



COLORADO
Department of
Transportation

DOCUMENT SEPARATOR SHEET

REGION 5 – JUNE 2017 CONVERSION

To be placed at the beginning of each separator sheet.



r500001902

Description:

ROW Plans 11X17

Route # and Mile Points:

US 160

Originating Office:

ROW/Survey

File Name:

F 022-2(2)_ROW(.PDF)

Box Location:

30 of 38

INDEX OF SHEETS

- SKETCH MAP AND TITLE SHEET
- TABULATION OF LENGTH AND DESIGN
- TYPICAL SECTIONS
- SUMMARY OF QUANTITIES
- SURFACING PLAN AND BALLAST PLAN
- LIST OF STRUCTURES
- TABULATIONS OF MUCK EXCAVATION AND BLADING AND SHAPING, DETAILS FOR TIMBER CRIBBING, TYPICAL SECTION OF TRENCH FOR CMP UNDERDRAIN AND TYPICAL SECTION FOR DITCHES
- STANDARD MARKER POSTS
- STANDARD HEADWALLS AND APRONS FOR C.M.P. CULVERTS
- STANDARD METHODS FOR SUPERELEVATION AND WIDENING OF CURVES
- STANDARD SIDE APPROACH ROADS, FLARING, CUT SLOPE TREATMENT AND WIDENING AT BRIDGES AND AT CREST OF GRADES
- STANDARD ROADWAY CONSTRUCTION TRAFFIC SIGNS
- ALIGNMENT PLAN AND PROFILE
- SUMMARY OF EARTHWORK QUANTITIES
- SUMMARY OF SOIL PROFILE TESTS

- M-7-B ✓
- M-102-G ✓
- M-1-B ✓
- M-2-DM ✓
- M-2-OS ✓

COLORADO
STATE HIGHWAY DEPARTMENT
PLAN AND PROFILE OF PROPOSED
FEDERAL AID PROJECT NO. F 022-2(2)
STATE HIGHWAY NO. 10
MINERAL COUNTY

SCALES ON ORIGINAL TRACINGS

ON PLAN, 1 IN. = 100 FT.
ON PROFILE 1 IN. = 100 FT. HORIZONTAL
1 IN. = 10 FT. VERTICAL

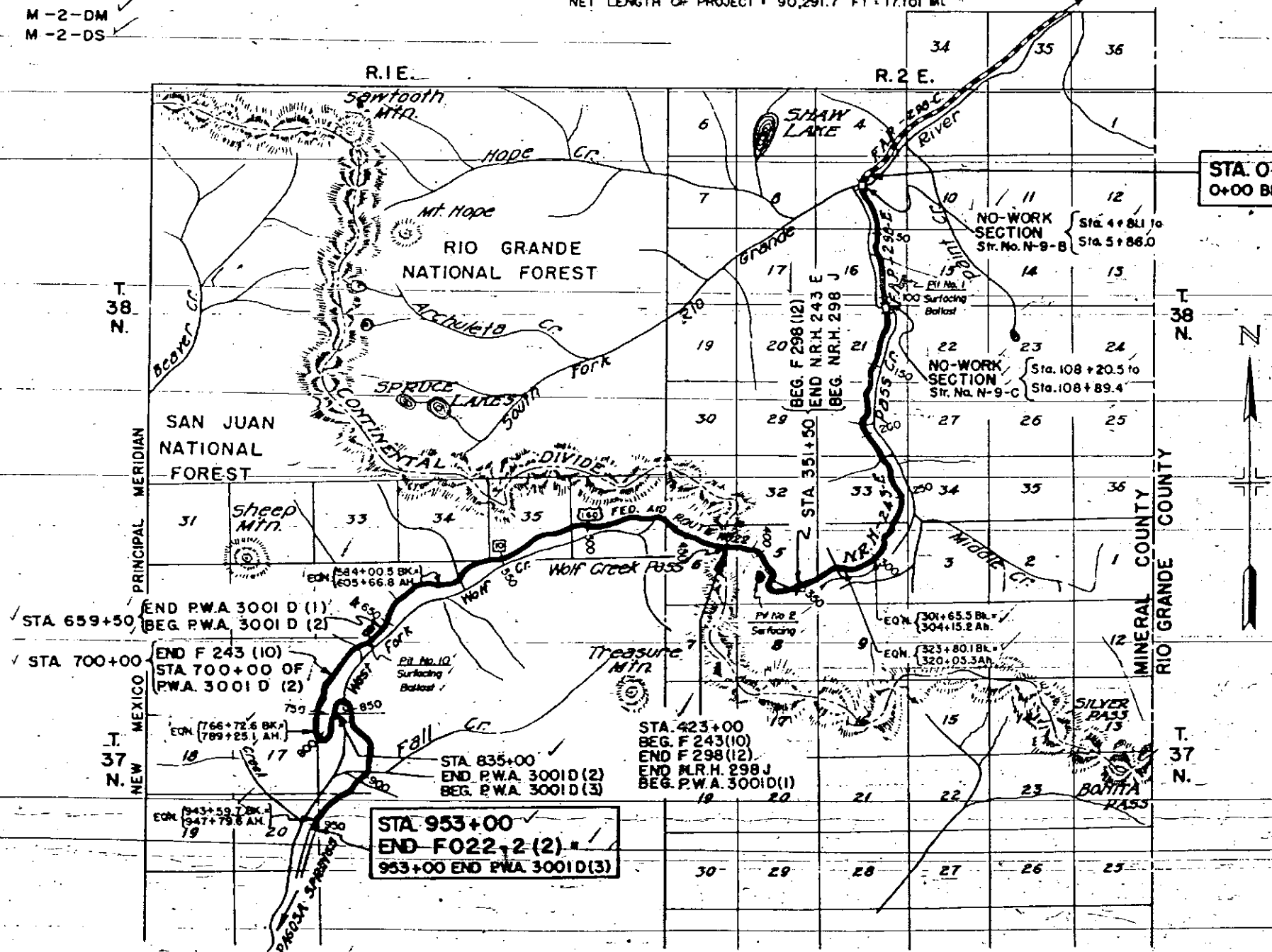
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD

GROSS LENGTH OF PROJECT = 90,465.5 FT = 17.134 MI

NET LENGTH OF PROJECT = 90,291.7 FT = 17.101 MI

CONVENTIONAL SIGNS

- CENTER LINE OF SURVEY
- RIGHT OF WAY LINES
- COUNTY LINE
- TOWNSHIP LINES
- SECTION LINES
- ONE-QUARTER SECTION LINES
- BARBED WIRE FENCE
- TELEPH. & TELEG. LINE
- POWER LINE
- RAILROAD
- PRESENT ROAD (PLAN SHEETS)
- WIRE CABLE GUARD FENCE



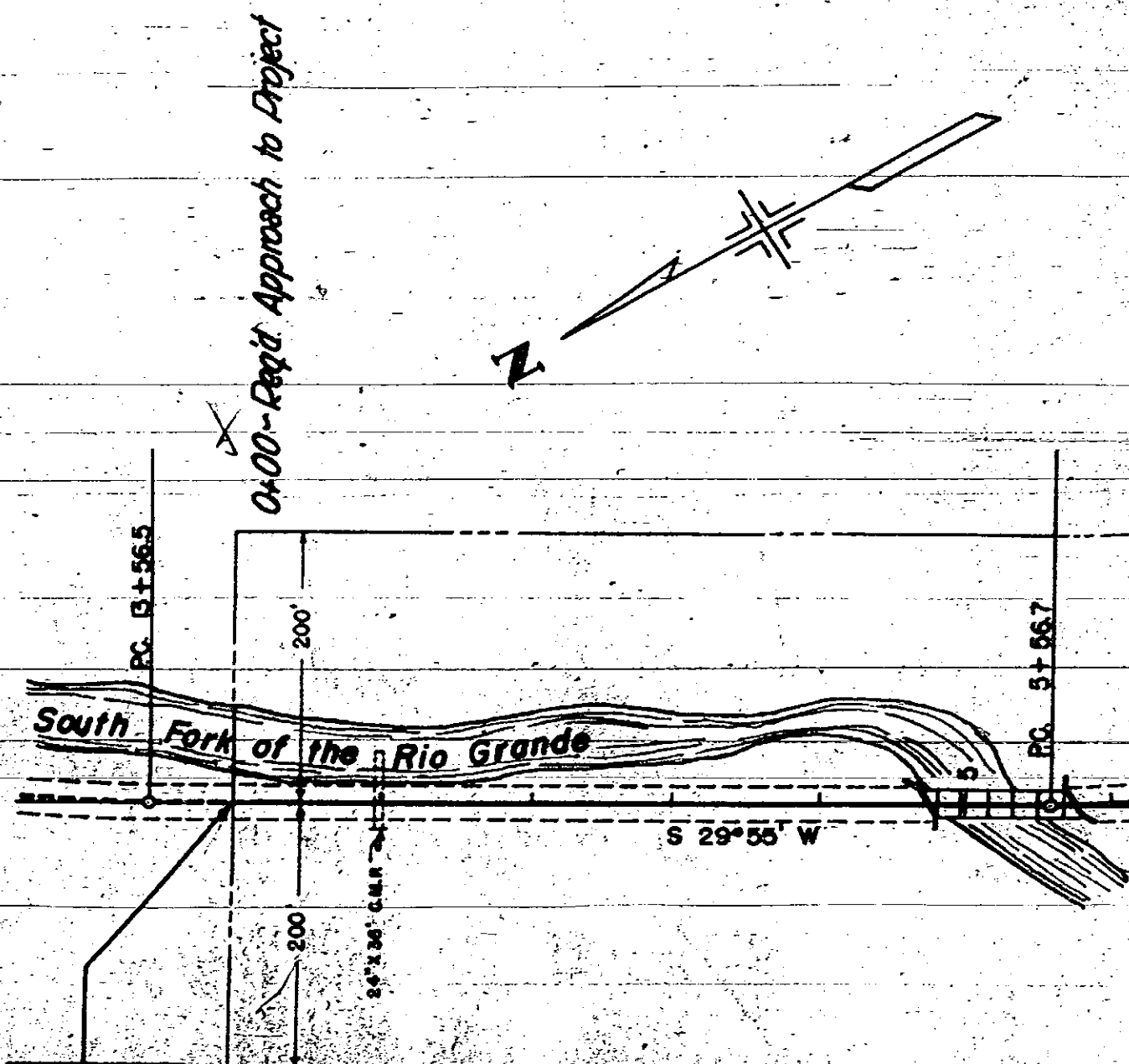
STA 0+00 BEGIN F022-2(2) ✓
0+00 BEGIN F.A.P. 298-E ✓

NOTE:
It is recommended that bidders on this Project go over the plan details with one of the following field representatives of this department.

- ✓ J. E. Casey, Construction Engineer, Durango, Colo.
- ✓ Robert B. Dwyler, Resident Engineer, Alamosa, Colo.

