

CONVENTIONAL SIGNS

CENTER LINE
RIGHT OF WAY LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE
LAND LINES
RAILROAD
BARBED WIRE FENCE
COMBINATION WIRE FENCE
SNOW FENCE
TELEPHONE & TELEGRAPH LINES
POWER LINE
DETOUR
PRESENT ROAD (Pen Sheets)

TABULATION OF LENGTH AND DESIGN DATA

STATION TO STATION	ROADWAY	MAJOR STRUCTURES	LOADING
BOULDER CO.	WELD CO.	BOULDER CO.	WELD CO.
LN. FT.	LN. FT.	LN. FT.	LN. FT.
STA 119+50 BEGIN WORK ORDER NO 2254	44.0		
STA 119+94 } CBC ACROSS	12.0		
STA 120+06 } WILLOW CREEK	594.0		
STA 125+00 END WORK ORDER NO 2254	178.0		
STA 127+78.0 } BRIDGE ACROSS			
STA 129+01.5 } CREEK			
STA 132+82.3 } END BOULDER CO	380.8		
STA 132+82.3 } BEGIN WELD CO			
STA 195+18.3 } CBC ACROSS	6,236.0		
STA 195+41.7 } BOULDER CANAL			
STA 216+96.6 } CBC ACROSS	2,154.9		
STA 217+34.5 } BOULDER CANAL			
STA 236+48.1 } CBC ACROSS	1,916.6		
STA 236+71.8 } BOULDER CANAL			
STA 304+53.9 } EQUATION	6,782.1		
STA 304+480 AM			
STA 339+99.9 - END S 0030(12) =	3,551.9		
STA 14+65.0 ON CROSS ROAD			
OF PROJECT I 25-3(4)229			
TOTAL	588.8	20,641.5	123.5

WORK ORDER NO 2254 (BOULDER COUNTY)
ROADWAY (BOULDER COUNTY)
SUB-TOTAL (BOULDER COUNTY)
SUB-TOTAL (WELD COUNTY)
ROADWAY (WELD COUNTY)
MAJOR STRUCTURES (WELD COUNTY)
SUB-TOTAL (WELD COUNTY)
TOTAL - NET AND GROSS LENGTH
INCLUDING WORK ORDER NO 2254

DESIGN DATA
MAXIMUM DEGREE CURVE
MAXIMUM GRADE
MINIMUM N.P.S.D. HORIZONTAL
MINIMUM N.P.S.D. VERTICAL
MAXIMUM DESIGN SPEED

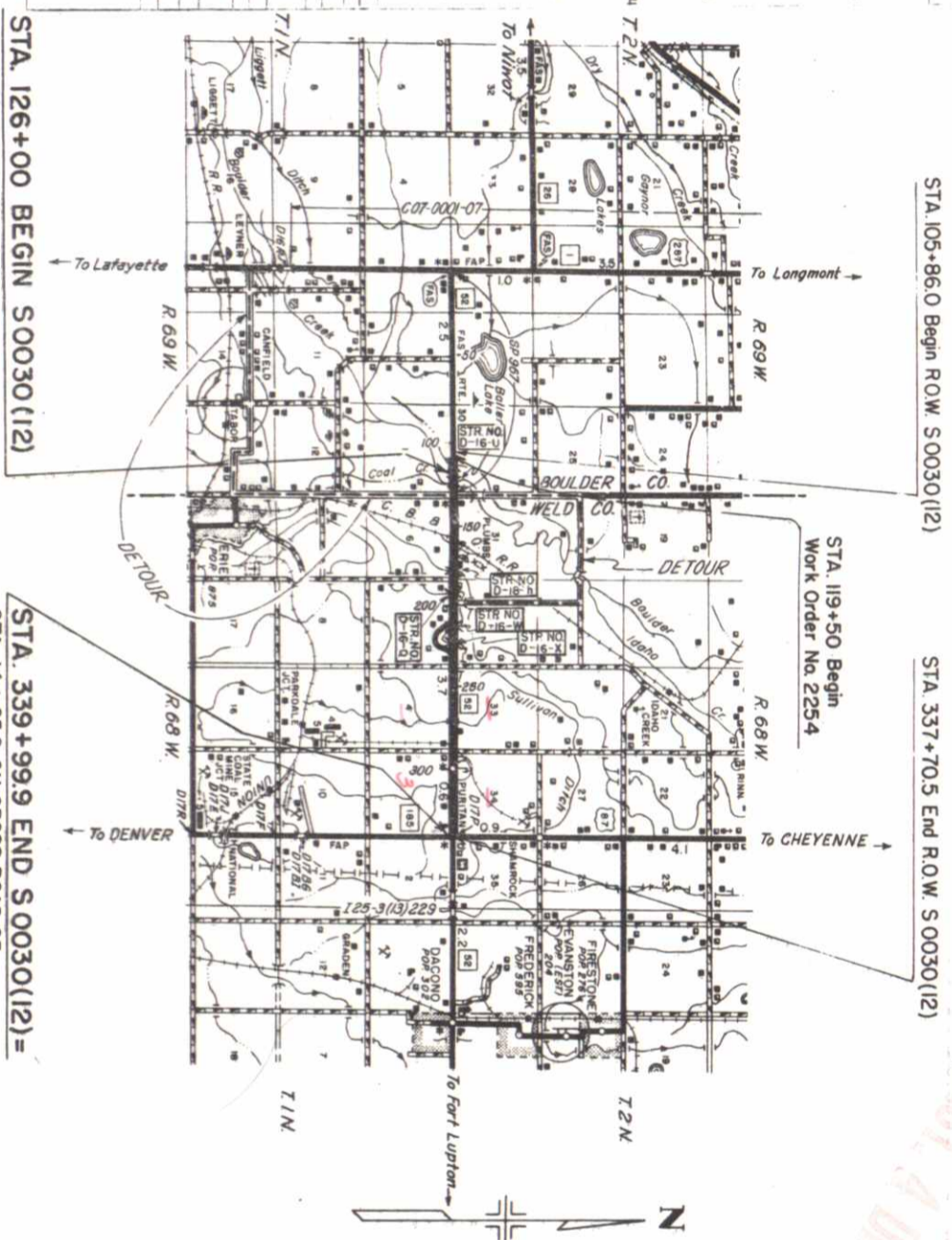
TABULATION OF LENGTH (R.O.W.)

STATION TO STATION	BOULDER CO	WELD CO.	
LN. FT.	MILES	LN. FT.	MILES
STA 105+86.0 BEGIN ROW	2,696.3	0.511	
STA 126+82.3 - END BOULDER CO			20,494.1
STA 337+70.5 END ROW			3,881
PROJECT TOTALS	23,190.4		4,392

COLORADO
DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED
FEDERAL AID PROJECT NO. S 0030(12)
STATE HIGHWAY NO. 52
BOULDER and WELD COUNTIES

ON PLAN 1 IN. = 50 FT. HORIZONTAL
ON PROFILE 1 IN. = 5 FT. VERTICAL
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD
GROSS LENGTH OF PROJECT 21,405.8 FT. (4.054 MI. (CONST. LENGTH)
NET LENGTH OF PROJECT 23,190.4 FT. = 4.392 MI. (R.O.W. LENGTH)



R.O.W. Sta 337-70.5 to Sta 339+99.9
Purchased under Project I 25 3 (4) 229.

INDEX OF SHEETS

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1	SKETCH MAP, TITLE PAGE AND TABULATION OF LENGTH & DESIGN DATA	
2	TYPICAL SECTION AND GENERAL NOTES	
3	SUMMARY OF APPROXIMATE QUANTITIES	
4	STRUCTURE QUANTITIES	
5	DETAILS OF DIVISION BOXES, CONCRETE HEADWALL & HEADGATE AND CONCRETE SLOPE & DITCH PAVING	
6	SUBBASE PLAN, SURFACING PLAN, FENCING REQUIREMENTS, DELINEATORS AND REMOVING GUARD POSTS AND R.O.W. MARKERS	
7	SPECIAL HEADWALL DETAILS	
8	SPECIAL STA. 127*	
9	SUPERELEVATION AND WIDENING OF CURVES - CROWNED HIGHWAYS (MAY 1, 1982)	M-1-D
10	APPROACH ROADS, FLARING, CUT SLOPE TREATMENT, BRIDGE & CREST WIDENING	M-2-A
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13	CONSTRUCTION TRAFFIC SIGNS	M-6-B
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15	DITCH TYPES	M-6-D
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17	SINGLE AND DOUBLE CONCRETE BOX CULVERTS SPECIAL FOR S 0030(12)	M-16-A
18	MINIPILES FOR CONCRETE BOX CULVERTS	M-16-C
19	REINFORCED CONCRETE PIPE	M-46-C
20	METAL PLATE GUARD FENCE	M-52-A
21	WIRE FENCES AND GATES	M-75-A
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23	DELINEATORS	M-81-A
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26	CROSS SECTIONS (STRUCTURES)	
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28	ADDED SHEET FOR WORK ORDER NO 2254	
29	ALIGNMENT PLAN AND PROFILE	
30	CROSS SECTION (STRUCTURE)	
31	CROSS SECTION (STRUCTURE)	
32	CROSS SECTION (STRUCTURE)	
33	CROSS SECTION (STRUCTURE)	
34	CROSS SECTION (STRUCTURE)	
35	CROSS SECTION (STRUCTURE)	
36	CROSS SECTION (STRUCTURE)	

D. S. M.

APPROVED
Chief Engineer
DATE

JMK

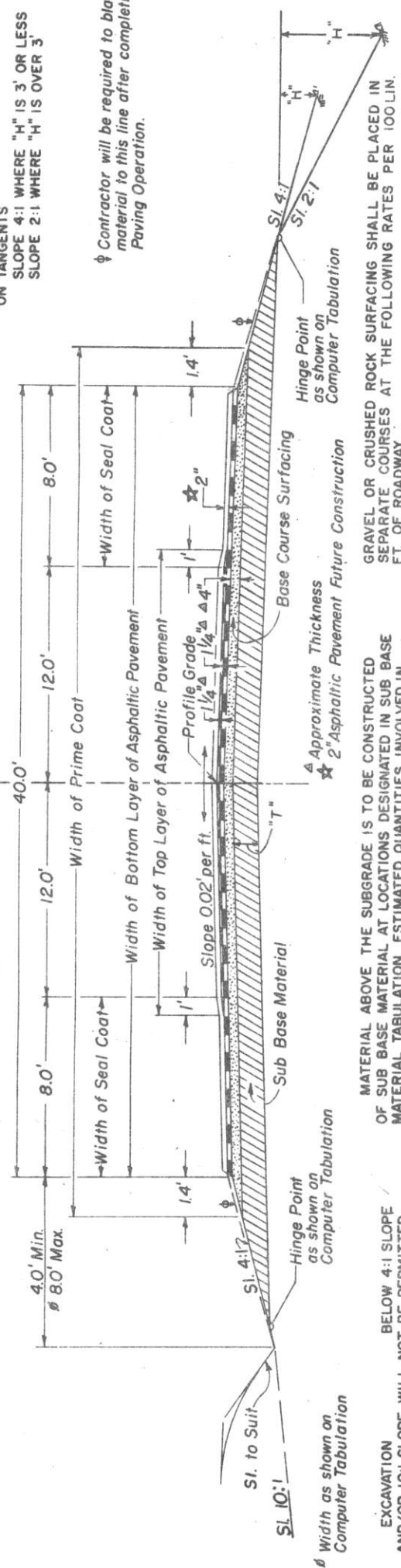
TYPICAL CROSS SECTION OF IMPROVEMENT

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	5 0030(12)	2	2

NOTE
SEE STANDARDS FOR DETAILS OF CUT SLOPE TREATMENT, FLARING AND WIDENING.

FILL SLOPES:
ON CURVES
SLOPE 4:1 WHERE "H" IS 5' OR LESS
SLOPE 2:1 WHERE "H" IS OVER 5'
ON TANGENTS
SLOPE 4:1 WHERE "H" IS 3' OR LESS
SLOPE 2:1 WHERE "H" IS OVER 3'

Contractor will be required to blade slope material to this line after completion of Paving Operation.



GRAVEL OR CRUSHED ROCK SURFACING SHALL BE PLACED IN SEPARATE COURSES AT THE FOLLOWING RATES PER 100 LIN. FT. OF ROADWAY

ASPHALTIC PAVEMENT (TOP LAYER)	19 TONS
ASPHALTIC PAVEMENT (BOTTOM LAYER)	30 TONS
BASE COURSE SURFACING	92 TONS

MATERIAL ABOVE THE SUBGRADE IS TO BE CONSTRUCTED OF SUB BASE MATERIAL AT LOCATIONS DESIGNATED IN SUB BASE MATERIAL TABULATION. ESTIMATED QUANTITIES INVOLVED IN THIS OPERATION AND THICKNESS OF MATERIAL REQUIRED ARE TABULATED IN THE SUB BASE MATERIAL PLAN.

EXCAVATION BELOW 4:1 SLOPE AND/OR 10:1 SLOPE WILL NOT BE PERMITTED.

THE DEPTH AND WIDTH OF THE SIDE DITCH SHALL BE VARIED WHERE NECESSARY IN ORDER TO PROVIDE PROPER DRAINAGE AND/OR ENTRANCE TO DRAINAGE STRUCTURES.

NOTE

BOTTOM LAYER OF ASPHALTIC SURFACING SHALL BE COMPLETED FOR FULL WIDTH BEFORE TOP LAYER OF ASPHALTIC SURFACING IS PLACED. PAVING JOINTS IN TOP LAYER WILL OVERLAP MIN. 1 FT. OVER JOINTS IN BOTTOM LAYER.

GENERAL NOTES

THIS PROJECT IS TO BE CONSTRUCTED IN CONFORMITY WITH THE STANDARD SPECIFICATIONS OF THE COLORADO DEPARTMENT OF HIGHWAYS, ADOPTED JANUARY 1, 1958.

ALL QUANTITIES ON PRELIMINARY PLANS ARE TO BE CONSIDERED APPROXIMATE ONLY.

ALL CURVES ARE TO BE SUPERELEVATED AND WIDENED AS PROVIDED BY THE STANDARD SUPERELEVATION SHEET INCLUDED WITH THE PLANS.

ALL POLES ENCRoACHING ON CONSTRUCTION ARE TO BE MOVED BY THE OWNERS.

IT IS ESTIMATED THAT OLD ROAD IS TO BE OBLITERATED AT THE FOLLOWING LOCATIONS:
STA. 202+ TO STA. 212+ L.T.
STA. 263+ TO STA. 295+ L.T.
STA. 330+ TO STA. 336+ L.T.

THICKNESS OF SUB-BASE, SURFACING AND ASPHALTIC PAVEMENT AS SHOWN ON PLANS IS APPROXIMATE ONLY. THESE MATERIALS ARE TO BE PLACED ON THE BASIS OF TONNAGE SHOWN ON PLANS.

FOR PRELIMINARY PLAN QUANTITIES OF ASPHALTIC ROAD MATERIALS AND STONE SCREENINGS, THE FOLLOWING RATES OF APPLICATION WERE USED.

- PRIME COAT MC 0.40 GALS. PER SQ. YD.
- TACK COAT 0.10 GALS. PER SQ. YD.
- SEAL COAT RC 0.35 GALS. PER SQ. YD.
- STONE SCREENINGS 25 LBS. PER SQ. YD.

RATE OF APPLICATION AND GRADE OF ASPHALTIC MATERIAL SHALL BE AS DETERMINED BY THE ENGINEER AT TIME OF APPLICATION.

APPLICATION METHODS, FOR LIQUID ASPHALTIC ROAD MATERIAL, WHICH RESULT IN THE DISCOLORATION OF CONCRETE PAVEMENT, CURBS OR GUTTERS WILL NOT BE PERMITTED.

DURING CONSTRUCTION OF THIS PROJECT, TRAFFIC WILL USE THE PRESENT TRAVELED ROADWAY EXCEPT WHERE DETOURS ARE SHOWN ON PLANS.

FIELD APPROACHES ARE TO BE PRIMED AND PAVED FOUR FEET OUTSIDE THE SHOULDER. ALL OTHER APPROACHES ARE TO BE PRIMED AND PAVED TO APPROXIMATELY FIFTY FEET OUT FROM THE EDGE OF THE ASPHALTIC SURFACING OR TO THE RIGHT-OF-WAY LINE, WHICHEVER IS LESS.

AT THE FOLLOWING LOCATIONS THE FIELD APPROACHES ARE TO BE TWELVE FOOT WIDE IN LIEU OF MINIMUM WIDTH SHOWN ON STANDARD M-2-A:

- STA. 181+46 RT STA. 195+15 LT
- STA. 182+50 LT STA. 217+45 RT & LT

THE FORCE ACCOUNT ITEM "CLEARING OF BUILDING SITES, INCLUDING REMOVAL OF FOUNDATIONS AND APPURTENANCES," SHALL INCLUDE REMOVAL OF ALL FOUNDATIONS, WELLS, OUTHOUSES AND OTHER APPURTENANCES NOT REMOVED BY THE OWNER, AND ANY NECESSARY BACKFILLING OF CELLARS, CESS POOLS, WELLS, ETC., TO PROVIDE NEAT ROADSIDE CONDITIONS. IT IS ESTIMATED THAT THIS ITEM APPLIES AT THE FOLLOWING LOCATIONS:

- STA. 201+ RT
- STA. 238+ LT
- STA. 291+ RT

SUMMARY OF APPROXIMATE QUANTITIES

Rev. 2-26-63 J.W.K. - Items 11, 12, 16, 46, 47, 53, 65 & 72
Rev. 7-17-63 J.W.K. (W.O. 2254)

