

FED. ROAD DIV. NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	WELD CO. 3% "I"	1	

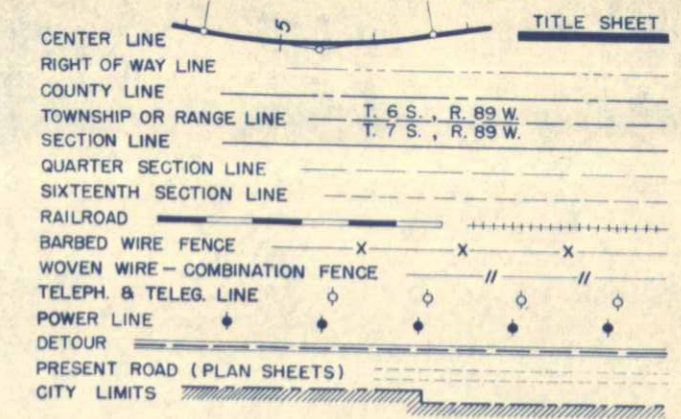
COLORADO STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED WELD COUNTY 3% "I" STATE HIGHWAY NO. 16

INDEX OF SHEETS

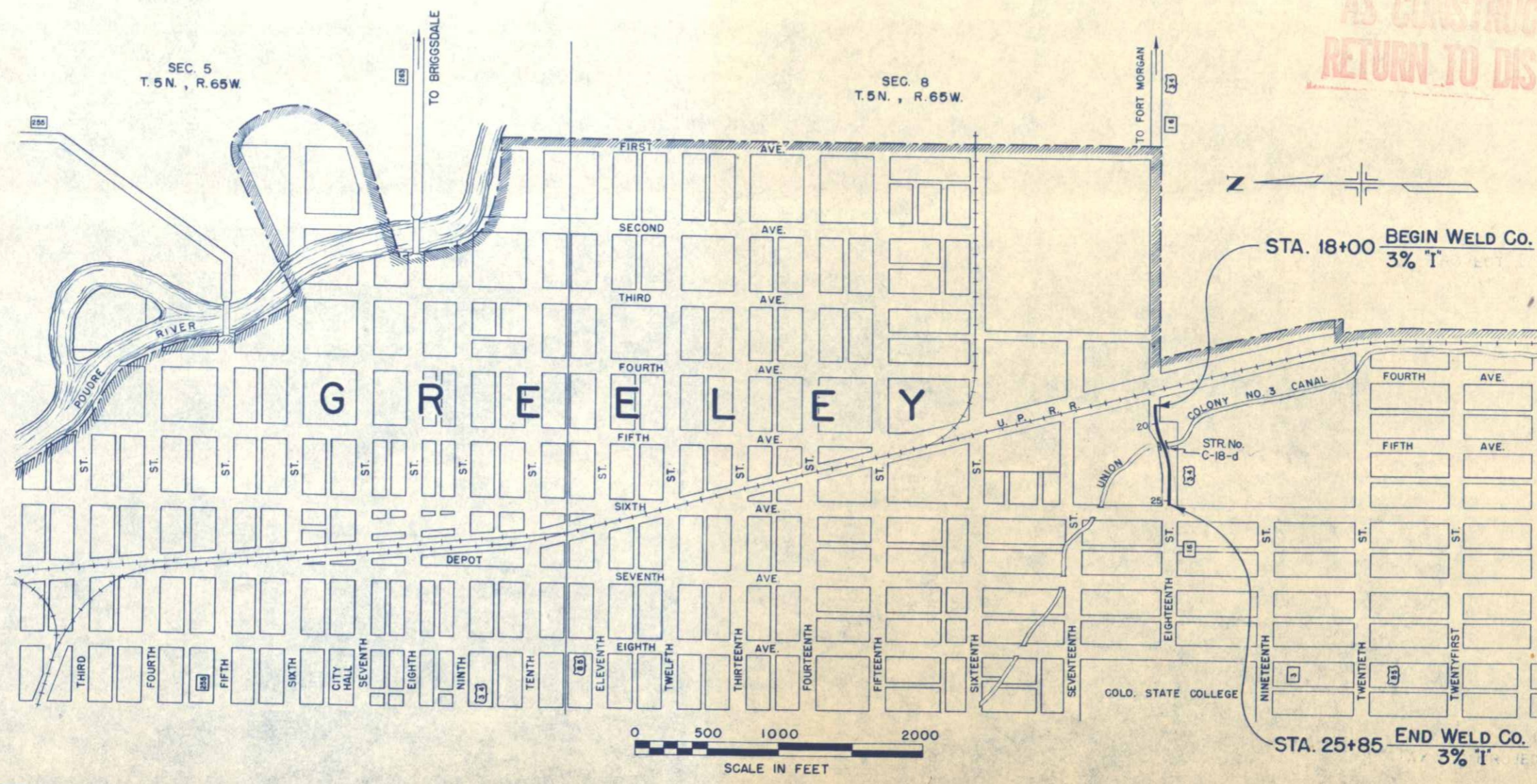
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|-------------|---|--------|
| SHEET NO. 1 | SKETCH MAP AND TITLE PAGE | |
| 2 | TYPICAL SECTION, SUMMARY OF APPROXIMATE QUANTITIES, SURFACING PLAN, SIDEWALK & COMBINATION CURB & GUTTER, FENCING REQUIREMENTS AND GENERAL NOTES. | M-10-B |
| 3-4 | DETAILS OF BRIDGE WIDENING, STA. 21+. | |
| 5 | STANDARD LETTERS & FIGURES FOR YEAR NUMBERS & STRUCTURE NUMBERS. | |
| 6 | STANDARD ROADWAY CONSTRUCTION TRAFFIC SIGNS | M-2-DS |
| 7 | ALIGNMENT PLAN AND PROFILE. | |
| 8-10 | CROSS SECTIONS. | |