HIGHWAY DEPARTMENT
STATE OF COLORADO
RECOMMENDED FOR APPROVAL:
James Bell
DISTRICT ENGINEER
APPROVED:
Thomas H. Williams
STATE HIGHWAY ENGINEER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
RECOMMENDED FOR APPROVAL:
DISTRICT ENGINEER
APPROVED:

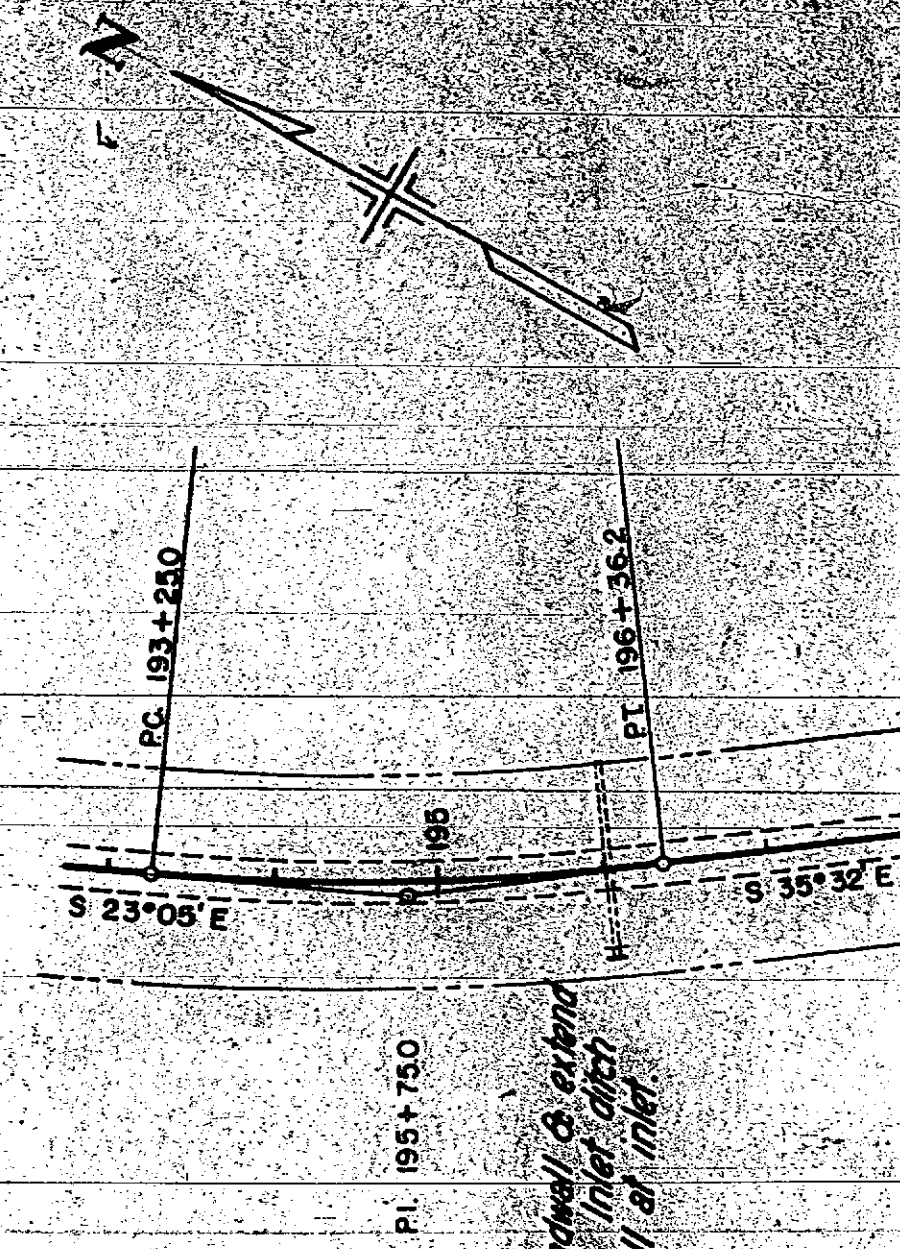


STA. 0+00
BEGIN F022-2(2)
0+00 BEGIN FAP 298-E

NOTE:

Alignment and Grades as shown are subject to modification during construction after approval by the Denver Office.

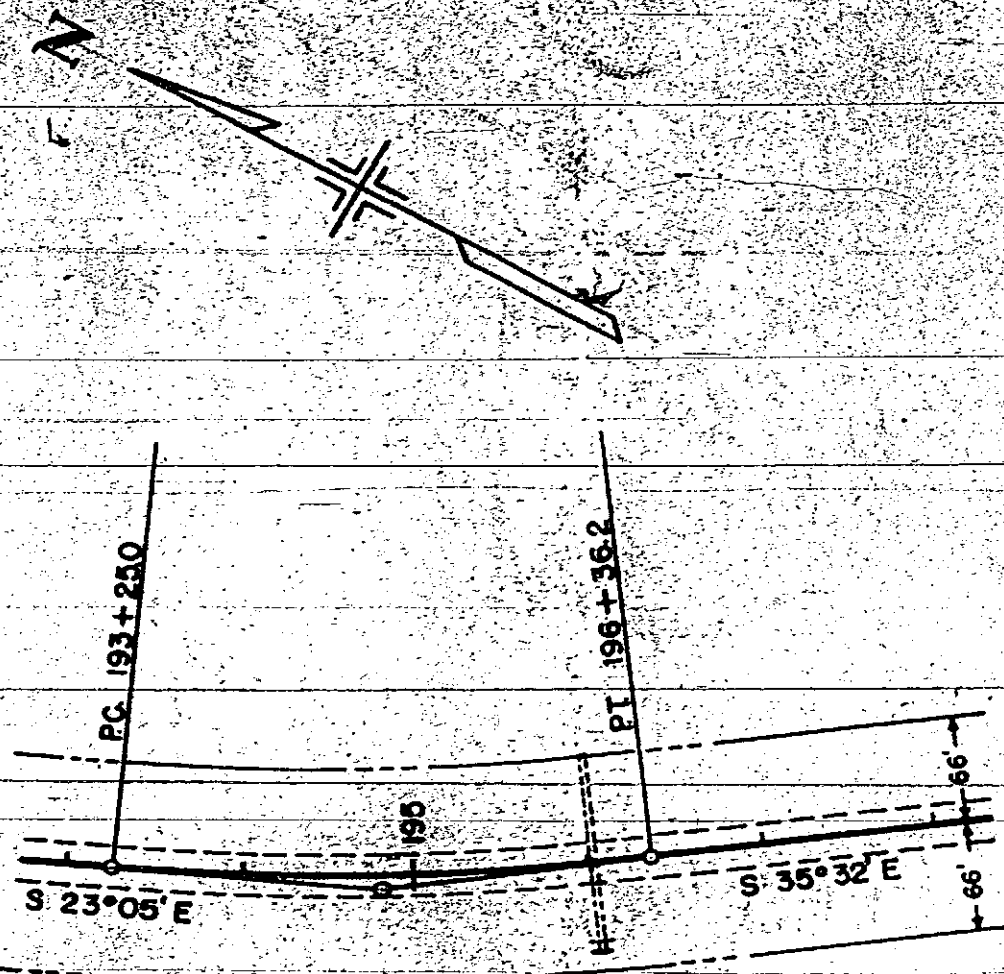
Soil data shown on the plans is obtained from best available testing laboratory information. This information is shown for convenience of the Contractor and the Department does not guarantee the accuracy of these tests. If materials not conforming to the data on plans are encountered during construction the grading plan shown on plans will be modified where necessary to secure dense, stable embankments.



196+00-Remove Headwall & extend
24' x 36' C.M.P. 4' Pl. Inlet ditch
& Type 21" Headwall at inlet

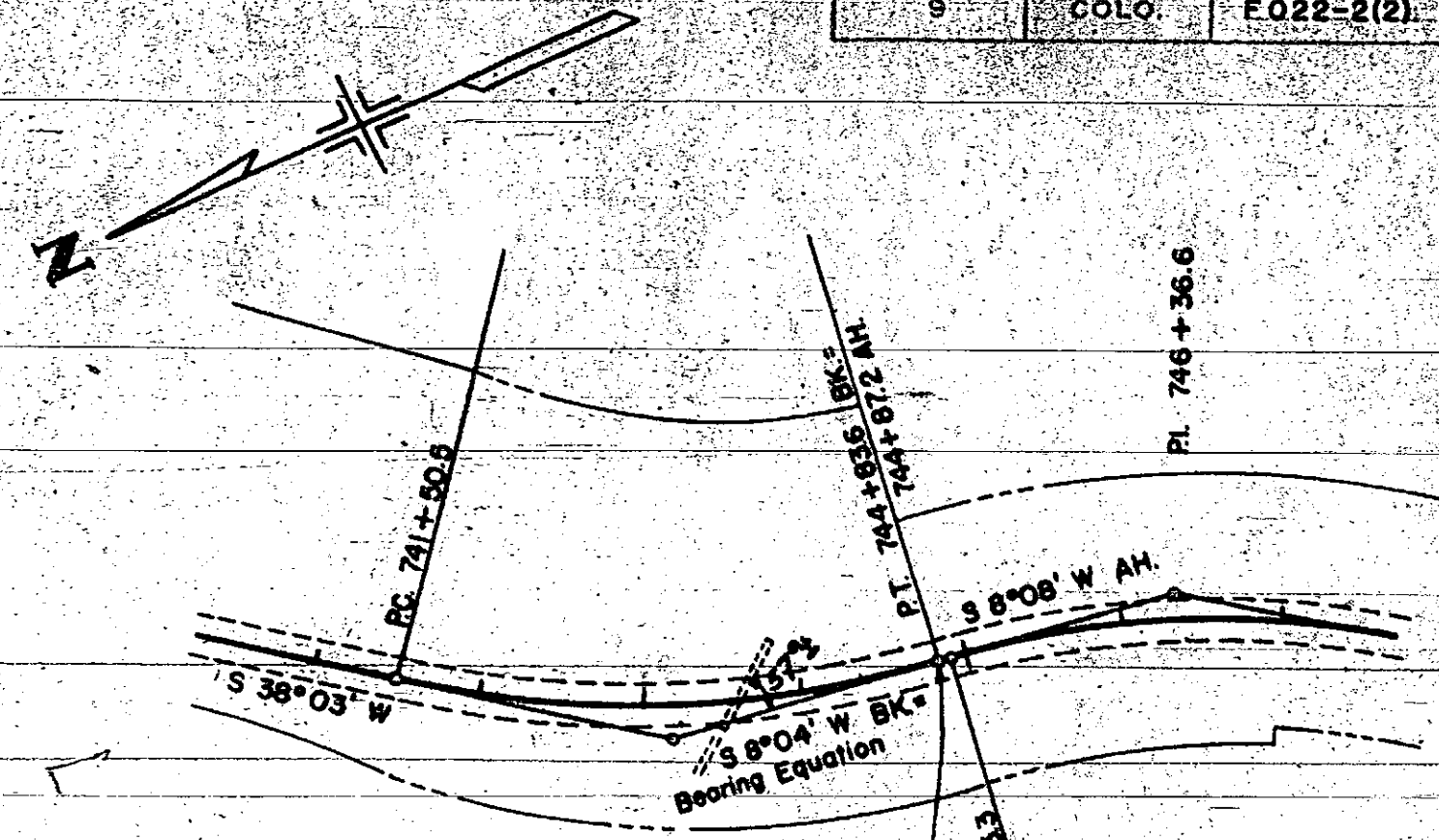
15 A-7-6(7)
Similar to # 7a
7a A-7-6(7)
15 A-7-6(7)
20 A-7-6(7)
Similar to # 7a

FED. ROAD DIV. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	E022-2(2)	13	



PI. 195+75.0

196+00 - Remove Headwall & extend
24"x18" C.M.P. 4 ft. Inlet ditch
& Type "A" Headwall at inlet.



