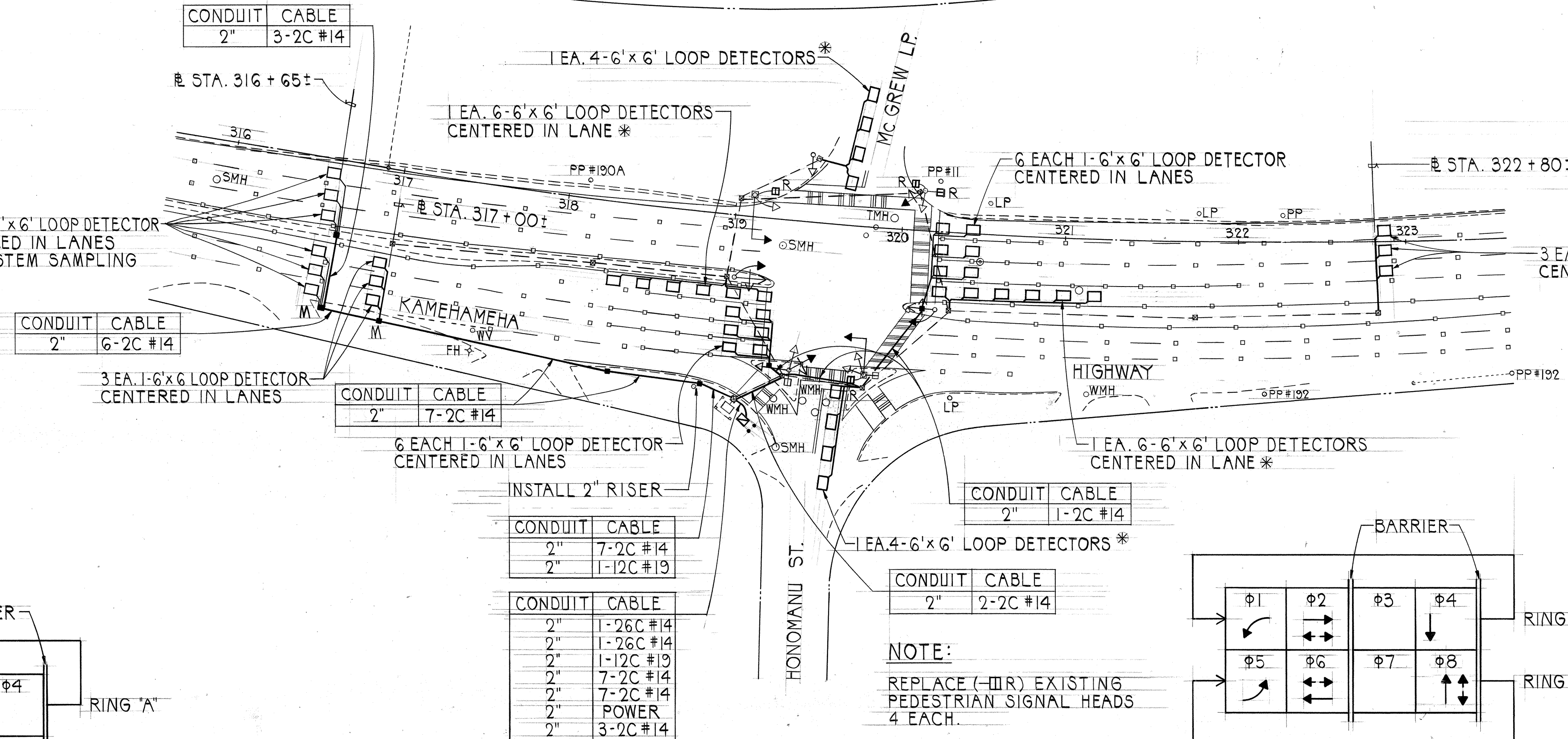


ESTIMATED QUANTITIES ~ HONOMANU ST.

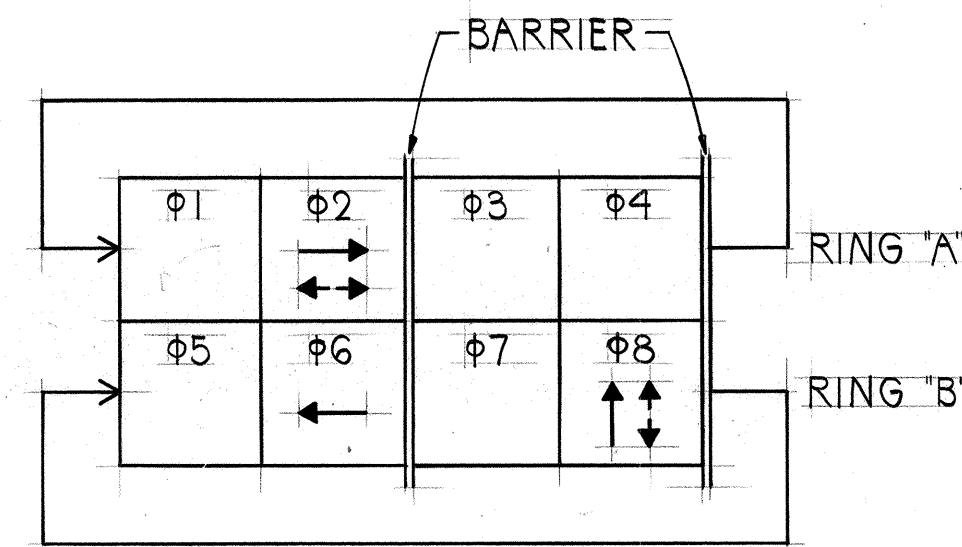
623.2003	MODEL 170 TRAFFIC SIGNAL CONTROLLER WITH MODEL 332 CABINET	1 EA.
623.2051	FOUNDATION FOR CABINET	1 EA.
623.4001	PEDESTRIAN SIGNAL ASSEMBLY (REPLACEMENT)	4 EA.
623.5001	TRAFFIC SIGNAL DUCTLINE 1-2"	430 L.F.
623.5002	TRAFFIC SIGNAL DUCTLINE 2-2"	22 L.F.
623.5007	TRAFFIC SIGNAL DUCTLINE 7-2"	15 L.F.
623.6010	TYPE "B" PULLBOX	5 EA.
623.6011	TYPE "B" PULLBOX (MODIFIED COVER)	2 EA.
623.7002	NO. 14 2-CONDUCTOR CABLE	2500 L.F.
623.7041	LOOP DETECTOR ONE LOOP	24 EA.
623.7044	LOOP DETECTOR FOUR LOOPS	2 EA.
623.7046	LOOP DETECTOR SIX LOOPS	2 EA.
623.8001	REMOVE EXIST. CONTROLLER ASSEMBLY AND CABINET	1 EA.
623.9002	RISER FOR INTERCONNECT CABLE	1 EA.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99D-02-87	1990	5	15

