FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	365-H(I)	1	

365.0801

Rev. 3-22-45 T.L.K.
Rev. 4-13-45 T.L.K.
Rev. 4-19-45 - Index - T.L.K.

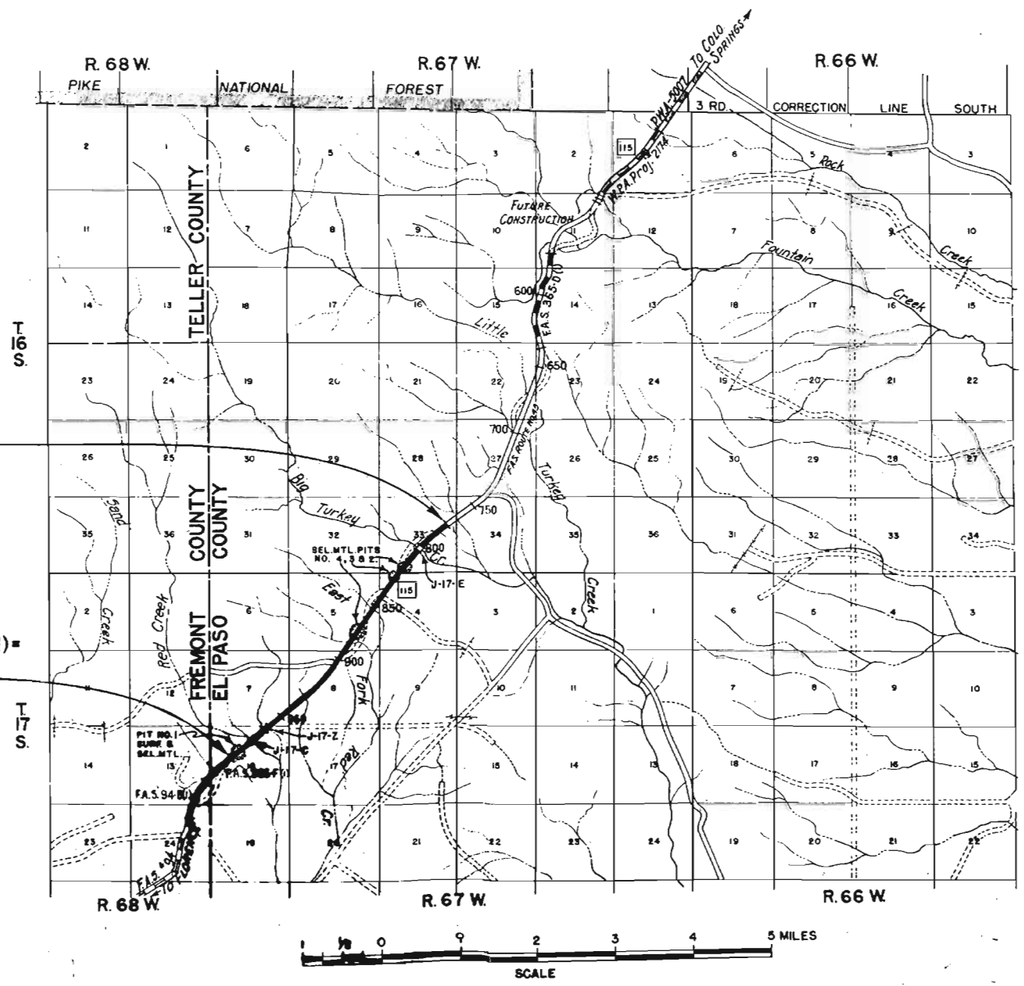
COLORADO
STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED
FEDERAL AID SECONDARY PROJECT NO. 365-H(I)
STATE HIGHWAY NO. 115
EL PASO COUNTY

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
NET LENGTH OF PROJECT } 21,900.0 FEET = 4.147 MILES

T&P&D.

INDEX OF SHEETS



STA. 775+00,
BEGINNING OF F.A.S. 365-H(I)

STA. 994+00, END OF F.A.S. 365-H(I)=
STA. 477+35.3 END OF F.A.S. 365-F(I)

CONVENTIONAL SIGNS

CENTER LINE OF SURVEY
RIGHT OF WAY LINES
TOWNSHIP OR RANGE LINE
SECTION LINE
ONE-QUARTER SECTION LINE
BARBED WIRE FENCE
TELEPHONE LINE
PRESENT ROAD

NOTE

It is recommended that bidders on this project go over the plan details with one of the following field representatives of this department.
Ernest Montgomery, Division Engineer, located at Colo. Springs.
Glen McEldowney, Resident Engineer, located at Colo. Springs.

RECOMMENDED FOR APPROVAL
ASSISTANT ENGINEER DATE

APPROVED
STATE HIGHWAY ENGINEER DATE 4-9-45

RECOMMENDED FOR APPROVAL
DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

RECOMMENDED FOR APPROVAL
CHIEF, WESTERN REGION
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	365-H(1)	2	

Rev. General Notes - 3-22-45 T.L.K.
Rev. - 4-13-45 T.L.K. Sel. Mat. Pits

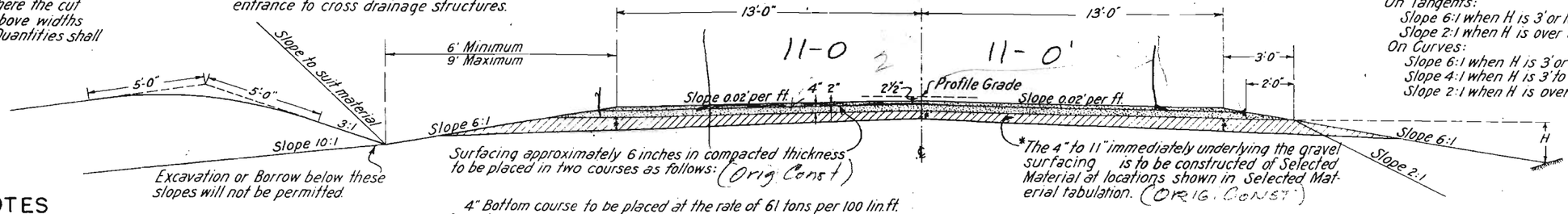
TYPICAL CROSS SECTION OF IMPROVEMENT

CUT SLOPE TREATMENT IN EARTH CUTS

The intersection of cut slopes with the existing ground shall be rounded in earth cuts, beginning 5 feet outside the slope stake and extending 5 feet down the cut slope. Where the cut slope is less than 5 feet, reduce each of the above widths of slope treatment to the actual slope distance. Quantities shall be included in "Unclassified Excavation."

TYPICAL SECTION

NOTE: The depth and width of the side ditch shall be varied where necessary in order that sufficient depth may be acquired to provide entrance to cross drainage structures.



Excavation or Borrow below these slopes will not be permitted.

Surfacing approximately 6 inches in compacted thickness to be placed in two courses as follows: (Orig. Const.)

4" Bottom course to be placed at the rate of 61 tons per 100 lin. ft. of roadway.

2" Top course to be placed at the rate of 28 tons per 100 lin. ft. of roadway.

*The 4" to 11" immediately underlying the gravel surfacing is to be constructed of Selected Material at locations shown in Selected Material tabulation. (ORIG. CONST.)