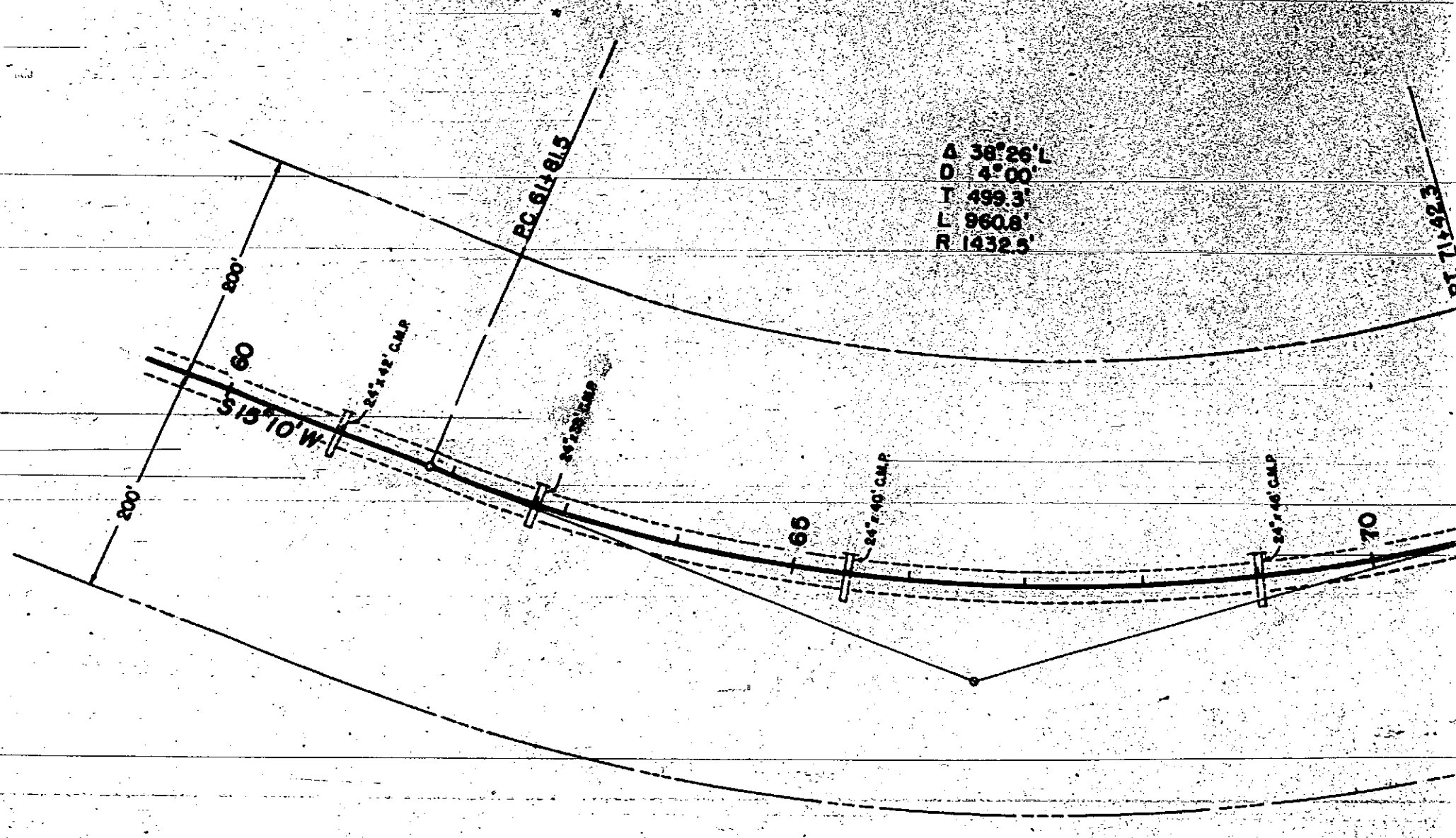
PI. 743+21.0

743+60 - Extend 24"x18" cross culvert
2 ft. & inlet ditch.

EQUATION

19 A-7-5(7)	20 A-7-5(7)
Similar to #7a	Similar to #7a
70 A-7-5(7)	
200 51.2	

80 A-2-6(0)	
LL 32.8	
PI 10.8	
X=200 21.5	



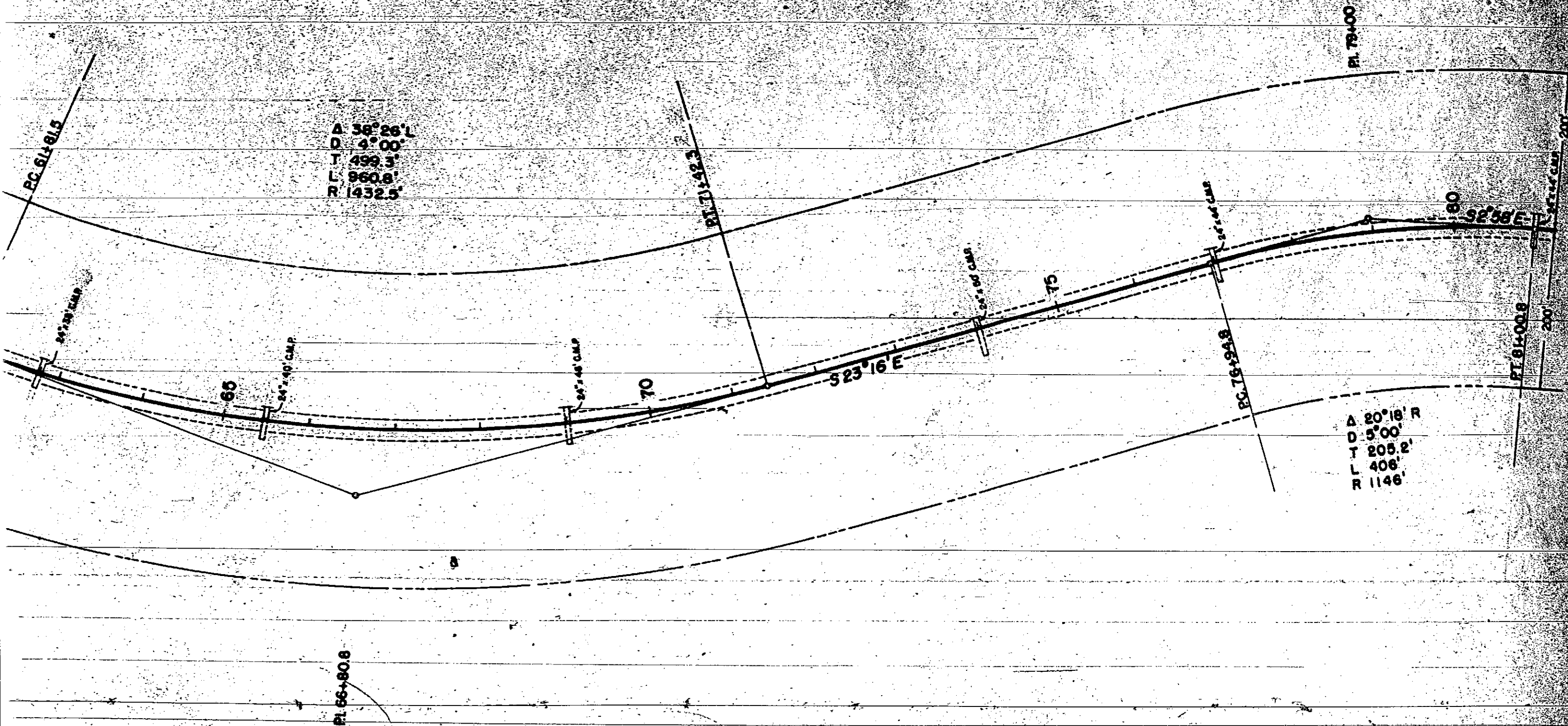
Δ 38° 26' L
D 4° 00' L
T 499.3'
L 960.8'
R 1432.5'

PI 66+80.8

BB	A-F-a(0)
LL	26.2
PI	NP
%-200	13.4

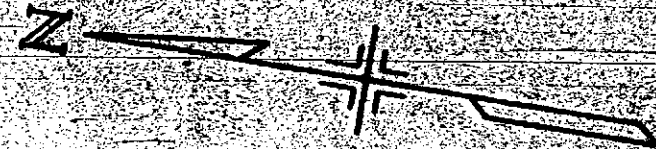
not 589.46 feet from assumed elevations
in profile to correct elevations

DIV. NO.	STATE	PROJECT NO.	SHEET NO.
9	COLO	F022-2(2)	4



#7	A-1-6(10)
LL	28.8
PI	NP
%-200	19.5
#7A	A-7-3(7)
LL	55.4
PI	17.0
%-200	51.2

Pit No. 1, Test Nos. 6262 and 6268
 Base Course Surfacing and Ballast
 Location S.E. 1/4, Sec. 16, T.38N., R. 2E.
 Haul 50' Lt. of Sta. 89+00
 A-2-4(0)
 L.L. 33.8
 P.I. N.P.
 % -200 4.9



88+00 to 94+00 - Req'd 750 lin. ft. of 6"
 Perforated C.M.P. Underdrain Lt. (Details
 on Sheet #7)

20°18'R
 5°00'
 205.2'
 406.0'
 1146.0'

P.T. 81+00.8
 81+00 - Extend 24"x44" cross culvert 6' Lt.

84+00 - Remove Headwall & extend 24"x50" cross culv
 2' Lt. & 4' Lt. Type "A" Headwall at inlet

86+00 - Remove Headwall & extend
 24"x38" cross culvert 6' Lt. & 6' Lt.

90+50 - Remove Headwall & extend
 24"x38" C.M.P. 6' Lt. Inlet & outlet
 ditches Type "A" Headwall at inlet

92+00 - Remove Headwall & extend
 24"x38" C.M.P. 6' Lt. Inlet & outlet
 ditches Type "A" Headwall at inlet

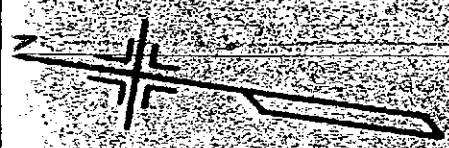
94+50 - Remove Headwall & extend
 24"x40" C.M.P. 6' Lt. & 4' Lt. Inlet
 & outlet ditches Type "A" Headwall
 at inlet

#9 A-5-7
 L.L. 44.5
 P.I. 10.2
 % -200 6.47

Similar to #1 & #7A

#7 A-1-1(0)
 L.L. 25.8
 P.I. N.P.

