

SECOND FLOOR MECHANICAL PLAN

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

GENERAL NOTES

- A. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF WORK. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- B. COORDINATE INSTALLATION OF MECHANICAL SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION AND AVOID CONFLICTS. INSTALL DUCTWORK AND PIPING AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE INSTALLATION OF DUCTWORK AND PIPING TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. VERIFY DUCT SPACE AVAILABLE ABOVE ALL CEILINGS PRIOR TO ANY FABRICATION OF INSTALLATION.
- C. NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AROUND EQUIPMENT.
- D. OVERHEAD HANGERS AND SUPPORTS FOR EQUIPMENT, DUCTWORK AND PIPING SHALL BE FASTENED TO BUILDING JOISTS OR BEAMS. DO NOT ATTACH HANGERS AND SUPPORTS TO THE ABOVE FLOOR SLAB OR ROOF.
- E. PROVIDE A PREFABRICATED 45 DEGREE, HIGH EFFICIENCY, RECTANGULAR/ROUND BRANCH DUCT TAKEOFF FITTING WITH MANUAL BALANCING DAMPER AND LOCKING QUADRANT FOR BRANCH DUCT CONNECTIONS AND TAKE-OFFS TO INDIVIDUAL DIFFUSERS AND REGISTERS.
- F. BRANCH DUCTWORK SHALL BE THE SAME SIZE AS NECK SIZE SHOWN UNLESS OTHERWISE NOTED.
- G. REFER TO SPECIFICATIONS FOR DUCTWORK AND PIPING INSULATION REQUIREMENTS. DUCT SIZES ON MECHANICAL PLANS ARE INDICATED CLEAR INSIDE AIRFLOW DIMENSIONS. INCREASE SHEET METAL SIZES ACCORDINGLY TO ACCOUNT FOR THICKNESS OF DUCT LINER.
- H. ALL ROOF AND WALL PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PROVIDE ALL REQUIRED SLEEVES, FLASHINGS, CURBS, REINFORCED ANGLES, SUPPORTING FRAMES, ETC. UNLESS THEY ARE SPECIFICALLY CALLED OUT TO BE FURNISHED BY OTHERS.
- I. THE ELECTRICAL SYSTEM DESIGN IS BASED IN PART ON THE SPECIFIED HVAC EQUIPMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE ELECTRICAL REQUIREMENTS OF THE HVAC EQUIPMENT BEING FURNISHED. ANY CHANGES TO THE ELECTRICAL SYSTEM DUE TO HVAC EQUIPMENT OTHER THAN THE SPECIFIED EQUIPMENT BEING FURNISHED SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