FILL SLOPES
On Tangents:
Slope 6:1 when H is 3' or less
Slope 2:1 when H is over 3'
On Curves:
Slope 6:1 when H is 3' or less
Slope 4:1 when H is 3' to 10'
Slope 2:1 when H is over 10'

GENERAL NOTES

This Project is to be constructed in conformity with the Standard Specifications of the Colorado State Highway Department adopted June 1, 1940.

All quantities on preliminary plans are to be considered approximate only.

All roadway excavation required to construct the project is to be obtained as indicated on the plans. Quantities involved beyond the limits of the ditch as shown on the Typical Section, either noted on the profile as "Borrow" or on the "List of Structures" as "Excavation" and "Embankment" are to be classified and paid for as "Unclassified Excavation."

These quantities are to be staked as part of the original excavation at locations indicated on the plans. 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.

Except as otherwise noted on the plans, payment for overhaul will be based on measurement along the center line of the Project.

All curves are to be superelevated and widened as provided for by the Standard Superelevation Sheet included with the plans.

All side approach roads to the Project shall be gravel surfaced with a 4-inch thickness of Top Course "Gravel or Crushed Rock Surfacing" extending approximately to the Right of Way line. Estimated tonnage of surfacing material required in this operation is shown in the "List of Structures."

The alignment, grade lines and drainage structures shown on plans are subject to adjustment by the Engineer in the field to meet construction requirements, after approval by the Denver Office of the Department.

All poles encroaching on construction are to be moved by the owners.

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.

The ends of all cuts shall be flared and backslopes flattened to discharge side ditch drainage away from the base of adjacent fill slopes. The transition of flattened backslopes and ditch shall be constructed in such manner that a uniform appearance of slope and ditch results, and so as to promote the growth of native groundcover.

The entire Project shall be cleared and grubbed in conformity with the requirements of the Standard Specifications, except that such trees or shrubs as the Engineer may designate, shall be left in place and protected from damage during construction operations.

The ends of Culverts on this project which are not provided with headwalls shall be covered with approximately 6 inches of Embankment material in such a manner that a minimum of metal shall be exposed in the completed work. This shall be accomplished by warping embankment slopes around and adjacent to the culvert.

All Concrete Pipe Culverts shall be provided with a standard concrete headwall at each end.

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 a manner that traffic may readily pass over the road. The Contractor shall also at his own expense construct and maintain in safe condition, all temporary approaches to and crossings of intersecting highways.

Intercepting Ditches shall be placed on all grades (not over 1%) following the ground contour, and where possible shall be so constructed that the direction of the flow will be away from the roadway, in order to spread runoff and thereby avoid erosion. This work shall be done in accordance with the methods shown on Standard Sheet No. M-107-B included in the plans. These ditches shall be constructed at locations staked by the Engineer.

SURFACING PLAN

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

No alteration of the Surfacing Plan as here outlined will be allowed without written permission from the Department.

PLACE REQUIRED STA. TO STA.	SOURCE	QUANTITY TONS AVAILABLE	QUANTITY TONS REQUIRED 2" TOP	QUANTITY TONS REQUIRED 4" BOTT.	OVERHAUL TON MILES
775+00 - 800+05	Pit No. 1		702	1528	6282
800+05 - 800+67.7 (Bridge)					
800+67.7 - 936+20	Roadway excavation and widening cuts on R.O.W. Sta. 983+ to 994		3795	8267	15480
936+20 - 961+40			706	1538	Free haul
961+40 - 961+63 (C.B.C.)					
961+63 - 974+50			361	785	
974+50 - 974+92.7 (Bridge)					
974+92.7 - 989+00			394	859	
989+00 - 994+00			140	305	
Approaches			490		488
Detour				350	267
Totals			6,588	13,632	22,517

WIDENING AT BRIDGE APPROACHES

Roadway Embankment at Bridge Approaches shall be so constructed that the finish point of the gravel shoulder is a minimum of 3 ft. outside the curb line of the Bridge. Where widening of the section is necessary to achieve this result, it shall take place gradually over a distance of 300 feet. This is done to accommodate guard fence or guard posts at Bridge Approaches.

TABULATION OF SUBGRADE EXCAVATION & SELECTED MATERIAL

At the locations shown below, the 4" to 11" immediately underlying the Surfacing, is to be excavated and backfilled with Selected Material. Approximate quantities involved in this operation, together with disposition of excavated Material and sources of Selected Material, are shown in the following tabulation.

STA. TO STA.	SUBGRADE EXCAV. FOR SELECT CU. YDS.	DISPOSITION	THICKNESS OF SELECTED MATERIAL * INCHES CENTER	THICKNESS OF SELECTED MATERIAL * INCHES SHOULDER POINT	SELECTED MATERIAL REQUIRED TONS	SOURCE	OVERHAUL TON MILES
775+00 - 800+05	(Br.)	All subgrade excavation to be used in roadway embankment.	4"	8"	2716	Pit No. 2 Roadway excavation Sta. 815+ to 820+	Free haul
800+05 - 800+67.7							
800+67.7 - 811+00			4"	8"	1105		
811+00 - 818+00			No Sel. Mat'l. Req'd				
818+00 - 827+59			4"	8"	928		
827+59 - 831+75			4"	8"	557		
831+75 - 858+50			7"	11"	4494	Pit No. 4 Roadway excavation Sta. 871+ to 875+	
858+50 - 877+00			No. Sel. Mat'l Req'd				
877+00 - 881+58			4"	8"	495		
881+58 - 926+80			4"	8"	4884	Pit No. 4 Rdwy excav. Sta. 871+ to 875+	375
926+80 - 945+95			4"	8"	2068		
945+95 - 961+40			4"	8"	1668		
961+40 - 961+63	(C.B.C.)		4"	8"	25	Pit No. 1 Roadway excavation and widening cuts on R.O.W. Sta. 983+ to 994	Free haul
961+63 - 974+50			4"	8"	1390		
974+50 - 974+92.7	(Br.)						
974+92.7 - 980+00			4"	8"	549		
980+00 - 994+00			No Sel. Mat'l Req'd.				
Totals					20,879		$ 375

$ Included for payment in "Overhaul of Surfacing."

