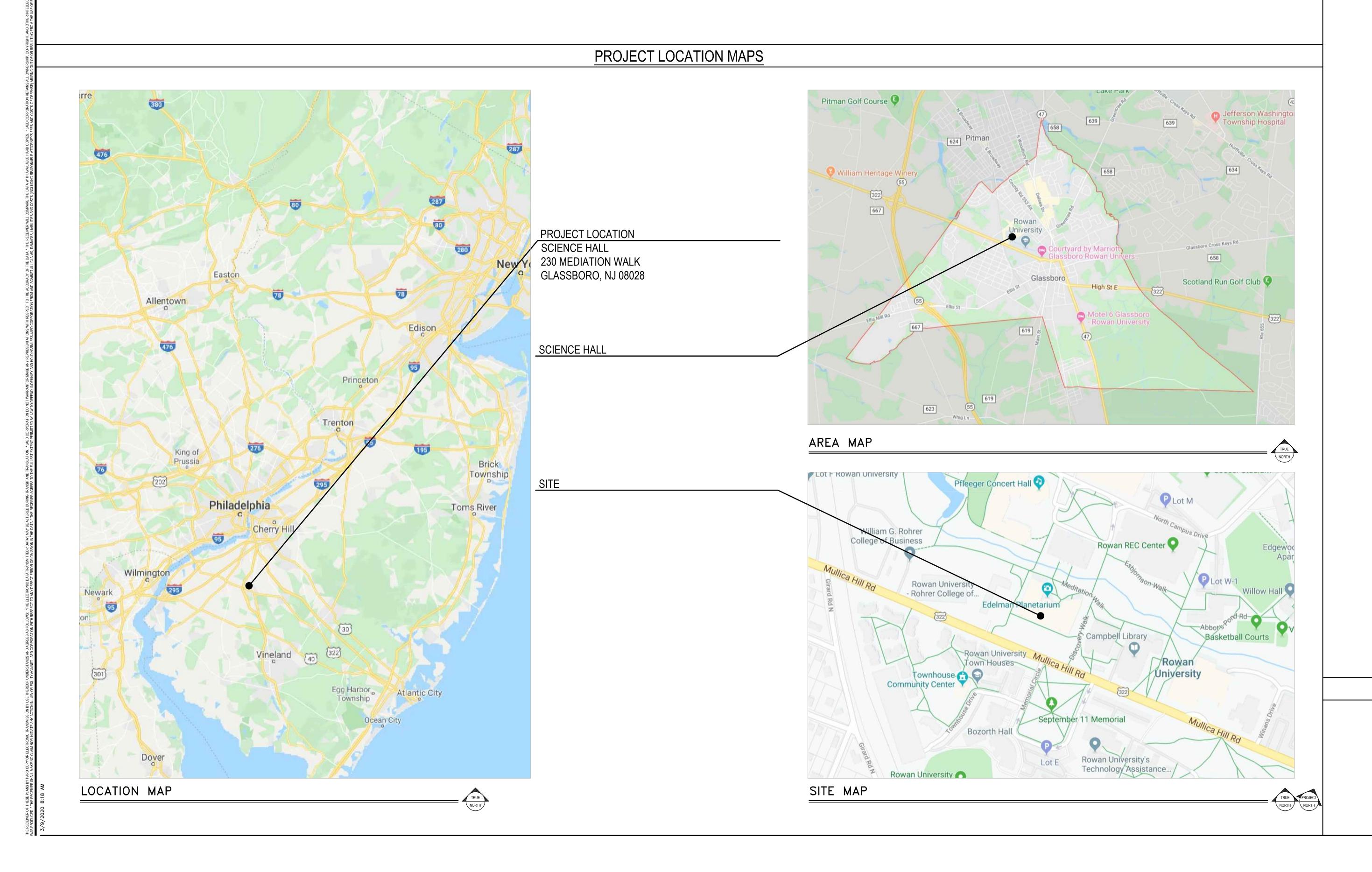
ROWAN UNIVERSITY ROOM 121 CONVERSION AT SCIENCE HALL 230 MEDIATION WALK

GLASSBORO, NJ 08028



SHEET INDEX

GENERAL INFORMATION G-000 COVER SHEET

ARCHITECTURAL

A-101 ARCHITECTURAL PLANS AND DETAILS

MECHANICAL

M-000 MECHANICAL COVER SHEET MECHANICAL PLANS M-101 MECHANICAL SCHEDULES & DETAILS M-500

ELECTRICAL

E-000	ELECTRICAL COVER SHEET
E-101	ELECTRICAL FLOOR DEMOLITION AND NEW PLANS
E-111	ELECTRICAL ROUTING PLAN
E-500	ELECTRICAL DETAILS
E-600	ELECTRICAL PANEL SCHEDULED SINGLE LINE DIAGRAM

PLUMBING P-101 PLUMBING PLANS

FIRE PROTECTION

FP101 FIRE PROTECTION PLANS

CODE INFORMATION

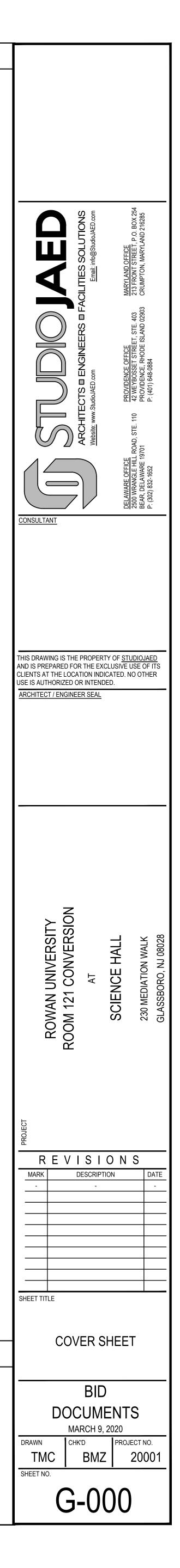
1. APPLICABLE CODES AND STANDARDS IBC 2015 IMC 2015 IPC 2015 NFPA 13 - 2015 NFPA 101- 2015

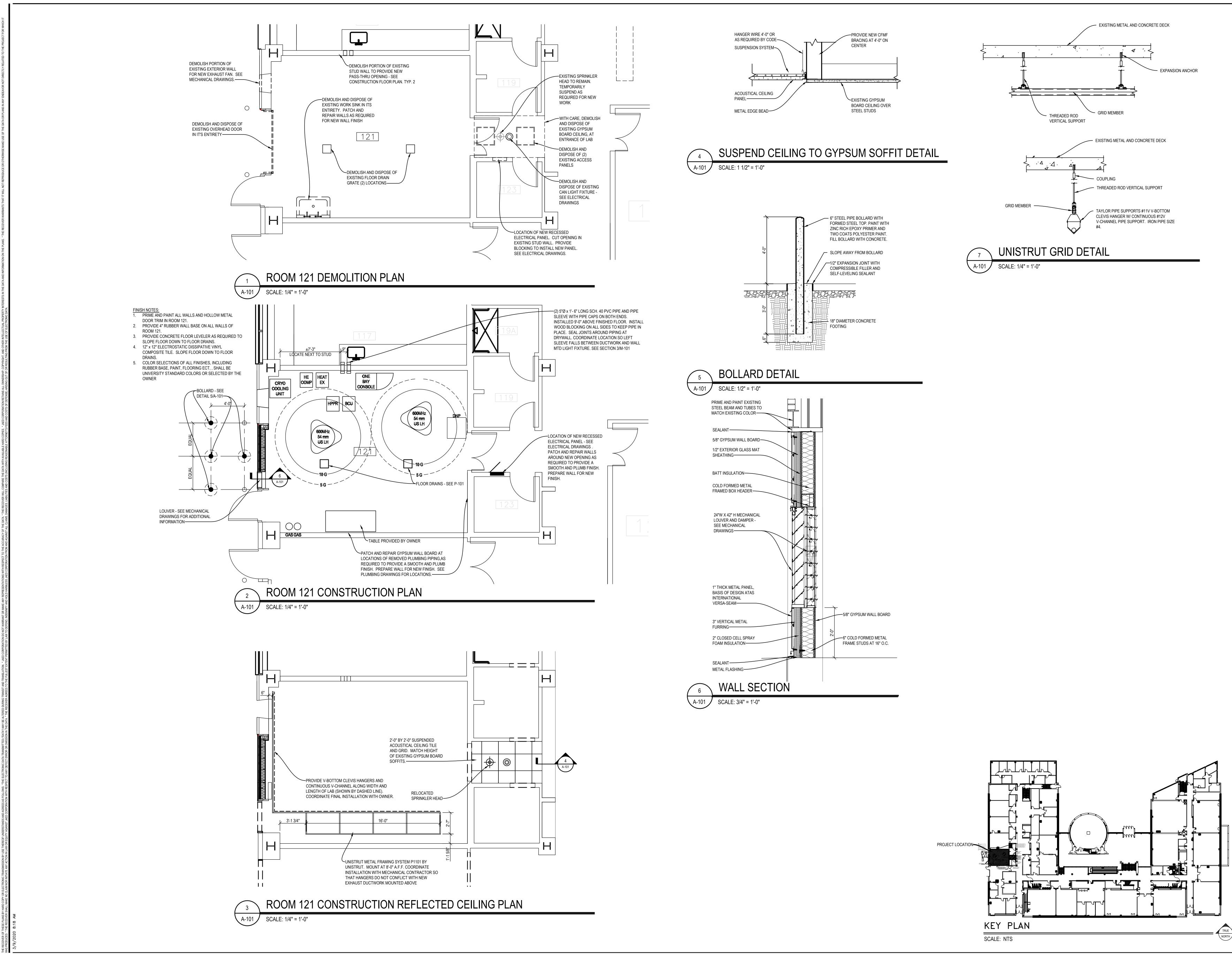
ADA STANDARDS FOR ACCESSIBLE DESIGN - 2010

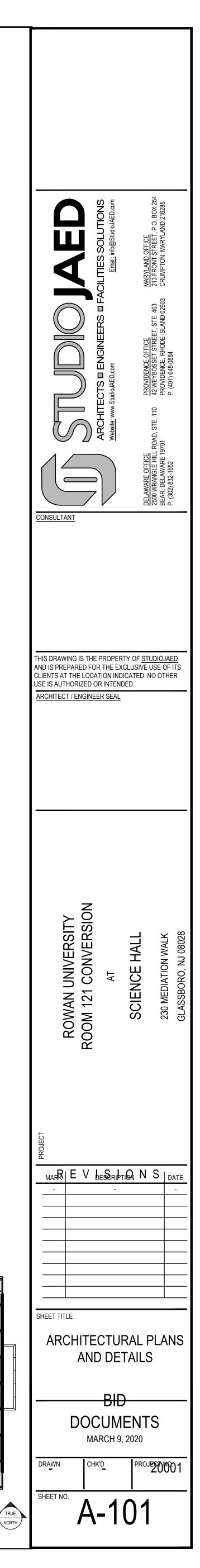
2. PROJECT DATA OWNER: ROWAN UNIVERSITY

LOCATION: SCIENCE HALL

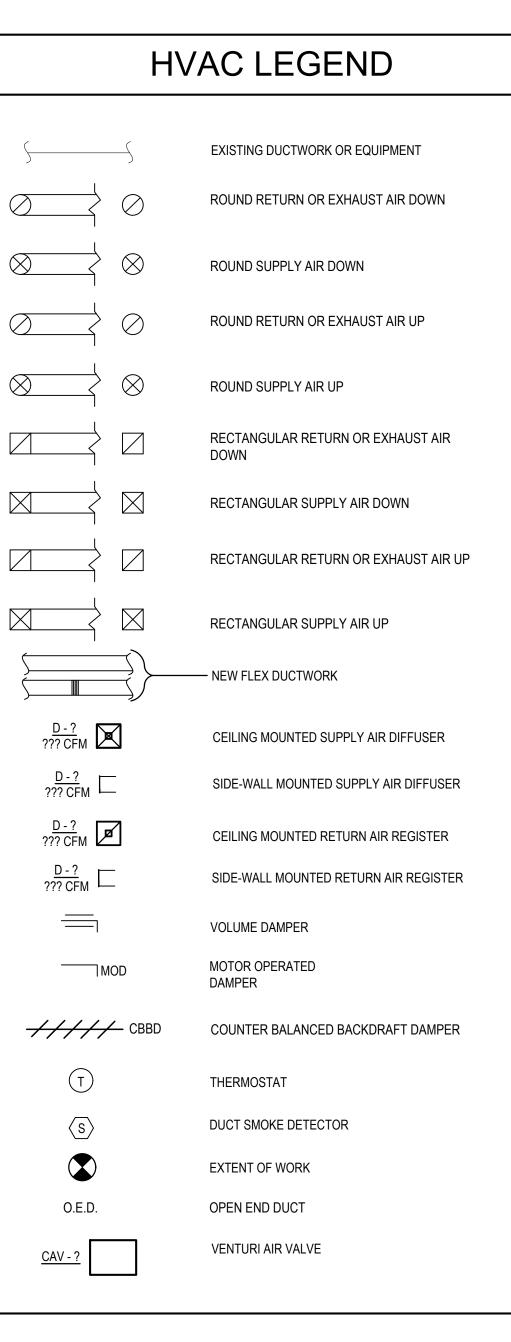
ADDRESS: 230 MEDIATION WALK, GLASSBORO, NJ 08028 OCCUPANCY CLASSIFICATION: EDUCATION GROUP E







