Renovation to

246 Edgewood Avenue

www.mdecarlo.com

M. DeCARLO
ARCHITECTURE

2470 H.L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN
CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

19 AUG 2014	MEP COORDINATION MTG.
03 OCT 2014	90% CD'S

TITLE SHEET

T1

RELEASED FOR CONSTRUCTION

PROJECT CONTACTS:

OWNER :
Board of Regents of the University System of Georgia
270 Washington ST SW Suite 6122
Atlanta, GA 30334

ARCHITECT:
Sara Hawker
Michael DeCarlo
M. DeCarlo Architecture
2470 H. L. Williams Drive NE
Atlanta, GA. 30317
(404) 606-5344
sara.r.hawker@gmail.com

CONTRACTOR:
MaCallan Construction
1642 Powers Ferry Rd SE
Suite 250
Marietta GA 30067

STRUCTURAL ENGINEER:
Bryce Hatton
Project North Engineering
(678) 390-0345

MECHANICAL / ELECTRICAL / PLUMBING ENGINEERS:
Kevin Finlay, PE; kfinlay@conway-owen.com
Alexander F. Hilliard; AHilliard@conway-owen.com
Noman Khan; nkhan@conway-owen.com
Conway & Owen Consulting Engineers
1455 Bluegrass Lakes Pkwy
Alpharetta, GA 30004
(T) 678.350.9000 x. 107
(F) 678.350.9010

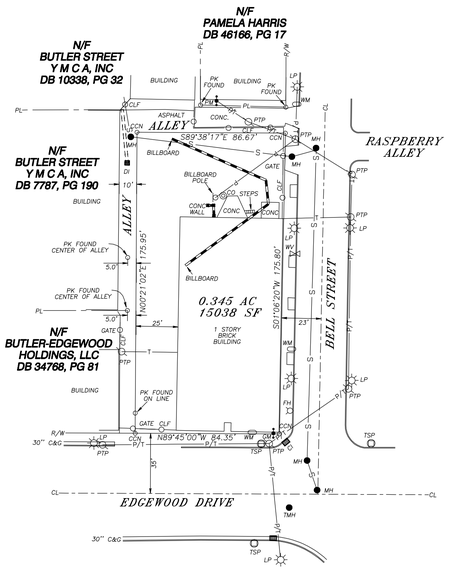
DRAWING INDEX:

LEGEND

AC	-	ACRES
CCN	-	CONCRETE NAIL SET
CO	-	CLEAN OUT
CONC	-	CONCRETE
C&G	-	CURB AND GUTTER
CLF	-	CHAIN LINK FENCE
DWCB	-	DOUBLE WING CATCH BASIN
DB.PG	-	DEED BOOK, PAGE
EP	-	EDGE OF PAVEMENT
-G-	-	GAS LINE
GM	-	GAS METER
GW	-	GUY WIRE
IPF	-	IRON PIN FOUND
IPS	-	IRON PIN SET (1/2" R/B)
LP	-	LIGHT POLE
MH	-	MANHOLE
N/F	-	NOW OR FORMERLY
OT	-	OPEN TOP PIPE
OCS	-	OUTLET CONTROL STRUCTURE
-P-	-	POWER LINE
-P/T-	-	POWER & TELEPHONE LINE
PL	-	PROPERTY LINE
POB	-	POINT OF BEGINNING
PM	-	POWER METER
PP	-	POWER POLE
PTP	-	POWER TELEPHONE POLE
R/B	-	REBAR
R/W	-	RIGHT OF WAY
SF	-	SQUARE FEET
TMH	-	TELEPHONE MANHOLE
TSP	-	TRAFFIC SIGNAL POLE
WM	-	WATER METER
WV	-	WATER VALVE

NOTES

1. THE FIELD DATA, COLLECTED ON SEPTEMBER 30, 2007, UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ON FOOT IN 105,716 FEET AND AN ANGULAR ERROR OF 02 SECONDS PER ANGLE POINT, AND WAS ADJUSTED USING THE COMPASS RULE. A TRIMBLE DIRECT TRACKER 200 TOTAL STATION WAS USED TO OBTAIN LINEAR & ANGULAR MEASUREMENTS.
2. THIS PLAT HAS BEEN CALCULATED FOR CLOSURE AND HAS BEEN FOUND TO BE ACCURATE WITHIN ONE FOOT IN 143,729 FEET.
3. DURING THE FIELD SURVEY PERFORMED ON THIS SITE THERE WAS NO VISIBLE, ABOVE GROUND EVIDENCE OF A HUMAN BURIAL AREA OR CEMETERY OBSERVED. HOWEVER A THOROUGH INSPECTION OF THE INTERIOR OF THIS SITE WAS NOT PERFORMED BY THIS SURVEYOR. THEREFORE EXCEPTION IS MADE AS TO THE PRESENCE OF HUMAN BURIAL AREAS OR CEMETERIES THAT MAY EXIST WITHIN THE BOUNDARIES OF THIS SITE.
4. EASEMENTS, IF ANY, ALONG UTILITIES DEPICTED HEREON ARE NOT KNOWN. NO RECORDED DOCUMENTATION, OTHER THAN THOSE DESCRIBED HEREON, COULD BE OBTAINED BY THIS SURVEYOR TO CLARIFY THE MATTER ANY FURTHER THAN SHOWN HEREON.
5. UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON ABOVE-GROUND, VISIBLE STRUCTURES, BEING CONNECTED TOGETHER IN THE MOST LOGICAL MEANS POSSIBLE. ALL UNDERGROUND UTILITIES, HOWEVER, SHOULD BE REFERENCED AS APPROXIMATE IN LOCATION.
6. PER THE FEDERAL EMERGENCY MANAGEMENT ASSOCIATION WEBSITE" THE PANEL SPECIFIC TO THIS SITE WAS NOT PRINTED AND STARTED THAT THERE WAS "NO SPECIAL FLOOD HAZARD AREA"



THIS PLAT IS FOR THE EXCLUSIVE USE OF Board of Regents of the University System of Georgia, Georgia State University and Panther Place, LLC ANY USE BY THIRD PARTIES IS AT THEIR OWN RISK.

GEORGIA REGISTERED No. 3044 LAND SURVEYOR RICHARD E. MILLARD

SHEET	OF
1	1

DATE: 11/8/07
SCALE: 1" = 30'
FILE# BERY01
JOB# G207136.GSU
DRAWN BY WDC

THIS PLAT IS NOT VALID UNLESS IT BEARS THE ORIGINAL SIGNATURE, IN INK, OF THE REGISTRANT ACROSS THE REGISTRANT'S SEAL.

GRAPHIC SCALE
0' 15' 30' 60'

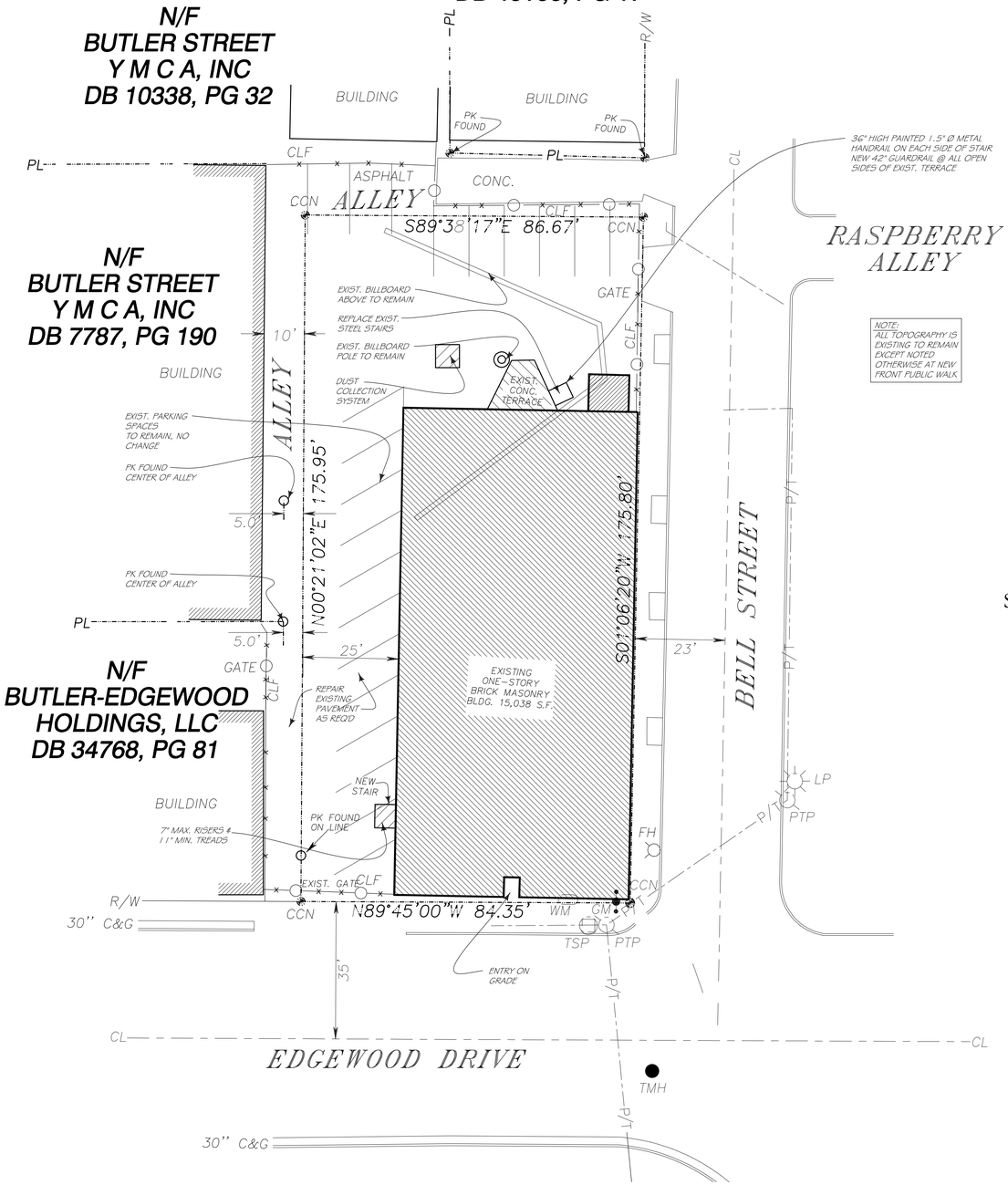
NO.	DATE	DESCRIPTION
1	4/29/09	NAME CHANGE & UPDATE

REVISIONS

Boundary Survey For
Board of Regents of the University System of Georgia, Georgia State University and Panther Place, LLC
Being
246 Edgewood Avenue
Located In
Land Lot 51, 14th District
City of Atlanta, Fulton County, Georgia

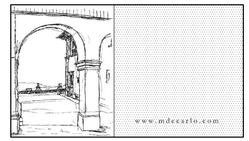
Rochester & Associates, Inc.
425 Oak Street N.W. • Gainesville, Georgia 30501
(770)718.0600 (770)718.9090 Fax • www.rochester-assoc.com

/ SITE SURVEY
SCALE: N.T.S.



/ PROPOSED SITE PLAN
SCALE: 1" = 10'-0"

10' 0 10' 20'
GRAPHIC SCALE
1 inch = 10 feet



M. DeCARLO
ARCHITECTURE
2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

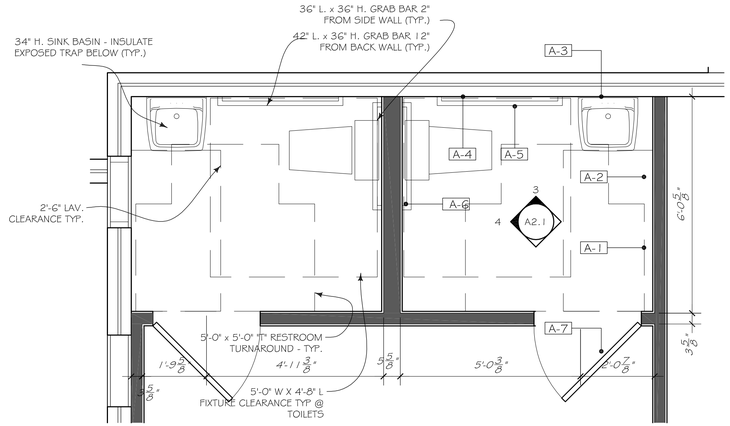
Drawing Record:

03 OCT 2014	90% CD'S

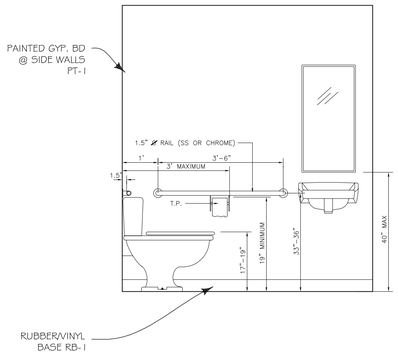
SITE PLAN & SURVEY

A0.1

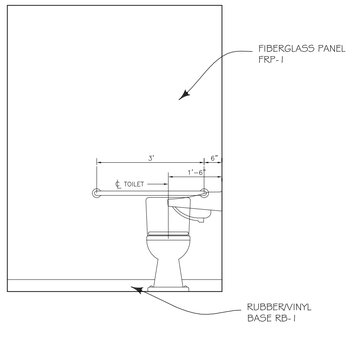
RELEASED FOR CONSTRUCTION



2 GROUND FLOOR PLAN
SCALE: 1/2" = 1'-0"



3 TOILET ROOM ELEVATION
SCALE: 1/2" = 1'-0"



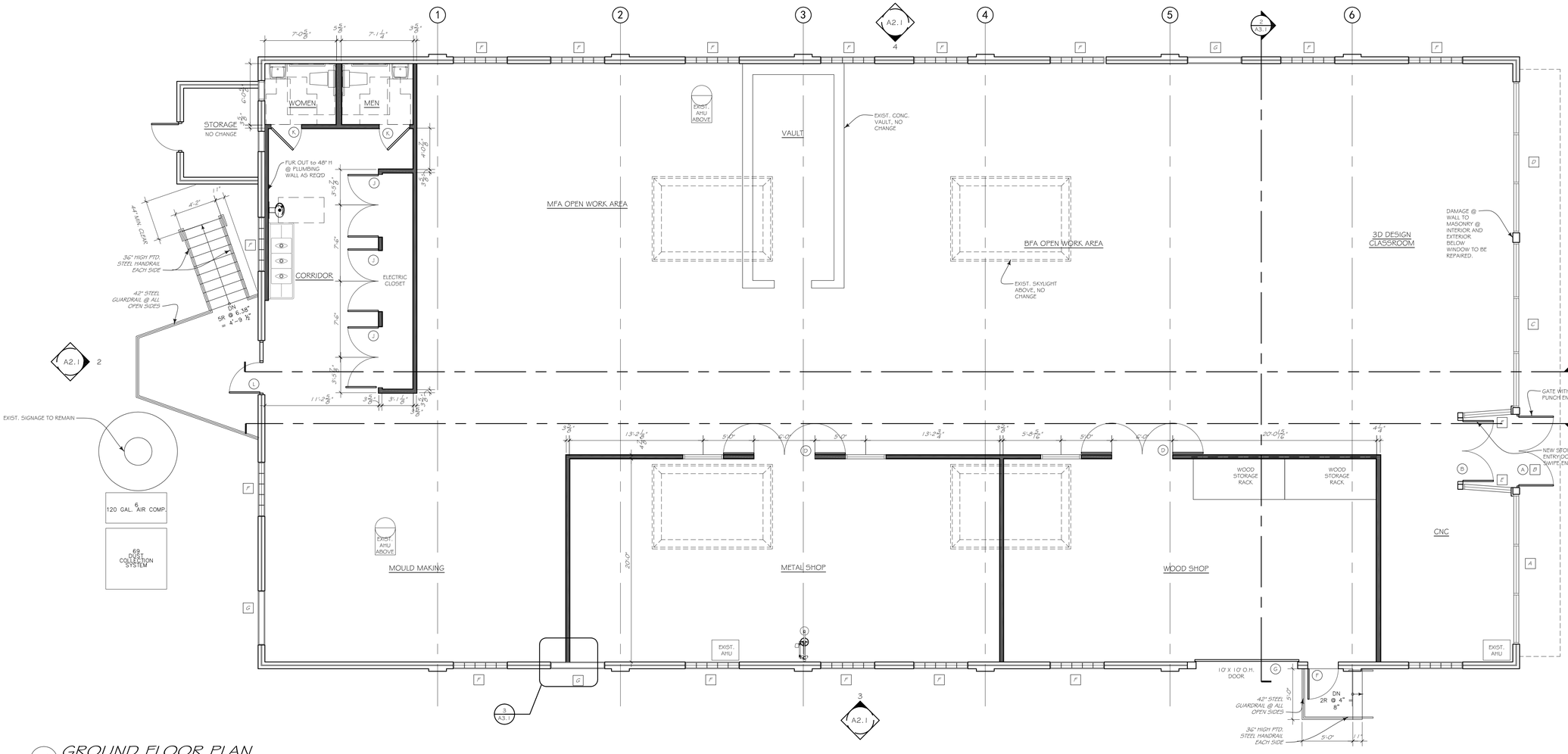
4 TOILET ROOM ELEVATION
SCALE: 1/2" = 1'-0"

WALL LEGEND

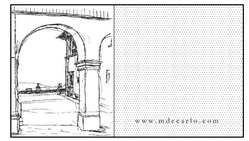
- EXISTING WALL
- NEW MTL. STUD WALL - @ 16" O.C.

TOILET ACCESSORY SCHEDULE

KEY	ITEM	MANUFACTURER	MODEL NO.
A-1	PAPER TOWEL DISPENSER / WASTER PAPER	OWNER SUPPLIED	---
A-2	SOAP DISPENSER	OWNER SUPPLIED	---
A-3	MIRROR	BOBRICK	B-290 1836
A-4	TOILET TISSUE DISPENSER	OWNER SUPPLIED	---
A-5	42" GRAB BAR	BOBRICK	B-6806-42
A-6	36" GRAB BAR	BOBRICK	B-6806-36
A-7	CLOTHES HOOK & DOOR BUMPER	BOBRICK	B-212



1 GROUND FLOOR PLAN
SCALE: 3/16" = 1'-0"



M. DeCARLO
ARCHITECTURE

2470 H.L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

11 AUG 2014	CLIENT REVIEW
18 AUG 2014	DEPARTMENT REVIEW
19 AUG 2014	MEP COORDINATION MTG.
05 SEPT 2014	OWNER REVISIONS
03 OCT 2014	90% CD'S

GROUND FLOOR PLAN

A1.1

RELEASED FOR CONSTRUCTION

ROOM FINISH SCHEDULE

No.	DESCRIPTION	FLOOR	WALL	BASE	CEILING	DOORS	FRAMES
101	3D Design Classroom	C-1	PT-1	RB-1	PT-2	---	PT-4
102	CNC	C-1	PT-1	RB-1	PT-2	---	PT-4
103	Wood Shop	C-1	PT-1	RB-1	PT-2	PT-3	PT-3 @ DOOR PT-4 @ WINDOW
104	Metal Shop	C-1	PT-1	RB-1	PT-2	PT-3	PT-3 @ DOOR PT-4 @ WINDOW
105	Mould Making	C-1	PT-1	RB-1	PT-2	---	PT-4
106	Open Work Area	C-1	PT-1	RB-1	PT-2	---	PT-4
107	Not used	---	---	---	---	---	---
108	Not Used	---	---	---	---	---	---
109	Not Used	---	---	---	---	---	---
110	Not Used	---	---	---	---	---	---
111	Not Used	---	---	---	---	---	---
112	Vault	C-1	PT-1	---	PT-2	---	---
113	MFA Studio	C-1	PT-1	RB-1	PT-2	---	PT-4
114	Corridor	C-1	PT-1	RB-1	PT-2	PT-3	PT-3 @ DOOR PT-4 @ WINDOW
115	Corridor	C-1	PT-1	RB-1	PT-2	PT-3	PT-3 @ DOOR PT-4 @ WINDOW
116	Women's Toilet	C-1	PT-1	RB-1	PT-2	PT-3	PT-3 @ DOOR PT-4 @ WINDOW
117	Men's Toilet	C-1	PT-1	RB-1	PT-2	PT-3	PT-3 @ DOOR PT-4 @ WINDOW

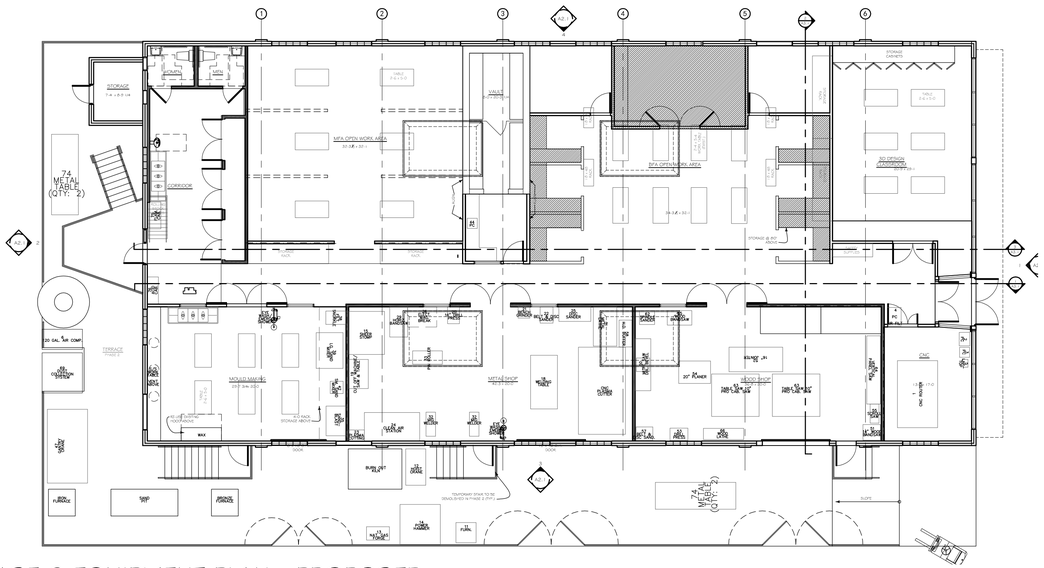
MATERIAL SCHEDULE

No.	DESCRIPTION
C-1	EXIST. CONC. TO BE CLEANED, PATCHED AND SEALED
PT-1	BENJAMIN MOORE: WINTER SOLSTICE 1605; EGGSHELL
PT-2	BENJAMIN MOORE: INT. RM. DECORATOR5 WHITE; FLAT
PT-3	BENJAMIN MOORE: ASHLAND SLATE 1608; SEMIGLOSS
PT-4	TO MATCH DARK BRONZE FACTORY FINISH @ STOREFRONT
FRP-1	MARLITE STANDARD 5 100g; WHITE
RB-1	ROPPE 700 SERIES STANDARD TOE - 123 CHARCOAL 4"h

WALL LEGEND

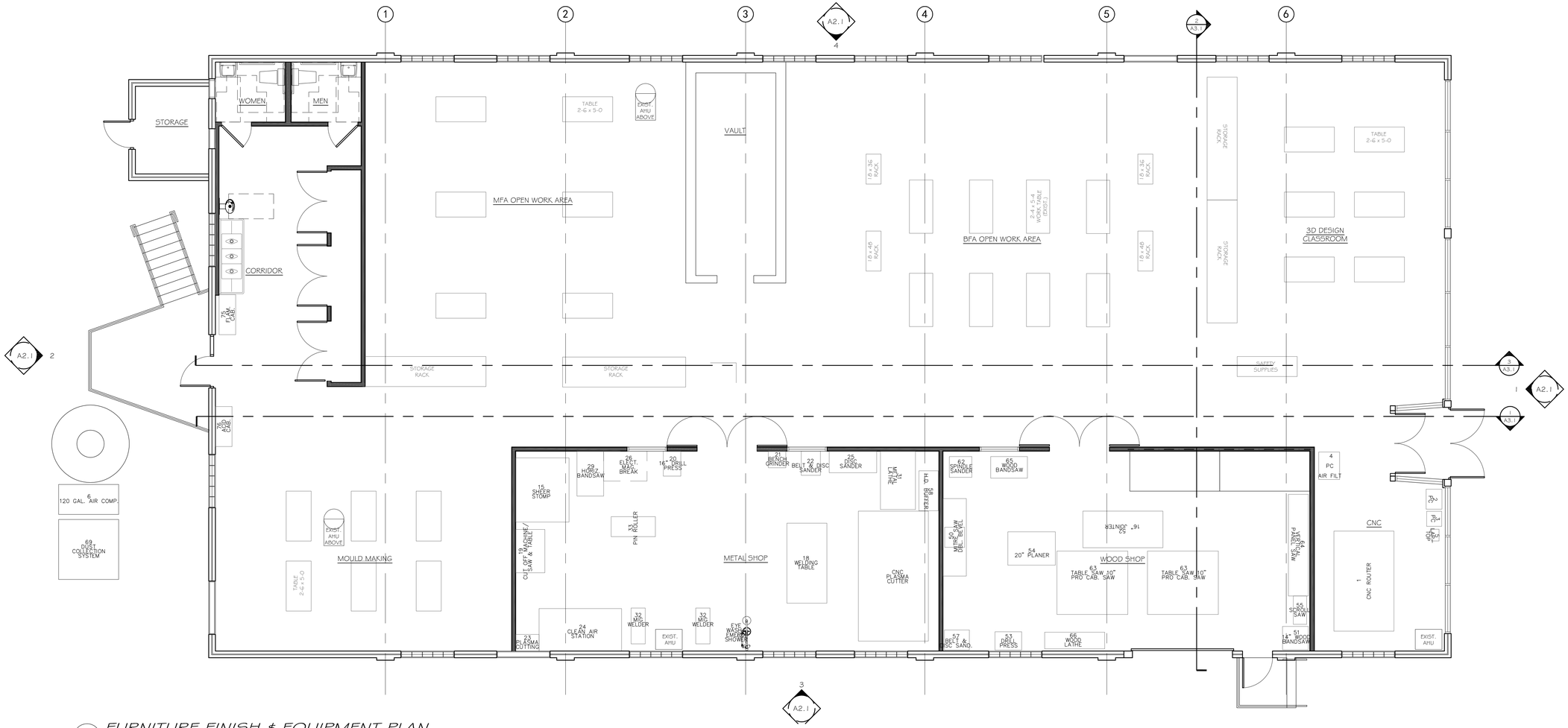
EXISTING WALL

NEW MTL. STUD WALL - @ 16" O.C.



