



**RENOVATION OF THREE  
RESIDENCE HALLS  
POCAHONTAS, BOLLING, &  
DRAPER HALLS**

RADFORD UNIVERSITY  
RADFORD, VIRGINIA

217-17565  
1115

## ATTIC FLOOR FIRE ALARM AND TELECOMMUNICATIONS PLAN

SCALE: 1/8" = 1'-0"

REFER TO FIRE RATING NOTES ON SHEET E001  
AND ARCHITECTURAL LIFE SAFETY DRAWINGS



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Checked By RGW  
Drawn By RSM



## THIRD FLOOR FIRE ALARM AND TELECOMMUNICATIONS PLAN

SCALE: 1/8" = 1'

- NOTE: THE CONTRACTOR SHALL BID AND INSTALL THE FIRE PROTECTION SYSTEM AS SHOWN IN THE DOCUMENTS. DEVIATIONS IN MATERIALS, LOCATIONS, CONFIGURATIONS OR SIZES PROPOSED BY THE CONTRACTOR WILL BE REVIEWED UNDER THE PROVISIONS OF SECTION 26 OF THE GENERAL CONDITIONS AS A 'SUBSTITUTION'.

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ISSUES AND REVISIONS	
NO.	SUBMITTAL
5	BID DOCUMENTS

DATE  
06.19.14

## SECOND FLOOR FIRE ALARM AND TELECOMMUNICATIONS PLAN

SCALE: 1/8" = 1'

- This architectural floor plan illustrates several key fire safety features:

  - 1 HR RATED FIRE BARRIER**: Located at the top center, separating different areas.
  - STORAGE**: A room labeled "STORAGE" is shown with dimensions 75' x 75'.
  - 75' D E 10' x 10'**: A specific area is marked with dimensions 75' deep by 10' wide by 10' high.
  - 75' D E 10' x 10'**: Another area is marked with dimensions 75' deep by 10' wide by 10' high.
  - PROVIDE SMOKE DETECTOR AT THE TOP OF THE ELEVATOR SHAFT AND A HEAT DETECTOR WITHIN 24" OF EACH SPRINKLER HEAD**: A note specifies the placement of smoke and heat detectors.
  - REFUGIAL**: A room labeled "REFUGIAL" is shown with dimensions 75' x 75'.
  - REFER TO ENLARGED ELECTRICAL PLAN ROOM IT 250 SHEET 261P**: A note points to an enlarged electrical plan.
  - 1 HR RATED FIRE BARRIER (TYP)**: Located at the bottom left, separating different areas.
  - MANTAIN MINIMUM 8'-8" CLEAR HEAD HEIGHT THIS AREA FOR ATTIC GRESS**: A note specifies clear head height requirements.

## ATTIC FLOOR FIRE ALARM AND TELECOMMUNICATIONS PLAN

REFER TO FIRE RATING NOTES ON SHEET E001  
AND ARCHITECTURAL LIFE SAFETY DRAWINGS

- LOCATION OF BOXES IN FIELD WITH ARCHITECT.

9. CONDUITS FROM FLOORS BELOW SQUITED TO ATTIC IT ROOM VIA CHASE. COORDINATE DRAUGHTS IN ATTIC

10. PROVISIONS FOR WALL MOUNTED TELEVISION, MOUNTED AT 4'6" AFF (PROVISIONS IN 10' SHELL AT 6'0"). COORDINATE EXACT HEIGHT FOR FIELD WITH ARCHITECT.

11. FEED DEVICE FROM BELOW WITH SINGLE CHANNEL SURFACE RACENAY.

12. CONNECT ELEVATOR RESUME ASSISTANCE DEVICE TO CIRCUIT L1-S1. REFER TO SPECIFICATIONS FOR ADDITIONAL WIRING REQUIREMENTS.

13. POKE THROUGH EXISTING WALL WITH CONDUIT FROM BEHIND TO INSTALL NEW EXPANSION UNIT BOX (NOT PROVIDED) EXTERIOR TO THE EXISTING WALL. PROVIDE ACCESS TO THE EXISTING WALL BY REMOVING END OF THE NEW CONDUIT INSIDE THE EXISTING WALL. REMOVE EXISTING CEILING WHERE NECESSARY IN EXISTING STAIRWELL(S). THIS WILL RUN CONDUIT ABOVE NEAREST ACCESSIBLE CEILING. ALSO PROVIDE ALL RACEWAYS AND BOXES REQUIRED TO INTERFACE CARD READERS WITH ELECTRIC STAIRCASES - CONNECT ELECTRIC STAIRCASES TO CIRCUIT L1-S1. PROVIDE ACCESS TO THE EXISTING WALL BY REMOVING END OF THE NEW CONDUIT INSIDE THE EXISTING WALL. PROVIDE ALL RACEWAYS AND BOXES REQUIRED FOR CABINETS TO OWNER-FURNISHED DOOR HORN JUST INSIDE THE DOOR OR ABOVE THE DOOR. COORDINATE ALL DOOR SECURITY INSTALLATIONS WITH OWNER PRIOR TO RG-CH.

14. UTILIZE WINDOW INTEL AND SLEAKHEAD FOR CONCEALING CONDUITS AND WIRING. DO NOT UTILIZE SURFACE RACENAY IN THE COMMON AREAS AND VERIFY RACENAY ROUTE IN THE ARCHITECT.

15. PROVE ONE 1-1/4" CONDUIT WITH THIN STRAIN RELIEF TUBE TO Junction Box ON WALL. WALL MOUNTED BOXES WILL BE REUSED. POSITION JUNCTION BOXES AT 5'-0" FROM OTHER TO Y PROVISIONS. PROVIDE FLOOR ZAGT LOCATION. PROVIDE ADAPTER PLATE FOR AN INPUT-OUT AND VIA INPUT IN POKING THRU DEVICE.

16. PROVIDE SIGHTING LINE FOR ELEVATOR CONTROL PANEL. PROVIDE A CONTROL PANEL (DAMPER), COORDINATE WHICH CONTROLLER CONTROLS OPENING AND CLOSING OF DAMPER. ASSEMBLY. AS AN OPTION TO THE CONTRACTOR, CONTROLS MODELS MAY BE PROVIDED FOR CONTROL OF SMOKE DAMPERS, FIRE ALARM SHOWN, DRAFTMANUAL, SHALL CLEAR, IDENTIFY MANUFACTURER OF CONTRACTOR AND DAMPER CONTROLLED.

17. CONNECT SPRINKLER SYSTEM ELECTRONIC BELL TO DUCTWORK 16'-0". HELD FIRMLY IN PLACE WITH SPRINKLER SYSTEM INSTALLER. SURFACE RACENAY AND FRIMMING ON BUILDING EXTERIOR. UTILIZE EXISTING CHASE FOR CONCEALING CIRCUIT. NOTIFY ARCHITECT IF CIRCUIT CANNOT BE CONCEALED.

18. LOCATE GENERATOR REMOTE ANNUNCIATOR PANEL AT 6' TO 10' ELEVATOR. ASSISTANCE MASTER STATION SHALL BE LOCATED BELOW GENERATOR REMOTE ANNUNCIATOR PANEL. COORDINATE EXACT LOCATION OF GENERATOR REMOTE ANNUNCIATOR PANEL. PROVIDE ACCESS TO ELEVATOR CONTROL CENTER AND ELEVATOR ASSISTANCE MASTER STATION IN FIELD WITH ARCHITECT.

## SECOND, THIRD AND ATTIC FLOOR FIRE ALARM AND TELECOMMUNICATIONS PLANS

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E302

## GRAPHIC SCALES



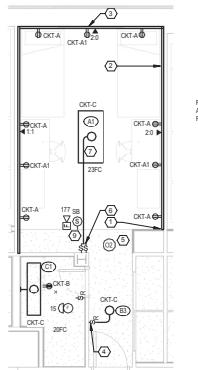
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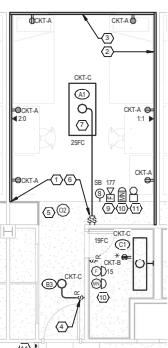


Checked By  
Drawn By  
RGW  
BSM



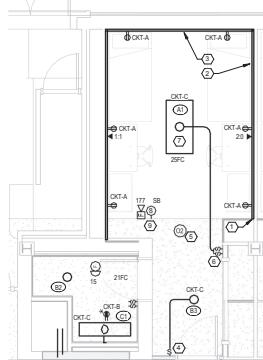
**TYPICAL ENLARGED BEDROOM ELECTRICAL PLAN - TYPE 'A'**

SCALE: 1/4" = 1'-0"



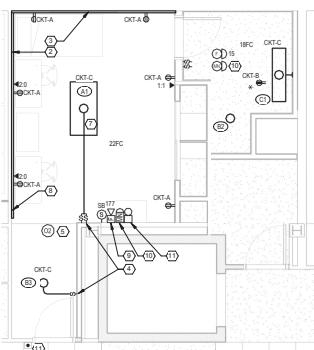
**TYPICAL ENLARGED BEDROOM ELECTRICAL PLAN - TYPE 'B'**

SCALE: 1/4" = 1'-0"



**TYPICAL ENLARGED BEDROOM ELECTRICAL PLAN - TYPE 'C'**

SCALE: 1/4" = 1'-0"



**TYPICAL ENLARGED BEDROOM ELECTRICAL PLAN - TYPE 'D'**

SCALE: 1/4" = 1'-0"