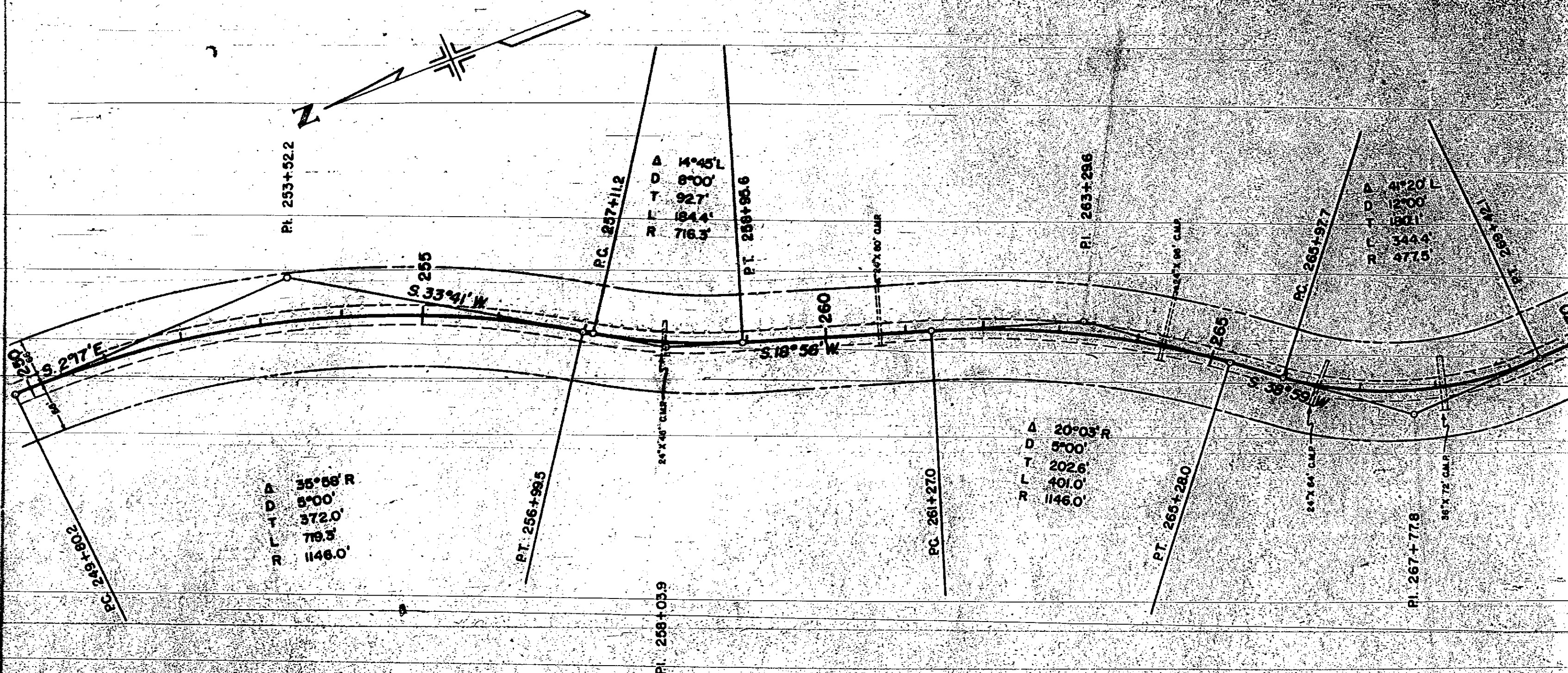
FED. ROAD DIV. NO.	DIST.	PROJECT NO.	SHEET NO.	TOTAL SHEETS
5	COLO.	FQ22-2(2)	15	



at 120' L.M. 6' LI. Inlet & outlet ditches Type 'A' Headwall at inlet

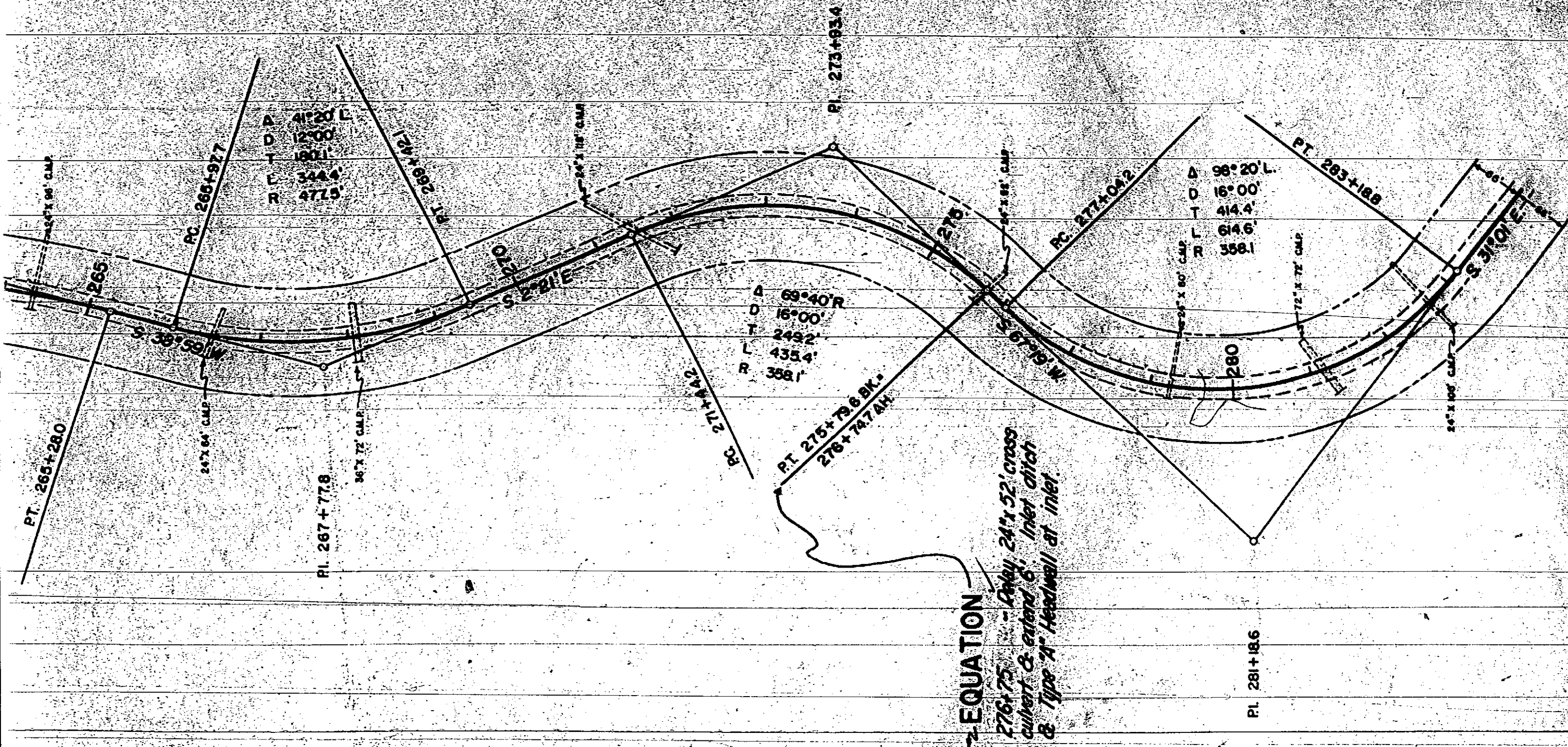
at 150' - Remove Headwall & extend 24' x 40' C.M.D. 6' LI & 4' DI. Inlet & outlet ditches Type 'A' Headwall at inlet.

#10	A-1-M10
LL	32.3
PI	MP
%-200	212
C.B.R.	267



10530	NOTE: Station 589.46 feet from existing alignment shown on plan to correct alignment to new level datum. #25 A-2-30)	#26 A-1-5(0) Similar to #3 #3 A-1-5(0) LL 223 PI NP % 200 151	10530 #27 A-2-7(0) LL 421 PI 183 % 200 231 #27A A-1-5(0) LL 75 PI NP
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FED. ROAD DIV. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F022-2 (2)	16	



#27 A-2-7(1)
LL 42.1
PI 18.3
%-200 29.1

#27A A-2-7(10)
LL 7.5
PI NP
%-200 15.4

10600

#28 A-2-7(2)
LL 35.5
PI 25.5
%-200 28.8

#28A A-2-7(15)
LL 68.5
PI 25.5
%-200 63.4

79.6 BK

74.7 AH

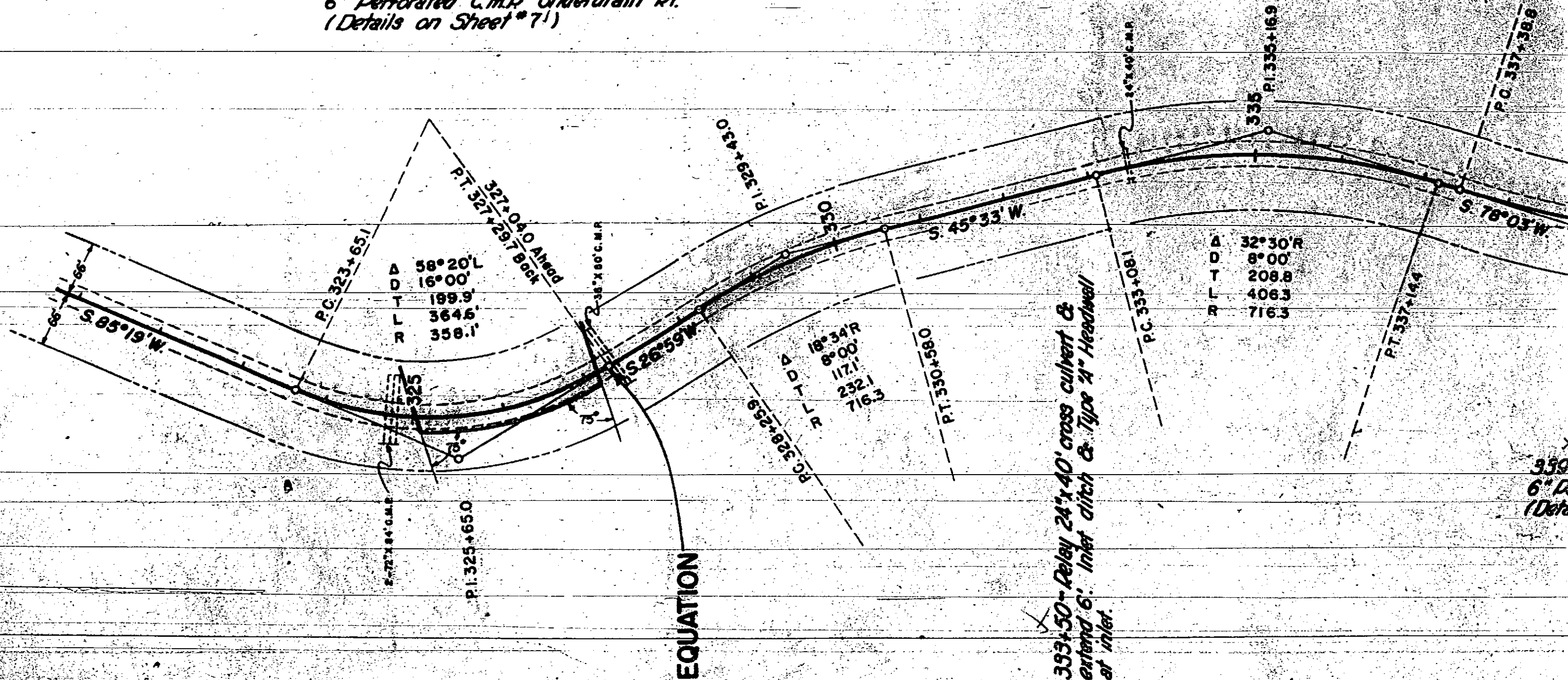
#29 A-2-7(4)
LL 53.8
PI 22.7
%-200 37.8
G.B.R. 3.1

