

WATER NOTES

1. Unless otherwise specified, all materials and construction of water system facilities and appurtenances shall be in accordance with the Standard Specifications for Road and Bridge Construction, dated 1985, as amended, of the Hawaii Highways Division, Department of Transportation.
2. The BWS Standard Details, Figures 1-62 inclusive, bound in the "Water System Standards" of the BWS, dated March 1977, as amended, are applicable to this project.
3. The Contractor shall notify the Board of Water Supply in writing one(1) week prior to commencing work on the Water System.
4. Any adjustments to the existing water system including manholes, meter boxes, and meters required during construction to meet requirements of BWS Standards, whether shown on the plans or not, shall be done by the Contractor at no cost to the Board.
5. The Contractor shall verify the location of waterlines in the field prior to installation of new guardrails. If there is a conflict, the new guardrails will be installed at the locations designated by the Engineer.
6. Contact BWS Heeia Corporation Yard, Masa Katamoto at 247-3440 upon commencing construction.
7. The Contractor shall adjust all valve boxes and manhole frames and covers that are in the areas to be paved. Prior to paving operations, BWS will mark all water manholes and valve boxes involved with this project. The Contractor shall be responsible for referencing and adjusting all BWS appurtenances. Referencing of BWS facilities shall be incidental to the various contract items. Any additional work required of BWS to locate and reference BWS facilities, subsequent to paving operations, will be at the Contractor's expense. BWS will bill Contractor for said additional work.
8. All plans approved by the Board of Water Supply are based solely on the adequacy of the water supply. All other features of the water system, such as lines, grades, fittings etc., and drainage and other features of improvements shall not be the responsibility of the Board of Water Supply.
9. Reapproval shall be required if this project is not under construction within a period of one year (See Rules and Regulations of the Board of Water Supply.)
10. The project shall provide four sets of approved plans one week prior to commencing work on the water system.
11. The existence and location of underground utilities and structures as shown on the plans are from the latest available data but is not guaranteed as to the accuracy or the encountering of other obstacles during the course of the work. The Contractor shall be responsible and shall pay for all damages to the existing utilities.

ELECTRIC NOTES

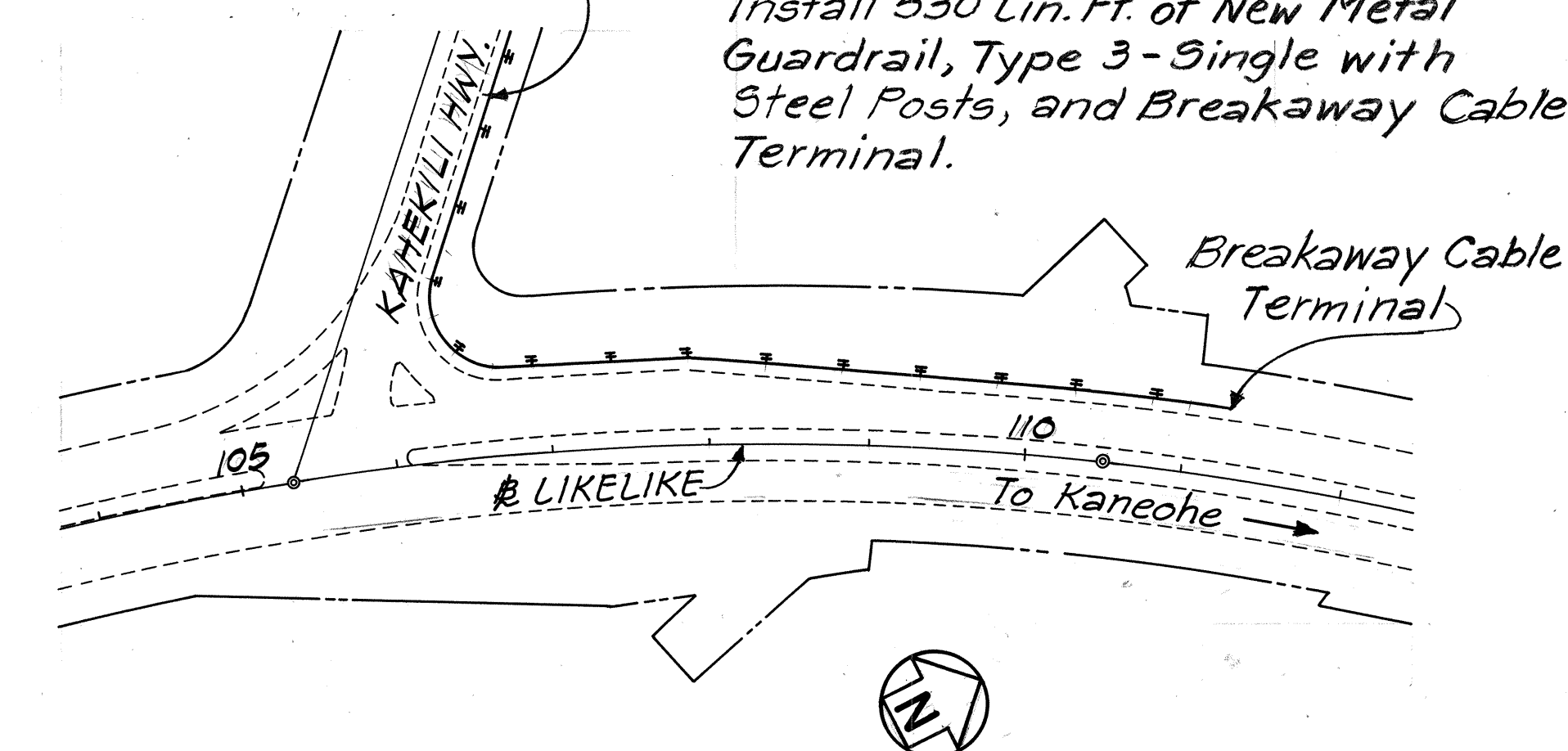
1. The existence and location of HECO's overhead and underground facilities shown on the plans are from existing records with varying degrees of accuracy and are not guaranteed as shown. The Contractor shall exercise extreme caution whenever construction crosses or is in close proximity of underground lines and shall maintain adequate clearance when operating equipment within or under any overhead lines.
2. The Contractor shall be liable for any damages to HECO facilities and shall immediately report such damages to HECO's Trouble Dispatcher at 548-7961.

