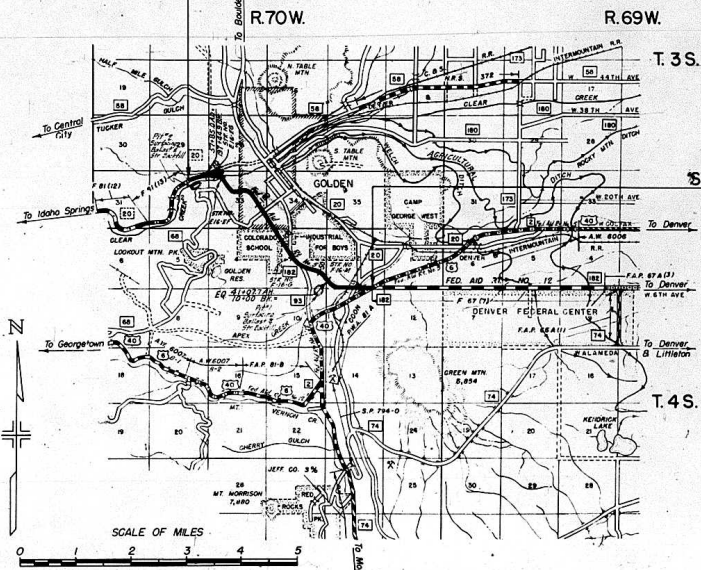


# COLORADO STATE HIGHWAY DEPARTMENT

## PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. F 005-3(5) STATE HIGHWAY NO. 182 & 20 JEFFERSON COUNTY

SCALES OF ORIGINAL TRACINGS  
ON PLAN, 1 IN. = 100 FT.  
ON PROFILE 1 IN. = 100 FT. HORIZONTAL  
1 IN. = 10 FT. VERTICAL  
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD  
GROSS LENGTH OF PROJECT 21,445.5 ft. = 4.062 miles  
NET LENGTH OF PROJECT

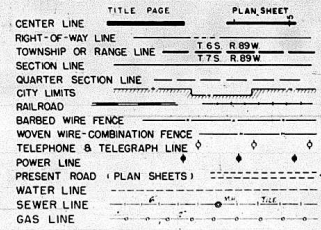
STA. 76+30.0 END F 005-3(5)=  
Sta 76+30.0 BEGIN F 81(13)



STA. 50+14 BEG. F 005-3(5)=  
BEG. F 67(7)

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F 005-3(5)	1	

### CONVENTIONAL SIGNS



### INDEX OF SHEETS

SHEET NO.1	SKETCH MAP AND TITLE PAGE	
2	TYPICAL SECTIONS AND DETAILS OF CONCRETE CURB	
3	GENERAL NOTES, TABULATION OF LENGTH AND DESIGN DATA, R.O.W. MARKERS AND DETAILS OF GROUTED RUBBLE SLOPE AND DITCH PAVING	
4	SUMMARY OF APPROXIMATE QUANTITIES	
5	SURFACING PLAN, BALLAST PLAN AND FENCING REQUIREMENTS	
6-9	LIST OF STRUCTURES	
10-16	DETAILS OF BRIDGE, STA. 179+	
17-24	DETAILS OF OVERPASS, STA. 183+	
25	DETAILS OF ROAD APPROACHES AND DETAILS OF FENCE STILE	
26-260	LAYOUT AND DETAILS OF INTERSECTION AT GRADE, STA. 49+	
27	LAYOUT AND DETAILS OF INTERSECTION AT GRADE, STA. 134+	
28	LAYOUT AND DETAILS OF GRADE SEPARATION, STA. 134+ (FUTURE CONSTRUCTION)	
29	PROFILES AND GRADES OF INTERSECTION AND RAMPS, STA. 134+ (FUTURE CONSTRUCTION)	
30	LAYOUT AND DETAILS OF INTERSECTION, JUNCTION SH 182 AND S.H. 20	
31	STANDARD LETTERS & FIGURES FOR YEAR NUMBERS & STRUCTURE NUMBERS	M-10-B
32	STANDARD MARKER POSTS	M-7-B
33	STANDARD HEADWALLS AND APRONS FOR CMP CULVERTS	M-102-G
34	STANDARD CONCRETE BOX CULVERTS	M-103-G
35	STANDARD CONCRETE BOX CULVERT	M-104-F
36	STANDARD DOUBLE CONCRETE BOX CULVERT	M-110-D
37	STANDARD NO. 12 AND NO. 13 CONCRETE INLETS	M-12-C13
38	STANDARD CATTLE GUARD, 16' ROADWAY	M-16-A
39	STANDARD WIRE FENCE WITH WOODEN POSTS	M-24-H
40	STANDARD METHODS FOR SUPERELEVATION AND WIDENING OF CURVES	M-1-B
41	STANDARD METHODS FOR SUPERELEVATING CURVES ON DIVIDED HIGHWAYS	M-1-C1
42	STANDARD SIDE APPROACH ROADS, FLARING, CUT SLOPE TREATMENT & WIDENING AT BRIDGES & AT CREST OF GRADES	M-2-DM
43	STANDARD ROADWAY CONSTRUCTION TRAFFIC SIGNS	M-2-DS
44	STANDARD RAILROAD CROSSING SIGN	M-18-A
45	STANDARD TYPES OF DITCHES AND CONSTRUCTION METHODS	M-107-C
46-53	ALIGNMENT PLAN AND PROFILE	
54	ALIGNMENT PLAN AND PROFILE (LOOKOUT MT. ROAD)	
55-56	ALIGNMENT PLAN AND PROFILE (SOUTH LANE AND NORTH LANE OF INTERSECTION) (FUTURE CONSTRUCTION)	
57-201	CROSS SECTIONS	
202-209	CROSS SECTIONS (LOOKOUT MT. ROAD)	
210-214	CROSS SECTIONS (NORTH RAMP, STA. 49+)	
215	SUMMARY OF EARTHWORK QUANTITIES AND TABULATION OF INTERCEPTING DITCHES	
270	LAYOUT & DETAILS OF HOUSING PROJECT, STA. 134+	
216-240	WORK ORDER No 14,861	

**NOTICE TO BIDDERS**  
It is recommended that bidders on this Project go over the plan details with one of the following field representatives of this Department.  
Glen McElbenny, Construction Engineer, Denver, Colorado  
E. H. Dauchy, Resident Engineer, Golden, Colorado

HIGHWAY DEPARTMENT  
STATE OF COLORADO

RECOMMENDED FOR APPROVAL:

*J. S. Baird* 5-5-50  
ASSISTANT ENGINEER DATE

APPROVED:

*Frank A. Lister* 5-5-50  
STATE HIGHWAY ENGINEER DATE

DEPARTMENT OF COMMERCE  
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL:

DISTRICT ENGINEER DATE

DIVISION ENGINEER DATE

FED. ROAD DIV. NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 005-3(B)	2	2

Rev. 5-19-50 E.A.R. Typ. Sec. for Underdrain  
 Rev. 9-15-50 E.A.R. Curb Details  
 Rev. 5-19-50 E.A.R. Typ. Sec. for Underdrain  
 Rev. 12-10-50 E.A.R. Typ. Sec. for Underdrain

# TYPICAL SECTIONS OF IMPROVEMENT

NOTE:  
 See Standard M-2-P.M. for details of cut slope treatment, flaring and widening for guard fence and/or marker posts.

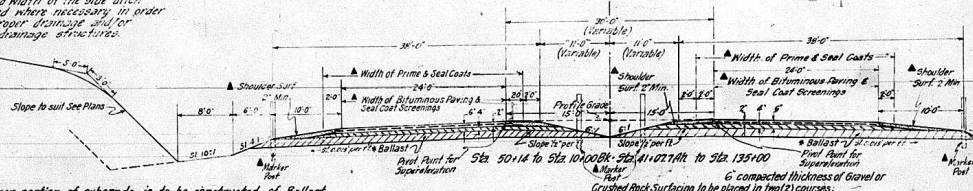
★ TRANSITIONS BETWEEN SECTIONS  
 Sta. 158+00 To Sta. 163+00 Sec. A to B  
 Sta. 163+00 To Sta. 164+00 Sec. B to C  
 Sta. 578+00 Alt. To Sta. 608+00 Sec. C to D

▲ FUTURE CONSTRUCTION

Excavation or Borrow below 4:1 and/or 10:1 will not be permitted.  
 The depth and width of the side ditch may be varied where necessary in order to provide proper drainage and/or entrance to drainage structures.

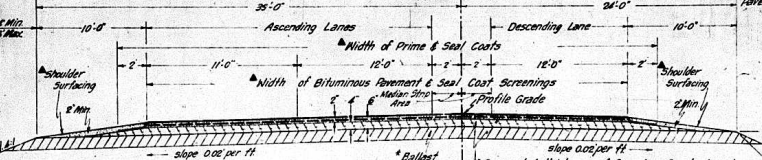
## TYPICAL SECTION FOR DIVIDED HIGHWAY

### SECTION A



The upper portion of subgrade is to be constructed of Ballast Material at locations designated in Ballast material tabulation. Estimated quantities involved in this operation and thickness of material required are tabulated on sheet No. 5.

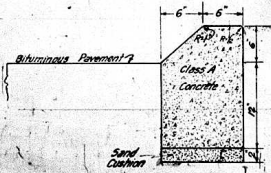
### SECTION B



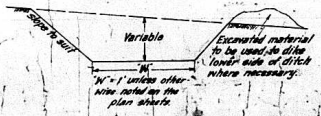
6" compacted thickness of Gravel or Crushed Rock Surfacing to be placed in two (2) courses.  
 ▲ Approximately 2" top course to be placed at the rate of 54 tons per 100 lin. ft. of roadway.  
 ▲ Approximately 4" bottom course surfacing to be placed at the rate of 19 tons per 100 lin. ft. of roadway.  
 ▲ Approximately 2" bottom course surfacing for shoulder areas to be placed at the rate of 29 tons per 100 lin. ft. of roadway and compacted after placement of Bituminous Pavement.

Excavation or Borrow below 4:1 and/or 10:1 will not be permitted.  
 The depth and width of the side ditch may be varied where necessary in order to provide proper drainage and/or entrance to drainage structures.

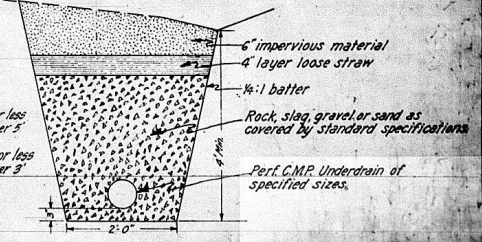
## TYPICAL SECTION FOR DITCHES & CHANNEL IMPROVEMENTS



DETAILS OF CONCRETE CURB

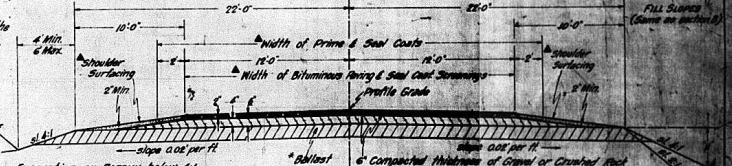


## TYPICAL SECTION OF TRENCH FOR C.M.P. UNDERDRAIN



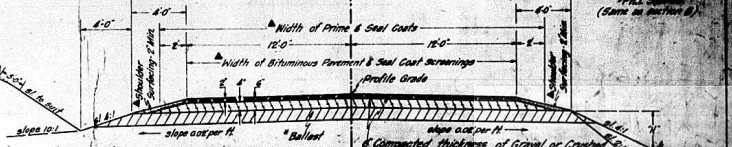
FILL SLOPES  
 On Curves  
 Slope 4:1 where 'H' is 5' or less  
 Slope 2:1 where 'H' is over 5'  
 On Tangents  
 Slope 4:1 where 'H' is 3' or less  
 Slope 2:1 where 'H' is over 3'

### SECTION C



Excavation or Borrow below 4:1 and/or 10:1 will not be permitted.  
 The depth and width of the side ditch may be varied where necessary in order to provide proper drainage and/or entrance to drainage structures.

### SECTION D



Excavation or Borrow below 4:1 and/or 10:1 will not be permitted.  
 The depth and width of the side ditch may be varied where necessary in order to provide proper drainage and/or entrance to drainage structures.

6" compacted thickness of Gravel or Crushed Rock Surfacing to be placed in two (2) courses.  
 ▲ Approximately 2" top course to be placed at the rate of 54 tons per 100 lin. ft. of roadway.  
 ▲ Approximately 4" bottom course surfacing to be placed at the rate of 19 tons per 100 lin. ft. of roadway.  
 ▲ Approximately 2" bottom course surfacing for shoulder areas to be placed at the rate of 29 tons per 100 lin. ft. of roadway and compacted after placement of Bituminous Pavement.

FED. ROAD DIV. NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 005-3(B)	3	

### GENERAL NOTES

- ✓ This Project is to be constructed in conformity with the Standard Specifications of the Colorado State Highway Department adopted January 1, 1948.
- ✓ All quantities on preliminary plans are to be considered approximate only.
- ✓ All roadway excavation required to construct this Project is to be obtained and used as indicated on the plans. Quantities involved beyond the limits of the ditches shown on the Typical Cross Section, either noted as "Borrow on the Plans" or as "Embankments" in the List of Structures, are to be classified and paid for as "Unclassified Excavation." These quantities are to be staked as part of the original excavation of locations indicated on the Plans. Any slope stakes beyond the limits of the Typical Section as shown are subject to change by the Engineer to fit conditions actually met in construction.
- ✓ All poles encroaching on construction are to be moved by the owners.
- ✓ All corrugated Metal Pipe Cross Culverts shall be laid with Metal Aprons on each end unless otherwise noted on the plans.
- ✓ All concrete used on this project shall be "Air-Entrained Concrete".
- ✓ Culverts projecting from embankments shall be covered with approximately 6 inches of embankment material in such a manner that a minimum of pipe shall be exposed in the completed work. This shall be accomplished by warping embankment slopes around and adjacent to the culvert.
- ✓ Except as otherwise noted on the plans, payment for overhaul will be based on the measurement along the centerline of the project.
- ✓ Right of Way fences, including line posts, shall be constructed approximately six (6) inches inside the boundary of the Highway Right of Way as shown on the plans.
- ✓ Approximate location and quantities involved in construction of intercepting ditches are tabulated on summary of earthwork quantities sheet.
- ✓ All curves are to be super-elevated and widened as provided by the Standard Super-elevation sheets included with the plans except as otherwise noted on the plans.
- ✓ Curves on this project over 6 degrees shall be provided with the super-elevation shown on the Standard Super-elevation sheet for a 6 degree curve.
- On all inlet and outlet ditches and drain ditches, 18" unless otherwise noted on plans.
- ✓ The three-account item "Clearing of Building Sites including Removal of Foundations and Appendances" shall include removal of all foundations, wells, outhouses and other appendances not removed by the owner and any necessary backfilling of cellars, cess pools, wells etc. to provide neat road-side conditions. It is estimated that this item applies at the following stations: 121+ to 126+5, 176+ to 176+ and 164+.
- ✓ The Detour for this project lies along the present traveled road. At all places on the project where the new work lies along the present traveled road, the Contractor shall, at his own expense, prosecute construction in such manner that traffic may readily pass over the road. Also the Contractor shall maintain in safe condition and at his own expense, all temporary approaches to and crossings of intersecting roads.
- ✓ It is estimated that the old road is to be obliterated at the following stations: 35+ to 47+; 68+ to 91+.
- ✓ If excavation operations develop material that will stand on slopes steeper than slope stake lines, the Department reserves the right to change cut slopes during the progress of such excavations.

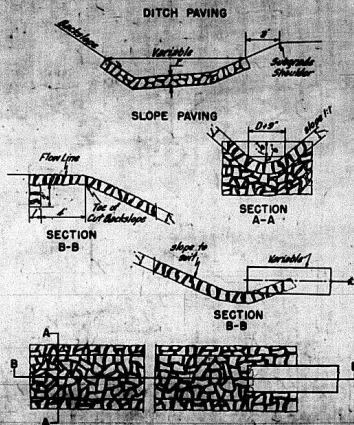
### R.O.W. MARKERS

	STATION	SIDE	NUMBER	EAST SURVEY	
				WIDTH	MARKER
	36+00	LT & RT	2		
	10+00 Bk = 41+07.7 Ah	LT & RT	2		
	66+00	LT & RT	2		
	38+00	LT & RT	2		
	TOTAL OUTSIDE GOLDEN 76' RDWY.			5	
	115+00	LT & RT	2		
	TOTAL INSIDE GOLDEN 76' RDWY.			2	
	143+00	LT & RT	2		
	TOTAL INSIDE GOLDEN 59' RDWY.			2	
	167+50	LT & RT	2		
	197+44.9 Bk	LT & RT	2		
	TOTAL OUTSIDE GOLDEN 44' RDWY.			4	

### TABULATION OF LENGTH AND DESIGN DATA

STATION	DESCRIPTION	ROADWAY		MAJOR STRUCTURE	
		WIDTH	LN. FT.		
<b>OUTSIDE GOLDEN</b>					
✓ 30+14	Org. F005-3(B) (Dog. F 67 (P))	✓ 76'	1401.0		
✓ 36+11.5	Double 10'-10" C.B.C.	✓ 76'	2408.5		
✓ 35+22.5	Equation	✓ 76'	2408.5		
✓ 10+00 Bk = 41+07.7 Ah	Equation	✓ 76'	4706.0		
✓ 58+23.7	Double 10'-10" C.B.C.	✓ 76'	6077.1		
✓ 89+26.2	City Limits INSIDE GOLDEN	✓ 76'	2476.9		
✓ 110+23.3	City Limits INSIDE GOLDEN	✓ 59'	3700.0		
✓ 135+00	Equation	✓ 44'	233.6		
✓ 162+00	Equation	✓ 44'	316.5		
✓ 164+33.6	City Limits OUTSIDE GOLDEN	✓ 44'	1099.2		
✓ 167+50.1 Bk = 158+00 Bk Ah	Equation	✓ 44'	2658		
✓ 175+70	Bridge	✓ 44'	1172.8	206.5	
✓ 181+00.8	Overpass	✓ 44'	1845.0	206.5	
✓ 185+72.8	Equation	✓ 32'			
✓ 197+44.9 Bk = 175+70 Ah	Equation				
✓ 197+44.9 Bk = 175+70 Ah	End F005-3(B) (Dog. F 67 (P))				
✓ 76+30.0					
<b>TOTALS</b>			20963.2	402.5	
<b>SUMMARY</b>				LN. FT.	MILES
F 005-3(B) OUTSIDE GOLDEN					
76' Roadway					
44' Roadway					
32' Roadway					
4 Major Structures					
F 005-3(B) TOTAL INSIDE GOLDEN					
76' Roadway					
59' Roadway					
44' Roadway					
F 005-3(B) TOTAL INSIDE GOLDEN					
<b>TOTAL (F 005-3(B)) TOTAL</b>			21443.5	402.5	
<b>DESIGN DATA</b>					
Maximum Degree of Curve				10.00	
Maximum Grade				5.00%	
Minimum Horizontal Curve Length				430	
Minimum Sight Distance				200	
Minimum				5.00%	

### DETAILS OF GROUTED RUBBLE SLOPE AND DITCH PAVING



SUMMARY OF APPROXIMATE QUANTITIES

ITEM NO.	ITEM	UNIT	ROADWAY						GOLDEN	DOUBLE		BRIDGE	OVERPASS	MOVING BUILDINGS	PROJECT TOTALS
			OUTSIDE		INSIDE		GOLDEN			10'x10'	10'x8'				
			76'	44'	32'	76'	59'	44'	50	50	180	185+00	185+72.2		
			WIDTH	WIDTH	WIDTH	WIDTH	WIDTH	WIDTH	WIDTH	WIDTH	C.B.C.	C.B.C.	C.B.C.		
			Prepared	Prepared	Prepared	Prepared	Prepared	Prepared	Prepared	Prepared	36+11.5	89+93.7	181+04.5		
			Imp-Sum	Imp-Sum	Imp-Sum	Imp-Sum	Imp-Sum	Imp-Sum	Imp-Sum	Imp-Sum	89+93.7	89+93.7	89+93.7		
102	Clearing & Grading Entire Project	Imp-Sum													
104	Removal of 4 Structures	Imp-Sum													
106	Removal of 6 Structures	Imp-Sum													
108	Removal of 6 Structures	Imp-Sum													
110	Removal of 6 Structures	Imp-Sum													
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328	Removal of 6 Structures	Imp-Sum													

Rev. 4/12/68 J.M. Surf. & Ballast Plan

### ★ SURFACING PLAN

It is estimated that material for Gravel Surfacing for the project is available in the vicinity of the pits indicated in the following tabulation. Estimated quantities involved in this operation are shown below.

Alteration of the Surfacing Plan as here outlined will be allowed only on written permission from the Department.

MATERIAL TO BE PLACED	SOURCE	QUANTITY				OVERHAUL
		AVAILABLE	TONS USED	TON MILES	TON MILES	
		SHOULDER GRADING C	TOP COURSE GRADING C	BOT. COURSE GRADING C	TOP & BOTTOM SHOULDER	
50+14 - 37+00	Pit #1, 1000 to 524170054	381	710	1884	F.H. F.H.	
37+00 - 17+00	524170054	580	1080	3280	F.H. F.H.	
17+00 - 10+00 BK	524170054	203	378	1057	F.H. F.H.	
11+02.75A - 76+88	745, 730W	1039	1834	5407	F.H. F.H.	
76+88 - 107+29		892	1643	4392	F.H. F.H.	
107+29 - 110+53.3		86	159	445	F.H. F.H.	
Estimated for Accel., Decel. & Storage Lanes Estimated for Approaches			202	407	F.H. F.H.	
		1042	2128	5329	F.H. F.H.	
TOTAL OUTSIDE GOLDEN 76' ROADWAY		4212	8234	22241	864	1567
110+23.3 - 124+29		408	759	2123	452	822
124+29 - 135+00		311	579	1618	146	265
Estimated for Accel., Decel. & Storage Lanes Estimated for Approaches			191	260	32	68
		323	669	1325	249	361
TOTAL INSIDE GOLDEN 76' ROADWAY		1042	2138	5396	873	1516
135+00 - 137+69	Pit #2, 1800 to 169267000	80	156	405	B	13
137+69 - 142+00	169267000	113	220	871	F.H. F.H.	
142+00 - 162+00	NE 1/4, Sec 32, T35 N, R70W	361	836	1919	F.H. F.H.	
Estimated for Accel., Decel. & Storage Lanes			63	126	1	1
TOTAL INSIDE GOLDEN 99' ROADWAY		554	1275	3021	9	14
162+00 - 164+33.6		60	103	249	F.H.	F.H.
TOTAL INSIDE GOLDEN 44' ROADWAY		60	103	248	0	0
164+33.6 - 176+00		210	298	750	F.H. F.H.	
176+00 - 179+00		57	81	204	F.H. F.H.	
181+00 - 183+70		51	72	181	F.H. F.H.	
185+12 - 187+49.84		223	317	795	F.H. F.H.	
Allowing for Bridges Estimated for Approaches			76	192	F.H. F.H.	
		48	162	418	F.H. F.H.	
TOTAL OUTSIDE GOLDEN 44' ROADWAY		589	968	2427	0	0
57+850A - 60+185		42	81	192	F.H. F.H.	
60+185 - 74+20.1		107	361	789	F.H. F.H.	
74+20.1 - 76+33.6		17	27	65	F.H. F.H.	
Estimated for Approaches						
TOTAL OUTSIDE GOLDEN 32' ROADWAY		166	469	1199	2	2

★ Future Construction

### FENCING REQUIREMENTS

STATION	SIDE	REMOVE FENCE	BUILD BARBED WIRE FENCE	BUILD COMB. WIRE FENCE	B. W. GATES
34+00	X	X	250		
36+80	X	X	240		
36+80 - 30+70	RH	X	610		
36+80 - 35+30	LT	X	180		
35+00	X	X	230		
34+70 - 32+15	LT	X	260	260	
31+30	X	X	290		
31+70 - 10+00 BK	LT	X	990	2170	
30+90	X	X	290		
30+15 - 10+00 BK	RH	X	2020		
19+1	LT	X	60		
17+20	X	X	670		
41+07.75A - 64+00	LT	X	2280		
41+07.75A - 105+40	RH	X	6823		
53+10	X	X	310		
60+83	RH	X	70		
64+20	X	X	540		
64+80 - 111+10	LT	X	340	4660	
66+15	X	X	1010		
67+50 - 78+00	RH	X	1010		
86+20	X	X	460		
89+30	X	X	560		
93+75	X	X	610		
100+20	X	X	190		
TOTAL OUTSIDE GOLDEN 76' ROADWAY			7930	18643	
109+40 - 130+20	RH	X	2090		
111+10 - 131+00	LT	X	1900		
130+20 - 133+50	RH	X	330	330	
131+00 - 133+90	X	X	300	380	
110+22	X	X	510		
130+20	X	X	630		
139+80	RH	X	50	1190*	
134+80 - 135+00	RH	X	50		
134+80 - 135+00	LT	X	50		
TOTAL INSIDE GOLDEN 76' ROADWAY			1490	4130	1900
135+00 - 162+00	LT	X	2740		
136+00 - 162+00	RH	X	2930		
135+00 - 161+50	RH	X	900		
141+22	X	X	200		
152+30 - 156+30	RH	X	300		
TOTAL INSIDE GOLDEN 99' ROADWAY			1400	5670	
162+00 - 164+33.6	LT	X	235		
162+00 - 164+33.6	RH	X	235		
164+33.6	X	X	300	470	
TOTAL INSIDE GOLDEN 44' ROADWAY			300	470	
161+32.1 - 179+00	RH	X	1466		
162+33.6 - 179+00	LT	X	1466		
176+50	LT	X	350		
181+88	X	X	280		
182+40 - 185+20	X	X	615		
181+32 - 187+49.84	RH	X	1851*		
18+49.0 - 33+00	LT	X	515		
TOTAL OUTSIDE GOLDEN 44' ROADWAY			622	5396	1
57+850A - 63+00	RH	X	515		
64+20	X	X	50		
TOTAL OUTSIDE GOLDEN 32' ROADWAY			50	515	

\* Includes 360 ft. along 19th St. and 170 ft. to be placed in rear of temporary buildings Sta. 5250 - 5262+200 & North Lane of Intersection

### BALLAST PLAN

It is estimated that Ballast material for the project is available in the vicinity of the pits indicated in the following tabulation. Estimated quantities involved in this operation are shown below.

