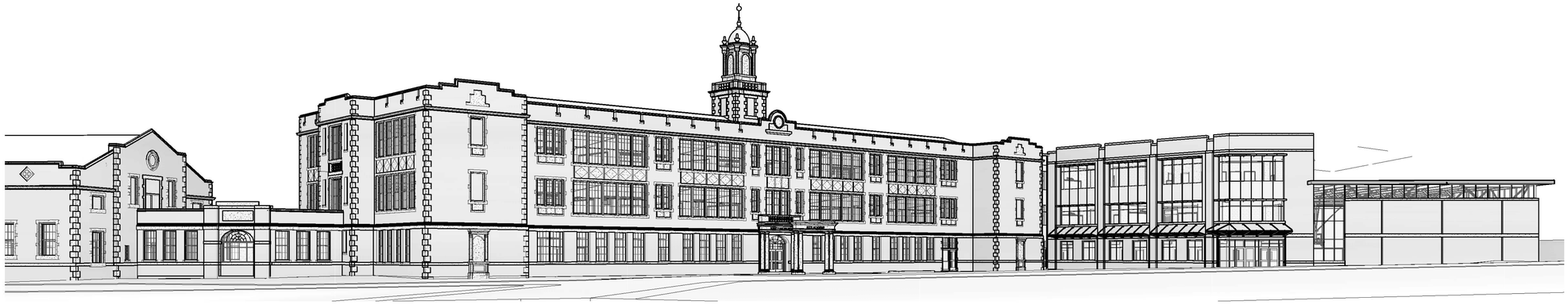
Additions & Renovations at Robert Poole Building #056

1300 W 36TH ST., BALTIMORE, MD 21211

VOLUME 2



CONSTRUCTION SET 7/28/16

Maryland Stadium Authority

City of Baltimore
Baltimore City Public Schools
Department of Facilities

GREAT KIDS GREAT SCHOOLS

NO.	NAME
A 000.2	COVER VOL 2

SHEET LIST - MECHANICAL

NO.	NAME	REV
M 001	SYMBOLS, LEGENDS, AND ABBREVIATIONS - MECHANICAL	
M 010	SITE PLAN - MECHANICAL PIPING	
M 021	DEMO BASEMENT, FIRST AND SECOND FLOOR PLAN A - MECHANICAL PIPING	
M 022	DEMO BASEMENT FLOOR PLAN B - MECHANICAL PIPING	
M 023	DEMO FIRST & SECOND FLOOR PLAN B - MECHANICAL PIPING	
M 024	DEMO THIRD FLOOR PLAN B - MECHANICAL PIPING	
M 025	DEMO ATTIC PLAN B - MECHANICAL PIPING	
M 026	DEMO BASEMENT, FIRST & SECOND FLOOR PLAN A - DUCTWORK	
M 027	DEMO BASEMENT FLOOR PLAN B - DUCTWORK	
M 028	DEMO FIRST & SECOND FLOOR PLAN B DUCTWORK	
M 029	DEMO THIRD FLOOR PLAN B - DUCTWORK	
M 030	DEMO ATTIC PLAN B - DUCTWORK	
M 111	NEW WORK BASEMENT & FIRST FLOOR PLAN A - MECHANICAL PIPING	
M 112	NEW WORK SECOND & ROOF PLAN A - MECHANICAL PIPING	
M 113	NEW WORK BASEMENT PLAN B - MECHANICAL PIPING	1
M 114	NEW WORK FIRST FLOOR PLAN B - MECHANICAL PIPING	1
M 115	NEW WORK FIRST FLOOR PLAN C - MECHANICAL PIPING	
M 116	NEW WORK SECOND FLOOR PLAN B - MECHANICAL PIPING	
M 117	NEW WORK SECOND FLOOR PLAN C - MECHANICAL PIPING	
M 118	NEW WORK THIRD FLOOR PLAN B - MECHANICAL PIPING	2
M 119	NEW WORK THIRD FLOOR PLAN C - MECHANICAL PIPING	1
M 120	NEW WORK ROOF PLAN B - MECHANICAL PIPING	
M 121	NEW WORK ROOF PLAN C - MECHANICAL PIPING	
M 211	NEW WORK BASEMENT & FIRST FLOOR PLAN A - DUCTWORK	2
M 212	NEW WORK SECOND & ROOF PLAN A - DUCTWORK	1
M 213	NEW WORK BASEMENT PLAN B - DUCTWORK	1
M 214	NEW WORK FIRST FLOOR PLAN B - DUCTWORK	
M 215	NEW WORK FIRST FLOOR PLAN C - DUCT WORK	1
M 216	NEW WORK SECOND FLOOR PLAN B - DUCT WORK	
M 217	NEW WORK SECOND FLOOR PLAN C - DUCTWORK	1
M 218	NEW WORK THIRD FLOOR PLAN B - DUCTWORK	
M 219	NEW WORK THIRD FLOOR PLAN C - DUCTWORK	2
M 220	NEW WORK ROOF PLAN B - DUCTWORK	1
M 221	NEW WORK ROOF PLAN C - DUCTWORK	1
M 300	ENLARGED MECHANICAL PLANS	
M 400	SCHEMATIC DIAGRAMS - MECHANICAL	
M 401	SCHEMATIC DIAGRAMS - MECHANICAL	
M 402	SCHEMATIC DIAGRAMS - MECHANICAL	
M 403	SCHEMATIC DIAGRAMS - MECHANICAL	
M 404	CDWS/R RISER - AREA A - MECHANICAL PIPING	
M 405	CDWS/R RISER - AREA B - MECHANICAL PIPING	
M 406	CDWS/R RISER - AREA C - MECHANICAL PIPING	
M 407	SECTIONS - MECHANICAL	

SHEET LIST - MECHANICAL

NO.	NAME	REV
M 408	SECTIONS - MECHANICAL	
M 500	DETAILS - MECHANICAL	
M 501	DETAILS - MECHANICAL	
M 502	DETAILS - MECHANICAL	2
M 503	DETAILS - MECHANICAL	1
M 600	SCHEDULES - MECHANICAL	
M 601	SCHEDULES - MECHANICAL	1
M 602	SCHEDULES - MECHANICAL	
M 700	CALCULATIONS - MECHANICAL	
M 701	CALCULATIONS - MECHANICAL	1

SHEET LIST - PLUMBING

NO.	NAME	REV
P 001	SYMBOLS, LEGENDS, AND ABBREVIATIONS - PLUMBING	
P 010	SITE PLAN - PLUMBING	
P 021	DEMO BASEMENT, FIRST & SECOND FLOOR PLAN A - PLUMBING	
P 022	DEMO BASEMENT FLOOR PLAN B - PLUMBING	2
P 023	DEMO FIRST & SECOND FLOOR PLAN B - PLUMBING	
P 024	DEMO THIRD FLOOR PLAN B - PLUMBING	1
P 025	DEMO ATTIC PLAN PLAN B - PLUMBING	
P 100	UNDERFLOOR PLAN - PLUMBING	1
P 101	Unnamed	
P 111	NEW WORK BASEMENT & FIRST FLOOR PLAN A - PLUMBING	2
P 112	NEW WORK SECOND & ROOF PLAN A - PLUMBING	2
P 113	NEW WORK BASEMENT PLAN B - PLUMBING	3
P 114	NEW WORK FIRST FLOOR PLAN B - PLUMBING	2
P 115	NEW WORK FIRST FLOOR PLAN C - PLUMBING	2
P 116	NEW WORK SECOND FLOOR PLAN B - PLUMBING	2
P 117	NEW WORK SECOND FLOOR PLAN C - PLUMBING	2
P 118	NEW WORK THIRD FLOOR PLAN B - PLUMBING	1
P 119	NEW WORK THIRD FLOOR PLAN C - PLUMBING	2
P 120	NEW WORK ROOF PLAN B - PLUMBING	
P 121	NEW WORK ROOF PLAN C - PLUMBING	
P 400	ENLARGED PLANS - PLUMBING	3
P 401	ENLARGED PLANS - PLUMBING	3
P 500	STORMWATER - AREA A - PLUMBING	
P 501	STORMWATER - AREA B - PLUMBING	
P 502	STORMWATER - AREA C - PLUMBING	1
P 510	SANITARY AND VENT - AREA A & B - PLUMBING	2
P 511	SANITARY AND VENT - AREA C - PLUMBING	1
P 512	SANITARY AND VENT - ENLARGED PLANS - PLUMBING	1
P 520	DOMESTIC WATER - AREA A & B - PLUMBING	1
P 521	DOMESTIC WATER - AREA C - PLUMBING	1
P 522	DOMESTIC WATER - ENLARGED PLANS - PLUMBING	1
P 530	NATURAL GAS - AREA A & B - PLUMBING	1
P 531	NATURAL GAS - AREA C - PLUMBING	1
P 600	SCHEDULES - PLUMBING	
P 700	DETAILS - PLUMBING	2

SHEET LIST - FIRE PROTECTION

NO.	NAME	REV
FA 001	SYMBOLS, LEGENDS, AND ABBREVIATIONS - FIRE ALARM	1
FA 111	NEW WORK BASEMENT & FIRST FLOOR PLAN A - FIRE ALARM	
FA 112	NEW WORK SECOND & ROOF PLAN A - FIRE ALARM	
FA 113	NEW WORK BASEMENT PLAN B - FIRE ALARM	
FA 114	NEW WORK FIRST FLOOR PLAN B - FIRE ALARM	
FA 115	NEW WORK FIRST FLOOR PLAN C - FIRE ALARM	
FA 116	NEW WORK SECOND FLOOR PLAN B - FIRE ALARM	
FA 117	NEW WORK SECOND FLOOR PLAN C - FIRE ALARM	
FA 118	NEW WORK THIRD FLOOR PLAN B - FIRE ALARM	
FA 119	NEW WORK THIRD FLOOR PLAN C - FIRE ALARM	
FA-800	DETAILS - FIRE ALARM	
FA-801	DETAILS - FIRE ALARM	
FP 001	SYMBOLS, LEGENDS, AND ABBREVIATIONS - FIRE PROTECTION	
FP 111	NEW WORK BASEMENT & FIRST FLOOR PLAN - FIRE PROTECTION	
FP 112	NEW WORK SECOND & ROOF PLAN A - FIRE PROTECTION	
FP 113	NEW WORK BASEMENT PLAN B - FIRE PROTECTION	
FP 114	NEW WORK FIRST FLOOR PLAN B - FIRE PROTECTION	
FP 115	NEW WORK FIRST FLOOR PLAN C - FIRE PROTECTION	1
FP 116	NEW WORK SECOND FLOOR PLAN B - FIRE PROTECTION	
FP 117	NEW WORK SECOND FLOOR PLAN C - FIRE PROTECTION	1
FP 118	NEW WORK THIRD FLOOR PLAN B - FIRE PROTECTION	
FP 119	NEW WORK THIRD FLOOR PLAN C - FIRE PROTECTION	
FP 120	NEW WORK ROOF PLAN B - FIRE PROTECTION	
FP 121	NEW WORK ROOF PLAN C - FIRE PROTECTION	
FP 200	FIRE PROTECTION RISER DIAGRAM	
FP 300	DETAILS - FIRE PROTECTION	

SHEET LIST - ELECTRICAL

NO.	NAME	REV
E 001	SYMBOLS, LEGENDS, AND ABBREVIATIONS - ELECTRICAL	
E 010	SITE PLAN - ELECTRICAL	
E 011	SITE PLAN - LIGHTING	
E 021	DEMO BASEMENT, FIRST AND SECOND FLOOR PLAN A - LIGHTING	
E 022	DEMO BASEMENT FLOOR PLAN B - LIGHTING	
E 023	DEMO FIRST & SECOND FLOOR PLAN B - LIGHTING	
E 024	DEMO THIRD FLOOR PLAN B - LIGHTING	
E 025	DEMO BASEMENT, FIRST, AND SECOND FLOOR PLAN D - LIGHTING	
E 026	DEMO BASEMENT, FIRST AND SECOND FLOOR PLAN A - POWER	
E 027	DEMO BASEMENT FLOOR PLAN B - POWER	
E 028	DEMO FIRST & SECOND FLOOR PLAN B - POWER	
E 029	DEMO THIRD FLOOR PLAN B - POWER	
E 030	DEMO BASEMENT, FIRST, AND SECOND FLOOR PLAN D - POWER	
E 111	NEW WORK BASEMENT & FIRST FLOOR PLAN A - LIGHTING	2
E 112	NEW WORK SECOND & ROOF PLAN A - LIGHTING	
E 113	NEW WORK BASEMENT PLAN B - LIGHTING	1
E 114	NEW WORK FIRST FLOOR PLAN B - LIGHTING	1
E 115	NEW WORK FIRST FLOOR PLAN C - LIGHTING	1
E 116	NEW WORK SECOND FLOOR PLAN B - LIGHTING	
E 117	NEW WORK SECOND FLOOR PLAN C - LIGHTING	1
E 118	NEW WORK THIRD FLOOR PLAN B - LIGHTING	1
E 119	NEW WORK THIRD FLOOR PLAN C - LIGHTING	2
E 120	NEW WORK ROOF PLAN B - LIGHTING	
E 211	NEW WORK BASEMENT & FIRST FLOOR PLAN A - POWER	
E 212	NEW WORK SECOND & ROOF PLAN A - POWER	
E 213	NEW WORK BASEMENT PLAN B - POWER	2
E 214	NEW WORK FIRST FLOOR PLAN B - POWER	
E 215	NEW WORK FIRST FLOOR PLAN C - POWER	1
E 216	NEW WORK SECOND FLOOR PLAN B - POWER	
E 217	NEW WORK SECOND FLOOR PLAN C - POWER	
E 218	NEW WORK THIRD FLOOR PLAN B - POWER	
E 219	NEW WORK THIRD FLOOR PLAN C - POWER	2
E 220	NEW WORK ROOF PLAN B - POWER	
E 221	NEW WORK ROOF PLAN C - POWER	
E 311	NEW WORK BASEMENT & FIRST FLOOR PLAN A - MECHANICAL POWER	
E 312	NEW WORK SECOND FLOOR PLAN A - MECHANICAL POWER	
E 313	NEW WORK BASEMENT PLAN B - MECHANICAL POWER	1
E 314	NEW WORK FIRST FLOOR PLAN B - MECHANICAL POWER	
E 315	NEW WORK FIRST FLOOR PLAN C - MECHANICAL POWER	
E 316	NEW WORK SECOND FLOOR PLAN B - MECHANICAL POWER	
E 317	NEW WORK SECOND FLOOR PLAN C - MECHANICAL POWER	
E 318	NEW WORK THIRD FLOOR PLAN B - MECHANICAL POWER	
E 319	NEW WORK THIRD FLOOR PLAN C - MECHANICAL POWER	
E 400	ENLARGED FLOOR PLANS - ELECTRICAL	1
E 401	ENLARGED FLOOR PLANS - ELECTRICAL	1
E 402	ENLARGED FLOOR PLANS - ELECTRICAL	
E 500	ELECTRICAL ONE-LINE RISER DIAGRAM	
E 501	ELECTRICAL DETAILS AND DIAGRAMS	1

SHEET LIST - ELECTRICAL

NO.	NAME	REV
E 502	ELECTRICAL DETAILS	
E 503	ELECTRICAL DETAILS	
E 600	ELECTRICAL PANEL SCHEDULES	
E 601	ELECTRICAL PANEL SCHEDULES	
E 602	ELECTRICAL PANEL SCHEDULES	
E 603	ELECTRICAL PANEL SCHEDULES	
E 604	ELECTRICAL PANEL SCHEDULES	
E 605	ELECTRICAL PANEL SCHEDULES	
E 606	ELECTRICAL PANEL SCHEDULES	
E 607	ELECTRICAL PANEL SCHEDULES	
E 608	ELECTRICAL PANEL SCHEDULES	
E 610	LIGHTING CONTROL SCHEDULE	
E 700	LIGHTING FIXTURE SCHEDULE	
E 701	LIGHTING FIXTURE SCHEDULE	
E 702	LIGHTING COMCHECK COMPLIANCE CERTIFICATES	
E 703	LIGHTING COMCHECK COMPLIANCE CERTIFICATES	

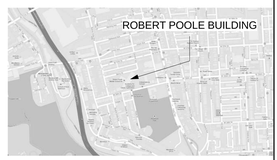
SHEET LIST - KITCHEN

NO.	NAME	REV
K101	KITCHEN EQUIPMENT PLAN	
K102	BUILDING CONDITIONS & VENTILATION PLAN	
K103	PLUMBING ROUGH-IN PLAN	
K104	ELECTRICAL ROUGH-IN PLAN	
K501	FABRICATION DETAILS	
K502	UTILITY RACEWAY DETAILS	
K503	VENTILATOR DETAILS	
K504	VENTILATOR WIRING DIAGRAM	

SHEET LIST - TECHNOLOGY

NO.	NAME	REV
T000	TECHNOLOGY SYMBOLS & NOTES	
T100	SITE PLAN	2
T101	OVERALL LEVEL 0	
T102	OVERALL LEVEL 1	
T103	OVERALL LEVEL 2	
T104	OVERALL LEVEL 3	
T111	LEVELS 0A & 1A	
T112	LEVEL 2A	
T113	LEVEL 0B	
T114	LEVEL 1B	
T115	LEVEL 1C	
T116	LEVEL 2B	
T117	LEVEL 2C	
T118	LEVEL 3B	
T119	LEVEL 3C	
T500	MAIN TELECOM ROOM DETAILS	
T501	TELECOM ROOM DETAILS	
T502	PATHWAYS	
T503	INTERCOM AND CLOCK	
T504	GYMNASIUM SOUND SYSTEM	
T505	AUXILIARY GYM SOUND SYSTEM	
TY000	SECURITY SYMBOLS & NOTES	
TY111	LEVEL 0A & 1A SECURITY	
TY112	LEVEL 2A SECURITY	
TY113	LEVEL 0B SECURITY	
TY114	LEVEL 1B SECURITY	
TY115	LEVEL 1C SECURITY	
TY116	LEVEL 2B SECURITY	
TY117	LEVEL 2C SECURITY	
TY118	LEVEL 3B SECURITY	
TY119	LEVEL 3C SECURITY	
TY500	ACCESS & INTRUSION	
TY501	CCTV SYSTEM	3
TYAD 3.01	CCTV REVISION	3

VICINITY MAP N



SITE MAP N

Additions & Renovations at Robert Poole Building #056

VOLUME 2

JRS ARCHITECTS
2010 Clipper Park Rd, Suite 101
Baltimore, MD 21211
410.235.7256

BALTIMORE CITY PUBLIC SCHOOLS
BOARD OF SCHOOL COMMISSIONERS
200 E. NORTH AVENUE, BALTIMORE, MD 21202

? ? ?

DATE: 3/31/16
COVER VOL 2
SHEET NUMBER
DRAWING NO. A 000.2

7/29/2016 10:11:59 AM

ABBREVIATIONS

A	
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AMB	AMBIENT
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)
ATC	AUTOMATIC TEMPERATURE CONTROL
B	
B.O.D.	BOTTOM OF DUCT
B.O.P.	BOTTOM OF PIPE
BDD	BACKDRAFT DAMPER
BFP	BACKFLOW PREVENTER
BLDG	BUILDING
BTU	BRITISH THERMAL UNIT
BTUH	BRITISH THERMAL UNIT PER HOUR
C	
CA	COMPRESSED AIR
CB	CATCH BASIN
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CIRC	CIRCULATION
CLG	CEILING
CO	CLEANOUT
CO2	CARBON DIOXIDE
COL	COLUMN
CONC	CONCRETE
CONN	CONNECT(ION)
CONT	CONTINUATION
CONTR	CONTRACTOR
CU	CONDENSING UNIT
CW	CITY WATER
℄	CENTERLINE
D	
D	DRAIN
DB	DRY BULB TEMPERATURE, °F
DIA	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
DN	DOWN
DOM	DOMESTIC
DS	DUCT SILENCER OR DOWNSPOUT
DWGS	DRAWINGS
DWV	DRAINAGE, WASTE & VENT
DX	DIRECT EXPANSION
E	
EA	EACH
EAT	ENTERING AIR TEMPERATURE, °F
ELEC	ELECTRIC(AL)
ELEV	ELEVATION OR ELEVATOR
ENT	ENTERING
EQUIP	EQUIPMENT
ES/EW	EMERGNECY SHOWER/EYEWASH
ESP	EXTERNAL STATIC PRESSURE
EWC	ELECTRIC WATER COOLER
EWT	ENTERING WATER TEMPERATURE, °F
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPANSION
F	
FC	FAN COIL UNIT
FCO	FLOOR CLEANOUT
FD	FIRE DAMPER OR FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FIN	FINISH(ED)
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLGD	FLANGED
FLR	FLOOR
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPM	FEET PER MINUTE
FS	FLOW SWITCH
FT	FOOT OR FEET
FTG	FOOTING OR FITTING
FURN	FURNISH
°F	DEGREES FAHRENHEIT
G	
G	GAS
GAL	GALLON
GCO	GRADE CLEANOUT
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GWR	GLYCOL/WATER RETURN
GWS	GLYCOL/WATER SUPPLY
H	
H/C	HANDICAP
HB	HOSE BIBB
HD	HUB DRAIN
HOR	HORIZONTAL
HP	HORSEPOWER OR HEAT PUMP
HR	HOUR
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
HW	HOT WATER
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HZ	FREQUENCY

ABBREVIATIONS

I	
ID	INSIDE DIAMETER
IN	INCH(ES)
INSUL	INSULATE OR INSULATION
INV	INVERT
J	
JAN	JANITOR
K	
KW	KILOWATT(S)
L	
LAT	LEAVING AIR TEMPERATURE, °F
LAV	LAVATORY
LB	POUNDS
LBS/HR	POUNDS PER HOUR
LRA	LOCKED ROTOR AMPS
LVG	LEAVING
LWT	LEAVING WATER TEMPERATURE, °F
M	
M	MOTOR
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MER	MECHANICAL EQUIPMENT ROOM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
N	
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
N/A	NOT APPLICABLE
NFHB	NON-FREEZE HOSE BIBB
NFWH	NON-FREEZE WALL HYDRANT
NG	NATURAL GAS
NIC	NOT IN CONTRACT
NO.	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O	
OA	OUTSIDE AIR
OAT	OUTSIDE AIR TEMPERATURE, °F
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
P	
PB	POLYBUTYLENE
PC	PUMPED CONDENSATE
PD	PRESSURE DROP
PE	POLYETHYLENE
PLBG	PLUMBING
PRESS	PRESSURE
PRV	PRESSURE REDUCING VAVLE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
PVC	POLYVINYL CHLORIDE
Q	
QTY	QUANTITY
R	
RA	RETURN AIR
RD	ROOF DRAIN
REQ'D	REQUIRED
RET	RETURN
RG	RETURN GRILLE
RH	RELATIVE HUMIDITY
RL	RAIN LEADER
RPM	REVOLUTIONS PER MINUTE
RTU	ROOF TOP UNIT

HVAC LEGEND:

**ALL EXISTING ITEMS TO BE SHOWN HALFTONE*

- SUPPLY/OUTSIDE AIR DUCT RISER
- RETURN/RELIEF AIR DUCT RISER
- EXHAUST AIR DUCT RISER
- SUPPLY/OUTSIDE AIR DUCT DOWN
- RETURN/RELIEF AIR DUCT DOWN
- EXHAUST AIR DUCT DOWN
- DUCT SIZE, INCHES (8x8 8ø 8/8)
- AIR GRILLE: SUPPLY, RETURN/EXHAUST
- MOUNTED BELOW DUCT: GRILLE, DIFFUSER
- ELBOW: RADIUS, MITERED
- TRANSITION: CONCENTRIC, ECCENTRIC
- BRANCH TAKEOFF: RECTANGULAR, ROUND
- DUCT MOUNTED RE-HEAT COIL
- FLEXIBLE CONNECTION
- FLEXIBLE DUCT
- DUCT RISE
- ACCESS DOOR (AD)
- DUCT LINER
- SUPPLY DIFFUSER
- SUPPLY DIFFUSER, DIRECTION OF THROW
- RETURN/EXHAUST GRILLE
- LINEAR SLOT DIFFUSER
- THERMOSTAT/TEMPERATURE SENSOR
- HUMIDISTAT/HUMIDITY SENSOR
- CO2 SENSOR
- MANUAL DAMPER
- OPPOSED BLADE DAMPER
- PARALLEL BLADE DAMPER
- BALANCING DAMPER
- SMOKE DAMPER
- FIRE DAMPER
- FIRE & SMOKE DAMPER
- BACKDRAFT DAMPER
- FLOW SWITCH
- MOTORIZED DAMPER
- DUCT MOUNTED HUMIDIFIER
- DUCT MOUNTED PRESSURE SENSOR
- STATIC PRESSURE SENSOR
- DUCT MOUNTED SMOKE DETECTOR
- DIRECTION OF AIR FLOW: SUPPLY, RETURN/EXHAUST

PIPING LEGEND:

**ALL EXISTING ITEMS TO BE SHOWN HALFTONE*

- PIPE UP AND DOWN
- TEE CONNECTION - STRAIGHT, DOWN, AND UP
- FLEXIBLE CONNECTION
- (1%) DIRECTION OF FLOW & (SLOPE %)
- GATE VALVE
- BUTTERFLY VALVE
- BALL VALVE
- GLOBE VALVE
- AUTOMATIC 2-WAY CONTROL VALVE
- AUTOMATIC 3-WAY CONTROL VALVE
- PLUG VALVE/BALANCING COCK
- SOLENOID VALVE
- MOTOR OPERATED VALVE
- TRIPLE DUTY VALVE
- CHECK VALVE
- PRESSURE REDUCING VALVE
- PRESSURE REGULATING VALVE
- BALANCING VALVE
- HOSE END DRAIN VALVE
- STOP CHECK VALVE
- BASKET STRAINER
- VALVE IN VERTICAL
- SHOCK ARRESTOR
- UNION
- P-TRAP
- FLOOR DRAIN W/ P-TRAP
- FD- FLOOR DRAIN
- RD- ROOF DRAIN
- AD- AREA DRAIN
- FLOW SWITCH
- PUMP
- SAFETY VALVE OR PRESSURE RELIEF
- THERMOMETER
- STRAINER WITH BLOW-DOWN VALVE
- MANUAL AIR VENT
- AUTOMATIC AIR VENT
- PRESSURE GAUGE
- GAS COCK
- OS&Y VALVE

- PIPING TO BE REMOVED
- CHR — CHILLED WATER RETURN
- PCHR — PRIMARY CHILLED WATER RETURN
- CHS — CHILLED WATER SUPPLY
- PCHS — PRIMARY CHILLED WATER SUPPLY
- CD — CONDENSATE
- CDWR — CONDENSER WATER RETURN
- CDWS — CONDENSER WATER SUPPLY
- GWR — GLYCOL/WATER RETURN
- GWS — GLYCOL/WATER SUPPLY
- HWR — HEATING WATER RETURN
- PHWR — PRIMARY HEATING WATER RETURN
- HWS — HEATING WATER SUPPLY
- PHWS — PRIMARY HEATING WATER SUPPLY
- MU — MAKE-UP WATER
- RHG — REFRIGERANT HOT GAS
- RL — REFRIGERANT LIQUID
- RS — REFRIGERANT SUCTION
- D — DRAIN

TYPICAL ANNOTATION:

- AREA OF REVISION
- 1 — REVISION SEQUENCE NUMBER
- X — KEYED NOTE
- X — DEMOLITION KEYED NOTE
- POINT OF CONNECTION OF EXISTING SYSTEM
- POINT OF DISCONNECTION OF EXISTING SYSTEM
- DETAIL NUMBER / DRAWING NUMBER
- EQUIPMENT ABBREVIATION / EQUIPMENT NUMBER
- EQUIPMENT ABBREVIATION / EQUIPMENT NUMBER / XX UNIQUE IDENTIFIER
- 1 / A7.1 DETAIL NUMBER / DRAWING NUMBER
- 1 / A2.1 DETAIL NUMBER / DRAWING NUMBER
- 1 / A101 VIEW REFERENCE

SHEET LIST

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M 114	NEW WORK FIRST FLOOR PLAN B - MECHANICAL PIPING
M 115	NEW WORK FIRST FLOOR PLAN C - MECHANICAL PIPING
M 116	NEW WORK SECOND FLOOR PLAN B - MECHANICAL PIPING
M 117	NEW WORK SECOND FLOOR PLAN C - MECHANICAL PIPING
M 118	NEW WORK THIRD FLOOR PLAN B - MECHANICAL PIPING
M 119	NEW WORK THIRD FLOOR PLAN C - MECHANICAL PIPING
M 120	NEW WORK ROOF PLAN B - MECHANICAL PIPING
M 121	NEW WORK ROOF PLAN C - MECHANICAL PIPING
M 211	NEW WORK BASEMENT & FIRST FLOOR PLAN A - DUCTWORK
M 212	NEW WORK SECOND & ROOF PLAN A - DUCTWORK
M 213	NEW WORK BASEMENT PLAN B - DUCTWORK
M 214	NEW WORK FIRST FLOOR PLAN B - DUCTWORK
M 215	NEW WORK FIRST FLOOR PLAN C - DUCT WORK
M 216	NEW WORK SECOND FLOOR PLAN B - DUCT WORK
M 217	NEW WORK SECOND FLOOR PLAN C - DUCTWORK
M 218	NEW WORK THIRD FLOOR PLAN B - DUCTWORK
M 219	NEW WORK THIRD FLOOR PLAN C - DUCTWORK
M 220	NEW WORK ROOF PLAN B - DUCTWORK
M 221	NEW WORK ROOF PLAN C - DUCTWORK
M 300	ENLARGED MECHANICAL PLANS
M 400	SCHEMATIC DIAGRAMS - MECHANICAL
M 401	SCHEMATIC DIAGRAMS - MECHANICAL
M 402	SCHEMATIC DIAGRAMS - MECHANICAL
M 403	SCHEMATIC DIAGRAMS - MECHANICAL
M 404	CDWS/R RISER - AREA A - MECHANICAL PIPING
M 405	CDWS/R RISER - AREA B - MECHANICAL PIPING
M 406	CDWS/R RISER - AREA C - MECHANICAL PIPING
M 407	SECTIONS - MECHANICAL
M 408	SECTIONS - MECHANICAL
M 500	DETAILS - MECHANICAL
M 501	DETAILS - MECHANICAL
M 502	DETAILS - MECHANICAL
M 503	DETAILS - MECHANICAL
M 600	SCHEDULES - MECHANICAL
M 601	SCHEDULES - MECHANICAL
M 602	SCHEDULES - MECHANICAL
M 700	CALCULATIONS - MECHANICAL
M 701	CALCULATIONS - MECHANICAL

GENERAL NOTES

1. THESE GENERAL NOTES APPLY TO ALL M SERIES DRAWINGS.
2. NOT ALL SYMBOLS, ABBREVIATIONS AND NOTES MAY APPLY TO THIS PROJECT.
3. PROVIDE OFFSETS AND TRANSITIONS IN DUCTWORK AND PIPING AS REQUIRED TO AVOID INTERFERENCE AT NO ADDITIONAL COST TO THE PROJECT.
4. VERIFY ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. PROVIDE TRANSITIONS TO MAKE FINAL CONNECTION TO EQUIPMENT, UNLESS OTHERWISE INDICATED. FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION OF WORK.
5. EXACT LOCATION OF DIFFUSERS, GRILLES AND REGISTERS SHALL BE COORDINATED WITH THE REFLECTED CEILING PLANS BEFORE INSTALLATION. PROVIDE SYMMETRY WITH THE ROOM LIGHTING SYSTEMS.
6. VERIFY DIFFUSER, GRILLE AND REGISTER MOUNTING FRAME TYPES WITH THE CEILING TYPES. MATCH FRAME TYPE WITH CEILING CONFIGURATION.
7. DUCTWORK SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO UNDERSIDE OF BEAMS AND JOISTS.
8. PROVIDE CONCRETE HOUSEKEEPING PADS TO SUIT FLOOR MOUNTED MECHANICAL EQUIPMENT, SIZE PADS AND COORDINATE WITH OTHER TRADES FOR EXACT LOCATION.
9. PROVIDE ACCESS DOORS OR PANELS FOR DUCT MOUNTED FIRE, SMOKE, AND FIRE/SMOKE DAMPERS AND SMOKE DETECTORS.
10. PROVIDE ACCESS DOORS IN WALLS AND INACCESSIBLE CEILINGS TO PERMIT SERVICE TO DAMPERS, VALVES, AND CONCEALED EQUIPMENT.
11. DUCT FITTINGS ARE INDICATED SYMBOLICALLY. REFER TO DETAILS, CONFIGURATION OF FITTING, TAPS AND CONNECTIONS. DUCT CONSTRUCTION SHALL COMPLY WITH SMACNA CONSTRUCTION STANDARDS. ALL 90 DEG. ELBOWS SHALL BE LONG RADIUS TYPE UNLESS SPACE IS LIMITED. ALL SQUARE ELBOWS. SHORT RADIUS ELBOWS IN SUPPLY DUCT SHALL HAVE TURNING VANES.
12. PROVIDE FLEXIBLE CONNECTIONS BETWEEN DUCTWORK AND FANS/AIR HANDLING EQUIPMENT.
13. FLEXIBLE DUCTWORK SHALL NOT BE USED IN RETURN OR EXHAUST DUCT SYSTEM. WHERE USED IN SUPPLY, LIMIT LENGTH TO 5 FEET.
14. PAINT FLAT BLACK THE INSIDE OF ALL DUCTWORK VISIBLE THROUGH DIFFUSERS, GRILLES AND REGISTERS.
15. PROVIDE OPEN END DUCTWORK (OED) WITH 2x2 MESH (1/2"x1/2") ALUMINUM SCREEN WITH REMOVABLE FRAMES.
16. ALL DUCT WORK SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.
17. CONCENTRATE LOADS AT JOIST/BEAM LOCATIONS. PROVIDE ANGLE BRACES WHERE CONCENTRATED LOADS OCCUR AT OTHER LOCATIONS.
18. COORDINATE ALL DOOR UNDER CUTS INDICATED AND REQUIRED FOR PROPER AIR MOVEMENT.
19. PROVIDE RUNOUT PIPING AS SCHEDULED OR AS OTHERWISE INDICATED.
20. PROVIDE DUCTWORK TO TERMINAL AIR DEVICES AT SCHEDULED INLET SIZE UNLESS OTHERWISE INDICATED.
21. FIRE SAFE PIPE AND DUCTWORK PENETRATIONS OF ALL FIRE RATED AND SMOKE RESISTIVE CONSTRUCTION. MAINTAIN FIRE RTING AT ALL PENETRATIONS. PROVIDE FIRE DAMPERS AND FIRE CAULKING AS NECESSARY.
22. MOUNT ROOM THERMOSTATS AT 48 INCHES AFF, MOUNT OCCUPANCY SENSORS AT 84 INCHES AFF UNLESS OTHERWISE INDICATED.
23. INSTALL ALL EQUIPMENT LEVEL AND PLUMB. PROVIDE BLOCKING HARDWARE AS REQUIRED.
24. INSTALL ALL EQUIPMENT REQUIRING PERIODIC SERVICE NOT LESS THAN 10 FEET FROM ROOF EDGE OR OPENING WITHOUT PROTECTIVE RAILING OR PARAPET OF 42 INCHES.
25. DUCT SYSTEMS SHALL BE BALANCED TO CFM INDICATED ON DRAWINGS. FANS SHALL BE FIELD TESTED TO PROVE COMPLIANCE WITH SCHEDULED FAN PERFORMANCE AND SCHEDULED AIR FLOW AT DESIGN TOTAL STATIC PRESSURE.
26. PROVIDE VOLUME DAMPERS AT ALL BRANCH DUCT TAKEOFFS, AT EACH AIR TERMINAL DEVICE, AND WHERE INDICATED.
27. EXISTING CONDITIONS SHOWN ARE FOR REFERENCE ONLY AND BASED ON ORIGINAL CONSTRUCTION DRAWINGS AND CASUAL FIELD OBSERVATION AND REPRESENT THE BEST AVAILABLE INFORMATION. CONTRACTOR MUST FIELD VERIFY ACTUAL EXISTING CONDITIONS AS RELATED TO THE REQUIRED SCOPE OF WORK.
28. PATCH EXISTING WALL/FLOOR PENETRATIONS TO MATCH EXISTING CONSTRUCTION WHERE DUCTS, PIPING AND EQUIPMENT HAVE BEEN DEMOLISHED AND PENETRATION CANNOT BE REUSED.
29. ALL DEMOLITION OF EQUIPMENT, DUCTWORK, AND PIPING TO INCLUDE ALL ACCESSORIES, SUPPORTS, HANGERS, HOUSKEEPING PADS, AND CONTROLS.
30. PROTECT ANY OPENING IN EXTERIOR WALL ACCORDINGLY UNTIL NEW EQUIPMENT, I.E. EXHAUST FAN, ETC., IS INSTALLED.
31. REMOVE ALL LOUVERS AND VENTS, SANDBLAST, CLEAN REPAINT TO MATCH EXTERIOR WALL AND REINSTALL IN EXTERIOR WALL IF NOT BEING REPLACED.
32. AIR HANDLING EQUIPMENT TO BE REMOVED SHALL INCLUDE ALL ASSOCIATED DUCTWORK, PIPING TO POINTS INDICATED, SUPPORTS, FLUE PIPING, HOUSE KEEPING PAD, CONTROLS AND OTHER APPURTENANCES.
33. ALL DUCTWORK SHALL BE NEW, UNLESS NOTED SPECIFICALLY OTHERWISE. ALL MATERIAL SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.
34. PROVIDE ALL HANGERS, ATTACHMENTS, AND SUPPORTS NECESSARY TO SUSPEND SHEETMETAL WORK INDICATED.
35. PROVIDE FIELD VERIFICATION AND MEASUREMENT NECESSARY TO COORDINATE WITH EXISTING CONDITIONS AS WELL AS WORK OF OTHER TRADES. SHOP DRAWINGS SHALL INDICATE THE COORDINATED SYSTEMS.
36. SOME HYDRONIC EQUIPMENT IS SHOWN ON THE DUCTWORK PLANS FOR COORDINATION PURPOSES ONLY.
37. ALL PIPING, HANGERS, SUPPORTS AND PIPING INSULATION SHALL BE NEW UNLESS OTHERWISE NOTED. ALL PIPING APPURTENANCES SHALL BE NEW AND SHALL COMPLY WITH SPECIFICATIONS.
38. PROVIDE NEW BRANCH PIPING TO NEW TERMINAL EQUIPMENT SCHEDULED OR OTHERWISE INDICATED. NEW BRANCH PIPING SHALL INCLUDE ISOLATION VALVES NEAR THE MAIN, IN ADDITION TO ISOLATION VALVES REQUIRED IN OR AT THE TERMINAL EQUIPMENT. WHERE EQUIPMENT SERVED IS LOCATED ON THE FLOOR ABOVE, PROVIDE ISOLATION VALVES AT THE MAIN PRIOR TO STUB-UP TO EQUIPMENT. ALSO PROVIDE VALVES IN UNIT ENCLOSURE ABOVE FLOOR.
39. M.C. IS RESPONSIBLE FOR ALL CUTTING/PATCHING, CORE-DRILLS, AND ANY OTHER MODIFICATIONS TO EXISTING CONSTRUCTION NECESSARY TO CREATE PATHWAYS FOR MECHANICAL WORK.
40. PROVIDE VFD FOR EACH PUMP, WITH BYPASS FEATURE. PROVIDE PRESSURE TAP IN SUPPLY PIPING TO CONTROL VFDs.
41. CONTROL WIRING IN BOILER ROOM SHALL BE RUN IN RIGID METALLIC CONDUIT.
42. MATERIALS AND WORK SHALL BE IN ACCORDANCE WITH INTERNATIONAL CODES, INCLUDING 2012 INTERNATIONAL BUILDING CODE, 2012 INTERNATIONAL MECHANICAL CODE, 2012 INTERNATIONAL PLUMBING CODE, 2011 NATIONAL ELECTRIC CODE, THE LATEST EDITION OF NFPA STANDARDS, AS WELL AS ALL STATE AND LOCAL AMENDMENTS TO THE AFOREMENTIONED CODES OR STANDARDS.
43. PROVIDE VAPOREX INSULATION ON ALL CHILLED WATER AND HEATING WATER PIPING.
44. ALL NEW EQUIPMENT INSTALLED ON ROOF TO BE MOUNTED AT A MINIMUM OF 36" CLEAR OF ROOF.
45. CUTTING AND PATCHING
    - A. DO NOT CUT AND PATCH STRUCTURAL ELEMENTS IN A MANNER THAT WOULD CHANGE THEIR LOAD-CARRYING CAPACITY.
    - B. DO NOT CUT AND PATCH CONSTRUCTION EXPOSED ON THE EXTERIOR OR IN OCCUPIED SPACES IN A MANNER THAT WOULD REDUCE THE BUILDING'S AESTHETIC QUALITIES.
    - C. USE MATERIALS IDENTICAL TO EXISTING MATERIALS. FOR EXPOSED SURFACES, USE MATERIALS THAT VISUALLY MATCH EXISTING SURFACES TO THE FULLEST EXTENT POSSIBLE IF IDENTICAL MATERIALS ARE UNAVAILABLE OR CANNOT BE USED. USE MATERIALS WHOSE INSTALLED PERFORMANCE WILL EQUAL OR SURPASS THAT OF EXISTING MATERIALS.
    - D. PATCH WITH DURABLE SEAMS THAT ARE AS INVISIBLE AS POSSIBLE.
      1. RESTORE EXPOSED FINISHES OF PATCHED AREAS AND EXTEND FINISH RESTORATION INTO RETAINED ADJOINING CONSTRUCTION IN A MANNER THAT WILL ELIMINATE EVIDENCE OF PATCHING AND REFINISHING.
      2. WHERE REMOVING WALLS OR PARTITIONS EXTENDS ONE FINISHED AREA INTO ANOTHER, PATCH AND REPAIR FLOOR AND WALL SURFACES IN THE NEW SPACE. PROVIDE AN EVEN SURFACE OF UNIFORM COLOR AND APPEARANCE. REMOVE EXISTING FLOOR AND WALL COVERINGS AND REPLACE WITH NEW MATERIALS, IF NECESSARY, TO ACHIEVE UNIFORM COLOR AND APPEARANCE.
         - a. WHERE PATCHING OCCURS IN A SMOOTH PAINTED SURFACE, EXTEND FINAL PAINT COAT OVER ENTIRE UNBROKEN SURFACE CONTAINING THE PATCH AFTER THE AREA HAS RECEIVED PRIMER AND SECOND COAT.
      3. PATCH, REPAIR, OR RE-HANG EXISTING CEILINGS AS NECESSARY TO PROVIDE AN EVEN-PLANE SURFACE OF UNIFORM APPEARANCE.
      4. PATCH EXPOSED FLOOR WHERE NEW EQUIPMENT HAS A DIFFERENT FOOTPRINT.
46. CONTRACTOR TO WATER PRESSURE CLEAN ALL EXISTING TO REMAIN FLOOR DRAINS AND CONDENSATE PIPING.
47. HAZARDOUS MATERIALS: REFER TO SPECIFICATIONS FOR HAZARDOUS MATERIAL WORK TO BE INCLUDED IN PROJECT SCOPE.

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

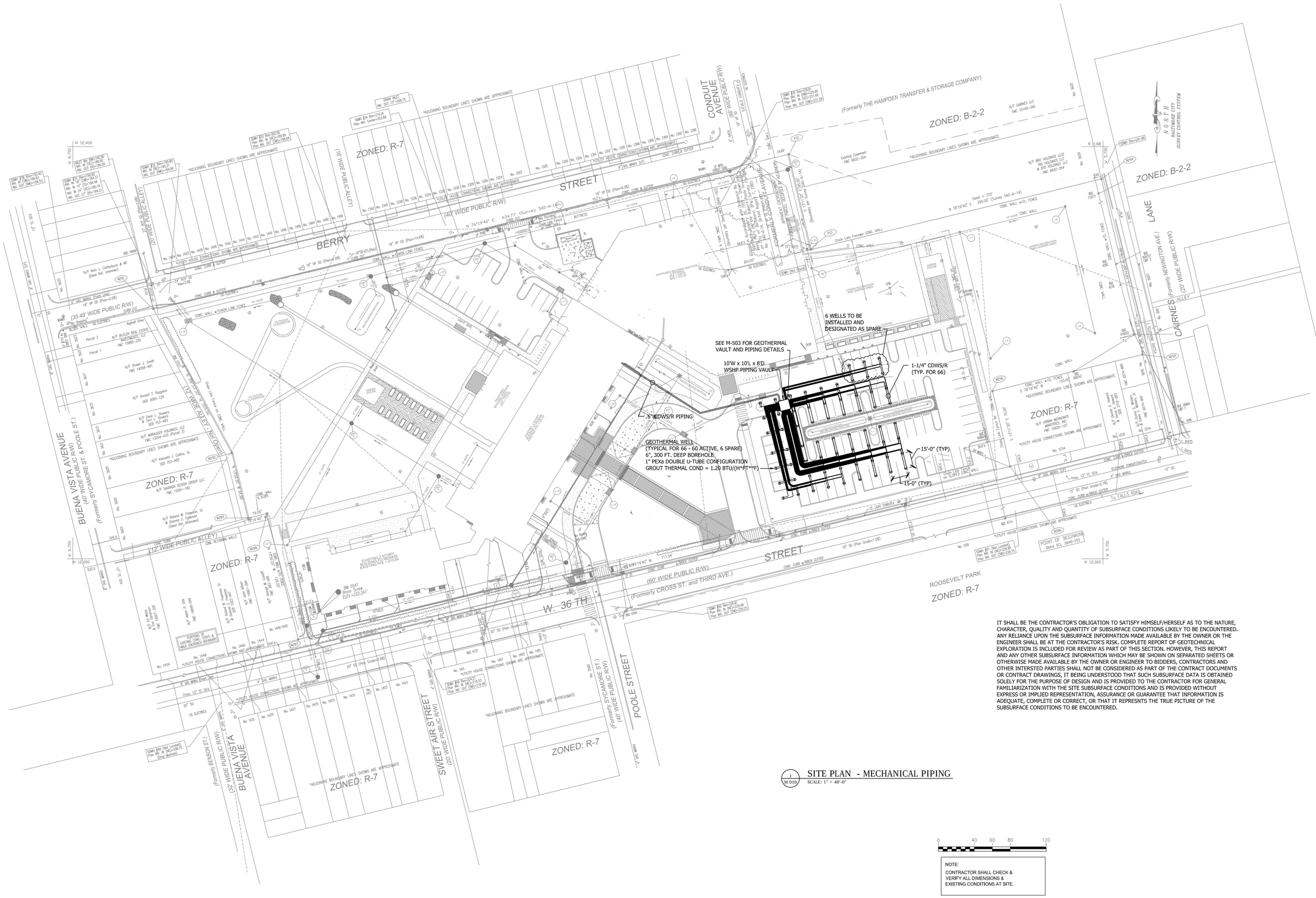
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
SYMBOLS, LEGENDS, AND ABBREVIATIONS - MECHANICAL

M 001

7/26/2016 10:10:00 AM



SITE PLAN - MECHANICAL PIPING

M 010 SCALE: 1" = 40'-0"

0 40 60 80 120

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

IT SHALL BE THE CONTRACTOR'S OBLIGATION TO SATISFY HIMSELF/HERSELF AS TO THE NATURE, CHARACTER, QUALITY AND QUANTITY OF SUBSURFACE CONDITIONS LIKELY TO BE ENCOUNTERED. ANY RELIANCE UPON THE SUBSURFACE INFORMATION MADE AVAILABLE BY THE OWNER OR THE ENGINEER SHALL BE AT THE CONTRACTOR'S RISK. COMPLETE REPORT OF GEOTECHNICAL EXPLORATION IS INCLUDED FOR REVIEW AS PART OF THIS SECTION. HOWEVER, THIS REPORT AND ANY OTHER SUBSURFACE INFORMATION WHICH MAY BE SHOWN ON SEPARATED SHEETS OR OTHERWISE MADE AVAILABLE BY THE OWNER OR ENGINEER TO BIDDERS, CONTRACTORS AND OTHER INTERSTED PARTIES SHALL NOT BE CONSIDERED AS PART OF THE CONTRACT DOCUMENTS OR CONTRACT DRAWINGS, IT BEING UNDERSTOOD THAT SUCH SUBSURFACE DATA IS OBTAINED SOLELY FOR THE PURPOSE OF DESIGN AND IS PROVIDED TO THE CONTRACTOR FOR GENERAL FAMILIARIZATION WITH THE SITE SUBSURFACE CONDITIONS AND IS PROVIDED WITHOUT EXPRESS OR IMPLIED REPRESENTATION, ASSURANCE OR GUARANTEE THAT INFORMATION IS ADEQUATE, COMPLETE OR CORRECT, OR THAT IT REPRESNTS THE TRUE PICTURE OF THE SUBSURFACE CONDITIONS TO BE ENCOUNTERED.

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No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

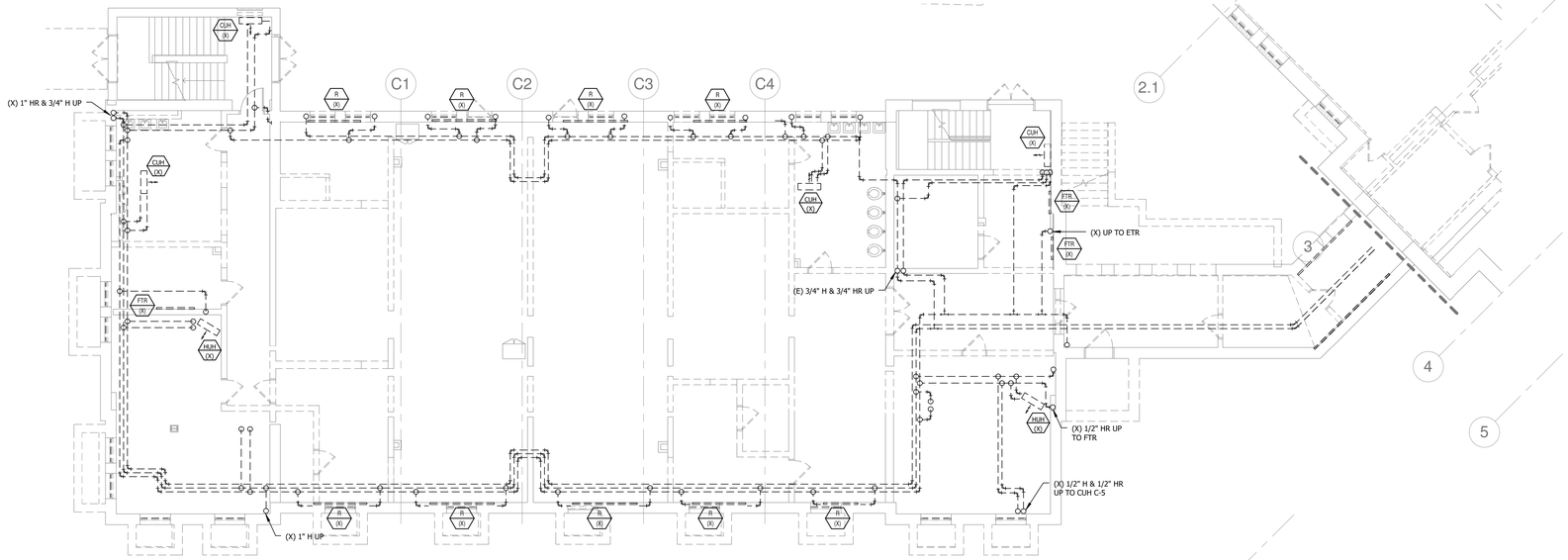
DATE: 03/31/16

SCALE: AS NOTED

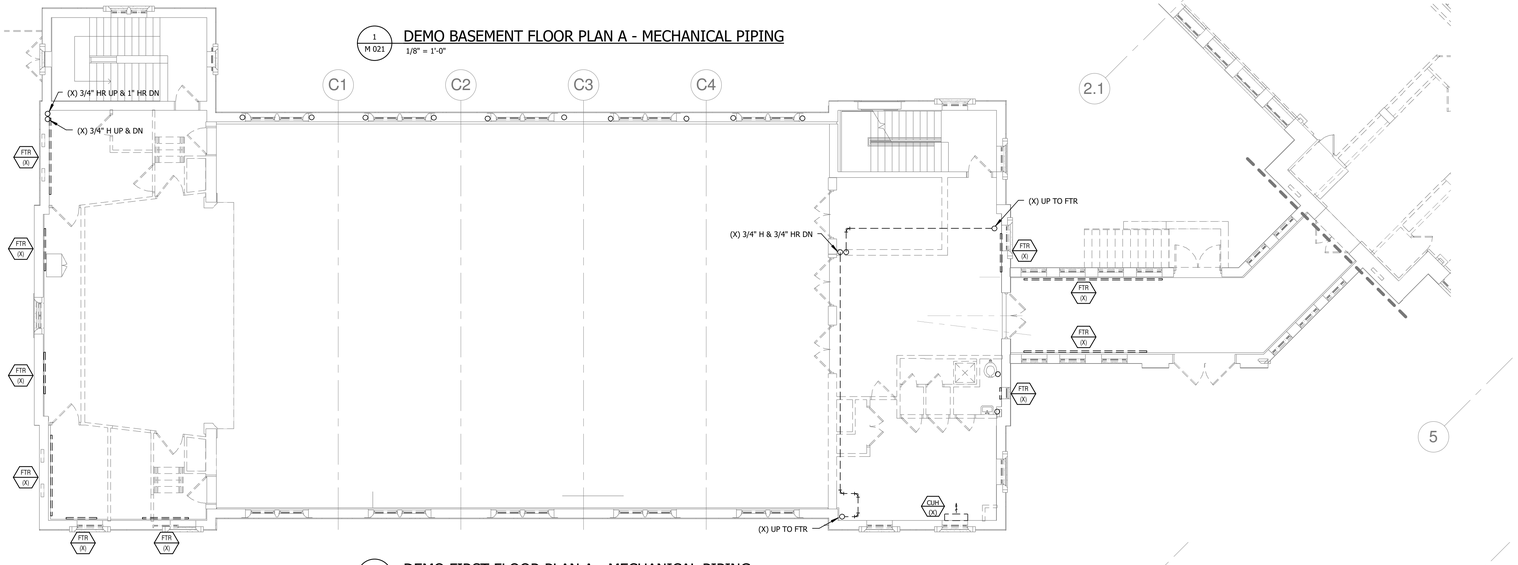
DRAWING NAME
SITE PLAN - MECHANICAL PIPING

M 010

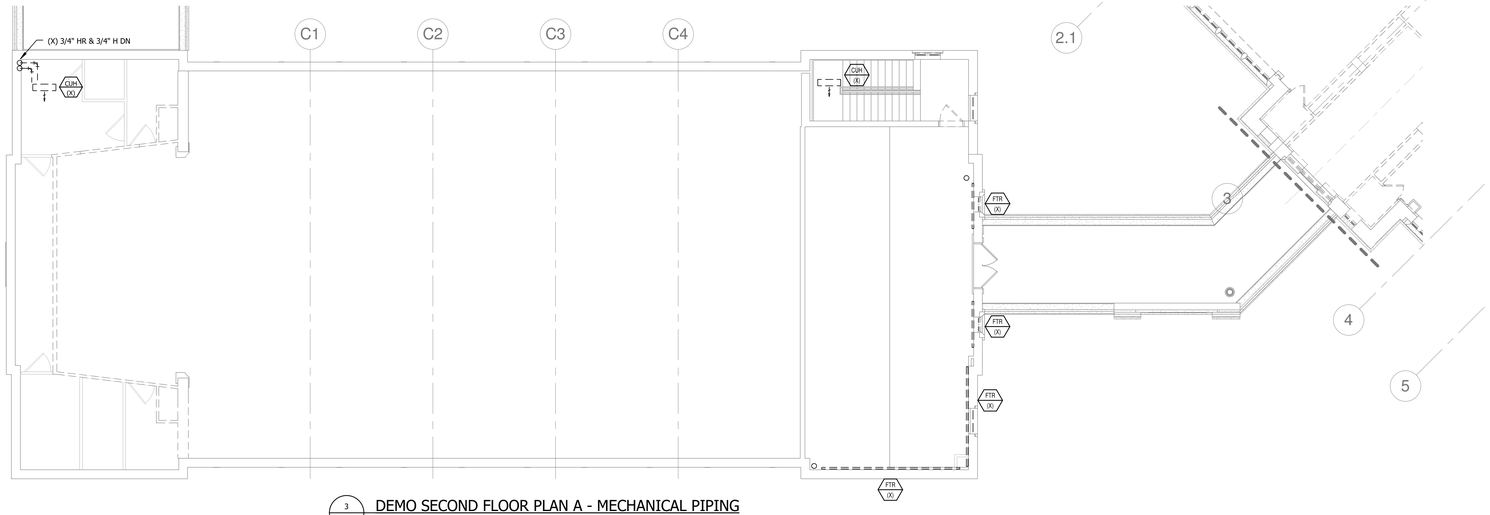
JOSHUA PELLICIA 7/26/2016 7:53 AM U:\PROJ\JRS ARCHITECTS, INC\M\15-05A36.00-ROPK-ROBERT POOLE RENOVATION ADDITION\E_DRAWINGS ENG\A_CAD\A_DRAWINGS\MEP\M010--15-05A36.00.DWG



1 M 021 DEMO BASEMENT FLOOR PLAN A - MECHANICAL PIPING
1/8" = 1'-0"



2 M 021 DEMO FIRST FLOOR PLAN A - MECHANICAL PIPING
1/8" = 1'-0"

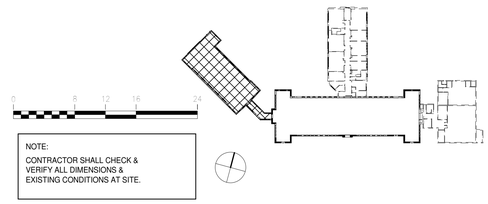


3 M 021 DEMO SECOND FLOOR PLAN A - MECHANICAL PIPING
1/8" = 1'-0"

GENERAL DEMOLITION NOTES:

1. REMOVE ALL EXISTING MECHANICAL EQUIPMENT, PIPING, HANGERS, SUPPORTS, HOUSEKEEPING PADS AND WIRING ASSOCIATED WITH EQUIPMENT.

2. PATCH ANY OPENINGS IN FLOOR, INTERIOR/EXTERIOR WALLS AND ROOF IN ACCORDANCE AND COORDINATION WITH ARCHITECTURAL DRAWINGS AND MECHANICAL NEW DRAWINGS.



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No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO BASEMENT, FIRST AND SECOND FLOOR PLAN A - MECHANICAL PIPING

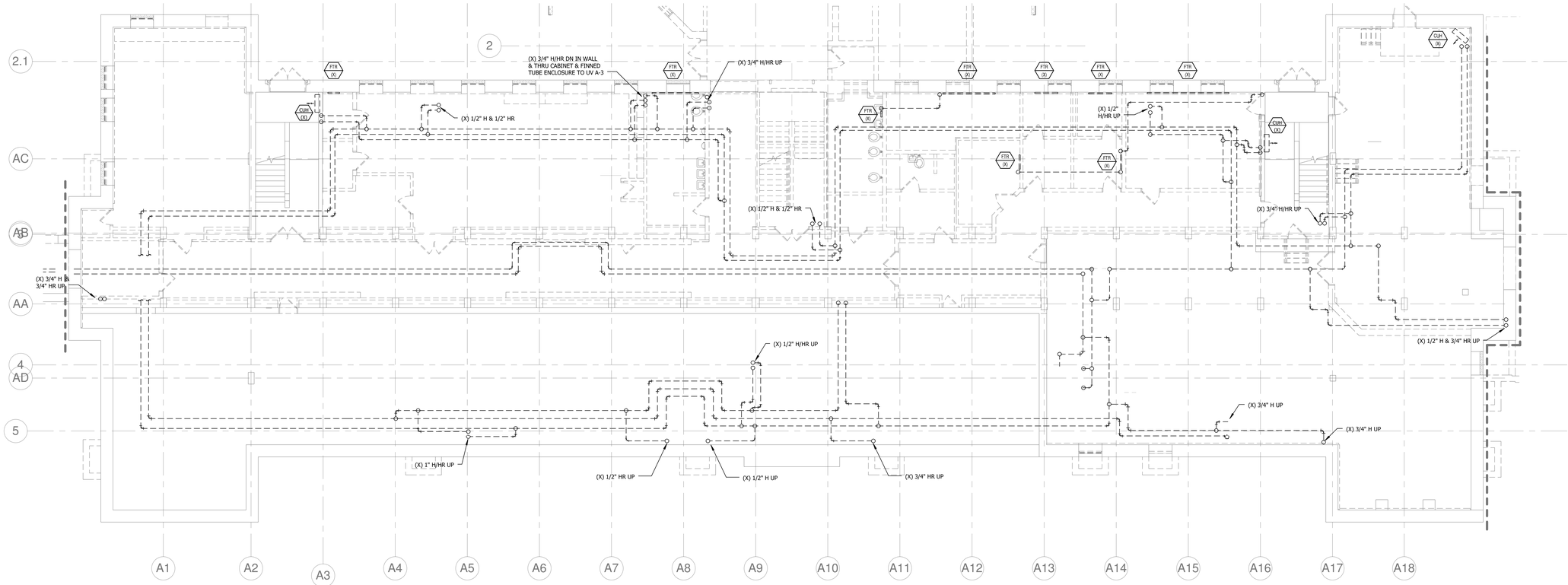
M 021

7/26/2016 10:10:18 AM

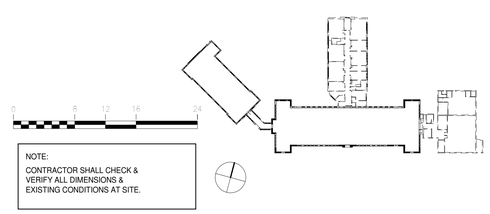
GENERAL DEMOLITION NOTES:

1. REMOVE ALL EXISTING MECHANICAL EQUIPMENT, PIPING, HANGERS, SUPPORTS, HOUSEKEEPING PADS AND WIRING ASSOCIATED WITH EQUIPMENT.

2. PATCH ANY OPENINGS IN FLOOR, INTERIOR/EXTERIOR WALLS AND ROOF IN ACCORDANCE AND COORDINATION WITH ARCHITECTURAL DRAWINGS AND MECHANICAL NEW DRAWINGS.



1 / M 022 DEMO BASEMENT FLOOR PLAN B - MECHANICAL PIPING
1/8" = 1'-0"



NOTE:
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7/26/2016 10:10:28 AM

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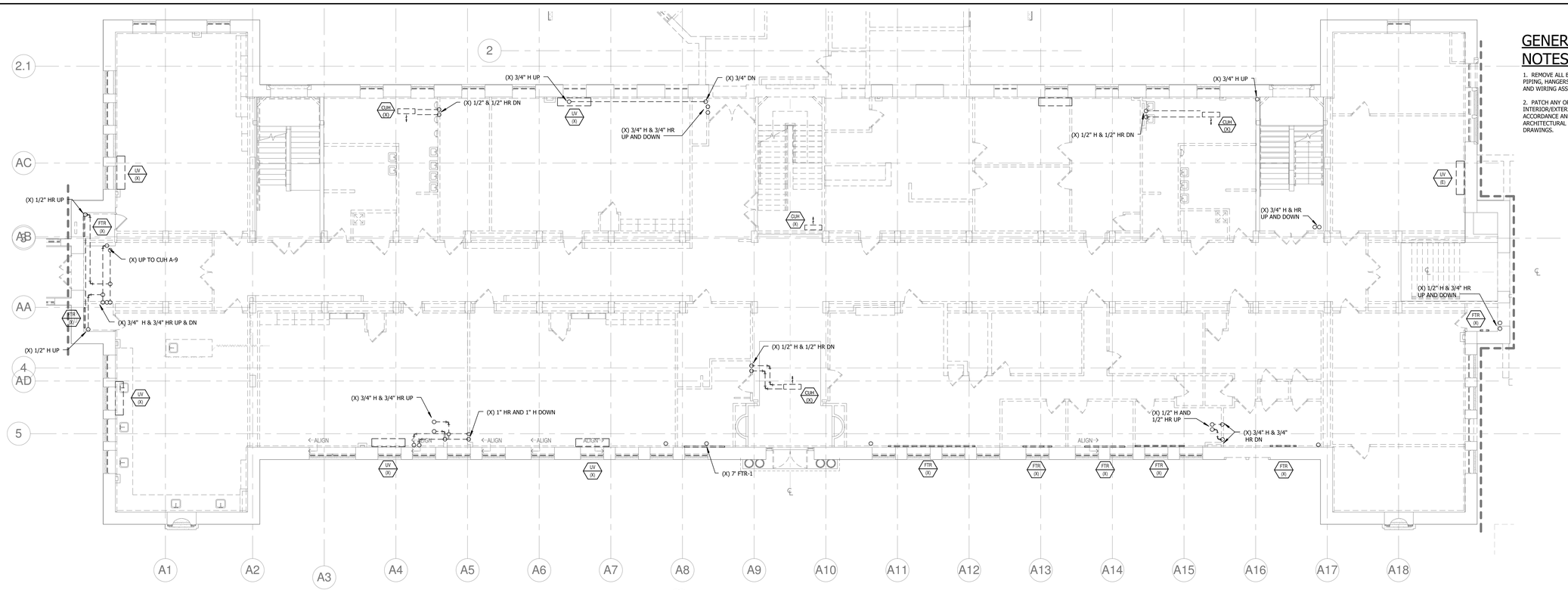
No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO BASEMENT FLOOR PLAN B - MECHANICAL PIPING

M 022



1 / M 023 DEMO FIRST FLOOR PLAN B - MECHANICAL PIPING

1/8" = 1'-0"

2 / M 023 DEMO SECOND FLOOR PLAN B - MECHANICAL PIPING

1/8" = 1'-0"

GENERAL DEMOLITION NOTES:

1. REMOVE ALL EXISTING MECHANICAL EQUIPMENT, PIPING, HANGERS, SUPPORTS, HOUSEKEEPING PADS AND WIRING ASSOCIATED WITH EQUIPMENT.

2. PATCH ANY OPENINGS IN FLOOR, INTERIOR/EXTERIOR WALLS AND ROOF IN ACCORDANCE AND COORDINATION WITH ARCHITECTURAL DRAWINGS AND MECHANICAL NEW DRAWINGS.

NOTE:
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I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
DEMO FIRST & SECOND FLOOR PLAN B - MECHANICAL PIPING

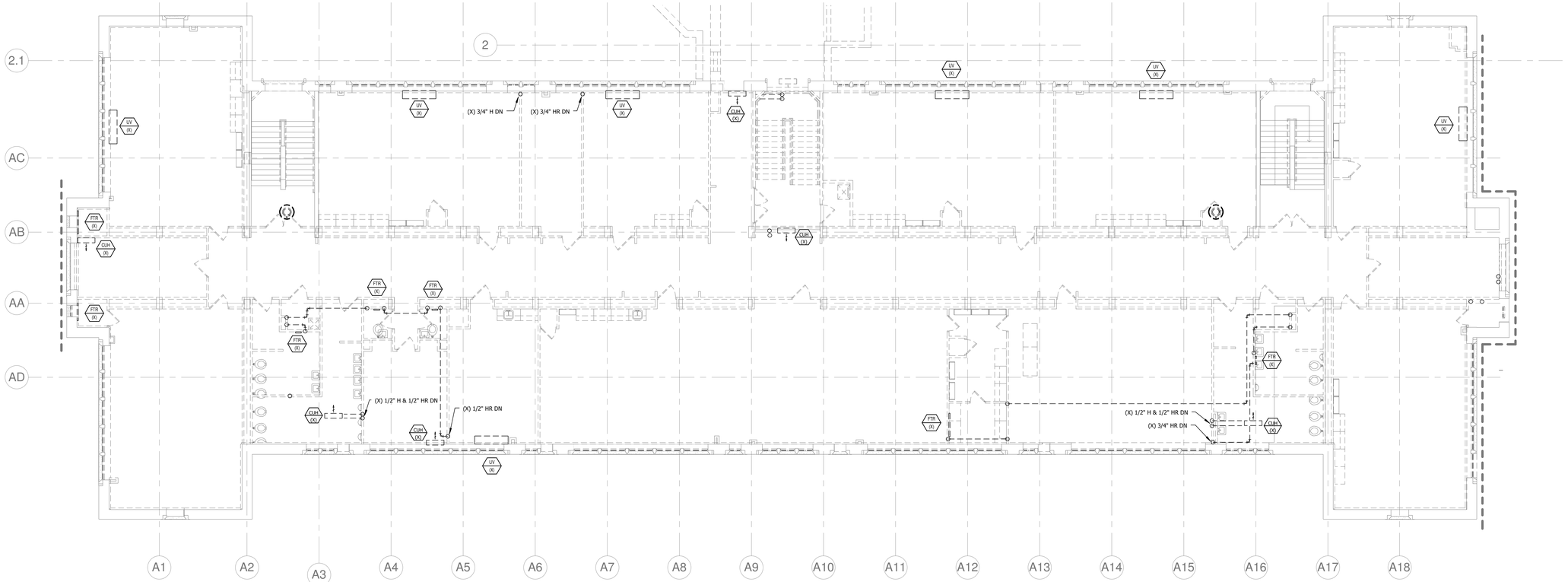
M 023

7/26/2016 10:10:47 AM

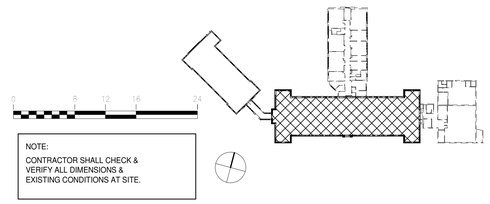
GENERAL DEMOLITION NOTES:

1. REMOVE ALL EXISTING MECHANICAL EQUIPMENT, PIPING, HANGERS, SUPPORTS, HOUSEKEEPING PADS AND WIRING ASSOCIATED WITH EQUIPMENT.

2. PATCH ANY OPENINGS IN FLOOR, INTERIOR/EXTERIOR WALLS AND ROOF IN ACCORDANCE AND COORDINATION WITH ARCHITECTURAL DRAWINGS AND MECHANICAL NEW DRAWINGS.



1 / M 024 DEMO THIRD FLOOR PLAN B - MECHANICAL PIPING
1/8" = 1'-0"



NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

JRS ARCHITECTS
2010 Clipper Park Rd.
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410.235.7256

ASSOCIATE ARCHITECT
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LANDSCAPE ARCHITECT
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CIVIL ENGINEER
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Additions & Renovations at Robert Poole Building #056
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BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO THIRD FLOOR PLAN B - MECHANICAL PIPING

M 024

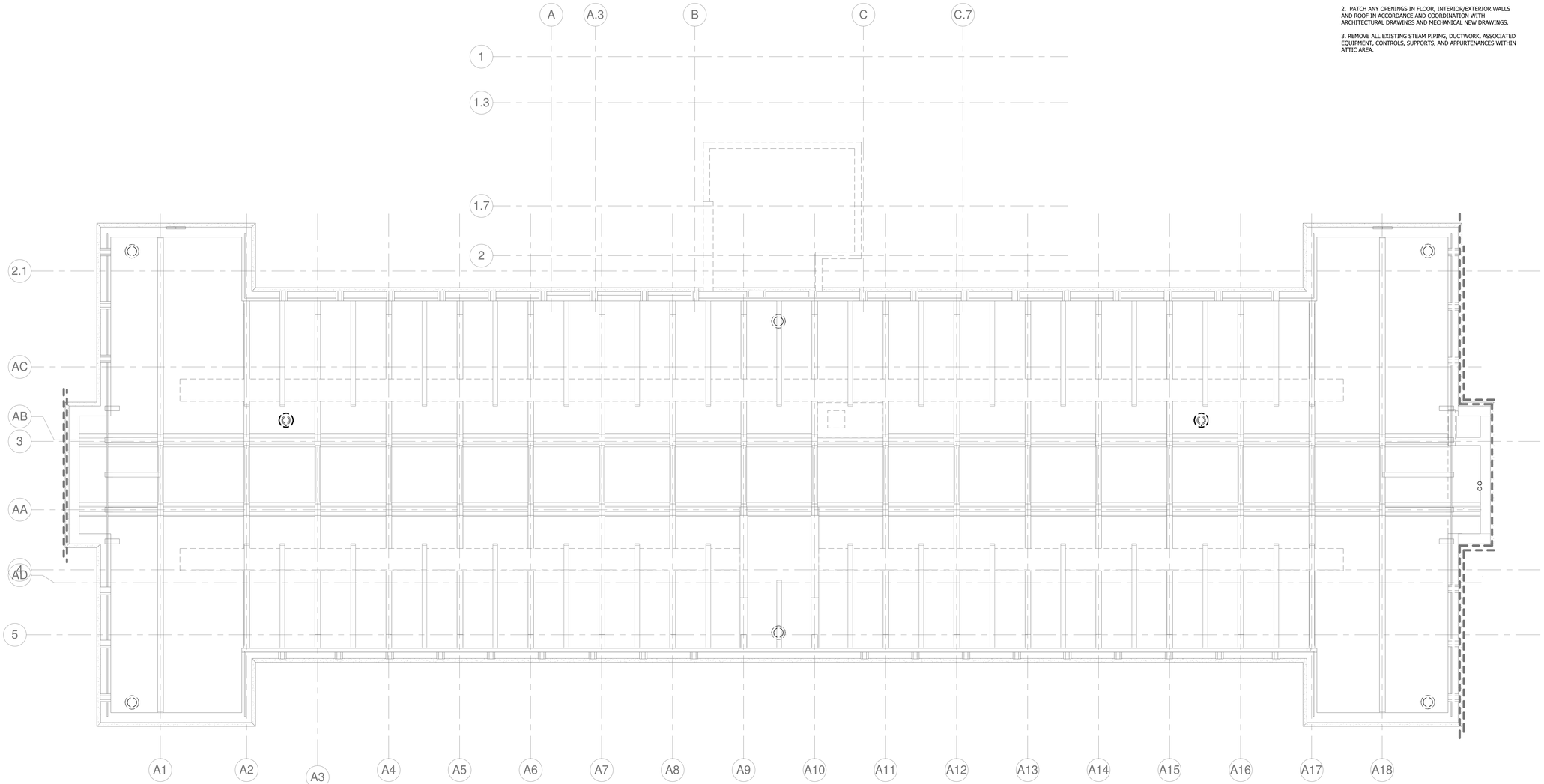
7/26/2016 10:10:56 AM

GENERAL DEMOLITION NOTES:

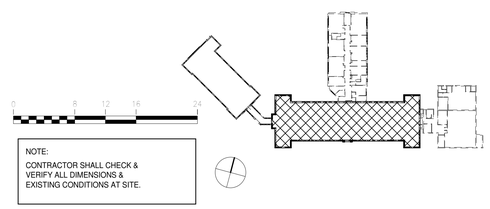
1. REMOVE ALL EXISTING MECHANICAL EQUIPMENT, PIPING, HANGERS, SUPPORTS, HOUSEKEEPING PADS AND WIRING ASSOCIATED WITH EQUIPMENT.

2. PATCH ANY OPENINGS IN FLOOR, INTERIOR/EXTERIOR WALLS AND ROOF IN ACCORDANCE AND COORDINATION WITH ARCHITECTURAL DRAWINGS AND MECHANICAL NEW DRAWINGS.

3. REMOVE ALL EXISTING STEAM PIPING, DUCTWORK, ASSOCIATED EQUIPMENT, CONTROLS, SUPPORTS, AND APPURTENANCES WITHIN ATTIC AREA.



1 / M 025 DEMO ATTIC PLAN B - MECHANICAL PIPING
1/8" = 1'-0"



NOTE:
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No.	DATE	DESCRIPTION

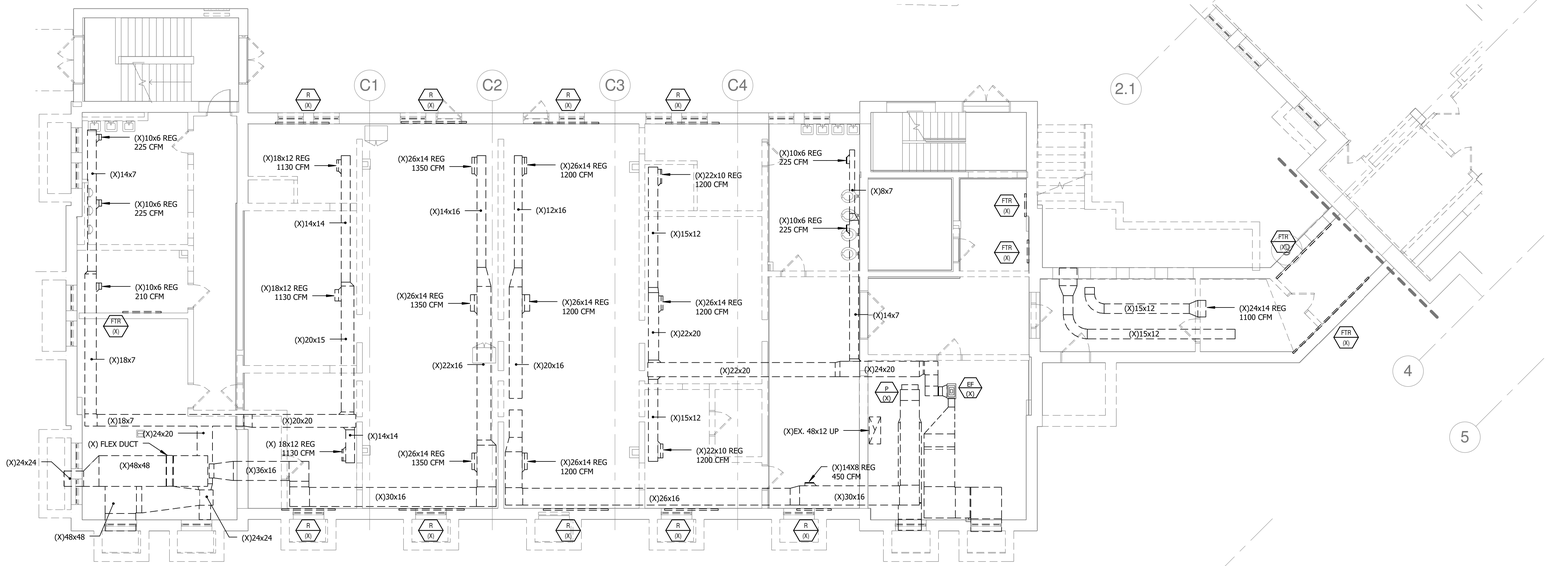
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO ATTIC PLAN B - MECHANICAL PIPING

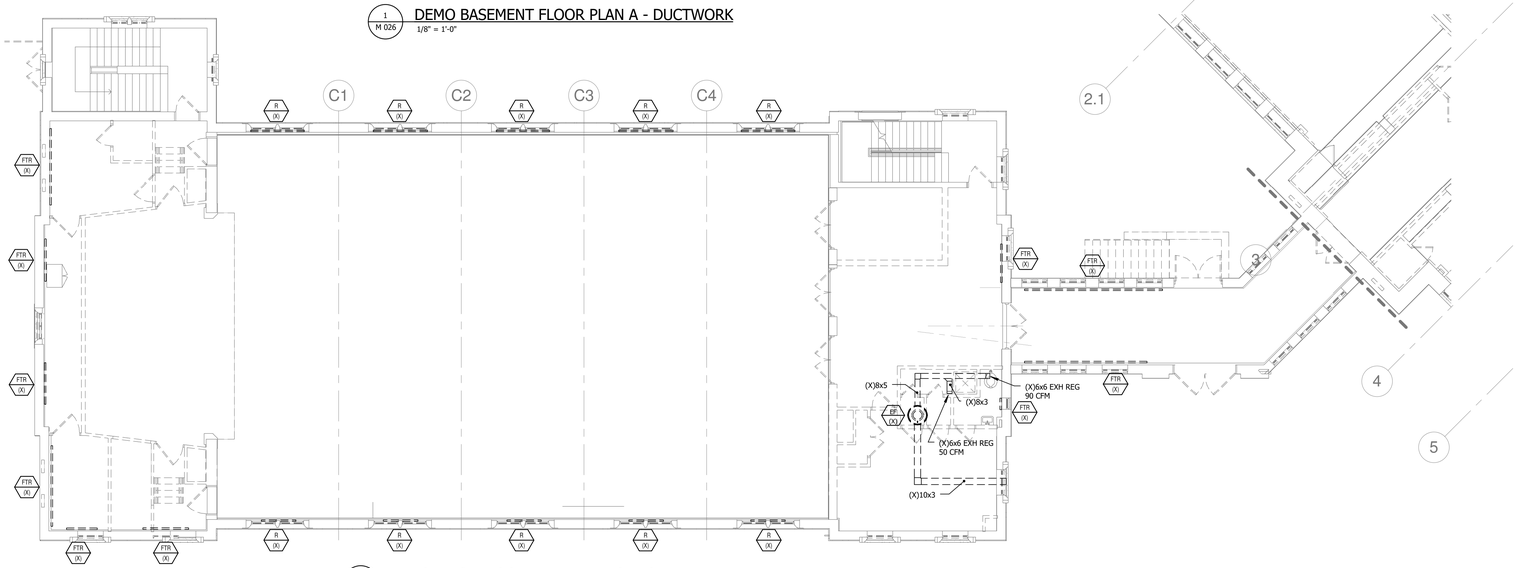
M 025

7/26/2016 10:11:07 AM



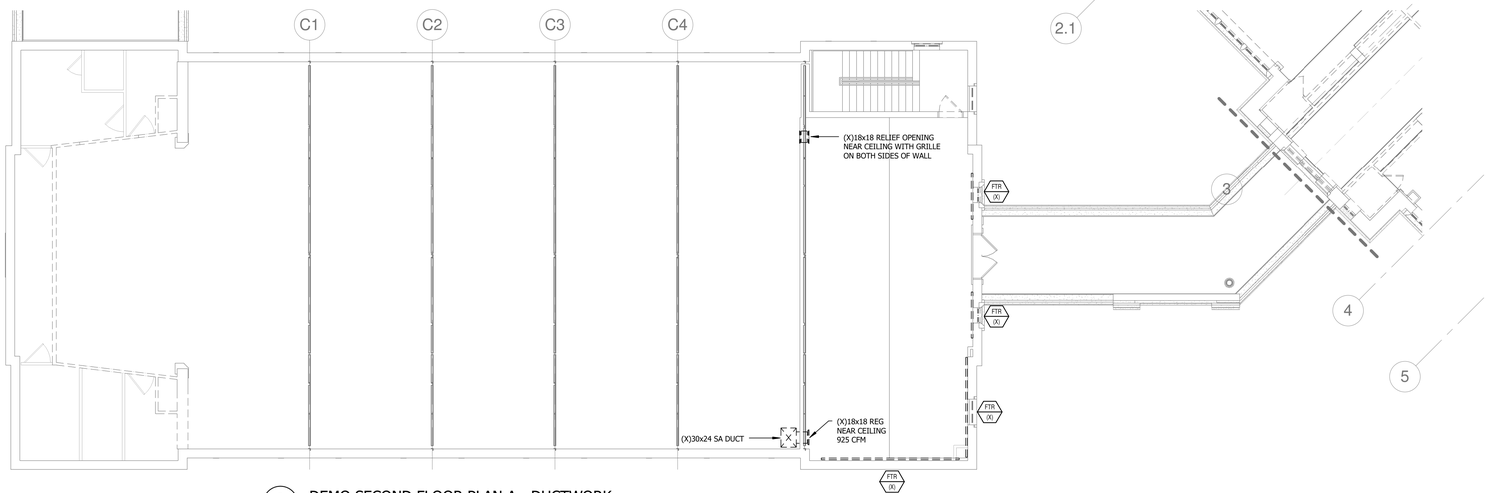
1 M 026 DEMO BASEMENT FLOOR PLAN A - DUCTWORK

1/8" = 1'-0"



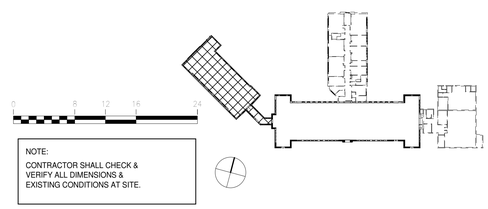
2 M 026 DEMO FIRST FLOOR PLAN A - DUCTWORK

1/8" = 1'-0"



3 M 026 DEMO SECOND FLOOR PLAN A - DUCTWORK

1/8" = 1'-0"



NOTE:

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GENERAL DEMOLITION NOTES:

1. REMOVE ALL EXISTING MECHANICAL EQUIPMENT, PIPING, HANGERS, SUPPORTS, HOUSEKEEPING PADS AND WIRING ASSOCIATED WITH EQUIPMENT.

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PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME

DEMO BASEMENT, FIRST & SECOND FLOOR PLAN A - DUCTWORK

M 026

7/26/2016 10:11:27 AM

GENERAL DEMOLITION NOTES:

1. REMOVE ALL EXISTING MECHANICAL EQUIPMENT, PIPING, HANGERS, SUPPORTS, HOUSEKEEPING PADS AND WIRING ASSOCIATED WITH EQUIPMENT.

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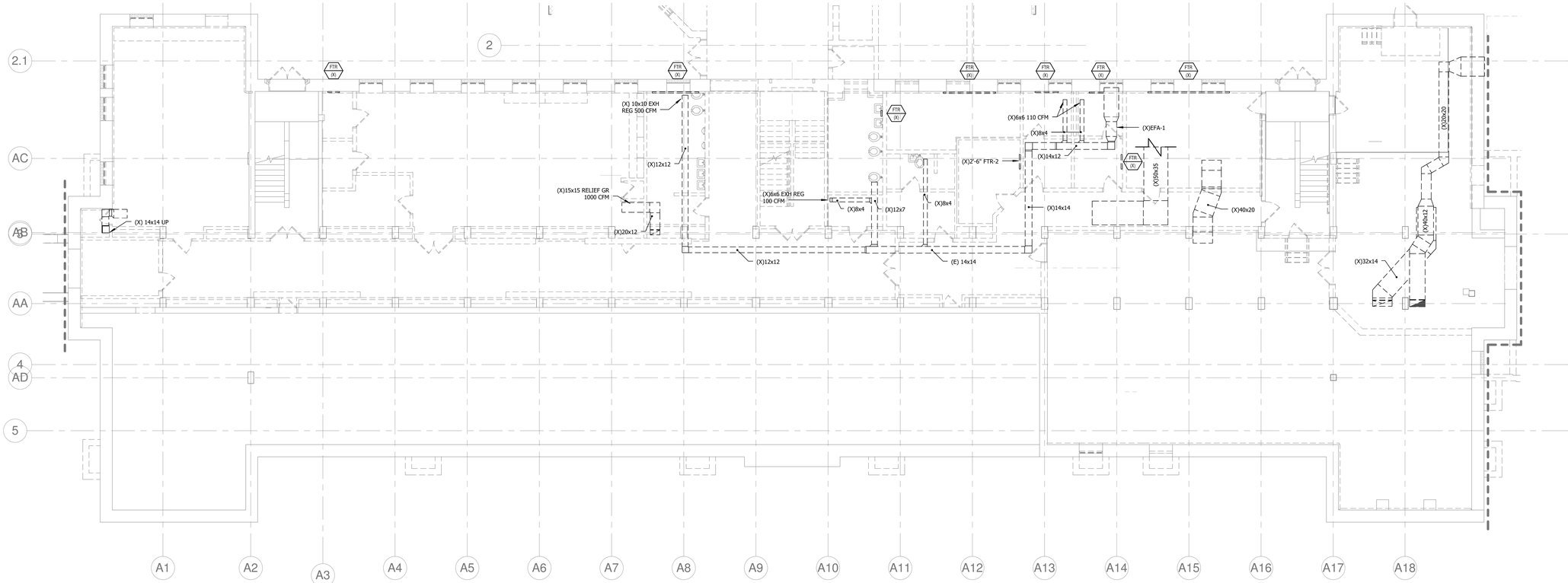
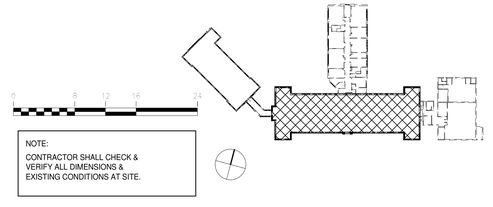


1 / M 027 DEMO BASEMENT FLOOR PLAN B - DUCTWORK
1/8" = 1'-0"



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BRUNJAC ENGINEERING
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NYIKOS ASSOCIATES
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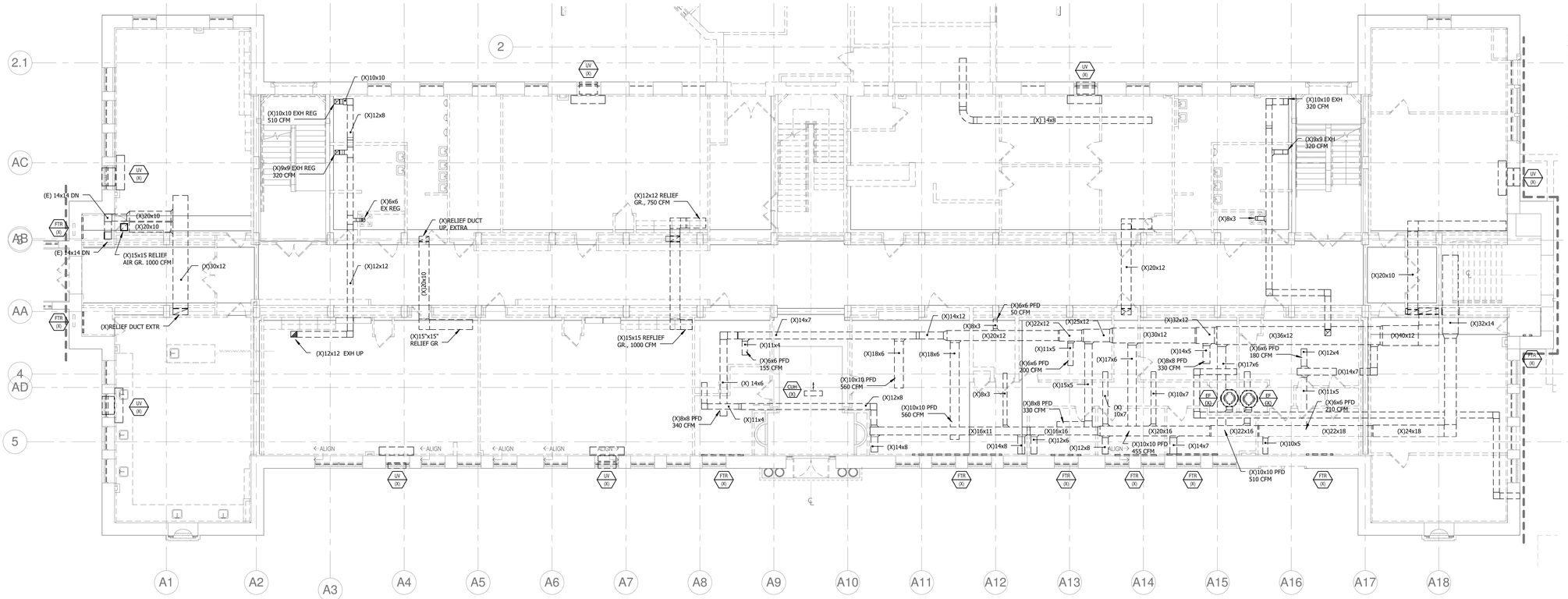
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO BASEMENT FLOOR PLAN B - DUCTWORK

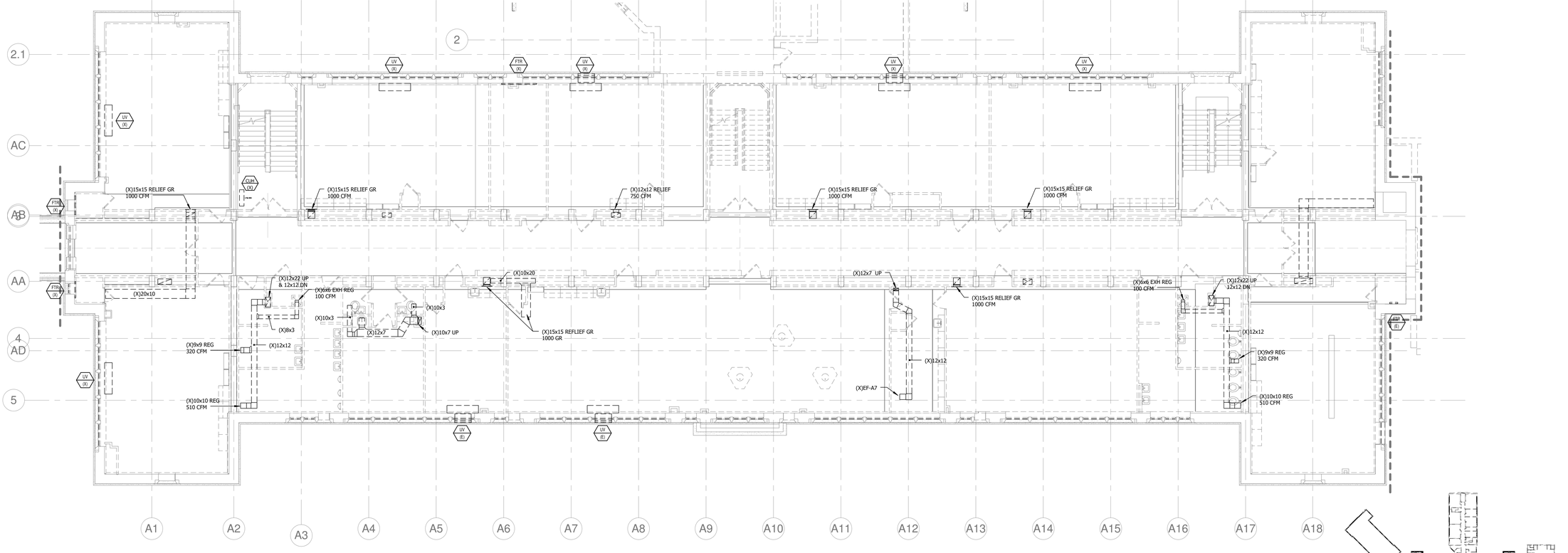
M 027

7/26/2016 10:11:37 AM



1 / M 028 DEMO FIRST FLOOR PLAN B - DUCTWORK

1/8" = 1'-0"



2 / M 028 DEMO SECOND FLOOR PLAN B - DUCTWORK

1/8" = 1'-0"

GENERAL DEMOLITION NOTES:

1. REMOVE ALL EXISTING MECHANICAL EQUIPMENT, PIPING, HANGERS, SUPPORTS, HOUSEKEEPING PADS AND WIRING ASSOCIATED WITH EQUIPMENT.

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MAHAN RYKIEL ASSOCIATES
800 WYMAN PARK DR, SUITE 100
BALTIMORE, MD 21211

CIVIL ENGINEER
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7125 AMBASSADOR RD, SUITE 200
BALTIMORE, MD 21244

STRUCTURAL ENGINEER
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MEP ENGINEER
BRINJAC ENGINEERING
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No.	DATE	DESCRIPTION

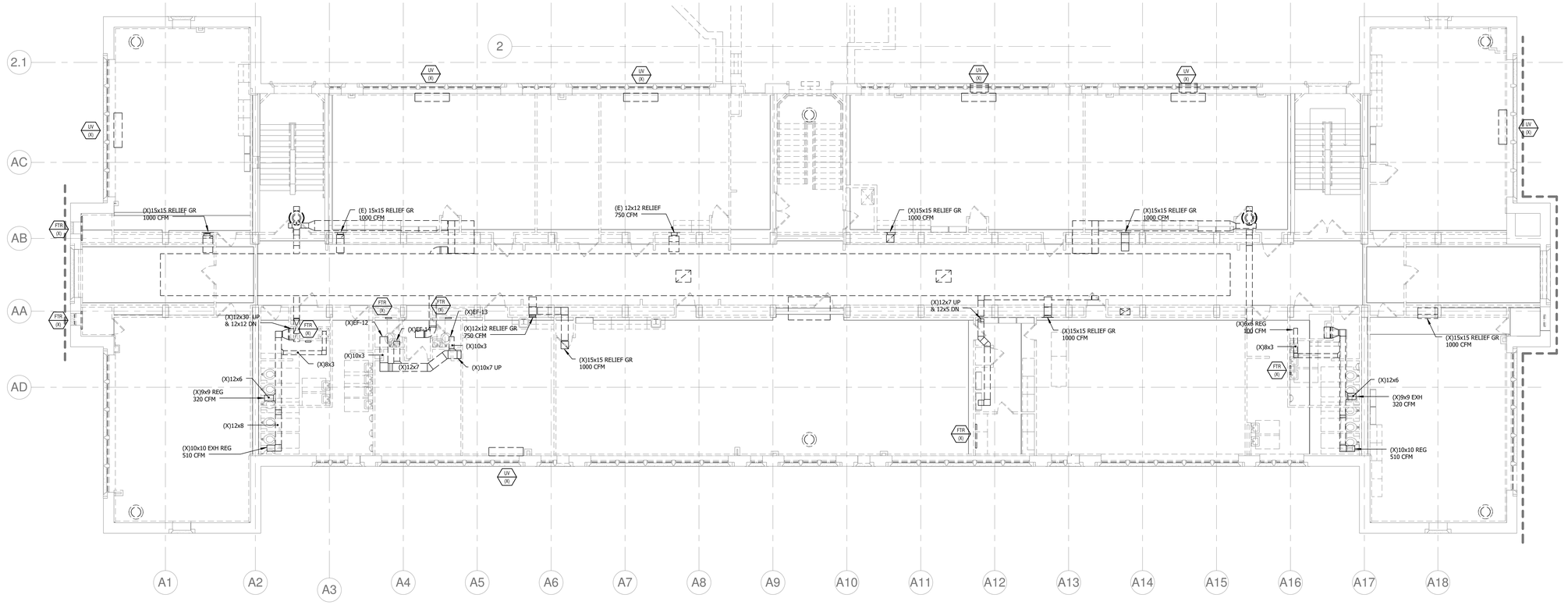
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO FIRST & SECOND FLOOR PLAN B DUCTWORK

M 028

7/26/2016 10:12:02 AM

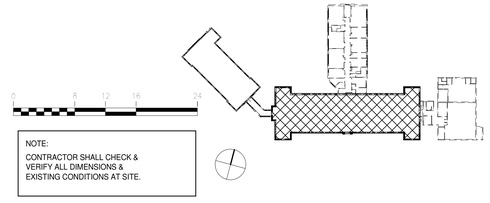


1 / M 029 DEMO THIRD FLOOR PLAN B - DUCTWORK
1/8" = 1'-0"

GENERAL DEMOLITION NOTES:

1. REMOVE ALL EXISTING MECHANICAL EQUIPMENT, PIPING, HANGERS, SUPPORTS, HOUSEKEEPING PADS AND WIRING ASSOCIATED WITH EQUIPMENT.

2. PATCH ANY OPENINGS IN FLOOR, INTERIOR/EXTERIOR WALLS AND ROOF IN ACCORDANCE AND COORDINATION WITH ARCHITECTURAL DRAWINGS AND MECHANICAL NEW DRAWINGS.



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2010 Clipper Park Rd.
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STV, INC.
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BALTIMORE, MD 21244

STRUCTURAL ENGINEER
ALBRECHT ENGINEERING
3500 BOSTON ST, SUITE 329
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18219A FLOWER HILL WAY
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BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO THIRD FLOOR PLAN B - DUCTWORK

M 029

7/26/2016 10:12:15 AM

GENERAL DEMOLITION NOTES:

1. REMOVE ALL EXISTING MECHANICAL EQUIPMENT, PIPING, HANGERS, SUPPORTS, HOUSEKEEPING PADS AND WIRING ASSOCIATED WITH EQUIPMENT.

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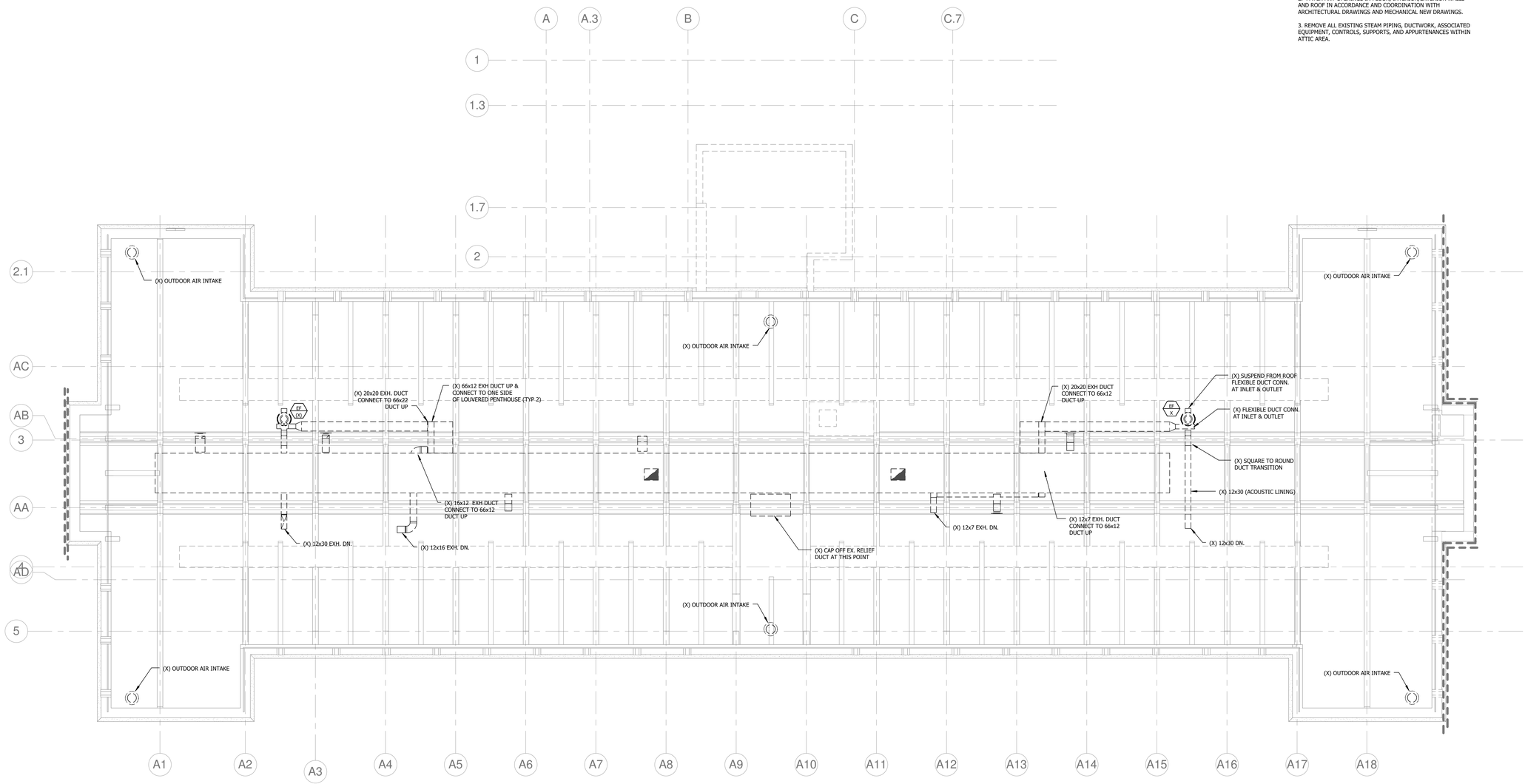
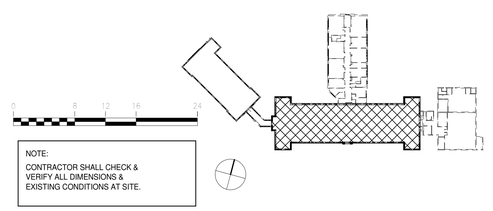
3. REMOVE ALL EXISTING STEAM PIPING, DUCTWORK, ASSOCIATED EQUIPMENT, CONTROLS, SUPPORTS, AND APPURTENANCES WITHIN ATTIC AREA.



1 / M 030 DEMO ATTIC PLAN B - DUCTWORK
1/8" = 1'-0"



NOTE:
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No.	DATE	DESCRIPTION

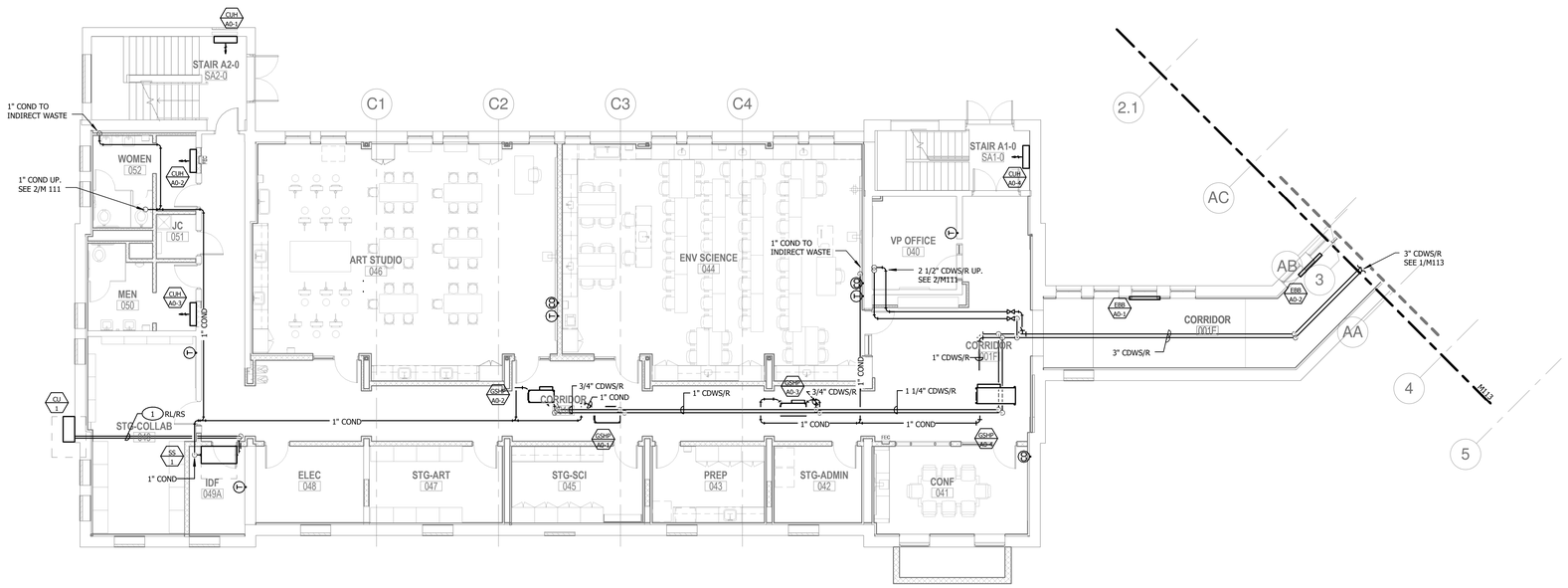
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

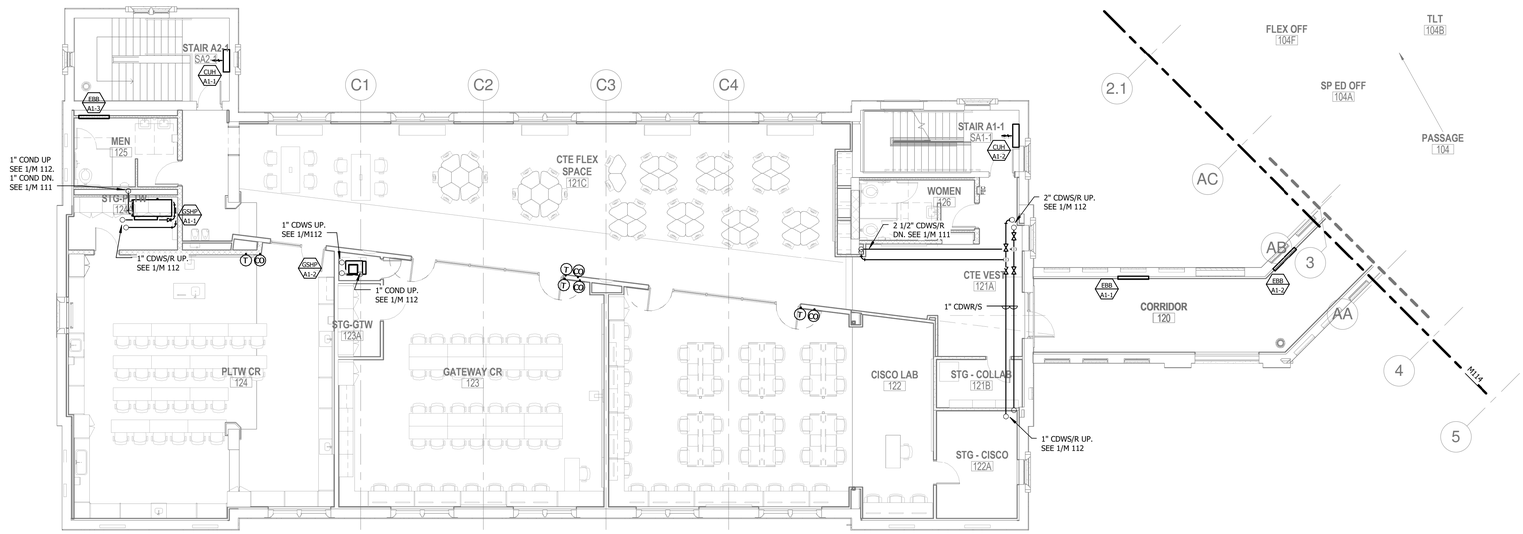
DRAWING NAME
DEMO ATTIC PLAN B - DUCTWORK

M 030

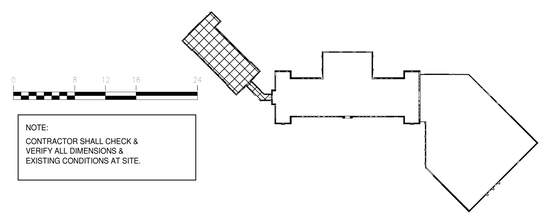
7/26/2016 10:12:25 AM



1 M 111 NEW WORK BASEMENT FLOOR PLAN A - MECHANICAL PIPING
1/8" = 1'-0"



2 M 111 NEW WORK FIRST FLOOR PLAN A - MECHANICAL PIPING
1/8" = 1'-0"



NOTE:
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KEYED NOTES:

1 REFRIGERANT LINES SIZED PER MANUFACTURER'S STANDARDS.

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STRUCTURAL ENGINEER
ALBRECHT ENGINEERING
3500 BOSTON ST, SUITE 329
BALTIMORE, MD 21224

MEP ENGINEER
BRINJAC ENGINEERING
1800 N. CHARLES ST, SUITE 310
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FOOD SERVICE
NYIKOS ASSOCIATES
18219A FLOWER HILL WAY
GAITHERSBURG, MD 20879

AV/IT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD, SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056
1300 W 36TH ST., BALTIMORE, MD 21211

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

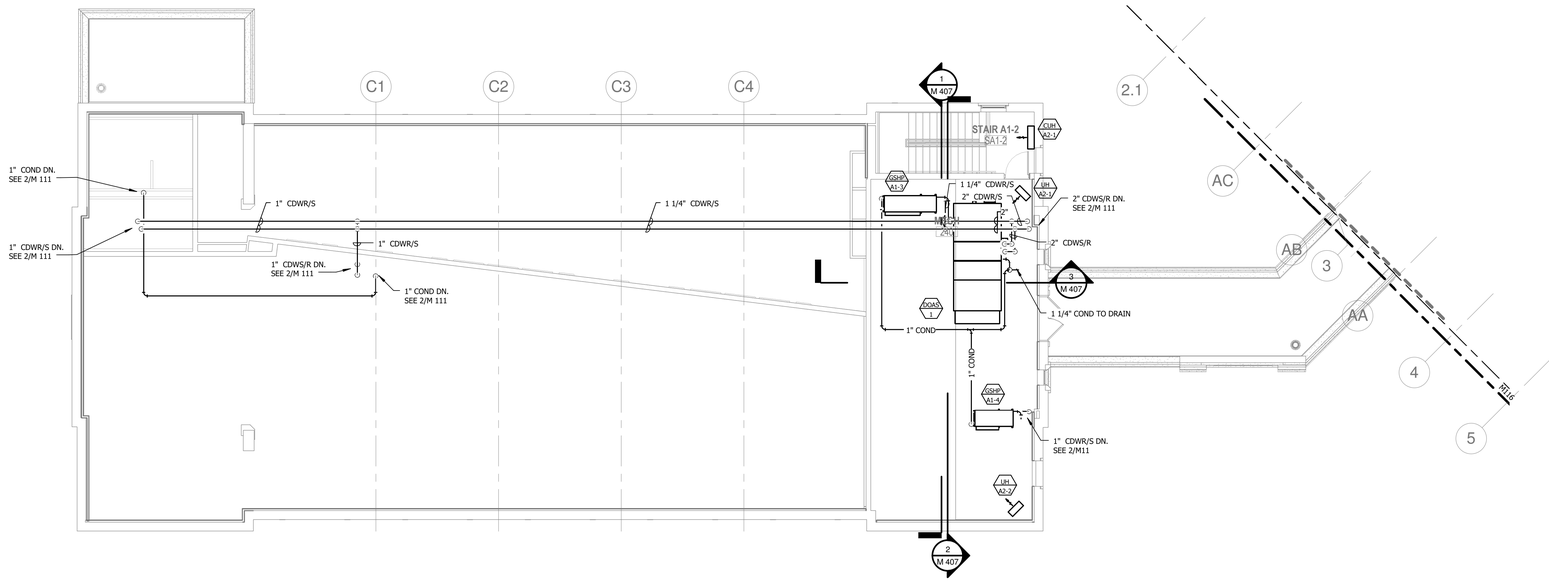
BID ISSUE

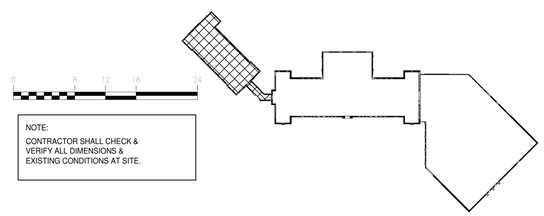
PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK BASEMENT & FIRST FLOOR PLAN A - MECHANICAL PIPING

M 111

7/26/2016 10:16:26 AM





NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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LANDSCAPE ARCHITECT
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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

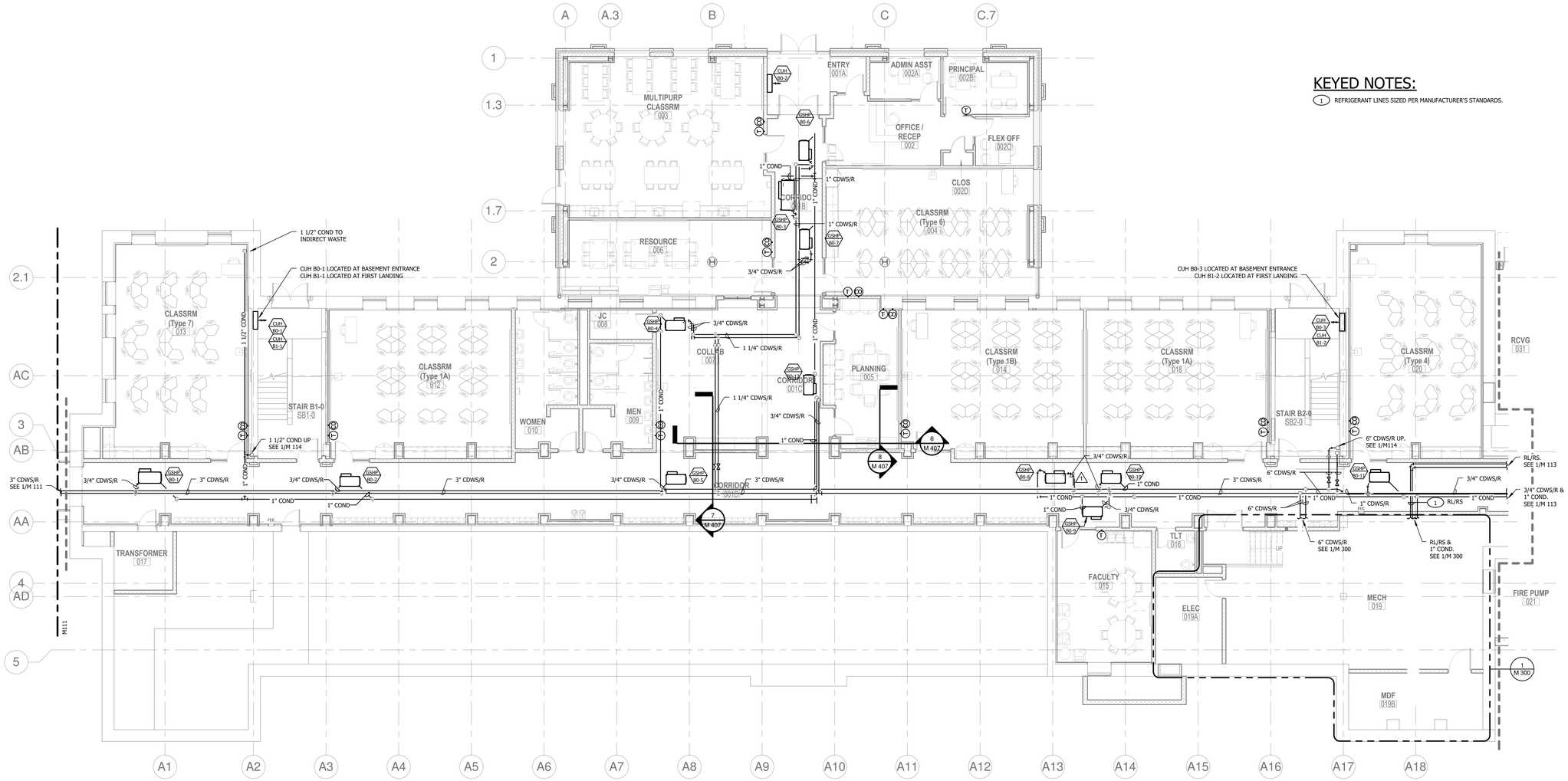
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND & ROOF PLAN A - MECHANICAL PIPING

M 112

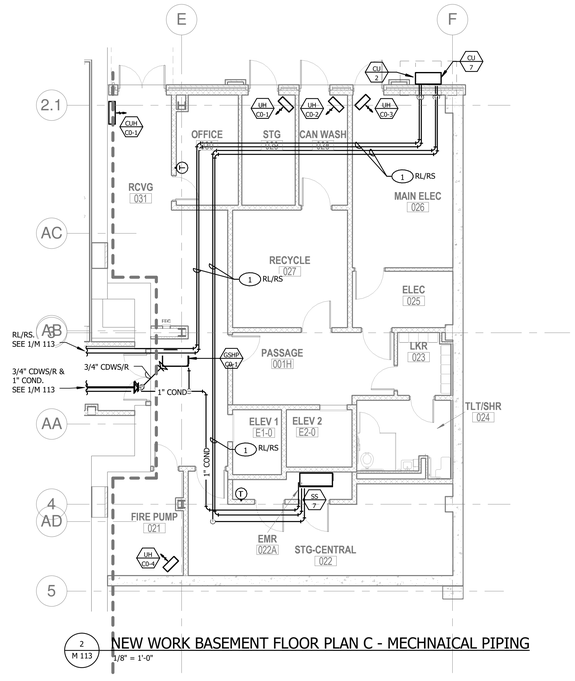
7/26/2016 10:17:02 AM



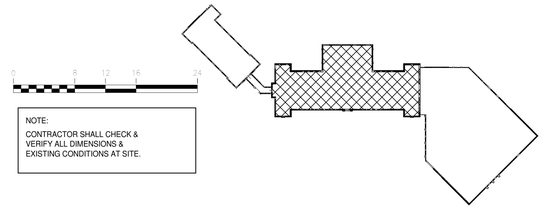
KEYED NOTES:

1 REFRIGERANT LINES SIZED PER MANUFACTURER'S STANDARDS.

1 M 113 NEW WORK BASEMENT FLOOR PLAN B - MECHANICAL PIPING
1/8" = 1'-0"



2 M 113 NEW WORK BASEMENT FLOOR PLAN C - MECHNAICAL PIPING
1/8" = 1'-0"



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LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	05/06/16	ADDENDUM #5

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

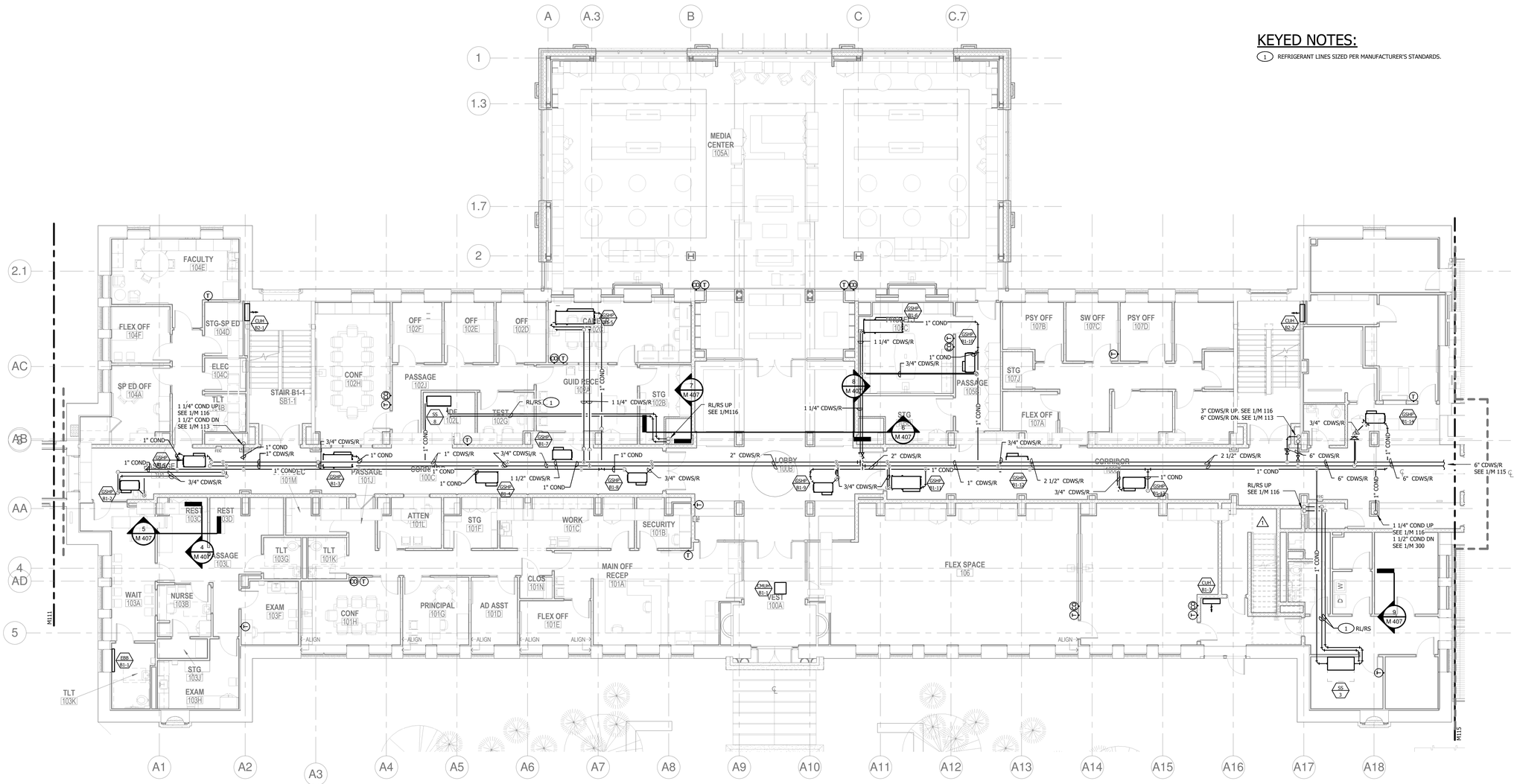
DRAWING NAME
NEW WORK BASEMENT PLAN B - MECHANICAL PIPING

M 113

7/26/2016 10:17:26 AM

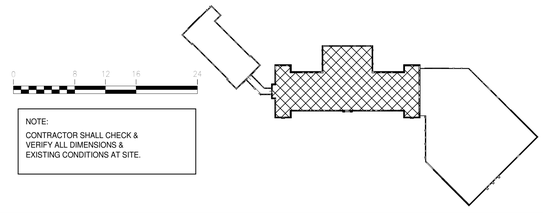
KEYED NOTES:

(1) REFRIGERANT LINES SIZED PER MANUFACTURER'S STANDARDS.



1 / M 114 NEW WORK FIRST FLOOR PLAN B - MECHANICAL PIPING

1/8" = 1'-0"



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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

PROJECT No.: 152-01

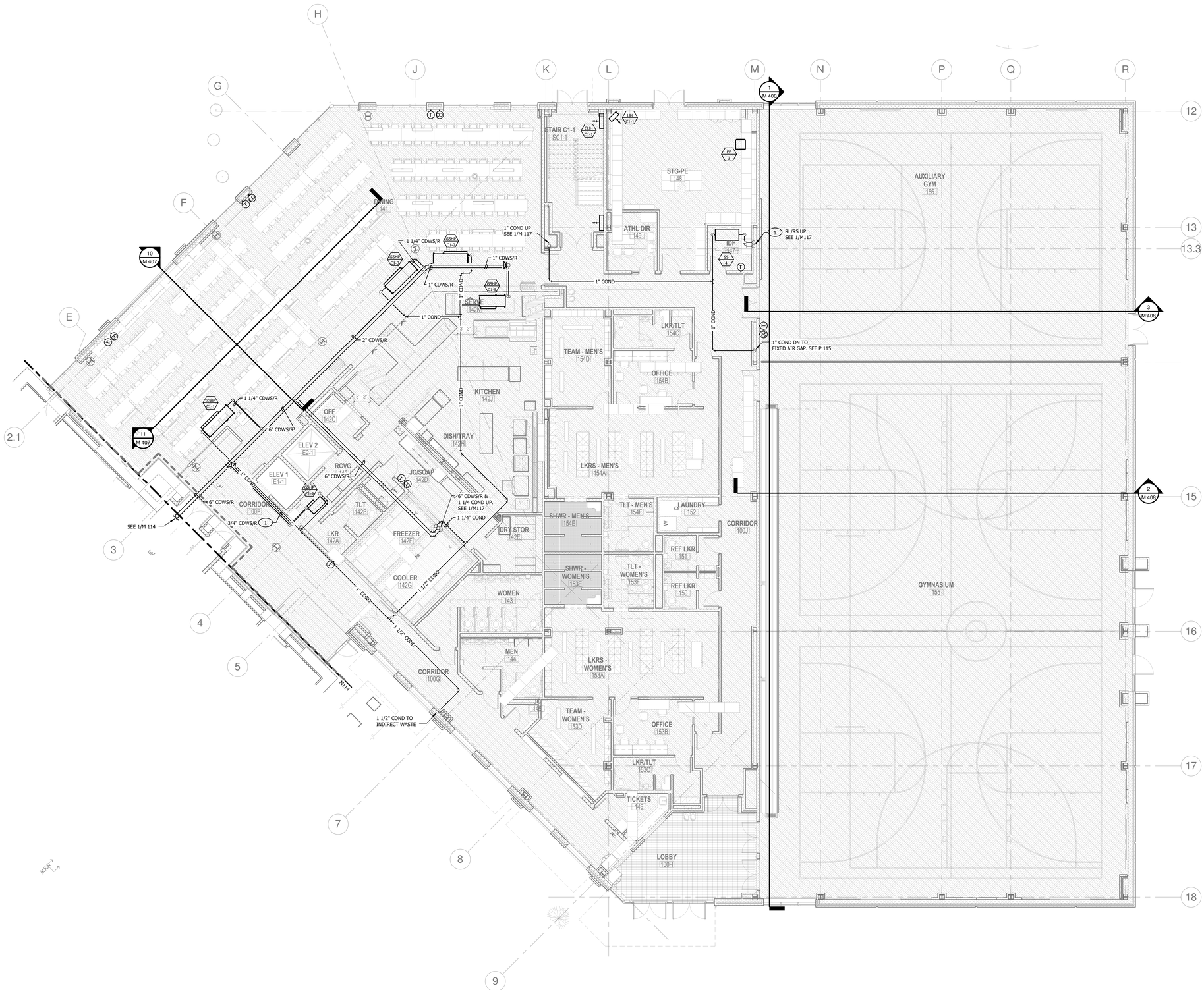
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK FIRST FLOOR PLAN B - MECHANICAL PIPING

M 114

7/26/2016 10:17:44 AM



KEYED NOTES:

1. REFRIGERANT LINES SIZED PER MANUFACTURER'S STANDARDS.

1 / M 115 NEW WORK FIRST FLOOR PLAN C - MECHANICAL PIPING
1/8" = 1'-0"

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

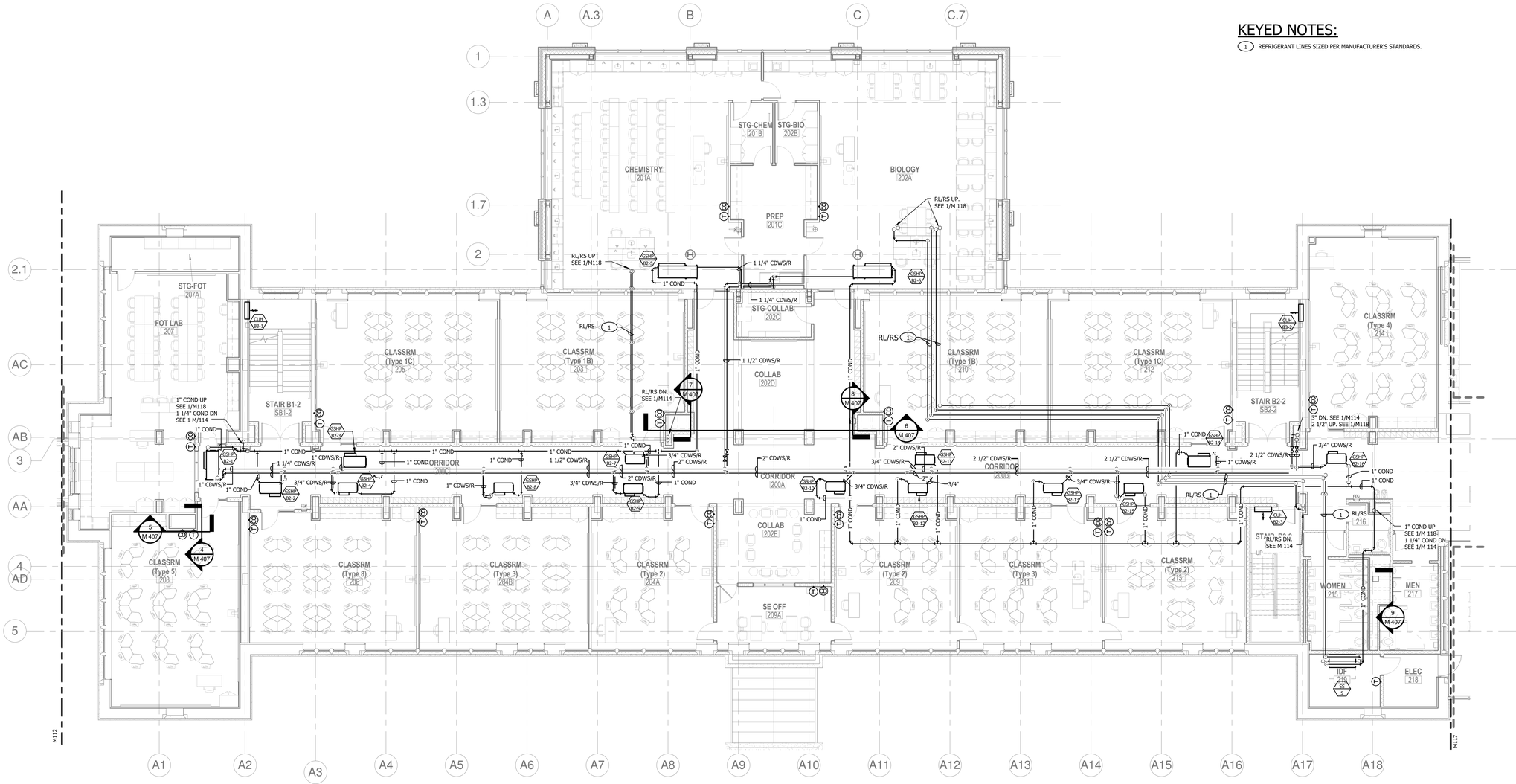
DRAWING NAME
NEW WORK FIRST FLOOR PLAN C - MECHANICAL PIPING

M 115

7/26/2016 10:22:24 AM

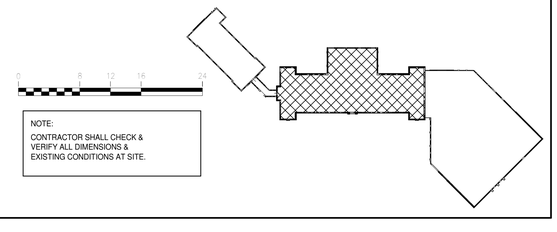
KEYED NOTES:

1. REFRIGERANT LINES SIZED PER MANUFACTURER'S STANDARDS.



1 M 116 NEW WORK SECOND FLOOR PLAN B - MECHANICAL PIPING

1/8" = 1'-0"



NOTE:
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STV, INC.
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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

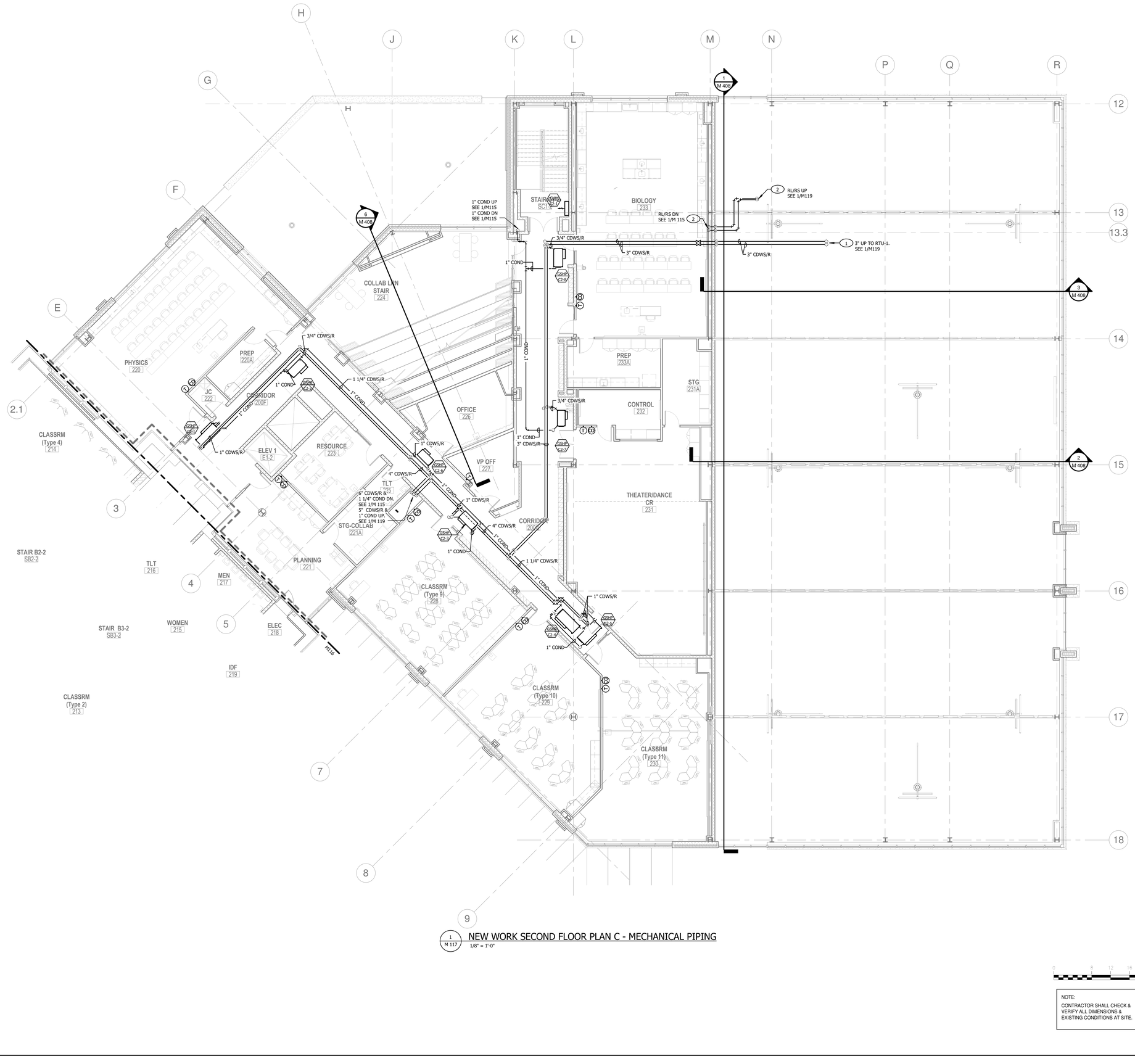
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND FLOOR PLAN B - MECHANICAL PIPING

M 116

7/26/2016 10:22:50 AM



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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

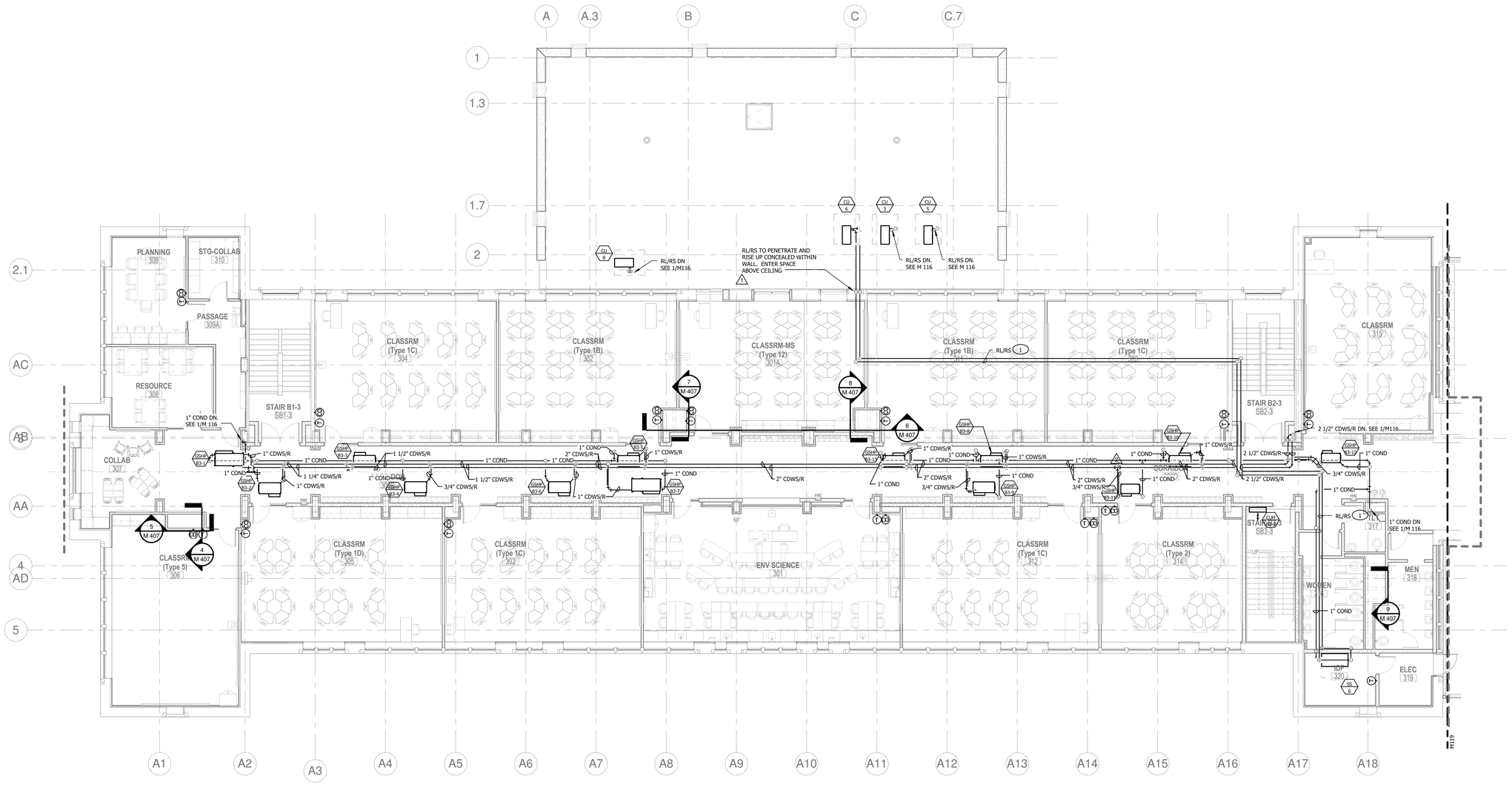
DRAWING NAME
NEW WORK SECOND FLOOR PLAN C - MECHANICAL PIPING

M 117

7/26/2016 10:28:06 AM

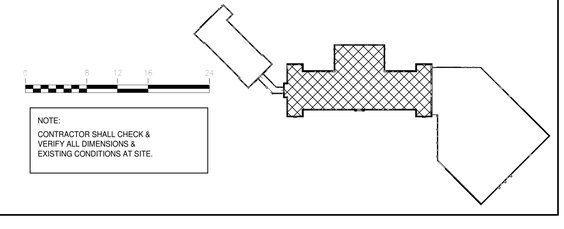
KEYED NOTES:

1. REFRIGERANT LINES SIZED PER MANUFACTURER'S STANDARDS.



1 M 118 NEW WORK THIRD FLOOR PLAN B - MECHANICAL PIPING

1/8" = 1'-0"



NOTE:
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7/26/2016 10:28:24 AM

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2010 Clipper Park Rd.
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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2
2	05/06/16	ADDENDUM #5

BID ISSUE

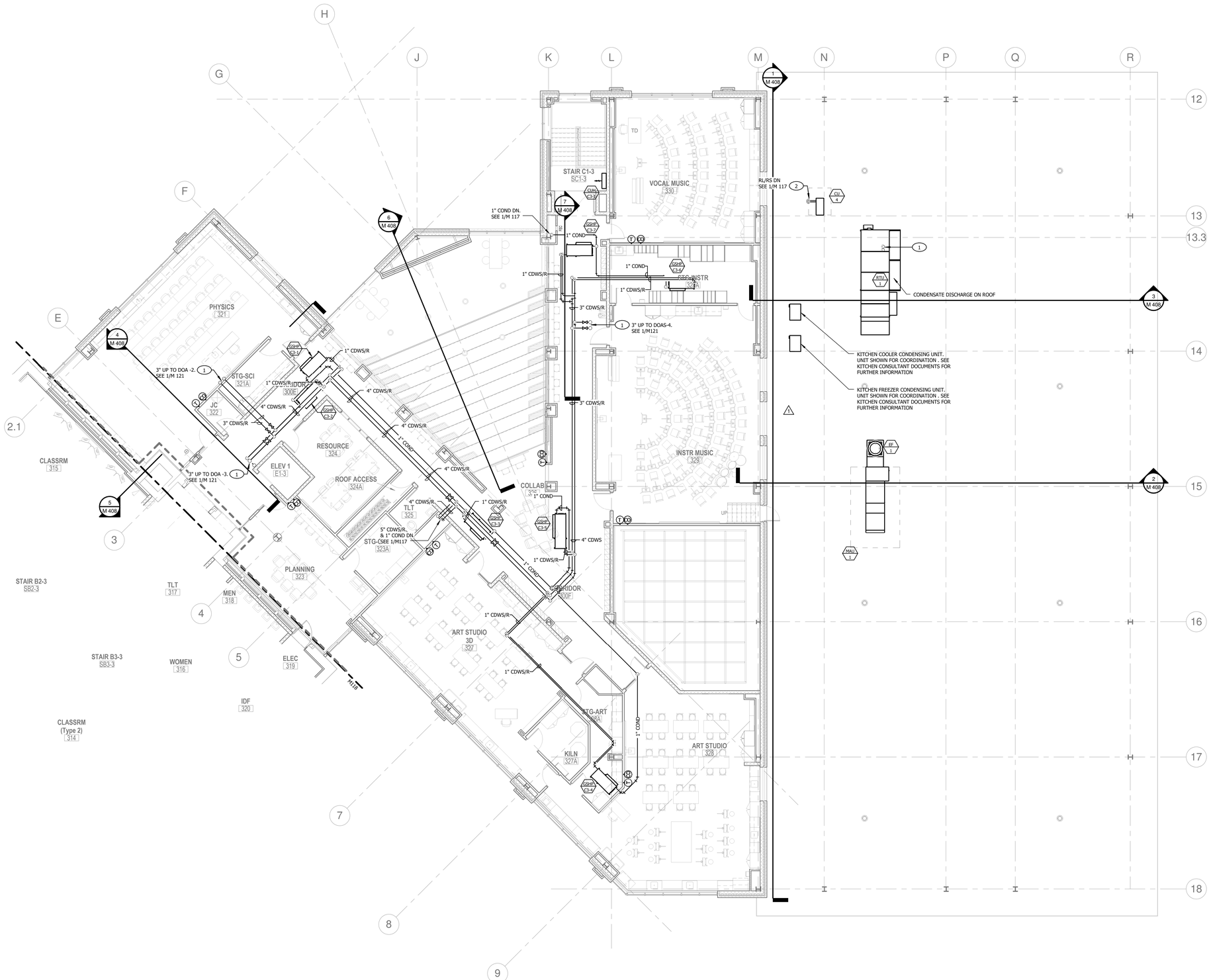
PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK THIRD FLOOR PLAN B - MECHANICAL PIPING

M 118



KEYED NOTES:

1. GEOTHERMAL WATER PIPING UP TO ROOFTOP UNIT SHALL PENETRATE ROOF WITHIN THE EQUIPMENT'S ROOF CURB. IF PIPING IS ROUTED OUTSIDE THE CURB AND EXPOSED ON THE ROOF, THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL REQUIREMENTS, AND PROVIDE HEAT TRACING AT NO ADDITIONAL COST.
2. REFRIGERANT LINES SIZED PER MANUFACTURER'S STANDARDS.

1 M 119 NEW WORK THIRD FLOOR PLAN C - MECHANICAL PIPING
1/8" = 1'-0"

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

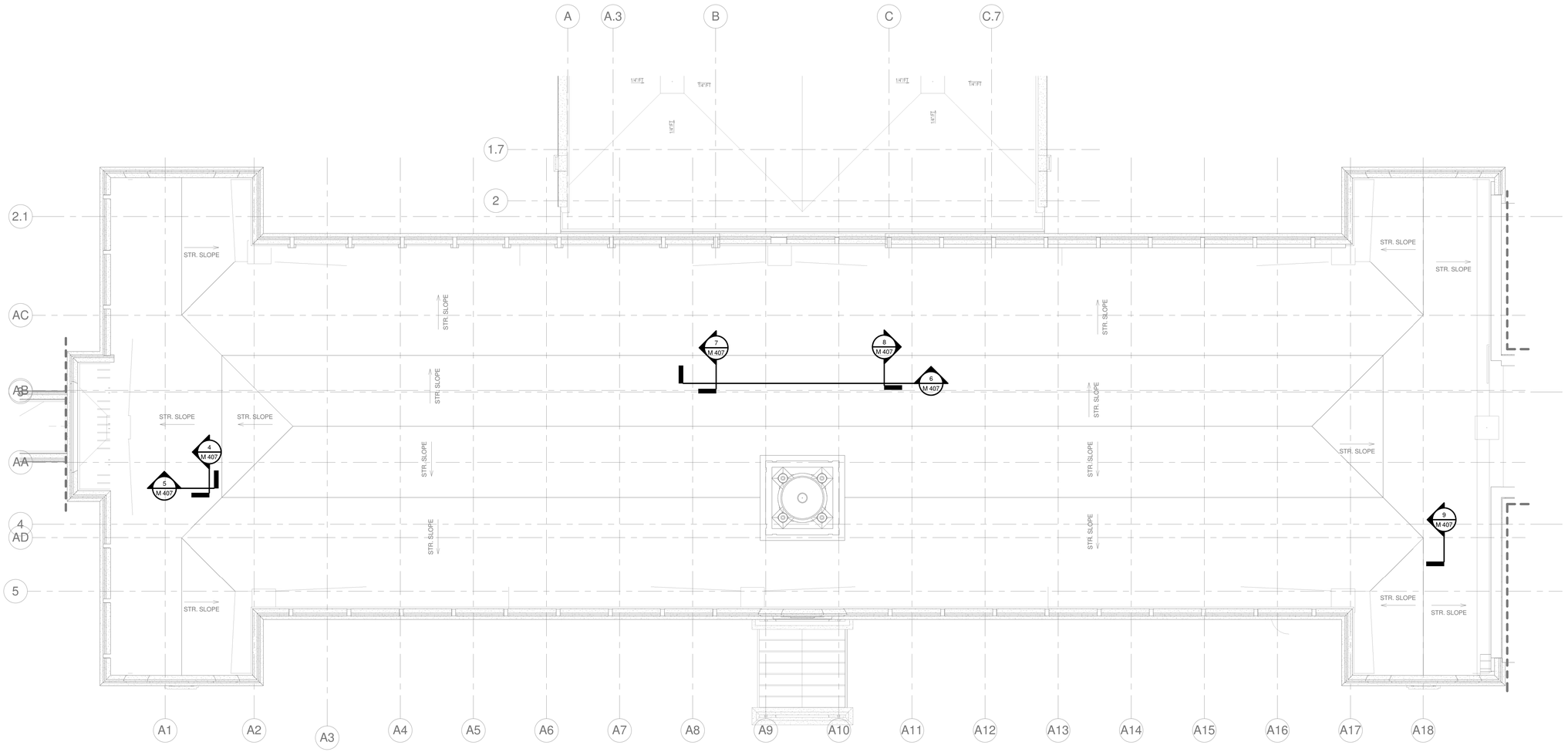
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK THIRD FLOOR PLAN C - MECHANICAL PIPING

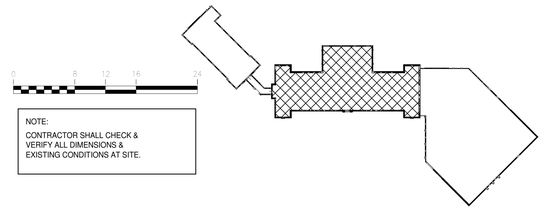
M 119

7/26/2016 10:32:47 AM



1 / M 120 NEW WORK ROOF PLAN AREA B - HVAC PIPING

1/8" = 1'-0"



NOTE:

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JRS ARCHITECTS

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

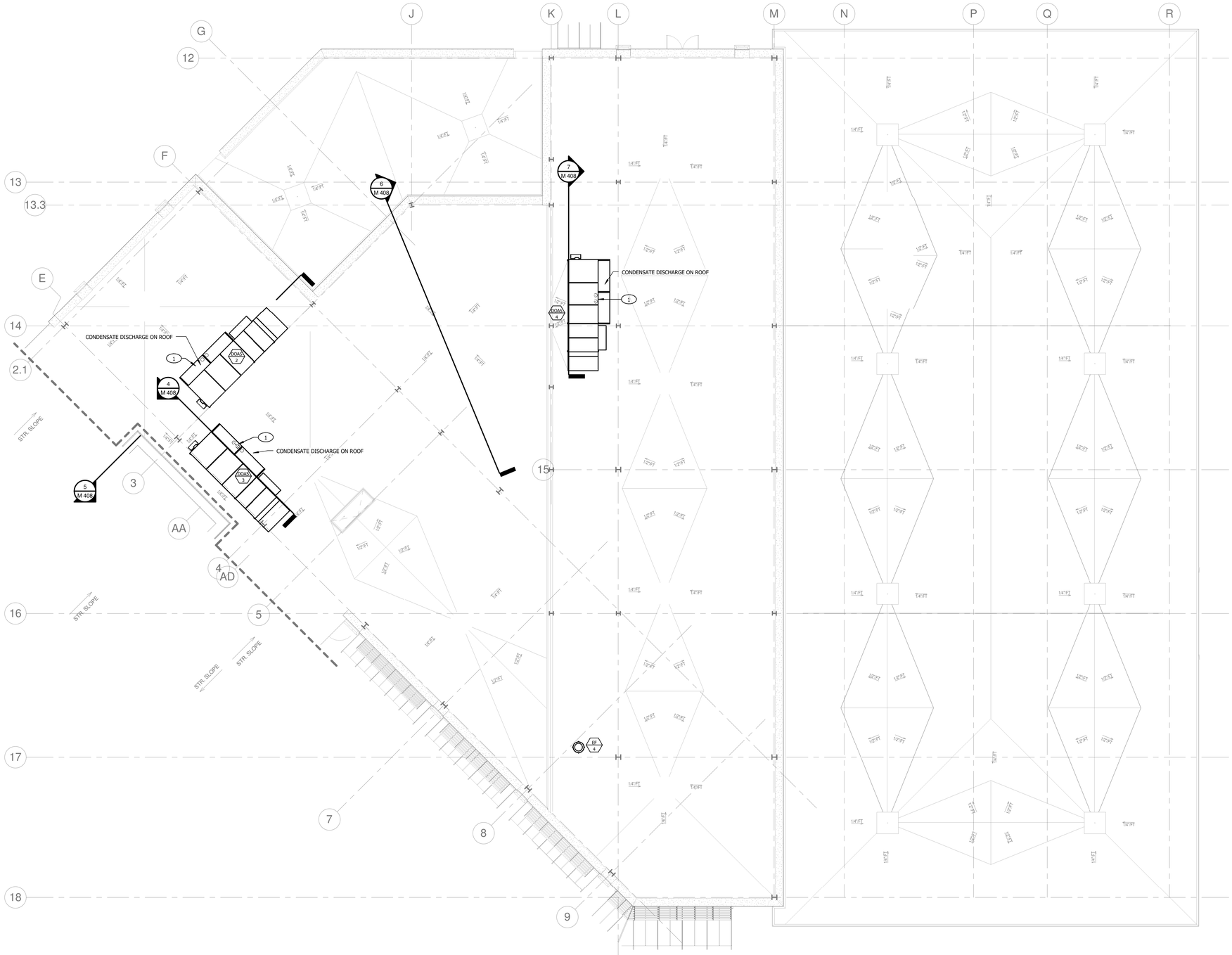
DRAWING NAME

NEW WORK ROOF PLAN B - MECHANICAL PIPING

FOR REFERENCE ONLY

M 120

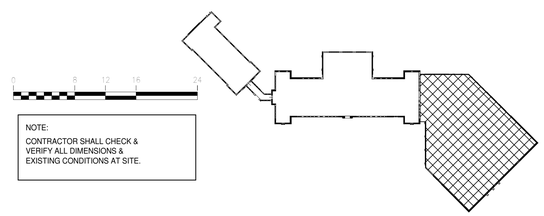
7/26/2016 10:33:20 AM



KEYED NOTES:

1. GEOTHERMAL WATER PIPING UP TO ROOFTOP UNIT SHALL PENETRATE ROOF WITHIN THE EQUIPMENT'S ROOF CURB. IF PIPING IS ROUTED OUTSIDE THE CURB AND EXPOSED ON THE ROOF, THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ALL REQUIREMENTS, AND PROVIDE HEAT TRACING AT NO ADDITIONAL COST.

1 / M 121 NEW WORK ROOF PLAN AREA C - HVAC PIPING
1/8" = 1'-0"



NOTE:
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No.	DATE	DESCRIPTION

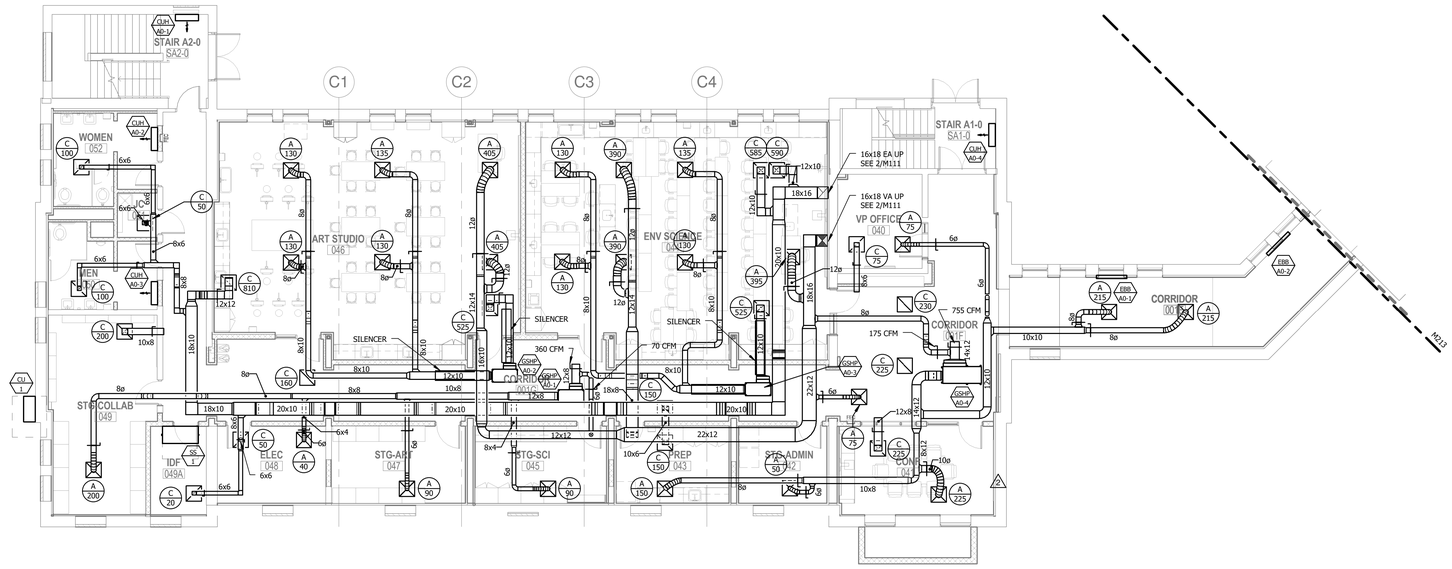
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

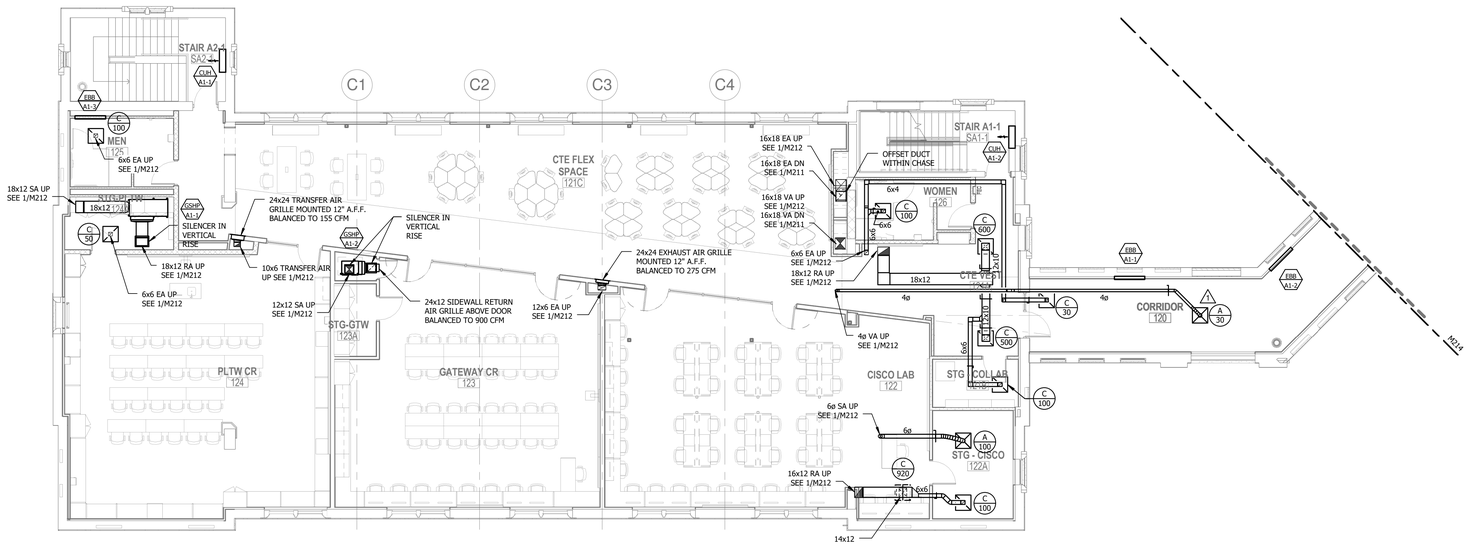
DRAWING NAME
NEW WORK ROOF PLAN C - MECHANICAL PIPING

M 121

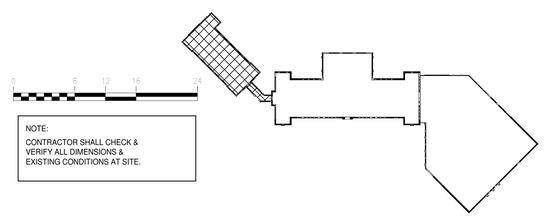
7/26/2016 10:41:59 AM



1 M 211 NEW WORK BASEMENT FLOOR PLAN A - DUCTWORK
1/8" = 1'-0"



2 M 211 NEW WORK FIRST FLOOR PLAN A - DUCTWORK
1/8" = 1'-0"



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7/26/2016 10:43:48 AM

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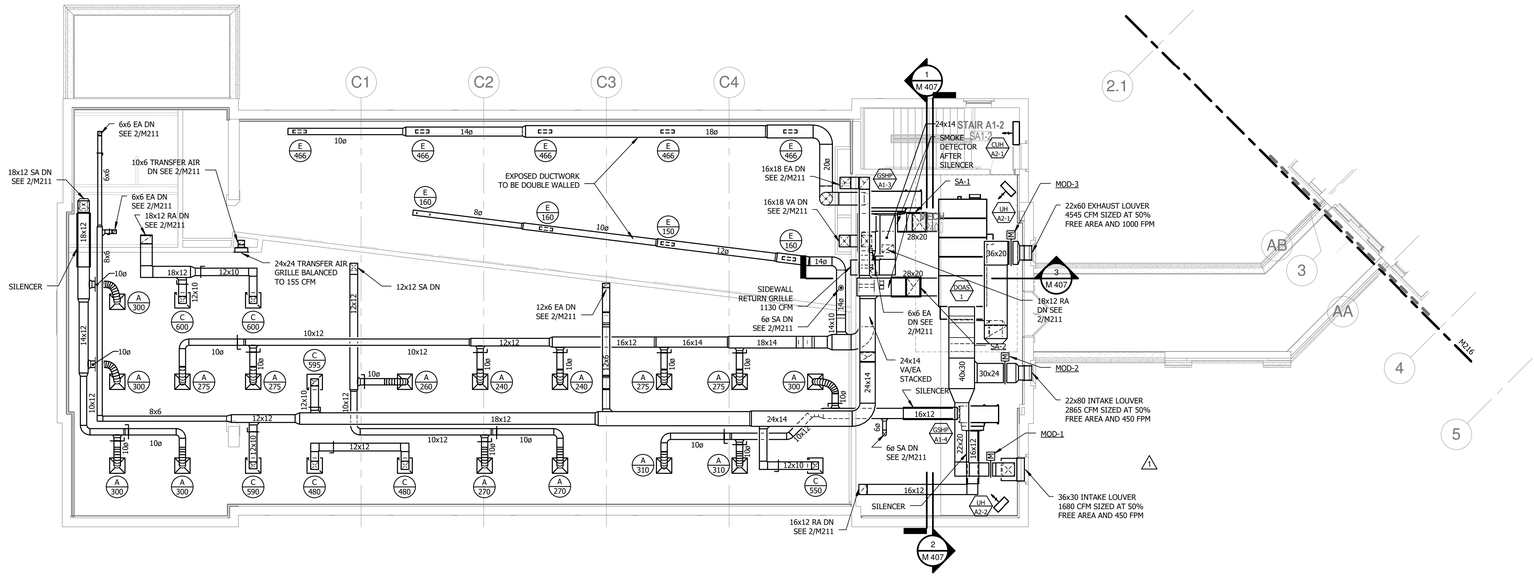
No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2
2	05/06/16	ADDENDUM #5

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

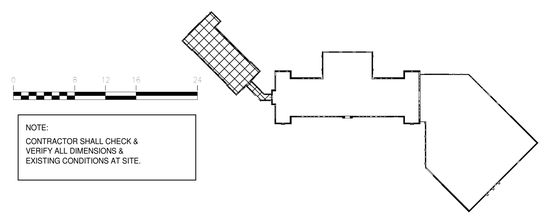
DRAWING NAME
NEW WORK BASEMENT & FIRST FLOOR PLAN A - DUCTWORK

M 211



1 M 212 NEW WORK SECOND FLOOR PLAN A - DUCTWORK

1/8" = 1'-0"



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7/26/2016 10:44:52 AM

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No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

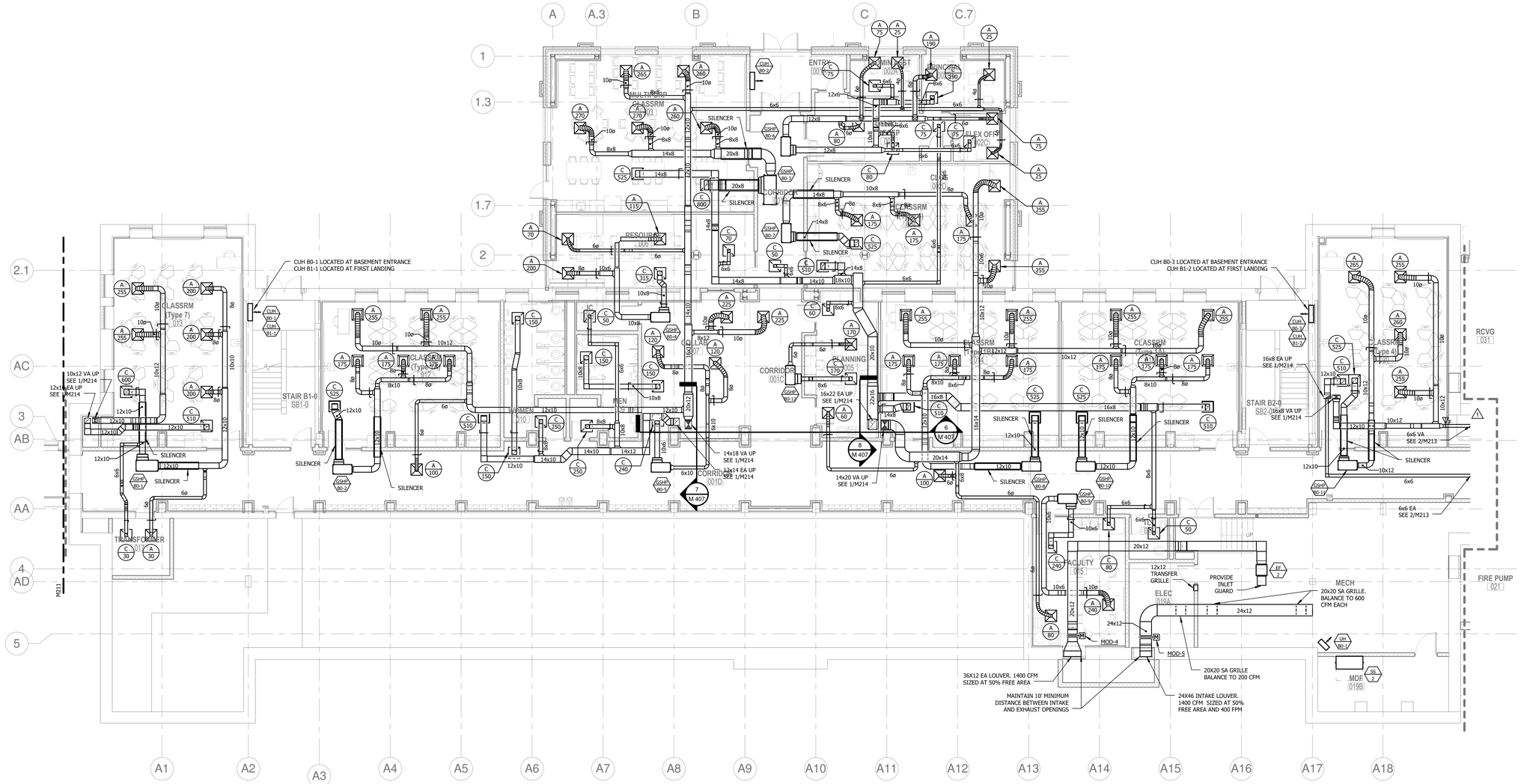
PROJECT No.: 152-01

DATE: 03/31/16

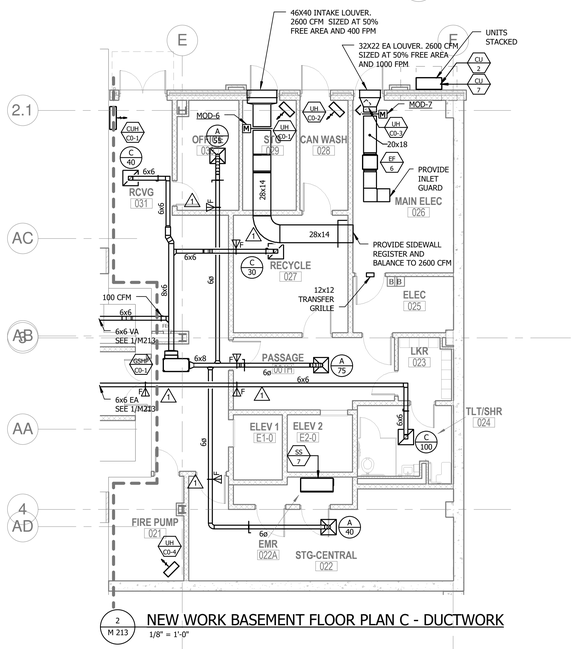
SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND & ROOF PLAN A - DUCTWORK

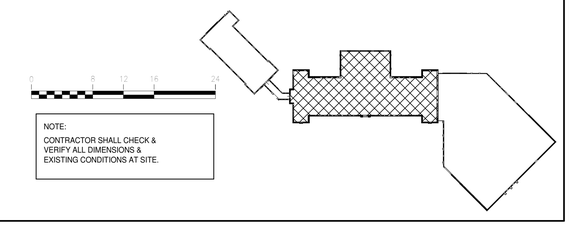
M 212



1 M 213 NEW WORK BASEMENT FLOOR PLAN B - DUCTWORK
1/8" = 1'-0"



2 M 213 NEW WORK BASEMENT FLOOR PLAN C - DUCTWORK
1/8" = 1'-0"



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7/26/2016 10:45:19 AM

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LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

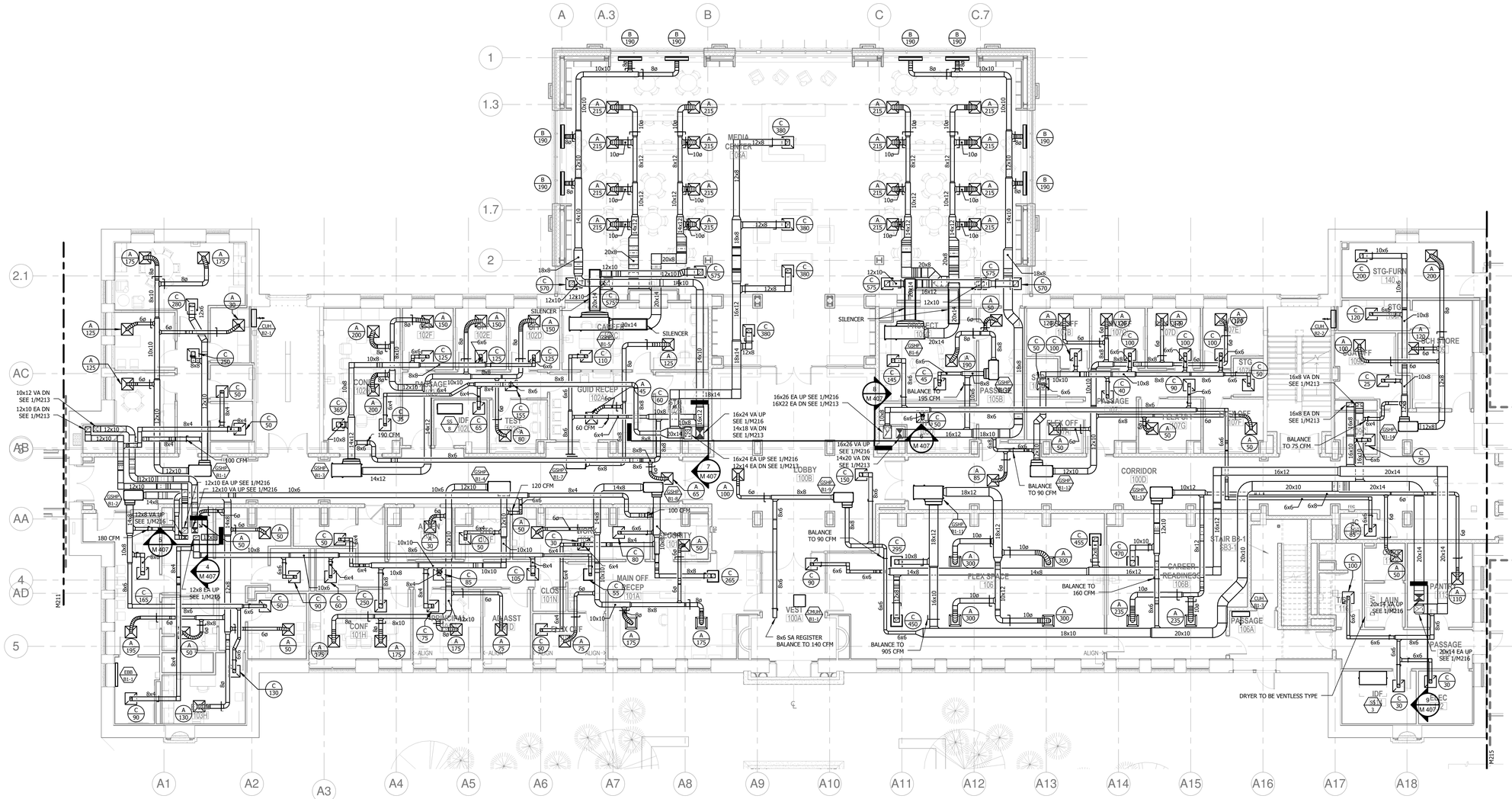
PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

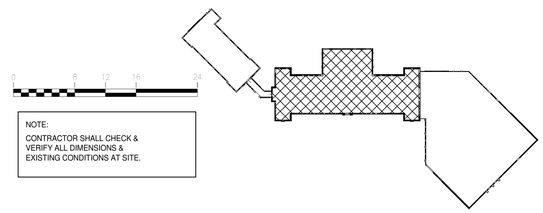
DRAWING NAME
NEW WORK BASEMENT PLAN B - DUCTWORK

M 213



1 / M 214 NEW WORK FIRST FLOOR PLAN B - DUCTWORK

1/8" = 1'-0"



NOTE:
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7/26/2016 10:45:40 AM

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No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK FIRST FLOOR PLAN B - DUCTWORK

M 214

GENERAL NOTES:

1. GREASE DUCT SERVING TYPE I HOOD THAT PENETRATES A CEILING, WALL, OR FLOOR SHALL BE ENCLOSED FROM THE POINT OF PENETRATION TO THE OUTLET TERMINAL. PROVIDE FIRE RESISTANT RATING OF NOT LESS THAN THE PENETRATED ASSEMBLY.

KEYED NOTES:

1. MAKE UP AIR CONNECTION TO VENTILATION HOOD. COORDINATE FINAL CONNECTION LOCATION WITH KITCHEN CONSULTANT VENTILATOR DETAILS.
2. EXHAUST AIR CONNECTION TO VENTIALTION HOOD. COORDINATE FINAL CONNECTION LOCATION WITH KITCHEN CONSULTANT VENTILATOR DETAILS. EXHAUST DUCT TO BE STEEL WITH MINIMUM THICKNESS OF 0.0575 IN(NO. 16 GAGE)
3. PROVIDE CLEANOUT EVERY 20 FEET IN THE HORIZONTAL DIRECTION OF KITCHEN EXHAUST DUCT.
4. HEAT SENSOR PROVIDED WITH HOOD SHALL BE INTERLOCKED TO ACTIVATE HOOD AND MAU-1/EF-1.
5. LOCATION OF MANUAL ACTUATED DEVICE TO SHUTDOWN FUEL AND ELECTRICAL POWER TO COOKING EQUIPMENT.

10"ø DRYER EXHAUST TERMINATE WITH DRYER VENT WITH BACKDRAFT DAMPER

8X6 EA LOUVER

10x40 RA DUCT UP. SEE 1/M217

24x36 RETURN AIR GRILLE MOUNTED 12" A.F.F. BALANCE TO 2600 CFM

24x36 RETURN AIR GRILLE MOUNTED 12" A.F.F. BALANCE TO 2600 CFM

28x14 EA UP SEE 1/M217

28x14 MA UP SEE 1/M217

22x16 RA UP SEE 1/M217

22x16 SA UP SEE 1/M217

30x16 EA UP SEE 1/M217

30x16 VA UP SEE 1/M217

18x20 RA UP SEE 1/M217

24x36 RETURN AIR GRILLE MOUNTED 12" A.F.F. BALANCE TO 2600 CFM

40x10 RA DUCT DN. TO RA GRILLE

24x36 RETURN AIR GRILLE MOUNTED 12" A.F.F. BALANCE TO 2600 CFM

STAIR C1-1 SC1-1

STG-PE 148 OED 100 CFM

AUXILIARY GYM 156

GYMNASIUM 155

ATHL DIR 149

IDF 147

TEAM - MEN'S 154D

OFFICE 154B

KITCHEN 142F

DISHTRN 142H

JANITOR 150

ELEV 2 E2-1

ELEV 1 E1-1

SCH STORE 109

CORRIDOR 109C

LKR 142A

DRY STOR 142E

FREEZER 142K

COOLER 142G

SHWR - MEN'S 154C

LKRS - MEN'S 154A

MEN 154

LAUNDRY 152

LKR 100

OFFICE 100

SHWR - WOMEN'S 153C

WOMEN 153

LKRS - WOMEN'S 153A

MEN 144

TEAM - WOMEN'S 153D

OFFICE 153B

LKR/TLT 153C

TICKETS 146

LOBBY 100H

TLT 109C

JC 108

CARE 115B

PANTRY 113

PASSAGE 110

LAUN 115A

T/SH 116

ELEC 112

IDF 114

STAIR B3-1 SB3-1

CAREER READINESS 106B

PASSAGE 106A

1 M 215 NEW WORK FIRST FLOOR PLAN C - DUCTWORK

1/8" = 1'-0"

NOTE:
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No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

PROJECT No.: 152-01

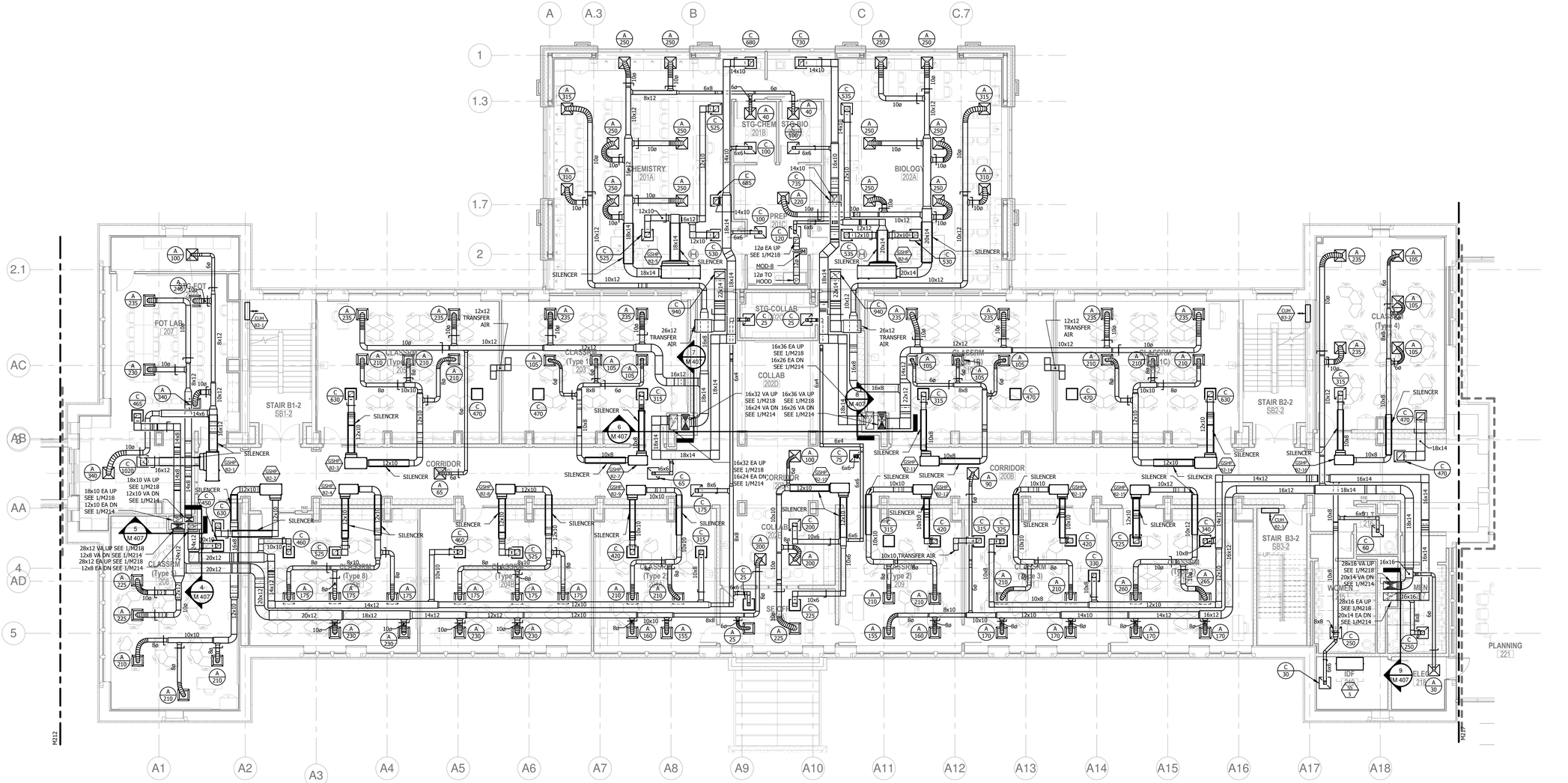
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK FIRST FLOOR PLAN C - DUCT WORK

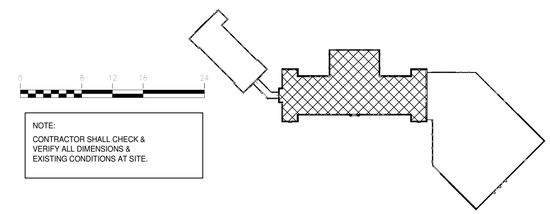
M 215

7/26/2016 10:51:13 AM



1 M 216 NEW WORK SECOND FLOOR PLAN B - DUCTWORK

1/8" = 1'-0"



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No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

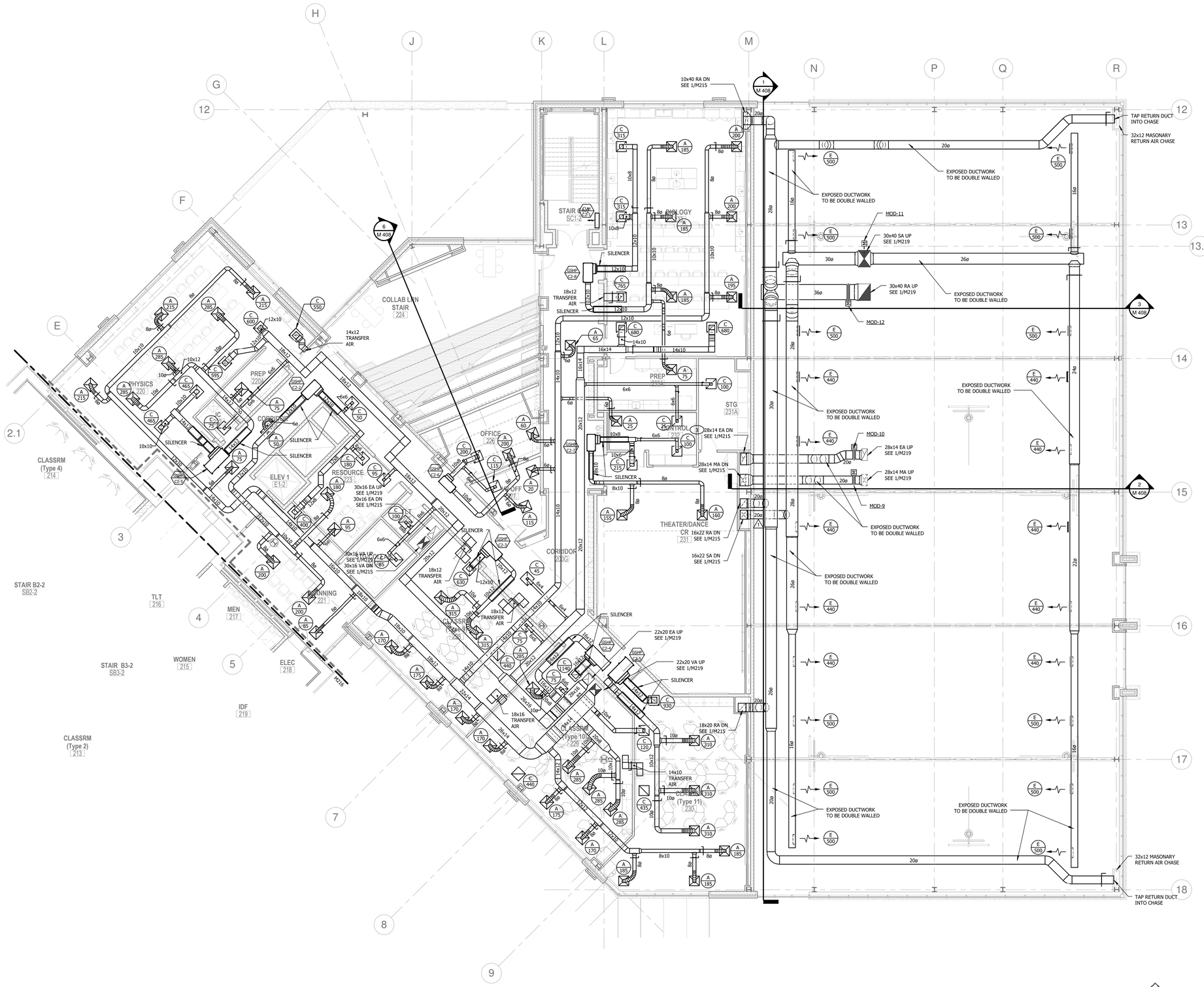
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND FLOOR PLAN B - DUCT WORK

M 216

7/26/2016 10:51:45 AM



KEYED NOTES:

(1) EXHAUST DUCT TO BE STEEL WITH MINIMUM THICKNESS OF 0.0575 IN(NO. 16 GAGE)

1 / M 217 NEW WORK SECOND FLOOR PLAN C - DUCTWORK

1/8" = 1'-0"

0 8 12 16 24

NOTE:
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No.	DATE	DESCRIPTION
1	05/06/16	ADDENDUM #5

BID ISSUE

PROJECT No.: 152-01

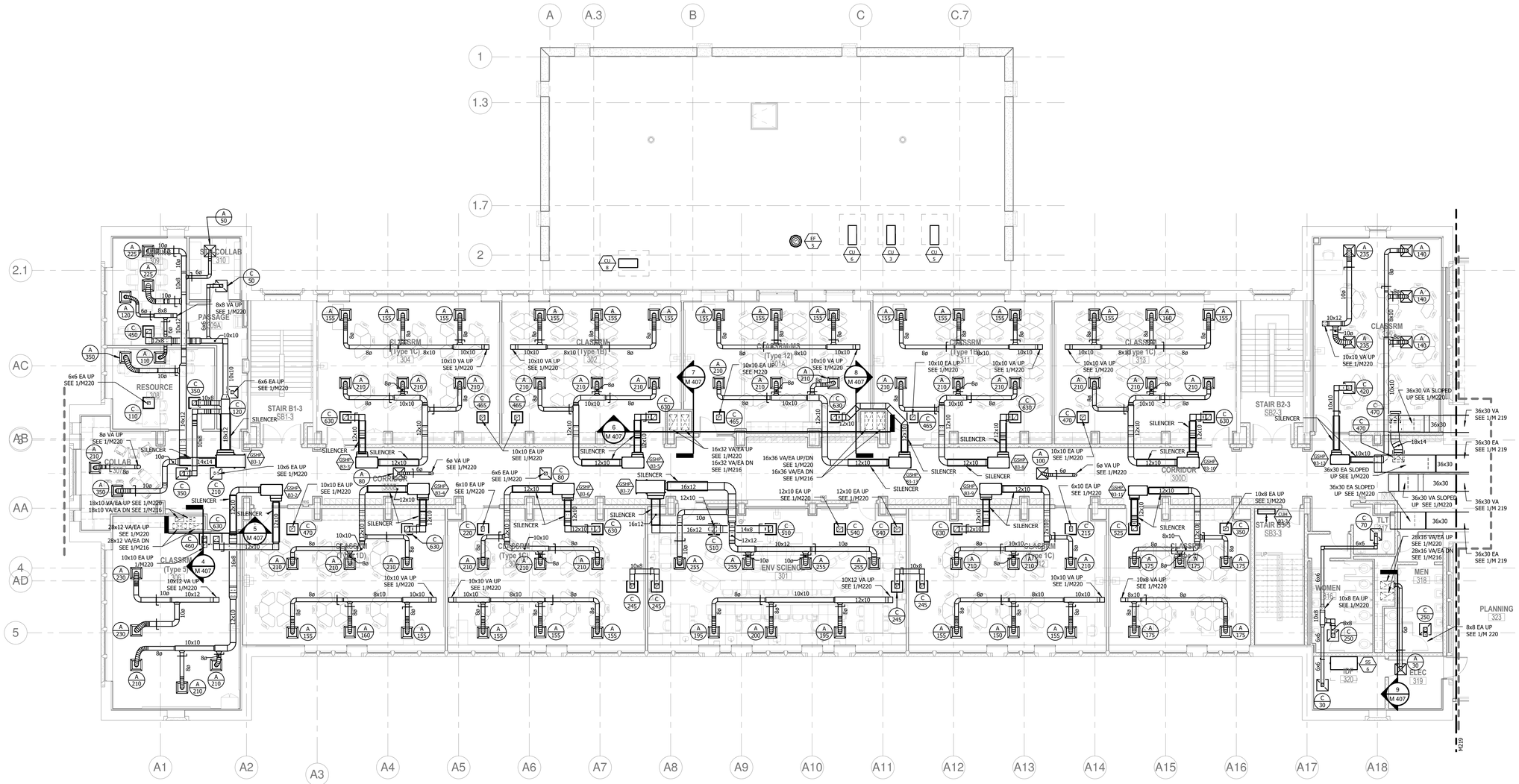
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND FLOOR PLAN C - DUCTWORK

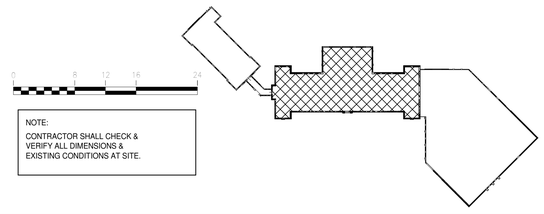
M 217

7/26/2016 10:58:37 AM



1 M 218 NEW WORK THIRD FLOOR PLAN B - DUCTWORK

1/8" = 1'-0"



NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056

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LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

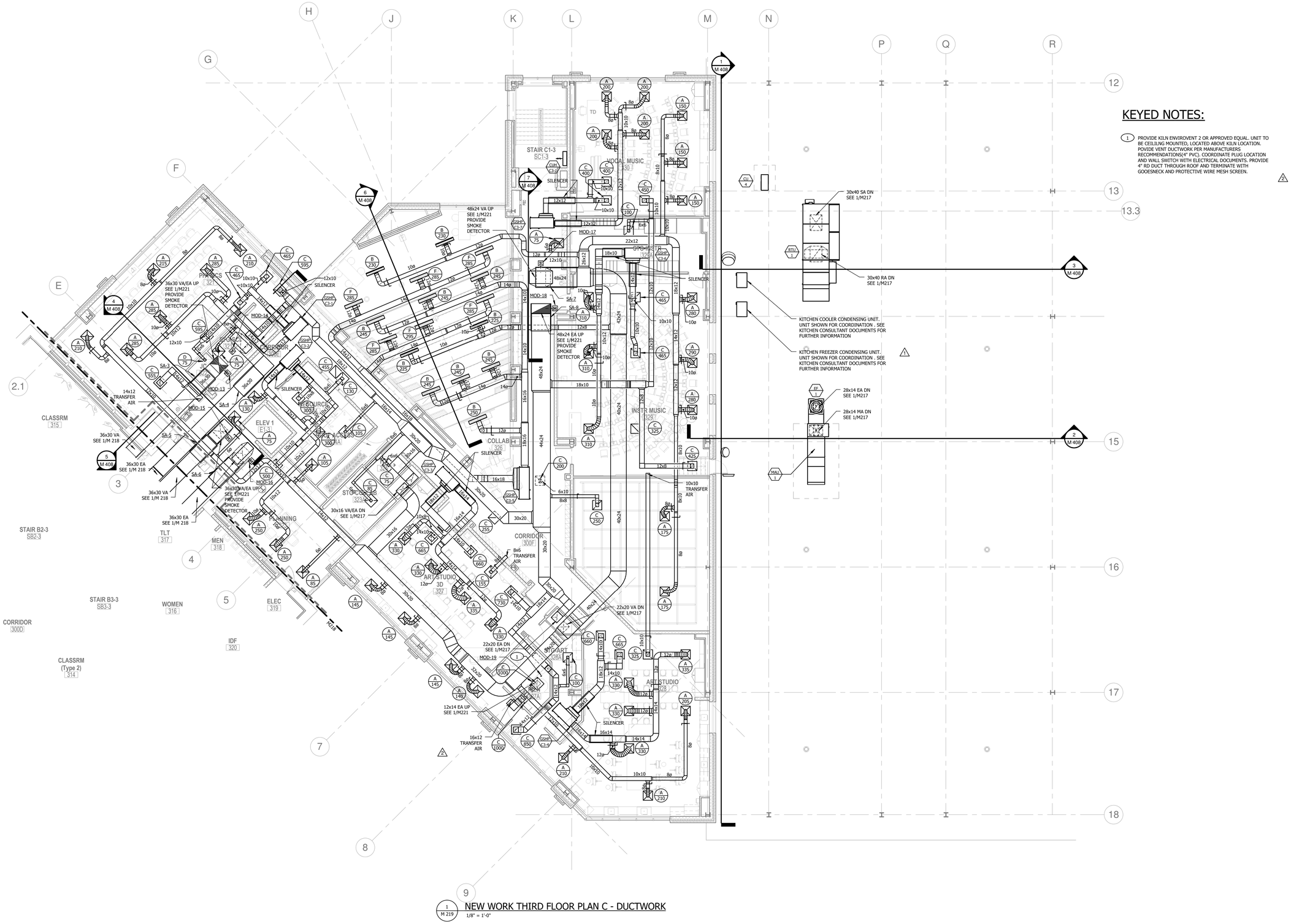
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK THIRD FLOOR PLAN B - DUCTWORK

M 218

7/26/2016 10:58:58 AM



KEYED NOTES:

1. PROVIDE KILN ENVIROVENT 2 OR APPROVED EQUAL. UNIT TO BE CEILING MOUNTED, LOCATED ABOVE KILN LOCATION. POVIDE VENT DUCTWORK PER MANUFACTURERS RECOMMENDATIONS(4" PVC). COORDINATE PLUG LOCATION AND WALL SWITCH WITH ELECTRICAL DOCUMENTS. PROVIDE 4" RD DUCT THROUGH ROOF AND TERMINATE WITH GOOESNECK AND PROTECTIVE WIRE MESH SCREEN.

1 M 219 NEW WORK THIRD FLOOR PLAN C - DUCTWORK
1/8" = 1'-0"

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EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2
2	04/29/16	ADDENDUM #4

BID ISSUE

PROJECT No.: 152-01

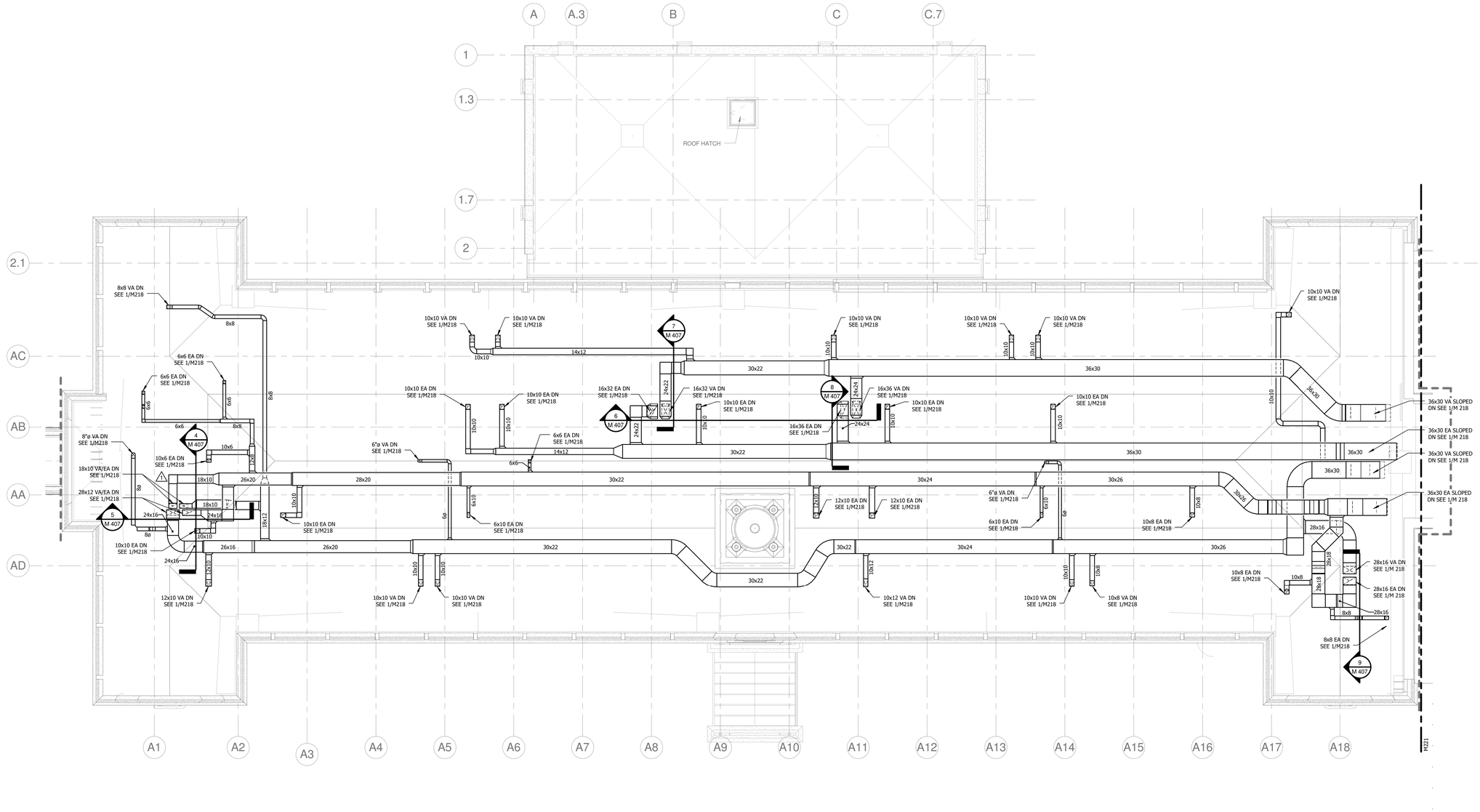
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK THIRD FLOOR PLAN C - DUCTWORK

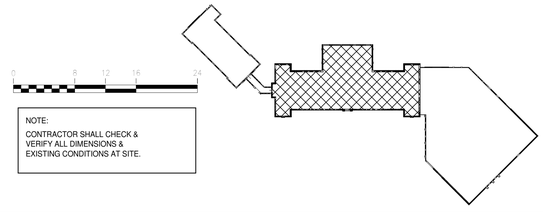
M 219

7/26/2016 11:04:22 AM



1 M 220 NEW WORK ROOF PLAN B - DUCTWORK

1/8" = 1'-0"



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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	05/06/16	ADDENDUM #5

BID ISSUE

PROJECT No.: 152-01

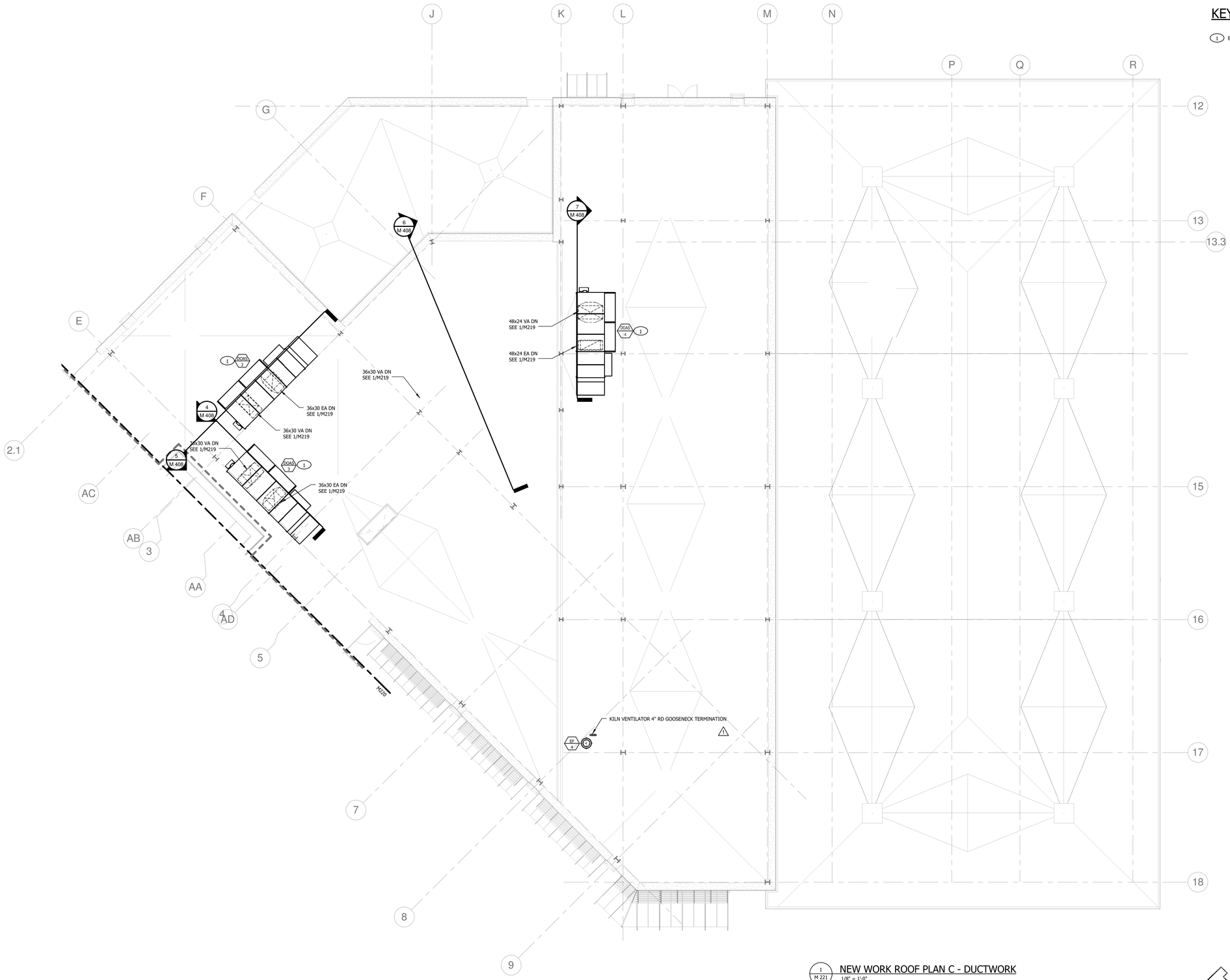
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME

NEW WORK ROOF PLAN B - DUCTWORK

M 220



KEYED NOTES:

1 EXTERIOR HVAC EQUIPMENT AND DUCTWORK TO BE FIELD PAINTED.

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/29/16	ADDENDUM #4

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

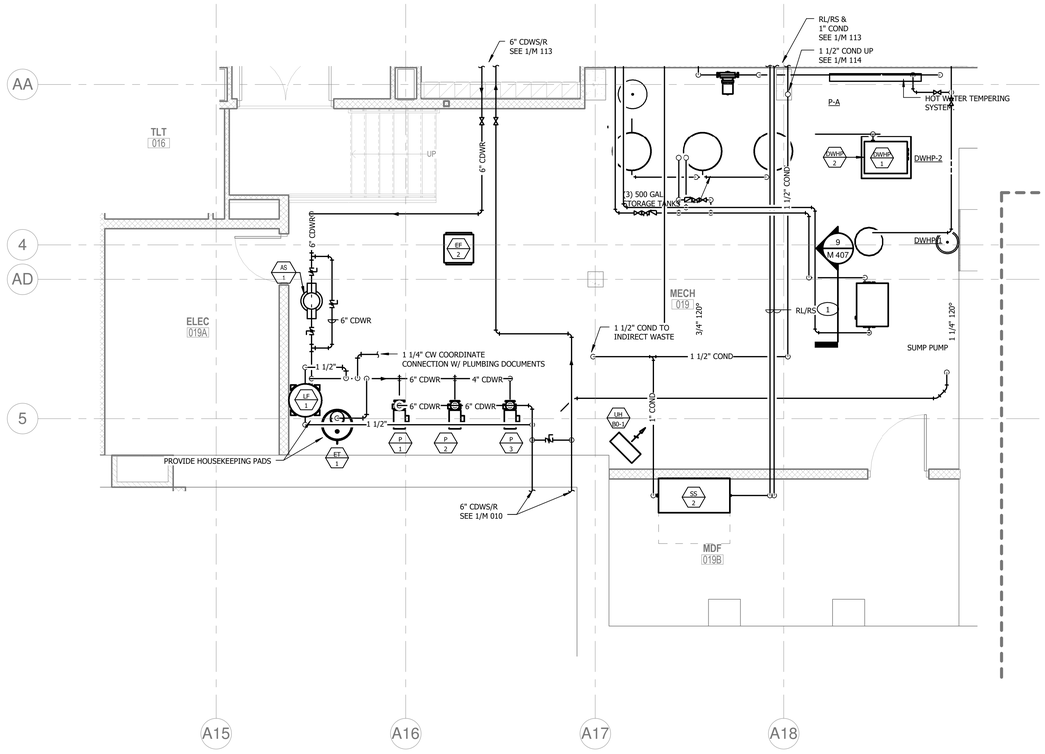
DRAWING NAME
NEW WORK ROOF PLAN C - DUCTWORK

M 221

7/26/2016 11:13:37 AM

KEYED NOTES:

(1) REFRIGERANT LINES SIZED PER MANUFACTURER'S STANDARDS.



