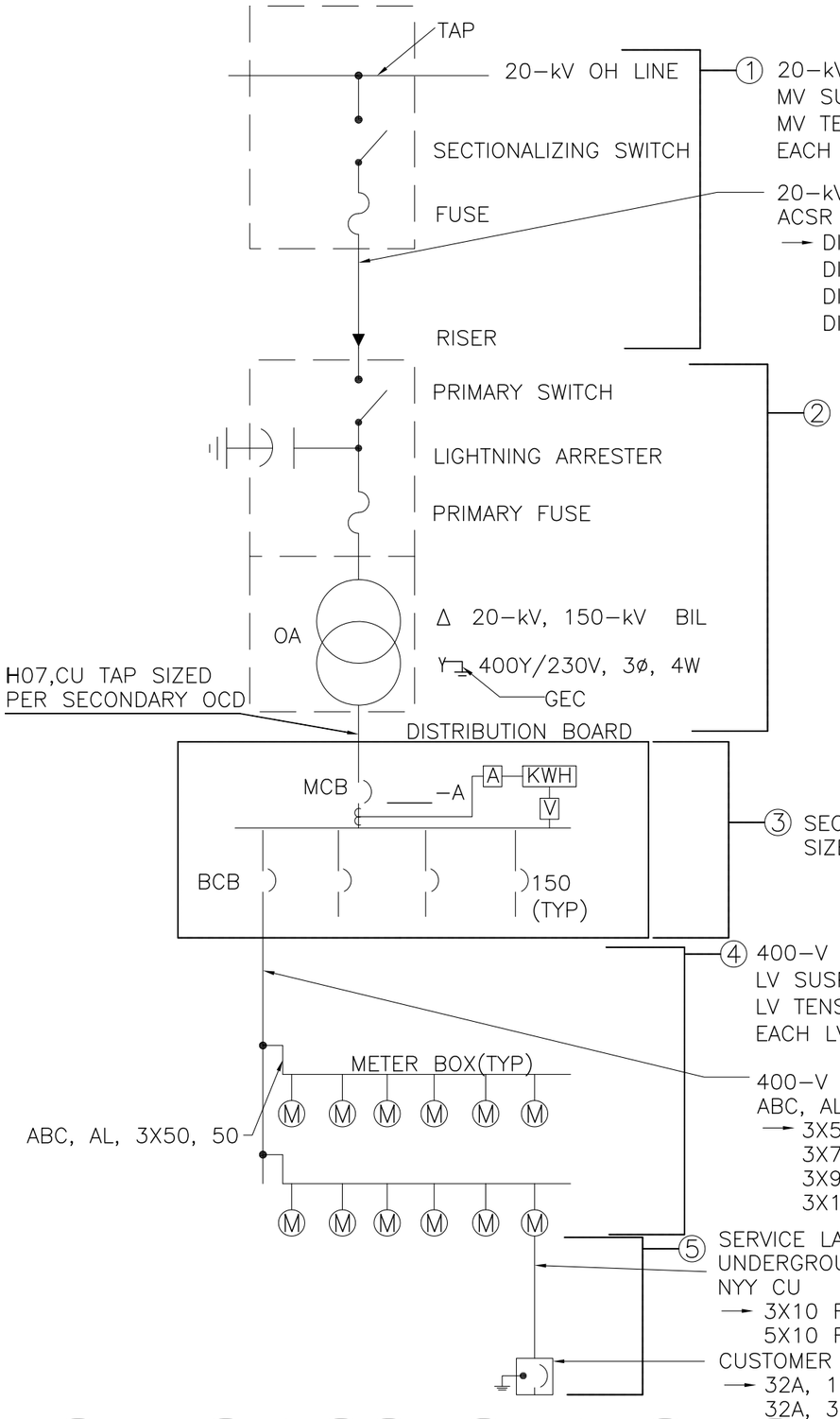


① 20-kV OHL
MV SUSPENSION (TANGENT) POLES, SINGLE 2,000-mm CROSS ARM, DABS AS-01, 2XAS-05, AS-07, MV-301C
MV TENSION (ANGLE) POLES, DOUBLE 2,000-mm CROSS ARMS, DABS AS-03, 1XAS-05, 6XAS-09, MV-308C
EACH MV TENSION (ANGLE) POLE IS GUYED. MV GUY; DABS AN-S1, GU-S1, GU-102C

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.