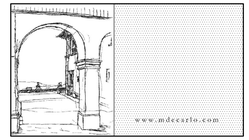
2 PHASE 2 EQUIPMENT PLAN - PROPOSED

SCALE: 3/32" = 1'-0"



1 FURNITURE FINISH & EQUIPMENT PLAN

SCALE: 3/16" = 1'-0"



M. DeCARLO
ARCHITECTURE

2470 H.L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

05 SEPT 2014	OWNER REVISIONS
03 OCT 2014	90% CD'S

FURNITURE, FINISH & EQUIPMENT PLAN

A1.2

RELEASED FOR CONSTRUCTION

CEILING SCHEDULE

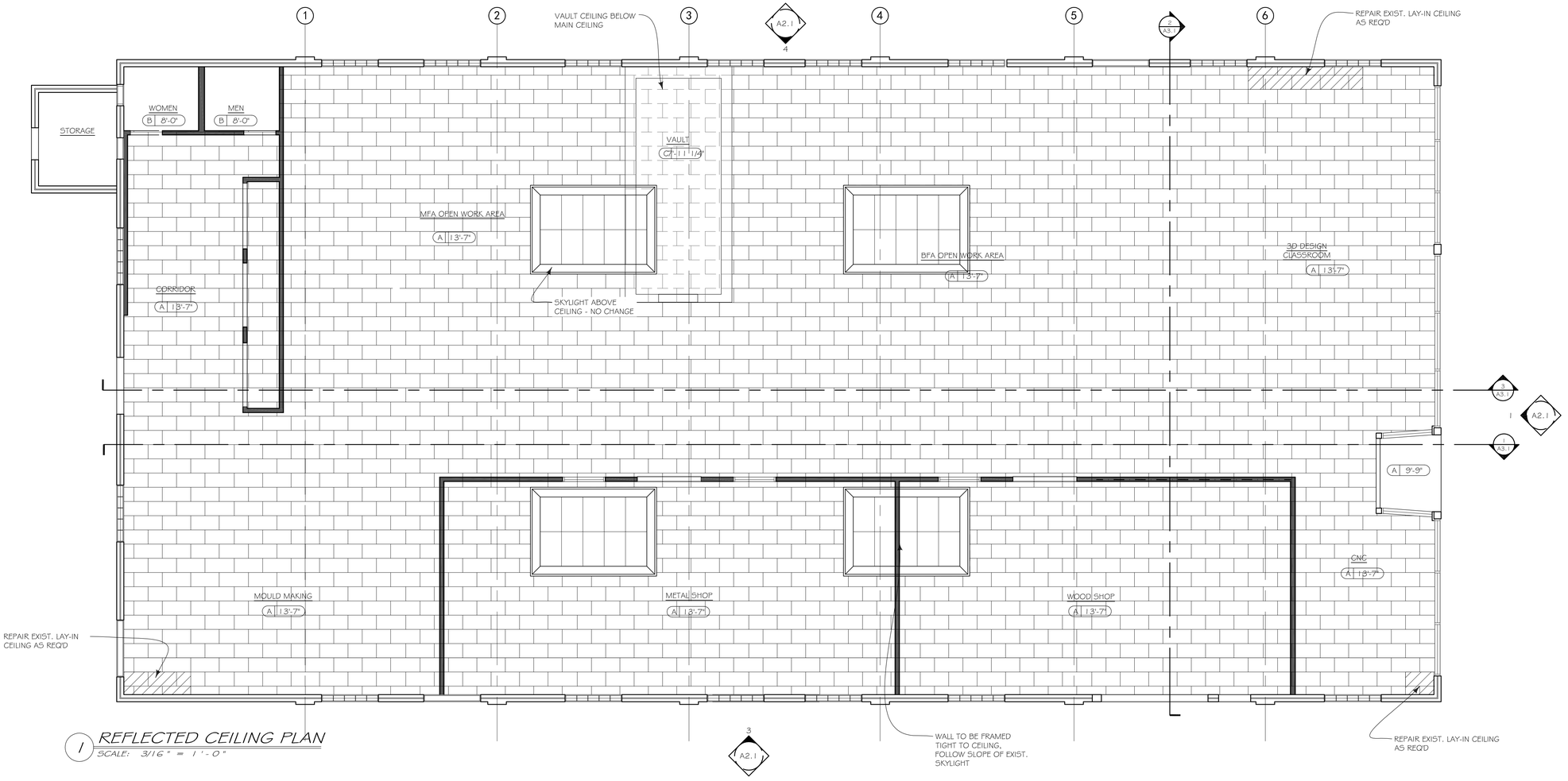
TAG	CEILING FINISH
A	EXISTING TO REMAIN
B	5/8" GYP. WALL BOARD
C	EXISTING METAL DECKING
NOTE:	

GENERAL NOTES

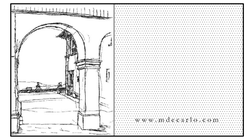
1. CONFIRM FIXTURE SELECTIONS, LOCATIONS & FINISHES WITH OWNER
2. VERIFY ALL LIGHTING & ELECTRICAL ROUGH-IN LOCATIONS IN FIELD WITH OWNER PRIOR TO COMMENCING WORK.
3. SEE ELECTRICAL DRAWINGS FOR ALL ELECTRICAL INFORMATION EXCEPT LIGHTING LOCATIONS
4. CONFIRM RECEPTACLE & FIRE ALARM DEVICE LOCATIONS WITH OWNER
5. SEE MECHANICAL DRAWINGS FOR HVAC LOCATIONS - HOLD LIGHTING LOCATIONS AND RECONFIGURE MECHANICAL RUNS IN CASE OF CONFLICTS
6. CENTER LIGHTING & HVAC REGISTERS IN CORRESPONDING SPACES AND OVER SINKS U.N.O.
7. COORDINATE AUDIO SYSTEM LAYOUT & INSTALLATION WITH OWNER.

WALL LEGEND

- EXISTING WALL
- NEW MTL. STUD WALL - @ 16" O.C.
- NEW MTL. STUD WALL - W/ BLOCKING AS REQ'D



1 REFLECTED CEILING PLAN
SCALE: 3/16" = 1'-0"



M. DeCARLO
ARCHITECTURE

2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN
CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

05 SEPT 2014	OWNER REVISIONS
03 OCT 2014	90% CD'S

REFLECTED CEILING PLAN

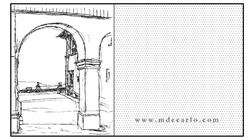
A1.3

RELEASED FOR CONSTRUCTION

WALL LEGEND

EXISTING WALL

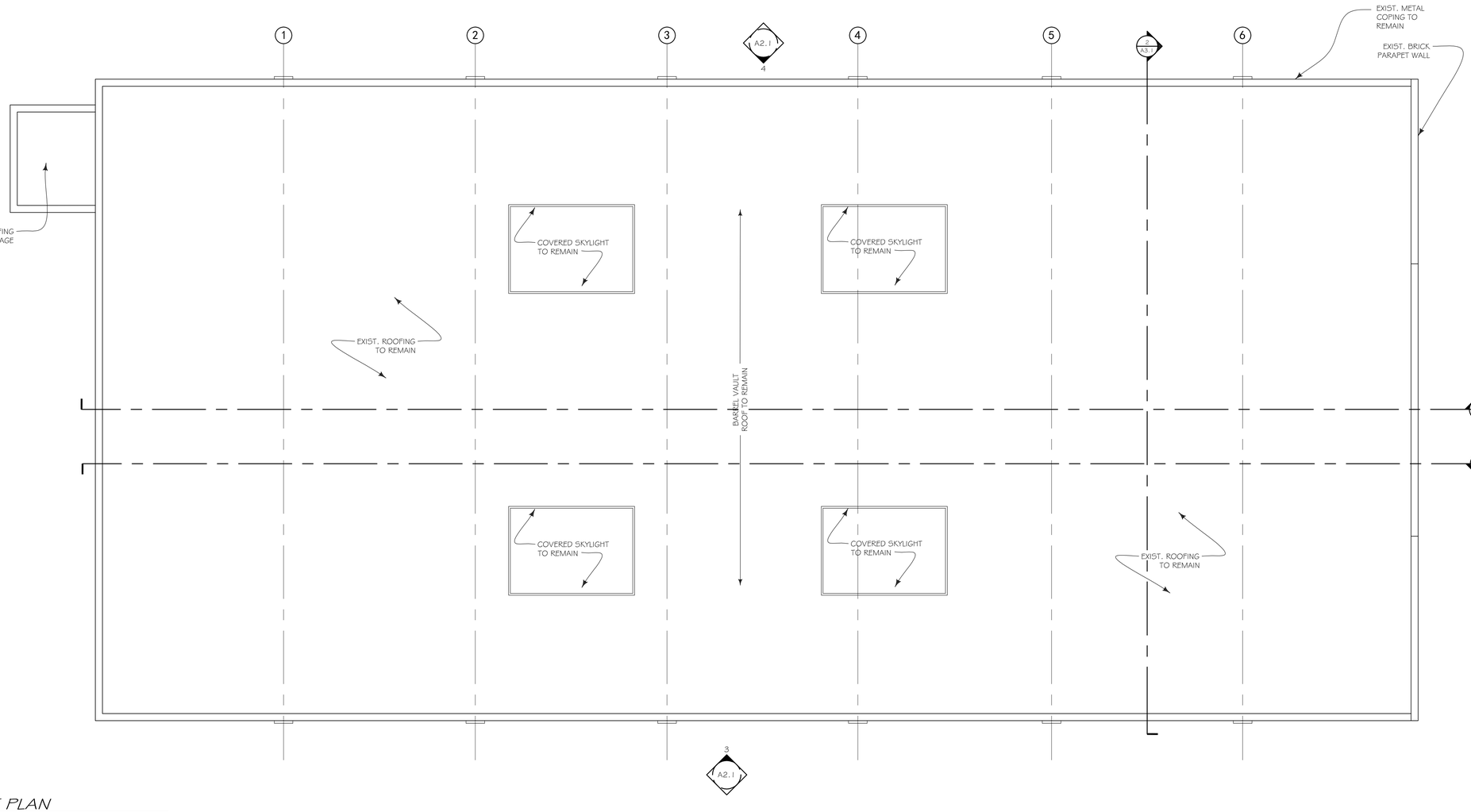
NEW MTL. STUD WALL - @ 16" O.C.



M. DeCARLO
ARCHITECTURE

2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION



1 ROOF PLAN
SCALE: 3/16" = 1'-0"

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

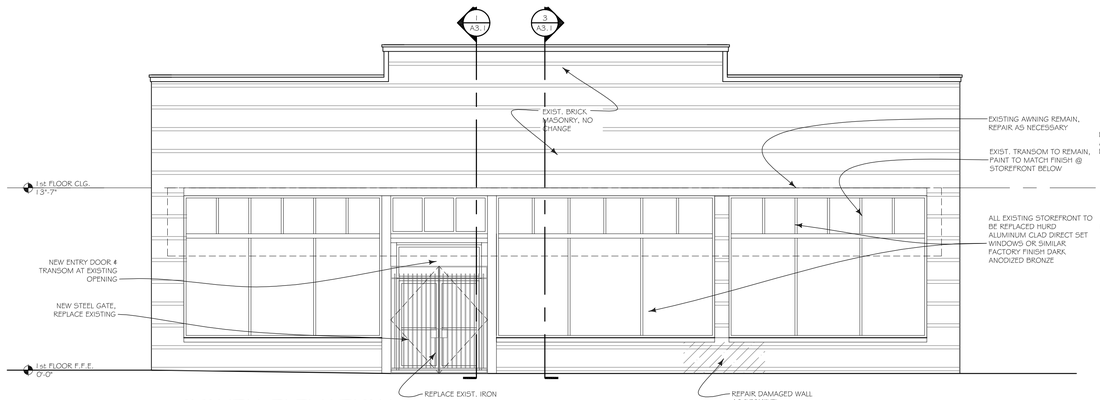
Drawing Record:

05 SEPT 2014	OWNER REVISIONS
03 OCT 2014	90% CD'S

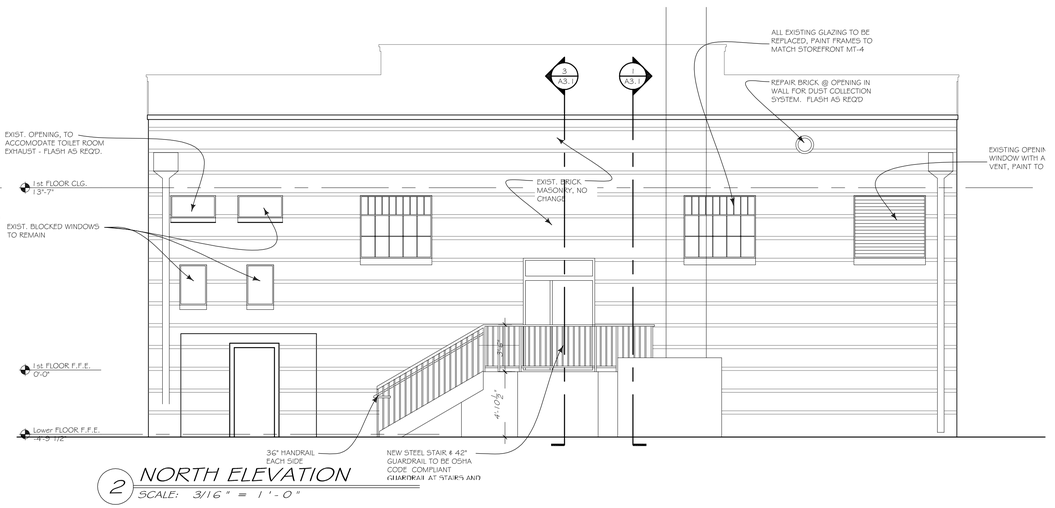
ROOF PLAN

A1.4

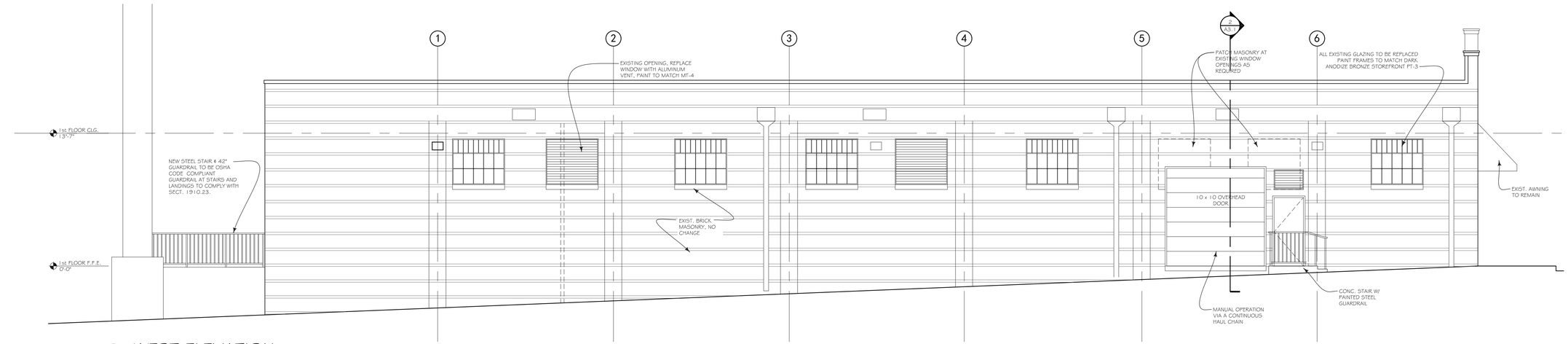
RELEASED FOR CONSTRUCTION



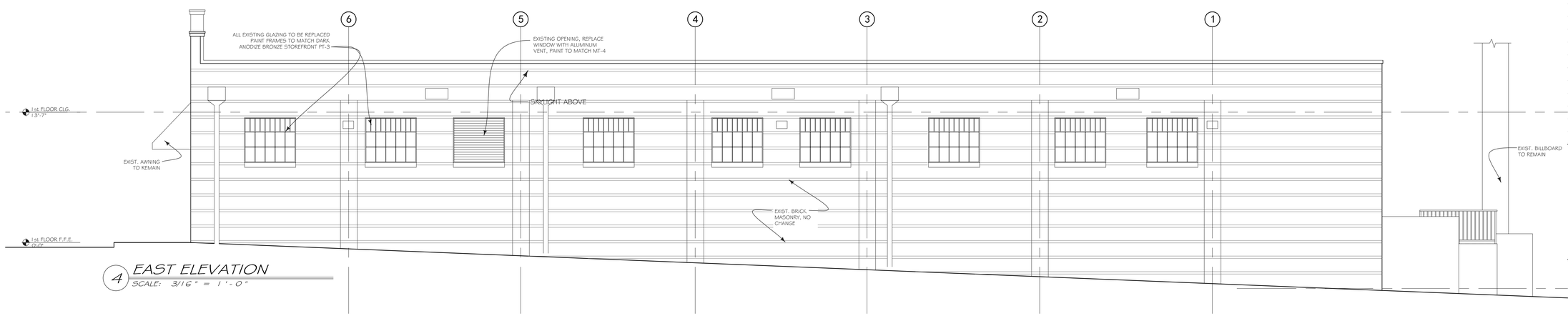
1 SOUTH ELEVATION
SCALE: 3/16" = 1'-0"



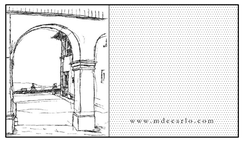
2 NORTH ELEVATION
SCALE: 3/16" = 1'-0"



3 WEST ELEVATION
SCALE: 3/16" = 1'-0"



4 EAST ELEVATION
SCALE: 3/16" = 1'-0"



M. DeCARLO
ARCHITECTURE

2470 H.L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN
CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

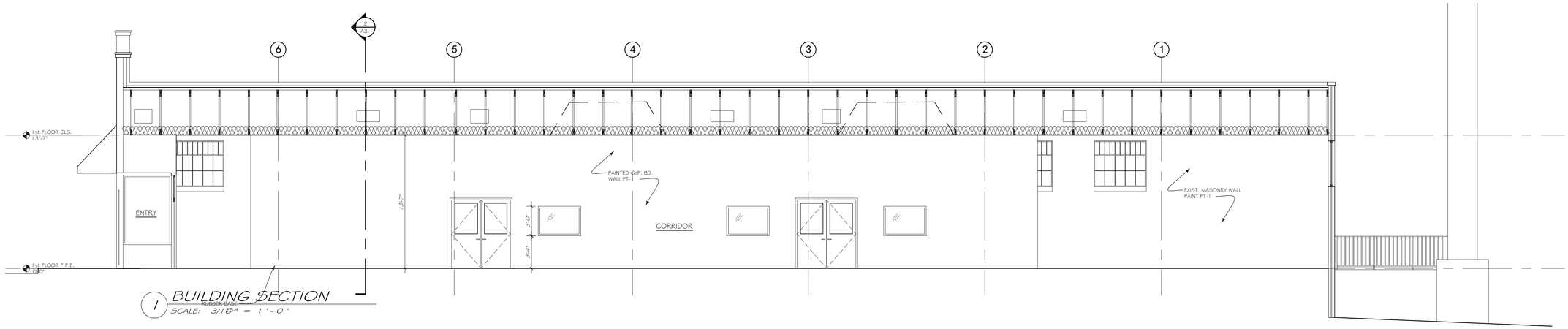
Drawing Record:

04 SEPT 2014	CLIENT REVIEW
03 OCT 2014	90% CD'S

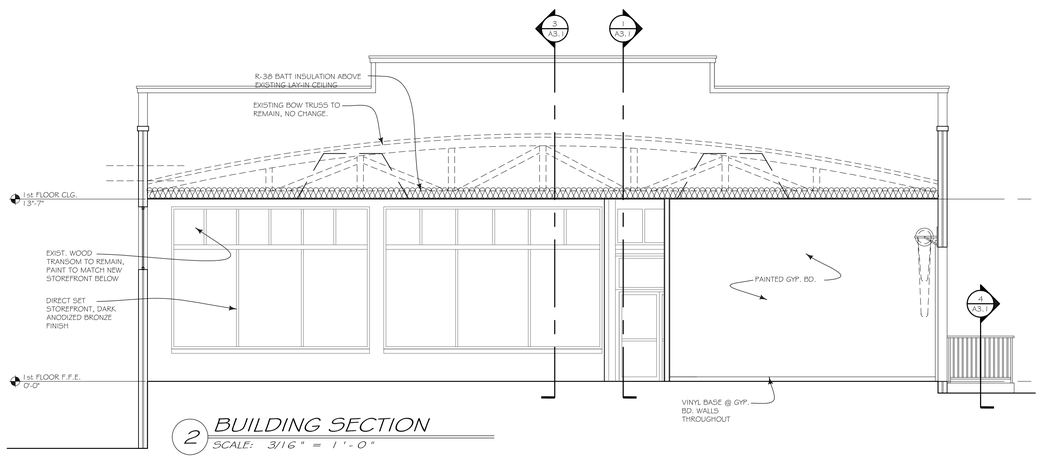
ELEVATION

A2.1

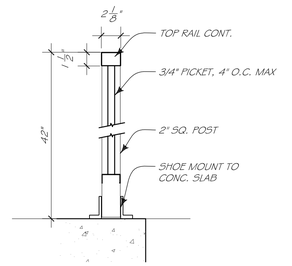
RELEASED FOR CONSTRUCTION



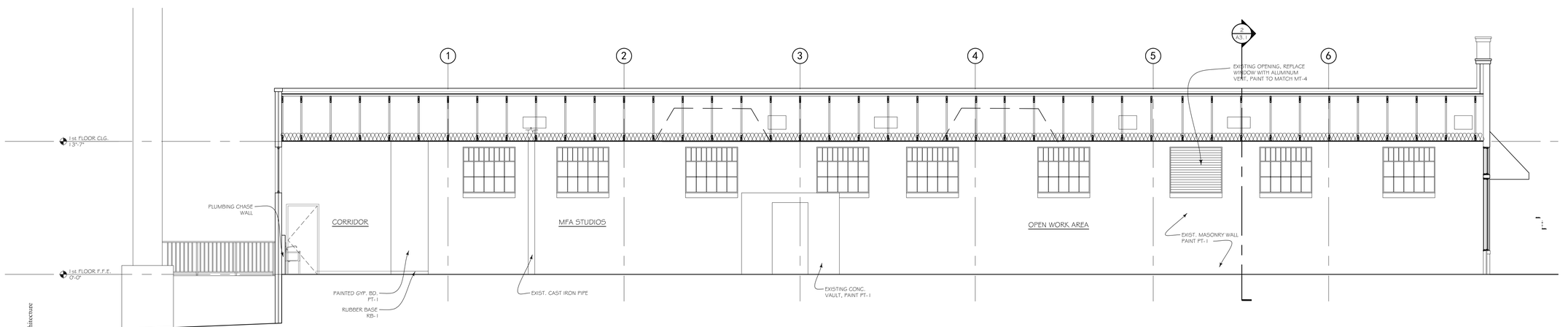
1 BUILDING SECTION
SCALE: 3/16" = 1'-0"



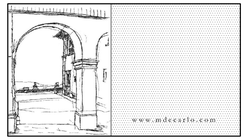
2 BUILDING SECTION
SCALE: 3/16" = 1'-0"



4 GUARDRAIL DETAIL
SCALE: 1 1/2" = 1'-0"



3 BUILDING SECTION
SCALE: 3/16" = 1'-0"



M. DeCARLO
ARCHITECTURE

2470 H.L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN
CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

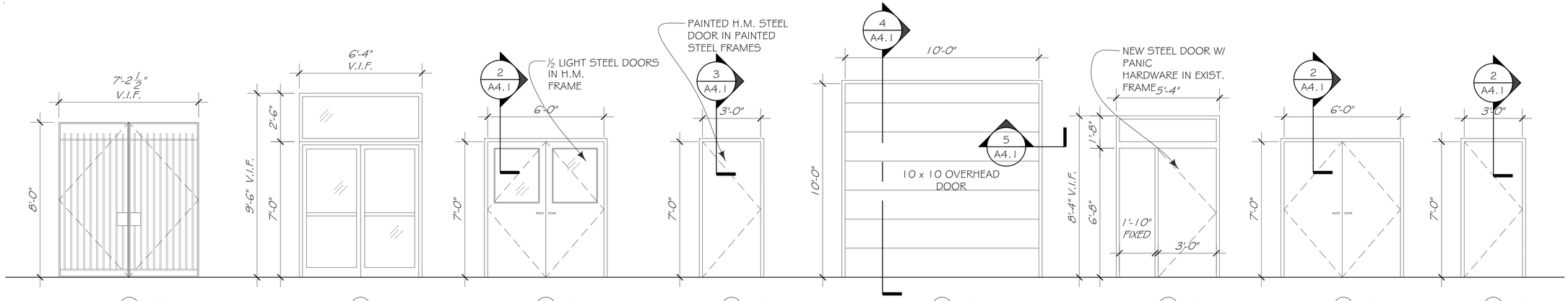
Drawing Record:

03 OCT 2014	90% CD'S

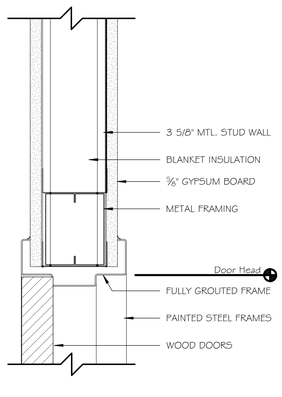
BUILDING SECTIONS

A3.1

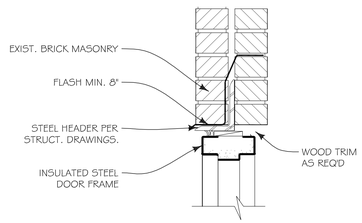
RELEASED FOR CONSTRUCTION

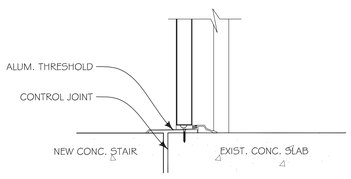


1 DOOR ELEVATIONS
SCALE: 3/8" = 1'-0"

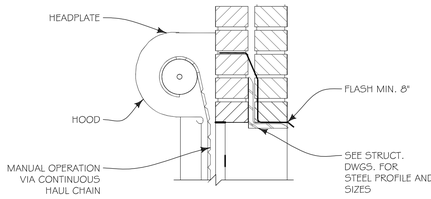


2 TYP. INTERIOR HEAD/JAMB
SCALE: 1 1/2" = 1'-0"

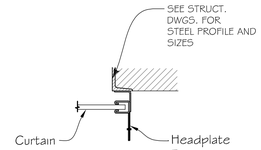




3 TYP. EXTERIOR HEAD/JAMB
SCALE: 1 1/2" = 1'-0"



4 HEAD @ OVERHEAD DOOR
SCALE: 1 1/2" = 1'-0"

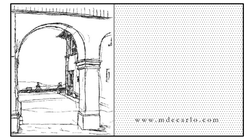


5 JAMB @ OVERHEAD DOOR
SCALE: 1 1/2" = 1'-0"

DOOR SCHEDULE

TYPE	SIZE	MATERIAL	HARDWARE	REMARKS
A	PAIR 3'-7" x 8'-0" (V.I.F.)	WROUGHT IRON	HEAVY DUTY HINGES; PUSH BUTTON ACCESS PAD PER OWNER;	GATE
B	PAIR 3'-2" x 7'-0" (V.I.F.)	STL. / GLASS	CLOSER W/ HOLD OPEN; PANIC HDWR.; ALUM THRESHOLD; CARD ACCESS BY OWNER	
C	PAIR 3'-0" x 7'-0"	PTD. WOOD/GLASS	CLOSER; HINGES; LEVER HANDLE	
D	3'-0" x 7'-0"	PAINTED STEEL	CLOSER; HINGES; LEVER HANDLE; DEAD BOLT	
E	10'-0" x 10'-0"	INSUL. STEEL	TBD	MANUAL OPERATION
F	3'-0" x 6'-8" (V.I.F.)	PAINTED STEEL	PANIC HW, EXTERIOR KEYED LEVER HANDLE, CLOSER, PAIR OF KICKPLATES	EXIST. FRAME /FIXED SIDELITE
G	PAIR 3'-0" x 7'-0"	PAINTED SOLID CORE WOOD	LEVER HANDLE	
H	3'-0" x 7'-0"	PAINTED SOLID CORE WOOD	LEVER HANDLE W/ PRIVACY LATCH	

NOTES:
1. FINAL DOOR LEVER SELECTION AND MATERIALS BY OWNER.
2. FIELD VERIFY ALL EXISTING OPENING SIZES PRIOR TO ORDERING & INSTALLATION.
3. ALL WOOD DOORS TO BE 1¾" THICK U.N.O.
4. SEE EXTERIOR ELEVATIONS FOR EXTERIOR DOOR DESIGNS AND CORRESPONDING TRANSOMS.
5. TRANSOM SIZES REFER TO SASH SIZES.
6. TYP. DOOR HW FINISH
7. TYP. DOOR BASIS OF DESIGN