NOTE: FIRE ALARM NOTIFICATION DEVICES IN THE FOLLOWING BEDROOMS ARE NOT SHOWN ON THESE PLANS. THESE DEVICES ARE IN ADDITION TO FIRE ALARM NOTIFICATION STRIPE. APPLIES TO BEDROOMS 101, 102, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 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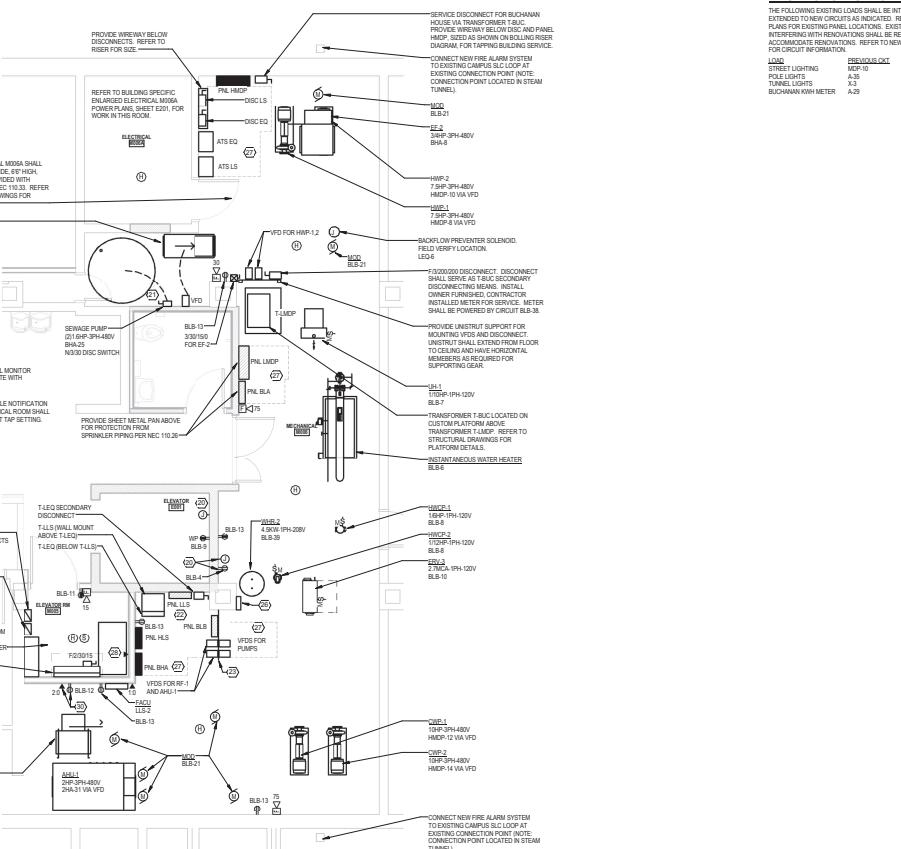
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ENLARGED ELECTRICAL PLAN - MECHANICAL M006

1/4" = 1'-0"

ISSUES AND REVISIONS  
NO. SUBMITTAL  
5 BID DOCUMENTS  
DATE  
05/14/14

ENLARGED ELECTRICAL  
PLANS - BOLLING

GRAPHIC SCALE  
0' 0" 2' 4' 6'

E401B



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DWELLING UNIT CIRCUIT CALCULATIONS

ENLARGED ELECTRICAL PLAN NOTES :

NOTE: ALL PLANS NOTES MAY NOT APPLY TO THIS SHEET

- FEED SURFACE RACEWAY WITH 10' 12G CIRCUIT FOR TELECOMMUNICATIONS AND TO CONDUIT BOX AS REQUIRED FOR POWER. CONDUITS SHALL DRAIN DOWN IN CEILING AND FEED DIRECTLY INTO HORIZONTAL RUN OF SURFACE RACEWAY. CONDUITS SHALL RUN FROM ACCESSIBLE CORRIDOR CEILING SPACE AND THEN INTO CEILING AND DOWN TO SURFACE RACEWAY. VERTICAL SURFACE RACEWAY DROP AND EXPOSED CONDUITS SHALL NOT BE PERMITTED, UNLESS SPECIFICALLY NOTED OTHERWISE.
- ROUTE WIREMANAGEABLE SURFACE RACEWAY AROUND ROOM AS INDICATED SUCH THAT THE TOP OF RACEWAY IS JUST BELOW WINDOW SILL (HEIGHT VARIES BY FLOOR).
- PROVIDE SPACE IN RACEWAY FOR WINDOW SENSOR GENERAL (URNISHED AND INSTALLED BY MECHANICAL). PROVIDE TRANSITION IN RACEWAY FOR WRINKLE UP TO WINDOW.
- DOUE TO THE WINDOW HEIGHT IN THIS SPACE, VERTICAL METAL SURFACE RACEWAY WILL BE REQUIRED TO ROUTE THE RACEWAY BELOW THE WINDOW (4'-0" AT BOTTOM OF WINDOW). PROVIDE REQUIRED CONNECTORS AND TERMINALS NEEDED FOR A CONTINUOUS SYSTEM. RACEWAY SHALL BE ROUTED AROUND THE ROOM AT 18" AFF TO CENTER OF CEILING. PROVIDE CONNECTORS AND TERMINALS NEEDED FOR A CONTINUOUS SURFACE RACEWAY SHALL BE PROVIDED AS NOTED IN PLAN NOTES #1.
- FEED SURFACE RACEWAY WITH 10' 12G CIRCUIT FOR TELECOMMUNICATIONS AND TO CONDUIT BOX AS REQUIRED FOR POWER. CONDUITS SHALL DRAIN DOWN FROM ACCESSIBLE CORRIDOR CEILING SPACE AND THEN INTO VERTICAL SURFACE RACEWAY DROP AT THIS LOCATION (VERTICAL SHALL TRANSITION TO HORIZONTAL AT HEIGHT INDICATED). ROUTE HORIZONTAL SURFACE RACEWAY AROUND THE ROOM AS NOTED.
- PROVISIONS FOR BSMASHER. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH EQUIPMENT. PROVIDE DISCONNECTING MEANS PER EQUIPMENT.
- PROVIDE VERTICAL SURFACE RACEWAY TO A HEIGHT OF 4' AFF FOR TELEVISION PROVISIONS. PROVIDE DUPLEX RECEPTACLE AND COMMUNICATIONS OUTLET WITH INDICATED TERMINATIONS AT 4' AFF. PROVIDE ALL REQUIRED CONNECTORS AND TERMINALS NEEDED FOR A CONTINUOUS SYSTEM. COORDINATE EXACT LOCATION OF VERTICAL RACEWAY IN FIELD WITH OWNER.
- CUT NEW BOX AND POKE THROUGH WITH CONDUIT FROM CLOSET, CHASE, BULLHEAD OR UNFINISHED SPACE BEHIND.
- PROVIDE NEMA 14-50R RECEPTACLE FOR RANGE HOOD. FIELD HORN TO KNOX IF PRIOR TO RENOVATION. PROVIDE TOGGLE SWITCH AT SAME HEIGHT AS ABOVE COUNTERTOP RECEPTACLES. COORDINATE EXACT LOCATION WITH ARCHITECT.
- INSTALL RECEPTACLE HORIZONTALLY, 2" BELOW COUNTER. COORDINATE WITH CLOSET OWNER.
- INSTALL SURFACE RACEWAY ON EXISTING WALL AND FEED BY BORING THROUGH WALL WITH CONDUIT FROM SURFACE RACEWAY IN ADJACENT ROOM.
- FEED SURFACE RACEWAY WITH 10' 12G CIRCUIT FOR TELECOMMUNICATIONS AND TO CONDUIT BOX AS REQUIRED FOR POWER. CONDUITS SHALL DRAIN DOWN IN CEILING AND FEED DIRECTLY INTO HORIZONTAL RUN OF SURFACE RACEWAY. CONDUITS SHALL RUN FROM ACCESSIBLE CORRIDOR CEILING SPACE AND THEN INTO CEILING AND DOWN TO SURFACE RACEWAY. VERTICAL SURFACE RACEWAY DROP AND EXPOSED CONDUITS SHALL NOT BE PERMITTED, UNLESS SPECIFICALLY NOTED OTHERWISE.
- MOUNT SMOKE DETECTOR IN BULBHEAD SUCH THAT TOP OF SMOKE DETECTOR IS 4" BELOW CEILING. SPEAKER/STROBE AND SMOKE DETECTOR SHALL ALIGN HORIZONTALLY.
- PROVIDE SINGLE CHANNEL SURFACE RACEWAY FROM BELOW FOR WINDOW SENSOR (WINDOW SENSOR FURNISHED) AND INSTALLED BY MECHANICAL.
- PROVIDE FOR WALL MOUNTED TELEVISION. COORDINATE EXACT LOCATION AND HEIGHT IN FIELD WITH OWNER.
- PROVIDE FOR WALL MOUNTED TELEPHONE. PROVIDE FOR RECHARGEABLE PHONE GANG OUTLET BOX MOUNTING. GANG READING PLATE AT 4' AFF. AFF 4'-0" AFF HEIGHT AS DIRECTED BY OWNER. PROVIDE TWO 2D 1/2" CONDUITS WITH FULL STRING BETWEEN BOXES FOR OWNER PROVIDED CABLING. COORDINATE EXACT LOCATION OF BOXES IN FIELD WITH OWNER.
- PROVIDE MASS NOTIFICATION STROBE IN INDICATED BEDROOM AND BATHROOMS. MASS NOTIFICATION STROBES SHALL BE AT SAME HEIGHT OF SAME CANDELA RATING AS FIRE ALARM STROBE IN SAME SPACES.
- PROVIDE WIRELESS DOOR CHIME WITH BUILT-IN STROBE LIGHT AND COMPATIBLE PUSH BUTTON IN INDICATED ROOMS. PROVIDE SINGLE RECEPTACLE IN FACE OF BULBHEAD FOR WIRELESS DOORBELL/STROBE CENTER. GFI RECEPTACLE SHALL BE SAME HEIGHT AS OTHER NOTIFICATION DEVICES IN BULBHEAD. CONNECT RECEPTACLE TO BULBHEAD RECEPTACLE.
- ELIMINATE EXISTING LIGHTING. REMOVE JUNCTION BOX AND RECEPTACLES IN MECHANICAL ROOM. LOCATE 10' 12G CIRCUIT FROM MECHANICAL ROOM JUNCTION BOX TO ELEVATOR P/T JUNCTION BOX. MOUNT JUNCTION BOX IN ELEVATOR PIT AT 8' AFF. COORDINATE LOCATION OF PROVISIONS WITH SYSTEM INSTALLER.
- DISCONNECT FOR SEWAGE PUMPS. PUMPS SHALL BE CONNECTED VIA CONTROL PANEL PROVIDED BY PUMP VENDORS. VERIFY CONTROL PANEL LOCATION IN FIELD. REFER TO SHEET PWD FOR SEWAGE PUMPS DETAILS. CONNECT PANEL CONTROL TO CIRCUIT B.B.2.
- PROVIDE SUPPORT TO SWING PANEL LLS FROM THE WALL SUCH THAT THE FRONT OF PANEL LLS IS EVEN WITH THE FRONT OF T100 SECONDARY DISCONNECT.
- PROVIDE UNIT/UNIT SUPPORT FOR MOUNTING PANEL B.B.2 AND B.B.3. UNIT/UNIT SHALL EXTEND FROM DOOR TO CEILING AND HAVE HORIZONTAL MEMBERS AS REQUIRED FOR SUPPORTING WIRE AND PANEL LLS.
- PONE THROUGH EXISTING WALL WITH CONDUIT FROM BEHIND TO INSTALL NEW EXPRESSED OUTLET BOX AND EXPRESSED EXTERIOR CONDUIT. RUN SURFACE CHANNEL SURFACE RACEWAY FROM INTERIOR SIDE OF EXISTING WALL UP TO CEILING (RUN ACROSS EXISTING CEILING WHERE NECESSARY) IN DORMITORY CEILING. THEN RUN CONDUIT TO ACCESSIBLE CORRIDOR CEILING. ALSO PROVIDE ALL RECEPTACLES AND CONNECTORS REQUIRED TO ACCESS CEILING. CONNECT ELECTRIC STROKES AND CARD READER POWER SUPPLY(IES) OTHERS TO CIRCUIT L.G.2. PROVIDE ALL RECEPTACLES AND BOXES REQUIRED FOR CABLING TO OWNER-FURNISHED DOOR ALARM HORN JUST INSIDE THE DOOR OR ABOVE THE CEILING. COORDINATE ALL DOOR SECURITY INSTALLATION WITH ARCHITECT PRIOR TO RENOVATION.
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- LIGHTING CONTACTORS (LON) AND LENS FOR BULBHEAD. LON AND LENS FOR POCAHONTAS. LOC (DAMPER), EXTEND EXISTING CIRCUITS TO NEW LOCATION FOR LIGHTING.
- WITH A 2' WIDE YELLOW LINE, PAINT THE NEW RELOCATED CEILING ON THE FLOOR AS INDICATED. STENO NO. STORAGE - ELECTRICAL WORKING SPACE IN 2" HIGH YELLOW LETTERS CENTERED IN THE SPACE OUTLINE AREA.
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- BAS SYSTEM CONTROLS PROVISIONS. COORDINATE LOCATION IN FIELD WITH SYSTEM INSTALLER.

