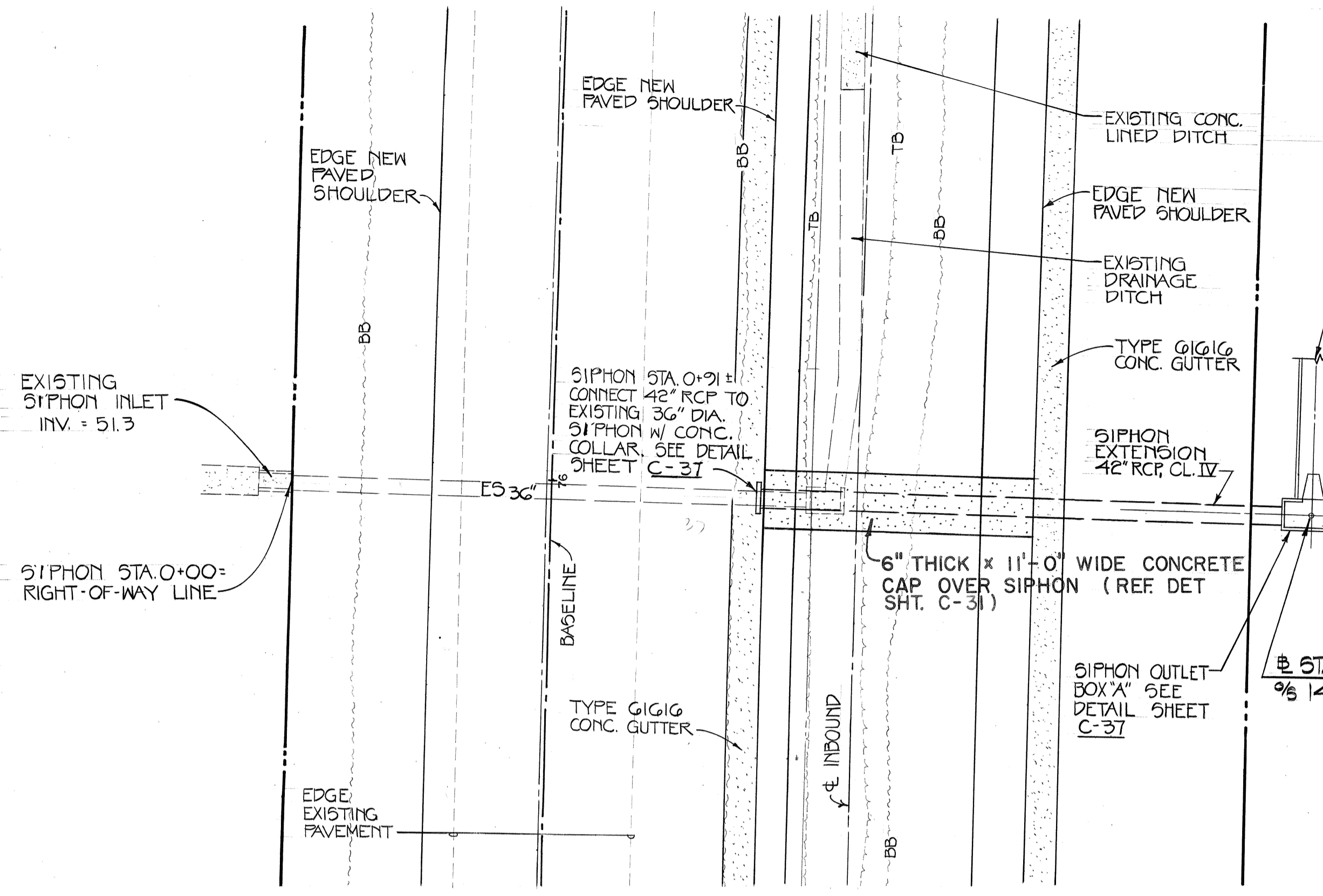
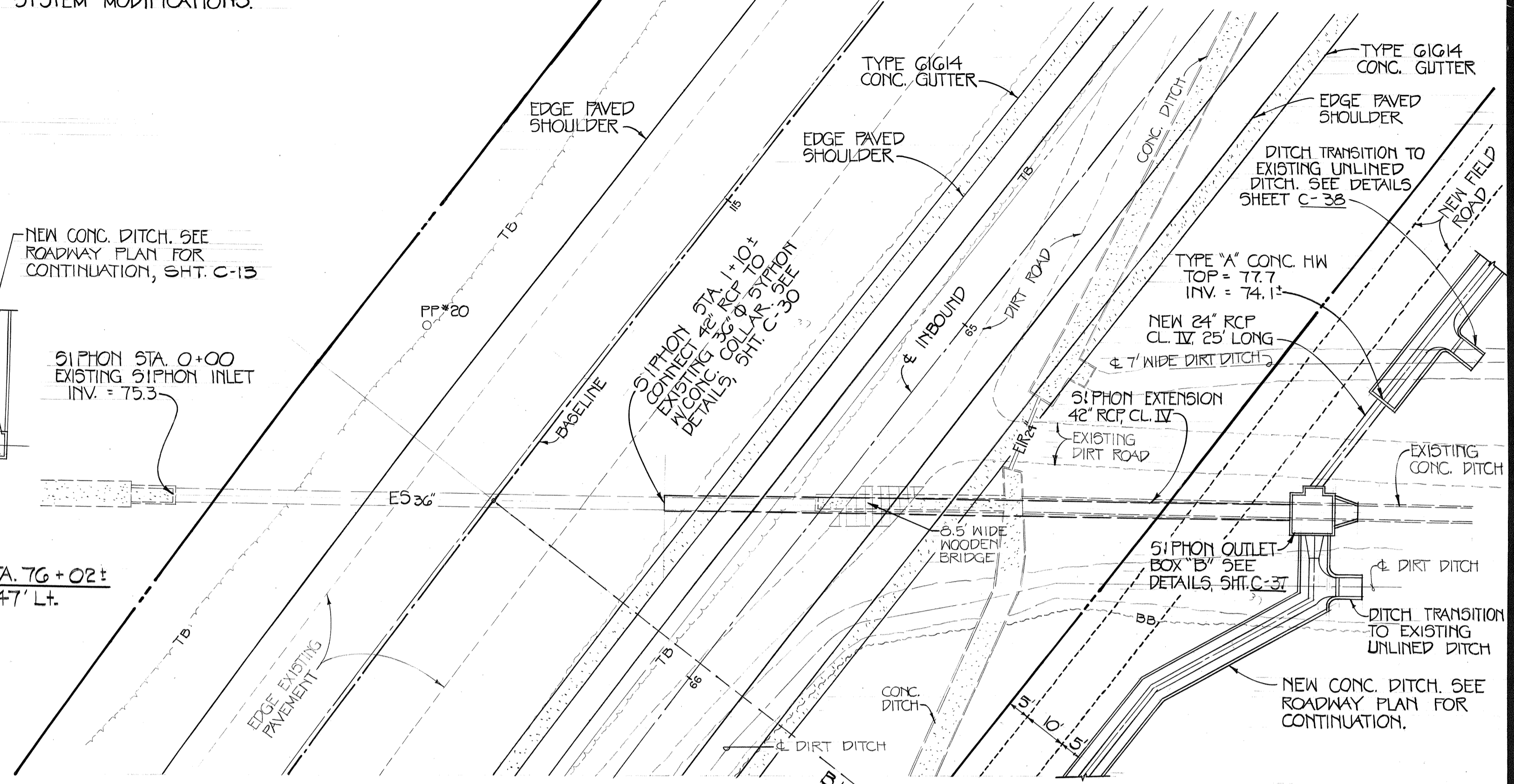