M. DeCARLO
ARCHITECTURE
2470 H.L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

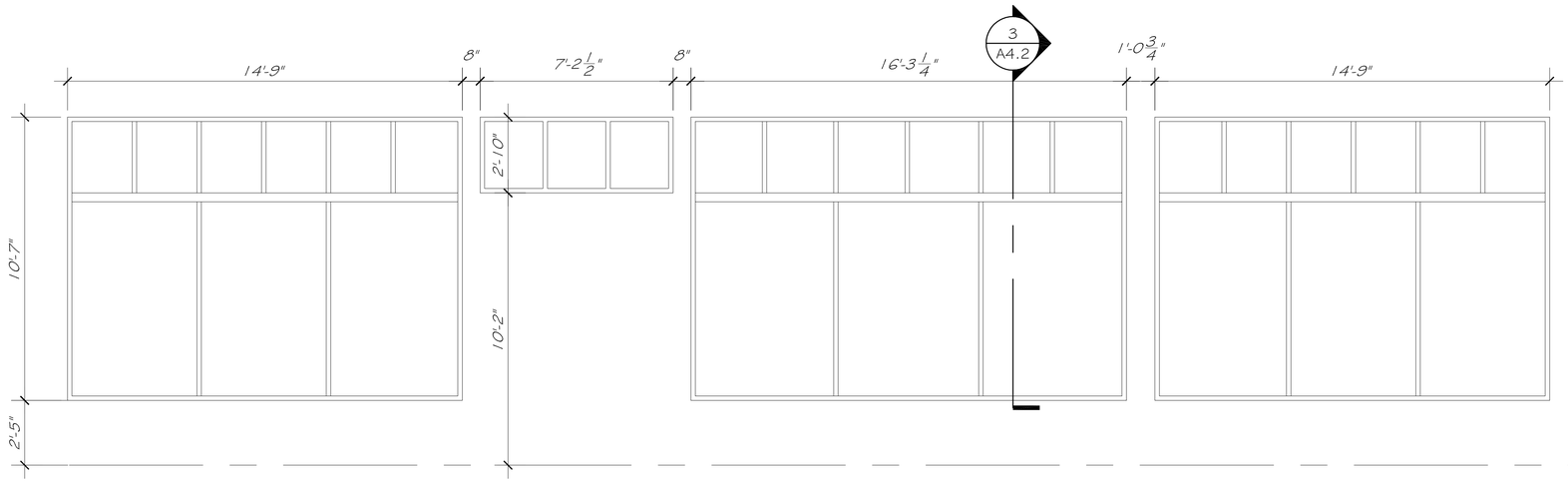
Drawing Record:

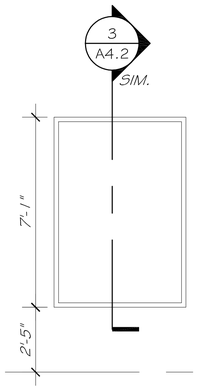
03 OCT 2014	90% CD'S

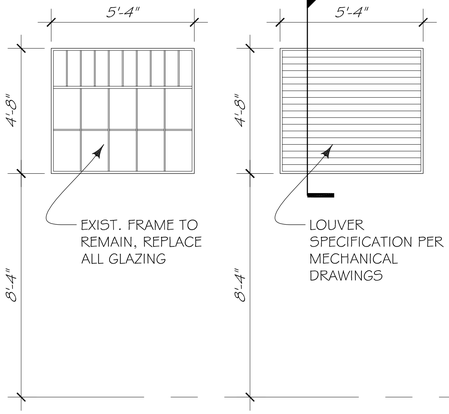
DOOR ELEVATION -

A4.1

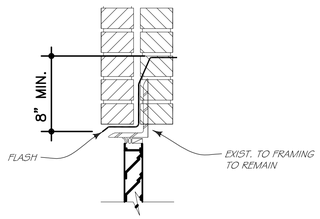
RELEASED FOR CONSTRUCTION

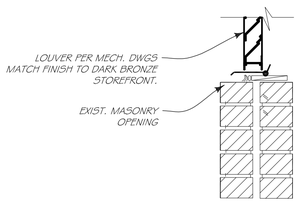




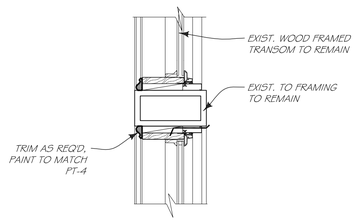


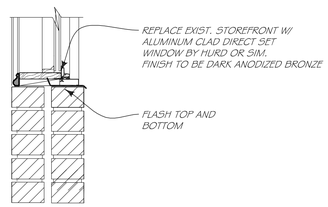
1 WINDOW ELEVATIONS
SCALE: 3/8" = 1'-0"



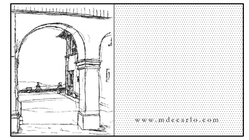


2 LOUVER DETAIL
SCALE: 1 1/2" = 1'-0"





3 STOREFRONT DETAIL
SCALE: 1 1/2" = 1'-0"



M. DeCARLO
ARCHITECTURE

2470 H.L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN
CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:
03 OCT 2014 90% CD'S

WINDOW ELEVATIONS & DETAILS

A4.2

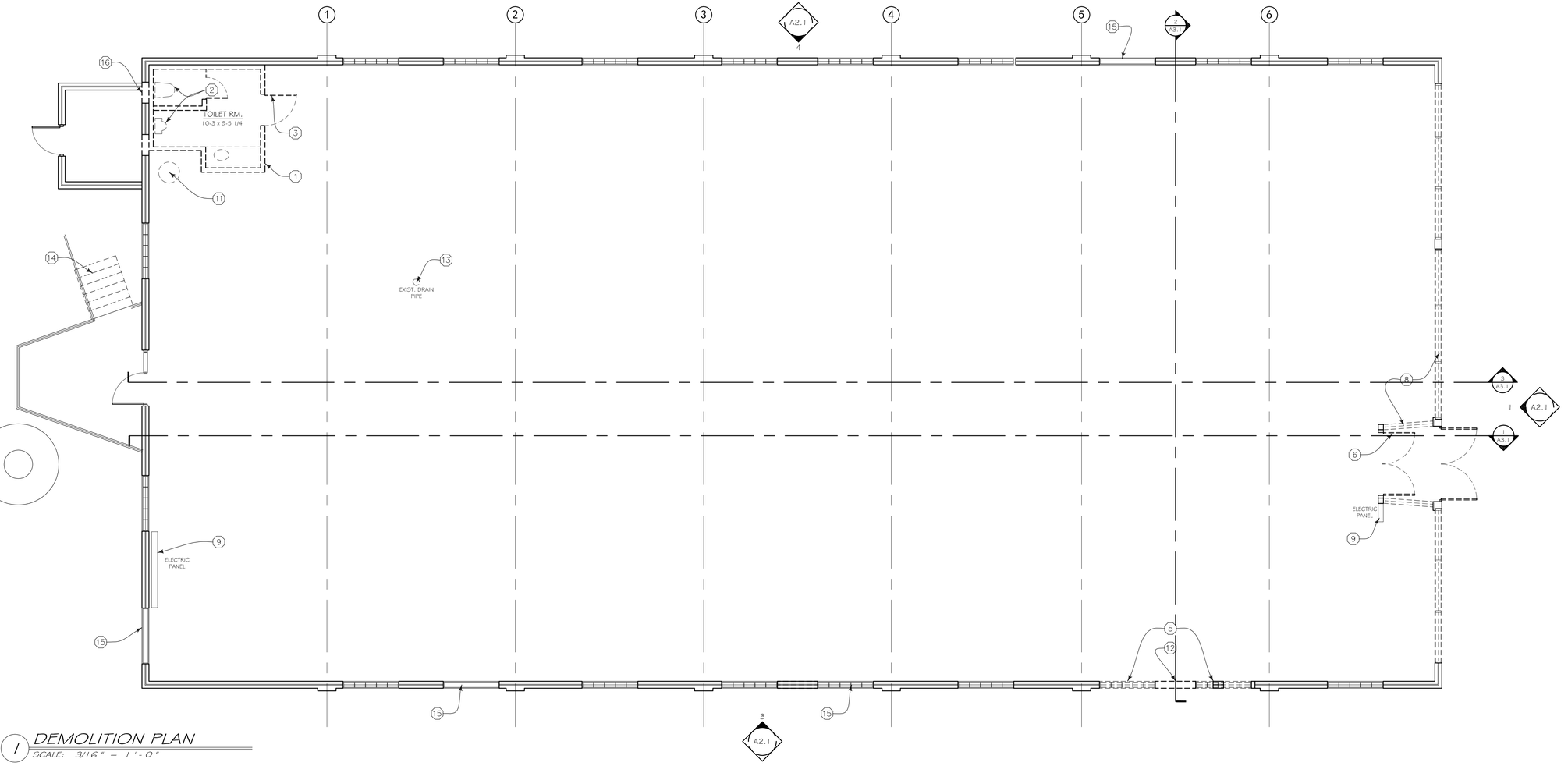
RELEASED FOR CONSTRUCTION

DEMOLITION NOTES

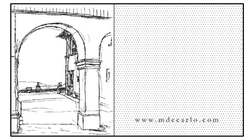
1. REMOVE EXISTING NON-LOADING BEARING WALL
2. REMOVE EXISTING RESTROOM FIXTURES, FINISHES, FLOOR PLATFORM & CEILING IN THEIR ENTIRETY
3. REMOVE EXISTING DOOR & FRAME
4. NOT USED.
5. REMOVE EXISTING WINDOWS, TO BE INFILL W/ MASONRY TO MATCH
6. REMOVE EXISTING ENTRY DOOR, TRANSOM & FRAME
7. REMOVE EXISTING GATE AND FRAME
8. REMOVE EXISTING STOREFRONT AND TRANSOM.
9. REMOVE EXISTING ELECTRICAL PANEL.
10. NOT USED
11. REMOVE EXISTING WATER HEATER
12. REMOVE EXISTING BRICK VENEER - BRACE EXISTING STRUCTURE AS NECESSARY.
13. REMOVE EXISTING DRAIN PIPE, CONTRACTOR TO VERIFY SITE CONDITIONS PRIOR.
14. REMOVE EXIST. STEEL STAIR
15. REMOVE EXIST. WINDOW FRAME AND GLAZING, PREPARE OPENING FOR VENT INSTALLATION
16. REMOVE EXIST. PLYWOOD AND FRAMING AS REQUIRED TO ACCOMODATE VENT.

WALL LEGEND

- WALL TO BE DEMOLISHED
- EXISTING WALL TO REMAIN



1 DEMOLITION PLAN
SCALE: 3/16" = 1'-0"



M. DeCARLO
ARCHITECTURE

2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

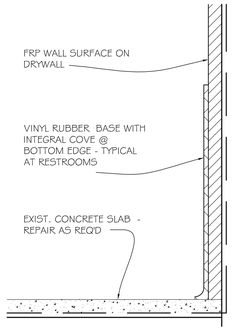
Drawing Record:

05 SEPT 2014	OWNER REVISIONS
03 OCT 2014	90% CD'S

DEMOLITION PLAN

D1.1

RELEASED FOR CONSTRUCTION



2 COVE TILE BASE DETAIL
SCALE: HALF (TYP. @ RESTROOMS)

CODE INFORMATION:

Project Address:	246 Edgewood Avenue Atlanta, GA. 30303
Zoning:	HC-20C / SA5
Occupancy:	F-1, Factory (IBC 306.2) Industrial Occ. (I) (NFPA 6.1.12.) Classroom (education) occupancy is an accessory occupancy only per IBC 508.2
Construction Type:	Type VB (permitted 1 story <8500 s.f.w/ out sprinkler per IBC table 503) , unsprinklered
Building Height:	1 story - 24'-3" (Avg. grade @ front to roof peak)
Building Area:	7482 s.f. gross
Occupant Load:	Classrooms 539 s.f. @ 1/20 net = 27 Shops 5940 s.f. @ 1/50 net = 119 Total: 146 Occupants (per NFPA Table 7.3.1.2)
Lot Coverage:	See site plan
Site Area:	.345 Acres (15,038 sq.ft.)
Egress Door Width:	3'-0" min. at each exit (181 x 0.2 in./occ. = 29.2 / 2 exits = 14.6")
Egress Path:	Maintain 44" min. clear path to all building exit doors, or 36" min clear path within rooms or areas having 50 or fewer occupants.
Number of Exits:	2 (2 min.) NFPA 40.2.4
Exit Separation:	117'-5 1/4" ($\frac{1}{3}$ x 136'-3" bldg. diagonal = 68'-1$\frac{1}{2}$" min) (per NFPA 7.5.1.3.2)
Max. Travel Dist.:	Ground Floor 50'-2" - (200'-0" max.) (NFPA Table 40.2.6)
Max. Common Path:	32'-10" - (50'-0" max.) (NFPA Table 40.2.5)
Max. Dead End Corr:	23'-4" (50'-0" max) (NFPA Table 40.2.5)
Min. Plumbing:	2 WC's & 2 LAVs provided @ (1/100 occ. = 1.46 WC's & LAVs req'd.) 1 service sink provided (1 req'd) (per IBC Table 2902.1)
Eyewash:	OSHA Standards 29CFR 19.10.151 (c) - 1 req'd
Drinking Fountain:	1 per 400 > 2 req'd per IPC 410.2 or 1 HC Accessible

PROJECT GENERAL NOTES:

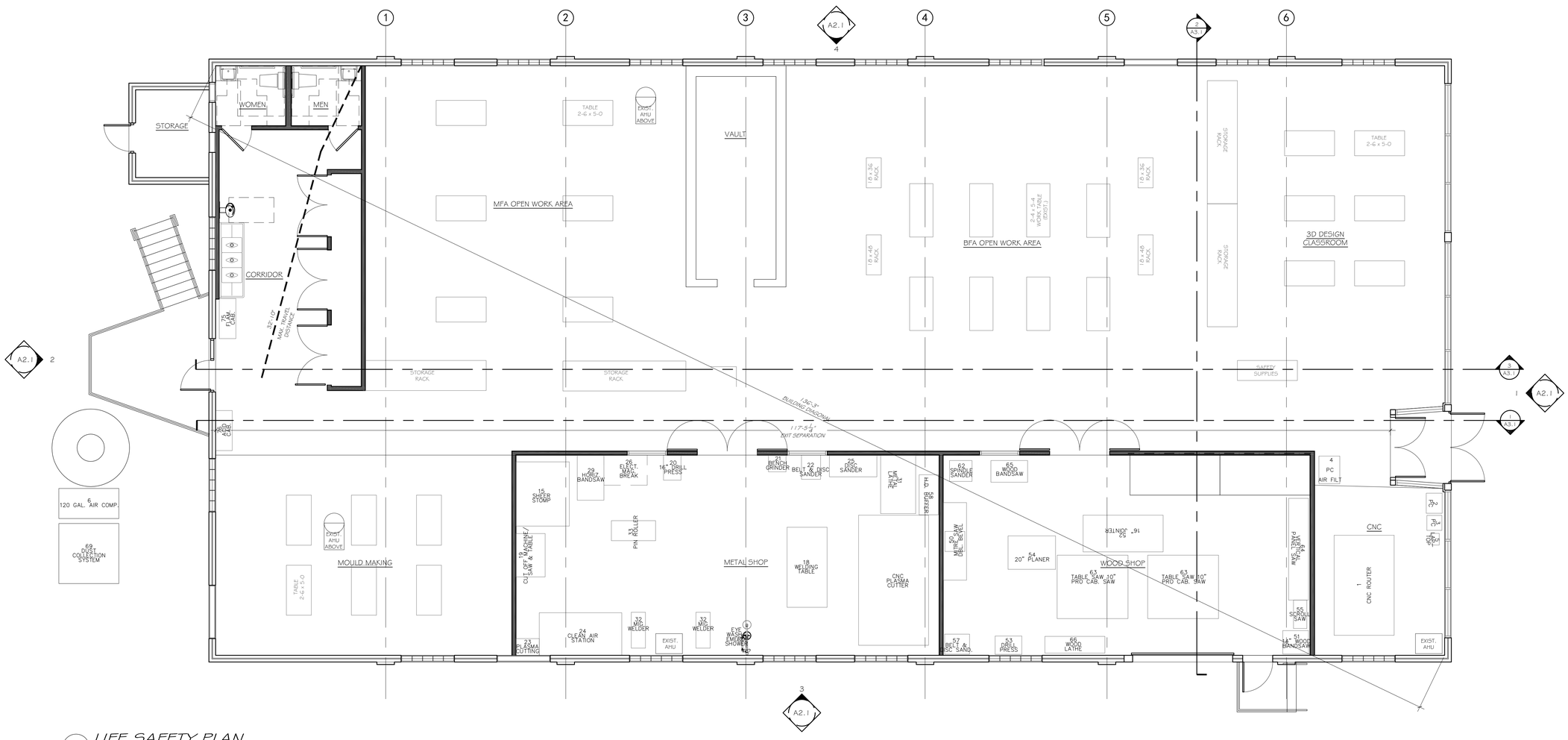
1. Construction drawings are to show conformity to building codes and for architectural design information only. General Contractor is responsible for all final material selections and for coordination and oversight of construction process.
2. Construction shall meet the requirements of all applicable building codes including any product, drawings, or specifications not provided within the scope of this drawing set.
3. Construction and installation shall follow all manufacturer guidelines and recommendations, including those needed for warranties.
4. All existing conditions and dimensions shall be field verified prior to commencement of construction. Discrepancies shall be brought to the Architect's attention so that design modifications can be made if necessary.
5. Dimensions noted on drawings shall take precedence over scaled dimensions.
6. General Contractor is responsible for verifying engineering issues meet all applicable codes, including structural, electrical, HVAC, and plumbing work. Discrepancies shall be brought to the Architect's attention so that design modifications can be made if necessary.

APPLICABLE CODES:

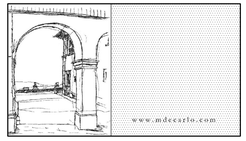
- International Building Code, 2012 Edition, with Georgia Amendments (2013)
- International Residential Code, 2012 Edition, with Georgia Amendments (2013)
- International Fire Code, 2012 Edition, with Georgia Amendments (2013)
- International Plumbing Code, 2012 Edition, with Georgia Amendments (2013)
- International Mechanical Code, 2012 Edition, with Georgia Amendments (2012)
- International Fuel Gas Code, 2012 Edition, with Georgia Amendments (2013)
- National Electrical Code, 2011 Edition, with no Georgia Amendments
- International Energy Conservation Code, 2009 Edition, with Georgia Supplements and Amendments (2011) (2012)
- 2012 NFPA 101 – Life Safety Code with state Amendments (2013)

WALL LEGEND

- EXISTING WALL
- NEW MTL. STUD WALL - @ 16" O.C.
- NEW MTL. STUD WALL - W/ BLOCKING AS REQD



1 LIFE SAFETY PLAN
SCALE: 3/16" = 1'-0"



M. DeCARLO
ARCHITECTURE

2470 H.L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

05 SEPT 2014	OWNER REVISIONS
03 OCT 2014	90% CD'S

LIFE SAFETY PLAN

LS1.1

RELEASED FOR CONSTRUCTION

ELECTRICAL GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH ALL LOCAL BUILDING CODES, LAWS, REGULATIONS, ORDINANCES AND 2011 NATIONAL ELECTRICAL CODE.
2. THE ELECTRICAL WORK SHALL CONSIST OF ALL LABOR AND MATERIAL TO COMPLETELY INSTALL ALL ELECTRICAL WORKS AS SHOWN ON THESE DRAWINGS.
3. COORDINATE LOCATION OF LIGHT FIXTURES IN AREAS OF MECHANICAL DUCTWORK AND PIPING WITH MECHANICAL CONTRACTOR. RELOCATE LIGHT FIXTURES, WIRING AND CONDUIT IF NECESSARY AS DIRECTED BY THE ARCHITECT/ENGINEER.
4. ALL WORK ASSOCIATED WITH THE SCOPE OF THIS PROJECT INCLUDING EQUIPMENT, ACCESSORIES, DEVICES, SYSTEMS, ETC. SHALL BE COVERED BY A ONE YEAR GUARANTEE WHICH SHALL START AT THE TIME OF FINAL ACCEPTANCE BY THE OWNER. ANY DEFECTS IN PRODUCTS, INSTALLATION, OR WORKMANSHIP SHALL BE CORRECTED AT NO ADDITIONAL CHARGE AND SHALL INCLUDE ANY NECESSARY REPAIRS TO WALLS, FLOORS, MILLWORK, ETC. WHICH SHALL BE REPAIRED BACK TO NEW AND FINISHED CONDITION.
5. THE CONTRACTOR SHALL KEEP A RECORD OF THE CHANGES WHICH ARE IN CONFLICT WITH THESE DRAWINGS AND SPECIFICATIONS. AT THE COMPLETION OF THIS WORK THE CONTRACTOR SHALL SUBMIT "AS BUILT" PRINTS TO THE OWNER.
6. THE DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY SHOW THE EXACT ROUTING OR DETAILED FITTINGS. ALL WORK SHALL BE INSTALLED AS A COMPLETE SYSTEM WITH NECESSARY COMPONENTS, FITTINGS, STRAPS, ETC. ALL JUNCTION BOXES AND COMPONENTS SHALL BE INSTALLED SO THAT THEY ARE ACCESSIBLE.
7. REFER TO THE ENTIRE CONTRACTED DRAWING SET AND SPECIFICATIONS FOR GUIDANCE ON DIMENSIONS, CEILING HEIGHTS, DOOR SWINGS, ROOM FINISHES, STRUCTURAL DETAILS, LOCATIONS OF DUCTWORK, PIPING AND STRUCTURAL MEMBERS. INSTALL THE ELECTRICAL SYSTEMS SO AS NOT TO INTERFERE WITH THE INSTALLATION OR FUNCTION OF ANOTHER DISCIPLINES WORK.
8. ALL CONDUIT MUST BE CONCEALED ABOVE THE CEILING OR IN THE WALLS UNLESS OTHERWISE NOTED.
9. COORDINATE RECEPTACLE NEMA TYPE AND VOLTAGE WITH ALL EQUIPMENT.
10. THE CONTRACTOR SHALL INSTALL ALL WORK IN A NEAT AND WORKMANLIKE MANNER AND ACCORDING TO GENERALLY ACCEPTED PRACTICES OF FIRST CLASS WORKMANSHIP.
11. PROVIDE A NEW DIRECTORY FOR ALL PANELS. CORRECTLY LABEL ALL CIRCUITS, SPACES AND SPARES PER NEC 408.4.
12. ALL RECESSED LIGHTING FIXTURES SHALL BE FASTENED TO STRUCTURE OR GRID PER N.E.C. 410.
13. ANY CONDUIT, BUSWAY, CABLE TRAY, SLEEVES, ETC. THAT PENETRATE RATED WALLS, CEILINGS AND FLOORS SHALL BE FIRE STOPPED PER CODE.
14. MOUNTING HEIGHTS FOR DEVICES ARE TO BE MEASURED TO THE DEVICE CENTERLINE.
15. ALL BRANCH CIRCUITS SHALL BE WIRED ½"C, 2-#12, 1-#12G MINIMUM, UNLESS OTHERWISE NOTED ON THE PLANS. ALL HOMERUNS SHALL BE A MINIMUM ¾" CONDUIT.
16. PROVIDE A SEPARATE GREEN, INSULATED, #12AWG EQUIPMENT GROUNDING CONDUCTOR ROUTED WITH THE BRANCH CIRCUIT HOMERUN CONDUCTORS. PROVIDE GROUND THROUGH ENTIRE CONDUIT RUN TO THE LAST DEVICE. ALL EQUIPMENT SHALL BE GROUNDED AT THE PANEL WHICH FEEDS THE EQUIPMENT. PROVIDE GROUNDING PER NEC 250.
17. ALL SWITCHES FOR LIGHTS, FANS, ETC., WHICH ARE SHOWN TO BE MOUNTED IN THE SAME GENERAL AREA, SHALL SHARE A MULTI-GANG COVER PLATE AS REQUIRED.
18. ARMORED CABLE MAY BE USED IN WALLS AND MILLWORK ONLY AND MUST BE MC TYPE (WITH GROUND). ALL CONDUIT TO AND ABOVE THE PLENUM SHALL BE EMT. ALL HOMERUNS SHALL BE IN CONDUIT RAN FROM THE FIRST DEVICE OR LIGHT FIXTURE TO THE PANEL.
19. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS OF OUTLETS, LIGHT FIXTURES, AND PARTITIONS. FINISHES FOR DEVICES AND COVERPLATES SHALL BE AS SELECTED BY ARCHITECT.
20. PROVIDE A 2-GANG OUTLET BOX AND 1" CONDUIT WITH PULL STRING TO ABOVE ACCESSIBLE CEILING FOR ALL NEW DATA, TELEPHONE AND CABLE OUTLETS. COORDINATE PLASTER RING SIZE WITH TENANT AND CABLE VENDOR.
21. LIGHT FIXTURES SHALL BE AS SCHEDULED, WITH ONLY PRE-APPROVED EQUAL FIXTURES ACCEPTABLE.
22. FLUORESCENT LAMPS SHALL BE RAPID START, 32W, OR LOW MERCURY CONTENT, AND OF NOT LESS THAN 2900 LUMEN OUTPUT UNLESS OTHERWISE NOTED ON LIGHT FIXTURE SCHEDULE.
23. FLUORESCENT BALLASTS SHALL BE ELECTRONIC WITH A MAXIMUM OF 10% THD AND AS MANUFACTURED BY ADVANCE, OSRAM/SYLVANIA, GE/MAGNETEK, OR MOTOROLA.
24. ALL CONDUCTORS SHALL BE COPPER. CONDUCTORS FOR SIZES NO. 10 AND SMALLER SHALL BE TYPE "THWN" OR "THHN/THWN". CONDUCTORS FOR SIZES NO. 8 AND LARGER SHALL BE TYPE "XHHW". SOLID CONDUCTORS TERMINATING IN A BREAKER OR DEVICE SHALL BE UTILIZED FOR WIRE SIZE NO. 12. MINIMUM WIRE SIZE SHALL BE NO. 12.
25. ALL BOXES SHALL BE PRESSED STEEL, SINGLE PIECE (NON-GANGABLE) TYPE.
26. ALL COVER PLATES SHALL BE STAINLESS STEEL.
27. ALL COVER PLATES FOR DEVICES AND JUNCTION BOXES SHALL HAVE CIRCUIT NUMBERS LABELED WITH INDELIBLE INK MARKER. DEVICE COVERS SHALL BE LABELED ON THE BACK, JUNCTION BOX COVERS SHALL BE LABELED ON THE FRONT.
28. RECEPTACLES SHALL BE 120 VOLT, 20A, WITH PARTS NUMBERS AS LISTED BY HUBBELL OR EQUAL BY ARROWHART, P&S, OR LEVITON. COLOR SHALL BE AS SELECTED BY THE ARCHITECT.

SINGLE RECEPTACLE	#BL5361X
DUPLEX RECEPTACLE	#BL5352X
GFCI RECEPTACLE	#GF5352X

29. SWITCHES SHALL BE 120/277V, 20A, WITH PARTS NUMBERS AS LISTED BY HUBBELL OR EQUAL BY ARROWHART, P&S, OR EAGLE. COLOR SHALL BE AS SELECTED BY THE ARCHITECT.

