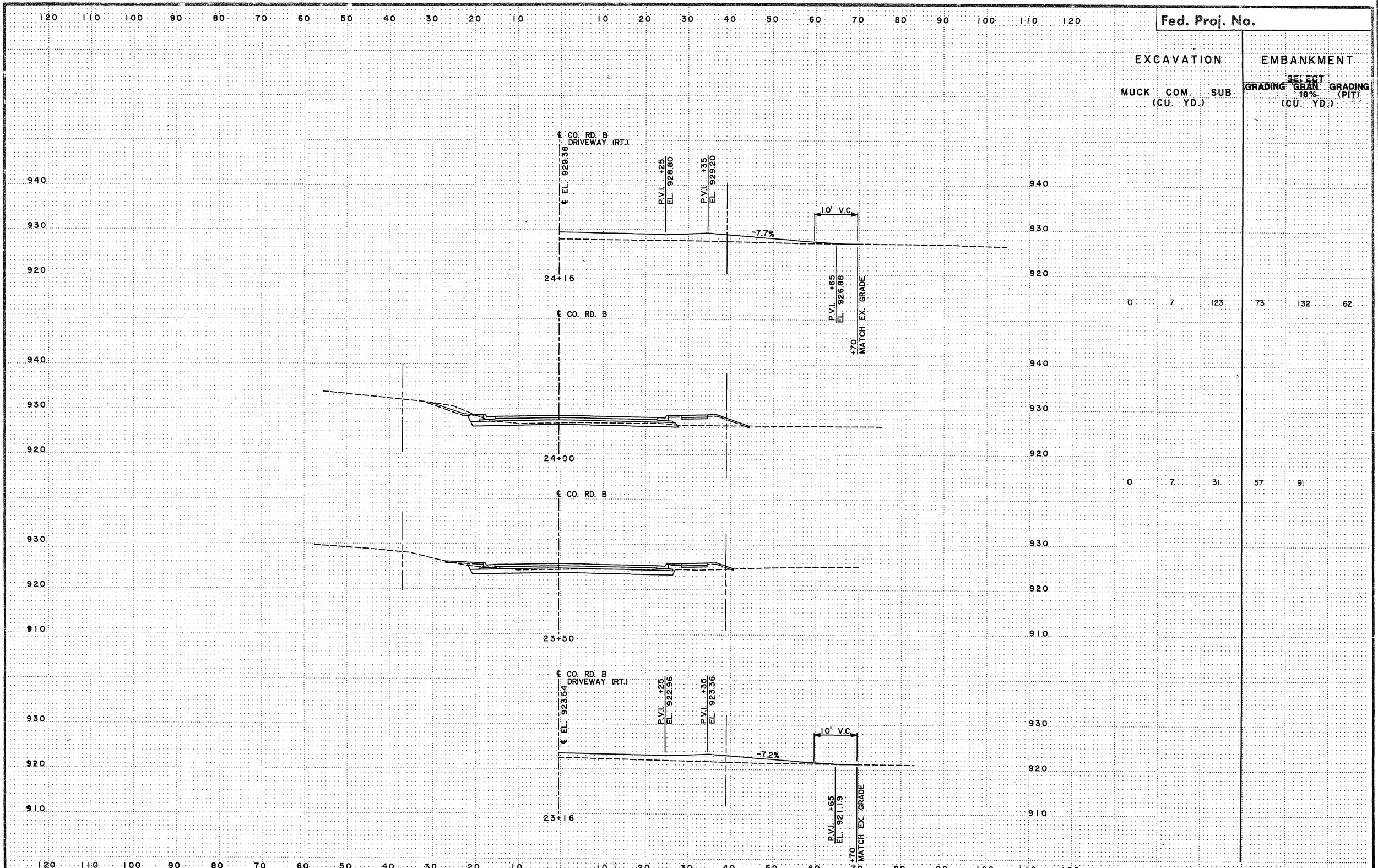
	EXCAVATION			EMBANKMENT	
	MUCK (CU. YD.)	COM. (CU. YD.)	SUB GRADING (CU. YD.)	SELECT GRAN 10% (CU. YD.)	GRADING (PIT) (CU. YD.)
	① 0	① 16	① 72	① 42	① 118
	0	23	87	29	113
	0	46	86	20	88

① INCLUDES QUANTITIES FROM IRENE ST.

CO. RD. B
STA. 22+00 TO 23+15

S.A.P. 62-625-19 28-113 Sheet No. 65 of 103 Sheets

Fed. Proj. No.



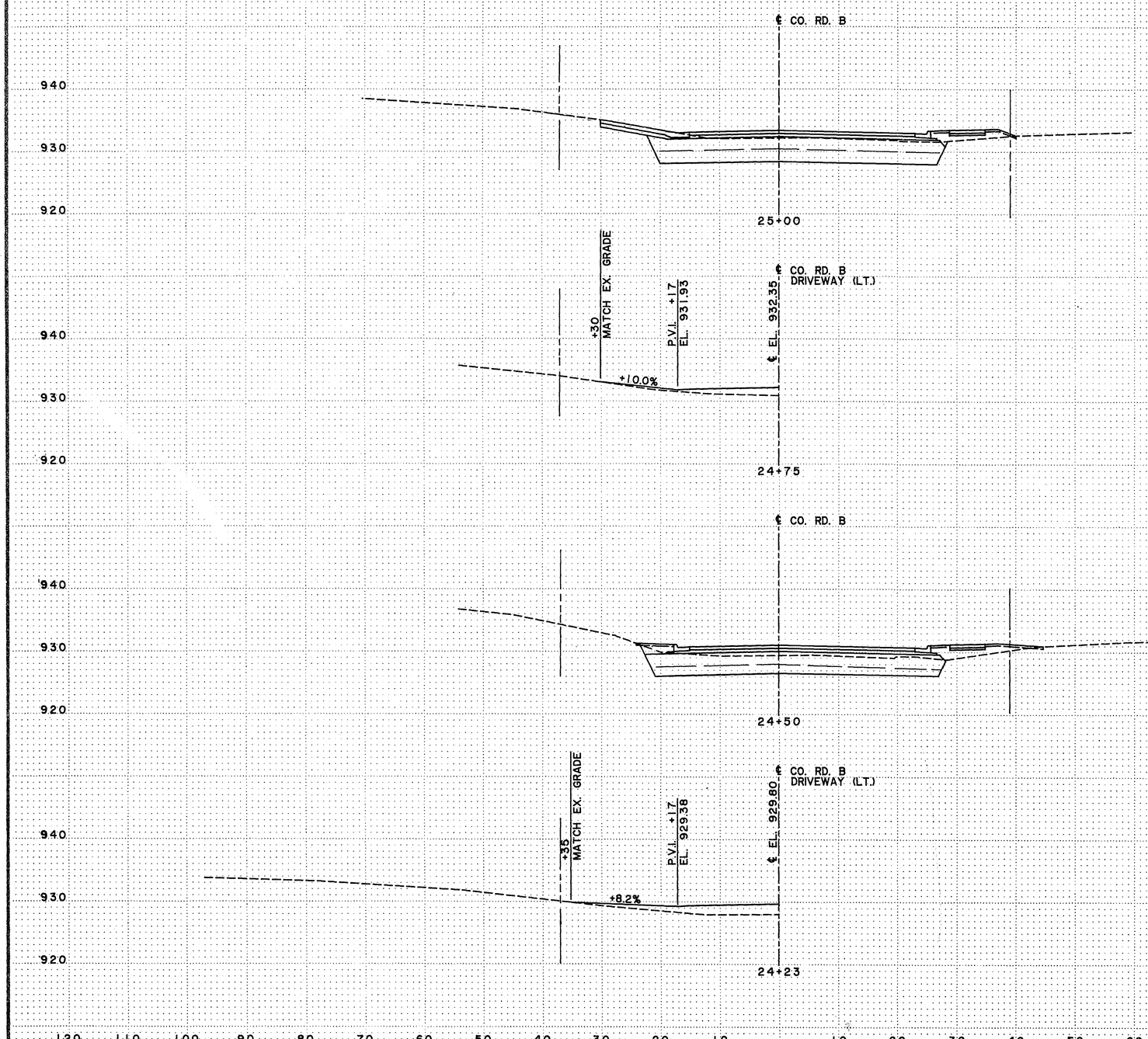
EXCAVATION			EMBANKMENT		
MUCK (CU. YD.)	COM. (CU. YD.)	SUB (CU. YD.)	SELECT GRADING	GRAN 10% GRADING	(PIT) (CU. YD.)
0	7	123	73	132	62
0	7	31	57	91	

CO. RD. B
STA. 23+16 TO 24+15

S.A.P. 62-625-19 28- 113 Sheet No. 66 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.



EXCAVATION			EMBANKMENT		
MUCK (CU. YD.)	COM. (CU. YD.)	SUB GRADING (CU. YD.)	SELECT GRAN 10% (CU. YD.)	GRADING (PIT) (CU. YD.)	
0	14	319	33	178	180
0	11	269	57	173	151

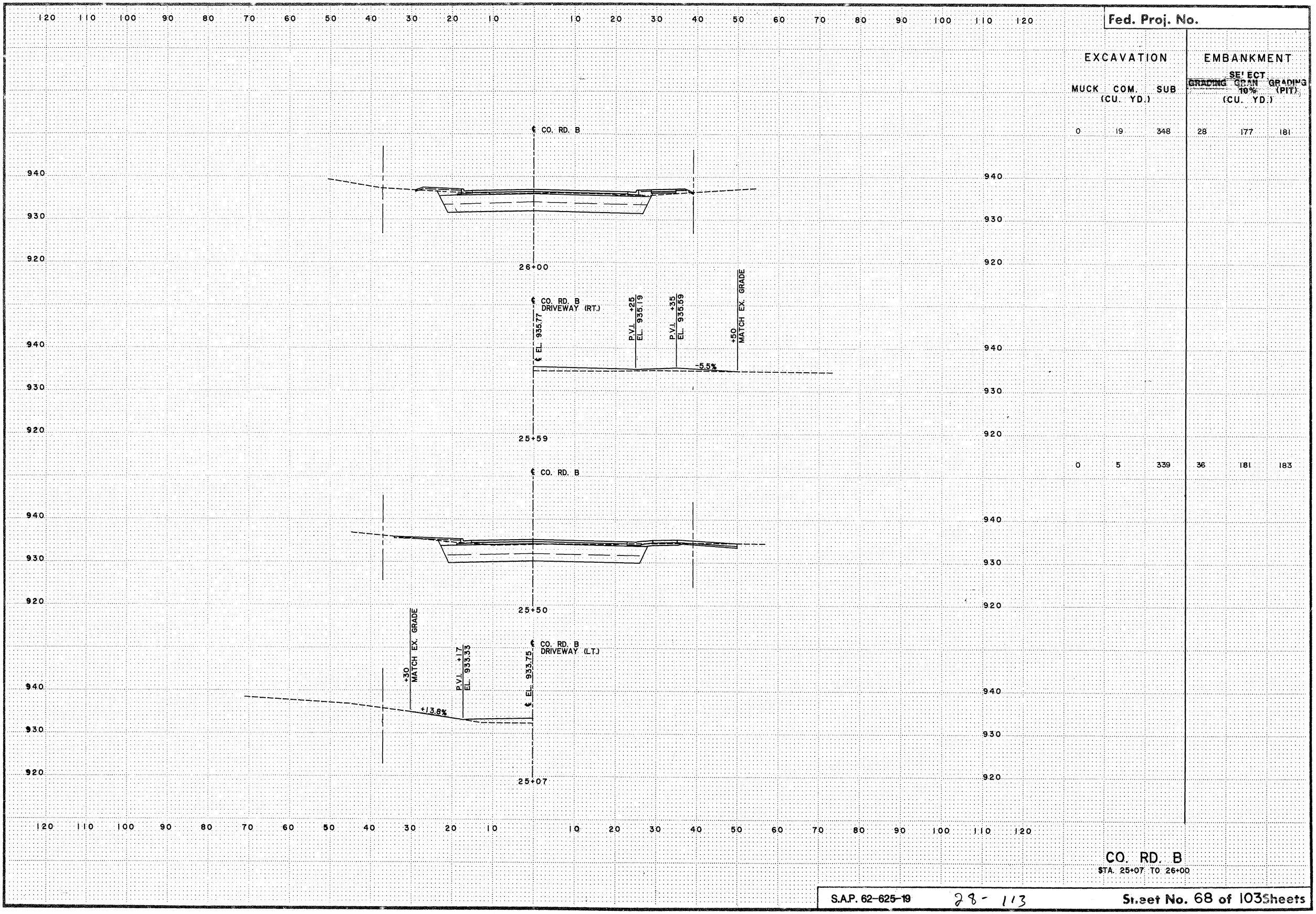
CO. RD. B
STA. 24+23 TO 25+00

S.A.P. 62-625-19 29-113 Sheet No. 67 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.

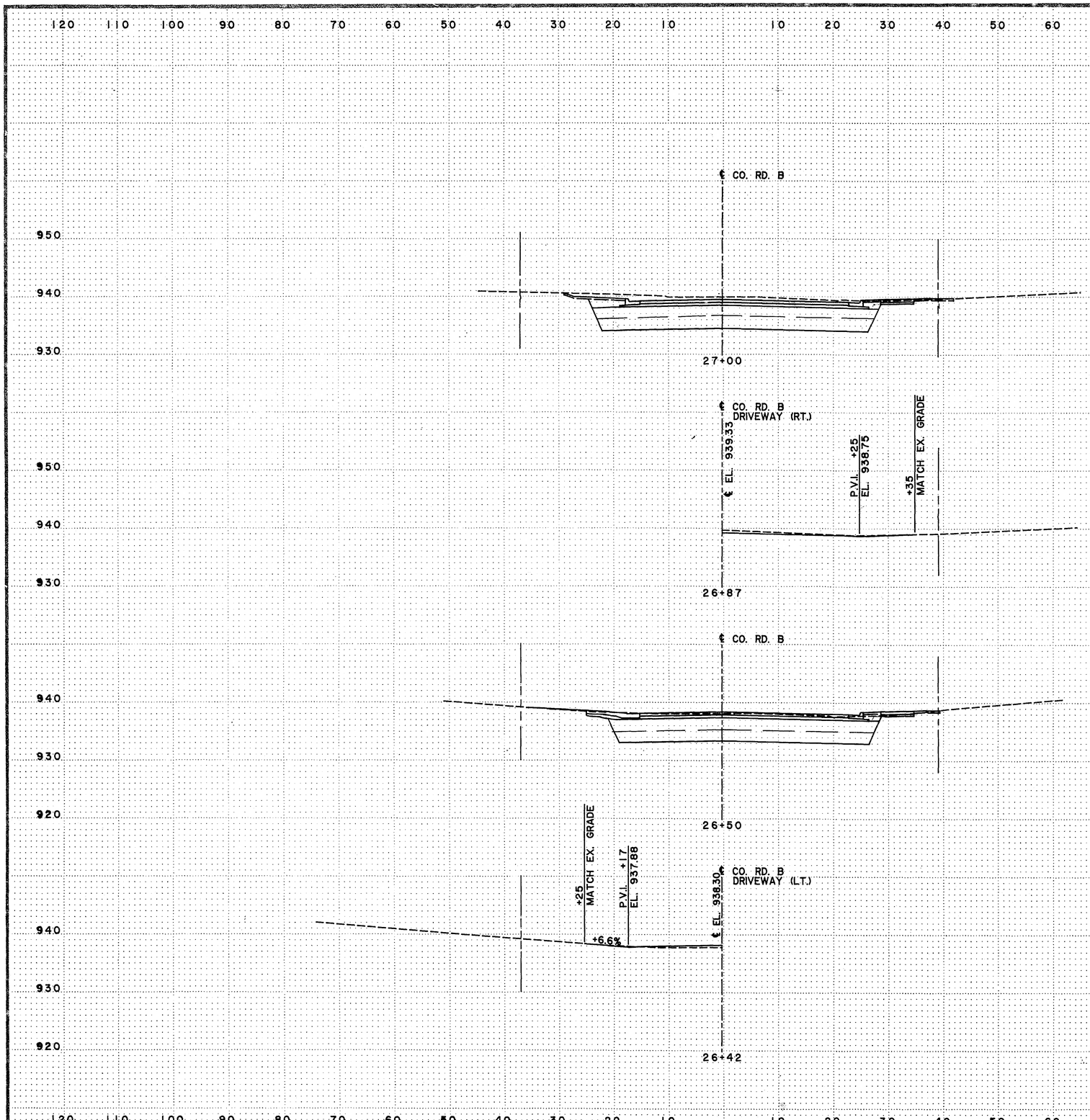
EXCAVATION			EMBANKMENT		
MUCK (CU. YD.)	COM. (CU. YD.)	SUB (CU. YD.)	GRADING	SELECT GRAN 10% (CU. YD.)	GRADING (PIT) (CU. YD.)
0	19	348	28	177	181
0	5	339	36	181	183



CO. RD. B
STA. 25+07 TO 26+00

S.A.P. 62-625-19 28-113 Sheet No. 68 of 103Sheets

Fed. Proj. No.



EXCAVATION			EMBANKMENT		
MUCK (CU. YD.)	COM. (CU. YD.)	SUB (CU. YD.)	GRADING (CU. YD.)	SELECT GRAN. 10% (PIT) (CU. YD.)	GRADING (CU. YD.)
0	151	376	22	191	185
0	74	361	19	180	181

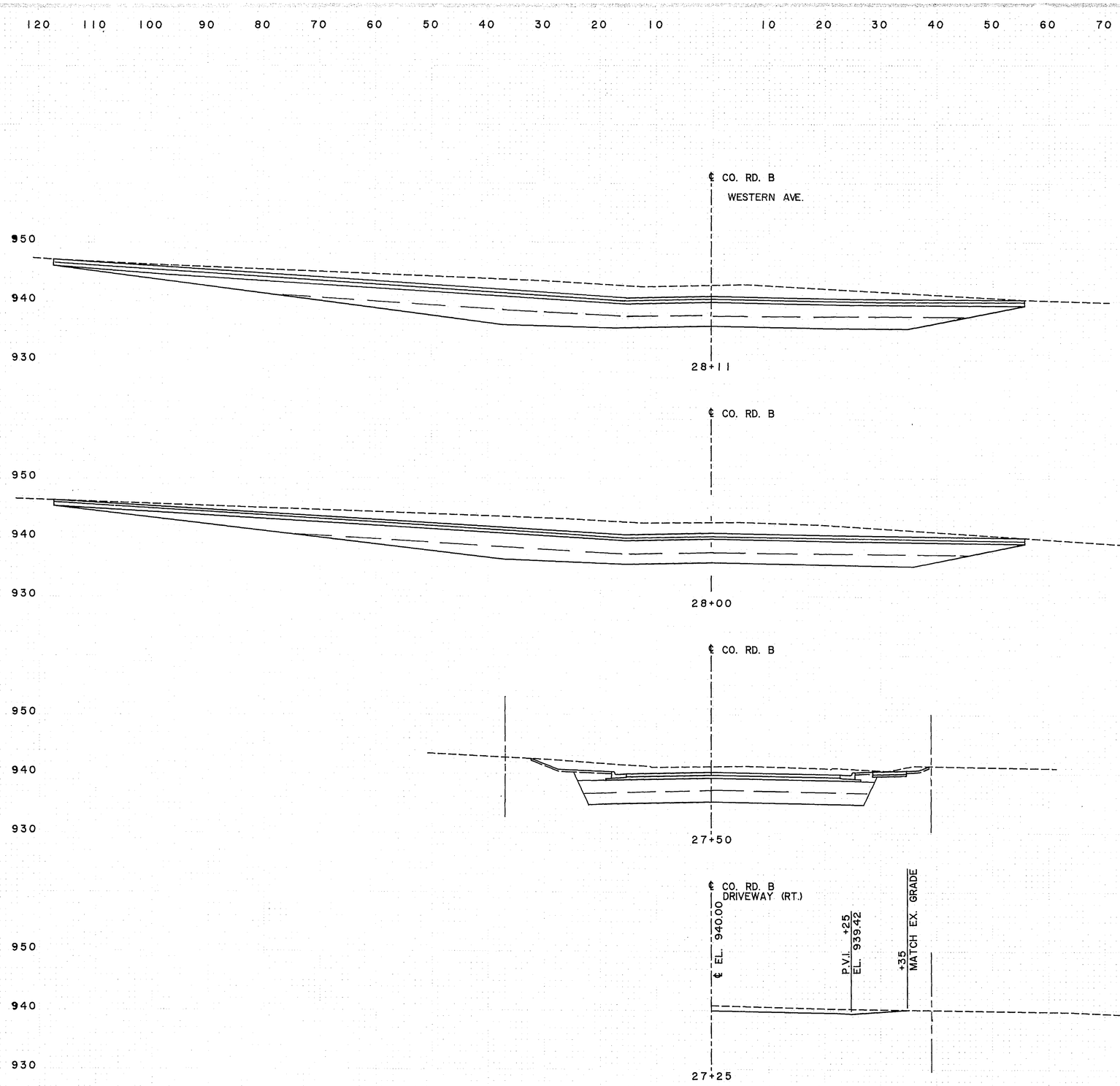
CO. RD. B
STA. 26+42 TO 27+00

S.A.P. 62-625-19 28-113

Sheet No. 69 of 103 Sheets

COPY EQUIPMENT FORM 81

Fed. Proj. No.