GRAPHIC SCALES



E401P

DWELLING UNIT CIRCUIT CALCULATIONS

- FEED SURFACE RACEWAY WITH 10' 12G CIRCUIT FOR TELECOMMUNICATIONS AND TO CONDUIT BOX AS REQUIRED FOR POWER. CONDUITS SHALL DRAIN DOWN IN CEILING AND FEED DIRECTLY INTO HORIZONTAL RUN OF SURFACE RACEWAY. CONDUITS SHALL RUN FROM ACCESSIBLE CORRIDOR CEILING SPACE AND THEN INTO CEILING AND DOWN TO SURFACE RACEWAY. VERTICAL SURFACE RACEWAY DROP AND EXPOSED CONDUITS SHALL NOT BE PERMITTED, UNLESS SPECIFICALLY NOTED OTHERWISE.
- ROUTE WIREMANAGEABLE SURFACE RACEWAY AROUND ROOM AS INDICATED SUCH THAT THE TOP OF RACEWAY IS JUST BELOW WINDOW SILL (HEIGHT VARIES BY FLOOR).
- PROVIDE SPACE IN RACEWAY FOR WINDOW SENSOR GENERAL (URNISHED AND INSTALLED BY MECHANICAL). PROVIDE TRANSITION IN RACEWAY FOR WRINKLE UP TO WINDOW.
- DOUE TO THE WINDOW HEIGHT IN THIS SPACE, VERTICAL METAL SURFACE RACEWAY WILL BE REQUIRED TO ROUTE THE RACEWAY BELOW THE WINDOW (4'-0" AT BOTTOM OF WINDOW). PROVIDE REQUIRED CONNECTORS AND TERMINALS NEEDED FOR A CONTINUOUS SYSTEM. RACEWAY SHALL BE ROUTED AROUND THE ROOM AT 18" AFF TO CENTER OF CEILING. PROVIDE CONNECTORS AND TERMINALS NEEDED FOR A CONTINUOUS SURFACE RACEWAY SHALL BE PROVIDED AS NOTED IN PLAN NOTES #1.
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- PROVIDE ONE (1) DEDICATED PHONE LINE.
- PONE THROUGH WALL WITH CONDUIT FROM SURFACE RACEWAY IN ADJACENT ROOM FOR FEEDING DEVICE.
- BAS SYSTEM CONTROLS PROVISIONS. COORDINATE LOCATION IN FIELD WITH SYSTEM INSTALLER.

ENLARGED ELECTRICAL PLAN - VESTIBULE V100

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

- ISSUES AND REVISIONS  
NO. SUBMITTAL  
5 BLD DOCUMENTS  
DATE  
05/19/14
- PROVIDE FOR ALL RECEPTACLES. LOCATE IN BULBHEAD. PAINT THE NEW RELOCATED CEILING ON THE FLOOR AS INDICATED. STENO NO. STORAGE - ELECTRICAL WORKING SPACE IN 2" HIGH YELLOW LETTERS CENTERED IN THE SPACE OUTLINE AREA.
- PROVIDE ONE (1) DEDICATED PHONE LINE.
- PONE THROUGH WALL WITH CONDUIT FROM SURFACE RACEWAY IN ADJACENT ROOM FOR FEEDING DEVICE.
- BAS SYSTEM CONTROLS PROVISIONS. COORDINATE LOCATION IN FIELD WITH SYSTEM INSTALLER.

ENLARGED ELECTRICAL PLANS - POCAHONTAS

ENLARGED ELECTRICAL PLAN - RD APARTMENT 101

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - SUPER SUITE 110

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - SUPER SUITE APARTMENT 330

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - MECHANICAL M006

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B100

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B101

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B102

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B103

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B104

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B105

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B106

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B107

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B108

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B109

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B110

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B111

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B112

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B113

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B114

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B115

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B116

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B117

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B118

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B119

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B120

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B121

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B122

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B123

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B124

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B125

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B126

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B127

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B128

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B129

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B130

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B131

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B132

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B133

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B134

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B135

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B136

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B137

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B138

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B139

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B140

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B141

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B142

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B143

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B144

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B145

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B146

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B147

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B148

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B149

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B150

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B151

NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

ENLARGED ELECTRICAL PLAN - BULBHEAD B152

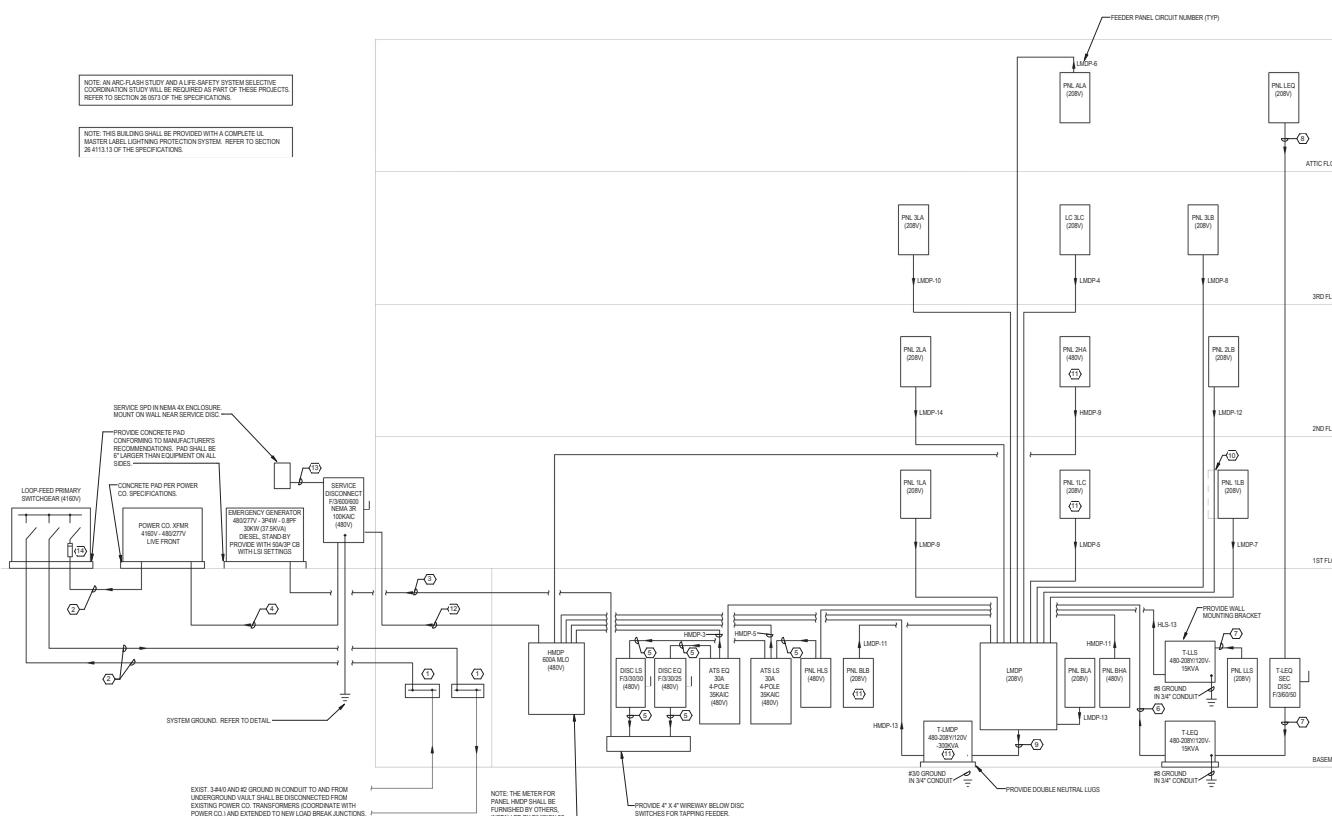
NOTE: BOLING SIMILAR, DRAPER OPPOSITE HAND.