SINGLE POLE	#HBL1221X
THREE WAY	#HBL1223X
FOUR WAY	#HBL1224X

(ADD "L" SUFFIX FOR KEYED LOCKING TYPE)

30. PANELBOARDS, MOTOR STARTERS, SAFETY SWITCHES (HEAVY DUTY), ETC. SHALL BE AS MANUFACTURED BY GENERAL ELECTRIC, SQUARE D, SIEMENS, OR CUTLER HAMMER. ALL BREAKERS SHALL BE "BOLT-ON" TYPE.
31. FOR EQUIPMENT THAT IS TO BE WIRED BY ELECTRICAL CONTRACTOR AND FURNISHED BY OTHERS, ELECTRICAL CONTRACTOR SHALL REVIEW ALL SPECIFICATION SECTIONS, EQUIPMENT SCHEDULES, AND/OR DETAILS THROUGHOUT DOCUMENTS THAT PERTAIN TO THIS EQUIPMENT AND INCLUDE ALL WIRING AND DEVICES REFERENCED IN THEIR BIDS. ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION OF THIS EQUIPMENT WITH RESPECTIVE CONTRACTOR PRIOR TO ROUGH-IN.
32. ALL ABANDONED WIRE SHALL BE REMOVED.
33. WHERE WORK BY THE GENERAL CONTRACTOR (WALL REMOVE, NEW OR RELATED WALL OPENING, ETC.) RESULTS IN THE REMOVALS, REFEEDING, OR RELOCATION OF LIGHTING FIXTURES OR ELECTRICAL DEVICES, THE ELECTRICAL CONTRACTOR SHALL DISCONNECT OR RECONNECT AS REQUIRED ALL ACTIVE DEVICES REMAINING ON THAT CIRCUIT SYSTEM.
34. RING OUT ALL CIRCUITS IN EXISTING PANEL AFFECTED BY THIS ALTERATION. WHERE ADDITONAL CIRCUITS ARE NEEDED, REFUSE CIRCUITS AVAILABLE FOR REUSE, OR PROVIDE NEW BREAKERS. TAG ALL UNUSED CIRCUITS AS SPARE, REPLACE ALL INOPERATIVE OR DEFECTIVE CIRCUIT BREAKERS, AND TIGHTEN ALL CONNECTIONS.
35. WHERE DEMOLITION DISRUPTS ELECTRICAL CONTINUITY OF EXISTING RECEPTACLES/LIGHTS, AND NO RECONNECTION IS SHOWN, RECONNECT TO ITS EXISTING CIRCUIT.
36. ALL DIMENSIONS OF EXISTING CONSTRUCTION ARE APPROXIMATE. THE ELECTRICAL CONTRACTOR SHALL MAKE ALL NECESSARY FIELD MEASUREMENTS OF EXISTING STRUCTURES AND EQUIPMENT TO VERIFY DIMENSIONS SHOWN ON THE DRAWINGS. PROVIDE PROPER DIMENSIONS NOT SHOWN PRIOR TO EQUIPMENT FABRICATION. ALL COST FOR MODIFICATIONS OF NEW CONSTRUCTION DUE TO LACK OF CONFIRMATION OF DIMENSIONS BY FIELD MEASUREMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
37. PROVIDE 120 VOLT POWER FOR ALL SMOKE/FIRE DAMPERS AND TIE DAMPERS BACK TO THE BUILDING FIRE ALARM SYSTEM SO THAT UPON ACTIVATION OF DUCT MOUNTED SMOKE DETECTOR OR INDIVIDUAL SENSORS ASSOCIATED WITH DAMPER A SIGNAL WILL BE SENT BACK TO THE BUILDING FIRE ALARM SYSTEM INDICATING ALARM AND STATUS OF DAMPER (OPEN/CLOSED). CONTRACTOR SHALL PROVIDE ALL WIRING, DUCT MOUNTED SMOKE DETECTORS, MODULES, RELAY AND ASSOCIATED EQUIPMENT REQUIRED FOR A COMPLETE INSTALLATION. COORDINATE EXACT CONNECTION REQUIREMENTS BETWEEN ALL TRADES. (ELECTRICAL, MECHANICAL & FIRE PROTECTION). CONTRACTOR SHALL COORDINATE QUANTITY OF DUCT MOUNTED SMOKE DETECTORS.
38. CONDUCTORS SHALL HAVE COLOR CODED JACKETS THE ENTIRE LENGTH FOR SIZES NO. 6 AND SMALLER. THE CONDUCTORS FOR SIZES NO. 4 AND LARGER SHALL HAVE COLOR CODED MARKING TAPE OR COLOR CODED JACKETS THE ENTIRE LENGTH. COLORS SHALL BE AS FOLLOWS

120/208 VOLT SYSTEM	277/480 VOLT SYSTEM
PHASE 'A' - Black	PHASE 'A' - BROWN
PHASE 'B' - RED	PHASE 'B' - ORANGE
PHASE 'C' - BLUE	PHASE 'C' - YELLOW
NEUTRAL - WHITE	NEUTRAL - GRAY
GROUND - GREEN	GROUND - GREEN

39. WHERE PHASE MARKING TAPE IS USED IT SHALL BE WRAPPED 2" WIDE AND LOCATED AT TWO (2) LOCATIONS 6" AND 18" FROM THE TERMINATION. PHASE MARKING TAPE FOR THE NEUTRAL AND GROUNDING CONDUCTORS SHALL BE PROVIDED WHERE VISIBLE AT ANY POINT WHERE THE CONDUCTOR IS ACCESSIBLE.
40. PROVIDE ARC-FLASH WARNING LABELS ON ELECTRICAL EQUIPMENT THAT COMPLIES WITH NEC 110.16.
41. PROVIDE CONSPICUOUS AND PERMANENT LABEL ON NEW PANELBOARDS INDICATING AVAILABLE FAULT CURRENT PER NEC 110.24.

ABBREVIATIONS

AC	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
BFG	BELOW FINISHED GRADE
E / R	EXISTING / RELOCATED
FAA	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
UNO	UNLESS NOTED OTHERWISE
WP	WEATHER PROOF
XFMR	TRANSFORMER

DEMOLITION NOTES:

1. REMOVE AND DISCARD ALL LIGHT FIXTURES IN AREAS OF WORK. COORDINATE EXACT WORK AREAS WITH ARCHITECTURAL DOCUMENTS. REFER TO LIGHTING PLAN FOR EXISTING FIXTURES TO REMAIN / BE RELOCATED.
2. ALL EXISTING FIXTURES AND MATERIAL SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL FACILITY.
3. WHERE DEMOLITION DISRUPTS THE ELECTRICAL CONTINUITY OF EXISTING RECEPTACLES/LIGHTS AND NO RECONNECTION IS SHOWN, RECONNECT TO IT'S EXISTING CIRCUIT.
4. ALL ABANDONED WIRE SHALL BE REMOVED.
5. ALL ABANDONED CONDUIT AND BOXES THAT ARE NOT IN CONCRETE SHALL BE REMOVED.
6. SEE ELECTRICAL AND LIGHTING PLANS FOR MORE INFORMATION.
7. REFER TO ARCHITECTURAL DRAWINGS FOR FULL SCOPE OF DEMOLITION WORK.

FIRE ALARM NOTES

1. ALL NEW FIRE ALARM DEVICES SHALL BE ADA APPROVED.
2. ALL AUDIO/VISUAL DEVICES SHALL MATCH EXISTING.
3. ALL FIRE ALARM DEVICES ARE TO BE CONNECTED TO THE BASE BUILDING FIRE ALARM SYSTEM BY A NICET LEVEL 3 LISCENSED INSTALLER AS APPROVED BY THE LANDLORD.
4. CONFIRM EXISTING A/V LOADS AND PROVIDE NEW POWER SUPPLIES WITHIN THIS TENANT SPACE AS REQUIRED.
5. ALL WORK ASSOCIATED WITH THE FIRE ALARM SHALL BE COORDINATED WITH THE BUILDING'S CHIEF ENGINEER.

VOICE/DATA AND SECURITY NOTES

1. PROVIDE OUTLET BOX WITH 1" CONDUIT (UNLESS NOTED OTHERWISE ON PLANS) TO 6" ABOVE ACCESSIBLE CEILING FOR ALL WALL MOUNTED VOICE/DATA AND SECURITY DEVICES.
2. PROVIDE POWER FOR SECURITY SYSTEM DEVICES AS REQUIRED.

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION	MOUNTING HEIGHT ON CENTER (COORD. WITH ARCH.)
	FLUORESCENT LIGHT FIXTURE	
	EMERGENCY LIGHT FIXTURE	
	CEILING MOUNTED LIGHT FIXTURE	
	CEILING MOUNTED WALL WASH LIGHT FIXTURE	
	EXIT SIGN (PROVIDE FACES AND ARROWS AS SHOWN)	
	WALL MOUNTED EXIT SIGN (PROVIDE FACES AND ARROWS AS SHOWN)	
	CONDUIT RUN CONCEALED IN WALL OR CEILING	
	CONDUIT RUN CONCEALED IN THE FLOOR, UNDERGROUND, OR UNDER THE ELEVATED SLAB	
	CONDUIT RUN EXPOSED. ROUTE PARALLEL/PERPENDICULAR TO WALLS AND STRUCTURE.	
	CIRCUITS HOMERUN TO THE PANEL	
	NUMBER OF CONDUCTORS (GROUND NOT SHOWN)	
	FLEXIBLE CONDUIT OR CORD	
	PLYWOOD BACKBOARD	
	DUPLEX RECEPTACLE - WALL MOUNTED	18"
or IG	ISOLATED GROUND DUPLEX RECEPTACLE - WALL MOUNTED	18"
or GFI	GFCI DUPLEX RECEPTACLE - WALL MOUNTED	18"
	OUTLET ABOVE THE COUNTER	6" ABOVE COUNTER
	QUADRUPLEX RECEPTACLE - WALL MOUNTED	18"
	SPECIAL AMP/VOLT RECEPTACLE - WALL MOUNTED	18"
	FLOOR RECEPTACLE	
	VOICE AND DATA OUTLET - WALL MOUNTED	18"
2	TWO-GANG VOICE AND DATA OUTLET - WALL MOUNTED	18"
	FLOOR VOICE AND DATA OUTLET	
	VOICE OUTLET - WALL MOUNTED	18"
	DATA OUTLET - WALL MOUNTED	18"
	TELEVISION CABLE OUTLET - PROVIDE CABLE	18"
	JUNCTION BOX	
	JUNCTION BOX - WALL MOUNTED	
P	VERTICAL DROP STEEL POWER POLE - LEGRAND #25DTP - SPECIALTY RECEPTACLE AS SHOWN	
	SPST SWITCH - WALL MOUNTED	48"
3	3-WAY SWITCH - WALL MOUNTED	48"
4	4-WAY SWITCH - WALL MOUNTED	48"
D	DIMMER SWITCH - WALL MOUNTED (PROVIDE WATTAGE AS REQUIRED)	48"
LVD	LOW-VOLTAGE DIMMER SWITCH - WALL MOUNTED (PROVIDE WATTAGE AS REQUIRED)	48"
M	MOTOR RATED SWITCH	48"
P	PILOT LIGHT SWITCH	48"
	WALL MOUNTED OCCUPANCY SENSOR - WATTSTOPPER WS-250. COLOR TO MATCH STANDARD OUTLETS	48"
	CEILING MOUNTED OCCUPANCY SENSOR - WATTSTOPPER CI-200. PROVIDE ACCESSORIES AS REQ'D.	
	277/480 VOLT PANELBOARD OR DISTRIBUTION PANEL	
	120/208 VOLT PANELBOARD OR DISTRIBUTION PANEL	
	DISCONNECT (FRAME AND POLES TO MATCH OCP OR AS NOTED)	
30AF	FUSED DISCONNECT (FUSE AS NOTED)	
	FIRE ALARM PULL STATION - WALL MOUNTED	48"
	FIRE ALARM ADA APPROVED AUDIO/VISUAL (110cd)	80"
	FIRE ALARM ADA APPROVED VISUAL ONLY (110cd)	80"
	FIRE ALARM PULL STATION AT 48" AND AUDIO/VISUAL AT 80" AFF	
S	SMOKE DETECTOR	
F W	PROVIDE FIRE ALARM CONNECTION TO SPRINKLER FLOW AND TAMPER SWITCHES/VALVES. COORDINATE QUANTITY AND LOCATIONS WITH SPRINKLER CONTRACTOR.	

M. DeCARLO
ARCHITECTURE

2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678 . 595 . 9002
E-mail: mike@mdecarlo.com

MACALLAN
CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

ELECTRICAL NOTES & LEGEND

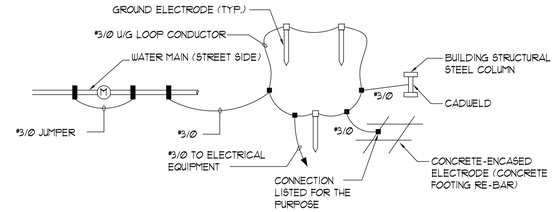
CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

E0.1

NOT RELEASED FOR CONSTRUCTION

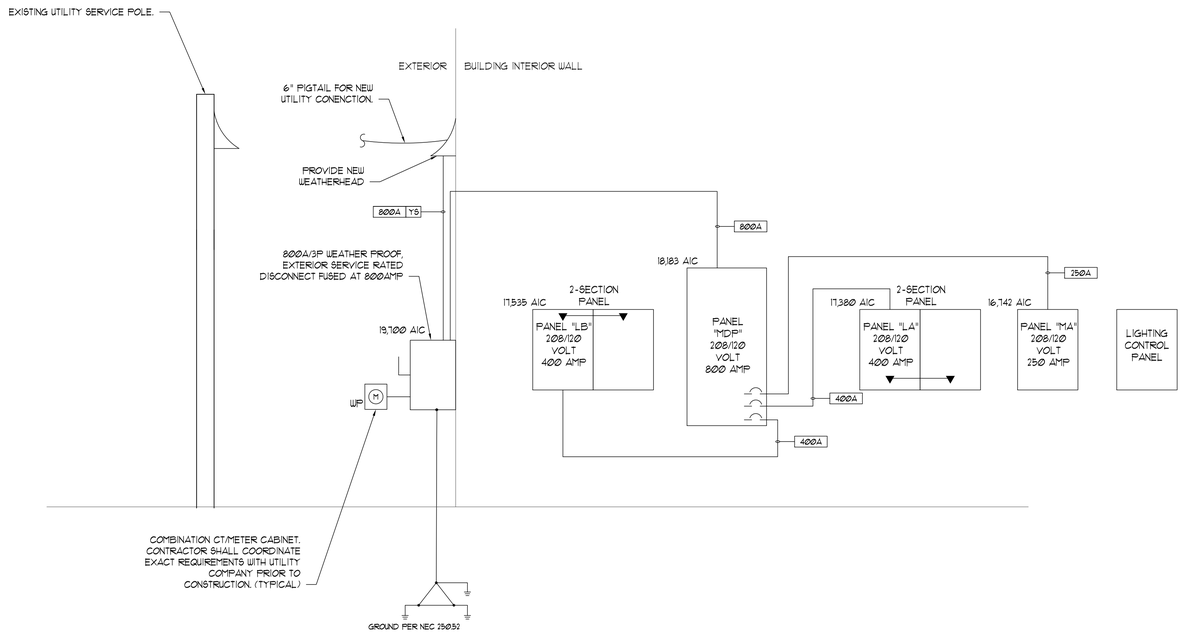
RISER DIAGRAM FEEDER SCHEDULE

TAG	NUMBER OF SETS	CONFIG.	PHASE/NEUTRAL SIZE PER SET	EQUIP. GROUND PER SET	CONDUIT SIZE PER SET	NOTES
800A YS	2	3-PH, 4W	4 * 600 kcmil	N/A	4"	SERVICE LATERAL
800A	2	3-PH, 4W+G	4 * 600 kcmil	1 * 1/0	4"	
400A	1	3-PH, 4W+G	4 * 600 kcmil	1 * 3	4"	
250A	1	3-PH, 4W+G	4 * 250kcmil	1 * 4	3"	



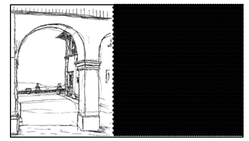
2 MAIN GROUND DETAIL (AT EACH BUILDING)

NO SCALE



1 ELECTRICAL RISER DIAGRAM

NO SCALE



M. DeCARLO
ARCHITECTURE

2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN
CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

ELECTRICAL RISER
& SCHEDULES

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

E0.2

NOT RELEASED FOR CONSTRUCTION

PANELBOARD "MA" SCHEDULE

VOLTAGE:	208 Y / 120	3 PHASE 4 WIRE	MAIN:	250A MCB		MOUNTING:	PROVIDE WITH FEED THRU LUGS
BUS SIZE:	250 AMPS	FAULT DUTY:	SEE RISER		AIC	SURFACE	

CKT NO	DESCRIPTION	LOAD	NOTE	BKR	PHASE A	PHASE B	PHASE C	BKR	NOTE	LOAD	DESCRIPTION	CKT NO
1	EF-1	0.9		20/2	2.5			20/2		1.7	EUH-1	2
3		0.9				2.5				1.7		4
5	EF-1	0.4		20/2			2.0	20/2		1.7	EUH-2	6
7		0.4			2.0					1.7		8
9	EF-1	0.4		20/2		2.0		20/2		1.7	EUH-3	10
11		0.4					2.0			1.7		12
13	EF-4 & EF-5	0.7		20/1	2.4			20/2		1.7	EUH-4	14
15	(R)AHU	0.4		20/2		2.1				1.7		16
17		0.4					3.0	40/2		2.5	EUH-5	18
19	(R)AHU	0.4		20/2	3.0					2.5		20
21		0.4				3.0		40/2		2.5	EUH-6	22
23	(R)AHU	2.1		30/2			4.6			2.5		24
25		2.1			2.1			20/1		0.0	SPARE	26
27	SPARE	0.0		20/1		0.0		20/1		0.0	SPARE	28
29	SPARE	0.0		20/1			0.0	20/1		0.0	SPARE	30
31	SPARE	0.0		20/1	0.0			20/1		0.0	SPARE	32
33	SPARE	0.0		20/1		0.0		20/1		0.0	SPARE	34
35	SPARE	0.0		20/1			0.0	20/1		0.0	SPARE	36
37	SPARE	0.0		20/1	0.0			20/1		0.0	SPARE	38
39	SPARE	0.0		20/1		0.0		20/1		0.0	SPARE	40
41	SPARE	0.0		20/1			0.0	20/1		0.0	SPARE	42
					11.9	9.6	11.5					

				TOTAL BUS KVA		
LIGHTING:	0.0	x 125% =	0.0	A	B	C
RECEPT:	0.0	x NEC 220.44	0.0	11.9	9.6	11.5
MOTORS:	3.9	x 100%	3.9			
A/C:	5.9	x 100%	5.9			
HEATING:	23.3	x 100%	23.3			
KITCHEN:	0.0	x NEC 220.56	0.0			
MISC	0.0	x 100%*	0.0			
TOTAL KVA	33.1	CALC KVA	33.1			
TOTAL AMPS	91.9	CALC AMPS	91.9			

NOTES:

PANELBOARD "MDP" SCHEDULE

VOLTAGE:	208 Y / 120	3 PHASE 4 WIRE	MAIN:	800A MCB		MOUNTING:	
BUS SIZE:	800 AMPS	FAULT DUTY:	SEE RISER		AIC	SURFACE	

CKT NO	DESCRIPTION	LOAD	NOTE	BKR	PHASE A	PHASE B	PHASE C	BKR	NOTE	LOAD	DESCRIPTION	CKT NO
1		11.9		250/3	50.7			400/3		38.8		2
3	PANEL "MA"	9.6				42.6				33.0	PANEL "LA"	4
5		11.5					50.6			39.1		6
7		12.0		100/3	39.5			400/3		27.5		8
9	WH-1	12.0				41.3				29.3	PANEL "LB"	10
11		12.0					43.0			31.0		12
13		0.0		100/3	4.7			50/3		4.7	120 GALLON AIR COMPRESSOR	14
15	SPARE	0.0				4.7				4.7		16
17		0.0					4.7			4.7		18
19		0.0		20/1	0.0			20/1		0.0	SPARE	20
21	SPARE	0.0				0.0		20/1		0.0	SPARE	22
23		0.0					0.0	20/1		0.0	SPARE	24
25		0.0		20/3	0.0			20/1		0.0	SPARE	26
27	SPARE	0.0				0.0		20/1		0.0	SPARE	28
29		0.0					0.0	20/1		0.0	SPARE	30
31	SPACE	0.0		20/1	0.0			20/1		0.0	SPACE	32
33	SPACE	0.0				0.0		20/1		0.0	SPACE	34
35	SPACE	0.0					0.0	20/1		0.0	SPACE	36
37	SPACE	0.0		20/1	0.0			20/1		0.0	SPACE	38
39	SPACE	0.0				0.0		20/1		0.0	SPACE	40
41	SPACE	0.0		20/1			0.0	20/1		0.0	SPACE	42
					94.9	88.6	98.2					

				TOTAL BUS KVA		
LIGHTING:	9.0	x 125% =	11.3	A	B	C
RECEPT:	7.8	x NEC 220.44	7.8	94.9	88.6	98.2
MOTORS:	3.9	x 100%	3.9			
A/C:	5.9	x 100%	5.9			
HEATING:	23.3	x 100%	23.3			
KITCHEN:	0.0	x NEC 220.56	0.0			
MISC	231.9	x 100%*	231.9			
TOTAL KVA	281.7	CALC KVA	284.0			
TOTAL AMPS	783.0	CALC AMPS	789.2			

NOTES:
1

PANELBOARD "LB-SECTION #1" SCHEDULE

VOLTAGE:	208 Y / 120	3 PHASE 4 WIRE	MAIN:	400A MLO		MOUNTING:	PROVIDE WITH FEED THRU LUGS
BUS SIZE:	400 AMPS	FAULT DUTY:	SEE RISER		AIC	SURFACE	

CKT NO	DESCRIPTION	LOAD	NOTE	BKR	PHASE A	PHASE B	PHASE C	BKR	NOTE	LOAD	DESCRIPTION	CKT NO
1	CORRIDOR 115	0.0		20/1	0.4			20/1		0.4	MOULD MAKING 105	2
3	ELECTRICAL REC	0.0		20/1		0.5		20/1		0.5	MOULD MAKING 105	4
5	OPEN WORK AREA 113	0.5		20/1			1.0	20/1		0.5	MOULD MAKING 105	6
7	OPEN WORK AREA 113	0.5		20/1	1.0			20/1		0.5	MOULD MAKING 105	8
9	OPEN WORK AREA 113	0.5		20/1		1.5		20/1		1.0	METALSHOP 104	10
11	OPEN WORK AREA 113	0.5		20/1			1.5	20/1		1.0	METALSHOP 104	12
13	OPEN WORK AREA 113	0.5		20/1	1.3			20/1		0.8	METALSHOP 104	14
15	OPEN WORK AREA 113	0.5		20/1		1.0		20/1		0.5	METALSHOP 104	16
17	OPEN WORK AREA 113	1.2		20/1			1.7	20/1		0.5	METALSHOP 104	18
19	OPEN WORK AREA 113	0.8		20/1	1.3			20/1		0.5	METALSHOP 104	20
21	OPEN WORK AREA 106	0.8		20/1		1.8		20/1		1.0	WOODSHOP 103	22
23	OPEN WORK AREA 106	0.8		20/1			1.6	20/1		0.8	WOODSHOP 103	24
25	OPEN WORK AREA 106	1.2		20/1	1.7			20/1		0.5	WOODSHOP 103	26
27	OPEN WORK AREA 106	0.5		20/1		1.0		20/1		0.5	WOODSHOP 103	28
29	OPEN WORK AREA 106	0.5		20/1			1.0	20/1		0.5	WOODSHOP 103	30
31	OPEN WORK AREA 106	0.5		20/1	1.3			20/1		0.8	CNC 102	32
33	OPEN WORK AREA 106	0.5		20/1		1.0		20/1		0.5	CNC 102	34
35	OPEN WORK AREA 106	0.5		20/1			1.0	20/1		0.5	CNC 102	36
37	OPEN WORK AREA 106	0.5		20/1	0.5			20/1		0.0	SPARE	38
39	OPEN WORK AREA 106	0.5		20/1		0.5		20/1		0.0	SPARE	40
41	OPEN WORK AREA 106	0.5		20/1			0.5	20/1		0.0	SPARE	42
					7.5	7.3	8.3					

				TOTAL BUS KVA		
LIGHTING:	2.8	x 125% =	3.5	A	B	C
RECEPT:	7.8	x NEC 220.44	7.8	27.5	29.3	31.0
MOTORS:	0.0	x 100%	0.0			
A/C:	0.0	x 100%	0.0			
HEATING:	0.0	x 100%	0.0			
KITCHEN:	0.0	x NEC 220.56	0.0			
MISC	77.2	x 100%*	77.2			
TOTAL KVA	87.8	CALC KVA	88.5			
TOTAL AMPS	244.0	CALC AMPS	246.0			

NOTES:
1

PANELBOARD "LA-SECTION #1" SCHEDULE

VOLTAGE:	208 Y / 120	3 PHASE 4 WIRE	MAIN:	400A MLO		MOUNTING:	PROVIDE WITH FEED THRU LUGS
BUS SIZE:	400 AMPS	FAULT DUTY:	SEE RISER		AIC	SURFACE	

CKT NO	DESCRIPTION	LOAD	NOTE	BKR	PHASE A	PHASE B	PHASE C	BKR	NOTE	LOAD	DESCRIPTION	CKT NO
1	CNC ROUTER	0.8		20/2	1.8			20/2		1.0	METAL LATHE	2
3		0.8				1.8				1.0		4
5	COMPUTERS	1.0		20/1			4.3	50/2		3.3	MIG WELDER	6
7	AIR FILTRATION	0.5		20/1	3.8					3.3		8
9	COMPUTERS	1.0		20/1		1.8				0.8	PORTABLE SPOT WELDER	10
11	14" SAW TABLE	1.8		20/1			2.6	20/3		0.8		12
13	16.5" DRILL PRESS	1.2		20/1	2.0					0.8		14
15	8" BENCH GRINDER	0.8		20/1		1.8		20/1		1.0	SANDBLASTER	16
17	BELT & DISC SANDER	1.9		20/1			2.3			0.4		18
19	DC PLASMA CUTTER	1.5		20/3	1.9			20/3		0.4	SAW BLADE WELDER	20
21		1.5		20/2		1.9				0.4		22
23	DOWNDRAFT STATION	1.3		20/3			5.2	50/2		3.9	TIG WELDER	24
25		1.3			5.2					3.9		26
27		1.3				2.3		20/1		1.0	FILTRATION SNORKEL	28
29	DISC CUTTER	2.4		30/2			5.3	30/3		2.9	LARGE SAND MIXER	30
31		2.4			5.3					2.9		32
33		2.4				5.3				2.9		34
35	ELECTRONIC BREAK	1.0		20/2			2.0	20/1		1.0	SMALL SAND MIXER	36
37		1.0			4.3			50/2		3.3	MIG WELDER	38
39	HORIZONTAL BANDSAW	0.2		20/1		3.4				3.3		40
41	HORIZONTAL BANDSAW	0.2		20/1			2.0	20/1		1.8	12" MITRE SAW	42
					24.2	18.4	23.7					

				TOTAL BUS KVA		
LIGHTING:	6.2	x 125% =	7.8	A	B	C
RECEPT:	0.0	x NEC 220.44	0.0	38.8	33.0	39.1
MOTORS:	0.0	x 100%	0.0			
A/C:	0.0	x 100%	0.0			
HEATING:	0.0	x 100%	0.0			
KITCHEN:	0.0	x NEC 220.56	0.0			
MISC	104.1	x 100%*	104.1			
TOTAL KVA	116.9	CALC KVA	112.4			
TOTAL AMPS	308.1	CALC AMPS	312.5			

NOTES:
1

PANELBOARD "LB-SECTION #2" SCHEDULE

VOLTAGE:	208 Y / 120	3 PHASE 4 WIRE	MAIN:	400A MLO		MOUNTING:	PROVIDE WITH FEED THRU LUGS
BUS SIZE:	400 AMPS	FAULT DUTY:	SEE RISER		AIC	SURFACE	

CKT NO	DESCRIPTION	LOAD	NOTE	BKR	PHASE A	PHASE B	PHASE C	BKR	NOTE	LOAD	DESCRIPTION	CKT NO
43	SPARE	0.0		20/1	2.6			50/2		2.6	SPARE	44
45	SPARE	0.0		20/1		2.6				2.6		46
47	SPARE	0.0		20/1			2.6	20/1		2.6	SPARE	48
49	SPARE	0.0		20/1	1.0			20/1		1.0	SPARE	50
51	SPARE	0.0		20/1		3.8				3.8	SPARE	52
53	SPARE	0.0		20/1			3.8	50/3		3.8		54
55	SPARE	0.0		20/1	3.8					3.8		56
57	SPARE	1.0		40/2		1.4				0.4	SPARE	58
59	SPARE	1.0					1.4	20/3		0.4		60
61	SPARE	1.0		50/2	1.4					0.4		62
63	SPARE	1.0				2.1		20/1		1.1	SPARE	64
65	SPARE	2.8					3.6	20/1		0.8	SPARE	66
67		2.8		40/3	3.6			20/1		0.8	SPARE	68
69	SPARE	3.6				4.5		20/1		0.8	SPARE	70
71		3.6					3.6	20/1		0.0	SPARE	72
73	SPARE	3.8		40/3	3.8			20/1		0.0	SPARE	74
75		3.8				3.8		20/1		0.0	SPARE	76
77		3.8		20/1			3.8	20/1		0.0	SPARE	78
79	SPARE	3.8		20/1	3.8			20/1		0.0	SPARE	80
81		3.8		20/1		3.8		20/1		0.0	SPARE	82
83		3.8		20/1			3.8	20/1		0.0	SPARE	84
					20.0	22.0	22.7					

				TOTAL BUS KVA		
LIGHTING:	0.0	x 125% =	0.0	A	B	C
RECEPT:	0.0	x NEC 220.44	0.0	20.0	22.0	22.7
MOTORS:	0.0	x 100%	0.0			
A/C:	0.0	x 100%	0.0			
HEATING:	0.0	x 100%	0.0			
KITCHEN:	0.0	x NEC 220.56	0.0			
MISC	64.7	x 100%*	64.7			
TOTAL KVA	64.7	CALC KVA	64.7			
TOTAL AMPS	179.9	CALC AMPS	179.9			

NOTES:
1

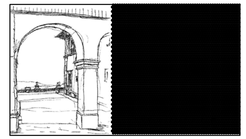
PANELBOARD "LA-SECTION #2" SCHEDULE

VOLTAGE:	208 Y / 120	3 PHASE 4 WIRE	MAIN:	400A MLO		MOUNTING:	
BUS SIZE:	400 AMPS	FAULT DUTY:	SEE RISER		AIC	SURFACE	

CKT NO	DESCRIPTION	LOAD	NOTE	BKR	PHASE A	PHASE B	PHASE C	BKR	NOTE	LOAD	DESCRIPTION	CKT NO
43	14" WOOD BANDSAW	1.2		20/2	2.7			20/3		1.4	TABLE SAW 10" PRO CABINET SAW	44
45		1.2				2.7				1.4		46
47	16" JOINTER	0.5		20/3			1.9			1.4		48
49		0.5			2.3			20/1		1.8	VERTICAL PANEL SAW	50
51		0.5				2.3				1.8		52
53	18" DRILL PRESS	1.8		20/1			3.6	20/3		1.8	TABLE SAW 10" PRO CABINET SAW	54
55		2.1		20/3	3.9					1.8		56
57	20" PLANER	2.1				3.3		20/1		1.2	BENCH GRINDER	58
59		2.1					3.4	20/1		1.3	LIGHTING	60
61	20" SCROLLER SAW	0.2		20/1	1.5			20/1		1.4	OPEN WORK LTG	62
63	BELT & DISC SANDER	0.1		20/3		1.8		20/1		1.1	OPEN WORK LTG	64
65		0.1					2.0	20/1		1.3	OPEN WORK LTG	66
67		0.1			2.0			20/1		1.3	SHOP LIGHTING	68
69	HEAVY DUTY BUFFER & POLISHER	0.4		20/3		0.4		20/1		0.0	SPARE	70
71		0.4					0.4	20/1		0.0	SPARE	72
73		0.4			0.4			20/1		0.0	SPARE	74
75	OSCILATING SPINDLE SANDER	1.8		20/3		1.8		20/1		0.0	SPARE	76
77		1.8					1.8	20/1		0.0	SPARE	78
79		1.8			1.8			20/1		0.0	SPARE	80
81	14" WOOD BANDSAW	2.3		30/2		2.3		20/1		0.0	SPARE	82
83		2.3					2.3	20/1		0.0	SPARE	84
					14.6	14.6	15.4					

				TOTAL BUS KVA		
LIGHTING:	6.2	x 125% =	7.8	A	B	C
RECEPT:	0.0	x NEC 220.44	0.0	14.6	14.6	15.4
MOTORS:	0.0	x 100%	0.0			
A/C:	0.0	x 100%	0.0			
HEATING:	0.0	x 100%	0.0			
KITCHEN:	0.0	x NEC 220.56	0.0			
MISC	38.4	x 100%*	38.4			
TOTAL KVA	44.6	CALC KVA	46.1			
TOTAL AMPS	123.9	CALC AMPS	128.2			

NOTES:
1



M. DeCARLO
ARCHITECTURE

2470 H.L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN
CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

ELECTRICAL PANEL SCHEDULES

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

E0.3

NOT RELEASED FOR CONSTRUCTION

16010 GENERAL ELECTRICAL REQUIREMENTS

1.01 SUMMARY

A. Division 16 includes Division 16000 of the Specifications and Electrical Drawings. Elements of the Scope of Work include, but are not limited to, labor, materials, equipment, supplies, storage, transportation and all required permits and licenses. Division 16 does not stand alone, but is part of the complete project and its Documents. Requirements of the General Conditions and Division 1 apply to all work in the Division.