	EXCAVATION			EMBANKMENT		
	MUCK (CU. YD.)	COM. (CU. YD.)	SUB GRADING (CU. YD.)	SELECT GRAN 10% (CU. YD.)	GRADING (PIT) (CU. YD.)	
28+11	0	① 501	① 699	① 29	① 473	278
28+00	0	293	549	9	274	276

① INCLUDES QUANTITIES FROM WESTERN AVE.

CO. RD. B

STA. 27+25 TO 28+11

S.A.P. 62-625-19 29-113

Sheet No. 70 of 103 Sheets

Fed. Proj. No.

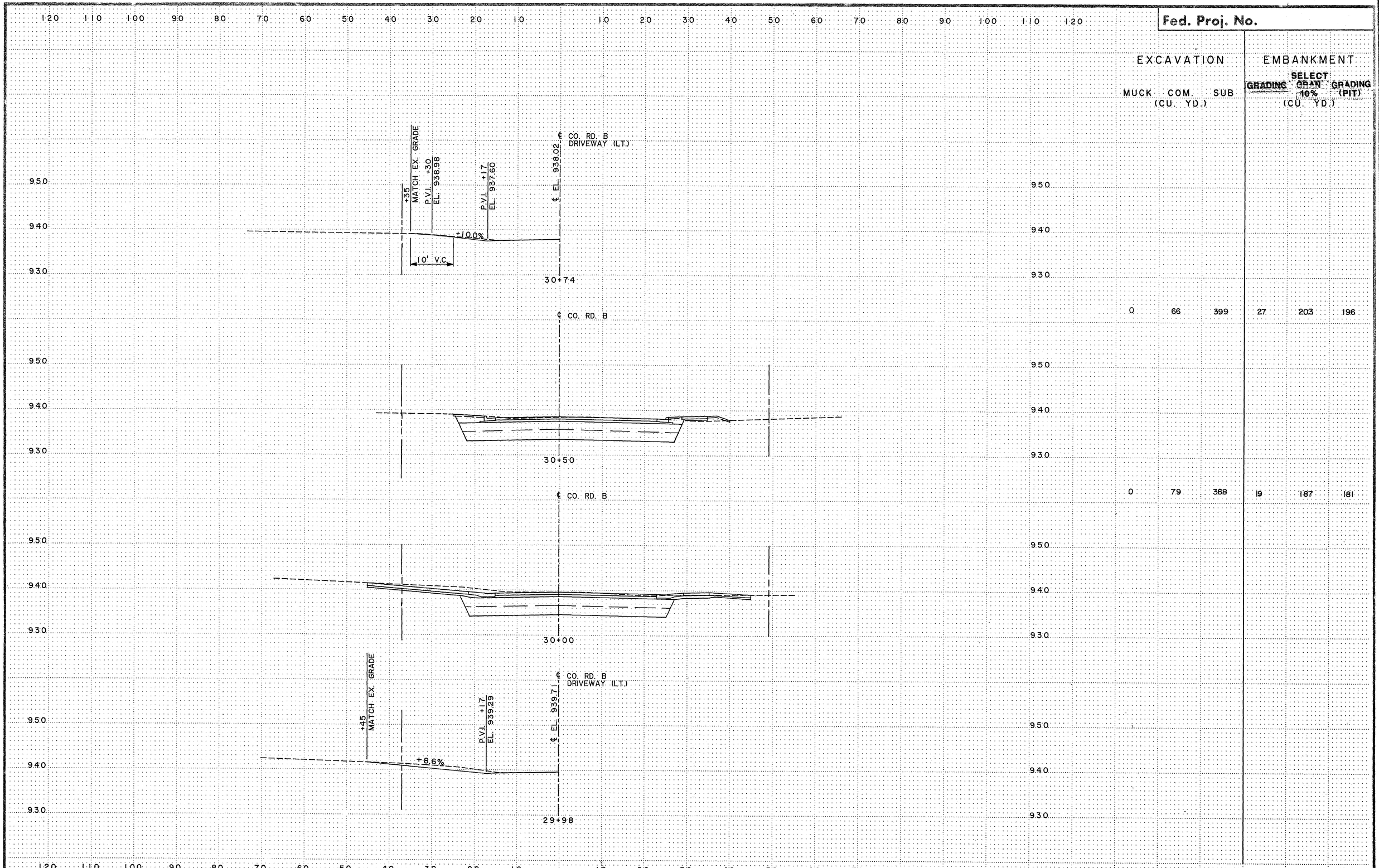
EXCAVATION			EMBANKMENT		
MUCK (CU. YD.)	COM. (CU. YD.)	SUB (CU. YD.)	GRADING	SELECT GRAN 10% (CU. YD.)	GRADING (PIT) (CU. YD.)
0	108	368	15	196	183
0	155	377	25	199	189
0	240	377	19	188	189

CO. RD. B
STA. 28+50 TO 29+89

S.A.P. 62-625-19 29-117 Sheet No. 71 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.



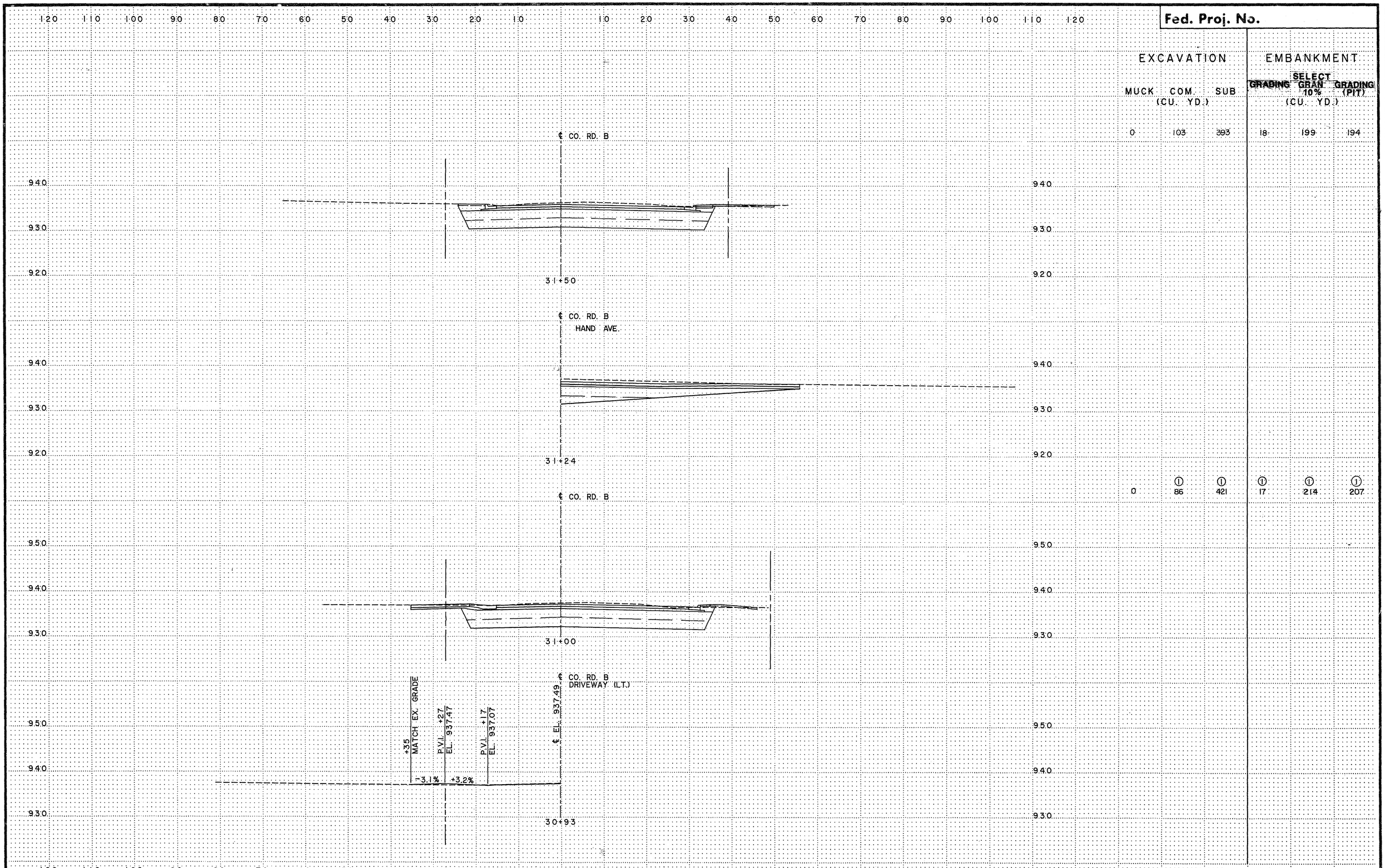
EXCAVATION			EMBANKMENT		
MUCK (CU. YD.)	COM.	SUB	GRADING	SELECT GRAN. 10% (CU. YD.)	GRADING (PIT)
0	66	399	27	203	196
0	79	368	19	187	181

CO. RD. B
STA. 29+98 TO 30+74

S.A.P. 62-625-19 28-113 Sheet No. 72 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.



	EXCAVATION			EMBANKMENT		
	MUCK (CU. YD.)	COM.	SUB	GRADING	SELECT GRAN. 10% (CU. YD.)	GRADING (PIT)
	0	103	393	18	199	194
①	0	86	421	17	214	207

① INCLUDES QUANTITIES FROM HAND AVE.

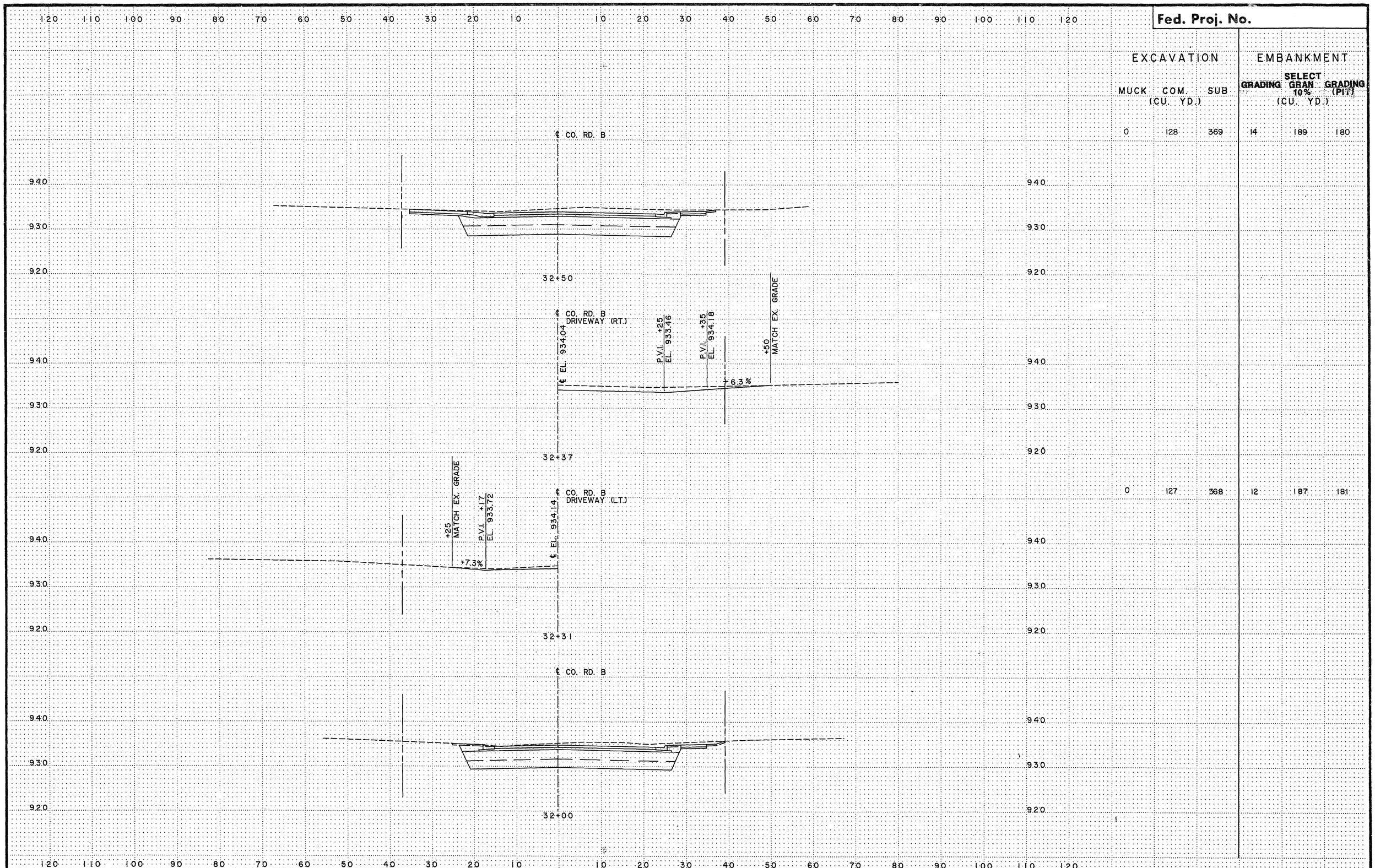
CO. RD. B
STA. 30+93 TO 31+50

S.A.P. 62-625-19 28-113

Sheet No. 73 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.



EXCAVATION			EMBANKMENT		
MUCK (CU. YD.)	COM.	SUB	GRADING	SELECT GRAN 10% (CU. YD.)	GRADING (PIT)
0	128	369	14	189	180
0	127	368	12	187	181

CO. RD. B
STA. 32+00 TO 32+50

S.A.P. 62-625-19 28-113 Sheet No. 74 of 103 Sheets

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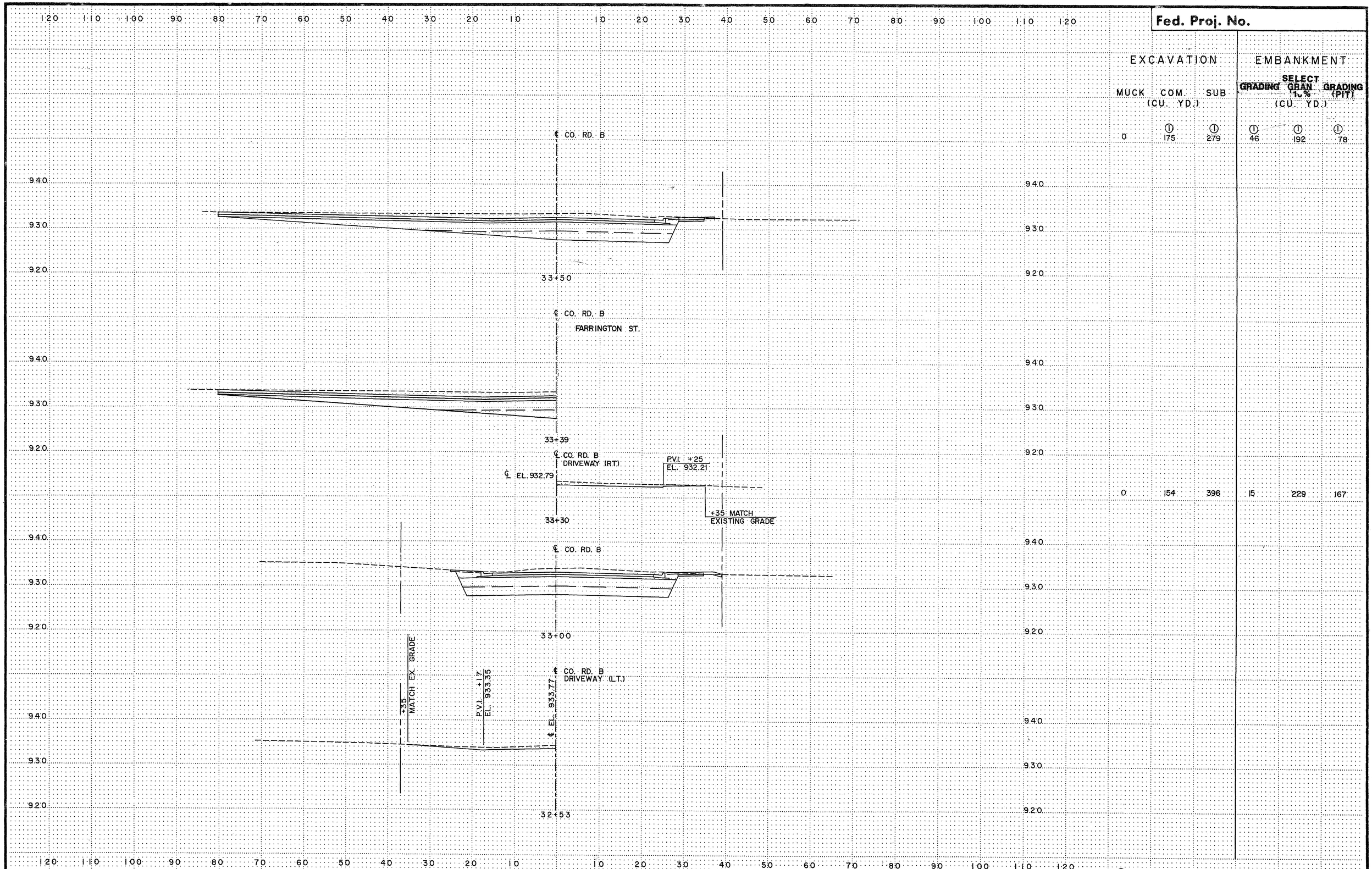

	EXCAVATION		EMBANKMENT		
	MUCK (CU. YD.)	COM. SUB (CU. YD.)	GRADING	SELECT GRAN. 1.% (CU. YD.)	GRADING (PIT)
	0	① 175	① 279	① 46	① 192	① 78
	0	154	396	15	229	167

① INCLUDES QUANTITIES FROM FARRINGTON ST.