1 / M 300 ENLARGED MECHANICAL ROOM - NEW WORK BASEMENT FLOOR PLAN B - MECHANICAL PIPING

1/4" = 1'-0"

NOTE:
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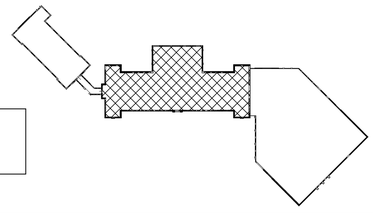

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LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

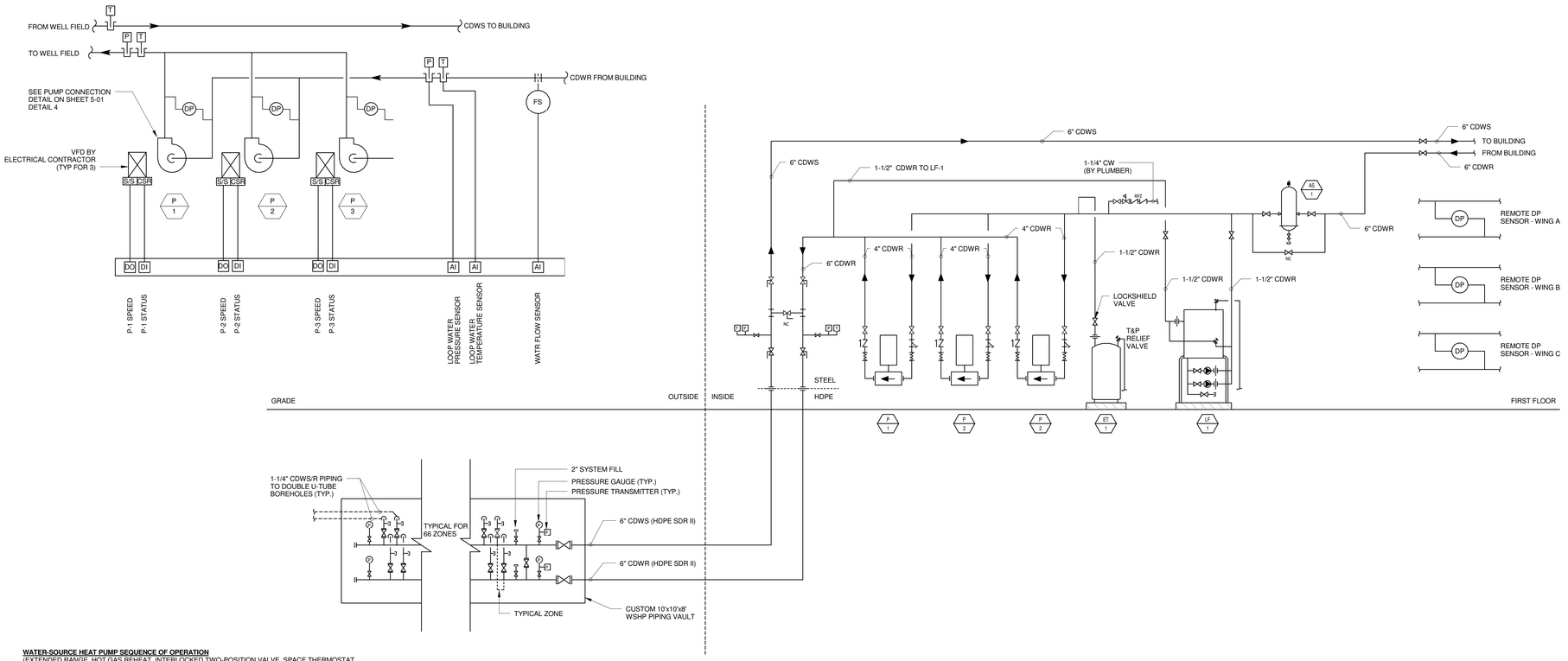
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
ENLARGED MECHANICAL PLANS

M 300

7/26/2016 11:13:53 AM



CONDENSER WATER SYSTEM DIAGRAM

GEOTHERMAL FIELD CONTROL SEQUENCE (P-1, P-2 & P-3)

A. GENERAL: THE GEOTHERMAL WELL FIELD PROVIDES COOLING/HEATING CONDENSER WATER FOR THE GEOTHERMAL HEAT PUMPS. THE SYSTEM CONSISTS OF THREE PRIMARY CONDENSER WATER PUMPS. IN ADDITION TO THE WELL FIELD AND DISTRIBUTION PIPING. THE SYSTEM SHALL BE CONTROLLED FROM THE DDC CONTROL SYSTEM. PROVIDE LEAD/ LEAD/ STANDBY PUMPING, THE BMS SHALL ALTERNATE PUMPS TO EQUALIZE RUN TIME.

B. ADJUST PUMP SPEED TO MAINTAIN SYSTEM PRESSURE SETPOINT.
1. THE 2 LEAD PUMPS SHALL RUN TO MAINTAIN SYSTEM PRESSURE SETPOINT. PUMP SPEEDS SHALL OPERATE AND VARY SPEED SIMULTANEOUS, IN THE EVENT SYSTEM PRESSURE IS NOT MAINTAINED BY THE 2 LEAD PUMPS THE STANDBY PUMP MAY START.
2. PUMP VARIABLE FREQUENCY DRIVE SHALL INCREASE THE PUMP SPEED SHALL BE BASED ON DIFFERENTIAL PRESSURE ACROSS SUPPLY AND RETURN MAINS IN THE MECHANICAL ROOM VIA DIFFERENTIAL PRESSURE TRANSMITTERS.
3. THE BMS SHALL NOT PERMIT PUMP TO FALL BELOW MINIMUM PUMP SPEED THAT CORRESPONDS WITH 100 GALLONS PER MINUTE (MINIMUM ALLOWABLE PUMP SPEED SHALL BE CONFIRMED WITH PUMP MANUFACTURER).
4. MODULATE WATER BYPASS SYSTEM VALVE TO MAINTAIN WATER PRESSURE DIFFERENTIAL BETWEEN SUPPLY AND RETURN PIPING MAINS WHEN SYSTEM IS AT THE MINIMUM SPEED.
5. VALVE TO MODULATE "OPEN" TO BYPASS FLOW TO RETURN PIPING WHEN PRESSURE DIFFERENTIAL IS ABOVE SET POINT AND MODULATE "CLOSE" WHEN PRESSURE DIFFERENTIAL IS BELOW SET POINT.

C. STATUS OF ALL PUMPS SHALL BE REPORTED TO THE BMS.

D. UPON FAILURE OF LEAD PUMP AN ALARM SHALL SIGNAL AT THE BMS AND THE LAG PUMP SHALL START AUTOMATICALLY.

E. PROVIDE PROOF OF FLOW FOR ALL PUMPS.

F. THE BMS SHALL MONITOR BOTH THE SUPPLY AND RETURN WATER TEMPERATURES IN THE LOOPS.

G. UPON FAILURE TO MAINTAIN DIFFERENTIAL PRESSURE ALARM SHALL SIGNAL AT THE BMS.

H. PUMPS SHALL BE ENABLED PER THE UNOCCUPPIED/OCCUPPIED SCHEDULE OF THE BUILDING.

WATER-SOURCE HEAT PUMP SEQUENCE OF OPERATION
(EXTENDED RANGE, HOT GAS REHEAT, INTERLOCKED TWO-POSITION VALVE, SPACE THERMOSTAT, HUMIDISTAT, CO2, AND LIGHTING OCCUPANCY DETECTOR INTEGRATION)

WATER SOURCE HEAT PUMPS CONSIST OF A PACKAGED WATER-COOLED REFRIGERATION SYSTEM WITH HOT GAS REHEAT COIL (WHERE SCHEDULED), SUPPLY FAN, TWO-POSITION CONDENSER WATER ISOLATION VALVE, AND SPACE TEMPERATURE, HUMIDITY, AND CO2 SENSORS (WHERE INDICATED). CLASSROOMS ARE EQUIPPED WITH OCCUPANCY DETECTORS PROVIDED WITH THE LIGHTING CONTROLS AND INTEGRATED TO THE HVAC CONTROLS BY THE ATC CONTRACTOR.

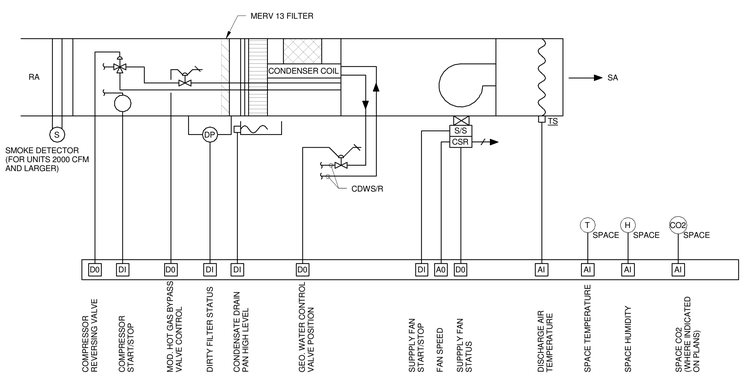
A. WATER SOURCE HEAT PUMP CONTROLLER
1. UNIT MOUNTED SOLID STATE CONTROL SYSTEM SHALL CONTROL OPERATION AS REQUIRED BY MANUFACTURER.
2. START-UP: THE UNIT WILL NOT OPERATE UNTIL ALL THE INPUTS AND SAFETY CONTROLS ARE CHECKED FOR NORMAL OPERATING CONDITIONS.
3. SAFETY CONTROLS: THE SOLID STATE CONTROLLER RECEIVES SEPARATE SIGNALS FROM A HIGH PRESSURE SWITCH FOR SAFETY, A LOW PRESSURE SWITCH TO PREVENT LOSS OF REFRIGERANT AND A LOW SUCTION TEMPERATURE THERMISTOR FOR FREEZE PROTECTION. UPON A CONTINUOUS 30 SECOND MEASUREMENT OF THE FAULT (IMMEDIATE FOR HIGH PRESSURE), COMPRESSOR OPERATION IS STOPPED.
4. FAULT RETRY: ALL FAULTS ARE RETRIED TWICE BEFORE FINALLY LOCKING THE UNIT OUT TO PREVENT NUISANCE SERVICE CALLS.
5. COMPONENT SEQUENCING DELAYS: COMPONENTS ARE SEQUENCED AND DELAYED FOR OPTIMUM UNIT PERFORMANCE.
6. RANDOM START: PREVENTS POWER SURGES BY DELAYING UNIT START UP BY 10-40 SECONDS SO ALL UNITS DO NOT START AT THE SAME TIME.
7. COMPRESSOR ANTI-SHORT CYCLE: A 5-MINUTE TIME DELAY PREVENTS THE COMPRESSOR FROM SHORT CYCLING AND EXTENDS THE MOTOR LIFE.
8. CONDENSATE OVERFLOW: A SENSOR IN THE DRAIN PAN ELECTRICALLY SENSES THE PRESENCE OF WATER. A SWITCH IS TIED TO THE SAFETY LOCKOUT CIRCUIT WHICH WILL DISABLE THE UNIT.
9. MOTOR VALVE: SOLENOID ISOLATION VALVE IS TO BE WIRED IN THE COMPRESSOR CIRCUIT AND IS PIPED IN THE RETURN GEOTHERMAL WATER LINE FROM THE UNIT. A FIELD SELECTABLE SWITCH PROVIDES 90 SECOND DELAY PRIOR TO ENERGIZING THE COMPRESSOR ALLOWING THE MOTORIZED VALVE TO FULLY OPEN BEFORE THE COPRESSOR STARTS. WHEN COMPRESSORS DE-ENERGIZED, THE REVERSE SHALL OCCUR.
10. CYCLING OF COMPRESSOR/FAN AND FOR NIGHT SETBACK.
11. WATER SOURCE HEAT PUMPS SHALL BE SWITCHED BETWEEN HEATING AND COOLING BASED UPON ZONE SETPOINT.
12. DEHUMIDIFICATION OPERATION SHALL BE PROVIDED BY UNIT HOT GAS REHEAT AND MANUFACTURER CONTROL SEQUENCE.

B. THE BMS WILL INTERFACE WITH THE HEAT PUMP THROUGH THE DDC CONTROL THAT TRANSMITS SYSTEM INFORMATION THROUGH A COMMUNICATION BUS CONNECTED TO A FRONT-END. THE DDC CONTROL WILL CONTROL/MONITOR THE FOLLOWING OPERATIONS.

1. OCCUPIED/UNOCCUPIED MODE:
   a. WATER SOURCE HEAT PUMP SUPPLIES RE-CIRCULATED HEATING AND COOLING AIR TO ITS ASSOCIATED ZONE.
   b. IN OCCUPIED MODE, EACH HEAT PUMP SUPPLY FAN IS ENERGIZED FOR CONTINUOUS OPERATION. THE UNIT THEN CONTROLS TO MAINTAIN THE ASSOCIATED ZONE TEMPERATURE.
   c. IN UNOCCUPIED MODE, EACH HEAT PUMP SUPPLY FAN AND COMPRESSOR(S) IS DE-ENERGIZED. EACH HEAT PUMP SUPPLY AND COMPRESSOR(S) MAY BE ENERGIZED DURING UNOCCUPIED MODE TO MAINTAIN THE UNOCCUPIED MODE ZONE TEMPERATURE SETPOINT. HEATING SHALL BE ENABLED WHEN SPACE TEMPERATURE DROPS BELOW UNOCCUPIED HEATING SETPOINT OF 60°F (ADJUSTABLE). UPON TEMPERATURE RISE OF 4°F (ADJUSTABLE) ABOVE UNOCCUPIED HEATING SETPOINT THE SUPPLY FAN SHALL STOP AND DX HEATING BE DISABLED. COOLING SHALL BE ENABLED WHEN SPACE TEMPERATURE RISES ABOVE UNOCCUPIED COOLING SETPOINT OF 85°F (ADJUSTABLE). UPON TEMPERATURE DROP OF 4°F (ADJUSTABLE) BELOW UNOCCUPIED COOLING SETPOINT, SUPPLY FAN SHALL STOP AND DX COOLING BE DISABLED.
   d. PROVIDE TEMPERATURE SENSORS WITH PUSHBUTTON OVERRIDE AND SLIDER ADJUSTMENT.
   e. OPTIMAL START/STOP: THE BAS SHALL MONITOR THE SCHEDULED OCCUPIED TIME, OCCUPIED SPACE SETPOINTS AND SPACE TEMPERATURE TO CALCULATE WHEN THE OPTIMAL START OCCURS. THE BAS SHALL MONITOR THE SCHEDULED UNOCCUPIED TIME, OCCUPIED SETPOINTS AND SPACE TEMPERATURE TO CALCULATE WHEN THE OPTIMAL STOP OCCURS. WHEN THE OPTIMAL STOP MODE IS ACTIVE THE UNIT CONTROLLER SHALL MAINTAIN THE SPACE TEMPERATURE TO THE SPACE TEMPERATURE OFFSET SETPOINT.
   f. OCCUPANCY OVERRIDE: THE BAS SHALL MONITOR THE STATUS OF THE "ON" AND "CANCEL" BUTTONS OF THE SPACE TEMPERATURE SENSOR. WHEN AN OCCUPANCY OVERRIDE REQUEST IS RECEIVED FROM A SPACE SENSOR, THE UNIT SHALL TRANSITION FROM IT'S CURRENT OCCUPANCY MODE TO OCCUPANCY OVERRIDE MODE AND THE UNIT SHALL MAINTAIN THE OCCUPIED MODE SPACE TEMPERATURE SETPOINTS.
2. HEATING/COOLING MODES:
   a. EACH HEAT PUMP WILL BE INDEXED TO HEATING OR COOLING MODE BASED ON THE SPACE AIR TEMPERATURES.
   b. HEATING MODE: DURING HEATING MODE, THE ZONE TEMPERATURE WILL BE MAINTAINED AT 70°F (ADJUSTABLE) AS SENSED BY THE SPACE THERMOSTAT. EACH HEAT PUMP REFRIGERATION CIRCUIT REVERSING VALVE WILL REMAIN IN ITS NORMAL POSITION TO PROVIDE HEAT. IF THE ZONE TEMPERATURE FALLS 4°F (ADJUSTABLE) BELOW SETPOINT, THE COMPRESSOR WILL BE ENABLE TO PROVIDE HEATING. IF THE ZONE TEMPERATURE RAISES 4°F (ADJUSTABLE) ABOVE SETPOINT, THE COMPRESSOR WILL BE DISABLED.
   c. COOLING MODE: DURING COOLING MODE, THE ZONE TEMPERATURE WILL BE MAINTAINED AT 76°F (ADJUSTABLE) AS SENSED BY THE SPACE THERMOSTAT. THE HEAT PUMP REFRIGERATION CIRCUIT REVERSING VALVE WILL BE ENERGIZED TO PROVIDE COOLING. IF THE ZONE TEMPERATURE RAISES 4°F (ADJUSTABLE) ABOVE SETPOINT, THE COMPRESSOR WILL BE ENABLED TO PROVIDE COOLING. IF THE ZONE TEMPERATURE FALLS 4°F (ADJUSTABLE) BELOW SETPOINT, THE COMPRESSOR WILL BE DISABLED.
   d. MORNING WARM-UP: DURING OPTIMAL START, IF THE SPACE TEMPERATURE IS BELOW THE OCCUPIED HEATING SETPOINT A MORNING WARM-UP MODE SHALL BE ACTIVATED. WHEN MORNING WARM-UP IS INITIATED THE UNIT SHALL ENABLE THE HEATING AND SUPPLY FAN. WHEN THE SPACE TEMPERATURE REACHES THE OCCUPIED HEATING SETPOINT (ADJ.), THE UNIT SHALL TRANSITION TO THE OCCUPIED MODE.
   e. PRE-COOL MODE: DURING OPTIMAL START, IF THE SPACE TEMPERATURE IS ABOVE THE OCCUPIED COOLING SETPOINT, PRE-COOL MODE SHALL BE ACTIVATED. WHEN PRE-COOL IS INITIATED THE UNIT SHALL ENABLE THE FAN AND COOLING. WHEN THE SPACE TEMPERATURE REACHES OCCUPIED COOLING SETPOINT (ADJ.), THE UNIT SHALL TRANSITION TO THE OCCUPIED MODE.
3. SAFETIES, ALARMS & MONITORING:
   a. THE DDC SYSTEM THROUGH THE SMART THERMOSTAT MONITORS EACH HEAT PUMP SUPPLY FAN MOTOR RUN STATUS VIA CURRENT SWITCH. IF THE UNIT IS ENABLED AND THE CURRENT SWITCH DOES NOT MONITOR THE SUPPLY FAN RUN STATUS WITHIN 1 MINUTE, AN ALARM WILL BE DISPLAYED AT THE FRONT-END.
   b. THE SOLID STATE CONTROLLER GENERAL ALARM SHALL BE MONITORED THROUGH THE DDC.
   c. ON A LOSS IN SYSTEM WATER FLOW OR HIGH TEMPERATURE , UNITS SHALL BE PLACED IN EMERGENCY SHUTDOWN MODE BY DISABLING THE UNIT.
   d. DDC SYSTEM AND UNIT CONTROLS SHALL SENSE, LOG AND REPORT ROOM TEMPERATURE AND DETERMINE THE OPERATION OF THE UNIT IN HEATING OR COOLING MODE BASED ON SPACE CONDTIONS.
   e. FILTER TIMER: THE FAN-RUN TIME (HRS) SHALL BE COMPARED TO THE FILTER MAINTENANCE TIMER SETPOINT. ONCE THE SETPOINT IS REACHED A FILTER TIMER ALARM DIAGNOSTIC SHALL BE ANNUNCIATED AT THE BAS. WHEN THE DIAGNOSTIC IS CLEARED, THE FILTER-MAINTENANCE TIMER IS RESET TO ZERO, AND THE TIMER BEGINS ACCUMULATING FAN-RUN TIME AGAIN.

INPUT/OUTPUT SUMMARY TABLE

WATER SOURCE HEAT PUMPS	HARDWARE: OUTPUT: DIGITAL: Control Relay(s)	Contactor	Transducer	Direct	VFD Speed Control	HARDWARE: OUTPUT: ANALOG: Pressure Switch(es)	Humidistat(s)	Pulse	Signal Relay(s)	Thermostat(s)	Zone Sensor(s)	HARDWARE: INPUT: DIGITAL: Flow Switch	HARDWARE: INPUT: ANALOG: Temperature	Humidity	Current Transducer	Pressure	Pressure Switch	CFM	Carbon Dioxide	Setpoint Adjustment	SOFTWARE: ALARMS: DIGITAL: Equipment Status	Equipment Failure	Smoke	SOFTWARE: ALARMS: ANALOG: High Limit	Low Limit	SOFTWARE: PROGRAMMING: Scheduled Start/Stop	Optimum Start/Stop	Duty Cycling	Demand Limiting	Timed Program Commands	Temperature Control	Space Air Economizer	Run Time	Boiler Lead/Lag	Variable Speed	Chiller Lead/Lag	Condenser Water Reset	VAV Control	Trend Override	Trend Analysis	Notes
Water Source Heat Pumps	X					X			X	X		X	X	X					X	X	X	X					X	X			X		X					X	X	
Supply Fan	X								X													X																			
CDWS Isolation Valve	X									X																															
Flow Switch	X					X																																		
Supply Air													X	X						X					X	X													X	
Space Air													X	X					X	X					X	X													X	
DX System Alarm																						X	X																X	
Condensate Alarm		X																																						



WATER SOURCE HEAT PUMP UNIT CONTROL DIAGRAM

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GAITHERSBURG, MD 20879

AV/IT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD, SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056
1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
SCHEMATIC DIAGRAMS - MECHANICAL

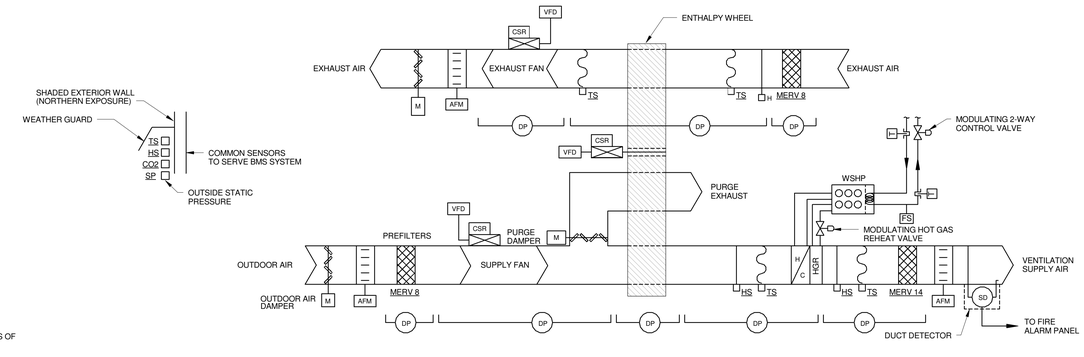
M 400

7/26/2016 11:14:00 AM

INPUT/OUTPUT SUMMARY TABLE

DOAU	HARDWARE: OUTPUT: DIGITAL: Control Relay(s)	Contactor	ANALOG: Transducer: Heating Water Setpoint	Direct	INPUT: DIGITAL: VFD Speed Control: Pressure Switch(es)	Flow Switch(es)	Alarm Relay(s)	Current Switch(es)	Boiler Controller Status	ANALOG: Temperature	Humidity	Current Transducer	Damper Position	Viscosity	Carbon Dioxide	Setpoint Adjustment	Other Sensor Present	SOFTWARE: ALARMS: DIGITAL: Equipment Status	Equipment Failure	Smoke	Factory Controller Alarm	Fire Shutdown	ANALOG: OA Gas Detection	Low Limit	High Limit	Dirty Filter	PROGRAMMING: Scheduled Start/Stop	Optimum Start/Stop	Duty Cycling	Boiler Lead/Lag	Timed Program Commands	Temperature Control	Demand Limiting	Run Time	Boiler Lead/Lag	Chilled Water Reset	Chiller Lead/Lag	Condenser Water Reset	VAV Control	Timed Override	Trend Analysis	NOTES
POINT DESCRIPTION																																									
Ventilation Fan	X					X			X	X			X	X		X		X	X			X	X			X												X	1
Exhaust Fan	X					X			X	X			X	X		X		X	X			X	X			X												X	1
Ventilation Air											X	X											X	X															X	
Exhaust Air											X	X				X							X	X															X	
Outdoor Air Leaving Energy Wheel											X	X																												
Exhaust Air Leaving Energy Wheel											X	X																												
OA Damper / Exhaust Damper				X																							X													
OA Flow															X																								X	
EA Flow															X																								X	
Condenser Water Valve - Modulating	X			X														X													X								
Filters - DP Switch (TYP.)						X					X																												X	
Refrigerant System Alarm							X											X	X																					
Energy Wheel Start/Stop	X							X										X																				X	
Energy Wheel Defrost Speed control	X					X			X									X									X											X	

Notes 1. Monitor VFD failure alarm



DOAU CONTROL DIAGRAM

PACKAGED ROOFTOP UNIT SEQUENCE OF OPERATION
(WATER-COOLED DX HEAT PUMP WITH ENTHALPY WHEEL ENERGY RECOVERY)

OTHER THAN FOR OCCUPANCY OVERRIDE PERIODS, AHU SHALL BE OFF DURING UNOCCUPIED MODES AND SHALL RUN CONTINUOUSLY DURING OCCUPIED MODES.

UNOCCUPIED OPERATIONS: IN UNOCCUPIED MODES, AHU FANS SHALL NORMALLY BE OFF, CONDENSER WATER CONTROL VALVE CLOSED, THE OUTDOOR AIR AND EXHAUST AIR DAMPERS SHALL BE CLOSED.

OCCUPANCY OVERRIDE OPERATIONS: THE BAS SHALL MONITOR THE STATUS OF THE "ON" AND "CANCEL" BUTTONS OF THE SPACE TEMPERATURE SENSOR. WHEN AN OCCUPANCY OVERRIDE REQUEST IS RECEIVED FROM A SPACE SENSOR, THE UNIT SHALL TRANSITION FROM ITS CURRENT OCCUPANCY MODE TO OCCUPANCY OVERRIDE MODE AND THE UNIT SHALL MAINTAIN THE OCCUPIED MODE SPACE TEMPERATURE SETPOINTS.

OCCUPIED OPERATIONS: SUPPLY AND EXHAUST FANS SHALL RUN CONTINUOUSLY.

1. DAMPER VENTILATION CONTROL: ONCE THE ZONE ENTERS THE OCCUPIED MODE, OUTDOOR AIR AND EXHAUST AIR DAMPERS SHALL OPEN.
2. CO2 VENTILATION CONTROL: CO2 CONCENTRATION SHALL BE CONTROLLED AT THE ZONE LEVEL BY STROKING THE ZONE VENTILATION DAMPER OPEN OR CLOSED TO CYCLE OUTDOOR AIR FLOW TO THE ZONE. THE AHU SUPPLY FAN VFD AND RETURN FAN VFD SHALL MODULATE TO MAINTAIN DUCT STATIC PRESSURE SETPOINT.
3. ECONOMIZER CONTROL - AT OUTDOOR AIR TEMPERATURES BELOW THE SUPPLY AIR TEMPERATURE SETPOINT (55°F; ADJ.), AND BELOW THE MAXIMUM SUPPLY AIR HUMIDITY RATIO (60 GR/LB; ADJ.), HEATING/ COOLING COIL SHALL CYCLE OFF AND CONDENSER WATER CONTROL VALVE SHALL MODULATE CLOSED.
4. DEHUMIDIFICATION: FACTORY INSTALLED MODULATING HOT GAS REHEAT SHALL BE ALLOWED ONLY WHEN THE UNIT MODE IS COOLING AND THE ZONE RELATIVE HUMIDITY IS GREATER THAN THE DEHUMIDIFICATION ENABLE SETPOINT. ON A CALL FOR DEHUMIDIFICATION, THE REHEAT VALVE SHALL ENERGIZE AND THE COMPRESSOR SHALL ENABLE. WHEN THE HUMIDITY CONTROL SETPOINT IS SATISFIED, THE VALVE SHALL BE DE-ENERGIZED AND THE COMPRESSOR SHALL BE DISABLED. IF THERE IS A CALL FOR COOLING FROM THE SPACE TEMPERATURE CONTROLLER, WHILE IN REHEAT, THE REHEAT VALVE SHALL BE DE-ENERGIZED AND THE COMPRESSOR CONTINUES TO RUN.
5. SUPPLY AIR TEMPERATURE SETPOINT CONTROL:
   a. IN OCCUPIED MODE, AHU SUPPLY AND RETURN FANS SHALL RUN AND SUPPLY AIR CONDITIONS SHALL BE CONTROLLED.
   b. AHU SUPPLY AIR CONTROL SHALL BE BY DISCHARGE AIR TEMPERATURE SENSORS FOR BOTH TEMPERATURE (°F DRY BULB) AND HUMIDITY RATIO (GR/LB). INITIAL DISCHARGE AIR SETPOINTS SHALL BE 55°F (ADJ.) AND 60 GR/LB (ADJ.).
   c. WHEN OUTSIDE AIR CONDITIONS EXCEED ECONOMIZER CONDITIONS, WATER-COOLED DX HEAT PUMP SYSTEM SHALL RUN IN COOLING TO MAINTAIN SUPPLY AIR CONDITIONS (DRY BULB AND HUMIDITY RATIO).
      i. COOLING WITH NO ENERGY RECOVERY: ENABLE WHEN OUTDOOR AIR CONDITIONS ARE ABOVE ECONOMIZER ENABLE SETPOINT BUT BELOW EXHAUST AIR TEMPERATURE. ENERGY RECOVERY WHEEL SHALL STOP AND WHEEL BYPASS DAMPERS SHALL OPEN (IF AVAILABLE). THE WHEEL PURGE AIR DAMPER SHALL CLOSE. THE CONDENSER WATER VALVE SHALL MODULATE TO CONTROL LEAVING WATER TEMPERATURE FROM WSHP. THE WATER-COOLED DX HEAT PUMP SHALL MODULATE, AND MODULATING HOT GAS REHEAT CONTROL VALVE SHALL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AND HUMIDITY RATIO.
      ii. COOLING WITH ENERGY RECOVERY: ENABLE WHEN OUTDOOR AIR CONDITIONS ARE ABOVE ECONOMIZER ENABLE SETPOINT AND EXHAUST AIR TEMPERATURE. ENERGY RECOVERY WHEEL SHALL TURN AT CONSTANT SPEED AND WHEEL BYPASS DAMPERS SHALL CLOSE (IF AVAILABLE). THE WHEEL PURGE AIR DAMPER SHALL OPEN. THE CONDENSER WATER VALVE SHALL MODULATE TO CONTROL LEAVING WATER TEMPERATURE FROM WSHP. THE WATER-COOLED DX HEAT PUMP SHALL MODULATE, AND MODULATING HOT GAS REHEAT CONTROL VALVE SHALL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AND HUMIDITY RATIO.
   d. WHEN OUTSIDE AIR CONDITIONS ARE BELOW ECONOMIZER CONDITIONS AND BELOW MIXED AIR TEMPERATURE, WATER-COOLED DX HEAT PUMP SYSTEM SHALL RUN IN HEATING TO MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT.
      i. HEATING WITH ENERGY RECOVERY: ENABLE WHEN OUTDOOR AIR CONDITIONS ARE BELOW ECONOMIZER ENABLE SETPOINT AND BELOW EXHAUST AIR TEMPERATURE. WHEEL BYPASS DAMPERS SHALL CLOSE (IF AVAILABLE) AND WHEEL PURGE AIR DAMPER SHALL OPEN. ENERGY RECOVERY WHEEL SHALL ROTATE AT CONSTANT SPEED. THE CONDENSER WATER VALVE SHALL MODULATE TO CONTROL LEAVING WATER TEMPERATURE FROM WSHP, AND THE WATER-COOLED DX HEAT PUMP SHALL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AND MAXIMUM HUMIDITY RATIO.
      ii. HEATING WITH ENERGY RECOVERY AND DEFROST CONTROL: ENABLE WHEN OUTDOOR AIR CONDITIONS ARE BELOW ECONOMIZER ENABLE SETPOINT AND BELOW EXHAUST AIR TEMPERATURE. WHEEL BYPASS DAMPERS SHALL CLOSE (IF AVAILABLE) AND WHEEL PURGE AIR DAMPER SHALL OPEN. ENERGY RECOVERY WHEEL SHALL ROTATE AT SPEED NECESSARY TO PREVENT FROST ON THE WHEEL CONDENSER WATER VALVE SHALL MODULATE TO CONTROL LEAVING WATER TEMPERATURE FROM WSHP, AND THE WATER-COOLED DX HEAT PUMP SHALL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AND MAXIMUM HUMIDITY RATIO.
6. FAN SPEED CONTROL:
   a. SUPPLY FAN VFD SHALL MODULATE TO MAINTAIN SUPPLY DUCT STATIC PRESSURE SETPOINT; SETPOINT SHALL BE DETERMINED BY THE AIR BALANCE CONTRACTOR.
   b. RETURN FAN VFD SHALL MODULATE TO MAINTAIN RETURN DUCT STATIC PRESSURE SETPOINT; SETPOINT SHALL BE DETERMINED BY THE AIR BALANCE CONTRACTOR.
   c. SUPPLY FAN AND RETURN FAN AIRFLOW SHALL BE MEASURED AND RETURN AIRFLOW SHALL NOT EXCEED SUPPLY AIRFLOW.
7. SAFETIES, ALARMS & MONITORING:
   a. THE DDC SYSTEM SHALL MONITOR EACH HEAT PUMP SUPPLY FAN MOTOR RUN STATUS VIA CURRENT SWITCH. IF THE UNIT IS ENABLED AND THE CURRENT SWITCH DOES NOT MONITOR THE SUPPLY FAN RUN STATUS WITHIN 1 MINUTE, AN ALARM WILL BE DISPLAYED AT THE FRONT-END.
   b. THE SOLID STATE CONTROLLER GENERAL ALARM SHALL BE MONITORED THROUGH THE DDC.
   c. FILTER STATUS: A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTER WHEN THE FAN IS RUNNING. IF THE SWITCH CLOSES DURING NORMAL OPERATION A DIRTY FILTER ALARM SHALL BE ANNUNCIATED AT THE BAS.
   d. SMOKE DETECTOR SHUTDOWN: THE UNIT SHALL SHUT DOWN IN RESPONSE TO A SIGNAL FROM THE SMOKE DETECTOR INDICATING THE PRESENCE OF SMOKE. THE SMOKE DETECTOR SHALL BE INTERLOCKED TO THE UNIT THROUGH THE DRY CONTACTS OF THE SMOKE DETECTOR. A MANUAL RESET OF THE SMOKE DETECTOR SHALL BE REQUIRED TO RESTART THE UNIT.
   e. MIXED AIR LOW LIMIT: THE INITIAL DAMPER OPENING RATE SHALL BE LIMITED TO 2% PER MINUTE (ADJ.) UNTIL THE DAMPER HAS REACHED ITS MINIMUM VENTILATION POSITION. THE OUTSIDE AIR DAMPER SHALL MODULATE TO A POSITION LESS THAN THE MINIMUM DAMPER POSITION IF THE MIXED AIR TEMPERATURE DROPS BELOW 50.0 DEG. F (ADJ.). IF THE MIXED AIR TEMPERATURE SENSOR FAILS AN ALARM SHALL BE ANNUNCIATED AT THE BAS AND THE OUTSIDE AIR DAMPER SHALL RETURN TO THE MINIMUM POSITION.

DEDICATED OUTDOOR AIR UNIT SEQUENCE OF OPERATION
(DEDICATED 100% OA WITH WATER-COOLED DX HEAT PUMP AND ENTHALPY WHEEL ENERGY RECOVERY)

OTHER THAN FOR OCCUPANCY OVERRIDE PERIODS, AHU SHALL BE OFF DURING UNOCCUPIED MODES AND SHALL RUN CONTINUOUSLY DURING OCCUPIED MODES.

UNOCCUPIED OPERATIONS: IN UNOCCUPIED MODES, AHU FANS SHALL NORMALLY BE OFF, CONDENSER WATER CONTROL VALVE CLOSED, THE OUTDOOR AIR AND EXHAUST AIR DAMPERS SHALL BE CLOSED, AND THE PURGE AIR DAMPER SHALL BE CLOSED.

OCCUPANCY OVERRIDE OPERATIONS: THE BAS SHALL MONITOR THE STATUS OF THE "ON" AND "CANCEL" BUTTONS OF THE SPACE TEMPERATURE SENSOR. WHEN AN OCCUPANCY OVERRIDE REQUEST IS RECEIVED FROM A SPACE SENSOR, THE UNIT SHALL TRANSITION FROM ITS CURRENT OCCUPANCY MODE TO OCCUPANCY OVERRIDE MODE AND THE UNIT SHALL MAINTAIN THE OCCUPIED MODE SPACE TEMPERATURE SETPOINTS.

OCCUPIED OPERATIONS: SUPPLY AND EXHAUST FANS SHALL RUN CONTINUOUSLY.

1. DAMPER VENTILATION CONTROL: ONCE THE ZONE ENTERS THE OCCUPIED MODE, OUTDOOR AIR AND EXHAUST AIR DAMPERS SHALL OPEN.
2. CO2 VENTILATION CONTROL: CO2 CONCENTRATION SHALL BE CONTROLLED AT THE ZONE LEVEL BY STROKING THE ZONE VENTILATION DAMPER OPEN OR CLOSED TO CYCLE OUTDOOR AIR FLOW TO THE ZONE. THE AHU SUPPLY FAN VFD AND EXHAUST FAN VFD SHALL MODULATE TO MAINTAIN DUCT STATIC PRESSURE SETPOINT.
3. ECONOMIZER CONTROL FOR 100% OA UNITS: AT OUTDOOR AIR TEMPERATURES BELOW THE SUPPLY AIR TEMPERATURE SETPOINT (70°F; ADJ.), AND BELOW THE MAXIMUM SUPPLY AIR HUMIDITY RATIO (60 GR/LB; ADJ.), ENTHALPY WHEEL SHALL STOP, HEATING/COOLING COIL SHALL CYCLE OFF AND CONDENSER WATER CONTROL VALVE SHALL MODULATE CLOSED.
4. DEHUMIDIFICATION: FACTORY INSTALLED MODULATING HOT GAS REHEAT SHALL BE ALLOWED ONLY WHEN THE UNIT MODE IS COOLING AND THE ZONE RELATIVE HUMIDITY IS GREATER THAN THE DEHUMIDIFICATION ENABLE SETPOINT. ON A CALL FOR DEHUMIDIFICATION, THE REHEAT VALVE SHALL ENERGIZE AND THE COMPRESSOR SHALL ENABLE. WHEN THE HUMIDITY CONTROL SETPOINT IS SATISFIED, THE VALVE SHALL BE DE-ENERGIZED AND THE COMPRESSOR SHALL BE DISABLED. IF THERE IS A CALL FOR COOLING FROM THE SPACE TEMPERATURE CONTROLLER, WHILE IN REHEAT, THE REHEAT VALVE SHALL BE DE-ENERGIZED AND THE COMPRESSOR CONTINUES TO RUN.
5. SUPPLY AIR TEMPERATURE SETPOINT CONTROL:
   a. IN OCCUPIED MODE, AHU SUPPLY AND EXHAUST FANS SHALL RUN AND SUPPLY AIR CONDITIONS SHALL BE CONTROLLED.
   b. AHU SUPPLY AIR CONTROL SHALL BE BY DISCHARGE AIR TEMPERATURE SENSORS FOR BOTH TEMPERATURE (°F DRY BULB) AND HUMIDITY RATIO (GR/LB). INITIAL DISCHARGE AIR SETPOINTS SHALL BE 70°F (ADJ.) AND 60 GR/LB (ADJ.).
   c. WHEN OUTSIDE AIR CONDITIONS EXCEED ECONOMIZER CONDITIONS, WATER-COOLED DX HEAT PUMP SYSTEM SHALL RUN IN COOLING TO MAINTAIN SUPPLY AIR CONDITIONS (DRY BULB AND HUMIDITY RATIO).
      i. COOLING WITH NO ENERGY RECOVERY: ENABLE WHEN OUTDOOR AIR CONDITIONS ARE ABOVE ECONOMIZER ENABLE SETPOINT BUT BELOW EXHAUST AIR TEMPERATURE. ENERGY RECOVERY WHEEL SHALL STOP AND WHEEL BYPASS DAMPERS SHALL OPEN (IF AVAILABLE). THE WHEEL PURGE AIR DAMPER SHALL CLOSE. THE CONDENSER WATER VALVE SHALL MODULATE TO CONTROL LEAVING WATER TEMPERATURE FROM WSHP. THE WATER-COOLED DX HEAT PUMP SHALL MODULATE, AND MODULATING HOT GAS REHEAT CONTROL VALVE SHALL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AND HUMIDITY RATIO.
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   d. WHEN OUTSIDE AIR CONDITIONS ARE BELOW ECONOMIZER CONDITIONS AND BELOW EXHAUST AIR TEMPERATURE, WATER-COOLED DX HEAT PUMP SYSTEM SHALL RUN IN HEATING TO MAINTAIN SUPPLY AIR TEMPERATURE SETPOINT.
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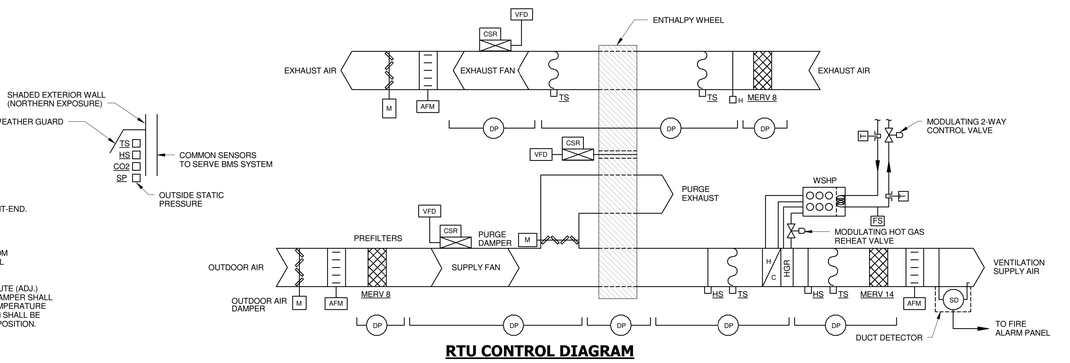
      ii. HEATING WITH ENERGY RECOVERY AND DEFROST CONTROL: ENABLE WHEN OUTDOOR AIR CONDITIONS ARE BELOW ECONOMIZER ENABLE SETPOINT AND BELOW EXHAUST AIR TEMPERATURE. WHEEL BYPASS DAMPERS SHALL CLOSE (IF AVAILABLE) AND WHEEL PURGE AIR DAMPER SHALL OPEN. ENERGY RECOVERY WHEEL SHALL ROTATE AT SPEED NECESSARY TO PREVENT FROST ON THE WHEEL CONDENSER WATER VALVE SHALL MODULATE TO CONTROL LEAVING WATER TEMPERATURE FROM WSHP, AND THE WATER-COOLED DX HEAT PUMP SHALL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AND MAXIMUM HUMIDITY RATIO.
6. FAN SPEED CONTROL:
   a. SUPPLY FAN VFD SHALL MODULATE TO MAINTAIN SUPPLY DUCT STATIC PRESSURE SETPOINT; SETPOINT SHALL BE DETERMINED BY THE AIR BALANCE CONTRACTOR.
   b. EXHAUST FAN VFD SHALL MODULATE TO MAINTAIN EXHAUST DUCT STATIC PRESSURE SETPOINT; SETPOINT SHALL BE DETERMINED BY THE AIR BALANCE CONTRACTOR.
   c. SUPPLY FAN AND EXHAUST FAN AIRFLOW SHALL BE MEASURED AND EXHAUST AIRFLOW SHALL NOT EXCEED SUPPLY AIRFLOW.
7. SAFETIES, ALARMS & MONITORING:
   a. THE DDC SYSTEM SHALL MONITOR EACH HEAT PUMP SUPPLY FAN MOTOR RUN STATUS VIA CURRENT SWITCH. IF THE UNIT IS ENABLED AND THE CURRENT SWITCH DOES NOT MONITOR THE SUPPLY FAN RUN STATUS WITHIN 1 MINUTE, AN ALARM WILL BE DISPLAYED AT THE FRONT-END.
   b. THE SOLID STATE CONTROLLER GENERAL ALARM SHALL BE MONITORED THROUGH THE DDC.
   c. FILTER STATUS: A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTER WHEN THE FAN IS RUNNING. IF THE SWITCH CLOSES DURING NORMAL OPERATION A DIRTY FILTER ALARM SHALL BE ANNUNCIATED AT THE BAS.
   d. SMOKE DETECTOR SHUTDOWN: THE UNIT SHALL SHUT DOWN IN RESPONSE TO A SIGNAL FROM THE SMOKE DETECTOR INDICATING THE PRESENCE OF SMOKE. THE SMOKE DETECTOR SHALL BE INTERLOCKED TO THE UNIT THROUGH THE DRY CONTACTS OF THE SMOKE DETECTOR. A MANUAL RESET OF THE SMOKE DETECTOR SHALL BE REQUIRED TO RESTART THE UNIT.

INPUT/OUTPUT SUMMARY TABLE

RTU	HARDWARE: OUTPUT: DIGITAL: Control Relay(s)	Contactor	ANALOG: Transducer: Heating Water Setpoint	Direct	INPUT: DIGITAL: VFD Speed Control: Pressure Switch(es)	Flow Switch(es)	Alarm Relay(s)	Current Switch(es)	Boiler Controller Status	ANALOG: Temperature	Humidity	Current Transducer	Damper Position	Viscosity	Carbon Dioxide	Setpoint Adjustment	Other Sensor Present	SOFTWARE: ALARMS: DIGITAL: Equipment Status	Equipment Failure	Smoke	Factory Controller Alarm	Fire Shutdown	ANALOG: OA Gas Detection	Low Limit	High Limit	Dirty Filter	PROGRAMMING: Scheduled Start/Stop	Optimum Start/Stop	Duty Cycling	Boiler Lead/Lag	Timed Program Commands	Temperature Control	Demand Limiting	Run Time	Boiler Lead/Lag	Chilled Water Reset	Chiller Lead/Lag	Condenser Water Reset	VAV Control	Timed Override	Trend Analysis	NOTES
POINT DESCRIPTION																																									
Supply Fan	X				X			X	X	X			X	X		X		X	X			X	X			X												X	1
Return Fan	X				X			X	X	X			X	X		X		X	X			X	X			X												X	1
Supply Air											X	X													X	X													X	
Exhaust Air											X	X				X									X	X													X	
Outdoor Air Leaving Energy Wheel											X	X																												
Exhaust Air Leaving Energy Wheel											X	X																												
Return Air											X	X				X									X	X													X	
OA Damper / Relief Damper				X																							X													
OA Flow																X																								X	
RA Flow																X																								X	
Condenser Water Valve - Modulating	X			X														X													X								
Filters - DP Switch (TYP.)					X						X															X												X	
Refrigerant System Alarm						X												X	X																					

Notes 1. Monitor VFD failure alarm



RTU CONTROL DIAGRAM

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Additions & Renovations at Robert Poole Building #056

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I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

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DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
SCHEMATIC DIAGRAMS - MECHANICAL

M 401

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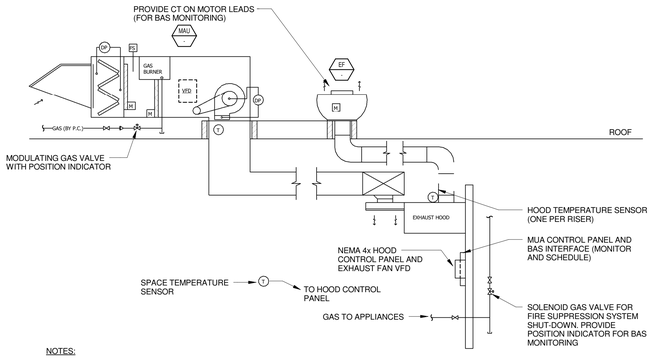


NOTES:

1. PROVIDE CONTROLS SYSTEM FOR KITCHEN EXHAUST AND MUA COMPLETE.
2. EXHAUST AIRFLOW SHALL BE VARIABLE, BASED ON HOOD TEMPERATURE SENSOR.
3. MAKE-UP AIR SHALL TRACK EXHAUST AIR AT 80% MUA TO EA RATIO.
4. PROVIDE INTEGRATION TO HOOD FIRE SUPPRESSION SYSTEM (ANSUL).
5. PROVIDE END-SWITCHES OR OPERATOR POSITION INDICATORS WITH EACH MOTORIZED DAMPER.
6. PROVIDE DIRTY FILER SWITCH, BURNER AIRFLOW SWITCH AND DAN DP TRANSDUCER.

KITCHEN EXHAUST AND MAKE-UP AIR SYSTEM (TYPE I HOOD):

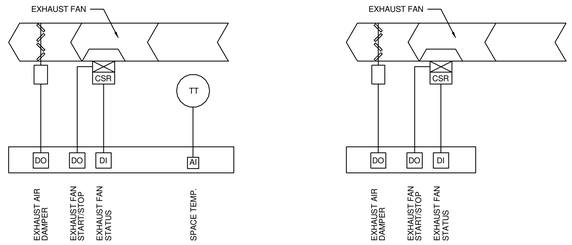
1. KITCHEN HOOD EXHAUST SYSTEM SHALL OPERATE BASED ON A DEDICATED SCHEDULE, PROGRAMMED AT THE BUILDING AUTOMATION SYSTEM.
2. ON A CALL TO RUN, EXHAUST FAN AND MUA FANS SHALL SOFT START AND RAMP TO FULL SPEED.
3. MAKE-UP AIR UNIT GAS BURNER SHALL MODULATE OUTPUT CAPACITY TO MAINTAIN CONSTANT DISCHARGE AIR TEMPERATURE SETPOINT, WHICH SHALL BE ADJUSTABLE.
4. MINIMUM DISCHARGE AIR TEMPERATURE SETPOINT SHALL BE DETERMINED AS KITCHEN SPACE TEMPERATURE SETPOINT MINUS 10°F.
5. EXHAUST FAN VFD SHALL MODULATE TO MAINTAIN EXHAUST AIR TEMPERATURE RANGE OF 85°F TO 130°F (ADJUSTABLE), AT 85°F, FAN SPEED SHALL BE AT MINIMUM AND AT 130°F FAN SPEED SHALL BE 100%. ALL SETPOINTS SHALL BE ADJUSTABLE, INCLUDING THE DYNAMIC REST RANGE MINIMUM AND MAXIMUM TEMPERATURES. FOR COOKING OPERATIONS WITH MAXIMUM TEMPERATURE OF 400°F, RESET RANGE SHALL BE 85°F TO 90°F IN LIEU OF 85°F TO 130°F.
6. A MANUAL OVER-RIDE LOCATED IN THE COOKING SPACE SHALL BE PROVIDED TO FORCE EXHAUST AND MUA FANS TO 100% UPON MANUAL ACTIVATION. OVER-RIDE FUNCTION SHALL INCLUDE AN ADJUSTABLE TIMER TO SET DURATION OF 100% OPERATION. AT THE CONCLUSION OF THE TIMED OVER-RIDE CONDITION, EXHAUST FAN AND MUA FAN SHALL REVERT TO NORMAL OPERATION. BAS SYSTEM SHALL LOG A CHANGE IN STATE OF THE SYSTEM WITH THE TIME STAMPS.
7. ALL SETPOINTS AND DATA AVAILABLE AT THE LOCAL CONTROLLER SHALL BE AVAILABLE AT THE BAS.

FIRE SUPPRESSION SYSTEM OPERATION:

1. UPON ACTIVATION OF THE ASSOCIATED HOOD FIRE SUPPRESSION SYSTEM, THE HOOD EXHAUST AND MAKE-UP AIR SYSTEM SHALL ENTER EMERGENCY MODE. BAS SYSTEM SHALL REGISTER AN EMERGENCY ALARM.
2. EMERGENCY MODE SHALL STOP MAKE-UP AIR UNIT BURNER AND THEN SUPPLY FAN. ALL DAMPERS SHALL CLOSE.
3. IF THE ASSOCIATED EXHAUST FAN IS RUNNING, IT SHALL CONTINUE TO RUN AND SHALL RAMP TO 100%. FAN SHALL RUN CONTINUOUSLY UNTIL MANUAL INTERVENTION.
4. IF THE ASSOCIATED EXHAUST FAN IS NOT RUNNING AT THE TIME THE FIRE SUPPRESSION SYSTEM IS ACTIVATED, FAN SHALL NOT RUN. IF THE MANUAL OVER-RIDE SWITCH IS TURNED ON, FAN SHALL RAMP TO 100% AND SHALL RUN CONTINUOUSLY UNTIL MANUAL INTERVENTION.

1 / M 402 TYPE I EXHAUST HOOD DETAIL DETAIL

NO SCALE



SYSTEM: TAB / EXHAUST FANS	HARDWARE: OUTPUT: DIGITAL: CONTROL RELAY	HARDWARE: OUTPUT: DIGITAL: CONTACTOR	HARDWARE: OUTPUT: DIGITAL: HAND/OFF/AUTO	HARDWARE: OUTPUT: DIGITAL: OFF/AUTO	HARDWARE: OUTPUT: ANALOG: DAMPER CONTROL	HARDWARE: OUTPUT: ANALOG: CONTROL, SET POINT ADJUSTMENT	HARDWARE: OUTPUT: ANALOG: VALVE CONTROL	HARDWARE: OUTPUT: ANALOG: POSITION ADJUSTMENT	HARDWARE: INPUT: DIGITAL: PRESSURE	HARDWARE: INPUT: DIGITAL: DIFFERENTIAL PRESSURE SWITCH	HARDWARE: INPUT: DIGITAL: DIFF. PRESS. FLOW SWITCH	HARDWARE: INPUT: DIGITAL: AUXILIARY CONTACT	HARDWARE: INPUT: DIGITAL: PULSE	HARDWARE: INPUT: DIGITAL: SWITCH STATUS	HARDWARE: INPUT: DIGITAL: CURRENT SONSING RELAY	HARDWARE: INPUT: ANALOG: TEMPERATURE (DEGREE °F)	HARDWARE: INPUT: ANALOG: RELATIVE HUMIDITY (PERCENT)	HARDWARE: INPUT: ANALOG: STATIC PRESSURE (PSIG, PSIA, PSID)	HARDWARE: INPUT: ANALOG: POSITION	HARDWARE: INPUT: ANALOG: FLOW	HARDWARE: INPUT: ANALOG: DIFFERENTIAL PRESSURE	SOFTWARE: ALARMS: DIGITAL: CONTROL CODE	SOFTWARE: ALARMS: DIGITAL: HIGH LIMIT (CRITICAL SPACES)	SOFTWARE: ALARMS: DIGITAL: LOW LIMIT (CRITICAL SPACES)	SOFTWARE: ALARMS: ANALOG: HIGH LIMIT	SOFTWARE: ALARMS: ANALOG: LOW LIMIT	SOFTWARE: ALARMS: ANALOG: RUN TIME	SOFTWARE: ALARMS: ANALOG: LOW DELTA	SOFTWARE: ALARMS: ANALOG: HIGH LIMIT	SOFTWARE: APPLICATION PROGRAMS: REHEAT COIL RESET	SOFTWARE: APPLICATION PROGRAMS: SPACE TEMP RESET	SOFTWARE: APPLICATION PROGRAMS: OCCUPIED/UNOCCUPIED ***	SOFTWARE: APPLICATION PROGRAMS: LIGHTING CONTROL	FAILURE MODE **
OCCUPANCY TIME																																	
GRAPHIC DISPLAY	●																																
POINT DESCRIPTION																																	
EXHAUST FAN STATUS															●					●	●												
EXHAUST FAN START/STOP			●																		●												
DAMPER CONTROL	●																																
SPACE TEMP.																	●				●	●											
EXHAUST FAN STATUS															●						●	●											
EXHAUST FAN START/STOP			●																		●												
DAMPER CONTROL	●																																
KITCHEN HOOD EF STATUS															●						●	●											
KITCHEN VENTILATION START/STOP			●																		●												
SA TEMPERATURE																	●				●	●											
MAKE UP FAN STATUS															●						●	●											
HEATING COIL VALVE CONTROL						●																								●			
DAMPER CONTROL	●																																

* ONE MEASUREMENT FOR ENTIRE SYSTEM
** LAST COMMMAND O - ON (OPEN)
*** REFER TO SCHEDULES FOR TAB REQUIREMENTS

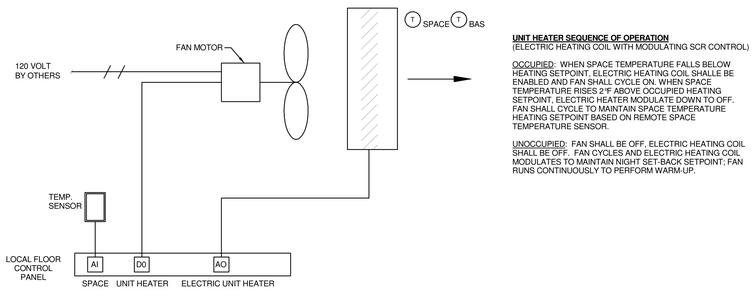
H - HIGH VALUE F - OFF (CLOSED)
L - LOW VALUE N - LOCAL LOOP

2 / M 402 EXHAUST FAN CONTROLS DETAIL

NO SCALE

NOTES:

1. ALL EXHAUST FANS TO HAVE MOTORIZED DAMPER INTERLOCKED WITH FAN SEQUENCE OF OPERATION. LOUVER SHALL PROVE OPEN PRIOR TO FAN STARTING.



UNIT HEATER SEQUENCE OF OPERATION
(ELECTRIC HEATING COIL WITH MODULATING SCR CONTROL)

OCCUPIED: WHEN SPACE TEMPERATURE FALLS BELOW HEATING SETPOINT, ELECTRIC HEATING COIL SHALLE BE ENABLED AND FAN SHALL CYCLE ON. WHEN SPACE TEMPERATURE RISES 2°F ABOVE OCCUPIED HEATING SETPOINT, ELECTRIC HEATER MODULATE DOWN TO OFF. FAN SHALL CYCLE TO MAINTAIN SPACE TEMPERATURE HEATING SETPOINT BASED ON REMOTE SPACE TEMPERATURE SENSOR.

UNOCCUPIED: FAN SHALL BE OFF, ELECTRIC HEATING COIL SHALL BE OFF. FAN CYCLES AND ELECTRIC HEATING COIL MODULATES TO MAINTAIN NIGHT SET-BACK SETPOINT; FAN RUNS CONTINUOUSLY TO PERFORM WARM-UP.

UNIT HEATERS / POINT DESCRIPTION	HARDWARE: OUTPUT: DIGITAL: Control Relay(s)	Contactor	Transducer	Direct	VFD Speed Control	INPUT: DIGITAL: Pressure Switch(es)	Flow Switch(es)	Filter	Signal Relay(s)	Current Switch(es)	End Switch	INPUT: ANALOG: Temperature	Humidity	Current Transducer	Pressure	Velocity	CFM	Carbon Dioxide	Setpoint Adjustment	SOFTWARE: ALARMS: DIGITAL: Equipment Status	Flame Failure	Smoke	ALARMS: ANALOG: High Limit	Low Limit	PROGRAMMING: Scheduled Start/Stop	Optimum Start/Stop	Duty Cycle	Demand Limiting	Timed Program Command	Temperature Compensated	Outdoor Air Economizer	Run Time	Night Heat Lock	Hot Water Reset	Chilled Water Reset	Night Set Back	Condenser Water Reset	VAV Control	Timed Override	Trend Analysis	Notes
UNIT HEATERS																																										X	
Supply Fan	X									X											X																						
Valve	X																																									
Supply Air												O												X	X																		
Space Air												X												X	X																		

3 / M 402 UNIT HEATER CONTROL DIAGRAM DETAIL

NO SCALE

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

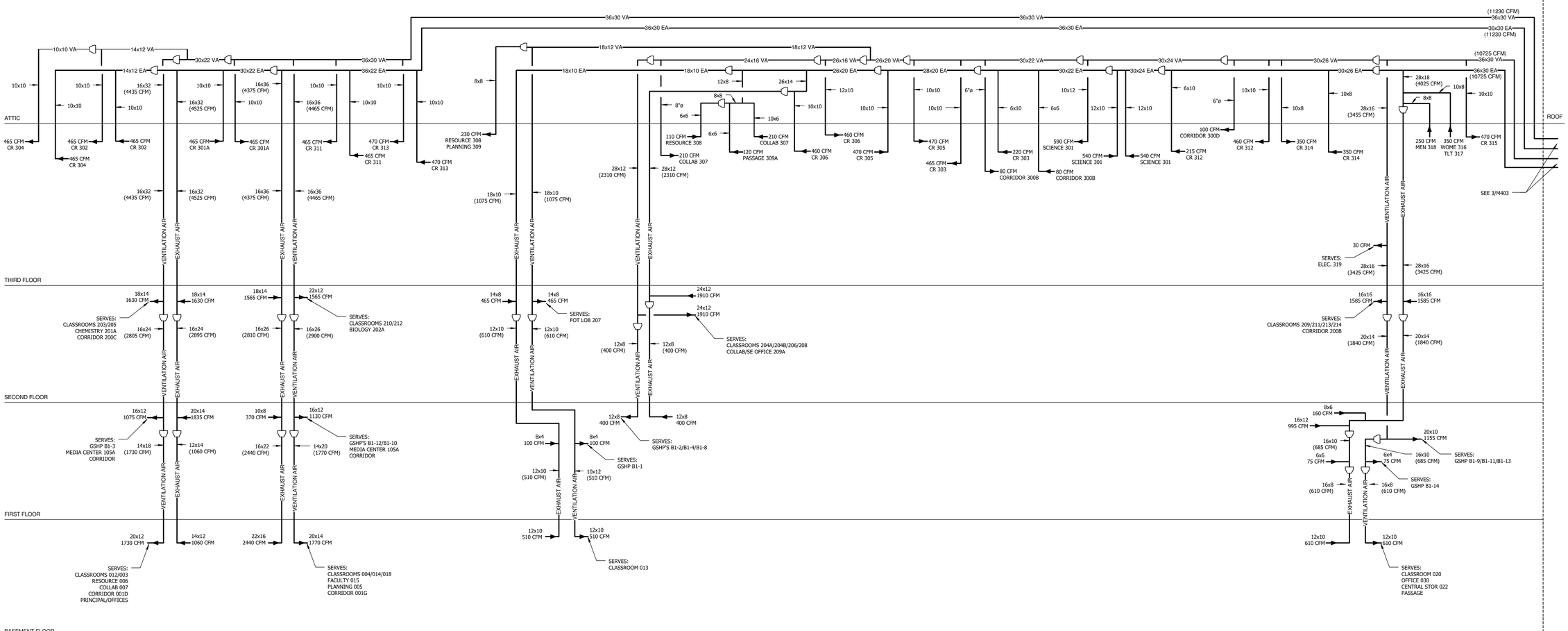
BID ISSUE

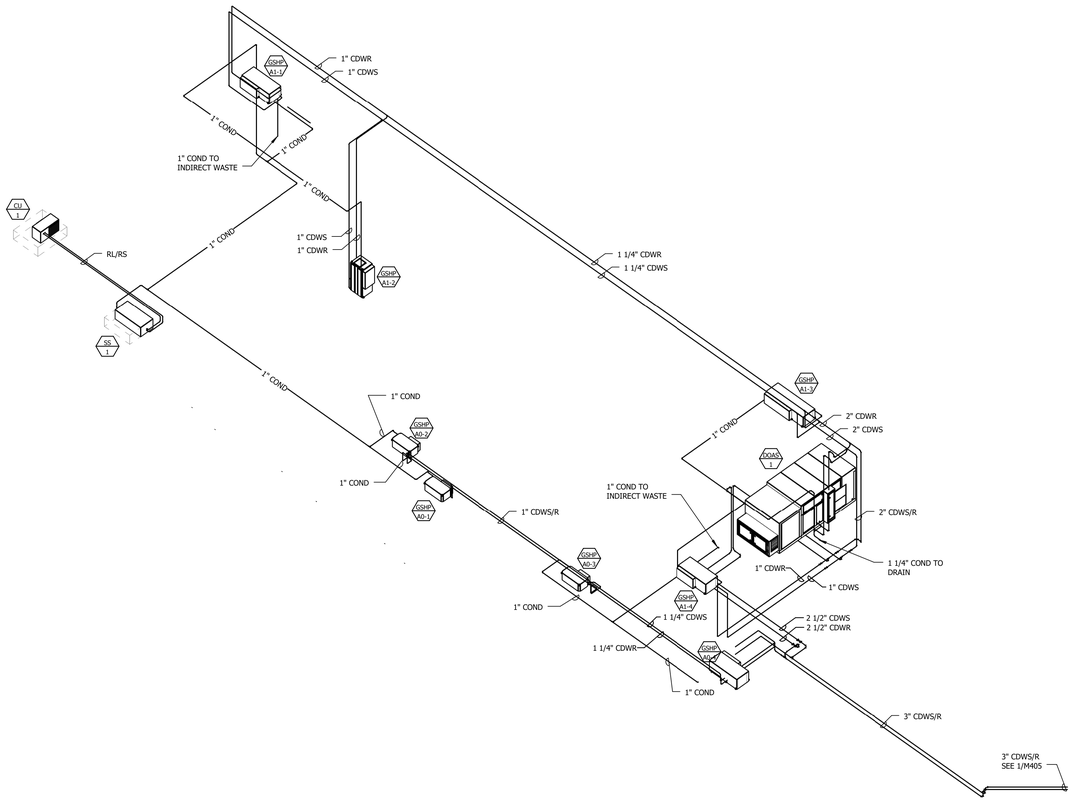
PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
SCHEMATIC DIAGRAMS - MECHANICAL

M 402

7/26/2016 11:14:14 AM


ATTIC
THIRD FLOOR
SECOND FLOOR
FIRST FLOOR
BASEMENT FLOOR
ROOF
SEE 3/M403
VENTILATION AIR
EXHAUST AIR
SERVES: CLASSROOMS 203/205 CHEMISTRY 201A CORRIDOR 200C
SERVES: CLASSROOMS 210/212 BIOLOGY 202A
SERVES: FOT LOB 207
SERVES: CLASSROOMS 204A/204B/206/208 COLLAB/SE OFFICE 209A
SERVES: CLASSROOMS 209/211/213/214 CORRIDOR 200B
SERVES: GSHP B1-3 MEDIA CENTER 105A CORRIDOR
SERVES: GSHP B1-12/B1-10 MEDIA CENTER 105A CORRIDOR
SERVES: GSHP'S B1-2/B1-4/B1-8
SERVES: GSHP B1-1
SERVES: GSHP B1-9/B1-11/B1-13
SERVES: GSHP B1-14
SERVES: CLASSROOMS 012/003 RESOURCE 006 COLLAB 007 CORRIDOR 001D PRINCIPAL/OFFICES
SERVES: CLASSROOMS 004/014/018 FACULTY 015 PLANNING 005 CORRIDOR 001G
SERVES: CLASSROOM 013
SERVES: CLASSROOM 020 OFFICE 030 CENTRAL STOR 022 PASSAGE
SERVES: ELEC. 319
SERVES: PLTW 124 GATEWAY 123 CISCO 122
SERVES: CTE FLEX 121C
SERVES: ENV SCI 044 ART STUDIO 046 STORAGE SPACES
SERVES: DINING 141 KITCHEN 142J
SERVES: CORRIDOR 300E PHYSICS 321 PLANNING 323 RESOURCE 324
SERVES: CORRIDOR 200F PHYSICS 220 PLANNING 221 RESOURCE 223 CLASSROOMS 228/229/230 OFFICE 226/227 CONTROL 232 BIO 233
SERVES: LOCKER AREA
SERVES: KITCHEN HOOD
GYM ROOF
SERVES: GYM
SERVES: GYM
SERVES: GYM



1 / M 404 CDWS/R RISER - AREA A - MECHANICAL PIPING

JRS ARCHITECTS

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
CDWS/R RISER - AREA A - MECHANICAL PIPING

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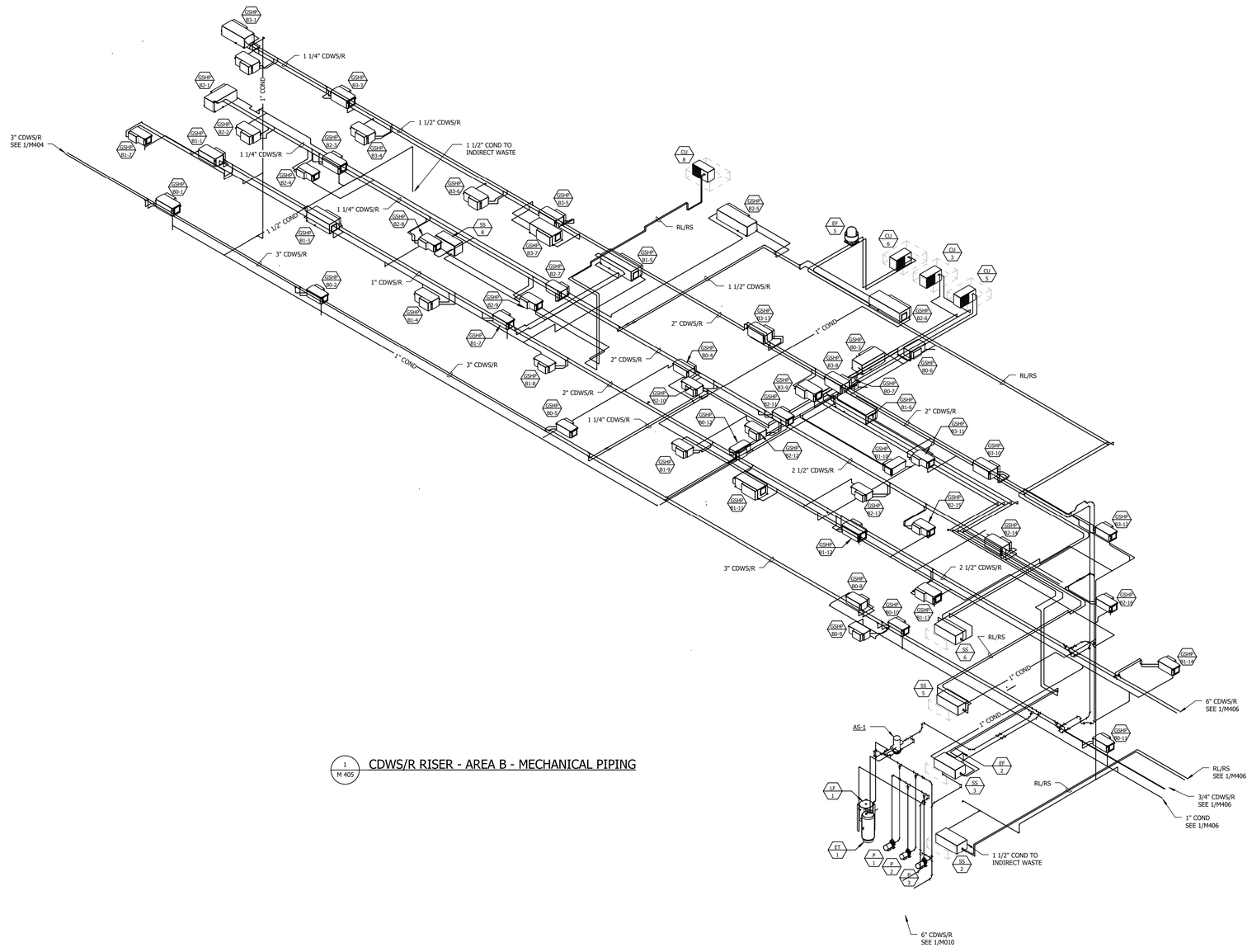

1 / M 405 CDWS/R RISER - AREA B - MECHANICAL PIPING

JRS ARCHITECTS

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DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME

CDWS/R RISER - AREA B - MECHANICAL PIPING

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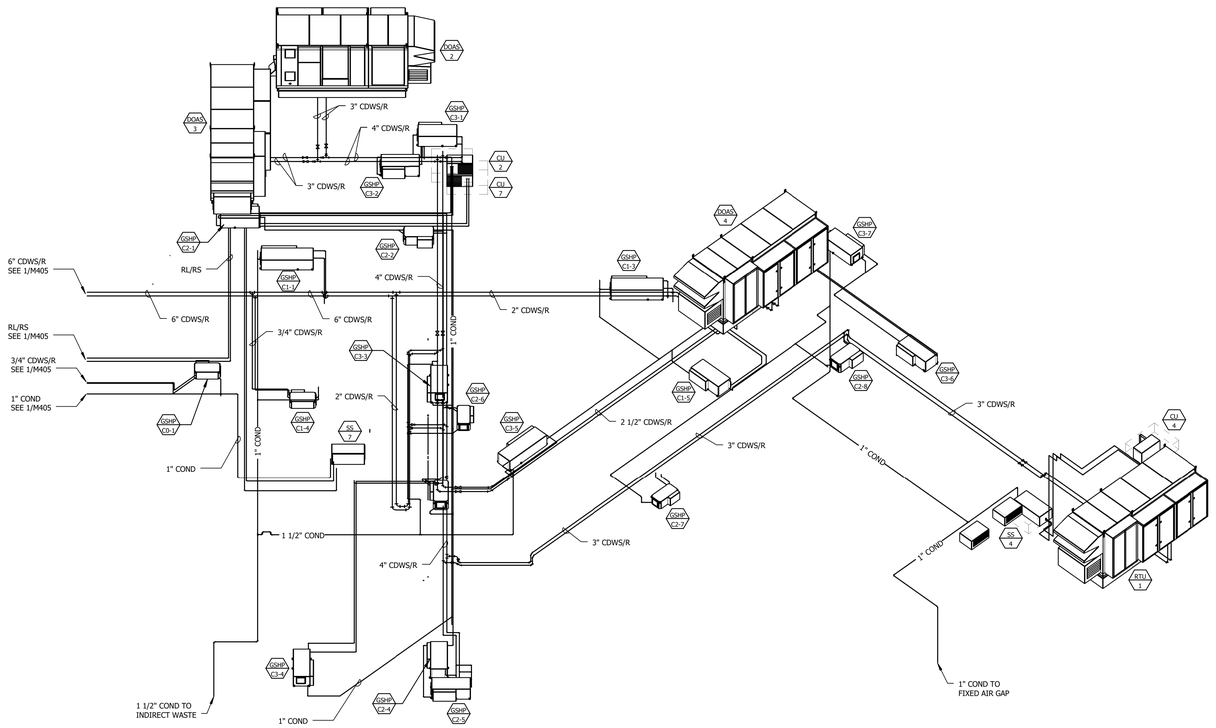

1 M 406 CDWS/R RISER - AREA C - MECHANICAL PIPING

7/26/2016 11:14:38 AM

JRS ARCHITECTS

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

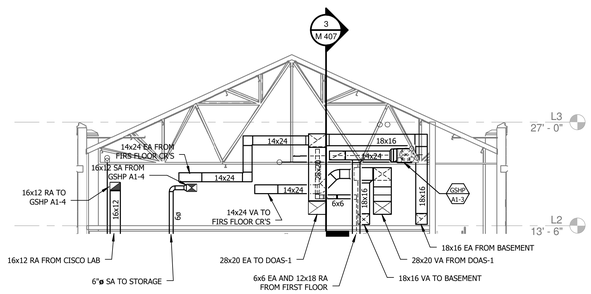
PROJECT No.: 152-01

DATE: 03/31/16

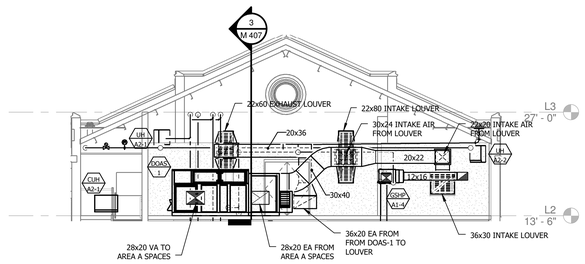
SCALE: AS NOTED

DRAWING NAME
CDWS/R RISER - AREA C - MECHANICAL PIPING

M 406



1 M 407 MECH ROOM A 1
1/8" = 1'-0"



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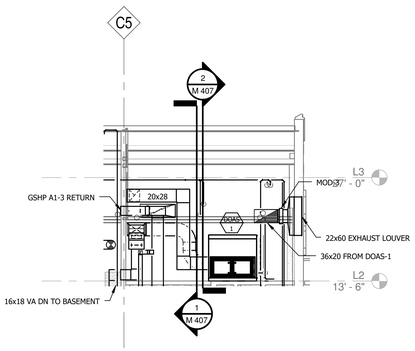

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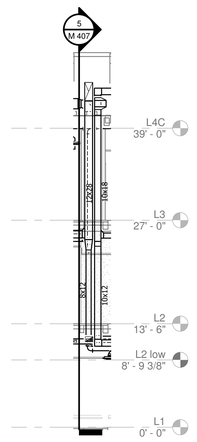

4 M 407 MECH CHASE B 1
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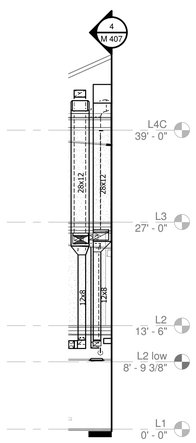

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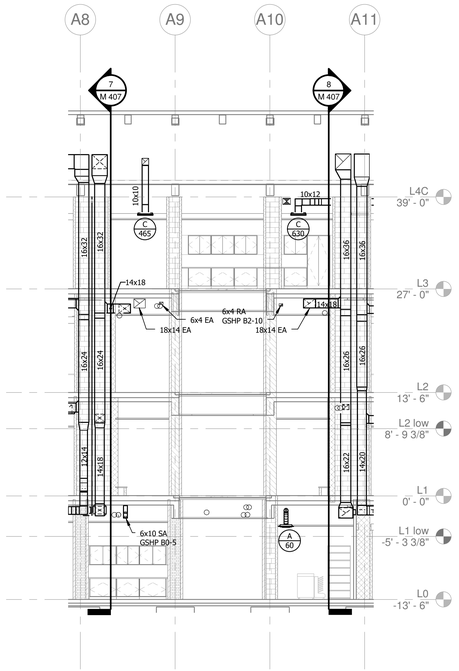

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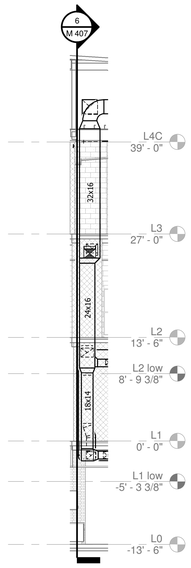

7 M 407 MECH CHASE B 4
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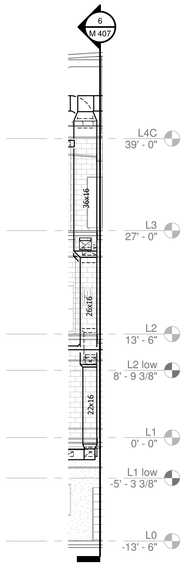

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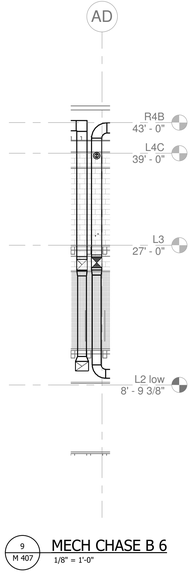

9 M 407 MECH CHASE B 6
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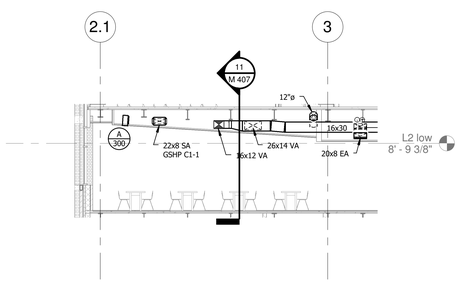

10 M 407 MECH SECTION C 1
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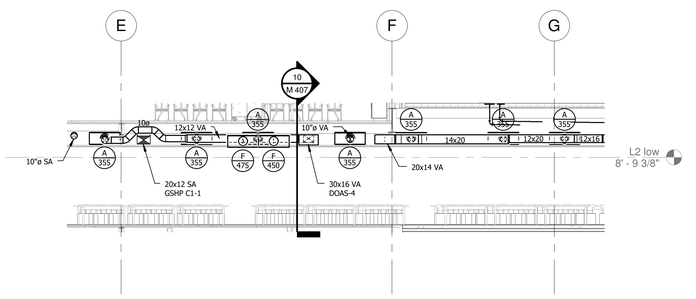

11 M 407 MECH SECTION C 2
1/8" = 1'-0"

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No.	DATE	DESCRIPTION

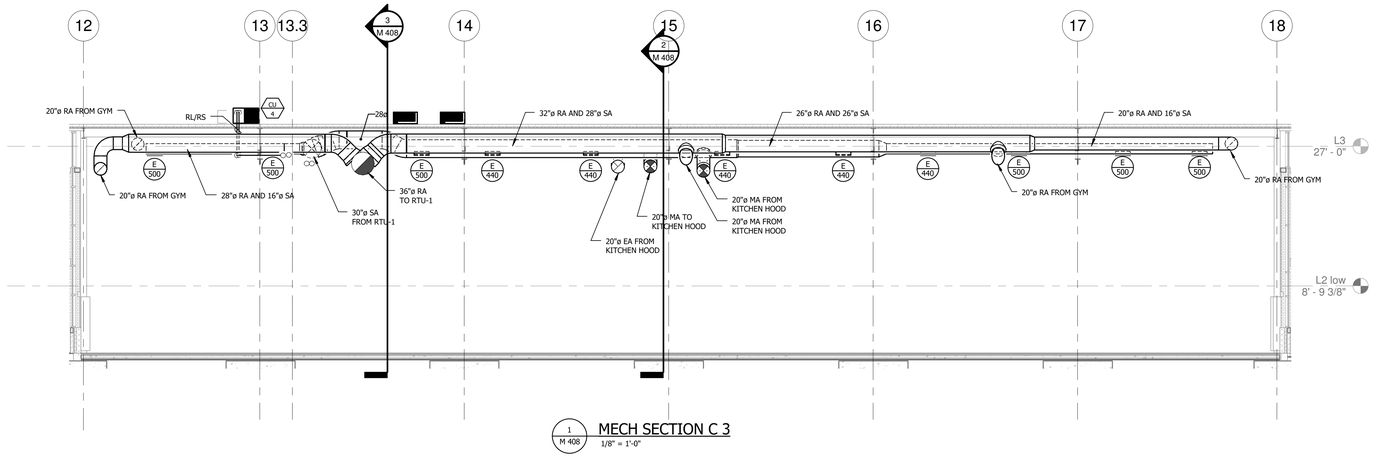
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
SECTIONS - MECHANICAL

M 407

7/26/2016 11:15:08 AM



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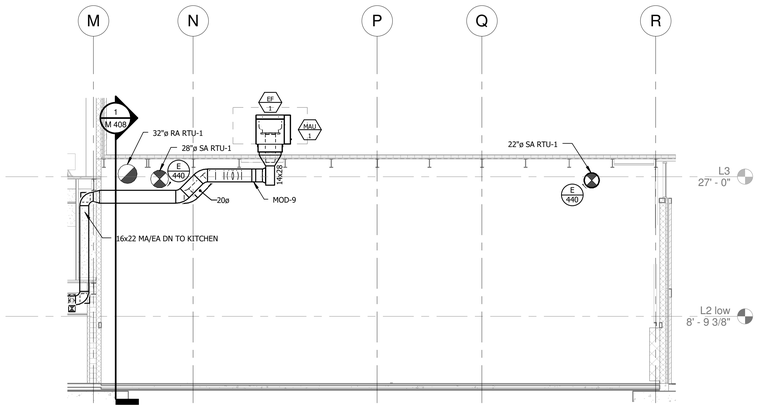

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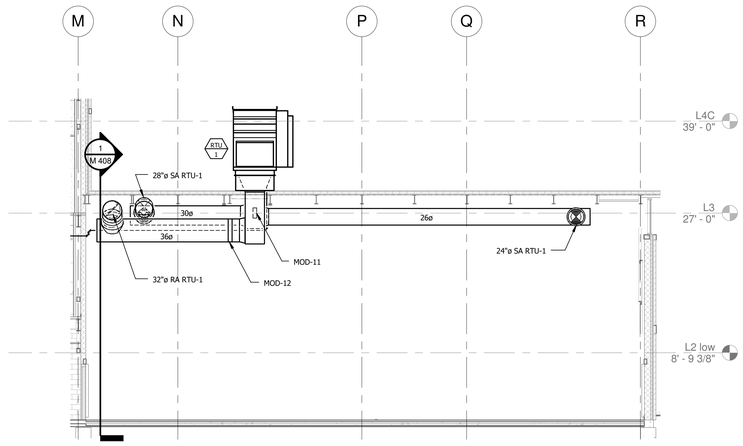
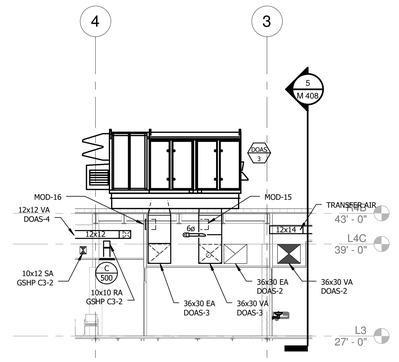
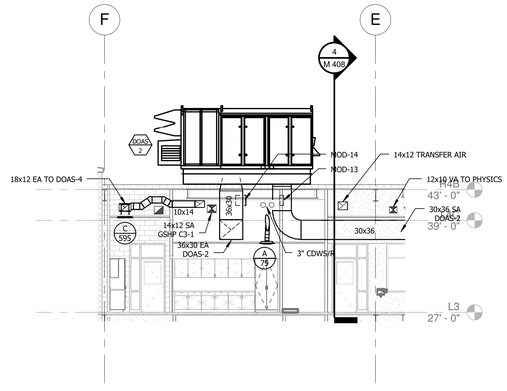


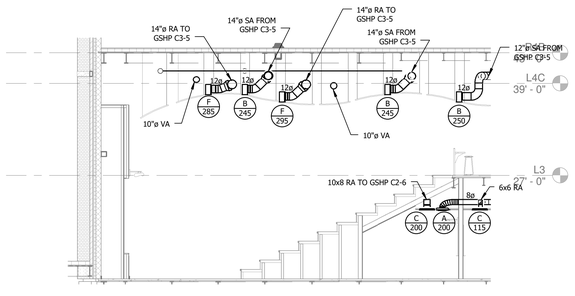
3 M 408 MECH SECTION C 5
1/8" = 1'-0"



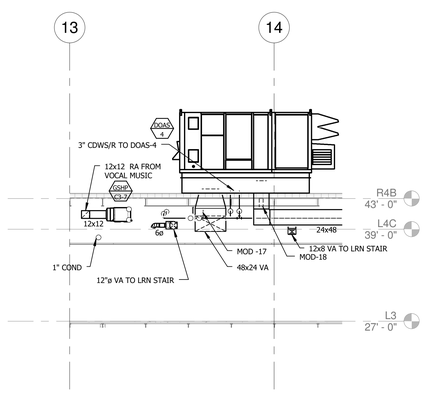
4 M 408 MECH SECTION C 6
1/8" = 1'-0"



5 M 408 MECH SECTION C 7
1/8" = 1'-0"



6 M 408 MECH SECTION C 8
1/8" = 1'-0"



7 M 408 MECH SECTION C 9
1/8" = 1'-0"

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

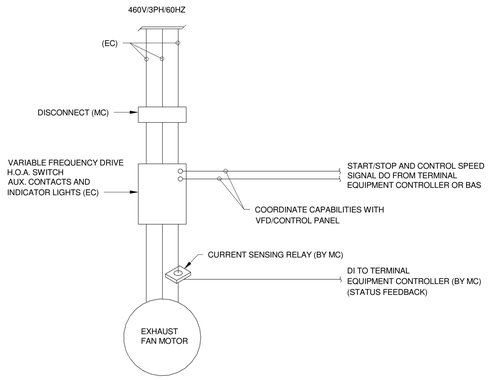
DATE: 03/31/16

SCALE: AS NOTED

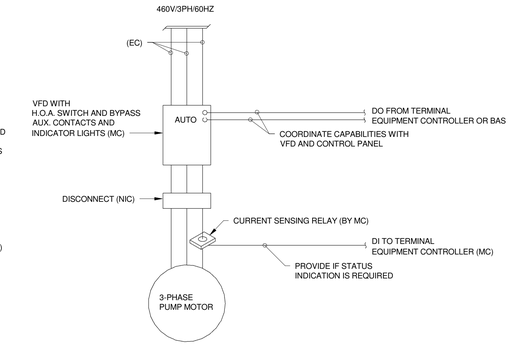
DRAWING NAME
SECTIONS - MECHANICAL

M 408

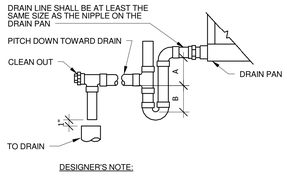
7/26/2016 11:15:37 AM



1 M 500 — 3 PHASE EXHAUST FAN WIRING DETAIL
NO SCALE



2 M 500 — 3 PHASE PUMP WIRING DETAIL
NO SCALE

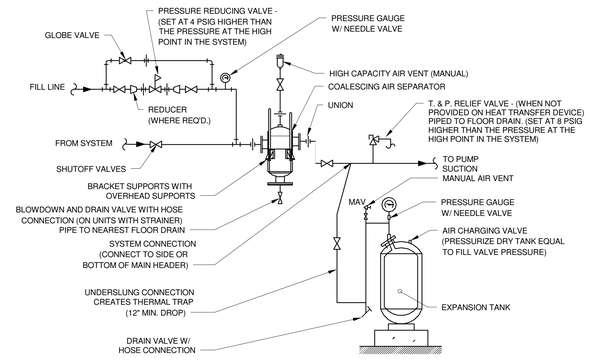


DESIGNER'S NOTE:

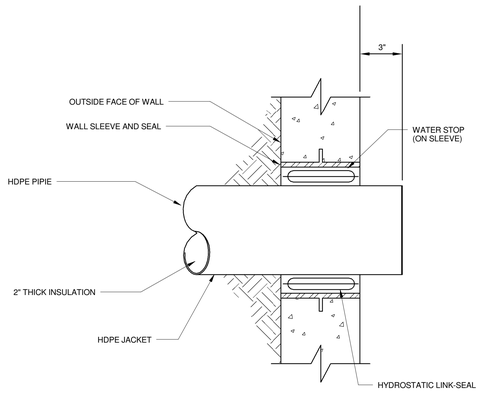
UNIT TYPE	A	B
DRAW THRU	2" PLUS X	X
BLOW THRU	1" MINIMUM	2X

WHERE X = STATIC PRESSURE IN PAN

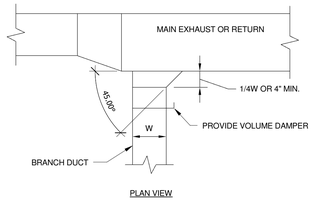
3 M 500 — AIR HANDLING UNIT CONDENSATE DRAIN AND TRAP DETAIL
NO SCALE



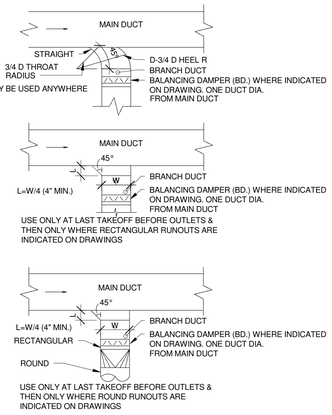
4 M 500 — DIRT/AIR SEPARATOR AND EXPANSION TANK DETAIL
NO SCALE



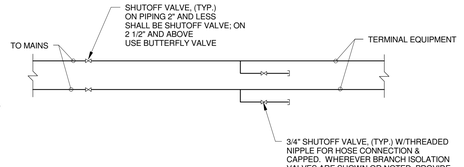
5 M 500 — BELOW GRADE HDPE PIPING SYSTEM WALL PENETRATION DETAIL
NO SCALE



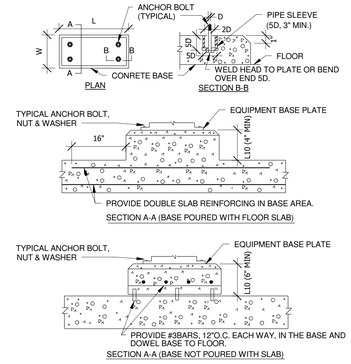
6 M 500 — BRANCH DUCT CONNECTION - EXHAUST OR RETURN DETAIL
NO SCALE



7 M 500 — BRANCH DUCT CONNECTION - SUPPLY DETAIL
NO SCALE

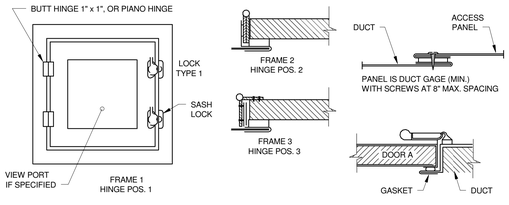


8 M 500 — BRANCH PIPING ISOLATION VALVE DETAIL
NO SCALE



NOTE:
1. THIS DETAIL APPLIES TO EQUIPMENT NOT SPECIFIED TO BE MOUNTED ON SPRING ISOLATED BASES.
2. L AND W DIMENSIONS SHALL BE 6 INCHES GREATER THAN THE EQUIPMENT BASE PLATE.

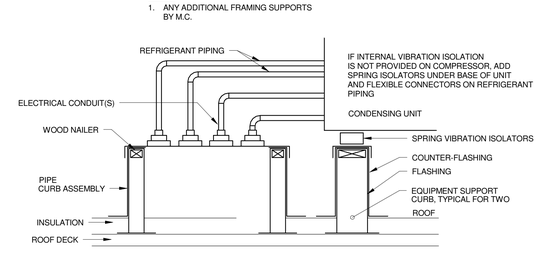
9 M 500 — CONCRETE EQUIPMENT PAD DETAIL
NO SCALE



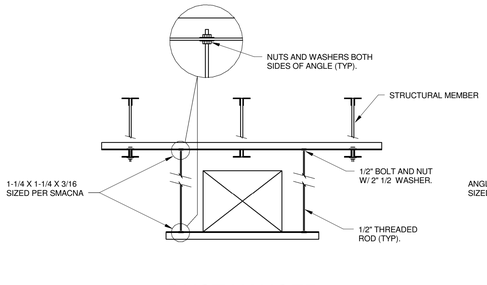
	DOOR SIZE	NO. HINGES	NO. LOCKS	METAL GAGE		
				FRAME	DOOR	BACK
2' W.G. STATIC AND LESS	12" x 12" 16" x 20" 24" x 24"	2 2 3	1-S 2-S 2-S	24 22 22	26 24 22	26 26 26
3' W.G. STATIC	12" x 12" 16" x 20" 24" x 24"	2 2 3	1-S 1-S,1-T,1-B 2-S,1-T,1-B	22 20 20	22 20 20	26 24 24
4' W.G. TO 10" W.G.	12" x 12" 16" x 20" 24" x 24"	2 3 3	1-S,1-T,1-B 2-S,1-T,1-B 2-S,2-T,2-B	20 18 18	20 18 18	26 24 24
S = SIDE OPPOSITE HINGES, T = TOP, B = BOTTOM						

NOTE:
1. COORDINATE DUCT ACCESS DOORS WITH EXTERNAL FIBERGLASS BLANKET DUCT INSULATION.

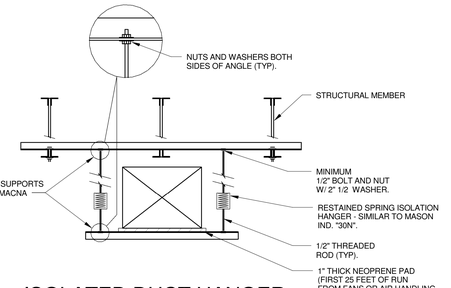
10 M 500 — DUCT ACCESS DOORS DETAIL
NO SCALE



11 M 500 — CONDENSING UNIT MOUNTING DETAIL DETAIL
NO SCALE

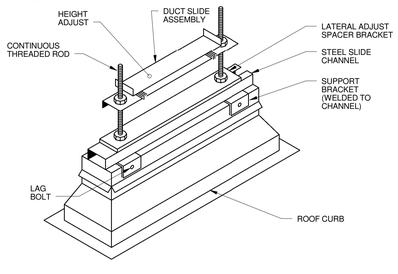


DUCT HANGER



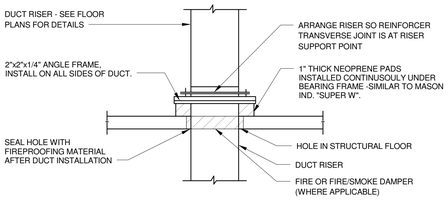
ISOLATED DUCT HANGER

12 M 500 — DUCT HANGER DETAILS DETAIL
NO SCALE



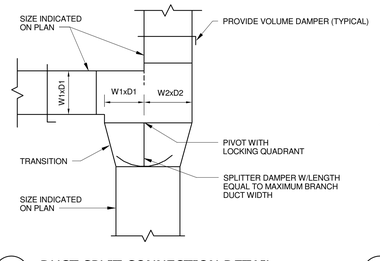
NOTES:
1. COORDINATE SLIDE ASSEMBLY WITH ROOFTOP DUCTWORK DRAWINGS 1/H-2.6
2. COORDINATE ROOF CURB INSTALLATION WITH ARCHITECURAL ROOF PLANS FOR FLASHING REQUIREMENTS.

13 M 500 — DUCT MOUNTING PEDESTAL DETAIL
NO SCALE

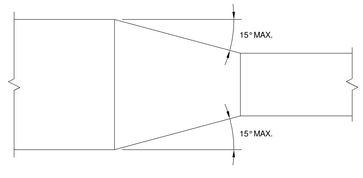


NOTE:
1. ALL DUCT WORK RISERS WHICH ARE RUN EXPOSED SHALL BE PROVIDED WITH A 4" HIGH CONCRETE CURB AROUND OPENING FOR DUCT.

14 M 500 — DUCT RISER SUPPORT DETAIL DETAIL
NO SCALE

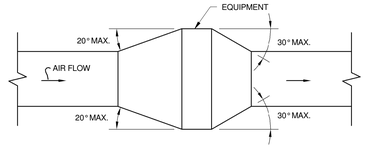


15 M 500 — DUCT SPLIT CONNECTION DETAIL
NO SCALE



PLAN OR SIDE VIEW

16 M 500 — DUCTWORK TRANSITION DETAIL
NO SCALE



PLAN OR SIDE VIEW

NOTE:
UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY.

17 M 500 — DUCTWORK TRANSITION - EQUIPMENT MOUNTED DETAIL
NO SCALE

7/26/2016 11:15:45 AM

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

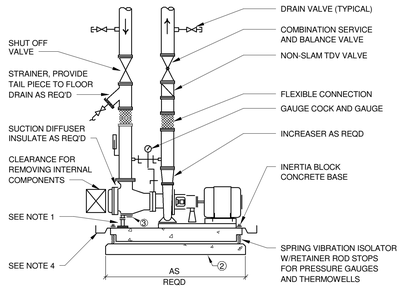
No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DETAILS - MECHANICAL

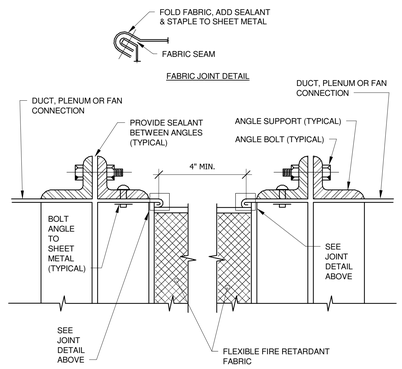
M 500



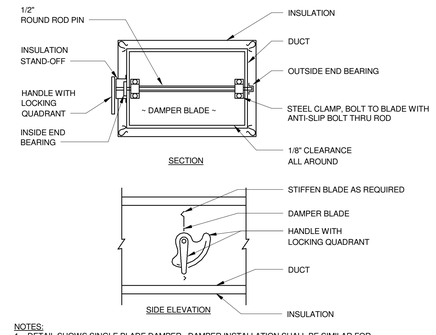
NOTES:

1. STANCHION SUPPORT ON SUCTION END AS REQD
2. HOUSEKEEPING PAD THICKNESS 4"; CHAMFER EDGES 1"
3. 3/4"Ø HOSE BIBB DRAIN W/CAP ≥
4. PROVIDE PUMP DRAIN PAN IF NOT FURNISHED BY PUMP MFG
5. GROUT PUMP BASE AS REQD

1 M 501 — END SUCTION BASE MOUNTED PUMP DETAIL1
12" = 1'-0"



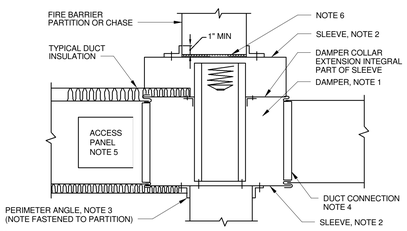
2 M 501 — EQUIPMENT FLEXIBLE CONNECTION
12" = 1'-0"



NOTES:

1. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSTALLATION SHALL BE SIMILAR FOR AND ROUND DAMPERS.
2. SINGLE BLADE DAMPER LIMITED TO 12" MAXIMUM DUCT DEPTH
3. SEE DETAIL 13/H-8.2 FOR MULT-BLADE VOLUME DAMPER.

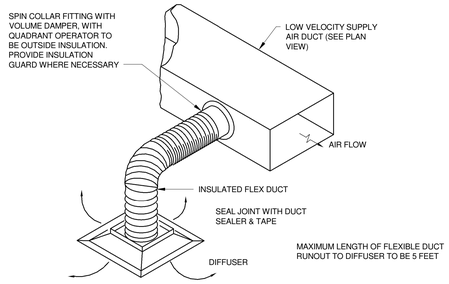
3 M 501 — MANUAL VOLUME DAMPER
12" = 1'-0"



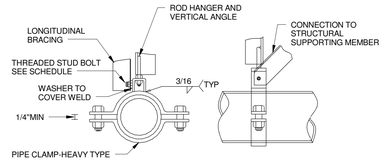
NOTES:

1. A VERTICAL DAMPER IS SHOWN. HORIZONTAL DAMPER INSTALLATION, IS SIMILAR. FOLLOW DAMPER MANUFACTURER'S INSTRUCTIONS, INCLUDING FASTENER OPTIONS AND GAGES FOR SLEEVE AND PERIMETER ANGLES. FIRE DAMPERS MUST BE INSTALLED IN THE PARTITION OR FLOOR AND NOT OUTSIDE THE PENETRATION.
2. GALVANIZED SLEEVE: SLEEVE TO BE A MINIMUM 14 GA. FASTEN SLEEVE TO DAMPER FRAME AND TO PERIMETER ANGLES.
3. PERIMETER ANGLES: GALVANIZED STEEL, NOT LESS THAN 1 1/2" x 1 1/2", 10 GAGE, TO PROVIDE 1" MINIMUM OVERLAP OF OPENING ON ALL 4 SIDES.
4. BREAKAWAY DUCT CONNECTION.
5. ACCESS PANELS: INSTALL AT A LOCATION TO PERMIT SERVICING THE FUSIBLE LINK OR LINKS. PROVIDE HINGED DOOR WITH CAM LOCK FASTENER AND NEOPRENE GASKET (6"X6" MINIMUM SIZE). REFER TO DETAIL 12/H-8.1 FOR SIZING REQUIREMENTS.
6. PROVIDE 1" CLEARANCE ON HEIGHT AND WIDTH. FILL OPEN SPACE WITH ROCK WOOL FIRESTOP FIBER.
7. ALL DUCT WORK RISERS WHICH ARE RUN EXPOSED, SHALL BE PROVIDED WITH 4 INCH HIGH CONCRETE CURB AROUND OPENING FOR DUCT.
8. FIRE DAMPERS SHALL BL UL555 RATED FOR 1 1/2 HOURS.

4 M 501 — FIRE DAMPER INSTALLATION
12" = 1'-0"



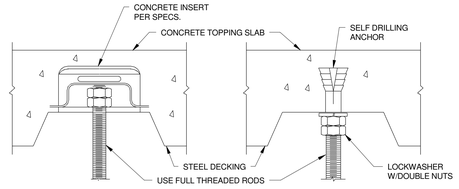
5 M 501 — FLEXIBLE DUCT CONNECTIONS DETAIL
12" = 1'-0"



NOTES:

1. IF PIPE REQUIRES INSULATION, THEN ALSO PROVIDE INSULATION AROUND ANCHOR.
2. WELD OR BOLT SUPPORTS TO OVERHEAD BEAMS USING 1/2" BOLTS AND/OR 3/16" WELDS.
3. ALL BOLTS 1/2 "

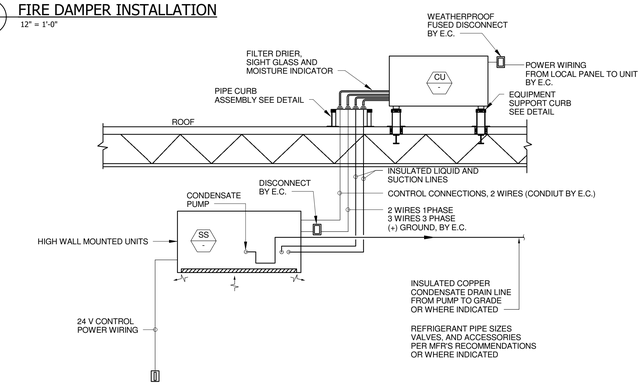
6 M 501 — PIPE ANCHOR
1/8" = 1'-0"



MAXIMUM LOAD PER MFR. RECOMMENDED RATING.

INSTALLED AFTER CONCRETE IS POURED. MAX LOAD 50% OF MFR. RECOMMENDED RATING.

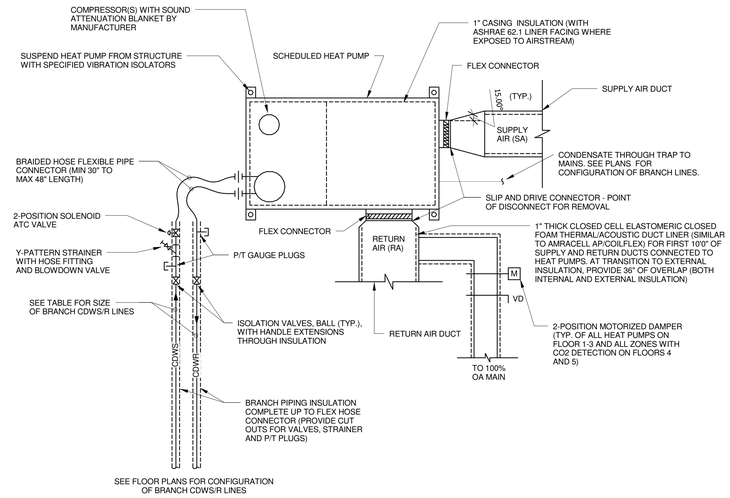
7 M 501 — PIPE AND SUSPENDED EQUIPMENT SUPPORT - COMPSITE METAL DECK
12" = 1'-0"



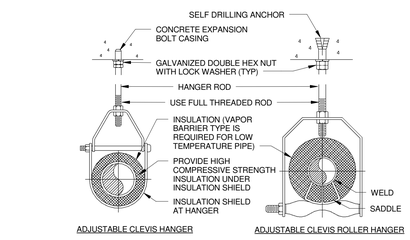
NOTE: WALL MOUNTED UNITS SIMILAR

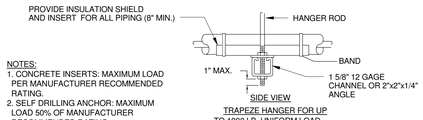
NOTE:
MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH DESIGN AND INSTALLATION OF EQUIPMENT WITH DIFFERENT ELECTRICAL CHARACTERISTICS THAN THE BASIS OF DESIGN.

8 M 501 — MINI-SPLIT SS AND CU ROOF INSTALLATION DETAIL
12" = 1'-0"



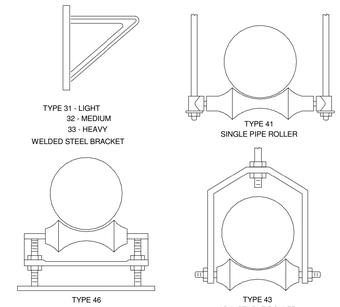
9 M 501 — HEAT PUMP DETAIL
12" = 1'-0"



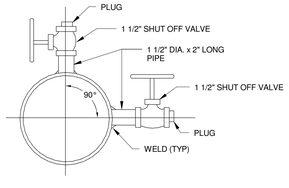


NOTES:
1. CONCRETE INSERTS: MAXIMUM LOAD PER MANUFACTURER RECOMMENDED RATING.
2. SELF DRILLING ANCHOR: MAXIMUM LOAD 50% OF MANUFACTURER RECOMMENDED RATING.

10 M 501 — PIPE HANGER
1/8" = 1'-0"



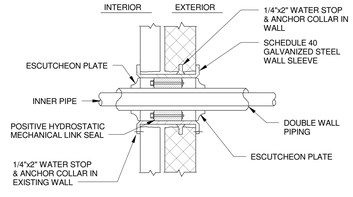
11 M 501 — PIPE BRACKETS AND ROLLERS
1/8" = 1'-0"



NOTES:

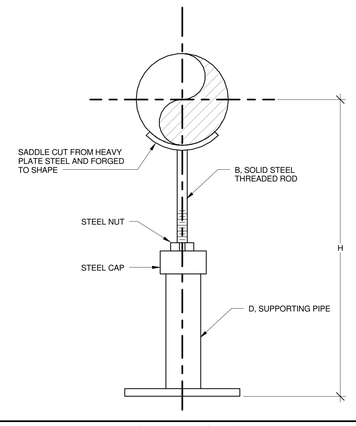
1. PROVIDE IN CONDENSER WATER MAIN.
2. LOCATE PITOT TUBE TAPS 20 PIPE DIAMETERS DOWNSTREAM AND 10 PIPE DIAMETERS UPSTREAM FROM THE NEAREST PIPE FITTING.

12 M 501 — PITOT TEST CONNECTIONS
1/8" = 1'-0"



NOTE:
ESCUTCHEON PLATE FINISHES TO BE COORDINATED AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION.

13 M 501 — OUTSIDE WALL PIPE PENETRATION
1/8" = 1'-0"



ADJUSTABLE PIPE SUPPORT
LENGTH OF THREADED SHANKS WILL ALLOW UP TO 6 INCHES FOR ADJUSTMENT

SIZE OF PIPE TO BE SUPPORTED - INCHES	DIMENSIONS OF MATERIALS USED					SIZE OF SUPPORTING PIPE	HEIGHT
		SADDLE	SHANK 'B' INCHES		FLANGE	D	D
	OD	INCHES	SIZE (min)	LENGTH	OD INCHES	INCHES	INCHES
3	3.96	3/8 X 2	3/4 ROD	8	7 1/2	2 STD	20
4	4.80	3/8 X 2	3/4 ROD	8	9	2 STD	20
6	6.90	3/8 X 2	3/4 ROD	8	11	2 STD	20
8	9.05	1/2 X 2	3/4 ROD	8	13 1/2	2 STD	20
10	11.10	1/2 X 2	3/4 ROD	8	16	2 STD	20

14 M 501 — PIPE SUPPORT DETAIL
12" = 1'-0"

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Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056
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I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

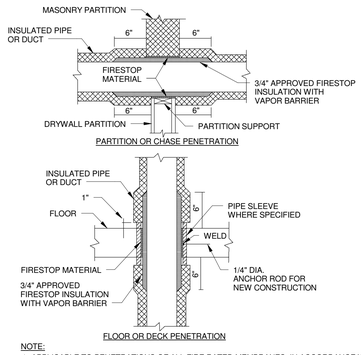
No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED
DRAWING NAME: DETAILS - MECHANICAL

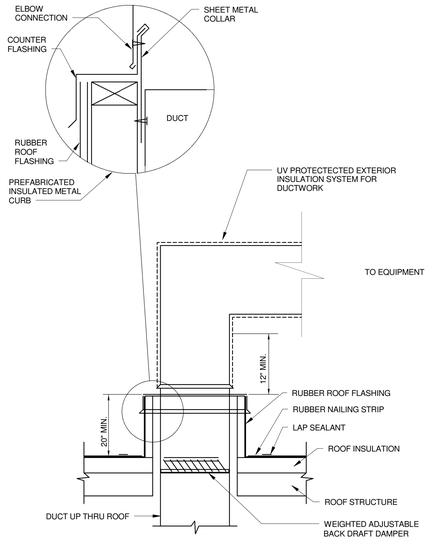
M 501

7/26/2016 11:15:54 AM

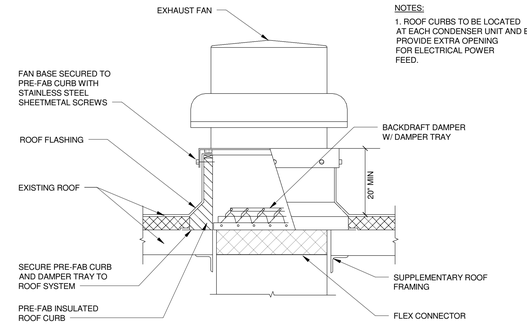


NOTE:
1. APPLICABLE TO PENETRATIONS OF ALL FIRE RATED MEMBRANES, IN ACCORDANCE WITH NFPA.

1 M 502 — PIPE/DUCT PENETRATION OF FIRE/SMOKE BARRIERS DETAIL
NO SCALE

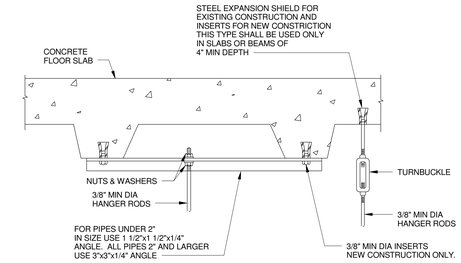


2 M 502 — ROOF DUCT CURB DETAIL DETAIL
NO SCALE



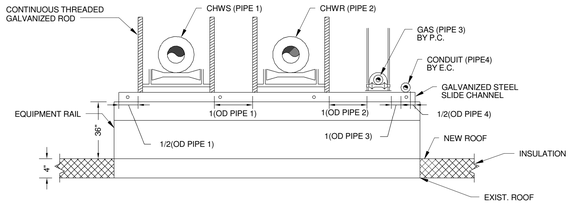
NOTES:
1. INSTALL FAN AND CURB PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

3 M 502 — ROOF MOUNTED EXHAUST FAN DETAIL DETAIL
NO SCALE

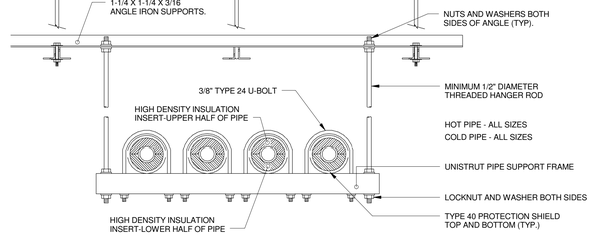


4 M 502 — SECURING HANGER RODS TO CONCRETE SLAB DETAIL
NO SCALE

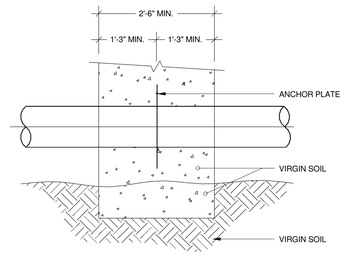
5 M 502 — ROOF PIPE CURB DETAIL - R1 DETAIL
NO SCALE



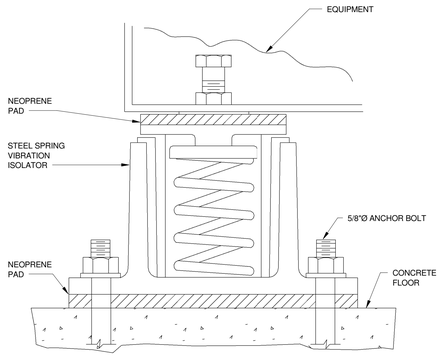
6 M 502 — ROOF PIPE SUPPORT DETAIL DETAIL
NO SCALE



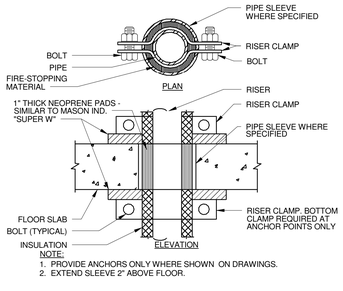
7 M 502 — TRAPEZE PIPE SUPPORT DETAIL
NO SCALE



8 M 502 — UNDERGROUND PIPING TYPICAL ANCHOR PLAN DETAIL
NO SCALE

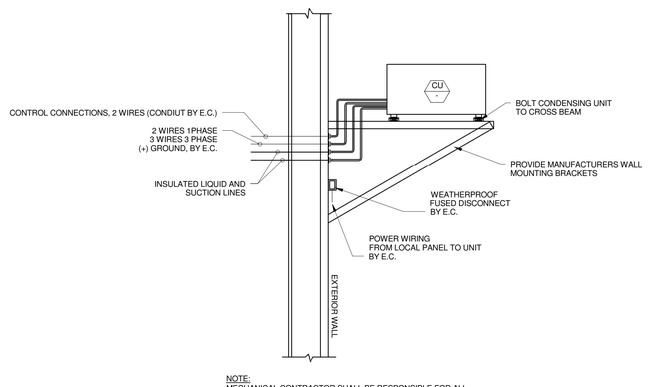


9 M 502 — SPRING VIBRATION ISOLATOR DETAIL
NO SCALE



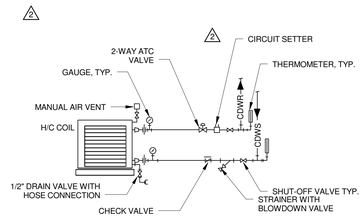
NOTE:
1. PROVIDE ANCHORS ONLY WHERE SHOWN ON DRAWINGS.
2. EXTEND SLEEVE 2" ABOVE FLOOR.

10 M 502 — SUPPORT/ANCHOR FOR PIPE RISER DETAIL
NO SCALE



NOTE:
MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH DESIGN AND INSTALLATION OF EQUIPMENT WITH DIFFERENT ELECTRICAL CHARACTERISTICS THAN THE BASIS OF DESIGN.

11 M 502 — MINI-SPLIT CU WALL MOUNTING DETAIL DETAIL
NO SCALE



12 M 502 — COIL CONNECTION DETAIL DETAIL
NO SCALE

1

7/26/2016 11:16:03 AM

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

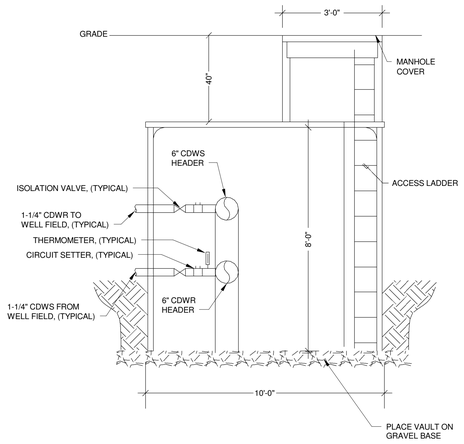
No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2
2	06/10/16	ADDENDUM #6

BID ISSUE

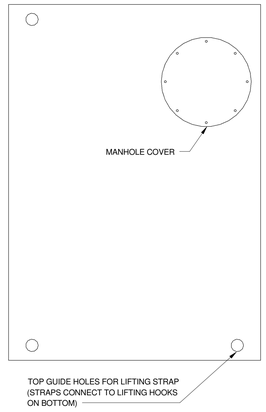
PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DETAILS - MECHANICAL

M 502



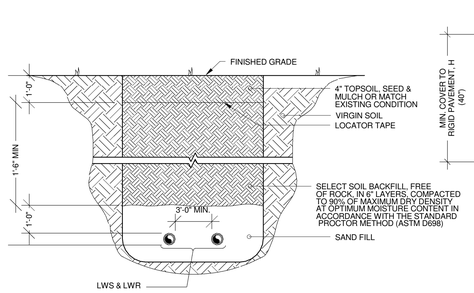
END VIEW DIMENSIONED (NO SCALE)

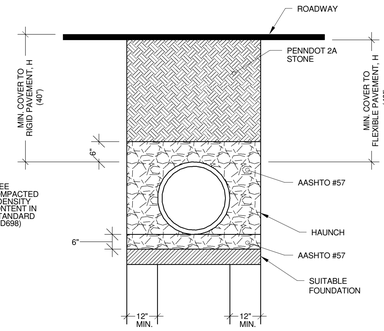


TOP VIEW (NO SCALE)

NOTES:
1. REFER TO SPEC SECTION.
2. MINIMUM WALL THICKNESS OF VAULT SHALL BE 8".

1 / M 503 PRECAST CONCRETE GEOTHERMAL MANIFOLD VAULT DETAIL
12" = 1'-0"





	MINIMUM COVER
	SURFACE LIVE LOADING CONDITION
PIPE DIAM.	H-25
6-16"	40"

NOTES:

1. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
2. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
3. BEDDING: UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 6" FOR 6"-24".
4. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
5. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 36" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION.

   COMPACT ALL BACKFILL UNDER PAVEMENT OR GRAVEL TO 95% OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH THE STANDARD PROCTOR METHOD (ASTM D698).

   COMPACT ALL BACKFILL UNDER LAWNS AND LANDSCAPING TO 90% OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH THE STANDARD PROCTOR METHOD (ASTM D698).

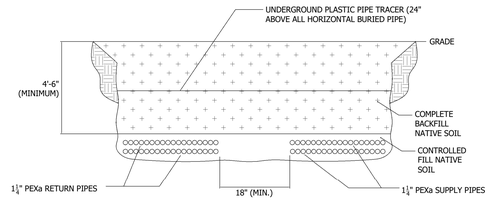
   ALL CONSTRUCTION SHALL MEET PENNDOT PUB. 408.

2 / M 503 UNDERGROUND PIPING TYPICAL EXCAVATION DETAIL
12" = 1'-0"

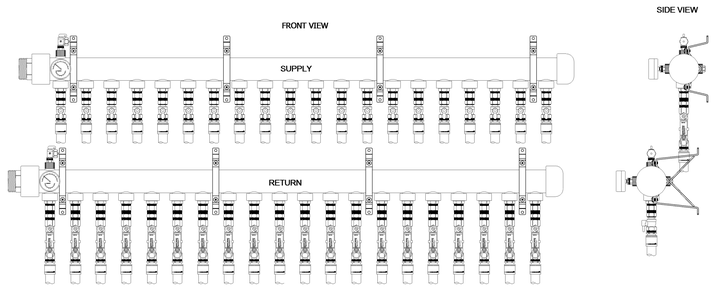
1

RAUGEO INSTALLATION NOTES

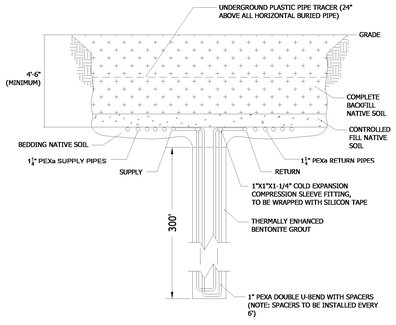
1. IF EVERLOC FITTINGS AND SLEEVES WILL BE INSTALLED AND BURIED, THEY MUST BE COMPLETELY WRAPPED IN WATERPROOF, ADHESIVE-FREE TAPE OR RAUCROSS HEAT SHRINK TUBING TO HELP REDUCE CORROSION CAUSED BY THE SURROUNDING ENVIRONMENT- CHECK LOCAL CODES FOR COMPLIANCE.
2. PRESSURE TESTING; DO NOT EXCEED 150 PSI (1030 KPA) FOR THE RAUPEX PIPE. VERIFY MAXIMUM PRESSURE REQUIREMENTS FOR THE OTHER SYSTEM COMPONENTS PRIOR TO PERFORMING THE TEST. PERFORM A PRELIMINARY PRESSURE TEST PRESSURIZING THE SYSTEM TO THE GREATER OF 1.5 TIMES THE MAXIMUM OPERATING PRESSURE, OR 100 PSI (690 KPA), FOR 30 MINUTES. AS THE PIPING EXPANDS, RESTORE PRESSURE, FIRST AT 10 MINUTES INTO THE TEST AND AGAIN AT 20 MINUTES. AT THE END OF THE 30 MINUTE PRELIMINARY TEST, PRESSURE MUST NOT FALL BY MORE THAN 5 PSI FROM THE MAXIMUM, AND THERE SHALL BE NO LEAKAGE. AFTER PERFORMING THE PRELIMINARY TEST, PERFORM THE MAIN PRESSURE TEST IMMEDIATELY. THE MAIN PRESSURE TEST SHALL LAST AT LEAST 2 HOURS, THE TEST PRESSURE SHOULD BE RESTORED AND MUST NOT FALL MORE THAN 3PS AFTER 2 HOURS. NO LEAKAGE SHOULD BE DETECTED
3. MANIFOLDS SHOULD BE POSITIONED AT THE HIGHEST POINT OF THE GROUND LOOP HEAT EXCHANGE SYSTEM. THE PIPE SHOULD BE LAID AT A SLIGHT GRADIENT TO THE MANIFOLD SO THAT PURGING AIR FROM THE SYSTEM WILL BE EFFECTIVE. REHAU PRO-BALANCE XP AND HLV MANIFOLDS CAN BE INSTALLED HORIZONTALLY OR VERTICALLY.
4. SINCE CONDENSATION WILL OFTEN FORM ON THE ABOVE-GROUND PORTION OF THE GROUND LOOP HEAT EXCHANGER, REHAU RECOMMENDS INSULATING MANIFOLDS. IF INSULATING IS NOT POSSIBLE, REHAU RECOMMENDS THAT THE SYSTEM MANIFOLD BE INSTALLED OUTSIDE OF THE BUILDING IN A PROTECTED ENCLOSURE. UNINSULATED MANIFOLDS INSIDE THE BUILDING SHOULD ALLOW FOR CONDENSATE COLLECTION.
5. WHEN MANIFOLDS ARE INSTALLED INSIDE THE BUILDING, IT MUST BE ENSURED THAT THE RAUPEX PIPES ARE NOT IN CONTACT WITH THE WALL OF THE STRUCTURE. REHAU RECOMMENDS A 1 ½" (4 CM) THICK RIGID FOAMED POLYURETHANE SLEEVE TO PREVENT STRUCTURE WALL FROM BECOMING DAMP DUE TO CONDENSATION.
6. PIPES SHOULD BE BENT TO A 90° ANGLE BEFORE THE CONNECTION TO THE MANIFOLD.
7. BOREHOLE DEPTHS AND/OR HORIZONTAL TRENCH LENGTHS SHOULD BE WITHIN 5% OF OTHERS TO MINIMIZING THE BALANCING REQUIRED, IF A BALANCING MANIFOLD IS NOT BEING USED.
8. BEFORE INSERTING U-BEND INTO THE BOREHOLE, INSPECT THE COILS FOR DAMAGE.
9. DOUBLE U-BENDS- BEFORE INSERTING INTO BOREHOLE, THE TWO SINGLE U-BENDS SHOULD BE BOLTED TOGETHER WITH THE TWO SOCKET HEAD CAP SCREWS, PROVIDED.
10. INSERTION OF THE PEXA U-BEND INTO A VERTICAL BOREHOLE IS MADE EASIER IF IT IS FIRST FILLED WITH WATER, AS THE WATER REDUCES THE U-BEND'S BUOYANCY. IF, DURING INSTALLATION OF THE UBEND, THERE IS A FROST HAZARD, UBENDS SHOULD BE DRAINED TO 6 FT (1.8 M) BELOW GRADE TO PREVENT THE WATER FROM FREEZING. TO FURTHER AID IN THE INSERTION OF THE U-BEND, A WEIGHT CAN BE ADDED TO ITS END TO HELP PULL THE U-BEND TO THE BOTTOM OF THE BOREHOLE.
11. U-BEND SHOULD BE INSERTED INTO THE BOREHOLE WITH THE TREMIE PIPE. ONCE THE U-BEND REACHES THE BOTTOM OF THE BOREHOLE, BEGIN TO GROUT THE BOREHOLE WITH THE APPROPRIATE GROUT MIXTURE BASD ON SYSTEM DESIGN AND/OR PROJECT SPECIFICATION. IT IS IMPORTANT TO GROUT FROM THE BOTTOM OF THE BOREHOLE TO THE TOP, TO ENSURE THAT BRIDGING DOES NOT OCCUR.
12. IF PIPE SPACERS ARE BEING USED, REHAU RECOMMENDS INSTALLING PIPE SPACERS EVERY 4-6 FT FOR THE ENTIRE LENGTH OF THE BOREHOLE, AS U-BEND IS BEING INSERTED INTO THE BOREHOLE.
13. IF CONNECTION OF THE U-BEND TO THE MANIFOLD OR REVERSE-RETURN HEADER IS GOING TO BE DELAYED, THE U-BENDS SHOULD BE FLUSHED WITH WATER TO REMOVE ANY DEBRIS AND THEIR EXPOSED PIPE ENDS TAPED CLOSED WITH END CAPS.
14. TYPICALLY, HORIZONTAL GEOTHERMAL PIPING SHOULD BE INSTALLED AT A DEPTH OF 4-6 FT (1.2-1.8 M) BELOW GRADE AND AT AN INTERVAL OF 18-30 IN (46-76 CM).
15. BACKFILLING- IF THE PIPE TEMPERATURE IS SUBSTANTIALLY HIGHER (DUE TO SUNLIGHT) THAN THE TRENCH TEMPERATURE, THE PIPE MUST BE LIGHTLY COVERED TO HELP RELIEVE INTERNAL PIPE STRESS BEFORE THE PIPE TRENCH IS FINALLY BACKFILLED. THE NATIVE EXCAVATED MATERIAL CAN BE REUSED FOR THE PIPING ZONE AND TO BACKFILL THE REMAINDER OF THE PIPE TRENCH WITH RAUPEX PIPE IF;
    A. THE EXCAVATED MATERIAL CAN BE WELL COMPACTED
    B. THE MAXIMUM GRAIN SIZE DOES NOT EXCEED 2.5 IN (63 MM)
    C. NO STONES WHICH COULD PINCH THE PIPE ARE LYING ON THE PIPE.
16. RAUPEX PIPE SHOULD NOT BE LAID IN SOIL WITH LARGE AIR GAPS (SUCH AS GRAVEL) SINCE AIR CAVITIES REDUCE THE HEAT TRANSFER BETWEEN THE PIPE AND THE SOIL. IF THE PIPE IS TO BE BURIED IN THE GRAVEL, A FINE SOIL SHOULD BE USED AROUND THE PIPES TO ENSURE EFFECTIVE HEAT TRANSFER.



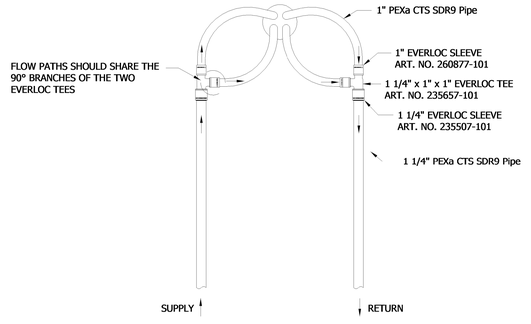
3 / M 503 SUPPLY-RETURN TRENCH DETAIL DETAIL
NO SCALE



4 / M 503 PRO-BALANCE XP MANIFOLD DETAIL DETAIL
NO SCALE



5 / M 503 GEOTHERMAL BOREHOLE AND TRENCH DETAIL DETAIL
NO SCALE



6 / M 503 SUPPLY-RETURN TEE AT BOREHOLE DETAIL DETAIL
NO SCALE

7/26/2016 11:16:13 AM

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No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DETAILS - MECHANICAL

M 503

(DOAS) (RTU) DEDICATED OUTDOOR AIR UNIT / ROOFTOP UNIT (EWT: 73 F COOLING, 46 F HEATING) (6% PROPYLENE GLYCOL)

DESIGN	LOCATION	SERVING	FANS								COOLING MODE											HGR		HEATING MODE							HEAT PUMP				COIL					
			DESIGN	TYPE	TSP (IN WG)	ESP (IN WG)	CFM	FAN RPM	BHP	HP	EAT (°F)		LAT (°F)		NET TOTAL MBH	NET SENS MBH	GPM	WPD (FT)	EWT (°F)	LWT (°F)	EER	LAT (°F)		EAT (°F)	LAT (°F)	TOTAL MBH	GPM	WPD (FT)	EWT (°F)	LWT (°F)	COP	TONS	REFRIG	STAGES	HOT GAS REHEAT	MAX FPI	MIN ROWS	FACE AREA (SQ. FT)	MAX FACE VEL (FPM)	NO. OF COIL(S)	MAX APD (IN WG)
											DB	WB	DB	WB								DB	WB	DB	DB															
DOAS-1	BUILDING A MECH 250	BUILDING A	SUPPLY	BACK INCL	2.85	0.80	4545	1700	4.18	(2) 4	83.7	70.3	55.5	55.5	202.1	127.4	45	4.1	73.0	84.4	20.5	70.5	61.2	39.9	74.1	187.0	45	3.5	46.0	39.5	5.9	12	410A	3	YES	12	4	10	454	1	0.49
			EXHAUST	BACK INCL	2.20	0.10	4545	1536	3.25	(2) 4																														
DOAS-2	BUILDING C ROOF	BUILDING B ADDITION	SUPPLY	BACK INCL	2.77	1.00	11230	2127	7.82	(2) 5	81.8	69.1	54.0	54.0	495.7	312.5	100	2.4	73.0	91.7	22.1	64.0	58.0	46.1	78.1	417.9	100	2.7	46.0	36.4	5.2	40	410A	3	YES	12	4	27.6	400	1	0.40
			EXHAUST	BACK INCL	2.25	1.15	11230	2079	7.16	(2) 5																														
DOAS-3	BUILDING C ROOF	BUILDING B EXISTING	SUPPLY	BACK INCL	3.03	1.35	10725	2133	7.90	(2) 5	81.7	69.0	53.4	53.4	491.1	306.6	100	2.4	73.0	91.6	21.8	63.7	57.6	46.7	79.9	417.1	100	2.7	46.0	36.4	5.2	40	410A	3	YES	12	4	27.6	386	1	0.38
			EXHAUST	BACK INCL	2.42	1.35	10725	2069	7.12	(2) 5																														
DOAS-4	BUILDING C ROOF	BUILDING C	SUPPLY	BACK INCL	3.18	1.20	11935	2285	9.68	(2) 7.5	82.2	69.3	55.3	55.3	499.7	322.3	100	2.4	73.0	92.0	21.4	64.8	59.0	44.7	74.5	424.6	100	2.7	46.0	36.2	5.5	40	410A	3	YES	12	4	27.6	432	1	0.45
			EXHAUST	BACK INCL	2.34	1.15	11935	2190	8.30	(2) 5																														
RTU-1	GYM ROOF	GYMNASIUM/ LOCKERS	SUPPLY	BACK INCL	2.44	0.80	12830	2263	9.12	(2) 7.5	76.0	64.1	54.2	53.6	373.9	282.1	100	16.7	73.0	82.3	20.1	64.0	57.6	66.5	89.3	340.8	100	13.2	46.0	41.0	5.1	40	410A	3	YES	12	4	22.1	580	1	0.68
			EXHAUST	BACK INCL	1.09	0.60	3800	1143	1.11	(1) 3																														

NOTES:
1. MERV 13 FILTERS ON OAI. MERV 8 FILTERS ON EA.
2. PROVIDE VFDS ON FANS.
3. SINGLE POINT POWER CONNECTION.
4. PROVIDE AIRFLOW MONITORING STATIONS ON SUPPLY AND EXHAUST FANS.
5. COMPRESSORS: STAGE-1 DIGITAL, STAGE-2 STANDARD.
6. PROVIDE WITH DUCT MOUNTED SMOKE DETECTORS IN SUPPLY AND RETURN AIR MAINS PRIOR TO ANY BRACH TAKE-OFFS. DETECTION OF SMOKE SHALL SHUTDOWN UNIT. PROVIDE WITH REMOTE TEST STATION IN OCCUPIED SPACE.
7. PROVIDE SPRING ISOLATED 24" PRE-MANUFACTURED ROOF CURB.
8. PROVIDE 24" PRE-MANUFACTURED ROOF CURB.

(DOAS) (RTU) DEDICATED OUTDOOR AIR UNIT / ROOFTOP UNIT (CONTINUED) (EWT: 73 F COOLING, 46 F HEATING) (6% PROPYLENE GLYCOL)

DESIGN	HEAT WHEEL - SUMMER										HEAT WHEEL - WINTER										EER	ELECTRICAL DATA				GENERAL				BASIS OF DESIGN	NOTES
	OA EAT (°F)		VA LAT (°F)		RA EAT (°F)		EA LAT (°F)		TOTAL MBH	SENS MBH	MAX APD (IN WG)	EFF %	OA EAT (°F)		VA LAT (°F)		RA EAT (°F)		EA LAT (°F)		TOTAL MBH	SENS MBH	MAX APD (IN WG)	EFF %		FLA	MCA	MOP	V/PH/HZ	WEIGHT (LBS)	LENGTH (IN)	WIDTH (IN)	HEIGHT (IN)		
	DB	WB	DB	WB	DB	WB	DB	WB					DB	WB	DB	WB	DB	WB	DB	WB														
DOAS-1	95.0	78.0	83.7	70.4	75.0	63.0	85.8	71.4	137.4	57.8	1.00	56 (SENS) 53 (LAT)	0.0	-0.1	39.9	37.4	70.0	58.0	32.9	33.3	250.5	203.3	1.00	55 (SENS) 53 (LAT)		46.9	50.5	60	460/3/60	4027	208	74	73	TRANE OAGF180D4	1,2,3,4,5,6
DOAS-2	95.0	78.0	81.8	69.1	75.0	63.0	87.5	72.6	389.0	163.1	0.74	65 (SENS) 61 (LAT)	0.0	-0.1	46.1	42.0	70.0	58.0	26.1	28.0	714.4	571.1	0.74	65 (SENS) 61 (LAT)		90.4	95.7	110	460/3/60	8389	254	93	93	TRANE OANE480A4	1,2,3,4,5,6,7
DOAS-3	95.0	78.0	81.7	69.0	75.0	63.0	87.7	72.7	380.2	160.0	0.72	66 (SENS) 62 (LAT)	0.0	-0.1	46.7	42.4	70.0	58.0	25.6	27.5	698.6	559.8	0.72	66 (SENS) 62 (LAT)		90.4	95.7	110	460/3/60	8389	254	93	93	TRANE OANE480A4	1,2,3,4,5,6,7
DOAS-4	95.0	78.0	82.3	69.4	75.0	63.0	87.2	72.4	406.8	170.0	0.80	63 (SENS) 59 (LAT)	0.0	-0.1	44.7	41.0	70.0	58.0	27.4	29.0	746.2	595.5	0.80	63 (SENS) 59 (LAT)		96.6	101.9	110	460/3/60	8455	254	93	93	TRANE OANE480A4	1,2,3,4,5,6,7
RTU-1	95.0	78.0	78.3	66.5	75.0	63.0	90.0	74.2	168.1	74.6	0.27	82 (SENS) 76 (LAT)	0.0	-0.1	58.2	50.1	70.0	58.0	16.7	19.8	309.8	260.7	0.27	83 (SENS) 76 (LAT)		73.9	80.3	100	460/3/60	7566	254	93	93	TRANE OANE480A4	1,2,3,4,5,6,8

(MOD) MOTOR OPERATED DAMPER

TAG	OPERATOR	SIZE	NOTES
MOD-1	DOAS-1	22 X 20	2
MOD-2	DOAS-1	30 X 24	2
MOD-3	DOAS-1	36 X 20	2
MOD-4	EF-2	20 X 12	1
MOD-5	EF-2	24 X 12	1
MOD-6	EF-6	28 X 14	1
MOD-7	EF-6	20 X 18	1
MOD-8	EF-5	12ø	1
MOD-9	MAU-1	20ø	3
MOD-10	EF-1	20ø	3
MOD-11	RTU-1	30 X 40	2
MOD-12	RTU-1	36ø	2
MOD-13	DOAS-2	36 X 30	2
MOD-14	DOAS-2	36 X 30	2
MOD-15	DOAS-3	36 X 30	2
MOD-16	DOAS-3	36 X 30	2
MOD-17	DOAS-4	48 X 24	2
MOD-18	DOAS-4	48 X 24	2
MOD-19	EF-4	12 X 14	1

NOTES:
1. INTERLOCK WITH ASSOCIATED EF OPERATION.
2. INTERLOCK WITH ASSOCIATED DOAS/RTU OPERATION.
3. INTERLOCK WITH ASSOCIATED MAU/EF OPERATION.

(MAU) MAKE UP AIR UNIT

TAG	LOCATION	AREA SERVED	MINIMUM O/A CFM	CONSTANT VOLUME OR VAV	SUPPLY FAN					HEATING COIL DATA							MOTOR DATA				UNIT DIMENSIONS (L"xW"xH")	UNIT WEIGHT (LBS)	BASIS OF DESIGN
					TOTAL SUPPLY CFM	EXT SP (INCH H2O)	FAN TYPE	QTY	FAN RPM	DRIVE TYPE	HEAT CFM	EAT DB (F)	LAT DB (F)	STAGES	NAT GAS. INPUT MBH	NAT GAS. OUTPUT MBH	EFF %	NAT GAS PRESS PSI	HP	RPM	VOLT/PH	MCA (AMPS)			
MAU-1	GYM ROOF	KITCHEN	3600	VAV	3600	0.50	FWD CURVE	1	614	BELT	3600	12.9	85.0	4:1	350	280	80.0	0.50	1-1/2	1725	208/3	19.6	155" x 40" x 45"	1377	GREENHECK IGX-115-H22

NOTES:
1. E.S.P INCLUDES AN ALLOWANCE FOR DIRTY FILTERS (0.15" WG - PREFILTER)
2. DAMPERS SHALL BE PROVIDED BY THE UNIT MANUFACTURER. DAMPER ACTUATORS SHALL BE FACTORY INSTALLED.
3. SCHEDULED START & STOP BY BUILDING AUTOMATION SYSTEM.
4. PROVIDE FACTORY INSTALLED SPRING VIBRATION ISOLATION & DISCONNECT.
5. PROVIDE UNIT WITH 2" 30% EFFIECEINT PER FILTER. SIDE UNLESS HOUSING AND 400 FPM MAXIMUM FACE VELOCITY.
6. PROVIDE UNIT WITH COMBINATION CURB FOR MOUNTING OF MAU-1 AND EF-1.
7. PROVIDE WITH REMOTE MOUNTED CONTROL PANEL FOR VARIABLE VOLUME CONTROL OF MAU-1 AND EF-1 IN RELATION TO EXHAUST TEMPERATURE. SEE CONTROL PANEL FOR MORE INFORMATION.

(SS/CU) DUCTLESS SPLIT SYSTEMS

TAG	SYSTEM	SS LOCATION	NOMINAL TONS	TOTAL CLG (BTU/HR)	LOW SS FAN CFM	SS WT (LBS)	SS ELECT. DATA				REFRIG.	CU ELECT. DATA				CU GENERAL		EFFICIENCY SEER	BASIS OF DESIGN	NOTES
							FAN FLA	MOCP	VOLT	PH	TYPE	MCA	MOCP	VOLT	PH	CU LOCATION	CU WT (LBS)		INDOOR UNIT / OUTDOOR UNIT	
SS-1/CU-1	CEILING MTD COOLING ONLY	IDF 049A	1	13,300	480	220	1.4	15	208	1	R407C	9.1	15	208	1	ROOF	200	-	LIEBERT MINI-MATE2 MMD12E/PFH014A	1,2,3,4,5,6
SS-2/CU-2	CEILING MTD COOLING ONLY	MDF 019B	3	31,800	1,000	225	2.8	15	208	3	R407C	13.4	35	208	3	ROOF	241	-	LIEBERT MINI-MATE2 MMD36E/PFH037A	1,2,3,4,5,6
SS-3/CU-3	CEILING MTD COOLING ONLY	IDF 114	1	13,300	480	220	1.4	15	208	1	R407C	9.1	15	208	1	ROOF	200	-	LIEBERT MINI-MATE2 MMD12E/PFH014A	1,2,3,4,5,6
SS-4/CU-4	CEILING MTD COOLING ONLY	IDF 147	1	13,300	480	220	1.4	15	208	1	R407C	9.1	15	208	1	ROOF	200	-	LIEBERT MINI-MATE2 MMD12E/PFH014A	1,2,3,4,5,6
SS-5/CU-5	CEILING MTD COOLING ONLY	IDF 219	1	13,300	480	220	1.4	15	208	1	R407C	9.1	15	208	1	ROOF	200	-	LIEBERT MINI-MATE2 MMD12E/PFH014A	1,2,3,4,5,6
SS-6/CU-6	CEILING MTD COOLING ONLY	IDF 320	1	13,300	480	220	1.4	15	208	1	R407C	9.1	15	208	1	ROOF	200	-	LIEBERT MINI-MATE2 MMD12E/PFH014A	1,2,3,4,5,6
SS-7/CU-7	CEILING MTD COOLING ONLY	EMR 022A	1	13,300	480	220	1.4	15	208	1	R407C	9.1	15	208	1	ROOF	200	-	LIEBERT MINI-MATE2 MMD12E/PFH014A	1,2,3,4,5,6
SS-8/CU-8	CEILING MTD COOLING ONLY	IDF 102L	1	13,300	480	220	1.4	15	208	1	R407C	9.1	15	208	1	ROOF	200	-	LIEBERT MINI-MATE2 MMD12E/PFH014A	1,2,3,4,5,6

NOTES:
1. PROVIDE WALL MOUNTED WIRED CONTROLLER, CONDENSATE PUMP (& ASSOCIATED CONTROLS), WIND BAFFLE, WALL MOUNTING BRACKETS.
2. DISCONNECTS FOR SS (INDOOR UNITS) AND CU (OUTDOOR UNITS) ARE FURNISHED & INSTALLED BY E.C.
3. PROVIDE (2) 18" HIGH EQUIPMENT SUPPORT RAILS FOR EACH CU ON ROOF - PROVIDE VIBRATION ISOLATION AT EACH CU CONNECTION TO RAIL x 4.
4. PROVIDE & INSTALL REFRIGERANT PIPING PER MANUFACTURER'S INSTALLATION INSTUCTIONS INCLUDING ALL DEVICES REQUIRED FOR A COMPLETE OPERATING SYSTEM.
5. PROVIDE & INSTALL A WALL MOUNTED WIRED THERMOSTAT FOR EACH SS/CU UNITS.
6. PROVIDE LIFT PUMP WITH SAFETY SWITCH TO SHUT OFF UNIT IN EVENT OF CONDENSATE BUILD UP. ALARM TO BMS.

(EF) FAN SCHEDULE

TAG	LOCATION	SERVES	AIR CAPACITY (CFM)	TYPE	TSP. (IN. WG)	FAN RPM	CONTROL	MOTOR			BASIS OF DESIGN	NOTES
								HP	VOLT	PH		
EF-1	GYM ROOF	KITCHEN HOOD	3800	CENTRIFUGAL UPBLAST - ROOF	1	1279	SWITCH	1-1/2	208	3	GREENHECK CUBE-180-15	1
EF-2	MECH 019	MECHANICAL ROOM/ELEC	1400	INLINE	0.75	1614	ATC	1/2	115	1	GREENHECK SQ-120-VG	2
EF-3	OUTD STOR 148C	INDOOR/OUTDOOR STORAGE	100	INLINE	0.5	1278	ATC	1/4	115	1	GREENHECK SQ-97-VG	
EF-4	ROOF AREA C	KILN	1000	CENTRIFUGAL - ROOF	0.75	1725	SWITCH	1/4	115	1	GREENHECK G-103-VG	
EF-5	ROOF AREA B	FUME HOOD	700	CENTRIFUGAL UPBLAST - ROOF	0.75	1534	SWITCH	1/4	115	1	GREENHECK CUBE-099	
EF-6	MAIN ELEC 026	MAIN ELEC 026/ELEC 025	2600	INLINE	0.5	1546	ATC	1	208	1	GREENHECK SQ-140-VG	2

NOTES:
1. PROVIDE WITH REMOTE MOUNTED CONTROL PANEL FOR VARIABLE VOLUME CONTROL OF MAU-1 AND EF-1 IN RELATION TO EXHAUST TEMPERATURE. SEE CONTROL PANEL FOR MORE INFORMATION.
2. PROVIDE FAN WITH GREENHECK VARI-GREEN CONTROL OR APPROVED EQUAL. CONTROL SHALL REGULATE FAN SPEED BASED ON SPACE TEMPERATURE.

(P) PUMP SCHEDULE

TAG	SYSTEM	TYPE	DESIGN CAPACITY (GPM)	DISCHARGE HEAD (FT)	MAX NPSH REQUIRED (FT)	MIN. EFF. (%)	SIZE DATA			PUMP DESIGN		MOTOR DATA						BASIS OF DESIGN	NOTES
							SUCTION (IN)	DISCH. (IN)	IMPELLER (IN)	MIN. WORKING PRESSURE (PSI)	MIN. WORKING TEMPERATURE (F)	HP	RPM	MOTOR CLASS	MIN. MOTOR EFFICIENCY (%)	VOLT	PH		
P-1	CONDENSER WATER (GROUND LOOP)	CLOSE-COUPLED END SUCTION	250	79	10	76	3	2.5	8.8	175	250	10	1760	NEMA PREMIUM	93	460	3	TACO CI 2510C	1,2,3,4,5,6,7
P-2	CONDENSER WATER (GROUND LOOP)	CLOSE-COUPLED END SUCTION	250	79	10	76	3	2.5	8.8	175	250	10	1760	NEMA PREMIUM	93	460	3	TACO CI 2510C	1,2,3,4,5,6,7
P-3	CONDENSER WATER (GROUND LOOP)	CLOSE-COUPLED END SUCTION	250	79	10	76	3	2.5	8.8	175	250	10	1760	NEMA PREMIUM	93	460	3	TACO CI 2510C	1,2,3,4,5,6,7

NOTES:
1. PUMPS SHALL BE FURNISHED WITH VARIABLE FREQUENCY DRIVES (TO INCLUDE INTEGRAL DISCONNECT AND BYPASS SWITCH.
2. PUMP CASINGS SHALL INCLUDE 1/4" GAUGE PORTS ON SUCTION AND DISCHARGE.
3. PROVIDE FULL BACNET OR LONMARK INTERFACE OF VFD TO BUILDING AUTOMATION SYSTEM.
4. PROVIDE ISOLATION VALVE AND TRIPLE DUTY VALVE ON SUCTION SIDE OF EACH PUMP.
5. PROVIDE SEPARATE NON-SLAM CHECK VALVE AND ISOLATION VALVE ON DISCHARGE SIDE OF EACH PUMP.
6. PROVIDE PUMP CONTROL PANEL TO INTEGRATE PUMPS IN PARALLEL AND PROVIDE LEAD/LEAD/STANDBY CONTROL AND ALTERNATION.
7. PUMPS TO BE OPERATED ON A ROTATING LEAD/LAG/STANDBY SCHEDULE.

(LF) LOOP WATER CHEMICAL FEED SYSTEM SCHEDULE

TAG	SYSTEM	LOCATION	TYPE	TANK VOLUME (GAL)	PUMP DATA (EACH)			TANK PHYSICAL DATA				MAX COLD FILL PRESSURE (PSI)	MIN. SYSTEM RATINGS		ELECTRICAL TYPE	ELECTRICAL POWER	BASIS OF DESIGN	NOTES
					HP	MIN. GPM	MIN. HEAD (PSI)	TANK QTY. (EA)	TANK MATERIAL	TANK CAPACITY (GAL)	SYSTEM CONN. (IN)		MAX WORKING TEMPERATURE (F)	MAX WORKING PRESSURE (PSI)				
LF-1	CONDENSER WATER	MECHANICAL ROOM	PACKAGED TANK AND DUPLEX PUMP	50.0	1/3	1.5	100	1	EPOXY COATED STEEL	50	1 1/2	80	200	200	5R-20 PLUG AND CORD	115/60/1	J.L. WINGERT GL-50-2H	1,2,3,4,5,6

NOTES:
1. PROVIDE COMPLETED ENGINEERED SYSTEM FROM A SINGLE SOURCE SYSTEM PROVIDER SPECIALIZING IN WATER TREATMENT FOR CLOSED LOOP HYDRONIC SYSTEMS. REFER TO SPECIFICATION FOR ADDITIONAL PERFORMANCE REQUIREMENTS.
2. TANK SHALL INCLUDE INTEGRAL SECONDARY CONTAINMENT AND AIR INTAKE AND RELIEF VALVES/OPENINGS AS NECESSARY.
3. FEED SYSTEM SHALL COME WITH AN INTEGRAL CONTROL PANEL IN NEMA 4 ENCLOSURE AND 8' MINIMUM POWER CORD WITH 5R-20 PLUG.
4. PROVIDE WITH LOW LEVEL FLOAT SWITCH, 2 PRESSURE SWITCHES AND GAUGES, AND TWO PRESSURE RELIEF VALVES.
5. INSTALL FEED UNIT ON CONCRETE HOUSEKEEPING PAD WITH BOLTED ANCHORS.
6. CONTRACTOR TO PROVIDE EXTERNAL ISOLATION VALVES ON BOTH THE INLET AND OUTLET SIDE OF THE FEED UNIT.

(ET) EXPANSION TANK SCHEDULE

TAG	SYSTEM	TOTAL TANK VOLUME (GAL)	MIN. ACCEP VOLUME (GAL)	SIZE DATA			RATED OPERATING TEMPERATURE (F)	RATED OPERATING PRESSURE (PSI)	TANK ORIENTATION	BASIS OF DESIGN	NOTES
				DIA. (IN)	LEN (IN)	SYSTEM CONN. (IN)					
ET-1	CONDENSER WATER	106	57	24	66	1.0	240	250	VERTICAL	AMTROL EXTROL 400-L-250-SGR	1,2,3

NOTES:
1. PROVIDE T&P LIQUID RELIEF VALVE, PIPED TO FLOOR DRAIN.
2. PROVIDE 6" HIGH CONCRETE HOUSEKEEPING PAD.
3. TANK SHALL BE DIAPHRAGM STYLE, ASME STAMPED, FULL ACCEPTANCE, AND SHALL BE FINISHED WITH A PERFORMANCE URETHANE CORROSION PROTECTION SYSTEM.

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Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056
1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
SCHEDULES - MECHANICAL

M 600

7/26/2016 11:16:19 AM

(GSHP) GROUND SOURCE HEAT PUMPS (EWT: 73 F COOLING, 46 F HEATING) (6% PROPYLENE GLYCOL)

DESIGN	LOCATION	SERVING	GPM/PSI	COOLING EWT (F)	COOLING LWT (F)	COOLING (MBH) TOTAL/SENSIBLE	HEATING EWT (F)	HEATING LWT (F)	HEATING (MBH)	CFM/ESP (IN OF WATER)	COOLING EAT (F)	COOLING LAT (F)	HEATING EAT (F)	HEATING LAT (F)	EER	⚠1 COP	HORIZONTAL/VERTICAL	V/PH/HZ	MCA	MOCP	WEIGHT LBS	DIMENSION WxHxD	BASIS OF DESIGN	SUPPLY DUCT SILENCER DATA		RETURN DUCT SILENCER DATA	
																								CASING WxLxH	BASIS OF DESIGN	CASING WxLxH	BASIS OF DESIGN
GSHP A0-1	CORRIDOR 001G	STOR 045, 047, 049	1.8 / 1.87	73	88.7	12.0 / 9.5	46	37.6	11.0	420 / 0.70	78	55	68	100.4	15.5	5.2	HORIZONTAL	265/1/60	6.97	15	173	40 X 15 X 20	TRANE EXHF0127	-	-	-	-
GSHP A0-2	CORRIDOR 001G	ART STUDIO 046	2.2 / 2.56	73	89.6	14.7 / 11.4	46	36.8	13.9	525 / 0.70	78	58	68	92.2	15.3	4.8	HORIZONTAL	265/1/60	8.89	15	173	40 X 15 X 20	TRANE EXHF0157	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP A0-3	CORRIDOR 001G	ENV SCI 044	2.2 / 2.56	73	89.6	14.7 / 11.4	46	36.8	13.9	525 / 0.70	78	58	68	92.2	15.3	4.8	HORIZONTAL	265/1/60	8.89	15	173	40 X 15 X 20	TRANE EXHF0157	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP A0-4	CORRIDOR 001F	CONF 041	4.0 / 1.86	73	87.9	26.0 / 19.5	46	37.3	23.6	930 / 0.60	78	55.8	68	97.9	18.3	6.44	HORIZONTAL	460/3/60	4.43	15	333	60.2 X 22 X 26	TRANE VSHE0244	-	-	-	-
GSHP B0-1	CORRIDOR 001D	CLASSROOM 013	2.7 / 1.97	73	90.1	19.2 / 15.0	46	36.2	17.7	630 / 0.80	78	56.1	68	93.7	16.7	5.1	HORIZONTAL	265/1/60	10.93	15	264	46 X 18 X 23	TRANE EXHF0187	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B0-2	CORRIDOR 001D	CLASSROOM 012	2.2 / 2.56	73	89.6	14.7 / 11.4	46	36.8	13.9	525 / 0.70	78	58	68	92.2	15.3	4.8	HORIZONTAL	265/1/60	8.89	15	173	40 X 15 X 20	TRANE EXHF0157	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B0-3	CORRIDOR 001B	MULTIPURPOSE 003	4.0 / 1.86	73	87.9	25.6 / 18.2	46	37.3	23.4	800 / 0.60	78	55.8	68	97.9	18.3	6.44	HORIZONTAL	460/3/60	4.43	15	333	60.2 X 22 X 26	TRANE VSHE0244	20x84x8	VIBRO ACOUSTICS RD-MV-F9-L18669	20x84x8	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B0-4	COLLAB 007	RESOURCE 006	1.4 / 1.94	73	89.4	9.2 / 7.3	46	37	8.5	315 / 0.70	78	56.8	68	92.6	14.9	5.4	HORIZONTAL	265/1/60	4.10	15	165	40 X 15 X 20	TRANE EXHF0097	-	-	-	-
GSHP B0-5	CORRIDOR 001D	COLLAB 007	1.1 / 1.77	73	90.3	8.0 / 6.1	46	36.6	7.4	240 / 0.70	78	52.8	68	101.8	15	4.9	HORIZONTAL	265/1/60	3.53	15	173	40 X 15 X 20	TRANE EXHF0067	-	-	-	-
GSHP B0-6	CORRIDOR 001B	PRINCIPAL 002B	1.8 / 1.87	73	88.7	12.0 / 9.5	46	37.6	11.0	420 / 0.70	78	55	68	100.4	15.5	5.2	HORIZONTAL	265/1/60	6.97	15	173	40 X 15 X 20	TRANE EXHF0127	-	-	-	-
GSHP B0-7	CORRIDOR 001B	CLASSROOM 004	2.2 / 2.56	73	89.6	14.7 / 11.4	46	36.8	13.9	525 / 0.70	78	58	68	92.2	15.3	4.8	HORIZONTAL	265/1/60	8.89	15	173	40 X 15 X 20	TRANE EXHF0157	14x84x8	VIBRO ACOUSTICS RD-MV-F9-L18669	14x84x8	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B0-8	CORRIDOR 001G	CLASSROOM 014	2.2 / 2.56	73	89.6	14.7 / 11.4	46	36.8	13.9	525 / 0.70	78	58	68	92.2	15.3	4.8	HORIZONTAL	265/1/60	8.89	15	173	40 X 15 X 20	TRANE EXHF0157	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B0-9	CORRIDOR 001G	FACULTY 015	1.1 / 1.77	73	90.3	8.0 / 6.1	46	36.6	7.4	240 / 0.70	78	52.8	68	101.8	15	4.9	HORIZONTAL	265/1/60	3.53	15	173	40 X 15 X 20	TRANE EXHF0067	-	-	-	-
GSHP B0-10	CORRIDOR 001G	CLASSROOM 018	2.2 / 2.56	73	89.6	14.7 / 11.4	46	36.8	13.9	525 / 0.70	78	58	68	92.2	15.3	4.8	HORIZONTAL	265/1/60	8.89	15	173	40 X 15 X 20	TRANE EXHF0157	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B0-11	CORRIDOR 001G	CLASSROOM 020	2.2 / 2.56	73	89.6	14.7 / 11.4	46	36.8	13.9	525 / 0.70	78	58	68	92.2	15.3	4.8	HORIZONTAL	265/1/60	8.89	15	173	40 X 15 X 20	TRANE EXHF0157	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B0-12	CORRIDOR 001C	PLANNING 005	1.1 / 1.77	73	90.3	8.0 / 6.1	46	36.6	7.4	240 / 0.70	78	52.8	68	101.8	15	4.9	HORIZONTAL	265/1/60	3.53	15	173	40 X 15 X 20	TRANE EXHF0067	-	-	-	-
GSHP C0-1	CORRIDOR 001J	OFFICE 030	1.1 / 1.77	73	90.3	7.4 / 5.0	46	36.6	7.1	170 / 0.70	78	52.8	68	101.8	15	4.9	HORIZONTAL	265/1/60	3.53	15	165	40 X 15 X 20	TRANE EXHF0067	-	-	-	-
GSHP A1-1	STOR 124A	PLTW CR 124	5.6 / 5.21	73	87.6	35.2 / 25.8	46	38	31.1	1200 / 0.60	78	55.5	68	98.5	15.8	5.85	HORIZONTAL	460/3/60	6.54	15	333	60.2 X 22 X 26	TRANE VSHE0334	18x84x12	VIBRO ACOUSTICS RD-MV-F9-L18669	18x84x12	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP A1-2	CLOSET	GATEWAY CR 123	4.0 / 1.86	73	84.8	25.3 / 18.0	46	39	23.3	800 / 0.60	78	55.6	68	97.1	18.3	6.44	VERTICAL	460/3/60	4.43	15	333	24.5 X 42 X 26.5	TRANE VSVE0244	12x84x12	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x12	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP A1-3	MECH 240	CTE FLEX SPACE 121C	10.1 / 3.09	73	88.2	64.6 / 47.1	46	36.7	63.8	2330 / 0.60	78	58	68	96.5	14.8	5.3	HORIZONTAL	460/3/60	10.0	15	524	81.2 X 22 X 26	TRANE VSHE0604	-	-	-	-
GSHP A1-4	MECH 240	CISCO CR 122	4.0 / 1.86	73	87.9	26.4 / 20.8	46	37.3	23.8	1020 / 0.60	78	55.8	68	97.9	18.3	6.44	HORIZONTAL	460/3/60	4.43	15	333	60.2 X 22 X 26	TRANE VSHE0244	16x84x12	VIBRO ACOUSTICS RD-MV-F9-L18669	16x84x12	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B1-1	CORRIDOR 100C	FACULTY 104E	2.7 / 1.97	73	90.1	19.2 / 15.0	46	36.2	17.7	630 / 0.80	78	56.1	68	93.7	16.7	5.1	HORIZONTAL	265/1/60	10.93	15	264	46 X 18 X 23	TRANE EXHF0187	-	-	-	-
GSHP B1-2	CORRIDOR 100C	NURSE 103B	2.2 / 2.56	73	89.6	14.7 / 11.4	46	36.8	13.9	525 / 0.70	78	58	68	92.2	15.3	4.8	HORIZONTAL	265/1/60	8.89	15	173	40 X 15 X 20	TRANE EXHF0157	-	-	-	-
GSHP B1-3	CORRIDOR 100C	CONF 102H	4.0 / 1.86	73	87.9	26.0 / 19.5	46	37.3	23.6	930 / 0.60	78	55.8	68	97.9	18.3	6.44	HORIZONTAL	460/3/60	4.43	15	333	60.2 X 22 X 26	TRANE VSHE0244	-	-	-	-
GSHP B1-4	CORRIDOR 100C	PRINCIPAL 101G	2.7 / 1.97	73	90.1	19.2 / 15.0	46	36.2	17.7	630 / 0.80	78	56.1	68	93.7	16.7	5.1	HORIZONTAL	265/1/60	10.93	15	264	46 X 18 X 23	TRANE EXHF0187	-	-	-	-
GSHP B1-5	CAREER 102C	MEDIA CENTER 105A	6.8 / 1.64	73	88.5	45.3 / 36.0	46	36.8	40.4	1720 / 0.60	78	57.6	68	92.3	18.6	6.7	HORIZONTAL	460/3/60	7.11	15	524	81.2 X 22 X 26	TRANE VSHE0424	20x84x14	VIBRO ACOUSTICS RD-MV-F9-L18669	20x84x14	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B1-6	PROJECT 105C	MEDIA CENTER 105A	6.8 / 1.64	73	88.5	45.3 / 36.0	46	36.8	40.4	1720 / 0.60	78	57.6	68	92.3	18.6	6.7	HORIZONTAL	460/3/60	7.11	15	524	81.2 X 22 X 26	TRANE VSHE0424	20x84x14	VIBRO ACOUSTICS RD-MV-F9-L18669	20x84x14	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B1-7	CORRIDOR 100C	CAREER 102C	1.1 / 1.77	73	90.3	7.4 / 5.0	46	36.6	7.1	170 / 0.70	78	52.8	68	101.8	15	4.9	HORIZONTAL	265/1/60	3.53	15	165	40 X 15 X 20	TRANE EXHF0067	-	-	-	-
GSHP B1-8	CORRIDOR 100C	MAIN OFF RECEP 101A	2.2 / 2.56	73	89.6	14.7 / 11.4	46	36.8	13.9	525 / 0.70	78	58	68	92.2	15.3	4.8	HORIZONTAL	265/1/60	8.89	15	173	40 X 15 X 20	TRANE EXHF0157	-	-	-	-
GSHP B1-9	LOBBY 100B	LOBBY 100B	1.1 / 1.77	73	90.3	8.0 / 6.1	46	36.6	7.4	240 / 0.70	78	52.8	68	101.8	15	4.9	HORIZONTAL	265/1/60	3.53	15	173	40 X 15 X 20	TRANE EXHF0067	-	-	-	-
GSHP B1-10	PASSAGE 105B	PROJECT 105C	1.1 / 1.77	73	90.3	8.0 / 6.1	46	36.6	7.4	240 / 0.70	78	52.8	68	101.8	15	4.9	HORIZONTAL	265/1/60	3.53	15	173	40 X 15 X 20	TRANE EXHF0067	-	-	-	-
GSHP B1-11	CORRIDOR 100D	FLEX SPACE 106	5.6 / 5.21	73	87.6	35.2 / 25.8	46	38	31.1	1200 / 0.60	78	55.5	68	98.5	15.8	5.85	HORIZONTAL	460/3/60	6.54	15	333	60.2 X 22 X 26	TRANE VSHE0344	-	-	-	-
GSHP B1-12	CORRIDOR 100D	PSY OFF 107B	2.7 / 1.97	73	90.1	19.2 / 15.0	46	36.2	17.7	630 / 0.80	78	56.1	68	93.7	16.7	5.1	HORIZONTAL	265/1/60	10.93	15	264	46 X 18 X 23	TRANE EXHF0187	-	-	-	-
GSHP B1-13	CORRIDOR 100D	CAREER READINESS 106B	2.7 / 1.97	73	90.1	19.2 / 15.0	46	36.2	17.7	630 / 0.80	78	56.1	68	93.7	16.7	5.1	HORIZONTAL	265/1/60	10.93	15	264	46 X 18 X 23	TRANE EXHF0187	-	-	-	-
GSHP B1-14	CORRIDOR 100D	SGA 109B	1.8 / 1.87	73	88.7	12.0 / 9.5	46	37.6	11.0	420 / 0.70	78	55	68	100.4	15.5	5.2	HORIZONTAL	265/1/60	6.97	15	173	40 X 15 X 20	TRANE EXHF0127	-	-	-	-
GSHP C1-1	DINING 141	DINING 141	10.1 / 3.09	73	88.2	62.0 / 41.6	46	36.7	61.7	1800 / 0.60	78	58	68	96.5	14.8	5.3	HORIZONTAL	460/3/60	10.0	15	524	81.2 X 22 X 26	TRANE VSHE0604	-	-	-	-
GSHP C1-2	DINING 141	DINING 141	10.1 / 3.09	73	88.2	62.0 / 41.6	46	36.7	61.7	1800 / 0.60	78	58	68	96.5	14.8	5.3	HORIZONTAL	460/3/60	10.0	15	524	81.2 X 22 X 26	TRANE VSHE0604	-	-	-	-
GSHP C1-3	DINING 141	DINING 141	10.1 / 3.09	73	88.2	62.0 / 41.6	46	36.7	61.7	1800 / 0.60	78	58	68	96.5	14.8	5.3	HORIZONTAL	460/3/60	10.0	15	524	81.2 X 22 X 26	TRANE VSHE0604	-	-	-	-
GSHP C1-4	RCVG 142	OFFICE 142C	2.2 / 2.56	73	89.6	14.7 / 11.4	46	36.8	13.9	525 / 0.70	78	58	68	92.2	15.3	4.8	HORIZONTAL	265/1/60	8.89	15	173	46 X 18 X 23	TRANE EXHF0157	-	-	-	-
GSHP C1-5	SERVE 142K	KITCHEN 142J	6.8 / 1.64	73	88.5	45.3 / 36.0	46	36.8	40.4	1720 / 0.60	78	57.6	68	92.3	18.6	6.7	HORIZONTAL	460/3/60	7.11	15	524	81.2 X 22 X 26	TRANE VSHE0424	-	-	-	-
GSHP B2-1	CORRIDOR 200C	FOT LAB 207	4.0 / 1.86	73	87.9	26.4 / 20.8	46	37.3	23.8	1020 / 0.60	78	55.8	68	97.9	18.3	6.44	HORIZONTAL	460/3/60	4.43	15	333	60.2 X 22 X 26	TRANE VSHE0244	16x84x12	VIBRO ACOUSTICS RD-MV-F9-L18669	16x84x12	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B2-2	CORRIDOR 200C	LANGUAGE CR 208	2.7 / 1.97	73	90.1	19.2 / 15.0	46	36.2	17.7	630 / 0.80	78	56.1	68	93.7	16.7	5.1	HORIZONTAL	265/1/60	10.93	15	264	46 X 18 X 23	TRANE EXHF0187	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B2-3	CORRIDOR 200C	CLASSROOM 205	2.7 / 1.97	73	90.1	19.2 / 15.0	46	36.2	17.7	630 / 0.80	78	56.1	68	93.7	16.7	5.1	HORIZONTAL	265/1/60	10.93	15	264	46 X 18 X 23	TRANE EXHF0187	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B2-4	CORRIDOR 200C	CLASSROOM 206	2.2 / 2.56	73	89.6	14.7 / 11.4	46	36.8	13.9	525 / 0.70	78	58	68	92.2	15.3	4.8	HORIZONTAL	265/1/60	8.89	15	173	40 X 15 X 20	TRANE EXHF0157	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B2-5	CHEMISTRY 201A	CHEMISTRY 201A	6.8 / 1.64	73	88.5	44.6 / 33.6	46	36.8	39.9	1580 / 0.60	78	57.6	68	92.3	18.6	6.7	HORIZONTAL	460/3/60	7.11	15	524	81.2 X 22 X 26	TRANE VSHE0424	18x84x14	VIBRO ACOUSTICS RD-MV-F9-L18669	18x84x14	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B2-6	BIOLOGY 202A	BIOLOGY 202A	6.8 / 1.64	73	88.5	45.3 / 36.0	46	36.8	40.4	1720 / 0.60	78	57.6	68	92.3	18.6	6.7	HORIZONTAL	460/3/60	7.11	15	524	81.2 X 22 X 26	TRANE VSHE0424	20x84x14	VIBRO ACOUSTICS RD-MV-F9-L18669	20x84x14	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B2-7	CORRIDOR 200C	CLASSROOM 203	1.4 / 1.94	73	89.4	9.2 / 7.3	46	37	8.5	315 / 0.70	78	56.8	68	92.6	14.9	5.4	HORIZONTAL	265/1/60	4.10	15	165	40 X 15 X 20	TRANE EXHF0097	10x84x8	VIBRO ACOUSTICS RD-MV-F9-L18669	10x84x8	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B2-8	CORRIDOR 200C	CLASSROOM 204B	2.2 / 2.56	73	89.6	14.7 / 11.4	46	36.8	13.9	525 / 0.70	78	58	68	92.2	15.3	4.8	HORIZONTAL	265/1/60	8.89	15	173	40 X 15 X 20	TRANE EXHF0157	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B2-9	CORRIDOR 200C	CLASSROOM 204A	1.8 / 1.87	73	88.7	12.0 / 9.5	46	37.6	11.0	420 / 0.70	78	55	68	100.4	15.5	5.2	HORIZONTAL	265/1/60	6.97	15	173	40 X 15 X 20	TRANE EXHF0127	10x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	10x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B2-10	CORRIDOR 200A	SE OFF 209A	2.2 / 2.56	73	89.6	14.7 / 11.4	46	36.8	13.9	525 / 0.70	78	58	68	92.2	15.3	4.8	HORIZONTAL	265/1/60	8.89	15	173	40 X 15 X 20	TRANE EXHF0157	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B2-11	CORRIDOR 200B	CLASSROOM 210	1.4 / 1.94	73	89.4	9.2 / 7.3	46	37	8.5	315 / 0.70	78	56.8	68	92.6	14.9	5.4	HORIZONTAL	265/1/60	4.10	15	165	40 X 15 X 20	TRANE EXHF0097	10x84x8	VIBRO ACOUSTICS RD-MV-F9-L18669	10x84x8	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B2-12	CORRIDOR 200B	CLASSROOM 209	1.8 / 1.87	73	88.7	12.0 / 9.5	46	37.6	11.0	420 / 0.70	78	55	68	100.4	15.5	5.2	HORIZONTAL	265/1/60	6.97	15	173	40 X 15 X 20	TRANE EXHF0127	10x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	10x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B2-13	CORRIDOR 200B	CLASSROOM 211	1.8 / 1.87	73	88.7	12.0 / 9.5	46	37.6	11.0	420 / 0.70	78	55	68	100.4	15.5	5.2	HORIZONTAL	265/1/60	6.97	15	173	40 X 15 X 20	TRANE EXHF0127	10x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	10x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B2-14	CORRIDOR 200B	CLASSROOM 212	2.7 / 1.97	73	90.1	19.2 / 15.0	46	36.2	17.7	630 / 0.80	78	56.1	68	93.7	16.7	5.1	HORIZONTAL	265/1/60	10.93	15	264	46 X 18 X 23	TRANE EXHF0187	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B2-15	CORRIDOR 200B	CLASSROOM 213	2.2 / 2.56	73	89.6	14.7 / 11.4	46	36.8	13.9	525 / 0.70	78	58	68	92.2	15.3	4.8	HORIZONTAL	265/1/60	8.89	15	173	40 X 15 X 20	TRANE EXHF0157	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B2-16	CORRIDOR 200B	CLASSROOM 214	1.4 / 1.94	73	89.4	9.2 / 7.3	46	37	8.5	315 / 0.70	78	56.8	68	92.6	14.9	5.4	HORIZONTAL	265/1/60	4.10	15	165	40 X 15 X 20	TRANE EXHF0097	10x84x8	VIBRO ACOUSTICS RD-MV-F9-L18669	10x84x8	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP C2-1	CORRIDOR 200F	PHYSICS 220	4.0 / 1.86	73	87.9	26.0 / 19.5	46	37.3	23.6	930 / 0.60	78	55.8	68	97.9	18.3	6.44	HORIZONTAL	460/3/60	4.43	15	333	60.2 X 22 X 26	TRANE VSHE0244	14x84x12	VIBRO ACOUSTICS RD-MV-F9-L18669	14x84x12	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP C2-2	CORRIDOR 200F	RESOURCE 223	2.7 / 1.97	73	90.1	19.2 / 15.0	46	36.2	17.7	630 / 0.80	78	56.1	68	93.7	16.7	5.1	HORIZONTAL	265/1/60	10.93	15	264	46 X 18 X 23	TRANE EXHF0187	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP C2-3	CORRIDOR 200G	CLASSROOM 228	2.7 / 1.97	73	90.1	19.2 / 15.0	46	36.2	17.7	630 / 0.80	78	56.1	68	93.7	16.7	5.1	HORIZONTAL	265/1/60	10.93	15	264	46 X 18 X 23	TRANE EXHF0187	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP C2-4	CORRIDOR 200G	CLASSROOM 229	5.6 / 3.21	73	87.6	35.0 / 25.1	46	38	31.0	1140 / 0.60	78	55.5	68	98.5	15.8	5.85	HORIZONTAL	460/3/60	6.54	15	333	60.2 X 22 X 26	TRANE VSHE0334	16x84x12	VIBRO ACOUSTICS RD-MV-F9-L18669	16x84x12	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP C2-5	CORRIDOR 200G	CLASSROOM 230	4.0 / 1.86	73	87.9	26.0 / 19.5	46	37.3	23.6	930 / 0.60	78	55.8	68	97.9	18.3	6.44	HORIZONTAL	460/3/60	4.43	15	333	60.2 X 22 X 26	TRANE VSHE0244	14x84x12	VIBRO ACOUSTICS RD-MV-F9-L18669	14x84x12	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP C2-6	CORRIDOR 200G	VP OFFICE 227	1.4 / 1.94	73	89.4	9.2 / 7.3	46	37	8.5	315 / 0.70	78	56.8	68	92.6	14.9	5.4	HORIZONTAL	265/1/60	4.10	15	165	40 X 15 X 20	TRANE EXHF0097	-	-	-	-
GSHP C2-7	CORRIDOR 200G	THEATER/DANCE 231	1.4 / 1.94	73	89.4	9.2 / 7.3	46	37	8.5	315 / 0.70	78	56.8	68	92.6	14.9	5.4	HORIZONTAL	265/1/60	4.10	15	165	40 X 15 X 20	TRANE EXHF0097	10x84x8	VIBRO ACOUSTICS RD-MV-F9-L18669	10x84x8	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP C2-8	CORRIDOR 200G	BIOLOGY 233	2.7 / 1.97	73	90.1	19.2 / 15.0	46	36.2	17.7	630 / 0.80	78	56.1	68	93.7	16.7	5.1	HORIZONTAL	265/1/60	10.93	15	264	46 X 18 X 23	TRANE EXHF0187	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B3-1	CORRIDOR 300B	RESOURCE 308	5.6 / 5.21	73	87.6	35.2 / 25.8	46	38	31.1	1200 / 0.60	78	55.5	68	98.5	15.8	5.85	HORIZONTAL	460/3/60	6.54	15	333	60.2 X 22 X 26	TRANE VSHE0334	14x84x14	VIBRO ACOUSTICS RD-MV-F9-L18669	18x84x12	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B3-2	CORRIDOR 300B	CLASSROOM 306	2.7 / 1.97	73	90.1	19.2 / 15.0	46	36.2	17.7	630 / 0.80	78	56.1	68	93.7	16.7	5.1	HORIZONTAL	265/1/60	10.93	15	264	46 X 18 X 23	TRANE EXHF0187	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B3-3	CORRIDOR 300B	CLASSROOM 304	2.7 / 1.97	73	90.1	19.2 / 15.0	46	36.2	17.7	630 / 0.80	78	56.1	68	93.7	16.7	5.1	HORIZONTAL	265/1/60	10.93	15	264	46 X 18 X 23	TRANE EXHF0187	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B3-4	CORRIDOR 300B	CLASSROOM 305	2.7 / 1.97	73	90.1	19.2 / 15.0	46	36.2	17.7	630 / 0.80	78	56.1	68	93.7	16.7	5.1	HORIZONTAL	265/1/60	10.93	15	264	46 X 18 X 23	TRANE EXHF0187	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669
GSHP B3-5	CORRIDOR 300B	CLASSROOM 302	2.7 / 1.97	73	90.1	19.2 / 15.0	46	36.2	17.7	630 / 0.80	78	56.1	68	93.7	16.7	5.1	HORIZONTAL	265/1/60	10.93	15	264	46 X 18 X 23	TRANE EXHF0187	12x84x10	VIBRO ACOUSTICS RD-MV-F9-L18669	12x84x10	VIBRO ACOUS

(DIFF) DIFFUSER REGISTER AND GRILLE SCHEDULE

TAG	SERVICE	CFM RANGE	NECK DIA. (IN)	SIZE FACE (IN)	LINEAR DATA				MAX. PD (IN. WG)	MAX. NOISE (NC)	PATTERN	MANUFACTURER AND MODEL NUMBER	REMARKS
					QTY OF SLOT	SLOT WIDTH (IN)	LENGTH (IN)	BAR WIDTH (IN)					
A	PERFORATED DIFFUSER	50 - 120	6	24x24	-	-	-	-	0.07	30	4 WAY	TITUS PMC	ALL PATTERN SHALL BE 4-WAY UNLESS OTHERWISE NOTED
		125 - 210	8		-	-	-	-	0.07	30			
		215 - 320	10		-	-	-	-	0.07	30			
		325 - 520	12		-	-	-	-	0.07	30			
B	SUPPLY LINEAR SLOT	50 - 150	6	-	2	1	48L	-	0.07	30	-	TITUS ML-38	
		155 - 230	10		2	1	48L	-	0.07	30			
		235 - 300	12		2	1	48L	-	0.07	30			
C	PERFORATED RETURN	50 - 400	12	24x24	-	-	-	-	0.07	30	-	TITUS PAR	
		50 - 750	14		-	-	-	-	0.07	30			
		50 - 1000	16		-	-	-	-	0.07	30			
		50 - 1400	18		-	-	-	-	0.07	30			
D	RETURN/EXHAUST REGISTER	50 - 120	-	6x6	-	-	-	-	0.07	30	FIXED DEFLECTION (45 DEG)	TITUS 3FL	
		125 - 240	-	10x6	-	-	-	-	0.07	30			
		245 - 325	-	10x8	-	-	-	-	0.07	30			
		330 - 485	-	14x8	-	-	-	-	0.07	30			
		490 - 640	-	18x10	-	-	-	-	0.07	30			
		645 - 800	-	24x10	-	-	-	-	0.07	30			
E	DRUM LOUVER SINGLE DEFLECTION VANES	100 - 300	9x6	9x6	-	-	-	-	0.05	>10	-	TITUS DL	PROVIDE O.B. DAMPER IN BRANCH DUCT ADJUSTABLE FROM FACE OF GRILLE
		301 - 450	18x6	18x6	-	-	-	-	0.18	25			
		451 - 600	18x10	18x10	-	-	-	-	0.25	31			
		601 - 1000	22x10	22x10	-	-	-	-	0.25	31			
		1001 - 2000	40x12	40x12	-	-	-	-	0.25	31			
		2001 - 3000	70x12	70x12	-	-	-	-	0.25	31			
F	RETURN LINEAR SLOT	50 - 150	6	-	2	1	48L	-	0.07	30	-	TITUS ML-38	
		155 - 230	10		2	1	48L	-	0.07	30			
		235 - 300	12		2	1	48L	-	0.07	30			

NOTES: 1. FRAME SHALL MATCH CEILING TYPE

(UH) (CUH) (EBB) ELECTRIC HEATER SCHEDULE

TAG	LOCATION	MOUNTING	TYPE	FAN DATA		ELECTRIC HEATER DATA				NO. FANS	NO. MOTORS	MOTOR HP (EACH)	ELEC. (V/Ph)	TOTAL FLA	BASIS OF DESIGN	REMARKS
				CFM	DRIVE TYPE	CAPACITY TOT. (MBH)	kW	EAT DB (F)	LAT DB (F)							
CUH A0-1	STAIR A2-0	FLOOR	CABINET	250	DIRECT	10.2	3	60	98	1	1	1/8	277/1	12	QMARK CU93S	1,3
CUH A0-2	WOMEN 052	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3
CUH A0-3	MEN 050	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3
CUH A0-4	STAIR A1-0	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3
CUH B0-1	STAIR B1-0	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3,4
CUH B0-2	ENTRY 001A	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3
CUH B0-3	STAIR B2-0	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3,4
CUH C0-1	RCVG 031	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3
CUH A1-1	STAIR A2-1	FLOOR	CABINET	250	DIRECT	10.2	3	60	98	1	1	1/8	277/1	12	QMARK CU93S	1,3
CUH A1-2	STAIR A1-1	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3
CUH B1-1	STAIR B1-1	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3,4
CUH B1-2	STAIR B2-1	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3,4
CUH B1-3	STAIR B3-1	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3
CUH C1-1	STAIR C1-1	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3
CUH A2-1	STAIR A1-2	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3
CUH B2-1	STAIR B1-2	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3,4
CUH B2-2	STAIR B2-2	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3,4
CUH B2-3	STAIR B3-2	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3
CUH C2-1	STAIR C1-2	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3
CUH B3-1	STAIR B1-3	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3,4
CUH B3-2	STAIR B2-3	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3,4
CUH B3-3	STAIR B3-3	FLOOR	CABINET	250	DIRECT	6.8	2	60	85	1	1	1/8	277/1	8	QMARK CU93S	1,3
CUH C3-1	STAIR C1-3	FLOOR	CABINET	250	DIRECT	10.2	3	60	98	1	1	1/8	277/1	12	QMARK CU93S	1,3
CMUH B1-1	VEST 100A	CEILING	CABINET	300	DIRECT	10.2	3	60	98	1	1	-	277/1	10.8	QMARK CDF542	1,2,3
UH B0-1	MECH 019	SUSPENDED	HORIZONTAL	350	DIRECT	10.2	3	60	87	1	1	1/100	277/1	11	QMARK MUH0371	1,2,3
UH C0-1	STOR 029	SUSPENDED	HORIZONTAL	350	DIRECT	10.2	3	60	87	1	1	1/100	277/1	11	QMARK MUH0371	1,2,3
UH C0-2	CAN WASH 028	SUSPENDED	HORIZONTAL	350	DIRECT	10.2	3	60	87	1	1	1/100	277/1	11	QMARK MUH0371	1,2,3
UH C0-3	MAIN ELEC 026	SUSPENDED	HORIZONTAL	350	DIRECT	10.2	3	60	87	1	1	1/100	277/1	11	QMARK MUH0371	1,2,3
UH C0-4	FIRE PUMP 021	SUSPENDED	HORIZONTAL	350	DIRECT	10.2	3	60	87	1	1	1/100	277/1	11	QMARK MUH0371	1,2,3
UH C1-1	ATHL STOR 148A	SUSPENDED	HORIZONTAL	350	DIRECT	10.2	3	60	87	1	1	1/100	277/1	11	QMARK MUH0371	1,2,3
UH A2-1	MECH 250	SUSPENDED	HORIZONTAL	350	DIRECT	10.2	3	60	87	1	1	1/100	277/1	11	QMARK MUH0371	1,2,3
UH A2-2	MECH 250	SUSPENDED	HORIZONTAL	350	DIRECT	10.2	3	60	87	1	1	1/100	277/1	11	QMARK MUH0371	1,2,3
EBB A0-1	CORRIDOR 001E	FLOOR	BASEBOARD	-	-	2.56	0.75	60	-	0	0	-	277/1	2.7	QMARK CBD757	3
EBB A0-2	CORRIDOR 001E	FLOOR	BASEBOARD	-	-	2.56	0.75	60	-	0	0	-	277/1	2.7	QMARK CBD757	3
EBB A1-1	CORRIDOR 120	FLOOR	BASEBOARD	-	-	2.56	0.75	60	-	0	0	-	277/1	2.7	QMARK CBD757	3
EBB A1-2	CORRIDOR 120	FLOOR	BASEBOARD	-	-	2.56	0.75	60	-	0	0	-	277/1	2.7	QMARK CBD757	3
EBB A1-3	MEN 125	FLOOR	BASEBOARD	-	-	2.56	0.75	60	-	0	0	-	277/1	2.7	QMARK CBD757	3
EBB B1-1	TLT 103K	FLOOR	BASEBOARD	-	-	2.56	0.75	60	-	0	0	-	277/1	2.7	QMARK CBD757	3

NOTES:
1. PROVIDE WITH INTEGRAL DISCONNECT SWITCH.
2. PROVIDE SUPPORT FROM STRUCTURE FOR SUSPENDED UNIT HEATERS. SUPPORT AND ATTACHMENTS TO UNIT HEATERS SHALL BE PER MANUFACTURER'S REQUIREMENTS.
3. PLANS SHOW APPROXIMATE LOCATIONS ONLY. EXACT LOCATION SHALL BE COORDINATED IN FIELD WITH THE CONDITIONS OF INSTALLATION.
4. RECESSED UNIT. PROVIDE FRONT INLET AND FRONT OUTLET DISCHARGES.

JRS ARCHITECTS
2010 Clipper Park Rd.
Suite 101
Baltimore, MD 21211
410.235.7256

ASSOCIATE ARCHITECT
SCHRADER GROUP ARCHITECTURE LLC
161 LEVERINGTON AVE, SUITE 105
PHILADELPHIA, PA 19127

LANDSCAPE ARCHITECT
MAHAN RYKIEL ASSOCIATES
800 WYMAN PARK DR, SUITE 100
BALTIMORE, MD 21211

CIVIL ENGINEER
STV, INC.
7125 AMBASSADOR RD, SUITE 200
BALTIMORE, MD 21244

STRUCTURAL ENGINEER
ALBRECHT ENGINEERING
3500 BOSTON ST, SUITE 329
BALTIMORE, MD 21224

MEP ENGINEER
BRINJAC ENGINEERING
1800 N. CHARLES ST, SUITE 310
BALTIMORE, MD 21201

FOOD SERVICE
NYIKOS ASSOCIATES
18219A FLOWER HILL WAY
GAITHERSBURG, MD 20879

AV/IT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD, SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056
1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
SCHEDULES - MECHANICAL

M 602

7/26/2016 11:16:33 AM

VENTILATION PER ASHRAE 62.1-2010 AND IMC CODE 2012

Zone Name / Space Name	Mult.	Supply Air (CFM)	Floor Area (ft²)	Required Outdoor Air (CFM/ft²)	Time Averaged Occupancy	Required Outdoor Air (CFM/person)	Air Distribution Effectiveness	Required Outdoor Air (CFM)	Uncorrected Outdoor Air (CFM)	Space Ventilation Efficiency
A0-1										
Prop (A0) Women 052	1	57	148.0	0.06	0.0	0.00	0.80	**11**	*9*	1.077
Prop (A0) Men 050	1	44	132.0	0.06	0.0	0.00	0.80	**10**	*8*	1.050
Prop (A0) JC 051	1	5	32.0	0.12	0.0	0.00	0.80	**5**	*4*	0.272
Prop (A0) Stor 049	1	111	345.0	0.06	0.0	0.00	0.80	**26**	*21*	1.039
Prop (A0) Elec 048	1	37	142.0	0.06	0.0	0.00	0.80	**11**	*9*	0.987
Prop (A0) Coll Stg 047	1	46	177.0	0.06	0.0	0.00	0.80	**13**	*11*	0.984
Prop (A0) Sci Stg 045	1	45	177.0	0.06	0.0	0.00	0.80	**13**	*11*	0.980
Prop (A0) Corr 001G	1	85	769.0	0.06	0.0	0.00	0.80	**58**	*46*	0.593
A0-2										
Prop (A0) Art 046	1	576	1241.0	0.12	25.0	10.00	0.80	**499**	*399*	1.000
A0-3										
Prop (A0) Env Sci 044	1	631	1231.0	0.12	31.0	10.00	0.80	**572**	*458*	1.000
A0-4										
Prop (A0) Prep 043	1	135	153.0	0.06	7.0	5.00	0.80	**55**	*44*	0.801
Prop (A0) Adm Stor 042	1	30	120.0	0.06	0.0	0.00	0.80	**9**	*7*	0.905
Prop (A0) Conf 041	1	217	234.0	0.06	12.0	5.00	0.80	**93**	*74*	0.784
Prop (A0) Corr 001F	1	66	517.0	0.06	0.0	0.00	0.80	**39**	*31*	0.623
Prop (A0) VP Office 040	1	56	136.0	0.06	1.0	5.00	0.80	**16**	*13*	0.917
Prop (A0) Corr 001E	1	427	426.0	0.06	0.0	0.00	0.80	**32**	*26*	1.135
B0-1										
Prop (B0) Classroom 013	1	739	800.0	0.12	31.0	10.00	0.80	**508**	*406*	1.000
B0-2										
Prop (B0) Classroom 012	1	620	786.0	0.12	31.0	10.00	0.80	**505**	*404*	0.821
Prop (B0) Corridor 001D	1	106	964.0	0.06	0.0	0.00	0.80	**72**	*58*	0.956
B0-3										
Prop (B0) Teach Kit 003	1	771	881.0	0.12	31.0	10.00	0.80	**520**	*416*	0.865
Prop (B0) Corridor 001B	1	30	268.0	0.06	0.0	0.00	0.80	**20**	*16*	0.860
B0-4										
Prop (B0) Resource 006	1	305	247.0	0.06	6.0	5.00	0.80	**56**	*45*	1.011
Prop (B0) Planning 005	1	156	246.0	0.06	6.0	5.00	0.80	**56**	*45*	0.835
B0-5										
Prop (B0) Collab/Cor 007	1	170	1539.0	0.06	0.0	0.00	0.80	**115**	*92*	0.716
Prop (B0) Men's 009	1	106	227.0	0.06	0.0	0.00	0.80	**17**	*14*	1.235
Prop (B0) Women's 008	1	30	229.0	0.06	0.0	0.00	0.80	**17**	*14*	0.829
Prop (B0) JC 010	1	4	25.0	0.12	0.0	0.00	0.80	**4**	*3*	0.395
B0-6										
Prop (B0) Admin Ast 002A	1	140	93.0	0.06	1.0	5.00	0.80	**13**	*11*	1.006
Prop (B0) Principal 002B	1	220	136.0	0.06	1.0	5.00	0.80	**16**	*13*	1.026
Prop (B0) Flex Off 002C	1	80	97.0	0.06	1.0	5.00	0.80	**14**	*11*	0.932
Prop (B0) Office 002	1	72	184.0	0.06	1.0	5.00	0.80	**20**	*16*	0.822
Prop (B0) Closet 002D	1	2	20.0	0.06	0.0	0.00	0.80	**2**	*1*	0.421
B0-7										
Prop (B0) Classroom 004	1	504	779.0	0.12	31.0	10.00	0.80	**504**	*403*	1.000
B0-8										
Prop (B0) Classroom 014	1	521	889.0	0.12	31.0	10.00	0.80	**521**	*417*	1.000
B0-9										
Prop (B0) Faculty 015	1	201	312.0	0.06	8.0	5.00	0.80	**73**	*59*	0.938
Prop (B0) Toilet 016	1	6	49.0	0.06	0.0	0.00	0.80	**4**	*3*	0.736
Prop (B0) Elec 019A	1	28	160.0	0.06	0.0	0.00	0.80	**12**	*10*	0.871
B0-10										
Prop (B0) Classroom 018	1	621	791.0	0.12	31.0	10.00	0.80	**506**	*405*	0.821
Prop (B0) Corridor 001H	1	112	1018.0	0.06	0.0	0.00	0.80	**76**	*61*	0.955
B0-11										
Prop (B0) Classroom 022	1	513	834.0	0.12	31.0	10.00	0.80	**513**	*410*	1.000
C0-1										
Prop (C0) Cent Stg 122	1	41	376.0	0.06	0.0	0.00	0.80	**28**	*23*	0.743
Prop (C0) Passage 001K+	1	37	338.0	0.06	0.0	0.00	0.80	**25**	*20*	0.743
Prop (C0) Locker 041	1	6	53.0	0.06	0.0	0.00	0.80	**4**	*3*	0.743
Prop (C0) Office 034	1	55	124.0	0.06	1.0	5.00	0.80	**16**	*12*	1.139
Prop (C0) Tlt/shr 042	1	16	122.0	0.06	0.0	0.00	0.80	**9**	*7*	0.856
A1-1										
Prop (A1) Men 125	1	138	125.0	0.06	0.0	0.00	0.80	**9**	*8*	1.316
Prop (A1) Stor 124A	1	83	100.0	0.06	0.0	0.00	0.80	**8**	*6*	1.295
Prop (A1) PLTW CR 123	1	962	1178.0	0.12	30.0	10.00	0.80	**552**	*441*	0.811
A1-2										
Prop (A1) Gateway CR 124	1	814	1043.0	0.12	26.0	10.00	0.80	**481**	*385*	1.000
A1-3										
Prop (A1) Flex Space 121	1	1287	1779.0	0.12	30.0	10.00	0.80	**642**	*513*	0.727
Prop (A1) Women 126	1	29	134.0	0.06	0.0	0.00	0.80	**10**	*8*	0.874
Prop (A1) Corridor 120	1	955	426.0	0.06	0.0	0.00	0.80	**32**	*26*	1.192
Prop (A1) Aisle 120A	1	227	260.0	0.06	0.0	0.00	0.80	**20**	*16*	1.139
A1-4										
Prop (A1) Cisco CR 122	1	950	1166.0	0.12	30.0	10.00	0.80	**550**	*440*	0.775
Prop (A1) Stor 122A	1	317	136.0	0.06	0.0	0.00	0.80	**10**	*8*	1.321
B1-1										
Prop (B1) Flex Off 104F	1	216	102.0	0.06	1.0	5.00	0.80	**14**	*11*	1.041
Prop (B1) Faculty 104E	1	477	273.0	0.06	7.0	5.00	0.80	**64**	*51*	0.970
Prop (B1) SE Office 104A	1	152	138.0	0.06	1.0	5.00	0.80	**17**	*13*	0.996
Prop (B1) SE Stor 104D	1	8	72.0	0.06	0.0	0.00	0.80	**5**	*4*	0.425
Prop (B1) Elec 104C	1	3	41.0	0.06	0.0	0.00	0.80	**3**	*2*	0.195
Prop (B1) Toilet 104B	1	6	48.0	0.06	0.0	0.00	0.80	**4**	*3*	0.539
Prop (B1) Passage 104	1	12	107.0	0.06	0.0	0.00	0.80	**8**	*6*	0.425
B1-2										
Prop (B1) Rest 103C	1	31	101.0	0.00	1.0	25.00	0.80	**31**	*25*	0.214
Prop (B1) Rest 103D	1	31	105.0	0.00	1.0	25.00	0.80	**31**	*25*	0.214
Prop (B1) Passage 103L	1	11	121.0	0.06	0.0	0.00	0.80	**9**	*7*	0.392
Prop (B1) Toilet 103G	1	5	46.0	0.06	0.0	0.00	0.80	**3**	*3*	0.552
Prop (B1) Wait 103A	1	303	232.0	0.06	2.0	5.00	0.80	**30**	*24*	1.115
Prop (B1) Nurse 103B	1	39	91.0	0.06	1.0	5.00	0.80	**13**	*10*	0.880
Prop (B1) Exam 103F	1	47	106.0	0.18	1.0	10.00	0.80	**36**	*29*	0.441
Prop (B1) Toilet 103K	1	159	84.0	0.06	0.0	0.00	0.80	**6**	*5*	1.174
Prop (B1) Stor 103J	1	3	34.0	0.06	0.0	0.00	0.80	**3**	*2*	0.392
Prop (B1) Exam 103H	1	132	125.0	0.18	1.0	10.00	0.80	**41**	*33*	0.905
B1-3										
Prop (B1) Conf 102H	1	392	342.0	0.06	17.0	5.00	0.80	**132**	*106*	0.895
Prop (B1) Office 102G	1	121	104.0	0.06	1.0	5.00	0.80	**14**	*11*	1.115
Prop (B1) Office 102F	1	120	102.0	0.06	1.0	5.00	0.80	**14**	*11*	1.116
Prop (B1) Office 102E	1	121	103.0	0.06	1.0	5.00	0.80	**14**	*11*	1.116
Prop (B1) Passage 102J	1	19	170.0	0.06	0.0	0.00	0.80	**13**	*10*	0.552
Prop (B1) Test 102D	1	40	87.0	0.06	1.0	5.00	0.80	**13**	*10*	0.909
Prop (B1) Corridor 100C	1	91	826.0	0.06	0.0	0.00	0.80	**62**	*50*	0.552
B1-4										
Prop (B1) Atten 101L	1	38	88.0	0.06	1.0	5.00	0.80	**13**	*10*	0.829
Prop (B1) Stor 101F	1	9	104.0	0.06	0.0	0.00	0.80	**8**	*6*	0.343
Prop (B1) Passage 101J	1	20	214.0	0.06	0.0	0.00	0.80	**16**	*13*	0.343
Prop (B1) Sec Stor 101M	1	5	59.0	0.06	0.0	0.00	0.80	**4**	*4*	0.343
Prop (B1) Confer 101H	1	357	190.0	0.06	10.0	5.00	0.80	**77**	*61*	0.950
Prop (B1) Ad Asst 101D	1	108	92.0	0.06	1.0	5.00	0.80	**13**	*11*	1.043
Prop (B1) Principal 101G	1	189	135.0	0.06	1.0	5.00	0.80	**16**	*13*	1.078
Prop (B1) Toilet 101K	1	5	46.0	0.06	0.0	0.00	0.80	**3**	*3*	0.503
B1-5 & 6										
Prop (B1) Media 105A	1	3400	3219.0	0.12	80.0	10.00	0.80	**1483**	*1186*	1.000
B1-7										
Prop (B1) Career 102C	1	124	311.0	0.06	2.0	5.00	0.80	**36**	*29*	1.021
Prop (B1) Guid Recp 102A	1	32	204.0	0.06	1.0	5.00	0.80	**22**	*17*	0.635
Prop (B1) Storage 102B	1	10	94.0	0.06	0.0	0.00	0.80	**7**	*6*	0.630
B1-8										
Prop (B1) Work 101C	1	56	141.0	0.06	1.0	5.00	0.80	**17**	*13*	0.839
Prop (B1) Flex Off 101E	1	108	92.0	0.06	1.0	5.00	0.80	**13**	*11*	1.020
Prop (B1) Main Rept 101A	1	345	507.0	0.06	2.0	5.00	0.80	**51**	*40*	0.995
Prop (B1) Security 101B	1	46	112.0	0.06	1.0	5.00	0.80	**15**	*12*	0.822
Prop (B1) Closet 101N	1	4	48.0	0.06	0.0	0.00	0.80	**4**	*3*	0.320
B1-9										
Prop (B1) Vest 100A	1	177	270.0	0.06	0.0	0.00	0.80	**20**	*16*	1.167
Prop (B1) Lobby/S 100B	1	128	1159.0	0.06	0.0	0.00	0.80	**87**	*70*	0.602
B1-10										
Prop (B1) Passage 105B	1	25	225.0	0.06	0.0	0.00	0.80	**17**	*14*	1.077
Prop (B1) Project 105D	1	185	234.0	0.12	12.0	10.00	0.80	**185**	*148*	0.757
Prop (B1) Storage 105C	1	12	112.0	0.06	0.0	0.00	0.80	**8**	*7*	1.077
B1-11										
Prop (B1) Flex Space106A	1	1555	1354.0	0.06	88.0	7.50	0.80	**927**	*741*	1.000
B1-12										
Prop (B1) Corridor 100D	1	73	666.0	0.06	0.0	0.00	0.80	**50**	*40*	0.458
Prop (B1) Passage 107	1	23	207.0	0.06	0.0	0.00	0.80	**16**	*12*	0.458
Prop (B1) Flex Off 107A	1	118	81.0	0.06	1.0	5.00	0.80	**12**	*10*	1.033
Prop (B1) Flex Off 107F	1	118	96.0	0.06	1.0	5.00	0.80	**13**	*11*	1.024
Prop (B1) Flex Off 107G	1	118	92.0	0.06	1.0	5.00	0.80	**13**	*11*	1.026
Prop (B1) Stor 107H	1	4	37.0	0.06	0.0	0.00	0.80	**3**	*2*	0.458
Prop (B1) Stor 107J	1	4	34.0	0.06	0.0	0.00	0.80	**3**	*2*	0.458
Prop (B1) SW Off 107C	1	118	93.0	0.06	1.0	5.00	0.80	**13**	*11*	1.025
Prop (B1) SW Off 107E	1	129	99.0	0.06	1.0	5.00	0.80	**14**	*11*	1.032
Prop (B1) Psy Off 107B	1	126	96.0	0.06	1.0	5.00	0.80	**13**	*11*	1.031
Prop (B1) Psy Off 107D	1	118	93.0	0.06	1.0	5.00	0.80	**13**	*11*	1.025
B1-13										
Prop (B1) Career Rd 106B	1	212	541.0	0.06	3.0	5.00	0.80	**59**	*47*	0.913
Prop (B1) Passage 106	1	189	254.0	0.06	0.0	0.00	0.80	**19**	*15*	1.092
Prop (B1) Passage 111	1	8	74.0	0.06	0.0	0.00	0.80	**6**	*4*	0.513
Prop (B1) Pantry 110	1	16	145.0	0.06	0.0	0.00	0.80	**11**	*9*	0.513
Prop (B1) Laundry 111A	1	6	50.0	0.06	0.0	0.00	0.80	**4**	*3*	0.513
Prop (B1) Toilet/SH 111C	1	8	64.0	0.06	0.0	0.00	0.80	**5**	*4*	0.626
Prop (B1) Pers Care 111B	1	6	53.0	0.06	0.0	0.00	0.80	**4**	*3*	0.513
B1-14										
Prop (B1) Corridor 100E	1	46	413.0	0.06	0.0	0.00	0.80	**31**	*25*	0.494
Prop (B1) Furn Stor 140	1	280	212.0	0.06	0.0	0.00	0.80	**16**	*13*	1.117
Prop (B1) SGA Off 109B	1	66	167.0	0.06	1.0	5.00	0.80	**19**	*15*	0.890
Prop (B1) Sch Store 109A	1	31	191.0	0.06	1.0	5.00	0.80	**21**	*16*	0.499
Prop (B1) Toilet 109D	1	7	52.0	0.06	0.0	0.00	0.80	**4**	*3*	0.608
Prop (B1) JC 109C	1	4	26.0	0.12	0.0	0.00	0.80	**4**	*3*	0.174
C1-1,2,3										
Prop (C1) Dining 141	1	4891	3715.0	0.18	288.0	7.50	0.80	**3536**	*2829*	1.000
C1-4										
Prop (C1) Office 142C	1	43	96.0	0.06	1.0	5.00	0.80	**13**	*11*	0.950
Prop (C1) Locker 142A	1	6	55.0	0.06	0.0	0.00	0.80	**4**	*3*	0.586
Prop (C1) Toilet 142B	1	7	50.0	0.06	0.0	0.00	0.80	**4**	*3*	0.699
Prop (C1) Corridor 100E	1	37	336.0	0.06	0.0	0.00	0.80	**25**	*20*	0.586
Prop (C1) Passage 142	1	30	268.0	0.06	0.0	0.00	0.80	**20**	*16*	0.586
Prop (C1) Corridor 100F	1	148	308.0	0.06	0.0	0.00	0.80	**23**	*18*	1.110
C1-5										
Prop (C1) Kitchen 142J	1	974	970.0	0.12	5.0	7.50	0.80	**192**	*154*	0.973
Prop (C1) Dry Stor 142E	1	36	326.0	0.06	0.0	0.00	0.80	**24**	*20*	0.491
Prop (C1) Janitor 142D	1	4	25.0	0.12	0.0	0.00	0.80	**4**	*3*	0.171
Prop (C1) Serve 142K	1	438	368.0	0.12	3.0	7.50	0.80	**83**	*67*	0.981
Prop (C1) Dish/Tray 142H	1	13	114.0	0.06	0.0	0.00	0.80	**9**	*7*	0.491
B2-1										
Prop (B2) FOT Lab 207	1	984	1011.0	0.12	25.0	10.00	0.80	**464**	*371*	0.884
Prop (B2) FOT Stor 207A	1	78	106.0	0.06	0.0	0.00	0.80	**8**	*6*	1.254
B2-2										
Prop (B2) Lang Class 208	1	779	774.0	0.12	27.0	10.00	0.80	**454**	*363*	1.000
B2-3										
Prop (B2) Corridor 200C	1	91	825.0	0.06	0.0	0.00	0.80	**62**	*50*	0.823
Prop (B2) Classroom 205	1	748	771.0	0.12	28.0	10.00	0.80	**466**	*373*	0.881
B2-4										
Prop (B2) Classroom 206	1	620	780.0	0.12	28.0	10.00	0.80	**467**	*374*	1.000
B2-5										
Prop (B2) Chemistry 201A	1	1487	1310.0	0.12	33.0	10.00	0.80	**609**	*487*	0.918
Prop (B2) Chem Stor 201B	1	19	97.0	0.06	0.0	0.00	0.80	**7**	*6*	0.935
Prop (B2) Bio Stor 202B	1	18	96.0	0.06	0.0	0.00	0.80	**7**	*6*	0.935
B2-6										
Prop (B2) Biology 202A	1	1200	1327.0	0.12	33.0	10.00	0.80	**612**	*489*	0.786
Prop (B2) Prep 201C	1	500	204.0	0.06	0.0	0.00	0.80	**15**	*12*	1.265
Prop (B2) Corridor 200B	1	29	171.0	0.06	0.0	0.00	0.80	**13**	*10*	0.856
B2-7										
Prop (B2) Classroom 203	1	471	808.0	0.12	28.0	10.00	0.80	**471**	*377*	1.000
B2-8										
Prop (B2) Pride 204	1	494	573.0	0.12	20.0	10.00	0.80	**336**	*269*	1.000
B2-9										
Prop (B2) Pride 202	1	484	545.0	0.12	19.0	10.00	0.80	**319**	*255*	1.000
B2-10										
Prop (B2) CorStair 200A	1	106	959.0	0.06	0.0	0.00	0.80	**72**	*58*	0.713
Prop (B2) Collab 201	1	201	342.0	0.12	12.0	10.00	0.80	**201**	*161*	0.393
Prop (B2) Pride Off 209A	1	295	218.0	0.06	1.0	5.00	0.80	**23**	*18*	1.316
B2-11										
Prop (B2) Classroom 210	1	467	781.0	0.12	28.0	10.00	0.80	**467**	*374*	1.000
B2-12										
Prop (B2) Pride 209	1	485	547.0	0.12	19.0	10.00	0.80	**320**	*256*	1.000
B2-13										
Prop (B2) Pride 211	1	493	570.0	0.12	20.0	10.00	0.80	**336**	*268*	1.000
B2-14										
Prop (B2) Classroom 212	1	724	789.0	0.12	28.0	10.00	0.80	**468**	*375*	0.874
Prop (B2) Corridor 200D	1	126	1140.0	0.06	0.0	0.00	0.80	**86**	*68*	0.842
B2-15										
Prop (B2) Classroom 213	1	622	794.0	0.12	28.0	10.00	0.80	**469**	*375*	0.840
Prop (B2) Women 215B	1	31	234.0	0.06	0.0	0.00	0.80	**18**	*14*	1.028
Prop (B2) Toilet 219	1	8	63.0	0.06	0.0	0.00	0.80	**5**	*4*	1.028
B2-16										
Prop (B2) Classroom 214	1	467	779.0	0.12	28.0	10.00	0.80	**467**	*373*	1.000
C2-1										
Prop (C2) Physics 220	1	1025	1199.0	0.12	30.0	10.00	0.80	**555**	*444*	1.000
C2-2										
Prop (C2) Corridor 200	1	264	2396.0	0.06	0.0	0.00	0.80	**180**	*144*	0.649
Prop (C2) Resource 223	1	235	301.0	0.06	12.0	5.00	0.80	**98**	*78*	0.913
Prop (C2) Planning 224A	1	383	420.0	0.06	8.0	5.00	0.80	**81**	*65*	1.116
Prop (B2) Men 215A (C2)	1	26	193.0	0.06	0.0	0.00	0.80	**14**	*12*	0.763
C2-3										
Prop (C2) Classroom 228	1	814	777.0	0.12	31.0	10.00	0.80	**504**	*403*	1.000
C2-4										
Prop (C2) Classroom 229	1	1243	889.0	0.12	31.0	10.00	0.80	**521**	*417*	1.000
C2-5										
Prop (C2) Classroom 230	1	961	1082.0	0.12	33.0	10.00	0.80	**575**	*460*	1.000
C2-6										
Prop (C2) VP Office 227	1	74	190.0	0.06	1.0	5.00	0.80	**21**	*16*	0.841
Prop (C2) Storage 226	1	181	108.0	0.06	0.0	0.00	0.80	**8**	*6*	1.074
Prop (C2) Conf 226	1	271	161.0	0.06	6.0	5.00	0.80	**50**	*40*	0.936
C2-7										
Prop (C2) Black Box 231	1	364	1526.0	0.06	20.0	10.00	0.80	**364**	*292*	1.000
C2-8										
Prop (C2) Biology 233	1	683	1300.0	0.12	31.0	10.00	0.80	**583**	*466*	1.000
B3-1										
Prop (B3) Planning 309	1	446	304.0	0.06	15.0	5.00	0.80	**117**	*93*	0.944
Prop (B3) Col Stor 310	1	101	105.0	0.06	0.0	0.00	0.80	**8**	*6*	1.127
Prop (B3) Resource+ 308	1	346	350.0	0.06	13.0	5.00	0.80	**108**	*86*	0.894
Prop (B3) Collab 307	1	405	263.0	0.06	13.0	5.00	0.80	**101**	*81*	0.956
B3-2										
Prop (B3) Classroom 306	1	809	762.0	0.12	28.0	10.00	0.80	**464**	*371*	1.000
B3-3										
Prop (B3) Classroom 304	1	777	776.0	0.12	28.0	10.00	0.80	**466**	*373*	0.860
Prop (B3) Corridor 300B	1	150	888.0	0.06	0.0	0.00	0.80	**67**	*53*	1.017
B3-4										
Prop (B3) Classroom 305	1	624	781.0	0.12	28.0	10.00	0.80	**467**	*374*	1.000
B3-5										
Prop (B3) Classroom 302	1	813	808.0	0.12	28.0	10.00	0.80	**471**	*377*	1.000
B3-6										
Prop (B3) Classroom 303	1	651	769.0	0.12	28.0	10.00	0.80	**465**	*372*	1.000
B3-7										
Prop (B3) Science MS 301	1	1026	1269.0	0.12	32.0	10.00	0.80	**590**	*472*	0.768
Prop (B3) Cor/Stair 300A	1	526	1009.0	0.06	0.0	0.00	0.80	**76**	*61*	1.199
B3-8										
Prop (B3) Classroom 311	1	812	800.0	0.12	28.0	10.00	0.80	**470**	*376*	1.000
B3-9										
Prop (B3) Classroom 312	1	653	781.0	0.12	28.0	10.00	0.80	**467**	*374*	1.000
B3-10										
Prop (B3) Classroom 313	1	752	787.0	0.12	28.0	10.00	0.80	**468**	*374*	0.844
Prop (B3) Corridor 300D	1	208	1230.0	0.06	0.0	0.00	0.80	**92**	*74*	1.024
B3-11										
Prop (B3) Classroom 314	1	619	740.0	0.12	28.0	10.00	0.80	**461**	*369*	0.827
Prop (B3) Women 319	1	45	236.0	0.06	0.0	0.00	0.80	**18**	*14*	1.176
Prop (B3) Toilet 322	1	12	64.0	0.06	0.0	0.00	0.80	**5**	*4*	1.176
B3-12										
Prop (B3) Classroom 315	1	470	803.0	0.12	28.0	10.00	0.80	**470**	*376*	1.000
C3-1										
Prop (C3) Physics 331	1	1192	1358.0	0.18	29.0	10.00	0.80	**668**	*534*	1.000
C3-2										
Prop (C3) Corridor 300	1	409	2396.0	0.06	0.0	0.00	0.80	**180**	*144*	0.829
Prop (C3) Planning 332A	1	418	420.0	0.06	8.0	5.00	0.80	**81**	*65*	1.074
Prop (C3) Resource 332B	1	250	301.0	0.06	12.0	5.00	0.80	**98**	*78*	0.877
Prop (B3) Men 318 (C3)	1	38	201.0	0.06	0.0	0.00	0.80	**15**	*12*	0.872
C3-3										
Prop (C3) Art Studio 337	1	1464	1337.0	0.18	27.0	10.00	0.80	**638**	*511*	1.000
C3-4										
Prop (C3) Art Studio 338	1	1274	1373.0	0.18	28.0	10.00	0.80	**659**	*527*	1.000
C3-5										
Prop (C3) Collab 326	1	2254	1300.0	0.06	85.0	7.50	0.80	**894**	*716*	1.000
C3-6										
Prop (C3) Ins Music 339	1	1101	1641.0	0.06	60.0	10.00	0.80	**873**	*698*	1.000

COMcheck Software Version 4.0.2.4
Mechanical Compliance Certificate

Project Information

Energy Code:	2012 IECC
Project Title:	Additions & Alterations at Robert Poole
Location:	Baltimore, Maryland
Climate Zone:	4a
Project Type:	Addition

Construction Site:
1300 W 36th St.
Baltimore, MD 21211

Owner/Agent:
Baltimore City Public Schools

Designer/Contractor:
JRS Architects
2010 Clipper Park Rd
Baltimore, MD 21211

Mechanical Systems List

Quantity	System Type & Description
7	SS-1,3,4,5,6,7,8 (Single Zone): Cooling: 1 each - Split System, Capacity = 13 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: None Proposed Efficiency = 13.00 SEER, Required Efficiency = 13.00 SEER Fan System: Unspecified
1	SS-2 (Single Zone): Cooling: 1 each - Split System, Capacity = 32 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: None Proposed Efficiency = 13.00 SEER, Required Efficiency = 13.00 SEER Fan System: Unspecified
7	GSHP EXHF0087 (Single Zone): Ground Source Heat Pump Heating Mode: Capacity = 7 kBtu/h, Proposed Efficiency = 3.40 COP, Required Efficiency = 3.10 COP Cooling Mode: Capacity = 8 kBtu/h, Proposed Efficiency = 17.40 EER, Required Efficiency = 13.40 EER Fan System: Unspecified
6	GSHP EXHF0097 (Single Zone): Ground Source Heat Pump Heating Mode: Capacity = 9 kBtu/h, Proposed Efficiency = 3.80 COP, Required Efficiency = 3.10 COP Cooling Mode: Capacity = 9 kBtu/h, Proposed Efficiency = 16.90 EER, Required Efficiency = 13.40 EER Fan System: Unspecified
7	GSHP EXHF0127 (Single Zone): Ground Source Heat Pump Heating Mode: Capacity = 11 kBtu/h, Proposed Efficiency = 3.60 COP, Required Efficiency = 3.10 COP Cooling Mode: Capacity = 12 kBtu/h, Proposed Efficiency = 18.80 EER, Required Efficiency = 13.40 EER Fan System: Unspecified
15	GSHP EXHF0157 (Single Zone): Ground Source Heat Pump Heating Mode: Capacity = 14 kBtu/h, Proposed Efficiency = 3.40 COP, Required Efficiency = 3.10 COP Cooling Mode: Capacity = 15 kBtu/h, Proposed Efficiency = 17.90 EER, Required Efficiency = 13.40 EER

Quantity	System Type & Description
	Fan System: Unspecified
20	GSHP EXHF0187 (Single Zone): Ground Source Heat Pump Heating Mode: Capacity = 18 kBtu/h, Proposed Efficiency = 3.60 COP, Required Efficiency = 3.10 COP Cooling Mode: Capacity = 19 kBtu/h, Proposed Efficiency = 18.70 EER, Required Efficiency = 13.40 EER Fan System: Unspecified
13	GSHP VSHE0244 (Single Zone): Ground Source Heat Pump Heating Mode: Capacity = 24 kBtu/h, Proposed Efficiency = 6.44 COP, Required Efficiency = 3.10 COP Cooling Mode: Capacity = 26 kBtu/h, Proposed Efficiency = 18.30 EER, Required Efficiency = 13.40 EER Fan System: Unspecified
6	GSHP VSHE0334 (Single Zone): Ground Source Heat Pump Heating Mode: Capacity = 31 kBtu/h, Proposed Efficiency = 5.85 COP, Required Efficiency = 3.10 COP Cooling Mode: Capacity = 35 kBtu/h, , Water Economizer Proposed Efficiency = 15.80 EER, Required Efficiency = 13.40 EER Fan System: Unspecified
6	GSHP VSHE0424 (Single Zone): Ground Source Heat Pump Heating Mode: Capacity = 40 kBtu/h, Proposed Efficiency = 5.70 COP, Required Efficiency = 3.10 COP Cooling Mode: Capacity = 45 kBtu/h, , Water Economizer Proposed Efficiency = 18.60 EER, Required Efficiency = 13.40 EER Fan System: Unspecified
4	GSHP VSHE0604 (Single Zone): Ground Source Heat Pump Heating Mode: Capacity = 62 kBtu/h, Proposed Efficiency = 5.30 COP, Required Efficiency = 3.10 COP Cooling Mode: Capacity = 62 kBtu/h, , Water Economizer Proposed Efficiency = 14.80 EER, Required Efficiency = 13.40 EER Fan System: Unspecified
1	DOAS-1 (Multiple-Zone): Ground Source Heat Pump Heating Mode: Capacity = 187 kBtu/h, No minimum efficiency requirement applies Cooling Mode: Capacity = 202 kBtu/h, No minimum efficiency requirement applies Fan System: DOAU-1 -- Compliance (Brake HP method) : Passes Fans: FAN1 Supply, Multi-Zone VAV, 4545 CFM, 4.0 motor nameplate hp, 4.2 brake hp FAN 2 Exhaust, Multi-Zone VAV, 4545 CFM, 4.0 motor nameplate hp, 3.3 brake hp Pressure Drop Credits: Fully ducted return and/or exhaust air systems, 0.5501 credit Particulate filtration credit: MERV 13 through 15, 0.9902 credit Sound attenuation section, 0.1650 credit Heat recovery device, other than coil runaround loop, 0.7327 credit
1	DOAS-2 (Multiple-Zone): Ground Source Heat Pump Heating Mode: Capacity = 418 kBtu/h, No minimum efficiency requirement applies Cooling Mode: Capacity = 496 kBtu/h, No minimum efficiency requirement applies Fan System: DOAU-2 -- Compliance (Brake HP method) : Passes

Quantity	System Type & Description
	Fans: FAN 1 Supply, Multi-Zone VAV, 11230 CFM, 5.0 motor nameplate hp, 7.8 brake hp FAN 2 Exhaust, Multi-Zone VAV, 11230 CFM, 5.0 motor nameplate hp, 7.2 brake hp Pressure Drop Credits: Fully ducted return and/or exhaust air systems, 1.3592 credit Particulate filtration credit: MERV 13 through 15, 2.4466 credit Sound attenuation section, 0.4078 credit Heat recovery device, other than coil runaround loop, 2.2890 credit
1	DOAS-3 (Multiple-Zone): Ground Source Heat Pump Heating Mode: Capacity = 417 kBtu/h, No minimum efficiency requirement applies Cooling Mode: Capacity = 491 kBtu/h, No minimum efficiency requirement applies Fan System: DOAU-3 -- Compliance (Brake HP method) : Passes Fans: FAN 1 Supply, Multi-Zone VAV, 10725 CFM, 5.0 motor nameplate hp, 7.9 brake hp FAN 2 Exhaust, Multi-Zone VAV, 10725 CFM, 5.0 motor nameplate hp, 7.1 brake hp Pressure Drop Credits: Fully ducted return and/or exhaust air systems, 1.2981 credit Sound attenuation section, 0.3894 credit Particulate filtration credit: MERV 13 through 15, 2.3366 credit Heat recovery device, other than coil runaround loop, 2.2431 credit
1	DOAS-4 (Multiple-Zone): Ground Source Heat Pump Heating Mode: Capacity = 425 kBtu/h, No minimum efficiency requirement applies Cooling Mode: Capacity = 500 kBtu/h, No minimum efficiency requirement applies Fan System: DOAU-4 -- Compliance (Brake HP method) : Passes Fans: FAN 1 Supply, Multi-Zone VAV, 11935 CFM, 7.5 motor nameplate hp, 9.7 brake hp FAN 2 Exhaust, Multi-Zone VAV, 11935 CFM, 5.0 motor nameplate hp, 8.3 brake hp Pressure Drop Credits: Fully ducted return and/or exhaust air systems, 1.4446 credit Particulate filtration credit: MERV 13 through 15, 2.6002 credit Sound attenuation section, 0.4334 credit Heat recovery device, other than coil runaround loop, 2.3691 credit
1	RTU-1 (Multiple-Zone): Ground Source Heat Pump Heating Mode: Capacity = 341 kBtu/h, No minimum efficiency requirement applies Cooling Mode: Capacity = 374 kBtu/h, No minimum efficiency requirement applies Fan System: RTU-1 -- Compliance (Brake HP method) : Passes Fans: FAN 1 Supply, Multi-Zone VAV, 12830 CFM, 7.5 motor nameplate hp, 9.1 brake hp FAN 2 Exhaust, Multi-Zone VAV, 3800 CFM, 2.0 motor nameplate hp, 1.1 brake hp Pressure Drop Credits: Fully ducted return and/or exhaust air systems, 1.5529 credit Particulate filtration credit: MERV 13 through 15, 2.6972 credit Heat recovery device, other than coil runaround loop, 3.5123 credit
1	MAU-1 (Single Zone): Heating: 1 each - Central Furnace, Gas, Capacity = 280 kBtu/h Proposed Efficiency = 80.00% Et, Required Efficiency = 80.00% Et Fan System: MAU -- Compliance (Motor nameplate HP method) : Passes Fans:

Quantity	System Type & Description
	FAN 1 Supply, Constant Volume, 250 CFM, 0.0 motor nameplate hp
8	UH's (Unknown): Heating: 1 each - Unit Heater, Electric, Capacity = 11 kBtu/h No minimum efficiency requirement applies Fan System: UH -- Compliance (Motor nameplate HP method) : Passes Fans: FAN 1 Supply, Constant Volume, 250 CFM, 0.0 motor nameplate hp
20	CUH's (Unknown): Heating: 1 each - Unit Heater, Electric, Capacity = 7 kBtu/h No minimum efficiency requirement applies Fan System: CUH -- Compliance (Motor nameplate HP method) : Passes Fans: FAN 1 Supply, Constant Volume, 250 CFM, 0.1 motor nameplate hp
4	CUH's 2 (Unknown): Heating: 1 each - Unit Heater, Electric, Capacity = 10 kBtu/h No minimum efficiency requirement applies Fan System: CUH -- Compliance (Motor nameplate HP method) : Passes Fans: FAN 1 Supply, Constant Volume, 250 CFM, 0.1 motor nameplate hp
6	EBB's (Unknown): Heating: 1 each - Unit Heater, Electric, Capacity = 3 kBtu/h No minimum efficiency requirement applies Fan System: None

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2012 IECC requirements in *COMcheck* Version 4.0.2.4 and to comply with the mandatory requirements listed in the Inspection Checklist.