CONVENTIONAL SIGNS



SCALES ON 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 } 785 Ft. = 0.149 Miles
 NET LENGTH OF PROJECT }

AS CONSTRUCTED PLANS
RETURN TO DIST. 4 DESIGN



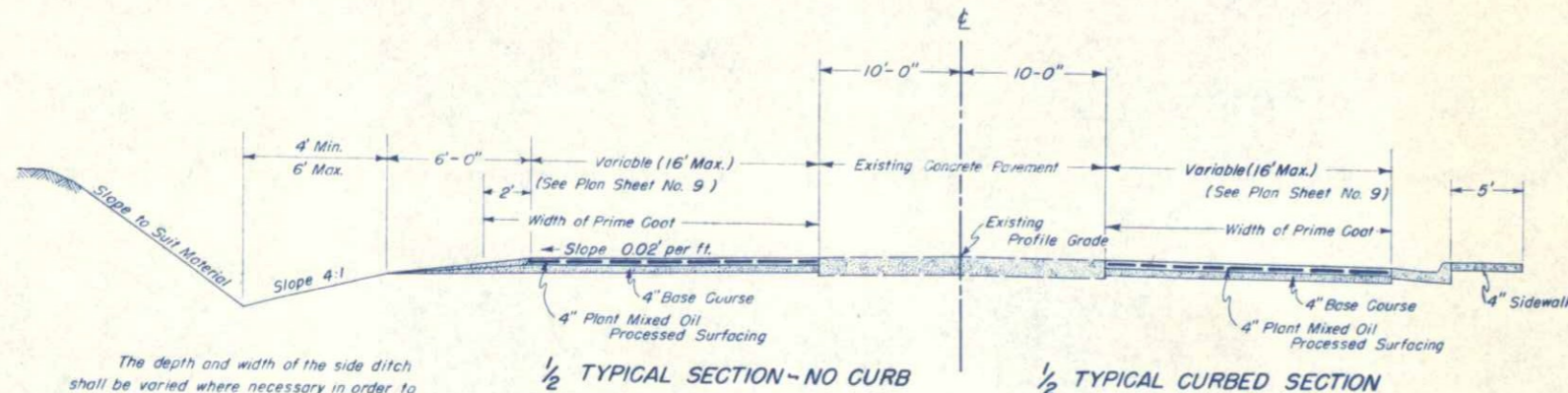
HIGHWAY DEPARTMENT
STATE OF COLORADO

RECOMMENDED FOR APPROVAL:
James Bull 11-15-51
 ASSISTANT ENGINEER DATE

APPROVED:
Manuel C. Watson 11-16-51
 STATE HIGHWAY ENGINEER DATE

FEDERAL ROAD DIVISION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	WELD CO. 3% "I"	2	

TYPICAL SECTION



The depth and width of the side ditch shall be varied where necessary in order to provide proper drainage.