B. Provide the necessary interface with other Divisions to provide a complete project. Carefully check the Documents of this Division with those Documents of other Divisions. Determine the requirements of any interfacing materials or equipment being furnished and/or installed by those Sections and Divisions, and provide proper installation and required interface.

C. No deviation from the Contract Documents shall be made without the written consent of the Architect and Engineer.

D. All Specifications and Drawings are to be considered together as the Contract Documents. Any work shown in one and not the other, or is implied by either, shall be provided to make a complete project. Should conflicts exist between the Specifications and Drawings or there is an item shown or noted for which is not clearly defined, immediately submit a request for clarification.

E. The Drawings are schematic and are not intended to show the exact location of outlets, devices, etc. or the routing of conduit.

F. Dimensions and information regarding accurate locations of equipment, and structural limitations and finish shall be coordinated and verified with other Divisions of Work.

G. The right is reserved to relocate any device (receptacle, switch, fire alarm, audio/visual, junction box, outlet, etc.) a maximum of 10'-0" before it is permanently installed without incurring additional cost to the Contract.

1.02 REFERENCE STANDARDS

A. All work shall comply with the most recently revised versions of all local, state and federal codes, ordinances of the authority having jurisdiction, laws, rules and regulations. Any modifications required by any of the above shall be made without any additional cost to the owner. Where requirements between governing Codes and Regulations vary, the more restrictive provision shall apply.

B. Nothing contained in the Contract Documents shall be construed as authority or permission to disregard legal requirements and regulations. The Contractor shall thoroughly review the Documents and bring any such conflicts to the attention of the Architect and Engineer prior to installation.

C. All materials shall comply with standards of the following: NEC, NFPA, ANSI, ASTM, NEMA, IEEE, EBM, FAA, FCC, IES, OSHA, NETA, IBC, UL.

D. All materials shall be new and shall bear the label of UL.

1.03 EXISTING CONDITIONS

A. Where work is to be performed in an existing facility, the contractor shall visit the site prior to bid and be familiar with all existing conditions. Special attention shall be given to work to be performed above an existing ceiling.

B. Where existing slabs are to be cut or core drilled, the contractor shall x-ray the existing slabs to avoid cutting or disrupting existing conduits, cables, plumbing or structural members.

C. The electrical service to the building shall not be interrupted without written consent of the building owner.

D. No allowance will be made for lack of knowledge of existing conditions.

E. At the completion of the project, all work under this Division shall be completely integrated with the existing systems and left in perfect operating condition.

F. Where work under this Division disrupts the continuity of any existing to remain circuit or feeder, the Contractor shall repair/replace as necessary to return to a perfectly functional and safe operating condition.

G. Prior to any demolition or construction the Contractor shall have the existing conditions inspected by an EPA, OSHA certified asbestos abatement agency to identify the presence of asbestos. Should any asbestos be found it shall be brought to the immediate attention of the Architect and Owner and specifically identified in writing.

1.04 DEFINITIONS

A. PROVIDE: to furnish, install and connect.

B. FURNISH: to supply all materials, labor, equipment, testing apparatus, controls, tests, accessories and all other items customarily required for the proper and complete application.

C. INSTALL: to join, unite, fasten, link, attach, set-up or connect together, complete, tested, and ready for normal satisfactory operation.

D. ENGINEER: the Engineer of record.

E. CONTRACT DOCUMENTS: the complete set of Specifications and Drawings of all Divisions.

F. WORK: labor, materials, equipment, accessories, controls and other items required for a complete installation.

G. CONCEALED: embedded in masonry or other construction, installed in furred spaces, within double partitions or hung ceilings, in trenches, in crawl spaces or in enclosures.

H. CONDUIT: rigid steel: intermediate metal conduit (IMC), plastic conduit (PVC), electrical metallic tubing (EMT), or flexible steel conduit.

I. MANUFACTURED CABLE: pre-wired metal clad manufactured cable bearing a UL. label: metal clad cable (MC), health care (HCF).

J. WIRING/WIRED: all wire installed in conduit to equipment, device, junction box, light fixture, etc. from panel board or switchgear with all required boxes, connectors, couplings, etc.

K. EXPOSED: not installed underground or concealed.

L. EQUAL: equal in quality, workmanship, materials, weight, size, design and efficiency of the specified product, conforming with manufacturers.

M. SUPPLY: to purchase, procure, acquire and deliver complete with related accessories.

N. AUTHORITY HAVING JURISDICTION (AHJ): applicable local, state and federal authorities having jurisdiction over any part of the Scope within this Division and other Divisions.

2.0 PRODUCTS

2.01 MANUFACTURERS

A. Manufacturer's names and catalog numbers specified in the Contract Documents are intended to describe the material and set the standard of quality. All bids shall be based on material specified. Request for approval of material not specified shall be considered if the request is in written form and submitted to the Architect no later than fourteen (14) days prior to the bid date. All requests shall conform with the provisions of the general and supplementary conditions.

2.03 AS-BUILT DRAWINGS

A. The Contractor shall maintain on a daily basis at the Project site a complete set of "Record Drawings". The "Record Drawings" shall consist of a set of blueline prints. Record dimensions shall clearly and accurately delineate the work as installed: locations shall be suitably identified by at least two dimensions to permanent structures. The Contractor and Subcontractor shall mark all "Record Drawings" on the drawings with a rubber stamp impression or an AutoCAD image that states such.

3.0 EXECUTION

3.01 INSTALLATION

A. The equipment selections used in the preparation of the Contract Documents will fit into the physical spaces provided and indicated, allowing ample room for access, servicing, removal and replacement of parts, etc. Adequate space shall be allowed for clearance in accordance with the Code requirements and the requirements of the local Authorities having jurisdiction, and the equipment manufacturer's recommendations.

B. In the preparation of Drawings, a reasonable effort to accommodate acceptable equipment manufacturer's space requirements has been made. However, since space requirements and equipment arrangement vary according to each manufacturer, the responsibility for initial access, maintenance access, code required access, and proper fit rests with the Contractor.

C. Physical dimensions and arrangements of equipment to be installed shall be subject to the Architect's and Engineer's review.

D. The General Contractor and all Subcontractors shall coordinate the installation of ductwork, conduit, busway, piping, cable trays, etc., installation with lighting fixtures, special ceiling construction, air distribution equipment, and the structure. Provide additional rises, drops and offsets as required. If after installed, new ductwork, conduit, busway, piping or cable is found to be in conflict with the architecture, structure, or other trade work which is either existing or shown on the Contract Documents, the ductwork, conduit, busway, piping or cable shall be relocated without additional cost to the Owner.

E. No conduit, equipment, busway, etc., shall be installed in the eight (8) inch high zone directly above the ceiling in tenant areas to allow for tenant build-out and flexibility unless otherwise specifically shown on the Drawings or prior written authorization is received from the Engineer.

F. Accessibility and Clearance:

1. Electrical equipment, outlets, junction and pull boxes shall be installed in accessible locations, avoiding obstructions, preserving headroom, and keeping openings and passageways clear.

2. Minor adjustments in the locations of equipment shall be made where necessary, providing such adjustments do not adversely affect functionality of the equipment.

G. Scaffolds and staging for installation of electrical work shall be provided under the work of this Division.

3.02 STRUCTURAL FITTINGS

A. Furnish and install the necessary sleeves, inserts, hangers, anchor bolts, and related structural items. Install at the proper time.

B. Sleeves shall be supplied for electrical conduits passing through walls or slabs and shall be placed before concrete is poured.

C. Equipment supports for electrical work shall be fastened to the structure by inserts, anchor bolts, bolting to drilled and tapped structural members, or be welding to the structure.

D. Flashing: Wherever conduits pass through the roof or outer walls, base flashing and counterflashing shall be provided.

E. Anchor bolts and inserts shall be galvanized and of adequate size and strength for installation of electrical work and shall be placed in forms before concrete is poured.

F. Cutting and patching: All additional cutting, patching and reinforcement of construction of building, subject to review by the Architect, shall be performed under this Section. Refer to appropriate Division for requirements.

3.03 WEATHERPROOF EQUIPMENT

A. Electrical devices or equipment located in damp, semi-exposed areas shall be weather-resistant. Enclosures shall comply with NEMA Type 3R requirements.

B. Surface mounted outlet boxes shall be cast metal with threaded bolts. Pull or junction boxes shall be cast metal with bolted and gasketed covers.

C. Outlet box covers shall be of a suitable weatherproof type with gaskets, packing glands, weatherproof doors, or other required means to prevent entry of moisture.

D. Lighting fixtures shall be installed with suitable gasket, and UL labeled for location.

3.04 CLEANING

A. Brush and clean work prior to concealing, painting and acceptance. Perform in stages if directed.

B. Painted exposed work soiled or damaged: Clean and repair to match adjoining work before final acceptance.

C. Remove dust and debris from inside and outside of material and equipment.

3.05 IDENTIFICATION OF CIRCUITS AND EQUIPMENT

A. Numbered adhesive strip tags shall be attached to branch circuit wiring in conduits at every point where runs are broken or terminated. Also tag pull wires in empty conduits.

B. Junction and Pull boxes shall have covers stenciled with box number when shown on the drawings, or circuit numbers according to panel schedules. Data shall be lettered in a conspicuous manner with a color contrasting to finish.

3.06 TESTS AND DEMONSTRATIONS

A. All systems shall be tested in the presence of the Owner or an Owner designated representative upon completion of the Work and demonstrate that the installation is in accordance with the Contract Documents.

B. All motors shall be checked and adjusted for correct direction of rotation.

C. Loading of circuits and feeders in panelboards shall be checked and balanced.

D. Any work found not to be in compliance with the Contract documents shall be repaired or replaced without incurring additional cost to the Contract price.

E. Provide all in instruction to the Owner on maintenance and operation of all systems and equipment provided under this Division.

3.07 WARRANTIES

A. The warranty period for all systems, equipment, components, work, etc. shall be no less than one (1) year, unless specified otherwise hereinafter and shall include at least one (1) full heating season and one (1) full cooling season. The Contractor shall, without cost to the Owner, remedy any defects within a reasonable time to be specified in notice from the Architect. In default thereof, the Owner may have such work done and charge all costs to the Contractor. The start of the Contractor's warranty period, as defined in the General Conditions, shall commence on the issue of a "Certificate of Substantial Completion", by the Owner or the Owner's Representative for each item of material, equipment or system. The Subcontractor shall confer with the General Contractor prior to the bid date concerning the project schedule and determine if there is a need to operate any items of equipment or systems for temporary heating and/or cooling or other reasons prior to "Substantial Completion". All required extended warranty costs for equipment, materials, and systems shall be included in the Subcontractor's bid.

16110 RACEWAYS AND WIRING

1.0 PRODUCTS

1.01 CONDUIT

A. Galvanized Rigid Steel Conduit (GRC): Rigid steel conduit shall be galvanized, constructed of high-grade raw steel piping, galvanized inside and outside with threaded joints.

B. Intermediate Metal Conduit (IMC): IMC shall be constructed of high-grade steel tubing, galvanized inside and outside with threaded joints. Zinc coating shall be applied by the hot-dip, galvanized process.

C. Electrical Metallic Tubing (EMT): EMT shall be constructed of high-grade steel, zinc coated and galvanized inside and outside.

D. Rigid Plastic Conduit (PVC): PVC conduit shall be polyvinyl chloride rigid scheduled to heavy wall type. PVC conduit shall be joined with PVC couplings of the solvent cement type to provide complete watertight joints. Conduit systems shall be UL listed for direct burial and exposed use.

E. Flexible Metal Conduit: Shall be flexible steel conduit tubing spirally wound having a hot-dip galvanized coating and meeting requirements of UL for flexible metal conduit.

F. Liquidtight Flexible Metal Conduit: Shall be flexible steel conduit spirally wound and shall have a copper grounding strand and factory-applied neoprene jacket. Liquidtight flexible conduit shall meet the requirements of UL.

1.02 CONDUIT FITTINGS

A. GRC and IMC: shall be factory-made taper threaded and of the same material as the conduit. Provide with molded nylon insulating bushing or throat at all boxes and cabinets with locknuts inside and outside. Provide watertight hubs in wet locations for terminations into enclosures. Provide insulated grounding bushing where required.

B. EMT: shall be of the same material as the conduit and shall be hexnut compression or steel setscrew. Provide with molded nylon insulating bushing or throat at all boxes and cabinets. Provided insulated grounding bushing where required.

C. PVC: shall be Schedule 40 and of the same manufacturer as the conduit.

D. Flexible Metal Conduit and Liquidtight Flexible Metal Conduit: Provide couplings at connections between flexible and rigid conduit suitable for that application. Provide with nylon-insulated busing or throat at all boxes and cabinets with locknuts.

E. Expansion Joints: Provide OZ/Gedney Type AX expansion joint fittings for all conduit which crosses an expansion joint. Provide with internal ground and external bonding jumper.

F. Wire Support Bushings: Provide for vertical runs as required by the NEC.

1.03 JUNCTION BOXES AND PULL BOXES

A. Junction boxes and Pull boxes shall be galvanized steel with node size and gauge as required by the NEC in accordanc with voltage parameters. Covers shall be of the same gauge as the box as shall be screw fastened. Boxes shall be sized as required but no smaller than 4 inches square and 1-1/2 inches deep.

B. Covers shall be accessible.

C. Provide galvanized cast iron or aluminum with threaded hubs and gaskets for outdoor and damp locations.

D. Boxes in grade or underwater shall be cast brass or bronze.

1.04 OUTLET BOXES

A. Outlet boxes shall be UL listed, and of sizes and types required for the application.

B. Boxes Recessed in Construction: Sheet steel boxes, unless noted or required otherwise. Boxes shall be no lighter than 14 gauge and shall be galvanized after fabrication. Set so face of box will finish flush with building surface.

1. For Lighting Fixture Outlets: 4-inch square with raided fixture ring.

2. For Wall Switches, Receptacles, and Communication Use: 4 inch square, one-piece: no sectional boxes permitted. Use boxes with plaster rings in all plastered walls where wall thickness permits. Use boxes less than 1-1/2 inch deep only in locations where deep boxes cannot be accommodated by construction.

C. Boxes Used Outdoors or in Damp/Wet Locations: Cast metal boxes (iron and alloy) with gasketed covers and threaded hubs.

D. Boxes in Hazardous Areas: Approved cast metal boxes with appropriate sealing fittings.

E. Provide blank cover for boxes without fixture or device.

F. Boxes in grade or underwater shall be cast brass or bronze.

G. Cycolac: Per code for pools and fountains only.

1.05 CONDUCTORS

A. Provide conductors of stranded copper, 98% conductivity, new building wire, insulated in accordance with the requirements of the NEC. Insulation shall be rated no less than 600-volt. Conductors shall be Type "THUN" or "THHN/THUN". Solid conductors terminating in a breaker or device shall be utilized for wire size No. 12. Sizes specified are AWG gauge for No. 4/0 and smaller and circular mils (kcmil) for sizes larger than No. 4/0. Minimum wire size shall be No. 12.

B. Connectors: Make splices and connections in conductors using UL connectors.

C. All conductor sizes shown on the Drawings are copper unless specifically noted otherwise. All ground conductors shall be copper.

1.09 MANUFACTURERS

A. Conduit (GRC, IMC, EMT) shall be by Allied, Republic, Triangle or Wheatland

B. Conduit Fittings (GRC, IMC, EMT) shall be by Appleton, OZ, Gedney, Steel City, Thomas and Betts or Raco

C. Flexible Metal Conduit shall be by AFC, Alflex, Anaconda or International Metal Hose

D. Liquidtight Flexible Metal Conduit shall be by American Brass Company, Anaconda or Electri-Flex Company

E. PVC Conduit and Fittings shall be by Carlon, Certainteed or Triangle

F. Copper Conductors shall be by American Insulated Wire, Cablec, General Cable, Pirelli, Southwire or Triangle

G. Conductors, Aluminum, 600 volt or less (where specified) shall be Alcan Cable, Cablec or Southwire

H. Outlets and Boxes shall be by Appleton, Raco, Steel City or Midland

2.0 EXECUTION

2.01 CONDUIT

A. GRC or Intermediate Metal Conduit (IMC) shall be used where exposed and subject to physical damage, or installed in damp or wet locations.

B. Rigid Plastic Conduit (PVC) shall be used for underground branch circuits, underground feeders where run below the slab on grade, 1" maximum in the slab on grade, 1" maximum in the slabs above grade, in concrete columns and concrete wall and in masonry walls.

C. Electrical Metalic Tubing (EMT) shall be used for branch circuits concealed in walls and ceilings. EMT may be used for feeders where not exposed to damage and/or not installed in wet or damp locations.

D. Flexible Metal Conduit shall be used for connections to rotating or vibrating equipment. The lengths shall be as short as possible, in no case longer than 6' or shorter than 12".

E. Liquidtight Flexible Metal Conduit shall be used for connections to rotating or vibrating equipment where located outdoors or in damp or wet locations. The lengths shall be as short as possible but in no case longer than 6' or shorter than 12". Liquidtight Flexible Metal Conduit shall NOT be located above a ceiling, in an air shaft or in a mechanical room utilized as a return air plenum.

F. Raceways shall be installed as a complete and total wiring enclosure system from outlet to outlet, to junction box, pull box, panel or cabinet prior to the installation of the conductors.

G. All conduit shall be run concealed (except in electrical, mechanical and similar area) unless shown otherwise. Where conduit is run exposed it shall be run in a net and orderly manner. All conduit shall be run parallel and perpendicular to the building structure.

H. Conduits shall be secure to all boxes, cabinets, panels and equipment with locknuts and bushings and shall be securely fastened in place on intervals required by the Code and local codes: hangers, supports or fastenings shall be provided at each elbow and at the end of each straight run within 3' of a termination to a box or cabinet. All supports shall be independent and shall not use ceiling supporting system wires.

I. Use threaded rods and hangers for supporting single conduit. Multiple conduits shall be supported using a trapeze of Unistrut (or Kindorf) channels and threaded rods with double nut/washer.

J. Provide pullboxes as shown and/or as required by Code and where necessary in the raceway system to avoid excessive runs or too many bends. Boxes shall have removable hinged or screw covers and shall be accessible.

K. The minimum size conduit shall be ½" diameter. Homeruns shall extend from the first outlet or device to the panel designated and shall be a minimum ¾" diameter.

L. Provide non-hardening elastic type duct seal compound for each conduit entering the building from the outside and from one space to another having a normal operating temperature differential greater or less than 10 degrees F.

M. Provide seals around all conduit and sleeves penetrating through walls, partition or ceilings. Provide UL approved fire resistant seal around all penetrations through fire rated barriers to maintain the barrier rating.

N. Provide pull wire or nylon rope in all empty conduits.

M. DeCARLO
ARCHITECTURE

2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678 . 595 . 9002
E-mail: mike@mdecarlo.com

MACALLAN
CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

ELECTRICAL

SPECIFICATIONS

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

E0.4

NOT RELEASED FOR CONSTRUCTION

2.02 CONDUCTORS

A. No conductor shall be smaller than No. 12 except for signal or control circuits.

B. All conductors shall be installed in conduit.

C. Where a connection is made to any terminal of 40 amperes or more and/or conductors No. 8 or larger, copper terminal lugs shall be bolted to the conductors. Where multiple terminal lugs are made, individual lugs for each conductor shall be used. Where aluminum conductors are accepted in this Section or noted on the drawings, the terminations shall be made with high compression lugs as manufactured by Ideal or MAC.

D. A maximum of six (6) current carrying conductors shall be run in a conduit. The neutral shall be considered a current carrying conductor.

E. For homeruns of 120 Volt, 20 amp circuits, where the length of run from the panelboard to the center of the load exceeds 100'-0" the conductors shall be No. 10 minimum. If that length exceeds 200'-0" the conductors shall be No. 8 minimum.

F. For homeruns of 277 Volt, 20 amp circuits where the length of run from the panelboard to the center of the load exceeds 200'-0" the conductors shall be No. 10 minimum.

G. Multiple branch circuits homeruns serving computer loads, electronic lighting ballasts and/or H.I.D. lighting ballasts shall utilize a neutral conductor one trade size larger than the phase conductors or use separate neutrals for each circuit. Neutral conductors for individual branch circuits may the same size as the phase conductor but not less.

H. Provide an equipment grounding conductor in all feeder and branch circuit conduits. Size per code unless shown otherwise.

I. Conductors shall have color coded jackets for sizes No. 8 and smaller and color coded marking tape for sizes larger than No. 8 as follows:

120/208 Volt System	277/480 Volt System
Phase A - Black	Phase A - Brown
Phase B - Red	Phase B - Orange
Phase C - Blue	Phase C - Yellow
Neutral - White	Neutral - Gray
Ground - Green	Ground - Green

J. Where phase marking tape is used it shall be wrapped 2" wide and located at two (2) locations 6" and 18" from the termination.

K. Before pulling any wire into conduit, thoroughly swab the conduit and clean the boxes of debris.

L. Run feeders in continuous lengths, without joints or splices. Joints shall occur in branch circuits only in locations where they divide.

M. Run conductors for emergency power in conduits separate from all other wiring.

N. Bundle conductors in switchboards and panelboard cabinets and similar using nylon straps made for the purpose. Conductors No. 8 and larger shall be bundled in individual circuits.

2.03 JUNCTION BOXES, PULL BOXES, AND OUTLET BOXES

A. All junction boxes and pullboxes shall be size in accordance with the Code. All boxes shall be rigidly secured in position to building structure. Boxes larger than 4" shall be secured at two points. Outlet boxes shall be flush with the finished wall or ceiling, or not more than ¼" back, unless specifically shown as surface mounted or its purpose is to be above the ceiling. Provide galvanized steel or cast type outlet boxes. Where exposed ARC or IMC terminates in a box, provide cast box with threaded hubs. All boxes shall be provided with a cover plate. All outlet boxes shall be mounted vertically unless noted otherwise. Where outlets are shown at the same location but at different heights, they shall be mounted one above the other along the same centerline. The exact mounting height of an outlet may be adjusted slightly to align with masonry joint where approved by the Architect. Verify outlet locations in finished spaces with Drawings of interior details and finishes. Outlets shall NOT be located back to back. Where outlets are shown on opposite sides of a wall, they shall be located in separate stud spaces. Protect floor boxes from entering debris during construction using temporary covers approved by the floor box manufacturer. Provide barriers in outlet boxes for switches separating different phases for voltages exceeding 150 volts to ground. Boxes shall not be supported from a suspended ceiling.

16140 DEVICES

1.0 PRODUCTS

1.01 GENERAL

A. The color of all devices, wall plates and coverplates shall be as selected by the Architect.

2.02 SWITCHES

A. Wall switches, unless noted otherwise, shall be flush mounted, commercial grade 120/277 volt, 20 amp, toggle switches and shall be as following. Single Pole Leviton No. 1221 Series, Double Pole: Leviton No. 1222 Series, 3-way: Leviton No. 1223 Series, 4-way: Leviton No. 1224 Series or equal by Hubbell, P&S or Cooper.

B. DECORA Wall switches, unless noted otherwise, shall be flush mounted commercial grade, 120/277 volt, 20 amp, rocker switches as following. Single Pole: Leviton No. 5621 Series, Double Pole: Leviton No. 5622 Series, 3-Way: Leviton No. 5623 Series, 4-Way: Leviton No. 5624 Series, or equal by Hubbell, P&S or Cooper

C. Dimmer switches, unless specified otherwise in the Drawings or by the Architect, shall be Lutron Nova T-star series with wattage and type as required by the load and color/finish as selected by the Architect. Provide 3-way and 4-way dimmers where multiple dimmers as shown to control the same lights. Where on/off switches are indicated adjacent to dimmer switches they shall be ganged together and the on/off switches shall also be Lutron Nova T-star series to match the look of the dimmer switches.

D. Motor rated switches and switches indicated as pilot switches, unless noted otherwise, shall be flush mounted industrial grade, red pilot light "on" with overload protection as follows (note: wire per manufacturers recommendation): 120V, 20 amp Circuits - Hubbell HBL1221PL, 277V, 20 amp Circuits - Hubbell HBL1221PL7, 120V, 30 amp Circuits - Hubbell HBL3031PL

E. Key switches, unless noted otherwise, shall be flush mounted, commercial grade, 120/277V, 20 amp: Single Pole: Leviton No. 1221-2L Series, Double Pole: Leviton No. 1222-2L Series, 3-Way: Leviton No. 1223-2L Series, 4-Way: Leviton No. 1224-2L Series, or equal by Hubbell, P&S or Cooper

F. Wall switches in back of house areas, unless noted otherwise, shall be commercial grade 120/277 volt, 20 amp, toggle switch Leviton No. 1221 Series or equal by Hubbell, P&S or Cooper.

