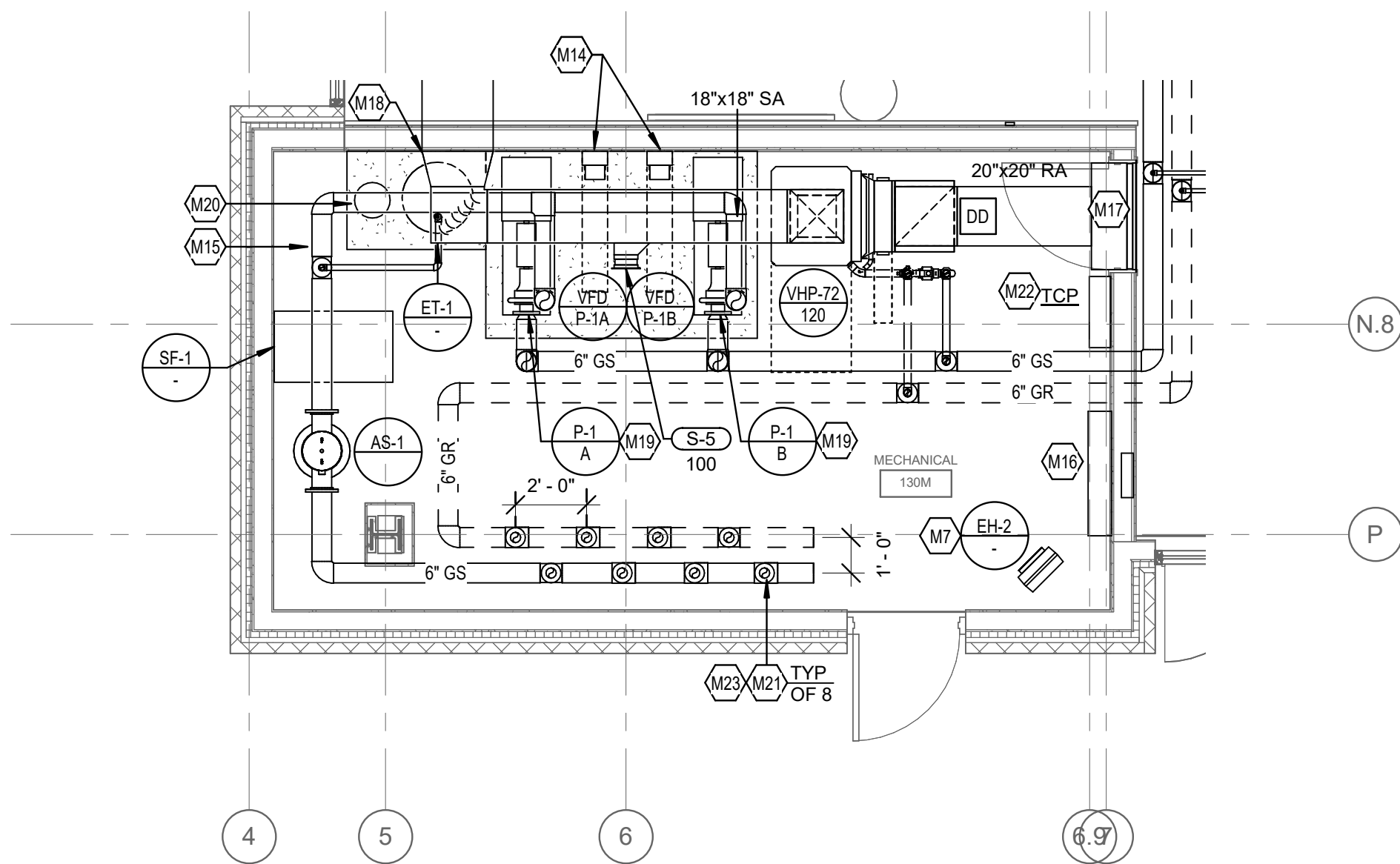
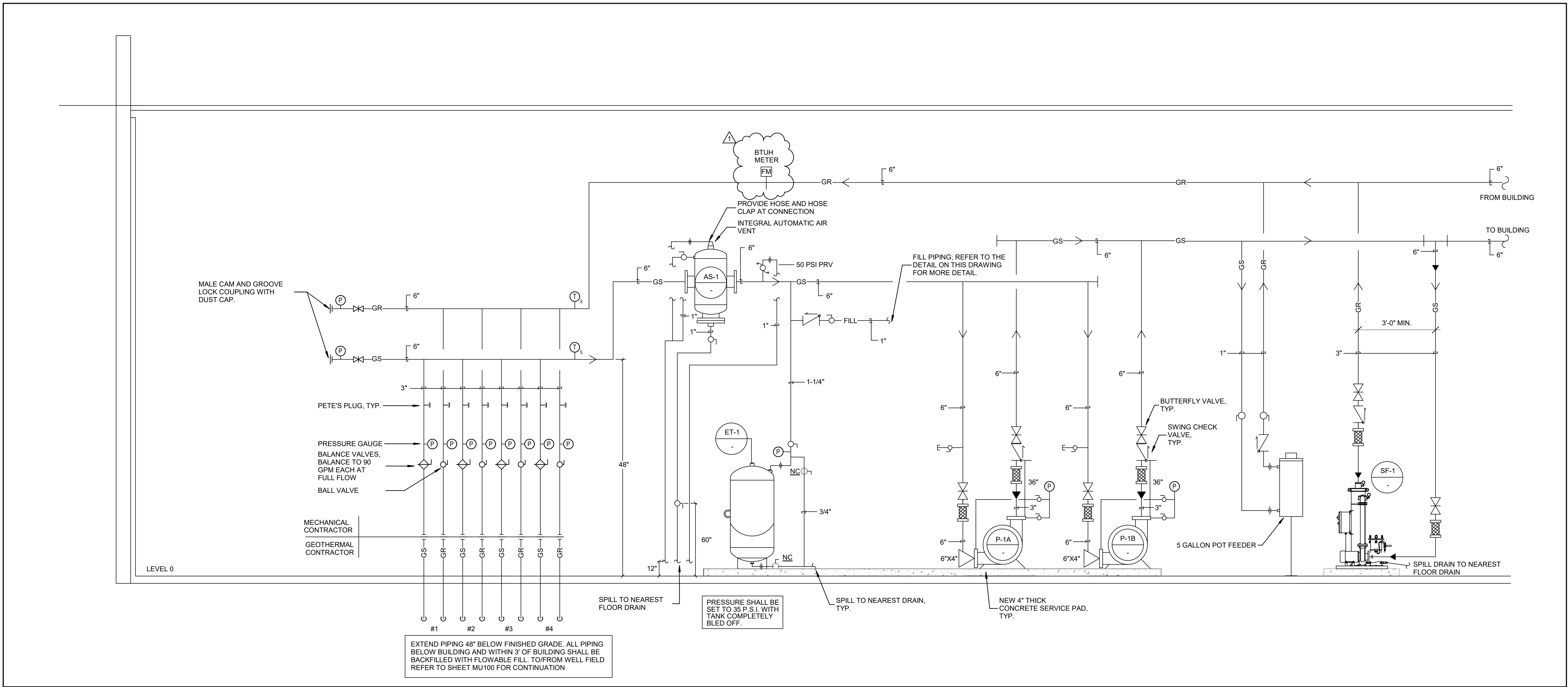


3 HVAC FILL SYSTEM PIPING SCHEMATIC
NOT TO SCALE



2 ENLARGED MECHANICAL PLAN - MECHANICAL 130M
1/4" = 1'-0"



1 GEOTHERMAL PIPING SCHEMATIC - MECHANICAL ROOM HEADER
NOT TO SCALE

- MECHANICAL NOTES:**
1. REFER TO ENLARGED SUITE PLANS ON SHEET M130 FOR DUCTWORK SIZING, AIRFLOWS, AND GRILLE TYPES.
 2. CENTER SUPPLY GRILLE ABOVE DOOR AT EACH UNIT BEDROOM.
 3. PROVIDE A HIGH EFFICIENCY TAKE-OFF AT EACH GRILLE, REGISTER, AND DIFFUSER BRANCH RUN-OUT, TYP OF ALL. REFER TO DETAILS ON SHEET M140.
 4. REFER TO COMBO FIRE/SMOKE DAMPER DETAIL ON SHEET M140. CONTRACTOR TO INSTALL THE FIRE/SMOKE DAMPER SUCH THAT THE RATING IS MAINTAIN ACROSS THE WALL AND SUCH THAT THE ACTUATOR IS LOCATED OUTSIDE THE PLANE OF THE WALL.
 5. PROVIDE DUCT ACCESS DOOR FOR ALL COMBO FIRE/SMOKE DAMPERS AS REQUIRED.
 6. PROVIDE ASSOCIATED DUCT MOUNTED SMOKE DETECTOR WITH EACH COMBO FIRE/SMOKE DAMPER SERVING GROUND FLOOR ONLY. COORDINATE INSTALLATION WITH EC.
 7. BALANCE ALL EXHAUST DUCTWORK BRANCHES TO CFM INDICATED ON FLOOR PLANS.
 8. REFER TO HEAT PUMP INSTANCE SCHEDULE ON EACH FLOOR FOR SPECIFIC REQUIREMENTS.
 9. REFER TO HEAT PUMP INSTALLATION DETAILS ON SHEET M141 FOR SPECIFIC REQUIREMENTS.
 10. SPILL CONDENSATE TO NEAREST FLOOR DRAIN.
 11. NO PIPING/DUCTWORK TO BE ROUTED OVER ELECTRICAL PANELS.
 12. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EQUIPMENT SO THAT ALL REQUIRED CLEARANCES ARE MAINTAINED. COORDIANTE WITH OTHER TRADES.
 13. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL DAMPERS AND VALVES IN ACCESSIBLE LOCATIONS. COORDIANTE WITH OTHER TRADES.
 14. CONTRACTOR SHALL MOCK UP A TYPICAL SUITE UNIT A/B WITH ALL TRADES IN PLACE FOR OWNER AND CMTA INSPECTION AND APPROVAL PRIOR TO CONTINUING ON TO OTHER TYPICAL SUITES.
 15. PROVIDE A HIGH EFFICIENCY TAKE-OFF AND VOLUME DAMPER AT EACH OUTSIDE AIR BRANCH RUN-OUT.