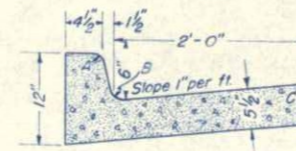
1/2 TYPICAL SECTION - NO CURB

1/2 TYPICAL CURBED SECTION

Approximate 8" compacted thickness of surfacing shall be placed in two (2) separate courses of the following approximate rates per 100 lin. ft. of 16 ft widened section for one (1) side of roadway:

- 4" Top Course of Plant Mixed Oil Processed Surfacing (By City Forces) 178 Sq. Yds.
- 4" Base Course Surfacing (Curbed) 36 Tons
- Surfacing for Shoulder Areas 7 Tons
- 4" Base Course Surfacing (No Curb) 43 Tons

A = 1 1/2"
B = 2"
C = 1"



COMBINATION CURB AND GUTTER

SURFACING PLAN

The Source for Surfacing Material for this Project is undesignated. Estimated quantities involved in this operation are listed below. Alteration of the Surfacing Plan as here outlined will be allowed only on written permission from the Department.

MATERIAL TO BE PLACED	SOURCE	CONTRACT WORK		CITY FORCES	
		QUANTITY - TONS		QUANTITY - SQ. YDS.	
		4" BASE COURSE	* SHOULDER SURFACING	4" PLANT MIX.	
LEFT SIDE					
17+80.2 to 21+51.7		165	26	563	
21+69.9 to 25+85 Bridge		150		738	37
RIGHT SIDE					
18+25 to 20+10		46	13	135	
20+10 to 21+51.7		51		252	
21+69.9 to 25+85 Bridge		150		738	37
TOTAL		562	39	2500	

* TO BE WINDROWED ON SHOULDERS, THEN BLADED AND SHAPED BY CITY FORCES AFTER PLACEMENT OF PLANT MIXED OIL PROCESSED SURFACING.

SIDEWALK & COMBINATION CURB & GUTTER

MATERIAL TO BE PLACED	SIDEWALK (4" THICK)	COMBINATION CURB & GUTTER
	CLASS "A" CONCRETE	CLASS "A" CONCRETE
	SQ. FT.	LIN. FT.
LEFT SIDE		
21+71± to 21+81±	50	10
RIGHT SIDE		
20+10± to 21+52±	75	151
21+71± to 21+81±		
TOTALS	125	161

FENCING REQUIREMENTS

LOCATION	REMOVING AND REBUILDING FENCE
	LIN. FT.
LEFT SIDE	
21+23 to 21+48	25
21+70 to 21+80	10
RIGHT SIDE	
21+00 to 21+50	50
21+73 to 21+83	10
TOTALS	95

SUMMARY OF APPROXIMATE QUANTITIES

ITEM NO.	ITEM	UNIT	ROADWAY	WORK BY CITY FORCES
11a	Removal of Portions of Present Structure, Sta. 21+	Lump Sum	•	
12b	Removing and Rebuilding Fence	Lin. Ft.	100	
13c	Unclassified Excavation	Cu. Yd.	800	
14a	Dry Rock Excavation (Str.)	Cu. Yd.	15	
14b	Dry Common Excavation (Str.)	Cu. Yd.	125	
14c	Wet Rock Excavation (Str.)	Cu. Yd.	5	
14d	Wet Common Excavation (Str.)	Cu. Yd.	15	
16a	Structure Backfill (Class 1)	Cu. Yd.	120	
16d	Mechanical Tamping	Hr.	15	
17c	Rolling with Rubber Tired Roller	Hr.	10	
17f	Furnishing Rubber Tired Roller	Ea.	1	
17g	Wetting	M Gal.	25	
26c	Gravel or Crushed Rock Surfacing (Grading C)	Ton	650	
30x	Asphaltic Road Material M-C	Gal.		1,000
32ax	Plant Mixed Oil Processed Surfacing (4" Thick)	Sq. Yd.		2,500
46a	Class "A" Concrete	Cu. Yd.	63	
47y	Transporting, Altering & Placing Reinforcing Steel	Lb.	8,000	
48	Structural Steel	Lb.	1,600	
84c	Concrete Combination Curb & Gutter	Lin. Ft.	170	
86	Concrete Sidewalks	Sq. Ft.	130	
132q	Inlet Grating & Frame (Bridge Drain) Relocation of R.R. Warning Sign	Ea Lump Sum	2	•

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 Utilities encroaching on construction are to be moved by the Owners.