ROADWAY GENERAL NOTES

1. The existence and location of underground utilities, manholes, monuments, and structures as shown on the plans are from the latest available data but the accuracy is not guaranteed. Furthermore, the encountering of other obstacles during the course of work may be possible. The Contractor shall be responsible and shall pay for all damages to existing facilities resulting from his operations.
2. The Contractor shall notify the Mass Transit Lines, Inc. Customer and Public Relations Office at 537-9224 seven (7) days prior to any paving operations.
3. The Contractor's attention is directed to Subsection 107.13-"Public Convenience and Safety" and to Section 645-"Traffic Control" of the Special Provisions.
4. As shown on the plans or directed by the Engineer, a smooth riding transition shall be provided at the beginning and end of the project, at side streets and driveways, between all pavement areas used by public traffic during each construction phase, and between transition of construction phases.
5. Existing Asphalt Concrete Pavement removed by cold planing and excavated pavement areas may be used for "Recycled Plant Mix Asphalt Concrete Base Course" or otherwise shall be the Contractor's property.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-01-86	1986	5	54

See Plan Sheet No. 6 for continuation of Guardrail installation



PLAN
Scale: 1" = 100'

SCOPE OF WORK

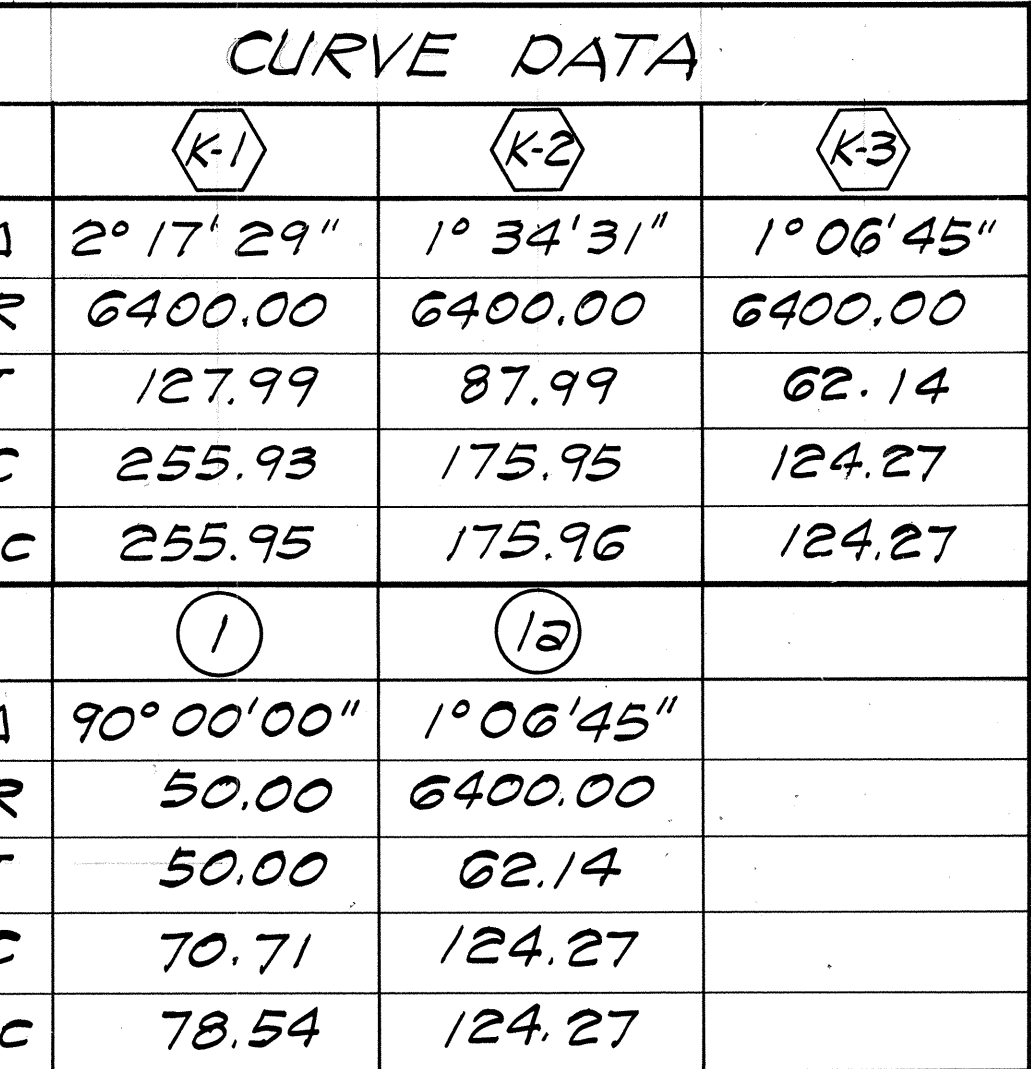
The scope of work for this project consists of widening Kahakili Hwy. from Likelike Hwy. to Haiku Rd. primarily to accommodate adequate left turn lanes at Kulukeoe St., Keaahala Rd., Kahuhipa St., and Haiku Rd. intersections; and the installation of Traffic Signals at the Kulukeoe St. intersection.

Improvements consist of constructing of new roadway pavement and base for the widening, constructing of 6' wide paved shoulders, reconstructing of existing 6' wide bikeway/shoulder between Keaahala Rd. and Haiku Rd., resurfacing the existing pavement with asphalt concrete, adjusting existing traffic signal system, installing traffic signals at Kulukeoe St., extending drainage culvert, replacing guardrails, installing signs, and striping.

STATE OF HAWAII DEPARTMENT OF TRANSPORTATION HIGHWAYS DIVISION
UTILITY GENERAL NOTES, CONSTRUCTION NOTES AND PLAN
KAHEKILI HWY. IMPROVEMENTS
Likelike Hwy. to Haiku Road
PROJECT NO. 83F-01-86
Scale: As Shown Date: May, 1986
SHEET No. 1 OF 5 SHEETS

DATE	_____
SURVEY PLOTTED BY	_____
DRAWN BY	_____
DESIGNED BY	_____
QUANTITIES BY	_____
CHECKED BY	_____
ORIGINAL PLAN	_____
NOTE BOOK	_____
NO.	_____

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
NOTE BOOK	DRAWN BY _____	" _____
	TRACED BY _____	" _____
	DESIGNED BY _____	" _____
	QUANTITIES BY _____	" _____
No. _____	CHECKED BY _____	" _____