	GENERAL HVAC NOTES
1. 2.	ALL NEW SUPPLY AIR DIFFUSERS AND RETURN AIR REGISTERS SHALL BE EQUIPPED W/ MFGR. SUPPLIED VOLUME DAMPERS.
	ARCHITECTURAL DRAWINGS FOR FIRE RATED PARTITIONS. PROVIDE LABELED ACCESS DOORS AS NEEDED. FIRE DAMPERS AND INSTALLATION ARE TO BE IN ACCORDANCE WITH THE 2003 INTERNATIONAL MECHANICAL CODE.
3.	DUCT SMOKE DETECTORS ARE TO BE SUPPLIED AND INSTALLED WHERE SHOWN IN ACCORDANCE WITH NFPA 72. ACCESS SHALL BE PROVIDED TO SMOKE DETECTORS FOR INSPECTION AND MAINTENANCE. ELECTRICAL CONTRACTOR SHALL MAKE APPROPRIATE AND REQUIRED ELECTRICAL CONNECTIONS TO THE DUCT SMOKE DETECTORS AS SPECIFIED AND REQUIRED FOR PROPER OPERATION. DUCT SMOKE DETECTORS SHALL DE-ENERGIZE THE AIR HANDLING UNIT, OR EXHAUST FAN, THAT THEY ARE ASSOCIATED WITH AND ACTIVATE A VISIBLE AND AUDIBLE SUPERVISORY SIGNAL IN THE BUILDING'S FIRE PROTECTIVE SIGNALING SYSTEM AT A CONSTANTLY ATTENDED LOCATION. ANY SYSTEM THAT IS DE-ENERGIZED BY THE ALARM SHALL NOT RESTART EXCEPT BY MANUAL RESET ON THE UNIT R THROUGH THE BAC SYSTEM. SMOKE DETECTORS SHALL COMPLY WITH SECTIONS 606.2, 606.3 AND 606.4 OF THE 1996 INTERNATIONAL MECHANICAL CODE IN ENTIRETY.
4.	PIPES, BUS DUCTS, CABLES, WIRES, AIR DUCTS AND SIMILAR BUILDING SERVICE EQUIPMENT THAT PASS THROUGH SMOKE PARTITIONS SHALL BE PROTECTED AS STATED IN NFPA 101 CHAPTER 6-3.6. THE SPACE BETWEEN THE PENETRATING PIPE OR DUCT AND THE SMOKE BARRIER SHALL:
	A. BE FILLED WITH A MATERIAL CAPABLE OF MAINTAINING THE SMOKE-RESISTANCE OF THE SMOKE BARRIER OR
	B. BE PROTECTED BY AN APPROVED DEVICE DESIGNED FOR THE SPECIFIC PURPOSE. INSULATION AND COVERINGS FOR PIPES AND DUCTS SHALL NOT PASS THROUGH FIRE BARRIERS UNLESS ONE OF THESE REQUIREMENTS IS MET. CONTRACTOR IS RESPONSIBLE FOR CHOOSING WHICH ALTERNATIVE TO USE UNLESS OTHERWISE SPECIFIED
5.	IN THE DRAWINGS OR SPECIFICATIONS.
6.	METAL. DUCTBOARD IS PROHIBITED. PROVIDE AND INSTALL ALL GAUGES AND METERS AS SHOWN AND SPECIFIED.
7.	MFGR'S OF ALL COILS SHALL ENSURE THAT THE COILS ARE CLEAN AND FREE OF ANY RESIDUE FROM THE MANUFACTURING AND SHIPPING PROCESS. IF COILS ARE FOUND TO BE DIRTY OR SMOKE WHEN HOT WATER IS PROVIDED TO THEM, THE CONTRACTOR WILL
8.	BE RESPONSIBLE FOR CLEANING OF THE COILS, AS WELL AS, CLEANING THE BUILDING FROM SMOKE, COIL EMANATIONS, OR VAPORS. ALL DUCTS SHALL BE CONNECTED TO AIR OUTLETS, AIR INLETS, AND AIR HANDLING DEVICES TO PROVIDE A COMPLETE DUCTWORK SYSTEM. FOR CONNECTION TO AIR OUTLETS UP TO 5 FEET OF FLEX DUCT SHALL BE USED WHERE CONCEALED FROM OCCUPANT VIEW. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL TRANSITIONS TO ENSURE PROPER AND ADEQUATE CONNECTIONS OF ALL DUCTWORK TO ALL AIR INLETS, OUTLETS, AIR HANDLING DEVICES AND AIR TERMINAL DEVICES. DUCTWORK IS TO BE COORDINATED WITH TRANSFER AIR OPENINGS AND ROOF TRUSS SYSTEM, OR STRUCTURAL STEEL.
9.	THE RETURN AIRFLOWS INDICATED ON THE PLANS CORRESPOND TO THE OCCUPIED MODE WITH MINIMUM OUTSIDE AIR BEING SUPPLIED. THE BALANCE REPORT IS TO INDICATE THESE AIRFLOWS IN THIS MODE OF OPERATION.
10.	GRAVITY VENTILATORS, ROOF EXHAUSTERS AND ASSOCIATED DUCTWORK CONNECTIONS ARE TO BE COORDINATED WITH BUILDING STRUCTURAL COMPONENTS.
11.	HVAC EQUIPMENT SHALL BE FURNISHED WITH A MOTOR STARTER SUITABLE FOR THE OFF-ON CONTROL OF THE MOTOR BY A REMOTE THERMOSTAT OR BAS CONTACT. THESE STARTERS SHALL COMPLY WITH NATIONAL ELECTRIC CODE.
12.	ALL AIR HANDLING UNITS ARE TO BE INSTALLED TO PROVIDE ADEQUATE, UNOBSTRUCTED, ACCESS AND CLEARANCE FOR AIR FILTER REPLACEMENT.
13.	ALL MOTORS FURNISHED AND INSTALLED BY THE MECHANICAL CONTRACTOR (OR A MECHANICAL SUBCONTRACTOR) SHALL BE PROTECTED AGAINST OVERLOAD IN ACCORDANCE WITH N.E.C. ARTICLE 430, SECTION C.
14.	WHERE DEMOLISHING AND REMOVING UV'S, REMOVE ASSOCIATED LOUVER. CONTRACTOR MUST PATCH AND PAINT TO MATCH EXISTING SURROUNDINGS.
15.	VENTS AND PLUMBING VENTS SHALL BE LOCATED A MINIMUM OF 10' FROM ANY INTAKE AIR OPENING.
16.	MECHANICAL EQUIPMENT AND DEVICES SHALL OPERATE WITHOUT OBJECTIONABLE NOISE AND VIBRATION BEING TRANSMITTED TO OCCUPIED PORTIONS OF THE BUILDING OR ANY PART OF THE BUILDING STRUCTURE BY APPARATUS, PIPING, DUCTWORK, CONDUITS, OR OTHER PARTS OF THE MECHANICAL SYSTEM. SECURE AND BRACE ALL PIPING AND DUCTWORK, PROVIDE FLEXIBLE CONNECTION, VIBRATION ISOLATORS, OR OTHER DEVICES WHERE INDICATED OR REQUIRED TO PREVENT THE TRANSMISSION OF NOISE AND VIBRATION TO THE BUILDING. NC LEVEL IS 35.
17.	ALL NEW CEILING MOUNTED AIR INLETS AND AIR OUTLETS ARE TO BE COORDINATED WITH LIGHTING. A NEAT, SYMMETRICAL INSTALLATION IS TO BE MAINTAINED, WITH CEILING MOUNTED AIR INLETS/OUTLETS IN PROXIMITY TO LOCATIONS SHOWN ON THE PLANS. IN THE CASE THAT THERE IS A CONFLICT, THE LOCATION OF THE LIGHTING WILL TAKE PRIORITY AND THE INLET/OUTLET SHALL BE RELOCATED AS CLOSE AS POSSIBLE. DUCTWORK SHOP DRAWINGS ARE TO SHOW PLACEMENT OF AIR INLETS/OUTLETS WITH LIGHTING OVERLAID ON THE SAME PLAN. CONTRACTORS ARE TO USE REFLECTED CEILING PLAN AS BASIS FOR COORDINATION.
18.	THE CONTRACTOR SHALL PROVIDE ALL WALL AND ROOF PENETRATIONS REQUIRED FOR DUCT ROUTING. THE CONTRACTOR SHALL PATCH AND PAINT ALL PENETRATIONS LEFT BY DEMOLITION WORK AND BY CLEARANCE OPENINGS THAT REMAIN AFTER NEW DUCT INSTALLATIONS.
19.	NOTIFY THE OWNER IN THE EVENT ANY EXISTING HAZARDOUS MATERIALS, SUCH AS ASBESTOS, PCB'S, LEAD, ETC., ARE ENCOUNTERED ON THE PROJECT. THE OWNER WILL ARRANGE WITH A QUALIFIED SPECIALIST FOR THE IDENTIFICATION, TESTING, REMOVAL, HANDLING AND PROTECTION AGAINST EXPOSURE OR ENVIRONMENTAL POLLUTION, TO COMPLY WITH APPLICABLE REGULATIONS, LAWS AND ORDINANCES.
20.	ALL THERMOSTATS SHOWN ON HVAC PLANS ARE TO BE MOUNTED 4'-0" MAXIMUM AFF (TOP OF UNIT), UNLESS NOTED OTHERWISE. CONTRACTOR IS RESPONSIBLE FOR MOUNTING & WIRING ALL THERMOSTATS. PLENUM RATED CABLES MUST BE USED.
21.	VARIABLE FREQUENCY DRIVES (VFD) SHALL BE CONSIDERED SYNONYMOUS WITH ADJUSTABLE FREQUENCY DRIVES (AFD).
22.	THE CONTRACTOR SHALL PROVIDE RADIUSED ELBOWS OR SQUARE THROAT ELBOWS WITH VANES FOR ALL DUCTWORK CHANGES IN DIRECTION, PER SMACNA HVAC DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE. SQUARE THROAT ELBOWS WITHOUT VANES AND MITERED ELBOWS ARE NOT PERMITTED.
23.	ALL BLOWER COILS UNITS ARE TO HAVE 24" MINIMAL CLEARANCE ON ACCESS SIDE COORDINATE UNIT SUSPENSION WITH STRUCTURE
24.	ALL GANG TOILET ROOM DOORS ARE TO BE UNDERCUT TO PROVIDE 0.75" CLEARANCE BETWEEN BOTTOM OF DOOR AND FINISHED FLOOR.
25. 26.	HANG ALL CEILING MOUNTED UNITS HIGH TO ALLOW FOR CONDENSATE TRAPPING AND GRAVITY VENTS.
20.	PRIOR TO SUBMITTING BID, THE CONTRACTOR SHALL VISIT THE SITE AND BE THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS AND PROPOSED CONSTRUCTION. CONTRACTOR SHALL INCLUDE IN THEIR BID ALL MATERIALS, LABOR AND ALL INCIDENTALS FOR A COMPLETE INSTALLATION WHETHER SPECIFICALLY INDICATED OR NOT. ALL ERRORS, DISCREPANCIES AND MISSED ITEMS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER DURING THE BIDDING PROCESS BY THE CONTRACTOR. THESE ITEMS SHALL BE INCLUDED IN THE BID PRICE. NO EXTRA COST WILL BE ALLOWED FOR ANY DISCREPANCY WHICH COULD HAVE BEEN NOTICED AT THE SITE BY THE CONTRACTOR.
28.	INSTALL ALL EQUIPMENT AND MATERIALS PER MANUFACTURER'S WRITTEN INSTRUCTION.
29.	THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADDITIONAL COSTS INCURRED AS A RESULT OF SUBSTITUTIONS OR DEVIATIONS FROM THE BASIS OF DESIGN SHOWN ON THESE DRAWINGS.
30.	CONTROLS ARE TO BE EXTENDED TO ALL EXISTING, REUSED MECHANICAL EQUIPMENT, INCLUDING EXISTING UNIT VENTILATORS AND EXHAUST FANS. THESE ARE TO BE TIED INTO AND CONTROLLED BY THE NEW BAS SYSTEM.
31.	CONTRACTOR IS RESPONSIBLE FOR PROVIDING TRANSITIONS AND FLEXIBLE CONNECTIONS BETWEEN ALL UNITS AND SUPPLY, RETURN, OR OUTSIDE AIR DUCTS.
32.	CONTRACTOR SHALL PROVIDE NEW DANFOSS OR APPROVED EQUAL VALVES FOR ALL HEAT ONLY COILS.
33.	CONTRACTOR SHALL VERIFY THAT ALL EXISTING EQUIPMENT TO BE REUSED IS IN WORKING ORDER.



 \oslash

GENERAL PIPING NOTES

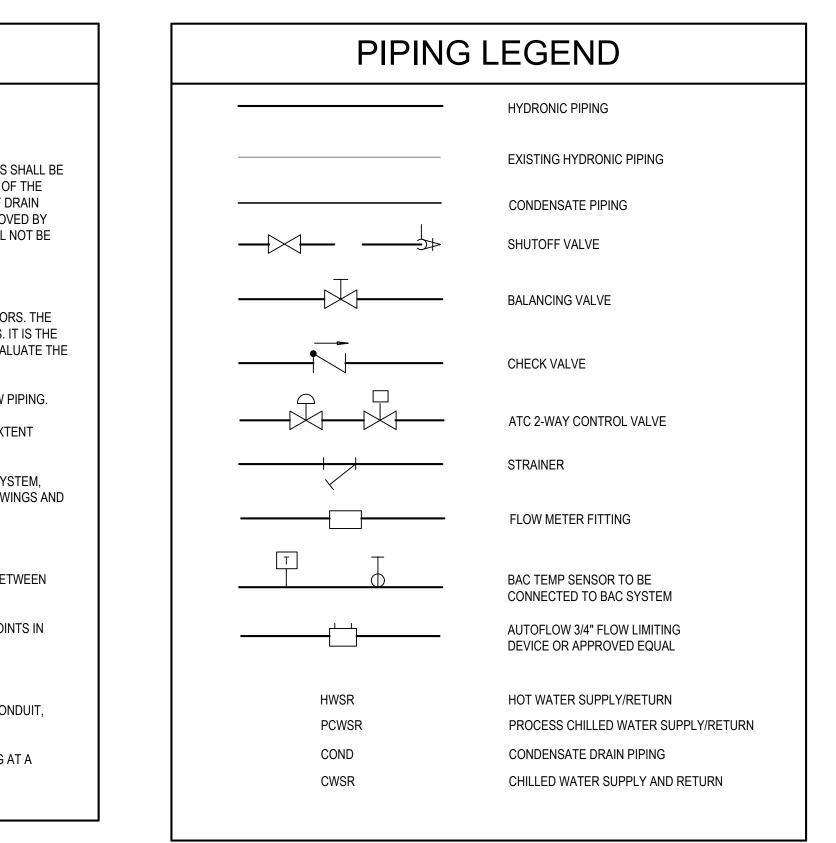
- INSTALL ALL GAUGES AND METERS AS SHOWN ON DRAWINGS AND AS SPECIFIED.
- INSULATE ALL PIPING AS SPECIFIED.
- UNLESS OTHERWISE SHOWN OR SPECIFIED, ALL CONDENSATE DRAINS FROM ALL HVAC UNITS SHALL BE TRAPPED AND PIPED THROUGH THE BUILDING AND DRAINED THROUGH THE EXTERIOR WALL OF THE BUILDING AT A HEIGHT NOT TO EXCEED 18" ABOVE GRADE. PIPE SIZES SHALL MATCH SIZE OF DRAIN CONNECTION AT A MINIMUM. UNIT DRAINS SHALL NOT BE GANGED TOGETHER UNLESS APPROVED BY ARCHITECT/ENGINEER. UNLESS OTHERWISE SHOWN OR STATED, CONDENSATE PIPING SHALL NOT BE EXPOSED.
- ALL FLOOR PENETRATIONS SHALL BE SLEEVED AND SEALED AS SPECIFIED.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL NEW PIPING PENETRATIONS IN WALLS AND FLOORS. THE PIPING PLANS DO NOT SPECIFICALLY NOTE WHERE PIPING PENETRATES WALLS AND FLOORS. IT IS THE CONTRACTOR'S RESPONSIBILITY PRIOR TO BID TO STUDY THE PLANS AND IF NECESSARY EVALUATE THE SITE, TO ACCOUNT FOR ALL PIPING PENETRATIONS OF THE EXISTING STRUCTURE.
- THE CONTRACTOR SHALL PROVIDE NEW SUPPORTS OF COMPATIBLE MATERIAL FOR ALL NEW PIPING. PROVIDE NEW DUAL TEMPERATURE WATER SUPPLY AND RETURN PIPING SYSTEM, TO THE EXTENT
- PROVIDE CHILLED WATER SUPPLY AND RETURN SYSTEM, DOMESTIC WATER DISTRIBUTION SYSTEM, DOMESTIC HOT WATER SUPPLY AND RETURN SYSTEM TO THE EXTENT SHOWN ON PLAN DRAWINGS AND IN DETAILS.
- ALL CONTROL VALVES TO BE INSTALLED OVER DRAIN PANS IN HVAC UNITS.

SPECIFIED AND SHOWN ON CONTRACT DRAWINGS.

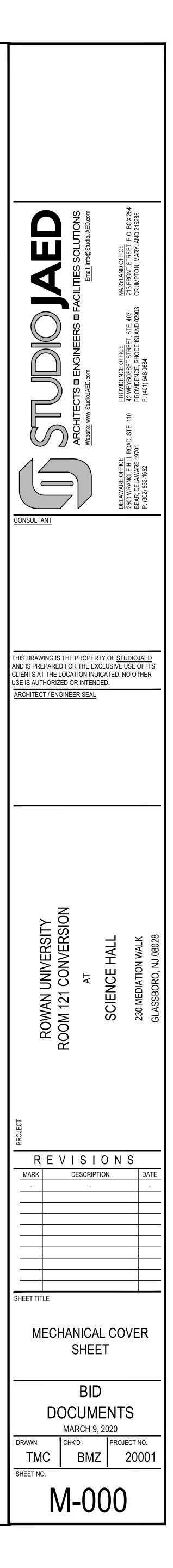
- . ALL PIPING SHALL BE SIZED AS CALLED OUT ON DRAWINGS, AND MAY NOT BE DOWN SIZED BETWEEN CONTROL VALVE AND COIL.
- PROVIDE AIR VENTS AT ALL HIGH POINTS IN SYSTEM. PROVIDE DRAIN VALVES TO ALL LOW POINTS IN SYSTEM.
- 2. PROVIDE ISOLATION VALVES AT ALL BRANCH PIPING TAKEOFFS. . COORDINATE INSTALLATION OF ALL NEW PIPING WITH EXISTING FIRE PROTECTION PIPING, CONDUIT,
- EXHAUST/RELIEF DUCT WORK, AND STRUCTURE. . FOR CONDENSATE DRAIN PIPING RUNS LONGER THAN 50 FEET, PROVIDE A REMOVABLE PLUG AT A CHANGE OF DIRECTION EVERY 50 FT.