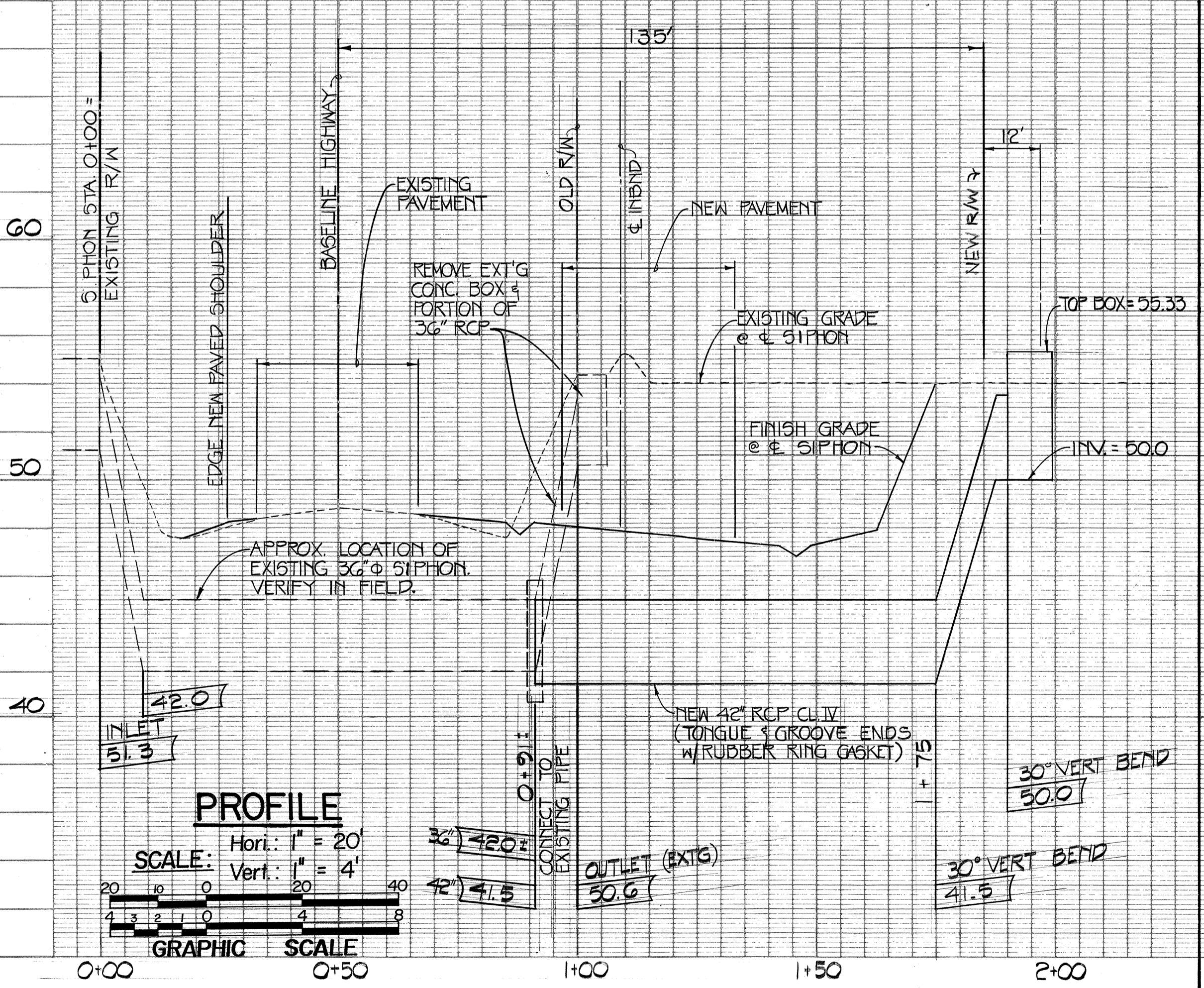
SEE SHEET C-3 FOR "NOTES FOR WORK WITHIN CANEFIELD AREAS, AND IRRIGATION SYSTEM MODIFICATIONS."



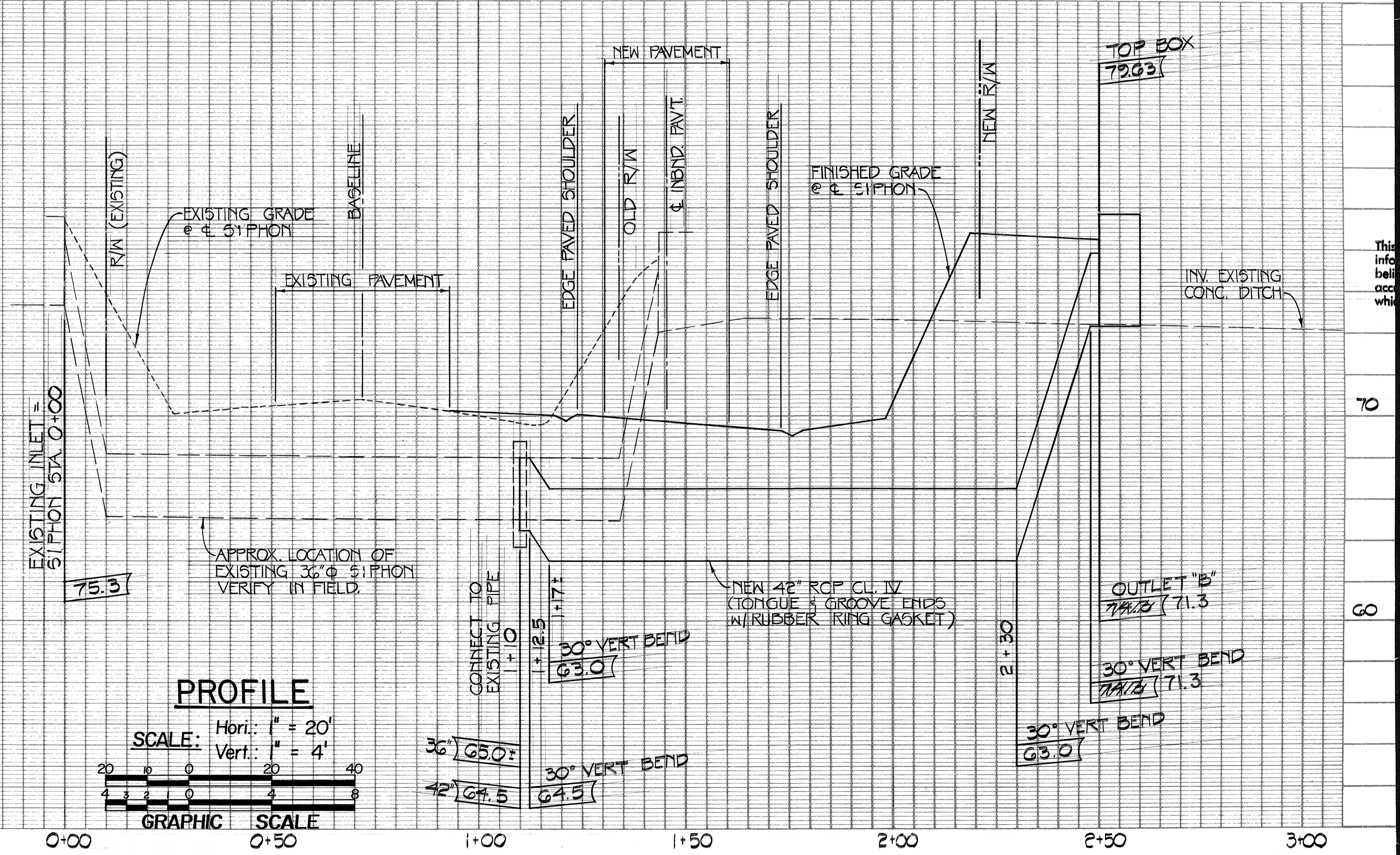
PLAN - IRRIGATION SIPHON "A"  
 B.L. STA. 76 + 02 ±  
 SCALE: 1" = 20'  
 GRAPHIC SCALE



PLAN - IRRIGATION SIPHON "B"  
 B.L. STA. 115 + 85 ±  
 SCALE: 1" = 20'  
 GRAPHIC SCALE



PROFILE  
 SCALE: Hori: 1" = 20'  
 Vert: 1" = 4'  
 GRAPHIC SCALE



PROFILE  
 SCALE: Hori: 1" = 20'  
 Vert: 1" = 4'  
 GRAPHIC SCALE



Airports Division  
 DEPARTMENT OF TRANSPORTATION  
 STATE OF HAWAII

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

*[Signature]*  
 10/2/91  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 1754-C  
 HAWAII, U.S.A.

R. T. TANAKA ENGINEERS, INC.  
 871 KOLU STREET, SUITE 201  
 WAILUKU, MAUI, HAWAII 96793

DSGN.	DRWN.	CHKD.	APPD.
R.H.	C.N.	RTT.	

KEY PLAN / NOTES :

NO.	DATE	REVISIONS
-----	------	-----------

**AS-BUILT** (Record Drawing)  
 DATE: 7/12/91

This Drawing has been prepared, in part, based upon information furnished by others. While this information is believed to be reliable, the Design Professional cannot assume its accuracy of this As-Built drawing or for any errors or omissions which may have been incorporated into it as a result.

