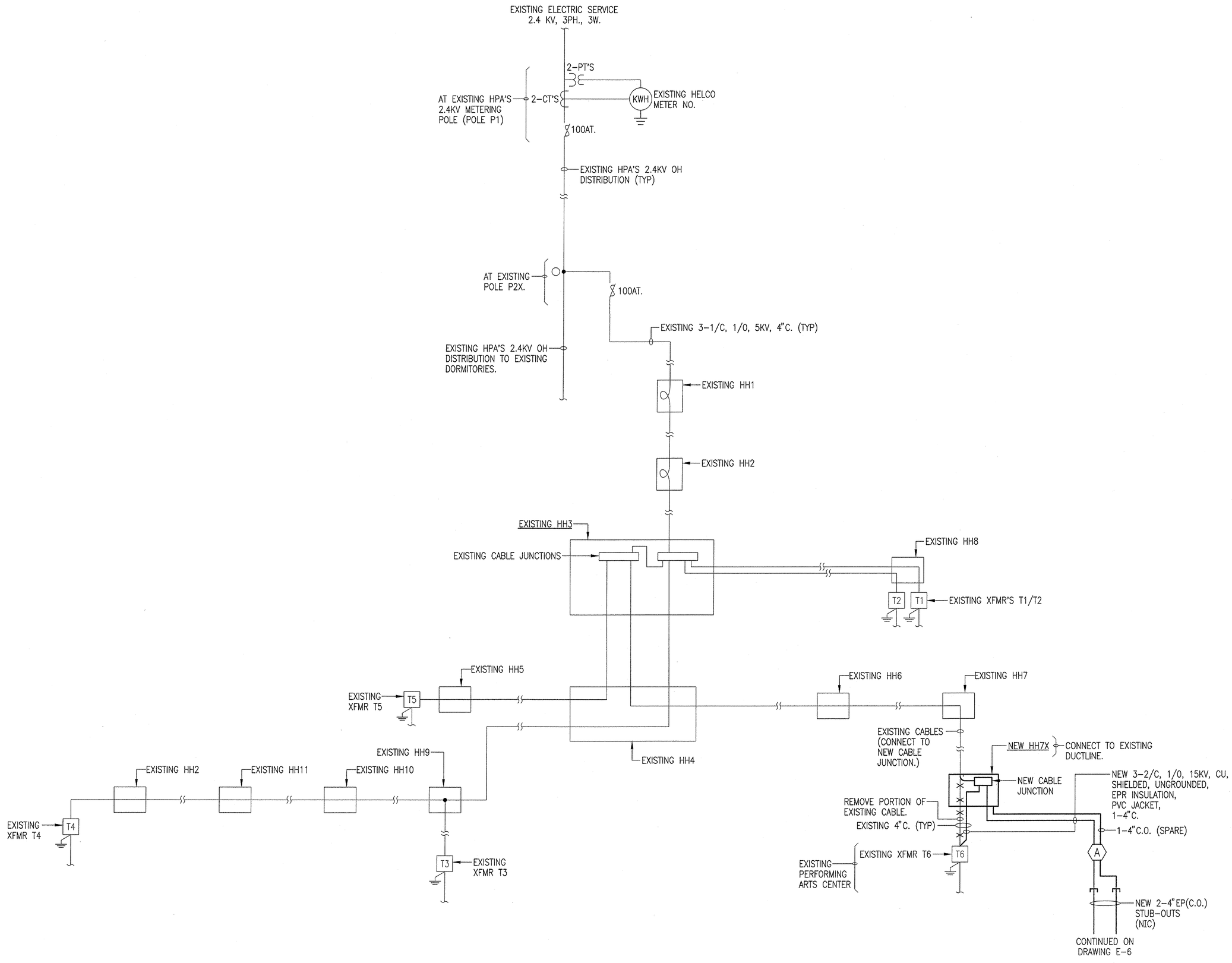

ONE-LINE DIAGRAM - EXISTING 2.4 KV DISTRIBUTION SYSTEM/NEW SERVICE TO HPA ENERGY LAB

(NOTE: ONLY APPLICABLE ITEMS ARE INDICATED.)

SERVICE/LOAD DATA

A. ELECTRIC

1. EXISTING AVAILABLE ELECTRIC SERVICE/DISTRIBUTION:
   2.4KV, 3PH., 3W.
   PROPOSE EXTEND EXISTING 2.4KV SYSTEM TO NEW HPA ENERGY LAB BUILDING.
2. EXISTING TYPE OF DISTRIBUTION SYSTEM: UNDERGROUND
3. ESTIMATED BUILDING CONNECTED KVA:

		ESTIMATED DEMAND KVA:
RECEPTACLE/LIGHTING(~7000 SF.)	42.0	28.0
A.C.	14.0	11.0
WATER HEATING	1.2	.8
WATER PUMPS	10.0	8.0
MISCELLANEOUS	12.0	6.0
TOTALS	79.2	53.8

4. ESTIMATED AVERAGE MEASURED TOTAL DEMAND KVA(W/O ON-SITE GENERATION): 35.0
5. ESTIMATED TOTAL ON-SITE POWER GENERATION: WIND: APPROX. 100KW
   P-V : APPROX. 30KW
6. MINIMUM SYSTEM CAPACITY BASED ON 130 KW OR 174 KVA.
7. NEW DESIGN SERVICE CAPACITY: 225 KVA
8. BUILDING SERVICE/UTILIZATION VOLTAGE: 208Y/120V., 3PH., 3W.
9. BUILDING AMPERE CAPACITY: 800 AMPERES

ENERGY LAB
Hawai'i Preparatory Academy

Kamuela, Hawaii
Tmk: 6-5-01: 33

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ELECTRICAL ENGINEERING
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808.961.9666 x22

ALL ELECTRICAL WORK SHALL COMPLY TO CHAP. 9, HAWAII COUNTY CODE, AND INSTALLATION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE

WALLACE T. OKI LICENSED PROFESSIONAL ENGINEER 3539-E HAWAII U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION

WALLACE T. OKI, P.E., INC.
ELECTRICAL ENGINEERING
P.O. BOX 4070/688 KINOOLE ST., STE. 115B
HILO, HI. 96720 PH:961-9666/FAX:935-2549

WTO REF. NO. 82008149

ELECTRICAL WORK

Drawn by:	-	Job Number:	2804.00
Checked by:		Scale:	AS NOTED
Plot Date:		Issue Date:	17 OCT 08
PERMIT ISSUE			E-5