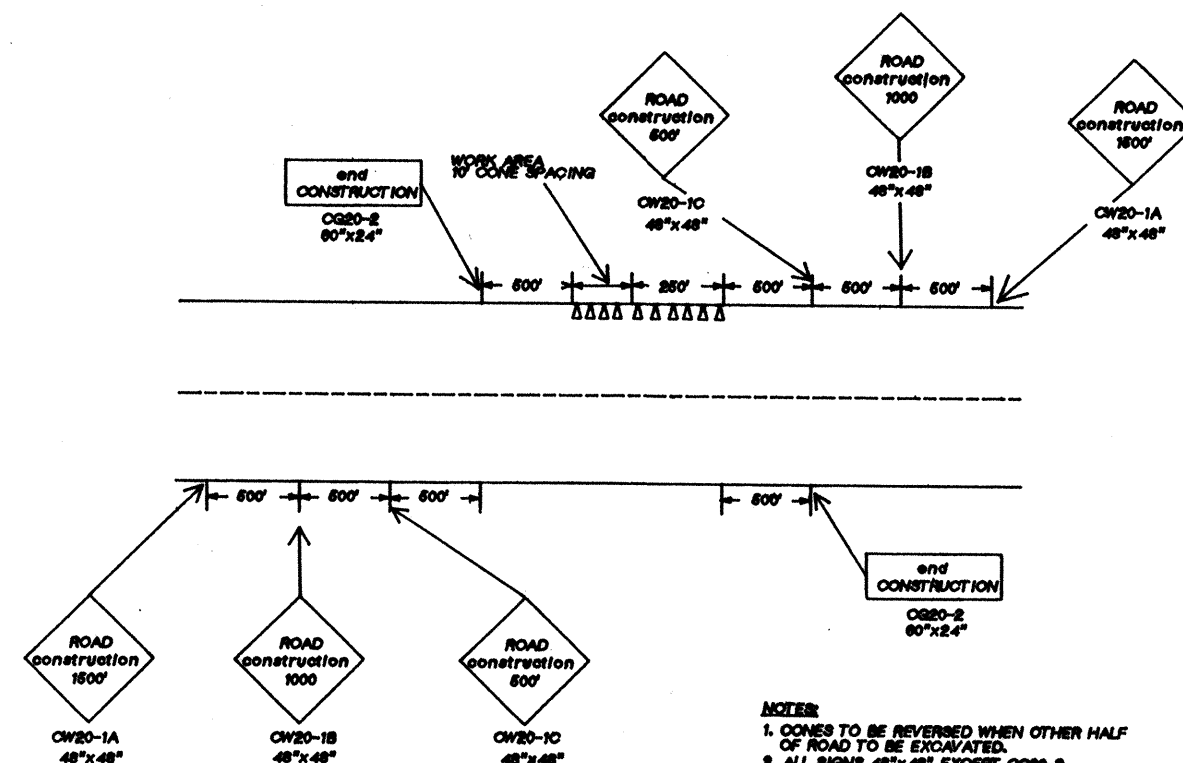
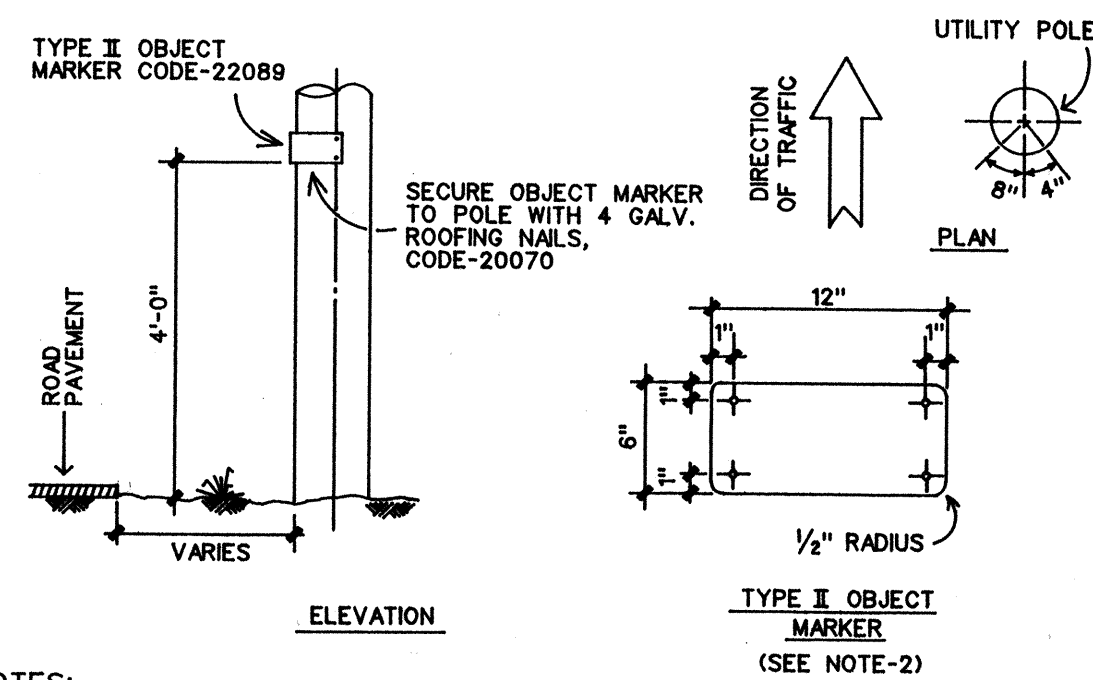


(REVISED 7/10/86)

- MECO AND/OR ITS CONTRACTOR SHALL OBTAIN A CONSTRUCTION PERMIT FROM THE STATE'S HIGHWAY DISTRICT ENGINEER AT THE KAHULUI OFFICE PRIOR TO THE COMMENCEMENT OF WORK WITHIN STATE HIGHWAY RIGHT-OF-WAY.
- CONSTRUCTION AND RESTORATION OF ALL EXISTING HIGHWAY FACILITIES WITHIN STATE RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE CURRENT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE SPECIFICATION FOR INSTALLATION OF MISCELLANEOUS IMPROVEMENTS WITHIN STATE HIGHWAYS, OF THE STATE HIGHWAYS DIVISION.
- ALL LANES SHALL BE OPENED TO TRAFFIC DURING THE MORNING PEAK HOURS FROM 8:00 A.M. TO 8:30 A.M., AND DURING THE AFTERNOON PEAK HOURS FROM 3:00 P.M. TO 6:00 P.M., AND DURING OFF-WORK HOURS. ONLY ONE LANE OF HANA HWY. SHALL BE CLOSED AT ANY OTHER TIME.
- MECO AND/OR ITS CONTRACTOR SHALL PROVIDE, INSTALL, AND MAINTAIN ALL NECESSARY SIGNS, LIGHTS, FLARES, BARRICADES, MARKERS, CONES, AND OTHER PROTECTIVE FACILITIES AND SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION AND FOR THE CONVENIENCE AND SAFETY OF PUBLIC TRAFFIC. ALL SUCH PROTECTIVE FACILITIES AND PRECAUTIONS TO BE TAKEN SHALL CONFORM WITH THE "ADMINISTRATIVE RULES OF HAWAII GOVERNING THE USE OF TRAFFIC CONTROL DEVICES AT WORK SITES ON OR ADJACENT TO PUBLIC STREETS AND HIGHWAYS" ADOPTED BY THE DIRECTOR OF TRANSPORTATION, AND THE CURRENT U.S. FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, PART VI TRAFFIC CONTROLS FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS". IF LANE CLOSURES ARE REQUIRED DURING CONSTRUCTION, A TRAFFIC CONTROL PLAN SHALL BE INCORPORATED INTO THE CONSTRUCTION PLANS AND MUST BE APPROVED BY THE DIVISION PRIOR TO THE ISSUANCE OF THE PERMIT.
- APPROVAL OF PERMIT CONSTRUCTION PLANS SHALL BE VALID FOR A PERIOD OF ONE YEAR THEREOF FROM THE DATE OF NOTIFICATION OF APPROVAL TO THE APPLICANT. IN THE EVENT CONSTRUCTION DOES NOT COMMENCE WITHIN THIS ONE-YEAR PERIOD, THE APPLICANT WILL BE REQUIRED TO RESUBMIT HIS CONSTRUCTION PLANS FOR DIVISION'S REVIEW AND APPROVAL.
- ALL REGULATORY GUIDE AND CONSTRUCTION SIGNS AND BARRICADES SHALL BE OF HIGH INTENSITY REFLECTIVE SHEETING.

