ALL MEANS OF EGRESS SHALL BE MAINTAINED DURING CONSTRUCTION.

3. REMOVED AND REINSTALLED, COORDINATE WITH MECHANICAL CONTRACTOR.

REFER TO MECHANICAL DRAWINGS FOR LOCATIONS AND EXTENT OF CEILING REQUIRED TO BE PENETRATIONS, COORDINATE WITH ELECTRICAL CONTRACTOR.

6. REMOVAL OF INSULATED METAL PANELS.

5. REMOVAL AND REINSTALLATION OF STEEL JOISTS AND BRACING.

7. INSTALLATION OF EQUIPMENT CURBS.

8. INSTALLATION OF CONCRETE HOUSEKEEPING PADS.

9. PROVIDE NEW INSULATION AND MEMBRANE ROOFING.

REQUIREMENTS.

THE OVERVIEW OF SCOPE INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

- ALL DRAWINGS SHALL BE SUBMITTED TO COMPLY WITH THE CHANGES INDICATED, SIZES AND LOCATIONS INCLUSIVE, BUT NOT LIMITED TO, THE FOLLOWING CODES AND RELATED REFERENCES:
  - 2015 INTERNATIONAL FUEL GAS CODE
  - 2015 MICHIGAN BUILDING CODE
  - 2015 MICHIGAN PLUMBING CODE
  - 2015 MICHIGAN MECHANICAL CODE
  - 2015 MICHIGAN ENERGY CODE-ASHRAE 90.1-2013
  - 2015 AMERICAN NATIONAL STANDARDS INSTITUTE CODES AND STANDARDS
  - MICHIGAN STATE FIRE AND BUILDING CODES
  - LOCAL BUILDING CODES

- ALL SUBMITTALS AND RELATED INFORMATION ARE INTENDED TO BE SCALE ACCURATE.

- ALL ELEVATIONS AND CROSS SECTIONS ARE TO REFLECT ACTUAL CONSTRUCTION.

- ALL DIMENSIONS AND TOLERANCES ARE ACCORDANCE WITH THE 2015 AMERICAN NATIONAL STANDARDS INSTITUTE CODES AND STANDARDS.

- ALL REPAIRS AND ALTERATIONS SHALL BE IN ACCORDANCE WITH THE CHARTERED PROFESSIONAL ENGINEER'S SPECIFICATIONS FOR THE PROJECT.

- ALL DRAWINGS ARE TO BE SUBMITTED IN INCLINED FORM.

- ALL WORKMEN'S HOURS REQUIRED TO BE SUBMITTED IN INCLINED FORM.

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Sheet Notes:
1. Verify existing conditions in field, including but not limited to dimensions, wall construction, wall cavities and concealed structure.
2. Notify owner & architect immediately if conditions do not match what is indicated on documents.
3. For mechanical demolition work and new work, refer to mechanical drawings.
4. As required, patch, repair and/or paint/replace adjacent surfaces to match original conditions where proposed arch. & M.E.P. work (including installation of M.E.P. equipment) disturbed existing conditions.
5. All spaces are to be cleaned and any damage caused by the contractor is to be patched, repaired and/or painted/replaced to match original conditions once work is completed.
6. Refer to sheet G-1 for phasing of construction.

Demolition keyed notes:
- Mechanical equipment to be removed, refer to mech.
- Remove existing insulated metal panel wall assembly as required for installation of new mech. equipment, refer to mech.

