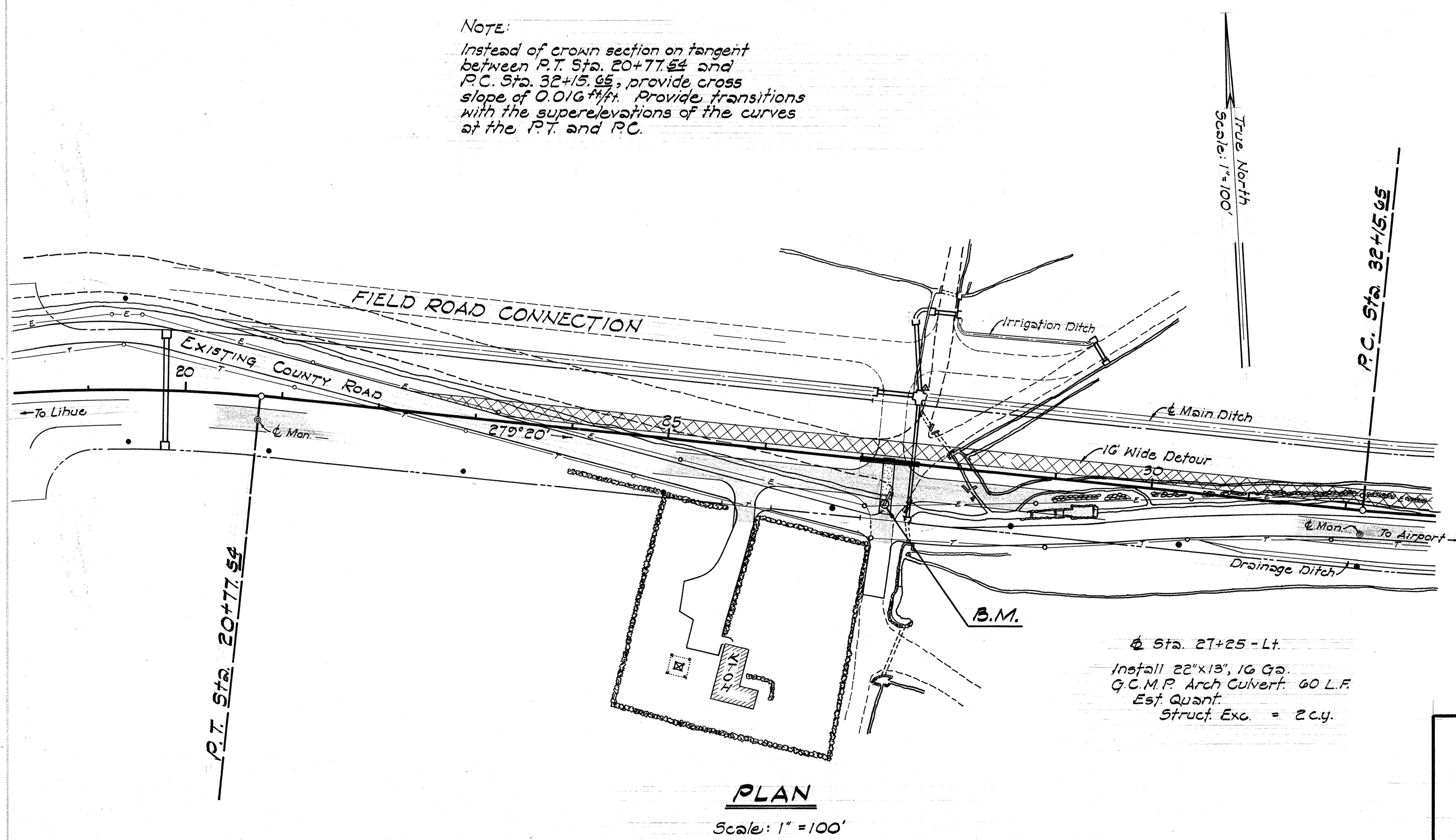


PLAN	DATE
BY	
SURVEYED	
NOTE BOOK	
ALIGNED CHECKED	
RT. OF WAY CHECKED	
NO.	

PROFILE	DATE
BY	
SURVEYED	
NOTE BOOK	
GRADES CHECKED	
B.M.'S NOTED	
STRUCTURE NOTATIONS CHECKED	
NO.	