TRAFFIC CONTROL DEVICES PLAN
40 MPH AND ABOVE POSTED SPEED LIMITS

NOTES:

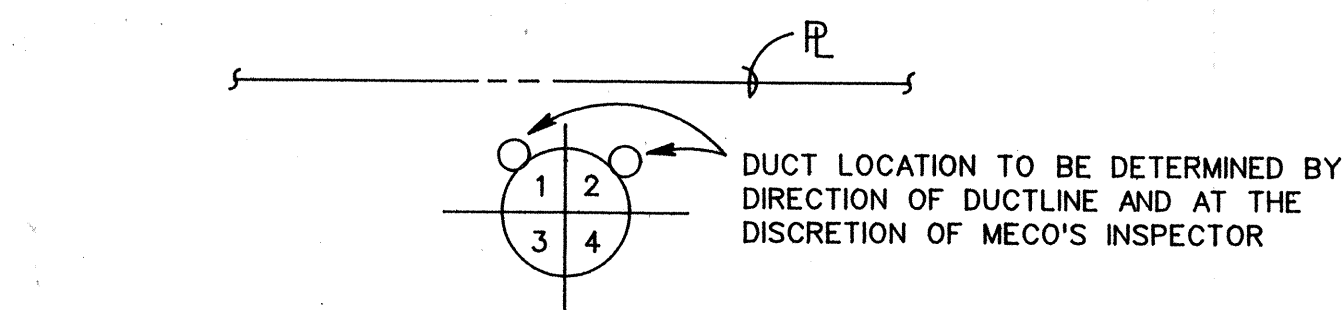
- ALL UTILITY POLES THAT ARE WITHIN THE STATE HIGHWAY RIGHT OF WAY AND WITHIN 30 FEET OF THE ROADWAY EDGE OF PAVEMENT SHALL BE MARKED IN CONFORMANCE WITH STATE OF HAWAII, DEPT. OF TRANSPORTATION STANDARD PLAN TE-17.
- THE TYPE II OBJECT MARKER FOR UTILITY POLES SHALL BE MADE OF AMBER REFLECTIVE SHEETING MATERIAL OVERLAYED ON 0.020" ALUMINUM SHEETING.

STATE HIGHWAY OBJECT MARKER

N.T.S.

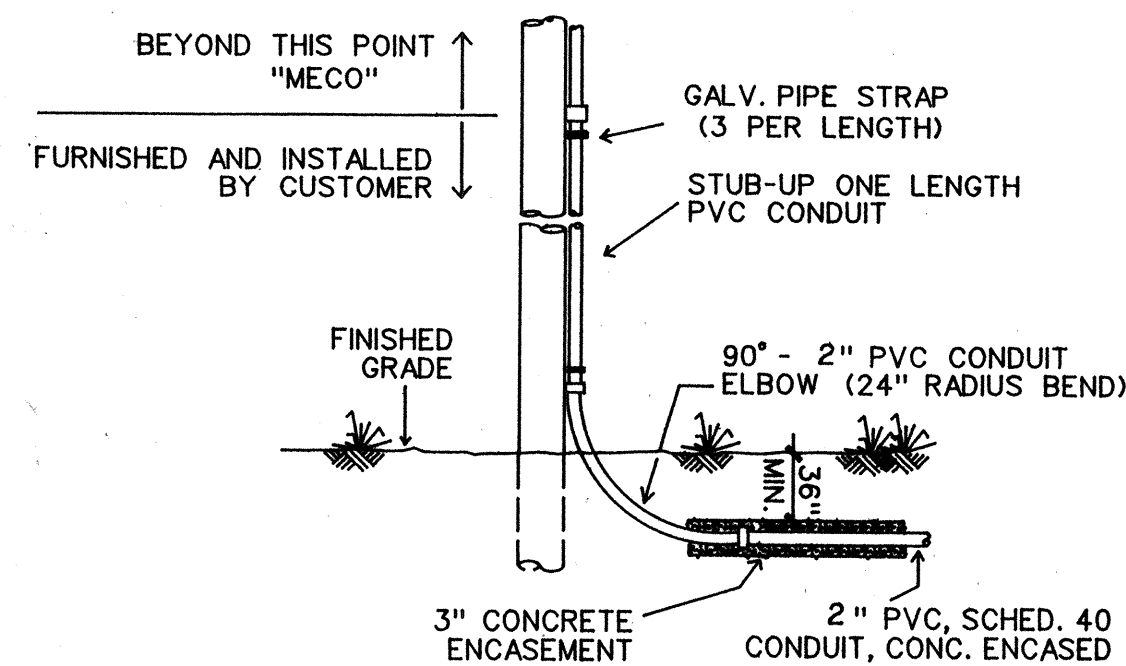
DUCT NOTES

- ALL CONDUITS TO BE PVC SCHEDULE 40.
- ALL CONDUITS TO CONTAIN A POLYOLEFIN PULL LINE (NET LINE CAT. #232 OR EQUIVALENT).
- BACKFILL LEGEND:
TYPE "A" BACKFILL: BEACH SAND, EARTH, OR EARTH AND GRAVEL. IF EARTH AND GRAVEL, THE MAXIMUM ROCK SIZE SHALL BE 1" AND THE MIXTURE SHALL CONTAIN NOT MORE THAN 50% BY VOLUME OF ROCK PARTICLES.
TYPE "B" BACKFILL: BEACH SAND, EARTH, OR EARTH AND GRAVEL. IF EARTH AND GRAVEL, THE MIXTURE MUST PASS A 1/2" MESH SCREEN AND CONTAIN NOT MORE THAN 20% BY VOLUME OF ROCK PARTICLES.
NOTE: IF THE NORMAL MATERIAL IN THE BOTTOM OF THE TRENCH IS NOT TYPE "B", AN ADDITIONAL 3" SHALL BE EXCAVATED AND TYPE "B" BACKFILL SHALL BE PROVIDED.
CONCRETE ENCASEMENT STRENGTH 2500 PSI IN 28 DAYS MAXIMUM AGGREGATE 3/4"