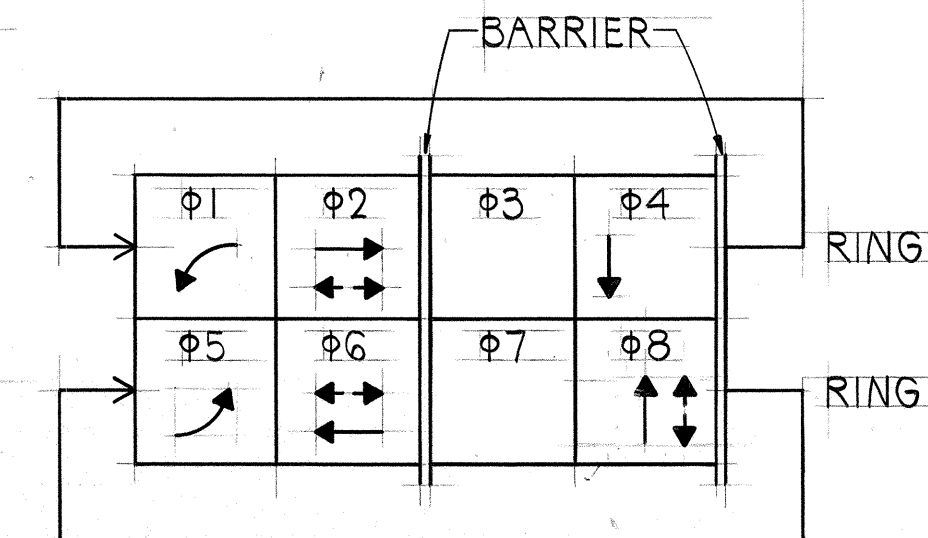


ESTIMATED QUANTITIES ~ PALI MOMI ST.

623.4001	PEDESTRIAN SIGNAL ASSEMBLY (REPLACEMENT)	8 EA.
623.5001	TRAFFIC SIGNAL DUCTLINE 1-2"	465 L.F.
623.5002	TRAFFIC SIGNAL DUCTLINE 2-2"	30 L.F.
623.6010	TYPE "B" PULLBOX	5 EA.
623.7002	NO. 14 2-CONDUCTOR CABLE	1000 L.F.
623.7041	LOOP DETECTOR ONE LOOP	6 EA.
623.7044	LOOP DETECTOR FOUR LOOPS	2 EA.
623.7046	LOOP DETECTOR SIX LOOPS	2 EA.
623.9002	RISER FOR INTERCONNECT CABLE	2 EA.
623.5201	GALVANIZED STEEL CONDUIT	120 L.F.

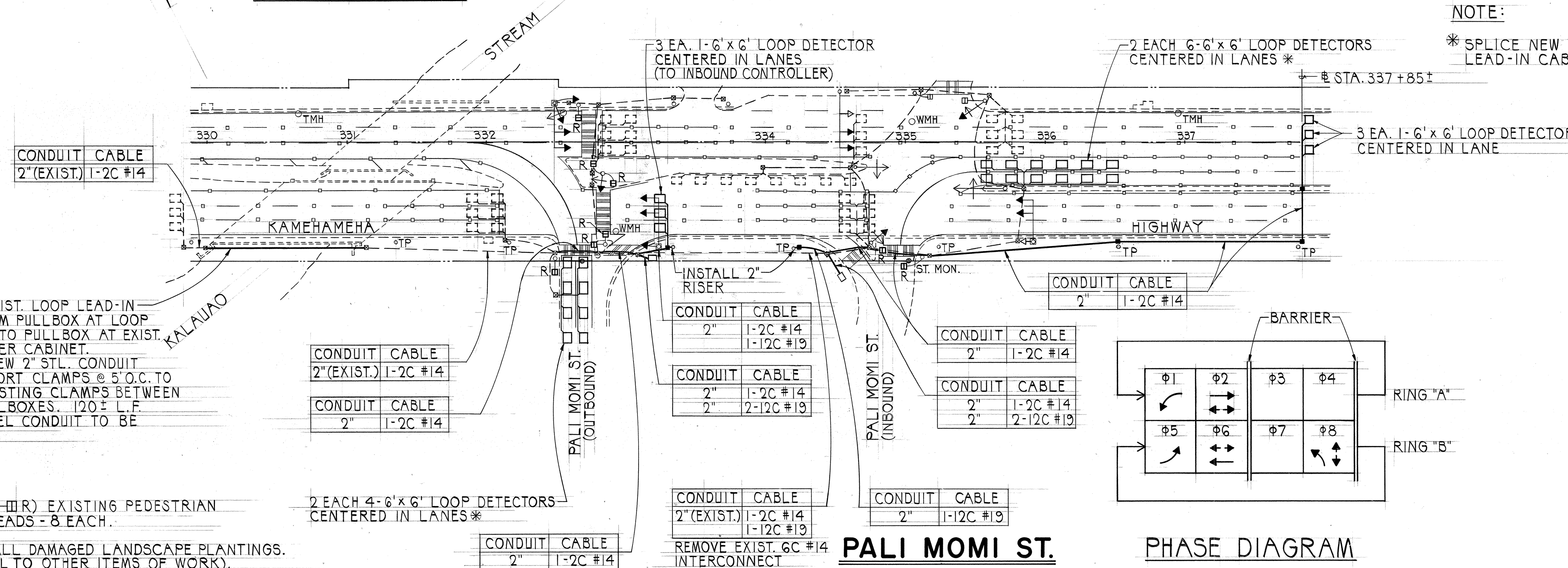


PHASE DIAGRAM

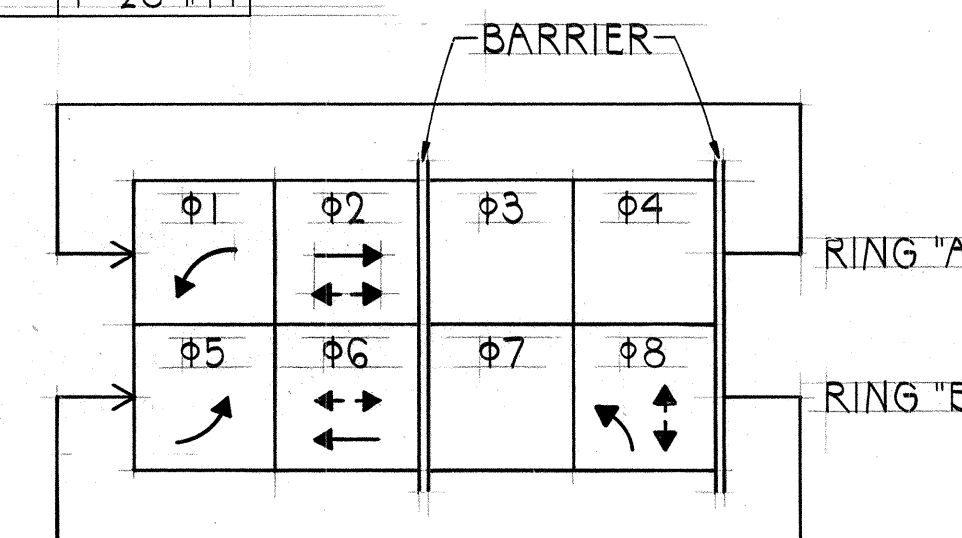


PHASE DIAGRAM

HONOMANU STREET



NOTE:
* SPLICE NEW LOOPS TO EXISTING LOOP LEAD-IN CABLE AT EXISTING PULLBOX.



