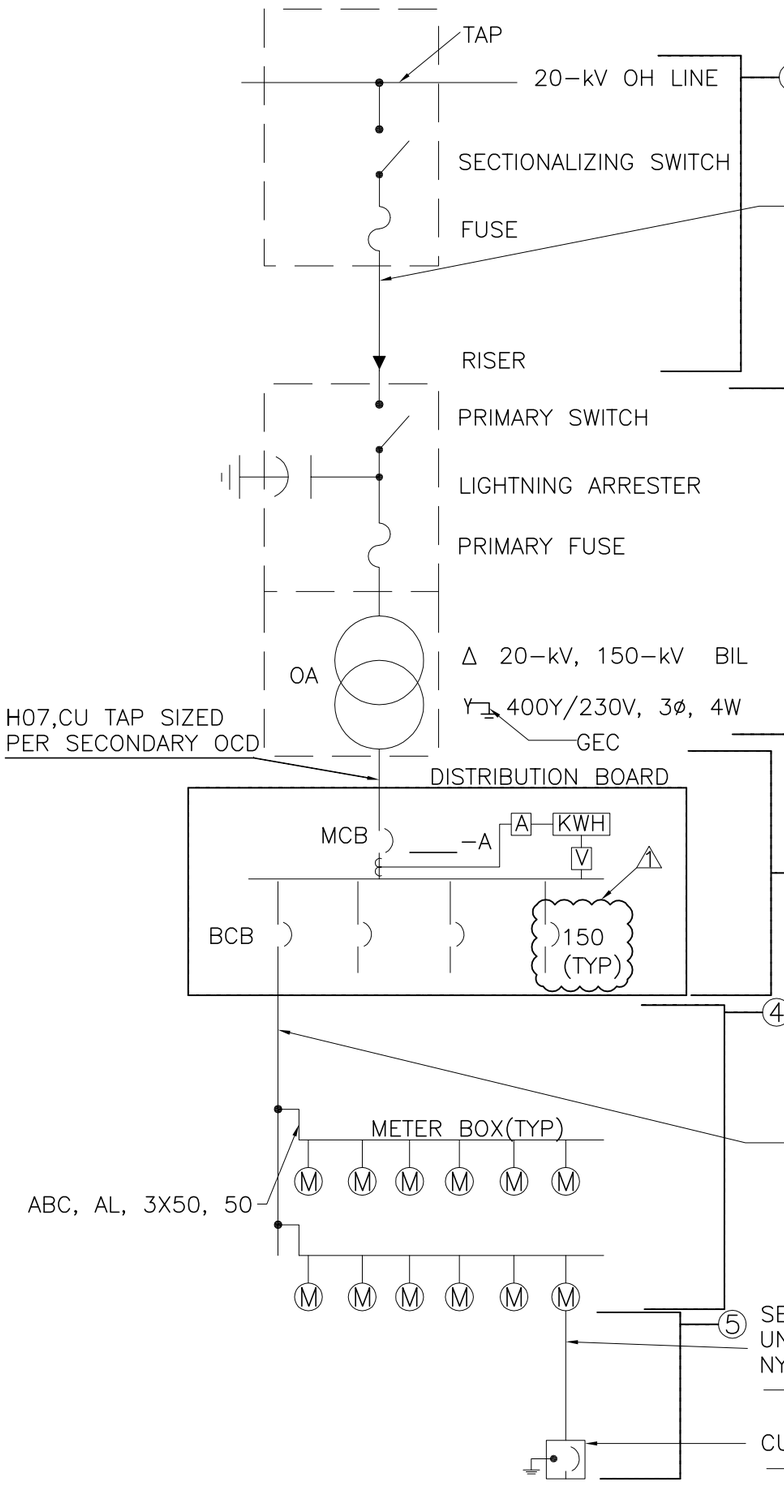

① 20-kV OHL
MV SUSPENSION (TANGENT) POLES, SINGLE 2,000-mm CROSS ARM, DABS AS-01, 2XAS-05, AS-07, MV-301C
MV TENSION (ANGLE) POLES, DOUBLE 2,000-mm CROSS ARMS, DABS AS-03, 1XAS-05, 6XAS-09, MV-308C
EACH MV TENSION (ANGLE) POLE IS GUYED. MV GUY; DABS AN-S1, GU-S1, GU-102C

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 (mm²)	BCB (A)	GEC (mm²)
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.