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	5 0030(12)	3	

SPECIFICATION ITEM NO.	ITEM	UNIT	ROADWAY				MAJOR STRUCTURES				PROJECT TOTALS							
			BOULDER CO.		WELD CO.		BOULDER CO.		WELD CO.									
			W.O. NO. 2254		BRIDGE STA. 127+	C.B.C. STA. 195+	C.B.C. STA. 217+	C.B.C. STA. 236+										
10	CLEARING AND GRUBBING ENTIRE PROJECT	LUMP SUM	(Prorated)		(Prorated)													
11	REMOVAL OF 26 STRUCTURES	LUMP SUM	• (1)		• (25)													
11	RESET MAIL BOXES	LUMP SUM																
11	REMOVAL OF BRIDGE, STA. 127+	LUMP SUM																
11	REMOVAL OF BRIDGE, STA. 182+	LUMP SUM																
11	REMOVAL OF BRIDGE, STA. 195+	LUMP SUM																
11	REMOVING GUARD POSTS	EACH			27													
11	RESET IRRIGATION STRUCTURES	EACH			1													
11	RESET CONCRETE FLARED END SECTIONS	EACH			1													
11	REMOVAL OF 6'x3' C.B.C. STA. 277+	LUMP SUM																
12	REMOVING FENCE	LIN. FT.	1,155	1,800	17,545													18,000
13	UNCLASSIFIED EXCAVATION	CU. YD.	2,925	6,000	59,600	400		25		25		25						63,000
13	UNCLASSIFIED DITCH EXCAVATION	CU. YD.	5		935													1,000
14	UNCLASSIFIED STRUCTURAL EXCAVATION - MISCELLANEOUS	CU. YD.	30	80	820			130		160		110						1,250
14	UNCLASSIFIED STRUCTURAL EXCAVATION - BRIDGES	CU. YD.				250												250
16	STRUCTURE BACKFILL (CLASS X)	CU. YD.	15	220	560	135		30		35		15						310
17	COMPACTION (MODIFIED)	CU. YD.	4,800	8,000	100,200													105,000
17	WETTING	M GAL.	185	230	3,805													3,990
17	WATER (DILUTED EMULSIFIED ASPHALT)	M GAL.	13	10	297													310
18	STATION YARD OVERHAUL	STA. YD.	200	33,000	380,800													381,000
18	YARD MILE OVERHAUL	YD. MI.			6,200													6,200
23	SUBBASE MATERIAL (CLASS 2)	TON	3,200	2,900	67,600													70,800
26	GRAVEL OR CRUSHED ROCK SURFACING (GRADING C)	TON	1,200	700	20,500													21,700
29	ASPHALT (85-100 PENETRATION) (TACK)	TON	1	1	29													30
30	ASPHALTIC ROAD MATERIAL MC (PRIME)	GAL.	1,900	1,300	41,400													43,300
30	ASPHALTIC ROAD MATERIAL RC (SEAL)	GAL.	350	500	12,950													13,300
31	STONE SCREENINGS (TYPE 1)	TON	13	20	467													480
32	PLANT MIXED ASPHALTIC SURFACING	TON	480	130	10,480													10,960
46	CLASS "A" CONCRETE	CU. YD.		98	168.0													1030
47	REINFORCING STEEL	LB.		7,460	15,060	26,50		173.6		243.6		179.8						163,300
48	STRUCTURAL STEEL	LB.				64,440		23,890		34,836		25,014						4,300
52	12" REINFORCED CONCRETE CULVERT PIPE (CLASS II)	LIN. FT.			60													60
52	24" REINFORCED CONCRETE CULVERT PIPE (CLASS II)	LIN. FT.			472													472
52	48" REINFORCED CONCRETE CULVERT PIPE (CLASS II)	LIN. FT.			92													92
53	12" CORRUGATED METAL CULVERT PIPE	LIN. FT.			26													26
53	18" CORRUGATED METAL CULVERT PIPE	LIN. FT.			1,120													1,120
53	24" CORRUGATED METAL CULVERT PIPE	LIN. FT.	70		296													366
53	30" CORRUGATED METAL CULVERT PIPE	LIN. FT.			70													70
53	36" CORRUGATED METAL CULVERT PIPE	LIN. FT.			152													152
53	42" CORRUGATED METAL CULVERT PIPE	LIN. FT.			81													81
65	CONCRETE SLOPE AND DITCH PAVING	CU. YD.			232													232
67	RIPRAP	CU. YD.				210												210
75	METAL PLATE GUARD RAIL (BEAM TYPE)	LIN. FT.				238												238
75	METAL PLATE GUARD FENCE (BEAM TYPE)	LIN. FT.				75												75
76	BARBED WIRE FENCE WITH METAL POSTS	LIN. FT.	130	1,000	18,370													18,500

D. S. M.

▲ WORK ORDER NO 2254 NOT INCLUDED

(Continued on Sheet No. 4)

SUMMARY OF APPROXIMATE QUANTITIES

(Continued from Sheet No 3)

Rev. 2-26-63 J.W.K. - Items 76 & 53 (Thick on 36" Corr. Alum Culv Pipe)
 ~ Force Account.
 Rev. 7-17-63 J.W.K. (W.O. NO. 2254)

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	5 0030 (12)	4	

SPECIFICATION ITEM NO.	ITEM	UNIT	ROADWAY				MAJOR STRUCTURES				PROJECT TOTALS							
			BOULDER CO.		WELD CO.		BOULDER CO.		WELD CO.									
			W.O. NO. 2254				BRIDGE STA. 127+	C.B.C. STA. 195+	C.B.C. STA. 217+	C.B.C. STA. 236+								
76	WALK GATES	EACH			1													
76	COMBINATION WIRE FENCE WITH METAL POSTS ✓	LIN. FT ✓	305	600	3395													4,300
76	DRIVEWAY GATES	EACH	1	1	5													6
76	CORNER AND LINE BRACE POSTS	EACH ✓	6	7	34													40
76	END POSTS	EACH	3	6	67													70
80	SHEET COPPER	LB.																
81	RIGHT OF-WAY MARKERS	EACH ✓	1		14			15										15
89	DRAIN PIPE (4"x1'-6")	EACH						6										6
126	12" SLIDE HEADGATE (4'-0" FRAME) ✓	EACH ✓			1													1
156	PARSHALL METAL MEASURING FLUME ✓	EACH ✓			1													1
192	DELINEATORS TYPE I	EACH	11	3	147													158
192	DELINEATORS TYPE III	EACH	2															2
	FORCE ACCOUNT																	
	OBLITERATING OLD ROAD	LUMP SUM			•													•
	REMOVE CROSSING PLANK, CONSTRUCT TIMBER GRADE CROSSING, PLUG EXISTING 24"x40' R.C.P., PROVIDE AND INSTALL 30"x48' C.M.P. (8 GAGE), 2-RELOCATE REFLECTORIZED RAILROAD CROSSBUCK SIGNS (WORK BY C.B. & Q. R.R. CO. FORCES).	LUMP SUM ✓			•													•
	REMOVE CROSSING PLANK, CONSTRUCT TIMBER GRADE CROSSING, REMOVE 1.5'x1.0'x2.0' WOOD BOX CULVERT UNDER R.R. RT., PROVIDE AND INSTALL 24"x28' C.M.P. LT. & RT. (WORK BY U.P.R.R. FORCES).	LUMP SUM			•													•
	RELOCATE POWER LINES (WORK BY UNION R. E. A. FORCES)	LUMP SUM	• (Prorated)		• (Prorated)													•
	CLEARING AND GRUBBING	LUMP SUM			•													•
	CLEARING OF BUILDING SITES, INCLUDING REMOVAL OF FOUNDATIONS AND APPURTENANCES	LUMP SUM ✓			•													•
	REMOVING BRIDGE, STA. 120+, AND ADDING 1 STRAND TO BARBED WIRE FENCE	LUMP SUM			•													•
	STATE FORCES																	
	REFLECTORIZED RAILROAD ADVANCE WARNING SIGNS	EACH ✓			4													4
	REFLECTORIZED RAILROAD CROSSBUCK SIGNS	EACH ✓			2													2
	REMOVE REFLECTORIZED RAILROAD ADVANCED WARNING SIGNS	EACH			2													2
	* SIGNING AND STRIPING ENTIRE PROJECT	LUMP SUM	•		•													•
	RIGHT OF WAY																	
	RIGHT OF WAY ENTIRE PROJECT INCLUDING MOVING OF BUILDINGS AND APPURTENANCES	LUMP SUM	•		•													•
	ALTERNATE BID ITEMS																	
53	18" CORRUGATED ALUMINUM CULVERT PIPE (0.060" THICK)	LIN. FT.																1,120
53	24" CORRUGATED ALUMINUM CULVERT PIPE (0.060" THICK)	LIN. FT.																366
53	30" CORRUGATED ALUMINUM CULVERT PIPE (0.075" THICK)	LIN. FT.																70
53	36" CORRUGATED ALUMINUM CULVERT PIPE (0.075" THICK)	LIN. FT.																152

D. S. M.

* NON-FEDERAL AID.

▲ WORK ORDER NO. 2254 NOT INCLUDED

STRUCTURE QUANTITIES

Rev. 7-17-63 JWK ~ Sta 121+ to Sta 126+
 Changed to Sta 115+ to Sta 119+

LOCATION	REMOVAL OF STRUCTURES NO.	EXCAVATION CUBIC YARDS		UNCLASSIFIED STRUCTURAL EXCAVATION CUBIC YARDS MISC.	STRUCTURE BACKFILL CUBIC YARDS CLX	GRAVEL OR CRUSHED ROCK SURFACING TONS	ASPHALTIC SURFACING TONS	CONCRETE CUBIC YARDS CL "X"	REINFORCING STEEL LBS.	CORRUGATED METAL CULVERT PIPE LINEAR FEET				CONCRETE PIPE AND DITCH PAVING CU. YD.	REINFORCED CONCRETE CULVERT PIPE (CLASS II) LINEAR FEET		MISCELLANEOUS
		UNCL.	EMB.							UNCL.	DITCH	12"	18"		24"	30"	
115+ to 119+ 124+41			1000 20			18	2										
127+ to 129+ 132+30 132+58 132+82	1		100	5 27	14	108	34			70							
(QUANTITIES IN SUMMARY)																	
TOTALS BOULDER COUNTY																	
133+09				5 27	.18			1.44									
133+39				12	8	18	6										
133+ to 135+ 134+00 134+50				32	8	18	6										
135+13				1	10												
141+34				6	4												
143+24				10	8												
147+13				10	4												
150+83				18	10												
152+12				5	4												
157+70				100													
157+ to 163+																	
158+11																	
158+26				3	16												
158+51				8	4												
159+																	
163+09																	
163+20																	
163+53																	
164+																	
164+78																	
164+88																	
165+50																	
169+																	
171+58																	
173+ to 184+																	
175+35																	
176+52																	
177+26																	
179+ to 182+ 179+90																	
181+30																	
181+46																	
181+77																	
181+87																	

D. S. M.

WORK by STATE FORCES
 1-Remove RR advance warning sign.
 1-Relocated RR advance warning sign.

FORCE ACCOUNT
 Remove crossing plank, Construct timber grade crossing, pluy existing 24x40 R.C. P. Provide & install 30x48 C.M.P. (8 in.)
 2-Relocate ReflectORIZED RR crossbuck signs (Work by C.B. & Q. RR. Forces).

WORK by STATE FORCES
 1-Remove RR advance warning sign.
 1-Relocated RR advance warning sign.

1-Reset Irrig Structures
 1-Parshall Metal Measuring Flume (12" throat x 15 depth).

STRUCTURE QUANTITIES
 (Continued from Sheet No. 5)

LOCATION	REMOVAL OF STRUCTURES		EXCAVATION		UNCLASSIFIED STRUCTURAL EXCAVATION		STRUCTURE BACKFILL		GRAVEL OR CRUSHED ROCK SURFACING		ASPHALTIC SURFACING		CONCRETE		REINFORCING STEEL		CORRUGATED METAL CULVERT PIPE			CONCRETE SLOPE WITH DITCH PAVING		REINFORCED CONCRETE CULVERT PIPE (CLASS II)		MISCELLANEOUS	
	NO.	UNCL.	EMB.	UNCL. DITCH	CUBIC YARDS	CUBIC YARDS	CUBIC YARDS	CL. X	TONS	TONS	CL. "A"	CUBIC YARDS	LBS.	LBS.	12"	18"	24"	30"	36"	42"	CU. YD.	12"	24"		48"
182+00	/	15	30		45	7		18	2	10.53		10,910													
182+45	/		10		20	8		18	2	1.28 (Box)															
182+60						6		18	6	0.97 (H/W)															
182+60 to 182+85						3		18	9																
189+ to 195+						4		18	6																
184+62						3		18	2																
184+75						3		18	2																
186+40						4		18	2																
187+						3		18	2																
188+35						4		18	2																
189+						3		18	2																
194+75						4		18	2																
195+15						4		18	2																
195+30						4		18	2																
195+50						4		18	2																
195+90						4		18	2																
197+64						4		18	2																
202+18						5		18	8																
211+26						6		80	6																
213+50						4		18	6																
215+00						4		50	4																
217+00						2		50	4																
217+14						2		22	4																
217+45						26		22	4																
217+70						18		22	4																
218+50 - 235+10						18		22	4																
223+55						18		22	4																
225+00						15		34	4																
226+00						4		34	4																
235+67						21		18	2																
235+80						2		18	2																
236+00						2		18	2																
236+40						4		18	8																
236+60						4		18	8																
236+80						13		18	8																
237+95						9		18	36																
238+50						28		120	36																
239+00						13		120	36																

(Continued on Sheet No. 7)

STRUCTURE QUANTITIES

(Continued from Sheet No. 6)

Rev. 2-26-63 J.W.K. Conc Sl. & Ditch Box, Uncl.
Ditch Excav. & Conc. Deleted 290+ &
Changed Force Account
Rev. 7-17-63 J.W.K. (W.O. No. 2254)

LOCATION	REMOVAL OF STRUCTURES NO.	EXCAVATION CUBIC YARDS		UNCLASSIFIED STRUCTURAL EXCAVATION CUBIC YARDS	STRUCTURE BACKFILL CUBIC YARDS	GRAVEL OR CRUSHED ROCK SURFACING TONS	ASPHALTIC SURFACING TONS	CONCRETE CUBIC YARDS	REINFORCING STEEL LBS.	CORRUGATED METAL CULVERT PIPE LINEAR FEET				CONCRETE SLOPE AND DITCH PAVING CU. YD.	REINFORCED CONCRETE CULVERT PIPE (CLASS II) LINEAR FEET			MISCELLANEOUS	
		UNCL.	EMB.							UNCL.	DITCH	12"	18"		24"	30"	36"		42"
253+40		5		15	13	18	2												
255+00																			
264+55		10		8	4	15	2												
270+00		5		8	4	18	2												
272+60		90		10	5	20	2												
277+36		40		5	4	35	2	4957	4147										
279+35		55		33	26	18	2												
280+15		85		5	11	40	2												
280+40		20		5	14	24	2												
284+80		65		11	14	24	2												
285+05		100		30	14	110	35												
285+40		40		10	17	21	8												
291+15		27		10	6	20	8												
292+00		55		5	4	15	2												
298+78		65		10	6	20	8												
300+11		30		17	8	15	6												
302+29		30		3	3	15	2												
303+30		20		8	4	15	2												
304+12		10		17	75	30	2												
304+48																			
305+38																			
317+90																			
321+18																			
334+00																			
339+09																			
TOTALS WELD COUNTY	25	435	1822	979	814	1389	316	16791	15,057	26	1120	296	70	152	81	232	60	472	92
TOTALS BOULDER COUNTY	1		1120	5	27	126	36												
WORK ORDER NO. 2254			80			18	2												
		50	70		220	18	2	98	7460										
TOTAL WORK ORDER NO. 2254	25	50	150	80	220	36	4	98	7460										
PROJECT TOTALS	26	435	2942	984	841	1515	352	16791	15,057	26	1120	366	70	152	81	232	60	472	92

D. E. M.

Remove 6'x3 C.B.C.
Work By State Forces
2-ReflectORIZED R.R.
Advance Warning Signs
2-ReflectORIZED R.R.
Crossbuck Signs
Force Account
Remove Crossing Plank; Construct
Timber Grade Crossing; Remove
1.5x10x20' Wood Box Culvert
under R.R. Rt. Provide and
install 24"x28" CMP Lt. & Rt.
(Work by U.P.R.R. Forces)

1-Reset Conc. Flared End Sections (24')

Force Account
Removal of Bridge, Sta. 120+

Does Not Include Work Order No. 2254

Major Structure; Quantities shown in Summary, but not included in Structure Quantities Totals.

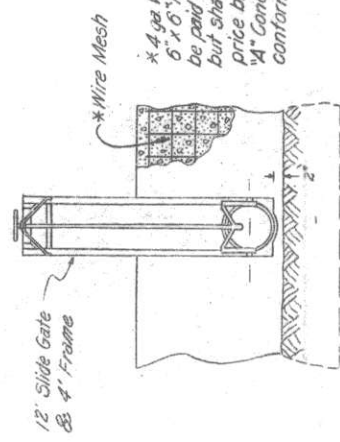
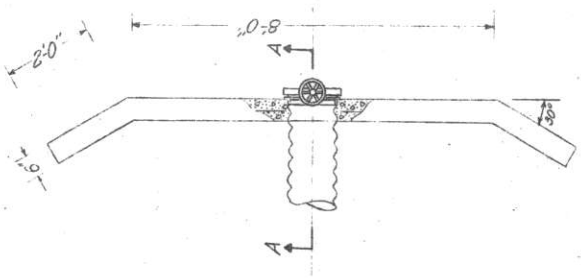
* To be obtained from Ditch Excavation.
α Included in Surfacing Plan.
▲ Allowance for Connecting Band.

FEDERAL ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.
9	COLORADO	50030(12)	8

Rev. 2/28/63 LMK - Added Notes at Detail of C.S.&D.P.

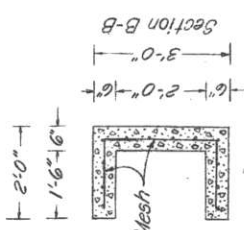
QUANTITIES:

- 1-12" Slide Headgate (4' Frame)
- 0.97 Cu Yds of Class "A" Concrete

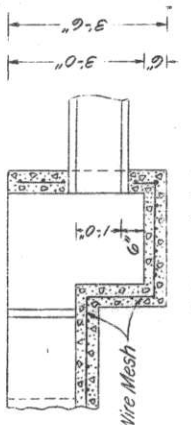
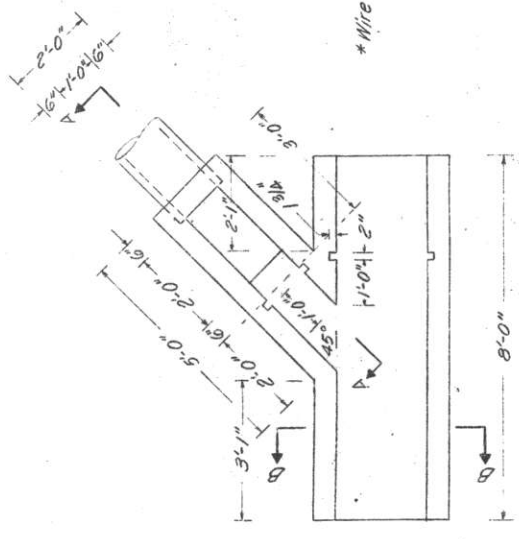


*4 ga Welded Wire Fabric with 6"x6" mesh (6x6x4/4) will not be paid for as a separate item, but shall be included in the price bid per Cu. Yd. for Class "A" Concrete. Wire Fabric shall conform to AASHTO Spec. 55.

Section A-A
DETAIL OF HEADGATE & CONCRETE HEADWALL
Station 182+85, Lt.

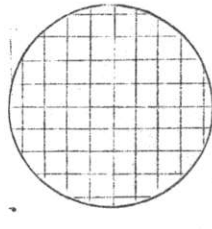


*Wire Mesh
1.44 Cu Yds. Concrete
0.011 M Ft. bm.
Miscellaneous Timber

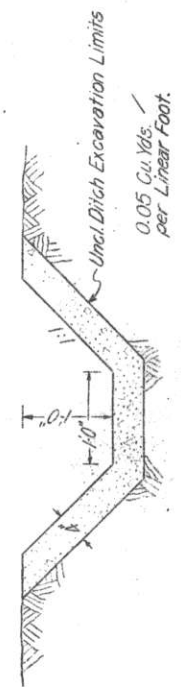


Section A-A
DETAILS OF DIVISION BOX
Station 133+39 Rt.

