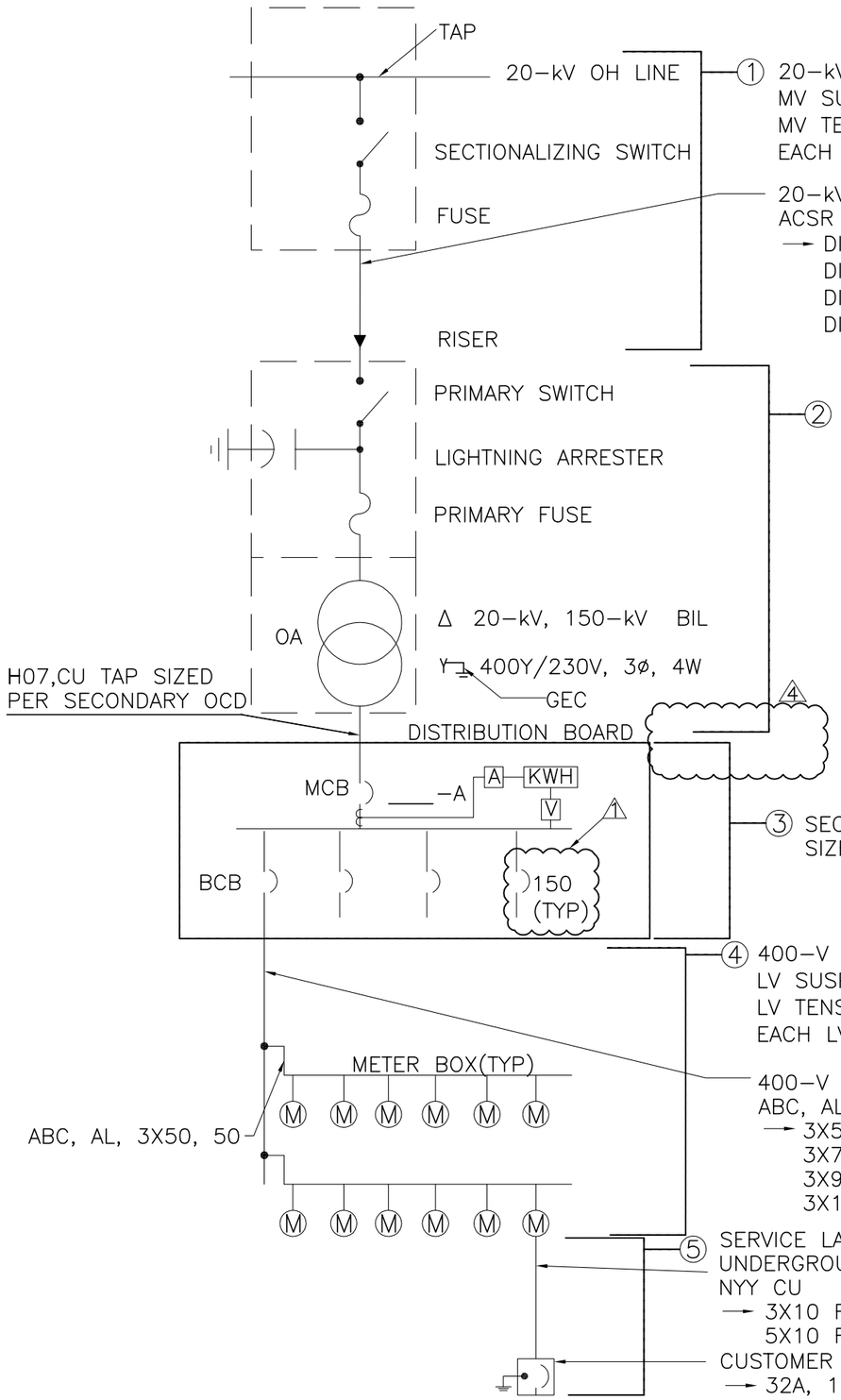

① 20-kV OHL
MV SUSPENSION (TANGENT) POLES, SINGLE 2,000-mm CROSS ARM, DABS AS-01, 2XAS-05, AS-07, MV-301C
MV TENSION (ANGLE) POLES, DOUBLE 2,000-mm CROSS ARMS, DABS AS-03, 1XAS-05, 6XAS-09, MV-308C
EACH MV TENSION (ANGLE) POLE IS GUYED. MV GUY; DABS AN-S1, GU-S1, GU-102C