New work keyed notes:
- New mech. equipment, verify exact size and location with mech., refer to mech.
- New conc. equipment pad, verify exact size and location with mech., refer to mech.
- New insulated metal panel system to match exist.
1. REMOVE EXISTING ROOF DECK MATERIAL AND EXPOSE EXISTING ROOF DECK
2. ENCLOSE DECK WITH INSULATION MATERIAL AND ENCLOSURE DECKING (NO METAL DECK) AND COVER WITH PVB R-O-R 5ML TO COMPLETE ROOF DECK.
3. CORRECT OR REPLACE ELECTRICAL & THERMAL CONDUITS TO MEET CODES AND BLDG. INSPECTION TO MEET CODES AND BLDG. INSPECTION
4. REMOVE EXISTING ROOF DECK MATERIAL AS REQUIRED, REPLACE AS REQUIRED.
5. INSTALL ROOF SYSTEM INFILL AS REQUIRED, REPLACE AS REQUIRED.
6. VERIFY EXISTING CONDITIONS IN FIELD, INCLUDING BUT NOT LIMITED TO:
   a. UNDERLAYMENT, INSULATION, DECK, JOISTS & BRACING
   b. STRUCTURAL BRACING
   c. ULTIMATE LOAD conditions
6. COVER EXISTING ROOF DECK OFFICE/STORAGE AREAS AND CLEARANCES.
7. REMOVE EXISTING DECK, REPLACE AS REQUIRED.
8. INSTALL NEW DECK INFILL, MATCH TYPE, THICKNESS & MFR. RECOMMENDATIONS
9. INSTALL REINFORCEMENT WHERE PROPOSED ARCH. & M.E.P. WORK (INCLUDING INSTALLATION OF M.E.P. EQUIPMENT) DISTURBED EXISTING STRUCTURAL BRACING
10. INSTALL NEW MODIFIED BITUMEN ROOF INFILL, MEET TYPE, THICKNESS & MFR. RECOMMENDATIONS
11. INSTALL NEW MODIFIED BITUMEN ROOF INFILL, MEET TYPE, THICKNESS & MFR. RECOMMENDATIONS
DEMONSTRATION ROOFTOP CODE:

DISCONNECT AND REMOVE AIR HANDLING UNIT AND ASSOCIATED COILS, DAMPERS, FANS AND CONTROLS. SUPPLY AND RETURN AIR DUCTWORK TO REMAIN FOR REUSE.

DISCONNECT AND REMOVE INLINE RETURN AIR FAN AND ASSOCIATED CONTROLS.

DISCONNECT AND REMOVE WALL LOUVER, MOTORIZED DAMPER AND ACTUATOR ASSEMBLIES AS PART OF EXTERIOR WALL DEMOLITION. STORE ASSEMBLIES FOR FUTURE REINSTALLATION. COORDINATE WITH ARCHITECTURAL TRADES.

DISCONNECT REMOVE AND STORE INSULATED PANEL CONSTRUCTION AT OUTDOOR AIR PLENUM AS REQUIRED FOR INSTALLATION OF SUPPLY AIR DUCT FROM TEMPORARY AHU TO BE MOUNTED AT GRADE.

DISCONNECT AND REMOVE RETURN AIR PLENUM BETWEEN AHU-1 AND AHU-2 IN PHASES. AREA OF ROOF OPENING REQUIRED FOR UNIT REPLACEMENT. COORDINATE WITH ARCHITECTURAL AND STRUCTURAL TRADES.

DISCONNECT SUPPLY AIR DUCT CONNECTION TO AHU TO FACILITATE UNIT REPLACEMENT.

DISCONNECT RETURN AIR DUCT CONNECTION TO AHU TO FACILITATE UNIT REPLACEMENT.

DISCONNECT OUTSIDE AIR INTAKE CONNECTION AND ASSOCIATED DAMPER TO OUTSIDE AIR PLENUM TO FACILITATE AHU REPLACEMENT.

DISCONNECT AND REMOVE INLINE EXHAUST FAN AND ASSOCIATED DUCTWORK AND CONTROLS.

DISCONNECT AND REMOVE EXHAUST STACK CONNECTION UP THROUGH ROOF. COORDINATE SEALING OF THROUGH ROOF PENETRATION WITH ARCHITECTURAL TRADES.

DISCONNECT AND REMOVE AIR INTAKE DUCTWORK UP TO ROOF MOUNTED INTAKE HOOD. COORDINATE SEALING ON THROUGH ROOF PENETRATION WITH ARCHITECTURAL TRADES.