G. Timer switches, unless noted otherwise, shall be 24VAC to 277VAC, toggle style timer with timed interval setting of 1 minute to 18 hours, flicker time out warning, and shall fit a standard wallbox. Adjust interval to 2 hours at project completion unless noted otherwise. Manufacturer shall be Tork 5620F or approved equal.

H. Wall mounted motion sensors, unless noted otherwise, shall be passive infrared wattstopper WA-200 Series (or equal by Novitas). Color as selected by Architect. Adjust interval to 15 minutes at project completion unless noted otherwise. (Coordinate sensor type with lighting ballasts and provide accessories as required).

1.03 RECEPTACLES

A. Receptacles shall be plastic, 2P, 3W, grounded as follows:

1. Duplex receptacles - for multi-outlet circuits, 125 volt, 15 amp rating Leviton 5262 Series or equal by Hubbell, P&S or Cooper.
2. Duplex receptacles - for dedicated, single-outlet circuits, 125 volt, 20 amp rating Leviton 5362 series or equal by Hubbell, P&S or Cooper.
3. Duplex isolated ground receptacle -125 volt, 20 amp rating Leviton 5362-IG series (provide color alternate of color for standard receptacles as selected by Architect) or equal by Hubbell, P&S or Cooper.
4. Simplex (single) receptacles -125 volt, 20 amp rating Leviton 5361 series or equal by Hubbell, P&S or Cooper.

B. DECORA Receptacles shall be plastic, 2P, 3W, grounded decorator series as follows:

1. Duplex receptacles - for multi-outlet circuits, 125 volt, 15 amp rating Leviton 16262 Decora Series or equal by Hubbell, P&S or Cooper.
2. Duplex receptacles - for dedicated, single-outlet circuits, 125 volt, 20 amp rating Leviton 16362 Decora series or equal by Hubbell, P&S or Cooper.
3. Duplex isolated ground receptacles -125 volt, 20 amp rating Leviton 16362-IG Decora series (Color of these devices shall be different than that of the other devices. Color shall be as selected by the Architect) or equal by Hubbell, P&S or Cooper.
4. Simplex (single) receptacles -125 volt, 20 amp rating Leviton 5361 series or equal by Hubbell, P&S or Cooper.
5. Duplex receptacles in back of house areas, unless otherwise noted, (e.g. equipment rooms, mechanical rooms, electrical rooms) shall be 125 volt, 20 amp rating Leviton 5362 series or equal by Hubbell, P&S or Cooper.

C. Ground Fault Interrupter Receptacles (GFCI) shall be plastic, 2P, 3W, 125 volt, 20 amp, self protecting type Leviton 8898 series or equal by Hubbell, P&S or Cooper. Hospital GFCI receptacles shall be Leviton 8898-HG or equal by Hubbell, P&S or Cooper.

D. Weather receptacles shall have a duplex GFCI receptacle as specified above with a gasketed weatherproof coverplate Leviton 4990 or approved equal.

E. Hospital Grade receptacles shall match those specified in 16140-2.03 (A) except hospital grade type

1.04 COVERPLATES

A. Coverplates shall be 11⅝plastic1⅛ midway size thermoplastic nylon Leviton PJ Series 11⅝steel1⅛ satin finish 302 stainless steel standard size (provide jumbo size for concrete and masonry walls) by Leviton or equal by Hubbell, P&S or Cooper.

B. Provide multigang plates for devices shown at the same location. Coordinate gang configuration with the Architect where more than 3 devices are shown at one location.

C. Coverplates for all back-of-house equipment rooms (i.e. mechanical, electrical, loading dock, service corridor, etc.) shall be stainless steel.

2.0 EXECUTION

2.01 INSTALLATION

A. Provide appropriate outlet box for each device or multi-ganged devices.

B. Provide plaster ring reducer for boxes larger than the device plate.

C. Provide dimmer switch type and size to match load.

D. Coordinate locations of all devices with the Architect and the interior detail Drawings.

E. Coordinate cutting, obtain pre-cut openings from manufacturer for door switches, metal partitions and furniture mounted devices.

F. In general, devices in finished spaces shall be flush mounted. Verify the requirements of all spaces with the Architect.

G. Each device shall have a coverplate as is appropriate for the application. Coverplates shall be installed true and plumb with building lines, mortar joints and architectural features.

H. Mount receptacles and special systems outlets vertical and 18" above the finished floor to the device centerline, unless noted or required otherwise.

I. Mount switches vertical and 48" above the finished floor to the device centerline and 6" from a door strike, unless noted or required otherwise.

J. All exterior devices shall be provided with a weatherproof cover/enclosure. Exterior receptacles shall be GFCI type.

K. Coordinate mounting heights for devices indicated to be mounted over counter with the Architect.

L. Install a green insulated bonding jumper for all grounded devices and bond to the outlet box.

M. Each outlet used as a junction box, or for future device or fixture, shall be fitted with a blank coverplate to match other device coverplates.

N. Floor outlets shall be of the necessary type suitable for the application and installed per the manufacturers recommendation. Fire ratings shall be maintained. Where the installation of a specified or required floor box effects the elevated slab/floor fire rating, the necessary fire assembly (approved by the Architect) shall be constructed below the slab.

O. Do not locate junction boxes or voice/data conduit stub downs for poke-thru devices above a non-accessible ceiling. In these cases extend the poke-thru conduit to an accessible ceiling.

16200 DISTRIBUTION

1.01 PANELBOARDS

A. Short circuit rating of panelboards shall be the interrupting rating of lowest rated device in the panel or application UL series for proper main and branch device combinations. Panelboards shall have a maximum of 42 protective devices per panel, including sub-feeders and excluding main overcurrent protective devices. For more than 42 devices, 2 or more panelboards are required. With 2 or more panelboards, sub-feed lug or thru-feed lugs shall be used in all by 1 section of each panelboard. Lugs shall have same capacity as incoming mains. Protective devices shall be molded case circuit breakers.

B. Enclosure: Boxes shall be a nominal 20 inches wide and 6 inches deep with wire bending space per the National Electric Code. Fronts shall be reinforced steel with concealed hinges and concealed trim adjusting screws. Trim clamps are unacceptable. All door locks shall be corrosion proof Valox (or equal) with retractable latches. All door locks shall be keyed for a single key. Clean Lexan (or equal) directory card holders shall be permanently mounted on front door. All panelboard series ratings shall be prominently displayed on dead front shield. Interiors shall permit top or bottom incoming cables.

C. Bus bars: Bus bars shall be copper, phase sequenced, fully insulated and supported by high impact Noryl (or equal) interior base assemblies. Bus bars shall be mechanically supported by zinc finished galvanneal steel frames to prevent vibration and damage from short circuits. Terminations shall be UL tested and listed and suitable for UL copper. Provide 1 continuous bus bar per phase. Each bus bar shall have sequentially phased branch circuit connectors for bolt-on branch circuit breakers. Bus bars shall be rated as indicated in Drawings. Lugs shall be rated for 75 degree C terminations. Interiors shall be field convertible for top or bottom incoming feed. Main and sub-feed circuit breakers shall be vertically mounted. Main lug interiors up to 400 amperes shall be field convertible to main breaker. Interior leveling provisions shall be provided for flush mounted applications. Lug bodies shall bolt in place.

D. Circuit Breakers: Molded case circuit breakers shall be bolt-in devices for 120/208V panels and 277/480V panels. All circuit breakers shall have thermal and magnetic trip elements in each pole. Multiple pole breakers shall have internal common trip crossbars for simultaneous tripping of each pole. Circuit breakers shall not be restricted to any mounting location due to physical size. All branch breakers 15 to 100 amperes shall be able to be mounted in any panel position for twin or double mounting without space penalty. Sum of ratings for 2 such twin mounted devices shall not exceed 100 amperes. Main and sub-feed circuit breakers may be vertically or horizontally mounted. Branch breaker panelboard connections shall be copper to copper. All panelboard terminations shall be rated as indicated in Drawings. All breakers shall have an over center mechanism and be quick make and quick break. All breakers shall have handle trip indication and a trip indicator in window of circuit breaker housing. Main breakers shall be UL listed for use with: Shunt, Under Voltage, and Ground Fault Shunt Trips; Auxiliary and Alarm Switches; and Mechanical Lug Kits. Branch breakers shall be UL listed for use with: Shunt Trips, Auxiliary and Alarm Switches.

E. Finish: Boxes shall be corrosion resistant, zinc finish galvanneal. Fronts shall be powder finish painted ANSI 61 gray.

F. Panels shall be manufactured by General Electric, Square D, Cutler-Hammer or Siemens.

1.02 FUSES

A. Fuses shall have 200,000 Amp RMS SYS rating. Fuses for circuits 1 to 600 amperes shall be dual element, current limiting time delay (500% of rated current for minimum of 10 seconds) with separate overload and short circuit clearing chamber. Bussman "Low Peak" or equal by Littlefuse or Ferraz Shaumut. UL Class J. Fuses for circuits above 600 amperes shall be current limiting, time delay (500% of rated current for minimum of 4 seconds, clear 20 times rated current in Ø.1 seconds or less). Bussman, "Hi-Cap" or equal by Littlefuse or Ferraz Shaumut. UL Class L.

2.0 EXECUTION

A. Clean all enclosures free of all foreign matter and dust. Remove all rust marks and repaint to new condition. Provide all necessary hardware to level and secure all switchgear. Provide a typewritten directory for all panelboards. Make spares in pencil.

16420 MOTOR CONTROLS AND WIRING

1.0 GENERAL

A. Furnish and install all equipment, materials, tools and labor to provide a complete system for motor operation. Refer to other related Sections of Division 15 and 16 and the Mechanical, Electrical and Plumbing Drawings.

B. A Motor starter shall be proved by Division 16 for each motor except for those specified in Division 15 to be furnished by that Division. All motor starters not integral to the equipment served shall be installed and connected by Division 16.

C. All low voltage control wiring shall be provided by Division 15 unless specifically noted otherwise on the Drawings.

D. Provide 120 volt line voltage for controls as required. Provide 120 volt to all line voltage motor operated dampers. Provide fire alarm connections to all fire and smoke dampers. Coordinate with Division 15.

2.0 EXECUTION

2.01 INSTALLATION

A. All motor starters shall be installed by Division 16 unless an integral part of a piece of equipment. Provide all power wiring to motors unless prewired as part of a packaged unit. Provide line voltage power wiring through a control device (i.e. fire stats, thermostat, aqua stat) where required. Coordinate with Division 15. Where multiple mechanical terminal units (e.g. FTU's) containing multi-phase heating elements and single phase motors are connected together on the same multi-phase homerun/circuit, the single-phase motors shall be connected to alternate phases to balance the load. Coordinate with Division 15. Provide a neutral conductor of equal size to the phase conductors unless noted otherwise on the Drawings.

16450 GROUNDING SYSTEM

1.0 GENERAL

A. Furnish and install all equipment, materials, tools, and labor to provide a complete grounding system.

B. Ground all metallic parts of the electrical system which are not intended to carry current such as conduit, panelboards, cabinets and enclosures, motor frames, device boxes, etc., in accordance with the NEC and applicable codes.

C. In non-metallic conduits, maintain continuity of equipment grounding by installing an insulated grounding conductor and connected by an acceptable method.

2.0 PRODUCTS

2.01 GENERAL

A. All equipment and materials provided under this Section of the Specifications shall be new, UL listed, and bear the UL label.

B. All panelboards, transformers, etc. shall be provided with a copper equipment ground bar bolted, brazed, or riveted to the associated enclosure or cabinet. All receptacles, switches, disconnects, individual motor controllers, etc. shall be provided with a grounding terminal connected to the device frame or enclosure.

C. All conduit, cable tray, manufactured wiring systems, raceways, junction boxes, pull boxes, etc. shall be made electrically continuous by means of grounding conductors, bonding jumpers, grounding bushings, etc. as required by the NEC and the authorities having jurisdiction.

D. Refer to other Sections for additional grounding requirements.

2.02 GROUNDING CONDUCTORS

A. All equipment grounding conductors shall be green insulated copper conductors sized as indicated on the Drawings. Where the authorities having jurisdiction or local code requires equipment grounding conductor sizing in excess of that shown on the Drawings or specified herein, the larger size conductor shall be installed.

B. All bonding conductors shall be flexible copper bonding jumpers sized in accordance with the NEC for grounding electrode conductors.

3.0 EXECUTION

3.01 INSTALLATION

A. Each system of electrically continuous metallic piping and ductwork shall be electrically grounded in accordance with the requirements of the NEC for "bonding" as they apply to the "bonding of piping systems". Isolated metallic piping and duct systems shall be bonded to the building equipment grounding system.

B. Bonding and grounding conductors shall be sized, shall be run in conduit, and shall be connected to various services in accordance with the requirements of the authorities having jurisdiction and the NEC.

C. Provide a separate green-insulated equipment grounding conductor, with insulation of the same rating as the phase conductors, for all feeders and branch circuits. Install the grounding conductors in the raceway with related phase and neutral conductors. Where parallel conductors in separate raceways occur, provide a grounding conductor in each raceway. Connect all grounding conductors to ground terminals at each end of the run so that there will be no uninterrupted grounding circuit from the point of ground fault back to a point of connection of the equipment ground and system neutral.

D. Connect the secondary neutral point and the enclosure in each dry type transformer together and run a grounding electrode conductor from their common point of connection to the building grounding electrode system.

E. Provide grounding bushings on all raceways terminating within all electrical enclosures. Provide grounding conductors from such bushings to the frame of the enclosure, ground bus and equipment grounding strap where one occurs.

16500 LIGHTING

1.0 GENERAL

A. Furnish and install lighting fixtures complete with all lamps as specified on the Electrical, Architectural, Interior and Lighting Designer Drawings. Furnish and install all supports, brackets, connectors, materials, tools, wiring, controls and labor to provide a complete and operating lighting system.

B. All blemished, damaged or unsatisfactory fixtures shall be replaced in a satisfactory manner as directed by the Architect.

C. Where a fixture type designated has been omitted, cannot be determined or is in conflict with other Drawings or Specifications, request a clarification from the Architect, prior to bid, and provide suitable fixture type as directed.

D. All lamps shall be operating at project completion and for a period of six (6) months after the final acceptance by the Owner.

E. Confirm exact locations of lighting fixtures with the Architectural Reflected Ceiling Plan and mechanical equipment above or on the ceiling.

F. All recessed lighting fixtures shall match the ceiling type and be tested and certified by the fixture manufacturer for the type of mounting.

G. The following submittal data shall be furnished according to the Conditions of the Construction Contract, Division 1 Specifications, and Section 16010 and shall include by not be limited to: Lighting fixtures complete with physical dimensions, materials, connector details, voltage, current, installation details, air handling capability, etc. Lamps, complete with base or pin configuration, lumen rating, life expectancy, color temperature, starting characteristics, etc.

H. Assure the electrical continuity of all metallic raceway systems, pulling up all conduits and/or locknuts wrench-tight. Where expansion joints or telescoping joints occur, provide bonding jumpers. Wherever flexible metallic conduit is employed, provide a green insulated ground jumper installed in the flexible conduit.

I. Provide an insulated green bonding jumper from the grounding screw in the outlet box. Do not install behind the device mounting screws.

2.0 PRODUCTS

2.01 LIGHTING FIXTURES

A. Base bid lighting fixtures shall be based on manufacturer and descriptions listed. Alternate fixture manufacturers not specified and proposed by the Contractor shall be submitted for approval prior to base bid. Fixtures are designated on the Drawings by "type" as indicated by a letter that corresponds to a lighting fixture description and specification on the lighting fixture schedule. Each lighting fixture shall comply with local codes and the authority having jurisdiction and shall be UL listed. Provide a lighting fixture complete with lamps, ballasts and required accessories for each lighting fixture shown. Provide all mounting and trim hardware to suit the specific installation and location. Where fixtures are specified with acrylic lenses, provide virgin acrylic with 0.125 inch thickness. Exit lighting fixtures shall meet the requirements of all federal, state and local codes.

2.02 LAMPS

A. Incandescent A-lamps shall be inside frosted and 130 volt rated unless noted otherwise. Par and reflector type lamps shall be 130 volt rated. All lamps shall be as specified on the Lighting Fixture Schedule. Fluorescent lamps in general shall be T8, 48-inch length with initial lumens of 2,950 at 32 watts and an average life of 20,000 hours. If a color is not designated on the Drawings, then provide 3500K color lamps. Ballast and lamps shall be compatible.

B. Acceptable manufacturers are General Electric, Osram-Sylvania or Philips.

M. DeCARLO
ARCHITECTURE

2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678 . 595 . 9002
E-mail: mike@mdecarlo.com

MACALLAN
CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

ELECTRICAL

SPECIFICATIONS

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

E0.5

NOT RELEASED FOR CONSTRUCTION

LIFE SAFETY SYSTEM SPECIFICATION

1.0 GENERAL

A. THIS SECTION DESCRIBES THE BASIC MATERIALS AND INSTALLATION METHODS FOR THE LIFE SAFETY SYSTEM. COMPLY WITH OTHER DIVISION 16 SECTIONS AND DRAWINGS AS APPLICABLE. REFER TO OTHER DIVISIONS FOR COORDINATION OF WORK.

B. THIS PERFORMANCE SPECIFICATION PROVIDES THE MINIMUM REQUIREMENTS FOR THE LIFE SAFETY SYSTEM. THE SYSTEM SHALL INCLUDE, BUT NOT LIMITED TO ALL EQUIPMENT, MATERIALS, LABOR, DOCUMENTATION AND SERVICES NECESSARY TO FURNISH AND INSTALL A COMPLETE, OPERATIONAL SYSTEM TO INCLUDE BUT NOT LIMITED TO THE FOLLOWING FUNCTIONS:
1. AUDIO/VISUAL NOTIFICATION. 2. SPRINKLER SUPPRESSION SYSTEM MONITORING AND CONTROL.
3. MANUAL INITIATION. 4. OFF-PREMISE NOTIFICATION

C. DRAWINGS ARE DIAGRAMMATIC. THE DEVICES SHOWN ON THE PLANS ARE FOR GENERAL ARCHITECTURAL AND OWNER COORDINATION AND SHALL BE CONSIDERED A MINIMUM. THE CONTRACTOR SHALL COORDINATE WITH ALL TRADES AND PROVIDE THE NECESSARY DEVICES, CONNECTIONS AND ZONE REQUIRED (INCLUDED, SPRINKLER SYSTEM FLOW AND TAMPER SWITCHES, ETC.) PROVIDE QUANTITY OF AUDIO/VISUAL DEVICES AND POWER SUPPLIES AS REQUIRED BY NFPA AND THE AUTHORITY HAVING JURISDICTION.

1.02 MANUFACTURER

A. EDWARDS SYSTEMS TECHNOLOGY, INC. PRODUCTS CONSTITUTE THE MINIMUM TYPE AND QUALITY OF EQUIPMENT TO BE INSTALLED. ACCEPTABLE ALTERNATE MANUFACTURERS AND PANELS ARE AS FOLLOWS: NOTIFIER AM 2020, PYROTRONICS MXLV.

1.03 SYSTEM DESCRIPTION

A. THE CONTRACTOR SHALL FURNISH ALL LABOR, SERVICES AND MATERIALS NECESSARY TO FURNISH AND INSTALL A COMPLETE, FUNCTIONAL FIRE ALARM SYSTEM , THE SYSTEM SHALL COMPLY IN RESPECTS WITH ALL PERTINENT CODES, RULES, REGULATIONS AND LAWS OF THE AUTHORITY, AND LOCAL JURISDICTION. THE SYSTEM SHALL COMPLY IN ALL RESPECTS WITH THE REQUIREMENTS OF THE SPECIFICATIONS, MANUFACTURER'S RECOMMENDATIONS AND UNDERWRITERS LABORATORIES INC. (UL!) LISTINGS.
B. SYSTEM FEATURES
1. PROVIDE AND INSTALL A NEW FIRE DETECTION AND ALARM SYSTEM THAT SHALL CONSIST OF: FIRE ALARM CONTROL PANEL, MANUAL PULL STATIONS, SPRINKLER SYSTEM WATERFLOW(S), VALVE SUPERVISORY SWITCH(S), AND AUDIO/VISUAL DEVICES.
2. PROVIDE CONNECTION TO A CENTRAL STATION. THE OWNER SHALL ARRANGE FOR TWO DEDICATED PHONE LINES TO BE TERMINATED AS DIRECTED BY THE INSTALLING CONTRACTOR.

C. SUBMITTALS PROJECT SUBMITTAL: THE CONTRACTOR SHALL PURCHASE NO EQUIPMENT FOR THE SYSTEM SPECIFIED HEREIN UNTIL THE OWNER HAS APPROVED THE PROJECT SUBMITTALS IN THEIR ENTIRETY AND HAS RETURNED THEM TO THE CONTRACTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MEET THE ENTIRE INTENT AND FUNCTIONAL PERFORMANCE DETAILED IN THESE SPECIFICATIONS. THE CONTRACTOR SHALL SUBMIT FOUR (4) COMPLETE SETS OF DOCUMENTATION INCLUDING POINT TO POINT CAD DRAWINGS AND SUBMITTALS WITHIN 30 CALENDAR DAYS AFTER AWARD OF PURCHASE ORDER. EACH SUBMITTAL SHALL INCLUDE CATALOG CUT, DATA SHEET, ETC.

D. WARRANTY AND MAINTENANCE
1. WARRANTY: THE CONTRACTOR SHALL WARRANTY ALL MATERIALS, INSTALLATION AND WORKMANSHIP FOR ONE (1) YEAR FROM DATE OF ACCEPTANCE, UNLESS OTHERWISE SPECIFIED.

2.0 PRODUCTS
2.01 PANEL COMPONENTS & FUNCTIONS: THE CONTROL PANEL SHALL BE A MULTI-PROCESSOR-BASED SYSTEM DESIGNED SPECIFICALLY FOR FIRE AND RELEASING SYSTEM APPLICATIONS. THE SYSTEM SHALL BE DESIGNED AND EQUIPPED TO RECEIVE, MONITOR, AND ANNUNCIATE SIGNALS FROM DEVICES AND CIRCUITS INSTALLED THROUGHOUT THE BUILDING. EACH SYSTEM POWER SUPPLY SHALL BE A MINIMUM OF 6 AMPS @ 24 VDC. THE SYSTEM SHALL ALLOW MESSAGE ROUTING TO BE CONFIGURED TO ANY OR ALL ANNUNCIATORS. THE SYSTEM SHALL PROVIDE AN OFF PREMISE DIGITAL ALARM COMMUNICATORS TRANSMITTER (DACT) CAPABLE OF TRANSMITTING SYSTEM ALARM, TROUBLE AND SUPERVISORY EVENTS TO A CENTRAL MONITORING STATION (CMS). THE DACT SHALL SUPPORT DUAL TELEPHONE LINES, 20 PPS 4/2 COMMUNICATIONS, AND CONFIGURED FOR DUAL TONE MULTI-FREQUENCY (DTMF) OR PULSE MODES.
2.02 FIELD-MOUNTED SYSTEM COMPONENTS
A. INITIATING DEVICES: MANUAL STATION - ANALOG/ADDRESSABLE DOUBLE ACTION, SINGLE STAGE FIRE ALARM STATIONS. THE STATION SHALL BE FINISHED IN RED WITH SILVER "PULL IN CASE OF FIRE" LETTERING.
B. NOTIFICATION APPLIANCES - LOW PROFILE HORN-STROBES. PROVIDE LOW PROFILE WALL MOUNT HORN/STROBES AT THE LOCATIONS SHOWN ON THE DRAWINGS. THE HORN/STROBE SHALL PROVIDE AN AUDIBLE OUTPUT OF 84 DBA AT 10 FT. WHEN MEASURED IN REVERBERATION ROOM PER UL-464. STROBES SHALL PROVIDE SYNCHRONIZED FLASH OUTPUTS. THE STROBE OUTPUT SHALL BE DETERMINED AS REQUIRED BY ITS SPECIFIC LOCATION AND APPLICATION.

3.0 FIELD QUALITY CONTROL - ALL FIRE ALARM TESTING SHALL BE IN ACCORDANCE WITH NATIONAL FIRE ALARM CODE, NFPA 72 - 1999, CHAPTER 7.

2.03 LAMP HOLDERS

A. For incandescent, provide porcelain body and nickel-plated brass socket, prelubricated with silicone compound. For fluorescent, provide white urea plastic body and silver-plated phosphor bronze or beryllium copper contacts. Fluorescent lamp sockets with open-circuit voltage over 300 volts shall be safety type and designed to open circuit when lamp is removed. For compact fluorescent lamps, provide molded thermoplastic body with copper alloy contacts and stainless steel retainer clips. Provide pin configuration to match lamps. For high intensity discharge, provide porcelain body and nickel-plated brass socket, prelubricated with silicone compound. Medium base sockets shall be 4 KV pulse rated.

2.04 BALLASTS

A. General: All ballasts shall be UL listed and CBM certified. Ballasts shall be CSA certified where applicable. Ballast shall be approved for operating with specified lamp. Ballast shall provide normal rated lamp life as stated by acceptable lamp manufacturer. Ballast shall be suitable to operate on the voltage system they are connected to and maintain correct lamp operation with 10% fluctuation of rated input voltage with no damage to ballasts or lamps. Ballast shall have the lowest sound rating available for the lamps specified. Replace noisy ballasts as directed by Engineer at no cost to the Owner. Ballast shall contain no PCBs. Ballasts shall be identical within each fixture type. All ballasts within the same luminaire shall be from the same manufacturer.Ballast shall support a sustained short to ground on open circuit of any output leads without damage to the ballast and without blowing fuses either inside the ballast or in line with the ballast.

B. Ballast shall be suitable to operate in: Indoor heated or air conditioned spaces: 50°F to 150°F ambient, Outdoor or in unheated spaces: 0°F to 105°F, Un-air-conditioned spaces: 50°F to 150°F at rated life in pendant mounted industrial type fixture. Recess mounted fixtures: in maximum 140°F ceiling cavity with fire-rated covering, clear air space between fixture and covering minimum of 3 inches. Ballast for T-4 and T-5 lamps shall have lamp fault interrupter for end of life failure. Manufacturer shall have been manufacturing ballasts for at least 5 years.

C. Fluorescent Ballast: Ballast shall be high frequency and operate lamps at a frequency above 25 KHz with less than 2% lamp flicker. Provide rapid start 0.99 power factor ballast, except as noted, with required voltage and frequency. Ballast shall be UL listed Class P with integral resetting thermal protector, and be suitable for use indoor or Type 1 outdoor application. Ballast case temperature shall not exceed 90°C. Ballast shall have a ballast factor of greater than 0.75. Ballast shall comply with Federal Communications Commission Part 18C limits for electromagnetic interference and radio frequency interference for non-consumer equipment. Ballast shall provide transient immunity as specified by ANSI C62.41, Category A (formerly IEEE 587, Section B). Ballast shall have lamp current crest factor of less than 1.7. Total harmonics distortion shall be less than 10%. Third harmonic distortion shall be less than 6%. Ballast shall internally limit in-rush current to not exceed 30 times normal operating current for a duration of 3 milliseconds. Manufacturer shall provide 5 year written warranty against defects in material or workmanship, including replacement labor cost.

D. High Intensity Discharge: Provide constant wattage autotransformer (CWA) or high reactance autotransformer high power factor (HX-HPF) type ballast with power factor greater than .90 except as noted. Ballast shall be designed with Class AH° insulation. Drop out voltage shall be not less than 70% of nominal.

1. For indoor commercial application: Provide NEMA rated AA° sound rating. Ballast shall comply with Federal Communications Commission Part 18C limits for electromagnetic interference and radio frequency interference. Ballast shall provide immunity as specified by ANSI C82-4.

2. Each Pulse start ballast must have end of lamp life protection system such as Advance LI60D1 or equal installed as part of ballast / fixture system.