PROJECT TITLE :

HANA HIGHWAY IMPROVEMENTS

PROJECT NO. :

STATE NO. AM-1061-12  
 AIP NO. 3-15-0006-11

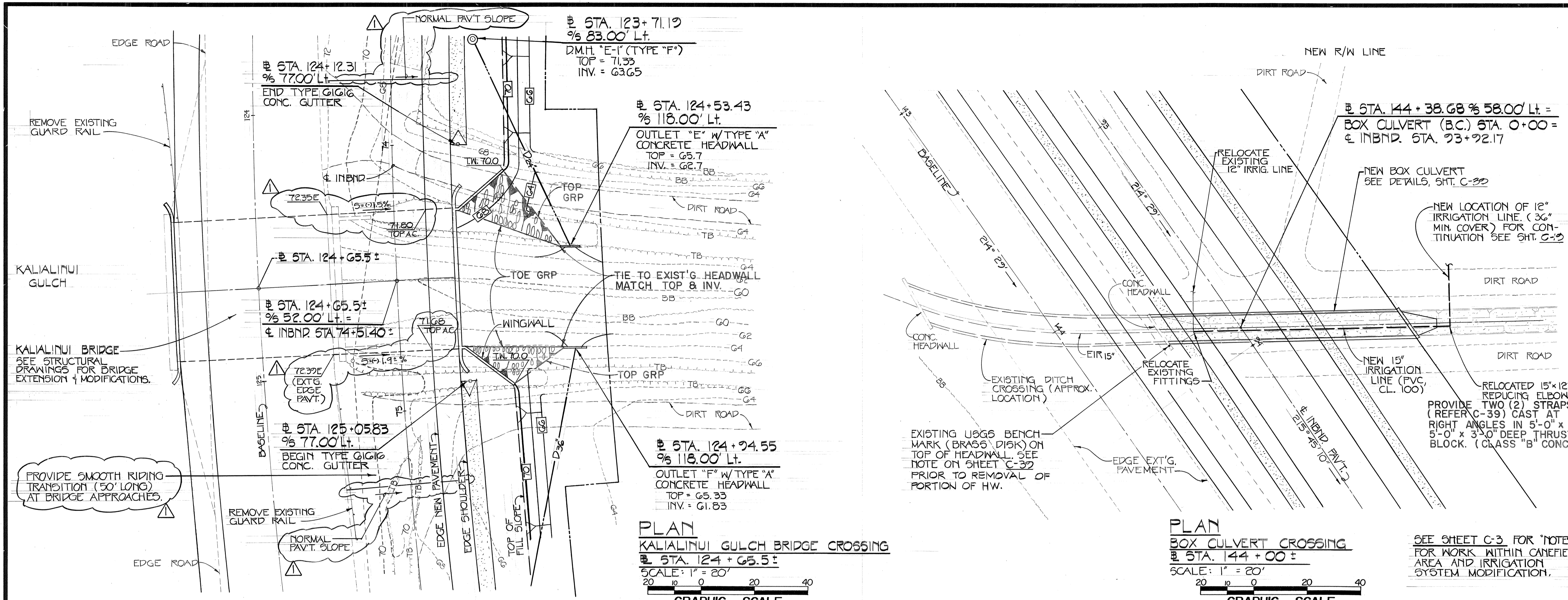
SHEET TITLE :

PLAN & PROFILE  
 IRRIGATION SIPHONS  
 AT Sta. 76 + 02 ±  
 & Sta. 115 + 85 ±

DATE: 11-15-89

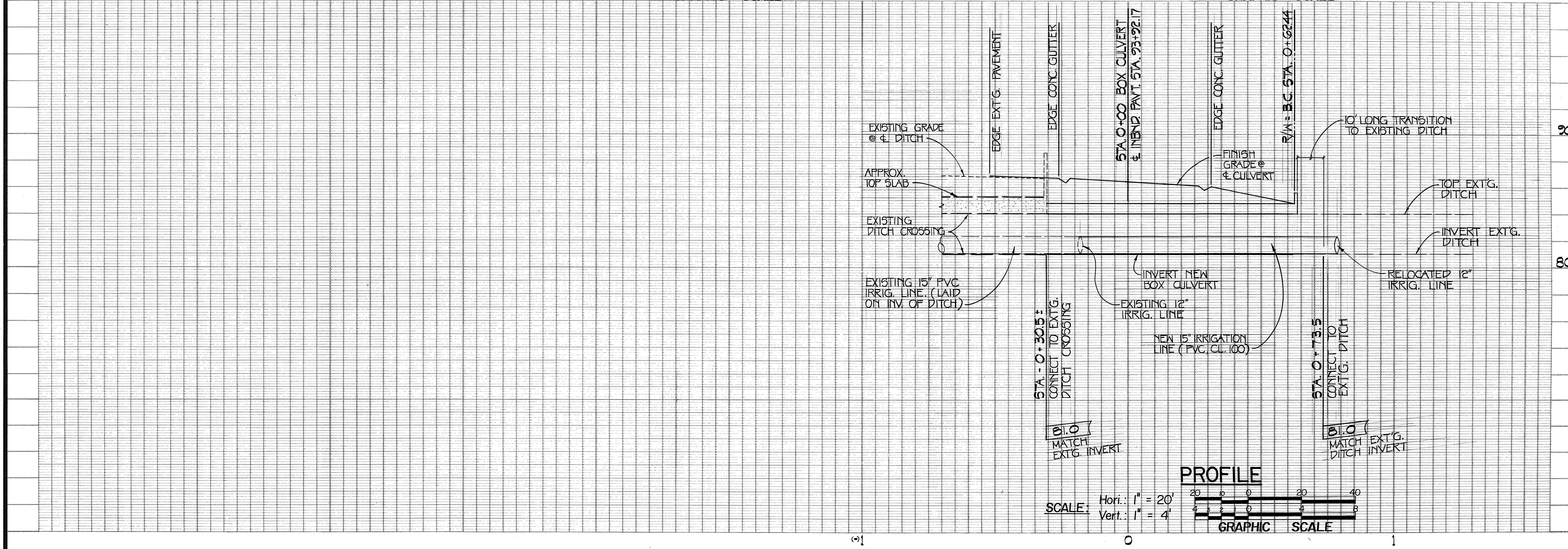
DWG. NO. :

**C-32**




**PLAN**  
**KALIALINI GULCH BRIDGE CROSSING**  
 STA. 124+65.5 ±  
 SCALE: 1" = 20'  
 GRAPHIC SCALE

**PLAN**  
**BOX CULVERT CROSSING**  
 STA. 144+00 ±  
 SCALE: 1" = 20'  
 GRAPHIC SCALE

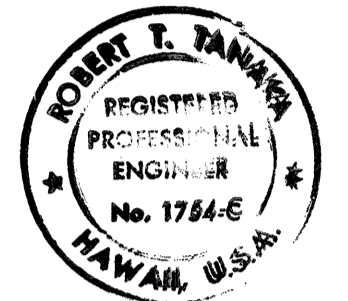


**PROFILE**  
 SCALE: Hor.: 1" = 20'  
 Vert.: 1" = 4'  
 GRAPHIC SCALE



State of Hawaii  
 Airports Division  
 DEPARTMENT OF TRANSPORTATION  
 STATE OF HAWAII

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.



ROBERT T. TANAKA  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 1754-E  
 HAWAII, U.S.A.

R. T. TANAKA ENGINEERS, INC.  
 871 KOLU STREET, SUITE 201  
 WAILUKU, MAUI, HAWAII 96793

DSGN.	DRWN.	CHKD.	APPD.
R.H.	C.N.	R.T.T.	

**KEY PLAN / NOTES :**

SEE SHEET C-3 FOR NOTES FOR WORK WITHIN CANEFIELD AREA AND IRRIGATION SYSTEM MODIFICATION.