CO. RD. B
STA. 32+53 TO 33+50

S.A.P. 62-625-19 28-113 **Sheet No. 75 of 103 Sheets**

COPY EQUIPMENT FORM #1

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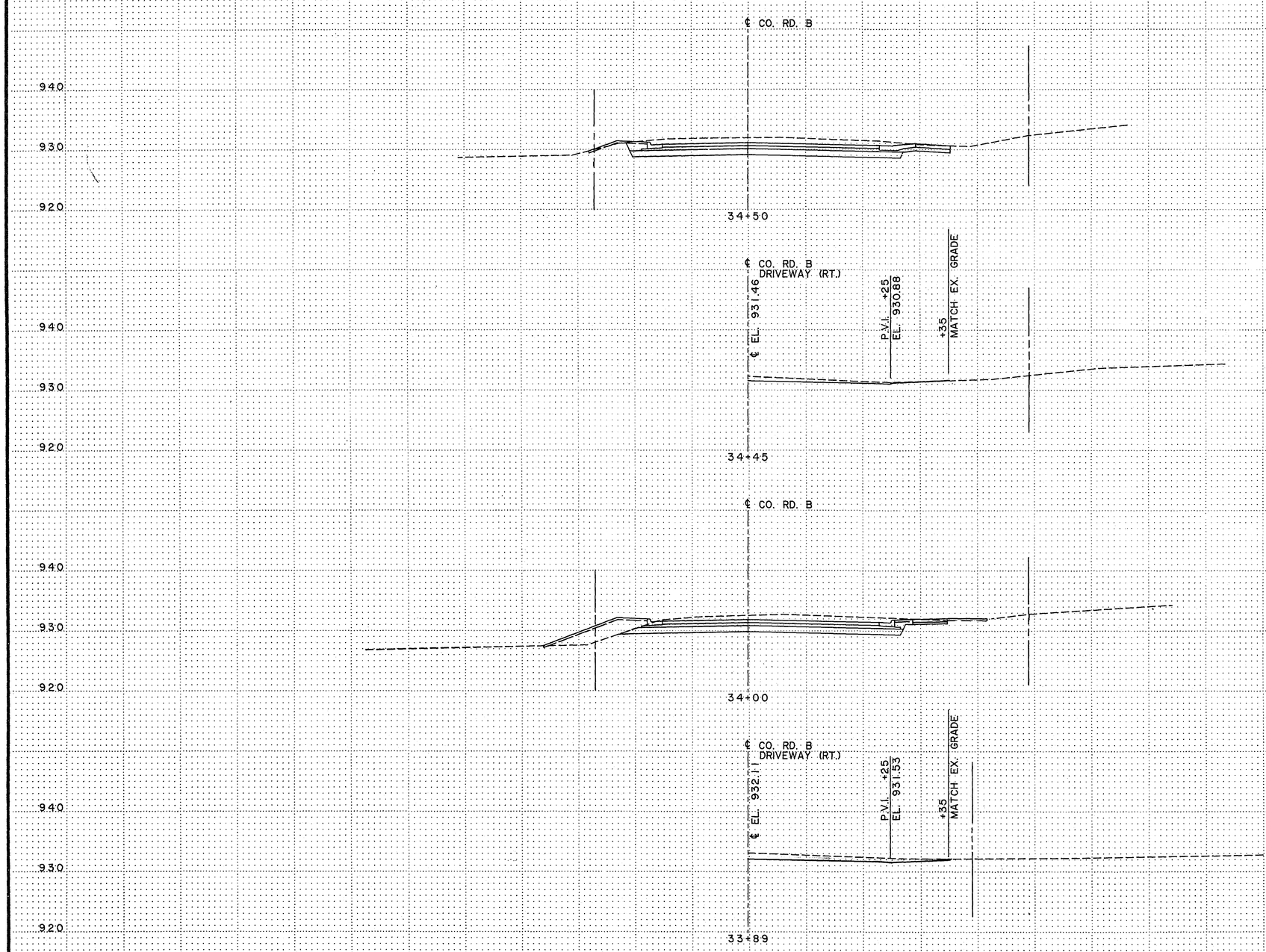


EXCAVATION			EMBANKMENT	
MUCK (CU. YD.)	COM.	SUB	SELECT GRADING CHAN 10% (PIT) (CU. YD.)	GRADING
0	128	88	18	87
0	115	87	46	87

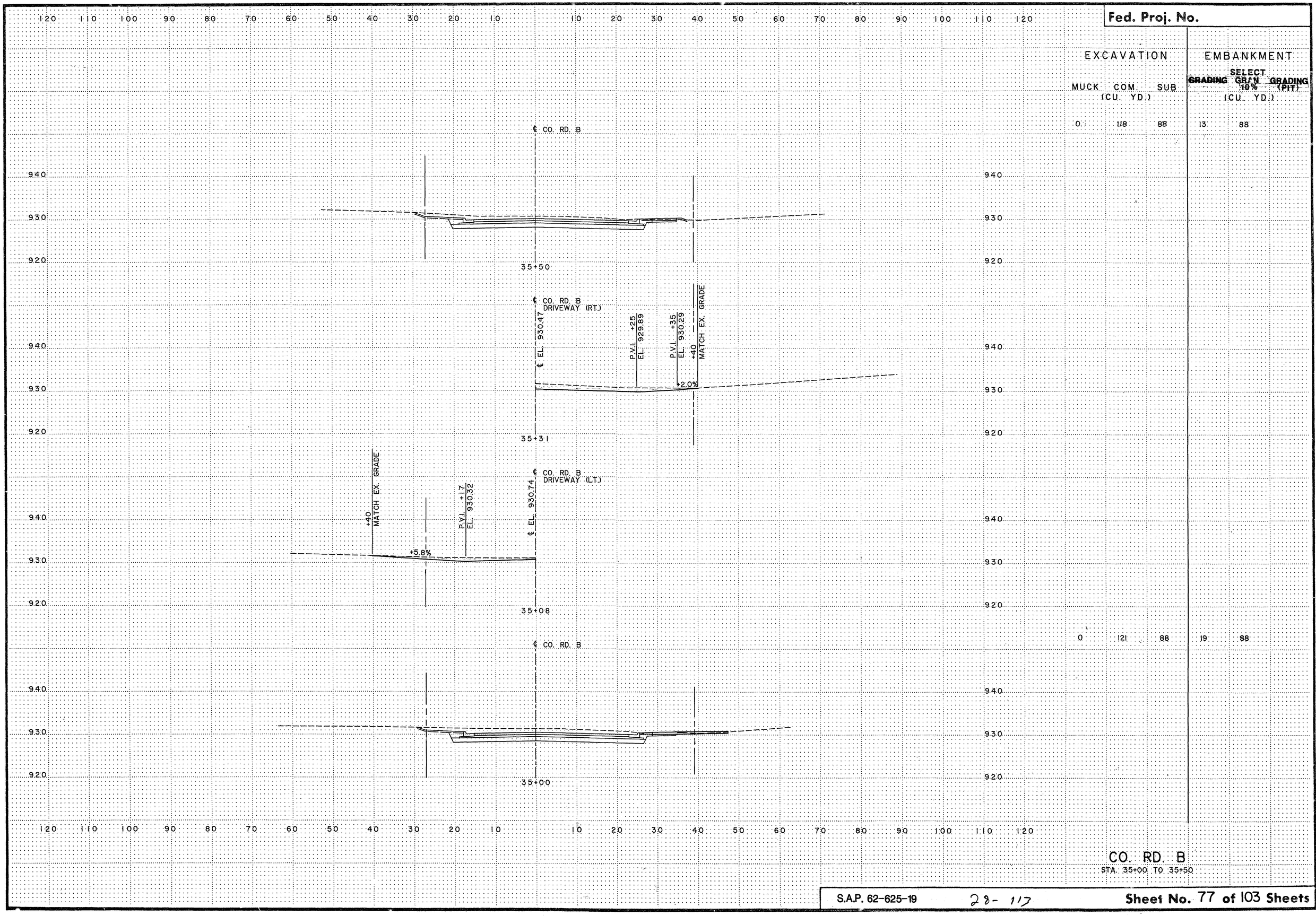
CO. RD. B
STA. 33+89 TO 34+50

S.A.P. 62-625-19 28-113 Sheet No. 76 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.

EXCAVATION			EMBANKMENT	
MUCK (CU. YD.)	COM.	SUB	SELECT GRADING GRAN 10% (CU. YD.)	GRADING (PIT)
0	118	88	13	88
0	121	88	19	88

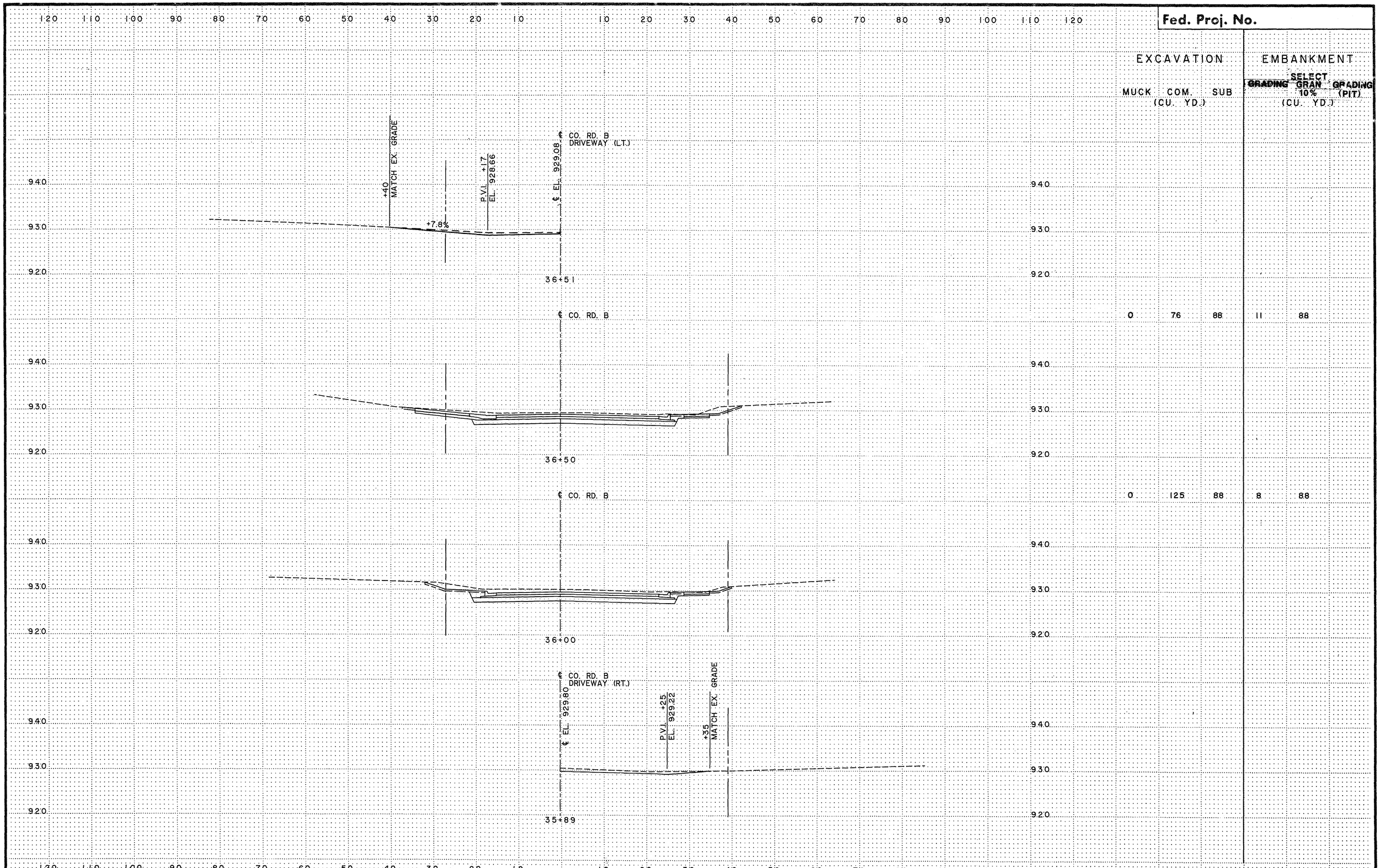


CO. RD. B
STA. 35+00 TO 35+50

S.A.P. 62-625-19 28-117 Sheet No. 77 of 103 Sheets

COPY EQUIPMENT FORM #1

Fed. Proj. No.

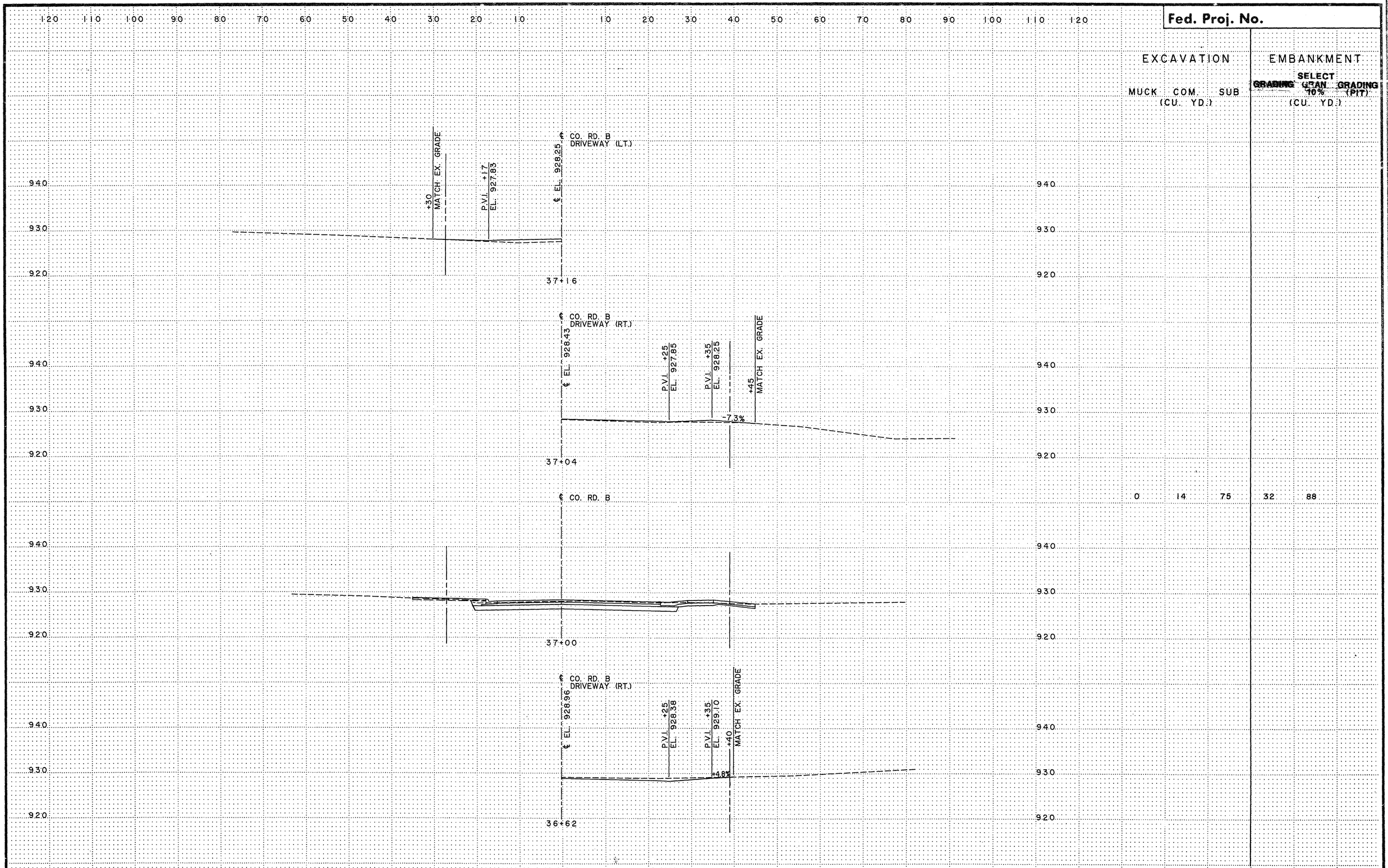


	EXCAVATION			EMBANKMENT	
	MUCK (CU. YD.)	COM.	SUB	GRADING	SELECT GRAN 10% GRADING (PIT) (CU. YD.)
36+51					
36+50	0	76	88	11	88
36+00	0	125	88	8	88
35+89					

CO. RD. B
STA. 35+89 TO 36+51

S.A.P. 62-625-19 29-113 Sheet No. 78 of 103 Sheets

Fed. Proj. No.



EXCAVATION			EMBANKMENT	
MUCK (CU. YD.)	COM.	SUB	GRADING	SELECT GRAN 10% GRADING (PIT) (CU. YD.)
0	14	75	32	88

CO. RD. B
STA. 36+62 TO 37+16

COPY EQUIPMENT FORM #1

S.A.P. 62-625-19 28-113

Sheet No. 79 of 103 Sheets

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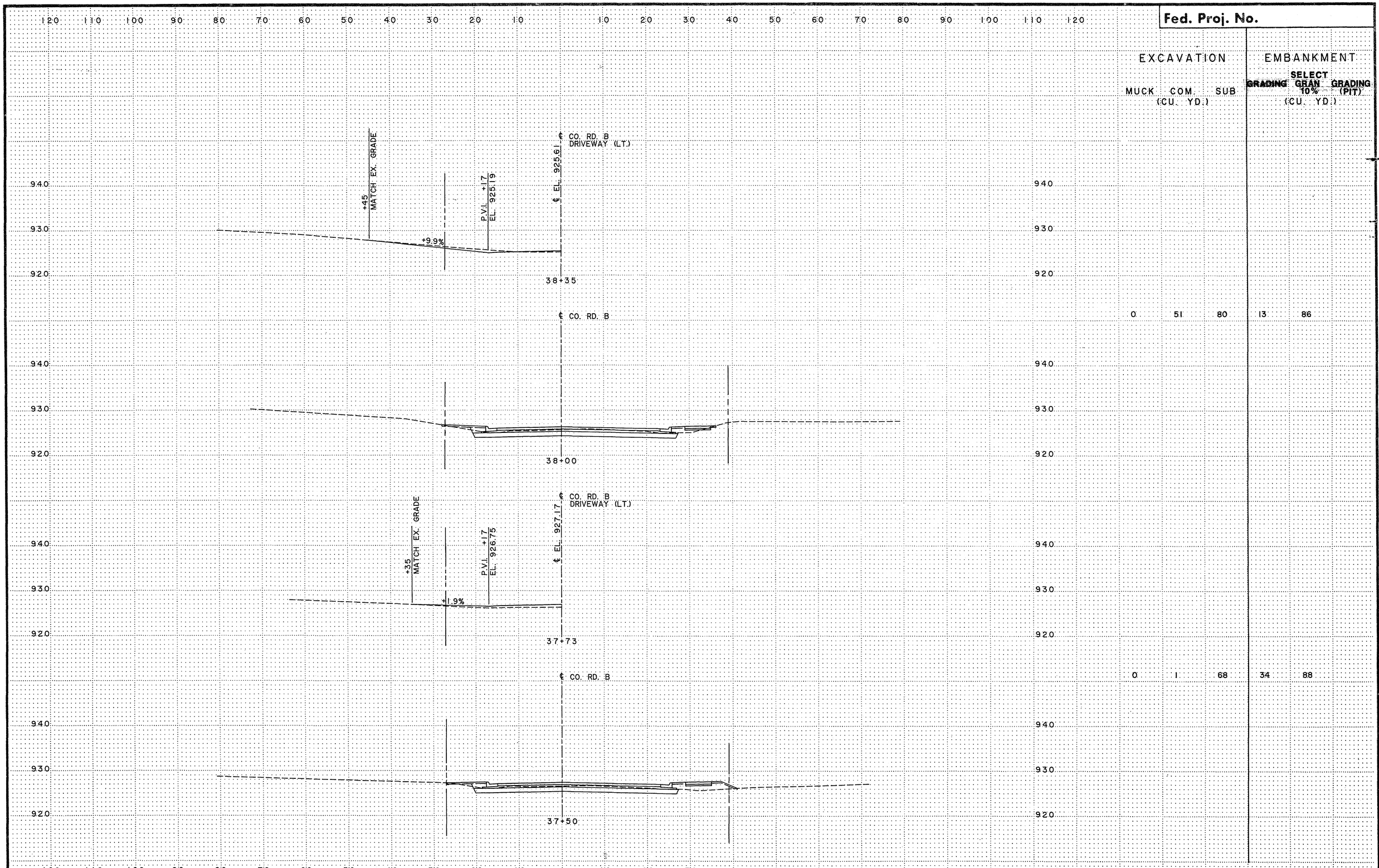

	EXCAVATION	EMBANKMENT	
	MUCK (CU. YD.)	COM. GRADING (CU. YD.)	SUB GRADING (CU. YD.)
			SELECT GRAN 10% (PIT) (CU. YD.)
	0	51	80	13	86
	0	1	68	34	88