EN





**RENOVATION OF THREE  
RESIDENCE HALLS  
POCAHONTAS, BOLLING, &  
DRAPER HALLS**

RADFORD UNIVERSITY  
RADFORD, VIRGINIAProject Code  
VMDO Project Number  
217-16565  
1115Checked By  
Drawn By  
RGW  
BSM

POWER RISER DIAGRAM - DRAPER

NO SCALE

X' INDICATES QUANTITY OF  
DISPATCHED CABLES TO BE PULLED  
TO OUTLET BY CONTRACTOR

(P) INDICATES OUTLET 42' AFF TO CENTER  
FOR COURTESY PHONE

(O) INDICATES OUTLET ON WALL ABOVE  
CLOTHESLINE OR IN EXPOSED  
HARD CEILING, OR IN EXPOSED  
STRUCTURE

(-) NO SUBSCRIPT INDICATES OUTLET 18' AFF  
TO CENTER, OR AT BEDROOM  
HOMECOMING SURFACE FINISH  
ELEVATION

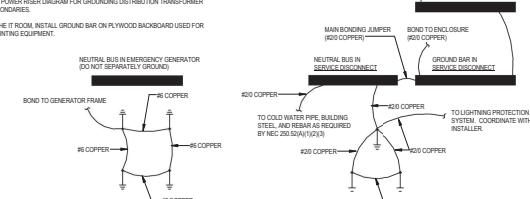
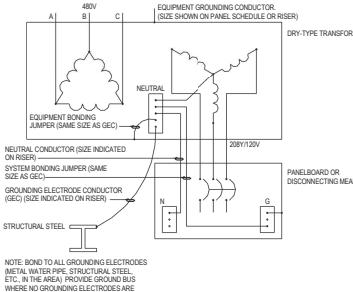
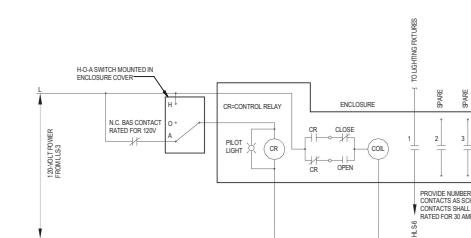
SEE SPECIFICATIONS FOR TELECOMMUNICATIONS CABLEING REQUIREMENTS

**COMMUNICATIONS SYMBOL DETAIL**

NO SCALE

**GROUNDING SCHEMATIC GENERAL NOTES:**

1. ALL GROUND ROD CONNECTIONS SHALL BE EXTERIOR/MILD. THE THREE (3) GROUND RODS SHOWN IN THE TOPO SHALL BE 10 FEET APART. THE FOUR (4) GROUND RODS SHOWN AROUND THE GENERATOR SHALL BE EVENLY SPACED AT LEAST 1' FEET APART.
2. ALL TRANSFORMERS SHOWN SHALL BE #3 COPPER, EXCEPT WHERE SPECIFICALLY INDICATED TO BE #2 COPPER.
3. SEE POWER RISER DIAGRAM FOR GROUNDING DISTRIBUTION TRANSFORMER SECONDARIES.
4. IN THE IT ROOM, INSTALL GROUND BAR ON PLYWOOD BACKBOARD USED FOR MOUNTING EQUIPMENT.

GENERATOR  
GROUNDING SCHEMATIC  
NO SCALEBUILDING  
GROUNDING SCHEMATIC  
NO SCALETRANSFORMER GROUNDING DETAIL  
NO SCALEEMERGENCY LIGHTING CONTACTOR  
WIRING DIAGRAM  
SCALE: NONEISSUES AND REVISIONS  
NO. SUBMITTAL  
5 BID DOCUMENTS  
DATE  
05.19.14**ELECTRICAL DETAILS  
AND DIAGRAMS -  
DRAPER**

E402D





RENOVATION OF THREE  
RESIDENCE HALLS  
POCAHONTAS, BOLLING, &  
DRAHER HALLS

RADFORD UNIVERSITY  
RADFORD, VIRGINIA

Project Code: 217-16565  
VMDO Project Number: 1115



Checked By: RGW  
Drawn By: BSM

PANEL BLB																				
CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	L1	L2	L3	CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	L1	L2	L3	
1	REC STAIR 1	201	#2	#2	#2	34"	-	-	-	2	SENSE PUMP CONTROL PANEL	151	#2	#2	#2	34"	-	-	-	
3	REC STAIR 2	201	#2	#2	#2	34"	-	-	-	4	ELEV PIT SUMP PUMP	201	#2	#2	#2	34"	-	-	-	
5	REC CRAWL SPACE / SUMP ALARM	201	#2	#2	#2	34"	-	-	-	72	6 INSTRUMENTATION WATER HEATER	201	#2	#2	#2	34"	-	-	-	
7	EF-14KU (M4-1 BASEMENT)	151	#2	#2	#2	34"	-	-	-	8	HMC-1 / HMC-2	151	#2	#2	#2	34"	-	-	-	
9	L/G/ECC ELEVATOR PIT	201	#2	#2	#2	34"	-	-	-	10	ERR-3 (BASEMENT)	151	#2	#2	#2	34"	-	-	-	
11	RECELEVATOR MACH ROOM	201	#2	#2	#2	34"	-	-	-	12	BAS PANELS	201	#2	#2	#2	34"	-	-	-	
13	REC BASEMENT MACH ROOM	201	#2	#2	#2	34"	-	-	-	14	LIGHTING CONTACTOR	201	#2	#2	#2	34"	-	-	-	
15	SPARE	201	-	-	-	-	-	-	-	16	SPARE	201	-	-	-	-	-	-	-	
17	SUMP PUMP	201	#2	#2	#2	34"	-	-	-	18	SPARE	201	-	-	-	-	-	-	-	
19	SPARE	201	-	-	-	-	-	-	-	20	SPARE	201	-	-	-	-	-	-	-	
21	MECH MOD 1 MODS	201	#2	#2	#2	34"	-	-	-	22	SPARE	201	-	-	-	-	-	-	-	
23	SPARE	201	-	-	-	-	-	-	-	24	SPARE	201	-	-	-	-	-	-	-	
25	SPARE	201	-	-	-	-	-	-	-	26	SPARE ONLY	201	-	-	-	-	-	-	-	
27	16.5MCA (M4-1 SPACES)	202	#10	-	#10	34"	-	-	-	28	SPARE ONLY	201	-	-	-	-	-	-	-	
29	16.5MCA (M4-1 20KV)	-	#10	-	-	-	-	-	-	30	SPARE ONLY	201	-	-	-	-	-	-	-	
31	16.5MCA (M4-1 SPACES)	202	#12	-	#12	34"	-	-	-	32	SPARE ONLY	201	-	-	-	-	-	-	-	
33	16.5MCA (M4-1 20KV)	-	#12	-	-	-	-	-	-	34	SPARE ONLY	201	-	-	-	-	-	-	-	
35	IPU (CRAWL SPACE)	202	#12	-	#12	34"	-	-	-	36	SPARE ONLY	201	-	-	-	-	-	-	-	
37	16.5MCA (M4-1 20KV)	-	#10	-	-	-	-	-	-	38	BUCHANAN KWH METER	153	#12	#12	#12	34"	.03	-	-	
39	WB-3 (MECHANICAL MODS)	302	#10	-	#10	34"	-	-	-	40	"	-	#12	-	-	-	.03	-	-	
41	4.90W (PH1-20KV)	-	#10	-	-	-	-	-	-	42	"	-	#12	-	-	-	.03	-	-	
43	SPARE	201	-	-	-	-	-	-	-	44	EXIST LIGHTS	402	#6	-	#10	34"	1.0	-	-	-
45	SPARE	201	-	-	-	-	-	-	-	46	"	-	#6	-	-	-	1.0	-	-	
47	SPARE	201	-	-	-	-	-	-	-	48	SPARE ONLY	201	-	-	-	-	-	-	-	
49	SPARE	201	-	-	-	-	-	-	-	50	EXIST TUNNEL LIGHTS	201	#10	#10	#10	34"	1.5	-	-	-
51	SPARE	201	-	-	-	-	-	-	-	52	EXIST STREET LIGHTING	502	#6	-	#10	34"	4.1	-	-	-
53	SPARE	201	-	-	-	-	-	-	-	54	"	-	#6	-	-	-	4.1	-	-	
PHASE LOAD TOTALS																				
9.31 13.03 12.45																				

PANEL HEDP																			
CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	L1	L2	L3	CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	L1	L2	L3
1	PETES EMERGENCY WIREWAY	803	#4	#8	#6	1-1&"	-	-	-	2	BILLING EMERGENCY PANELS	503	#6	#6	#10	1"	7.9	-	-
3	"	-	#4	-	-	-	10.7	4	"	-	#6	-	-	-	-	7.9	-	-	
5	"	-	#4	-	-	-	10.7	6	"	-	#6	-	-	-	-	7.9	-	-	
7	SPACE ONLY	-	#3	-	-	-	-	-	8	POOHATOSA EMERGENCY PANELS	503	#4	#4	#4	1-1&"	7.9	-	-	
9	"	-	#3	-	-	-	-	-	10	"	-	#6	-	-	-	7.9	-	-	
11	"	-	#3	-	-	-	-	-	12	"	-	#6	-	-	-	7.9	-	-	
13	SPACE ONLY	-	#3	-	-	-	-	-	14	SPACE ONLY	-	#3	-	-	-	-	-	-	-
15	"	-	#3	-	-	-	-	-	16	"	-	#6	-	-	-	-	-	-	-
17	"	-	#3	-	-	-	-	-	18	"	-	#6	-	-	-	-	-	-	-
NOT 1: PROVIDE 1/2" SODIUM CONDUCTORS FOR CIRCUIT(S) 19, 20, 32																			
NOT 2: PROVIDE 20% MORE NEUTRAL BAR																			
NOT 3: AN "M" BESIDE THE BREAKER INDICATES THE BREAKER IS TO BE SUB-METERED																			
PHASE LOAD TOTALS																			
26.5 26.5 26.5																			

PANELBOARD HMDP SCHEDULE																			
CKT NO.	POLES	BKR	PHASE	NEUT	GND	COND	L1	L2	L3	CKT NO.	POLES	BKR	PHASE	NEUT	GND	COND	L1	L2	L3
MAIN	3	600	(L50)	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-
1	3	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
2	3	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
3	3	25	1	10	10	10	34"	34"	34"	4	3	10	10	10	34"	PANEL-LEG-VIA-ATS-L5	-	-	-
4	3	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-
5	3	30	1	10	10	10	34"	34"	34"	6	3	110	1	2	-	2	1-1&"	ELEVATOR	-
6	3	-	-	-	-	-	-	-	-	7	3	100	-	-	-	-	-	-	-
7	3	200W	1	12	-	-	-	-	-	8	3	200W	1	12	-	12	34"	HWP-1	-
9	3	125(M)	1	1	6	1-1&"	-	-	-	10	3	200W	1	12	-	12	34"	HWP-2	-
11	3	125	1	12	1	1	1-1&"	-	-	12	3	125	1	1	6	1-1&"	1.14"	PANEL-BHA	-
12	3	250W	1	12	-	-	-	-	-	13	3	250W	1	12	-	12	34"	CWP-1	-
14	3	450W	2	40	-	-	-	-	-	15	3	250W	1	12	-	12	34"	CWP-2	-
16	3	250W	1	12	-	-	-	-	-	17	3	250W	1	12	-	12	34"	CWP-3	-
18	3	250W	1	12	-	-	-	-	-	19	3	250W	1	12	-	12	34"	CWP-4	-
20	3	250W	1	12	-	-	-	-	-	21	3	250W	1	12	-	12	34"	CWP-5	-
22	3	250W	1	12	-	-	-	-	-	23	3	250W	1	12	-	12	34"	CWP-6	-
24	3	250W	1	12	-	-	-	-	-	25	3	250W	1	12	-	12	34"	CWP-7	-
26	3	250W	1	12	-	-	-	-	-	27	3	250W							