NO.	DATE	REVISIONS
	7-16-20	MISC. REVISIONS

**AS-BUILT** (Record Drawing)  
 DATE: 7/12/91

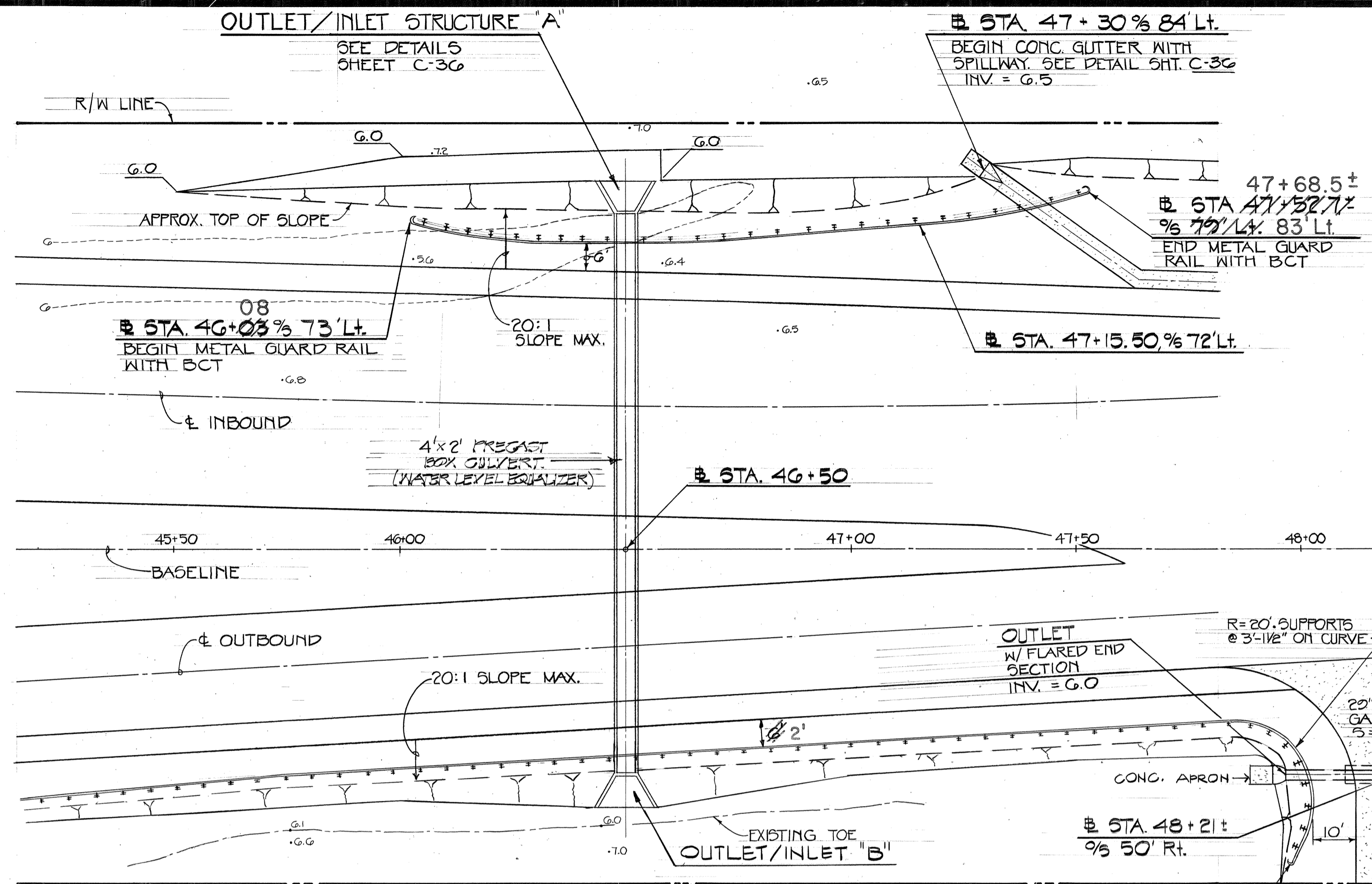
This Drawing has been prepared, in part, based upon information furnished by others. While this information is believed to be reliable, the Design Professional cannot assure its accuracy or that it has been incorporated into it as a result.

**PROJECT TITLE :**  
**HANA HIGHWAY IMPROVEMENTS**

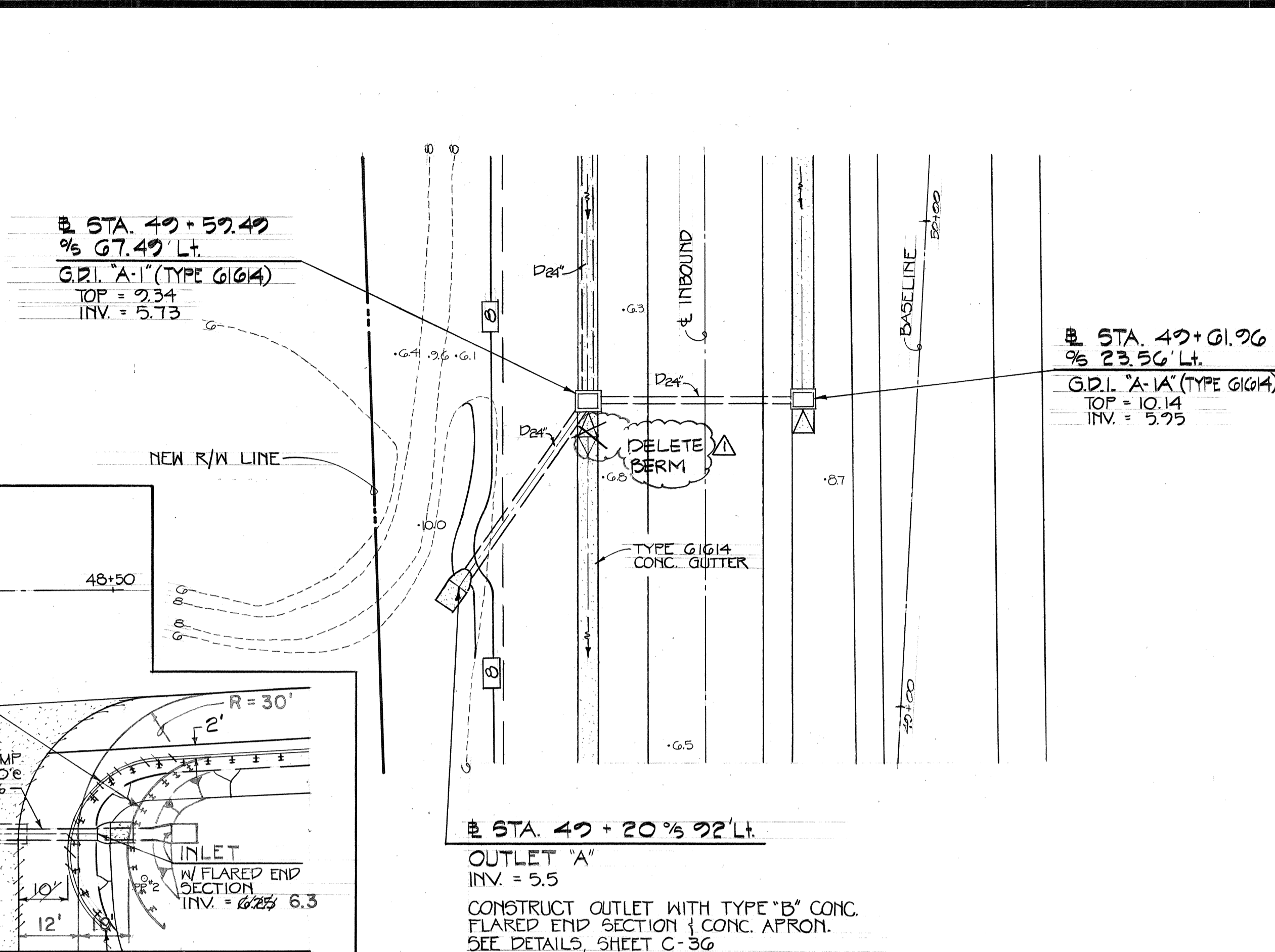
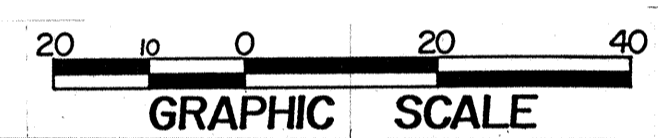
**PROJECT NO. :**  
 STATE NO. AM-1061-12  
 AIP NO. 3-15-0006-11

**SHEET TITLE :**  
**PLAN - KALIALINI GULCH CROSSING at Sta. 124+65.5**  
**PLAN & PROFILE - BOX CULVERT CROSSING at Sta. 144+00**