STATE OF KENTUCKY APPROVAL

TAGGED NOTES

- M7: MOUNT BOTTOM EH-2 9'-6" AFF.
- M14: PROVIDE A VERTICAL UNI-STRUT STAND FOR THE VFD. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR.
- M15: PROVIDE 4" THICK CONCRETE PAD UNDER MECHANICAL EQUIPMENT. PAD SHALL BE 6" LARGER THAN EQUIPMENT IN ALL DIRECTIONS.
- M16: MAKE-UP WATER FILL STATION. MOUNT 48" AFF. REFER TO SHEET M132 FOR FURTHER DETAIL.
- M17: PROVIDE 12" DEEP PLENUM THE FULL SIZE OF THE GRILLE. CONNECT TO PLENUM WITH EXPANDED THROAT TAP.
- M18: TRANSITION TO DOUBLE WALL OVAL DUCTWORK IN MECHANICAL ROOM.
- M19: REFER TO GEOTHERMAL PIPING SCHEMATIC ON THIS SHEET FOR FURTHER DETAIL.
- M20: PROVIDE 5 GALLON POT FEEDER. REFER TO THIS SHEET FOR FURTHER DETAIL.
- M21: COORDINATE GEOTHERMAL PIPE HEADER LOCATIONS WITH STRUCTURAL SLEEVES. REFER TO STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.
- M22: TEMPERATURE CONTROL PANEL. COORDINATE POWER AND DATA CONNECTION WITH ELECTRICAL CONTRACTOR.
- M23: PIPING TO GEOTHERMAL WELL FIELD. REFER TO SHEET MU100 FOR CONTINUATION.

#	DATE	CHANGE DESCRIPTION
1	02/18/2020	ADDENDUM #2

NKU - New Residence Hall
KENTON DRIVE & CARROLL DRIVE
HIGHLAND HEIGHTS, KY 41099
FOR
NORTHERN KENTUCKY UNIVERSITY

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DRAWING TITLE:
ENLARGED MECHANICAL PLANS

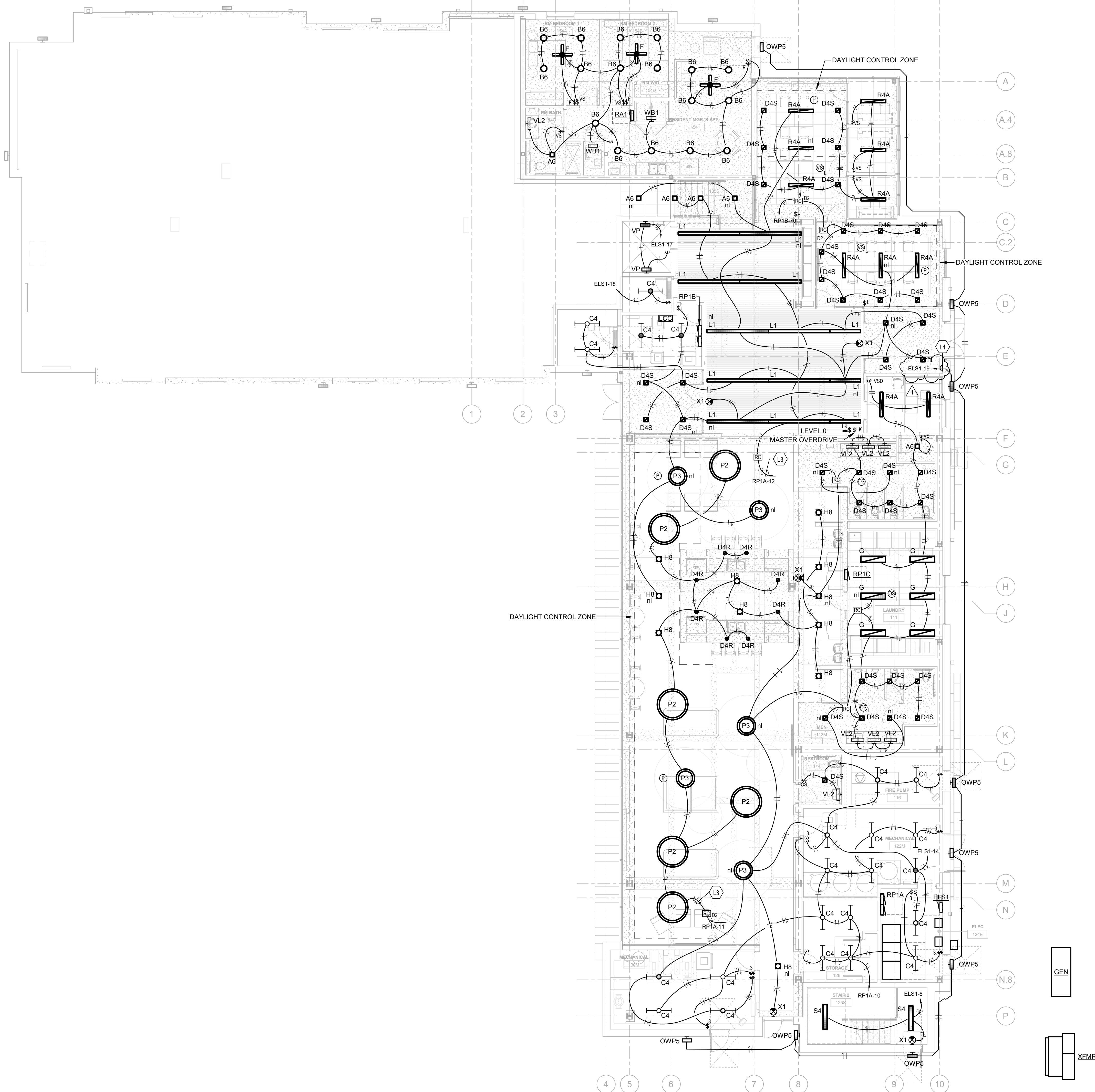
JANUARY 30, 2020

DRAWN BY LMA CHECKED BY CMG

#18237

M132

BID & PERMIT SUBMITTAL



2 LEVEL 0 - LIGHTING
SCALE: 1/8" = 1'-0"

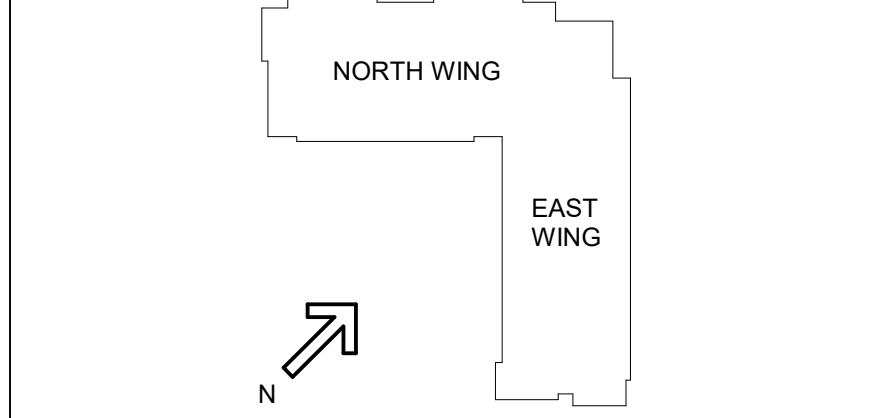
STATE OF KENTUCKY APPROVAL

GENERAL NOTES (LIGHTING):