Alteration of the plan as here outlined will be allowed only on written permission from the Department.

MATERIAL TO BE PLACED	SOURCE	QUANTITY AND THICKNESS				OVERHAUL
		AVAILABLE	THICKNESS	CLASS 2 THICKNESS	TONS	
30+14 - 37+00	Pit #1, 1000 to 524170054		13"	8898	F.H.	
37+00 - 17+00	524170054		13"	13840	F.H.	
17+00 - 10+00 BK	524170054		13"	4814	F.H.	
11+02.75A - 48+00	745, 730W		13"	4791	F.H.	
48+00 - 58+00			13"	2800	F.H.	
58+00 - 68+00			13"	6920	F.H.	
68+00 - 76+88			18"	8165	F.H.	
76+88 - 78+00			18"	1176	F.H.	
78+00 - 83+00			17"	1106	F.H.	
83+00 - 105+00			14"	1718	F.H.	
105+00 - 107+29			14"	2508	F.H.	
107+29 - 110+53.3			13"	1074	F.H.	
Estimated for Accel., Decel. & Storage Lanes Estimated for Approaches Allowance for Irregularities in subgrade (10%)				6961	496	
TOTAL OUTSIDE GOLDEN 76' ROADWAY				88555	5457	
110+23.3 - 124+29				3966	2398	
124+29 - 135+00				8502	1700	
Estimated for Accel., Decel. & Storage Lanes Estimated for Approaches Allowance for Irregularities in subgrade (10%)				1200	219	
				3277	985	
TOTAL INSIDE GOLDEN 76' ROADWAY				6	377	111
135+00 - 137+69	Pit #2, 1800 to 169267000			1344	459	
137+69 - 142+00	169267000			1840	6122	
142+00 - 162+00	NE 1/4, Sec 32, T35 N, R70W			17"	8172	89
Estimated for Accel., Decel. & Storage Lanes Estimated for Approaches Allowance for Irregularities in subgrade (10%)				17"	1501	F.H.
				18"	8198	F.H.
				6"	711	F.H.
				7"	670	B
TOTAL INSIDE GOLDEN 99' ROADWAY				1393	8	
162+00 - 164+33.6				1080	104	
TOTAL INSIDE GOLDEN 44' ROADWAY				6"	493	F.H.
176+00 - 179+00				6"	408	F.H.
181+00 - 183+70				6"	387	F.H.
181+00 - 187+49.84				6"	186	F.H.
Allowing for Bridges Estimated for Approaches Allowance for Irregularities in subgrade (10%)						
TOTAL OUTSIDE GOLDEN 44' ROADWAY				2038	0	
57+850A - 60+185				6"	309	F.H.
60+185 - 74+20.1				6"	1829	F.H.
74+20.1 - 76+33.6				6"	238	F.H.
Estimated for Approaches Allowance for Irregularities in subgrade (10%)					218	1
TOTAL OUTSIDE GOLDEN 32' ROADWAY					2361	6

\* Based on Curve 'D' of S.H.D. Design #12.

Add C.D. Volume JAN 1971/50

LIST OF STRUCTURES

STATION	DESCRIPTION	REMOVE STRUCTURE	EXCAVATION				STRUCTURAL EXCAVATION		STRUCTURE BACKFILL	MECHANICAL TAMPING	NO.13 INLET GRATING AND FRAME EACH	GRAVEL OR CRUSHED ROCK SURFAC. @ TON	CONCRETE CLASS		REIN-FORCING STEEL LBS.	CORRUGATED METAL CULVERT PIPE				METAL APRONS FOR C.M.P. CULVERTS			MISCELLANEOUS		
			UNCLASSIFIED CUBIC YARDS		UNCLASS DITCH CU. YDS.	CUBIC YARDS		CUBIC YARDS					CU. YDS.	HOUR		CLASS "A"	CLASS "B"	18"	24"	30"	36"	24"		30"	36"
			NO.	EXCAV		EMB.	CU. YDS.																		
57+ to 49+ 56+50	Remove 263 Guard Posts, Lt. & Rt. No. 13 Conc. Inlet (H-45) Cross Culverts & Ditches				75	75			42	1		1.04		136					2				Remove 263 Guard Posts ✓		
55+10	No. 13 Conc. Inlet (H-45) & Aprons, Remove 1.5' of C.M.P. in place, Lt. (387+00 U.S. 42)	1					7		5	1		1.04		136					2						
57+00-50+14	Approach to Project (Details on sheet 26)		*									1633													
58+85-50+15	Concrete Curb, Lt. (389+05-392+30 U.S. 40) (Details on sheet 26)																						125 Lin. Ft. Concrete Curb 3 Cu. Yds. Sand Cushion ✓		
51+54	No. 13 Conc. Inlet (H-45) Relay & Extend 24' of C.M.P. Rt. Apron at Inlet & Inlet Ditch, Remove Headwall, Rt.	1			5	34			30	1		1.45		208		94			1				125 Lin. Ft. Concrete Curb 3 Cu. Yds. Sand Cushion ✓ Relay 24' of C.M.P. ✓		
51+05	No. 13 Conc. Inlet (H-45) Extend 24' of C.M.P. 14' Lt. & 44' Rt. Apron at Outlet, Remove 1.5' of C.M.P. in place, Lt. (391+42.8 on U.S. 40)	1					22		30	1		2.05		213		125 125			1						
34+75 50+71-50+05	Cross Culvert & Inlet Ditch (397+28 North Ramp) Concrete Curb in Median (Details on sheet 26)				5	10			18										2				125 Lin. Ft. Concrete Curb 1 Cu. Yd. Sand Cushion ✓		
50+14-40+82 48+50	Concrete Curb, Lt. & Rt. (Details on sheet 26) No. 13 Conc. Inlet (H-45) Cross Culvert, Apron at Outlet & Outlet Ditch, Rt.				25	23			19	1		1.10		136		44			1				250 Lin. Ft. Concrete Curb 2 Cu. Yds. Sand Cushion ✓		
50+ to 44+	Drain Ditch, Lt.				700																				
49+	Intersection as per details sheet 26 & 26a		*									5729													
48+93-48+23	Concrete Curb in Median, Lt. (Details on sheet 26)																						133 Lin. Ft. Concrete Curb 1 Cu. Yd. Sand Cushion ✓		
48+50	No. 13 Conc. Inlet (H-45) Cross Culvert, Apron at Outlet & Outlet Ditch				25	37			28	1		1.10		136		70			1						
48+50-47+35	Concrete Curb, Rt. (394+40-395+70 U.S. 40) (Details on sheet 26)																						228 Lin. Ft. Concrete Curb 2 Cu. Yds. Sand Cushion ✓		
47+00 44+80	No. 13 Conc. Inlet (H-45) Cross Culverts & Ditches Cross Culvert & Outlet Ditch				5	60			45	1		1.04		136		58 126			2						
39+60-38+50 39+ 39+00	Concrete Curb, Rt. as per details on sheet 26a Road Approach, Rt. (Details on sheet 26a) No. 13 Conc. Inlet (H-45) Cross Culk & Apron at Outlet		*				64		36	1	719	1.10		136		88			1				170 Lin. Ft. Concrete Curb 3 Cu. Yds. Sand Cushion ✓		
44+40	Cross Culvert (397+58, North Ramp)				10	40			37								92		2						
36+ 36+11.5-35+88.5	Remove C.M.P. Lt. Double 10'x10' 14" C.P. (Type 10A) Outlet Ditch, (W-25)	1																					(Quantities in Summary) ✓		
36+00-34+50 35+40	Drain Ditch, Rt. Road Approach, Lt. (Type 10A) (Details on sheet 25)				40							165													
35+00 31+	No. 13 Conc. Inlet (H-45) Cross Culvert & Apron at Outlet Railroad Advance Warning Signs						18		30	1		1.10		136		80			1				2 Railroad Advance Warning Signs (State Forces) ✓		
31+00	No. 13 Conc. Inlet (H-45) Cross Culverts & Ditches				25	81			47	1		1.04		136		88 88			2						
25+00	No. 13 Conc. Inlet (H-45) Cross Culvert & Apron at Outlet						17		27	1		1.10		136		68			1						
15+00	No. 13 Conc. Inlet (H-45) Cross Culverts & Ditches				55	63			41	1		1.04		136		54 56			2						

Add. Ch. 2 Culverts 1/14/49

LIST OF STRUCTURES

STATION	DESCRIPTION	REMOVE STRUCTURE NO.	EXCAVATION			STRUCTURAL EXCAVATION		STRUCTURE BACKFILL CU. YDS.	MECHANICAL TAMPING HOUR	NO. 13 INLET GRATING AND FRAME EACH	GRAVEL OR CRUSHED ROCK SURFAC. TON	CONCRETE		REIN-FORCING STEEL LBS.	CORRUGATED CULVERT				METAL PIPE			METAL APRONS FOR CULVERTS			MISCELLANEOUS	
			UNCLASSIFIED		UNCLASS. DITCH	CUBIC	YARDS					CUBIC	YARDS		CLASS "A"	CLASS "B"	18"	24"	30"	36"	24"	30"	36"			
			EXCAV	EMB	CU. YDS.	●									CU. YDS.	CU. YDS.	CU. YDS.									
45+00	No. 13 Conc. Inlet (H-45), Cross Culverts & Inlet Ditch				5	23		42		✓		1.04	136													
50+00	No. 13 Conc. Inlet (H-100) & Cross Culverts					52		80		✓		2.02	329													
60+00	No. 13 Conc. Inlet (H-45), Cross Culvert, Apron at Outlet					35		25		✓		1.10	136													
63+00	No. 13 Conc. Inlet (H-45), Cross Culvert, Apron at Outlet					18		29		✓		1.10	136													
63+25 - 64+25 64+50	Concrete Curb in median (Details on sheet 25) Road Approach, Lt. (Type 1), Apron & Drain Lanes, Side Drains & Ditches (Details on sheet 25)			220	25	33		24			155															205 Lin Ft Conc. Curb 2 Curb Sand Cushion ✓
64+75 - 65+75 65+00 70+00	Concrete Curb in Median (Details on sheet 26) Cross Culvert & Inlet Ditch No. 13 Conc. Inlet (H-45), Cross Culvert, Apron at Outlet				5	31 34		79 27		✓		1.10	136													214 Lin Ft Conc. Curb 2 Curb Sand Cushion ✓
75+00	No. 13 Conc. Inlet (H-45), Cross Culverts & Inlet Ditch				5	75		51		✓		1.04	136													
85+00	No. 13 Conc. Inlet (H-45), Cross Culvert, Apron at Outlet					19		29		✓		1.10	136													
89+ - 89+	Drain Ditch, Rt.				15																					
88+837 - 88+26.2 90+70	Double 10'-6" x 6'-6" C.B.C. (Type 10B) Outlet Ditch (Type 25) No. 13 Conc. Inlet (H-45), Cross Culvert, Apron at Outlet					17		27		✓		1.10	136													(Quantities in Summary)
92+	Remove Cattle Guard, Rt.																									Remove Cattle Guard ✓
91+20	Road Approach, Lt. & Cattle Guard, Lt.			110							36															1-16" Cattle Guard ✓
96+00	No. 13 Conc. Inlet (H-45), Cross Culverts & Ditches				5	85		49		✓		1.04	136													
98+18	6'-7" x 11" C.B.C. & Inlet Ditch (Std. M-103-B)				15	48		325		33		114.16	11046													
101+00	No. 13 Conc. Inlet (H-45), Cross Culvert, Apron at Outlet					17		27		✓		1.10	136													
102+ - 104+	Fill Depression, Rt.				15																					
105+40	No. 13 Conc. Inlet (H-100) Cross Culvert & Inlet Ditch				5	45		72		✓		2.02	329													
110+00	No. 13 Conc. Inlet (H-45) Cross Culvert, Apron at Outlet Mechanical Tamping for C.M.P. Culverts					9		25		105	✓	1.10	136													
<b>TOTAL OUTSIDE GOLDEN 76 ROADWAY</b>		4	0	2445	1035	1108		1380	138	24	8499	143.22	0	11945	0	1929	92	494								
117+50	No. 13 Conc. Inlet (H-45), Cross Culverts & Ditches				40	61		42		✓		1.04	136													
123+00	No. 13 Conc. Inlet (H-45), Cross Culvert, Apron at Outlet & Outlet Ditch				5	17		25		✓		1.10	136													
124+ - 125+ 124+ - 125+	Remove Unsuitable Material Drain Ditch, Lt.			1615	*	5																				
124+75	Cross Culvert & Inlet Ditch				5	40		73		✓																
124+ - 129+ 127+30	Remove Unsuitable Material No. 13 Conc. Inlet (H-30) & Cross Culverts			1840	*			54		✓		1.95	297													

WEST SURVEY

Rev. 5/14/50-548 - C&G Sta. 153' & 1/4" from  
Adj. Force Account Items 104 & 105

### LIST OF STRUCTURES

STATION	DESCRIPTION	REMOVE STRUCTURE NO.	EXCAVATION			STRUCTURAL EXCAVATION		STRUCTURE BACKFILL CU. YDS.	MECHANICAL TAMPING HOUR	NO. 13 INLET GRATING AND FRAME EACH	GRAVEL OR CRUSHED ROCK SURF. TON	CONCRETE		REINFORCING STEEL LBS.	CORRUGATED CULVERT				METAL PIPE		METAL APRONS FOR C.M.P. CULVERTS			MISCELLANEOUS	
			UNCLASSIFIED CUBIC	CLASSIFIED YARDS	UNCLASSIFIED DITCH CU. YDS.	CUBIC	YARDS					CLASS "A" CU.YDS.	CLASS "B" CU.YDS.		18"	24"	30"	36"	18"	24"	30"	36"			
			NO.	EXCAV.	EMB.	CU. YDS.	•																		
134+10 134+50	Encase 250 ft. of Water Line in 18" C.M.P. (Work by City of Golden, Forces) Encase 350 ft. of Sewer Line in 18" C.M.P. (Work by City of Golden Forces)																						(FORCE ACCOUNT) (FORCE ACCOUNT)		
133+00-134+00 133+65-134+00 134+29.4	Concrete Curb in Median (Details on sheet 27) Concrete Curb Rt. (Details on sheet 27) Concrete Curb Rt. (Details on sheet 27)																						205 Lin. Ft. Conc. Curb ✓ 2 Cu. Yds. Sand Cushion ✓ 150 Lin. Ft. Conc. Curb ✓ 1 Cu. Yds. Sand Cushion ✓ 670 Lin. Ft. Conc. Curb ✓ 3 Cu. Yds. Sand Cushion ✓		
134+29.4 134+52-135+00	Road Approaches & Intersection as per details on sheets 27 Concrete Curb in Median (Details on sheet 27)		*								225												110 Lin. Ft. Conc. Curb ✓ 1 Cu. Yd. Sand Cushion ✓		
Left of Sta. 134+29.4 1+50 2+30	LOOKOUT MOUNTAIN ROAD Cross Culvert & Ditches Road Approach, Side Drain & Ditches, Rt.				100	48		20								80					2				
3+10 3+40 5+70	Road Approach, Side Drain & Ditches, Rt. Road Approach, Side Drain & Ditches, Lt. Road Approach, Side Drain & Ditches, Rt.				80	5	3	9			11					36									
3+10 3+40 5+70	Road Approach, Side Drain & Ditches, Rt. Road Approach, Side Drain & Ditches, Lt. Road Approach, Side Drain & Ditches, Rt.				100 160	5 5	3 3	9 9			11 11					36 36									
10+20 10+25	Road Approach, Side Drain & Ditches, Lt. Road Approach, Side Drain & Ditches, Rt.				40	5	3	9			11					36									
10+20 10+25	Road Approach, Side Drain & Ditches, Lt. Road Approach, Side Drain & Ditches, Rt.				25 125	5 5	3 3	9 9			11 11					36 36									
Right of Sta. 134+29.4 6+00 1+ Lt. to 6+ Rt.	Road Approach & Side Drain, Lt. Relay 18"x22" Side Drain, Rt. & Road Approach, Rt. Remove 6 Side Drains Mechanical Tamping for C.M.P. Culverts				6	110 55	3 2	9 7			11 30					36							Relay 18"x22" Side Drain ✓		
	<b>TOTAL INSIDE GOLDEN 76' ROADWAY</b>				6	3985	165	165	209		284	28	3	2387	4.09	0	529	252	338	0	182		7	0	2
135+00-135+55 135+25 136+80 739+25	Concrete Curb in Median (Details on sheet 27) Cross Culvert & Inlet Ditch Cross Culvert & Ditches No 13 Conc. Inlet (H-As), Cross Culvert Apron at Outlet																						110 Lin. Ft. Conc. Curb ✓ 1 Cu. Yd. Sand Cushion ✓		
139+50-142+50 142+50	Grouted Rubble Slope & Ditch Paving, Lt. (2 Th) (Details on sheet 3) Cross Culvert & Ditches, Grouted Rubble Slope & Ditch Paving at Inlet (12 Th) No Apron at Inlet (Details on sheet 3)					10 20	37 50		51 61							128					2				
139+50-142+50 142+50	Grouted Rubble Slope & Ditch Paving, Lt. (2 Th) (Details on sheet 3) Cross Culvert & Ditches, Grouted Rubble Slope & Ditch Paving at Inlet (12 Th) No Apron at Inlet (Details on sheet 3)					21	21		21		1	1.10		136		48					1				
139+50-142+50 142+50	Grouted Rubble Slope & Ditch Paving, Lt. (2 Th) (Details on sheet 3) Cross Culvert & Ditches, Grouted Rubble Slope & Ditch Paving at Inlet (12 Th) No Apron at Inlet (Details on sheet 3)					63 215	79		34							76					1		220 sq. Yds. Grouted Rubble Slope & Ditch Paving ✓ 20 sq. Yds. Grouted Rubble Slope & Ditch Paving ✓		
153+80 to 156+50 150+00 153+10 154+70 to 156+ 158+ - 160+	6' Perf. C.M.P. Underdrain (Details sheets 2 & 5) Fence Stiles, Lt. & Rt. (Details on sheet 25) 6"x116" G.B.C. & Ditches Ditch Change, Lt. (Details on sheet 51) Drain Ditch, Lt. Mechanical Tamping for C.M.P. Culverts						200																270-6' Perf. C.M.P. Underdrain ✓ 0.281 M. Ham. Misc. Ulntr. Timber ✓		
153+80 to 156+50 150+00 153+10 154+70 to 156+ 158+ - 160+	6' Perf. C.M.P. Underdrain (Details sheets 2 & 5) Fence Stiles, Lt. & Rt. (Details on sheet 25) 6"x116" G.B.C. & Ditches Ditch Change, Lt. (Details on sheet 51) Drain Ditch, Lt. Mechanical Tamping for C.M.P. Culverts					25 223	175		225	25		86.42		9432											
	<b>TOTAL INSIDE GOLDEN 59' ROADWAY</b>				0	0	0	523	625		392	40	1		8752	0	3569	0	48	128	202		1	2	3

WEST SURVEY

## LIST OF STRUCTURES

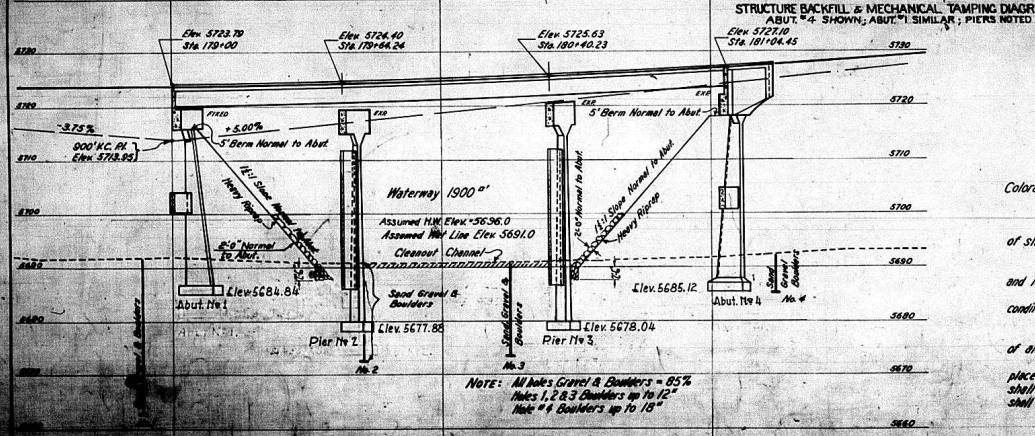
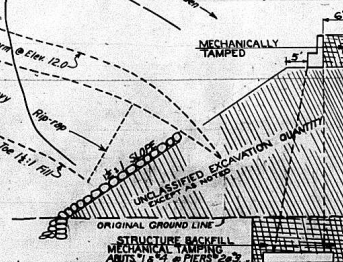
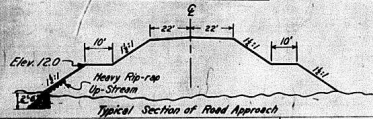
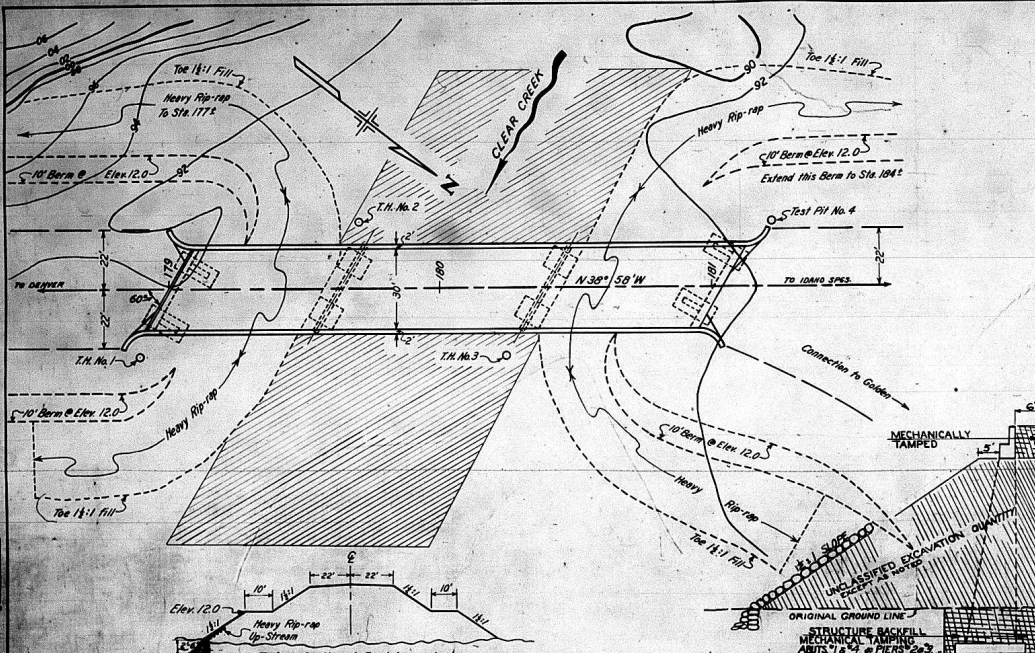
STATION	DESCRIPTION	REMOVE STRUCTURE NO.	EXCAVATION			STRUCTURAL EXCAVATION			STRUCTURE BACKFILL CU YDS.	MECHANICAL TAMPING HOUR	NO.13 INLET GRATING AND FRAME EACH	GRAVEL OR CRUSHED ROCK SURFACE @ TON	CONCRETE		REINFORCING STEEL LBS.	CORROGATED METAL PIPE				METAL APRONS FOR C.M.P. CULVERTS			MISCELLANEOUS	
			UNCLASSIFIED		UNCLASSIFIED DITCH CU YDS.	STRUCTURAL EXCAVATION		CLASS "A" CU YDS.					CLASS "B" CU YDS.	18"		24"	30"	36"	24"	30"	36"			
			CUBIC	YARDS		NO.	EXCAV.															EMB.		NO.
162+1 162+10	Fence Stiles Lt & Rt (Details on sheet 25) Cross Culvert & Ditches Mechanical Tamping for C.M.P. Culverts				5	11			35														220 M.P. 6m Misc. Untr. Timber	
<b>TOTAL INSIDE GOLDEN 44' ROADWAY</b>			0	0	0	5	11		35	4	0	0	0	0	0	0	94	0	0			2	0	0
164+95 168+11	Road Approach, Lt. 5'-5.76" C.B.C. (Type 82) & Ditches (N-12)		95									32												
169+50 174+50-177+50	Cross Culvert & Ditches Grouted Rubble Slope & Ditch Paving, Lt. & Rt. (12" Thick) (Details on sheet 3)				30	23			18	19		127.64		3,286								2		580 Sq Yds Grouted Rubble Slope & Ditch Paving
176+50 179+00-181+04.5	Road Approach & Side Drain, Lt. Bridge as per details on sheets 10 to 16				15	2			8			32			30									
183+70.3-185+76.6	Overpass as per details on sheet 17 to 24																							
186+65 193+65	Road Approach to Golden (Details on sheet 25) Cross Culvert & Ditches Grouted Rubble Slope & Ditch Paving at Inlet (12" Thick), No Apron at Inlet (Details on sheet 3)		1320									564												92 Sq Yds Grouted Rubble Slope & Ditch Paving
195+20	Cross Culvert & Ditches Grouted Rubble Slope & Ditch Paving at Inlet (12" Thick), No Apron at Inlet (Details on sheet 3) Mechanical Tamping for C.M.P. Culverts				190	110			26													1	1	70 Sq Yds Grouted Rubble Slope & Ditch Paving
<b>TOTAL OUTSIDE GOLDEN 44' ROADWAY</b>			0	1315	1365	480	633		252	26	0	628	127.64	0	3,286	30	110	0	56			3	0	1
62+00 68+50 71+50	Cross Culvert & Ditches, Type "A" Headwall at Inlet Road Approach with No Decel. Lane, Rt. Cross Culvert & Outlet Ditch Mechanical Tamping for C.M.P. Culverts				60	46			18				1.65									1		
<b>TOTAL OUTSIDE GOLDEN 32' ROADWAY</b>			0	8,000	0	65	55		38	4	0	95	0	1.65	0	0	110	0	0			3	0	0

- Structural Excavation is estimated to be 80% Common and 20% Rock, each of which is estimate to be 75% Dry and 25% Wet.
- \* Included in Roadway Quantities.
- Future Construction.
- ⊕ Includes floor for connecting band

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	FD05-3(5)	10	

### SUMMARY OF QUANTITIES

ITEM	DESCRIPTION	UNIT	SUPER.	ABUT. NO.1	PIER NO.2	PIER NO.3	ABUT. NO.4	TOTAL
13c	Unclassified Excav	Cu Yd						400
14a	Dry Rock Excav (Struct)	Cu Yd		2.5			2.5	5.0
14b	Dry Common Excav (Struct)	Cu Yd		12.0			10.0	22.0
14c	Wet Rock Excav (Struct)	Cu Yd			2.5	2.5		5.0
14d	Wet Common Excav (Struct)	Cu Yd		75.0	140.0	140.0	85.0	440.0
15a	Structure Backfill	Cu Yd		60.0	30.0	30.0	60.0	180.0
16d	Mechanical Tamping	Hr		12.0	10.0	10.0	16.0	48.0
42a	Untreat Bridge Timber	Mt bm		0.208			0.139	0.347
46a	Class "A" Concrete	Cu Yd	170.3	80.2	72.8	74.0	89.7	487.0
47	Reinforcing Steel	Lb	28,490	9,000	10,360	10,350	10,180	68,380
48	Structural Steel	Lb	216,930	0,060			0,040	217,030
67b	Heavy Riprap	Cu Yd						2,133
80c	Sheet Copper 32 oz.	Lb	4					4
89	Drain Pipe 4"x2'-0"	Each	20					20
*	1/2" Expan Joint Material	Sq Ft	80					
*	16 Ga Sheet Metal	Sq Ft	80					



- \* To be included in bid price for Class "A" Concrete.
- Assumed Wet Line, Elev. 5691.09
- Bolts & Nuts as indicated in Bid Price.
- Includes 16,200 lbs of handrail steel.
- Includes 940 lbs of handrail steel.