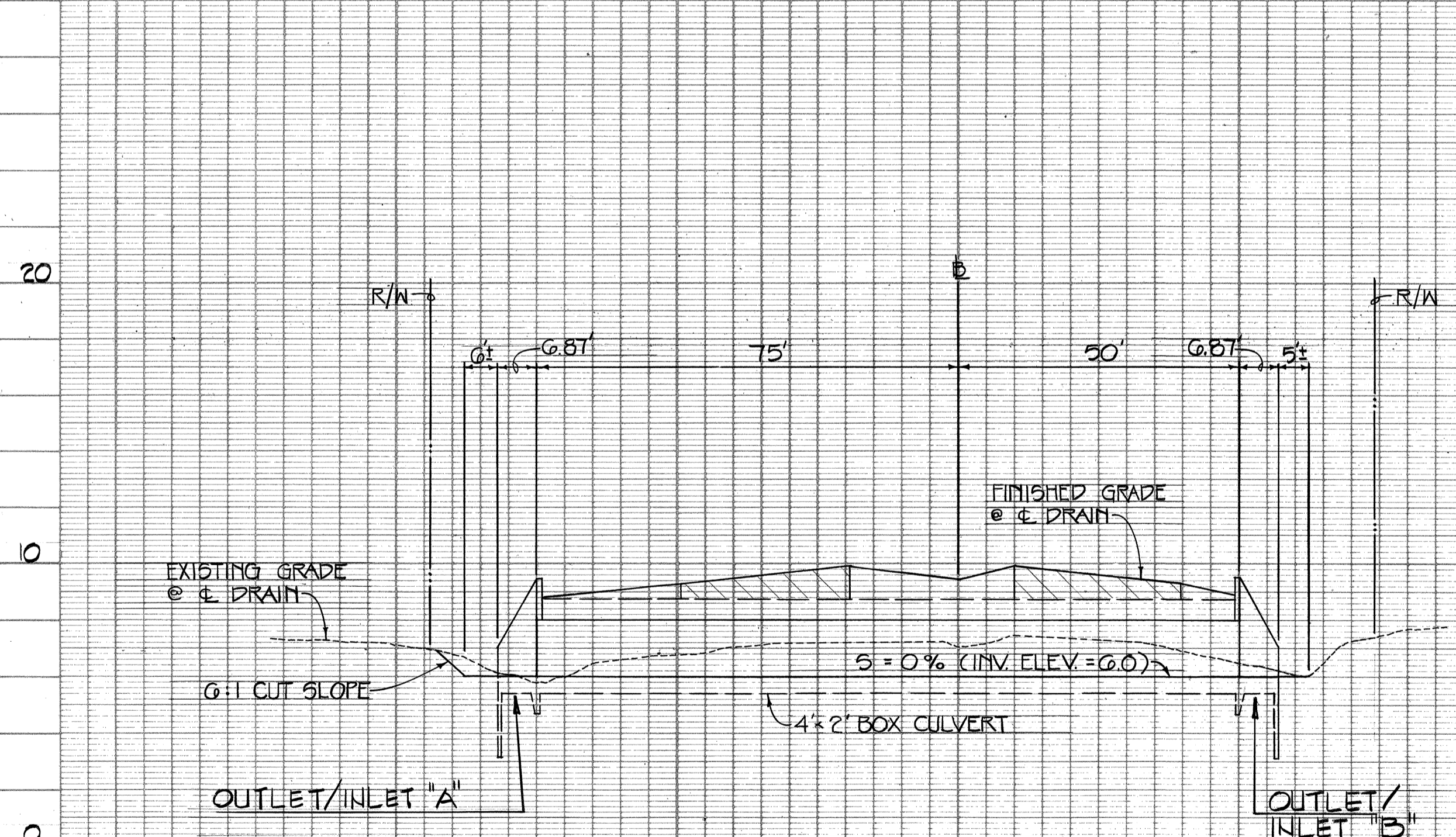
DATE: 11-15-89  
 DWG. NO.: **C-33**



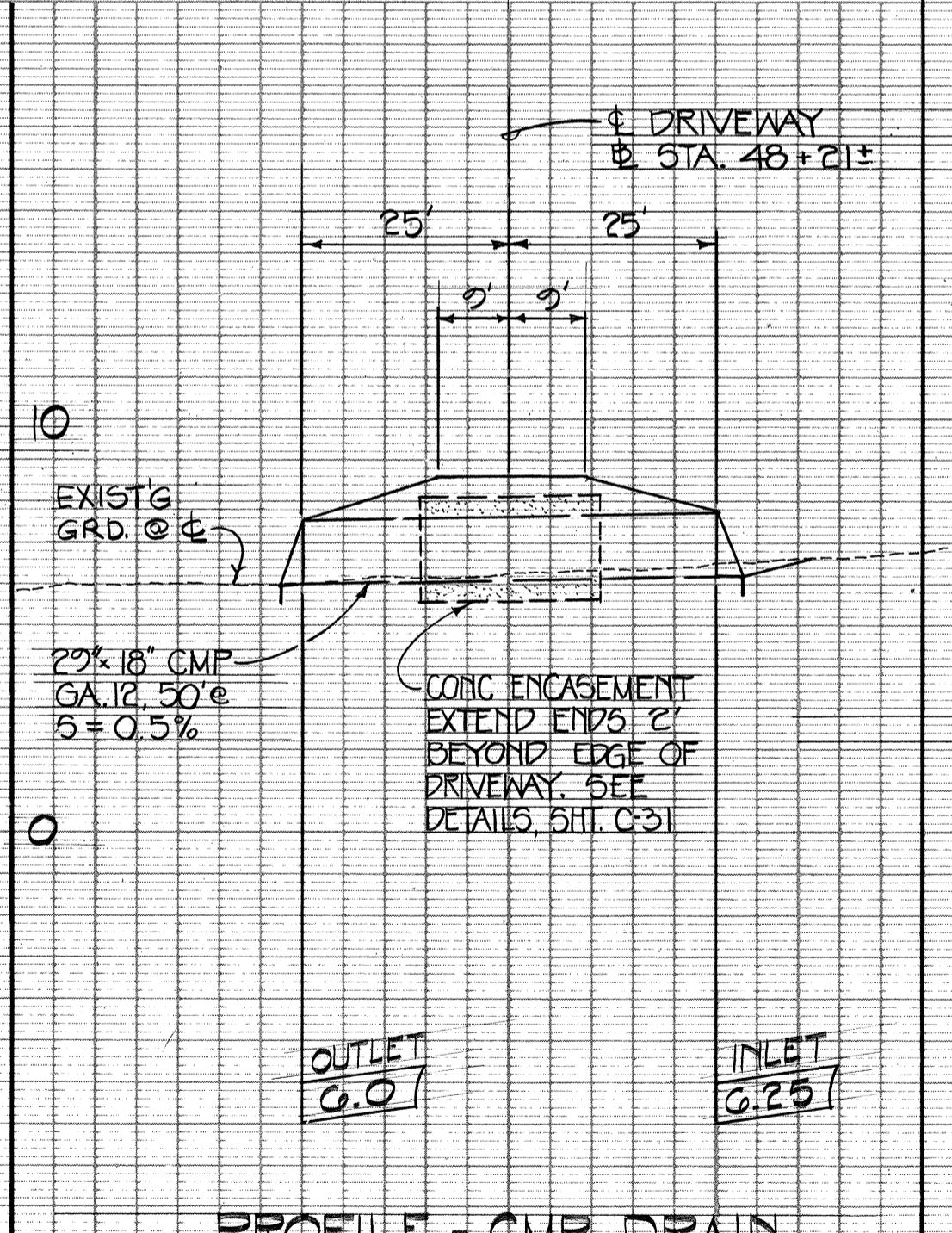
**DETAIL PLAN**  
 AT STA. 45+45 TO STA. 48+55  
 SCALE: 1" = 20'



**PLAN - DRAINLINE**  
 AT STA. 47+01  
 SCALE: 1" = 20'

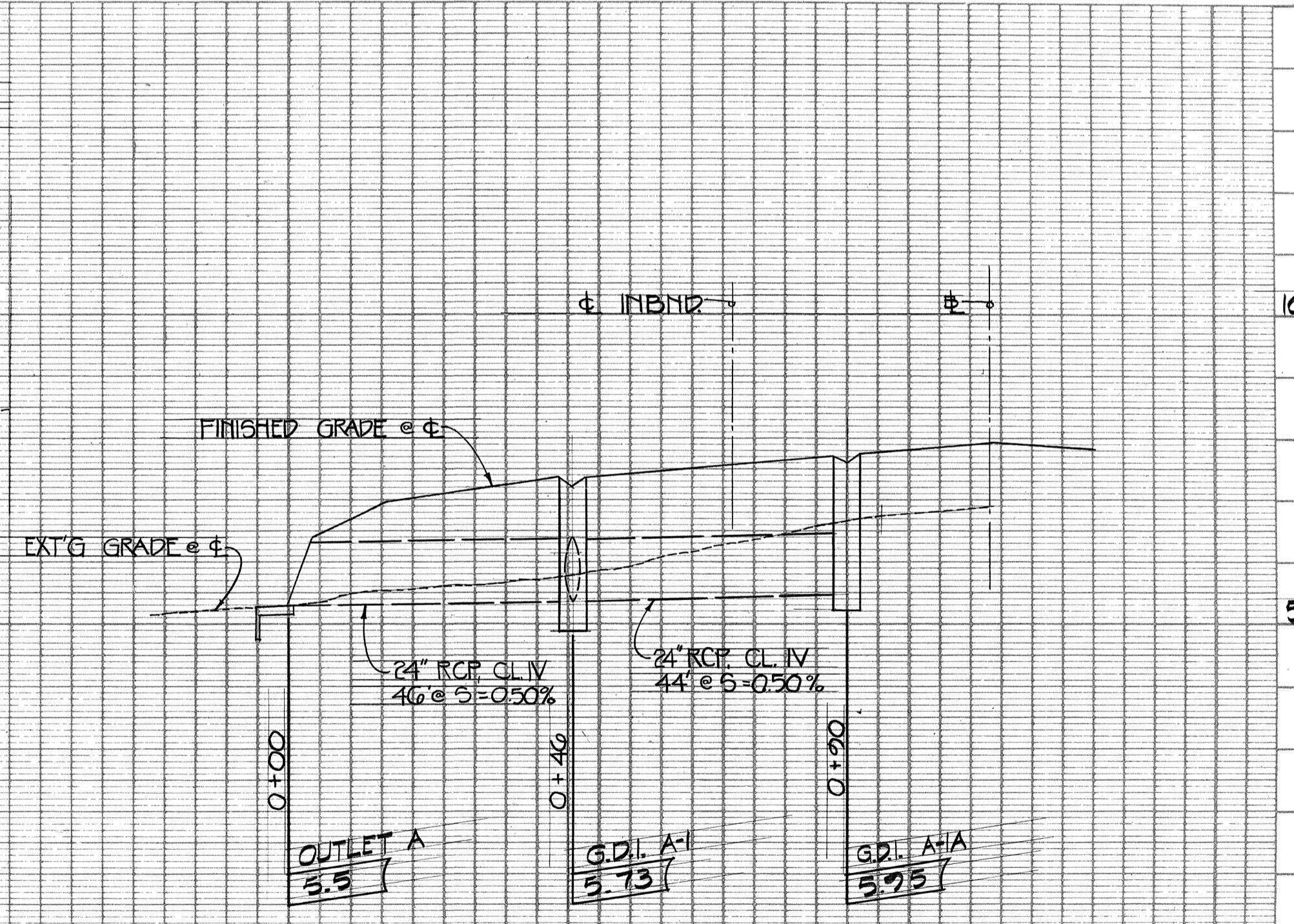
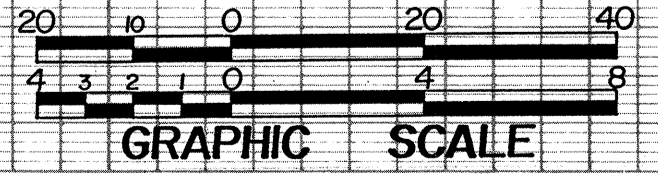