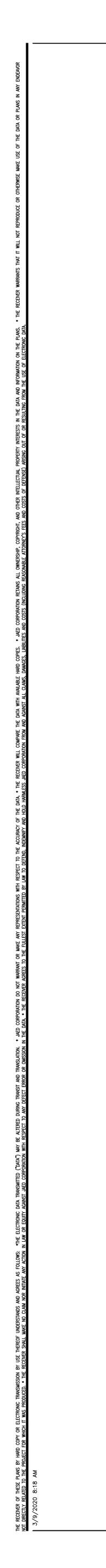
MECHANICAL DEMO NOTES & LEGEND

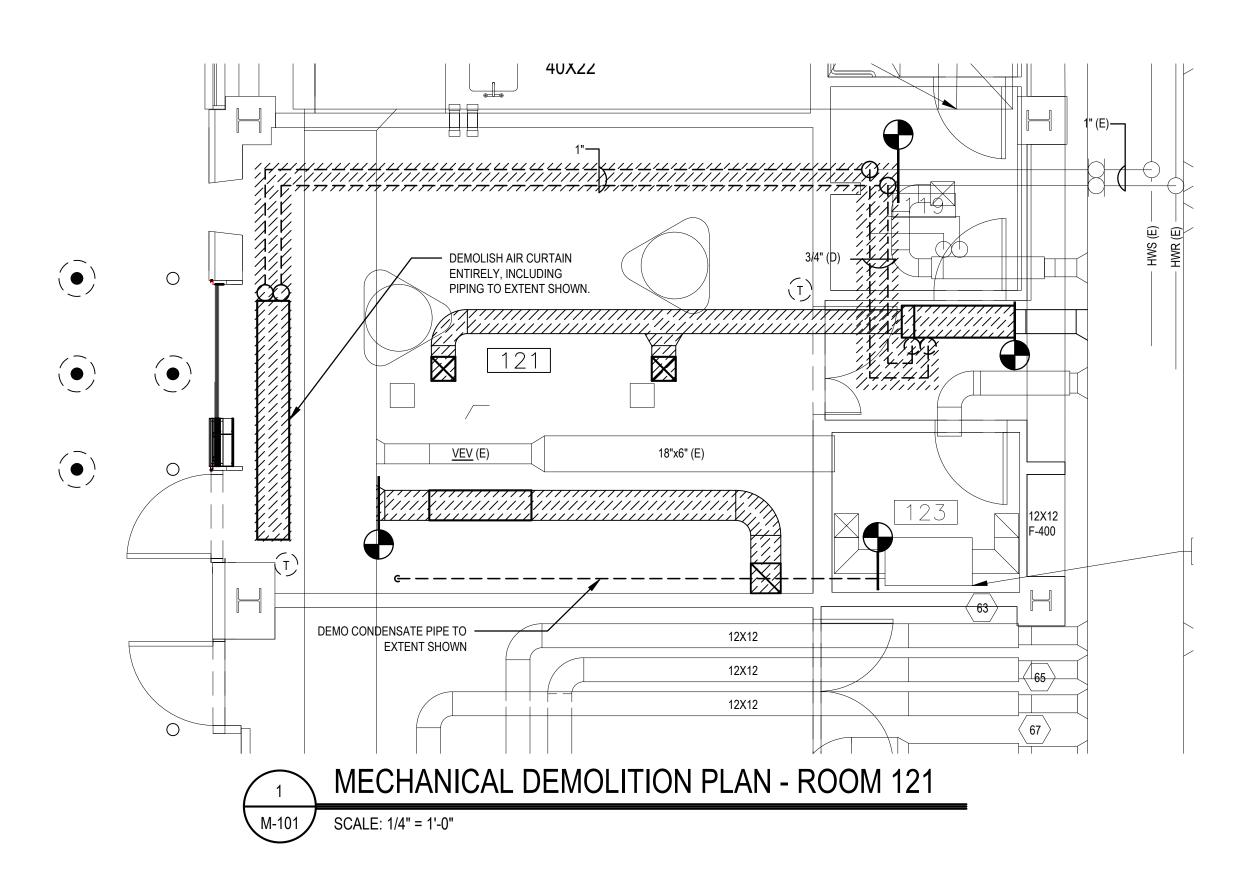
- ALL DEMOLISHED MECHANICAL UNITS ARE TO BE REMOVED AND TAKEN OFF SITE AND BECOME PROPERTY OF THE CONTRACTOR UNLESS NOTED OTHERWISE.
- ALL DEMOLISHED DUCTWORK, DIFFUSERS, REGISTERS, GRILLES, INSULATION, AND HANGERS ARE TO BE REMOVED AND TAKEN OFF SITE AND BECOME PROPERTY OF THE CONTRACTOR UNLESS NOTED OTHERWISE.
- ALL DEMOLISHED HEATING SUPPLY AND RETURN PIPING, VALVES, FITTINGS, INSULATION AND HANGERS ARE TO BE REMOVED AND TAKEN OFF SITE AND BECOME PROPERTY OF THE CONTRACTOR UNLESS NOTED OTHERWISE. PIPING THAT IS TO BE ABANDONED IN PLACE SHALL BE CUT AND CAPPED BELOW FLOOR OR WITHIN TRENCH, AND THE OPENING SEALED WITH CONCRETE.
- PROVIDE TEMPORARY COVERS AND CAPS FOR TEMPORARILY EXPOSED EXISTING PIPING, EQUIPMENT AND WALL OPENINGS. TEMPORARY COVERS AND CAPS SHALL BE SUFFICIENT TO ENSURE DIRT, WEATHER AND CONSTRUCTION DEBRIS WILL NOT ENTER ANY SYSTEM OR WALL, ROOF OR FLOOR OPENING.
- REMOVAL AND DISPOSAL OF GAS PIPING AND GAS FIRED APPLIANCES SHALL BE IN CONFORMANCE WITH NFPA 54.
- EXISTING GAS PIPING SHALL FIRST BE DISCONNECTED FROM ALL SOURCES OF GAS AND THEN THOROUGHLY PURGED WITH AIR, WATER, OR INERT GAS BEFORE CUTTING OR WELDING IS DONE.
- WHEN GAS PIPING IS OPENED, THE SECTION TO BE WORKED ON SHALL BE TURNED OFF FROM THE GAS SUPPLY AT THE NEAREST CONVENIENT POINT, AND THE LINE PRESSURE VENTED TO THE OUTDOORS, OR TO VENTILATED AREAS OF SUFFICIENT SIZE TO PREVENT ACCUMULATION OF FLAMMABLE MIXTURES. IF THIS SECTION EXCEEDS 50 FEET OF 2.5" PIPING, THE REMAINING GAS PIPING SHALL BE DISPLACED WITH AN INERT GAS.
- SEE ELECTRICAL PLANS FOR INFORMATION ON WIRING TERMINATION OF DEMO'D EQUIPMENT.
- . REFER TO ARCHITECTURAL DRAWINGS FOR CEILING DEMOLITION PLAN.
- 10. PATCHING AND PAINTING AT UNIT VENTILATOR, FIN TUBE, UNIT HEATER, AND THERMOSTAT LOCATIONS BY GENERAL TRADES. SEE ARCHITECTURAL DRAWINGS FOR FINISH SCHEDULE.
- 1. THE CONTRACTOR SHALL PROVIDE PROTECTION FOR ALL ROOFTOP AND WALL OPENINGS CREATED BY DEMOLITION SUITABLE FOR WITHSTANDING WEATHER CONDITIONS.
- 12. THE CONTRACTOR SHALL PROVIDE FLOOR PROTECTION IN THE GYMNASIUM. ANY DAMAGE TO THE GYMNASIUM FLOOR SHALL BE THE CONTRACTOR'S RESPONSIBILITY, AND REPAIR COSTS SHALL BE BACK CHARGED TO THE CONTRACTOR.
- 13. ALL ASBESTOS CONTAINING MATERIALS WILL BE REMOVED BY OTHERS PRIOR TO DEMOLITION.
- 14. THE INFORMATION SHOWN ON THESE DRAWINGS WAS COMPILED FROM EXISTING DRAWINGS AND SITE VISITS. HOWEVER, THE INFORMATION MAY STILL VARY FROM THE ACTUAL INSTALLATION. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION FOR DEMOLITION WORK.

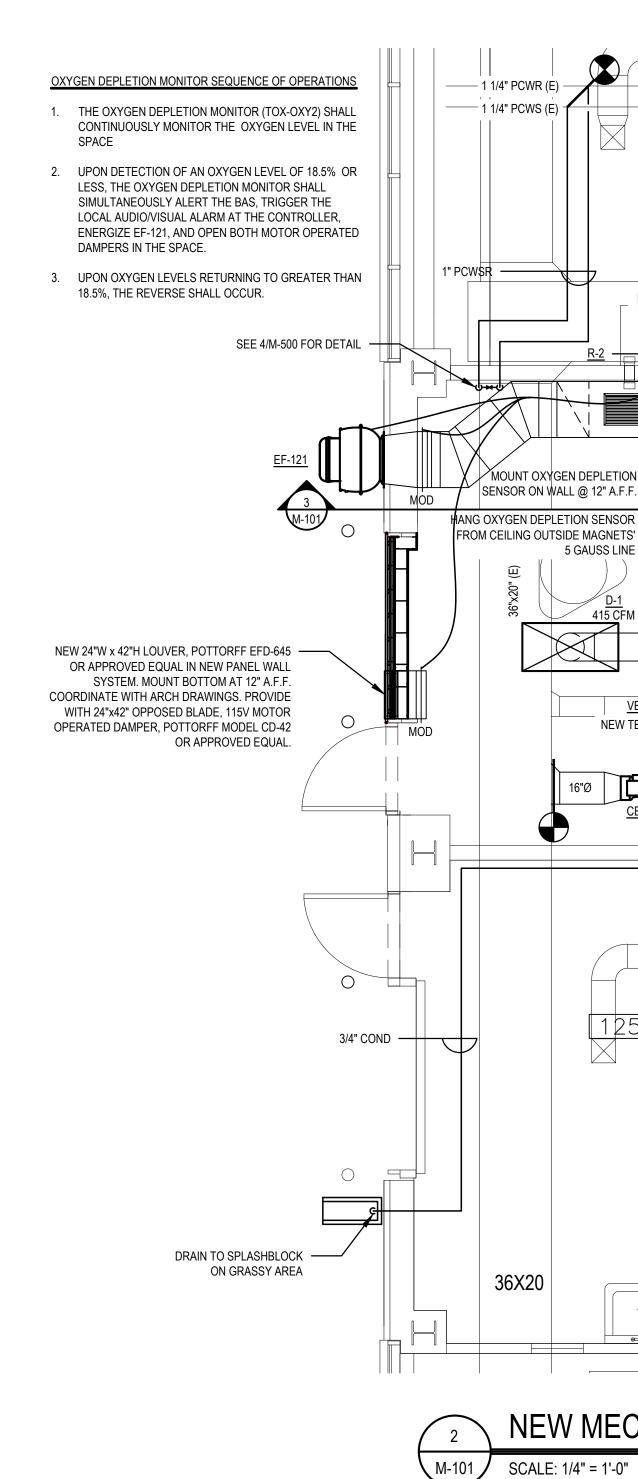


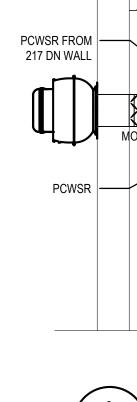
	AIR CURTAIN
[]]	VARIABLE AIR VOLUME BOX
	DUCTWORK
[] RHC	RE-HEAT COIL
	HYDRONIC SUPPLY AND RETURN PIPING
C	PIPING ELBOW DOWN
0	PIPING ELBOW UP
'////,	DEMOLISH MECHANICAL EQUIPMENT IN HATCHED AREA, INCLUDING ALL RELATED PIPING, INSULATION, VALVES, FITTINGS, DUCTWORK, INSULATION, HANGERS, SUPPORTS, HARDWARE, DEVICES AND INSULATION, ENCLOSURES, MOUNTS, AND WALL LOUVERS UNLESS OTHERWISE NOTED.



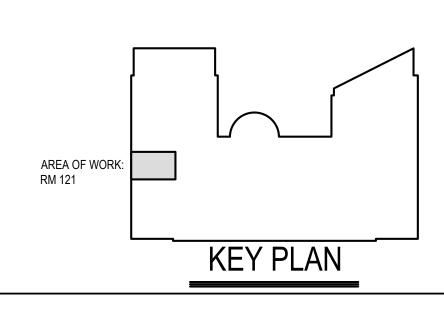


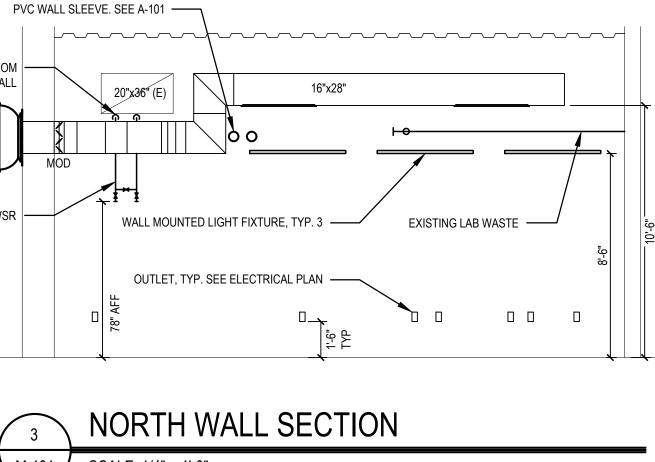






M-101 SCALE: 1/4" = 1'-0"

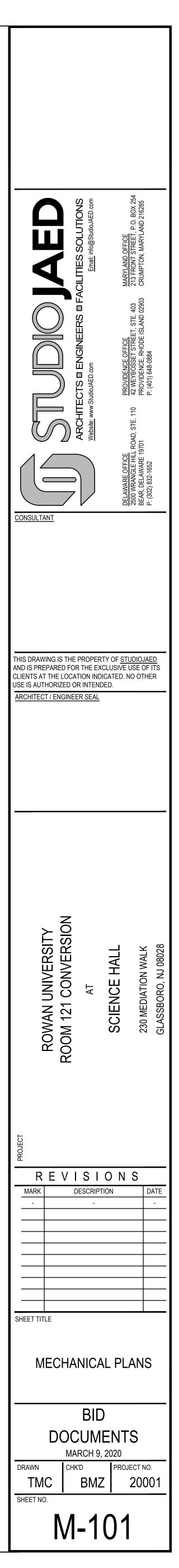


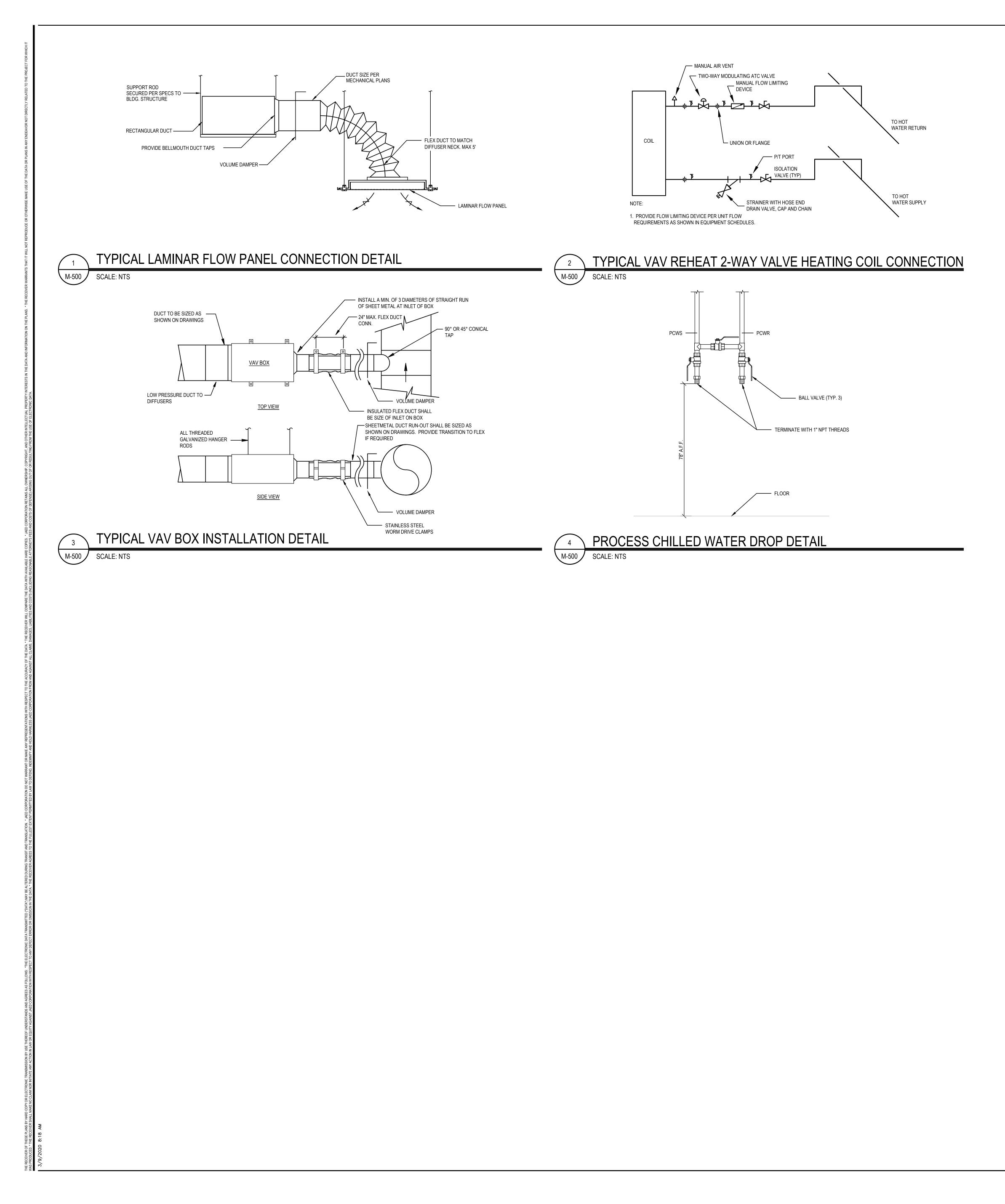


PHOENIX CONTROLS INTERFACE SHALL REPORT TO EXISTING BAS. SEE LABORATORY AIRFLOW CONTROL SYSTEM SPECIFICATION.