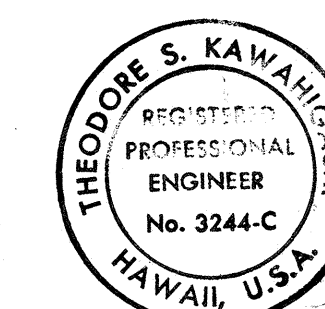
PHASE DIAGRAM

PALI MOMI ST.

REMOVE EXIST. LOOP LEAD-IN CABLE FROM PULLBOX AT LOOP LOCATION TO PULLBOX AT EXIST. CONTROLLER CABINET. PROVIDE NEW 2" STL. CONDUIT WITH SUPPORT CLAMPS @ 5' O.C. TO MATCH EXISTING CLAMPS BETWEEN EXIST. PULLBOXES. 120' L.F. EXIST. STEEL CONDUIT TO BE REMOVED.

NOTE:

- REPLACE (HWR) EXISTING PEDESTRIAN SIGNAL HEADS - 8 EACH.
- RESTORE ALL DAMAGED LANDSCAPE PLANTINGS. (INCIDENTAL TO OTHER ITEMS OF WORK).



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Theodore S. Kawahara
Signature

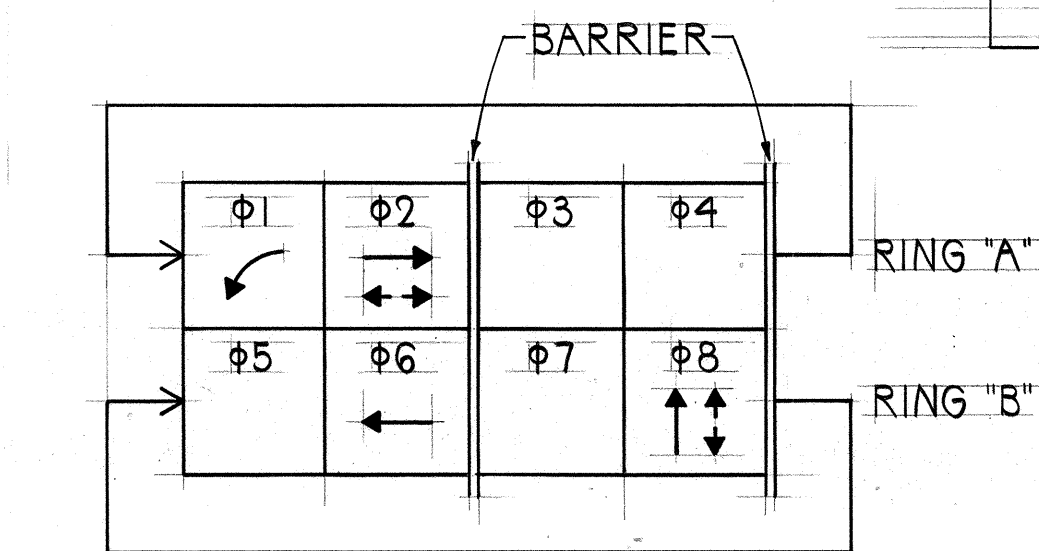
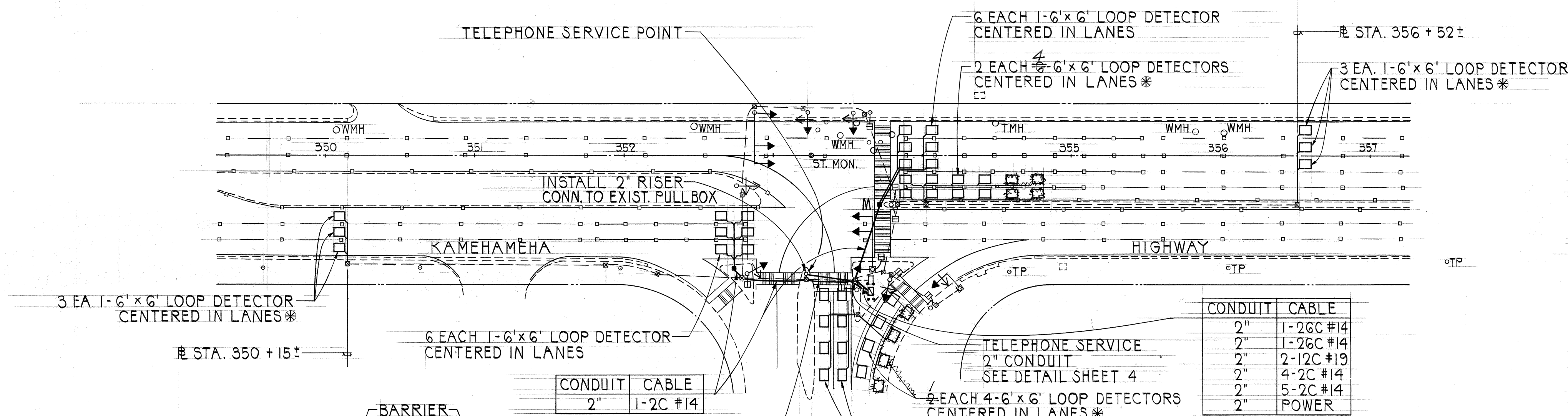
STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

INTERSECTION PLANS
HONOMANU ST. & PALI MOMI ST.

KAMEHAMEHA HWY. INTERCONNECTION
OF TRAFFIC SIGNAL SYSTEM
FROM AIEA TO PEARL CITY
PROJECT NO. 99D-02-87

SCALE: AS SHOWN DATE: APR. 16, 1990
SHEET NO. 1 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99D-02-87	1990	6	15



PHASE DIAGRAM

NOTE:

1. 332 CABINET SHALL BE WIRED AND FURNISHED WITH A TYPE 170 CONTROLLER FOR LOCAL CONTROL AND A TYPE 170 CONTROLLER TO OPERATE AS MASTER CONTROLLER.