CO. RD. B
STA. 37+50 TO 38+35

S.A.P. 62-625-19 29-113

Sheet No. 80 of 103 Sheets

COPY EQUIPMENT FORM #1

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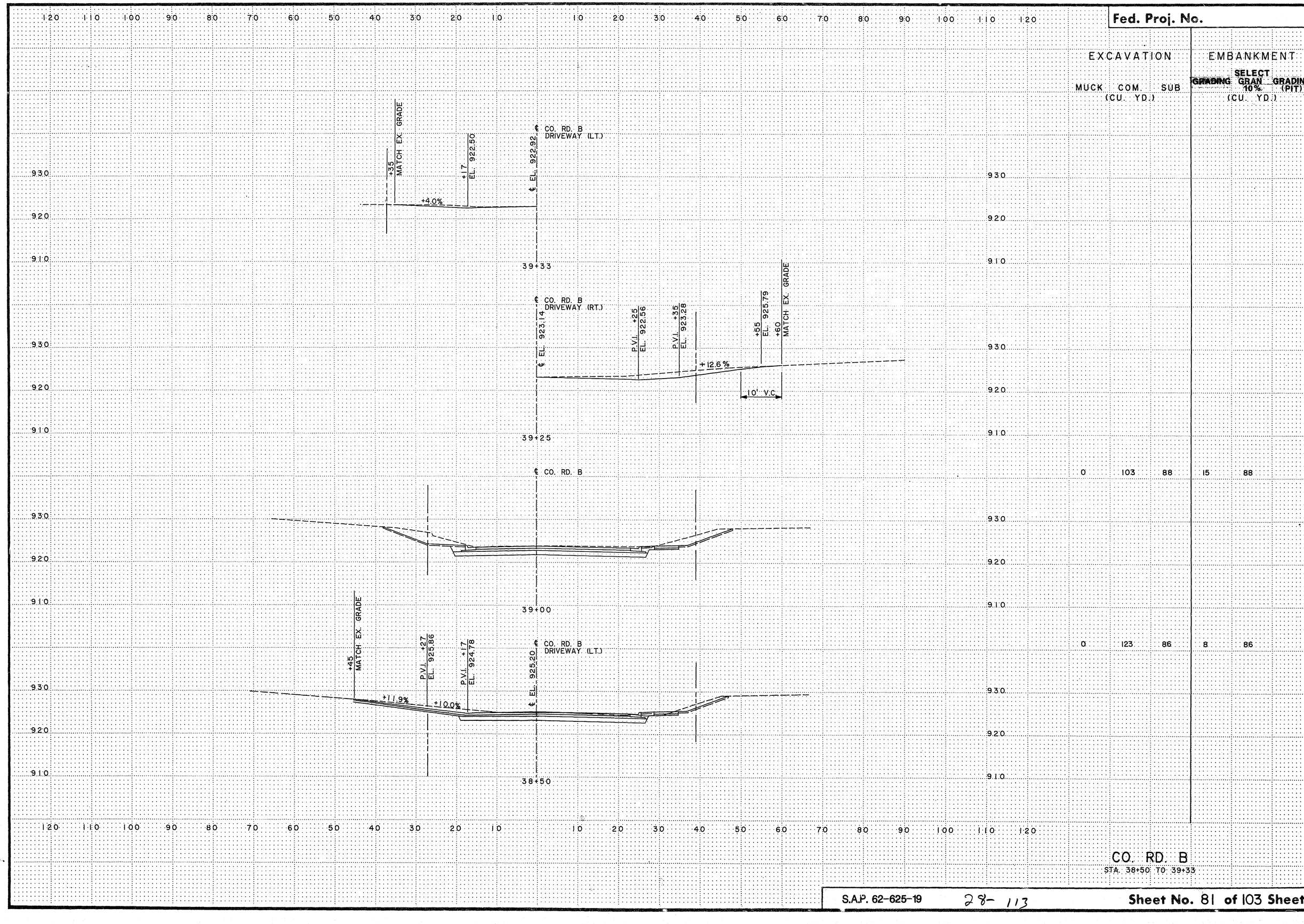


EXCAVATION			EMBANKMENT	
MUCK (CU. YD.)	COM.	SUB	GRADING	SELECT GRAN 10% (PIT) GRADING (CU. YD.)
0	103	88	15	88
0	123	86	8	86

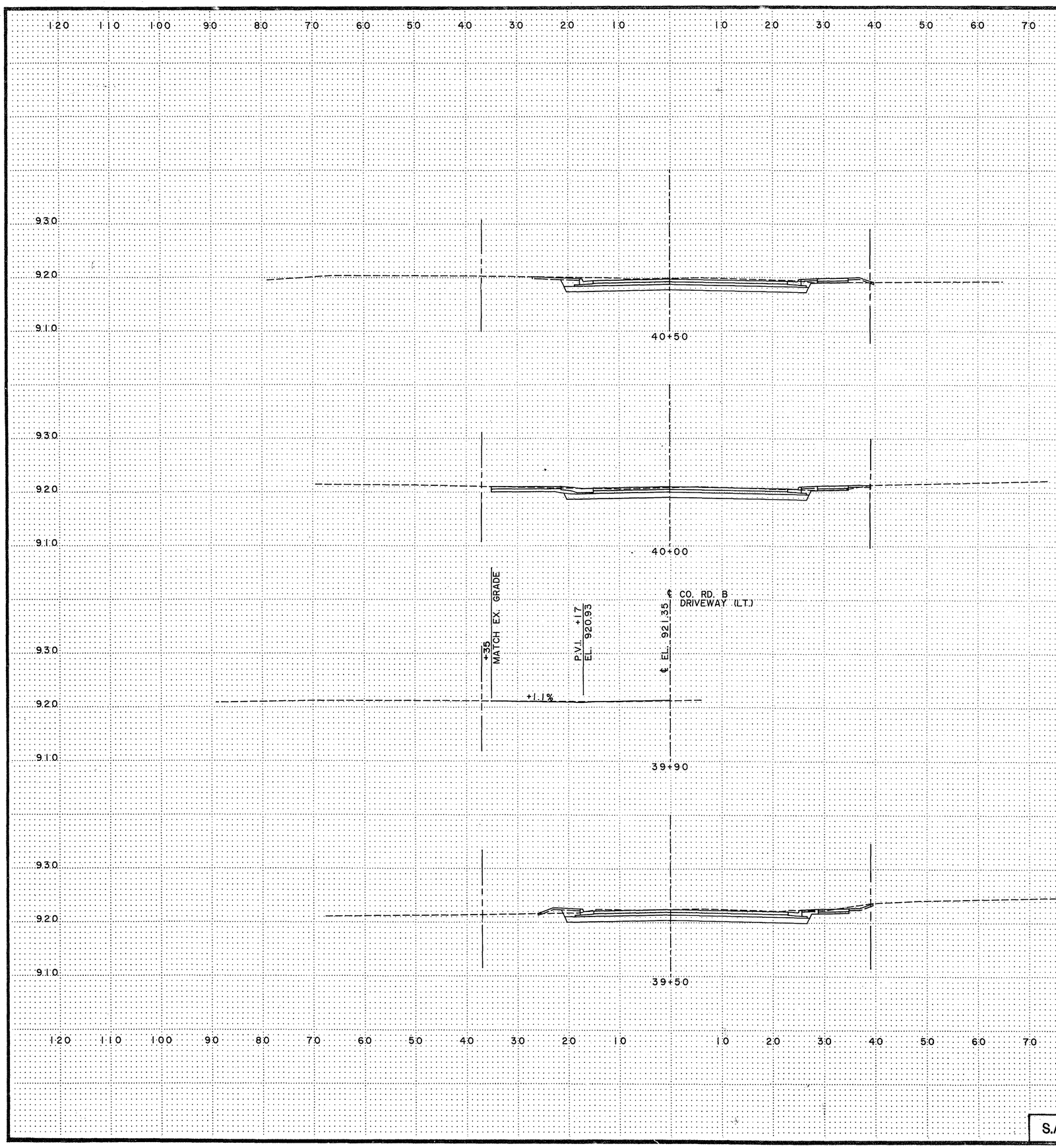
CO. RD. B
STA. 38+50 TO 39+33

S.A.P. 62-625-19 28-113

Sheet No. 81 of 103 Sheets

COPY EQUIPMENT FORM 81

Fed. Proj. No.



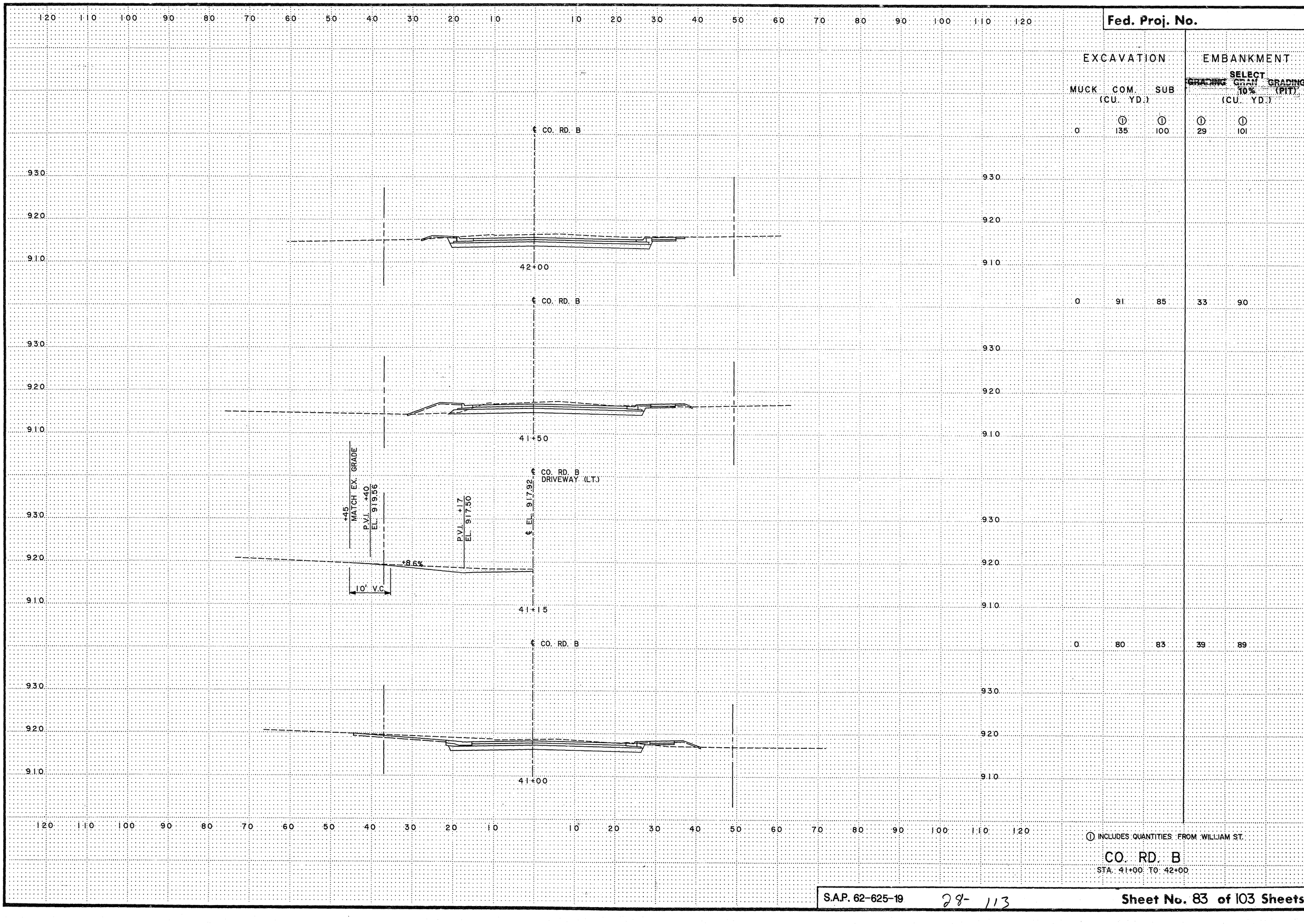
	EXCAVATION		EMBANKMENT	
	MUCK (CU. YD.)	COM. SUB	SELECT GRADING GRAN 10%	GRADING (PIT) (CU. YD.)
	0	83 88	26	88
	0	58 88	20	88
	0	53 88	17	88

CO. RD. B
STA. 39+50 TO 40+00

S.A.P. 62-625-19 28-117

Sheet No. 82 of 103 Sheets

Fed. Proj. No.



	EXCAVATION		EMBANKMENT	
	MUCK (CU. YD.)	COM. SUB	GRADING	SELECT GRAN GRADING 10% (PIT) (CU. YD.)
	0	① 135 ① 100	① 29	① 101
	0	91 85	33	90
	0	80 83	39	89

① INCLUDES QUANTITIES FROM WILLIAM ST.

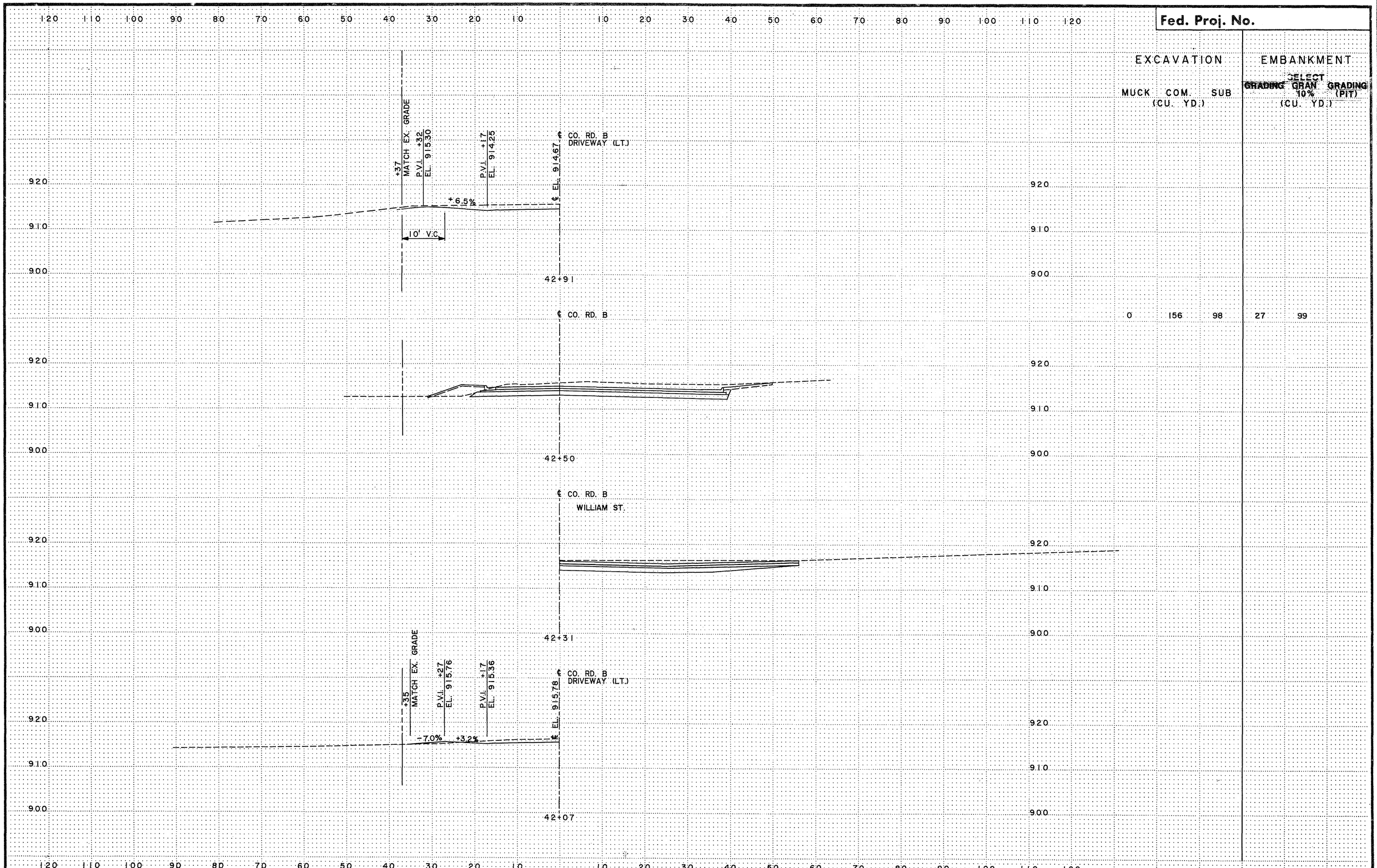
CO. RD. B
STA. 41+00 TO 42+00

S.A.P. 62-625-19 28-113

Sheet No. 83 of 103 Sheets

COPY EQUIPMENT FORM 81

Fed. Proj. No.



	EXCAVATION			EMBANKMENT	
	MUCK (CU. YD.)	COM.	SUB GRADING	SELECT GRAN 10% (CU. YD.)	GRADING (PIT)
	0	156	98	27	99

CO. RD. B
STA. 42+07 TO 42+91

S.A.P. 62-625-19 28-113

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COPY EQUIPMENT FORM #1

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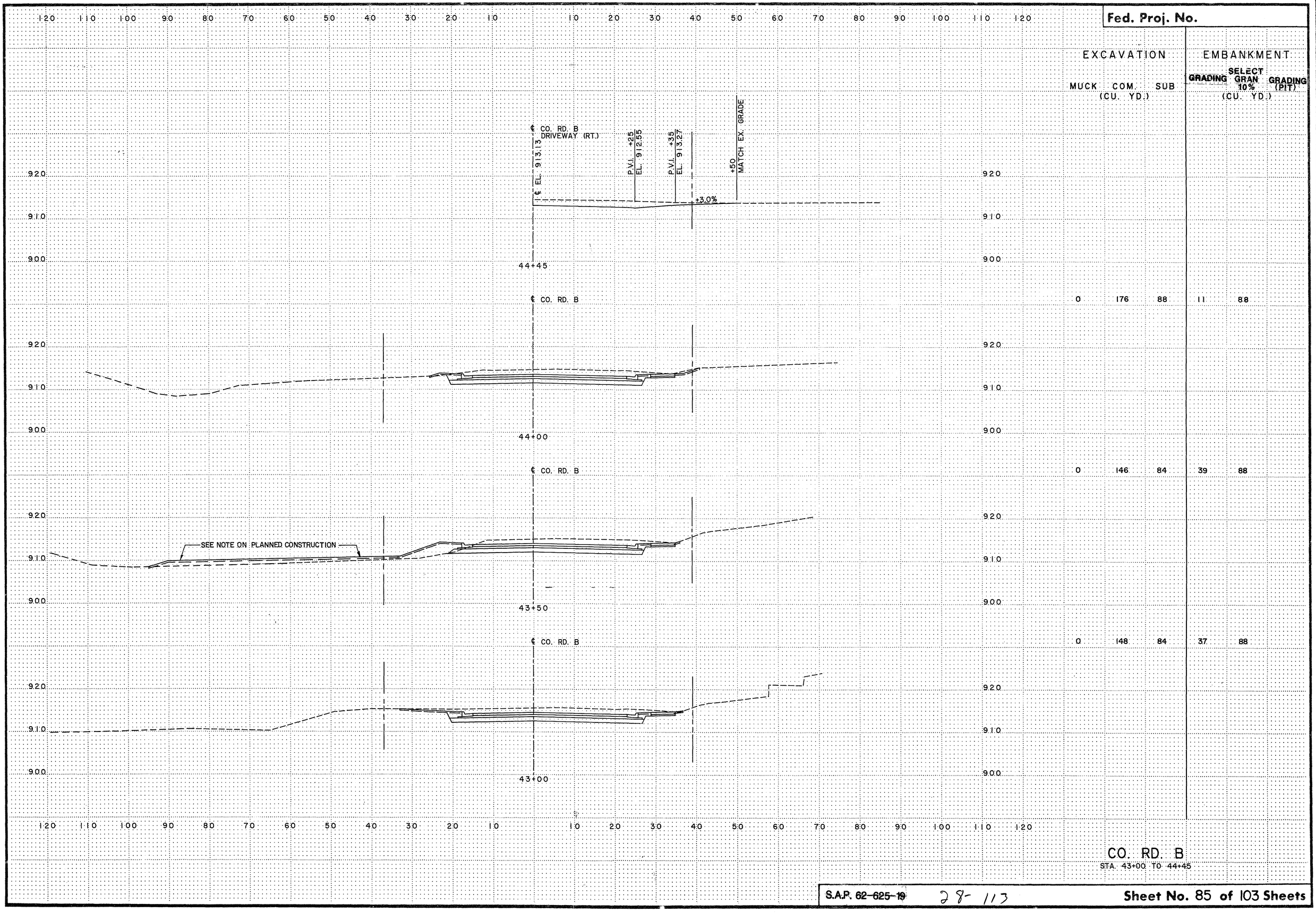

	EXCAVATION		EMBANKMENT	
	MUCK (CU. YD.)	COM. SUB	GRADING	SELECT GRAN 10% GRADING (PIT) (CU. YD.)
	0	176 88	11	88
	0	146 84	39	88
	0	148 84	37	88

CO. RD. B
STA. 43+00 TO 44+45

S.A.P. 62-625-19 28-113

Sheet No. 85 of 103 Sheets

COPY EQUIPMENT FORM #1

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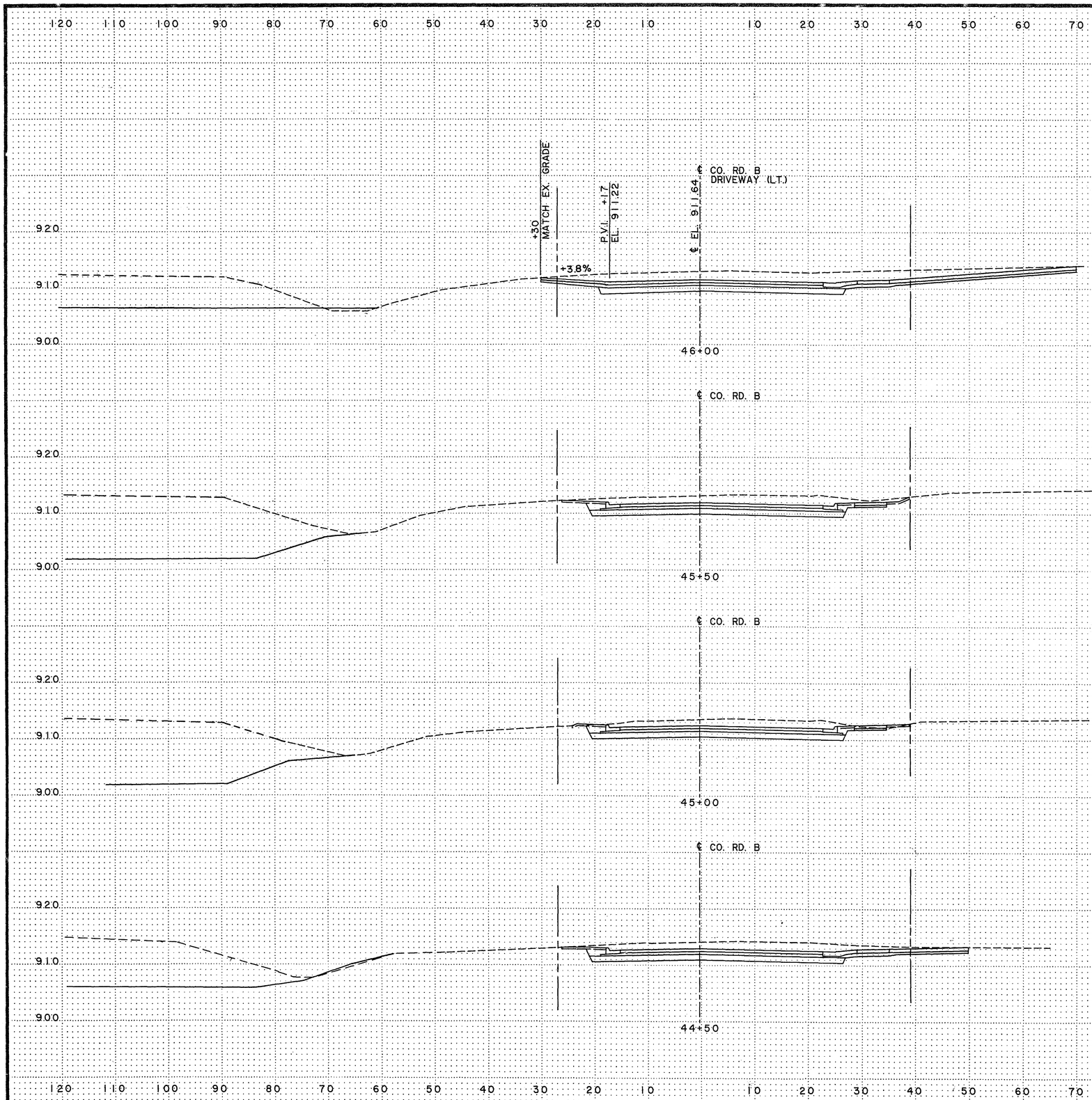

EXCAVATION			EMBANKMENT	
MUCK (CU. YD.)	COM. (CU. YD.)	SUB	GRADING	SELECT GRAN 10% GRADING (PIT) (CU. YD.)
0	242	86	6	87
0	253	86	5	87
0	163	88	14	88
0	171	88	13	88

*QUANTITIES DO NOT INCLUDE POND EXCAVATION.