- REFERENCE DRAWINGS
- Sheet 11 - Bar list & bending diagrams.
  - Sheet 12 - Details of superstructure.
  - Sheet 13 - Details of Expansion device, handrail, & Camber diagram.
  - Sheet 14 - Details of Abut. No. 1.
  - Sheet 15 - Details of Abut. No. 4.
  - Sheet 16 - Details of Abut. No. 4.

#### GENERAL NOTES

All work shall be done according to the Standard Specifications of the Colorado State Highway Department - Adopted January 1, 1948.  
All concrete shall be class "A" and air entrained.

Forms for concrete surfaces exposed in the finished work shall be constructed of shiplap or tongue and groove lumber 3/8" unless faced with panel board.  
All concrete exposed to view shall receive a Class "1" surface finish except underside of floor slabs & abut. faces below stringers.  
All reinforcing bars shall be intermediate grade deformed and tagged with station number and letter designation. Main bars shall not be spliced.  
Soundings and depth of footings shown are according to the best available data. If essentially different conditions are encountered, the Bridge Engr. will inspect and determine if redesign is necessary.  
All piers shall be 34" diameter. All piers to be painted green.  
Paint - All structural steel shall receive one shop coat zinc chromate and two field coats of aluminum paint.  
Contractors' attention is called to specifications covering Mechanical Tamping: Earth shall be placed in 6" layers, sloping up to and on a minimum slope of 4:1. Mechanical Tamping of each layer shall start along wet and continue away from wet. Above the original ground line, mechanical tamping shall be done to a distance of 6 feet from wall. (See Mechanical Tamping Diagram)  
Rolling equipment shall not be used within 6 feet of walls.

LOADING DATA:  
LIVE LOAD - A. A. H. & H. 1931-44  
WIND - 100 MPH  
SEWER - 18" DIA. 12' SPAN  
CULVERT - 18" DIA. 12' SPAN  
DESIGNING DATA:  
A.A.H. & H. UNIT SYSTEMS  
1:1000 HORIZ. BY 1" IN.  
1:1000 VERT. BY 1" IN.  
1:10000 HORIZ. BY 1" IN.  
1:10000 VERT. BY 1" IN.

**COLORADO STATE HIGHWAY DEPARTMENT**  
330 West 62nd St., Denver, Colorado  
1818 & 1/2 Basin Street, 30th Fl., Denver, Colorado  
Layout, General Notes  
Summary of Quantities  
Engr. C. L. ...  
Checked by ...  
Drawn by ...  
Date: 5-10-50

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F005-3(3)	11	

# BAR LIST

FOR SUPERSTRUCTURE						
Mark	Size	No. Reqd	Length	Type	Dimensions	
					l	l'
E1	5/8"	163	38'-0"	I	36'-4"	2'-2"
E2	3/8"	103	40'-0"	II	36'-4"	2'-2"
E3	3/8"	162	39'-0"	III		
S1	1/2"	88	4'-3"	IV	0'-6 1/2"	1'-1"
D1	1/2"	244	33'-0"	Str		
D2	1/2"	122	33'-0"	Str		
S2	3/8"	82	5'-11"	Str		2'-2"

Summary for Superstructure

13,184 Lin ft. of 1/2" @ 0.668 = 8807 #  
 15,553 Lin ft. of 3/8" @ 1.043 = 24,394 #  
 1% Overrun = 289 #  
**TOTAL = 29,480 #**

FOR ABUTMENT NO. 1						
Mark	Size	No. Reqd	Length	Type	Dimensions	
					l	l'
F1	3/8"	26	15'-1"	I	14'-3"	2'-2"
F2	3/8"	16	4'-3"	I	3'-5"	2'-2"
F3	3/8"	5	7'-8"	I	6'-0"	2'-2"
A1	1/2"	8	35'-5"	V	33'-9"	4'-4"
A2	1/2"	4	19'-2"	V	17'-6"	4'-4"
A3	1/2"	2	9'-7 1/2"	V	8'-3"	4'-4"
A4	3/8"	4	33'-6"	Str		
A5	3/8"	4	22'-6"	Str		
A6	3/8"	4	16'-6"	Str		
A7	3/8"	4	10'-6"	Str		
A8	3/8"	13	19'-6"	Str	1'-7 1/2"	7'-7 1/2"
A9	1/2"	12	16'-6"	Str	1'-7 1/2"	6'-1 1/2"
A10	1/2"	12	14'-6"	Str	1'-7 1/2"	5'-1 1/2"
A11	1/2"	12	10'-6"	Str	1'-7 1/2"	3'-1 1/2"
A12	1/2"	4	7'-6"	Str	1'-7 1/2"	2'-2"
A13	1/2"	10	26'-6"	Str		4'-4"
A14	1/2"	2	24'-10"	I	23'-6"	2'-2"
A15	1/2"	22	11'-5"	I	11'-7 1/2"	3'-7 1/2"
A16	3/8"	40	10'-5"	Str		
A17	1/2"	4	15'-2"	Str	2'-2"	6'-6"
A18	1/2"	3	36'-0"	Str		
A19	1/2"	3	24'-6"	I	21'-6"	4'-4"
A20	3/8"	3	24'-0"	III	19'-0"	5'-0"
A21	3/8"	3	25'-0"	III	19'-0"	5'-0"
A22	3/8"	3	25'-0"	III	19'-0"	5'-0"
A23	1/2"	3	38'-9"	IV	37'-0"	2'-9"
A24	1/2"	5	7'-6"	V	6'-2"	3'-8"
A25	1/2"	3	10'-0"	V	8'-6"	4'-4"
A26	1/2"	3	38'-10"	V	35'-0"	4'-4"
A27	1/2"	2	13'-1"	V	10'-2"	4'-4"
A28	1/2"	2	13'-1"	V	10'-2"	4'-4"
A29	1/2"	2	24'-7"	V	19'-5"	4'-4"
A30	1/2"	2	23'-0"	V	19'-5"	3'-7"
A31	1/2"	2	38'-4"	V	37'-0"	2'-2"
A32	1/2"	2	11'-2"	V	10'-2"	3'-3"
C1	3/8"	1	13'-2"	Str		2'-2"
C2	3/8"	4	10'-10"	Str		2'-2"
C3	3/8"	1	3'-9"	Str		
C4	3/8"	1	3'-9"	Str		
C5	3/8"	1	2'-9"	Str		
C6	3/8"	1	1'-9"	Str		
C7	3/8"	1	1'-9"	Str		
C8	3/8"	7	14'-6"	Str	5'-0"	2'-2"
C9	3/8"	7	14'-6"	Str	5'-0"	2'-2"
C10	3/8"	7	14'-6"	Str	5'-0"	2'-2"
C11	3/8"	4	11'-0"	Str	4'-6"	
C12	3/8"	5	11'-7 1/2"	Str		
C13	3/8"	4	10'-1 1/2"	Str		
B1	3/8"	1	28'-5"	I	11'-0"	3'-8"
B2	3/8"	2	14'-2"	I	13'-0"	3'-8"
B3	3/8"	3	31'-0"	I	30'-0"	2'-2"
B4	3/8"	2	14'-0"	Str		
B5	3/8"	2	14'-0"	Str		
B6	3/8"	2	14'-0"	Str		
B7	3/8"	2	14'-0"	Str		
B8	3/8"	2	14'-0"	Str		
B9	3/8"	2	14'-0"	Str		
B10	3/8"	2	14'-0"	Str		
B11	3/8"	2	14'-0"	Str		
B12	3/8"	2	14'-0"	Str		

FOR PIER NO. 1						
Mark	Size	No. Reqd	Length	Type	Dimensions	
					l	l'
W1	3/4"	40	10'-11"	I	8'-11"	3'-2"
W2	3/8"	42	9'-2"	I	7'-6"	2'-8"
W3	1/2"	3	6'-1"	V	4'-7"	4'-4"
P1	1/2"	8	18'-0"	Str		
P2	1/2"	8	30'-0"	Str		
P3	1/2"	1	31'-9"	Str		
P4	1/2"	3	34'-9"	Str		
P5	1/2"	12	39'-9"	Str		
P6	1/2"	1	40'-3 1/2"	Str		
P7	1/2"	1	30'-0"	Str	2'-2 1/2"	2'-1 1/2"
P8	1/2"	2	16'-1 1/2"	Str	1'-1 1/2"	3'-4 1/2"
P9	1/2"	2	8'-10"	Str	1'-1 1/2"	2'-0"
P10	1/2"	2	9'-0"	Str	2'-0"	2'-0"
P11	1/2"	2	37'-2"	Str	2'-1 1/2"	2'-1 1/2"
P12	1/2"	2	37'-2"	Str	2'-1 1/2"	2'-1 1/2"
P13	1/2"	2	22'-7"	Str	2'-1 1/2"	2'-1 1/2"
P14	1/2"	2	22'-7"	Str	2'-1 1/2"	2'-1 1/2"
P15	1/2"	2	22'-7"	Str	2'-1 1/2"	2'-1 1/2"
P16	1/2"	2	22'-7"	Str	2'-1 1/2"	2'-1 1/2"
P17	1/2"	34	27'-3"	Str		2'-2"
P18	1/2"	24	25'-6"	Str		
P19	1/2"	4	46'-10"	Str	2'-10"	7'-0"
P20	1/2"	2	36'-9"	Str		
P21	1/2"	2	24'-7"	I	23'-3"	5'-4"
P22	1/2"	2	12'-0"	I	9'-0"	4'-4"
P23	1/2"	2	39'-0"	I	35'-0"	4'-4"
P24	1/2"	2	11'-0"	I	10'-0"	4'-4"
P25	1/2"	4	17'-6"	I	14'-6"	4'-4"
P26	1/2"	4	36'-8"	Str		
P27	1/2"	55	11'-11"	Str	11'-0"	3'-7 1/2"

Summary Pier No. 1

1940 Lin ft. of 1/2" @ 0.668 = 1296 #  
 2450 Lin ft. of 3/8" @ 1.043 = 2555 #  
 97 Lin ft. of 7/8" @ 2.048 = 178 #  
 30 Lin ft. of 1" @ 3.4 = 129 #  
 634 Lin ft. of 1 1/2" @ 4.303 = 2729 #  
 380 Lin ft. of 1 3/4" @ 5.313 = 2015 #  
 1% Overrun = 95 #  
**TOTAL = 9,000 #**

FOR PIER NO. 2						
Mark	Size	No. Reqd	Length	Type	Dimensions	
					l	l'
W1	3/4"	40	10'-11"	I	8'-11"	3'-2"
W2	3/8"	42	9'-2"	I	7'-6"	2'-8"
W3	1/2"	3	6'-1"	V	4'-7"	4'-4"
P1	1/2"	8	18'-0"	Str		
P2	1/2"	8	30'-0"	Str		
P3	1/2"	1	31'-9"	Str		
P4	1/2"	3	34'-9"	Str		
P5	1/2"	12	39'-9"	Str		
P6	1/2"	1	40'-3 1/2"	Str		
P7	1/2"	1	30'-0"	Str	2'-2 1/2"	2'-1 1/2"
P8	1/2"	2	16'-1 1/2"	Str	1'-1 1/2"	3'-4 1/2"
P9	1/2"	2	8'-10"	Str	1'-1 1/2"	2'-0"
P10	1/2"	2	9'-0"	Str	2'-0"	2'-0"
P11	1/2"	2	37'-2"	Str	2'-1 1/2"	2'-1 1/2"
P12	1/2"	2	37'-2"	Str	2'-1 1/2"	2'-1 1/2"
P13	1/2"	2	22'-7"	Str	2'-1 1/2"	2'-1 1/2"
P14	1/2"	2	22'-7"	Str	2'-1 1/2"	2'-1 1/2"
P15	1/2"	2	22'-7"	Str	2'-1 1/2"	2'-1 1/2"
P16	1/2"	2	22'-7"	Str	2'-1 1/2"	2'-1 1/2"
P17	1/2"	34	27'-3"	Str		2'-2"
P18	1/2"	24	25'-6"	Str		
P19	1/2"	4	46'-10"	Str	2'-10"	7'-0"
P20	1/2"	2	36'-9"	Str		
P21	1/2"	2	24'-7"	I	23'-3"	5'-4"
P22	1/2"	2	12'-0"	I	9'-0"	4'-4"
P23	1/2"	2	39'-0"	I	35'-0"	4'-4"
P24	1/2"	2	11'-0"	I	10'-0"	4'-4"
P25	1/2"	4	17'-6"	I	14'-6"	4'-4"
P26	1/2"	4	36'-8"	Str		
P27	1/2"	55	11'-11"	Str	11'-0"	3'-7 1/2"

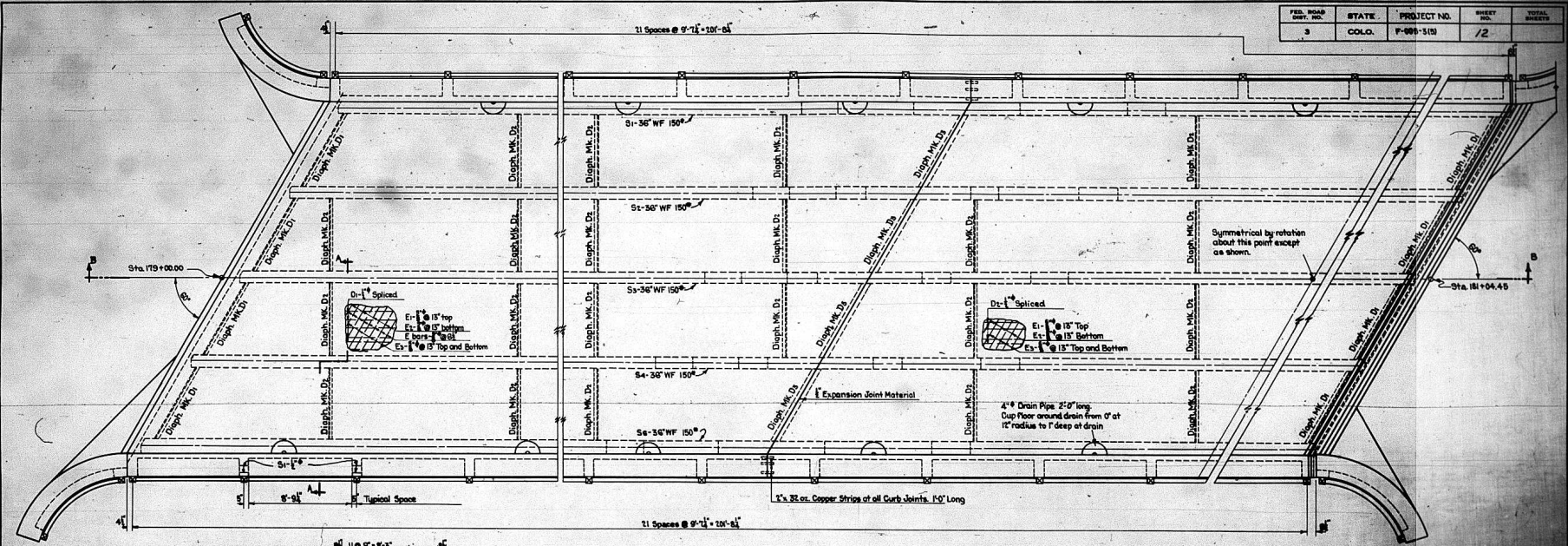
Summary Pier No. 2

2444 Lin ft. of 1/2" @ 0.668 = 1632 #  
 1040 Lin ft. of 3/8" @ 1.043 = 1085 #  
 437 Lin ft. of 7/8" @ 1.502 = 656 #  
 1293 Lin ft. of 1" @ 3.403 = 5521 #  
 257 Lin ft. of 1 1/4" @ 5.313 = 1365 #  
 1% Overrun = 101 #  
**TOTAL = 10,360 #**

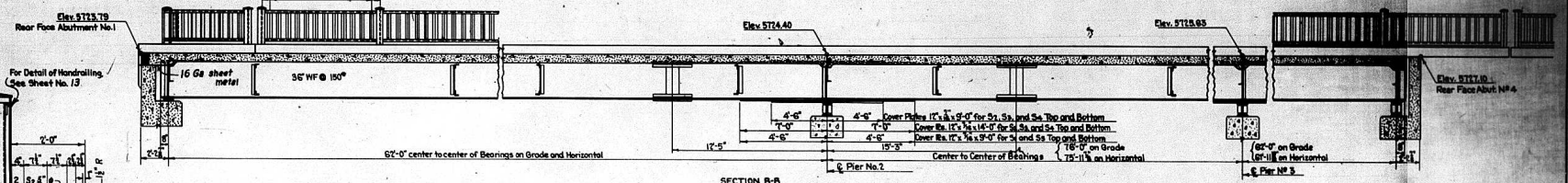
FOR PIER NO. 3						
Mark	Size	No. Reqd	Length	Type	Dimensions	
					l	l'
W1	3/4"	40	10'-11"	I	8'-11"	3'-2"
W2	3/8"	42	9'-2"	I	7'-6"	2'-8"
W3	1/2"	3	6'-1"	V	4'-7"	4'-4"
P1	1/2"	8	18'-0"	Str		
P2	1/2"	8	30'-0"	Str		
P3	1/2"	1	31'-9"	Str		
P4	1/2"	3	34'-9"	Str		
P5	1/2"	12	39'-9"	Str		
P6	1/2"	1	40'-3 1/2"	Str		
P7	1/2"	1	30'-0"	Str	2'-2 1/2"	2'-1 1/2"
P8	1/2"	2	16'-1 1/2"	Str	1'-1 1/2"	3'-4 1/2"
P9	1/2"	2	8'-10"	Str	1'-1 1/2"	2'-0"
P10	1/2"	2	9'-0"	Str	2'-0"	2'-0"
P11	1/2"	2	37'-2"	Str	2'-1 1/2"	2'-1 1/2"
P12	1/2"	2	37'-2"	Str	2'-1 1/2"	2'-1 1/2"
P13	1/2"	2	22'-7"	Str	2'-1 1/2"	2'-1 1/2"
P14	1/2"	2	22'-7"	Str	2'-1 1/2"	2'-1 1/2"
P15	1/2"	2	22'-7"	Str	2'-1 1/2"	2'-1 1/2"
P16	1/2"	2	22'-7"	Str	2'-1 1/2"	2'-1 1/2"
P17	1/2"	34	27'-3"	Str		2'-2"
P18	1/2"	24	25'-6"	Str		
P19	1/2"	4	46'-10"	Str	2'-10"	7'-0"
P20	1/2"	2	36'-9"	Str		
P21	1/2"	2	24'-7"	I	23'-3"	5'-4"
P22	1/2"	2	12'-0"	I	9'-0"	4'-4"
P23	1/2"	2	39'-0"	I	35'-0"	4'-4"
P24	1/2"	2	11'-0"	I	10'-0"	4'-4"
P25	1/2"	4	17'-6"	I	14'-6"	4'-4"
P26	1/2"	4	36'-8"	Str		
P27	1/2"	55	11'-11"	Str	11'-0"	3'-7 1/2"

FOR PIER NO. 4						
Mark	Size	No. Reqd	Length	Type	Dimensions	
					l	l'
P11	1/2"	34	21'-0"	Str		
P10	1/2"	24	25'-6"	Str		
E1	1/2"	2	16'-10"	Str	2'-0"	7'-0"
P10	1/2"	2	36'-9"	Str		
P11	1/2"	2	24'-7"	Str	2'-3"	5'-4"
P12	1/2"	2	12'-0"	I	9'-0"	4'-4"
P13	1/2"	2	39'-0"	I	35'-0"	4'-4"
P14	1/2"	2	11'-4"	I	8'-0"	

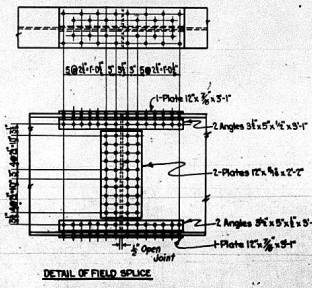
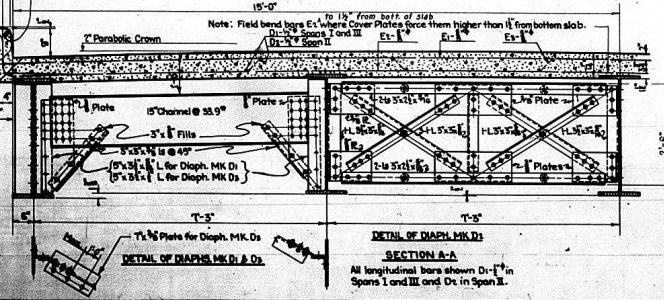
FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	P-400-3(3)	1/2	



REV.	DATE	BY	CHKD.	DESCRIPTION
1	11-15-39	J.S.	J.S.	AS SHOWN
2	11-15-39	J.S.	J.S.	AS SHOWN
3	11-15-39	J.S.	J.S.	AS SHOWN
4	11-15-39	J.S.	J.S.	AS SHOWN
5	11-15-39	J.S.	J.S.	AS SHOWN
6	11-15-39	J.S.	J.S.	AS SHOWN
7	11-15-39	J.S.	J.S.	AS SHOWN
8	11-15-39	J.S.	J.S.	AS SHOWN
9	11-15-39	J.S.	J.S.	AS SHOWN
10	11-15-39	J.S.	J.S.	AS SHOWN
11	11-15-39	J.S.	J.S.	AS SHOWN
12	11-15-39	J.S.	J.S.	AS SHOWN
13	11-15-39	J.S.	J.S.	AS SHOWN
14	11-15-39	J.S.	J.S.	AS SHOWN
15	11-15-39	J.S.	J.S.	AS SHOWN
16	11-15-39	J.S.	J.S.	AS SHOWN
17	11-15-39	J.S.	J.S.	AS SHOWN
18	11-15-39	J.S.	J.S.	AS SHOWN
19	11-15-39	J.S.	J.S.	AS SHOWN
20	11-15-39	J.S.	J.S.	AS SHOWN
21	11-15-39	J.S.	J.S.	AS SHOWN
22	11-15-39	J.S.	J.S.	AS SHOWN
23	11-15-39	J.S.	J.S.	AS SHOWN
24	11-15-39	J.S.	J.S.	AS SHOWN
25	11-15-39	J.S.	J.S.	AS SHOWN
26	11-15-39	J.S.	J.S.	AS SHOWN
27	11-15-39	J.S.	J.S.	AS SHOWN
28	11-15-39	J.S.	J.S.	AS SHOWN
29	11-15-39	J.S.	J.S.	AS SHOWN
30	11-15-39	J.S.	J.S.	AS SHOWN
31	11-15-39	J.S.	J.S.	AS SHOWN
32	11-15-39	J.S.	J.S.	AS SHOWN
33	11-15-39	J.S.	J.S.	AS SHOWN
34	11-15-39	J.S.	J.S.	AS SHOWN
35	11-15-39	J.S.	J.S.	AS SHOWN
36	11-15-39	J.S.	J.S.	AS SHOWN
37	11-15-39	J.S.	J.S.	AS SHOWN
38	11-15-39	J.S.	J.S.	AS SHOWN
39	11-15-39	J.S.	J.S.	AS SHOWN
40	11-15-39	J.S.	J.S.	AS SHOWN
41	11-15-39	J.S.	J.S.	AS SHOWN
42	11-15-39	J.S.	J.S.	AS SHOWN
43	11-15-39	J.S.	J.S.	AS SHOWN
44	11-15-39	J.S.	J.S.	AS SHOWN
45	11-15-39	J.S.	J.S.	AS SHOWN
46	11-15-39	J.S.	J.S.	AS SHOWN
47	11-15-39	J.S.	J.S.	AS SHOWN
48	11-15-39	J.S.	J.S.	AS SHOWN
49	11-15-39	J.S.	J.S.	AS SHOWN
50	11-15-39	J.S.	J.S.	AS SHOWN

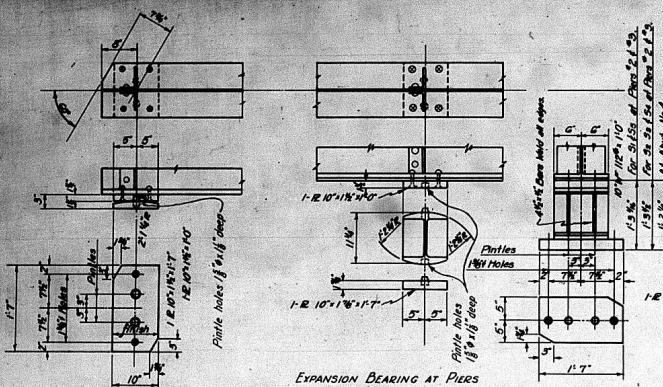


Span No. 1	53.3
Span No. 2	63.7
Span No. 3	53.3



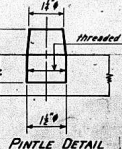
**COLORADO STATE HIGHWAY DEPARTMENT**  
 3 SPANS 62'-10" - 62' CONTINUOUS CONCRETE SLAB AND I BEAM BRIDGE  
 50 FOOT ROADWAY  
 DETAILS OF SUPERSTRUCTURE  
 APPROVED: [Signature]  
 DATE: May 1, 1950

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLOR.	F005-3(D)	13	



**DETAILS OF BEARINGS**  
 2-balls 1" x 1 1/8" Required for each bearing  
 Note: Coat finished surfaces with white lead and tallow - See Specifications Sec. 41.3.17.