No Overhaul will be allowed or paid for as a separate item on this Project. The cost of all hauling shall be included in the Contract bid prices of the items involved.

All Concrete used on this Project shall be "Air Entrained" Concrete.

All excess excavation material not required in the Construction of this Project shall become the property of the Contractor and shall be hauled away and disposed of by him.

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.

OILING NOTES (City Forces)

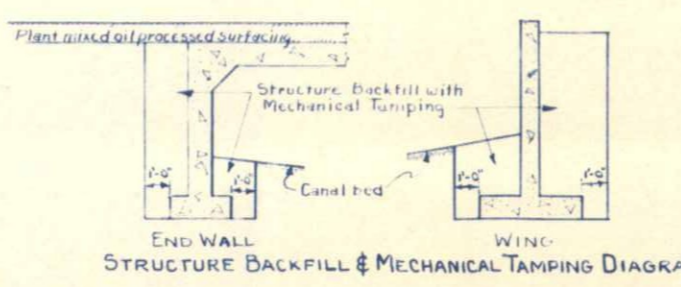
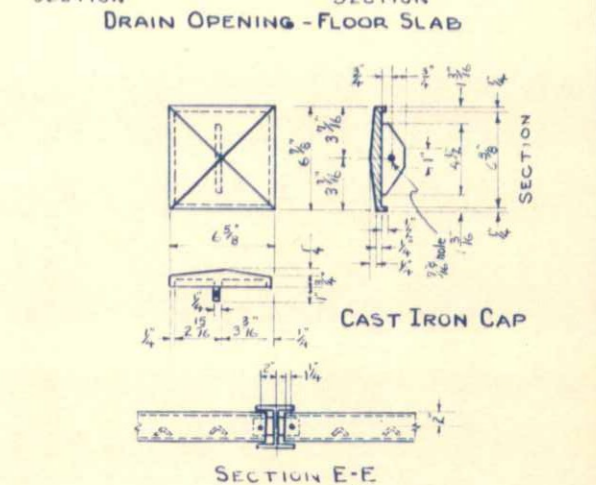
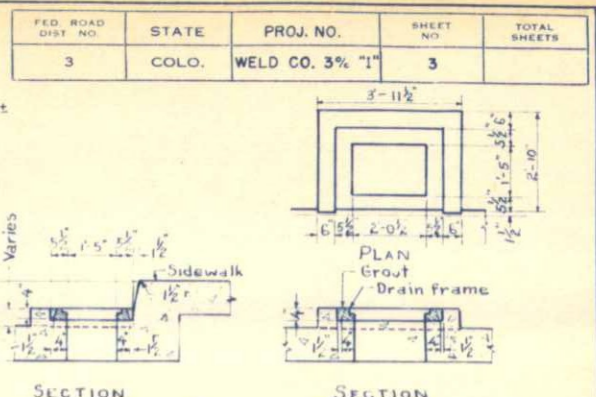
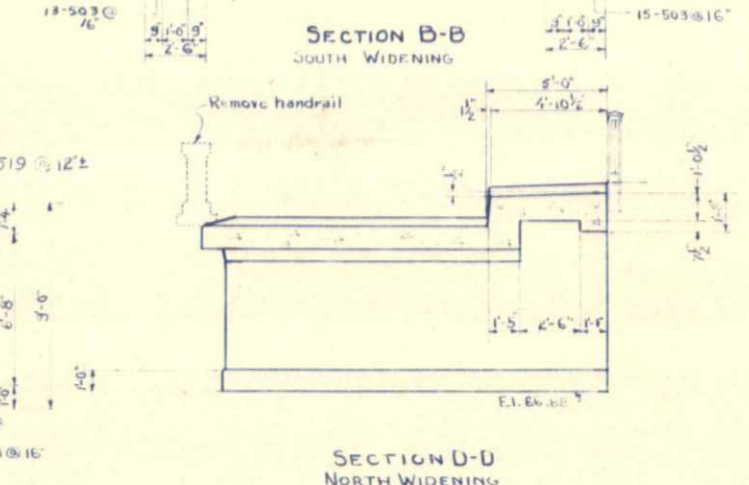
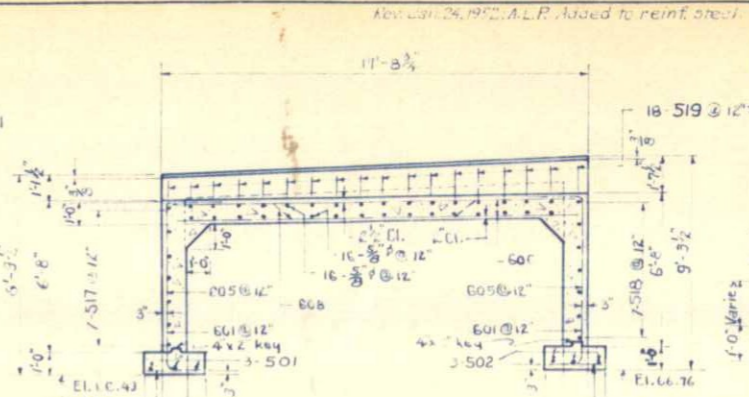
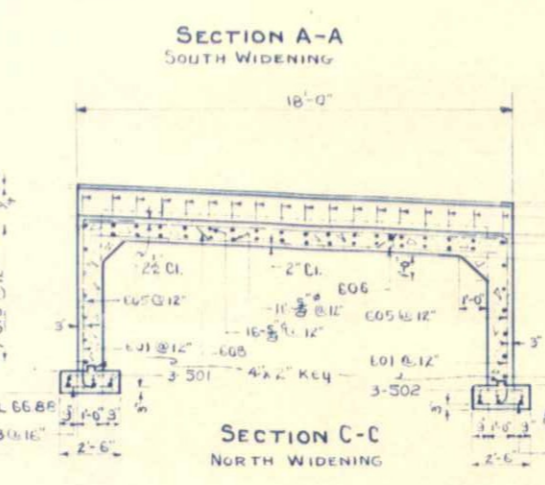
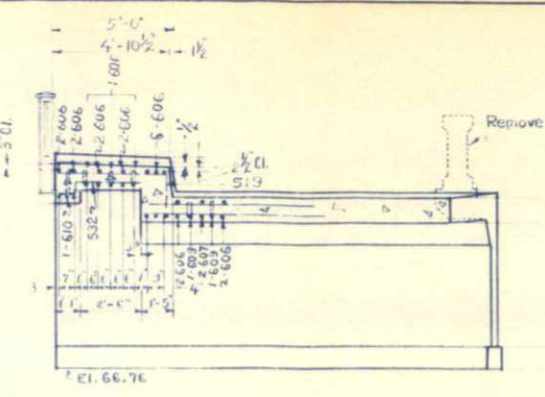
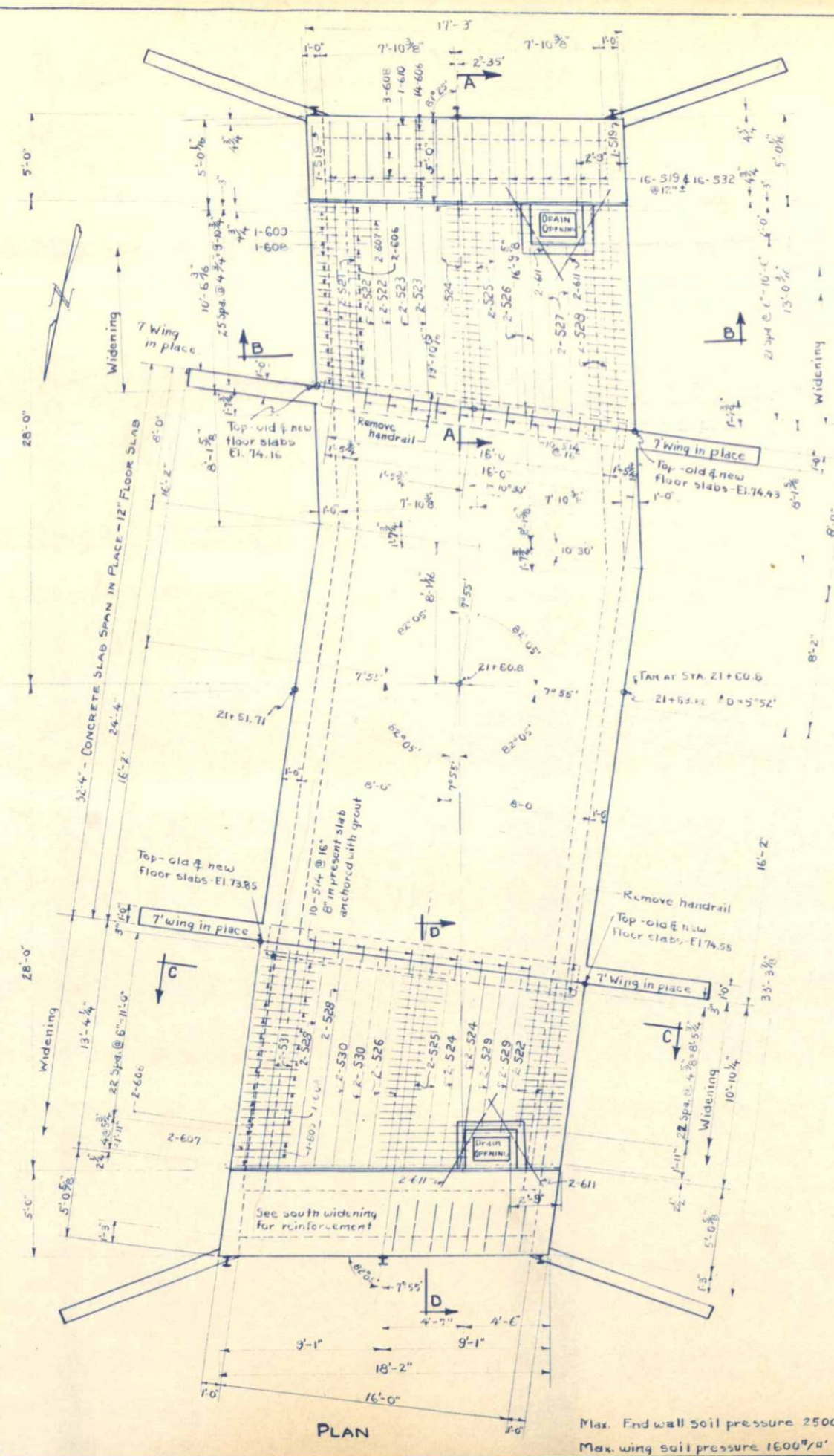
For preliminary plan quantities of Asphaltic Road Materials, the following rates of application were used:

PRIME COAT M-C (Roadway) @ 0.40 Gals./Sq. Yd.
PRIME COAT M-C (Bridge) @ 0.10 Gals./Sq. Yd.
PAVING ASPHALT (For Plant Mixed Oil Mat.)

Rate of application, grade of oil and penetration of asphalt shall be as determined by the Engineer at time of application.

REVISIONS
New Jan. 24, 1951, A.L.R. Added to reinf. steel.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	WELD CO. 3% "1"	3	



SUMMARY OF QUANTITIES			
ITEM	DESCRIPTION	UNIT	TOTALS
11a	Removal of portions of present Structures	Lump Sum	Lump Sum
14	Structural Excavation	Cu. Yd.	150
16a	Structure Backfill (Class I)	Cu. Yd.	120
16d	Mechanical Tamping	Hour	12
46a	Class "A" Concrete	Cu. Yd.	63
47x	Transporting, Altering & Placing Reinforcing Steel	Lb.	3170
48	Structural Steel (Handrails, includes 1/2" for wecrun)	Lb.	1530
132g	Inlet Grating and frame (Bridge Drain)	Each	2
*	1/2" Expansion Joint Material	Sq. Ft.	30

* To be included in bid price of Class "A" Concrete.
 ⊙ Reinforcing Steel available at Highway Store No. 4 located at 905 Erie Ave., Pueblo.
 ● Estimated to be 90% Common and 10% Rock, each of which is estimated to be 90% Dry and 10% Wet.

GENERAL NOTES
 ALL REINFORCING STEEL BARS SHALL CONFORM TO A. S. T. M. SPECIFICATIONS A 305-507 OR THE LATEST REVISION THEREOF.
 ALL CONCRETE SURFACES EXPOSED TO VIEW SHALL RECEIVE CLASS "1" SURFACE FINISH; EXCEPT UNDERSIDE OF FLOOR SLABS AND END WALLS DIRECTLY UNDER DECK.
 PAINT - ALL STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT ZINC CHROMATE AND TWO FIELD COATS OF ALUMINUM PAINT.
 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 ENTRAINMENT AS SPECIFIED.
 FORMS FOR CONCRETE SURFACES EXPOSED IN THE FINISHED WORK SHALL BE CONSTRUCTED OF SHIP LAP OR TONGUE AND GROOVE LUMBER 3/4" UNLESS FACTO WITH PANEL BOARD.
 CONCRETE END WALLS, FLOOR SLABS, AND CURB SHALL BE POURED MONOLITHICALLY. FOOTINGS IN ROCK SHALL BE POURED OUT TO THE ROCK AND NOT FORMED.
 ALL REINFORCING BARS SHALL BE INTERMEDIATE GRADE.
 ALL REINFORCING BARS SHALL BE DEFORMED AND TAGGED WITH THE STATION NUMBER AND NUMBER 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 ENGINEER WILL INSPECT AND DETERMINE IF REDESIGN IS NECESSARY.