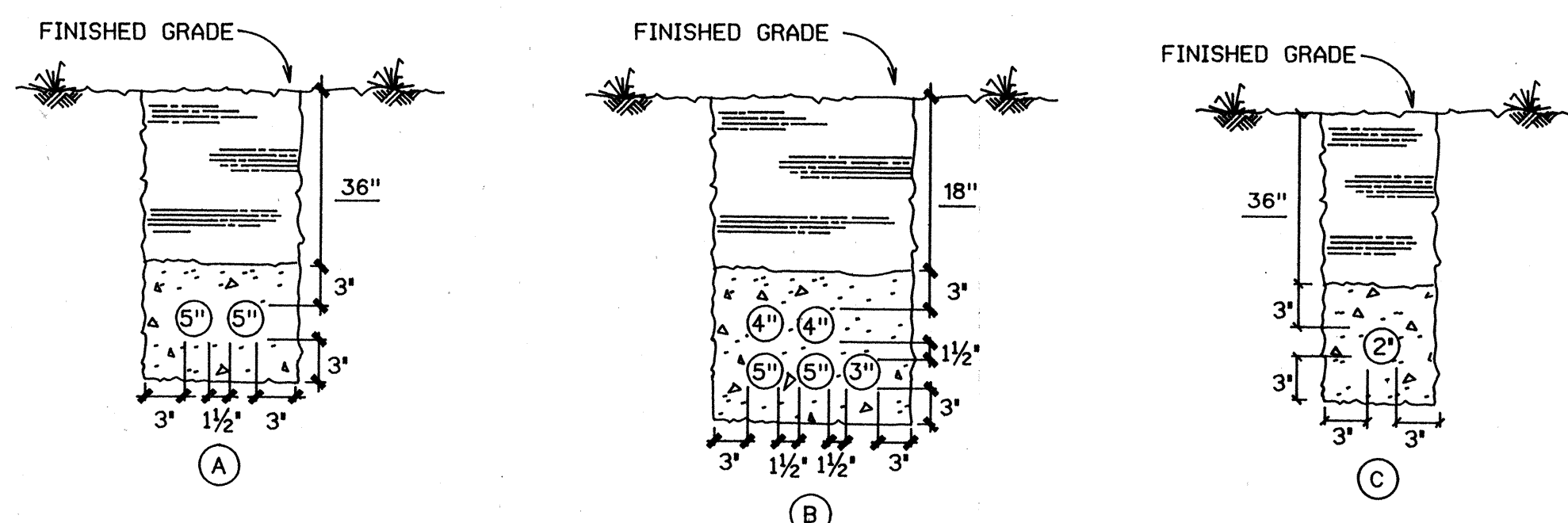


POLE QUADRANT DETAIL

N.T.S.

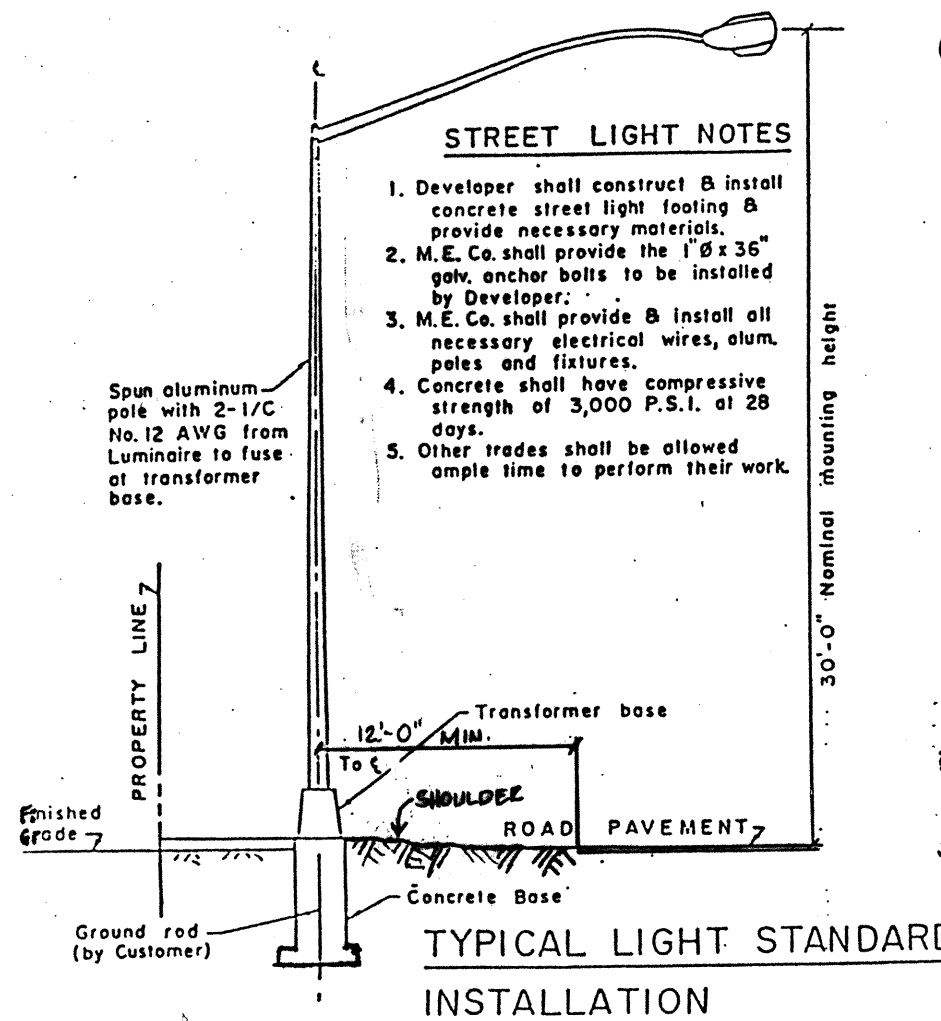


CONDUIT INSTALLATION & RISER



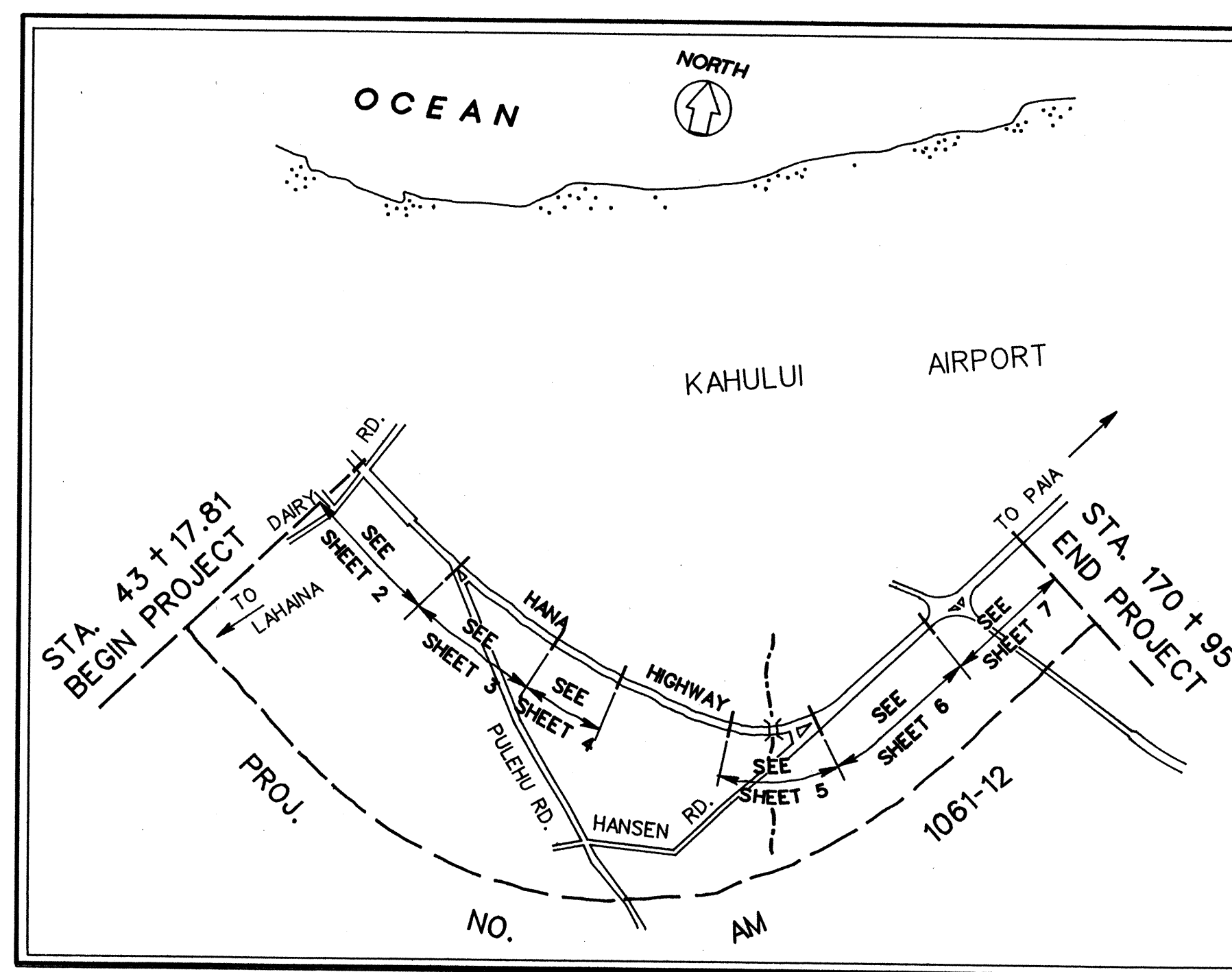
DUCT DETAILS

N.T.S.