DISCONNECT AND REMOVE EXHAUST DUCTWORK AS INDICATED.
NEW WORK KEYED NOTES:

PROVIDE NEW AIR HANDLING UNIT AND ASSOCIATED COILS, DAMPERS, FANS AND CONTROLS AS SPECIFIED. REFER TO PROPOSED CONSTRUCTION PHASING NOTES ON DRAWING G-1.

TEMPORARY RETURN AIR CONNECTION BETWEEN RF-1 AND AHU-2.

TEMPORARY RETURN AIR DUCT CONNECTION BETWEEN RF-2 AND AHU-1.

TEMPORARY SUPPLY AIR DUCT CONNECTION FROM GRADE MOUNTED AHU TO AHU-3 SUPPLY AIR DISTRIBUTION SYSTEM.

CONNECT AND EXTEND SUPPLY AIR DISCHARGE FROM AHU AND RECONNECT WITH EXISTING AIR DISTRIBUTION SYSTEM. PROVIDE MOTORIZED ISOLATION DAMPER IN DUCT TO PREVENT BACKDRAFTS WHEN AHU-1 IS OFFLINE.

CONNECT AND EXTEND SUPPLY AIR DISCHARGE WITH EXISTING AIR DISTRIBUTION SYSTEM.

RECONNECT AND EXTEND RETURN AIR DUCTWORK FROM RETURN FAN TO AHU.

EXTEND RETURN AIR DUCTWORK FROM AHU UP HIGH NEAR CEILING TO ACCOMMODATE TEMPORARY AND FINAL RETURN AIR DUCT CONNECTIONS.

CONNECT INTAKE AIR OPENING FROM NEW AHU TO EXISTING OUTDOOR AIR PLENUM.

COORDINATE WITH ARCHITECTURAL TRADES FOR REINSTALLATION OF EXISTING WALL LOUVER AND ASSOCIATED MOTORIZED DAMPER. RECONNECT DAMPER CONTROLS.

COORDINATE REINSTALLATION OF AIR PLENUM INSULATED WALL PANELS WITH ARCHITECTURAL TRADES.
DISCONNECT AND REMOVE AIR HANDLING UNIT AND ASSOCIATED COILS, DAMPERS, FANS AND CONTROLS. LPS AND LPC PIPING TO REMAIN FOR REUSE. REFER TO PROPOSED CONSTRUCTION PHASING NOTES ON DRAWING G-1.

DISCONNECT AND REMOVE STEAM HEATING COIL AND ASSOCIATED LPS PIPING, VALVES AND FITTINGS FROM COIL CONNECTION BACK TO LPS 4" ISOLATION VALVE.

DISCONNECT AND REMOVE LPC PIPING FROM HEATING COIL AND HUMIDIFIER CONNECTIONS BACK TO THROUGH FLOOR PENETRATION.

DISCONNECT AND REMOVE HUMIDIFIER AND ASSOCIATED PIPING, FITTINGS AND VALVES BACK TO LPS 2" ISOLATION VALVE NEAR 4" LPS BRANCH LINE AND TO LPC THROUGH FLOOR PENETRATION. FOR AHU-1 AND AHU-2 MODIFY LOCATION OF LPC THROUGH FLOOR PENETRATION AS REQUIRED TO ACCOMMODATE ENLARGED HOUSEKEEPING PAD.

DISCONNECT AND REMOVE CHWR AND CHWR PIPING AND FITTINGS FROM CONNECTION AT AHU TO HIGH ABOVE AHU. RECLAIM REFRIGERANT PER EPA STANDARDS.

DISCONNECT AND REMOVE HYDRONIC PIPING CONNECTIONS TO AHU-3 ENERGY RECOVERY COIL AS REQUIRED TO ACCOMMODATE UNIT REMOVAL AND REPLACEMENT.