Mitchell E. Peters, EIT Mechanical Engineer — Signature — 4/27/16

Name - Title — Date

Robert Poole School - Exhaust

Space	Area	Floor	Usage	Floor Area (sq ft)	Exhaust Rate (CFM/sq ft)	Fixtures (#)	Exhaust Rate (CFM/fixture)	Required Exhaust (CFM)	Provided Exhaust (CFM)
Women 052	A	Base	Toilet Room	150		2	50	100	100
Men 050	A	Base	Toilet Room	133		2	50	100	100
JC 051	A	Base	Janitorial	34		1	50	50	50
Art Studio 046	A	Base	Art Classroom	1150	0.70			805	810
Env Sci 044	A	Base	Science Laboratory	1172	1.00			1172	1175
Men 125	A	1st	Toilet Room	125		2	50	100	100
Women 126	A	1st	Toilet Room	126		2	50	100	100
PLTW CR	A	1st	Science Laboratory	1180	1.00			1180	1185
Men 009	B	Base	Toilet Room	183		5	50	250	250
Women 008	B	Base	Toilet Room	250		5	50	250	250
JC 010	B	Base	Janitorial	65		1	50	50	50
Toilet 016	B	Base	Toilet Room	50		1	50	50	50
Toilet/Shower 024	B	Base	Toilet/Shower Room	122		1 / 1	50 / 20	70	100
Toilet 103K	B	1st	Toilet Room	85		1	50	50	90
Toilet 103G	B	1st	Toilet Room	47		1	50	50	90
Toilet 101K	B	1st	Toilet Room	47		1	50	50	60
Toilet/Shower 116	B	1st	Toilet/Shower Room	96		1 / 1	50 / 20	70	100
Toilet 109C	B	1st	Toilet Room	50		1	50	50	75
JC 108	B	1st	Janitorial	34		1	50	50	75
Chemistry 201A	B	2nd	Science Laboratory	1360	1.00			1360	1365
Biology 202A	B	2nd	Science Laboratory	1410	1.00			1410	1465
Classroom 211	B	2nd	Science Laboratory	590	1.00			590	655
Toilet 216	B	2nd	Toilet Room	60		1	50	50	60
Women 215	B	2nd	Toilet Room	215		5	50	250	250
Men 217	B	2nd	Toilet Room	195		5	50	250	250
Science 301	B	3rd	Science Laboratory	1072	1.00			1072	1080
Toilet 317	B	3rd	Toilet Room	60		1	50	50	70
Women 316	B	3rd	Toilet Room	216		5	50	250	250
Men 318	B	3rd	Toilet Room	195		5	50	250	250
Locker 142A	C	1st	Locker/Dressing Room	43	0.25	1	50	61	75
Toilet 142B	C	1st	Toilet Room	48		1	50	50	50
JC/Soap 142D	C	1st	Janitorial	35		1	50	50	50
Team-Men's 154D	C	1st	Sports Locker Room	243	0.50			122	150
Locker/Toilet 154C	C	1st	Toilet/Shower/Locker	109	0.25	1 / 1	50 / 20	97	100
Lockers -Men's 154A	C	1st	Sports Locker Room	622	0.50			311	330
Showers-Men's 154E	C	1st	Shower Room	108		6	20	120	120
Toilet-Men's 154F	C	1st	Toilet Room	104		3	50	150	150
Showers-Women's 153E	C	1st	Shower Room	108		6	20	120	120
Toilet-Women's 153F	C	1st	Toilet Room	105		3	50	150	150
Ref Locker 151	C	1st	Toilet/Locker Room	75	0.25	1	50	69	100
Ref Locker 150	C	1st	Toilet/Locker Room	75	0.25	1	50	69	100
Lockers -Women's 153A	C	1st	Sports Locker Room	619	0.50			310	330
Team-Women's 153D	C	1st	Sports Locker Room	222	0.50			111	150
Locker/Toilet 153C	C	1st	Toilet/Shower/Locker	120	0.25	1 / 1	50 / 20	100	100
Women 143	C	1st	Toilet Room	246		5	50	250	250
Men 144	C	1st	Toilet Room	167		4	50	200	200
JC 145	C	1st	Janitorial	29		1	50	50	50
Physics 220	C	2nd	Science Laboratory	1084	1.00			1084	1195
JC 222	C	2nd	Janitorial	37		1	50	50	75
Toilet 225	C	2nd	Toilet Room	48		1	50	50	100
Biology 233	C	2nd	Science Laboratory	1360	1.00			1360	1360
Physics 321	C	3rd	Science Laboratory	1186	1.00			1186	1190
Toilet 325	C	3rd	Toilet Room	46		1	50	50	75
Art Studio 327	C	3rd	Art Classroom	1026	0.70			718	730
Art Studio 328	C	3rd	Art Classroom	1205	0.70			844	850

JRS ARCHITECTS
2010 Clipper Park Rd.
Suite 101
Baltimore, MD 21211
410.235.7256

ASSOCIATE ARCHITECT
SCHRADER GROUP ARCHITECTURE LLC
161 LEVERINGTON AVE, SUITE 105
PHILADELPHIA, PA 19127

LANDSCAPE ARCHITECT
MAHAN RYKIEL ASSOCIATES
800 WYMAN PARK DR, SUITE 100
BALTIMORE, MD 21211

CIVIL ENGINEER
STV, INC.
7125 AMBASSADOR RD, SUITE 200
BALTIMORE, MD 21244

STRUCTURAL ENGINEER
ALBRECHT ENGINEERING
3500 BOSTON ST, SUITE 329
BALTIMORE, MD 21224

MEP ENGINEER
BRINJAC ENGINEERING
1800 N. CHARLES ST, SUITE 310
BALTIMORE, MD 21201

FOOD SERVICE
NYIKOS ASSOCIATES
18219A FLOWER HILL WAY
GAITHERSBURG, MD 20879

AV/IT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD, SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole
Building #056
1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/27/16	ADDENDUM #3

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
CALCULATIONS - MECHANICAL

M 701

7/26/2016 11:16:39 AM

ABBREVIATIONS

A	
(A)	ABANDON IN PLACE
AAV	AIR ADMITTANCE VALVE
AC	AIR COMPRESSOR
AD	ACCESS DOOR
AF	AIR FILTER
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
AV	ACID VENT
AW	ACID WASTE
C	
CA	COMPRESSED AIR
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CO	CLEANOUT
CO2	CARBON DIOXIDE
CW	COLD WATER (DOMESTIC)
D	
DBCP	DOUBLE CHECK (ASSEMBLY) BACKFLOW PREVENTOR
DE	DEINOIZED (WATER)
DER	DEINOIZED (WATER) RETURN
DES	DEINOIZED (WATER) SUPPLY
DF	DRINKING FOUNTAIN
DFU	DRAINAGE FIXTURE UNIT
DI	DISTILLED (WATER)
DIA	DIAMETER
DP	DIFFERENTIAL PRESSURE
DR	DRAIN
DWH	DOMESTIC WATER HEATER
DWR	DRINKING WATER RETURN
DWS	DRINKING WATER SUPPLY
E	
(E)	EXISTING
(ETR)	EXISTING TO REMAIN
ET	EXPANSION TANK
EW	EYE WASH
EW/S	EYE WASH/SAFETY SHOWER (COMBINATION)
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
F	
FC	FLEXIBLE CONNECTOR
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FFE	FINISHED FLOOR ELEVATION
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FR	FLOOR RECEPTOR
FS	FLOW SWITCH
FT	FEET
G	
GAS	(NATURAL) GAS
GCO	GRADE CLEANOUT
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GV	GAS VENT
H	
HB	HOSE BIBB
HP	HORSEPOWER
HW	HOT WATER (SUPPLY)
HWR	HOT WATER RETURN
HX	HEAT EXCHANGER
HZ	HERTZ
I	
IDW	INDIRECTE WASTE
IE	INVERT ELEVATION
IN	INCHES
K	
KW	KILOWATT(S)
L	
LA	LABORATORY (COMPRESSED) AIR
LAV	LAVATORY
LPG	LIQUIFIED PETROLEUM GAS (PROPANE)

ABBREVIATIONS

LV	LABAORATORY VACUUM
M	
MA	MEDICAL (COMPRESSED) AIR
MAV	MANUAL AIR VENT
MAX	MAXIMUM
MBH	1000 BTU PER HOUR
MIN	MINIMUM
MR	MOP RECEPTOR
MV	MEDICAL VACUUM
N	
N2	NITROGEN
N20	NITROUS OXIDE
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
P	
P	PUMP
PD	PUMP DISCHARGE
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PS	PRESSURE SWITCH
PSIA	POUNDS PER SQUARE INCH, ABSOLUTE
PSIG	POUNDS PER SQUARE INCH, GAUGE
R	
(R)	REPLACE
RD	ROOF DRAIN
RPM	REVOLUTIONS PER MINUTE
RPZ	PREDUCED PRESSURE ZONE (BACKFLOW PREVENTOR)
RWC	RAINWATER CONDUCTOR
RWR	REFRIGERATED (DOMESTIC) WATER RETURN
RWS	REFRIGERATED (DOMESTIC) WATER SUPPLY
S	
S	SINK
SAN	SANITARY (DRAIN/SEWER)
SF	SQUARE FOOT
SFU	SUPPLY FIXTURE UNIT
SH	SHOWER
SRWC	SECONDARY RAIN WATER CONDUCTOR
SS	SERVICE SINK
SSD	SUB-SOIL DRAIN
SSH	SAFETY SHOWER
ST	STORM (DRAIN/SEWER)
STACK	STACK
T	
TEMP	TEMPERATURE
TOS	TOP OF STEEL
V	
V	VENT (SANITARY)
VAC	VACUUM
VC	VACUUM CLEANING
VTR	VENT THROUGH ROOF
W	
W	WASTE
WAGD	WASTE ANESHTHESIA DISPOSAL
WC	WATER CLOSET
WCO	WALL CLEAN OUT
WH	WALL HYDRANT
WHA-X	WATER HAMMER ARRESTOR (SIZE)
X	
(X)	(REMOVE EXISTING)

PLUMBING LEGEND:

**ALL EXISTING ITEMS TO BE SHOWN HALFTONE*

- DOMESTIC COLD WATER
- HOT WATER (110°F UNLESS NOTED OTHERWISE)
- HOT WATER RETURN (CIRCULATION)
- SOIL OR WASTE (ABOVE FLOOR OR GRADE) - NEW
- SOIL OR WASTE (BELOW FLOOR OR GRADE) - NEW
- VENT
- RWC — RAINWATER CONDUCTOR
- SRWC — SECONDARY RAINWATER CONDUCTOR
- G — GAS
- GW — GREASE WASTE
- AW — ACID WASTE
- AV — ACID VENT
- ID — INDIRECT WASTE
- PD — PUMP DISCHARGE
- N2 — NITROGEN
- O2 — OXYGEN
- CO2 — CARBON DIOXIDE
- WAGD — WASTE ANESTHESIA GAS DISPOSAL
- CA — COMPRESSED AIR
- LA — LABORATORY COMPRESSED AIR
- MA — MEDICAL COMPRESSED AIR
- NPW — NON-POTABLE WATER
- CD — CONDENSATE
- VAC — VACUUM
- MV — MEDICAL VACUUM
- LV — LABORATORY VACUUM
- LPG — LIQUIFIED PETROLEUM GAS (PROPANE)
- DS — DOWNSPOUT
- DWS — DRINKING WATER SUPPLY
- DWR — DRINKING WATER RETURN
- PIPING TO BE REMOVED
- FCO — FLOOR CLEANOUT OR GRADE CLEANOUT
- CO — END OF LINE CLEANOUT
- TWO WAY CLEANOUT
- BLIND FLANGE OR END CAP
- TEE CONNECTION - STRAIGHT, DOWN, AND UP
- PIPE UP AND DOWN

- FLEXIBLE CONNECTION
- (1%) — DIRECTION OF FLOW & (SLOPE %)
- GATE VALVE
- BUTTERFLY VALVE
- BALL VALVE
- GLOBE VALVE
- AUTOMATIC 2-WAY CONTROL VALVE
- AUTOMATIC 3-WAY CONTROL VALVE
- PLUG VALVE/BALANCING COCK
- SOLENOID VALVE
- MOTOR OPERATED VALVE
- TRIPLE DUTY VALVE
- CHECK VALVE
- PRESSURE REDUCING VALVE
- VALVE IN VERTICAL
- SHOCK ARRESTOR
- UNION
- P-TRAP
- FLOOR DRAIN W/ P-TRAP
- FD- FLOOR DRAIN
- RD- ROOF DRAIN
- AD- AREA DRAIN
- FS FLOW SWITCH
- PUMP
- SAFETY VALVE OR PRESSURE RELIEF
- THERMOMETER
- STRAINER WITH BLOW-DOWN VALVE
- MANUAL AIR VENT
- AUTOMATIC AIR VENT
- PRESSURE GAUGE
- GAS COCK
- OS&Y VALVE
- HOSE BIBB/WALL HYDRANT
- WALL HYDRANT W/ LOCKED BOX
- P-1 STACK DESIGNATION
- BFP BACKFLOW PREVENTER
- DOUBLE CHECK VALVE BACKFLOW PREVENTER

GENERAL NOTES:

1. THE FOLLOWING NOTES ARE GENERAL IN NATURE AND PERTAIN TO THE ENTIRE PROJECT UNLESS OTHERWISE NOTED ON THE DRAWINGS WHERE THEY OCCUR.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS.
3. PRIOR TO BID, THE CONTRACTOR SHALL EXAMINE ALL PROJECT DRAWINGS TO DEVELOP A COMPLETE UNDERSTANDING OF THE PROJECT SCOPE. FAILURE TO REVIEW ALL CONTRACT DRAWINGS WILL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES TO PERFORM. ALL WORK REQUIRED. THE CONTRACTOR SHALL. UPON REVIEW OF THE DRAWINGS, ADVISE THE ENGINEER OF ANY DISCREPANCIES WHICH WILL AFFECT THE WORK REQUIRED.
4. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO ELIMINATE ANY CONFLICTS BETWEEN PIPING, DUCTWORK, AND ELECTRICAL WORK.
5. DRAWINGS ARE DIAGRAMMATIC; THEREFORE, THE CONTRACTOR SHALL MAKE ADJUSTMENTS AS REQUIRED FOR A COMPLETE INSTALLATION. CONTRACTOR SHALL CLOSELY EXAMINE ALL PROJECT DRAWINGS TO UNDERSTAND WORK REQUIRED AND TO AVOID INTERFERENCE WITH EXISTING AND NEW WORK SUCH AS DUCTS, PIPING, LIGHTING FIXTURES, STRUCTURAL BEAMS, ETC.
6. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND FEES AND ARRANGE FOR INSPECTIONS BY LOCAL AUTHORITIES.
7. PROTECT ALL EQUIPMENT AND FIXTURES STORED OR SET IN PLACE ON THE JOB.
8. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS, ROOM FINISHES, AND COORDINATION WITH ARCHITECTURAL PLANS BEFORE COMMENCING WORK.
9. ALL PIPING TO BE CONCEALED UNLESS OTHERWISE NOTED.
10. ALL VENT LINES SHALL BE INSTALLED VERTICAL OR SLOPED UP TO VTR.
11. EACH PLUMBING FIXTURE SHALL BE PROVIDED WITH AN ACCESSIBLE KEYLESS STOP ON SUPPLIES.
12. EACH RISER SHALL BE VALVED IN AN ACCESSIBLE LOCATION.
13. WORK INDICATED AS HAVING MINOR DETAILS OBVIOUSLY OMITTED FOR CLARITY SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
14. PAINTING OF EXISTING EXPOSED PIPING SHALL BE BY THE GENERAL CONTRACTOR. COLOR AS DIRECTED BY THE ARCHITECT. PAINTING OF NEW EXPOSED PIPING SHALL BE BY THIS CONTRACTOR.
15. DRAINAGE, SEWAGE, OR PLUMBING WORK SHALL NOT BE COVERED OR CONCEALED IN ANY MANNER UNTIL AFTER IT IS INSPECTED AND APPROVED BY THE PLUMBING INSPECTOR.
16. THE APPROPRIATE SECTIONS OF THE FOLLOWING CODES APPLY TO THE WORK OF THIS CONTRACT:
    A. THE INTERNATIONAL PLUMBING CODE: 2012 EDITION
17. PROVIDE CLEANOUTS ON HORIZONTAL DRAINS NOT MORE THAN 100 FEET APART, AT EACH CHANGE OF DIRECTION GREATER THAN 45º OR WHEN A CHANGE OF DIRECTION OCCURS FOR EVERY 40 FEET OF PIPING DEVELOPED LENGTH, AT THE BASE OF EACH STACK, AND AT EVERY HORIZONTAL DRAIN OFFSET. ALL CLEANOUTS SHALL BE ACCESSIBLE AND HAVE PROPER CLEARANCE FOR SERVICE.

TYPICAL ANNOTATION:

- AREA OF REVISION
- REVISION SEQUENCE NUMBER
- KEYED NOTE
- DEMOLITION KEYED NOTE
- POINT OF CONNECTION OF EXISTING SYSTEM
- POINT OF DISCONNECTION OF EXISTING SYSTEM
- DETAIL NUMBER / DRAWING NUMBER
- EQUIPMENT ABBREVIATION / EQUIPMENT NUMBER
- EQUIPMENT ABBREVIATION / EQUIPMENT NUMBER / XX UNIQUE IDENTIFIER
- DETAIL NUMBER / DRAWING NUMBER
- DETAIL NUMBER / DRAWING NUMBER
- 1 / A101 VIEW REFERENCE

SHEET LIST

Sheet Number	Sheet Name
P 001	SYMBOLS, LEGENDS, AND ABBREVIATIONS - PLUMBING
P 010	SITE PLAN - PLUMBING
P 021	DEMO BASEMENT, FIRST & SECOND FLOOR PLAN A - PLUMBING
P 022	DEMO BASEMENT FLOOR PLAN B - PLUMBING
P 023	DEMO FIRST & SECOND FLOOR PLAN B - PLUMBING
P 024	DEMO THIRD FLOOR PLAN B - PLUMBING
P 025	DEMO ATTIC PLAN PLAN B - PLUMBING
P 100	UNDERFLOOR PLAN - PLUMBING
P 101	Unnamed
P 111	NEW WORK BASEMENT & FIRST FLOOR PLAN A - PLUMBING
P 112	NEW WORK SECOND & ROOF PLAN A - PLUMBING
P 113	NEW WORK BASEMENT PLAN B - PLUMBING
P 114	NEW WORK FIRST FLOOR PLAN B - PLUMBING
P 115	NEW WORK FIRST FLOOR PLAN C - PLUMBING
P 116	NEW WORK SECOND FLOOR PLAN B - PLUMBING
P 117	NEW WORK SECOND FLOOR PLAN C - PLUMBING
P 118	NEW WORK THIRD FLOOR PLAN B - PLUMBING
P 119	NEW WORK THIRD FLOOR PLAN C - PLUMBING
P 120	NEW WORK ROOF PLAN B - PLUMBING
P 121	NEW WORK ROOF PLAN C - PLUMBING
P 400	ENLARGED PLANS - PLUMBING
P 401	ENLARGED PLANS - PLUMBING
P 500	STORMWATER - AREA A - PLUMBING
P 501	STORMWATER - AREA B - PLUMBING
P 502	STORMWATER - AREA C - PLUMBING
P 510	SANITARY AND VENT - AREA A & B - PLUMBING
P 511	SANITARY AND VENT - AREA C - PLUMBING
P 512	SANITARY AND VENT - ENLARGED PLANS - PLUMBING
P 520	DOMESTIC WATER - AREA A & B - PLUMBING
P 521	DOMESTIC WATER - AREA C - PLUMBING
P 522	DOMESTIC WATER - ENLARGED PLANS - PLUMBING
P 530	NATURAL GAS - AREA A & B - PLUMBING
P 531	NATURAL GAS - AREA C - PLUMBING
P 600	SCHEDULES - PLUMBING
P 700	DETAILS - PLUMBING

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

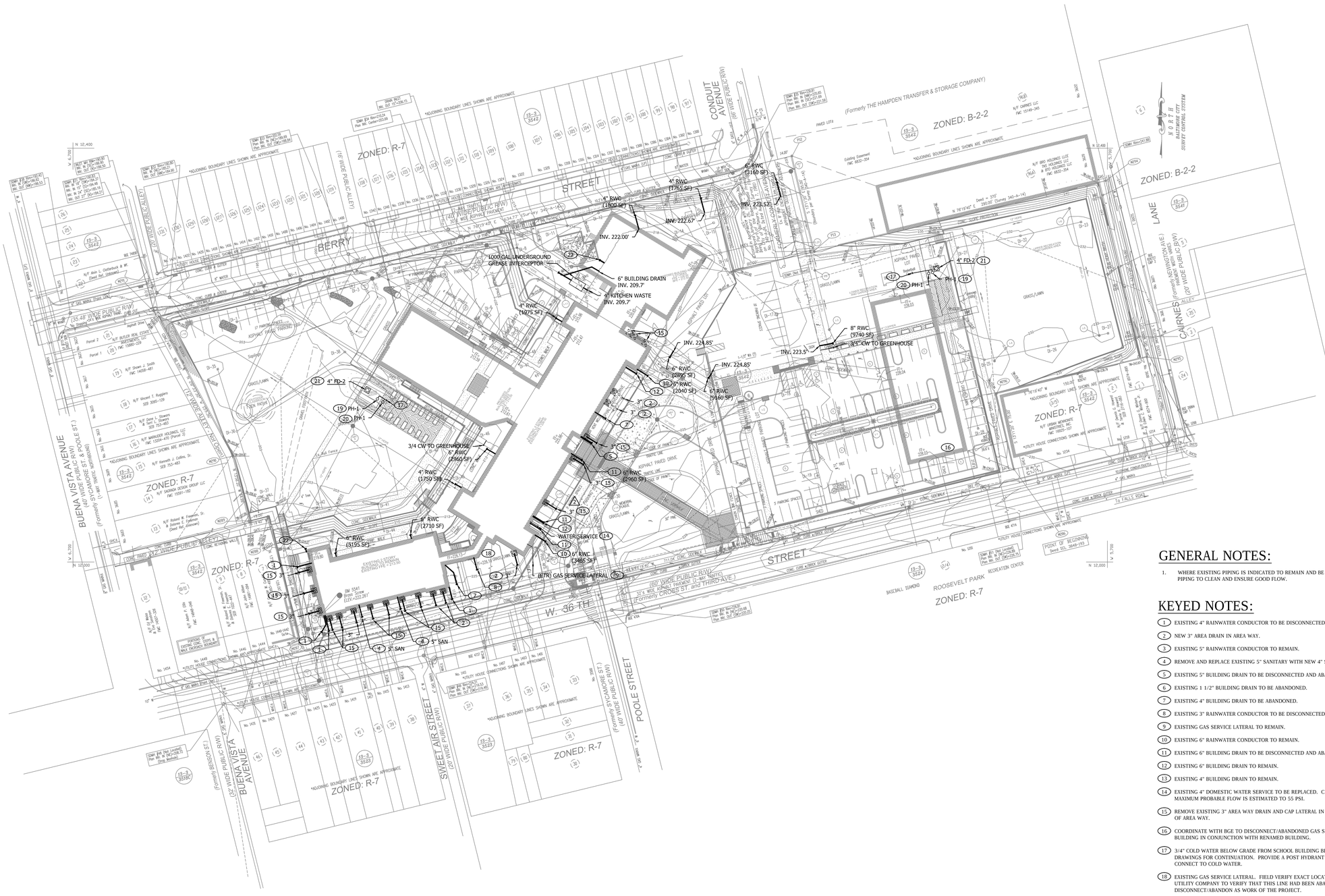
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
SYMBOLS, LEGENDS, AND ABBREVIATIONS - PLUMBING

P 001

7/26/2016 11:44:01 AM


ZONED: R-7
ZONED: B-2-2
BERRY STREET
CONDUIT AVENUE (66' WIDE PUBLIC R/W)
BUENA VISTA AVENUE (66' WIDE PUBLIC R/W) (Formerly SYCAMORE ST. & POOLE ST.)
(Formerly BENSON ST.) (32' WIDE PUBLIC R/W)
SWEET AIR STREET (40' WIDE PUBLIC R/W)
W. 36TH STREET (60' WIDE PUBLIC R/W) (Formerly CROSS ST. and THIRD AVE.)
POOLE STREET
LANE (Formerly NEWINGTON AVE.) (PUBLIC R/W) (20' WIDE PUBLIC R/W)
CARNES ALLEY
(Formerly THE HAMPDEN TRANSFER & STORAGE COMPANY)
ROOSEVELT PARK
BASEBALL DIAMONDS
RECREATION CENTER
*ADJOINING BOUNDARY LINES SHOWN ARE APPROXIMATE
1000 GAL. UNDERGROUND GREASE INTERCEPTOR
6" BUILDING DRAIN INV. 209.7'
3" KITCHEN WASTE INV. 209.7'
4" RWC (1075 SF)
4" RWC (1800 SF)
4" RWC (1750 SF)
4" RWC (3160 SF)
INV. 222.00'
INV. 222.67'
INV. 223.52'
INV. 224.85'
6" RWC (2895 SF)
6" RWC (2040 SF)
6" RWC (9160 SF)
8" RWC (9740 SF)
3/4" CW TO GREENHOUSE
INV. 223.5'
6" RWC (3960 SF)
3/4" CW TO GREENHOUSE
8" RWC (2710 SF)
6" RWC (3195 SF)
6" RWC (3465 SF)
WATER SERVICE
(ETR) GAS SERVICE LATERAL
4" FD-2
PH-1
3" SAN
5" SAN
JM 5543 Brass Screw ELEV.=222.26'
EXISTING 6" RWC TO REMAIN
EXISTING 5" RWC TO REMAIN
EXISTING 4" RWC TO REMAIN
EXISTING 3" RWC TO REMAIN
EXISTING 1 1/2" RWC TO REMAIN
EXISTING 5" BUILDING DRAIN TO REMAIN
EXISTING 4" BUILDING DRAIN TO REMAIN
EXISTING 3" BUILDING DRAIN TO REMAIN
EXISTING 1 1/2" BUILDING DRAIN TO REMAIN
EXISTING 6" BUILDING DRAIN TO BE DISCONNECTED AND ABANDONED
EXISTING 5" BUILDING DRAIN TO BE DISCONNECTED AND ABANDONED
EXISTING 4" BUILDING DRAIN TO BE DISCONNECTED AND ABANDONED
EXISTING 3" BUILDING DRAIN TO BE DISCONNECTED AND ABANDONED
EXISTING 4" RAINWATER CONDUCTOR TO BE DISCONNECTED AND ABANDONED
EXISTING 5" RAINWATER CONDUCTOR TO BE DISCONNECTED AND ABANDONED
EXISTING 6" RAINWATER CONDUCTOR TO BE DISCONNECTED AND ABANDONED
EXISTING GAS SERVICE LATERAL TO BE DISCONNECTED AND ABANDONED
EXISTING 4" DOMESTIC WATER SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING 4" DOMESTIC WATER SERVICE TO REMAIN
EXISTING 4" FIRE SERVICE TO REMAIN
EXISTING 6" FIRE SERVICE TO REMAIN
EXISTING 8" FIRE SERVICE TO REMAIN
EXISTING 10" FIRE SERVICE TO REMAIN
EXISTING 12" FIRE SERVICE TO REMAIN
EXISTING 6" DOMESTIC WATER SERVICE TO REMAIN
EXISTING 8" DOMESTIC WATER SERVICE TO REMAIN
EXISTING 10" DOMESTIC WATER SERVICE TO REMAIN
EXISTING 12" DOMESTIC WATER SERVICE TO REMAIN
EXISTING 3" DOMESTIC WATER SERVICE TO REMAIN
EXISTING 3" DOMESTIC WATER SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING 4" DOMESTIC WATER SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING 6" DOMESTIC WATER SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING 8" DOMESTIC WATER SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING 10" DOMESTIC WATER SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING 12" DOMESTIC WATER SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING GAS SERVICE LATERAL TO REMAIN
EXISTING GAS SERVICE LATERAL TO BE DISCONNECTED AND ABANDONED
EXISTING 4" GAS SERVICE TO REMAIN
EXISTING 4" GAS SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING 6" GAS SERVICE TO REMAIN
EXISTING 6" GAS SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING 8" GAS SERVICE TO REMAIN
EXISTING 8" GAS SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING 10" GAS SERVICE TO REMAIN
EXISTING 10" GAS SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING 12" GAS SERVICE TO REMAIN
EXISTING 12" GAS SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING 3" GAS SERVICE TO REMAIN
EXISTING 3" GAS SERVICE TO BE DISCONNECTED AND ABANDONED
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EXISTING 12" GAS SERVICE TO REMAIN
EXISTING 12" GAS SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING GAS SERVICE LATERAL TO REMAIN
EXISTING GAS SERVICE LATERAL TO BE DISCONNECTED AND ABANDONED
EXISTING 4" GAS SERVICE TO REMAIN
EXISTING 4" GAS SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING 6" GAS SERVICE TO REMAIN
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EXISTING 8" GAS SERVICE TO REMAIN
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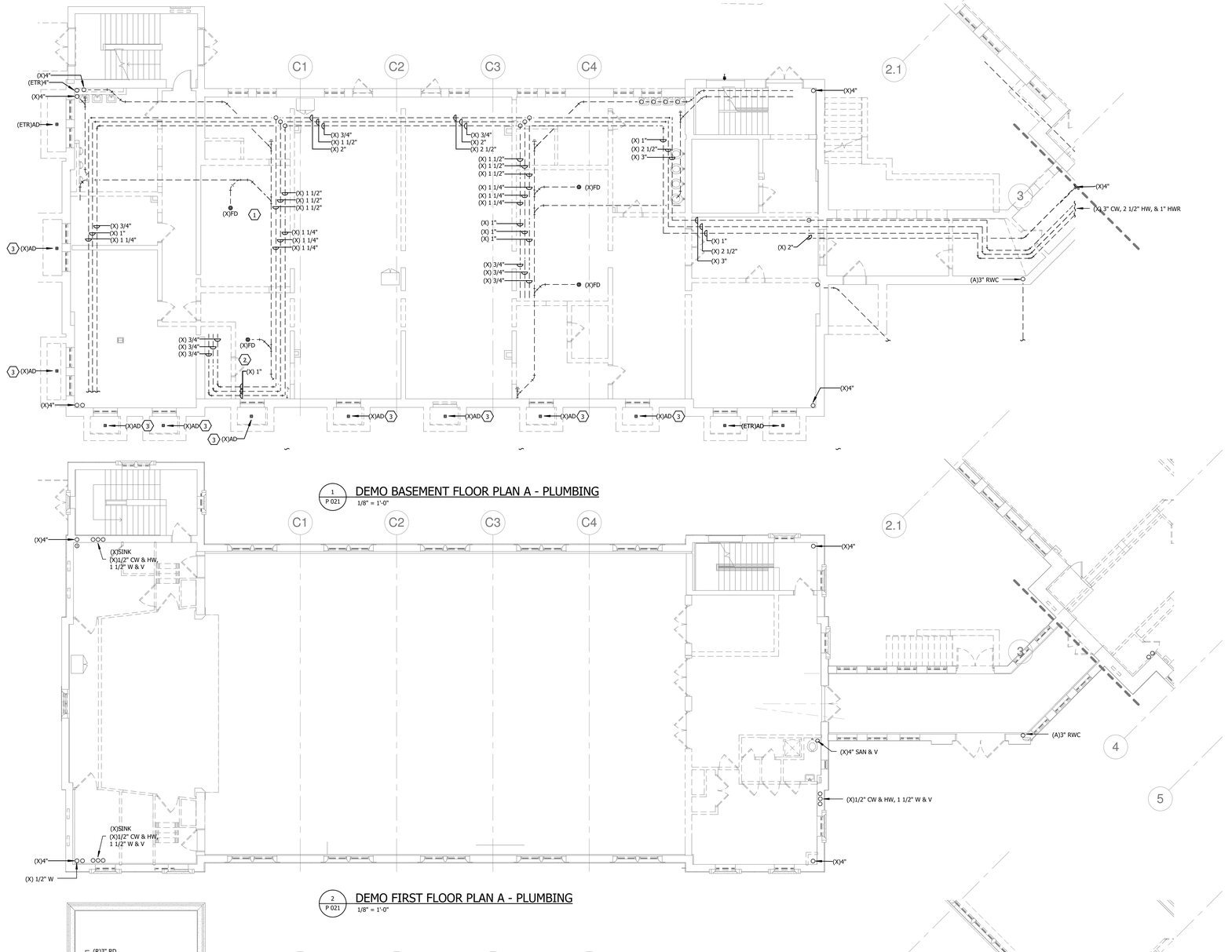
EXISTING 10" GAS SERVICE TO REMAIN
EXISTING 10" GAS SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING 12" GAS SERVICE TO REMAIN
EXISTING 12" GAS SERVICE TO BE DISCONNECTED AND ABANDONED
EXISTING 3" GAS SERVICE TO REMAIN
EXISTING 3" GAS SERVICE



1 P 021 DEMO BASEMENT FLOOR PLAN A - PLUMBING
1/8" = 1'-0"

2 P 021 DEMO FIRST FLOOR PLAN A - PLUMBING
1/8" = 1'-0"

3 P 021 DEMO SECOND FLOOR PLAN A - PLUMBING
1/8" = 1'-0"

GENERAL NOTES:

1. REMOVE ALL EXISTING PLUMBING SYSTEMS NOT INDICTED TO BE REUSED OR TO BE ABONDONED IN WALL OR BELOW SLAB ON GRADE FLOORS.

DEMOLITION KEYED NOTES:

1. REMOVE NINE INDIVIDUAL SHOWERS AND RELATED TRIM, PIPING, AND FLOOR DRAINS.
2. REMOVE SIX SHOWER HEADS AND RELATED TRIM, PIPING, AND FLOOR DRAINS.
3. REMOVE EXISTING AREA DRAIN AND CAP PIPING IN CONJUNCTION WITH REMOVAL OF AREA WAY.

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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LICENSE NO.: 19284
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

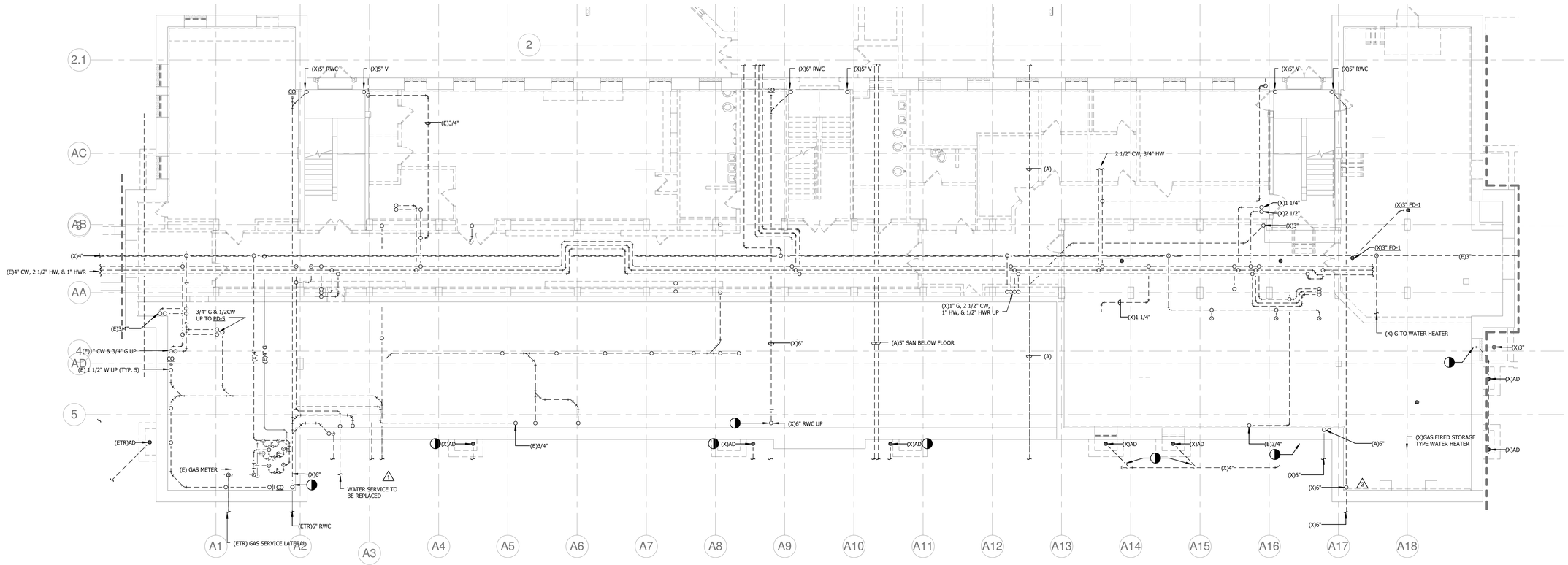
DRAWING NAME
DEMO BASEMENT, FIRST & SECOND FLOOR PLAN A - PLUMBING

P 021

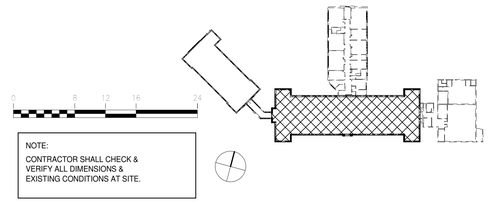
7/26/2016 11:44:22 AM

GENERAL NOTES:

1. REMOVE ALL EXISTING PLUMBING SYSTEMS NOT INDICTED TO BE REUSED OR TO BE ABONDONED IN WALL OR BELOW SLAB ON GRADE FLOORS.



1 / P 022 DEMO BASEMENT FLOOR PLAN B - PLUMBING
1/8" = 1'-0"



NOTE:
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7/26/2016 11:44:35 AM

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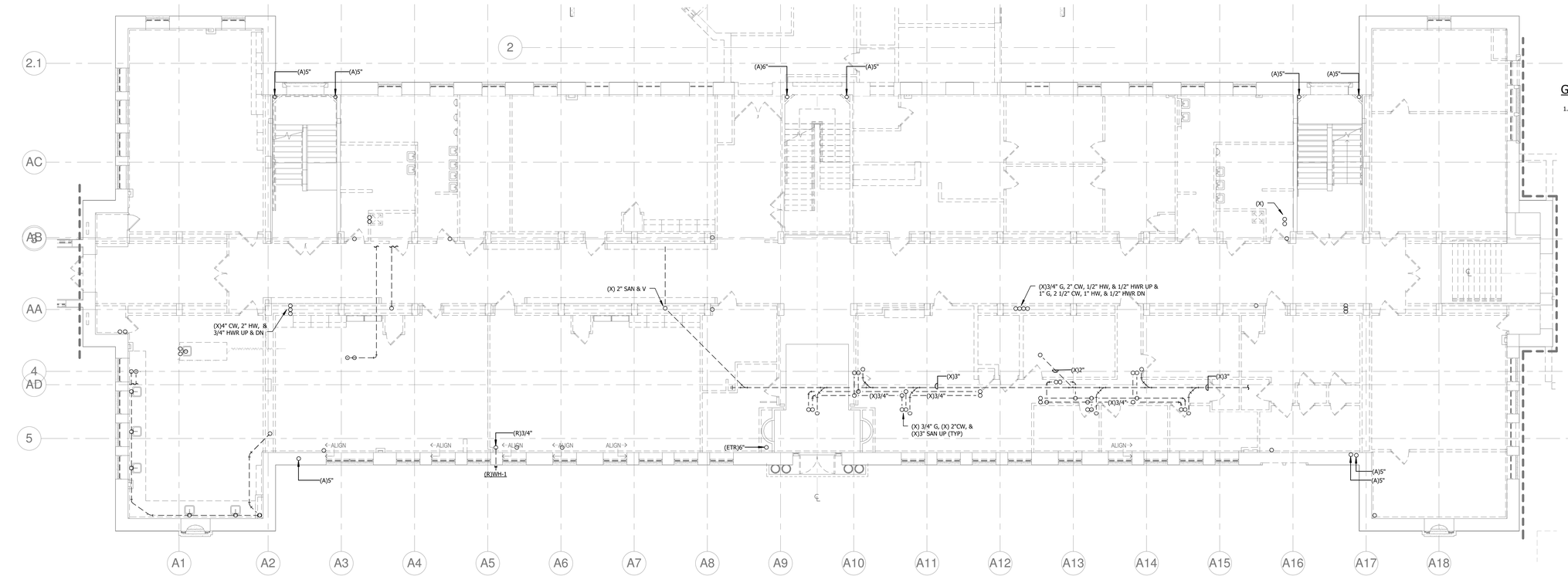
LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2
2	04/27/16	ADDENDUM #3

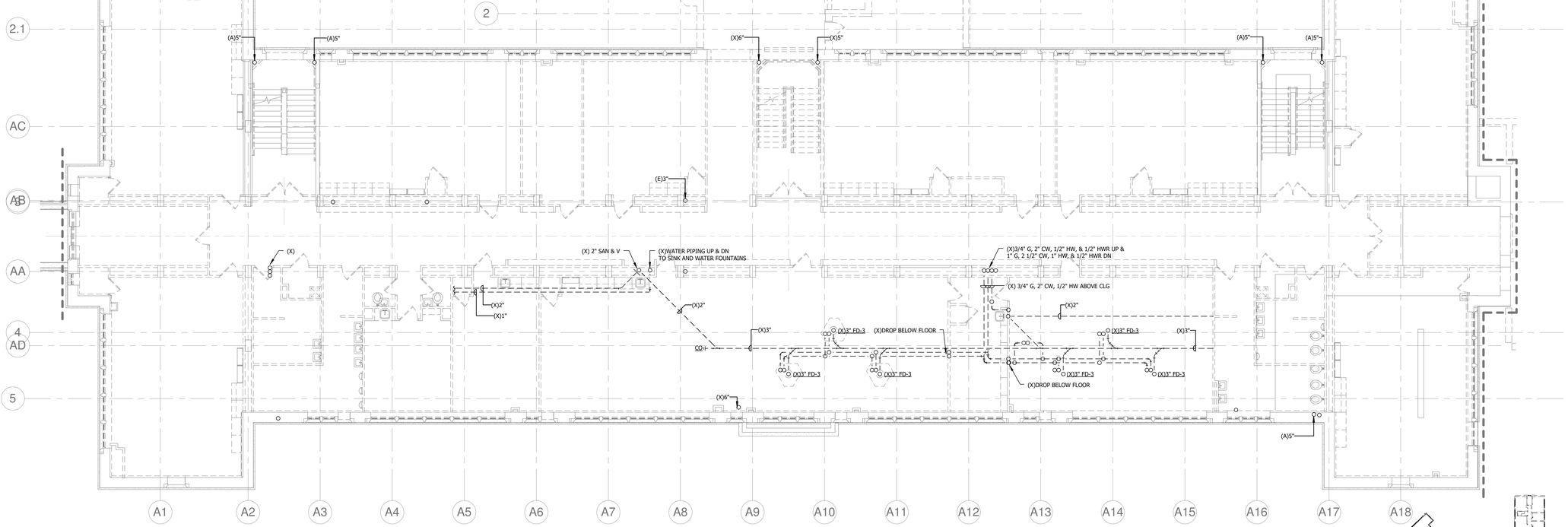
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED
DRAWING NAME
DEMO BASEMENT FLOOR PLAN B - PLUMBING

P 022



1 / P 023 DEMO FIRST FLOOR PLAN B - PLUMBING
1/8" = 1'-0"



2 / P 023 DEMO SECOND FLOOR PLAN B - PLUMBING
1/8" = 1'-0"

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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GENERAL NOTES:

1. REMOVE ALL EXISTING PLUMBING SYSTEMS NOT INDICTED TO BE REUSED OR TO BE ABONDONED IN WALL OR BELOW SLAB ON GRADE FLOORS.

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO FIRST & SECOND FLOOR PLAN B - PLUMBING

P 023

7/26/2016 11:44:57 AM

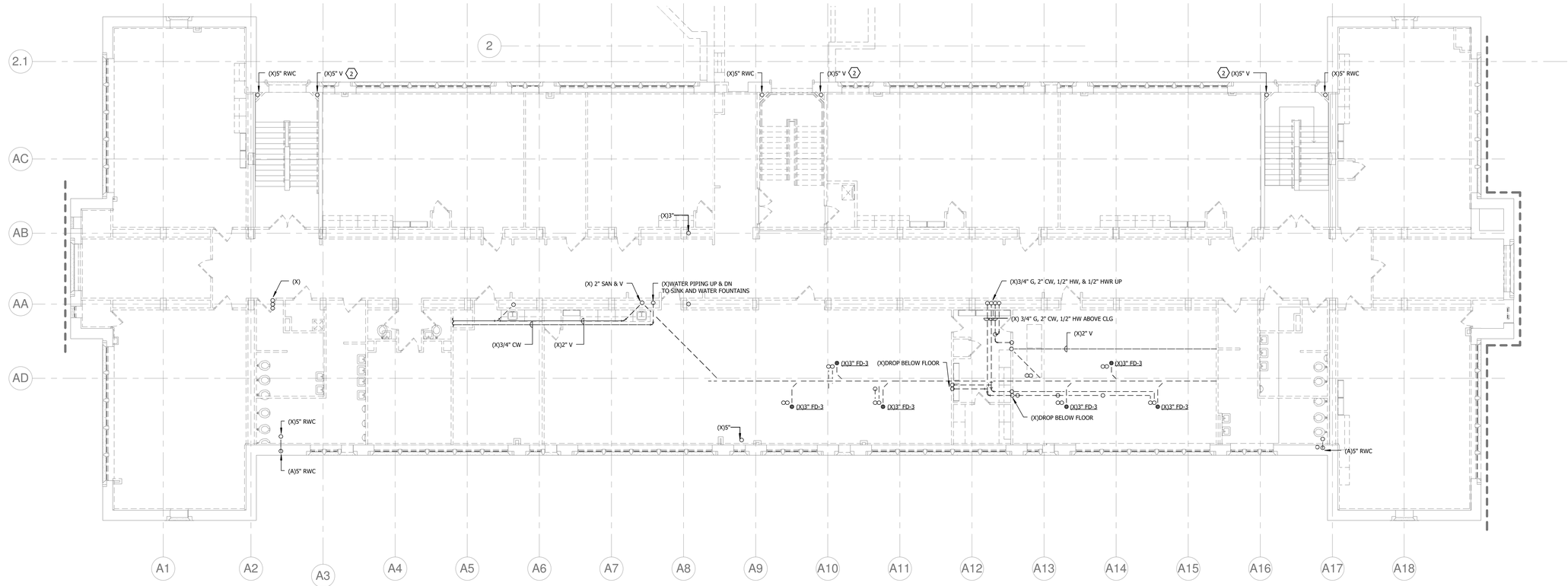
GENERAL NOTES:

1. REMOVE ALL EXISTING PLUMBING SYSTEMS NOT INDICTED TO BE REUSED OR TO BE ABONDONED IN WALL OR BELOW SLAB ON GRADE FLOORS.

DEMOLITION KEYED NOTES:

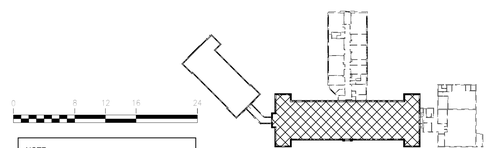
(1) DISCONNECT RAINWATER CONDUCTOR FROM ROOF DRAIN AND REMOVE ROOF DRAIN FOR REPLACEMENT.

(2) REMOVE VENT THROUGH ROOF.



1 / P 024 DEMO THIRD FLOOR PLAN B - PLUMBING
1/8" = 1'-0"

⚠ REVISED PLUMBING



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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1

BID ISSUE

PROJECT No.: 152-01

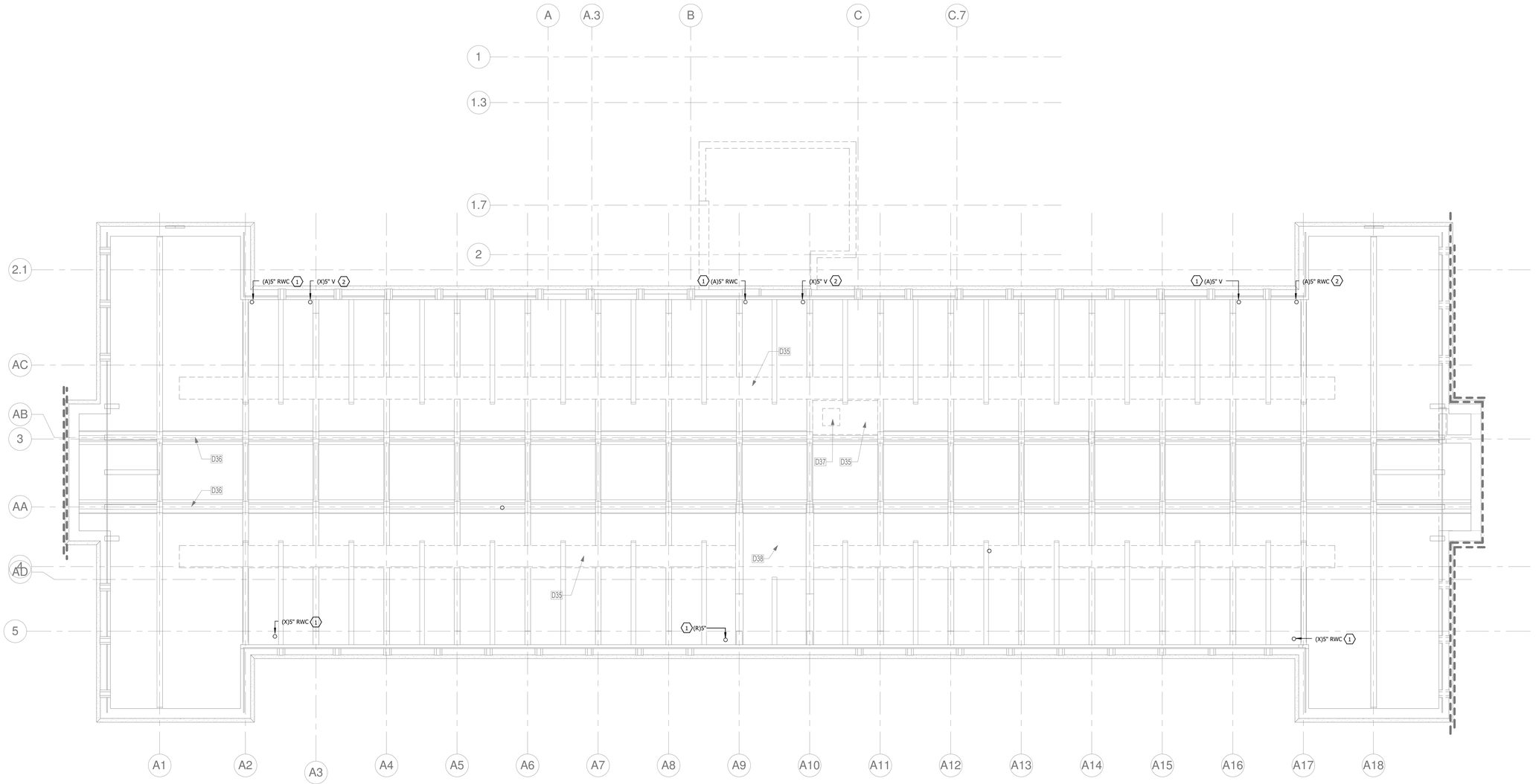
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
DEMO THIRD FLOOR PLAN B - PLUMBING

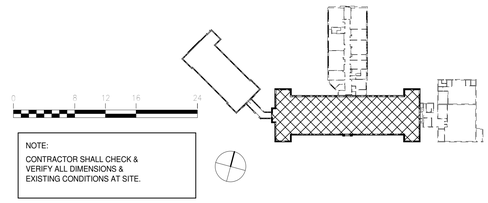
P 024

7/26/2016 11:45:08 AM



1 / P 025 DEMO ATTIC PLAN B - PLUMBING

1/8" = 1'-0"



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7/26/2016 11:45:20 AM

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LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

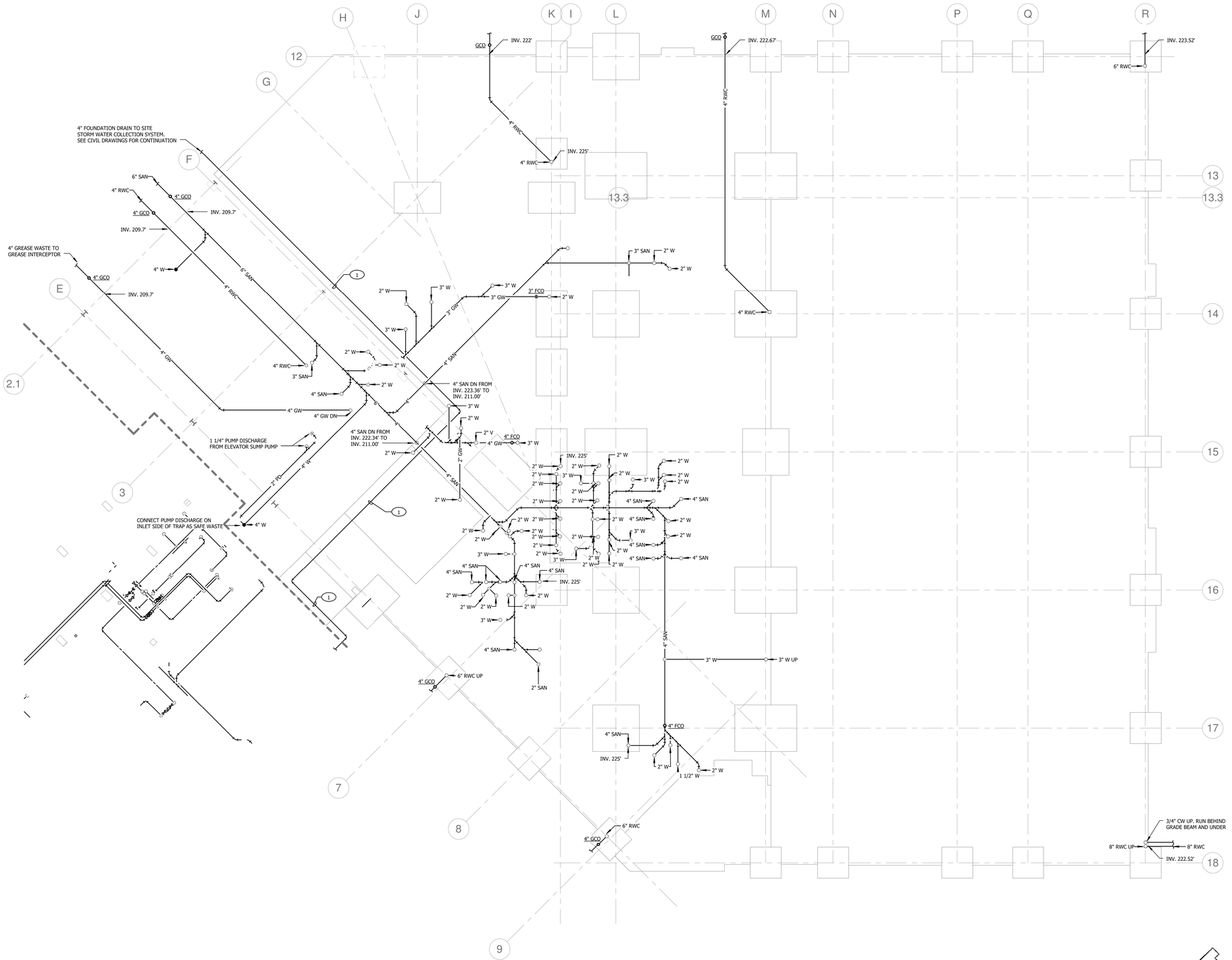
PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
DEMO ATTIC PLAN PLAN B - PLUMBING

P 025



1 / P 100 UNDERFLOOR PLAN - AREA C - PLUMBING
1/8" = 1'-0"

⚠ REVISED PLUMBING

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

7/26/2016 11:45:36 AM

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1

BID ISSUE

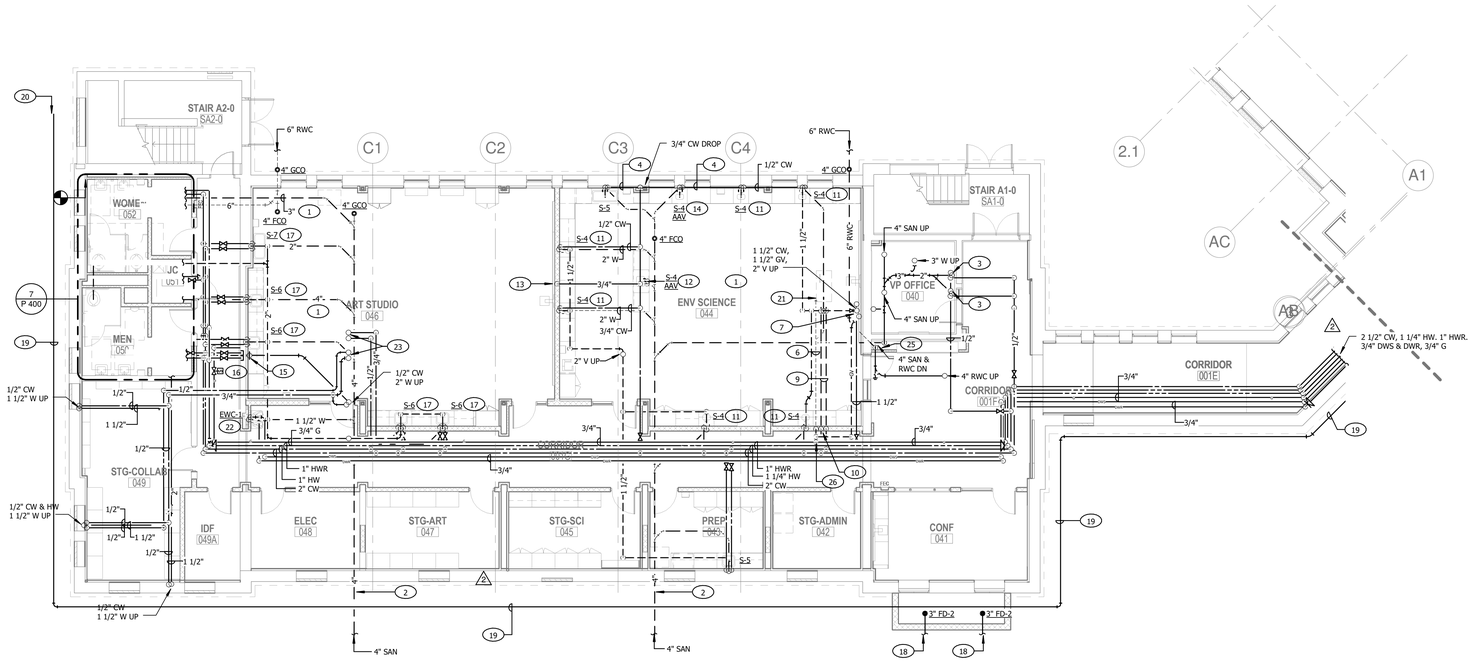
PROJECT No.: 152-01

DATE: 03/31/16

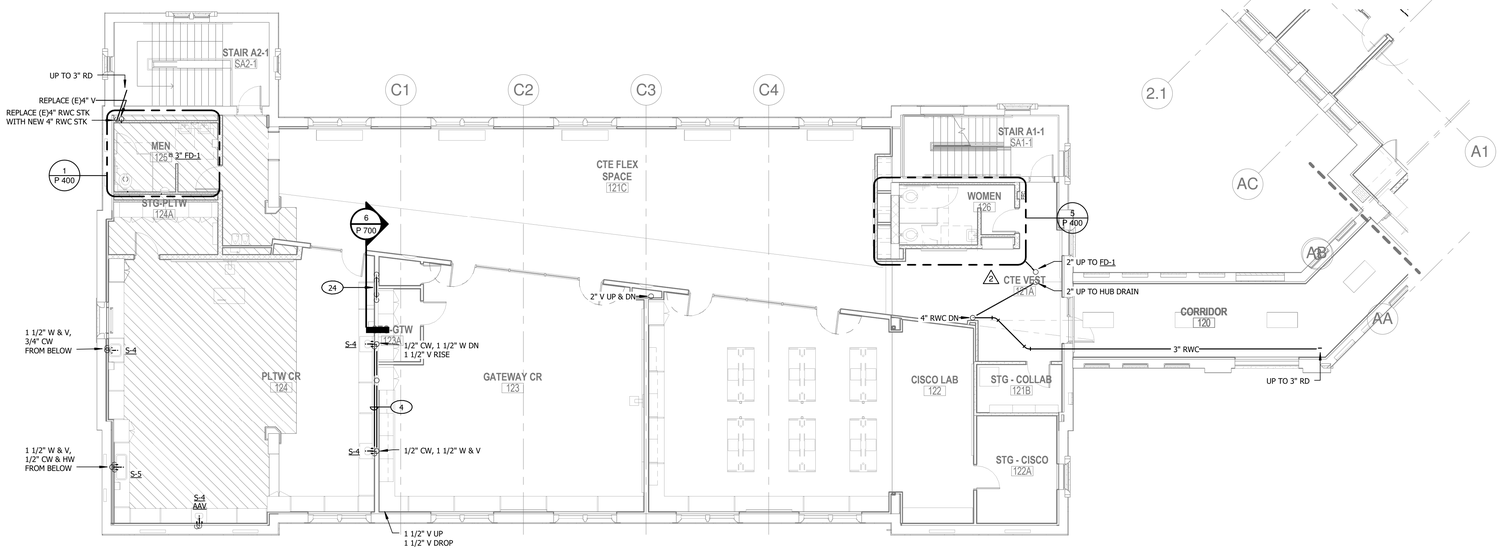
SCALE: AS NOTED

DRAWING NAME
UNDERFLOOR PLAN - PLUMBING

P 100



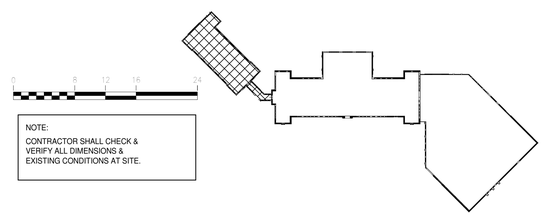
1 / P 111 NEW WORK BASEMENT FLOOR PLAN A - PLUMBING
1/8" = 1'-0"



2 / P 111 NEW WORK FIRST FLOOR PLAN A - PLUMBING
1/8" = 1'-0"

KEYED NOTES:

1. REPLACE EXISTING UNDER FLOOR SANITARY WITH NEW SANITARY PIPING. FIELD VERIFY EXACT ROUTE.
2. NEW 4" SANITARY TO REPLACE EXISTING 5" SANITARY. FIELD VERIFY EXACT LOCATION. (2)
3. 1/2" HOT WATER, 1 1/2" WASTE UP.
4. 1/2" COLD WATER, 1 1/2" WASTE THOUGH CASEWORK FOR SINKS.
5. 1/2" COLD WATER, 2" WASTE THOUGH CASEWORK FOR SINKS.
6. 1/2" CORRUGATED STAINLESS STEEL GAS IN 3" PVC SLEEVE BELOW FLOOR TO INSTRUCTOR TABLE. SEE DETAIL 6/P 700.
7. 1 1/2" GAS VENT UP FROM 3" PVC SLEEVE.
8. 1 1/2" GAS VENT UP AND DOWN.
9. 1/2" COLD AND HOT WATER BELOW FLOOR TO INSTRUCTOR TABLE.
10. 1/2" COLD AND HOT WATER DOWN. 1/2" CORRUGATED STAINLESS STEEL GAS IN 3" PVC SLEEVE DOWN. SEE DETAIL 6/P 700.
11. 1/2" COLD WATER, 1 1/2" WASTE AND VENT.
12. 1/2" COLD WATER FROM BELOW FLOOR. 1/2" WASTE DOWN.
13. 1/2" COLD WATER DOWN TO BELOW FLOOR TO ISLAND SINK.
14. 1/2" COLD WATER, 1/1 2/" WASTE DOWN.
15. 1/2" COLD AND HOT WATER AND 1/2" GAS AND 1 1/2" WASTE CAPPED ABOVE CEILING FOR FUTURE DEMO TABLE ABOVE.
16. SOLENOID VALVE IN GAS LINE FOR PLTW CR 124. CONNECT TO SHUTOFF SWITCH PROVIDED UNDER DIVISION 26.
17. 1/2" COLD AND HOT WATER DROP, 1 1/2" WASTE AND VENT.
18. 3" RAINWATER FROM AREA WAY TO SITE STORM WATER COLLECTION SYSTEM. SEE CIVIL DRAWINGS FOR CONTINUATION.
19. INSTALL NEW FOUNDATION DRAIN ON EXISTING FOOTER. SEE WALL SECTIONS ON A 401 FOR TYPICAL DETAIL.
20. NEW 4" FOUNDATION DRAIN TO SITE STORM WATER COLLECTION SYSTEM. SEE CIVIL DRAWINGS FOR CONTINUATION.
21. PROVIDE BOX RECESSED IN FLOOR FOR TERMINATION OF WATER, GAS, AND WASTE PIPING FOR FUTURE DEMONSTRATION TABLE. BOX SIMILAR TO A CONVENTION CENTER FLOOR BOX (CCFB) BY LEGRAND. TERMINATE AND CAP PIPING IN BOX. PROVIDE WITH TOP SUITABLE TO RECEIVE FLOOR COVERING.
22. 1/2" DRINKING WATER, 1 1/2" WASTE AND VENT TO WATER COOLER.
23. 3/4" COLD WATER AND 1/2" HOT WATER UP TO SHUT OFF BOX IN PLTW CR 124.
24. 3/4" COLD AND 1/2" HOT WATER SHUT OFF VALVES IN BOX RECESSED IN WALL. SEE DETAIL 6/P 700.
25. FIXED AIR GAP ON RAINWATER STACK FOR AIR CONDITIONING CONDENSATE. SEE DETAIL 10/P 700.
26. PROVIDE SOLENOID VALVE IN GAS LINE TO CLASSROOM FOR EMERGENCY SHUT OFF.



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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1
2	04/27/16	ADDENDUM #3

BID ISSUE

PROJECT No.: 152-01

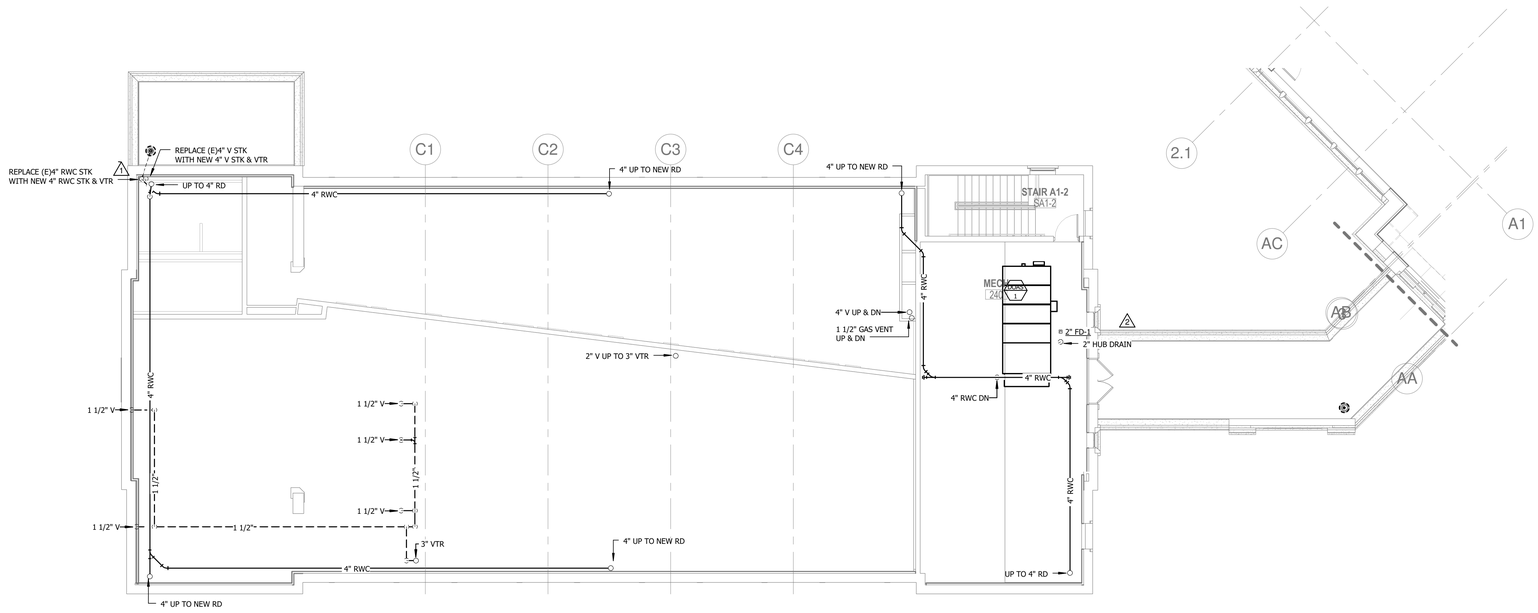
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK BASEMENT & FIRST FLOOR PLAN A - PLUMBING

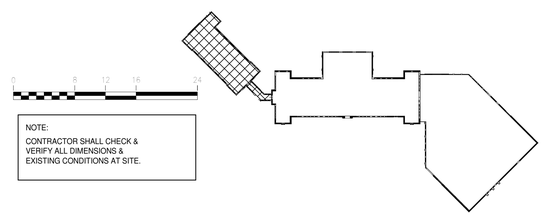
P 111

7/26/2016 11:45:58 AM



1 / P 112 NEW WORK SECOND FLOOR PLAN A - PLUMBING
1/8" = 1'-0"

2 / P 112 NEW WORK ROOF PLAN A - PLUMBING
1/8" = 1'-0"



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No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2
2	04/27/16	ADDENDUM #3

BID ISSUE

PROJECT No.: 152-01

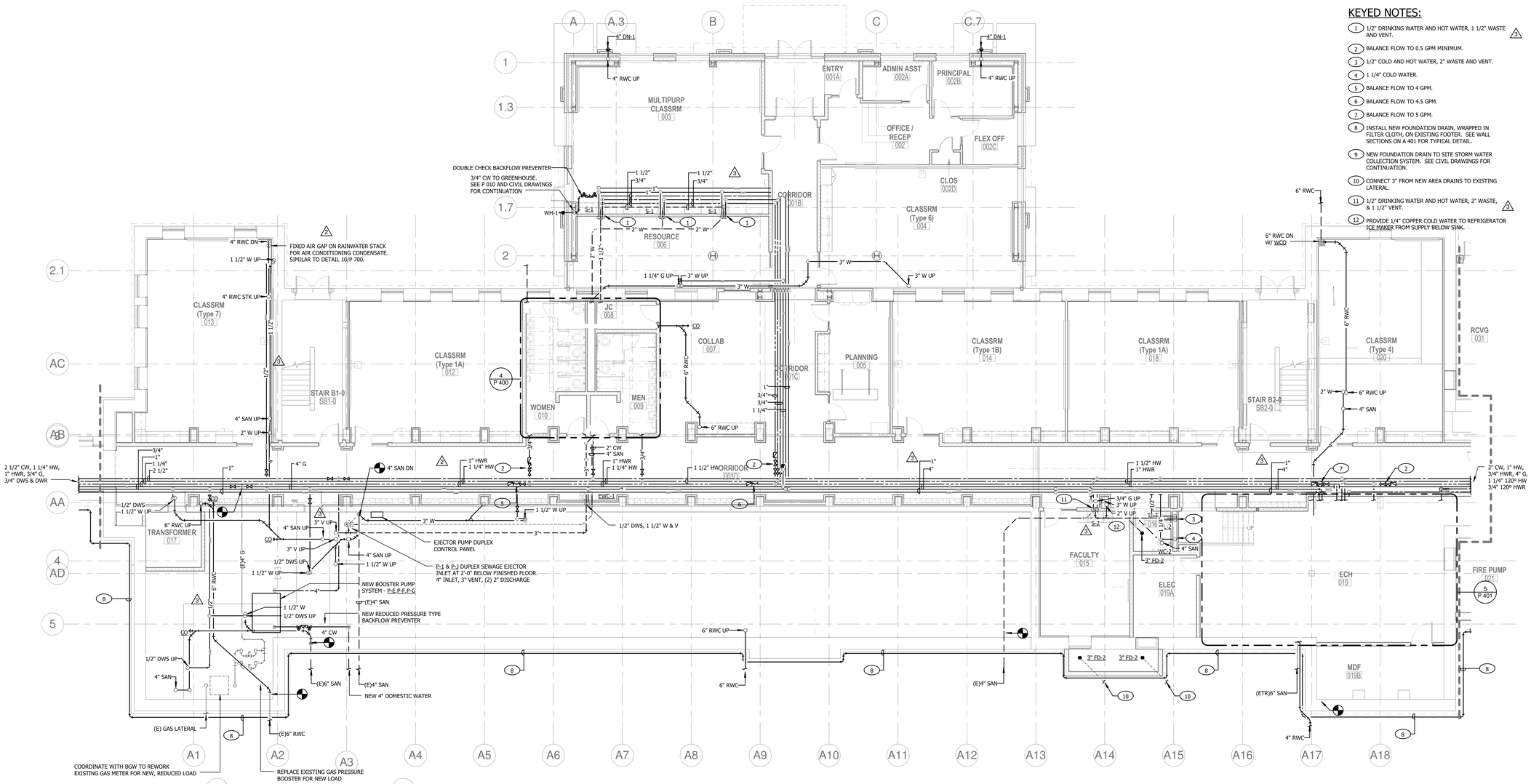
DATE: 03/31/16

SCALE: AS NOTED

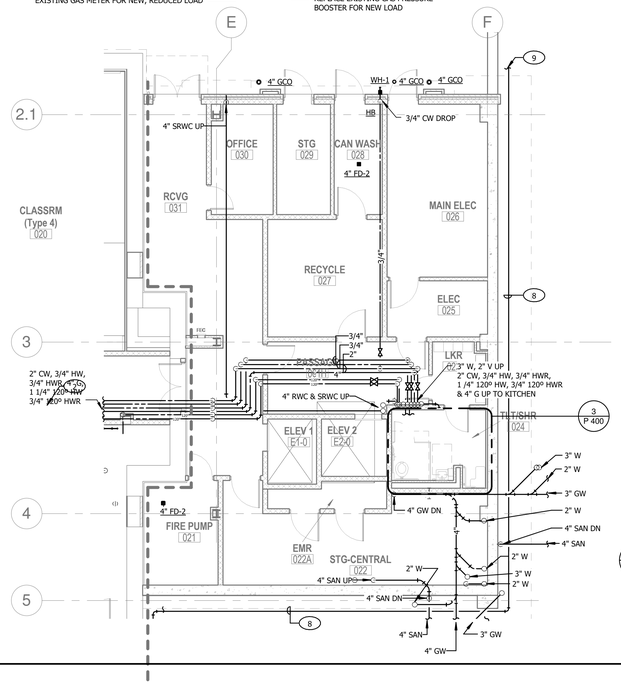
DRAWING NAME
NEW WORK SECOND & ROOF PLAN A - PLUMBING

P 112

7/26/2016 11:46:21 AM



1 P 113 NEW WORK BASEMENT PLAN B - PLUMBING
1/8" = 1'-0"



2 P 113 NEW WORK BASEMENT PLAN C - PLUMBING
1/8" = 1'-0"

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1
2	04/22/16	ADDENDUM #2
3	04/27/16	ADDENDUM #3

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK BASEMENT PLAN B - PLUMBING

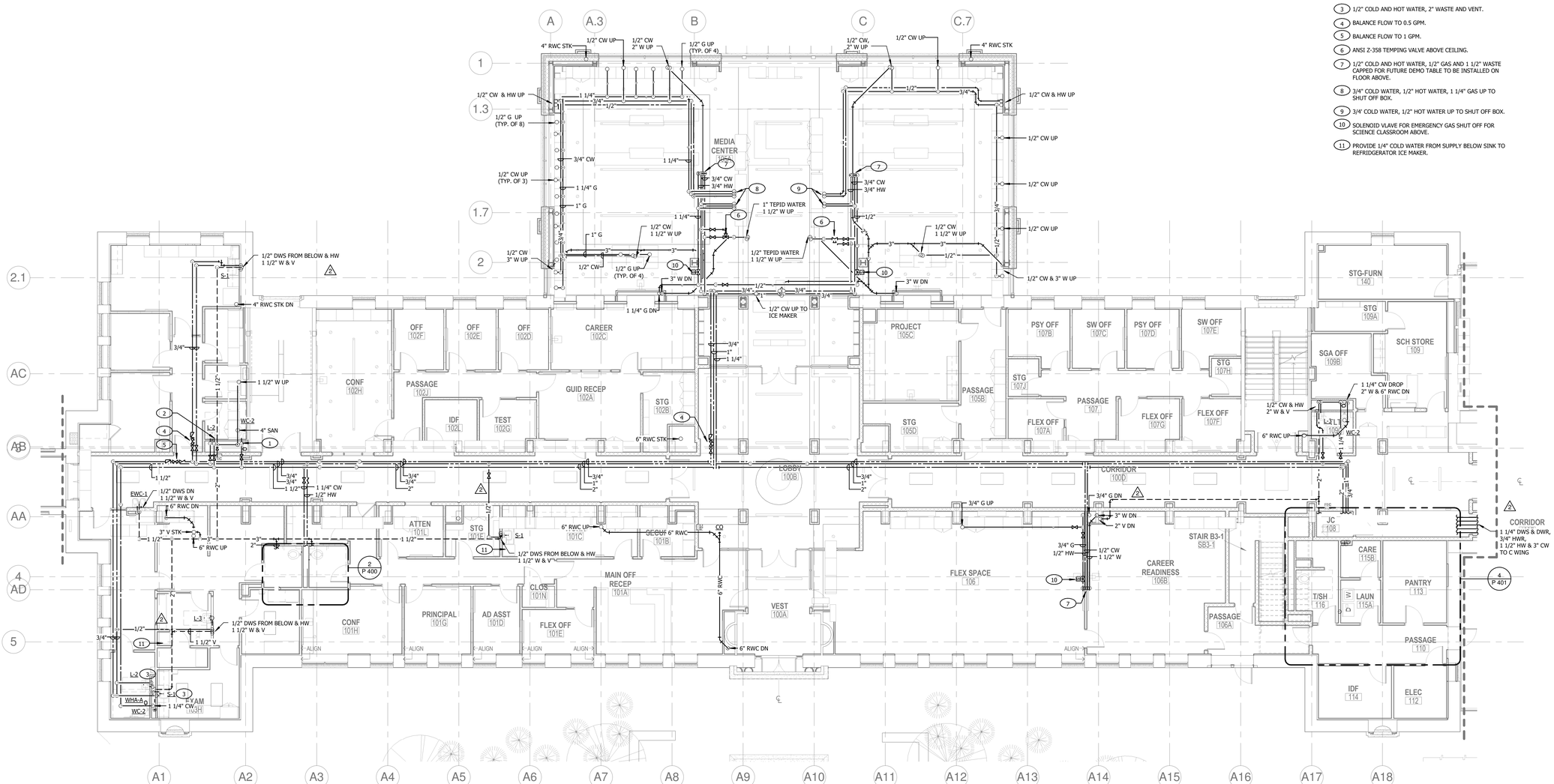
P 113

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

7/26/2016 11:46:41 AM

KEYED NOTES:

1. 2" WASTE DOWN FROM SINK, 1 1/4" COLD WATER DROP TO WATER CLOSET.
2. 1/2" COLD AND HOT WATER DROP, 2" WASTE THROUGH CHASE, 2" VENT RISE.
3. 1/2" COLD AND HOT WATER, 2" WASTE AND VENT.
4. BALANCE FLOW TO 0.5 GPM.
5. BALANCE FLOW TO 1 GPM.
6. ANSI Z-358 TEMPING VALVE ABOVE CEILING.
7. 1/2" COLD AND HOT WATER, 1/2" GAS AND 1 1/2" WASTE CAPPED FOR FUTURE DEMO TABLE TO BE INSTALLED ON FLOOR ABOVE.
8. 3/4" COLD WATER, 1/2" HOT WATER, 1 1/4" GAS UP TO SHUT OFF BOX.
9. 3/4" COLD WATER, 1/2" HOT WATER UP TO SHUT OFF BOX.
10. SOLENOID VLAVE FOR EMERGENCY GAS SHUT OFF FOR SCIENCE CLASSROOM ABOVE.
11. PROVIDE 1/4" COLD WATER FROM SUPPLY BELOW SINK TO REFRIDGERATOR ICE MAKER.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OFF 102F
OFF 102E
OFF 102D
CAREER 102C
PROJECT 105C
PSY OFF 107B
SW OFF 107C
PSY OFF 107D
SW OFF 107E
STG-FURN 140
STG 109A
SCH STORE 109
SGA OFF 109B
CONF 102H
PASSAGE 102J
GUID RECEP 102A
IDF 102L
TEST 102G
STG 102B
STG 105D
PASSAGE 105B
STG 107J
STG 107H
FLEX OFF 107A
PASSAGE 107
FLEX OFF 107G
FLEX OFF 107F
LOBBY 100B
CORRIDOR 100D
ATTEN 101L
STG 101E
GCOUR 101B
MAIN OFF RECEP 101A
CLOS 101N
CONF 101H
PRINCIPAL 101G
AD ASST 101D
FLEX OFF 101E
VEST 100A
FLEX SPACE 106
CAREER READINESS 106B
STAIR B3-1 SB3-1
PASSAGE 106A
JC 108
CARE 115B
T/SH 116
LAUN 115A
PANTRY 113
PASSAGE 110
IDF 114
ELEC 112
CORRIDOR
1/2" DWS FROM BELOW & HW 1 1/2" W & V
4" RWC STK DN
1 1/2" W UP
WC-2
4" SAN
1/2" DWS DN 1 1/2" W & V
6" RWC DN
3" V STK
6" RWC UP
1 1/4" CW 1/2" HW
EWC-1
1/2" DWS FROM BELOW & HW 1 1/2" W & V
1 1/2" V
WHA-A
EYAM 103H
1 1/4" CW DROP 2" W & 6" RWC DN
1/2" CW & HW 2" W & V
6" RWC UP
3/4" G DN
3" W DN
2" V DN
3/4" G 1/2" HW
1/2" CW 1 1/2" W
1/2" DWS FROM BELOW & HW 1 1/2" W & V
6" RWC UP
6" RWC DN
3/4" G UP
1/2" CW & HW UP
1/2" G UP (TYP. OF 8)
3/4" CW
1 1/4" G
1" G
1/2" CW UP (TYP. OF 3)
1/2" CW 3" W UP
1/2" CW 1 1/2" W UP
1/2" G UP (TYP. OF 4)
3" W DN
1 1/4" G DN
1" TEPID WATER 1 1/2" W UP
1/2" TEPID WATER 1 1/2" W UP
1/2" CW UP TO ICE MAKER
3/4" CW 3/4" HW
1/2" CW UP
1/2" CW & 3" W UP
1/2" CW, 2" W UP
4" RWC STK
3" W DN
1/2" CW UP
1/2" CW & 3" W UP
3/4" CW 3/4" HW
1/2" CW 1 1/2" W UP
3" W DN
1/2" CW UP
1/2" CW UP
1/2" CW UP
1/2" CW & HW UP
1/2" CW UP
1/2" CW UP
1/2" CW UP
1/2" CW & 3" W UP
3" W DN
1/2" CW UP
1/2" CW UP
1/2" CW UP
1/2" CW & HW UP
1/2" CW UP
1/2" CW UP
1/2" CW UP
1/2" CW & 3" W UP
3/4" CW 3/4" HW
1/2" CW 1 1/2

KEYED NOTES:

1. 6" PRIMARY AND SECONDARY RAINWATER CONDUCTOR UP TO RD-1.
2. 4" PRIMARY AND SECONDARY RAINWATER CONDUCTOR UP TO RD-1.
3. 1/2" DRINKING WATER DROP TO ICE MAKER CONNECTION BOX. CONNECT REFRIGERATOR ICE MAKER VIA 5 FEET OF 1/4" COPPER TUBING. (2)
4. 1/2" COLD WATER AND 1 1/2" WASTE UP TO SCIENCE CLASSROOM SINK.
5. 1/2" COLD AND HOT WATER AND 1 1/2" WASTE UP TO SCIENCE CLASSROOM SINK.
6. 1/2" COLD AND HOT WATER AND GAS AND 1 1/2" WASTE CAPPED FOR FUTURE DEMO TABLE IN SCIENCE CLASSROOM ABOVE.
7. ANSI Z-358 TEMPERING VALVE ABOVE CEILING.
8. 1/2" TEPID WATER AND 1 1/2" WASTE UP TO EYEWASH.
9. 3/4" COLD WATER AND 1/2" HOT WATER UP TO SHUT OFF VALVE BOX.
10. 1/2" COLD WATER AND 2" WASTE UP TO SCIENCE CLASSROOM SINK.
11. SOLENOID VALVE IN GAS LINE FOR EMERGENCY SHUT OFF TO SCIENCE CLASSROOM ABOVE.
12. BALANCE FLOW TO 0.5 GPM MINIMUM.

1 P 115 NEW WORK FIRST FLOOR PLAN C - PLUMBING
1/8" = 1'-0"

NOTE:
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No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1
2	04/27/16	ADDENDUM #3

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

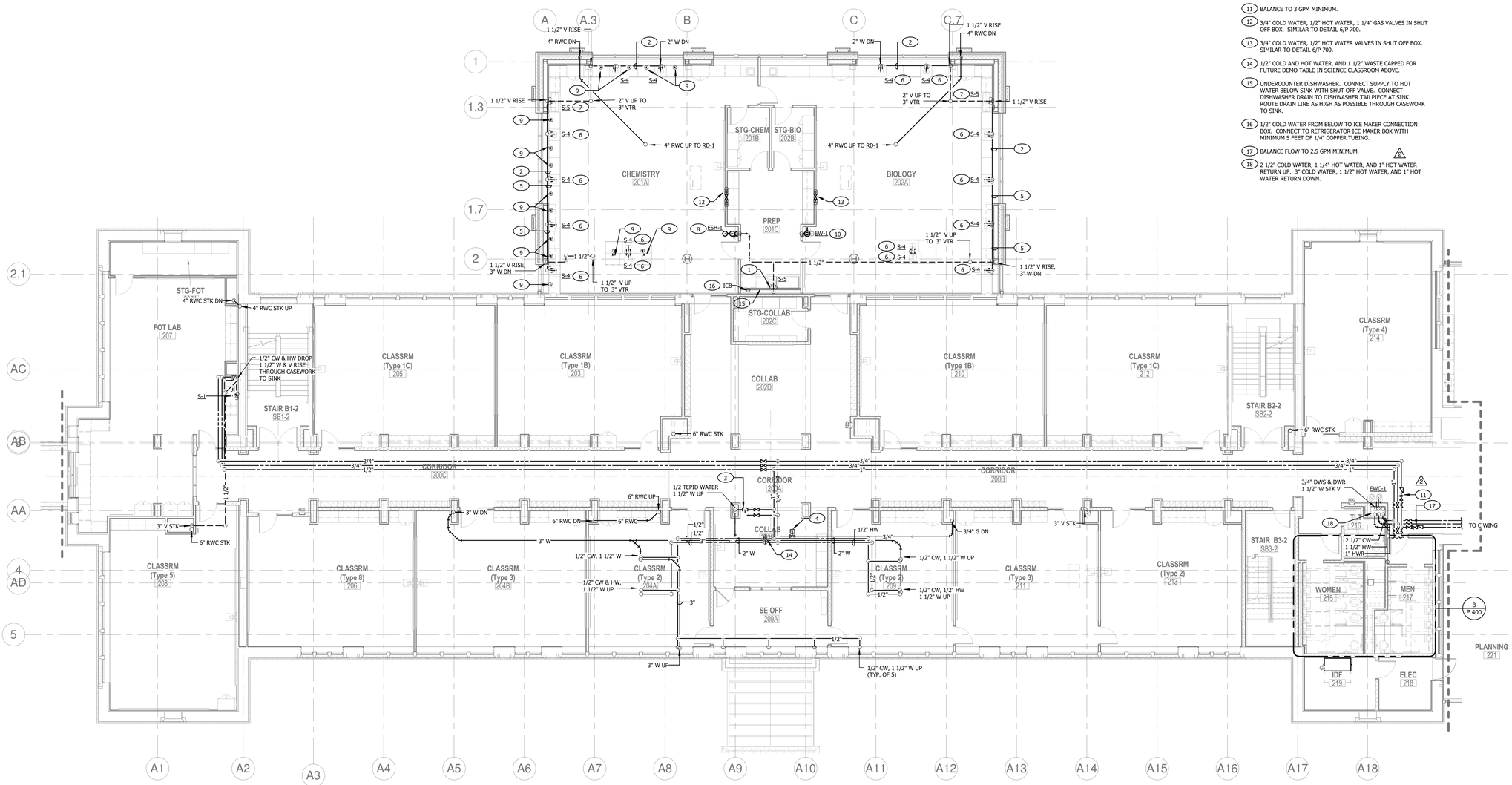
DRAWING NAME
NEW WORK FIRST FLOOR PLAN C - PLUMBING

P 115

7/26/2016 11:50:13 AM

KEYED NOTES:

1. 1/2" COLD AND HOT WATER, 1 1/2" WASTE AND VENT
2. 1 1/2" WASTE THROUGH CASEWORK.
3. ANSI Z-358 TEMPERING VALVE ABOUT CEILING.
4. SOLENOID VALVE IN GAS LINE FOR EMERGENCY SHUTOFF IN SCIENCE 301.
5. 2" WASTE THROUGH CASEWORK.
6. 1/2" COLD WATER. 1 1/2" WASTE.
7. 1/2" COLD AND HOT WATER, 1 1/2" WASTE.
8. 1" TEPID WATER FROM BELOW, 1 1/2" WASTE DOWN, 1 1/2" VENT RISE.
9. 1/2" GAS TO GAS TURRET.
10. 1/2" TEPID WATER FROM BELOW, 1 1/2" WASTE DOWN, 1 1/2" VENT RISE.
11. BALANCE TO 3 GPM MINIMUM.
12. 3/4" COLD WATER, 1/2" HOT WATER, 1 1/4" GAS VALVES IN SHUT OFF BOX. SIMILAR TO DETAIL 6/P 700.
13. 3/4" COLD WATER, 1/2" HOT WATER VALVES IN SHUT OFF BOX. SIMILAR TO DETAIL 6/P 700.
14. 1/2" COLD AND HOT WATER, AND 1 1/2" WASTE CAPPED FOR FUTURE DEMO TABLE IN SCIENCE CLASSROOM ABOVE.
15. UNDERCOUNTER DISHWASHER. CONNECT SUPPLY TO HOT WATER BELOW SINK WITH SHUT OFF VALVE. CONNECT DISHWASHER DRAIN TO DISHWASHER TAILPIECE AT SINK. ROUTE DRAIN LINE AS HIGH AS POSSIBLE THROUGH CASEWORK TO SINK.
16. 1/2" COLD WATER FROM BELOW TO ICE MAKER CONNECTION BOX. CONNECT TO REFRIGERATOR ICE MAKER BOX WITH MINIMUM 5 FEET OF 1/4" COPPER TUBING.
17. BALANCE FLOW TO 2.5 GPM MINIMUM. (2)
18. 2 1/2" COLD WATER, 1 1/4" HOT WATER, AND 1" HOT WATER RETURN UP. 3" COLD WATER, 1 1/2" HOT WATER, AND 1" HOT WATER RETURN DOWN.



1 / P 116 NEW WORK SECOND FLOOR PLAN B - PLUMBING

1/8" = 1'-0"

NOTE:
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NYIKOS ASSOCIATES
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Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1
2	04/27/16	ADDENDUM #3

BID ISSUE

PROJECT No.: 152-01

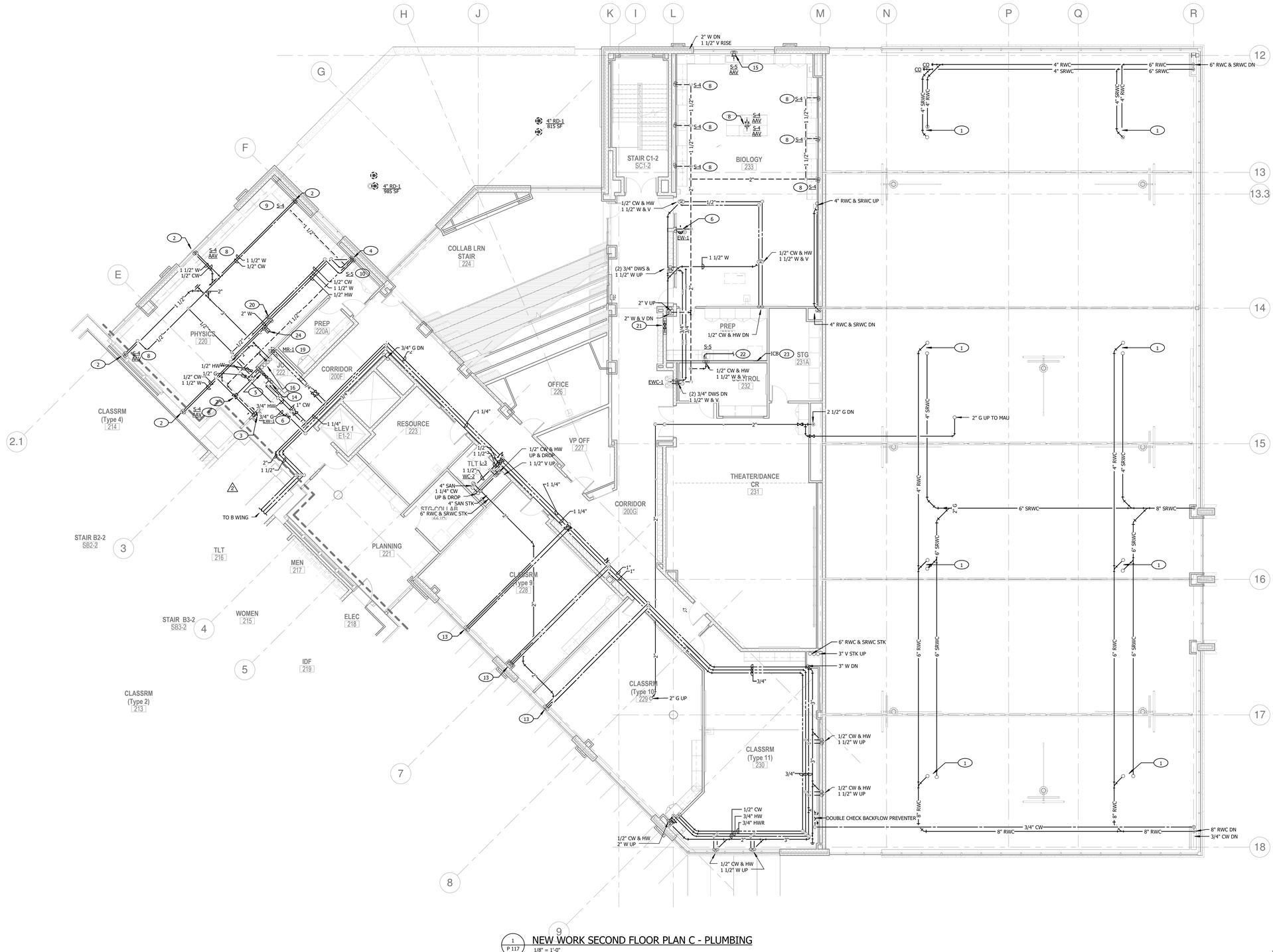
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND FLOOR PLAN B - PLUMBING

P 116

7/26/2016 11:50:34 AM



1 P 117 NEW WORK SECOND FLOOR PLAN C - PLUMBING

1/8" = 1'-0"

KEYED NOTES:

1. 4" PRIMARY AND SECONDARY RAINWATER CONDUCTOR UP TO RD-1.
2. 1/2" COLD AND 1 1/2" WASTE UP TO SINKS IN PHYSICS 321.
3. 1/2" TEPID WATER, 1 1/2" WASTE UP TO EYEWASH IN PHYSICS 321.
4. 1/2" COLD AND HOT WATER, 1 1/2" WASTE UP TO SINK IN PHYSICS 321.
5. EMERGENCY SHUTOFF VALVES FOR 3/4" COLD WATER, AND 1/2" HOT WATER FOR PHYSICS 220.
6. 1/2" TEPID WATER FROM BELOW, 1 1/2" WASTE AND VENT FOR EYEWASH.
7. ANSI Z-358 TEMPERING VALVES ABOVE CEILING FOR EYEWASH ABOVE.
8. 1/2" COLD WATER AND 1 1/2" WASTE FROM BELOW TO SINK. AUTOMATIC AIR VENT BELOW SINK.
9. 1/2" COLD AND HOT WATER FROM BELOW, 1 1/2" WASTE AND VENT.
10. 1/2" COLD AND HOT WATER FROM BELOW, 1 1/2" WASTE AND VENT.
11. 2" WASTE DOWN AND 1 1/2" VENT RISE.
12. 1/2" COLD AND HOT WATER UP AND DROP TO MOP RECEPTOR.
13. 1/2" COLD AND HOT WATER AND 1 1/2" WASTE UP.
14. 3/4" COLD WATER AND 1/2" HOT WATER DROP TO SHUT OFF VALVE BOX AND RISE TO SHUT OFF VALVE BOX IN PHYSICS 321.
15. 1/2" COLD AND HOT WATER FROM BELOW, 1 1/2" WASTE DOWN. AUTOMATIC AIR VENT BELOW SINK.
16. 4" SECONDARY AND PRIMARY RAINWATER STACKS, 3" WASTE STACK AND 2" VENT STACK.
17. EMERGENCY SHUTOFF VALVES FOR 3/4" COLD WATER, 1/2" HOT WATER, AND 1/2" GAS FOR BIOLOGY 223.
18. 3/4" COLD WATER, 1/2" HOT WATER AND 1/2' GAS DOWN FOR PHYSICS 220 SINKS. 3/4" COLD WATER, 1/2" HOT WATER, AND 1/2" GAS FROM SHUT OFF BOX IN PHYSICS 321.
19. 1/2" COLD AND HOT WATER DROP TO MOP RECEPTOR AND UP TO MOP RECEPTOR ABOVE.
20. 1/2" COLD AND HOT WATER, 1/2" GAS AND 1 1/2" WASTE CAPPED FOR FUTURE DEMO TABLE IN PHYSICS 321.
21. EMERGENCY SHUT OFF VALVES FOR 3/4" COLD WATER AND 1/2" HOT WATER FOR BIOLOGY 235.
22. UNDERCOUNTER DISHWASHER. CONNECT SUPPLY TO HOT WATER BELOW SINK WITH SHUT OFF VALVE. CONNECT DISHWASHER DRAIN TO DISHWASHER TAILPIECE AT SINK. ROUTE DRAIN LINE AS HIGH AS POSSIBLE THROUGH CASEWORK TO SINK.
23. 1/2" COLD WATER FROM BELOW TO ICE MAKER CONNECTION BOX. CONNECT TO REFRIGERATOR ICE MAKER BOX WITH MINIMUM 5 FEET OF 1/4" COPPER TUBING.
24. SOLENOID VALVE IN GAS LINE FOR EMERGENCY SHUT OFF TO SCIENCE CLASSROOM ABOVE.

⚠ REVISED PLUMBING

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

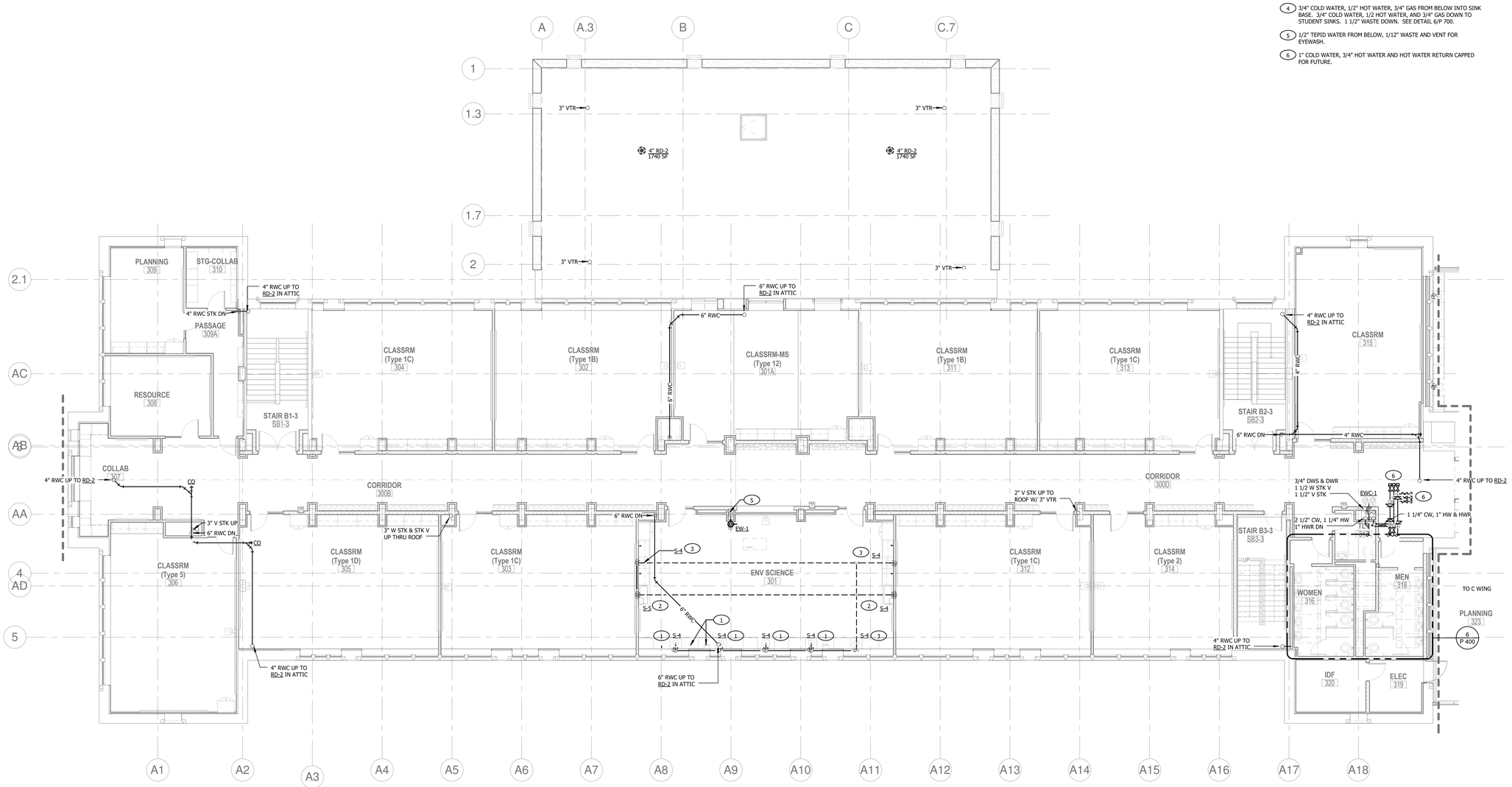
DRAWING NAME
NEW WORK SECOND FLOOR PLAN C - PLUMBING

P 117

7/26/2016 11:54:28 AM

KEYED NOTES:

1. 1/2" COLD WATER, 1 1/2" WASTE.
2. 1/2" COLD AND HOT WATER, 1 1/2" WASTE AND VENT.
3. 1/2" COLD WATER, 1 1/2 WASTE AND VENT.
4. 3/4" COLD WATER, 1/2" HOT WATER, 3/4" GAS FROM BELOW INTO SINK BASE. 3/4" COLD WATER, 1/2 HOT WATER, AND 3/4" GAS DOWN TO STUDENT SINKS. 1 1/2" WASTE DOWN. SEE DETAIL 6/P 700.
5. 1/2" TEPID WATER FROM BELOW, 1/12" WASTE AND VENT FOR EYEWASH.
6. 1" COLD WATER, 3/4" HOT WATER AND HOT WATER RETURN CAPPED FOR FUTURE.



1 / P 118 NEW WORK THIRD FLOOR PLAN B - PLUMBING
1/8" = 1'-0"

⚠ REVISED PLUMBING

NOTE:
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No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1

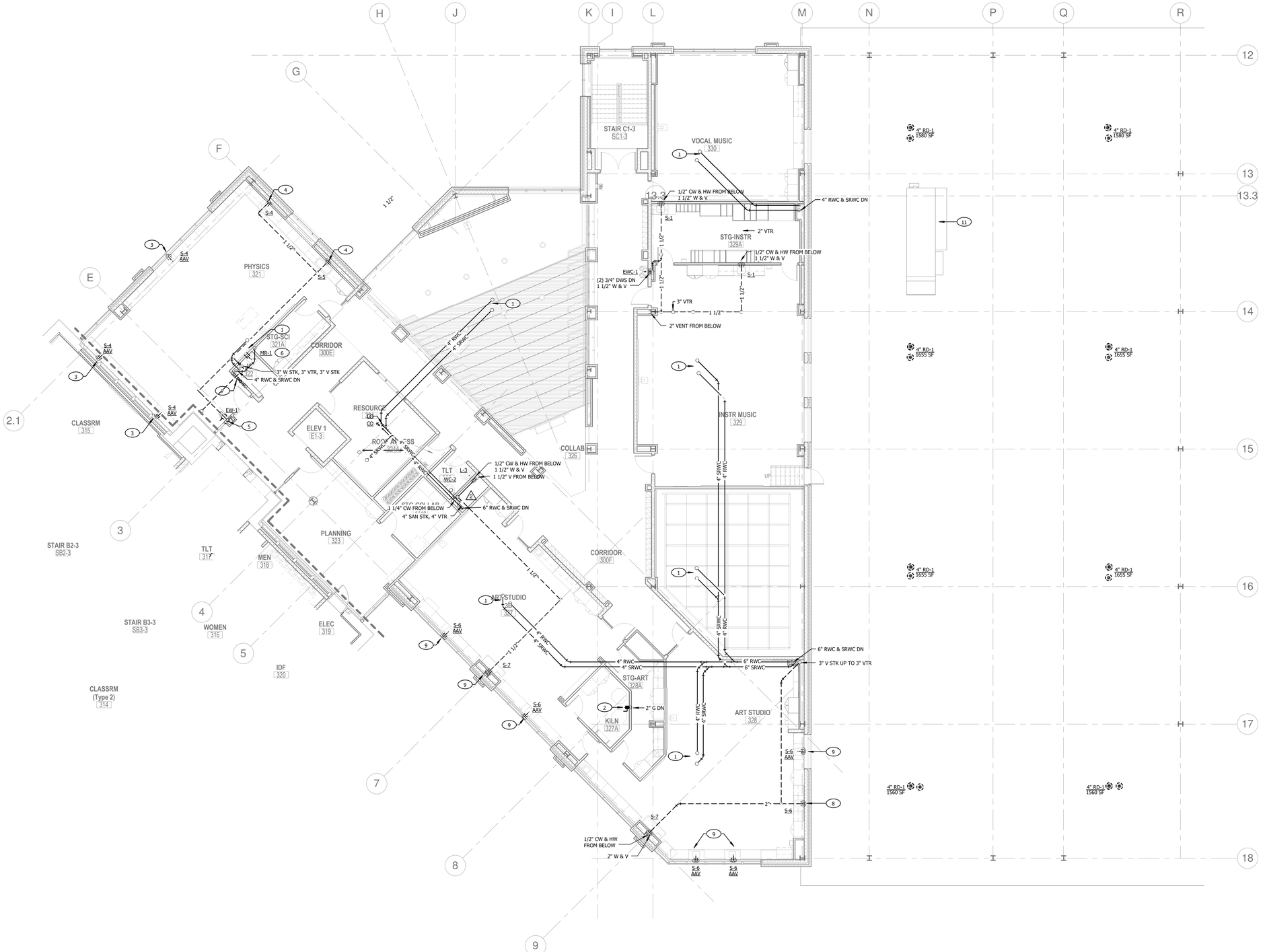
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK THIRD FLOOR PLAN B - PLUMBING

P 118

7/26/2016 11:54:41 AM



1 / P 119 NEW WORK THIRD FLOOR PLAN C - PLUMBING
1/8" = 1'-0"

⚠ REVISED PLUMBING

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

KEYED NOTES:

1. 4" PRIMARY AND SECONDARY RAINWATER CONDUCTOR UP TO RD-1.
2. 2" GAS TO KILN. PROVIDE SHUTOFF AND CONNECT WITH FLEXIBLE APPLIANCE CONNECTOR.
3. 1/2" COLD WATER FROM BELOW TO SINK. 1 1/2" WASTE DOWN WITH AUTOMATIC AIR VENT BELOW SINK.
4. 1/2" COLD FROM BELOW. 1 1/2" AND VENT.
5. 1/2" TEPID WATER FROM BELOW, 1 1/2" WASTE AND VENT FOR EYEWASH.
6. 1/2" COLD AND HOT WATER FROM BELOW.
7. EMERGENCY SHUT OFF VALVES FROM 3/4" COLD, 1/2" HOT WATER AND 1/2" GAS FOR PHYSICS 321.
8. 1/2" COLD AND HOT WATER FROM BELOW. 1 1/2" WASTE AND VENT.
9. 1/2" COLD AND HOT WATER FROM BELOW. 1 1/2" WASTE DOWN WITH AUTOMATIC AIR VENT.
10. 1/2" COLD AND HOT WATER FROM BELOW. 2" WASTE AND 1 1/2" VENT.
11. 2" GAS FROM BELOW ROOF TO MAKEUP AIR UNIT. CONNECT TO UNIT PER MANUFACTURER'S LITERATURE AND DETAIL 9/P 700. FLASH ROOF PENETRATION.

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No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1
2	05/06/16	ADDENDUM #5

BID ISSUE

PROJECT No.: 152-01

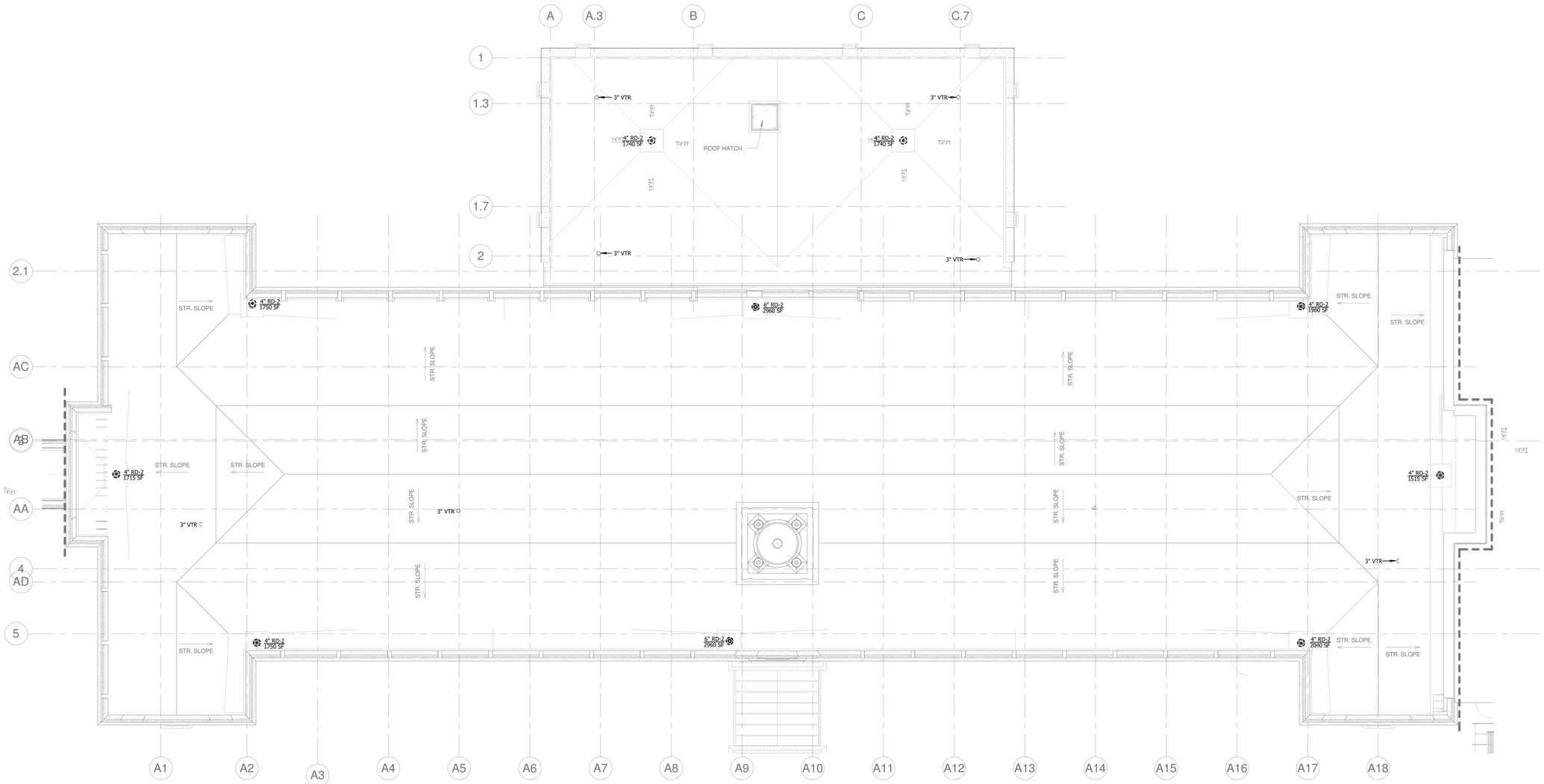
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK THIRD FLOOR PLAN C - PLUMBING

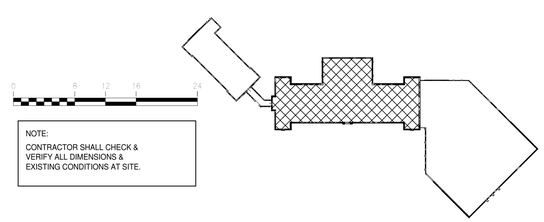
P 119

7/26/2016 11:57:05 AM



1 / P 120 NEW WORK ROOF PLAN B - PLUMBING

1/8" = 1'-0"



NOTE:
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7/26/2016 11:57:31 AM

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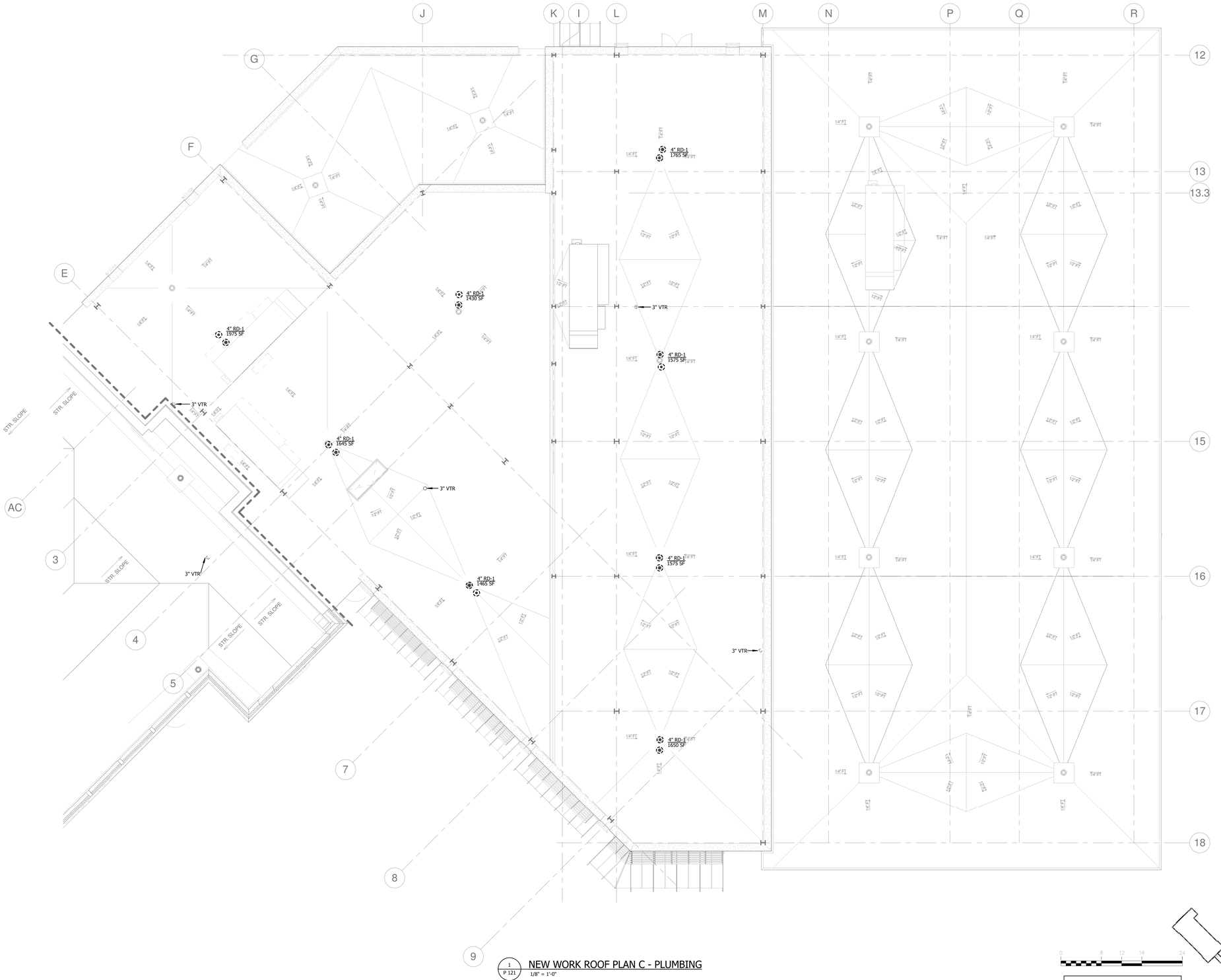
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK ROOF PLAN B - PLUMBING

P 120



1 / P 121 NEW WORK ROOF PLAN C - PLUMBING
1/8" = 1'-0"

NOTE:
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No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

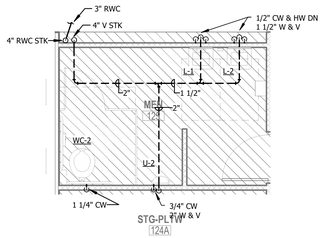
DATE: 03/31/16

SCALE: AS NOTED

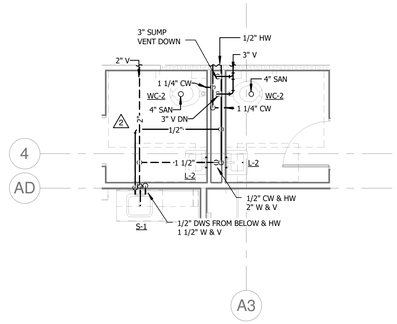
DRAWING NAME
NEW WORK ROOF PLAN C - PLUMBING

P 121

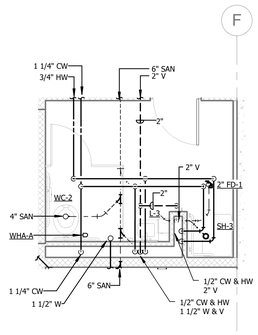
7/26/2016 11:58:02 AM



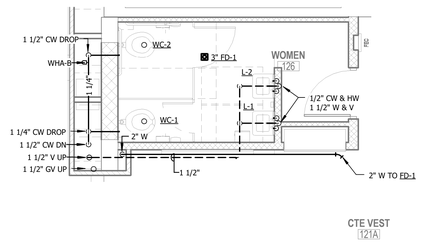
1 P 400 ENLARGED MEN 125
1/4" = 1'-0"



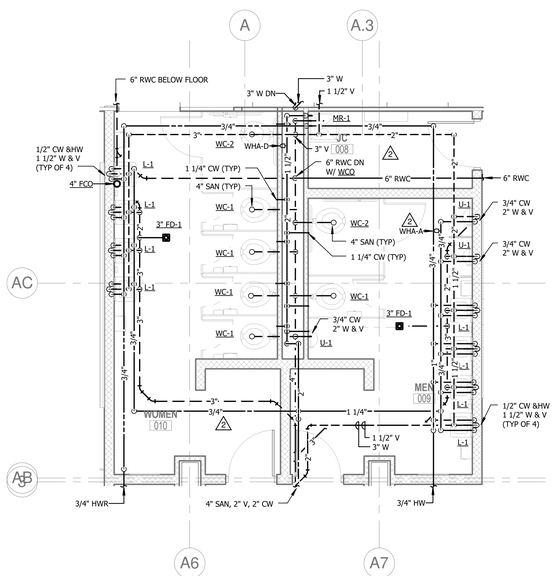
2 P 400 ENLARGED TOILET 103G
1/4" = 1'-0"



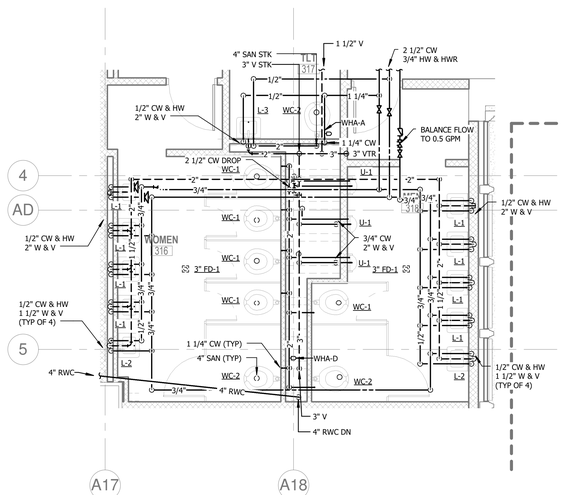
3 P 400 ENLARGED TOILET/SHOWER 042
1/4" = 1'-0"



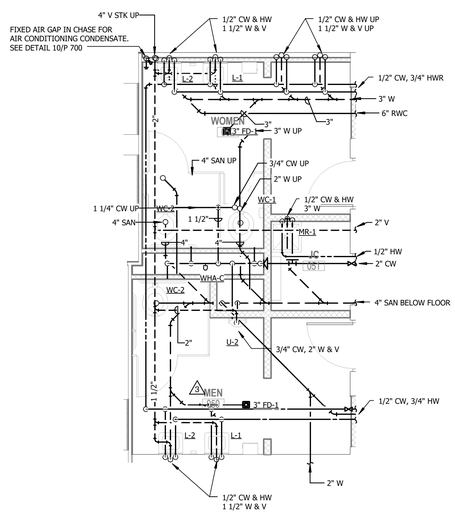
5 P 400 ENLARGED WOMEN 126
1/4" = 1'-0"



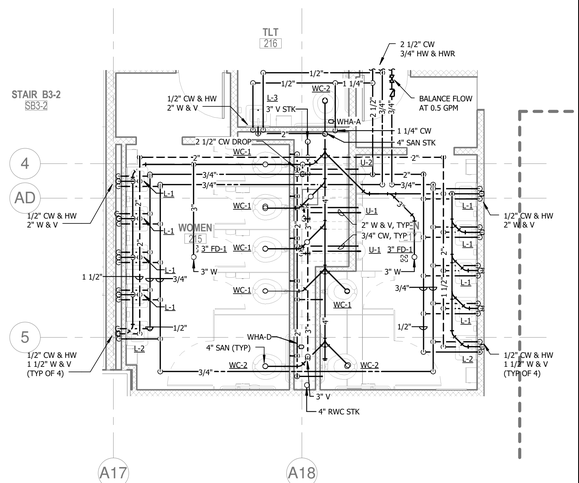
4 P 400 ENLARGED MEN'S 008/WOMEN'S 009
1/4" = 1'-0"



6 P 400 ENLARGED MEN 318/WOMEN 319
1/4" = 1'-0"



7 P 400 ENLARGED MEN'S 060/WOMEN'S 062
1/4" = 1'-0"



8 P 400 ENLARGED MEN 215A/WOMEN215B
1/4" = 1'-0"

1

7/26/2016 11:58:23 AM

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2	04/27/16	ADDENDUM #3
3	05/06/16	ADDENDUM #5

BID ISSUE

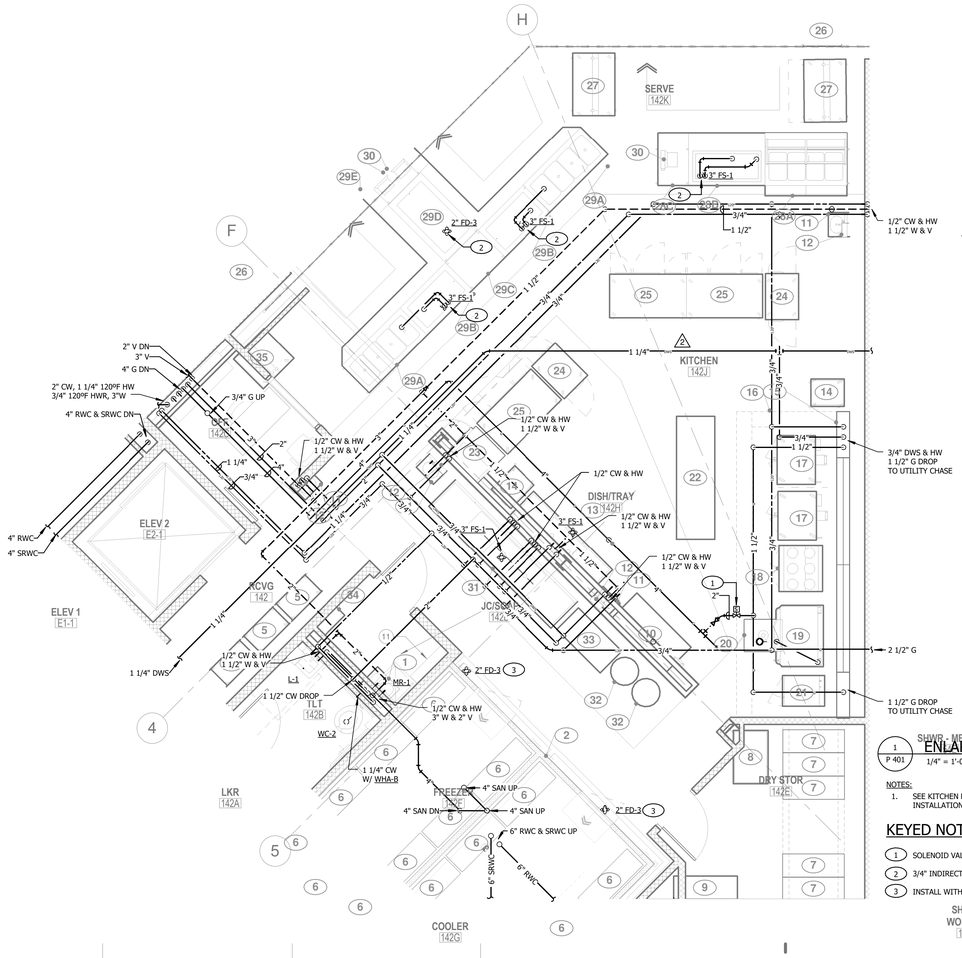
PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
ENLARGED PLANS - PLUMBING

P 400

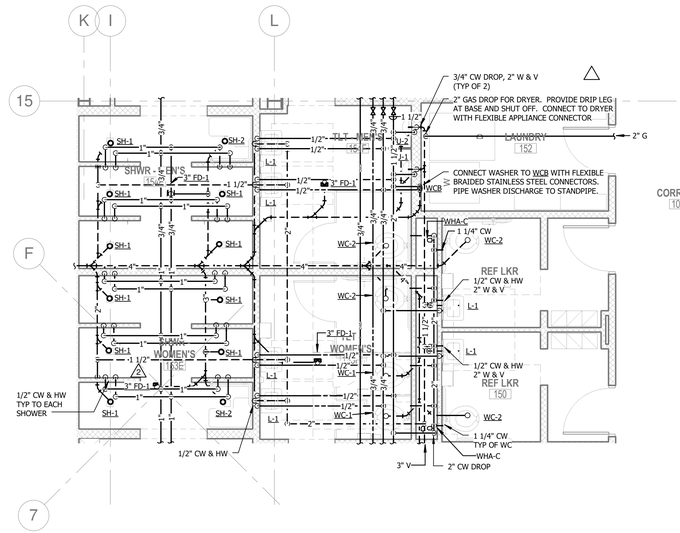


1 P 401 ENLARGED KITCHEN - PLUMBING
1/4" = 1'-0"

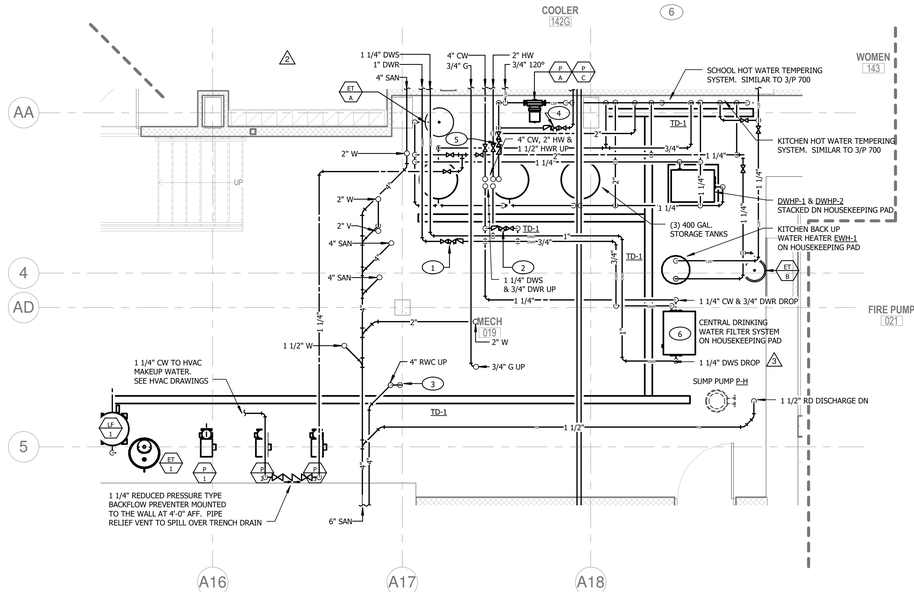
NOTES:
1. SEE KITCHEN DRAWINGS FOR PLUMBING CONTRACTOR RESPONSIBILITIES RELATED TO INSTALLATION OF KITCHEN EQUIPMENT.

KEYED NOTES:

1. SOLENOID VALVE BY P.C. FOR CONNECTION TO HOOD SUPPRESSION SYSTEM.
2. 3/4" INDIRECT WASTE FROM HOT WELLS/COLD WELLS TO FLOOR SINK WITH AIR GAP.
3. INSTALL WITH TOP OF RIM FLUSH WITH FINISHED FLOOR.



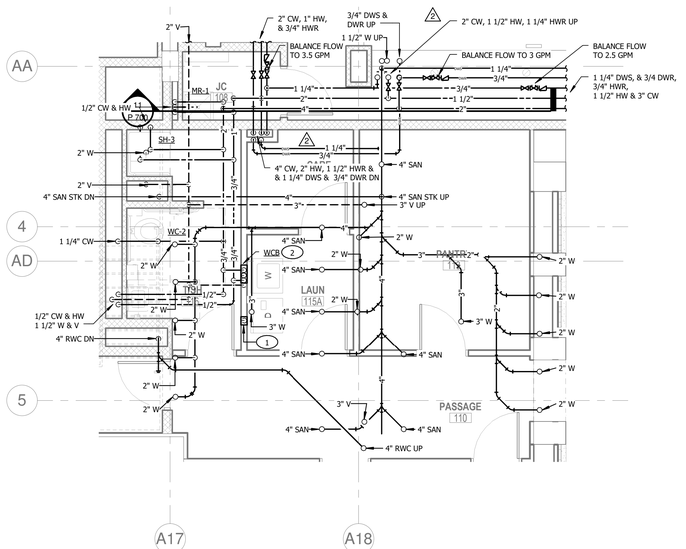
2 P 401 ENLARGED LOCKER ROOM
1/4" = 1'-0"



5 P 401 ENLARGED MECHANICAL ROOM - PLUMBING
1/4" = 1'-0"

KEYED NOTES:

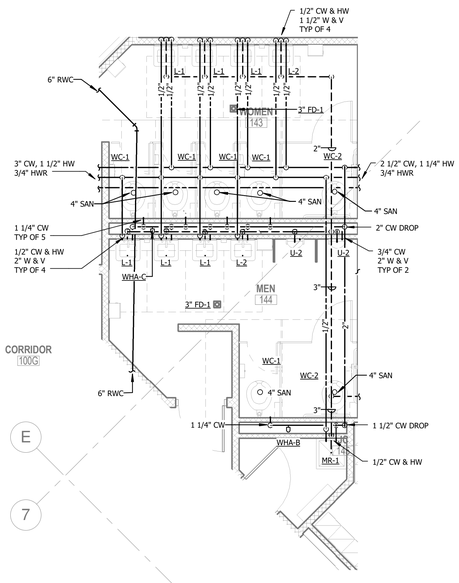
1. BALANCE FLOW TO 3 GPM.
2. BALANCE FLOW TO 3.5 GPM.
3. FIXED AIR GAP FOR AIR CONDITIONING CONDENSATE AT BASE OF STACK. SIMILAR TO DETAIL 10/P 700. 2
4. BALANCE FLOW TO 5.5 GPM.
5. BALANCE FLOW TO 12.5 GPM.
6. (1) IL10-SF-TM-L-MOD MODIFIED IN-LINE STERI-FLO FILTER/PURIFIER/STERILIZER (ON SKID) INCLUDING 1 RETICULATING PUMP, (1) QUARTZ SLEEVE AND LAMP, (3) 5 MICRON SPUN POLYPRO PRE-FILTER ELEMENT AND MICRON LEAD REMOVAL CARBON BLOCK FILTER ELEMENTS. PUMP TO BE PLACED ON THE RETURN LINE. 100 GPM RATE. 3



4 P 401 ENLARGED LAUNDRY - PLUMBING
1/4" = 1'-0"

KEYED NOTES:

1. GAS CONNECTION BOX IN WALL WITH 3/4" GAS FROM BELOW. CONNECT DRYER WITH FLEXIBLE APPLIANCE CONNECTION.
2. 1/2" COLD AND HOT WATER, 2" WASTE AND VENT TO WCB. CONNECT WASHER WITH FLEXIBLE STAINLESS STEEL BRAIDED SUPPLY CONNECTORS. 1



3 P 401 ENLARGED WOMEN 143/MEN 144
1/4" = 1'-0"

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1
2	04/27/16	ADDENDUM #3
3	05/06/16	ADDENDUM #5

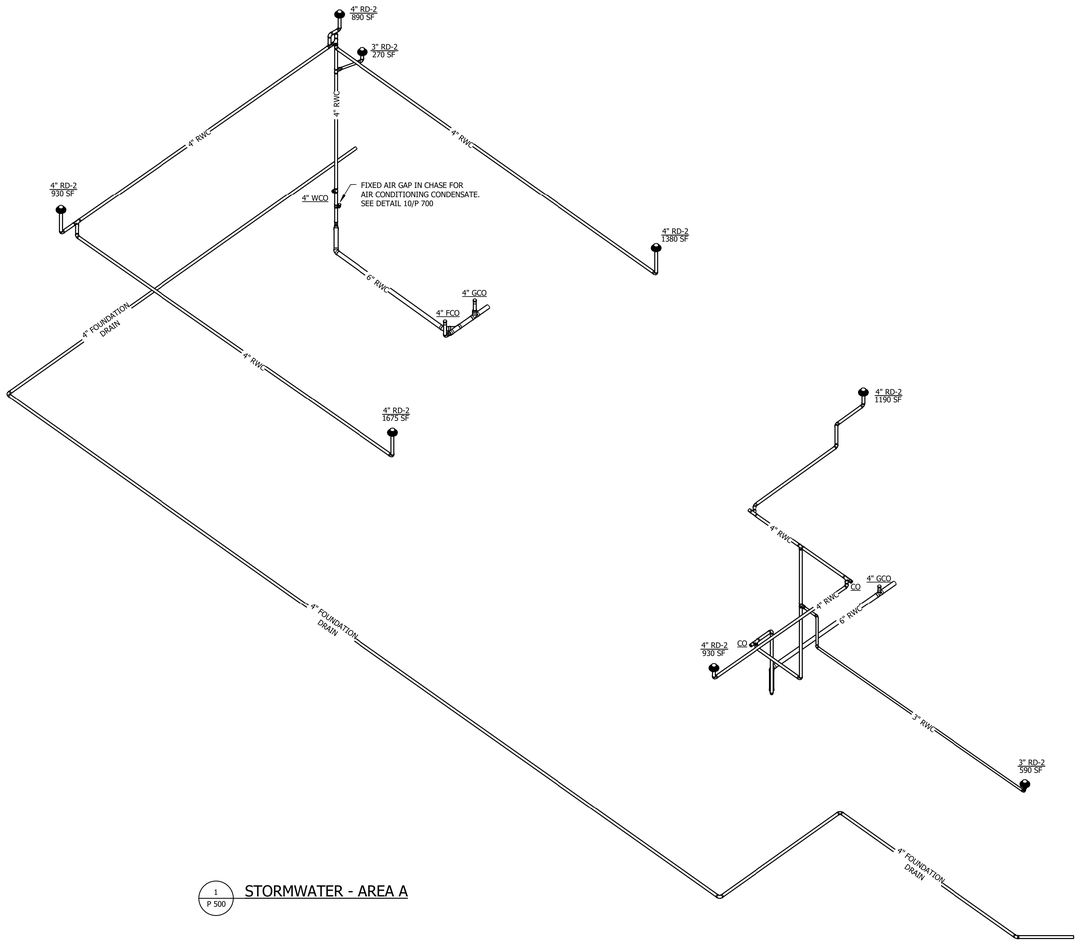
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
ENLARGED PLANS - PLUMBING

P 401

7/26/2016 11:59:03 AM



1 / P 500 STORMWATER - AREA A

7/26/2016 11:59:08 AM

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EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

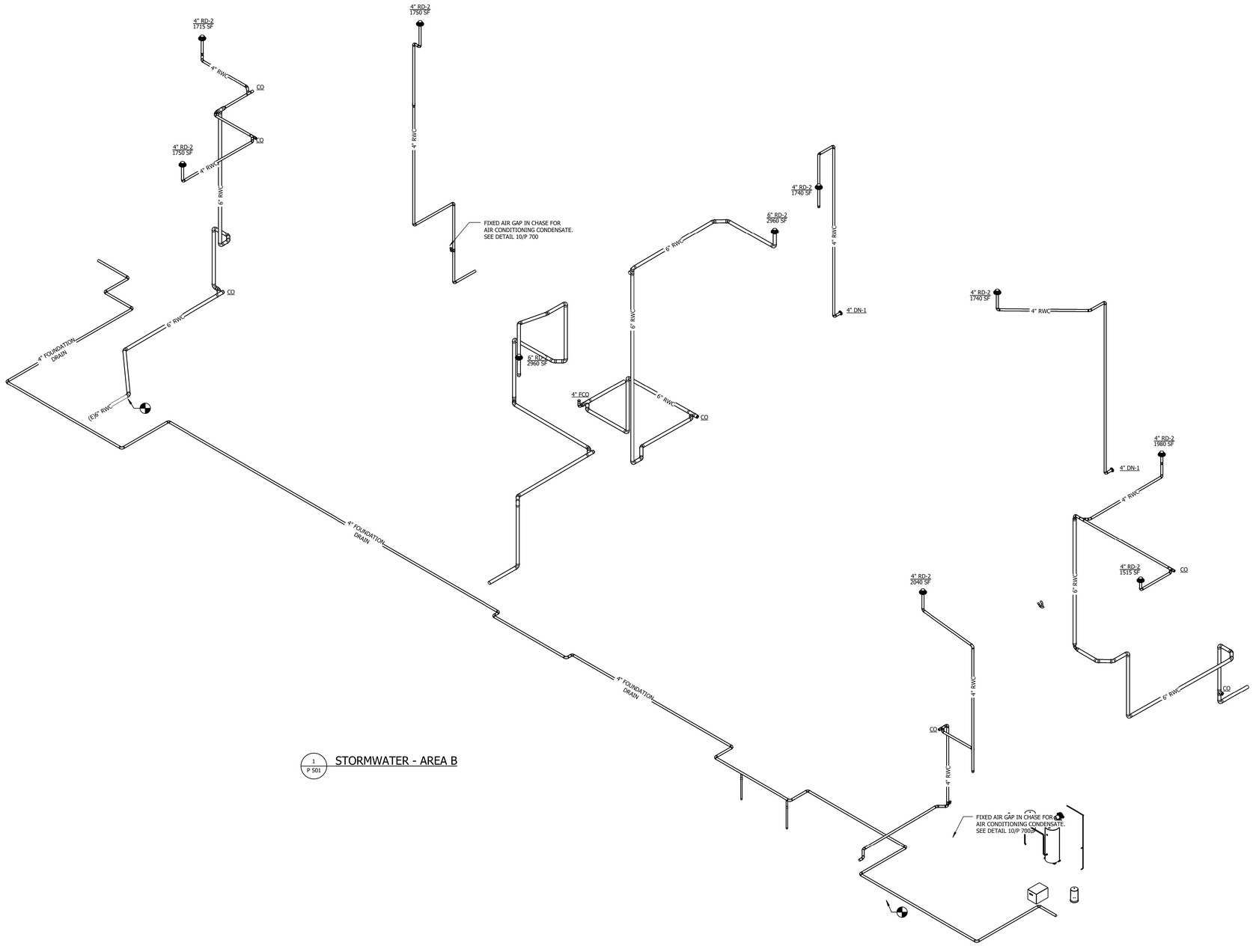
PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
STORMWATER - AREA A - PLUMBING

P 500



1 / P 501 STORMWATER - AREA B

7/26/2016 11:59:16 AM

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No.	DATE	DESCRIPTION

BID ISSUE

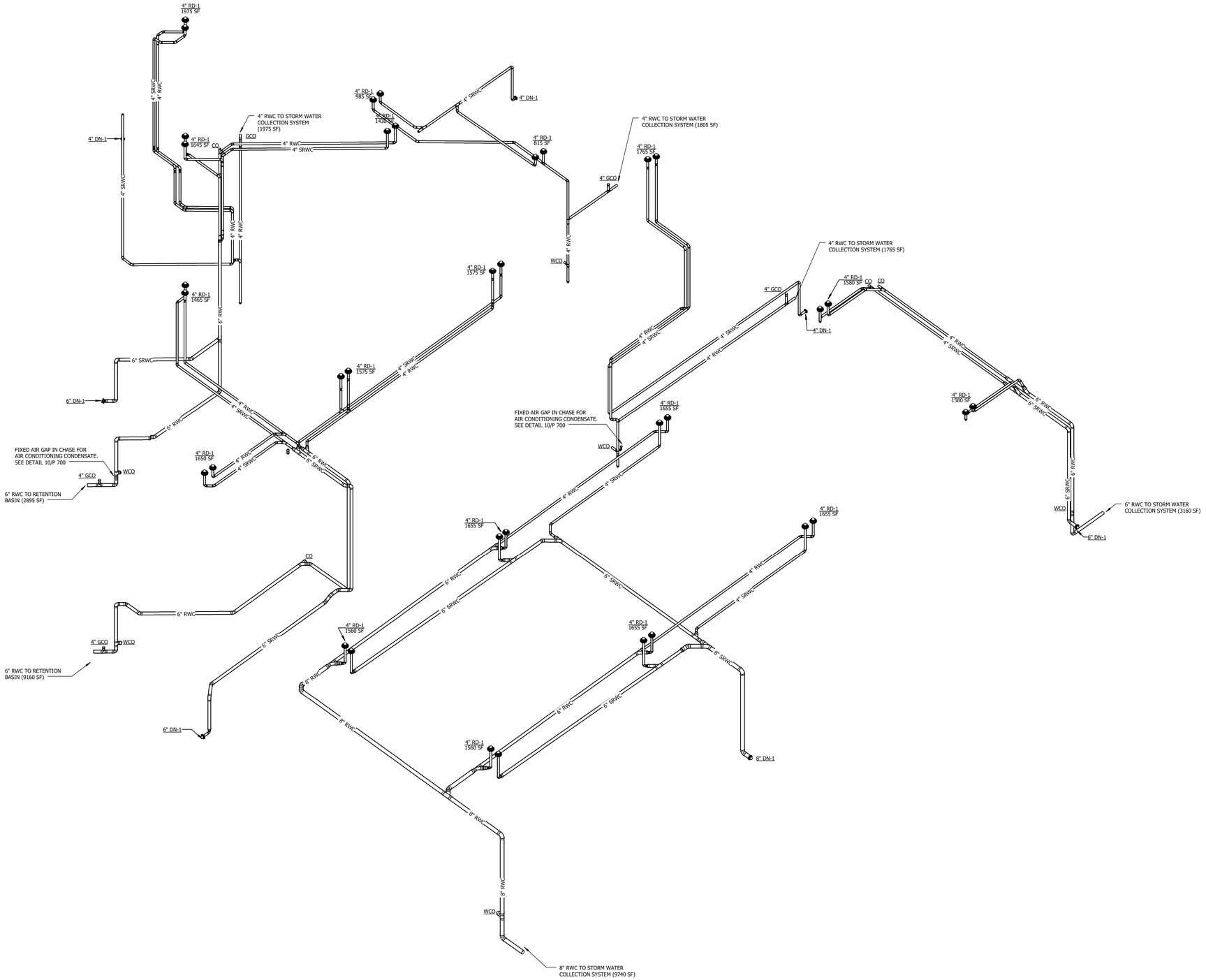
PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
STORMWATER - AREA B - PLUMBING

P 501



1 / P 502 STORMWATER - AREA C

⚠1 REVISED PLUMBING

JRS ARCHITECTS

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EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1

BID ISSUE

PROJECT No.: 152-01

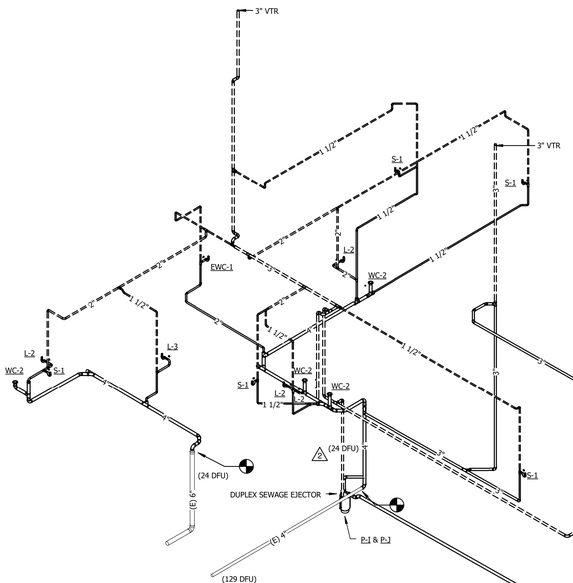
DATE: 03/31/16

SCALE: AS NOTED

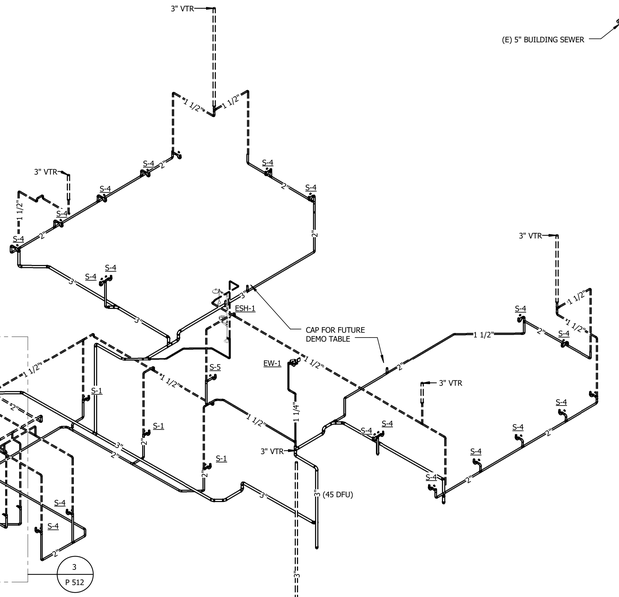
DRAWING NAME
STORMWATER - AREA C - PLUMBING

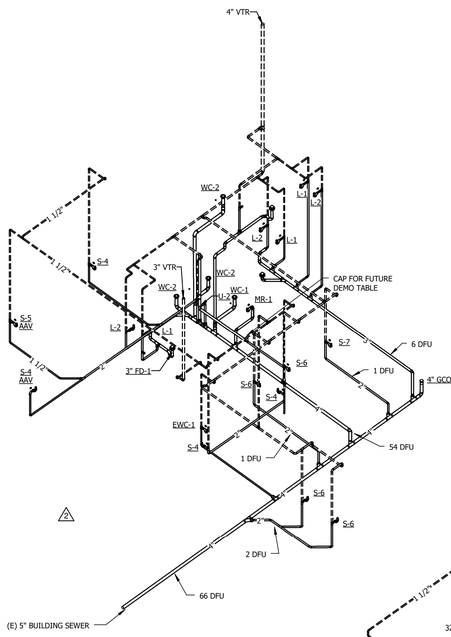
P 502

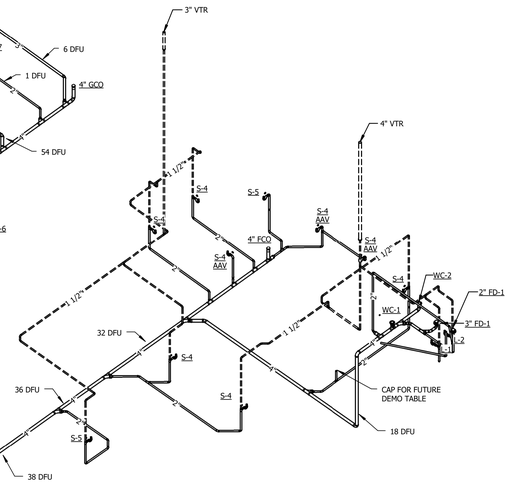
7/26/2016 11:59:23 AM



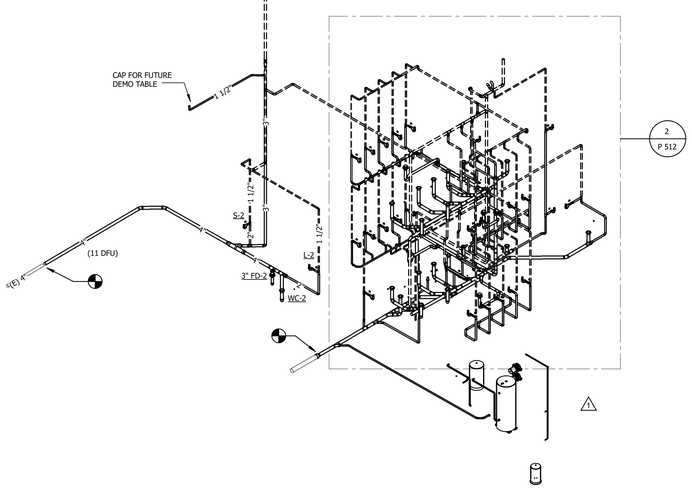
2 SANITARY AND VENT - AREA B - PLUMBING







1 SANITARY AND VENT - AREA A - PLUMBING



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No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1
2	05/06/16	ADDENDUM #5

BID ISSUE

PROJECT No.: 152-01

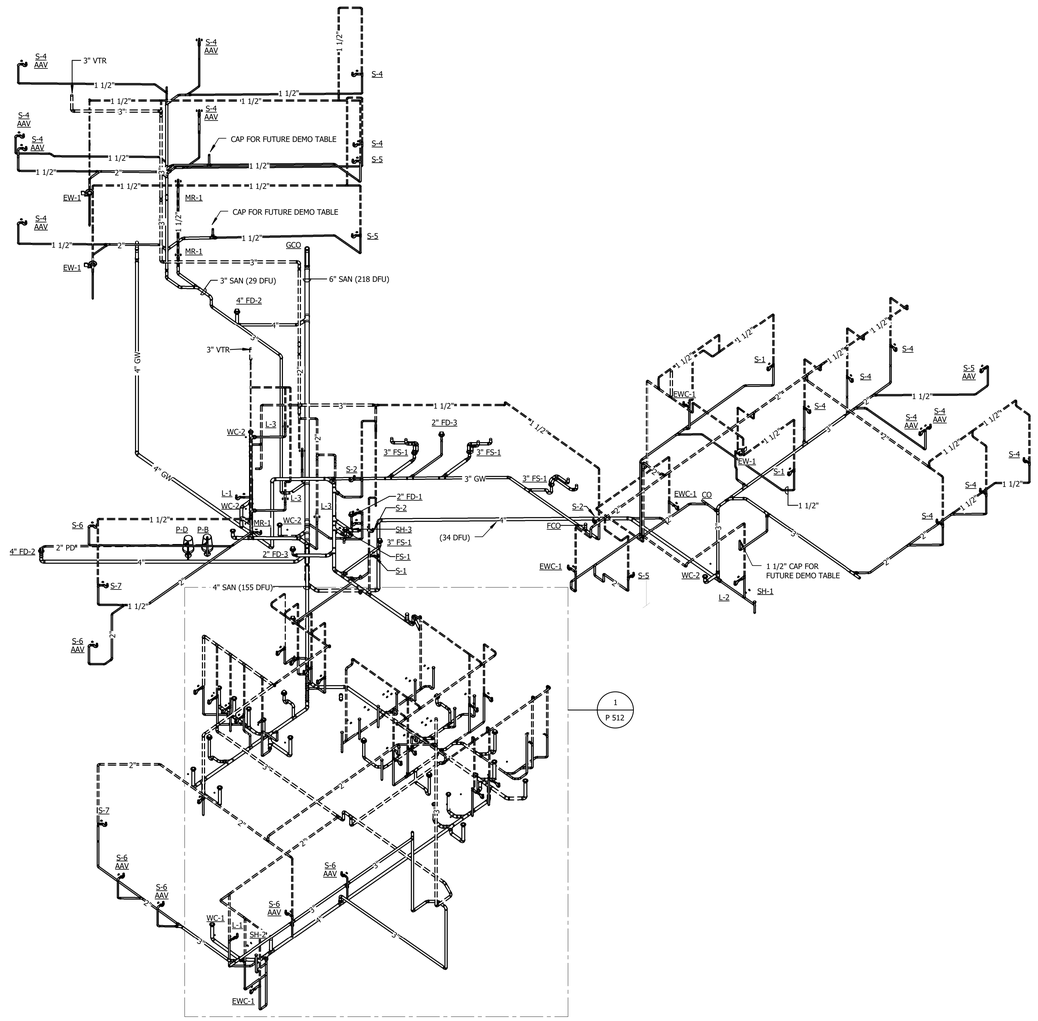
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
SANITARY AND VENT - AREA A & B - PLUMBING

P 510

7/26/2016 11:59:35 AM



1 / P 511 SANITARY AND VENT - AREA C - PLUMBING

1 REVISED PLUMBING

7/26/2016 11:59:43 AM

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LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1

BID ISSUE

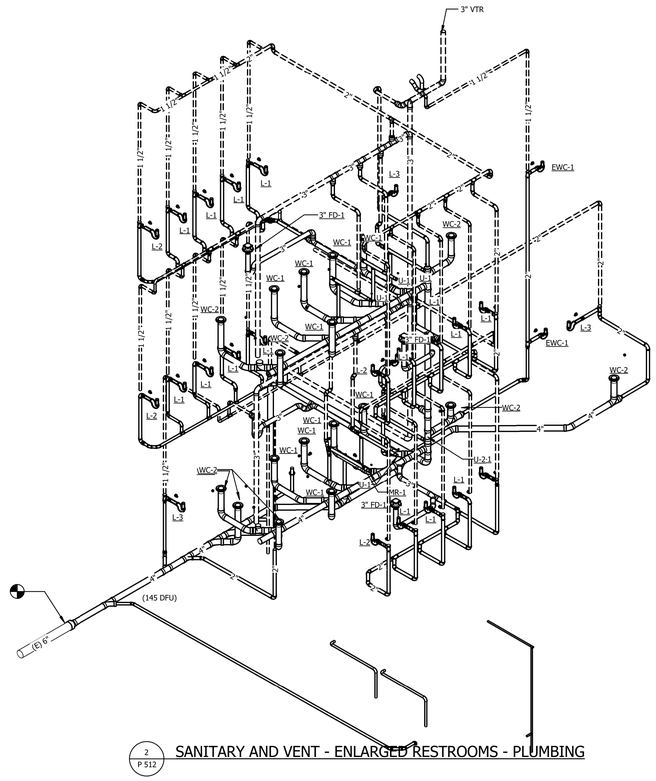
PROJECT No.: 152-01

DATE: 03/31/16

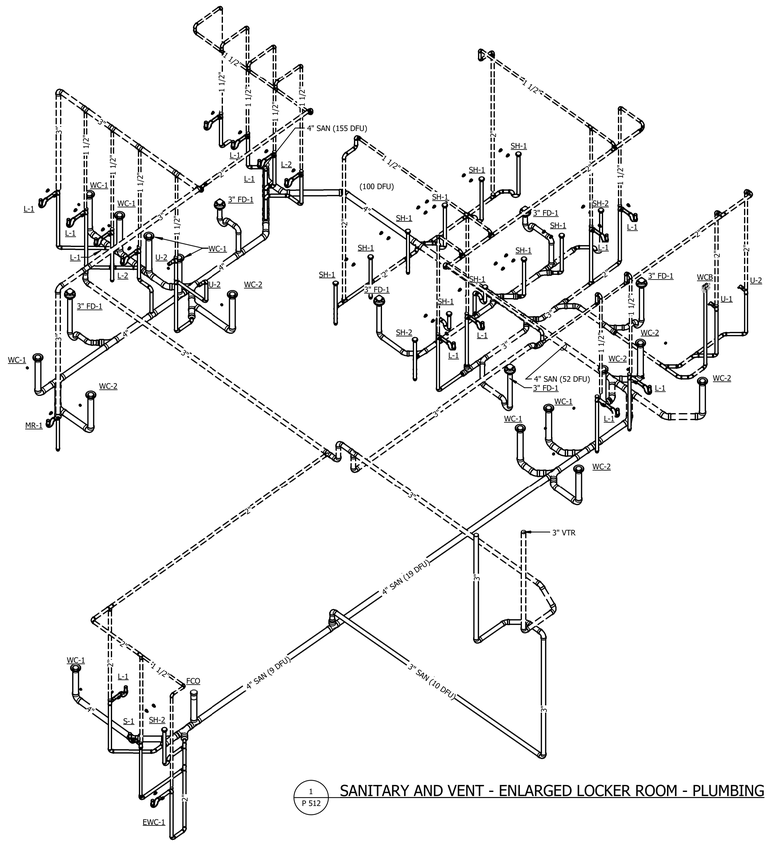
SCALE: AS NOTED

DRAWING NAME
SANITARY AND VENT - AREA C - PLUMBING

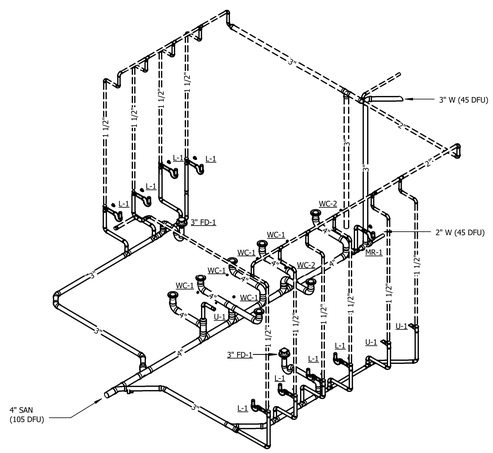
P 511



2 / P 512 SANITARY AND VENT - ENLARGED RESTROOMS - PLUMBING



1 / P 512 SANITARY AND VENT - ENLARGED LOCKER ROOM - PLUMBING



3 / P 512 SANITARY AND VENT - RESTROOM 009/010 - AREA B - PLUMBING

⚠ REVISED PLUMBING

JRS ARCHITECTS

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EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

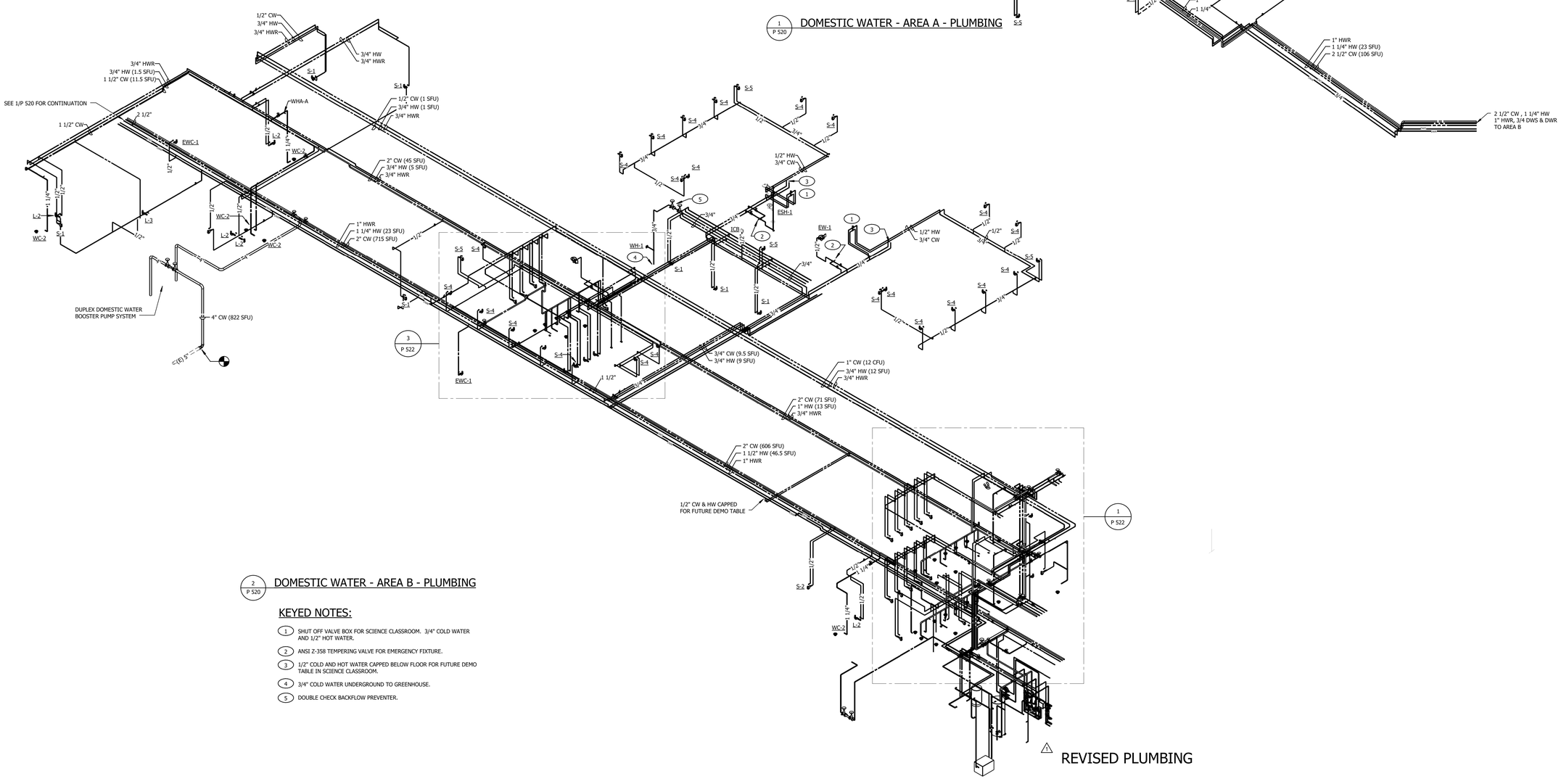
SCALE: AS NOTED

DRAWING NAME

SANITARY AND VENT - ENLARGED PLANS - PLUMBING

P 512

7/26/2016 11:59:54 AM



1 P 520 DOMESTIC WATER - AREA A - PLUMBING

2 P 520 DOMESTIC WATER - AREA B - PLUMBING

KEYED NOTES:

1. SHUT OFF VALVE BOX FOR SCIENCE CLASSROOM. 3/4" COLD WATER AND 1/2" HOT WATER.
2. ANSI Z-358 TEMPERING VALVE FOR EMERGENCY FIXTURE.
3. 1/2" COLD AND HOT WATER CAPPED BELOW FLOOR FOR FUTURE DEMO TABLE IN SCIENCE CLASSROOM.
4. 3/4" COLD WATER UNDERGROUND TO GREENHOUSE.
5. DOUBLE CHECK BACKFLOW PREVENTER.

⚠ REVISED PLUMBING

7/26/2016 12:00:05 PM

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No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1

BID ISSUE

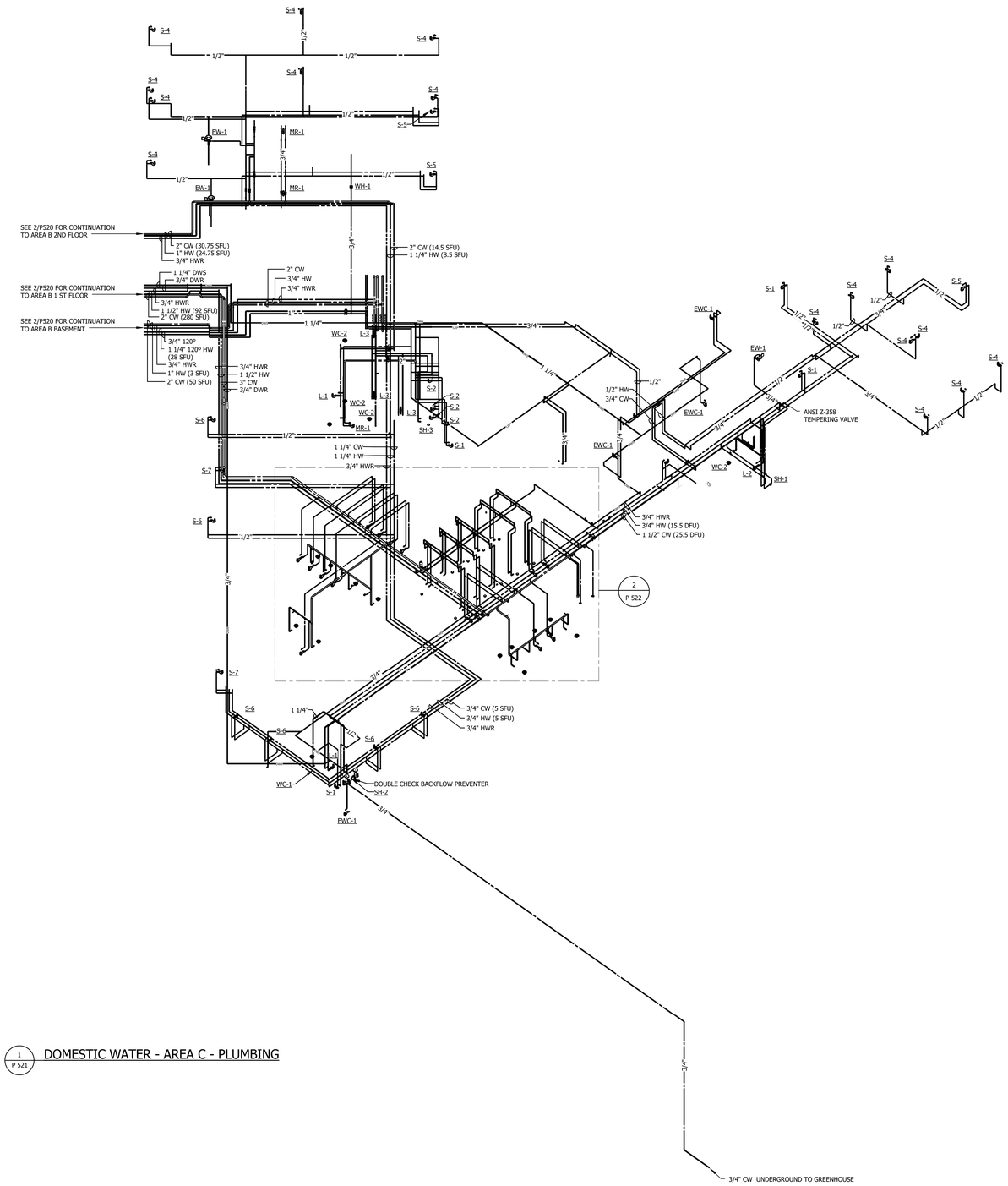
PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
DOMESTIC WATER - AREA A & B - PLUMBING

P 520



1 P 521 DOMESTIC WATER - AREA C - PLUMBING

⚠1 REVISED PLUMBING

7/26/2016 12:00:13 PM

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BID ISSUE

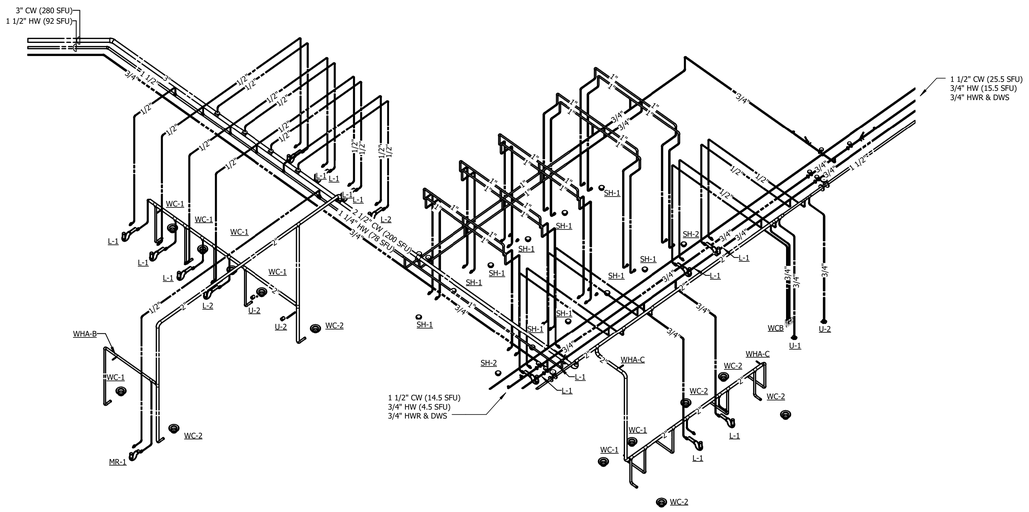
PROJECT No.: 152-01

DATE: 03/31/16

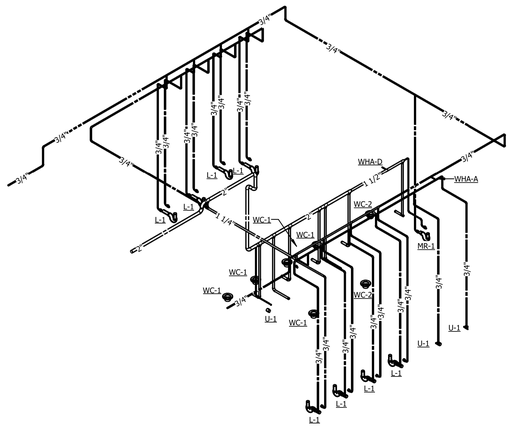
SCALE: AS NOTED

DRAWING NAME
DOMESTIC WATER - AREA C - PLUMBING

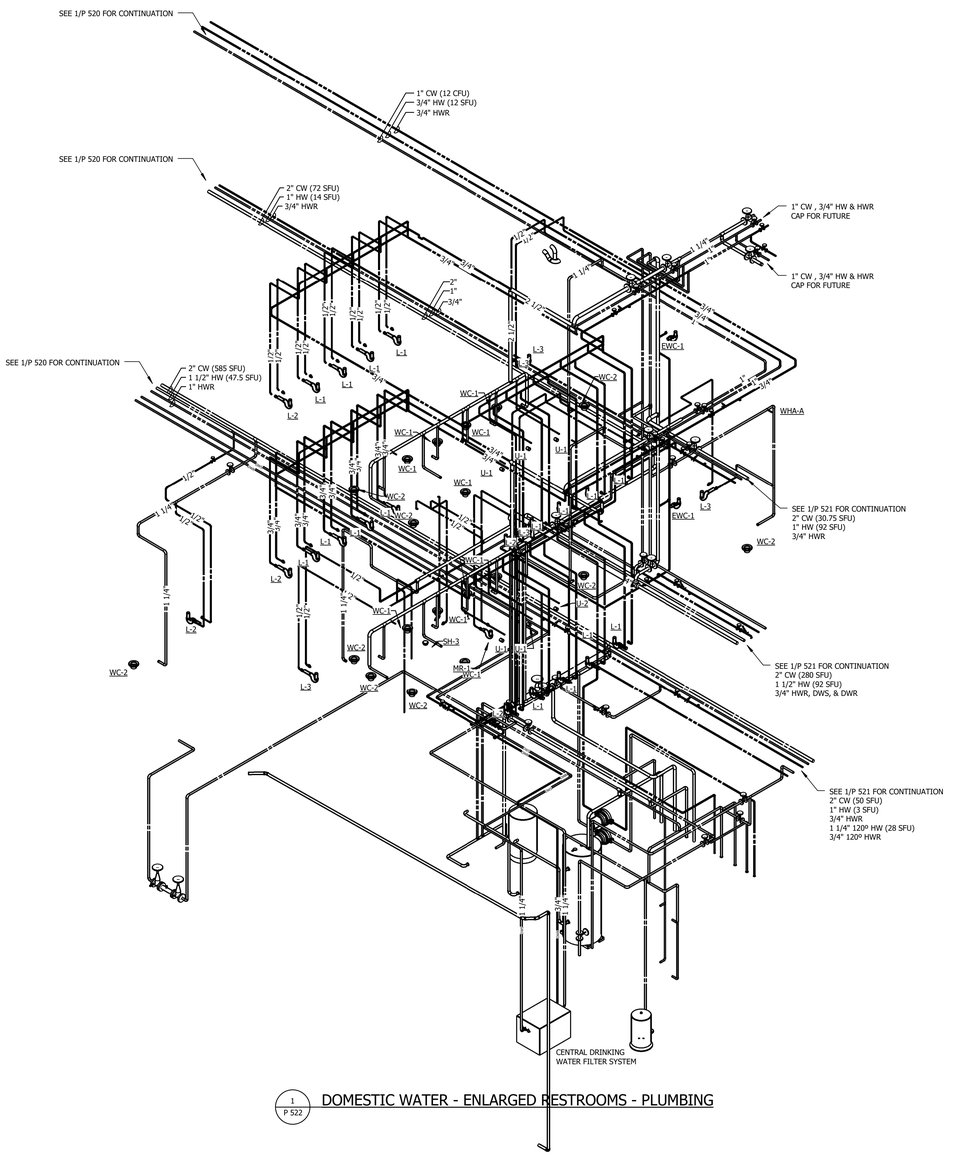
P 521



2 / P 522 DOMESTIC WATER - LOCKER ROOM - PLUMBING



3 / P 522 DOMESTIC WATER - AREA B - ENLARGED RESTROOMS 009/010



1 / P 522 DOMESTIC WATER - ENLARGED RESTROOMS - PLUMBING

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No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
DOMESTIC WATER - ENLARGED PLANS - PLUMBING

P 522

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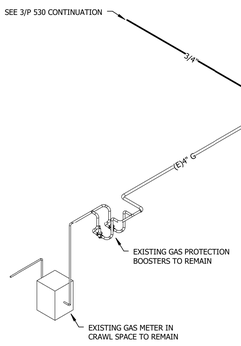
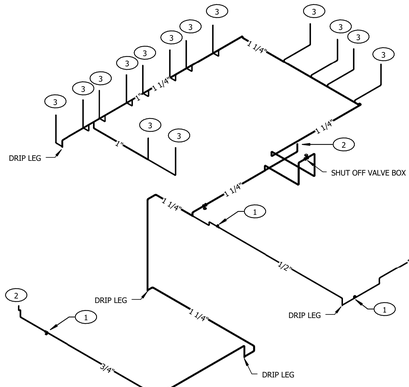
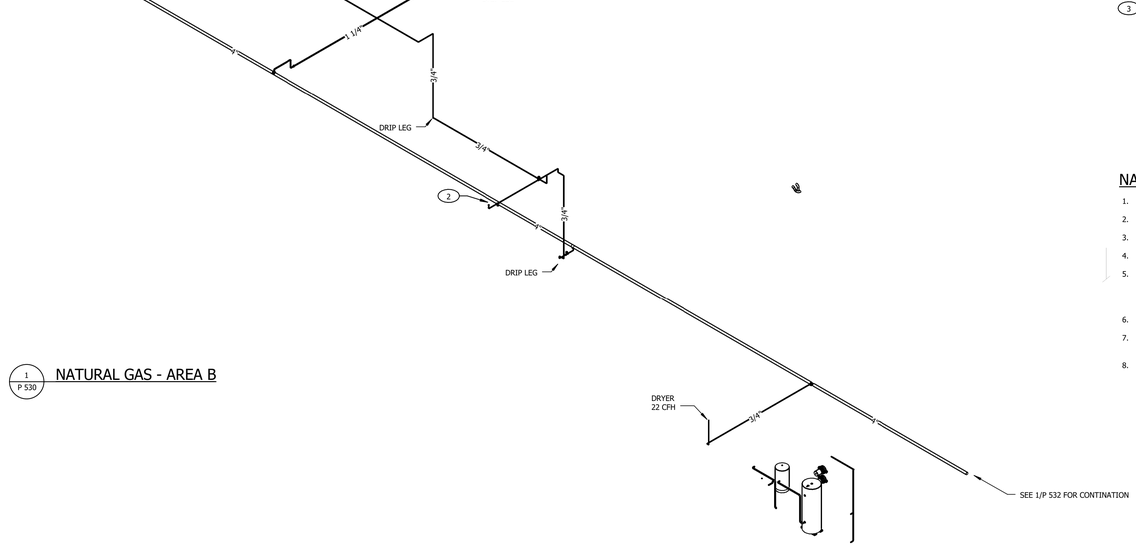
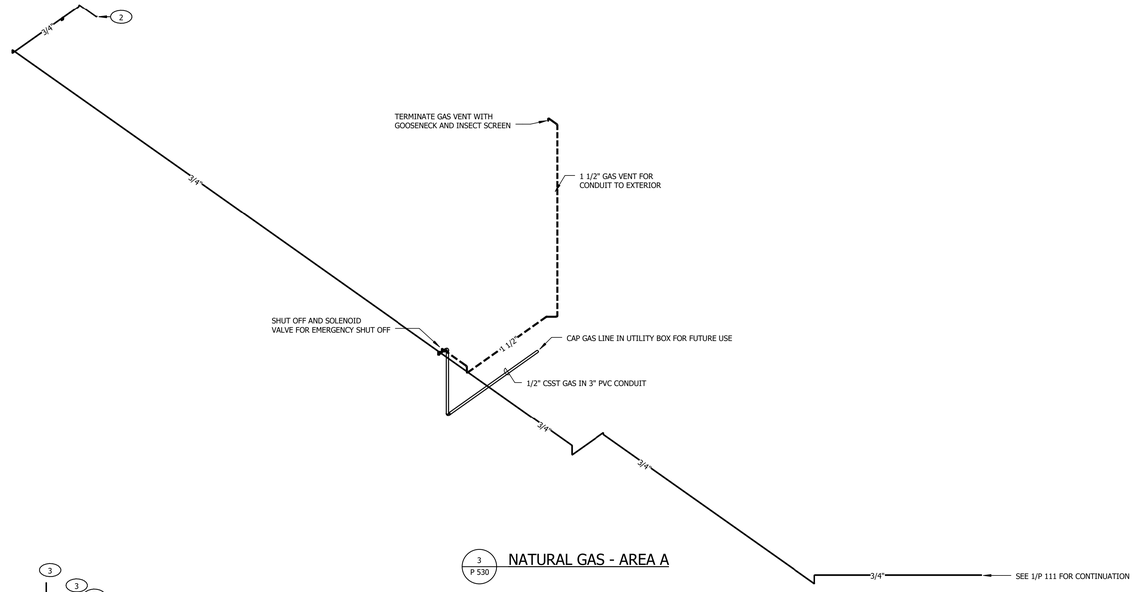






1 P 530 NATURAL GAS - AREA B



3 P 530 NATURAL GAS - AREA A

KEYED NOTES:

1. SOLENOID VALVE FOR EMERGENCY SHUT OFF.
2. CAP GAS BELOW FLOOR AT FUTURE DEMO TABLE LOCATION.
3. 1/2" GAS TO TURRET ON LAB BENCH.

NATURAL GAS SYSTEM DESIGN NOTES:

1. TOTAL CONNECTED LOAD: 2400 CFH. TOTAL, 20 CFH FOR AREA A AND 180 CFH FOR AREA B.
2. OUTLET PRESSURE AT 7" W.C.
3. PIPE SIZES BASED ON 0.5" W.C PRESSURE DROP OVER DEVELOPED LENGTH OF 350 LF FOR AREA A.
4. SPECIFIC GRAVITY: 0.6.
5. PIPING:
   A. MAINS: BLACKSTEEL.
   B. BRANCHLINES, RUNOUTS TO APPLIANCES: BLACKSTEEL OR CORRUGATED STAINLESS STEEL PIPE. (CSST)
   C. BELOW GRADE: POLYETHYLENE.
6. GAS PIPE INSTALLATION SHALL COMPLY WITH THE INTERNATIONAL FUEL GAS CODE, CHAPTER 4 SECTION 404.
7. GAS PIPING SHALL BE ELECTRICALLY BONDED IN ACCORDANCE WITH CHAPTER 3, SECTION 310.1 OF THE INTERNATIONAL FUEL GAS CODE.
8. BRANCH LINES AND RUNOUTS USING CSST PIPE SHALL BE SIZED AS FOLLOWS.:

SIZE (IN.)	MAX FLOW (MBH)
1/2	1/2
3/4	3/4
1	1
1 1/4	1 1/4
1 1/2	1 1/2
2	2

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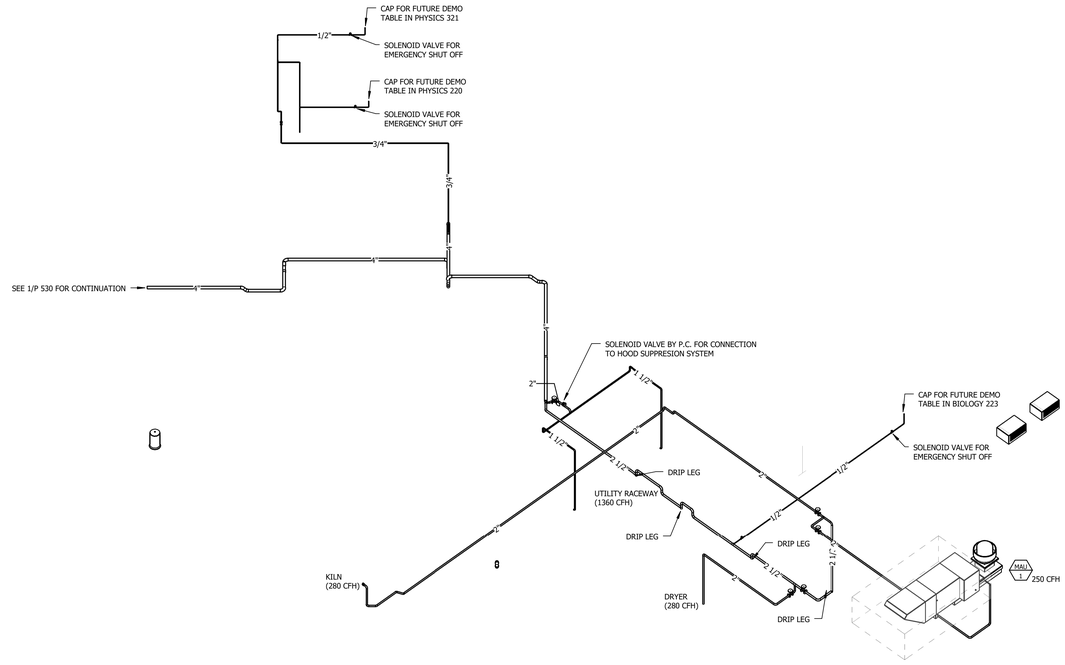
DRAWING NAME
NATURAL GAS - AREA A & B - PLUMBING

P 530



1 / P 531 NATURAL GAS - AREA C

NATURAL GAS SYSTEM DESIGN NOTES:

1. TOTAL CONNECTED LOAD: 1180 CFH FOR AREA C. 1380 CFH TOTAL.
2. OUTLET PRESSURE AT 7" W.C.
3. PIPE SIZES BASED ON 0.5" W.C PRESSURE DROP OVER DEVELOPED LENGTH OF 680 LF FOR AREA C.
4. SPECIFIC GRAVITY: 0.6.
5. PIPING:
   A. MAINS: BLACKSTEEL.
   B. BRANCHLINES, RUNOUTS TO APPLIANCES: BLACKSTEEL OR CORRUGATED STAINLESS STEEL PIPE. (CSST)
   C. BELOW GRADE: POLYETHYLENE.
6. GAS PIPE INSTALLATION SHALL COMPLY WITH THE INTERNATIONAL FUEL GAS CODE, CHAPTER 4 SECTION 404.
7. GAS PIPING SHALL BE ELECTRICALLY BONDED IN ACCORDANCE WITH CHAPTER 3, SECTION 310.1 OF THE INTERNATIONAL FUEL GAS CODE.
8. BRANCH LINES AND RUNOUTS USING CSST PIPE SHALL BE SIZED AS FOLLOWS.:

SIZE (IN.)	MAX FLOW (MBH)
1/2	1/2
3/4	3/4
1	1
1 1/4	1 1/4
1 1/2	1 1/2
2	2

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SCALE: AS NOTED

DRAWING NAME
NATURAL GAS - AREA C - PLUMBING

P 531

(DWHP) PROPOSED DOMESTIC WATER HEAT PUMP UNIT SCHEDULE

TAG	DOMESTIC LOOP (SUPPLY) WATER						HEAT PUMP LOOP (SOURCE) WATER					HEAT PUMP PERFORMANCE				ELECTRICAL			BASIS OF DESIGN
	FLOW (GPM)	(GPM)	EXTERNAL W.P.D. (FT HD)	E.W.T. (°F)	L.W.T. (°F)	HEAT REJECTION (MBH)	FLOW (GPM)	E.W.T. (°F)	L.W.T. (°F)	W.P.D. (FT)	HEAT ABSORPTION (MBH)	COP	EVAP. SUCTION TEMP (F)	COMPRESSOR TYPE	REF. TYPE	POWER (V/PH/HZ)	RLA (AMPS)	LRA (AMPS)	MANUFACTURER AND MODEL NUMBER
DWHP-1	1.51	90.7	10	40	140	71.1	14	35	25	6	50.5	2.99	26.23	SCROLL	R-134A	480 / 3 / 60	20	125	COLMAC COIL/HPW7LS
DWHP-2	1.51	90.7	10	40	140	71.1	14	35	25	6	50.5	2.99	26.23	SCROLL	R-134A	480 / 3 / 60	20	125	COLMAC COIL/HPW7LS

NOTES: PROVIDE EACH UNIT WITH THE FOLLOWING COMPONENTS:

- VENTED, DOUBLE WALL, STAINLESS STEEL, BRAZED PLATE CONDENSERS (POTABLE WATER).
- SINGLE WALL, STAINLESS STEEL, BRAZED PLATE EVAPORATORS (SOURCE WATER).
- ADJUSTABLE TXV, MOISTURE INDICATING SIGHT GLASS, LIQUID LINE FILTER DRIER.
- BRONZE HOT WATER CIRCULATING PUMP (POTABLE WATER).
- ELECTRONIC TEMPERATURE CONTROL VALVE TO REGULATE FLOW OF DOMESTIC WATER PER THE UNIT DISCHARGE TEMPERATURE.
- SOURCE WATER FLOW SWITCH AND FREEZE STAT.
- AUTOMATIC CONTROLS INCLUDING: HIGH AND LOW PRESSURE CUTOUTS, COMPRESSOR TIME DELAY RELAY, NORMAL RUN AND FAULT INDICATING LIGHTS, PHASE FAILURE RELAY.

PUMP SCHEDULE

SYMBOL	SERVICE	GPM	HEAD (FT.)	TYPE	ELECTRICAL CHARACTERISTICS HP	VOLTS	PHASE	SPEED	SUCTION	DISCHARGE	REMARKS	MANUFACTURER/MODEL NUMBER BASIS OF DESIGN
P-A	BUILDING HOT WATER CIRCULATING	18	18	INLINE	1/3	120	1	1750	1 1/4"	1 1/4"	7 DAY TIME CLOCK AND AQUASTAT	BELL & GOSSETT SERIES HD3
P-B	ELEVATOR SUMP PUMP	25	25	SUBMERSIBLE	1/2	120	1	1750	-	1 1/4"		WEIL SERIES 1400
P-C	KITCHEN RECIRCULATION PUMP	5	17	INLINE	1/6	120	1	1750	3/4"	3/4"	7 DAY TIME CLOCK AND AQUASTAT	BELL & GOSSETT SERIES PR
P-D	ELEVATOR SUMP PUMP	50	18	SUBMERSIBLE	1/2	120	1	1750	-	1 1/4"		WEIL SERIES 1400
P-E	BOOSTER PUMP	70	25	END SUCTION	2	480	3	-	3"	3"	CITY WATER PRESSURE AT MAXIMUM PROBABLE FLOW IS ESTIMATED TO BE 55 PSI	PACKAGED VARIABLE SPEED, MULTIPLEX PUMP SYSTEM
P-F	BOOSTER PUMP	70	25	END SUCTION	2	480	3	-	3"	3"		
P-G	BOOSTER PUMP	70	25	END SUCTION	2	480	3	-	3"	3"		
P-H	SUMP PUMP	25	25	SUBMERSIBLE	1/2	120	1	1750	-	1 1/4"		WEIL SERIES 1400
P-I	DUPLEX SEWAGE EJECTOR	50	17	SUBMERSIBLE	1/2	120	1	1725	4"	2"	WITH NEMA CONTROL PANEL, DISCONNECT ALTERNATOR, ALARMS, LEVEL CONTROLS	ZOELLER PREPACKAGED DUPLEX ELECTOR SYSTEM WITH 36"Dx48" BASIN WITH RAIL SYSTEM, 280 SERIES PUMPS
P-J	DUPLEX SEWAGE EJECTOR	50	17	SUBMERSIBLE	1/2	120	1	1725	4"	2		

EXPANSION TANK SCHEDULE

SYMBOL	SERVICE	TYPE	MIN. ACCEPT VOL (GAL)	SYSTEM (MIN)	TEMPERATURE (MAX)	SYSTEM PRESSURE (PSI)	RELIEF VALVE PRESSURE (PSI)	CONNECT SIZE (IN)
ET-A	DOMESTIC HOT WATER (2)	VERTICAL MOUNTED DIAPHRAGM	52	40	140	66	125	2
ET-B	KITCHEN HOT WATER	HORIZONTAL MOUNTED DIAPHRAGM	5	40	140	66	125	2

DRAINAGE SCHEDULE

SYMBOL	DESCRIPTION	BODY	STRAINER	REMARKS
-	- (2)	-		
CO	CLEAN OUT	Z-1470		
FCO	FLOOR CLEANOUT	Z-1400		
FD-1	FLOOR DRAIN	Z-415	5" DIA, BRONZE	
FD-2	FLOOR DRAIN	Z-550-4	9" DIA CAST IRON	WITH SEDIMENT BUCKET
FD-3	KITCHEN FLOOR DRAIN	Z-415	TYP. I, 5" DIA, BRONZE	INSTALL WITH TOP OF RIM FLUSH WITH FINISHED FLOOR
FS-1	FLOOR SINK	Z-1900 (1)	12"x12"	WITH ALUMNINUM BUCKET - PROVIDE 1/2 OR 3/4 GRATE AS REQUIRED
GCO	GRADE CLEANOUT	Z-1406		
WCO	WALL CLEANOUT	ZANB-1468		
RD-1	COMBINATION ROOF DRAIN	Z-163EA	15" ALUMINUM DOME (2)	
RD-2	PRIMARY ROOF DRAIN	Z-100 EARC	15" ALUMINUM DOME	
-	-	-	-	
TD-1	TRENCH DRAIN	Z-880	CLASS B DUCTILE SLOTTED GRATE	FIELD VERIFY LENGTH OF EACH SECTION

NOTES:
1. UNLESS OTHERWISE NOTED, MODEL NUMBERS SHOWN ARE FOR ZURN INDUSTRIES PRODUCTS AS BASIS OF DESIGN
2. SEE PLANS FOR PIPE SIZES.
3. REFER TO ARCHITECTURAL DRAWINGS FOR FLOOR FINISHES. PROVIDE CLEANOUT SUITABLE FOR FLOOR FINISH SHOWN PER SPECIFICATIONS.
4. PROVIDE FLOOR DRAINS WITH TRAP PROTECTION AS SPECIFIED.
5. PROVIDE BARRIER TYPE TRAP PROTECTION CONFORMING TO ASSE 1072 ON ALL FLOOR DRAIN TYPES.