TYPICAL LIGHT STANDARD
INSTALLATION

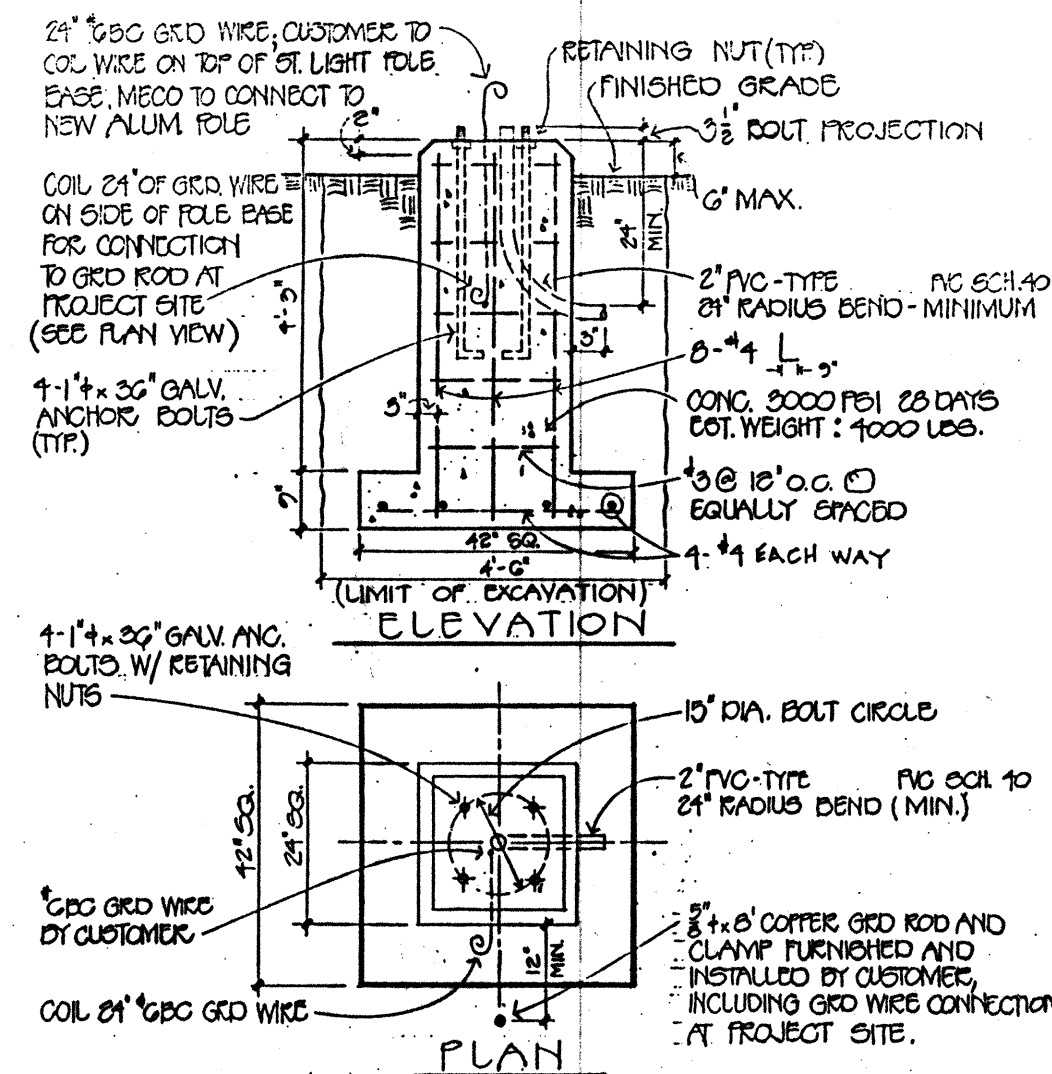
STATE OF HAWAII COLOR CODING

- YELLOW ☐ EXISTING FACILITIES TO BE REMOVED
DEMOLISHED, ABANDONED OR RELOCATED
- RED ☐ NEW FACILITIES
- GREEN ☐ EXISTING FACILITIES TO REMAIN
- ORANGE ☐ TEMPORARY FACILITIES TO BE REMOVED
AFTER USE
- RED & GREEN ☐ EXISTING FACILITIES TO BE ADJUSTED
- RED & YELLOW ☐ RELOCATED FACILITIES



LOCATION MAP

N.T.S.

PRECAST CONCRETE FOOTING
STREET LIGHT POLE BASE
TRANSFORMER TYPE

ELECTRICAL LEGEND:

- EXISTING POLE
- EXISTING POLE (TO BE REMOVED)
- EXISTING ANCHOR
- EXISTING OVERHEAD CONDUCTORS
- EXISTING OVERHEAD CONDUCTORS (TO BE REMOVED)
- △ EXISTING POLEMOUNT TRANSFORMER
- EXISTING HANDHOLES
- ⊗ EXISTING UNDERGROUND
- ⊗ EXISTING STREET LIGHT
- NEW POLE
- NEW ANCHOR
- ▲ NEW POLEMOUNT TRANSFORMER
- NEW OVERHEAD SECONDARY
- NEW OVERHEAD PRIMARY
- ⊗ NEW 5'X7' HANDHOLE (DWG. #18843, 5'-5" DEEP)
- ⊗ NEW 2'X4' PULLBOX
- ⊗ NEW STREET LIGHT
- ⊗ NEW METER LOOP
- NEW UNDERGROUND SECONDARY
- NEW UNDERGROUND 3+ PRIMARY FEEDER
- NEW STUBOUT

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 or for any errors or omissions which may have been incorporated into it as a result.

EASEMENT DOCUMENT NO.:

SUBSTATION: 2 KANAHU
CIRCUIT: KAHUMANU
#1245

ESTIMATED DEMAND:

TAX MAP KEY: 4700
REFER TO MAP(S): MTH1985
APPLICATION NO.: 20-942A
JOINT POLE NO.: 10965

LINE	SMU	CODE	DESCRIPTION	QTY.
1		58	55' WOOD POLE	7
2	3-4100		1/2" DOWN GUY	11
3	3-4120		24" DEADMAN 1" ANCHOR ROD	11
4	8-1220		VERTICLE DE & BUCK 23KV	1
5	8-2510-F1		TANGENT DBL CKT VERT 23KV	3
6	8-2510-F2		TANGENT DBL CKT VERT 23KV DBL ARM	3
7	3-4100		1/2" HEAD GUY	3
8	SPECIAL		BREAKAWAY ST. LIGHT SUPPORT COUPLING	46
9		8295	CONDUCTOR AL 336.4 MCM STRD.	2785*
10		2790	EYELET GALV.	18
11		2374	THIMBLE DE AL W/GALV. COT BOLT & BRZ PIN	18
12		1162	INSULATOR SUSP. PORC. 9" GALV. CAP	72
13		2786	GRIP DE AL 44" FOR 336.4 MCM	18
14	12-1010		WOOD POLE GROUNDING	7
15	12-5201		TYPE II OBJECT MARKER	22
16		19	35' WOOD POLE	7
17		39	45' WOOD POLE	1
18	3-4100		3/8" DOWN GUY	5
19	3-4100		3/8" HEAD GUY	1
20	5-1009-F3		SEC. DE CONSTRUCTION	4
21	7-2230		FLAT CONSTRUCTION DEADEND & BUCK	2
22	7-2430		FLAT DOUBLE ARM DEADEND	1
23		7985	*1/0 AL TRIPLEX CABLE 300V	550'
24		8296	*3/0 AAC STRD. CONDUCTOR	30*
25	13-1001		SECONDARY RISER CONSTRUCTION 2"	28
26	10-2040		1+ TRANSFORMER SECONDARY LEADS	2
27	10-2060		1+ TRANSFORMER PRIMARY CONNECTION	2
28	10-2100		1+ TRANSFORMER INSTALLATION	2
29	12-1020-F		NEUTRAL GROUNDING	2
30	5-1009-F5		SEC. ANGLE CONSTRUCTION (31°-40°)	1
31		8032	CONDUCTOR *2AL TRIPLEX 600V	14800
32	11-2020-6		30' AL POLE, 150W HPS 120V 12' TRUSS ARM	13
33	11-2020-9		30' AL POLE, 250W HPS 120V 12' TRUSS ARM	45
34		99064	SEC. PEDESTAL CONNECTOR	183
35		7622	CONDUCTOR 3-1/2" *500 MCM AL PEIN 15KV	6000
36	21-1046-2		RACKING & GRD BUS DETAILS FOR 5'X7' HH	2
37	26-2009-20		600A PREFAB SPLICE 500 MCM AL TO 500 MCM AL PEIN	21
38	26-2009-18		600A PREFAB SPLICE 500 MCM TO 500 MCM TO *46 AL PEIN	6
39	26-2009-11		600A PREFAB DEADEND 1/2 500 MCM AL PEIN	8
40		27	40' WOOD POLE	6
41	7-2210		12'X4' FLAT CONSTRUCTION WITH NEUTRAL	7