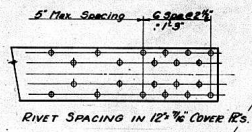
EXPANSION BEARINGS  
 At Abut. No. 4  
 5 Required.



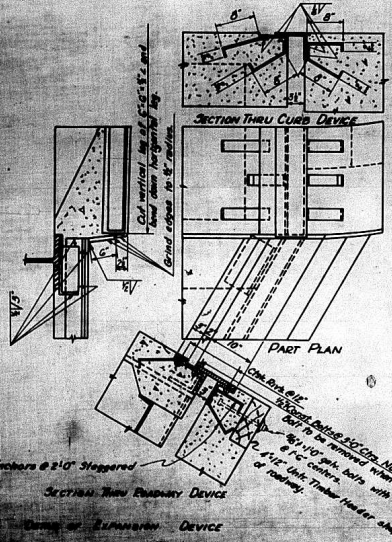
PINTLE DETAIL

Steel req'd. for 2 Curb Exp. Devices  
 2-2x 6" x 4" x 1/2"  
 2-2x 6" x 4" x 1" x 10"  
 12 anchors 2 1/2" x 1/2" x 10"

Steel required for 1 Roadway Exp. Device.  
 1- Bar 3" x 1/2" x 34'-7 1/2"  
 1-R. 10" x 1/2" x 34'-7 1/2"  
 1-2 6" x 4" x 3/4" x 3'  
 1-2 6" x 4" x 1" x 3'  
 2-8x 6" x 1" x 11'  
 5- Clips 6" x 2" x 10"  
 36- Anchor Bars 2 1/2" x 1/2" x 10"  
 (No Pintle or Anchors)



RIVET SPACING IN 12" COVE RE'S.

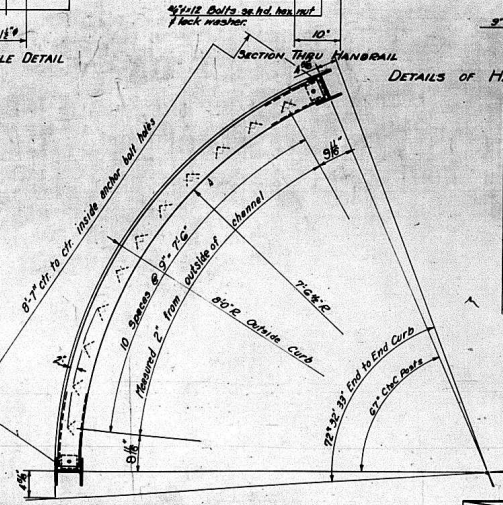


SECTION THRU CURB DEVICE

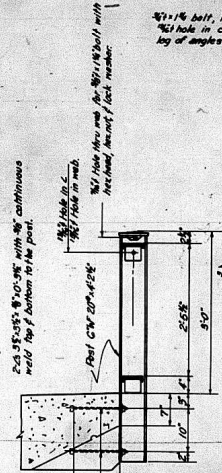
PART PLAN

SECTION THRU ROADWAY DEVICE

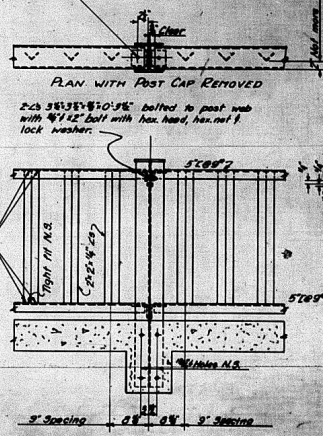
DETAILS OF EXPANSION DEVICE



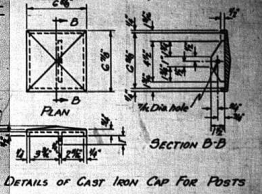
DETAIL OF ABUTMENT CURB RAIL  
 4 Required  
 Details and dimensions not shown same as above



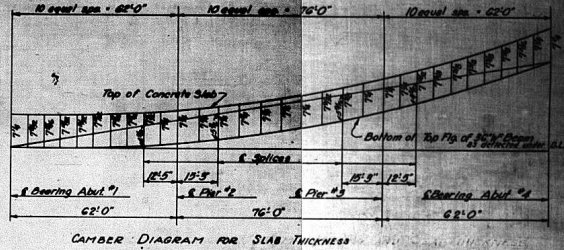
SECTION THRU MAINRAIL  
 DETAILS OF MAINRAIL



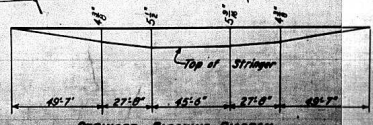
SECTION A-A



DETAILS OF CAST IRON CAP FOR POSTS



CAMBER DIAGRAM FOR SLAB THICKNESS



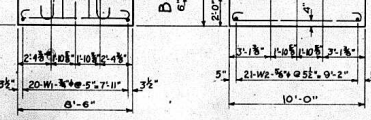
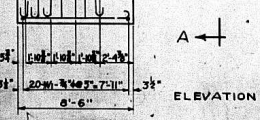
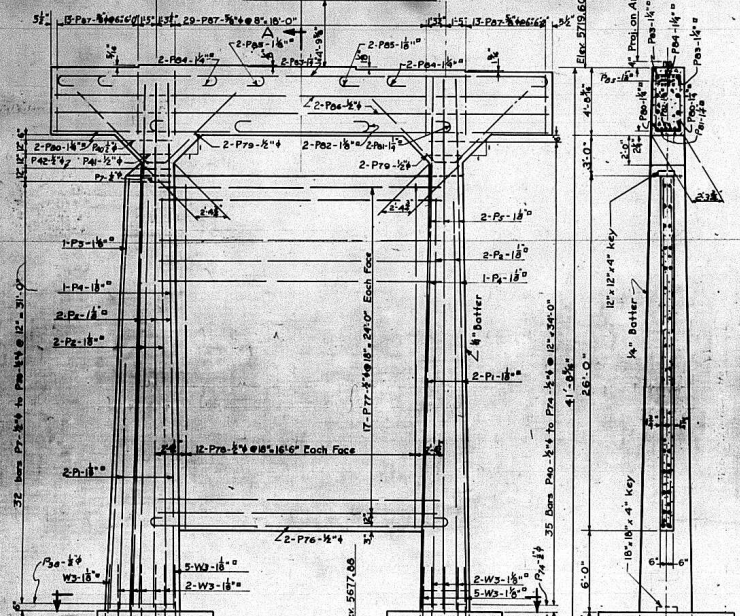
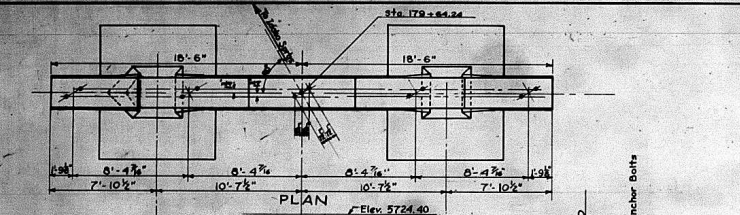
STRINGER BLOCKING DIAGRAM

57E No. E-10-17

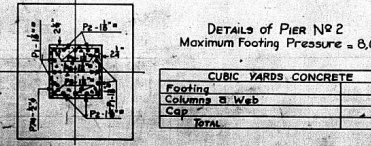
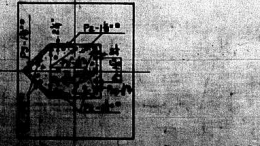
**COLORADO**  
**STATE HIGHWAY DEPARTMENT**  
 3.33x5x62.7625 CONTINUOUS CONC.  
 SLAB & DEAM BRIDGE  
 30' ROADWAY  
 DETAILS OF EXPANSION DEVICE, MAINRAIL,  
 CURB DEVICE  
 Approved by EFS  
 Made by EFS  
 Checked by



FED. ROAD DIST. NO.	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	FOOS-3(6)	15	



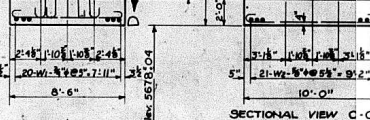
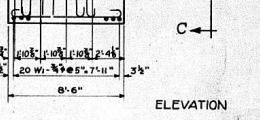
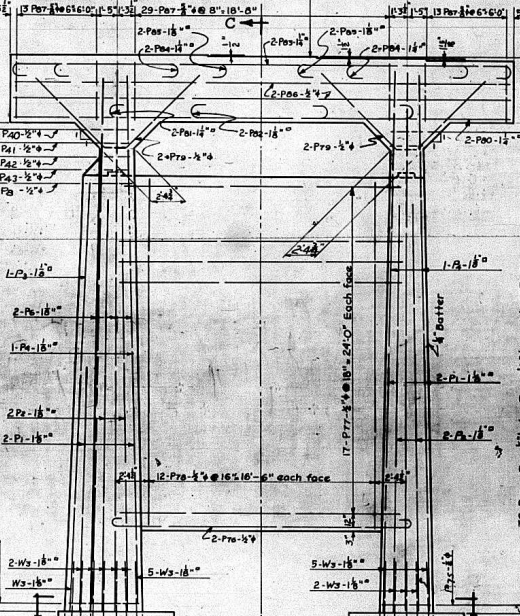
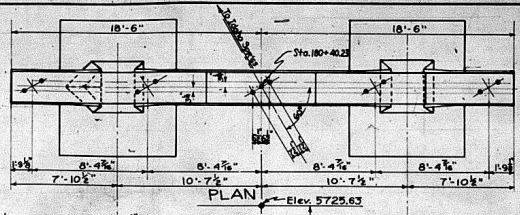
Sectional View A-A



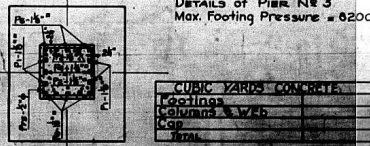
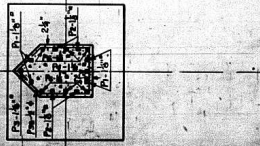
SECTION D-B  
Dowels W3 not shown. Splice one to each bar shown

DETAILS OF PIER NO. 2  
Maximum Footing Pressure = 8,000 psf

CUBIC YARDS CONCRETE	
Footing	12.6
Columns & Web	43.0
Cap	16.4
TOTAL	72.0



Sectional View C-C



SECTION D-D  
Dowels W3 not shown. Splice one to each bar shown

DETAILS OF PIER NO. 3  
Max. Footing Pressure = 8200 psf

CUBIC YARDS CONCRETE	
Columns	12.6
Columns & Web	44.7
Cap	11.1
TOTAL	70.0

**COLORADO**  
STATE HIGHWAY DEPARTMENT

DETAILS OF PIERS  
3 SPANS 62'-76'-62" CONTINUOUS  
CONCRETE SLAB 8 I BEAM BRIDGE  
30'-0" ROADWAY

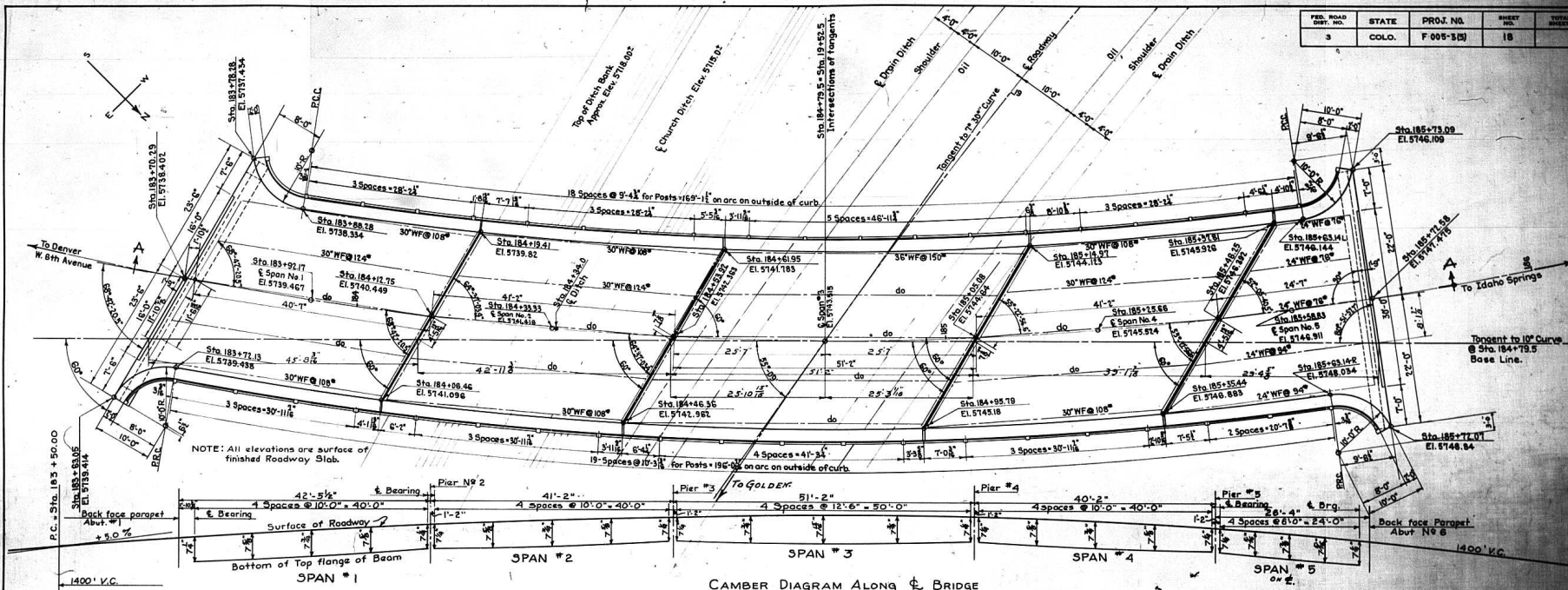
Drawn by: E.R.S. Approved by: G.W. Shook  
Made by: E.R.S. Checked by: G.W. Shook

Date: 11/11/1930



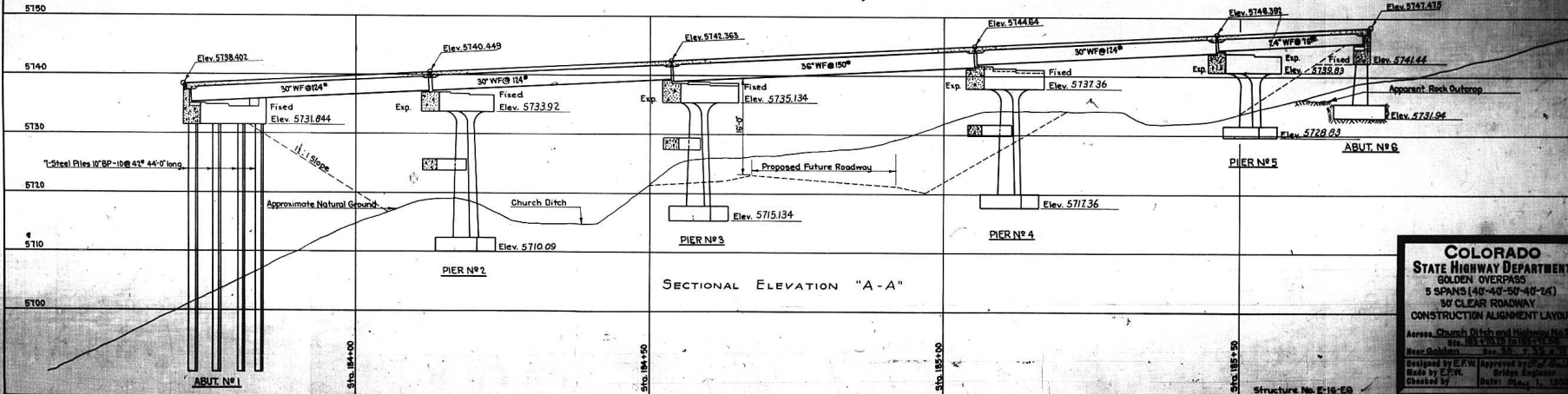


FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F 605-3(5)	18	



NOTE: All elevations are surface of finished Roadway Slab.

CAMBER DIAGRAM ALONG BRIDGE

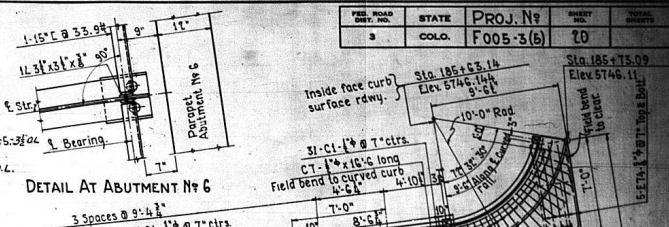
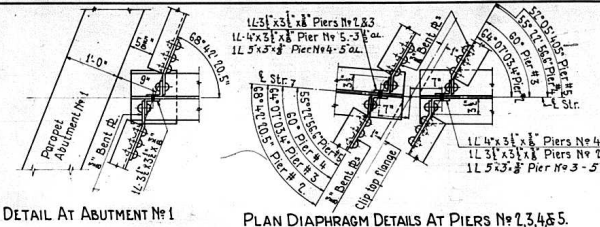
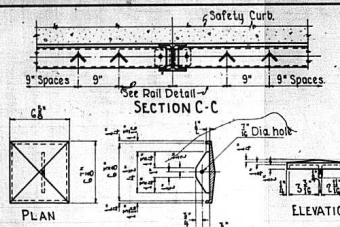


**COLORADO STATE HIGHWAY DEPARTMENT**  
**GOLDEN OVERPASS**  
 5 SPANS (40'-40"-50'-40'-24")  
 30' CLEAR ROADWAY  
 CONSTRUCTION ALIGNMENT LAYOUT  
 Address: Church Ditch and Highway No. 6  
 Sta. 183+70.00 to 185+90.00  
 Near Golden, Colo. 80130  
 Designed by E.F.W. Approved by C.D.M. 5/22/50  
 Made by C.D.M. Bridge Division  
 Checked by Date: May 1, 1950

Structure No. 218-EQ



FED. ROAD DIST. NO.	STATE	PROJ. No	SHEET
3	COLO.	F005-3(6)	20

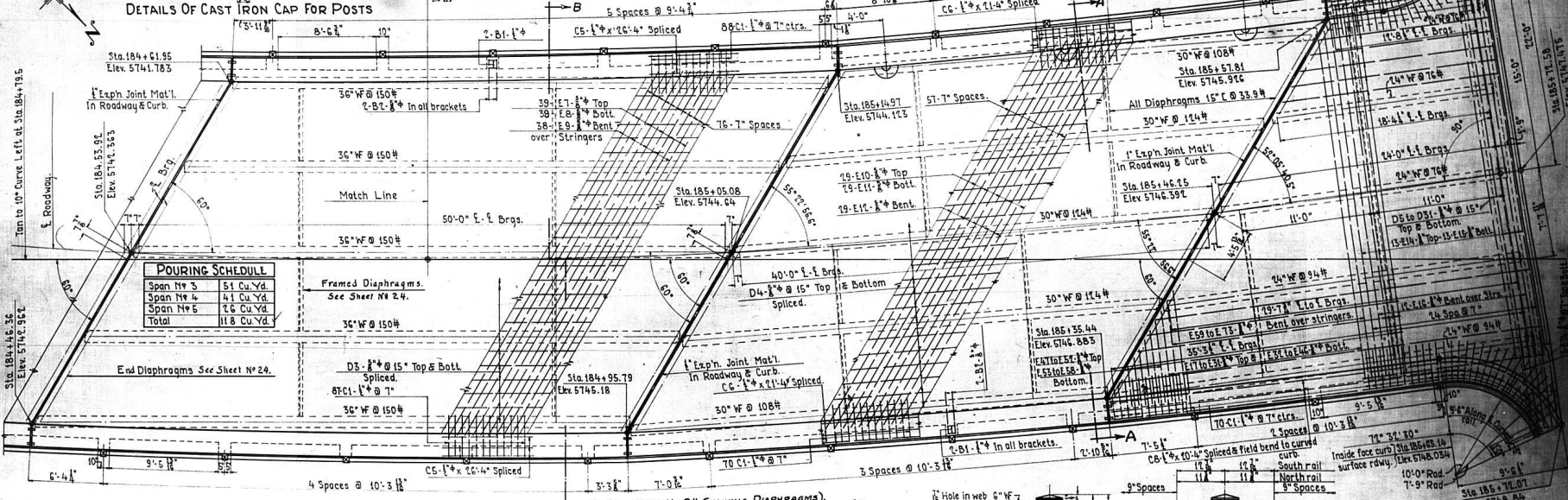


DETAILS OF CAST IRON CAP FOR POSTS

DETAIL AT ABUTMENT No 1

PLAN DIAPHRAGM DETAILS AT PIERS No 2, 3, 4, 5.

DETAIL AT ABUTMENT No 6

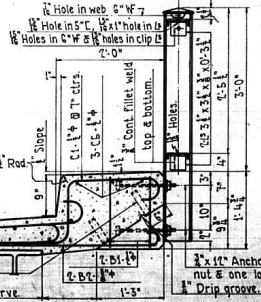


POURING SCHEDULE

Span No 3	51 Cu Yd
Span No 4	44 Cu Yd
Span No 5	26 Cu Yd
Total	118 Cu Yd

REVISIONS

NO.	DATE	DESCRIPTION
1	10/1/24	...
2	10/1/24	...
3	10/1/24	...
4	10/1/24	...
5	10/1/24	...
6	10/1/24	...
7	10/1/24	...
8	10/1/24	...
9	10/1/24	...
10	10/1/24	...



UNIT STRESSES

Structural Steel - 18,000 lbs. per sq. inch.  
Reinf. Steel - 20,000 lbs. per sq. inch.  
Concrete - 1,000 lbs. per sq. inch.

REFERENCE DRAWINGS

See Sheet No. 11.