3. MOUNT ALL NEW AIR TERMINALS AT 9'-6" A.F.F.

- PROVIDE TOXALERT TOX-OXY2 OXYGEN DEPLETION MONITOR AND (2) TOXALERT TOX-O2/1 OXYGEN DEPLETION SENSORS. SEE 2/M-101. SEE SEQUENCE OF OPERATIONS THIS DRAWING.
 RHC-121, CAV-121 AND CEV-121 SHALL BE CONTROLLED BY THE EXISTING PHOENIX CONTROLS INTERFACE IN BUILDING TO MAINTAIN ROOM TEMPERATURE SETPOINT BY +/- 1°F. EXISTING
- MECHANICAL NEW WORK NOTES: 1. PROVIDE TOXALERT TOX-OXY2 OXYGEN DEPLETION MONITOR AND (2) TOXALERT TOX O2/4 OXYGEN DEPLETION SENSORS SET
- 56X2 \square **(56) Г** 1" PCW\$R ------REPLACE PIPE HANGERS IN VICINITY AS REQUIRED TO INSTALL NEW 28"X16" EXHAUST DUCT. PROVIDE SUPPORTS FROM DUCT HANGERS MOUNT OXYGEN DEPLETION -SENSOR ON WALL @ 12" A.F.F. HANG OXYGEN DEPLETION SENSOR ------RECONNECT EXISTING 3/4" FROM CEILING OUTSIDE MAGNETS' PIPING TO NEW 1" PIPING RHC-121 5 GAUSS LINE CAV-121 24"x16" <u>VAV</u> (E) 48X22 14"Ø 59 B.O.D. MIN 10'-6". RUN AS HIGH AS POSSIBLE _____ 18"x6" (E) <u>VEV</u> (E) NEW TEMPERATURE SENSOR TO CONTROL CAV-121, CEV-121 AND RHC-121. PROVIDE TIE-IN TO EXISTING BAS. SEE LABORATORY AIRFLOW CONTROL SPECIFICATION. <u>R-1</u> 12X12 F-400 < 63 } _ _ _ PROVIDE NEW CONDENSATE PUMP, LITTLE GIANT VCMA-15, -115V OR APPROVED EQUAL $\langle 67 \rangle$ 125 < 69 \ge 36X20 ⊕⊢⊕ NEW MECHANICAL PLAN - ROOM 121





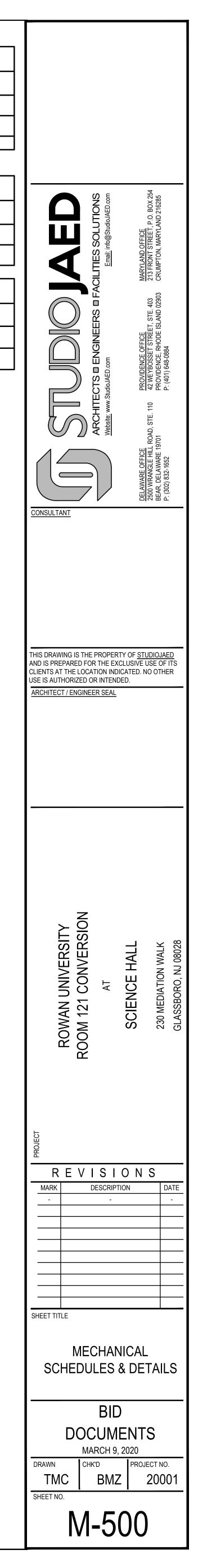
<u>R - #</u>		RETURN GR	ILLE SCH	EDULE	
UNIT NUMBER	SIZE (FACE / NECK)	DESCRIPTION	MANUFACTURER	MODEL NUMBER	REMARKS
<u>R-1</u>	24"X24" / 16"Ø	ALUMINUM PERFORATED RETURN GRILLE	KRUEGER	56690	
<u>R-2</u>	36"X14"	ALUMINUM FIXED BLADE RETURN GRILLE	KRUEGER	S580	0° DEFLECTION
NOTE: PROVIDE EQ	UIPMENT BY KRUEGER O	R APPROVED EQUAL. FINISH SHALL BE FACTORY OFF-WHITE FINIS	SH. CONTRACTOR IS RESP	PONSIBLE TO SELECT APP	PROPRIATE MOUNT DEPENDING ON CEILING TYPE.

<u>D - #</u>		DIFFUSE	R SCHED	JLE	
UNIT NUMBER	SIZE (FACE / NECK)	DESCRIPTION	MANUFACTURER	MODEL NUMBER	REMARKS
<u>D-1</u>	24"X48" / 14"Ø	LAMINAR FLOW PANEL	KRUEGER	5100	PROVIDE FACE OPERABLE DAMPER
NOTE: PROVIDE EQ MOUNT DEPENDING		R APPROVED EQUAL. PROVIDE WITH 23% FREE AREA PERFORATE	ED FACE. FINISH SHALL BE	FACTORY OFF-WHITE FI	NISH. CONTRACTOR IS RESPONSIBLE TO SELECT APPROPRIATE

<u>EF - #</u>					EXHA	UST F	AN SC	HED	ULE		
UNIT NUMBER	LOCATION	TYPE	CFM	RPM	ESP (in-w.g.)	DRIVE	ELEC	POWER	MOUNT	COOK MODEL #	REMARKS
EF-121	121	WALL MTD UPBLAST	3300	1795	0.5	DIRECT	208/3/60	1 1/2 HP	WALL	ACWD-150W17D (VF2)	
		AS SCHEDULED OR APPF , POTTORFF MODEL CD-42			-	ONICALLY CON	IMUTATED TEFC I	MOTOR WIT	H FAN-MOUNTED	SPEED CONTROLLER. PR	OVIDE 28"x16" 115V OPPOSED-BLADE MOTOR

		AIR VA	ALVE SCHEDULE	
UNIT NUMBER	MAX CFM	MIN CFM	PHOENIX CONTROLS MODEL #	REMARKS
CAV-121	1250	1250	MAVA112M-ALEHZ	
CEV-121	1400	1400	EXVA112M-ALEHZ	
NOTES: PROVIDE EQUIPMENT	AS SCHEDULE OR A	PPROVED EQUAL.		

RHC-X				REHE	EAT (COIL	SCHE	DULE		
UNIT NUMBER	CFM	A.P.D. (IN. H2O)	COIL SIZE (WxH)	MBH	GPM	W.P.D. (FT. H2O)	EAT/LAT (F)	EWT/LWT (F)	JCI MODEL #	REMARKS
RHC-121	1250	0.08	27x18	47.4	4.9	7.4	55/90	180/160	MA0100815.0024G01C02003501F500SF	
NOTES: PROVIDE	EQUIPMEN	IT AS SCHEDULED OF	APPROVED EQ	UAL. PROVID	E WITH TW	O-WAY CONT	ROL VALVE DE	TAIL		



ELECTRICAL SYMBOL LEGEND

Power Devic	ces
φ	GENERAL PURPOSE DUPLEX RECEPTACLE - 20AMP, 125VOLTS, NEMA5-20R. ELECTRICAL BOX TO BE 2-1/8" DEEP.
#	GENERAL PURPOSE QUADRUPLEX RECEPTACLE - 20AMP, 125VOLTS, NEMA5-20R. ELECTRICAL BOX TO BE 2-1/8" DEEP.
Ŷ	GENERAL PURPOSE SINGLE RECEPTACLE - 220V, NEMA RATING NOTED ON PLANS.
J	JUNCTION BOX - FOR FUTURE ACCESS CONTROL HARDWARE
SM	FRACTIONAL HORSEPOWER MOTOR STARTER WITH OVERLOAD IN NEMA 1 ENCLOSURE; SQ'D FG1P OR APPROVED EQUAL FOR INDOORS, FW1P FOR OUTDOORS WITH NEMA 4 ENCLOSURE
	WIREMOLD LEGRAND 2400 SERIES OR APPROVED EQUAL WITH DIVIDER, FACEPLATE AND DEVICES.
ď	FUSED DISCONNECT SWITCH-HEAVY DUTY, 3POLE WITH FUSE CLIPS SUITABLE FOR CLASS "R" FUSES. NEMA1 UNLESS NOTED. WP-WEATHER PROOF-NEMA3R ENCLOSURE. (NOMENCLATURE: 30A/20A = SWITCH SIZE/FUSE SIZE). SQ D CLASS 3110 OR EQUAL
Lighting Cor	ntrols
\$	WALL SWITCH - 20A, 120/277V, SINGLE POLE, HEAVY DUTY, TOGGLE TYPE
\$ _D	SLIDING DIMMER WITH ON/OFF SWITCH, RATED FOR 120/277V - 10/5 AMP, LEGRAND CD4FBL3P OR EQUAL. COLOR TO BE SELECTED BY ARCHITECT. PROVIDE LOW VOLTAGE WIRING BETWEEN SWITCH AND LIGHT FIXTURES.
M9	CEILING MOUNTED MOTION SENSOR; HUBBELL / OMNI-DT-2000 OR APPROVED EQUAL. PROVIDE WITH POWER PACK.
PP	POWER PACK; HUBELL / UVPP OR APPROVED EQUAL.
EL-1	EMERGENCY LIGHTING CONTROL UNIT. WATTSTOPPER: ELCU-200 OR APPROVED EQUAL. SEE EMERGENCY LIGHTING RELAY DETAIL.
Fire Alarm D	Devices
P	MANUAL STATION - PULL STATION/FIRE ALARM BOX
₩30cd	NOTIFICATION DEVICE (AUDIO/VISUAL) - HORN WITH STROBE AS SINGLE ASSEMBLY, REQUIRED CANDELA RATING 'X' INDICATED "X cd".
Communica	tion Devices
$\mathbf{\nabla}$	TELECOMMUNICATION OUTLET - DATA AND VOICE WIRING DEVICE RJ45, CAT5E JACKS. DATA OUTLET CONDUIT TO EXTEND ABOVE THE CEILING TO THE CORRIDOR. CABLING AND JACKS/DROPS OF DEVICE TO BE PROVIDED BY OTHERS.

- WHEN REQUISITIONS FOR PAYMENT ARE SUBMITTED.

TRANSFORMERS, ETC. WITHIN 15 FEET OF THE LOCATION SHOWN.

- OTHER TRADES PRIOR TO DEMOLITION.

- THIS PROJECT.

PROVIDE NEW FIRE ALARM SYSTEM DEVICES AND CONNECT TO EXISTING FIRE ALARM SYSTEM. ALL NEW DEVICES AND WIRING SHALL BE COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM. PROVIDE REQUIRED TESTING AND INSPECTION AS REQUIRED BY STATE OF NEW JERSEY FIRE MARSHALL'S OFFICE.

ELECTRICAL GENERAL NOTES

PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, COORDINATION, ADDITIONAL DESIGN AND ALL INCIDENTALS NECESSARY TO PROVIDE A COMPLETE AND OPERABLE SYSTEM AS DETAILED ON PLANS TO THE SATISFACTION OF THE ENGINEER AND THE OWNER. COORDINATE ALL WORK WITH THE ENGINEER BEFORE THE START OF WORK.

PRIOR TO SUBMITTING BID, THE CONTRACTOR SHALL VISIT THE SITE AND BE THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS AND PROPOSED CONSTRUCTION. CONTRACTOR SHALL INCLUDE IN THEIR BID ALL MATERIAL, LABOR, AND ALL INCIDENTALS FOR A COMPLETE INSTALLATION WHETHER SPECIFICALLY INDICATED OR NOT. ALL ERRORS, DISCREPANCIES AND MISSED ITEMS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER DURING THE BIDDING PROCESS BY THE CONTRACTOR THESE ITEMS SHALL BE INCLUDED IN THE BID PRICE. NO EXTRA COST WILL BE ALLOWED FOR ANY DISCREPANCY WHICH COULD HAVE BEEN NOTICED AT THE SITE VISIT BY THE CONTRACTOR.

3. PERFORM WORK AS REQUIRED BY APPLICABLE CODES, REGULATIONS, AND LAWS OF LOCAL, STATE, AND FEDERAL GOVERNMENTS AND OTHER AUTHORITIES WITH LAWFUL JURISDICTION. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE.

4. MATERIAL AND EQUIPMENT SHALL BE NEW (UNLESS NOTED), UL, NEMA, ANSI, IEEE, ADA & CMB APPROVED FOR INTENDED PURPOSE. MATERIAL AND INSTALLATION SHALL MEET REQUIREMENTS OF NATIONAL AND LOCAL ELECTRICAL CODE. 5. GIVE NOTICES, FILE PLANS, OBTAIN PERMITS, AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY

APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION. . MAINTAIN RECORD DRAWINGS ON SITE. RECORD SET MUST BE COMPLETE AND CURRENT AND AVAILABLE FOR INSPECTION

GUARANTEE WORK IN WRITING PER SPECIFICATIONS, REPAIR OR REPLACE DEFECTIVE MATERIALS OR INSTALLATION AT NO COST TO OWNER DURING THE GUARANTEE PERIOD. CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE AT NO COST TO OWNER. SUBMIT GUARANTEE TO OWNER BEFORE FINAL PAYMENT.

8. COORDINATE ALL ELECTRICAL ITEMS WITH EXISTING FIELD CONDITIONS. LOCATIONS SHOWN ARE APPROXIMATE AND MAY REQUIRE MINOR ADJUSTMENT IN THE FIELD TO SATISFY THE DESIGN INTENT.

9. DAMAGE TO EXISTING FACILITIES AND EQUIPMENT SHALL BE REPAIRED OR REPLACED IMMEDIATELY BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.

10. THE LOCATIONS ON THESE PLANS ARE APPROXIMATE AND REQUIRE COORDINATION WITH ALL OTHER TRADES AND VERIFICATION OF EXISTING CONDITIONS. ROUTING OF CONDUIT IS DIAGRAMMATIC IN NATURE AND NOT INTENDED TO SHOW ALI REQUIRED OFFSETS AND DETAILS. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING ASSOCIATED EQUIPMENT AND CONDITIONS. COORDINATE THE LOCATION OF ALL EQUIPMENT WITH THE ENGINEER AND THE OWNER. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL OTHER TRADE'S DRAWINGS AND SPECIFICATIONS AND COORDINATING WITH ALL OTHER TRADES DURING BIDDING AND CONSTRUCTION. THE CONTRACTOR IS TO INCLUDE CIRCUIT LENGTHS OF WIRE AND CONDUIT REQUIRED TO INSTALL CONNECTED DEVICES AND EQUIPMENT SUCH AS PANELBOARDS, SWITCHBOARDS,

1. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUITY OF ALL POWER, CONTROL, FIRE ALARM, SECURITY SYSTEMS, AND COMMUNICATIONS FUNCTIONS TO ALL AREAS AFFECTED BY DEMOLITION AND/OR NEW CONSTRUCTION.

12. REPAIR AND PATCH ANY DISTURBED AREAS TO MATCH ADJACENT CONSTRUCTION. 13. DISCONNECT AND MAKE SAFE ANY EQUIPMENT TO BE REMOVED BY OTHERS. COORDINATE REMOVAL OF EQUIPMENT WITH

14. IN ANY AREA REQUIRING THE PERFORMANCE OF ANY TRADE'S WORK, THIS CONTRACTOR SHALL CAREFULLY REMOVE AND STORE ANY OR ALL ELECTRICAL ITEMS IN PATH OF WORK, REINSTALLING, AND RECONNECTING SAME AS REQUIRED, IN ACCORDANCE WITH THE PLANS AND/OR AS DIRECTED AFTER COMPLETION OF OTHER TRADE'S WORK IN THAT AREA.

15. PRIOR TO THE START OF DEMOLITION, CONTRACTOR SHALL FIELD VERIFY ALL BRANCH CIRCUITS AND MAINTAIN THOSE CIRCUITS THAT EXTEND OUTSIDE THE SCOPE OF WORK.

16. AFTER RENOVATING EXISTING ELECTRICAL WORK, THE CONTRACTOR SHALL ENSURE THAT ALL REMAINING AND NEW EQUIPMENT WILL OPERATE PROPERLY, INCLUDING BUT NOT LIMITED TO BACKFEEDING OF EXISTING POWER AND LIGHTING CIRCUITS. REFER TO SINGLE LINE DIAGRAM.

ALL ELECTRICAL WORK INDICATED TO REMAIN SHALL BE SUITABLY PROTECTED TO PREVENT ANY DAMAGE.

18. WHERE ELECTRICAL SYSTEMS PASS THROUGH RENOVATED AREAS TO SERVE OTHER PORTIONS OF THE PREMISES, SYSTEMS SHALL BE SUITABLY PROTECTED TO PREVENT DAMAGE OR RELOCATED AND THE SYSTEMS RESTORED TO NORMAL OPERATION. ANY OUTAGES IN SYSTEMS SHALL BE COORDINATED WITH OWNER. RESTORE POWER TO EXISTING TO REMAIN EQUIPMENT IF INTERRUPTED BY DEMOLISHED CIRCUITS IN THE AREA.

19. CONTRACTOR SHALL SUBMIT FOR REVIEW, SHOP DRAWINGS FOR ALL EQUIPMENT AND MATERIALS USED ON THE PROJECT. SUBMITTALS SHALL BE REVIEWED BY THE ENGINEER BEFORE PURCHASE OF MATERIALS.