A UTILITY CO. STANDBY MAN IS REQUIRED TO BE AT THE SITE AT THE TIME ANY NON-UTILITY CO. PERSONNEL WILL BE BREAKING INTO OR ENTERING ANY FACILITIES THAT CONTAIN ENERGIZED UTILITY CO. EQUIPMENT OR CABLES.

THREE WORKING DAYS ADVANCE NOTICE IS REQUIRED BY THE UTILITY CO. FOR ANY INSPECTION SERVICE OR STANDBY MAN.

CALL MECO -- PH: 871-7777

CHIEF, HIGHWAYS DIVISION, DEPARTMENT
OF TRANSPORTATION - STATE OF HAWAII
(APPROVAL GRANTED FOR WORK
WITHIN STATE RIGHT-OF-WAY ONLY)

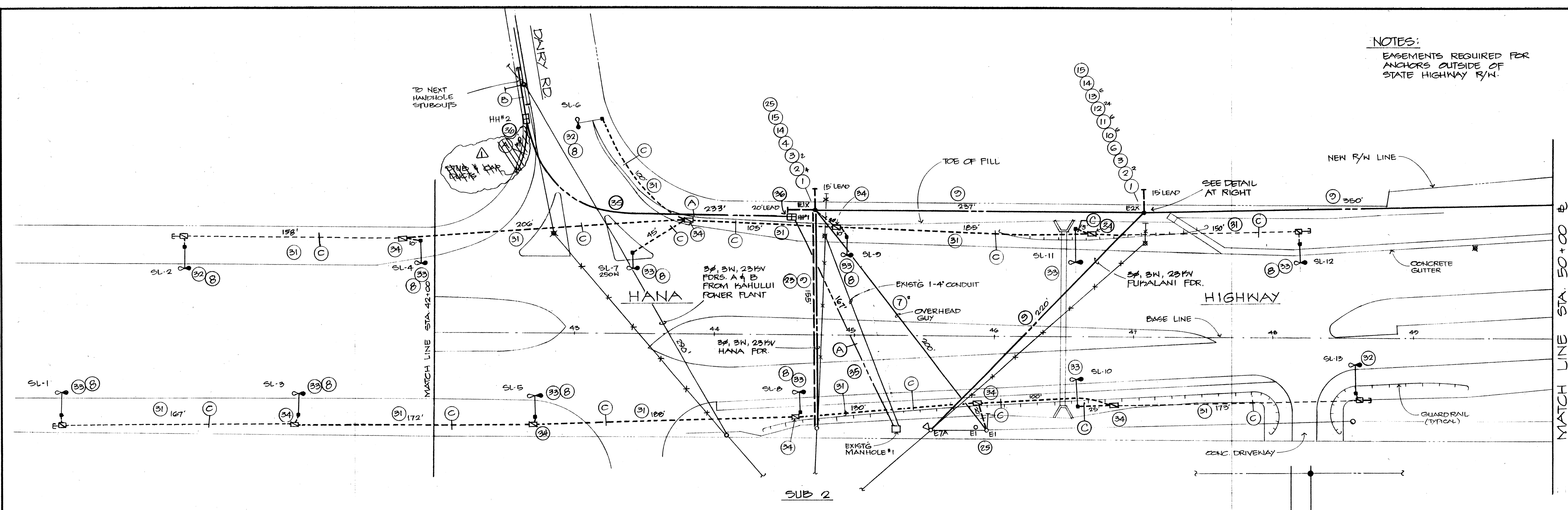
APPROVAL LETTER NO. _____

I. D. No. _____

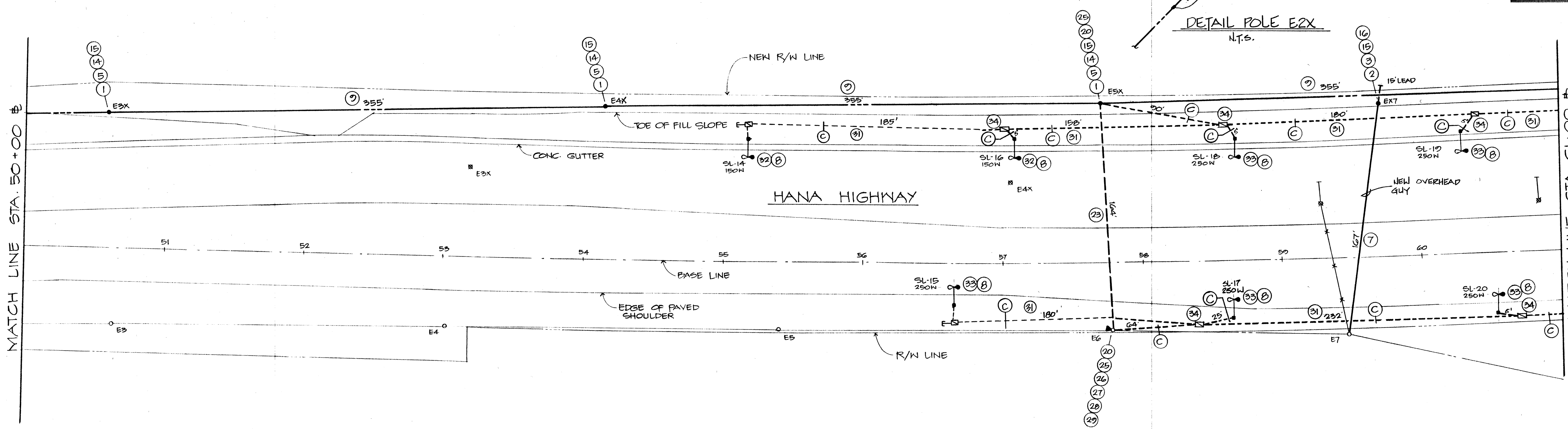
DATE _____

DATE _____

1	2-1-91	ADD WOOD POLES FOR ST. LIGHTS	BY	CHK'D	APP'D
REVISIONS					
STATE OF HAWAII HANA HWY. IMPROVEMENTS, KAHULUI STATE PROJECT NO. AM-1061-12					
DESIGNED	W. MIYASAKI	DRAWN	BPJ	DATE	4/23/90
CHECKED		SCALE	AS NOTED		
DESIGNER		SUPERVISOR	STAFF ENGINEER		
APPROVAL:			MAUI ELECTRIC COMPANY, LTD. KAHULUI, MAUI, HAWAII 96732		
DRAWING NUMBER			2-1-486		
SHEET			1 OF 7		