RENOVATION OF THREE  
RESIDENCE HALLS  
POCAHONTAS, BOLLING, &  
DRAPER HALLS  
RADFOR UNIVERSITY  
RADFOR, VIRGINIA

217-16565  
VMDO Project Number  
1115

Checked By RGW  
Drawn By BSM

ISSUES AND REVISIONS  
NO. SUBMITTAL  
5 BID DOCUMENTS  
DATE  
05/19/14

PANELBOARD  
SCHEDULES - DRAPER

E501D

PANEL BLB																				
VOLTAGE: 208Y/120		MAIN: 250A MCB		INTGAL SPD: NO		GND: YES		MOUNTING SURFACE		INTERUPT RATING: 10,000 AIC										
SYSTEM: 3PH 4W		BUS RATING: 250A		GND: YES																
CKT	LOAD SERVICE	BKR	PHASE	NEUT	GND	COND	L1	L2	L3	CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	L1	L2	L3	
1	REC STAIR I	201	#12	#12	#12	3/4"	72			2	3/EVAC PUMP CONTROL PANEL	150	#1	#2	#2	3/4"	2			
3	REC STAIR II	201	#12	#12	#12	3/4"				72	4/ELEV PT SUMP PUMP	30	#1	#2	#2	3/4"				
5	RECORDED ELEVATOR ALARM	201	#12	#12	#12	3/4"				75	6/MSTAN DUST COLLECTOR HEATER	200	#1	#2	#2	3/4"	7			
7	F-14A(1), L1A(1) (SEGMENT)	150	#12	#12	#12	3/4"	82			8	HWP-1, HWP-2	150	#1	#2	#2	3/4"	55			
9	LIT/ORED ELEVATOR PT	201	#12	#12	#12	3/4"	5			10	EVN (1) (SEGMENT)	150	#1	#2	#2	3/4"	16			
11	EVC ELEVATOR MACH ROOM	201	#12	#12	#12	3/4"				12	IAS HANDLS	200	#1	#2	#2	3/4"	1			
13	RC BASEMENT MCH ROOM	201	#12	#12	#12	3/4"	9			14	GENERATOR JACKET HEATER	201	#1	#2	#2	3/4"	1.5			
15	SPARE	201	-	-	-	-				16	GENERATOR RECEPTACLE	201	#1	#2	#2	3/4"	18			
17	SPUM ALARM	201	#12	#12	#12	3/4"				18	SPARE	201	-	-	-	-	-			
19	SPARE	201	-	-	-	-				20	SPARE	201	-	-	-	-	-			
21	MECH MCH MODS	201	#12	#12	#12	3/4"	54			22	SPARE	201	-	-	-	-	-			
23	SPARE	201	-	-	-	-				24	SPARE	201	-	-	-	-	-			
25	SPARE	201	-	-	-	-				26	SPARE	201	-	-	-	-	-			
27	OU2 CRANE (SPACE)	202	#10	-	#10	3/4"	12			28	SPARE	201	-	-	-	-	-			
29	16.5MCA (PH-26V)	-	#10	-	-	-	1.20			30	SPARE	201	-	-	-	-	-			
31	OJ-1 (CRANE SPACE)	202	#12	-	#12	3/4"	1.21			32	SPARE	201	-	-	-	-	-			
33	16.5MCA (PH-26V)	-	#12	-	-	-	1.21			34	SPARE	201	-	-	-	-	-			
35	HPU-1 (CRANE SPACE)	202	#12	-	#12	3/4"			1.26	EXIST LIGHTS	201	#10	#10	#10	3/4"	1.5				
37	16.5MCA (PH-26V)	-	#12	-	-	-	1.26			38	EXIST LIGHTS	201	#10	#10	#10	3/4"	1.5			
39	WB-3 (MECHANICAL MOD)	302	#10	-	#10	3/4"	2.25			40	EXIST TUNNEL LIGHTS	201	#10	#10	#10	3/4"	1.5			
41	4.5KW-1PH-26V	-	#10	-	-	-	2.25			42	EXIST LOAD	201	#10	#10	#10	3/4"	1.5			
43	SPARE	201	-	-	-	-	44			44	SPARE	202	-	-	-	-	-			
45	SPARE	201	-	-	-	-	45			46	SPARE	201	-	-	-	-	-			
47	SPARE	201	-	-	-	-	48			48	SPACE ONLY	201	-	-	-	-	-			
49	SPARE	201	-	-	-	-	50			50	SPACE ONLY	201	-	-	-	-	-			
51	SPARE	201	-	-	-	-	52			52	EXIST LOAD	500	#6	#10	3/4"	4.1				
53	SPARE	201	-	-	-	-	54			54	SPARE	201	-	-	-	-	4.1			
PHASE LOAD TOTALS														8.88	12.68	15.42				

LOADS (KVA)	CONNECTED	DEMAND	LOADS (KVA)	CONNECTED	DEMAND	LOADS (KVA)	CONNECTED	DEMAND				
LIGHTING	12.7	1.25	15.88	KITCHEN EQUIPMENT	0	1.0	51.44	42.5	29.75			
REC TO 10A08	3.72	1.0	3.72	REF TO 10 KVA	10	1.0	10	0.25	0			
REC REMAINING	0	0.5	0.5	REC REMAINING	126.74	0.5	126.74	0.5	118.61			
SPACE HEATING	0	0.0	0	AIR CONDITIONING	60.13	1.0	60.13	0.0	0			
AIR CONDITIONING	7.52	1.0	7.52	NON-SEASONAL MOTORS	0	1.0	0	0	0			
NON-SEASONAL MOTORS	0	1.0	0	LARGEST MOTOR	43.2	0.25	10.8	MIN FEEDER/PANEL CAPACITY	346.6	KVA	488.7	AMPS
LARGEST MOTOR	2.14	0.25	.54	WATER HEATING	4.5	1.0	4.5	OVERALL DEMAND FACTOR	0.82			

PANELBOARD HMDP SCHEDULE														
480V/277V VOLT, 3-PHASE, 4-WIRE, GROUND BUS, ISOLATED, 600A BUSSING, WALL MOUNT, 3000A AC, "M" BEFORE BREAKER INDICATES FEEDER IS TO BE SUB-METERED														
CKT	NO.	CIRCUIT BREAKER	POLES	AMPS	# SETS	PHASE	NEUT	GND	COND	L1	L2	L3	OUTGOING FEEDER	SERVING
MAIN	LUCK	-	-	-	-	-	-	-	-	-	-	-	-	-
1	3	-	-	-	-	-	-	-	-	-	-	-	-	-
2	3	-	-	-	-	-	-	-	-	-	-	-	-	-
3	3	-	-	-	-	-	-	-	-	-	-	-	-	-
4	3	-	-	-	-	-	-	-	-	-	-	-	-	-
5	3	-	-	-	-	-	-	-	-	-	-	-	-	-
6	3	110	1	2	-	-	-	-	-	-	-	-	-	-
7	3	100	-	-	-	-	-	-	-	-	-	-	-	-
8	3	2000	1	12	-	-	-	-	-	-	-	-	-	-
9	3	1250	1	6	-	-	-	-	-	-	-	-	-	-
10	3	2000	1	12	-	-	-	-	-	-	-	-	-	-
11	3	125	1	1	-	-	-	-	-	-	-	-	-	-
12	3	250	1	12	-	-	-	-	-	-	-	-	-	-
13	3	4500	2	40	-	-	-	-	-	-	-	-	-	-
14	3	2500	1	12	-	-	-	-	-	-	-	-	-	-
15	3	-	-	-	-	-	-	-	-	-	-	-	-	-
16	3	-	-	-	-	-	-	-	-	-	-	-	-	-

PANEL LMDP																			
VOLTAGE: 208Y/120V MAIN: 100A MCB SYSTEM: 3PH 4W GND: YES SOIL: NEUT INTERUPT: 25,000 AC																			
CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	L1	L2	L3	CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	L1	L2	L3
1	SPARE	1250	-	-	-	-	-	-	-	2	SPACE ONLY	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-
7	SPACE ONLY	-	-	-	-	-	-	-	-	8	LOAD CENTER 3LC	1000	#1	#1	M	1.1/2"	9.11		
9	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-
11	PANEL T/LC (M)	1250	#1	#1	#1	1.1/2"	49			14	PANEL ALA	1000	#3	#3	M	1.5/4"	3.18		
13	-	-	-	-	-	-	-	-	-	16	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	18	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	22	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	24	-	-	-	-	-	-	-	-	-
25	PANEL T/LA	2000	#30	#30	#6	2"	9.4			26	PANEL 3LA	1250	#1	#1	M	1.1/2"	6.95		
27	-	-	-	-	-	-	-	-	-	28	-	-	-	-	-</td				


**RENOVATION OF THREE  
RESIDENCE HALLS  
POCAHONTAS, BOLLING, &  
DRAPER HALLS**  
 RADFORD UNIVERSITY  
 RADFORD, VIRGINIA