CO. RD. B
STA. 44+50 TO 46+00

S.A.P. 62-625-19 28-113 Sheet No. 86 of 103 Sheets

COPY EQUIPMENT FORM #1

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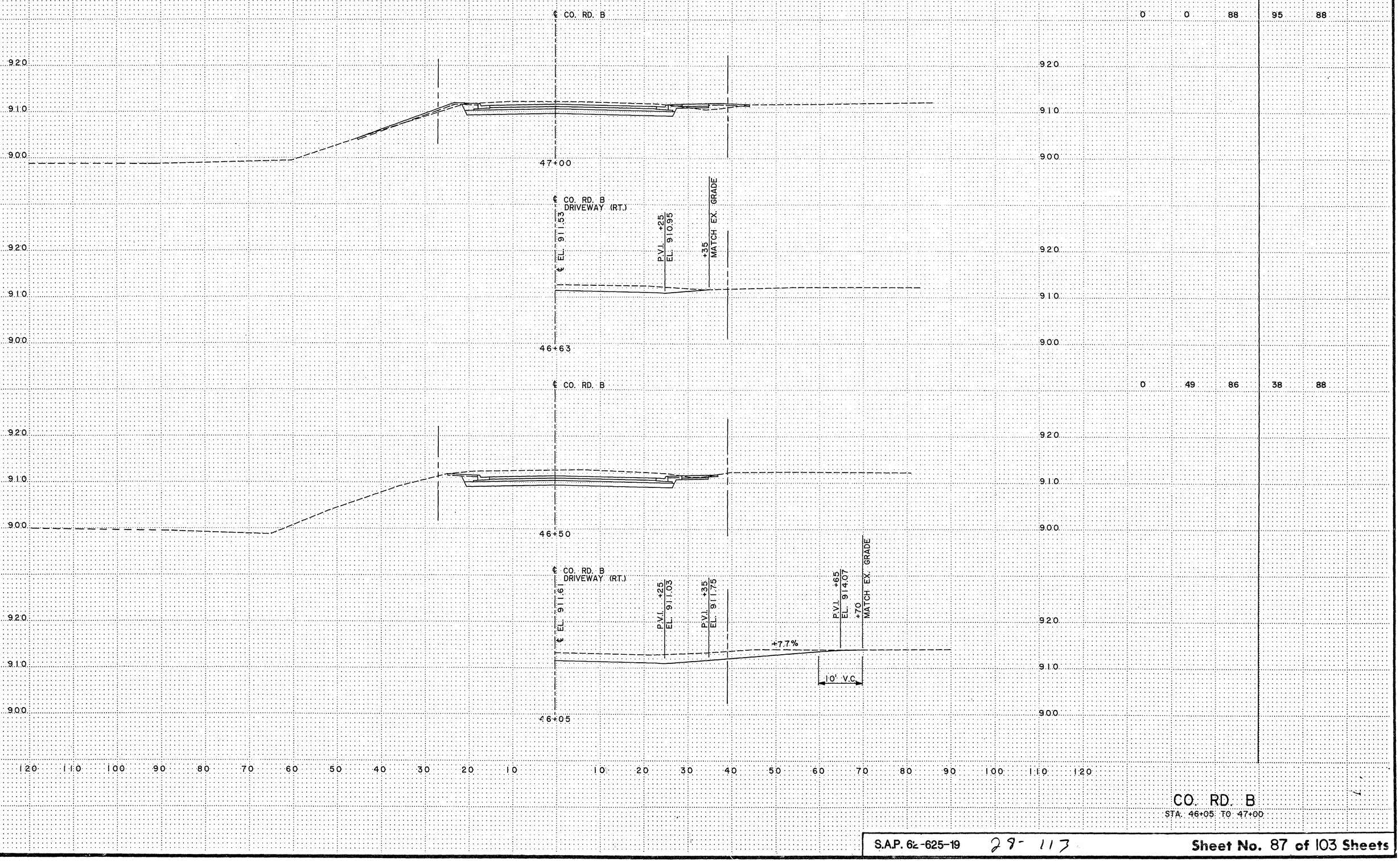
	EXCAVATION			EMBANKMENT	
	MUCK (CU. YD.)	COM.	SUB	GRADING	SELECT GRAN 10% GRADING (PIT) (CU. YD.)
47+00	0	0	88	95	88
46+63	0	49	86	38	88
46+50					
46+05					

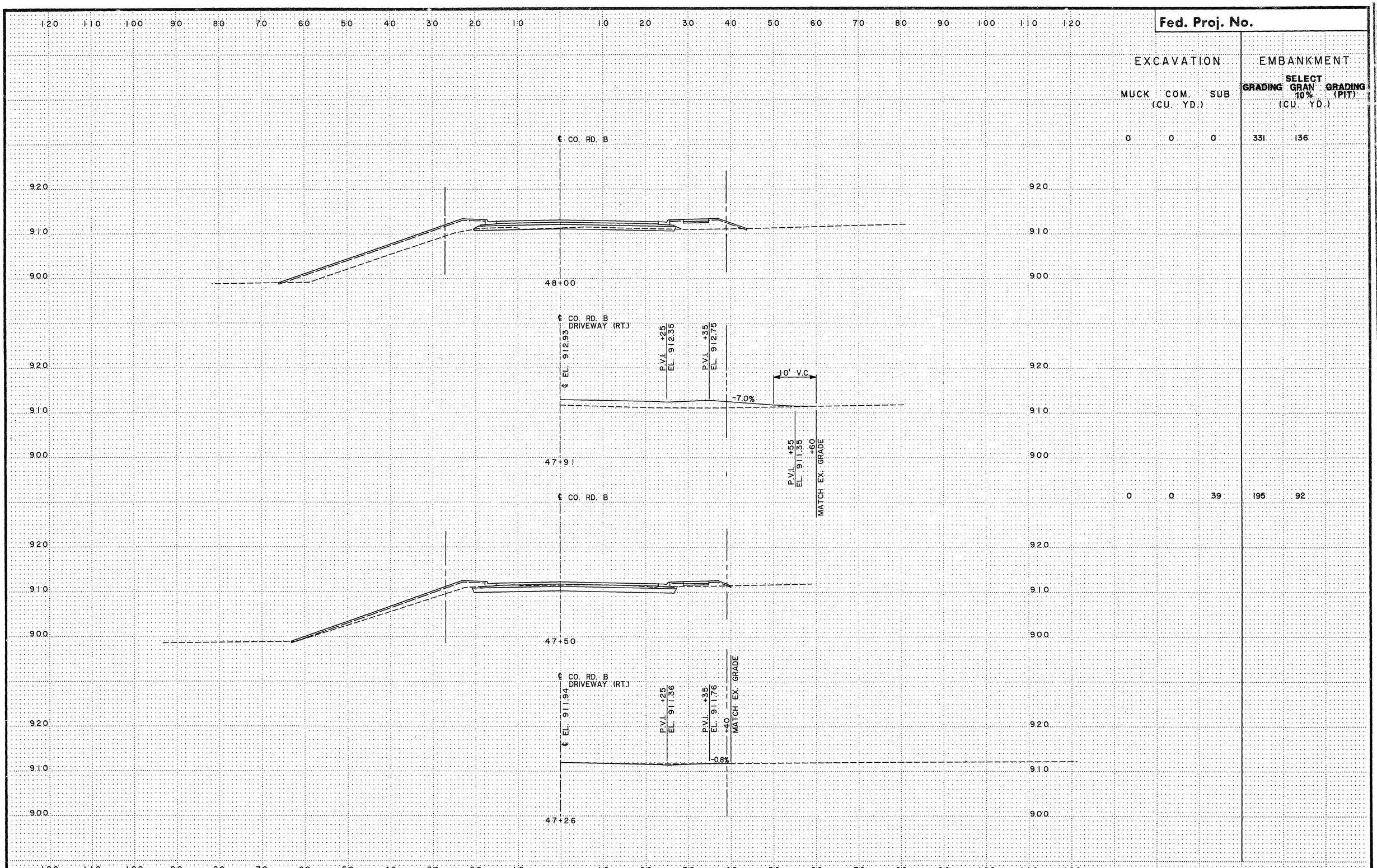


CO. RD. B
STA. 46+05 TO 47+00

S.A.P. 62-625-19 29-113

Sheet No. 87 of 103 Sheets

Fed. Proj. No.



EXCAVATION			EMBANKMENT	
MUCK (CU. YD.)	COM. (CU. YD.)	SUB (CU. YD.)	GRADING	SELECT GRAN 10% GRADING (PIT) (CU. YD.)
0	0	0	331	136
0	0	39	195	92

CO. RD. B
STA. 47+26 TO 48+00

S.A.P. 62-625-19 28-113 **Sheet No. 88 of 103 Sheets**

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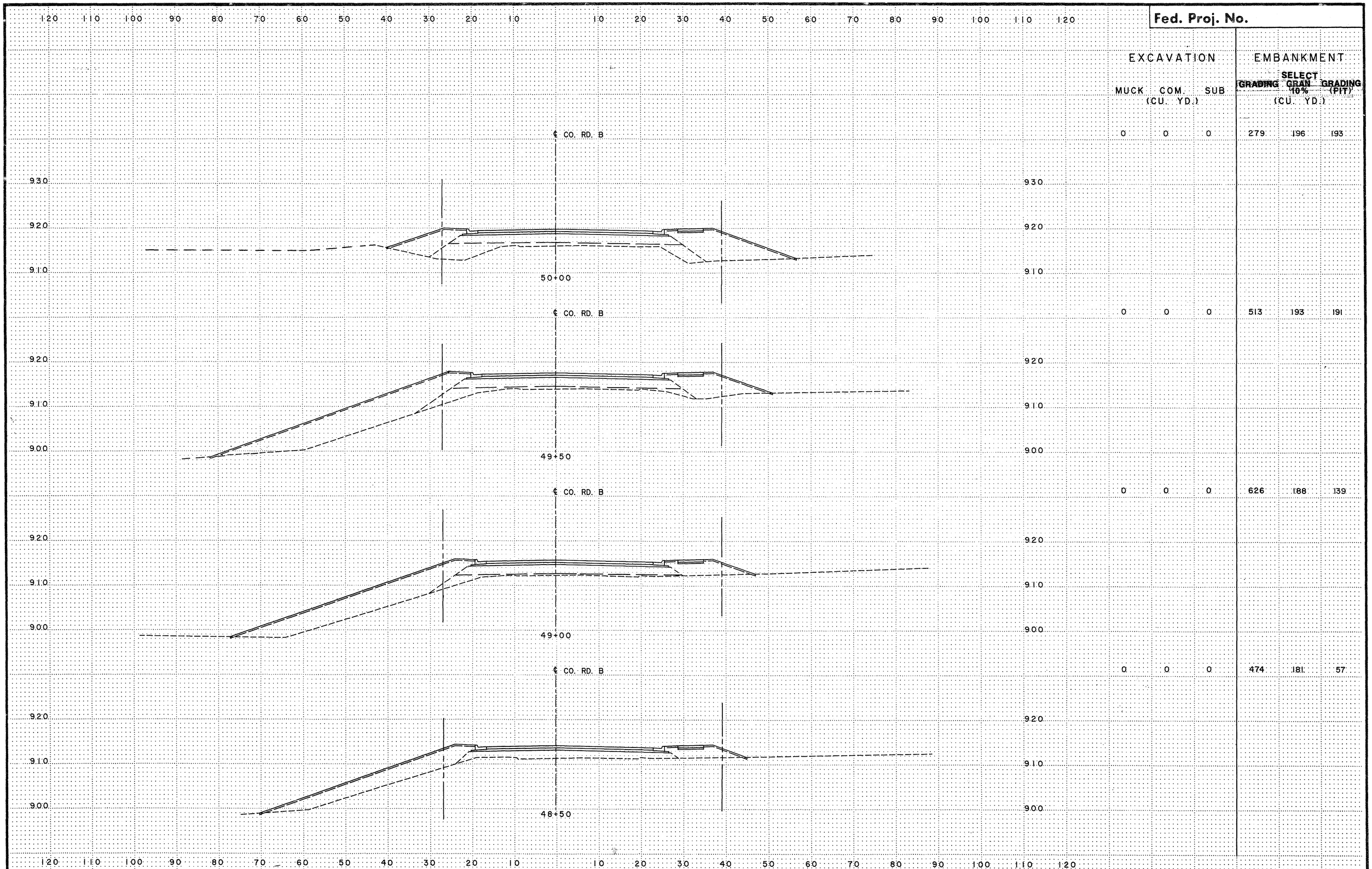

	EXCAVATION			EMBANKMENT		
	MUCK (CU. YD.)	COM.	SUB	GRADING	SELECT GRAN 10% (CU. YD.)	GRADING (PIT)
	0	0	0	279	196	193
	0	0	0	513	193	191
	0	0	0	626	188	139
	0	0	0	474	181	57

CO. RD. B
STA. 48+50 TO 50+00

S.A.P. 62-625-19 28-113 **Sheet No. 89 of 103 Sheets**

COPY EQUIPMENT FORM #1

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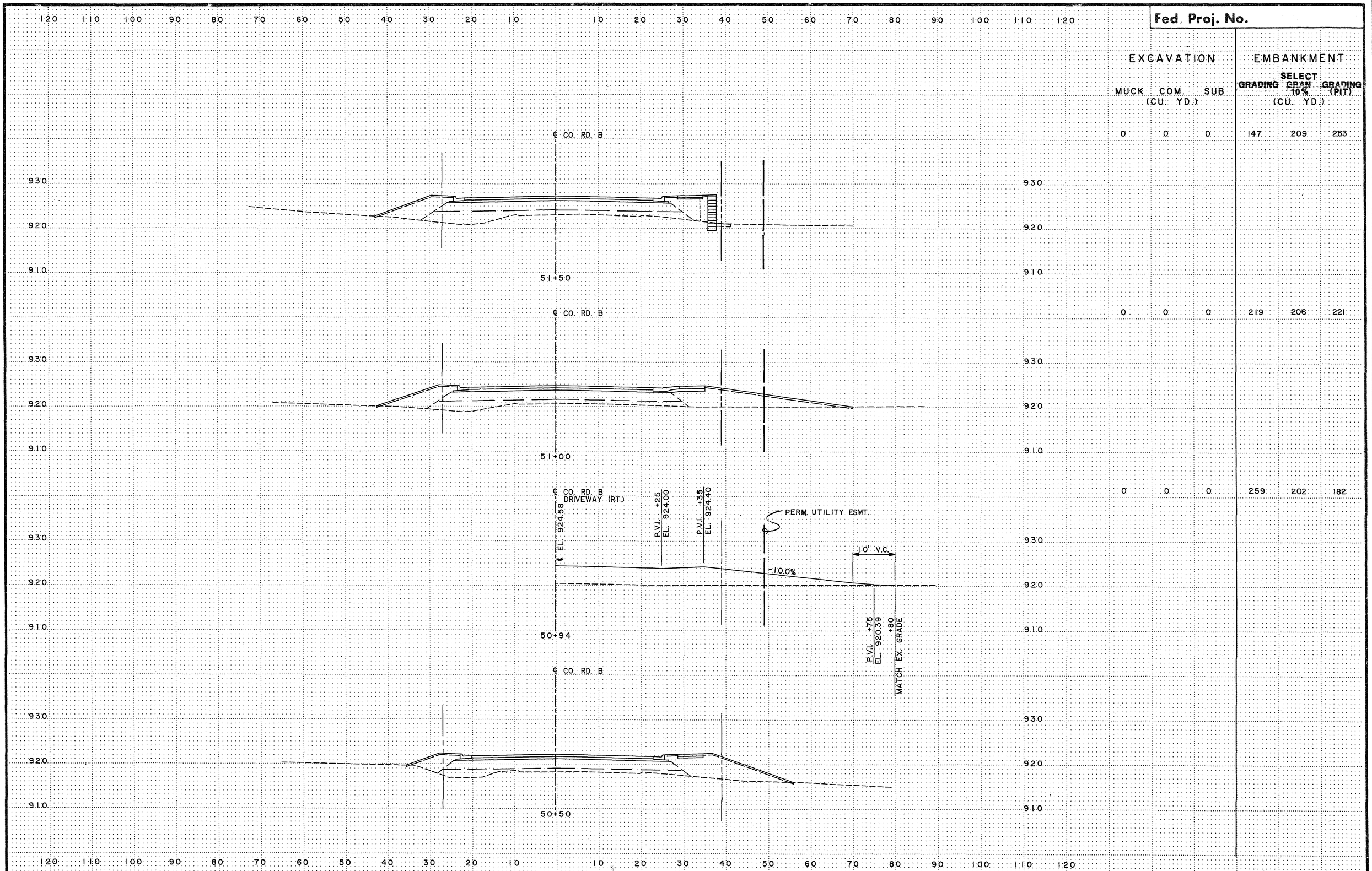

	EXCAVATION			EMBANKMENT		
	MUCK (CU. YD.)	COM. (CU. YD.)	SUB (CU. YD.)	GRADING (CU. YD.)	SELECT GRAN 10% (CU. YD.)	GRADING (PIT) (CU. YD.)
	0	0	0	147	209	253
	0	0	0	219	206	221
	0	0	0	259	202	182