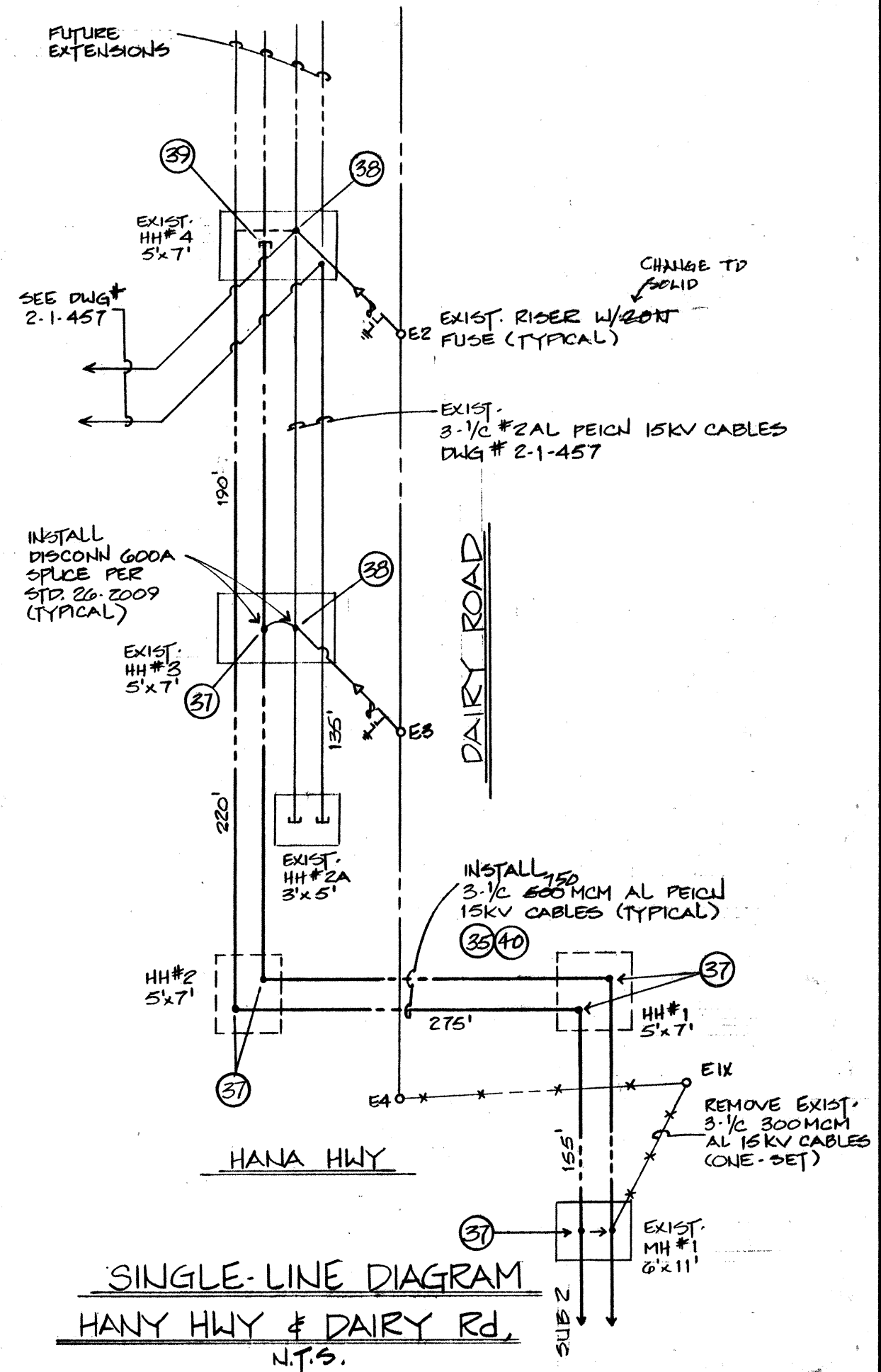


ELECTRICAL SITE PLAN
SCALE: 1" = 40'



ELECTRICAL SITE PLAN
SCALE: 1" = 40'

NOTES:
EASEMENTS REQUIRED FOR
ANCHORS OUTSIDE OF
STATE HIGHWAY R/W.



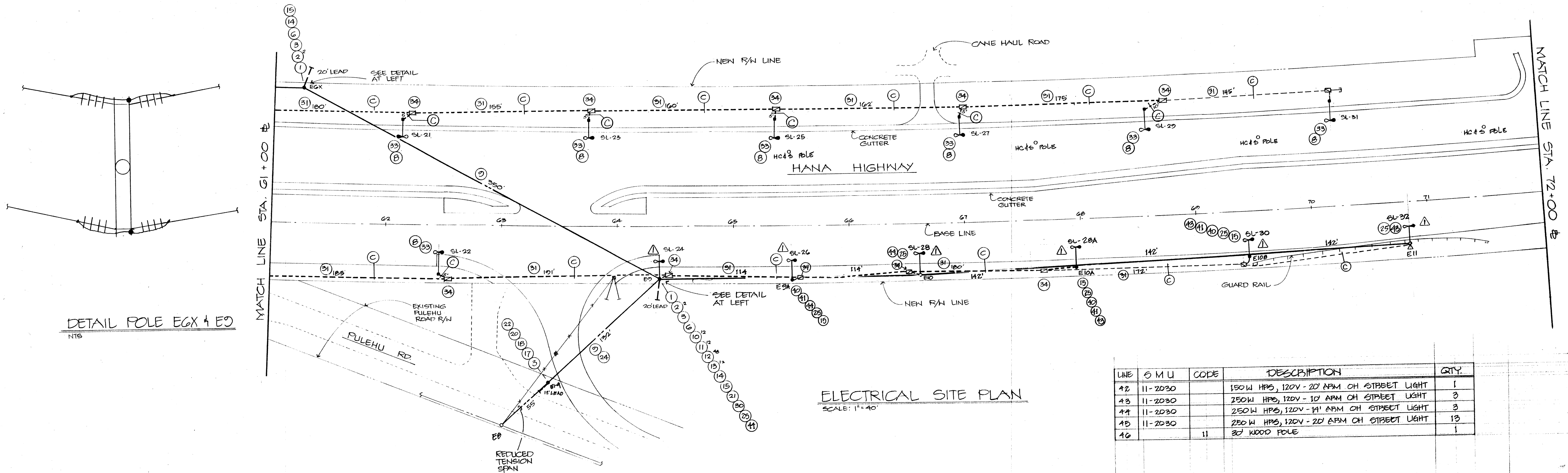
SINGLE-LINE DIAGRAM
HANA HWY & DAIRY RD.
N.T.S.

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

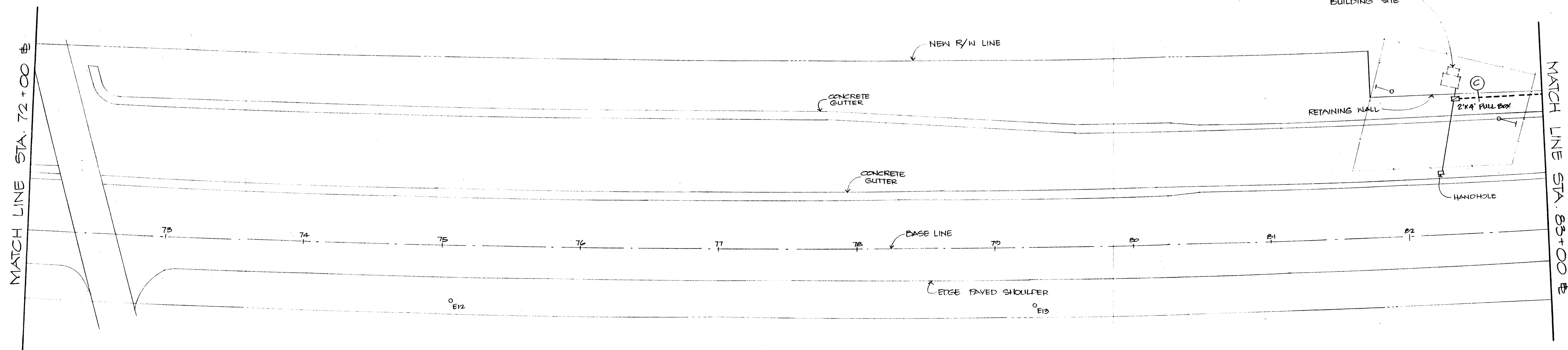
This Drawing has been prepared, in part, based upon information furnished by others. While this information is believed to be reliable, the Design Professional cannot assume its accuracy of this As-Built drawing or for any errors or omissions which may have been incorporated into it as a result.