**COLORADO**  
STATE HIGHWAY DEPARTMENT  
GOLDEN OVERPASS  
SUPERSTRUCTURE  
SPANS No 3-4-5

Address: Church, Ditch & Highway to D.D.  
Aurora, Colo. 80014  
New Golden, Colo. 80639

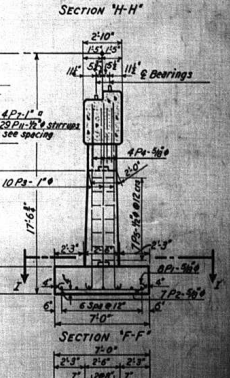
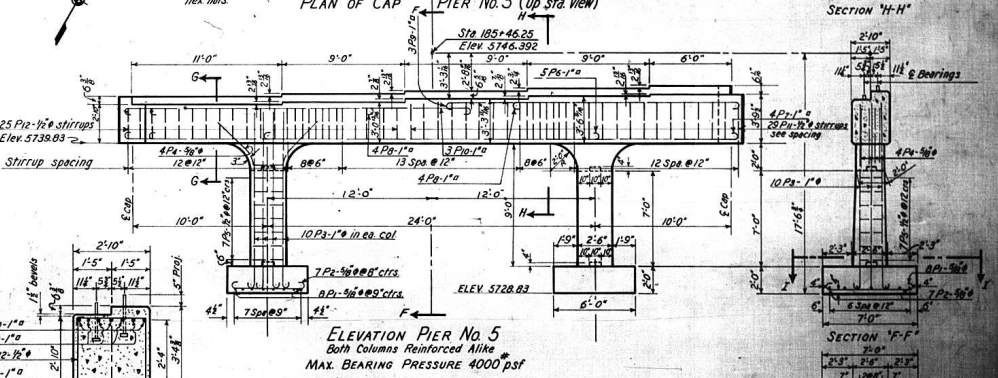
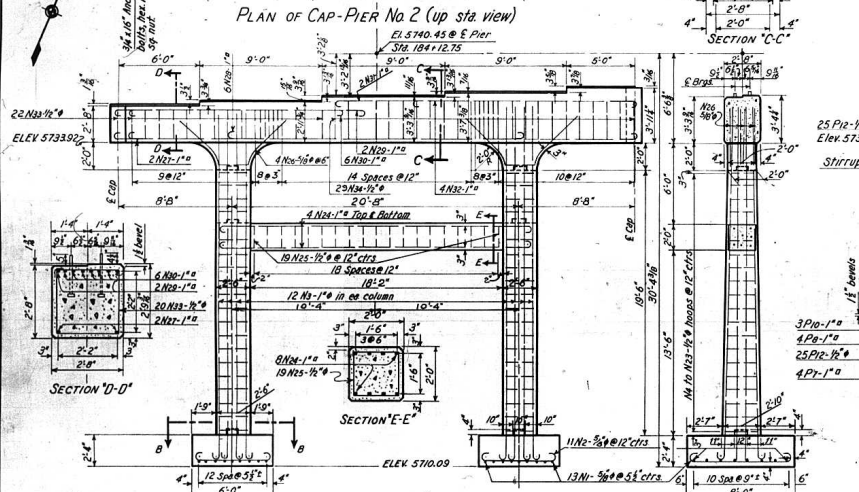
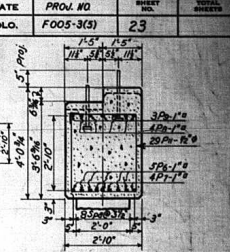
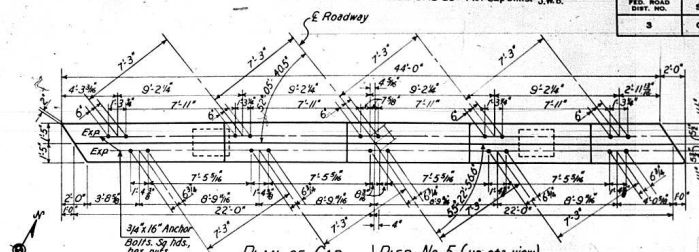
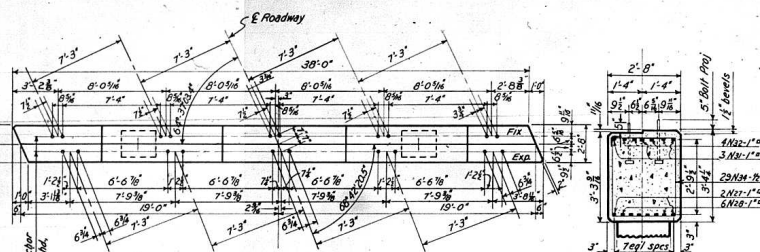
Designed by E.S. Approved by J.W. 10/1/24  
Checked by J.W. 10/1/24  
Drawn by J.W. 10/1/24  
Classified by J.W. 10/1/24

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F005-3 (5)	71	

BAR LIST FOR SUPERSTRUCTURE									
BAR NO.	LENGTH	TYPE	QUANTITY	REMARKS	BAR NO.	LENGTH	TYPE	QUANTITY	REMARKS
B1	86 4'-6"	IV	0-1	1-2	E61	1 15'-6"	X	2	
B2	86 3'-0"	V	2	2-2	E62	1 17'-1"	X	2	
C1	709 4'-8"	III	1	C-1	E63	1 18'-7"	X	2	
C2	6 1'-6"	Stira	1		E64	1 18'-7"	X	2	
C3	6 2'-0"	Stira	1		E65	1 18'-7"	X	2	
C4	11 2'-3"	Stira	1		E66	1 18'-7"	X	2	
C5	11 2'-6"	Stira	1		E67	1 18'-7"	X	2	
C6	11 2'-3"	Stira	1		E68	1 18'-7"	X	2	
C7	3 1'-6"	Stira	1		E69	1 18'-7"	X	2	
C8	6 1'-0"	Stira	1		E70	1 18'-7"	X	2	
D1	106 1'-8"	Stira	1		E71	1 18'-7"	X	2	
D2	106 1'-4"	Stira	1		E72	1 18'-7"	X	2	
D3	106 1'-4"	Stira	1		E73	1 18'-7"	X	2	
D4	106 1'-4"	Stira	1		E74	1 18'-7"	X	2	
D5	1 1'-0"	Stira	1		E75	1 18'-7"	X	2	
D6	106 3'-6"	Stira	1		E76	1 18'-7"	X	2	
D7	106 3'-6"	Stira	1		E77	1 18'-7"	X	2	
E1	34 3'-6"	II	34-8		E78	1 18'-7"	X	2	
E2	34 3'-6"	II	33-8		E79	1 18'-7"	X	2	
E3	34 3'-0"	IX	3-11	2-8	E80	1 18'-7"	X	2	
E4	34 3'-0"	IX	3-11	2-8	E81	1 18'-7"	X	2	
E5	34 3'-0"	IX	3-11	2-8	E82	1 18'-7"	X	2	
E6	34 3'-0"	IX	3-11	2-8	E83	1 18'-7"	X	2	
E7	34 3'-0"	IX	3-11	2-8	E84	1 18'-7"	X	2	
E8	34 3'-0"	IX	3-11	2-8	E85	1 18'-7"	X	2	
E9	34 3'-0"	IX	3-11	2-8	E86	1 18'-7"	X	2	
E10	34 3'-0"	IX	3-11	2-8	E87	1 18'-7"	X	2	
E11	34 3'-0"	IX	3-11	2-8	E88	1 18'-7"	X	2	
E12	34 3'-0"	IX	3-11	2-8	E89	1 18'-7"	X	2	
E13	34 3'-0"	IX	3-11	2-8	E90	1 18'-7"	X	2	
E14	13 3'-4"	II	31-6		E91	1 18'-7"	X	2	
E15	13 3'-4"	II	31-6		E92	1 18'-7"	X	2	
E16	11 3'-0"	II	31-11	1-6	E93	1 18'-7"	X	2	
E17	11 3'-0"	II	31-11	1-6	E94	1 18'-7"	X	2	
E18	11 3'-0"	II	31-11	1-6	E95	1 18'-7"	X	2	
E19	11 3'-0"	II	31-11	1-6	E96	1 18'-7"	X	2	
E20	11 3'-0"	II	31-11	1-6	E97	1 18'-7"	X	2	
E21	11 3'-0"	II	31-11	1-6	E98	1 18'-7"	X	2	
E22	11 3'-0"	II	31-11	1-6	E99	1 18'-7"	X	2	
E23	11 3'-0"	II	31-11	1-6	E100	1 18'-7"	X	2	
E24	11 3'-0"	II	31-11	1-6	E101	1 18'-7"	X	2	
E25	11 3'-0"	II	31-11	1-6	E102	1 18'-7"	X	2	
E26	11 3'-0"	II	31-11	1-6	E103	1 18'-7"	X	2	
E27	11 3'-0"	II	31-11	1-6	E104	1 18'-7"	X	2	
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E29	11 3'-0"	II	31-11	1-6	E106	1 18'-7"	X	2	
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E43	11 3'-0"	II	31-11	1-6	E120	1 18'-7"	X	2	
E44	11 3'-0"	II	31-11	1-6	E121	1 18'-7"	X	2	
E45	11 3'-0"	II	31-11	1-6	E122	1 18'-7"	X	2	
E46	11 3'-0"	II	31-11	1-6	E123	1 18'-7"	X	2	
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E48	11 3'-0"	II	31-11	1-6	E125	1 18'-7"	X	2	
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E57	11 3'-0"	II	31-11	1-6	E134	1 18'-7"	X	2	
E58	11 3'-0"	II	31-11	1-6	E135	1 18'-7"	X	2	
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E62	11 3'-0"	II	31-11	1-6	E139	1 18'-7"	X	2	
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E64	11 3'-0"	II	31-11	1-6	E141	1 18'-7"	X	2	
E65	11 3'-0"	II	31-11	1-6	E142	1 18'-7"	X	2	
E66	11 3'-0"	II	31-11	1-6	E143	1 18'-7"	X	2	
E67	11 3'-0"	II	31-11	1-6	E144	1 18'-7"	X	2	
E68	11 3'-0"	II	31-11	1-6	E145	1 18'-7"	X	2	
E69	11 3'-0"	II	31-11	1-6	E146	1 18'-7"	X	2	
E70	11 3'-0"	II	31-11	1-6	E147	1 18'-7"	X	2	
E71	11 3'-0"	II	31-11	1-6	E148	1 18'-7"	X	2	
E72	11 3'-0"	II	31-11	1-6	E149	1 18'-7"	X	2	
E73	11 3'-0"	II	31-11	1-6	E150	1 18'-7"	X	2	
E74	11 3'-0"	II	31-11	1-6	E151	1 18'-7"	X	2	
E75	11 3'-0"	II	31-11	1-6	E152	1 18'-7"	X	2	
E76	11 3'-0"	II	31-11	1-6	E153	1 18'-7"	X	2	
E77	11 3'-0"	II	31-11	1-6	E154	1 18'-7"	X	2	
E78	11 3'-0"	II	31-11	1-6	E155	1 18'-7"	X	2	
E79	11 3'-0"	II	31-11	1-6	E156	1 18'-7"	X	2	
E80	11 3'-0"	II	31-11	1-6	E157	1 18'-7"	X	2	
E81	11 3'-0"	II	31-11	1-6	E158	1 18'-7"	X	2	
E82	11 3'-0"	II	31-11	1-6	E159	1 18'-7"	X	2	
E83	11 3'-0"	II	31-11	1-6	E160	1 18'-7"	X	2	
E84	11 3'-0"	II	31-11	1-6	E161	1 18'-7"	X	2	
E85	11 3'-0"	II	31-11	1-6	E162	1 18'-7"	X	2	
E86	11 3'-0"	II	31-11	1-6	E163	1 18'-7"	X	2	
E87	11 3'-0"	II	31-11	1-6	E164	1 18'-7"	X	2	
E88	11 3'-0"	II	31-11	1-6	E165	1 18'-7"	X	2	
E89	11 3'-0"	II	31-11	1-6	E166	1 18'-7"	X	2	
E90	11 3'-0"	II	31-11	1-6	E167	1 18'-7"	X	2	
E91	11 3'-0"	II	31-11	1-6	E168	1 18'-7"	X	2	
E92	11 3'-0"	II	31-11	1-6	E169	1 18'-7"	X	2	
E93	11 3'-0"	II	31-11	1-6	E170	1 18'-7"	X	2	
E94	11 3'-0"	II	31-11	1-6	E171	1 18'-7"	X	2	
E95	11 3'-0"	II	31-11	1-6	E172	1 18'-7"	X	2	
E96	11 3'-0"	II	31-11	1-6	E173	1 18'-7"	X	2	
E97	11 3'-0"	II	31-11	1-6	E174	1 18'-7"	X	2	
E98	11 3'-0"	II	31-11	1-6	E175	1 18'-7"	X	2	
E99	11 3'-0"	II	31-11	1-6	E176	1 18'-7"	X	2	
E100	11 3'-0"	II	31-11	1-6	E177	1 18'-7"	X	2	
E101	11 3'-0"	II	31-11	1-6	E178	1 18'-7"	X	2	
E102	11 3'-0"	II	31-11	1-6	E179	1 18'-7"	X	2	
E103	11 3'-0"	II	31-11	1-6	E180	1 18'-7"	X	2	
E104	11 3'-0"	II	31-11	1-6	E181	1 18'-7"	X	2	
E105	11 3'-0"	II	31-11	1-6	E182	1 18'-7"	X	2	
E106	11 3'-0"	II	31-11	1-6	E183	1 18'-7"	X	2	
E107	11 3'-0"	II	31-11	1-6	E184	1 18'-7"	X	2	
E108	11 3'-0"	II	31-11	1-6	E185	1 18'-7"	X	2	
E109	11 3'-0"	II	31-11	1-6	E186	1 18'-7"	X	2	
E110	11 3'-0"	II	31-11	1-6	E187	1 18'-7"	X	2	
E111	11 3'-0"	II	31-11	1-6	E188	1 18'-7"	X	2	
E112	11 3'-0"	II	31-11	1-6	E189	1 18'-7"	X	2	
E113	11 3'-0"	II	31-11	1-6	E190	1 18'-7"	X	2	
E114	11 3'-0"	II	31-11	1-6	E191	1 18'-7"	X	2	
E115	11 3'-0"	II	31-11	1-6	E192				



FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	FOOS-3(3)	23	



BAR LIST FOR PIER No 2

MARK	SIZE	NO REQD	LENGTH	TYPE	DIMENSIONS			EFF. WT. LBS
					2	m	f	1
N1	5/8"	26	8'-7"	II	6'-7"		24"	2'
N2	5/8"	22	6'-7"	II	6'-11"		24"	2'
N3	1"	2	27'-4"	I	26'-0"		4"	31'
N4	1"	8	8'-5 1/2"	I		17'-0"		
N5	1"	288	10'-1"	IV	2'-11"	2'-5"	2'-5"	by 1/2"
N6	1"	8	25'-1"	II	22'-6"		4"	31'
N7	5/8"	18	15'-6"	III	17'-11"	1'-7 1/2"		
N8	5/8"	8	11'-8"	VII				
N9	1"	2	39'-6"	II	36'-10"		4"	31'
N10	1"	6	23'-10"	II	21'-2"		4"	31'
N11	1"	2	19'-3"	II	16'-7"		4"	31'
N12	1"	6	18'-3"	II	15'-7"		4"	31'
N13	1"	3	26'-2"	II	21'-6"		4"	31'
N14	1"	4	16'-0"	II	16'-11"		4"	31'
N15	5/8"	22	10'-2 1/2"	II	23'-3"	2'-3 1/2"		
N16	5/8"	29	11'-5"	II	2'-3 1/2"	2'-11"		

BAR SUMMARY FOR PIER No 2

1059 lin ft of 1/2" @ 0.668 #/lin = 714 lbs  
 461 lin ft of 5/8" @ 1.043 #/lin = 481 lbs  
 656 lin ft of 1" @ 2.67 #/lin = 1751 lbs  
 713 lin ft of 1 1/2" @ 3.40 #/lin = 2445 lbs  
 Overrun 1 1/2" = 49 lbs  
**TOTAL = 3440 lbs**

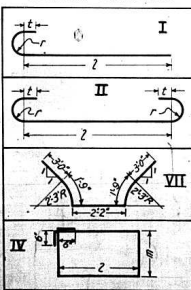
BAR LIST FOR PIER No 5

MARK	SIZE	NO REQD	LENGTH	TYPE	DIMENSIONS			EFF. WT. LBS
					2	m	f	1
P1	5/8"	16	7'-7"	II	5'-11"		24"	2'
P2	5/8"	14	6'-7"	II	4'-11"		24"	2'
P3	1"	20	14'-2"	I	12'-10"		4"	31'
P4	5/8"	8	11'-8"	VII				
P5	5/8"	14	8'-2"	IV	2'-11"	1'-5 1/2"		
P6	1"	5	26'-8"	II	24'-0"		4"	31'
P7	1"	4	45'-5"	II	42'-0"		4"	31'
P8	1"	8	18'-8"	II	16'-0"		4"	31'
P9	1"	3	23'-8"	II	21'-0"		4"	31'
P10	1"	3	25'-8"	II	23'-0"		4"	31'
P11	1 1/2"	29	11'-10"	IV	2'-5 1/2"	2'-11"		
P12	1 1/2"	25	10'-10"	IV	2'-5 1/2"	2'-5 1/2"		

BAR SUMMARY FOR PIER No 5

728 lin ft of 1/2" @ 0.668 #/lin = 486 lbs  
 307 lin ft of 5/8" @ 1.043 #/lin = 320 lbs  
 204 lin ft of 1" @ 2.67 #/lin = 543 lbs  
 613 lin ft of 1 1/2" @ 3.40 #/lin = 2084 lbs  
 Overrun 1 1/2" = 32 lbs  
**TOTAL = 3680 lbs**

BENDING DIAGRAMS



POURING SCHEDULE

PART	PIER 2	PIER 5
Footings	8.2	6.5
Columns & Struts	12.4	4.0
Cap	12.4	16.5
<b>TOTAL</b>	<b>33.0</b>	<b>27.0</b>

\*Strut on Pier 2 only.

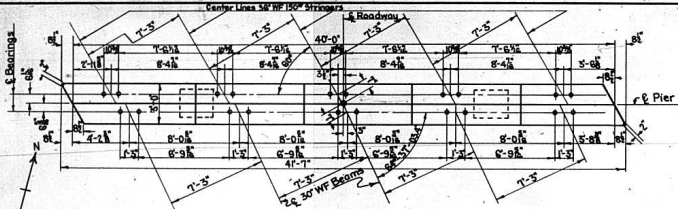
Scale	1" = 1'-0"
Notes	1. All dimensions are to center unless otherwise noted.
	2. Reinforcement is to be placed in accordance with the drawings.
	3. All steel to be A307.
	4. All concrete to be placed in accordance with the specifications.
	5. All work to be done in accordance with the specifications.

Dimensions and elevations shown allow for 1" ground under bearing plates. See sheet 21.

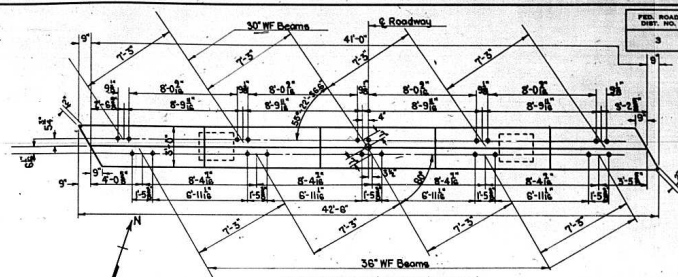
REFERENCE DRAWINGS  
 See Sheet No 17

**COLORADO STATE HIGHWAY DEPARTMENT**  
**GOLDEN OVERPASS**  
 DETAILS OF  
 PIERS No 2 & No 5  
 Approved by: *[Signature]*  
 Checked by: *[Signature]*  
 Date: 5-18-50

FED. ROAD DIST. NO.	STATE	PRJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F-005-5(5)	24	24



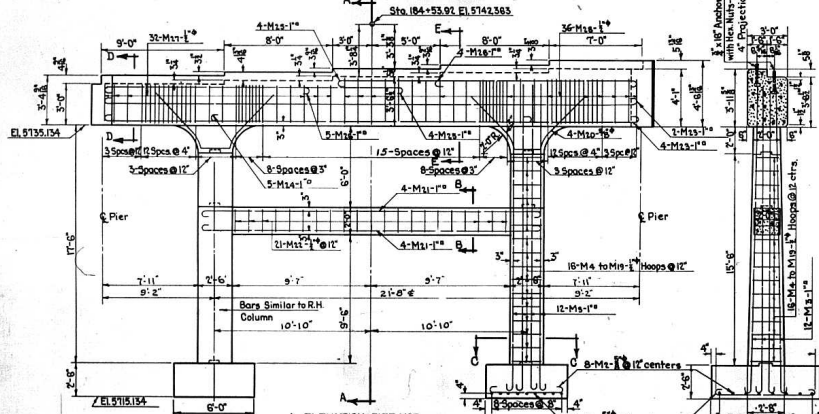
PLAN-PIER NO. 3 (UP STATION VIEW)



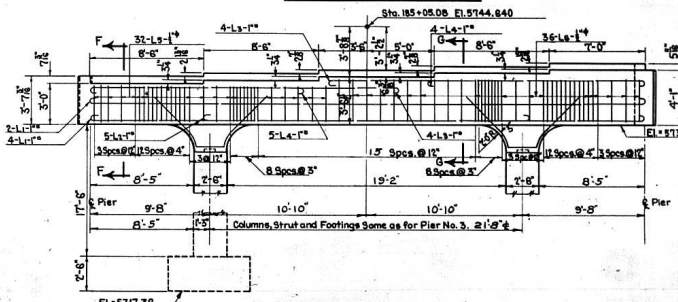
PLAN-PIER NO. 4 (UP STATION VIEW)

Bar List-Pier No. 3

Marking	Length	Type	1	m	ft
M1	18	5-T	1	4.27	14
M2	18	5-T	1	4.27	14
M3	24	25-T	1	21.00	69
M4	6	6-C	1	1.52	5
M5	to 12	to 9-T	II	to 23	76
M6	to 12	to 9-T	III	to 23	76
M7	6	15-S	1	3.94	13
M8	6	15-S	1	3.94	13
M9	6	15-S	1	3.94	13
M10	6	15-S	1	3.94	13
M11	6	15-S	1	3.94	13
M12	6	15-S	1	3.94	13
M13	6	15-S	1	3.94	13
M14	6	15-S	1	3.94	13
M15	6	15-S	1	3.94	13
M16	6	15-S	1	3.94	13
M17	6	15-S	1	3.94	13
M18	6	15-S	1	3.94	13



ELEVATION-PIER NO. 3



ELEVATION-PIER NO. 4

Bar List-Pier No. 4

Marking	Length	Type	1	m	ft
M1	18	5-T	1	4.27	14
M2	18	5-T	1	4.27	14
M3	24	25-T	1	21.00	69
M4	6	6-C	1	1.52	5
M5	to 12	to 9-T	II	to 23	76
M6	to 12	to 9-T	III	to 23	76
M7	6	15-S	1	3.94	13
M8	6	15-S	1	3.94	13
M9	6	15-S	1	3.94	13
M10	6	15-S	1	3.94	13
M11	6	15-S	1	3.94	13
M12	6	15-S	1	3.94	13
M13	6	15-S	1	3.94	13
M14	6	15-S	1	3.94	13
M15	6	15-S	1	3.94	13
M16	6	15-S	1	3.94	13
M17	6	15-S	1	3.94	13
M18	6	15-S	1	3.94	13

Bar Summary-Pier No. 3

1486 lin. ft.	17 bars @ 3.400' per lin. ft.	587.8
385 lin. ft.	bars @ 1.500' per lin. ft.	577.5
1270 lin. ft.	bars @ 0.588' per lin. ft.	746.7
	1 1/2 Overrun	187.5
	Total	2099.5

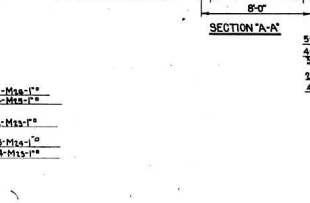
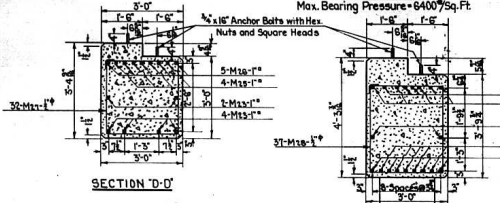
Bar Summary-Pier No. 4

1504 lin. ft.	17 bars @ 3.400' per lin. ft.	587.8
385 lin. ft.	bars @ 1.500' per lin. ft.	577.5
1270 lin. ft.	bars @ 0.588' per lin. ft.	746.7
	1 1/2 Overrun	187.5
	Total	2099.5

REFERENCE DRAWINGS  
See Sheet No. 11

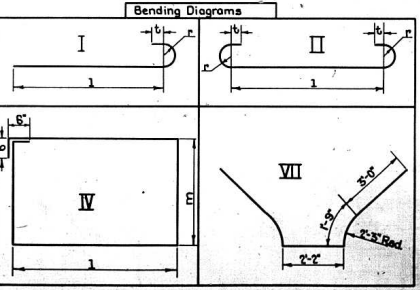
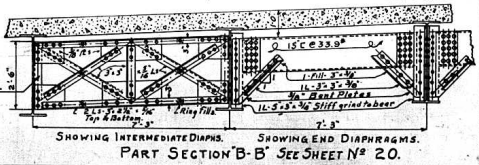
-Note-  
Dimensions and elevations shown allow for 1" spout under bearing plates. See sheet # 21

-Note-  
For Bar Lists of Abutments No. 1 and No. 6, See Sheet No. 12



POURING SCHEDULE

	PIER NO. 3	PIER NO. 4
Footings	89 Cu. Yds.	89 Cu. Yds.
Columns-Strut	97 Cu. Yds.	97 Cu. Yds.
Cap	0.00 Cu. Yds.	0.00 Cu. Yds.
Total	186.00 Cu. Yds.	186.00 Cu. Yds.



Bar Summary-Abutment No. 1

671 lin. ft.	17 bars @ 1.500' per lin. ft.	1020.7
1335 lin. ft.	bars @ 0.588' per lin. ft.	1683.3
	1 1/2 Overrun	187.5
	Total	3891.5

Bar Summary-Abutment No. 6

679 lin. ft.	17 bars @ 3.400' per lin. ft.	2327.3
193 lin. ft.	bars @ 1.500' per lin. ft.	289.5
519 lin. ft.	bars @ 1.043' per lin. ft.	541.2
1644 lin. ft.	bars @ 0.588' per lin. ft.	2025.1
	1 1/2 Overrun	400.0
	Total	4083.1

**COLORADO STATE HIGHWAY DEPARTMENT**

GOLDEN OVERPASS  
PIER NO. 3 AND PIER NO. 4  
AND BARLISTS

Address: S.H. No. 10 and Church Street  
Golden, Colo. 80401  
Designed by E.P.W. Approved by G.C.C.  
Drawn by J.F.S. Checked by E.P.S. Date: 11/15/50

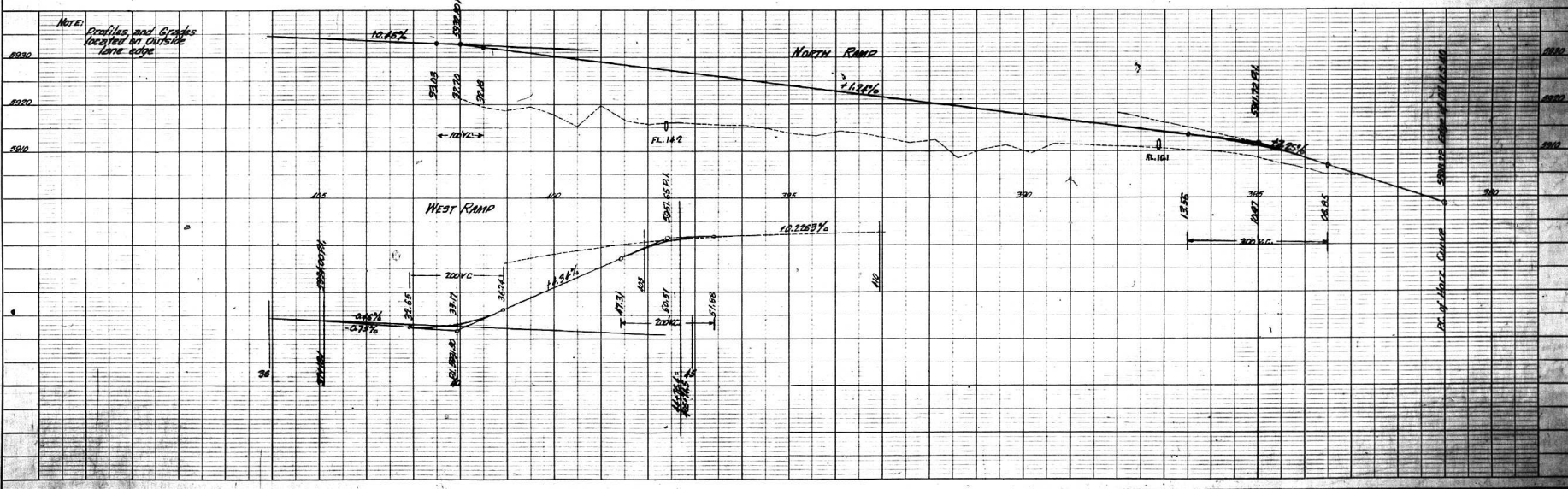
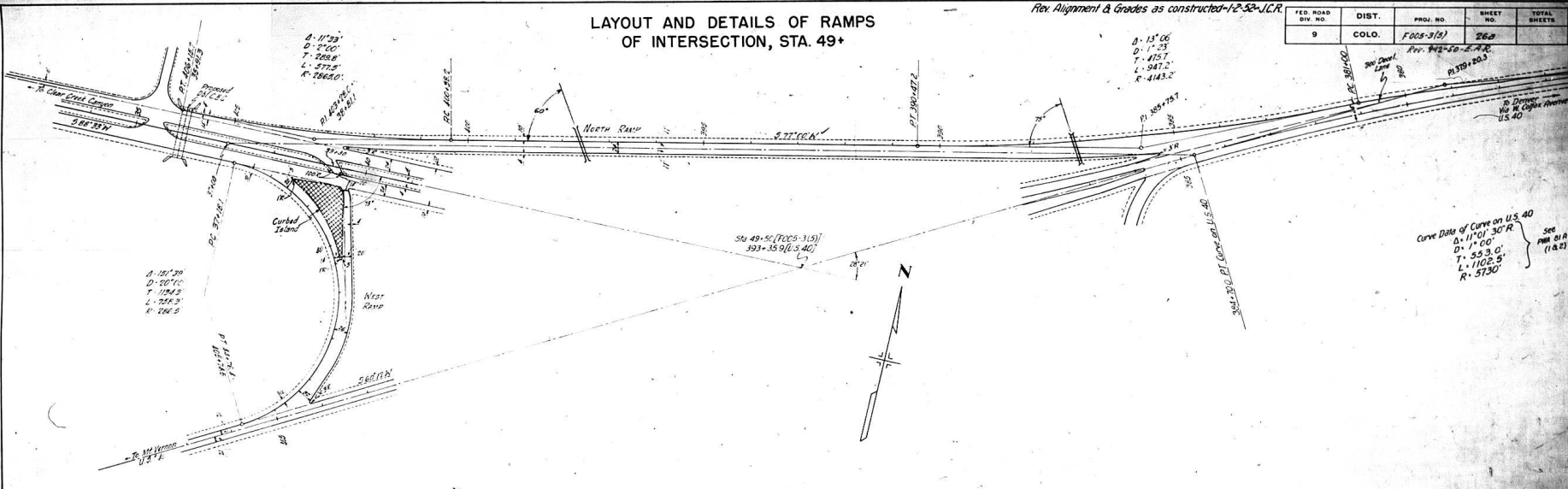
STR. No. E-16-E.G.