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	365-H(1)	4	

Rev. for C.B.C's & Conc. Pipe Culv. 3-22-45 T.L.I

TABULATION OF STRUCTURES

STATION	DESCRIPTION	REMOVE STRUCT. NO.	UNCLASSIFIED EXCAVATION CU.YDS. EXCAV.	UNCLASSIFIED EXCAVATION CU.YDS. EMB.	UNCLASSIFIED DITCH EXCAVATION CU.YDS.	STRUCTURAL EXCAVATION CU.YDS. ☆	SELECTED BACK-FILL CU.YDS	GRAVEL SURF. TONS	CONCRETE CU.YDS. CL."A"	CONCRETE CU.YDS. CL."B"	REINF. STEEL LBS.	RELAYING PIPE LIN.FT.	CONCRETE CULVERT PIPE LIN. FT. 18"	24"	36"	72"	GROUTED RUBBLE SLOPE PAVING (12" THICK) SQ.YDS.	MISCELLANEOUS
775+00	Project Marker & Approach to Project			50		5		50				12	ø					Project Marker
780+25	Relay 18"X12' C.M.P. Sd. Drain, Lt., & extend with 18"X24' C.M.P. from Sta. 865+85											24						
	Road Appr. Lt. Remove 2-3' Oil Drums, Lt.	1		100				20										
793+75	Road Appr., Rt. Relay as Side Drain, Rt. 36"X34' C.M.P. from Sta. 809+70, Rt.			100		5		20				34						
	Road Approaches, Rt. & Lt., & Relay as Side Drain Rt., 24"X36' C.M.P. from Sta. 985+32.			200		5		40				36						
	Cattle Guard (16' Roadway) Rt.																	Cattle Guard (16' Roadway)
781+00 to 988+50	Channel Change, Erosion Checks, Contour Intercepting Ditches, & Dr. Ditches (Details on	Sh. 6 & 7)			3810	120												(815 Sq. yds. Dry Rubble Sl. Pav.
800+05	Remove Pen, Rt.	1																5.1 M.ft. b.m. Misc. Tr. Timber
800+05 to 800+67.7	Concrete & I Beam Bridge (1 Span @ 59'-2") Details on Sheets 8-10) Channel Improvement.					(QUANTITIES IN SUMMARY)												
	Embankment for Detour			300				100										
	Remove Detour		300															
802+00	Relay as Side Dr., Rt. 72"x 30' C.M.P. from Sta.					5						30						
806+70	868+50. Road Appr., Rt. & Slope Pav. at Inlet			200				20									5	
	Remove 15"X16' C.M.P. & 15"X19' Tile Pipe Rt.	1																
807+50	24"X42' Conc. Cross Culv. & Ditch Changes				20	30	25			3.8				42				
	Rt. & Lt. 24"X30' Conc. Pipe across channel, Rt.					20	15			3.8				30				
807+75	Road Approaches, Rt. & Lt. Relay as Sd. Drain,							50				30					5	
	Rt., 60"X30' C.M.P. from Sta. 850+38. Slope			100		5												
	Paving at Inlet.																	
809+70	Relay 36"X34' C.M.P. at Sta. 780+25																	
819+31	Relay 24"X32' C.M.P. at Sta. 976+00																	
820+25	Conc. Cross Culv., Inlet & Outlet, Sl. Pav. at Inlet				20	45	40			3.8				48			20	
825+20	Conc. Cross Culv. & Ditch Dikes Rt. & Lt.			10		20	30			3.8				40				
828+40	Road Approach, Lt.		100					20										
842+00	Relay as Side Drain, Lt., 18"X26' C.M.P. from					5						26						
	Sta. 899+50. Walk Approaches, Lt. & Rt.			50				10										
843+50	Conc. Pipe Cross Culv. Inlet & Outlet				15	20	30							48				
848+ to 852+	Channel Change, Lt.				800													
850+38	Remove 160' Rubble Wall & 84' Guard Rail, Rt.	(Lump Sum in Summary)																Remove 160' Rubble Wall &
	Relay 60"X30' C.M.P. at Sta. 807+75.																	84' Guard Rail.
851+25	5'X7'X80' C.B.C., Inlet & Outlet & Channel Change				100	255	225		112.3		9660							
865+00	Conc. Pipe Cross Culvert, Inlet & Outlet.				5	10	30			3.8				68				
865+85	Relay 18"X24' C.M.P. at Sta. 780+25																	
868+50	5'X7'X52' C.B.C., Inlet & Outlet				5	60	75		85.5		7420							
	Relay 72"X30' C.M.P. at Sta. 802+00																	
870+50	Road Approach, Rt. Remove & Rebuild		50					20										Remove & Rebuild
	Cattle Guard, Rt.																	Cattle Guard.
881+25	5'X7'X64' C.B.C. Inlet & Outlet.				15	75	90		97.0		8380							
883+46	Relay 72"X40' C.M.P., Lt., at Sta. 974+																	
885+50	Relay as Side Drain, Lt., 15"X30' C.M.P. from					5						30						
889+00	Sta. 932+00. Road Approaches Rt. & Lt.			25		5		40										
	Relay as Side Drain, Lt., 24"X36' C.M.P.																	
	from Sta. 981+90. Road Approach, Lt.			75				20				36						
896+25	Slope Paving 115' Rt.																10	
896+40	Relay 24"X26' C.M.P. at Sta. 964+00																	
899+50	Conc. Pipe Cross Culvert & Ditches				10	50	50			7.9					54			
	Relay 18"X26' C.M.P. at Sta. 842+00																	
900+00	Road Approach & Slope Paving, Rt.			300				155									100	
904+50	Conc. Pipe Cross Culvert, Inlet & Outlet.				5	10	25			3.8				66				
	Relay 15"X34' C.M.P. at sta. 954+00																	
907+00	Road Approaches, Rt. & Lt.		150					40										
918+20 to 921+80	Channel Change, Rt.				700													
921+00	Road Approach Rt. & Relay as Side Drain in			100				50										
	Channel Change Rt., 72"X40' C.M.P. from Sta. 925+40					20						40						
925+40	5'X7'X76' C.B.C. & Channel Change				100	210	180		108.5		9340							
	Relay 72"X40' C.M.P. at Sta. 921+00																	
932+00	Conc. Pipe Cross Culvert, Inlet & Outlet				5	45	20			3.8				52				
	Relay 15"X30' C.M.P. at Sta. 885+50																	
936+00	Road Approaches, Rt. & Lt.		150					40										

RIGHT OF WAY MARKERS

STATION	NO. SIDE LEFT	RIGHT
775+00	1	
784+17	1	
802+97	1	
822+76	1	
830+00	1	
841+28.8	1	
848+37	1	
848+68	1	
857+85	1	
861+00	1	
863+00	1	
888+40	1	
902+46	1	
919+50	1	
941+70	1	
960+00	1	
977+27	1	

STATION	NO. SIDE LEFT	RIGHT
775+00		1
785+87		1
801+83		1
804+00		1
809+00		1
817+31.3		1
823+80		1
832+00		1
834+00		1
845+68		1
858+70		1
861+00		1
863+00		1
889+13		1
900+37		1
906+33.6		1
915+00		1
918+00		1
921+77		1
926+21.9		1
940+68		1
976+29		1
TOTAL		39

(CONTINUED ON SHEET NO.5)

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	365-H(1)	27	

Rev. for soil data note 3-22-45 - T.L.K.

NOTE:

The alignment, grade lines and drainage structures shown on plans are subject to adjustment by the Engineer in the field to meet construction requirements, after approval by the Denver Office of the Department.