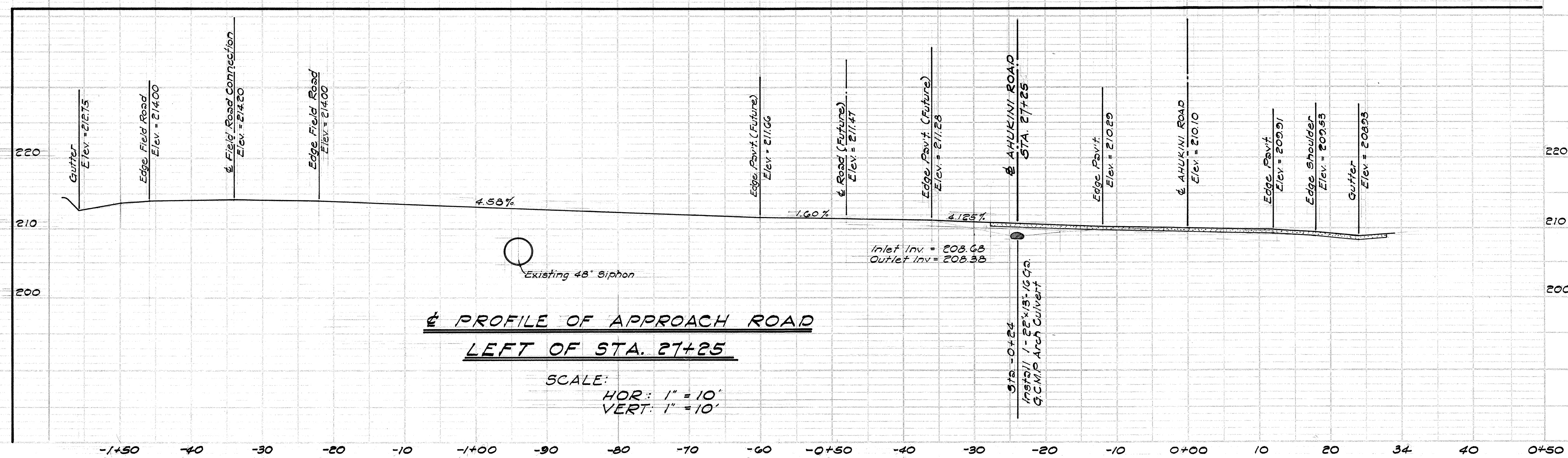
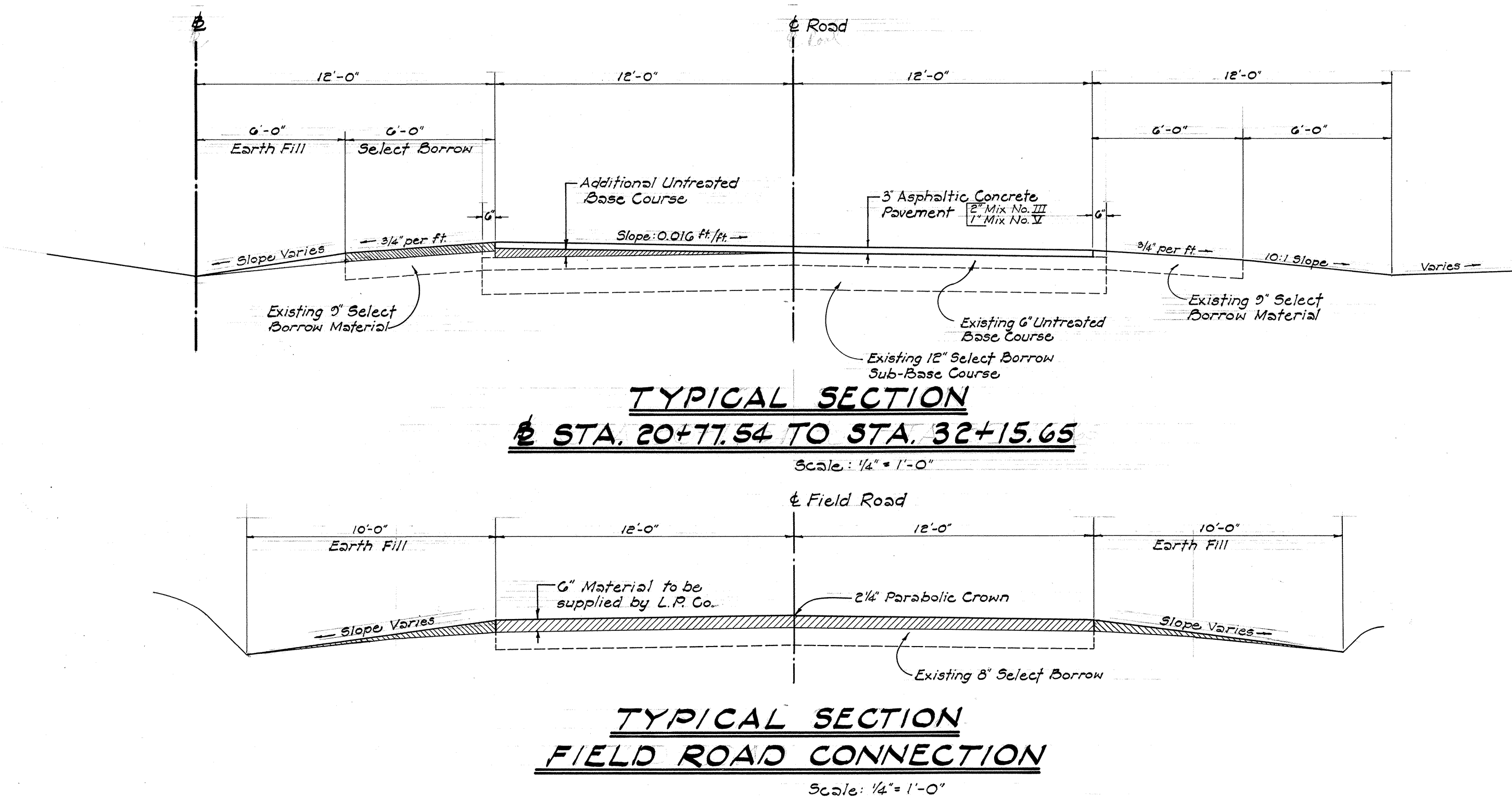
Note:
Instead of crown section on tangent
between P.T. Sta. 20+77.54 and
P.C. Sta. 32+15.65, provide cross
slope of 0.016 ft/ft. Provide transitions
with the superelevations of the curves
at the P.T. and P.C.