CO. RD. B
STA 50+50 TO 51+50

S.A.P. 62-625-19 29-113 Sheet No. 90 of 103 Sheets

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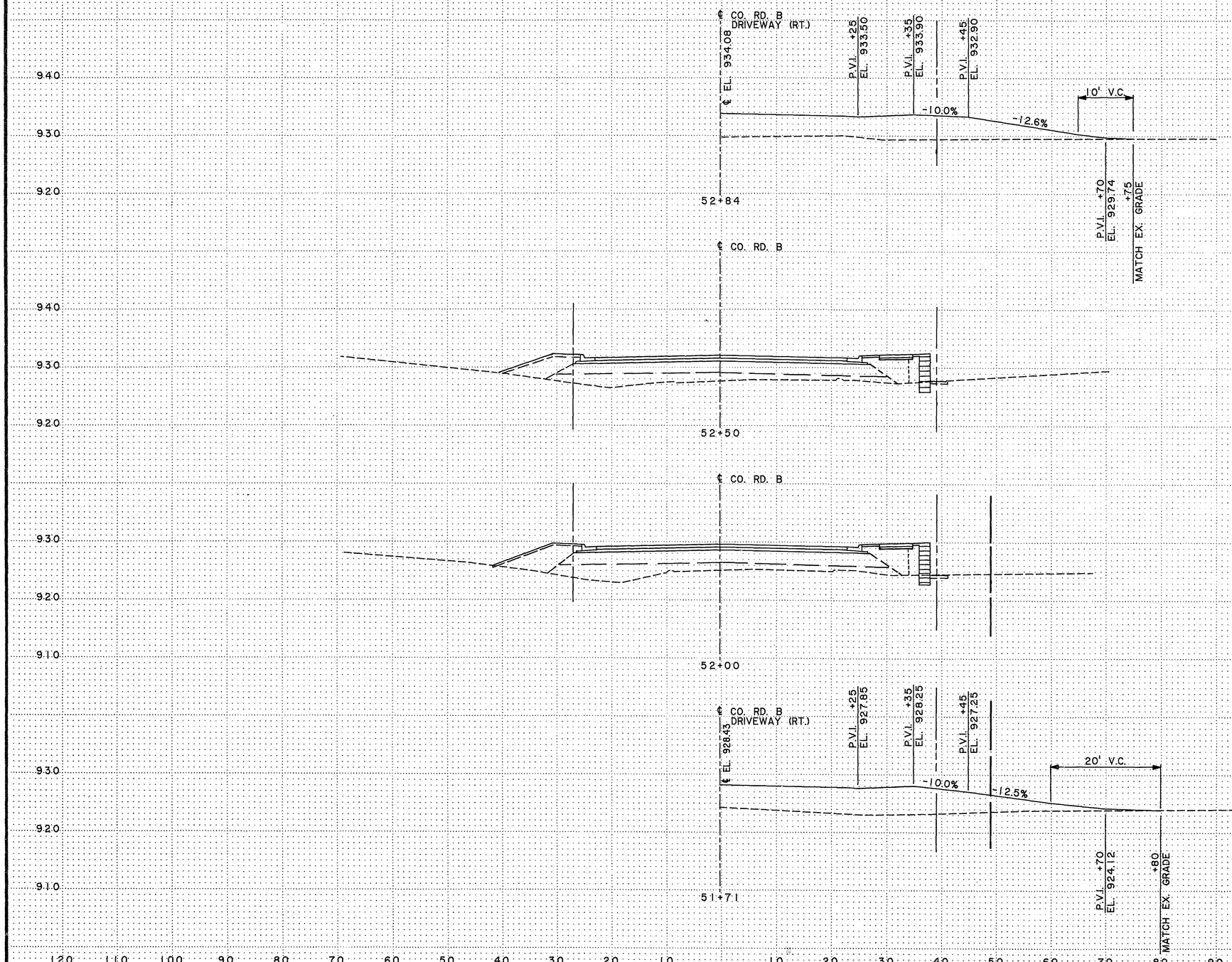

	EXCAVATION			EMBANKMENT		
	MUCK (CU. YD.)	COM.	SUB	GRADING	SELECT GRAN 10% (CU. YD.)	GRADING (PIT)
940						
930						
920						
	0	0	0	162	205	167
940						
930						
920						
	0	0	0	131	175	273
930						
920						
910						

CO. RD. B
STA. 51+71 TO 52+84

S.A.P. 62-625-19 28-113 Sheet No. 91 of 103 Sheets

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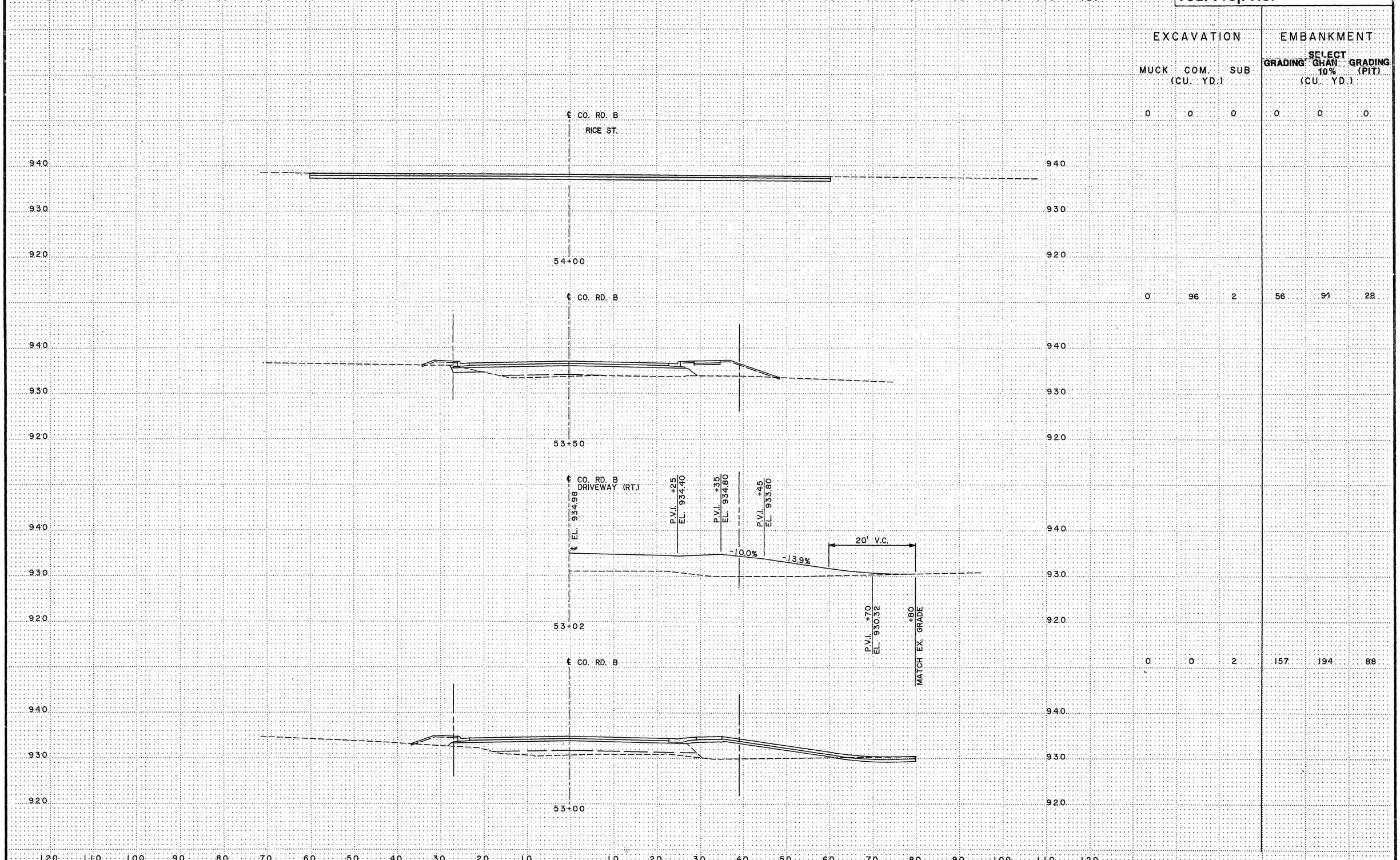

	EXCAVATION			EMBANKMENT		
	MUCK (CU. YD.)	COM. (CU. YD.)	SUB (CU. YD.)	GRADING (CU. YD.)	SELECT GHAN 10% (CU. YD.)	GRADING (PIT) (CU. YD.)
	0	0	0	0	0	0
	0	96	2	56	91	28
	0	0	2	157	194	88

CO. RD. B
STA. 53+00 TO 54+00

S.A.P. 62-625-19 28-113 Sheet No. 92 of 103 Sheets

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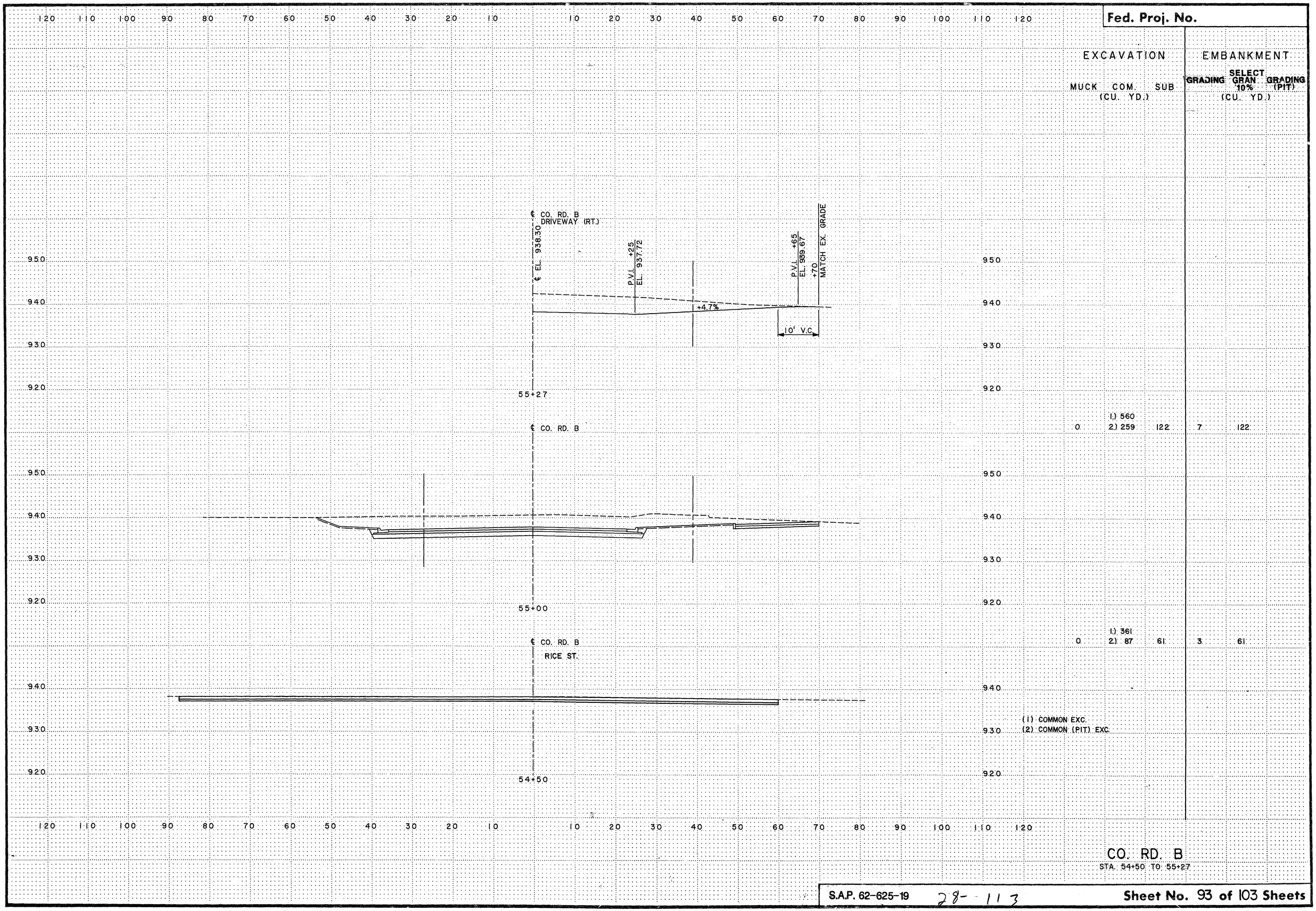

EXCAVATION			EMBANKMENT	
MUCK (CU. YD.)	COM. (CU. YD.)	SUB	GRADING	SELECT GRAN 10% GRADING (PIT) (CU. YD.)
	1.) 560			
0	2.) 259	122	7	122
	1.) 361			
0	2.) 87	61	3	61

(1) COMMON EXC.
(2) COMMON (PIT) EXC.

CO. RD. B
STA. 54+50 TO 55+27

S.A.P. 62-625-19 28-113

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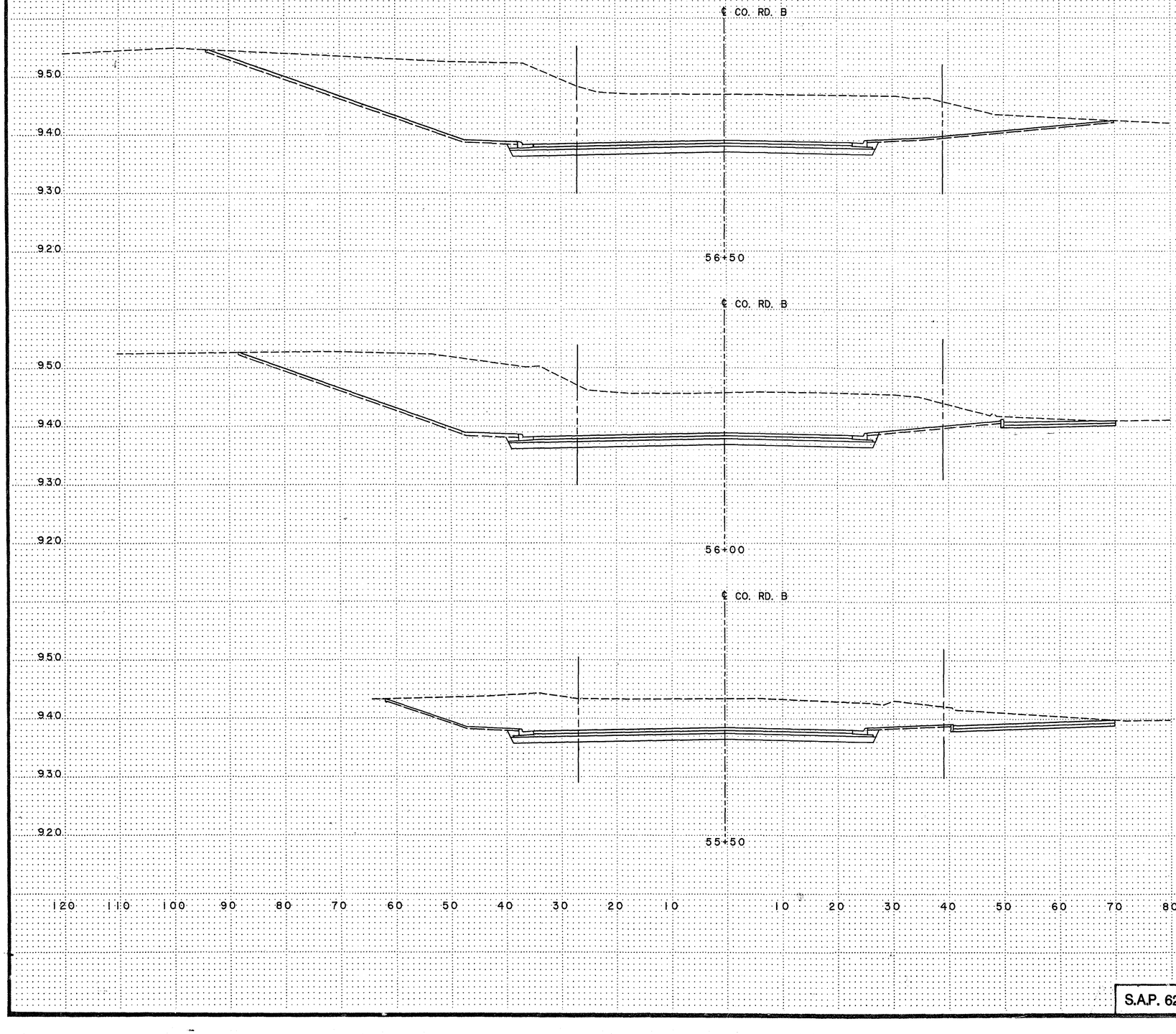

	EXCAVATION			EMBANKMENT
	MUCK (CU. YD.)	COM. (CU. YD.)	SUB	(CU. YD.)
0	1) 1037 2) 1326	122	7	122
0	1) 950 2) 1113	122	7	122
0	1) 784 2) 696	122	7	122

1) COMMON EXC.
2) COMMON (PIT) EXC.

CO. RD. B
STA. 55+50 TO 56+50

S.A.P. 62-625-19 28-113

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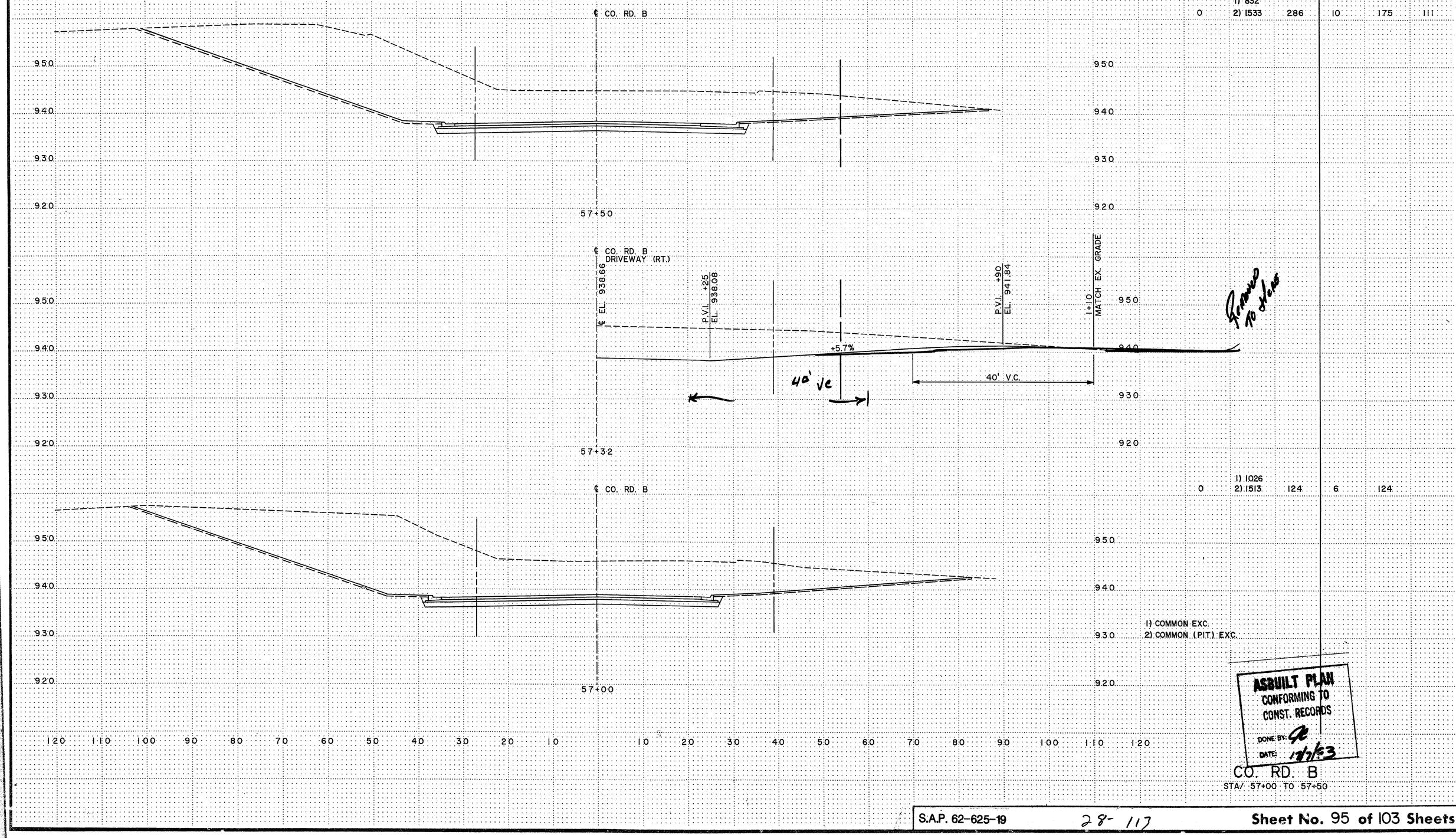
COPY EQUIPMENT FORM #1

Fed. Proj. No.