Fencing is tabulated on sheet No. 3

Right of Way Markers are tabulated on sheet No. 4

Timber Guard Posts are tabulated on sheet No. 5

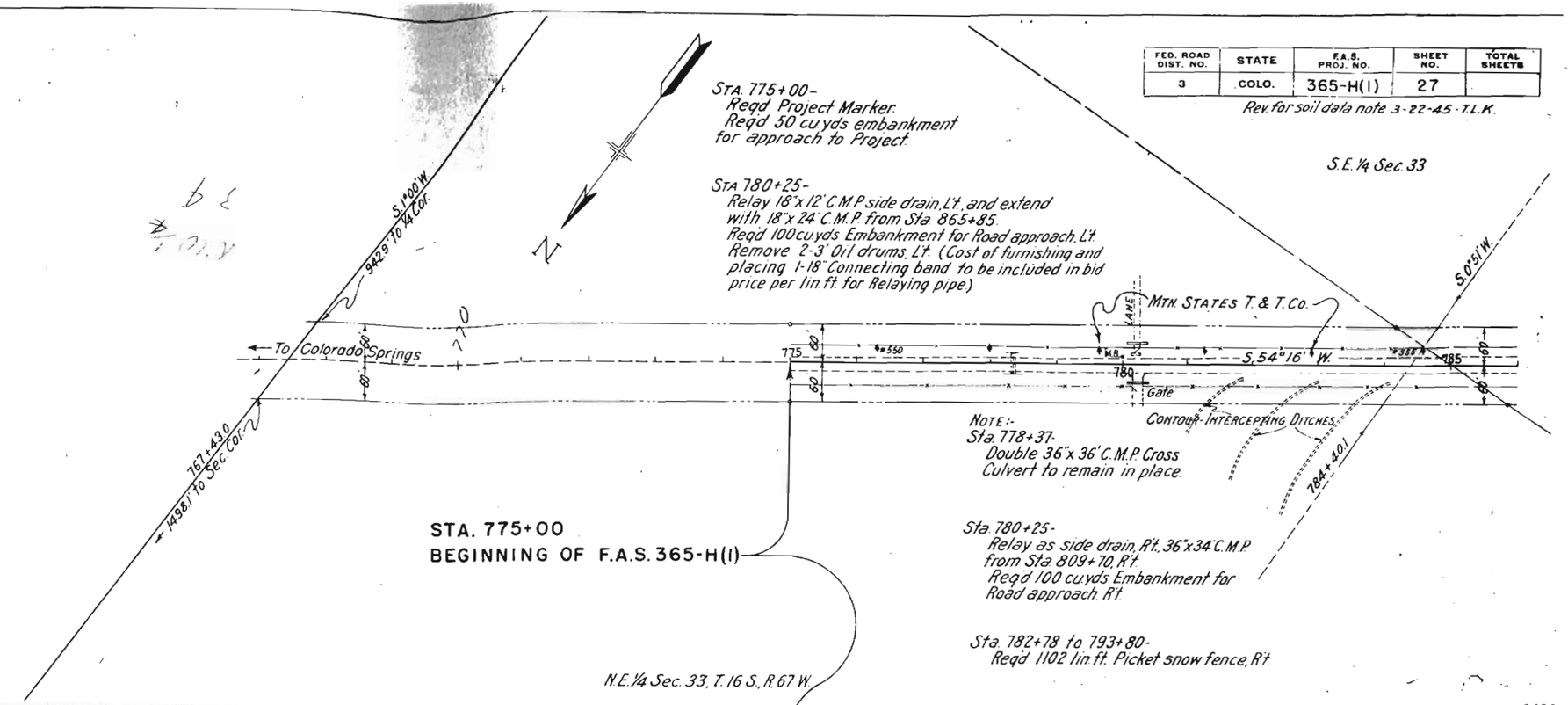
Wire Cable Guard fence is tabulated on sheet No. 5.

Picket Snow Fence is tabulated on Sheet No. 3.

The req'd contour-intercepting ditches, ditch paving and drainage ditches are tabulated on sheet No. 7.

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 plans are encountered during construction, necessary modifications of the grading plan shown on the plans will be made to secure dense, stable embankments.

Mail Boxes to be removed and reset are tabulated on Sheet No. 3



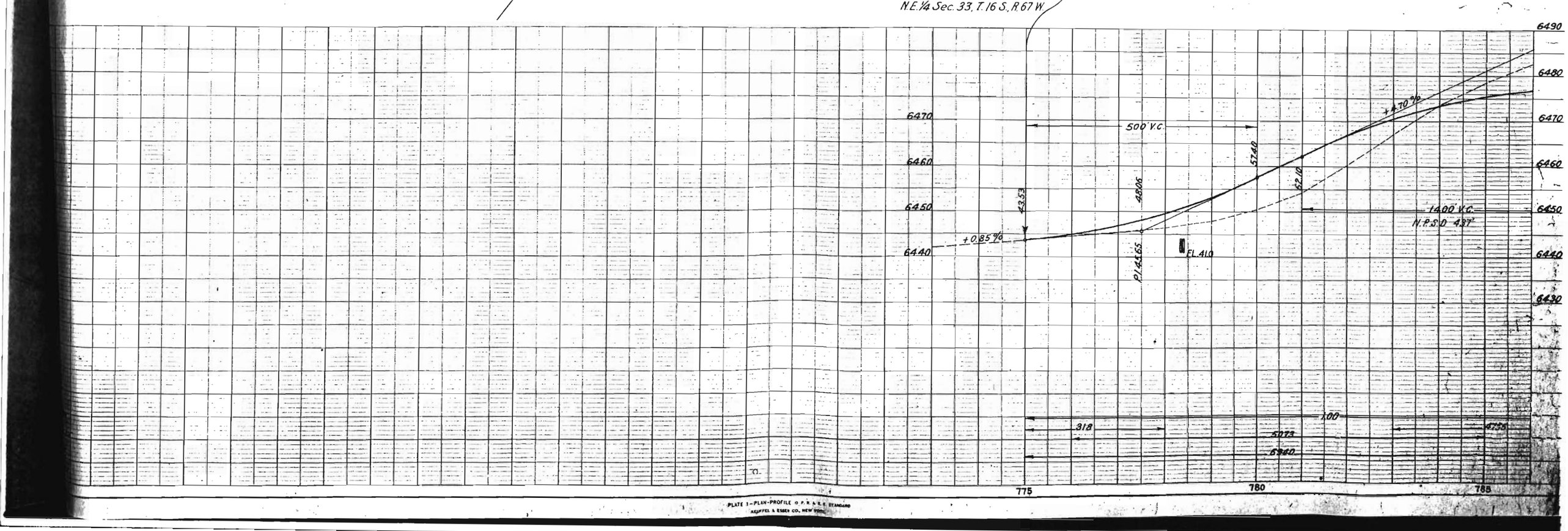


PLATE 1—PLAN-PROFILE O. P. R. & B. STANDARD
KELLOGG & ESSER CO., NEW YORK

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	365-H(1)	28	

Rev. for Conc. Pipe Culv. 3-22-45 - T.L.K.

NOTE:
Sta. 788+25, L't.
U.S.G.S. Bench Mark to be removed and reset by the State Highway Dep't Engineering Forces.

NOTE:
Sta. 794+10-
Contractor shall protect 12" tile pipe line under Highway.

S.E.¼ Sec. 33, T. 16 S., R. 67 W.

Sta. 800+05 to 800+67.7-
Reqd Concrete & I-beam Bridge (1-Span @ 59'-2")
as per details on Sheets No. 8-10, & 300 cu yds Uncl. Excav. for Channel improvement.
Reqd 300 cu yds. Embank. for Detour and 100 Tons Gravel Surfacing for Detour.
Remove 300 cu yds Uncl. Excav. after Detour is abandoned.