20. ALL WIRING SHALL BE COPPER, 600V, 75°/90° RATED WITH FLAME-RETARDENT, HEAT AND MOISTURE RESISTANT INSULATION. 21. PERMANENTLY LABEL ALL NEW ELECTRICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO, DEVICE DESIGNATION AND SUPPLY CIRCUIT DESIGNATION. UPDATE OR REPLACE PANEL DIRECTORIES TO INCLUDE NEW CIRCUIT INFORMATION RESULTING FROM

22. PROVIDE TEMPORARY POWER AND LIGHTING FOR ALL TRADES AS REQUIRED TO COMPLETE THE PROJECT. ALL TEMPORARY AND INTERIM EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND STANDARDS INCLUDING, BUT NOT LIMITED TO NFPA 110 AND NFPA 70.

23. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION THAT IS NOT SHOWN ON THE DRAWINGS.

24. OPENINGS IN EXISTING CONCRETE AND MASONRY WALLS AND FLOORS REQUIRED FOR CONDUIT INSTALLATION SHALL BE CORE DRILLED. MAXIMUM CORE DRILL SIZE SHALL BE 5" IN DIAMETER. CORE DRILL LOCATIONS SHALL BE SPACED A MINIMUM OF 6" FROM EACH OTHER MEASURED FROM THE OUTSIDE EDGE OF THE CORE DRILL. ALL CORE DRILL OPENINGS SHALL BE PROPERLY SEALED ACCORDING TO THEIR LOCATION AND APPLICATION.

25. ALL OUTAGES SHALL BE KEPT TO A MINIMUM. ALL WORK THAT REQUIRES A SUSTAINED EQUIPMENT OUTAGE SHALL BE PERFORMED CONTINUOUSLY AROUND THE CLOCK UNTIL WORK IS COMPLETED UNLESS NOTED OTHERWISE. COORDINATE OUTAGES WITH OWNER REPRESENTATIVE.

26. PROVIDE FOR EACH BRANCH CIRCUIT AND FEEDER CIRCUIT A DEDICATED EQUIPMENT GROUND WIRE. FOR SINGLE PHASE BRANCH CIRCUITS OF 120 V/1PH OR 277V/1 PH, PROVIDE DEDICATED HOT, DEDICATED NEUTRAL AND DEDICATED EQUIPMENT GROUND WIRES. SHARING OF NEUTRAL OR EQUIPMENT GROUND WIRES IS NOT PERMITTED. WIRING TO ALL HVAC EQUIPMENT OR OTHER TRADE EQUIPMENT SHALL BE IN CONDUIT. ALL EQUIPMENT AND FEEDER WIRING IN MECHANICAL ROOM/ELECTRICAL ROOM SHALL BE IN RIGID CONDUIT. USE OF MC CABLE IS LIMITED TO BRANCH CIRCUIT WIRING ABOVE RECESSED CEILING OR CONCEALED IN WALL. WIRING TO OUTLETS ON TABLE SHALL BE PROVIDE IN EITHER EMT CONDUIT OR FLEXIBLE METAL CONDUIT.

27. PROVIDE IDENTIFICATION LABELS FOR ALL BRANCH CIRCUITS AND FEEDERS CIRCUITS AT JUNCTION BOXES, PANELBOARDS, TROUGHS, AND SPLICE BOXES.

28. PROVIDE UNSPLICED FEEDERS FROM PANELBOARD OR SWITCHBOARD TO ALL EQUIPMENT, INCLUDING ALL 20 AMPERE, SINGLE POLE BRANCH CIRCUIT WIRING.

29. ALL WIRING DEVICES ARE TO BE RECESSED WHERE POSSIBLE. WHERE RECESSING IS NOT POSSIBLE, WIRING DEVICES ARE TO BE SURFACE MOUNTED WITH CIRCUIT WIRING ROUTED IN SURFACE MOUNTED CONDUIT PER SPECIFICATIONS.

30. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL (2) #14-3/4" FROM EACH VENDOR SUPPLIED DUCT SMOKE DETECTOR TO FACP. INSTALLATION OF DETECTOR BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL

NECESSARY ELECTRICAL TERMINATIONS. EACH BLOWER COIL (BC) AND EACH ENERGY RECOVERY VENTILATOR (ERV) WILL HAVE (1) SUPPLY DUCT SMOKE DETECTOR AND (1) RETURN DUCT SMOKE DETECTOR. 31. VFD CABLE SHALL BE OKONITE C-L-X TYPE MC-HL (XHHW2) OR APPROVED EQUAL. 3/C VFD CABLE SHALL BE RATED FOR 600 /1000

V MARINE CABLE AND UL LISTED AS TYPE MC-HL CABLE PER UL2225(E38916). VFD CABLES SHALL HAVE UNCOATED SOFT

COPPER STRANDED CONDUCTORS RATED FOR 90 DEG CENTIGRADE WET OR DRY CROSS LINK POLYETHELENE HIGH

DIELECTRIC STRENGTH COLOR CODED INSULATION, AND THREE BARE SOFT STRANDED GROUND CONDUCTORS WITH NON-HYGROSCOPIC FILLER AND BINDER TAPE. SHEATH SHALL BE CLOSE FITTING, IMPERVIOUS, CONTINOUS WELDED

CORRUGATED ALUMINUM C-L-X PER UL1569. SHEATH SHALL BE PROTECTED WITH LOW TEMPERATURE BLACK PVC JACKET. CONTRACTOR SHALL PROVIDE PROPER FITTINGS FOR INSTALLATION OF VFD CABLE.

32. ALL CONDUIT PENETRATIONS THROUGH WALLS OR CEILINGS SHALL BE PATCHED AND SEALED WITH FIRE RATED FOAM SEALANT.

33. PROVIDE INSULATING BUSHINGS ON CONDUIT THREADS OR CONNECTORS WHERE RACEWAYS WITH CONDUITS OR MC CABLES

ENTER A BOX OR ENCLOSURE. THIS BUSHING SHALL BE INSTALLED ON ALL CABLES AND CONDUITS.

34. PROVIDE FIRE ALARM RATED MC CABLE FOR CONNECTIONS BETWEEN FIRE ALARM DEVICES. MC CABLE SHALL RUN CONCEALED

ABOVE CEILINGS AND IN DRYWALL. WHERE EXPOSED, PROVIDE EMT; NO EXPOSED MC CABLE IS PERMITTED.

35. (N) DENOTES NEW EQUIPMENT OR WIRING. (E) DENOTES EXISTING EQUIPMENT OR WIRING TO REMAIN.

(D) DENOTES EQUIPMENT OR WIRING TO BE DEMOLISHED.

FIRE ALARM SYSTEM

TELECOMMUNICATION GENERAL NOTES

I. ALL LOW VOLTAGE CABLING MUST BE INSTALLED ACCORDING TO BICSI GUIDELINES.

- 2. ALL CABLING SHALL CONFORM TO THE LATEST EDITION OF THE EIA/TIA STANDARDS.
- 3. ALL CABLING SHALL BE APPROPRIATELY LABELED.
- 4. CONTRACTOR SHALL NOT INSTALL ANY EQUIPMENT PRIOR TO ITS APPROVAL BY THE ARCHITECT AND ENGINEER. CONTRACTOR WILL BE LIABLE FOR ITS REMOVAL IN ANY SUCH CASE.
- 5. PROVIDE A COMPLETE GROUNDING SYSTEM FOR ALL LOW VOLTAGE SYSTEMS AS SHOWN.
- CONTRACTOR TO PROVIDE PATHWAYS FOR LOW VOLTAGE SYSTEMS. PATHWAYS SHALL CONSIST OF IN-WALL CONDUIT, SURFACE MOUNTED SPLIT CHANNEL METALLIC RACEWAY, BACK BOXES, SLEEVES, CHASES, CABLE TRAY AND J-HOOKS. ANY PENETRATION OF A FIRE-RATED BARRIER MUST BE FIRE-STOPPED IN ACCORDANCE WITH LOCAL AND STATE LAWS AND THE AUTHORITY HAVING JURISDICTION.
- PRIOR TO BEGINNING ANY WORK, SECURE NECESSARY PERMITS OR CLEARANCES FROM THE AUTHORITIES HAVING JURISDICTION. PROVIDE ALL LABOR AND MATERIALS FOR A COMPLETE INSTALLATION. WORK SHALL BE EXECUTED BY EXPERIENCED TRADESMEN WHO ARE LICENSED IN THE JURISDICTION WHERE THE PROJECT IS LOCATED.
- 8. CONDUITS SHALL BE RUN BEHIND FINISHED SURFACES WHERE POSSIBLE UNLESS OTHERWISE NOTED. 9. THE TELECOMMUNICATION PLANS ARE DIAGRAMMATIC ONLY. COORDINATE TECHNOLOGY EQUIPMENT LOCATION AND INSTALLATION WITH EQUIPMENT BEING SERVED.
- 10. CONTRACTOR SHALL INFORM THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION AND PRIOR TO COMPLETION OF
- 11. THE CONTRACTOR SHALL INCLUDE IN THE WORK, WITHOUT EXTRA COST, ANY LABOR, MATERIALS, SERVICES, APPARATUS, DRAWINGS (IN ADDITION TO CONTRACT DRAWINGS AND DOCUMENTS), IN ORDER TO COMPLY WITH ALL APPLICABLE LAWS, INDICATED AND/OR SPECIFIED.
- BEFORE SUBMITTING BIDS, THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE ALL ADJOINING EXISTING BUILDINGS, EQUIPMENT AND SPACE CONDITIONS ON WHICH HIS/HER WORK IS ANY WAY DEPENDENT FOR THE BEST WORKMANSHIP AND OPERATION ACCORDING TO THE INTENT OF THE SPECIFICATIONS AND DRAWINGS. HE/SHE SHALL REPORT TO THE ARCHITECT/ENGINEER ANY CONDITION WHICH MIGHT PREVENT HIM/HER FROM INSTALLING HIS/HER EQUIPMENT IN THE MANNER SPECIFIED TEN DAYS PRIOR TO SUBMISSION OF BIDS.
- 13. NO CONSIDERATION OR ALLOWANCE WILL BE GRANTED FOR FAILURE TO VISIT THE SITE, NOR FOR ANY ALLEGED MISUNDERSTANDING OF MATERIALS TO BE FURNISHED OR WORK TO BE PERFORMED.
- 14. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCOVERED CONFLICTS BETWEEN EXISTING INSTALLATIONS WHICH ARE NOT SCHEDULED FOR DEMOLITION AND THE NEW WORK INDICATED WITHIN THE CONTRACT DOCUMENTS. SUCH NOTIFICATION SHALL BE ACCOMPANIED BY A DRAWING DELINEATING THE PROPOSED SOLUTION PRIOR TO STARTING ANY WORK IN THE AFFECTED AREA.
- 15. THE EXACT NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL SYSTEMS. PROVIDE ALL WIRES AND CABLES NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM WHETHER INDICATED ON PLAN OR NOT. 16. REFER TO ARCHITECTURAL DRAWINGS FOR THE FINISH, EXACT LOCATION, ELEVATION, MOUNTING HEIGHTS AND DETAILS OF ALL LIGHT
- FIXTURES AND DEVICES WITHIN THE CEILING GRID FOR COORDINATION WITH TECHNOLOGY EQUIPMENT. REPORT ANY DISCREPANCIES TO THE ARCHITECT IMMEDIATELY. 2. WHEREVER CONDUITS PENETRATE WALLS OR FLOORS, SPACE REMAINING IN SUCH PENETRATIONS SHALL BE FILLED. FILLING MATERIAL
- SHALL BE FIRE RESISTIVE WITH RATING EQUAL TO THE RATING OF THE FLOOR OR WALL ITSELF. 18. PROVIDE AND LEAVE ACCESSIBLE PULL STRINGS IN ALL CONDUITS, RACEWAYS, SLEEVES AND CHASES TO LOW VOLTAGE WIRING TO BE
- INSTALLED.
- 19. OUTLET BOXES INSTALLED ON OPPOSITE SIDES OF THE SAME PARTITION SHALL BE STAGGERED. DO NOT MOUNT OUTLET BOXES BACK TO BACK
- 20. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS, CUT SHEETS, CALCULATIONS AND EQUIPMENT LITERATURE FOR ALL EQUIPMENT BEING PROVIDED AS PART OF THIS SCOPE OF WORK. THE EXACT DEVICE OR PIECE OF EQUIPMENT TO BE INSTALLED MUST BE CLEARLY CALLED OUT FOR THE DESIGN TEAM TO REVIEW. 21. CONTRACTOR SHALL PROVIDE COMPLETE AS-BUILT DRAWINGS FOR REVIEW AND APPROVAL BY THE DESIGN TEAM PRIOR TO JOB
- COMPLETION. 22. CONTRACTOR SHALL PROVIDE A COMPLETE PUNCH LIST OF ALL INSTALLED SYSTEMS TO THE CONSTRUCTION MANAGER WHEN THE INSTALLED WORK IS READY TO BE EXAMINED BY THE DESIGN TEAM. INCOMPLETE SYSTEMS SHALL NOT BE REVIEWED UNTIL IT IS DETERMINED THAT THE SYSTEMS ARE APPROXIMATELY COMPLETE.
- 23. ALL TELECOMMUNICATIONS CABLING SHALL BE PLENUM RATED CAT6, 4 PAIRS, UNSHIELDED TWISTED PAIR CABLE, HUBBELL CAT NO C6RPX OR EQUAL ROUTED BETWEEN TELE/DATA ROOM AND EACH VOICE AND/OR DATA JACK. THE USE OF J-HOOKS IS PERMITTED IN AREAS WITH A SUSPENDED CEILING WHERE ADEQUATE CLEARANCE CAN BE OBTAINED. ALL WIRING IN SPACES WITHOUT CEILINGS OR AREAS WITH INADEQUATE SPACE ABOVE THE CEILING SHALL BE RUN IN EMT. PROVIDE TERMINATIONS AT BOTH PATCH PANEL AND OUTLET. PROVIDE CAT6 PATCH CORDS (36" L) FOR CONNECTION OF PATCH PANEL TO FUTURE ETHERNET SWITCH. CONTRACTOR SHALL TONE/TEST/TERMINATE ALL CONNECTIONS. PROVIDE ADDITIONAL CAT6 48 PORT PATCH PANEL(S) IN MDF OR IDF, AS APPLICABLE, AS REQUIRED TO SUPPORT ADDITIONAL DATA CONNECTIONS IN MDF/IDF. DATA PATCH PANELS SHALL BE HUBBELL M/N HP648 OR APPROVED EQUAL.

24. CABLE AND JACKS SHALL BE OF TYPE AND COLOR SHOWN:

FUNCTION	TYPE	CABLE AND JACK
DATA	CAT6	BLUE
VOICE	CAT6	WHITE
VIDEO	CAT6	YELLOW
WAP	CAT6A	PURPLE
CATV	RG6	ORANGE

				LIGHTING FIX1	URE SCHEDULE	
TYPE	LAMPS	VOLTAGE	MOUNT	FIXTURE DESCRIPTION	MANUFACTURER/CATALOG NUMBER	REMARKS
A	LED 4698 LUMENS	120/277	SUSPENDED	1'X8' SUSPENDED LED LIGHT	LEDALITE FLOATPLANE 24-L-A-E-A-J-08-7-D-E-W-N-A1 OR APPROVED EQUAL	PROVIDE MOUNTING HARDWARE AS REQUIRED. MOUNT FIXTURES AT 9'-0" A.F.F.
В	LED 2229 LUMENS	120/277	WALL-MOUNT	1'X4' WALL-MOUNT LED LIGHT	LEDALITE FLOATPLANE 24-L-A-E-A-J-04-7-D-E-W OR APPROVED EQUAL	PROVIDE MOUNTING HARDWARE AS REQUIRED. MOUNT FIXTURES AT 8'-6" A.F.F.
с	LED 3061 LUMENS	120/277	RECESSED	HIGH EFFICIENCY 6" LED DOWNLIGHT	PRESCOLITE LF6ML-DM1-277-6LFML30L-40K-8 OR APPROVED EQUAL	ARCHITECT TO SELECT COLOR AND TRIM FINISHES. PROVIDE MOUNTING HARDWARE AS REQUIRED.

CONSTRUCTION TO ALLOW SUFFICIENT TIME FOR COORDINATION OF EXISTING BUILDING ACTIVITIES WITH THE CONSTRUCTION WORK.