EASEMENT DOCUMENT NO.:
SUBSTATION: 2 KANAHU
CIRCUIT: KAAHUMANU #1245
ESTIMATED DEMAND:
TAX MAP KEY: 4700
REFER TO MAPS: M111065
APPLICATION NO: 20-042A
JOINT POLE NO:

1	8/6/90	ELIMINATE STUB AT HH#2 TO HANA HWY		WM	WM <i>WM</i>
NO.	DATE	REVISIONS		BY	CHK'D APP'D
STATE OF HAWAII					
HANA HIGHWAY IMPROVEMENTS, KAHULUI					
STATE PROJECT No AM-1061-12					
DESIGNED BY W. MIYASAKI		DRAWN BY		DATE 4/23/90	SCALE AS NOTED
CHECKED		MAUI ELECTRIC COMPANY, LTD.			
<i>WM</i> DESIGNER	<i>WM</i> SUPERVISOR	<i>WM</i> STAFF ENGINEER		KAHULUI, MAUI, HAWAII 96732	
APPROVAL:		DRAWING NUMBER 2-1-486 SHEET <u>2</u> OF <u>7</u>			
<i>WM</i>					



LINE	S M U	CODE	DESCRIPTION	QTY.
42	11-2030		150W HPS, 120V - 20' ARM OH STREET LIGHT	1
43	11-2030		250W HPS, 120V - 10' ARM OH STREET LIGHT	3
44	11-2030		250W HPS, 120V - 14' ARM OH STREET LIGHT	3
45	11-2030		250W HPS, 120V - 20' ARM OH STREET LIGHT	13
46		11	30' WOOD POLE	1



ELECTRICAL SITE PLAN
SCALE: 1"=40'

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

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EASEMENT DOCUMENT NO. _____

SUBSTATION: 2 KAHANA
CIRCUIT: KAHUMANU
1245

ESTIMATED DEMAND: _____

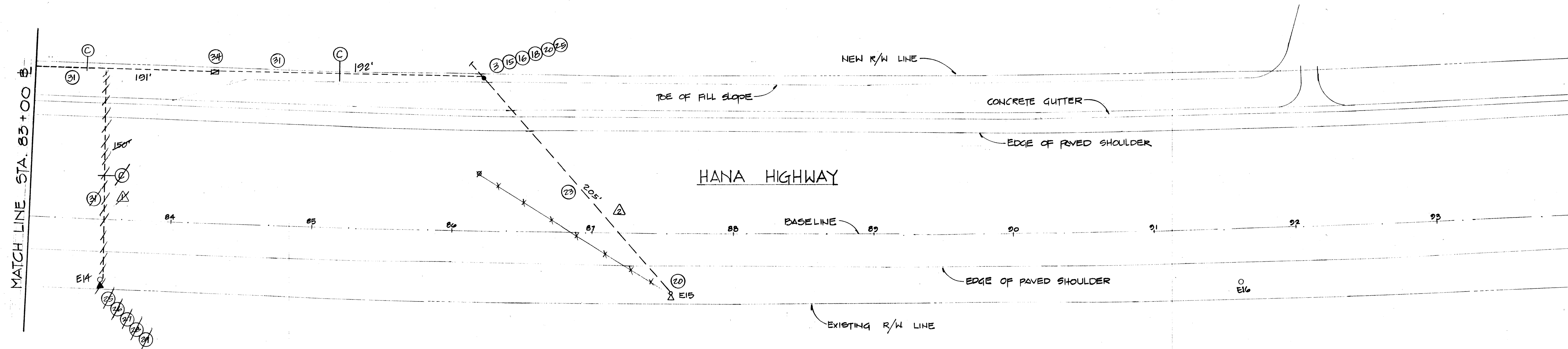
TAX MAP KEY: 4700

REFER TO MAP(S): 4700

APPLICATION NO: M111365

JOINT POLE NO: 20-042A

1	2-1-91	ADD WOOD POLES FOR ST. LIGHTS	W/M	82
NO.	DATE	REVISIONS	BY	CHK'D APP'D
STATE OF HAWAII				
HANA HIGHWAY IMPROVEMENTS, KAHULUI				
STATE PROJECT NO. AM-1061-12				
DESIGNED	W. MIYASAKI	DRAWN BY	DATE 4/23/90	SCALE AS NOTED
CHECKED	W/M	SUPERVISOR	h/a	STAFF ENGINEER
APPROVAL:	MAUI ELECTRIC COMPANY, LTD. KAHULUI, MAUI, HAWAII 96732			
DRAWING NUMBER				SHEET 3 OF 7



ELECTRICAL SITE PLAN
SCALE: 1" = 40'-0"

AS-BUILT (Record Drawing)

DATE 7/12/91

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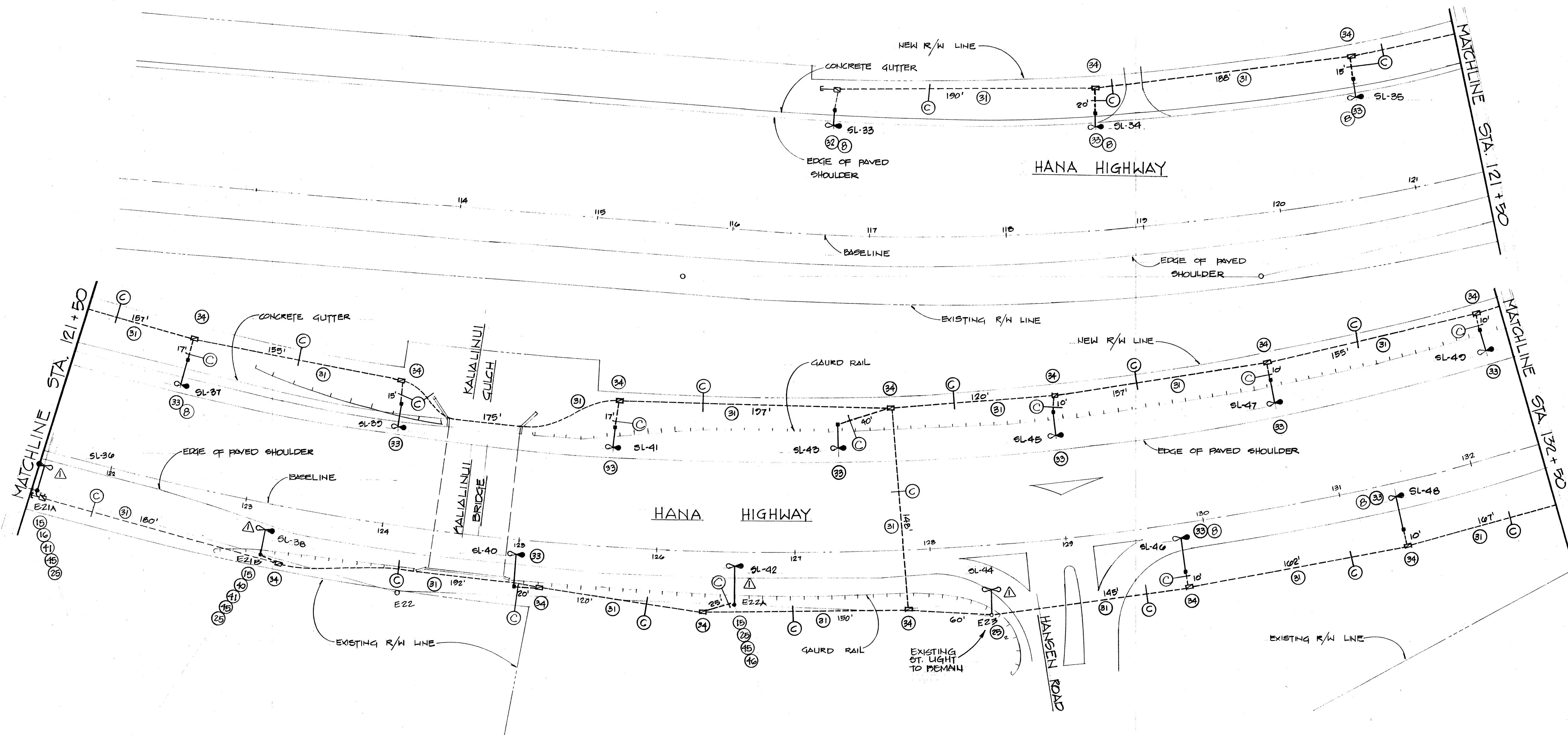
EASEMENT DOCUMENT NO: _____