S.W.¼ Sec. 33

Δ 9°09' L.
D. 1°00'
T. 458.5'
L. 915.0'
R. 5730'

P.C. 787+46.5

P.T. 796+61.5

S. 54°16' W.

Gate

"V 110 U.S.G.S. 1935"

El. top of Pipe 47.63

PIPE LINE

DRAINAGE DITCH

DRAINAGE DITCH

CULTIVATED FIELD

#560

12" TILE

El. top of Pipe 51.46

TRAP

MTN. STATES T. & T. CO.

Gate

#565

SHED

PRESENT ROAD

TRAP

P.I. 792+05.0

Sta. 793+75-
Relay as side drain, Rt., 24"x36' C.M.P. from 985+32.
Reqd Cattle guard (16' Roadway) Rt., and 200 cu yds Embankment for Road approaches, L't. & Rt.

Sta. 800+05-
Remove pen, R't.

PEN

Turkey Creek

Big

SHED

BARN

SHED

POLE FENCE

CONCRETE SLAB & 24"x40' C.M.P.

Sta. 802+00-
Relay 72"x30' C.M.P. from Sta. 868+50 as side drain, R't.
Reqd 200 cu yds Embankment for Road approach, R't.
Reqd 5 sq yds Grouted rubble slope paving, (12" thick) at Inlet of side drain.

Sta. 807+50-
Reqd 24"x42' Conc. Pipe Cross Culvert and 20 cu yds Uncl. ditch Excav. for ditch changes, R't. & L't.
Reqd 24"x30' Conc. Pipe across Channel, R't.

Sta. 807+75-
Reqd 100 cu yds Embankment for Road approaches, Rt. & L't.
Relay as side drain, R't., 60"x30' C.M.P. from Sta. 850+38.
Reqd 5 sq yds Grouted Rubble Slope Paving (12" thick) at inlet of side drain.

CONTOUR - INTERCEPTING DITCHES

S. 45°07' W.

CHANNEL CHANGE

#570

#575

36"x34' C.M.P.

15"x16' C.M.P. & 15"x19' TILE PIPE

Gate

PRESENT ROAD

Sta. 806+70 - Remove 15"x16' C.M.P. & 15"x19' Tile pipe, R't. (To be classified and paid for as one removal)

Sta. 800+ to 809+
Reqd Channel Change and Erosion checks, Rt.
(Details on Sheets No. 6 & 7)

Sta. 809+70-
Relay 36"x34' C.M.P. at Sta. 780+25.

required contour-intercepting ches, ditch paving and drainage ches are tabulated on sheet No. 7.

N.E.¼ Sec. 33

P.I. 95.00

+4.10%

7628

14.00 V.C.

N.P.S.D. 457'

Approx. F.L. 47.9

53.00

-6.00%

960 V.C.

35.60

P.I. 780, 24.20

4.00

+.60

+3.50%

F.L. 43.3

400 V.C.

56.60

63.15

63.40

P.I. 53.40

+3.00%

P.I. 72.40

+2.90%

20,262

1.00

17,202

36,789

1.00

3112

62

112

518

1.97

888

4.62

28,143

27

790

795

800

805

810

815

6490

6480

6470

6460

6450

6440

6430

6420

6410

BRIDGE DATA

STRUCTURE NO. J-17-E
STREAM- Big Turkey Creek
SKEW ANGLE- 90°

STATION 800+05 TO 800+67.7
COUNTY- El Paso
POSITION REFER PRESENT STRUCT- 240' Downstream

PRESENT STRUCTURE	PROPOSED STRUCTURE
SPAN- Conc. Fond & 24'x40' C.M.P.	1 @ 59'-2"
CLEAR ROADWAY-	30'-0"
CLEAR WATERWAY-	50.8°
TYPE OF SUPERSTRUCT.-	Steel I beam & Conc.
TYPE OF SUBSTRUCT.-	Concrete
REQUIREMENTS FOR REMOVAL- No	DETOUR STRUCT. REQD- Use Present Ford
R.R. SIDING- Colorado Springs	HAUL TO BRIDGE SITE- 16 Miles

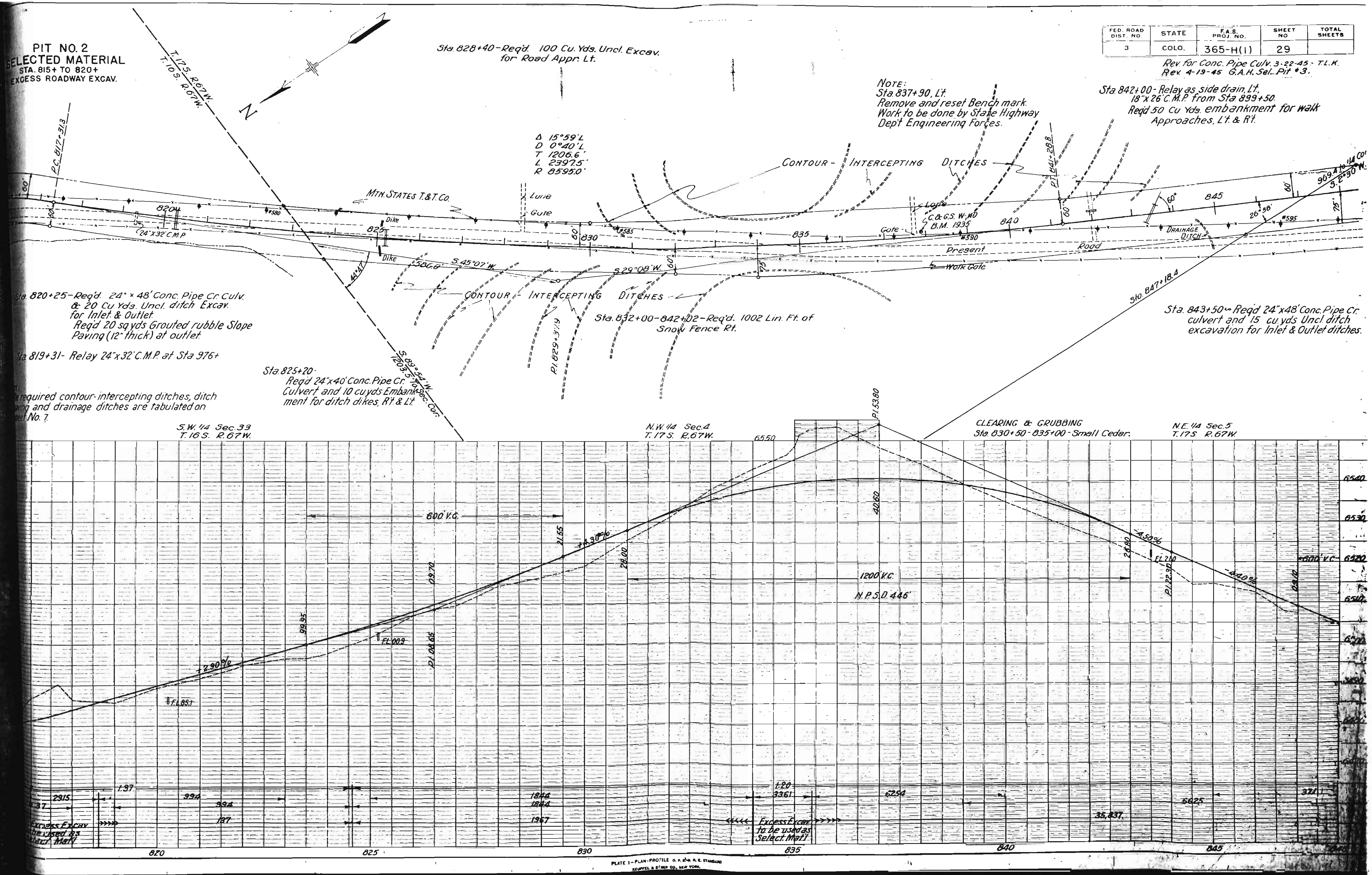
STREAM DATA
DRAINAGE AREA IN SQ. MI. - 16.6 Sq. Mi.