* SPLICE NEW LOOPS TO EXISTING LOOP LEAD-IN CABLE AT EXISTING PULLBOX.

KAONOHI STREET

NOTE:

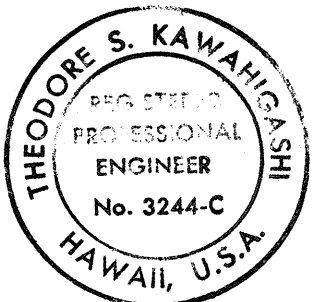
FOR TRAFFIC SIGNAL PLANS FOR LIPOA PLACE INTERSECTION, SEE SHEET 10.

FOR TRAFFIC SIGNAL PLANS FOR KANUKU STREET INTERSECTION, SEE SHEET 12.

ESTIMATED QUANTITIES ~ KAONOHI ST.

623.2002	MODEL 170 TRAFFIC SIGNAL CONTROLLER AND MODEL 170 MASTER CONTROLLER WITH MODEL 332 CABINET	EA.
623.2051	FOUNDATION FOR CABINET	EA.
623.5001	TRAFFIC SIGNAL DUCTLINE 2-2"	40 L.F.
623.5001	TRAFFIC SIGNAL DUCTLINE 1-2"	128 L.F.
623.5006	TRAFFIC SIGNAL DUCTLINE 6-2"	12 L.F.
623.6010	TYPE "B" PULLBOX	EA.
623.6011	TYPE "B" PULLBOX (MODIFIED COVER)	EA.
623.7002	NO. 14 2-CONDUCTOR CABLE	260 L.F.
623.7041	LOOP DETECTOR ONE LOOP	18 EA.
623.7044	LOOP DETECTOR FOUR LOOPS	5 EA.
623.7046	LOOP DETECTOR SIX LOOPS	2 EA.
623.8001	REMOVE EXIST. CONTROLLER ASSEMBLY AND CABINET	EA.
623.9002	RISER FOR INTERCONNECT CABLE	EA.
623.9010	TELEPHONE SERVICE	EA.

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION
Theodore S. Kawahigashi
 Signature

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

INTERSECTION PLANS
KAONOHI STREET
KAMEHAMEHA HWY. INTERCONNECTION
OF TRAFFIC SIGNAL SYSTEM
FROM AIEA TO PEARL CITY
PROJECT NO. 99D-02-87

SCALE: AS SHOWN
DATE: APR. 16, 1990

SHEET No. 2 OF 5 SHEETS

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99D-02-87	1990	8	15

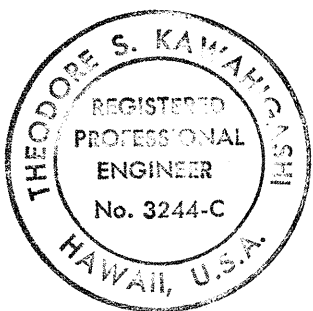
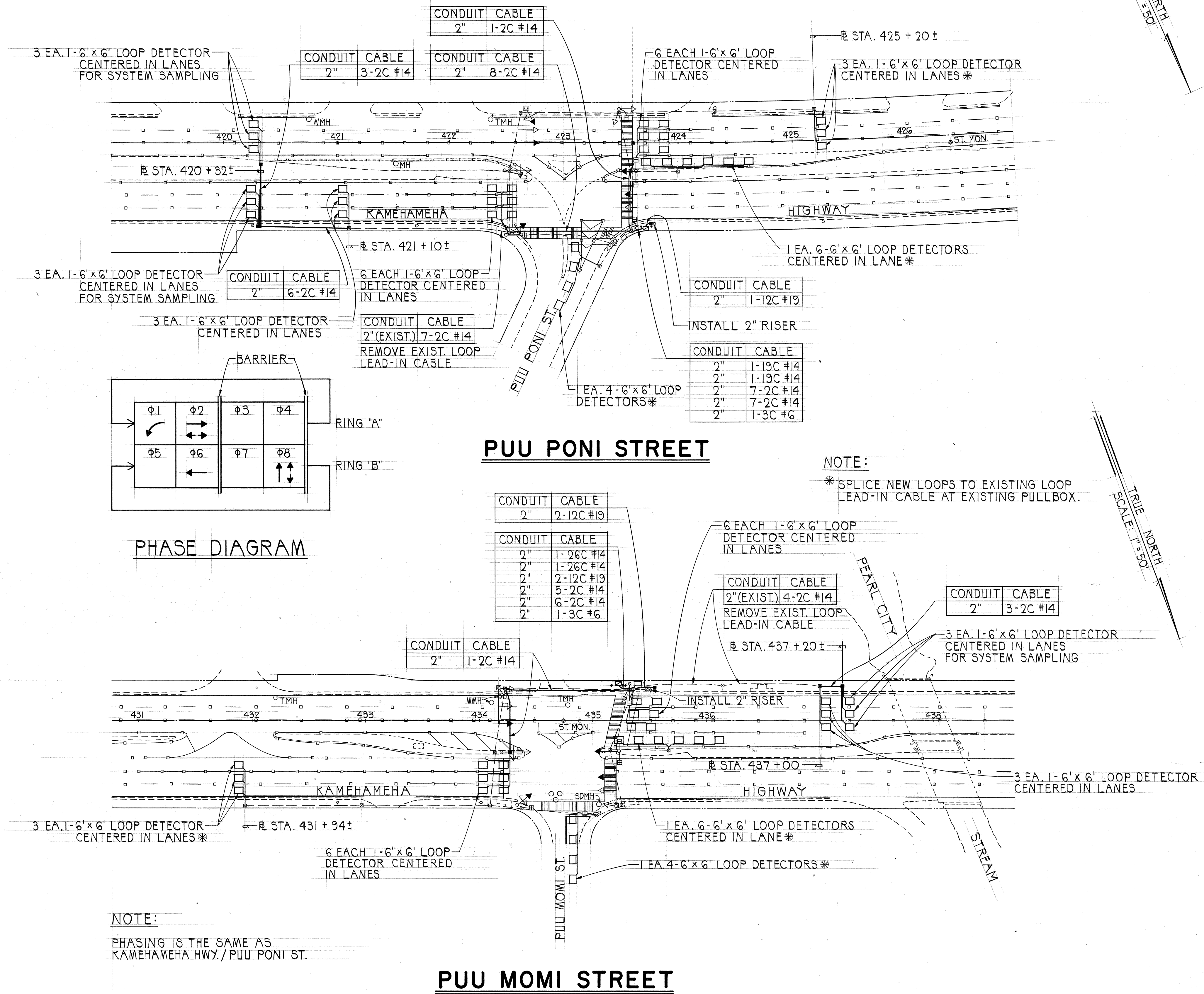
ESTIMATED QUANTITIES ~ PUU PONI ST.