CONCEPT DESIGN

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

DESIGNED BY: MAL
DATE: 12/31/2010
DWN BY: AS
SUBMITTED BY: TETRA TECH
CHK BY: MAL
FILE NO.: LT0025-E-100

USAID FROM THE AMERICAN PEOPLE
AESP

USAID - OIEE
42 VILLAGES ELECTRIFICATION
ELECTRICAL
ONE-LINE DIAGRAM

SHEET REFERENCE NUMBER:
LT0025
E-100

DRAFT 1/6/2011 8:15 AM

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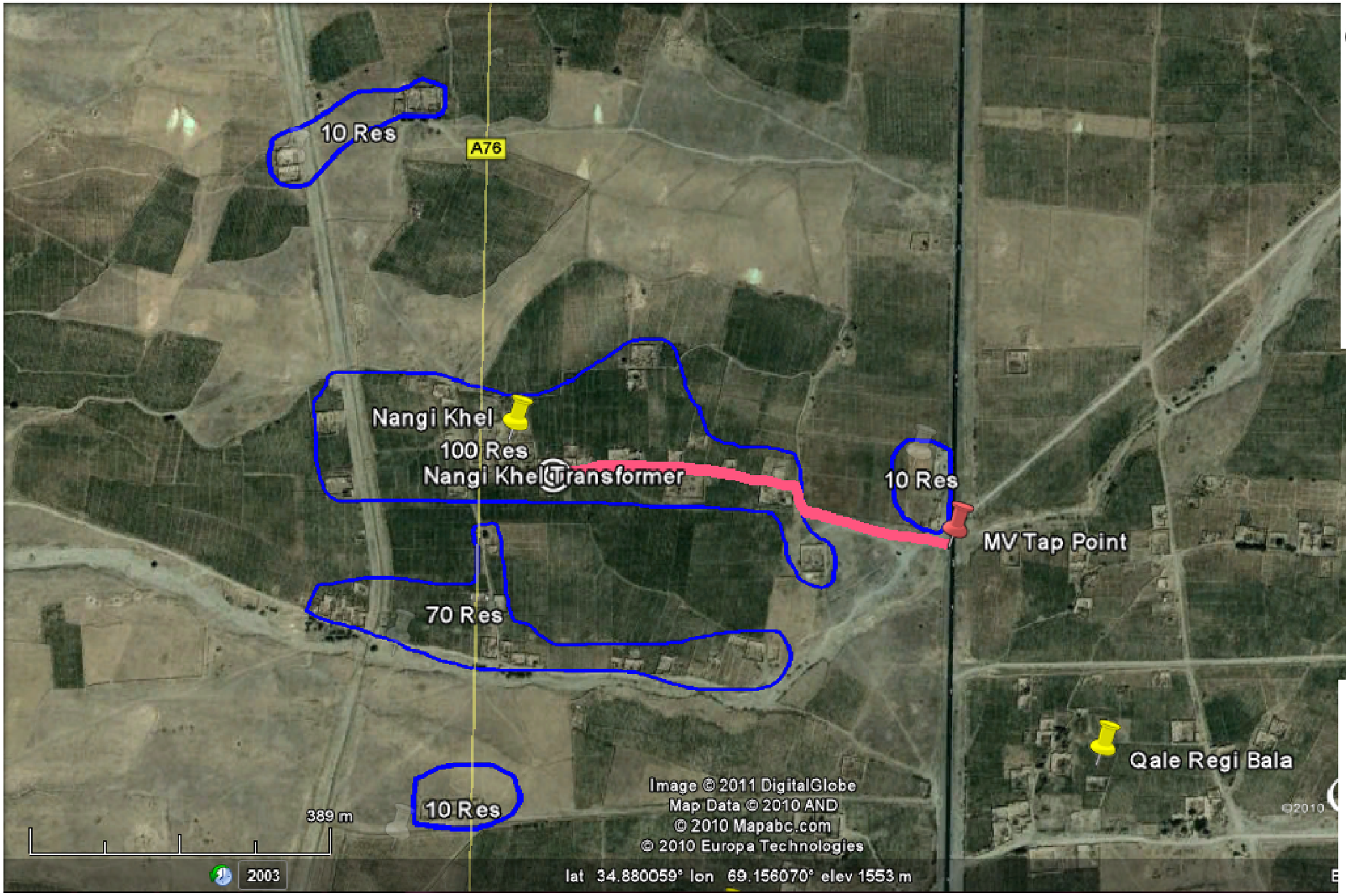

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CONCEPT DESIGN

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SYMB	DESCRIPTION	DATE	APP

DESIGNED BY: AS
DATE: 01/13/2011
DWN BY: AS
SUBMITTED BY: TETRA TECH
CHK BY: MAL
FILE NO.: LT0025-E-145

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A E S P

USAID – OIEE
42 VILLAGES ELECTRIFICATION
NANGI KHEL
AERIAL IMAGE

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SHEET REFERENCE NUMBER:
LT0025
E–145