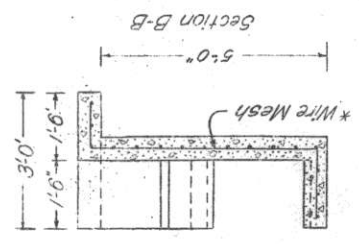
* WIRE MESH



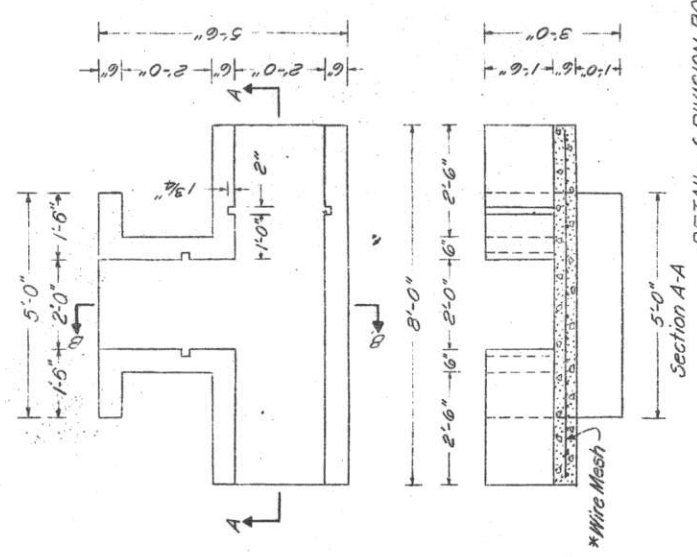
4 gauge Wlded Wire Fabric
6"x6" mesh (6x6x4/4)



DETAIL OF
CONCRETE SLOPE & DITCH PAVING
Transverse expansion joints shall be placed perpendicular to centerline of ditch at intervals of 30' feet.



1.28 Cu Yds. Conc.
0.014 M Ft. bm.
Miscellaneous Timber



Section A-A
DETAIL OF DIVISION BOX
Station 179+90 Rt, 181+30 Rt, 182+60 Lt, 187+ Lt, 189+ Lt.

For flashboards - Not to be paid for as separate item. To be included in cost bid for concrete.

Revised: Reinf. steel, class "A" concrete
 & Skew angle on 20'x14' CBC to Sta 217+14.0
 (DBS - JHT 26 Feb 63)

REV. NO.	DESCRIPTION	PROJECT NO.	DATE
0	CONS.	50030(12)	10

STATION 182+45

BAR LIST ~ I HEADWALL

Mark Size	No. Reinf.	Length	Type	Dimension
401 1/2"	4	18'-0"	Str.	18'-0"
402	19	5'-6"	I	1'-9" 8"
403	22	4'-0"	II	2'-7" 1'-5"
404	27	5'-8"	Str.	
405	3	14'-8"	Str.	
406	2	14'-4"	Str.	
418	2	11'-0"	Str.	
419 1/2"	3	2'-4"	Str.	
701 1/2"	6	13'-0"	Str.	
702	6	12'-5"	Str.	
719	2	2'-6"	Str.	
1001 1/2"	4	18'-0"	Str.	

SUMMARY
 684 lin. ft. #4 @ 0.668 pif = 457 lb.
 346 lin. ft. #5 @ 2.044 pif = 708 lb.
 72 lin. ft. #6 @ 4.303 pif = 310 lb.
 +1% ± overrun = 15 lb.
 Total = 1490 lb.

STATION 236+60

BAR LIST ~ I HEADWALL

Mark Size	No. Reinf.	Length	Type	Dimension
425 1/2"	6	23'-0"	Str.	23'-0"
426	24	6'-4"	I	2'-2" 8"
427	27	4'-0"	II	2'-7" 1'-5"
428	14	6'-6"	Str.	
429	3	11'-2"	Str.	
430	2	11'-2"	Str.	
450	2	2'-0"	Str.	
451 1/2"	3	2'-0"	Str.	
901 1/2"	6	21'-0"	Str.	
902	6	20'-3"	Str.	
919	2	3'-3"	Str.	
1002 1/2"	6	23'-0"	Str.	

SUMMARY
 805 lin. ft. #4 @ 0.668 pif = 538 lb.
 569 lin. ft. #5 @ 3.400 pif = 1867 lb.
 138 lin. ft. #6 @ 4.303 pif = 594 lb.
 +1% ± overrun = 31 lb.
 Total = 3030 lb.

STATION 195+30

BAR LIST ~ I HEADWALL

Mark Size	No. Reinf.	Length	Type	Dimension
425 1/2"	6	23'-0"	Str.	23'-0"
426	24	6'-4"	I	2'-2" 8"
427	27	4'-0"	II	2'-7" 1'-5"
435	14	7'-0"	Str.	
456	4	10'-4"	Str.	
457	2	2'-0"	Str.	
477	2	2'-0"	Str.	
478 1/2"	4	2'-0"	Str.	
931 1/2"	6	21'-0"	Str.	
932	6	20'-0"	Str.	
947	2	3'-9"	Str.	
1002 1/2"	6	23'-0"	Str.	

SUMMARY
 804 lin. ft. #4 @ 0.668 pif = 537 lb.
 506 lin. ft. #5 @ 3.400 pif = 1720 lb.
 138 lin. ft. #6 @ 4.303 pif = 594 lb.
 +1% ± overrun = 29 lb.
 Total = 2880 lb.

STATION 217+14

BAR LIST ~ I HEADWALL

Mark Size	No. Reinf.	Length	Type	Dimension
420 1/2"	34	6'-6"	Str.	
481	6	34'-4"	Str.	
482	33	9'-0"	I	3'-0" 1'-7"
483	36	4'-11"	II	2'-7" 2'-4"
484	3	30'-4 1/2"	Str.	
485	2	13'-3 1/2"	Str.	
4105	2	4'-4"	Str.	
4106 1/2"	3	4'-4"	Str.	
951	2	20'-6"	Str.	
9100	2	3'-1 1/2"	Str.	
9101 1/2"	14	21'-0"	Str.	
1101 1/2"	12	34'-4"	Str.	

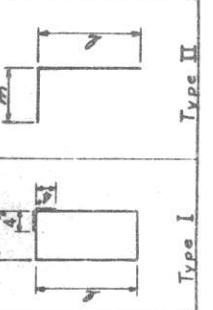
SUMMARY
 1762 lin. ft. #4 @ 0.668 pif = 1177 lb.
 1476 lin. ft. #5 @ 3.400 pif = 5018 lb.
 412 lin. ft. #6 @ 5.313 pif = 2189 lb.
 +1% ± overrun = 86 lb.
 Total = 8470 lb.

SUMMARY OF QUANTITIES

Str. No.	Size	Sta.	Description	Unit	Total
	12'-4"	182+45	Class "A" Concrete	Cu. Yd.	12.4
			Reinf. Steel (incl. 18% overrun)	Lb.	1490
	20'-4"	195+30	Class "A" Concrete	Cu. Yd.	17.4
			Reinf. Steel (incl. 18% for overrun)	Lb.	2880
	20'-4"	217+14	Class "A" Concrete	Cu. Yd.	52.6
			Reinf. Steel (incl. 18% for overrun)	Lb.	8470
	20'-4"	236+60	Class "A" Concrete	Cu. Yd.	18.3
			Reinf. Steel (incl. 18% for overrun)	Lb.	3030

* For one headwall
 Note: For box quantities see Std. M-46-C.
 For wingwalls see Std. M-46-E.

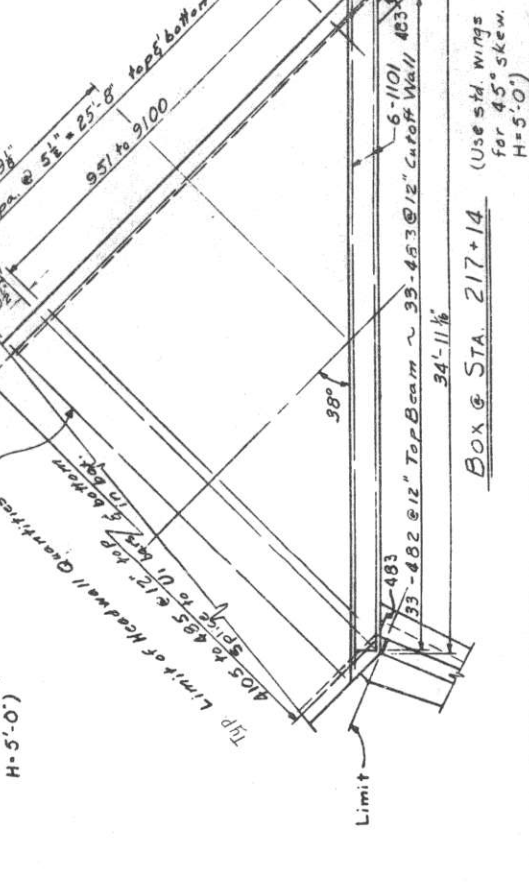
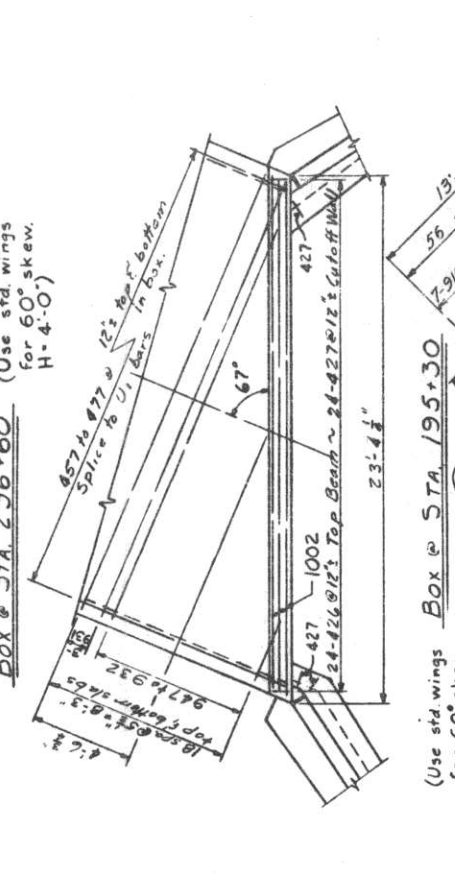
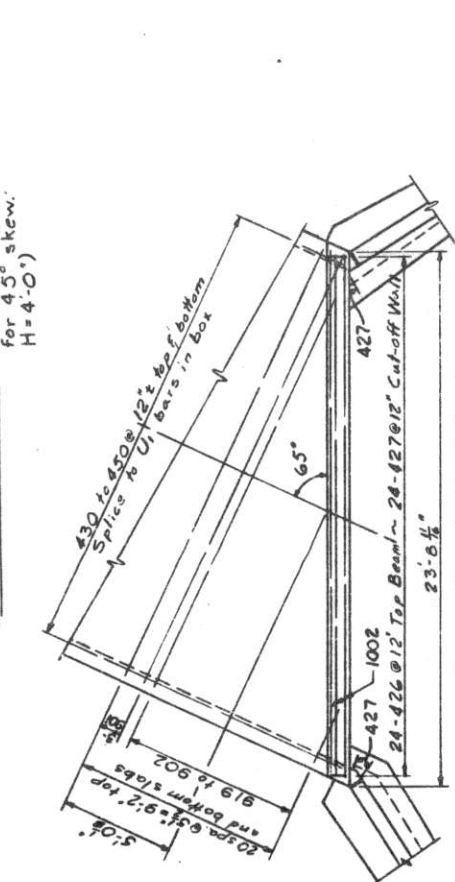
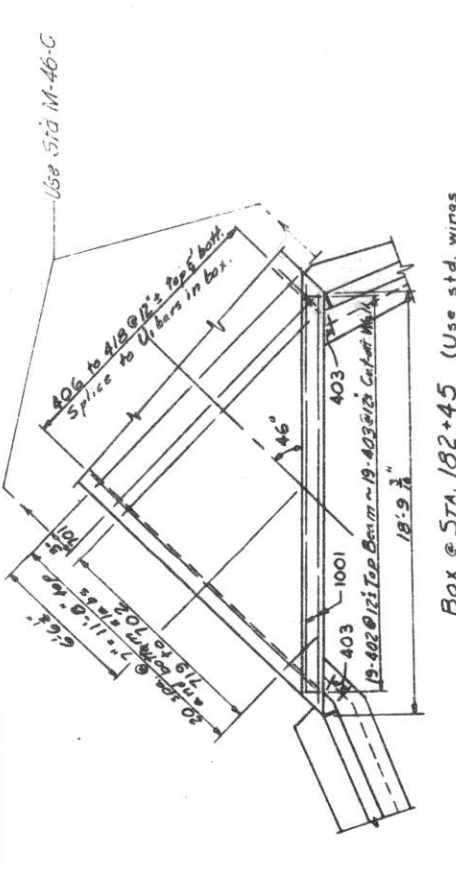
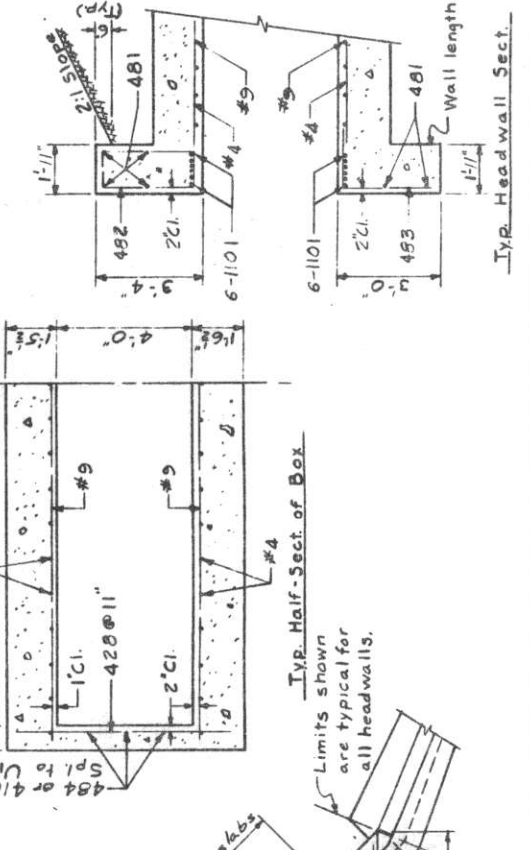
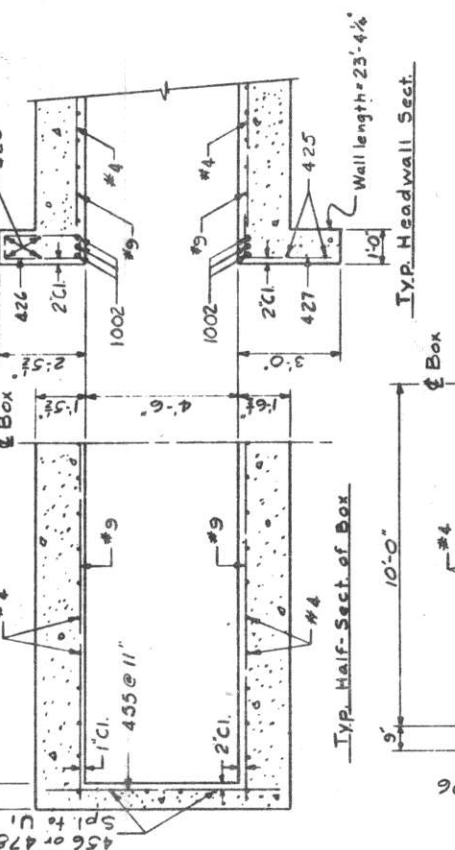
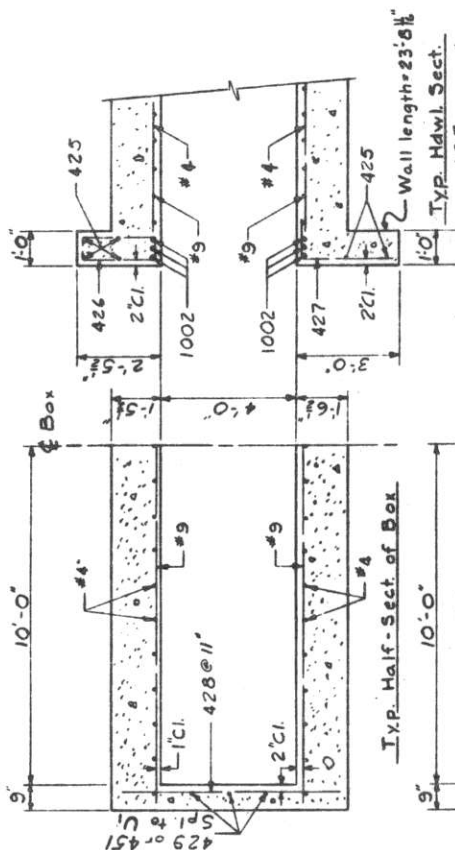
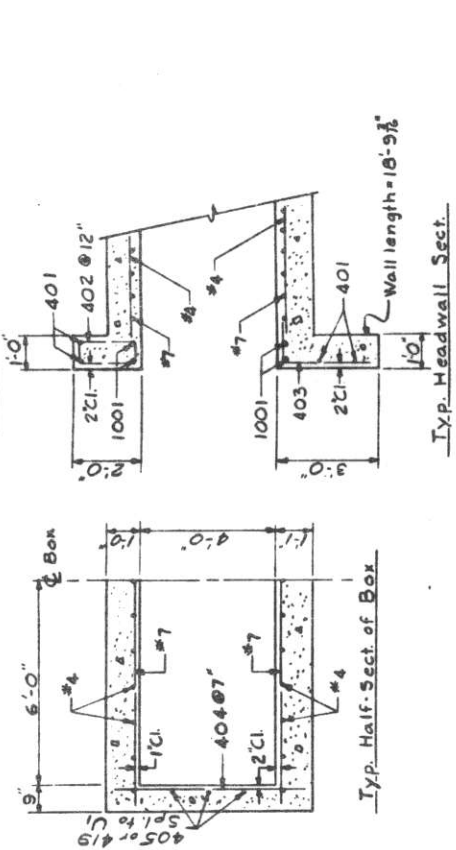
BENDING DIAGRAMS



COLORADO
 DEPARTMENT OF HIGHWAYS
 SPECIAL HEADWALL
 DETAILS

Approved by DBS
 Made by DBS
 Checked by DBS

Station: 195+30, 217+14, 236+60



FED. ROAD REG. NO.	DIVISION	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	50030(12)	12	

COLORADO
DEPARTMENT OF HIGHWAYS

BENDING DIAGRAMS & BAR LIST

Across *BOULDER CREEK*
Sta. *17+78.0 To 19+01.5*
Near *Paritan* Sec. *136 T12N R69W*

Designed by *W. J. B.*
Made by *J. B.*
Checked by *J. B.*
Date: *April 2-1962*

BAR LIST - Pier N^o 2
(Per N^o 3 Similar except as noted)

Mark	Size	No. Req'd	Length	Type	Dimensions
					l m
415	1/2"	24	7'-4"	I	1'-8" 7'-8"
416	3/4"	18	20'-0"	Str.	
417	1"	18	21'-0"	IV	10'-2" 8"
418	1 1/4"	12	4'-0"	XIII	1'-8" 1'-2"
419	1 1/2"	1	13'-0"	Str.	
505	3/8"	37	8'-4"	I	2'-2" 1'-8"
506	3/8"	24	5'-0"	Str.	
601	1/2"	2	30'-8"	Str.	
803*	1"	8	3'-0"	Str.	
804	1"	3	20'-0"	Str.	
1110	1 1/2"	2	30'-8"	Str.	
1111	1 1/2"	8	10'-6"		
1112	1 1/2"	8	13'-3"		
1113	1 1/2"	8	3'-6"	Str.	