# LAYOUT AND DETAILS OF RAMPS OF INTERSECTION, STA. 49+

Rev. Alignment & Grades as constructed-12-52-JCR

FED. ROAD DIV. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	FOCS-3(5)	260	



DATE	BY

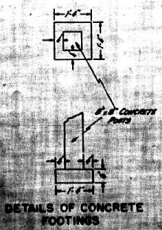
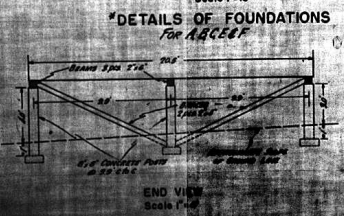
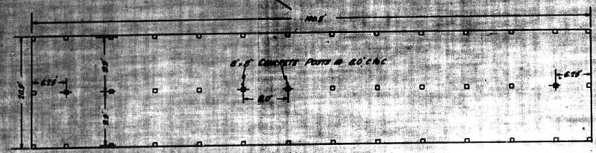
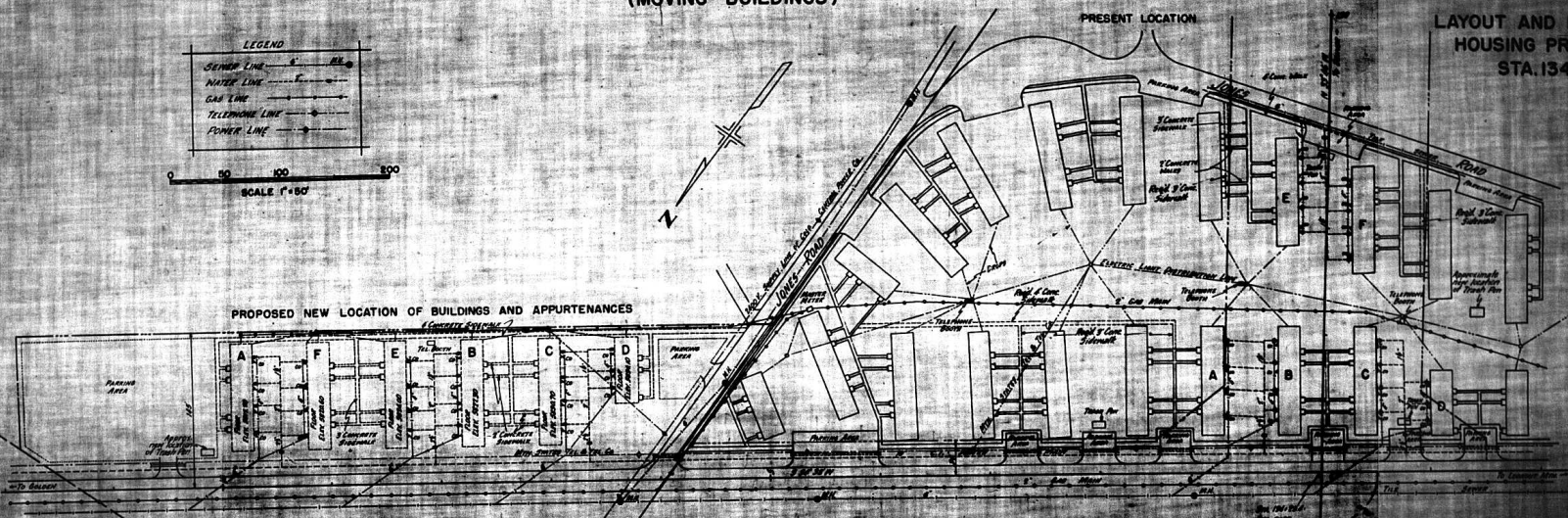
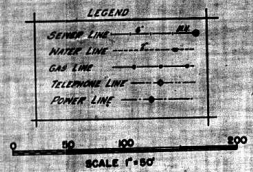
DATE	BY



# COLORADO PROJECT NO. F 005-3(5) (MOVING BUILDINGS)

FED. ROAD DIST. NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 005-3(B)	278	

**LAYOUT AND DETAILS OF HOUSING PROJECT,  
STA. 134+**



**GENERAL NOTES**

This Project is to be constructed in conformity with the Standard Specifications of the Colorado State Highway Department adopted January 1, 1948.

All concrete on this project shall be Air Entrained Concrete.

This Project includes preparation of new building site area, construction of new foundations, rearrangement of sidewalks and drainage, moving of lettered buildings and rehabilitation of utilities to conform with Plans. Quantities for this work included in Summary.



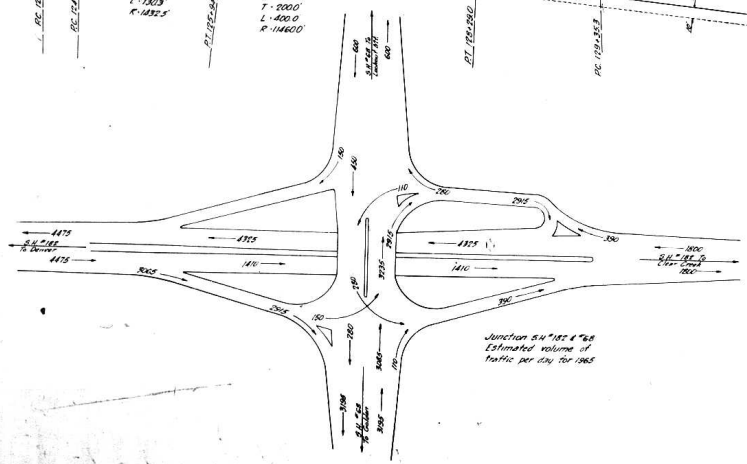
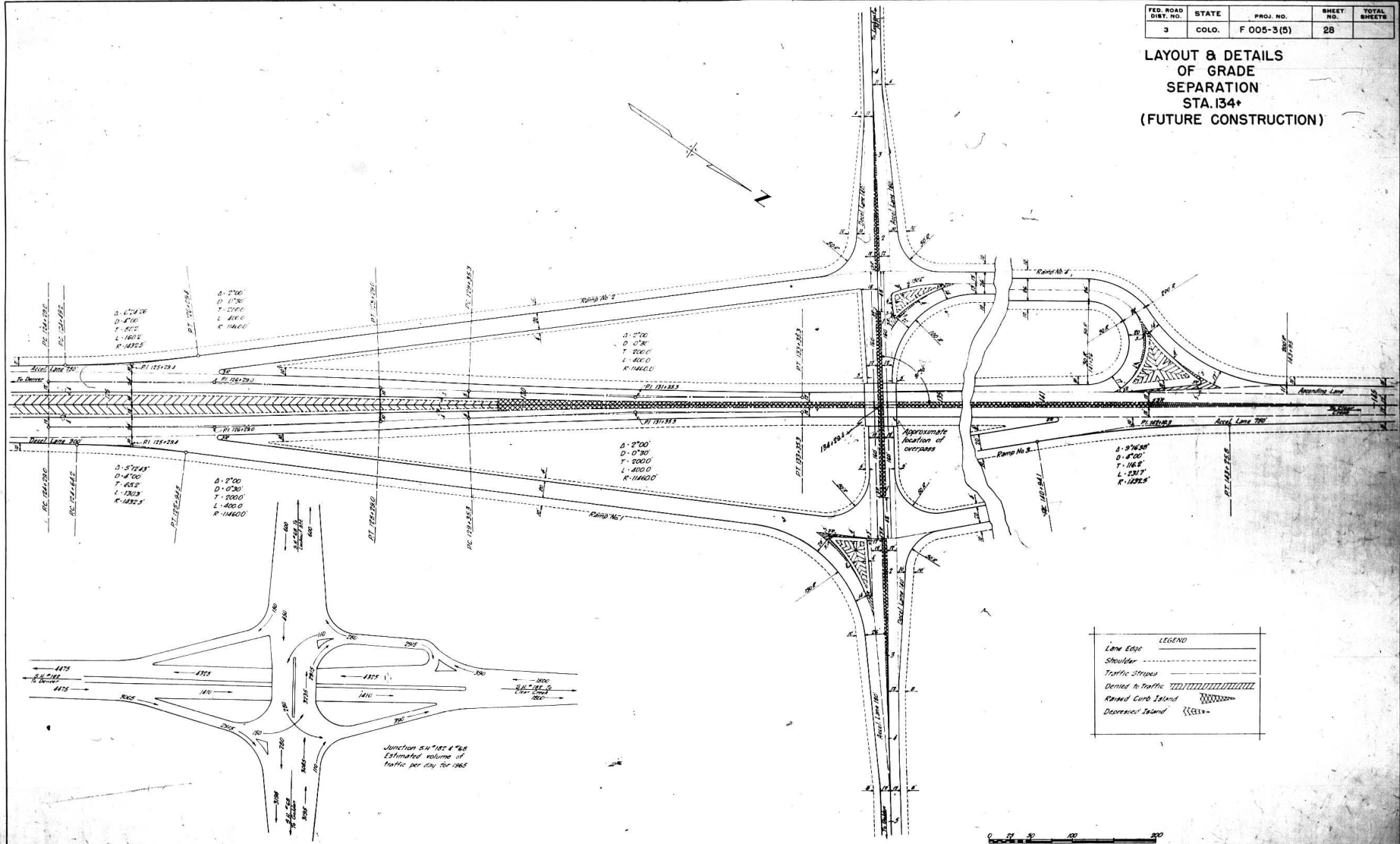
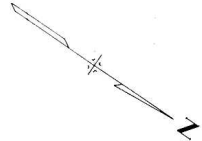
**NOTE:**  
Entire proposed new location for buildings is to be covered with 8" of Gravel or Crushed Rock Surfacing after completion of grading operations.

## SUMMARY OF APPROXIMATE QUANTITIES

ITEM NO.	ITEM	UNIT	TOTALS
11a	Moving of Buildings and Placing on New Foundations	Lump Sum	1
11b	Remove and Rebuild Trash Pen	Each	2
11c	Removing Sidewalk	Sq. Ft.	2070
11c	Unclassified Excavation	Cu. Yd.	1000
14b	Dry Common Excavation (91r)	Cu. Yd.	70
26c	Gravel or Crushed Rock Surfacing (Grading C)	Ton	210
46a	Class "A" Concrete	Cu. Yd.	22
91b	Relaying of Pipe	Lin Ft.	30
96	Concrete Sidewalk	Sq. Ft.	2370
<b>Force Account</b>			
	Rehabilitation of Utilities	Lump Sum	1
	Rehabilitation of Foundations	Lump Sum	1
	Grading and Surfacing	Lump Sum	1

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F 005-3(5)	28	

LAYOUT & DETAILS  
OF GRADE  
SEPARATION  
STA. 134+  
(FUTURE CONSTRUCTION)



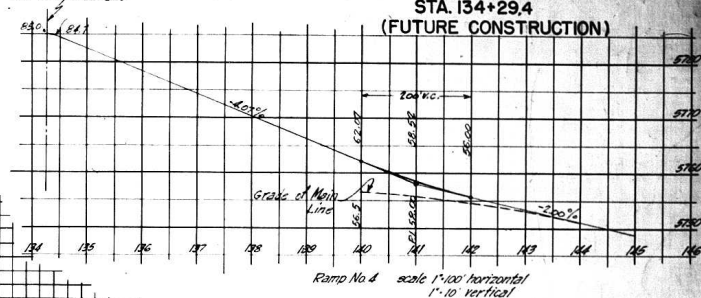
LEGEND	
—	Lane Edge
- - - - -	Shoulder
— · — · —	Traffic Strips
	Denied to Traffic
	Raised Curb Island
	Depressed Island



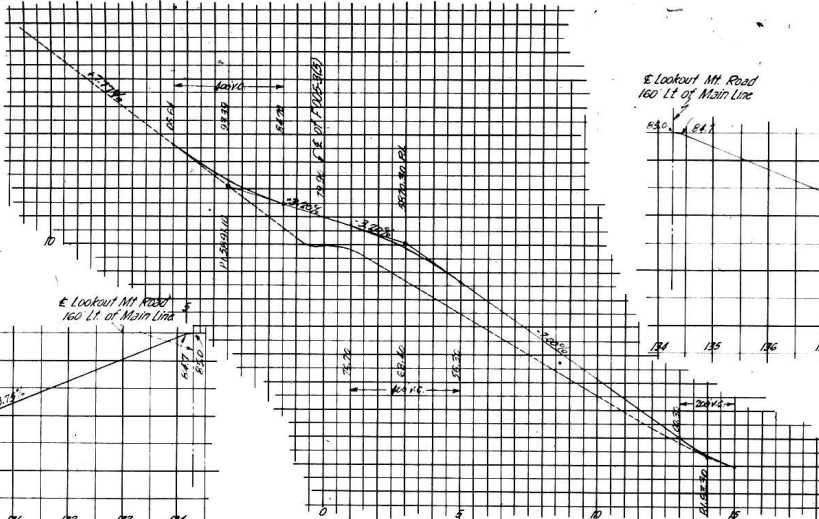
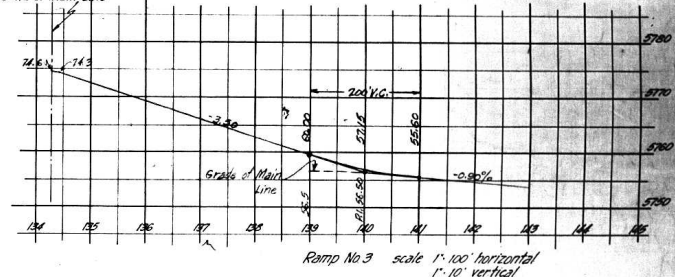
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F 005-3(5)	29	

**PROFILES & GRADES  
OF INTERSECTION & RAMP  
STA. 134+29.4  
(FUTURE CONSTRUCTION)**

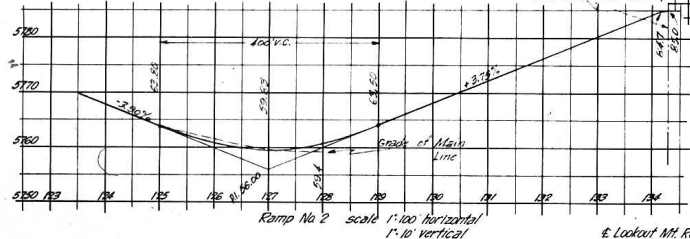
E Lookout Mt. Road  
160 Lt of Main Line



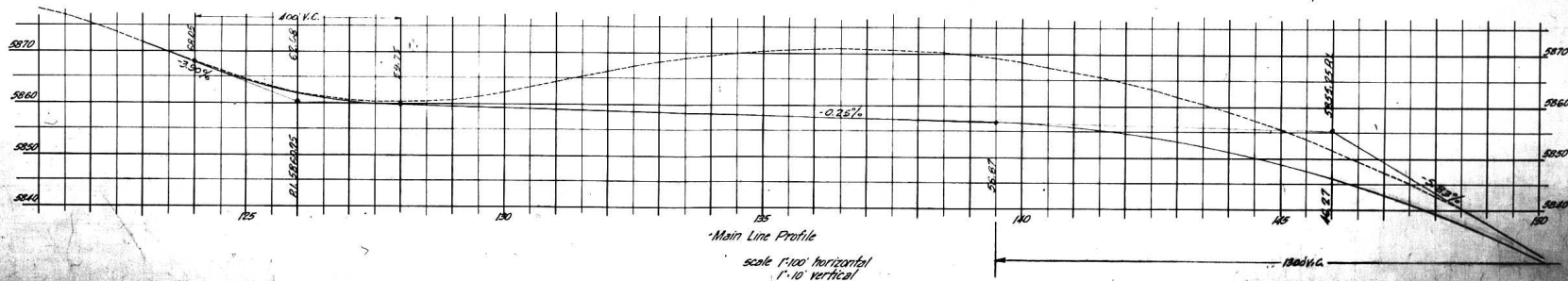
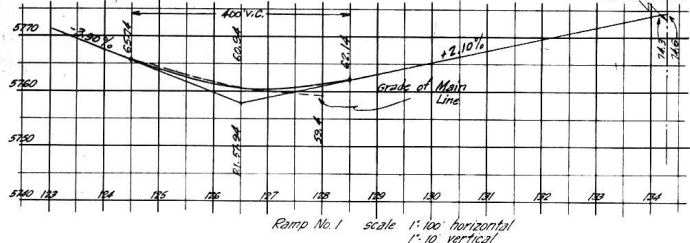
E Lookout Mt. Road  
160 Rt of Main Line



E Lookout Mt. Road  
160 Lt of Main Line



E Lookout Mt. Road  
160 Rt of Main Line



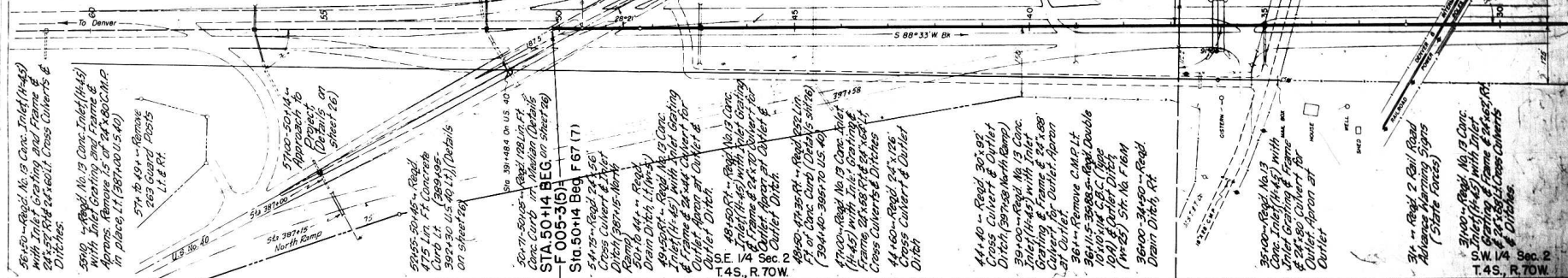


**NOTE:**  
 Alignment and grades as shown are subject to modification during construction, after approval by the Denver Office. All curves on this project over 6 degrees shall be provided with the super-elevation shown on the standard super-elevation sheet for a 6 degree curve.  
 Typical section for Channel and Ditch Changes is shown on sheet 2.  
 The soil data shown on the plans is obtained from best available testing laboratory information. This information is shown for the convenience of the Contractor and the Department does not guarantee the accuracy of these tests. If materials not conforming to the data on the plans are encountered during construction, necessary modification of the grading plan shown on the plans will be made to secure dense, stable embankments.  
 Right of Way Markers are tabulated on sheet 3.  
 Fencing Requirements are tabulated on sheet 2.

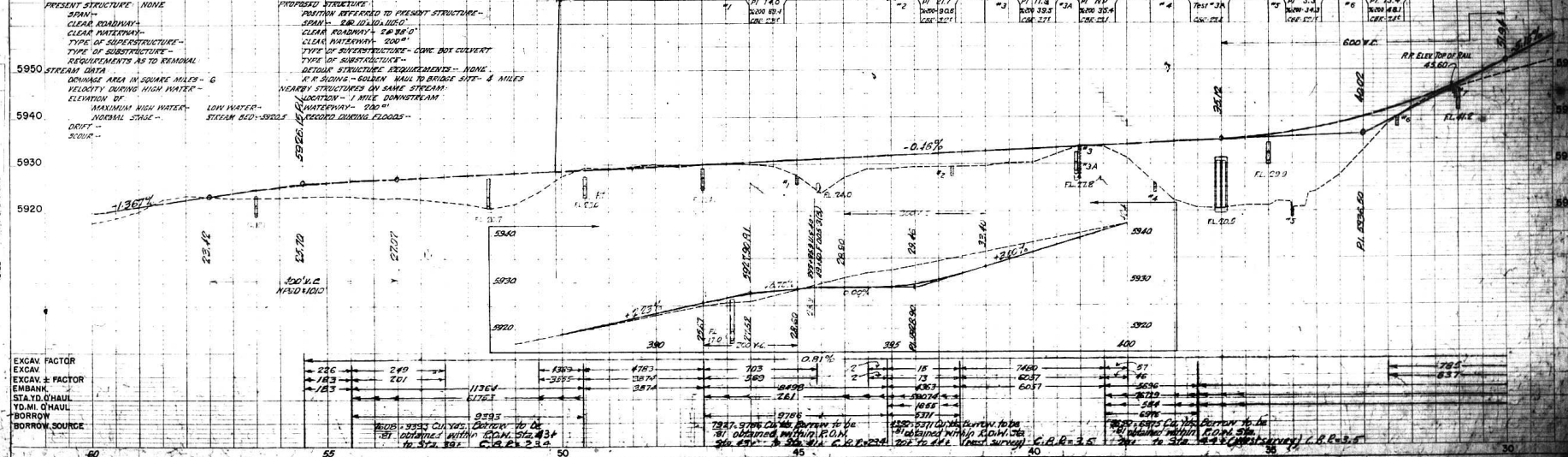
NO. 11-12-24-C Intersection Details

PROJ. ROAD DIV. NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F005-3(5)	46	

EAST SURVEY  
 NW 1/4 Sec. II  
 T.4S., R.70W.



**STRUCTURE NOTES FOR C.B.C. STA 35+88.5-36+11.5 STR. NO. F-16-M**



N.W. 1/4 Sec. 11  
T. 4 S., R. 70 W.

21+00 - Road No. 19 Conc. Inlet  
(14-45) with Inlet Grating &  
Frame & 24" x 66" Culvert for  
Child. Apron at Outlet.

FED. ROAD DIV. NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F005-3(5)	47	

EAST SURVEY & WEST SURVEY

25+00 - Road No. 19 Conc. Inlet  
(14-45) with Inlet Grating &  
Frame & 24" x 66" Culvert for  
Child. Apron at Outlet.

4 = 59°01' Lt  
D = 4°00'  
T = 507.5'  
L = 975.4'  
R = 1432.5'  
HOR. S.D. = 640

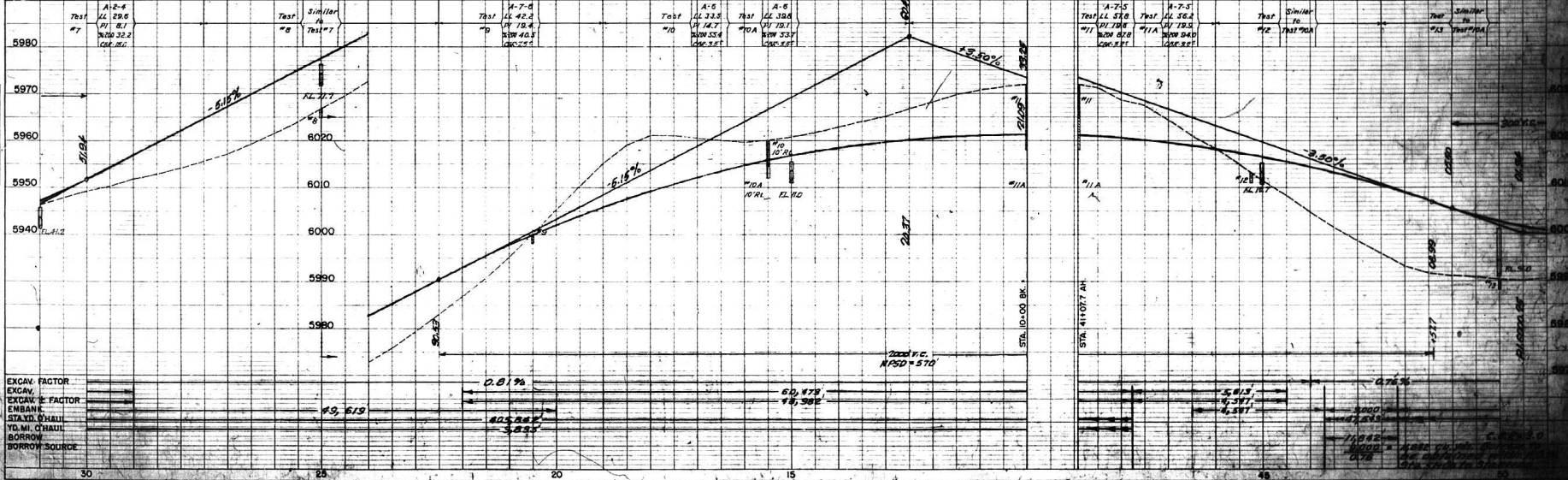
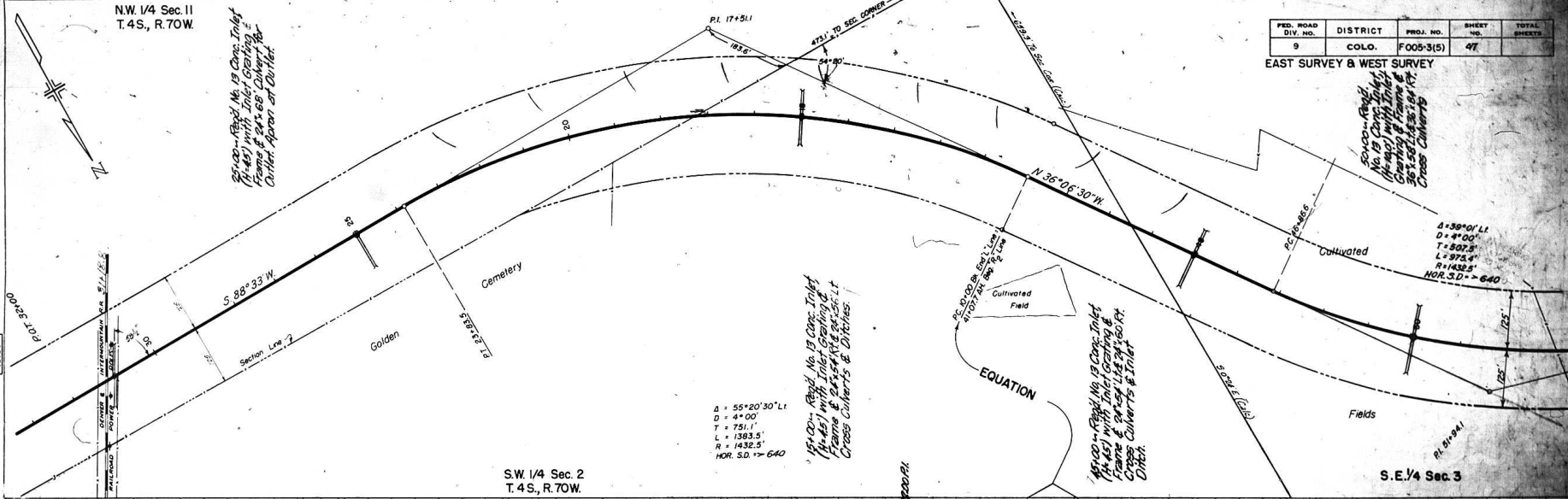
Δ = 55°20'30" Lt  
D = 4°00'  
T = 751.1'  
L = 1393.5'  
R = 1432.5'  
HOR. S.D. = 640

15+00 - Road No. 19 Conc. Inlet  
(14-45) with Inlet Grating &  
Frame & 24" x 66" Culvert for  
Child. Apron at Outlet.