KEYED PLAN NOTES

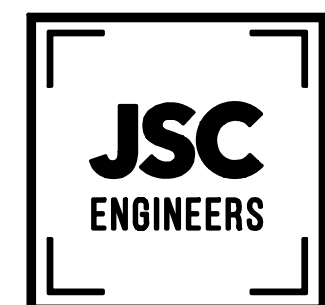
1. INLINE EXHAUST FAN FURNISHED WITH HOOD SYSTEM. INSTALL PER MANUFACTURER'S WRITTEN REQUIREMENTS. TRANSITION DUCTWORK TO FAN AND HOOD AS REQUIRED.
2. PROVIDE 10" TYPE 'B' VENT DUCTWORK FOR HOOD EXHAUST.
3. PROVIDE 18"x18" LOUVER ON WALL EQUAL TO RUSKIN ELF6375DX WITH MINIMUM 0.97 SQ-FT OF FREE AREA AND INSECT SCREEN. TRANSITION DUCTWORK TO LOUVER AS REQUIRED. PAINT LOUVER COLOR TO MATCH BUILDING. COORDINATE COLOR WITH ARCHITECT.
4. PROVIDE INLINE EXHAUST FAN AT LOCATION SHOWN. INSTALL BACKDRAFT DAMPER IN DISCHARGE DUCT. TRANSITION DUCTWORK TO FAN AS REQUIRED.
5. PROVIDE CONCENTRIC VENT FOR FURNACE TO EXTERIOR WALL. INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS. ADHERE TO SIZE AND LENGTH LIMITATIONS. LOCATED A MINIMUM OF 10'-0" FROM OUTSIDE AIR INTAKE.
6. PROVIDE CONDENSATE DRAIN TRAP. DISCHARGE WITH AIR GAP TO MOP SINK IN ROOM.
7. OUTDOOR AIR DUCT UP TO INTAKE HOOD. SIZE PER PLANS. PROVIDE RUSKIN CDR25 ROUND CONTROL DAMPER WITH 24V SPRING RETURN ACTUATOR FOR CONTROL OF OUTDOOR AIR SUPPLY. INTERLOCK WITH FURNACE CONTROLS SO THAT DAMPER IS OPEN WHEN THE FURNACE FAN IS ON AND CLOSED WHEN THE FURNACE FAN IS OFF.
8. PROVIDE LAY-IN GRILLE WITH DUCT TO GRILLE MOUNTED HIGH ON WALL.
9. INSTALL DUCT MOUNTED DRUM LOUVER AT 30° ANGLE DOWN FROM HORIZONTAL. TYPICAL ALL LOUVERS FACING EXTERIOR WALL.
10. INSTALL DUCT MOUNTED DRUM LOUVER AT 0° ANGLE. TYPICAL ALL LOUVERS FACING INTERIOR OF SPACE.
11. PROVIDE AVERAGING SENSOR FOR INDICATED RTU THERMOSTAT. MOUNT AT 48" AFF.
12. PROVIDE 12x12 OPENING THROUGH WALL INTO ELEVATOR HOISTWAY WITH GRILLE ON STORAGE ROOM SIDE.
13. SUPPORT VERTICAL DUCTS WITH STEEL ANGLES OR CHANNEL SECURED TO THE SIDES OF THE DUCT WITH WELDS, BOLTS, SHEET METAL SCREWS, OR BLIND RIVETS. SUPPORT AT EACH FLOOR AND AT A MAXIMUM INTERVALS OF 16 FEET.

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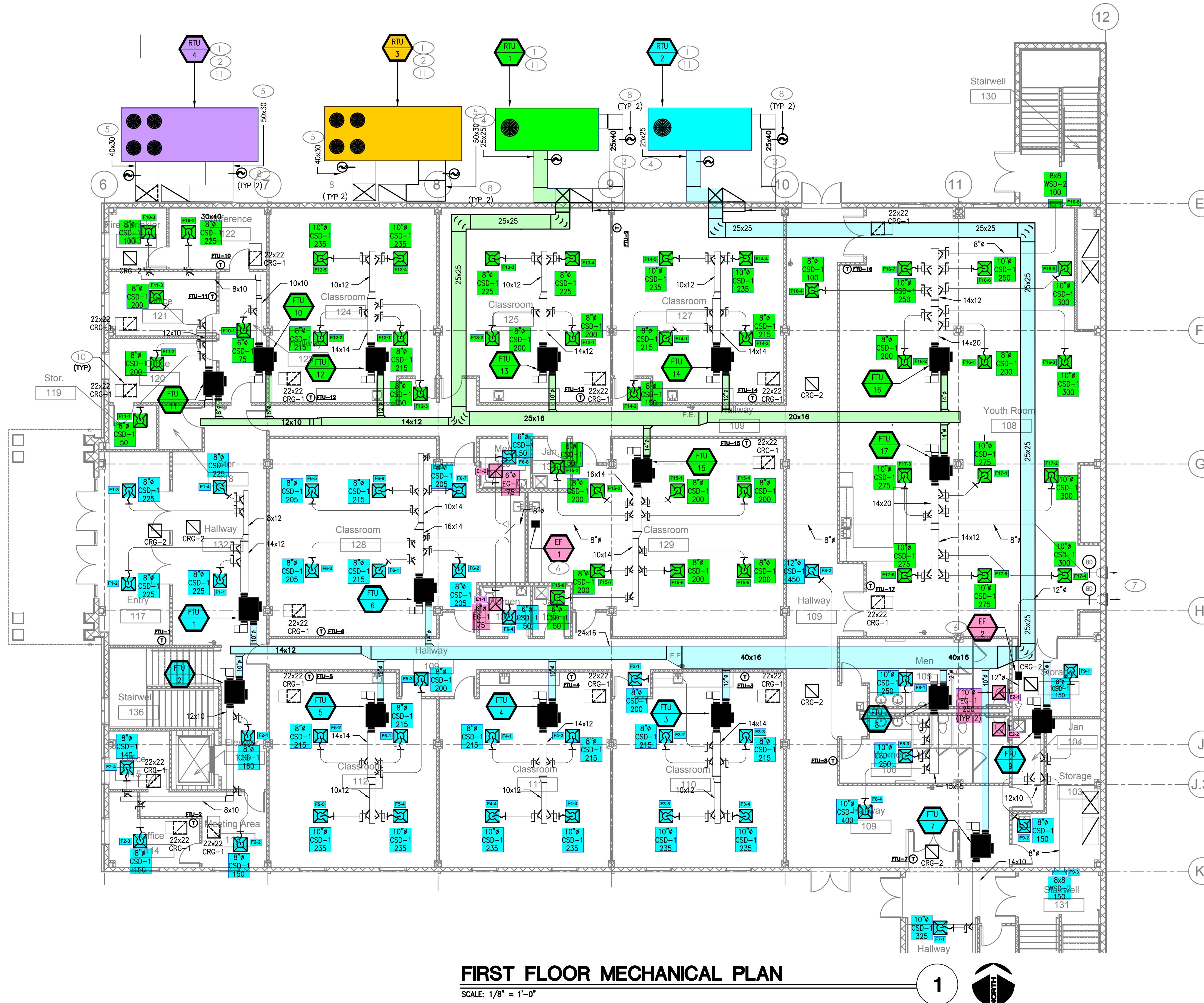
BUILDING ADDITION FOR
**BEAUTIFUL SAVIOR
LUTHERAN CHURCH**
13105 S. BLACK BOB ROAD

