
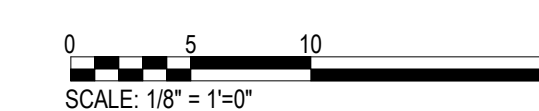
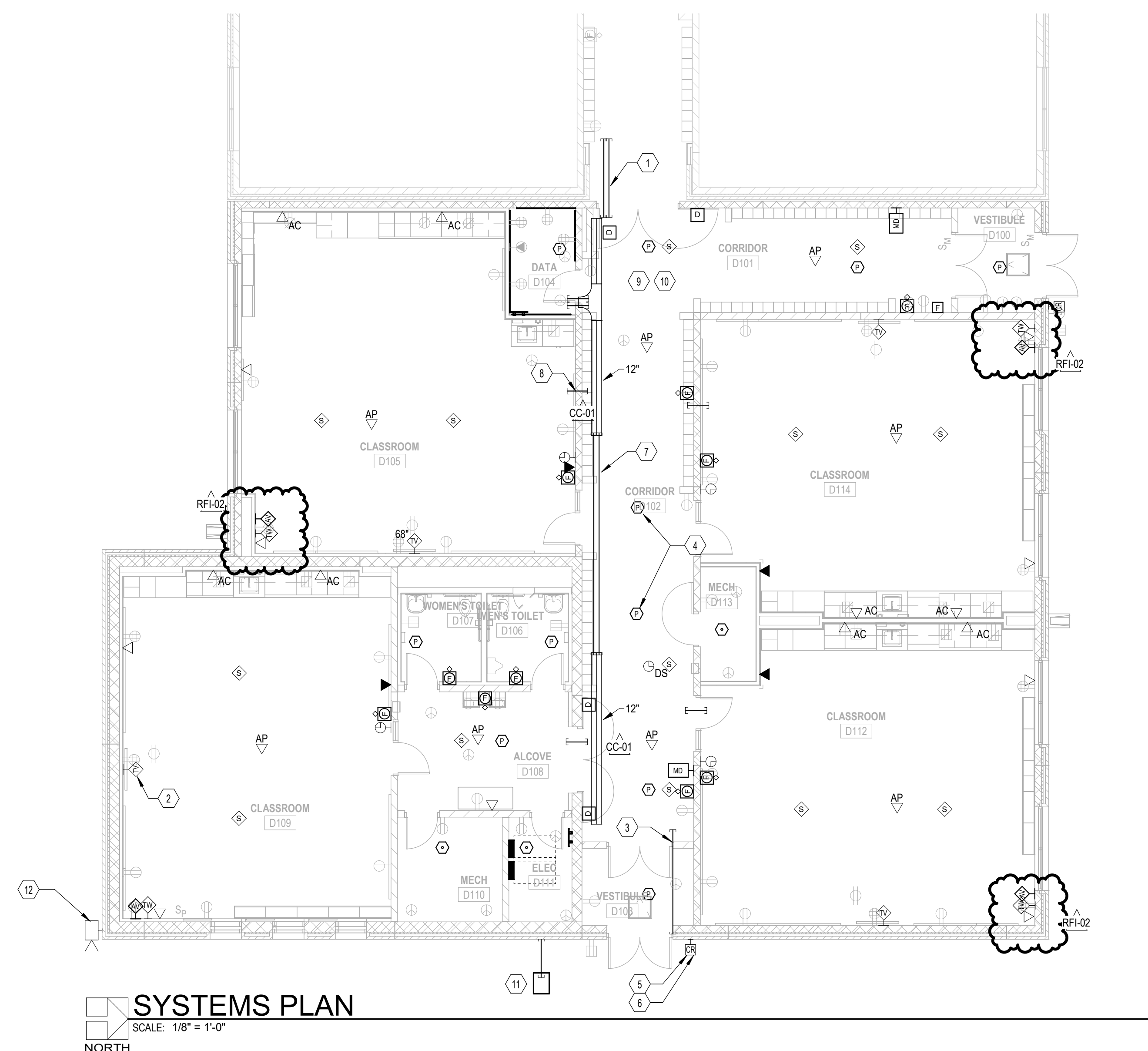


