MONTANA STATE UNIVERSITY
CHEMISTRY BUILDING ROOM 24
ELECTRON MICROSCOPE INSTALLATION

PPA NO. 19-0077

ISSUED FOR BID - 15 MAY 2020

PROJECT TEAM

OWNER

Mechanical

Electrical

ARCHITECT

MECHANICAL

GENERAL INDEX

ELECTRICAL

MECHANICAL

ELECTRICAL

SITE ACCESS / STAGING

BASEMENT FLOOR KEY PLAN

VICINITY MAP - MSU CAMPUS

GENERAL PROJECT NOTES

1. All construction work shall be done in accordance with applicable codes, standards, and guidelines.
2. The contractor shall protect the site and adjacent areas from damage caused by construction operations.
3. The contractor shall maintain a clean and safe work area.
4. All materials and equipment shall be stored in the staging area.
5. The contractor shall ensure that all work is completed in a timely manner.

GENERAL DRAWING CRITERIA:

1. All drawings shall be in accordance with the project specifications.
2. All dimensions shall be taken from the existing construction.
3. All materials and equipment shall be stored in the staging area.

ARCHITECTURAL DRAWING INDEX

A. FRONT ELEVATION
B. SIDE ELEVATION
C. REAR ELEVATION
D. SOUTH ELEVATION
E. NORTH ELEVATION
F. EAST ELEVATION
G. WEST ELEVATION
H. SOUTH ELEVATION
I. NORTH ELEVATION
J. EAST ELEVATION
K. WEST ELEVATION

MECHANICAL DRAWING INDEX

A. PLUMBING PLAN
B. DUCT PLAN
C. MECHANICAL PLAN
D. ELECTRICAL PLAN
E. HVAC PLAN
F. FIRE PROTECTION PLAN
G. SECURITY SYSTEM PLAN
H. LIGHTING PLAN
I. AUTOMATION PLAN
J. HVAC DUCT PLAN
K. HVAC DUCT DETAIL PLAN
L. HVAC DUCT DETAIL PLAN
M. HVAC DUCT DETAIL PLAN
N. HVAC DUCT DETAIL PLAN
O. HVAC DUCT DETAIL PLAN
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T. HVAC DUCT DETAIL PLAN
U. HVAC DUCT DETAIL PLAN
V. HVAC DUCT DETAIL PLAN
W. HVAC DUCT DETAIL PLAN
X. HVAC DUCT DETAIL PLAN
Y. HVAC DUCT DETAIL PLAN
Z. HVAC DUCT DETAIL PLAN

ELECTRICAL DRAWING INDEX

A. POWER PLAN
B. LIGHTING PLAN
C. AUTOMATION PLAN
D. SECURITY SYSTEM PLAN
E. FIRE PROTECTION PLAN
F. ELECTRICAL PLAN
G. DUCT PLAN
H. MOUNTING DETAIL PLAN
I. CONSTRUCTION DETAIL PLAN
J. APPARATUS DETAIL PLAN
K. PANEL DETAIL PLAN
L. ENCLOSURE DETAIL PLAN
M. ENCLOSURE DETAIL PLAN
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PROJECT SCHEDULE

A. PRE-CONSTRUCTION
B. CONSTRUCTION
C. POST-CONSTRUCTION

LIMITS OF WORK

A. SOUTH ELEVENTH AVENUE
B. NORTH ELEVENTH AVENUE
C. WEST COLLEGE AVENUE
D. EAST COLLEGE AVENUE
E. SOUTH COLLEGE AVENUE

PERMITS

A. BUILDING PERMIT
B. SIGN PERMIT
C. LIGHTING PERMIT
D. WATER PERMIT
E. SEWER PERMIT
F. GAS PERMIT
G. ELECTRIC PERMIT
H. TELEPHONE PERMIT
I. AUTOMATION PERMIT
J. SECURITY SYSTEM PERMIT
K. FIRE PROTECTION PERMIT
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Z. PANEL DETAIL PERMIT

SAFETY

A. The contractor shall ensure the safety of their employees, subcontractors, building occupants, pedestrians near the construction site, and access routes.
B. The contractor shall ensure that all work is completed in a timely manner.
C. The contractor shall ensure that all work is completed in a timely manner.
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SPECIFICATIONS