NEARBY STRUCTURES ON SAME STREAM
LOCATION-
WATERWAY-

ELEVATIONS
MAXIMUM HIGH WATER- 6425.5± LOW WATER- 6422.0
NORMAL STAGE- Dry in Summer STREAM BED- 6422.0
DRIFT- Light SCOUR- None

PLATE I - PLAN-PROFILE O. P. R. & B. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	365-H(1)	29	



PIT NO. 4
SELECTED MATERIAL
STA. 871+ TO 875+
EXCESS ROADWAY EXCAV.

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	365-H(1)	30	

Rev. for C.B.C's. & Conc. Pipe Culv. 3-22-45 - T.L.K.

N.W. 1/4 Sec. 4
T. 17 S. R. 67 W.

1/4 Cor. 2

909.4' To 1/4 Cor.
S. 2°30' W.

Sta. 848+ to 852+
Req'd 800 cu yds Unclassified ditch excavation for Channel change, Lt.

Sta. 865+85-
Relay 18"x24' C.M.P. at Sta. 780+25.

Mtn. States T. & T. Co.

Present Road

Gate
Cattle Guard Wood

72"x30' C.M.P.

18"x24' C.M.P.

5' Walk Gate

DITCHES

DRAINAGE

26°30'

S. 29°08' W.

Sta. 847+18.4

60"x30' C.M.P.

Sta 850+38-
Remove 160' Rubble wall, and 84' guard rail, Rt.
Relay 60"x30' C.M.P. at Sta. 807+75.

Sta 851+25- Req'd. 5'x7'x80' C.B.C. & 100 Cu. Yds. Uncl. ditch Excav. for Inlet and Outlet and channel thru present road.

Sta. 853+98-862+00- Req'd 802 Lin. Ft. of Snow Fence Rt.

Sta. 865+00- Req'd. 24"x68' Conc. Pipe Cr. Culv. & 5 Cu Yds. Uncl. ditch Excav. for outlet and inlet.

Sta. 868+50- Req'd.- 5'x7'x52' C.B.C. and 5 cu yds Uncl. ditch Excav. for Inlet and Outlet. Relay 72"x30' C.M.P. at Sta 802+00.

Sta. 870+50- Req'd.
50 Cu Yds. Uncl. Excav. for Road Appr. Rt. Remove & Rebuild Cattle Gd. Rt.

Sta. 871+00-876+02- Req'd. 502 Lin. Ft. of Snow Fence Rt.

NOTE:
The required contour-intercepting ditches, ditch paving and drainage ditches are tabulated on sheet No. 7.

N.E. 1/4 Sec. 5
T. 17 S. R. 67 W.

S.E. 1/4 Sec. 5
T. 17 S. R. 67 W.

CLEARING & GRUBBING
Sta. 848+00-854+00- Light Clearing.
Sta. 860+00-870+50- Pinon & Scrub Oak

600' V.C.
500' V.C.
600' V.C.
400' V.C.

+4.40%
+0.60%
-0.60%
-0.40%
-0.785%

PI 95.90
PI 101.30
PI 87.35
PI 81.70

FL 82.1
FL 85.70
FL 70.6

N.P.S. D 477

Excess Excav. to be used as Select Mat'l.

PLATE I - PLAN-PROFILE O.P.R.& B.E. STANDARD
REUFEL & ESSER CO., NEW YORK.

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	365-H(1)	31	

Rev. for C.B.C. & Conc. Pipe Culv. 3-22-45 - T.L.K.

Sta. 883+46 - Relay 72"x40' C.M.P at Sta 974+

Sta 885+50 - Relay as side drain, L't, 15"x30'C.M.P from Sta 932+00.
Reqd 25 cuyds Embankment for Road approaches, L't & R't.

Sta 889+00 - Relay as side drain, L't, 24"x36'C.M.P from Sta 981+90.
Reqd 75 cuyds Embankment for Road approach, L't.

N.E. 1/4 Sec. 8
T. 17 S. R. 67 W.

Sta 888+76

72"x40' C.M.P

Southern Colo. Power Line

MTN. STATES T. & T. CO.

675

670

880 885 890 895 900 905 910

S. 29°08' W.

59°50'

24"x36' C.M.P

18"x26' C.M.P

15"x34' C.M.P

Present Road

Mail Box

U.S.C. & G.S. B.M. A-225-1938

Old Canon City Road

DRAINAGE DITCH

60'

gates

Δ 19°53' R
D 1°
T 1004.3'
L 1988.3'
R 57300'

P.C. 906+33.6

Sta 907+00 - Reqd. 150 Cu. Yds. Uncl. Excav. for Road Approaches, L't & R't.

Sta 881+25 - Reqd. 5'x 7'x 64' C.B.C. and 15 Cu Yds Uncl. ditch Excavation for Inlet and Outlet

Sta 896+25 - Reqd 10 sq yds Grouted Rubble Slope Paving (12" thick). 115' R't.

Sta 896+40 - Relay 24"x 26' C.M.P at Sta 964+00.

Sta 896+35 to 899+50 - Reqd Channel change R't (Excavation quantities and typical Section shown on Sheet No. 7)

Sta 899+50 - Reqd. 36"x 54' Conc. Pipe Cr. Culv. & 10 Cu. Yds. Uncl. ditch Excav. for ditches.

Sta 899+50 - Relay 18"x 26' C.M.P at Sta 842+00.

Sta 900+00 - Reqd 300 cu yds Embank. for Road approach, R't, and 100 sq yds Grouted Rubble Slope Paving (12" thick) on N.W. slope.

N.W. 1/4 Sec. 8
T. 17 S. R. 67 W.

Sta 904+50 - Reqd 24"x66' Conc. Pipe Cr. Culv. & 5 cu yds. Uncl ditch Excav for Inlet & Outlet
Relay 15"x 34' C.M.P at Sta. 954+00.

CLEARING & GRUBBING
Sta. 880+00 - 885+00 - Light Clearing
Sta. 904+50 - 905+50 - " "

NOTE:
The required contour-intercepting ditches, ditch paving and drainage ditches are tabulated on sheet No. 7.

S.E. 1/4 Sec. 5
T. 17 S. R. 67 W.