15+00 - Road No. 19 Conc. Inlet  
(14-45) with Inlet Grating &  
Frame & 24" x 66" Culvert for  
Child. Apron at Outlet.

S.E. 1/4 Sec. 3

SW 1/4 Sec 2  
T. 4 S., R. 70 W.

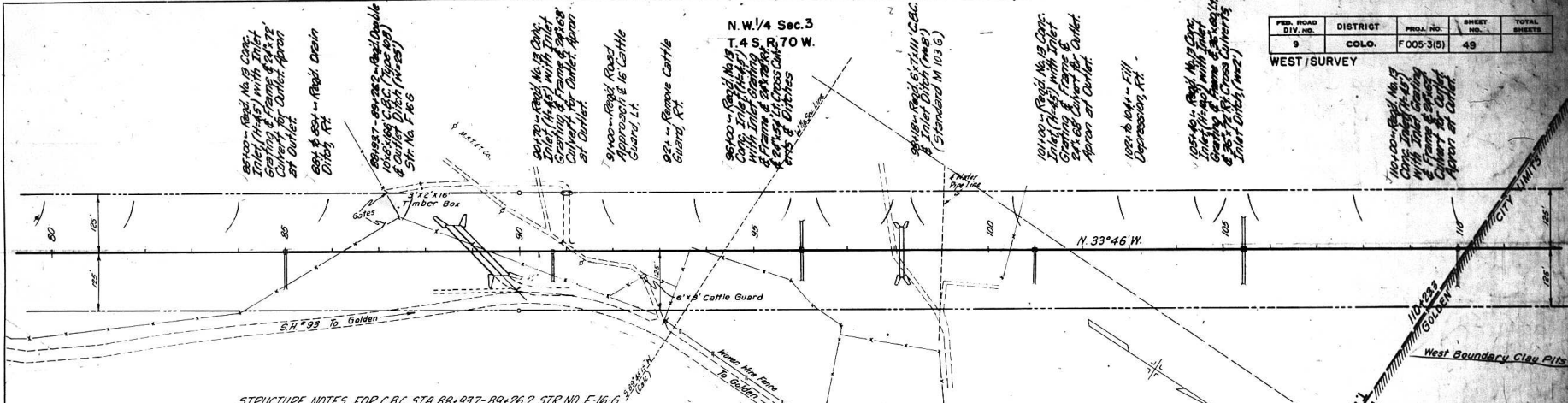


EXCAV. FACTOR	
EXCAV. FACTOR	
EMBANK. FACTOR	
STAYD. CHAUL	
YD. M. CHAUL	
BORROW SOURCE	



PLAN	REVISED
DATE	
BY	
CHECKED	
DATE	

PROFILE	REVISED
DATE	
BY	
CHECKED	
DATE	



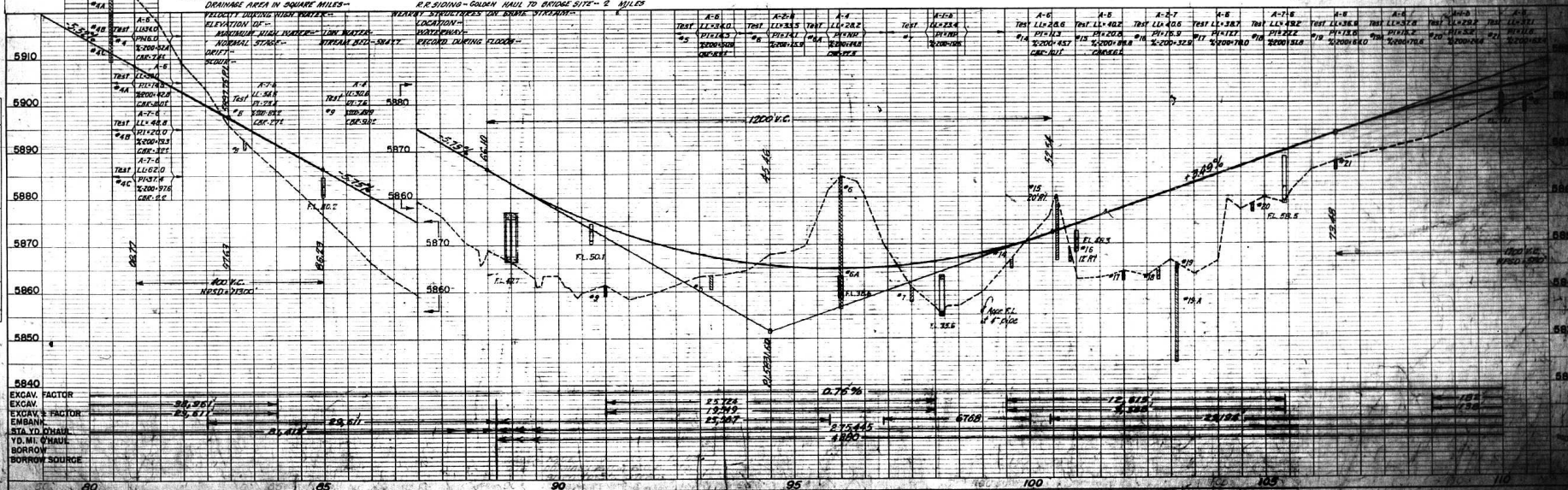
FED. ROAD DIV. NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 005-3(5)	49	

WEST/SURVEY

**STRUCTURE NOTES FOR C.B.C, STA 88+937-89+26.2 STR NO F-16-6**

PRESENT STRUCTURE NONE  
 POSITION REFERRED TO PRESENT STRUCTURE - SPAN - 20' 10", S. 154' 0"

PROPOSED STRUCTURE  
 CLEAR ROADWAY - 20' 10"  
 CLEAR WATERWAY - 16' 0"  
 TYPE OF SUPERSTRUCTURE - CONC BOX CULVERT  
 TYPE OF SUBSTRUCTURE -  
 REQUIREMENTS AS TO REMOVAL -  
 STREAM DATA -  
 DRAINAGE AREA IN SQUARE MILES -



EXCAV. FACTOR	34.26'
EMBANK. FACTOR	25.87'
STA. YD. DRAIN	25.87'
YD. MI. DRAIN	25.87'
BORROW	
BORROW SOURCE	

PLAN  
 SCALE  
 1" = 40'

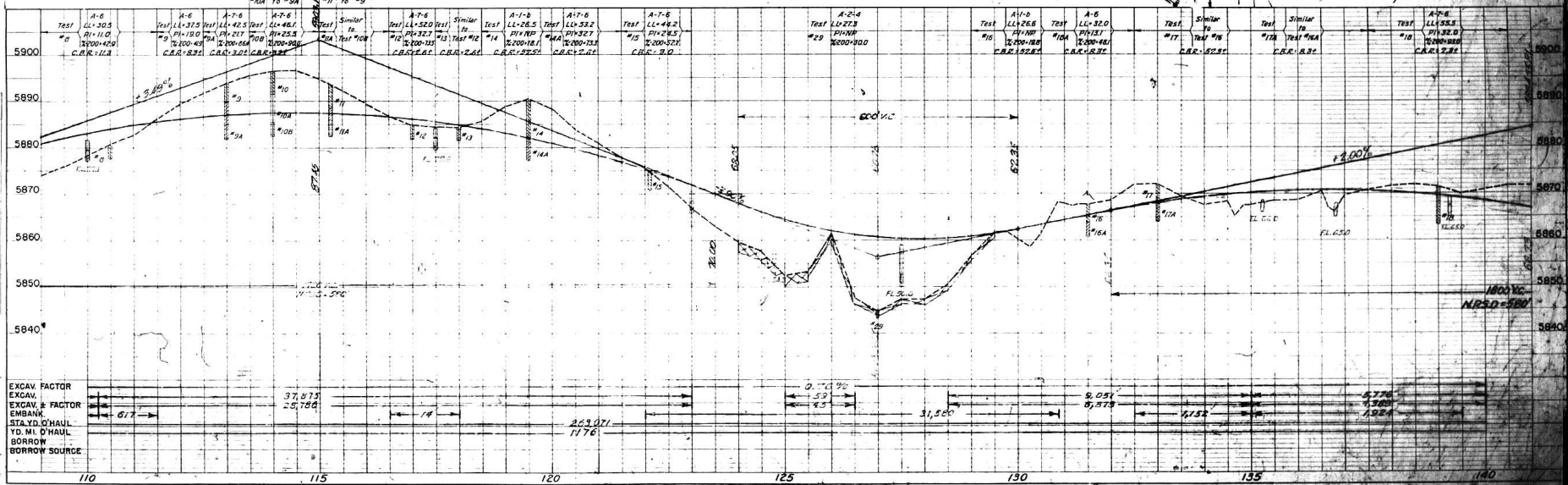
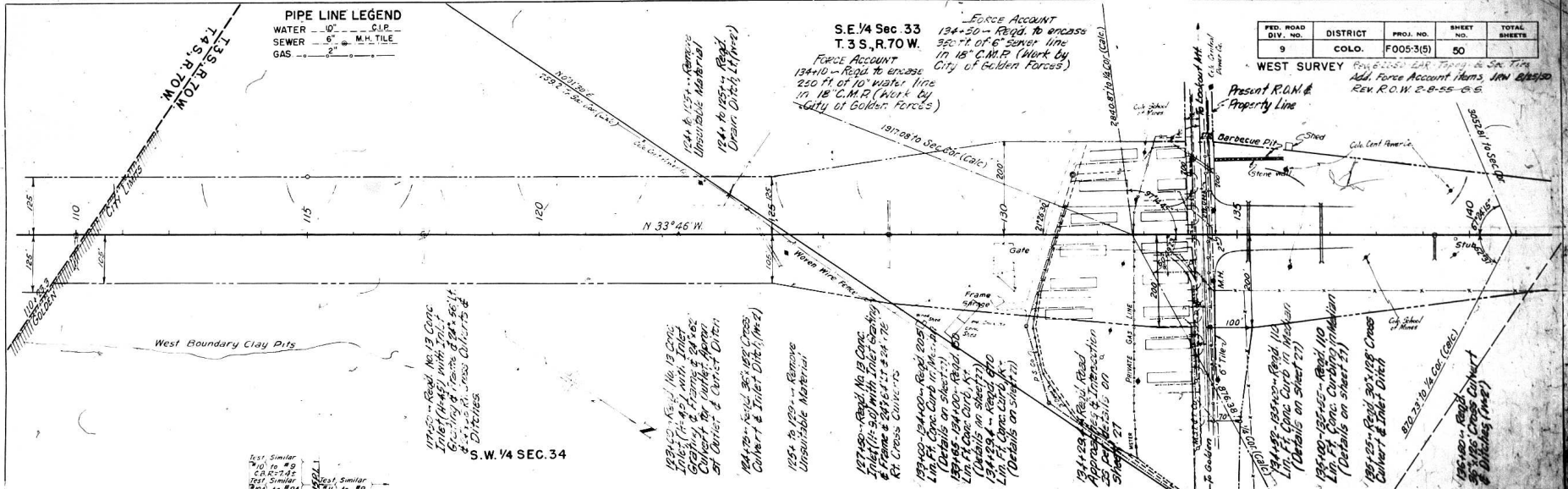
PROFILE  
 SCALE  
 1" = 10'

**PIPE LINE LEGEND**  
 WATER — 10" — C.I.P.  
 SEWER — 6" — M.H. TILE  
 GAS — 2" —

**S.E. 1/4 Sec 33**  
**T. 3 S., R. 70 W.**  
**FORCE ACCOUNT**  
 134-30 - Road to encase  
 350' ft. of 6" sewer line  
 10' 15" C.I.P. (Work by  
 City of Golden, Force)  
**FORCE ACCOUNT**  
 134-10 - Road to encase  
 250' ft. of 10" water line  
 15' 10" C.I.P. (Work by  
 City of Golden, Force)

FED. ROAD DIV. NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F0053(5)	50	

**WEST SURVEY**  
 Add. Force Account Items JAN 20/1920  
 Rev. R.O.W. 2-8-55 - G.S.



EXCAV. FACTOR  
 EXCAV. & FACTOR  
 EMBANK.  
 STA. TO D'HAUL  
 BORROW SOURCE





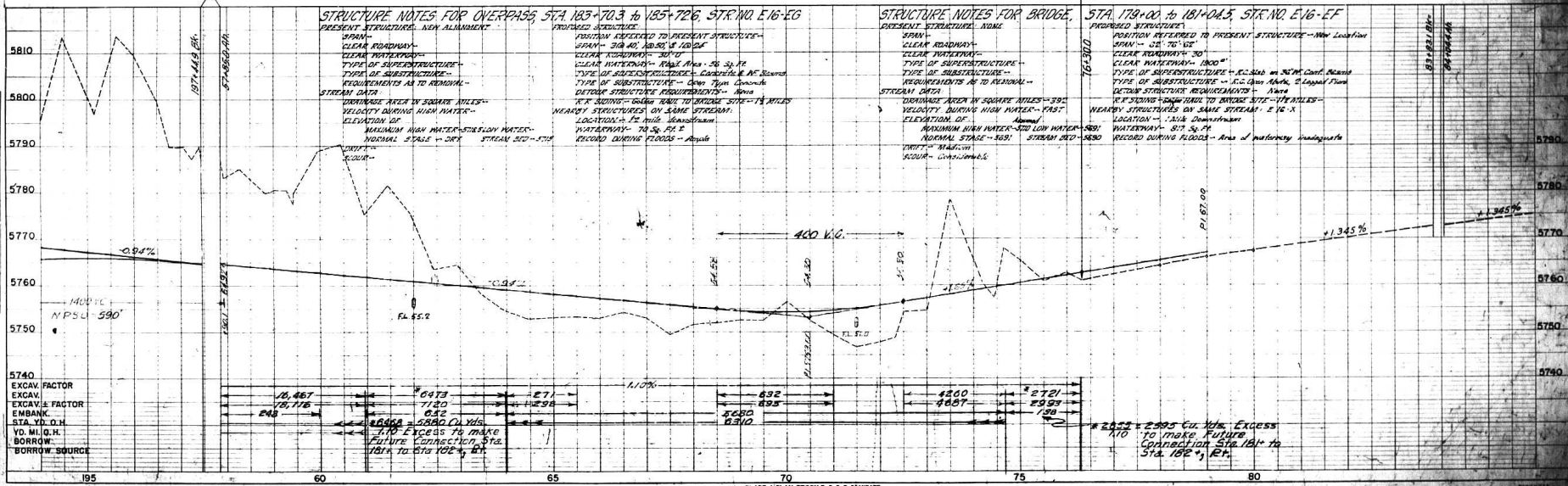
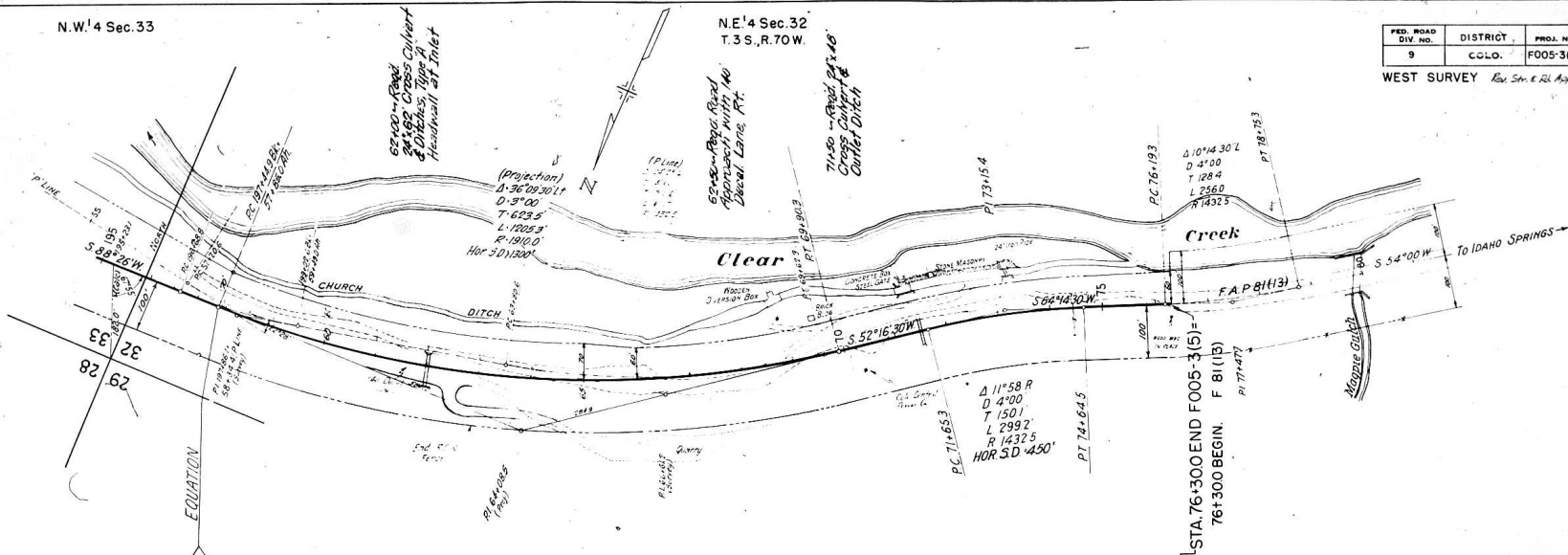
N.W. 1/4 Sec. 33

N.E. 1/4 Sec. 32  
T. 3 S., R. 70 W.

FED. ROAD DIV. NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	C.C.O.	FOO5-3(5)	53	

WEST SURVEY Rev. Str. & All Appx. I.R.N. 6/24/52

PLAN	PROFILE	SECTION
1	2	3



**STRUCTURE NOTES FOR OVERPASS STA 183+70.3 to 185+72.6, STR. NO. E16-EG**  
 PROPOSED STRUCTURE:  
 POSITION REFERRED TO PRESENT STRUCTURE -  
 SPAN - 30' 00", 20' 00" & 20' 00"  
 CLEAR ROADWAY -  
 CLEAR INTERSECT - 30' 0"  
 CLEAR INTERSECT - Right Hand - 25' 0" M.  
 TYPE OF SUBSTRUCTURE - Cast-in-place concrete  
 TYPE OF SUBSTRUCTURE - Cast-in-place concrete  
 TYPE OF SUBSTRUCTURE - Cast-in-place concrete  
 REQUIREMENTS AS TO REMOVAL -  
 STREAM DATA  
 DRAINAGE AREA IN SQUARE MILES -  
 VELOCITY DURING HIGH WATER -  
 ELEVATION OF  
 MAXIMUM HIGH WATER - FLOOD WATER -  
 NORMAL STAGE - 589'  
 STREAM BED - 579'  
 RECORD DURING FLOODS -  
 WEARWAY STRUCTURES ON SAME STREAM:  
 LOCATION - 1/2 mile downstream  
 HIGHWAY - 74 S. 54 E.  
 RECORD DURING FLOODS - Annual

**STRUCTURE NOTES FOR BRIDGE STA. 179+00 to 181+00.5, STR. NO. E16-ET**  
 PROPOSED STRUCTURE:  
 POSITION REFERRED TO PRESENT STRUCTURE - New Location  
 SPAN - 35' 70" 1/2"  
 CLEAR ROADWAY - 30'  
 CLEAR INTERSECT - 100"  
 TYPE OF SUBSTRUCTURE - Cast-in-place concrete  
 TYPE OF SUBSTRUCTURE - Cast-in-place concrete  
 TYPE OF SUBSTRUCTURE - Cast-in-place concrete  
 REQUIREMENTS AS TO REMOVAL -  
 STREAM DATA  
 DRAINAGE AREA IN SQUARE MILES - 390'  
 VELOCITY DURING HIGH WATER - FAST  
 ELEVATION OF  
 MAXIMUM HIGH WATER - FLOOD WATER - 589'  
 NORMAL STAGE - 589'  
 STREAM BED - 580'  
 RECORD DURING FLOODS - Area of waterway investigated  
 WEARWAY STRUCTURES ON SAME STREAM - 1/2 M.  
 LOCATION - 1/2 mile downstream  
 HIGHWAY - 74 S. 54 E.  
 RECORD DURING FLOODS - Annual

\* 200' ± 200' Ex. Min. Excess to 100' ± Future Connection Sta. 181+ to Sta. 182+ 1/2 M.



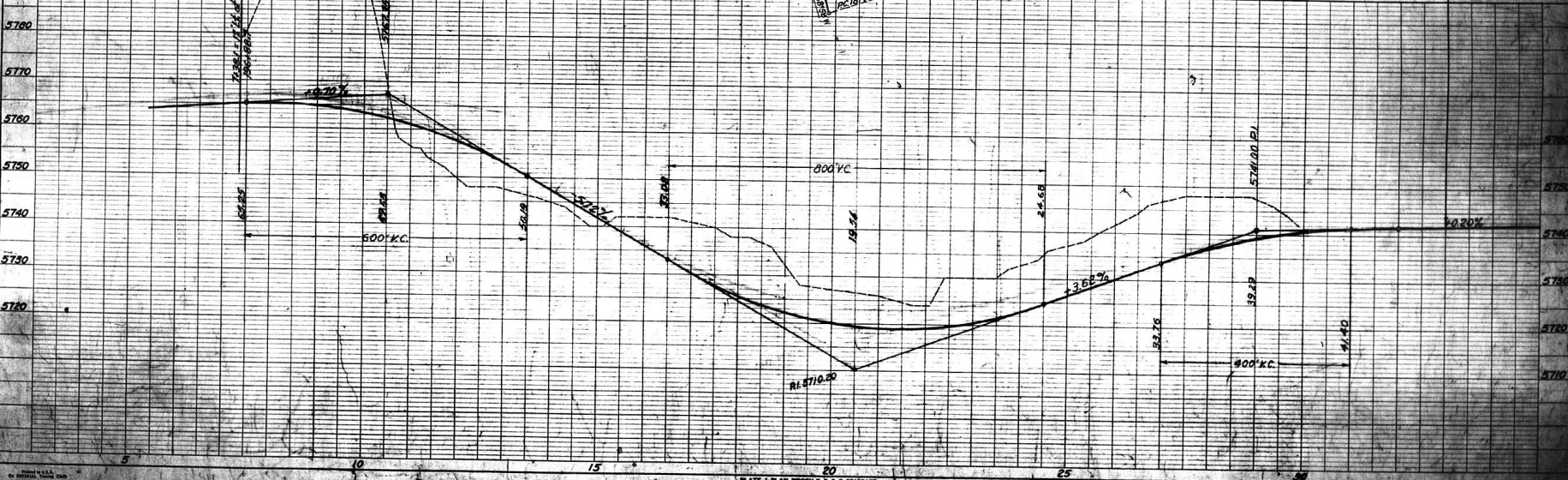
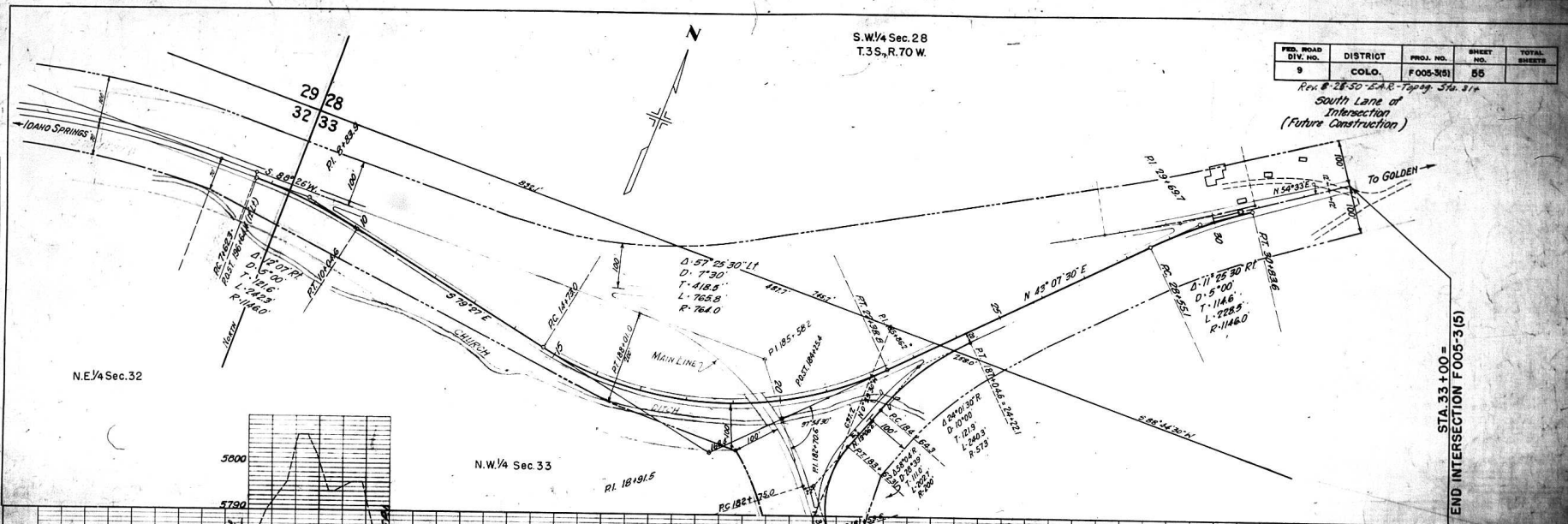
S.W. 1/4 Sec. 28  
T.35 S., R.70 W.