**GENERAL SYSTEMS NOTES**

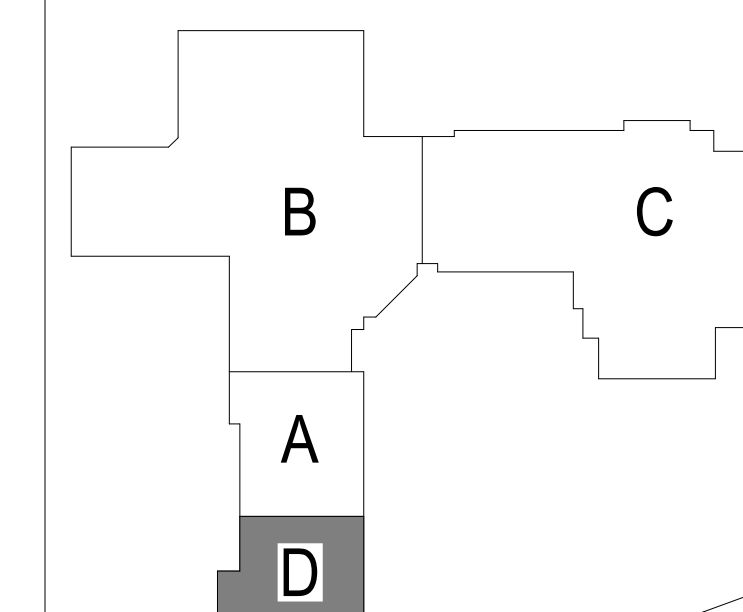
1. OUTLETS FOR TELECOM, FIRE ALARM, SECURITY, ACCESS, CONTROL, AND ALL OTHER LOW VOLTAGE CABLING. PROVIDE INSULATED BUSHINGS ON ALL CONDUIT STUB-UPS, INCLUDING UNUSED STUB-UPS OR STUB-UPS INDICATED FOR FUTURE USE.
2. SLEEVES FOR LOW VOLTAGE CABLES. PROVIDE SLEEVES PER SECTION 270520. COORDINATE WITH PATH OF DUCTWORK AND PIPES TO ENSURE ACCESSIBILITY. INSTALL ALL SLEEVES 12" ABOVE HIGHER CEILING OF TWO ADJACENT SPACES (REFER TO ROOM FINISH SCHEDULES AND REFLECTED CEILING PLANS FOR CEILING HEIGHTS). STUB SLEEVES INTO JOIST SPACE OF FINISHED ROOMS WITH EXPOSED STRUCTURE. PROVIDE INSULATED BUSHINGS ON BOTH ENDS OF EMT SLEEVES, INCLUDING UNUSED SLEEVES. PROVIDE GROUT TO SECURE SLEEVES TO WALL. FIRESTOP AT ALL FIRE-RATED WALLS WHERE REQUIRED FOR UL LISTING OF FIRE-RATED WALL CABLE PATHWAY ASSEMBLY.
3. COMMUNICATIONS OUTLET RACEWAYS SHALL BE ROUTED UP WITH SWEEP BENDS UNLESS SHOWN AS UGC.
4. EXPOSED CABLES IN FINISHED SPACES. PROVIDE 3/4 INCH MINIMUM CONDUIT FOR ALL LOW-VOLTAGE CABLES IN EXPOSED STRUCTURE AREAS. PAINT ALL CONDUIT, BOXES, AND ASSOCIATED MOUNTING HARDWARE TO MATCH ADJACENT FINISHES.
5. CABLE TRAY SHALL BE INSTALLED OVER/UNDER OR AROUND OBSTRUCTIONS TO MAINTAIN ACCESS AND CLEARANCES. SIDES OF CABLE TRAY SHALL NOT BE CUT TO REDUCE HEIGHT. PROVIDE EQUIVALENT SIZED SLEEVES WHERE CABLE TRAY CAN NOT BE INSTALLED WITH CLEARANCES SPECIFIED. SEE SECTION 270528.36.
6. INSTALL SLEEVES FOR INSTALLATION OF ALL LOW VOLTAGE CABLING. FOLLOW INDUSTRY STANDARDS TO MAINTAIN 40% FILL REQUIREMENTS IN ALL SLEEVES. PROVIDE ADDITIONAL SLEEVES (MEETING REQUIREMENTS) AS REQUIRED.
7. ROUTE ALL LOW VOLTAGE CABLING INSTALLED IN LOCATIONS WITH NO CEILINGS (EXPOSED STRUCTURE) IN MINIMUM 3/4" CONDUIT TO ACCESSIBLE SPACE ABOVE NEAREST LAY-IN CEILING.
8. DO NOT ATTACH CABLE OR EQUIPMENT SUPPORTS TO METAL ROOF DECKING.
9. DO NOT INSTALL CABLES ABOVE STRUCTURAL MEMBERS IN ROOF DECK SPACES.
10. CABLE TRAY AND SLEEVES SHALL BE FIRESTOPPED AND SMOKE STOPPED THROUGH FIRE-SMOKE-RATED WALLS PER MFR'S RECOMMENDATIONS AND MATERIALS SPECIFIED IN DIVISION 7. USE REMOVABLE PILLOWS OR NON-HARDENING PUTTY.
11.  S OR FS - SMOKE OR FIRE-SMOKE DAMPER SYMBOL. PROVIDE CONNECTION TO FIRE ALARM SYSTEM. PROVIDE FA RELAY AND DUCT DETECTOR WITH REMOTE INDICATOR LAMP AND TEST SWITCH FOR ACTUATION OF DAMPER. DETECTION AND ACTUATION SHALL BE COMPLIANT WITH IBC 2006 SECTION 716.3.2.1 TYPICAL FOR EACH DAMPER SHOWN.
12. PROVIDE RELAY(S) FOR FAN SHUTDOWN OF MECHANICAL EQUIPMENT WITHIN 3FT OF EACH MECH UNIT. REFER TO HVAC PLANS FOR EQUIPMENT LOCATION AND DUCTS. COORDINATE EFFORT WITH DIVISION 23.
13. FIRE ALARM SYSTEM SHALL CONNECT DIRECTLY TO MECHANICAL UNITS SHOWN ON SCHEDULE AND SHUT-DOWN CORRESPONDING UNITS UPON ACTIVATION OF COMMON DUCTED DETECTION AS SPECIFIED.
14. PROVIDE FIRE ALARM MONITORING OF ALL FLOW SWITCHES, TAMPER SWITCHES, AND POST INDICATOR VALVES. COORDINATE QUANTITIES AND LOCATION WITH DIVISION 21 CONTRACTOR.