ELECTRIC WATER HEATER SCHEDULE

FIXTURE	SYSTEM	CAPACITY GALLONS	RECOVERY GPH/GPM @ ° F	ELECTRICAL V	Ø	KW	MANUFACTURER AND MODEL
EWH-1	KITCHEN BACK-UP WATER HEATER	50 GAL	149 GPH @ 100ºF	480	3	43	BRADFORD WHITE 50A-36-3

FIXTURES SCHEDULE

FIXTURE	DESCRIPTION	MANUFACTURER AND MODEL BASIS OF DESIGN	FAUCET/TRIM BASIS OF DESIGN	SUPPORT BASIS OF DESIGN	FLOW RATE/ CONSUMPTION	COLD WATER	HOT WATER	SOIL/ WASTE	VENT	NOTES
EW-1	EMERGENCY EYEWASH	WALL MOUNTED EYE/FACE WASH WITH STAINLESS STEEL RECEPTOR WITH COVER	STAY OPEN, CHROME PLATED BRASS BALL VALVE AND STAINLESS STEEL PUSH FLAG	WALL MOUNTED	3 GPM	1/2"	1/2'	-	-	ANSI Z358.1 COMPLIANT, BARRIER FREE, AND ANSI COMPLIANT TEMPERING VALVE
ESH-1	EMERGENCY COMBINATION FIXTURE	COMBINATION EMERGENCY SHOWER AND EYEWASH UNIT CONSTRUCTED FROM SCHEDULE 40 HOT-DIPPED GALVANIZED STEEL PIPE AND FITTINGS WITH POWDER COATED CAST IRON FLOOR FLANGE. EYE/FACE WASH SIMILAR TO EW-1. SHOWER HEAD OF 10.5" STAINLESS STEEL	STAY OPEN, CHROME PLATED BRASS BALL VALVE AND STAINLESS STEEL PUSH FLAG FOR EYEWASH AND TRIANGULAR PULL ROD FOR SHOWER	FLOOR MOUNTED	20 GPM	1"	3/4"	-	-	ANSI Z358.1 COMPLIANT, BARRIER FREE, AND ANSI COMPLIANT TEMPERING VALVE
EWC-1	BI-LEVEL ELECTRIC WATER COOLER	BI-LEVEL, BARRIER FREE, SURFACE MOUNTED WITH SIDE AND FRONT MOUNTED PUSH BARS, STAINLESS STEEL BASIN AND EXTERIOR PANELS AND FLEXIBLE HOODED BUBBLER, LEAD FREE WATER WAYS	-	FLOOR MOUNTED PLATE CARRIER	-	1/2"	-	1 1/2"	1 1/2"	
ICB	ICE MAKER CONNECTION BOX	20 GUAGE STAINLESS STEEL BOX AND TRIM RING	1/4 TURN STOP	RECESSED	-	1/2"	-	-	-	
L-1	LAVATORY STUDENT/PUBLIC	RECTANGULAR, ENAMELD CAST IRON, FRONT OVERFLOW WITH 8" FAUCET CENTERS, 20"X18 NOM	COMBINATION HOT AND COLD METERING, WDESPREAD, SLOW CLOSING, 5" SPOUT AND VANDALPROOF	FLOOR MOUNTED PLATE CARRIER	0.35 GPM	1/2"	1/2"	1 1/2"	1 1/2"	LAVATORY HOT WATER SUPPLIED FROM CENTRAL TEMPERING STATION SET AT 110°F AND CONFORMING TO ASSE 1070
L-2	ACCESSIBLE LAVATORY (STUDENT/PUBLIC)	ACCESSIBLE HEIGHT, RECTANGULAR, ENAMELD CAST IRON, FRONT OVERFLOW WITH 8" FAUCET CENTERS, 20"X18 NOM	COMBINATION HOT AND COLD METERING, WDESPREAD, SLOW CLOSING, 5" SPOUT AND VANDALPROOF	FLOOR MOUNTED PLATE CARRIER	0.35 GPM	1/2"	1/2"	1 1/2"	1 1/2"	LAVATORY HOT WATER SUPPLIED FROM CENTRAL TEMPERING STATION SET AT 110°F AND CONFORMING TO ASSE 1070
L-3	ACCESSIBLE LAVATORY (STAFF)	ACCESSIBLE HEIGHT, RECTANGULAR, ENAMELD CAST IRON, FRONT OVERFLOW WITH 8" FAUCET CENTERS, 20"X18 NOM	MANUAL FAUCET WITH WRISTBLADE HANDLES, WIDESPREAD, 5" SPOUT	FLOOR MOUNTED PLATE CARRIER	0.35 GPM	1/2"	1/2"	1 1/2"	1 1/2"	LAVATORY HOT WATER SUPPLIED FROM CENTRAL TEMPERING STATION SET AT 110°F AND CONFORMING TO ASSE 1070
MR-1	MOP RECEPTOR	(2) MOLDED STONE ONE PIECE BASIN, 36"X24" FIAT MSB3624	WALL MOUNTED, 8" CENTERS, CROSS HANDLES, VACUUM BREAKER, HOSE THREAD OUTLET, PAIL HOOK AND BRACE CHICAGO 540-LD897BWXFLP	FLOOR	2.5 GPM	1/2"	1/2"	2"	1 1/2"	
S-1	SINGLE BOWL SINK	18 GAUGE STAINLESS STEEL, WITH UNDERCOATING WITH REAR CENTER DRAIN OUTLET ELKAY LRAD 221955	COMBINATION HOT AND COLD WITH 8" CENTERS, 120 DEGREE SWING, GOOSENECK SPOUT AND INDEXED LEVER HANDLES CHICAGO 786-E29	SELF RIMMING COUNTER TYPE	0.5 GPM	1/2"	1/2"	1 1/2"	1 1/2"	
S-2	DOUBLE BOWL SINK	18 GAUGE STAINLESS STEEL, WITH UNDERCOATING WITH REAR CENTER DRAIN OUTLET ELKAY LRAD 331955	DECK MOUNTED, COMBINATION HOT AND COLD WITH 8" CENTERS, 120 DEGREE SWING, GOOSENECK SPOUT AND INDEXED LEVER HANDLES CHICAGO 786-E29	SELF RIMMING COUNTER TYPE	0.5 GPM	1/2"	1/2"	1 1/2"	1 1/2"	
S-3	CLASSROOM SINK	18 GAUGE STAINLESS STEEL, WITH UNDERCOATING WITH REAR CENTER DRAIN OUTLET ELKAY LRAD 221955	DECK MOUNTED, COMBINATION HOT AND COLD WITH 8" CENTERS, 120 DEGREE SWING, GOOSENECK SPOUT AND INDEXED LEVER HANDLES CHICAGO 786-E29	SELF RIMMING COUNTER TYPE	0.5 GPM	1/2"	1/2"	1 1/2"	1 1/2"	
S-4	SCIENCE CLASSROOM SINK (STUDENT USE)	EPOXY RESIN SINK FURNISHED WITH SCIENCE CLASSROOM CASEWORK	DECK MOUNTED, COLD WATER ONLY. RIGID GOOSENECK SPOUT WITH VACUUM BREAKER, INDEXED LEVER HANDLES AND VANDAL PROOF SERRATED NOZZLE CHICAGO FAUCET 928-369CP	UNDERMOUNT	0.5 GPM	1/2"	1/2"	1 1/2"	1 1/2"	(2) PROVIDE PASTER TRAP ON SINK
S-5	SCIENCE CLASSROOM SINK (TEACHER USE)	EPOXY RESIN SINK FURNISHED WITH SCIENCE CLASSROOM CASEWORK	DECK MOUNTED, COMBINATION HOT AND COLD WITH 8" CENTERS, 120 DEGREE SWING, GOOSENECK SPOUT WITH VACUUM BREAKER, INDEXED LEVER HANDLES AND VANDAL PROOF SERRATED NOZZLE CHICAGO FAUCET 786-GN2BVBE7CP	UNDERMOUNT	0.5 GPM	1/2"	1/2"	1 1/2"	1 1/2"	PROVIDE PASTER TRAP ON SINK
S-6	ART ROOM SINK	18 GAUGE STAINLESS STEEL, WITH UNDERCOATING WITH REAR CENTER DRAIN OUTLET ELKAY LRAD 221955	DECK MOUNTED, COMBINATION HOT AND COLD WITH 8" CENTERS, 120 DEGREE SWING, GOOSENECK SPOUT AND INDEXED LEVER HANDLES CHICAGO 786-E29	SELF RIMMING COUNTER TYPE	0.5 GPM	1/2"	1/2"	1 1/2"	1 1/2"	PROVIDE SOLIDS INTERCEPTOR BELOW SINK
S-7	CLEANUP SINK	14 GAUGE STAINLESS STEEL, WALL HUNG SINK WITH CENTER DRAIN OUTLET ELKAY EWMA4820C	WALL MOUNTED, COMBINATION HOT AND COLD WITH 8" CENTERS, 120 DEGREE SWING, 5 1/4" GOOSENECK SPOUT AND INDEXED LEVER HANDLES CHICAGO FAUCET 631-GN2AE35VABCP	SELF RIMMING COUNTER TYPE	0.5 GPM	1/2"	1/2"	1 1/2"	1 1/2"	PROVIDE SOLIDS INTERCEPTOR BELOW SINK IN ART ROOMS
SH-1	SHOWER	WALL MOUNTED SHOWER CONSTRUCTED OF 18-GUAGE TYPE 304 STAINLESS STEEL AND PROVIDED WITH A SHROUD EXTENDING TO THE CEILING AND A SOAP DISH	PRESSURE BALANCING SHOWER VALVE WITH LEVER AND CHECKSTOPS AND VANDAL PROOF , FIXED SHOWER HEAD	WALL MOUNTED	1.25 GPM	1/2"	1/2"	2"	1 1/2"	
SH-2	ACESSIBLE SHOWER	WALL MOUNTED SHOWER CONSTRUCTED OF 18-GUAGE TYPE 304 STAINLESS STEEL AND PROVIDED WITH A SHROUD EXTENDING TO THE CEILING AND A SOAP DISH	PRESSURE BALANCING SHOWER VALVE WITH HAND HELD SPRAYER AND STAINLESS STEEL HOSE.	WALL MOUNTED	1.25 GPM	1/2"	1/2"	2"	1 1/2"	SEE ARCHITECTURAL DRAWINGS/SPECIFICATIONS FOR SEAT, GRAB BAR AND SHOWER CURTAIN
SH-3	STAFF SHOWER	WALL MOUNTED SHOWER CONSTRUCTED OF 18-GUAGE TYPE 304 STAINLESS STEEL AND PROVIDED WITH A SHROUD EXTENDING TO THE CEILING AND A SOAP DISH	PRESSURE BALANCING SHOWER VALVE WITH LEVER AND CHECKSTOPS AND BALL JOINT ADJUSTABLE SHOWER HEAD	WALL MOUNTED	1.25 GPM	1/2"	1/2"	2"	1 1/2"	
U-1	WALL HUNG URINAL	VITREOUS CHINA, WALL HUNG, TOP SPUD, WASHDOWN TYPE	MANUAL FLUSH VALVE	FLOOR MOUNTED PLATE TYPE FIXTURE CARRIER	0.125 GPF	3/4"	-	2"	1 1/2"	
U-2	ACCESSIBLE WALL HUNG URINAL	ACCESSIBLE HEIGHT, VITREOUS CHINA, WALL HUNG, TOP SPUD, WASHDOWN TYPE	MANUAL FLUSH VALVE	FLOOR MOUNTED PLATE TYPE FIXTURE CARRIER	0.125 GPF	3/4"	-	2"	1 1/2"	
WC-1	FLOOR MOUNTED WATER CLOSET	VITREOUS CHINA, FLOOR MOUNTED, ELONGATED BOWL, SIPHON JET	MANUAL DUAL FLUSH VALVE	FLOOR MOUNTED	1.6/1.1 GPF	1 1/4"	-	4"	2"	PROVIDE WITH WHITE, ELONGATED, SOLID PLASTIC, OPEN FRONT SEAT, COMPLETE WITH STAINLESS STEEL POSTS AND COMBINATION SELF-SUSTAINING AND CHECK HINGE
WC-2	ACCESSIBLE FLOOR MOUNTED WATER CLOSET	ACCESSIBLE HEIGHT,VITREOUS CHINA, FLOOR MOUNTED, ELONGATED BOWL, SIPHON JET	MANUAL DUAL FLUSH VALVE	FLOOR MOUNTED	1.6/1.1 GPF	1 1/4"	-	4"	2"	PROVIDE WITH WHITE, ELONGATED, SOLID PLASTIC, OPEN FRONT SEAT, COMPLETE WITH STAINLESS STEEL POSTS AND COMBINATION SELF-SUSTAINING AND CHECK HINGE
WCB	WASHING MACHINE CONNECTION BOX	20 GUAGE STAINLESS STEEL BOX AND TRIM RING	1/4 TURN STOPS	RECESSED	-	1/2"	1/2"	2"	1 1/2"	PROVIDE WATER HAMMER ARRESTORS ON OUTLETS
YH-1	YARD HYDRANT	ZURN Z-1396XL	-	-	-	3/4"	-	-	-	-

TYPICAL KITCHEN EQUIPMENT SCHEDULE

SYMBOL	DESCRIPTION	DRAIN WATER AND VENT DIRECT DRAIN SIZE (IN)	DRAIN WATER AND VENT INDIRECT DRAIN SIZE (IN)	POTABLE WATER COLD WATER SIZE (IN)	POTABLE WATER HOT WATER SIZE (IN)	POTABLE WATER 120ºF HOT WATER SIZE (IN)	NATURAL GAS SIZE	NATURAL GAS MBTUH	REMARKS
1	JANITOR'S SINK (MR-1)	4		1/2	1/2				
2	EVAPORATOR COIL DRAIN		3/4						DISCHARGE TO FLOOR DRAIN WITH AIR GAP
11	HAND SINK	1 1/2		1/2	1/2				
13	PREPARATION TABLE WITH SINKS		2	1/2	1/2				DISCHARGE TO FLOOR DRAIN WITH AIR GAP
15	UTILITY RACEWAY			3/4	3/4		1 1/4"	1360	
20	FLOOR TROUGH	3							
21	CONVECTION STEAMER		1 1/2						PROVIDE PRESSURE REDUCING VALVE ON SUPPLY AS REQUIRED BY MANUFACTURER'S LITERATURE. DISCHARGE DRAIN TO FLOOR TROUGH
28A	HOT/COLD FOOD COUNTER, MOBILE		3/4						DISCHARGE TO FLOOR SINK WITH AIR BREAK
28B	COLD FOOD COUNTER		3/4						DISCHARGE TO FLOOR SINK WITH AIR BREAK
29A	HOT/COLD FOOD COUNTER, MOBILE		3/4						DISCHARGE DRAIN TO FLOOR SINK WITH AIR BREAK
29B	COLD FOOD COUNTER, MOBILE		3/4						DISCHARGE DRAIN TO FLOOR SINK WITH AIR BREAK
29D	COLD FOOD COUNTER		3/4						DISCHARGE TO FLOOR SINK WITH AIR BREAK
31	POT WASHING SINK	(2) 1 1/2	FS	(2) 1/2		(2) 1/2			AIR GAP AT FAUCET. PIPE DRAINS TO DISCHARGE TO FLOOR SINK WITH AIR GAP

NOTES:

1 SEE KITCHEN DRAWINGS FOR PLUMBING CONTRACTOR RESPONSIBILITIES RELATED TO INSTALLATION OF KITCHEN EQUIPMENT.

(1)

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Additions & Renovations at Robert Poole Building #056

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I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1
2	04/27/16	ADDENDUM #3

BID ISSUE

PROJECT No.: 152-01

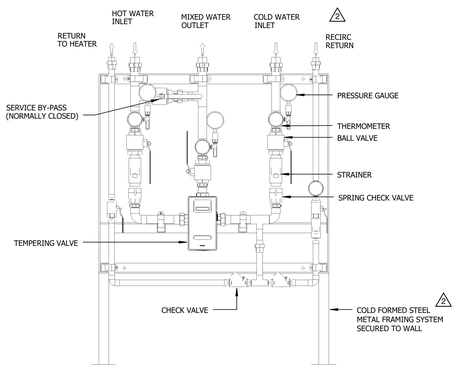
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
SCHEDULES - PLUMBING

P 600

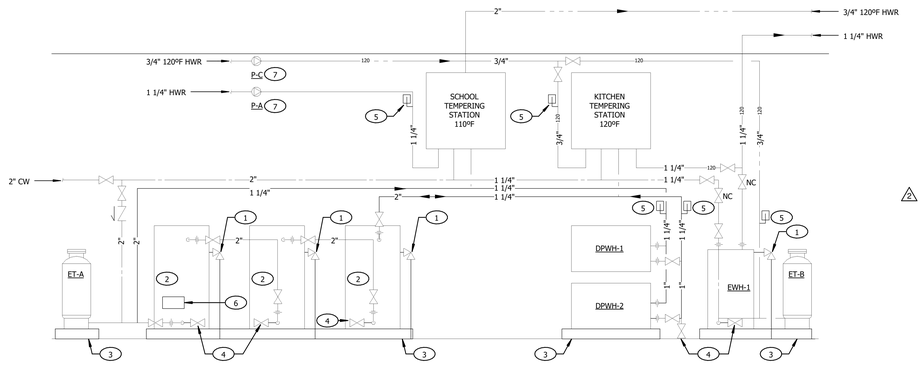
JOSHUA PELLICCIA 7/28/2016 7:58 AM U:\PROJ\JRS ARCHITECTS, INC\WOL15.00426.00-BCPS--ROBERT POOLE RENOVATION ADDITION\F_DRAWINGS (CNTL)_CAD\A_DRAWINGS\MEP\P600-15.00426.00.DWG



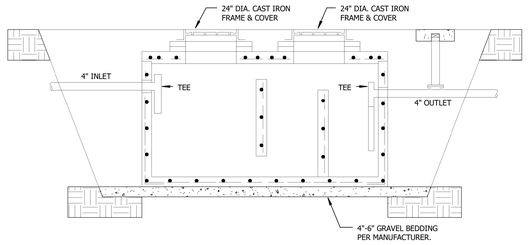
NOTE:

1. PROVIDE INCREASERS ON PIPE CONNECTIONS TO MATCH SIZES SHOWN ON PLAN.
2. SEE PLANS AND DETAILS FOR PIPE SIZES

3 / P 700 TEMPERING VALVE DETAIL
NO SCALE



2 / P 700 DOMESTIC WATER HEATER SCHEMATIC DETAIL
NO SCALE



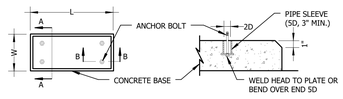
GREASE INTERCEPTOR NOTES:

1. GREASE INTERCEPTOR, FRAMES, AND COVERS SHALL BE RATED FOR H20 LOADING.
2. LABEL CAST IRON COVERS "GREASE INTERCEPTOR".
3. ALL JOINTS AT THE FRAME AND COVER, CONCRETE ADJUSTMENT RINGS AND THE LID OF THE INTERCEPTOR SHALL BE SEALED WITH BUTYL JOINT SEALER.
4. BACKFILL AROUND AND ON TOP OF GREASE INTERCEPTOR WITH EXCAVATED MATERIAL IN TWO FOOT LIFTS AND MECHANICALLY COMPACTED. PLACE BACKFILL UNIFORMLY AROUND TANK.
5. GRADE CLEANOUT OR OUTLET OF TANK SHALL BE SUITABLE AS A SAMPLING PORT.
6. PROVIDE FILL ABOVE TANK LEVELED SUITABLE FOR FINISHED GRADE MATERIAL AS SHOWN ON CIVIL DRAWINGS (I.E. GRASS, ASPHALT).
7. PROVIDE FRP STEPS OR LADDER AT EACH MANHOLE ACCESS.

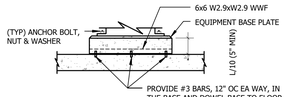
1 / P 700 1000 GALLON GREASE INTERCEPTOR DETAIL
NO SCALE

KEYED NOTES:

1. ASME TEMPERATURE AND PRESSURE RELIEF VALVE. DISCHARGE OVER TRENCH DRAIN.
2. 400 GALLON STORAGE TANK.
3. HOUSEKEEPING PAD. SEE DETAIL 12/P 700.
4. DRAIN VALVE.
5. THERMOMETER.
6. AQUASTAT SENSOR. DWHP SHALL BE STAGED AND CYCLED TO MAINTAIN TEMPERATURE SETPOINT (ADJUSTABLE) IN TANK.
7. RECIRCULATION PUMP. SEE DETAIL 5/P 700.



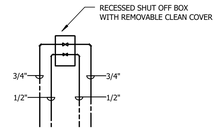
PLAN SECTION B-B



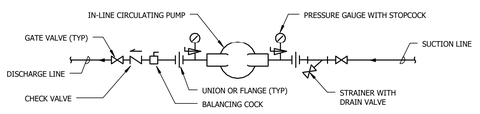
SECTION A-A (BASE NOT POURED WITH SLAB)

NOTE:
1. L AND W DIMENSIONS SHALL BE 6 INCHES GREATER THAN THE EQUIPMENT BASE PLATE.

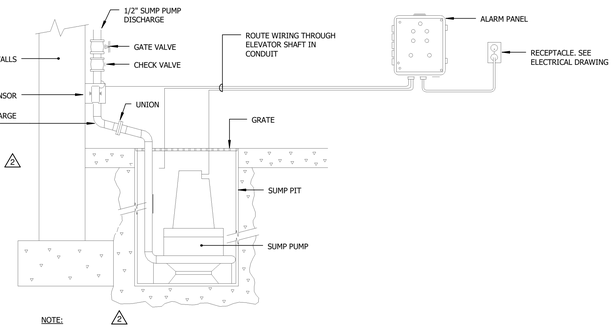
12 / P 700 4 INCH HOUSEKEEPING PAD DETAIL
NO SCALE



6 / P 700 TYPICAL SHUT OFF VALVE BOX
1/4" = 1'-0"



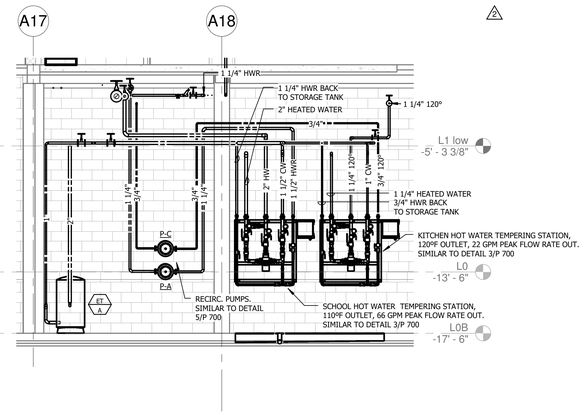
5 / P 700 RECIRCULATING PUMP DETAIL
NO SCALE



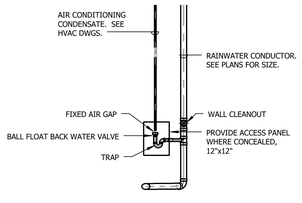
NOTE:

1. OIL SMART SWITCH AND ALARM PANEL REQUIRED FOR HYDRAULIC ELEVATOR ALTERNATE BID.

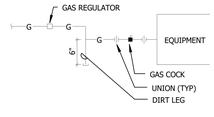
4 / P 700 TYPICAL ELEVATOR SUMP PUMP DETAIL
NO SCALE



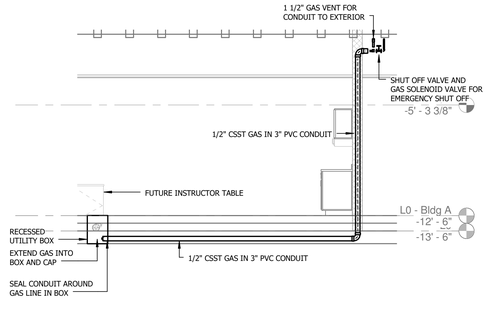
11 / P 700 TEMPERING STATION SECTION
1/4" = 1'-0"



10 / P 700 INDIRECT WASTE DETAIL
NO SCALE



9 / P 700 GAS CONNECTION DETAIL DETAIL
NO SCALE



8 / P 700 GAS DETAIL
1/4" = 1'-0"

1

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LICENSE NO.: H20#
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/14/16	ADDENDUM #1
2	04/27/16	ADDENDUM #3

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DETAILS - PLUMBING

P 700

7/26/2016 12:00:57 PM

FIRE ALARM LEGEND:

**ALL EXISTING ITEMS TO BE SHOWN HALFTONE*

(15)	CANDELLA RATING
	FIRE ALARM WALL MOUNTED VISIBLE NOTIFICATION APPLIANCE
	FIRE ALARM CEILING MOUNTED VISIBLE NOTIFICATION APPLIANCE
	FIRE ALARM WALL MOUNTED AUDIBLE NOTIFICATION APPLIANCE
	FIRE ALARM WALL MOUNTED VISIBLE NOTIFICATION APPLIANCE
	FIRE ALARM WALL MOUNTED COMBINED AUDIBLE/VISIBLE NOTIFICATION APPLIANCE
	FIRE ALARM CEILING MOUNTED COMBINED AUDIBLE/VISIBLE NOTIFICATION APPLIANCE
HD	HEAT DETECTOR
CO	CARBON MONOXIDE DETECTOR
S	SMOKE DETECTOR
S	DUCT SMOKE DETECTOR
FAP	FIRE ALARM PANEL
FAA	FIRE ALARM ANNUNCIATOR
AMP	AMPLIFIER PANEL
NAC	NOTIFICATION APPLIANCE CIRCUIT POWER EXTENDER PANEL
M	MANUAL PULL STATION
CM	CONTROL MODULE
MM	MONITOR MODULE
R	RELAY
DH	DOOR HOLDER
ACS	AREA OF RESCUE ASSISTANCE CALL STATION
ARA	AREA OF RESCUE ASSISTANCE ANNUNCIATOR
FS	FLOW SWITCH (BY OTHERS)
TS	TAMPER SWITCH (BY OTHERS)
PS	HIGH/LOW AIR PRESSURE SWITCH (BY OTHERS)
PS	ALARM PRESSURE SWITCH (BY OTHERS)
	DUCT SMOKE DAMPER (BY OTHERS)
	DUCT SMOKE/FIRE DAMPER (BY OTHERS)
LT	LOW TEMPERATURE SENSOR

GENERAL NOTES

1. SOME LEGEND SYMBOLS MAY NOT BE USED. SEE FLOOR PLANS FOR APPLICABLE DEVICES.
2. THESE NOTES ARE GENERAL IN NATURE AND PERTAIN TO THE ENTIRE PROJECT UNLESS OTHERWISE NOTED AS SUCH ON AN INDIVIDUAL DRAWING.
3. PRIOR TO BIDDING, THE CONTRACTOR SHALL EXAMINE ALL PROJECT DRAWINGS AND SPECIFICATIONS TO DEVELOP A COMPLETE UNDERSTANDING OF THE PROJECT SCOPE. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY EXISTING CONDITIONS BEFORE BIDDING. FAILURE TO DO THIS WILL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES TO PERFORM ALL REQUIRED WORK. THE CONTRACTOR SHALL ADVISE THE PROFESSIONAL OF ANY DISCREPANCIES WHICH WILL AFFECT THE WORK REQUIRED.
4. PERFORM ALL WORK AND INSTALL ALL EQUIPMENT IN ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS AND IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOGNIZED INDUSTRY PRACTICES. ALL EQUIPMENT, DEVICES, AND MATERIALS SHALL BE UL LISTED AND FM APPROVED.
5. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING ALL REQUIRED INFORMATION TO THE AUTHORITY HAVING JURISDICTION TO OBTAIN THE NECESSARY PERMITS AND APPROVALS. ALL FEES ASSOCIATED WITH THIS SUBMISSION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE ALL REQUIRED INSPECTIONS AND BE RESPONSIBLE FOR ALL FEES CHARGED BY THE AUTHORITY HAVING JURISDICTION FOR SUCH INSPECTION.
6. REFER TO THE ARCHITECTURAL PLANS FOR DIMENSIONS, ROOM FINISHES, FIRE WALLS, DOOR HARDWARE SCHEDULES, AND LIKE ITEMS. REFER TO THE STRUCTURAL DRAWINGS FOR STRUCTURAL MEMBERS. REFER TO OTHER TRADES PLANS TO UNDERSTAND THE EXTENT OF THEIR WORK AS REQUIRED.
7. DO NOT SCALE DRAWINGS. HOLD INDICATED DIMENSIONS WHERE SHOWN. RESOLVE ANY DISCREPANCIES WITH THE PROFESSIONAL PRIOR TO BEGINNING WORK.
8. PROVIDE A NEW MULTIPLEX/ADDRESSABLE, NON-CODED, SUPERVISED FIRE ALARM SYSTEM AS DESCRIBED IN THE SPECIFICATIONS AND AS SHOWN ON THE FIRE ALARM DRAWINGS. THE WORK COVERED UNDER THIS CONTRACT INCLUDES THE FURNISHING OF ALL EQUIPMENT, LABOR, AND MATERIALS TO PROVIDE A COMPLETE SYSTEM IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND REFERENCED CODES. THE DRAWINGS DO NOT SHOW ALL REQUIRED CONNECTIONS, INTERCONNECTING DETAILS, TERMINAL BLOCKS, JUNCTION BOXES, ETC. THE CONTRACTOR SHALL PROVIDE ALL APPURTENANCES FOR A COMPLETED AND OPERATIONAL SYSTEM THAT MEETS THE DESIGN INTENT AND CODE REQUIREMENTS.
9. THE LAYOUT ON THE DRAWINGS IS DIAGRAMMATIC. WHERE ADDITIONAL REMOTE FIRE ALARM CONTROL UNITS, NAC EXTENDER PANELS, OR SIMILAR FIRE ALARM RELATED EQUIPMENT ARE NEEDED, THEY SHALL BE PROVIDED.
10. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES TO ELIMINATE CONFLICTS BETWEEN STRUCTURAL ELEMENTS AS WELL AS PIPING, DUCTWORK, SPRINKLER, ARCHITECTURAL, AND OTHER ELECTRICAL WORK. ALL EQUIPMENT SHALL BE COORDINATED WITH OTHER TRADES AND ARCHITECTURAL AND STRUCTURAL FEATURES.
11. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE FINAL PLACEMENT OF ALL FIRE ALARM DEVICES IN ACCORDANCE WITH NFPA 72 AND APPLICABLE ADA REQUIREMENTS.
12. PROVIDE A NEW FIRE ALARM CONTROL PANEL (FAP) AND REMOTE ANNUNCIATOR PANEL (FAA).
13. PROVIDE AUDIBLE/VISIBLE NOTIFICATION THROUGHOUT THE BUILDING.
14. PROVIDE DETECTION THROUGHOUT THE BUILDING AS SHOWN IN THE PLANS.
15. FURNISH DUCT SMOKE DETECTORS FOR INSTALLATION BY THE MECHANICAL CONTRACTOR. REFER TO THE MECHANICAL DRAWINGS FOR EXACT QUANTITIES AND LOCATIONS. INTERFACE THE DUCT SMOKE DETECTORS WITH THE FIRE ALARM SYSTEM TO SHUT DOWN ASSOCIATED AIR HANDLERS UPON ACTIVATION OF THE SMOKE DETECTOR.
16. PROVIDE CONTROL MODULES, RELAYS, AND MONITOR MODULES TO INTERFACE DOOR HOLDERS, FIRE PROTECTION ALARM AND SUPERVISORY SWITCHES, AND KITCHEN HOOD SUPPRESSION SYSTEM WITH THE FIRE ALARM SYSTEM.
17. PROVIDE DETECTION AND INTERFERENCE CONTROLS FOR ELEVATOR RECALL AND ELEVATOR POWER SHUNT.
18. ALL FIRE ALARM WIRING SHALL BE IN CONDUIT IN EXPOSED AREAS. WIRING SHALL BE CONCEALED IN AREAS WITH CEILINGS. CONDUIT SHALL BE UTILIZED IN AREAS WITHOUT CEILINGS. CONTRACTOR SHALL COORDINATE ROUTINGS WITHIN THESE EXPOSED AREAS TO PRODUCE A SYMMETRIC AND AESTHETIC LAYOUT. REFER TO SPECIFICATION 283100 FOR WIRING AND CONDUIT REQUIREMENTS.
19. FIRE ALARM CIRCUITS SHALL BE 24-VOLT DC AND POWER WIRING SHALL BE 120-VOLT AC CIRCUITS. SIGNALING LINE CIRCUITS SHALL BE CLASS B AND NOTIFICATION APPLIANCE CIRCUITS SHALL BE CLASS B.
20. CIRCUITS SHALL CONTAIN AT LEAST 20 PERCENT SPARE CAPACITY FOR NOTIFICATION APPLIANCES ON THE NAC AND/OR AMPLIFIER CIRCUITS AND 20 PERCENT SPARE CAPACITY FOR INITIATING DEVICES ON THE SLC (E.G., NOT MORE THAN 80 PERCENT LOADED).
21. CONTRACTOR SHALL REPLACE IN KIND ALL CEILING TILES DAMAGED DURING INSTALLATION AT NO ADDITIONAL COST.
22. CONTRACTOR SHALL REPAINT OR REFINISH ANY AREA IN KIND IF INSTALLATION DEFACES EXISTING WALLS, FLOORS, OR CEILINGS.
23. AFTER ALL EQUIPMENT IS INSTALLED, IT SHALL BE TESTED TO DEMONSTRATE PROPER OPERATION OF PERFORMANCE AND COMPLIANCE WITH THE SPECIFICATIONS. EQUIPMENT NOT OPERATING CORRECTLY SHALL BE FIELD CORRECTED OR REPLACED. SYSTEMS WILL BE TESTED IN ACCORDANCE WITH NFPA REQUIREMENTS. THE OWNER'S REPRESENTATIVE, PROFESSIONAL, AND AUTHORITY HAVING JURISDICTION SHALL BE PRESENT FOR THE TEST.
24. PROVIDE CARBON MONOXIDE DETECTION IN THE BOILER ROOM, MECHANICAL ROOMS, AND KITCHEN.
25. PROVIDE SINGLE ACTION PULL STATION WITH PROTECTIVE COVERS THROUGHOUT THE BUILDING.
26. PROVIDE A KNOX DRAWING/DOCUMENT BOX ADJACENT TO THE FIRE ALARM PANEL. PROVIDE A FULL SIZE SET OF DRAWINGS, 1/2 SIZE SET, AND A FLASH DRIVE WITH PDFS OF ALL THE AS-BUILT DRAWINGS.
27. THE CONTRACTOR SHALL ENSURE ALL WIRE CONNECTIONS ARE MADE PER NFPA 72, NFPA 70, THE MANUFACTURER'S RECOMMENDATIONS AND RECOGNIZED INDUSTRY PRACTICE.
28 THE FIRE ALARM DRAWINGS AND SPECIFICATIONS ARE PERFORMANCE BASED. THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL AS A DEFERRED SUBMITTAL TO THE AHJ SHOP DRAWINGS AND CALCULATIONS INDICATING THE SYSTEM LAYOUT. THE PROFESSIONAL SHALL REVIEW THE SHOP DRAWINGS AND CALCULATIONS PRIOR TO THE DEFERRED SUBMISSION TO THE AHJ AND PROVIDE NOTATION ON THE DRAWINGS INDICATING THEY WERE REVIEWED AND APPROVED BY THE PROFESSIONAL. SUBMIT APPROVED DRAWINGS PRIOR TO INSTALLATION.

DEMOLITON GENERAL NOTES

1. DEMOLISH ALL EXISTING FIRE ALARM EQUIPMENT FROM THE BUILDING. THIS INCLUDES ALL FIRE ALARM PANELS, NOTIFICATION DEVICES, DETECTORS, WIRE, CONDUIT, HANGERS, AND SUPPORTS.

TYPICAL ANNOTATION:

- AREA OF REVISION
- 1 — REVISION SEQUENCE NUMBER
- X — KEYED NOTE
- X — DEMOLITION KEYED NOTE
- POINT OF CONNECTION OF EXISTING SYSTEM
- POINT OF DISCONNECTION OF EXISTING SYSTEM
- 1 / A7.1 — DETAIL NUMBER / DRAWING NUMBER
- EQUIPMENT ABBREVIATION / EQUIPMENT NUMBER
- EQUIPMENT ABBREVIATION / EQUIPMENT NUMBER / XX — UNIQUE IDENTIFIER
- 1 / A7.1 — DETAIL NUMBER / DRAWING NUMBER
- 1 / A7.1 — DETAIL NUMBER / DRAWING NUMBER
- 1 / A101 — VIEW REFERENCE

SHEET LIST

Sheet Number	Sheet Name
FA 001	SYMBOLS, LEGENDS, AND ABBREVIATIONS - FIRE ALARM
FA 111	NEW WORK BASEMENT & FIRST FLOOR PLAN A - FIRE ALARM
FA 112	NEW WORK SECOND & ROOF PLAN A - FIRE ALARM
FA 113	NEW WORK BASEMENT PLAN B - FIRE ALARM
FA 114	NEW WORK FIRST FLOOR PLAN B - FIRE ALARM
FA 115	NEW WORK FIRST FLOOR PLAN C - FIRE ALARM
FA 116	NEW WORK SECOND FLOOR PLAN B - FIRE ALARM
FA 117	NEW WORK SECOND FLOOR PLAN C - FIRE ALARM
FA 118	NEW WORK THIRD FLOOR PLAN B - FIRE ALARM
FA 119	NEW WORK THIRD FLOOR PLAN C - FIRE ALARM
FA-800	DETAILS - FIRE ALARM
FA-801	DETAILS - FIRE ALARM

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No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

PROJECT No.: 152-01

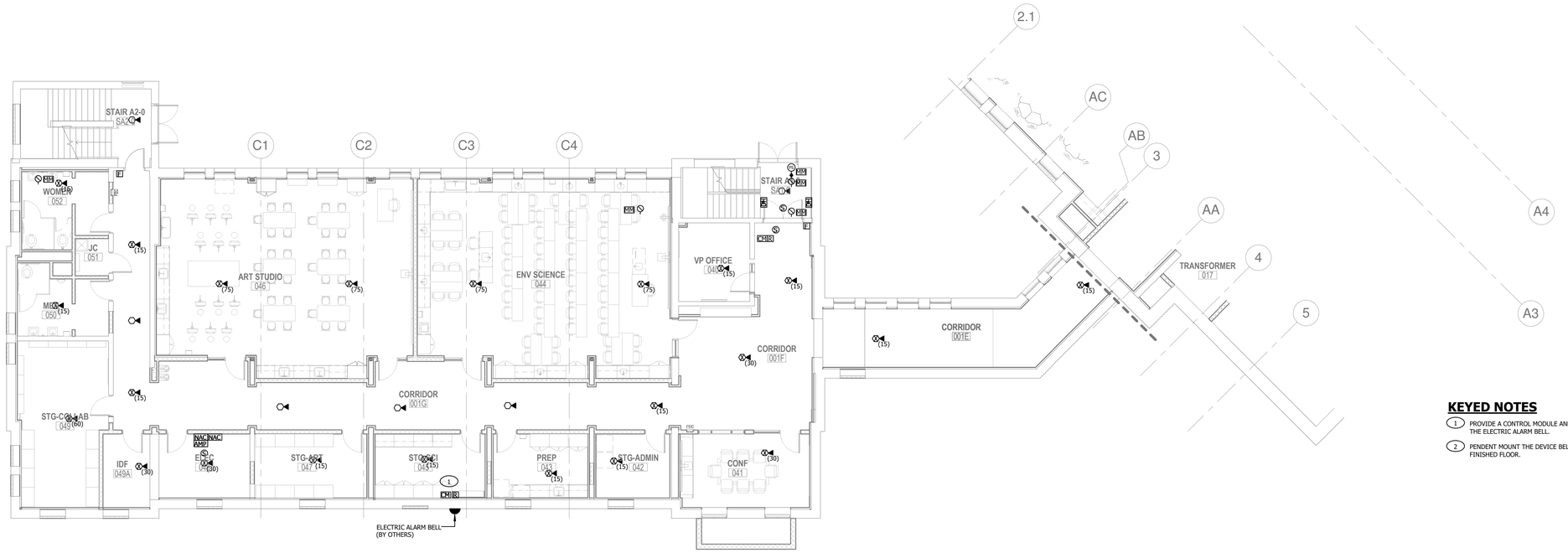
DATE: 03/31/16

SCALE: AS NOTED

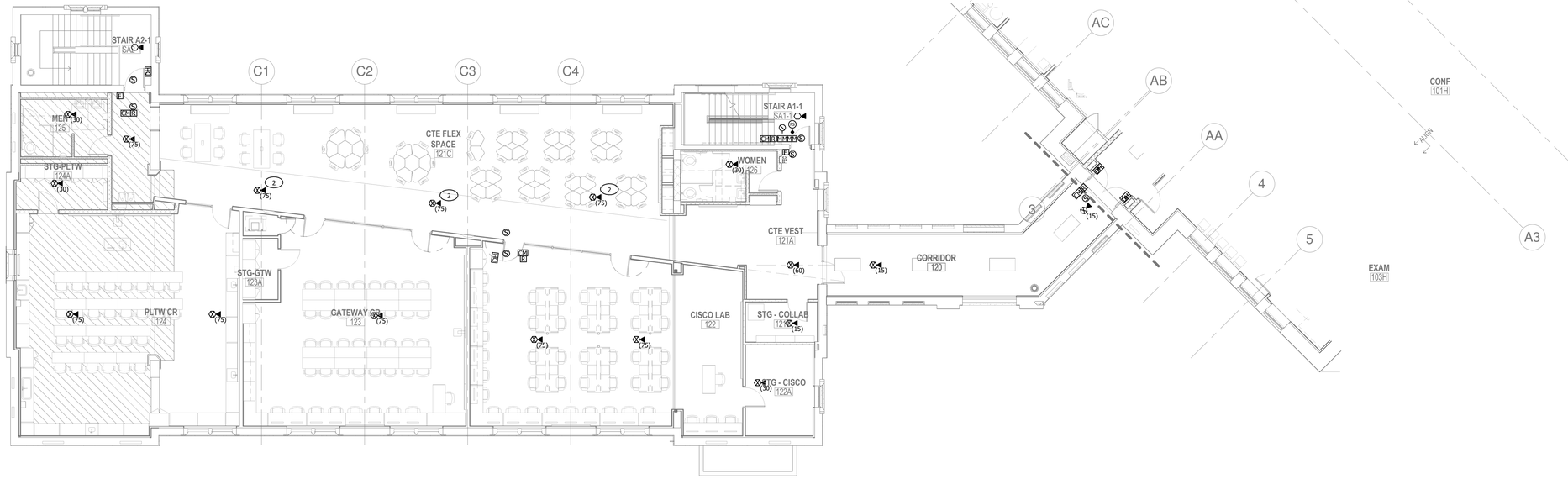
DRAWING NAME
SYMBOLS, LEGENDS, AND ABBREVIATIONS - FIRE ALARM

FA 001

7/26/2016 9:26:46 AM



1 FA 111 NEW WORK BASEMENT FLOOR PLAN A - FIRE ALARM
1/8" = 1'-0"



2 FA 111 NEW WORK FIRST FLOOR PLAN A - FIRE ALARM
1/8" = 1'-0"

KEYED NOTES

1. PROVIDE A CONTROL MODULE AND RELAY TO ACTIVATE THE ELECTRIC ALARM BELL.
2. PENDENT MOUNT THE DEVICE BELOW 20 FEET ABOVE THE FINISHED FLOOR.

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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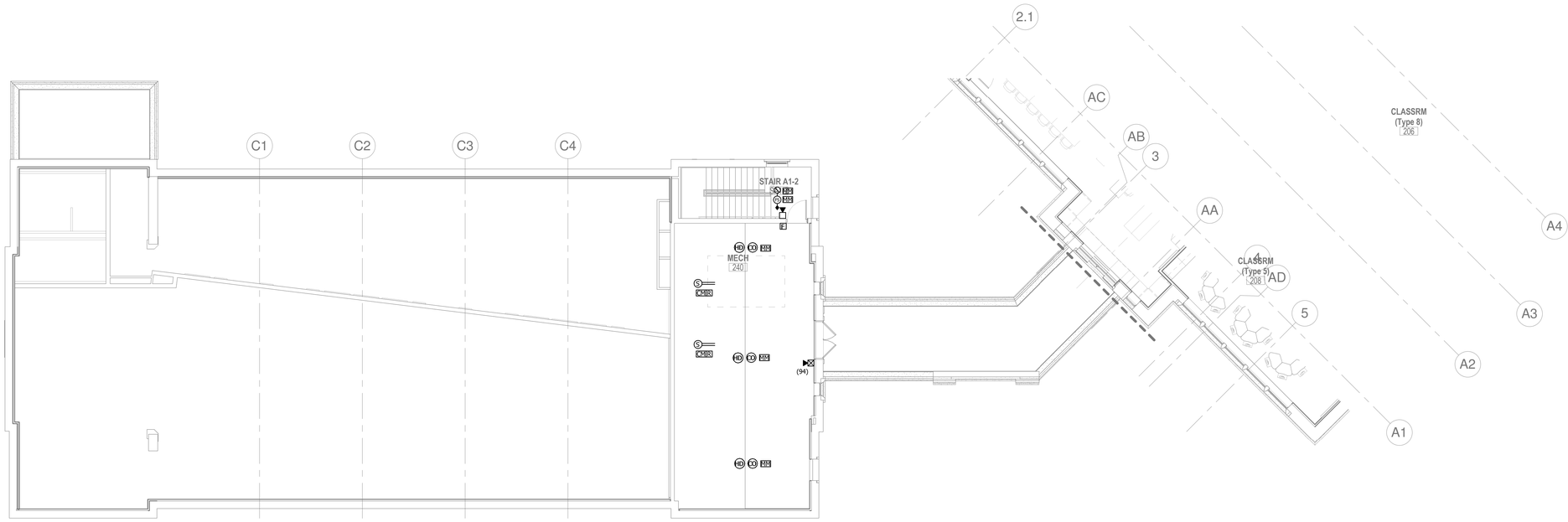
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK BASEMENT & FIRST FLOOR PLAN A - FIRE ALARM

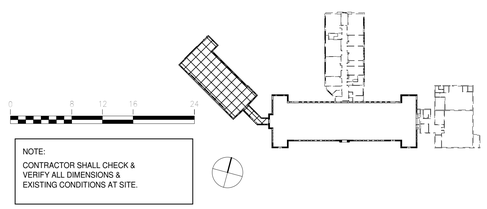
FA 111

7/26/2016 9:27:57 AM



1 / FA 112 NEW WORK SECOND FLOOR PLAN A - FIRE ALARM

1/8" = 1'-0"



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7/26/2016 9:28:48 AM

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No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME:

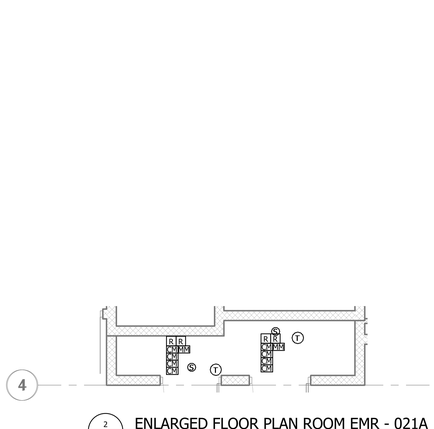
NEW WORK SECOND & ROOF PLAN A - FIRE ALARM

FA 112

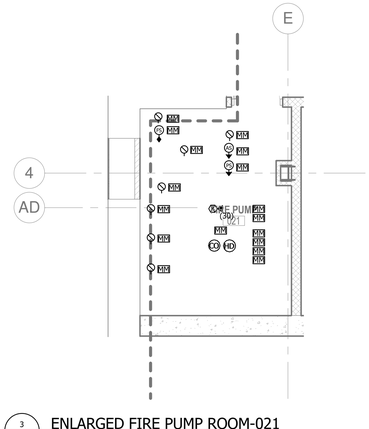
KEYED NOTES

1. PROVIDE MODULES FOR ELEVATOR RECALL, POWER SHUNT, CQB ALARM, AND SHUNT TRIP POWER SUPERVISION.
2. PROVIDE HEAT DETECTOR WITHIN 12" OF EVERY SPRINKLER.
3. PROVIDE A WEATHER PROOF DEVICE.
4. PROVIDE LOW TEMPERATURE SENSORS IN THE CRAWL SPACE.
5. PROVIDE A CONTROL MODULE AND RELAY TO INTERFACE THE DOOR HARDWARE POWER SUPPLY WITH THE FIRE ALARM SYSTEM.

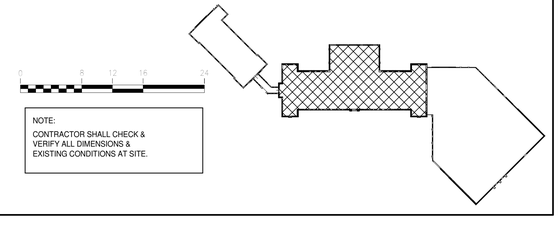
1 FA 113 NEW WORK BASEMENT FLOOR PLAN B - FIRE ALARM
1/8" = 1'-0"



2 FA 113 ENLARGED FLOOR PLAN ROOM EMR - 021A
1/4" = 1'-0"



3 FA 113 ENLARGED FIRE PUMP ROOM-021
1/4" = 1'-0"



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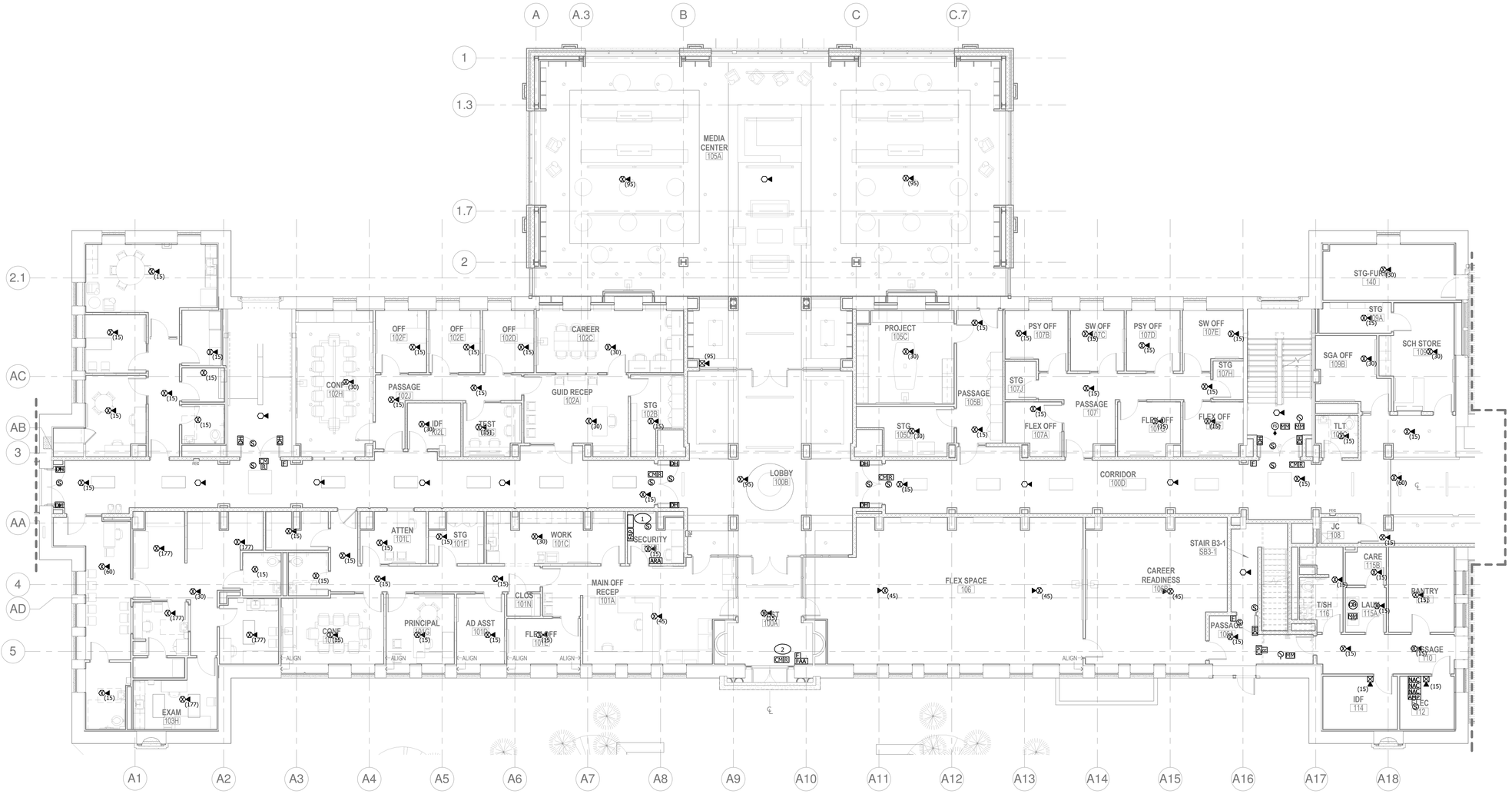
No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK BASEMENT PLAN B - FIRE ALARM

FA 113

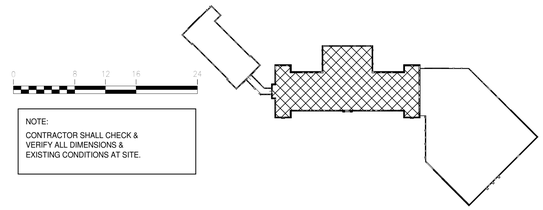


1 / FA 114 NEW WORK FIRST FLOOR PLAN B - FIRE ALARM

1/8" = 1'-0"

KEYED NOTES

1. KNOX DOCUMENT BOX.
2. PROVIDE A CONTROL MODULE AND RELAY TO INTERFACE THE DOOR HARDWARE POWER SUPPLY WITH THE FIRE ALARM SYSTEM.



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7/26/2016 9:23:14 AM

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EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

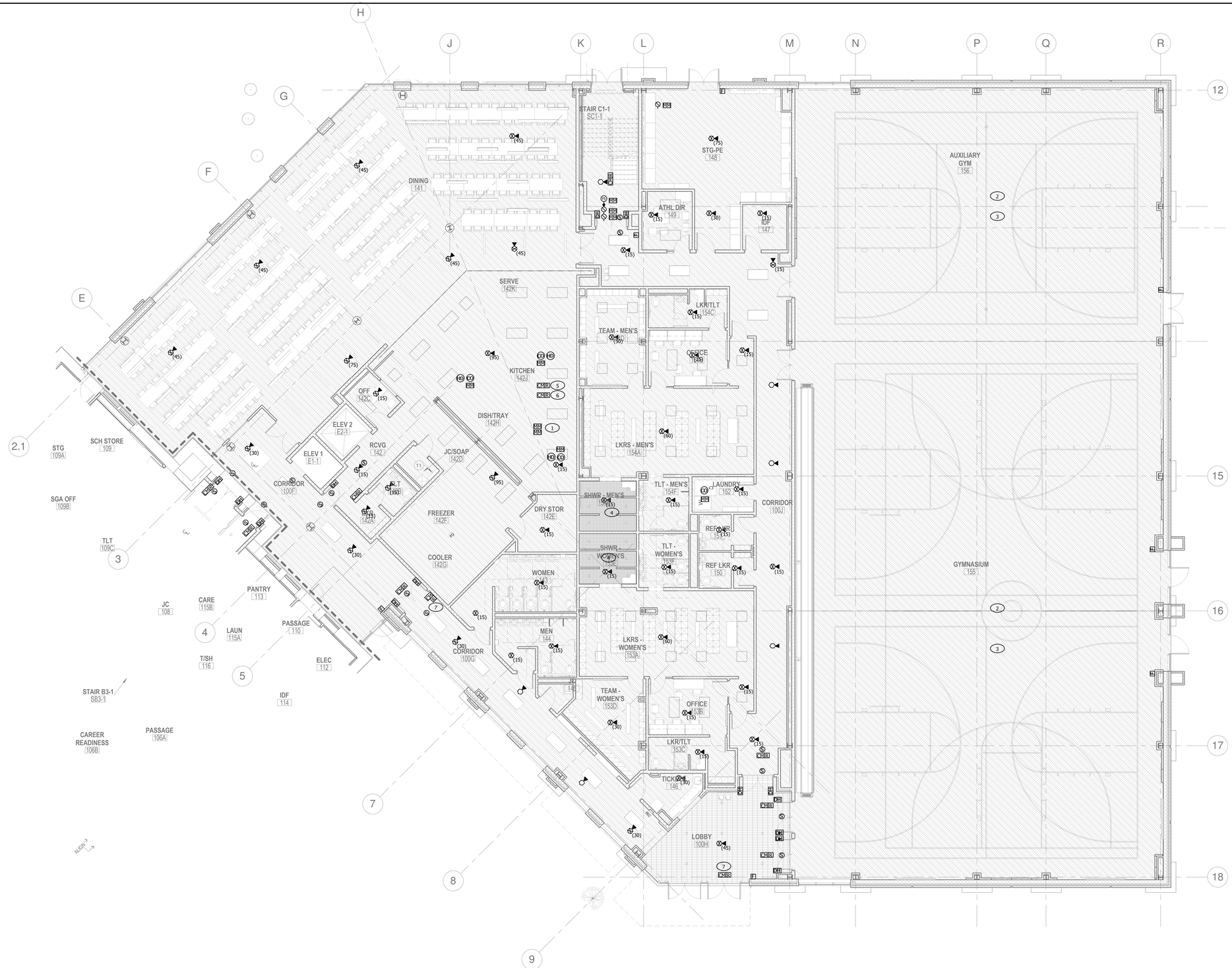
PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK FIRST FLOOR PLAN B - FIRE ALARM

FA 114



1 / FA 115 NEW WORK FIRST FLOOR PLAN C - FIRE ALARM

1/8" = 1'-0"

KEYED NOTES

1. PROVIDE MONITOR MODULES TO MONITOR THE KITCHEN HOOD SUPRESSION SYSTEM.
2. PROVIDE PROTECTIVE METAL CAGES ON THE DEVICES IN THE GYM.
3. SEE FA 117 FOR DEVICES IN THE GYM.
4. PROVIDE A WEATHER PROOF DEVICE.
5. PROVIDE A CONTROL MODULE AND RELAY TO SHUNT THE GAS SERVICE UNDER THE KITCHEN HOOD.
6. PROVIDE A CONTROL MODULE AND RELAY TO SHUNT ELECTRICAL POWER UNDER THE KITCHEN HOOD.
7. PROVIDE A CONTROL MODULE AND RELAY TO INTERFACE THE DOOR HARDWARE POWER SUPPLY WITH THE FIRE ALARM SYSTEM.

0 8 12 16 24

NOTE:
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No.	DATE	DESCRIPTION

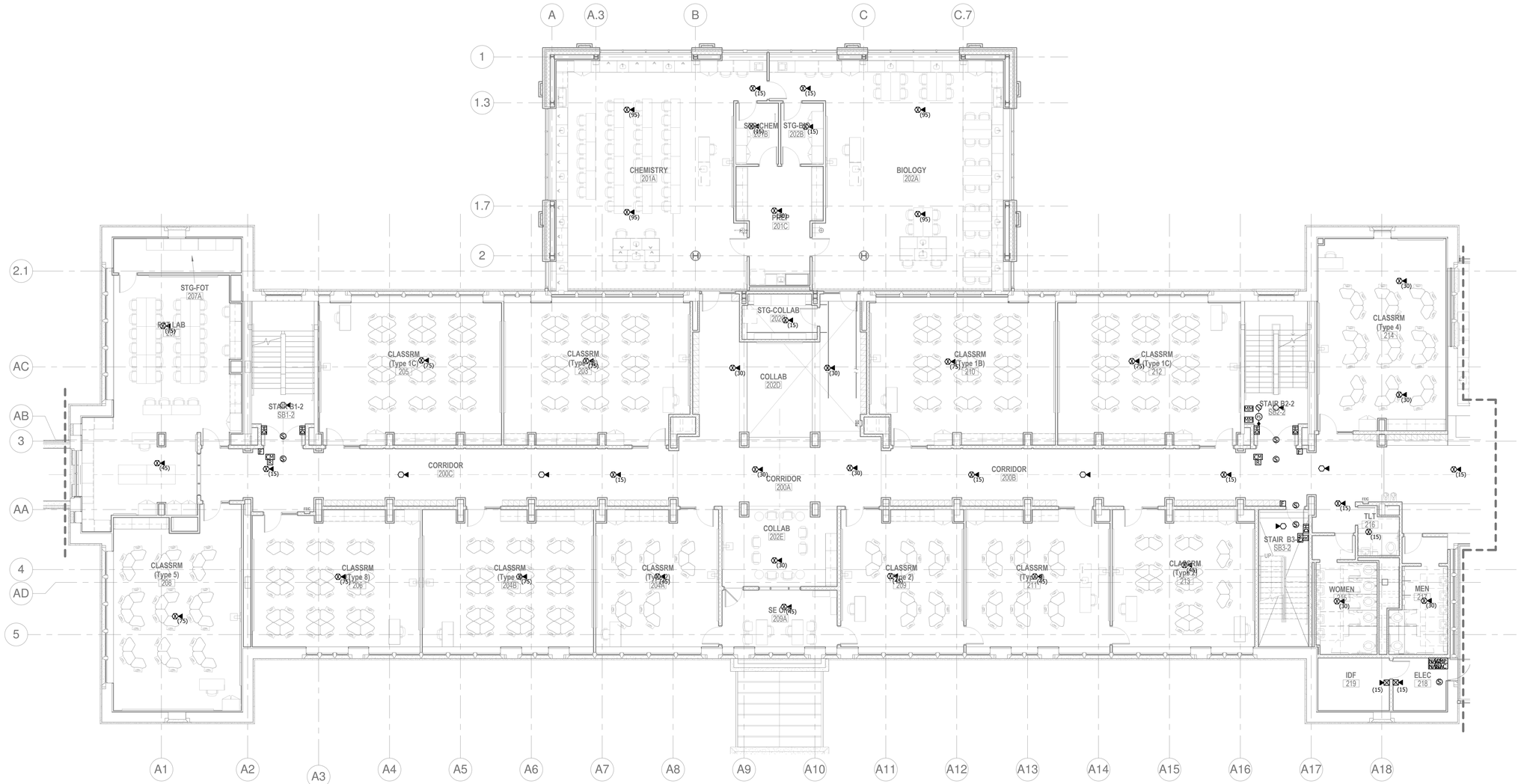
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK FIRST FLOOR PLAN C - FIRE ALARM

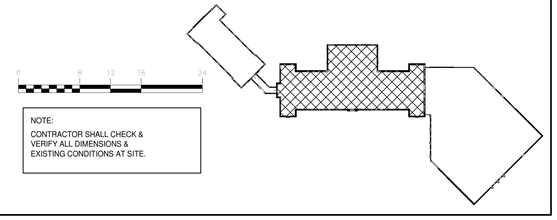
FA 115

7/26/2016 9:31:34 AM



1 FA 116 NEW WORK SECOND FLOOR PLAN B - FIRE ALARM

1/8" = 1'-0"



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7/26/2016 9:31:53 AM

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No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND FLOOR PLAN B - FIRE ALARM

FA 116

KEYED NOTES

1. PROVIDE PROTECTIVE METAL CAGES ON DEVICES IN THE GYM.
2. PROVIDE RED WALL MOUNTED DEVICE IN THE BLACK BOX THEATER.
3. MOUNT THE SPEAKER STROBES ON THE BOTTOM OF THE BEAM. WHERE REQUIRED, PENDENT MOUNT THE SPEAKER STROBES AT THE BEAM HEIGHT.

1 / FA 117 NEW WORK SECOND FLOOR PLAN C - FIRE ALARM

1/8" = 1'-0"

0 8 12 16 24

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LICENSE NO.: 19294
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No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

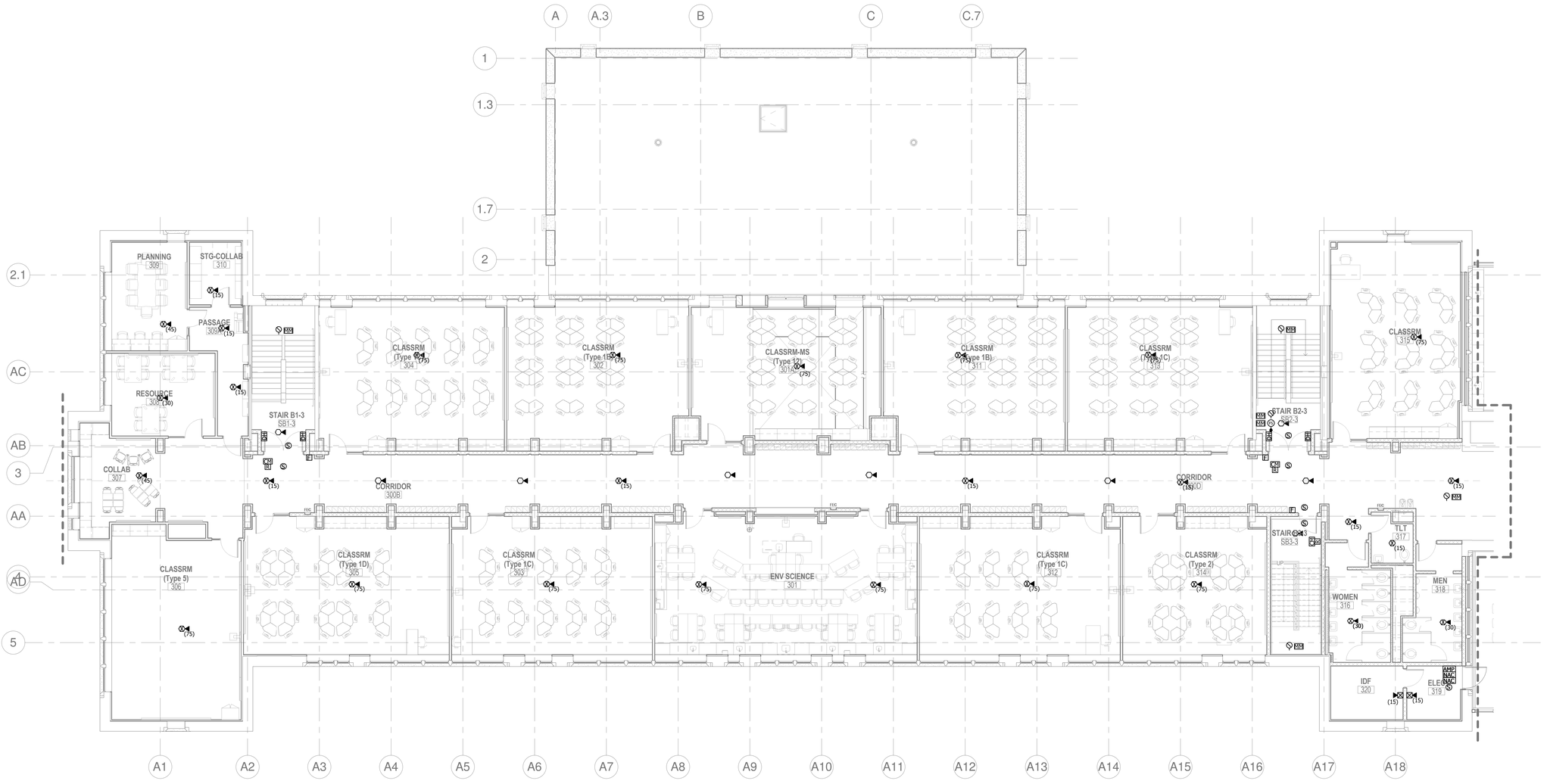
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND FLOOR PLAN C - FIRE ALARM

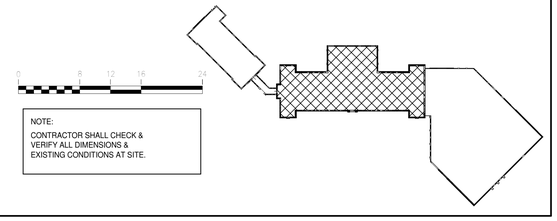
FA 117

7/26/2016 9:36:03 AM



1 / FA 118 NEW WORK THIRD FLOOR PLAN B - FIRE ALARM

1/8" = 1'-0"



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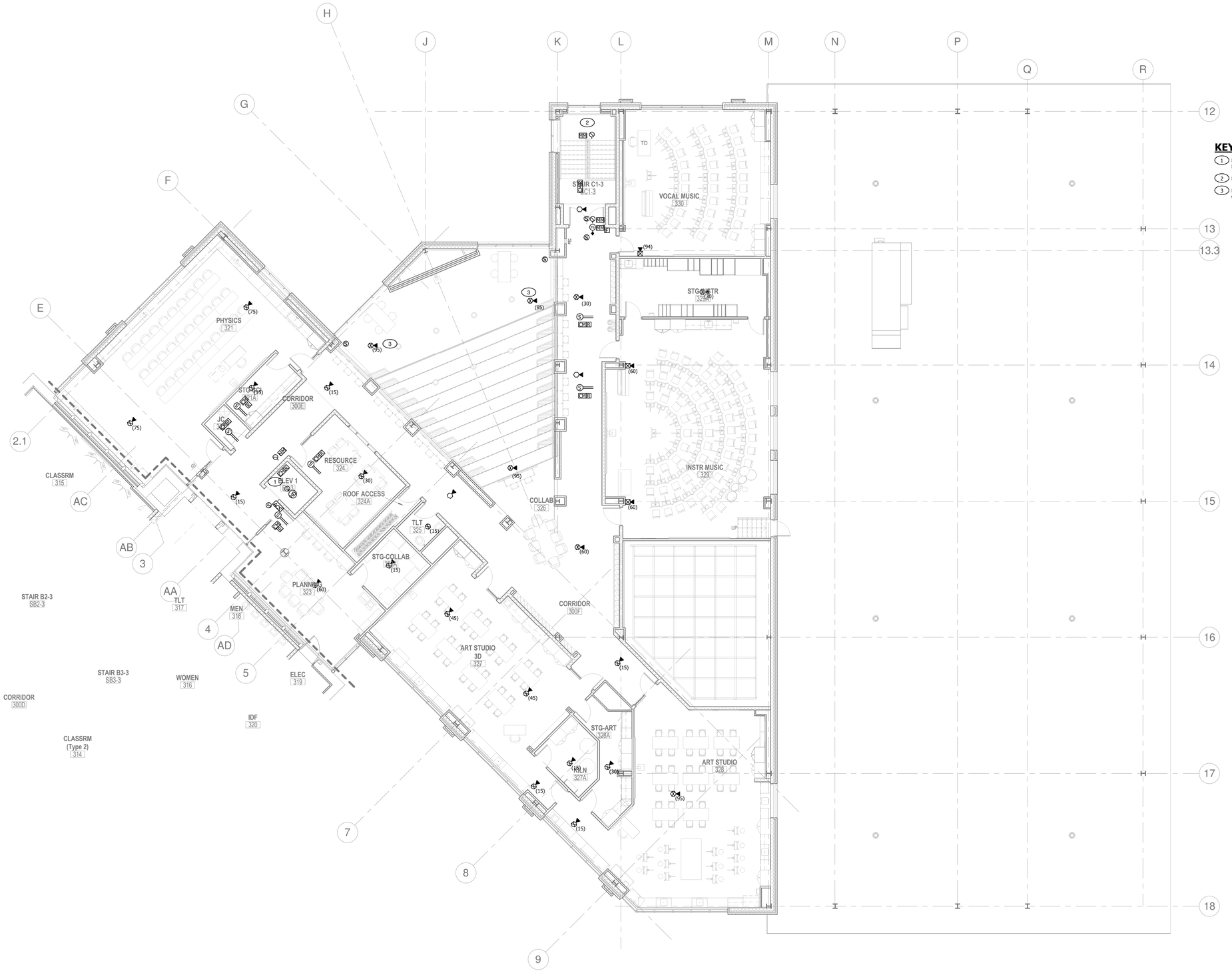
DRAWING NAME
NEW WORK THIRD FLOOR PLAN B - FIRE ALARM

FA 118



KEYED NOTES

1. PROVIDE A CONTROL MODULE AND RELAY TO ACTIVATE THE HOISTWAY VENT.
2. FREE STANDING ROOF HYDRANT ON ROOF.
3. PENDENT MOUNT THE DEVICES IN OR BETWEEN THE FLOATING CEILING PANELS.

1 / FA 119 NEW WORK THIRD FLOOR PLAN C - FIRE ALARM

1/8" = 1'-0"

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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Baltimore City Public Schools
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I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

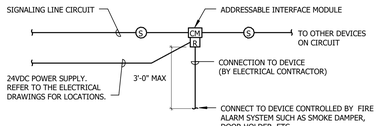
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK THIRD FLOOR PLAN C - FIRE ALARM

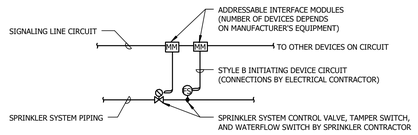
FA 119

7/26/2016 9:39:26 AM

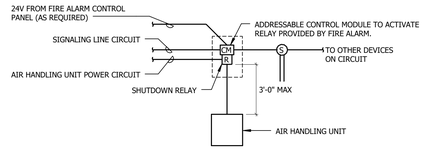


NOTES:
1. PROVIDE 24VDC POWER SUPPLY FROM FACP AS RQUIRED.
2. PROVIDE RELAY AS REQUIRED.
3. VERIFY POWER DRAW AND VOLTAGE OF DEVICE WITH THE RESPECTIVE CONTRACTOR.

1 / FA-800 **CONTROL INTERFACE DETAIL**
NO SCALE

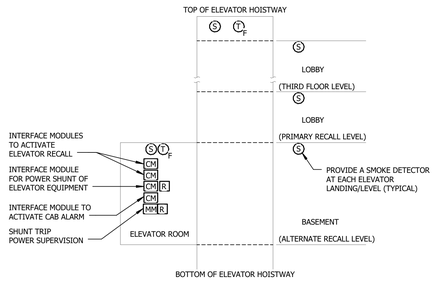


2 / FA-800 **SPRINKLER SYSTEM INTERFACE DETAIL**
NO SCALE



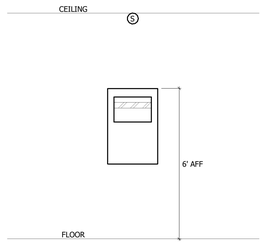
NOTES:
1. ACTIVATION OF DUCT DETECTOR SHALL CAUSE SHUT DOWN RELAY TO BE ACTIVATED.
2. DUCT SMOKE DETECTOR PROVIDED BY THE FIRE ALARM CONTRACTOR AND INSTALLED BY OTHERS. ALL CONNECTIONS, POWER SUPPLY, AND RELAY SHALL BE BY THE FIRE ALARM CONTRACTOR.
3. THE ARRANGEMENT SHOWN DOES NOT PROHIBIT THE USE OF A RELAY BASE DUCT DETECTOR AS LONG AS THE HVAC DEVICE SHUT DOWN IS ACCOMPLISHED WITHIN 3 FEET OF THE RELAY.
4. ALL CONNECTIONS SHALL BE BY THE FIRE ALARM CONTRACTOR.

3 / FA-800 **FIRE ALARM HVAC SHUT DOWN INTERFACE ADDRESSABLE PANEL**
1/8" = 1'-0"



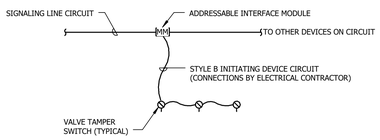
NOTES:
1. REFER TO THE MATRIX OF OPERATIONS FOR ACTIONS.
2. ALL DETECTORS ARE SHOWN FOR THE PURPOSE OF ILLUSTRATION ONLY. PROVIDE DETECTORS WITHIN 2 FEET OF EACH SPRINKLER HEAD LOCATED INTHE ELEVATOR EQUIPMENT ROOM OR ELEVATOR HOISTWAY.
3. A SMOKE DETECTOR SHALL BE LOCATED ON THE CEILING WITHIN 21 FEET OF THE CENTERLINE OF EACH ELEVATOR DOOR WITHIN THE ELEVATOR BANK UNDER THE CONTROL OF THE DETECTOR.

4 / FA-800 **PASSENGER ELEVATOR EQUIPMENT INTERFACE**
1/8" = 1'-0"



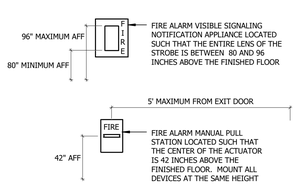
NOTES:
1. FOR BLOCK WALLS - COORDINATE MOUNTING HEIGHT WITH TOP OF COURSE OF BLOCK NEAREST 6 FEET AFF.
2. REFER TO THE MANUFACTURER'S RECOMMENDATIONS FOR MOUNTING THE BOX BASED ON THE TYPE OF WALL.

5 / FA-800 **FIRE ALARM PANEL/ANNUNCIATOR MOUNTING DETAIL**
NO SCALE



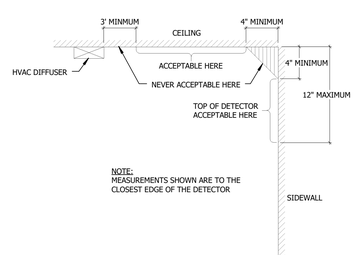
NOTES:
1. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR CONNECTION OF MULTIPLE DEVICES TO A SINGLE MONITOR MODULE.
2. A MAXIMUM OF 3 TAMPER SWITCHES MAY BE CONNECTED TO A SINGLE MONITOR MODULE WHEN SERVING THE SAME FUNCTION AND LOCATED IN THE SAME ROOM.

6 / FA-800 **FIRE ALARM TAMPER SWITCH INTERFACE DETAIL**
NO SCALE



NOTES:
1. WHERE FLOOR PLAN INDICATES THAT NOTIFICATION APPLIANCE AND MANUAL PULL STATION ARE LOCATED IN THE SAME AREA, THEY SHALL BE MOUNTED IN THE SAME VERTICAL LINE.
2. PROVIDE SINGLE ACTION PULL STATIONS WITH PROTECTIVE COVERS WITH AUDIBLE ALARMS.

7 / FA-800 **MANUAL PULL STATION AND STROBE MOUNTING DETAIL**
NO SCALE



8 / FA-800 **PROPER PLACEMENT FOR DETECTORS DETAIL**
NO SCALE

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EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

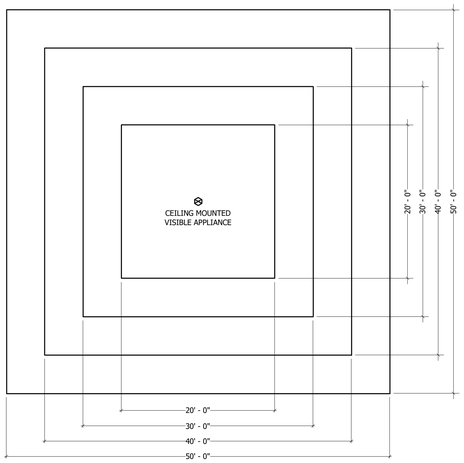
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DETAILS - FIRE ALARM

FA-800

7/26/2016 9:39:31 AM

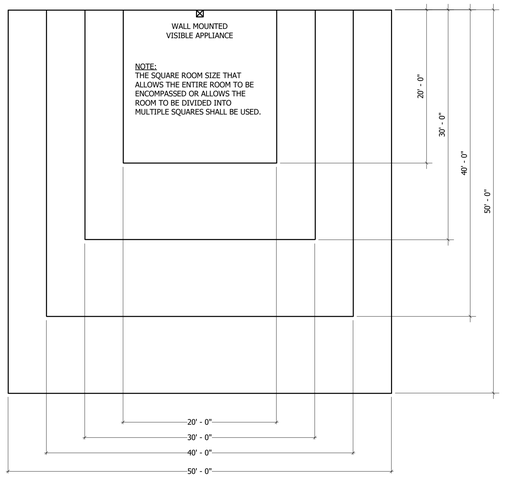


MAXIMUM ROOM SIZE (FT)	MAXIMUM LENS HEIGHT (FT)	MINIMUM REQUIRED LIGHTING OUTPUT (cd)
20 x 20	10	15
30 x 30	10	30
40 x 40	10	60
44 x 44	10	75
50 x 50	10	95
53 x 53	10	110
55 x 55	10	115
59 x 59	10	135
63 x 63	10	150
68 x 68	10	177
70 x 70	10	185

MAXIMUM ROOM SIZE (FT)	MAXIMUM LENS HEIGHT (FT)	MINIMUM REQUIRED LIGHTING OUTPUT (cd)
20 x 20	20	30
30 x 30	20	45
40 x 40	20	75
44 x 44	20	80
50 x 50	20	95
53 x 53	20	110
55 x 55	20	115
59 x 59	20	135
63 x 63	20	150
68 x 68	20	177
70 x 70	20	185

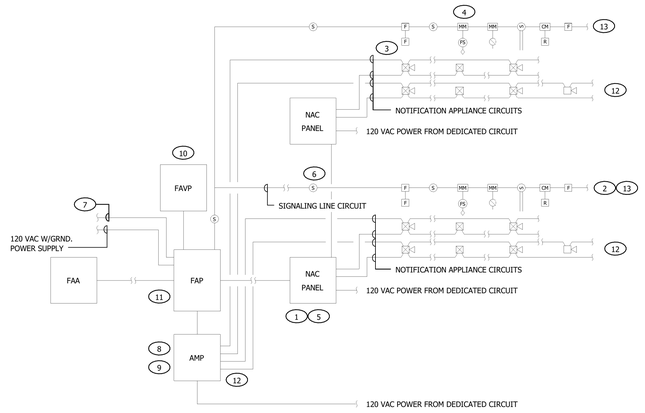
MAXIMUM ROOM SIZE (FT)	MAXIMUM LENS HEIGHT (FT)	MINIMUM REQUIRED LIGHTING OUTPUT (cd)
20 x 20	30	55
30 x 30	30	75
50 x 50	30	95
53 x 53	30	110
55 x 55	30	115
59 x 59	30	135
63 x 63	30	150
68 x 68	30	177
70 x 70	30	185

1 FA-801 CEILING MOUNTED VISIBLE APPLIANCE SPACING TEMPLATE DETAIL
NO SCALE



MAXIMUM ROOM SIZE (FT)	MINIMUM REQUIRED LIGHTING OUTPUT (cd) ONE LIGHT PER ROOM
20 x 20	15
28 x 28	30
30 x 30	34
40 x 40	60
45 x 45	75
50 x 50	94
54 x 54	110
55 x 55	115
60 x 60	135
63 x 63	150
68 x 68	177

2 FA-801 WALL MOUNTED VISIBLE APPLIANCE SPACING TEMPLATE DETAIL
NO SCALE



NOTES:

1. THE TYPE OF DEVICE AT THIS LOCATION WILL DEPEND ON THE MANUFACTURER'S EQUIPMENT. NOTHING IN THE DESIGN DOCUMENTS IS INTENDED, NOR SHOULD IT BE CONSTRUED, TO LIMIT THE TYPES OF DEVICES THAT MAY BE USED, PROVIDED THE INTENDED SYSTEM PERFORMANCE IS ACHIEVED AND WITHIN THE UL LISTING.
2. THE DEVICES SHOWN ON THE RISER DIAGRAM ARE REPRESENTATIVE OF THOSE TO BE PROVIDED THROUGHOUT THE BUILDING. THEY ARE NOT INTENDED TO SHOW TOTAL QUANTITIES OF DEVICES. THE CONTRACTOR SHALL REFER TO THE FLOOR PLANS FOR THIS INFORMATION.
3. PIGTAILING IS NOT PERMITTED.
4. ADDRESSABLE INTERFACE MODULES ARE REQUIRED FOR NON-ADDRESSABLE INITIATING AND INDICATING DEVICES FOR CONNECTION TO THE FIRE ALARM SYSTEM. SEE THE WIRING SCHEMATICS ON THIS DRAWING FOR ADDITIONAL INFORMATION.
5. PROVIDE REMOTE NOTIFICATION APPLIANCE CIRCUIT POWER BOOSTER PANELS AS REQUIRED.
6. PROVIDE A SMOKE DETECTOR ABOVE ALL CONTROL PANELS (TYPICAL).
7. THE LOCATION AND TYPE OF INTERFACE DEVICE FOR CONNECTION TO THE MONITORING SERVICE MUST BE COORDINATED WITH CONTRACTING SERVICE COMPANY.
8. AMP PANELS ARE PERMITTED TO BE CENTRALLY LOCATED OR DISTRIBUTED IN LOCATIONS ADJACENT TO THE NAC PANELS.
9. PROVIDE AMPLIFIER PANEL CAPACITY AS REQUIRED.
10. THE FIRE ALARM VOICE PANEL SHALL BE LOCATED ADJACENT TO THE MAIN FIRE ALARM PANEL IN THE FIRE COMMAND CENTER.
11. PROVIDE THE LOCATION OF THE NAC PANESL AT THE MAIN FIRE ALARM PANEL.
12. PAGING ZONES SHALL BE ELEVATOR GROUPS, EXIT STAIRWAYS, AND EACH FLOOR PER IBC 2012 SECTION 907.5.2.2.
13. UTILIZE A TERMINAL STRIP TO BREAK THE SLC CIRCUIT INTO SMALLER SECTIONS TO ALLOW FOR TESTING OF GROUND FAULTS. LABEL THE LOCATION OF THE TERMINAL STRIP IN THE FIRE ALARM PANEL AND BELOW THE CEILING AT THE ACTUAL LOCATION OF THE TERMINAL STRIP. THE SECTION SHALL BE BASED ON THE PHYSICAL LAYOUT OF THE BUILINDG (EX. WINGS OR FLOOR).

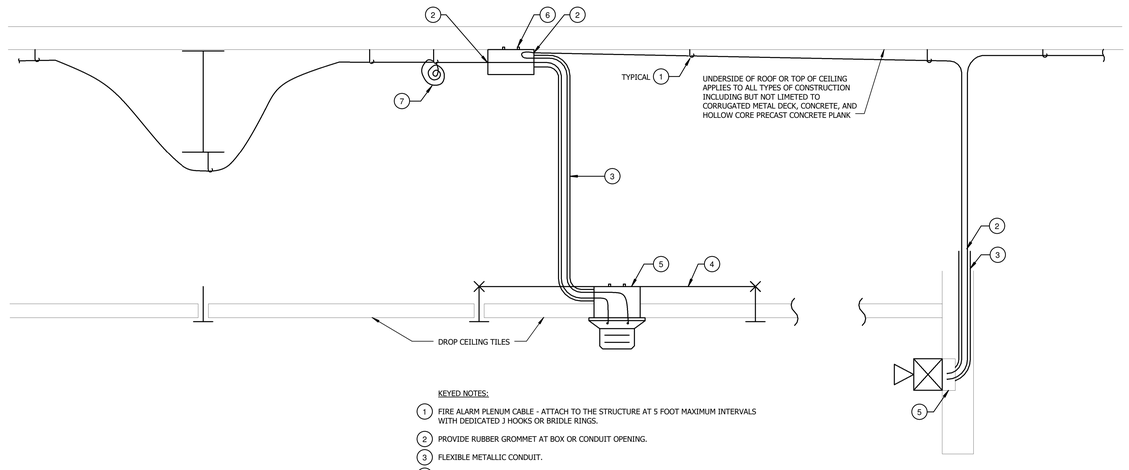
3 FA-801 FIRE ALARM SYSTEM RISER DIAGRAM - MULTIPLE FLOORS - VOICE SYSTEM DETAIL
NO SCALE

SYSTEM OUTPUTS

SYSTEM INPUTS

		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
1	ANY GENERAL BUILDING DETECTOR IN TROUBLE	X	X					X		X	X											1
2	ANY GENERAL BUILDING DETECTOR IN ALARM					X	X	X	X	X			X									2
3	ANY GENERAL BUILDING MANUAL PULL STATION IN ALARM					X	X	X		X			X									3
4	ANY DUCT DETECTOR IN ALARM			X	X			X		X		X		X							X	4
5	FIRE ALARM AC POWER FAILURE			X	X			X		X		X										5
6	FIRE ALARM SYSTEM LOW BATTERY	X	X					X		X	X											6
7	OPEN CIRCUIT	X	X					X		X	X											7
8	GROUND FAULT	X	X					X		X	X											8
9	NOTIFICATION APPLIANCE CIRCUIT SHORT	X	X					X		X	X											9
10	ANY TROUBLE ALARM	X	X					X		X	X											10
11	SMOKE DETECTOR ADJACENT TO DOOR HOLD-OPEN DEVICE IN ALARM					X	X	X	X	X			X		X							11
12	ELEVATOR LANDING SMOKE DETECTOR OTHER THAN PRIMARY RECALL LEVEL IN ALARM					X	X	X	X	X			X			X						12
13	ELEVATOR LANDING SMOKE DETECTOR ON PRIMARY RECALL LEVEL IN ALARM					X	X	X	X	X			X				X					13
14	HEAT DETECTOR IN ELEVATOR EQUIPMENT ROOM IN ALARM					X	X	X	X	X			X					X		X		14
15	HEAT DETECTOR IN ELEVATOR HOISTWAY IN ALARM					X	X	X	X	X			X					X		X		15
16	SMOKE DETECTOR IN ELEVATOR EQUIPMENT ROOM IN ALARM					X	X	X	X	X			X			X				X		16
17	SMOKE DETECTOR IN ELEVATOR HOISTWAY IN ALARM					X	X	X	X	X			X			X			X	X		17
18	KITCHEN HOOD EXTINGUISHING SYSTEM ACTIVATION					X	X	X	X	X			X									18
19	FIRE PUMP RUNNING					X	X	X	X	X	X											19
20	FIRE PUMP POWER FAILURE/PHASE REVERSAL/ALT. POWER SOURCE			X	X			X		X	X											20
21	ANY TAMPER SWITCH			X	X			X		X	X											21
22	ANY GENERAL BUILDING WATERFLOW ALARM					X	X	X	X	X			X									22

4 FA-801 FIRE ALARM SYSTEM MATRIX OF OPERATION DETAIL
NO SCALE



KEYED NOTES:

1. FIRE ALARM PLENUM CABLE - ATTACH TO THE STRUCTURE AT 5 FOOT MAXIMUM INTERVALS WITH DEDICATED J HOOKS OR BRIDLE RINGS.
2. PROVIDE RUBBER GROMMET AT BOX OR CONDUIT OPENING.
3. FLEXIBLE METALLIC CONDUIT.
4. CADDY ACOUSTICAL "TEE BAR" ELECTRICAL BOX HANGER OR EQUAL.
5. JUNCTION BOX.
6. SECURELY FASTEN FLEXIBLE METALLIC CONDUIT TO STRUCTURE VIA A JUNCTION BOX OR CONDUIT FITTING AND CLAMP.
7. COIL EXCESS WIRE ON A J-HOOK OR BRIDLE RING ADJACENT TO CONDUIT.

5 FA-801 FIRE ALARM PLENUM WIRING AND DEVICE MOUNTING DETAIL
NO SCALE

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SCALE: AS NOTED

DRAWING NAME
DETAILS - FIRE ALARM

FA-801

7/26/2016 9:39:38 AM

FIRE PROTECTION LEGEND:

**ALL EXISTING ITEMS TO BE SHOWN HALFTONE*

- PENDENT SPRINKLER HEAD
- UPRIGHT SPRINKLER HEAD
- SIDEWALL SPRINKLER HEAD
- PIPE RISE
- PIPE DROP
- TEE CONNECTION STRAIGHT
- TEE CONNECTION DOWN
- TEE CONNECTION UP
- PIPE CONTINUATION
- PIPE CAP
- HIGH/LOW AIR PRESSURE SWITCH
- ALARM PRESSURE SWITCH
- WATER FLOW SWITCH
- PRESSURE GAUGE
- GATE VALVE
- GATE VALVE WITH TAMPER SWITCH
- CHECK VALVE
- MULTI-PURPOSE/ANGLE HOSE VALVE
- VALVE CONTROL STATION
- DOUBLE CHECK VALVE BACKFLOW PREVENTER ASSEMBLY
- FIRE DEPARTMENT CONNECTION
- FREESTANDING ROOF HYDRANT
- FIRE PUMP TEST CONNECTION
- EXTERIOR ELECTRIC ALARM BELL
- ACV — ALARM CHECK VALVE ASSEMBLY
- DRY — DRY PIPE VALVE ASSEMBLY
- OH-1 — ORDINARY HAZARD GROUP 1
- OH-2 — ORDINARY HAZARD GROUP 2

TYPICAL ANNOTATION:

- AREA OF REVISION
- REVISION SEQUENCE NUMBER
- KEYED NOTE
- DEMOLITION KEYED NOTE
- POINT OF CONNECTION OF EXISTING SYSTEM
- POINT OF DISCONNECTION OF EXISTING SYSTEM
- DETAIL NUMBER / DRAWING NUMBER
- EQUIPMENT ABBREVIATION / EQUIPMENT NUMBER
- EQUIPMENT ABBREVIATION / EQUIPMENT NUMBER / XX — UNIQUE IDENTIFIER
- DETAIL NUMBER / DRAWING NUMBER (A7.1)
- DETAIL NUMBER / DRAWING NUMBER (A7.1)
- 1 / A101 VIEW REFERENCE

GENERAL NOTES:

1. SOME LEGEND SYMBOLS MAY NOT BE USED. SEE FLOOR PLAN DRAWINGS FOR APPLICABLE DEVICES.
2. THESE NOTES ARE GENERAL IN NATURE AND PERTAIN TO THE ENTIRE PROJECT UNLESS OTHERWISE NOTED AS SUCH ON AN INDIVIDUAL DRAWING.
3. PRIOR TO BIDDING, THE CONTRACTOR SHALL EXAMINE ALL PROJECT DRAWINGS AND SPECIFICATIONS TO DEVELOP A COMPLETE UNDERSTANDING OF THE PROJECT SCOPE. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY EXISTING CONDITIONS BEFORE BIDDING. FAILURE TO DO THIS WILL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES TO PERFORM ALL REQUIRED WORK. THE CONTRACTOR SHALL ADVISE THE PROFESSIONAL OF ANY DISCREPANCIES WHICH WILL AFFECT THE WORK REQUIRED.
4. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERTINENT CODES AND REGULATIONS. THE ONTRACTOR SHALL INSTALL ALL EQUIPMENT IN ACCORDANCE WITH APPLICABLE CODES, MANUFACTURER'S WRITTEN INSTRUCTIONS, AND RECOGNIZED INDUSTRY PRACTICES. ALL EQUIPMENT, DEVICES, AND MATERIALS SHALL BE UL LISTED AND FM APPROVED.
5. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING ALL REQUIRED INFORMATION TO THE AUTHORITY HAVING JURISDICTION TO OBTAIN THE NECESSARY PERMITS AND APPROVALS. ALL FEES ASSOCIATED WITH THIS SUBMISSION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE ALL REQUIRED INSPECTIONS AND BE RESPONSIBLE FOR ALL FEES CHARGED BY THE AUTHORITY HAVING JURISDICTION FOR SUCH INSPECTIONS.
6. REFER TO THE ARCHITECTURAL PLANS FOR DIMENSIONS, ROOM FINISHES, FIRE WALLS, AND LIKE ITEMS. REFER TO THE STRUCTURAL DRAWINGS FOR STRUCTURAL MEMBERS. REFER TO OTHER TRADES PLANS TO UNDERSTAND THE EXTENT OF THEIR WORK AS REQUIRED.
7. DO NOT SCALE DRAWINGS. HOLD INDICATED DIMENSIONS WHERE SHOWN. RESOLVE ANY DISCREPANCIES WITH THE PROFESSIONAL PRIOR TO BEGINNING WORK.
8. PROVIDE A NEW COMPLETE SPRINKLER AND STANDPIPE SYSTEM AS DESCRIBED IN THE SPECIFICATIONS AND SHOWN ON THE DRAWINGS. THE WORK COVERED UNDER THIS CONTRACT INCLUDES THE FURNISHING OF ALL EQUIPMENT, LABOR, AND MATERIALS TO PROVIDE A COMPLETE SYSTEM IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND REFERENCED CODES.
9. THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A WATER FLOW TEST AND SUBMITTING THE INFORMATION TO THE PROFESSIONAL.
10. THE LAYOUT ON THE DRAWINGS IS DIAGRAMMATIC. THE CONTRACTOR SHALL COORDINATE WITH OTHERTRADES TO ELIMINATE CONFLICTS BETWEEN STRUCTURAL ELEMENTS AS WELL AS PIPING, DUCTWORK, ELECTRICAL, AND ARCHITECTURAL WORK. PROVIDE OFFSETS, TRANSITIONS IN PIPING, AND AUXILIARY LOW POINT DRAINS AS REQUIRED TO AVOID INTERFERENCES AT NO ADDITIONAL COST TO THE PROJECT.
11. THE DRAWINGS DO NOT SHOW ALL OF THE HEADS REQUIRED. ANY HEADS SHOWN ON THE DRAWINGS ARE INTENDED TO SHOW THE INTENT OF THE LAYOUT WITH RESPECT TO ARCHITECTURAL AND OTHER TRADES WORK. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE FINAL PLACEMENT OF ALL SPRINKLER HEADS IN ACCORDANCE WITH NFPA 13.
12. ALL PIPING SHALL BE CONCEALED IN AREAS WITH CEILINGS. PIPING SHALL BE EXPOSED IN AREAS WITHOUT CEILINGS. CONTRACTOR SHALL COORDINATE ROUTINGS WITHIN THESE EXPOSED AREAS TO PRODUCE A SYMMETRIC AND AESTHETIC PIPE AND HEAD LAYOUT.
13. THE AUTOMATIC SPRINKLER SYSTEMS SHALL BE HYDRAULICALLY DESIGNED IN ACCORDANCE WITH THE AREA/DENSITY METHOD REQUIREMENTS OF NFPA 13. THE ROOM DESIGN METHOD SHALL NOT BE USED. THE FOLLOWING C-FACTORS SHALL BE UTILIZED IN THE CALCULATIONS: CEMENT LINED CAST OR DUCTILE IRON PIPE C = 120, BLACK STEEL IN WET PIPE SYSTEMS C = 110.
14. ALL AREAS NOT OTHERWISE SHOWN AS A HIGHER HAZARD CLASS SHALL BE DESIGNATED AS LIGHT HAZARD.
15. ALL THREADED PIPE SHALL BE SCHEDULE 40. MINIMUM PIPE SIZE IS 1".
16. PIPE HANGERS SHALL COMPLY WITH IBC AND NFPA REQUIREMENTS FOR SEISMIC BRACING.
17. ALL EQUIPMENT SHALL BE COORDINATED WITH OTHER TRADES AND ARCHITECTURAL AND STRUCTURAL FEATURES.
18. FIRE STOPPING FOR ALL PIPES PENETRATING FIRE RATED WALLS AND SEALING OF SMOKE BARRIERS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS, THE UL LISTING, AND THE SPECIFICATIONS TO MAINTAIN THE RATING.
19. CONTRACTOR SHALL REPLACE IN KIND ALL CEILING TILES DAMAGED DURING INSTALLATION AT NO ADDITIONAL COST.
20. CONTRACTOR SHALL REPAINT OR REFINISH ANY AREA IN KIND IF INSTALLATION DEFACES EXISTING WALLS, FLOORS, OR CEILINGS.
21. AFTER ALL EQUIPMENT IS INSTALLED, IT SHALL BE TESTED IN ACCORDANCE WITH NFPA 13 AND THE SPECIFICATIONS. EQUIPMENT NOT OPERATING CORRECTLY SHALL BE FIELD CORRECTED OR REPLACED. THE OWNER'S REPRESENTATIVE, PROFESSIONAL, AND AUTHORITY HAVING JURISDICTION SHALL BE PRESENT FOR THE TEST.
22. THE FIRE PROTECTION DRAWINGS AND SPECIFICATIONS ARE PERFORMANCED BASED. THE FIRE PROTECTION CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL AS A DEFERRED SUBMITAL TO THE LOCAL AHJ THREE (3) SETS OF SHOP DRAWINGS AND HYDRAULIC CALCULATIONS INDICATING THE SPRINKLER SYSTEM LAYOUT INCLUDING FINAL HEAD LOCATIONS. THE PROFESSIONAL SHALL REVIEW THE SHOP DRAWINGS AND HYDRAULIC CALCULATIONS PRIOR TO THE DEFERRED SUBMISSION TO THE AHJ AND PROVIDE NOTATION ON THE DRAWINGS INDICATING THEY WERE REVIEWED AND APPROVED BY THE PROFESSIONAL. SUBMIT APPROVED DRAWINGS AND CALCULATIONS WITH THE REQUIRED APPLICATION FEE PRIOR TO INSTALLATION.

DEMOLITION GENERAL NOTES:

1. DEMOLISH ALL EXISTING SPRINKLER EQUIPMENT FROM THE BUILDING. THIS INCLUDES ALL PIPING, SPRINKLERS, VALVES, HANGERS, AND SUPPORTS.

SHEET LIST

Sheet Number	Sheet Name
FP 001	SYMBOLS, LEGENDS, AND ABBREVIATIONS - FIRE PROTECTION
FP 111	NEW WORK BASEMENT & FIRST FLOOR PLAN - FIRE PROTECTION
FP 112	NEW WORK SECOND & ROOF PLAN A - FIRE PROTECTION
FP 113	NEW WORK BASEMENT PLAN B - FIRE PROTECTION
FP 114	NEW WORK FIRST FLOOR PLAN B - FIRE PROTECTION
FP 115	NEW WORK FIRST FLOOR PLAN C - FIRE PROTECTION
FP 116	NEW WORK SECOND FLOOR PLAN B - FIRE PROTECTION
FP 117	NEW WORK SECOND FLOOR PLAN C - FIRE PROTECTION
FP 118	NEW WORK THIRD FLOOR PLAN B - FIRE PROTECTION
FP 119	NEW WORK THIRD FLOOR PLAN C - FIRE PROTECTION
FP 120	NEW WORK ROOF PLAN B - FIRE PROTECTION
FP 121	NEW WORK ROOF PLAN C - FIRE PROTECTION
FP 200	FIRE PROTECTION RISER DIAGRAM
FP 300	DETAILS - FIRE PROTECTION

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LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

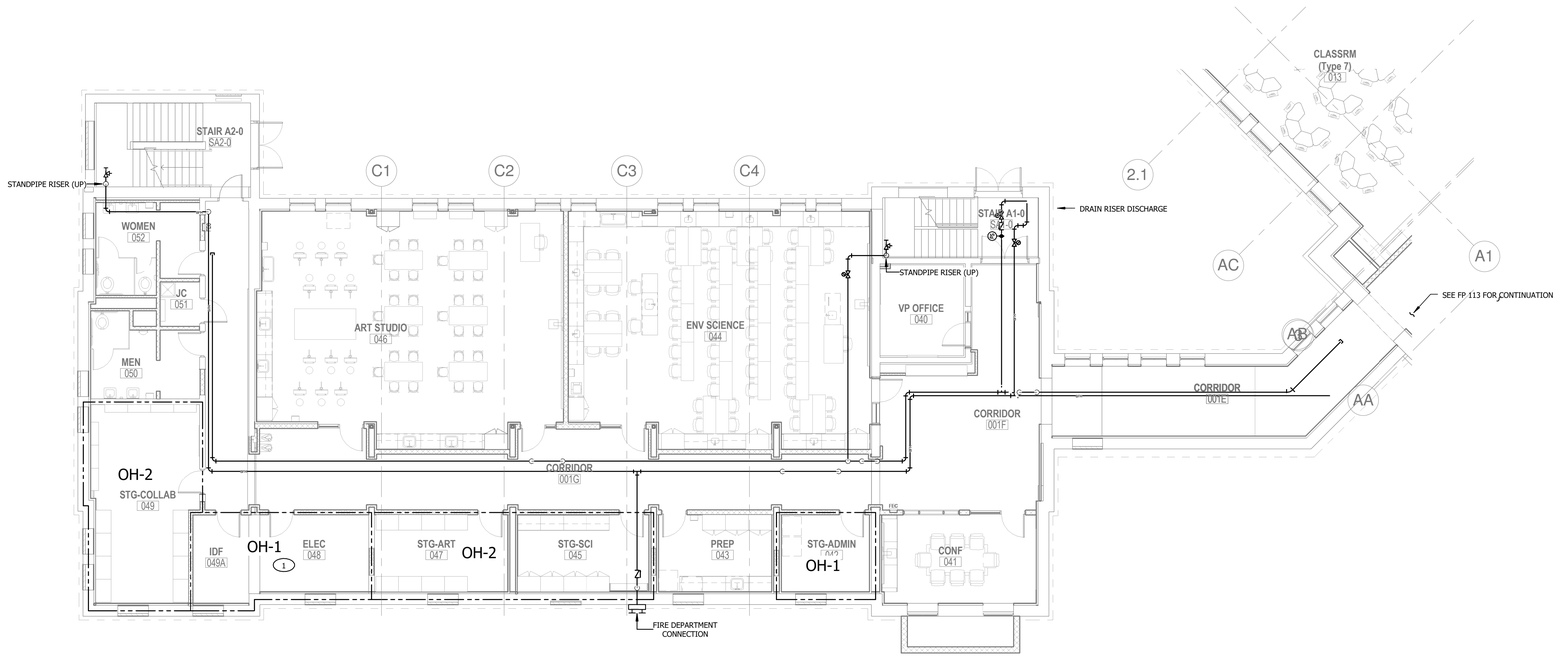
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
SYMBOLS, LEGENDS, AND ABBREVIATIONS - FIRE PROTECTION

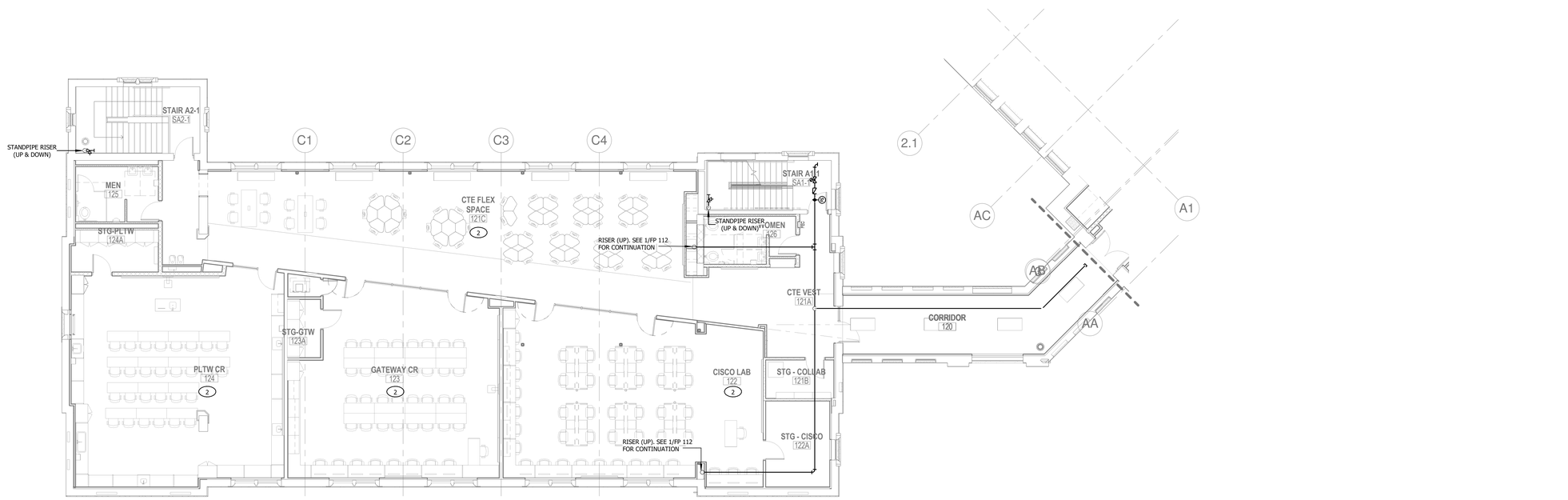
FP 001

7/26/2016 11:21:26 AM



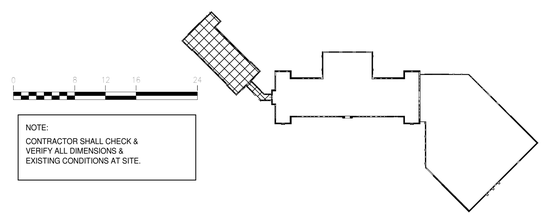
1 / FP 111 NEW WORK BASEMENT FLOOR PLAN A - FIRE PROTECTION

1/8" = 1'-0"



2 / FP 111 NEW WORK FIRST FLOOR PLAN A - FIRE PROTECTION

1/8" = 1'-0"



NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

GENERAL NOTES:

1. PROVIDE SEISMIC SEPARATION ASSEMBLIES AT THE BUILDING EXPANSION JOINTS. REFER TO THE STRUCTURAL DRAWING FOR THE EXPANSION JOINT LOCATIONS.

KEYED NOTES:

1. AVOID ROUTING PIPE THROUGH THE ELECTRICAL ROOM OR OVER PANELS/EQUIPMENT.
2. PROVIDE SPRINKLER COVERAGE ABOVE AND BELOW THE FLOATING CEILING.

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PROJECT No.: 152-01

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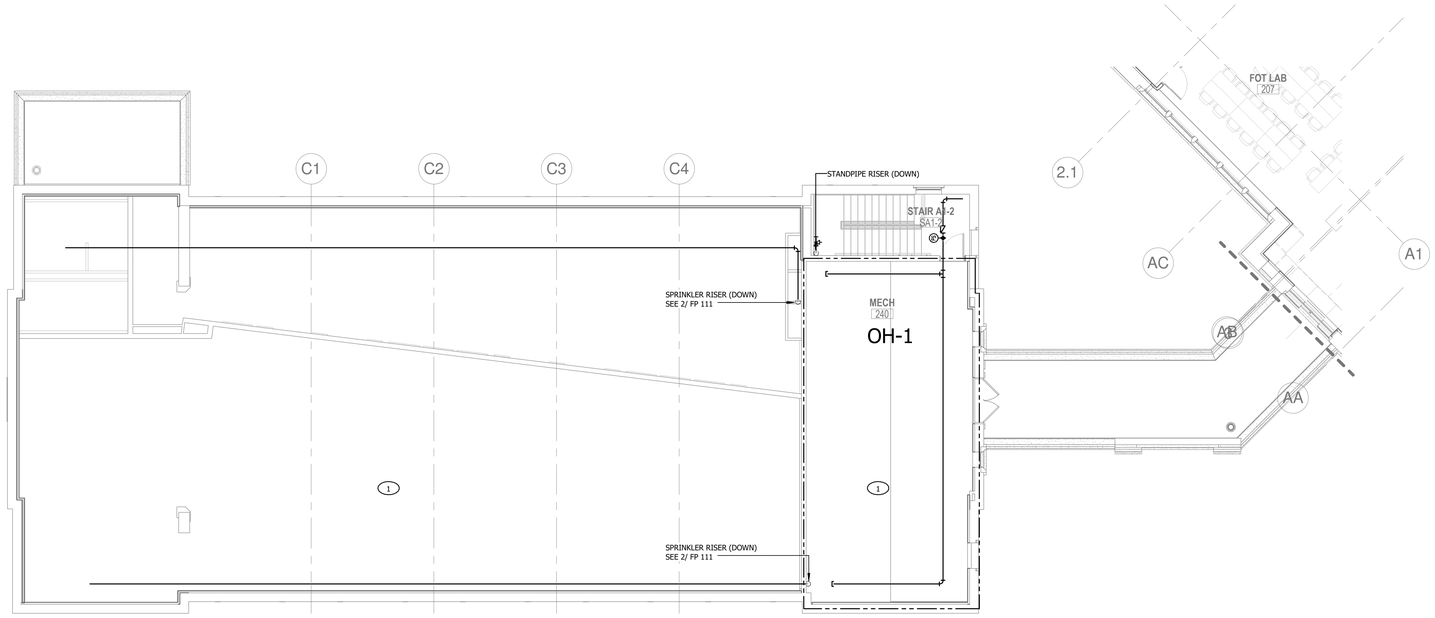
SCALE: AS NOTED

DRAWING NAME
NEW WORK BASEMENT & FIRST FLOOR PLAN - FIRE PROTECTION

FP 111

7/26/2016 11:22:20 AM



1 / FP 112 NEW WORK SECOND FLOOR PLAN A - FIRE PROTECTION

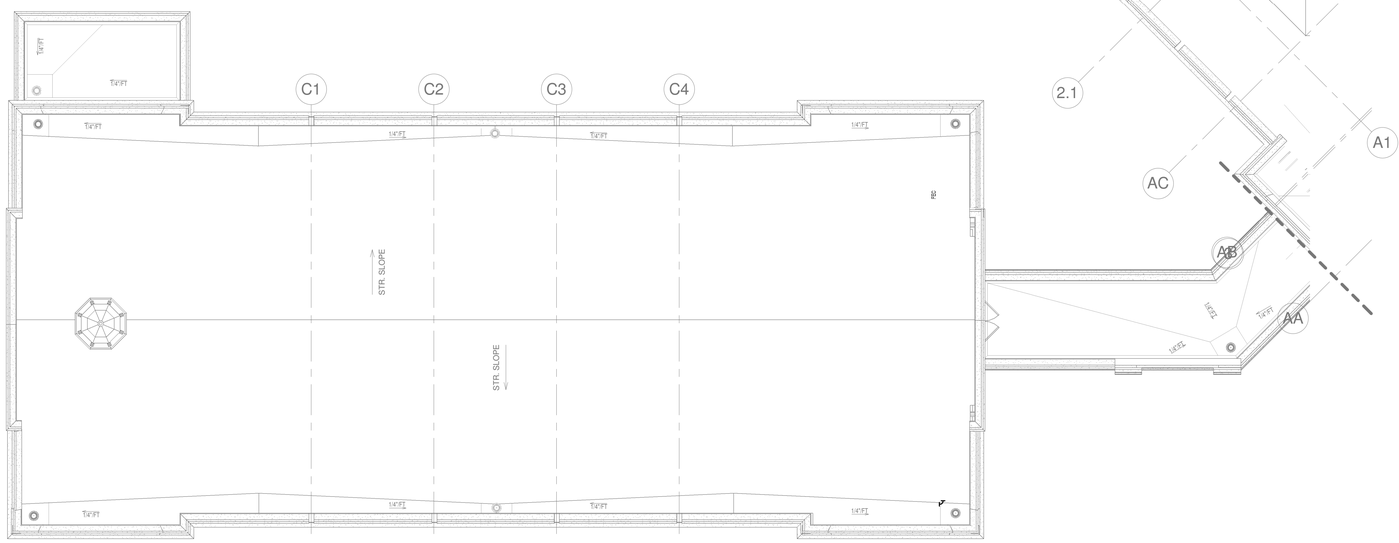
1/8" = 1'-0"

GENERAL NOTES:

1. PROVIDE SEISMIC SEPARATION ASSEMBLIES AT THE BUILDING EXPANSION JOINTS. REFER TO THE STRUCTURAL DRAWING FOR THE EXPANSION JOINT LOCATIONS.

KEYED NOTES:

(1) ROUTE THE BRANCH LINES UP THE SLOPE SO THE SYSTEM WILL DRAIN PROPERLY.



2 / FP 112 NEW WORK ROOF PLAN A - PLUMBING

1/8" = 1'-0"

NOTE:
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No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND & ROOF PLAN A - FIRE PROTECTION

FP 112

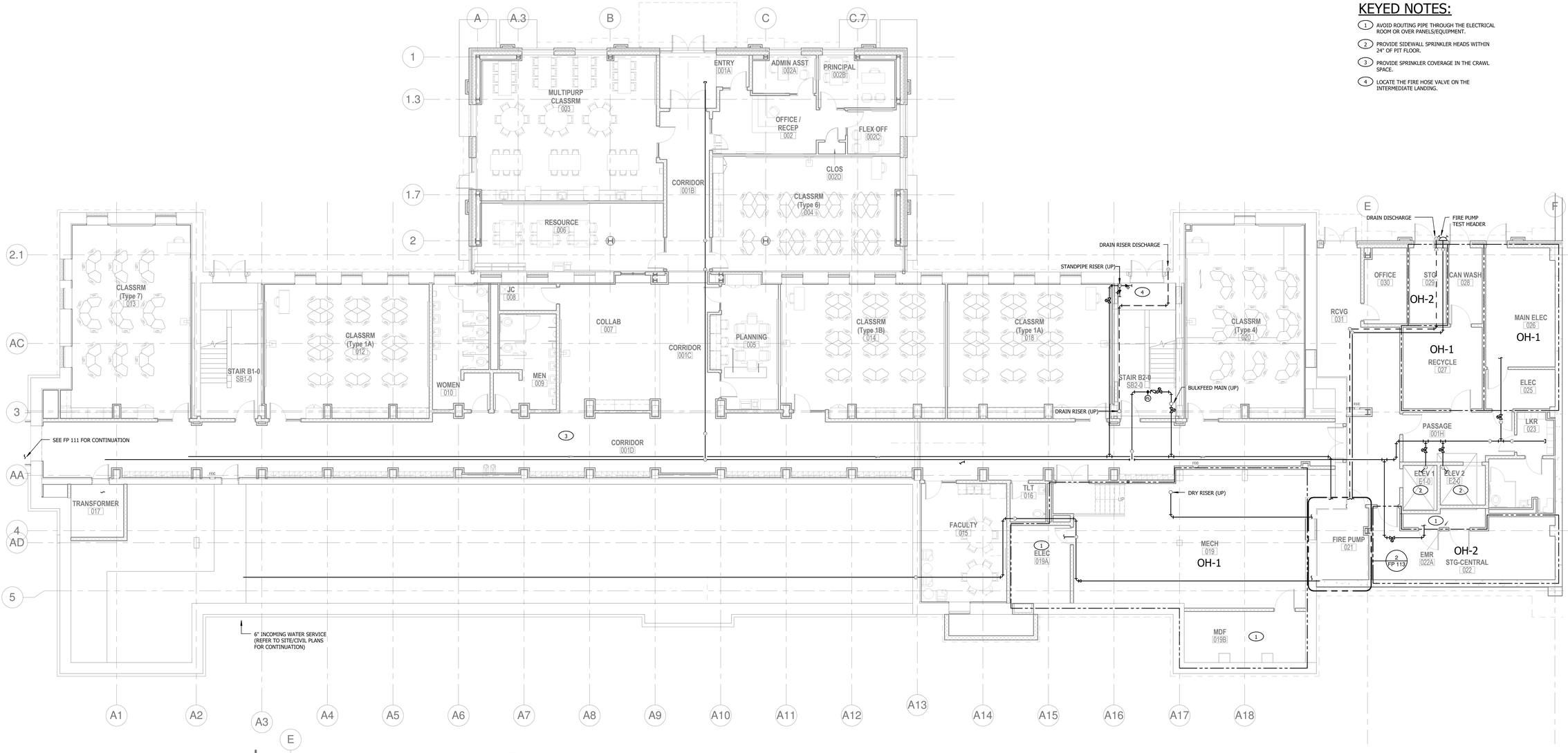
7/26/2016 11:22:40 AM

GENERAL NOTES:

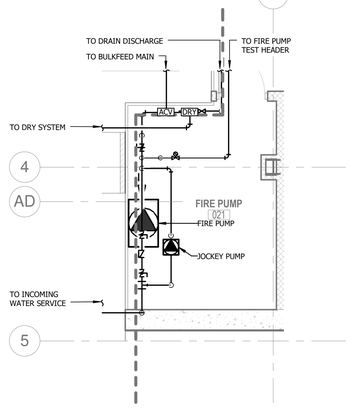
1. PROVIDE SEISMIC SEPARATION ASSEMBLIES AT THE BUILDING EXPANSION JOINTS. REFER TO THE STRUCTURAL DRAWING FOR THE EXPANSION JOINT LOCATIONS.

KEYED NOTES:

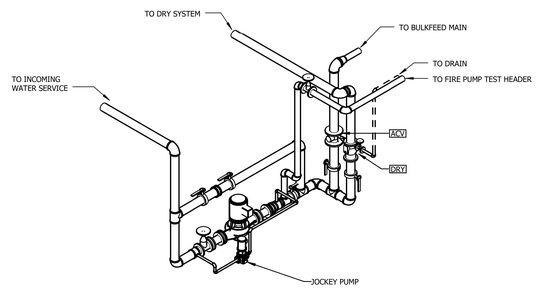
1. AVOID ROUTING PIPE THROUGH THE ELECTRICAL ROOM OR OVER PANELS/EQUIPMENT.
2. PROVIDE SIDEWALL SPRINKLER HEADS WITHIN 24" OF PIT FLOOR.
3. PROVIDE SPRINKLER COVERAGE IN THE CRAWL SPACE.
4. LOCATE THE FIRE HOSE VALVE ON THE INTERMEDIATE LANDING.



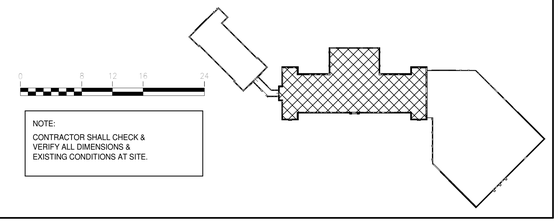
1 / FP 113 NEW WORK BASEMENT FLOOR PLAN B - FIRE PROTECTION
1/8" = 1'-0"



2 / FP 113 ENLARGED FIRE PUMP ROOM
1/4" = 1'-0"



3 / FP 113 FIRE PUMP ROOM DETAIL



NOTE:
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LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK BASEMENT PLAN B - FIRE PROTECTION

FP 113

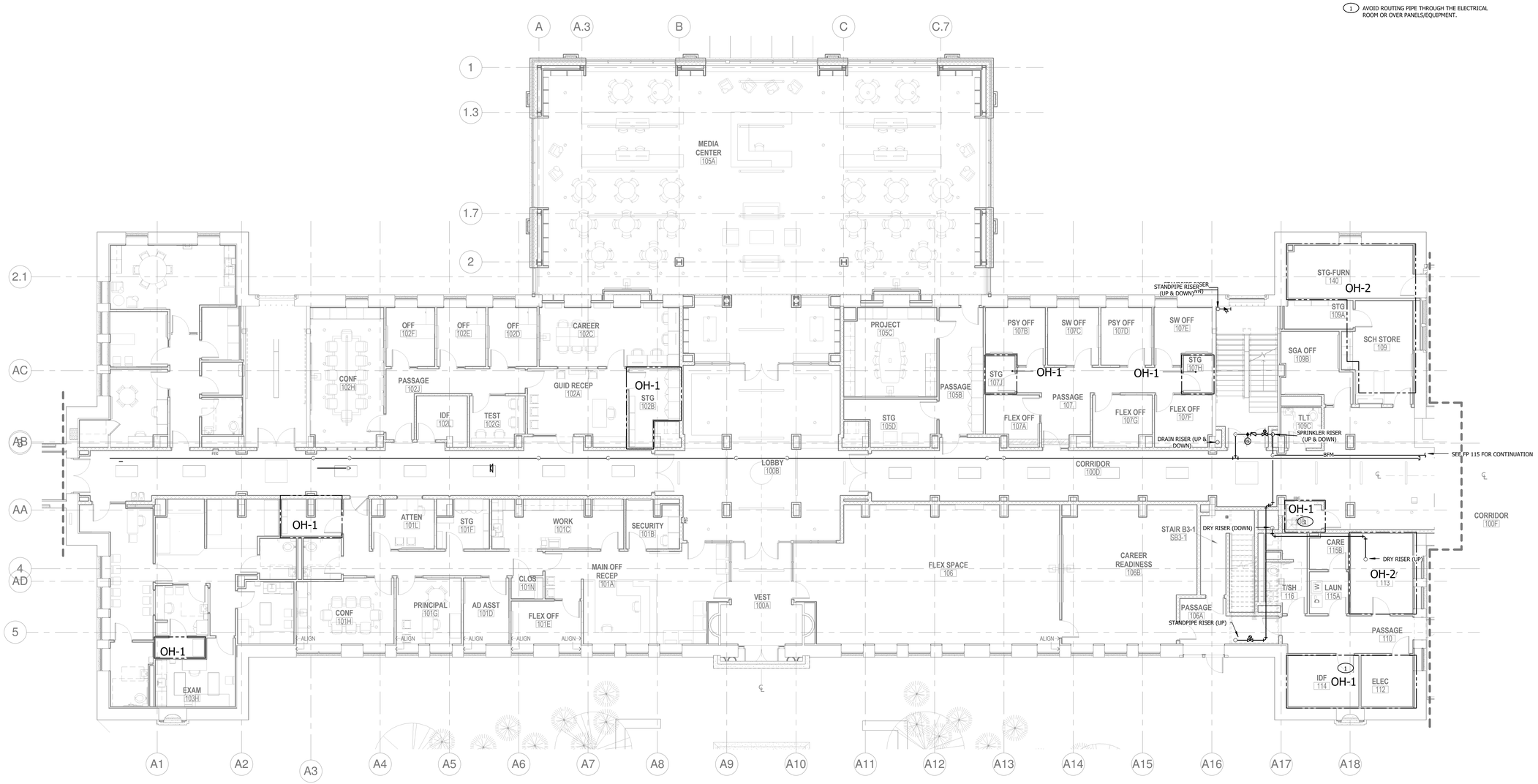
7/26/2016 11:22:59 AM

GENERAL NOTES:

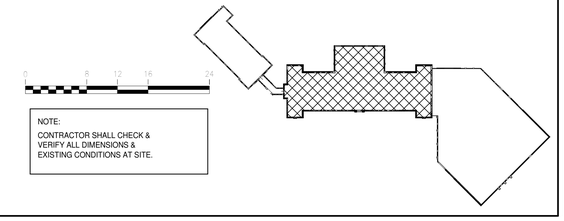
1. PROVIDE SEISMIC SEPARATION ASSEMBLIES AT THE BUILDING EXPANSION JOINTS. REFER TO THE STRUCTURAL DRAWING FOR THE EXPANSION JOINT LOCATIONS.

KEYED NOTES:

(1) AVOID ROUTING PIPE THROUGH THE ELECTRICAL ROOM OR OVER PANELS/EQUIPMENT.



1 / FP 114 NEW WORK FIRST FLOOR PLAN B - FIRE PROTECTION
1/8" = 1'-0"



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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK FIRST FLOOR PLAN B - FIRE PROTECTION

FP 114

7/26/2016 11:23:14 AM

GENERAL NOTES:

1. PROVIDE SEISMIC SEPARATION ASSEMBLIES AT THE BUILDING EXPANSION JOINTS. REFER TO THE STRUCTURAL DRAWING FOR THE EXPANSION JOINT LOCATIONS.

KEYED NOTES:

1. PROVIDE A KITCHEN HOOD SUPPRESSION SYSTEM. SEE THE SPECIFICATIONS FOR MORE DETAILS. SEE MECHANICAL DRAWINGS FOR HOOD TYPE.
2. SEE FP 117 FOR GYM SPRINKLER MAIN LOCATION.
3. PROVIDE DRY PENDANT HEADS IN THE FREEZER AND COOLER.

STANDPIPE RISER (UP)
DRAIN DISCHARGE
STAIR C1-1
SC1-1
STG-PE
148
OH-2
SPRINKLER RISER (UP)
GYM RISER (UP)
149
DRAIN RISER (UP)
IDF
147
AUXILIARY GYM
156
DINING
141
SERVE
142K
LKR/TLT
154C
TEAM - MEN'S
154D
OFFICE
154B
OH-1
KITCHEN
143
OFF
142C
DISH/TRAY
142H
ELEV 2
E2-1
ELEV 1
E1-1
RCVG
142
JC/SOAP
142D
SCH STORE
109
STG
109A
LKRS - MEN'S
154A
CORRIDOR
100F
TLT
142B
LKR
142A
FREEZER
142F
OH-2
TLT - MEN'S
154F
LAUNDRY
152
SHWR - MEN'S
154E
CORRIDOR
100J
DRY STOR
142E
SGA OFF
109B
RESTROOM
OH-2
TLT
109C
COOLER
142G
SHWR - WOMEN'S
153E
TLT - WOMEN'S
153F
REF LKR
150
GYMNASIUM
155
WOMEN
143
PANTRY
113
CARE
115B
JC
108
PASSAGE
110
LAUN
115A
MEN
144
LKRS - WOMEN'S
153A
CORRIDOR
100G
T/SH
116
ELEC
112
OH-2
TEAM - WOMEN'S
153D
OFFICE
153B
OH-1
2
STAIR B3-1
SB3-1
IDF
114
LKR/TLT
153C
CAREER READINESS
106B
PASSAGE
106A
TICKETS
146
LOBBY
100H
ALIGN

1 FP 115 NEW WORK FIRST FLOOR PLAN C - FIRE PROTECTION
1/8" = 1'-0"

0 8 12 16 24

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No.	DATE	DESCRIPTION
1	05/06/16	ADDENDUM #5

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK FIRST FLOOR PLAN C - FIRE PROTECTION

FP 115

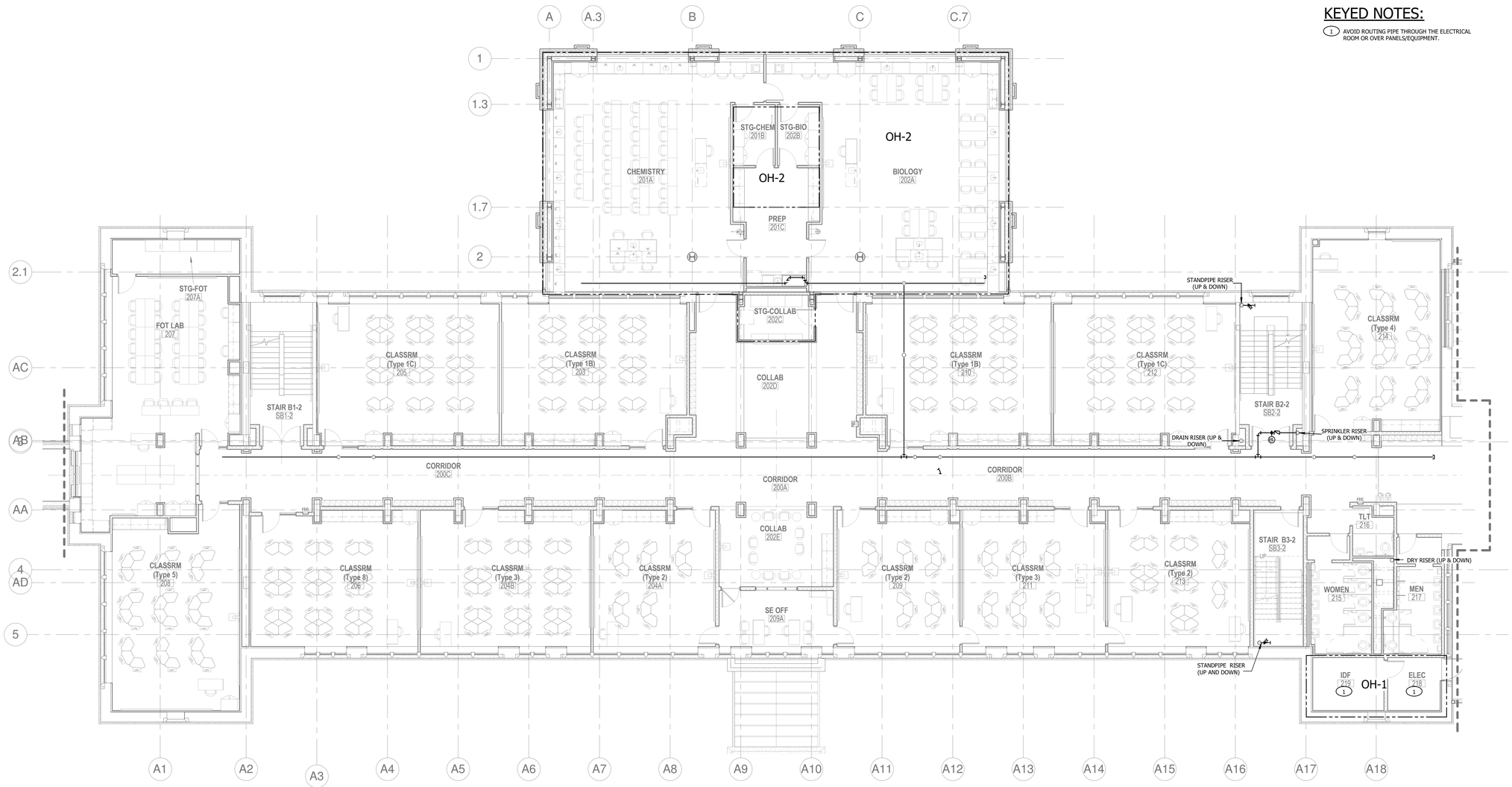
7/26/2016 11:25:25 AM

GENERAL NOTES:

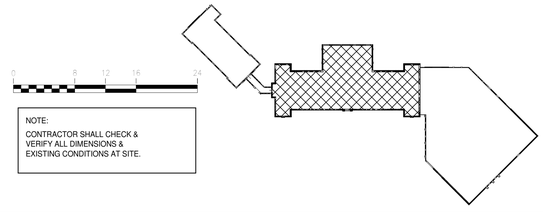
1. PROVIDE SEISMIC SEPARATION ASSEMBLIES AT THE BUILDING EXPANSION JOINTS. REFER TO THE STRUCTURAL DRAWING FOR THE EXPANSION JOINT LOCATIONS.

KEYED NOTES:

(1) AVOID ROUTING PIPE THROUGH THE ELECTRICAL ROOM OR OVER PANELS/EQUIPMENT.



(1) FP 116 NEW WORK SECOND FLOOR PLAN B - FIRE PROTECTION
1/8" = 1'-0"



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ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056
1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

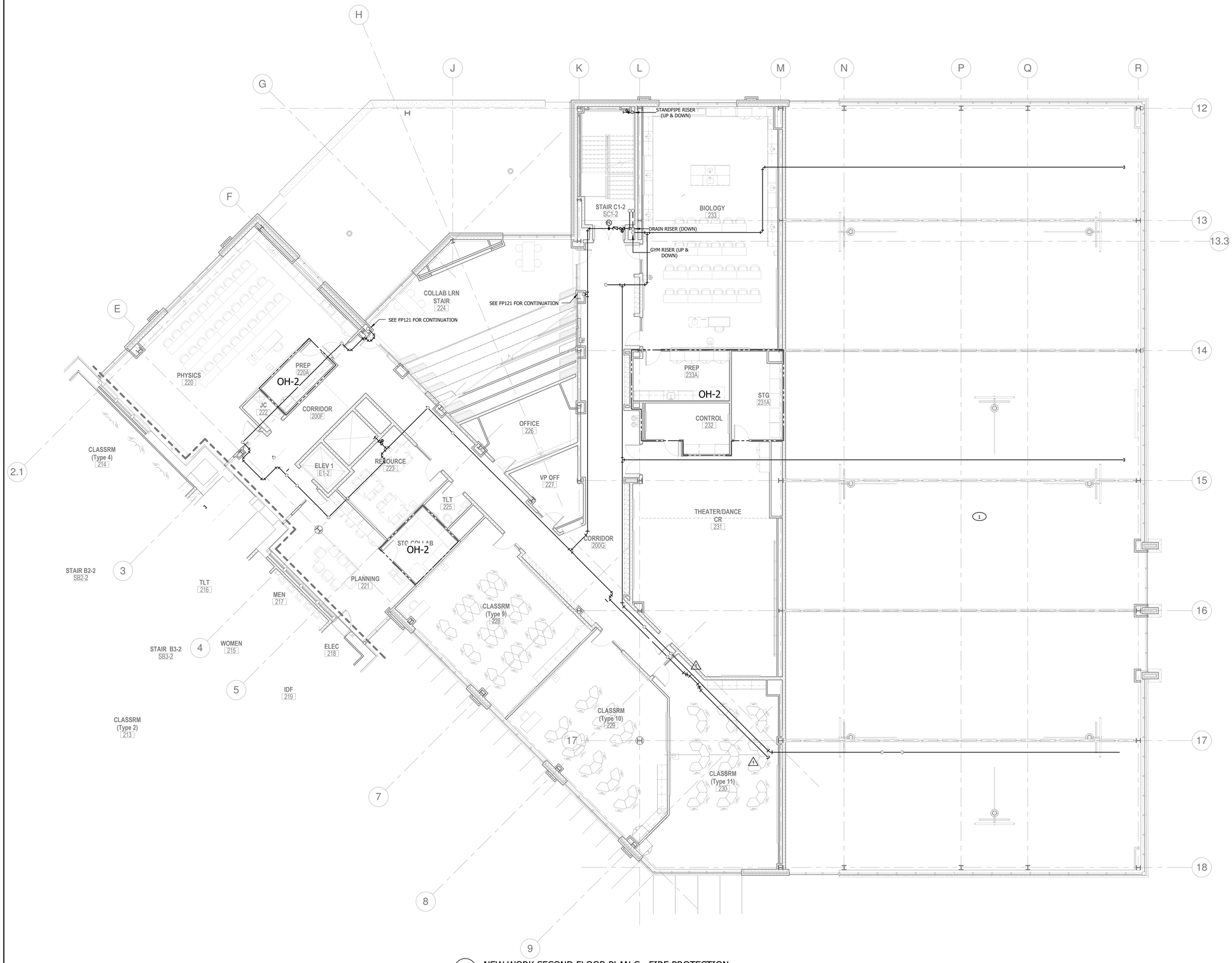
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND FLOOR PLAN B - FIRE PROTECTION

FP 116

7/26/2016 11:25:47 AM



GENERAL NOTES:

1. PROVIDE SEISMIC SEPARATION ASSEMBLIES AT THE BUILDING EXPANSION JOINTS. REFER TO THE STRUCTURAL DRAWING FOR THE EXPANSION JOINT LOCATIONS.

KEYED NOTES:

(1) PROVIDE COMPLETE COVERAGE IN THE GYM WITH THE PARTITIONS OPEN OR CLOSED.

(1 / FP 117) NEW WORK SECOND FLOOR PLAN C - FIRE PROTECTION
1/8" = 1'-0"

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

JRS ARCHITECTS
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410.235.7256

ASSOCIATE ARCHITECT
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LANDSCAPE ARCHITECT
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MEP ENGINEER
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No.	DATE	DESCRIPTION
1	05/06/16	ADDENDUM #5

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND FLOOR PLAN C - FIRE PROTECTION

FP 117

7/26/2016 11:30:04 AM

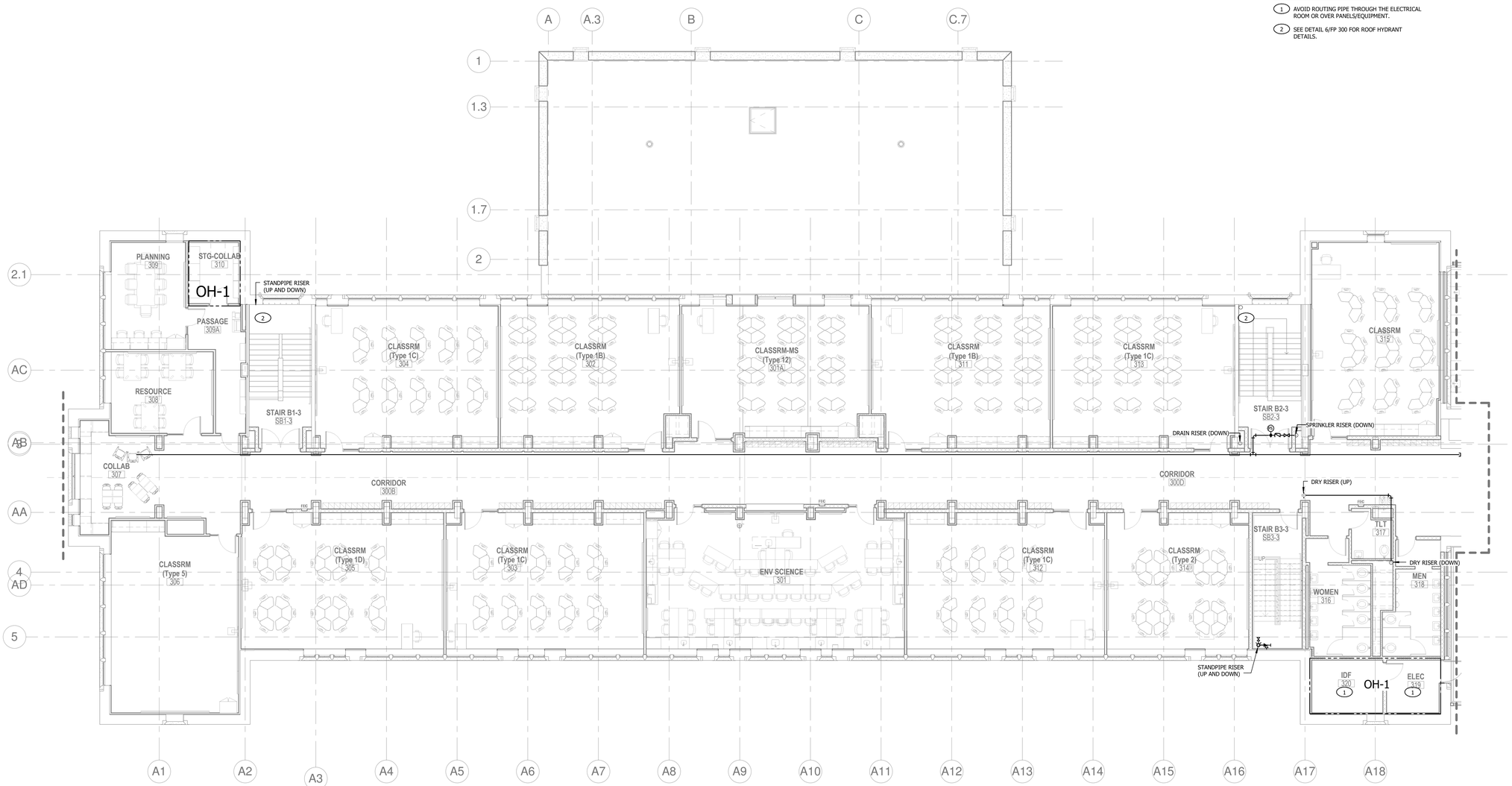
GENERAL NOTES:

1. PROVIDE SEISMIC SEPARATION ASSEMBLIES AT THE BUILDING EXPANSION JOINTS. REFER TO THE STRUCTURAL DRAWING FOR THE EXPANSION JOINT LOCATIONS.

KEYED NOTES:

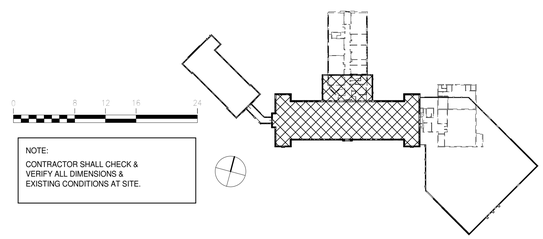
(1) AVOID ROUTING PIPE THROUGH THE ELECTRICAL ROOM OR OVER PANELS/EQUIPMENT.

(2) SEE DETAIL 6/FP 300 FOR ROOF HYDRANT DETAILS.



1 / FP 118 NEW WORK THIRD FLOOR PLAN C - FIRE PROTECTION

1/8" = 1'-0"



NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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LICENSE NO.: 19284
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

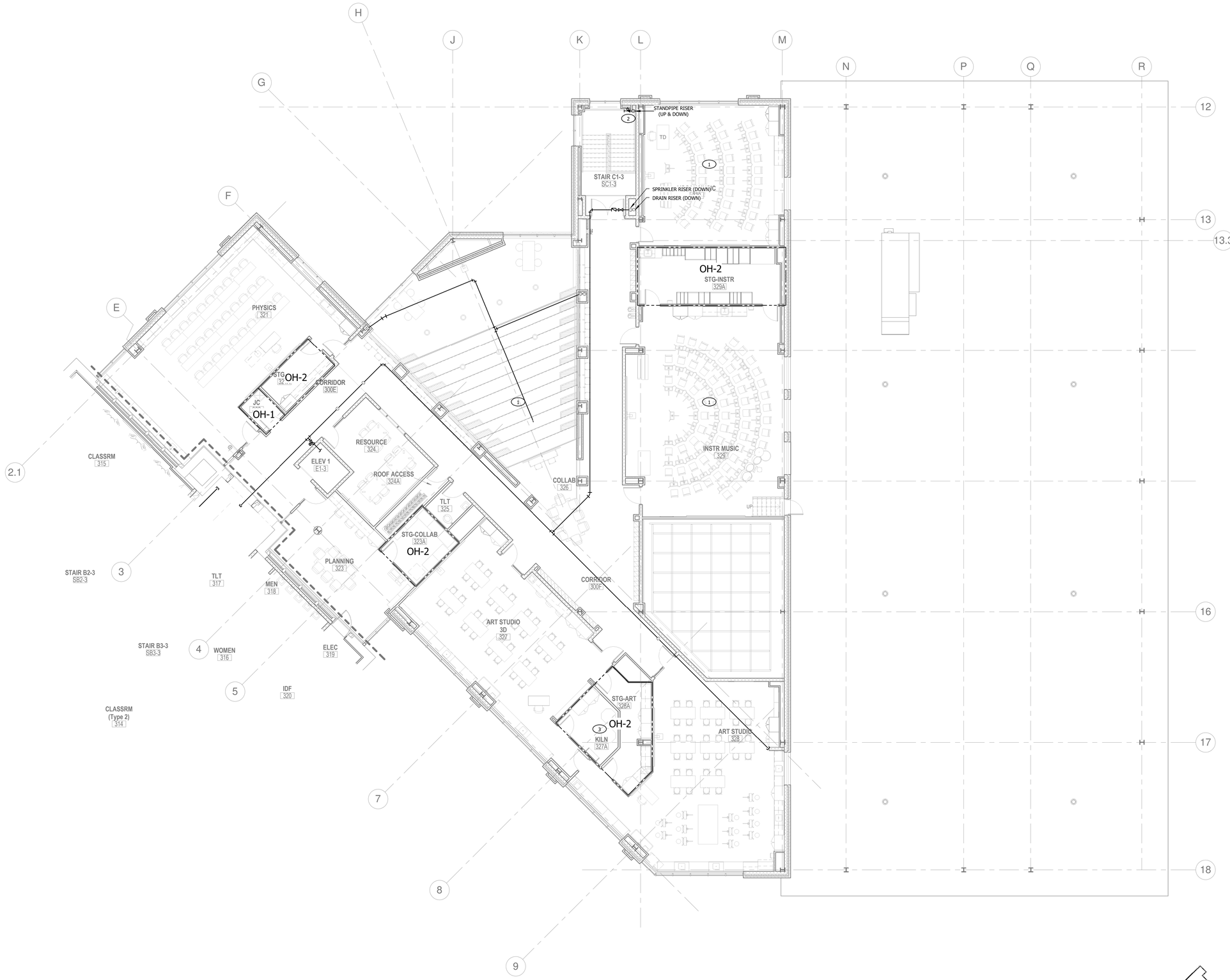
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK THIRD FLOOR PLAN B - FIRE PROTECTION

FP 118

7/26/2016 11:30:19 AM



GENERAL NOTES:

1. PROVIDE SEISMIC SEPARATION ASSEMBLIES AT THE BUILDING EXPANSION JOINTS. REFER TO THE STRUCTURAL DRAWING FOR THE EXPANSION JOINT LOCATIONS.

KEYED NOTES:

1. PROVIDE SPRINKLER COVERAGE ABOVE AND BELOW THE FLOATING CEILING.
2. SEE DETAIL 6/FP 300 FOR ROOF HYDRANT DETAILS.
3. VERIFY THE TEMPERATURE AND PROVIDE THE NFPA 13 REQUIRED HEAD TEMPERATURE IN THE KILN ROOM.

1 FP 119 NEW WORK THIRD FLOOR PLAN B - FIRE PROTECTION
1/8" = 1'-0"

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME:
NEW WORK THIRD FLOOR PLAN C - FIRE PROTECTION

FP 119

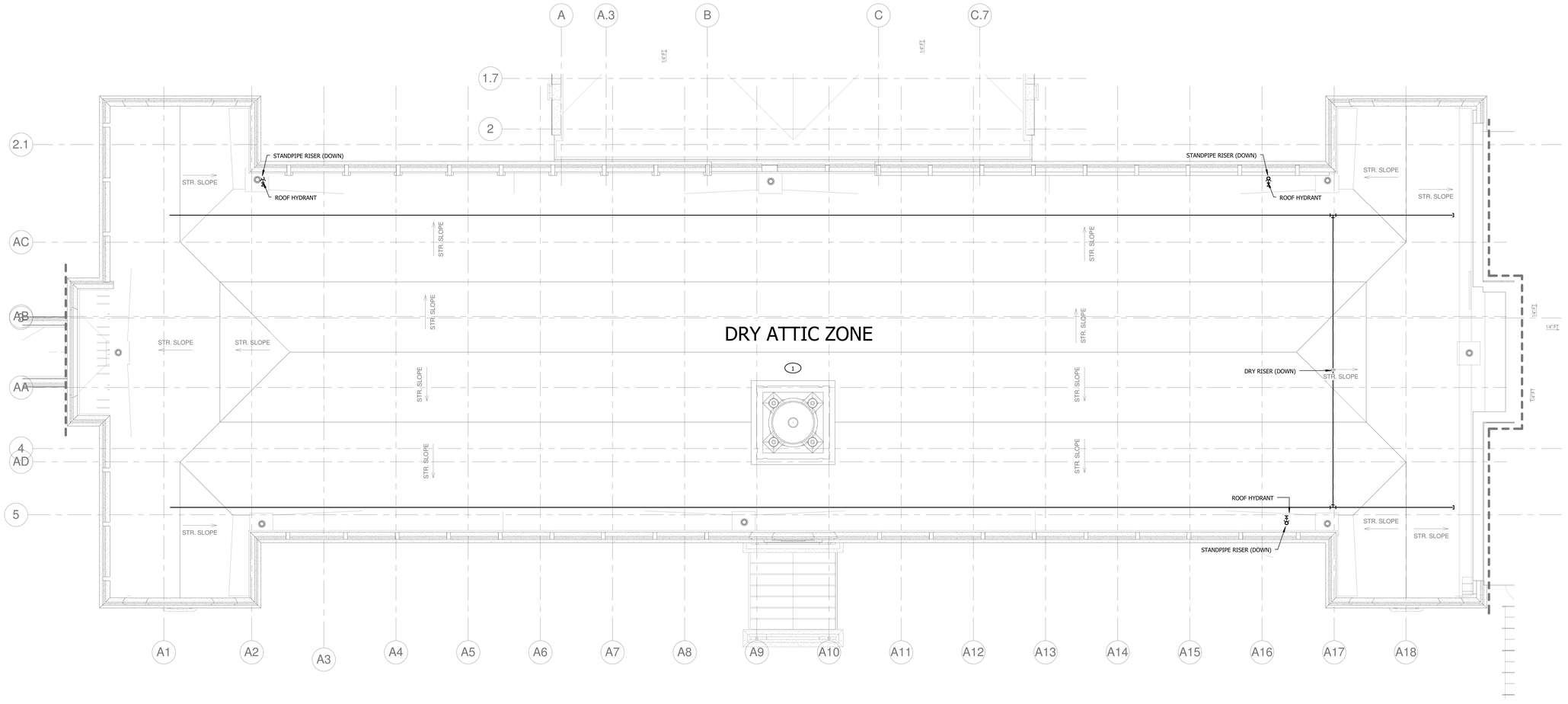
7/26/2016 11:33:31 AM

GENERAL NOTES:

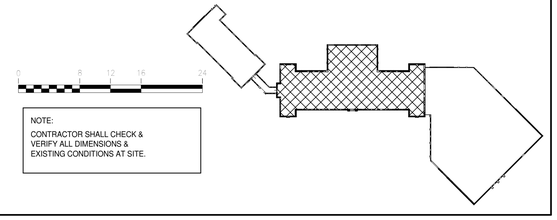
1. PROVIDE SEISMIC SEPARATION ASSEMBLIES AT THE BUILDING EXPANSION JOINTS. REFER TO THE STRUCTURAL DRAWING FOR THE EXPANSION JOINT LOCATIONS.

KEYED NOTES:

(1) PROVIDE COMPLETE SPRINKLER COVERAGE IN THE ATTIC.



1 / FP 120 NEW WORK ROOF PLAN B - FIRE PROTECTION
1/8" = 1'-0"



NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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LICENSE NO.: 19284
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

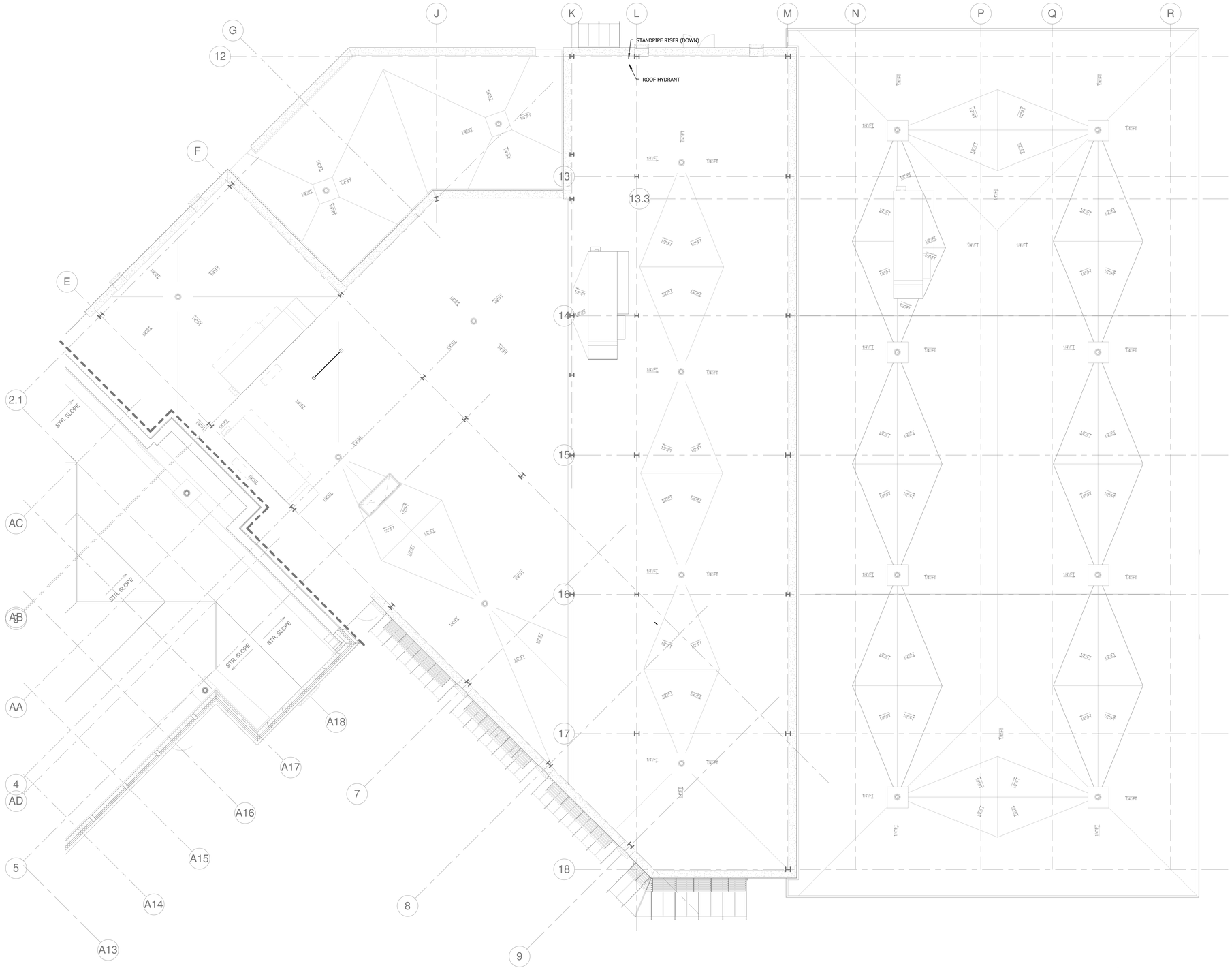
DRAWING NAME
NEW WORK ROOF PLAN B - FIRE PROTECTION

FP 120

7/26/2016 11:33:56 AM

GENERAL NOTES:

1. PROVIDE SEISMIC SEPARATION ASSEMBLIES AT THE BUILDING EXPANSION JOINTS. REFER TO THE STRUCTURAL DRAWING FOR THE EXPANSION JOINT LOCATIONS.



1 / FP 121 NEW WORK ROOF PLAN C - FIRE PROTECTION
1/8" = 1'-0"

0 8 16 24

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

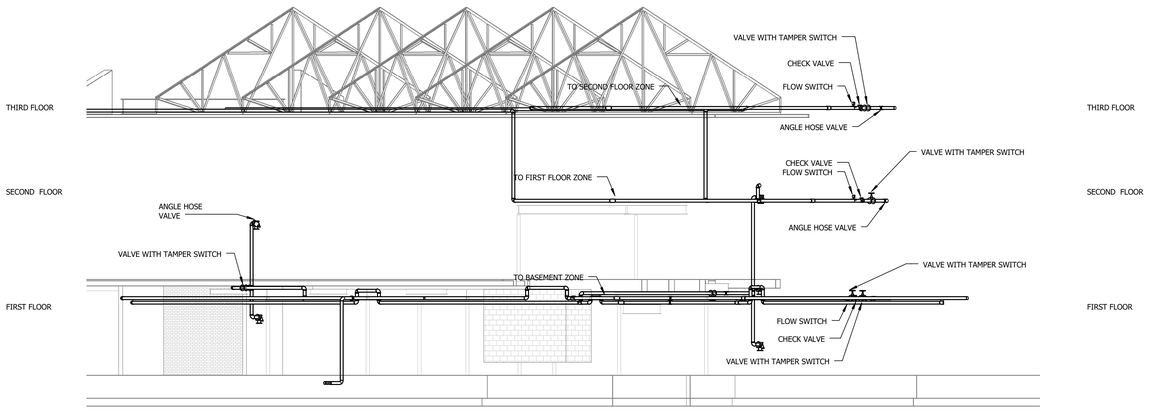
DATE: 03/31/16

SCALE: AS NOTED

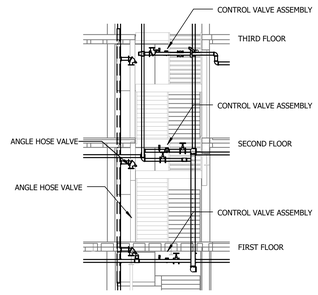
DRAWING NAME
NEW WORK ROOF PLAN C - FIRE PROTECTION

FP 121

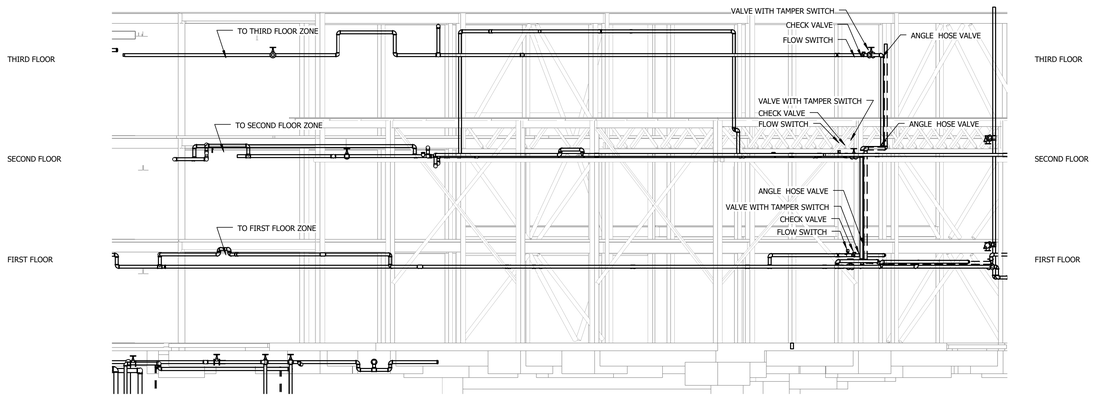
7/26/2016 11:34:25 AM



1 FP 200 FIRE PROTECTION RISER AREA A



2 FP 200 FIRE PROTECTION RISER AREA B STAIR B2-0



3 FP 200 FIRE PROTECTION RISER AREA C

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No.	DATE	DESCRIPTION

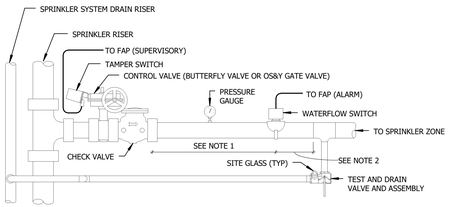
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
FIRE PROTECTION RISER DIAGRAM

FP 200

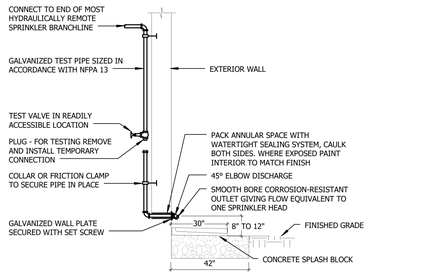
7/26/2016 11:34:42 AM



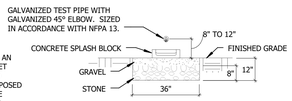
NOTES:

1. 24 INCHES MINIMUM IN ACCORDANCE WITH WATERFLOW DETECTION DEVICE MANUFACTURER.
2. 6 TO 24 INCHES MINIMUM DEPENDING UPON WATERFLOW DETECTION DEVICE MANUFACTURER.
3. REFER TO DRAWINGS FOR DRAIN RISER QUANTITIES AND TERMINATIONS.

1 FP 300 SPRINKLER ZONE CONTROL STATION DETAIL
NO SCALE



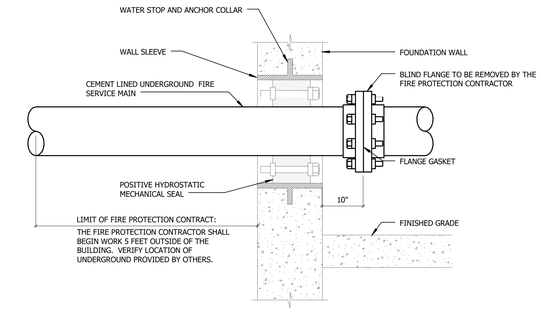
SECTION



NOTE:
THE TEST VALVE SHOULD BE LOCATED AT AN ACCESSIBLE POINT NOT MORE THAN 5 FEET ABOVE THE FLOOR AND NOT EXPOSED TO FREEZING. NOT LESS THAN 4 FEET OF EXPOSED TEST PIPE IN WARM ROOM BEYOND VALVE WHERE PIPE EXTENDS THROUGH WALL TO OUTSIDE IN ACCORDANCE WITH NFPA 13.

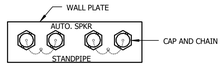
ELEVATION

2 FP 300 WET PIPE SYSTEM INSPECTOR'S TEST CONNECTION DETAIL
NO SCALE

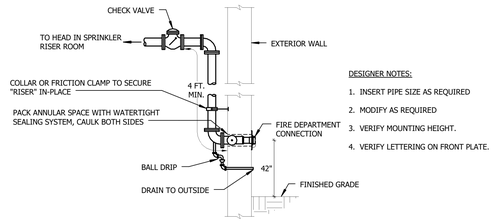


OUTSIDE UNDERGROUND FIRE WATER SERVICE

3 FP 300 WALL PENETRATION (FP BEGINS 5' OUTSIDE) DETAIL
NO SCALE



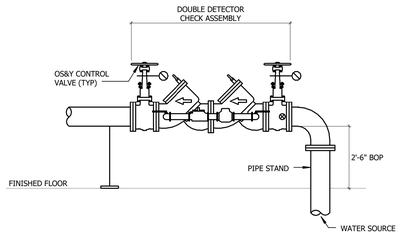
FLUSH MOUNTED INLETS



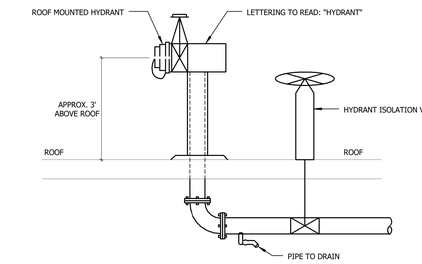
DESIGNER NOTES:

1. INSERT PIPE SIZE AS REQUIRED
2. MODIFY AS REQUIRED
3. VERIFY MOUNTING HEIGHT.
4. VERIFY LETTERING ON FRONT PLATE.

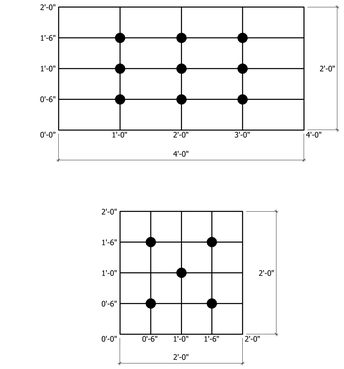
4 FP 300 FIRE DEPARTMENT CONNECTION FLUSH MOUNT DETAIL
NO SCALE



5 FP 300 BACKFLOW PREVENTOR ASSEMBLY DETAIL
NO SCALE



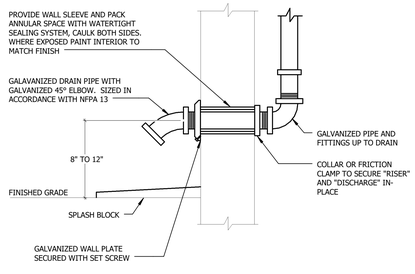
6 FP 300 FREESTANDING ROOF HYDRANT DETAIL
NO SCALE



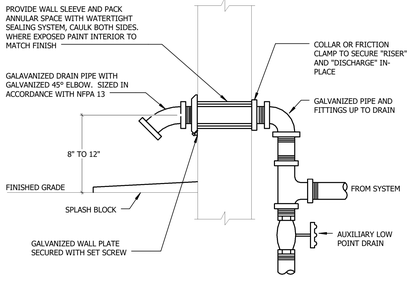
NOTES:

1. SPRINKLER HEADS SHALL BE LOCATED IN THE CENTER OF ALL CEILING TILES WHERE POSSIBLE.
2. WHEN REQUIRED DUE TO CONFLICTS OR ODD SIZED ROOMS, SPRINKLERS SHALL BE PERMITTED TO BE INSTALLED IN THE QUARTER POINTS AS SHOWN IN THIS DETAIL.

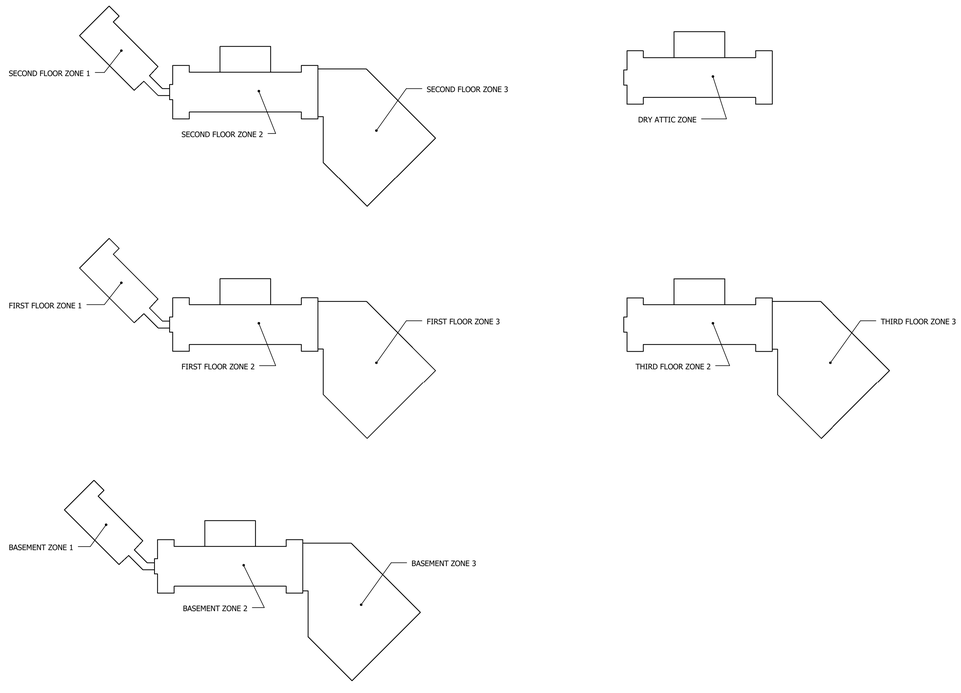
7 FP 300 CENTER OF CEILING TILE - SPRINKLER HEAD LOCATION DETAIL
NO SCALE



8 FP 300 DRAIN DISCHARGE DETAIL
NO SCALE



9 FP 300 DRAIN DISCHARGE WITH AUXILIARY LOW POINT DRAIN DETAIL
NO SCALE



10 FP 300 FIRE PROTECTION ZONING DETAIL
NO SCALE

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ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056
1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DETAILS - FIRE PROTECTION

FP 300

7/26/2016 11:34:51 AM

ABBREVIATIONS

A	
A	AMPERES
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
ATC	AUTOMATIC TEMPERATURE CONTROL
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
B	
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
C	
CPT	CONTROL POWER TRANSFORMER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CUV	CABINET UNIT VENTILATOR
D	
DIA	DIAMETER
DPDT	DOUBLE POLE, DOUBLE THROW
E	
EC	ELECTRICAL CONTRACTOR
EF	ELECTRIC HAND DRYER
EHD	EXHAUST FAN
EMT	ELECTRICAL METALLIC TUBING
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
F	
F	FAN
FCU	FAN COIL UNIT
FLA	FULL LOAD AMPERES
FR	FINNED RADIATION
G	
GFAR	GROUND FAULT ALARM RELAY
GFI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTION
H	
H-O-A	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HT	HEIGHT
HUH	HORIZONTAL UNIT HEATER
I	
IMC	INTERMEDIATE METALLIC CONDUIT
K	
KCMIL	KILO CIRCULAR MILS
KVA	KILOVOLT-AMPERES
KW	KILOWATTS
L	
LRA	LOCKED ROTOR AMPERES
LTG	LIGHTING
M	
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
N	
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NEC	NATIONAL ELECTRICAL CODE
NO.	NUMBER
O	
OC	ON CENTER
P	
P	PUMP
PC	PLUMBING CONTRACTOR
PDU	POWER DISTRUBUTION UNIT
PQM	POWER QUALITY METER
PSI	POUNDS PER SQUARE INCHE
PVC	POLYVINYL CHLORIDE
Q	
Q	QUANTITY
R	
RAF	RETURN AIR FAN
RCP	RADIANT CEILING PANEL
RGS	RIGID GALVANIZED STEEL
RTU	ROOF TOP UNIT
S	
SCU	SELF-CONTAINED UNIT
SPDT	SINGLE POLE, DOUBLE THROW
SPST	SINGLE POLE, SINGLE THROW
SS	SPLIT SYSTEM
STP	SHEILDED TWISTED PAIR
STS	STATIC TRANSFER SWITCH
T	
TYP	TYPICAL
V	
V	VOLT, VOLTS
VA	VOLT AMPERES
VAV	VARIABLE AIR VOLUME
W	
WP	WEATHERPROOF
X	
XFMR	TRANSFORMER
XP	EXPLOSION PROOF

LIGHTING FIXTURES LEGEND:

**ALL EXISTING ITEMS TO BE SHOWN HALFTONE*

INTERIOR LIGHTING

MOUNTING	
RECESSED/SURFACE	RECESSED LIGHT FIXTURE
PENDANT	PENDANT LIGHT FIXTURE
WALL	WALL LIGHT FIXTURE
WALL	WALL SCONCE
AS NOTED	DOWNLIGHT
AS NOTED	WALLWASH FIXTURE
AS NOTED	DOUBLE WALLWASH FIXTURE
AS NOTED	ADJUSTABLE DOWNLIGHT ACCENT
AS NOTED	TRACK LIGHTING
12" BELOW CEILING MAX. 8'-0" AFF	LIFE SAFETY REMOTE BATTERY UNIT
12" BELOW CEILING MAX. 8'-0" AFF	LIFE SAFETY BATTERY UNIT
6" ABOVE DOOR JAMB	EXIT SIGN; DIRECTION ARROWS AS INDICATED
CEILING	EXIT SIGN; DIRECTION ARROWS AS INDICATED
AS NOTED	LIGHT FIXTURE CONNECTED TO LIFE SAFETY CIRCUIT, TYPICAL

NOTE:
FIXTURES MARKED AS LIFE SAFETY SHALL HAVE THE FOLLOWING OPERATIONS:
1. UNDER NON-EMERGENCY CONDITIONS LIFE SAFETY LIGHTING SHALL BE CONTROLLED WITH THE REST OF THE NORMAL FITURES AS SHOWN.
2. UNDER EMERGENCY CONDITIONS THE LIFE SAFETY LIGHTING SHALL COME ON 100%.

EXTERIOR LIGHTING

	1 OR 2 HEAD POLE LIGHT
	3 OR 4 HEAD POLE LIGHT
	SPOT LIGHT FIXTURE
	FLOOD LIGHT FIXTURE
	BOLLARD MOUNTED LIGHT FIXTURE

SWITCHES LEGEND:

**ALL EXISTING ITEMS TO BE SHOWN HALFTONE*

MOUNTING	
46" AFF	SINGLE POLE TOGGLE SWITCH
46" AFF	THREE WAY TOGGLE SWITCH
46" AFF	FOUR WAY TOGGLE SWITCH
46" AFF	WALLBOX DIMMER
46" AFF	MULTI-WAY WALLBOX DIMMER
46" AFF	TOGGLE SWITCH WITH PILOT LIGHT
46" AFF	TOGGLE SWITCH MOMENTARY CONTACT
46" AFF	TOGGLE SWITCH MOMENTARY CONTACT; RAISE/LOWER
46" AFF	SINGLE POLE TOGGLE SWITCH; KEY OPERATED
46" AFF	THREE WAY TOGGLE SWITCH; KEY OPERATED
46" AFF	FOUR WAY TOGGLE SWITCH; KEY OPERATED
46" AFF	DOUBLE SWITCHING; REFER TO NOTES ON PLAN
46" AFF	ARCHITECTURAL LIGHTING KEYPAD
46" AFF	SINGLE POLE TOGGLE SWITCH; OCCUPANT SENSOR

NOTE: 'T' INDICATES SWITCH(ES) WITH INTEGRAL TIMER(S).

RECEPTACLES LEGEND:

**ALL EXISTING ITEMS TO BE SHOWN HALFTONE*

MOUNTING	
18" AFF	SINGLE RECEPTACLE
18" AFF	DUPLEX RECEPTACLE
(+42") AS NOTED [CR] 6" ABOVE COUNTER	DUPLEX RECEPTACLE; (ELEVATION) [TYPE] [CR-COMPUTER, CS-CONTROLLED/SWITCHED, E-EMERGENCY]
C	DUPLEX RECEPTACLE - ABOVE COUNTERTOP
18" AFF	DUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER
WP 24" AFF	EXTERIOR DUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER AND WEATHERPROOF COVER
18" AFF	DUPLEX RECEPTACLE WITH TRANSIENT VOLTAGE SURGE SUPPRESSION (TVSS)
18" AFF	DUPLEX RECEPTACLE WITH ISOLATED GROUND
18" AFF	QUADRUPLEX RECEPTACLE
18" AFF	QUADRUPLEX RECEPTACLE WITH GROUND FAULT INTERRUPTER
18" AFF	QUADRUPLEX RECEPTACLE WITH TRANSIENT VOLTAGE SURGE SUPPRESSION (TVSS)
18" AFF	QUADRUPLEX RECEPTACLE WITH ISOLATED GROUND
18" AFF	SPECIAL PURPOSE RECEPTACLE SINGLE PHASE
18" AFF	SPECIAL PURPOSE RECEPTACLE THREE PHASE
AS NOTED	SURFACE RACEWAY; RECEPTACLES AS INDICATED
CEILING	DUPLEX RECEPTACLE
FLOOR	DUPLEX RECEPTACLE
FLOOR	QUADRUPLEX RECEPTACLE
FLOOR	SPECIAL PURPOSE RECEPTACLE SINGLE PHASE
FLOOR	SPECIAL PURPOSE RECEPTACLE THREE PHASE
FLOOR	FURNITURE FEED COMBINATION POWER/TELECOM; GANG BOX SIZE AS INDICATED (TELECOM/AV CABLING PER PLANS)
6G FLOOR	COMBINATION QUADRUPLEX RECEPTACLE/TELECOM; GANG BOX SIZE AS INDICATED (TELECOM/AV CABLING PER PLANS)
3" AFF	DUPLEX RECEPTACLE WITH CAST OUTLET BOX ON STANDPIPE
3" AFF	QUADRUPLEX RECEPTACLE WITH CAST OUTLET BOX ON STANDPIPE
3" AFF	SPECIAL PURPOSE RECEPTACLE SINGLE PHASE WITH CAST OUTLET BOX ON STANDPIPE
3" AFF	SPECIAL PURPOSE RECEPTACLE THREE PHASE WITH CAST OUTLET BOX ON STANDPIPE
FLOOR	6" FURNITURE FEED POKE-THRU COMBINATION POWER/TELECOM; (TELECOM/AV CABLING PER PLANS)
P 8" FLOOR	COMBINATION POWER/TELECOM/AV; SIZE AS INDICATED (TELECOM/AV CABLING PER PLANS)
#	POWER POLE; # OF DATA DROPS, IF APPLICABLE

EQUIPMENT LEGEND:

**ALL EXISTING ITEMS TO BE SHOWN HALFTONE*

MOUNTING	
18" AFF	JUNCTION BOX; FLUSH
3" AFF	JUNCTION BOX WITH CAST OUTLET BOX ON STAND PIPE
18" AFF	BLANK OUTLET
-	JUNCTION BOX
-	BLANK OUTLET; FLUSH
FLOOR	JUNCTION BOX; FLUSH
FLOOR	BLANK OUTLET
CEILING	DROP CORD
CEILING	CORD REEL
5'-0" AFF	ENCLOSED CIRCUIT BREAKER
-	CONTACTOR
-	DRY TYPE TRANSFORMER; KVA RATING AS INDICATED
5'-0" AFF	SAFETY SWITCH; NON-FUSED (NEMA TYPE 1, UNLESS NOTED OTHERWISE)
5'-0" AFF	SAFETY SWITCH; FUSED (NEMA TYPE 1, UNLESS NOTED OTHERWISE)
5'-0" AFF	COMBINATION STARTER (NEMA TYPE 1, UNLESS NOTED OTHERWISE)
5'-0" AFF	MOTOR STARTER (NEMA TYPE 1, UNLESS NOTED OTHERWISE)
-	MOTOR
-	RELAY
46" AFF	PUSHBUTTON
EPO 46" AFF	PUSHBUTTON; EMERGENCY STOP
K 46" AFF	PUSHBUTTON WITH KEY RESET
46" AFF	PUSHBUTTON; START/STOP
DT CEILING	OCCUPANT SENSOR; 360 DEGREE DISPERSION 'IR'=INFRARED, 'DT'=DUAL TECHNOLOGY, 'US'-ULTRASONIC
CEILING	DAYLIGHTING SENSOR
-	BUILDING MOUNTED PHOTOCELL. HEIGHT SHALL BE IN LINE WITH BUILDING MOUNTED LIGHT FIXTURES.

DISTRIBUTION LEGEND:

**ALL EXISTING ITEMS TO BE SHOWN HALFTONE*

MOUNTING	
TOP BREAKER 6'-0" AFF	PANELBOARD; RECESSED
TOP BREAKER 6'-0" AFF	PANELBOARD; SURFACE MOUNTED
AS NOTED	PULL BOX OR WIREWAY
	BRANCH CIRCUITING; (2)#12 PER 1 POLE CIRCUIT WITH SEPARATE #12 GROUND WIRE MINIMUM
	HOMERUN TO PANELBOARD; PANEL AND CIRCUIT NUMBER AS INDICATED
	EQUIPMENT ON SAME CIRCUIT BUT SEPARATELY CONTROLLED
	CIRCUIT CONTINUATION
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
— E —	EMERGENCY ONLY CIRCUIT
— NE —	NORMAL/EMERGENCY CIRCUIT
	NORMAL/EMERGENCY CIRCUIT - RISER DIAGRAM

TYPICAL ANNOTATION:

- AREA OF REVISION
- 1 — REVISION SEQUENCE NUMBER
- X — KEYED NOTE
- X — DEMOLITION KEYED NOTE
- POINT OF CONNECTION OF EXISTING SYSTEM
- POINT OF DISCONNECTION OF EXISTING SYSTEM
- 1 / A7.1 — DETAIL NUMBER / DRAWING NUMBER
- E / 1 — EQUIPMENT ABBREVIATION / EQUIPMENT NUMBER
- E / 1 — EQUIPMENT ABBREVIATION / EQUIPMENT NUMBER
- XX — UNIQUE IDENTIFIER
- 1 / A7.1 — DETAIL NUMBER / DRAWING NUMBER
- 1 / A7.1 — DETAIL NUMBER / DRAWING NUMBER
- 1 / A101 VIEW REFERENCE

SYMBOL GENERAL NOTES:

1. WHERE DEVICE HEIGHT OF 46" OCCURS AT POINT OF CHANGE OF FINISH, THE DEVICE SHALL BE LOWERED TO OCCUR IN ONE FINISH.
2. WHERE DEVICES OCCUR IN BRICK, TILE, OR BLOCK WALLS, THEY SHALL BE MOUNTED AT A VERTICAL MASONRY JOINT AND IN EITHER TOP OR BOTTOM HORIZONTAL JOINT, MAXIMUM MOUNTING HEIGHT OF 46" AFF.
3. UNLESS OTHERWISE NOTED, ALL MOUNTING HEIGHT DIMENSIONS LISTED ARE TO THE CENTER LINE OF THE WALL BOX OR DEVICE.
4. EXISTING EQUIPMENT SHOWN DASHED.
5. SOME LEGEND SYMBOLS MAY NOT BE USED. SEE FLOOR PLANS FOR APPLICABLE DEVICES.

GENERAL NOTES:

1. NON-PRIME CONTRACTS (TELECOM CONTRACT UNDER ELECTRICAL)

IN ADDITION TO SURFACE RACEWAY AND/OR FLOOR MOUNTED OUTLET BOXES AND POWER POLES INDICATED ON ELECTRICAL DRAWINGS, THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL CABLE TRAY AND FLUSH MOUNTED OUTLET BOXES/BACK BOXES AND ASSOCIATED CONDUIT FOR ALL TELECOMMUNICATIONS OUTLETS (INCLUDING PA/MASTER CLOCK/SOUND SYSTEMS, CATV/VIDEO SYSTEMS, AND SECURITY SYSTEMS) ON THIS PROJECT. THE CONTRACTOR SHALL REFERENCE THE TELECOMMUNICATIONS AND SECURITY DRAWINGS ('T' AND 'S' DRAWINGS) FOR CABLE TRAY AND OUTLET/DEVICE LOCATIONS, AND ALL INSTALLATION DETAILS SHOWN ON THE 'T' AND 'S' DRAWINGS. THE CONTRACTOR SHALL ALSO REFERENCE THE TELECOMMUNICATIONS DRAWINGS FOR EMBEDDED CONDUIT REQUIRED FOR IN-FLOOR BOXES THAT ARE SHOWN ON THE 'T' DRAWINGS, AND THE CONTRACTOR SHALL PROVIDE THE EMBEDDED CONDUITS AS SHOWN ON THE 'T' DRAWINGS.

THE ELECTRICAL CONTRACTOR SHALL REFERENCE THE TELECOMMUNICATIONS DRAWINGS FOR ANY UNDERGROUND SITE WORK AND SHALL PROVIDE ALL UNDERGROUND CONDUITS, DUCTBANKS, HANDHOLES, MANHOLES, AND UNDERGROUND PENETRATIONS AS SHOWN ON THE 'T' DRAWINGS. CONTRACTOR SHALL PROVIDE ALL EXCAVATION, BACKFILLING AND SURFACE RESTORATION REQUIRED FOR THE SITE WORK.

THE ELECTRICAL CONTRACTOR SHALL REFERENCE THE TELECOMMUNICATIONS AND SECURITY SPECIFICATIONS FOR SPECIFIC REQUIREMENTS FOR CABLE TRAYS, GROUNDING, PA/MASTER CLOCK/SOUND SYSTEMS, CATV/VIDEO SYSTEMS, AND SECURITY SYSTEMS.

REFERENCE NOTES:

ER1. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE LOCATIONS OF THE FOLLOWING:
- A. ALL CEILING MOUNTED LIGHTING FIXTURES AND DEVICES
- B. ALL FIRE RATED PARTITIONS AND BUILDING EXPANSION JOINTS
- C. MOUNTING HEIGHTS OF EQUIPMENT AND DEVICES

ER2. REFER TO THE HVAC DRAWINGS FOR THE LOCATIONS OF THE FOLLOWING:
- A. MECHANICAL EQUIPMENT, CONTROL PANELS AND MOTORS
- B. AUTOMATIC TEMPERATURE CONTROL SYSTEM PANELS AND DEVICES
- C. DUCT MOUNTED SMOKE DETECTORS
- D. MOTORIZED DAMPERS AND CONTROL VALVES
- E. ELECTRIC HEAT TRACING OF MECHANICAL PIPING

ER3. REFER TO THE PLUMBING DRAWINGS FOR THE LOCATIONS OF THE FOLLOWING:
- A. ELECTRIC WATER HEATERS
- B. ELECTRIC FLUSH VALVES
- C. ELECTRIC HEAT TRACING OF PLUMBING AND DRAINAGE PIPING

ER4. REFER TO THE FIRE PROTECTION/SPRINKLER DRAWINGS FOR THE LOCATIONS OF THE FOLLOWING:
- A. WATER FLOW AND TAMPER SWITCHES
- B. PRE-ACTION AND/OR DELUGE SYSTEM CONTROL PANELS
- C. ELECTRIC HEAT TRACING OF SPRINKLER PIPING

ER5. REFER TO THE APPROPRIATE VENDORS APPROVED DIMENSIONED LAYOUT DRAWINGS FOR THE LOCATIONS OF THE FOLLOWING:
- A. CONDUIT CONNECTIONS TO FURNITURE AND PREFABRICATED MILLWORK
- B. ELEVATOR AND ESCALATOR RELATED POWER, LIGHTING AND EMPTY CONDUIT PROVISIONS
- C. POWER AND CONTROL WIRING FOR ELECTRICALLY OPERATED DOORS.

SHEET LIST

Sheet Number	Sheet Name
E 001	SYMBOLS, LEGENDS, AND ABBREVIATIONS - ELECTRICAL
E 010	SITE PLAN - ELECTRICAL
E 011	SITE PLAN - LIGHTING
E 021	DEMO BASEMENT, FIRST AND SECOND FLOOR PLAN A - LIGHTING
E 022	DEMO BASEMENT FLOOR PLAN B - LIGHTING
E 023	DEMO FIRST & SECOND FLOOR PLAN B - LIGHTING
E 024	DEMO THIRD FLOOR PLAN B - LIGHTING
E 025	DEMO BASEMENT, FIRST, AND SECOND FLOOR PLAN D - LIGHTING
E 026	DEMO BASEMENT, FIRST AND SECOND FLOOR PLAN A - POWER
E 027	DEMO BASEMENT FLOOR PLAN B - POWER
E 028	DEMO FIRST & SECOND FLOOR PLAN B - POWER
E 029	DEMO THIRD FLOOR PLAN B - POWER
E 030	DEMO BASEMENT, FIRST, AND SECOND FLOOR PLAN D - POWER
E 111	NEW WORK BASEMENT & FIRST FLOOR PLAN A - LIGHTING
E 112	NEW WORK SECOND & ROOF PLAN A - LIGHTING
E 113	NEW WORK BASEMENT PLAN B - LIGHTING
E 114	NEW WORK FIRST FLOOR PLAN B - LIGHTING
E 115	NEW WORK FIRST FLOOR PLAN C - LIGHTING
E 116	NEW WORK SECOND FLOOR PLAN B - LIGHTING
E 117	NEW WORK SECOND FLOOR PLAN C - LIGHTING
E 118	NEW WORK THIRD FLOOR PLAN B - LIGHTING
E 119	NEW WORK THIRD FLOOR PLAN C - LIGHTING
E 120	NEW WORK ROOF PLAN B - LIGHTING
E 211	NEW WORK BASEMENT & FIRST FLOOR PLAN A - POWER
E 212	NEW WORK SECOND & ROOF PLAN A - POWER
E 213	NEW WORK BASEMENT PLAN B - POWER
E 214	NEW WORK FIRST FLOOR PLAN B - POWER
E 215	NEW WORK FIRST FLOOR PLAN C - POWER
E 216	NEW WORK SECOND FLOOR PLAN B - POWER
E 217	NEW WORK SECOND FLOOR PLAN C - POWER
E 218	NEW WORK THIRD FLOOR PLAN B - POWER
E 219	NEW WORK THIRD FLOOR PLAN C - POWER
E 220	NEW WORK ROOF PLAN B - POWER
E 221	NEW WORK ROOF PLAN C - POWER
E 311	NEW WORK BASEMENT & FIRST FLOOR PLAN A - MECHANICAL POWER
E 312	NEW WORK SECOND FLOOR PLAN A - MECHANICAL POWER
E 313	NEW WORK BASEMENT PLAN B - MECHANICAL POWER
E 314	NEW WORK FIRST FLOOR PLAN B - MECHANICAL POWER
E 315	NEW WORK FIRST FLOOR PLAN C - MECHANICAL POWER
E 316	NEW WORK SECOND FLOOR PLAN B - MECHANICAL POWER
E 317	NEW WORK SECOND FLOOR PLAN C - MECHANICAL POWER
E 318	NEW WORK THIRD FLOOR PLAN B - MECHANICAL POWER
E 319	NEW WORK THIRD FLOOR PLAN C - MECHANICAL POWER
E 400	ENLARGED FLOOR PLANS - ELECTRICAL
E 401	ENLARGED FLOOR PLANS - ELECTRICAL
E 402	ENLARGED FLOOR PLANS - ELECTRICAL
E 500	ELECTRICAL ONE-LINE RISER DIAGRAM
E 501	ELECTRICAL DETAILS AND DIAGRAMS
E 502	ELECTRICAL DETAILS
E 503	ELECTRICAL DETAILS
E 600	ELECTRICAL PANEL SCHEDULES
E 601	ELECTRICAL PANEL SCHEDULES
E 602	ELECTRICAL PANEL SCHEDULES
E 603	ELECTRICAL PANEL SCHEDULES
E 604	ELECTRICAL PANEL SCHEDULES
E 605	ELECTRICAL PANEL SCHEDULES
E 606	ELECTRICAL PANEL SCHEDULES
E 607	ELECTRICAL PANEL SCHEDULES
E 608	ELECTRICAL PANEL SCHEDULES
E 610	LIGHTING CONTROL SCHEDULE
E 700	LIGHTING FIXTURE SCHEDULE
E 701	LIGHTING FIXTURE SCHEDULE
E 702	LIGHTING COMCHECK COMPLIANCE CERTIFICATES
E 703	LIGHTING COMCHECK COMPLIANCE CERTIFICATES

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No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
SYMBOLS, LEGENDS, AND ABBREVIATIONS - ELECTRICAL

E 001

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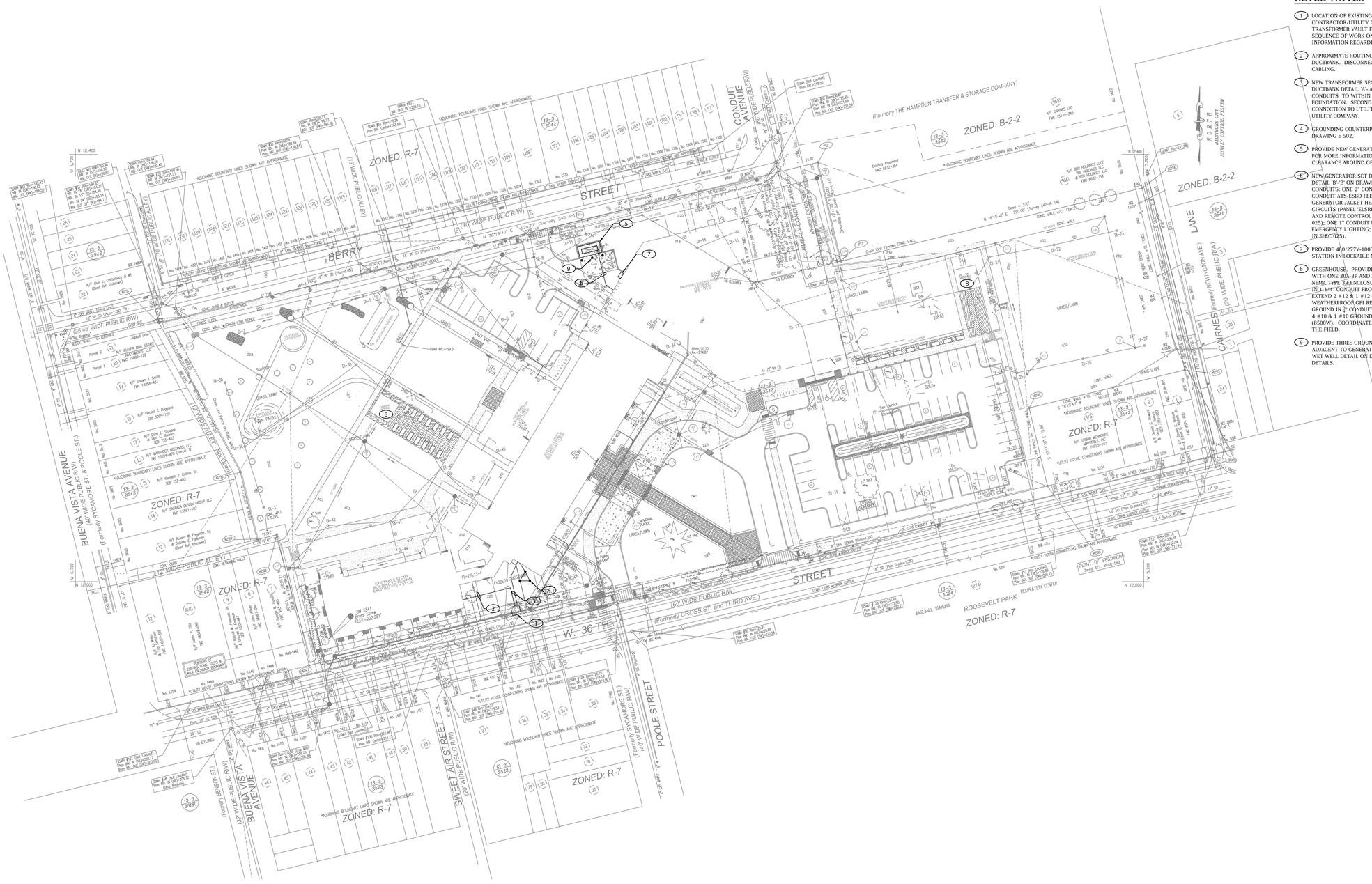

1 / E 010 SITE PLAN - ELECTRICAL
SCALE: 1" = 40'-0"

0 40 60 80 120

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

GENERAL NOTES

A. EXISTING ELECTRICAL SERVICE SHALL BE MAINTAINED TO BE USED AS TEMPORARY CONSTRUCTION POWER FOR CONSTRUCTION PROJECT. CONTRACTOR SHALL CONTACT BG&E AT COMMENCEMENT OF PROJECT TO TRANSFER SERVICE BILLING TO RESPONSIBLE PROJECT ENTITY (CAM CONSTRUCTION). TRANSFER OF SERVICE SHALL OCCUR JULY 1, 2016 (VERIFY FINAL DATE DURING PROJECT KICK-OFF).

B. ALL SERVICE RELATED EQUIPMENT AND INSTALLATIONS SHALL BE PER BG&E SPECIFICATIONS. EXPECTED FINAL SERVICE CUTOVER DATE OF MARCH 1, 2017. THE WORK REQUEST AND SERVICE REQUEST NUMBERS ARE AS FOLLOWS: WO#13795605 AND SR#04520463. CONTRACTOR SHALL CONTACT BG&E AT COMMENCEMENT OF PROJECT TO COORDINATE INSTALLATION REQUIREMENTS AND DATES. REFER TO SPECIFICATIONS FOR CONTACT INFORMATION.

KEYED NOTES

1. LOCATION OF EXISTING UTILITY COMPANY TRANSFOMER. CONTRACTOR/UTILITY COMPANY SHALL REUSE TRANSFORMER VAULT FOR NEW TRANSFORMER. REFER TO SEQUENCE OF WORK ON THIS DRAWING FOR DETAILED INFORMATION REGARDING EXISTING AND NEW SERVICES.
2. APPROXIMATE ROUTING OF EXISTING SECONDARY SERVICE DUCTBANK. DISCONNECT AND REMOVE CONDUITS AND CABLING.
3. NEW TRANSFORMER SECONDARY DUCTBANK. REFER TO DUCTBANK DETAIL 'A'-'A' ON DRAWING E 502. PROVIDE CONDUITS TO WITHIN 5' OF EXISTING TRANSFORMER FOUNDATION. SECONDARY CONDUCTORS AND FINAL CONNECTION TO UTILITY COMPANY TRANSFORMER BY UTILITY COMPANY.
4. GROUNDING COUNTERPOISE. REFER TO DETAIL ON DRAWING E 502.
5. PROVIDE NEW GENERATOR SET. REFER TO DRAWING E 500 FOR MORE INFORMATION. MAINTAIN MINIMUM 42" CLEARANCE AROUND GENSET.
6. NEW GENERATOR SET DUCTBANK. REFER TO DUCTBANK DETAIL 'B'-'B' ON DRAWING E 502. PROVIDE THE FOLLOWING CONDUITS: ONE 2" CONDUIT FOR ATS-ELSD FEEDER; ONE 2" CONDUIT ATS-ESBD FEEDER; ONE 1" CONDUIT FOR GENERATOR JACKET HEATER AND BATTERY CHARGER CIRCUITS (PANEL 'ELSRP'); ONE 2" CONDUIT FOR CONTROL AND REMOTE CONTROL PANEL CABLING (TERMINATE IN ELEC. 025); ONE 1" CONDUIT FOR GENERATOR ENCLOSURE EMERGENCY LIGHTING; ONE 2" SPARE CONDUITS (TERMINATE IN ELEC 025).
7. PROVIDE 480/277V-1000A PORTABLE GENERATOR DOCKING STATION IN LOCKABLE NEMA TYPE 4X ENCLOSURE.
8. GREENHOUSE. PROVIDE 208/120V-8P-60A LOAD CENTER WITH ONE 30A-3P AND FIVE 20A-1P CIRCUIT BREAKERS IN NEMA TYPE 3R ENCLOSURE. EXTEND 4 #6 & 1 #10 GROUND IN 1-1/4" CONDUIT FROM LOAD CENTER TO PANEL 'BPP'. EXTEND 2 #12 & 1 #12 GROUND IN 3/4" CONDUIT TO TWO WEATHERPROOF GFI RECEPTACLES. EXTEND 2 #12 & 1 #12 GROUND IN 3/4" CONDUIT TO GREENHOUSE LIGHTING. EXTEND 4 #10 & 1 #10 GROUND IN 3/4" CONDUIT TO UNIT HEATER (8500W). COORDINATE FINAL LOCATION OF ALL DEVICES IN THE FIELD.
9. PROVIDE THREE GROUND RODS, SPACE ON 10'-0" CENTER ADJACENT TO GENERATOR SET. REFER TO GROUND ROD WET WELL DETAIL ON DRAWING E502 FOR INSTALLATION DETAILS.

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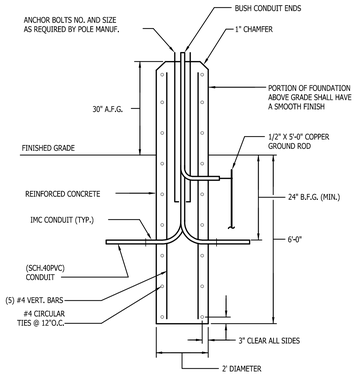
SCALE: AS NOTED

DRAWING NAME
SITE PLAN - ELECTRICAL

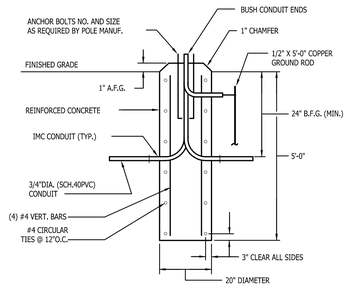
E 010

JOSHUA PELLICIA 7/26/2016 7:52 AM U:\PROJ\JRS ARCHITECTS, INC\MD\15-05\ADL05-ROPK-ROBERT POOLE RENOVATION ADDITION\E_DRAWINGS ENG\A_CAD\A_DRAWINGS\MEP\ELEC\A-15-05ADL05.DWG



TYPICAL RAISED FOUNDATION DETAIL FOR FIXTURE TYPE 'OA-84'

NO SCALE



TYPICAL FLUSH FOUNDATION DETAIL FOR FIXTURE TYPE 'OB-49'

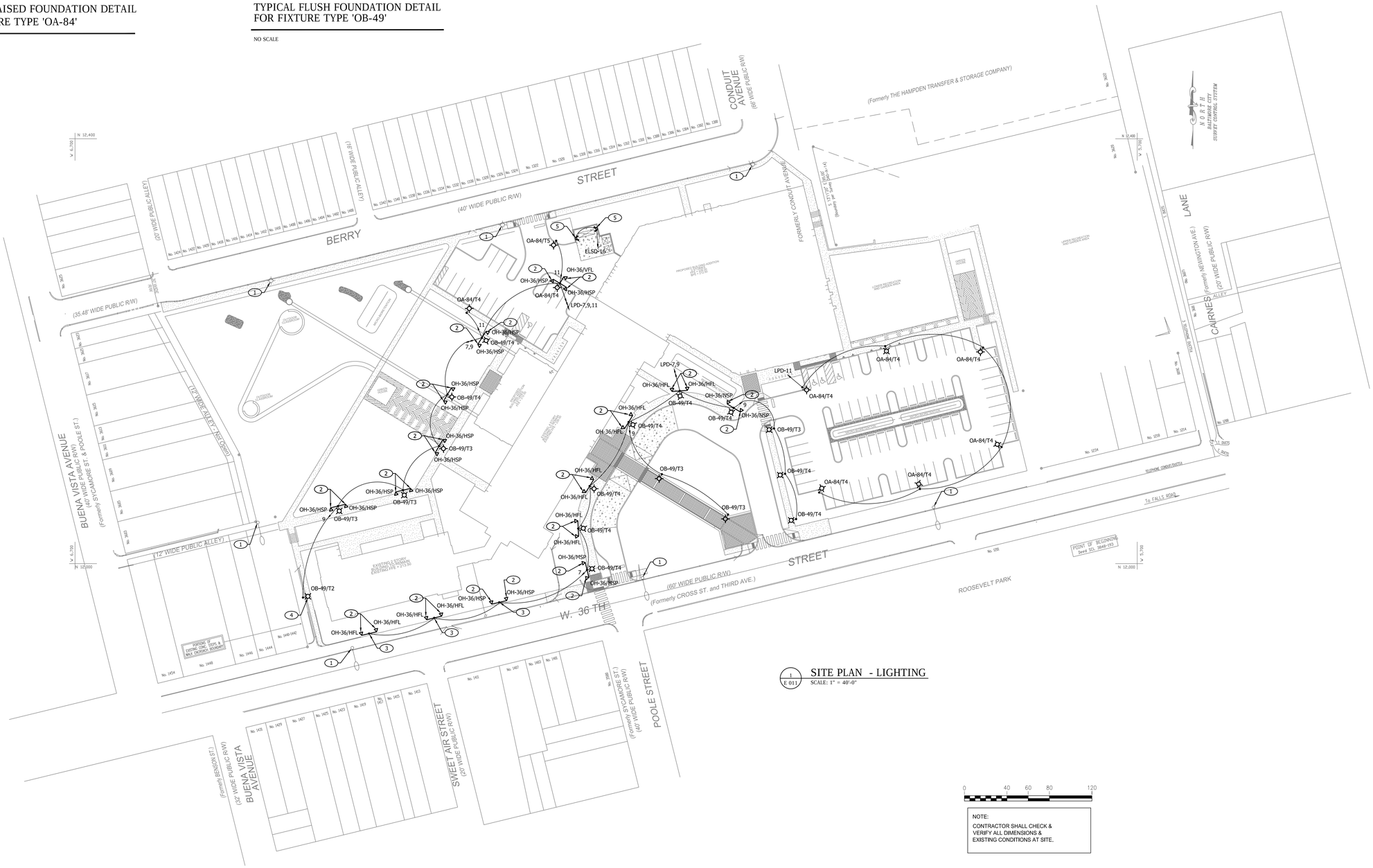
NO SCALE

GENERAL NOTES:

1. UNLESS OTHERWISE NOTED, DISCONNECT AND REMOVE ALL EXISTING SITE LIGHT FIXTURES, POLES, AND FOUNDATIONS WITHIN PROJECT BOUNDARIES, AND ALL ASSOCIATED CONTROLS AND BRANCH CIRCUIT WIRING AND CONDUIT BACK TO SOURCE. REFER TO CIVIL DRAWINGS FOR LOCATIONS OF EXISTING SITE LIGHTING.
2. REFER TO CIVIL PLANS FOR EXACT PLACEMENT OF NEW LIGHT POLE FOUNDATIONS.
3. LIGHT FIXTURES SHOWN ON SITE LIGHTING PLAN HAVE A SLASH MARK AND ADDITIONAL TEXT AT THE END OF THE FIXTURE TAG. THIS TEXT DESIGNATES THE OPTICAL DISTRIBUTION. REFER TO LIGHTING FIXTURE SCHEDULE (SHEET E700) FOR MORE INFORMATION.

KEYED NOTES:

1. EXISTING STREET LIGHT ON POLE; SHALL REMAIN IN PLACE AND OPERATIONAL.
2. FURNISH AND INSTALL FLOODLIGHT FIXTURE TYPE 'OH-36' AND ASSOCIATED ARM BRACKET AT TOP OF LIGHT POLE. ARM BRACKET SHALL BE MOUNTED AT 90° TO ARM BRACKET FOR AREA LIGHT FIXTURE TYPE 'OA-84' OR 'OB-49,' AS SHOWN. AIM FLOODLIGHTS TO ILLUMINATE EXISTING BUILDING FACADE AS UNIFORMLY AS POSSIBLE.
3. AT THIS LOCATION, PROVIDE POLE AND FOUNDATION FOR FIXTURE TYPE 'OB-49,' BUT DO NOT PROVIDE AREA LUMINAIRE OR ARM FOR AREA LUMINAIRE.
4. PROVIDE THIS FIXTURE WITH HOUSE SIDE SHIELD.
5. PROVIDE EMERGENCY LIGHTING UNIT AS HIGH AS POSSIBLE ON WALL OF GENERATOR ENCLOSURE. MOUNT ALL UNITS WITHIN SAME ENCLOSURE AT SAME ELEVATION. REFER TO SPECIFICATION SECTION 265100 FOR INFORMATION ON SPECIFIED EQUIPMENT.