PER. ROAD DIV. NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 005-3(5)	55	

Rev. # 28-50 E.A.R. Topog. 3/6. 811  
South Lane of Intersection  
(Future Construction)

PLAN SHEET NO.	DATE	BY	SCALE

PROFILE SHEET NO.	DATE	BY	SCALE

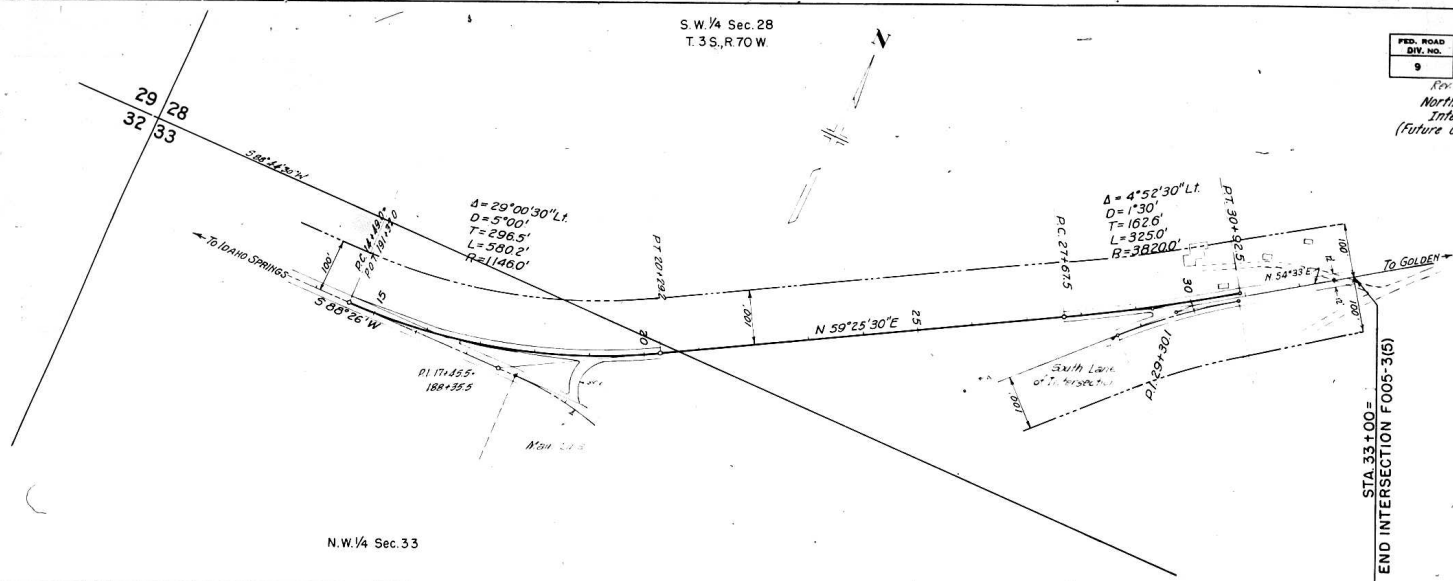


S.W. 1/4 Sec. 28  
T. 3 S., R. 70 W.

FED. ROAD DIV. NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F005-3(5)	56	

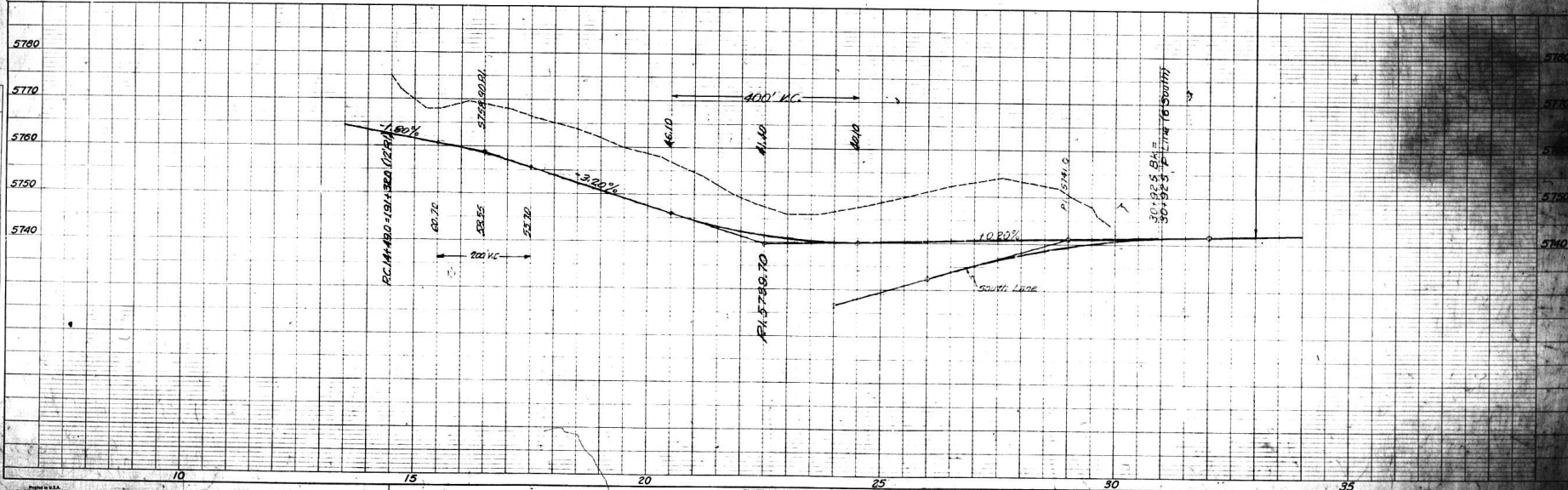
Rev. 8-25 50' E.A.R. - Topog. - Sta. 317  
North Lane of Intersection  
(Future Construction)

PLAN  
CHECKED BY  
DESIGNED BY  
NOTED BY  
DATE



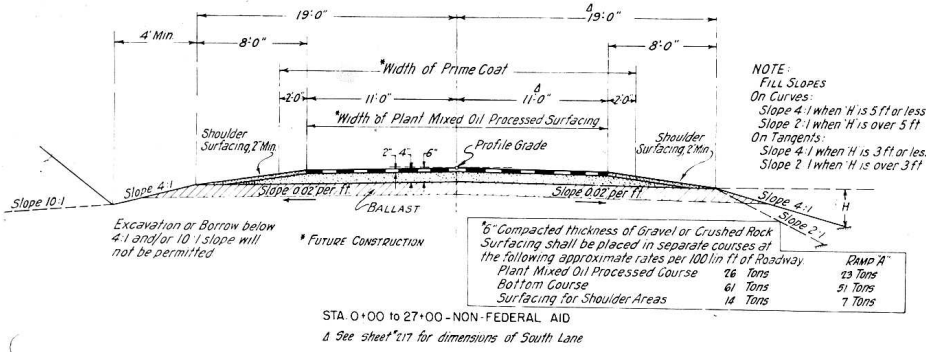
N.W. 1/4 Sec. 33

PROFILE  
CHECKED BY  
DESIGNED BY  
NOTED BY  
DATE



## TYPICAL CROSS SECTION OF IMPROVEMENT AND SUMMARY OF QUANTITIES

NOTE:  
See Standard M-2-DM for details of Cut Slope Treatment, Flaring and widening for guard fence and/or Guard Posts.



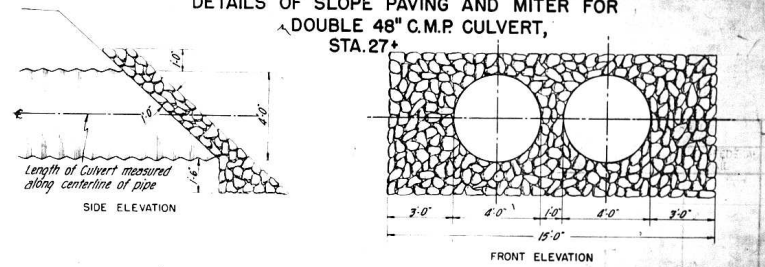
### SUMMARY OF APPROXIMATE QUANTITIES

ITEM NO	ITEM	UNIT	ROADWAY				PROJECT TOTALS
100x	Clearing and Grubbing Entire Project	Lump Sum					
114	Removal of Timber Bridge Sta 27+	Lump Sum					
130	Unclassified Excavation	Cu Yd	34000				34 000
130	Unclassified Ditch Excavation	Cu Yd	300				300
140	Dry Rock Excavation (Str)	Cu Yd	25				25
140	Dry Common Excavation (Str)	Cu Yd	95				95
140	Wet Rock Excavation (Str)	Cu Yd	10				10
140	Wet Common Excavation (Str)	Cu Yd	34				34
160	Structure Backfill (class 1)	Cu Yd	170				170
160	Mechanical Tamping	Hour	20				20
170x	Rolling with Tamping Roller (2 Unit)	Hour	50				50
170y	Rolling with Tamping Roller (4 Unit)	Hour	30				30
170z	Rolling with Flat Wheeled Roller	Hour	10				10
170	Wetting	M Gal	630				630
180a	Station Yard Overhaul	Sq Yd	63000				63 000
180b	Yard Mile Overhaul	Yd Mi	100				100
460	Class "B" Concrete	Cu Yd	2				2
530	24" Corrugated Metal Culvert Pipe	Lin Ft	88				88
530	30" Corrugated Metal Culvert Pipe	Lin Ft	118				118
530	48" Corrugated Metal Culvert Pipe	Lin Ft	186				186
63	Grouted Rubble Slope and Ditch Paving (12" Thick)	Sq Yd	20				20

### LIST OF STRUCTURES

STATION	DESCRIPTION	REMOVE STRUCTURE NO	EXCAVATION				STRUCTURAL EXCAVATION CUBIC YARDS	STRUCTURE BACKFILL CUBIC YARDS	GRAVEL OR CRUSHED ROCK SURFACING LIN FT	CLASS "B" CONC. Cu Yds	CORRUGATED METAL CULVERT PIPE LIN. FT				CORRUG. METAL PIPE ARCH CULVERTS LIN. FT	MISCELLANEOUS		
			UNCLAS. EXCAV	EMB	UNCLAS. DITCH	•					24"	30"	48"	60"				
1+97	Extend 60" Cross Culvert 20 Ft Inlet Ditch				5	12	17	2										
2+05	Adjust Manhole Ring and Cover															Adj. Manhole Ring & Cover		
2+20	Road Approach, Lt																	
2+75	Road Approach, Rt																	
3+57 - 3+93	Arch Side Drain, Rt. Rem 12" 56" Pipe Culvert	1	15	5	9		9							34				
3+73	Road Approaches, Lt & Rt		60					20										
4+99	Arch Cross Culvert & Ditches Rem 12" 56" Pipe Culvert	1	5	5	28		19								56			
5+00	Road Approach, Rt							10										
7+40	Arch Side Drain, Ditches Rt & Road Apprs Lt & Rt. Rem 12" 20" Pipe Culvert & Remove Drop Inlet	1	10	5	4		7	20							26			
7+57	Arch Cross Culvert, Ditches, Rem 12" 56" Pipe Culvert	1		5	21		18								54			
10+88	Arch Cross Culvert, Inlet Ditch, Rem 12" 56" Pipe Culvert	1		5	24		21								60			
11+07	Arch Side Drain, Ditches Lt & Road Apprs Lt & Rt. Remove Side Drain Rt	1	470	5	4		7	20							26			
16+00	Cross Culvert & Ditches				5	23		21										
19+20	Cross Culvert & Inlet Ditch				5	28		19										
20+89	Road Approach, Lt				55			12										
All Non-Fed Aid	Mech. Tamping for Culverts less than 60" diam.																	
	TOTAL NON-FEDERAL AID		7	80	540	40	153		128	19	102	0	172	0	0	21	86	174
27+20	2 Cross Culverts, Ditches, Grouted Rubble Slope & Ditch Paving at Inlet (12" Thick)																	
33+80	Remove Timber Bridge, Lt					30	44											
35+10	Road Approach, Lt					75								78				
35+10	Cross Culvert & Ditches					25	65							118				
21+00 (S. Lane)	Cross Culvert, Type X Headwall at Inlet & Inlet Ditch					5	50											
All Fed Aid	Mechanical Tamping for Culverts less than 60" diam.																	
	TOTAL FEDERAL AID		0	0	75	60	189		165	17	0	165		88	118	156	0	0

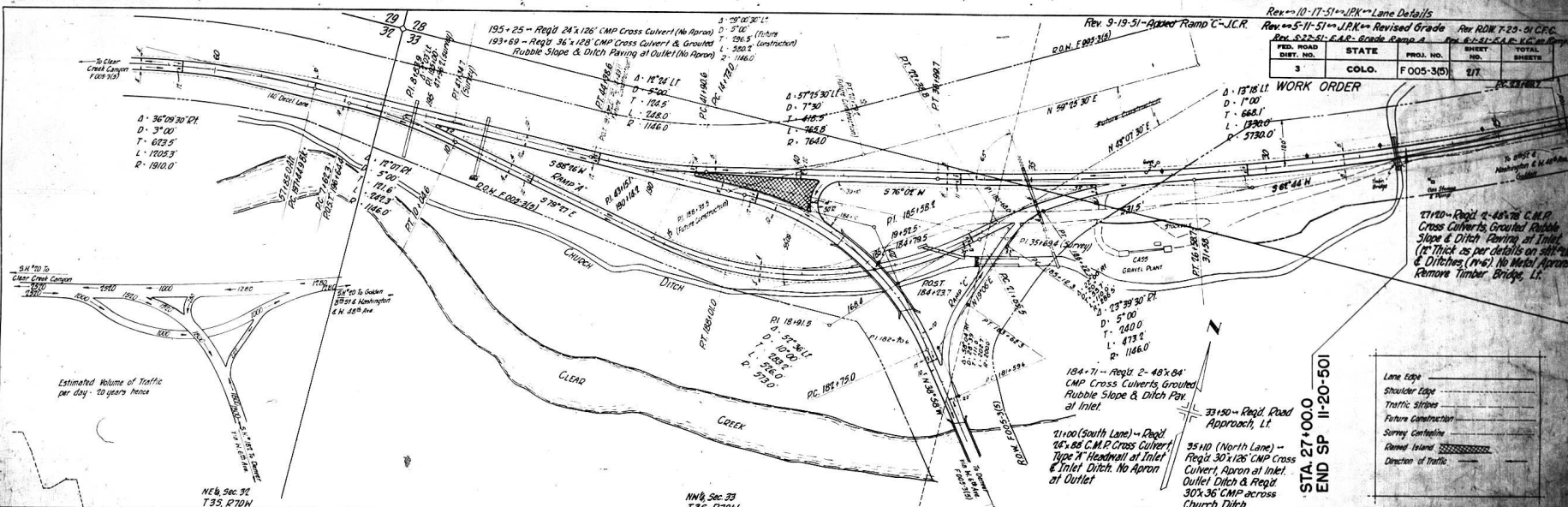
### DETAILS OF SLOPE PAVING AND MITER FOR DOUBLE 48" C.M.P. CULVERT, STA. 27+



\* No. Metal Aprons. \* Allowance of 1 Ft. for Connecting Bond. \* Future Construction

PLAN	DATE
REVISED	
DATE	
BY	
FOR	
BY	
FOR	
BY	
FOR	

PROFILE	DATE
REVISED	
DATE	
BY	
FOR	
BY	
FOR	
BY	
FOR	



Rev 10-17-51-JPK-Lane Details  
 Rev 5-11-51-JPK-Revised Grade  
 Rev 5-12-51-G.A.E-Grade Ramp A  
 Plan RDW 7-23-51 E.R.G.  
 Plan 5-12-51-G.A.E-Grade Ramp A

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F005-3(B)	27	27

**WORK ORDER**

27120-Reg'd 2-48x76 C.M.P. Cross Culverts Grouted Rubble Slope & Ditch Paving at Inlet (12' Thick as per details on site plan & Ditches (1+6) No Metal Aprons Remove Timber Bridge, Lt.

Estimated Volume of Traffic per day - 20 years hence

STA. 27+00.0  
 END SP 11-20-501

Lane Edge	_____
Shoulder Edge	_____
Traffic stripes	_____
Future Construction	_____
Survey Contour	_____
Named Island	_____
Direction of Traffic	_____

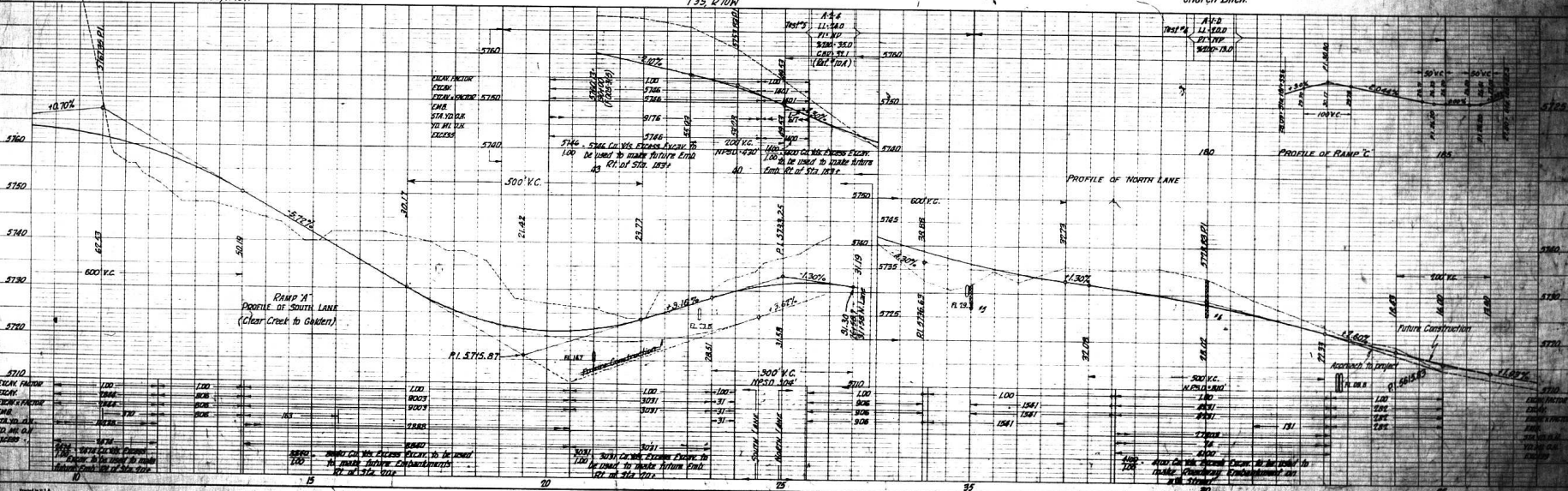
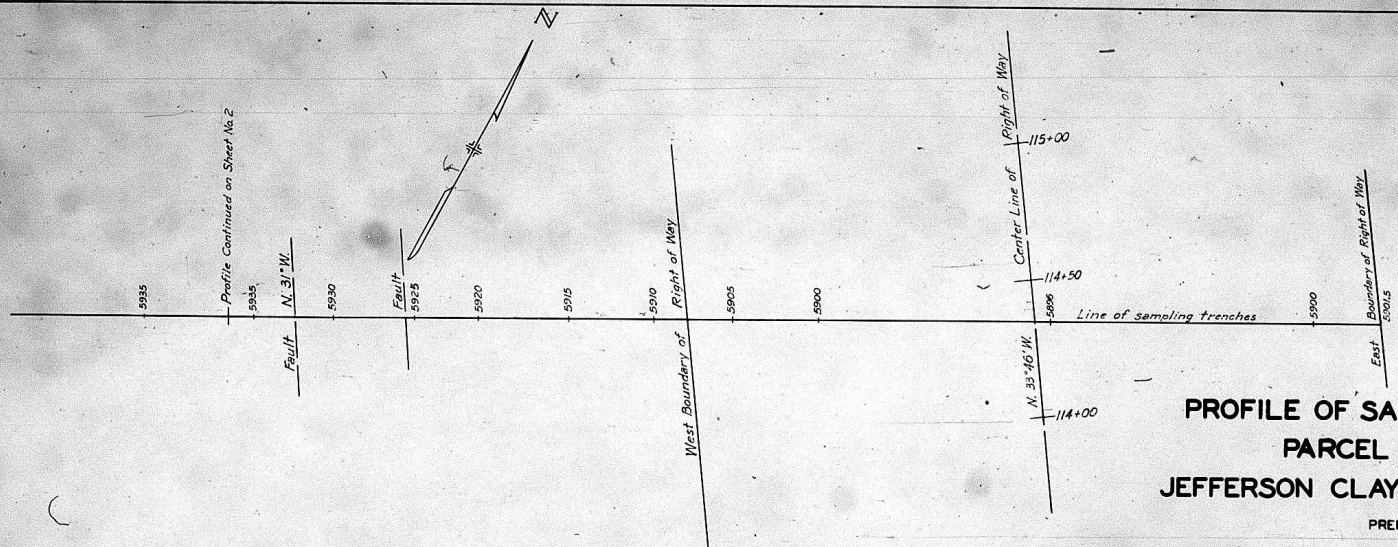


PLATE 1 PLAN PROFILE & VERTICAL CURVES  
 ROAD DISTRICT NO. 3, COLORADO



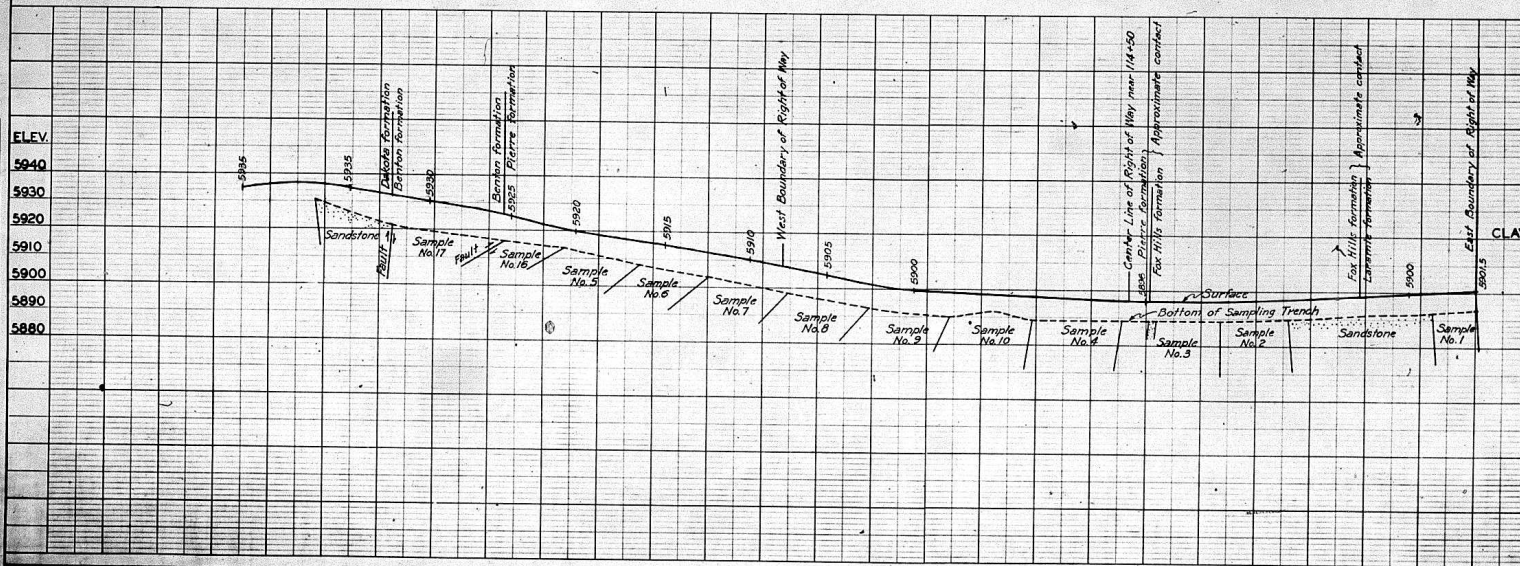
FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F005-3 (3)	1	2

PLAN	NOTED	DATE
BOOK	REVISION	
NO.	BY	



**PROFILE OF SAMPLING TRENCHES**  
**PARCEL NO. 6 & 6A**  
**JEFFERSON CLAY & INVESTMENT CO.**  
 PREPARED FOR  
**COLORADO STATE HIGHWAY DEPARTMENT**

PROFILE	NOTED	DATE
BOOK	REVISION	
NO.	BY	



BY  
**A. N. MURRAY**  
 SEPTEMBER 1960

**PLAN & PROFILE SCALE**  
 VERTICAL - 1 INCH = 50 FEET  
 HORIZONTAL - 1 INCH = 50 FEET

**LEGEND**

CLAY SAMPLE NO.	USE OF CLAY
1	Questionable Value
2	Questionable Value
3	Questionable Value
4	Questionable Value
5	Questionable Value
6	Questionable Value
7	Questionable Value
8	Questionable Value
9	Light Weight Aggregate
10	Light Weight Aggregate
16	Questionable Value
17	Questionable Value