623.2003	MODEL 170 TRAFFIC SIGNAL CONTROLLER WITH MODEL 332 CABINET	1 EA.
623.2051	FOUNDATION FOR CABINET	1 EA.
623.5001	TRAFFIC SIGNAL DUCTLINE 1-2"	308 L.F.
623.5005	TRAFFIC SIGNAL DUCTLINE 5-2"	12 L.F.
623.6010	TYPE "B" PULLBOX	3 EA.
623.7002	NO. 14 2-CONDUCTOR CABLE	2810 L.F.
623.7041	LOOP DETECTOR ONE LOOP	24 EA.
623.7044	LOOP DETECTOR FOUR LOOPS	1 EA.
623.7046	LOOP DETECTOR SIX LOOPS	1 EA.
623.8001	REMOVE EXIST. CONTROLLER ASSEMBLY AND CABINET	1 EA.
623.9002	RISER FOR INTERCONNECT CABLE	1 EA.

ESTIMATED QUANTITIES ~ PUU MOMI ST.

623.2003	MODEL 170 TRAFFIC SIGNAL CONTROLLER WITH MODEL 332 CABINET	1 EA.
623.2051	FOUNDATION FOR CABINET	1 EA.
623.5001	TRAFFIC SIGNAL DUCTLINE 1-2"	216 L.F.
623.5006	TRAFFIC SIGNAL DUCTLINE 6-2"	16 L.F.
623.6010	TYPE "B" PULLBOX	3 EA.
623.7002	NO. 14 2-CONDUCTOR CABLE	1225 L.F.
623.7041	LOOP DETECTOR ONE LOOP	21 EA.
623.7044	LOOP DETECTOR FOUR LOOPS	1 EA.
623.7046	LOOP DETECTOR SIX LOOPS	1 EA.
623.8001	REMOVE EXIST. CONTROLLER ASSEMBLY AND CABINET	1 EA.
623.9002	RISER FOR INTERCONNECT CABLE	1 EA.

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



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Theodore S. Kawahigashi
Signature

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

INTERSECTION PLANS
PUU PONI ST. & PUU MOMI ST.
KAMEHAMEHA HWY. INTERCONNECTION
OF TRAFFIC SIGNAL SYSTEM
FROM AIEA TO PEARL CITY
PROJECT NO. 99D-02-87

SCALE: AS SHOWN DATE: APR. 16, 1990

SHEET No. 4 OF 5 SHEETS

623.2002 MODEL 170 TRAFFIC SIGNAL CONTROLLER & MODEL 170
MASTER CONTROLLER W/ MODEL 332 CABINET 1 EA.

CONDUIT CABLE

2	1-26C #14
2	2-2C #14
2	6-2C #14
2	1-12C #19
2	1-3C #6

CONDUIT CABLE

2"	3-2C #14
----	----------

EXISTING

COND.	CABLE
2"	1-26C #14
2"	1-2C #14

CONDUIT CABLE

CONDUIT	CABLE
2	1-26C #14
2	1-26C #14
2	5-2C #14
2	5-2C #14
2	4-2C #14
2	1-12C #19
2	1-3C #6

CONDUIT CABLE

2"	1-2C #14
----	----------

CONDUIT CABLE

2"	1-12C #19
2"	6-2C #14

EXIST. PULL BOX

EXIST. CONC. SIDEWALK

R/W LINE

PLUG & ABANDON

DEMOLISH EXIST. PULL BOX (INCIDENTAL TO OTHER ITEMS OF WORK)

EXIST. CONTROLLER

PLUG & ABANDON

SIGN

REPLACE EXIST. PULL BOX W/ NEW TYPE "A" PULL BOX

CONNECT EXIST. CONDUIT & CABLE

EXISTING

COND. CABLE

2"	1-2C #14
----	----------

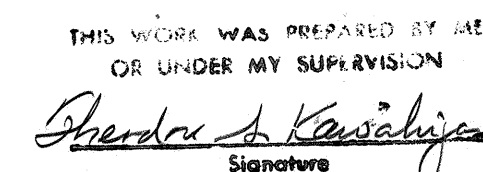
ORIGINAL PLAN	SURVEY PLOTTED BY _____	DATE _____
	DRAWN BY _____	" _____
	TRACED BY _____	" _____
NOTE BOOK	DESIGNED BY _____	" _____
	QUANTITIES BY _____	" _____
No. _____	CHECKED BY _____	" _____



* SPLICE NEW LOOPS TO EXISTING LOOP.
LEAD-IN CABLE AT EXISTING PULLBOX.



623.2003	MODEL 170 TRAFFIC SIGNAL CONTROLLER WITH MODEL 332 CABINET	1 EA.
623.2051	FOUNDATION FOR CABINET	1 EA.
623.3001	TRAFFIC SIGNAL ASSEMBLY WITH TYPE I MOUNTING (REPLACEMENT)	1 EA.
623.4001	PEDESTRIAN SIGNAL ASSEMBLY (REPLACEMENT)	8 EA.
623.4021	PEDESTRIAN SIGNAL ASSEMBLY WITH BRACKET MOUNTING	2 EA.
623.4041	PEDESTRIAN PUSH BUTTON WITH INSTRUCTION SIGN	2 EA.
623.5001	TRAFFIC SIGNAL DUCTLINE 1-2"	450 L.F.
623.5002	TRAFFIC SIGNAL DUCTLINE 2-2"	46 L.F.
623.5005	TRAFFIC SIGNAL DUCTLINE 5-2"	50 L.F.
623.5007	TRAFFIC SIGNAL DUCTLINE 7-2"	20 L.F.
623.6000	TYPE "A" PULLBOX	1 EA.
623.6001	TYPE "A" PULLBOX (REPLACE EXISTING)	1 EA.
623.6010	TYPE "B" PULLBOX	5 EA.
623.7002	NO.14 2-CONDUCTOR CABLE	2,500 L.F.
623.7041	LOOP DETECTOR ONE LOOP	24 EA.
623.7044	LOOP DETECTOR FOUR LOOPS	1 EA.
623.7046	LOOP DETECTOR SIX LOOPS	1 EA.
623.8001	REMOVE EXISTING CONTROLLER ASSEMBLY AND CABINET	1 EA.
623.9002	RISER FOR INTERCONNECT CABLE	1 EA.