#29A A-2-7(15)
LL 69.3
PI 23.4

#30 A-2-7(2)
LL 53.5
PI 22.3
%-200 30.0
G.B.R. 10.8

10660

325+ to 327+ ~ Req'd 375 lin ft. of
6" Perforated C.M.P. Underdrain Rt.
(Details on Sheet #7)



EQUATION

NOTE

Subtract 389.46 feet from
assumed elevation shown on
profile to correct elevation to
sea level datum

#34 A-1(10)

LL 33.8

PT NP

%-200 13.3

#35 A-2

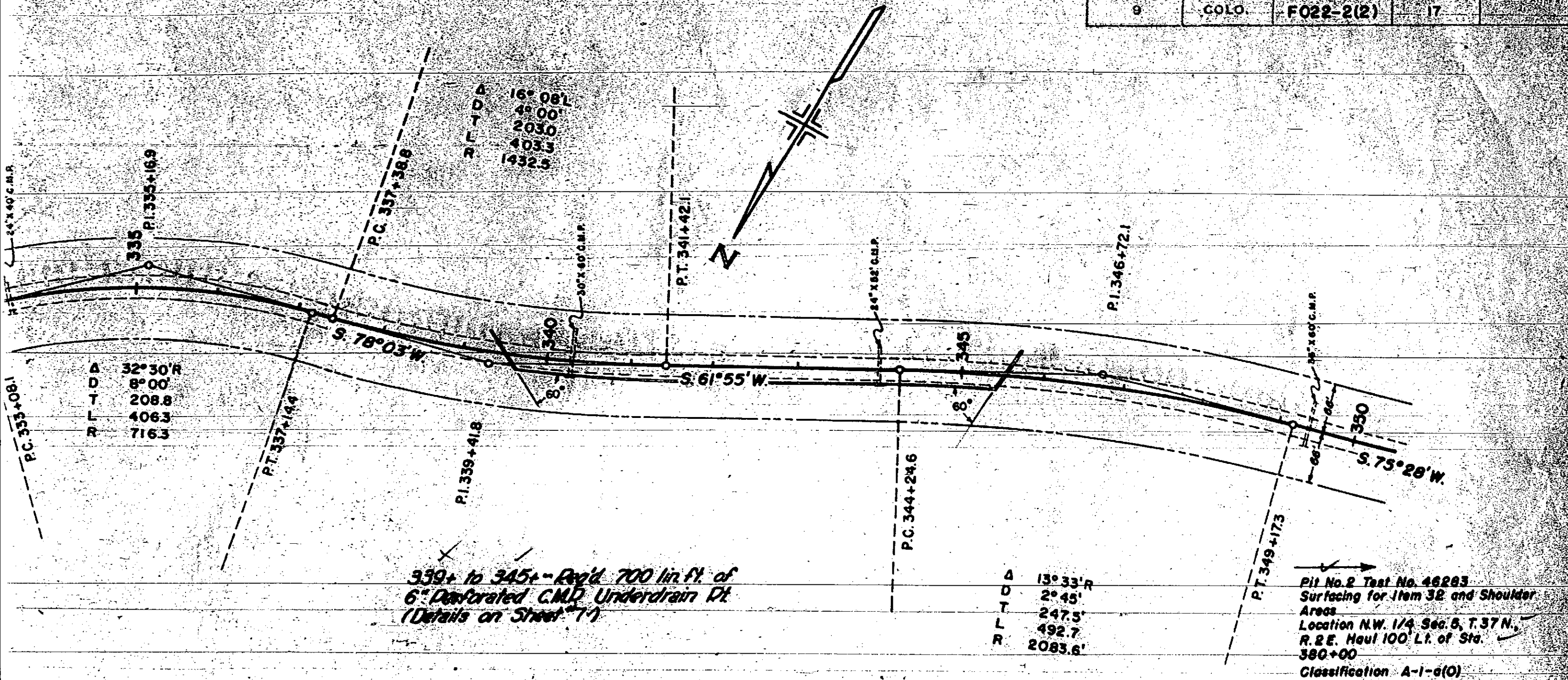
LL

PI

%-200

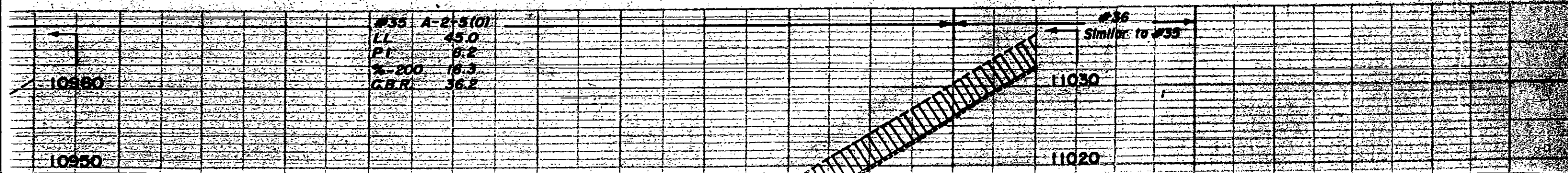
G.B.R.

FED. ROAD DIV. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F022-2(2)	17	



339+ to 345+ - Reg'd 700 lin. ft. of
6" Perforated C.M.P. Underdrain Rt.
(Details on Sheet "1")

Pit No. 2 Test No. 46283
Surfacing for Item 32 and Shoulder
Areas
Location N.W. 1/4 Sec. 8, T. 37 N.,
R. 2 E. Haul 100' L.I. of Sta.
380+00
Classification A-1-a(0)



#35	A-2-5(0)
LL	45.0
PI	8.2
%-200	16.3
G.B.R.	36.2

#36
Similar to #35

PII No. 10, Test No. 6153
 Location: S.E. 1/4, Sec. 4, T. 37 N., R. 1E.
 Haul: 100' Rt. of Sta. 658+00
 A=1-a(0)
 L.L. 22.3
 P.I. N.P.
 %=200 8.1

A 26°40' R
 D 10°00'
 T 135.8'
 L 266.7'
 R 573.0'

Projected Line
 A 7°23' R
 D 3°00'
 T 123.2'
 L 246.1'
 R 1910.0'

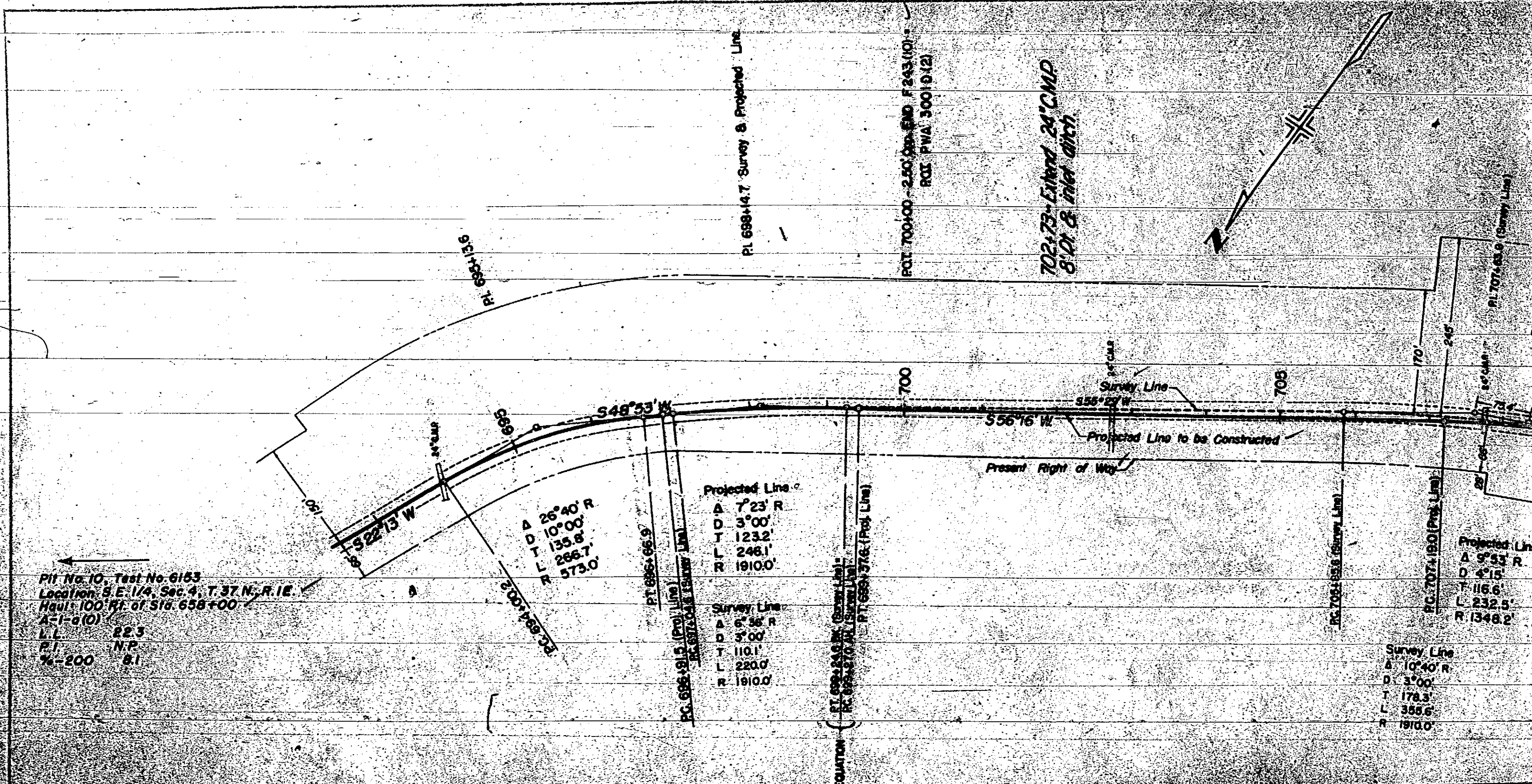
Survey Line
 A 6°38' R
 D 3°00'
 T 110.1'
 L 220.0'
 R 1910.0'

Projected Line
 A 9°55' R
 D 4°15'
 T 116.6'
 L 232.5'
 R 1348.2'

Survey Line
 A 10°40' R
 D 3°00'
 T 178.3'
 L 355.6'
 R 1910.0'