DISCONNECT AND REMOVE DRAIN PIPING AND ASSOCIATED TRAP AND FITTINGS FROM COIL DRAIN PAN TO INDIRECT DISCHARGE AT FLOOR DRAIN. EXISTING FLOOR DRAIN TO REMAIN.

NEW WORK KEYED NOTES:

PROVIDE NEW AIR HANDLING UNIT AND ASSOCIATED COILS, DAMPERS, FANS AND CONTROLS AS SPECIFIED. REFER TO PROPOSED CONSTRUCTION PHASING NOTES ON DRAWING G-1.

RECONNECT AND EXTEND 4" LPS PIPING TO AHU STEAM HEATING COIL. PROVIDE ASSOCIATED VALVES AND FITTINGS. REFER TO STEAM HEATING COIL PIPING DETAIL.

RECONNECT AND EXTEND LPC FROM THROUGH FLOOR PENETRATION TO AHU HEATING COIL AND HUMIDIFIER.

REFER TO STEAM HEATING COIL PIPING DETAIL AND TO HUMIDIFIER PIPING DETAIL.

RECONNECT AND EXTEND 2" LPS PIPING TO AHU STEAM HUMIDIFIER. PROVIDE ASSOCIATED VALVES AND FITTINGS. REFER TO STEAM HEATING COIL PIPING DETAIL.

RECONNECT AND EXTEND CHWS AND CHWR PIPING TO AHU CHILLED WATER COIL. PROVIDE ASSOCIATED VALVES AND FITTINGS. REFER TO CHILLED WATER COIL PIPING DETAIL.

RECONNECT AND EXTEND HHWS AND HHWR PIPING TO AHU HYDRONIC HOT WATER HEATING COIL. PROVIDE ASSOCIATED VALVES AND FITTINGS. REFER TO HYDRONIC HOT WATER COIL PIPING DETAIL.

PROVIDE DRAIN PIPING AND ASSOCIATED TRAP AND FITTINGS FROM AHU COIL DRAIN PAN TO EXISTING FLOOR DRAIN AND INDIRECTLY WASTE TO FLOOR DRAIN.
DEMOLITION KEYED NOTES:
(APPLICABLE THIS SHEET ONLY)

DISCONNECT AND REMOVE EXHAUST STACK.
COORDINATE ROOF REPAIRS WITH ARCHITECTURAL TRADES.
DISCONNECT AND REMOVE INTAKE AIR HOOD AND ASSOCIATED DUCTWORK, COORDINATE ROOFING MODIFICATIONS WITH ARCHITECTURAL AND STRUCTURAL TRADES.

NEW WORK KEYED NOTES:
(APPLICABLE THIS SHEET ONLY)

PROVIDE PLUME STYLE EXHAUST FAN EF-3A MOUNTED ON DUAL INTAKE PLENUM AND ROOF CURB. MODIFY EXISTING THROUGH ROOF OPENING TO ACCOMMODATE NEW EXHAUST FAN(S). COORDINATE WITH ARCHITECTURAL AND STRUCTURAL TRADES.

PROVIDE PLUME STYLE EXHAUST FANS EF-4A AND EF-4B MOUNTED ON DUAL INTAKE PLENUM AND ROOF CURB. PROVIDE NEW THROUGH ROOF OPENING TO ACCOMMODATE NEW ROOF MOUNTED EXHAUST FANS. COORDINATE WITH ARCHITECTURAL AND STRUCTURAL TRADES.

ALTERNATE #3 ONLY:
PROVIDE PLUME STYLE EXHAUST FAN EF-3B MOUNTED ON DUAL INTAKE PLENUM AND ROOF CURB SUPPLIED AS PART OF EXHAUST FAN EF-3A INSTALLATION.
DEMOLITION KEYED NOTES:
(APPLICABLE THIS SHEET ONLY)

NEW WORK KEYED NOTES:
(APPLICABLE THIS SHEET ONLY)

PROVIDE 26x16 RETURN AIR DUCT, 26x14 EXHAUST AIR DUCT AND ASSOCIATED FIRE DAMPER AT THROUGH FLOOR PENETRATION TO SECOND FLOOR IN LOCATION OF PREVIOUSLY REMOVED DUCTWORK. PROVIDE TRANSITION IN SHAFT TO CONNECT 26x14 EXHAUST DUCT TO EXISTING 24x16 EXHAUST DUCT DOWN TO BASEMENT. REFER TO SHAFT 4 RISER DIAGRAM.