- REFER TO THE ARCHITECT'S REFLECTED CEILING PLANS, ELEVATIONS, AND CASEWORK DETAILS FOR EXACT LOCATIONS OF ALL WALL AND CEILING MOUNTED ELECTRICAL DEVICES.
- CONTRACTOR SHALL FOLLOW BRANCH CIRCUITING LAY-OUT, AS INDICATED ON THE FLOOR PLANS, WITH A MAXIMUM OF THREE (3) BRANCH CIRCUITS PER HOMERUN. EACH BRANCH CIRCUIT SHALL BE PROVIDED WITH A DEDICATED NEUTRAL CONDUCTOR. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT CARRYING. IF ADDITIONAL CONDUCTORS ARE RAN IN THE SAME CONDUIT WITH THOSE INDICATED, CONTRACTOR SHALL DERATE ALL CURRENT CARRYING CONDUCTORS PER N.E.C. #310.15(B)(3), AND UPSIZE CONDUIT AS REQUIRED PER N.E.C. #300.17 AND ANNEX C. MULTIWIRE BRANCH CIRCUITS AS DEFINED IN N.E.C. #100 / 210.4 (CIRCUITS SHARING A COMMON NEUTRAL CONDUCTOR) SHALL NOT BE PERMITTED.
- IDENTIFY THE PANEL AND CIRCUIT NUMBER FOR ALL RECEPTACLES, SWITCHES, ETC. IN AREA OF CONSTRUCTION. PROVIDE CLEAR ADHESIVE LABELS WITH BLACK LETTERING. IN HEALTHCARE FACILITIES, ENGRAVE EMERGENCY DEVICE COVERPLATES IN PATIENT CARE AREAS. ALSO, MARK INSIDES OF ALL DEVICE BOXES WITH PANEL AND CIRCUIT NUMBER.
- LOCATE CHAIN-HUNG INDUSTRIAL FIXTURES IN MECHANICAL ROOMS TO AVOID DUCTWORK AND PIPING, TO MAXIMIZE AVAILABLE LIGHT. SPACE AROUND EQUIPMENT, AIR HANDLERS, ETC. TO PROVIDE ADEQUATE LIGHTING TO ALL AREAS OF ROOM. PROVIDE ADDITIONAL FIXTURES OF SAME TYPE AS NEEDED TO FULFILL THIS REQUIREMENT.
- LOCATE EXIT SIGNS FOR MAXIMUM VIEWING AREA TO IDENTIFY EGRESS PATHS AS INDICATED ON PLANS. COORDINATE LOCATIONS SUCH THAT ARCHITECTURAL FEATURES OR EQUIPMENT FROM OTHER TRADES DO NOT OBSTRUCT VIEW.
- WHERE EXIT SIGNS OR EMERGENCY BATTERY PACKS ARE PROVIDED, THEY SHALL BE CONNECTED TO AN UNSWITCHED LINE.
- LUMINAIRES INDICATED WITH MULTI-LEVEL SWITCHING SHALL HAVE SIMILAR LAMPS CONTROLLED TOGETHER, I.E. INBOARD AND OUTBOARD LAMPS OR RIGHT AND LEFT HAND LAMPS.
- ALL LIGHTING FIXTURE LENSES, PARABOLIC LOUVERS, DOWNLIGHTING ALZAK CONES AND "PARACUBE" LOUVERS SHALL BE HANDLED WITH COTTON GLOVES DURING INSTALLATION AND LAMPING TO AVOID FINGERPRINTS OR DIRT DEPOSITS. IT IS PREFERRED THAT FIXTURES BE SHIPPED AND INSTALLED WITH CLEAR PLASTIC BAGS TO PROTECT LOUVERS. AT CLOSE OF PROJECT, AND AFTER CONSTRUCTION AIR FILTERS ARE CHANGED, REMOVE BAGS. ANY LOUVER OR CONE SHOWING DIRT OR FINGER PRINTS SHALL BE CLEANED WITH SOLVENT RECOMMENDED BY THE MANUFACTURER, OR REPLACED AS NECESSARY IN ORDER TO TURN OVER TO THE OWNER NEW FIXTURES AT OCCUPANCY.
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- ROUTE CIRCUIT THROUGH EXTERIOR LIGHTING CONTACTOR CABINET. REFER TO EXTERIOR LIGHTING CONTROL DETAIL FOR MORE INFORMATION.



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1	2.18.2020	ADDENDUM #2

NEW STUDENT HOUSING
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HIGHLAND HEIGHTS, KY 41099
FOR
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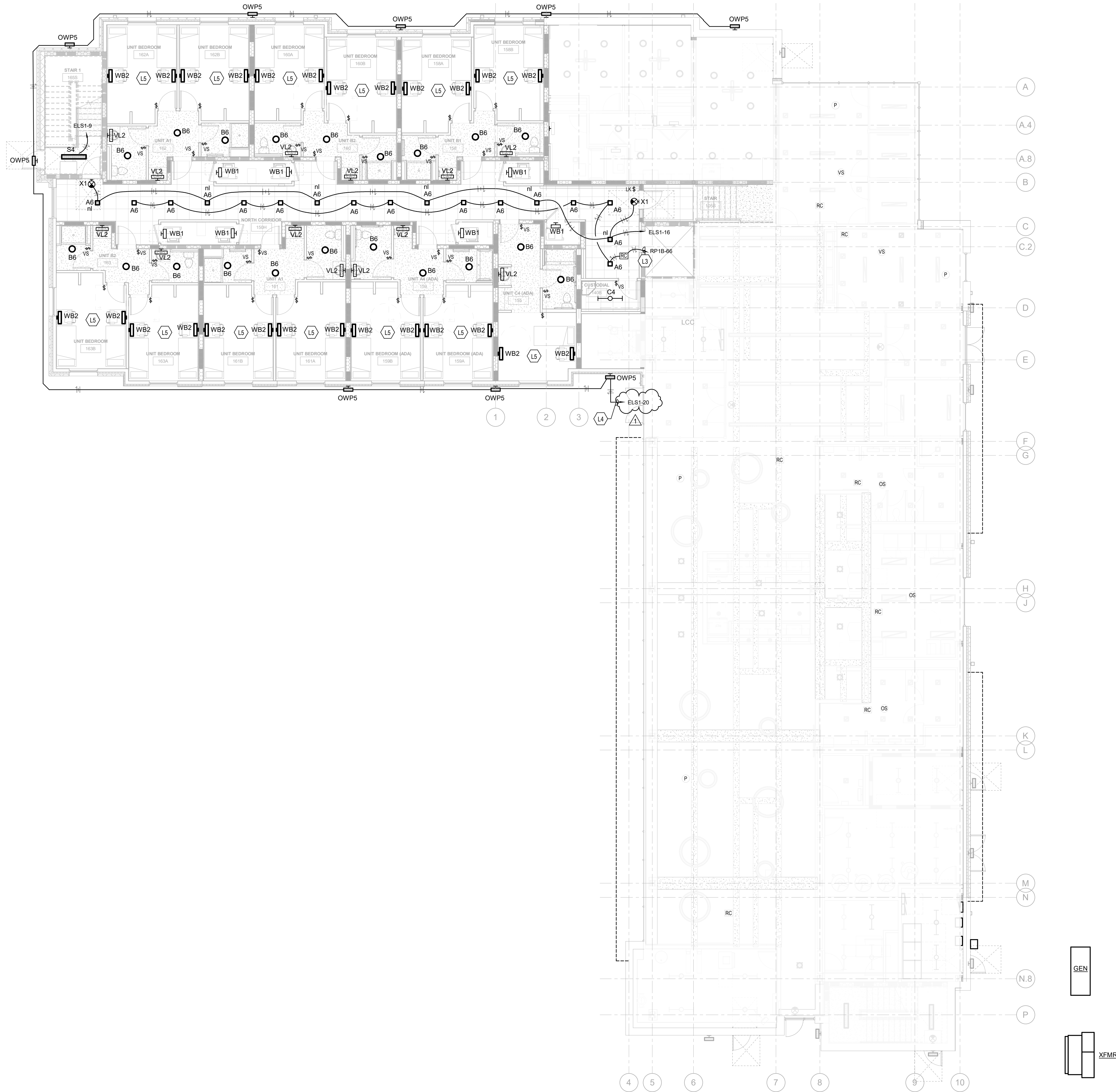
MOODY•NOLAN
300 SPRUCE STREET
SUITE 300
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CMTA
10411 Meeting Street, Prospect, KY 40369
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DRAWING TITLE:

LEVEL 0 - LIGHTING PLAN

STATE OF KENTUCKY
ROBERT ANTHONY HANS
23143
PROFESSIONAL ENGINEER
JANUARY 30, 2020
DRAWN BY: GCR
CHECKED BY:
E100
BID & PERMIT SUBMITTAL



2 LEVEL 1 - LIGHTING
SCALE: 1/8" = 1'-0"

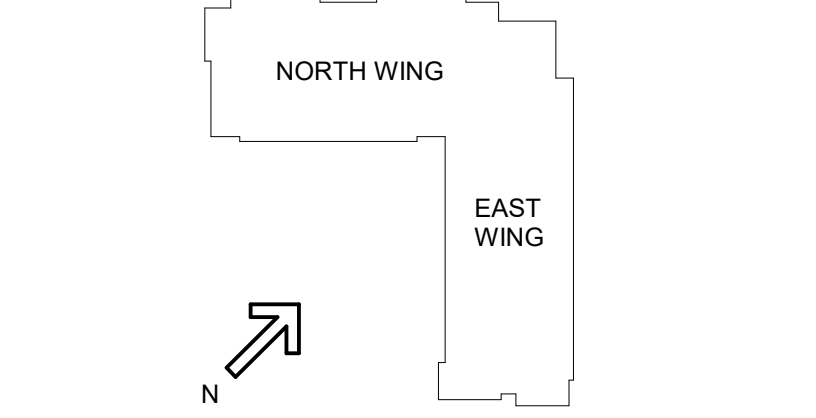
STATE OF KENTUCKY APPROVAL

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- ROUTE CIRCUIT THROUGH EXTERIOR LIGHTING CONTACTOR CABINET. REFER TO EXTERIOR LIGHTING CONTROL DETAIL FOR MORE INFORMATION.
- REFER TO ENLARGED PLANS FOR TYPICAL CIRCUITING ARRANGEMENTS IN DORM UNITS AND PANEL SCHEDULES FOR PANEL AND CIRCUIT NUMBERS.