CONCEPT DESIGN

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| SYMB | DESCRIPTION | DATE | APR |
|---|---|---|---|

DESIGNED BY: AS
DATE: 03/26/2011
DWN BY: AS
SUBMITTED BY: TETRA TECH
CHK BY: FB
FILE NO.: LT0031-E-100

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AESP

USAID - OIEE
20-kV DISTRIBUTION LINES
ELECTRICAL
ONE-LINE DIAGRAM

SHEET REFERENCE NUMBER:
LT0031
E-100

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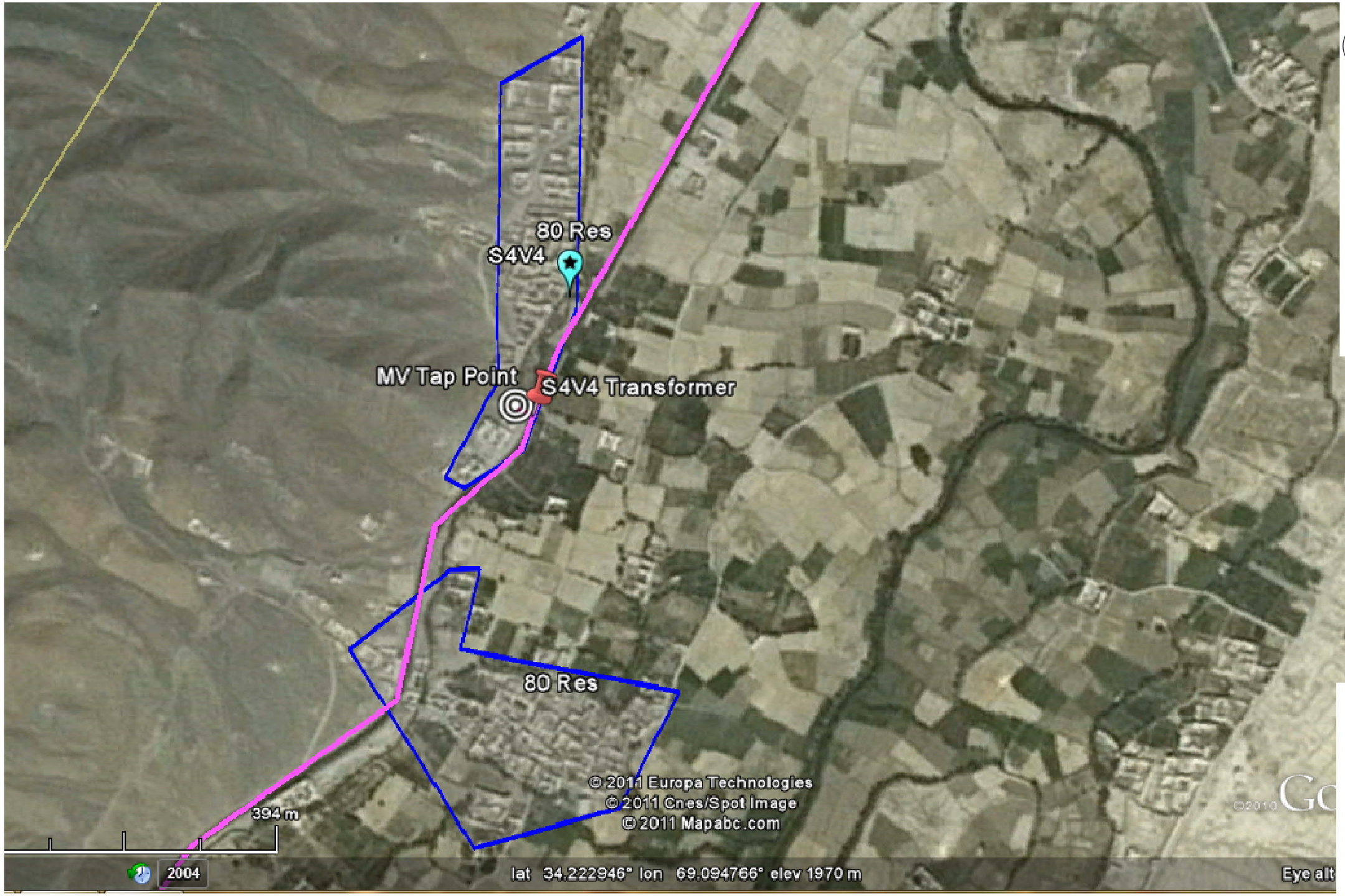


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| SYMB | DESCRIPTION | DATE | APR |
|---|---|---|---|
| | | | |