 Project Code: 217-17565  
 VMDO Project Number: 1115

 Checked By: RGW  
 Drawn By: BSM

PANEL BLB																			
VOLTAGE: 308Y/120V		MAIN: 225A MLD		INTERAL SPD: NO		MOUNTING: 8IN-H		SERVICE: 18,000W		INTERRUPT: 100A		LOAD SERVED							
CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	I1	I2	I3	CKT	BKR	PHASE	NEUT	GND	COND	I1	I2	I3	
1	SPARE	201	-	-	-	-	-	-	-	2	SEWAGE PUMP CONTROL PANEL	15/1	#12	#12	#12	3/4"	2		
3	SPARE	201	-	-	-	-	-	-	-	4	ELV PIT SLAMP LAMP	201	#12	#12	#12	3/4"	7		
5	REC CRAN. SPICE / SUM ALARM	201	#12	#12	#12	3/4"	J2	72	6	INSTANTANEOUS WATER HEATER	201	#12	#12	#12	3/4"		53		
7	EF 4, U4, L4, L1 (BASEMENT)	15/1	#12	#12	#12	3/4"	J2	8	HWP-1, HWP-2	15/1	#12	#12	#12	3/4"	77				
9	LTC/ELEVATOR RT	201	#12	#12	#12	3/4"	3	10	ERW-3(BASMENT)	15/1	#12	#12	#12	3/4"		18			
11	REC ELEVATOR MACH ROOM	201	#12	#12	#12	3/4"	18	12	BAS PANELS	201	#12	#12	#12	3/4"		1			
13	REC BASEMENT MACH ROOM	201	#12	#12	#12	3/4"	3	14	LIGHTING CONTACTOR	201	#12	#12	#12	3/4"	1				
15	SPARE	201	-	-	-	-	-	16	SPARE	201	-	-	-	-					
17	SUMP PUMP	201	#12	#12	#12	3/4"	1,18	18	SPARE	201	-	-	-	-					
19	SPARE	201	-	-	-	-	-	20	SPARE	201	-	-	-	-					
21	MECH MODE MODS	201	#12	#12	#12	3/4"	54	22	EXIST TUNNEL LIMITS	201	#10	#10	#10	3/4"	1,5				
23	SPARE	201	-	-	-	-	-	24	EXIST SUMP IN TUNNEL	201	#10	#10	#10	3/4"		86			
25	SPARE	201	-	-	-	-	-	26	EXIST WEST TUNNEL REC	201	#10	#10	#10	3/4"					
27	QUADRANT 2(200)	202	#10	#10	#10	3/4"	1,1	28	EXIST WEST TUNNEL REC	201	#10	#10	#10	3/4"		9			
29	16.5MVA 191-209V	202	#10	#10	#10	3/4"	11	30	EXIST WEST TUNNEL REC	201	#10	#10	#10	3/4"		9			
31	Q1 (CRAWS, SPAC)	202	#10	#10	#10	3/4"	22	32	EXIST WEST TUNNEL REC	201	#10	#10	#10	3/4"					
33	16.5MVA 191-209V	15/1	#12	#12	#12	3/4"	1,1	34	EXIST WEST TUNNEL REC	201	#10	#10	#10	3/4"		9			
35	HPU 1 (CRAWS, SPAC)	202	#10	#10	#10	3/4"	1,26	36	EXIST WEST TUNNEL REC	201	#10	#10	#10	3/4"		9			
37	16.5MVA 191-209V	202	#10	#10	#10	3/4"	1,38	38	EXIST WEST TUNNEL REC	201	#10	#10	#10	3/4"		9			
39	WHR-2 (MECHANICAL 5000)	302	#10	#10	#10	3/4"	2,25	40	EXIST TUNNEL LIMITS	202	#10	#10	#10	3/4"	1				
41	4.5KW 191-209V	10/1	-	-	-	-	2,25	42	-	-	-	-	-	-	1				
43	SPARE	201	-	-	-	-	44	EXIST POLE LIGHTS	402	#8	-	#10	3/4"	1,8					
45	SPARE	201	-	-	-	-	46	-	#8	-	-	-	-	-	1,8				
47	SPARE	201	-	-	-	-	48	SPACE ONLY	-	-	-	-	-	-	-				
49	SPARE	201	-	-	-	-	50	SPACE ONLY	-	-	-	-	-	-	-				
51	SPARE	201	-	-	-	-	52	EXIST STREET LIGHTING	502	#8	-	#10	3/4"	4,1					
53	SPARE	201	-	-	-	-	54	-	#8	-	-	-	-	-	-				
PHASE LOAD TOTALS													9.65	16.37	15.98				

PANELBOARD HMDP SCHEDULE												
480Y/277 VOL, 3-PHASE, 4-WIRE, GROUND BUS, SOLID NEUTRAL, 60A BUSING, INTERAL SPD, WALL MOUNT, 3200A AC, "N" SERVICE BRANCH INDICATES FEEDER IS TO BE SUB-METERED		OUTGOING FEEDER										
CKT NO.	POLES	MPS	#BTWS	PHASE	NEUT	GND	COND	I1	I2	I3		SERVING
MAIN	3	600	(LS)	-	-	-	-	-	-	-	-	
1	3	-	-	-	-	-	-	-	-	-	-	100A PROVISION
2	3	-	-	-	-	-	-	-	-	-	-	100A PROVISION
3	3	25	1	10	10	10	10	3/4"	3/4"	3/4"	3/4"	PANEL-LD2 VIA ATS EQ
4	3	-	-	-	-	-	-	-	-	-	-	100A PROVISION
5	3	30	1	10	10	10	10	3/4"	3/4"	3/4"	3/4"	PANEL-HLS VIA ATS LS
6	3	100	1	2	-	-	2	1-1/4"	-	-	-	ELEVATOR
7	3	100	-	-	-	-	-	-	-	-	-	SPARE
8	3	20M	1	12	-	-	12	3/4"	3/4"	3/4"	3/4"	HWP-1
9	3	12M	1	1	1	6	1.5"	-	-	-	-	PANEL-2H
10	3	20M	1	12	-	-	12	3/4"	3/4"	3/4"	3/4"	HWP-2
11	3	125	1	1	6	1.5"	-	-	-	-	-	PANEL-BWA
12	3	25M	1	12	-	-	12	3/4"	3/4"	3/4"	3/4"	CWP-1
13	3	650M	2	40	-	-	2	-	-	-	-	PANEL-LMDP (WHA-XM3R)
14	3	25M	1	12	-	-	12	3/4"	3/4"	3/4"	3/4"	CWP-2
15	3	-	-	-	-	-	-	-	-	-	-	100A PROVISION
16	3	-	-	-	-	-	-	-	-	-	-	25A PROVISION
CIRCUIT 10 IS NON-COINCIDENT WITH CIRCUIT 9 AND CIRCUIT 14 IS NON-COINCIDENT WITH CIRCUIT 12.												
LOADS (KVA)												
CONNECTED	DEMAND	FACTOR	DEMAND	LOADS (KVA)	CONNECTED	DEMAND	DEMAND	LOADS (KVA)	CONNECTED	DEMAND	DEMAND	DEMAND
1	4115	1.25	314.6	LIGHTING	42.5	0.7	29.75	1	4115	1.25	0	0
2	10	1.0	0	KITCHEN EQUIPMENT	0	1.25	0	10	1.25	0	0	0
3	125	1.0	0	CONTINUOUS	0	1.25	0	125	1.0	0	0	0
4	154	1.0	0	NON-CONTINUOUS	0	1.25	0	154	1.0	0	0	0
5	154	1.0	0	Demand	0	1.0	0	154	1.0	0	0	0
6	-	-	-		-	-	-		-	-	-	
7	-	-	-		-	-	-		-	-	-	
8	-	-	-		-	-	-		-	-	-	
9	-	-	-		-	-	-		-	-	-	
10	-	-	-		-	-	-		-	-	-	
11	-	-	-		-	-	-		-	-	-	
12	-	-	-		-	-	-		-	-	-	
13	-	-	-		-	-	-		-	-	-	
14	-	-	-		-	-	-		-	-	-	
15	-	-	-		-	-	-		-	-	-	
16	-	-	-		-	-	-		-	-	-	
17	-	-	-		-	-	-		-	-	-	
18	-	-	-		-	-	-		-	-	-	
19	-	-	-		-	-	-		-	-	-	
20	-	-	-		-	-	-		-	-	-	
21	-	-	-		-	-	-		-	-	-	
22	-	-	-		-	-	-		-	-	-	
23	-	-	-		-	-	-		-	-	-	
24	-	-	-		-	-	-		-	-	-	
25	-	-	-		-	-	-		-	-	-	
26	-	-	-		-	-	-		-	-	-	
27	-	-	-		-	-	-		-	-	-	
28	-	-	-		-	-	-		-	-	-	
29	-	-	-		-	-	-		-	-	-	
30	-	-	-		-	-	-		-	-	-	
31	-	-	-		-	-	-		-	-	-	
32	-	-	-		-	-	-		-	-	-	
33	-	-	-		-	-	-		-	-	-	
34	-	-	-		-	-	-		-	-	-	
35	-	-	-		-	-	-		-	-	-	
36	-	-	-		-	-	-		-	-	-	
37	-	-	-		-	-	-		-	-	-	
38	-	-	-		-	-	-		-	-	-	
39	-	-	-		-	-	-		-	-	-	
40	-	-	-		-	-	-		-	-	-	
41	-	-	-		-	-	-		-	-	-	
42	-	-	-		-	-	-		-	-	-	
43	-	-	-		-	-	-		-	-	-	
44	-	-	-		-	-	-		-	-	-	
45	-	-	-		-	-	-		-	-	-	
46	-	-	-		-	-	-		-	-	-	
47	-	-	-		-	-	-		-	-	-	
48	-	-	-		-	-	-	</td				



## PANEL HLS

MAIN: 30A MCB									
VOLTAGE: 208Y/120V SYSTEM: 3PH, 4W GROUND: YES									
INTERGRAL SPD: YES MOUNTING: SURFACE INTERRUPT RATING: 10,000 AC									
CKT # LOAD SERVED BKR PHASE NEUT GND COND L1 L2 L3 CKT # LOAD SERVED BKR PHASE NEUT GND COND L1 L2 L3									
1 ATTIC EMERGENCY LTD 201 #12 #12 #12 3/4" 7 2 LTO ELEVATOR RM 201 #12 #12 #12 3/4" 12 1.1									
3 BASEMENT EMERGENCY LTD 201 #12 #12 #12 3/4" 33 4 LTO STARWELLS 201 #12 #12 #12 3/4" 1.1									
5 1ST FLR EMERGENCY LTD 201 #12 #12 #12 3/4" 43 6 EXTERIOR EMERGENCY LTD 201 #12 #12 #12 3/4" 44									
7 2ND FLR EMERGENCY LTD 201 #12 #12 #12 3/4" 0 8 SPARE 201 - - - - - - - - -									
9 3RD FLR EMERGENCY LTD 201 #12 #12 #12 3/4" 28 10 SPARE 201 - - - - - - - - -									
11 SPARE 201 - - - - - - - - -									
13 PANEL LLS 250 #10 - #10 3/4" 5.14 14 SPACE ONLY - - - - - - - - -									
15 (VA-T-L15) - #10 - - - 3.06 16 SPACE ONLY - - - - - - - - -									
17 * - #10 - - - 1.64 18 SPACE ONLY - - - - - - - - -									
MAIN CIRCUIT BREAKER SHALL HAVE LSJ ADJUSTABLE TRIP SETTINGS									
PHASE LOAD TOTALS: 6.26 4.77 2.51									

## PANEL 1LA

MAIN: 225A MUD									
VOLTAGE: 208Y/120V SYSTEM: 3PH, 4W GROUND: YES									
INTERGRAL SPD: NO MOUNTING: FLUSH INTERRUPT RATING: 10,000 AC									
CKT # LOAD SERVED BKR PHASE NEUT GND COND L1 L2 L3 CKT # LOAD SERVED BKR PHASE NEUT GND COND L1 L2 L3									
1 BATHROOM REC 107A 201 #12 #12 #12 3/4" 2 2 BATHROOM REC 114A 201 #12 #12 #12 3/4" 25									
3 BATHROOM REC 109A 201 #12 #12 #12 3/4" 33 4 LTO STARWELLS 201 #12 #12 #12 3/4" 25									
5 1ST FLR EMERGENCY LTD 201 #12 #12 #12 3/4" 43 6 EXTERIOR EMERGENCY LTD 201 #12 #12 #12 3/4" 44									
7 2ND FLR EMERGENCY LTD 201 #12 #12 #12 3/4" 0 8 SPARE 201 - - - - - - - - -									
9 3RD FLR EMERGENCY LTD 201 #12 #12 #12 3/4" 28 10 SPARE 201 - - - - - - - - -									
11 SPARE 201 - - - - - - - - -									
13 PANEL LLS 250 #10 - #10 3/4" 5.14 14 SPACE ONLY - - - - - - - - -									
15 (VA-T-L15) - #10 - - - 3.06 16 SPACE ONLY - - - - - - - - -									
17 * - #10 - - - 1.64 18 SPACE ONLY - - - - - - - - -									
MAIN CIRCUIT BREAKER SHALL HAVE LSJ ADJUSTABLE TRIP SETTINGS									
PHASE LOAD TOTALS: 9.11 9.59 6.53									