#	DATE	CHANGE DESCRIPTION
1	2.18.2020	ADDENDUM #2

NEW STUDENT HOUSING
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DRAWING TITLE:
LEVEL 1 - LIGHTING PLAN

JANUARY 30, 2020	
DRAWN BY: GCR	CHECKED BY:
-	
E101	
BID & PERMIT SUBMITTAL	

STATE OF KENTUCKY
ROBERT ANTHONY HANS
23143
Professional Engineer

ELEC - INTERIOR LUMINAIRE SCHEDULE											
TYPE	DESCRIPTION	BASIS OF DESIGN		EQUAL MANUFACTURERS	MOUNTING	LAMPS / CCT	MINIMUM LUMENS	MAXIMUM WATTAGE	VOLTAGE	REMARKS	
		MANUFACTURER	MODEL								
A6	SQUARE SURFACE MOUNT LED FLAT PANEL DOWNLIGHT, NON-CONDUCTIVE DEAD FRONT HOUSING, WIDE DISTRIBUTION ACRYLIC OPTICS, 90CRI	HALO	SMd6S-12-935-WH	JUNO	SURFACE	3500K LED	1200 LUMENS	16	120		
B6	ROUND SURFACE MOUNT LED FLAT PANEL DOWNLIGHT, NON-CONDUCTIVE DEAD FRONT HOUSING, WIDE DISTRIBUTION ACRYLIC OPTICS, 90CRI	HALO	SMd6R-12-935-WH	JUNO AFX EDGE	SURFACE	3500K LED	1200 LUMENS	16	120		
C4	4" LED INDUSTRIAL STRIP WITH ROUND DIFFUSE LENS	METALUX	4-SNL-ED-LD5-41SL-LW-UNV-L835-CD-1	LITHONIA CLX UTOPIA SSLED	SUSPENDED	3500K LED	4000 LUMENS	35	120		
D4R	4" ROUND RECESSED LED DOWNLIGHT, MEDIUM DISTRIBUTION, FLANGED SEMI-SPECULAR ALUMINUM REFLECTOR	HALO	HC4-15-D010 & HM4-12-835-41-MD-H	LITHONIA LDN4 CASAMBI AL4R	RECESSED	3500K LED	1000 LUMENS	11	120		
D4S	4" SQUARE RECESSED LED DOWNLIGHT, MEDIUM DISTRIBUTION, FLANGED SEMI-SPECULAR ALUMINUM REFLECTOR	HALO	PR54-10-D010 & SM4-12-8FS-41S-MD-H	LITHONIA LDN4 CASAMBI AL4RS	RECESSED	3500K LED	1000 LUMENS	11	120		
F	MODERN CEILING FAN, DIE CAST ALUMINUM HOUSING, 6-SPEED MOTOR, FAN CONTROLLER	MODERN FAN	CIR-FM-BA-50-AL-NL-WVC	OXYGEN R3-102	SURFACE	NA	NA	36	120		
G	1'X4' LED FLAT PANEL, LOW PROFILE ALUMINUM BEZEL WITH SEAMLESS CORNERS, ACRYLIC FROSTED LENS, IMPACT RESISTANT	METALUX	14FP3035HE	LITHONIA EPANEL LITELINE LEDP	RECESSED	3500K LED	3000 LUMENS	25	120		
H8	8" SUSPENDED LED CYLINDER, SPUN ALUMINUM HOUSING, WIDE DISTRIBUTION, FLANGED ALUMINUM REFLECTOR	HALO	HCC8S-1500-D010-MB-HCC8P36MB-SPXX & HM8-1520-835-81-WD-H	LITHONIA LDN8	PENDANT	3500K LED	1500 LUMENS	37	120		
L1	SUSPENDED LED LINEAR DIRECT FIXTURE, 2" APERTURE, EXTRUDED ALUMINUM HOUSING, DIE CAST ENDCAPS, SATIN ACRYLIC DIFFUSER, WHITE STEEL REFLECTOR	FINELITE	HP2-D-X-S-835-F-120V-FM-FE-SC	AXIS BEAM2 MARK SLOT 2 LED	PENDANT	3500K LED	330 LUMENS/FT		120	SEE PLANS FOR RUN LENGTHS	
P2	60" CIRCULAR LED PENDANT, EXTRUDED ALUMINUM HOUSING, 2" APERTURE, CENTRAL CANOPY	SCOTT LIGHTING	S2793-D-L90-38K-BA-L36	BETA CALCO OCL A02	SUSPENDED	3500K LED	5000 LUMENS	90	120		
P3	36" CIRCULAR LED PENDANT, EXTRUDED ALUMINUM HOUSING, 2" APERTURE, CENTRAL CANOPY	SCOTT LIGHTING	S2791-D-L62-35K-BA-L36	BETA CALCO OCL A02	SUSPENDED	3500K LED	3000 LUMENS	62	120		
R2B	RECESSED LED LINEAR FIXTURE, 2" APERTURE, EXTRUDED ALUMINUM HOUSING, DIE CAST ENDCAPS, SATIN ACRYLIC DIFFUSER, WHITE STEEL REFLECTOR	FINELITE	HP2-R-2-S-835-F-120V-SC-FE	AXIS BEAM2 MARK SLOT 2 LED	RECESSED	3500K LED	340 LUMENS/FT	30	120		
R4A	RECESSED LED LINEAR FIXTURE, 4" APERTURE, EXTRUDED ALUMINUM HOUSING, DIE CAST ENDCAPS, SATIN ACRYLIC DIFFUSER, WHITE STEEL REFLECTOR	FINELITE	HP4-R-4-S-835-F-120V-SC-FE	AXIS BEAM4 MARK SLOT 4 LED	RECESSED	3500K LED	625 LUMENS/FT	30	120		
R4B	RECESSED LED LINEAR FIXTURE, 4" APERTURE, EXTRUDED ALUMINUM HOUSING, DIE CAST ENDCAPS, SATIN ACRYLIC DIFFUSER, WHITE STEEL REFLECTOR	FINELITE	HP4-R-4-S-835-F-120V-SC-FE	AXIS BEAM4 MARK SLOT 4 LED	RECESSED	3500K LED	625 LUMENS/FT	30	120		
R6A	RECESSED LED LINEAR FIXTURE, 4" APERTURE, EXTRUDED ALUMINUM HOUSING, DIE CAST ENDCAPS, SATIN ACRYLIC DIFFUSER, WHITE STEEL REFLECTOR	FINELITE	HP4-R-6-S-835-F-120V-SC-FE	AXIS BEAM4 MARK SLOT 4 LED	RECESSED	3500K LED	380 LUMENS/FT	30	120		
S4	4FT SURFACE MOUNT LINEAR WITH INTEGRAL OCCUPANCY SENSOR AND 10% STEP DIMMING, STEEL HOUSING, FROSTED WIDE DISTRIBUTION LENS	METALUX	4-SWLED-S2HL-LW-UNV-L835-SD-1-SVPD1	LITHONIA MWL	SURFACE	3500K LED	5000 LUMENS	54	120		
VL2	LED WALL MOUNT VANITY LIGHT, INTEGRAL POWER SUPPLY, HIGH IMPACT ACRYLIC LENS	TERON LIGHTING	VCY24-L18.0-LT500-120/277-XX-35K	OXYGEN	WALL	3500K LED	2000 LUMENS	18	120	FINISH PER ARCHITECT	
VP	2' LED VAPORTIGHT, FIBERGLASS HOUSING, ACRYLIC LENS, GASKETED, STAINLESS STEEL LATCHES	METALUX	2VT3-LD5-4-G-120V-L840-TP	LITHONIA DMW2 ATLAS TRV	WALL	4000K LED	4000 LUMENS	25	120		
WB1	16" WALL MOUNTED LED CLOSET LIGHT	LITHONIA LIGHTING	FMMLCL-18-840-S1	AXIS BEAM2 MARK SLOT 2 LED	WALL	4000K LED	925 LUMENS	14	120		
WB2	LINEAR DIRECT INDIRECT WALL MOUNT, EXTRUDED ALUMINUM HOUSING WITH INTERNAL JOINER, DIE CAST ENDCAPS, ASYMETRIC UPLIGHT, STEEL REFLECTOR, CONCEALED MOUNTING BRACKET	FINELITE	HP2-WM-ID-X-S-S-835-F-ASYR-120V-FE-SC	AXIS BEAM2 MARK SLOT 2 LED	WALL 9'-0"	3500K LED	600 LUMENS/FT	32	120		
X1	THERMOPLASTIC EXIT SIGN, UNIVERSAL MOUNT, RED LETTERS, WHITE HOUSING	SURELITES	LPX-6	LITHONIA LGM	UNIVERSAL	LED		2	120		

ELEC - EXTERIOR LUMINAIRE SCHEDULE										
TYPE	DESCRIPTION	BASIS OF DESIGN		EQUAL MANUFACTURERS	MOUNTING	LAMPS / CCT	MINIMUM LUMENS	MAXIMUM WATTAGE	VOLTAGE	REMARKS
		MANUFACTURER	MODEL							
OP1	CAMPUS STANDARD LED ROADWAY AREA LIGHT, STEEL POLE, TYPE 3 DISTRIBUTION, PHOTOCELL	AEL	ATB2-80BLEDE70-MVOLT-R3		18" BASE 30FT POLE	5000K LED	22,000 LUMENS	177		MATCH EXISTING CAMPUS STANDARDS. PROVIDE VIBRATION DAMPENER IN POLE
OP2	CAMPUS STANDARD LED POLE MOUNTED INDIRECT PEDESTRIAN LIGHT, STEEL POLE, TYPE V DISTRIBUTION	BEGA	77210 & 906HR		PLAZA BASE 12FT POLE	4000K LED	4000 LUMENS	55	120	PROVIDE VIBRATION DAMPENER
OP3	LED STRING LIGHTING, MEDIUM BASE LAMPS, FROSTED GLOBE, STAINLESS STEEL AIRCRAFT CABLE MOUNTING	CELESTIAL	HYA-STL-GF-24 RSA-4-TL-15-A-A-X-C-V	TOKISTAR TREELITE TRL3500	PLAZA BASE 15FT POLE	2700K LED		55	120	
OWP5	LED WALL PACK, DIE CAST ALUMINUM HOUSING, POWDER COAT FINISH, GASKETED, TYPE IV DISTRIBUTION	PERFORMANCE IN LIGHTING	070022	BEGA CWP5	WALL	4000K LED	4000 LUMENS	36	120	FINISH PER ARCHITECT