CONDUIT AVENUE
(66' WIDE PUBLIC R/W)
STREET
(40' WIDE PUBLIC R/W)
BERRY
(20' WIDE PUBLIC ALLEY)
(Formerly THE HAMPDEN TRANSFER & STORAGE COMPANY)
FORMERLY CONDUIT AVENUE
LANE
(20' WIDE PUBLIC R/W)
(Formerly NEWINGTON AVE.)
CARNES
(20' WIDE PUBLIC ALLEY)
BUENA VISTA AVENUE
(40' WIDE PUBLIC R/W)
(Formerly SYCAMORE ST. & POOLE ST.)
12' WIDE PUBLIC ALLEY
(35 48' WIDE PUBLIC R/W)
12' WIDE ALLEY (NOT OPEN)
W. 36 TH
STREET
(60' WIDE PUBLIC R/W)
(Formerly CROSS ST. and THIRD AVE.)
ROOSEVELT PARK
POINT OF BEGINNING Seed STA. 3848+93
N 12,400
N 12,000
E 5,700
E 6,700
OA-84/T5
ELSD-16
OH-36/VFL
OH-36/HSP
OA-84/T4
LPD-7,9,11
OB-49/T4
OH-36/HSP
7,9
OH-36/HSP
OB-49/T3
OH-36/HSP
OH-36/HSP
OH-36/HSP
OB-49/T3
OH-36/HSP
OH-36/HSP
OB-49/T2
OH-36/HFL
OH-36/HFL
OH-36/HFL
LPD-7,9
OH-36/HFL
OH-36/HFL
OH-36/NSP
OB-49/T4
OB-49/T4
OH-36/HFL
OH-36/HFL
OB-49/T4
OB-49/T3
OB-49/T3
OH-36/HFL
OB-49/T4
OH-36/HFL
OH-36/MSP
OB-49/T4
OH-36/MSP
LPD-11
OA-84/T4
OA-84/T4
OA-84/T4
OB-49/T4
OA-84/T4
OA-84/T4
OB-49/T4
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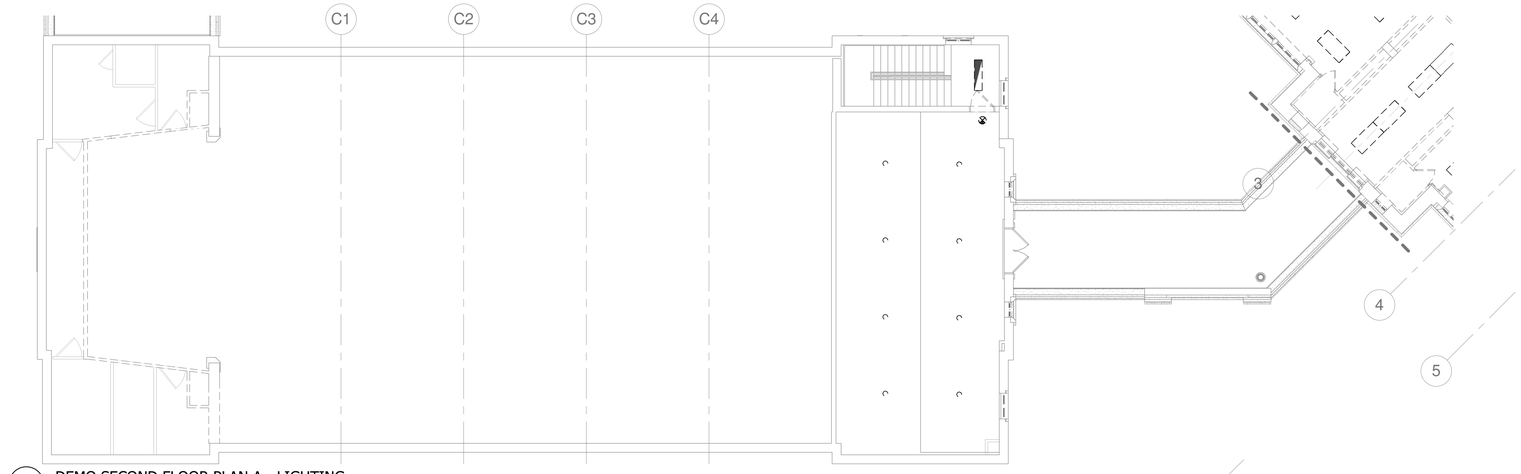
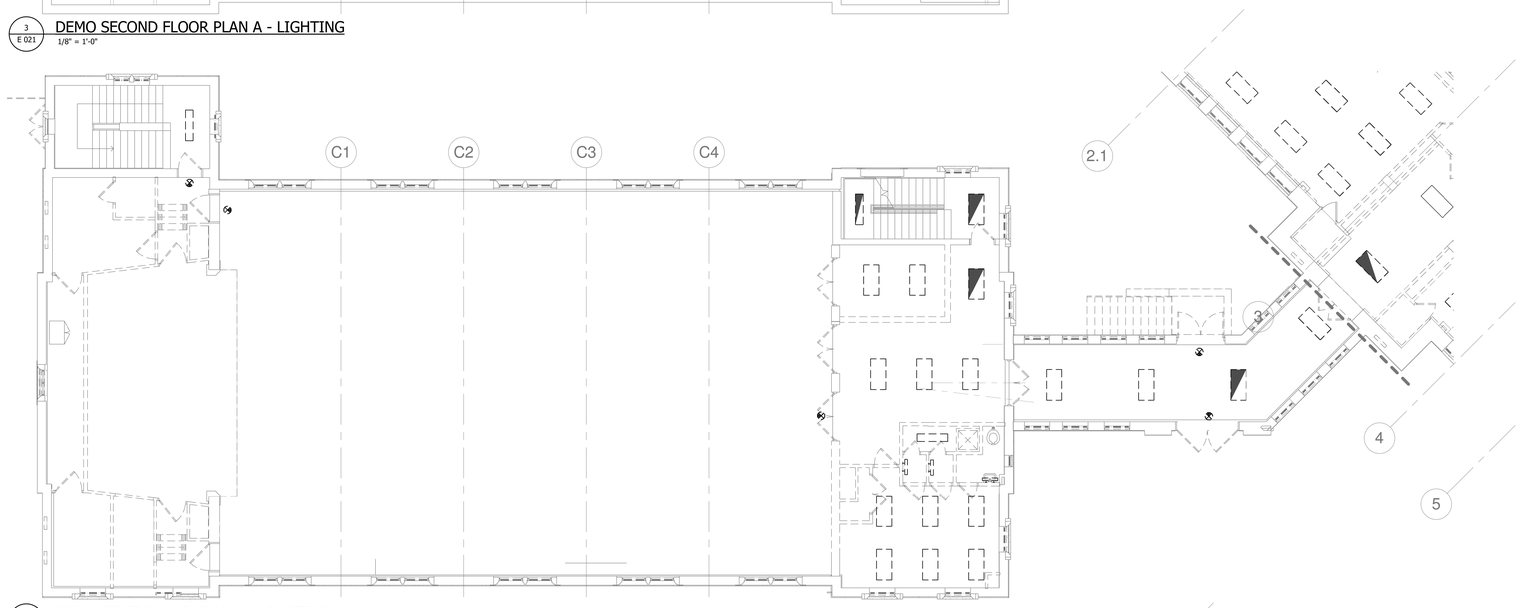
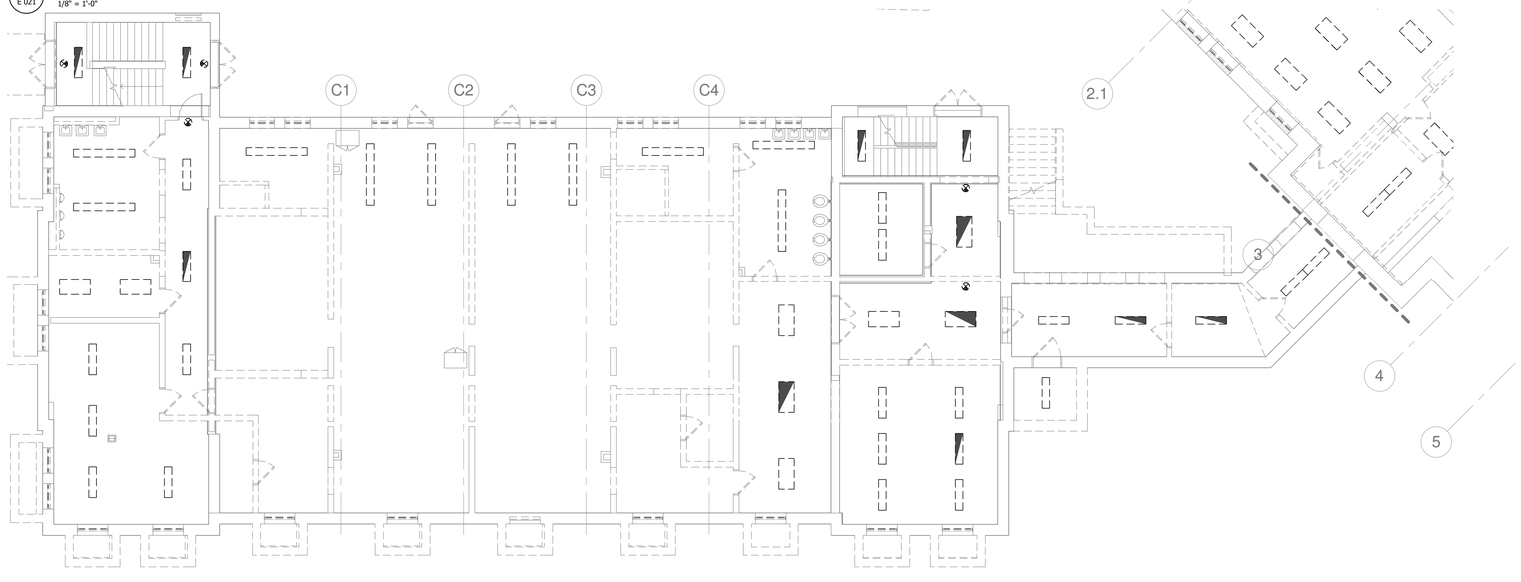


3 / E 021 DEMO SECOND FLOOR PLAN A - LIGHTING
1/8" = 1'-0"



2 / E 021 DEMO FIRST FLOOR PLAN A - LIGHTING
1/8" = 1'-0"



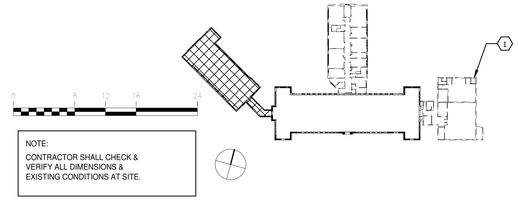
1 / E 021 DEMO BASEMENT FLOOR PLAN A - LIGHTING
1/8" = 1'-0"

DEMOLITION GENERAL NOTES:

1. UNLESS OTHERWISE NOTED, DISCONNECT AND REMOVE ALL EXISTING LIGHT FIXTURES AND ASSOCIATED CONTROLS AND BRANCH CIRCUIT WIRING AND CONDUIT BACK TO SOURCE.
2. LIGHT FIXTURE TYPES, LOCATIONS, AND QUANTITIES SHOWN ON THIS DEMO PLAN ARE APPROXIMATE AND MAY NOT BE INDICATIVE OF ALL EQUIPMENT AS IT CURRENTLY EXISTS. UNLESS OTHERWISE NOTED, DEMOLITION SHALL BE INCLUSIVE OF ALL EQUIPMENT IN INTERIOR SPACES, AS WELL AS ANY LIGHTING EQUIPMENT MOUNTED TO THE EXTERIOR SURFACES OF THE BUILDING.
3. SEE ARCHITECTURAL BUILDING ELEVATIONS FOR QUANTITY AND LOCATION OF EXISTING EXTERIOR BUILDING MOUNTED LIGHT FIXTURES.
4. DISPOSAL NOTES:
   A. ALL BALLASTS CONTAINING PCB'S AND BATTERIES SHALL BE TREATED AS HAZARDOUS WASTE AND DISPOSED OF AS REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY'S UNIVERSAL WASTE RULE. ANY STATE REGULATIONS MORE STRINGENT SHALL TAKE PRECEDENCE.
   B. ALL FLUORESCENT AND HID LAMPS SHALL BE TREATED AS HAZARDOUS WASTE AND RECYCLED AS REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY'S UNIVERSAL WASTE RULE. ANY STATE REGULATIONS MORE STRINGENT SHALL TAKE PRECEDENCE
      1. LAMPS RECOGNIZED AS HAVING REDUCED MERCURY CONTENT AND PASSING THE TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP) SHALL BE EXCLUDED.
5. FURNISH AND INSTALL NEW LIGHTING EQUIPMENT AS INDICATED ON NEW WORK LIGHTING PLANS.

DEMOLITION KEYED NOTES:

1 EXISTING EASTERN BUILDING ADDITION TO BE COMPLETELY DEMOLISHED. DISCONNECT AND REMOVE ALL LIGHT FIXTURES AND ASSOCIATED CONTROLS AND CIRCUITING IN OR ON THIS BUILDING ADDITION.



NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056
1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO BASEMENT, FIRST AND SECOND FLOOR PLAN A - LIGHTING

E 021

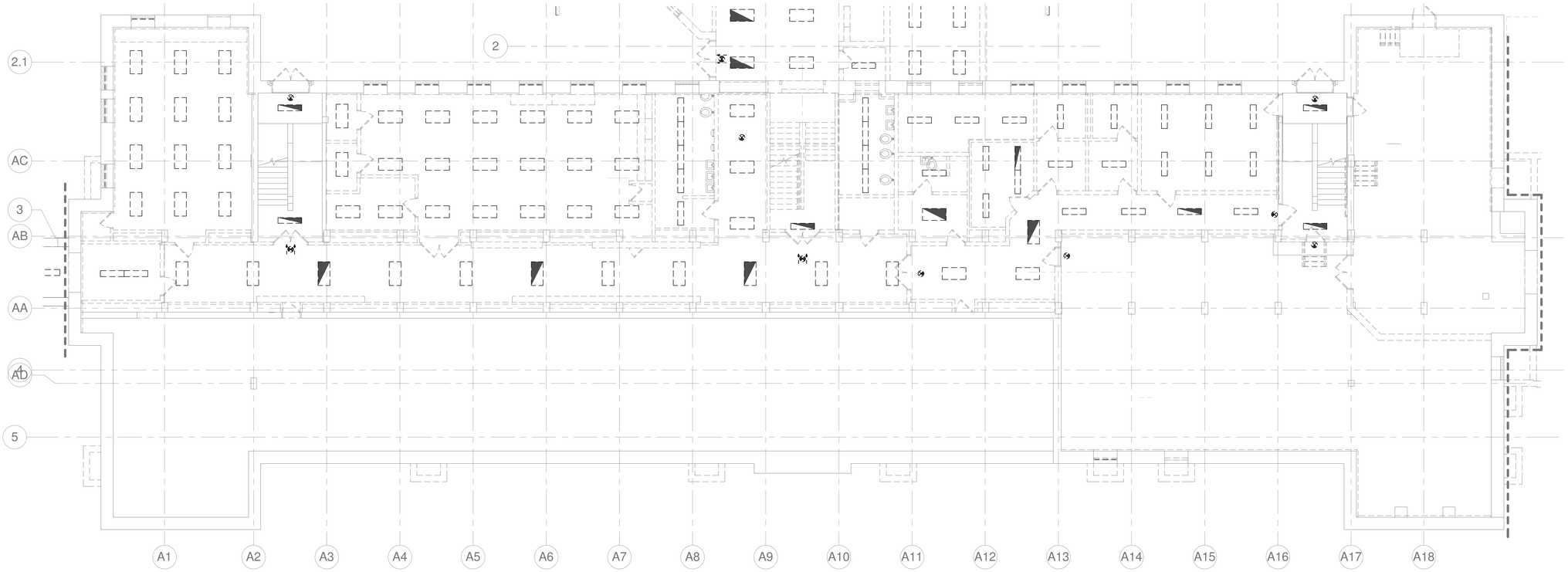
7/26/2016 8:38:13 AM

DEMOLITION GENERAL NOTES:

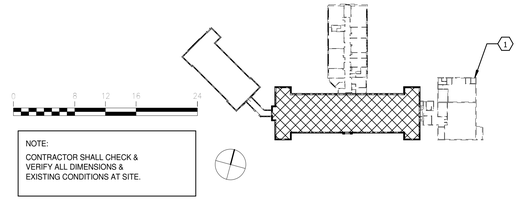
1. UNLESS OTHERWISE NOTED, DISCONNECT AND REMOVE ALL EXISTING LIGHT FIXTURES AND ASSOCIATED CONTROLS AND BRANCH CIRCUIT WIRING AND CONDUIT BACK TO SOURCE.
2. LIGHT FIXTURE TYPES, LOCATIONS, AND QUANTITIES SHOWN ON THIS DEMO PLAN ARE APPROXIMATE AND MAY NOT BE INDICATIVE OF ALL EQUIPMENT AS IT CURRENTLY EXISTS. UNLESS OTHERWISE NOTED, DEMOLITION SHALL BE INCLUSIVE OF ALL EQUIPMENT IN INTERIOR SPACES, AS WELL AS ANY LIGHTING EQUIPMENT MOUNTED TO THE EXTERIOR SURFACES OF THE BUILDING.
3. SEE ARCHITECTURAL BUILDING ELEVATIONS FOR QUANTITY AND LOCATION OF EXISTING EXTERIOR BUILDING MOUNTED LIGHT FIXTURES.
4. DISPOSAL NOTES:
   A. ALL BALLASTS CONTAINING PCB'S AND BATTERIES SHALL BE TREATED AS HAZARDOUS WASTE AND DISPOSED OF AS REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY'S UNIVERSAL WASTE RULE. ANY STATE REGULATIONS MORE STRINGENT SHALL TAKE PRECEDENCE.
   B. ALL FLUORESCENT AND HID LAMPS SHALL BE TREATED AS HAZARDOUS WASTE AND RECYCLED AS REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY'S UNIVERSAL WASTE RULE. ANY STATE REGULATIONS MORE STRINGENT SHALL TAKE PRECEDENCE
      1. LAMPS RECOGNIZED AS HAVING REDUCED MERCURY CONTENT AND PASSING THE TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP) SHALL BE EXCLUDED.
5. FURNISH AND INSTALL NEW LIGHTING EQUIPMENT AS INDICATED ON NEW WORK LIGHTING PLANS.

DEMOLITION KEYED NOTES:

(1) EXISTING EASTERN BUILDING ADDITION TO BE COMPLETELY DEMOLISHED. DISCONNECT AND REMOVE ALL LIGHT FIXTURES AND ASSOCIATED CONTROLS AND CIRCUITING IN OR ON THIS BUILDING ADDITION.



1 / E 022 DEMO BASEMENT FLOOR PLAN B - LIGHTING
1/8" = 1'-0"



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I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 19284
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

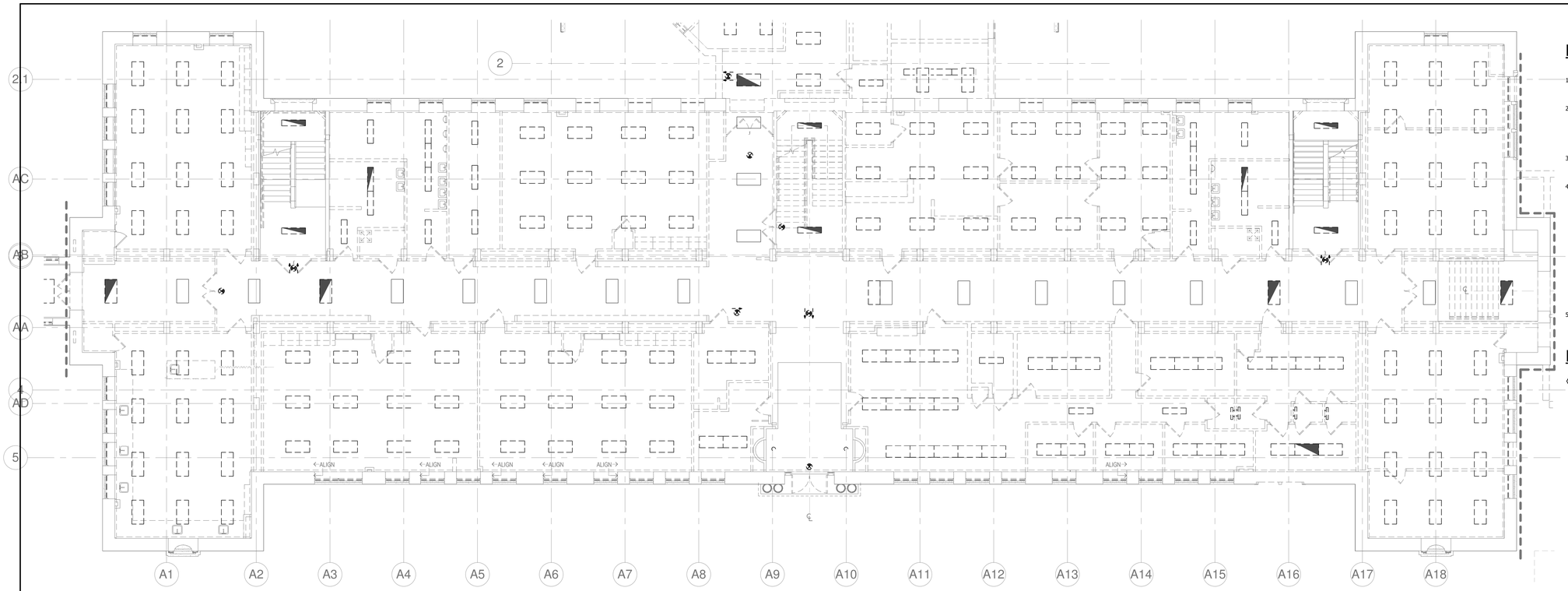
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

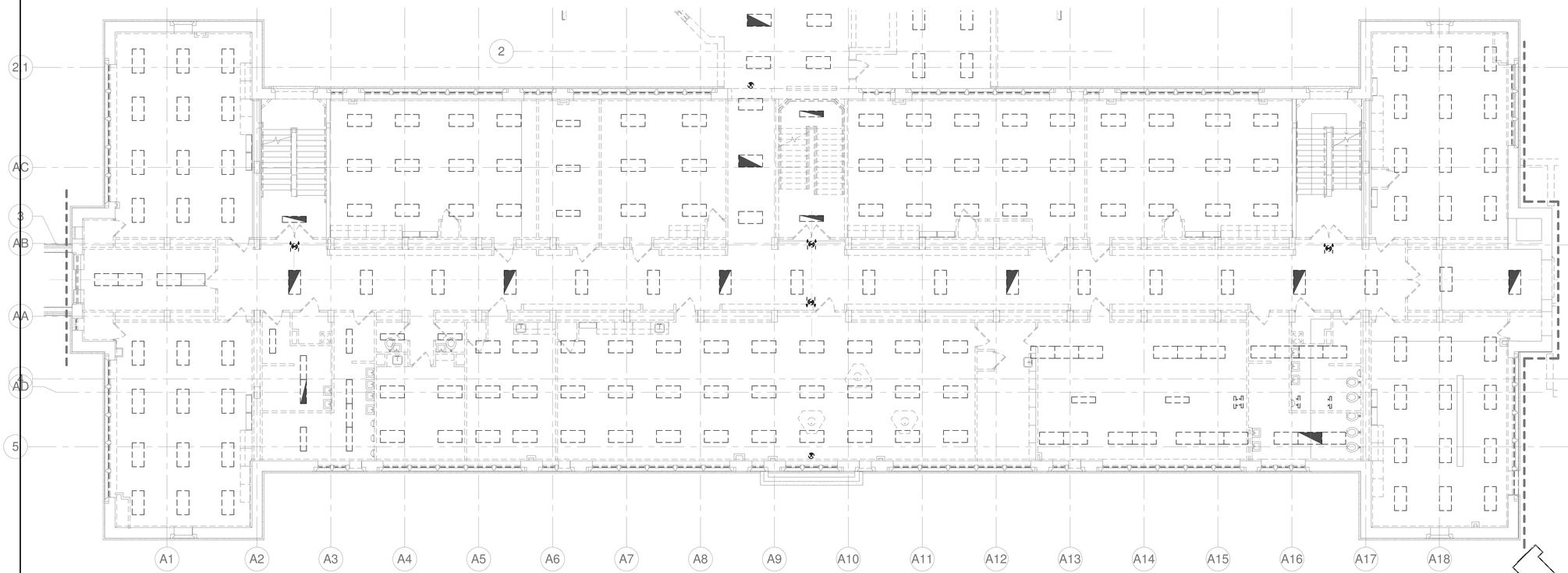
DRAWING NAME
DEMO BASEMENT FLOOR PLAN B - LIGHTING

E 022

7/26/2016 8:38:22 AM



1 E 023 DEMO FIRST FLOOR PLAN B - LIGHTING
1/8" = 1'-0"



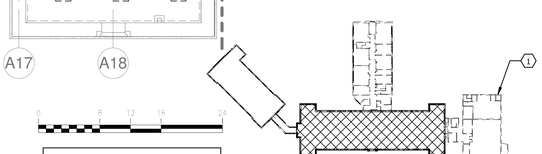
2 E 023 DEMO SECOND FLOOR PLAN B - LIGHTING
1/8" = 1'-0"

DEMOLITION GENERAL NOTES:

1. UNLESS OTHERWISE NOTED, DISCONNECT AND REMOVE ALL EXISTING LIGHT FIXTURES AND ASSOCIATED CONTROLS AND BRANCH CIRCUIT WIRING AND CONDUIT BACK TO SOURCE.
2. LIGHT FIXTURE TYPES, LOCATIONS, AND QUANTITIES SHOWN ON THIS DEMO PLAN ARE APPROXIMATE AND MAY NOT BE INDICATIVE OF ALL EQUIPMENT AS IT CURRENTLY EXISTS. UNLESS OTHERWISE NOTED, DEMOLITION SHALL BE INCLUSIVE OF ALL EQUIPMENT IN INTERIOR SPACES, AS WELL AS ANY LIGHTING EQUIPMENT MOUNTED TO THE EXTERIOR SURFACES OF THE BUILDING.
3. SEE ARCHITECTURAL BUILDING ELEVATIONS FOR QUANTITY AND LOCATION OF EXISTING EXTERIOR BUILDING MOUNTED LIGHT FIXTURES.
4. DISPOSAL NOTES:
   - A. ALL BALLASTS CONTAINING PCB'S AND BATTERIES SHALL BE TREATED AS HAZARDOUS WASTE AND DISPOSED OF AS REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY'S UNIVERSAL WASTE RULE. ANY STATE REGULATIONS MORE STRINGENT SHALL TAKE PRECEDENCE.
   - B. ALL FLUORESCENT AND HID LAMPS SHALL BE TREATED AS HAZARDOUS WASTE AND RECYCLED AS REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY'S UNIVERSAL WASTE RULE. ANY STATE REGULATIONS MORE STRINGENT SHALL TAKE PRECEDENCE.
     1. LAMPS RECOGNIZED AS HAVING REDUCED MERCURY CONTENT AND PASSING THE TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP) SHALL BE EXCLUDED.
5. FURNISH AND INSTALL NEW LIGHTING EQUIPMENT AS INDICATED ON NEW WORK LIGHTING PLANS.

DEMOLITION KEYED NOTES:

1. EXISTING EASTERN BUILDING ADDITION TO BE COMPLETELY DEMOLISHED. DISCONNECT AND REMOVE ALL LIGHT FIXTURES AND ASSOCIATED CONTROLS AND CIRCUITING IN OR ON THIS BUILDING ADDITION.



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EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO FIRST & SECOND FLOOR PLAN B - LIGHTING

E 023

7/26/2016 8:38:44 AM

DEMOLITION GENERAL NOTES:

1. UNLESS OTHERWISE NOTED, DISCONNECT AND REMOVE ALL EXISTING LIGHT FIXTURES AND ASSOCIATED CONTROLS AND BRANCH CIRCUIT WIRING AND CONDUIT BACK TO SOURCE.
2. LIGHT FIXTURE TYPES, LOCATIONS, AND QUANTITIES SHOWN ON THIS DEMO PLAN ARE APPROXIMATE AND MAY NOT BE INDICATIVE OF ALL EQUIPMENT AS IT CURRENTLY EXISTS. UNLESS OTHERWISE NOTED, DEMOLITION SHALL BE INCLUSIVE OF ALL EQUIPMENT IN INTERIOR SPACES, AS WELL AS ANY LIGHTING EQUIPMENT MOUNTED TO THE EXTERIOR SURFACES OF THE BUILDING.
3. SEE ARCHITECTURAL BUILDING ELEVATIONS FOR QUANTITY AND LOCATION OF EXISTING EXTERIOR BUILDING MOUNTED LIGHT FIXTURES.
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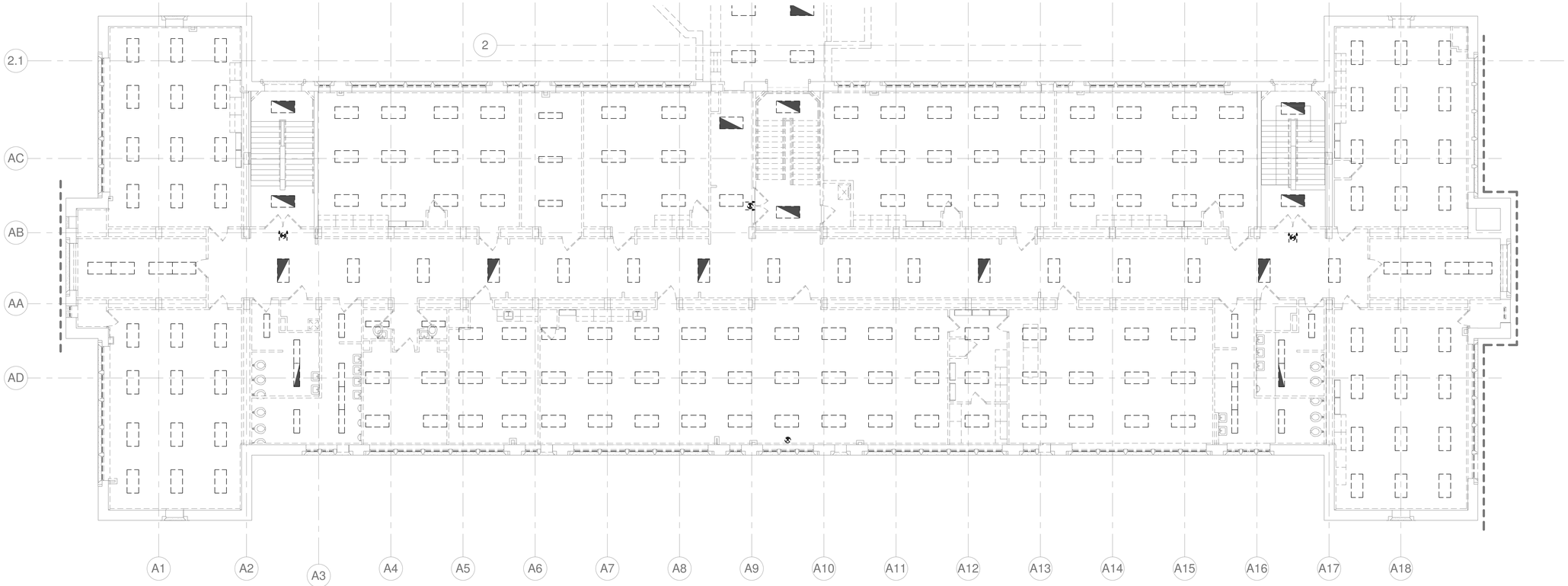
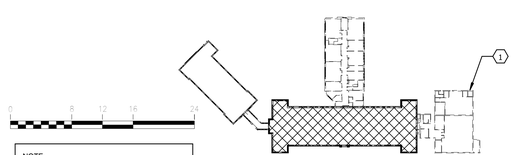
   A. ALL BALLASTS CONTAINING PCB'S AND BATTERIES SHALL BE TREATED AS HAZARDOUS WASTE AND DISPOSED OF AS REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY'S UNIVERSAL WASTE RULE. ANY STATE REGULATIONS MORE STRINGENT SHALL TAKE PRECEDENCE.
   B. ALL FLUORESCENT AND HID LAMPS SHALL BE TREATED AS HAZARDOUS WASTE AND RECYCLED AS REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY'S UNIVERSAL WASTE RULE. ANY STATE REGULATIONS MORE STRINGENT SHALL TAKE PRECEDENCE
      1. LAMPS RECOGNIZED AS HAVING REDUCED MERCURY CONTENT AND PASSING THE TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP) SHALL BE EXCLUDED.
5. FURNISH AND INSTALL NEW LIGHTING EQUIPMENT AS INDICATED ON NEW WORK LIGHTING PLANS.

DEMOLITION KEYED NOTES:

1. EXISTING EASTERN BUILDING ADDITION TO BE COMPLETELY DEMOLISHED. DISCONNECT AND REMOVE ALL LIGHT FIXTURES AND ASSOCIATED CONTROLS AND CIRCUITING IN OR ON THIS BUILDING ADDITION.
2. DISCONNECT AND REMOVE ANY EXISTING LIGHT FIXTURES LOCATED IN ATTIC SPACE ABOVE TOP FLOOR, AS WELL AS ALL ASSOCIATED LIGHTING CONTROLS AND BRANCH CIRCUIT WIRING AND CONDUIT BACK TO SOURCE.



1 / E 024 DEMO THIRD FLOOR PLAN B - LIGHTING (2)
1/8" = 1'-0"



NOTE:
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EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO THIRD FLOOR PLAN B - LIGHTING

E 024

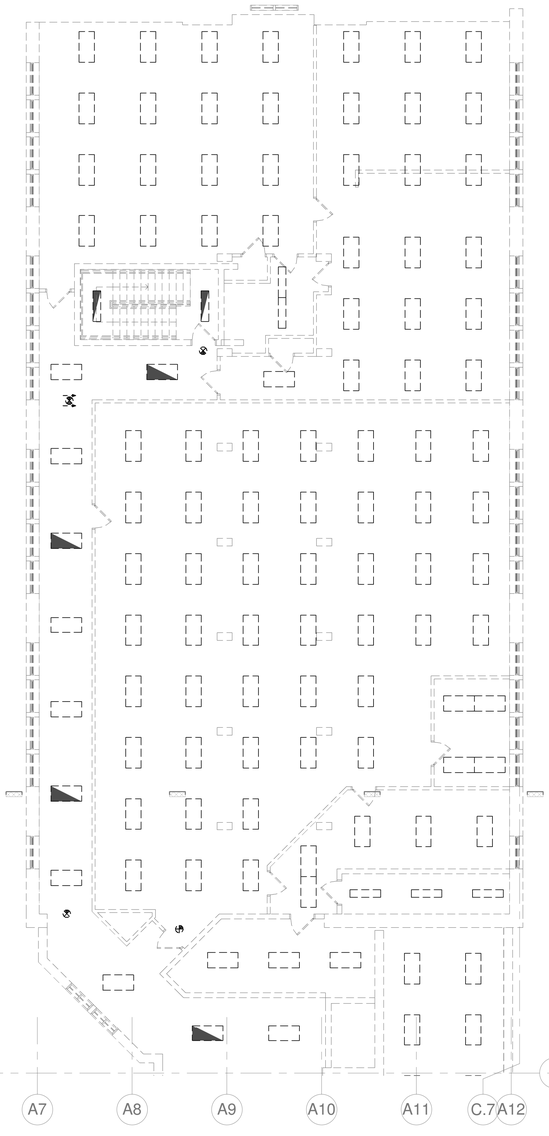
7/26/2016 8:38:54 AM

DEMOLITION GENERAL NOTES:

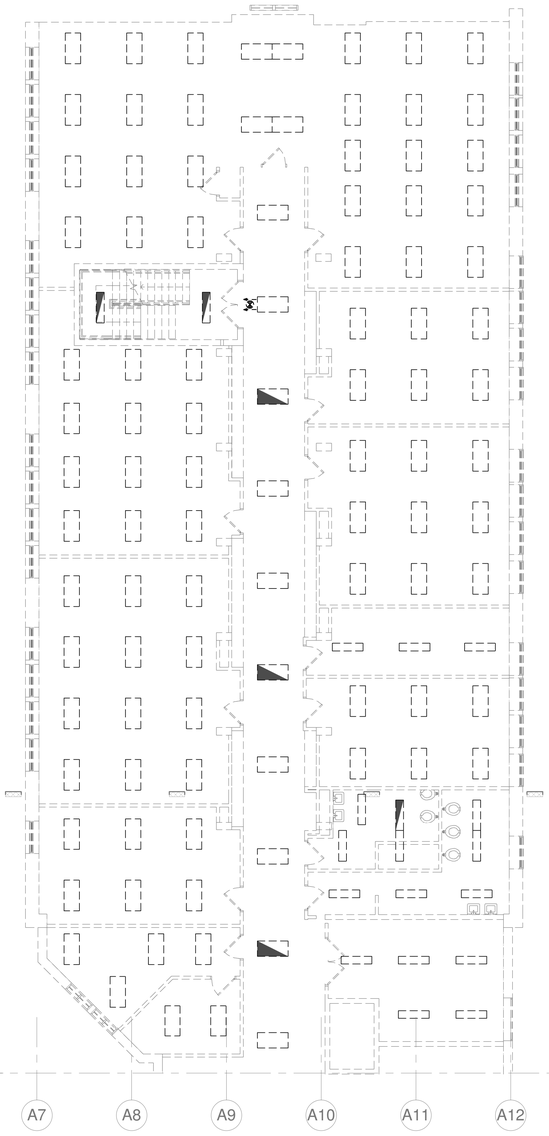
1. UNLESS OTHERWISE NOTED, DISCONNECT AND REMOVE ALL EXISTING LIGHT FIXTURES AND ASSOCIATED CONTROLS AND BRANCH CIRCUIT WIRING AND CONDUIT BACK TO SOURCE.
2. LIGHT FIXTURE TYPES, LOCATIONS, AND QUANTITIES SHOWN ON THIS DEMO PLAN ARE APPROXIMATE AND MAY NOT BE INDICATIVE OF ALL EQUIPMENT AS IT CURRENTLY EXISTS. UNLESS OTHERWISE NOTED, DEMOLITION SHALL BE INCLUSIVE OF ALL EQUIPMENT IN INTERIOR SPACES, AS WELL AS ANY LIGHTING EQUIPMENT MOUNTED TO THE EXTERIOR SURFACES OF THE BUILDING.
3. SEE ARCHITECTURAL BUILDING ELEVATIONS FOR QUANTITY AND LOCATION OF EXISTING EXTERIOR BUILDING MOUNTED LIGHT FIXTURES.
4. DISPOSAL NOTES:
   A. ALL BALLASTS CONTAINING PCB'S AND BATTERIES SHALL BE TREATED AS HAZARDOUS WASTE AND DISPOSED OF AS REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY'S UNIVERSAL WASTE RULE. ANY STATE REGULATIONS MORE STRINGENT SHALL TAKE PRECEDENCE.
   B. ALL FLUORESCENT AND HID LAMPS SHALL BE TREATED AS HAZARDOUS WASTE AND RECYCLED AS REGULATED BY THE ENVIRONMENTAL PROTECTION AGENCY'S UNIVERSAL WASTE RULE. ANY STATE REGULATIONS MORE STRINGENT SHALL TAKE PRECEDENCE
   .
      1. LAMPS RECOGNIZED AS HAVING REDUCED MERCURY CONTENT AND PASSING THE TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP) SHALL BE EXCLUDED.
5. FURNISH AND INSTALL NEW LIGHTING EQUIPMENT AS INDICATED ON NEW WORK LIGHTING PLANS.

DEMOLITON KEYED NOTES:

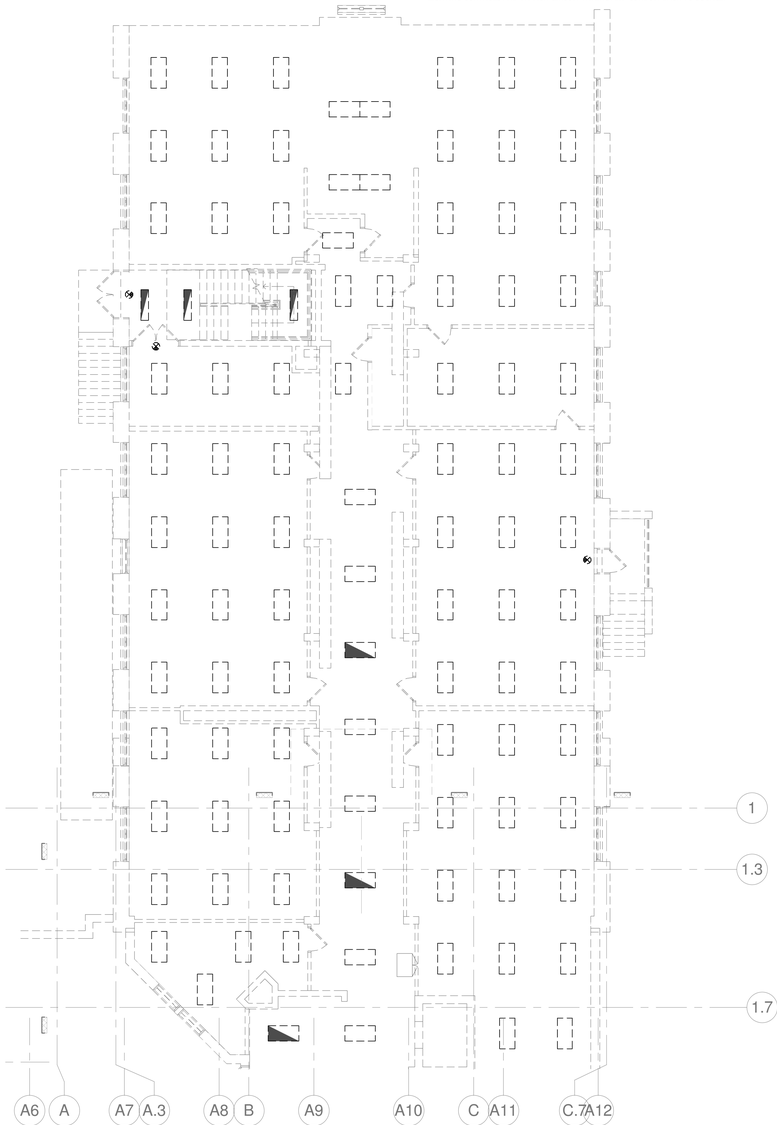
1. EXISTING EASTERN BUILDING ADDITION TO BE COMPLETELY DEMOLISHED. DISCONNECT AND REMOVE ALL LIGHT FIXTURES AND ASSOCIATED CONTROLS AND CIRCUITING IN OR ON THIS BUILDING ADDITION.
2. DISCONNECT AND REMOVE ANY EXISTING LIGHT FIXTURES LOCATED IN ATTIC SPACE ABOVE TOP FLOOR, AS WELL AS ALL ASSOCIATED LIGHTING CONTROLS AND BRANCH CIRCUIT WIRING AND CONDUIT BACK TO SOURCE.



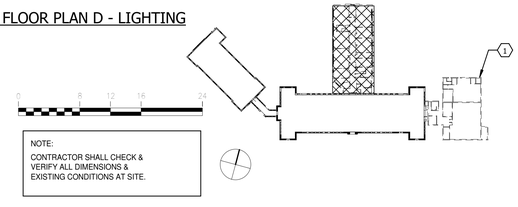
3 / E 025 DEMO SECOND FLOOR PLAN D - LIGHTING (2)
1/8" = 1'-0"



2 / E 025 DEMO FIRST FLOOR PLAN D - LIGHTING
1/8" = 1'-0"



1 / E 025 DEMO BASEMENT FLOOR PLAN D - LIGHTING
1/8" = 1'-0"



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LICENSE NO.: 18294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

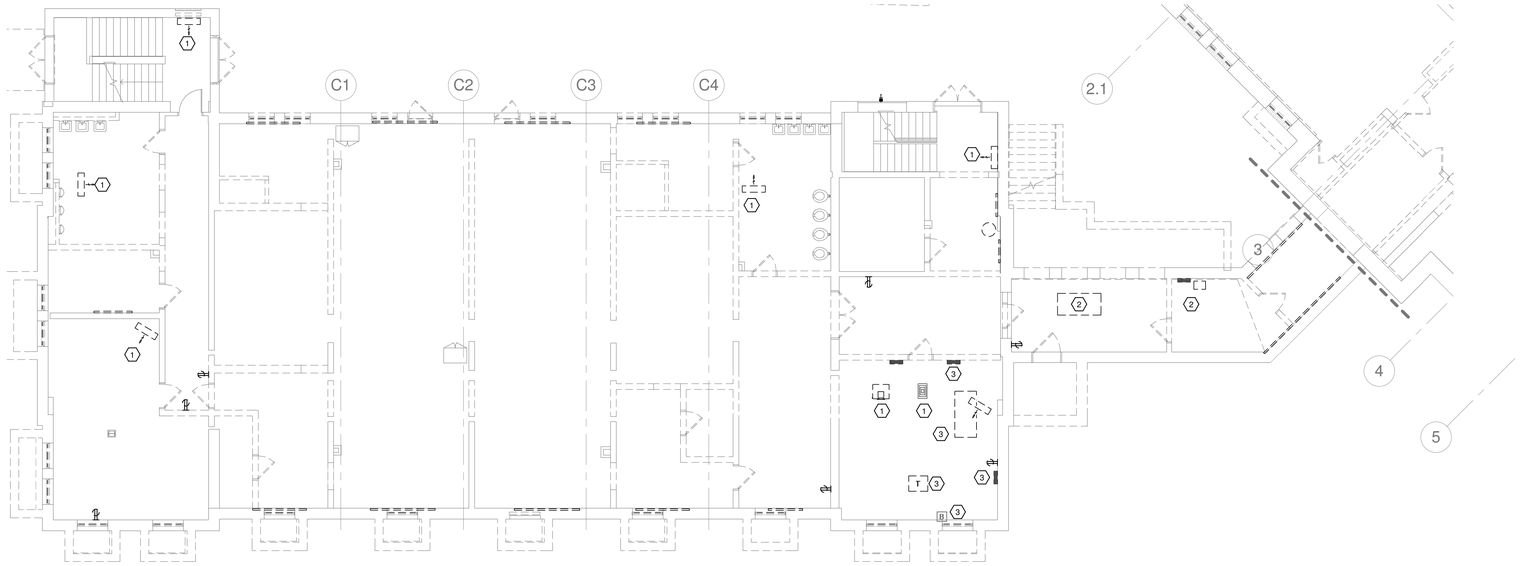
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

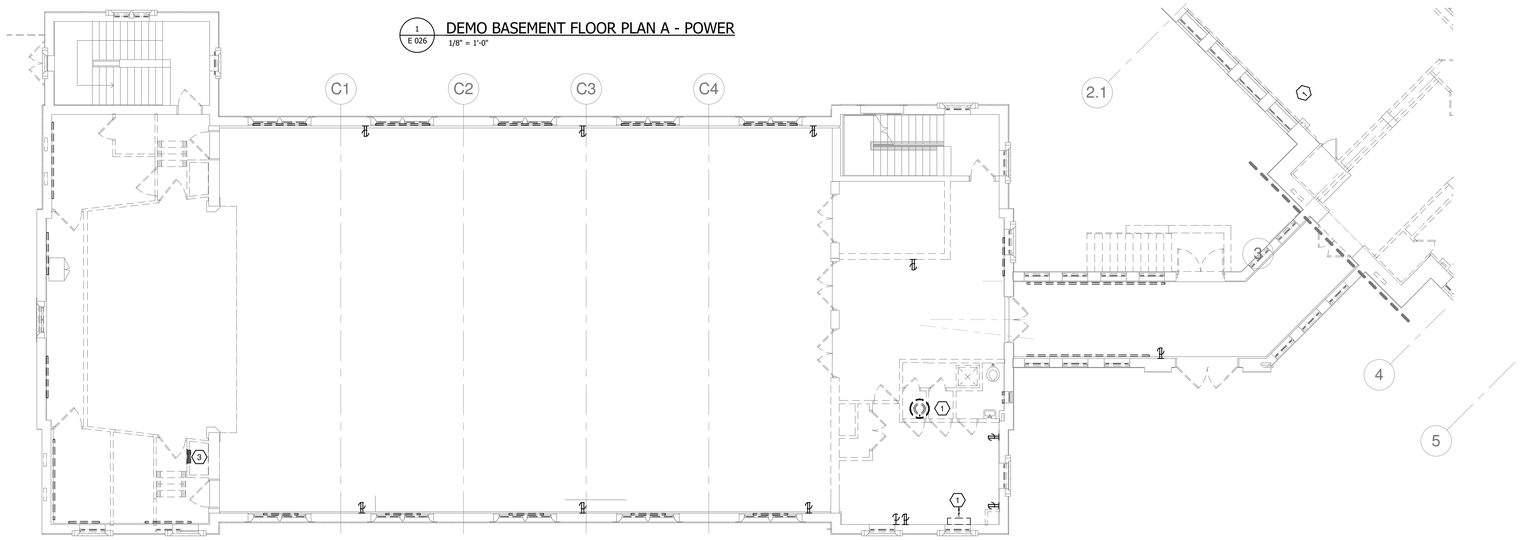
DRAWING NAME
DEMO BASEMENT, FIRST, AND SECOND FLOOR PLAN D - LIGHTING

E 025

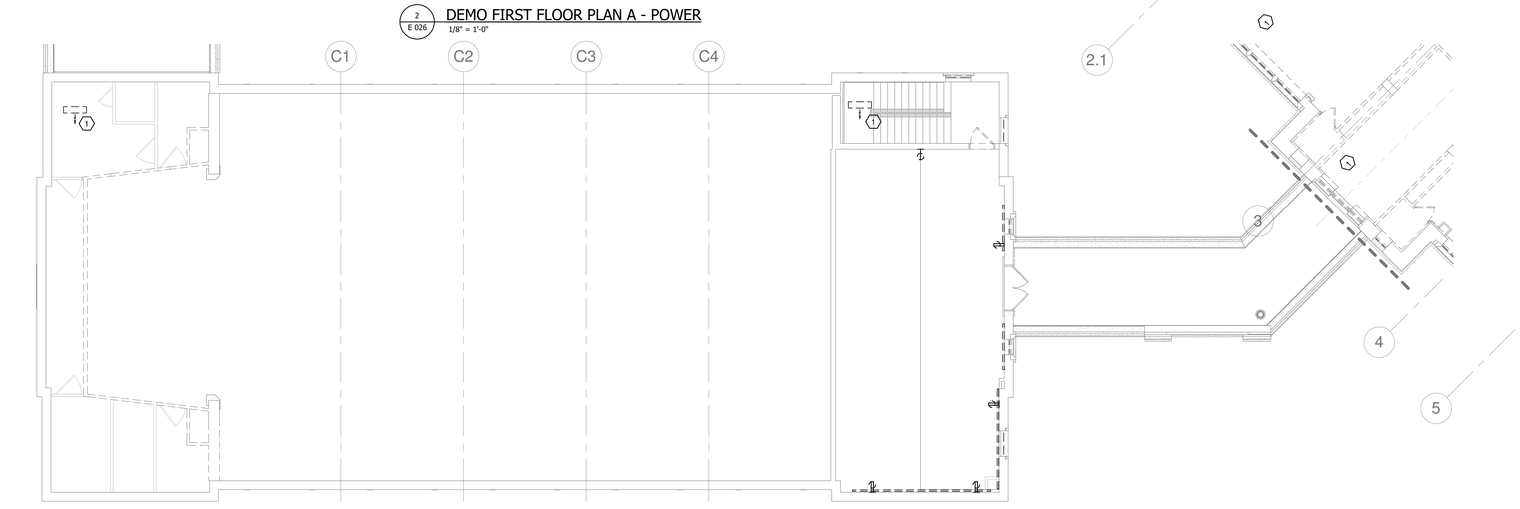
7/26/2016 8:39:07 AM



1 E 026 DEMO BASEMENT FLOOR PLAN A - POWER
1/8" = 1'-0"



2 E 026 DEMO FIRST FLOOR PLAN A - POWER
1/8" = 1'-0"



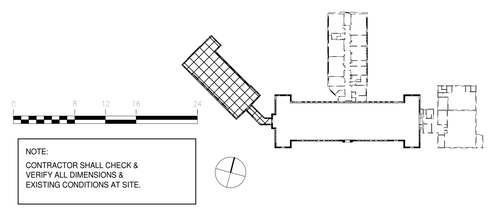
3 E 026 DEMO SECOND FLOOR PLAN A - POWER
1/8" = 1'-0"

GENERAL NOTES:

A. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL DEVICES, OUTLETS, CONDUIT AND WIRING BACK TO SOURCE.
B. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL FINAL CONNECTIONS TO MECHANICAL/PLUMBING/FIRE ALARM/TELECOMMUNICATIONS/AUDIO VISUAL EQUIPMENT, INCLUDING ALL ASSOCIATED DISCONNECTS/STARTERS/AC DRIVES/SWITCHES, ALL CONDUIT AND WIRING BACK TO SOURCE.
C. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL DISTRIBUTION PANELBOARDS, BRANCH PANELBOARDS, AND TRANSFORMERS.

KEYED NOTES:

1. EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED.
2. DISCONNECT AND REMOVE EXISTING GENERATOR AND ALL ASSOCIATED APPURTENANCES, INCLUDING, BUT NOT LIMITED TO, BATTERIES, BATTERY CHARGER, TRANSFER EQUIPMENT, AND FUEL SERVICE CONNECTIONS.
3. EXISTING DISTRIBUTION EQUIPMENT TO BE MAINTAINED FOR TEMPORARY SERVICE DURING CONSTRUCTION. COORDINATE FINAL DEMOLITION OF SERVICE EQUIPMENT WITH OTHER DISCIPLINES IN THE FIELD. DISCONNECT AND REMOVE MAIN SERVICE DISTRIBUTION BOARD, UTILITY CABINET, AND ALL ASSOCIATED DISTRIBUTION TRANSFORMERS AND EQUIPMENT.



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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO BASEMENT, FIRST AND SECOND FLOOR PLAN A - POWER

E 026

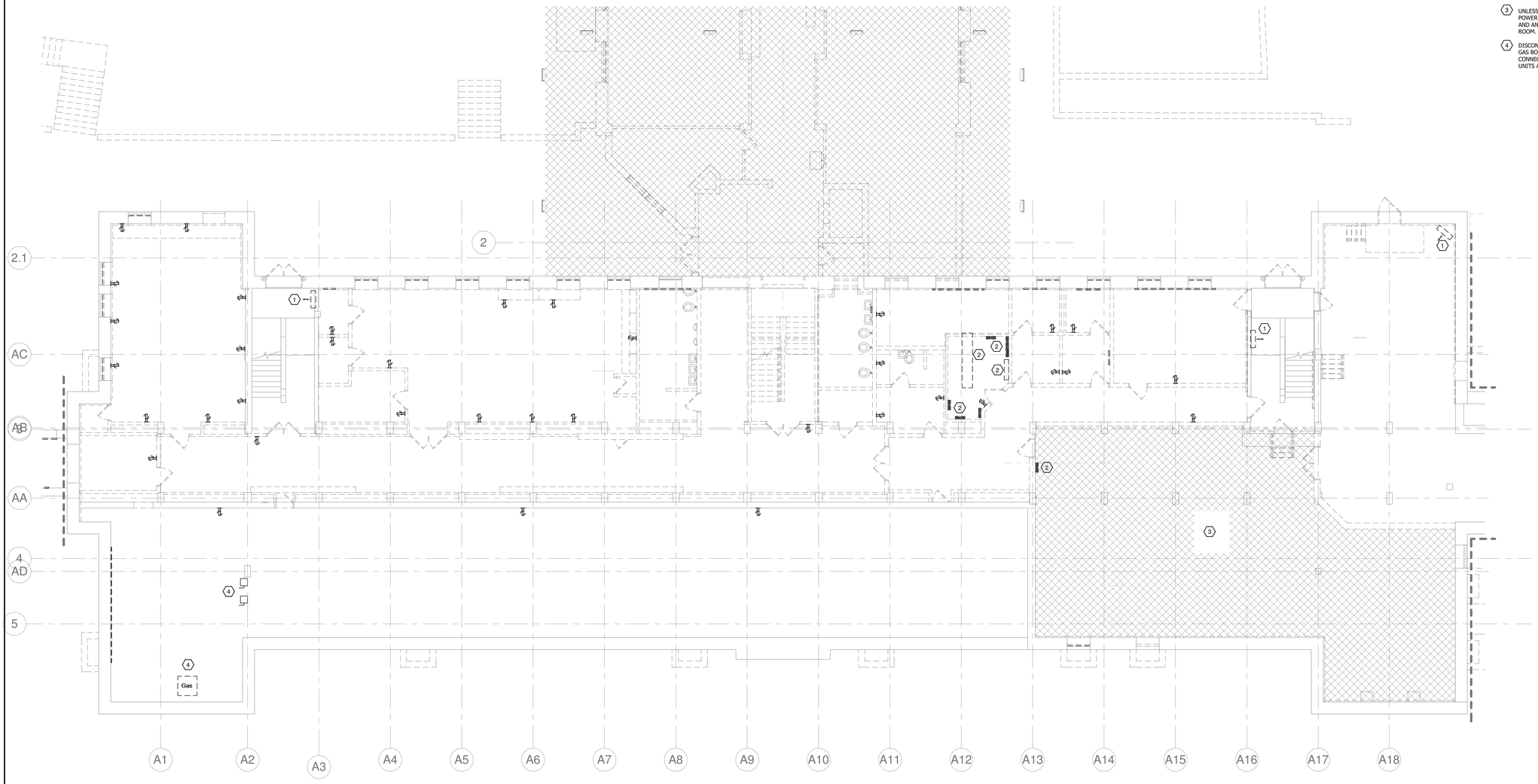
7/26/2016 8:39:24 AM

GENERAL NOTES:

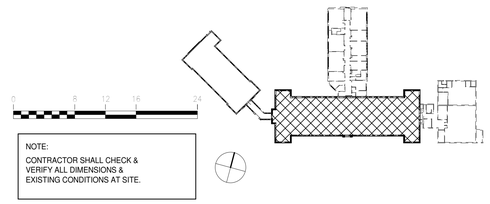
A. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL DEVICES, OUTLETS, CONDUIT AND WIRING BACK TO SOURCE.
B. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL FINAL CONNECTIONS TO MECHANICAL/PLUMBING/FIRE ALARM/TELECOMMUNICATIONS/AUDIO VISUAL EQUIPMENT, INCLUDING ALL ASSOCIATED DISCONNECTS/STARTERS/AC DRIVES/SWITCHES, ALL CONDUIT AND WIRING BACK TO SOURCE.
C. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL DISTRIBUTION PANELBOARDS, BRANCH PANELBOARDS, AND TRANSFORMERS.

KEYED NOTES:

1. EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED.
2. EXISTING DISTRIBUTION EQUIPMENT TO BE MAINTAINED FOR TEMPORARY SERVICE DURING CONSTRUCTION. COORDINATE FINAL DEMOLITION OF SERVICE EQUIPMENT WITH OTHER DISCIPLINES IN THE FIELD. DISCONNECT AND REMOVE MAIN SERVICE DISTRIBUTION BOARD, UTILITY CABINET, AND ALL ASSOCIATED DISTRIBUTION TRANSFORMERS AND EQUIPMENT.
3. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL POWER CONNECTIONS TO EXISTIGN MECHANICAL, PLUMBING AND ANCILLARY EQUIPMENT IN THE EXISTING MECHANICAL ROOM.
4. DISCONNECT AND REMOVE POWER CONNECTION TO EXISTING GAS BOOSTER DISCONNECT SWITCHES. PROVIDE NEW CONNECTION FROM NEW DISTRIBUTION PANEL TO EXISTIGN UNITS AS SHOWN ON NEW WORK PLAN.



1 / E 027 DEMO BASEMENT FLOOR PLAN B - POWER
1/8" = 1'-0"



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No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO BASEMENT FLOOR PLAN B - POWER

E 027

7/26/2016 8:39:34 AM

GENERAL NOTES:

A. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL DEVICES, OUTLETS, CONDUIT AND WIRING BACK TO SOURCE.
B. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL FINAL CONNECTIONS TO MECHANICAL/PLUMBING/FIRE ALARM/TELECOMMUNICATIONS/AUDIO VISUAL EQUIPMENT, INCLUDING ALL ASSOCIATED DISCONNECTS/STARTERS/AC DRIVES/SWITCHES, ALL CONDUIT AND WIRING BACK TO SOURCE.
C. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL DISTRIBUTION PANELBOARDS, BRANCH PANELBOARDS, AND TRANSFORMERS.

KEYED NOTES:

1. EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED.
2. EXISTING DISTRIBUTION EQUIPMENT TO BE MAINTAINED FOR TEMPORARY SERVICE DURING CONSTRUCTION. COORDINATE FINAL DEMOLITION OF SERVICE EQUIPMENT WITH OTHER DISCIPLINES IN THE FIELD. DISCONNECT AND REMOVE MAIN SERVICE DISTRIBUTION BOARD, UTILITY CABINET, AND ALL ASSOCIATED DISTRIBUTION TRANSFORMERS AND EQUIPMENT.

1 / E 028 DEMO FIRST FLOOR PLAN B - POWER
1/8" = 1'-0"

2 / E 028 DEMO SECOND FLOOR PLAN B - POWER
1/8" = 1'-0"

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EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO FIRST & SECOND FLOOR PLAN B - POWER

E 028

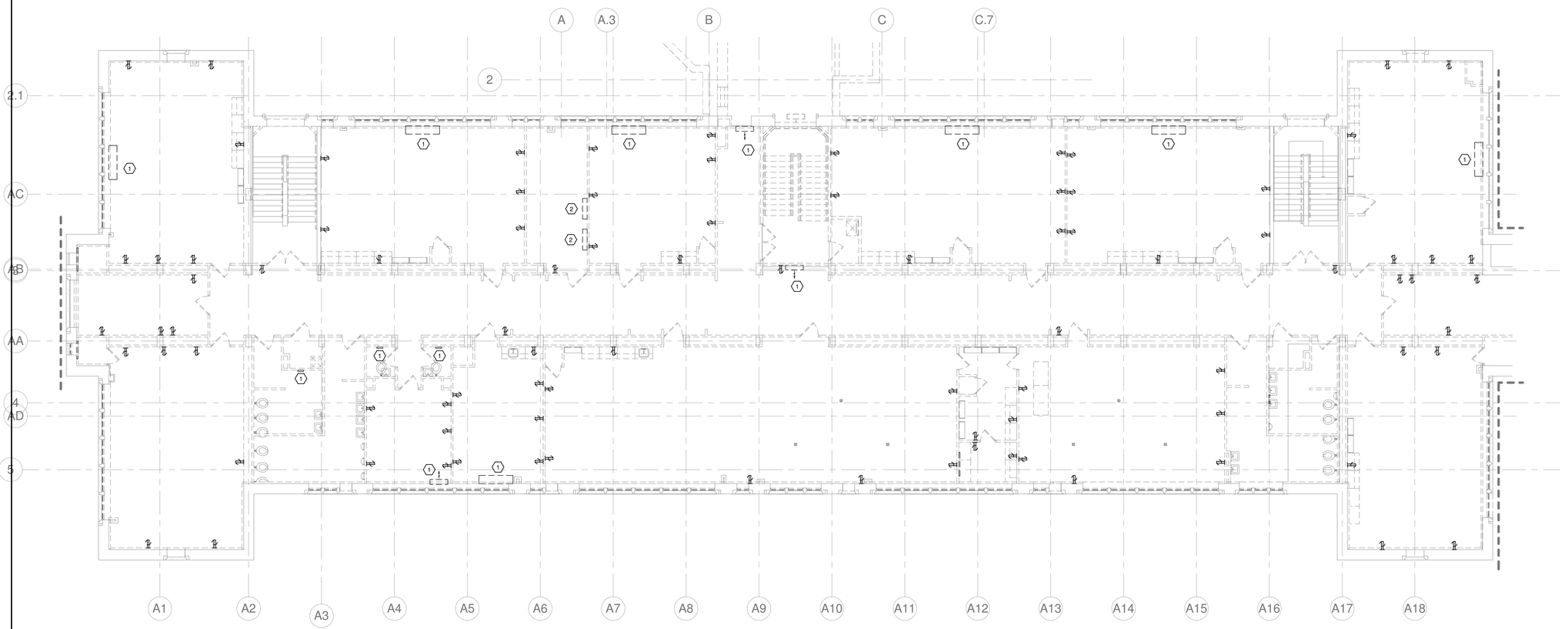
7/26/2016 8:39:55 AM

GENERAL NOTES:

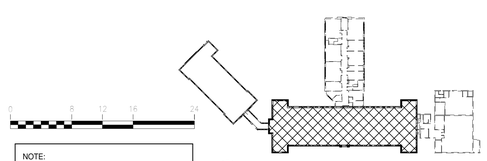
A. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL DEVICES, OUTLETS, CONDUIT AND WIRING BACK TO SOURCE.
B. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL FINAL CONNECTIONS TO MECHANICAL/PLUMBING/FIRE ALARM/TELECOMMUNICATIONS/AUDIO VISUAL EQUIPMENT, INCLUDING ALL ASSOCIATED DISCONNECTS/STARTERS/AC DRIVES/SWITCHES, ALL CONDUIT AND WIRING BACK TO SOURCE.
C. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL DISTRIBUTION PANELBOARDS, BRANCH PANELBOARDS, AND TRANSFORMERS.

KEYED NOTES:

1. EXISTING MECHANICAL EQUIPMENT TO BE DEMOLISHED.
2. EXISTING DISTRIBUTION EQUIPMENT TO BE MAINTAINED FOR TEMPORARY SERVICE DURING CONSTRUCTION. COORDINATE FINAL DEMOLITION OF SERVICE EQUIPMENT WITH OTHER DISCIPLINES IN THE FIELD. DISCONNECT AND REMOVE MAIN SERVICE DISTRIBUTION BOARD, UTILITY CABINET, AND ALL ASSOCIATED DISTRIBUTION TRANSFORMERS AND EQUIPMENT.



1 / E 029 DEMO THIRD FLOOR PLAN B - POWER
1/8" = 1'-0"



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7/26/2016 8:40:07 AM

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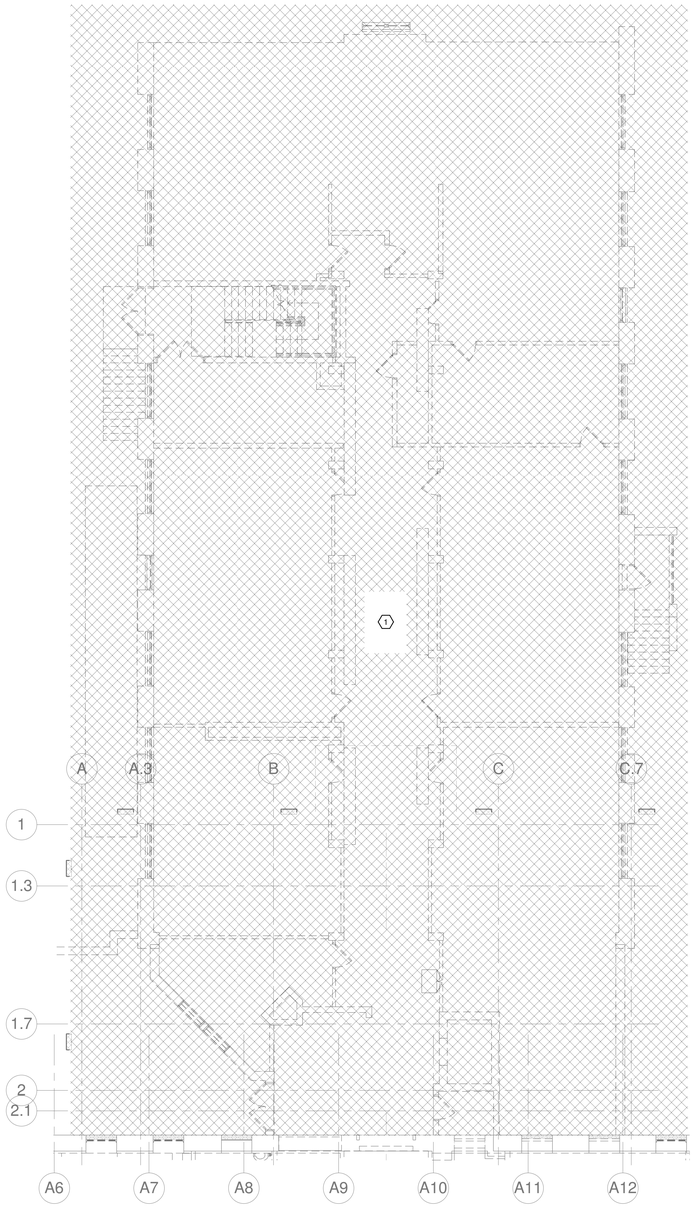
No.	DATE	DESCRIPTION

BID ISSUE

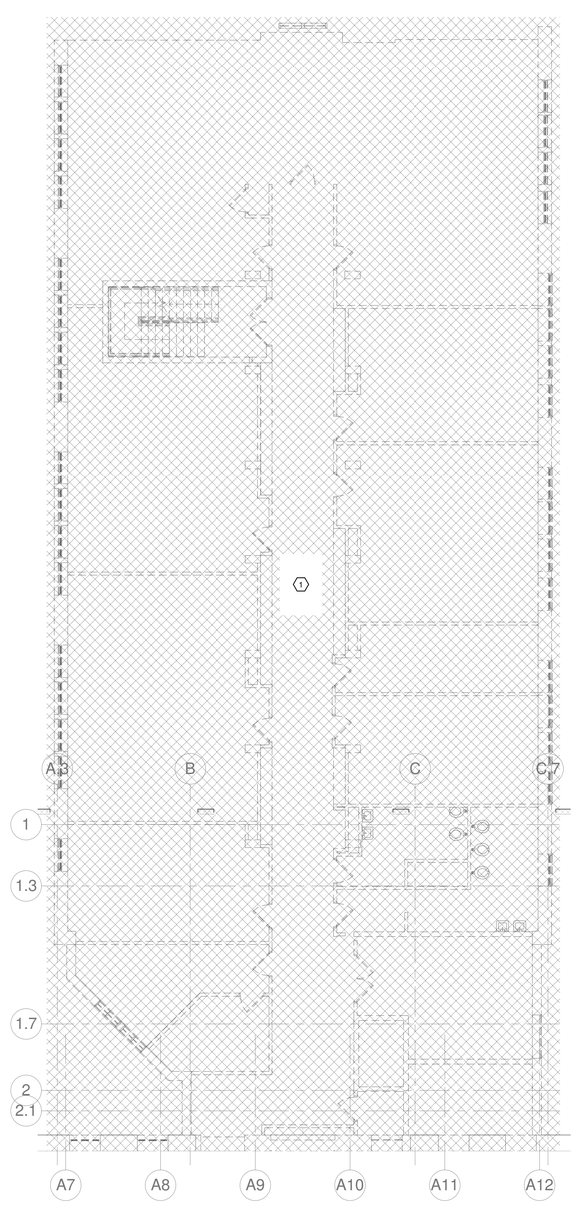
PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO THIRD FLOOR PLAN B - POWER

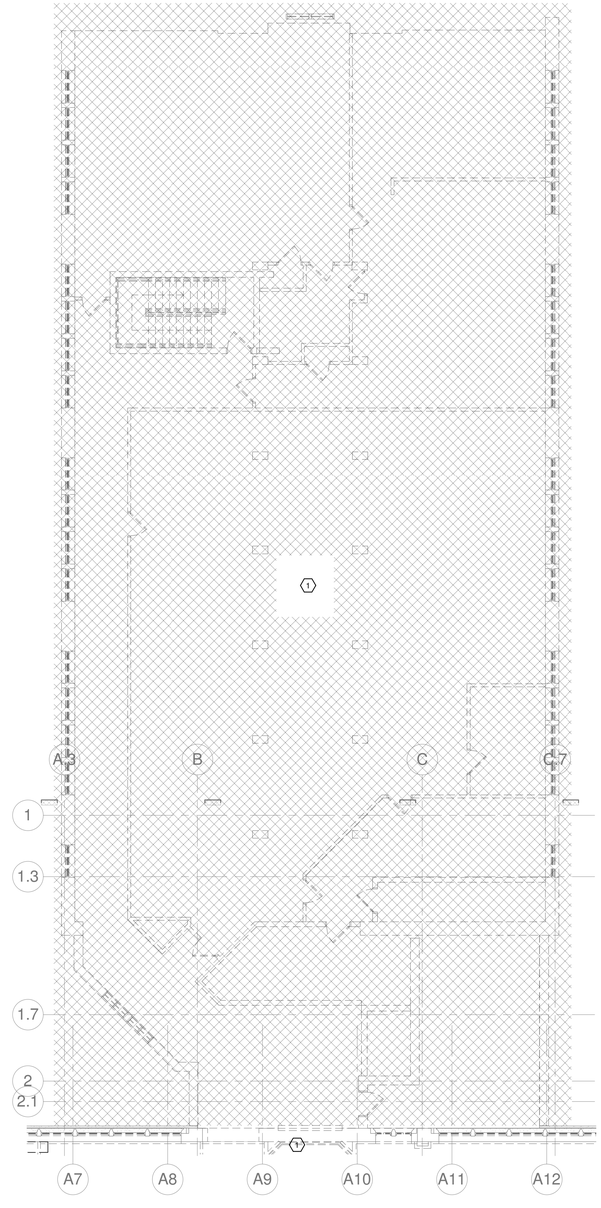
E 029



1 / E 030 DEMO BASEMENT FLOOR PLAN D - POWER
1/8" = 1'-0"



2 / E 030 DEMO FIRST FLOOR PLAN D - POWER
1/8" = 1'-0"



3 / E 030 DEMO SECOND FLOOR PLAN D - POWER
1/8" = 1'-0"

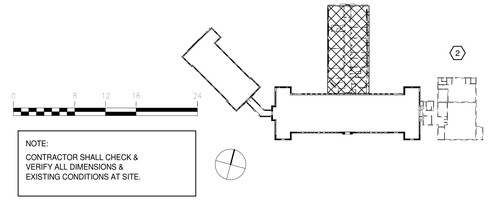
GENERAL NOTES:

A. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL DEVICES, OUTLETS, CONDUIT AND WIRING BACK TO SOURCE.
B. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL FINAL CONNECTIONS TO MECHANICAL/PLUMBING/FIRE ALARM/TELECOMMUNICATIONS/AUDIO VISUAL EQUIPMENT, INCLUDING ALL ASSOCIATED DISCONNECTS/STARTERS/AC DRIVES/SWITCHES, ALL CONDUIT AND WIRING BACK TO SOURCE.
C. UNLESS NOTED OTHERWISE, DISCONNECT AND REMOVE ALL DISTRIBUTION PANELBOARDS, BRANCH PANELBOARDS, AND TRANSFORMERS.

KEYED NOTES:

1 EXISTING BUILDING ADDITION TO BE DEMOLISHED IN IT'S ENTIRETY. DISCONNECT AND REMOVE ALL ASSOCIATED ELECTRICAL DEVICES AND CONFIRM THAT ALL ELECTRICAL FEEDERS AND BRANCH CIRCUITS HAVE BEEN SAFED OFF PRIOR TO ANY STRUCTURAL DEMOLITION.

2 REFER TO KEYPLAN ON THIS DRAWING. EXISTING BUILDING ADDITION (NOT SHOWN IN PLAN VIEW) TO BE DEMOLISHED IN IT'S ENTIRETY. DISCONNECT AND REMOVE ALL ASSOCIATED ELECTRICAL DEVICES AND CONFIRM THAT ALL ELECTRICAL FEEDERS AND BRANCH CIRCUITS HAVE BEEN SAFED OFF PRIOR TO ANY STRUCTURAL DEMOLITION.



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7/26/2016 8:40:20 AM

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

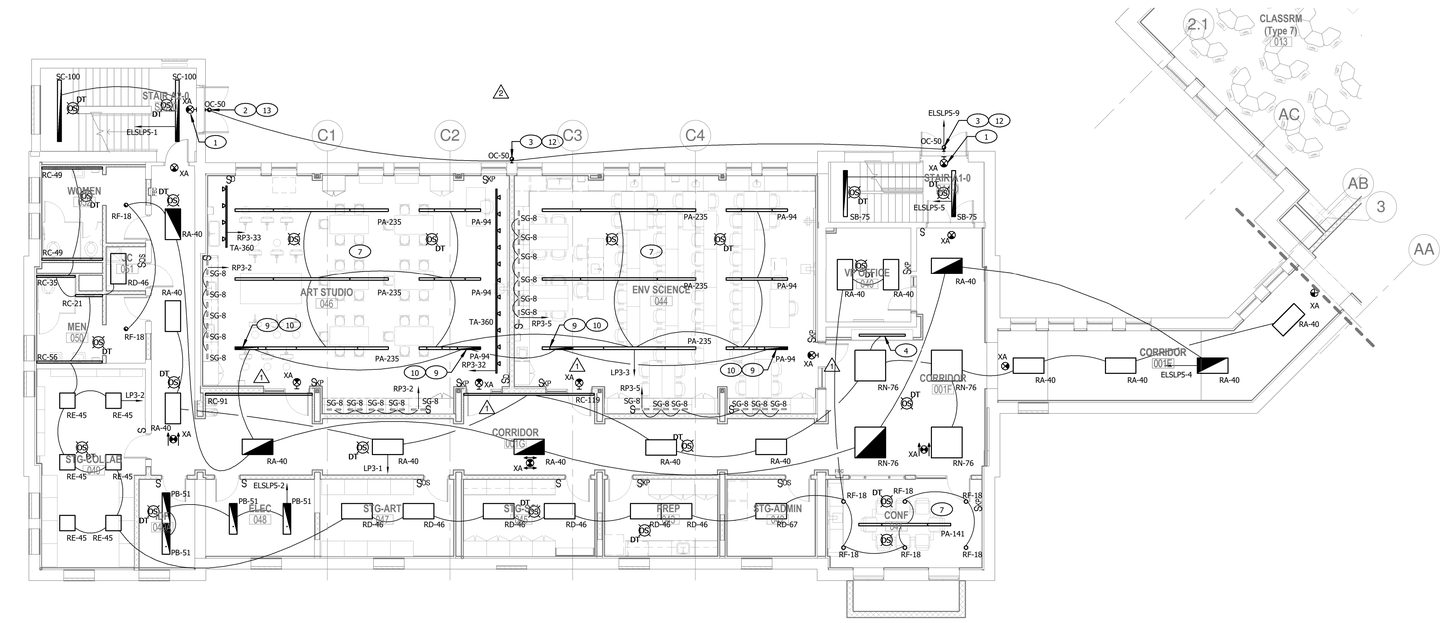
No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
DEMO BASEMENT, FIRST, AND SECOND FLOOR PLAN D - POWER

E 030


SC-100
STAIR A2-1
OC-50
ELSLP5-1
ELSLP5-9
STAIR A1-0
SB-75
ELSLP5-5
RC-49
WOMEN
050
RF-18
RA-40
RC-35
RC-21
MEN
052
RC-56
RD-46
ART STUDIO
046
ENV SCIENCE
044
VP OFFICE
040
CORRIDOR
001E
001F
ELSLP5-4
RC-91
RP3-2
RP3-33
TA-360
RP3-5
RP3-32
LP3-3
RC-119
RN-76
RE-45
LP3-2
STG-PLTW
045
LP3-1
ELSLP5-2
PB-51
ELEC
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PREP
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STG-ADMIN
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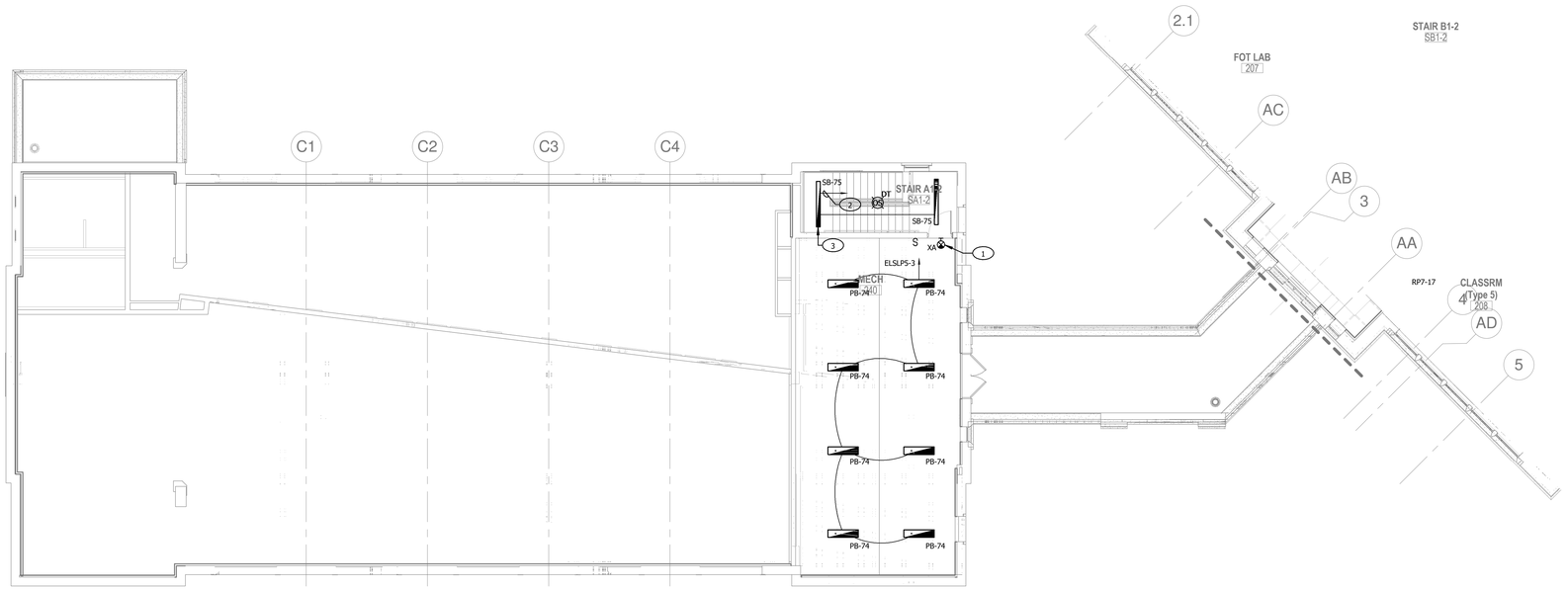
RF-18
RF-18



1 / E 112 NEW WORK SECOND FLOOR PLAN A - LIGHTING

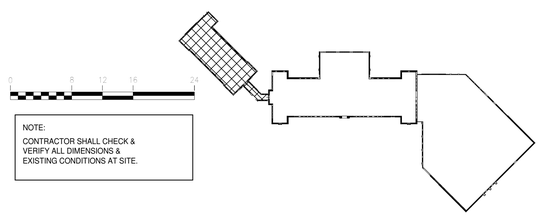
1/8" = 1'-0"

GENERAL NOTES:

A. UNLESS NOTED OTHERWISE, PROVIDE BODINE GTD (OR APPROVED EQUAL) FOR CONNECTION OF EMERGENCY CIRCUIT TO NORMAL/EMERGENCY FIXTURES. REFER TO DRAWING E 501 FOR TYPICAL INSTALLATION DETAIL.
B. OCCUPANCY SENSOR/DAYLIGHT SENSOR LOCATIONS ARE DIAGRAMMATIC AND ARE SHOWN TO INDICATE AREAS TO BE COVERED ONLY. PROVIDE QUANTITIES/LOCATIONS AND RELATED APPURTENANCES AS REQUIRED FOR COVERAGE AS DEFINED IN THE SPECIFICATIONS.
C. CONNECT EXIT SIGNS UNSWITCHED TO NEAREST NORMAL/EMERGENCY CIRCUIT WITH 2 #12 & 1 #12 GROUND IN 3/4" CONDUIT.
D. REFER TO DRAWING E401 FOR A TYPICAL CLASSROOM LAYOUT AND CONTROL DETAIL.

KEYED NOTES:

1. MOUNT EXIT SIGN 1'-0" ABOVE TOP OF DOOR FRAME.
2. CONNECT TO CIRCUIT DOWN ON FLOOR BELOW.
3. MOUNT THIS FIXTURE VIA RIGID STEM SUSPENSION, AT HEIGHT OF 14'-0" AFF FROM BOTTOM OF FIXTURE TO TOP OF STAIR LANDING DIRECTLY UNDERNEATH.



NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND & ROOF PLAN A - LIGHTING

E 112

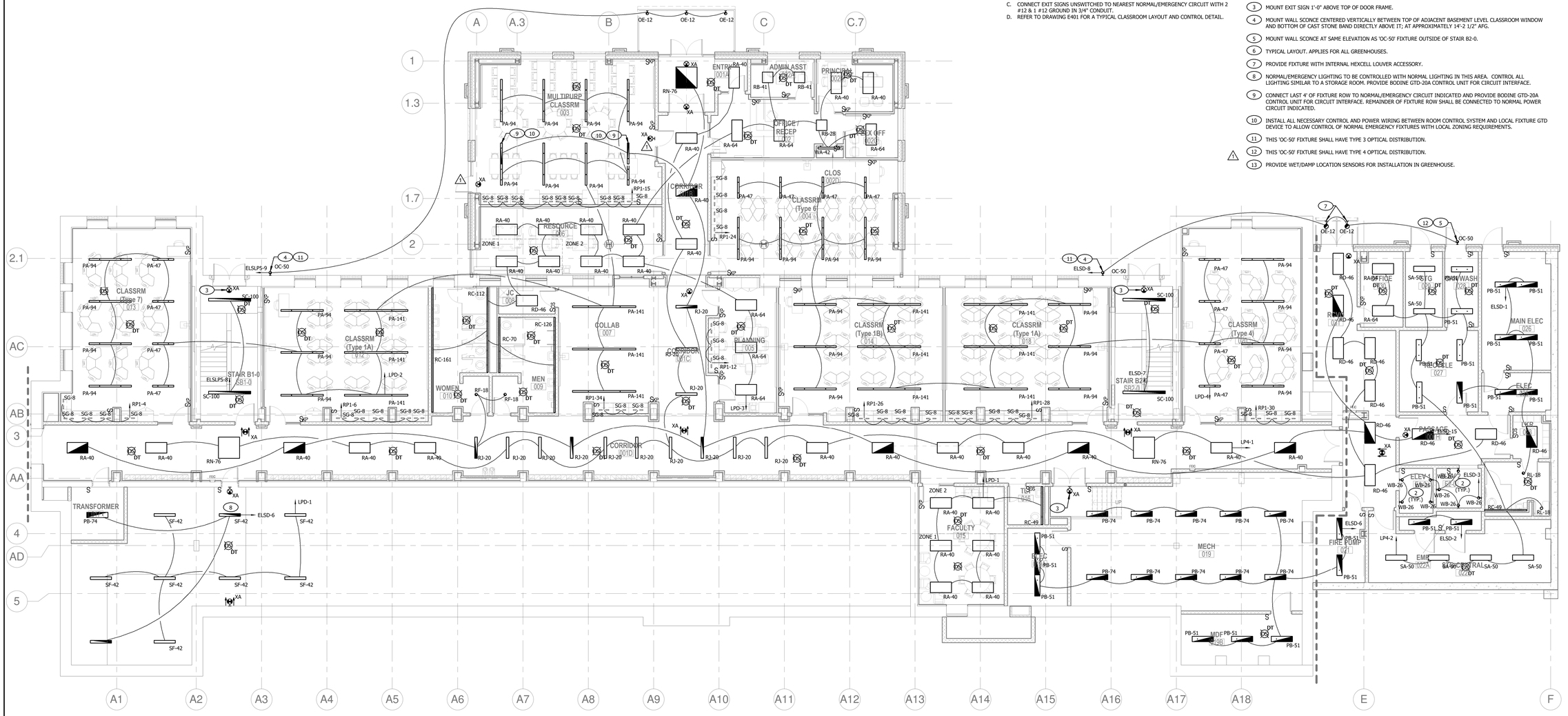
7/26/2016 8:41:29 AM

GENERAL NOTES:

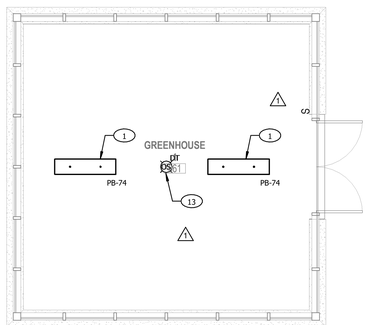
A. UNLESS NOTED OTHERWISE, PROVIDE BODINE GTD (OR APPROVED EQUAL) FOR CONNECTION OF EMERGENCY CIRCUIT TO NORMAL/EMERGENCY FIXTURES. REFER TO DRAWING E 501 FOR TYPICAL INSTALLATION DETAIL.
B. OCCUPANCY SENSOR/DAYLIGHT SENSOR LOCATIONS ARE DIAGRAMMATIC AND ARE SHOWN TO INDICATE AREAS TO BE COVERED ONLY. PROVIDE QUANTITIES/LOCATIONS AND RELATED APPURTENANCES AS REQUIRED FOR COVERAGE AS DEFINED IN THE SPECIFICATIONS.
C. CONNECT EXIT SIGNS UNSWITCHED TO NEAREST NORMAL/EMERGENCY CIRCUIT WITH 2 #12 & 1 #12 GROUND IN 3/4" CONDUIT.
D. REFER TO DRAWING E401 FOR A TYPICAL CLASSROOM LAYOUT AND CONTROL DETAIL.

KEYED NOTES:

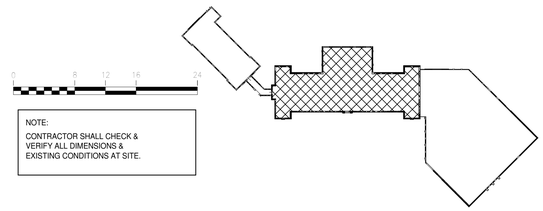
1. SUSPEND LIGHT FIXTURE FROM MAIN STRUCTURAL MEMBER OF GREENHOUSE ROOF. MOUNT BOTTOM OF FIXTURE AT 9'-4" AFF.
2. MOUNT FIXTURE TYPE "WB" IN ELEVATOR PIT ON WALL OF ELEVATOR HOISTWAY. WITH ELEVATOR CAB IN LOWEST POSITION, MOUNT FIXTURE AS HIGH AS POSSIBLE WITHOUT INTERFERING WITH CAB, AND WHILE STILL MAINTAINING FULL ACCESSIBILITY TO FIXTURE. COORDINATE WITH ALL OTHER TRADES.
3. MOUNT EXIT SIGN 1'-0" ABOVE TOP OF DOOR FRAME.
4. MOUNT WALL SCONCE CENTERED VERTICALLY BETWEEN TOP OF ADJACENT BASEMENT LEVEL CLASSROOM WINDOW AND BOTTOM OF CAST STONE BAND DIRECTLY ABOVE IT; AT APPROXIMATELY 14'-2 1/2" AFG.
5. MOUNT WALL SCONCE AT SAME ELEVATION AS 'OC-50' FIXTURE OUTSIDE OF STAIR B2-0.
6. TYPICAL LAYOUT. APPLIES FOR ALL GREENHOUSES.
7. PROVIDE FIXTURE WITH INTERNAL HEXCELL LOUVER ACCESSORY.
8. NORMAL/EMERGENCY LIGHTING TO BE CONTROLLED WITH NORMAL LIGHTING IN THIS AREA. CONTROL ALL LIGHTING SIMILAR TO A STORAGE ROOM. PROVIDE BODINE GTD-20A CONTROL UNIT FOR CIRCUIT INTERFACE.
9. CONNECT LAST 4' OF FIXTURE ROW TO NORMAL/EMERGENCY CIRCUIT INDICATED AND PROVIDE BODINE GTD-20A CONTROL UNIT FOR CIRCUIT INTERFACE. REMAINDER OF FIXTURE ROW SHALL BE CONNECTED TO NORMAL POWER CIRCUIT INDICATED.
10. INSTALL ALL NECESSARY CONTROL AND POWER WIRING BETWEEN ROOM CONTROL SYSTEM AND LOCAL FIXTURE GTD DEVICE TO ALLOW CONTROL OF NORMAL EMERGENCY FIXTURES WITH LOCAL ZONING REQUIREMENTS.
11. THIS 'OC-50' FIXTURE SHALL HAVE TYPE 3 OPTICAL DISTRIBUTION.
12. THIS 'OC-50' FIXTURE SHALL HAVE TYPE 4 OPTICAL DISTRIBUTION.
13. PROVIDE WET/DAMP LOCATION SENSORS FOR INSTALLATION IN GREENHOUSE.



1 / E 113 NEW WORK BASEMENT FLOOR PLAN B - LIGHTING
1/8" = 1'-0"



2 / E 113 NEW WORK GREENHOUSE PLAN - LIGHTING (6)
1/4" = 1'-0"



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LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED
DRAWING NAME
NEW WORK BASEMENT PLAN B - LIGHTING

E 113

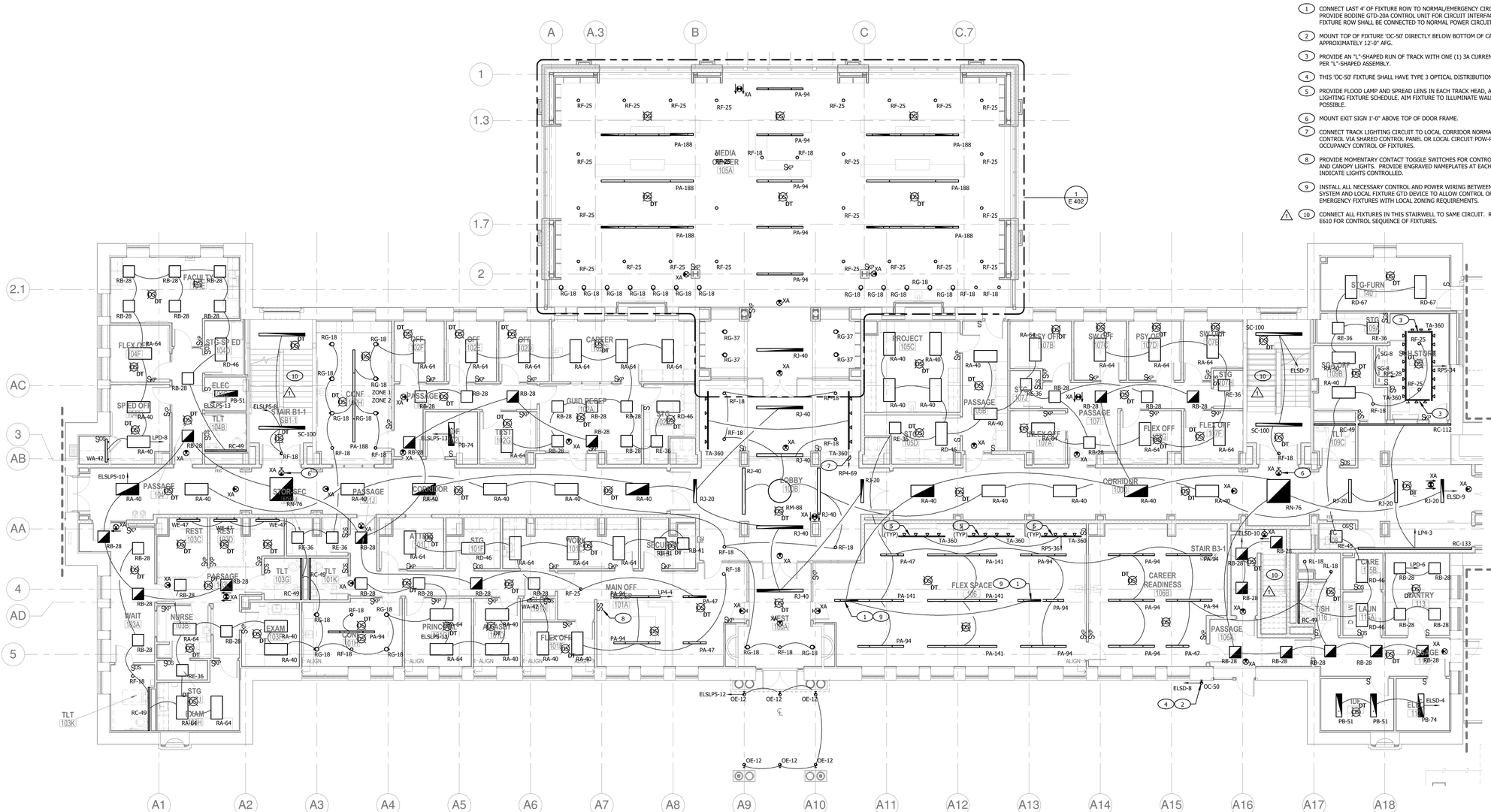
7/26/2016 8:41:50 AM

GENERAL NOTES:

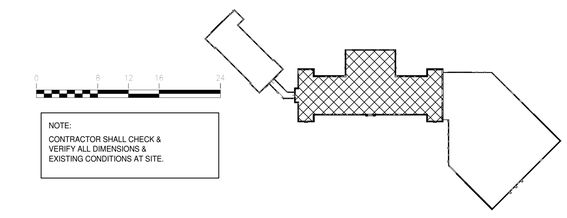
A. UNLESS NOTED OTHERWISE, PROVIDE BODINE GTD (OR APPROVED EQUAL) FOR CONNECTION OF EMERGENCY CIRCUIT TO NORMAL/EMERGENCY FIXTURES. REFER TO DRAWING E 501 FOR TYPICAL INSTALLATION DETAIL.
B. OCCUPANCY SENSOR/DAYLIGHT SENSOR LOCATIONS ARE DIAGRAMMATIC AND ARE SHOWN TO INDICATE AREAS TO BE COVERED ONLY. PROVIDE QUANTITIES/LOCATIONS AND RELATED APPURTENANCES AS REQUIRED FOR COVERAGE AS DEFINED IN THE SPECIFICATIONS.
C. CONNECT EXIT SIGNS UNSWITCHED TO NEAREST NORMAL/EMERGENCY CIRCUIT WITH 2 #12 & 1 #12 GROUND IN 3/4" CONDUIT.
D. REFER TO DRAWING E401 FOR A TYPICAL CLASSROOM LAYOUT AND CONTROL DETAIL.

KEYED NOTES:

1. CONNECT LAST 4' OF FIXTURE ROW TO NORMAL/EMERGENCY CIRCUIT INDICATED AND PROVIDE BODINE GTD-20A CONTROL UNIT FOR CIRCUIT INTERFACE. REMAINDER OF FIXTURE ROW SHALL BE CONNECTED TO NORMAL POWER CIRCUIT INDICATED.
2. MOUNT TOP OF FIXTURE 'OC-50' DIRECTLY BELOW BOTTOM OF CAST STONE BAND; AT APPROXIMATELY 12'-0" AFG.
3. PROVIDE AN "L"-SHAPED RUN OF TRACK WITH ONE (1) 3A CURRENT LIMITING DEVICE PER "L"-SHAPED ASSEMBLY.
4. THIS 'OC-50' FIXTURE SHALL HAVE TYPE 3 OPTICAL DISTRIBUTION.
5. PROVIDE FLOOD LAMP AND SPREAD LENS IN EACH TRACK HEAD, AS SPECIFIED IN LIGHTING FIXTURE SCHEDULE. AIM FIXTURE TO ILLUMINATE WALL AS EVENLY AS POSSIBLE.
6. MOUNT EXIT SIGN 1'-0" ABOVE TOP OF DOOR FRAME.
7. CONNECT TRACK LIGHTING CIRCUIT TO LOCAL CORRIDOR NORMAL LIGHTING CONTROL VIA SHARED CONTROL PANEL OR LOCAL CIRCUIT POW-PAK TO PROVIDE OCCUPANCY CONTROL OF FIXTURES.
8. PROVIDE MOMENTARY CONTACT TOGGLE SWITCHES FOR CONTROL OF CUPOLA LIGHTS AND CANOPY LIGHTS. PROVIDE ENGRAVED NAMEPLATES AT EACH SWITCH TO INDICATE LIGHTS CONTROLLED.
9. INSTALL ALL NECESSARY CONTROL AND POWER WIRING BETWEEN ROOM CONTROL SYSTEM AND LOCAL FIXTURE GTD DEVICE TO ALLOW CONTROL OF NORMAL EMERGENCY FIXTURES WITH LOCAL ZONING REQUIREMENTS.
10. CONNECT ALL FIXTURES IN THIS STAIRWELL TO SAME CIRCUIT. REFER TO DRAWING E610 FOR CONTROL SEQUENCE OF FIXTURES.



1 / E 114 NEW WORK FIRST FLOOR PLAN B - LIGHTING
1/8" = 1'-0"



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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	05/06/16	ADDENDUM #5

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK FIRST FLOOR PLAN B - LIGHTING

E 114

7/26/2016 8:42:08 AM

GENERAL NOTES:

A. UNLESS NOTED OTHERWISE, PROVIDE BODINE GTD (OR APPROVED EQUAL) FOR CONNECTION OF EMERGENCY CIRCUIT TO NORMAL/EMERGENCY FIXTURES. REFER TO DRAWING E 501 FOR TYPICAL INSTALLATION DETAIL.
B. OCCUPANCY SENSOR/DAYLIGHT SENSOR LOCATIONS ARE DIAGRAMMATIC AND ARE SHOWN TO INDICATE AREAS TO BE COVERED ONLY. PROVIDE QUANTITIES/LOCATIONS AND RELATED APPURTENANCES AS REQUIRED FOR COVERAGE AS DEFINED IN THE SPECIFICATIONS.
C. CONNECT EXIT SIGNS UNSWITCHED TO NEAREST NORMAL/EMERGENCY CIRCUIT WITH 2 #12 & 1 #12 GROUND IN 3/4" CONDUIT.
D. REFER TO DRAWING E401 FOR A TYPICAL CLASSROOM LAYOUT AND CONTROL DETAIL.

KEYED NOTES:

1. MOUNT FIXTURE TYPE 'WA-42' ON WALL OF ELEVATOR HOISTWAY, AS HIGH AS POSSIBLE WHILE STILL MAINTAINING FULL ACCESSIBILITY TO FIXTURE. COORDINATE WITH SAFETY BEAM(S) AT TOP OF HOISTWAY, AND ALL OTHER TRADES.
2. PROVIDE FIXTURE WITH INTERNAL HEXCELL LOUVER ACCESSORY.
3. MOUNT WALL SCONCE AT SAME ELEVATION AS 'OC-50' FIXTURES MOUNTED ON EXTERIOR WALL OF DINING 141.
4. MOUNT WALL SCONCE 'OC-50' CENTERED VERTICALLY BETWEEN THE TWO HIGHEST CAST STONE BANDS ON THIS FACADE; AT APPROXIMATELY 14'-6" ABOVE FLOOR LEVEL OF FIRST FLOOR.
5. MOUNT FIXTURE CENTERED VERTICALLY IN CAST STONE BAND; AT APPROXIMATELY 11'-10" ABOVE FLOOR LEVEL OF FIRST FLOOR.
6. MOUNT FIXTURE CENTERED VERTICALLY IN UPPER BRICK BAND OF THIS FACADE; AT APPROXIMATELY 18'-0 ABOVE FLOOR LEVEL OF FIRST FLOOR.
7. LIGHTING INSIDE OF WALK-IN FREEZER AND COOLER UNITS SHALL BE PROVIDED BY FREEZER/COOLER VENDOR. ELECTRICAL CONTRACTOR SHALL PROVIDE POWER TO UNITS.
8. PROVIDE WIRE GUARD OVER EXIT SIGN.
9. DISPLAY CASE LIGHTING TO BE PROVIDED BY CASEWORK VENDOR. ELECTRICAL CONTRACTOR SHALL PROVIDE POWER AND CONNECTION TO LIGHT FIXTURES. CONNECT FIXTURES TO NORMAL POWER CIRCUIT FEEDING THE NEAREST CORRIDOR LIGHT FIXTURE.
10. MOUNT EXIT SIGN 1'-0" ABOVE TOP OF DOOR FRAME.
11. MATCH MOUNTING HEIGHT OF EXIT SIGNS ON OPPOSITE SIDE OF GYMNASIUM.
12. MAIN ENTRY LIGHTING CONTROL STATION.
13. NORMAL/EMERGENCY LIGHTING FIXTURES IN THIS AREA TO BE CONTROLLED WITH ADJACENT NORMAL LIGHTING FIXTURES WITHIN SAME CONTROL ZONE OF SAME AREA. PROVIDE BODINE GTD-20A CONTROL UNIT FOR CIRCUIT INTERFACE.
14. FOR ALL REQUIRED OCCUPANY SENSOR IN GYMNASIUM AREA, UTILIZE HIGH BAY PASSIVE INFRARED STYLE UNITS FOR COMPLETE COVERAGE.
15. CONNECT ALL FIXTURES IN THIS STAIRWELL TO SAME CIRCUIT. REFER TO DRAWING E610 FOR CONTROL SEQUENCE OF FIXTURES.

1 / E 115 NEW WORK FIRST FLOOR PLAN AREA C - LIGHTING
1/8" = 1'-0"

0 8 12 16 24

NOTE:
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No.	DATE	DESCRIPTION
1	05/06/16	ADDENDUM #5

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK FIRST FLOOR PLAN C - LIGHTING

E 115

7/26/2016 8:42:27 AM

GENERAL NOTES:

A. UNLESS NOTED OTHERWISE, PROVIDE BODINE GTD (OR APPROVED EQUAL) FOR CONNECTION OF EMERGENCY CIRCUIT TO NORMAL/EMERGENCY FIXTURES. REFER TO DRAWING E 501 FOR TYPICAL INSTALLATION DETAIL.
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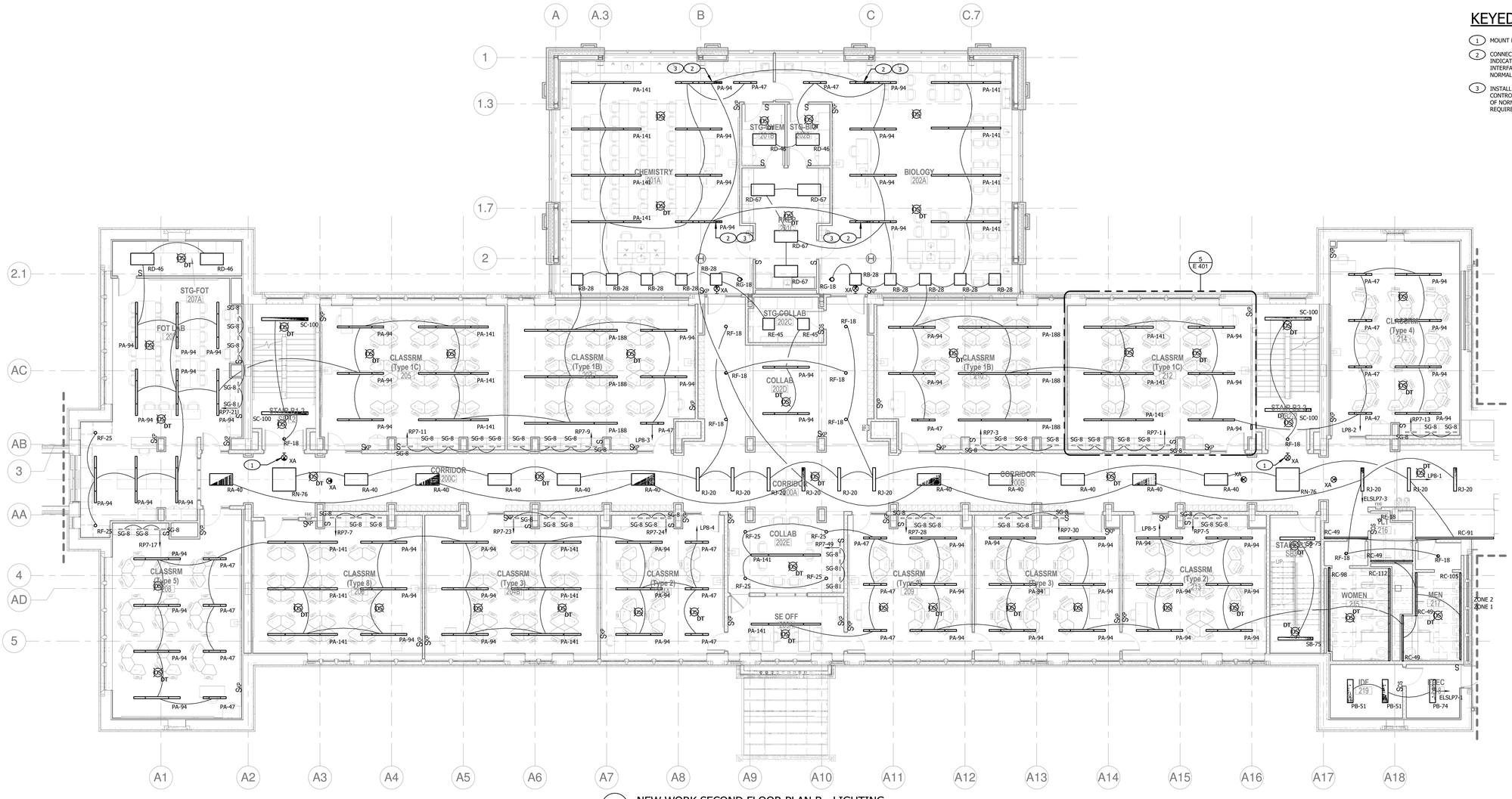
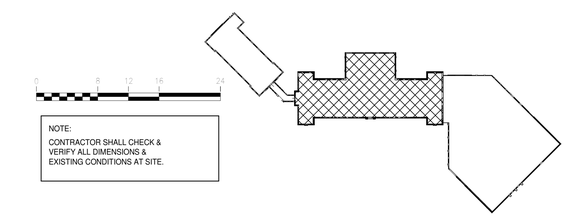
C. CONNECT EXIT SIGNS UNSWITCHED TO NEAREST NORMAL/EMERGENCY CIRCUIT WITH 2 #12 & 1 #12 GROUND IN 3/4" CONDUIT.
D. REFER TO DRAWING E401 FOR A TYPICAL CLASSROOM LAYOUT AND CONTROL DETAIL.

KEYED NOTES:

1. MOUNT EXIT SIGN 1'-0" ABOVE TOP OF DOOR FRAME.
2. CONNECT LAST 4' OF FIXTURE ROW TO NORMAL/EMERGENCY CIRCUIT INDICATED AND PROVIDE BODINE GTD-20A CONTROL UNIT FOR CIRCUIT INTERFACE. REMAINDER OF FIXTURE ROW SHALL BE CONNECTED TO NORMAL POWER CIRCUIT INDICATED.
3. INSTALL ALL NECESSARY CONTROL AND POWER WIRING BETWEEN ROOM CONTROL SYSTEM AND LOCAL FIXTURE GTD DEVICE TO ALLOW CONTROL OF NORMAL EMERGENCY FIXTURES WITH LOCAL ZONING REQUIREMENTS.



1 E 116 NEW WORK SECOND FLOOR PLAN B - LIGHTING
1/8" = 1'-0"



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EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME:
NEW WORK SECOND FLOOR PLAN B - LIGHTING

E 116

7/26/2016 8:48:00 AM

GENERAL NOTES:

A. UNLESS NOTED OTHERWISE, PROVIDE BODINE GTD (OR APPROVED EQUAL) FOR CONNECTION OF EMERGENCY CIRCUIT TO NORMAL/EMERGENCY FIXTURES. REFER TO DRAWING E 501 FOR TYPICAL INSTALLATION DETAIL.
B. OCCUPANCY SENSOR/DAYLIGHT SENSOR LOCATIONS ARE DIAGRAMMATIC AND ARE SHOWN TO INDICATE AREAS TO BE COVERED ONLY. PROVIDE QUANTITIES/LOCATIONS AND RELATED APPURTENANCES AS REQUIRED FOR COVERAGE AS DEFINED IN THE SPECIFICATIONS.
C. CONNECT EXIT SIGNS UNSWITCHED TO NEAREST NORMAL/EMERGENCY CIRCUIT WITH 2 #12 & 1 #12 GROUND IN 3/4" CONDUIT.
D. REFER TO DRAWING E401 FOR A TYPICAL CLASSROOM LAYOUT AND CONTROL DETAIL.

KEYED NOTES:

1. PROVIDE COMPLETE SYSTEM OF THEATRICAL LIGHTING AND CONTROLS EQUIPMENT, PER SPECIFICATION SECTION 265561. REFER TO DRAWINGS E217, E219, AND E503 FOR ADDITIONAL INFORMATION ON POWER DISTRIBUTION AND CONTROLS FOR THEATRICAL LIGHTING.
2. PIPE GRID, BY OTHERS. REFER TO ARCHITECTURAL DRAWINGS.
3. NOT USED.
4. MOUNT FIXTURE CENTERED IN WALL SECTION LOCATED BETWEEN SECOND AND THIRD FLOORS.
5. MOUNT THIS "WH-14" WALL SCONCE CENTERED IN WALL PANEL BESIDE WHITE BOARD; AT APPROXIMATE HEIGHT OF 13'-0" AFF.
6. REFER TO THIRD FLOOR LIGHTING PLAN, SHEET E119, FOR CEILING MOUNTED LIGHTS IN THIS ROOM.
7. CONNECT LAST 4' OF FIXTURE ROW TO NORMAL/EMERGENCY CIRCUIT INDICATED AND PROVIDE BODINE GTD-20A CONTROL UNIT FOR CIRCUIT INTERFACE. REMAINDER OF FIXTURE ROW SHALL BE CONNECTED TO NORMAL POWER CIRCUIT INDICATED.
8. INSTALL ALL NECESSARY CONTROL AND POWER WIRING BETWEEN ROOM CONTROL SYSTEM AND LOCAL FIXTURE GTD DEVICE TO ALLOW CONTROL OF NORMAL EMERGENCY FIXTURES WITH LOCAL ZONING REQUIREMENTS.
9. NORMAL/EMERGENCY LIGHTING FIXTURES IN THIS AREA TO BE CONTROLLED WITH ADJACENT NORMAL LIGHTING FIXTURES WITHIN SAME CONTROL ZONE OF SAME AREA. PROVIDE BODINE GTD20-A CONTROL UNIT FOR CIRCUIT INTERFACE.
10. DISPLAY CASE LIGHTING TO BE PROVIDED BY CASEWORK VENDOR. ELECTRICAL CONTRACTOR SHALL PROVIDE POWER AND CONNECTION TO LIGHT FIXTURES. CONNECT FIXTURES TO NORMAL POWER CIRCUIT FEEDING THE NEAREST CORRIDOR LIGHT FIXTURE.
11. MOUNT EXIT SIGN 1'-0" ABOVE TOP OF DOOR FRAME.
12. THEATER/DANCE 231 DIMMING CONTROL PANEL MAIN UNIT.
13. ALTERNATE ENTRY CONTROL UNITS.
14. PROVIDE SINGLE POLE TOGGLE SWITCH WITH PILOT LIGHT FOR CONTROL OF ALL TYPE WJ-9 FIXTURES. LABEL SWITCH PLATE WITH "RECORDING SIGNS" OR OTHER VERBIAGE, AS DIRECTED BY OWNER.

1 / E 117 NEW WORK SECOND FLOOR PLAN C - LIGHTING
1/8" = 1'-0"

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND FLOOR PLAN C - LIGHTING

E 117

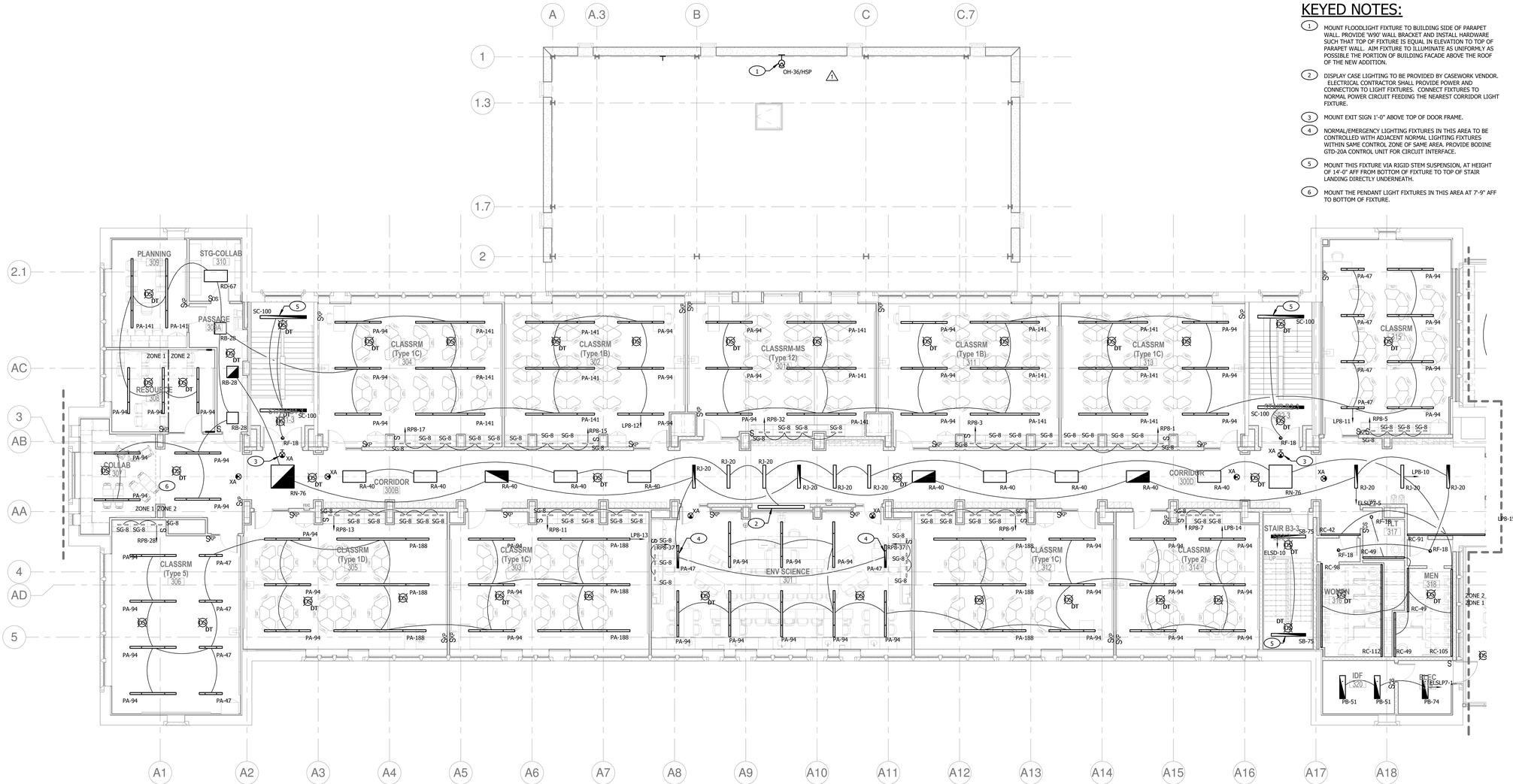
7/26/2016 8:48:18 AM

GENERAL NOTES:

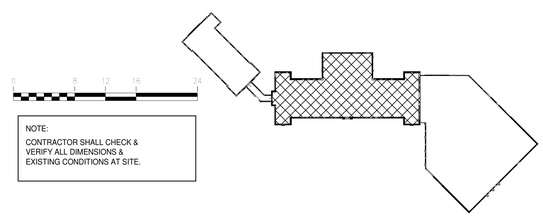
A. UNLESS NOTED OTHERWISE, PROVIDE BODINE GTD (OR APPROVED EQUAL) FOR CONNECTION OF EMERGENCY CIRCUIT TO NORMAL/EMERGENCY FIXTURES. REFER TO DRAWING E 501 FOR TYPICAL INSTALLATION DETAIL.
B. OCCUPANCY SENSOR/DAYLIGHT SENSOR LOCATIONS ARE DIAGRAMMATIC AND ARE SHOWN TO INDICATE AREAS TO BE COVERED ONLY. PROVIDE QUANTITIES/LOCATIONS AND RELATED APPURTENANCES AS REQUIRED FOR COVERAGE AS DEFINED IN THE SPECIFICATIONS.
C. CONNECT EXIT SIGNS UNSWITCHED TO NEAREST NORMAL/EMERGENCY CIRCUIT WITH 2 #12 & 1 #12 GROUND IN 3/4" CONDUIT.
D. REFER TO DRAWING E401 FOR A TYPICAL CLASSROOM LAYOUT AND CONTROL DETAIL.

KEYED NOTES:

1. MOUNT FLOODLIGHT FIXTURE TO BUILDING SIDE OF PARAPET WALL. PROVIDE 'W90' WALL BRACKET AND INSTALL HARDWARE SUCH THAT TOP OF FIXTURE IS EQUAL IN ELEVATION TO TOP OF PARAPET WALL. AIM FIXTURE TO ILLUMINATE AS UNIFORMLY AS POSSIBLE THE PORTION OF BUILDING FACADE ABOVE THE ROOF OF THE NEW ADDITION.
2. DISPLAY CASE LIGHTING TO BE PROVIDED BY CASEWORK VENDOR. ELECTRICAL CONTRACTOR SHALL PROVIDE POWER AND CONNECTION TO LIGHT FIXTURES. CONNECT FIXTURES TO NORMAL POWER CIRCUIT FEEDING THE NEAREST CORRIDOR LIGHT FIXTURE.
3. MOUNT EXIT SIGN 1'-0" ABOVE TOP OF DOOR FRAME.
4. NORMAL/EMERGENCY LIGHTING FIXTURES IN THIS AREA TO BE CONTROLLED WITH ADJACENT NORMAL LIGHTING FIXTURES WITHIN SAME CONTROL ZONE OF SAME AREA. PROVIDE BODINE GTD-20A CONTROL UNIT FOR CIRCUIT INTERFACE.
5. MOUNT THIS FIXTURE VIA RIGID STEM SUSPENSION, AT HEIGHT OF 14'-0" AFF FROM BOTTOM OF FIXTURE TO TOP OF STAIR LANDING DIRECTLY UNDERNEATH.
6. MOUNT THE PENDANT LIGHT FIXTURES IN THIS AREA AT 7'-9" AFF TO BOTTOM OF FIXTURE.



1 / E 118 NEW WORK THIRD FLOOR PLAN B - LIGHTING
1/8" = 1'-0"



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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

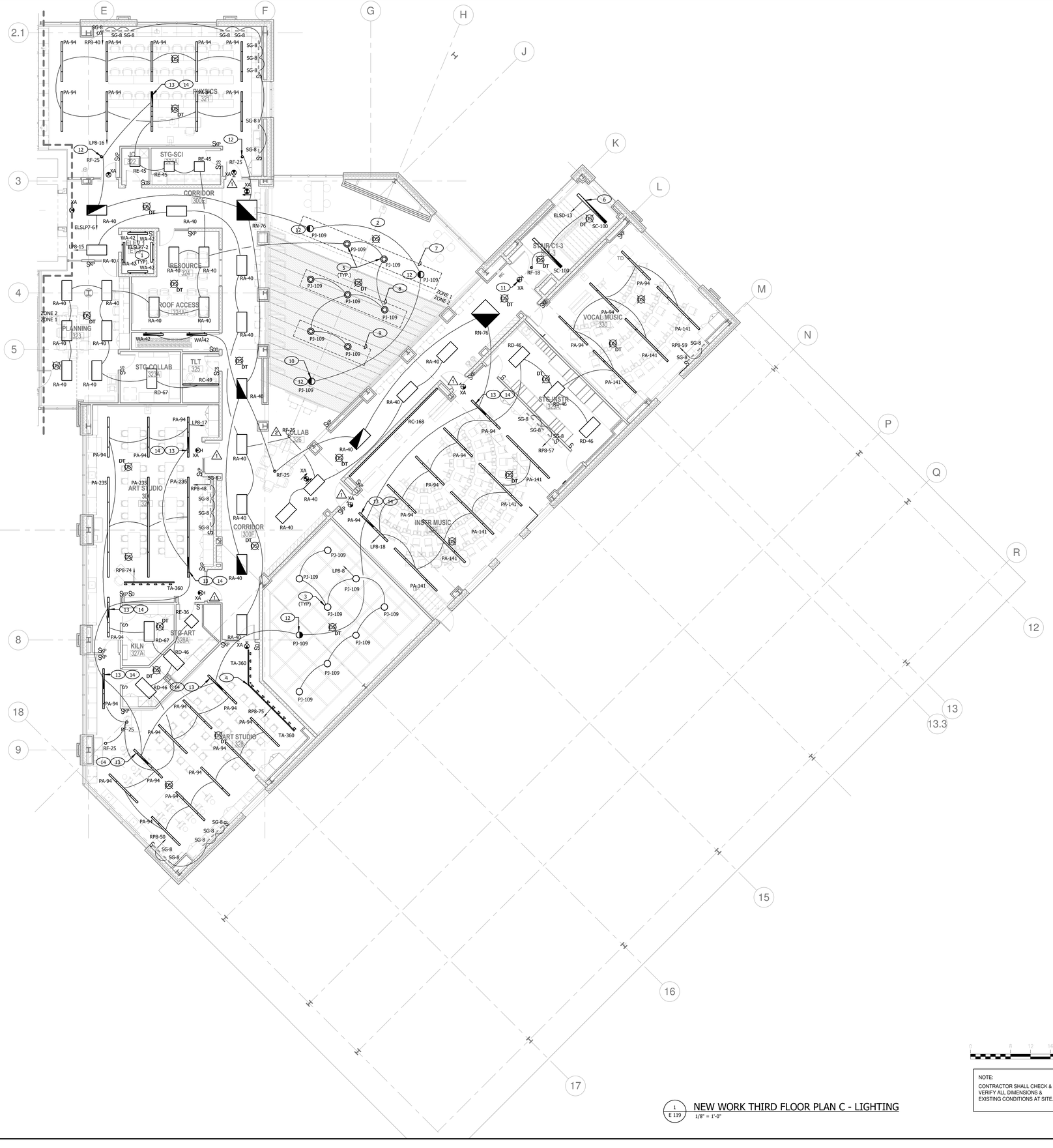
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK THIRD FLOOR PLAN B - LIGHTING

E 118

7/26/2016 8:48:36 AM



GENERAL NOTES:

A. UNLESS NOTED OTHERWISE, PROVIDE BODINE GTD (OR APPROVED EQUAL) FOR CONNECTION OF EMERGENCY CIRCUIT TO NORMAL/EMERGENCY FIXTURES. REFER TO DRAWING E 501 FOR TYPICAL INSTALLATION DETAIL.
B. OCCUPANCY SENSOR/DAYLIGHT SENSOR LOCATIONS ARE DIAGRAMMATIC AND ARE SHOWN TO INDICATE AREAS TO BE COVERED ONLY. PROVIDE QUANTITIES/LOCATIONS AND RELATED APPURTENANCES AS REQUIRED FOR COVERAGE AS DEFINED IN THE SPECIFICATIONS.
C. CONNECT EXIT SIGNS UNSWITCHED TO NEAREST NORMAL/EMERGENCY CIRCUIT WITH 2 #12 & 1 #12 GROUND IN 3/4" CONDUIT.
D. REFER TO DRAWING E401 FOR A TYPICAL CLASSROOM LAYOUT AND CONTROL DETAIL.

KEYED NOTES:

1. MOUNT FIXTURE TYPE 'WA-42' ON WALL OF ELEVATOR HOISTWWAY, AS HIGH AS POSSIBLE WHILE STILL MAINTAINING FULL ACCESSIBILITY TO FIXTURE. COORDINATE WITH SAFETY BEAM(S) AT TOP OF HOISTWAY, AND ALL OTHER TRADES.
2. REFER TO SECOND FLOOR LIGHTING PLAN, SHEET E117, FOR WALL MOUNTED LIGHTS IN THIS ROOM.
3. MOUNT BOTTOM OF FIXTURE 1'-0" HIGHER THAN BOTTOM OF THEATRICAL PIPE GRID; AT APPROXIMATELY 13'-6" AFF. COORDINATE FIXTURE LOCATION WITH THEATRICAL PIPE GRID, SUCH THAT EACH FIXTURE IS CENTERED WITHIN A SQUARE OF THE GRID.
4. PROVIDE FLEXIBLE TRACK JOINER TO CONNECT TWO STRAIGHT RUNS OF TRACK. EACH RUN OF TRACK SHALL BE INSTALLED PARALLEL TO RESPECTIVE WALL ADJACENT TO IT. PROVIDE ONE (1) 3A CURRENT LIMITING DEVICE FOR ENTIRE ASSEMBLY OF BOTH RUNS.
5. MOUNT "PJ-109" FIXTURES IN THIS ROOM CENTERED BETWEEN ADJACENT ROWS OF FLOATING CEILING PANELS. SUPPORT FIXTURES FROM STRUCTURE ABOVE CEILING SYSTEM.
6. MOUNT THIS FIXTURE VIA RIGID STEM SUSPENSION, AT HEIGHT OF 13'-0" AFF FROM BOTTOM OF FIXTURE TO TOP OF STAIR LANDING DIRECTLY UNDERNEATH.
7. MOUNT ROW OF FIXTURES AT FRONT OF ROOM SUCH THAT BOTTOM OF FIXTURE IS AT 14'-0" AFF AT SECOND FLOOR LEVEL.
8. MOUNT SECOND ROW OF FIXTURES FROM FRONT OF ROOM SUCH THAT BOTTOM OF FIXTURE IS AT 13'-0" AFF ABOVE STAIR DIRECTLY BENEATH IT.
9. MOUNT THIRD ROW OF FIXTURES FROM FRONT OF ROOM SUCH THAT BOTTOM OF FIXTURE IS AT 12'-1" AFF ABOVE STAIR DIRECTLY BENEATH IT.
10. MOUNT THIS FIXTURE AS HIGH AS POSSIBLE, WHILE KEEPING ENTIRE FIXTURE HOUSING BELOW ADJACENT FLOATING CEILING PANELS.
11. MOUNT EXIT SIGN 1'-0" ABOVE TOP OF DOOR FRAME.
12. NORMAL/EMERGENCY LIGHTING FIXTURES IN THIS AREA TO BE CONTROLLED WITH ADJACENT NORMAL LIGHTING FIXTURES WITHIN SAME CONTROL ZONE OF SAME AREA. PROVIDE BODINE GT20-A CONTROL UNIT FOR CIRCUIT INTERFACE.
13. CONNECT LAST 4' OF FIXTURE ROW TO NORMAL/EMERGENCY CIRCUIT INDICATED AND PROVIDE BODINE GTD-20A CONTROL UNIT FOR CIRCUIT INTERFACE. REMAINDER OF FIXTURE ROW SHALL BE CONNECTED TO NORMAL POWER CIRCUIT INDICATED.
14. INSTALL ALL NECESSARY CONTROL AND POWER WIRING BETWEEN ROOM CONTROL SYSTEM AND LOCAL FIXTURE GTD DEVICE TO ALLOW CONTROL OF NORMAL EMERGENCY FIXTURES WITH LOCAL ZONING REQUIREMENTS.

1 / E 119 NEW WORK THIRD FLOOR PLAN C - LIGHTING
1/8" = 1'-0"

0 8 12 16 24

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No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2
2	05/06/16	ADDENDUM #5

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

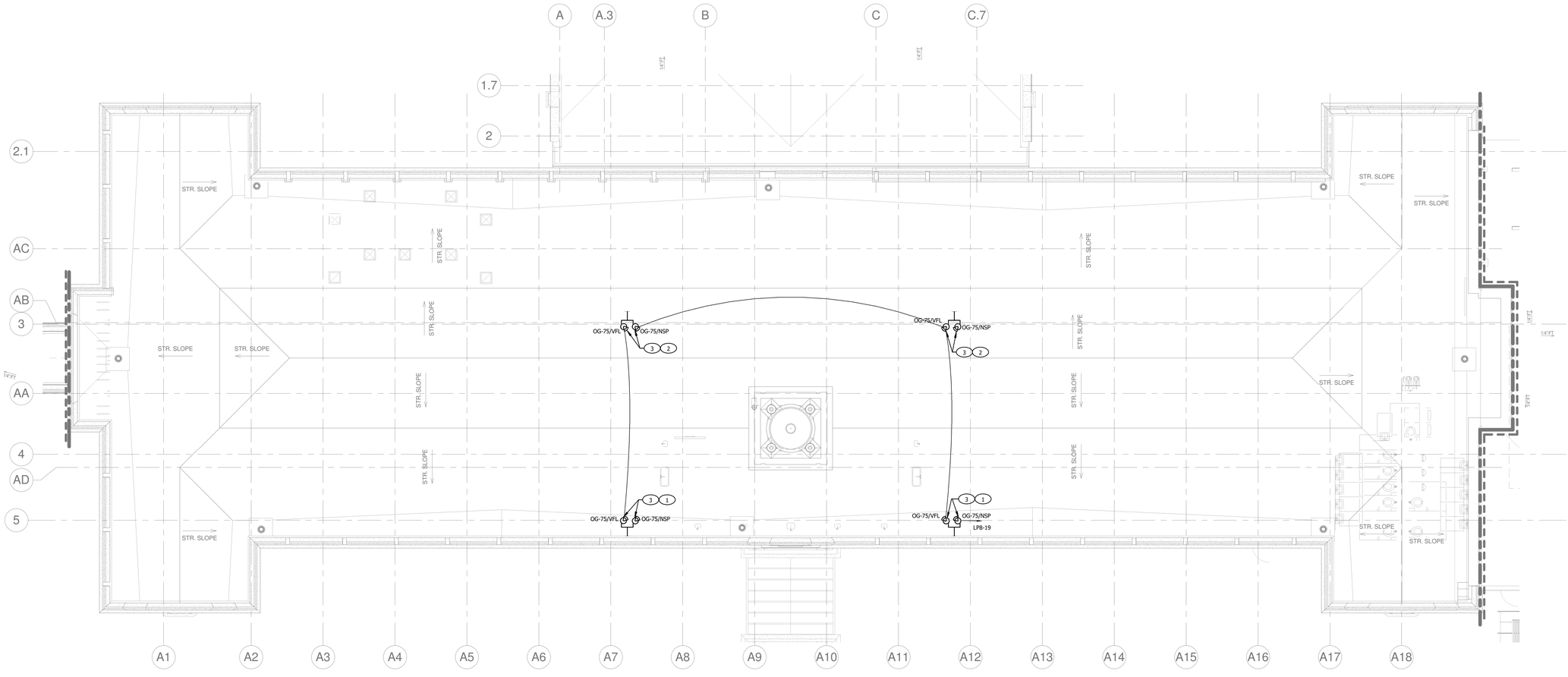
DRAWING NAME
NEW WORK THIRD FLOOR PLAN C - LIGHTING

E 119

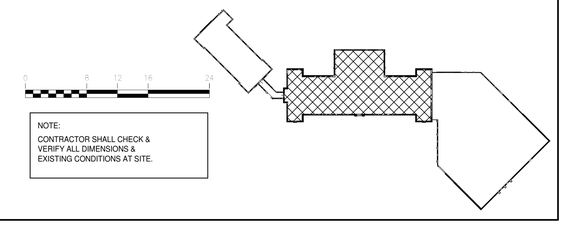
7/26/2016 8:48:54 AM

KEYED NOTES:

1. MOUNT FIXTURES ON PARAPET WALL OF ROOF. PROVIDE 'WMB' WALL MOUNT BRACKET AND 'TAB' TWIN ARM BRACKET, AS SPECIFIED IN LIGHTING FIXTURE SCHEDULE. INSTALL MOUNTING HARDWARE SUCH THAT TOP OF FIXTURES ARE EQUAL IN ELEVATION TO TOP OF PARAPET WALL.
2. MOUNT FIXTURES ON TOP OF ROOF. PROVIDE 'SM' STANCHION MOUNTING HARDWARE AND 'TAB' TWIN ARM BRACKET, AS SPECIFIED IN LIGHTING FIXTURE SCHEDULE. LOCATE STANCHION SO THAT THIS SET OF FLOODLIGHTS IS EQUIDISTANT FROM CENTERLINE OF CUPOLA, AS COMPARED TO FLOODLIGHTS MOUNTED ON SOUTH PARAPET WALL. STANCHION SHALL BE LOCATED ON FLATTEST PART OF ROOF, AND SHALL BE SECURED TO ROOF STRUCTURE. PROVIDE WEATHERPROOFING TO MAKE ROOF PENETRATION WEATHERTIGHT.
3. AIM FIXTURES TO ILLUMINATE AS UNIFORMLY AS POSSIBLE THE CUPOLA ON TOP OF THE ROOF. SPOTLIGHT FIXTURE SHALL BE AIMED TOWARDS DOME AT TOP; FLOODLIGHT FIXTURE SHALL BE AIMED TOWARDS CUPOLA STRUCTURE THAT IS BELOW DOME AND ABOVE TOP OF PARAPET WALL OF ROOF.



1 / E 120 NEW WORK ROOF PLAN B - LIGHTING
1/8" = 1'-0"



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7/26/2016 8:49:29 AM

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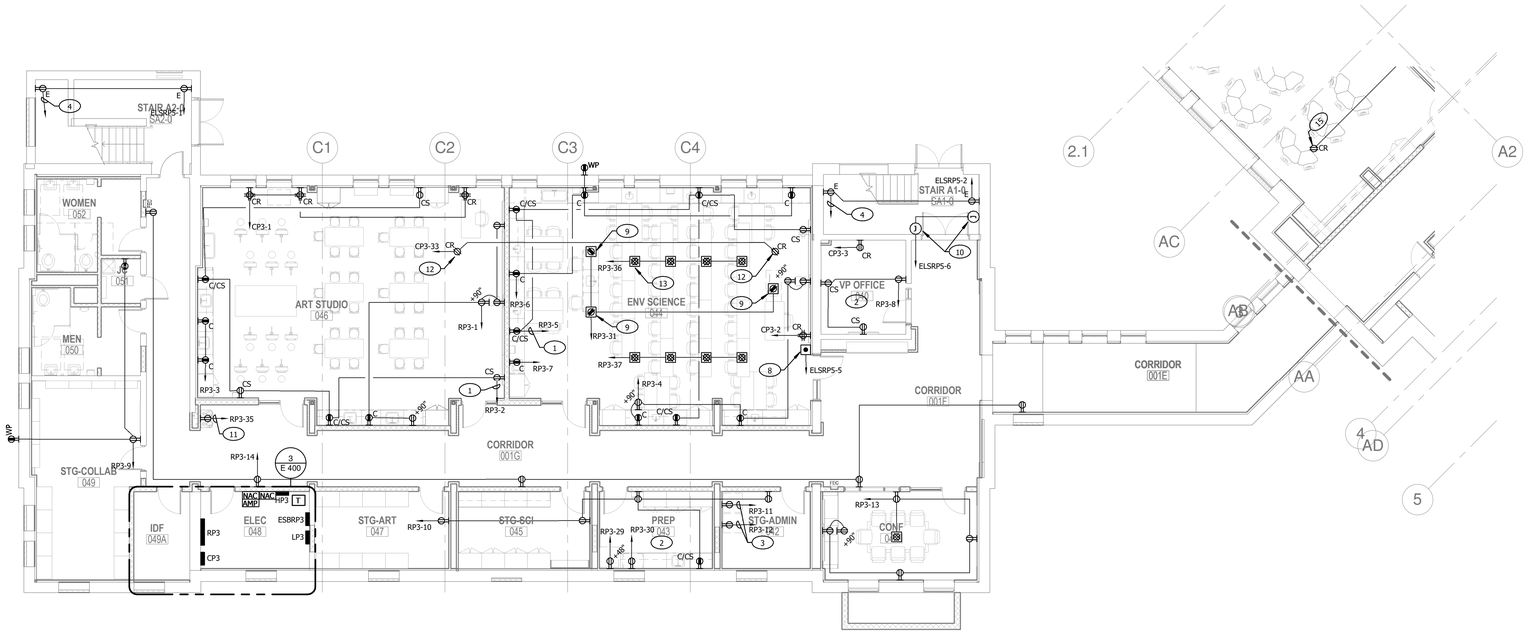
No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

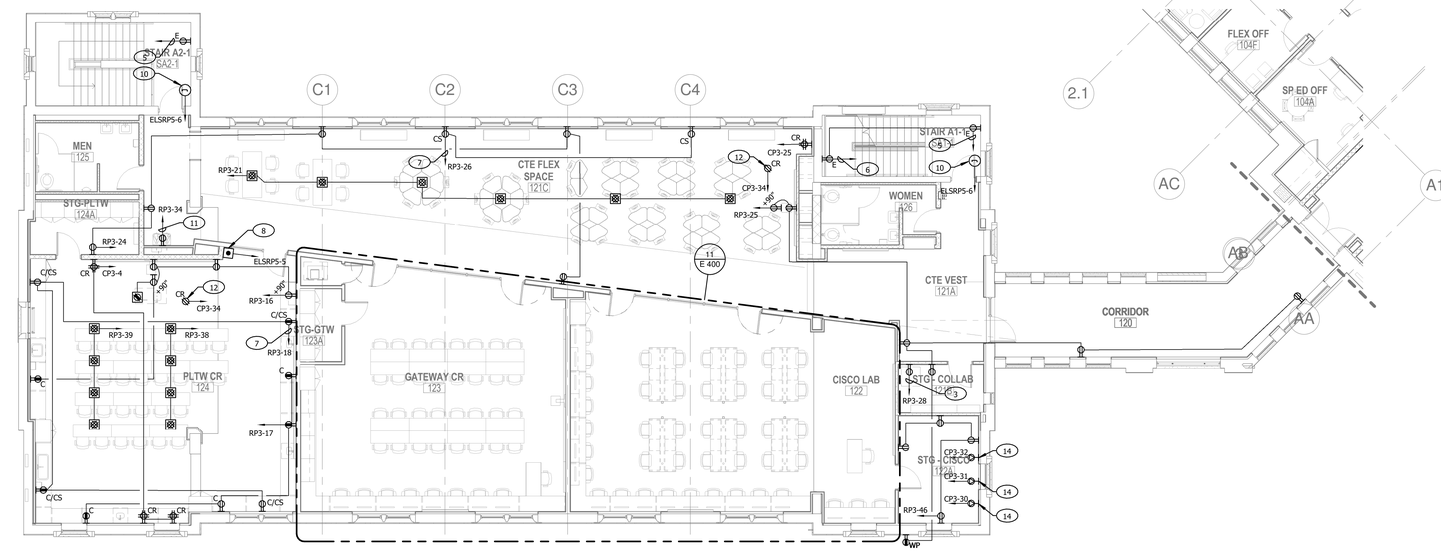
DRAWING NAME
NEW WORK ROOF PLAN B - LIGHTING

E 120



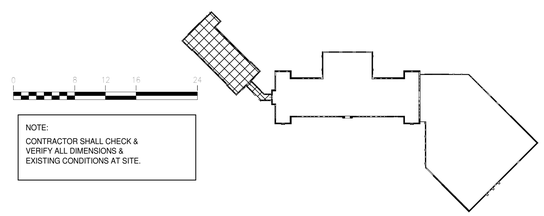
1 E 211 NEW WORK BASEMENT FLOOR PLAN A - POWER

1/8" = 1'-0"



2 E 211 NEW WORK FIRST FLOOR PLAN A - POWER

1/8" = 1'-0"



NOTE:
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GENERAL NOTES:

A. FOR DEVICES BOXES SHOWN AS BEING MOUNTED BACK TO BACK IN A STUD WALL, OFFSET ONE BOX TO BE IN THE ADJACENT STUD SPACE. OUTLET BOXES IN ADJACENT ROOMS SHALL NOT BE INSTALLED SIDE BY SIDE IN THE SAME STUD SPACE.

B. FOR COUNTERTOP RECEPTACLES, CONFIRM REACH DISTANCE FROM EDGE OF COUNTERTOP TO FACE OF DEVICE DOES NOT EXCEED 24". IF DEVICE FACE EXCEEDS 24" REACH LIMIT, PROVIDE BOX EXTENSION TO BRING FACE TO 24" FROM EDGE OF COUNTERTOP.

KEYED NOTES:

1. EXTEND CIRCUIT THROUGH ROOM LIGHTING CONTROLLER IN ROOM 044. REFER TO DRAWING E-501 FOR DETAILS OR CIRCUIT OPERATION AND CONTROL.
2. FOR RECEPTACLES INDICATED AS CONTROLLED/SWITCHED, ROUTE RECEPTACLE CIRCUIT THROUGH ASSOCIATED ROOM LIGHTING CONTROLLER TO PROVIDE OCCUPANCY SENSOR CONTROL OF RECEPTACLES. REFER TO DRAWING E-501 FOR DETAILS OF CIRCUIT OPERATION AND CONTROL.
3. RECEPTACLE FOR COW (COMPUTERS ON WHEELS) CABINET. COORDINATE FINAL LOCATION WITH EQUIPMENT IN THE FIELD.
4. REFER TO FIRST FLOOR PLAN ON THIS DRAWING FOR CONTINUATION OF CIRCUIT.
5. REFER TO GROUND FLOOR PLAN ON THIS DRAWING FOR CONTINUATION OF CIRCUIT.
6. REFER TO DRAWING E-212 FOR CONTINUATION OF CIRCUIT.
7. EXTEND CIRCUIT THROUGH ROOM LIGHTING CONTROLLER IN ROOM 121. REFER TO DRAWING E-501 FOR DETAILS OR CIRCUIT OPERATION AND CONTROL.
8. PROVIDE MUSHROOM TYPE, KEYED RESET (STI 2000 SERIES OR EQUAL) EMERGENCY SHUT-OFF SWITCH FOR CONTROL OF GAS SOLENOID VALVE. PROVIDE FINAL CONNECTION TO VALVE AS NECESSARY. MOUNT AT 48" AFF.
9. PROVIDE FLUSH MOUNTED DUPLEX RECEPTACLE. SAW CUT EXISTING FLOOR AND EXTEND 3/4" CONDUIT TO NEAREST PARTITION WALL AND STUB UP ABOVE CEILING. PROVIDE MINIMUM 2" CONCRETE COVER ON NEW CONDUIT.
10. POWER CONNECTION TO DOOR MAGNETIC HOLD OPEN. COORDINATE FINAL LOCATION IN THE FIELD.
11. MOUNT RECEPTACLE BEHIND ACCESSIBLE PANEL ON OR ADJACENT TO ELECTRIC WATER COOLER CHILLER UNIT. EXTEND CIRCUIT THROUGH ELECTRICAL ROOM LIGHTING CONTROL UNIT FOR TIMECLOCK CONTROL OF CIRCUIT.
12. PROVIDE TWO DUPLEX RECEPTACLES IN CEILING MOUNTED A/V CABINET. COORDINATE FINAL LOCATION WITH EQUIPMENT LOCATION IN THE FIELD.
13. PROVIDE FLUSH MOUNTED DOUBLE DUPLEX RECEPTACLE. SAW CUT EXISTING FLOOR AND EXTEND 3/4" CONDUIT TO NEAREST PARTITION WALL AND STUB UP ABOVE CEILING. PROVIDE MINIMUM 2" CONCRETE COVER ON NEW CONDUIT. TYPICAL.
14. PROVIDE NEMA L5-30 RECEPTACLES FOR ROOM EQUIPMENT. COORDINATE FINAL LOCATION WITH SUPPLIED EQUIPMENT AND RACK LAYOUT IN FIELD.

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No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK BASEMENT & FIRST FLOOR PLAN A - POWER

E 211

7/26/2016 8:49:46 AM

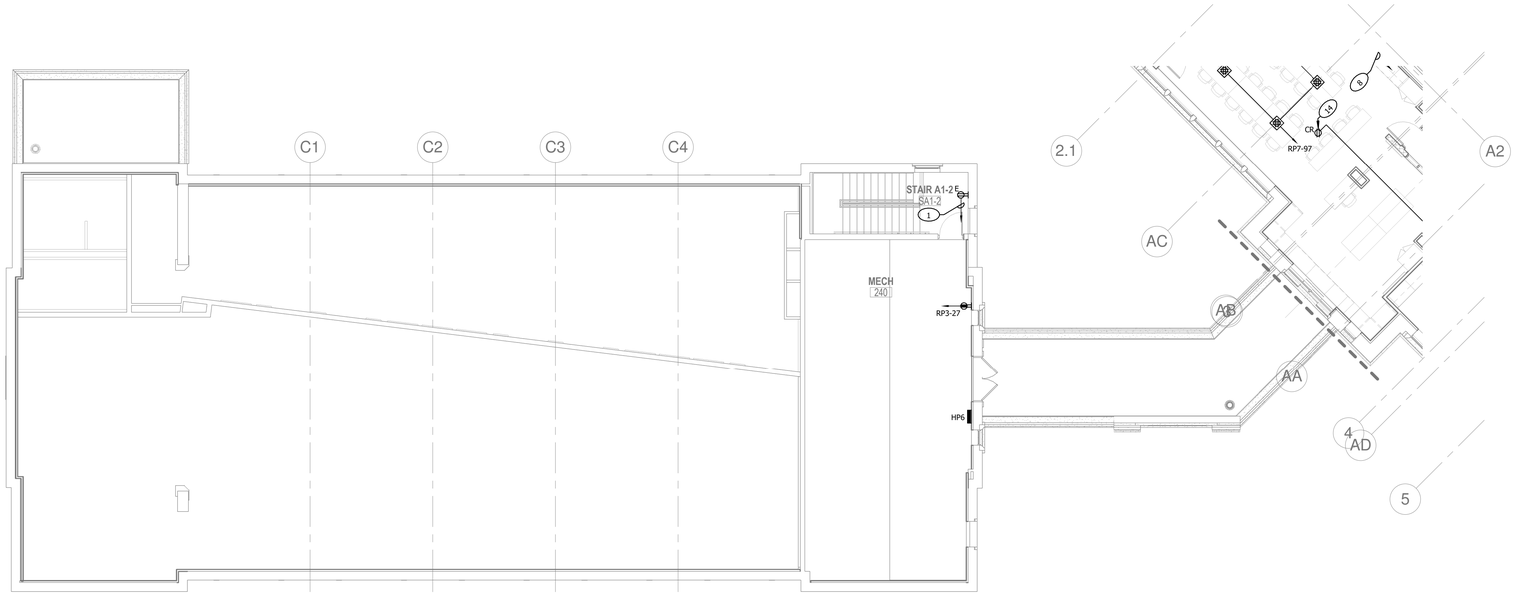
GENERAL NOTES:

A. PROVIDE LIGHTNING PROTECTION SYSTEM FOR BUILDING, INCLUDING ALL ROOFTOP MOUNTED MECHANICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR DETAILS AND SYSTEM REQUIREMENTS.

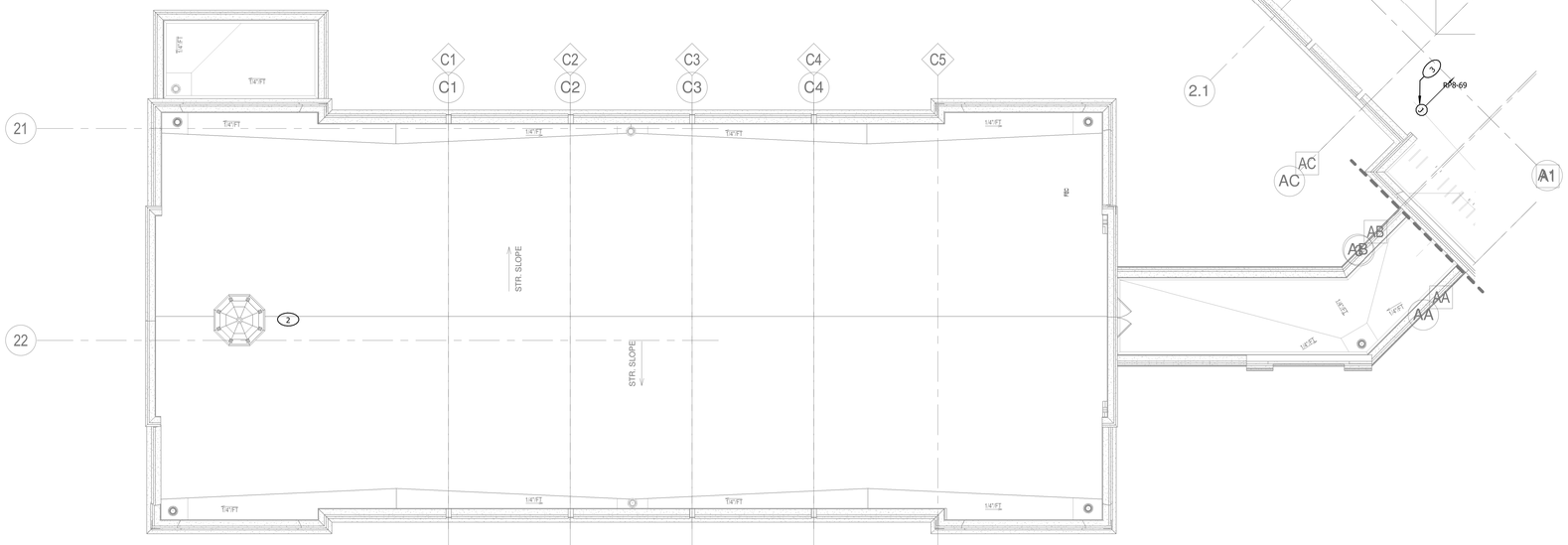
KEYED NOTES:

(1) REFER TO DRAWING E-211 FOR CONTINUATION OF CIRCUIT.

(2) LIGHTNING PROTECTION SYSTEM SHALL INCLUDE FULL COVERAGE OF ARCHITECTURAL CUPOLA IN THIS GENERAL LOCATION. REFER TO ARCHITECTURAL ELEVATIONS FOR CUPOLA DETAILS.



1 / E 212 NEW WORK SECOND FLOOR PLAN A - POWER
1/8" = 1'-0"



2 / E 212 NEW WORK ROOF PLAN A - POWER
1/8" = 1'-0"

0 8 12 16 24

NOTE:
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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

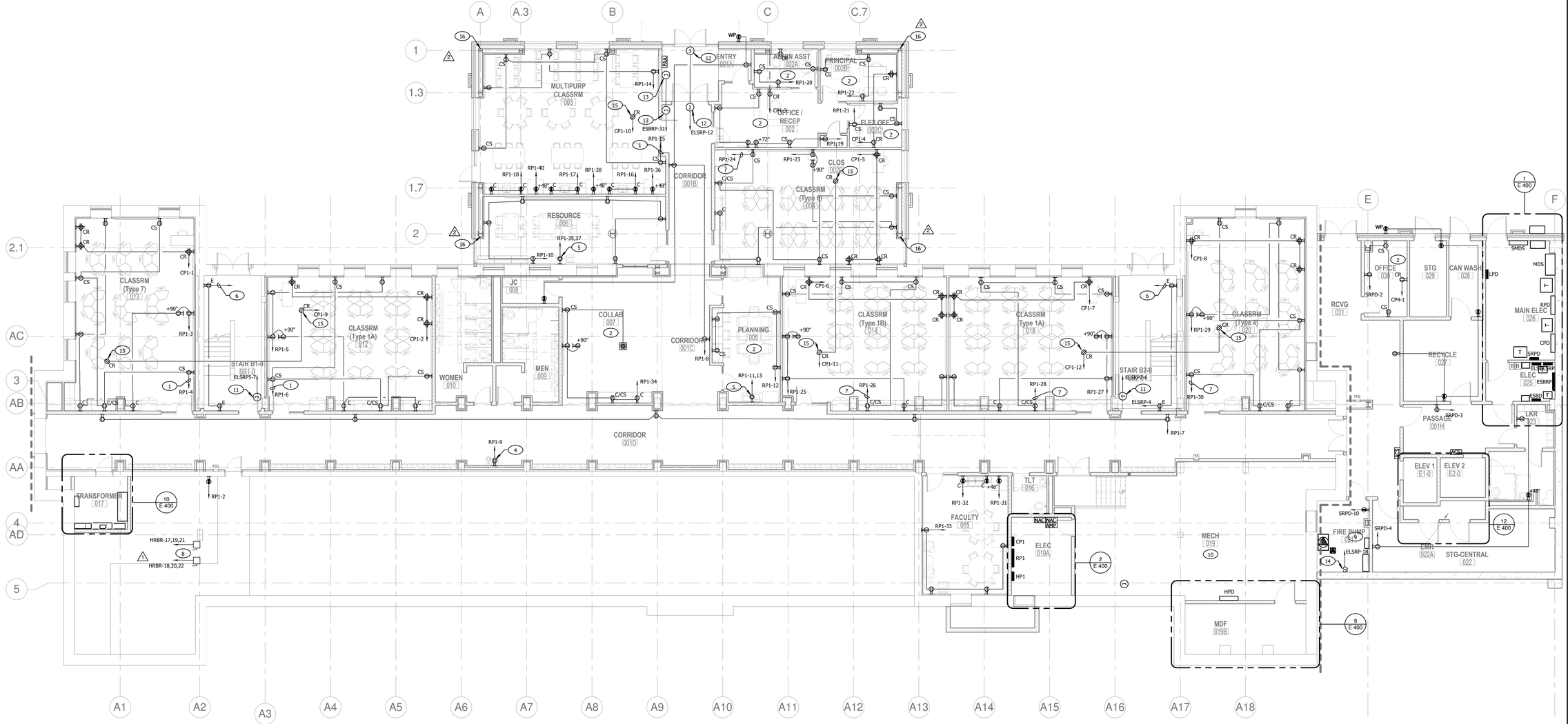
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND & ROOF PLAN A - POWER

E 212

7/26/2016 8:50:08 AM



1 E 213 NEW WORK BASEMENT FLOOR PLAN B - POWER

1/8" = 1'-0"

GENERAL NOTES:

A. FOR DEVICES BOXES SHOWN AS BEING MOUNTED BACK TO BACK IN A STUD WALL, OFFSET ONE BOX TO BE IN THE ADJACENT STUD SPACE. OUTLET BOXES IN ADJACENT ROOMS SHALL NOT BE INSTALLED SIDE BY SIDE IN THE SAME STUD SPACE.

B. FOR COUNTERTOP RECEPTACLES, CONFIRM REACH DISTANCE FROM EDGE OF COUNTERTOP TO FACE OF DEVICE DOES NOT EXCEED 24". IF DEVICE FACE EXCEEDS 24" REACH LIMIT, PROVIDE BOX EXTENSION TO BRING FACE TO 24" FROM EDGE OF COUNTERTOP.

KEYED NOTES:

1. EXTEND CIRCUIT THROUGH ROOM LIGHTING CONTROLLER IN ROOM 013. REFER TO DRAWING E-501 FOR DETAILS OR CIRCUIT OPERATION AND CONTROL.
2. FOR RECEPTACLES INDICATED AS CONTROLLED/SWITCHED, ROUTE RECEPTACLE CIRCUIT THROUGH ASSOCIATED ROOM LIGHTING CONTROLLER TO PROVIDE OCCUPANCY SENSOR CONTROL OF RECEPTACLES. REFER TO DRAWING E-501 FOR DETAILS OF CIRCUIT OPERATION AND CONTROL.
3. RECEPTACLE FOR COW (COMPUTERS ON WHEELS) CABINET. COORDINATE FINAL LOCATION WITH EQUIPMENT IN THE FIELD.
4. MOUNT RECEPTACLE BEHIND ACCESSIBLE PANEL ON OR ADJACENT TO ELECTRIC WATER COOLER CHILLER UNIT. EXTEND CIRCUIT THROUGH ELECTRICAL ROOM LIGHTING CONTROL UNIT FOR TIMECLOCK CONTROL OF CIRCUIT.
5. PROVIDE NEMA 6-20 RECEPTACLE FOR COPIER. COORDINATE FINAL LOCATION WITH EQUIPMENT IN THE FIELD.
6. REFER TO DRAWING E-214 FOR CONTINUATION OF CIRCUIT.
7. EXTEND CIRCUIT THROUGH ROOM LIGHTING CONTROLLER IN ROOM 020. REFER TO DRAWING E-501 FOR DETAILS OR CIRCUIT OPERATION AND CONTROL.
8. PROVIDE NEW CIRCUITS TO EXISTING GAS BOOSTER DISCONNECTS IN CRAWLSPACE.
9. TERMINATE 3 1/C #8 MI CABLES IN 12"X12"X8" JUNCTION BOX ADJACENT TO NEW FIRE PUMP AND JOCKEY PUMP CONTROLLER. EXTEND 3 #4 & 1 #10 GROUND IN 1-1/4" CONDUIT FROM JUNCTION BOX TO NEW FIRE PUMP CONTROLLER AND MAKE FINAL CONNECTION TO UNIT. EXTEND 3 #10 & 1 #10 GROUND IN 3/4" CONDUIT FROM JUNCTION BOX TO JOCKEY PUMP CONTROLLER.

KEYED NOTES (CONT'D):

10. REFER TO DRAWING E-401 FOR DETAILS OF WORK IN THE MECHANCIAL ROOM.
11. POWER CONNECTION TO DOOR MAGNETIC HOLD OPEN. COORDINATE FINAL LOCATION IN THE FIELD.
12. POWER CONNECTION TO AUTOMATIC DOOR OPERATOR. PROVIDE LOW VOLTAGE CABLES FROM DOOR OPERATOR TO ACTUATORS. COORDINATE ACTUATOR LOCATIONS IN THE FIELD.
13. POWER CONNECTION TO DOOR HARDWARE POWER SUPPLY LOCATED ABOVE ACCESSIBLE CEILING.
14. POWER CONNECTION TO ATTIC SUPPRESSION SYSTEM AIR COMPRESSOR.
15. PROVIDE TWO DUPLEX RECEPTACLES IN CEILING MOUNTED A/V CABINET. COORDINATE FINAL LOCATION WITH EQUIPMENT LOCATION IN THE FIELD.
16. GROUND COLUMN PER DETAIL ON DRAWING E-502. CONNECT TO OTHER GROUNDED COLUMNS ON THIS DRAWING WITH #2 BARE COPPER GROUNDING CONDUCTOR IN 3/4" PVC CONDUIT. EXTEND #2 BARE COPPER GROUNDING CONDUCTOR FROM ONE COLUMN BOND BACK TO MAIN GROUNDING BUSBAR IN MAIN ELECTRICAL ROOM.

0 8 12 16 24

NOTE:
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No.	DATE	DESCRIPTION
1	04/27/16	ADDENDUM #3
2	05/06/16	ADDENDUM #5

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK BASEMENT PLAN B - POWER

E 213

7/26/2016 8:50:25 AM

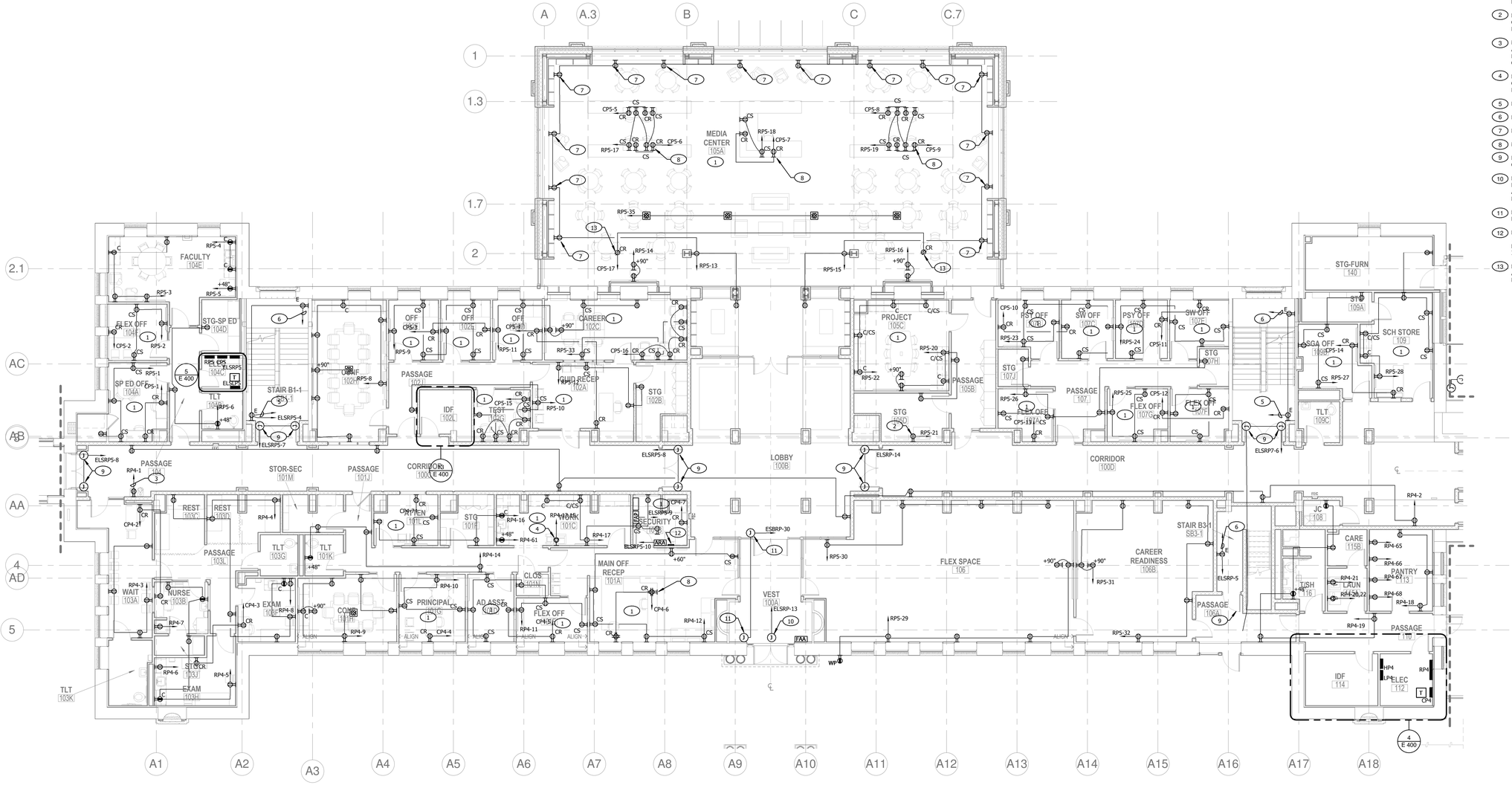
GENERAL NOTES:

A. FOR DEVICES BOXES SHOWN AS BEING MOUNTED BACK TO BACK IN A STUD WALL, OFFSET ONE BOX TO BE IN THE ADJACENT STUD SPACE. OUTLET BOXES IN ADJACENT ROOMS SHALL NOT BE INSTALLED SIDE BY SIDE IN THE SAME STUD SPACE.

B. FOR COUNTERTOP RECEPTACLES, CONFIRM REACH DISTANCE FROM EDGE OF COUNTERTOP TO FACE OF DEVICE DOES NOT EXCEED 24". IF DEVICE FACE EXCEEDS 24" REACH LIMIT, PROVIDE BOX EXTENSION TO BRING FACE TO 24" FROM EDGE OF COUNTERTOP.

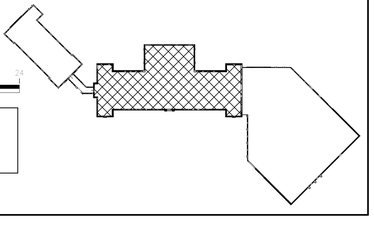
KEYED NOTES:

1. FOR RECEPTACLES INDICATED AS CONTROLLED/SWITCHED, ROUTE RECEPTACLE CIRCUIT THROUGH ASSOCIATED ROOM LIGHTING CONTROLLER TO PROVIDE OCCUPANCY SENSOR CONTROL OF RECEPTACLES. REFER TO DRAWING E-501 FOR DETAILS OF CIRCUIT OPERATION AND CONTROL.
2. RECEPTACLE FOR COW (COMPUTERS ON WHEELS) CABINET. COORDINATE FINAL LOCATION WITH EQUIPMENT IN THE FIELD.
3. MOUNT RECEPTACLE BEHIND ACCESSIBLE PANEL ON OR ADJACENT TO ELECTRIC WATER COOLER CHILLER UNIT. EXTEND CIRCUIT THROUGH ELECTRICAL ROOM LIGHTING CONTROL UNIT FOR TIMECLOCK CONTROL OF CIRCUIT.
4. PROVIDE NEMA 6-20 RECEPTACLE FOR COPIER. COORDINATE FINAL LOCATION WITH EQUIPMENT IN THE FIELD.
5. REFER TO DRAWING E-213 FOR CONTINUATION OF CIRCUIT.
6. REFER TO DRAWING E-216 FOR CONTINUATION OF CIRCUIT.
7. HORIZONTALLY MOUNT DEVICE IN TOE SPACE OF SHELVING.
8. MOUNT DEVICE IN DESK CASEWORK.
9. POWER CONNECTION TO DOOR MAGNETIC HOLD OPEN. COORDINATE FINAL LOCATION IN THE FIELD.
10. POWER CONNECTION TO AUTOMATIC DOOR OPERATOR. PROVIDE LOW VOLTAGE CABLES FROM DOOR OPERATOR TO ACTUATORS. COORDINATE ACTUATOR LOCATIONS IN THE FIELD.
11. POWER CONNECTION TO DOOR HARDWARE POWER SUPPLY LOCATED ABOVE ACCESSIBLE CEILING.
12. REMOTE GENERATOR ANNUNCIATOR PANEL. EXTEND ONE 1" CONDUIT FROM PANEL TO GENERATOR. PROVIDE REQUIRED CONTROL CABLING FOR COMPLETE INSTALLATION.
13. PROVIDE TWO DUPLEX RECEPTACLES IN CEILING MOUNTED A/V CABINET. COORDINATE FINAL LOCATION WITH EQUIPMENT LOCATION IN THE FIELD.



1 / E 214 NEW WORK FIRST FLOOR PLAN B - POWER

1/8" = 1'-0"



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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

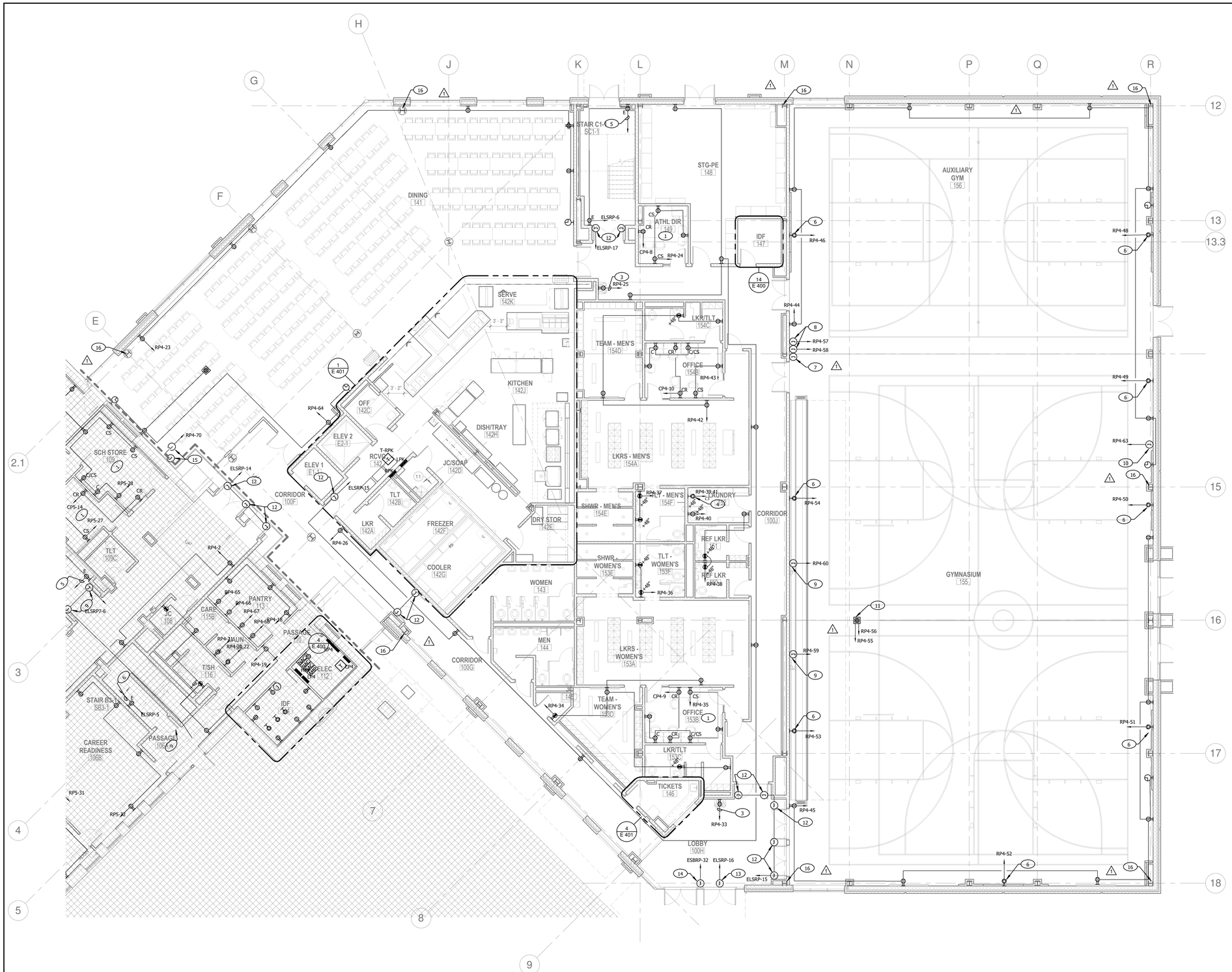
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK FIRST FLOOR PLAN B - POWER

E 214

7/26/2016 8:50:45 AM



1 E 215 NEW WORK FIRST FLOOR PLAN C - POWER
1/8" = 1'-0"

GENERAL NOTES:

A. FOR DEVICES BOXES SHOWN AS BEING MOUNTED BACK TO BACK IN A STUD WALL, OFFSET ONE BOX TO BE IN THE ADJACENT STUD SPACE. OUTLET BOXES IN ADJACENT ROOMS SHALL NOT BE INSTALLED SIDE BY SIDE IN THE SAME STUD SPACE.

B. FOR COUNTERTOP RECEPTACLES, CONFIRM REACH DISTANCE FROM EDGE OF COUNTERTOP TO FACE OF DEVICE DOES NOT EXCEED 24". IF DEVICE FACE EXCEEDS 24" REACH LIMIT, PROVIDE BOX EXTENSION TO BRING FACE TO 24" FROM EDGE OF COUNTERTOP.

KEYED NOTES:

1. FOR RECEPTACLES INDICATED AS CONTROLLED/SWITCHED, ROUTE RECEPTACLE CIRCUIT THROUGH ASSOCIATED ROOM LIGHTING CONTROLLER TO PROVIDE OCCUPANCY SENSOR CONTROL OF RECEPTACLES. REFER TO DRAWING E-501 FOR DETAILS OF CIRCUIT OPERATION AND CONTROL.
2. RECEPTACLE FOR COW (COMPUTERS ON WHEELS) CABINET. COORDINATE FINAL LOCATION WITH EQUIPMENT IN THE FIELD.
3. MOUNT RECEPTACLE BEHIND ACCESSIBLE PANEL ON OR ADJACENT TO ELECTRIC WATER COOLER CHILLER UNIT. EXTEND CIRCUIT THROUGH ELECTRICAL ROOM LIGHTING CONTROL UNIT FOR TIMECLOCK CONTROL OF CIRCUIT.
4. COORDINATE RECEPTACLE TYPE WITH SUPPLIED EQUIPMENT IN THE FIELD.
5. REFER TO DRAWING E-217 FOR CONTINUATION OF CIRCUIT.
6. POWER CONNECTION FOR BACKBOARD WINCH. COORDINATE FINAL LOCATION OF RECEPTACLE WITH SUPPLIED EQUIPMENT IN THE FIELD. PROVIDE RECEPTACLE NEMA CONFIGURATION TO MATCH SUPPLIED EQUIPMENT. EXTEND 3 #12 & 1 #12 GROUND IN 3/4" CONDUIT FROM RECEPTACLE LOCATION DOWN TO FLUSH JUNCTION BOX AT GYM ENTRANCE FOR KEY SWITCH CONTROLLER.
7. PROVIDE MULTIGANG FLUSH MOUNTED JUNCTION BOXES FOR BACKBOARD KEYSWITCH CONTROLLERS. COORDINATE QUANTITY WITH SUPPLIED EQUIPMENT. MOUNT AT 42" AFF.
8. POWER CONNECTION TO SCREEN DIVIDER CONTROL SWITCH. EXTEND 2 #12 & 1 #12 GROUND FROM CONTROL SWITCH LOCATION UP TO MOTOR CONTROL PANEL AND MAKE FINAL CONNECTION. COORDINATE FINAL LOCATION AND CONNECTION TYPE IN FIELD.
9. POWER CONNECTION TO BLEACHER CONTROL. COORDINATE FINAL LOCATION AND CONNECTION TYPE IN FIELD.
10. POWER CONNECTION TO SCOREBOARD. COORDINATE MOUNTING HEIGHT IN FIELD WITH SUPPLIED EQUIPMENT. PROVIDE ADDITIONAL 6"X6"X2-1/8" FLUSH MOUNTED JUNCTION BOX FOR SCOREBOARD CONTROL CABLING. EXTEND TWO 2" CONDUITS FROM JUNCTION BOX TO FLLOR BOX LOCATION IN GYMNASIUM FLOOR FOR SCORER'S TABLE.
11. PROVIDE SIX-GANG FLUSH FLOORBOX (LEGRAND EVOLUTION EFB6S) WITH TWO RECEPTACLES AND FOUR JUNCTION BOXES FOR SCOREBOARD/DATA ACTIVATIONS.
12. POWER CONNECTION TO DOOR MAGNETIC HOLD OPEN. COORDINATE FINAL LOCATION IN THE FIELD.
13. POWER CONNECTION TO AUTOMATIC DOOR OPERATOR. PROVIDE LOW VOLTAGE CABLES FROM DOOR OPERATOR TO ACTUATORS. COORDINATE ACTUATOR LOCATIONS IN THE FIELD.
14. POWER CONNECTION TO DOOR HARDWARE POWER SUPPLY LOCATED ABOVE ACCESSIBLE CEILING.
15. POWER CONNECTION TO MOTORIZED PROJECTION SCREEN. COORDINATE FINAL LOCATION IN THE FIELD. EXTEND 3/4" CONDUIT FROM SCREEN MOTOR CONTROL DOWN TO SINGLE GANG JUNCTION BOX AT 48" AFF FOR SCREEN CONTROL. PROVIDE CONTROL WIRING AS NECESSARY BETWEEN MOTOR AND CONTROL SWITCH.
16. GROUND COLUMN PER DETAIL ON DRAWING E-502. CONNECT TO OTHER GROUNDED COLUMNS ON THIS DRAWING WITH #2 BARE COPPER GROUNDING CONDUCTOR IN 3/4" PVC CONDUIT. EXTEND #2 BARE COPPER GROUNDING CONDUCTOR FROM ONE COLUMN BOND BACK TO MAIN GROUNDING BUSBAR IN MAIN ELECTRICAL ROOM.

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1	05/06/16	ADDENDUM #5

BID ISSUE

PROJECT No.: 152-01

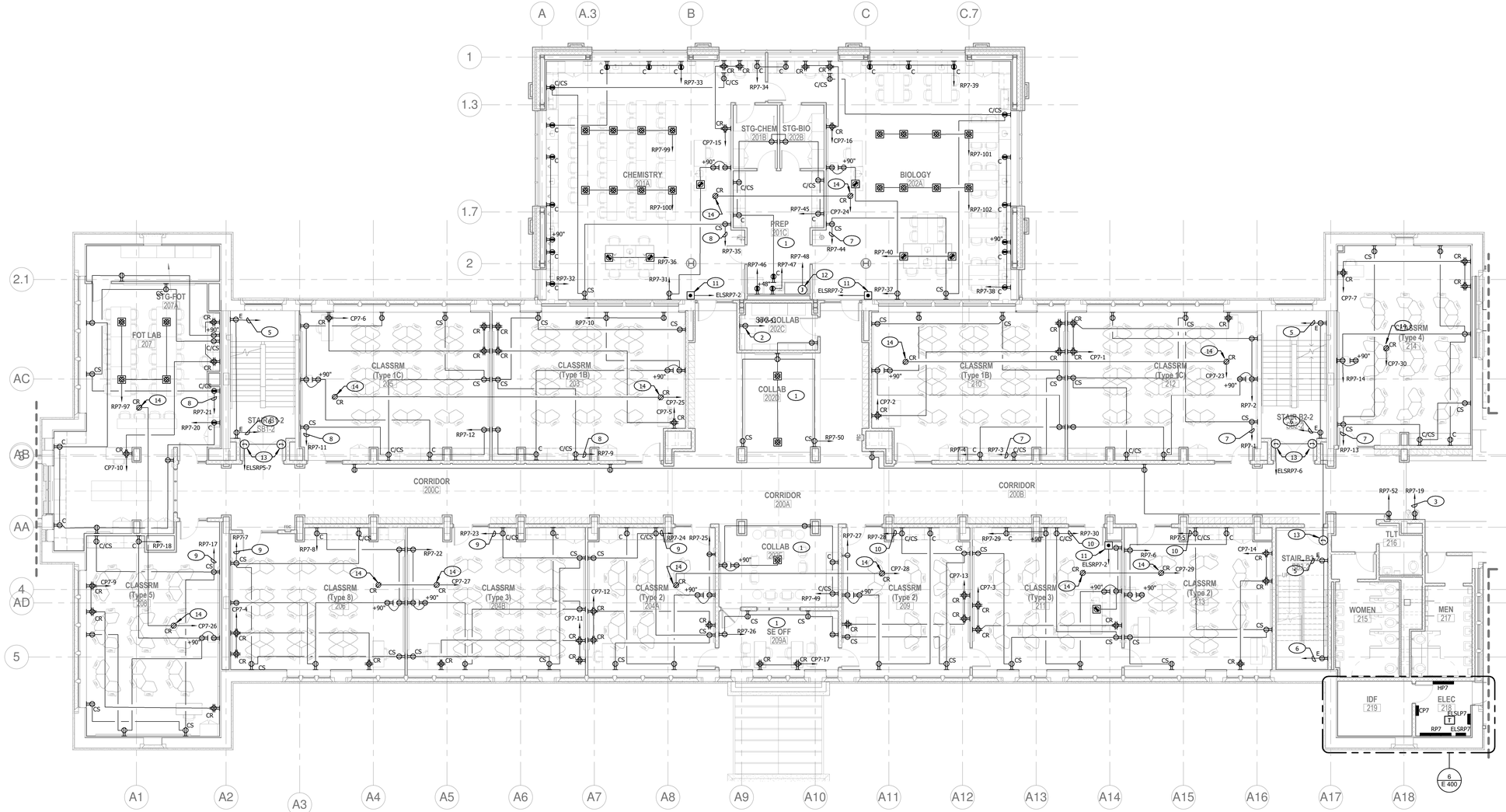
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK FIRST FLOOR PLAN C - POWER

E 215

7/26/2016 8:51:01 AM



1 E 216 NEW WORK SECOND FLOOR PLAN B - POWER

1/8" = 1'-0"

GENERAL NOTES:

A. FOR DEVICES BOXES SHOWN AS BEING MOUNTED BACK TO BACK IN A STUD WALL, OFFSET ONE BOX TO BE IN THE ADJACENT STUD SPACE. OUTLET BOXES IN ADJACENT ROOMS SHALL NOT BE INSTALLED SIDE BY SIDE IN THE SAME STUD SPACE.

B. FOR COUNTERTOP RECEPTACLES, CONFIRM REACH DISTANCE FROM EDGE OF COUNTERTOP TO FACE OF DEVICE DOES NOT EXCEED 24". IF DEVICE FACE EXCEEDS 24" REACH LIMIT, PROVIDE BOX EXTENSION TO BRING FACE TO 24" FROM EDGE OF COUNTERTOP.

KEYED NOTES:

1. FOR RECEPTACLES INDICATED AS CONTROLLED/SWITCHED, ROUTE RECEPTACLE CIRCUIT THROUGH ASSOCIATED ROOM LIGHTING CONTROLLER TO PROVIDE OCCUPANCY SENSOR CONTROL OF RECEPTACLES. REFER TO DRAWING E-501 FOR DETAILS OF CIRCUIT OPERATION AND CONTROL.
2. RECEPTACLE FOR COW (COMPUTERS ON WHEELS) CABINET. COORDINATE FINAL LOCATION WITH EQUIPMENT IN THE FIELD.
3. MOUNT RECEPTACLE BEHIND ACCESSIBLE PANEL ON OR ADJACENT TO ELECTRIC WATER COOLER CHILLER UNIT. EXTEND CIRCUIT THROUGH ELECTRICAL ROOM LIGHTING CONTROL UNIT FOR TIMECLOCK CONTROL OF CIRCUIT.
4. MOUNT RECEPTACLE IN CASEWORK 2" BELOW COUNTERTOP. TYPICAL FOR DEVICES IN THIS LOCATION.
5. REFER TO DRAWING E-214 FOR CONTINUATION OF CIRCUIT.
6. REFER TO DRAWING E-218 FOR CONTINUATION OF CIRCUIT.
7. EXTEND CIRCUIT THROUGH ROOM LIGHTING CONTROLLER IN ROOM 214. REFER TO DRAWING E-501 FOR DETAILS OR CIRCUIT OPERATION AND CONTROL.
8. EXTEND CIRCUIT THROUGH ROOM LIGHTING CONTROLLER IN ROOM 207. REFER TO DRAWING E-501 FOR DETAILS OR CIRCUIT OPERATION AND CONTROL.
9. EXTEND CIRCUIT THROUGH ROOM LIGHTING CONTROLLER IN ROOM 208. REFER TO DRAWING E-501 FOR DETAILS OR CIRCUIT OPERATION AND CONTROL.
10. EXTEND CIRCUIT THROUGH ROOM LIGHTING CONTROLLER IN ROOM 213. REFER TO DRAWING E-501 FOR DETAILS OR CIRCUIT OPERATION AND CONTROL.
11. PROVIDE MUSHROOM TYPE, KEYED RESET (STI 2000 SERIES OR EQUAL) EMERGENCY SHUT-OFF SWITCH FOR CONTROL OF GAS SOLENOID VALVE. PROVIDE FINAL CONNECTION TO VALVE AS NECESSARY. MOUNT AT 48" AFF.
12. POWER CONNECTION TO FUME HOOD. COORDINATE CONNECTION TYPE AND LOCATION IN THE FIELD.
13. POWER CONNECTION TO DOOR MAGNETIC HOLD OPEN. COORDINATE FINAL LOCATION IN THE FIELD.
14. PROVIDE TWO DUPLEX RECEPTACLES IN CEILING MOUNTED A/V CABINET. COORDINATE FINAL LOCATION WITH EQUIPMENT LOCATION IN THE FIELD.

NOTE:
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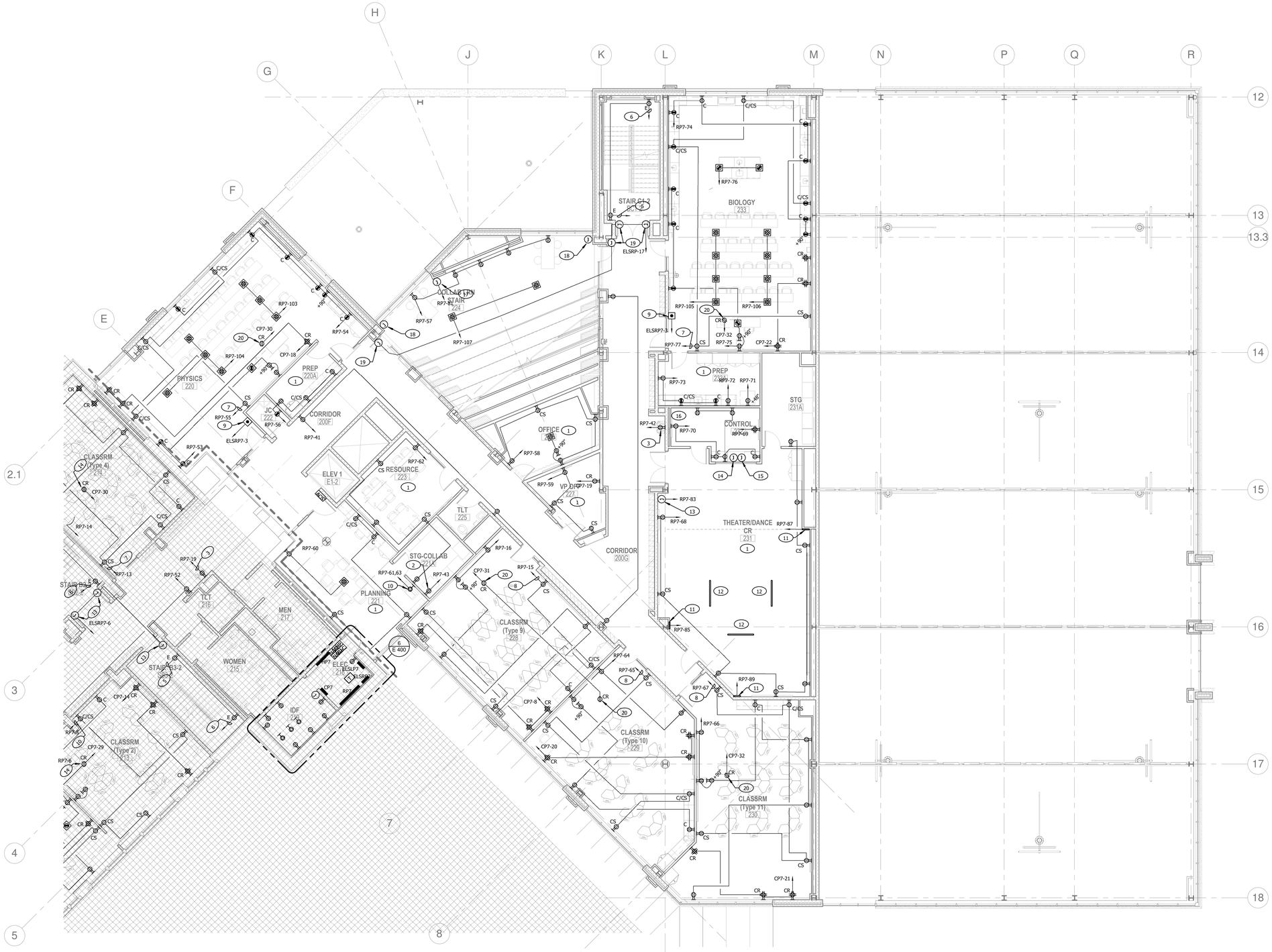
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND FLOOR PLAN B - POWER

E 216

7/26/2016 8:51:23 AM


STAIR C1-2
COLLAB STAIR 124
BIOLOGY 233
PREP 220A
PHYSICS 220
JC 222
CORRIDOR 200F
CLASSRM (Type 4) 219
ELEV 1 E1-2
RESOURCE 223
OFFICE 226
PREP 232
STG 231A
CONTROL 232
VP DIR 227
TLT 225
THEATER/DANCE CR 231
CORRIDOR 200G
STG-COLLAB 224A
PLANNING 221
MEN 217
TLT 216
WOMEN 215
STAIR C3-2
IDF 220
ELEC 214
CLASSRM (Type 9) 228
CLASSRM (Type 2) 213
CLASSRM (Type 10) 229
CLASSRM (Type 11) 230
ELSRP7-3
ELSRP7-6
ELSRP7-17
RP7-74
RP7-76
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RP7-54
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RP7-19
RP7-83
RP7-68
RP7-87
RP7-85
RP7-53
RP7-62
RP7-60
RP7-16
RP7-61,63
RP7-43
RP7-15
RP7-52
RP7-14
RP7-13
RP7-64
RP7-65
RP7-67
RP7-89
RP7-66
CP7-32
CP7-75
CP7-22
CP7-30
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CP7-21
RP7-55
RP7-56
RP7-41
ELSRP7-3
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CP7-29
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RP7-43
RP7-44
RP7-45
RP7-46

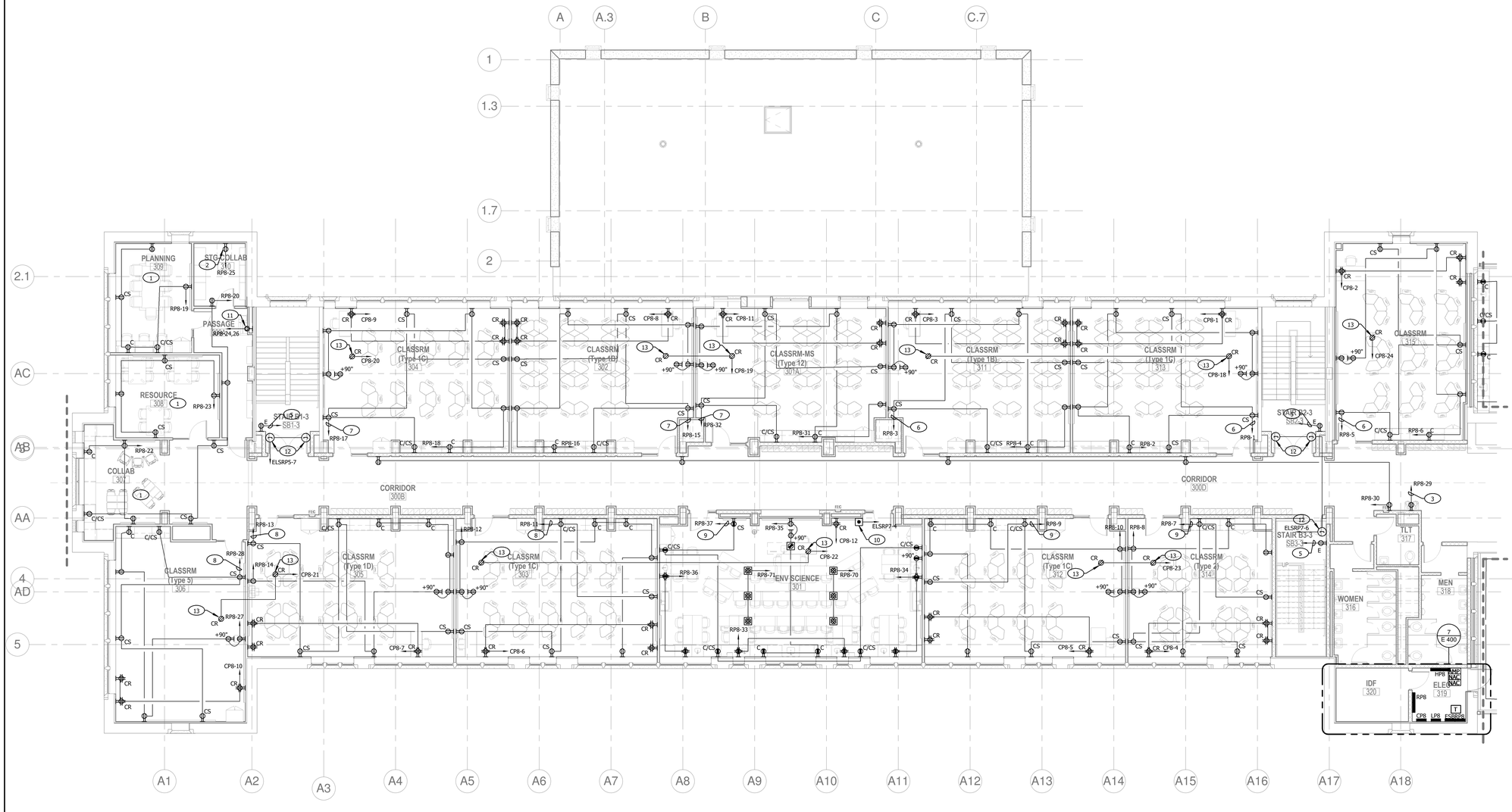
GENERAL NOTES:

A. FOR DEVICES BOXES SHOWN AS BEING MOUNTED BACK TO BACK IN A STUD WALL, OFFSET ONE BOX TO BE IN THE ADJACENT STUD SPACE. OUTLET BOXES IN ADJACENT ROOMS SHALL NOT BE INSTALLED SIDE BY SIDE IN THE SAME STUD SPACE.

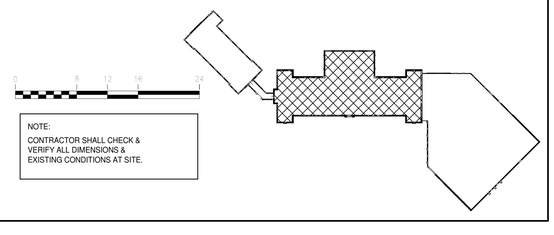
B. FOR COUNTERTOP RECEPTACLES, CONFIRM REACH DISTANCE FROM EDGE OF COUNTERTOP TO FACE OF DEVICE DOES NOT EXCEED 24". IF DEVICE FACE EXCEEDS 24" REACH LIMIT, PROVIDE BOX EXTENSION TO BRING FACE TO 24" FROM EDGE OF COUNTERTOP.

KEYED NOTES:

1. FOR RECEPTACLES INDICATED AS CONTROLLED/SWITCHED, ROUTE RECEPTACLE CIRCUIT THROUGH ASSOCIATED ROOM LIGHTING CONTROLLER TO PROVIDE OCCUPANCY SENSOR CONTROL OF RECEPTACLES. REFER TO DRAWING E-501 FOR DETAILS OF CIRCUIT OPERATION AND CONTROL.
2. RECEPTACLE FOR COW (COMPUTERS ON WHEELS) CABINET. COORDINATE FINAL LOCATION WITH EQUIPMENT IN THE FIELD.
3. MOUNT RECEPTACLE BEHIND ACCESSIBLE PANEL ON OR ADJACENT TO ELECTRIC WATER COOLER CHILLER UNIT. EXTEND CIRCUIT THROUGH ELECTRICAL ROOM LIGHTING CONTROL UNIT FOR TIMECLOCK CONTROL OF CIRCUIT.
4. MOUNT RECEPTACLE IN CASEWORK 2" BELOW COUNTERTOP. TYPICAL FOR DEVICES IN THIS LOCATION.
5. REFER TO DRAWING E-216 FOR CONTINUATION OF CIRCUIT.
6. EXTEND CIRCUIT THROUGH ROOM LIGHTING CONTROLLER IN ROOM 315. REFER TO DRAWING E-501 FOR DETAILS OR CIRCUIT OPERATION AND CONTROL.
7. EXTEND CIRCUIT THROUGH ROOM LIGHTING CONTROLLER IN ROOM 304. REFER TO DRAWING E-501 FOR DETAILS OR CIRCUIT OPERATION AND CONTROL.
8. EXTEND CIRCUIT THROUGH ROOM LIGHTING CONTROLLER IN ROOM 306. REFER TO DRAWING E-501 FOR DETAILS OR CIRCUIT OPERATION AND CONTROL.
9. EXTEND CIRCUIT THROUGH ROOM LIGHTING CONTROLLER IN ROOM 319. REFER TO DRAWING E-501 FOR DETAILS OR CIRCUIT OPERATION AND CONTROL.
10. PROVIDE MUSHROOM TYPE, KEYED RESET (STI 2000 SERIES OR EQUAL) EMERGENCY SHUT-OFF SWITCH FOR CONTROL OF GAS SOLENOID VALVE. PROVIDE FINAL CONNECTION TO VALVE AS NECESSARY. MOUNT AT 48" AFF.
11. PROVIDE NEMA 6-20 RECEPTACLE FOR COPIER. COORDINATE FINAL LOCATION WITH EQUIPMENT IN THE FIELD.
12. POWER CONNECTION TO DOOR MAGNETIC HOLD OPEN. COORDINATE FINAL LOCATION IN THE FIELD.
13. PROVIDE TWO DUPLEX RECEPTACLES IN CEILING MOUNTED A/V CABINET. COORDINATE FINAL LOCATION WITH EQUIPMENT LOCATION IN THE FIELD.



1 E 218 NEW WORK THIRD FLOOR PLAN B - POWER
1/8" = 1'-0"



NOTE:
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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK THIRD FLOOR PLAN B - POWER

E 218

7/26/2016 8:51:55 AM

1 NEW WORK THIRD FLOOR PLAN C - POWER
E 219 1/8" = 1'-0"

GENERAL NOTES:

A. FOR DEVICES BOXES SHOWN AS BEING MOUNTED BACK TO BACK IN A STUD WALL, OFFSET ONE BOX TO BE IN THE ADJACENT STUD SPACE. OUTLET BOXES IN ADJACENT ROOMS SHALL NOT BE INSTALLED SIDE BY SIDE IN THE SAME STUD SPACE

B. FOR COUNTERTOP RECEPTACLES, CONFIRM REACH DISTANCE FROM EDGE OF COUNTERTOP TO FACE OF DEVICE DOES NOT EXCEED 24". IF DEVICE FACE EXCEEDS 24" REACH LIMIT, PROVIDE BOX EXTENSION TO BRING FACE TO 24" FROM EDGE OF COUNTERTOP.

KEYED NOTES:

1. FOR RECEPTACLES INDICATED AS CONTROLLED/SWITCHED, ROUTE RECEPTACLE CIRCUIT THROUGH ASSOCIATED ROOM LIGHTING CONTROLLER TO PROVIDE OCCUPANCY SENSOR CONTROL OF RECEPTACLES. REFER TO DRAWING E-501 FOR DETAILS OF CIRCUIT OPERATION AND CONTROL.
2. RECEPTACLE FOR COW (COMPUTERS ON WHEELS) CABINET. COORDINATE FINAL LOCATION WITH EQUIPMENT IN THE FIELD.
3. MOUNT RECEPTACLE BEHIND ACCESSIBLE PANEL ON OR ADJACENT TO ELECTRIC WATER COOLER CHILLER UNIT. EXTEND CIRCUIT THROUGH ELECTRICAL ROOM LIGHTING CONTROL UNIT FOR TIMECLOCK CONTROL OF CIRCUIT.
4. MOUNT RECEPTACLE IN CASEWORK 2" BELOW COUNTERTOP. TYPICAL FOR DEVICES IN THIS LOCATION.
5. REFER TO DRAWING E-217 FOR CONTINUATION OF CIRCUIT.
6. EXTEND CIRCUIT THROUGH ROOM LIGHTING CONTROLLER IN ROOM 321. REFER TO DRAWING E-501 FOR DETAILS OR CIRCUIT OPERATION AND CONTROL.
7. EXTEND CIRCUIT THROUGH ROOM LIGHTING CONTROLLER IN ROOM 329. REFER TO DRAWING E-501 FOR DETAILS OR CIRCUIT OPERATION AND CONTROL.
8. PROVIDE MUSHROOM TYPE, KEYED RESET (STI 2000 SERIES OR EQUAL) EMERGENCY SHUT-OFF SWITCH FOR CONTROL OF GAS SOLENOID VALVE. PROVIDE FINAL CONNECTION TO VALVE AS NECESSARY. MOUNT AT 48" AFF.
9. PROVIDE NEMA 6-20 RECEPTACLE FOR COPIER. COORDINATE FINAL LOCATION WITH EQUIPMENT IN THE FIELD. (2)
10. PROVIDE NEMA 6-50 RECEPTACLE FOR KILN. COORDINATE FINAL LOCATION WITH EQUIPMENT IN THE FIELD.
11. FOR RECEPTACLES INDICATED AS CONTROLLED/SWITCHED, ROUTE CIRCUIT THROUGH SENSOR RELAY (LUTRON POW-PAK OR APPROVED EQUAL) FOR CONNECTION TO LOCAL OCCUPANCY SENSOR.
12. COORDINATE MOUNTING HEIGHT WITH ASSOCIATED DATA OUTLET AND SUPPLIED EQUIPMENT IN THE FIELD.
13. PROVIDE CEILING MOUNTED L21-20 RECEPTACLE FOR POWER CONNECTION OF STUDIO LIGHTING SYSTEM "SLIM-DIM" MODULES.
14. APPROXIMATE LOCATION FOR CONDUIT STUBS FROM FIRST FLOOR ELECTRICAL ROOM.
15. POWER CONNECTION TO DOOR MAGNETIC HOLD OPEN. COORDINATE FINAL LOCATION IN THE FIELD.
16. PROVIDE TWO DUPLEX RECEPTACLES IN CEILING MOUNTED A/V CABINET. COORDINATE FINAL LOCATION WITH EQUIPMENT LOCATION IN THE FIELD.
17. PROVIDE 240V-100A-3P NEMA TYPE 1 NON-FUSED SAFETY SWITCH. PROVIDE FINAL CONNECTION TO KILN. (2)
18. RECEPTACLE FOR KILN VENT SYSTEM. PROVIDE FACTORY APPLIED "CONTROLLED" SYMBOL. PROVIDE SINGLE POLE TOGGLE SWITCH FOR RECEPTACLE CONTROL ADJACENT TO ROOM EXHAUST SWITCH. PROVIDE ENGRAVED SWITCHPLATE WITH WORDING "KILN VENT".

NOTE:
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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/27/16	ADDENDUM #3
2	04/29/16	ADDENDUM #4

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK THIRD FLOOR PLAN C - POWER

E 219

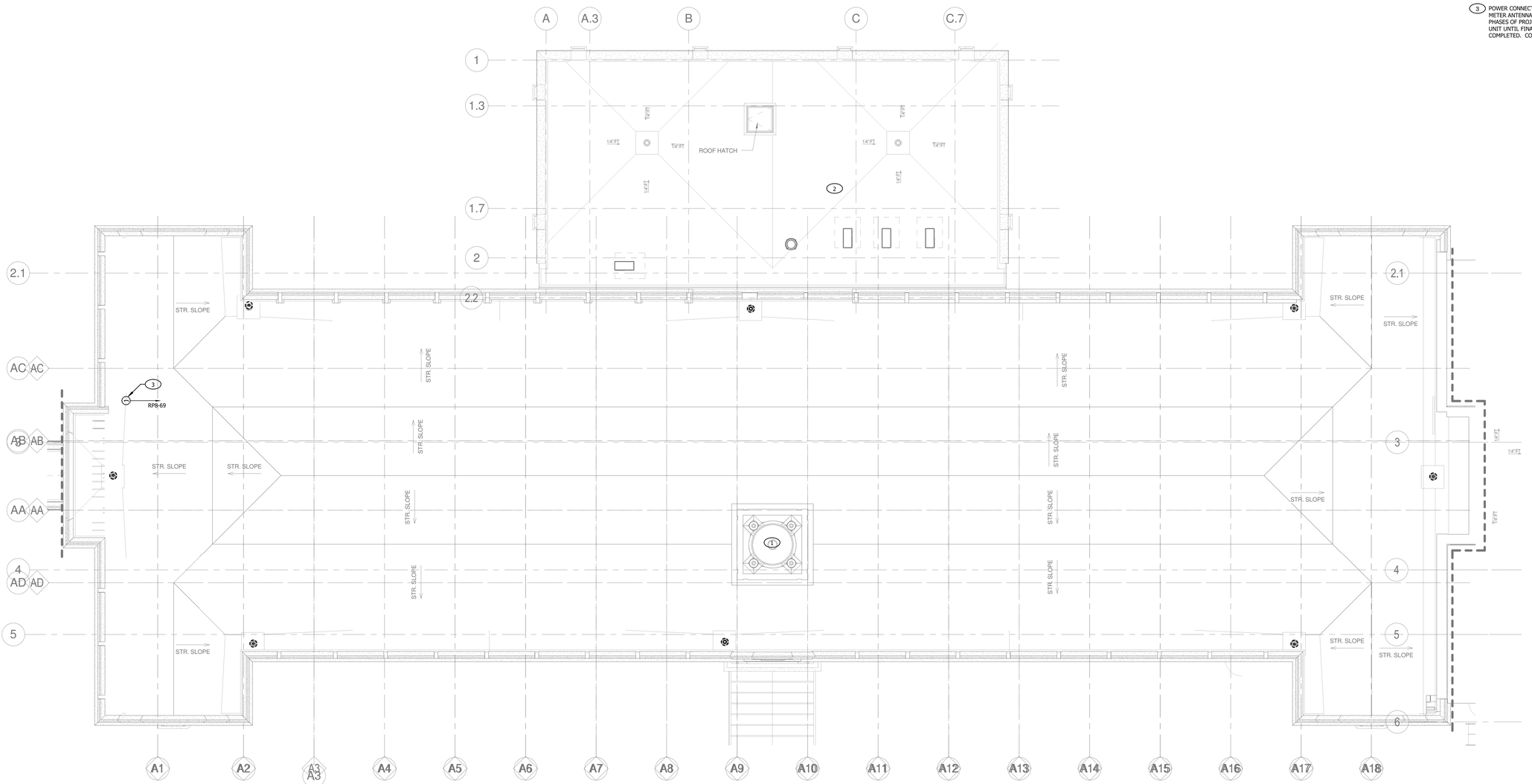
7/26/2016 8:52:12 AM

GENERAL NOTES:

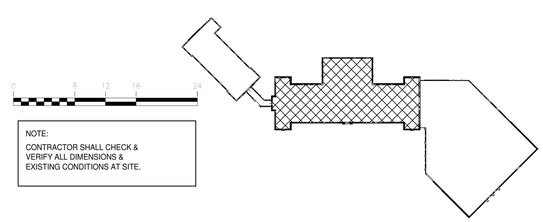
A. PROVIDE LIGHTNING PROTECTION SYSTEM FOR BUILDING, INCLUDING ALL ROOFTOP MOUNTED MECHANICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR DETAILS AND SYSTEM REQUIREMENTS.

KEYED NOTES:

1. LIGHTNING PROTECTION SYSTEM SHALL INCLUDE FULL COVERAGE OF ARCHITECTURAL CUPOLA IN THIS GENERAL LOCATION. REFER TO ARCHITECTURAL ELEVATIONS FOR CUPOLA DETAILS.
2. LIGHTNING PROTECTION SYSTEM SHALL INCLUDE FULL COVERAGE OF LOWER LEVEL ROOF IN THIS LOCATION. REFER TO DRAWING E 318 FOR EQUIPMENT LOCATIONS ON LOWER ROOF.
3. POWER CONNECTION IN ATTIC/CEILING SPACE FOR WATER METER ANTENNAE SYSTEM, TO BE INSTALLED IN EARLY PHASES OF PROJECT. PROVIDE TEMPORARY POWER TO UNIT UNTIL FINAL POWER CONNECTION CAN BE COMPLETED. COORDINATE FINAL LOCATION IN THE FIELD.



1 / E 220 NEW WORK ROOF PLAN B - POWER
1/8" = 1'-0"



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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK ROOF PLAN B - POWER

E 220

7/26/2016 6:52:37 AM

GENERAL NOTES:

A. PROVIDE LIGHTNING PROTECTION SYSTEM FOR BUILDING, INCLUDING ALL ROOFTOP MOUNTED MECHANICAL EQUIPMENT. REFER TO SPECIFICATIONS FOR DETAILS AND SYSTEM REQUIREMENTS.

B. REFER TO MECHANICAL SCHEDULES ON M-600 SERIES DRAWINGS FOR ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT.

KEYED NOTES:

1. PROVIDE SINGLE POINT POWER CONNECTION TO UNIT. COORDINATE LOCATION IN THE FIELD.
2. MOUNT RECEPTACLE ON UNIT IN LOCATION TO NOT INTERFERE WITH THE OPERATION OF ACCESS PANELS OR ENTRY DOORS. COORDINATE LCOATION IN THE FIELD.
3. LIGHTNING PROTECTION SYSTEM SHALL INCLUDE FULL COVERAGE OF LOWER LEVEL ROOF IN THIS LOCATION. REFER TO DRAWING E 319 FOR EQUIPMENT LOCATIONS ON LOWER ROOF.
4. EXTEND 2 #12 & 1 #12 GROUND DOWN TO THERMAL SWITCH IN KILN ROOM ON FLOOR BELOW.