## PANEL LLS

MAIN: 30A MCB									
VOLTAGE: 208Y/120V SYSTEM: 3PH, 4W GROUND: YES									
INTERGRAL SPD: NO MOUNTING: SURFACE INTERRUPT RATING: 10,000 AC									
CKT # LOAD SERVED BKR PHASE NEUT GND COND L1 L2 L3 CKT # LOAD SERVED BKR PHASE NEUT GND COND L1 L2 L3									
1 LIGHTING 4.7 1.25 5.88 2 REC TO 10 KVA 0 1.0 0 3 REC REMAINING 0 0.5 0 4 SPARE HEATING 0 0.0 0 5 NON-SEASONAL MOTORS 0 1.0 0 6 LARGEST MOTOR 0 0.25 0 7 WATER HEATING 0 1.0 0									
8 SPARE 201 - - - - - - - - -									
10 SPARE 201 - - - - - - - - -									
12 SPARE 201 - - - - - - - - -									
14 SPARE ONLY - - - - - - - - -									
15 SPARE ONLY - - - - - - - - -									
17 SPARE ONLY - - - - - - - - -									
18 SPARE ONLY - - - - - - - - -									
19 SPARE ONLY - - - - - - - - -									
20 SPARE ONLY - - - - - - - - -									
22 SPARE ONLY - - - - - - - - -									
24 SPARE ONLY - - - - - - - - -									
26 SPARE ONLY - - - - - - - - -									
28 SPARE ONLY - - - - - - - - -									
30 SPARE ONLY - - - - - - - - -									
PHASE LOAD TOTALS: 5.14 3.06 3.16									

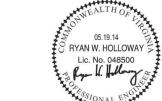
## PANEL 1LA

MAIN: 225A MUD									
VOLTAGE: 208Y/120V SYSTEM: 3PH, 4W GROUND: YES									
INTERGRAL SPD: NO MOUNTING: FLUSH INTERRUPT RATING: 10,000 AC									
CKT # LOAD SERVED BKR PHASE NEUT GND COND L1 L2 L3 CKT # LOAD SERVED BKR PHASE NEUT GND COND L1 L2 L3									
1 BATHROOM REC 107A 201 #12 #12 #12 3/4" 2 2 BATHROOM REC 114A 201 #12 #12 #12 3/4" 1.5									
3 BATHROOM REC 109A 201 #12 #12 #12 3/4" 18 4 LTO STARWELLS 201 #12 #12 #12 3/4" 1.44									
5 1ST FLR EMERGENCY LTD 201 #12 #12 #12 3/4" 2 6 BATHROOM REC 114A 201 #12 #12 #12 3/4" 1.44									
7 2ND FLR EMERGENCY LTD 201 #12 #12 #12 3/4" 1 8 BATHROOM REC 114A 201 #12 #12 #12 3/4" 1.44									
9 BATHROOM REC 114A 201 #12 #12 #12 3/4" 0 10 SPARE 201 - - - - - - - - -									
11 SPARE 201 - - - - - - - - -									
13 PANEL LLS 250 #10 - #10 3/4" 5.14 14 SPACE ONLY - - - - - - - - -									
15 (VA-T-L15) - #10 - - - 3.06 16 SPACE ONLY - - - - - - - - -									
17 * - #10 - - - 1.64 18 SPACE ONLY - - - - - - - - -									
MAIN CIRCUIT BREAKER SHALL HAVE LSJ ADJUSTABLE TRIP SETTINGS									
PHASE LOAD TOTALS: 9.11 9.59 6.53									

## PANEL LQO

MAIN: 30A MCB									
VOLTAGE: 208Y/120V SYSTEM: 3PH, 4W GROUND: YES									
INTERGRAL SPD: NO MOUNTING: SURFACE INTERRUPT RATING: 10,000 AC									
CKT # LOAD SERVED BKR PHASE NEUT GND COND L1 L2 L3 CKT # LOAD SERVED BKR PHASE NEUT GND COND L1 L2 L3									
1 LIGHTING 1.25 0 3 REC TO 10 KVA 10 1.0 10 3 REC REMAINING 0.5 0 3 SPARE HEATING 0 0.0 0 3 NON-CONTINUOUS 0.5									

RENOVATION OF THREE  
RESIDENCE HALLS  
POCAHONTAS, BOLLING, &  
DRAPER HALLS  
RADFORD UNIVERSITY  
RADFORD, VIRGINIA

217-17565  
VMDO Project Number  
1115Checked By  
Drawn By  
RGW  
BSM

PANEL 2LB														
VOLTAGE: 208Y/120		MAIN: 250A M&D		INTLAL SPD: NO		MOUNTING: FLUSH		GND: NEUT		LOAD SERVED		CIR:		
SYSTEM: 3PH/4W		BUS RATING: 25A		GND: COND		COND: L1 L2		L1 L2 L3		BKR PHASE	NEUT GND			
CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	COND	L1	L2	L3	CKT	LOAD SERVED		
1	REC BEDROOM 201	201	#12	#12	#12	3/4"	1.08	2	REC BEDROOM 204	201	#12	#12	3/4"	1.08
3	REC BEDROOM 203	201	#12	#12	#12	3/4"	1.08	4	REC BEDROOM 206	201	#12	#12	3/4"	1.08
5	REC BEDROOM 209	201	#12	#12	#12	3/4"	1.08	6	REC BEDROOM 208	201	#12	#12	3/4"	1.08
7	REC BEDROOM 211	201	#12	#12	#12	3/4"	1.08	8	REC BEDROOM 210	201	#12	#12	3/4"	1.08
9	REC BEDROOM 213	201	#12	#12	#12	3/4"	1.08	10	REC BEDROOM 212	201	#12	#12	3/4"	1.08
11	REC BEDROOM 215	201	#12	#12	#12	3/4"	1.08	12	REC BEDROOM 212	201	#12	#12	3/4"	1.08
13	REC BEDROOM 217	201	#12	#12	#12	3/4"	1.08	14	REC BEDROOM 214	201	#12	#12	3/4"	1.08
15	REC BEDROOM 219	201	#12	#12	#12	3/4"	1.08	16	REC BEDROOM 214	201	#12	#12	3/4"	1.08
17	REC BEDROOM 217	201	#12	#12	#12	3/4"	1.08	18	REC BEDROOM 216	201	#12	#12	3/4"	1.08
19	REC BEDROOM 217	201	#12	#12	#12	3/4"	54	20	REC BEDROOM 216	201	#12	#12	3/4"	54
21	REC BEDROOM 219	201	#12	#12	#12	3/4"	1.08	22	REC BEDROOM 218	201	#12	#12	3/4"	1.08
23	REC BEDROOM 221	201	#12	#12	#12	3/4"	1.08	24	REC BEDROOM 220	201	#12	#12	3/4"	1.08
25	REC BEDROOM 223	201	#12	#12	#12	3/4"	1.08	26	REC BEDROOM 222	201	#12	#12	3/4"	1.08
27	REC BEDROOM 225	201	#12	#12	#12	3/4"	1.08	28	REC BEDROOM 224	201	#12	#12	3/4"	1.08
29	REC BEDROOM 227	201	#12	#12	#12	3/4"	1.08	30	REC BEDROOM 228	201	#12	#12	3/4"	1.08
31	SPARE	201	-	-	-	-	-	32	REC BEDROOM 228	201	#12	#12	3/4"	1.08
33	SPARE	201	-	-	-	-	-	34	SPARE	201	-	-	-	-
35	SPARE	201	-	-	-	-	-	36	SPARE	201	-	-	-	-
37	SPARE	201	-	-	-	-	-	38	SPARE	201	-	-	-	-
39	SPARE	201	-	-	-	-	-	40	SPARE	201	-	-	-	-
41	SPARE	201	-	-	-	-	-	42	SPARE	201	-	-	-	-