C

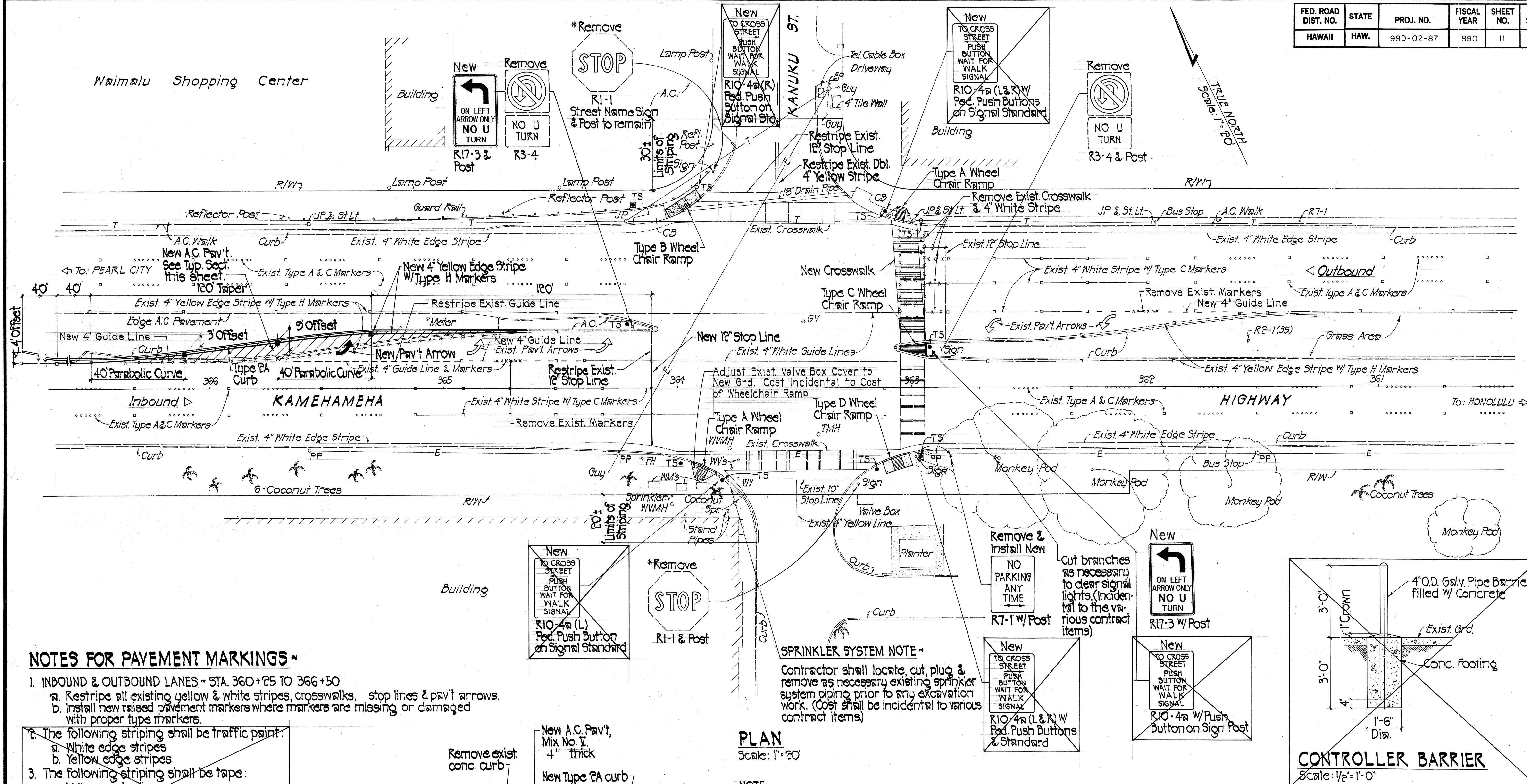
ORIGINAL PLAN	SURVEY PLOTTED BY	DATE
	DRAWN BY	"
	TRACED BY	"
NOTE BOOK	DESIGNED BY	"
	QUANTITIES BY	"
No.	CHECKED BY	"

SIGNAL INDICATIONS

THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION
Shedra S. Kawahiga
Signature