SUMMARY - Pier N^o 2

975 Lin Ft 1/2" @ 0.668 lbs/linft = 651 Lbs
 428 Lin Ft 3/4" @ 1.043 lbs/linft = 446 Lbs
 61 Lin Ft 1" @ 1.502 lbs/linft = 92 Lbs
 84 Lin Ft 1 1/4" @ 2.670 lbs/linft = 224 Lbs
 279 Lin Ft 1 1/2" @ 5.313 lbs/linft = 1,482 Lbs
 Plus 1% for Overrun = 30 Lbs
Total = 2,925 Lbs

SUMMARY - Pier N^o 3

975 Lin Ft 1/2" @ 0.668 lbs/linft = 651 Lbs
 428 Lin Ft 3/4" @ 1.043 lbs/linft = 446 Lbs
 61 Lin Ft 1" @ 1.502 lbs/linft = 92 Lbs
 60 Lin Ft 1 1/4" @ 2.670 lbs/linft = 160 Lbs
 279 Lin Ft 1 1/2" @ 5.313 lbs/linft = 1,482 Lbs
 Plus 1% for Overrun = 29 Lbs
Total = 2,860 Lbs

* This bar in Pier N^o 2 only.

BAR LIST - Abutment N^o 1
(Abutment N^o 2 Similar)

Mark	Size	No. Req'd	Length	Type	Dimensions
					l m
406	1/2"	6	33'-8"	Str.	
407	1"	12	10'-0"	VIII	3'-8" 2'-8"
408	1 1/4"	4	13'-4"	I	4'-8" 1'-8"
409	1 1/2"	36	5'-6"	Str.	
410	2"	20	4'-8"	Str.	
411	2 1/2"	4	8'-8"	Str.	
412	1/4"	14	7'-4"	I	1'-8" 1'-8"
413	1/4"	40	7'-6"	Str.	
420	1/4"	24	6'-6"	Str.	
421	1/4"	22	10'-3"	VIII	3'-9 1/2" 2'-9 1/2"
422	1/4"	5	10'-6"	VIII	3'-11" 2'-11"
901	1 1/2"	4	33'-8"	Str.	
902	1 1/2"	8	9'-0"		
903	1 1/2"	4	20'-0"		
904	1 1/2"	6	9'-5"	Str.	

SUMMARY

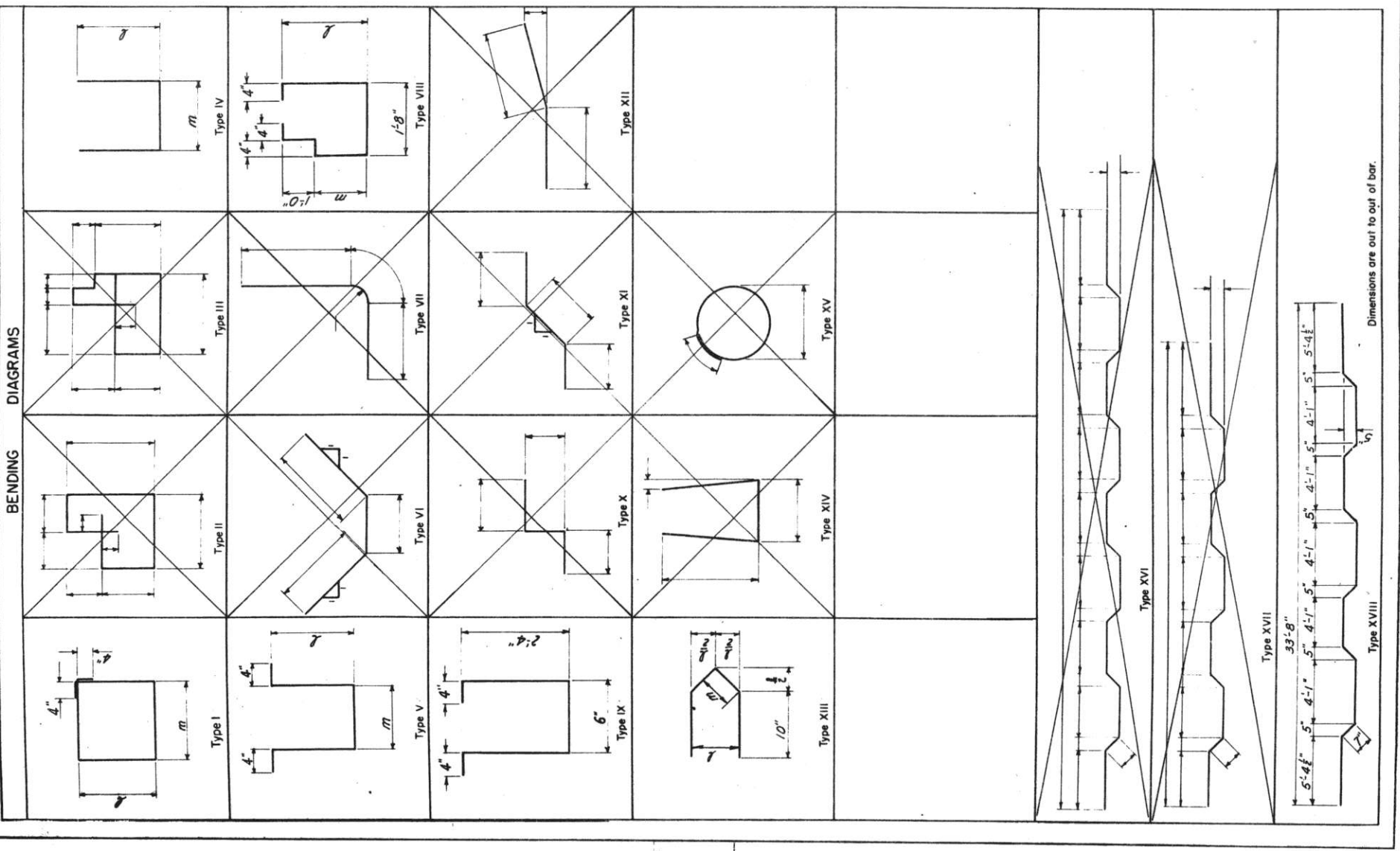
1538 Lin Ft 1/2" @ 0.668 lbs/linft = 1,027 Lbs
 343 Lin Ft 1" @ 1.502 lbs/linft = 515 Lbs
 Plus 1% for Overrun = 22 Lbs
Total = 2,215 Lbs

BAR LIST - SUPERSTRUCTURE

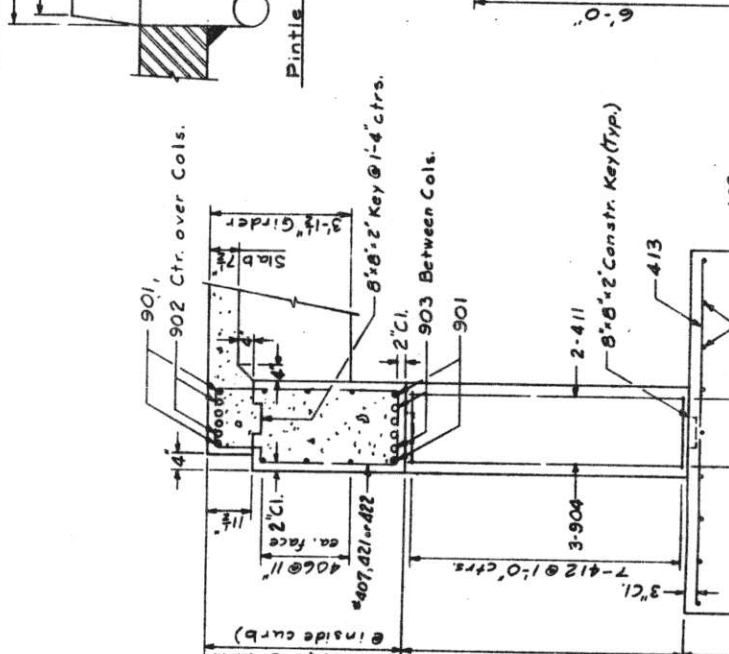
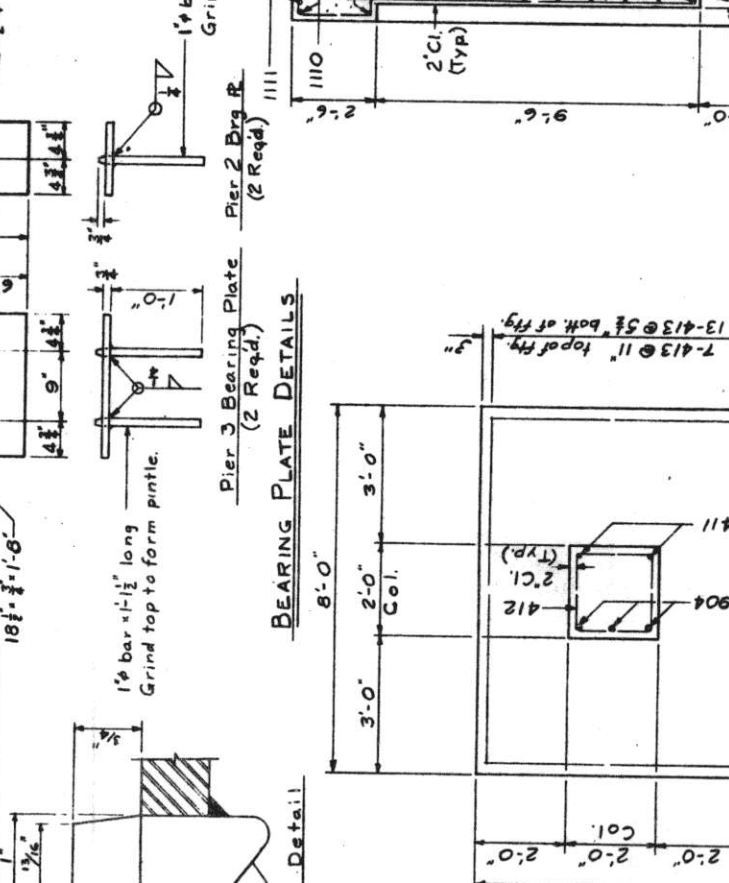
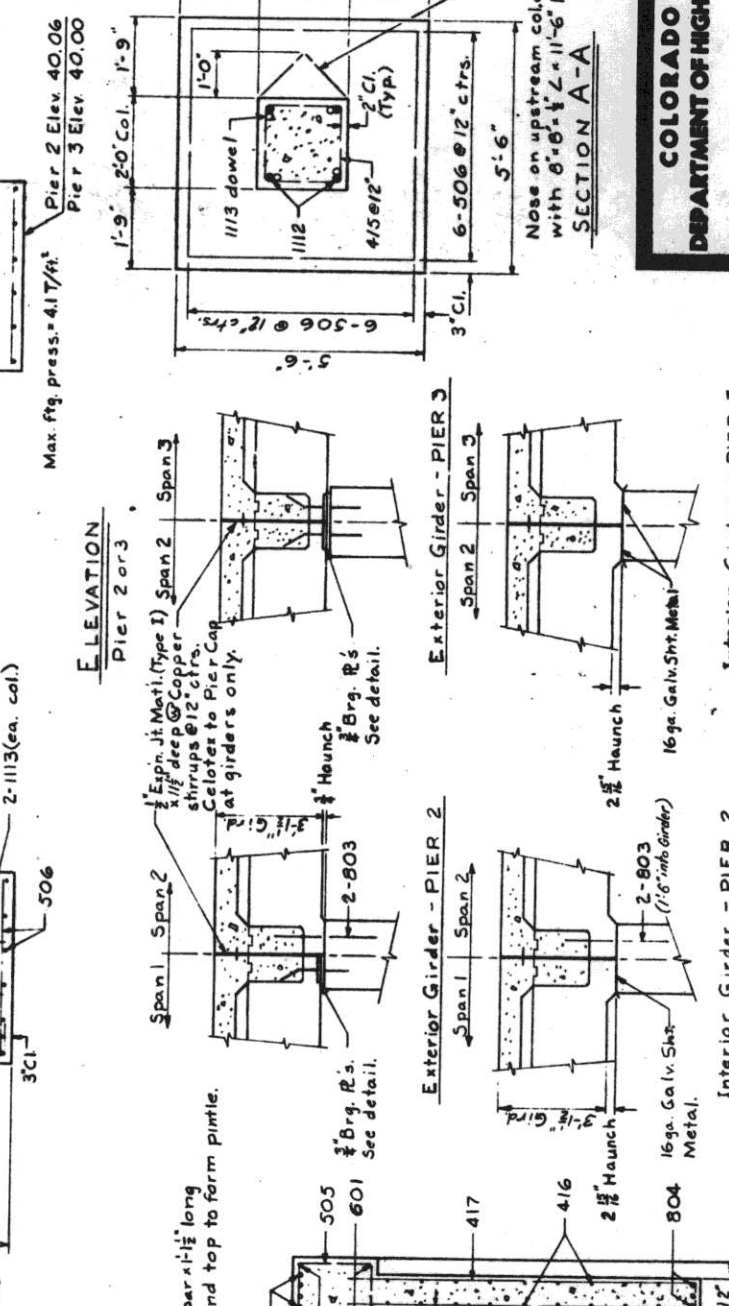
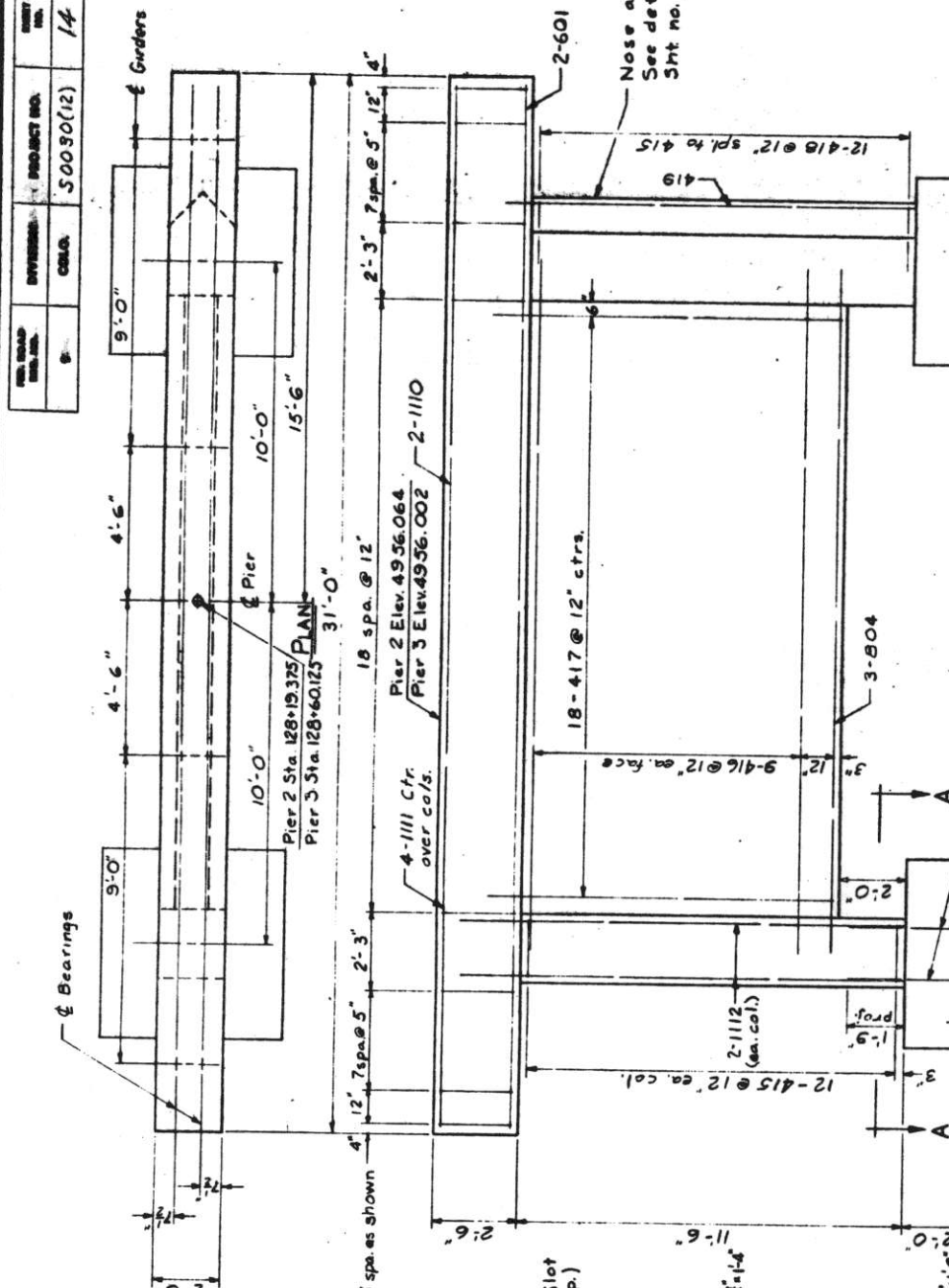
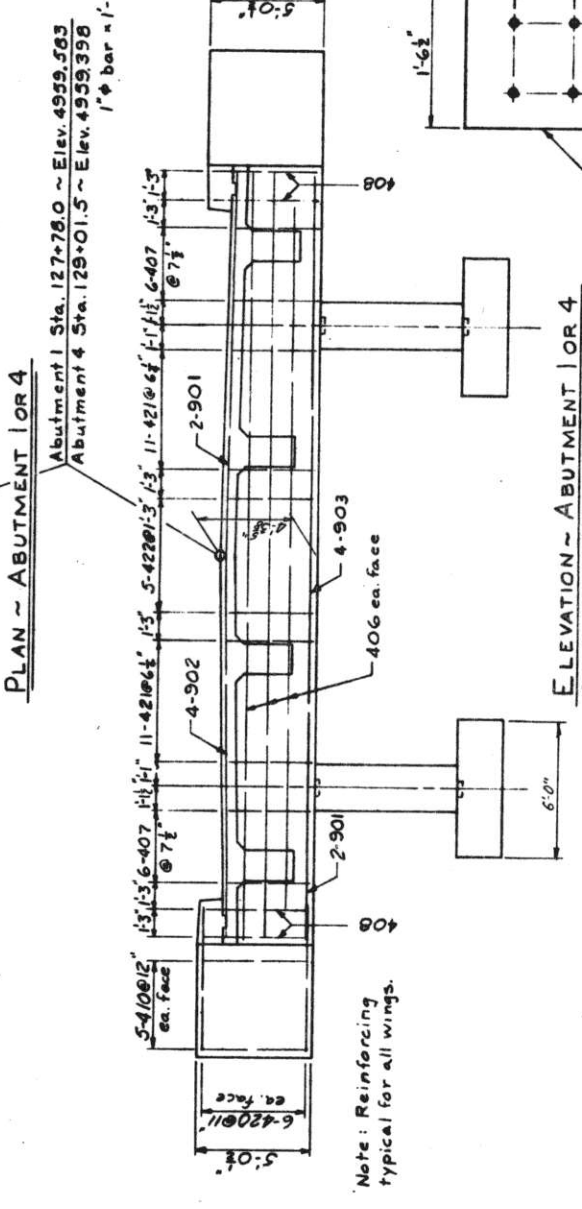
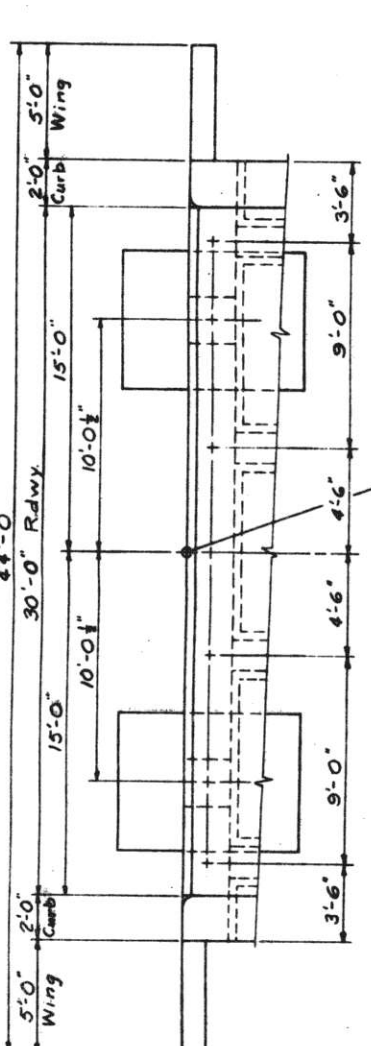
Mark	Size	No. Req'd	Length	Type	Dimensions
					l m
401	1/2"	268	20'-9"	Str.	
402	1"	134	20'-7"	Str.	
403	1 1/4"	250	4'-4"	IV	1'-4" 1'-8"
404	1 1/2"	80	4'-2"	I	1'-3" 6"
405	1 1/2"	784	7'-5"	V	2'-10" 1'-1"
414	1 1/2"	120	5'-10"	IX	
430	1 1/2"	90	5'-10"	V	2'-4" 6"
501	3/8"	254	33'-8"	Str.	
502	3/8"	127	34'-8"	VIII	
801	1"	8	33'-8"	Str.	
802	1"	14	28'-0"	Str.	
1101	1 1/2"	32	41'-1"	Str.	
1102	1 1/2"	24	38'-0"		
1103	1 1/2"	24	34'-6"		
1104	1 1/2"	24	29'-0"		
1105	1 1/2"	24	23'-0"		
1106	1 1/2"	16	40'-6"	Str.	
1107	1 1/2"	16	10'-6"	Str.	