REFERENCE DRAWINGS
 Sheet # Elevations - Wings - Bar lists (Inlet Grating and Frame)
LOADING DATA
 LIVE LOAD A 5 H U H 20-44 (Widening)
 DEAD LOAD ASSUMES 15 LBS PER SQ. FT. ADDITIONAL WEARING SURFACE WHICH INCLUDES THE 1/2" HIGH CONCRETE MONOLITHIC WEARING SURFACE SHOWN.
DESIGNING DATA
 A.A.S.H.O. 1945 UNIT STRESSSES
 1000 lbs. per sq. in. (Reinforcing)
 2000 lbs. per sq. in. (Concrete)
 10

COLORADO STATE HIGHWAY DEPARTMENT
 CONCRETE SLAB BRIDGE 16' CLEAR SPAN
 CONCRETE RIGID FRAME WIDENINGS
 56' ROADWAY - 5' SIDEWALKS
 PLAN, SECTIONS, SUMMARY OF QUANTITIES
 DETAIL OF HANDRAIL
 ACROSS UNION TULLOCH CANAL NO. 3
 Sta. 21+51.71 to 21+69.88
 In Creek - 16th St. (S.H. NO. 16)
 Designed by M.G.L. Approved by P.D. Bentley
 Made by Bridge Engineer
 Checked by Date: July 30, 1951.

Max. End wall soil pressure 2500#/sq. ft.
 Max. wing soil pressure 1600#/sq. ft.

STRUCTURE No. C-18-d

NOTE:
 All telephone poles and power poles encroaching upon construction areas are to be moved by their owners at no expense to the Project.
 The Gas Co. shall be contacted prior to bridge widening construction in order that they may make necessary alterations of their gas line crossing from Rt to Lt. under the present structure.
 The grade of the Plant Mixed Oil Processed Surfacing shall be a smooth transition flush with the top of the existing concrete gutter and the top of the existing concrete gutter.

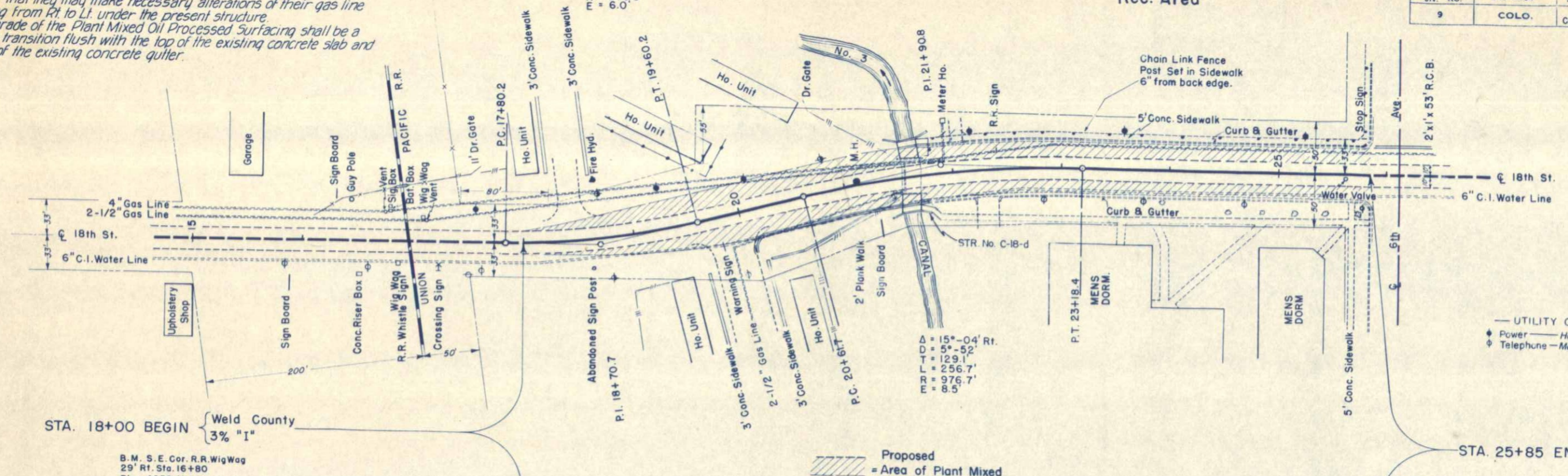
Rev. 12-17-51 - Utility Ownerships - J.C.R.