PLAN
Scale: 1" = 100'

Sta. 27+25 - L.I.
Infall 22'x13', 10 G.S.
G.C.M.P. Arch Culvert: 60 L.F.
Est. Quant.
Struct. Exc. = 2 cu.

**PLAN
TO ACCOMPANY
CONTRACT CHANGE ORDER NO. 2
AHUKINI ROAD
PROJ. NO. S-0570(1)
LIHUE, KAUAI, HAWAII**
SCALE: AS SHOWN DATE: MAY, 1965



GENERAL NOTES

1. The existing location of utilities shown are approx. only & shall be confirmed by the contractor in the field before beginning construction.
2. The Contractor shall coordinate his work with the Lihue Plantation Co. Ltd. so as not to disrupt the plantations normal schedule of operations in the vicinity of the project.
3. The item, "Maintaining Detours" is intended: to cover the work involved in the construction & maintenance of minor ramps other than that shown in the plans; and, to include all lighting, signing, delineating and barricading deemed necessary by the engineer to effectively safeguard & route the general public through the entire project.
4. All azimuths are based on "KALEPA" Δ.
5. All elevations are based on "Mean Sea Level."
6. Δ Monuments shall be installed according to R/W data.
7. All telephone & electric services to be moved by others.
8. All existing material items designated to be removed shall upon removal become the property of the Contractor.
9. All material items designated to be salvaged shall be thoroughly cleaned & stockpiled at the job site as directed by the engineer for pickup by the respective governmental agencies.
10. At completion of major items of work exposed old road pavements & detour surfaces shall be scarified unless otherwise directed by the engineer.
11. Excavated material to be wasted shall be disposed of along the job site and in the Lihue Airport grounds as directed by the Engineer.
12. All existing traffic signs not shown on the plans shall be removed and stockpiled as directed by the Engineer. The signs and supports shall remain State property. Cost of removing the existing signs shall be incidental to Regulatory and Warning Signs and Route Markers and shall not be paid for separately.
13. Existing utility poles to be removed, will be removed by others.

Note:
1- For existing waterline locations see sheet nos. 10-13
2- For underground telephone & electrical service line locations see sheet no. 9
3- For signs at junction. See junction detail, sheet no. 2

Sta. 2+60 & 4+00 - Rt.
Install new R-1 "Stop" signs. For details see Standard Details sheet no. 26

Sta. 2+00
Relocate T.B. Cross outside of R/W as directed by the engineer. This work shall be considered incidental to Roadway Exc. & shall not be paid for separately.

Summary of Regulatory signs and Route Markers

	New	Rel.
M-1-3 (51)	2	
M-1-4 (56)	4	
M-1-4 (57)	3	
M-2-1	3	
M-4-1	2	
M-4-3	2	
M-4-4	1	
R-1-1 (25)	2	1
R-2-1 (35)	2	
R-2-5	2	

NOTE:
Unless otherwise ordered, all excavations within the R/W shall be broken thru and backfilled. This work shall be considered incidental to Roadway Exc. and shall not be paid for separately.

Sta. 1+87 Rt.
Construct 18"x8" Concrete Box Culvert. For Details see sht. no. 22A
Estimated Quantities
Stru. Exc. 6 C.Y.
Class "B-1" Conc. 2.1 C.Y.
Reinf. Steel 160 Lbs.

B.M. = Top of Federal Aid Hwy. Bdy. Mon. at junction of Kuhio Hwy. & Anukini Rd. Elev. = 218.92'

BASELINE CURVE DATA

Δ	21° 16'
L	10° 38'
LC	1500.00'
PC	281.62'
PT	553.57'
SE	553.76'
	0.022 Ft./Ft.

Sta. 5+70 to 10+60 - Lt.
Unless otherwise ordered by the engineer, a detour as shown shall be constructed to facilitate work on the adjacent roadbed. Exc. quantities are included in Roadway Exc.
Est. Quant.
B.C. Area
B.C. Surface Treatment - 800 sq. yd.

Sta. 10+62
Install 36" Siphon Pipe as shown.
For Details see Sheet No. 16

Construct Plain Conc. Sidewalk as shown. For details see sheet no. 2
Sta.
0+78 to 1+00 - Rt. 1+78
1+78 to 2+00 - Rt. 2+22
2+22 to 2+60 - Rt. 2+58
2+60 to 3+00 - Rt. 3+23

Construct Plain Conc. Gutter as shown. For details see sheet no. 2
Sta.
0+72 to 1+00 - Lt. 1+34
1+34 to 2+00 - Lt. 2+56
2+56 to 3+00 - Lt. 3+23

Sta.	Approx. Width	E/P	B.C.	A.C.	Exc.	Emb.
0+20 to 0+22 - Rt.	14'	15'	22.54	33.54	2.16	0
0+22 to 0+24 - Rt.	14'	15'	34.48	50.43	2.16	0
1+07 - Rt.	14'	15'	15.45	54.49	50.43	14.2
2+44 to 2+46 - Rt.	20'	20'	34.157	56.197	14.16	0
2+46 to 2+48 - Lt.	22'	30'	23.0	24.0	24.0	0
3+70 - Lt.	18'	30'	158	157	11.53	0
5+86 to 5+88 - Rt.	18'	30'	158	157	11.53	0
5+88 to 5+90 - Rt.	24'	30'	118	100	18	78.24