**PROFILE - BOX CULVERT**  
 AT STA. 46+50



**PROFILE - CMP DRAIN**  
 ACROSS DRIVEWAY

SCALE: Hori: 1" = 20'  
 Vert: 1" = 4'



**PROFILE**



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.  
 R. T. TANAKA ENGINEERS, INC.  
 871 KOLU STREET, SUITE 201  
 WAILUKU, MAUI, HAWAII 96793

DSGN.	DRWN.	CHKD.	APPD.
RH.	C.N.	R.T.	

**KEY PLAN / NOTES :**

NO.	DATE	REVISIONS
1	7-17-90	GUTTER TRANSITIONAL BERM DELETED

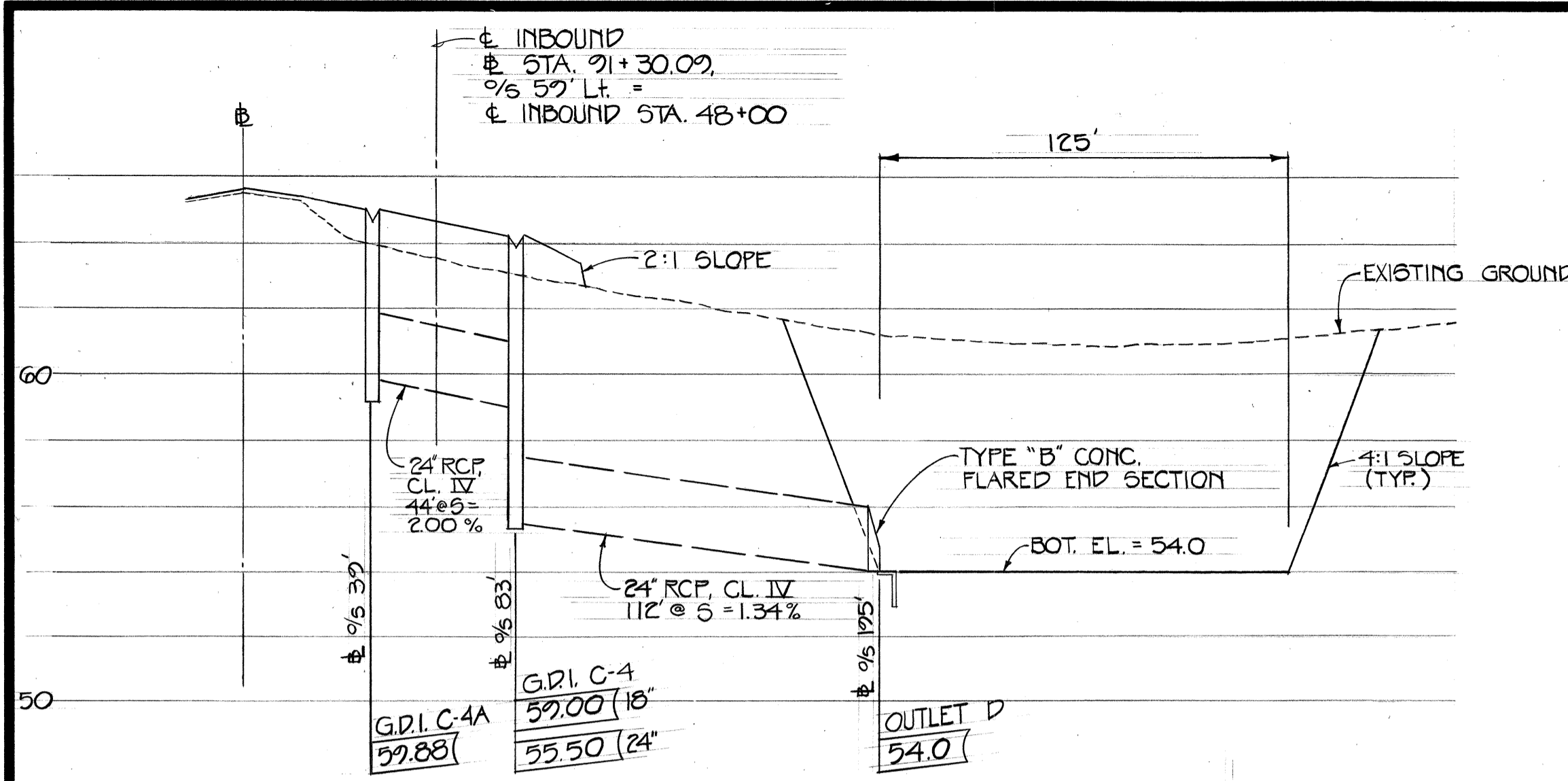
**AS-BUILT** (Record Drawing)  
 DATE: 7/12/91  
 The Drawing has been prepared, in part, based upon information furnished by others. While this information is believed to be reliable, the Design Professional cannot assume its accuracy or that it may have been incorporated into it as a result.

**PROJECT TITLE :**  
 HANA HIGHWAY IMPROVEMENTS

**PROJECT NO. :**  
 STATE NO. AM-1061-12  
 AIP NO. 3-15-0006-11

**SHEET TITLE :**  
 PLAN & PROFILE DRAINLINES at Sta. 46+50 and 49+61

DATE: 11-15-89  
 DWG. NO.: C-34



PROFILE - DRAINLINE AT STA. 91+30.09

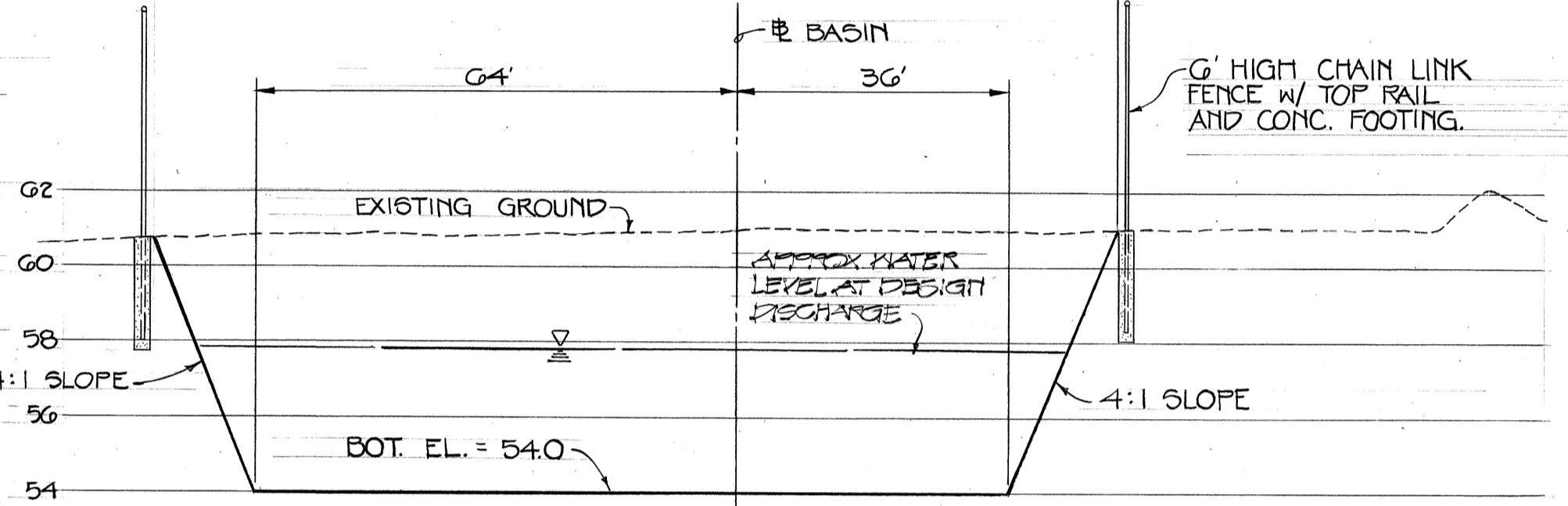
SCALE: HORI.: 1" = 40'  
VERT.: 1" = 4'