ELECTRICAL ABBREVIATIONS

(D) - DENOTES EQUIPMENT OR WIRING TO BE DEMOLISHED (E) - DENOTES EXISTING EQUIPMENT OR WIRING TO REMAIN N) - DENOTES NEW EQUIPMENT OR WIRING

A - AMPS AC - ABOVE CEILING AF - AMPERE FRAME AFF - ABOVE FINISHED FLOOR AT - AMPERE TRIP **ATS - AUTOMATIC TRANSFER SWITCH** BLDG - BUILDING C - CONDUIT

CB - CIRCUIT BREAKER DISC - DISCONNECT ENCL - ENCLOSURE FA - FIRE ALARM G - GROUND

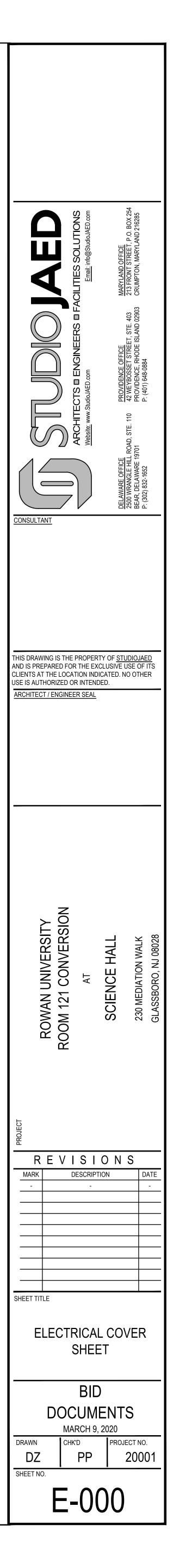
GE - GENERAL ELECTRIC GFCI - GROUND FAULT CIRCUIT INTERRUPTER KA - KILO AMPERE KV - KILO VOLT KVA - KILO VOLT AMPERE LG - LG CORPORATION

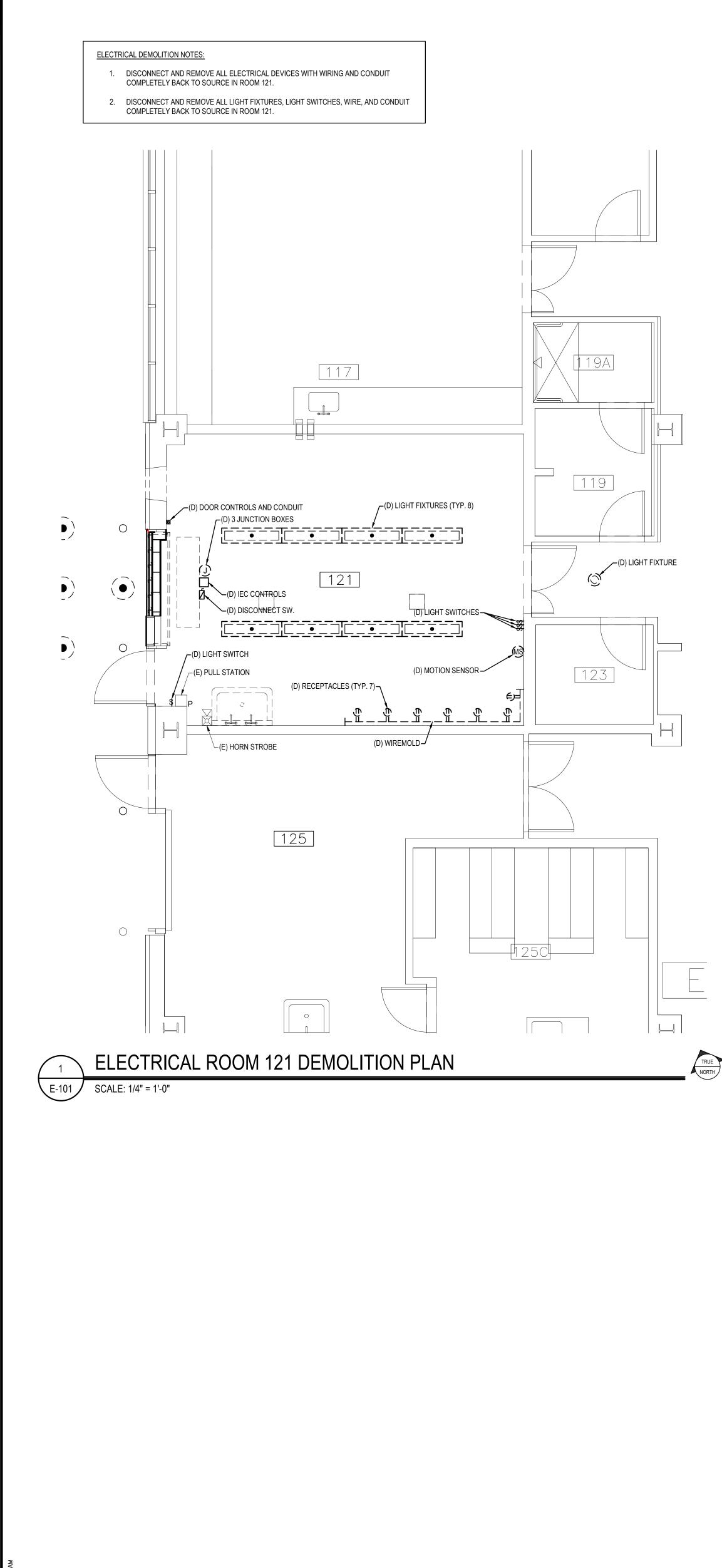
LI - LONG TIME + INSTANTANEOUS LSI - LONG TIME + SHORT TIME + INSTANTANEOUS MCB - MINIATURE CIRCUIT BREAKER MCCB - MOLDED CASE CIRCUIT BREAKER MDP - MAIN DISTRIBUTION PANEL MTS - MANUAL TRANSFER SWITCH MVASC - MEGA VOLT AMPERE SHORT CIRCUIT NTS - NOT TO SCALE OC - ON CENTER PH - PHASE PNL - PANEL QO - QWIK OPEN PROTECTION SP - SPEAKER SPD - SURGE PROTECTIVE DEVICE SW - SWITCH SWBD - SWITCHBOARD UG - UNDERGROUND **UPS - UNINTERRUPTIBLE POWER SOURCE** V - VOLTS W - WATTS OR WIRE WP - WEATHERPROOF

XFMR - TRANSFORMER

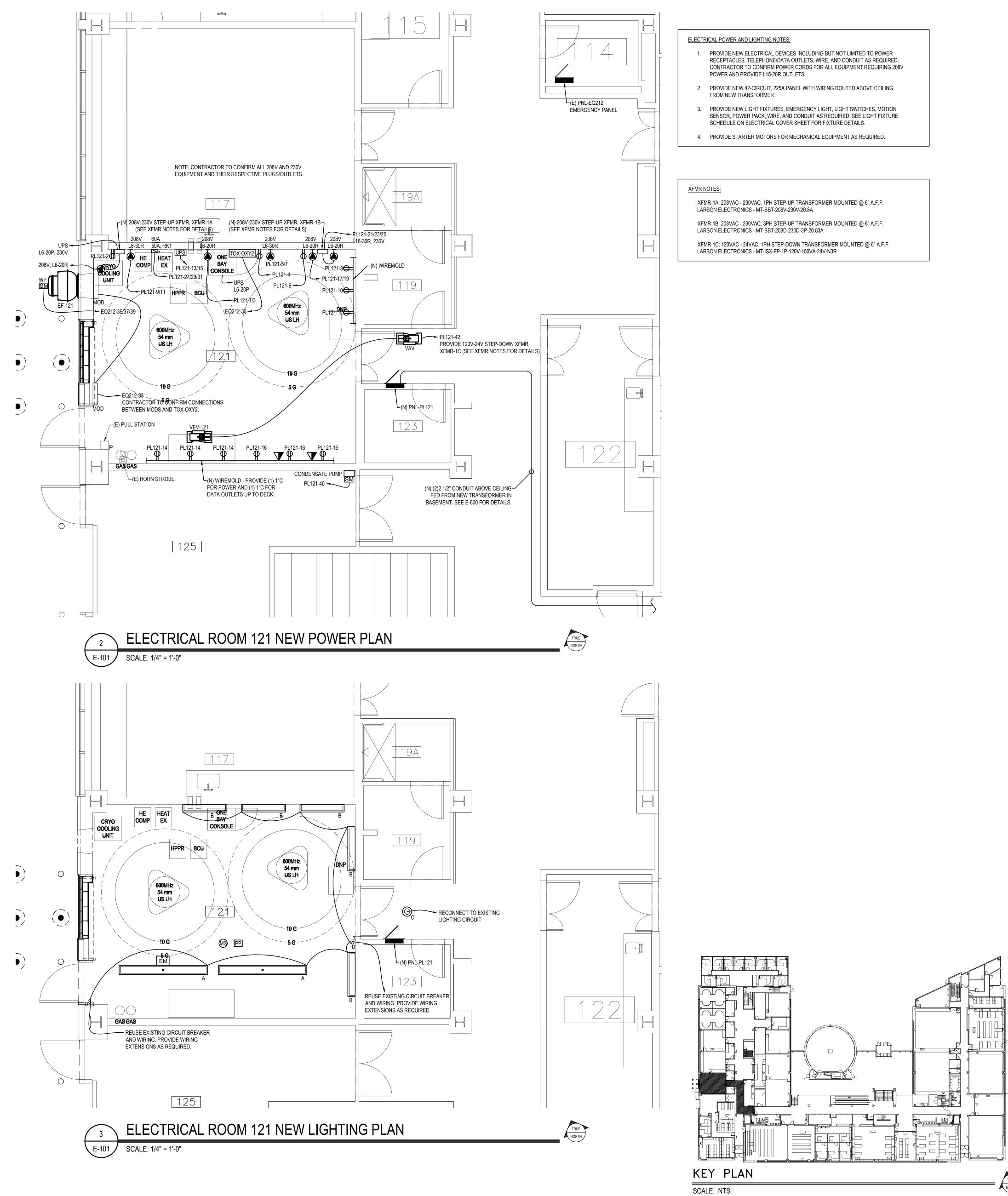
Z - IMPEDANCE

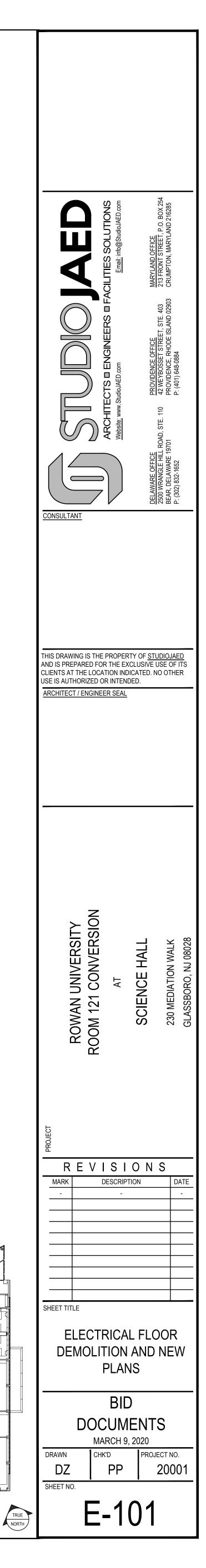
GRAPHIC CONVENTIONS Wiring Devices Disconnects I 30A. WP - DISCONNECT SIZE, WP: WEATHER 20A. RK1 PROOF DESIGNATION DESIGNATION FUSE SIZE, OUTLETS TO BE MOUNTED AT TYPE RK1 STANDARD HEIGHT UNLESS OTHERWISE NOTED Lighting Fixtures Lighting Switches TYPE: A - LUMINAIRE TYPE - SEE LIGHT FIXTURE SCHEDULE PLA-11-d ----- CONTROL DEVICE IDENTIFICATION DEVICE TYPE DESIGNATION - BRANCH CIRCUIT NUMBER — PANEL DESIGNATION