SUMMARY

16,745 Lin Ft 1/2" @ 0.668 lbs/linft = 11,188 Lbs
 12,854 Lin Ft 1" @ 1.502 lbs/linft = 13,511 Lbs
 661 Lin Ft 1 1/4" @ 2.670 lbs/linft = 1,765 Lbs
 5,119 Lin Ft 1 1/2" @ 5.313 lbs/linft = 27,197 Lbs
 Plus 1% for Overrun = 534 Lbs
Total = 54,195 Lbs



REV. NO.	DESCRIPTION	DATE	TOTAL SHEETS
1	50090(12)	14	



COLORADO DEPARTMENT OF HIGHWAYS
ABUTMENT AND PIER DETAILS
 BOULDER CREEK
 Sta. 127+78.0 to 129+01.5
 Design by PC
 Checked by DBS
 Date: Sept. 25, 1962

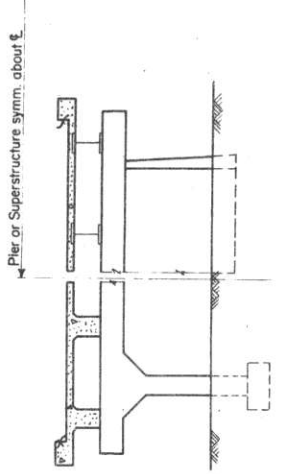
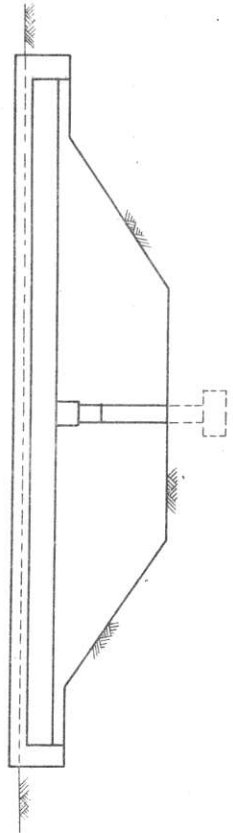
Note: Cover pintle holes in top plates when pouring girder concrete.

SECTION @ PIER

FOOTING PLAN

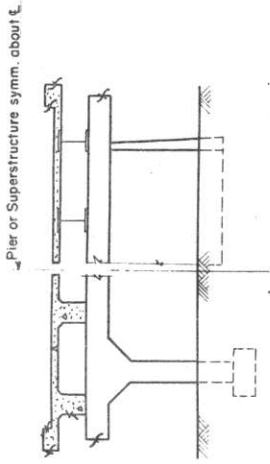
ABUTMENT TYPICAL SECTION
 Max. fig. press. = 3.2 T/ft.

FED. ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	50030 (12)	16	



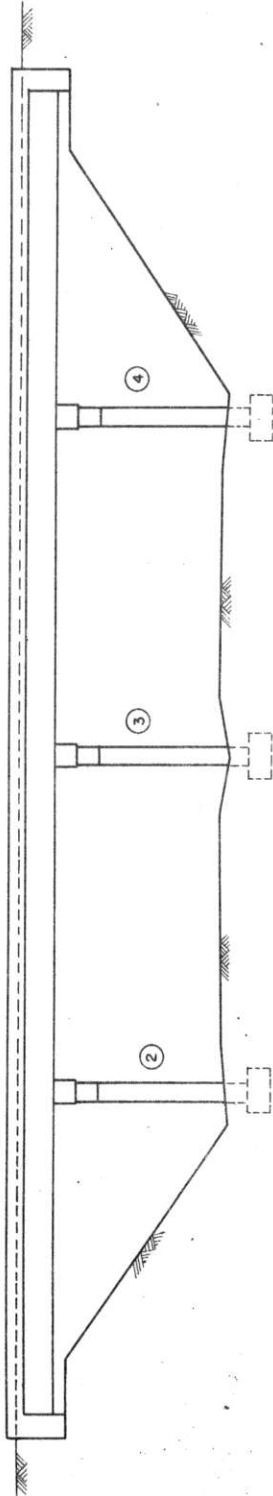
PIER AND SUPERSTRUCTURE

RURAL STREAM CROSSING

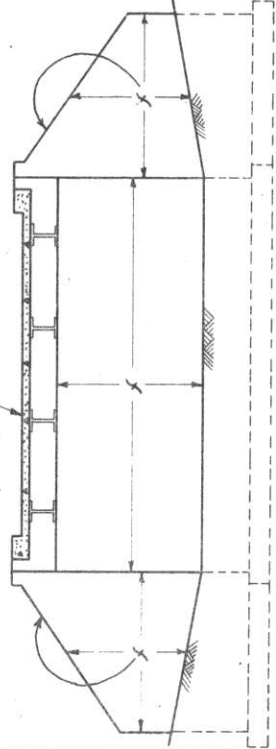


PIER AND SUPERSTRUCTURE

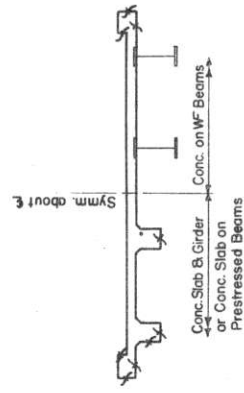
STREAM CROSSING IN OR NEAR URBAN AREA



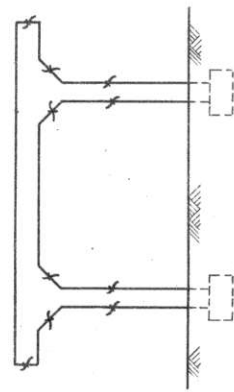
STUB ABUTMENTS
(Underpass Only)



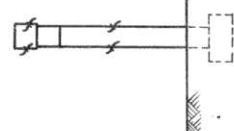
CANTILEVER ABUTMENTS
(Underpass Only)



Superstructure



All Piers



Piers 2, 3 & 4

In case of round columns the whole column shall receive Class "I" finish on all Piers.

UNDERPASS

COLORADO
 DEPARTMENT OF HIGHWAYS
 DETAILS SHOWING PORTIONS OF STRUCTURE TO RECEIVE CLASS "I" SURFACE FINISH.

Across Boulder Creek
 Sta. 127+78.0 to 129+01.5
 Near Puritan Sec. 1/4 - T. 12N R. 69W

Designed by A.D.N. Approved by *[Signature]*
 Made by R.R.A.-J.B. Bridge Engineer
 Checked by *[Signature]* Date: *[Date]*

PLEASE DO NOT TRIM

SW 1/4 Sec. 36

T.2N. R.69W

SE 1/4 Sec. 36

First Line Sheet Note is on Sheet No. 34

FED. ROAD DIST. NO.	9
DIVISION	COLO.
PROJ. NO.	S 0030 (12)
SHEET NO.	333
TOTAL SHEETS	

Rev 7-17-63 JWH added this sheet (NO No. 2254)

D. S. M.

$A=4.25'$
 $D=2'00''$
 $T=110.4'$
 $L=220.8'$
 $R=2865.0'$

1185+ Road Appr. Lt.

P.C. 114+29.2

P.I. 113+18.8

P.C. 114+29.2

P.I. 115+39.6

P.C. 115+08.4 (Present Road)

P.I. 117+02.2

P.I. 118+39.6

P.I. 119+50

P.T. 119+50

P.T. 119+50

P.T. 119+50

P.T. 119+50

P.T. 119+50

P.T. 119+50

P.T. 119+50

P.T. 119+50

P.T. 119+50

P.T. 119+50

P.T. 119+50

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P.T. 119+50

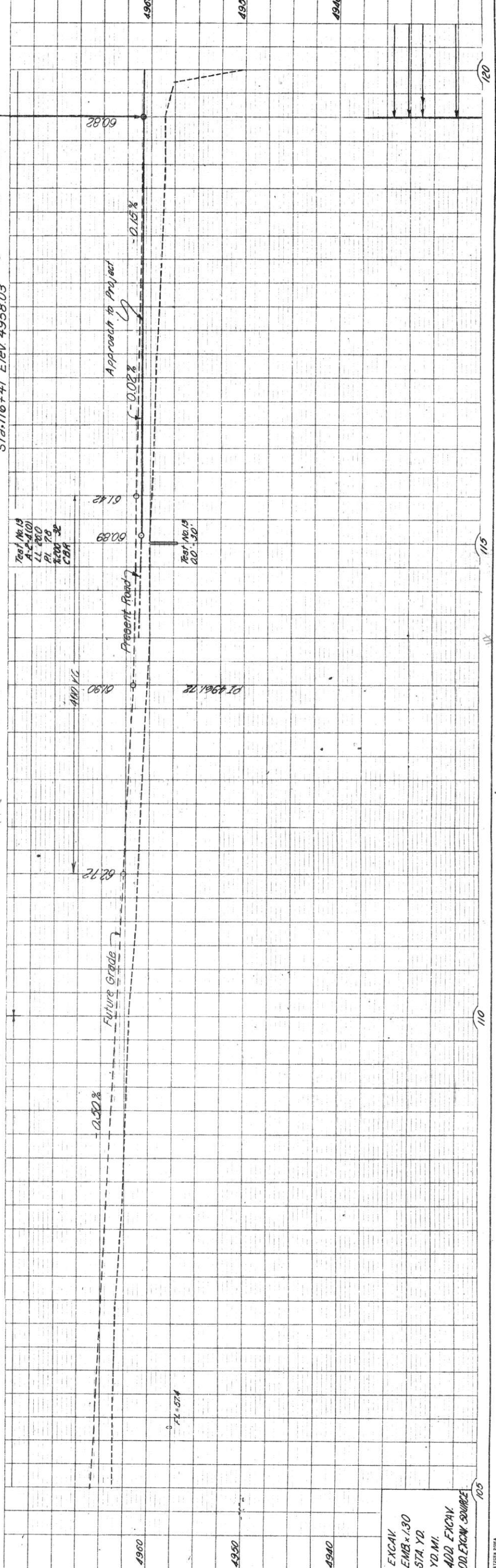
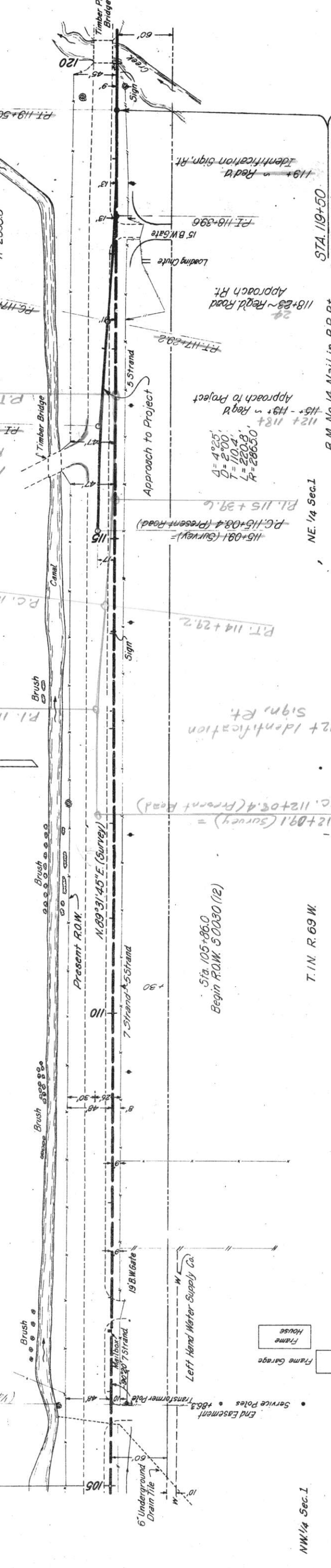
P.T. 119+50

P.T. 119+50

P.T. 119+50

P.T. 119+50

P.T. 119+50



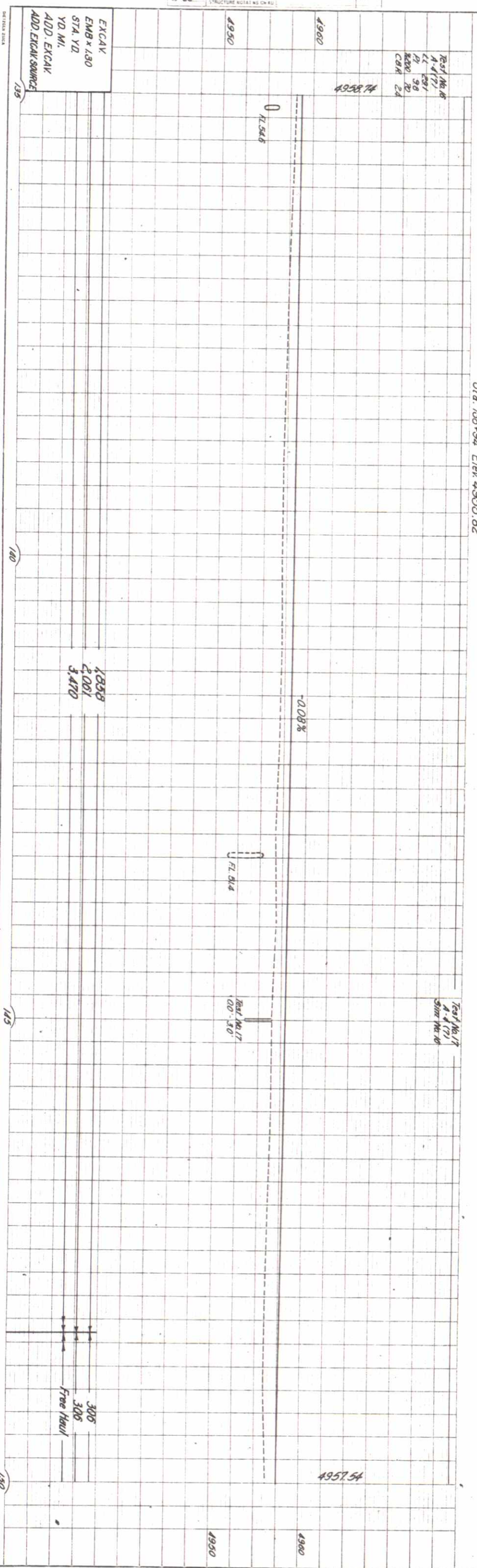
EXCAV
 EMB. 1.30
 STA. YD.
 YD. MI.
 ADD EXCAV.
 ADD EXCAV SOURCE

NO.	DATE	BY	REVISION
1			
2			
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PLEASE DO NOT TRIM

PLAN	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO. 22863	ALIGNMENT CHECKED		
NO. 22864	BY OF WAY CHECKED		

PROFILE	SURVEYED	BY	DATE
OFF. FORM	PLOTTED		
NO. 60	GRADES TAKEN		
	B. M. + NOTE		
	STRUCTURE NOTATIONS ON RD.		



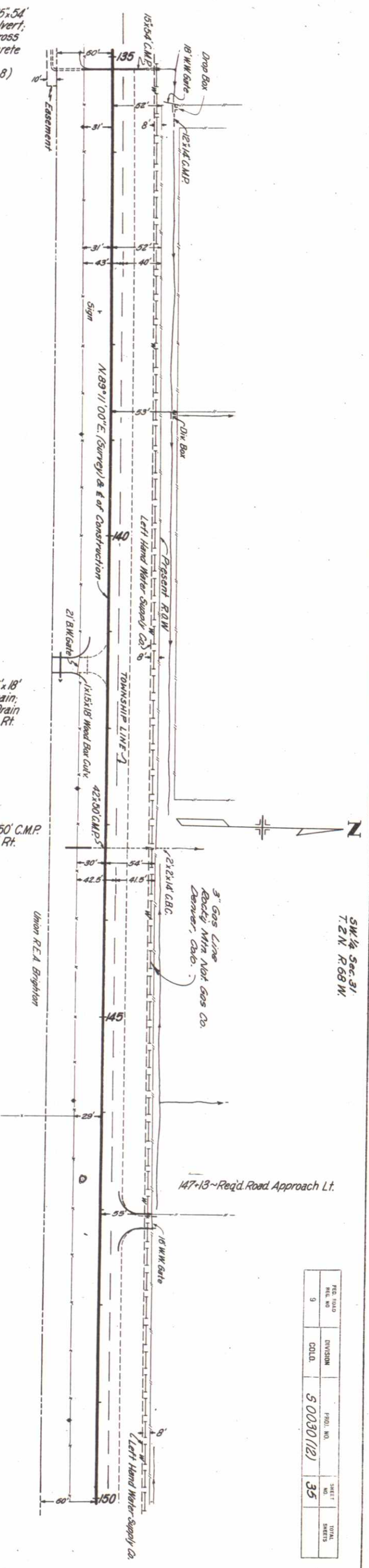
135+13 ~ Remove 15x54 C.M.P. Cross Culvert; Req'd. 18x68 Cross Culvert, & Concrete Lined Ditch Lt (Detail on Sheet No 8)

141+34 ~ Remove 1x1.5x18' Wood Box Side Drain, Req'd. 18x26 Side Drain & Road Approach Rt.

143+24 ~ Extend 42x50' C.M.P. Cross Culvert 28' Rt.

NW 1/4 Sec 6 T. 2 N. R. 68 W.