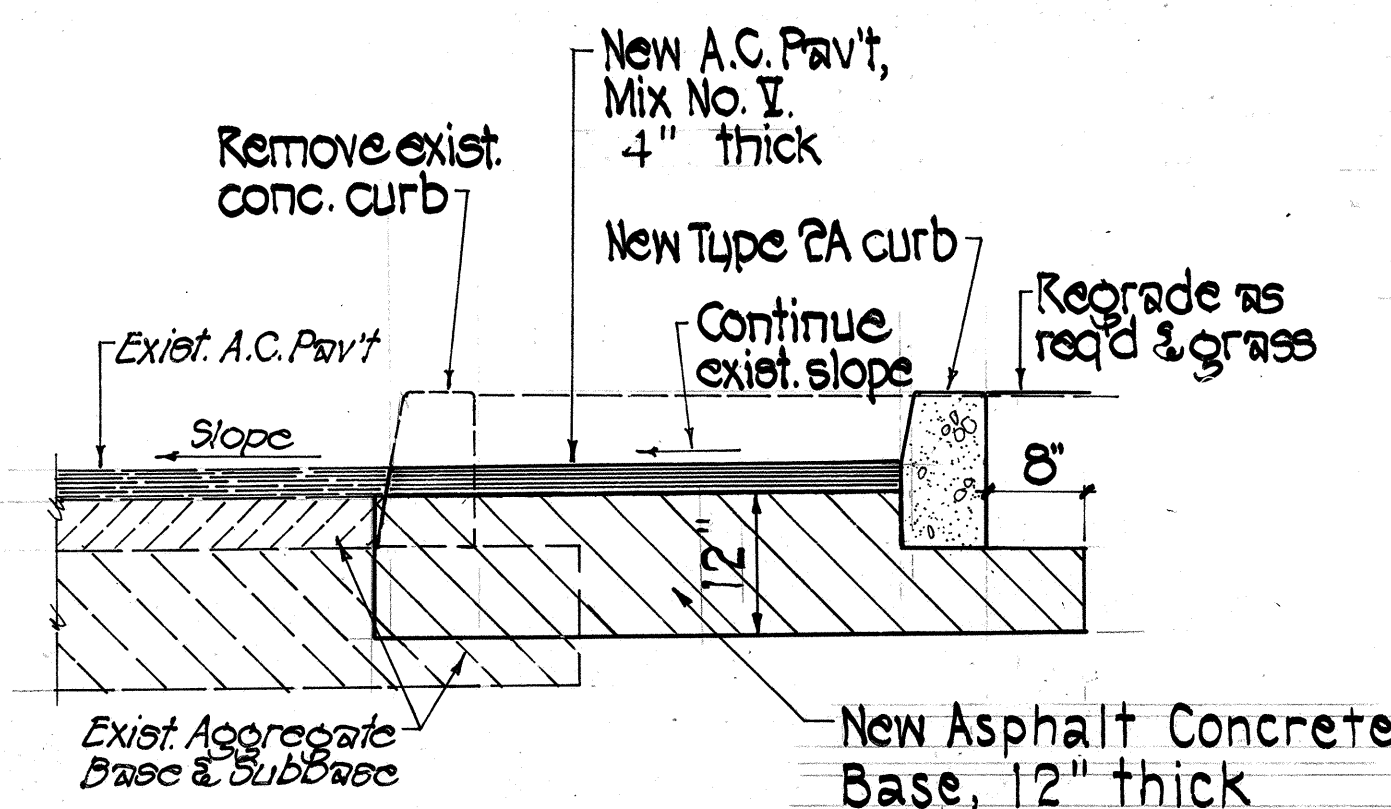
10

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99D-02-87	1990	11	15



NOTES FOR PAVEMENT MARKINGS ~

- INBOUND & OUTBOUND LANES ~ STA. 360+25 TO 366+50
 - Restripe all existing yellow & white stripes, crosswalks, stop lines & pav't arrows.
 - Install new raised pavement markers where markers are missing or damaged with proper type markers.
- The following striping shall be traffic paint:
 - White edge stripes
 - Yellow edge stripes
- The following striping shall be tape:
 - Yellow center lines
 - Crosswalks
 - Stop lines
 - Pavement directional arrows
 - Lane lines
 - Guide lines



TYPICAL PAVEMENT SECTION
Not to Scale

SPRINKLER SYSTEM NOTE ~

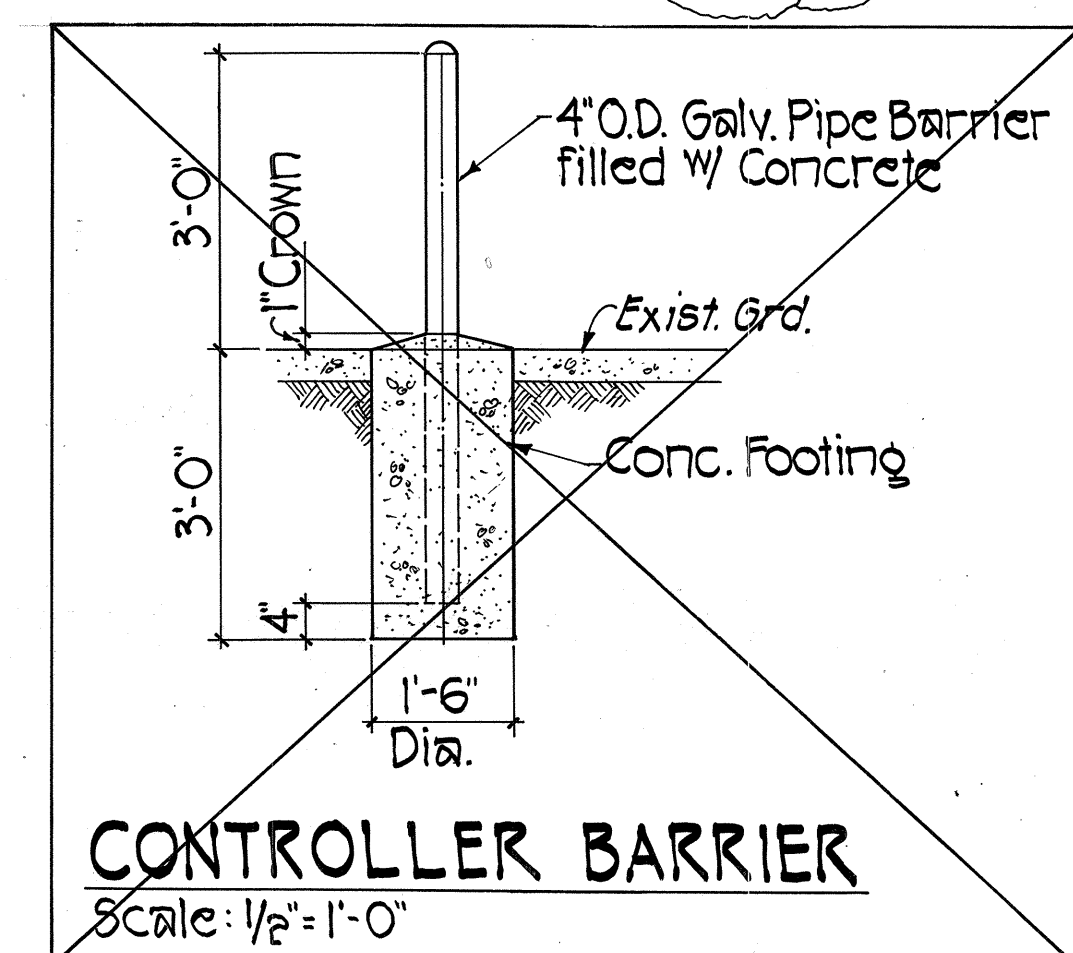
Contractor shall locate, cut, plug & remove as necessary existing sprinkler system piping prior to any excavation work. (Cost shall be incidental to various contract items)

PLAN

Scale: 1" = 20'

NOTE:

* Remove existing "Stop" sign after Traffic Signal System becomes operational.