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN

KAHEKILI HWY. IMPROVEMENTS
Likelike Hwy. to Haiku Road
PROJECT NO. 83F-01-8G

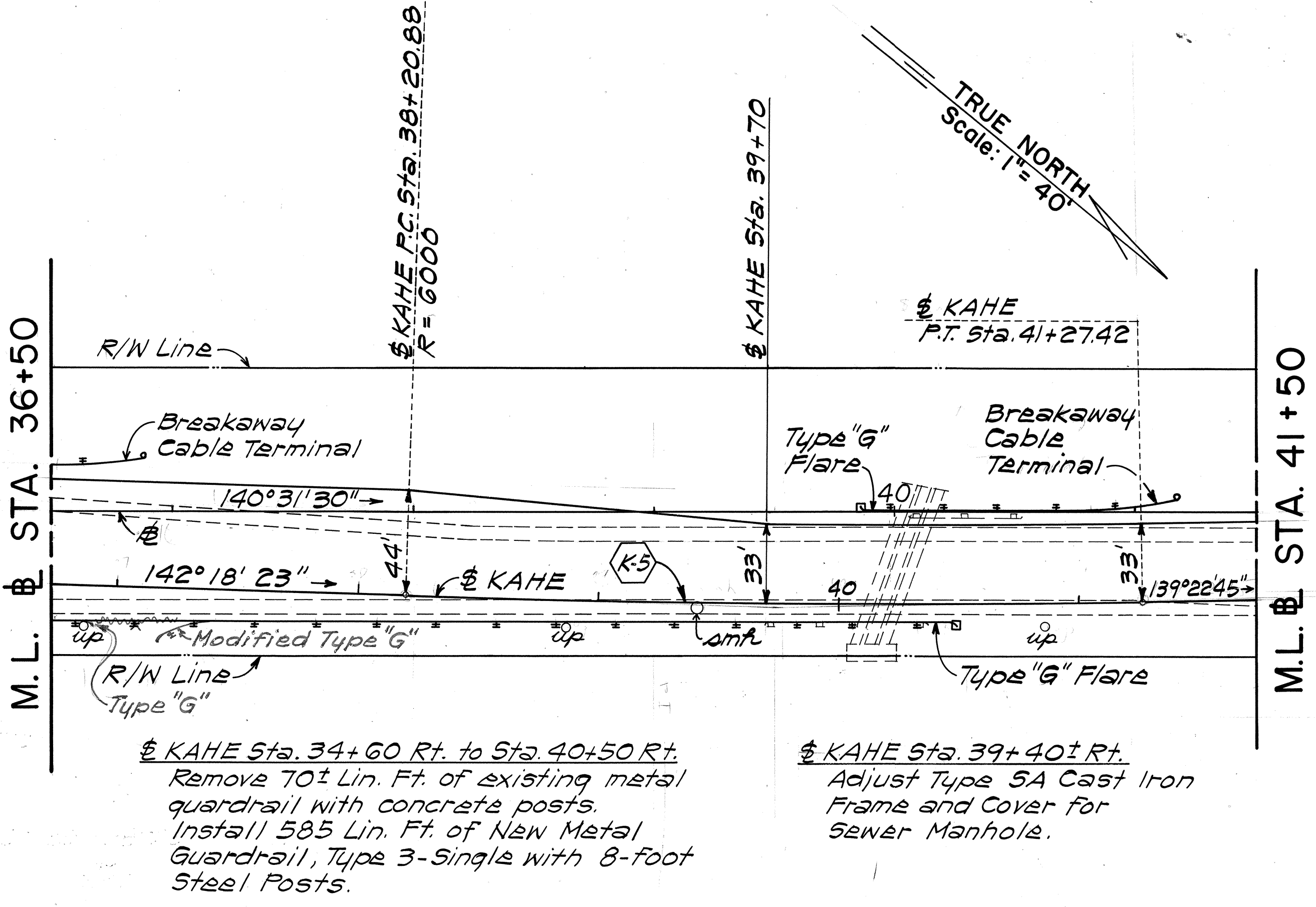
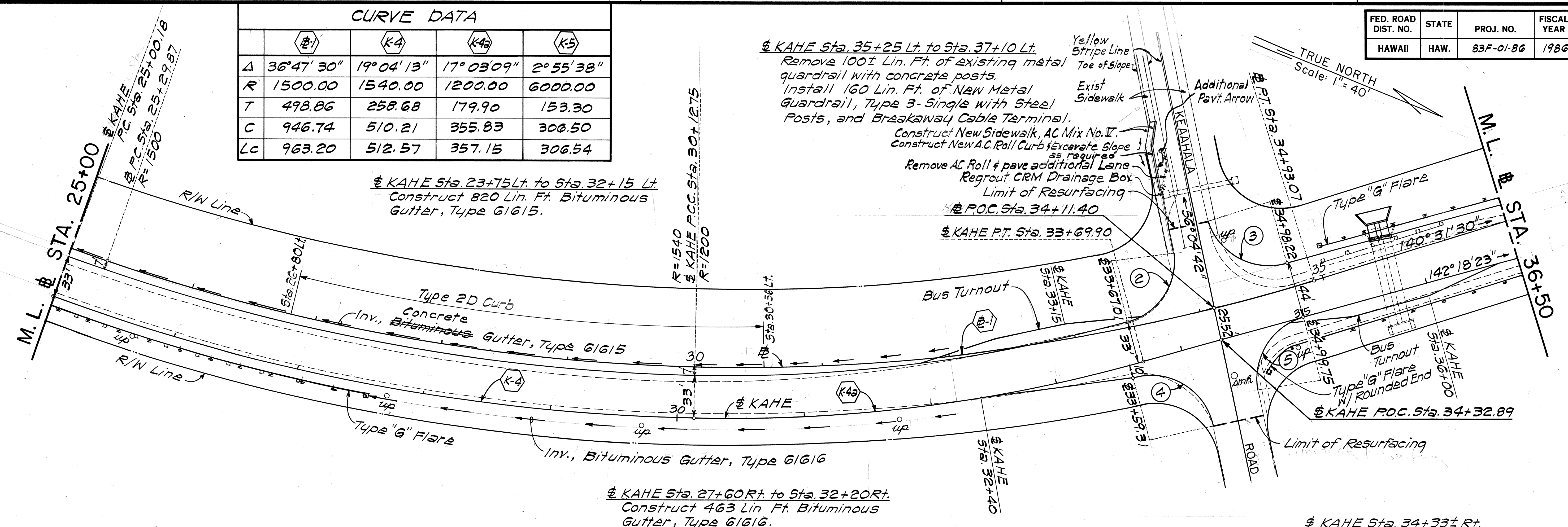
Scale: 1" = 40' Date: Apr., 1986