No.	Description	Date
△	OWNER ADDITIONS	01.26.21
△	OWNER CHANGE	02.03.21
△	RESTROOM ADD	09.13.21
△	GAS METER LOCATION	11.03.21
△	SITE POLE CHANGE	11.08.21

**2ND FLOOR
MECHANICAL
PLAN**

Project number 19-130
Date 11.08.2021

M102



FIRST FLOOR MECHANICAL PLAN

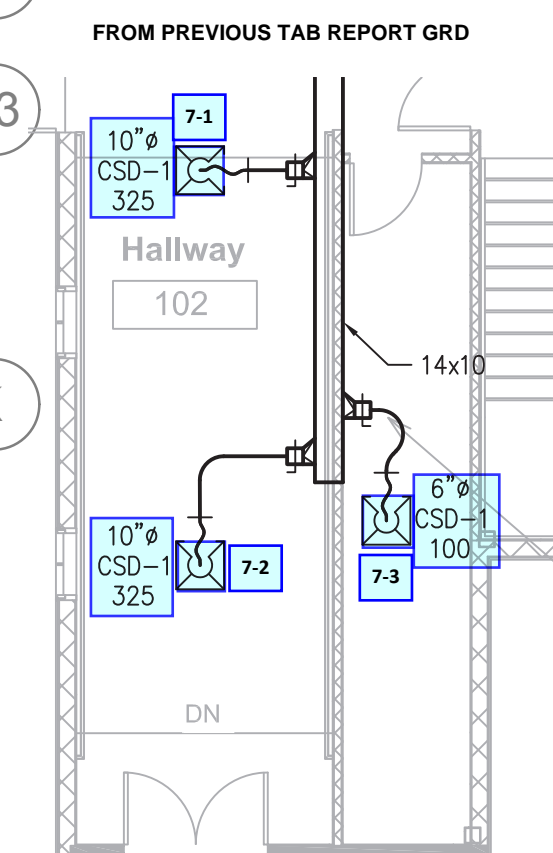
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KEYED PLAN NOTES