Sta 888+76 to Intersection
621.8'

-0.785%

F.L. 605

24.24

P.I. 71.10

67.88

55.10

800 V.C.
N.P.S.D. 603

-3.00%

37.10

600 V.C.

28.88

26.61

+0.504%

F.L. 635

P.I. 25.10

F.L. 616.0

28.88

300 V.C.
N.P.S.D. 453'

1.08 2438 | 3042 | 3042 | 2767 | 0.932 | 86 | 3269 | 10,909 | 5 | 1.13 | 41 | 0.93 | 10 | 42.15 | 1.15 | 42.05 | 66.62

6460 6450 6440 6430 6420 6410

880 885 890 895 900 905 910

PLATE 1 - PLAN-PROFILE C. P. R. & R. E. STANDARD
KEUFFEL & ESSER CO., NEW YORK.

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	365-H(1)	32	

Rev. for C.B.C. & Conc. Pipe Culv. 3-22-45 T.L.K.

S.W.¼ Sec. 8
T. 17 S., R. 67 W.

FORCE ACCOUNT
Moving Power Line, Sta. 916+ to 926+
(Work by Southern Colo. Power Co. Forces)

Sta. 937+00 - Req'd. 50 Cu. Yds Uncl Excav. for Road Approach, Lt.

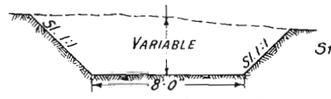
Sta. 907+00 - 915+02 - Req'd. 802 Lin. Ft. of Snow Fence Rt.

Sta 918+20 - 921+80 - Req'd. 700 Cu. Yds. Uncl. ditch Excav. for Channel Change, Rt.

Sta. 925+40 - Req'd. 5'x 7'x 76' C.B.C. & 100 Cu. Yds. Uncl Ditch Excav for Channel change. Relay 72"x40' C.M.P. at Sta. 921+00.

Sta 936+00 - Req'd. 150 Cu. Yds. Uncl. Excav. for Road Approaches, Lt. & Rt.

NOTE:
The required contour-intercepting ditches, ditch paving and drainage ditches are tabulated on sheet No. 7.



TYPICAL SECTION OF CHANNEL CHANGE

Sta. 921+00 - Req'd. 100 Cu. Yds. Embank for Road Approach, Rt. Relay as side drain in Channel change, Rt. 72"x40' C.M.P. from Sta. 925+40.

Sta 932+00 - Req'd 24"x 52' Conc. Pipe Cr. Cvt. Req'd 5 cu yds Uncl. Ditch Excav. for Inlet and outlet. Relay 15"x 30' C.M.P. at Sta. 885+50.

CLEARING & GRUBBING
Sta. 917+00 - 928+00 - Light Clearing

N.W.¼ Sec. 8
T. 17 S. R. 67 W.

S.E.¼ Sec. 7
T. 17 S. R. 67 W.

PLATE I - PLAN-PROFILE

S.W. 1/4 Sec. 8 T. 17 S. R. 67 W.

S.E. 1/4 Sec. 7 T. 17 S. R. 67 W.

N.E. 1/4 Sec. 18 T. 17 S. R. 67 W.

ILL. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	365-H(1)	33	

Rev. for C.B.C. 3-22-45 T.L.K.
Rev. 4-13-45 G.A.H. O.H.

1262.9' to Sec. Cor. S. 0° 26' E.

Sta. 954+00 - Relay as side drain, Rt., 15"x34" C.M.P. from 904+50. Reqd 100 Cu. Yds. Uncl. Excav. for Road Approaches, Lt. & Rt.

N. 89° 22' E. 1283.2' to Sec. Cor.

Sta. 960+00 - Req'd 50 Cu. Yds. Embankment for Road Approach, Lt.

NOTE - Sta 953+60 - Bench Mark to be reset by State Highway Dep't Engineering Forces.

Sta. 971+00 - Req'd. 60 Cu Yds. Embank. for Road Appr. Lt.

CONTOUR-INTERCEPTING DITCHES

DRAINAGE DITCH

U.S.C.&G.S. B.M. #255-B, 1938

940 945 950 955 960 965 970

ROUTE OF DETOUR

Present Road

S. 49° 01' W.

M.B.S.

Gate

Southern Colo. Power Line

Cultivated Field

Gate

Mail Boxes

60' 60'

CONTOUR-INTERCEPTING DITCHES

Sta. 945+80 - Reqd. 5'x 7'x 46' C.B.C. and 55 cu yds Uncl. ditch Excav. for Inlet & Outlet. Relay 72"x 28' C.M.P. Culvert at Sta 974+75.

Sta. 961+40 to 961+63 - Reqd Double 10'x 8'x 36' Concrete Box Culvert, Type 10-A, as per details on Sheet No. 15, and 200 cu yds Uncl Excavation for Channel improvement.

DETOUR REQUIREMENTS:-
200 Cu Yds Embankment.
100 Tons Surfacing.
Relay 72"x 28' C.M.P.
Remove 72"x 28' C.M.P. after Detour has been abandoned.
200 cu yds. Uncl Excav. for removing Detour.

Sta. 964+00 - Relay as side drain, Rt. 24"x 26" C.M.P. from Sta 896+40. Reqd 60 Cu Yds. Embank. for Road Appr Rt.

960+73.0

NOTE: The required contour-intercepting ditches, ditch paving and drainage ditches are tabulated on sheet No. 7

BRIDGE DATA

STRUCTURE NO. J-17-Z
STREAM - WASH
SKEW ANGLE - 90°

PRESENT STRUCTURE
SPAN - 72"x 28' C.M.P.
CLEAR ROADWAY -
CLEAR WATERWAY - 28.3'
TYPE OF SUPERSTRUCT. -
TYPE OF SUBSTRUCT. -
REQUIREMENTS FOR REMOVAL - To be removed
R.R. SIDING - Co. to. Springs

STREAM DATA
DRAINAGE AREA in Sq. Mi. - 2.1 Sq. Mi.

ELEVATIONS
MAXIMUM HIGH WATER -
NORMAL STAGE -
DRIFT -
LOW WATER - 6389.2
STREAM BED - 6389.2
SCOUR -

STATION 961+40 TO 961+63
COUNTY - EL PASO
POSITION REFER. PRESENT STRUCT. - 12' Downstream

PROPOSED STRUCTURE
2 @ 10'-0"
160.0'
Double 10'x 8' C.B.C.

DETOUR STRUCT REQUIRED - Use present 72" C.M.P.
HAUL TO BRIDGE SITE:
NEARBY STRUCTURES ON SAME STREAM
LOCATION:
WATERWAY:

CLEARING & GRUBBING
Sta 945 to 948+, Light Clearing

600' V.C. +2.00% +3.40% -7.84% 400' V.C. 500' V.C. +0.20% +0.30%

PI 67.49 PI 89.50 PI 98.50 PI 101.20 PI 111.50

FL 59.5 FL 88.2

74.66 72.84 71.31 72.62 82.70 88.80 93.50 97.37 99.00

N.P.S.D. 720 N.P.S.D. 654

1.17 2125 2125 961 2342 2342 42 1.19 2210 7418 789 BRIDGE 1/2 1423 600 1.19 643 643 1473 1473 114

945 950 955 960 965 970 972

600 594 588 582 576

PLATE 1 - PLAN-PROFILE OF P.B. & P.C. STANDARD
HEUFELD & ESSEX CO., NEW YORK

FED. ROAD DIST. NO.	STATE	F.A.S. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	365-H(1)	34	

Rev. for Conc. Pipe Culv. 3-22-45 - T.L.K.