CLEARING AND GRUBBING STA 146+ Pt ~ Remove 1 Tree

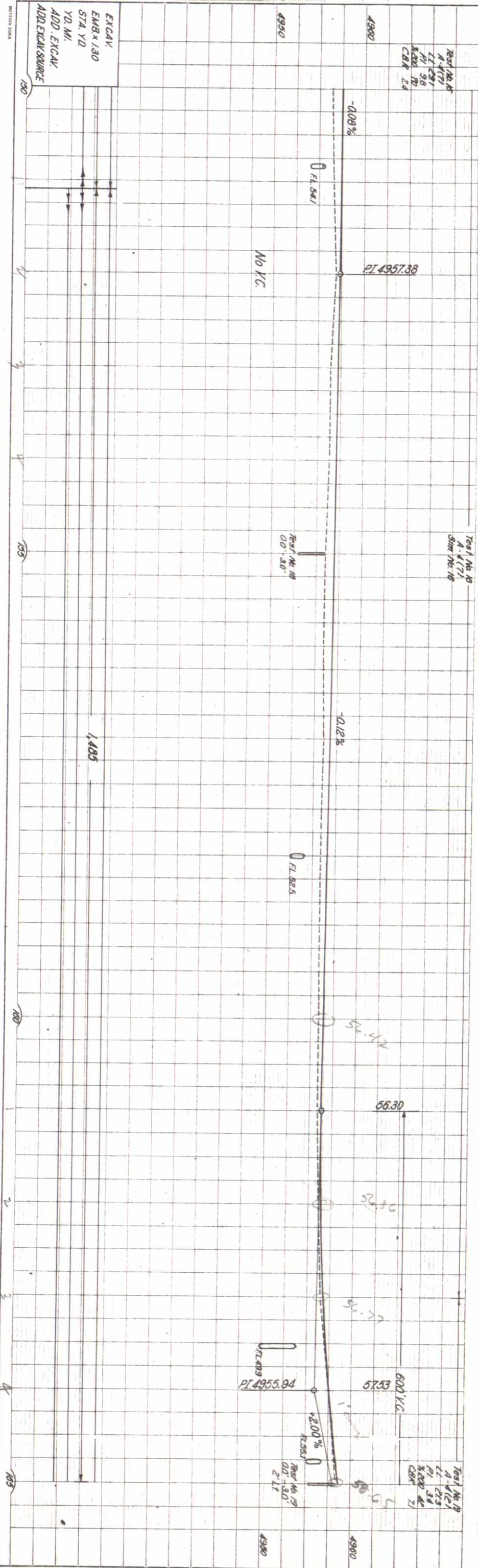


FED. ROAD	DIVISION	FILE NO.	SHEET	TOTAL
9	COLL.	5 0030 (12)	35	SHEETS

PROFILE	BY	DATE
SURVEYED P. OTTLE GRADES CHECKED S. M. NOTED STRUCTURE NOTATIONS CHECKED		

PLAN	BY	DATE
SURVEYED P. OTTLE ALIGNED CHECKED R.L. OF WAY CHECKED		

22263
22264
22265



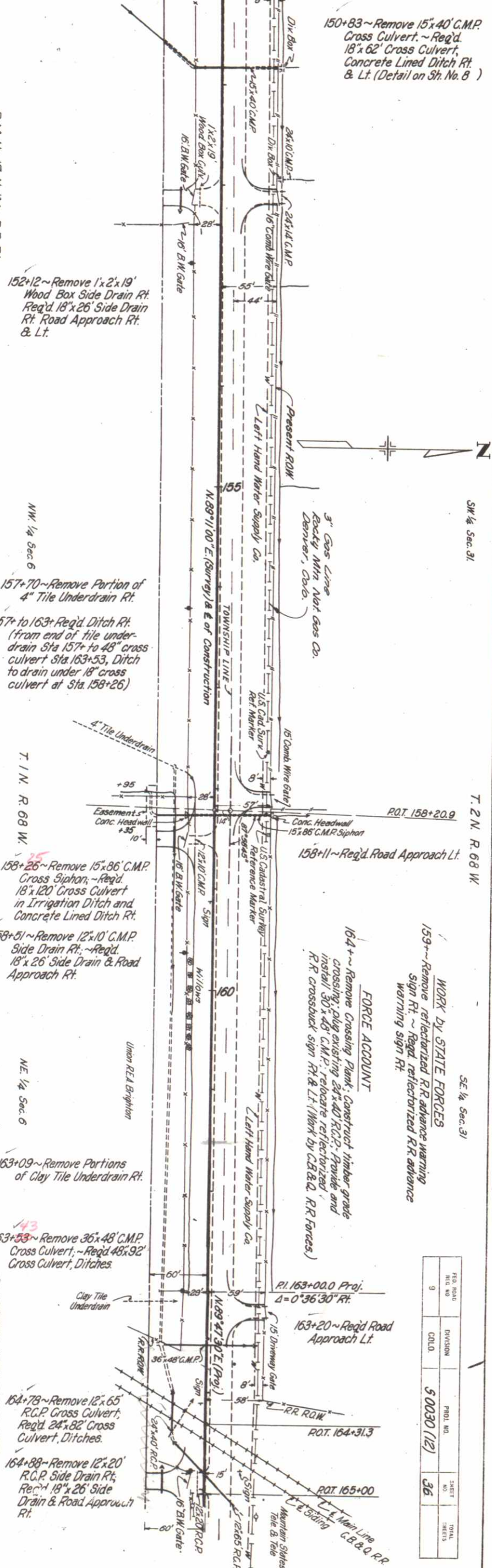
B.M. No. 17 Nail in P.P. Rt.
Sta 152+77 Elev. 4956.41

Test No. 18
A-1171
Silt No. 18

T. 1 N. R. 68 W.

NE 1/4 Sec. 6

CLEARING AND GRUBBING
Sta 159+ to Sta 160+ ~ Remove Willows Rt.



150+83 ~ Remove 15'x40' C.M.P. Cross Culvert. ~ Req'd. 18'x62' Cross Culvert, Concrete Lined Ditch Rt. & Lt. (Detail on Sh. No. 8)

152+12 ~ Remove 1'x2'x19' Wood Box Side Drain Rt. Req'd. 18'x26' Side Drain Rt. Road Approach Rt. & Lt.

157+70 ~ Remove Portion of 4" Tile Underdrain Rt.

157+ to 163+ Req'd. Ditch Rt. (from end of tile underdrain Sta 157+ to 48" cross culvert Sta 163+53, Ditch to drain under 18" cross culvert at Sta 158+26)

158+26 ~ Remove 15'x86' C.M.P. Cross Siphon. ~ Req'd. 18'x120' Cross Culvert in Irrigation Ditch and Concrete Lined Ditch Rt.

158+51 ~ Remove 12'x10' C.M.P. Side Drain Rt. ~ Req'd. 18'x26' Side Drain & Road Approach Rt.

163+09 ~ Remove Portions of Clay Tile Underdrain Rt.

163+53 ~ Remove 36'x48' C.M.P. Cross Culvert. ~ Req'd. 48'x92' Cross Culvert, Ditches.

164+78 ~ Remove 12'x65' R.C.P. Cross Culvert. Req'd. 24'x82' Cross Culvert, Ditches.

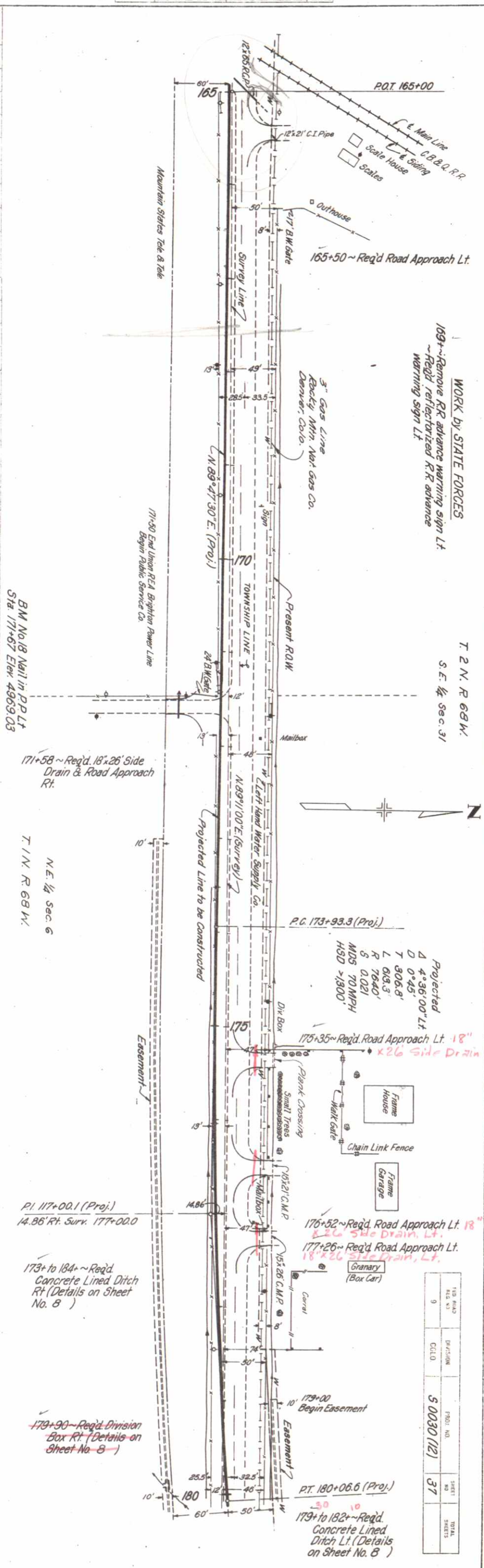
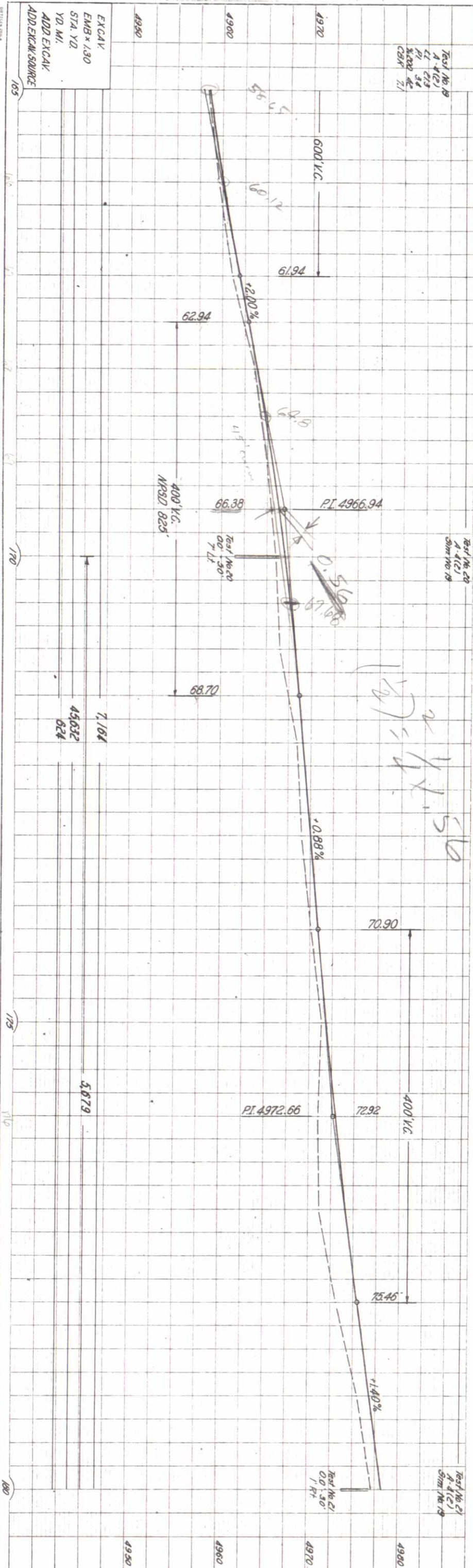
164+88 ~ Remove 12'x20' R.C.P. Side Drain Rt. Req'd. 18'x26' Side Drain & Road Approach Rt.

WORK BY STATE FORCES
159+ ~ Remove reflectorized R.R. advance warning sign Rt. ~ Req'd. reflectorized R.R. advance warning sign Rt.
164+ ~ Remove Crossing Plank. Construct timber grade crossing, plug existing 24'x40' R.C.P. Provide and install 30'x40' C.M.P. relocate reflectorized R.R. crossback sign Rt. & Lt. (Work by C.B. & Q. R.R. Forces)

FILE NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	5 0030 (12)	36	

PLAN	DATE
NO.	BY
22863	
22864	
22865	

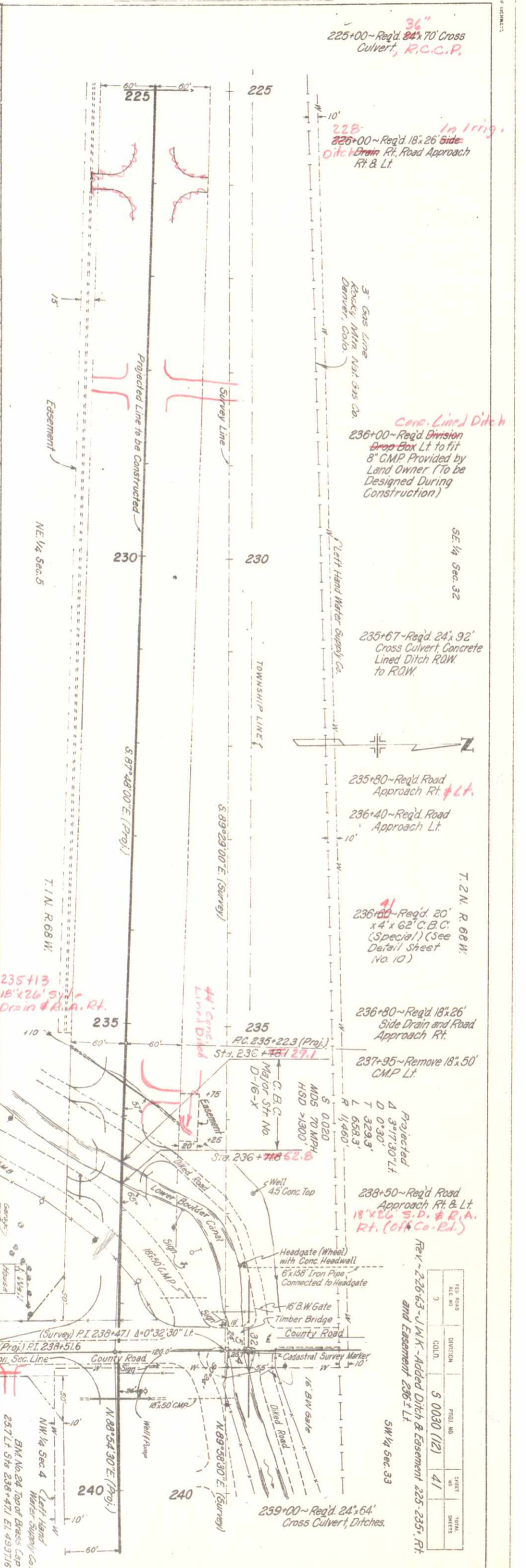
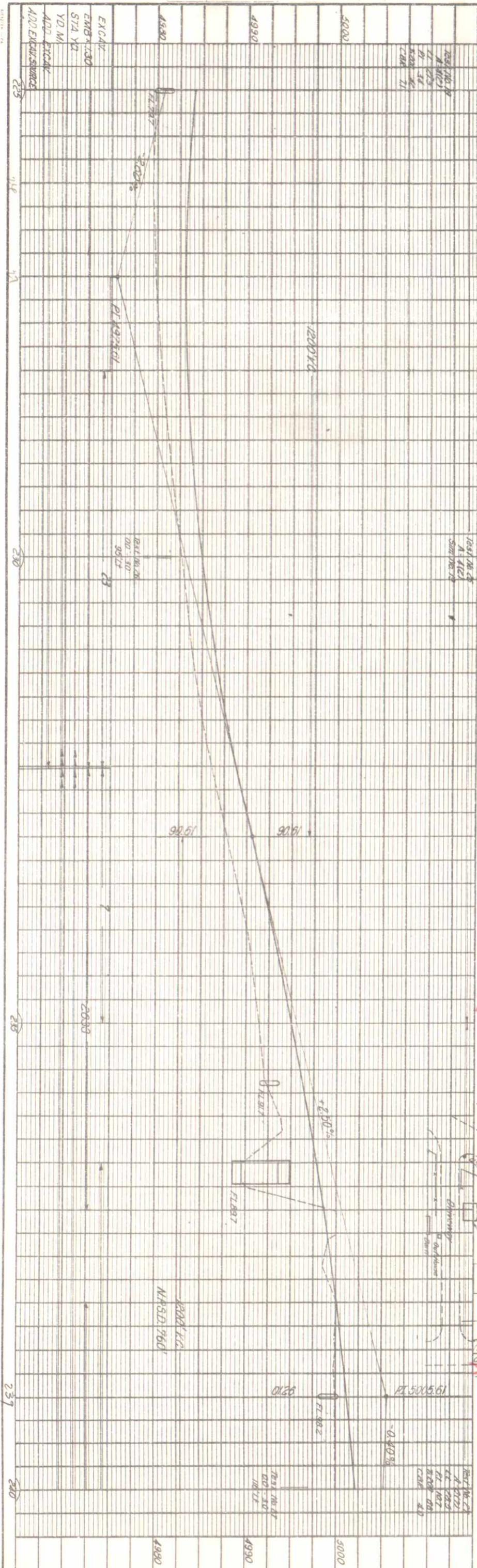
PROFILE	DATE
OFF FORM	BY
86	