**C.S.C.E.
 Rec. Area**

FED. ROAD DIV. NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	WELD CO 3% I	7	

$\Delta = 15^{\circ} - 09' \text{ Lt.}$
 $D = 8^{\circ} - 26'$
 $T = 90.5'$
 $L = 180.0'$
 $M = 679.5'$
 $E = 6.0'$

$\Delta = 15^{\circ} - 04' \text{ Rt.}$
 $D = 5^{\circ} - 52'$
 $T = 129.1'$
 $L = 256.7'$
 $M = 976.7'$
 $E = 8.5'$



UTILITY OWNERSHIPS
 ♦ Power — Home Light & Power Co.
 ◊ Telephone — Mountain States Tel. & Teleg. Co.

STA. 18+00 BEGIN { Weld County 3% "I"

B.M. S.E. Cor. R.R. WigWag
 29' Rt. Sta. 16+80
 Elev. 4659.11

STA. 25+85 END { Weld County 3% "I"

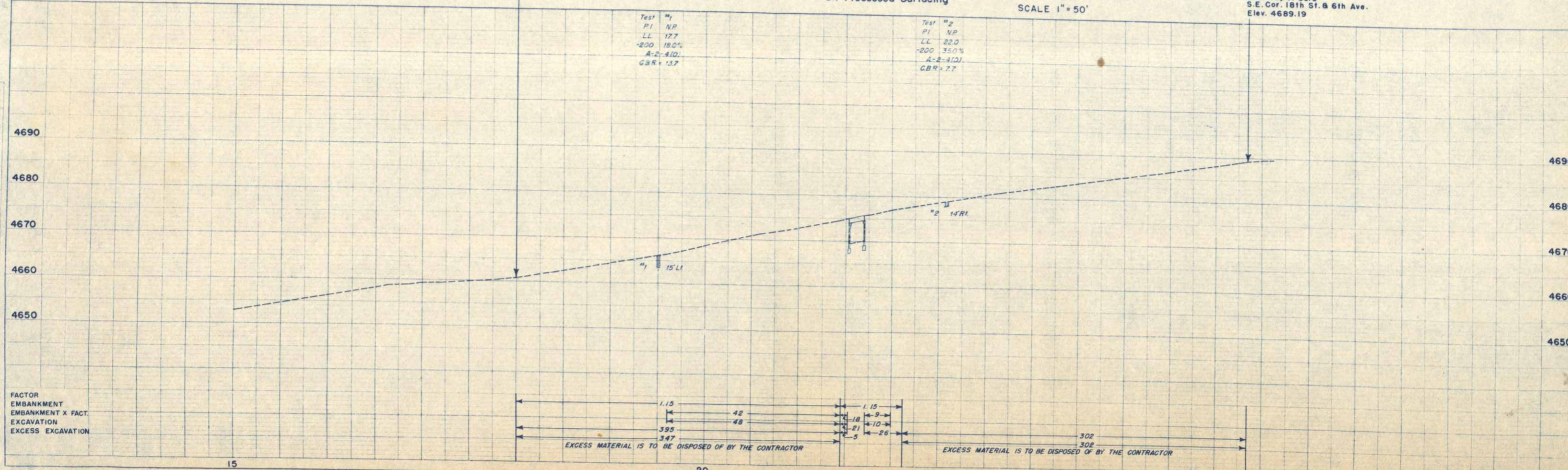
B.M. Top of Curb
 S.E. Cor. 18th St. & 6th Ave.
 Elev. 4689.19

Proposed Area of Plant Mixed Oil Processed Surfacing

SCALE 1" = 50'

Test #1
 P.I. N.P.
 L.L. 17.7
 -200 18.0%
 A-2-4(1)
 G.B.R. 13.7

Test #2
 P.I. N.P.
 L.L. 22.0
 -200 35.0%
 A-2-4(2)
 G.B.R. 7.7



H. J. Winter
 N. V. Francis

H. J. Winter
 N. V. Francis