20-kV OH LINE
ACSR
→ DIN 70/12
DIN 95/15
DIN 120/20
DIN 185/30

②

SECONDARY TRANSFORMER SUBSTATION & DISTRIBUTION BOARD

TRANSFORMER kVA	MCB (A)	TAP C/ø, 3P+N (mm^2)	BCB (A)	GEC (mm^2)
25	50	1 X 50	NONE	25
40	80	1 X 50	NONE	35
63	120	1 X 50	NONE	35
100	200	1 X 120	2 X 150	35
160	300	1 X 240	3 X 150	70
250	500	2 X 150	5 X 150	70
400	800	3 X 185	7 X 150	95
630	1200	5 X 185	12 X 150	95
1000	2000	8 X 240	10 X 250	95

③ SECONDARY 400-V DISTRIBUTION
SIZE TRANSFORMER SECONDARY OCD PER TRANSFORMER SIZE

④ 400-V OH TO METER BOXES
LV SUSPENSION (TANGENT) POLES, DABS AS-11, LV-101
LV TENSION (ANGLE) POLES, DABS AS-12, AS-13, LV-102
EACH LV TENSION (ANGLE) POLE IS GUYED. LV GUY, DABS AN-S1, GU-S1, GU-101C

400-V OH LINE
ABC, AL
→ 3X50, 50
3X70, 50
3X95, 70
3X120, 70

⑤ SERVICE LATERALS AND SE DISCONNECTS
UNDERGROUND SERVICE LATERAL
NYY CU
→ 3X10 RE
5X10 RE
CUSTOMER SERVICE DISCONNECT
→ 32A, 1P
32A, 3P

NOTE:
MATERIALS SHALL CONFORM TO DABS DISTRIBUTION STANDARDS, CHAPTER U DABS STANDARD TECHNICAL DATA SHEETS, CHAPTER Y, DABS TECHNICAL SPECIFICATIONS, CHAPTERS A THROUGH S, AND DABS CHAPTER Z-3 INFORMATION ON SPECIFIC ITEMS OF SUPPLY, CHAPTERS D,H,I,N,O,S.

NOT FOR CONSTRUCTION

UNLESS OTHERWISE NOTED, LINEAR DIMENSIONS SHOWN ARE IN MILLIMETERS.

This project was made possible by the United States Agency for International Development and the generous support of the American People through USAID Global Architecture and Engineering IQC Contracts.

CONCEPT DESIGN

	DESCRIPTION	DATE	APR
4	ADJUSTED SECTIONS	01/08/2011	
3	ADDED GEC SIZES	01/03/2011	
2	ADDED SECONDARY TABLE	12/20/2010	
1	CHANGED SIZE OF OCD	12/18/2010	
SYMB			

DESIGNED BY: MAL
DRWN BY: AS
CHK BY: MAL
DATE: 01/17/2011
SUBMITTED BY: TETRA TECH
FILE NO.: LT0025-E-100

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AESP

USAID - OIEE
42 VILLAGES ELECTRIFICATION
ELECTRICAL
ONE-LINE DIAGRAM

DRAFT 1/15/2011 11:15 AM

SHEET REFERENCE NUMBER:
LT0025
E-100

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CONCEPT DESIGN

SYMB	DESCRIPTION	DATE	APP

DESIGNED BY: AS
DATE: 01/17/2011
DWN BY: AS
SUBMITTED BY: TETRA TECH
CHK BY: MAL
FILE NO.: LT0025-E-169

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USAID – OIEE
42 VILLAGES ELECTRIFICATION
KALAKAN DISTRICT-C
AERIAL IMAGE