NOTE 1: PROVIDE AFCI BREAKERS FOR CIRCUITS 1, 5

PHASE LOAD TOTALS 10.8 9.72 9.72

NOTE 2: PROVIDE 200A RATED NEUTRAL BAR

NOTE 3: PROVIDE 200A RATED NEUTRAL BAR

NOTE 4: PROVIDE AFCI BREAKERS FOR CIRCUITS 1, 2, 4

NOTE 5: PROVIDE AFCI BREAKERS FOR CIRCUITS 1, 2, 6

NOTE 6: PROVIDE AFCI BREAKERS FOR CIRCUITS 1, 2, 8

NOTE 7: PROVIDE AFCI BREAKERS FOR CIRCUITS 1, 2, 10

NOTE 8: PROVIDE AFCI BREAKERS FOR CIRCUITS 1, 2, 12

NOTE 9: PROVIDE AFCI BREAKERS FOR CIRCUITS 1, 2, 14

NOTE 10: PROVIDE AFCI BREAKERS FOR CIRCUITS 1, 2, 16

NOTE 11: PROVIDE AFCI BREAKERS FOR CIRCUITS 1, 2, 18

NOTE 12: PROVIDE AFCI BREAKERS FOR CIRCUITS 1, 2, 20

NOTE 13: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 22

NOTE 14: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 24

NOTE 15: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 26

NOTE 16: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 28

NOTE 17: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 30

NOTE 18: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 32

NOTE 19: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 34

NOTE 20: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 36

NOTE 21: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 38

NOTE 22: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 40

NOTE 23: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 42

NOTE 24: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 44

NOTE 25: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 46

NOTE 26: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 48

NOTE 27: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 50

NOTE 28: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 52

NOTE 29: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 54

NOTE 30: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 56

NOTE 31: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 58

NOTE 32: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 60

NOTE 33: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 62

NOTE 34: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 64

NOTE 35: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 66

NOTE 36: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 68

NOTE 37: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 70

NOTE 38: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 72

NOTE 39: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 74

NOTE 40: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 76

NOTE 41: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 78

NOTE 42: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 80

NOTE 43: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 82

NOTE 44: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 84

NOTE 45: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 86

NOTE 46: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 88

NOTE 47: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 90

NOTE 48: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 92

NOTE 49: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 94

NOTE 50: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 96

NOTE 51: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 98

NOTE 52: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 100

NOTE 53: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 102

NOTE 54: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 104

NOTE 55: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 106

NOTE 56: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 108

NOTE 57: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 110

NOTE 58: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 112

NOTE 59: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 114

NOTE 60: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 116

NOTE 61: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 118

NOTE 62: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 120

NOTE 63: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 122

NOTE 64: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 124

NOTE 65: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 126

NOTE 66: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 128

NOTE 67: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 130

NOTE 68: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 132

NOTE 69: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 134

NOTE 70: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 136

NOTE 71: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 138

NOTE 72: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 140

NOTE 73: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 142

NOTE 74: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 144

NOTE 75: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 146

NOTE 76: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 148

NOTE 77: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 150

NOTE 78: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 152

NOTE 79: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 154

NOTE 80: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 156

NOTE 81: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 158

NOTE 82: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 160

NOTE 83: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 162

NOTE 84: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 164

NOTE 85: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 166

NOTE 86: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 168

NOTE 87: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 170

NOTE 88: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 172

NOTE 89: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 174

NOTE 90: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 176

NOTE 91: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 178

NOTE 92: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 180

NOTE 93: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 182

NOTE 94: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 184

NOTE 95: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 186

NOTE 96: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 188

NOTE 97: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 190

NOTE 98: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 192

NOTE 99: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 194

NOTE 100: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 196

NOTE 101: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 198

NOTE 102: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 200

NOTE 103: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 202

NOTE 104: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 204

NOTE 105: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 206

NOTE 106: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 208

NOTE 107: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 210

NOTE 108: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 212

NOTE 109: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 214

NOTE 110: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 216

NOTE 111: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 218

NOTE 112: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 220

NOTE 113: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 222

NOTE 114: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 224

NOTE 115: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 226

NOTE 116: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 228

NOTE 117: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 230

NOTE 118: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 232

NOTE 119: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 234

NOTE 120: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 236

NOTE 121: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 238

NOTE 122: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 240

NOTE 123: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 242

NOTE 124: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 244

NOTE 125: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 246

NOTE 126: PROVIDE AFCi BREAKERS FOR CIRCUITS 1, 2, 248

NOTE 127: PROVIDE AFCi BREAK



RENOVATION OF THREE  
RESIDENCE HALLS  
POCAHONTAS, BOLLING, &  
DRAPER HALLS

RADFORD UNIVERSITY  
RADFORD, VIRGINIA

217-17565  
VMDO Project Number  
1115



Checked By RGW  
Drawn By BSM

## PANEL BHA

PANEL BHA											
VOLTAGE: 480Y/277V				MAIN: 125A MLD				INTERNAL SPD: NO			
SYSTEM: 3PH, 4W				BUS RATING: 125A				MOUNTING: SURFACE			
SOLID NEUTRAL: YES											
CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	L1	L2	L3	CKT	LOAD SERVED
1	ERV-1 (ATC)	263	#12	-	#12	3/4"	2.08			2	CUH-1 150W/PH-277V
3	SUPPLY FAN, EXHAUST IN AND	-	#12	-	-	-	2.08			4	CUH-2 30W/PH-277V
5	ENGD REC/RECOVERY WHEEL	125	#12	-	-	-	2.08			5	SHUNT TRIP POWER
7	ERV-1 (ATC)	265	#12	-	#12	3/4"	2.08			7	EF-2 3HP-1P-480V
9	SUPPLY FAN, EXHAUST IN AND	-	#12	-	-	-	2.08			15	150S #2
11	ENERGY RECOVERY WHEEL	-	#12	-	-	-	2.08			16	10H(P-3PH-480V)
13	SPARE	309	-	-	-	-	14			17	-
15	-	-	-	-	-	-	16			19	-
17	-	-	-	-	-	-	18			21	-
19	EF-3	150/3 #12	-	-	#12	3/4"	.58	20		23	-
21	1HP-3PH-480V	-	#12	-	-	-	58	22		25	-
23	-	-	#12	-	-	-	58	24		27	-
25	SEWAGE PUMP	150/3 #12	-	#12	3/4"	1.68	26			29	-
27	(VA CONTROL PANEL)	-	#12	-	-	-	1.68	28		30	-
29	-	-	#12	-	-	-	1.68	30			-
											PHASE LOAD TOTALS: 6.59 10.09 7.19

## PANEL 3LB

PANEL 3LB											
VOLTAGE: 300Y/120V				MAIN: 250A MLD				INTERNAL SPD: NO			
SYSTEM: 3PH, 4W				BUS RATING: 250A				MOUNTING: FLUSH			
SOLID NEUTRAL: YES											
CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	L1	L2	L3	CKT	LOAD SERVED
1	REC BEDROOM-301	201	#12	#12	#12	3/4"	1.5			2	REC BEDROOM-304
3	REC BEDROOM-303	201	#12	#12	#12	3/4"	1.08			4	REC BEDROOM-305
5	REC BEDROOM-302	201	#12	#12	#12	3/4"	1.08			6	REC BEDROOM-306
7	REC BEDROOM-311	201	#12	#12	#12	3/4"	1.08			8	REC BEDROOM-310
9	REC BEDROOM-313	201	#12	#12	#12	3/4"	1.08			10	REC BEDROOM-312
11	REC BEDROOM-312	201	#12	#12	#12	3/4"	1.08			12	REC BEDROOM-313
13	REC BEDROOM-315	201	#12	#12	#12	3/4"	1.08			14	REC BEDROOM-314
15	REC BEDROOM-315	201	#12	#12	#12	3/4"	.54			16	REC BEDROOM-314
17	REC BEDROOM-317	201	#12	#12	#12	3/4"	1.08			18	REC BEDROOM-316
19	REC BEDROOM-317	201	#12	#12	#12	3/4"	.54			20	REC BEDROOM-316
21	REC BEDROOM-319	201	#12	#12	#12	3/4"	1.08			22	REC BEDROOM-320
23	REC BEDROOM-321	201	#12	#12	#12	3/4"	1.08			24	REC BEDROOM-322
25	REC BEDROOM-323	201	#12	#12	#12	3/4"	1.08			26	REC BEDROOM-322
27	SPARE	201	-	-	-	-				28	REC BEDROOM-324
29	SPARE	201	-	-	-	-				30	SPARE
											PHASE LOAD TOTALS: 9.82 9.64 7.56

## PANEL 2HA

PANEL 2HA											
VOLTAGE: 480Y/277V				MAIN: 125A MLD				INTERNAL SPD: NO			
SYSTEM: 3PH, 4W				BUS RATING: 125A				MOUNTING: FLUSH			
SOLID NEUTRAL: YES											
CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	L1	L2	L3	CKT	LOAD SERVED
1	BASIC BEDROOM-2 JNTS	151	#12	#12	#12	3/4"	1.86			2	LTO-1 3PH-480V
3	1ST FLR VFC UNITS	151	#12	#12	#12	3/4"	3.46			4	LTO-2N 1PH-480V
5	1ST FLR VFC UNITS	151	#12	#12	#12	3/4"	1.11			6	LTO-2N 1PH-480V
7	1ST FLR VFC UNITS	151	#12	#12	#12	3/4"	.8			8	LTO-1 3PH-480V
9	1ST FLR VFC UNITS	151	#12	#12	#12	3/4"	2.02			10	LTO STAIRVELLS
11	2ND FLR VFC UNITS	151	#12	#12	#12	3/4"	3.55			12	ATC-1
13	2ND FLR VFC UNITS	151	#12	#12	#12	3/4"	3.46			14	SPARE
15	2ND FLR VFC UNITS	151	#12	#12	#12	3/4"	2.68			16	SPARE
17	2ND FLR VFC UNITS	151	#12	#12	#12	3/4"	3.09			18	SPARE
19	3RD FLR VFC UNITS	151	#12	#12	#12	3/4"	2.05			20	SPARE
21	3RD FLR VFC UNITS	151	#12	#12	#12	3/4"	2.68			22	SPARE
23	3RD FLR VFC UNITS	151	#12	#12	#12	3/4"	3.09			24	SPARE
25	3RD FLR VFC UNITS	201	#12	#12	#12	3/4"	2.22			26	SPARE
27	SPARE	201	-	-	-	-	28			28	SPARE
29	SPARE	201	-	-	-	-	30			31	SPARE
											PHASE LOAD TOTALS: 17.53 15.67 17.8

PANEL ALA											
VOLTAGE: 200/120V				MAIN: 100A MLD				INTERNAL SPD: NO			
SYSTEM: 3PH, 1W				BUS RATING: 100A				MOUNTING: FLUSH			
SOLID NEUTRAL: YES											
CKT	LOAD SERVED	BKR	PHASE	NEUT	GND	COND	L1	L2	L3	CKT	LOAD SERVED
1	REC ATTIC	201	#12	#12	#12	3/4"	.54			2	UH-1 GFT-3, UH-2
3	REC ATTIC	201	#12	#12	#12	3/4"	.72			4	UH-1 GFT-3, UH-2, UH-120V
5	REC ATTIC	201	#12	#12	#12	3/4"	.9			6	MOD-1 ATC
7	ELEVATOR MOTORIZED DAMPER	201	#12	#12	#12	3/4"	.53			8	ERV-UNI-LIGHT
9	SPARE	201	-	-	-	-				10	SPARE
11	SPARE	201	-	-	-	-	12			13	SPARE
13	SPARE	201	-	-	-	-	14			15	SPARE
15	SPARE	201	-	-	-	-	16			17	SPARE
17	SPARE	201	-	-	-	-	18			19	SPARE
19	SPARE	201	-	-	-	-	20			21	SPARE
21	SPARE	201	-	-	-	-	22			23	SPARE
23	SPARE	201	-	-	-	-	24			25	SPARE
25	SPARE	201	-	-	-	-	26			27	SPARE
27	SPARE	201	-	-	-	-	28			29	SPARE
							30				PHASE LOAD TOTALS: 3.18 1.91 1.7

PANELBOARD SCHEDULES											
LOADS (kVA)	CONNECTED	DEMAND	DEMAND	LOADS (kVA)	CONNECTED	DEMAND	DEMAND				
LIGHTING	5	1.25	63	KITCHEN EQUIPMENT	0	1.0	0				
REC HEATING	2.16	1.10	126	CONTINUOUS	0	1.25	0				
REC REMAINING	0	0.5	0	NON-CONTINUOUS	0	1.0	0				
SPACE HEATING	0	0.0	0	DEMAND	0	1.0	0				
AIR CONDITIONING	40.13	1.0	40.13	TOTAL CONNECTED LOAD	48	56.7	AMPS				
NON-SEASONAL MOTORS	0	1.0	0	MIN. FEEDER/PANEL CAPACITY	22	KVA	61.6				
LARGEST MOTOR	2.83	0.25	71	OVERALL DEMAND FACTOR	1.06						
WATER HEATING	0	1.0	0								