POINTS OF ACCESS

STATION	WIDTH	LEFT	RIGHT
0+25	—	35.00	—
0+30	—	20.00	—
1+30	—	20.00	—
2+50	50.00	40.06	—
3+70	50.00	—	—
4+80	—	50.00	—
5+80	—	40.26	—
6+90	60.00	60.00	—
16+45	50.00	50.01	—
18+25	50.00	50.00	—
25+85	—	50.00	—
27+30	50.00	50.00	—
36+50	60.00	60.00	—
43+25	—	50.00	—
50+75	—	60.00	—
56+40	50.01	50.00	—
70+30	60.00	60.00	—

OVERHAUL SUMMARY

FROM STATION	TO STATION	NET DIST.	VOLUME	STA. YARDS
27+25	9+40	7.85 STA	721 CY	5,660
28+35	44+95	6.60 STA	3,290 CY	21,714
64+10	53+35	0.55 STA	42 CY	23
67+75	53+12	4.63 STA	644 CY	2,982
WASTE			14,151 CY	
FREEHAUL			10,097 CY	20,379
TOTAL			28,224 CY	24,714

NOTE:
Excess Material shall be wasted as shown in the Cross-Section and in the vicinity of the Hanger and the North End of the Runway at the Lihue Airport.

7026	=	5580
2094 + 6934	=	9028
5280	=	1340
1000 + 6454	=	7454
5280	=	2060
7768 + 1400	=	9168
5280	=	1337
3282 + 4886	=	8168
5280	=	2848
	=	8517

- Existing Utility Poles
- Proposed Utility Poles



B.M. 4 on north headwall of 36" pipe culvert crossing cane haul road approx. 270 ft. north of Sta. 8+00. Elev. = 223.67'

Sta. 19+70 to 20+30 - Lt.
Construct field road connection 24' wide, and approaches as shown. Exc. quantities are included under Roadway Exc.
Est. Quant.
B.C. Area = 2670 sq. ft.
For typical section see sheet no. 4C

22+50
Sta. 22+20 to 26+40 - Lt.
Unless otherwise ordered by the Engineer, a detour as shown shall be constructed to facilitate work on the adjacent roadbed. Exc. quantities are included in Roadway Exc.
Est. Quant.
B.C. Area = 2,240 sq. ft.
Bit. Surface Treatment = 2,622 sq. yd.
For typical section, see sheet no. 4

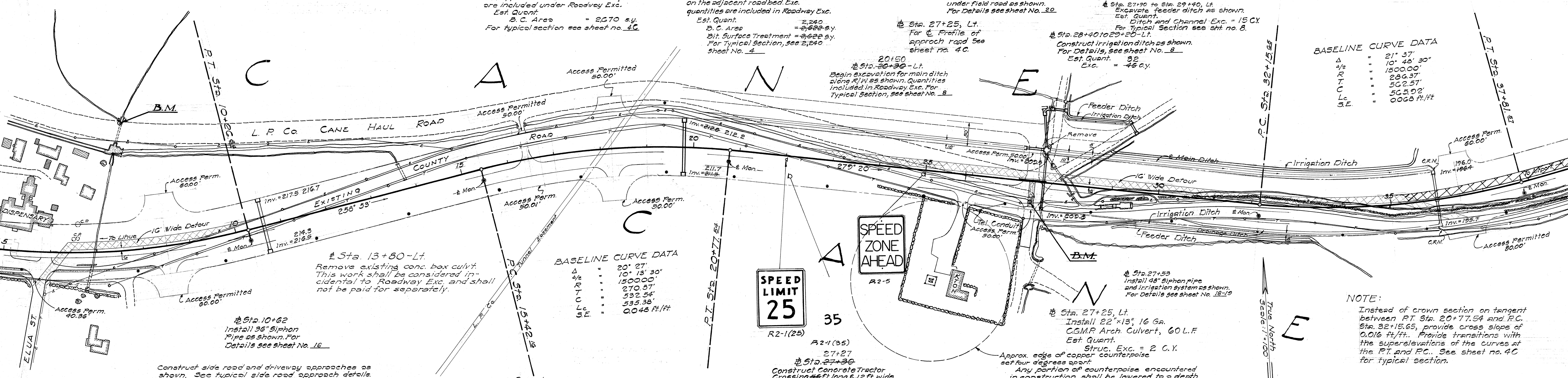
Sta. 27+25, Lt.
For C. Profile of approach road see sheet no. 4C

29+28
Sta. 29+26 - Lt.
Install 36" Siphon Pipe under field road as shown. For Details, see sheet No. 20
Sta. 29+30 to 29+40, Lt.
Excavate feeder ditch as shown. Est. Quant.
Ditch and Channel Exc. = 15 CY.
For typical section see sheet no. 8

Sta. 28+40 to 29+20 - Lt.
Construct irrigation ditch as shown. For Details, see sheet No. 8
Est. Quant.
Exc. = 46 cy.