E. Acceptable manufacturers are Magnetek, Osram/Sylvania and Advance.

2.05 EMERGENCY BATTERY LIGHTING

A. Lighting fixtures indicated on the drawings to be provided with an emergency battery ballast shall provide emergency lighting by using standard fluorescent lamp or lamps and an emergency battery ballast. The ballast shall consist of a field replaceable high temperature, maintenance free nickel cadmium battery, charger and electronic circuitry contained in one metal case. Provide a solid state charging indicator light to monitor the charger and battery, double pole test switch and installation hardware. The battery ballast shall provide power to the fluorescent lamp upon failure of the normal supply to the fixture. The test button and indicator light shall be integral in the fixture reflector and shall be positioned within or on the surface of the fixture so as to be accessible and identifiable. Under normal mode the battery ballast shall keep the batteries at full charge. Upon loss of normal power the battery ballast shall operate the fluorescent lamp or lamps for 90 minutes. Battery recharge time shall not exceed 16 hours to fully recharge and shall not exceed 225 milliamperes charging current. The lumen output of the lamp or lamps powered by battery unit shall be not less than 1100 lumens initially for a four foot fluorescent lamp. The battery ballast shall meet or exceed all the requirements set forth in UL924 "Emergency Lighting and Power Equipment" and shall be UL listed for installation on top of or remote from the fixture. Emergency illumination shall meet or exceed the requirements set forth in the National Electric Code, Life Safety Code and UL 90-Minute Requirements.

3.0 EXECUTION

3.01 GENERAL

A. Locations on the Drawings are diagrammatic. Verify exact locations with Architectural Reflected Ceiling Plans and coordinate space conditions with other trades. Modify locations in mechanical equipment rooms to suit the conditions of the mechanical equipment while maintaining a sufficient and uniform lighting level equal to that provided by the layout shown on the Drawings. Fixtures of the same type and in the same ceiling shall have lamps, socket assembling and door hinges oriented in the same direction. Reflector cones, baffles, aperture plates, light controlling element for air handling fixtures and decorative elements shall be installed after completion of ceiling tiles, painting and general cleanup. Target and focus adjustable lighting fixtures after regular working hours and before building acceptance. Permanently indicate targeting on fixture and provide positive locking devices to preclude mis-focus relamping. Target and focus in the presence of the Architect and Lighting Designer. Relamp all incandescent and low-voltage fixtures immediately prior to Owner's acceptance of building. Replace non-operating, damaged or darkened fluorescent and high intensity discharge lamps immediately to Owner's acceptance of building. Clean all fixture reflectors, lenses, louver, decorative accessories and lamps immediately prior to Owner's acceptance of building. Destaticize plastic lenses and diffusers after cleaning. Lighting fixtures mounted within, under, on or integral with millwork shall be given special consideration. Fixture counting and sizes shall be coordinated with the applicable space and adjusted accordingly. This coordination shall occur prior to ordering fixtures. Refer to Architectural Drawings for details.

3.02 SUPPORT OF LIGHT FIXTURES

A. Support directly from building structure, any lighting fixture which weighs in excess of the capacity of the suspended ceiling on which it is installed. Support each such fixture with the quantity of threaded rods or fixture support wires required to prevent fixture warping; however provide no less than two rods or wire per fixture. Outlets, which are recessed in a suspended ceiling and support the weight of surface-mounted or suspended fixtures, shall be supported from a channel spanning and secured to the ceiling support system. Support each end of the channel with a fixture support wire attached to structure. Installation in grid-type suspended ceiling: Support each corner of a grid opening, in which a lay-in fixture is located, with a fixture support wire attached to structure. Provide a support clip, securely fastened to the ceiling grid, at or near each corner of each lay-in fixture. Support fixtures, which are smaller than the ceiling grid opening and which are recessed in the acoustical panel, with at least two metal channels spanning, and secured to, the ceiling grid. Support each end of each channel or each corner of the grid opening with a fixture support wire attached to structure. Do no support fixtures by ceiling acoustical panels. Provide additional supports as required by local codes and seismic zone.
B.

M. DeCARLO
ARCHITECTURE

2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN
CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

ELECTRICAL

SPECIFICATIONS

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

E0.6

NOT RELEASED FOR CONSTRUCTION

Record Drawings and Operating and Maintenance Manuals:

❑ 1. Construction documents with record drawings and operating and maintenance manuals provided to the owner.

Alex Hilliard	*Alex J Hilliard*	10/3/2014
Lighting Designer or Contractor Name	Signature	Date

COMcheck Software Version 3.9.4

Interior Lighting and Power Compliance Certificate

90.1 (2007) Standard

Section 1: Project Information

Project Type: **New Construction**
Project Title :

Construction Site: Owner/Agent: Designer/Contractor:

Section 2: Interior Lighting and Power Calculation

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B x C)
Common Space Types:Workshop	6971	1.9	13245
Common Space Types:Active Storage	242	0.8	194
Common Space Types:Electrical/Mechanical	66	1.5	99
Common Space Types:Restrooms	86	0.9	77
Common Space Types:Corridor/Transition	36	0.5	18
		Total Allowed Watts =	13633

Section 3: Interior Lighting Fixture Schedule

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:Workshop (6971 sq.ft.)				
Linear Fluorescent 1: C: 48" T5 HO 54W: Electronic:	2	44	108	4752
Common Space Types:Active Storage (242 sq.ft.)				
Linear Fluorescent 1 copy 1: C: 48" T5 HO 54W: Electronic:	2	6	108	648
Common Space Types:Electrical/Mechanical (66 sq.ft.)				
Linear Fluorescent 1 copy 2: C: 48" T5 HO 54W: Electronic:	2	3	108	324
Common Space Types:Restrooms (86 sq.ft.)				
Linear Fluorescent 4: G: 22" T5 14W: Electronic:	1	2	14	28
LED 1: F: Other:	1	2	20	40
Common Space Types:Corridor/Transition (36 sq.ft.)				
Linear Fluorescent 7: B: 24" T8 17W: Electronic:	2	1	34	34
			Total Proposed Watts =	5826

Interior Lighting PASSES: Design 57% better than code.

Section 4: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 90.1 (2007) Standard requirements in COMcheck Version 3.9.4 and to comply with the mandatory requirements in the Requirements Checklist.

Name - Title Signature Date

Section 5: Post Construction Compliance Statement

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	DESCRIPTION	LAMPS	MANUFACTURER
B	2'x2' DIRECT/INDIRECT FLUORESCENT FIXTURE	32WT8 / 3500K	METALUX *RDI COLUMBIA *STE OR APPROVED EQUAL BY DAYBRITE
C	4' INDUSTRIAL HIGH OUTPUT FLUORESCENT STRIP FIXTURE, SUSPENDED FROM STRUCTURE 13'-0" AFF.	54WT5HO / 3500K	COLUMBIA *CSR MEXALUX * MBF OR APPROVED EQUAL BY DAYBRITE
CE	SAME AS TYPE "C" EXCEPT WITH EMERGENCY BALLAST FOR EGRESS LIGHTING	54WT5HO / 3500K	COLUMBIA *CSR MEXALUX * MBF OR APPROVED EQUAL BY DAYBRITE
F	6" RECESSED LED DOWNLIGHT, 1000 LUMEN, 80+ CRI, 3000K	LED 1000 LUMEN 3000K	PORTFOLIO *LD6A SERIES OR APPROVED EQUAL BY HUBBELL, OR DAYBRITE
G	2' WALL VANITY LIGHT, COORDINATE FINISH WITH ARCHITECT PRIOR TO PURCHASE	14W T5	SHAPER *604 OR APPROVED EQUAL BY HUBBELL OR DAYBRITE
H	EXTERIOR WALL PACK FOR EGRESS LIGHTING, FULL CUTOFF, SEALED DIE-CAST ALUMINUM HOUSING, WET LOCATION LABEL, INTEGRAL PHOTOCELL	LED	GARDCO: 104-MT-232TRF OR APPROVED EQUAL BY HUBBELL OR COOPER
X	NEW EDGE LIT LED EXIT SIGN. PROVIDE NUMBER AND FACES AND DIRECTIONAL ARROWS AS SHOWN. (90 MIN. EMERGENCY NICAD BATTERY)	LED	EMERGILITE *PRESTIGE SERIES OR APPROVED EQUAL BY CHLORIDE OR SURELITES

NOTE: CONFIRM VOLTAGE WITH DRAWINGS AND COORDINATE/CONFIRM ALL MOUNTING HEIGHTS AND FINISHES WITH ARCHITECT PRIOR TO ORDERING AND INSTALLATION.

LIGHTING CONTROL SYSTEM NOTES:

1. PROVIDE A COMPLETE LIGHTING CONTROL SYSTEM AND LIGHTING CONTROL PANEL BY COOPER CONTROLS (MODEL: LK8 OR APPROVED EQUAL). CONTROL PANEL FEATURES INCLUDE BUT NOT EXCLUSIVE TO: OVERRIDE BUTTONS AND ALL ASSOCIATED CONTROL WIRING.
2. OVERRIDE SWITCH (3-BUTTON) SHALL ALLOW AN OCCUPANT TO KEEP THE LIGHTS ON FOR AN ADDITIONAL 2-HOURS AND SHALL HAVE A PILOT LIGHT NEATLY LABELED DESCRIBING THE AREA IT CONTROLS.
3. COORDINATE TIME SETTINGS WITH THE OWNER.
4. PROVIDE CONTROL POWER AS REQUIRED.
5. ALL COMPONENTS SHALL BE FROM THE SAME MANUFACTURER.
6. OVERRIDE BUTTON SHALL OPERATES AS NORMAL SWITCHS DURING OPERATING HOURS AND CONTROL CORRIDOR LIGHTING ONLY. AFTER HOURS SWITCH SHALL OPERATE AS OVERRIDE CONTROLS.
7. CONTRACTOR SHALL COORDINATE LOCATION OF LIGHTING CONTROL PANEL WITH TENANT AND LANDLORD PRIOR TO INSTALLATION.

LIGHTING CONTROL PANEL SCHEDULE

OVERRIDE ZONE	RELAY	DESCRIPTION OF LIGHTING TO BE CONTROLLED	CONTROL	PANEL - CIRCUIT #	NOTES
1	1	OPEN WORK AREA	TIME CONTROL ON/OFF	LA-62	
	2	OPEN WORK AREA	TIME CONTROL ON/OFF	LA-64	
	3	OPEN WORK AREA	TIME CONTROL ON/OFF	LA-66	
2	4	SHOP LIGHTING	TIME CONTROL ON/OFF	LA-68	
	5	SPARE			
	6	SPARE			
	7	SPARE			
	8	SPARE			

M. DeCARLO
ARCHITECTURE
2470 H.L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

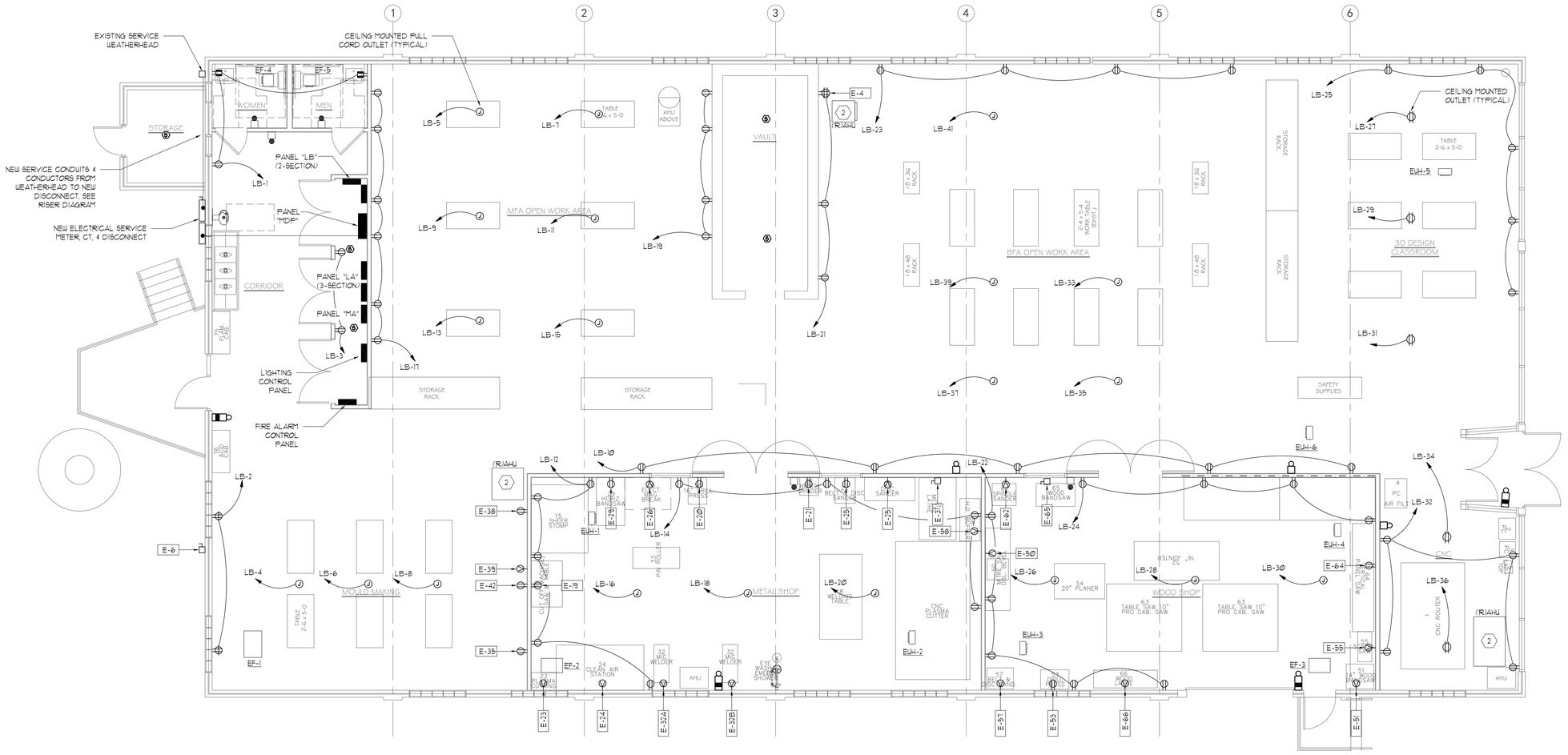
Drawing Record:

LIGHTING DETAILS & SCHEDULES

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

E0.7

NOT RELEASED FOR CONSTRUCTION



GROUND FLOOR PLAN - ELECTRICAL

SCALE: 3/16" = 1'-0"

NORTH

KEY NOTES (APPLY TO ELECTRICAL & LIGHTING PLANS)

1. COORDINATE EXACT LOCATION WITH TENANT PRIOR TO INSTALLATION.
2. RELOCATED MECHANICAL-HVAC UNIT. EXTEND EXISTING CONNECTION TO NEW PANEL "MA" AND PROVIDE NEW BREAKER AS INDICATED ON PANEL SCHEDULE. CONTRACTOR TO FIELD VERIFY EXISTING CONNECTION PRIOR TO RELOCATION AND INSTALLATION.

GENERAL NOTES (APPLY TO THIS PLAN ONLY)

1. COORDINATE EXACT LOCATION AND MOUNTING HEIGHT FOR ALL ELECTRICAL DEVICES WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.
2. OUTLETS THAT WERE DISCONNECTED DURING DEMOLITION SHALL BE RE-CONNECTED TO SAME CIRCUIT.
3. REFER TO SHEET E1.1 FOR ELECTRICAL EQUIPMENT CONNECTION SCHEDULE FOR DEVICES WITH THE FOLLOWING TAGS (* DENOTES CORRESPONDING EQUIPMENT TAG):

E-* ⊖

E-* ⊖

M. DeCARLO
ARCHITECTURE

2470 H.L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

GROUND FLOOR PLAN - ELECTRICAL

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

E1.0

NOT RELEASED FOR CONSTRUCTION

EQUIPMENT ELECTRICAL CONNECTION SCHEDULE

E-#	DESCRIPTION	ELECTRICAL					CIRCUIT	NEW BREAKER	FEEDER	CONNECTION	MOUNTING HEIGHT	DISCONNECT	REMARKS
		VOLT	P	FLA	KW	HP							
50	12" MITRE SAW	120	1	15.0			LA-42	20/1	2#12,1#12(G), ½"C	PLUG			
51	14" WOOD BANDSAW	208	1	12.0			LA-43,45	20/2	2#12,1#12(G), ½"C	L6-20R			
52	16" JOINTER	208	3	4.0			LA-47,49,51	20/3	2#12,1#12(G), ½"C	L14-20R			VIA. POWER POLE
53	18" DRILL PRESS	120	1	15.0			LA-53	20/1	2#12,1#12(G), ½"C	PLUG			
54	20" PLANER	208	3			5.0	LA-55,57,59	20/3	3#12,1#12(G), ½"C	L14-20R			VIA. POWER POLE
55	20" SCROLL SAW	120	1	1.3			LA-61	20/1	2#12,1#12(G), ½"C	PLUG			
57	BELT & DISC SANDER	208	3	6.0			LA-63,65,67	20/3	3#12,1#12(G), ½"C	L14-20R			
58	HEAVY DUTY BUFFER & POLISHER	208	3	3.5			LA-69,71,73	20/3	3#12,1#12(G), ½"C	L14-20R			
62	OSCILATING SPINDLE SANDER	208	3	15.0			LA-75,77,79	20/3	3#12,1#12(G), ½"C	L14-20R			
63A	TABLE SAW 10" PRO CABINET SAW	208	3	12.0		5.0	LA-44,46,48	20/3	3#12,1#12(G), ½"C	L14-20R			VIA. POWER POLE
63B	TABLE SAW 10" PRO CABINET SAW	208	3	12.0		5.0	LA-44,46,48	20/3	3#12,1#12(G), ½"C	L14-20R			VIA. POWER POLE
64	VERTICAL PANEL SAW	120	1	15.0			LA-50	20/1	2#12,1#12(G), ½"C	PLUG			
65	WOOD BANDSAW	208	1	22.4			LA-81,83	30/2	2#10,1#10(G), ¾"C	DIRECT		30/1/1	
66	WOOD LATHE	208	3	15.0			LA-52,54,56	20/3	3#12,1#12(G), ½"C	L14-20R		30/3/3R	
67	BENCH BRINDER	120	1			0.5	LA-58	20/1	2#12,1#12(G), ½"C	PLUG			

EQUIPMENT NOTES:

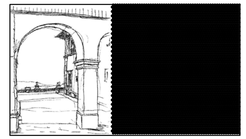
1. CONTRACTOR TO FIELD VERIFY EXACT EQUIPMENT CONNECTIONS & REQUIREMENTS PRIOR TO ROUGH-IN. COORDINATE AND FIT ALL WORK ACCORDINGLY.
2. ALL EXTERIOR ELECTRICAL EQUIPMENT ENCLOSURES SHALL BE NEMA-3R.
3. HARDWIRED CONNECTIONS TO EQUIPMENT SHALL BE MADE THROUGH LIQUID-TITE FLEXIBLE CONDUIT.
4. DISCONNECT SWITCHES SHALL BE INSTALLED WITHIN SITE AND/OR WITHIN REACH OF THE EQUIPMENT CONNECTION. PROVIDE A NAMEPLATE FOR EACH DISCONNECT WITH THE EQUIPMENT SERVED.

EQUIPMENT ELECTRICAL CONNECTION SCHEDULE

E-#	DESCRIPTION	ELECTRICAL					CIRCUIT	NEW BREAKER	FEEDER	CONNECTION	MOUNTING HEIGHT	DISCONNECT	REMARKS
		VOLT	P	FLA	KW	HP							
1	CNC ROUTER	208	1	7.5			LA-1,3	20/2	2#12,1#12(G), ½"C				
2	COMPUTER	120	1		0.5		LA-5 (PARTIAL)	20/1	2#12,1#12(G), ½"C	PLUG			
3	COMPUTER	120	1		0.5		LA-5 (PARTIAL)	20/1	2#12,1#12(G), ½"C	PLUG			
4	AIR FILTRATION	120	1		0.5		LA-7	20/1	2#12,1#12(G), ½"C	PLUG			
5	COMPUTER	120	1		0.5		LA-9	20/1	2#12,1#12(G), ½"C	PLUG			
6	120 GALLON AIR COMPRESSOR	208	3	38.8			MDP-14,16,18	50/3	3#4,1#10(G), 1¼"C	DIRECT		60/3/3R	
19	14" SAW TABLE	120	1	15.0			LA-11	20/1	2#12,1#12(G), ½"C	PLUG			
20	16.5" DRILL PRESS	120	1	10.5			LA-13	20/1	2#12,1#12(G), ½"C	PLUG			
21	8" BENCH GRINDER	120	1	7.0			LA-15	20/1	2#12,1#12(G), ½"C	PLUG			
22	BELT & DISC SANDER	120	1	15.6			LA-17	20/1	2#12,1#12(G), ½"C	PLUG			
23	DC PLASMA CUTTER	208	1	14.0			LA-19,21	20/2	2#12,1#12(G), ½"C	L6-20R			
24	DOWNDRAFT STATION	208	3		4.0		LA-23,25,27	20/3	3#12,1#12(G), ½"C	L14-20R			
25	DISC SANDER	208	1	20.2			LA-29,31,33	30/3	3#10,1#10(G), ¾"C	L14-30R			
26	ELECTRONC BREAK	208	1	10.0			LA-35,37	20/2	2#12,1#12(G), ½"C	L6-20R			
29	HORIZONTAL BANDSAW	120	1	1.5			LA-41	20/1	2#12,1#12(G), ½"C	PLUG			
31	METAL LATHE	208	1	9.8			LA-2,4	20/2	2#12,1#12(G), ½"C	DIRECT			
32A	MIG WELDER	208	1	31.3			LA-6,8	50/2	2#6,1#10(G), 1¼"C	L6-50R			
32B	MIG WELDER	208	1	31.3			LA-38,40	50/2	2#6,1#10(G), 1¼"C	L6-50R			
34	PORTABLE SPOT WELDER	208	3		2.5		LA-10,12,14	20/3	3#12,1#12(G), ½"C	L14-20R			
35	SANDBLASTER	120	1		1.0		LA-16	20/1	2#12,1#12(G), ½"C	PLUG			
36	SAW BLADE WELDER	208	3		1.2		LA-18,20,22	20/3	3#12,1#12(G), ½"C	L15-20R			
37	TIG WELDER	208	2		7.7		LA-24,26	50/2	2#6,1#10(G), 1¼"C	L6-50R			
38	FILTRATION SNORKEL	120			1.0		LA-28	20/1	2#12,1#12(G), ½"C	PLUG			
39	LARGE SAND MIXER	208 / 120	3	24.0			LA-30,32,34	30/3	3#10,1#10(G), ¾"C	L14-30R			
42	SMALL SAND MIXER	120	1			0.5	LA-36	20/1	2#12,1#12(G), ½"C	PLUG			
44	COMPUTER	120	1		0.5		LA-5 (PARTIAL)	20/1	2#12,1#12(G), ½"C	PLUG			

EQUIPMENT NOTES:

1. CONTRACTOR TO FIELD VERIFY EXACT EQUIPMENT CONNECTIONS & REQUIREMENTS PRIOR TO ROUGH-IN. COORDINATE AND FIT ALL WORK ACCORDINGLY.
2. ALL EXTERIOR ELECTRICAL EQUIPMENT ENCLOSURES SHALL BE NEMA-3R.
3. HARDWIRED CONNECTIONS TO EQUIPMENT SHALL BE MADE THROUGH LIQUID-TITE FLEXIBLE CONDUIT.
4. DISCONNECT SWITCHES SHALL BE INSTALLED WITHIN SITE AND/OR WITHIN REACH OF THE EQUIPMENT CONNECTION. PROVIDE A NAMEPLATE FOR EACH DISCONNECT WITH THE EQUIPMENT SERVED.



M. DeCARLO
ARCHITECTURE

2470 H.L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN
CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

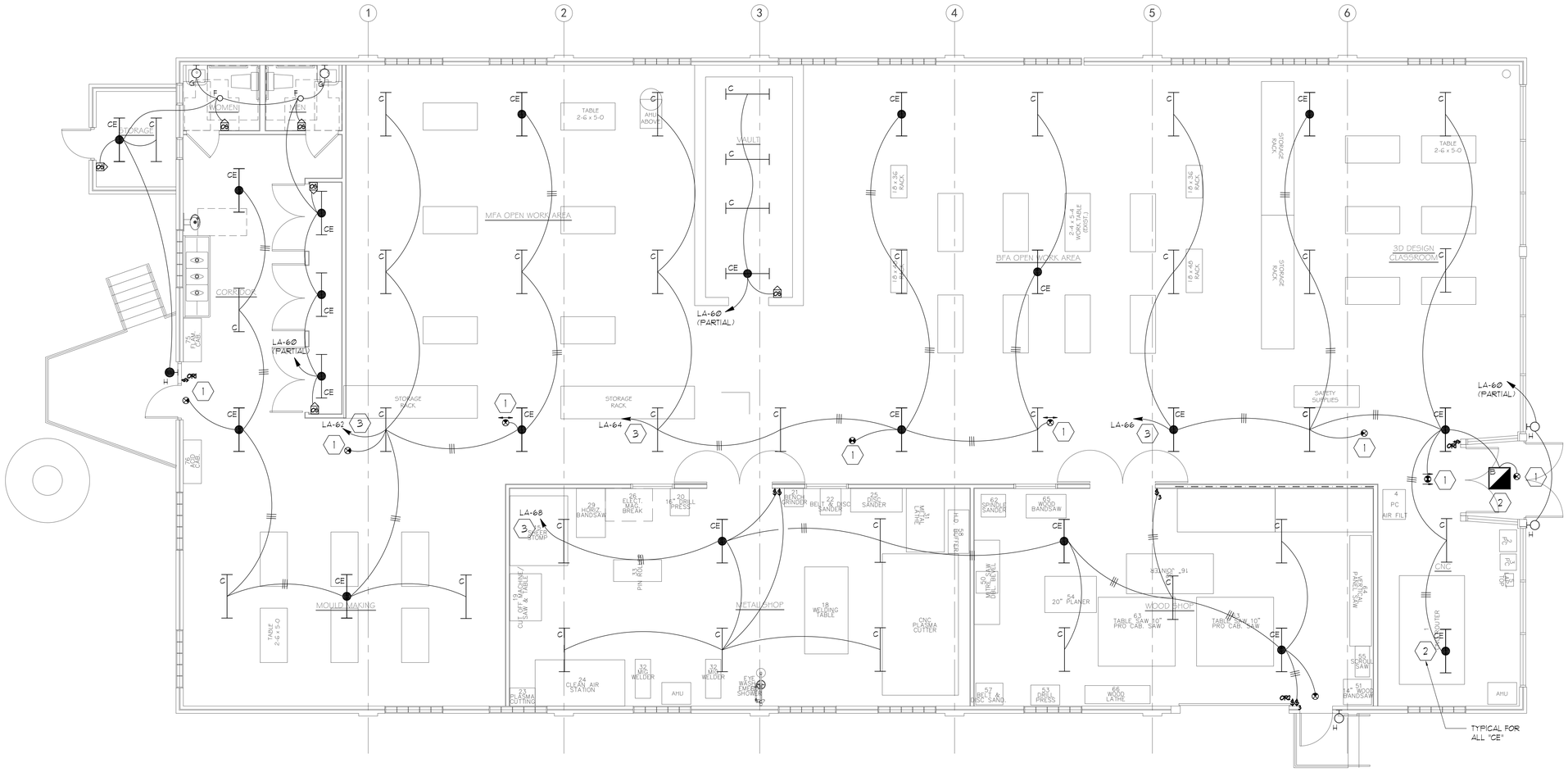
Drawing Record:

ELECTRICAL EQUIPMENT SCHEDULES

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

E1.1

NOT RELEASED FOR CONSTRUCTION



GROUND FLOOR PLAN - LIGHTING

SCALE: 3/16" = 1'-0"

NORTH

GENERAL NOTES (APPLY TO THIS PLAN ONLY)

1. COORDINATE EXACT LOCATION AND HEIGHT FOR ALL LIGHTING FIXTURE AND DEVICES WITH ARCHITECT AND OWNER PRIOR TO INSTALLATION.

KEY NOTES

1. PROVIDE UNSWITCHED "HOT" FOR EMERGENCY EXIT SIGN.
2. PROVIDE UNSWITCHED "HOT" FOR EMERGENCY EGRESS FIXTURE BATTERY BALLAST
3. ROUTE CIRCUIT THROUGH LIGHTING CONTROL SYSTEM.