TRANSITION AS INDICATED AND RECONNECT RETURN AIR CONNECTION THROUGH WALL TO FLOOR. PROVIDE FIRE DAMPER AT SHAFT WALL PENETRATION.

RECONNECT RETURN AIR DUCTWORK TO EXISTING RETURN AIR DUCT.

RECONNECT RETURN AIR BRANCH DUCTWORK TO MODIFIED RETURN AIR MAIN DUCT.

PROVIDE 26x22 RETURN AIR DUCT UP TO THIRD FLOOR, 26x22 RETURN AIR TO FIRST FLOOR AND 26x14 EXHAUST AIR BETWEEN FIRST AND THIRD FLOOR ALONG WITH ASSOCIATED FIRE DAMPERS AS INDICATED IN LOCATION OF PREVIOUSLY REMOVED DUCTWORK. REFER TO SHAFT 4 RISER DIAGRAM.

PROVIDE 26x22 RETURN AIR DUCT AND 26X14 EXHAUST AIR IN SHAFT DOWN TO SECOND FLOOR ALONG WITH ASSOCIATED FIRE DAMPERS AS INDICATED IN LOCATION OF PREVIOUSLY REMOVED DUCTWORK. REFER TO SHAFT 4 RISER DIAGRAM.

PROVIDE ROOF MOUNTED EXHAUST FAN EF-20 ON ROOF ABOVE FOR BASEMENT GENERAL EXHAUST.

PROVIDE GYPSUM SHAFT WALL ASSEMBLY (2 HOUR RATING) TO MATCH EXISTING ADJACENT CONSTRUCTION.

PROVIDE FIRE STOP AT PERIMETER OF DUCT PENETRATIONS TO MAINTAIN FIRE RATING. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
PROVIDE DEDICATED STAINLESS STEEL EXHAUST DUCT FOR STERILIZER. RECONNECT TO STERILIZER AND EXTEND ACROSS BASEMENT AND UP INTO CHASE IN NORTH EAST CORNER OF BUILDING. PROVIDE DRAINS AT LOW POINTS IN DUCT. ROUTE DRAINS DOWN TO BELOW COUNTER IN LABS AND DISCHARGE INTO SINK SANITARY DRAINS.

PROVIDE DEDICATED STAINLESS STEEL EXHAUST DUCT FOR CAGE WASH. RECONNECT TO CAGE WASH AND EXTEND ACROSS BASEMENT AND UP INTO CHASE IN NORTH EAST CORNER OF BUILDING. PROVIDE DRAINS AT LOW POINTS IN DUCT. ROUTE DRAINS DOWN TO BELOW COUNTER IN LABS AND DISCHARGE INTO SINK SANITARY DRAINS.

PROVIDE DEDICATED STAINLESS STEEL EXHAUST DUCT FOR BOTTLE WASH. RECONNECT TO BOTTLE WASH AND EXTEND ACROSS BASEMENT AND UP INTO CHASE IN NORTH EAST CORNER OF BUILDING. PROVIDE DRAINS AT LOW POINTS IN DUCT. ROUTE DRAINS DOWN TO BELOW COUNTER IN LABS AND DISCHARGE INTO SINK SANITARY DRAINS.

PROVIDE NEW BRANCH SUPPLY AIR DUCT CONNECTION FROM MAIN TO EXISTING DIFFUSER, ROUTED SO AS NOT TO INTERFERE WITH NEW BOTTLE WASH EXHAUST DUCT.

CAP AND SEAL DUCTWORK AT LOCATION OF REMOVED BRANCH DUCT.