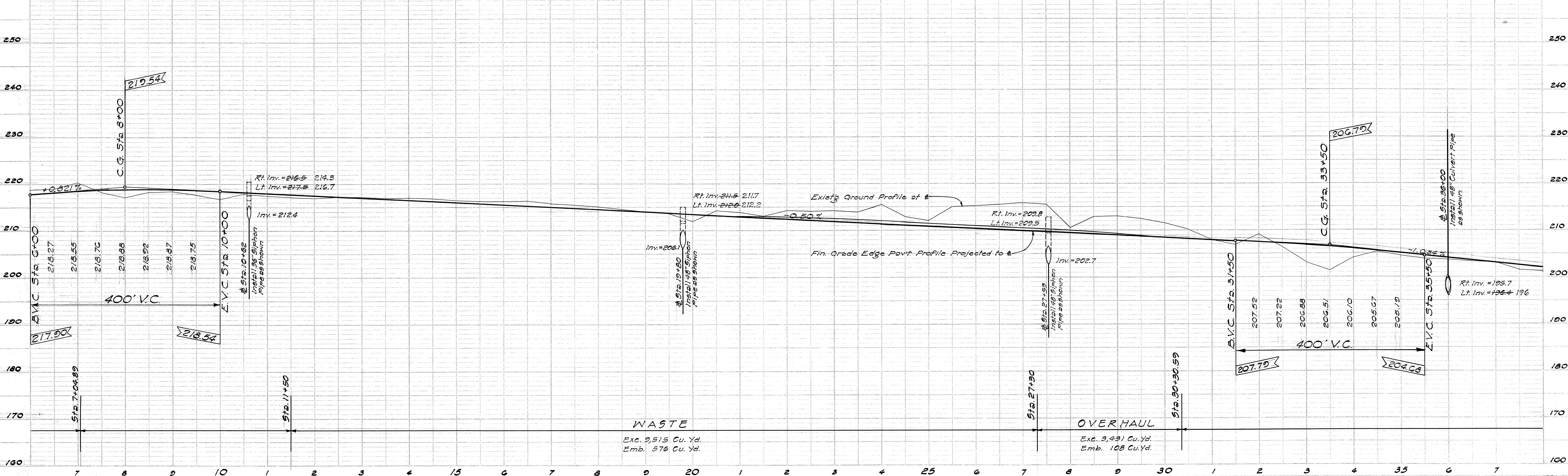
BASILINE CURVE DATA

Δ	21° 37'
Δ/2	10° 48' 30"
R	1500.00'
T	286.37'
L	562.57'
E	562.57'
P.C.	0006 ft./ft



NOTE:
Instead of crown section on tangent between P.T. Sta. 20+77.54 and P.C. Sta. 32+15.65, provide cross slope of 0.016 ft./ft. Provide transitions with the super-elevations of the curves at the P.T. and P.C.. See sheet no. 4C for typical section.

Station	Approx. Width	4/P R	B.C. Area	A.C. Area	Exc. 332	Emb.
Sta. 16+40 - Lt.	14'	30'	139 sq. yd.	68 sq. yd.	0 cy.	0 cy.
Sta. 18+24 - Rt.	20'	30'	103 sq. yd.	48 sq. yd.	0 cy.	0 cy.
Sta. 25+86 to 26+90 - Rt.	20'	30'	123 sq. yd.	47 sq. yd.	0 cy.	0 cy.
Sta. 27+25 - Lt.	24'	30'	244 sq. yd.	64 sq. yd.	398 sq. yd.	0 cy.
Sta. 27+30 - Rt.	20'	30'	163 sq. yd.	220 sq. yd.	127 sq. yd.	0 cy.



Construct side road approaches as shown. See Typical side road approach detail.

Approx. Width	R	B.C. Area	A.C. Area	Exc. Emb.
43+20-Rt	20'	328 sq. yd.	73 sq. yd.	78 cy
56+40-B.S.	24'	30'	303 sq. yd.	90 cy

Sta. 29+00 to Sta. 35+50 - Lt.
Excavate irrigation ditch as shown.
Est. Quant.
Ditch & Channel Exc. = 120 cy
For Typical Section, see sheet no. 8

Sta. 30+00 - Lt. and Rt.
Construct erosion wall at bends in main ditch as shown - 15' long
Est. Quant.
Struc. Exc. = 56 cy
C.R.M. = 38 cy
See Typical Section, sheet no. 8

NOTE:
Excavate main ditch left of as shown. Quantities included in Roadway Exc. See Typical section, sheet no. 8

Sta. 30+00 to 30+70 Rt.
Excavate main ditch along R/W as shown. Quantities included in Roadway Exc. See Typical Section sheet no. 8

Sta. 41+00 - Lt.
Construct concrete turnout as shown. For details see sheet no. 17
Est. Quantities
2-1' Conc. = 27 cy
Struc. Exc. = 136 cy

50+40
Sta. 51+00
Install 48" C.I. III R.C.C.P. or 48" 12 gage CGMP & excavate connecting ditch as shown. 96 Lin. Ft., 1-CHW, 1-CDI, 1-CBI
Est. Quant.
Struc. Exc. = 123 cy
Ditch & Channel Exc. = 88 cy
Class "B-1" Conc. = 132 cy
Reinf. Steel = 78 Lbs.
For Details of C.B.I. see sheet No. 17

36+40 79+88
Sta. 51+50 to 79+50 - Lt.
Unless otherwise ordered by the engineer, a detour as shown shall be constructed to facilitate work on the adjacent road bed. Exc. quantities are included in Roadway Exc.
Est. Quant.
B.C. Area = 7645
Bit Surface Treatment = 5000 sq. yd.
For Typical Section, see sheet no. 4