EXCAVATION			EMBANKMENT		
MUCK (CU. YD.)	COM. (CU. YD.)	SUB	GRADING	SELECT GRAN 10% (PIT) (CU. YD.)	GRADING
	1) 832				
0	2) 1533	286	10	175	111



Removed to stone

1) 1026
0 2) 1513 124 6 124

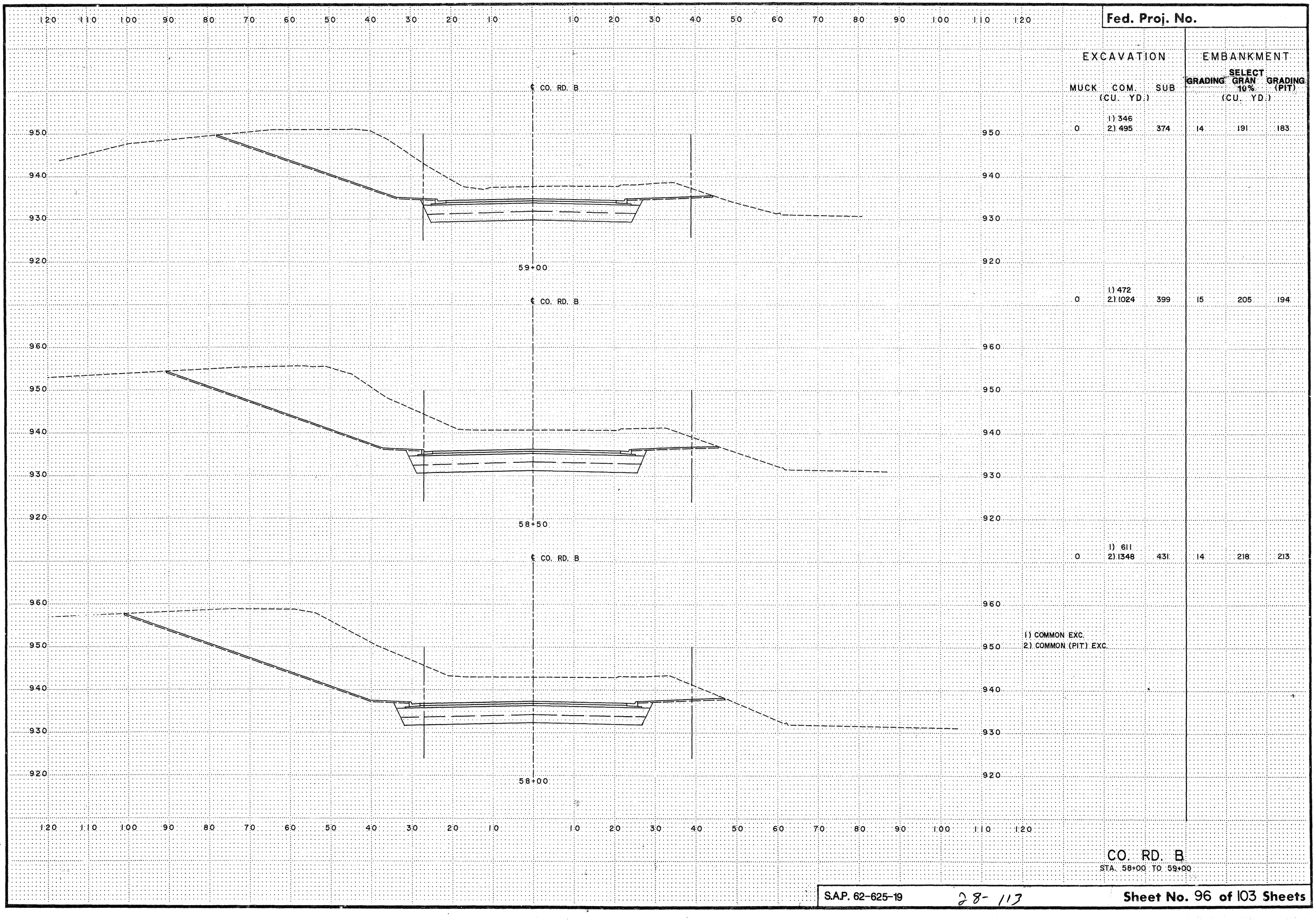
1) COMMON EXC.
2) COMMON (PIT) EXC.

ASBUILT PLAN
CONFORMING TO
CONST. RECORDS
DONE BY: [illegible]
DATE: 12/1/83

CO. RD. B
STA/ 57+00 TO 57+50

S.A.P. 62-625-19 28-117 Sheet No. 95 of 103 Sheets

Fed. Proj. No.



	EXCAVATION			EMBANKMENT		
	MUCK (CU. YD.)	COM. (CU. YD.)	SUB (CU. YD.)	GRADING	SELECT GRAN 10% (CU. YD.)	GRADING (PIT)
59+00	0	1) 346 2) 495	374	14	191	183
58+50	0	1) 472 2) 1024	399	15	205	194
58+00	0	1) 611 2) 1348	431	14	218	213

1) COMMON EXC.
2) COMMON (PIT) EXC.

CO. RD. B
STA. 58+00 TO 59+00

S.A.P. 62-625-19 28-113 Sheet No. 96 of 103 Sheets

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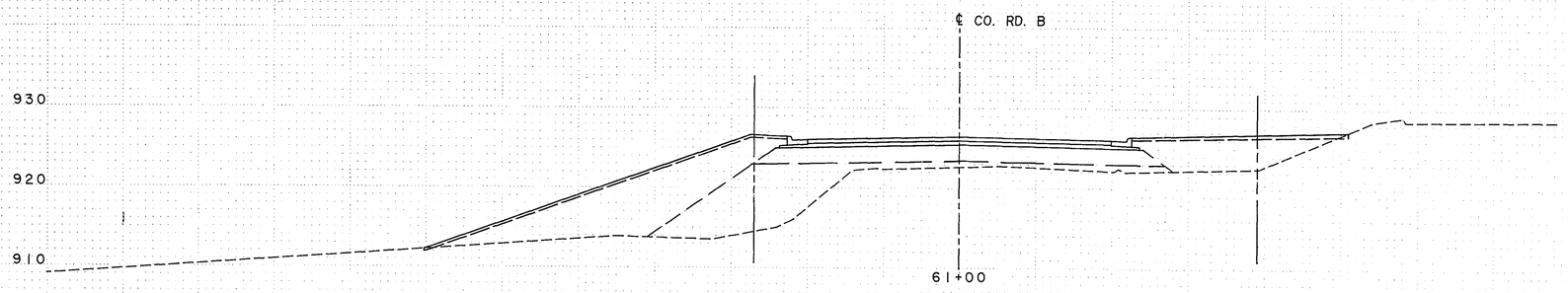
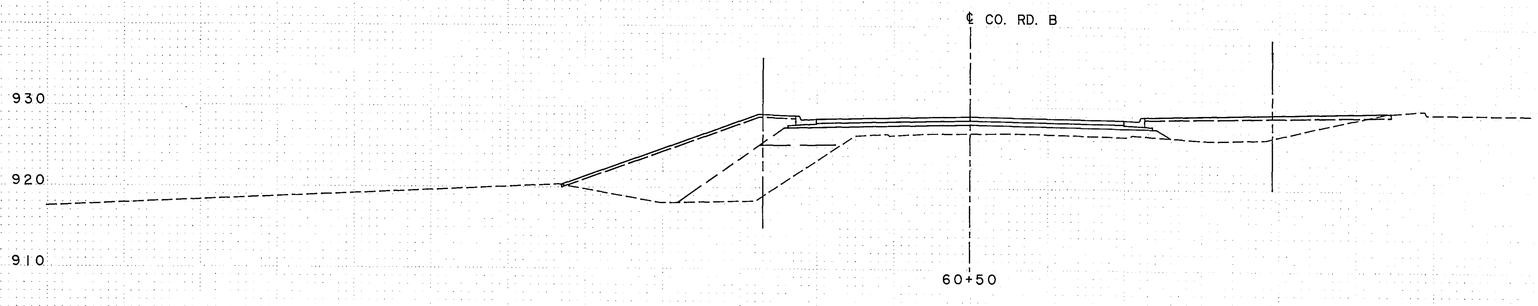
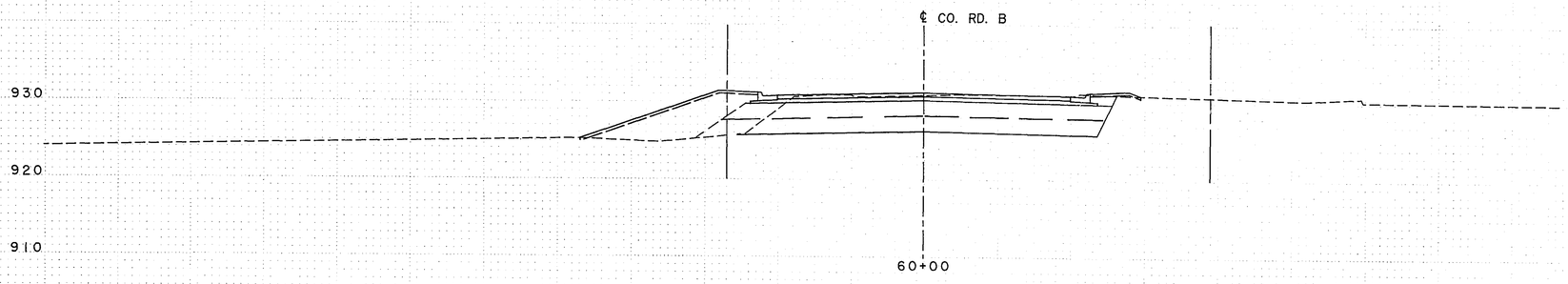
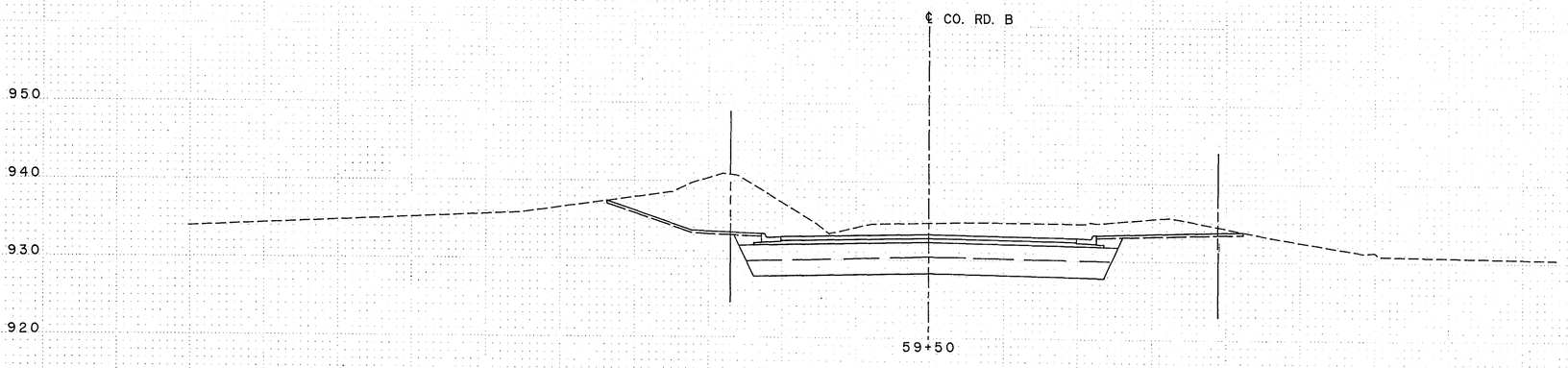








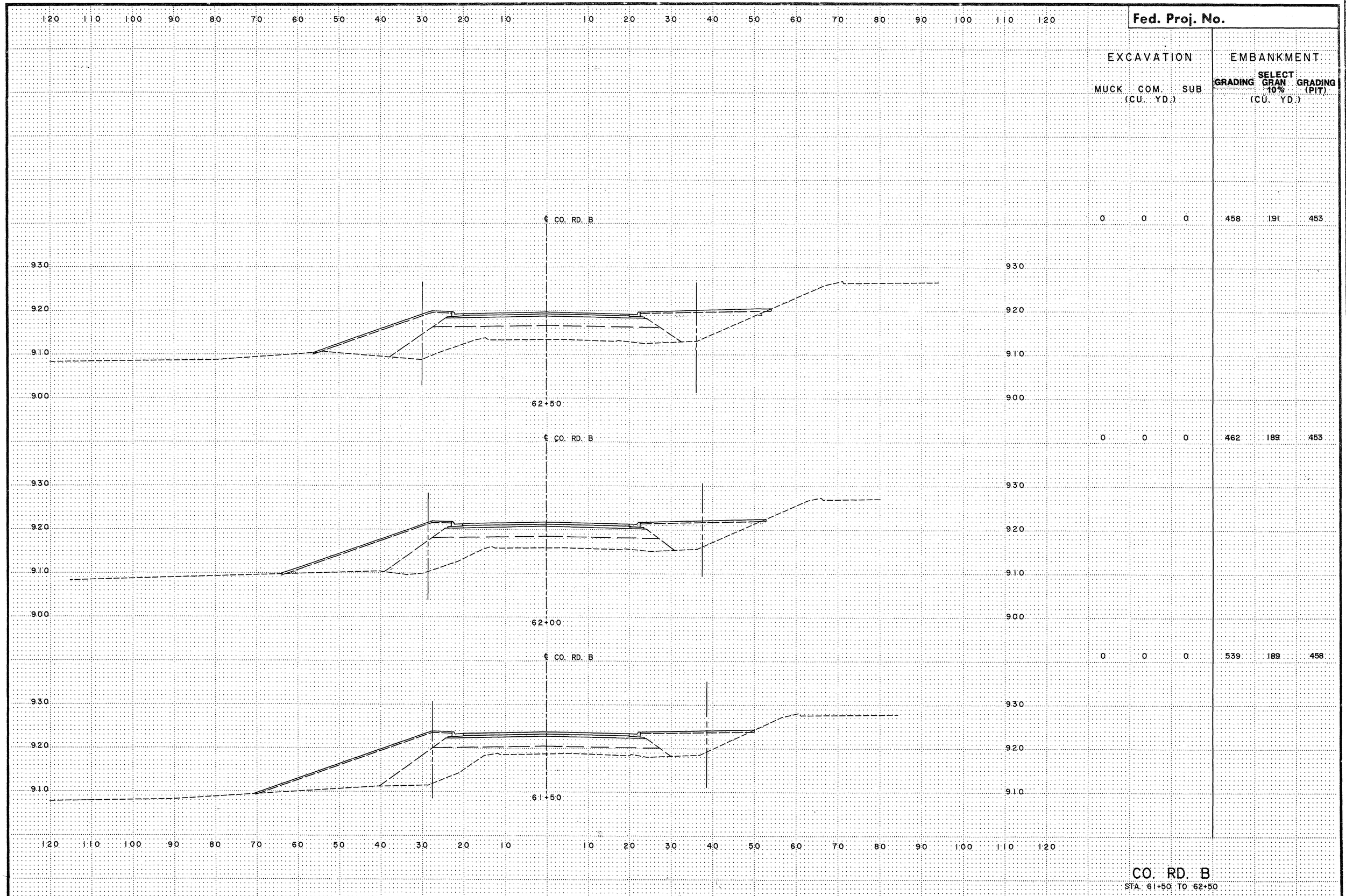
	EXCAVATION			EMBANKMENT		
	MUCK (CU. YD.)	COM. (CU. YD.)	SUB (CU. YD.)	GRADING	SELECT GRAN 10% (PIT) (CU. YD.)	GRADING
930 920 910	0	0	0	558	188	419
	0	0	0	447	170	269
	0	1) 16	168	245	176	176
	0	1) 168 2) 63	351	76	193	187

1) COMMON EXC.
2) COMMON (PIT) EXC.

CO. RD. B
STA. 59+50 TO 61+00

S.A.P. 62-625-19 28-113 Sheet No. 97 of 103 Sheets

Fed. Proj. No.

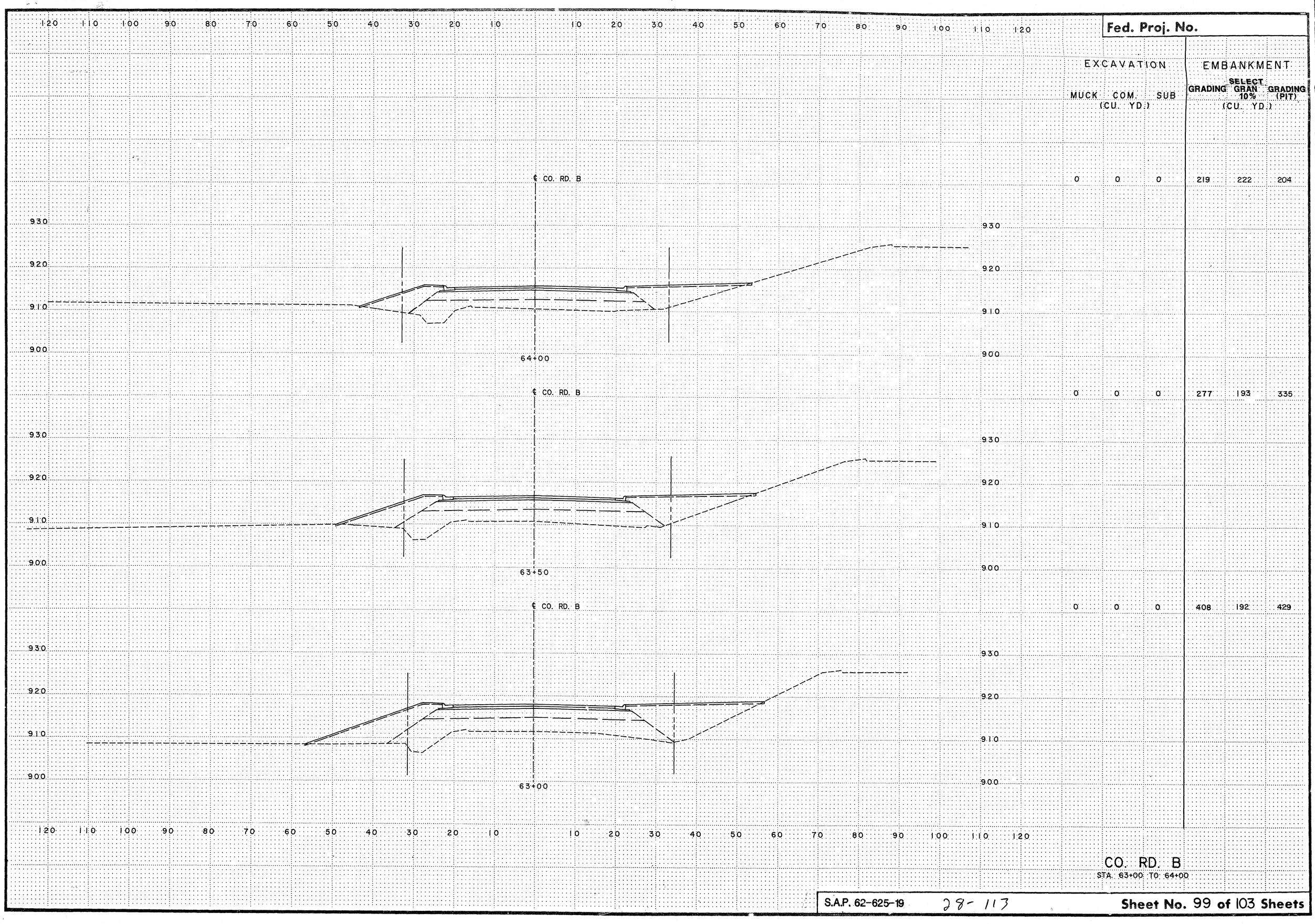


	EXCAVATION			EMBANKMENT		
	MUCK (CU. YD.)	COM.	SUB	GRADING	SELECT GRAN 10% (CU. YD.)	GRADING (PIT)
	0	0	0	458	191	453
	0	0	0	462	189	453
	0	0	0	539	189	458

CO. RD. B
STA. 61+50 TO 62+50

S.A.P. 62-625-19 28-113 Sheet No. 98 of 103 Sheets

Fed. Proj. No.