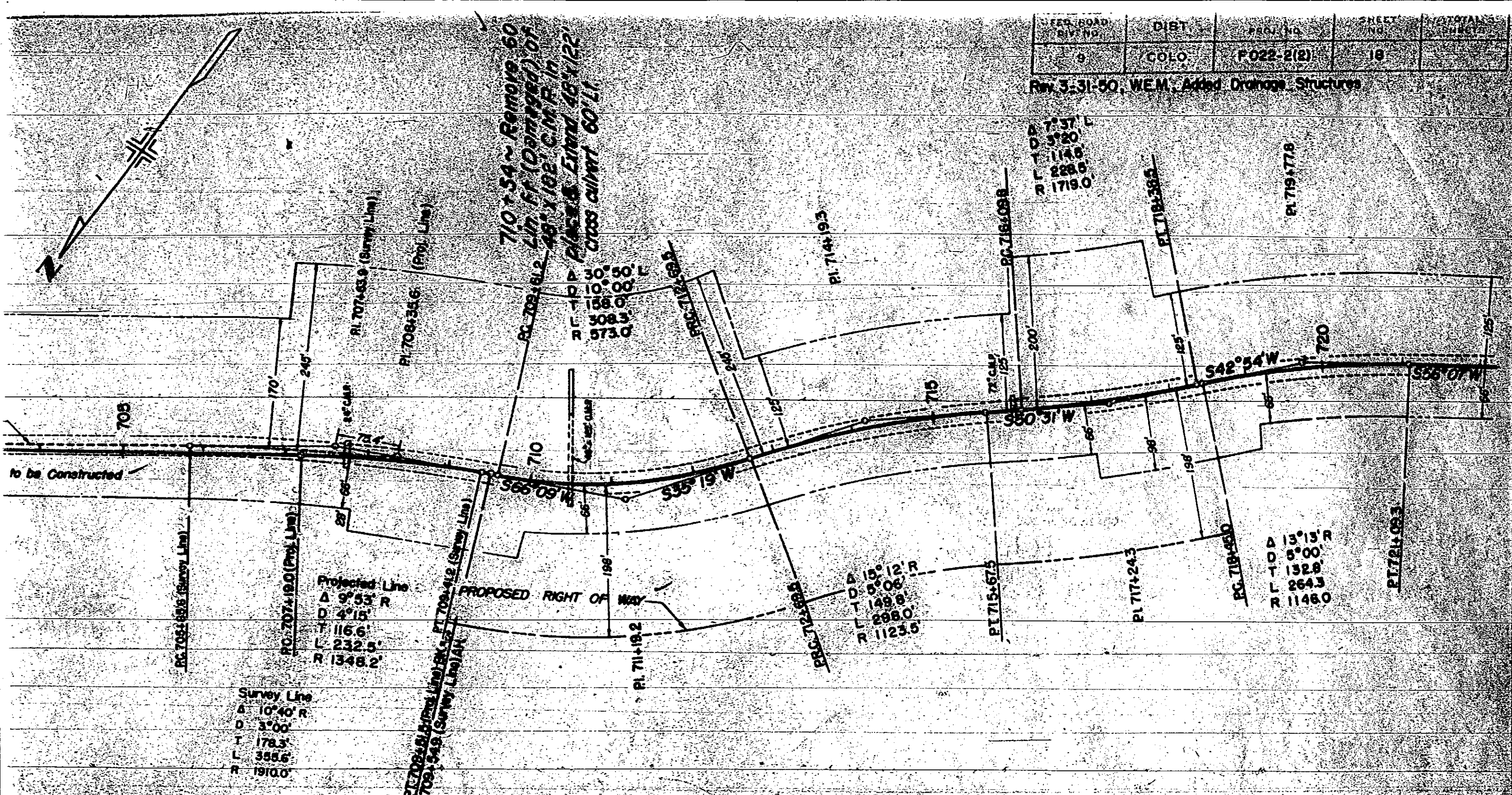
#42 A=2-500
 L.L. 25.2
 P.I. 12.9
 %=200 23.0
 #43 A=2-500
 Similar to #42

#44 A=1-1
 L.L. 1
 P.I. N
 %=200 1



FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
5	COLO.	P022-2(2)	18	

Rev. 3-31-50, W.E.M., Added Drainage Structures



Survey Line
 Δ 10°40' R
 D 3°00'
 T 178.3'
 L 355.6'
 R 1910.0'

Projected Line
 Δ 9°53' R
 D 4°15'
 T 116.6'
 L 232.5'
 R 1348.2'

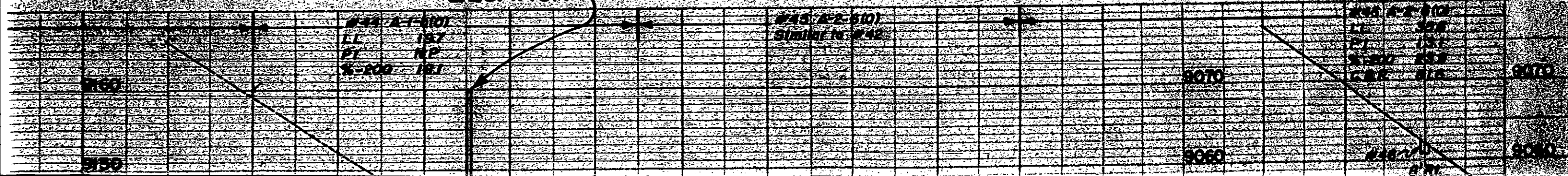
Δ 30°50' L
 D 10°08' L
 T 188.0'
 L 308.3'
 R 573.0'

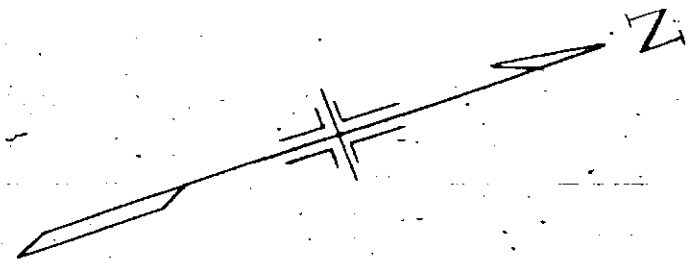
Δ 15°12' R
 D 5°06'
 T 149.8'
 L 298.0'
 R 1123.5'

Δ 7°37' L
 D 3°20'
 T 114.8'
 L 228.6'
 R 1719.0'

Δ 13°13' R
 D 5°00'
 T 132.8'
 L 264.3'
 R 1146.0'

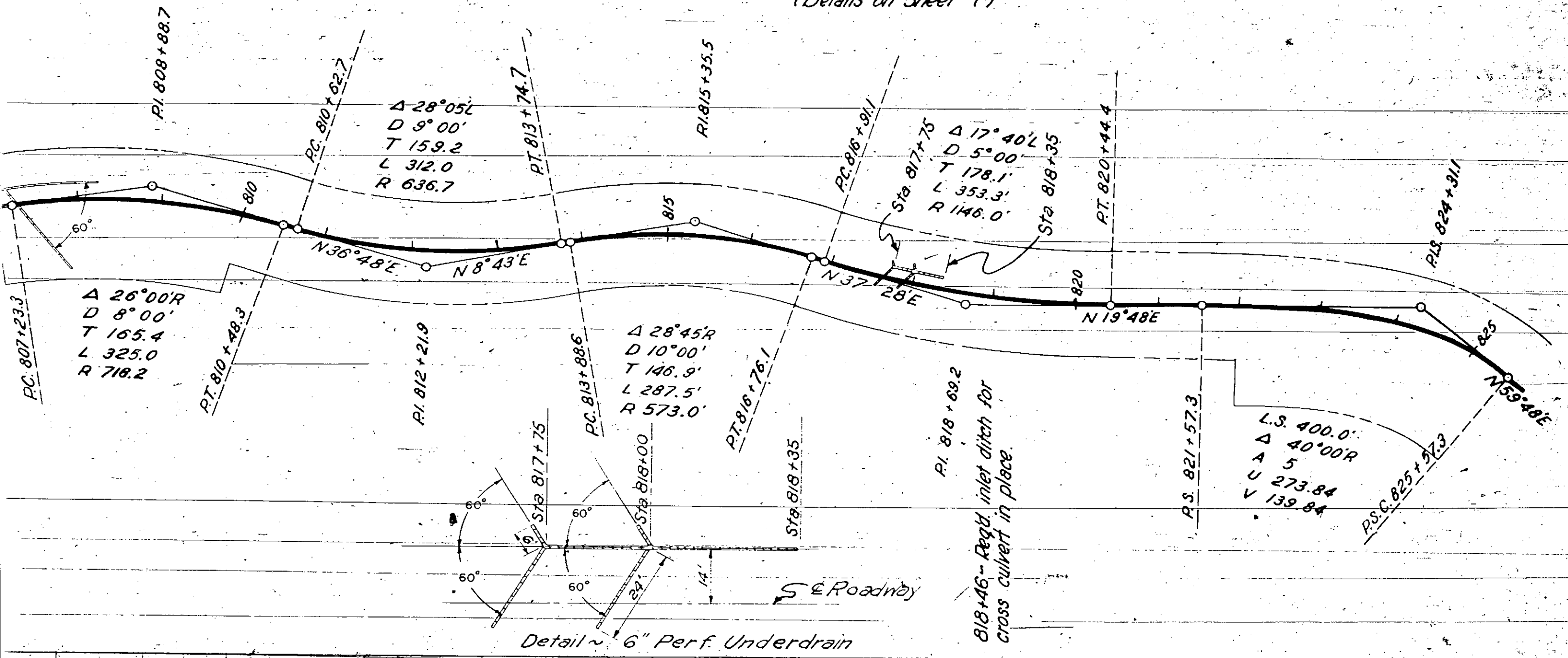
EQUATION





FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F 022-2(2)	19	

817+ to 818+ ~ Req'd. 120 lin. ft. of
6" Perforated C.M.P. Underdrain Lt.
(Details on Sheet #7)