DESIGNED BY: AS
DATE: 03/26/2011
DWN BY: AS
SUBMITTED BY: TETRA TECH
CHK BY: FB
FILE NO.: LT0031-E-131

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20kV DISTRIBUTION LINES
BOTKHAK TO MOHAMMAD AGHA–S4V4
AERIAL IMAGE

SHEET REFERENCE NUMBER:
LT0031
E–131

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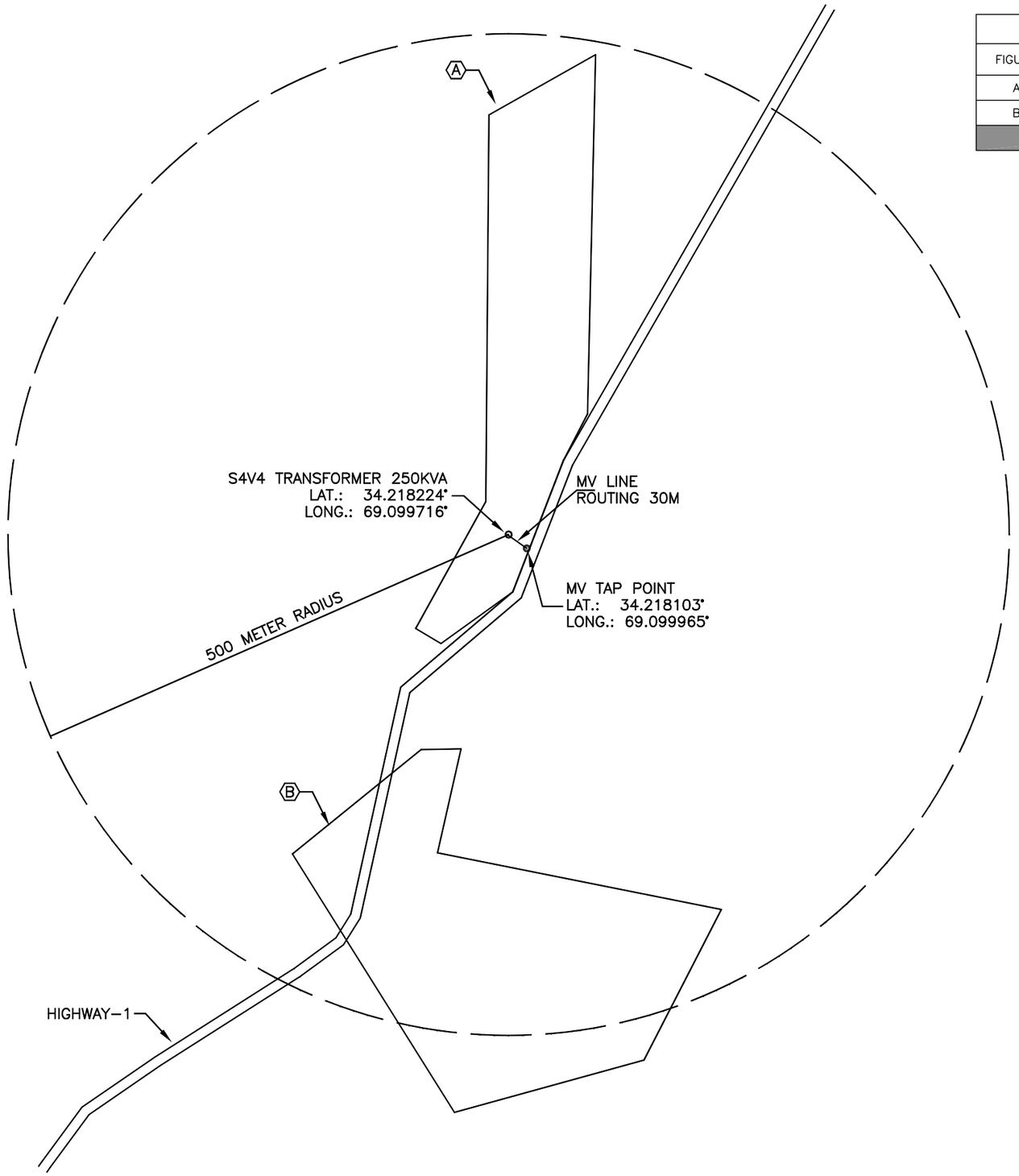


| SUMMARY TABLE | | | | | |
|---|---|---|---|---|---|
| FIGURE | TYPE OF CUSTOMER | NUMBER OF CUSTOMER | AREA $M^2$ | DENSITY $M^2$/CUSTOMER | ESTIMATED PEAK COINCIDENTAL KW |
| A | RESIDENTIAL COMPOUNDS | 80 | 49,739 | 622 | 56 |
| B | RESIDENTIAL COMPOUNDS | 80 | 76,803 | 960 | 56 |
| TOTAL LOAD | | 160 | 126,542 | 791 | 112 |

N

**CONCEPT DESIGN**

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| SYMB | DESCRIPTION | DATE | APR |
|---|---|---|---|

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USAID – OIEE
20kV DISTRIBUTION LINES
BOTKHAK TO MOHAMMAD AGHA–S4V4
CONCEPT DESIGN

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E–132

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