N.E. 1/4 Sec. 18 T. 17 S. R. 67 W.

N.W. 1/4 Sec. 18, T. 17 S., R. 67 W.

Sta. 972+50 to 974+92 - Reqd 25 cu yds Uncl. ditch Excav. for drain ditch, Lt.

Sta. 974+50 to 974+92.7 - Reqd Concrete & I-beam Bridge (1-Span @ 40') as per details on Sheets No. 11 to 13, & 400 cu yds. Uncl. Excav. for Channel Improvement. Remove 20' Concrete Bridge.
Detour Requirements:-
500 cu yds Embankment.
150 tons Surfacing.
Relay 72"x 28' C.M.P. from Sta. 945+80 and 72"x 40' C.M.P. from Sta. 883+46
Remove 72"x 28' C.M.P. & 72"x 40' C.M.P. after Detour has been abandoned.
500 cu yds Uncl. Excav. for removing Detour.

Sta. 986+80 - Reqd. 50 Cu. Yds. Uncl. Excav. for Road Appr. Lt.

PIT NO. 1
SURFACING & SEL. MAT'L.
STA. 983+ TO 994
EXCESS ROADWAY EXCAV., & WIDENING CUTS ON R.O.W.

Sta. 990+67 to 994+00, Rt. and 992+00 to 994+00, Lt. - Remove 533 lin. ft. of Wire Mesh Guard Fence.

Note:- Sta. 992+75 - 30"x 100' C.M.P. to remain in place

Sta. 994+00 - Reqd 100 cu yds Embankment for Approach to Project.

Note - Sta. 994+00 - Project Marker and R.O.W. markers to remain in place.

To Florence →

STA. 994+00, END OF F.A.S. 365-H(1)
STA. 477+35.3 END OF F.A.S. 365-F(1)

Spring
Drain Ditch
CREEK
Present Road
Route of Detour
Mail Boxes
Mail Box
Southern Colo. Power Line
CONTOUR - INTERCEPTING DITCHES
S. 2°22' E.
S. 49°01' W.
S. 49°34'23" W.
S. 50°26' W.
980
985
990
P.I. 987+05.5
P.C. 985+63.8
P.T. 988+47.1
Δ 1°25'12"
D 0°30'
T 141.7'
L 283.3'
R 11460.0'
976+80.5

Note: The required contour intercepting ditches, ditch paving and drainage ditches are tabulated on sheet No. 7.

Sta. 976+00 - Relay as side drain, Lt. 24"x 32' C.M.P. from Sta 819+31. Reqd 100 cu yds Embank. for Road approaches, Lt. & Rt.

Sta. 981+90 - Reqd 24"x 48' Conc. Pipe Cross Culv. & 5 cu yds Uncl. ditch Excav. for Inlet. Relay 24"x 36' C.M.P. at Sta. 889+00. Reqd. 17 sq. yds Grouted Rubble Slope Paving (12" thick) at Inlet.

Sta. 985+32 - Reqd 24" x 48' conc. Pipe Cr. Culv. Relay 24"x 36' C.M.P. at Sta. 793+75. Reqd:- 150 Cu. Yds. Uncl. ditch Excav. for Inlet & Outlet. Reqd 20 sq. yds Grouted Slope Paving (12" thick) at Inlet.

BRIDGE DATA

STRUCTURE NO. J-17-C
Stream - Red Creek
Skew Angle - 90°

STATION 974+50 TO 974+92.7
County - El Paso
Position Refer Present Struct. - 15' Downstream

	Present Structure	Proposed Structure
Span	@ 20'	1 @ 40'
Clear Roadway	25'-6"	30'-0"
Clear Waterway	144 Sq. Ft.	380 Sq. Ft.
Type of Superstruct.	Conc. Slab on timber stringers	Steel I-beam & Concrete
Type of Substruct.	Concrete	Concrete
Requirements For Removal	To be removed	Detour Struct. Reqd. - 72"x 40' C.M.P. to be relaid from Sta 883+46
R.R. Siding	Colo. Springs	Haul to Bridge Site - 19 Miles

Stream Data - Drainage Area in Sq. Mi. - 9.8 Sq. Mi.

Nearby Structures on Same Stream
Location -
Waterway -

Elevations
Maximum High Water - 6395.6 Low Water - 6392
Normal Stage - Dry Stream Bed - 6392
Drift - Light Scour - None

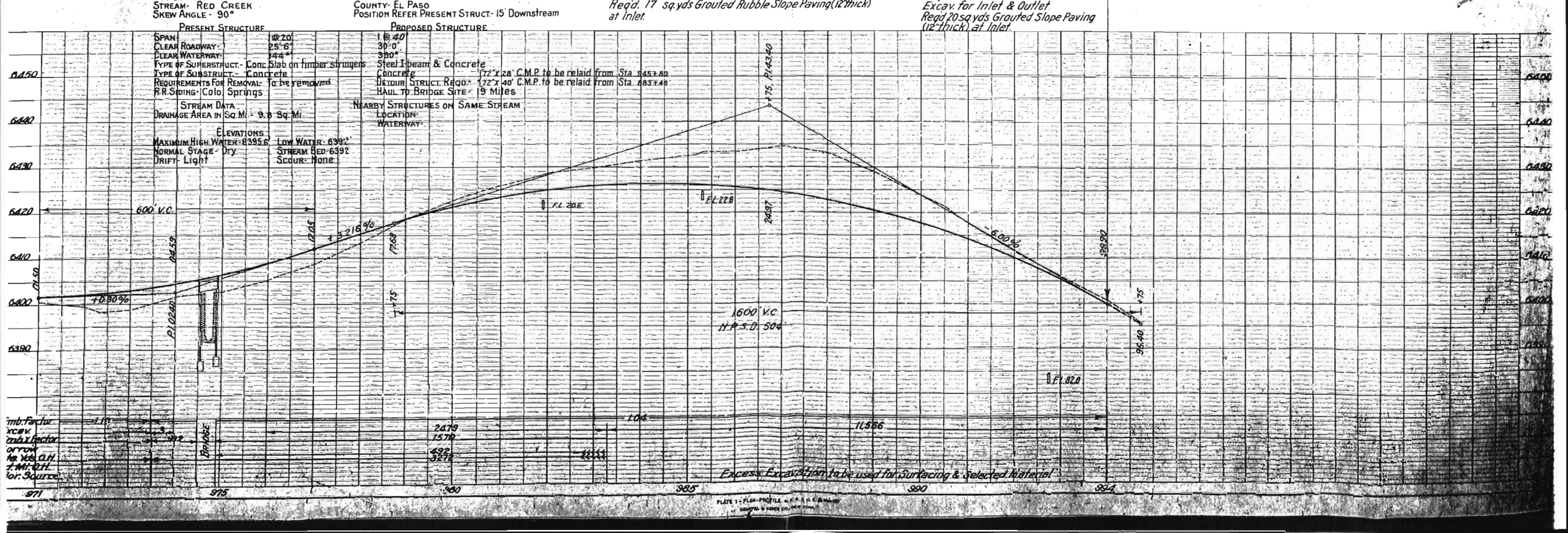


PLATE 1 - PLAN-PROFILE