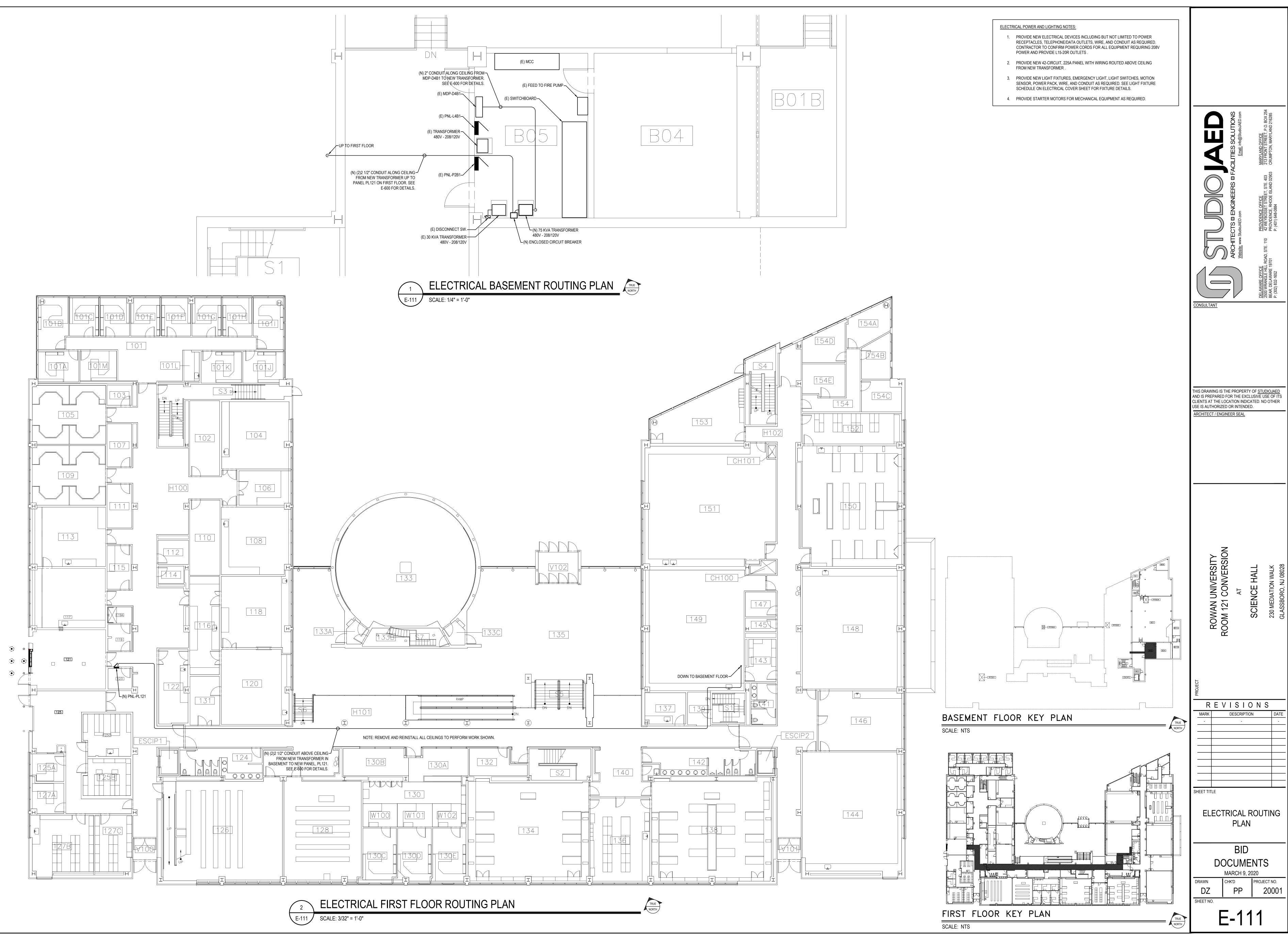




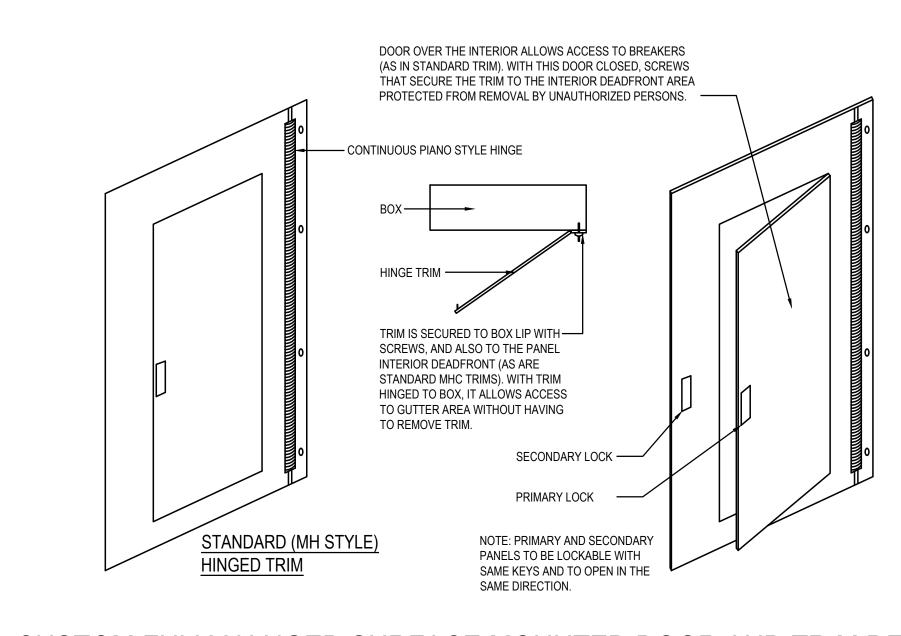






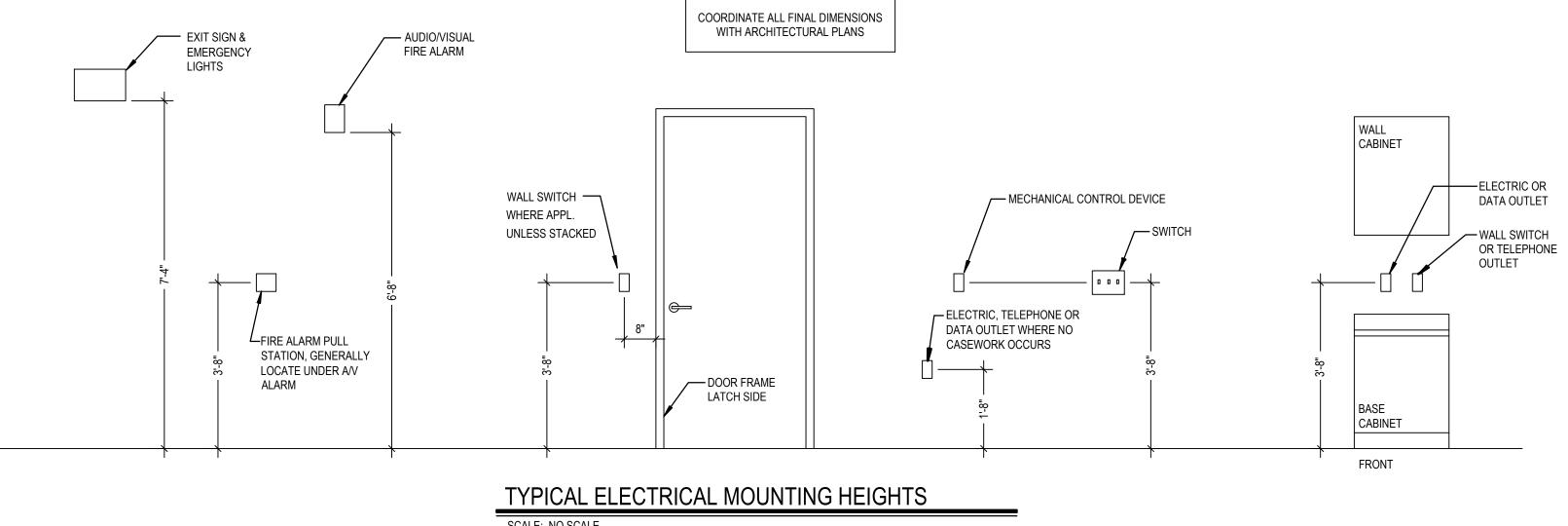




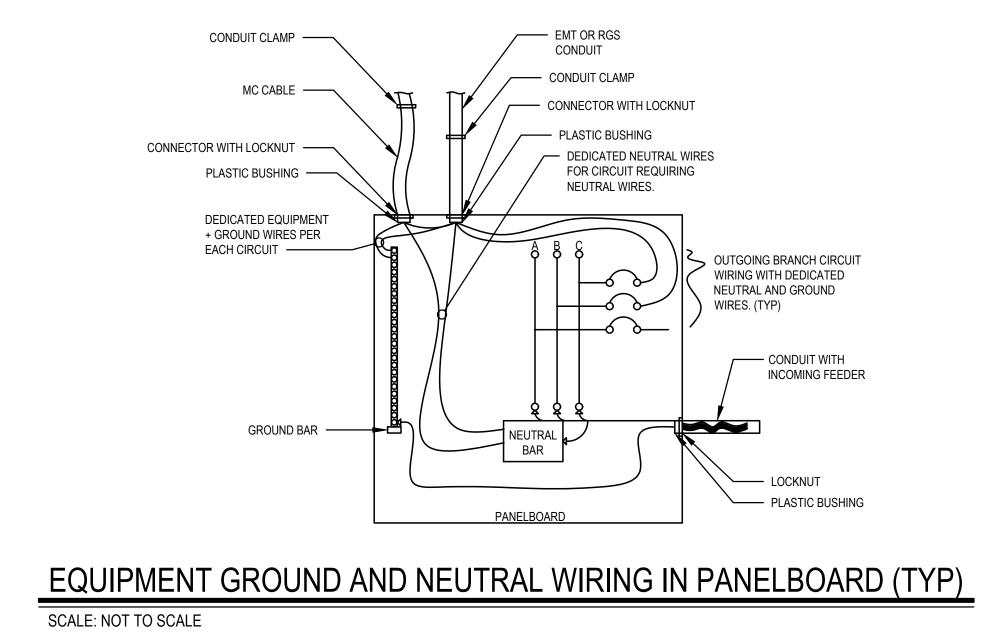


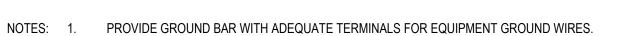




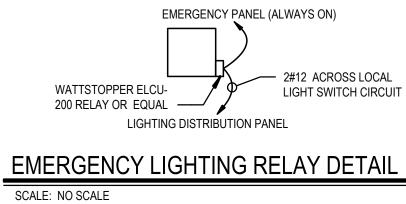


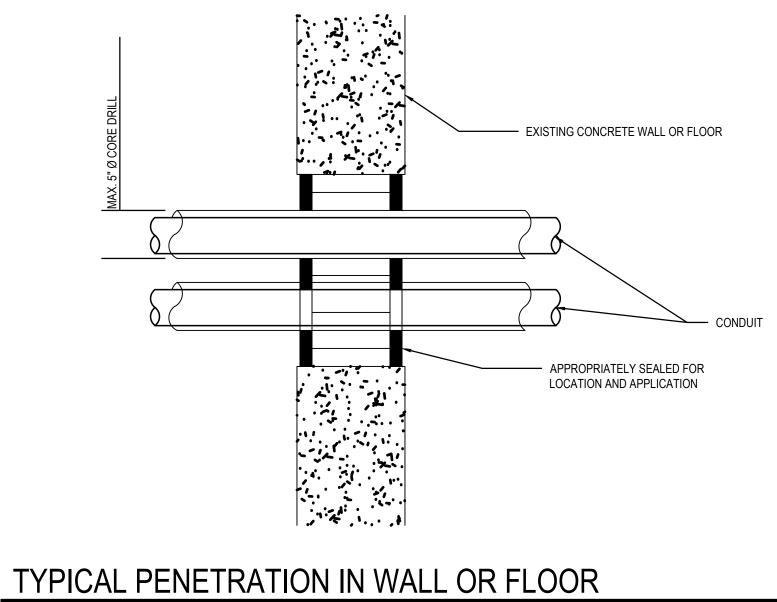
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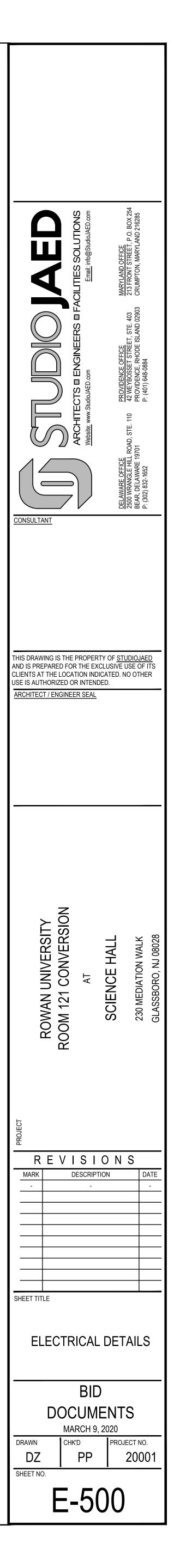


DOUBLE LUGGING OF NEUTRAL OR EQUIPMENT GROUND WIRES IS NOT PERMITTED. NUMBER OF NEUTRAL AND EQUIPMENT GROUND WIRES VARY BY PANEL AND BRANCH CIRCUITS. - 3.

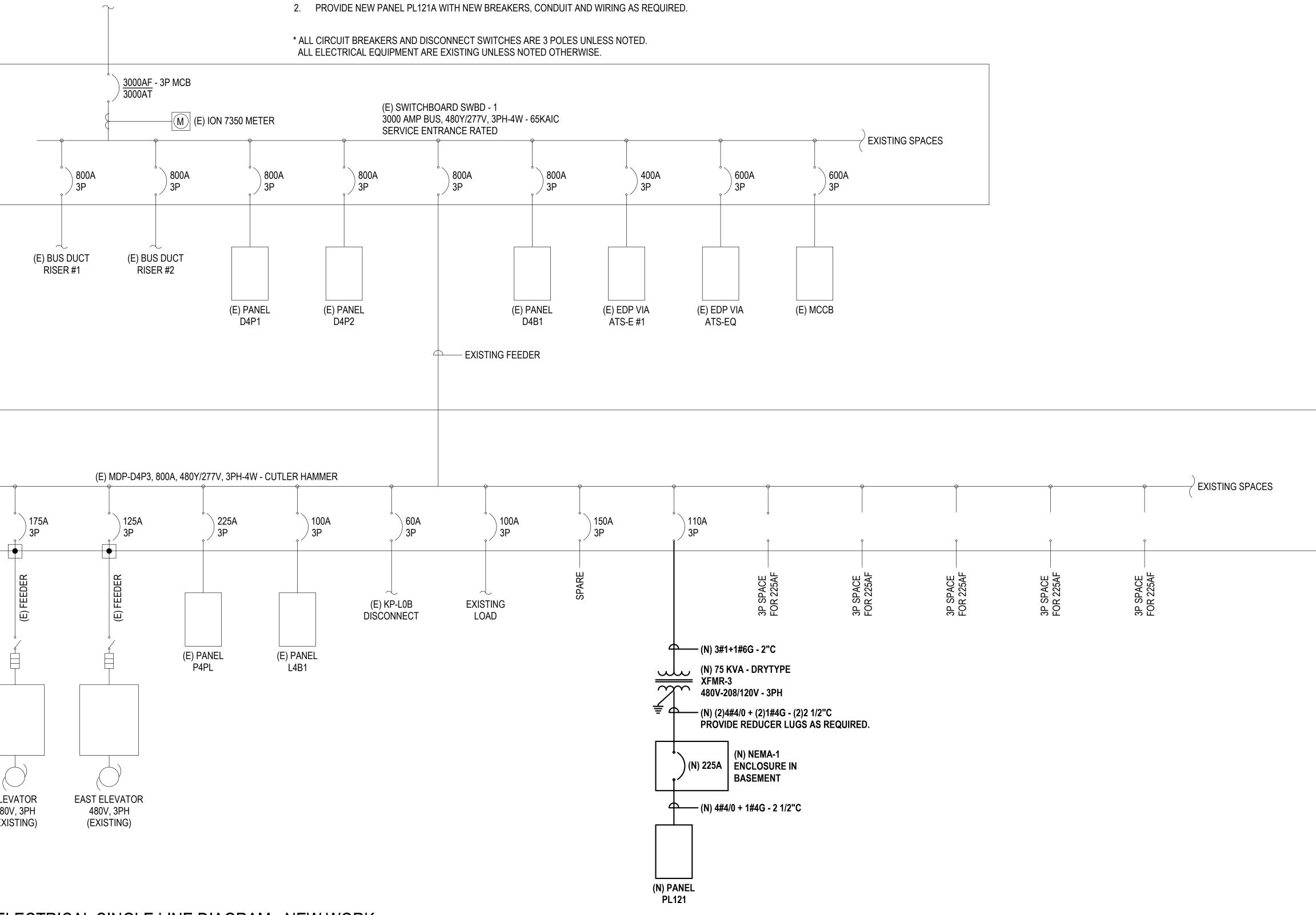


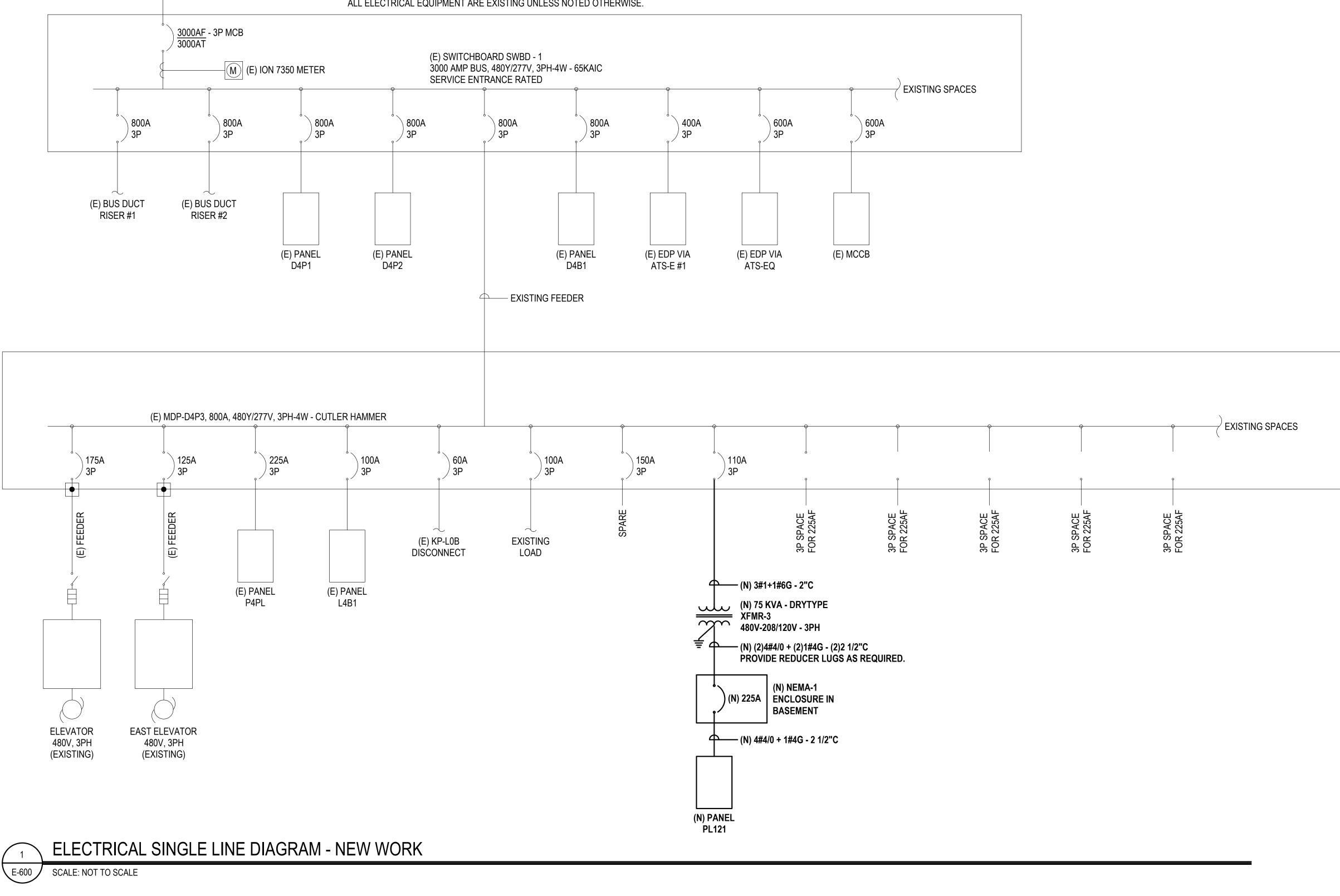


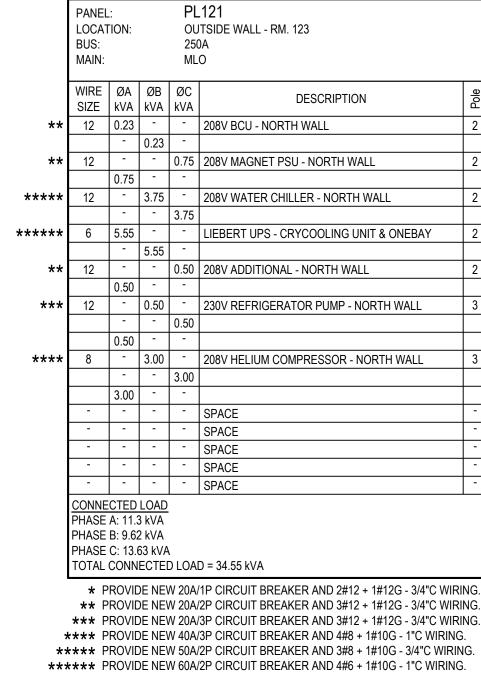
SCALE: NOT TO SCALE







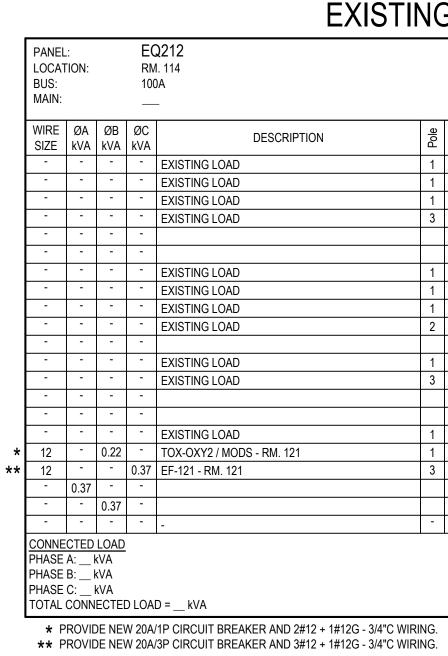




NEW WORK NOTES:

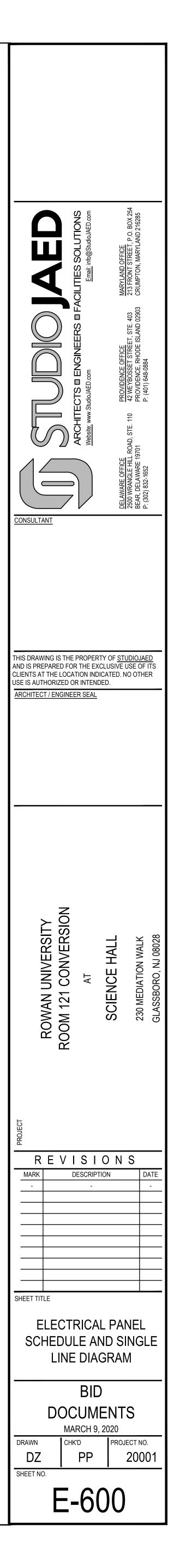
1. PROVIDE NEW TRANSFORMER XFMR-3 WITH CONDUIT AND WIRING AS REQUIRED.