HPD-21
HPD-22
HPD-23
RPB-64
RPB-64
EF 4

1 NEW WORK ROOF PLAN C - POWER
E 221 1/8" = 1'-0"

NOTE:
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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

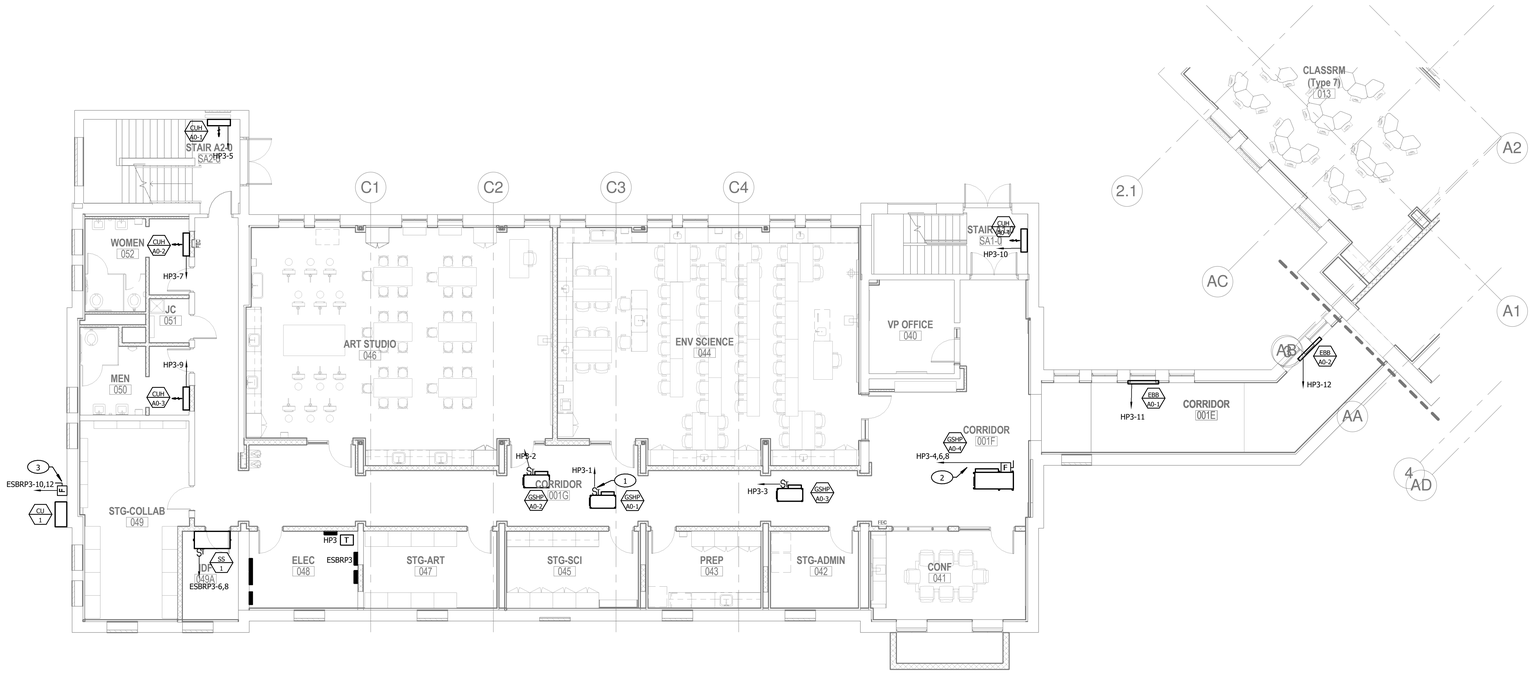
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK ROOF PLAN C - POWER

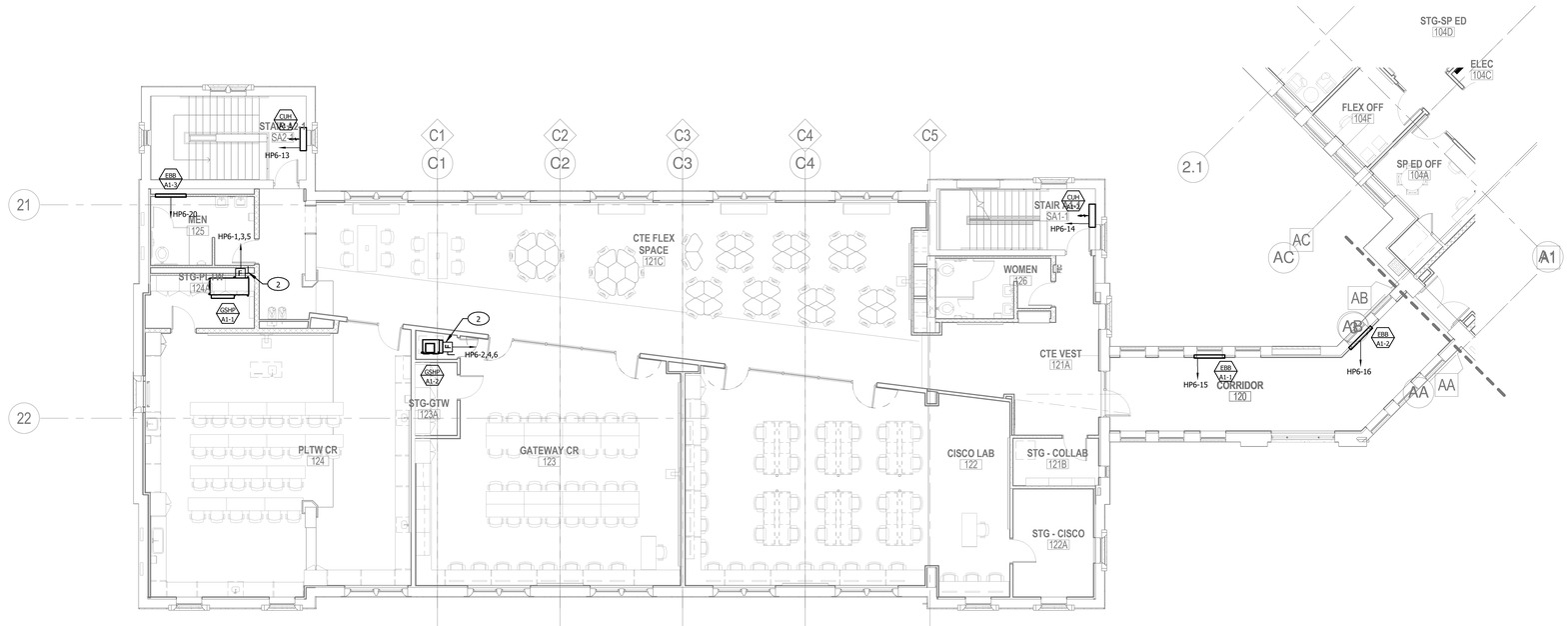
E 221

7/26/2016 8:53:04 AM



1 / E 311 NEW WORK BASEMENT PLAN A - MECHANICAL POWER

1/8" = 1'-0"



2 / E 311 NEW WORK FIRST FLOOR PLAN A - MECHANICAL POWER

1/8" = 1'-0"

GENERAL NOTES:

A. REFER TO MECHANICAL SCHEDULES ON M-600 SERIES DRAWINGS FOR ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT.

KEYED NOTES:

1. MOUNT SWITCH OR DISCONNECT IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT. TYPICAL FOR ALL MECHANICAL UNIT CONNECTIONS.
2. PROVIDE 480V-30A-3P-3F NEMA TYPE 1 FUSED SAFETY SWITCH, FUSED TO 15A. MOUNT SWITCH IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT.
3. PROVIDE 240V-30A-3P-2F NEMA TYPE 4X FUSED SAFETY SWITCH, FUSED TO 15A. MOUNT SWITCH ADJACENT TO UNIT AT FINAL MOUNTING HEIGHT.

NOTE:
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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK BASEMENT & FIRST FLOOR PLAN A - MECHANICAL POWER

E 311

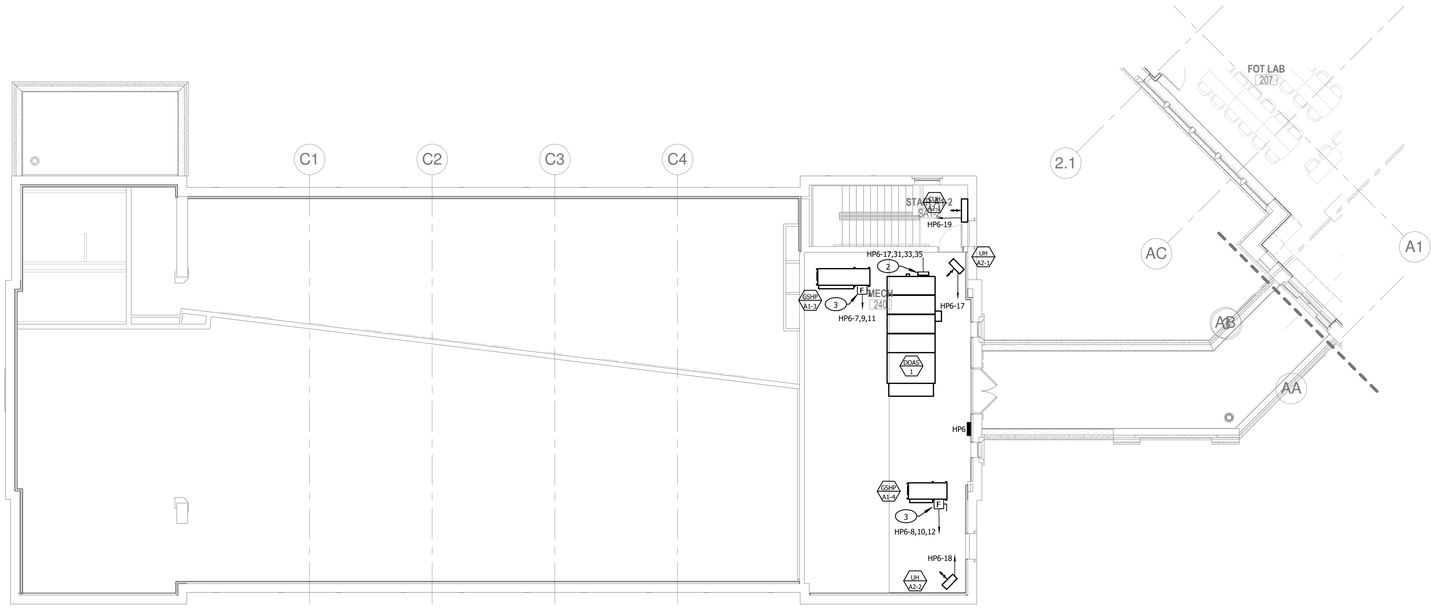
7/26/2016 8:53:18 AM

GENERAL NOTES:

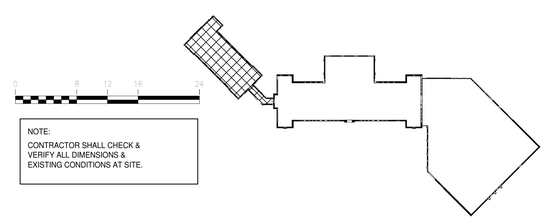
A. REFER TO MECHANICAL SCHEDULES ON M-600 SERIES DRAWINGS FOR ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT.

KEYED NOTES:

1. MOUNT SWITCH OR DISCONNECT IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT. TYPICAL FOR ALL MECHANICAL UNIT CONNECTIONS.
2. PROVIDE SINGLE POINT POWER CONNECTION TO UNIT. COORDINATE FINAL LOCATION IN THE FIELD.
3. PROVIDE 480V-30A-3P-3F NEMA TYPE 1 FUSED SAFETY SWITCH, FUSED TO 15A. MOUNT SWITCH IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT.



1 / E 312 NEW WORK SECOND FLOOR PLAN A - MECHANICAL POWER
1/8" = 1'-0"



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LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED
DRAWING NAME: NEW WORK SECOND FLOOR PLAN A - MECHANICAL POWER

E 312

7/26/2016 8:53:27 AM

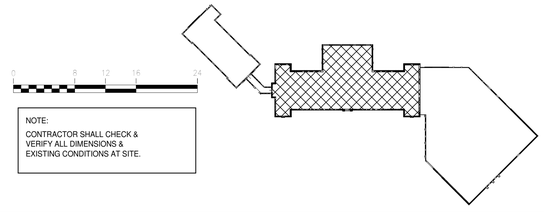
GENERAL NOTES:

A. REFER TO MECHANICAL SCHEDULES ON M-600 SERIES DRAWINGS FOR ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT.

KEYED NOTES:

1. MOUNT SWITCH OR DISCONNECT IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT. TYPICAL FOR ALL MECHANICAL UNIT CONNECTIONS.
2. PROVIDE 240V-30A-3P-3F NEMA TYPE 1 FUSED SAFETY SWITCH, FUSED TO 15A. MOUNT SWITCH IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT.
3. PROVIDE 480V-30A-3P-3F NEMA TYPE 1 FUSED SAFETY SWITCH, FUSED TO 15A. MOUNT SWITCH IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT.
4. PROVIDE 240V-30A-3P-2F NEMA TYPE 4X FUSED SAFETY SWITCH, FUSED TO 15A. MOUNT SWITCH ADJACENT TO UNIT AT FINAL MOUNTING HEIGHT.
5. PROVIDE 240V-30A-3P-3F NEMA TYPE 4X FUSED SAFETY SWITCH, FUSED TO 20A. MOUNT SWITCH ADJACENT TO UNIT AT FINAL MOUNTING HEIGHT.
6. PROVIDE 480V-30A-3P-3F NEMA TYPE 1 FUSED SAFETY SWITCH, FUSED TO 20A. MOUNT SWITCH IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT.
7. POWER CONNECTION TO SEWAGE EJECTOR PUMP CONTROL PANEL. PROVIDE FINAL CONNECTION TO PUMPS P-1 AND P-3.

1 E 313 NEW WORK BASEMENT FLOOR PLAN B - MECHANICAL POWER
1/8" = 1'-0"



NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

7/26/2016 6:53:40 AM

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Baltimore City Public Schools
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LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK BASEMENT PLAN B - MECHANICAL POWER

E 313

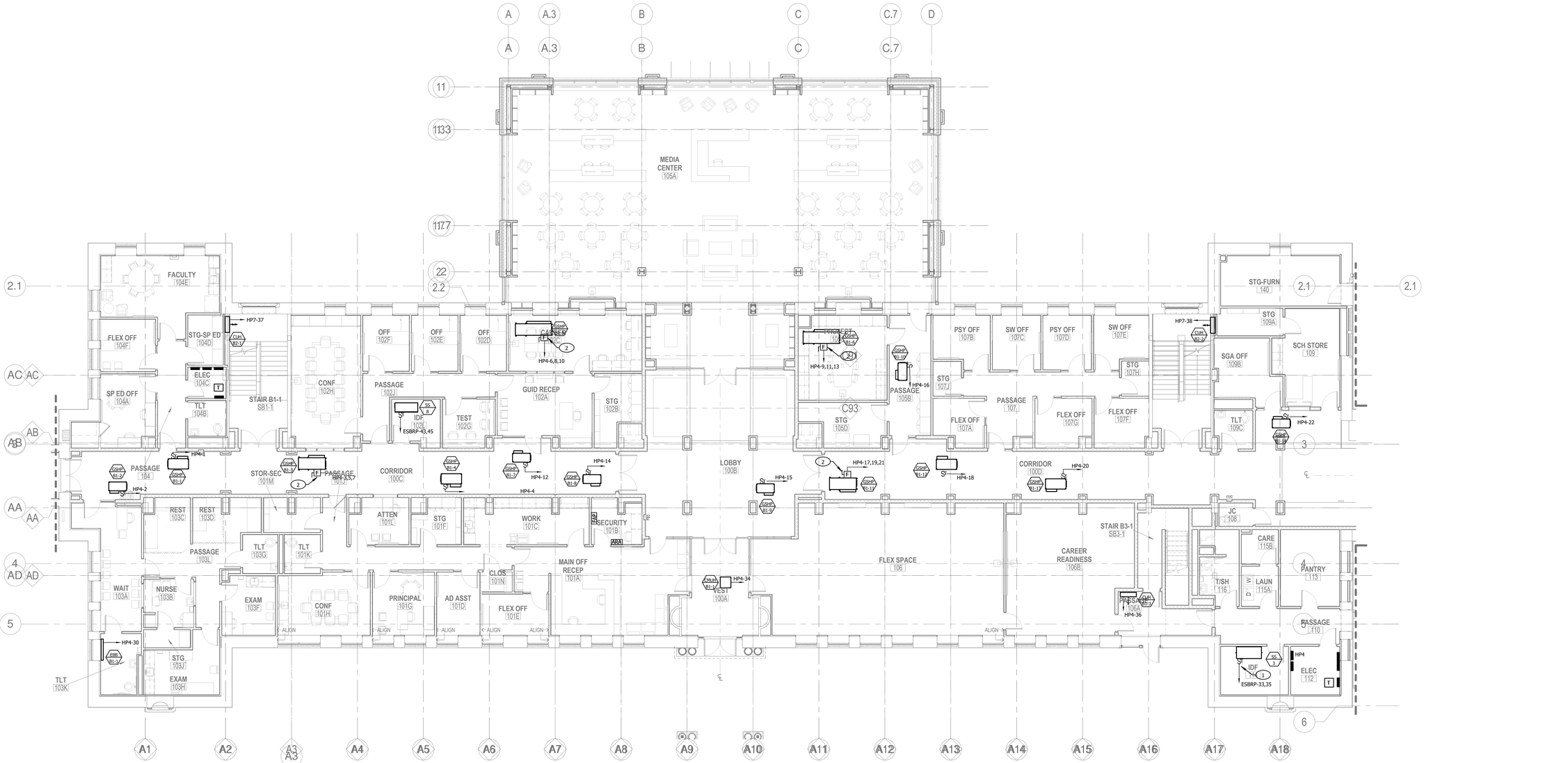
GENERAL NOTES:

A. REFER TO MECHANICAL SCHEDULES ON M-600 SERIES DRAWINGS FOR ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT.

KEYED NOTES:

(1) MOUNT SWITCH OR DISCONNECT IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT. TYPICAL FOR ALL MECHANICAL UNIT CONNECTIONS.

(2) PROVIDE 480V-30A-3P-3F NEMA TYPE 1 FUSED SAFETY SWITCH, FUSED TO 15A. MOUNT SWITCH IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT.



1 / E 314 NEW WORK FIRST FLOOR PLAN B - MECHANICAL POWER
1/8" = 1'-0"

NOTE:
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LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK FIRST FLOOR PLAN B - MECHANICAL POWER

E 314

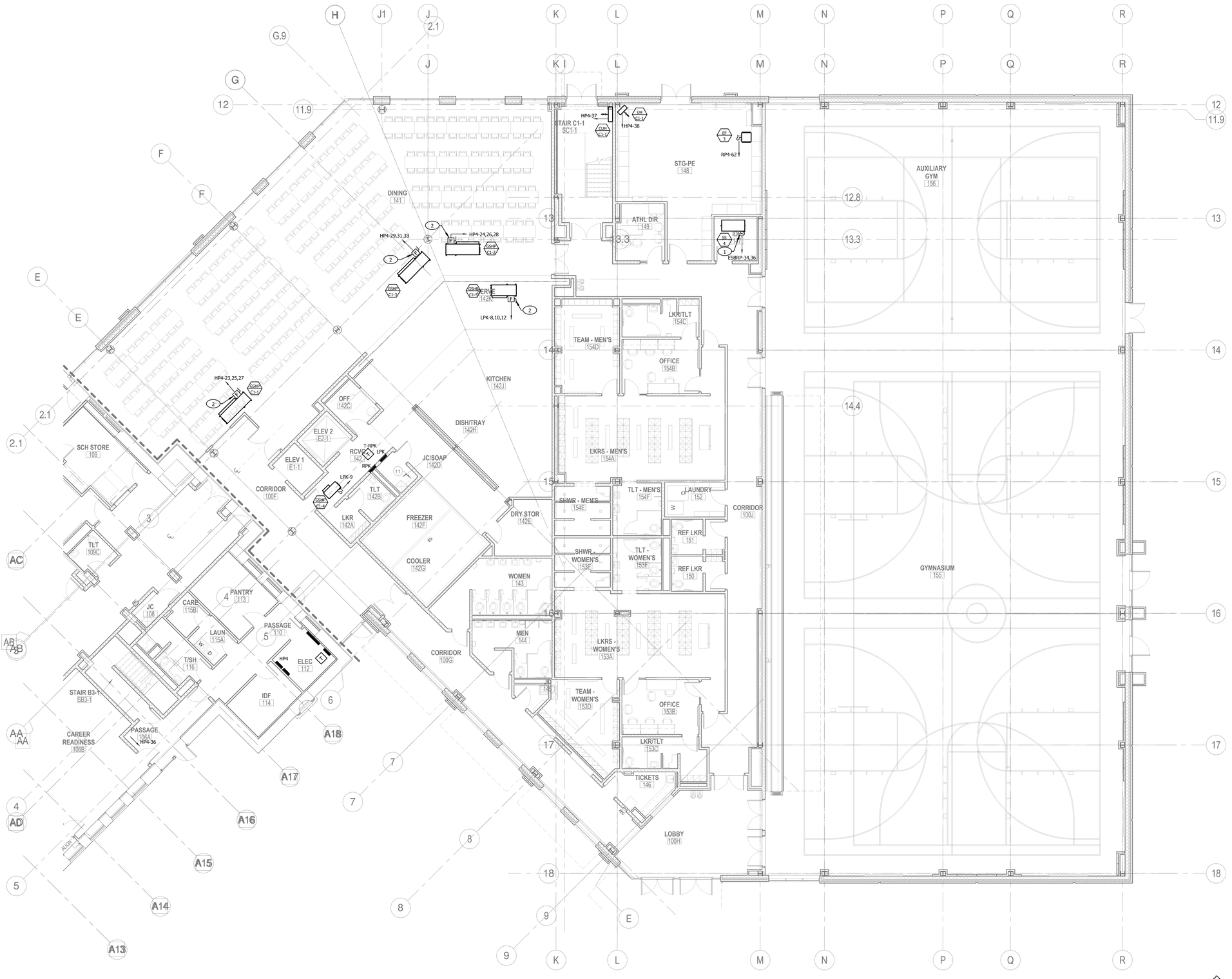
7/26/2016 6:53:52 AM

GENERAL NOTES:

A. REFER TO MECHANICAL SCHEDULES ON M-600 SERIES DRAWINGS FOR ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT.

KEYED NOTES:

1. MOUNT SWITCH OR DISCONNECT IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT. TYPICAL FOR ALL MECHANICAL UNIT CONNECTIONS.
2. PROVIDE 480V-30A-3P-3F NEMA TYPE 1 FUSED SAFETY SWITCH, FUSED TO 15A. MOUNT SWITCH IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT.



1 E 315 NEW WORK FIRST FLOOR PLAN C - MECHANICAL POWER
1/8" = 1'-0"

0 8 12 16 24

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK FIRST FLOOR PLAN C - MECHANICAL POWER

E 315

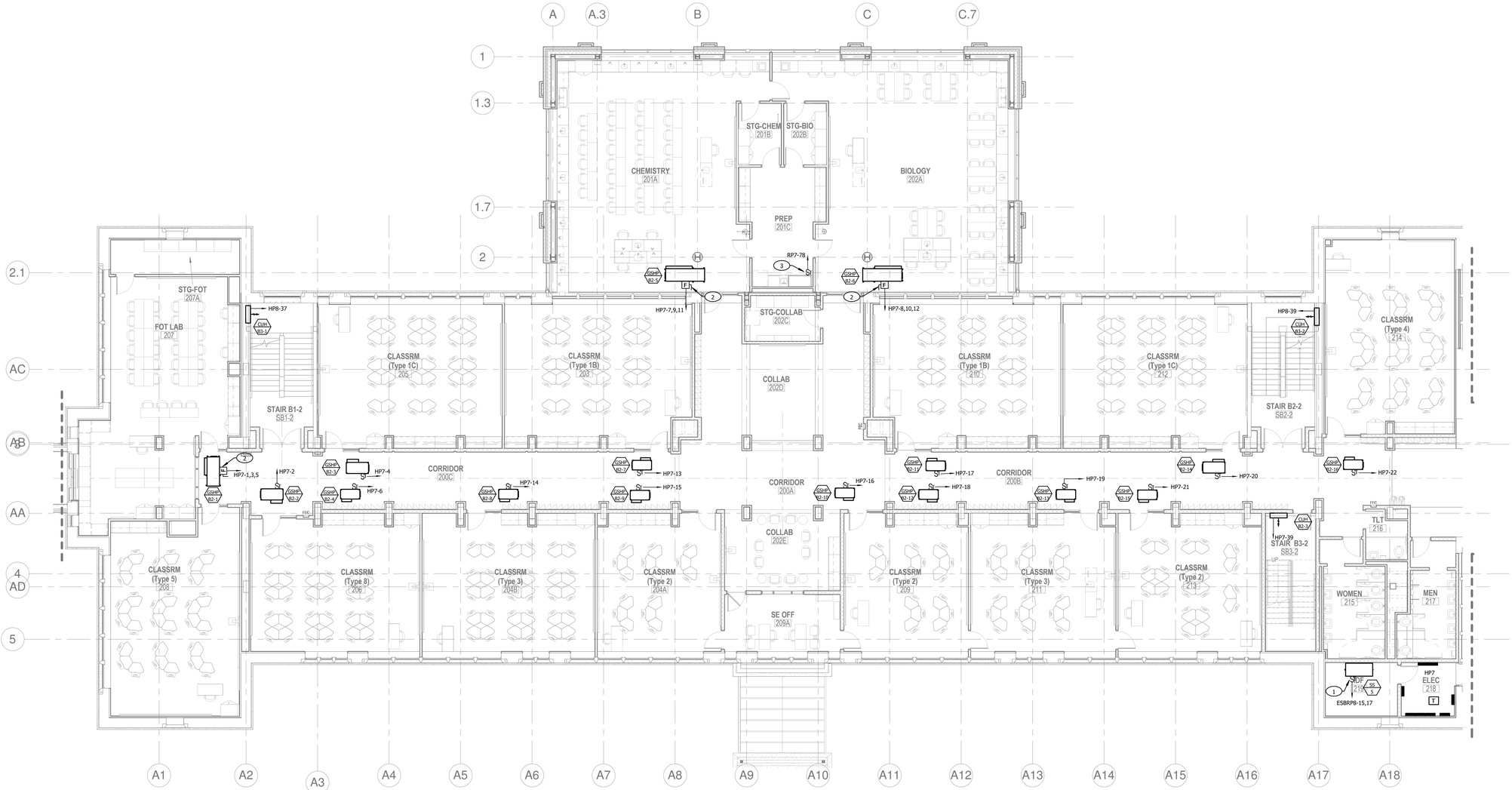
7/26/2016 8:54:07 AM

GENERAL NOTES:

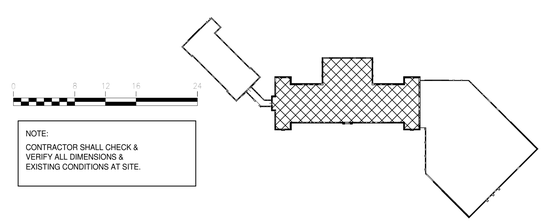
A. REFER TO MECHANICAL SCHEDULES ON M-600 SERIES DRAWINGS FOR ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT.

KEYED NOTES:

1. MOUNT SWITCH OR DISCONNECT IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT. TYPICAL FOR ALL MECHANICAL UNIT CONNECTIONS.
2. PROVIDE 480V-30A-3P-3F NEMA TYPE 1 FUSED SAFETY SWITCH, FUSED TO 15A. MOUNT SWITCH IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT.
3. MOUNT THERMAL SWITCH FOR CONTROL OF EXHAUST FAN EF-5 IN OR ADJACENT TO FUME HOOD. COORDINATE FINAL LOCATION IN THE FIELD.



1 / E 316 NEW WORK SECOND FLOOR PLAN B - MECHANICAL POWER
1/8" = 1'-0"



NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

7/26/2016 8:54:30 AM

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

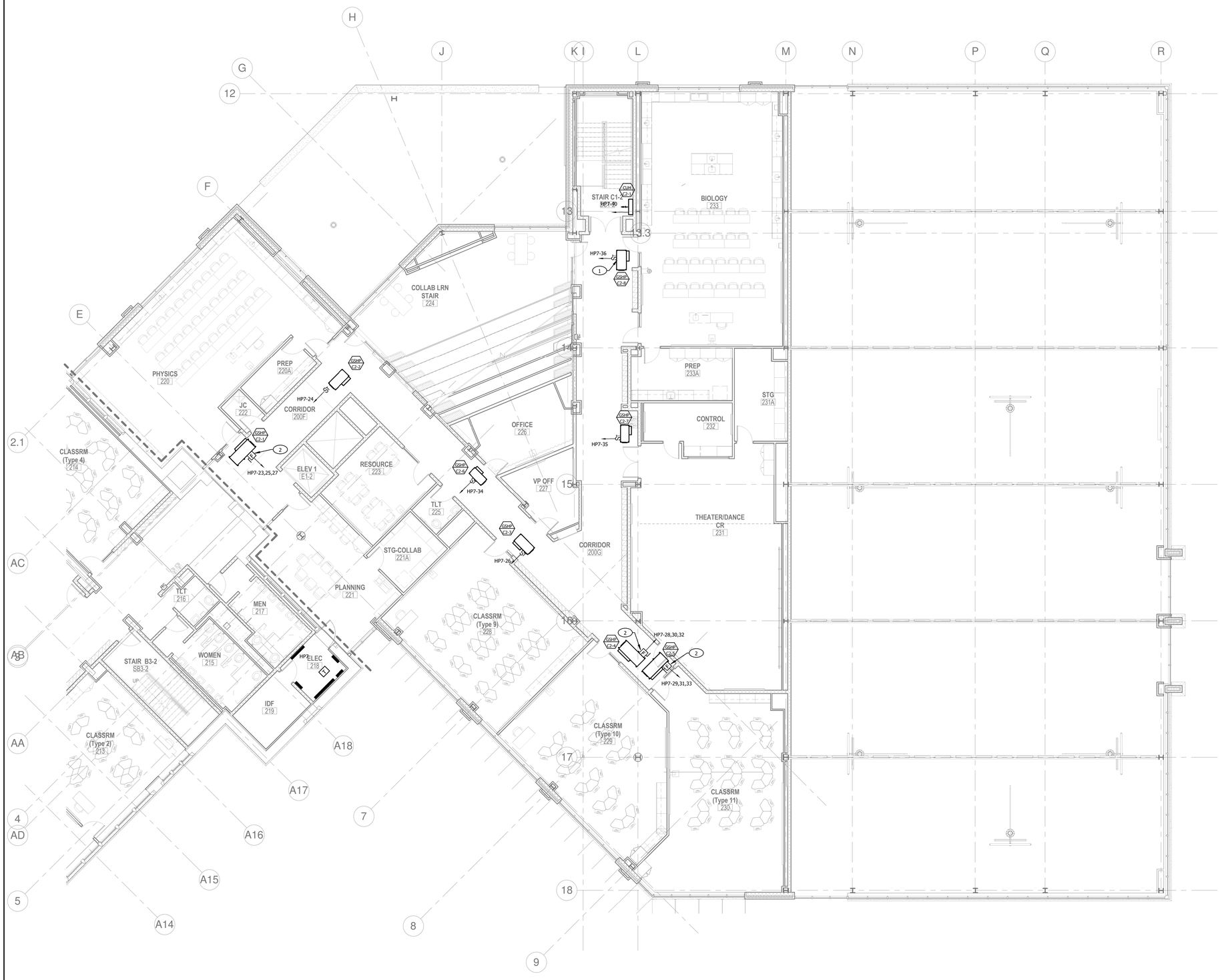
No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
NEW WORK SECOND FLOOR PLAN B - MECHANICAL POWER

E 316



GENERAL NOTES:

A. REFER TO MECHANICAL SCHEDULES ON M-600 SERIES DRAWINGS FOR ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT.

KEYED NOTES:

1. MOUNT SWITCH OR DISCONNECT IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT. TYPICAL FOR ALL MECHANICAL UNIT CONNECTIONS.
2. PROVIDE 480V-30A-3P-3F NEMA TYPE 1 FUSED SAFETY SWITCH, FUSED TO 15A. MOUNT SWITCH IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT.

1 / E 317 NEW WORK SECOND FLOOR PLAN C - MECHANICAL POWER
1/8" = 1'-0"

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED
DRAWING NAME: NEW WORK SECOND FLOOR PLAN C - MECHANICAL POWER

E 317

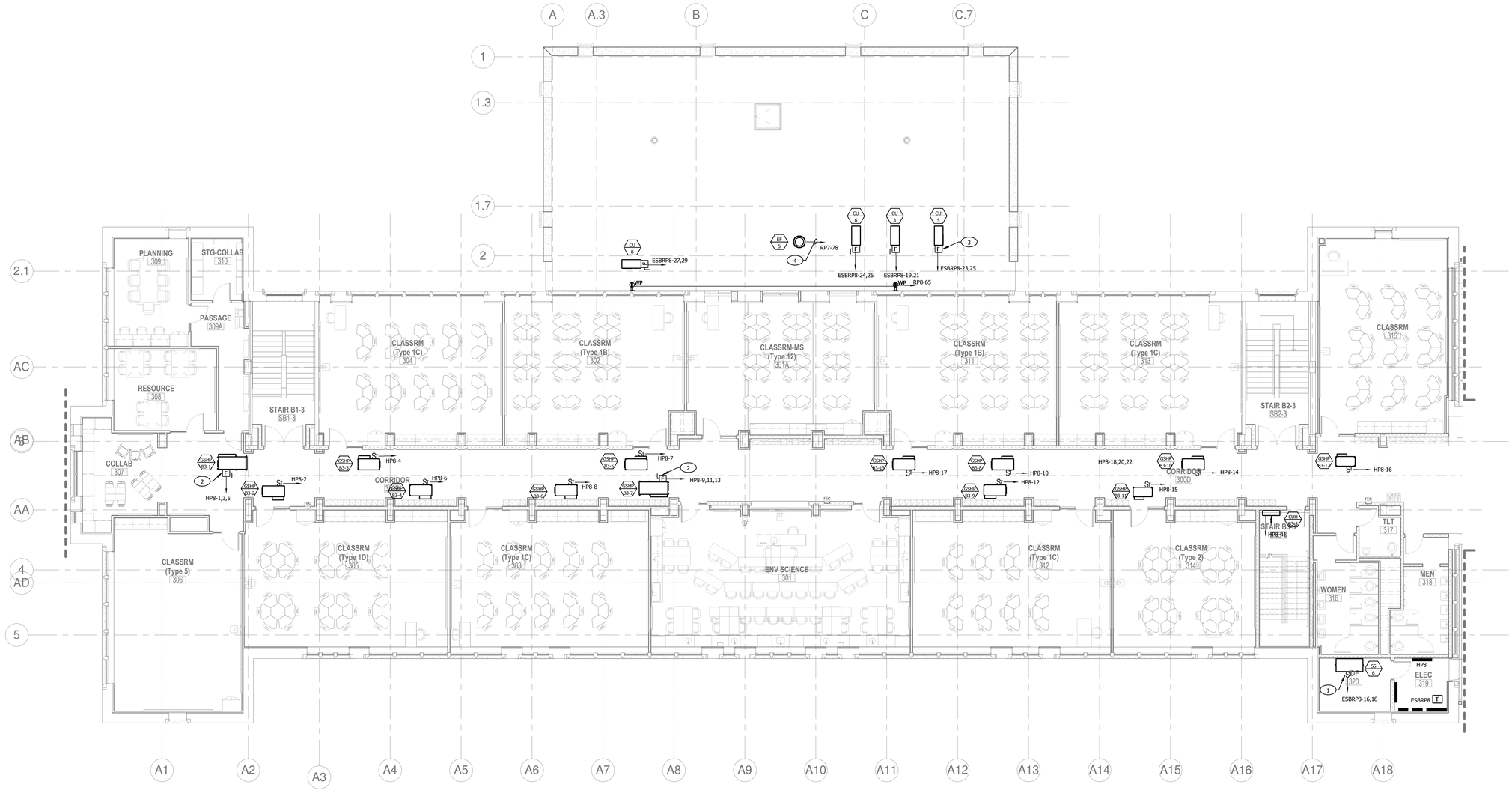
7/26/2016 8:54:51 AM

GENERAL NOTES:

A. REFER TO MECHANICAL SCHEDULES ON M-600 SERIES DRAWINGS FOR ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT.

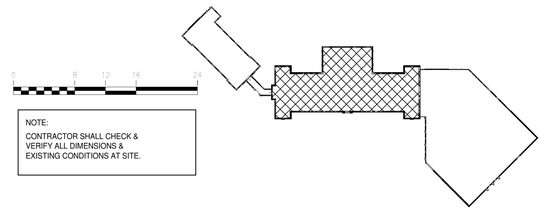
KEYED NOTES:

1. MOUNT SWITCH OR DISCONNECT IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT. TYPICAL FOR ALL MECHANICAL UNIT CONNECTIONS.
2. PROVIDE 480V-30A-3P-3F NEMA TYPE 1 FUSED SAFETY SWITCH, FUSED TO 15A. MOUNT SWITCH IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT.
3. PROVIDE 240V-30A-3P-2F NEMA TYPE 4X FUSED SAFETY SWITCH, FUSED TO 15A. MOUNT SWITCH ON OR ADJACENT TO UNIT. TYPICAL FOR CONDENSING UNIT DISCONNECTS.
4. EXTEND 2 #12 & 1 #12 GROUND DOWN TO THERMAL SWITCH IN FUME HOOD ON FLOOR BELOW.



1 / E 318 NEW WORK THIRD FLOOR PLAN B - MECHANICAL POWER

1/8" = 1'-0"



NOTE:
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LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

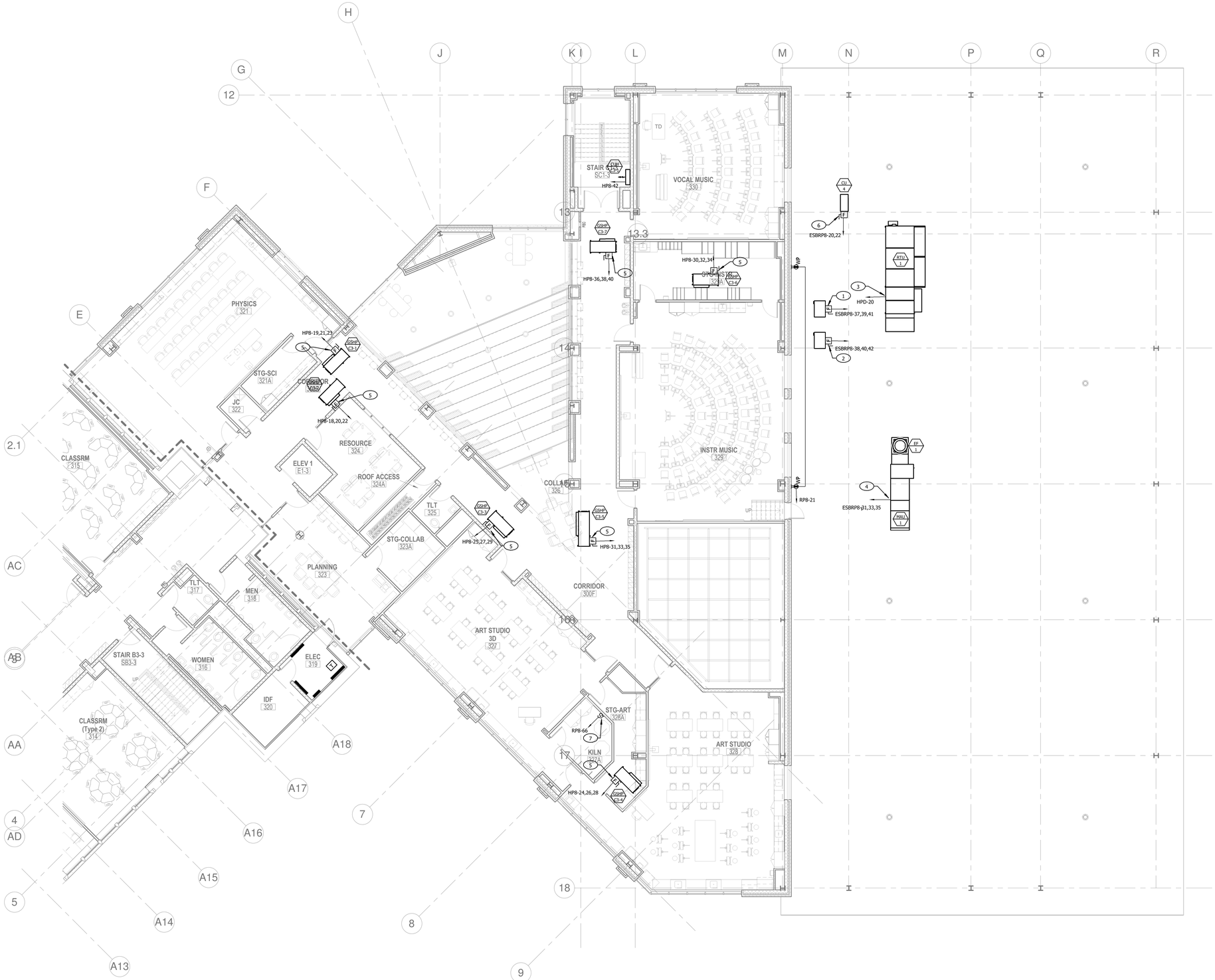
DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
NEW WORK THIRD FLOOR PLAN B - MECHANICAL POWER

E 318

7/26/2016 8:55:05 AM



GENERAL NOTES:

A. REFER TO MECHANICAL SCHEDULES ON M-600 SERIES DRAWINGS FOR ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT.

KEYED NOTES:

1. KITCHEN COOLER CONDENSING UNIT. PROVIDE 240V-30A-3P-3F NEMA TYPE 4X FUSED SAFETY SWITCH, FUSED TO 15A.
2. KITCHEN FEEZER CONDENSING UNIT. PROVIDE 240V-30A-3P-3F NEMA TYPE 4X FUSED SAFETY SWITCH, FUSED TO 30A.
3. PROVIDE SINGLE POINT POWER CONNECTION TO UNIT. COORDINATE LOCATION IN THE FIELD.
4. PROVIDE SINGLE POINT POWER CONNECTION TO UNIT. EXTEND CONTROL WIRING DOWN TO REMOTE PANEL IN KITCHEN. REFER TO DRAWING E 401 FOR LOCATION AND DETAILS. EXTEND 3 #12 FROM UNIT INTERNAL FUSEBLOCK TO UNIT MOUNTED EXHAUST FAN EF-1.
5. PROVIDE 480V-30A-3P-3F NEMA TYPE 1 FUSED SAFETY SWITCH, FUSED TO 15A. MOUNT SWITCH IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT.
6. PROVIDE 240V-30A-3P-2F NEMA TYPE 4X FUSED SAFETY SWITCH, FUSED TO 15A. MOUNT SWITCH ON OR ADJACENT TO UNIT.
7. MOUNT THERMAL SWITCH FOR CONTROL OF EXHAUST FAN EF-4 IN OR ADJACENT TO KILNS. COORDINATE FINAL LOCATION IN THE FIELD.

1 / E 319 NEW WORK THIRD FLOOR PLAN C - MECHANICAL POWER
1/8" = 1'-0"

0 8 12 16 24

NOTE:
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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

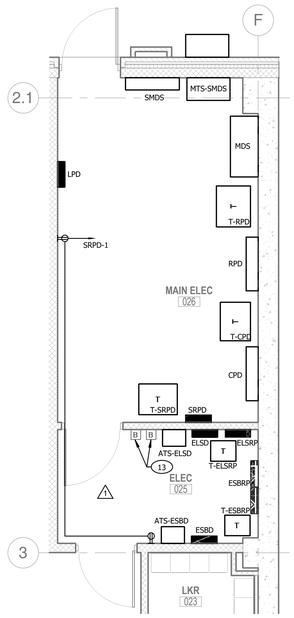
No.	DATE	DESCRIPTION

BID ISSUE

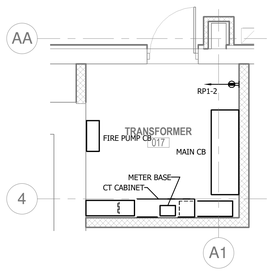
PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED
DRAWING NAME: NEW WORK THIRD FLOOR PLAN C - MECHANICAL POWER

E 319

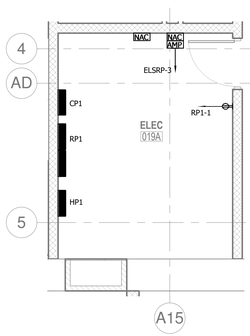
7/26/2016 6:55:21 AM



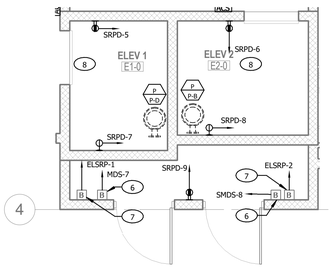
1 E 400 ENLARGED PLAN - MAIN ELEC 026, ELEC 025
1/4" = 1'-0"



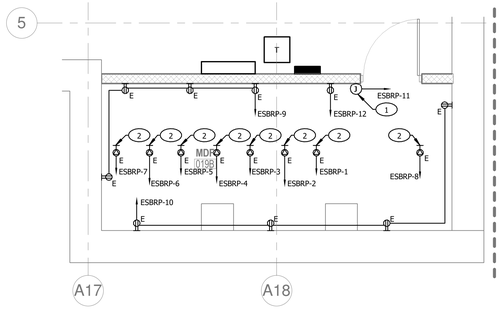
10 E 400 ENLARGED PLAN - TRANSFORMER 017
1/4" = 1'-0"



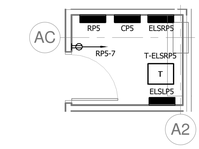
2 E 400 ENLARGED PLAN - ELEC 019A
1/4" = 1'-0"



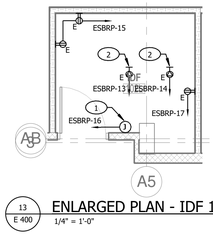
12 E 400 ENLARGED PLAN ELEV PIT, EMR 022A
1/4" = 1'-0"



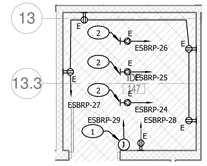
9 E 400 ENLARGED PLAN - MDF 019B
1/4" = 1'-0"



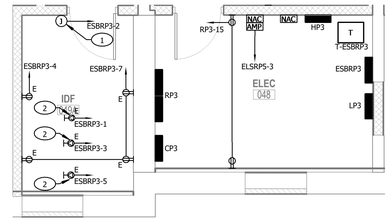
5 E 400 ENLARGED PLAN - ELEC 104C
1/4" = 1'-0"



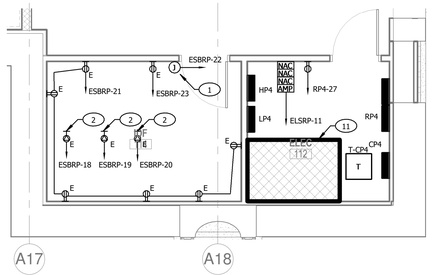
13 E 400 ENLARGED PLAN - IDF 102L
1/4" = 1'-0"



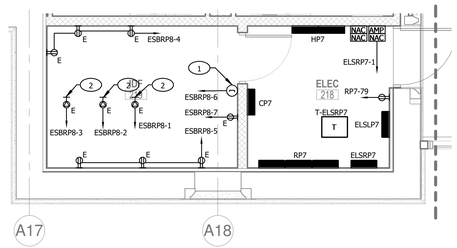
14 E 400 ENLARGED PLAN - IDF 147
1/4" = 1'-0"



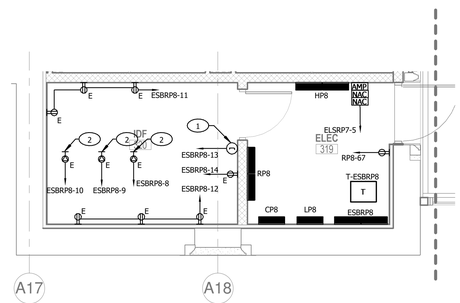
3 E 400 ENLARGED PLAN - ELEC 048, IDF 049A
1/4" = 1'-0"



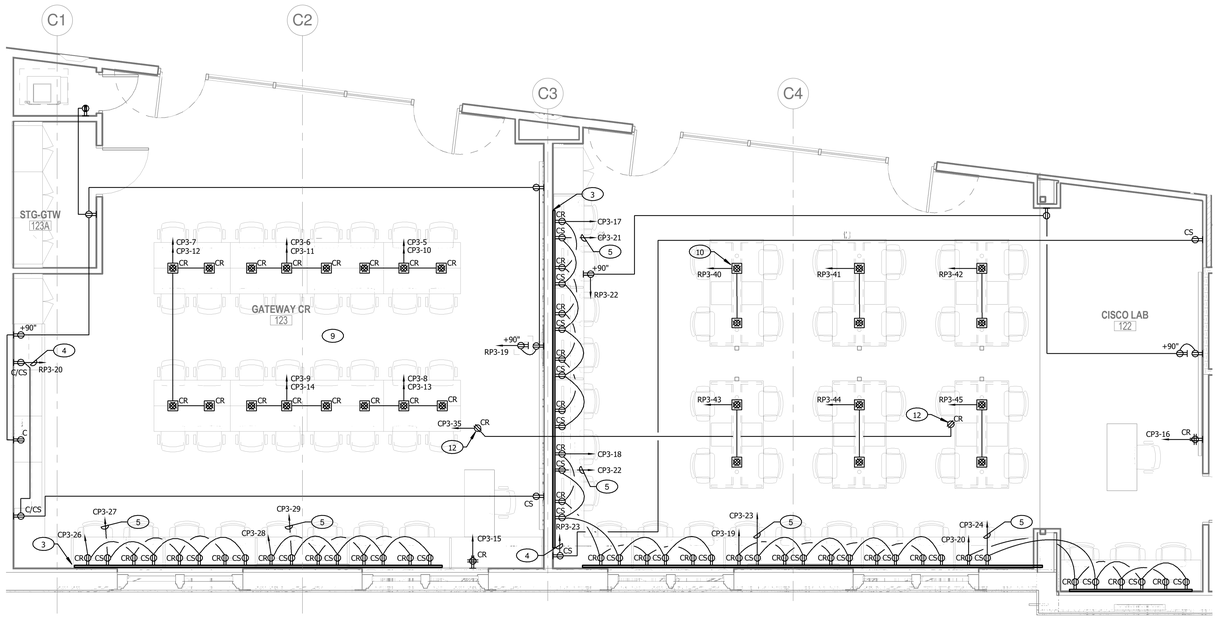
4 E 400 ENLARGED PLAN - IDF 114 ELEC 112
1/4" = 1'-0"



6 E 400 ENLARGED PLAN - IDF 219, ELEC 218
1/4" = 1'-0"



7 E 400 ENLARGED PLAN - IDF 320, ELEC 319
1/4" = 1'-0"



11 E 400 ENLARGED PLAN - GATEWAT CR 123, CISCO CR 122
1/4" = 1'-0"

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

GENERAL NOTES:

A. FOR DEVICES BOXES SHOWN AS BEING MOUNTED BACK TO BACK IN A STUD WALL, OFFSET ONE BOX TO BE IN THE ADJACENT STUD SPACE. OUTLET BOXES IN ADJACENT ROOMS SHALL NOT BE INSTALLED SIDE BY SIDE IN THE SAME STUD SPACE.
B. FOR COUNTERTOP RECEPTACLES, CONFIRM REACH DISTANCE FROM EDGE OF COUNTERTOP TO FACE OF DEVICE DOES NOT EXCEED 24". IF DEVICE FACE EXCEEDS 24" REACH LIMIT, PROVIDE BOX EXTENSION TO BRING FACE TO 24" FROM EDGE OF COUNTERTOP.

KEYED NOTES:

1. POWER CONNECTION TO ACCESS CONTROL POWER SUPPLY. COORDINATE LOCATION IN THE FIELD.
2. PROVIDE NEMA L5-30 RECEPTACLE MOUNTED ON CABLETRAY ABOVE EQUIPMENT CABINETS. COORDINATE FINAL LOCATION WITH SUPPLIED EQUIPMENT IN FIELD.
3. PROVIDE DUAL CHANNEL HORIZONTAL RACEWAY AT 18" AFF. PROVIDE ALL REQUIRED APPURTENANCES FOR A COMPLETE INSTALLATION.
4. EXTEND CIRCUIT THROUGH ROOM LIGHTING CONTROLLER IN ROOM 121. REFER TO DRAWING E-501 FOR DETAILS OR CIRCUIT OPERATION AND CONTROL.
5. PROVIDE MULTIZONE CONTROL UNIT FOR OCCUPANCY SENSOR CONTROL, OR SENSOR RELAY (LUTRON POW-PAK OR APPROVED EQUAL) FOR CONNECTION TO LOCAL OCCUPANCY SENSOR IN THIS AREA FOR CONTROL OF CONTROLLED/SWITCHED RECEPTACLES.
6. POWER CONNECTION TO ELEVATOR CONTROL PANEL. PROVIDE 480V-40A-3P ENCLOSED CIRCUIT BREAKER WITH SHUNT TRIP OPERATOR. PROVIDE 2 N.O. AND 2 N.C. CONTACTS. BREAKER SHALL BE LOCKABLE IN THE OPEN AND CLOSED POSITION. PROVIDE FINAL CONNECTION TO CONTROL PANEL.
7. POWER CONNECTION TO ELEVATOR CAB LIGHTS. PROVIDE 120V-20A-1P ENCLOSED CIRCUIT BREAKER. PROVIDE FINAL CONNECTION TO CONTROL PANEL.
8. ALL DEVICES, OUTLETS, JUNCTION BOXES, OUTLET BOXES, CONDUIT AND WIRING WITHIN 4' OF THE ELEVATOR PIT FLOOR SHALL BE NEMA TYPE 4. COORDINATE FINAL LOCATIONS WITH THE ELEVATOR INSTALLER IN THE FIELD.
9. PROVIDE POKE-THRU WITH TWO DUPLEX RECEPTACLES, CONNECT ONE RECEPTACLE TO UNCONTROLLED CIRCUIT AND THE SECOND RECEPTACLE TO THE CONTROLLED CIRCUIT. PROVIDE MULTIZONE CONTROL UNIT FOR OCCUPANCY SENSOR CONTROL, OR SENSOR RELAY (LUTRON POW-PAK OR APPROVED EQUAL) FOR CONNECTION TO LOCAL OCCUPANCY SENSOR IN THIS AREA FOR CONTROL OF CONTROLLED/SWITCHED RECEPTACLE.
10. FLOORBOX POWER FOR CUSTOM WORKSTATION. COORDINATE FINAL LOCATION WITH SUPPLIED CASEWORK IN THE FIELD. TYPICAL FOR POKE-THRU LOCATIONS IN CISCO CR.
11. MAINTAIN 4'X6' CLEAR SPACE IN ELECTRICAL ROOM FOR FUTURE SOLAR TRANSFER EQUIPMENT. EXTEND THREE 4" CONDUITS FROM ABOVE CEILING IN ELECTRICAL ROOM ABOVE SPACE THROUGH ELECTRICAL ROOM ON FLOOR ABOVE AND ACROSS CEILING SPACE TO EXTERIOR WALL AT GYM ROOFTOP. EXTEND CONDUITS THROUGH WALL 6" AND CAP. PROVIDE PULL ROPE FOR FUTURE USE. REFER TO DRAWING E219 FOR LOCATION.
12. PROVIDE TWO DUPLEX RECEPTACLES IN CEILING MOUNTED A/V CABINET. COORDINATE FINAL LOCATION WITH EQUIPMENT LOCATION IN THE FIELD.
13. FIRE PUMP AND LIFE SAFETY TRANSFER SWITCH CIRCUIT BREAKERS. REFER TO DRAWING E500 FOR FURTHER DETAIL.

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	05/06/16	ADDENDUM #5

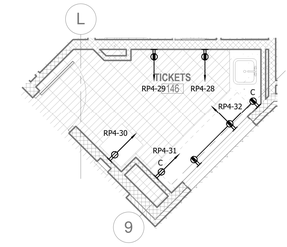
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED
DRAWING NAME: ENLARGED FLOOR PLANS - ELECTRICAL

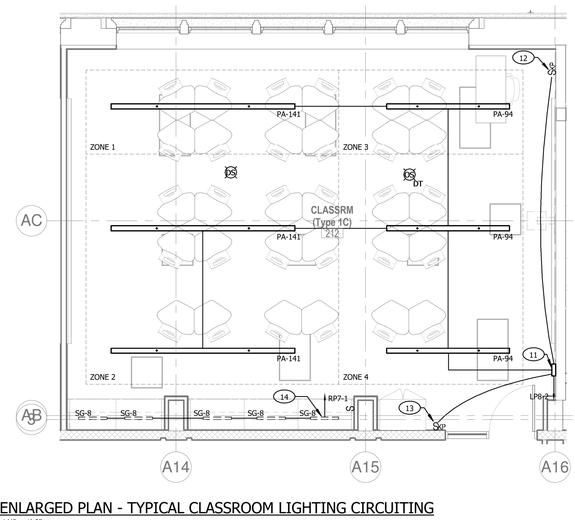
E 400

7/26/2016 8:55:55 AM

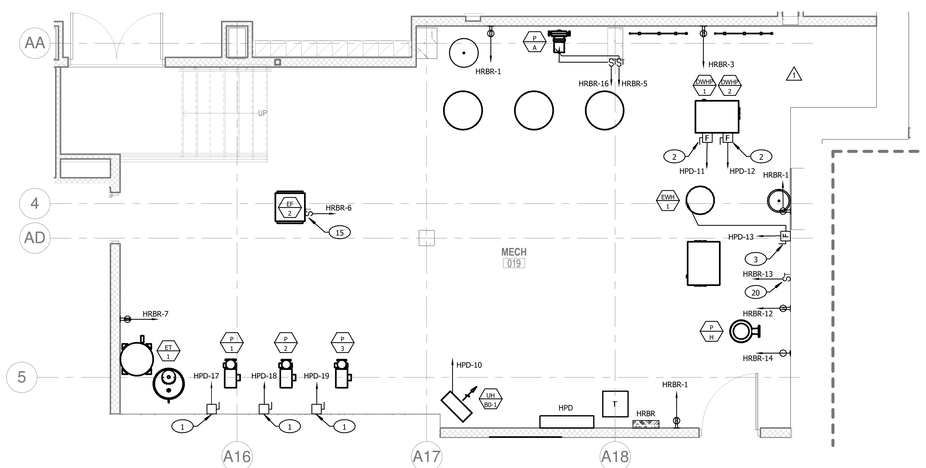
1 E 401 ENLARGED PLAN - KITCHEN - POWER
1/4" = 1'-0"



4 E 401 ENLARGED PLAN - TKTS 146
1/4" = 1'-0"



5 E 401 ENLARGED PLAN - TYPICAL CLASSROOM LIGHTING CIRCUITING
1/4" = 1'-0"



2 E 401 ENLARGED PLAN - MECH 019
1/4" = 1'-0"

GENERAL NOTES:

A. REFER TO MECHANICAL SCHEDULES ON M-400 SERIES DRAWINGS FOR ELECTRICAL CHARACTERISTICS OF MECHANICAL EQUIPMENT.
B. REFER TO KITCHEN EQUIPMENT PLAN AND UTILITY LOAD SCHEDULE (K101 & K102) FOR ELECTRICAL CHARACTERISTICS OF KITCHEN EQUIPMENT.
C. FOR DEVICES BOXES SHOWN AS BEING MOUNTED BACK TO BACK IN A STUD WALL, OFFSET ONE BOX TO BE IN THE ADJACENT STUD SPACE. OUTLET BOXES IN ADJACENT ROOMS SHALL NOT BE INSTALLED SIDE BY SIDE IN THE SAME STUD SPACE.
D. FOR COUNTERTOP RECEPTACLES, CONFIRM REACH DISTANCE FROM EDGE OF COUNTERTOP TO FACE OF DEVICE DOES NOT EXCEED 24". IF DEVICE FACE EXCEEDS 24" REACH LIMIT, PROVIDE BOX EXTENSION TO BRING FACE TO 24" FROM EDGE OF COUNTERTOP.

KEYED NOTES:

1. VARIABLE FREQUENCY DRIVE BY MECHANICAL CONTRACTOR. PROVIDE FINAL CONNECTION TO ASSOCIATED PUMP. LOAD SIDE CONDUCTORS TO MATCH LINE SIDE.
2. PROVIDE 480V-30A-3P-3F NEMA TYPE 1 FUSED SAFETY SWITCH, FUSED TO 30A. MOUNT SWITCH IN LOCATION TO NOT INTERFERE WITH ANY ACCESS PANELS. MAKE FINAL CONNECTION TO UNIT.
3. PROVIDE 480V-100A-3P-3F NEMA TYPE 1 FUSED SAFETY SWITCH, FUSED TO 70A. MAKE FINAL CONNECTION TO UNIT.
4. FOR RECEPTACLES INDICATED AS CONTROLLED/SWITCHED, ROUTE RECEPTACLE CIRCUIT THROUGH ASSOCIATED ROOM LIGHTING CONTROLLER TO PROVIDE OCCUPANCY SENSOR CONTROL OF RECEPTACLES. REFER TO DRAWING E-501 FOR DETAILS OF CIRCUIT OPERATION AND CONTROL.
5. POWER CONNECTION TO COOLER/FREEZER FOR DOOR HEATERS, LIGHTING, AND ALARM.
6. PEDESTAL MOUNTED JUNCTION BOX, MOUNTED 2" AFF. PROVIDE RECEPTACLE CONFIGURATION AS COORDINATED WITH SUPPLIED EQUIPMENT. TYPICAL FOR ALL JUNCTION BOXES.
7. PEDESTAL MOUNTED RECEPTACLE, MOUNTED 2" AFF. TYPICAL FOR ALL RECEPTACLES.
8. POWER CONNECTION TO KITCHEN HOOD UTILITY RACEWAY. TYPICAL FOR TWO.
9. PROVIDE SHUNT TRIP OPERATORS FOR CIRCUIT BREAKERS AS INDICATED ON PANEL SCHEDULES. EXTEND 3 #12 IN 1/2" CONDUIT FROM OPERATORS TO KITCHEN HOOD SUPPRESSION SYSTEM CONTROL PANEL.
10. ROOFTOP MAU-1/EF-1 REMOTE CONTROL PANEL, FURNISHED BY EQUIPMENT MANUFACTURER. EXTEND ONE 1" CONDUIT WITH 6 #12 CONDUCTORS FOR HOOD LIGHT CONTROL. EXTEND ONE 1" CONDUIT TO ROOFTOP MAU-1/EF-1 WITH 10 #12 CONDUCTORS FOR REMOTE CONTROL OF STARTERS AND HEAT.
11. PROVIDE 4-ZONE LIGHTING CONTROLLER ABOVE CEILING IN THE VICINITY OF THE ENTRY DOOR. ROUTE ROOM LIGHTING CIRCUITS THROUGH UNIT FOR ZONED CONTROL AS INDICATED ON THIS PLAN. REFER TO LIGHTING CONTROL RISER AND SCHEDULE AS SHOWN ON DRAWINGS E 501 AND E 610 FOR ADDITIONAL DETAILS.
12. PROVIDE LOW VOLTAGE 5-BUTTON MASTER CONTROL STATION ADJACENT TO TEACHER'S DESK. REFER TO SCHEDULE ON DRAWING E 610 FOR DETAILS.
13. PROVIDE LOW VOLTAGE 3-BUTTON ENTRY CONTROL STATION ADJACENT TO EACH ROOM ENTRY DOOR. REFER TO SCHEDULE ON DRAWING E 610 FOR DETAILS.
14. CONNECT UNDERCABINET LIGHTS TO LOCAL ROOM OCCUPANCY SENSOR CONTROLLED CIRCUIT. PROVIDE LOCAL INDIVIDUAL MOMENTARY CONTACT SWITCH FOR LOCAL CONTROL OF FIXTURES.
15. MOUNT ON OR ADJACENT TO UNIT.
16. POWER CONNECTION TO COOLER BLOWER COIL.
17. POWER CONNECTION TO FREEZER BLOWER COIL.
18. POWER CONNECTION TO COIL HEAT TRACE CONTROLLER.
19. PROVIDE 12/3 TYPE SOW CORD WITH PLUG FOR POWER CONNECTION TO UNIT. ALLOW ENOUGH CORD SLACK FOR 1' DRIP LOOP WHEN INSTALLED. COORDINATE PLUG TYPE WITH SUPPLIED EQUIPMENT IN THE FIELD.
20. POWER CONNECTION TO WATER FILTRATION SYSTEM CIRCULATION PUMP. PROVIDE FINAL CONNECTION TO UNIT. COORDINATE LOCATION IN THE FIELD.

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

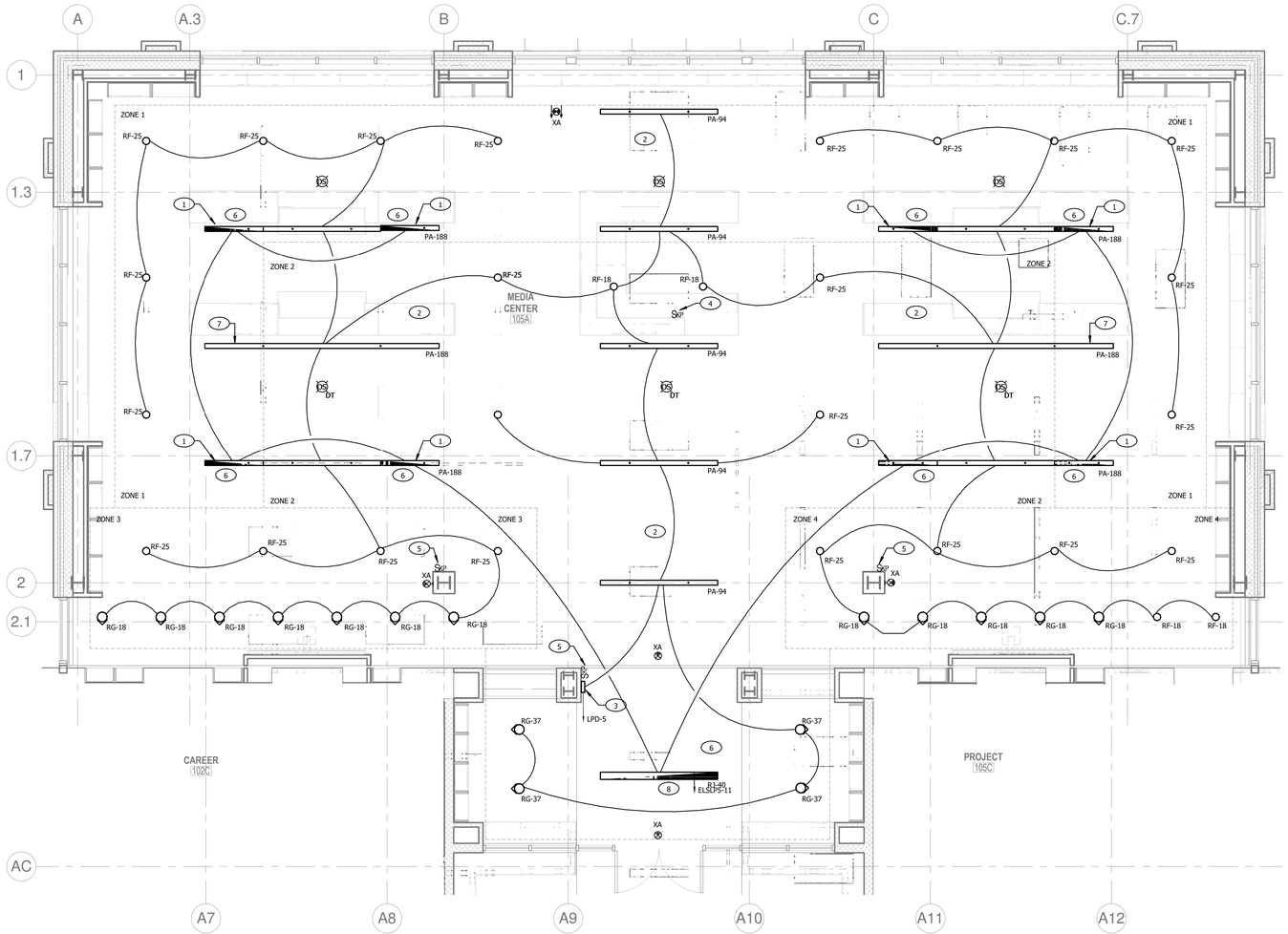
No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED
DRAWING NAME: ENLARGED FLOOR PLANS - ELECTRICAL

E 401

7/26/2016 8:56:21 AM



1 / E 402 ENLARGED FLOOR PLAN - MEDIA CENTER 105A - LIGHTING

1/4" = 1'-0"

GENERAL NOTES:

A. UNLESS NOTED OTHERWISE, PROVIDE BODINE GTD (OR APPROVED EQUAL) FOR CONNECTION OF EMERGENCY CIRCUIT TO NORMAL/EMERGENCY FIXTURES. REFER TO DRAWING E 501 FOR TYPICAL INSTALLATION DETAIL.
B. OCCUPANCY SENSOR/DAYLIGHT SENSOR LOCATIONS ARE DIAGRAMMATIC AND ARE SHOWN TO INDICATE AREAS TO BE COVERED ONLY. PROVIDE QUANTITIES/LOCATIONS AND RELATED APPURTENANCES AS REQUIRED FOR COVERAGE AS DEFINED IN THE SPECIFICATIONS.
C. CONNECT EXIT SIGNS UNSWITCHED TO NEAREST NORMAL/EMERGENCY CIRCUIT WITH 2 #12 & 1 #12 GROUND IN 3/4" CONDUIT.

KEYED NOTES:

1. CONNECT LAST 4' OF FIXTURE ROW TO NORMAL/EMERGENCY CIRCUIT INDICATED AND PROVIDE BODINE GTD-20A CONTROL UNIT FOR CIRCUIT INTERFACE. CENTRAL PORTION OF FIXTURE ROW SHALL BE CONNECTED TO NORMAL POWER CIRCUIT INDICATED.
2. MOUNT BOTTOM OF 'PA-XX' PENDANT LIGHTS IN THIS ROOM AT 9'-0" AFF.
3. PROVIDE 4-ZONE LIGHTING CONTROLLER ABOVE CEILING IN THE VICINITY OF THE ENTRY DOOR. ROUTE ROOM LIGHTING CIRCUITS THROUGH UNIT FOR ZONED CONTROL AS INDICATED ON THIS PLAN. REFER TO LIGHTING CONTROL RISER AND SCHEDULE AS SHOWN ON DRAWINGS E 501 AND E 610 FOR ADDITIONAL DETAILS.
4. PROVIDE LOW VOLTAGE 7-BUTTON MASTER CONTROL STATION INSTALLED IN MAIN DESK CASEWORK. REFER TO SCHEDULE ON DRAWING E 610 FOR DETAILS.
5. PROVIDE LOW VOLTAGE 3-BUTTON ENTRY CONTROL STATION. REFER TO SCHEDULE ON DRAWING E 610 FOR DETAILS.
6. INSTALL ALL NECESSARY CONTROL AND POWER WIRING BETWEEN ROOM CONTROL SYSTEM AND LOCAL FIXTURE GTD DEVICE TO ALLOW CONTROL OF NORMAL EMERGENCY FIXTURES WITH LOCAL ZONING REQUIREMENTS.
7. CIRCUIT FIXTURE SUCH THAT LAST 4' OF FIXTURE ROW IS CONTROLLED WITH ZONE 1 AND REMAINDER OF FIXTURE ROW IS CONTROLLED WITH ZONE 2.
8. PROVIDE BODINE GTD-20A CONTROL UNIT FOR CIRCUIT INTERFACE BETWEEN NORMAL/EMERGENCY CIRCUIT OF THIS FIXTURE AND NORMAL CIRCUIT OF OTHER FIXTURES WITHIN SAME CONTROL ZONE.

NOTE:
CONTRACTOR SHALL CHECK & VERIFY ALL DIMENSIONS & EXISTING CONDITIONS AT SITE.

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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

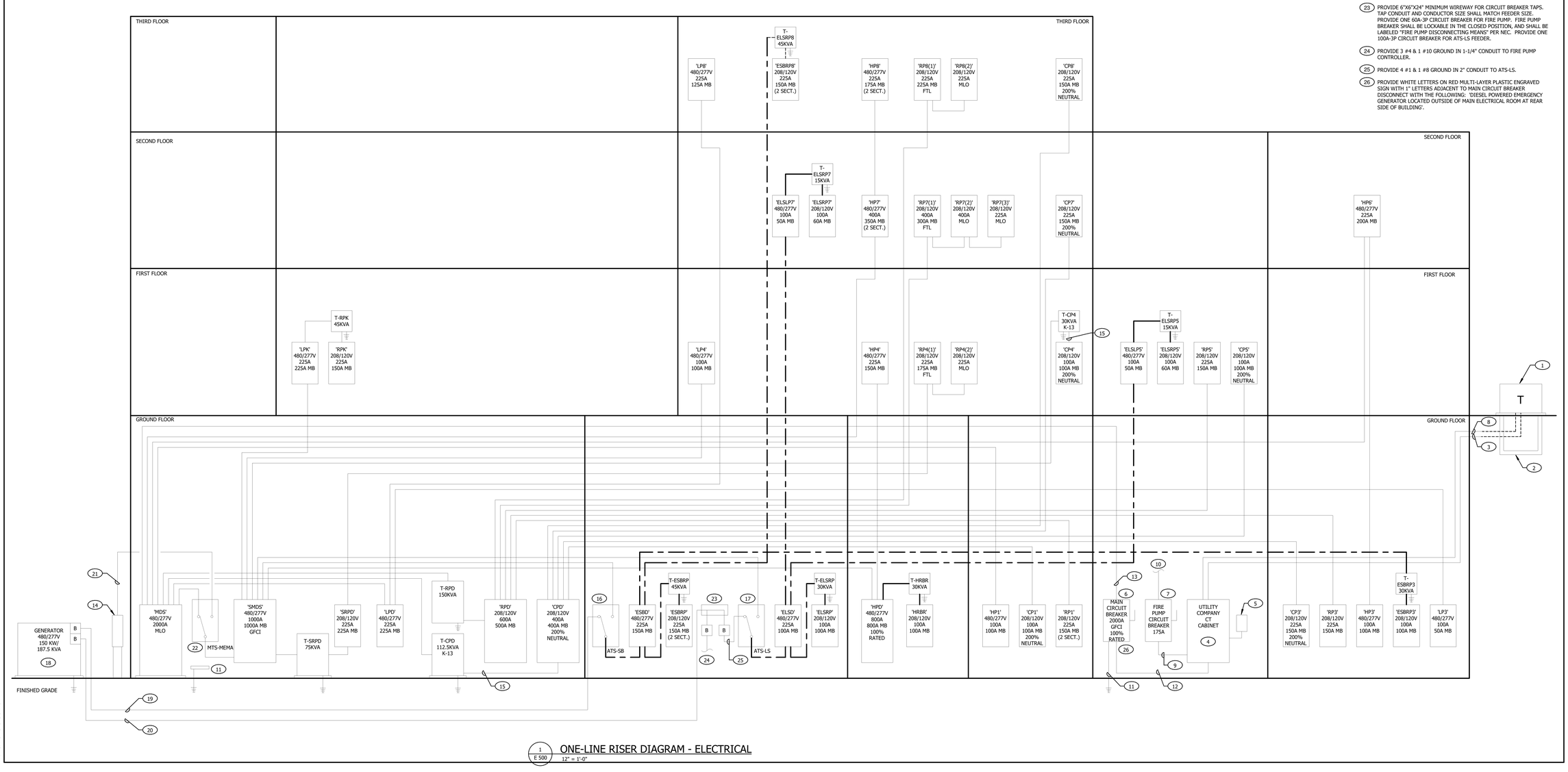
DRAWING NAME:
ENLARGED FLOOR PLANS - ELECTRICAL

E 402

7/26/2016 8:56:44 AM

KEYED NOTES:

1. NEW UTILITY COMPANY TRANSFORMER BY UTILITY COMPANY.
2. EXISTING TRANSFORMER PAD/VAULT TO REMAIN. PROVIDE NEW DUCTBANK FROM WITHIN 5' OF EXISTING PAD TO NEW CT CABINET.
3. NEW 6-WAY UTILITY DUCTBANK. DUCTBANK BY CONTRACTOR, CONDUCTORS BY UTILITY COMPANY.
4. NEW UTILITY CT CABINET PER BG&E SPECIFCATIONS.
5. NEW METER AND METER ENCLOSURE PER BG&E SPECIFICATIONS.
6. MAIN SERVICE DISCONNECT CIRCUIT BREAKER.
7. FIRE PUMP CIRCUIT BREAKER. PROVIDE ENGRAVED NAMEPLATE WITH MINIMUM 1" LETTERING, WHITE ON RED BACKGROUND, INDICATING "FIRE PUMP DISCONNECTING MEANS". BREAKER SHALL BE LOCKABLE IN THE CLOSED POSITION.
8. EXTEND ONE 2" CONDUIT FROM CT CABINET TO WITHIN 5' OF EXISTING TRANSFORMER PAD FOR SEPERATE FIRE PUMP FEEDER, CONDUCTORS BY UTILITY COMPANY.
9. PROVIDE 3 #4 & 1 #6 GROUND IN 1-1/2" RGS CONDUIT FROM CT CABINET TO FIRE PUMP BREAKER.
10. PROVIDE 3 1/C #8 MI CABLES FROM FIRE PUMP BREAKER TO FIRE PUMP CONTROLLER.
11. CONNECT GROUNDING CONDUCTOR TO NEW GROUNDING COUNTERPOISE. EXTEND 250 KCMIL CONDUCTOR IN 1-1/2" PVC CONDUIT TO NEW 24"X4" COPPER MAIN GROUNDING BUSBAR IN MAIN ELECTRICAL ROOM. EXTEND 250 KCMIL CONDUCTOR IN 1-1/2" PVC CONDUIT TO EXISTING MAIN WATER SERVICE ENTRANCE.
12. PROVIDE 5 SETS OF 4-600 KCMIL & 1-250 KCMIL GROUND IN 12" X 12" MINIMUM WIRING TROUGH FROM MAIN CT CABINET TO MAIN CIRCUIT BREAKER.
13. PROVIDE 5 SETS OF 4-600 KCMIL & 1-250 KCMIL GROUND IN 4" CONDUIT FROM MAIN CIRCUIT BREAKER TO PANEL 'MDS' IN MAIN ELECTRICAL ROOM.
14. PROVIDE 480/277V-1000A-3 PHASE PORTABLE GENERATOR DOCKING STATION IN NEMA TYPE 4X ENCLOSURE.
15. PROVIDE TWO FULL SIZE NEUTRAL CONDUCTORS FROM TRANSFORMER TO PANELBOARD.
16. PROVIDE 480/277V-150A-4P AUTOMATIC TRANSFER SWITCH.
17. PROVIDE 480/277V-100A-4P AUTOMATIC TRANSFER SWITCH.
18. PROVIDE ONE 150A-3P (SB) AND ONE 175A-3P (LS) ELECTRONIC TRIP OUTPUT CIRCUIT BREAKERS ON GENERATOR.
19. PROVIDE 4 #1/0 & 1 #2 GROUND IN 2" CONDUIT.
20. PROVIDE 4 #2/0 & 1 #2 GROUND IN 2" CONDUIT.
21. PROVIDE 3 SETS OF 4-500 KCMIL & 1 #3/0 GROUND IN 4" CONDUIT.
22. PROVIDE 480/277V-1000A-4P NON-AUTOMATIC TRANSFER SWITCH.
23. PROVIDE 6"X6"X24" MINIMUM WIREWAY FOR CIRCUIT BREAKER TAPS. TAP CONDUIT AND CONDUCTOR SIZE SHALL MATCH FEEDER SIZE. PROVIDE ONE 60A-3P CIRCUIT BREAKER FOR FIRE PUMP. FIRE PUMP BREAKER SHALL BE LOCKABLE IN THE CLOSED POSITION, AND SHALL BE LABELED "FIRE PUMP DISCONNECTING MEANS" PER NEC. PROVIDE ONE 100A-3P CIRCUIT BREAKER FOR ATS-LS FEEDER.
24. PROVIDE 3 #4 & 1 #10 GROUND IN 1-1/4" CONDUIT TO FIRE PUMP CONTROLLER.
25. PROVIDE 4 #1 & 1 #8 GROUND IN 2" CONDUIT TO ATS-LS.
26. PROVIDE WHITE LETTERS ON RED MULTI-LAYER PLASTIC ENGRAVED SIGN WITH 1" LETTERS ADJACENT TO MAIN CIRCUIT BREAKER DISCONNECT WITH THE FOLLOWING: 'DIESEL POWERED EMERGENCY GENERATOR LOCATED OUTSIDE OF MAIN ELECTRICAL ROOM AT REAR SIDE OF BUILDING'.



1 / E 500 ONE-LINE RISER DIAGRAM - ELECTRICAL
12" = 1'-0"

7/26/2016 8:56:49 AM

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FOOD SERVICE
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AV/IT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
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ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056

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I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

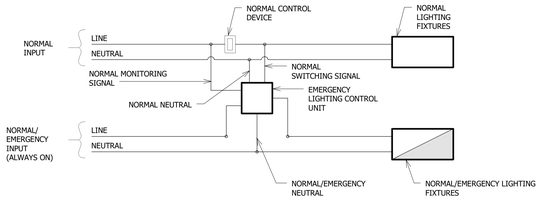
No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

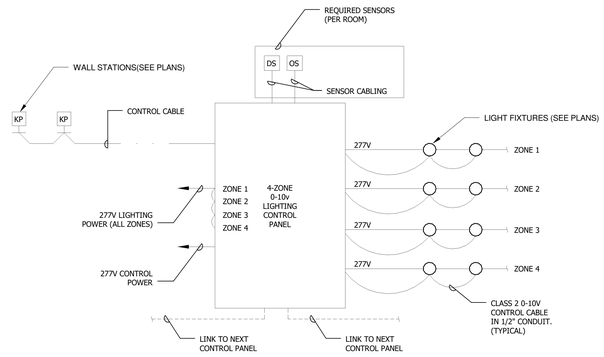
DRAWING NAME
ELECTRICAL ONE-LINE RISER DIAGRAM

E 500

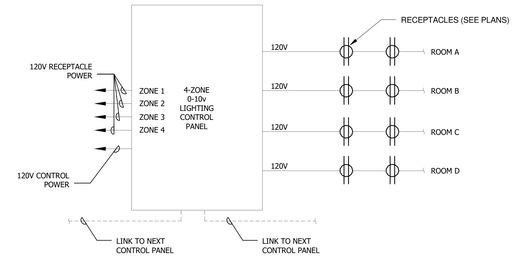


NOTES:
CONTROL UNIT TO ALLOW SIMULTANEOUS CONTROL OF NORMAL AND NORMAL/EMERGENCY LIGHT FIXTURES BY NORMAL CONTROL DEVICE UNDER NORMAL POWER CONDITIONS. UNDER EMERGENCY CONDITIONS, NORMAL CONTROL DEVICE SWITCHING SIGNAL TO BE BYPASSED AND NORMAL/EMERGENCY LIGHT FIXTURES TO OPERATE IN FULL 'ON' CONDITION.

1 / E 501 EMERGENCY SWITCH BYPASS CONTROL UNIT - TYPICAL WIRING DIAGRAM DETAIL
NO SCALE



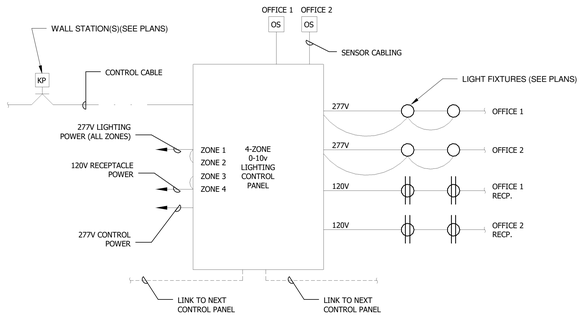
2 / E 501 LIGHTING CONTROL SCHEMATIC - CLASSROOM DETAIL
NO SCALE



4 / E 501 RECEPTACLE CONTROL SCHEMATIC - CLASSROOM DETAIL
NO SCALE

KEYED NOTES:

1. 4-ZONE LIGHTING CONTROL PANEL. REFER TO DETAIL ON THIS DRAWING FOR TYPICAL CONNECTIONS WITHIN ROOM. REFER TO TYPICAL ROOM LAYOUT ON DRAWING E-601 FOR TYPICAL CIRCUITING DETAILS. REFER TO CONTROL AND SWITCH SCHEDULES ON DRAWING E-610 FOR OPERATIONAL DETAILS. TYPICAL FOR ALL CLASSROOM 4-ZONE LIGHTING CONTROL PANELS.
2. 4-ZONE CONTROL PANEL (RECEPTACLES). REFER TO DETAIL ON THIS DRAWING FOR TYPICAL CONNECTIONS WITHIN MUTLIPLE ROOMS. REFER TO CONTROL AND SWITCH SCHEDULES ON DRAWING E-610 FOR OPERATIONAL DETAILS. TYPICAL FOR ALL 4-ZONE CONTROL PANELS (RECEPTACLES).
3. MULTI-ZONE LIGHTING CONTROL PANEL (CORRIDORS/STAIRS/ EXTERIOR LIGHTING). REFER TO CONTROL AND SWITCH SCHEDULES ON DRAWING E-610 FOR OPERATIONAL DETAILS.
4. PROVIDE ALL NECESSARY INTERCONNECTING CABLING REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM.
5. LIGHTING CONTROL PANEL HUB. PROVIDE MAIN PANELS FOR NETWORKING OF ALL LOCAL CONTROL PANELS AS INDICATED ON THIS RISER DIAGRAM. PROVIDE LOCAL PROGRAMMING INTERFACE AT THIS LOCATION FOR LOCAL CONTROL PANELS.
6. PROVIDE NETWORK GATEWAY TO MDF ROOM FROM CONTROL PANEL. PROVIDE ALL NECESSARY HARDWARE, CABLING AND APPURTENANCES TO INSTALL SYSTEM CONTROL SOFTWARE ON COMPUTER AT LOCATION TO BE DETERMINED BY THE OWNER IN THE FIELD.
7. 4-ZONE LIGHTING CONTROL PANEL FOR OFFICE SPACES. REFER TO DETAIL ON THIS DRAWING FOR TYPICAL CONNECTIONS. REFER TO CONTROL AND SWITCH SCHEDULES ON DRAWING E-610 FOR OPERATIONAL DETAILS. PROVIDE QUANTITY OF UNITS AS REQUIRED BY PROJECT CONDITIONS. LOCATE UNITS ABOVE CEILING ADJACENT TO NEAREST SPACES.



3 / E 501 LIGHTING CONTROL SCHEMATIC - MULTI-OFFICE SPACE DETAIL
NO SCALE

5 / E 501 LIGHTING CONTROL PANEL ONE-LINE RISER DIAGRAM
12" = 1'-0"

7/26/2016 8:56:55 AM

JRS ARCHITECTS
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LICENSE NO.: 19294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

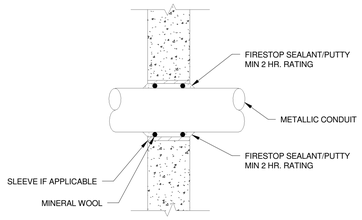
PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

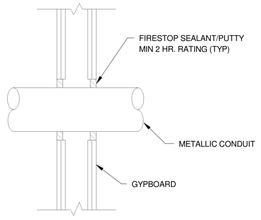
DRAWING NAME
ELECTRICAL DETAILS AND DIAGRAMS

E 501



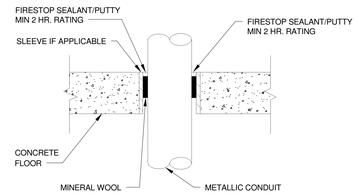
UL SYSTEM NO. W-J-1014

1 E 502 CONTINUOUS CONDUIT WALL PENETRATION AT CONCRETE DETAIL
NO SCALE



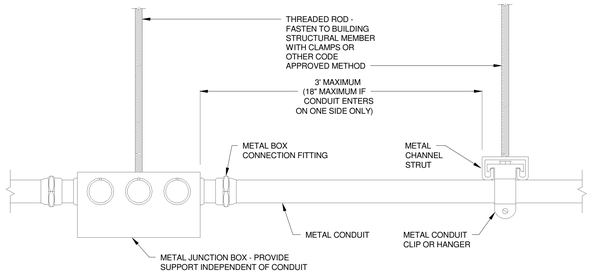
UL SYSTEM NO. W-L-1030

2 E 502 CONTINUOUS CONDUIT WALL PENETRATION AT GYPBOARD DETAIL
NO SCALE



UL SYSTEM NO. C-AJ-1009

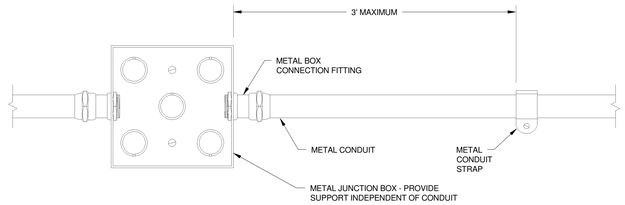
3 E 502 CONTINUOUS CONDUIT FLOOR PENETRATION AT CONCRETE DETAIL
NO SCALE



NOTES:

1. PROVIDE CONDUIT AND CONNECTION FITTINGS APPROPRIATE FOR THE ENVIRONMENT IN WHICH THE SYSTEM IS INSTALLED AND AS INDICATED IN THE SPECIFICATIONS.
2. DETAIL DOES NOT APPLY TO FLEXIBLE METAL CONDUIT OR NON-METALLIC CONDUIT.

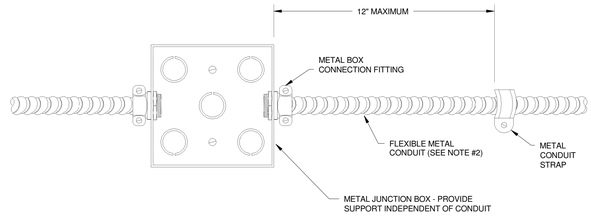
4 E 502 TYPICAL SUSPENDED JUNCTION BOX & METAL CONDUIT INSTALLATION DETAIL
12" = 1'-0"



NOTES:

1. PROVIDE CONDUIT AND CONNECTION FITTINGS APPROPRIATE FOR THE ENVIRONMENT IN WHICH THE SYSTEM IS INSTALLED AND AS INDICATED IN THE SPECIFICATIONS.
2. DETAIL DOES NOT APPLY TO FLEXIBLE METAL CONDUIT OR NON-METALLIC CONDUIT.

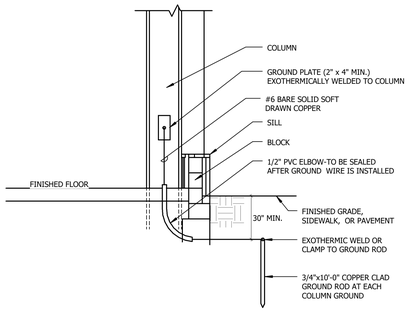
5 E 502 TYPICAL SURFACE JUNCTION BOX & METAL CONDUIT INSTALLATION DETAIL
12" = 1'-0"



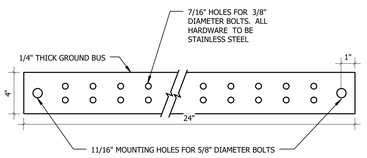
NOTES:

1. PROVIDE CONDUIT AND CONNECTION FITTINGS APPROPRIATE FOR THE ENVIRONMENT IN WHICH THE SYSTEM IS INSTALLED AND AS INDICATED IN THE SPECIFICATIONS.

6 E 502 TYPICAL SURFACE JUNCTION BOX & FLEXIBLE METAL CONDUIT INSTALLATION DETAIL
12" = 1'-0"



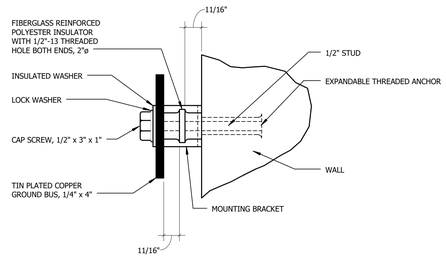
7 E 502 COLUMN GROUNDING DETAIL
NO SCALE



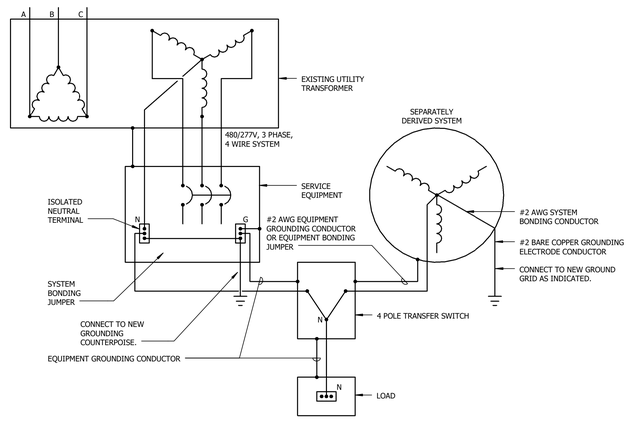
NOTE:

CONTRACTOR SHALL FIELD DRILL HOLES AS REQUIRED TO MATCH LUG DIMENSIONS AND NUMBER OF CONNECTIONS

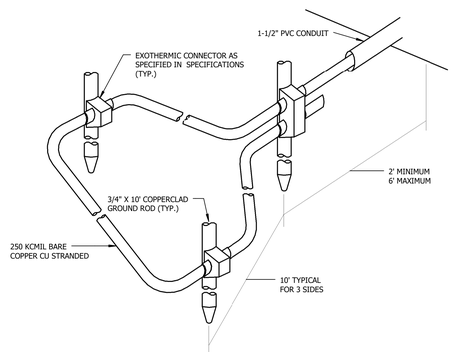
8 E 502 MAIN GROUND BUS DETAIL
NO SCALE



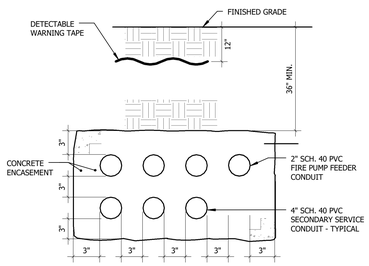
9 E 502 MAIN GROUND BUS MOUNTING DETAIL
NO SCALE



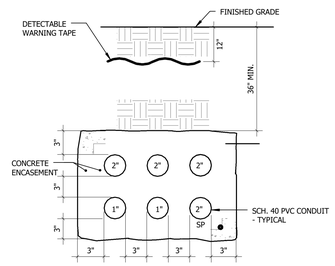
10 E 502 ELECTRICAL SERVICE GROUNDING AND BONDING CONFIGURATION
1/8" = 1'-0"



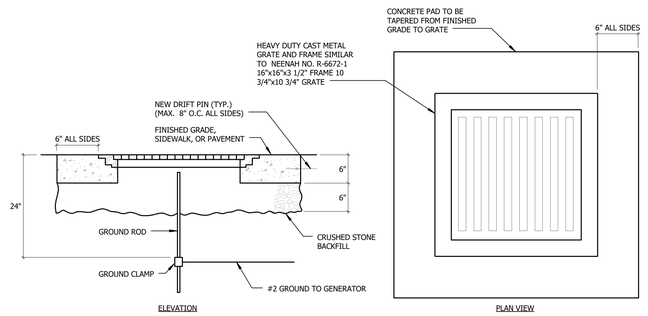
11 E 502 COUNTERPOISE GROUNDING
1/8" = 1'-0"



12 E 502 DUCT BANK SECTION 'A'-'A'
1/8" = 1'-0"



13 E 502 DUCT BANK SECTION 'B'-'B'
1/8" = 1'-0"



14 E 502 GROUND ROD WET-WELL
1/8" = 1'-0"

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No.	DATE	DESCRIPTION

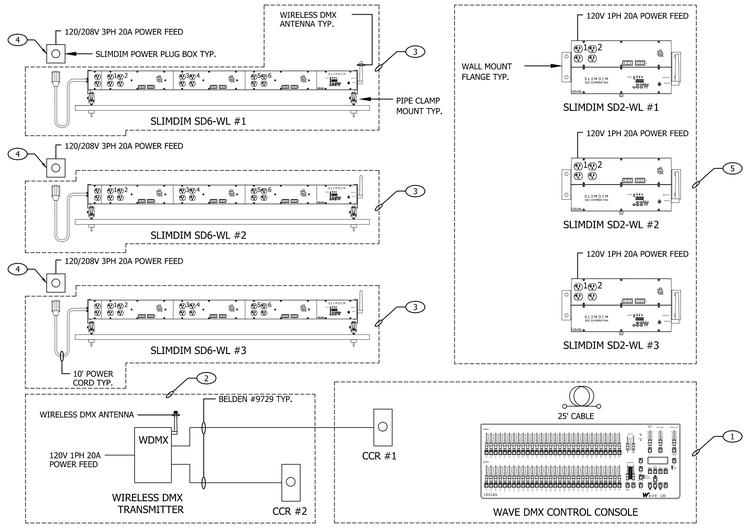
BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
ELECTRICAL DETAILS

E 502

7/26/2016 8:57:03 AM



1 / E 503 STUDIO LIGHTING CONTROL DRAWING
NO SCALE

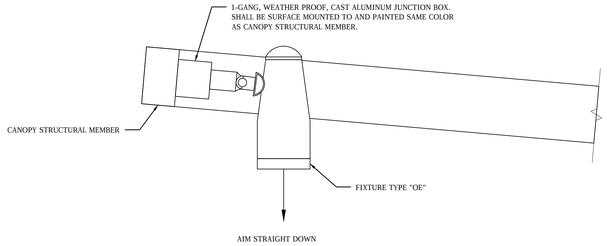
GENERAL NOTES:

1. PART NUMBERS INDICATED IN THIS DIAGRAM ARE BY LEHIGH ELECTRIC PRODUCTS COMPANY, AS BASIS OF DESIGN. REFER TO SPECIFICATION SECTION 265561 FOR MORE DETAIL.
2. REFER TO POWER DRAWINGS E217 AND E219 FOR MORE INFORMATION ON EQUIPMENT LOCATION AND CIRCUITING.

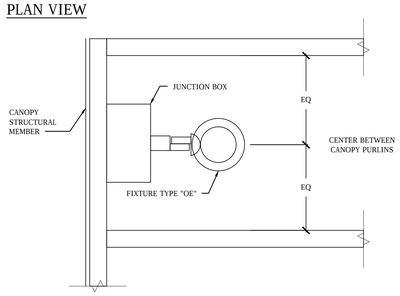
KEYED NOTES:

1. LOCATE IN CONTROL ROOM 232
2. LOCATE IN THEATER/ DANCE CR 231, ON WALL, AT HEIGHT AS NOTED ON SHEET E217.
3. LOCATE IN THEATER/DANCE CR 231, ON THEATRICAL PIPE GRID.
4. LOCATE IN THEATER/DANCE CR 231, ON CEILING, AS NOTED ON SHEET E219.
5. LOCATE IN THEATER/DANCE CR 231, ON WALL. MOUNTING HEIGHT SHALL BE SUCH THAT RECEPTACLES WITHIN SLIMDIM ARE EQUAL TO STANDARD RECEPTACLE MOUNTING HEIGHT FOR THIS PROJECT.

SIDE VIEW



PLAN VIEW



2 / E 503 CANOPY MOUNTING DETAIL
NO SCALE

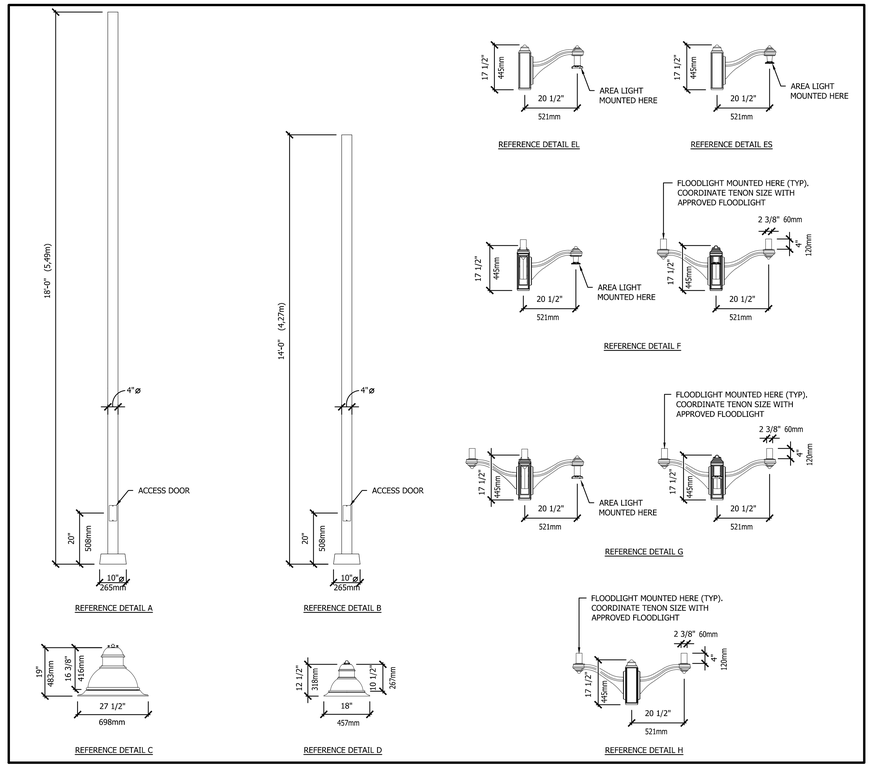
SUMMARY OF EXTERIOR LIGHT POLE SET-UPS

SET-UP #	FIXTURE TYPE	POLE		AREA LIGHT		FLOODLIGHT		MOUNTING BRACKET		REFERENCE DETAILS	CONFIGURATION***
		HEIGHT	MIN. WALL THICKNESS	SIZE	QTY	TYPE	QTY	QTY. OF ARMS DOWN*	QTY. OF ARMS UP**		
1	OA-84	18'	0.120"	LARGE	1	N/A	0	1	0	A, C, EL	
2	OA-84	18'	0.250"	LARGE	1	OH-36	3	1	3	A, C, G	
3	OB-49	14'	0.120"	SMALL	1	N/A	0	1	0	B, D, ES	
4	OB-49	14'	0.120"	SMALL	1	OH-36	2	1	2	B, D, F	
5	OB-49	14'	0.120"	SMALL	0	OH-36	2	0	2	B, H	

*AREA LIGHT HANGING BELOW ARM
**FLOODLIGHT SITTING ON TOP OF THE ARM

*** LEGEND:

- POLE
- ACCESS DOOR
- MOUNTING ARM
- AREA LIGHT
- FLOODLIGHT



3 / E 503 EXTERIOR LIGHT POLE SET-UP DETAILS
NO SCALE

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EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	05/06/16	ADDENDUM #5

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED
DRAWING NAME: ELECTRICAL DETAILS

E 503

JOSHUA FELLICIA 7/26/2016 7:38 AM L:\PROJ\JRS ARCHITECTS, INC\MPLS\15-004\26-00--ROPS--ROBERT POOLE RENOVATION ADDITION\C_DRAWINGS ENG\A_CAD\A_DRAWINGS\MEP\LEGO1--15-004\26-00.DWG

DRY TYPE TRANSFORMER SCHEDULE

TRANSFORMER		PRIMARY VOLTAGE - 480V DELTA							SECONDARY VOLTAGE - 208/120V, 3 PHASE, 4 WIRE WYE								
					FEEDER							FEEDER				SECONDARY DERIVED SYSTEM GROUND ELECTRODE		
DESIGNATION	SIZE (KVA)	DISC. SW.	POLES	FUSE/ TRIP	QTY.	SIZE	GRD.	COND.	DISC. SW.	POLES	FUSE/ TRIP	QTY.	SIZE	GRD.	COND.	QTY.	GRD.	COND.
T9	9	30	3	15	3	12	12	3/4"	60	3	35	4	8	8	1"	1	8	3/4"
T15	15	30	3	25	3	10	10	3/4"	60	3	60	4	4	8	1 1/4"	1	8	3/4"
T30	30	60	3	50	3	6	10	1"	100	3	100	4	1	6	2"	1	6	3/4"
T30 K-13	30	100	3	80	3	3	8	1 1/4"	100	3	100	5	1	6	2"	1	6	3/4"
T45	45	100	3	70	3	4	8	1 1/4"	200	3	150	4	1/0	6	2"	1	6	3/4"
T75	75	200	3	125	3	1	6	1 1/2"	400	3	225	4	4/0	2	2 1/2"	1	2	3/4"
T112.5	112.5	200	3	175	3	2/0	6	2"	400	3	400	4	600	1/0	4"	1	1/0	1"
T112.5 K-13	112.5	300	3	250	3	250	4	2 1/2"	400	3	400	5	600	1/0	4"	1	1/0	1"
T150	150	400	3	225	3	4/0	4	2 1/2"	600	3	500	(2) 4	250	(2) 1/0	(2) 3"	1	1/0	1"
T225	225	400	3	350	3	500	3	3"	800	3	800	(2) 4	600	(2) 3/0	(2) 4"	1	3/0	1 1/4"
T300	300	600	3	450	(2) 3	4/0	(2) 2	(2) 2"	1200	3	1000	(3) 4	500	(3) 4/0	(3) 3 1/2"	1	4/0	1 1/4"
T500	500	800	3	800	(2) 3	600	(2) 1/0	(2) 3 1/2"	2000	3	2000	(6) 4	500	(6) 400	(6) 4"	1	400	1 1/2"

NOTES FOR DRY TYPE TRANSFORMER SCHEDULE:

1. PROVIDE OVERCURRENT PROTECTION AS REQUIRED BY ARTICLE 240-21 OF THE 2011 N.E.C.
2. PROVIDE PRIMARY FEEDERS OF SIZES SHOWN IN SCHEDULE FROM PRIMARY FUSED SWITCH / CIRCUIT BREAKER TRIP LOAD LUGS TO TRANSFORMER PRIMARY TERMINALS UNLESS OTHERWISE NOTED.
3. PROVIDE SECONDARY FEEDERS OF SIZES SHOWN IN SCHEDULE FROM TRANSFORMER SECONDARY TERMINALS TO PANELBOARD OR OTHER EQUIPMENT CONNECTED TO THE SECONDARY FEEDER AS SHOWN ON THE POWER RISER DIAGRAM OR SINGLE LINE DIAGRAM UNLESS OTHERWISE NOTED.
4. SECONDARY DERIVED SYSTEM GROUNDING ELECTRODE CONDUCTOR SHALL BE CONNECTED TO NEAREST BUILDING STEEL COLUMN OR BEAM, OR WHEN STURCTURAL STEEL IS INACCESSIBLE, CONNECTED TO MAIN GROUNDING BUSBAR.

DISTRIBUTION PANEL SCHEDULE

PANEL	PROTECTIVE DEVICE				FEEDER				DESCRIPTION	
MAIN BUS DATA	NO.	CB FRAME (AMPS)	NO. POLES	TRIP (AMPS)	NO. OF SETS	WIRE QTY./SET	CONDUCTOR SIZE (AWG OR KCMIL)	GROUND SIZE PER SET	CONDUIT SIZE PER SET	SERVICE	REMARKS
	1	225	3	225	1	4	4/0	4	2 1/2	PANEL 'LPK'	
PANEL DESIGNATION	2	100	3	100	1	4	1	8	2	PANEL 'LP4'	
SMDS	3	225	3	125	1	4	1	6	2	PANEL 'SRPD'	VIA XFMR
	4	225	3	150	1	4	1/0	6	2	PANEL 'ESBD'	VIA ATS
480Y/277V	5	100	3	100	1	4	1	8	2	PANEL 'ELSD'	VIA ATS
3P,4W+GRD.	6	800	3	800	2	4	600	1/0	4	PANEL 'HPD'	100% RATED
1000 AMPS	7	100	3	80	1	4	3	8	1 1/4	PANEL 'CPH'	VIA XFMR
	8	100	3	40	1	4	8	10	1	ELEVATOR 2	
1000A MAIN	9	400	3							SPACE - PFFB	
CIRCUIT BKR.	10	400	3							SPACE - PFFB	
GFCI	11	400	3							SPACE - PFFB	
100% RATED	12	400	3							SPACE - PFFB	
FED FROM	13										
MTS-SMDS	14										
	15										
LOCATION	16										
ELEC. 026	17										
	18										
MIN. A.I.C.	19										
35,000	20										

NEC LOAD SUMMARY PANEL **SMDS**

LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
40.1	122.0	464.4	53.9	110.8	92.9	884.2	KVA (CONNECTED)
125%	54%	100%	100%	65%	0%	80%	DEMAND FACTOR
50.1	66.0	464.4	53.9	72.0	0.0	706.5	KVA (DEMAND)

⚠1 **850** AMPS (DEMAND)

DISTRIBUTION PANEL SCHEDULE

PANEL DESIGNATION SRPD | BUS AMP 225A | MIN. A.I.C. 10,000 | MAIN BREAKER 225A
LOCATION ELEC. 026 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES:
TOTAL POLES 42

CKT NO	DESCRIPTION	BREAKER AMP	BREAKER POLES	LOAD (KW) A	LOAD (KW) B	LOAD (KW) C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	LOAD (KW) B	LOAD (KW) C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
1	RECPS.-025,026	20	1	0.4			2	12	12	3/4	3/4	12	12	2	0.5			1	20	RECPS.	2
3	RECPS.-027,028,029,030	20	1		0.9		2	12	12	3/4	3/4	12	12	2		0.5		1	20	RECPS.-023,024,122	4
5	RECPS.- ELEV. 1 PIT	20	1			0.2	2	12	12	3/4	3/4	12	12	2			0.2	1	20	RECPS.- ELEV. 2 PIT	6
7	ELEV. 1 PIT SUMP PUMP	20	1	0.2			2	12	12	3/4	3/4	12	12	2	0.2			1	20	ELEV. 2 PIT SUMP PUMP	8
9	RECPS.-022A	20	1		0.2		2	12	12	3/4	3/4	12	12	2		0.2		1	20	RECPS.-021	10
11	SPARE	20	1			0.0											0.0	1	20	SPARE	12
13	SPARE	20	1	0.0												0.0		1	20	SPARE	14
15	SPARE	20	1		0.0										0.0			1	20	SPARE	16
17	SPARE	20	1			0.0											0.0	1	20	SPARE	18
19	SPARE	20	1	0.0											0.0			1	20	SPARE	20
21	SPARE	20	1		0.0											0.0		1	20	SPARE	22
23	SPARE	20	1			0.0											0.0	1	20	SPARE	24
25	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	26
27	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	28
29	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	30
31	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	32
33	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	34
35	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	36
37	PANEL 'RP4'	175	3	0.0			4	2/0	6	2					0.0			1		SPACE - PFFB	38
39	----------				0.0											0.0		1		SPACE - PFFB	40
41	----------					0.0											0.0	1		SPACE - PFFB	42
	SIDE TOTAL KW LOAD			1	1	0									1	1	0			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **SRPD**

NOTES:
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
0.7	27.2	0.7	13.1	8.0	10.0	59.7	KVA (CONNECTED)
125%	68%	100%	100%	65%	0%	64%	DEMAND FACTOR
0.9	18.6	0.7	13.1	5.2	0.0	38.4	KVA (NEMAND)

107 AMPS (DEMAND)

PANEL DESIGNATION LPD | BUS AMP 225A | MIN. A.I.C. 35,000 | MAIN BREAKER 225A
LOCATION ELEC. 026 | PHASE 3 | WIRE 4 | VOLTAGE 480Y/277
MOUNTING SURFACE | NOTES:
TOTAL POLES 30

CKT NO	DESCRIPTION	BREAKER AMP	BREAKER POLES	LOAD (KW) A	LOAD (KW) B	LOAD (KW) C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	LOAD (KW) B	LOAD (KW) C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
1	LIGHTS - GROUND FLOOR	20	1	1.3			2	10	10	3/4	3/4	10	10	2	2.4			1	20	LIGHTS - GROUND FLOOR	2
3	LIGHTS - GROUND FLOOR	20	1		1.5		2	10	10	3/4	3/4	10	10	2		2.5		1	20	LIGHTS - GROUND FLOOR	4
5	LIGHTS - MEDIA CENTER	20	1			2.4	2	10	10	3/4	3/4	10	10	2			2.7	1	20	LIGHTS - FIRST FLOOR	6
7	LIGHTS - EXTERIOR - FLOOD	20	1	1.1			2	8	8	1	3/4	10	10	2	0.5			1	20	LIGHTS - FIRST FLOOR	8
9	LIGHTS - EXTERIOR - PED.	20	1		0.9		2	8	8	1						0.0		1	20	SPARE	10
11	LIGHTS - EXTERIOR - PKG.	20	1			0.8	2	8	8	1							0.0	1	20	SPARE	12
13	SPARE	20	1	0.0											0.0			1	20	SPARE	14
15	SPARE	20	1		0.0											0.0		1	20	SPARE	16
17	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	18
19	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	20
21	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	22
23	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	24
25	PANEL 'LP3'	50	3	0.0			4	2	6	1 1/4	2	8	1	4	0.0			3	100	PANEL 'LP8'	26
27	----------				0.0											0.0				----------	28
29	----------					0.0											0.0			----------	30
31				0											0						32
33					0											0					34
35						0											0				36
37				0											0						38
39					0											0					40
41						0											0				42
	SIDE TOTAL KW LOAD			2	2	3									3	3	3			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **LPD**

NOTES:
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
63.7	0.0	0.0	0.0	0.0	0.0	63.7	KVA (CONNECTED)
125%	100%	100%	100%	100%	0%	125%	DEMAND FACTOR
79.7	0.0	0.0	0.0	0.0	0.0	79.7	KVA (DEMAND)

⚠1 **96** AMPS (DEMAND)

DISTRIBUTION PANEL SCHEDULE

PANEL	PROTECTIVE DEVICE				FEEDER					DESCRIPTION	
MAIN BUS DATA	NO.	CB FRAME (AMPS)	NO. POLES	TRIP (AMPS)	NO. OF SETS	WIRE QTY./SET	CONDUCTOR SIZE (AWG OR KCMIL)	GROUND SIZE PER SET	CONDUIT SIZE PER SET	SERVICE	REMARKS
	1	225	3	150	1	4	1/0	6	2	PANEL 'RP1'	
PANEL DESIGNATION	2	225	3	150	2	4	4/0	1/0	2 1/2	PANEL 'RP3'	
RPD	3	225	3	150	1	4	350	1/0	2 1/2	PANEL 'RP5'	
	4	400	3	300	1	4	350	3	3	PANEL 'RP7'	
208Y/120V	5	225	3	225	1	4	4/0	4	2 1/2	PANEL 'RP8'	
3P,4W+GRD.	6	100	3	50	1	4	6	10	1 1/4	GREENHOUSE	
600 AMPS	7	100	3	50	1	4	6	10	1 1/4	GREENHOUSE	
	8	225	3							SPACE - PFFB	
500A MAIN	9	225	3							SPACE - PFFB	
CIRCUIT BKR.	10	225	3							SPACE - PFFB	
	11										
	12										
FED FROM	13										
MDS	14										
VIA XFMR.	15										
LOCATION	16										
ELEC. 026	17										
	18										
MIN. A.I.C.	19										
10,000	20										

NEC LOAD SUMMARY PANEL **RPD**

LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
7.1	195.5	1.4	38.2	11.0	23.7	276.9	KVA (CONNECTED)
125%	53%	100%	100%	65%	0%	57%	DEMAND FACTOR
8.8	102.7	1.4	38.2	7.2	0.0	158.3	KVA (DEMAND)

439 AMPS (DEMAND)

PANEL SCHEDULES

XFMRS MDS
SMDS SRPD
LPD RPD

JRS ARCHITECTS
2010 Clipper Park Rd.
Suite 101
Baltimore, MD 21211
410.235.7256

ASSOCIATE ARCHITECT
SCHRADER GROUP ARCHITECTURE LLC
161 LEVERINGTON AVE. SUITE 105
PHILADELPHIA, PA 19127

LANDSCAPE ARCHITECT
MAHAN RYKIEL ASSOCIATES
800 WYMAN PARK DR. SUITE 100
BALTIMORE, MD 21211

CIVIL ENGINEER
STV, INC.
7125 AMBASSADOR RD. SUITE 200
BALTIMORE, MD 21244

STRUCTURAL ENGINEER
ALBRECHT ENGINEERING
3500 BOSTON ST. SUITE 329
BALTIMORE, MD 21224

MEP ENGINEER
BRINJAC ENGINEERING
1800 N. CHARLES ST. SUITE 310
BALTIMORE, MD 21201

FOOD SERVICE
NYIKOS ASSOCIATES
18219A FLOWER HILL WAY
GAITHERSBURG, MD 20879

AVIT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD. SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056

1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 16094
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
ELECTRICAL PANEL SCHEDULES

E 600

JOSHUA PELLICIA 7/28/2016 7:39 AM L:\PROJ\JRS ARCHITECTS, INC\MPS.15.09A36.00-MCPS-ROBERT POOLE RENOVATION ADDITION\E_DRAWINGS ENG\A_CAD\A_DRAWINGS\MEP\E600--15.09A36.00.DWG

DISTRIBUTION PANEL SCHEDULE

PANEL	PROTECTIVE DEVICE				FEEDER					DESCRIPTION	
MAIN BUS DATA	NO.	CB FRAME (AMPS)	NO. POLES	TRIP (AMPS)	NO. OF SETS	WIRE QTY./SET	CONDUCTOR SIZE (AWG OR KCMIL)	GROUND SIZE PER SET	CONDUIT SIZE PER SET	SERVICE	REMARKS
	1	100	3	100	1	5	1	8	2	PANEL 'CP1'	
PANEL DESIGNATION	2	225	3	150	2	5	4/0	1/0	2 1/2	PANEL 'CP3'	
CPD	3	100	3	100	1	5	4/0	3	2 1/2	PANEL 'CP5'	
	4	225	3	150	1	5	1/0	6	2	PANEL 'CP7'	
208Y/120V	5	225	3	150	1	5	1/0	6	2	PANEL 'CP8'	
3P,4W+GRD.	6	225	3							SPACE - PFFB	
400 AMPS	7	225	3							SPACE - PFFB	
	8	225	3							SPACE - PFFB	
400A MAIN	9										
CIRCUIT BKR.	10										
200% NEUTRAL	11										
	12										
FED FROM	13										
MDS	14										
VIA XFMR	15										
LOCATION	16										
ELEC. 026	17										
	18										
MIN. A.I.C.	19										
10,000	20										

NEC LOAD SUMMARY PANEL **CPD**

LTS.	RECPS.	HVAC	MISC.	KITCH.	. . . . .	TOTAL	
0.0	98.8	0.0	0.0	0.0	0.0	98.8	KVA (CONNECTED)
125%	55%	100%	100%	100%	0%	55%	DEMAND FACTOR
0.0	54.4	0.0	0.0	0.0	0.0	54.4	KVA (DEMAND)
						151	AMPS (DEMAND)

NOTES:
RECPS - 100% FIRST 10 KVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

PANEL DESIGNATION ESBD — BUS AMP 225A — MIN. A.I.C. 14,000 — MAIN BREAKER 150A
LOCATION ELEC. 025 — PHASE 3 — WIRE 4 — VOLTAGE 480Y/277
MOUNTING SURFACE — NOTES: PROVIDE LOCKABLE CIRCUIT BREAKERS FOR TRANSFORMER FEEDS
TOTAL POLES 30

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	PANEL 'ESBRP' VIA XFMR	70	3	0.0			4	4	8	1 1/4	1 1/4	6	2	4	0.0			3	50	PANEL 'ESBRP3' VIA XFMR	2
3	----------				0.0											0.0				----------	4
5	----------					0.0											0.0			----------	6
7	SPARE	20	1	0.0							1 1/4	8	4	4	0.0			3	70	PANEL 'ESBRP8' VIA XFMR	8
9	SPARE	20	1		0.0											0.0				----------	10
11	SPARE	20	1			0.0											0.0			----------	12
13	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	14
15	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	16
17	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	18
19	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	20
21	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	22
23	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	24
25	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	26
27	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	28
29	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	30
31				0											0						32
33					0											0					34
35						0											0				36
37				0											0						38
39					0											0					40
41						0											0				42
	SIDE TOTAL KW LOAD			0	0	0									0	0	0			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **ESBD**

LTS.	RECPS.	HVAC	MISC.	KITCH.	. . . . .	TOTAL	
0.0	78.9	29.6	4.2	2.7	0.0	115.5	KVA (CONNECTED)
125%	56%	100%	100%	100%	0%	70%	DEMAND FACTOR
0.0	44.5	29.6	4.2	2.7	0.0	81.0	KVA (DEMAND)
						97	AMPS (DEMAND)

NOTES:
RECPS - 100% FIRST 10 KVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

PANEL DESIGNATION ESBRP (SECTION 1) — BUS AMP 225A — MIN. A.I.C. 10,000 — MAIN BREAKER 150A
LOCATION ELEC. 025 — PHASE 3 — WIRE 4 — VOLTAGE 208Y/120
MOUNTING SURFACE — NOTES:
TOTAL POLES 42

0 | 0 | 0 SECTION 2 TOTAL KW LOAD

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	RECP.-019B (MDF)	30	1	2.9			2	10	10	3/4	3/4	10	10	2	2.9			1	30	RECP.-019B (MDF)	2
3	RECP.-019B (MDF)	30	1		2.9		2	10	10	3/4	3/4	10	10	2		2.9		1	30	RECP.-019B (MDF)	4
5	RECP.-019B (MDF)	30	1			2.9	2	10	10	3/4	3/4	10	10	2			2.9	1	30	RECP.-019B (MDF)	6
7	RECP.-019B (MDF)	30	1	2.9			2	10	10	3/4	3/4	10	10	2	2.9			1	30	RECP.-019B (MDF)	8
9	RECPS.-019B (MDF)	20	1		0.7		2	12	12	3/4	3/4	12	12	2		0.7		1	20	RECPS.-019B (MDF)	10
11	ACCESS CONTROL 019B	20	1			0.2	2	12	12	3/4	3/4	12	12	2			0.2	1	20	SECURITY 019B	12
13	RECP.-102L (IDF)	30	1	2.9			2	10	10	3/4	3/4	10	10	2	2.9			1	30	RECP.-102L (IDF)	14
15	RECPS.-102L (IDF)	20	1		0.4		2	12	12	3/4	3/4	12	12	2		0.2		1	20	ACCESS CONTROL 102L	16
17	SECURITY 102L	20	1			0.2	2	12	12	3/4	3/4	10	10	2			2.9	1	30	RECP.-114 (MDF)	18
19	RECP.-114 (IDF)	30	1	2.9			2	10	10	3/4	3/4	10	10	2	2.9			1	30	RECP.-114 (MDF)	20
21	RECPS.-114 (IDF)	20	1		1.1		2	12	12	3/4	3/4	12	12	2		0.2		1	20	ACCESS CONTROL 102L	22
23	SECURITY 114	20	1			0.2	2	12	12	3/4	3/4	10	10	2			2.9	1	30	RECP.-147 (IDF)	24
25	RECP.-147 (IDF)	30	1	2.9			2	10	10	3/4	3/4	10	10	2	2.9			1	30	RECP.-147 (IDF)	26
27	RECPS.-147 (IDF)	20	1		0.5		2	12	12	3/4	3/4	12	12	2		0.2		1	20	SECURITY 147	28
29	ACCESS CONTROL 147	20	1			0.2	2	12	12	3/4	3/4	10	10	2			0.5	1	20	DOOR HARDWARE P.S.	30
31	DOOR HARDWARE P.S.	20	1	0.5			2	10	10	3/4	3/4	10	10	2	0.5			1	20	DOOR HARDWARE P.S.	32
33	SS-3	15	2		0.1		3	12	12	3/4	3/4	12	12	3		0.1		2	15	SS-4	34
35	----------					0.1											0.1			----------	36
37	SS-2	15	3	0.3			4	12	12	3/4	3/4	12	12	4	1.6			3	20	CU-2	38
39	----------				0.3											1.6				----------	40
41	----------					0.3											1.6			----------	42
	SIDE TOTAL KW LOAD			15	6	4									17	6	11			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **ESBRP**

LTS.	RECPS.	HVAC	MISC.	KITCH.	. . . . .	TOTAL	
0.0	50.3	5.7	3.0	0.0	0.0	59.0	KVA (CONNECTED)
125%	60%	100%	100%	100%	0%	66%	DEMAND FACTOR
0.0	30.2	5.7	3.0	0.0	0.0	38.9	KVA (DEMAND)
						108	AMPS (DEMAND)

NOTES:
RECPS - 100% FIRST 10 KVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

PANEL DESIGNATION ELSD — BUS AMP 225A — MIN. A.I.C. 14,000 — MAIN BREAKER 100A
LOCATION ELEC. 025 — PHASE 3 — WIRE 4 — VOLTAGE 480Y/277
MOUNTING SURFACE — NOTES: IF NECESSARY, PROVIDE ELECTRONIC TRIP SUB-FEED BREAKERS FOR SELECTIVE COORDINATION.
TOTAL POLES 42

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	LIGHTS - BASEMENT	20	1	0.4			2	12	12	3/4	3/4	12	12	2	0.1			1	20	LIGHTS - ELEV. MACHINE RM.	2
3	LIGHTS - ELEV. PIT	20	1		0.2		2	12	12	3/4	3/4	12	12	2		0.2		1	20	LIGHTS - FIRST FLR.	4
5	LIGHTS - ELEV. SHAFT	20	1			0.2	2	12	12	3/4	3/4	10	10	2			1.4	1	20	LIGHTS - BASEMENT	6
7	LIGHTS - STAIR B2	20	1	0.7			2	10	10	3/4	3/4	10	10	2	0.7			1	20	LIGHTS - EXTERIOR	8
9	LIGHTS - FIRST FLR. CORR.	20	1		0.5		2	10	10	3/4	3/4	10	10	2		0.3		1	20	LIGHTS - STAIR B3	10
11	LIGHTS - FIRST FLR. CORR.	20	1			1.7	2	10	10	3/4	3/4	12	12	2			0.7	1	20	LIGHTS - DINING/KITCHEN	12
13	LIGHTS - STAIR C1	20	1	0.4			2	10	10	3/4	3/4	12	12	2	3.0			1	15	LIH CD-4	14
15	LIGHTS - BASEMENT CORR.	20	1		0.6		2	10	10	3/4	1	10	10	2		0.1		1	20	LIGHTS - GEN ENCLOSURE	16
17	SPARE	20	1			0.0											0.0	1	20	SPARE	18
19	SPARE	20	1	0.0											0.0			1	20	SPARE	20
21	SPARE	20	1		0.0											0.0		1	20	SPARE	22
23	SPARE	20	1			0.0											0.0	1	20	SPARE	24
25	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	26
27	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	28
29	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	30
31	SPACE - PFFB		1	0.0							1 1/4	10	6	4	0.0			3	50	PANEL 'ELSLPS'	32
33	SPACE - PFFB		1		0.0											0.0				----------	34
35	SPACE - PFFB		1			0.0											0.0			----------	36
37	PANEL 'ELSRP' VIA XFMR	50	3	0.0			4	6	10	1 1/4	1 1/4	10	6	4	0.0			3	50	PANEL 'ELSLP7'	38
39	----------				0.0											0.0				----------	40
41	----------					0.0											0.0			----------	42
	SIDE TOTAL KW LOAD			2	1	2									4	1	2			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **ELSD**

LTS.	RECPS.	HVAC	MISC.	KITCH.	. . . . .	TOTAL	
14.9	8.3	3.0	13.6	0.0	0.0	39.7	KVA (CONNECTED)
125%	100%	100%	100%	100%	0%	109%	DEMAND FACTOR
18.7	8.3	3.0	13.6	0.0	0.0	43.5	KVA (DEMAND)
						52	AMPS (DEMAND)

NOTES:
RECPS - 100% FIRST 10 KVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

PANEL DESIGNATION ELSRP — BUS AMP 100A — MIN. A.I.C. 10,000 — MAIN BREAKER MLO ⚠1
LOCATION ELEC. 025 — PHASE 3 — WIRE 4 — VOLTAGE 208Y/120
MOUNTING SURFACE — NOTES:
TOTAL POLES 30

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	ELEV. CAB LIGHTS	20	1	0.2			2	12	12	3/4	3/4	12	12	2	0.2			1	20	ELEV. CAB LIGHTS	2
3	FIRE ALARM PANEL 019A	20	1		0.5		2	12	12	3/4	3/4	8	8	2		1.3		1	20	RECPS.-STAIR B2	4
5	RECPS.-STAIR SB3	20	1			1.3	2	12	12	3/4	3/4	10	10	2			1.3	1	20	RECPS.-STAIR C1	6
7	GENERATOR HEATER	20	2	1.0			3	12	12	1	1	12	12	2	0.3			1	20	GENERATOR BATT. CHRGR.	8
9	----------				1.0						3/4	12	12	2		0.2		1	15	KITCHEN HOOD	10
11	FIRE ALARM PANEL 112	20	1			0.5	2	12	12	3/4	3/4	10	10	2			0.7	1	20	DOOR OPERATOR ENTRY 001A	12
13	DOOR OPERATOR VEST 100A	20	1	0.7			2	10	10	3/4	3/4	10	10	2	0.5			1	20	MAG. HOLDS - CORR. FIRST	14
15	MAG. HOLDS - CORR. FIRST	20	1		0.6		2	10	10	3/4	3/4	10	10	2		0.7		1	20	DOOR OPERATOR LOBBY 100H	16
17	MAG. HOLDS - STAIR C1	20	1			0.6	2	12	12	3/4	3/4	12	12	2			1.9	1	20	FIRE SUPP. AIR COMP.	18
19	SPARE	20	1	0.0											0.0			1	20	SPARE	20
21	SPARE	20	1		0.0											0.0		1	20	SPARE	22
23	SPARE	20	1			0.0											0.0	1	20	SPARE	24
25	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	26
27	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	28
29	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	30
31				0											0						32
33					0											0					34
35						0											0				36
37				0											0						38
39					0											0					40
41						0											0				42
	SIDE TOTAL KW LOAD			2	2	2									1	2	4			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **ELSRP**

LTS.	RECPS.	HVAC	MISC.	KITCH.	. . . . .	TOTAL	
0.4	4.0	0.0	9.0	0.0	0.0	13.3	KVA (CONNECTED)
125%	100%	100%	100%	100%	0%	101%	DEMAND FACTOR
0.5	4.0	0.0	9.0	0.0	0.0	13.4	KVA (DEMAND)
						37	AMPS (DEMAND)

NOTES:
RECPS - 100% FIRST 10 KVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

PANEL SCHEDULES

CPD
ESBRP-1
ELSD
ESBD
ESBRP-2
ELSRP

JRS ARCHITECTS
2010 Clipper Park Rd.
Suite 101
Baltimore, MD 21211
410.235.7256

ASSOCIATE ARCHITECT
SCHRADER GROUP ARCHITECTURE LLC
161 LEVERINGTON AVE. SUITE 105
PHILADELPHIA, PA 19127

LANDSCAPE ARCHITECT
MAHAN RYKIEL ASSOCIATES
800 WYMAN PARK DR. SUITE 100
BALTIMORE, MD 21211

CIVIL ENGINEER
STV, INC.
7125 AMBASSADOR RD. SUITE 200
BALTIMORE, MD 21244

STRUCTURAL ENGINEER
ALBRECHT ENGINEERING
3500 BOSTON ST. SUITE 329
BALTIMORE, MD 21224

MEP ENGINEER
BRINJAC ENGINEERING
1800 N. CHARLES ST. SUITE 310
BALTIMORE, MD 21201

FOOD SERVICE
NYIKOS ASSOCIATES
18219A FLOWER HILL WAY
GAITHERSBURG, MD 20879

AVIT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD. SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056
1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
ELECTRICAL PANEL SCHEDULES

E 601

JOSHUA PELLICCIA 7/26/2016 7:43 AM L:\PROJ\JRS ARCHITECTS, INC\MPV\15-04\06-00-RCPS-ROBERT POOLE RENOVATION ADDITION\C_DRAWINGS\E\PLE601 - 15.04.06.DWG

DISTRIBUTION PANEL SCHEDULE

PANEL	PROTECTIVE DEVICE				FEEDER						DESCRIPTION	
MAIN BUS DATA	NO.	CB FRAME (AMPS)	NO. POLES	TRIP (AMPS)	NO. OF SETS	WIRE QTY./SET	CONDUCTOR SIZE (AWG OR KCMIL)	GROUND SIZE PER SET	CONDUIT SIZE PER SET	SERVICE	REMARKS
	1	225	3	150	1	4	1/0	6	2	PANEL 'HPA'	
PANEL DESIGNATION	2	100	3	50	1	4	6	10	1 1/4	PANEL 'HRBR'	VIA XFMR
HPD	3	100	1	15	1	2	10	10	3/4	CUH B0-1	
	4	100	1	15	1	2	12	12	3/4	CUH B0-3	
480Y/277V	5	100	1	15	1	2	12	12	3/4	GSHP C0-1	
3P,4W+GRD.	6	100	1	15	1	2	12	12	3/4	CUH C0-1	
800 AMPS	7	100	1	15	1	2	12	12	3/4	UH C0-1	
	8	100	1	15	1	2	12	12	3/4	UH C0-2	
800A MAIN	9	100	1	15	1	2	12	12	3/4	UH C0-3	
CIRCUIT BKR.	10	100	1	15	1	2	12	12	3/4	UH B0-1	
100% RATED	11	100	3	30	1	4	10	10	3/4	DWHP-1	
	12	100	3	30	1	4	10	10	3/4	DWHP-2	
FED FROM	13	100	3	70	1	4	4	8	1 1/4	EWH-1	STANDBY UNIT
SMDS	14	100	3	20	1	4	10	10	3/4	P-E,P-F,P-G	TRIPLEX PUMP SYSTEM
	15	100	3							SPACE - PFFB	
LOCATION	16	100	3							SPACE - PFFB	
MECH. 019	17	100	3	25	1	4	10	10	3/4	P-1	
	18	100	3	25	1	4	10	10	3/4	P-2	
	19	100	3	25	1	4	10	10	3/4	P-3	
	20	100	3	100	1	4	1	8	2	RTU-1	
	21	225	3	110	1	4	1	6	2	DOAS-2	
	22	225	3	110	1	4	1	6	2	DOAS-3	
MIN. A.I.C.	23	225	3	110	1	4	1	6	2	DOAS-4	
35,000	24	225	3							SPACE - PFFB	

NEC LOAD SUMMARY PANEL **HPD**

LTS.	RECPS.	HVAC	MISC.	KITCH.	. . . . .	TOTAL	
0.1	0.9	425.2	6.3	0.0	89.2	521.7	KVA (CONNECTED)
125%	100%	100%	100%	100%	0%	83%	DEMAND FACTOR
0.1	0.9	425.2	6.3	0.0	0.0	432.5	KVA (DEMAND)
						520	AMPS (DEMAND)

NOTES:
RECPS - 100% FIRST 10 KVA,
50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

2

PANEL DESIGNATION HRBR | BUS AMP 100A | MIN. A.I.C. 10,000 | MAIN BREAKER 100A
LOCATION MECH. 019 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES:
TOTAL POLES 30

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	RECPS.-019	20	1	0.7			2	12	12	3/4	3/4	12	12	3	0.9			2	15	EF-6	2
3	RECP. - HOT WTR. MIX. CNTRL	20	1		0.2		2	12	12	3/4						0.9				----------	4
5	P-A	15	1			0.5	2	12	12	3/4	3/4	12	12	2			1.2	1	20	EF-2	6
7	RECP.-CHEM. FEED SYSTEM	20	1	0.2			2	12	12	3/4	3/4	12	12	3	0.1			2	15	SS-7	8
9	CU-7	15	2		0.9		3	12	12	3/4						0.1				----------	10
11	----------					0.9					3/4	12	12	2			0.1	1	20	RECP.-WATER FILTER UV LGT.	12
13	WATER FILTER CIRC. PUMP	20	1	0.7			2	12	12	3/4	3/4	12	12	2	1.1			1	20	RECP.-SUMP PUMP	14
15	SEWAGE EJECTOR PUMPS	30	1		2.4		2	10	10	3/4	3/4	12	12	2		0.5		1	20	P-C	16
17	GAS BOOSTER	40	3			2.1	4	8	10	1	1	10	8	4			2.1	3	40	GAS BOOSTER	18
19	----------			2.1											2.1					----------	20
21	----------				2.1												2.1			----------	22
23	SPARE	20	1			0.0												0.0	1	20	SPARE	24
25	SPARE	20	1	0.0											0.0			1	20	SPARE	26
27	SPARE	20	1		0.0											0.0		1	20	SPARE	28
29	SPARE	20	1			0.0											0.0	1	20	SPARE	30
31				0																	32
33					0												0				34
35						0												0			36
37				0																	38
39					0												0				40
41						0															42
	SIDE TOTAL KW LOAD			4	6	4									4	4	3			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **HRBR**

LTS.	RECPS.	HVAC	MISC.	KITCH.	. . . . .	TOTAL	
0.1	0.9	10.6	6.3	0.0	6.3	24.2	KVA (CONNECTED)
125%	100%	100%	100%	100%	0%	74%	DEMAND FACTOR
0.1	0.9	10.6	6.3	0.0	0.0	17.9	KVA (NEMAND)
						50	AMPS (DEMAND)

NOTES:
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

PANEL DESIGNATION CP1 | BUS AMP 100A | MIN. A.I.C. 10,000 | MAIN BREAKER 100A
LOCATION ELEC. 019A | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES: 200% NEUTRAL
TOTAL POLES 24

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	RECPS.-013	20	1	1.1			2	10	10	3/4	3/4	10	10	2	1.1			1	20	RECPS.-012	2
3	RECPS.-002,002A	20	1		0.4		2	10	10	3/4	3/4	10	10	2		0.4		1	20	RECPS.-OO2B,002C	4
5	RECPS.-004	20	1			1.1	2	10	10	3/4	3/4	12	12	2			1.1	1	20	RECPS.-014	6
7	RECPS.-018	20	1	1.1			2	12	12	3/4	3/4	12	12	2	1.1			1	20	RECPS.-020	8
9	RECPS.-A/V-012,013	20	1		0.7		2	10	10	3/4	3/4	10	10	2		0.4		1	20	RECPS.-A/V-003	10
11	RECPS.-A/V-004,014	20	1			0.7	2	10	10	3/4	3/4	12	12	2			0.7	1	20	RECPS.-A/V-018,020	12
13	SPARE	20	1	0.0											0.0			1	20	SPARE	14
15	SPARE	20	1		0.0											0.0		1	20	SPARE	16
17	SPARE	20	1			0.0											0.0	1	20	SPARE	18
19	SPARE	20	1	0.0											0.0			1	20	SPARE	20
21	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	22
23	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	24
25				0											0						26
27					0											0					28
29						0											0				30
31				0											0						32
33					0											0					34
35						0											0				36
37				0											0						38
39					0											0					40
41						0											0				42
	SIDE TOTAL KW LOAD			2	1	2									2	1	2			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **CP1**

LTS.	RECPS.	HVAC	MISC.	KITCH.	. . . . .	TOTAL	
0.0	9.7	0.0	0.0	0.0	0.0	9.7	KVA (CONNECTED)
125%	100%	100%	100%	100%	0%	100%	DEMAND FACTOR
0.0	9.7	0.0	0.0	0.0	0.0	9.7	KVA (DEMAND)
						27	AMPS (DEMAND)

NOTES:
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

PANEL DESIGNATION RP1 (SECTION 1) | BUS AMP 225A | MIN. A.I.C. 10,000 | MAIN BREAKER 150A
LOCATION ELEC 019A | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES: *-PROVIDE GFCI CIRCUIT BREAKER
TOTAL POLES 42

0 | 0 | 0 SECTION 2 TOTAL KW LOAD

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	RECPS.-019A	20	1	0.2			2	10	10	3/4	3/4	10	10	2	0.2			1	20	RECPS.-CRAWLSPACE	2
3	RECPS.-013	20	1		1.1		2	10	10	3/4	3/4	10	10	2		0.7		1	20	RECPS.-013 (CONTROLLED)	4
5	RECPS.-012	20	1			1.1	2	10	10	3/4	3/4	10	10	2			0.7	1	20	RECPS.-012 (CONTROLLED)	6
7	RECPS.-CORRIDOR	20	1	0.9			2	10	10	3/4	3/4	10	10	2	0.7			1	20	RECPS.-CORRIDOR	8
9	ELECTRIC WATER COOLER-*	20	1		0.5		2	10	10	3/4	3/4	10	10	2		1.1		1	20	RECPS.-006	10
11	RECP.-COPIER 005	20	2			0.8	3	12	12	3/4	3/4	10	10	2			0.7	1	20	RECPS.-005	12
13	----------			0.8							3/4	10	10	2	0.5			1	20	RECPS.-003	14
15	RECPS.-003 (CONTROLLED)	20	1		0.7		2	10	10	3/4	3/4	10	10	2		0.4		1	20	RECPS.-003	16
17	RECPS.-003	20	1			0.4	2	10	10	3/4	3/4	10	10	2			0.4	1	20	RECPS.-003	18
19	RECPS.-002,002D	20	1	0.9			2	10	10	3/4	3/4	10	10	2	0.5			1	20	RECPS.-002A	20
21	RECPS.-002C	20	1		0.5		2	10	10	3/4	3/4	10	10	2		0.5		1	20	RECPS.-002B	22
23	RECPS.-004	20	1			0.9	2	10	10	3/4	3/4	10	10	2			0.7	1	20	RECPS.-004 (CONTROLLED)	24
25	RECPS.-014	20	1	0.7			2	12	12	3/4	3/4	12	12	2	0.7			1	20	RECPS.-014 (CONTROLLED)	26
27	RECPS.-018	20	1		0.7		2	12	12	3/4	3/4	12	12	2		0.7		1	20	RECPS.-018 (CONTROLLED)	28
29	RECPS.-020	20	1			0.9	2	12	12	3/4	3/4	12	12	2			0.7	1	20	RECPS.-020 (CONTROLLED)	30
31	RECP.-REFRIGERATOR 015	20	1	1.0			2	12	12	3/4	3/4	12	12	2	0.4			1	20	RECPS.-015	32
33	RECPS.-015	20	1		0.7		2	12	12	3/4	3/4	12	12	2		0.9		1	20	RECPS.-007	34
35	RECP.-COPIER 005	20	2			0.8	3	12	12	3/4	3/4	10	10	2			1.0	1	20	RECP.-REFRIGERATOR 003	36
37	----------			0.8							3/4	10	10	2	1.0			1	20	RECP.-REFRIGERATOR 003	38
39	SPARE	20	1		0.0						3/4	10	10	2		1.0		1	20	RECP.-REFRIGERATOR 003	40
41	SPARE	30	1			0.0											0.0	1	20	SPARE	42
	SIDE TOTAL KW LOAD			5	4	5									4	5	4			SIDE TOTAL KW LOAD	

PANEL DESIGNATION RP1 (SECTION 2) | BUS AMP 225A | MIN. A.I.C. 10,000 | MAIN BREAKER MLO
LOCATION ELEC 019A | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES:
TOTAL POLES 18

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
43	SPARE	20	1	0.0											0.0			1	20	SPARE	44
45	SPARE	20	1		0.0											0.0		1	20	SPARE	46
47	SPARE	20	1			0.0											0.0	1	20	SPARE	48
49	SPARE	20	1	0.0											0.0			1	20	SPARE	50
51	SPARE	20	1		0.0											0.0		1	20	SPARE	52
53	SPARE	20	1			0.0											0.0	1	20	SPARE	54
55	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	56
57	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	58
59	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	60
61				0											0						62
63					0											0					64
65						0											0				66
67				0											0						68
69					0											0					70
71						0											0				72
73				0											0						74
75					0											0					76
77						0											0				78
79				0											0						80
81					0											0					82
83						0											0				84
	SIDE TOTAL KW LOAD			0	0	0									0	0	0			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **RP1**

LTS.	RECPS.	HVAC	MISC.	KITCH.	. . . . .	TOTAL	
0.0	20.3	0.0	2.0	4.0	1.5	27.8	KVA (CONNECTED)
125%	75%	100%	100%	80%	0%	73%	DEMAND FACTOR
0.0	15.2	0.0	2.0	3.2	0.0	20.4	KVA (DEMAND)
						57	AMPS (DEMAND)

NOTES:
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

PANEL DESIGNATION HP1 | BUS AMP 100A | MIN. A.I.C. 14,000 | MAIN BREAKER 100A
LOCATION ELEC. 019A | PHASE 3 | WIRE 4 | VOLTAGE 480Y/277
MOUNTING SURFACE | NOTES:
TOTAL POLES 30

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	GSHP B0-1	15	1	2.9			2	12	12	3/4	3/4	12	12	2	2.9			1	15	GSHP B0-2	2
3	GSHP B0-3	15	3		1.2		4	12	12	3/4	3/4	12	12	2		1.8		1	15	GSHP B0-4	4
5	----------					1.2					3/4	12	12	2			0.9	1	15	GSHP B0-5	6
7	----------			1.2							3/4	12	12	2	1.8			1	15	GSHP B0-6	8
9	GSHP B0-7	15	1		2.4		2	12	12	3/4	3/4	12	12	2		2.4		1	15	GSHP B0-8	10
11	GSHP B0-9	15	1			0.9	2	12	12	3/4	3/4	12	12	2			2.9	1	15	GSHP B0-10	12
13	GSHP B0-11	15	1	2.5			2	12	12	3/4	3/4	12	12	2	0.9			1	15	GSHP B0-12	14
15	CUH B0-2	15	1		2.0		2	12	12	3/4						0.0		1	15	SPARE	16
17	SPARE	15	1			0.0	2	12	12	3/4							0.0	1	15	SPARE	18
19	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	20
21	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	22
23	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	24
25	SPACE - PFFB		1	0.0														1		SPACE - PFFB	26
27	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	28
29	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	30
31				0											0						32
33					0											0					34
35						0											0				36
37				0											0						38
39					0											0					40
41						0											0				42
	SIDE TOTAL KW LOAD			7	6	2									6	4	4			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **HP1**

LTS.	RECPS.	HVAC	MISC.	KITCH.	. . . . .	TOTAL	
0.0	0.0	27.9	0.0	0.0	0.0	27.9	KVA (CONNECTED)
125%	100%	100%	100%	100%	0%	100%	DEMAND FACTOR
0.0	0.0	27.9	0.0	0.0	0.0	27.9	KVA (DEMAND)
						34	AMPS (DEMAND)

NOTES:
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

PANEL SCHEDULES

HPD
CP1
RP1-2
HRBR
RP1-1
HP1

JRS ARCHITECTS
2010 Clipper Park Rd.
Suite 101
Baltimore, MD 21211
410.235.7256

ASSOCIATE ARCHITECT
SCHRADER GROUP ARCHITECTURE LLC
161 LEVERINGTON AVE. SUITE 105
PHILADELPHIA, PA 19127

LANDSCAPE ARCHITECT
MAHAN RYKIEL ASSOCIATES
800 WYMAN PARK DR. SUITE 100
BALTIMORE, MD 21211

CIVIL ENGINEER
STV, INC.
7125 AMBASSADOR RD. SUITE 200
BALTIMORE, MD 21244

STRUCTURAL ENGINEER
ALBRECHT ENGINEERING
3500 BOSTON ST. SUITE 329
BALTIMORE, MD 21224

MEP ENGINEER
BRINJAC ENGINEERING
1800 N. CHARLES ST. SUITE 310
BALTIMORE, MD 21201

FOOD SERVICE
NYIKOS ASSOCIATES
18219A FLOWER HILL WAY
GAITHERSBURG, MD 20879

AVIT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD. SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056

1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 16094
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2
2	04/27/16	ADDENDUM #3

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
ELECTRICAL PANEL SCHEDULES

E 602

JOSHUA PELLICCIA 7/26/2016 7:44 AM L:\PROJ\JRS ARCHITECTS, INC\MD\15-09A06.00-MDPS-ROBERT POOLE RENOVATION ADDITION\E_DRAWINGS ENG\A_CAD\A_DRAWINGS\MEP\E602-15.09A06.00.DWG

PANEL DESIGNATION CP3 | BUS AMP 225A | MIN. A.I.C. 10,000 | MAIN BREAKER 150A
LOCATION ELEC. 048 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES: 200% NEUTRAL
TOTAL POLES 42

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	RECPS.-046	20	1	1.1			2	12	12	3/4	3/4	12	12	2	0.4			1	20	RECPS.-044	2
3	RECPS.-040	20	1		0.2		2	12	12	3/4	3/4	12	12	2		1.1		1	20	RECPS.-123	4
5	RECPS.-123 (FLOORBOX)	20	1			0.5	2	12	12	3/4	3/4	12	12	2			0.5	1	20	RECPS.-123 (FLOORBOX)	6
7	RECPS.-123 (FLOORBOX)	20	1	0.4			2	12	12	3/4	3/4	12	12	2	0.5			1	20	RECPS.-123 (FLOORBOX)	8
9	RECPS.-123 (FLOORBOX)	20	1		0.5		2	12	12	3/4	3/4	12	12	2		0.5		1	20	RECPS.-123 (FLOORBOX)	10
11	RECPS.-123 (FLOORBOX)	20	1			0.5	2	12	12	3/4	3/4	12	12	2			0.4	1	20	RECPS.-123 (FLOORBOX)	12
13	RECPS.-123 (FLOORBOX)	20	1	0.5			2	12	12	3/4	3/4	12	12	2	0.5			1	20	RECPS.-123 (FLOORBOX)	14
15	RECPS.-123	20	1		0.4		2	12	12	3/4	3/4	12	12	2		0.4		1	20	RECPS.-122	16
17	RECPS.-122 (RACEWAY)	20	1			0.9	2	12	12	3/4	3/4	12	12	2			0.9	1	20	RECPS.-122 (RACEWAY)	18
19	RECPS.-122 (RACEWAY)	20	1	0.9			2	12	12	3/4	3/4	12	12	2	0.7			1	20	RECPS.-122 (RACEWAY)	20
21	RECPS.-122 (RACEWAY)	20	1		0.9		2	12	12	3/4	3/4	12	12	2		0.9		1	20	RECPS.-122 (RACEWAY)	22
23	RECPS.-122 (RACEWAY)	20	1			0.9	2	12	12	3/4	3/4	12	12	2			0.7	1	20	RECPS.-122 (RACEWAY)	24
25	RECPS.-121	20	1	0.4			2	12	12	3/4	3/4	12	12	2	0.7			1	20	RECPS.-123 (RACEWAY)	26
27	RECPS.-123 (RACEWAY)	20	1		0.7		2	12	12	3/4	3/4	12	12	2		0.7		1	20	RECPS.-123 (RACEWAY)	28
29	RECPS.-123 (RACEWAY)	20	1			0.7	2	12	12	3/4	3/4	10	10	2			2.9	1	30	RECP.-122A	30
31	RECP.-122A	30	1	2.9			2	10	10	3/4	3/4	10	10	2	2.9			1	30	RECP.-122A	32
33	RECPS.-A/V-044,046	20	1		0.7		2	12	12	3/4	3/4	12	12	2		0.7		1	20	RECPS.-A/V-121C,124	34
35	RECPS.-A/V-122,123	20	1			0.7	2	12	12	3/4							0.0	1	20	SPARE	36
37	SPARE	20	1	0.0											0.0			1	20	SPARE	38
39	SPARE	20	1		0.0											0.0		1	20	SPARE	40
41	SPARE	20	1			0.0											0.0	1	20	SPARE	42
	SIDE TOTAL KW LOAD			6	3	4									6	4	5			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **CP3**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.0	29.3	0.0	0.0	0.0	0.0	29.3	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	67%	100%	100%	100%	0%	67%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	0.0	19.7	0.0	0.0	0.0	0.0	19.7	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**55**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION RP3 (SECTION 1) | BUS AMP 225A | MIN. A.I.C. 10,000 | MAIN BREAKER 150A
LOCATION ELEC. 048 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES: *-PROVIDE GFCI CIRCUIT BREAKER
TOTAL POLES 42

1 | 1 | 0 SECTION 2 TOTAL KW LOAD

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	RECPS.-046	20	1	0.9			2	12	12	3/4	3/4	12	12	2	0.7			1	20	RECPS.-046 (CONTROLLED)	2
3	RECPS.-046	20	1		0.4		2	12	12	3/4	3/4	12	12	2		0.7		1	20	RECPS.-044	4
5	RECPS.-044 (CONTROLLED)	20	1			0.7	2	12	12	3/4	3/4	12	12	2			0.5	1	20	RECPS.-044	6
7	RECP.-PRINTER 044	20	1	1.0			2	12	12	3/4	3/4	12	12	2	0.5			1	20	RECPS.-040	8
9	RECPS.-049,051	20	1		0.4		2	12	12	3/4	3/4	12	12	2		0.7		1	20	RECPS.-042,043,045,047	10
11	RECP.-C.O.W. 042	20	1			0.2	2	12	12	3/4	3/4	12	12	2			0.2	1	20	RECP.-C.O.W.	12
13	RECPS.-041	20	1	0.7			2	12	12	3/4	3/4	10	10	2	0.9			1	20	RECPS.-CORRIDOR	14
15	RECPS.-048	20	1		0.4		2	12	12	3/4	3/4	12	12	2		0.7		1	20	RECPS.-124 (CONTROLLED)	16
17	RECPS.-124	20	1			0.7	2	12	12	3/4	3/4	12	12	2			0.7	1	20	RECPS.-124 (CONTROLLED)	18
19	RECPS.-123	20	1	0.7			2	12	12	3/4	3/4	12	12	2	0.7			1	20	RECPS.-123 (CONTROLLED)	20
21	RECPS (FLOORBOXES) 121C	20	1		1.8		2	10	10	3/4	3/4	12	12	2		0.5		1	20	RECPS.-122	22
23	RECPS.-122 (CONTROLLED)	20	1			0.4	2	12	12	3/4	3/4	12	12	2			0.9	1	20	RECPS.-121,124A	24
25	RECPS.-1211,122A,CORRIDOR	20	1	0.9			2	10	10	3/4	3/4	12	12	2	0.4			1	20	RECPS.-121	26
27	RECPS.-250	20	1		0.2		2	12	12	3/4	3/4	10	10	2		0.2		1	20	RECP.-C.O.W. 122A	28
29	RECP.-REF 043	20	1			1.0	2	12	12	3/4	3/4	12	12	2			1.0	1	20	RECP.-DISHWASHER-043	30
31	RECPS.-044	20	1	0.5			2	12	12	3/4	3/4	12	12	2	1.8			1	20	LIGHTS-046	32
33	LIGHTS-045	20	1		1.7		2	12	12	3/4	3/4	12	12	2		0.5		1	20	ELECTRIC WATER COOLER-*	34
35	ELECTRIC WATER COOLER-*	20	1			0.5	2	12	12	3/4	3/4	12	12	2			1.4	1	20	RECPS (FLOORBOXES) 044	36
37	RECPS (FLOORBOXES) 044	20	1	1.4			2	12	12	3/4	3/4	12	12	2	1.4			1	20	RECPS (FLOORBOXES) 124	38
39	RECPS (FLOORBOXES) 124	20	1		1.4		2	12	12	3/4	3/4	12	12	2		0.7		1	20	RECPS (FLOORBOXES) 122	40
41	RECPS (FLOORBOXES) 122	20	1			0.7	2	12	12	3/4	3/4	12	12	2			0.7	1	20	RECPS (FLOORBOXES) 122	42
	SIDE TOTAL KW LOAD			6	6	4									6	4	6			SIDE TOTAL KW LOAD	

PANEL DESIGNATION RP3 (SECTION 2) | BUS AMP 225A | MIN. A.I.C. 10,000 | MAIN BREAKER MLO
LOCATION ELEC. 048 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES:
TOTAL POLES 42

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
43	RECPS (FLOORBOXES) 122	20	1	0.7			2	12	12	3/4	3/4	12	12	2	0.7			1	20	RECPS (FLOORBOXES) 122	44
45	RECPS (FLOORBOXES) 122	20	1		0.7		2	12	12	3/4	3/4	12	12	2		0.7		1	20	RECPS.-122A	46
47	SPARE	20	1			0.0											0.0	1	20	SPARE	48
49	SPARE	20	1	0.0											0.0			1	20	SPARE	50
51	SPARE	20	1		0.0											0.0		1	20	SPARE	52
53	SPARE	20	1			0.0											0.0	1	20	SPARE	54
55	SPARE	20	1	0.0											0.0			1	20	SPARE	56
57	SPARE	20	1		0.0											0.0		1	20	SPARE	58
59	SPARE	20	1			0.0											0.0	1	20	SPARE	60
61	SPARE	20	1	0.0											0.0			1	20	SPARE	62
63	SPARE	20	1		0.0											0.0		1	20	SPARE	64
65	SPARE	20	1			0.0											0.0	1	20	SPARE	66
67	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	68
69	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	70
71	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	72
73	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	74
75	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	76
77	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	78
79	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	80
81	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	82
83	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	84
	SIDE TOTAL KW LOAD			1	1	0									1	1	0			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **RP3**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	3.5	28.1	0.0	1.0	2.0	1.0	35.5	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	68%	100%	100%	100%	0%	74%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	4.3	19.0	0.0	1.0	2.0	0.0	26.4	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**73**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION HP3 | BUS AMP 100A | MIN. A.I.C. 14,000 | MAIN BREAKER 100A
LOCATION ELEC. 048 | PHASE 3 | WIRE 4 | VOLTAGE 480Y/277
MOUNTING SURFACE | NOTES:
TOTAL POLES 24

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	GSHP A0-1	15	1	1.8			2	12	12	3/4	3/4	12	12	2	2.4			1	15	GSHP A0-2	2
3	GSHP A0-3	15	1		2.9		2	12	12	3/4	3/4	12	12	4		1.2		3	15	GSHP A0-4	4
5	CUH A0-1	15	1			3.0	2	12	12	3/4							1.2			----------	6
7	CUH A0-2	15	1	2.0			2	12	12	3/4						1.2				----------	8
9	CUH A0-3	15	1		2.0		2	12	12	3/4	3/4	12	12	2		2.0		1	15	CUH A0-4	10
11	EBB A0-1	15	1			0.8	2	12	12	3/4	3/4	12	12	2			0.8	1	15	EBB A0-2	12
13	SPARE	15	1	0.0											0.0			1	15	SPARE	14
15	SPARE	15	1		0.0											0.0		1	15	SPARE	16
17	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	18
19	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	20
21	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	22
23	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	24
25				0																	26
27					0																28
29						0															30
31				0																	32
33					0																34
35						0															36
37				0																	38
39					0																40
41						0															42
	SIDE TOTAL KW LOAD			4	5	4									4	3	2			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **HP3**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.0	0.0	21.1	0.0	0.0	0.0	21.1	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	100%	0%	100%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	0.0	0.0	21.1	0.0	0.0	0.0	21.1	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**25**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION LP3 | BUS AMP 100A | MIN. A.I.C. 14,000 | MAIN BREAKER 50A
LOCATION ELEC. 048 | PHASE 3 | WIRE 4 | VOLTAGE 480Y/277
MOUNTING SURFACE | NOTES:
TOTAL POLES 18

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	LIGHTS - BASEMENT CORR.	20	1	1.2			2	12	12	3/4	3/4	12	12	2	1.8			1	20	LIGHTS - BASEMENT	2
3	LIGHTS - BASEMENT	20	1		2.1		2	12	12	3/4	3/4	10	10	2		1.5		1	20	LIGHTS - FIRST FLR. CORR.	4
5	LIGHTS - FIRST FLR.	20	1			2.1	2	10	10	3/4	3/4	10	10	2			3.8	1	20	LIGHTS - FIRST FLR.	6
7	SPARE	20	1	0.0											0.0			1	20	SPARE	8
9	SPARE	20	1		0.0											0.0		1	20	SPARE	10
11	SPARE	20	1			0.0											0.0	1	20	SPARE	12
13	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	14
15	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	16
17	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	18
19				0											0						20
21					0											0					22
23						0											0				24
25				0											0						26
27					0											0					28
29						0											0				30
31				0											0						32
33					0											0					34
35						0											0				36
37				0											0						38
39					0											0					40
41						0											0				42
	SIDE TOTAL KW LOAD			1	2	2									2	2	4			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **LP3**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	12.5	0.0	0.0	0.0	0.0	0.0	12.5	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	100%	0%	125%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	15.6	0.0	0.0	0.0	0.0	0.0	15.6	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**19**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION ESBRP3 | BUS AMP 100A | MIN. A.I.C. 10,000 | MAIN BREAKER 100A
LOCATION ELEC. 048 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES:
TOTAL POLES 24

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	RECP.-049A (IDF)	30	1	2.9			2	10	10	3/4	3/4	12	12	2	0.2			1	20	ACCESS CONTROL 049A	2
3	RECP.-049A (IDF)	30	1		2.9		2	10	10	3/4	3/4	12	12	2		0.2		1	20	SECURITY 049A	4
5	RECP.-049A (IDF)	30	1			2.9	2	10	10	3/4	3/4	12	12	3			0.1	2	15	SS-1	6
7	RECPS.-049A (IDF)	20	1	0.5			2	12	12	3/4						0.1				----------	8
9	SPARE	20	1		0.0						3/4	12	12	3		0.9		2	15	CU-1	10
11	SPARE	20	1			0.0											0.9			----------	12
13	SPARE	20	1	0.0											0.0			1	20	SPARE	14
15	SPARE	20	1		0.0											0.0		1	20	SPARE	16
17	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	18
19	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	20
21	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	22
23	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	24
25				0																	26
27					0																28
29						0															30
31				0																	32
33					0																34
35						0															36
37				0																	38
39					0																40
41						0															42
	SIDE TOTAL KW LOAD			3	3	3									0	1	1			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **ESBRP3**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.0	9.2	2.2	0.4	0.0	0.0	11.7	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	100%	0%	100%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	0.0	9.2	2.2	0.4	0.0	0.0	11.7	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**33**	AMPS (DEMAND)

NOTES:

PANEL SCHEDULES

CP3
RP3-1
RP3-2
HP3
LP3
ESBRP3

JRS ARCHITECTS
2010 Clipper Park Rd.
Suite 101
Baltimore, MD 21211
410.235.7256

ASSOCIATE ARCHITECT
SCHRADER GROUP ARCHITECTURE LLC
161 LEVERINGTON AVE, SUITE 105
PHILADELPHIA, PA 19127

LANDSCAPE ARCHITECT
MAHAN RYKIEL ASSOCIATES
800 WYMAN PARK DR, SUITE 100
BALTIMORE, MD 21211

CIVIL ENGINEER
STV, INC.
7125 AMBASSADOR RD, SUITE 200
BALTIMORE, MD 21244

STRUCTURAL ENGINEER
ALBRECHT ENGINEERING
3500 BOSTON ST, SUITE 329
BALTIMORE, MD 21224

MEP ENGINEER
BRINJAC ENGINEERING
1800 N. CHARLES ST, SUITE 310
BALTIMORE, MD 21201

FOOD SERVICE
NYIKOS ASSOCIATES
18219A FLOWER HILL WAY
GAITHERSBURG, MD 20879

AVIT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD, SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056

1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
ELECTRICAL PANEL SCHEDULES

E 603

JOSHUA PELLICCIA 7/26/2016 7:46 AM L:\PROJ\JRS ARCHITECTS, INC\MPS\15-04\06-00--ROPS--ROBERT POOLE RENOVATION ADDITION\C_DRAWINGS ENG\A_CAD\A_DRAWINGS\MEP\E603--15-0406-00.DWG

PANEL DESIGNATION: LPK | BUS AMP: 225A | MIN. A.I.C.: 35,000 | MAIN BREAKER: 225A
LOCATION: RCVG. 142 | PHASE: 3 | WIRE: 4 | VOLTAGE: 480Y/277
MOUNTING: FLUSH | NOTES: PROVIDE STAINLESS STEEL TRIM.
TOTAL POLES: 30

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	B	C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
1	PANEL 'RPK' VIA XFMR	70	3	0.0			4	4	8	1 1/4	2	8	1	4	19.0			3	100	UTILITY RACEWAY	2
3	----------				0.0											19.0					----------	4
5	----------					0.0											19.0				----------	6
7	LIGHTS	20	1	2.2			2	12	12	3/4	3/4	12	12	4	1.0			3	15	GSHP C1-4	8
9	GSHP C1-4	15	1		0.9		2	12	12	3/4						1.0				----------	10
11	SPARE	20	1			0.0											1.0			----------	12
13	SPARE	20	1	0.0											0.0			1	20	SPARE	14
15	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	16
17	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	18
19	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	20
21	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	22
23	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	24
25	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	26
27	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	28
29	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	30
31				0											0						32
33					0											0					34
35						0											0				36
37				0											0						38
39					0											0					40
41						0											0				42
	SIDE TOTAL KW LOAD			2	1	0									20	20	20			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **LPK**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	2.2	3.0	3.9	0.0	100.1	0.0	109.3	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	65%	0%	68%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	2.8	3.0	3.9	0.0	65.1	0.0	74.8	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**90**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION: RPK | BUS AMP: 225A | MIN. A.I.C.: 10,000 | MAIN BREAKER: 150A
LOCATION: RCVG. 142 | PHASE: 3 | WIRE: 4 | VOLTAGE: 208Y/120
MOUNTING: FLUSH | NOTES: PROVIDE STAINLESS STEEL TRIM
TOTAL POLES: 42 | *-PROVIDE GFCI CIRCUIT BREAKER

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	B	C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
1	FREEZER	20	1	1.0			2	12	12	3/4	3/4	12	12	2	0.5			1	20	RECPS.-142A, 142B, 142D	2
3	COOLER	20	1		1.0		2	12	12	3/4	3/4	12	12	2		1.0		1	20	RECP.-MILK COOLER	4
5	HOT FOOD COUNTER	30	2			2.5	3	10	10	3/4	3/4	10	10	3			2.5	2	30	HOT FOOD COUNTER	6
7	----------			2.5											2.5					----------	8
9	COLD FOOD COUNTER	20	1		0.9		2	12	12	3/4	3/4	12	12	2		0.9		1	20	COLD FOOD COUNTER	10
11	COLD FOOD COUNTER	20	1			0.9	2	12	12	3/4	3/4	12	12	2			0.2	1	20	RECP.-CASH REGISTER	12
13	RECPS.-CASH REGISTERS	20	1	0.4			2	12	12	3/4	3/4	10	10	3	2.5			2	30	HOT FOOD COUNTER	14
15	COLD FOOD COUNTER	20	1		0.9		2	12	12	3/4							2.5			----------	16
17	RECP.-MILK COOLER	20	1			1.0	2	12	12	3/4	1 1/4	10	6	4			2.8	3	50	UTILITY RACEWAY	18
19	RECPS.-142C	20	1	0.5			2	12	12	3/4						2.8				----------	20
21	COOLER BLOWER COIL	15	1		0.2		2	12	12	3/4							2.8			----------	22
23	FREEZER BLOWER COIL	25	1			2.1	2	10	10	3/4	3/4	12	12	2			0.2	1	15	HEAT TRACE-*	24
25	RECPS. - CONVENIENCE	20	1	0.2			2	12	12	3/4	3/4	12	12	2	1.0			1	20	RECP.-MILK COOLER	26
27	HEATED CABINET	20	2		0.8		3	12	12	3/4	3/4	12	12	3		0.8		2	20	HEATED CABINET	28
29	----------					0.8											0.8			----------	30
31	RECP. - REF. WORKTOP	20	1	1.5			2	12	12	3/4	3/4	12	12	2	1.5			1	20	RECP. - REF. WORKTOP	32
33	RECP. - REF. WORKTOP	20	1		1.5		2	12	12	3/4	3/4	12	12	3		0.8		2	20	HEATED CABINET	34
35	RECP.-POWER SCRUBBER	20	1			0.2	2	12	12	3/4							0.8			----------	36
37	SPARE	20	1	0.0											0.0			1	20	SPARE	38
39	SPARE	20	1		0.0											0.0		1	20	SPARE	40
41	SPARE	20	1			0.0											0.0	1	20	SPARE	42
	SIDE TOTAL KW LOAD			6	5	8									11	9	7			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **RPK**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.0	3.0	0.0	0.0	43.1	0.0	46.1	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	65%	0%	67%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	0.0	3.0	0.0	0.0	28.0	0.0	31.0	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**86**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION: CP4 | BUS AMP: 100A | MIN. A.I.C.: 10,000 | MAIN BREAKER: 100A
LOCATION: ELEC. 112 | PHASE: 3 | WIRE: 4 | VOLTAGE: 208Y/120
MOUNTING: SURFACE | NOTES: 200% NEUTRAL
TOTAL POLES: 30

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	B	C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
1	RECPS.-030	20	1	0.2			2	12	12	3/4	3/4	10	10	2	0.4			1	20	RECPS.-103A,103B	2
3	RECPS.-103F,103H	20	1		0.4		2	10	10	3/4	3/4	10	10	2		0.2		1	20	RECPS.-101G	4
5	RECPS.-101D,101E	20	1			0.4	2	10	10	3/4	3/4	10	10	2			0.4	1	20	RECPS.-101A	6
7	RECPS.-101B,101C,101L	20	1	0.5			2	10	10	3/4	3/4	12	12	2	0.2			1	20	RECPS.-149	8
9	RECPS.-153B	20	1		0.5		2	12	12	3/4	3/4	12	12	2		0.5		1	20	RECPS.-154B	10
11	RECPS.-142C	20	1			0.2	2	12	12	3/4							0.0	1	20	SPARE	12
13	SPARE	20	1	0.0											0.0			1	20	SPARE	14
15	SPARE	20	1		0.0											0.0		1	20	SPARE	16
17	SPARE	20	1			0.0											0.0	1	20	SPARE	18
19	SPARE	20	1	0.0											0.0			1	20	SPARE	20
21	SPARE	20	1		0.0											0.0		1	20	SPARE	22
23	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	24
25	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	26
27	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	28
29	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	30
31				0											0						32
33					0											0					34
35						0											0				36
37				0											0						38
39					0											0					40
41						0											0				42
	SIDE TOTAL KW LOAD			1	1	1									1	1	0			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **CP4**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.0	3.8	0.0	0.0	0.0	0.0	3.8	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	100%	0%	100%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	0.0	3.8	0.0	0.0	0.0	0.0	3.8	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**10**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION: HP4 | BUS AMP: 225A | MIN. A.I.C.: 35,000 | MAIN BREAKER: 150A
LOCATION: ELEC. 112 | PHASE: 3 | WIRE: 4 | VOLTAGE: 480Y/277
MOUNTING: SURFACE | NOTES:
TOTAL POLES: 42

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	B	C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
1	GSHP B1-1	15	1	2.9			2	10	10	3/4	3/4	10	10	2	2.4			1	15	GSHP B1-2	2
3	GSHP B1-3	15	3		1.2		4	10	10	3/4	3/4	10	10	2		2.9		1	15	GSHP B1-4	4
5	----------					1.2					3/4	10	10	4			1.9	3	15	GSHP B1-5	6
7	----------			1.2												1.9				----------	8
9	GSHP B1-6	15	3		1.9		4	12	12	3/4							1.9			----------	10
11	----------					1.9					3/4	12	12	2			0.9	1	15	GSHP B1-7	12
13	----------			1.9							3/4	12	12	2	2.4			1	15	GSHP B1-8	14
15	GSHP B1-9	15	1		0.9		2	12	12	3/4	3/4	12	12	2		0.9		1	15	GSHP B1-10	16
17	GSHP B1-11	15	3			1.9	4	12	12	3/4	3/4	12	12	2			2.9	1	15	GSHP B1-12	18
19	----------			1.9							3/4	12	12	2	1.1			1	15	GSHP B1-13	20
21	----------				1.9						3/4	12	12	2		1.8		1	15	GSHP B1-14	22
23	GSHP C1-1	15	3			2.7	4	12	12	3/4	3/4	12	12	4			2.7	3	15	GSHP C1-2	24
25	----------			2.7											2.7					----------	26
27	----------				2.7											2.7				----------	28
29	GSHP C1-3	15	3			2.7	4	12	12	3/4	3/4	12	12	2			0.8	1	15	EBB B1-1	30
31	----------			2.7							3/4	12	12	2	2.0			1	15	CUH B1-1	32
33	----------				2.7						3/4	12	12	2		3.0		1	15	CMUH B1-1	34
35	CUH B1-2	15	1			2.0	2	12	12	3/4	3/4	12	12	2			2.0	1	15	CUH B1-3	36
37	CUH C1-1	15	1	2.0			2	12	12	3/4	3/4	10	10	2	3.0			1	15	UH C1-1	38
39	SPARE	15	1		0.0											0.0		1	15	SPARE	40
41	SPARE	15	1			0.0											0.0	1	15	SPARE	42
	SIDE TOTAL KW LOAD			15	11	12									15	13	11			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **HP4**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.0	0.0	78.3	0.0	0.0	0.0	78.3	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	100%	0%	100%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	0.0	0.0	78.3	0.0	0.0	0.0	78.3	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**94**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION: RP4 (SECTION 1) | BUS AMP: 225A | MIN. A.I.C.: 10,000 | MAIN BREAKER: 175A
LOCATION: ELEC. 112 | PHASE: 3 | WIRE: 4 | VOLTAGE: 208Y/120
MOUNTING: SURFACE | NOTES: *-PROVIDE GFCI CIRCUIT BREAKER
TOTAL POLES: 42 | 7 | 8 | 6 | SECTION 2 TOTAL KW LOAD

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	B	C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
1	ELECTRIC WATER COOLER-*	20	1	0.5			2	10	10	3/4	3/4	10	10	2	1.4			1	20	RECPS.-CORRIDOR	2
3	RECPS.-103A	20	1		0.7		2	10	10	3/4	3/4	10	10	2		1.3		1	20	RECPS.-103C,103D,103H,103L	4
5	RECPS.-103B,103H,103J	20	1			0.9	2	10	10	3/4	3/4	10	10	2			1.0	1	20	RECP.-REFRIGERATOR 103H	6
7	RECP.-REFRIGERATOR 103B	20	1	1.0			2	10	10	3/4	3/4	10	10	2	1.0			1	20	RECP.-REFRIGERATOR 103F	8
9	RECPS.-101H	20	1		0.7		2	10	10	3/4	3/4	10	10	2		0.9		1	20	RECPS.-101G,101H	10
11	RECPS.-101D,101E	20	1			1.1	2	10	10	3/4	3/4	10	10	2			0.7	1	20	RECPS.-101A	12
13	RECP.-COPIER 101A	20	2	0.8			3	10	10	3/4	3/4	10	10	2	0.7			1	20	RECPS.-101J,101M	14
15	----------				0.8						3/4	10	10	2		0.9		1	20	RECPS.-101C,101F,101L	16
17	RECPS.-101B,101C,101N	20	1			1.3	2	10	10	3/4	3/4	12	12	2			0.7	1	20	RECPS.-113	18
19	RECPS.-106A,110,115A,115B	20	1	0.7			2	12	12	3/4	3/4	10	10	3	1.0			2	30	RECP.-DRYER 115A	20
21	RECP.-WASHER 115A	20	1		1.0		2	12	12	3/4						1.0				----------	22
23	RECPS.-141	20	1			0.9	2	12	12	3/4	3/4	12	12	2			0.5	1	20	RECPS.-149	24
25	ELECTRIC WATER COOLER-*	20	1	0.5			2	12	12	3/4	3/4	12	12	2	1.1			1	20	RECPS.-CORRIDOR	26
27	RECPS.-112	20	1		0.2		2	12	12	3/4	3/4	12	12	2		1.0		1	20	RECP.-APPLIANCE 146	28
29	RECP.-APPLIANCE 146	20	1			1.0	2	12	12	3/4	3/4	12	12	2			1.0	1	20	RECP.-APPLIANCE 146	30
31	RECP.-APPLIANCE 146	20	1	1.0			2	12	12	3/4	3/4	12	12	2	0.5			1	20	RECPS.-146	32
33	ELECTRIC WATER COOLER-*	20	1		0.5		2	12	12	3/4	3/4	12	12	2		0.9		1	20	RECPS.-145,153C,153D	34
35	RECPS.-153B	20	1			0.7	2	12	12	3/4	3/4	12	12	2			0.4	1	20	RECPS.-153F	36
37	RECPS.-154F	20	1	0.2			2	12	12	3/4	3/4	12	12	2	0.5			1	20	RECPS.-150,151,152	38
39	RECP.-DRYER 152	15	2		0.9		3	12	12	3/4	3/4	12	12	2		1.7		1	20	RECP.-WASHER 152	40
41	----------					0.9					3/4	12	12	2			0.9	1	20	RECPS.-154A,154C,154D	42
	SIDE TOTAL KW LOAD			5	5	7									6	8	5			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **RP4**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.7	24.1	0.7	12.4	8.0	10.0	55.9	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	71%	100%	100%	65%	0%	65%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	0.9	17.1	0.7	12.4	5.2	0.0	36.2	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**101**	AMPS (DEMAND)

NOTES:

PANEL SCHEDULES

LPK
CP4
RPK
HP4
RP4-1
RP4-2

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Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056

1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 16094
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2
2	05/06/16	ADDENDUM #5

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
ELECTRICAL PANEL SCHEDULES

E 604

JOSHUA PELLICIA 7/26/2016 7:47 AM L:\PROJ\JRS ARCHITECTS, INC\MPS 15 004.00--RCPS--ROBERT POOLE RENOVATION ADDITION\E_DRAWINGS\E_CAD\LA_DRAWINGS\MEP\E604--15 004.00.DWG

PANEL DESIGNATION LP4 | BUS AMP 100A | MIN. A.I.C. 14,000 | MAIN BREAKER 100A
LOCATION ELEC. 112 | PHASE 3 | WIRE 4 | VOLTAGE 480Y/277
MOUNTING SURFACE | NOTES:
TOTAL POLES 30

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	LIGHTS - BASEMENT - CORRIDOR	20	1	1.6			2	12	12	3/4	3/4	12	12	2	0.9			1	20	LIGHTS - BASEMENT	2
3	LIGHTS - FIRST FLR. - CORRIDOR	20	1		0.9		2	12	12	3/4	3/4	10	10	2		3.1		1	20	LIGHTS - FIRST FLR.	4
5	LIGHTS - FIRST FLR. - CORRIDOR	20	1			1.1	2	12	12	3/4	3/4	10	10	2			1.7	1	20	LIGHTS - DINING	6
7	LIGHTS - FIRST FLR.	20	1	2.9			2	10	10	3/4	3/4	10	10	2	1.7			1	20	LIGHTS - GYM	8
9	LIGHTS - GYM	20	1		2.9		2	10	10	3/4	3/4	10	10	2		2.4		1	20	LIGHTS - GYM	10
11	LIGHTS - EXTERIOR - BUILDING	20	1			0.6	2	12	12	3/4							0.0	1	20	SPARE	12
13	SPARE	20	1	0.0										0.0				1	20	SPARE	14
15	SPARE	20	1		0.0										0.0			1	20	SPARE	16
17	SPARE	20	1			0.0											0.0	1	20	SPARE	18
19	SPACE - PFFB		1	0.0										0.0				1		SPACE - PFFB	20
21	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	22
23	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	24
25	SPACE - PFFB		1	0.0										0.0				1		SPACE - PFFB	26
27	SPACE - PFFB		1		0.0										0.0			1		SPACE - PFFB	28
29	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	30
31				0										0							32
33					0										0						34
35						0										0					36
37				0										0							38
39					0										0						40
41						0											0				42
	SIDE TOTAL KW LOAD			4	4	2								3	5	2				SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **LP4**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	19.7	0.0	0.0	0.0	0.0	0.0	19.7	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	100%	0%	125%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	24.6	0.0	0.0	0.0	0.0	0.0	24.6	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**30**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION CP5 | BUS AMP 100A | MIN. A.I.C. 10,000 | MAIN BREAKER 100A
LOCATION ELEC. 104C | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES: 200% NEUTRAL
TOTAL POLES 30

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	RECPS.-104A	20	1	0.4			2	12	12	3/4	3/4	12	12	2	0.2			1	20	RECPS.-104F	2
3	RECPS.-102E, 102F	20	1		0.4		2	12	12	3/4	3/4	12	12	2		0.7		1	20	RECPS.-102A, 102D	4
5	RECPS.-105A	20	1			0.4	2	12	12	3/4	3/4	12	12	2			0.4	1	20	RECPS.105A	6
7	RECPS.-105A	20	1	0.4			2	12	12	3/4	3/4	12	12	2	0.4			1	20	RECPS.105A	8
9	RECPS.-105A	20	1		0.4		2	12	12	3/4	3/4	10	10	2		0.4		1	20	RECPS.-107B,107C	10
11	RECPS.-107D,107E	20	1			0.4	2	10	10	3/4	3/4	10	10	2			0.4	1	20	RECPS.-107F,107G	12
13	RECPS.-107A	20	1	0.2			2	10	10	3/4	3/4	10	10	2	0.2			1	20	RECPS.-109B	14
15	RECPS.-102G	20	1		0.7		2	12	12	3/4	3/4	10	10	2		0.7		1	20	RECPS.-102C	16
17	RECPS-A/V-105A	20	1			0.7	2	10	10	3/4							0.0	1	20	SPARE	18
19	SPARE	20	1	0.0												0.0		1	20	SPARE	20
21	SPARE	20	1		0.0												0.0	1	20	SPARE	22
23	SPARE	20	1			0.0											0.0	1	20	SPARE	24
25	SPARE	20	1	0.0												0.0		1	20	SPARE	26
27	SPACE - PFFB		1		0.0												0.0	1		SPACE - PFFB	28
29	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	30
31				0																	32
33					0												0				34
35						0															36
37				0																	38
39					0																40
41						0															42
	SIDE TOTAL KW LOAD			1	1	1									1	2	1			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **CP5**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.0	7.0	0.0	0.0	0.0	0.0	7.0	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	100%	0%	100%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	0.0	7.0	0.0	0.0	0.0	0.0	7.0	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**19**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION RP5 | BUS AMP 225A | MIN. A.I.C. 10,000 | MAIN BREAKER 150A
LOCATION ELEC. 104C | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES:
TOTAL POLES 42

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	RECPS.-104A	20	1	0.7			2	12	12	3/4	3/4	12	12	2	0.5			1	20	RECPS.-104F	2
3	RECPS.-104E	20	1		0.7		2	12	12	3/4	3/4	12	12	2		0.4		1	20	RECPS.-104E	4
5	RECP.-REFRIGERATOR 104E	20	1			1.0	2	12	12	3/4	3/4	12	12	2			0.5	1	20	RECPS.-104, 104B, 104D	6
7	RECP.-104C	20	1	0.2			2	12	12	3/4	3/4	12	12	2	1.1			1	20	RECPS.-102H	8
9	RECPS.-102F,102G	20	1		1.1		2	12	12	3/4	3/4	12	12	2		0.7		1	20	RECPS.-102B,102J,102K	10
11	RECPS.-102C,102E	20	1			1.3	2	12	12	3/4	3/4	12	12	2			0.7	1	20	RECPS.-102A,102B	12
13	RECPS.-105A	20	1	1.4			2	10	10	3/4	3/4	10	10	2	0.4			1	20	RECPS.-105A	14
15	RECPS.-105A	20	1		1.4		2	10	10	3/4	3/4	10	10	2		0.4		1	20	RECPS.-105A	16
17	RECPS.-105A	20	1			0.7	2	10	10	3/4	3/4	10	10	2			0.4	1	20	RECPS.-105A	18
19	RECPS.-105A	20	1	0.7			2	10	10	3/4	3/4	10	10	2	0.7			1	20	RECPS.-105B,105C,105D	20
21	RECP.-C.O.W. 105C	20	1		0.2		2	10	10	3/4	3/4	10	10	2		0.7		1	20	RECPS.-105D	22
23	RECPS.-107B,107C	20	1			1.1	2	10	10	3/4	3/4	10	10	2			1.1	1	20	RECPS.-107D,107E	24
25	RECPS.-107G,107F	20	1	1.1			2	10	10	3/4	3/4	10	10	2	1.1			1	20	RECPS.-107,107A,107H,107J	26
27	RECPS.-109B	20	1		0.7		2	10	10	3/4	3/4	10	10	2		1.1		1	20	RECPS.-109A,140	28
29	RECPS.-106	20	1			0.7	2	10	10	3/4	3/4	10	10	2			0.7	1	20	RECPS.-106	30
31	RECPS.-106B	20	1	0.5			2	10	10	3/4	3/4	10	10	2	0.7			1	20	RECPS.106B	32
33	RECPS.-102C,102E	20	1		0.5		2	12	12	3/4	3/4	10	10	2		1.4		1	20	LIGHTS - TRACK 109	34
35	RECPS.-(FLOORBOXES) 105A	20	1			1.4	2	10	10	3/4	3/4	10	10	2			1.1	1	20	LIGHTS - TRACK 106	36
37	SPARE	20	1	0.0											0.0			1	20	SPARE	38
39	SPARE	20	1		0.0											0.0		1	20	SPARE	40
41	SPARE	20	1			0.0											0.0	1	20	SPARE	42
	SIDE TOTAL KW LOAD			5	5	6								5	5	5				SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **RP5**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	2.5	25.7	0.0	0.0	1.0	0.0	29.3	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	69%	100%	100%	100%	0%	75%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	3.2	17.9	0.0	0.0	1.0	0.0	22.0	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**61**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION ELSLP5 | BUS AMP 100A | MIN. A.I.C. 14,000 | MAIN BREAKER MAIN SWITCH
LOCATION ELEC. 104C | PHASE 3 | WIRE 4 | VOLTAGE 480Y/277
MOUNTING SURFACE | NOTES: IF NECESSARY, PROVIDE ELECTRONIC TRIP SUB-FEED BREAKERS FOR SELECTIVE COORDINATION.
TOTAL POLES 24

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	LIGHTS -STAIR A2	20	1	0.2			2	12	12	3/4	3/4	12	12	2	0.2			1	20	LIGHTS - ELEC., IDF	2
3	LIGHTS - MECHANICAL	20	1		0.6		2	12	12	3/4	3/4	12	12	2		0.5		1	20	LIGHTS - BASEMENT - CORRIDOR	4
5	LIGHTS - STAIR A1	20	1			0.3	2	12	12	3/4	3/4	12	12	2			0.6	1	20	LIGHTS - FIRST FLR.	6
7	SPARE	20	1	0.0							3/4	12	12	2	0.6			1	20	LIGHTS - STAIR B1	8
9	LIGHTS - EXTERIOR	20	1		0.2		2	12	12	3/4	3/4	10	10	2		0.7		1	20	LIGHTS - FIRST. FLR. - CORRIDOR	10
11	LIGHTS - MEDIA CENTER	20	1			0.4	2	12	12	3/4	3/4	12	12	2			0.1	1	20	LIGHTS - EXTERIOR CANOPY	12
13	LIGHTS - ELEC, IDF	20	1	0.1			2	12	12	3/4					0.0			1	20	SPARE	14
15	SPARE	20	1		0.0											0.0		1	20	SPARE	16
17	SPARE	20	1			0.0											0.0	1	20	SPARE	18
19	PANEL 'ELSRP5' VIA XFMR	50	3	0.0			4	6	10	1 1/4	0.0							1		SPACE - PFFB	20
21	----------				0.0							0.0						1		SPACE - PFFB	22
23	----------					0.0							0.0					1		SPACE - PFFB	24
25				0							0										26
27					0							0									28
29						0							0								30
31				0							0										32
33					0								0								34
35						0								0							36
37				0							0										38
39					0								0								40
41						0								0							42
	SIDE TOTAL KW LOAD			0	1	1									1	1	1			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **ELSLP5**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	4.5	4.3	0.0	2.0	0.0	0.0	10.8	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	100%	0%	110%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	5.7	4.3	0.0	2.0	0.0	0.0	12.0	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**14**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION ELSRP5 | BUS AMP 100A | MIN. A.I.C. 10,000 | MAIN BREAKER 60A
LOCATION ELEC. 104C | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES:
TOTAL POLES 24

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	RECPS.-STAIR A2	20	1	0.5			2	10	10	3/4	3/4	10	10	2	0.9			1	20	RECPS.-STAIR A1	2
3	FIRE ALARM PANEL	20	1		0.5		2	12	12	3/4	3/4	10	10	2		1.3		1	20	RECPS.-STAIR B1	4
5	GAS ACTUATOR 044	20	1			0.5	2	12	12	3/4	3/4	12	12	2			0.4	1	20	MAG. HOLDS - STAIR A1, A2	6
7	MAG. HOLDS - STAIR B1	20	1	0.8			2	12	12	3/4	3/4	12	12	2	0.4			1	20	MAG. HOLDS - CORR. FIRST	8
9	MAIN FIRE ALARM PANEL	20	1		0.5		2	12	12	3/4	3/4	12	12	2		0.5		1	20	ARA PANEL	10
11	SPARE	20	1			0.0											0.0	1	20	SPARE	12
13	SPARE	20	1	0.0											0.0			1	20	SPARE	14
15	SPARE	20	1		0.0											0.0		1	20	SPARE	16
17	SPARE	20	1			0.0											0.0	1	20	SPARE	18
19	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	20
21	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	22
23	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	24
25				0											0						26
27					0											0					28
29						0											0				30
31				0											0						32
33					0											0					34
35						0											0				36
37				0											0						38
39					0											0					40
41						0											0				42
	SIDE TOTAL KW LOAD			1	1	1									1	2	0			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **ELSRP5**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.0	4.3	0.0	2.0	0.0	0.0	6.3	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	100%	0%	100%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	0.0	4.3	0.0	2.0	0.0	0.0	6.3	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**17**	AMPS (DEMAND)

NOTES:

PANEL SCHEDULES

LP4 CP5
RP5 ELSLP5
ELSRP5

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GAITHERSBURG, MD 20879

AVIT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD. SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056

1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: AS NOTED

DRAWING NAME
ELECTRICAL PANEL SCHEDULES

E 605

JOSHUA PELLICCIA 7/26/2016 7:48 AM L:\PROJ\JRS ARCHITECTS, INC\MPS\15-04\26-00--ROPS--ROBERT POOLE RENOVATION ADDITION\C_DRAWINGS\E DWGS\E_CAD\A_DRAWINGS\MEP\LEGDS--15-0426-00.DWG

PANEL DESIGNATION HP6 | BUS AMP 225A | MIN. A.I.C. 14,000 | MAIN BREAKER 200A
LOCATION MECH. 250 | PHASE 3 | WIRE 4 | VOLTAGE 480Y/277
MOUNTING SURFACE | NOTES:
TOTAL POLES 42

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	GSHP A1-1	15	3	1.7			4	12	12	3/4	3/4	12	12	4	1.2			3	15	GSHP A1-2	2
3	----------				1.7											1.2				----------	4
5	----------					1.7											1.2			----------	6
7	GSHP A1-3	15	3	2.7			4	12	12	3/4	3/4	12	12	4	1.2			3	15	GSHP A1-4	8
9	----------				2.7											1.2				----------	10
11	----------					2.7											1.2			----------	12
13	CUH A1-1	15	1	3.0			2	12	12	3/4	3/4	12	12	2	2.0			1	15	CUH A1-2	14
15	EBB A1-1	15	1		0.8		2	12	12	3/4	3/4	12	12	2		0.8		1	15	EBB A1-2	16
17	UH A2-1	15	1			3.0	2	12	12	3/4	3/4	12	12	2			3.0	1	15	UH A2-2	18
19	CUH A2-1	15	1	2.0			2	12	12	3/4	3/4	12	12	2	0.8			1	15	EBB A1-3	20
21	SPARE	15	1		0.0											0.0		1	15	SPARE	22
23	SPARE	15	1			0.0											0.0	1	15	SPARE	24
25	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	26
27	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	28
29	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	30
31	DOAS-1	60	3	12.5			4	4	10	1 1/4					0.0			1		SPACE - PFFB	32
33	----------				12.5											0.0		1		SPACE - PFFB	34
35	----------					12.5											0.0	1		SPACE - PFFB	36
37	PANEL 'HP3'	100	3	0.0			4	1	8	2					0.0			1		SPACE - PFFB	38
39	----------				0.0											0.0		1		SPACE - PFFB	40
41	----------					0.0												1		SPACE - PFFB	42
	SIDE TOTAL KW LOAD			22	18	20									5	3	5			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **HP6**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.0	0.0	94.0	0.0	0.0	0.0	94.0	KVA (CONNECTED)
	125%	100%	100%	100%	100%	0%	100%	DEMAND FACTOR
	0.0	0.0	94.0	0.0	0.0	0.0	94.0	KVA (DEMAND)

NOTES:
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

113 AMPS (DEMAND)

PANEL DESIGNATION RP7 (SECTION 1) | BUS AMP 400A | MIN. A.I.C. 10,000 | MAIN BREAKER 300A
LOCATION ELEC. 218 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES: *-PROVIDE GFCI CIRCUIT BREAKER
TOTAL POLES 42

9 | 12 | 10 SECTION 2 TOTAL KW LOAD

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	RECPS.-212 (CONTROLLED)	20	1	0.7			2	10	10	3/4	3/4	10	10	2	1.1			1	20	RECPS.-212	2
3	RECPS.-210 (CONTROLLED)	20	1		0.7		2	10	10	3/4	3/4	10	10	2		0.9		1	20	RECPS.-210	4
5	RECPS.-213 (CONTROLLED)	20	1			0.7	2	12	12	3/4	3/4	12	12	2			0.7	1	20	RECPS.-213	6
7	RECPS.-206 (CONTROLLED)	20	1	0.7			2	10	10	3/4	3/4	10	10	2	1.1			1	20	RECPS.-206	8
9	RECPS.-203 (CONTROLLED)	20	1		0.7		2	10	10	3/4	3/4	10	10	2		1.1		1	20	RECPS.-203	10
11	RECPS.-205 (CONTROLLED)	20	1			0.7	2	10	10	3/4	3/4	10	10	2			1.1	1	20	RECPS.-205	12
13	RECPS.-214 (CONTROLLED)	20	1	0.7			2	12	12	3/4	3/4	12	12	2	0.9			1	20	RECPS.-214	14
15	RECPS.-228 (CONTROLLED)	20	1		0.7		2	12	12	3/4	3/4	12	12	2		1.1		1	20	RECPS.-228	16
17	RECPS.-208 (CONTROLLED)	20	1			0.7	2	10	10	3/4	3/4	10	10	2			0.9	1	20	RECPS.-208	18
19	ELECTRIC WATER COOLER-*	20	1	0.5			2	10	10	3/4	3/4	10	10	2	1.3			1	20	RECPS.-207	20
21	RECPS.-207 (CONTROLLED)	20	1		0.7		2	10	10	3/4	3/4	10	10	2		1.1		1	20	RECPS.-204	22
23	RECPS.-204 (CONTROLLED)	20	1			0.7	2	10	10	3/4	3/4	10	10	2			0.7	1	20	RECPS.-202 (CONTROLLED)	24
25	RECPS.-202	20	1	0.9			2	10	10	3/4	3/4	10	10	2	0.7			1	20	RECPS.-209A	26
27	RECPS.-209	20	1		0.9		2	10	10	3/4	3/4	10	10	2		0.7		1	20	RECPS.-209 (CONTROLLED)	28
29	RECPS.-211	20	1			1.4	2	10	10	3/4	3/4	10	10	2			0.7	1	20	RECPS.-211 (CONTROLLED)	30
31	RECPS.-201A	20	1	1.1			2	10	10	3/4	3/4	10	10	2	0.7			1	20	RECPS.-201A	32
33	RECPS.-201A	20	1		0.7		2	10	10	3/4	3/4	10	10	2		1.0		1	20	RECP. - PRINTERS-201,202A	34
35	RECPS.-201A (CONTROLLED)	20	1			0.7	2	10	10	3/4	3/4	10	10	2			1.1	1	20	RECPS.-201A	36
37	RECPS.-202A	20	1	0.9			2	10	10	3/4	3/4	10	10	2	0.2			1	20	RECPS.-202A	38
39	RECPS.-202A	20	1		0.2		2	10	10	3/4	3/4	10	10	2		1.1		1	20	RECPS.-202A	40
41	RECPS. - CORRIDOR	20	1			0.0	2	10	10	3/4	3/4	12	12	2			0.5	1	20	ELECTRIC WATER COOLER-*	42
	SIDE TOTAL KW LOAD			6	5	5									6	7	6			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **RP7 (SECTION 1)**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.0	13.3	0.0	22.9	0.0	0.0	36.2	KVA (CONNECTED)
	125%	88%	100%	100%	100%	0%	95%	DEMAND FACTOR
	0.0	11.7	0.0	22.9	0.0	0.0	34.5	KVA (MEMAND)

NOTES:
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

96 AMPS (DEMAND)

PANEL DESIGNATION CP7 | BUS AMP 225A | MIN. A.I.C. 10,000 | MAIN BREAKER 150A
LOCATION ELEC. 218 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES: 200% NEUTRAL
TOTAL POLES 42

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
1	RECPS.-212	20	1	1.1			2	10	10	3/4	3/4	10	10	2	1.1			1	20	RECPS.-210	2
3	RECPS. 211	20	1		1.1		2	12	12	3/4	3/4	10	10	2		1.1		1	20	RECPS.-206	4
5	RECPS.	20	1			1.1	2	10	10	3/4	3/4	10	10	2			1.1	1	20	RECPS.-205	6
7	RECPS.-214	20	1	1.1			2	12	12	3/4	3/4	12	12	2	1.1			1	20	RECPS.-228	8
9	RECPS.-208	20	1		1.1		2	10	10	3/4	3/4	8	8	2		1.1		1	20	RECPS.-207	10
11	RECPS.-204	20	1			1.1	2	10	10	3/4	3/4	10	10	2			1.1	1	20	RECPS.-202	12
13	RECPS.-209	20	1	1.1			2	10	10	3/4	3/4	12	12	2	1.1			1	20	RECPS.-213	14
15	RECPS.-201A	20	1		1.1		2	10	10	3/4	3/4	10	10	2		1.1		1	20	RECPS.-202A	16
17	RECPS.-209A	20	1			0.7	2	12	12	3/4	3/4	10	10	2			1.1	1	20	RECPS.-220	18
19	RECPS.-227	20	1	0.2			2	12	12	3/4	3/4	12	12	2	1.1			1	20	RECPS.-229	20
21	RECPS.-230	20	1		1.1		2	10	10	3/4	3/4	10	10	2		1.1		1	20	RECPS.-233	22
23	RECPS.-A/V-210,212	20	1			0.7	2	12	12	3/4	3/4	10	10	2			0.7	1	20	RECPS.-A/V-201,202A	24
25	RECPS.-A/V-203,205	20	1	0.7			2	10	10	3/4	3/4	10	10	2	0.7			1	20	RECPS.-A/V-207,208	26
27	RECPS.-A/V-204B,206	20	1		0.7		2	10	10	3/4	3/4	12	12	2		0.7		1	20	RECPS.-A/V-209,204A	28
29	RECPS.-A/V-211,213	20	1			0.7	2	12	12	3/4	3/4	12	12	2			0.7	1	20	RECPS.-A/V-214,220	30
31	RECPS.-A/V-228,229	20	1	0.7			2	12	12	3/4	3/4	10	10	2	0.7			1	20	RECPS.-A/V-230,233	32
33	SPARE	20	1		0.0												0.0	1	20	SPARE	34
35	SPARE	20	1			0.0											0.0	1	20	SPARE	36
37	SPARE	20	1	0.0												0.0		1	20	SPARE	38
39	SPARE	20	1		0.0												0.0	1	20	SPARE	40
41	SPARE	20	1			0.0												1	20	SPARE	42
	SIDE TOTAL KW LOAD			5	5	4									6	5	5			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **CP7**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.0	29.7	0.0	0.0	0.0	0.0	29.7	KVA (CONNECTED)
	125%	67%	100%	100%	100%	0%	67%	DEMAND FACTOR
	0.0	19.9	0.0	0.0	0.0	0.0	19.9	KVA (DEMAND)

NOTES:
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

55 AMPS (DEMAND)

PANEL DESIGNATION RP7 (SECTION 2) | BUS AMP 400A | MIN. A.I.C. 10,000 | MAIN BREAKER MLO
LOCATION ELEC. 218 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES:
TOTAL POLES 42

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
43	RECP.-C.O.W. 221A	20	1	0.2			2	12	12	3/4	3/4	10	10	2	0.2			1	20	RECPS.-202A (CONTROLLED)	44
45	RECPS.-201B, 201C, 202B	20	1		1.3		2	10	10	3/4	3/4	10	10	2		1.0		1	20	RECP.-REFRIGERATOR 201C	46
47	RECP. -DISHWASHER 201C	20	1			1.0	2	10	10	3/4	3/4	10	10	2			0.2	1	20	FUME HOOD 201C	48
49	RECPS.-200E	20	1	1.1			2	12	12	3/4	3/4	12	12	2	1.1			1	20	RECPS.-032	50
51	RECP.-C.O.W. 200H	20	1		0.2		2	12	12	3/4	3/4	10	10	2		0.9		1	20	RECPS.-CORRIDOR	52
53	RECPS.-220	20	1			0.9	2	12	12	3/4	3/4	10	10	2			0.9	1	20	RECPS.-220	54
55	RECPS.-220 (CONTROLLED)	20	1	0.7			2	12	12	3/4	3/4	12	12	2	0.7			1	20	RECPS.-220A, 222	56
57	RECPS.-224	20	1		1.1		2	10	10	3/4	3/4	12	12	2		0.9		1	20	RECPS.-226	58
59	RECPS.-227	20	1			0.7	2	12	12	3/4	3/4	12	12	2			0.9	1	20	RECPS.-221	60
61	RECP.-COPIER 221	20	2	0.5			3	12	12	3/4	3/4	12	12	2	0.9			1	20	RECPS.-221A, 223	62
63	----------				0.5						3/4	10	10	2		1.1		1	20	RECPS.-229	64
65	RECPS.-229 (CONTROLLED)	20	1			0.7	2	10	10	3/4	3/4	10	10	2			1.3	1	20	RECPS.-230	66
67	RECPS.-230 (CONTROLLED)	20	1	0.7			2	10	10	3/4	3/4	10	10	2	1.4			1	20	RECPS.-231	68
69	RECPS.-224	20	1		0.4		2	12	12	3/4	3/4	10	10	2		1.1		1	20	RECPS.-232	70
71	RECP.-REFRIGERATOR 233A	20	1			1.0	2	12	12	3/4	3/4	10	10	2			1.0	1	20	RECP.-DISHWASHER 233A	72
73	RECPS.-224	20	1	0.5			2	12	12	3/4	3/4	10	10	2	0.9			1	20	RECPS.-233	74
75	RECPS.-224	20	1		1.1		2	10	10	3/4	3/4	10	10	2		1.1		1	20	RECPS.-233	76
77	RECPS.-233 (CONTROLLED)	20	1			0.9	2	10	10	3/4	3/4	10	10	2			0.7	1	15	EF-5 - FUME HOOD	78
79	RECP.-218	20	1	0.2			2	12	12	3/4	2	6	1	4	0.0			3	125	PANEL 'RP7 (SECTION 3)'	80
81	MOTORIZED SHADES 224	20	1		1.2		2	12	12	3/4						0.0				----------	82
83	LIGHT CNTRL. XMT.	20	1			0.2	2	12	12	3/4							0.0			----------	84
	SIDE TOTAL KW LOAD			4	6	5									5	6	5			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **RP7**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.0	69.3	0.7	25.0	4.0	2.2	101.2	KVA (CONNECTED)
	125%	57%	100%	100%	80%	0%	68%	DEMAND FACTOR
	0.0	39.7	0.7	25.0	3.2	0.0	68.6	KVA (DEMAND)

NOTES:
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

190 AMPS (DEMAND)

PANEL DESIGNATION RP7 (SECTION 3) | BUS AMP 225A | MIN. A.I.C. 10,000 | MAIN BREAKER MLO
LOCATION ELEC. 218 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES:
TOTAL POLES 42

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	NO	LOAD (KW) A	B	C	BREAKER POLES	AMP	DESCRIPTION	CKT NO
85	DIMMER 231	20	1	1.9			2	10	10	3/4	3/4	10	10	4	1.9			3	20	DIMMER 231	86
87	DIMMER 231	20	1		1.9		2	10	10	3/4						1.9				----------	88
89	DIMMER 231	20	1			1.9	2	10	10	3/4							1.9			----------	90
91	DIMMER 231	20	3	1.9			4	10	10	3/4	3/4	10	10	4	1.9			3	20	DIMMER 231	92
93	----------				1.9											1.9				----------	94
95	----------					1.9											1.9			----------	96
97	RECPS.-(FLOORBOXES) 207	20	1	1.4			2	10	10	3/4					0.0			1	20	SPARE	98
99	RECPS.-(FLOORBOXES) 201A	20	1		1.4		2	10	10	3/4	3/4	10	10	2		1.4		1	20	RECPS.-(FLOORBOXES) 201A	100
101	RECPS.-(FLOORBOXES) 202A	20	1			1.4	2	10	10	3/4	3/4	10	10	2			1.4	1	20	RECPS.-(FLOORBOXES) 202A	102
103	RECPS.-(FLOORBOXES) 220	20	1	1.1			2	12	12	3/4	3/4	12	12	2	1.4			1	20	RECPS.-(FLOORBOXES) 220	104
105	RECPS.-(FLOORBOXES) 233	20	1		1.4		2	12	12	3/4	3/4	12	12	2		1.4		1	20	RECPS.-(FLOORBOXES) 233	106
107	RECPS.-(FLOORBOXES) 224	20	1			0.7	2	12	12	3/4							0.0	1	20	SPARE	108
109	SPARE	20	1	0.0											0.0			1	20	SPARE	110
111	SPARE	20	1		0.0											0.0		1	20	SPARE	112
113	SPARE	20	1			0.0											0.0	1	20	SPARE	114
115	SPARE	20	1	0.0											0.0			1	20	SPARE	116
117	SPARE	20	1		0.0											0.0		1	20	SPARE	118
119	SPARE	20	1			0.0											0.0	1	20	SPARE	120
121	SPARE	20	1	0.0											0.0			1	20	SPARE	122
123	SPARE	20	1		0.0											0.0		1	20	SPARE	124
125	SPARE	20	1			0.0											0.0	1	20	SPARE	126
	SIDE TOTAL KW LOAD			6	7	6									5	7	5			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **RP7 (SECTION 3)**

	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.0	13.3	0.0	22.9	0.0	0.0	36.2	KVA (CONNECTED)
	125%	88%	100%	100%	100%	0%	95%	DEMAND FACTOR
	0.0	11.7	0.0	22.9	0.0	0.0	34.5	KVA (MEMAND)

NOTES:
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)
KITCH. - BETWEEN 100% & 65% (NEC 220.56)
NON-COINCIDENTAL - 0% (NEC 220.60)

96 AMPS (DEMAND)

PANEL SCHEDULES

HP6
RP7-1
RP7-3
CP7
RP7-2

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161 LEVERINGTON AVE. SUITE 105
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LANDSCAPE ARCHITECT
MAHAN RYKIEL ASSOCIATES
800 WYMAN PARK DR. SUITE 100
BALTIMORE, MD 21211

CIVIL ENGINEER
STV, INC.
7125 AMBASSADOR RD. SUITE 200
BALTIMORE, MD 21244

STRUCTURAL ENGINEER
ALBRECHT ENGINEERING
3500 BOSTON ST. SUITE 329
BALTIMORE, MD 21224

MEP ENGINEER
BRINJAC ENGINEERING
1800 N. CHARLES ST. SUITE 310
BALTIMORE, MD 21201

FOOD SERVICE
NYIKOS ASSOCIATES
18219A FLOWER HILL WAY
GAITHERSBURG, MD 20879

AVIT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
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I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 16094
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
ELECTRICAL PANEL SCHEDULES

E 606

JOSHUA PELLICCIA 7/26/2016 7:49 AM L:\PROJ\JRS_ARCHITECTS_INC\MD\15-05A06.00--RKPS--ROBERT POOLE RENOVATION ADDITION\E_DRAWINGS ENG\A_CAD\A_DRAWINGS\MEP\E606--15-05A06.00.DWG

PANEL DESIGNATION HP7 (SECTION 1) | BUS AMP 400A | MIN. A.I.C. 35,000 | MAIN BREAKER 350A
LOCATION ELEC. 218 | PHASE 3 | WIRE 4 | VOLTAGE 480Y/277
MOUNTING SURFACE | NOTES:
TOTAL POLES 42