A. MATERIALS
B. CONSTRUCTION
C. SAFETY
D. QUALITY
E. PERFORMANCE
F. MAINTENANCE
G. ACCESS
H. STORAGE
I. INSTALLATION
J. TESTING
K. OPERATION
L. punch list
M. COMMISSIONING
N. HANDOVER
O. training
P. maintenance
Q. warranty
R. compliance
S. testing
T. inspection
U. completeness
V. functionality
W. safety
X. accessibility
Y. performance
Z. compliance

REV.

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REVIEWED BY:

(15 MAY 2020)

DATE

(15 MAY 2020)
A. REFER TO REFLECTED CEILING PLAN FOR GENERAL NOTES, ROOM FINISH PLAN:

- REFER TO REFLECTED CEILING PLAN
- UNISTRUT FRAMEWORK - STRUCTURE
- EXISTING CONCRETE FLOOR

B. NEW FLOORING IN ROOM 024B IS STATIC DISPERSEIVE TYPE FLOORING. COORDINATE THE INSTALLATION AND CONNECTION OF GROUNDING STRIPS WITH ELECTRICAL.

- INSTALLATION AND CONNECTION OF GROUNDING STRIPS
- RESISTIVE BASE CANCELLATION SYSTEM INTERFERENCE (EMI)
- ELECTROMAGNETIC SURFACE - PAINT
- GYPSUM BOARD WALL

C. ALL OVERHEAD MECHANICAL PLUMBING, ELECTRICAL, AND LIGHTING SYSTEMS.

- INFORMATION PERTAINING TO MECHANICAL, A. REFER TO ENGINEERING DRAWINGS FOR GENERAL NOTES, REFLECTED CEILING PLAN:
- UNISTRUT FRAMEWORK - STRUCTURE
- EXISTING CONCRETE FLOOR

D. IN ROOM 024B, ALL OVERHEAD MECHANICAL, PLUMBING, ELECTRICAL, AND LIGHTING SYSTEMS.

- NOTE: PROVIDE CORRUGATED FIBERGLASS PANEL OF MICROSCOPE CABINET BELOW
- NOTE: PROVIDE AND INSTALL AN EQUIPMENT 024A MICROSCOPE
- NOTE: CENTER NEW EQUIPMENT 024B TO GUARD EQUIPMENT FROM OVERHEAD LEAKS LOCATED DIRECTLY ABOVE MICROSCOPE CABINET

E. MICROSCOPE CABINET BELOW TO BE CLEANED, PRIMED, AND PAINTED. STRUCTURE ABOVE ROOM 024B TO BE NOTE: EXISTING CONCRETE JOIST ABOVE PARTITION UNDER CONCRETE

F. MIROSCOPE 024B FIBERGLASS PANEL 4' X 4' - AS DRAWN, AREA IS APPROXIMATELY 4'-6" X 9'-0"

G. STRUCTURE ABOVE ROOM 024B TO BE NOTE: CENTER NEW EQUIPMENT 024A MICROSCOPE

H. LAB 024两个房间

I. SPACE AFTER REFERENCE NUM.
- INSTALLATION AND CONNECTION OF GROUNDING STRIPS
- RESISTIVE BASE CANCELLATION SYSTEM INTERFERENCE (EMI)
- ELECTROMAGNETIC SURFACE - PAINT
- GYPSUM BOARD WALL

J. REFER TO REFLECTED CEILING PLAN FOR GENERAL NOTES, ROOM FINISH SCHEDULE.
BASEMENT PLAN - HVAC DEMOLITION

SCALE: 1" = 1'-0" (24X36 SHEETS)
MECHANICAL DETAILS AND SCHEDULES

GRILLE REGISTER AND DIFFUSER SCHEDULE

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SUPPLY AIR SCHEDULE

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GENERAL EXHAUST AIR SCHEDULE

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FLOW CONTROL VALVE SCHEDULE

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MECHANICAL DETAILS AND SCHEDULES

AIR FLOW SCHEMATIC

NO SCALE