SUBSTATION: 2 KAHANA
CIRCUIT: KAHALUWANA
1245

ESTIMATED DEMAND: _____
TAX MAP KEY: 4700
REFER TO MAP(S): 4700
APPLICATION NO: H111263
JOINT POLE NO: 20-242A

NO.	DATE	REVISIONS	BY	CHK'D	APP'D
2	7/26/90	CHANGE TO OH ROAD CROSSING AT E15	WM	WM	AW
1	6/12/90	CHANGE TO US ROAD CROSSING AT E14	WM	WM	AW

STATE OF HAWAII			
HANA HIGHWAY IMPROVEMENTS, KAHULUI			
STATE PROJECT NO. AM-1061-12			
DESIGNED W. MIYASAKI	DRAWN G.K.	DATE 4/23/90	SCALE AS NOTED
CHECKED		MAUI ELECTRIC COMPANY, LTD.	
WM	SK	KAHULUI, MAUI, HAWAII 96732	
DESIGNER	SUPERVISOR	STAFF ENGINEER	
APPROVAL:		DRAWING NUMBER	
[Signature]		2-1-480	
		SHEET 4 OF 7	



ELECTRICAL SITE PLAN

SCALE: 1" = 40' 0"

AS-BUILT

(Record Drawing)

DATE 7/12/91

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EASEMENT DOCUMENT NO: _____

SUBSTATION: 2 KAHANA
CIRCUIT: KAHAMANU
1245

ESTIMATED DEMAND: _____

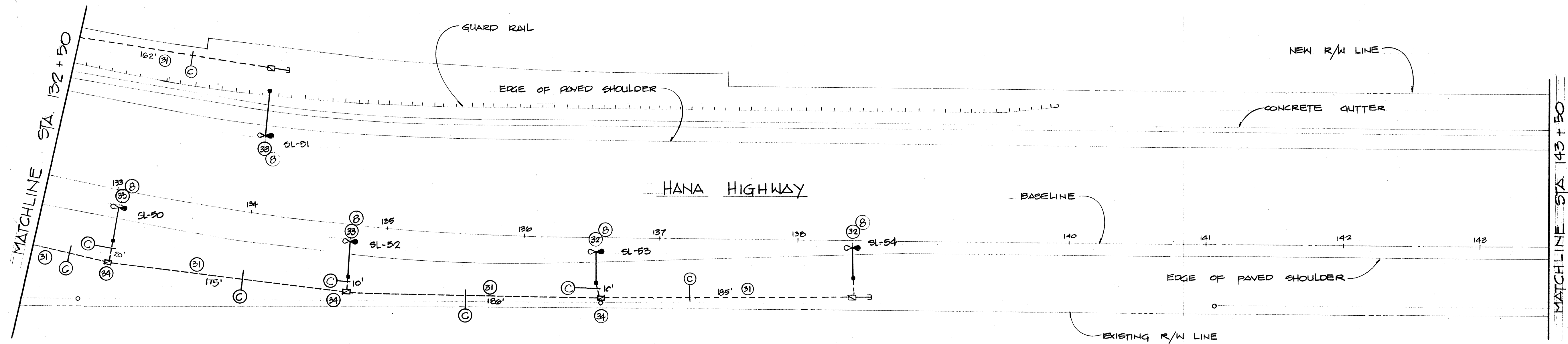
TAX MAP KEY: _____

REFER TO MAP(S): 4700

APPLICATION NO: M111265

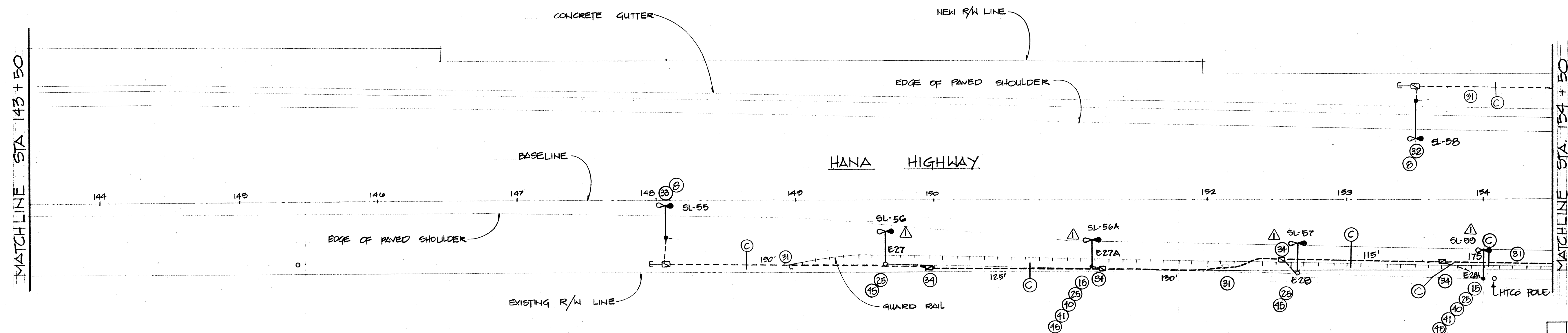
JOINT POLE NO: 20-242A

NO.	DATE	REVISIONS	BY	CHKD	APPD
1	2-1-91	ADD WOOD POLES FOR ST. LIGHTS		LWM	SL
STATE OF HAWAII					
HANA HIGHWAY IMPROVEMENTS, KAHULUI					
STATE PROJECT NO. DM-1061-2					
DESIGNED BY	MINASAKI	DRAWN BY	DATE	4/23/90	SCALE AS NOTED
CHECKED	LWM	SUPERVISOR	STAFF ENGINEER		
APPROVAL	MAUI ELECTRIC COMPANY, LTD.				
KAHULUI, MAUI, HAWAII 96732					
DRAWING NUMBER				2-1-486	
SHEET				5 OF 7	



ELECTRICAL SITE PLAN

SCALE: 1" = 40'-0"



ELECTRICAL SITE PLAN

SCALE: 1" = 40'-0"

AS-BUILT

(Record Drawing)

DATE 7/12/91

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EASEMENT DOCUMENT NO: _____

SUBSTATION: 2 KANASHA
CIRCUIT: KAHULUIMANU
1245

ESTIMATED DEMAND: _____

TAX MAP KEY: _____

REFER TO MAP(S): 4700

APPLICATION NO: M111265

JOINT POLE NO: 20-242A

1	2-1-91	ADD WOOD POLES FOR ST. LIGHTS	Wm	82
NO.	DATE	REVISIONS	BY	CHK'D APP'D
STATE OF HAWAII				
HANA HIGHWAY IMPROVEMENTS, KAHULUUI				
STATE PROJECT NO. SM-1061-12				
DESIGNED	W. MIYABAKI	DRAWN	GK	DATE 4/23/90
CHECKED	Wm	SUPERVISOR	4/2	SCALE AS NOTED
MAUI ELECTRIC COMPANY, LTD.				
KAHULU, MAUI, HAWAII 96732				
APPROVAL:				DRAWING NUMBER
				2-1-486
				SHEET 6 OF 7