0	0	0	SECTION 2 TOTAL KW LOAD

CKT NO	DESCRIPTION	BREAKER AMP	BREAKER POLES	LOAD (KW) A	LOAD (KW) B	LOAD (KW) C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE
1	GSHP B2-1	15	3	1.2			4	10	10	3/4
3	----------				1.2					
5	----------					1.2				
7	GSHP B2-5	15	3	1.9			4	10	10	3/4
9	----------				1.9					
11	----------					1.9				
13	GSHP B2-7	15	1	1.1			2	12	12	3/4
15	GSHP B2-9	15	1		1.8		2	12	12	3/4
17	GSHP B2-11	15	1			1.1	2	12	12	3/4
19	GSHP B2-13	15	1	1.8			2	12	12	3/4
21	GSHP B2-15	15	1		2.4		2	12	12	3/4
23	GSHP C2-1	15	3			1.2	4	12	12	3/4
25	----------			1.2						
27	----------				1.2					
29	GSHP C2-5	15	3			1.2	4	12	12	3/4
31	----------			1.2						
33	----------				1.2					
35	GSHP C2-7	15	1			1.1	2	12	12	3/4
37	CUH B2-1	15	1	2.0			2	10	10	3/4
39	CUH B2-3	15	1		2.0		2	12	12	3/4
41	SPARE	15	1			0.0				
	SIDE TOTAL KW LOAD			10	12	8				

COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	LOAD (KW) B	LOAD (KW) C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
3/4	10	10	2	2.9			1	15	GSHP B2-2	2
3/4	10	10	2		2.9		1	15	GSHP B2-3	4
3/4	10	10	4	1.9		2.4	1	15	GSHP B2-6	8
						1.9			----------	10
						1.9			----------	12
3/4	12	12	2	2.4			1	15	GSHP B2-8	14
3/4	12	12	2		2.4		1	15	GSHP B2-10	16
3/4	12	12	2			1.8	1	15	GSHP B2-12	18
3/4	12	12	2	2.9			1	15	GSHP B2-14	20
3/4	12	12	2		1.1		1	15	GSHP B2-16	22
3/4	12	12	2			2.9	1	15	GSHP C2-2	24
3/4	12	12	2	2.9			1	15	GSHP C2-3	26
3/4	12	12	4		1.7		3	15	GSHP C2-4	28
						1.7			----------	30
				1.7					----------	32
3/4	12	12	2		1.1		1	15	GSHP C2-6	34
3/4	10	10	2			2.9	1	15	GSHP C2-8	36
3/4	12	12	2	2.0			1	15	CUH B2-2	38
3/4	12	12	2		2.0		1	15	CUH C2-1	40
						0.0	1	15	SPARE	42
				17	13	14			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **HP7**

	LTS.	RECPS.	HVAC	MISC.	KITCH.	TOTAL	
	0.0	0.0	158.4	0.0	0.0	158.4	KVA (CONNECTED)
RECPS - 100% FIRST 10 KVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	100%	100%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	0.0	0.0	158.4	0.0	0.0	158.4	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)						**191**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION ELSLP7 | BUS AMP 100A | MIN. A.I.C. 14,000 | MAIN BREAKER MAIN SWITCH
LOCATION ELEC. 218 | PHASE 3 | WIRE 4 | VOLTAGE 480Y/277
MOUNTING SURFACE | NOTES: IF NECESSARY, PROVIDE ELECTRONIC TRIP SUB-FEED BREAKERS FOR SELECTIVE COORDINATION.
TOTAL POLES 18

CKT NO	DESCRIPTION	BREAKER AMP	BREAKER POLES	LOAD (KW) A	LOAD (KW) B	LOAD (KW) C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE
1	LIGHTS	20	1	0.4			2	12	12	3/4
3	LIGHTS - SECOND FLR.	20	1		0.4		2	12	12	3/4
5	LIGHTS - THIRD FLR.	20	1			0.3	2	12	12	3/4
7	SPARE	20	1	0.0						
9	SPARE	20	1		0.0					
11	SPARE	20	1			0.0				
13	PANEL 'ELSRP7' VIA XFMR	50	3	0.0			4	6	10	1 1/4
15	----------				0.0					
17	----------					0.0				
19				0						
21					0					
23						0				
25				0						
27					0					
29						0				
31				0						
33					0					
35						0				
37				0						
39					0					
41						0				
	SIDE TOTAL KW LOAD			0	0	0				

COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	LOAD (KW) B	LOAD (KW) C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
3/4	12	12	2	0.2			1	20	LIGHTS - ELEV. SHAFT	2
3/4	12	12	2		0.4		1	20	LIGHTS - SECOND FLR.	4
3/4	12	12	2			0.8	1	20	LIGHTS - THIRD FLR.	6
				0.0			1	20	SPARE	8
					0.0		1	20	SPARE	10
						0.0	1	20	SPARE	12
				0.0			1		SPACE - PFFB	14
					0.0		1		SPACE - PFFB	16
						0.0	1		SPACE - PFFB	18
				0						20
					0					22
						0				24
				0						26
					0					28
						0				30
				0						32
					0					34
						0				36
				0						38
					0					40
						0				42
				0	0	1			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **ELSLP7**

	LTS.	RECPS.	HVAC	MISC.	KITCH.	TOTAL	
	2.4	0.0	0.0	2.6	0.0	5.0	KVA (CONNECTED)
RECPS - 100% FIRST 10 KVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	100%	112%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	3.0	0.0	0.0	2.6	0.0	5.6	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)						**7**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION HP8 (SECTION 1) | BUS AMP 225A | MIN. A.I.C. 14,000 | MAIN BREAKER 175A
LOCATION ELEC. 319 | PHASE 3 | WIRE 4 | VOLTAGE 480Y/277
MOUNTING SURFACE | NOTES:
TOTAL POLES 42

0	0	0	SECTION 2 TOTAL KW LOAD

CKT NO	DESCRIPTION	BREAKER AMP	BREAKER POLES	LOAD (KW) A	LOAD (KW) B	LOAD (KW) C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE
1	GSHP B3-1	15	3	1.7			4	10	10	3/4
3	----------				1.7					
5	----------					1.7				
7	GSHP B3-5	15	1	2.9			2	10	10	3/4
9	GSHP B3-7	15	3		1.2		4	12	12	3/4
11	----------					1.2				
13	----------			1.2						
15	GSHP B3-11	15	1		2.4		2	12	12	3/4
17	GSHP B3-13	15	1			2.9	2	12	12	3/4
19	GSHP C3-1	15	3	1.7			4	12	12	3/4
21	----------				1.7					
23	----------					1.7				
25	GSHP C3-3	15	3	1.7			4	12	12	3/4
27	----------				1.7					
29	----------					1.7				
31	GSHP C3-5	15	3	2.7			4	10	10	3/4
33	----------				2.7					
35	----------					2.7				
37	CUH B3-1	15	1	2.0			2	10	10	3/4
39	CUH B3-2	15	1		2.0		2	12	12	3/4
41	CUH B3-3	15	1			2.0	2	12	12	3/4
	SIDE TOTAL KW LOAD			14	13	14				

COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	LOAD (KW) B	LOAD (KW) C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
3/4	10	10	2	2.9			1	15	GSHP B3-2	2
3/4	10	10	2		2.9		1	15	GSHP B3-3	4
3/4	10	10	2			2.9	1	15	GSHP B3-4	6
3/4	10	10	2	2.9			1	15	GSHP B3-6	8
3/4	12	12	2		2.9		1	15	GSHP B3-8	10
3/4	12	12	2			2.9	1	15	GSHP B3-9	12
3/4	12	12	2	2.9			1	15	GSHP B3-10	14
3/4	12	12	2		1.8		1	15	GSHP B3-12	16
3/4	12	12	4			1.7	3	15	GSHP C3-2	18
				1.7					----------	20
					1.7				----------	22
3/4	12	12	4			1.7	3	15	GSHP C3-4	24
				1.7					----------	26
					1.7				----------	28
3/4	10	10	4			1.7	3	15	GSHP C3-6	30
				1.7					----------	32
					1.7				----------	34
3/4	10	10	4			1.2	3	15	GSHP C3-7	36
				1.2					----------	38
					1.2				----------	40
3/4	10	10	2			3.0	1	15	CUH C3-1	42
				15	14	15			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **HP8**

	LTS.	RECPS.	HVAC	MISC.	KITCH.	TOTAL	
	0.0	0.0	85.6	0.0	0.0	85.6	KVA (CONNECTED)
RECPS - 100% FIRST 10 KVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	100%	100%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	0.0	0.0	85.6	0.0	0.0	85.6	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)						**103**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION HP7 (SECTION 2) | BUS AMP 400A | MIN. A.I.C. 35,000 | MAIN BREAKER MLO
LOCATION ELEC. 218 | PHASE 3 | WIRE 4 | VOLTAGE 480Y/277
MOUNTING SURFACE | NOTES:
TOTAL POLES 18

CKT NO	DESCRIPTION	BREAKER AMP	BREAKER POLES	LOAD (KW) A	LOAD (KW) B	LOAD (KW) C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE
43	SPARE	15	1	0.0						
45	SPARE	15	1		0.0					
47	SPACE - PFFB		1			0.0				
49	SPACE - PFFB		1	0.0						
51	SPACE - PFFB		1		0.0					
53	SPACE - PFFB		1			0.0				
55	PANEL 'HP8'	175	3	0.0			4	2/0	6	2
57	----------				0.0					
59	----------					0.0				
61				0						
63					0					
65						0				
67				0						
69					0					
71						0				
73				0						
75					0					
77						0				
79				0						
81					0					
83						0				
	SIDE TOTAL KW LOAD			0	0	0				

COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	LOAD (KW) B	LOAD (KW) C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
				0.0			1	15	SPARE	44
					0.0		1	15	SPARE	46
						0.0	1		SPACE - PFFB	48
				0.0			1		SPACE - PFFB	50
					0.0		1		SPACE - PFFB	52
						0.0	1		SPACE - PFFB	54
				0.0			1		SPACE - PFFB	56
					0.0		1		SPACE - PFFB	58
						0.0	1		SPACE - PFFB	60
				0						62
					0					64
						0				66
				0						68
					0					70
						0				72
				0						74
					0					76
						0				78
				0						80
					0					82
						0				84
				0	0	0			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **HP7**

	LTS.	RECPS.	HVAC	MISC.	KITCH.	TOTAL	
	0.0	0.0	158.4	0.0	0.0	158.4	KVA (CONNECTED)
RECPS - 100% FIRST 10 KVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	100%	100%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	0.0	0.0	158.4	0.0	0.0	158.4	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)						**191**	AMPS (DEMAND)

NOTES:

PANEL DESIGNATION ELSRP7 | BUS AMP 100A | MIN. A.I.C. 10,000 | MAIN BREAKER 100A
LOCATION ELEC. 218 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES:
TOTAL POLES 18

CKT NO	DESCRIPTION	BREAKER AMP	BREAKER POLES	LOAD (KW) A	LOAD (KW) B	LOAD (KW) C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE
1	FIRE ALARM PANEL 218	20	1	0.5			2	12	12	3/4
3	GAS ACTUATOR 220,233	20	1		0.2		2	12	12	3/4
5	FIRE ALARM PANEL 319	20	1			0.5	2	12	12	3/4
7	SPARE	20	1	0.0						
9	SPARE	20	1		0.0					
11	SPARE	20	1			0.0				
13	SPARE	20	1	0.0						
15	SPACE - PFFB		1		0.0					
17	SPACE - PFFB		1			0.0				
19				0						
21					0					
23						0				
25				0						
27					0					
29						0				
31				0						
33					0					
35						0				
37				0						
39					0					
41						0				
	SIDE TOTAL KW LOAD			1	0	1				

COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	LOAD (KW) B	LOAD (KW) C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
3/4	12	12	2	0.2			1	20	GAS ACTUATOR 201A, 202A	2
3/4	12	12	2		0.2		1	20	GAS ACTUATOR 301	4
3/4	12	12	2			1.0	1	20	MAG. HOLDS - STAIR B2, B3	6
				0.0			1	20	SPARE	8
					0.0		1	20	SPARE	10
						0.0	1	20	SPARE	12
				0.0			1	20	SPARE	14
					0.0		1		SPACE - PFFB	16
						0.0	1		SPACE - PFFB	18
				0						20
					0					22
						0				24
				0						26
					0					28
						0				30
				0						32
					0					34
						0				36
				0						38
					0					40
						0				42
				0	0	1			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **ELSRP7**

	LTS.	RECPS.	HVAC	MISC.	KITCH.	TOTAL	
	0.0	0.0	0.0	2.6	0.0	2.6	KVA (CONNECTED)
RECPS - 100% FIRST 10 KVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	100%	100%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	0.0	0.0	0.0	2.6	0.0	2.6	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)						**7**	AMPS (DEMAND)

NOTES:

PANEL SCHEDULES

HP7-1 HP7-2
ELSLP7 ELSRP7
HP8-1 HP8-2

JRS ARCHITECTS
2010 Clipper Park Rd.
Suite 101
Baltimore, MD 21211
410.235.7256

ASSOCIATE ARCHITECT
SCHRADER GROUP ARCHITECTURE LLC
161 LEVERINGTON AVE, SUITE 105
PHILADELPHIA, PA 19127

LANDSCAPE ARCHITECT
MAHAN RYKIEL ASSOCIATES
800 WYMAN PARK DR, SUITE 100
BALTIMORE, MD 21211

CIVIL ENGINEER
STV, INC.
7125 AMBASSADOR RD, SUITE 200
BALTIMORE, MD 21244

STRUCTURAL ENGINEER
ALBRECHT ENGINEERING
3500 BOSTON ST, SUITE 329
BALTIMORE, MD 21224

MEP ENGINEER
BRINJAC ENGINEERING
1800 N. CHARLES ST, SUITE 310
BALTIMORE, MD 21201

FOOD SERVICE
NYIKOS ASSOCIATES
18219A FLOWER HILL WAY
GAITHERSBURG, MD 20879

AVIT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD, SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056

1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
ELECTRICAL PANEL SCHEDULES

E 607

JOSHUA PELLICCIA 7/26/2016 7:50 AM L:\PROJ\JRS ARCHITECTS, INC\MPS\15-04\26.00-RCPS-ROBERT POOLE RENOVATION ADDITION\E_DRAWINGS\MEP\LE607-15.00A26.00.DWG

PANEL DESIGNATION CP8 | BUS AMP 225A | MIN. A.I.C. 10,000 | MAIN BREAKER 150A
LOCATION ELEC. 319 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES: 200% NEUTRAL
TOTAL POLES 42

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	B	C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
1	RECPS.-313	20	1	1.1			2	10	10	3/4	3/4	12	12	2	1.1			1	20	RECPS.-315	2
3	RECPS.-311	20	1		1.1		2	10	10	3/4	3/4	12	12	2		1.1		1	20	RECPS.-314	4
5	RECPS.-312	20	1			1.1	2	12	12	3/4	3/4	10	10	2			1.1	1	20	RECPS.-303	6
7	RECPS.-305	20	1	1.1			2	10	10	3/4	3/4	10	10	2	1.1			1	20	RECPS.-302	8
9	RECPS.-304	20	1		1.1		2	10	10	3/4	3/4	10	10	2		1.1		1	20	RECPS.-306	10
11	RECPS.-301A	20	1			1.1	2	10	10	3/4	3/4	12	12	2			0.4	1	20	RECPS.-301	12
13	RECPS.-321	20	1	0.4			2	12	12	3/4	3/4	12	12	2	1.1			1	20	RECPS.-327	14
15	RECPS.-328	20	1		1.1		2	12	12	3/4	3/4	10	10	2		1.1		1	20	RECPS.-329	16
17	RECPS.-330	20	1			1.1	2	10	10	3/4	3/4	12	12	2			0.7	1	20	RECPS.-A/V-311,313	18
19	RECPS.-A/V-301A,302	20	1	0.7			2	10	10	3/4	3/4	10	10	2	0.4			1	20	RECPS.-A/V-304	20
21	RECPS.-A/V-305,306	20	1		0.7		2	10	10	3/4	3/4	10	10	2		0.7		1	20	RECPS.-A/V-301,303	22
23	RECPS.-A/V-312,314	20	1			0.7	2	12	12	3/4	3/4	12	12	2			0.7	1	20	RECPS.-A/V-315,321	24
25	RECPS.-A/V-327,328	20	1	0.7			2	12	12	3/4	3/4	12	12	2	0.7			1	20	RECPS.-A/V-329,330	26
27	SPARE	20	1		0.0											0.0		1	20	SPARE	28
29	SPARE	20	1			0.0											0.0	1	20	SPARE	30
31	SPARE	20	1	0.0											0.0			1	20	SPARE	32
33	SPARE	20	1		0.0											0.0		1	20	SPARE	34
35	SPARE	20	1			0.0											0.0	1	20	SPARE	36
37	SPARE	20	1	0.0											0.0			1	20	SPARE	38
39	SPARE	20	1		0.0											0.0		1	20	SPARE	40
41	SPARE	20	1			0.0											0.0	1	20	SPARE	42
	SIDE TOTAL KW LOAD			4	4	4									4	4	3			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **CP8**

NOTES:	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.0	23.0	0.0	0.0	0.0	0.0	23.0	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	72%	100%	100%	100%	0%	72%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	0.0	16.5	0.0	0.0	0.0	0.0	16.5	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**46**	AMPS (DEMAND)

PANEL DESIGNATION LP8 | BUS AMP 225A | MIN. A.I.C. 14,000 | MAIN BREAKER 125A
LOCATION ELEC. 319 | PHASE 3 | WIRE 4 | VOLTAGE 480Y/277
MOUNTING SURFACE | NOTES:
TOTAL POLES 42

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	B	C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
1	LIGHTS - SECOND FLR. CORR.	20	1	0.7			2	10	10	3/4	3/4	10	10	2	3.6			1	20	LIGHTS - SECOND FLR.	2
3	LIGHTS - SECOND FLR.	20	1		3.8		2	10	10	3/4	3/4	10	10	2		2.4		1	20	LIGHTS - SECOND FLR.	4
5	LIGHTS - SECOND FLR.	20	1			2.4	2	10	10	3/4	3/4	10	10	2			0.5	1	20	LIGHTS - SECOND FLR. CORR.	6
7	LIGHTS - SECOND FLR.	20	1	2.2			2	10	10	3/4	3/4	10	10	2	2.7			1	20	LIGHTS - SECOND FLR.	8
9	LIGHTS - SECOND FLR.	20	1		1.5		2	10	10	3/4	3/4	10	10	2		1.1		1	20	LIGHTS - THIRD FLR. CORR.	10
11	LIGHTS - THIRD FLR.	20	1			2.7	2	10	10	3/4	3/4	10	10	2			2.5	1	20	LIGHTS - THIRD FLR.	12
13	LIGHTS - THIRD FLR.	20	1	2.3			2	10	10	3/4	3/4	10	10	2	2.2			1	20	LIGHTS - THIRD FLR.	14
15	LIGHTS - THIRD FLR. CORR.	20	1		0.4		2	10	10	3/4	3/4	10	10	2		2.5		1	20	LIGHTS - THIRD FLR.	16
17	LIGHTS - THIRD FLR.	20	1			2.1	2	10	10	3/4	3/4	10	10	2			1.9	1	20	LIGHTS - THIRD FLR.	18
19	LIGHTS - EXTERIOR - CUPOLA	20	1	0.6			2	10	10	3/4								1	20	SPARE	20
21	SPARE	20	1		0.0											0.0		1	20	SPARE	22
23	SPARE	20	1			0.0											0.0	1	20	SPARE	24
25	SPARE	20	1	0.0												0.0		1	20	SPARE	26
27	SPARE	20	1		0.0												0.0	1	20	SPARE	28
29	SPARE	20	1			0.0												1	20	SPARE	30
31	SPACE - PFFB		1	0.0												0.0		1		SPACE - PFFB	32
33	SPACE - PFFB		1		0.0												0.0	1		SPACE - PFFB	34
35	SPACE - PFFB		1			0.0												1		SPACE - PFFB	36
37	SPACE - PFFB		1	0.0												0.0		1		SPACE - PFFB	38
39	SPACE - PFFB		1		0.0												0.0	1		SPACE - PFFB	40
41	SPACE - PFFB		1			0.0												1		SPACE - PFFB	42
	SIDE TOTAL KW LOAD			6	6	7									8	6	5			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **LP8**

NOTES:	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	37.9	0.0	0.0	0.0	0.0	0.0	37.9	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	100%	100%	100%	100%	0%	125%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	47.4	0.0	0.0	0.0	0.0	0.0	47.4	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**57**	AMPS (DEMAND)

PANEL DESIGNATION RP8 (SECTION 1) | BUS AMP 225A | MIN. A.I.C. 10,000 | MAIN BREAKER 225A
LOCATION ELEC. 319 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES: *-PROVIDE GFCI CIRCUIT BREAKER
TOTAL POLES 42

10	9	11	SECTION 2 TOTAL KW LOAD

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	B	C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
1	RECPS.-313 (CONTROLLED)	20	1	0.7			2	12	12	3/4	3/4	12	12	2	1.1			1	20	RECPS.-313	2
3	RECPS.-311 (CONTROLLED)	20	1		0.7		2	12	12	3/4	3/4	12	12	2		1.1		1	20	RECPS.-311	4
5	RECPS.-315 (CONTROLLED)	20	1			0.9	2	12	12	3/4	3/4	12	12	2			0.9	1	20	RECPS.-315	6
7	RECPS.-314 (CONTROLLED)	20	1	0.7			2	12	12	3/4	3/4	12	12	2	1.1			1	20	RECPS.-314	8
9	RECPS.-312 (CONTROLLED)	20	1		0.7		2	12	12	3/4	3/4	12	12	2		1.3		1	20	RECPS.-312	10
11	RECPS.-303 (CONTROLLED)	20	1			0.7	2	10	10	3/4	3/4	10	10	2			1.3	1	20	RECPS.-303	12
13	RECPS.-305 (CONTROLLED)	20	1	0.7			2	10	10	3/4	3/4	10	10	2	1.3			1	20	RECPS.-305	14
15	RECPS.-302 (CONTROLLED)	20	1		0.7		2	10	10	3/4	3/4	10	10	2		1.1		1	20	RECPS.-302	16
17	RECPS.-304 (CONTROLLED)	20	1			0.7	2	10	10	3/4	3/4	10	10	2			1.1	1	20	RECPS.-304	18
19	RECPS.-309	20	1	0.9			2	8	8	3/4	3/4	8	8	2	0.9			1	20	RECPS.-307, 309A	20
21	RECPS.-ROOF	20	1		0.4		2	10	10	3/4	3/4	8	8	2		0.9		1	20	RECPS.-307	22
23	RECPS.-308	20	1			0.7	2	12	12	3/4	3/4	10	10	3			0.5	2	20	RECP.-COPIER 309A	24
25	RECP.-C.O.W. 310	20	1	0.2			2	12	12	3/4					0.5					----------	26
27	RECPS.-306	20	1		0.9		2	8	8	3/4	3/4	8	8	2		0.7		1	20	RECPS.-306 (CONTROLLED)	28
29	ELECTRIC WATER COOLER-*	20	1			0.5	2	10	10	3/4	3/4	10	10	2			0.9	1	20	RECPS.-CORRIDOR	30
31	RECPS.-301A	20	1	1.1			2	10	10	3/4	3/4	10	10	2	0.7			1	20	RECPS.-301A (CONTROLLED)	32
33	RECPS.-301	20	1		0.7		2	10	10	3/4	3/4	10	10	2		0.7		1	20	RECPS.-301	34
35	RECPS.-301	20	1			1.3	2	10	10	3/4	3/4	10	10	2			0.7	1	20	RECPS.-301	36
37	RECPS.-301 (CONTROLLED)	20	1	0.9			2	10	10	3/4	3/4	12	12	2	1.1			1	20	RECPS.-321	38
39	RECPS.-321	20	1		0.9		2	12	12	3/4	3/4	12	12	2		0.7		1	20	RECPS.-321 (CONTROLLED)	40
41	RECPS.-322	20	1			0.7	2	12	12	3/4	3/4	12	12	2			0.9	1	20	RECPS.-323A, 324	42
	SIDE TOTAL KW LOAD			5	5	6									7	6	6			SIDE TOTAL KW LOAD	

PANEL DESIGNATION RP8 (SECTION 2) | BUS AMP 225A | MIN. A.I.C. 10,000 | MAIN BREAKER MLO
LOCATION ELEC. 319 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES:
TOTAL POLES 42

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	B	C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
43	RECP.-C.O.W. 323A	20	1	0.2			2	12	12	3/4	3/4	12	12	2	0.9			1	20	RECPS.-323	44
45	RECP.-COPIER 323	20	2		0.5		3	12	12	3/4	3/4	12	12	2		1.3		1	20	RECPS.-327	46
47	----------					0.5					3/4	12	12	2			0.7	1	20	RECPS.-327 (CONTROLLED)	48
49	RECPS.-328	20	1	1.4			2	10	10	3/4	3/4	10	10	2	0.9			1	20	RECPS.-328 (CONTROLLED)	50
51	RECPS.-327A, 328A	20	1		1.1		2	12	12	3/4	1 1/4	10	4	3		5.0		2	60	RECP.-KILN 327A	52
53	RECP. - KILN VENT 327A	20	1			0.5	2	12	12	3/4							5.0			----------	54
55	SPARE	20	1	0.0							3/4	10	10	2	1.1			1	20	RECPS.-329	56
57	RECPS.-329 (CONTROLLED)	20	1		0.7		2	10	10	3/4	3/4	10	10	2		0.9		1	20	RECPS.-330	58
59	RECPS.-330 (CONTROLLED)	20	1			0.7	2	10	10	3/4	3/4	10	10	2			0.4	1	20	RECPS.-329A	60
61	ELECTRIC WATER COOLER-*	20	1	0.5			2	10	10	3/4	3/4	10	10	2	0.7			1	20	RECPS.-CORRIDOR	62
63	RECPS.-326	20	1		0.5		2	12	12	3/4	3/4	12	12	2		0.4		1	20	RECPS.-ROOF	64
65	RECPS.-ROOF	20	1			0.4	2	12	12	3/4	3/4	12	12	2			0.7	1	15	EF-4 - KILN	66
67	RECP.-319	20	1	0.2			2	12	12	3/4	3/4	12	12	2	1.1			1	20	RECPS.-326	68
69	WATER METER ANTENNAE	20	1		0.2		2	10	10	3/4	3/4	12	12	2		1.1		1	20	RECPS.-(FLOORBOXES) 301	70
71	RECPS.-(FLOORBOXES) 301	20	1			1.1	2	12	12	3/4	3/4	12	12	2			1.4	1	20	RECPS.-(FLOORBOXES) 321	72
73	RECPS.-(FLOORBOXES) 321	20	1	1.1			2	12	12	3/4	3/4	10	10	2	0.4			1	20	TRACK LIGHTS 327	74
75	TRACK LIGHTS 328	20	1		0.7		2	10	10	3/4	1 1/4	8	4	4		5.8		3	70	KILN - 327A	76
77	SPARE	20	1			0.0											5.8			----------	78
79	SPARE	20	1	0.0												5.8				----------	80
81	SPARE	20	1		0.0												0.0	1	20	SPARE	82
83	SPARE	20	1			0.0											0.0	1	20	SPARE	84
	SIDE TOTAL KW LOAD			3	4	3									11	14	14			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **RP8**

NOTES:	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	1.1	51.8	0.7	30.0	0.0	1.0	84.6	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	60%	100%	100%	100%	0%	74%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	1.4	30.9	0.7	30.0	0.0	0.0	63.0	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**175**	AMPS (DEMAND)

PANEL DESIGNATION ESBRP8 (SECTION 1) | BUS AMP 225A | MIN. A.I.C. 10,000 | MAIN BREAKER 150A
LOCATION ELEC. 319 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES:
TOTAL POLES 42

0	0	0	SECTION 2 TOTAL KW LOAD

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	B	C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
1	RECP.-219 (IDF)	30	1	2.9			2	10	10	3/4	3/4	10	10	2	2.9			1	30	RECP.-219 (IDF)	2
3	RECP.-219 (IDF)	30	1		2.9		2	10	10	3/4	3/4	12	12	2		0.5		1	20	RECPS.-219 (IDF)	4
5	RECPS.-219 (IDF)	20	1			0.5	2	12	12	3/4	3/4	12	12	2			0.2	1	20	ACCESS CONTROL 219	6
7	SECURITY 219	20	1	0.2			2	12	12	3/4	3/4	10	10	2	2.9			1	30	RECP.-320 (IDF)	8
9	RECP.-320 (IDF)	30	1		2.9		2	10	10	3/4	3/4	10	10	2		2.9		1	30	RECP.-320 (IDF)	10
11	RECPS.-320 (IDF)	20	1			0.5	2	12	12	3/4	3/4	12	12	2			0.5	1	20	RECPS.-320 (IDF)	12
13	ACCESS CONTROL 320	20	1	0.2			2	12	12	3/4	3/4	12	12	2	0.2			1	20	SECURITY 320	14
15	SS-5	15	2		0.1		3	12	12	3/4	3/4	12	12	3		0.1		2	15	SS-6	16
17	----------					0.1											0.1			----------	18
19	CU-3	15	2	0.9			3	10	10	3/4	3/4	10	10	3	0.9			2	15	CU-4	20
21	----------				0.9											0.9				----------	22
23	CU-5	15	2			0.9	3	10	10	3/4	3/4	10	10	3			0.9	2	15	CU-6	24
25	----------			0.9											0.9					----------	26
27	CU-8	15	2		0.9		3	10	10	3/4						0.0		1	20	SPARE	28
29	----------					0.9											0.0	1	20	SPARE	30
31	MAU-1/EF-1	25	3	2.4			4	10	10	3/4	0.0							1	20	SPARE	32
33	----------				2.4											0.0		1	20	SPARE	34
35	----------					2.4											0.0	1	20	SPARE	36
37	KITCHEN COOLER	20	3	0.9			4	10	10	3/4	3/4	8	4	2.5				3	30	KITCHEN FREEZER	38
39	----------				0.9										2.5					----------	40
41	----------					0.9											2.5			----------	42
	SIDE TOTAL KW LOAD			8	11	6									10	7	4			SIDE TOTAL KW LOAD	

PANEL DESIGNATION ESBRP8 (SECTION 2) | BUS AMP 225A | MIN. A.I.C. 10,000 | MAIN BREAKER MLO
LOCATION ELEC. 319 | PHASE 3 | WIRE 4 | VOLTAGE 208Y/120
MOUNTING SURFACE | NOTES:
TOTAL POLES 18

CKT NO	DESCRIPTION	BREAKER AMP	POLES	LOAD (KW) A	B	C	WIRE NO	WIRE SIZE	GND. SIZE	COND SIZE	COND SIZE	GND. SIZE	WIRE SIZE	WIRE NO	LOAD (KW) A	B	C	BREAKER POLES	BREAKER AMP	DESCRIPTION	CKT NO
43	SPARE	20	1	0.0											0.0			1	20	SPARE	44
45	SPARE	20	1		0.0											0.0		1	20	SPARE	46
47	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	48
49	SPACE - PFFB		1	0.0											0.0			1		SPACE - PFFB	50
51	SPACE - PFFB		1		0.0											0.0		1		SPACE - PFFB	52
53	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	54
55	SPACE - PFFB		1	0.0												0.0		1		SPACE - PFFB	56
57	SPACE - PFFB		1		0.0												0.0	1		SPACE - PFFB	58
59	SPACE - PFFB		1			0.0											0.0	1		SPACE - PFFB	60
61				0											0						62
63					0											0					64
65						0											0				66
67				0											0						68
69					0											0					70
71						0											0				72
73				0											0						74
75					0											0					76
77						0											0				78
79				0											0						80
81					0											0					82
83						0											0				84
	SIDE TOTAL KW LOAD			0	0	0									0	0	0			SIDE TOTAL KW LOAD	

NEC LOAD SUMMARY PANEL **ESBRP8**

NOTES:	LTS.	RECPS.	HVAC	MISC.	KITCH.		TOTAL	
	0.0	19.4	24.6	0.8	2.7	0.0	47.5	KVA (CONNECTED)
RECPS - 100% FIRST 10 kVA, 50% REMAINING (NEC 220.44)	125%	76%	100%	100%	100%	0%	90%	DEMAND FACTOR
KITCH. - BETWEEN 100% & 65% (NEC 220.56)	0.0	14.7	24.6	0.8	2.7	0.0	42.8	KVA (DEMAND)
NON-COINCIDENTAL - 0% (NEC 220.60)							**119**	AMPS (DEMAND)

PANEL SCHEDULES

CP8 LP8
RP8-1 RP8-2
ESBRP8-1 ESBRP8-2

JRS ARCHITECTS
2010 Clipper Park Rd.
Suite 101
Baltimore, MD 21211
410.235.7256

ASSOCIATE ARCHITECT
SCHRADER GROUP ARCHITECTURE LLC
161 LEVERINGTON AVE, SUITE 105
PHILADELPHIA, PA 19127

LANDSCAPE ARCHITECT
MAHAN RYKIEL ASSOCIATES
800 WYMAN PARK DR, SUITE 100
BALTIMORE, MD 21211

CIVIL ENGINEER
STV, INC.
7125 AMBASSADOR RD, SUITE 200
BALTIMORE, MD 21244

STRUCTURAL ENGINEER
ALBRECHT ENGINEERING
3500 BOSTON ST, SUITE 329
BALTIMORE, MD 21224

MEP ENGINEER
BRINJAC ENGINEERING
1800 N. CHARLES ST, SUITE 310
BALTIMORE, MD 21201

FOOD SERVICE
NYIKOS ASSOCIATES
18219A FLOWER HILL WAY
GAITHERSBURG, MD 20879

AVIT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD, SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056

1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 16094
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2
2	04/27/16	ADDENDUM #3
3	04/29/16	ADDENDUM #4

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
ELECTRICAL PANEL SCHEDULES

E 608

JOSHUA PELLICCIA 7/26/2016 7:50 AM L:\PROJ\JRS_ARCHITECTS, INC\MPS.15.09A36.00--RKPS--ROBERT POOLE RENOVATION ADDITION\E_DRAWINGS\ENG\E_CADD\A_DRAWINGS\MEP\E608--15.09A36.00.DWG

LIGHTING CONTROL/SWITCHING SCHEDULE

ROOM DESIGNATION	SWITCH TYPE(S)/CONTROL	SWITCH TYPE(S)/CONTROL DESCRIPTION	CONTROL UNIT(S)/ZONE(S)	CONTROL UNIT(S)/ZONE(S) DESCRIPTION
Typical Classroom 003, 004, 007, 012, 013, 014 018, 020, 044, 046, 106, 106B 122, 123, 124, 201A, 202A, 203 204A, 204B, 205, 206, 207, 208 209, 210, 211, 212, 213, 214 220, 228, 229, 230, 233, 301 301A, 302, 303, 304, 305, 306 311, 312, 313, 314, 315, 321 327, 328, 329, 330, ,	5-Button LV (teacher) 1-100%, 2-50%, 3-AV1, 4-AV2, 5-OFF 3-Button LV (entry) 1-100%, 2-50%, 3-OFF Occupancy Sensor Vacancy mode - Auto Off/Manual ON 10 minute unoccupied period shut-off Daylighting Sensor Continuous dimming Target lighting level at 100% 40 FC	100% All Lights at 100% 50% All Lights at 50% AV1 Front of Room (Teaching Wall) Lights OFF Back of Room Lights at 50% AV2 Front of Room (Teaching Wall) Lights OFF Back of Room Lights at 100% OFF All Lights OFF	4-Zone Control Panel Zone 1 - Window Wall, Back of Room Zone 2 - Interior Wall, Back of Room Zone 3 - Window Wall, Front of Room Zone 4 - Interior Wall, Front of Room Note: Confirm Daylighting zones with room layout. Rooms without daylighting controls shall have two zones, Front of Room & Back of Room. Note: NE lighting shall be controlled with local circuit via GTD.	Zone 1 Occupancy Sensor (Vacancy Mode) Daylighting Sensor (Continuous Dimming) Zone 2 Occupancy Sensor (Vacancy Mode) Zone 3 Occupancy Sensor (Vacancy Mode) Daylighting Sensor (Continuous Dimming) Zone 4 Occupancy Sensor (Vacancy Mode)
Typical Classroom (Receptacle Control) See List Above	Occupancy Sensor Occupancy mode - Auto OFF/Auto ON	N/A	4-Zone Control Panel Zone 1 - Classroom A Receptacles/UC Lights Zone 2 - Classroom B Receptacles/UC Lights Zone 3 - Classroom C Receptacles/UC Lights Zone 4 - Classroom D Receptacles/UC Lights	Zone 1 Occupancy Sensor Classroom A Zone 2 Occupancy Sensor Classroom B Zone 3 Occupancy Sensor Classroom C Zone 4 Occupancy Sensor Classroom D
Typical Office 002, 002A, 002B, 002C, 005, 030 040, 043, 101B, 101C, 101D, 101E 101G, 101L, 102A, 102C, 102E, 102F 102G, 102K, 103A, 103B, 103C, 103D 103F, 103H, 103L, 104A, 104F, 105D 107A, 107B, 107C, 107D, 107E, 107F 107G, 109, 109B, 142, 142C, 142H 142J, 142K, 149, 153B, 154B, 202D 209A, 223, 226, 227, 309, 324	3-Button LV (entry) 1-100%, 2-50%, 3-OFF Occupany Sensor Vacancy mode - Auto OFF/Manual ON 10 minute unoccupied period shut-off Target lighting level at 100% 30 FC 50 FC (103F, 103H, 142J, 142K) 20 FC (103A, 109, 142H) 10 FC (103C, 103D)	100% All Lights at 100% 50% All Lights at 50% OFF All Lights OFF	4-Zone Control Panel Shared as required for multiple rooms Note: NE lighting shall be controlled with local circuit via GTD ro GTD-20A (large rooms)	N/A
Typical Office (With Daylighting) 006, 015, 041, 101A, 101H, 102H 104E, 221, 224, 307, 308, 323	3-Button LV (entry) 1-100%, 2-50%, 3-OFF Occupany Sensor Vacancy mode - Auto OFF/Manual ON 10 minute unoccupied period shut-off Daylighting Sensor Continuous dimming Target lighting level at 100% 30 FC	100% All Lights at 100% 50% All Lights at 50% OFF All Lights OFF	4-Zone Control Panel Shared as required for multiple rooms Note: NE lighting shall be controlled with local circuit via GTD ro GTD-20A (large rooms)	Zone 1 Occupancy Sensor (Vacancy Mode) Daylighting Sensor (Continuous Dimming) Zone 2 Occupancy Sensor (Vacancy Mode) Note: Refer to drawings for daylighting zone. Where no zone is shown, the entire room is Zone 1 and there is no zone 2 required.
Restrooms 008, 019D, 050, 052, 103G, 103K 109C, 125, 126, 143, 144, 215	Occupancy Sensor Occupancy mode - Auto OFF/Auto ON 15 minute unoccupied period shut-off Target lighting level at 100% 5 FC 15 FC (at vanity)	Switch Type Occupancy Sensor Use Switch Type OS where shown on plans	N/A	N/A
Corridors, Lobbies 001A, 001B, 001D, 001E, 001F, 001G 001H, 001K, 100A, 100B, 100C, 100D 100F, 100G, 100H, 100J, 100K, 101J 104, 105B, 106A, 107, 110, 120 120A, 121A, 200A, 200B, 200C, 200D 200F, 200G, 300B, 300D, 300E, 300F 326, , , , ,	Occupancy Sensor (Normal Lighting) Occupancy mode - Auto OFF/Auto ON 30 minute unoccupied period shut-off Timeclock (Emergency Lighting) School OPEN (Lights on 100%) School CLOSED (Lights OFF) Target lighting level at 100% 10 FC	N/A	HUB Control Panel (Shared Unit) Zone 1 - Corridor Emergency Lighting Zone 2 - Corridor Normal Lighting	Zone 1 Timeclock 6A-6P(Confirm hours with Owner) Provide GTD-20A emergency bypass for emergency circuit in each corridor space.
Stairs SA1-0, SA1-1, SA1-2, SA2-0, SA2-1, SB1-0 SB1-1, SB1-2, SB1-3, SB2-0, SB2-1, SB2-2 SB2-3, SB3-0, SB3-1, SB3-2, SB3-3, SC1-1 SC1-2, SC1-3, , , ,	Occupancy Sensor Occupancy mode - Auto OFF/Auto ON 10 minute unoccupied period shut-off Target lighting level at 100% 10 FC	N/A	HUB Control Panel (Shared Unit) Zone 3 - Stair Lighting	Zone 2 Occupied - Lights at 100% Unoccupied - Lights at 50% Provide GTD-20A emergency bypass for emergency circuit in each stairwell.
Storage Rooms Telecom Rooms Similar Spaces 016, 019B, 019C, 023, 024, 027 028, 029, 031, 042, 045, 047 049, 049A, 051, 100M, 101F, 101N 102B, 102C, 103J, 104B, 104D, 105C 107H, 107J, 109A, 113, 114, 115A 115B, 116, 121B, 122A, 123A, 124A 140, 142A, 142B, 142D, 142E, 145 146, 147, 148, 148A, 148B, 148C 150, 151, 152, 153A, 153C, 153D 153E, 153F, 154A, 154C, 154D, 154E 154F, 201B, 201C, 202B, 202C, 207A 216, 219, 220A, 221A, 222, 225 231A, 233A, 310, 317, 320, 321A 322, 323A, 325, 327A, 328A, 329A ,	Occupancy Sensor Vacancy mode - Auto OFF/Manual ON 10 minute unoccupied period shut-off Target lighting level at 100% 20 FC 30 FC (031, 146) 5 FC (023, 150, 151, 153A, 154A) 10 FC (Janitors Closets, Closets, Storage) 10 FC (Shower Rooms)	Switch Type Occupancy Sensor Use Switch Type OS where shown on plans Switch Type - Single Toggle Use low-voltage momentary contact switch where ceiling sensors are shown.	N/A	N/A
Media Center 105A	7-Button LV (main desk) 1-100%, 2-50%, 3-AV1, 4-AV2, 5-AV3, 6-AV4, 7-OFF 3-Button LV (entry) 1-100%, 2-50%, 3-OFF 3-Button LV (Zone 3) 1-100%, 2-50%, 3-OFF 3-Button LV (Zone 4) 1-100%, 2-50%, 3-OFF Occupany Sensor Vacancy mode - Auto Off/Manual ON 10 minute unoccupied period shut-off Daylighting Sensor Continuous dimming Target lighting level at 100% 50 FC (Circulation Desk) 40 FC (Reading/Learning Area) 30 FC (Stacks, Computer Area) 10 FC (General Circulation)	100% All Lights at 100% 50% All Lights at 50% AV1 All Lights in Zone 1,2 & 4 at 100% All Lights in Zone 3 OFF AV2 All Lights in Zone 1,2 & 3 at 100% All Lights in Zone 4 OFF AV3 All Lights in Zone 1,2 at 100% All Lights in Zone 3,4 OFF AV4 All Lights in Zone 1,2 at 50% All Lights in Zone 3,4 OFF OFF All Lights OFF	4-Zone Control Panel Zone 1 - Window Wall Zone 2 - Room Interior Zone 3 - AV area 1 Zone 4 - AV area 2 Note: Confirm Daylighting zones with room layout	Zone 1 Occupancy Sensor (Vacancy Mode) Daylighting Sensor (Continuous Dimming) Zone 2 Occupancy Sensor (Vacancy Mode) Zone 3 Occupancy Sensor (Vacancy Mode) Zone 4 Occupancy Sensor (Vacancy Mode)

LIGHTING CONTROL/SWITCHING SCHEDULE

ROOM DESIGNATION	SWITCH TYPE(S)/CONTROL	SWITCH TYPE(S)/CONTROL DESCRIPTION	CONTROL UNIT(S)/ZONE(S)	CONTROL UNIT(S)/ZONE(S) DESCRIPTION
CTE Flex Space 121C	5-Button LV (teacher) 1-100%, 2-50%, 3-AV1, 4-AV2, 5-OFF 3-Button LV (entry) 1-100%, 2-50%, 3-OFF Occupany Sensor Vacancy mode - Auto Off/Manual ON 10 minute unoccupied period shut-off Daylighting Sensor Continuous dimming Target lighting level at 100% 40 FC	100% All Lights at 100% 50% All Lights at 50% AV1 Front of Room (Teaching Wall) Lights OFF Back of Room Lights at 50% AV2 Front of Room (Teaching Wall) Lights OFF Back of Room Lights at 100% OFF All Lights OFF	4-Zone Control Panel Zone 1 - Front of Room (5 type PJ-109) Zone 2 - Back of Room (Remaining PJ-109) Zone 3 - All type WG-141	Zone 1 Occupancy Sensor (Vacancy Mode) Daylighting Sensor (Continuous Dimming) Zone 2 Occupancy Sensor (Vacancy Mode) Daylighting Sensor (Continuous Dimming) Zone 3 Occupancy Sensor (Vacancy Mode)
Dining 141	5-Button LV (main entry) 1-100%, 2-50%, 3-AV1, 4-AV2, 5-OFF 3-Button LV (alternate entry) 1-100%, 2-50%, 3-OFF Occupany Sensor Vacancy mode - Auto Off/Manual ON 10 minute unoccupied period shut-off Daylighting Sensor Continuous dimming Target lighting level at 100% 40 FC	100% All Lights at 100% (Zones 1-6 at main entry) All Lights at 100% (Zones 5&6 at alternate entry) 50% All Lights at 50% (Zones 1-6 at main entry) All Lights at 50% (Zones 5&6 at alternate entry) AV1 Zone 1&2 (Projection Wall) Lights OFF Zone 3-6 Lights at 50% AV2 Zones 1&2 (Projection Wall) Lights OFF Zones 3-6 Lights at 100% OFF All Lights OFF (Zones 1-6 at main entry) All Lights OFF (Zones 5&6 at alternate entry)	4-Zone Control Panel (2 units) Zone 1 - West Side, Window Wall Zone 2 - West Side, Interior Zone 3 - Center of Room, Window Wall Zone 4 - Center of Room, Interior Zone 5 - East Side, Window Wall Zone 6 - East Side, Interior Note: NE lighting shall be controlled with local circuit via GTD.	Zone 1 Occupancy Sensor (Vacancy Mode) Daylighting Sensor (Continuous Dimming) Zone 2 Occupancy Sensor (Vacancy Mode) Zone 3 Occupancy Sensor (Vacancy Mode) Daylighting Sensor (Continuous Dimming) Zone 4 Occupancy Sensor (Vacancy Mode) Zone 5 Occupancy Sensor (Vacancy Mode) Daylighting Sensor (Continuous Dimming) Zone 6 Occupancy Sensor (Vacancy Mode)
Gymnasium 155, Auxiliary Gym 156	5-Button LV (main entry) 1-100%, 2-50%, 3-GYM1, 4-GYM2, 5-OFF 3-Button LV (Gym 155) 1-100%, 2-50%, 3-OFF Zone 1&2 ONLY 3-Button LV (Gym 156) 1-100%, 2-50%, 3-OFF Zone 3 ONLY Occupany Sensor Vacancy mode - Auto Off/Manual ON 10 minute unoccupied period shut-off Daylighting Sensor Continuous dimming Target lighting level at 100% 50 FC	100% All Lights at 100% (Zone 1,2,3&4 at main entry) 50% All Lights at 50% (Zone 1,2,3&4 at main entry) GYM1 Zone 1 & 2 Lights 100% Zone 3 & 4 Lights OFF GYM2 Zone 1 & 2 Lights OFF Zone 3 & 4 Lights 100% OFF All Lights OFF	4-Zone Control Panel Zone 1 - Gymnasium 155 Lights Zone 2 - Gymnasium 155 Lights (daylighting) Zone 3 - Auxiliary Gym 156 Lights Zone 4 - Auxiliary Gym 156 Lights (daylighting)	Zone 1 Occupancy Sensor (Vacancy Mode) Zone 2 Occupancy Sensor (Vacancy Mode) Daylighting Sensor (Continuous Dimming) Zone 3 Occupancy Sensor (Vacancy Mode) Zone 4 Occupancy Sensor (Vacancy Mode) Daylighting Sensor (Continuous Dimming)
Theater/Dance CR 231	5-Button LV (main unit/control) 1-100%, 2-50%, 3-25%, 4-10%, 5-OFF 3-Button LV (alternate entries) 1-100%, 2-50%, 3-OFF Occupany Sensor Vacancy mode - Auto Off/Auto ON 30 minute unoccupied period shut-off Target lighting level at 100% 40 FC	100% All Lights at 100% 50% All Lights at 50% 25% All Lights at 25% 10% All Lights at 10% OFF All Lights OFF	4 - Scene Dimming Control Panel Scene 1 - All 100% (Zone 1&2) Scene 2 - All 50% (Zone 1&2) Scene 3 - All 25% (Zone 1&2) Scene 4 - All 10% (Zone 1&2) OFF	Zone 1 Type PJ-109 fixtures Zone 2 Type RB-28 fixtures Note: Prior to scene programming, coordinate final light levels with owner.
Mechanical/Electrical Rooms	Toggle Switch (single/three-way as shown) Target lighting level at 100% 20 FC	N/A	N/A	N/A
Elevator Spaces	Toggle Switch Target lighting level at 100% (minimum) 10 FC (Elev. Pit, Landing in front of doors) 19 FC (machine room floor)	N/A	N/A	N/A
Exterior Lighting Building Mounted Parking Lot/Path Lighting Building Flood	Photocell School OPEN (Lights on 100%) School CLOSED (Lights at 50%) Timeclock School OPEN (Photocell ON, Timeclock OFF) School CLOSED (Lights OFF)		HUB Control Panel (Shared Unit) Zone 4 - Exterior Lighting (Building) Zone 5 - Exterior Lighting (Pedestrian) Zone 6 - Exterior Lighting (Parking Lot) Zone 7 - Exterior Lighting (Flood Lights) Note: Zone numbers may vary based on location of HUB.	Zone 4/5/6/7 Timeclock (Confirm hours with Owner) Zone 4 - 10P (50%), 12A (OFF) Zone 5 - 12A (OFF) Zone 6 - 12A (50%) Zone 7 - 10P (50%)
Electric Water Coolers	Timeclock School OPEN (Recp. ON) School CLOSED (Recp. OFF)	N/A	HUB Control Panel (Shared Unit) Zone 8 - Electric Water Coolers Note: Zone numbers may vary based on location of HUB.	Zone 8 Timeclock 6A-6P(Confirm hours with Owner)
Cupola Lights, Canopy Lights	Photocell Photocell ON/OFF Timeclock OFF Switch Manual Override (All Times)	Switch Type Momentary Contact	HUB Control Panel (Shared Unit) Zone 10 - Cupola Lights Zone 11 - Canopy Lights Note: Zone numbers may vary based on location of HUB.	Zone 10 Timeclock (Confirm hours with Owner) Zone 11 Timeclock (Confirm hours with Owner)

GENERAL LIGHTING CONTROL NOTES:
All specific times for Timeclock programming shown shall be confirmed with owner's representative prior to completion of final system programming.
All locations with daylighting controls shall be programmed to allow keypad control to lower the lighting level in the daylighting zone, but may not increase the lighting level in the daylighting zone.
All specific target lighting levels shown are averages across the task plane.

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Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056
1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION
1	04/22/16	ADDENDUM #2

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED
DRAWING NAME
LIGHTING CONTROL SCHEDULE

E 610

JOSHUA PELLICCIA 7/26/2016 7:52 AM L:\PROJ\JRS ARCHITECTS, INC\MPI\15.024.00-BCPS-ROBERT POOLE RENOVATION ADDITION\C_DRAWINGS, ENG\A_CAD\A_DRAWINGS\MEP\E610-15.024.00.DWG

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	MANUFACTURER / CATALOG NUMBER	LIGHT FIXTURE DESCRIPTION	LIGHT SOURCE	MAXIMUM FIXTURE INPUT POWER	MINIMUM LUMINOUS FLUX (INITIAL DELIVERED LUMENS)	MOUNTING LOCATION	FIXTURE VOLTAGE	REMARKS/INSTRUCTIONS
OA-84*	PHILIPS LUMEC AREA LIGHT FIXTURE: #DMS50-55W48LED4K-R-LEXF*-277-DMG-XXTX ARM (WITH 1 AREA LIGHT): #CRFT-1A-R4-XXTX ARM (WITH 1 AREA LIGHT + 3 FLOODLIGHTS): #[CRFT-007]-4-R4-XXTX POLE (WITH 1 AREA LIGHT): #SPR4D-18-XXTX POLE (WITH 1 AREA LIGHT + 3 FLOODLIGHTS): #SPR4V-18-XXTX ARCHITECTURAL AREA LIGHTING "UCL - UNIVERSE LARGE LED" SERIES EQUAL ANTIQUE STREET LAMPS "EHL22 LED" SERIES EQUAL	LARGE POLE MOUNTED AREA LIGHT FIXTURE WITH DOME-SHAPED CAST ALUMINUM HOUSING, FLAT GLASS LENS, AND FULL CUTOFF OPTICS. FIXTURE SHALL BE MOUNTED TO A DECORATIVE, CAST ALUMIMUM ARM BRACKET WITH GRADUAL "S" CURVE; ARM BRACKET SHALL BE MOUNTED TO A 4" DIAMETER, NON-TAPERED, ROUND STEEL POLE, 18' IN HEIGHT, WITH A MINIMUM WALL THICKNESS OF 0.120" (WITH NO FLOODLIGHTS ATTACHED TO POLE) AND 0.250" (WITH FLOODLIGHTS ATTACHED). OPTICAL DISTRIBUTION: T4 = TYPE 4 T5 = TYPE 5	LED CCT: 4000K CRI: >70	84 WATTS	T4 OPTICS - 5150 LUMENS T5 OPTICS - 5120 LUMENS	POLE	277 VOLTS	PAINTED FINISH ON LUMINAIRE, ARM BRACKET, AND POLE SHALL MATCH. COLOR AS SELECTED BY ARCHITECT. REFER TO FOUNDATION DETAIL ON SHEET E011 AND EXTERIOR LIGHT POLE SET-UP DETAILS ON SHEET E503. WHERE NOTED ON PLANS, PROVIDE ADDITIONAL DECORATIVE ARM BRACKET(S) AND FLOODLIGHT(S) OF TYPE AND QUANTITIES INDICATED; MOUNT AT TOP OF POLE. FIXTURE TYPES OA-84 AND OB-49 SHALL BE FURNISHED FROM SAME MANUFACTURER. SUBMIT CALCULATIONS WITH SHOP DRAWINGS THAT DEMONSTRATE THAT THE POLES SUBMITTED FOR APPROVAL CAN ADEQUATELY SUPPORT THE LIGHT FIXTURES AND ARM BRACKETS SUBMITTED FOR APPROVAL, FOR EACH UNIQUE POLE/AREA LIGHT/FLOODLIGHT/ARM BRACKET CONFIGURATION ON THIS PROJECT. *FIXTURES SHOWN ON SITE LIGHTING PLAN HAVE A SLASH MARK AND ADDITIONAL TEXT AT THE END OF THE FIXTURE TAG. THE ADDITIONAL TEXT INDICATES THE OPTICAL DISTRIBUTION. ALSO REFER TO 'OPTICAL DISTRIBUTION' INFORMATION IN LIGHT FIXTURE DESCRIPTION COLUMN OF SCHEDULE.
OB-49*	PHILIPS LUMEC AREA LIGHT FIXTURE: #DOS-35W32LED4K-T-LEXF*-277-DMG-XXTX-HS** ARM (WITH 1 AREA LIGHT): #CRFT-1A-R4-TS-XXTX ARM (WITH 1 AREA LIGHT + 2 FLOODLIGHTS): #[CRFT-006]-3B-R4-TS-XXTX ARM (WITH 0 AREA LIGHTS + 2 FLOODLIGHTS): #[CRF-011]-2-R4-XXTX POLE: #SPR4D-14-XXTX ARCHITECTURAL AREA LIGHTING "UCM - UNIVERSE MEDIUM LED" SERIES EQUAL ANTIQUE STREET LAMPS "EHL16 LED" SERIES EQUAL	SMALL POLE MOUNTED AREA LIGHT FIXTURE WITH DOME-SHAPED CAST ALUMINUM HOUSING, FLAT GLASS LENS, AND FULL CUTOFF OPTICS. FIXTURE SHALL BE MOUNTED TO A DECORATIVE, CAST ALUMIMUM ARM BRACKET WITH GRADUAL "S" CURVE; ARM BRACKET SHALL BE MOUNTED TO A 4" DIAMETER, NON-TAPERED, ROUND STEEL POLE, 14' IN HEIGHT, WITH A MINIMUM WALL THICKNESS OF 0.120". OPTICAL DISTRIBUTION: T2 = TYPE 2 T3 = TYPE 3 T4 = TYPE 4	LED CCT: 4000K CRI: >70	49 WATTS	T2 OPTICS - 3550 LUMENS T3 OPTICS - 3400 LUMENS T4 OPTICS - 3320 LUMENS	POLE	277 VOLTS	PAINTED FINISH ON LUMINAIRE, ARM BRACKET, AND POLE SHALL MATCH. COLOR AS SELECTED BY ARCHITECT. REFER TO FOUNDATION DETAIL ON SHEET E011 AND EXTERIOR LIGHT POLE SET-UP DETAILS ON SHEET E503. WHERE NOTED ON PLANS, PROVIDE ADDITIONAL DECORATIVE ARM BRACKET(S) AND FLOODLIGHT(S) OF TYPE AND QUANTITIES INDICATED; MOUNT AT TOP OF POLE. FIXTURE TYPES OA-84 AND OB-49 SHALL BE FURNISHED FROM SAME MANUFACTURER. SUBMIT CALCULATIONS WITH SHOP DRAWINGS THAT DEMONSTRATE THAT THE POLES SUBMITTED FOR APPROVAL CAN ADEQUATELY SUPPORT THE LIGHT FIXTURES AND ARM BRACKETS SUBMITTED FOR APPROVAL, FOR EACH UNIQUE POLE/AREA LIGHT/FLOODLIGHT/ARM BRACKET CONFIGURATION ON THIS PROJECT. *FIXTURES SHOWN ON SITE LIGHTING PLAN HAVE A SLASH MARK AND ADDITIONAL TEXT AT THE END OF THE FIXTURE TAG. THE ADDITIONAL TEXT INDICATES THE OPTICAL DISTRIBUTION. ALSO REFER TO 'OPTICAL DISTRIBUTION' INFORMATION IN LIGHT FIXTURE DESCRIPTION COLUMN OF SCHEDULE. **WHERE NOTED ON PLAN, PROVIDE FIXTURE WITH HOUSE SIDE SHIELD (LUMEC OPTION 'HS' OR EQUAL FROM OTHER APPROVED MANUFACTURER.)
OC-50	GARDCO #106L-DCC-DIM-2*-35LA-NW-UNIV-XXP-OL-WS** LITHONIA "WSQ LED" SERIES EQUAL EATON MCGRAW-EDISON "IMPACT ELITE LED" SERIES EQUAL	WALL SCONCE WITH DIE CAST ALUMINUM HOUSING IN 1/4-SPHERE SHAPE, AND DIFFUSING LENS. FIXTURE SHALL HAVE TWO CIRCUIT BOARDS AND TWO INTEGRAL 0-10V DIMMING DRIVERS; EACH DRIVER CONTROLLING ONE CIRCUIT BOARD. OPTICAL DISTRIBUTION: T2 = TYPE 2 T3 = TYPE 3 T4 = TYPE 4	LED CCT: 4000K CRI: >70 700MA MAX. DRIVE CURRENT	50 WATTS	T2 OPTICS - 3200 LUMENS T3 OPTICS - 3360 LUMENS T4 OPTICS - 3470 LUMENS	OUTDOOR - WALL	277 VOLTS	MOUNT CENTER OF FIXTURE AT 1' ABOVE THE DOOR FRAME, CENTERED OVER DOOR, UNLESS OTHERWISE NOTED ON PLANS. PAINTED FINISH TO BE SELECTED BY ARCHITECT FROM SPECIFIED MANUFACTURER'S STANDARD OPTIONS. *PROVIDE TYPE 2 DISTRIBUTION, EXCEPT WHERE OTHERWISE NOTED ON PLANS. **PROVIDE SURFACE MOUNTED BACKBOX (GARDCO OPTION 'WS' OR EQUAL FROM OTHER APPROVED MANUFACTURER) WHERE NOT POSSIBLE TO RECESS A JUNCTION BOX IN EXISTING WALL LOCATIONS. SURFACE BOX SHALL BE FED VIA CONDUIT THROUGH WALL, CONCEALING CONDUIT.
OD-29	KENALL #FN9L-3-A-XX-26L40K8-1-DV RAB LIGHTING "SLIM18N" SERIES EQUAL LITHONIA "OLWX1 LED" SERIES EQUAL	VANDAL RESISTANT WALL SCONCE WITH CURVED FRONT FACE OF HOUSING AND FLAT TEMPERED GLASS LENS ON BOTTOM.	LED CCT: 4000K CRI: >80	29 WATTS	1480 LUMENS	OUTDOOR - WALL	277 VOLTS	FIXTURE SHALL BE MOUNTED AS SHOWN ON PLANS. FINAL PLACEMENT TO BE COORDINATED WITH ARCHITECTURAL ELEVATIONS. PAINTED FINISH COLOR SHALL BE SELECTED BY ARCHITECT.
OE-12	INTENSE LIGHTING FIXTURE: #IVT702K-L1-841-FL-CC*-PFL4-71 LOUVER**: #PFL16B-71 B-K LIGHTING "ARTISTAR" SERIES EQUAL HUNZA "WALL SPOT HIGH POWER" SERIES EQUAL	SMALL PROFILE, SURFACE MOUNTED ACCENT LIGHT FIXTURE WITH DIE-CAST HOUSING, ADJUSTABLE KNUCKLE MOUNTING, SOLITE DIFFUSING LENS, AND INTEGRAL DRIVER.	LED CCT: 4000K CRI: >80	12 WATTS	710 LUMENS	OUTDOOR - CANOPY	277 VOLTS***	MOUNT FIXTURE TO STRUCTURE OF ENTRANCE CANOPY. MOUNT TO SIDE OF THE STRUCTURAL MEMBER THAT IS FURTHEST FROM THE EGRESS DOORS, RUNNING PARALLEL TO THE FACE OF THE BUILDING. REFER TO DETAIL ON SHEET E503. ADJUST FIXTURE SUCH THAT LIGHT IS AIMED STRAIGHT DOWN, AND LOCK IN PLACE. *FIXTURE SHALL HAVE CUSTOM FINISH COLOR TO MATCH COLOR OF CANOPY STRUCTURE. **PROVIDE INTERNAL, BLACK HEX LOUVER (INTENSE LIGHTING OPTION 'PFL16B-71' OR EQUAL FROM OTHER APPROVED MANUFACTURER) WHERE INDICATED ON PLANS. ***DIMMABLE DRIVER FOR INTENSE AND B-K LIGHTING FIXTURES ARE ONLY FOR 120V INPUT. IF ONE OF THESE FIXTURES IS SUBMITTED, PROVIDE REMOTE STEP-DOWN TRANSFORMER TO CONVERT 277V LINE VOLTAGE TO 120V FIXTURE VOLTAGE. LOCATE TRANSFORMER INSIDE BUILDING, IN A NEARBY ACCESSIBLE LOCATION, CLEARLY LABELED AS TO WHICH CIRCUIT IS FEEDING IT AND WHICH FIXTURES IT IS SUPPLYING POWER TO. PROVIDE ONE (1) TRANSFORMER PER CANOPY.
OF-48	WAC LIGHTING #DS-WD-05F-40-S-XX LUMINIS "SY602-L2W18R1" SERIES EQUAL V2 LIGHTING "CORE 300 LX" SERIES EQUAL	SURFACE MOUNTED CYLINDER WALL SCONCE WITH EQUAL UP AND DOWN LIGHT COMPONENTS AND 35°-45° BEAM SPREAD. FIXTURE SHALL BE WET LOCATION LISTED.	LED CCT: 4000K CRI: >80	48 WATTS	2900 LUMENS	OUTDOOR - WALL	277 VOLTS	MOUNT FIXTURE TO EXTERIOR WALL AS NOTED ON PLANS.
OG-75*	PHILLIPS GARDCO LUMINAIRE: #DFC7-DIM-NSP/VFL*-75LA-NW-UNIV-XXP-TAB-PTA*** MOUNTING HARDWARE**: #WMB, #SM, AND/OR #TAB GVA LIGHTING "FL100" SERIES EQUAL, CUSTOM TUNED LITHONIA "DSXF2" SERIES EQUAL ERCO "KONA" SERIES EQUAL	EXTERIOR ARCHITECTURAL FLOODLIGHT WITH SINGLE-PIECE, DIE CAST ALUMINUM HOUSING AND INTEGRAL CUTOFF HOOD DOOR AND LENS ASSEMBLY, WITH TEMPERED GLASS LENS. OPTICAL DISTRIBUTION: NSP = NARROW SPOT (NEMA 3X3) VFL = VERTICAL FLOOD (NEMA 6X6, ASYMMETRIC)	LED CCT: 4000K CRI: >70	81 WATTS	NSP OPTICS - 6680 LUMENS VFL OPTICS - 6524 LUMENS	BUILDING	277 VOLTS	FINISH COLOR ON FLOODLIGHT AS SELECTED BY ARCHITECT. FINISH ON MOUNTING HARDWARE SHALL MATCH FINISH ON FLOODLIGHT AT EACH RESPECTIVE LOCATION. *FIXTURES SHOWN ON LIGHTING PLANS HAVE A SLASH MARK AND ADDITIONAL TEXT AT THE END OF THE FIXTURE TAG. THE ADDITIONAL TEXT INDICATES THE OPTICAL DISTRIBUTION. ALSO REFER TO 'OPTICAL DISTRIBUTION' INFORMATION IN LIGHT FIXTURE DESCRIPTION COLUMN OF SCHEDULE. **WHERE NOTED FOR FIXTURE TO BE WALL MOUNTED, PROVIDE WALL BRACKET 'WMB' FROM GARDCO, AS INDICATED ON PLANS. WHERE NOTED FOR FIXTURE TO BE ROOF MOUNTED, PROVIDE SURFACE MOUNTED STANCHION MOUNT 'SM' FROM GARDCO. WHERE TWO FIXTURES ARE SPECIFIED AT A SINGLE LOCATION, PROVIDE TWIN ARM BRACKET 'TAB' FROM GARDCO, IN ADDITION TO ARM OR STANCHION MOUNT. FOR ALL MOUNTING HARDWARE MODEL NUMBERS: OR EQUAL PRODUCT FROM EQUAL MANUFACTURER, IF OTHER USED FOR FLOODLIGHT TYPE OG-75. ***PROVIDE POLE TOP ADAPTER (GARDCO OPTION 'PTA' OR EQUAL FROM OTHER APPROVED MANUFACTURER) WHERE MOUNTING HARDWARE HAS A TENON FOR FIXTURE CONNECTION.
OH-36*	PHILIPS GARDCO LUMINAIRE: #DFC7-DIM-NSP/MSP/HSP/HFL/VFL*-35LA-NW-UNIV-XXP-PTA*** MOUNTING HARDWARE**: #W90, #SM, OR DECORATIVE ARM BRACKETS SPECIFIED AS PART OF OA-84 AND OB-49 FIXTURES GVA LIGHTING "FL50" SERIES EQUAL, CUSTOM TUNED LITHONIA "DSXF1" SERIES EQUAL	EXTERIOR ARCHITECTURAL FLOODLIGHT WITH SINGLE-PIECE, DIE CAST ALUMINUM HOUSING AND INTEGRAL CUTOFF HOOD DOOR AND LENS ASSEMBLY, WITH TEMPERED GLASS LENS. OPTICAL DISTRIBUTION: NSP = NARROW SPOT (NEMA 3X3) MSP = MEDIUM SPOT (NEMA 5X5) HSP = HORIZONTAL SPOT (NEMA 7X5) HFL = HORIZONTAL FLOOD (NEMA 6X5) VFL = VERTICAL FLOOD (NEMA 6X6, ASYMMETRIC)	LED CCT: 4000K CRI: >70	37 WATTS	NSP OPTICS - 3744 LUMENS MSP OPTICS - 3982 LUMENS HSP OPTICS - 4016 LUMENS HFL OPTICS - 3800 LUMENS VFL OPTICS - 3701 LUMENS	POLE & BUILDING	277 VOLTS	AT POLE MOUNTED LOCATIONS, FINISH SHALL EXACTLY MATCH THAT OF TYPES OA-84 AND OB-49. AT BUILDING MOUNTED LOCATIONS, FINISH AS SELECTED BY ARCHITECT (MAY DIFFER FROM POLE-MOUNTED LOCATIONS.) FINISH ON MOUNTING HARDWARE SHALL MATCH FINISH ON FLOODLIGHT AT EACH RESPECTIVE LOCATION. *FIXTURES SHOWN ON LIGHTING PLANS HAVE A SLASH MARK AND ADDITIONAL TEXT AT THE END OF THE FIXTURE TAG. THE ADDITIONAL TEXT INDICATES THE OPTICAL DISTRIBUTION. ALSO REFER TO 'OPTICAL DISTRIBUTION' INFORMATION IN LIGHT FIXTURE DESCRIPTION COLUMN OF SCHEDULE. **MOUNT FIXTURE ON ARM BRACKET AT TOP OF LIGHT POLE, UNLESS OTHERWISE NOTED. WHERE NOTED FOR FIXTURE TO BE WALL MOUNTED, PROVIDE WALL BRACKET 'W90' FROM GARDCO, AS INDICATED ON PLANS. WHERE NOTED FOR FIXTURE TO BE ROOF MOUNTED, SURFACE MOUNTED STANCHION MOUNT 'SM' FROM GARDCO. FOR ALL MOUNTING HARDWARE MODEL NUMBERS: OR EQUAL PRODUCT FROM EQUAL MANUFACTURER, IF OTHER USED FOR FLOODLIGHT TYPE OH-36. ***PROVIDE POLE TOP ADAPTER (GARDCO OPTION 'PTA' OR EQUAL FROM OTHER APPROVED MANUFACTURER) WHERE MOUNTING HARDWARE HAS A TENON FOR FIXTURE CONNECTION.
PA-XX*	LEDALITE #7505-L-A-C-Q-N-XX*-7/3**-2-E-X FOCAL POINT "DART" SERIES EQUAL FINELITE "SERIES 18 LED" EQUAL	SEMI-INDIRECT LINEAR PENDANT FIXTURE WITH RECTILINEAR CROSS SECTION, 4"W X 2-1/4"H, AND FLAT END CAPS. FIXTURE SHALL HAVE A DIFFUSE BOTTOM LENS (APPROX. 10% DOWNLIGHT), A CLEAR TOP LENS / DUST COVER (APPROX. 90% UPLIGHT), AND SHALL BE SUSPENDED VIA ADJUSTABLE AIRCRAFT CABLES. NOMINAL FIXTURE LENGTHS: PA-47 = 4 FT. PA-94 = 8 FT. PA-141 = 12 FT. PA-188 = 16 FT. PA-235 = 20 FT. PA-282 = 24 FT.	LED CCT: 4000K CRI: >80	47 WATTS PER 4FT SECTION	4420 LUMENS PER 4FT SECTION	PENDANT	277 VOLTS	PROVIDE FIXTURE RUNS IN CONTINUOUS ROWS, IN TOTAL OVERALL LENGTHS AS SHOWN ON THE DRAWINGS. FOR LONGER FIXTURE ROWS THAT ARE ASSEMBLED FROM SHORTER SEGMENTS, SEGMENTS SHALL BE JOINED TOGETHER SUCH THAT THERE ARE NO LIGHT LEAKS AND NO VISIBLE SEAMS FROM NORMAL OCCUPANT VIEWING DISTANCES; FIXTURE ROWS SHALL BE COMPLETELY STRAIGHT AND HUNG LEVEL. FIXTURE SHALL BE MOUNTED SO THAT THE BOTTOM OF THE FIXTURE IS AT 8'-0" A.F.F., UNLESS OTHERWISE NOTED ON THE DRAWINGS. IN AREAS WITH FINISHED CEILINGS, FIXTURE SHALL BE MOUNTED NO LESS THAN 18" BELOW THE CEILING. FIXTURE TYPES PA-XX AND WE-XX SHALL BE FURNISHED FROM SAME MANUFACTURER. FINISH COLOR AS SELECTED BY ARCHITECT. *FIXTURES SHOWN ON LIGHTING PLANS HAVE 2 OR 3 NUMERALS IN THE FIXTURE TAG, INSTEAD OF THE "XX" NOTED IN THE FIXTURE SCHEDULE (FOR EXAMPLE, PA-47 INSTEAD OF PA-XX). THE NUMERALS INDICATE THE NOMINAL INPUT WATTAGE FOR THE OVERALL FIXTURE ROW. ALSO REFER TO 'NOMINAL FIXTURE LENGTH' INFORMATION IN LIGHT FIXTURE DESCRIPTION COLUMN OF SCHEDULE. **FIXTURE SHALL BE DIMMABLE AND ENTIRE FIXTURE ROW WITHIN A CONTROL ZONE SHALL DIM IN UNISON. WHERE NOTED ON PLANS FOR SEPARATE PORTIONS OF A FIXTURE ROW TO BE CONNECTED TO NORMAL AND NORMAL/EMERGENCY CIRCUITS OR TO DIFFERENT CONTROL ZONES, PROVIDE SEPARATE WIRING TO FIXTURE ROW TO ACCOMMODATE BOTH PORTIONS OF ROW, AND CONNECT TO CIRCUITS/ZONES AS INDICATED ON THE PLANS. PROVIDE UL924 DEVICE(S) FOR ANY ROW OR PORTION OF A ROW THAT IS DESIGNATED TO BE NORMAL/EMERGENCY.

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	MANUFACTURER / CATALOG NUMBER	LIGHT FIXTURE DESCRIPTION	LIGHT SOURCE	MAXIMUM FIXTURE INPUT POWER	MINIMUM LUMINOUS FLUX (INITIAL DELIVERED LUMENS)	MOUNTING LOCATION	FIXTURE VOLTAGE	REMARKS/INSTRUCTIONS
PB-51	COLUMBIA LIGHTING #LXEM-4-40-ML-RFA-ED-U-SSL-HT CERTOLUX "CRV" SERIES EQUAL PRECISION PARAGON "VTL" SERIES EQUAL LUMAX "VWBTLED" SERIES EQUAL	4' LONG, ENCLOSED AND GASKETED INDUSTRIAL-STYLE PENDANT FIXTURE WITH FIBERGLASS HOUSING. FIXTURE SHALL HAVE A LINEAL RIBBED, FROSTED, IMPACT-RESISTANT ACRYLIC LENS WITH NON-POROUS GASKET TO ENSURE SEAL TO HOUSING. LENS SHALL BE FASTENED VIA STAINLESS STEEL LATCHES. FIXTURE SHALL BE RATED FOR OPERATION IN HIGH AMBIENT TEMPERATURES (35°C OR HIGHER).	LED CCT: 4000K CRI: >80	51 WATTS	4820 LUMENS	PENDANT/ SURFACE	277 VOLTS	FIXTURE SHALL BE PENDANT/CHAIN MOUNTED TO STRUCTURE IN EXPOSED CEILING AREAS AND SURFACE MOUNTED TO GRID IN AREAS WITH CEILINGS. FIXTURE SHALL BE MOUNTED WITH BOTTOM OF FIXTURE AT 9'-0" AFF. CONTRACTOR SHALL COORDINATE FINAL LOCATION IN FIELD WITH OTHER TRADES. IF CONFLICT ARISES, FIXTURE SHALL BE MOUNTED BELOW OTHER TRADES WITH FIXTURE REMAINING ABOVE 8'-0" AFF.
PB-74	COLUMBIA LIGHTING #LXEM-4-40-VL-RFA-ED-U-SSL-HT CERTOLUX "CRV" SERIES EQUAL PRECISION PARAGON "VTL" SERIES EQUAL LUMAX "VWBTLED" SERIES EQUAL	4' LONG, ENCLOSED AND GASKETED INDUSTRIAL-STYLE PENDANT FIXTURE WITH FIBERGLASS HOUSING. FIXTURE SHALL HAVE A LINEAL RIBBED, FROSTED, IMPACT-RESISTANT ACRYLIC LENS WITH NON-POROUS GASKET TO ENSURE SEAL TO HOUSING. LENS SHALL BE FASTENED VIA STAINLESS STEEL LATCHES. FIXTURE SHALL BE RATED FOR OPERATION IN HIGH AMBIENT TEMPERATURES (35°C OR HIGHER).	LED CCT: 4000K CRI: >80	74 WATTS	7380 LUMENS	PENDANT/ SURFACE	277 VOLTS (120 VOLTS FOR GREEN-HOUSES)	FIXTURE SHALL BE PENDANT/CHAIN MOUNTED TO STRUCTURE IN EXPOSED CEILING AREAS AND SURFACE MOUNTED TO GRID IN AREAS WITH CEILINGS. FIXTURE SHALL BE MOUNTED WITH BOTTOM OF FIXTURE AT 9'-0" AFF. CONTRACTOR SHALL COORDINATE FINAL LOCATION IN FIELD WITH OTHER TRADES. IF CONFLICT ARISES, FIXTURE SHALL BE MOUNTED BELOW OTHER TRADES WITH FIXTURE REMAINING ABOVE 8'-0" AFF.
PC-80	PRUDENTIAL LIGHTING #BIO-LIN-LED4-MO-8'-XXX-AWL-D1W-SC-UNV-SSC-DM10 A-LIGHT "D3 ACCOLADE" SERIES EQUAL ZUMTOBEL "SLOTLIGHT LED II" SERIES EQUAL	8' LONG, PENDANT MOUNTED LINEAR WALLWASH FIXTURE WITH RECTILINEAR, EXTRUDED ALUMINUM HOUSING.	LED CCT: 4000K CRI: >80	10 WATTS PER FT.	660 LUMENS PER FT.	PENDANT	277 VOLTS	HOUSING FINISH COLOR AS SELECTED BY ARCHITECT. MOUNT FIXTURE SUCH THAT IT IS ALIGNED VERTICALLY WITH THE CENTER OF THE MULLION BETWEEN THE LOWER AND UPPER WINDOWS OF NORTH WALL IN CTE FLEX SPACE 121C; AT APPROXIMATELY 12' AFF TO CENTER OF FIXTURE. FIXTURE SHALL BE ORIENTED WITH MAXIMUM CANDLEPOWER TOWARDS THE TEACHING WALL.
PD-172	KENALL #EPLB-22-E-HL-CA-XXX-14L-40K8-DCC-DV-SCH-WG SPECTRUM "PROCTV22LEDGV-220L-40K0PR22-CNFR-WAG22" SERIES EQUAL HOLOPHANE "PHUZION PHS" SERIES EQUAL	22" DIAMETER, MONOPOINT HIGHBAY FIXTURE WITH CLEAR PRISMATIC ACRYLIC REFRACTOR AND CLEAR PRISMATIC ACRYLIC BOTTOM LENS. FIXTURE SHALL HAVE A DIMMING DRIVER, WIRE GUARD, AND SAFETY CHAIN & HANGER. FIXTURE HOUSING SHALL BE DIE-CAST ALUMINUM WITH A TOP HUB THAT HAS A LOOP STYLE HANGER AND 6' POWER CORD AND SEALED QUICK DISCONNECT PLUG.	LED CCT: 4000K CRI: >80	172 WATTS	16270 LUMENS	PENDANT	277 VOLTS	HOUSING FINISH COLOR AS SELECTED BY ARCHITECT. FIXTURE SHALL BE MOUNTED SO THAT THE TOP OF THE FIXTURE IS EQUAL IN ELEVATION TO THE BOTTOM OF THE ROOF STRUCTURAL TRUSS MEMBERS, UNLESS OTHERWISE NOTED ON THE DRAWINGS. CONTRACTOR SHALL PROVIDE HOOK FOR MOUNTING AND POWER RECEPTACLE.
PE	NOT USED							
PF	NOT USED							
PG	NOT USED							
PH	NOT USED							
PJ-109	KENALL #EPLB-16-E-PM-PPA-XXX-94L-40K8-DCC-DV HUBBELL "MINI LUNABAY" SERIES EQUAL OR APPROVED EQUAL	16" DIAMETER, MONOPOINT HIGHBAY FIXTURE WITH PEARLESCENT PRISMATIC ACRYLIC REFRACTOR AND CLEAR PRISMATIC ACRYLIC BOTTOM LENS. FIXTURE SHALL HAVE A DIMMING DRIVER AND RIGID STEM MOUNTING SYSTEM. FIXTURE HOUSING SHALL BE DIE-CAST ALUMINUM WITH A SEALED, THREADED HUB FOR 3/4" RIGID STEM PENDANT.	LED CCT: 4000K CRI: >80	109 WATTS ⚠1	10900 LUMENS	PENDANT	277 VOLTS	HOUSING FINISH COLOR AS SELECTED BY ARCHITECT. UNLESS OTHERWISE NOTED, BOTTOM OF FIXTURE SHALL BE MOUNTED AT 12'-0" AFF, FROM THE PORTION OF FLOOR THAT IS DIRECTLY BELOW THE FIXTURE. CONTRACTOR SHALL PROVIDE ALL NECESSARY COMPONENTS FOR RIGID PENDANT MOUNTING.
RA-40	FOCAL POINT #FEQL-24-WP-4000LH-40K-1C-UNV-LD1-X-WH AXIS "DIA" SERIES EQUAL LITECONTROL "LITEWAVE LHF" SERIES EQUAL	2'X4', RECESSED LED TROFFER WITH SLOPED 0.125" THICK ACRYLIC LENSES THAT HAVE MINIATURE PRECISION MOLDED CONICAL PRISMS THAT ALLOW 92% LIGHT TRANSMISSION. FIXTURE SHALL HAVE CENTRAL LAMP COMPARTMENT WITH 0.120" THICK LINEAR SPREAD LENS RETAINED WITH HIGH PERFORMANCE SIDE RAILS FINISHED IN MATTE SATIN WHITE. FIXTURE SHALL HAVE A HINGED DIFFUSER FOR EASY MAINTENANCE ACCESS.	LED CCT: 4000K CRI: >80	40 WATTS	4420 LUMENS	RECESSED	277 VOLTS	CONTRACTOR SHALL VERIFY THE EXACT CEILING CONDITION AND ORDER THE FIXTURE WITH THE APPROPRIATE MOUNTING TRIM. RA-XX AND RB-XX FIXTURES SHALL BE FURNISHED FROM THE SAME MANUFACTURER.
RA-64	FOCAL POINT #FEQL-24-WP-6000LH-40K-1C-UNV-LD1-X-WH AXIS "DIA" SERIES EQUAL LITECONTROL "LITEWAVE LHF" SERIES EQUAL	2'X4', RECESSED LED TROFFER WITH SLOPED 0.125" THICK ACRYLIC LENSES THAT HAVE MINIATURE PRECISION MOLDED CONICAL PRISMS THAT ALLOW 92% LIGHT TRANSMISSION. FIXTURE SHALL HAVE CENTRAL LAMP COMPARTMENT WITH 0.120" THICK LINEAR SPREAD LENS RETAINED WITH HIGH PERFORMANCE SIDE RAILS FINISHED IN MATTE SATIN WHITE. FIXTURE SHALL HAVE A HINGED DIFFUSER FOR EASY MAINTENANCE ACCESS.	LED CCT: 4000K CRI: >80	64 WATTS	6640 LUMENS	RECESSED	277 VOLTS	CONTRACTOR SHALL VERIFY THE EXACT CEILING CONDITION AND ORDER THE FIXTURE WITH THE APPROPRIATE MOUNTING TRIM. RA-XX AND RB-XX FIXTURES SHALL BE FURNISHED FROM THE SAME MANUFACTURER.
RB-28	FOCAL POINT #FEQL-22-WP-2500LH-40K-1C-UNV-LD1-X-WH AXIS "DIA" SERIES EQUAL LITECONTROL "LITEWAVE LHF" SERIES EQUAL	2'X2', RECESSED LED TROFFER WITH SLOPED 0.125" THICK ACRYLIC LENSES THAT HAVE MINIATURE PRECISION MOLDED CONICAL PRISMS THAT ALLOW 92% LIGHT TRANSMISSION. FIXTURE SHALL HAVE CENTRAL LAMP COMPARTMENT WITH 0.120" THICK LINEAR SPREAD LENS RETAINED WITH HIGH PERFORMANCE SIDE RAILS FINISHED IN MATTE SATIN WHITE. FIXTURE SHALL HAVE A HINGED DIFFUSER FOR EASY MAINTENANCE ACCESS.	LED CCT: 4000K CRI: >80	28 WATTS	2500 LUMENS	RECESSED	277 VOLTS	CONTRACTOR SHALL VERIFY THE EXACT CEILING CONDITION AND ORDER THE FIXTURE WITH THE APPROPRIATE MOUNTING TRIM. RA-XX AND RB-XX FIXTURES SHALL BE FURNISHED FROM THE SAME MANUFACTURER.
RB-41	FOCAL POINT #FEQL-22-WP-3500LH-40K-1C-UNV-LD1-X-WH AXIS "DIA" SERIES EQUAL LITECONTROL "LITEWAVE LHF" SERIES EQUAL	2'X2', RECESSED LED TROFFER WITH SLOPED 0.125" THICK ACRYLIC LENSES THAT HAVE MINIATURE PRECISION MOLDED CONICAL PRISMS THAT ALLOW 92% LIGHT TRANSMISSION. FIXTURE SHALL HAVE CENTRAL LAMP COMPARTMENT WITH 0.120" THICK LINEAR SPREAD LENS RETAINED WITH HIGH PERFORMANCE SIDE RAILS FINISHED IN MATTE SATIN WHITE. FIXTURE SHALL HAVE A HINGED DIFFUSER FOR EASY MAINTENANCE ACCESS.	LED CCT: 4000K CRI: >80	41 WATTS	3810 LUMENS	RECESSED	277 VOLTS	CONTRACTOR SHALL VERIFY THE EXACT CEILING CONDITION AND ORDER THE FIXTURE WITH THE APPROPRIATE MOUNTING TRIM. RA-XX AND RB-XX FIXTURES SHALL BE FURNISHED FROM THE SAME MANUFACTURER.
RC-XX*	PRUDENTIAL LIGHTING #PS9-A9-LED4-MO-XXX-W-UNV-X1/X7**-DM10-ADC LITECONTROL "WALL/SLOT 2000 LED" SERIES EQUAL PMC LIGHTING "SPI-LED" SERIES EQUAL ⚠1	9" WIDE, RECESSED PERIMETER WALLSLOT FIXTURE WITH LED LIGHT SOURCE CONCEALED FROM VIEW, PROVIDING LIGHT INDIRECTLY IN AN ASYMMETRIC DISTRIBUTION. FIXTURE SHALL HAVE A REMOVABLE DUST COVER.	LED CCT: 4000K CRI: >80	7 WATTS PER FT.	450 LUMENS PER FT.	RECESSED	277 VOLTS	PROVIDE CONTINUOUS ROWS IN TOTAL OVERALL LENGTHS SHOWN ON PLAN. PROVIDE END CAP FOR FIXTURE HOUSING IN LOCATIONS WHERE END OF FIXTURE DOES NOT BUTT UP AGAINST A WALL. *FIXTURES SHOWN ON LIGHTING PLANS HAVE 2 OR 3 NUMERALS IN THE FIXTURE TAG, INSTEAD OF THE "XX" NOTED IN THE FIXTURE SCHEDULE (FOR EXAMPLE, RC-49 INSTEAD OF RC-XX). THE NUMERALS INDICATE THE NOMINAL INPUT WATTAGE FOR THE OVERALL FIXTURE ROW. **CONTRACTOR SHALL VERIFY THE EXACT CEILING CONDITION AND ORDER THE FIXTURE WITH THE APPROPRIATE MOUNTING TRIM. FOR DRYWALL CEILINGS, PROVIDE MUD-IN FLANGE WHERE FIXTURE MEETS CEILING, TO CONCEAL FLANGE FROM VIEW. FOR ACT CEILINGS, FIXTURE FLANGE MUST SIT ON T

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	MANUFACTURER / CATALOG NUMBER	LIGHT FIXTURE DESCRIPTION	LIGHT SOURCE	MAXIMUM FIXTURE INPUT POWER	MINIMUM LUMINOUS FLUX (INITIAL DELIVERED LUMENS)	MOUNTING LOCATION	FIXTURE VOLTAGE	REMARKS/INSTRUCTIONS
RF-18	GOTHAM EVO-40/15-6AR-MWD-LSS-MVOLT-EZ1 EATON PORTFOLIO "LD6A" HOUSING + "6LW1" REFLECTOR SERIES EQUAL FOCAL POINT "FL60-RO" SERIES EQUAL PHILIPS LIGHTOLIER "CALCULITE" SERIES EQUAL	RECESSED DOWNLIGHT WITH 6" ROUND, OPEN APERTURE. FIXTURE SHALL HAVE REMOTE PHOSPHOR OR A MIXING CHAMBER BEHIND A PHOSPHOR COATED LENS TO PRODUCE AN EVEN LUMINANCE WITHOUT BRIGHT SPOTS OF INDIVIDUAL LEDS. FIXTURE SHALL HAVE A SELF-FLANGED REFLECTOR WITH CLEAR, IRIDESCENCE-FREE, SEMI-SPECULAR FINISH AND OPTICAL DISTRIBUTION WITH 1.0 SPACING CRITERION. REFLECTOR MUST BE ATTACHED TO LED CIRCUIT BOARD / HEAT SINK ASSEMBLY TO MAINTAIN CONSISTENT OPTICAL ALIGNMENT AND EFFICIENCY. FIXTURE SHALL BE UL LISTED FOR DAMP OR WET LOCATIONS.	LED CCT: 4000K CRI: >80	18 WATTS	1500 LUMENS	RECESSED	277 VOLTS	PROVIDE SLOPED CEILING ADAPTER (GOTHAM #SCA6, OR EQUAL FROM OTHER APPROVED MANUFACTURER) WHERE FIXTURE IS TO BE LOCATED IN A SLOPED SURFACE. DEGREE OF SLOPE OF ADAPTER SHALL EQUAL DEGREE OF SLOPE OF CEILING PLANE. RF-XX AND RG-XX FIXTURES SHALL BE FURNISHED FROM THE SAME MANUFACTURER. WHERE FIXTURE IS TO BE MOUNTED IN A RATED CEILING ASSEMBLY AND/OR IF INSULATION IS LOCATED ON TOP OF CEILING, PROVIDE FRAMING AND GWB ENCLOSURE TO TENT AROUND FIXTURE HOUSING TO MAINTAIN CEILING RATING. PROVIDE ADEQUATE AIR SPACE AROUND FIXTURE HOUSING PER MANUFACTURER'S REQUIREMENTS.
RF-25	GOTHAM EVO-40/20-6AR-MWD-LSS-MVOLT-EZ1 EATON PORTFOLIO "LD6A" HOUSING + "6LW1" REFLECTOR SERIES EQUAL FOCAL POINT "FL60-RO" SERIES EQUAL PHILIPS LIGHTOLIER "CALCULITE" SERIES EQUAL	RECESSED DOWNLIGHT WITH 6" ROUND, OPEN APERTURE. FIXTURE SHALL HAVE REMOTE PHOSPHOR OR A MIXING CHAMBER BEHIND A PHOSPHOR COATED LENS TO PRODUCE AN EVEN LUMINANCE WITHOUT BRIGHT SPOTS OF INDIVIDUAL LEDS. FIXTURE SHALL HAVE A SELF-FLANGED REFLECTOR WITH CLEAR, IRIDESCENCE-FREE, SEMI-SPECULAR FINISH AND OPTICAL DISTRIBUTION WITH 1.0 SPACING CRITERION. REFLECTOR MUST BE ATTACHED TO LED CIRCUIT BOARD / HEAT SINK ASSEMBLY TO MAINTAIN CONSISTENT OPTICAL ALIGNMENT AND EFFICIENCY. FIXTURE SHALL BE UL LISTED FOR DAMP OR WET LOCATIONS.	LED CCT: 4000K CRI: >80	25 WATTS	2000 LUMENS	RECESSED	277 VOLTS	PROVIDE SLOPED CEILING ADAPTER (GOTHAM #SCA6, OR EQUAL FROM OTHER APPROVED MANUFACTURER) WHERE FIXTURE IS TO BE LOCATED IN A SLOPED SURFACE. DEGREE OF SLOPE OF ADAPTER SHALL EQUAL DEGREE OF SLOPE OF CEILING PLANE. RF-XX AND RG-XX FIXTURES SHALL BE FURNISHED FROM THE SAME MANUFACTURER.
RG-18	GOTHAM EVO-WW-40/15-6AR-LSS-MVOLT-EZ1 EATON PORTFOLIO "LD6A" HOUSING + "6LW111" REFLECTOR SERIES EQUAL FOCAL POINT "FL60-RO" SERIES EQUAL PHILIPS LIGHTOLIER "CALCULITE" SERIES EQUAL	RECESSED WALLWASH DOWNLIGHT WITH 6" ROUND, OPEN APERTURE. FIXTURE SHALL HAVE REMOTE PHOSPHOR OR A MIXING CHAMBER BEHIND A PHOSPHOR COATED LENS TO PRODUCE AN EVEN LUMINANCE WITHOUT BRIGHT SPOTS OF INDIVIDUAL LEDS. FIXTURE SHALL HAVE A SELF-FLANGED REFLECTOR WITH CLEAR, IRIDESCENCE-FREE, SEMI-SPECULAR FINISH AND ASYMMETRIC WALLWASH LIGHT DISTRIBUTION. REFLECTOR MUST BE ATTACHED TO LED CIRCUIT BOARD / HEAT SINK ASSEMBLY TO MAINTAIN CONSISTENT OPTICAL ALIGNMENT AND EFFICIENCY. FIXTURE SHALL BE UL LISTED FOR DAMP OR WET LOCATIONS.	LED CCT: 4000K CRI: >80	18 WATTS	1500 LUMENS	RECESSED	277 VOLTS	RF-XX AND RG-XX FIXTURES SHALL BE FURNISHED FROM THE SAME MANUFACTURER.
RG-37	GOTHAM EVO-WW-40/30-6AR-LSS-MVOLT-EZ1 EATON PORTFOLIO "LD6A" HOUSING + "6LW111" REFLECTOR SERIES EQUAL FOCAL POINT "FL60-RO" SERIES EQUAL PHILIPS LIGHTOLIER "CALCULITE" SERIES EQUAL	RECESSED WALLWASH DOWNLIGHT WITH 6" ROUND, OPEN APERTURE. FIXTURE SHALL HAVE REMOTE PHOSPHOR OR A MIXING CHAMBER BEHIND A PHOSPHOR COATED LENS TO PRODUCE AN EVEN LUMINANCE WITHOUT BRIGHT SPOTS OF INDIVIDUAL LEDS. FIXTURE SHALL HAVE A SELF-FLANGED REFLECTOR WITH CLEAR, IRIDESCENCE-FREE, SEMI-SPECULAR FINISH AND ASYMMETRIC WALLWASH LIGHT DISTRIBUTION. REFLECTOR MUST BE ATTACHED TO LED CIRCUIT BOARD / HEAT SINK ASSEMBLY TO MAINTAIN CONSISTENT OPTICAL ALIGNMENT AND EFFICIENCY. FIXTURE SHALL BE UL LISTED FOR DAMP OR WET LOCATIONS.	LED CCT: 4000K CRI: >80	37 WATTS	3000 LUMENS	RECESSED	277 VOLTS	RF-XX AND RG-XX FIXTURES SHALL BE FURNISHED FROM THE SAME MANUFACTURER.
RH-77	KURTZON #WL-G-5-2X4-2/LED-R-40-UNV-A19 ⚠1 KENALL "SIMPLE SEAL" SERIES EQUAL EATON FAIL-SAFE "CLM" SERIES EQUAL	2'X4' PRISMATIC LENSED LED TOFFER, WET LOCATION. LENS SHALL BE INVERTED SUCH THAT SMOOTH SIDE FACES INTO ROOM. LENS SHALL DIFFUSE ANY PIXILLATION OF LEDS. FIXTURE SHALL HAVE TRIPLE GASKETING - BETWEEN LENS AND DOOR FRAME; BETWEEN DOOR FRAME AND HOUSING; AND BETWEEN HOUSING AND CEILING.	LED CCT: 4000K CRI: >80	77 WATTS	7300 LUMENS	RECESSED	277 VOLTS	CONTRACTOR SHALL VERIFY THE EXACT CEILING CONDITION AND ORDER THE FIXTURE WITH THE APPROPRIATE MOUNTING TRIM. RH-XX AND RI-XX FIXTURES SHALL BE FURNISHED FROM THE SAME MANUFACTURER.
RI-50	KURTZON #WL-G-5-2X2-2/LED-R-40-UNV-A19 KENALL "SIMPLE SEAL" SERIES EQUAL EATON FAIL-SAFE "CLM" SERIES EQUAL	2'X2' PRISMATIC LENSED LED TOFFER, WET LOCATION. LENS SHALL BE INVERTED SUCH THAT SMOOTH SIDE FACES INTO ROOM. LENS SHALL DIFFUSE ANY PIXILLATION OF LEDS. FIXTURE SHALL HAVE TRIPLE GASKETING - BETWEEN LENS AND DOOR FRAME; BETWEEN DOOR FRAME AND HOUSING; AND BETWEEN HOUSING AND CEILING.	LED CCT: 4000K CRI: >80	50 WATTS	3700 LUMENS	RECESSED	277 VOLTS	CONTRACTOR SHALL VERIFY THE EXACT CEILING CONDITION AND ORDER THE FIXTURE WITH THE APPROPRIATE MOUNTING TRIM. RH-XX AND RI-XX FIXTURES SHALL BE FURNISHED FROM THE SAME MANUFACTURER.
RJ-20	PRUDENTIAL LIGHTING #BIO-STD-FLSH-LED4-LO-4'-TMW-SAL-D1-SC-UNV-XX-DM10 FOCAL POINT "SEEM 4" SERIES EQUAL AXIS LIGHTING "BEAM 4" SERIES EQUAL	4' LONG X 4" WIDE, RECESSED SLOTLIGHT FIXTURE WITH FLUSH, FROSTED, SNAP-IN LENS. LENS SHALL COMPLETELY DIFFUSE LED DIODE IMAGE. LENS SHALL BE SINGLE PIECE FOR ENTIRE FIXTURE LENGTH; AND THERE SHALL BE NO GAP BETWEEN LENS AND HOUSING THROUGH WHICH BARE LEDS OR ANY INTERNAL COMPONENTS ARE VISIBLE.	LED CCT: 4000K CRI: >80	20 WATTS	1450 LUMENS	RECESSED	277 VOLTS	PROVIDE CONTINUOUS ROWS IN TOTAL OVERALL LENGTHS SHOWN ON PLAN. CONTRACTOR SHALL VERIFY THE EXACT CEILING CONDITION AND ORDER THE FIXTURE WITH THE APPROPRIATE MOUNTING TRIM. RJ-XX AND RK-XX FIXTURES SHALL BE FURNISHED FROM THE SAME MANUFACTURER.
RJ-40	PRUDENTIAL LIGHTING #BIO-STD-FLSH-LED4-LO-8'-TMW-SAL-D1-SC-UNV-XX-DM10 FOCAL POINT "SEEM 4" SERIES EQUAL AXIS LIGHTING "BEAM 4" SERIES EQUAL	8' LONG X 4" WIDE, RECESSED SLOTLIGHT FIXTURE WITH FLUSH, FROSTED, SNAP-IN LENS. LENS SHALL COMPLETELY DIFFUSE LED DIODE IMAGE. LENS SHALL BE SINGLE PIECE FOR ENTIRE FIXTURE LENGTH; AND THERE SHALL BE NO GAP BETWEEN LENS AND HOUSING THROUGH WHICH BARE LEDS OR ANY INTERNAL COMPONENTS ARE VISIBLE.	LED CCT: 4000K CRI: >80	40 WATTS	2910 LUMENS	RECESSED	277 VOLTS	PROVIDE CONTINUOUS ROWS IN TOTAL OVERALL LENGTHS SHOWN ON PLAN. CONTRACTOR SHALL VERIFY THE EXACT CEILING CONDITION AND ORDER THE FIXTURE WITH THE APPROPRIATE MOUNTING TRIM. RJ-XX AND RK-XX FIXTURES SHALL BE FURNISHED FROM THE SAME MANUFACTURER.
RK-43	PRUDENTIAL LIGHTING #BIO-STD-FLSH-LED4-SO-4'-TMW-SAL-D1-SC-UNV-XX-DM10 FOCAL POINT "SEEM 4" SERIES EQUAL AXIS LIGHTING "BEAM 4" SERIES EQUAL	SAME AS RJ-20, BUT WITH HIGHER LIGHT OUTPUT.	LED CCT: 4000K CRI: >80	43 WATTS	3240 LUMENS	RECESSED	277 VOLTS	PROVIDE CONTINUOUS ROWS IN TOTAL OVERALL LENGTHS SHOWN ON PLAN. CONTRACTOR SHALL VERIFY THE EXACT CEILING CONDITION AND ORDER THE FIXTURE WITH THE APPROPRIATE MOUNTING TRIM. RJ-XX AND RK-XX FIXTURES SHALL BE FURNISHED FROM THE SAME MANUFACTURER.
RK-86	PRUDENTIAL LIGHTING #BIO-STD-FLSH-LED4-SO-8'-TMW-SAL-D1-SC-UNV-XX-DM10 FOCAL POINT "SEEM 4" SERIES EQUAL AXIS LIGHTING "BEAM 4 LED" SERIES EQUAL	SAME AS RJ-40, BUT WITH HIGHER LIGHT OUTPUT.	LED CCT: 4000K CRI: >80	86 WATTS	6490 LUMENS	RECESSED	277 VOLTS	PROVIDE CONTINUOUS ROWS IN TOTAL OVERALL LENGTHS SHOWN ON PLAN. CONTRACTOR SHALL VERIFY THE EXACT CEILING CONDITION AND ORDER THE FIXTURE WITH THE APPROPRIATE MOUNTING TRIM. RJ-XX AND RK-XX FIXTURES SHALL BE FURNISHED FROM THE SAME MANUFACTURER.
RL-18	KURT VERSEN #WA1034-10-40-277-WHT-FR KIRLIN "LR05010" SERIES EQUAL PATHWAY "COVENTRY" SERIES EQUAL	4"-5" DIAMETER RECESSED WET LOCATION DOWNLIGHT WITH PRISMATIC OR FROSTED LENS AND WHITE, NON-CONDUCTIVE TRIM.	LED CCT: 4000K CRI: >80	18 WATTS	500 LUMENS	RECESSED	277 VOLTS	CONTRACTOR SHALL VERIFY THE EXACT CEILING CONDITION AND ORDER THE FIXTURE WITH THE APPROPRIATE MOUNTING TRIM.
RM-88	PRUDENTIAL LIGHTING #9040-LED4-LO-FWA-TMW-SC-UNV-XX-DM10 FOCAL POINT "SKYDOME" SERIES EQUAL MARK ARCHITECTURAL "MAGELLAN" SERIES EQUAL	4' DIAMETER RECESSED FIXTURE WITH A ROUND, FLAT, WHITE ACRYLIC LENS. LENS SHALL COMPLETELY DIFFUSE LED DIODE IMAGE.	LED CCT: 4000K CRI: >80	88 WATTS	6640 LUMENS	RECESSED	277 VOLTS	CONTRACTOR SHALL VERIFY THE EXACT CEILING CONDITION AND ORDER THE FIXTURE WITH THE APPROPRIATE MOUNTING TRIM.
RN-76	PRUDENTIAL LIGHTING #P9244-LED4-LO-WA-3W-SC-UNV-XX-DM10 PMC LIGHTING "2175" SERIES EQUAL LEGION LIGHTING "SKYLUME" SERIES EQUAL DAY-O-LITE "SKLL" SERIES EQUAL	4'X4' SQUARE RECESSED FIXTURE WITH A FLAT, WHITE ACRYLIC LENS AND REGRESSED, SMOOTH WHITE TRIM. LENS SHALL COMPLETELY DIFFUSE ANY HOTSPOTS OR PIXILLATION FROM LEDS.	LED CCT: 4000K CRI: >80	76 WATTS	6120 LUMENS	RECESSED	277 VOLTS	CONTRACTOR SHALL VERIFY THE EXACT CEILING CONDITION AND ORDER THE FIXTURE WITH THE APPROPRIATE MOUNTING TRIM.
SA-50	KENALL #MLHA8-48-R-XX-PP-4SL40K-DCC-DV-CDF-PM* EATON FAILSAFE "HVL LED" EQUAL LUMINAIRE LIGHTING "VISION 8" EQUAL	8"X4' ARCHITECTURAL, VANDAL-RESISTANT SURFACE MOUNTED FIXTURE WITH AN EXTRUDED ALUMINUM HOUSING WITH ROUNDED, DIE-CAST END CAPS. FIXTURE SHALL HAVE A PEARLESCENT POLYCARBONATE LENS WITH SMOOTH EXTERIOR AND LINEAR PRISMATIC INTERIOR, HELD IN PLACE WITH CAPTIVE, TAMPER-RESISTENT SCREWS.	LED CCT: 4000K CRI: >80	50 WATTS	4930 LUMENS	SURFACE	277 VOLTS	FIXTURE SHALL HAVE LIFETIME GUARANTEE: MANUFACTURER SHALL REPAIR OR REPLACE THE FIXTURE IF RENDERED INOPERABLE DUE TO PHYSICAL ABUSE FOR THE LIFE OF THE PRODUCT INSTALLATION. FINISH COLOR AS SELECTED BY ARCHITECT. *WHERE NOTED ON PLANS, PENDANT MOUNT FIXTURE VIA RIGID STEMS; LENGTH AS REQUIRED TO ACHIEVE MOUNTING HEIGHT INDICATED.
SB-75	KENALL #MLHA8-72-R-XX-PP-33L40K-DCC-DV-CDF-PM* EATON FAILSAFE "HVL LED" EQUAL LUMINAIRE LIGHTING "VISION 8" EQUAL	8"X6' ARCHITECTURAL, VANDAL-RESISTANT SURFACE MOUNTED FIXTURE WITH AN EXTRUDED ALUMINUM HOUSING WITH ROUNDED, DIE-CAST END CAPS. FIXTURE SHALL HAVE A PEARLESCENT POLYCARBONATE LENS WITH SMOOTH EXTERIOR AND LINEAR PRISMATIC INTERIOR, HELD IN PLACE WITH CAPTIVE, TAMPER-RESISTENT SCREWS.	LED CCT: 4000K CRI: >80	75 WATTS	7400 LUMENS	SURFACE	277 VOLTS	FIXTURE SHALL HAVE LIFETIME GUARANTEE: MANUFACTURER SHALL REPAIR OR REPLACE THE FIXTURE IF RENDERED INOPERABLE DUE TO PHYSICAL ABUSE FOR THE LIFE OF THE PRODUCT INSTALLATION. FINISH COLOR AS SELECTED BY ARCHITECT. ⚠1 *WHERE NOTED ON PLANS, PENDANT MOUNT FIXTURE VIA RIGID STEMS; LENGTH AS REQUIRED TO ACHIEVE MOUNTING HEIGHT INDICATED.
SC-100	KENALL #MLHA8-96-R-XX-PP-4SL40K-DCC-DV-CDF-PM* EATON FAILSAFE "HVL LED" EQUAL LUMINAIRE LIGHTING "VISION 8" EQUAL	8"X8' ARCHITECTURAL, VANDAL-RESISTANT SURFACE MOUNTED FIXTURE WITH AN EXTRUDED ALUMINUM HOUSING WITH ROUNDED, DIE-CAST END CAPS. FIXTURE SHALL HAVE A PEARLESCENT POLYCARBONATE LENS WITH SMOOTH EXTERIOR AND LINEAR PRISMATIC INTERIOR, HELD IN PLACE WITH CAPTIVE, TAMPER-RESISTENT SCREWS.	LED CCT: 4000K CRI: >80	100 WATTS	9870 LUMENS	SURFACE	277 VOLTS	FIXTURE SHALL HAVE LIFETIME GUARANTEE: MANUFACTURER SHALL REPAIR OR REPLACE THE FIXTURE IF RENDERED INOPERABLE DUE TO PHYSICAL ABUSE FOR THE LIFE OF THE PRODUCT INSTALLATION. FINISH COLOR AS SELECTED BY ARCHITECT. *WHERE NOTED ON PLANS, PENDANT MOUNT FIXTURE VIA RIGID STEMS; LENGTH AS REQUIRED TO ACHIEVE MOUNTING HEIGHT INDICATED.
SD	NOT USED							
SE	NOT USED							
SF-42	GE LIGHTING #ALC5-0-1-H-48-D-4-S-N-V-ST-N-W LITHONIA "WL4" SERIES EQUAL EATON METALUX "SLSTP" SERIES EQUAL	4' NOMINAL LINEAR STRIP FIXTURE WITH DIFFUSING WHITE ACRYLIC LENS, AND STEEL OR ALUMINUM HOUSING AND END CAPS.	LED CCT: 4000K CRI: >80	42 WATTS	3940 LUMENS	WALL	277 VOLTS	SURFACE MOUNT FIXTURE TO FINISHED CEILING. WHEN LOCATED IN ROOMS WITH NO CEILING / EXPOSED TO STRUCTURE, MOUNT FIXTURE TO UNDERSIDE OF STRUCTURE.
SG-8	BRUCK LIGHTING #138-543-WH-4 HALO "HU10" SERIES EQUAL NORA LIGHTING "NUD-77" SERIES EQUAL STARFIRE "LUC" SERIES EQUAL	18" LONG, LOW PROFILE UNDERCABINET LIGHT FIXTURE WITH ASYMMETRIC LIGHT DISTRIBUTION AND DIFFUSE LENS.	LED CCT: 4000K CRI: >80	8 WATTS	375 LUMENS	SURFACE	120 VOLTS	MOUNT FIXTURE ALONG FRONT EDGE OF CABINET, WITH ASYMMETRIC LIGHT DISTRIBUTION AIMED TOWARD BACK WALL. PROVIDE ONE 8-WATT POWER SUPPLY PER FIXTURE AND ALL CABLES, MOUNTING HARDWARE, AND ACCESSORIES REQUIRED FOR A COMPLETE SYSTEM.

GENERAL NOTES:

1. UNLESS OTHERWISE NOTED, ALL FIXTURES SHALL BE DIMMABLE VIA 0-10V CONTROL. PROVIDE DIMMING CONTROL INTERFACE EQUIPMENT AS REQUIRED FOR SPECIFIC LEDS AND DRIVER IN RESPECTIVE FIXTURE SUBMITTED FOR APPROVAL.
2. THE MAJORITY OF THE FIRST-NAME SPECIFIED LIGHTING PRODUCTS ARE LISTED WITH ENERGY STAR OR THE DESIGN LIGHTS CONSORTIUM (DLC); OR HAVE NOT BEEN SUBMITTED BY THE MANUFACTURER, BUT HAVE ENERGY EFFICIENT CHARACTERISTICS THAT WOULD LIKELY QUALIFY THEM FOR LISTING. THE CONTRACTOR SHALL BE RESPONSIBLE TO COLLECT DOCUMENTATION VERIFYING DLC OR ENERGY STAR LISTING FOR EACH PRODUCT AS PART OF THE SHOP DRAWING REVIEW PROCESS. IF A PRODUCT IS NOT LISTED, CONTRACTOR SHALL OBTAIN DOCUMENTATION FROM RESPECTIVE MANUFACTURER THAT DEMONSTRATES THAT THE PRODUCT WOULD MEET THE QUALIFICATIONS OF DLC OR ENERGY STAR, HAD THE PRODUCT BEEN SUBMITTED TO ONE OF THOSE ORGANIZATIONS. SUBMIT DOCUMENTATION TO LOCAL UTILITY (BGE) FOR PRE-APPROVAL, PRIOR TO SUBMITTING LIGHTING PACKAGE TO A/E TEAM FOR REVIEW. ALONG WITH THE SHOP DRAWING SUBMITTAL, INCLUDE WRITTEN VERIFICATION FROM UTILITY INDICATING THAT THEY APPROVE OF THE EQUIPMENT IN TERMS OF THE UTILITY ENERGY REBATES (BGE SMARTENERGY SAVERS PROGRAM). THE CONTRACTOR SHALL BE RESPONSIBLE FOR GATHERING ALL DOCUMENTATION FOR UTILITY ENERGY REBATES, AND FOR FILLING OUT AND SUBMITTING ALL APPLICATIONS FOR THESE REBATES ON THE OWNER'S BEHALF.

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	MANUFACTURER / CATALOG NUMBER	LIGHT FIXTURE DESCRIPTION	LIGHT SOURCE	MAXIMUM FIXTURE INPUT POWER	MINIMUM LUMINOUS FLUX (INITIAL DELIVERED LUMENS)	MOUNTING LOCATION	FIXTURE VOLTAGE	REMARKS/INSTRUCTIONS
TA-360	LIGHTING SERVICES INC. FIXTURE: #SSLGR38CL-00-XX TRACK: #31XXX SERIES 3 AMP CURRENT LIMITER: #TCL3X RIGID STEM SUPPORTS: #73XXX SERIES ACCESSORIES: #CROSS BAFFLE C, #C995* EDISON PRICE "SIGHTLINE" SERIES TRACK AND "MINIMA 38" SERIES FIXTURE EQUAL LITELAB "EUTRAC SPEC TRACK" SERIES TRACK AND "F22PAR38" SERIES FIXTURE EQUAL	ONE-CIRCUIT TRACK LIGHTING SYSTEM WITH DIMMABLE, LINE VOLTAGE LED TRACK HEADS. TRACK SHALL BE MADE OF EXTRUDED ALUMINUM WITH OVERALL HEIGHT BETWEEN 1.094" AND 1.781", AND OVERALL WIDTH BETWEEN 1" AND 1.813". TRACK SHALL HAVE ONE FLAT COPPER BUSBAR, ONE NEUTRAL BUSBAR, SECURE BUSBAR INSULATION, AND SHALL HAVE THE ABILITY TO BE DIRECTLY SURFACE MOUNTED OR SUSPENDED FROM RIGID STEM SUSPENSION SYSTEM. LIGHT FIXTURE SHALL BE FULLY ADJUSTABLE AND SHALL HAVE A MEDIUM SCREW BASE SOCKET, ALUMINUM HOUSING WITH VENTING, A TRACK FITTING WITH INTEGRAL ON/OFF SAFETY SWITCH, AND A REMOVABLE CROSS-BAFFLE.	PAR38 LED MEDIUM SCREW BASE CCT: 3000K CRI: 90, 80>50 SPOT (9°-15°) AND FLOOD (36°-40°) SYLVANIA "ULTRA PRO LED" SERIES, GREEN CREATIVE "TITANIUM CRI" SERIES, OR SORAA "VIVID" SERIES	360 WATTS PER RUN OF TRACK 18.5 WATTS PER LAMP	1000 LUMENS PER LAMP	TRACK - PENDANT/ SURFACE	120 VOLTS	FINISH COLOR AS SELECTED BY ARCHITECT FROM MANUFACTURER'S STANDARD COLORS; ALL COMPONENTS SHALL MATCH IN COLOR. IN ART STUDIOS, TRACK SHALL BE PENDANT-MOUNTED FROM RIGID STEMS, SUCH THAT THE BOTTOM OF THE TRACK IS EQUAL IN ELEVATION TO THE BOTTOM OF THE 'PA-XX' PENDANT LIGHTS IN THE RESPECTIVE ROOM, UNLESS OTHERWISE NOTED. IN OTHER LOCATIONS, TRACK SHALL BE SURFACE MOUNTED TO UNDERSIDE OF CEILING GRID, UNLESS OTHERWISE NOTED. PROVIDE QUANTITY OF TRACK HEADS SHOWN ON LIGHTING PLAN. AIM STRAIGHT DOWN, UNLESS OTHERWISE DIRECTED BY OWNER. WITHIN EACH ROOM, PROVIDE HALF OF THE FIXTURES WITH A SPOT DISTRIBUTION LAMP AND THE OTHER HALF WITH A FLOOD DISTRIBUTION LAMP; ALTERNATE LAMP TYPE WITH EVERY OTHER FIXTURE. PROVIDE A DIMMER SWITCH AND WIRING THAT IS COMPATIBLE WITH SPECIFIED FIXTURE, LAMP, AND TRACK COMPONENTS. SUBMIT WRITTEN VERIFICATION FROM THE DIMMER, FIXTURE, AND LAMP MANUFACTURERS INDICATING THEIR EQUIPMENT IS FULLY COMPATIBLE WITH ONE ANOTHER. PROVIDE FLEXIBLE TRACK JOINER WHERE SHOWN ON PLAN FOR TRACK SEGMENTS TO BE CONNECTED AT AN ANGLE OTHER THAN 90° OR 180°. PROVIDE ONE (1) 3-AMP CURRENT LIMITING DEVICE FOR EACH CONTINUOUS RUN OF TRACK. PROVIDE WORKING SAMPLE OF PROPOSED FIXTURE, TRACK, LAMP, AND ACCESSORIES DURING SHOP DRAWING REVIEW SUBMITTAL PROCESS. *PROVIDE 50°X50° SPREAD LENS (LSI #C995, OR EQUAL BY OTHER APPROVED MANUFACTURER) WHERE NOTED ON PLANS.
WA-42	GE LIGHTING #ALC5-0-1-H-48-D-4-S-N-V-ST-N-W LITHONIA "WL4" SERIES EQUAL EATON METALUX "SLSTP" SERIES EQUAL	4' NOMINAL LINEAR STRIP FIXTURE WITH DIFFUSING WHITE ACRYLIC LENS, AND STEEL OR ALUMINUM HOUSING AND END CAPS.	LED CCT: 4000K CRI: >80	42 WATTS	3940 LUMENS	WALL	277 VOLTS	MOUNT FIXTURE ON WALL IN HORIZONTAL ORIENTATION, LOCATED 6" ABOVE TOP OF DOOR FRAME.
WB-26	CANLET #68-01-20W-L-W-F-18 RIG-A-LITE "AVP LED" SERIES EQUAL ADRA "AVPH LED" SERIES EQUAL	WALL MOUNTED, ENCLOSED AND GASKETED, INDUSTRIAL "JELLY JAR" STYLE FIXTURE WITH IMPACT-RESISTANT HOUSING AND GUARD, IN WHITE FINISH. FIXTURE SHALL HAVE A FROSTED GLASS GLOBE AND STAINLESS STEEL HARDWARE. FIXTURE SHALL HAVE ONE-PIECE SILICONE GASKETS, SHALL BE UL LISTED FOR WET LOCATIONS, AND SHALL HAVE NEMA 4X RATING.	LED CCT: 4000K CRI: >80	26 WATTS	1740 LUMENS	WALL	277 VOLTS	MOUNT FIXTURE ON WALL IN ELEVATOR PIT. COORDINATE EXACT FINAL LOCATION WITH ALL OTHER EQUIPMENT.
WC	NOT USED							
WD	NOT USED							
WE-XX*	LEDALITE #7508-L-A-E-Q-N-XX*-7/3**-2-E-X FOCAL POINT "DART" SERIES EQUAL FINELITE "SERIES 18 LED" EQUAL	SEMI-INDIRECT LINEAR WALL MOUNT FIXTURE WITH RECTILINEAR CROSS SECTION, 4"W X 2-1/4"H, AND FLAT END CAPS. FIXTURE SHALL HAVE A DIFFUSE BOTTOM LENS (APPROX. 10% DOWNLIGHT), A CLEAR TOP LENS / DUST COVER (APPROX. 90% UPLIGHT), AND SHALL HAVE AN ASYMMETRIC LIGHT DISTRIBUTION, AIMED AWAY FROM WALL. FIXTURE SHALL BE MOUNTED TO A LOW PROFILE WALL BRACKET THAT IS CONCEALED BEHIND FIXTURE. NOMINAL FIXTURE LENGTHS: WE-38 = 4 FT. WE-76 = 8 FT. WE-114 = 12 FT. WE-152 = 16 FT.	LED CCT: 4000K CRI: >80	38 WATTS PER 4FT SECTION	2870 LUMENS PER 4FT SECTION	WALL	277 VOLTS	PROVIDE FIXTURE RUNS IN CONTINUOUS ROWS, IN TOTAL OVERALL LENGTHS AS SHOWN ON THE DRAWINGS. FOR LONGER FIXTURE ROWS THAT ARE ASSEMBLED FROM SHORTER SEGMENTS, SEGMENTS SHALL BE JOINED TOGETHER SUCH THAT THERE ARE NO LIGHT LEAKS AND NO VISIBLE SEAMS FROM NORMAL OCCUPANT VIEWING DISTANCES; FIXTURE ROWS SHALL BE COMPLETELY STRAIGHT AND HUNG LEVEL. FIXTURE SHALL BE MOUNTED SO THAT THE BOTTOM OF THE FIXTURE IS EQUAL IN ELEVATION TO THE PA-XX PENDANT FIXTURES WITHIN THE SAME ROOM, UNLESS OTHERWISE NOTED ON THE DRAWINGS. IN AREAS WITH FINISHED CEILINGS, FIXTURE SHALL BE MOUNTED NO LESS THAN 18" BELOW THE CEILING. FIXTURE TYPES PA-XX AND WE-XX SHALL BE FURNISHED FROM SAME MANUFACTURER. FINISH COLOR AS SELECTED BY ARCHITECT. *FIXTURES SHOWN ON LIGHTING PLANS HAVE 2 OR 3 NUMERALS IN THE FIXTURE TAG, INSTEAD OF THE "XX" NOTED IN THE FIXTURE SCHEDULE (FOR EXAMPLE, WE-38 INSTEAD OF WE-XX). THE NUMERALS INDICATE THE NOMINAL INPUT WATTAGE FOR THE OVERALL FIXTURE ROW. ALSO REFER TO 'NOMINAL FIXTURE LENGTH' INFORMATION IN LIGHT FIXTURE DESCRIPTION COLUMN OF SCHEDULE. **FIXTURE SHALL BE DIMMABLE AND ENTIRE FIXTURE ROW SHALL DIM IN UNISON. WHERE NOTED ON PLANS FOR A PORTION OF A FIXTURE ROW TO BE CONNECTED TO NORMAL/EMERGENCY CIRCUIT, PROVIDE SEPARATE WIRING TO FIXTURE ROW TO ACCOMMODATE BOTH NORMAL AND NORMAL/EMERGENCY PORTIONS OF ROW, AND CONNECT TO CIRCUITS INDICATED ON THE PLANS. PROVIDE UL924 DEVICE(S) FOR ANY ROW OR PORTION OF A ROW THAT IS DESIGNATED TO BE NORMAL/EMERGENCY.
WF	NOT USED							
WG-166	WINONA / WINDIRECT #WLAWC804-SEH1-INT-24LONG-AL1A4-40K-MVOLT-CA-XXX ELLIPTIPAR "S104-5108" SERIES EQUAL EATON AMETRIX "ASYX-WM S3" SERIES EQUAL	WALL MOUNTED UPLIGHT WITH ALUMINUM HOUSING, CLEAR TOP LENS, HIGH OUTPUT, AND ASYMMETRIC DISTRIBUTION.	LED CCT: 4000K CRI: >80	166 WATTS	10350 LUMENS	WALL	277 VOLTS	FINISH AS SELECTED BY ARCHITECT. MOUNT FIXTURE CENTERED VERTICALLY ON UPPER WINDOWS OF NORTH WALL IN CTE FLEX SPACE 121C; AT APPROXIMATELY 14' AFF TO CENTER OF FIXTURE.
WH-29	EATON SHAPER #865-18-W-L4/840-UNV-XX ADVENT "ONTARIO AIW8913" SERIES EQUAL SELUX "CERRO LED" SERIES EQUAL REYK LIGHTING "CUSTOM FIXTURE" EQUAL	SURFACE MOUNTED, DECORATIVE WALL SCONCE WITH CIRCULAR/RADIAL FORM. FIXTURE SHALL HAVE AN OPAQUE CENTER AND LIGHT SHALL BE DISTRIBUTED SYMMETRICALLY AROUND EDGES, PUTTING FACE OF FIXTURE IN SILHOUETTE. LEDS SHALL BE CONCEALED FROM DIRECT VIEW AT ALL ANGLES.	LED CCT: 4000K CRI: >80	29 WATTS	1460 LUMENS	WALL	277 VOLTS	FINISH AS SELECTED BY ARCHITECT. FIXTURE SHALL BE MOUNTED TO WALL IN LOCATIONS INDICATED ON PLANS.
WJ

COMcheck Software Version 4.0.3.0

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2012 IECC
Project Title: Additions & Alterations at Robert Poole
Project Type: Alteration

Construction Site:
1300 W 36th Street
Baltimore, MD 21211

Owner/Agent:
Baltimore City Schools

Designer/Contractor:
RJS Architects
2010 Clipper Park Rd
Suite 101
Baltimore, MD 21211

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Common Space Types:Classroom / Lecture / Training	33194	1.30	43152
2-Common Space Types:Conference / Meeting / Multipurpose	2272	1.19	2726
3-Common Space Types:Corridor / Transition	13036	0.70	9125
4-Common Space Types:Electrical/mechanical	3280	1.10	3608
5-Common Space Types:Lobby	1697	1.10	1867
6-Common Space Types:Office - Enclosed	3396	1.10	3736
7-Common Space Types:Restroom	2278	1	2278
8-Common Space Types:Stairway	3626	0.70	2538
9-Common Space Types:Storage	6135	0.80	4908
10-Healthcare Clinic/Hospital:Exam/treatment	511	1.70	869
11-Common Space Types:Lounge recreation	675	0.80	540
12-Healthcare Clinic/Hospital:Laundry -- washing	50	0.60	30
13-Common Space Types:Office - Open plan	1218	1	1218
14-Retail:Sales area	210	1.60	336
		Total Allowed Watts =	76931

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Common Space Types:Classroom / Lecture / Training (33194 sq.ft.)				
LED 9: PA-94: Other:	1	143	94	13442
LED 10: RA-64: Other:	1	7	64	448
LED 10: PA-188: Other:	1	19	188	3572
LED 12: PA-141: Other:	1	40	141	5640
LED 13: PA-47: Other:	1	36	47	1692
LED 14: RD-46: Other:	1	2	46	92
LED 17: PA-235: Other:	1	6	235	1410
LED 19: RA-40: Other:	1	4	40	160

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
LED 20: PA-282: Other:	1	3	282	846
LED 21: RF-25: Other:	1	6	25	150
LED 22: SG-8: Other:	1	162	8	1296
LED 78: WE-76: Other:	1	1	76	76
LED 79: WE-152: Other:	1	1	152	152
LED 81: TA-360: Other:	1	5	360	1800
Common Space Types:Conference / Meeting / Multipurpose (2272 sq.ft.)				
LED 81 copy 1: PA-141: Other:	1	1	141	141
LED 81 copy 2: PA-94: Other:	1	1	94	94
LED 81 copy 3: PA-188: Other:	1	1	188	188
LED 81 copy 4: RF-18: Other:	1	10	18	180
LED 81 copy 5: RG-18: Other:	1	10	18	180
Common Space Types:Corridor / Transition (13036 sq.ft.)				
LED 7: RJ-20: Other:	1	34	20	680
LED 10: RN-76: Other:	1	12	76	912
LED 23: RA-40: Other:	1	64	40	2560
LED 24: RB-28: Other:	1	27	28	756
LED 25: RC-119: Other:	1	1	119	119
LED 25 copy 1: RC-42: Other:	1	1	42	42
LED 25 copy 2: RC-91: Other:	1	3	91	273
LED 25 copy 3: RF-18: Other:	1	6	18	108
LED 25 copy 4: RC-49: Other:	1	1	49	49
LED 25 copy 5: RC-133: Other:	1	1	133	133
LED 25 copy 6: RC-112: Other:	1	1	112	112
Common Space Types:Electrical/mechanical (3280 sq.ft.)				
LED 35: PB-74: Other:	1	23	74	1702
LED 36: PB-51: Other:	1	15	51	765
LED 36 copy 1: WA-42: Other:	1	1	42	42
Common Space Types:Lobby (1697 sq.ft.)				
LED 2: RJ-40: Other:	1	6	40	240
LED 8: RB-28: Other:	1	4	28	112
LED 12: RA-40: Other:	1	9	40	360
LED 78: RG-37: Other:	1	1	37	37
LED 79: RG-18: Other:	1	2	18	36
LED 80: RF-18: Other:	1	7	18	126
LED 81: RM-88: Other:	1	1	88	88
LED 82: TA-360: Other:	1	2	360	720
LED 2 copy 1: RJ-20: Other:	1	2	20	40
Common Space Types:Office - Enclosed (3396 sq.ft.)				
LED 47: RA-40: Other:	1	10	40	400
LED 48: RA-64: Other:	1	20	64	1280
LED 49: RB-41: Other:	1	2	41	82
LED 50: PA-94: Other:	1	1	94	94
LED 51: PA-47: Other:	1	2	47	94
LED 52: RF-25: Other:	1	1	25	25
LED 53: RF-18: Other:	1	2	18	36
LED 54: RB-28: Other:	1	6	28	168
LED 55: RA-54: Other:	1	1	54	54
LED 56: PA-141: Other:	1	1	141	141
Common Space Types:Restroom (2278 sq.ft.)				
LED 65: RC-105: Other:	1	2	105	210
LED 4: RC-70: Other:	1	1	70	70
LED 57: RC-112: Other:	1	3	112	336
LED 60: RC-49: Other:	1	18	49	882
LED 61: RC-21: Other:	1	1	21	21
LED 63: RC-56: Other:	1	2	56	112

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
LED 63 copy 1: RC-28: Other:	1	1	28	28
LED 64: RC-91: Other:	1	1	91	91
LED 58: RC-126: Other:	1	1	126	126
LED 59: RC-161: Other:	1	1	161	161
LED 62: RC-35: Other:	1	1	35	35
LED 66: RF-18: Other:	1	13	18	234
LED 66 copy 1: RL-18: Other:	1	2	18	36
Common Space Types:Stairway (3626 sq.ft.)				
LED 67: SB-75: Other:	1	10	75	750
LED 68: SC-100: Other:	1	20	100	2000
LED 69: RF-18: Other:	1	6	18	108
LED 70: RB-28: Other:	1	3	28	84
LED 70 copy 1: WA-42: Other:	1	2	42	84
Common Space Types:Storage (6135 sq.ft.)				
LED 71: RD-46: Other:	1	14	46	644
LED 72: RD-67: Other:	1	4	67	268
LED 73: RE-45: Other:	1	10	45	450
LED 74: RE-36: Other:	1	9	36	324
LED 75: WA-42: Other:	1	2	42	84
LED 76: RD-46: Other:	1	1	46	46
LED 77: SF-42: Other:	1	9	42	378
LED 83: RB-28: Other:	1	4	28	112
Healthcare Clinic/Hospital:Exam/treatment (511 sq.ft.)				
LED 37: RA-64: Other:	1	2	64	128
LED 38: RA-40: Other:	1	2	40	80
LED 39: WE-47: Other:	1	3	47	141
Common Space Types:Lounge recreation (675 sq.ft.)				
LED 41: RB-41: Other:	1	1	41	41
LED 42: RA-40: Other:	1	10	40	400
LED 83: RA-54: Other:	1	1	54	54
LED 83 copy 1: RA-64: Other:	1	17	64	1088
LED 83 copy 2: PA-141: Other:	1	1	141	141
LED 83 copy 3: RF-18: Other:	1	1	18	18
Healthcare Clinic/Hospital:Laundry -- washing (50 sq.ft.)				
LED 78: RD-46: Other:	1	1	67	67
Common Space Types:Office - Open plan (1218 sq.ft.)				
LED 78 copy 1: RA-64: Other:	1	3	64	192
LED 78 copy 2: PA-94: Other:	1	2	94	188
LED 78 copy 3: RB-28: Other:	1	6	28	168
LED 78 copy 3: PA-141: Other:	1	2	141	282
LED 78 copy 3: SG-8: Other:	1	3	8	24
LED 78 copy 3: PA-47: Other:	1	2	47	94
LED 78 copy 3: RF-25: Other:	1	1	25	25
LED 78 copy 2: RF-18: Other:	1	1	18	18
Retail:Sales area (210 sq.ft.)				
LED 78 copy 3: RF-25: Other:	1	2	25	50
LED 78 copy 4: RF-18: Other:	1	1	18	18
LED 78 copy 5: SG-8: Other:	1	2	8	16
			Total Proposed Watts =	54852

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2012 IECC requirements in *COMcheck* Version 4.0.3.0 and to comply with the mandatory requirements listed in the Inspection Checklist.

1 / E 702 LIGHTING COMCHECK COMPLIANCE CERTIFICATE - EXISTING BUILDING ALTERATION
NO SCALE

COMcheck Software Version 4.0.3.0

Interior Lighting Compliance Certificate

Project Information

Energy Code: 2012 IECC
Project Title: Additions & Alterations at Robert Poole
Project Type: Addition

Construction Site:
1300 W 36th St.
Baltimore, MD 21211

Owner/Agent:
Baltimore City Schools

Designer/Contractor:
jRS Architects
2010 Clipper Park Rd
Baltimore, MD 21211

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Common Space Types:Classroom / Lecture / Training	23394	1.30	30412
2-Common Space Types:Corridor / Transition	7171	0.70	5020
3-Common Space Types:Electrical/mechanical	845	1.10	930
4-Common Space Types:Lobby	472	1.10	519
5-Common Space Types:Office - Enclosed	1416	1.10	1558
6-Gymnasium/fitness center:Playing area	11403	1.39	15864
7-Common Space Types:Restroom	3459	1	3459
8-Common Space Types:Stairway	822	0.70	575
9-Common Space Types:Storage	3667	0.80	2934
10-Retail:Sales area	210	1.60	336
11-Common Space Types:Family dining area	3707	1.39	5190
12-Common Space Types:Food preparation	1831	1.19	2197
13-Healthcare Clinic/Hospital:Laundry -- washing	87	0.60	52
14-Common Space Types:Locker room	1940	0.80	1552
15-Common Space Types:Office - Open plan	951	1	951
		Total Allowed Watts =	71649

Proposed Interior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Common Space Types:Classroom / Lecture / Training				
LED 10: PA-47: Other:	1	11	47	517
LED 10: PA-94: Other:	1	87	94	8178
LED 10: PA-141: Other:	1	26	141	3666
LED 11: RA-40: LED Panel 40W:	1	16	40	640
LED 11: RJ-40: LED Other Fixture Unit 40W:	1	1	40	40
LED 12: RF-25: LED Other Fixture Unit 25W:	1	28	25	700
LED 13: RF-18: Other:	1	6	18	108
LED 14: RG-18: Other:	1	14	18	252

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
LED 15: RG-37: Other:	1	4	37	148
LED 17: RE-45: Other:	1	2	45	90
LED 19: WH-29: Other:	1	6	29	174
LED 21: RD-67: Other:	1	7	67	469
LED 22: SG-8: Other:	1	71	8	568
LED 23: PJ-109: Other:	1	19	109	2071
LED 24: RC-168: Other:	1	1	168	168
LED 24: PA-188: Other:	1	6	188	1128
LED 78: RB-28: Other:	1	16	28	448
LED 79: WJ-9: Other:	1	1	9	9
LED 73: TA-360: Other:	1	2	360	720
2-Common Space Types:Corridor / Transition				
LED 29: RA-40: Other:	1	59	40	2360
LED 31: RD-46: Other:	1	2	46	92
LED 32: RN-76: Other:	1	5	76	380
LED 34: WJ-9: Other:	1	2	9	18
3-Common Space Types:Electrical/mechanical				
LED 36: PB-74: Other:	1	1	74	74
LED 39: PB-51: Other:	1	10	51	510
LED 39 copy 1: WA-42: Other:	1	8	42	336
LED 39 copy 2: WB-26: Other:	1	8	26	208
4-Common Space Types:Lobby				
LED 2: RN-76: Other:	1	1	76	76
LED 8: RA-40: LED Other Fixture Unit 28W:	1	6	40	240
LED 48: RF-18: Other:	1	1	18	18
5-Common Space Types:Office - Enclosed				
LED 49: RA-64: Other:	1	7	64	448
LED 50: RB-41: Other:	1	4	41	164
LED 51: RA-40: Other:	1	8	40	320
LED 52: PA-141: Other:	1	1	141	141
LED 53: RF-18: Other:	1	6	18	108
LED 53 copy 1: WE-47: Other:	1	1	47	47
6-Gymnasium/fitness center:Playing area				
LED 3: PD-172: Other:	1	45	172	7740
7-Common Space Types:Restroom				
LED 55: RC-49: Other:	1	6	49	294
LED 57: RL-18: Other:	1	16	18	288
LED 65: RC-70: Other:	1	4	70	280
LED 56: RF-18: Other:	1	2	18	36
LED 61: RC-112: Other:	1	2	112	224
LED 63: RE-45: Other:	1	2	45	90
LED 60: RC-98: Other:	1	1	98	98
LED 59: RC-49: Other:	1	1	49	49
8-Common Space Types:Stairway				
LED 67: SC-100: Other:	1	6	100	600
LED 68: RF-18: Other:	1	3	18	54
LED 68 copy 1: WA-42: Other:	1	2	42	84
9-Common Space Types:Storage				
LED 69: RD-67: Other:	1	2	67	134
LED 70: RD-46: Other:	1	9	46	414
LED 71: RH-77: Other:	1	8	77	616
LED 72: RE-45: Other:	1	6	45	270
LED 73: SA-50: Other:	1	16	50	800
LED 74: WA-42: Other:	1	1	42	42
LED 74: PB-51: Other:	1	6	51	306
10-Retail:Sales area				

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
LED 27: RF-18: Other:	1	1	18	18
LED 28: RA-64: Other:	1	1	64	64
11-Common Space Types:Family dining area				
LED 37: RK-86: Other:	1	17	86	1462
LED 38: RK-43: Other:	1	22	43	946
12-Common Space Types:Food preparation				
LED 40: RH-77: Other:	1	11	77	847
LED 41: RI-50: Other:	1	7	50	350
13-Healthcare Clinic/Hospital:Laundry -- washing				
LED 41 copy 1: RD-67: Other:	1	1	67	67
14-Common Space Types:Locker room				
LED 41 copy 2: RD-46: Other:	1	1	46	46
LED 41 copy 3: RI-50: Other:	1	1	50	50
LED 41 copy 4: RC-49: Other:	1	2	49	98
LED 41 copy 5: RE-36: Other:	1	36	36	1296
15-Common Space Types:Office - Open plan				
LED 41 copy 6: RA-40: Other:	1	12	40	480
			Total Proposed Watts =	45777

Interior Lighting PASSES: Design 39% better than code

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2012 IECC requirements in *COMcheck* Version 4.0.3.0 and to comply with the mandatory requirements listed in the Inspection Checklist.

Shannon Good - Lighting Studio Director (Name - Title) Shannon Good (Signature) 7/26/16 (Date)

2 / E 702 LIGHTING COMCHECK COMPLIANCE CERTIFICATE - ADDITION
NO SCALE

JRS ARCHITECTS
2010 Clipper Park Rd.
Suite 101
Baltimore, MD 21211
410.235.7256

ASSOCIATE ARCHITECT
SCHRADER GROUP ARCHITECTURE LLC
161 LEVERINGTON AVE, SUITE 105
PHILADELPHIA, PA 19127

LANDSCAPE ARCHITECT
MAHAN RYKIEL ASSOCIATES
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BALTIMORE, MD 21211

CIVIL ENGINEER
STV, INC.
7125 AMBASSADOR RD, SUITE 200
BALTIMORE, MD 21244

STRUCTURAL ENGINEER
ALBRECHT ENGINEERING
3500 BOSTON ST, SUITE 329
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MEP ENGINEER
BRINJAC ENGINEERING
1800 N. CHARLES ST, SUITE 310
BALTIMORE, MD 21201

FOOD SERVICE
NYIKOS ASSOCIATES
18219A FLOWER HILL WAY
GAITHERSBURG, MD 20879

AVIT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD, SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056
1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
LIGHTING COMCHECK COMPLIANCE CERTIFICATE

E 702

JOSHUA PELUCCIA 7/26/2016 12:35 PM U:\PROJ\JRS ARCHITECTS, INC\MD\15.00426.00-BCPS-ROBERT POOLE RENOVATION ADDITION\F_DRAWINGS ENG\A_CADA_DRAWINGS\MEP\E702_ETC1-15.00426.00_LIGHTING COMCHECK COMPLIANCE CERTIFICATES.DWG

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Parking area (31412 ft2): Tradable Wattage				
LED 3: OA-84: LED Roadway-Parking Unit 82W:	1	8	84	672
Walkway >= 10 feet wide (7883 ft2): Tradable Wattage				
LED 4: OB-49: LED Other Fixture Unit 50W:	1	2	49	98
Illuminated length of facade wall or surface (1313 ft): Non-tradable Wattage				
LED 10: OH-36: LED Panel 36W:	1	32	36	1152
LED 14: OC-50: LED Other Fixture Unit 50W:	1	9	50	450
LED 15: OD-29: LED Other Fixture Unit 28W:	1	2	29	58
LED 16: OG-75: Other:	1	8	75	600
Entry canopy (337 ft2): Tradable Wattage				
LED 9: OE-12: Other:	1	3	12	36
Walkway < 10 feet wide (902 ft of walkway length): Tradable Wattage				
LED 10: OB-49: LED Other Fixture Unit 50W:	1	8	50	400
			Total Tradable Proposed Watts =	2471

Exterior Lighting PASSES: Design 64% better than code

Exterior Lighting Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2012 IECC requirements in COM*check* Version 4.0.3.0 and to comply with the mandatory requirements listed in the Inspection Checklist.

Shawna Good - Lighting studio Director — Name - Title

Shawna Good — Signature

7/20/16 — Date

COM*check* Software Version 4.0.3.0

Exterior Lighting Compliance Certificate

Project Information

Energy Code: 2012 IECC
Project Title: Additions & Renovations at Robert Poole
Project Type: Addition
Exterior Lighting Zone: 2 (Residential mixed use area)

Construction Site:
1300 W 36th St
Baltimore, MD 21211

Owner/Agent:
Baltimore City Schools

Designer/Contractor:
JRS Architects
2010 Clipper Park Rd
suite 101
Baltimore, MD

Allowed Exterior Lighting Power

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Driveway	13850 ft2	0.06	Yes	831
Main entry	19 ft of door	20	Yes	380
Other door (not main entry)	71 ft of door	20	Yes	1420
Parking area	31412 ft2	0.06	Yes	1885
Walkway >= 10 feet wide	7883 ft2	0.14	Yes	1104
Illuminated length of facade wall or surface	1313 ft	2.5	No	3282
Entry canopy	337 ft2	0.25	Yes	84
Walkway < 10 feet wide	902 ft of	0.7	Yes	631
			Total Tradable Watts (a) =	6335
			Total Allowed Watts =	9817
			Total Allowed Supplemental Watts (b) =	600

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Proposed Exterior Lighting Power

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Driveway (13850 ft2): Tradable Wattage				
LED 1: OB-49: LED Roadway-Parking Unit 82W:	1	7	49	343
LED 5: OA-84: LED Roadway-Parking Unit 82W:	1	1	84	84
Main entry (19 ft of door width): Tradable Wattage				
LED 6: OD-29: LED Other Fixture Unit 28W:	1	2	29	58
LED 10: OE-12: LED Linear 10W:	1	11	12	132
Other door (not main entry) (71 ft of door width): Tradable Wattage				
LED 7: OC-50: LED Other Fixture Unit 50W:	1	7	50	350
LED 11: OD-29: LED Other Fixture Unit 28W:	1	2	29	58
LED 12: OF-48: LED Other Fixture Unit 50W:	1	4	48	192
LED 13: OE-12: Other:	1	4	12	48

3 / E 702 LIGHTING COMCHECK COMPLIANCE CERTIFICATE - EXTERIOR
NO SCALE

JRS ARCHITECTS
2010 Clipper Park Rd.
Suite 101
Baltimore, MD 21211
410.235.7256

ASSOCIATE ARCHITECT
SCHRADER GROUP ARCHITECTURE LLC
161 LEVERINGTON AVE, SUITE 105
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FOOD SERVICE
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AVIT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD, SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole
Building #056
1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 16294
EXPIRATION DATE: 12/14/2016

No.	DATE	DESCRIPTION

BID ISSUE

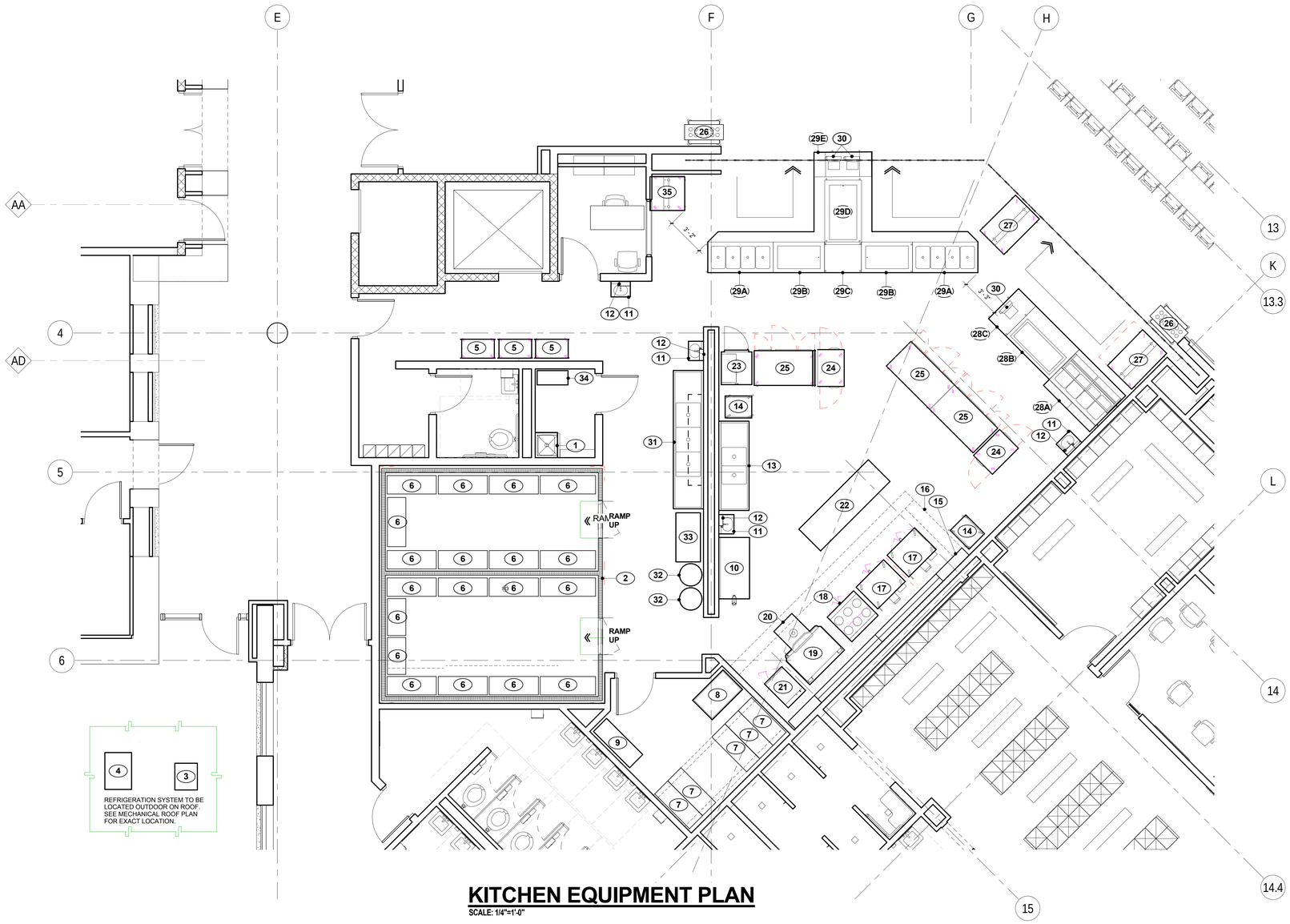
PROJECT No.: 152-01
DATE: 03/31/16
SCALE: AS NOTED

DRAWING NAME
LIGHTING COMCHECK COMPLIANCE CERTIFICATE

E 703

JOSHUA PELUCCIA 7/26/2016 12:35 PM U:\PROJ\JRS ARCHITECTS, INC\MD\15.00426.00-BCPS-ROBERT POOLE RENOVATION ADDITION\C_DRAWINGS ENGIA_CADIA_DRAWINGS\MEP\LIGHTING\E702_E703-15.00426.00_LIGHTING COMCHECK COMPLIANCE CERTIFICATES.DWG

NYIKOS ASSOCIATES, INC.
Foodservice Facilities Design/Consulting
18219-A Flower Hill Way ▮ Gaithersburg, MD 20879
Tel-(240)683-9530 ▮ Fax-(240)683-9532



KITCHEN EQUIPMENT PLAN

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

EQUIPMENT SCHEDULE

ITEM	QTY.	DESCRIPTION	REMARKS
1	1	MOP SINK & RACK	
2	1	WALK-IN COOLER/FREEZER	
3	1	COOLER REFRIGERATION SYSTEM	LOCATED OUTDOOR ON ROOF
4	1	FREEZER REFRIGERATION SYSTEM	LOCATED OUTDOOR ON ROOF
5	3	UTILITY CART, MOBILE	
6	19	SHELVING	
7	5	TRACK SHELVING SYSTEM	
8	1	CAN RACK	
9	1	DUNNAGE RACK, MOBILE	
10	1	WORKTABLE	W/ MANUAL CAN OPENER
11	4	HAND SINK	
12	4	SOAP & TOWEL DISPENSER	(N.I.K.E.C.) SPECIFIED BY ARCHITECT
13	1	PREP SINK	
14	2	PAN RACK CART, MOBILE	
15	1	UTILITY RACEWAY	
16	2	VENTILATOR	W/FIRE PROT. SYST. & MAKE-UP AIR
17	2	CONVECTION OVEN, MOBILE	DOUBLE - DECK
18	1	RANGE/OVEN, MOBILE	CONVECTION BASE
19	1	TILTING SKILLET, 40-GALLON	
20	1	FLOOR TROUGH	
21	1	CONVECTION STEAMER	DOUBLE COMPARTMENT
22	1	WORKTABLE	
23	1	REACH-IN HEATED CABINET, MOBILE	
24	2	PASS-THRU HEATED CABINET, MOBILE	
25	3	REFRIGERATED WORK TOP	
26	2	TRAY/FLATWARE DISPENSER, MOBILE	
27	2	MILK COOLER, MOBILE	
28A	1	HOT/COLD FOOD COUNTER, MOBILE	
28B	1	COLD FOOD COUNTER	
28C	1	CASHIER STAND, MOBILE	
29A	2	HOT/COLD FOOD COUNTER, MOBILE	
29B	2	COLD FOOD COUNTER, MOBILE	
29C	1	SOLID TOP COUNTER, MOBILE	
29D	1	COLD FOOD COUNTER	
29E	1	CASHIER STAND, MOBILE	
30	3	CASH REGISTER	(N.I.C.) FURNISHED BY OWNER
31	1	POT WASHING SINK	W/POWER SCRUBBER & OVERSHELF
32	2	TRASH CONTAINER, MOBILE	
33	1	POT & PAN SHELVING, MOBILE	
34	1	SHELVING	
35	1	MILK COOLER, MOBILE	

GENERAL HEALTH DEPARTMENT NOTATIONS

1. ALL PIPING, CONDUIT, AND SIMILAR WILL BE EITHER LOCATED INSIDE A WALL OR INSTALLED WITH A MINIMUM OF 3/4" SPACE FROM THE WALL OR SEALED TO THE WALL.

2. ALL DOORS TO THE OUTSIDE WILL BE SELF-CLOSING AND ROTEN PROOF.

3. A MINIMUM OF FIFTY (50) FOOT CANDLES OF SHIELDED LIGHT WILL BE PROVIDED AT ALL WORK SURFACES, STORAGE AREAS, FOOD PREPARATION AREAS, UTENSIL WASHING AREAS, TOILET ROOMS, LOCKER ROOMS, AND IN THE GARBAGE AND RUBBISH STORAGE AREAS.

4. ALL RESTROOM DOORS WILL BE SELF-CLOSING.

5. ALL RESTROOMS WILL BE EQUIPPED WITH MECHANICAL EXHAUST VENTILATION SIZED AT A MINIMUM RATE OF TWO (2) CUBIC FEET PER MINUTE PER SQUARE FOOT OF FLOOR AREA AND EXHAUSTING DIRECTLY TO THE OUTSIDE.

6. ALL FLOOR MOUNTING EQUIPMENT WILL BE PLACED ON NATIONAL SANITATION FOUNDATION (NSF) APPROVED SIX (6) INCH LEGS, OR THE EQUIVALENT, AND PROPERLY SPACED FROM ADJACENT EQUIPMENT OR WALLS, OR PLACED ON NSF APPROVED CASTERS, OR THE EQUIVALENT; OR PROPERLY SEALED TO ALL ADJACENT SURFACES.

7. ALL COUNTER MOUNTED FOOD SERVICE EQUIPMENT WEIGHING IN EXCESS OF EIGHTY (80) POUNDS WILL BE MOUNTED ON NSF APPROVED FOUR (4) INCH HIGH LEGS.

8. ALL EXPOSED RAW WOOD WILL BE SEALED.

9. ALL ANULAR OPENINGS IN CONSTRUCTION WILL BE SEALED TO 1/32TH OF AN INCH.

10. ALL AISLES WILL BE A MINIMUM OF THIRTY SIX (36) INCHES WIDE PER NATIONAL FIRE PROTECTION ASSOCIATION 101.

11. THE OUTSIDE STORAGE OF REFUSE WILL BE IN ROOTEN-PROOF CONTAINERS ON A PAVED SURFACE.

12. ALL SINK INSTALLATIONS WILL BE EQUIPPED WITH HOT AND COLD RUNNING WATERT THROUGH A MIXING VALUE OR COMBINATION FAUCET.

13. ALL PAINTING WILL BE WITH LEAD-FREE, NON-METALLIC ENAMEL PAINT OR A HIGH QUALITY VARNISH.

14. WASTE WATER FROM ALL APPLICABLE FOOD SERVICE EQUIPMENT WILL BE INDIVIDUALLY PLUMBED TO AN OPEN SITE DRAIN WITH A MINIMUM ONE INCH AIR GAP.

THE USE OF SEALANTS IN FOOD SERVICE EQUIPMENT

1. ALL SEALANTS MUST BE LISTED AS APPROVED BY THE NATIONAL SANITATION FOUNDATION (NSF) UNDER 51.

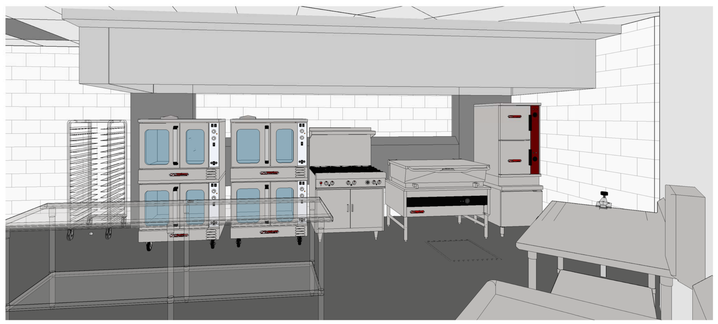
2. SEALANTS SHALL BE USED ONLY ON STRUCTURALLY SOUND JOINTS AND SEAMS.

3. SEALANTS MAY BE USED TO FILL SPACES AND OPENINGS SUCH AS, BUT NOT LIMITED TO, BLIND RIVET HEADS AND SLOT AND PHILLIPS HEAD SCREWS.

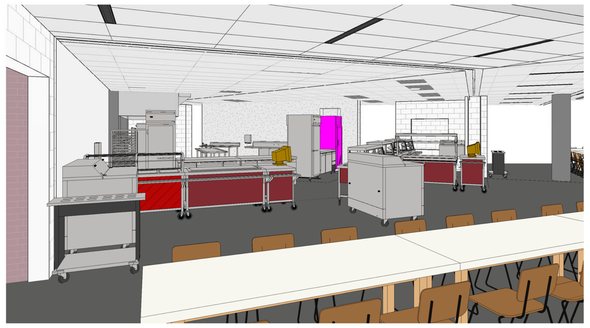
4. OPENINGS AROUND SERVICE AND UTILITY LINES SHOULD BE CLOSED INSOFAR AS PRACTICAL BY:
   A. COLLARS AND GROMMETS.
   B. FLEXIBLE FORM GASKETS.

   SEALANTS MAY BE USED TO SEAL SERVICE AND UTILITY LINES TO WALL AND ADJACENT PIECES OF EQUIPMENT WHERE THE SPACING IS. CLOSED TO LESS THAN 1/8 OF INCH.

5. SEALANTS MAY NOT BE UTILIZED IN FOOD AND SPLASH CONTACT SURFACES, TO FILL OPEN SPACES, OR VOIDS WHICH RESULT DUE TO IMPROPER DESIGN OR FABRICATION. ANY OPENING IN EXCESS OF 1/8 INCH SHALL BE CONSIDERED EXCESSIVE AND MUST BE CLOSED USING PROPER FIELD JOINTS.



KITCHEN VIEW AT COOKING LINE



KITCHEN VIEW AT SERVING LINE

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MEP ENGINEER
BRUNJAC ENGINEERING
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EDUCATIONAL SYSTEMS PLANNING
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ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056

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LICENSE NO.: 8602
EXPIRATION DATE: 8/3/2015

No.	DATE	DESCRIPTION

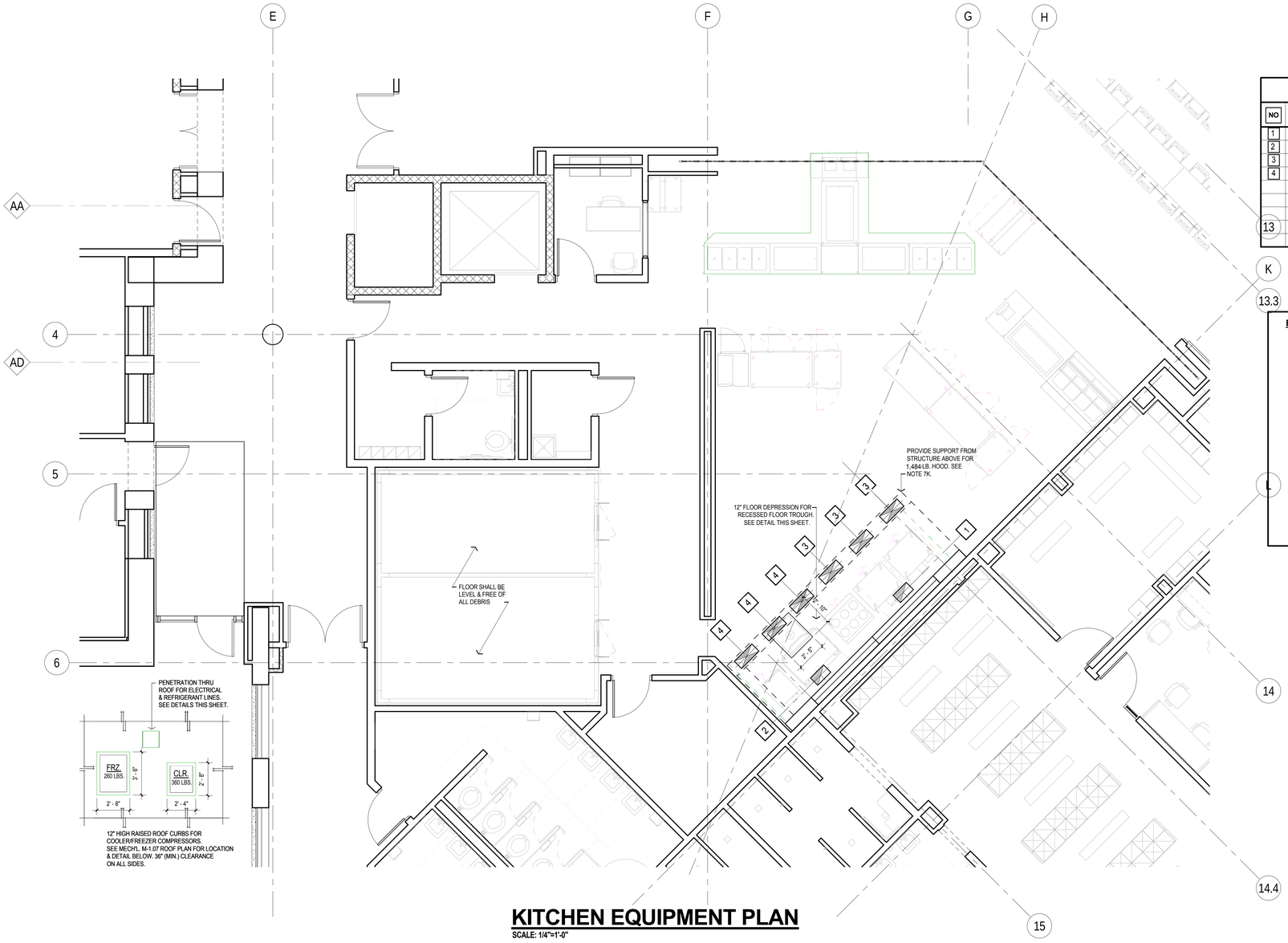
CONFORMED SET

PROJECT No.: 152-01
DATE: 04/06/16
SCALE: 1/4" = 1'-0"
DRAWING NAME

KITCHEN EQUIPMENT PLAN

K101

7/27/2016 12:40:33 PM



KITCHEN EQUIPMENT PLAN

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

VENTILATION SCHEDULE

NO	SIZE	C.F.M. EXHAUST	C.F.M. SUPPLY	TOTAL C.F.M.	W.G.S.P. @ COLLAR	CONN. HGT. A.F.F.	DESCRIPTION
1	10" x 18"	1,900		1,900	-0.596"	9'-6"	
2	10" x 18"	1,883		1,883	-0.603"	9'-6"	
3	10" x 24"		521(3)*	1,563*	0.149"	9'-6"	BUILT-IN BALANCING DAMPER
4	10" x 24"		470(3)*	1,410*	0.123"	9'-6"	BUILT-IN BALANCING DAMPER

* PROVIDE TEMPERED SUPPLY AIR DURING WINTER MONTHS: 55° to 60°F.

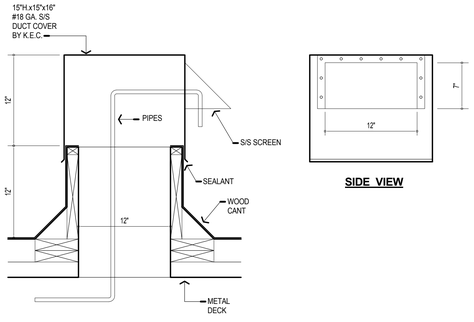
SEE SHEET K503 & K504 FOR FURTHER VENTILATOR DETAILS.

BUILDING CONDITIONS / VENTILATION SYBOLS

- FLOOR DEPRESSION
- SOLID MASONRY CURB
- THICKENED SLAB
- NON-COMBUSTIBLE WALL MATERIAL
- FINISHED WALL OPENING
- WALL BACKING
- EXHAUST DUCT/GRILL
- SUPPLY DUCT/GRILL

BUILDING CONDITIONS / VENTILATION NOTES:

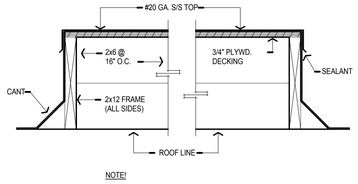
1. ALL WORK INDICATED ON THIS PLAN AND IN THESE NOTES SHALL BE BY OTHER THAN THE KITCHEN EQUIPMENT CONTRACTOR, UNLESS NOTED "BY K.E.C."
2. WALLS, FLOORS AND CEILINGS IN KITCHEN, PREP, SERVICE, AND DISHWASHING AREAS, OR ANY OTHER LOCATION WHERE FOOD OR BEVERAGES ARE PREPARED, SHALL BE SMOOTH, EASILY-CLEANABLE, NON-ABSORBANT, AND DURABLE. WALLS AND CEILINGS SHALL BE LIGHT COLORED.
3. PARTITION WALLS BETWEEN KITCHEN AREAS AND PUBLIC AREAS SHALL BE CONTRUCTED FOR MAXIMUM SOUND CONTROL.
4. MINIMUM VENTILATION REQUIREMENTS:
   - A. KITCHEN, SERVICE, PREP AND DISHWASHING AREAS: 4 TO 6 AIR CHANGES PER HOUR.
   - B. STOREROOMS: 2 TO 3 AIR CHANGES PER HOUR.
   - C. OFFICES: 4 AIR CHANGES PER HOUR. (RECOMMEND AIR CONDITIONING).
   - D. REFRIGERATION CONDENSING UNITS: 750 C.F.M. PER H.P., SUPPLY AND EXHAUST.
   - E. OTHER AREAS: AS REQUIRED BY CODES OR AS NOTED.
   - F. VERIFY VENTILATION REQUIREMENTS SHOWN ARE IN COMPLIANCE WITH LOCAL CODES.
5. FINAL DUCT CONNECTIONS SHALL BE BY MECHANICAL CONTRACTOR, OR EQUIVALENT, UNLESS NOTED.
6. FLOOR LOADING CAPACITY SHALL BE A MINIMUM OF 100 LBS. PER SQUARE FOOT OR AS REQUIRED BY LOCAL CODES.
7. GENERAL CONTRACTOR (G.C.), OR EQUIVALENT SHALL:
   - A. PROVIDE IN-WALL REINFORCING OR BACKING, AS REQUIRED, FOR WALL-MOUNTED EQUIPMENT; COORDINATE WITH K.E.C.
   - B. SLOPE FLOOR TO FLOOR SINKS, FLOOR DRAINS, OR FLOOR TROUGHS.
   - C. PROVIDE DOOR/WALL OPENINGS AND/OR PASSAGES TO ASSURE ACCESS FOR ALL KITCHEN EQUIPMENT. COORDINATE OPENING REQUIREMENTS WITH K.E.C.
   - D. PROVIDE WALK-IN COOLER/FREEZER DEPRESSIONS, SMOOTH AND TRANSIT-LEVEL, WHERE DEPRESSIONS ARE REQUIRED. DEPTH AS NOTED.
   - E. FILL EXCESS DEPRESSIONS AROUND WALK-IN COOLER/FREEZER WITH GROUT, FINISH FLOOR MATERIAL, AND COVED BASE, AFTER COOLER/FREEZER IS INSTALLED BY K.E.C.
   - F. PROVIDE SOLID MASONRY CURBS WITH TROWEL-SMOOTH AND LEVEL FINISH.
   - G. PROVIDE FIRE-RATED MATERIALS AND/OR INSULATION AS REQUIRED FOR EXHAUST DUCTS, VENT STACKS, ROOF/WALL PENETRATIONS, ETC. PER LOCAL CODES.
   - H. PROVIDE FIRE-RATED PARTITIONS WHERE NOTED AROUND COOKING/HEAT PRODUCING EQUIPMENT PER LOCAL CODES.
   - J. PROVIDE COVED-BASE MOLDING OR COVED INTEGRAL FLOOR MATERIALS AS REQUIRED AT ALL VERTICAL SURFACES OF KITCHEN FLOORS.
   - K. PROVIDE 1/2" DIAMETER (MINIMUM) HANGER RODS FROM STRUCTURE ABOVE CEILING AS REQUIRED FOR VENTILATORS AND CEILING-MOUNTED EQUIPMENT, WHERE NOTED.



PIPE PENETRATION ENCLOSURE DETAIL

SCALE: 1-1/2"=1'-0"

SIDE VIEW



NOTE!

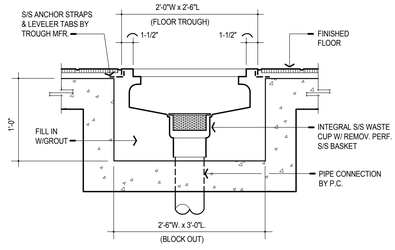
-- PLATFORM TO BE 12" HIGH & LEVEL IN BOTH DIRECTIONS

-- PROVIDE SHEET METAL HAT SECTION W/WATER-TIGHT SOLDERED JOINTS

-- BACK-FILL CURB OPENING W/INSULATION & ROOF SEALANT AFTER INSTALLATION

ROOF CURB DETAIL

SCALE: 1-1/2"=1'-0"



NOTE! TROUGH FURNISHED BY K.E.C.; INSTALLED BY G.C.

FLOOR TROUGH DETAIL

SCALE: 1-1/2"=1'-0"

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LICENSE NO.: 9002
EXPIRATION DATE: 6/30/015

No.	DATE	DESCRIPTION

CONFORMED SET

PROJECT No.: 152-01

DATE: 04/06/16

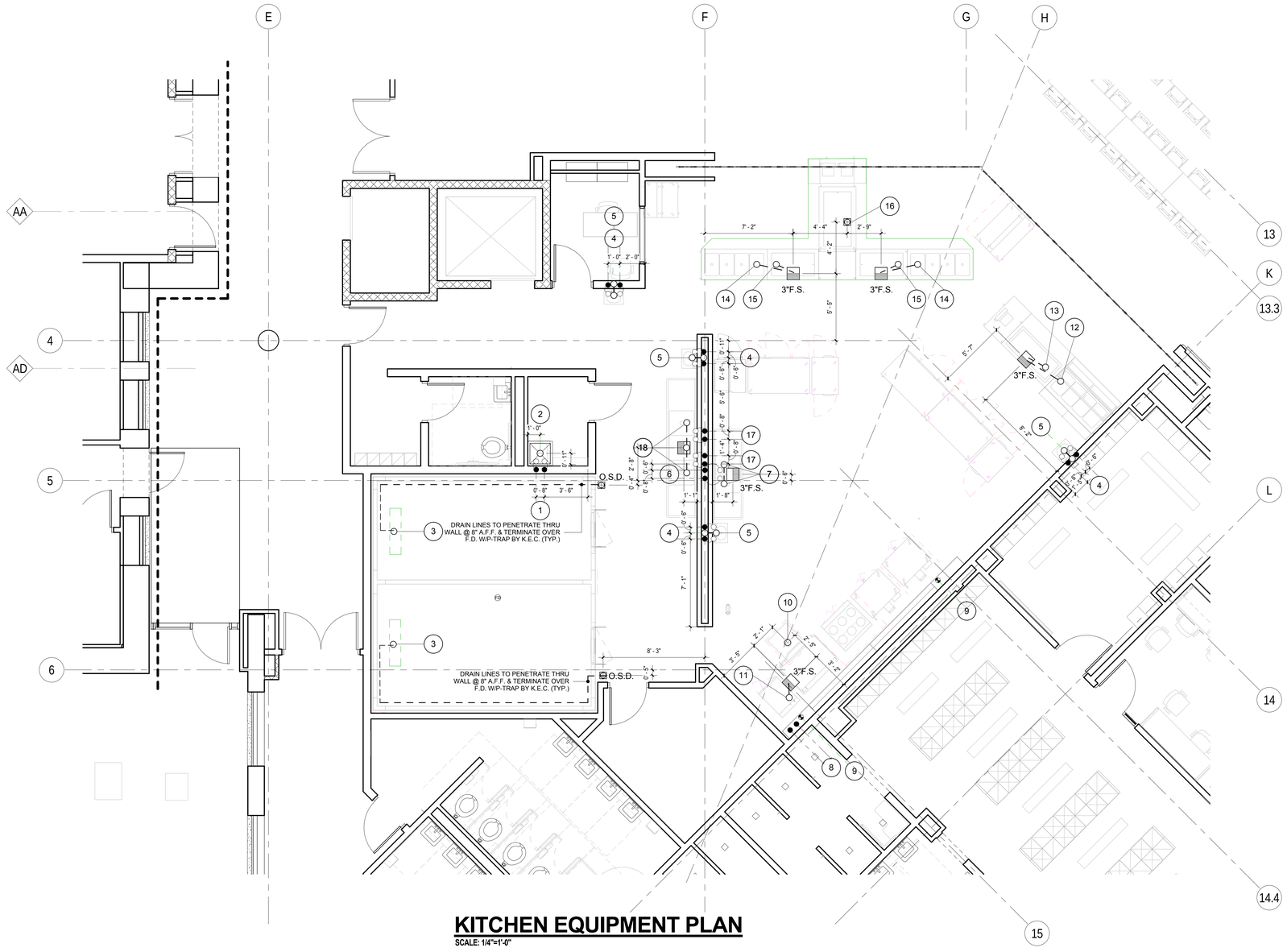
SCALE: 1/4" = 1'-0"

DRAWING NAME

BUILDING CONDITIONS & VENTILATION PLAN

K102

7/27/2016 12:41:08 PM



KITCHEN EQUIPMENT PLAN

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

PLUMBING SCHEDULE

R.I. #	WATER HW	WATER CW	WASTE DIR	WASTE IND	GAS SIZE	GAS MBH	R.I. HGT. A.F.F.	CONN. SIZE	CONN. HEIGHT.	DESCRIPTION	EQ. #
1	1/2"	1/2"					36"	0' - 0 1/2"	3' - 0"	MOP SINK FAUCET	1
2			4"				STUB	0' - 3"	0' - 3"	MOP SINK DRAIN	1
3				3/4"				0' - 0 5/8"	7' - 0"	EVAPORATOR COIL DRAIN	2
4	1/2"	1/2"					26"	0' - 0 1/2"	3' - 4"	HAND SINK FAUCET	11
5			1 1/2"				24"	0' - 1 1/2"	2' - 4"	HAND SINK DRAIN	11
(1) 6	1/2"	1/2"						0' - 0 1/2"	3' - 4"	PREP SINK FAUCET	13
7				1 1/2"				0' - 1 1/2"	1' - 10"	PREP SINK DRAIN (2)	13
(2) 8	3/4"	3/4"					D.F.A.	0' - 0 3/4"	6' - 6"	UTILITY RACEWAY	15
(2) 9					1 1/2"	1,360	D.F.A	0' - 1 1/4"	6' - 6"	UTILITY RACEWAY (LOOPED SERVICE)	15
(3) 10			3"				STUB	0' - 3"	-0' - 10"	FLOOR TROUGH DRAIN	20
11				1-1/2"				0' - 1 1/2"	3' - 2"	STEAMER DRAIN	21
12				3/4"				0' - 0 3/4"	0' - 6"	HOT/COLD FOOD COUNTER DRAIN	28A
13				3/4"				0' - 0 3/4"	0' - 6"	COLD FOOD COUNTER DRAIN	28B
14				3/4"				0' - 0 3/4"	0' - 6"	HOT/COLD FOOD COUNTER DRAIN	29A
15				3/4"				0' - 0 3/4"	0' - 6"	COLD FOOD COUNTER DRAIN	29B
16				3/4"				0' - 0 3/4"	0' - 6"	COLD FOOD COUNTER DRAIN	29D
17	3/4"	3/4"					15"	0' - 0 3/4"	3' - 4"	POT WASHING SINK FAUCET (2)	31
18				1-1/2"				0' - 1 1/2"	1' - 10"	POT WASHING SINK DRAIN (3)	31

(1) HOT & COLD WATER SERVICE FROM BOTTOM OF UTILITY RACEWAY. PROVIDE HARD PIPING THRU WALL AND CONNECT TO POTWASH SINK FAUCETS BY P.C.

(2) FLEXIBLE WATER & GAS HOSES WITH QUICK-DISCONNECT FITTINGS FURNISHED BY RACEWAY MFR.; INSTALLED ON EQUIPMENT BY PLUMBING CONTRACTOR. SEE SHEET K501 FOR FURTHER RACEWAY DETAILS.

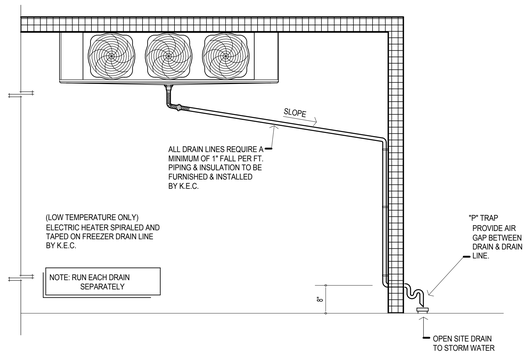
(3) SEE SHEET K103 FOR FLOOR TROUGH INSTALLATION DETAIL.

PLUMBING NOTES:

1. ALL OUTLETS AND CONNECTIONS SHOWN RELATE TO FOODSERVICE FIXTURES AND EQUIPMENT ONLY. SEE ARCHITECTURAL/ENGINEERING PLANS FOR ADDITIONAL PLUMBING REQUIREMENTS.
2. THIS PLUMBING PLAN IS INTENDED TO SHOW ROUGH-IN LOCATIONS AND HEIGHTS, CONNECTION SIZES, POSITIONS, HEIGHTS AND LOAD REQUIREMENTS. DIMENSIONS SHOWN ARE FROM FINISHED FLOORS AND FINISHED WALLS. VERIFY WALL PARTITION LOCATIONS WITH ARCHITECTURAL DRAWINGS.
3. FINAL CONNECTIONS TO ALL EQUIPMENT SHALL BE BY PLUMBING CONTRACTOR INCLUDING REQUIRED MATERIALS SUCH AS, STOPS, MIXING VALVES, FILTERS, TRAPS, CHECK VALVES, PIPING, TUBING, ETC. TO ASSURE PROPER OPERATION ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND LOCAL CODES.
4. PLUMBING CONTRACTOR (P.C.), OR EQUIVALENT, SHALL FURNISH AND INSTALL THE FOLLOWING:
   A. ALL WATER, WASTE, AND GAS SERVICE TO POINT OF ROUGH-IN AS SHOWN ON PLAN. ROUGH-IN OUTLETS TO STUB 4" OUT OF WALLS AT HEIGHT INDICATED FROM FINISHED FLOOR TO CENTERLINE OF OUTLET. FLOOR ROUGH-INS TO STUB UP 2" ABOVE FINISHED FLOOR OR CURBS. ALL FLOOR OPENINGS/PENETRATIONS ARE TO BE SEALED WATERTIGHT.
   B. PRESSURE REDUCING AND/OR REGULATING VALVES FOR DISHWASHERS, BOOSTER HEATERS, OR AS OTHERWISE NOTED IN ALL FOODSERVICE AREAS.
   C. ALL FLOOR SINKS, COMPLETE WITH TOP GRATES INDICATED, AND REMOVABLE SEDIMENT BUCKETS SET FLUSH WITH FINISH FLOOR, UNLESS NOTED.
   D. ALL WASTE LINES, DIRECT OR INDIRECT, EXCEPT AS NOTED. MINIMUM DIAMETER OF LINE SHALL BE AS INDICATED ON PLAN REGARDLESS OF CONNECTION SIZE, AND SHALL BE PITCHED DOWNWARD. MAINTAIN DRAIN LINES AS HIGH AS POSSIBLE ABOVE FLOOR FOR SANITATION AND AND CLEANING. ALL WASTE LINES SHALL HAVE ADEQUATE CLEAN-OUT PROVISIONS.
   E. INDIRECT WASTE LINES FOR WALK-IN COOLER/FREEZER BLOWER COILS SHALL BE PITCHED 1" PER FOOT OF HORIZONTAL RUN, AND TERMINATE WITH A P-TRAP OVER FLOOR SINK OR APPROVED RECEPTER WITH VACUUM BREAK AS REQUIED BY LOCAL CODE.
   F. ALL REQUIRED GREASE TRAPS, OUTSIDE THE BUILDING WHERE POSSIBLE; OTHERWISE BELOW OR SET FLUSH WITH FINISHED FLOOR.
   G. INSTALL FIRE CONTROL GAS SHUT-OFF VALVES AS SUPPLIED BY FIRE PROTECTION SYSTEM SUBCONTRACTOR PER LOCAL CODES. (IF GAS COOKING EQUIPMENT IS SPECIFIED.)
   H. VACUUM BREAKERS, AS REQUIRED, EXCEPT FOR DISHWASHERS AND DISPOSERS, AS SUPPLIED BY KITCHEN EQUIPMENT CONTRACTOR.
5. PLUMBING CONTRACTOR (P.C.), OR EQUIVALENT, SHALL INTERCONNECT DISHMACHINE WITH BOOSTER HEATER, AND WATER-TYPE VENTILATORS WITH CONTROL PANELS AS PER MANUFACTURER'S INSTRUCTIONS, WHEN APPLICABLE AND NOTED.
6. ALL VENT PIPES SHALL BE CONCEALED IN WALLS OR COLUMN CHASES. USE LOOP VENTS FOR ISLAND FIXTURES.
7. ALL EXPOSED PIPING AND FITTINGS IN KITCHEN AREAS SHALL BE CHROME-PLATED OR STAINLESS STEEL.
8. ALL LINES ROUTED THROUGH EQUIPMENT SHALL NOT INTERFERE WITH INTENDED USE OF, OR SERVICING OF, EQUIPMENT.

PLUMBING SYMBOLS

ABBREVIATION	SYMBOL	DESCRIPTION
H/CW		HOT/COLD WATER ROUGH-IN AND CONNECTION
W		WASTE ROUGH-IN AND CONNECTION
IW		INDIRECT WASTE
F.G.		FUEL GAS ROUGH-IN AND CONNECTION
F.S.		FLOOR SINK W/ HALF GRATE (W/MIN. CONN. SIZE)
F.D.		FLOOR (AREA) DRAIN
F.F.D.		FUNNEL FLOOR DRAIN
O.S.D.		OPEN SITE DRAIN (STORM WATER)
D.F.A.		DOWN FROM ABOVE



EVAPORATOR COIL DRAIN DETAIL

NO SCALE

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LICENSE NO.: 8002
EXPIRATION DATE: 6/30/15

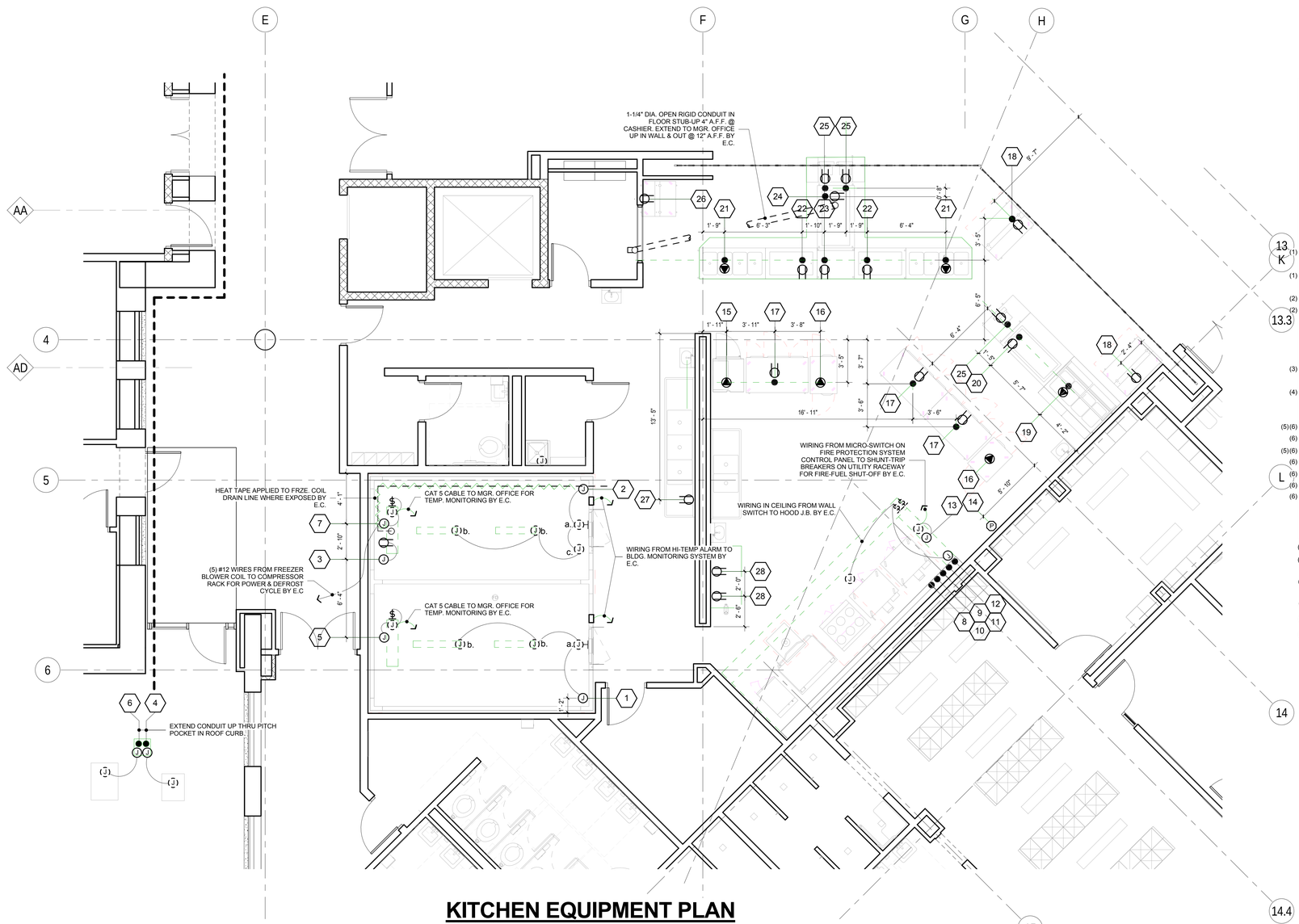
No.	DATE	DESCRIPTION

CONFORMED SET

PROJECT No.: 152-01
DATE: 04/06/16
SCALE: 1/4" = 1'-0"
DRAWING NAME:
PLUMBING ROUGH-IN PLAN

K103

7/27/2016 12:41:36 PM



KITCHEN EQUIPMENT PLAN

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

ELECTRICAL SCHEDULE

R.I. #	HP	KW	AMP	VOLT	PH	R.I. HGT. A.F.F.	DESCRIPTION	EQ. #	CORD & PLUG	RECEP.	J.B.
1						114"	BRANCH TO:				0
a.		.150		120	1		DOOR LIGHT, HEATER, ALARM	2			
b.		32W(2)		120	1		LIGHT FIXTURE (2)	2			
2						114"	BRANCH TO:				0
a.		.150		120	1		DOOR LIGHT, HEATER, ALARM	2			
b.		32W(2)		120	1		LIGHT FIXTURE (2)	2			
c.		.100		120	1		HEATED RELIEF PORT	2			
3		.150		120	1		DRAIN LINE HEAT TAPE RECEP.	2		0	0
4			20.1	208	3	STUB	COOLER COMPRESSOR RACK	3			0
5			1.8	120	1	114"	COOLER BLOWER COIL	3			0
(1) 6			21.0	208	3	STUB	FREEZER COMPRESSOR RACK	4			0
7			13.0	120	1	114"	FREEZER BLOWER COIL	4			0
(2) 8			100(svc)	480	3	D.F.A.	UTILITY RACEWAY	15			0
(2) 9			50.0(svc)	120/208	3	D.F.A.	UTILITY RACEWAY	15			0
10			30.0(cir)	208	3	D.F.A.	VENTILATOR EXHAUST CONTROL	16			0
11			30.0(cir)	208	3	D.F.A.	VENTILATOR MAKE-UP-AIR CONTROL	16			0
12			20.0(cir)	120	1	D.F.A.	VENTILATOR MGN'T CONTROL PANEL	16			0
13			20.0(cir)	120	1	108"	FIRE PROTECTION SYSTEM	16			0
(3) 14						48"	HEXAGON J-BOX, FIRE PULL	16			0
15			7.8	120/208	1	@CLG.	REACH-IN HEATED CABINET	23	0	0	
(4) 16			7.8	120/208	1	@CLG.	PASS-THRU HEATED CABINET	24	0	0	
17			12.3	120	1	STUB	REFRIGERATED WORKTOP RECEP.	25		0	
18	1/3			120	1	48"	MILK COOLER RECEP.	27		0	
(5)(6) 19			30.0	208	1	STUB	HOT/COLD FOOD COUNTER, MOBILE	28A		0	
(6) 20			7.8	120	1	STUB	COLD FOOD COUNTER RECEP.	28B		0	
(5)(6) 21			30.0	208	1	STUB	HOT/COLD FOOD COUNTER, MOBILE	29A		0	
(6) 22			6.0	120	1	STUB	COLD FOOD COUNTER RECEP.	29B		0	
(6) 23		1.0		120	1	STUB	CONVENIENCE RECEP.	29C		0	
(6) 24			7.8	120	1	STUB	COLD FOOD COUNTER	29D		0	
(6) 25			15.0(Cir)	120	1	STUB	CASH REGISTER RECEP.	30		0	
26	1/4			120	1	48"	MILK COOLER RECEP.	35		0	
27				120	1	12"	POWER SCRUBBER	31		0	
28			15.0(Cir)	120	1	50"	CONVENIENCE RECEP.			0	

(1) SEE MECH'L ROOF PLAN FOR EXACT LOCATION. ITEM FURNISHED W/MAIN-FUSED DISCONNECT SWITCH.

(2) CORD & PLUGS FOR # FURNISHED BY RACEWAY MFR.; INSTALLED ON EQUIPMENT BY E.C. SEE SHEET K501 FOR FURTHER RACEWAY DETAILS.

(3) EXTEND CONDUIT DOWN FROM JUNCTION BOX MOUNTED ABOVE FINISH CEILING TO CONTROL PANEL BY E.C. SEE SHEET K502 FOR FURTHER VENTILATOR DETAILS.

(4) EXTEND 1/2" DIA. OPEN RIGID CONDUIT FROM TOP OF PULL BOX UP IN WALL TO 6" ABOVE FINISH CLG. BY E.C.

(5) PROVIDE 208V W/ (2) HOT 4 WIRE CKT. ELECTRICAL CONTRACTOR TO EXTEND (1) HOT (1) NEUTRAL FOR 120V SUPPLY FOR REFRIGERATION.

(6) SEE FLOOR RECEPTACLE DETAIL THIS SHEET.

ELECTRICAL NOTES

1. ELECTRICAL SYSTEM IS DESIGNED FOR 120 VOLT, 1-PH; 480 VOLT, 3-PH, 4-WIRE, 60 HERTZ.

2. ALL OUTLETS AND CONNECTIONS SHOWN RELATE TO FOODSERVICE FIXTURES AND EQUIPMENT ONLY. SEE ARCHITECTURAL/ENGINEERING PLANS FOR ADDITIONAL ELECTRICAL REQUIREMENTS.

3. THIS ELECTRICAL PLAN IS INTENDED TO SHOW ROUGH-IN OUTLET TYPES, HEIGHTS AND LOCATIONS, AND CONNECTION POSITIONS AND LOAD REQUIREMENTS. ALL DIMENSIONS SHOWN ARE FROM FINISHED WALLS AND FINISHED FLOORS. VERIFY FINISH WALL PARTITION LOCATIONS WITH ARCHITECTURAL DRAWINGS.

4. ALL ELECTRICAL WORK FOR FABRICATED FOODSERVICE EQUIPMENT SHALL BE COMPLETELY WIRED BY THE FABRICATION CONTRACTOR TO A COMMON JUNCTION BOX, PULL BOX, OR CONTROL PANEL ON THE EQUIPMENT IN AN ACCESSIBLE POSITION. FINAL CONNECTIONS TO EQUIPMENT JUNCTION BOX OR PULL BOX, AND ALL ELECTRICAL WORK FROM MAIN PANEL BOARDS SHALL BE BY THE ELECTRICAL CONTRACTOR.

5. FINAL CONNECTIONS TO ALL FOODSERVICE EQUIPMENT SHALL BE PERFORMED BY THE ELECTRICAL CONTRACTOR, INCLUDING MATERIALS.

6. PIPING, CONDUIT, AND SIMILAR CONSTRUCTION, LOCATED OUTSIDE A WALL, MUST BE INSTALLED SO THAT THERE IS A MINIMUM OF 3/4 INCH SPACE BETWEEN IT AND THE WALL.

7. ELECTRICAL CONTRACTOR (E.C.), OR EQUIVALENT, SHALL FURNISH AND INSTALL THE FOLLOWING:

A. ALL JUNCTION BOXES, ELECTRICAL OUTLETS, COVER PLATES, SWITCHES, ETC. NOT BUILT INTO FIXTURES OR EQUIPMENT. ALL OUTLETS, JUNCTION BOXES, COVER PLATES, ETC. IN DISHROOMS OR AS INDICATED ON SCHEDULE SHALL BE MOISTURE-PROOF.

B. ALL PLUGS AND CORDS AS NOTED ON SCHEDULE. ALL CORDS SHALL BE N.E.M.A. RATED AND U.L. APPROVED FOR MANUFACTURED AND FABRICATED EQUIPMENT.

C. SHUNT-TRIP CIRCUIT BREAKERS OR DISCONNECTS FOR FIRE CONTROL SYSTEM SHUT-OFF OF FOODSERVICE EQUIPMENT BENEATH HOODS/VENTILATORS AS REQUIRED BY N.F.P.A.-96, LATEST EDITION, AND LOCAL CODES.

D. DISCONNECTS OR OTHER DEVICES AS REQUIRED BY CODES.

8. WHEN APPLICABLE, ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT AND WIRING, INSTALL ELECTRICAL COMPONENTS (PROVIDED BY K.E.C.), AND INTERWIRE BETWEEN THE FOLLOWING:

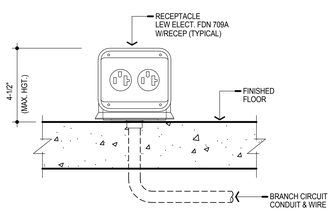
A. REMOTE REFRIGERATION SYSTEMS TO EVAPORATOR COILS.

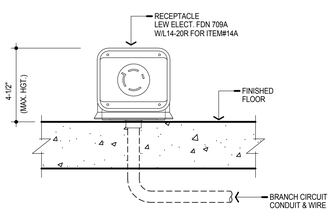
B. WALK-IN COOLER/FREEZER LIGHTS (RUN CONDUIT ABOVE COMPARTMENT CEILING).

C. REMOTE WALK-IN COOLER/FREEZER ALARM SYSTEMS (WHEN USED).

D. CONTROL PANELS TO WATER-TYPE VENTILATORS AND EXHAUST/SUPPLY FANS PER MANUFACTURER'S INSTRUCTIONS.

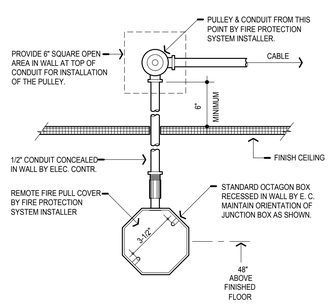
E. KITCHEN EXHAUST HOODS/VENTILATORS TO FIRE CONTROL SYSTEM AND SHUT-OFFS.





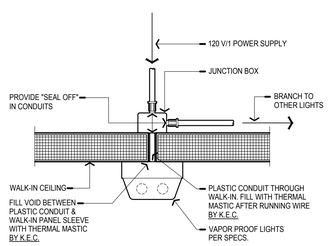
FLOOR RECEPTACLE DETAIL

SCALE: NONE



REMOTE FIRE PROTECTION PULL STATION DETAIL

SCALE: NONE



1. ALL CONDUIT TO BE RUN ON EXTERIOR CEILING OF WALK-IN.
2. ALL PENETRATIONS THRU WALK-IN ARE TO BE SEALED WITH THERMAL MASTIC BY K.E.C.
3. LIGHT FIXTURES TO BE SHIPPED LOOSE & INSTALLED BY K.E.C. FINAL CONNECTION BY ELECTRICIAN.
4. FURNISH LOW TEMPERATURE BALLAST (-20 °F) INSIDE FREEZER COMPARTMENT.
5. NO METAL CONDUIT INSIDE WALK-IN BOX.

WALK-IN LIGHT INSTALLATION DETAIL

SCALE: NONE

ELECTRICAL SYMBOLS

- JUNCTION BOX WITH FINAL CONNECTION TO EQIPMENT
- JUNCTION BOX INSTALLED IN EQUIPMENT.
- DUPLEX CONVENIENCE OUTLET
- DUPLEX CONVENIENCE OUTLET (INSTALLED IN EQUIPMENT)
- POWER OUTLET, 1 PHASE
- POWER OUTLET, 1 PHASE (INSTALLED IN EQUIPMENT)
- POWER OUTLET, 3 PHASE
- POWER OUTLET, 3 PHASE (INSTALLED IN EQUIPMENT)
- CONDUIT STUB WITH FINAL CONNECTION TO EQUIPMENT
- SWITCH
- SWITCH (INSTALLED IN EQUIPMENT BY K.E.C. OR MFR.).
- OCTAGON J-BOX, FIRE PULL.
- VAPOR PROOF LIGHT FIXTURE
- FLUORESCENT LIGHT FIXTURE
- TELEPHONE / DATA OUTLET
- D.F.A. DOWN FROM ABOVE

JRS ARCHITECTS
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CIVIL ENGINEER
STV, INC.
7125 AMBASSADOR RD, SUITE 200
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STRUCTURAL ENGINEER
ALBRECHT ENGINEERING
3500 BOSTON ST, SUITE 329
BALTIMORE, MD 21224

MEP ENGINEER
BRUNJAC ENGINEERING
1800 N. CHARLES ST, SUITE 310
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FOOD SERVICE
NYKOS ASSOCIATES
15219A FLOWER HILL WAY
GAITHERSBURG, MD 20879

AVIT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD, SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056

1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 8602
EXPIRATION DATE: 6/3/2015

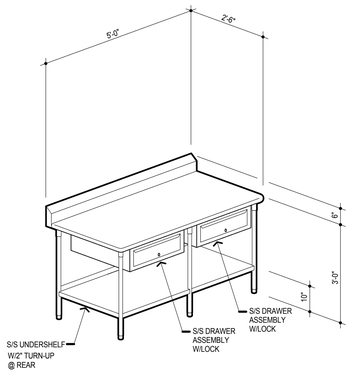
No.	DATE	DESCRIPTION

CONFORMED SET

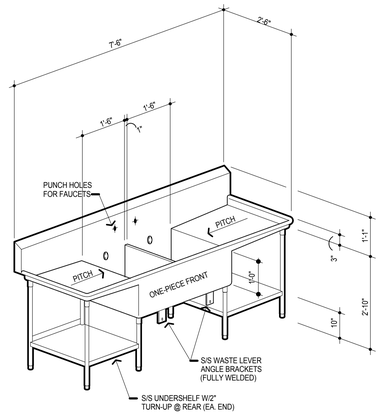
PROJECT No.: 152-01
DATE: 04/06/16
SCALE: 1/4" = 1'-0"
DRAWING NAME
ELECTRICAL ROUGH-IN PLAN

K104

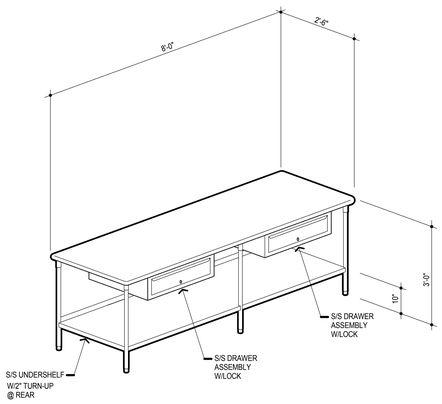
7/27/2016 12:42:11 PM



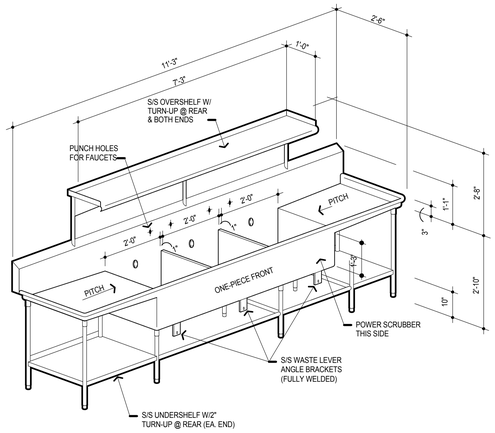
WORKTABLE 10



PREP SINK 13



WORKTABLE 22



POT WASHING SINK 31

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LICENSE NO.: 8002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

CONFORMED SET

PROJECT No.: 152-01

DATE: 04/06/16

SCALE: 1/2" = 1'-0"

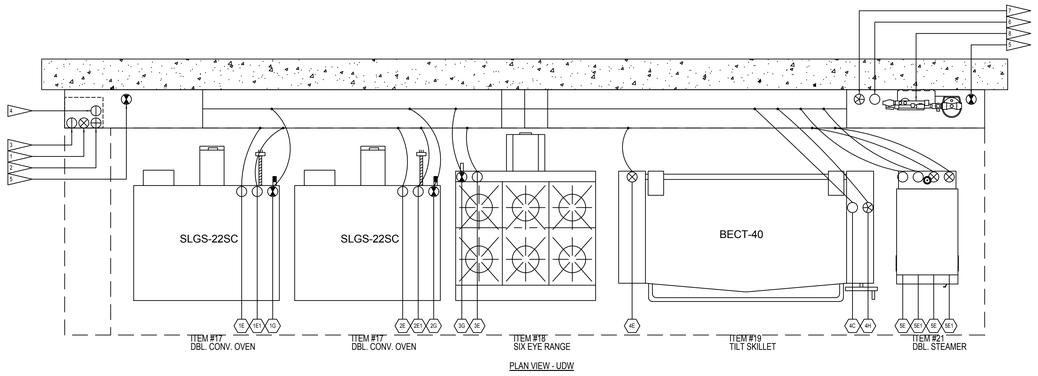
DRAWING NAME

FABRICATION DETAILS

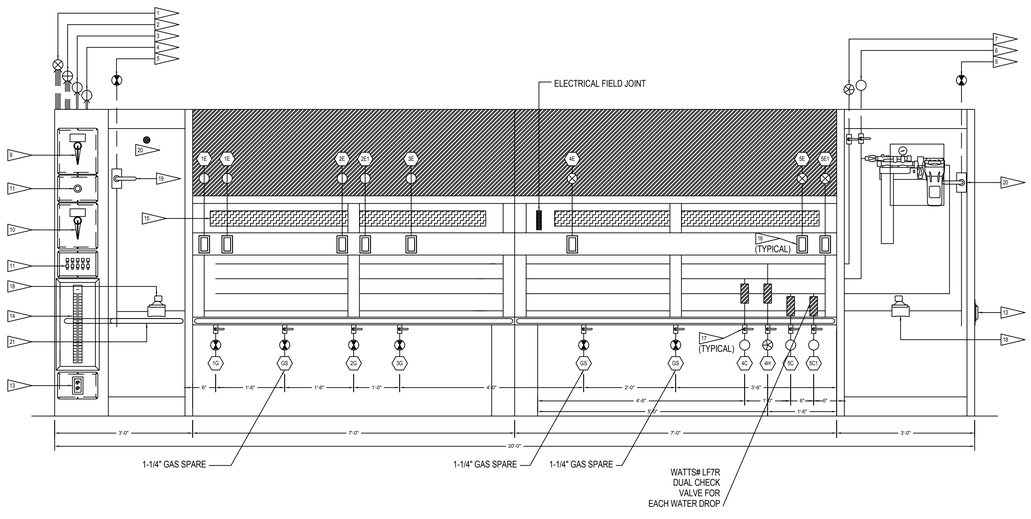
K501

7/27/2016 12:42:44 PM

ITEM 15



PLAN VIEW - UDW



UTILITY DISTRIBUTION SYSTEM EQUIPMENT SCHEDULE

EQUIPMENT				ELECTRICAL					CIRCUIT BREAKER		RECEPTACLE	GAS		WATER		STEAM			CONNECTION		NOTES
CONN.#	ITEM	DESCRIPTION	MANUFACTURER	MODEL #	KW.	AMPS	HP	VOLT	PH	AMPS	POLES	PART #	SIZE	MBH	HOT	COLD	SUPPLY	CONDRETURN	LBS/HR	TYPE	LENGTH	
1E	17	DBL. CONV. OVEN	SOUTHBEND	SLGS-22SC	1.0	7.9	-	120	1	15	1	26252	-	-	-	-	-	-	-	SUPPLIED	-	GFI BREAKER
1E1	17	DBL. CONV. OVEN	SOUTHBEND	SLGS-22SC	1.0	7.9	-	120	1	15	1	26252	-	-	-	-	-	-	-	SUPPLIED	-	GFI BREAKER
1G	17	DBL. CONV. OVEN	SOUTHBEND	SLGS-22SC	-	-	-	-	-	-	-	-	3/4"	122	-	-	-	-	-	QUICK DISCONNECT	5'	-
2E	17	DBL. CONV. OVEN	SOUTHBEND	SLGS-22SC	1.0	7.9	-	120	1	15	1	26252	-	-	-	-	-	-	-	SUPPLIED	-	GFI BREAKER
2E1	17	DBL. CONV. OVEN	SOUTHBEND	SLGS-22SC	1.0	7.9	-	120	1	15	1	26252	-	-	-	-	-	-	-	SUPPLIED	-	GFI BREAKER
2G	17	DBL. CONV. OVEN	SOUTHBEND	SLGS-22SC	-	-	-	-	-	-	-	-	3/4"	122	-	-	-	-	-	QUICK DISCONNECT	5'	-
3G	18	SIX EYE RANGE	SOUTHBEND	4361A	-	-	-	-	-	-	-	-	3/4"	230	-	-	-	-	-	QUICK DISCONNECT	5'	-
3E	18	SIX EYE RANGE	SOUTHBEND	436I1A	0.7	5.9	-	120	1	15	1	26252	-	-	-	-	-	-	-	SUPPLIED	-	GFI BREAKER
4E	19	TILT SKILLET	SOUTHBEND	BECT-40	27.0	32.5	-	480	3	50	3	CS8169	-	-	-	-	-	-	-	CORD & PLUG	6'	7L
4C	19	TILT SKILLET	SOUTHBEND	BECT-40	-	-	-	-	-	-	-	-	-	-	-	1/2"	-	-	-	QUICK DISCONNECT	5'	-
4H	19	TILT SKILLET	SOUTHBEND	BECT-40	-	-	-	-	-	-	-	-	-	-	1/2"	-	-	-	-	QUICK DISCONNECT	5'	-
5C	21	DBL. STEAMER	SOUTHBEND	EZ18-5	-	-	-	-	-	-	-	-	-	-	-	1/2"	-	-	-	QUICK DISCONNECT	5'	FILTERED
5C1	21	DBL. STEAMER	SOUTHBEND	EZ18-5	-	-	-	-	-	-	-	-	-	-	-	1/2"	-	-	-	QUICK DISCONNECT	5'	FILTERED
5E	21	DBL. STEAMER	SOUTHBEND	EZ18-5	15.0	18.0	-	480	3	30	3	L16-30R	-	-	-	-	-	-	-	CORD & PLUG	6'	7L
5E1	21	DBL. STEAMER	SOUTHBEND	EZ18-5	15.0	18.0	-	480	3	30	3	L16-30R	-	-	-	-	-	-	-	CORD & PLUG	6'	7L
D1	-	DUPLEX OUTLET	-	-	1.9	16.0	-	120	1	20	1	2095	-	-	-	-	-	-	-	SUPPLIED	-	SB-GFCI
D2	-	DUPLEX OUTLET	-	-	1.9	16.0	-	120	1	20	1	2095	-	-	-	-	-	-	-	SUPPLIED	-	SB-GFCI
TOTAL CONNECTED LOAD:					8.5	KW	23.6	AMPS		57.0	KW	68.6	AMPS	474	MBH	H.W.		STEAM SUPPLY			
FUTURE AVAILABLE LOAD CAPACITY:					5.9	KW	16.4	AMPS		9.5	KW	11.4	AMPS	886	MBH	3/4"					
SYSTEM CAPACITY:					14.4	KW	40.0	AMPS		66.5	KW	80.0	AMPS	1360	MBH	C.W.		COND. RETURN			
SERVICE SIZE:				120/208	V/	3	PH/	50	AMPS	480	V/	3	PH/	100	AMPS	1-1/2"	IPS	3/4"	-		

LEGEND
- MBH = 1000 BTU PER HOUR (1000s)
- SUPPLIED = EQUIPMENT SHIPPED WITH UNIT
- DCO = DUAL CONVENIENCE OUTLET
- SUPPLIED - KEK = ELECTRICAL CONNECTION PROVIDED BY COOKING EQUIPMENT MANUFACTURE
- SB = STRAIGHT BLADE PLUGS
- TL = TWIST LOCK PLUGS
- PS = PIN & SLEEVE PLUGS

SYMBOL SCHEDULE
COLD WATER
HOT WATER
NATURAL GAS
120 VAC 1 PHASE
208 VAC 1 PHASE
208 VAC 3 PHASE
480 VAC 3 PHASE
STEAM SUPPLY
STEAM CONDENSATE RETURN

UDS CONSTRUCTION TO BE
16 GA., TYPE 304 STAINLESS STEEL

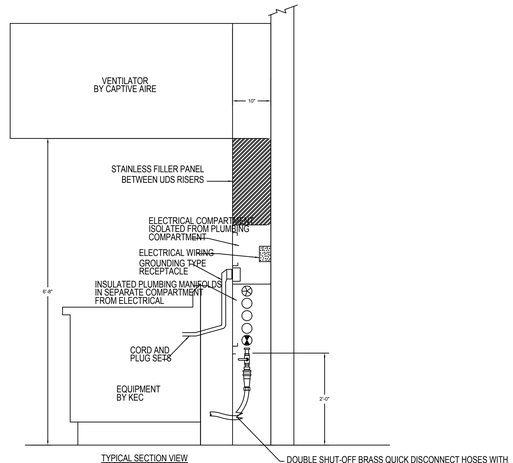
UTILITY DISTRIBUTION SYSTEM MODEL UDI
IS LISTED UNDER ETL FILE NUMBER 3054803
CONFORMS TO UL STD 891
CERTIFIED TO CAN/CSA C22.2 No. 31-M89

PRIOR TO SCHEDULING UDS FOR PRODUCTION
PLEASE PROVIDE APPROVED SUBMITTAL CUTSHEETS
ON FINAL KITCHEN EQUIPMENT ASSOCIATED WITH
THE UDS (NEW & USED) SO THAT CONNECTION
SIZES, TYPES AND LOCATIONS CAN BE VERIFIED

ANY CHANGES TO SUBMITTAL DRAWING
MAY AFFECT PRICE AND PRODUCTION TIME
PLEASE FORWARD CHANGES ASAP

FLAG NOTES

1. 480V/3PH/100A ELECTRICAL SERVICE FROM ABOVE. (PROVIDED BY ELECTRICAL CONTRACTOR)
2. 120/208V/3PH/50A ELECTRICAL SERVICE FROM ABOVE. (PROVIDED BY ELECTRICAL CONTRACTOR)
3. 120V/1PH/15A DEDICATED ELECTRICAL CIRCUIT INTO UDS TERMINALS "H1, N1" FOR FIRE/FUEL CONTROL. (PROVIDED BY ELECTRICAL CONTRACTOR) SEE SHEET 2.
4. 3-WIRE ELECTRICAL CIRCUIT FROM HOOD CONTROL PACKAGE TERMINALS "ST, KTS, GAS" TO UDS LIKE TERMINALS "ST, KTS, GAS" FOR UDS SHUT DOWN IN A FIRE CONDITION. (PROVIDED BY ELECTRICAL CONTRACTOR). SEE SHEET 2.
5. 1-1/2" LOOPED GAS SERVICE FROM ABOVE. (PROVIDED BY PLUMBING CONTRACTOR)
6. 3/4" COLD WATER SERVICE FROM ABOVE. (PROVIDED BY PLUMBING CONTRACTOR)
7. 3/4" COLD WATER SERVICE FROM ABOVE. (PROVIDED BY PLUMBING CONTRACTOR)
8. EVERPURE 9797-21 WATER FILTER W/ 14" 16" VIEW WINDOW.
9. 480V/3PH/125A SERVICE MAIN BREAKER W/SHUNT TRIP AND RESET HANDLE.
10. 120/208V/3PH/50A SERVICE MAIN BREAKER W/SHUNT TRIP AND RESET HANDLE.
11. EMERGENCY KILL SWITCH.
12. STATUS INDICATOR LIGHTS.
13. DCO RECEPTACLE W/WEATHERPROOF COVER.
14. ELECTRICAL LOAD CENTER WITH INDIVIDUAL CIRCUIT BREAKERS.
15. ELECTRICAL WIRING TO COOKING APPLIANCES.
16. ELECTRICAL CONNECTION W/WEATHERPROOF COVER AS SPECIFIED ON THE EQUIPMENT SCHEDULE. THIS SHEET.
17. PLUMBING CONNECTION AS SPECIFIED ON THE EQUIPMENT SCHEDULE, THIS SHEET.
18. 1-1/2" 120V ELECTRIC GAS VALVE.
19. MANUAL SHUT OFF VALVE.
20. REMOVABLE ACCESS PANELS.
21. NEOPRENE BUMPER GUARD.