Detail ~ 6" Perf. Underdrain

#56	A-2-6(0)
LL	317
PI	120
%-200	25.9

#57
Similar to #56

#58	A-1-b(0)
LL	28.9
PI	4.9
%-200	22.0

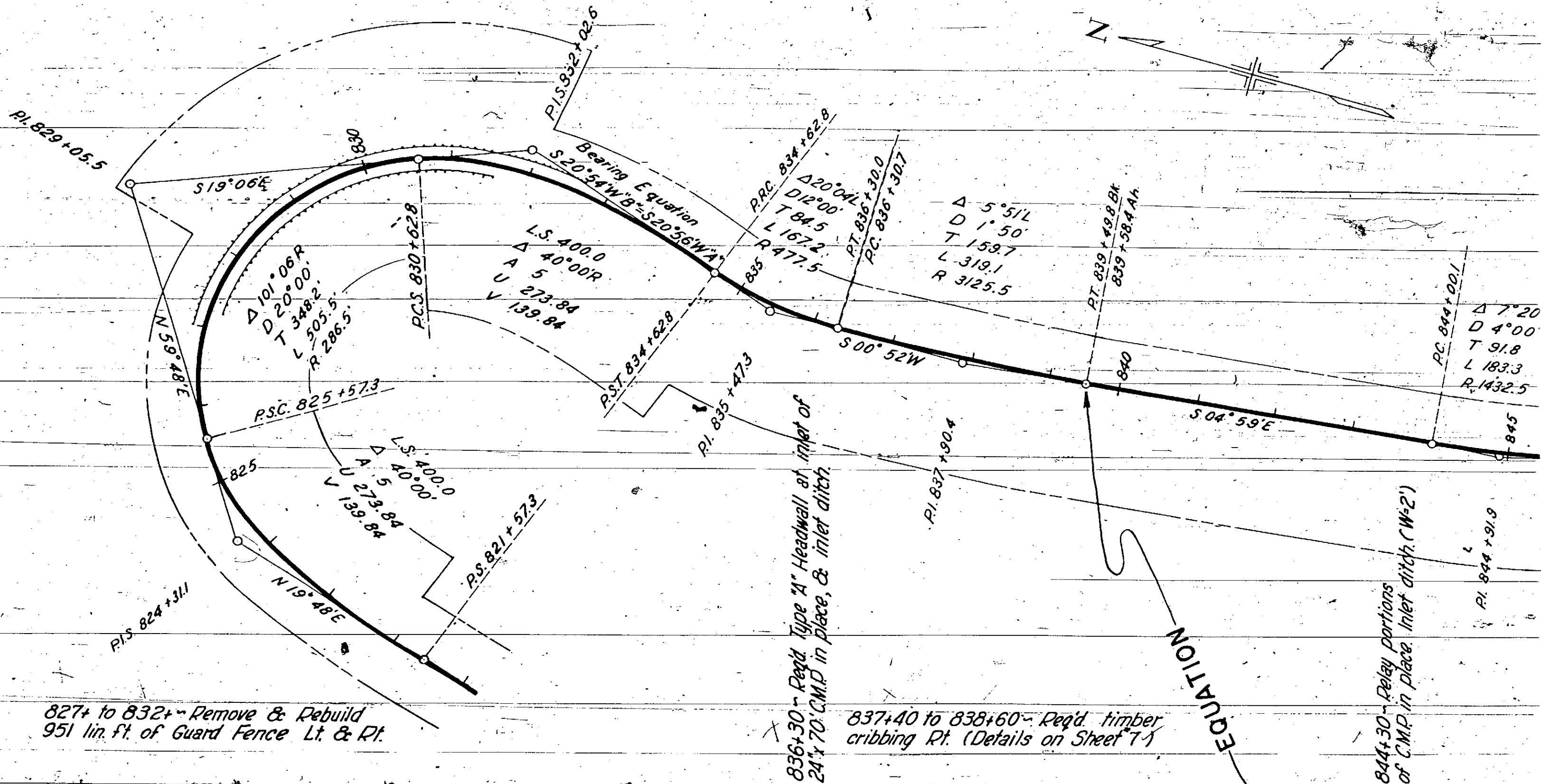
#59
Similar to #58

8570

8560

8570

8560



#58	A-1-b(0)
LL	289
PI	49
%-200	22.0

#59 A-1-b(0)
Similar to #58

#60	A-2-4(0)
LL	289
PI	8.1
%-200	14.8

#61 A-2-4(0)
Similar to #60

8510

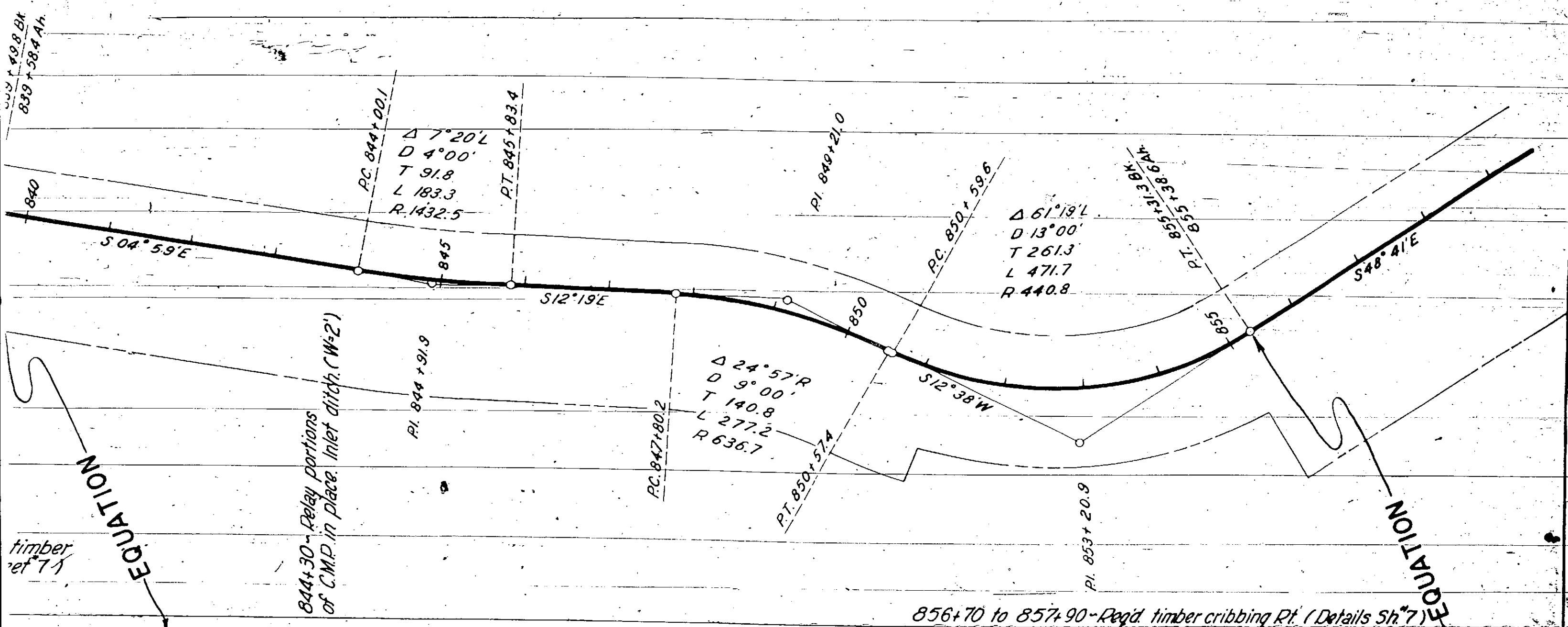
8500

8440

8430

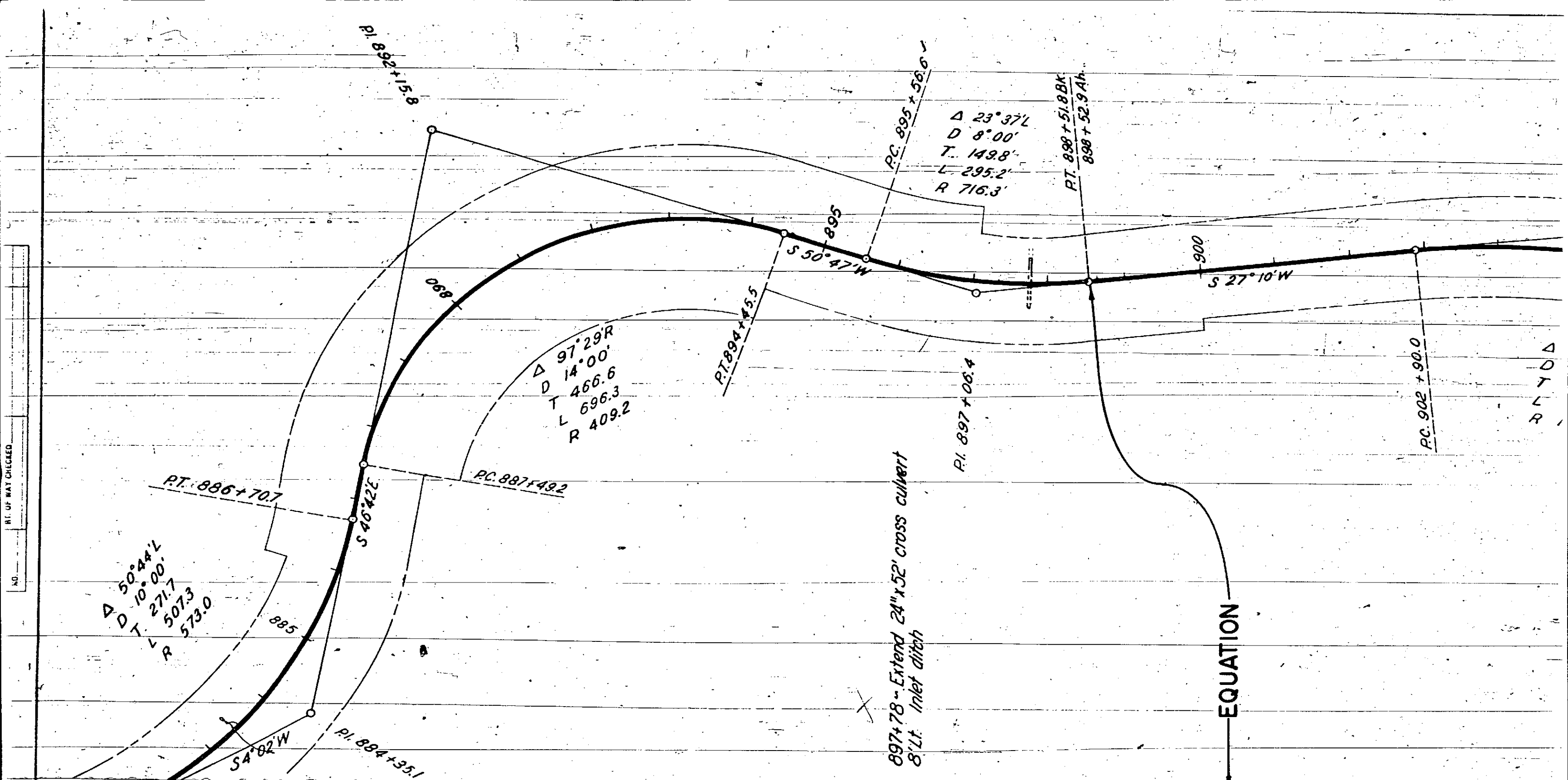
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F022-2(2)	20	

859+20 to 859+60 - Reqd timber cribbing Rt.
(Details on Sheet #7)