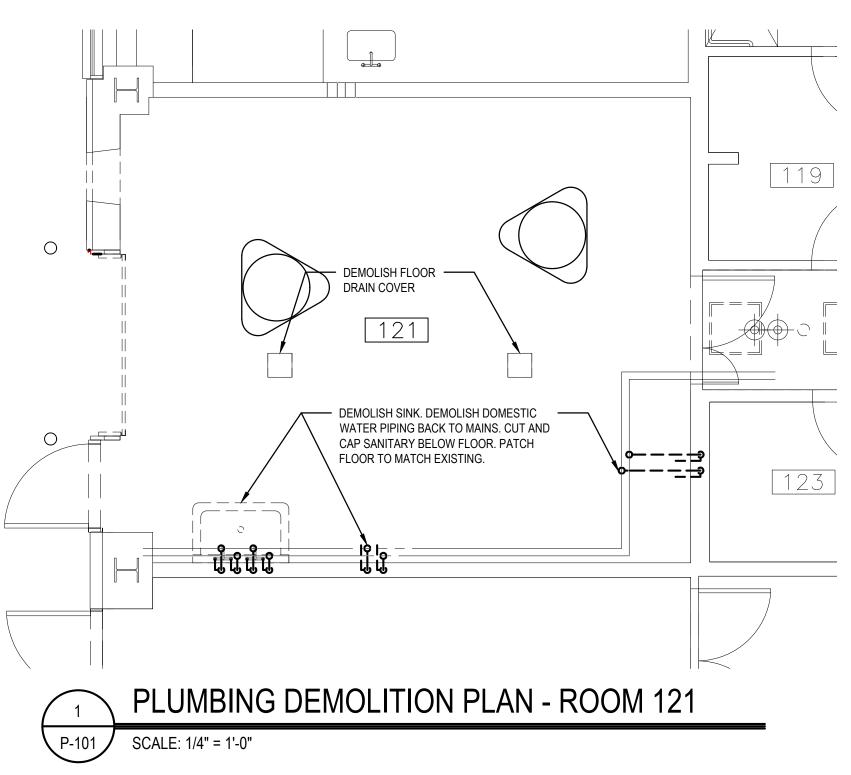
									VOLTAGE: ENCLOSURE: A.I.C: RATINGS:							
TION	Pole	Br	Ckt		Ø	Ckt	Br	Pole	DESCRIPTION	ØA kVA	ØB kVA	ØC kVA	WIRE SIZE			
	2	20	1	┠┲╇		2	20	1	RECEPTS NORTH WALL	0.18	-	-	12			
			3		<	4	20	1	RECEPTS NORTH WALL	-	0.18	-	12			
WALL	2	20	5	╞╢┿	┼┿╱	6	20	1	RECEPTS NORTH WALL	-	-	0.18	12			
			7	╞ᢩᡣᢩᆃ	++	8	20	1	RECEPTS EAST WALL	0.18	-	-	12			
RTH WALL	2	50	9	FT+-	+	10	20	1	RECEPTS EAST WALL	-	0.18	-	12			
			11	$\uparrow\uparrow$	┼┿॒॒	12	20	1	RECEPTS EAST WALL	-	-	0.18	12			
G UNIT & ONEBAY	2	60	13	┠╢┿─	++	- 14	20	1	RECEPTS SOUTH WALL	0.54	-	-	12			
			15	P_{-}	┥┼╱	- 16	20	1	RECEPTS SOUTH WALL	-	0.54	-	12			
WALL	2	20	17	┣┲┿	┼┿╌	- 18	-	-	SPACE	-	-	-	-			
			19	┠╱┿─	++	20	-	-	SPACE	-	-	-	-			
- NORTH WALL	3	20	21	1]	┥┼⌒	- 22	-	-	SPACE	-	-	-	-			
			23	┣┲╄┿	┼─┿──	- 24	-	-	SPACE	-	-	-	-			
			25	┞╱┿	++	26	-	-	SPACE	-	-	-	-			
R - NORTH WALL	3	40	27	ŀ∕T∔-	↓ ∩	28	-	-	SPACE	-	-	-	-			
			29	∕↑	┼┿╌	30	-	-	SPACE	-	-	-	-			
			31	┞╱┿	++	32	-	-	SPACE	-	-	-	-			
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		-	35	$\mid \uparrow \downarrow$	┼┿∩	36	-	-	SPACE	-	-	-	-			
		-	37	┞╱┿	++	- 38	-	-	SPACE	-	-	-	-			
		-	39	$\mid \uparrow \downarrow$	↓ ↓∩	40	20	1	CONDENSATE PUMP - VCMA-15	-	0.12	-	12			
	-	-	41			42	20	1	VAV/VEV-121	-	-	0.05	12			



EXISTING EMERGENCY PANEL

								VOLTA ENCLO A.I.C: RATING	SURE:	208/120 NEMA- 		H-4W		
Pole	Br	Ckt	Ø		Ckt	Br	Pole	DESCRIPTION	N		ØA kVA	ØB kVA	ØC kVA	WIRE SIZE
1	20	1	A B		2	20	1	EXISTING LOAD			-	-	-	-
1	20	3	-^	$+ \uparrow$	4	20	1	EXISTING LOAD			-	-	-	-
1	20	5	$ \rightarrow + $	∳^_	6	20	1	EXISTING LOAD			-	-	-	-
3	30	7	-₽+	<u>-</u> - ↑-	8	20	2	EXISTING LOAD			-	-	-	-
		9	-↑+-♦	+	10						-	-	-	-
		11	_^	∳^_	12	20	1	EXISTING LOAD			-	-	-	-
1	20	13	-∕+	$-\uparrow$	14	20	1	EXISTING LOAD			-	-	-	-
1	20	15		$+ \uparrow$	16	20	1	EXISTING LOAD			-	-	-	-
1	20	17	$ \frown \downarrow \downarrow$	∲	18	60	3	EXISTING LOAD			-	-	-	-
2	30	19	-∕T♦	<u>_</u>	20						-	-	-	-
		21	∽⊢♠	$+ \uparrow$	22						-	-	-	-
1	20	23	$\frown \vdash$	∳^_	24	20	1	EXISTING LOAD			-	-	-	-
3	100	25	-∩∔	$-\uparrow$	26	20	1	EXISTING LOAD			-	-	-	-
		27	₋∕↑┼₋∳	$-\uparrow$	28	20	1	EXISTING LOAD			-	-	-	-
		29	\wedge		30	20	1	EXISTING LOAD			-	-	-	-
1	20	31	\frown	$- \uparrow \uparrow$	32	20	1	EXISTING LOAD			-	-	-	-
1	20	33		$ \square $	34	-	-	-			-	-	-	-
3	20	35	┲╞┹		36	-	-	-			-	-	-	-
		37	₼े	$ \square $	38	-	-	-			-	-	-	-
		39		$ \square $	40	-	-	-			-	-	-	-
-	-	41			42	-	-	-			-	-	-	-





GENERAL PLUMBING NOTES 1. SEE THE ARCHITECTURAL DRAWINGS FOR INFORMATION ON THE SCOPE OF CONSTRUCTION. 2. COLLECT FIXTURE VENTS IN VENT HEADER ABOVE CEILING AND CONNECT TO CLOSEST EXISTING VTR OR BRANCH VENT (OF THE SAME OR LARGER SIZE). 3. FOR ALL EQUIPMENT REQUIREMENTS, REFER TO SPECIFICATIONS, PLUMBING SCHEDULE OR DRAWINGS. CONTRACTOR SHALL NOT INSTALL EQUIPMENT/MATERIALS UNTIL SAME IS APPROVED. 4. INSTALL WATER HAMMER ARRESTORS IN DOMESTIC WATER PIPING AS REQUIRED PER P.D.I. WH-201 STANDARDS FOR WATER HAMMER ARRESTORS. 5. PROVIDE TRAPS FOR ALL PLUMBING EQUIPMENT CONNECTIONS AND/OR IN ANY SANITARY PIPING AS REQUIRED BY THE APPLICATION. 6. PRIOR TO SUBMITTING BID, THE CONTRACTOR/BIDDER SHALL VISIT THE SITE AND BE THOROUGHLY FAMILIAR WITH THE EXISTING CONDITIONS AND PROPOSED CONSTRUCTION. CONTRACTOR/BIDDER SHALL INCLUDE IN THEIR BID ALL MATERIALS, LABOR AND ALL INCIDENTALS FOR A COMPLETE INSTALLATION WHETHER SPECIFICALLY INDICATED OR NOT. ALL ERRORS, DISCREPANCIES AND MISSED ITEMS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER DURING THE BIDDING PROCESS BY THE CONTRACTOR/BIDDER. THESE ITEMS SHALL BE INCLUDED IN THE BID PRICE. NO EXTRA COST WILL BE ALLOWED FOR ANY DISCREPANCY WHICH COULD HAVE BEEN NOTICED AT THE SITE BY THE CONTRACTOR/BIDDER. 7. ALL INSTALLATIONS SHALL COMPLY WITH ALL CODES OR REGULATIONS, LOCAL, STATE, OR NATIONAL HAVING JURISDICTION OVER THE PROJECT. 8. ALL FIXTURES AND PIPING INSTALLATIONS SHALL BE PROPERLY BRACED, RIGIDLY SUPPORTED, AND INSTALLED WITH ADEQUATE VIBRATION ISOLATION AND INSULATION. 9. PROVIDE ALL LABOR, MATERIALS, AND INSTALLATION APPARATUS TO INSURE A COMPLETE OPERATING SYSTEM IMPLIED BY DRAWING CONTENT AND AS SPECIFIED. 10. THOROUGHLY COORDINATE ALL PLUMBING INSTALLATIONS WITH WORK OF OTHER CONSTRUCTION DISCIPLINES. 11. SEAL ALL RESPECTIVE WALL, FLOOR, AND CEILING/ROOF PENETRATIONS AS APPROPRIATE TO MAINTAIN A WEATHER TIGHT ENCLOSURE, FIRE BARRIER, SMOKE BARRIER, ETC. AS APPLICABLE. REFER TO ARCHITECTURE PLANS FOR SMOKE AND FIRE BARRIERS/PARTITIONS. 12. CONTRACTOR TO PAY FOR ALL FEES AND PERMITS ASSOCIATED WITH PLUMBING WORK INDICATED AS NECESSARY TO SECURE A COMPLETE AND OPERATIONAL SYSTEM ON SCHEDULE AND IN A TIMELY MANNER. 13. CONNECT DHW, DCW, DHWR VENT, AND SOIL & WASTE LINES TO FIXTURES IN ACCORDANCE WITH SIZES INDICATED ON FIXTURE SCHEDULE. 14. RUN 2" MINIMUM SIZES SOIL & WASTE PIPING BELOW GROUND INSIDE BUILDING REGARDLESS OF SIZE ON FIXTURE CONNECTION SCHEDULE. 15. ALL DIMENSIONS AND PIPE SIZES ARE IN INCHES, UNLESS NOTED OTHERWISE. 16. FURNISH AND INSTALL ACCESS PANELS WHERE REQUIRED FOR ACCESS TO ALL CONCEALED VALVES, TRAPS, OR OTHER EQUIPMENT FURNISHED UNDER THIS CONTRACT WHERE NO OTHER MEANS IS AVAILABLE. 17. INSTALL ALL SHUT-OFF AND ISOLATION VALVES (WITH ACCESS PANELS IF NECESSARY) IN A LOCATION WHICH IS ACCESSIBLE FROM THE MAIN FLOOR. 18. CONTRACTOR TO PROVIDE SHUT-OFF VALVES AT ALL DEVICES. 19. KEEP ALL OPENINGS IN PIPES OR FITTINGS PLUGGED OR CAPPED UNTIL CONNECTED.

20. SLOPE ALL DWV LINES 1/8" PER FOOT (3" AND ABOVE), 1/4" PER FOOT (21/2" AND BELOW).

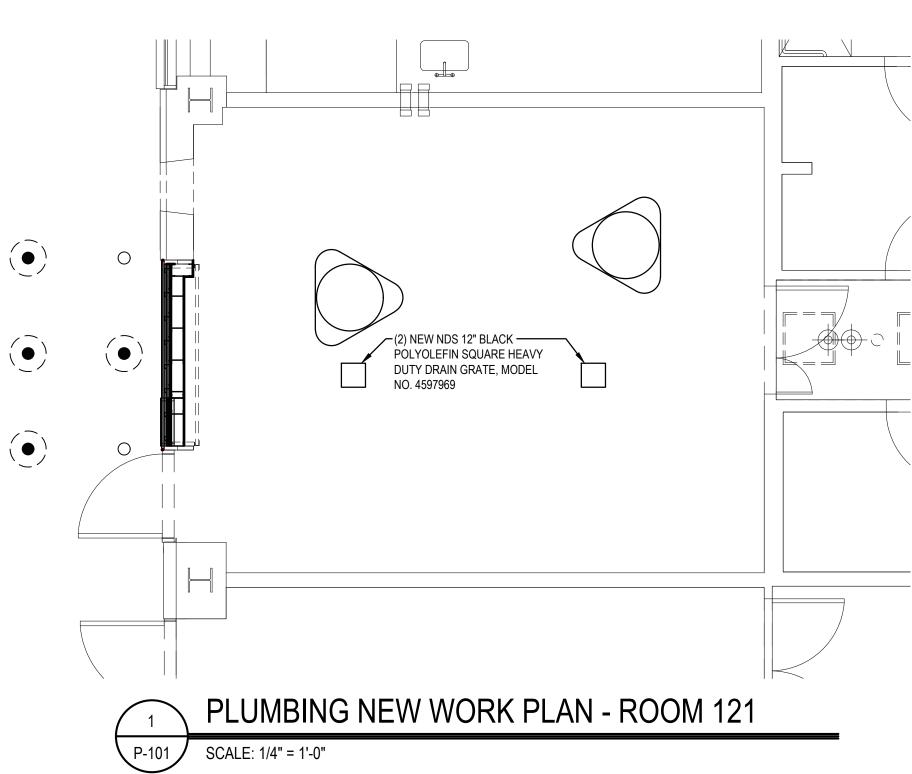
22. INSTALL WASTE AND SUPPLY GUARDS UNDER ALL LAVS-SEE FIXTURE SCHEDULE.

23. MAINTAIN RECORD DRAWINGS ON SITE. RECORD SET MUST BE COMPLETE , CURRENT AND AVAILABLE FOR INSPECTION

21. INSTALL ALL FIXTURES, AS SPECIFIED, WITH SUPPLY STOPS.

WHEN REQUISITIONS FOR PAYMENT ARE SUBMITTED.

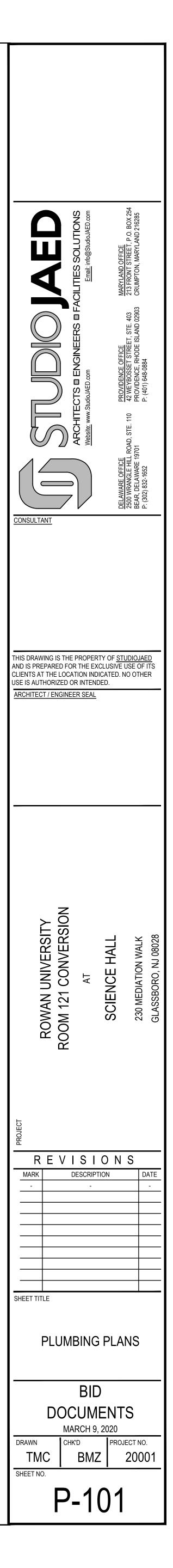
PLUMBI
>
N
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RIW
DCW
DHW
DHWR



SING LEGEND

	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC HOT WATER RETURN
	SANITARY SEWER
	SANITARY VENT PIPING
	DIRECTION OF FLOW
	BALL VALVE
	CAPPED PIPE
—	PIPE UP
—	PIPE DOWN

CLEANOUT IN FLOOR RUN IN WALL DOMESTIC COLD WATER DOMESTIC HOT WATER DOMESTIC HOT WATER RETURN CONNECTION POINT BETWEEN NEW & EXISITNG SYSTEM



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