Sta. 50+00 - Lt.
Install 48" C.I. III R.C.C.P. or 48" CGMP & excavate irrigation ditch connection as shown. 32 Lin. Ft., 1-CHW, 1-CTO
Est. Quant.
Struc. Exc. = 83 cy
Ditch & Channel Exc. = 13 cy
Class "B-1" Conc. = 186 cy
Reinf. Steel = 78 Lbs.
G.R.P. = 1.3 cy
For details of C.T.O. see sheet no. 21
For Typical Section of irrigation ditch, see sheet no. 8

Sta. 56+80 to 60+10 - Lt.
Excavate Feeder Ditch as shown. Est. Quant.
Ditch & Channel Exc. = 33 cy
For Typical Section see sheet no. 8

Sta. 56+50 to 59+50 - Rt.
Excavate Feeder Ditch as shown. Est. Quant.
Ditch & Channel Exc. = 129 cy
For Typical Section see sheet no. 8

B.M. "A" on N.E. corner of headwall of irrigation culvert at intersection of old road & Ahukini Road. Elev. 166.74

BASLINE CURVE DATA

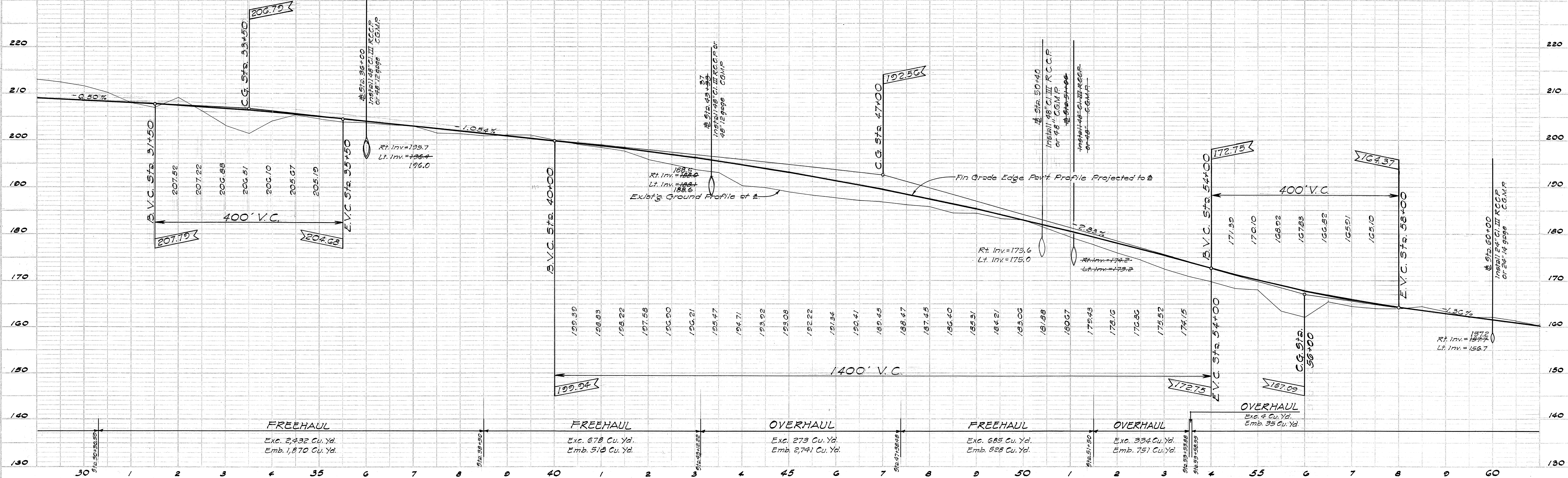
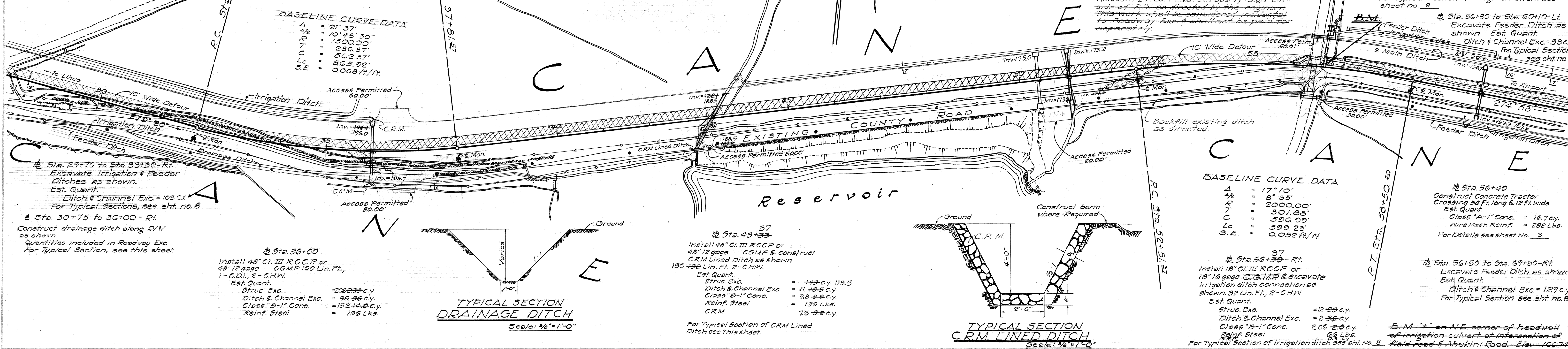
Δ	21° 37'
4%	10' 48" 30"
RT	1500.00'
LC	286.37'
LT	562.57'
SE	0.008 ft./ft.