110 ROAD	DIVISION	PROJ. NO.	SHEET
9	CCLD	5 0030 (12)	37
FILE NO.	CCLD	PROJ. NO.	SHEET

PROFILE	DATE
22863	
22864	
22865	
23707	

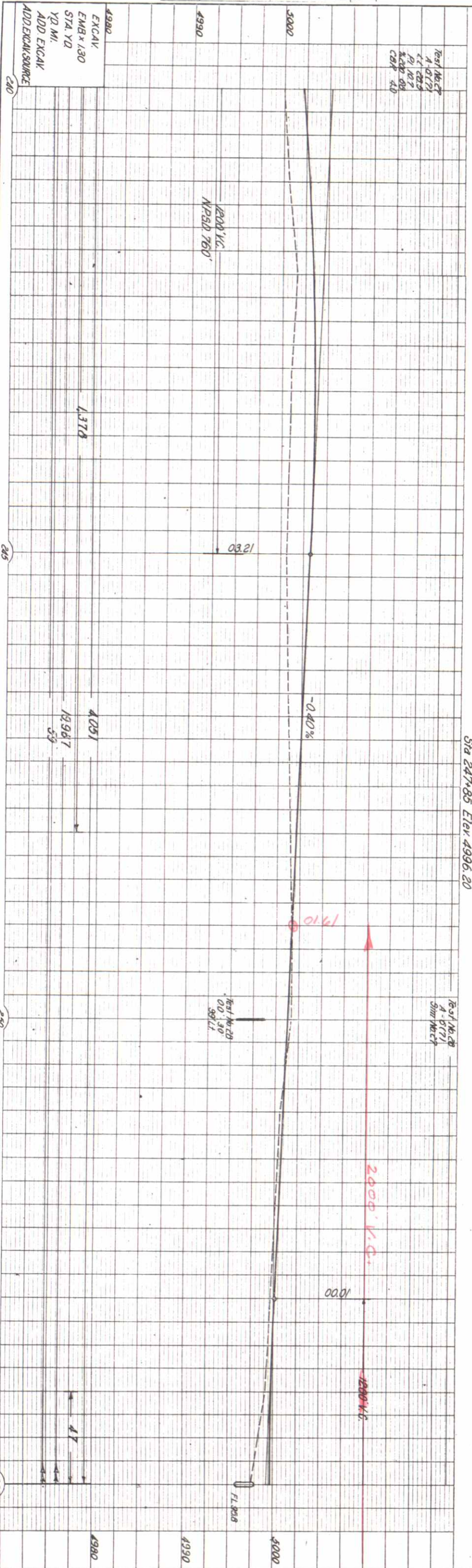
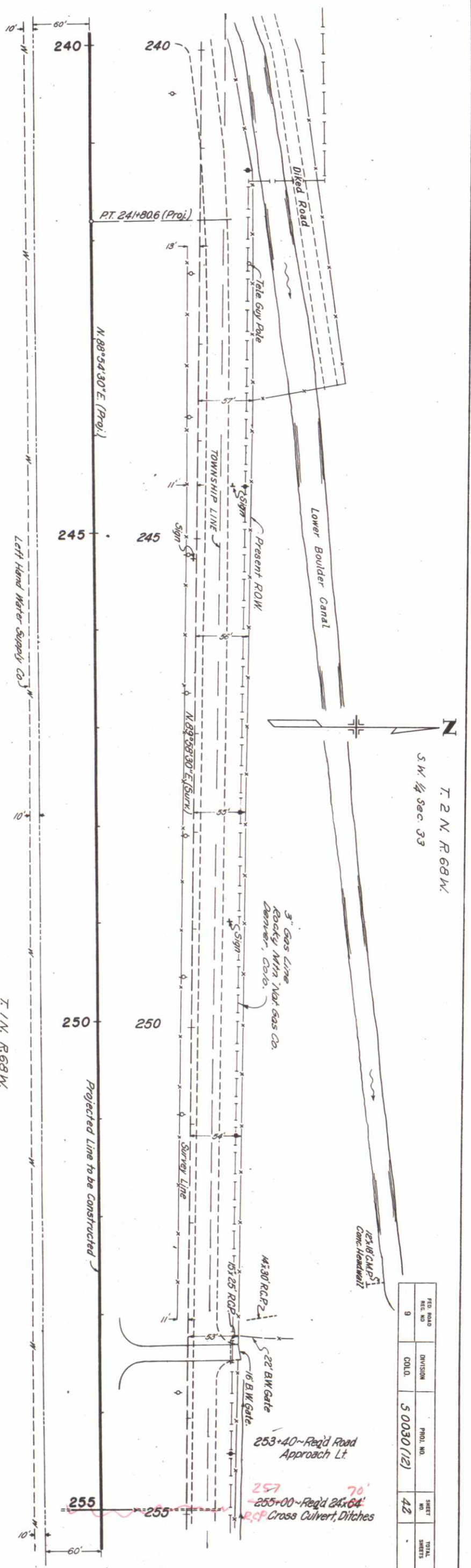
PLAN	DATE
22863	
22864	
22865	
23707	



FILE NO.	DIVISION	FILE NO.	SHEET NO.	TOTAL SHEETS
5 0030 (12)		41		

PLAN	SURVEYED	BY	DATE
NOTE BOOK 22863 NO. 22864	PLOTTED		
	ALIGNMENT CHECKED		
	RT. OF WAY CHECKED		

PROFILE	SURVEYED	BY	DATE
OFF FORM NO. 66	PLOTTED		
	GRADES CHECKED		
	B. M. NOTED		
	STRUCTURE NOTAT NO. CHECKED		



BM No. 25 Nail in P.P.L.
Sta 247+85 Elev 4996.20

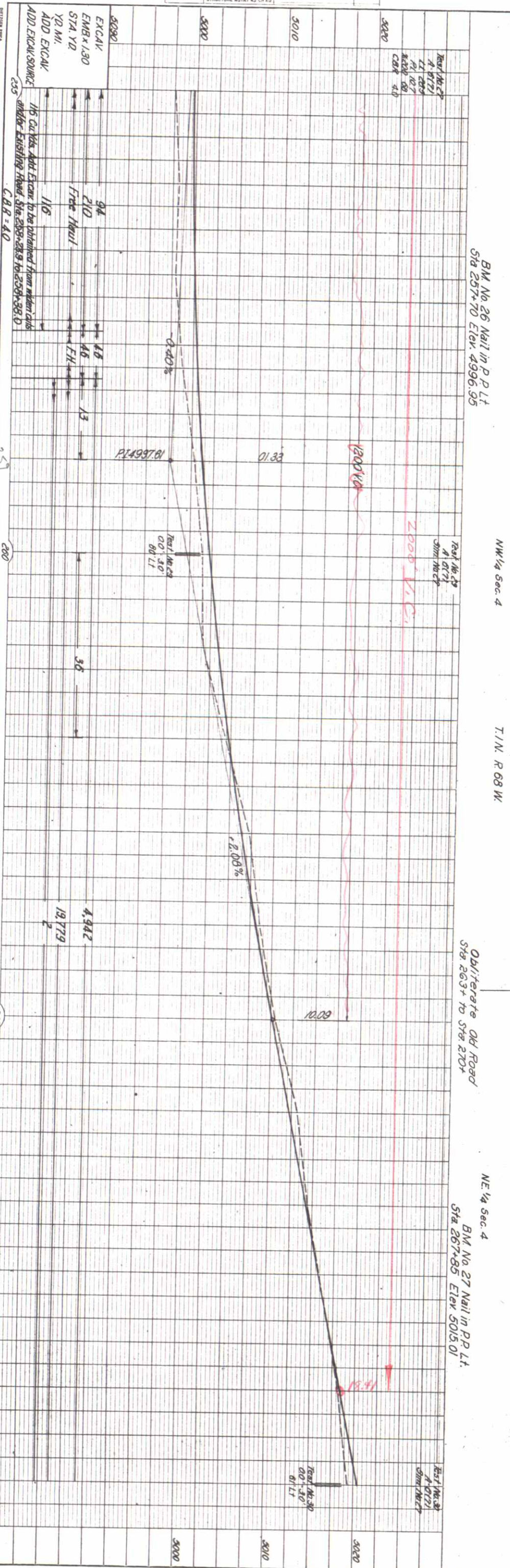
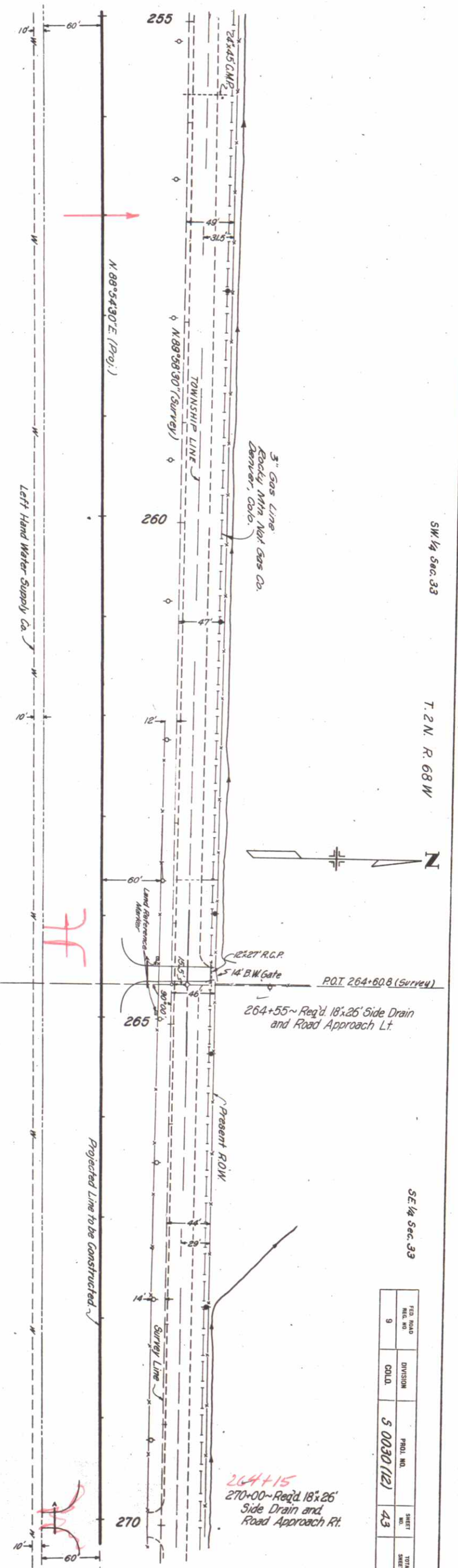
T. 1 N. R. 68 W.
N.W. 1/4 Sec. 4

FED. ROAD REL. NO.	DIVISION C.O.L.D.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	5 0030 (12)	42		

257
255+00 ~ Road 24x64'
R.S.P. Cross Culvert, Ditches

PLAN	SURVEYED	BY	DATE
NOTE BOOK 22863 NO 22863	PLOTTED		
	ALIGNMENT CHECKED		
	RT. OF WAY CHECKED		

PROFILE	SURVEYED	BY	DATE
NOTE BOOK OFF FORM NO 66	PLOTTED		
	GRADES CHECKED		
	STRUCTURE NOTATIONS CHECKED		

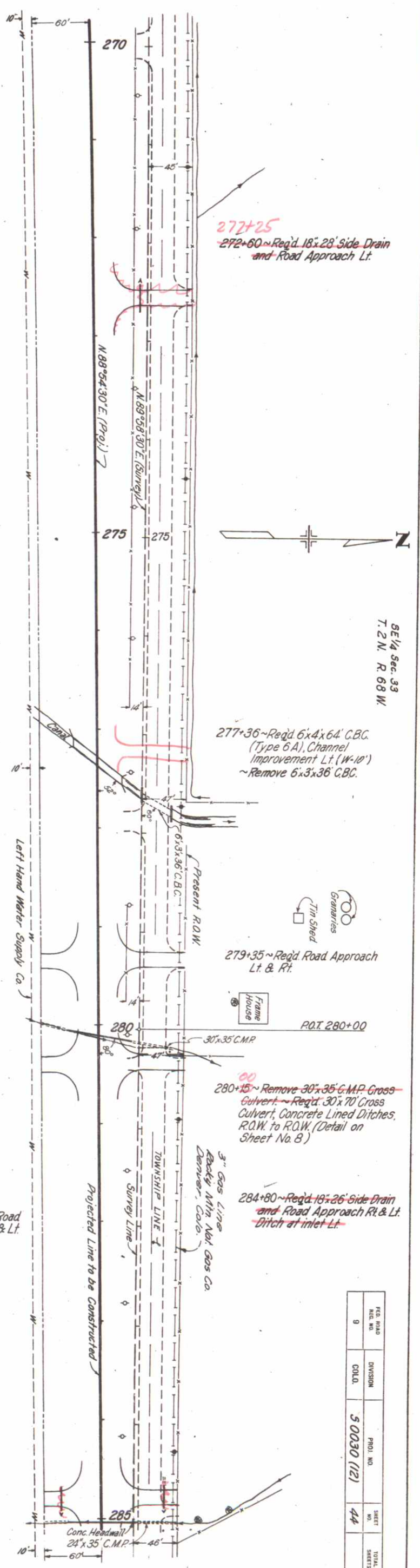
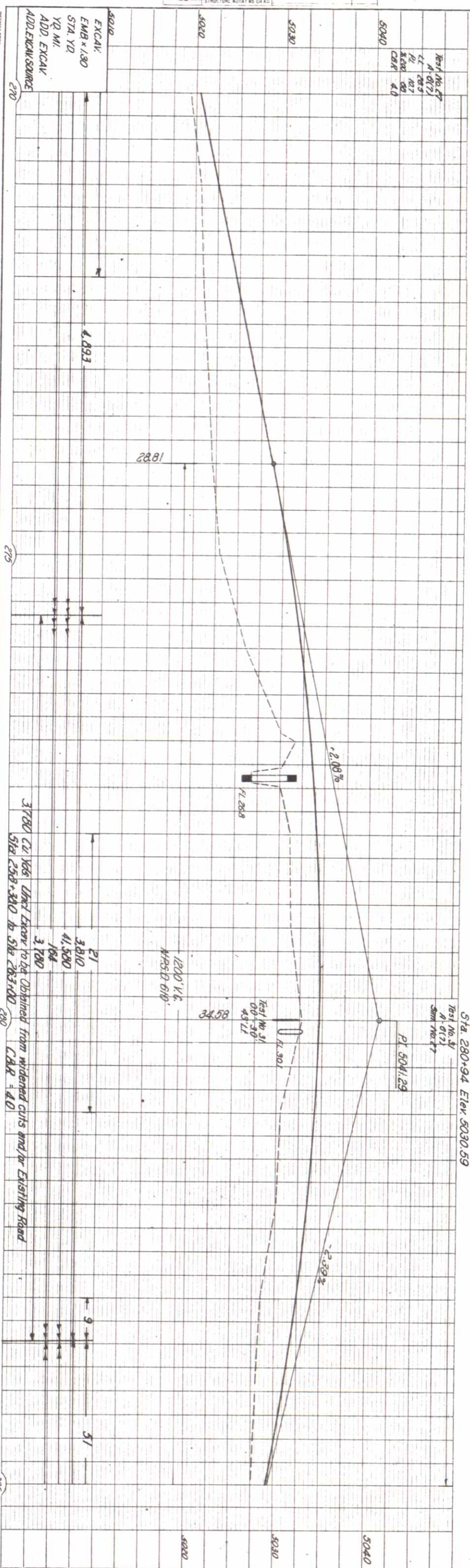


FILE NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	CONLD.	5 0030 (12)	43	

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

PROFILE	SURVEYED	BY	DATE
OFF FORM NO. 66	NOTES		
	GRADES UNPLANNED		
	BY N. M. NOTES		
	STRUCTURAL MATERIALS CHECKED		

22863 }
22864 }
22865 }



Obliterate Old Road
Sta 270+ to Sta. 285+

NE 1/4 Sec. 4
T. 1 N. R. 68 W.

BM No. 28 Nail in P.P. Lt.
Sta. 280+94 Elev. 5030.59

280+40 ~ Req'd. Road
Approach Rt. & Lt.

272+25
272+60 ~ Req'd. 18'x28' Side Drain
and Road Approach Lt.

277+36 ~ Req'd. 6'x4'x64' C.B.C.
(Type 6 A), Channel
Improvement Lt. (W-10')
~ Remove 6'x3'x36' C.B.C.

279+35 ~ Req'd. Road Approach
Lt. & Rt.

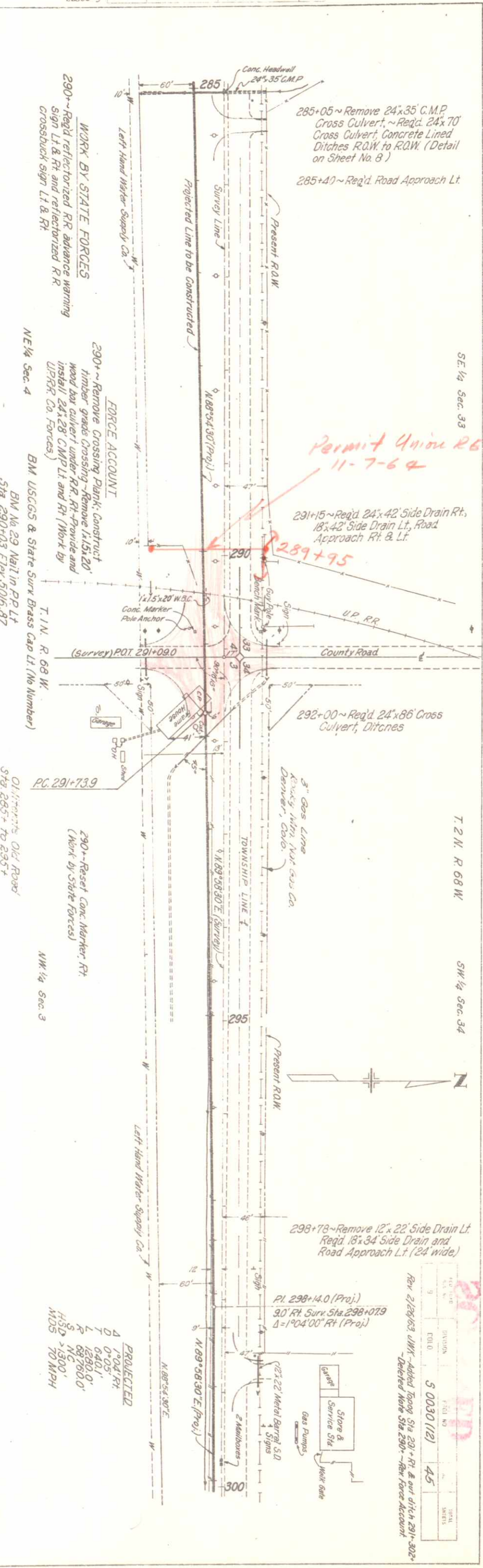
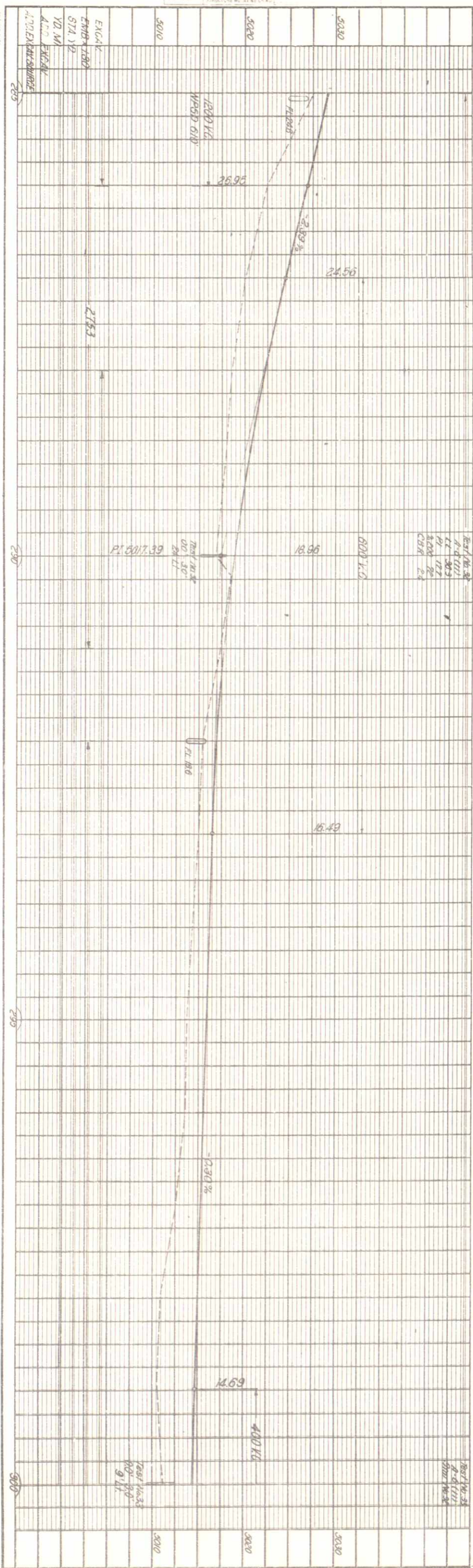
280+15 ~ Remove 30'x35' C.M.P. Cross
Culvert ~ Req'd. 30'x70' Cross
Culvert, Concrete Lined Ditches,
R.O.W. to R.O.W. (Detail on
Sheet No. 8)

284+80 ~ Req'd. 18'x26' Side Drain
and Road Approach Rt. & Lt.
Ditch at inlet Lt.