TYPICAL SECTION VIEW
MODEL UDW DISTRIBUTION SYSTEM

DOUBLE SHUT-OFF BRASS QUICK DISCONNECT HOSES WITH 1/4 TURN VALVES ON ALL LINES. ALL WATER HOSES ARE FLEXIBLE STAINLESS STEEL. ALL GAS HOSES ARE AGA CERTIFIED, CORRUGATED STAINLESS INNER JACKET, STAINLESS MESH OUTER, PVC COATED.

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EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

CONFORMED SET

PROJECT No.: 152-01
DATE: 04/06/16
SCALE: 3/4" = 1'-0"

DRAWING NAME
UTILITY RACEWAY DETAILS

K502

7/27/2016 12:43:02 PM

ITEM 16

HOOD INFORMATION - Job#2540838

HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	EXHAUST PLENUM						TOTAL SUPPLY CFM	HOOD CONSTRUCTION	HOOD CONFIG.	
					TOTAL EXH. CFM	RISER(S)							END TO END	ROW
						WIDTH	LENG.	DIA.	CFM	S.P.				
1	16L	6630 ND-2-PSP-F	9' 6.00"	600 Deg.	1900	10"	18"		1900	-0.596"	1565	304 SS 100%	LEFT	ALONE
2	16R	6630 ND-2-PSP-F	9' 5.00"	600 Deg.	1883	10"	18"		1883	-0.603"	1410	304 SS 100%	RIGHT	ALONE

HOOD INFORMATION

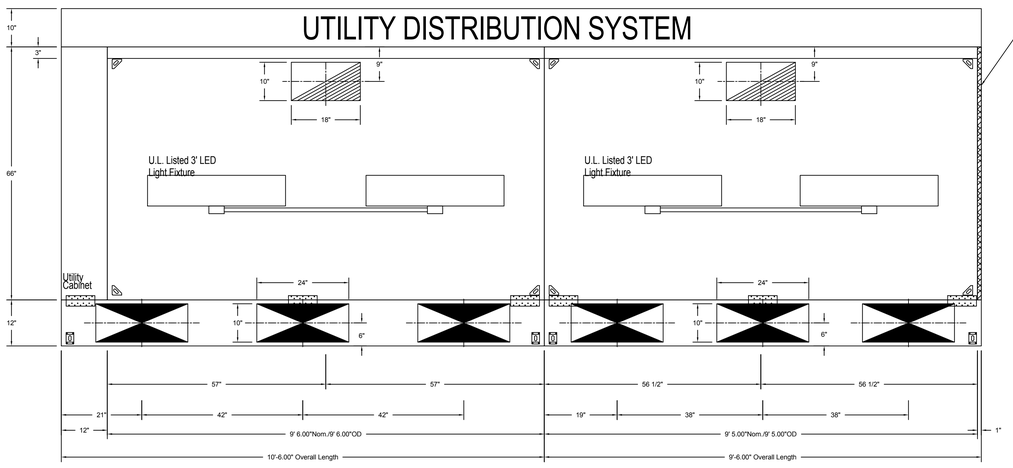
HOOD NO.	TAG	FILTER(S)					LIGHT(S)			UTILITY CABINET(S)				FIRE SYSTEM PIPING	HOOD HANGING WGHT
		TYPE	QTY.	HEIGHT	LENGTH	EFFICIENCY @ 9 MICRONS	QTY.	TYPE	WIRE GUARD	LOCATION	FIRE SYSTEM TYPE	ELECTRICAL SIZE	ELECTRICAL MODEL #	SWITCHES QUANTITY		
1	16L	Captrate Solo Filter	7	20"	16"	93% See Filter Spec.	2	3' LED Light	NO	Left	Ansul R102	3.0/3.0	DCV-1111	1 Light 1 Fan	YES	837 LBS
2	16R	Captrate Solo Filter	7	20"	16"	93% See Filter Spec.	2	3' LED Light	NO						YES	647 LBS

PERFORATED SUPPLY PLENUM(S)

HOOD NO.	TAG	POS.	LENGTH	WIDTH	HEIGHT	TYPE	RISER(S)				
							WIDTH	LENG.	DIA.	CFM	S.P.
1	16L	Front	126"	12"	6"	MUA	10"	24"		521	0.149"
						MUA	10"	24"		521	0.149"
						MUA	10"	24"		521	0.149"
2	16R	Front	114"	12"	6"	MUA	10"	24"		470	0.123"
						MUA	10"	24"		470	0.123"
						MUA	10"	24"		470	0.123"

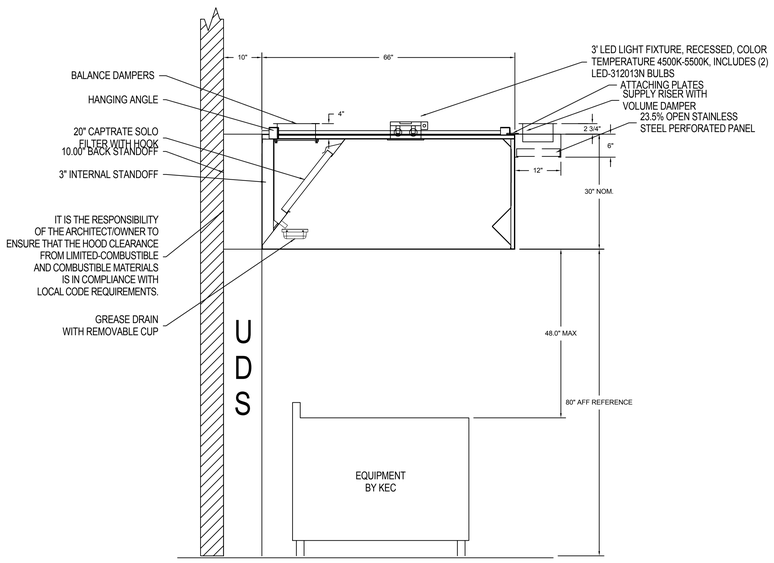
HOOD ACCESSORIES

HOOD NO.	TAG	OPTION
1	16L	FIELD WRAPPER 18.00" High Front, Left
		BACKSPLASH 80.00" High X 240.00" Long 304 SS Vertical
		BACK STANDOFF (FLAT) 10" Wide 126" Long
		BALANCE DAMPERS
		STRUCTURAL FRONT PANEL
2	16R	FIELD WRAPPER 18.00" High Front, Right
		RIGHT END STANDOFF (FINISHED) 1" Wide 66" Long Insulated
		BACK STANDOFF (FLAT) 10" Wide 114" Long
		BALANCE DAMPERS
		STRUCTURAL FRONT PANEL

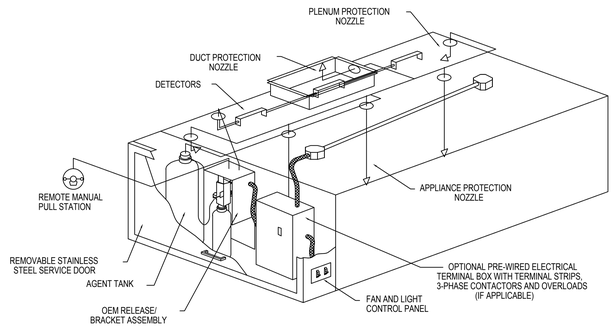


PLAN VIEW - Hood #1 (16L)
9' 6.00" LONG 6630ND-2-PSP-F

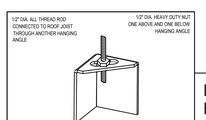
PLAN VIEW - Hood #2 (16R)
9' 5.00" LONG 6630ND-2-PSP-F



SECTION VIEW - MODEL 6630ND-2-PSP-F
HOODS - #1 (16L), #2 (16R)



TYPICAL ANSUL R-102 SYSTEM LAYOUT



ND-2 HANGING ANGLE DETAIL

LED BULBS BY K.E.C.
BULBS MUST BE RATED FOR
5000K COLOR TEMPERATURE

CAPTIVE-AIRE HOOD ARE BUILT IN COMPLIANCE WITH:
ETL LISTED #3054804-001
ETL SANITATION LISTED
NFPA #96

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Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056
1300 W 36TH ST., BALTIMORE, MD 21211

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LICENSE NO.: 8002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

CONFORMED SET

PROJECT No.: 152-01
DATE: 04/06/16
SCALE: 3/4" = 1'-0"
DRAWING NAME
VENTILATOR DETAILS

K503

7/27/2016 12:43:16 PM

UDS ELECTRICAL WIRING

	JOB NAME ROBERT POOLE MIDDLE SCHOOL	DATE	01/14/16
DRAWING NUMBER	JOB NUMBER	DRAWN BY	JLW

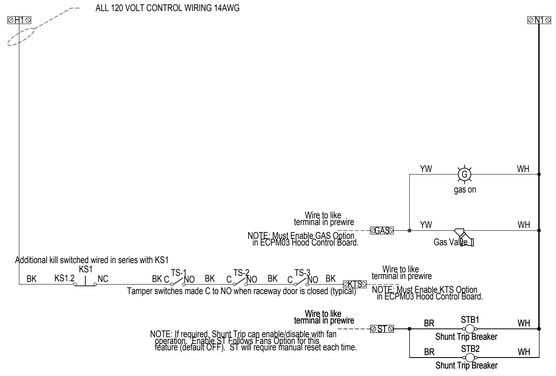
Installed Options

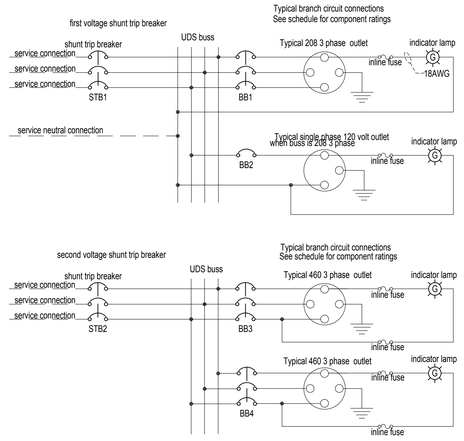
gas with kill switch

prewire connection

CONTROL INPUT 120VAC H1=LINE, N1=NEUTRAL 15A BKR - DO NOT WIRE TO SHUNT TRIP BREAKER
H1, N1 TERMINALS ARE WIRED TO LIKE TERMINALS ON ELECTRICAL CONTROL PACKAGE IF PRESENT

ALL 120 VOLT CONTROL WIRING 14AWG





COMPONENT IDENTIFICATION

Label	Description	Location
KS1	kill switch (twist to release) NC contacts	[33][34]
TS-x	Door tamper switch-ASKHC2J04AC	[34]
STB1 STB2	first voltage shunt trip breaker second voltage shunt trip breaker	[34][38] [35][43]
BBx	branch breaker see schedule for ratings	[38][43]

TR: Tripped, AR: Armed, C: Common

MS-1 MicroSwitch C-RD NO-BK NC-BR

NOTES
- FIELD WIRING
- INTERNAL WIRING
- XX TERMINAL IN PANEL
- XX TERMINAL IN PANEL AND REMOTE

Drawing shown De-energized.

WIRE COLOR

BK - BLACK	YW - YELLOW
BL - BLUE	GR - GREEN
BR - BROWN	GY - GRAY
OR - ORANGE	OR/BL - ORANGE/BLUE (STRIPE)
RD - RED	BL/RD - BLUE/RED (STRIPE)
WH - WHITE	RD/GN - RED/GREEN (STRIPE)
PR - PURPLE	
PK - PINK	

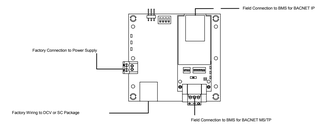
1. Indicator lamp leads in excess of 10' must be fused within the first 10' of the tap off the breaker or outlet, 18AWG.
2. spiral wrap shall not be used

FANS FOR THIS PROJECT WILL BE CONTROLLED
BY A DEMAND CONTROL VENT SYS (DCV) WITH PRE-WIRED VFD'S.
REFER TO THE MECHANICAL PLANS FOR FAN DETAILS.
FANS HAVE THE FOLLOWING REQUIREMENTS:

1. VAV CAPABLE TO MODULATE EXHAUST BETWEEN 15%-100% AND SUPPLY BETWEEN 80%-100% OF DESIGN.
2. INVERTER DUTY MOTORS REQUIRED
3. SEPARATE 120V INPUT REQUIRED FOR MAKE-UP AIR

ELECTRICAL PACKAGES - Job#2540838

NO.	TAG	PACKAGE #	LOCATION	SWITCHES LOCATION	SWITCHES QUANTITY	OPTION	FANS CONTROLLED TYPE	Ø	H.P.	VOLT	FLA
1		DCV-1111	Utility Cabinet Left	Utility Cabinet Left	1 Light	Smart Controls DCV	Exhaust	3	TBD		
				Hood # 1	1 Fan		Supply	3			

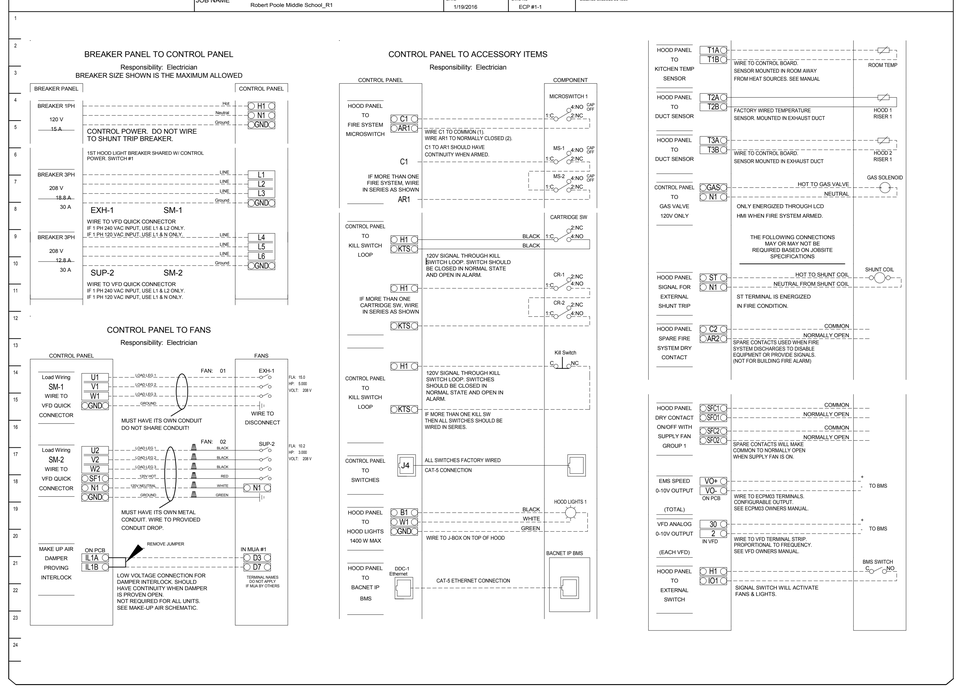


BACNET Interface for DCV and SC Packages

BACNET Interface for Hood Control Panel Specifications:
- Captive-Aire's microprocessor-based Hood Controls support communications to an external Building Management System through a BTL listed gateway (BACNET IP and MS/TP).
- The Hood Control Panel communicates real time data from sensors and equipment status to the Building Management System. The Hood Control Panel also allows the Building Management System to control fans, lights and wash cycles.
- The monitoring and controlling points for Hood Smart Controls and Demand Control Ventilation Systems are listed below:

ITEM 16 CONTROLS

JOB NO	MODEL NUMBER	DRAWN BY	SCHEMATIC TYPE	DESCRIPTION OF OPERATION:
2540838	DCV-1111		INSTALL	Demand Control Ventilation, or control for 1 Exhaust Fan, 1 Supply Fan, Exhaust on in Fire, Lights out in Fire. Fans modulate based on duct temperature. INVERTER DUTY THREE PHASE MOTOR REQUIRED! Room temperature sensor shipped loose for field installation.Verify distance between VFD and Motor, additional cost could apply if distance exceeds 50 feet.
JOB NAME: Robert Poole Middle School_R1		DATE: 1/19/2016	DWG NO: ECP #1-1	



ROOM TEMPERATURE SENSOR

The Room Temperature sensor is a 10K Ohm Thermistor. The sensor provides constant room temperature to the controller. It should be installed on a wall somewhere in the space but not directly under the hood or close to an appliance so that the reading is not affected by heat.

Typically a system will have one room temperature sensor. However, systems configured with 2 fan zones have the option to be ordered with 2 room temperature sensors, one for each zone. They should be mounted in the space accordingly.

SEQUENCE OF OPERATION – HOOD CONTROLS

ELECTRICAL PACKAGE: FP SERIES

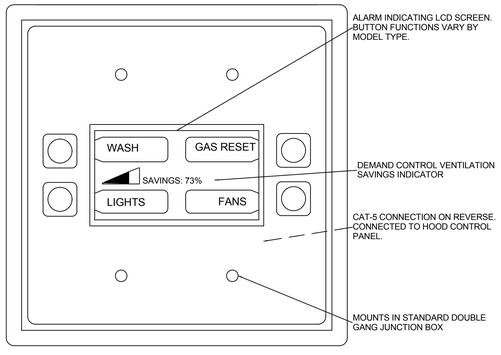
ALL POWER, LIGHTING, MICROSWITCH AND TEMPERATURE PROBE CONNECTIONS AND INTERLOCKS TO BE COMPLETED BY ELECTRICAL CONTRACTOR PER SCHEMATICS PROVIDED WITH EQUIPMENT.

TWO METHODS TO ACTIVATE EXHAUST SYSTEM:

1. ENGAGE FAN SWITCH IN THE "ON" POSITION TO ENERGIZE CONTACTOR(S) AND START THE EXHAUST FAN(S). SUPPLY FAN(S), IF PRESENT, WILL BE ACTIVATED BY FACTORY PRE-WIRED INTERLOCK.
2. TURN ON COOKING APPLIANCES. EXHAUST FAN(S) [AND SUPPLY FAN(S), IF PRESENT] WILL AUTOMATICALLY ENERGIZE WHEN DUCT TEMPERATURE EXCEEDS SET-POINT (FACTORY PRE-SET = 85°F). AUTOMATIC ACTIVATION COMPLIES WITH IMC 507.2.1.1 "OPERATION." FAN(S) WILL DISENGAGE WHEN DUCT TEMPERATURE FALLS BELOW SET-POINT.

FIRE CONDITION

IN THE EVENT OF A FIRE, A SIGNAL IS SENT ACROSS THE NORMALLY OPEN DRY CONTACT OF THE FIRE SUPPRESSION SYSTEM MICROSWITCH (INTERLOCKED WITH HOOD CONTROL PANEL BY ELECTRICIAN). EXHAUST FAN(S) TO REMAIN RUNNING, SUPPLY FAN(S) TO DE-ENERGIZE. LIGHTING CIRCUIT(S) TO DE-ENERGIZE. MICROSWITCH MUST BE RESET PRIOR TO RESUMPTION OF NORMAL OPERATION.



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No.	DATE	DESCRIPTION

CONFORMED SET

PROJECT No.: 152-01

DATE: 04/06/16

SCALE: 3/4" = 1'-0"

DRAWING NAME

VENTILATOR WIRING DIAGRAM

K504

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X	FLOORBOX MOUNTED TELECOM OUTLET
X	POKE THROUGH MOUNTED TELECOM OUTLET
X	CEILING MOUNTED TELECOM OUTLET
X	BLANK TELECOM OUTLET
P	1 CAT 6 VOICE
D	1 CAT 6 DATA (DUPLEX ELECTRICAL OUTLET)
DD	2 CAT 6 DATA (QUAD ELECTRICAL OUTLET)
Q	4 CAT 6 DATA (2 QUAD ELECTRICAL OUTLETS)
A1	1 CAT 6 DATA, 1 CAT 6 VOICE (QUAD ELECTRICAL OUTLET)
A	2 CAT 6 DATA, 1 CAT 6 VOICE (QUAD ELECTRICAL OUTLET)
AV	2 CAT 6 DATA, 1 CAT 6 VOICE, 1 COAX (QUAD ELECTRICAL OUTLET)
V	1 CAT 6 DATA, 1 COAX (DUPLEX ELECTRICAL OUTLET)
L	2 CAT 6 DATA, 1 CAT 6 VOICE, A/V CABLES (QUAD ELECTRICAL OUTLET)
C	1 CAT 6 DATA, RS-232 CONTROLLER, R2-232 PROJECTOR & 2 CONDUCTOR POWER
PR	1 CAT 6 DATA, A/V CABLES FROM L (TWO DUPLEX ELECTRICAL OUTLETS)
PR1	1 CAT 6 DATA, A/V CABLES FROM L1 (DUPLEX ELECTRICAL OUTLET)
L1	2 CAT 6 DATA, 1 CAT 6 VOICE, A/V CABLES (QUAD ELECTRICAL OUTLET)
W	2 CAT 6a DATA (PLUS CEILING ENCLOSURE)

NOTE: PATHWAYS AND ASSOCIATED POWER ONLY FOR THESE OUTLETS. CABLES FOR INFORMATIONAL PURPOSES ONLY.

C	INTERCOM CALL SWITCH
CV	INTERCOM CALL SWITCH WITH VOLUME CONTROL
CS	INTERCOM CALL SWITCH WITH SPEAKER
AD	INTERCOM CALL ADMINISTRATIVE HANDSET
VC	INTERCOM VOLUME CONTROL
SP	INTERCOM CEILING SPEAKER
INT	INTERCOM HORN SPEAKER
SP	INTERCOM WALL SPEAKER
SP	AUXILIARY SOUND SYSTEM SPEAKER
M	AUXILIARY SOUND MIC OUTLET
S	AUXLILIARY SOUND SPEAKER OUTLET
L	AUXILIARY SOUND LINE LEVEL OUTLET
L2	AUXLILIARY SOUND A/V OUTLET
	SLAVE CLOCK
	2" SLEEVE ABOVE THE DROP CEILING FOR LOW VOLTAGE CABLES INTO ALL SPACES

NOTE: SEE ARCHITECTURAL DRAWINGS FOR UNIVERSAL INTERIOR ELEVATIONS AT DEVICES AS NEEDED.

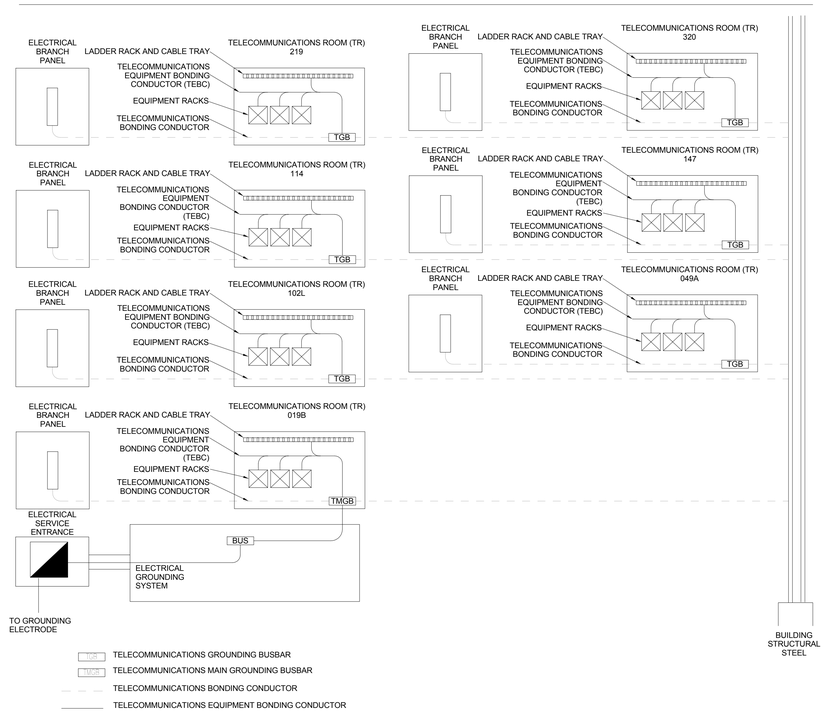
1 TECHNOLOGY SYMBOLS
N.T.S.

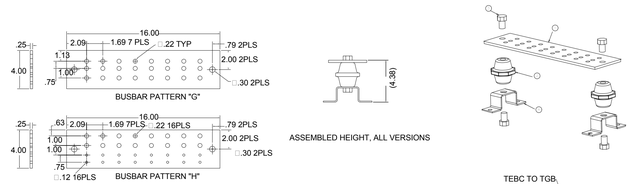
1. ALL ELECTRICAL SYSTEMS, EQUIPMENT, RACEWAYS, CABLING, BOXES, FIRESEALS, GROUNDING AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE NEC GUIDELINES.
2. ALL CONDUITS AND RACEWAYS SHALL BE PAINTED TO MATCH SURROUNDING FINISHES UNLESS OTHERWISE NOTED.
3. ALL LOW VOLTAGE CABLING MUST BE INSTALLED ACCORDING TO BICSI GUIDELINES AND METHODS.
4. ALL CABLING SHALL BE APPROPRIATELY LABELED. SEE T SERIES DRAWINGS FOR EXACT REQUIREMENTS.
5. CONTRACTOR SHALL NOT INSTALL ANY EQUIPMENT PRIOR TO ITS APPROVAL BY THE ARCHITECT, ENGINEER AND OWNER. CONTRACTOR SHALL BE LIABLE FOR ITS REMOVAL IN ANY SUCH CASE.
6. SEE ELECTRICAL DRAWINGS FOR POWER CIRCUITS AND REQUIREMENTS RELATED TO LOW VOLTAGE OUTLETS SHOWN IN THESE DRAWINGS.
7. ANY PENETRATION OF A FIRE-RATED BARRIER MUST BE PROPERLY SEALED WITH FIRESTOPPING MATERIAL IN ACCORDANCE WITH LOCAL AND STATE LAWS AND THE AUTHORITY HAVING JURISDICTION.
8. PRIOR TO BEGINNING ANY WORK, THE CONTRACTOR SHALL SECURE THE NECESSARY PERMITS AND CLEARANCES FROM THE AUTHORITIES HAVING JURISDICTION.
9. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS FOR A COMPLETE INSTALLATION.
10. THE WORK SHALL BE PERFORMED AND COMPLETED BY EXPERIENCED TRADESMEN WHO ARE LICENSED IN THE JURISDICTION WHERE THE PROJECT IS BEING CONSTRUCTED.
11. CONDUITS AND PATHWAYS SHALL BE RUN BEHIND FINISHED SURFACES WHERE POSSIBLE UNLESS OTHERWISE NOTED.
12. THE TECHNOLOGY PLANS ARE DIAGRAMMATIC. ALL WORK MUST BE COORDINATED PRIOR TO INSTALLATION.
13. THE CONTRACTOR SHALL INFORM THE ARCHITECT, ENGINEER AND OWNER PRIOR TO BEGINNING CONSTRUCTION AND PRIOR TO COMPLETION TO ALLOW FOR SUFFICIENT TIME OF WORK REQUIRING ADDITIONAL COORDINATION.
14. 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 OR EXPRESSED.
15. BEFORE SUBMITTING BIDS, THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE SITE, ADJOINING SITES AND STRUCTURES, ANY EXISTING STRUCTURES OR BUILDINGS AND SPACES RELEVANT TO THEIR WORK. THE CONTRACTOR SHALL PROVIDE WRITTEN REPORT THAT DETAILS ANY CONDITIONS WHICH MIGHT PREVENT EQUIPMENT INSTALLATION IN THE MANNER SHOWN ON THE CONTRACT DOCUMENTS.
16. NO CONSIDERATION OR ALLOWANCE SHALL BE GIVEN FOR FAILURE TO VISIT THE SITE, NOR FOR ANY ALLEGED MISUNDERSTANDING OF THE MATERIALS TO BE FURNISHED AND INSTALLED PROPERLY.
17. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT, ENGINEER AND OWNER IN WRITING OF ANY DISCOVERED CONFLICTS BETWEEN EXISTING INSTALLATIONS WHICH ARE NOT SCHEDULED FOR DEMOLITION AND THE WORK INDICATED WITHIN THE CONTRACT DOCUMENTS. SUCH NOTIFICATION SHALL BE ACCOMPANIED BY A DRAWING DELINEATING THE PROPOSED SOLUTION PRIOR TO STARTING WORK IN THE AFFECTED AREA.
18. ALL SLAB PENETRATIONS MUST BE X-RAYED AND DOCUMENTED PRIOR TO BEGINNING WORK.
19. THE EXACT NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL SYSTEMS. PROVIDE WIRES AND CABLES NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM WHETHER INDICATED ON THE PLANS OR NOT.
20. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE FINISH, EXACT LOCATION, ELEVATION, MOUNTING HEIGHTS AND DETAILS OF ALL LIGHT FIXTURES AND OTHER DEVICES WITH IN THE CEILING GRID FOR COORDINATION WITH TECHNOLOGY EQUIPMENT. REPORT ANY DISCREPANCIES TO THE ARCHITECT IMMEDIATELY.
21. WHEREVER CONDUITS PENETRATE WALLS OR FLOORS, THE SPACE REMAINING IN SUCH PENETRATIONS SHALL BE FILLED. THE FILLING MATERIAL SHALL BE FIRE RESISTIVE IN AN EQUAL OR GREATER AMOUNT THAN THE SURROUNDINGS.
22. PROVIDE AND LEAVE ACCESSIBLE A PULL STRING IN ALL CONDUITS AND RACEWAYS FOR LOW VOLTAGE WIRES TO BE INSTALLED.
23. OUTLET BOXES INSTALLED ON OPPOSITE SIDES OF A PARTITION SHALL BE INSTALLED OFFSET FROM ONE ANOTHER.
24. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS, WRITTEN SUBMITTALS, 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 MUST BE CLEARLY CALLED OUT FOR THE DESIGN TEAM TO REVIEW. SUBMITTALS WITHOUT THE PROPER INFORMATION HIGHLIGHTED SHALL BE REJECTED FOR RESUBMITTAL.
25. THE CONTRACTOR SHALL PROVIDE COMPLETE AS-BUILT DOCUMENTATION IN HARDCOPY AND ELECTRONIC FORMAT FOR REVIEW AND APPROVAL BY THE DESIGN TEAM PRIOR TO JOB COMPLETION.
26. THE CONTRACTOR SHALL PROVIDE A COMPLETE PUNCHLIST 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 SYSTEM ARE APPROXIMATELY AND APPROPRIATELY COMPLETE.

2 TECHNOLOGY GENERAL NOTES
N.T.S.

1. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL LOW VOLTAGE PATHWAYS INCLUDING, BUT NOT LIMITED TOO, CONDUITS, BOXES, JUNCTION BOXES, SLEEVES, CHASES, RACEWAYS, CABLE TRAYS AND J-HOOKS TO PROPERLY SUPPORT THE LOW VOLTAGE INFRASTRUCTURE.
2. PROVIDE AND INSTALL A COMPLETE TELECOM GROUNDING AND BONDING SYSTEM INCLUDING ALL TGBS, TMGBS, BONDING CONDUCTORS, LUGS, NUTS, CABLES AND CONNECTORS. BOND TO THE MAIN GROUNDING SYSTEM IN THE BUILDING.
3. PROVIDE A COMPLETE DATA NETWORK INFRASTRUCTURE PATHWAY SYSTEM INCLUDING ALL PATHWAYS, TERMINATION EQUIPMENT, UPS EQUIPMENT AND ASSOCIATED COMPONENTS. COORDINATE CABLING AND ELECTRONICS INSTALLATION WITH OWNER AT TIME OF INSTALLATION. A SEPARATE CABLING AND ELECTRONICS PACKAGE WILL BE PROVIDED BY THROUGH THE OWNER INCLUDING HORIZONTAL DATA AND VOICE CABLING AND EQUIPMENT, CATV CABLING AND EQUIPMENT AND ACTIVE ELECTRONICS.
4. PROVIDE AND INSTALL A COMPLETE VOIP TELEPHONE INFRASTRUCTURE PATHWAY SYSTEM INCLUDING ALL PATHWAYS, TERMINATIONS, AND ASSOCIATED COMPONENTS. A SEPARATE CABLING AND ELECTRONICS PACKAGE WILL BE PROVIDED BY THROUGH THE OWNER INCLUDING HORIZONTAL VOICE CABLING, EQUIPMENT AND ACTIVE ELECTRONICS.
5. PROVIDE AND INSTALL A COMPLETE INTERCOM/PA/MASTER CLOCK SYSTEM INCLDUING ALL CABLING, PATHWAYS, TERMINATION DEVICES, END USER DEVICES, CLOCKS, CALL SWITCHES HANDSETS, SPEAKERS, HEADEND ELECTRONICS AND ASSOCIATED COMPONENTS.
6. PROVIDE AND INSTALL COMPLETE MAIN GYMNASIUM, AUXILIARY GYMNASIUM AND CAFETERIA A/V SYSTEMS INCLUDING ALL CABLING, CONNECTORS, FACEPLATES, JACKS, SPEAKERS, AMPS, SIGNAL PROCESSORS, CONTROLLERS AND ASSOCIATED COMPONENTS.

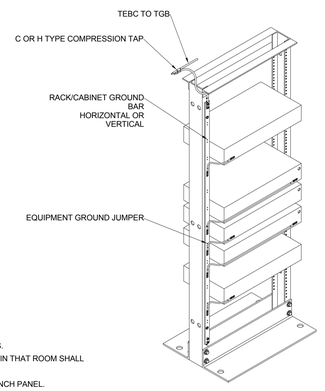
3 TECHNOLOGY SCOPE NOTES
N.T.S.





ITEM NO.	DESCRIPTION	QTY.
1	COPPER BUSBAR	1
2	NON CONDUCTIVE ISOLATION BUSHING	2
3	3/6-16" STAINLESS STEEL HEX BOLTS	4
4	3/8" S.S. LOCK WASHERS (NOT SHOWN)	4

CATALOG NO.	FINISH	DESCRIPTION	BUSBAR PATTERN	"N" QTY
HBBB14216G	BARE COPPER	4"X16"X.25" BUSBAR	"G"	N/A
HBBB1416H	BARE COPPER	4"X16"X.25" BUSBAR	"H"	N/A
HBBB14420J	BARE COPPER	4"X20"X.25" BUSBAR	"J"	N/A
HBBB14216GTP	TIN PLATED	4"X16"X.25" BUSBAR	"G"	N/A
HBBB1416HTP	TIN PLATED	4"X16"X.25" BUSBAR	"H"	N/A
HBBB14420JTP	TIN PLATED	4"X20"X.25" BUSBAR	"J"	N/A
HGRKTTMGB16H	BARE COPPER	4"X16"X.25" BUSBAR	"H"	1



TECHNOLOGY BONDING AND GROUNDING NOTES:

1. BONDING AND GROUNDING SYSTEM SHALL BE PROVIDED FOR LOW VOLTAGE SYSTEMS.
2. A TEBC SHALL BE PROVIDED IN EACH TELECOMMUNCATIONS ROOM. EQUIPMENT WITHIN THAT ROOM SHALL BE BONDED TO THE TEBC. THE TEBC SHALL BE BONDED TO THE TGB IN THAT SPACE.
3. THE TGB SHALL BE BONDED TO BUILDING STRUCTURAL STEEL AND THE NEAREST BRANCH PANEL.
4. IF A TMGB IS REQUIRED, IT SHALL BE NO FURTHER THAN 30' FROM THE MAIN ELECTRICAL SERVICE ENTRANCE AND PANEL.
5. BONDING AND GROUNDING SYSTEM SHALL FOLLOW TELECOMMUNICATIONS PATHWAYS AND SPACES.
6. BONDING AND GROUNDING SYSTEM SHALL BE BONDED TO BUILDING ELECTRICAL GROUND.
7. BONDING AND GROUNDING SYSTEM WIRE SHALL BE SIZED APPROPRIATELY FOR DISTANCE AND LOAD.
8. BONDING AND GROUNDING SYSTEM SHALL COMPLY WITH THE LATEST EDITION OF THE BICSI TDMM.
9. BONDING AND GROUNDING SYSTEM SHALL COMPLY WITH THE LATEST EDITION OF THE NEC.

4 TECHNOLOGY GROUNDING DIAGRAM
N.T.S.

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STRUCTURAL ENGINEER
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MEP ENGINEER
BRUNJAC ENGINEERING
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FOOD SERVICE
NYIKOS ASSOCIATES
18219A FLOWER HILL WAY
GAITHERSBURG, MD 20879

AVIT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD, SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056

1300 W 36TH ST., BALTIMORE, MD 21211

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LICENSE NO.: 8002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

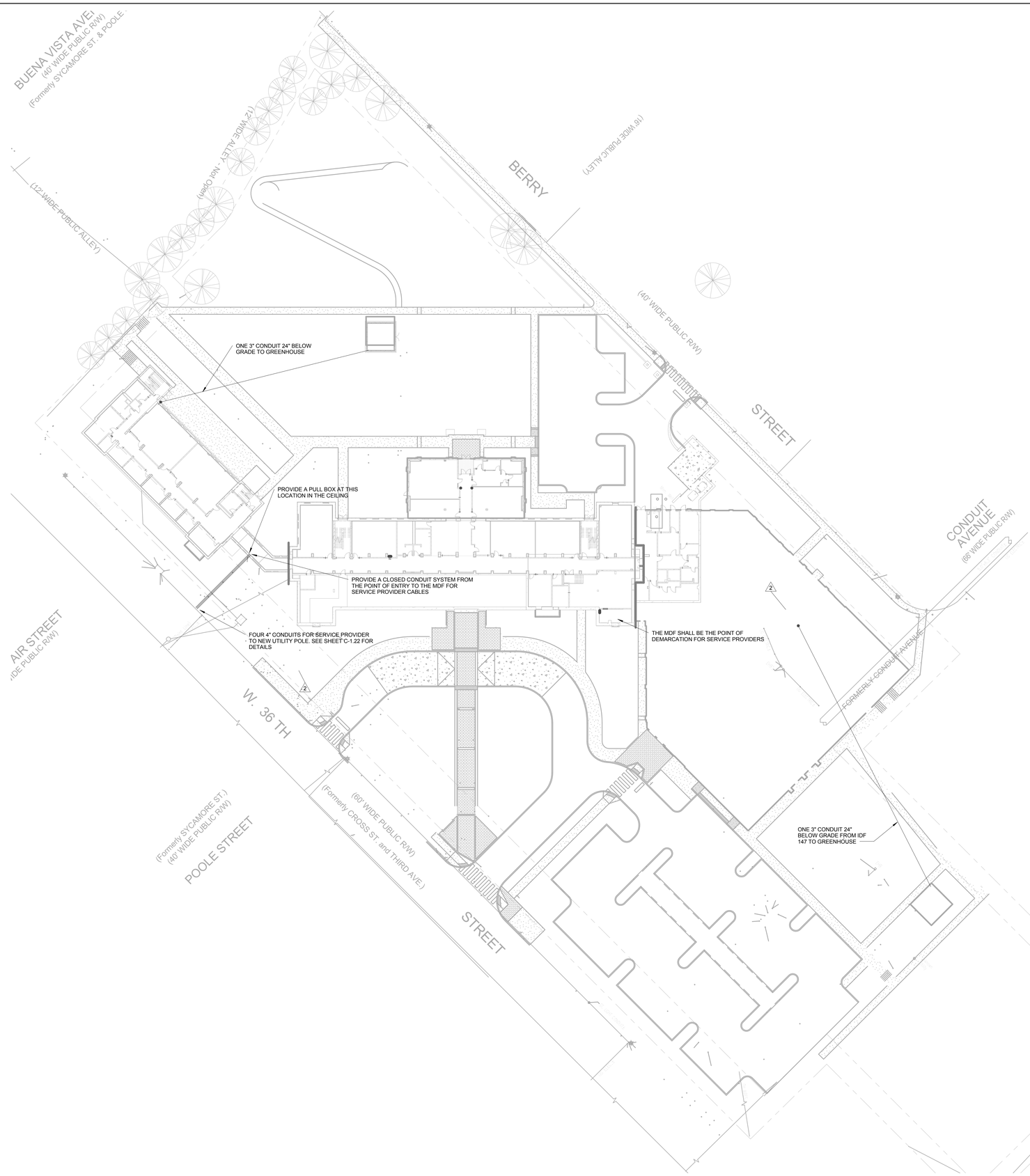
SCALE: As indicated

DRAWING NAME

TECHNOLOGY SYMBOLS & NOTES

T000

7/28/2016 3:21:31 PM



1 SITE PLAN
1" = 30'-0"

1. PROVIDE AND INSTALL INFRASTRUCTURE AS SHOWN.
2. THE MDF SHALL SERVE AS THE POINT OF DEMARCATION FOR INCOMING SERVICES. PROVIDE A CLOSED CONDUITS SYSTEM WITHIN THE BUILDING TO LAND SERVICE PROVIDER EQUIPMENT AND CABLES IN THE MDF.
3. UNDERGROUND LOW VOLTAGE CONDUITS SHALL BE A MINIMUM OF 24" BELOW GRADE AND COORDINATED WITH OTHER TRADES PRIOR TO INSTALLATION.
4. EXACT LOCATION OF SERVICE PROVIDER SITE ENTRY SHALL BE COORDINATED IN THE FIELD. ADJUST AS NECESSARY TO DELIVER SERVICES TO THE BUILDING.
5. PROVIDE AND INSTALL A 24" x 36" QUAZITE HAND HOLE AT SERVICE PROVIDER UTILITY POLE AND AFTER TWO 90 DEGREE BENDS.

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PHILADELPHIA, PA 19127

LANDSCAPE ARCHITECT
MAHAN RYKIEL ASSOCIATES
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LICENSE NO.: 9082
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION
2	04/22/16	ADDENDUM 2

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

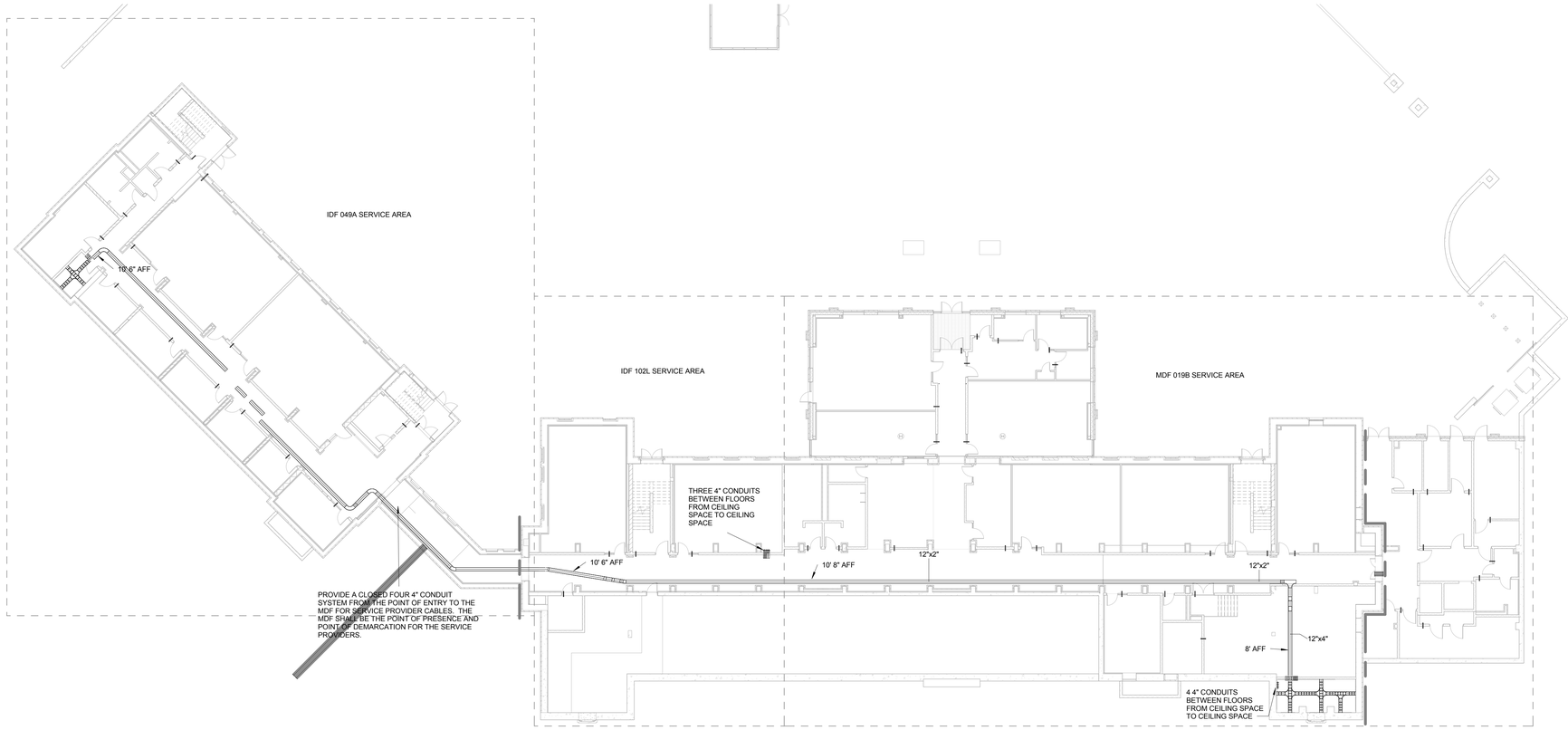
SCALE: 1" = 30'-0"

DRAWING NAME
SITE PLAN

T100

7/28/2016 3:21:35 PM

1. PROVIDE AND INSTALL WIRE MESH CABLE TRAY FOR LOW VOLTAGE DISTRIBUTION AS SHOWN. CABLE TRAY SHALL BE INSTALLED 3" ABOVE DROP CEILINGS AND HAVE 3" CLEAR ABOVE THE TOP RIM FOR ACCESS.
2. WHERE CABLE TRAY IS NOT POSSIBLE, INSTALL J-HOOKS NO MORE THAN 5' TO 6' APART TO SUPPORT LOW VOLTAGE CABLES.
3. COORDINATE INSTALLATION WITH OTHER TRADES.
4. PROVIDE AND INSTALL 4" CONDUITS AS SHOWN FOR LOW VOLTAGE DISTRIBUTION.
5. PROVIDE AND INSTALL 2" CONDUITS INTO EACH SPACE AS SHOWN FOR LOW VOLTAGE DISTRIBUTION.
6. PROVIDE AND INSTALL A SPARE 4" BACKBONE CONDUIT IN ALL AREAS FOR A FUTURE DAS SYSTEM. LEAVE EMPTY.
7. SERVICE AREAS SHOWN SHALL BE ADJUSTED AS NEEDED TO ALLOW HORIZONTAL STRUCTURED CABLES TO REMAIN LESS THAN 90 METERS.
8. COORDINATE ALL CABLE TRAY AND CONDUITS WITH FIREWALLS AND EXPANSION JOINTS. PENETRATIONS MUST PROVIDE THE SAME OR GREATER FIRE RATING.



1 OVERALL LEVEL 0
1/16" = 1'-0"

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2010 Clipper Park Rd.
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ASSOCIATE ARCHITECT
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LICENSE NO.: 8002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: As indicated

DRAWING NAME
OVERALL LEVEL 0

T101

7/28/2016 3:21:37 PM

1. PROVIDE AND INSTALL WIRE MESH CABLE TRAY FOR LOW VOLTAGE DISTRIBUTION AS SHOWN. CABLE TRAY SHALL BE INSTALLED 3" ABOVE DROP CEILINGS AND HAVE 3" CLEAR ABOVE THE TOP RIM FOR ACCESS.
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5. PROVIDE AND INSTALL 2" CONDUITS INTO EACH SPACE AS SHOWN FOR LOW VOLTAGE DISTRIBUTION.
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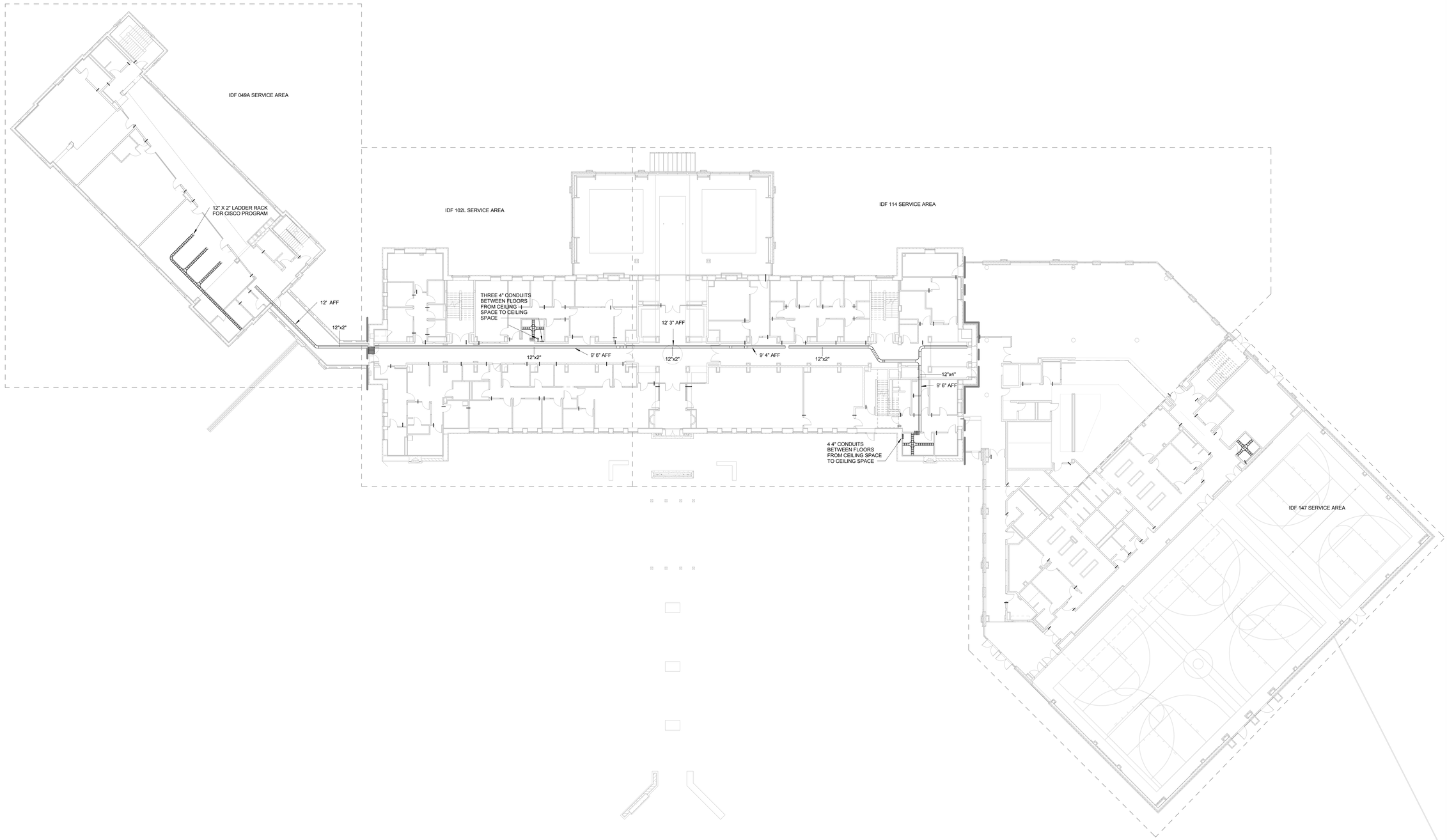
8. COORDINATE ALL CABLE TRAY AND CONDUITS WITH FIREWALLS AND EXPANSION JOINTS. PENETRATIONS MUST PROVIDE THE SAME OR GREATER FIRE RATING.



1 OVERALL LEVEL 1
1/16" = 1'-0"

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Suite 101
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ALBRECHT ENGINEERING
3500 BOSTON ST, SUITE 329
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MEP ENGINEER
BRUNJAC ENGINEERING
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LICENSE NO.: 9002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: As indicated

DRAWING NAME

OVERALL LEVEL 1

T102

7/28/2016 3:21:41 PM

1. PROVIDE AND INSTALL WIRE MESH CABLE TRAY FOR LOW VOLTAGE DISTRIBUTION AS SHOWN. CABLE TRAY SHALL BE INSTALLED 3" ABOVE DROP CEILINGS AND HAVE 3" CLEAR ABOVE THE TOP RIM FOR ACCESS.
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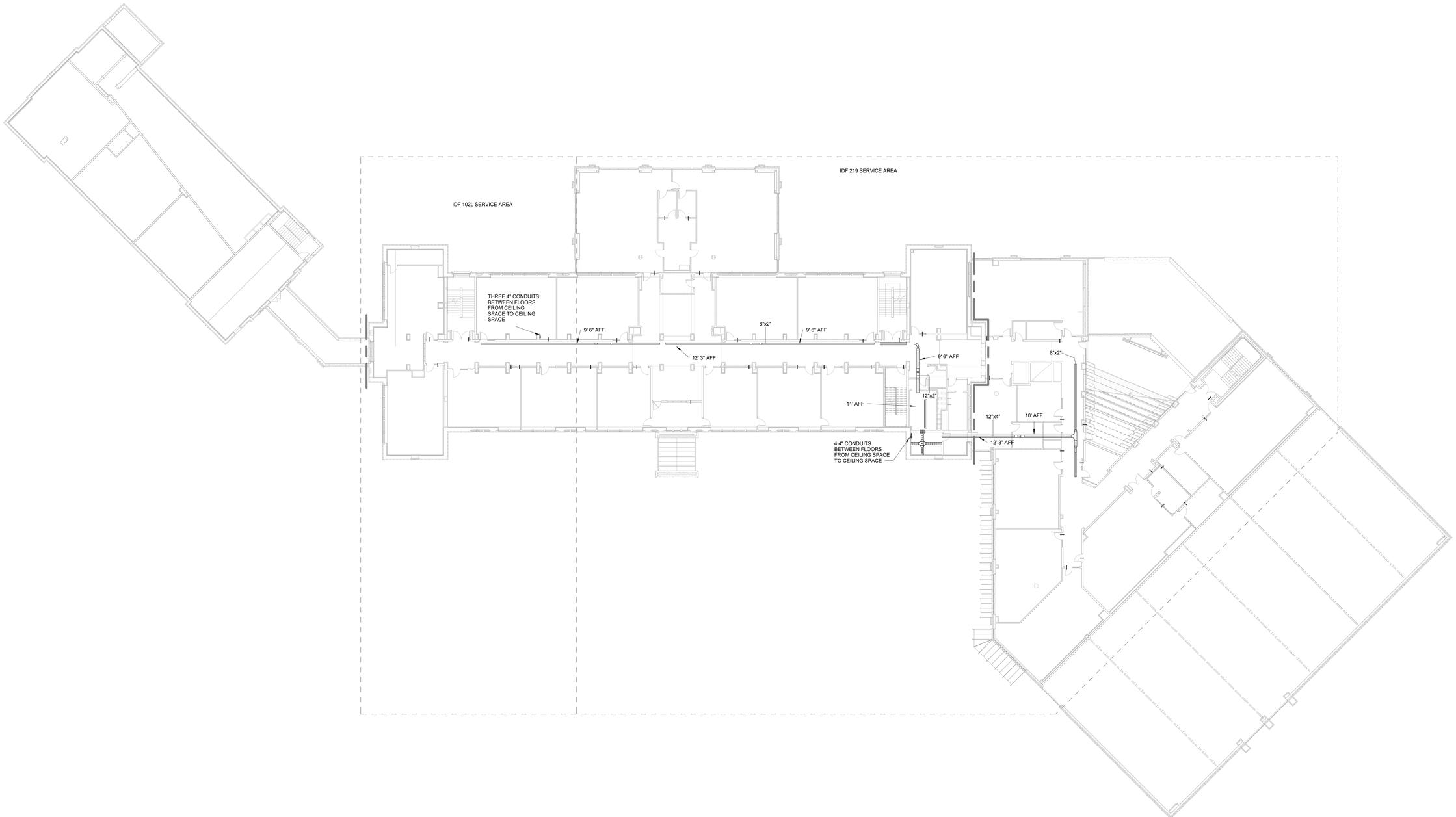

1 OVERALL LEVEL 2
1/16" = 1'-0"

JRS ARCHITECTS
2010 Clipper Park Rd.
Suite 101
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ASSOCIATE ARCHITECT
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BRUNJAC ENGINEERING
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NYIKOS ASSOCIATES
18219A FLOWER HILL WAY
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Baltimore City Public Schools
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LICENSE NO.: 8002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: As indicated

DRAWING NAME
OVERALL LEVEL 2

T103

7/28/2016 3:21:44 PM

1. PROVIDE AND INSTALL WIRE MESH CABLE TRAY FOR LOW VOLTAGE DISTRIBUTION AS SHOWN. CABLE TRAY SHALL BE INSTALLED 3" ABOVE DROP CEILINGS AND HAVE 3" CLEAR ABOVE THE TOP RIM FOR ACCESS.
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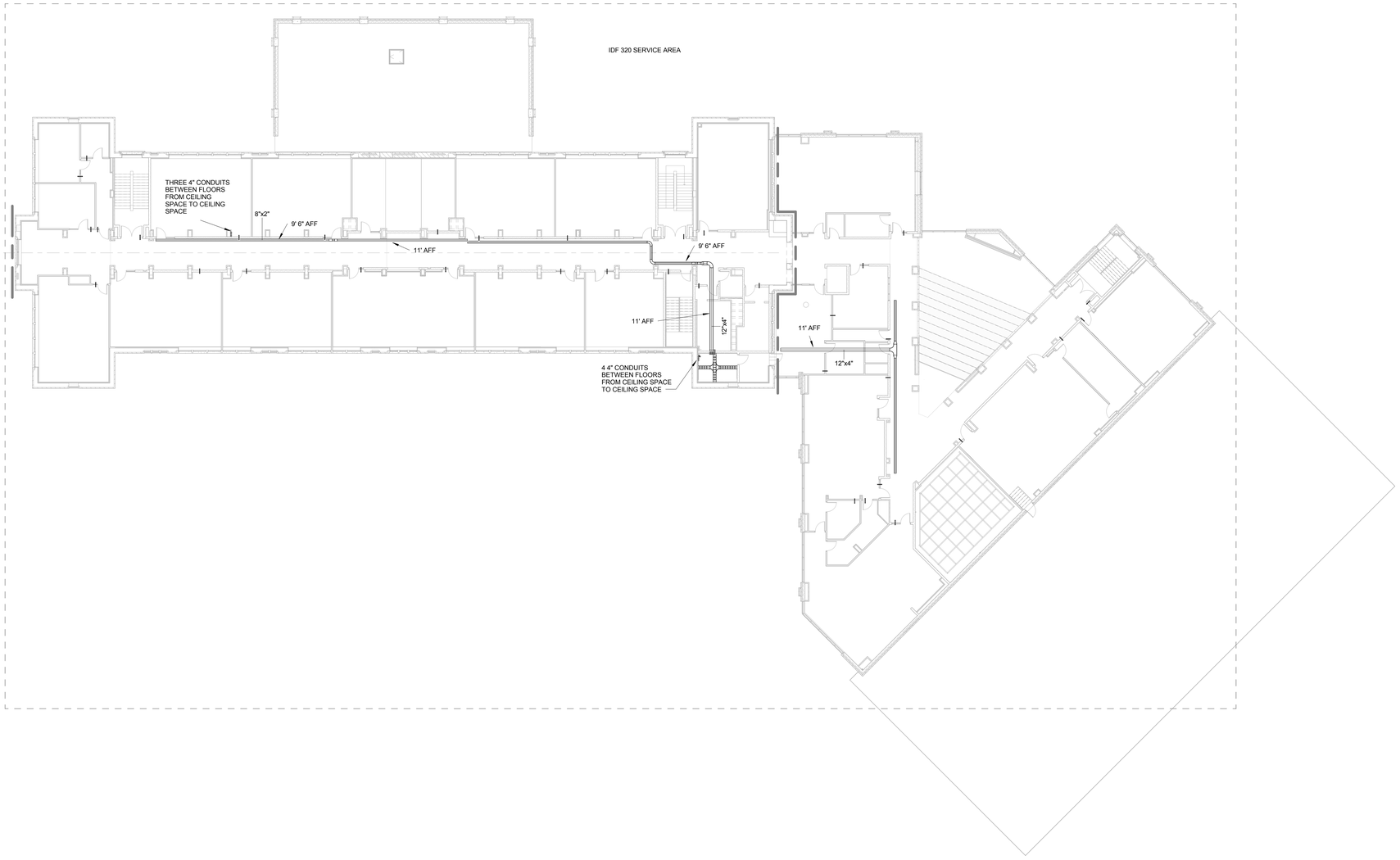

1 OVERALL LEVEL 3
1/16" = 1'-0"

JRS ARCHITECTS
2010 Clipper Park Rd.
Suite 101
Baltimore, MD 21211
410.235.7256

ASSOCIATE ARCHITECT
SCHRADER GROUP ARCHITECTURE LLC
161 LEVERINGTON AVE, SUITE 105
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MAHAN RYKIEL ASSOCIATES
800 WYMAN PARK DR, SUITE 100
BALTIMORE, MD 21211

CIVIL ENGINEER
STV, INC.
7125 AMBASSADOR RD, SUITE 200
BALTIMORE, MD 21244

STRUCTURAL ENGINEER
ALBRECHT ENGINEERING
3500 BOSTON ST, SUITE 329
BALTIMORE, MD 21224

MEP ENGINEER
BRUNJAC ENGINEERING
1800 N. CHARLES ST, SUITE 310
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NYIKOS ASSOCIATES
18219A FLOWER HILL WAY
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LICENSE NO.: 9002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

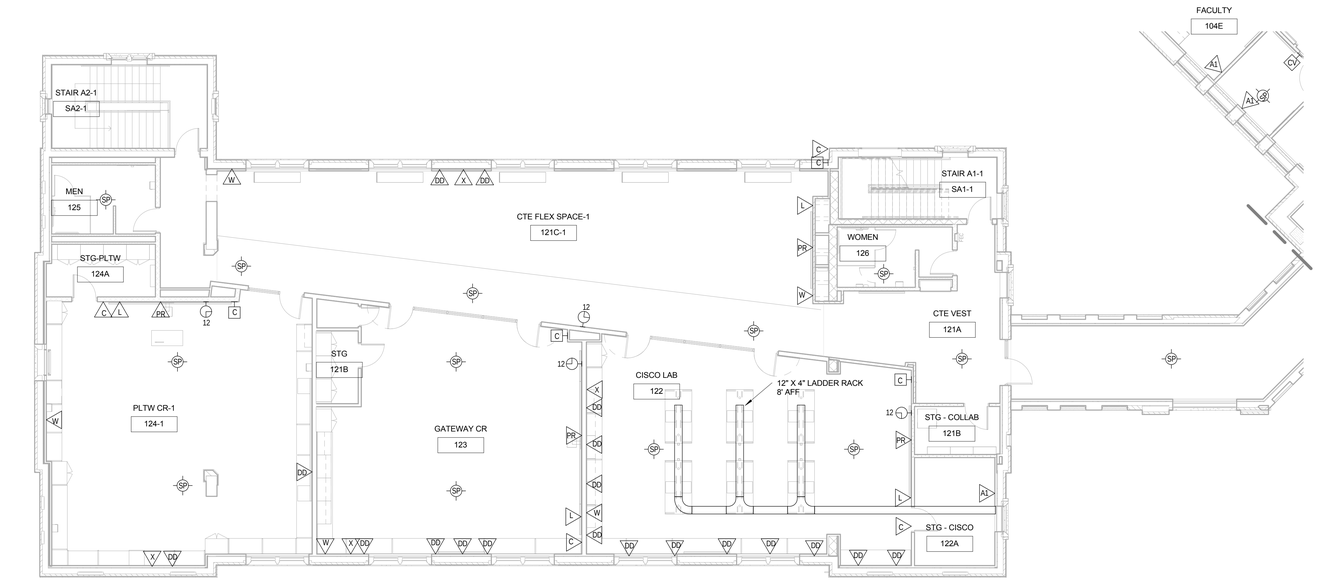
SCALE: As indicated

DRAWING NAME

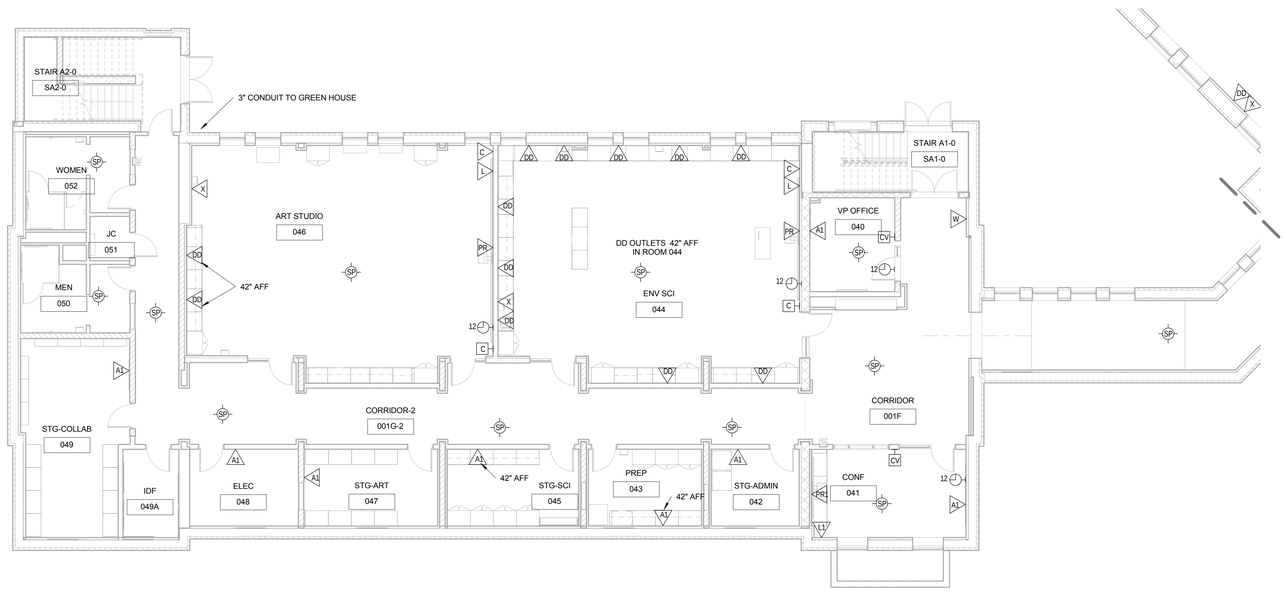
OVERALL LEVEL 3

T104

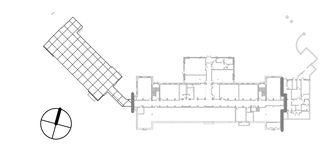
7/29/2016 3:21:47 PM



2 LEVEL 1A
1/8" = 1'-0"



1 LEVEL 0A
1/8" = 1'-0"



0' 4' 8' 16' 32'

JRS ARCHITECTS

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SCHRADER GROUP ARCHITECTURE LLC
161 LEVERINGTON AVE, SUITE 105
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LICENSE NO.: 8002
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No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

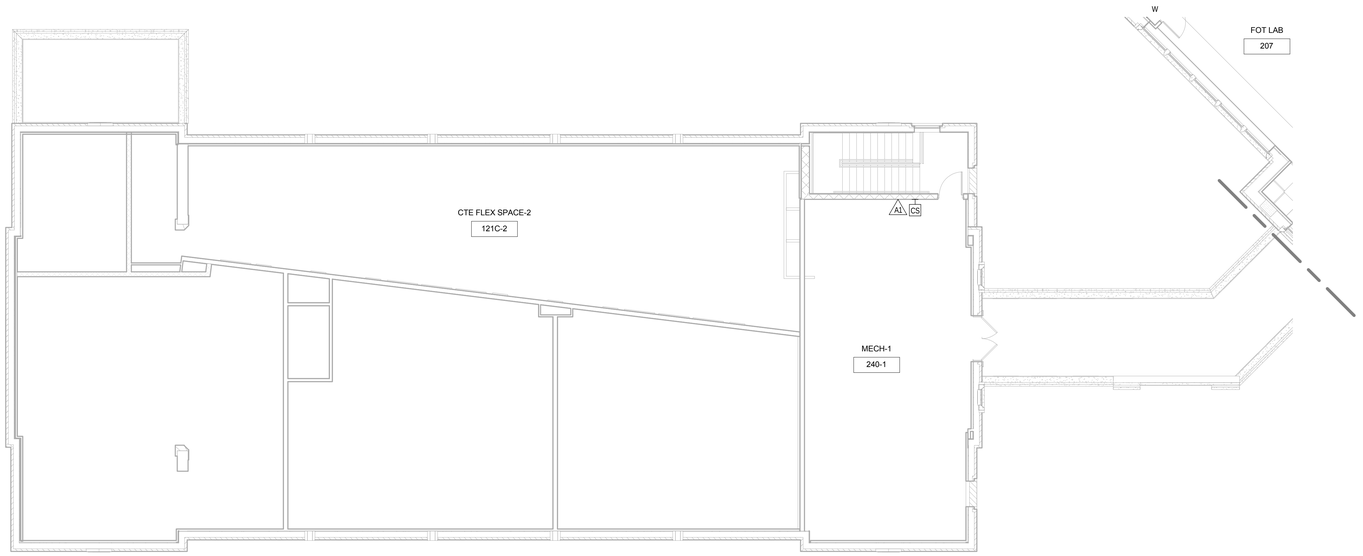
SCALE: As indicated

DRAWING NAME

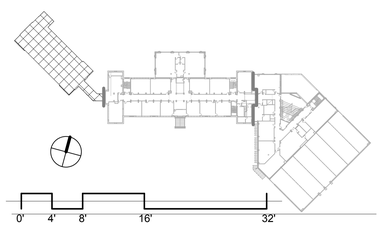
LEVELS 0A & 1A

T111

7/28/2016 3:21:50 PM



1 LEVEL 2A
1/8" = 1'-0"



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BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

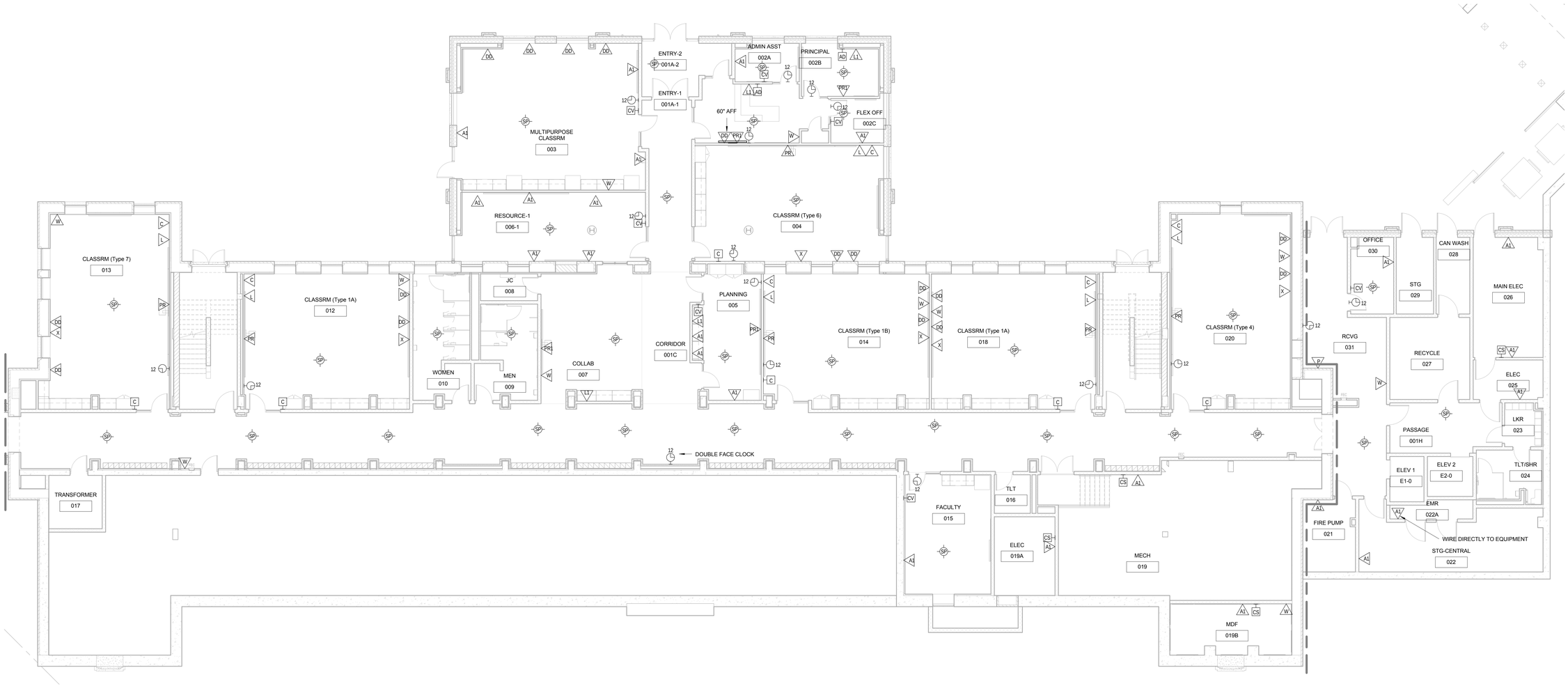
SCALE: As indicated

DRAWING NAME

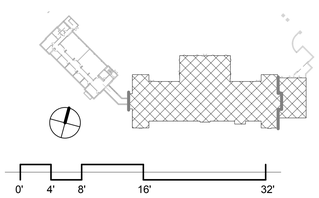
LEVEL 2A

T112

7/28/2016 3:21:52 PM



1 LEVEL 0B
1/8" = 1'-0"



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BID ISSUE

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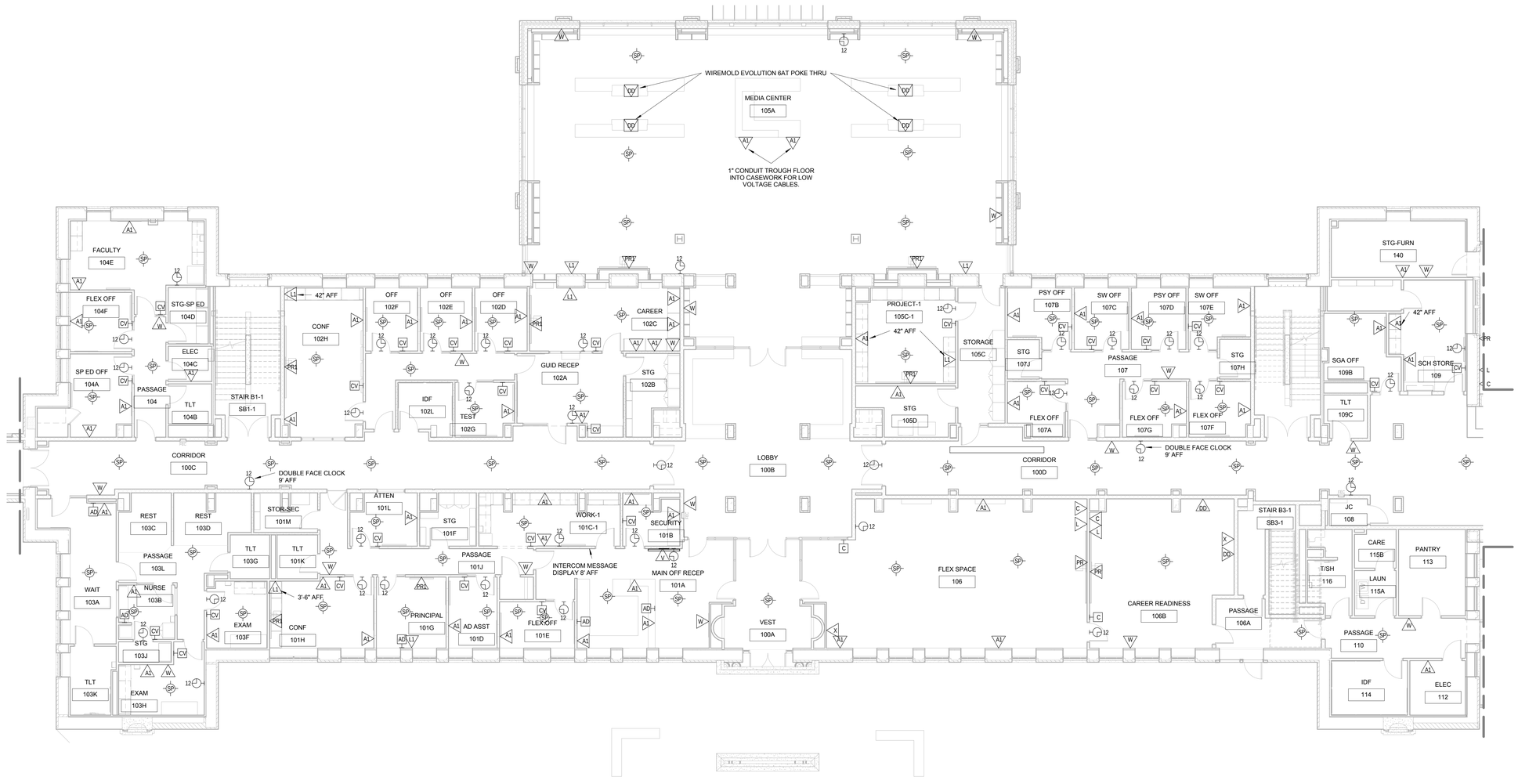
SCALE: As indicated

DRAWING NAME

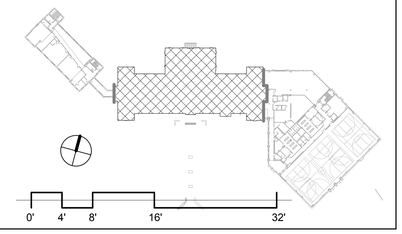
LEVEL 0B

T113

7/28/2016 3:21:54 PM



1 LEVEL 1B
1/8" = 1'-0"



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ASSOCIATE ARCHITECT
SCHRADER GROUP ARCHITECTURE LLC
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BALTIMORE, MD 21211

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BALTIMORE, MD 21244

STRUCTURAL ENGINEER
ALBRECHT ENGINEERING
3500 BOSTON ST, SUITE 329
BALTIMORE, MD 21224

MEP ENGINEER
BRUNJAC ENGINEERING
1800 N. CHARLES ST, SUITE 310
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FOOD SERVICE
NYIKOS ASSOCIATES
15219A FLOWER HILL WAY
GAITHERSBURG, MD 20879

AVIIT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
49 OLD SOLOMONS ISLAND RD, SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056

1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 8602
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

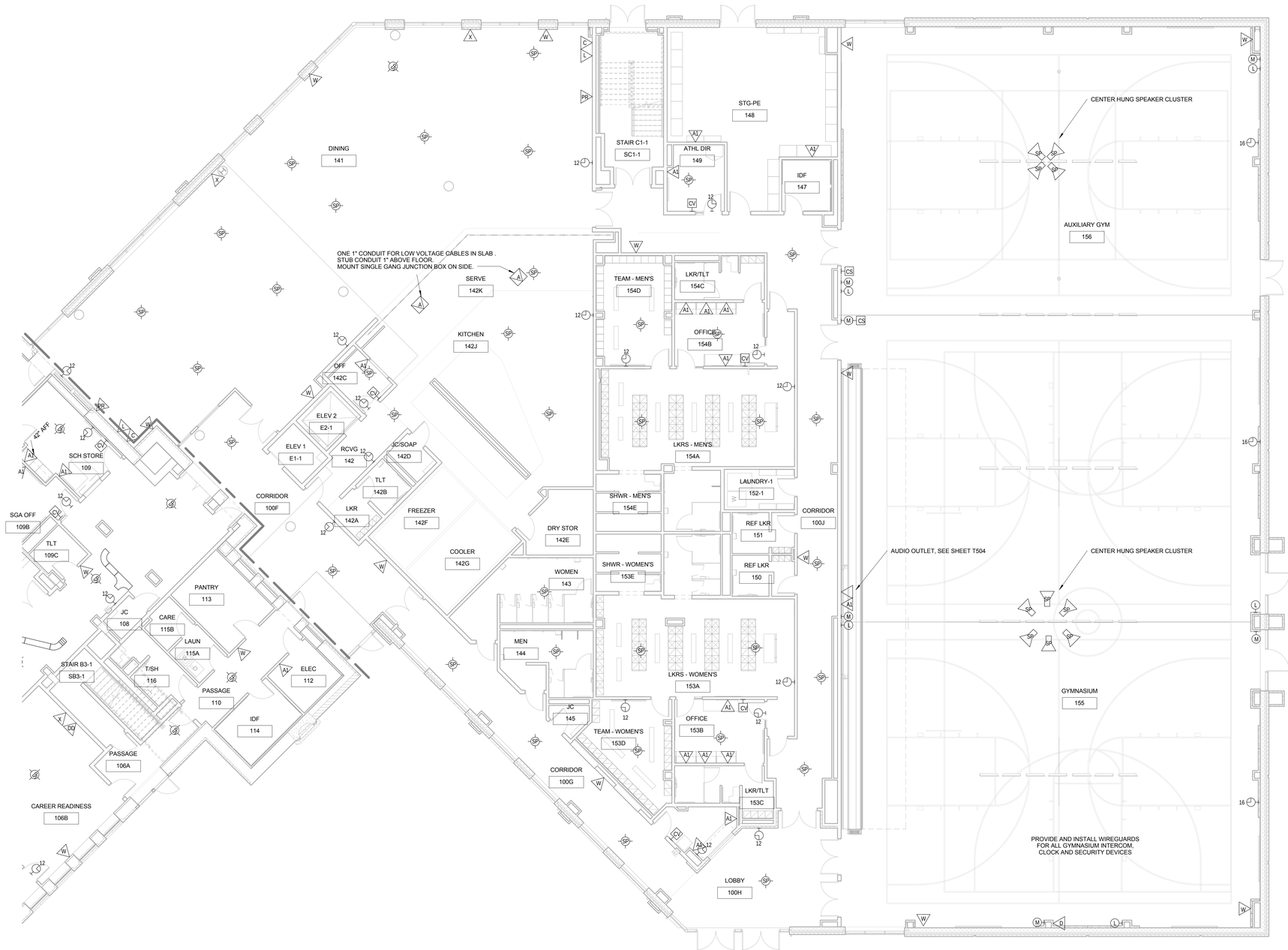
SCALE: As indicated

DRAWING NAME

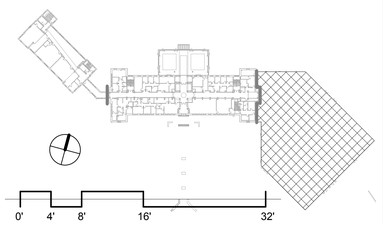
LEVEL 1B

T114

7/28/2016 3:21:58 PM



1 LEVEL 1C
1/8" = 1'-0"



JRS ARCHITECTS
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410.235.7256

ASSOCIATE ARCHITECT
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LICENSE NO.: 9002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

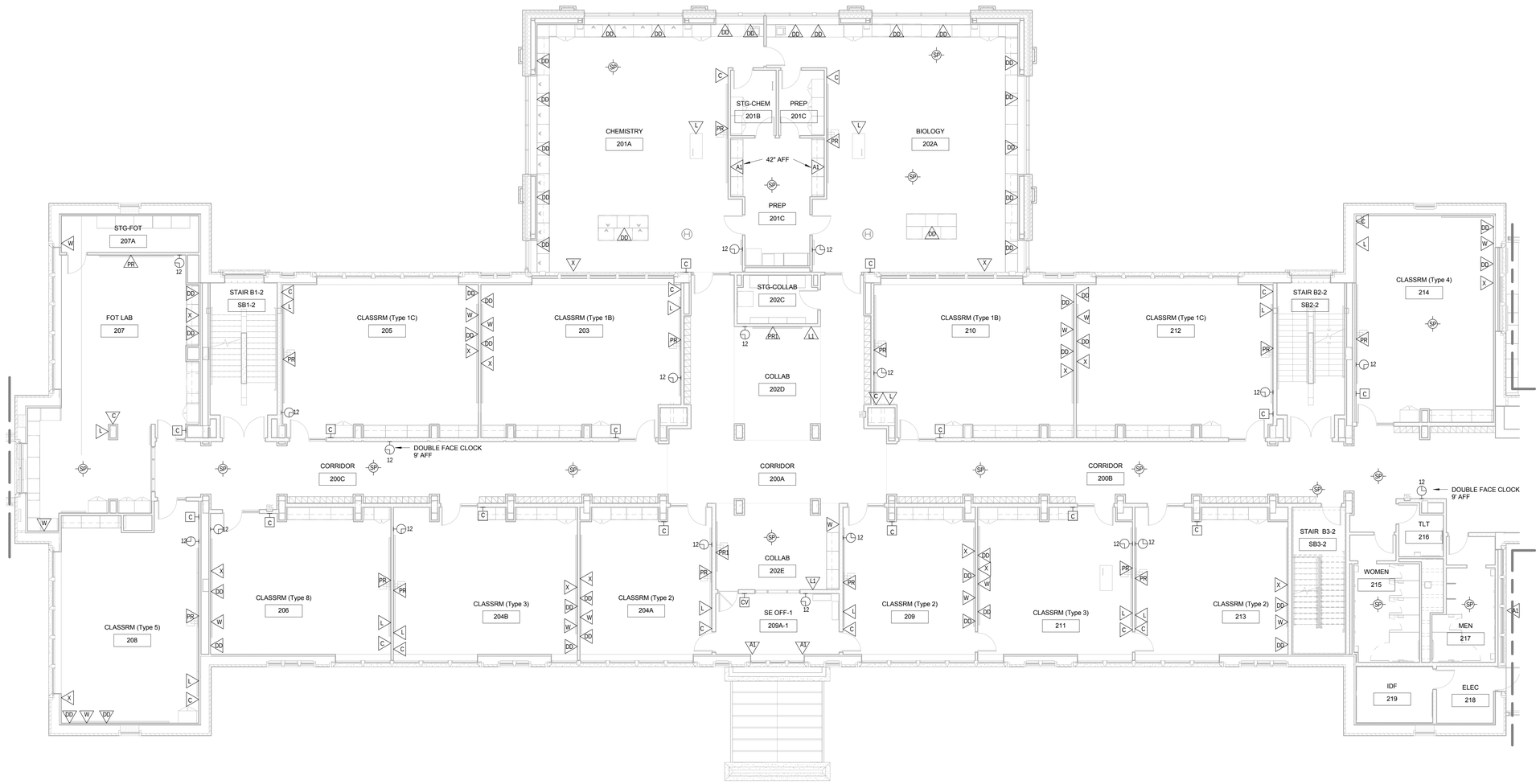
SCALE: As indicated

DRAWING NAME

LEVEL 1C

T115

7/28/2016 3:22:02 PM



1 LEVEL 2B
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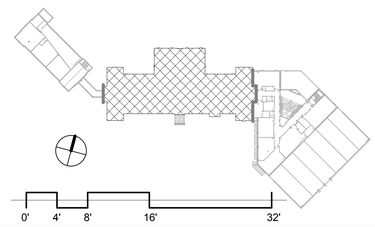

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LICENSE NO.: 8002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: As indicated

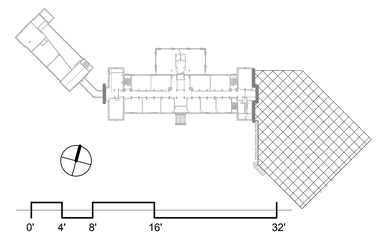
DRAWING NAME

LEVEL 2B

T116

7/28/2016 3:22:06 PM

1 LEVEL 2C
1/8" = 1'-0"



JRS ARCHITECTS

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Baltimore City Public Schools
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1300 W 36TH ST., BALTIMORE, MD 21211

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LICENSE NO.: 8002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

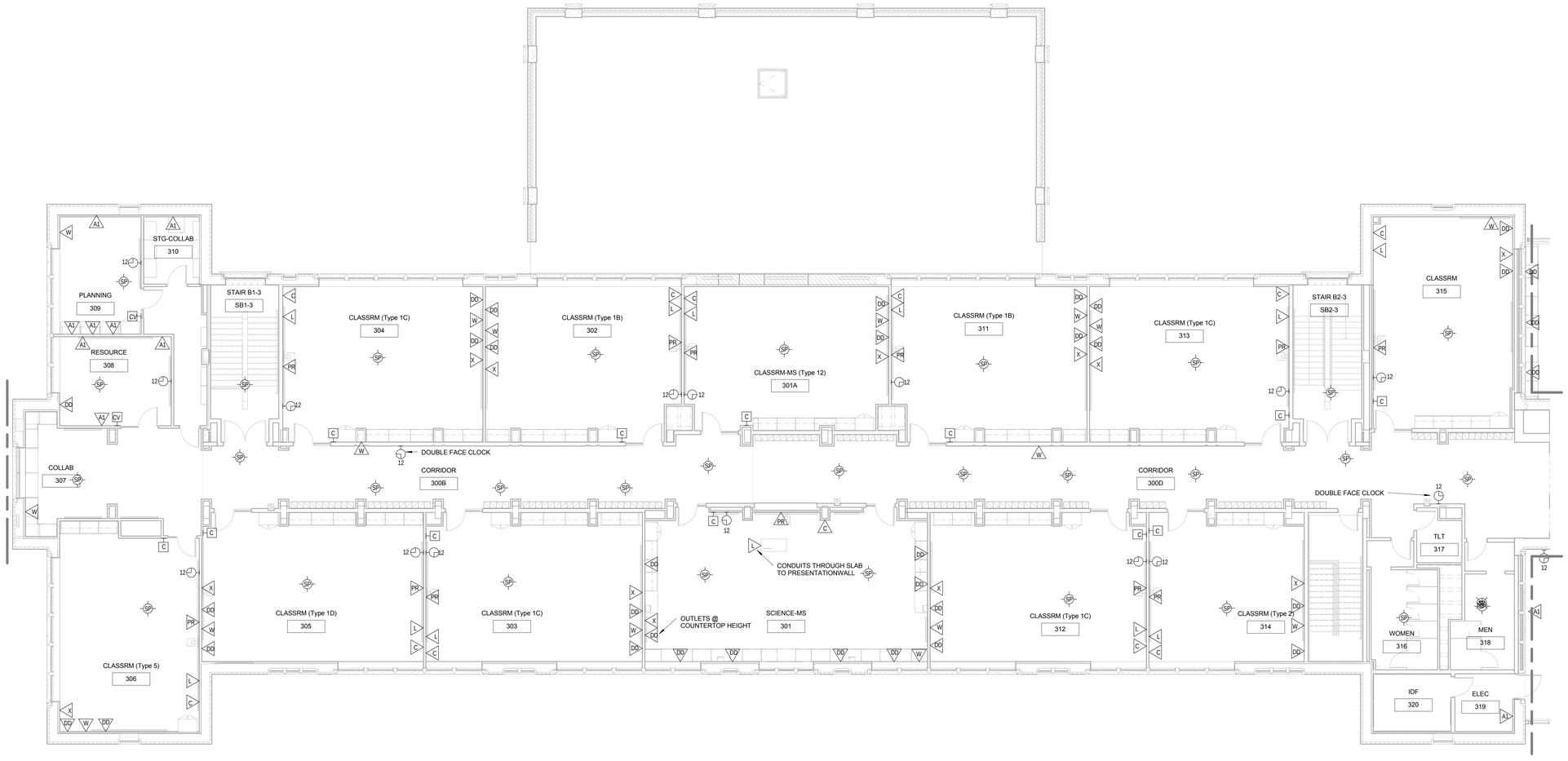
SCALE: As indicated

DRAWING NAME

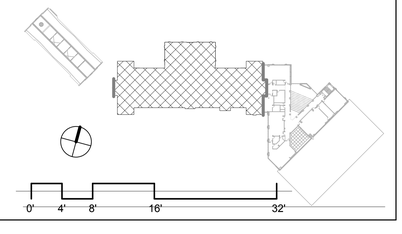
LEVEL 2C

T117

7/28/2016 3:22:10 PM



1 LEVEL 3B
1/8" = 1'-0"



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1300 W 36TH ST., BALTIMORE, MD 21211

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LICENSE NO.: 8022
EXPIRATION DATE: 6/30/15

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

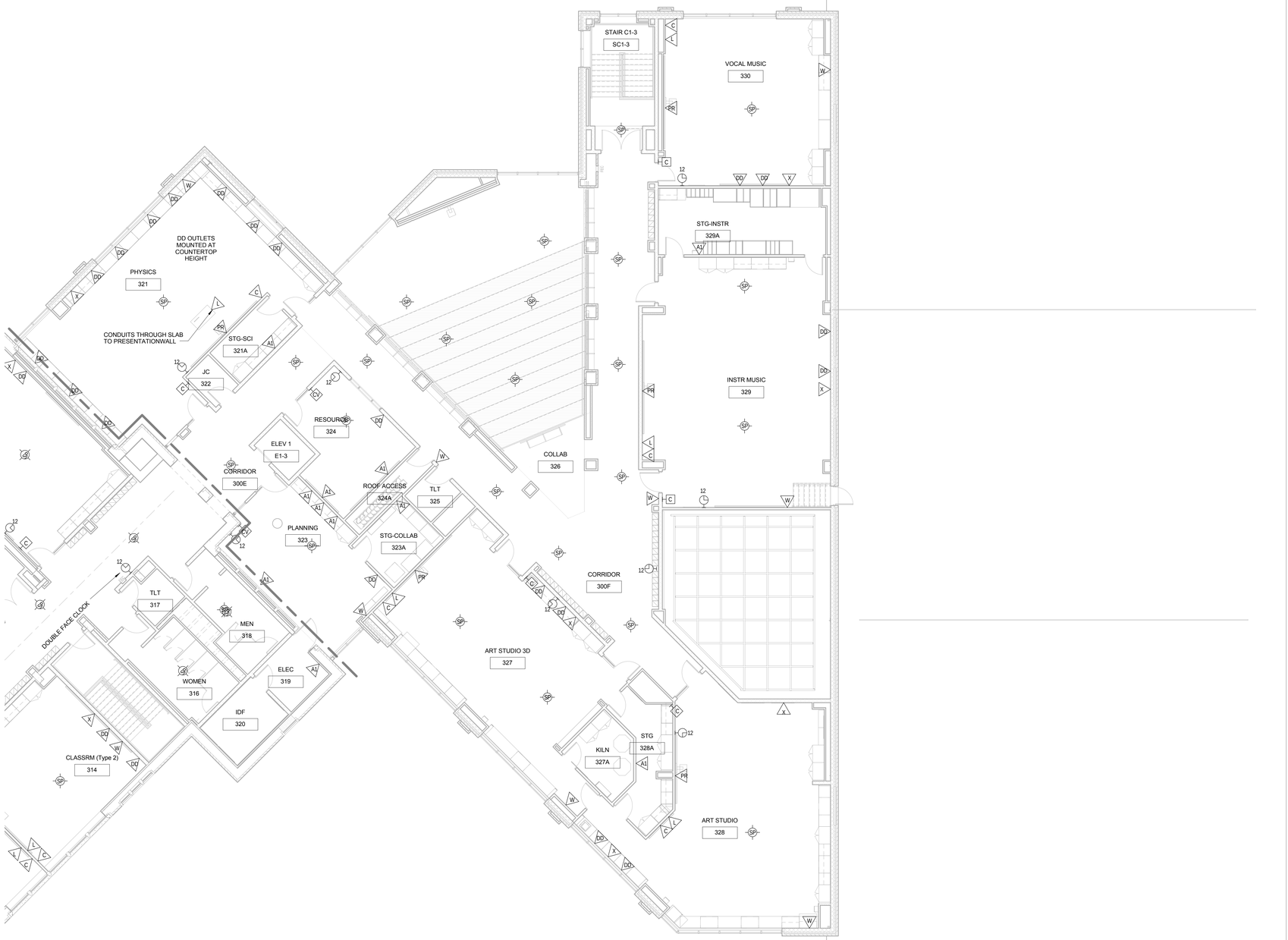
SCALE: As indicated

DRAWING NAME

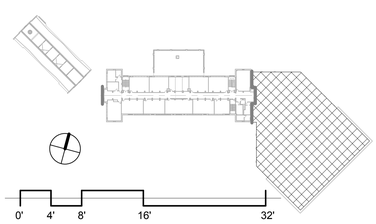
LEVEL 3B

T118

7/28/2016 3:22:13 PM



1 LEVEL 3C
1/8" = 1'-0"



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BALTIMORE, MD 21244

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BALTIMORE, MD 21224

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BRUNJAC ENGINEERING
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Baltimore City Public Schools
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LICENSE NO.: 8602
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

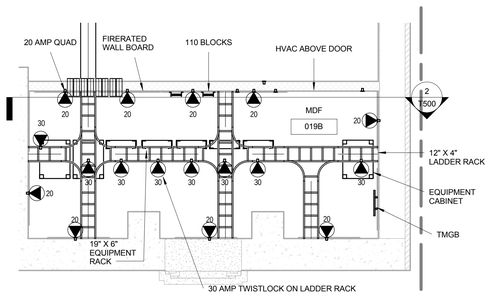
SCALE: As indicated

DRAWING NAME

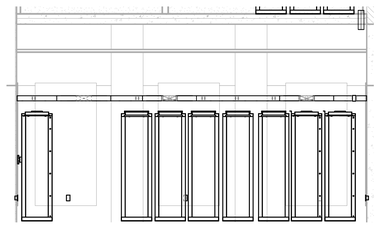
LEVEL 3C

T119

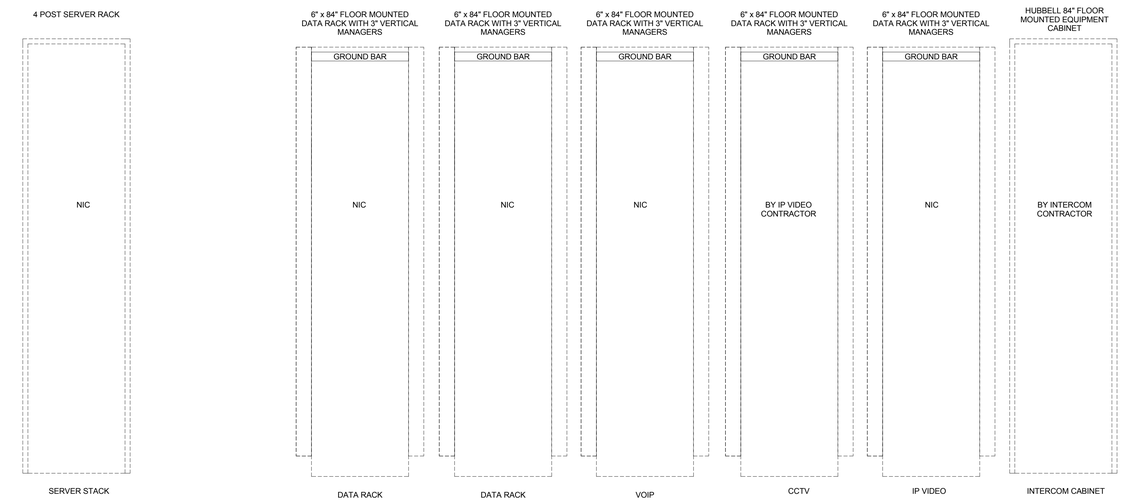
7/28/2016 3:22:17 PM



1 MDF 019B
1/4" = 1'-0"

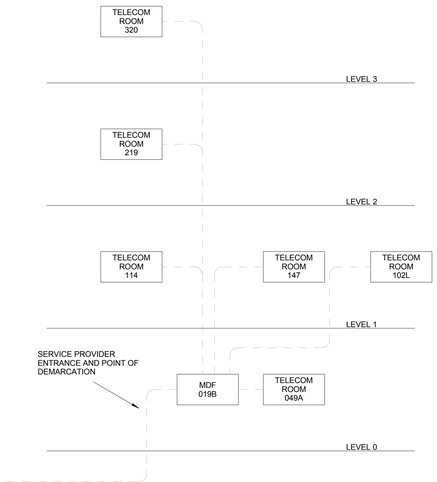


2 MDF 019B SECTION
1/4" = 1'-0"



1. RACK/CABINET LAYOUT SHOWN FOR INFORMATIONAL PURPOSES ONLY.
2. COORDINATE WITH OWNER AND OWNER'S EQUIPMENT FOR EXACT LAYOUT
3. DATA, VOIP, SERVER AND IP VIDEO RACKS/CABINETS ARE NOT IN CONTRACT.

3 MDF 019B EQUIPMENT RACKS
N.T.S.



1. THE MAIN TELECOM ROOM SHALL SERVE AS THE POINT OF DEMARCATION FOR INCOMING SERVICES TO THE BUILDING. SERVICE PROVIDER EQUIPMENT SHALL BE LOCATED ON FIRE-RATED WALL BOARD WITHIN THIS SPACE.
2. EXTEND ALL DEMARC SERVICES TO THE MAIN TELECOM ROOM.
3. PROVIDE AND INSTALL PATHWAYS FOR 12 STRANDS OF 50 MICRON OM4 MM BACKBONE FIBER FROM THE MDF TO EACH IDF.
4. PROVIDE AND INSTALL PATHWAYS FOR 6 STRANDS OF SINGLEMODE BACKBONE FIBER FROM THE MDF TO EACH IDF.
5. PROVIDE AND INSTALL PATHWAYS FOR 25-PAIR CAT 5 RISER FROM THE MDF TO EACH IDF.
6. PROVIDE AND INSTALL PATHWAYS FOR RG-11 QUAD SHIELD COAXIAL CABLE FROM THE MDF TO EACH IDF.

4 BACKBONE PATHWAY RISER DIAGRAM
N.T.S.

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AVIT CONSULTANT
EDUCATIONAL SYSTEMS PLANNING
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ANNAPOLIS, MD 21401

Baltimore City Public Schools
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LICENSE NO.: 8002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

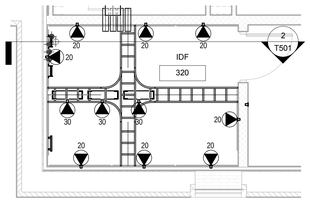
SCALE: As indicated

DRAWING NAME

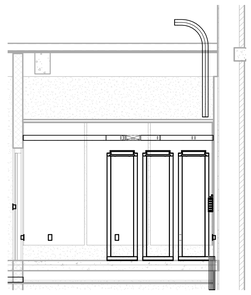
MAIN TELECOM ROOM DETAILS

T500

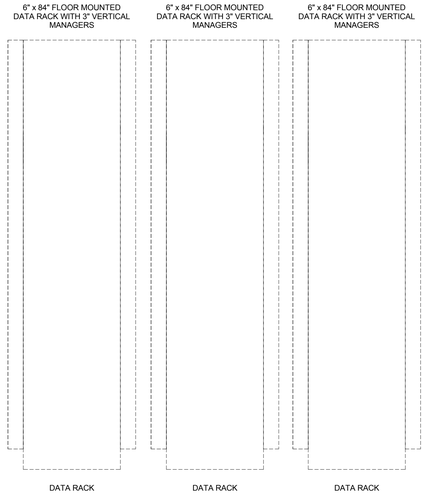
7/28/2016 3:22:18 PM



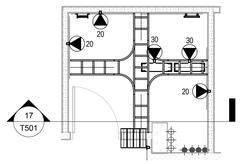
1 IDF 320
1/4" = 1'-0"



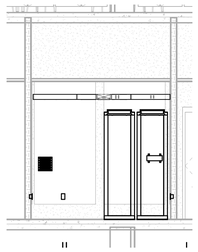
2 IDF 320 SECTION
1/4" = 1'-0"



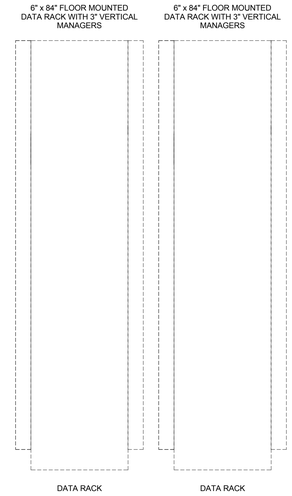
3 IDF 320 EQUIPMENT RACKS
N.T.S.



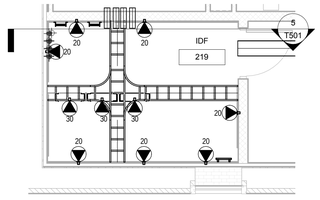
16 IDF 102L
1/4" = 1'-0"



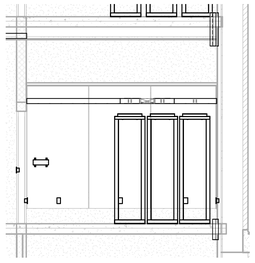
17 IDF 102L
1/4" = 1'-0"



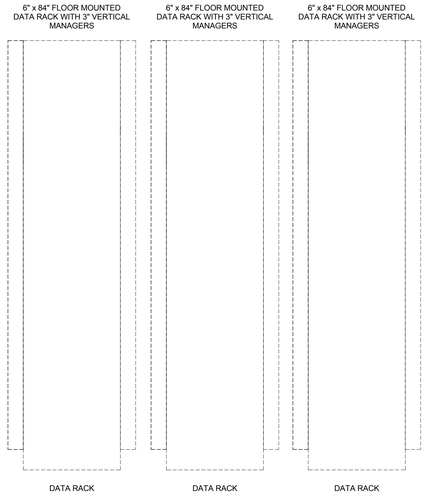
18 IDF 102L EQUIPMENT RACKS
N.T.S.



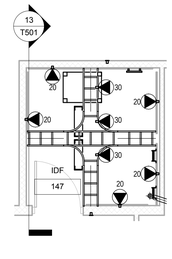
4 IDF 219
1/4" = 1'-0"



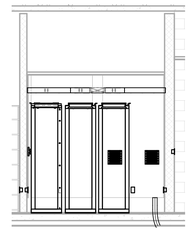
5 IDF 219 SECTION
1/4" = 1'-0"



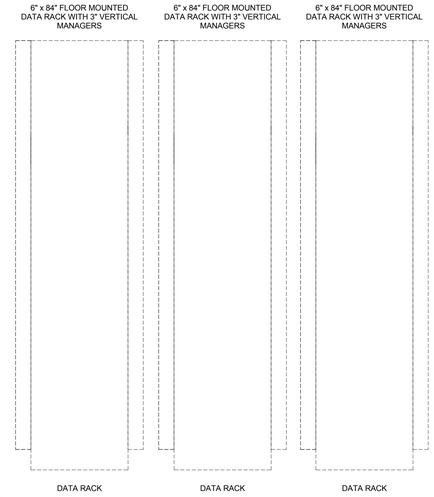
6 IDF 219 EQUIPMENT RACKS
N.T.S.



10 IDF 147
1/4" = 1'-0"



13 IDF 147 SECTION
1/4" = 1'-0"



14 IDF 147 EQUIPMENT RACKS
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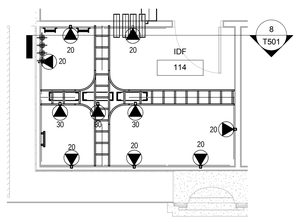
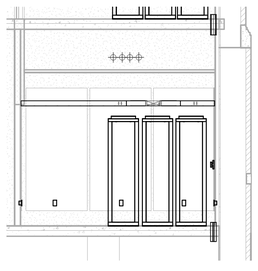
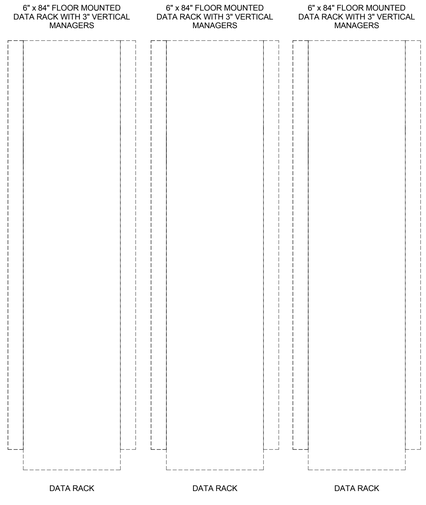


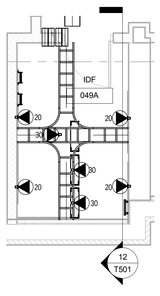
7 IDF 114
1/4" = 1'-0"



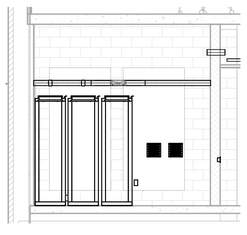
8 IDF 108A SECTION
1/4" = 1'-0"



9 IDF 108A EQUIPMENT RACKS
N.T.S.



11 IDF 049A
1/4" = 1'-0"



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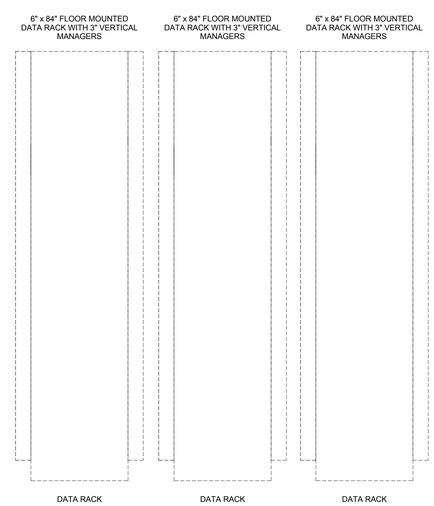

15 IDF 049A EQUIPMENT RACKS
N.T.S.

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LICENSE NO.: 8002
EXPIRATION DATE: 6/3/2016

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

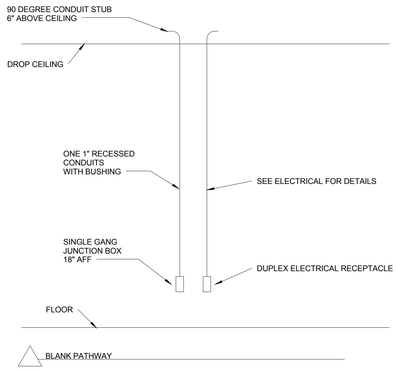
SCALE: As indicated

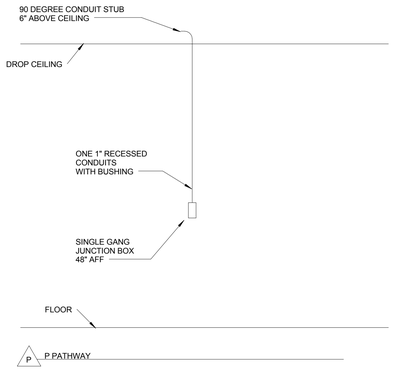
DRAWING NAME

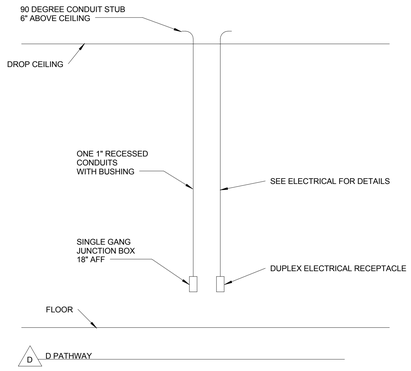
TELECOM ROOM DETAILS

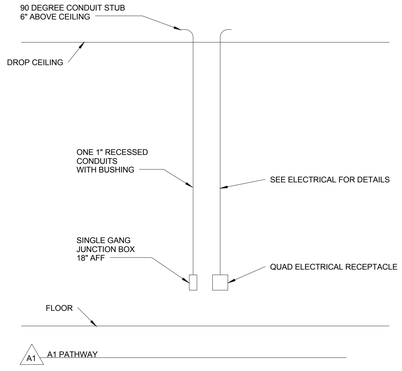
T501

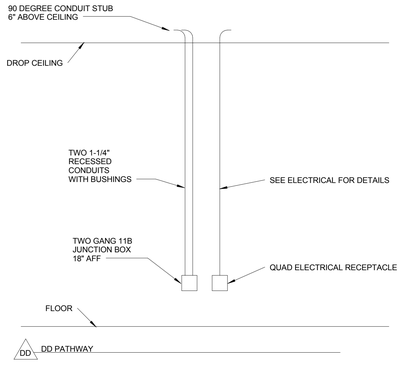
7/28/2016 3:22:22 PM

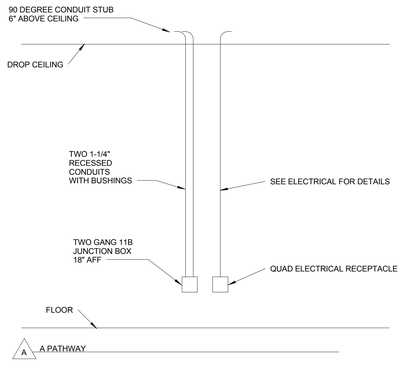


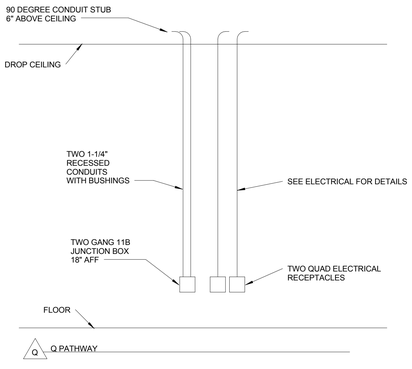


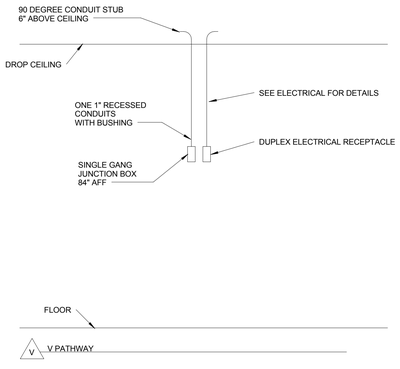


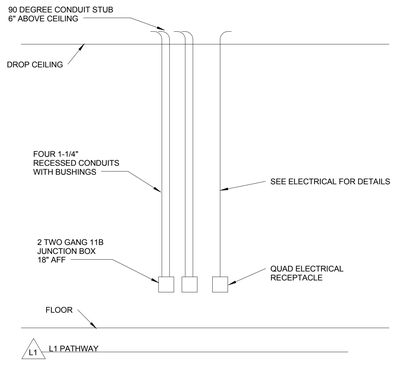


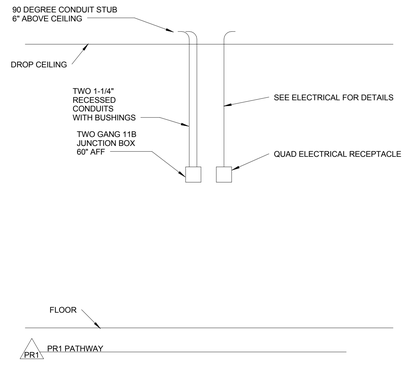


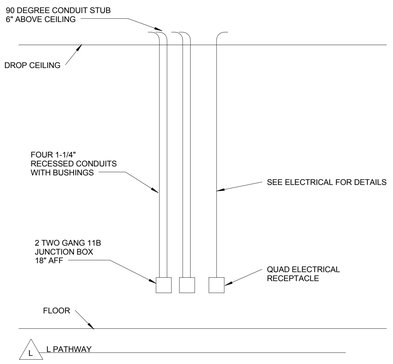


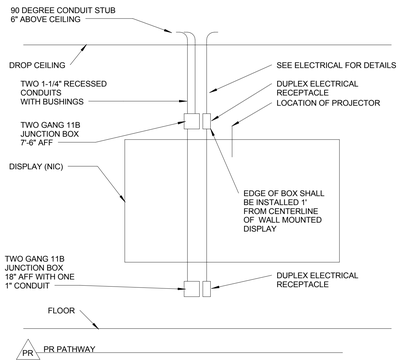


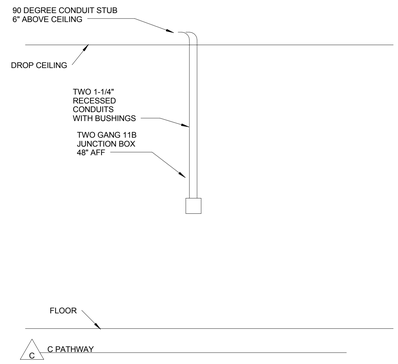


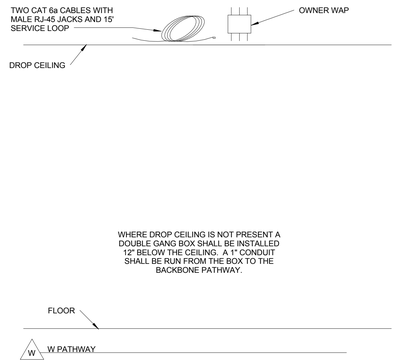


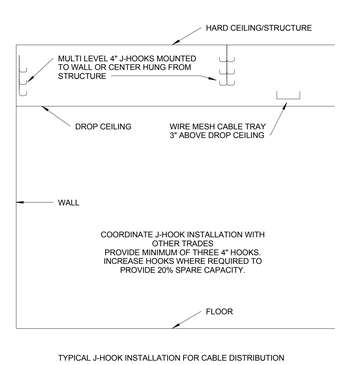




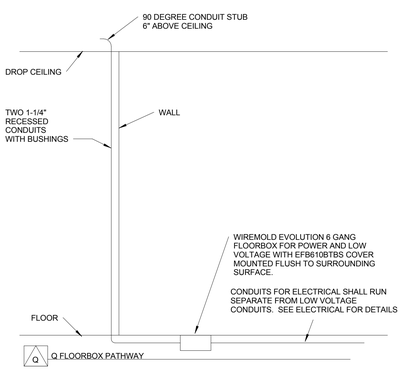


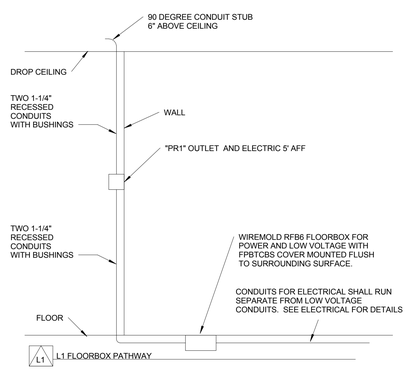


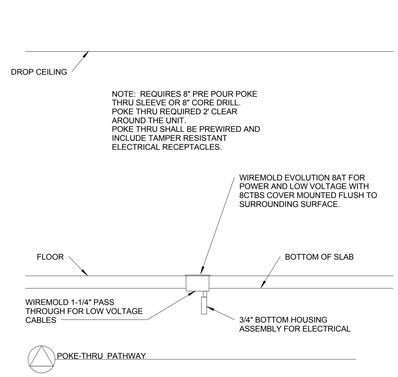


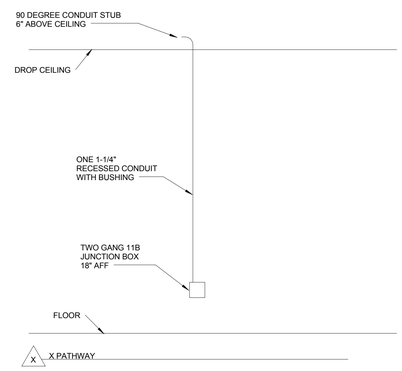


TYPICAL J-HOOK INSTALLATION FOR CABLE DISTRIBUTION









1. OUTLET HEIGHTS ARE STANDARD UNLESS OTHERWISE NOTED ON THE FLOOR PLAN DRAWINGS.
2. EXTENSION RINGS AND MUD RINGS SHALL BE ADDED TO BOXES WHERE PARTITIONS HAVE MULTIPLE LAYERS.
3. SEE BCPS ITD STANDARDS DOCUMENT FOR CURRENT STANDARDS.

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LICENSE NO.: 8002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

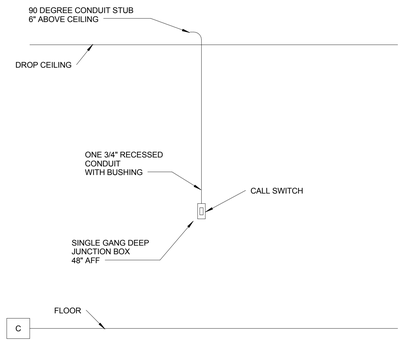
SCALE: N.T.S.

DRAWING NAME

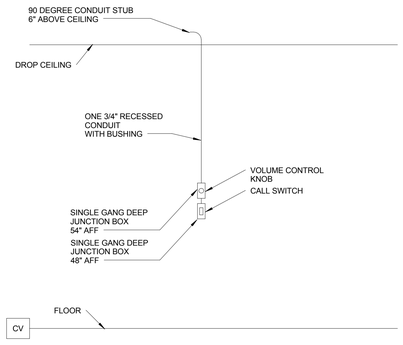
PATHWAYS

T502

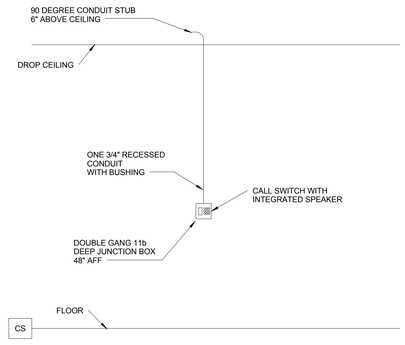
7/28/2016 3:22:23 PM



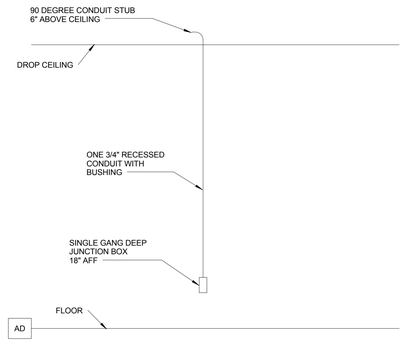
INTERCOM CALL SWITCH DETAIL



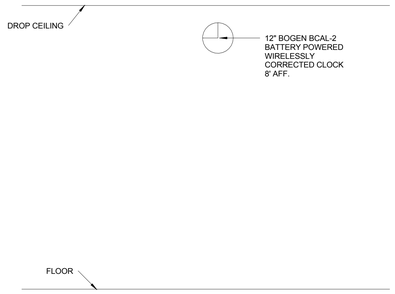
INTERCOM CALL SWITCH WITH VOLUME CONTROL DETAIL



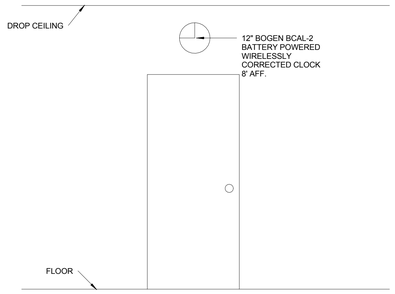
INTERCOM CALL SWITCH WITH INTEGRATED SPEAKER DETAIL



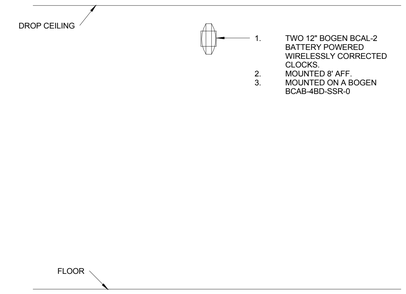
INTERCOM ADMINISTRATIVE HANDSET DETAIL



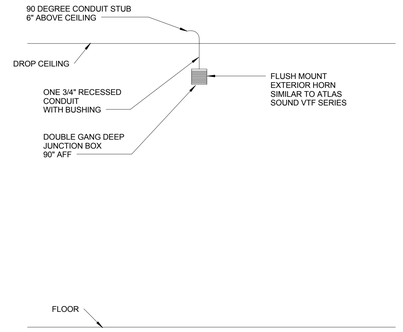
DROP CEILING SLAVE CLOCK DETAIL



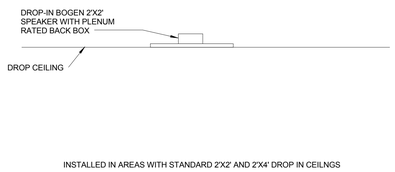
SLAVE CLOCK ABOVE DOOR DETAIL



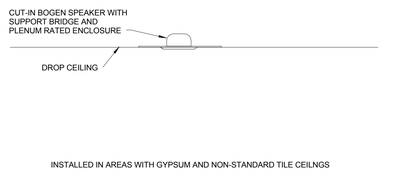
DOUBLE SIDED SLAVE CLOCK DETAIL



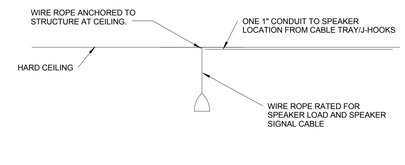
EXTERIOR HORN SPEAKER DETAIL

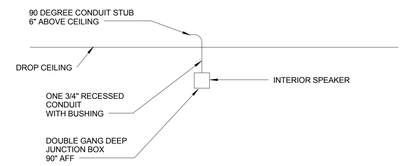


INSTALLED IN AREAS WITH STANDARD 2'X2' AND 2'X4' DROP IN CEILNGS



INSTALLED IN AREAS WITH GYPSUM AND NON-STANDARD TILE CEILNGS



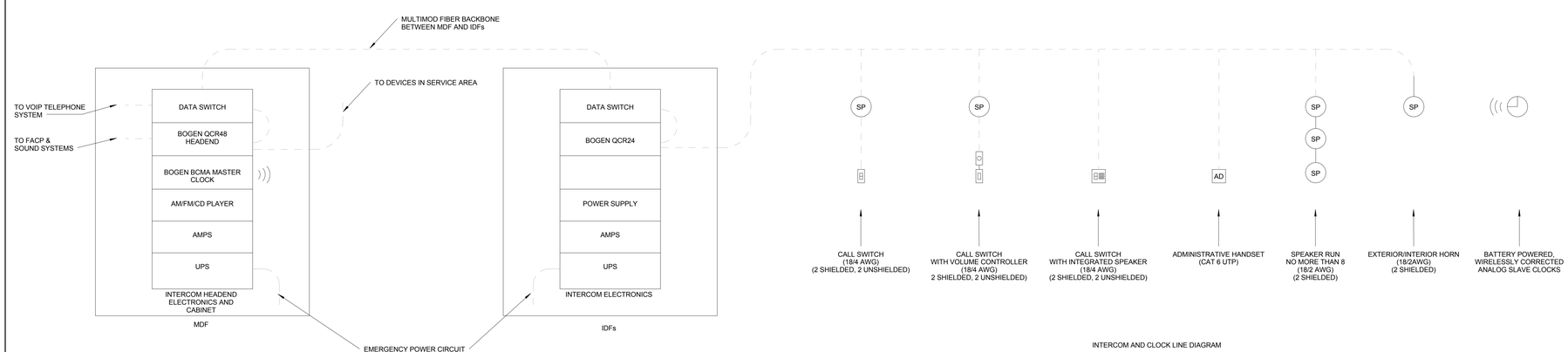


INTERIOR DROP-IN SPEAKER DETAIL

INTERIOR CUT-IN SPEAKER DETAIL

INTERIOR PENDANT SPEAKER DETAIL

INTERIOR WALL SPEAKER DETAIL



INTERCOM AND CLOCK LINE DIAGRAM

1. PROVIDE AND INSTALL ALL PATHWAYS, CABLING, TERMINATION FIELDS, CALL SWITCHES, HANDSETS, SPEAKERS, CLOCKS, HEADEND AND ELECTRONICS FOR A COMPLETE AND FULLY FUNCTIONAL INTERCOM/PA/MASTER CLOCK SYSTEM.
2. THE INTERCOM HEADEND SHALL BE LOCATED IN THE MDF AND MUST BE CONNECTED TO A 30 MINUTE UPS AND EMERGENCY POWER CIRCUITS.
3. THE INTERCOM HEADEND MUST BE INTERCONNECTED TO THE VOIP TELEPHONE SYSTEM AT THE FACILITY. PROVIDE ALL NECESSARY CABLES AND CONNECTORS FOR INTERCONNECTION TO THE VOIP HEADEND.
4. THE INTERCOM HEADEND SHALL HAVE PUNCH BLOCKS LOCATED IN OR DIRECTLY BEHIND THE EQUIPMENT CABINET FOR ALL CABLES FROM INTERCOM DEVICES.
5. THE INTERCOM HEADEND SHALL BE INTERCONNECTED TO AUXILIARY SOUND SYSTEMS AT THE FACILITY. PROVIDE ALL NECESSARY CABLES AND DEVICES FOR INTERCONNECTION. COORDINATE WORK WITH AUXILIARY SOUND SYSTEM CONTRACTOR.
6. THE INTERCOM SYSTEM SHALL SHALL OVERRIDE ALL LOCAL SOUND SYSTEMS IN THE EVENT OF AN ALL CALL OR EMERGENCY CALL.
7. THE INTERCOM SYSTEM SHALL BE INTERCONNECTED TO THE FIRE ALARM SYSTEM AT THE FACILITY. PROVIDE ALL NECESSARY CABLES AND DEVICES FOR INTERCONNECTION. COORDINATE ALL WORK WITH FIRE ALARM CONTRACTOR.
8. THE INTERCOM SYSTEM SHALL HAVE A VISUAL DISPLAY INSTALLED IN THE MAIN OFFICE AREA WHICH VISUALLY INDICATES SYSTEM ACTIVITY.
9. CABLING SHALL BE PER MANUFACTURER'S SPECIFICATIONS AND FOLLOW MANUFACTURER GUIDELINES. SEE LINE DIAGRAM FOR CABLE TYPES. WIRE GAUGE SIZE SHALL BE INCREASED WHERE REQUIRED FOR PROPER SIGNAL TRANSMISSION.
10. ALL CABLES SHALL BE PLENUM RATED.
11. MULTIPAIR SHIELDED CABLE MAY BE RUN FROM MDF TO IDFS FOR SPEAKERS. CABLES SHALL BE TRANSITIONED FROM MULTIPAIR BACKBONE TO INDIVIDUAL SHIELDED CABLES FOR SPEAKER RUNS. WALL MOUNTED 110/66 BLOCKS SHALL BE USED FOR CROSSCONNECTS.
12. ALL CABLES SHALL BE CLEARLY LABELED AT EACH END FOR IDENTIFICATION PURPOSES.
13. CLOCK SHALL BE BATTERY POWERED, WIRELESSLY CORRECTED ANALOG CLOCKS.
14. GYMNASIUM/ATHLETIC CLOCKS SHALL BE LARGE FORMAT AND HAVE A PROTECTIVE WIREGUARD INSTALLED.
15. PROVIDE ALL NECESSARY TESTING AND ADJUSTING FOR PROPER SIGNAL STRENGTH AND SOUND LEVELS PRIOR TO ACCEPTANCE.
16. AS-BUILT DOCUMENTATION SHALL INCLUDE ALL DEVICE LOCATIONS, CABLE ROUTING, LABELING, WIRING DIAGRAMS AND OTHER RELEVANT INFORMATION.
17. O&M MANUALS SHALL BE PROVIDED FOR THE OWNER UPON SYSTEM ACCEPTANCE.

JRS ARCHITECTS

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LICENSE NO.: 8602
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

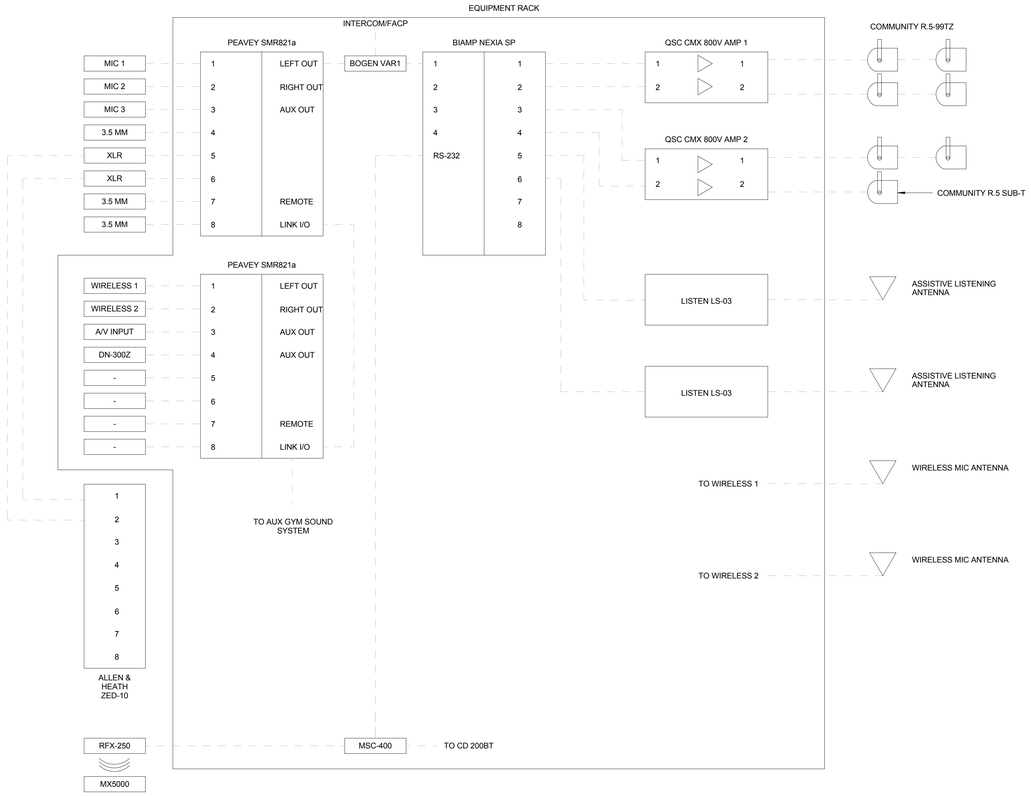
SCALE: 6" = 1'-0"

DRAWING NAME

INTERCOM AND CLOCK

T503

7/28/2016 3:22:24 PM

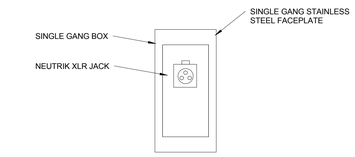


1 GYMNASIUM SOUND SYSTEM LINE DIAGRAM
N.T.S.

BLANK
RDL ST-ACR2 / RDL TX-70A
LISTEN LS-03 / LISTEN LS-03
SHURE SLX / SHURE SLX
PEAVEY MIXER
PEAVEY MIXER
BLANK
BIAMP NEXIA SP
DENON DN-300Z
ATLAS ECS-3
ATLAS ECS-3
SURGE X SEQ 2RU
LOWELL UDEL-214
URC MSC-400
BLANK
QSC CMX 800 V
BLANK
QSC CMX 800V
BLANK

NOTES:
1. PROVIDE AND INSTALL ALL REQUIRED PATHWAYS, CABLING, RACK EQUIPMENT, MICS, ELECTRONICS AND SPEAKERS FOR THE AUXILIARY SOUND SYSTEM AS DESCRIBED IN THE TECHNOLOGY DRAWINGS.
2. ELECTRONICS FOR THE AUXILIARY SOUND SYSTEMS SHALL BE PROVIDED, INSTALLED AND TESTED AND BE SHOWN TO BE FREE FROM DEFECT.
3. 48" WALL MOUNTED SWING EQUIPMENT CABINET SHALL BE PROVIDE, INSTALLED AND PROPERLY SECURED TO THE WALL AND HOLD THE ANTICIPATED AMOUNT OF EQUIPMENT AND WEIGHT.
4. 48" WALL MOUNTED CABINET SHALL BE INSTALLED 18" AFF
5. THE AUXILIARY SOUND SYSTEMS SHALL BE TIED TO THE FACP AND INTERCOM SYSTEM AND SHUNT DURING AN EMERGENCY CALL OR ALERT. COORDINATE WORK WITH INTERCOM, FACP AND ELECTRICAL INSTALLERS.
6. ALL CABLES SHALL BE RUN IN RIGID METALLIC CONDUIT RUN BEHIND SURFACES WHERE POSSIBLE.
7. ALL CABLES SHALL BE LABELED AT BOTH ENDS WITH IDENTIFICATION, SIGNAL STRENGTH AND CABLE LENGTH.
8. SOUND SHALL BE ADJUSTED, VERIFIED AND DEMONSTRATED AS PART OF SYSTEM INSTALLATION. PROVIDE AN EASE PLOT FOR THE SPEAKERS SELECTED WHICH SHOWN SOUND PRESSURE LEVELS FOR THE SPACE BEING SERVED.
9. PROVIDE A WHIRLWIND ISOPOD FOR IPOD CONNECTION.
10. LOCATE ALL ANTENNAS AT CEILING HEIGHT. ADJUST AS NEEDED FOR SYSTEM OPERATION.
11. SEE RELATED SPECIFICATION SECTION FOR EQUIPMENT AND INSTALLATION DETAILS.
12. MAIN GYM AND AUX GYM SHALL FUNCTION INDEPEDANTLY AND TOGETHER AS A UNIT.

2 GYMNASIUM EQUIPMENT RACK
N.T.S.



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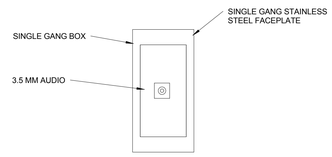

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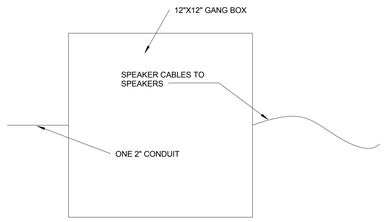

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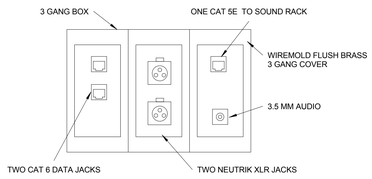
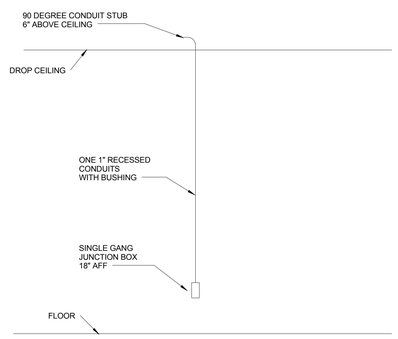
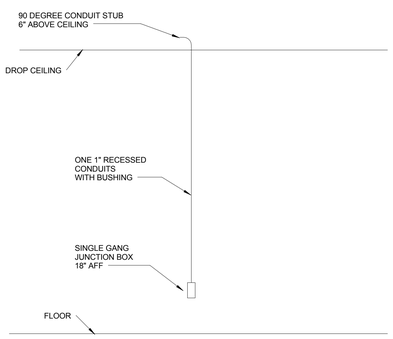


GYMNASIUM FLOORBOX FACEPLATE



M M PATHWAY



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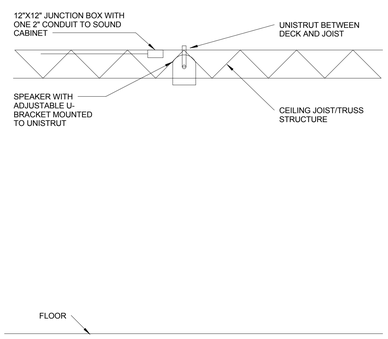

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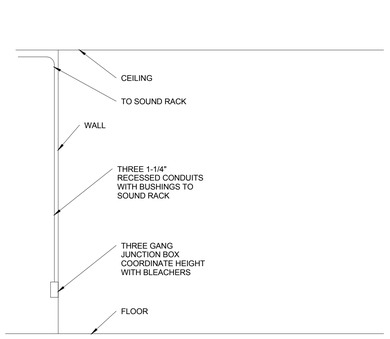

GYMNASIUM OUTLET PATHWAY

3 GYMNASIUM OUTLETS
N.T.S.

JRS ARCHITECTS
2010 Clipper Park Rd.
Suite 101
Baltimore, MD 21211
410.235.7256

ASSOCIATE ARCHITECT
SCHRADER GROUP ARCHITECTURE LLC
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LANDSCAPE ARCHITECT
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EDUCATIONAL SYSTEMS PLANNING
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Baltimore City Public Schools
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1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO.: 8602
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

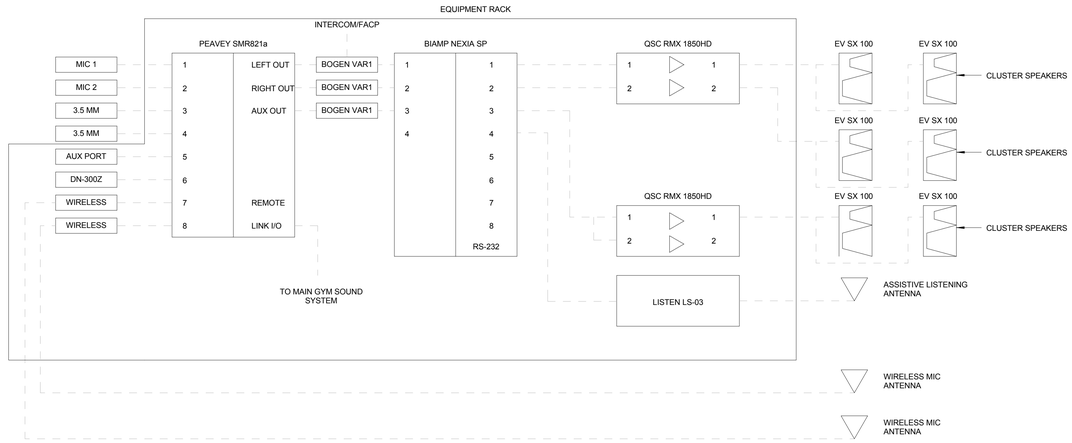
SCALE: As indicated

DRAWING NAME

GYMNASIUM SOUND SYSTEM

T504

7/28/2016 3:22:24 PM

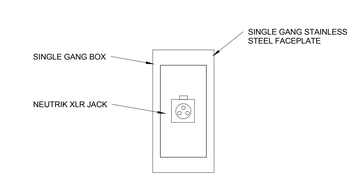


1 AUX GYM SOUND SYSTEM LINE DIAGRAM
N.T.S.

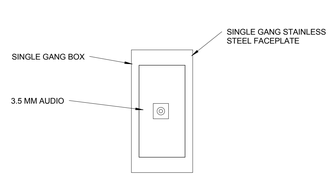
BLANK
BLANK / LISTEN LS-03
SHURE SLX / SHURE SLX
PEAVEY SMR821a
BIAMP NEXIA SP
BLANK
DENON DN-300Z
BLANK
BLANK
SURGE X SEQ 2RU
DRAWER
BLANK
BLANK
QSC RMX 1850 HD
BLANK
QSC RMX 1850 HD
BLANK

NOTES:
1. PROVIDE AND INSTALL ALL REQUIRED PATHWAYS, CABLING, RACK EQUIPMENT, MICS, ELECTRONICS AND SPEAKERS FOR THE AUXILIARY SOUND SYSTEM AS DESCRIBED IN THE TECHNOLOGY DRAWINGS.
2. ELECTRONICS FOR THE AUXILIARY SOUND SYSTEMS SHALL BE PROVIDED, INSTALLED AND TESTED AND BE SHOWN TO BE FREE FROM DEFECT.
3. 48" WALL MOUNTED SWING EQUIPMENT CABINET SHALL BE PROVIDE, INSTALLED AND PROPERLY SECURED TO THE WALL AND HOLD THE ANTICIPATED AMOUNT OF EQUIPMENT AND WEIGHT.
4. 48" WALL MOUNTED CABINET SHALL BE INSTALLED 18" AFF.
5. THE AUXILIARY SOUND SYSTEMS SHALL BE TIED TO THE FACP AND INTERCOM SYSTEM AND SHUNT DURING AN EMERGENCY CALL OR ALERT. COORDINATE WORK WITH INTERCOM, FACP AND ELECTRICAL INSTALLERS.
6. ALL CABLES SHALL BE RUN IN RIGID METALLIC CONDUIT RUN BEHIND SURFACES WHERE POSSIBLE.
7. ALL CABLES SHALL BE LABELED AT BOTH ENDS WITH IDENTIFICATION, SIGNAL STRENGTH AND CABLE LENGTH.
8. SOUND SHALL BE ADJUSTED, VERIFIED AND DEMONSTRATED AS PART OF SYSTEM INSTALLATION. PROVIDE AN EASE PLOT FOR THE SPEAKERS SELECTED WHICH SHOWN SOUND PRESSURE LEVELS FOR THE SPACE BEING SERVED.
9. PROVIDE AND INSTALL ALL ANTENNAS FOR THE SYSTEM AT CEILING HEIGHTS. ADJUST LOCATION IN THE FIELD FOR PROPER SIGNAL TRANSMISSION.
10. SEE RELATED SPECIFICATION SECTION FOR EQUIPMENT AND INSTALLATION DETAILS.
11. AUXILIARY AND MAIN GYMNASIUM SYSTEMS SHALL FUNCTION INDEPENDANTLY AND AS A SINGLE UNIT.

2 AUX GYM EQUIPMENT RACK
N.T.S.



M M FACEPLATE



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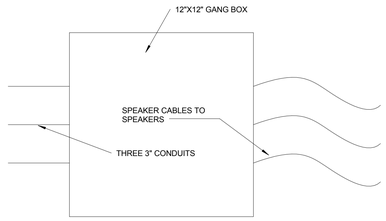

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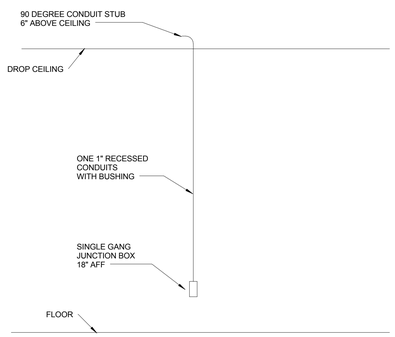
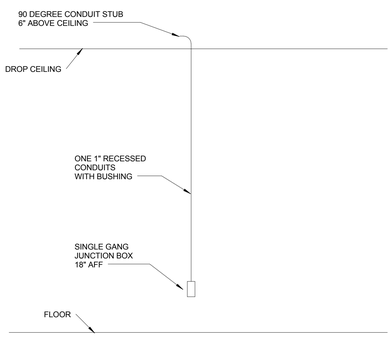
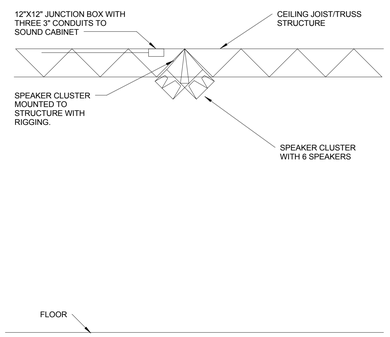


M M PATHWAY



L L PATHWAY



SP SP PATHWAY

3 AUX GYM OUTLETS
N.T.S.

JRS ARCHITECTS
2010 Clipper Park Rd.
Suite 101
Baltimore, MD 21211
410.235.7256

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LICENSE NO.: 8002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: As indicated

DRAWING NAME

AUXILIARY GYM SOUND SYSTEM

T505

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D	INTRUSION DETECTION DOOR CONTACT
M	INTRUSION DETECTION MOTION DETECTOR
W	INTRUSION DETECTION WIDE ANGLE MOTION DETECTOR
SP	INTRUSION DETECTION SECURITY PANEL
KP	INTRUSION DETECTION KEYPAD
CR	ACCESS CONTROL CARD READER
AC	ACCESS CONTROLLER
AR	AREA OF REFUGE STATION
AP	AREA OF REFUGE PANEL
AI	AIPHONE INTERIOR STATION
AE	AIPHONE EXTERIOR STATION
	FIXED CCTV CAMERA
	WIDE ANGLE CCTV CAMERA

NOTE: SEE ARCHITECTURAL DRAWINGS FOR UNIVERSAL INTERIOR ELEVATIONS AT DEVICES AS NEEDED.

1 SECURITY SYMBOLS
N.T.S.

1. ALL ELECTRICAL SYSTEMS, EQUIPMENT, RACEWAYS, CABLING, BOXES, FIRESEALS, GROUNDING AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF THE NEC GUIDELINES.
2. ALL CONDUITS AND RACWAYS SHALL BE PAINTED TO MATCH SURROUNDING FINISHED UNLESS OTHERWISE NOTED.
3. ALL LOW VOLTAGE CABLING MUST BE INSTALLED ACCORDING TO BICSI GUIDELINES AND METHODS.
4. ALL CABLING SHALL BE APPROPRIATELY LABELED. SEE T SERIES DRAWINGS FOR EXACT REQUIRMENTS.
5. CONTRACTOR SHALL NOT INSTALL ANY EQUIPMENT PRIOR TO ITS APPROVAL BY THE ARCHITEC, ENGINEER AND OWNER. CONTRACTOR SHALL BE LIABLE FOR ITS REMOVAL IN ANY SUCH CASE.
6. SEE ELECTRICAL DRAWINGS FOR POWER CIRCUITS AND REQUIREMENTS RELATED TO LOW VOLTAGE OUTLETS SHOWN IN THESE DRAWINGS.
7. ANY PENETRATION OF A FIRE-RATED BARRIER MUST BE PROPERLY SEALED WITH FIRESTOPPING MATERIAL IN ACCORDANCE WITH LOCAL AND STATE LAWS AND THE AUTHORITY HAVING JURISDICTION.
8. PRIOR TO BEGINNING ANY WORK, THE CONTRACTOR SHALL SECURE THE NECESSARY PERMITS AND CLEARANCES FROM THE AUTHORITIES HAVING JURISDICTION
9. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIALS FOR COMPLETE INSTALLATION.
10. THE WORK SHALL BE PERFORMED AND COMPLETED BY EXPERIENCED TRADESMEN WHO ARE LICENSED IN THE JURSIDICTION WHERE THE PROJECT IS BEING CONSTRUCTED.
11. CONDUITS AND PATHWAYS SHALL BE RUN BEHIND FINISHED SURFACES WHERE POSSIBLE UNLESS OTHERWISE NOTED.
12. THE TECHNOLOGY PLANS ARE DIAGRAMMATIC. ALL WORK MUST BE COORDINATED PRIOR TO INSTALLATION.
13. THE CONTRACTOR SHALL INFORM THE ARCHITECT, ENGINEER AND OWNER PRIOR TO BEGINNING CONSTRUCTION AND PRIOR TO COMPLETION TO ALLOW FOR SUFFICIENT TIME OF WORK REQUIRING ADDITIONAL COORDINATION.
14. 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 OR EXPRESSED.
15. BEFORE SUBMITTING BIDS, THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE SITE, ADJOINING SITES AND STRUCUTRES, ANY EXISTING STRUCTURES OR BUILDINGS AND SPACES RELEVANT TO THEIR WORK. THE CONTRACTOR SHALL PROVIDE WRITTEN REPORT THAT DETAILS ANY CONDITIONS WHICH MIGHT PREVENT EQUIPMENT INSTALLATION IN THE MANNER SHOWN ON THE CONTRACT DOCUMENTS.
16. NO CONSIDERATION OR ALLOWANCE SHALL BE GIVEN FOR FAILURE TO VISIT THE SITE, NOR FOR ANY ALLEGED MISUNDERSTANDING OF THE MATERIALS TO BE FURNISHED AND INSTALLED PROPERLY.
17. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT, ENGINEER AND OWNER IN WRITING OF ANY DISCOVERED CONFLICTS BETWEEN EXISTING INSTALLATIONS WHICH ARE NOT SCHEDULED FOR DEMOLISION AND THE THE WORK INDICATED WITHIN THE CONTRACT DOCUMENTS. SUCH NOTIFICATION SHALL BE ACCOMPANIED BY A DRAWING DELINEATING THE PROPOSES SOLUTION PRIOR TO STARTING WORK IN THE AFFECTED AREA.
18. ALL SLAB PENETRATIONS MUST BE X-RAYED AND DOCUMENTED PRIOR TO BEGINNING WORK.
19. THE EXACT NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL SYSTEMS. PROVIDE WIRES AND CABLES NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM WHETHER INDICATED ON THE PLANS OR NOT.
20. REFER TO THE ARCHITECTURAL DRAWINGS FOR THE FINISH, EXACT LOCATION, ELEVATION, MOUNTING HEIGHTS AND DETAILS OF ALL LIGHT FIXTURES AND OTHER DEVICES WITHIN THE CEILING GRID FOR COORDINATION WITH TECHNOLOGY EQUIPMENT. REPORT ANY DISCREPANCIES TO THE ARCHITECT IMMEDIATELY.
21. WHEREVER CONDUITS PENETRATE WALLS OR FLOORS, THE SPACE REMAINING IN SUCH PENETRATIONS SHALL BE FILLED. THE FILLING MATERIAL SHALL BE FIRE RESISTIVE IN AN EQUAL OR GREATER AMOUNT THAN THE SURROUNDINGS.
22. PROVIDE AND LEAVE ACCESSIBLE A PULL STRING IN ALL CONDUITS AND RACEWAYS FOR LOW VOLTAGE WIRES TO BE INSTALLED.
23. OUTLET BOXES INSTALLED ON OPPOSITE SIDES OF A PARTITION SHALL NOT BE INSTALLED OFFSET FROM ONE ANOTHER.
24. THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS, WRITTEN SUBMITTALS, 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 MUST BE CLEARLY CALLED OUT FOR THE DESIGN TEAM TO REVIEW. SUBMITTALS WITHOUT THE PROPER INFORMATION HIGHLIGHTED SHALL BE REJECTED FOR RESUBMITTAL.
25. THE CONTRACTOR SHALL PROVIDE COMPLETE AS-BUILT DOCUMENTATION IN HARDCOPY AND ELECTRONIC FORMAT FOR REVIEW AND APPROVAL BY THE DESIGN TEAM PRIOR TO JOB COMPLETION.
26. THE CONTRACTOR SHALL PROVIDE A COMPLETE PUNCHLIST 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 SYSTEM ARE APPROXIMATELY AND APPROPRIATELY COMPLETE.

2 SECURITY GENERAL NOTES
N.T.S.

1. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL LOW VOLTAGE PATHWAYS INCLUDING, BUT NOT LIMITED TOO, CONDUITS, BOXES, JUNCTION BOXES, SLEEVES, CHASES, RACEWAYS, CABLE TRAYS AND J-HOOKS TO PROPERLY SUPPORT THE LOW VOLTAGE INFRASTRUCTURE.
2. PROVIDE AND INSTALL A COMPLETE INTRUSION DETECTION AND ACCESS CONTROL SYSTEM INCLUDING ALL MOTION DETECTORS, DOOR CONTACTS, KEYPADS, PANELS, BATTERY BACKUP UNITS, CARD READERS, SERVERS, ACCESS CONTROLLERS CABLES AND ASSOCIATED COMPONENTS.
3. PROVIDE AND INSTALL A COMPLETE CCTV SYSTEM INCLUDING ALL CABLING, CONNECTORS,ASSOCIATED COMPONENTS ,ELECTRONICS AND CAMERAS FOR THIS CONTRACTOR TO INSTALL. COORDINATE INSTALLATION WITH OWNER AT TIME OF CONSTRUCTION.

3 SECURITY SCOPE NOTES
N.T.S.

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EDUCATIONAL SYSTEMS PLANNING
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ANNAPOLIS, MD 21401

Baltimore City Public Schools
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LICENSE NO.: 9002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: N.T.S.

DRAWING NAME

SECURITY SYMBOLS & NOTES

TY000

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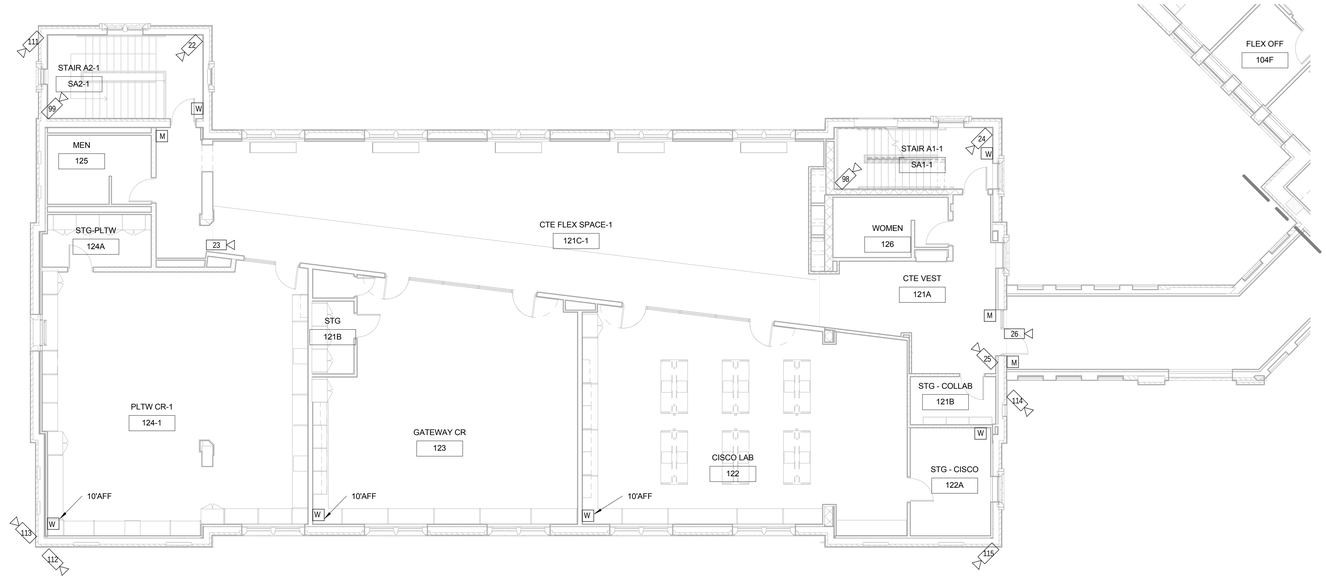
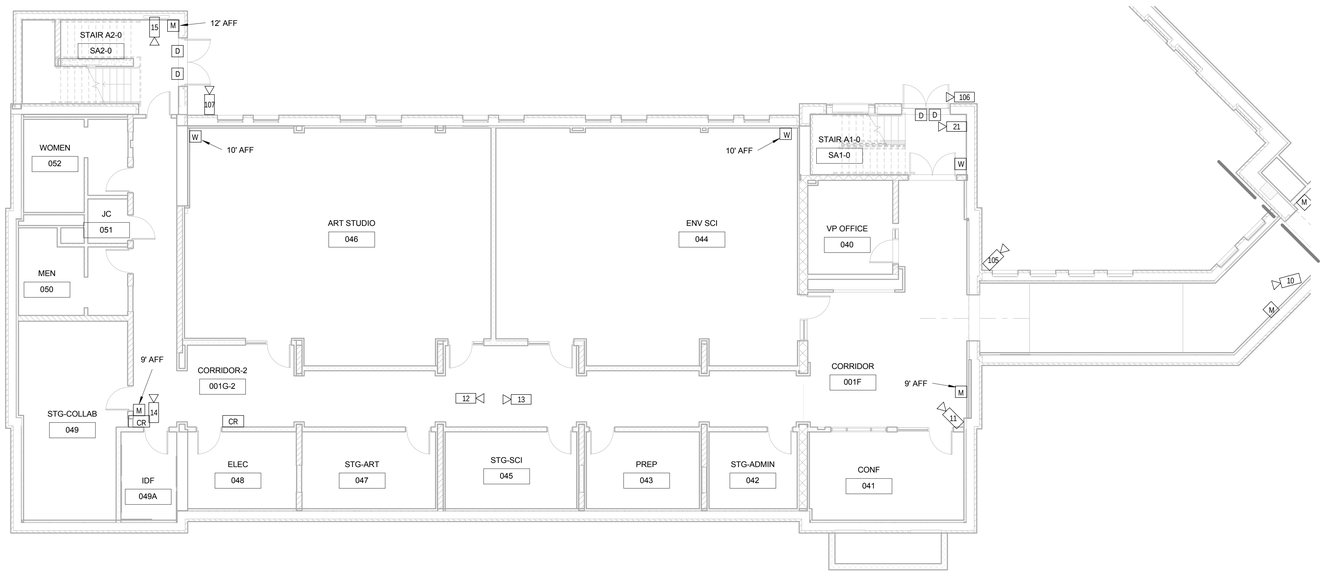
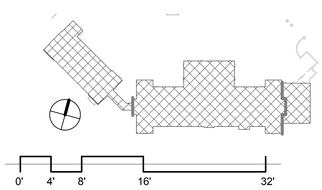


2 LEVEL 1A SECURITY
1/8" = 1'-0"



1 LEVEL 0A SECURITY
1/8" = 1'-0"



JRS ARCHITECTS

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LICENSE NO.: 8002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: As indicated

DRAWING NAME

LEVEL 0A & 1A SECURITY

TY111

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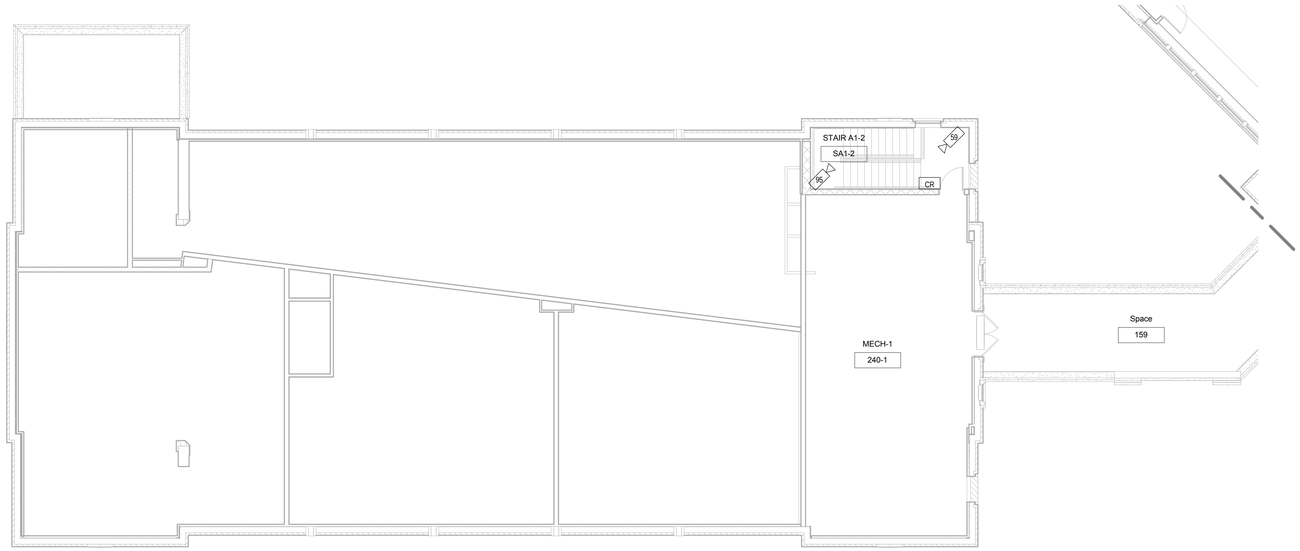

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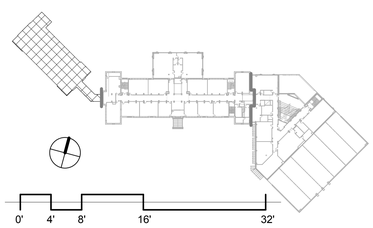

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MEP ENGINEER
BRUNJAC ENGINEERING
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FOOD SERVICE
NYIKOS ASSOCIATES
15219A FLOWER HILL WAY
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LICENSE NO.: 8602
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: As indicated

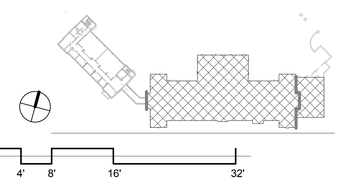
DRAWING NAME

LEVEL 2A SECURITY

TY112

7/28/2016 3:22:30 PM

1 LEVEL 0B SECURITY
1/8" = 1'-0"



JRS ARCHITECTS
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410.235.7256

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LICENSE NO.: 8002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

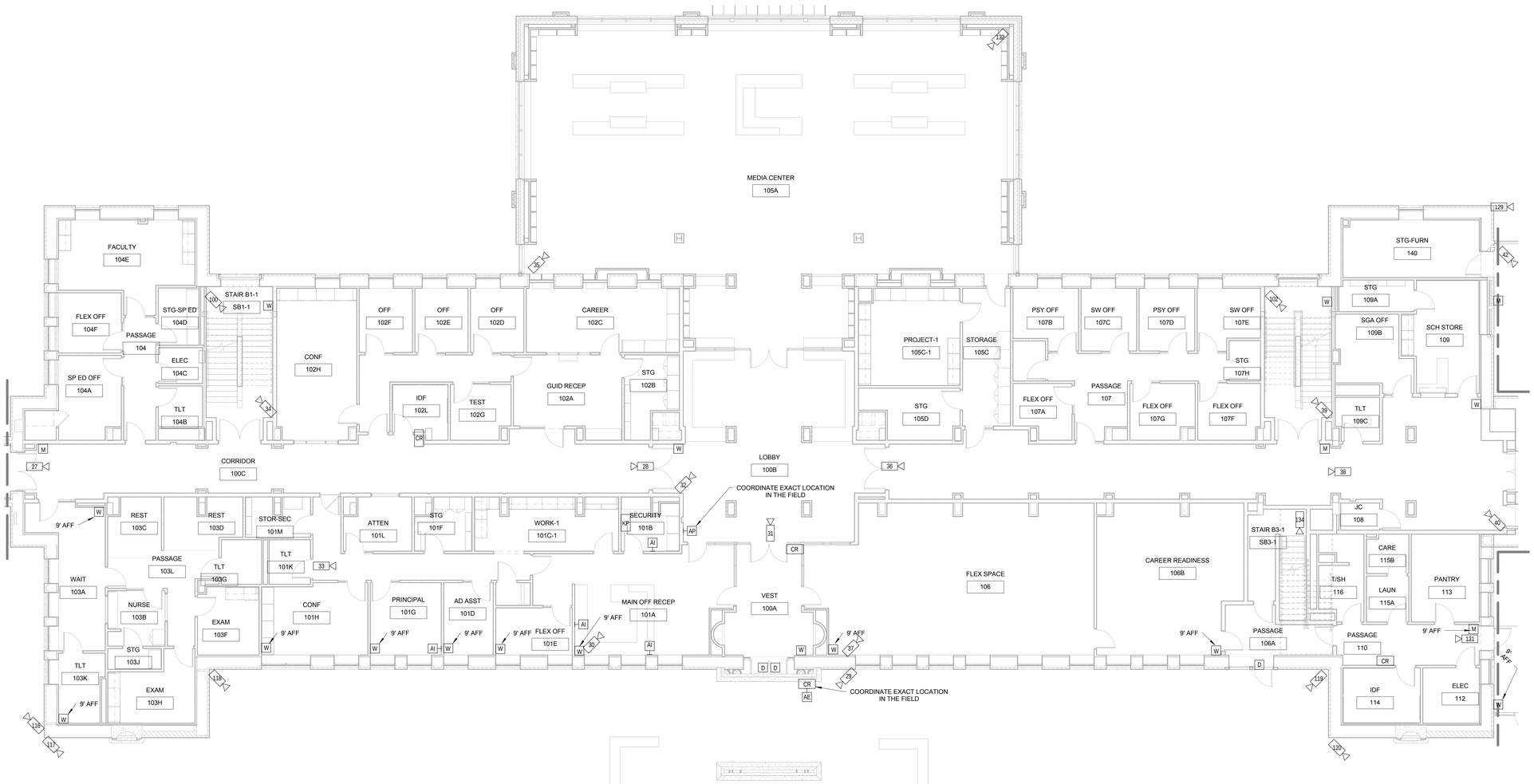
SCALE: As indicated

DRAWING NAME

LEVEL 0B SECURITY

TY113

7/28/2016 3:22:32 PM



1 LEVEL 1B SECURITY
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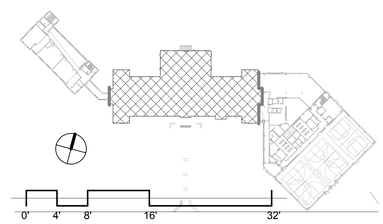

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LICENSE NO.: 9002
EXPIRATION DATE: 6/30/15

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

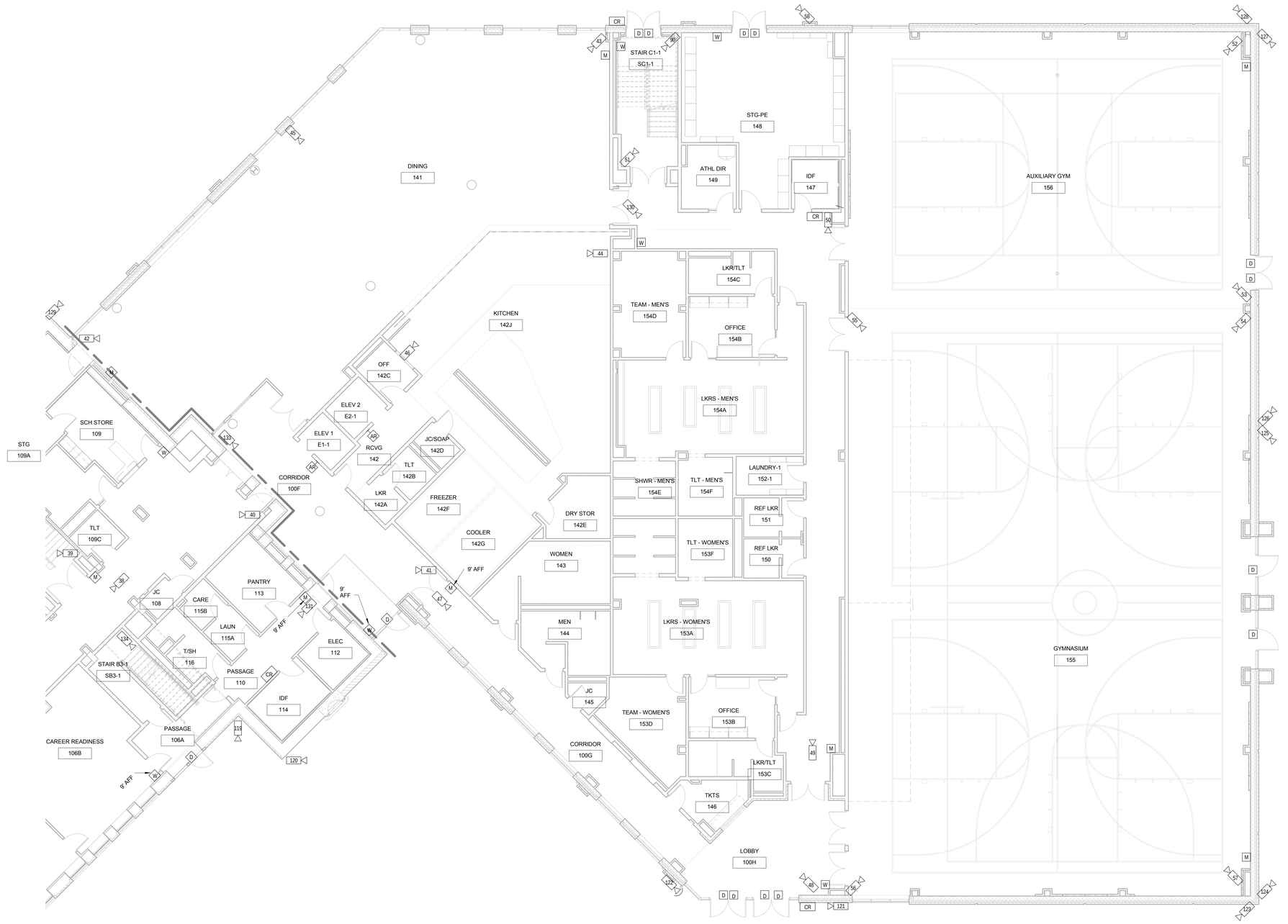
SCALE: As indicated

DRAWING NAME

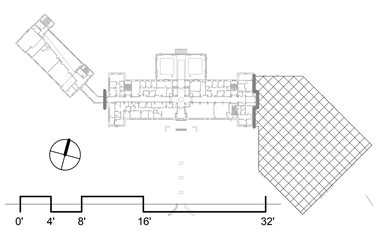
LEVEL 1B SECURITY

TY114

7/28/2016 3:22:36 PM



1 LEVEL 1C SECURITY
1/8" = 1'-0"



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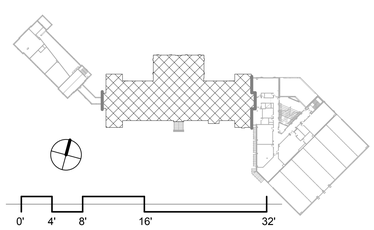
DRAWING NAME

LEVEL 1C SECURITY

TY115

7/28/2016 3:22:40 PM

1 LEVEL 2B SECURITY
1/8" = 1'-0"



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BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: As indicated

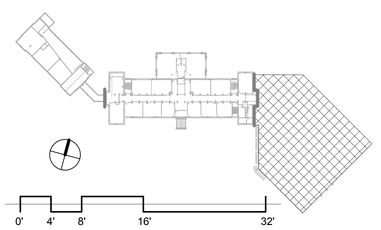
DRAWING NAME

LEVEL 2B SECURITY

TY116

7/28/2016 3:22:42 PM

1 LEVEL 2C SECURITY
1/8" = 1'-0"



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LICENSE NO.: 8602
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

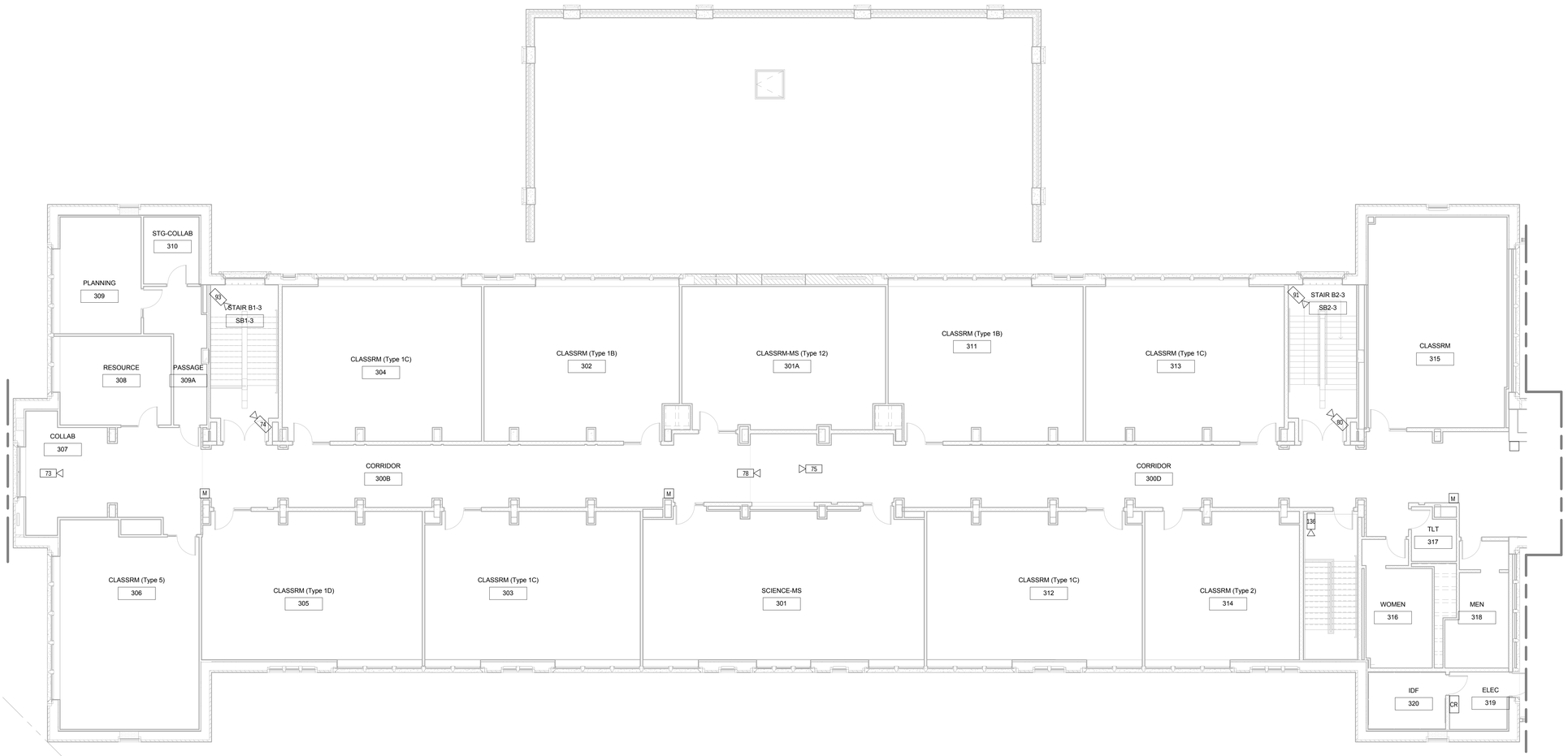
SCALE: As indicated

DRAWING NAME

LEVEL 2C SECURITY

TY117

7/28/2016 3:22:46 PM



1 LEVEL 3B SECURITY
1/8" = 1'-0"

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No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: As indicated

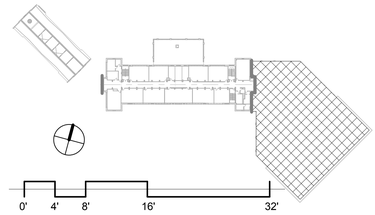
DRAWING NAME

LEVEL 3B SECURITY

TY118

7/28/2016 3:22:48 PM

1 LEVEL 3C SECURITY
1/8" = 1'-0"



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LICENSE NO.: 8022
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

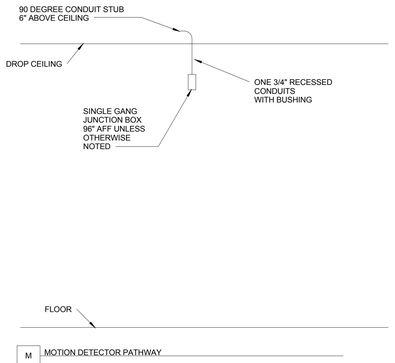
SCALE: As indicated

DRAWING NAME

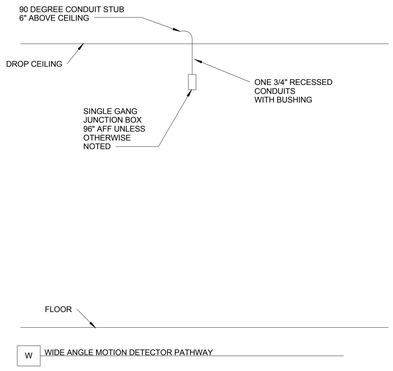
LEVEL 3C SECURITY

TY119

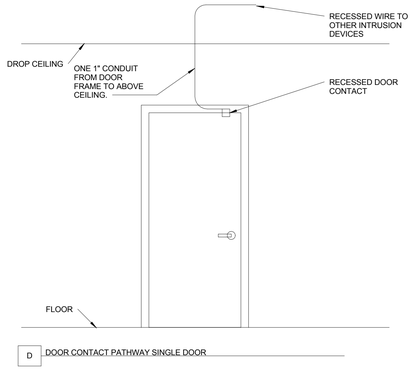
7/28/2016 3:22:52 PM



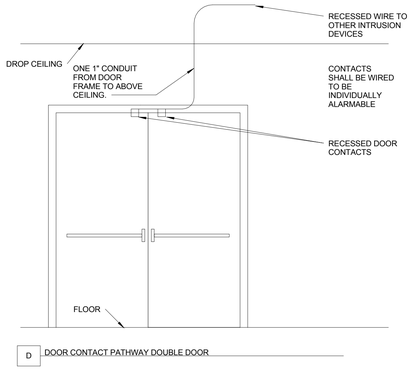
M MOTION DETECTOR PATHWAY



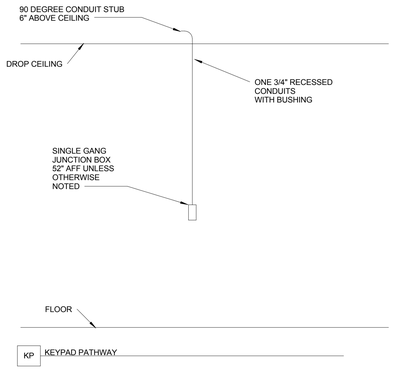
W WIDE ANGLE MOTION DETECTOR PATHWAY



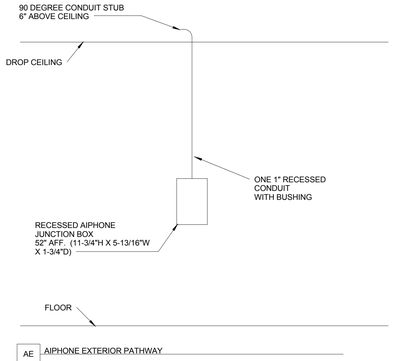
D DOOR CONTACT PATHWAY SINGLE DOOR



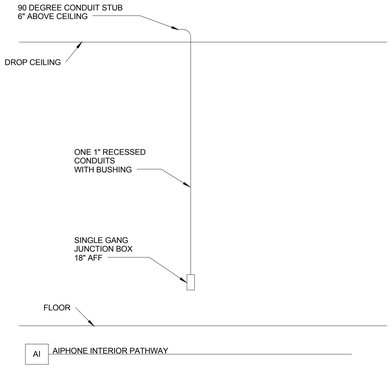
D DOOR CONTACT PATHWAY DOUBLE DOOR



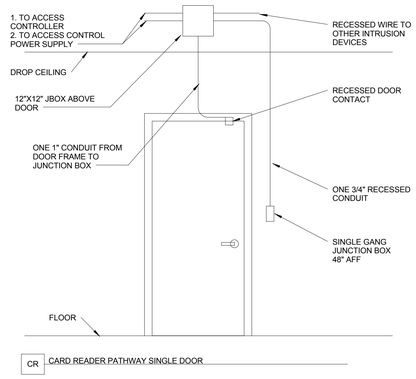
KP KEYPAD PATHWAY



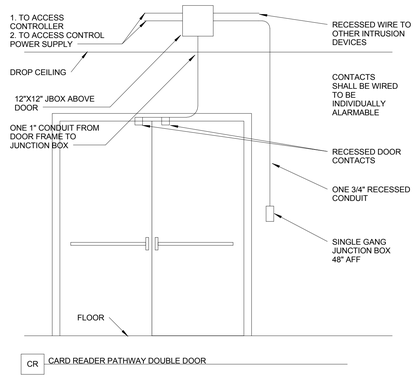
AE AIPHONE EXTERIOR PATHWAY



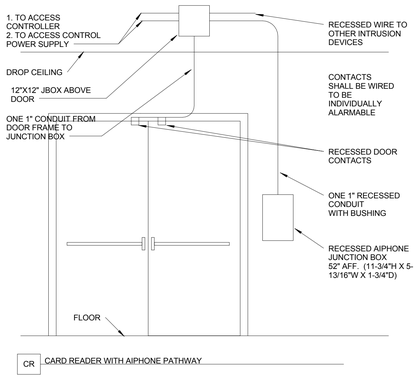
AI AIPHONE INTERIOR PATHWAY



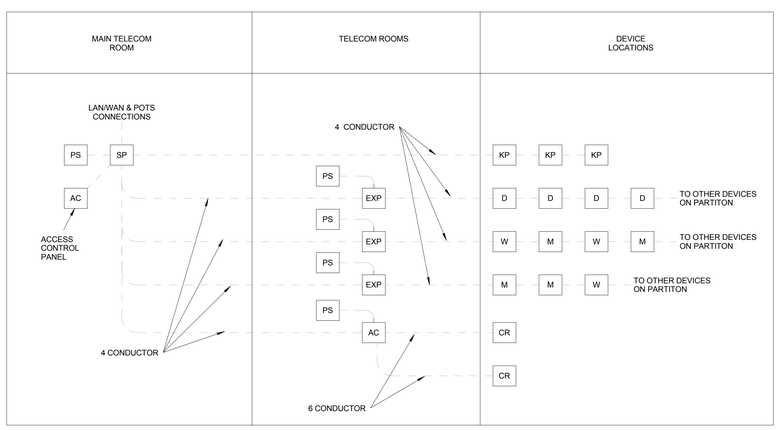
CR CARD READER PATHWAY SINGLE DOOR



CR CARD READER PATHWAY DOUBLE DOOR



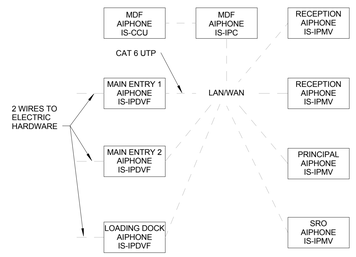
CR CARD READER WITH AIPHONE PATHWAY



ACCESS AND INTRUSION SYSTEM NOTES

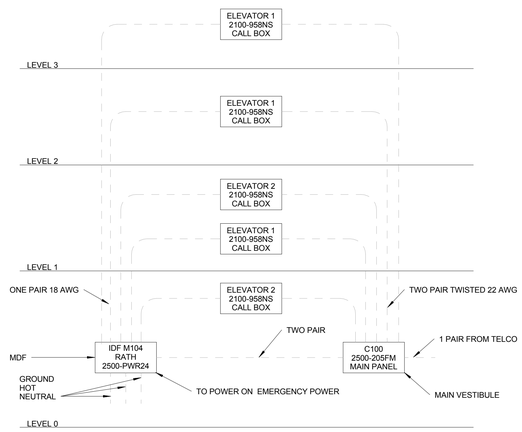
1. PROVIDE AND INSTALL ACCESS CONTROL PATHWAYS, WIRING, DEVICES AND ELECTRONICS FOR A COMPLETE SYSTEM.
2. PROVIDE AND INSTALL A COMPLETE INTRUSION DETECTION SYSTEM.
3. EGRESS SHALL NOT BE IMPEDED BY ACCESS CONTROL OR INTRUSION EQUIPMENT AND SHALL BE ACCOMPLISHED BY THE DOOR HARDWARE..
4. ELECTRICAL CONTRACTOR SHALL PROVIDE POWER CIRCUITS AND RECEPTACLES FOR THE SYSTEM. CORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER REQUIREMENTS.
5. ELECTRIC DOOR HARDWARE SHALL BE PROVIDED AND INSTALLED BY OTHERS AND MUST BE COORDINATED INTRUSION EQUIPMENT PRIOR TO INSTALLATION.
6. THE INTRUSION LINE DIAGRAM REPRESENTS A TYPICAL SYSTEM WIRING SCHEME. NOT ALL CONNECTIONS ARE SHOWN.
7. ACCESS CONTROL, AIPHONE AND INTRUSION DETECTION SYSTEMS SHALL BE INTEGRATED.
8. THE INTRUSION DETECTION SYSTEM SHALL INCLUDE DOOR CONTACTS, MOTION DETECTORS, KEYPADS, EXPANSION MODULES, POWER SUPPLIES, BATTERY BACKUP, SECURITY PANELS, SERVERS, CABLES, CONNECTORS, MOUNTS AND ASSOCIATED COMPONENTS FOR A COMPLETE AND OPERATIONS SYSTEM.
9. THE INTRUSION DETECTION SYSTEM SHALL BE CAPABLE OF BEING MONITORED LOCALLY AND REMOTELY. THE SYSTEM SHALL BE CONNECTED TO POTS LINES, IP LAN/WAN CONNECTIONS, THE ACCESS CONTROL SYSTEM, THE INTERCOM SYSTEM, THE LIGHTING CONTROL SYSTEM AND TO BATTERY BACKUP FOR OPERATION IN THE EVENT OF A POWER FAILURE.
10. ALL CABLING SHALL BE PLENUM RATED.
11. ALL CABLING SHALL BE COLOR CODED AND PROPERLY LABELED ON EACH END OF THE CABLE.
12. ALL CABLE GAUGE SHALL BE BASED ON DISTANCE AND LOAD CALCULATIONS. PROVIDE DISTANCE AND LOAD CALCULATIONS BASED ON THE EXACT LOCATION AND WIRING PATH OF DEVICES.
13. ALL WIRING SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
14. ALL PANELS (SP) AND EXPANSION MODULES (EXP) SHALL BE INSTALLED WITHIN SECURITY JUNCTION BOXES. JUNCTION BOXES SHALL BE COLOR CODED.
15. NO MORE THAN TEN DEVICES PER POWER SUPPLY.
16. MOTION DETECTORS SHALL BE WALL MOUNTED ON GIMBAL MOUNTS FOR ADJUSTABILITY.
17. DOOR CONTACTS SHALL BE RECESSED UNLESS OTHERWISE NOTED.
18. CARD READER PATHWAYS SHALL BE FLUSH MOUNTED.
19. INSTALLATION MUST BE COORDINATED WITH THE AIPHONE ENTRY DOOR VIDEO SYSTEM.
20. INSTALLATION MUST BE COORDINATED WITH ANY DOOR OPERATOR EQUIPMENT.
21. INSTALLATION MUST BE COORDINATED WITH THE OWNER, ARCHITECT, ELECTRICAL CONTRACTOR AND DOOR HARDWARE CONTRACTOR PRIOR TO INSTALLATION.
22. SUBMITTALS AND SHOP DRAWINGS MUST INCLUDED EXACT PRODUCT DATA CLEARLY INDICATED, SYSTEM CONNECTIONS, WIRING DIAGRAMS AND DEVICE LOCATIONS.
23. SYSTEM PROGRAMMING AND PARTITIONS MUST BE INCLUDED WITH SHOP DRAWING AND SUBMITTAL INFORMATION. A COMPLETED PARTITION AND ZONE SHEET MUST BE PROVIDED BASED ON THE OWNER'S INPUT.
24. AS-BUILT DOCUMENTATION SHALL BE SUBMITTED IN ELECTRONIC AUTOCAD AND HARDCOPY FORMAT AND SHALL INCLUDE ALL SYSTEM REVISIONS.

2 ACCESS AND INTRUSION LINE DIAGRAM
N.T.S.



1. PROVIDE AN INSTALL A COMPLETE IP BASED ENTRY DOOR VIDEO INTERCOM SYSTEM INCLUDING CONTROLLERS, EXTERIOR STATIONS, DOOR RELEASE MECHANISMS, INTERIOR STATION, IP MANAGERS, PATCH PANELS, CAT 6A CABLES, MULTICONDUCTOR WIRING AND POWER SUPPLIES.
2. SYSTEM SHALL BE CONNECTED TO EMERGENCY POWER AND SHALL FUNCTION IN THE EVENT OF A MAIN POWER FAILURE.
3. ALL DEVICES SHALL BE WIRED PER MANUFACTURER SPECIFICATIONS.
4. DOOR HARDWARE SHALL BE PROVIDED AND INSTALLED BY OTHER.
5. COORDINATE INSTALLATION WITH DOOR HARDWARE, ELECTRICIAN AND ARCHITECT PRIOR TO INSTALLATION.
6. ALL CABLING SHALL CONFORM TO THE LATEST NEC AND BICSI GUIDELINES.
7. CABLES SHALL BE PROPERLY LABELED ON BOTH ENDS OF THE CABLE.
8. SEE ACCESS CONTROL SPECIFICATIONS FOR MORE DETAIL.

3 AIPHONE SYSTEM DETAILS
N.T.S.



1. PROVIDE AND INSTALL AN ANALOG AREAS OF REFUGE SYSTEM.
2. SYSTEM SHALL INCLUDE CALL STATIONS, CENTRAL CALL PANEL, UPS EQUIPMENT, WIRING, SIGNAGE AND ASSOCIATED WIRING AND CONNECTORS.
3. REMOTE ELEVATOR STATIONS SHALL BE LOCATED OUTSIDE ELEVATORS ADJACENT TO THE ELEVATOR DOOR.
4. THE MAIN PANEL LOCATION SHALL BE LOCATED IN THE MAIN VESTIBULE.

4 AREA OF REFUGE LINE DIAGRAM
N.T.S.

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LANDSCAPE ARCHITECT
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49 OLD SOLOMONS ISLAND RD, SUITE 301
ANNAPOLIS, MD 21401

Baltimore City Public Schools
Additions & Renovations at Robert Poole Building #056

1300 W 36TH ST., BALTIMORE, MD 21211

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ARCHITECT UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NO.: 8002
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

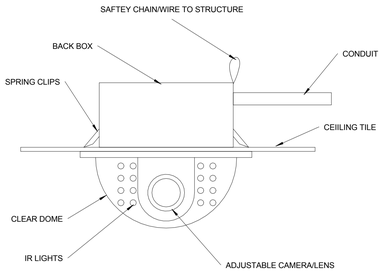
SCALE: N.T.S.

DRAWING NAME

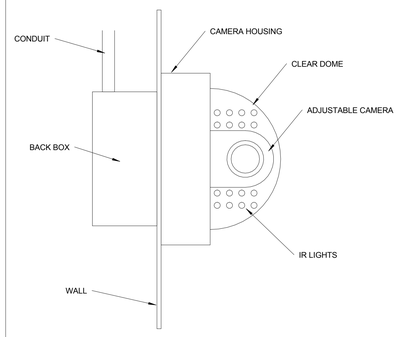
ACCESS & INTRUSION

TY500

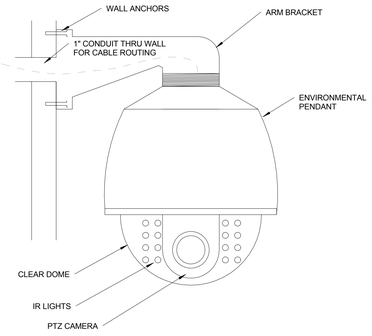
7/28/2016 3:22:53 PM



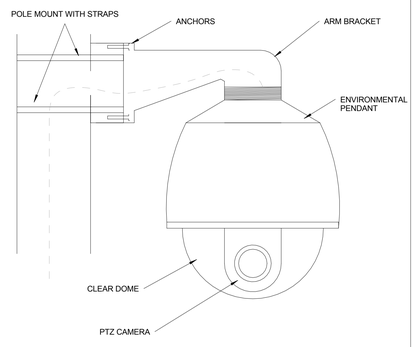
IN-CEILING FIXED IR CAMERA DETAIL



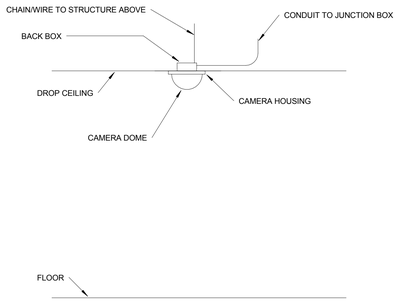
IN-WALL FIXED IR CAMERA DETAIL



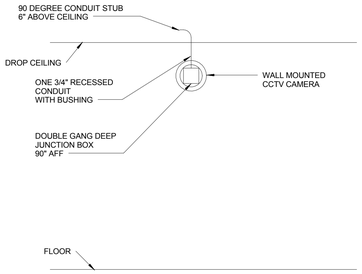
360 DEGREE DOME CAMERA DETAIL



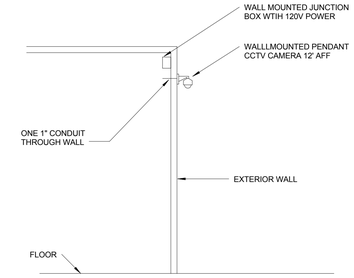
POLE MOUNT PTZ/360 DEGREE DOME CAMERA DETAIL



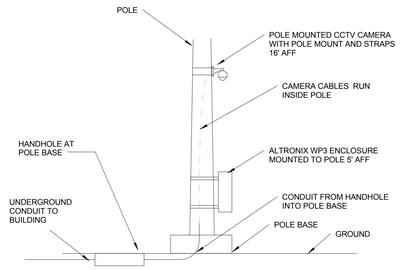
IN-CEILING CCTV CAMERA PATHWAY DETAIL



IN-WALL CCTV CAMERA PATHWAY DETAIL



EXTERIOR PENDANT CCTV CAMERA PATHWAY DETAIL



POLE MOUNTED CCTV CAMERA DETAIL

CCTV CAMERA SCHEDULE			
CAMERA	Type	Mount Type	Height
1	Fixed	CEILING	
2	Fixed	CEILING	
3	Fixed	CEILING	
4	Fixed	CEILING	
5	Fixed	WALL	9'
6	Fixed	WALL	9'
7	Fixed	WALL	8'
8	Fixed	PENDANT	8'
9	Fixed	PENDANT	10'
10	Fixed	CEILING	
11	Fixed	CEILING	
12	Fixed	CEILING	
13	Fixed	CEILING	
14	Fixed	CEILING	
15	Fixed	WALL	12'
16	Fixed	CEILING	
17	Fixed	CEILNG	
18	Fixed	WALL	8'
20	Fixed	WALL	8'
21	Fixed	WALL	9'
22	Fixed	WALL	12'
23	Fixed	WALL	10'
24	Fixed	WALL	10'
25	Fixed	CEILING	
26	Fixed	CEILING	
27	Fixed	CEILING	
28	Fixed	CEILING	
29	Fixed	PENDANT	10'
30	Fixed	CEILING	
31	Fixed	CEILING	
32	Fixed	CEILING	
33	Fixed	CEILING	
34	Fixed	WALL	9'
35	Fixed	CEILING	
36	Fixed	CEILING	
37	Fixed	CEILING	
38	Fixed	CEILING	
39	Fixed	WALL	10'
40	Fixed	CEILING	
41	Fixed	CEILING	
42	Fixed	CEILING	
43	Fixed	CEILING	
44	Fixed	CEILING	
45	Fixed	CEILING	
46	Fixed	CEILING	
47	Fixed	CEILING	
48	Fixed	CEILING	
49	Fixed	CEILING	
50	Fixed	CEILNG	
51	Fixed	WALL	9'
52	Fixed	WALL	16'
53	Fixed	WALL	16'
54	Fixed	WALL	16'
55	Fixed	WALL	16'
56	Fixed	WALL	16'
57	Fixed	WALL	16'
58	Fixed	PENDANT	12'
59	Fixed	WALL	9'
60	Fixed	CEILING	
61	Fixed	WALL	9'
62	Fixed	CEILNG	
63	Fixed	CEILNG	
64	Fixed	CEILING	
65	Fixed	CEILING	
66	Fixed	CEILING	
67	Fixed	WALL	9'
68	Fixed	CEILING	
69	Fixed	WALL	10'
70	Fixed	CEILING	
71	Fixed	CEILING	
72	Fixed	WALL	9'
73	Fixed	CEILING	
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75	Fixed	CEILNG	
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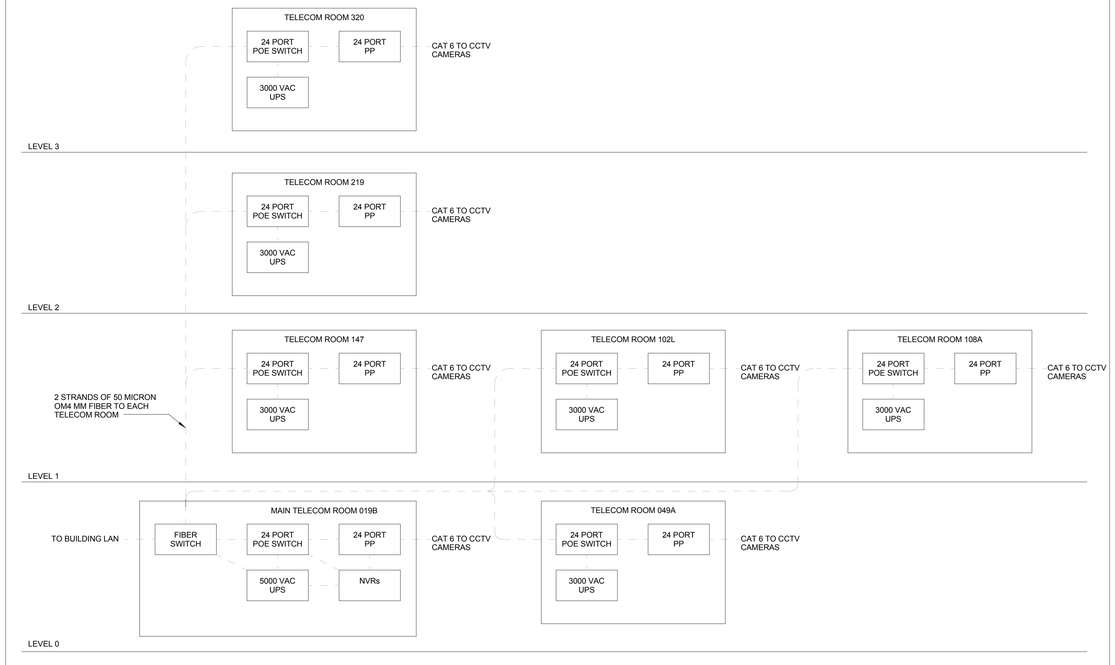
80	Fixed	WALL	9'
81	Fixed	CEILING	
82	Fixed	WALL	10'
83	Fixed	CEILNG	
84	Fixed	CEILING	
85	Fixed	CEILING	
86	Fixed	WALL	9'
87	Fixed	CEILING	
88	Fixed	CEILING	
89	Fixed	CEILING	
90	Fixed	WALL	8'
91	Fixed	WALL	13'
92	Fixed	WALL	13'
93	Fixed	WALL	13'
94	Fixed	WALL	13'
95	Fixed	WALL	13'
96	Fixed	WALL	13'
97	Fixed	WALL	13'
98	Fixed	WALL	13'
99	Fixed	WALL	8'
100	Fixed	WALL	13'
102	Fixed	WALL	13'
103	Fixed	WALL	10'
104	Fixed	WALL	10'
105	Fixed	PENDANT	12'
106	Fixed	PENDANT	12'
107	Fixed	PENDANT	12'
108	Fixed	PENDANT	12'
109	Wide Angle	PENDANT	12'
110	Wide Angle	PENDANT	12'
111	Fixed	PENDANT	
112	Fixed	PENDANT	12'
113	Fixed	PENDANT	12'
114	Fixed	PENDANT	12'
115	Fixed	PENDANT	12'
116	Fixed	PENDANT	12'
117	Fixed	PENDANT	12'
118	Fixed	PENDANT	12'
119	Fixed	PENDANT	12'
120	Fixed	PENDANT	12'
121	Fixed	PENDANT	12'
122	Wide Angle	PENDANT	12'
123	Fixed	PENDANT	12'
124	Fixed	PENDANT	12'
125	Fixed	PENDANT	12'
126	Fixed	PENDANT	12'
127	Fixed	PENDANT	12'
128	Fixed	PENDANT	12'
129	Fixed	PENDANT	12'
130	Fixed	CEILING	
131	Fixed	CEILING	
132	Fixed	CEILING	
133	Fixed	CEILING	
134	Fixed	WALL	10'
135	Fixed	WALL	9'
136	Fixed	WALL	9'

HUBBELL 84" FLOOR MOUNTED DATA CABINET

GROUND BAR
2 RU FIBER CABINET
2 RU CAT 6A PP
2 RU MANAGER
2 RU MANAGER
2 RU CAT 6A PP
MONITOR/KEYBOARD
1 RU 10 PORT POWER
3 RU 3000 VAC UPS

1. PROVIDE AND INSTALL EQUIPMENT AS SHOWN FOR A COMPLETE AND FUNCTIONAL IP VIDEO SURVEILLANCE SYSTEM.
2. CONTRACTOR SHALL PROVIDE VIDEO SURVEILLANCE NVRS, SWITCHES, SOFTWARE AND CAMERAS.
3. CONTRACTOR SHALL INCLUDE CABINETS, PATCH PANELS, POWER STRIPS, CABLES, CONNECTORS, MOUNTS, HOUSINGS AND UPS EQUIPMENT.
4. ALL CABLES SHALL BE CLEARLY LABELED AT EACH END AND INCLUDE THE CABLE LENGTH AND UNIQUE LABEL.
5. ALL CABLES SHALL BE RUN IN CABLE TRAY, J-HOOKS NO MORE THAN 6' APART AND WITHIN EMT CONDUIT.
6. BACKBONE CABLES SHALL BE 50 MICRON OM4 MM FIBER FROM THE TER TO EACH TR.
7. HORIZONTAL CABLES UNDER 90 METERS SHALL BE CAT 6 UTP WITH 15' OF SLACK AT THE CAMERA END AND A TERMINATED MALE RJ-45.
8. HORIZONTAL CABLES OVER 90 METERS SHALL BE TWO STRANDS OF MM FIBER AND 2 AWG COPPER FOR POWER DISTRIBUTION.
9. PTZ CAMERAS SHALL HAVE A 120V POWER SUPPLY ON EMERGENCY POWER LOCATED ADJACENT TO THE CAMERA LOCATION ON THE INTERIOR OF THE BUILDING.
10. CAMERA FIELD OF VIEW MUST BE VERIFIED AND ADJUSTED IN THE FIELD PRIOR TO INSTALLATION. MAKE ADJUSTMENTS AS NECESSARY TO PROVIDE THE INTENDED CAMERA COVERAGE AREA.
11. THE INSTALLATION SHALL BE COORDINATED WITH THE OWNER, ELECTRICIAN AND LOW VOLTAGE CONTRACTOR.
12. CCTV VIEWSTATIONS SHALL BE CONNECTED TO UPS EQUIPMENT AND OUTLETS ON BACKUP EMERGENCY POWER.
13. PROVIDE COMPLETE SHOP DRAWINGS AND EQUIPMENT SUBMITTALS WHICH CLEARLY IDENTIFY EACH SPECIFIC PIECE OF EQUIPMENT, CABLE ROUTE, EQUIPMENT LOCATION AND SYSTEM INTERCONNECTIONS.
14. PROVIDE COMPLETE AS-BUILT DRAWINGS WHEN THE INSTALLATION IS CONSIDERED COMPLETE. PUNCH LIST ITEMS SHALL HAVE BEEN CORRECTED, TEST RESULTS PROVIDED. AS-BUILTS MUST INCLUDE DEVICE LOCATIONS, EQUIPMENT CONNECTIONS, WIRING DIAGRAMS AND PROGRAMMING INFORMATION. PROVIDE IN HARDCOPY AND AUTOCAD 2010 OR LATER FORMAT.
15. SEE CCTV SPECIFICATION SECTION FOR EQUIPMENT DETAILS.

2 VIDEO SURVEILLANCE EQUIPMENT RACK
N.T.S.



3 VIDEO SURVEILLANCE LINE DIAGRAM
N.T.S.

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LANDSCAPE ARCHITECT
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ANNAPOLIS, MD 21401

Baltimore City Public Schools
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LICENSE NO.: 802
EXPIRATION DATE: 6/3/2015

No.	DATE	DESCRIPTION
3	04/27/16	ADDENDUM 3

BID ISSUE

PROJECT No.: 152-01

DATE: 03/31/16

SCALE: As indicated

DRAWING NAME

CCTV SYSTEM

TY501

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