ELEC - EQUIPMENT CONNECTION SCHEDULE							
EQUIP ID	DESCRIPTION	DISCONNECT MEANS	VOLTAGE	POLES	HP	POWER (KVA)	MCA
AC-1	SPLIT SYSTEM	30A/2P MOTOR RATED SWITCH	208	2		0.21	1
AFD	AIR FLOW DAMPERS	30A/1P MOTOR RATED SWITCH	120	1		0.02	
BH-4	BASE HEATER	FURNISHED WITH UNIT	120	1		0.60	
BH-10	BASE HEATER	FURNISHED WITH UNIT	120	1		1.50	
BP1	DOMESTIC WATER BOOSTER PUMP	60A/3P NON-FUSED DISCONNECT SWITCH	208	3	7.5	9.13	
CEF-1	CEILING EXHAUST FAN	30A/1P MOTOR RATED SWITCH	120	1	1/4	0.70	
CU-1	SPLIT SYSTEM OUTDOOR UNIT	30A/2P NON-FUSED DISCONNECT SWITCH	208	2		4.90	23.9
EH-1	ELECTRIC UNIT HEATER	FURNISHED WITH UNIT	120	1		1.50	
EH-2	ELECTRIC UNIT HEATER	FURNISHED WITH UNIT	208	2		3.20	
EH-3	ELECTRIC UNIT HEATER	FURNISHED WITH UNIT	208	2		3.20	
HHP-12	HEAT PUMP	FURNISHED WITH UNIT	208	2		1.50	7
OA1	ROOFTOP OUTSIDE AIR UNIT - NORTH	FURNISHED WITH UNIT	208	3		91.00	265
OA-2	ROOFTOP OUTSIDE AIR UNIT - SOUTH	FURNISHED WITH UNIT	208	3		96.30	283
P-1	HYDRONIC PUMP	VFD BY MECHANICAL	208	3	20	22.40	
RH-1	RESIDENTIAL RANGE HOOD	WALL SWITCH	120	1		0.42	2
SF-1	SIDESTREAM FILTER		208	3	1.5	2.50	
VHP-12	HEAT PUMP	FURNISHED WITH UNIT	208	2		1.50	7
VHP-16	HEAT PUMP	FURNISHED WITH UNIT	208	2		2.10	10
VHP-24	HEAT PUMP	FURNISHED WITH UNIT	208	3		4.00	11
VHP-72	HEAT PUMP	FURNISHED WITH UNIT	208	3		11.20	31
WH	WATER HEATER	30A/1P MOTOR RATED SWITCH	120	1		1.20	

STATE OF KENTUCKY APPROVAL

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NEW STUDENT HOUSING
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HIGHLAND HEIGHTS, KY 41099
FOR
NORTHERN KENTUCKY UNIVERSITY



**300 SPRUCE STREET
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DRAWING TITLE:

ELECTRICAL SCHEDULES



JANUARY 30, 2020

DRAWN BY: GCR CHECKED BY: -

E601

BID & PERMIT SUBMITTAL

PANELBOARD AND WIRING SCHEDULE														AVAILABLE FAULT CURRENT: 7.8				
PANEL: RA1						MAINS TYPE: MLO						KAIC RATING: 10						
VOLTAGE: 120/208V,1P,3W						SPD: No						LOCATION: RESIDENT MGR'S SPT....						
AMPERES: 175 A						MOUNTING: FLUSH						SUPPLY FROM: RP1B						
CIRCUIT DESCRIPTION		WIRE	GND	C	OC	P	CKT	A	B	CKT	P	OC	C	GND	WIRE	CIRCUIT DESCRIPTION		
REC - BEDROOM 154A						20	1	0.7	0.2		2	1	20			REC - VANITY 154		
HEAT PUMP - UNIT 154						20	2	5	1.1	4.0		1.1	4.0	6	2	50	KITCH RANGE	
REC - COUNTER						20	1	7			0.2	0.2	8	1	20	REC - COUNTER		
REC - BEDROOM 154B						20	1	9	0.7	1.5			10	1	20	EQUIP - WASHER		
REC - DISHWASHER						20	1	11			1.5	0.2	12	1	20	REC - COUNTER		
ELEC DRYER						30	2	13	2.5	1.1			14	1	20	REC - LIVING		
REC - REFRIG - NOTE 2							15			2.5	0.3		16	1	20	LTNG		
REC - MICROWAVE						20	1	19			1.5	1.5	20	1	20	RANGE HOOD		
SPARE		--	--	--	--	20	1	21	0.0	0.0			22	1	20	--	REC - GARBAGE DISPOSAL	
SPARE		--	--	--	--	20	1	23					24	1	20	--	SPARE	
TOTAL LOAD (KVA):						13.3 KVA						12.9 KVA						
TOTAL CURRENT (A):						127 A						124 A						
LOAD CLASSIFICATION		CONNECTED LOAD		DEMAND FACTOR		ESTIMATED DEMAND		PANEL TOTALS										
EQUIP		6 VA		100.00%		6 VA		TOTAL CONNECTED LOAD: 26190 VA										
HVAC		2100 VA		100.00%		2100 VA		TOTAL ESTIMATED DEMAND: 25294 VA										
LTNG		334 VA		125.00%		418 VA		TOTAL CONNECTED CURRENT: 126 A										
REC		3240 VA		100.00%		3240 VA		TOTAL ESTIMATED DEMAND CURRENT: 126 A										
DRYER - DWELLING		5000 VA		100.00%		5000 VA												
RANGE - DWELLING		8000 VA		100.00%		8000 VA												
APPLIANCE - DWELLING		7500 VA		100.00%		7500 VA												
NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.																		
1. ALL CIRCUIT BREAKERS FEEDING OUTLETS AND DEVICES IN DORM UNIT BEDROOMS, BATHROOMS, HALLWAYS, LIVING ROOMS, AND CLOSETS SHALL BE AFCI TYPE.																		
2. PROVIDE GFCI TYPE CIRCUIT BREAKER																		

PANELBOARD AND WIRING SCHEDULE													AVAILABLE FAULT CURRENT: 7.4			
PANEL: RP1C					MAINS TYPE: MLO					KAIC RATING: 10						
VOLTAGE: 208Y/120V,3P,4W					SPD: No					LOCATION: Space 169						
AMPERES: 150 A					MOUNTING: FLUSH					SUPPLY FROM: MDP						
CIRCUIT DESCRIPTION	WIRE	GND	C	OC	P	CKT	A	B	C	CKT	P	OC	C	GND	WIRE	CIRCUIT DESCRIPTION
EQUIP - WASHER - NOTE 1					20	1	1	1.2	1.0			2	1	20		EQUIP - DRYER - NOTE 1
EQUIP - WASHER - NOTE 1					20	1	3		1.2	1.0		4	1	20		EQUIP - DRYER - NOTE 1
EQUIP - WASHER - NOTE 1					20	1	5			1.2	1.0	6	1	20		EQUIP - DRYER - NOTE 1
EQUIP - WASHER - NOTE 1					20	1	7	1.2	1.0			8	1	20		EQUIP - DRYER - NOTE 1
EQUIP - WASHER - NOTE 1					20	1	9		1.2	1.0		10	1	20		EQUIP - DRYER - NOTE 1
EQUIP - WASHER - NOTE 1					20	1	11			1.2	1.0	12	1	20		EQUIP - DRYER - NOTE 1
EQUIP - WASHER - NOTE 1					20	1	13	1.2	1.0			14	1	20		EQUIP - DRYER - NOTE 1
EQUIP - WASHER - NOTE 1					20	1	15		1.2	1.0		16	1	20		EQUIP - DRYER - NOTE 1
EQUIP - ICE MAKER - NOTE 1					20	1	17			1.4	0.2	18	1	20		REC - LAUNDRY 111
EQUIP - DRYER - NOTE 1					20	1	19	1.0	1.2			20	1	20		EQUIP - WASHER - NOTE 1
EQUIP - DRYER - NOTE 1					20	1	21					22	1	20		EQUIP - WASHER - NOTE 1
SPARE	--	--	--	--	20	1	23			0.0	0.0	24	1	20	--	SPARE
SPARE	--	--	--	--	20	1	25	0.0	0.0			26	1	20	--	SPARE
SPARE	--	--	--	--	20	1	27		0.0	0.0		28	1	20	--	SPARE
SPARE	--	--	--	--	20	1	29			0.0	0.0	30	1	20	--	SPARE
TOTAL LOAD (KVA):							8.8 KVA		8.8 KVA		6.0 KVA					
TOTAL CURRENT (A):							77 A		77 A		55 A					
LOAD CLASSIFICATION		CONNECTED LOAD		DEMAND FACTOR		ESTIMATED DEMAND		PANEL TOTALS								
EQUIP		23400 VA		100.00%		23400 VA		TOTAL CONNECTED LOAD: 23580 VA								
REC		180 VA		100.00%		180 VA		TOTAL ESTIMATED DEMAND: 23580 VA								
								TOTAL CONNECTED CURRENT: 65 A								
								TOTAL ESTIMATED DEMAND CURRENT: 65 A								
NOTES: WHERE NOT LISTED, WIRE AND CONDUIT SHALL BE BE MINIMUM PER SPECIFICATIONS. SPARE BREAKERS TO BE 20A/1P.																
1. PROVIDE GFCI TYPE CIRCUIT BREAKER																