SHEET No. 2 OF 5 SHEETS

DATE _____
SURVEY PLOTTED BY _____
ORIGINAL PLAN _____
DRAWN BY _____
DESIGNED BY _____
CHECKED BY _____
NO. _____

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-01-86	1986	7	54

CURVE DATA				
	②	④	④a	⑤
Δ	36°47'30"	19°04'13"	17°03'09"	2°55'38"
R	1500.00	1540.00	1200.00	6000.00
T	498.86	258.68	179.90	153.30
C	946.74	510.21	355.83	306.50
Lc	963.20	512.57	357.15	306.54



KAHE Sta. 40+10 Lt. to Sta. 41+40 Lt.
Remove 45± Lin. Ft. of existing metal guardrail with concrete posts.
Install 105 Lin. Ft. of New Metal Guardrail, Type 3-Single with 8-foot Steel Posts, and Breakaway Cable Terminal.

KAHE Sta. 40+20± Lt.
Existing 3-36" CMP, CRM Wall Extension
For Details, see Plan Sht. No. 21.

CURVE DATA					
	②	③	④	⑤	○
Δ	86°21'58"	93°46'19"	93°16'00"	86°13'41"	
R	50.00	50.00	50.00	50.00	
T	46.93	53.40	52.94	46.81	
C	68.43	73.00	72.70	68.35	
Lc	75.37	81.83	81.39	75.25	