1. GROUND MOUNTED PACKAGED AC UNIT. INSTALL ON CONCRETE EQUIPMENT PAD PROVIDED BY OTHERS.
2. UNDER UNIT PROVIDE 36" TALL INSULATED SUPPLY/RETURN AIR PLENUM CURB. CONNECT SUPPLY AND RETURN AIR DUCTS TO CURB AS REQUIRED.
3. ROUTE 40x25 RETURN DUCT INTO BUILDING THEN UP TO ELEVATION OF PLENUM SPACE. EXTEND 36" INTO PLENUM AND TERMINATE WITH OPEN END. AT EXTERIOR WALL COORDINATE WITH GENERAL CONTRACTOR TO NOTCH STEM WALL FOR DUCT. SEAL WEATHER TIGHT.
4. ROUTE 25x25 SUPPLY DUCT INTO BUILDING THEN UP TO ELEVATION OF PLENUM SPACE. ROUTE DUCT AS SHOWN WITH MAIN TRUNK DOWN CORRIDOR. AT EXTERIOR WALL COORDINATE WITH GENERAL CONTRACTOR TO NOTCH STEM WALL FOR DUCT. SEAL WEATHER TIGHT.
5. ROUTE DUCT FROM UNIT TO INSIDE OF BUILDING THEN UP TO SECOND FLOOR. SEE M102 FOR CONTINUATION. AT EXTERIOR WALL COORDINATE WITH GENERAL CONTRACTOR TO NOTCH STEM WALL FOR DUCT. SEAL WEATHER TIGHT.
6. PROVIDE IN LINE EXHAUST FAN AT LOCATION SHOWN. INSTALL BACKDRAFT DAMPER IN DISCHARGE DUCT. TRANSITION DUCTWORK TO FAN AS REQUIRED.
7. PROVIDE 18"x18" LOUVER ON WALL EQUAL TO RUSKIN ELF6375DX WITH MINIMUM 0.91 SQ-FT OF FREE AREA AND INSECT SCREEN. TRANSITION DUCTWORK TO LOUVER AS REQUIRED. PAINT LOUVER COLOR TO MATCH BUILDING. COORDINATE COLOR WITH ARCHITECT. VERIFY DISCHARGE IS A MINIMUM OF 10'-0" FROM RTU OUTSIDE AIR INTAKE.
8. PROVIDE NEMA 4 RATED SMOKE DETECTOR IN RETURN AND SUPPLY AIR DUCTS IN COMPLIANCE WITH NFPA 72. DUCT SMOKE DETECTOR SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM. DUCT SMOKE DETECTORS SHALL BE INTERLOCKED TO SHUT DOWN ALL 'RTU' UNITS UPON DETECTION OF SMOKE.
9. CONDENSING UNIT LEVEL AT GRADE ON PREMANUFACTURED PAD. INSTALL PER MANUFACTURER'S INSTRUCTIONS MAINTAINING RECOMMENDED SERVICE CLEARANCES. ROUTE REFRIGERANT LINES THROUGH WALL 18" AFG. WEATHER SEAL REFRIGERANT LINE PENETRATIONS OF BUILDING. PROVIDE ALL RECOMMENDED VALVES, FILTERS, FITTINGS, ETC. AND MAKE ALL NECESSARY CONNECTIONS TO CASED COILS AT FURNACE. SIZE, ROUTE AND SLOPE REFRIGERANT LINES PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
10. PROVIDE RETURN BOOT OR FLEXABOOT PER SCHEDULE WITH 16" DUCT. TYPICAL ALL RETURNS WITH THIS SYMBOL.
11. SUPPORT VERTICAL DUCTS IN BUILDING WITH STEEL ANGLES OR CHANNEL SECURED TO THE SIDES OF THE DUCT WITH WELDS, BOLTS, SHEET METAL SCREWS, OR BLIND RIVETS. SUPPORT AT EACH FLOOR AND AT A MAXIMUM INTERVALS OF 16 FEET.



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BUILDING ADDITION FOR
BEAUTIFUL SAVIOR LUTHERAN CHURCH
 13105 S. BLACK BOB ROAD

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1ST FLOOR MECHANICAL PLAN

Project number 19-130
 Date 11.08.2021

M101