BASIN @ STA. 56+11.94  
BASIN DATA:

AVE. AREA 100' x 100' = 27,556 SQ. FT.  
DEPTH = 4'  
VOLUME = 110,224 CF  
DESIGN FLOW (25 YR., 1 HR.) = 19.8 CFS  
ONE HOUR RUNOFF VOLUME @ DESIGN FLOW = 71,280 CF

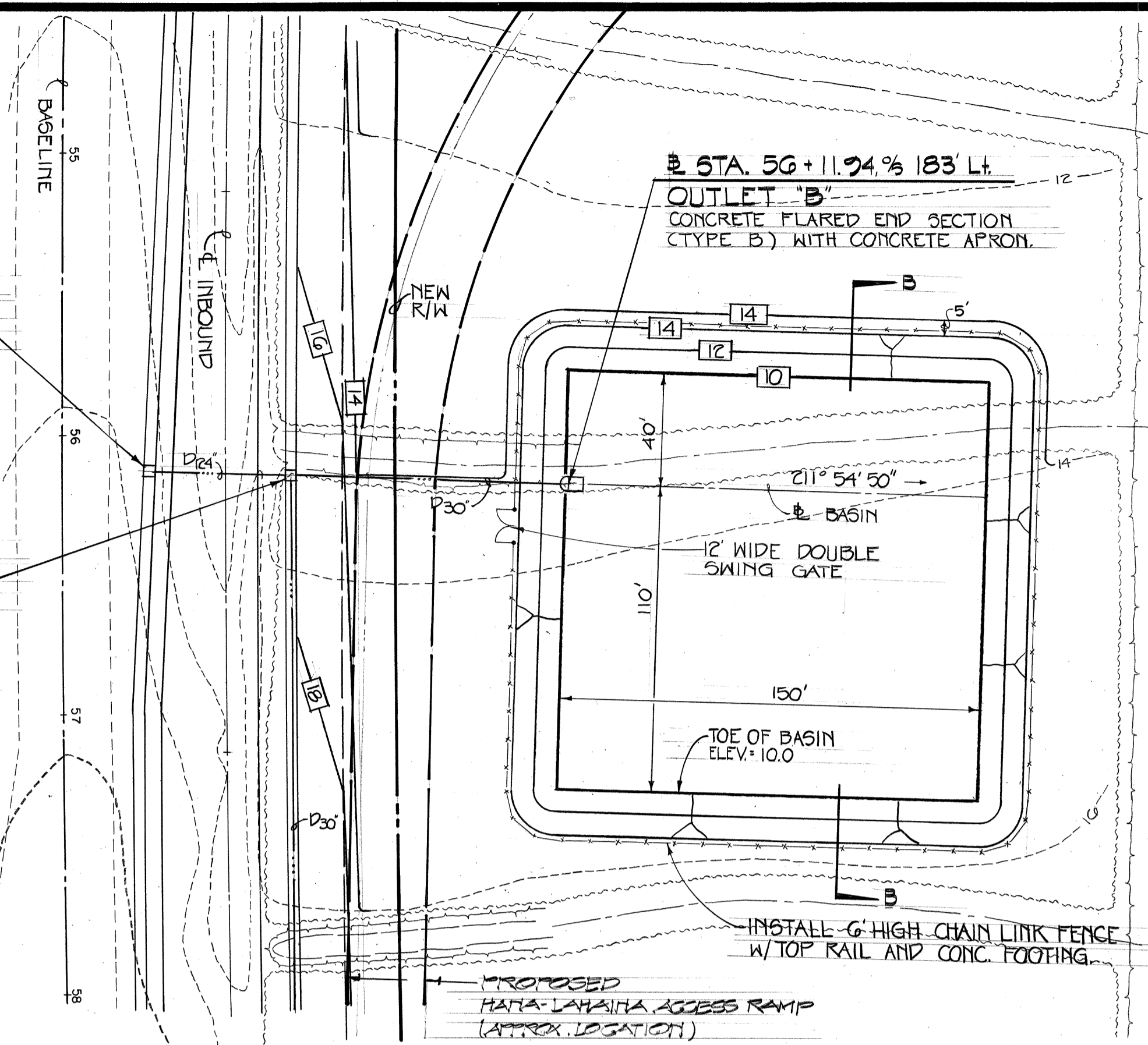
STA. 56+11.94  
% 30.42' Lt.  
G.D.I. B-1E  
TOP = 17.57  
INV. = 11.66

STA. 56+11.94  
% 83' Lt.  
G.D.I. B-1P  
TOP = 16.77  
INV. = 10.61



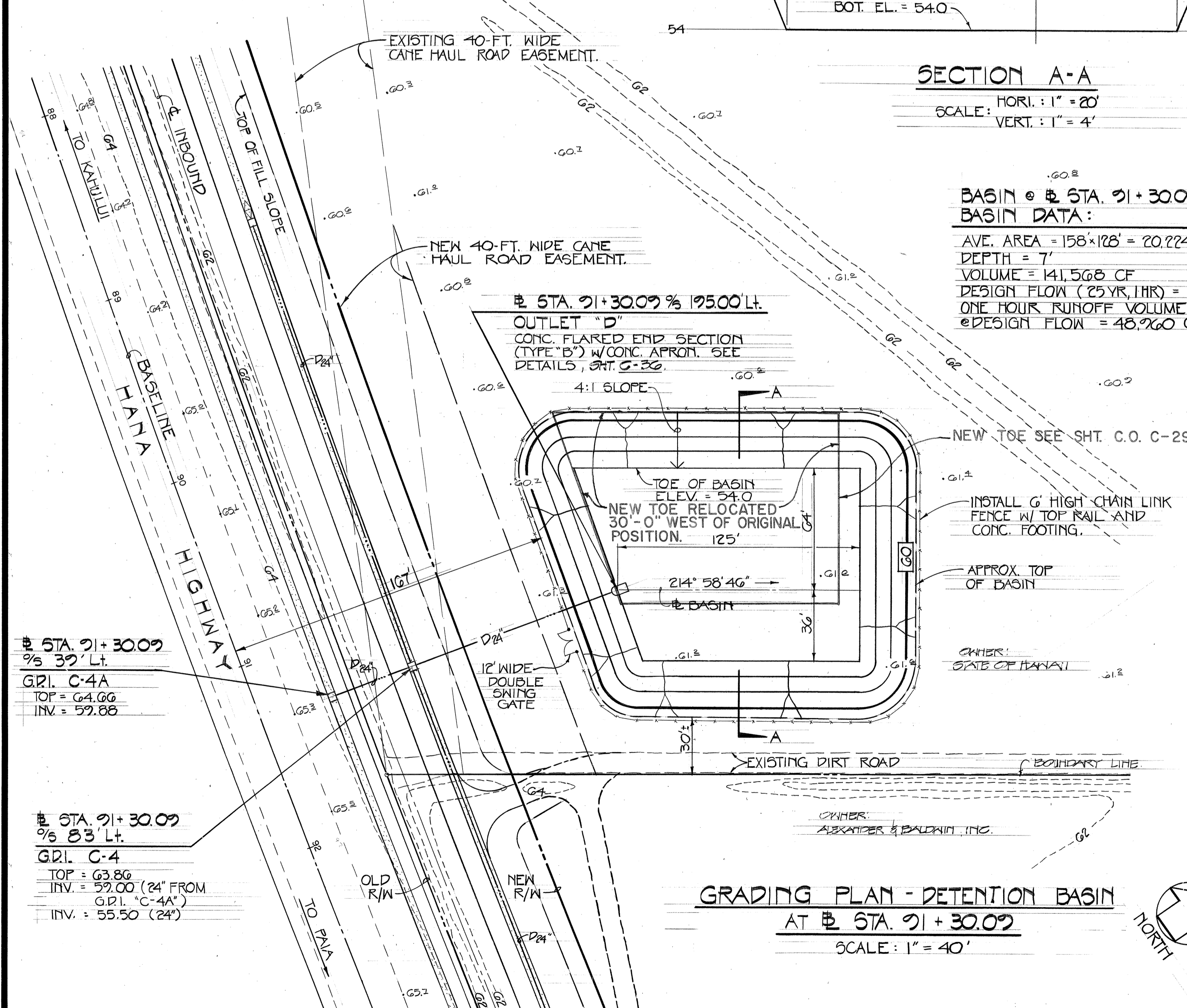
SECTION A-A

SCALE: HORI.: 1" = 20'  
VERT.: 1" = 4'



GRADING PLAN - TEMPORARY DETENTION BASIN AT STA. 56+11.94

SCALE: 1" = 40'



GRADING PLAN - DETENTION BASIN AT STA. 91+30.09

SCALE: 1" = 40'