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN

KAHEKILI HWY. IMPROVEMENTS
Likelike Hwy. to Haiku Road
PROJECT NO. 83F-01-86

Scale: 1" = 40' Date: Apr., 1986

SHEET NO. 3 OF 5 SHEETS

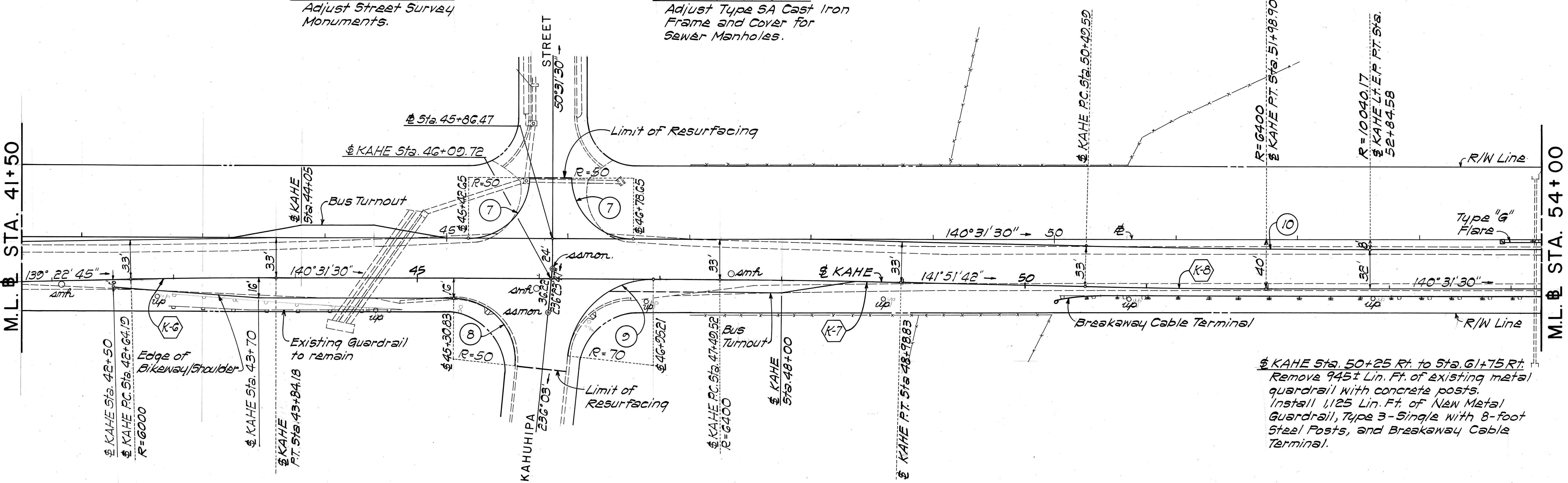
FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	83F-01-86	1986	8	54

\$ KAHE Sta. 53+90 Lt. to Sta. 61+35 Lt.
Remove 700± Lin. Ft. of existing metal guardrail with concrete posts.
Install 720 Lin. Ft. of New Metal Guardrail, Type 3-Single with 8-foot Steel Posts, and Breakaway Cable Terminal.

TRUE NORTH
Scale: 1" = 40'

\$ KAHE Sta. 46+07± Rt.
\$ KAHE Sta. 46+11± Lt.
Adjust Street Survey Monuments.