BASLINE CURVE DATA

Δ	17° 10'
4%	8' 35"
RT	2000.00'
LC	307.08'
LT	590.09'
SE	0.002 ft./ft.

TYPICAL SECTION DRAINAGE DITCH
Scale: 1/8" = 1'-0"

TYPICAL SECTION C.R.M. LINED DITCH
Scale: 1/8" = 1'-0"



Sta. 56+80 to Sta. 79+50 - Lt.
Excavate irrigation ditch along R/W & relocate existing R/W frame & gates at wing ditches as shown.
Est. Quant. = 939
Ditch & Channel Exc. = 505 c.y.
For details of irrigation ditch, see this sheet.
Relocation of R/W frame & gates to be incidental to Ditch & Channel Exc.

Sta. 79+50 - Lt.
End excavation for main ditch along R/W as shown.
Quantities included in Roadway Excavation.
See typical section this sheet.

Sta. 60+00
Install 24" C.I. III RCCP 36 or 24" 14 gage CGMP 93 Lin. Ft.
2-CD, 1-CHW
Est. Quant.
Struc. Exc. = 88 c.y. 77
Ditch & Channel Exc. = 12.5 c.y. 11
Class "B-1" Conc. = 50 c.y. 5.52
Reinf. Steel = 42 Lbs.
Moving existing pipeline = 50 Lin. Ft. 30

Sta. 69+25
Install 24" C.I. III RCCP or 24" 14 gage CGMP 108 Lin. Ft.
2-CD, 1-CHW
Est. Quant.
Struc. Exc. = 110 c.y. 112
Ditch & Channel Exc. = 25 c.y. 30
Class "B-1" Conc. = 50 c.y. 5.52
Reinf. Steel = 42 Lbs.
Moving Existing Pipeline = 30 Lin. Ft.

Sta. 79+45 - Lt.
Construct erosion wall at bend in main ditch as shown. 15' long
Est. Quant.
Struc. Exc. = 38.4 c.y.
C.R.M. = 37.2 c.y.
See typical section this sheet.