**SYSTEMS SHEET NOTES**

1. ROUTE (4) 3" CONDUITS FROM NEW CABLE TRAY TO EXISTING CABLE TRAY.
2. ROUTE 1 1/4" C TO J-BOX ABOVE ACCESSIBLE CEILING. TYPICAL FOR TEACHING WALL TV'S.
3. PROVIDE EMPTY CONDUIT FOR DOOR SECURITY HARDWARE. SEE DETAIL FOR ADDITIONAL INFORMATION. TYPICAL.
4. SMOKE DETECTOR SHALL BE LOCATED ON SIDE WALL OF SKYLIGHT. TOP OF DETECTOR SHALL BE BETWEEN 4" AND 12" DOWN FROM TOP OF OPENING. TYPICAL ALL SKYLIGHT LOCATIONS.
5. COORDINATE CARE READER CONNECTION WITH AUTO DOOR OPERATORS AT ALL EXTERIOR DOORS. MOUNT DEVICE TO POST PROVIDED BY OTHERS. SEE DETAIL xixA10.1 FOR ADDITIONAL INFORMATION. TYPICAL.
6. SEE DETAIL 22E6.1 FOR ADDITIONAL INFORMATION FOR SECURITY ROUGH-IN.
7. PROVIDE (4) 2" SLEEVES OVER GYPSUM CEILING.
8. PROVIDE SLEEVE AS NOTED IN SPECS. TYPICAL.
9. EXTEND EXISTING CLASSROOM INTERCOM SYSTEM INTO ADDITION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
10. EXTEND EXISTING FIRE ALARM SYSTEM INTO ADDITION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
11. EXTEND EXISTING 4" UNDERGROUND CONDUIT TO NEW HAND HOLE FOR FUTURE COMMUNICATIONS FIBER. SEE SITE PLAN FOR ADDITIONAL INFORMATION.
12. COORDINATE LOCATION OF J-BOX FOR OWNER PROVIDED CORNER MOUNT CAMERA TO MINIMIZE EXPOSED CABLING.



**KEY PLAN**



**BENNINGTON PUBLIC SCHOOLS PINE CREEK ELEMENTARY SCHOOL ADDITION**  
 7801 N HWY CLEVELAND BLVD  
 BENNINGTON NE 68607

**COMBINED CONTRACT**  
 05/21/2020  
 REVISIONS  
 CC-01 06/04/2020 TEST  
 RFI-02 10/06/2020

10-20105-30  
**SYSTEMS PLAN**

**E3.1**