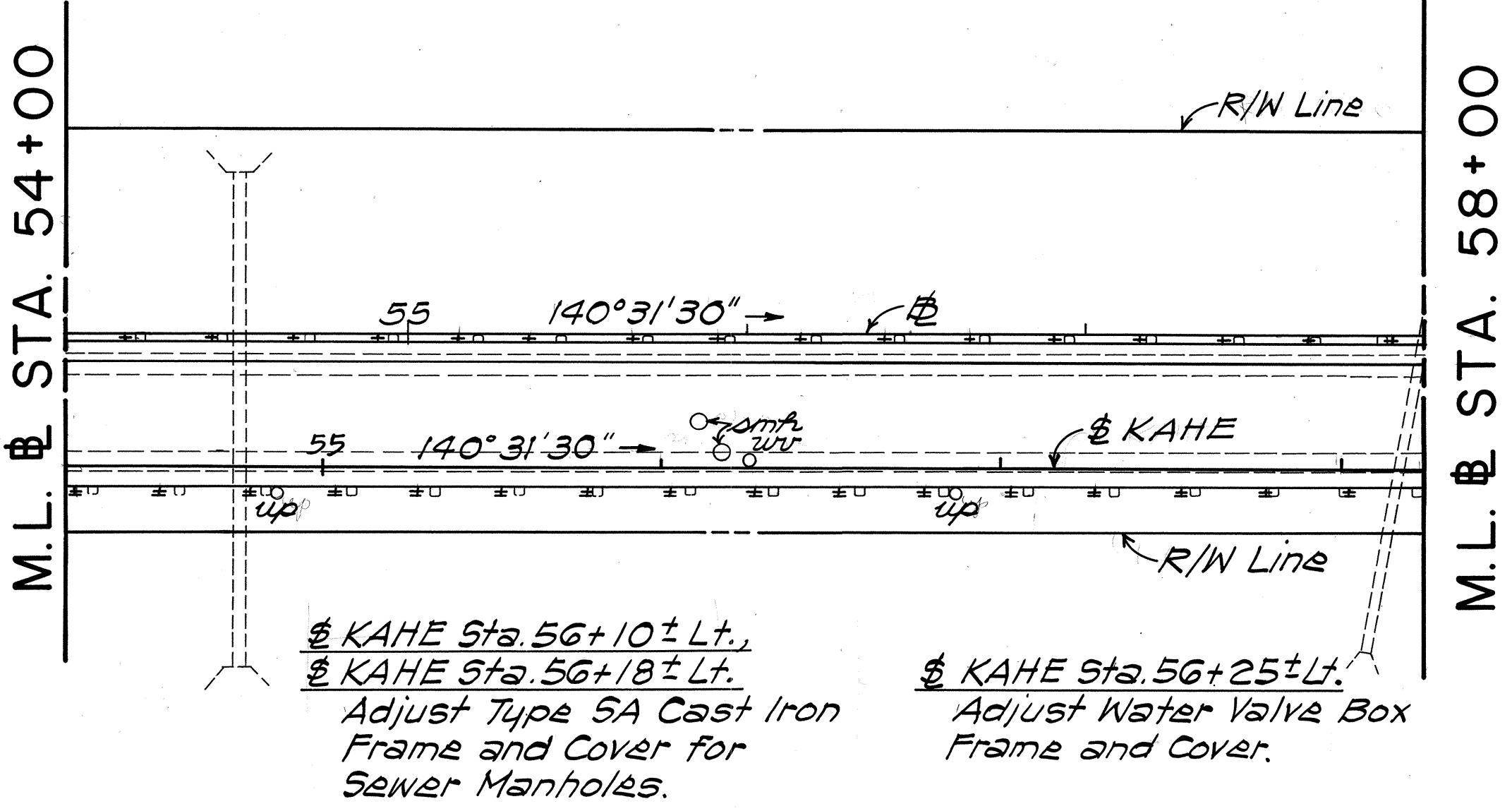
\$ KAHE Sta. 42+10± Rt.
\$ KAHE Sta. 45+98± Rt.
\$ KAHE Sta. 47+60± Lt.
Adjust Type 5A Cast Iron Frame and Cover for Sewer Manholes.



\$ KAHE Sta. 50+25 Rt. to Sta. 61+75 Rt.
Remove 945± Lin. Ft. of existing metal guardrail with concrete posts.
Install 1,125 Lin. Ft. of New Metal Guardrail, Type 3-Single with 8-foot Steel Posts, and Breakaway Cable Terminal.

CURVE DATA

	K-6	K-7	K-8	
Δ	1°08'45"	1°20'12"	1°20'12"	
R	6000.00	6400.00	6400.00	
T	60.00	74.66	74.66	
C	119.99	149.30	149.30	
L _c	119.99	149.31	149.31	
	7	8	9	10
Δ	90°00'00"	95°31'30"	84°28'30"	1°20'12"
R	50.00	50.00	70.00	10,040.17
T	50.00	55.07	63.56	117.12
C	70.71	74.04	94.11	234.22
L _c	78.54	83.36	103.21	234.23



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

PLAN

KAHEKILI HWY. IMPROVEMENTS
Likelike Hwy. to Haiku Road
PROJECT NO. 83F-01-86

Scale: 1" = 40' Date: Apr., 1986

SHEET NO. 4 OF 5 SHEETS

SURVEY PLOTTED BY	DATE
DRAWN BY	
DESIGNED BY	
CHECKED BY	
NO.	

ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
NOTE BOOK	DRAWN BY _____	_____
	TRACED BY _____	_____
	DESIGNED BY _____	_____
	QUANTITIES BY _____	_____
No. _____	CHECKED BY _____	_____