FILE NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	C.O.L.D.	5 0030 (12)	44	

PLAN	SURVEYED	BY	DATE
22863	PLOTTED		
22864	NOTE BOOK		
22865	ALIGNMENT CHECKED		
	RT. OF WAY CHECKED		

PROFILE	SURVEYED	BY	DATE
OFF FORM 66	PLOTTED		
	GRADES CHECKED		
	BY N.Y. 1225		
	STRUCTURE HEIGHTS CHECKED		



WORK BY STATE FORCES
 290+~ Read reflectorized RR advance warning sign Lt & Rt and reflectorized RR crossbuck sign Lt & Rt

FORCE ACCOUNT
 290+~ Remove Crossing Plank: Construct timber grade crossing - Remove 1x15x20' wood bar culvert under RR. Rt - Provide and install 24x28 C.M.P. Lt and Rt (Work by UP RR Co. Forces)
 T.I.N. R. 68 W.
 B.M. USCGS & State Surv Brass Cap Lt. (No Number)
 B.M. No. 29 Nail in PP Lt
 Sta. 290+03 Elev. 5016.87

PROJECTED
 1" 04' RT
 0' 05"
 1' 04.01"
 1' 12.90.0"
 1' 08' 760.0"
 1' 00' N.C.
 1' 00' 1300'
 1' 00' 70 MPH

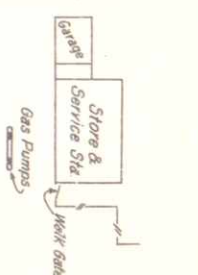
285+05~ Remove 24x35 C.M.P. Cross Culvert, ~ Req'd. 24x70' Cross Culvert, Concrete Lined Ditches R.O.W. to R.O.W. (Detail on Sheet No. 8)
 285+40~ Req'd. Road Approach Lt.

291+15~ Req'd. 24x42' Side Drain Rt, 18x42' Side Drain Lt, Road Approach Rt & Lt

292+00~ Req'd. 24x86' Cross Culvert, Ditches

298+78~ Remove 12x22' Side Drain Lt. Req'd. 18x34' Side Drain and Road Approach Lt. (24' wide)

PI 298+14.0 (Proj.)
 30' Rt Surv Sta. 298+07.9
 $\Delta = 1^{\circ}04'00''$ Rt (Proj.)



Rev. 2/28/53. U.M.K. - Added Topog. Sta. 291+PI & out ditch 291+302+
 Deleted Note Sta. 290+ - New force account

Permit Union R64
 11-7-64

FILE NO.	DIVISION	FILE NO.	SHEETS
5 0030 (12)		45	

SE 1/4 Sec. 33

T. 2 N. R. 68 W.

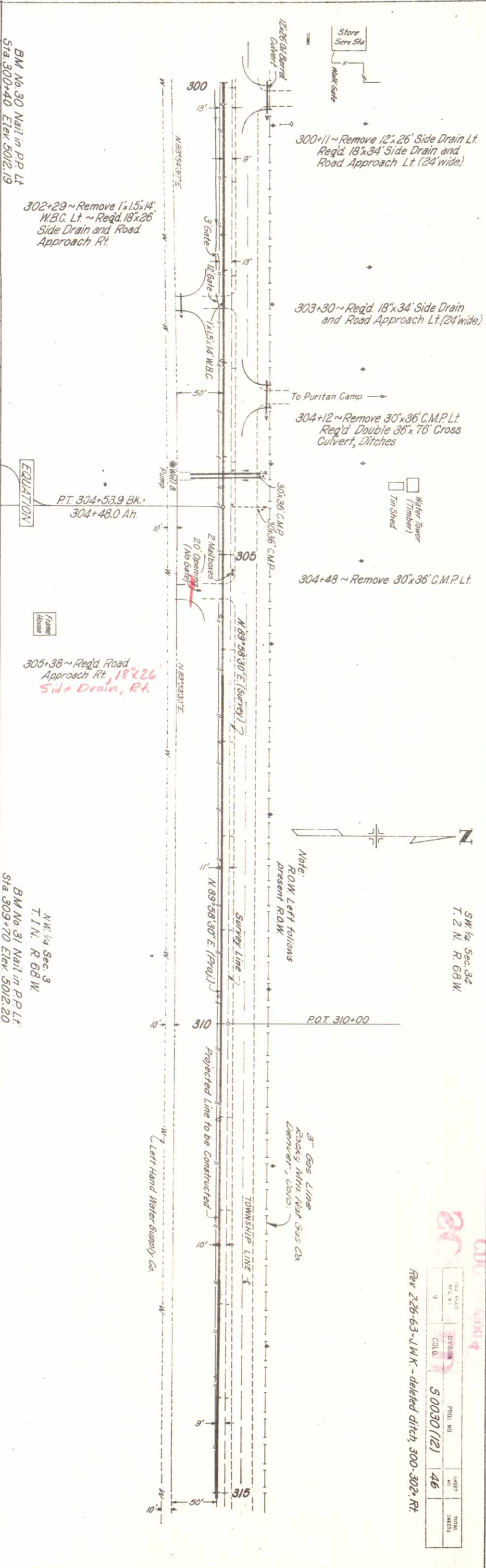
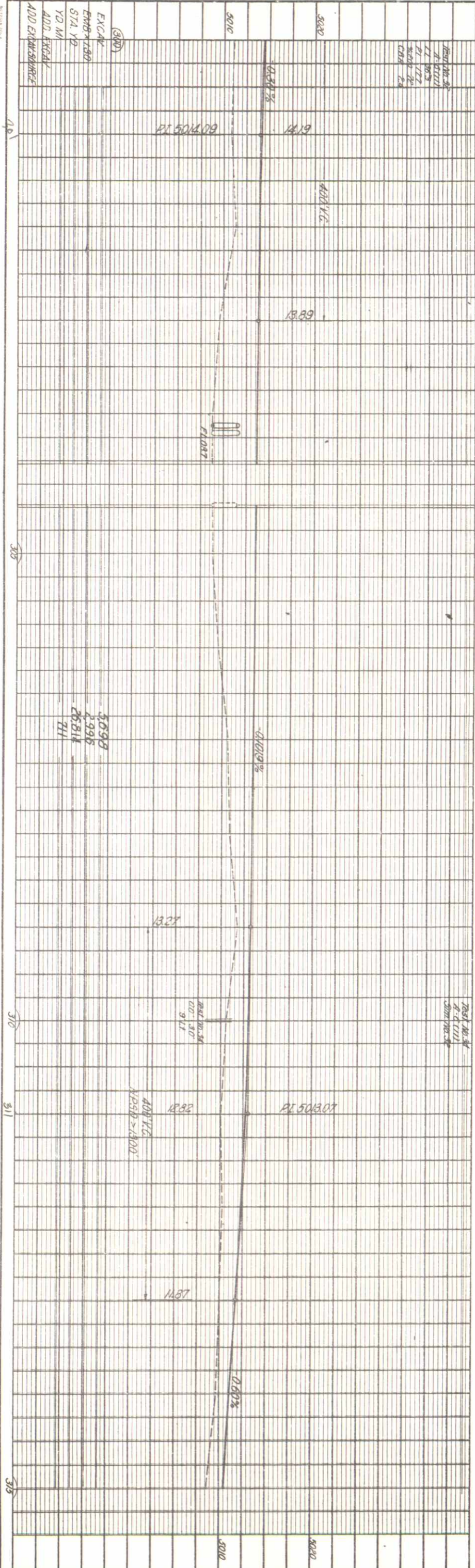
SW 1/4 Sec. 34

NW 1/4 Sec. 3

CD0-11004

PROFILE	SURVEYED	DATE
077 FORM	PLANNED	
NO. 66	GRADES CHECKED	
	BY A. NOTVO	
	STRUCTURE NOT TO SCALE	

PLAN	SURVEYED	DATE
NOTE BOOK 22863	PLANNED	
NO. 22860	ALIGNMENT CHECKED	
	BY A. NOTVO	
	RT OF WAY CHECKED	



BM No. 30 Nail in PP Lt
Sta 300+40 Elev 5012.19

302+29 ~ Remove 1x15x14 W.B.C. Lt ~ Req'd 18x26 Side Drain and Road Approach Rt.

303+11 ~ Remove 12x26 Side Drain Lt. Req'd 18x34 Side Drain and Road Approach Lt. (24 wide)

303+30 ~ Req'd 18x34 Side Drain and Road Approach Lt. (24 wide)

304+12 ~ Remove 30x36 C.M.P. Lt. Req'd Double 36x76 Cross Culvert, Ditches

304+48 ~ Remove 30x36 C.M.P. Lt.

P.T. 304+53.9 Bk.
304+48.0 Ah

305+38 ~ Req'd Road Approach Rt. 18x26 Side Drain, Rt.

N.M. 1/4 Sec. 3
T. 2 N. R. 68 W.

BM No. 31 Nail in PP Lt.
Sta 309+70 Elev 5012.20

SW 1/4 Sec. 34
T. 2 N. R. 68 W.

Note:
ROW Left follows Present ROW

3" Gas Line
Rocky Mtn. Nat. Gas Co.
Denver, Colo.

TOWNSHIP LINE

Projected Line to be Constructed

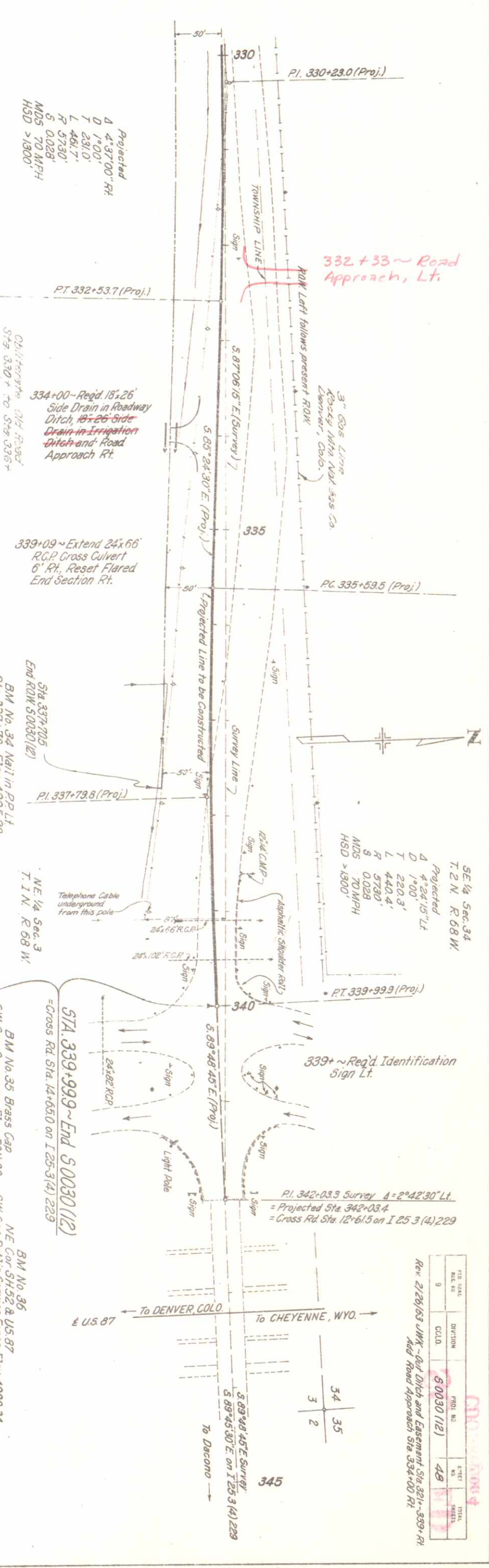
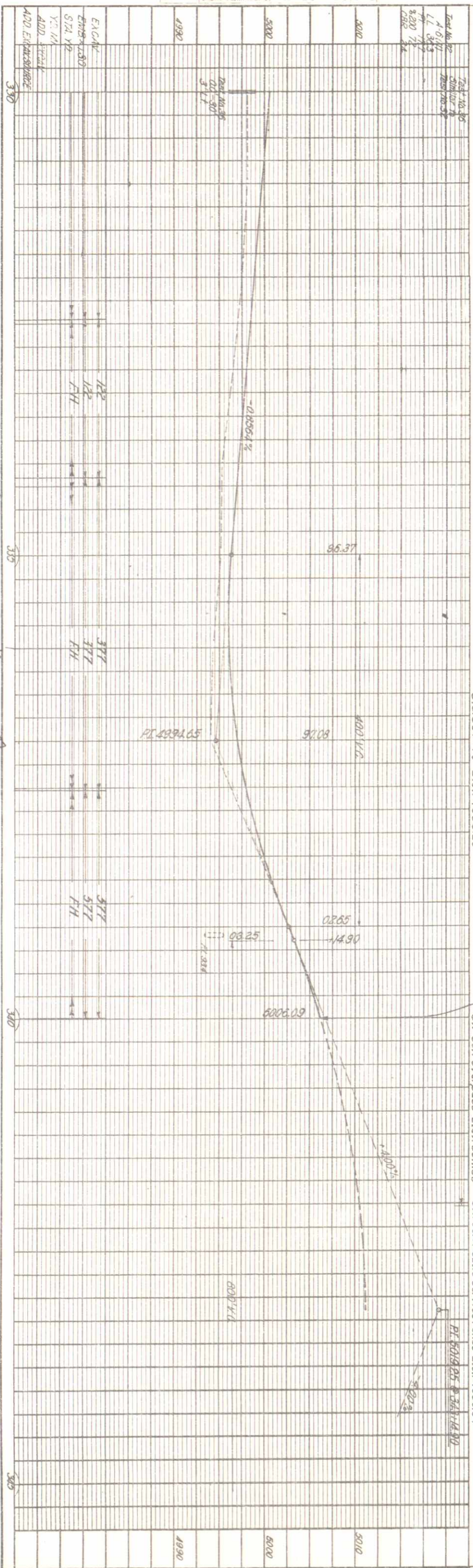
Left Hand Water Supply Co.

NO. 9	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	50030121	46		

REV 2-26-63-J.M.K. - deleted ditch 300-302+Rt.

PLAN	DATE
SURVEYED PLOTTED ALIGNED CHECKED NO. OF WAY CHECKED	2/26/63 2/26/63

PROFILE	DATE
SURVEYED PLOTTED CHECKED NO. OF WAY CHECKED	2/26/63 2/26/63



Projected
 D 4°37'00" RT
 D 1°00"
 T 231.0'
 L 461.7'
 R 5730'
 S 0.028'
 MDS 70 MPH
 HSD > 1300'

PT 332+53.7 (Proj.)
 334+00 ~ Reg'd. 18x26'
 Side Drain in Roadway
 Ditch, 18x26' Side
 Drain in Irrigation
 Ditch and Road
 Approach Rt.
 CH/17/27/74/81/83/87
 STA 330+ to STA 336+

339+09 ~ Extend 24x66'
 R.C.P. Cross Culvert
 6" Rt. Reset Flared
 End Section Rt.

End ROW 50030(12)
 STA 337+05
 STA 337+70 Elev 4995.20
 BM No. 34 Nail in P.P.Lt.
 STA 337+70 Elev 4995.20
 T. 1 N. R. 68 W.

Telephone Cable
 underground
 from this pole
 NE 1/4 Sec. 3
 T. 1 N. R. 68 W.

STA 339+99.9 ~ End 50030(12)
 = Cross Rd Sta. 14+65.0 on I 25-3(4) 229
 BM No. 35 Brass Cap
 SW Cor. Overpass Elev 5011.30
 NE Cor. Public Service Fence Elev 4990.34
 PI 342+03.3 Survey A=2°42'30" Lt.
 = Projected Sta. 342+03.4
 = Cross Rd Sta. 12+61.5 on I 25-3(4) 229

BM No. 36
 SW Cor. SH 52 & US 87
 NE Cor. Public Service Fence Elev 4990.34
 PI 342+03.3 Survey A=2°42'30" Lt.
 = Projected Sta. 342+03.4
 = Cross Rd Sta. 12+61.5 on I 25-3(4) 229

332+33 ~ Road
 Approach, Lt.

3" Gas Line
 Rocky with NOK 535 Co.
 Denver, Colo.

PC 335+59.5 (Proj.)

SE 1/4 Sec. 34
 T. 2 N. R. 68 W.
 Projected
 D 4°24'15" Lt
 T 220.3'
 L 440.4'
 R 5730'
 S 0.028'
 MDS 70 MPH
 HSD > 1300'

PT 339+99.9 (Proj.)
 339+ ~ Req'd. Identification
 Sign Lt.

PI 342+03.3 Survey A=2°42'30" Lt.
 = Projected Sta. 342+03.4
 = Cross Rd Sta. 12+61.5 on I 25-3(4) 229

FED. STATE	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	50030 (12)	48		

Rev. 2/26/63 UMY - Out Ditch and Easement Sta. 321+339+ Rt. and Road Approach Sta. 324+00 Rt.

Excavation
Cu. Yds. Area

Embankment
Area Cu. Yds.

Excavation
Cu. Yds. Area

Embankment
Area Cu. Yds.

FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0030(12)	49	

SUMMARY OF EARTHWORK QUANTITIES

EXCAVATION

- * FROM COMPUTER SECTIONS
- * ADD. UNCLASSIFIED EXCAVATION
FROM LIST OF STRUCTURES AS EXCAVATION
- * FROM LIST OF STRUCTURES AS EMBANKMENT
- * ESTIMATED FOR SUBSIDENCE
- ESTIMATED FOR CUT SLOPE TREATMENT

TOTAL

	BOULDER CO.	WELD CO.	PROJECT TOTAL
* FROM COMPUTER SECTIONS	1,515	29,882	31,397
* ADD. UNCLASSIFIED EXCAVATION FROM LIST OF STRUCTURES AS EXCAVATION	0	20,457	20,457
* FROM LIST OF STRUCTURES AS EMBANKMENT	0	435	435
* ESTIMATED FOR SUBSIDENCE	1,120	1,822	2,942
ESTIMATED FOR CUT SLOPE TREATMENT	152	5,034	5,186
	36	1,061	1,097
TOTAL	2,823¹ CU. YDS.	58,691¹ CU. YDS.	61,514¹ CU. YDS.

UNCLASSIFIED DITCH EXCAVATION

* INTERCEPTING DITCHES

	BOULDER COUNTY	WELD COUNTY	PROJECT TOTAL
	CU. YDS.	CU. YDS.	CU. YDS.
SUB-TOTAL	0	0	0
FROM LIST OF STRUCTURES	5	979	984
TOTAL	5	979	984

* INTERCEPTING DITCHES ARE NOT REQUIRED ON THIS PROJECT.

EMBANKMENT X FACTOR

FROM COMPUTER SECTIONS

1,312 CU. YDS.	50,542 CU. YDS.	51,854 CU. YDS.
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STATION YARD OVERHAUL

FROM COMPUTER SECTIONS
ESTIMATED FOR SUBSIDENCE

TOTAL

148	346,121	346,269
15	34,612	34,627
TOTAL	163 STA. YDS.	380,733 STA. YDS.

YARD MILE OVERHAUL

FROM COMPUTER SECTIONS
ESTIMATED FOR SUBSIDENCE

TOTAL

0	5,602	5,602
0	560	560
TOTAL	0	6,162 YD. MILE

COMPACTION

* FROM EXCAVATION
FROM BASE OF CUTS AND FILLS

TOTAL

2,787	57,195	59,892
1,934	42,163	44,097
TOTAL	4,721 CU. YDS.	99,358¹ CU. YDS.