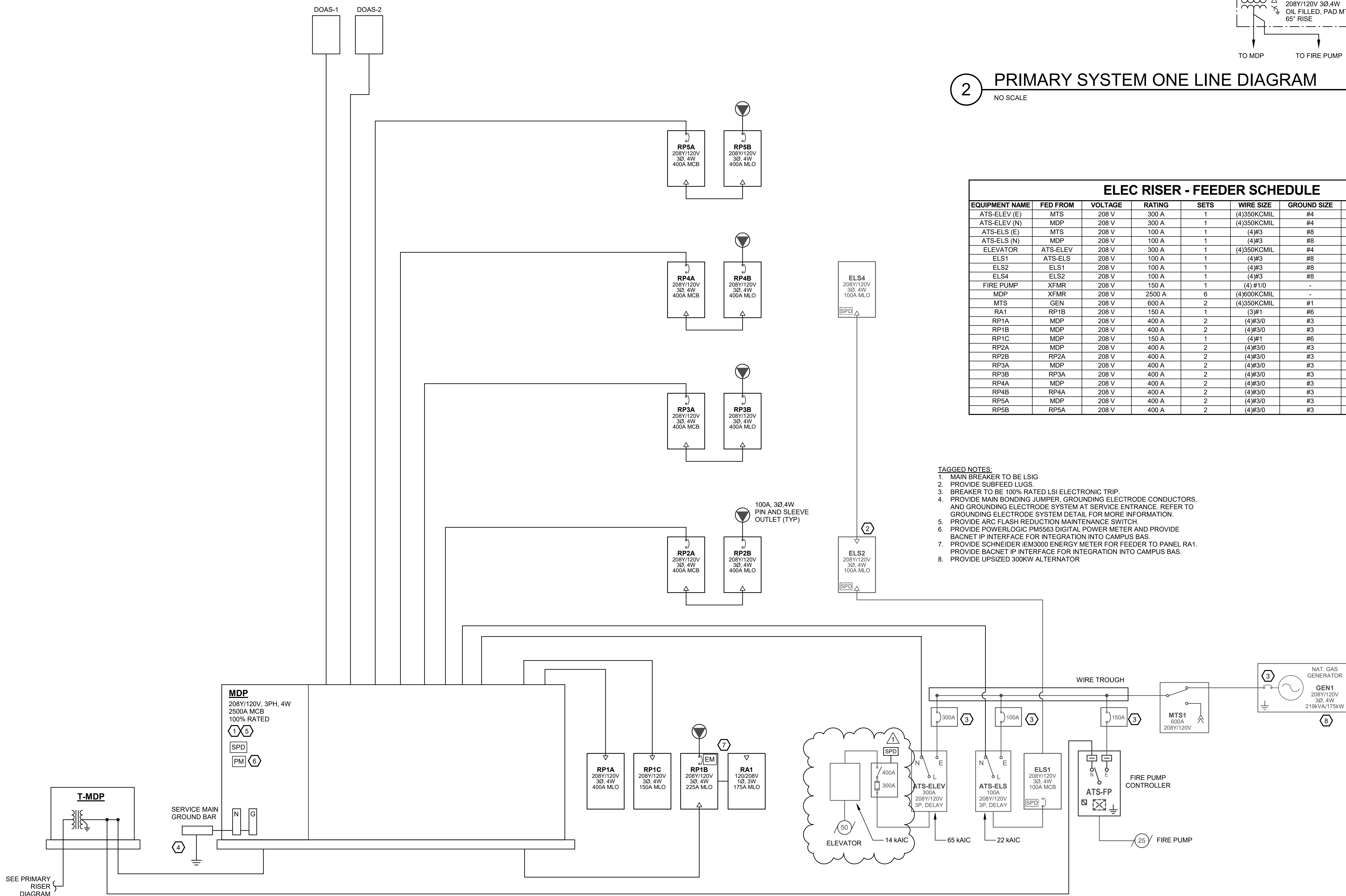
SWITCHBOARD AND WIRING SCHEDULE										AVAILABLE FAULT CURRENT: 85.9	
SWITCHBOARD: MDP				MAINS TYPE: MCB				KAIC RATING: 100			
VOLTAGE: 208Y/120V/3P/4W				SPD: Yes				LOCATION: ELEC 124E			
AMPERES: 2500 A				MOUNTING: PAD				SUPPLY FROM: XFMR			
CKT	CIRCUIT DESCRIPTION	SETS	WIRE	GND	COND	POLES	FRAME	TRIP	LOAD (KVA)	REMARKS	
1	ATS-ELEV (N)	1	4/35...	#4	2-1/2"	3	400 A	300 A	16.6		
2	ATS-ELS (N)	1	4/9#3	#8	1-1/4"	3	100 A	100 A	8.1		
3	RP1A	2	4/9#30	#3	2"	3	250 A	400 A	90.9		
4	RP1B	2	4/9#30	#3	2"	3	250 A	400 A	77.5		
5	RP1C	1	4/9#1	#6	1-1/2"	3	150 A	150 A	23.6		
6	RP2A	2	4/9#30	#3	2"	3	400 A	400 A	98.3		
7	RP3A	2	4/9#30	#3	2"	3	400 A	400 A	97.7		
8	RP4A	2	4/9#30	#3	2"	3	400 A	400 A	97.8		
9	RP5A	2	4/9#30	#3	2"	3	400 A	400 A	104.4		
10	HVAC OA-1	1	3/35#0	#4	3"	3	400 A	300 A	91.0		
11	HVAC OA-2	1	3/35#0	#4	3"	3	400 A	300 A	96.3		
12	HVAC VHP-12	1	#8	#10	1"	3	100 A	45 A	11.2		
13	HVAC P-1	1	3/9#3	#8	1-1/4"	3	100 A	100 A	22.4		
14	HVAC P-1	1	3/9#3	#8	1-1/4"	3	100 A	100 A	22.4		
15	EXTERIOR EVENT OUTLET	1	4/9#6	#10	1"	2	100 A	60 A	1.5		
16	JOCKEY PUMP	1	3/9#12	#12	1"	3	100 A	20 A	2.7		
17	BP-1	1	3/9#6	#10	1"	3	100 A	50 A	9.1		
18	SPARE	--	--	--	--	3	--	100 A	0.0		
19	SPARE	--	--	--	--	3	--	100 A	0.0		
20	SPARE	--	--	--	--	3	--	100 A	0.0		
LOAD CLASSIFICATION										TOTAL TOTALS	
CONNECTED LOAD		DEMAND FACTOR		ESTIMATED DEMAND		TOTAL CONN. LOAD: 872 KVA					
EQUIP		90732 VA		100.00%		TOTAL EST. DEMAND: 772 KVA					
HVAC		446820 VA		100.00%		TOTAL CONN. CURRENT: 2419 A					
KITCH		22840 VA		65.00%		TOTAL EST. DEMAND CURRENT: 2143 A					
LTNG		26252 VA		125.00%							
REC		207340 VA		52.41%							
ELEVATOR		16632 VA		100.00%							
DRYER - DWELLING		5000 VA		100.00%							
RANGE - DWELLING		8000 VA		100.00%							
APPLIANCE - DWELLING		7500 VA		100.00%							
SPACE HEATING		37400 VA		100.00%							
NOTES:											

PANELBOARD AND WIRING SCHEDULE													AVAILABLE FAULT CURRENT: 10.6														
PANEL: ELS1						MAINS TYPE: MCB						KAIC RATING: 14															
VOLTAGE: 208Y/120V, 3P, 4W						SPD: Yes						LOCATION: ELEC 124E															
AMPERES: 100 A						MOUNTING: SURFACE						SUPPLY FROM: ATS-ELS															
CIRCUIT DESCRIPTION	WIRE	GND	C	OCF	P	CKT	A	B	C	CKT	P	OCF	C	GND	WIRE	CIRCUIT DESCRIPTION											
ELS2	(4)#3	#8	1-1/4"	100	3	1	0.6	0.5		2	1	20				FIRE ALARM PANEL											
																	MTS RECEP										
																		MTS RECEP									
ELEVATOR LIGHTS					20	1	7	0.5	0.6		8	1	20			LTNG - STAIRWELL 2											
LTNG - STAIRWELL 1					20	1	9		0.5	0.5		10	1	20			GEN LIGHTS/REC										
GEN JACKET HEATER					20	2	11			0.3	0.5		12	1	20		GEN BATT CHARGER										
						13	0.3	1.0					14	1	20		LTNG - MECH RM ELEC RM/ FP RM										
240V WY GCMU					20	1	15		0.0	0.4		16	1	20			LTNG - FLOOR 4 CORRIDOR										
LTNG - ELEVATOR PIT					20	1	17			0.1	0.0		18	1	20		ELEV MACH RM										
BUILDING LIGHTING					20	1	19	0.3	0.3				20	1	20		BUILDING LIGHTING										
SPARE	--	--	--	--	20	1	21		0.0	0.0		22	1	20	--	--	SPARE										
SPARE	--	--	--	--	20	1	23					24	1	20	--	--	SPARE										
TOTAL LOAD (KVA):							4.2 KVA			2.7 KVA			1.3 KVA														
TOTAL CURRENT (A):							36 A			24 A			11 A														
LOAD CLASSIFICATION							CONNECTED LOAD							DEMAND FACTOR							ESTIMATED DEMAND						
EQUIP							3500 VA							100.00%							3500 VA						
LTNG							4647 VA							125.00%							5809 VA						