STATION	EXCAVATION MUCK (CU. YD.)	EXCAVATION COM. (CU. YD.)	EXCAVATION SUB (CU. YD.)	EMBANKMENT GRADING (CU. YD.)	EMBANKMENT SELECT GRAN 10% (CU. YD.)	EMBANKMENT GRADING (PIT) (CU. YD.)
64+00	0	0	0	219	222	204
63+50	0	0	0	277	193	335
63+00	0	0	0	408	192	429

CO. RD. B
STA. 63+00 TO 64+00

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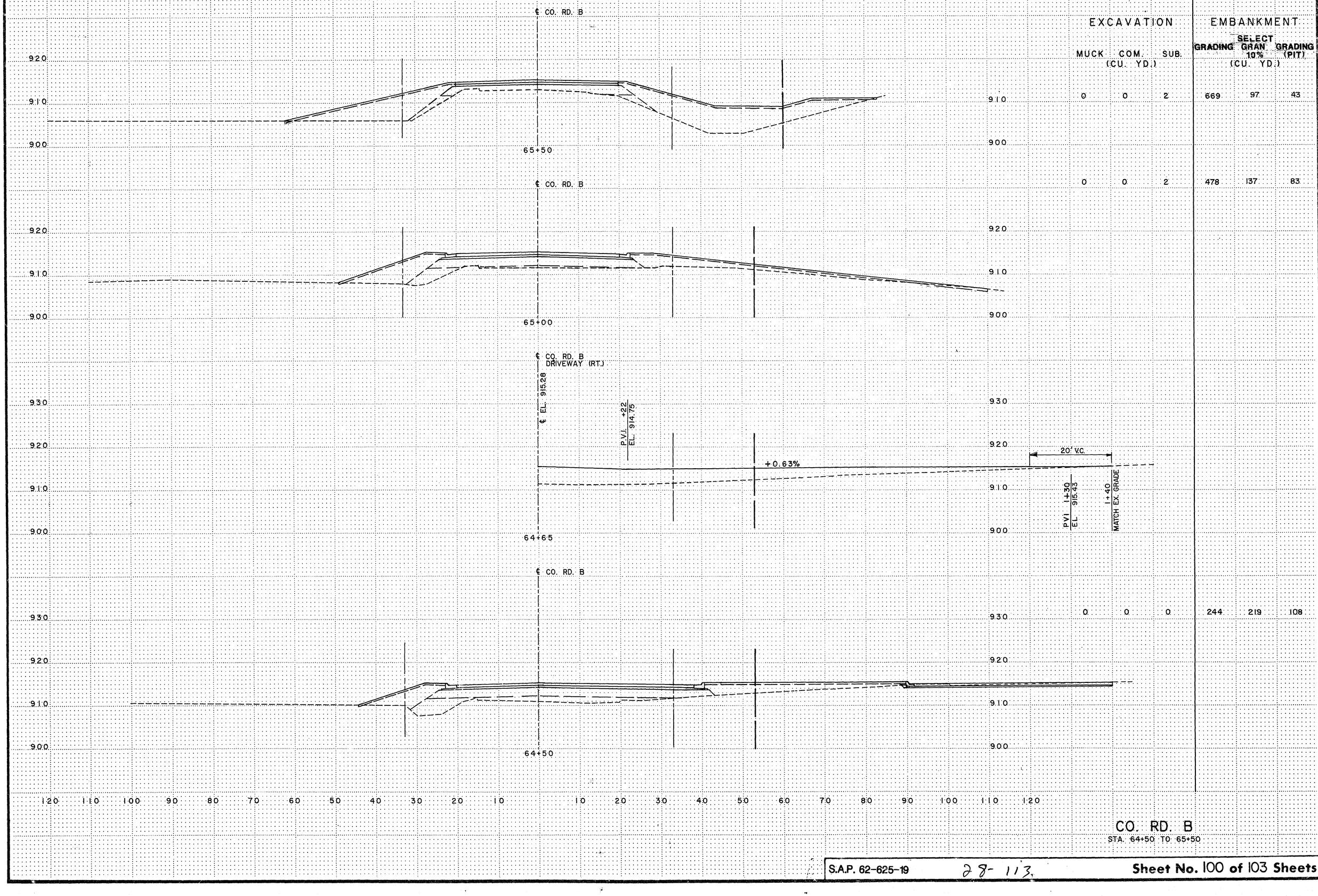
Fed. Proj. No.



EXCAVATION			EMBANKMENT		
MUCK (CU. YD.)	COM. (CU. YD.)	SUB. (CU. YD.)	GRADING (CU. YD.)	SELECT GRAN 10% (CU. YD.)	GRADING (PIT) (CU. YD.)
0	0	2	669	97	43
0	0	2	478	137	83
0	0	0	244	219	108

CO. RD. B
STA. 64+50 TO 65+50

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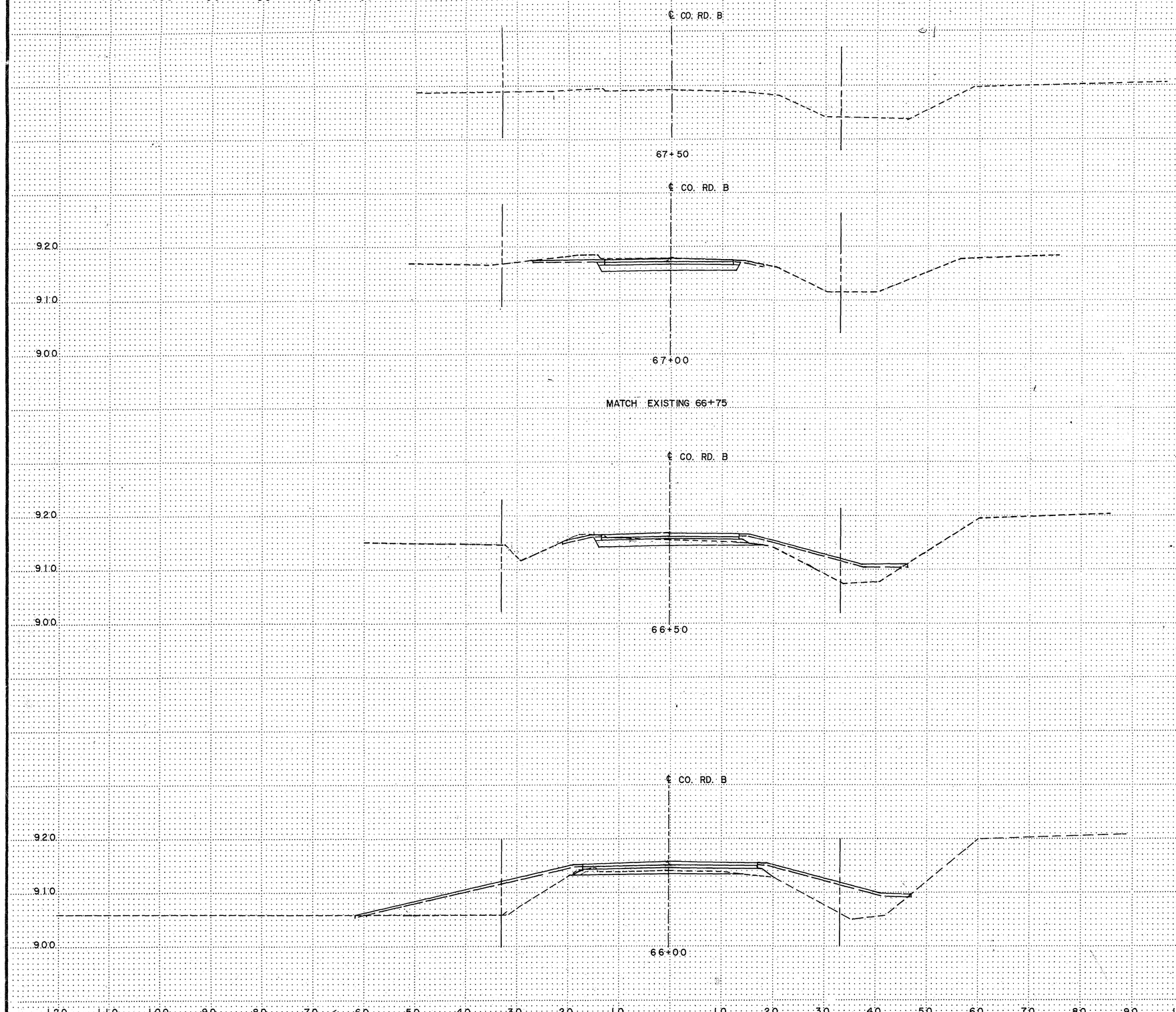
COPY EQUIPMENT FORM #1

Fed. Proj. No.



EXCAVATION			EMBANKMENT	
MUCK (CU. YD.)	COM.	SUB	GRADING	SELECT GRAN 10% (CU. YD.) GRADING (PIT)
0	11	25	0	58
0	17	42	81	94
0	6	77	412	89

CO. RD. B
STA. 66+00 TO 67+00

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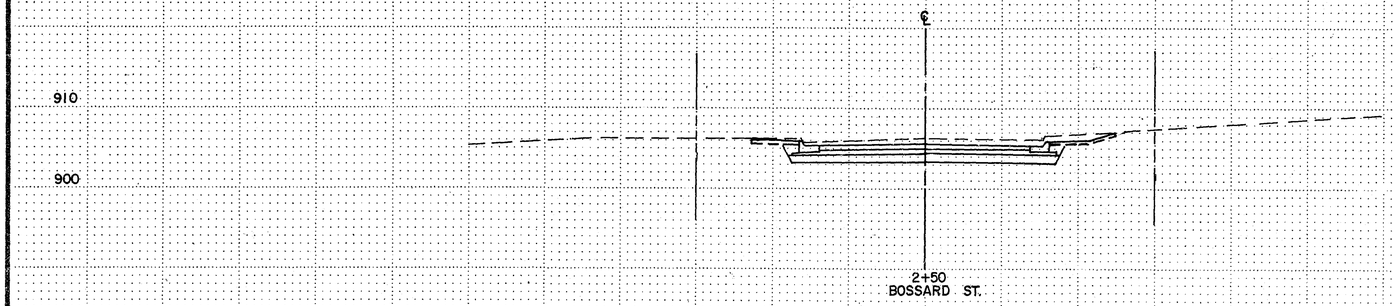
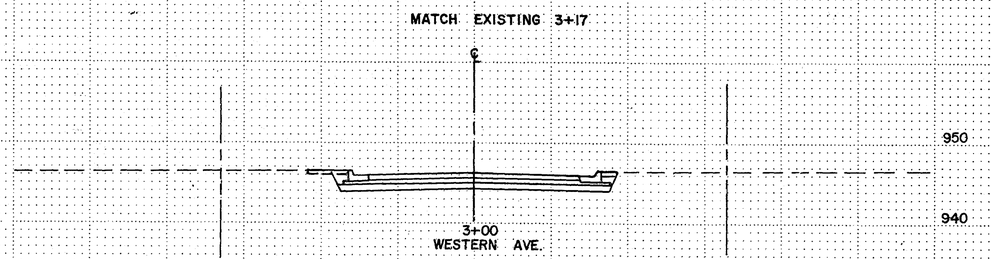
COPY EQUIPMENT FORM #1

Fed. Proj. No.

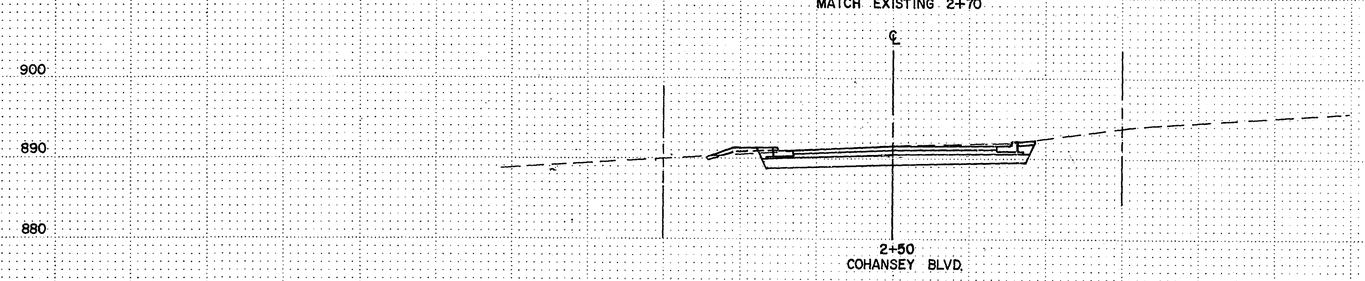
MATCH EXISTING 2+90

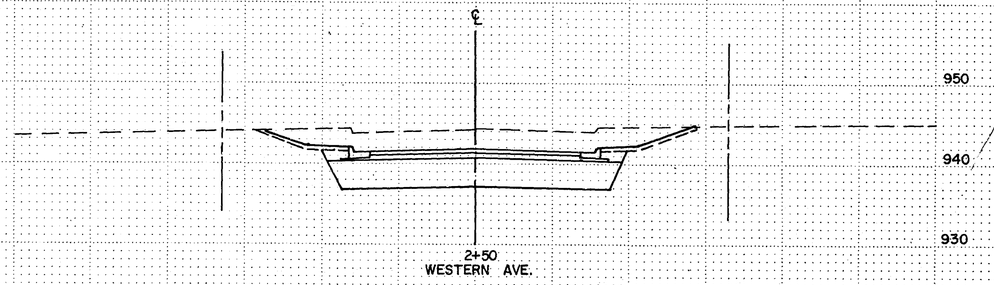


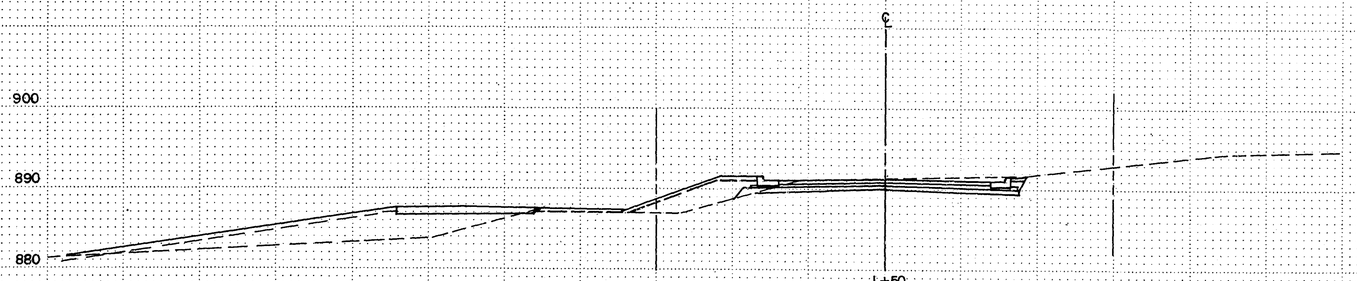
MATCH EXISTING 3+17



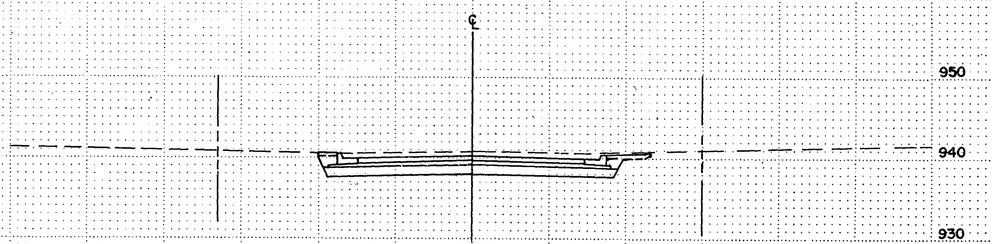
MATCH EXISTING 2+70





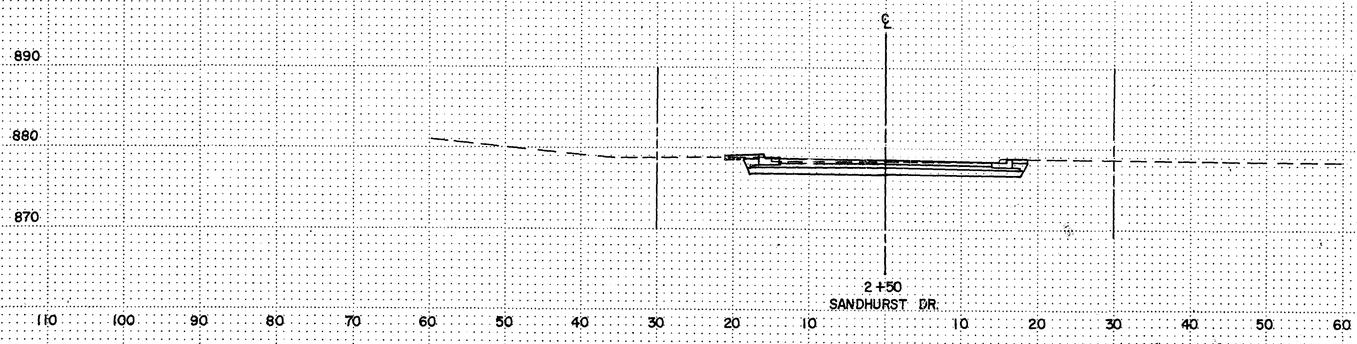


MATCH EXISTING 1+44

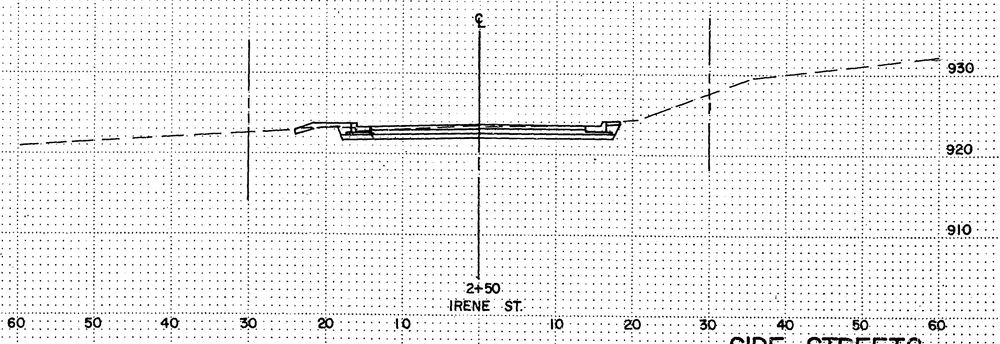


MATCH EXISTING 1+44

MATCH EXISTING 2+60



MATCH EXISTING 2+60



SIDE STREETS

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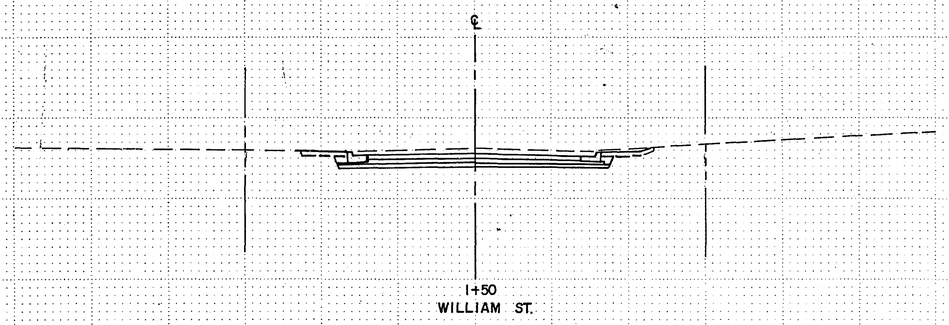
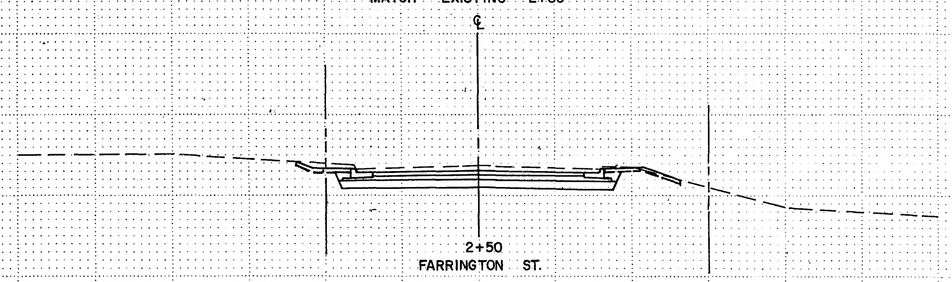
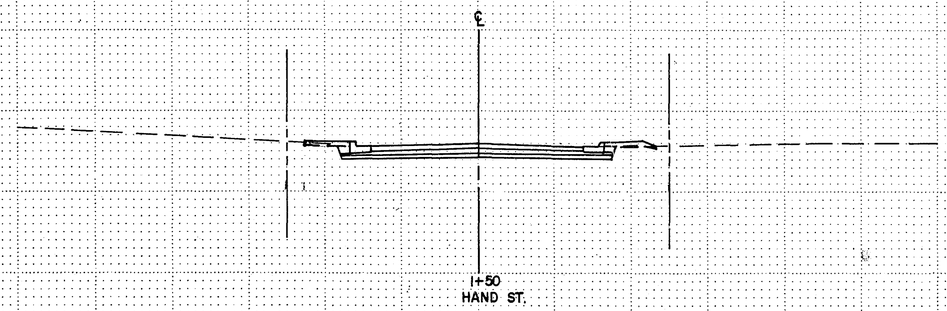
Fed. Proj. No.



MATCH EXISTING 1+44

MATCH EXISTING 2+80





MATCH EXISTING 1+44

60 50 40 30 20 10 10 20 30 40 50 60

SIDE STREETS

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COPY EQUIPMENT FORM #1