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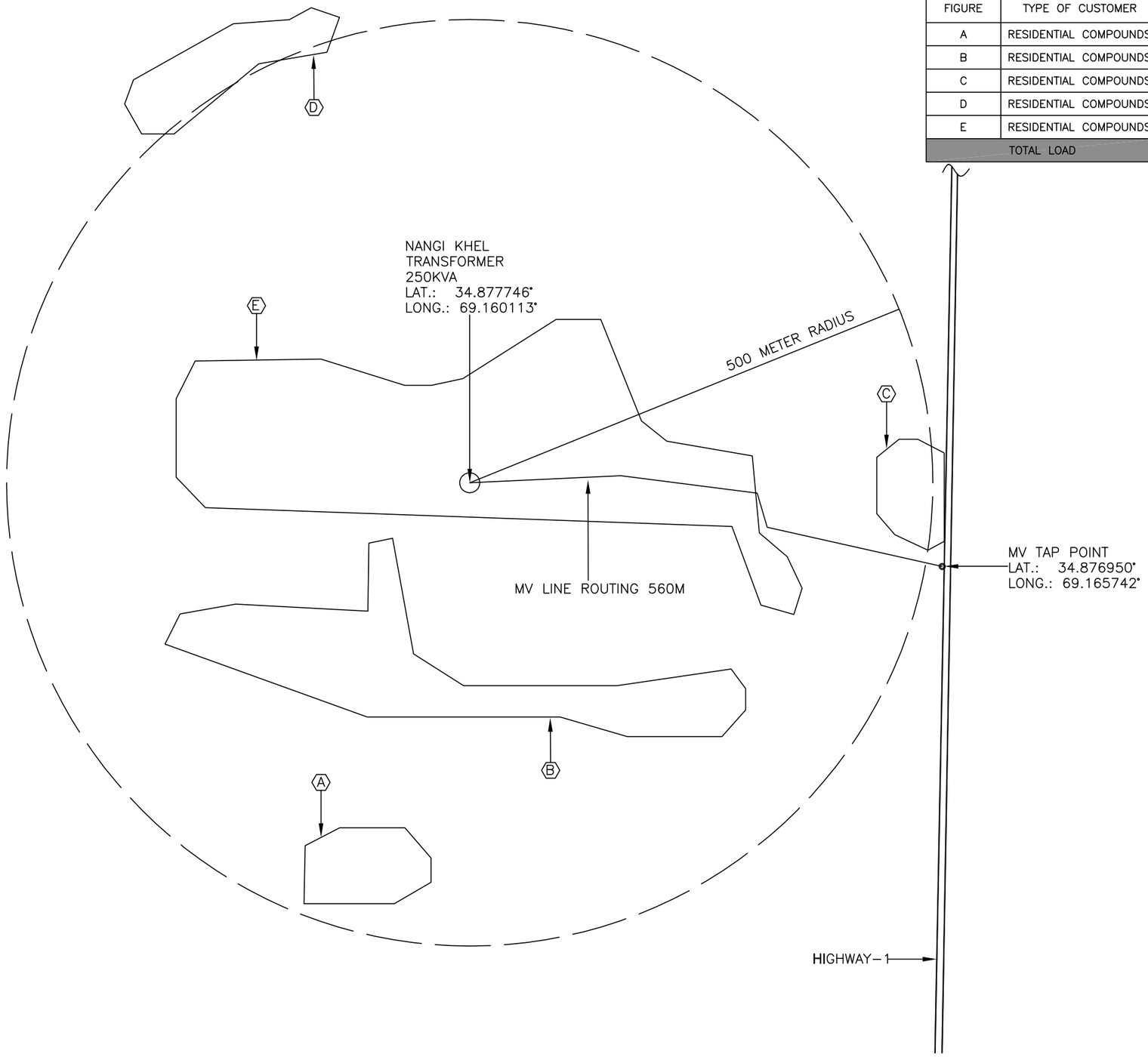

SUMMARY TABLE					
FIGURE	TYPE OF CUSTOMER	NUMBER OF CUSTOMER	AREA M^2	DENSITY M^2/CUSTOMER	ESTIMATED PEAK COINCIDENTAL KW
A	RESIDENTIAL COMPOUNDS	10	9,889	989	7
B	RESIDENTIAL COMPOUNDS	70	42,150	602	49
C	RESIDENTIAL COMPOUNDS	10	7,334	733	7
D	RESIDENTIAL COMPOUNDS	10	13,137	1,314	7
E	RESIDENTIAL COMPOUNDS	100	97,643	976	70
TOTAL LOAD		200	170,153	851	140

N

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SYMB	DESCRIPTION	DATE
		APR

DESIGNED BY: AS
DATE: 01/13/2011
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SUBMITTED BY: TETRA TECH
CHK BY: MAL
FILE NO.: LT0025-E-146

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A E S P

USAID – OIEE
42 VILLAGES ELECTRIFICATION
NANGI KHEL
CONCEPT DESIGN

SHEET REFERENCE NUMBER:
LT0025
E-146

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