ELEC RISER - FEEDER SCHEDULE								
EQUIPMENT NAME	FED FROM	VOLTAGE	RATING	SETS	WIRE SIZE	GROUND SIZE	CONDUIT SIZE	WIRE TYPE
ATS-ELEV (E)	MTS	208 V	300 A	1	(4)350KCMIL	#4	2-1/2"	THWN
ATS-ELEV (E)	MDP	208 V	300 A	1	(4)350KCMIL	#4	2-1/2"	THWN
ATS-ELS (E)	MDP	208 V	100 A	1	(4)#3	#8	1-1/4"	THWN
ATS-ELS (N)	MDP	208 V	100 A	1	(4)#3	#8	1-1/4"	THWN
ELEVATOR	ATS-ELEV	208 V	300 A	1	(4)350KCMIL	#4	2-1/2"	THWN
ELS1	ATS-ELS	208 V	100 A	1	(4)#3	#8	1-1/4"	THWN
ELS2	ELS1	208 V	100 A	1	(4)#3	#8	1-1/4"	THWN
ELS4	ELS2	208 V	100 A	1	(4)#3	#8	1-1/4"	THWN
FIRE PUMP	XFMR	208 V	150 A	1	(4) #10	-	1-1/2"	THWN
MDP	XFMR	208 V	2500 A	6	(4)600KCMIL	-	4"	THWN
MTS	GEN	208 V	600 A	2	(4)350KCMIL	#1	3"	THWN
RA1	RP1B	208 V	150 A	1	(3)#1	#6	1-1/4"	THWN
RP1A	MDP	208 V	150 A	2	(4)#30	#3	2"	THWN
RP1B	MDP	208 V	400 A	2	(4)#30	#3	2"	THWN
RP1C	MDP	208 V	150 A	1	(4)#1	#6	1-1/2"	THWN
RP2A	MDP	208 V	400 A	2	(4)#30	#3	2"	THWN
RP2B	RP2A	208 V	400 A	2	(4)#30	#3	2"	THWN
RP2A	MDP	208 V	400 A	2	(4)#30	#3	2"	THWN
RP3B	RP3A	208 V	400 A	2	(4)#30	#3	2"	THWN
RP4A	MDP	208 V	400 A	2	(4)#30	#3	2"	THWN
RP4B	RP4A	208 V	400 A	2	(4)#30	#3	2"	THWN
RP5A	MDP	208 V	400 A	2	(4)#30	#3	2"	THWN
RP5B	RP5A	208 V	400 A	2	(4)#30	#3	2"	THWN

- TAGGED NOTES:**
1. MAIN BREAKER TO BE LSIG
 2. PROVIDE SUBBED LUGS
 3. BREAKER TO BE 100% RATED LSI ELECTRONIC TRIP
 4. PROVIDE MAIN BONDING Jumper, GROUNDING ELECTRODE CONDUCTORS AND GROUNDING ELECTRODE SYSTEM AT SERVICE ENTRANCE. REFER TO GROUNDING ELECTRODE SYSTEM DETAIL FOR MORE INFORMATION.
 5. PROVIDE ARC FLASH REDUCTION MAINTENANCE SWITCH
 6. PROVIDE POWERLOGIC PM5563 DIGITAL POWER METER AND PROVIDE BACNET IP INTERFACE FOR INTEGRATION INTO CAMPUS BAS.
 7. PROVIDE SCHNEIDER IEM3000 ENERGY METER FOR FEEDER TO PANEL RA1
 8. PROVIDE SCHNEIDER IEM3000 ENERGY METER FOR INTEGRATION INTO CAMPUS BAS.
 9. PROVIDE UPSIZED 300KW ALTERNATOR



1 ELECTRICAL DISTRIBUTION RISER DIAGRAM

GENERAL NOTES (RISER):

- A. PROVIDE ENGRAVED LAMACAO LABELS FOR ALL POWER DISTRIBUTION EQUIPMENT FURNISHED OR MODIFIED IN THIS PROJECT. LABELS PER THE FOLLOWING:
- B. SERVICE EQUIPMENT SHALL BE MARKED WITH THE MAXIMUM AVAILABLE VOLT CURRENT AT THE EQUIPMENT AND THE DATE OF THE LAST INSPECTION. THE LABEL SHALL BE A TYPE-WRITTEN ADHESIVE LABEL WITH WHITE SEPARATE CONDUIT, 1/2" HIGH BLACK LETTERING.
- C. ALL CIRCUIT BREAKERS SHALL INSTALL SEPARATE CONDUITS, PULL BOXES, ETC. FOR EACH EMERGENCY POWER BRANCH & NORMAL POWER PER NEC FOR COMPLETE SEPARATION OF POWER SOURCES.
- D. ALL CIRCUIT BREAKERS AND/OR DISCONNECTS SERVING THE PRIMARY SIDE OF A TRANSFORMER WHICH ARE NOT WITHIN SITE OF THE TRANSFORMER SHALL BE PERMANENTLY INSTALLED MEANS TO LOCK THE BREAKER IN THE OFF POSITION. SUCH TRANSFORMERS SHALL HAVE THE ROOM NUMBER OF THE TRANSFORMER ROOM AND THE DATE OF THE LAST INSPECTION ENGRAVED ON THE EQUIPMENT NAMEPLATE.
- E. REFER TO SPECIFICATIONS FOR ARC FLASH AND RELATED INFORMATION FOR THE PROPOSED SITE.
- F. ALL DISTRIBUTION PANELBOARDS SHALL BE PROVIDED WITH A MINIMUM 9" BREAKER MOUNTING SPACE UNLESS NOTED OTHERWISE.
- G. ALL CONDUCTORS SHALL BE COPPER UNLESS NOTED OTHERWISE.
- H. MAIN SERVICE SWITCHBOARD SHALL BE 100% FULLY RATED OVER ITS DISTRIBUTION SECTIONS. DISTRIBUTION END BUSBARS SHALL BE FULLY RATED FOR ALL DISTRIBUTION SECTIONS INCLUDING PER-DRAWING BUS AND PER BUS EXTENSIONS. UPSIZE CONDUCTORS AS REQUIRED WHERE USING PVC FOR OVERHEAD AND FEEDER LINES.
- J. ALL UN-USED SPACES WITHIN SWITCHBOARD SHALL BE "PREPARED SPACES" THAT ALLOW EASY INSTALLATION OF A NEW CIRCUIT BREAKER.
- K. PROVIDE GROUND LUGS FOR EACH DEVICE.
- L. PROVIDE LOCK-OUT CIRCUIT BREAKERS FOR ALL SWITCHBOARD DEVICES.
- M. SWITCHBOARD SHALL BE FRONT ACCESSIBLE ONLY.

#	DATE	CHANGE DESCRIPTION
1	2.18.2020	ADDENDUM #2

NKU
NORTHERN
KENTUCKY
UNIVERSITY

NEW STUDENT HOUSING
KENTON DRIVE & CARROLL DRIVE
HIGHLAND HEIGHTS, KY 41059
FOR
**NORTHERN KENTUCKY
UNIVERSITY**


MOODY-NOLAN

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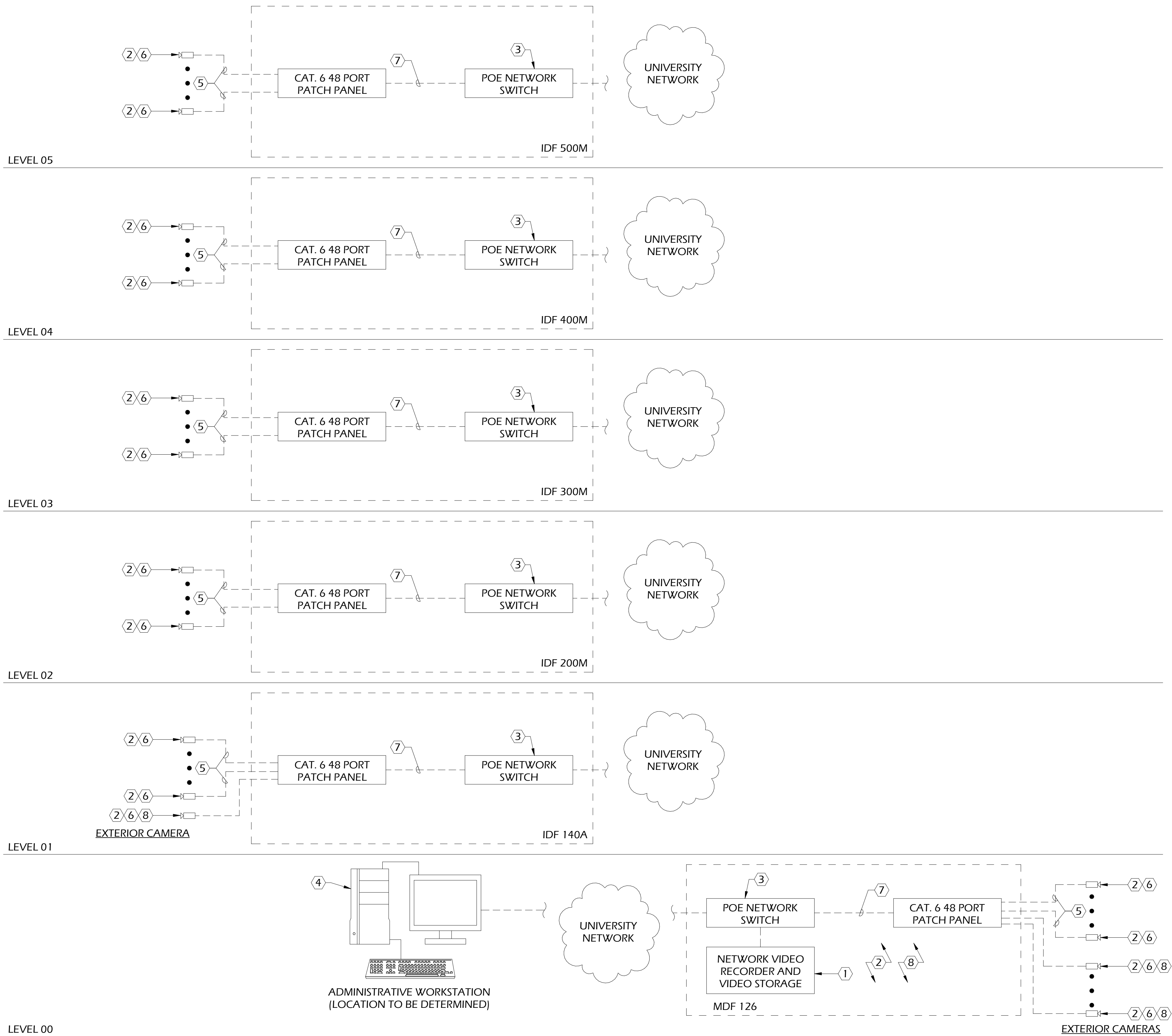