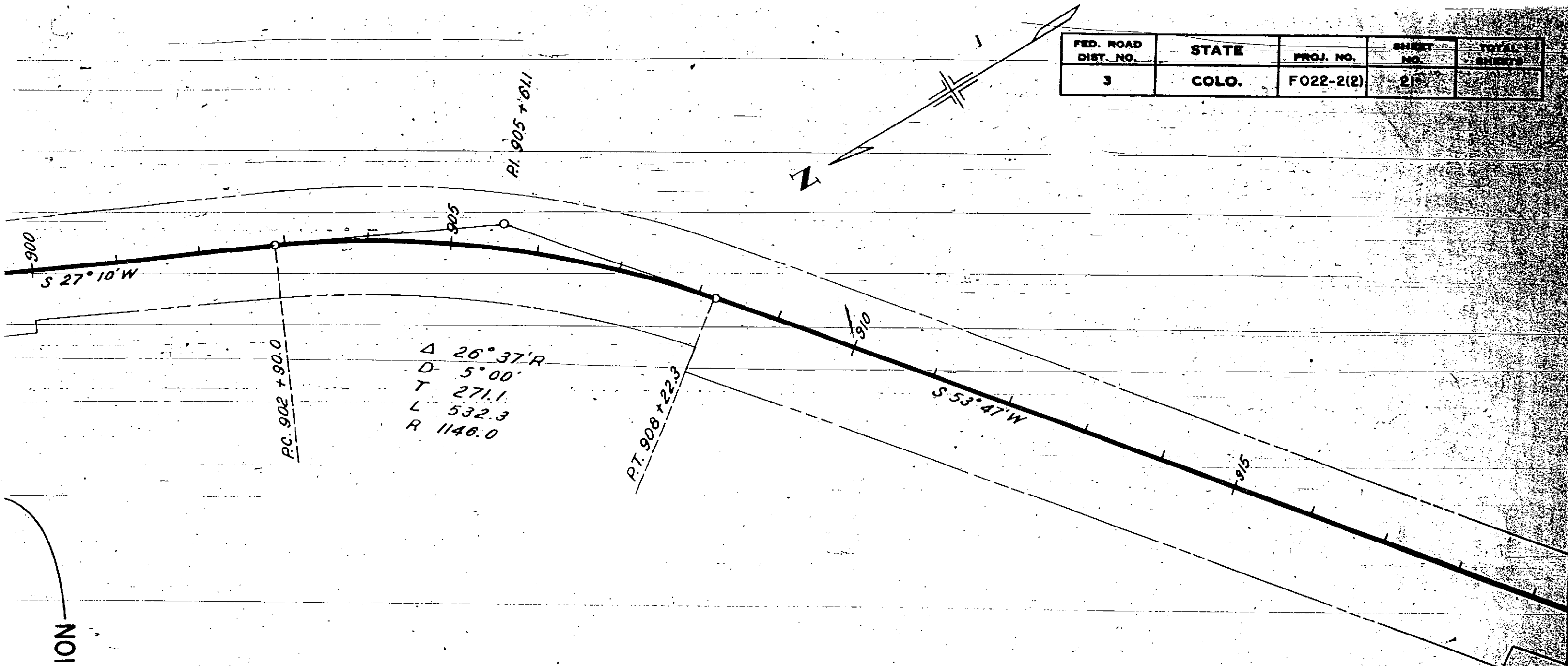
856+70 to 857+90 - Reqd timber cribbing Rt. (Details Sh #7)

# 61 A-2-4(0) Similar to # 60	# 62 A-2-4(0) LL. 29.0 PI. 6.8 %-200 24.0	# 63 A-2-4(0) Similar to # 62	8370	8360
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8150 8140 200' VC	#66 A-2-4(0) LL 30.6 PI 10.2 %-200 34.9	#68 A-2-4(0) LL 30.9 PI 10.4 %-200 26.9 G.B.R. 71.4 #68A A-7-6(5) LL 41.9 PI 19.0 %-200 45.4	8080 8070 7110 7110	#69A A-2-5(0) LL 35.5 PI 13.5 %-200 28.3 G.B.R. 30.8
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FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F022-2(2)	21	



Δ 26° 37' R
D 5° 00'
T 271.1
L 532.3
R 1146.0

EQUATION

#69A A-2-6(0)
LL 35.5
PI 13.5
%-200 28.3
C.B.R. 30.8

#70A
Similar to #68A

#71 A-7-6(6)
LL 49.1
PI 23.5
%-200 43.8
C.B.R. 49

7110
7110

8010

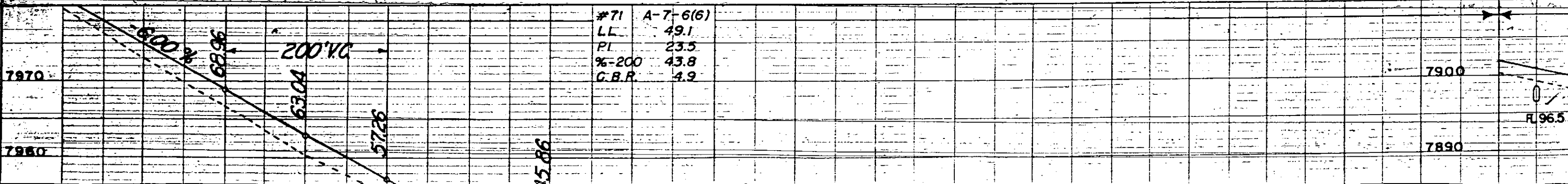
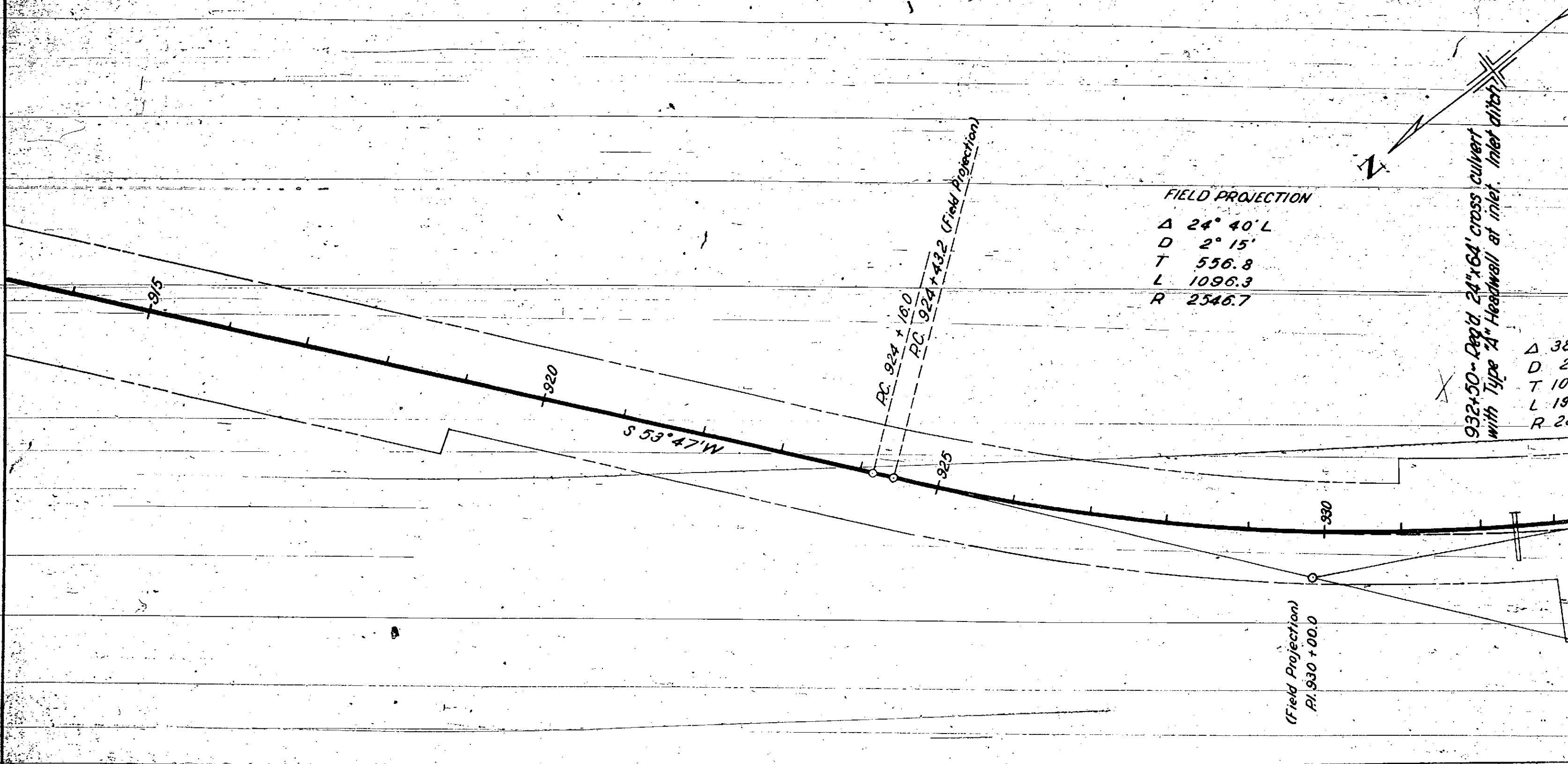
8000

7992.06 DI

8010

8000

RT. OF WAY CHECKED
NO.



FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F022-2(2)	22	23

FIELD PROJECTION

Δ 24° 40' L
D 2° 15'
T 556.8
L 1096.3
R 2546.7

932+50~ Req'd. 24"x64' cross culvert with Type "A" Headwall at inlet. Inlet ditch

Δ 38° 56' L
D 2° 00'
T 1012.7'
L 1946.7'
R 2865.0

P.T. 935+39.5 (Field Projection)

P.C. 937+88.1 (Field Projection)

FIELD PROJECTION
 Δ 14° 16' L
D 2° 30'
T 286.8'
L 570.7'
R 2292.0'

P.T. 943+58.8

S 14° 51' W

P.O.T. 943+59.76h
P.O.T. 947+79.64h

S 29° 07' W

(Field Projection)
P.I. 940+74.9

942+80~ Req'd. Type "A" Headwall at outlet of 24"x52' C.M.P. in place.

EQUATION

(Field Projection)
P.I. 930+00.0

P.I. 934+28.7

#75 A-7-6(16)
LL 50.7
PI 25.7
%-200 98.2

Subgrade Wet

#76 A-7-6(10)
LL 40.8
PI 15.4
%-200 93.3

200'VC

-2.20%

7900

7890

RL 96.5

#75 8' L1

86.56

84.71

83.56

81.40

81.20

81.00

NO. OF WAT. SHEETS



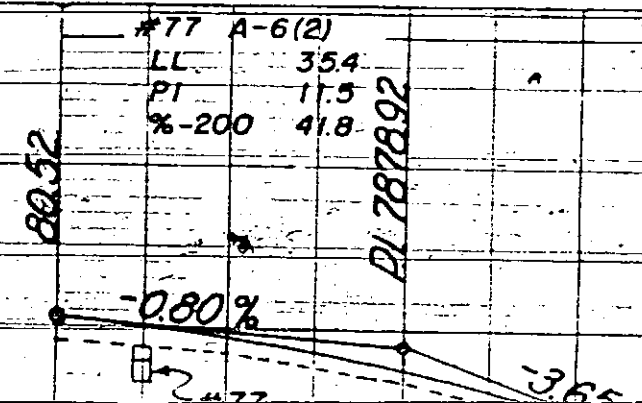
953+00 ~ Reg'd Approach to project.



Sta. 953+00 =
END F022-2(2) =
953+00 ON P.W.A. 300ID(2)

F022-2(2)

953+00 ~ Reg'd Project Marker Rt.
(State Forces) ✓



SUMMARY OF EARTH

EXCAVATION
FROM CROSS SECTIONS
MUCK EXCAVATION
LIST OF STRUCTURES AS
LIST OF STRUCTURES AS
ESTIMATED FOR CUT

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	F 022-2(2)	23	

MAJOR OF EARTHWORK QUANTITIES - F 022-2(2)

EXCAVATION

FROM CROSS SECTIONS

MUCK EXCAVATION

LIST OF STRUCTURES AS EXCAVATION

LIST OF STRUCTURES AS EMBANKMENT

ESTIMATED FOR CUT SHEET PREPARED

2307 ✓

6089 ✓