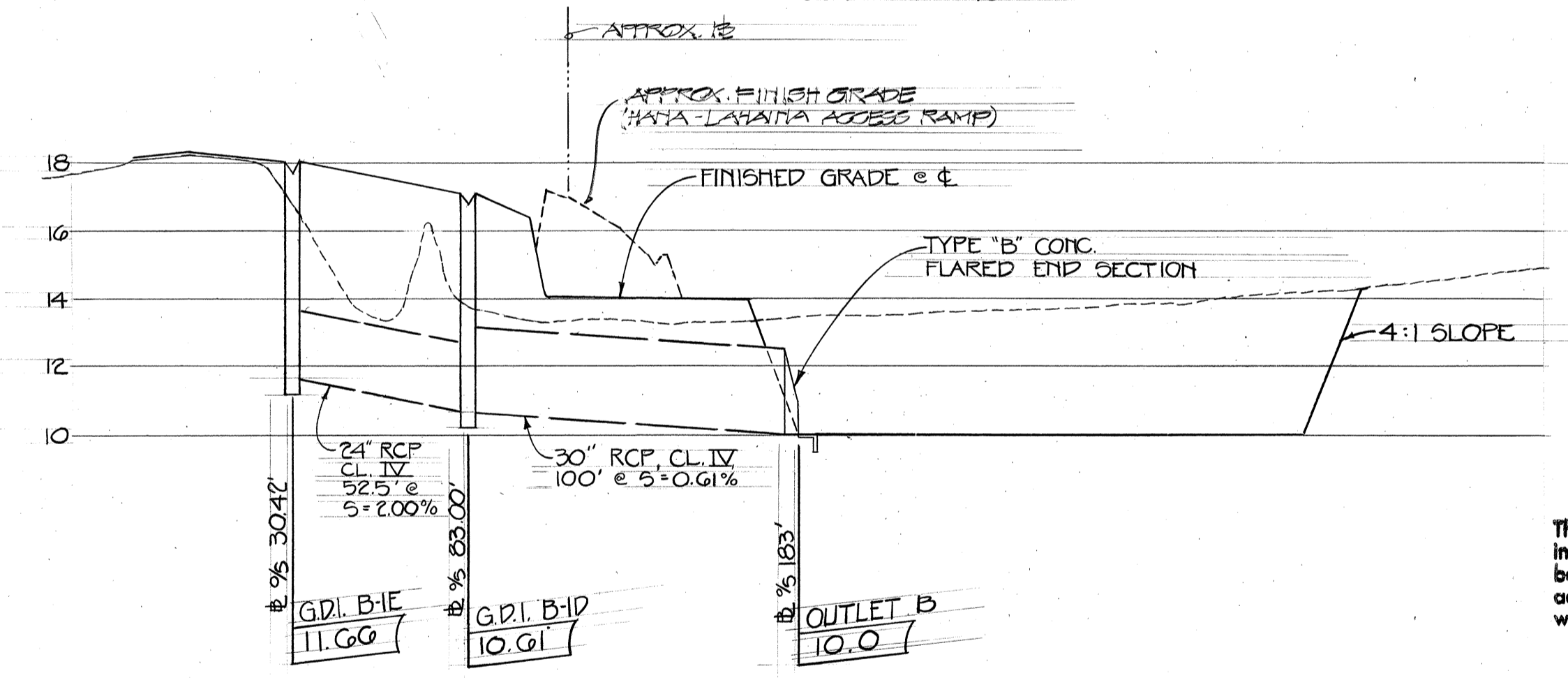
BASIN @ STA. 91+30.09  
BASIN DATA:

AVE. AREA = 158' x 128' = 20,224 SQ. FT.  
DEPTH = 7'  
VOLUME = 141,568 CF  
DESIGN FLOW (25 YR., 1 HR.) = 13.6 CFS  
ONE HOUR RUNOFF VOLUME @ DESIGN FLOW = 48,760 CF

STA. 91+30.09 % 195.00' Lt.  
OUTLET "D"  
CONC. FLARED END SECTION (TYPE "B") W/ CONC. APRON. SEE DETAILS, SHT. C-30

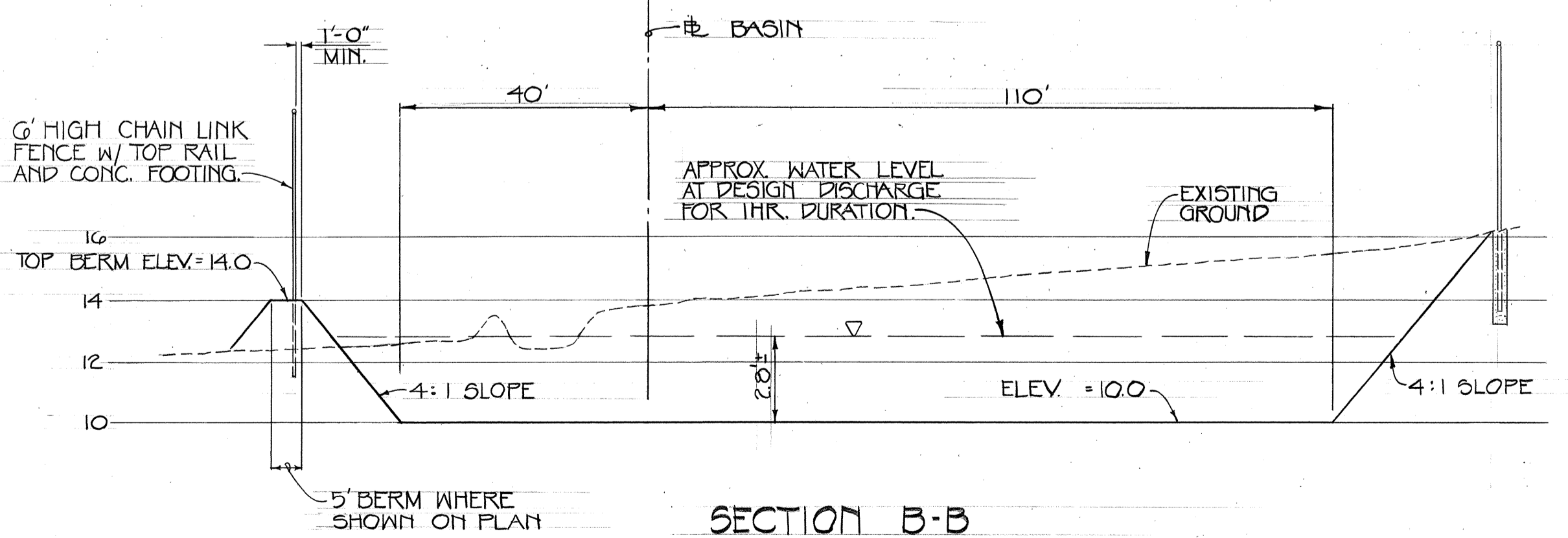
STA. 91+30.09 % 32' Lt.  
G.D.I. C-4A  
TOP = 64.66  
INV. = 59.88

STA. 91+30.09 % 83' Lt.  
G.D.I. C-4  
TOP = 63.86  
INV. = 59.00 (24' FROM G.D.I. C-4A)  
INV. = 55.50 (24')



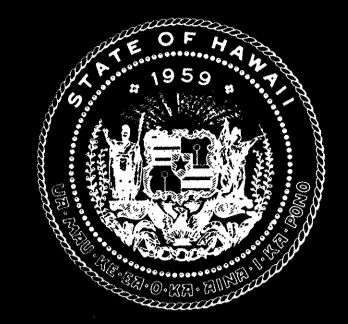
PROFILE - DRAINLINE AT STA. 56+11.94

SCALE: HORI.: 1" = 40'  
VERT.: 1" = 4'



SECTION B-B

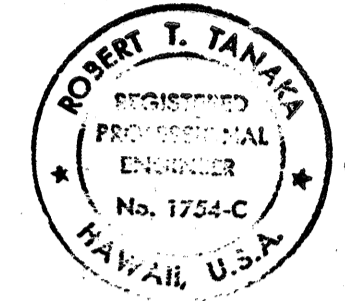
SCALE: HORI.: 1" = 20'  
VERT.: 1" = 4'



Airports Division  
DEPARTMENT OF TRANSPORTATION  
STATE OF HAWAII

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

*Robert T. Tanaka*  
10/2/89



R. T. TANAKA ENGINEERS, INC.  
871 KOLU STREET, SUITE 201  
WAILUKU, MAUI, HAWAII 96793

DSGN. DRWN. CHKD. APPD.

R.H. C.N. R.T.T.

KEY PLAN / NOTES :

NO.	DATE	REVISIONS
<b>AS-BUILT</b> (Record Drawing)		
DATE 7/12/91		

This drawing has been prepared, in part, based upon information furnished by others. While this information is believed to be reliable, the Design Professional cannot assume its accuracy or that it has been incorporated into it as a result.

PROJECT TITLE :

HANA HIGHWAY IMPROVEMENTS

PROJECT NO. :

STATE NO. AM-1061-12  
AIP NO. 3-15-0006-11

SHEET TITLE :

PLAN & PROFILE

DRAINLINES AT:  
Sta. 56+11.94 and  
Sta. 91+30.09

DATE :

11-15-89

DWG. NO. :

C-35