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DRAWING TITLE:

ELECTRICAL RISER DIAGRAM

		JANUARY 30, 2020	
DRAWN BY: GCR		CHECKED BY:	
-		E701	
BID & PERMIT SUBMITTAL			

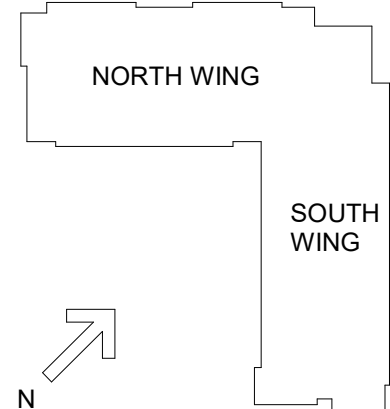


ONE-LINE VIDEO SURVEILLANCE SYSTEM
N.T.S. 1

CAMERA SCHEDULE					
CAMERA NUMBER	MOUNTING REQUIREMENTS	LENS TYPE	REFERENCE SHEET	REFERENCE DETAIL	FIELD OF VIEW
C-0.1	ELEVATOR CORNER CAB MOUNT	FIXED LENS	LV200	3/LV502	ELEVATOR CAB
C-0.2	WALL MOUNT AT 9'-0" AFG	VARIFOCAI FIXED LENS	LV200	5/LV502	ENTRY LOBBY EXTERIOR
C-0.3	CEILING MOUNT	360 DEGREE	LV200	2/LV502	ENTRY LOBBY
C-0.4	WALL MOUNT AT 9'-0" AFG	VARIFOCAI FIXED LENS	LV200	5/LV502	ENTRY LOBBY EXTERIOR
C-0.5	CEILING MOUNT	360 DEGREE	LV200	2/LV502	COMMON AREA
C-0.6	CEILING MOUNT	360 DEGREE	LV200	2/LV502	COMMON AREA/KITCHEN
C-0.7	CEILING MOUNT	360 DEGREE	LV200	2/LV502	COMMON AREA
C-0.8	CEILING MOUNT	VARIFOCAI FIXED LENS	LV200	2/LV502	COMMON AREA
C-0.9	WALL MOUNT AT 9'-0" AFG	180 DEGREE	LV200	4/LV502	STAIR/ENTRY DOOR
C-0.10	CEILING MOUNT	VARIFOCAI FIXED LENS	LV200	2/LV502	COMMON AREA/KITCHEN
C-0.11	CEILING MOUNT	VARIFOCAI FIXED LENS	LV200	2/LV502	COMMON AREA/KITCHEN
C-1.1	WALL MOUNT AT 9'-0" AFF	180 DEGREE	LV201	4/LV502	STAIR/ENTRY DOOR
C-1.2	CEILING MOUNT	VARIFOCAI FIXED LENS	LV201	1/LV502	CORRIDOR
C-1.3	CEILING MOUNT	VARIFOCAI FIXED LENS	LV201	1/LV502	STAIR/ENTRY DOOR
C-2.1	CEILING MOUNT	VARIFOCAI FIXED LENS	LV202	1/LV502	CORRIDOR
C-2.2	CEILING MOUNT	360 DEGREE	LV202	2/LV502	LOUNGE/ELEV LOBBY
C-2.3	CEILING MOUNT	VARIFOCAI FIXED LENS	LV202	1/LV502	CORRIDOR
C-3.1	CEILING MOUNT	VARIFOCAI FIXED LENS	LV203	1/LV502	CORRIDOR
C-3.2	CEILING MOUNT	360 DEGREE	LV203	2/LV502	LOUNGE/ELEV LOBBY
C-3.3	CEILING MOUNT	VARIFOCAI FIXED LENS	LV203	1/LV502	CORRIDOR
C-4.1	CEILING MOUNT	VARIFOCAI FIXED LENS	LV204	1/LV502	CORRIDOR
C-4.2	CEILING MOUNT	360 DEGREE	LV204	2/LV502	LOUNGE/ELEV LOBBY
C-4.3	CEILING MOUNT	VARIFOCAI FIXED LENS	LV204	1/LV502	CORRIDOR
C-5.1	CEILING MOUNT	VARIFOCAI FIXED LENS	LV205	1/LV502	CORRIDOR
C-5.2	CEILING MOUNT	360 DEGREE	LV205	2/LV502	LOUNGE/ELEV LOBBY
C-5.3	CEILING MOUNT	VARIFOCAI FIXED LENS	LV205	1/LV502	CORRIDOR

KEY NOTES:


- OWNER SHALL PROVIDE ALL REQUIRED NVR'S FOR SURVEILLANCE VIDEO STORAGE. OWNER SHALL PROVIDE ALL REQUIRED LICENSING FOR REQUIRED SYSTEM.
- SECURITY CONTRACTOR TO CONFIGURE VMS SYSTEM FOR "ACTIVITY DETECTION RECORDING". SEE SPECIFICATIONS FOR REQUIREMENTS. ALL VIDEO TO BE CONFIGURED TO BE MAINTAINED FOR A MINIMUM OF 30 DAYS.
- OWNER TO PROVIDE CORE SWITCH AND POWER-OVER-ETHERNET SWITCH MOUNTED IN TELECOM RACK.
- SECURITY CONTRACTOR TO LOAD AND CONFIGURE OWNER PROVIDED VIDEO SURVEILLANCE SOFTWARE ON UP TO SIX(6) OWNER PROVIDED WORKSTATIONS. ALL CAMERA SETTINGS TO BE PROGRAMMED BY CONTRACTOR TO OWNER'S SATISFACTION.
- TELECOM CONTRACTOR TO PROVIDE AND INSTALL ONE(1) CATEGORY 6 CABLE FOR EACH IP DEVICE.
- SECURITY CONTRACTOR TO INSTALL AND CABLE FOR OWNER-PROVIDED CAMERA HARDWARE. CONTRACTOR TO ENSURE CLEAR FIELD-OF-VIEW FOR ALL CAMERAS. SEE FLOOR PLANS FOR LOCATIONS. SEE CAMERA SCHEDULE FOR MOUNTING REQUIREMENTS.
- TELECOM CONTRACTOR TO PROVIDE AND INSTALL ALL CATEGORY 6 PATCH CABLES.
- CONTRACTOR TO PROVIDE AND INSTALL POE SURGE PROTECTOR AT DEVICE AND RACK MOUNTED POE SURGE PROTECTOR IN TELECOM ROOM. BASIS OF DESIGN IS DITEK MODEL #DTK-RM12POE (RACK) AND #DTK-MRJPOE (DEVICE). EACH PROTECTOR PANEL SHALL HAVE A #6 CONDUCTOR BACK TO TELECOM ROOM BUSBAR.




#	DATE	CHANGE DESCRIPTION
1	02/18/2020	ADDENDUM #2



NEW RESIDENCE HALL
KENTON DRIVE & CARROLL DRIVE
HIGHLAND HEIGHTS, KY 41099
FOR
NORTHERN KENTUCKY UNIVERSITY




434 MADISON AVENUE
COVINGTON, KY 41011
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J&A
ENGINEERING CONSULTANTS
4994 LOWER ROSWELL ROAD, SUITE ONE
MARIETTA, GEORGIA 30066
PHONE: (770) 587-6220
FAX: (770) 531-6878
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DRAWING TITLE:
ONE-LINE DIAGRAM - VIDEO SURVEILLANCE



Bicsi
Jorge E. Gomez
Reg. No. 10987
EXPIRES 12-31-19
RCDD

JANUARY 30, 2020

DRAWN BY: BT	CHECKED BY: CO
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19041

LV401

BID & PERMIT SUBMITTAL