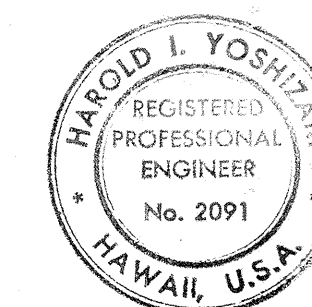


STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

STRIPING AND SIGNING PLAN
KANUKU STREET

KAMEHAMEHA HWY. INTERCONNECTION
OF TRAFFIC SIGNAL SYSTEM
FROM AIEA TO PEARL CITY
PROJECT NO. 99D-02-87

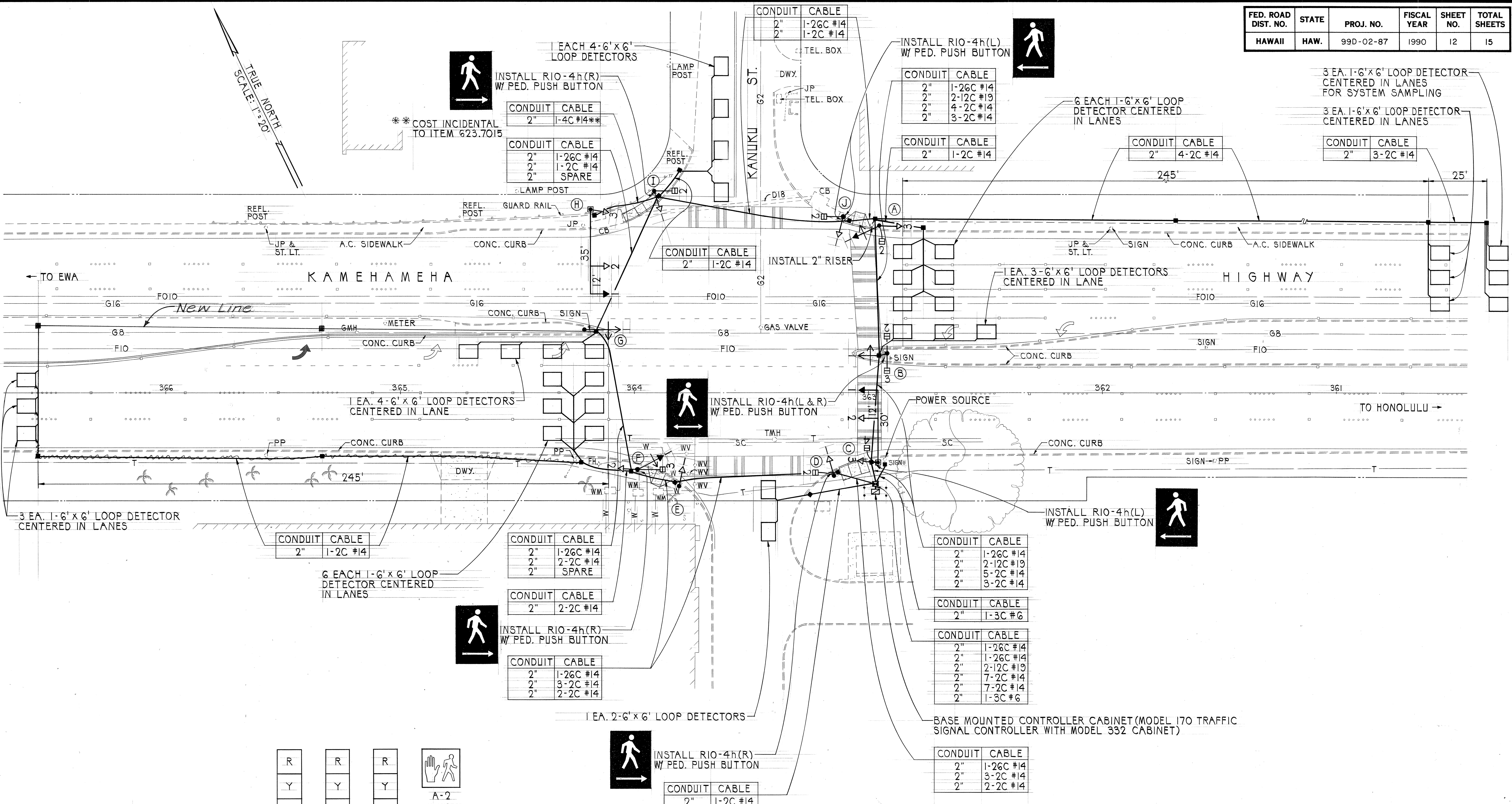
SCALE: AS SHOWN DATE: APR. 16, 1990
SHEET NO. 1 OF 2 SHEETS



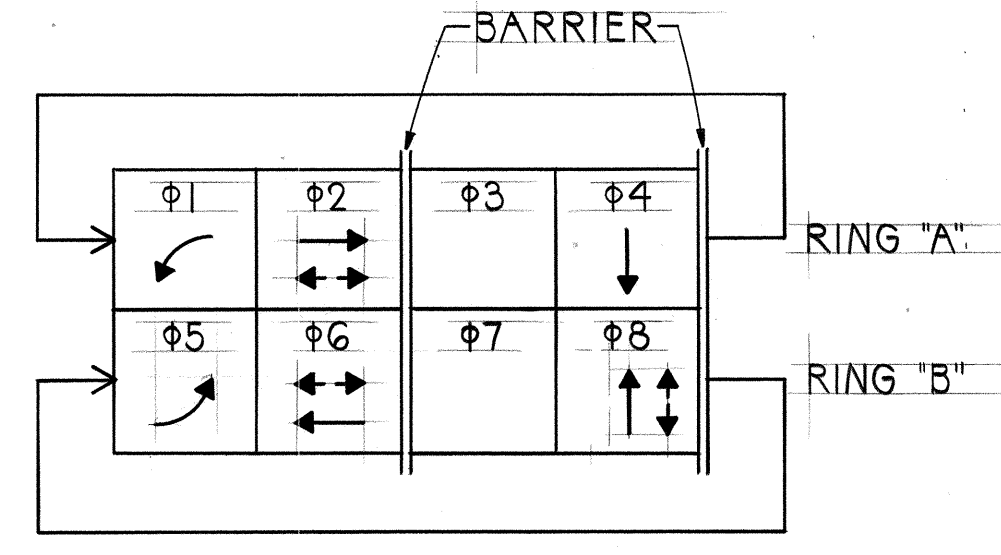
THIS WORK WAS PREPARED BY
ME OR UNDER MY SUPERVISION.
Harold I. Yoshizaki

SURVEY PLOTTED BY:	DATE:
DRAWN BY:	
DESIGNED BY:	
NOTED BY:	
CHECKED BY:	
ORIGINAL PLAN	NO.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
HAWAII	HAW.	99D-02-87	1990	12	15



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

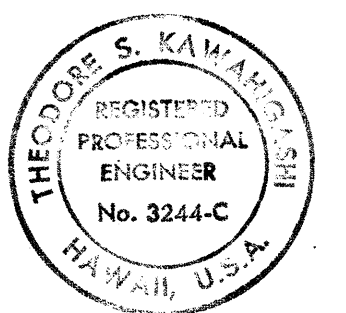


PHASE DIAGRAM

R	R	R	
Y	Y	Y	
G	↑	←	
A-3	C-1	A-1	A-2
C-2	H-1	*B-1	B-2
C-3		F-1	B-3
D-1		*G-1	C-4
E-1			D-2
F-2			F-3
H-2			I-2
H-3			J-2
I-1			
J-1			

*PROGRAMMED VISIBILITY HEAD

SIGNAL INDICATIONS



THIS WORK WAS PREPARED BY ME
OR UNDER MY SUPERVISION

Theodore S. Kamao
Signature

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

TRAFFIC SIGNAL PLAN
KANUKU STREET

KAMEHAMEHA HWY. INTERCONNECTION
OF TRAFFIC SIGNAL SYSTEM
FROM AIEA TO PEARL CITY
PROJECT NO. 99D-02-87

SCALE: AS SHOWN DATE: APR. 16, 1990

SHEET No. 2 OF 2 SHEETS