SHEET REFERENCE NUMBER:
LT0025
E-169

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1:5000

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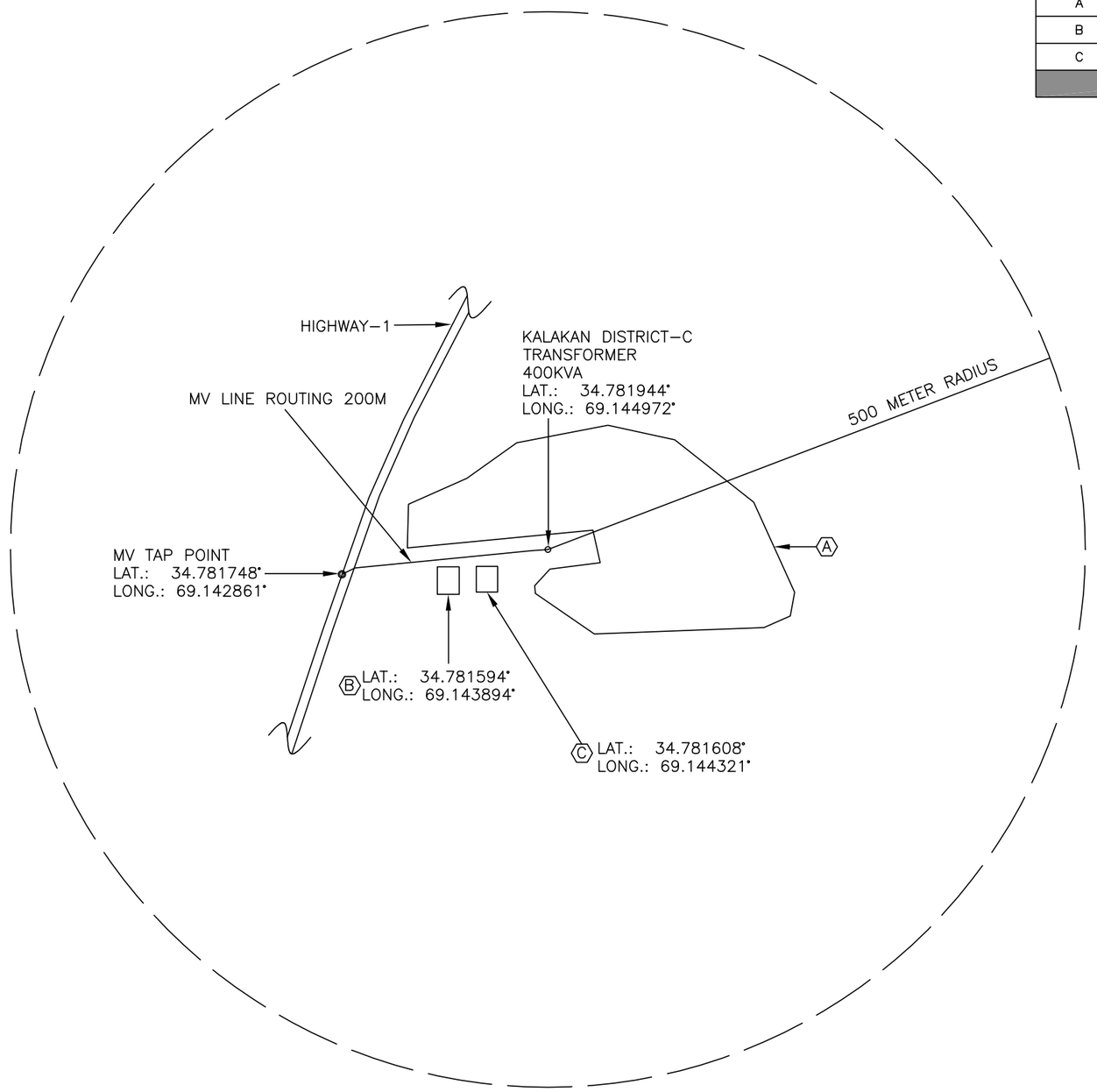
SUMMARY TABLE					
FIGURE	TYPE OF CUSTOMER	NUMBER OF CUSTOMER	AREA M^2	DENSITY M^2/CUSTOMER	ESTIMATED PEAK COINCIDENTAL KW
A	RESIDENTIAL COMPOUNDS	80	42,452	531	56
B	POLICE HQ	1	2,000		100
C	DISTRICT HQ	1	1,500		75
TOTAL LOAD		82	45,952	560	231



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CONCEPT DESIGN

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APR	DATE	DESCRIPTION	SYMB

DESIGNED BY: AS | DATE: 01/17/2011
DWN BY: AS | SUBMITTED BY: TETRA TECH
CHK BY: MAL | FILE NO.: LT0025–E–170

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USAID – OIEE
42 VILLAGES ELECTRIFICATION
KALAKAN DISTRICT–C
CONCEPT DESIGN

SHEET REFERENCE NUMBER:
LT0025
E–170

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