COORDINATE FLOOR CORING WITH ARCHITECTURAL TRADES.

COORDINATE INSTALLATION OF GYPSUM BOARD CEILING (2 LAYERS OF 5/8" GYP. BD.) HUNG ON EXISTING VIBRATION ISOLATORS WITH ARCHITECTURAL TRADES. PROVIDE 2 1/2" SOUND ATTENUATION BLANKET LAID OVER CEILING CONSTRUCTION. PROVIDE ACOUSTICAL SEALANT AND BACKER BOARD AT EXTERIOR WALL. FINISH AND PAINT TO MATCH EXISTING ADJACENT CONSTRUCTION. ELEVATION TO MATCH EXISTING CEILING.

COORDINATE INSTALLATION OF PORTLAND CEMENT PLASTER CEILING WITH ARCHITECTURAL TRADES. PROVIDE 2 1/2" SOUND ATTENUATION BLANKET INSULATION LAID OVER CEILING CONSTRUCTION. PROVIDE ACOUSTICAL SEALANT AND BACKER BOARD AT EXTERIOR WALL. FINISH AND PAINT TO MATCH EXISTING ADJACENT CONSTRUCTION. ELEVATION TO MATCH EXISTING CEILING.

REMOVE FROM STORAGE AND REINSTALL EXISTING DIFFUSERS AND OR GRILLES IN NEW CEILING CONSTRUCTION. BALANCE AIR FLOW TO INDICATED QUANTITIES.

ELECTRICAL CONTRACTOR SHALL RE-INSTALL LIGHTING FIXTURES IN PORTLAND CEMENT PLASTER CEILINGS AND GYPSUM BOARD CEILING ONCE MECHANICAL DUCTWORK HAS BEEN INSTALLED AND CEILING FRAMING IS INSTALLED. VERIFY ALL WORK WITH MECHANICAL TRADES PRIOR TO COMMENCEMENT OF WORK.
1. DEDICATED NEUTRAL CONDUCTORS SHALL BE CONSIDERED CURRENT-CARRYING CONDUCTORS. HOMERUNS CONTAINING MORE THAN THREE CURRENT CARRYING CONDUCTORS SHALL BE DERATED IN ACCORDANCE WITH THE 2014 NEC.

2. BRANCH CIRCUIT HOMERUN CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE 2014 NEC. THE MAXIMUM ALLOWABLE VOLTAGE DROP ON A FEEDER IS 2% AND THE MAXIMUM ALLOWABLE VOLTAGE DROP ON A BRANCH CIRCUIT IS 3% PROVIDE BRANCH CIRCUIT CONDUCTORS SIZED TO ENSURE THE TOTAL VOLTAGE DROP FROM THE SOURCE TO THE POINT OF UTILIZATION IS LESS THAN OR EQUAL TO 5%.

3. SEAL ALL ASSOCIATED PENETRATIONS THRU FIRE RATED WALLS WITH FIRESTOP MATERIAL.

4. ELECTRICAL TRADES SHALL UPDATE EXISTING PANELBOARD DIRECTORIES TO REFLECT REVISIONS/ADDITIONS TO BRANCH CIRCUIT WIRING WITHIN THE PROJECT AREA.

5. ALL 120V 20A CIRCUITS OVER 100 FEET IN LENGTH TO BE #10 AWG.

6. COORDINATE ALL WORK WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.

7. MAINTAIN CIRCUIT INTEGRITY FOR ALL DEVICES TO REMAIN (NOT INTENDED FOR DEMOLITION BUT INTERRUPTED BY DEMOLITION WORK).

8. COORDINATE ALL PHASING WITH SHEETS G-1 AND G-2.

9. FIRE ALARM SYSTEM IS AS MANUFACTURED BY SIEMENS. PROVIDE ALL DUCT SMOKE DETECTORS, RE-PROGRAMMING AND RE-CERTIFICATION OF SYSTEM AS REQUIRED BY THE AHJ.