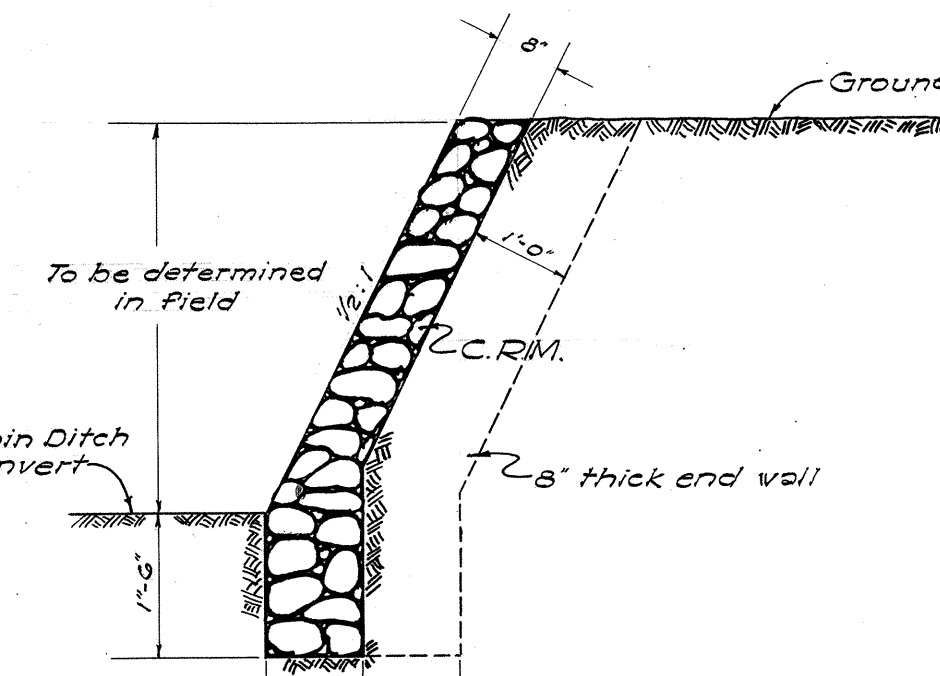
SPEED LIMIT 35

SPEED LIMIT 25

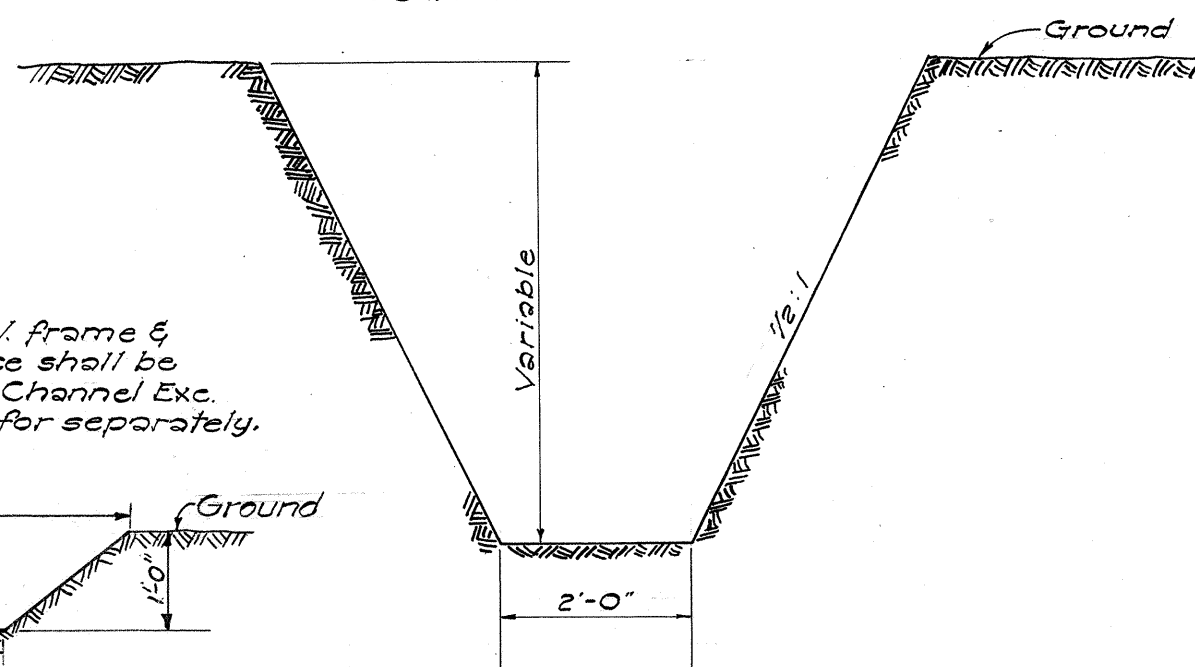
SPEED ZONE AHEAD

Install Federal Aid Marker

LIHUE AIRPORT GROUNDS



TYPICAL SECTION EROSION WALL STA. 79+45 Scale: 1/2" = 1'-0"



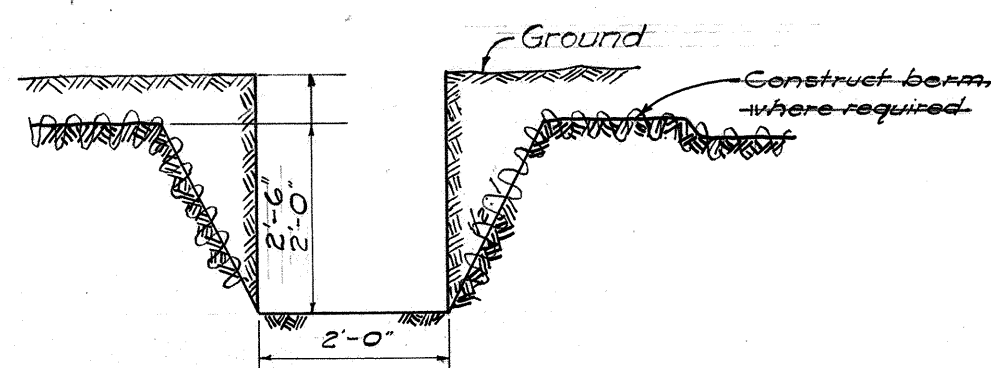
TYPICAL SECTION FEEDER DITCH Scale: 1/2" = 1'-0"

TYPICAL SECTION MAIN DITCH Scale: 1/2" = 1'-0"

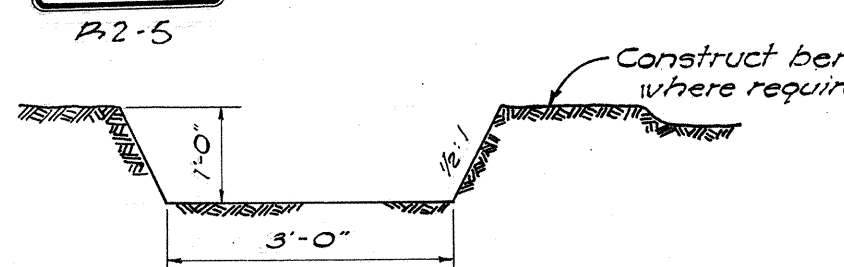
Note:
Relocation of all R/W frame & gates complete in place shall be incidental to Ditch & Channel Exc. & shall not be paid for separately.

Sta. 56+60 to Sta. 69+30 - Rt.
Excavate irrigation ditch along R/W & relocate existing R/W frame & gate as shown.
Est. Quant. = 233
Ditch & Channel Exc. = 205 c.y.
For details of irrigation ditch, see this sheet.

Sta. 63+00 - Rt.
Raise existing M.H. frame & cover to conform to finished grade.



TYPICAL SECTION IRRIGATION DITCH Scale: 1/2" = 1'-0"



TYPICAL SECTION OVERFLOW DITCH Scale: 1/2" = 1'-0"

Sta. 69+30 to Sta. 80+00 - Rt.
Excavate overflow ditch as shown.
Est. Quant. = 109
Ditch & Channel Exc. = 140 c.y.
For details of overflow ditch, see this sheet.