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

M. DeCARLO
ARCHITECTURE
2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

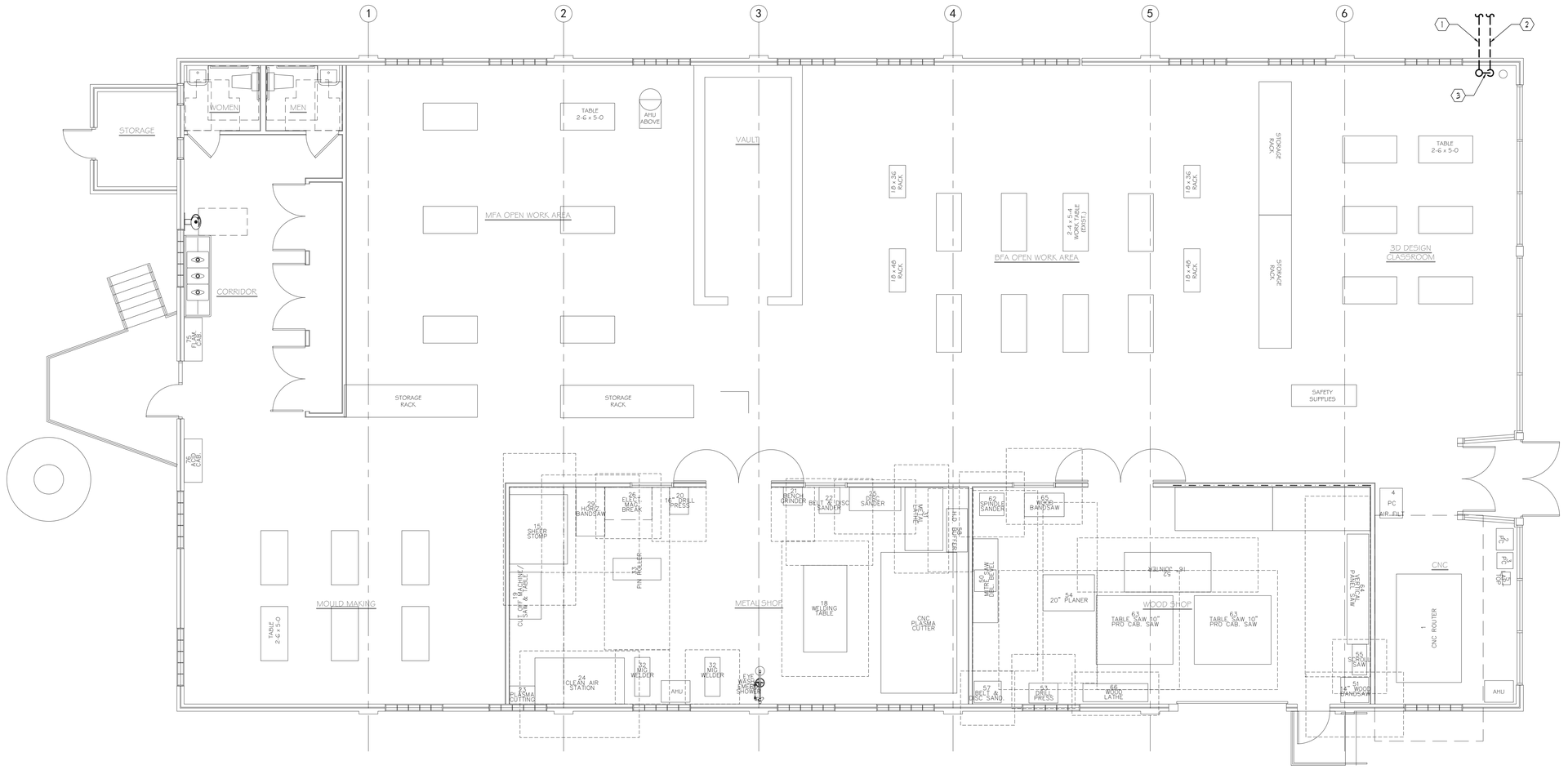
Job Number 1433

Drawing Record:

GROUND FLOOR PLAN - LIGHTING

E2.0

NOT RELEASED FOR CONSTRUCTION



FLOOR PLAN - FIRE PROTECTION

SCALE: 3/16" = 1'-0"

NORTH

GENERAL NOTES:

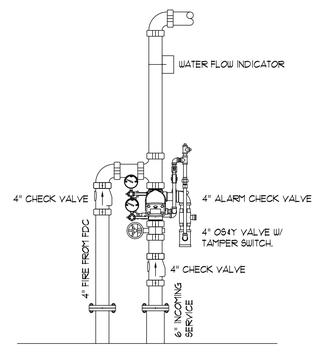
- COORDINATE LOCATION OF INCOMING SERVICE WITH LOCAL AHJ AND BUILDING USERS.

KEY NOTES:

1. 6" FIRE B/G. SEE CIVIL PLANS FOR CONTINUATION. COORDINATE LOCATION OF METER WITH CIVIL & WATER PROVIDER.
2. 4" FIRE FROM REMOTE FDC. SEE CIVIL PLANS FOR CONTINUATION. COORDINATE LOCATION OF FDC WITH LOCAL AHJ.
3. FIRE RISER. SEE DETAIL 2/FP1.0.

FIRE PROTECTION NOTES:

1. FIRE PROTECTION CONTRACTOR SHALL PROVIDE SPRINKLER DRAWINGS IN COMPLIANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES, AND IN ACCORDANCE WITH NFPA. CONTRACTOR SHALL PROVIDE GUARANTEE COVERING ALL WORK AND MATERIALS FOR ONE YEAR.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING FLOW TEST DATA AND PREPARING HYDRAULIC CALCULATIONS IF REQUIRED BY AUTHORITY HAVING JURISDICTION.
3. CONTRACTOR TO CONFIRM STRUCTURAL AND SUPPLY HYDRAULIC INFORMATION PRIOR TO SYSTEM DESIGN AND INSTALLATION.
4. SPRINKLER HEADS SHALL BE COORDINATED WITH LIGHTS, GRILLES, & DIFFUSERS WITHIN THE REQUIREMENTS OF NFPA 13.
5. DESIGNED SPRINKLER LAYOUT SHALL COMPLY WITH NFPA 13.



RISER DETAIL

2

NTS

M. DeCARLO
ARCHITECTURE

2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

FLOOR PLAN - FIRE PROTECTION

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

FP1.0

NOT RELEASED FOR CONSTRUCTION

LEGEND - HVAC

ABBR	SYMBOL	DESCRIPTION
A/C		ABOVE CEILING
AD		ACCESS DOOR
AFF		ABOVE FINISHED FLOOR
AHU		AIR HANDLING UNIT
B/F		BELOW FLOOR
B/G		BELOW GRADE
BHP		BRAKE HORSEPOWER
	TYPE-CFM	CEILING SUPPLY AIR DIFFUSER
	TYPE	CEILING RETURN AIR REGISTER / GRILLE OR EXHAUST REGISTER / GRILLE
CFM		CUBIC FEET PER MINUTE
CH		CHILLER
		CONNECT TO EXISTING
CU		CONDENSING UNIT
		DIRECTION OF AIRFLOW
DB		DRY BULB
DN		DOWN
DWG		DRAWING
		DUCT SIZE TRANSITION - SINGLE LINE DUCT
		DUCTWORK - NEW
		DUCTWORK - EXISTING OR DIFFUSER TO REMAIN
		DUCT - SUPPLY OR OUTSIDE AIR UP
		DUCT - RETURN OR EXHAUST UP
		DUCT - SUPPLY OR OUTSIDE AIR DOWN
		DUCT - RETURN OR EXHAUST DOWN
		DUCT TRANSITION - SQUARE-TO-ROUND (OR OVAL)
EAT		ENTERING AIR TEMPERATURE
EF		EXHAUST FAN
EFF		EFFICIENCY
ESP		EXTERNAL STATIC PRESSURE
EXH		EXHAUST
°F		FAHRENHEIT
FT		FEET
GA		GAUGE
GPM		GALLONS PER MINUTE
HP		HORSEPOWER
ID		INSIDE DIMENSION
IN		INCHES
KW		KILOWATTS
KVA		KILO VOLT AMPS
LAT		LEAVING AIR TEMPERATURE
LB		POUNDS
		LIMITS OF DEMOLITION
MAX		MAXIMUM
MD		MANUAL DAMPER
MFR		MEASUREMENT
MIN		MINIMUM
OA		OUTSIDE AIR
OD		OUTSIDE DIMENSION
PRV		PRESSURE REDUCING VALVE
PSI		POUNDS PER SQUARE INCH
SEN		SENSIBLE
SF	#	SQUARE FEET
SF		SUPPLY FAN
SP		STATIC PRESSURE
TEMP		TEMPERATURE
	T	THERMOSTAT
VTR		VENT THRU ROOF
WB		WET BULB
WC		WATER COLUMN
WT		WEIGHT

MECHANICAL & PLUMBING GENERAL NOTES

1. WORK SHALL COMPLY WITH LOCAL BUILDING CODES, LAWS, REGULATIONS, ORDINANCES, SMACNA STANDARDS, AND ASHRAE GUIDELINES.
2. THE WORK SHALL CONSIST OF ALL LABOR AND MATERIAL TO COMPLETELY INSTALL WORKS AS SHOWN ON THESE DRAWINGS.
3. COORDINATE LOCATION OF PIPE ROUTING, DUCTWORK AND DIFFUSERS WITH LIGHT FIXTURES WITH ELECTRICAL CONTRACTOR. RELOCATE PIPING AND/OR DUCTWORK, IF NECESSARY, AS DIRECTED BY THE ARCHITECT/ENGINEER.
4. WORK ASSOCIATED WITH THE SCOPE OF THIS PROJECT INCLUDING EQUIPMENT, ACCESSORIES, DEVICES, SYSTEMS, ETC. SHALL BE COVERED BY A ONE YEAR GUARANTEE WHICH SHALL START AT THE TIME OF FINAL ACCEPTANCE BY THE OWNER. ANY DEFECTS IN PRODUCTS, INSTALLATION, WORKMANSHIP SHALL BE CORRECTED AT NO ADDITIONAL CHARGE AND SHALL INCLUDE ANY NECESSARY REPAIRS TO WALLS, FLOORS, MILLWORK, ETC. WHICH SHALL BE REPAIRED BACK TO NEW AND FINISHED CONDITION.
5. THE CONTRACTOR SHALL KEEP A RECORD OF THE CHANGES WHICH ARE IN CONFLICT WITH THESE DRAWINGS AND SPECIFICATIONS. AT THE COMPLETION OF THIS WORK THE CONTRACTOR SHALL SUBMIT "AS BUILT" PRINTS TO THE OWNER.
6. THE DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY SHOW THE EXACT ROUTING OR DETAILED FITTINGS. WORK SHALL BE INSTALLED AS A COMPLETE SYSTEM WITH NECESSARY COMPONENTS, FITTINGS, STRAPS, ETC. DAMPERS AND VALVES SHALL BE INSTALLED SO THAT THEY ARE ACCESSIBLE.
7. REFER TO THE CONTRACT DRAWING SET AND SPECIFICATIONS FOR GUIDANCE ON DIMENSIONS, CEILING HEIGHTS, DOOR SWINGS, ROOM FINISHES, STRUCTURAL DETAILS, LOCATIONS OF DUCTWORK, PIPING AND STRUCTURAL MEMBERS. COORDINATE & INSTALL THE MECHANICAL SYSTEMS SO AS NOT TO INTERFERE WITH THE INSTALLATION OR FUNCTION OF ANOTHER DISCIPLINES WORK.
8. DUCT AND PIPING MUST BE CONCEALED ABOVE THE CEILING OR IN THE WALLS UNLESS OTHERWISE NOTED.
9. COORDINATE DIFFUSER LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLAN TO VERIFY FRAME TYPES BASED ON CEILING TYPE.
10. COORDINATE VALVE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLAN TO INSURE NONE ARE INSTALLED OVER GYPSUM BOARD CEILINGS. IF SUCH ACCOMMODATION CANNOT BE MADE, PROVIDE ACCESS PANEL. PANEL LOCATIONS SHALL BE APPROVED BY ARCHITECT PRIOR TO PANEL AND VALVE INSTALLATION.
11. THE CONTRACTOR SHALL INSTALL WORK IN A NEAT AND WORKMANLIKE MANNER AND ACCORDING TO GENERALLY ACCEPTED PRACTICES OF FIRST CLASS WORKMANSHIP.
12. THERMOSTATS SHALL BE LOCATED IN EACH ZONE AS INDICATED ON PLAN. THE EXACT LOCATION AND HEIGHT SHALL BE AS DIRECTED BY THE ARCHITECT.
13. INSTALL EQUIPMENT, DIFFUSERS, DUCTWORK, PIPING, INSULATION, AND FIXTURES AS RECOMMENDED BY THE MANUFACTURER'S INSTALLATION GUIDELINES AND LITERATURE.
14. DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS.
15. PROVIDE TURNING VANES IN RECTANGULAR DUCT ELBOWS.
16. CONTRACTOR SHALL PROVIDE (2) SETS OF FILTERS FOR EACH FAN COIL: ONE DURING CONSTRUCTION AND ONE SET AT COMPLETION OF CONSTRUCTION. FILTERS SHALL BE 1" THICK PLEATED, MINIMUM 30% EFFICIENT (MERV RATING OF 7).
17. PIPING, DUCTWORK, INSULATION, CONSTRUCTION STANDARDS, ETC. MUST BE EQUAL TO OR GREATER THAN EXISTING BASE BUILDING STANDARDS. THE USE OF RIGID FIBER DUCT BOARD AND PVC IS NOT PERMITTED.
18. ATTENTION IS DRAWN TO THE FACT THAT THIS IS AN EXISTING FACILITY AND NOT ALL EXISTING DUCT, PIPING, AND EQUIPMENT SHOWN ON THESE DRAWINGS WAS FIELD VERIFIED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND VERIFY EXISTING CONDITIONS, DEMOLITION, AND NEW WORK PRIOR TO EQUIPMENT AND MATERIALS PURCHASE AND/OR FABRICATION.
19. DIMENSIONS OF EXISTING CONSTRUCTION ARE APPROXIMATE. THE CONTRACTORS SHALL MAKE NECESSARY FIELD MEASUREMENTS OF EXISTING STRUCTURES AND EQUIPMENT TO VERIFY DIMENSIONS SHOWN ON THE DRAWINGS. PROVIDE PROPER DIMENSIONS NOT SHOWN PRIOR TO EQUIPMENT FABRICATION. COSTS FOR MODIFICATIONS OF NEW CONSTRUCTION DUE TO LACK OF CONFIRMATION OF DIMENSIONS BY FIELD MEASUREMENT SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
20. EXISTING EQUIPMENT AND MATERIALS SHOWN OR LISTED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT SITE. ITEMS REMOVED SHALL BE PROPERLY DISPOSED OF AND CONTRACTOR SHALL CAPTURE REFRIGERANT FROM APPLICABLE EQUIPMENT.

FAN SCHEDULE

TAG	CAPACITY (CFM)	SP (IN WG)	MOTOR HP	DRIVE	VOLT / Φ	MAX FAN RPM	MAX SONES	TYPE OF FAN	BASIS OF DESIGN	REMARKS
EF-1	7,100	1/4	1	BELT	208/1	655	18	WALL MOUNTED PROP FAN	GREENHECK: SB-30	①②③④
EF-2	2,000	1/5	1/4	BELT	208/1	700	11.5	WALL MOUNTED PROP FAN	GREENHECK: SB-24	①②③④
EF-3	1,750	1/4	1/4	BELT	208/1	690	11.5	WALL MOUNTED PROP FAN	GREENHECK: SB-24	①② ⑤
EF-4	70	1/8	FRAC	DIRECT	115/1	850	1.0	CEILING MOUNTED FAN	GREENHECK: SP-A	①② ⑤
EF-5	70	1/8	FRAC	DIRECT	115/1	850	1.0	CEILING MOUNTED FAN	GREENHECK: SP-A	①② ⑤

① DISCONNECT PROVIDED BY ELECTRICAL CONTRACTOR
② STARTER PROVIDED BY ELECTRICAL CONTRACTOR
③ PROVIDE WITH OSHA SAFETY CAGE.
④ CONTROLLED BY WALL MOUNTED TIMER SWITCH.
⑤ INTERLOCK WITH RESTROOM LIGHT SWITCH.

LOUVER SCHEDULE

TAG	CAPACITY (CFM)	MAX PD (IN WG)	DIMENSIONS (IN)		MIN FREE AREA (SQ FT)	SERVICE	BASIS OF DESIGN	REMARKS
			WIDTH	HEIGHT				
LV-1	7,100	0.06	64	56	13.9	INTAKE	RUSKIN: ELF375	①②③
LV-2	7,100	0.06	64	56	13.9	EXHAUST	RUSKIN: ELF375	①②③
LV-3	2,000	0.05	64	56	6.1	EXHAUST	RUSKIN: ELF375	①② ④
LV-4	3,750	0.05	64	56	13.9	INTAKE	RUSKIN: ELF375	①② ⑤
LV-5	1,750	0.05	36	24	4.5	EXHAUST	RUSKIN: ELF375	①② ⑥
LV-6	140	0.05	40	20	2.0	EXHAUST	RUSKIN: ELF375	①② ⑦

① PROVIDE INSECT SCREEN FOR LOUVER.
② LOUVER SHALL BE PAINTED TO MATCH BRICK EXTERIOR. LANDLORD SHALL APPROVE COLOR & LOCATION PRIOR TO PURCHASE.
③ PROVIDE CONTROL DAMPER. INTERLOCK WITH EF-1.
④ PROVIDE CONTROL DAMPER FOR 36" OF LOUVER WIDTH. REMAINDER OF LOUVER TO BE BLANKED OFF W/ INSULATED PANEL. INTERLOCK WITH EF-2.
⑤ PROVIDE CONTROL DAMPER. INTERLOCK WITH EF-2 & 3.
⑥ PROVIDE CONTROL DAMPER. INTERLOCK WITH EF-3.
⑦ PROVIDE BACKDRAFT DAMPER.

DIFFUSER, REGISTER & GRILLE SCHEDULE

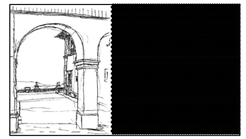
TAG	TYPE OF SERVICE	FLOW RANGE (CFM)	FACE SIZE	NECK SIZE	RUNOUT SIZE	# OF SLOTS	SLOT WIDTH	MAX ROOM NC	MAX SP (IN WG)	INTEGRAL DAMPER	BASIS OF DESIGN	REMARKS
A	SA	---	14"X12"	12"X10"	①	---	---	35	0.10	N	TITUS: 272RS	②
B	SA	---	14"X0"	14"X10"	①	---	---	35	0.10	Y	TITUS: 8300FS	②③

① RUNOUT SIZE SHALL BE EQUAL TO NECK SIZE UNLESS NOTED OTHERWISE ON DRAWINGS.
② FINISH FOR ALL DEVICES SHALL BE NO. 26 WHITE, UNLESS OTHERWISE INDICATED ON ARCHITECTURAL DRAWINGS
③ PROVIDE WITH AIR EXTRACTOR.

ELECTRIC HEATER SCHEDULE

TAG	DESCRIPTION	WATTS	VOLTS / Φ	AMPS	HEATER TYPE	BASIS OF DESIGN	REMARKS
EUH-1	ELECTRIC UNIT HEATER	3,300	208/1	15.9	HORIZONTAL DISCHARGE	MARKEL: 5100 SERIES	①②③④
EUH-2	ELECTRIC UNIT HEATER	3,300	208/1	15.9	HORIZONTAL DISCHARGE	MARKEL: 5100 SERIES	①②③④
EUH-3	ELECTRIC UNIT HEATER	3,300	208/1	15.9	HORIZONTAL DISCHARGE	MARKEL: 5100 SERIES	①②③④
EUH-4	ELECTRIC UNIT HEATER	3,300	208/1	15.9	HORIZONTAL DISCHARGE	MARKEL: 5100 SERIES	①②③④
EUH-5	ELECTRIC UNIT HEATER	5,000	208/1	24.1	HORIZONTAL DISCHARGE	MARKEL: 5100 SERIES	①②③④
EUH-6	ELECTRIC UNIT HEATER	5,000	208/1	24.1	HORIZONTAL DISCHARGE	MARKEL: 5100 SERIES	①②③④

① PROVIDE WITH THERMOSTAT
② PROVIDE WITH INTEGRAL DISCONNECT
③ PROVIDE WITH BUILT-IN THERMAL OVERHEAT PROTECTOR
④ PROVIDE WITH MOUNTING BRACKET



M. DeCARLO
ARCHITECTURE
2470 H.L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

SCHEDULES, LEGEND & NOTES - MECHANICAL

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

M0.1

NOT RELEASED FOR CONSTRUCTION

MECHANICAL (HVAC & PLUMBING) SPECIFICATIONS

A. GENERAL CONDITIONS OTHER CONTRACT DOCUMENTS
1. THE GENERAL CONDITIONS AND OTHER CONTRACT DOCUMENTS AS SET FORTH HEREBY ARE TO BE INCORPORATED INTO AND BECOME A PART OF THE SPECIFICATIONS FOR THE WORK UNDER THIS DIVISION.

B. CODES AND PERMITS
1. COMPLY WITH ALL RULES, REGULATIONS OF STATE, COUNTY, AND CITY AUTHORITIES HAVING JURISDICTION OVER THE PREMISES, INCLUDING SAFETY REQUIREMENTS OF OSHA. DO NOT CONSTRUE THIS AS RELIEVING CONTRACTOR FROM COMPLYING WITH SPECIFICATIONS WHICH EXCEED CODE REQUIREMENTS AND NOT IN CONFLICT THEREWITH.
2. SECURE AND PAY FOR ALL PERMITS AND CERTIFICATES OF INSPECTION REQUIRED.

C. LOCAL CONDITIONS:
1. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND BE FAMILIAR WITH ALL EXISTING CONDITIONS. SPECIAL ATTENTION SHALL BE GIVEN TO WORK TO BE PERFORMED ABOVE AN EXISTING CEILING. NO ALLOWANCE WILL BE MADE FOR LACK OF KNOWLEDGE OF EXISTING CONDITIONS.
2. THIS CONTRACTOR SHALL BE HELD TO HAVE EXAMINED THE PREMISES AND SITE SO AS TO COMPARE THEM WITH THE DRAWINGS AND SPECIFICATIONS. NO ALLOWANCE SHALL BE MADE TO THE CONTRACTOR BY REASON OF HIS FAILURE TO HAVE MADE SUCH EXAMINATION OR OF ANY ERROR ON HIS PART.
3. WHERE EXISTING SLABS ARE TO BE CUT OR CORE DRILLED, THE CONTRACTOR SHALL X-RAY THE EXISTING SLABS TO AVOID CUTTING OR DISRUPTING EXISTING CONDUITS, CABLES, PLUMBING OR STRUCTURAL MEMBERS.
4. HVAC SYSTEMS, PLUMBING SYSTEMS, AND ELECTRICAL SERVICE TO THE BUILDING SHALL NOT BE INTERRUPTED WITHOUT WRITTEN CONSENT OF THE BUILDING OWNER.
5. AT THE COMPLETION OF THE PROJECT, ALL WORK UNDER THIS DIVISION SHALL BE COMPLETELY INTEGRATED WITH THE EXISTING SYSTEMS AND LEFT IN PERFECT OPERATING CONDITION.
6. PRIOR TO ANY DEMOLITION OR CONSTRUCTION THE CONTRACTOR SHALL HAVE THE EXISTING CONDITIONS INSPECTED BY AN EPA, OSHA CERTIFIED ASBESTOS ABATEMENT AGENCY TO IDENTIFY THE PRESENCE OF ASBESTOS. SHOULD ANY ASBESTOS BE FOUND IT SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND OWNER AND SPECIFICALLY IDENTIFIED IN WRITING.

D. DRAWINGS
1. DRAWINGS AND SPECIFICATIONS ARE TO BE CONSIDERED AS SUPPLEMENTING EACH OTHER. WORK SPECIFIED SHALL BE PERFORMED OR FURNISHED AS THOUGH MENTIONED IN BOTH SPECIFICATIONS AND DRAWINGS.
2. THE DRAWINGS ARE SCHEMATIC ONLY AND ARE INTENDED TO SHOW APPROXIMATE LOCATIONS. DO NOT SCALE.

E. SHOP DRAWINGS
1. THIS CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON THE ITEMS OF EQUIPMENT AND SYSTEMS AS NECESSARY TO CLEARLY SHOW EQUIPMENT AND CONSTRUCTION.

F. SUPERVISION
1. THIS CONTRACTOR SHALL HAVE IN CHARGE OF THE WORK, A COMPETENT SUPERINTENDENT WITH EXPERIENCE IN THE WORK TO BE INSTALLED UNDER THIS CONTRACT.

G. COORDINATION
1. THIS CONTRACTOR SHALL COORDINATE HIS WORK AND COOPERATE WITH THE OTHER CONTRACTORS. HE SHALL ARRANGE HIS WORK WITH THEIRS SO THAT THERE WILL BE NO DELAY IN THE PROPER INSTALLATION.
2. EXAMINE WORK OF OTHER TRADES WHICH COMES IN CONTACT WITH OR IS COVERED BY THIS WORK. DO NOT ATTACH TO, COVER, OR FINISH AGAINST ANY DEFECTIVE WORK, OR INSTALL WORK OF THIS DIVISION IN A MANNER WHICH WILL PREVENT OTHER TRADES FROM PROPERLY INSTALLING THEIR WORK. CONSULT ALL DRAWINGS, SPECIFICATIONS AND DETAILS OF OTHER DIVISIONS OF THE WORK.

H. CUTTING AND PATCHING
1. ALL CUTTING AND PATCHING WORK RELATED TO THIS CONTRACT WILL BE THE RESPONSIBILITY OF THIS CONTRACTOR. REPAIRS SHALL MATCH NEW AND/OR EXISTING CONDITIONS.

I. GUARANTEE AND WARRANTIES
1. WARRANT THAT EQUIPMENT AND ALL WORK IS INSTALLED IN ACCORDANCE WITH GOOD ENGINEERING PRACTICE AND THAT ALL EQUIPMENT WILL MEET REQUIREMENTS SPECIFIED. ANY EQUIPMENT FAILING TO PERFORM OR FUNCTION AS SPECIFIED SHALL BE REPLACED WITH COMPLYING EQUIPMENT, WITHOUT COST TO THE OWNER.
2. GUARANTEE AGAINST DEFECTS IN WORKMANSHIP AND MATERIALS. MAKE GOOD REPAIR OR REPLACE ANY DEFECTIVE WORK, MATERIAL OR EQUIPMENT WITHIN (1) ONE YEAR FROM DATE OF ACCEPTANCE.

J. INSTALLATION REQUIREMENTS
1. LOCATIONS OF PIPING, EQUIPMENT, DUCTS, ETC., ON THE DRAWINGS IS DIAGRAMMATIC. INDICATED POSITIONS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. EXACT LOCATIONS SHALL BE SUBJECT TO BUILDING CONSTRUCTION AND INTERFERENCES WITH OTHER WORK. ARCHITECT RESERVES THE RIGHT TO MAKE MINOR CHANGES IN LOCATION OF ANY PART OF THE WORK UP TO THE TIME OF ROUGHING-IN WITHOUT ADDITIONAL COST.

K. TEST AND ADJUSTMENTS
1. OBTAIN ALL INSPECTIONS REQUIRED BY LAW, ORDINANCES, RULES, REGULATIONS OF AUTHORITIES HAVING JURISDICTION, FURNISH CERTIFICATES OF SUCH INSPECTIONS. PAY ALL FEES AND PROVIDE ALL EQUIPMENT, POWER AND LABOR NECESSARY FOR INSPECTIONS AND TEST.
2. PRESSURE TESTS
   A. ALL PIPING SHALL BE GIVEN THE FOLLOWING PRESSURE TEST WITHOUT APPRECIABLE PRESSURE DROP. EQUIPMENT WHICH WOULD BE DAMAGED BY THE REQUIRED TEST PRESSURE SHALL BE ISOLATED FROM THE SYSTEM DURING TESTING.

SERVICE	MEDIUM	(PSI)	HRS.
DOMESTIC WATER	WATER	125	6

   B. SANITARY SEWERS PER STATE PLUMBING CODE AND LOCAL AUTHORITY.

L. HVAC SYSTEMS ADJUSTMENTS AND BALANCE
1. PROVIDE A COMPLETE TEST AND BALANCE OF THE SYSTEMS THAT SERVE THIS SPACE. PLACE ALL HEATING, VENTILATING, AND AIR CONDITIONING SYSTEMS AND EQUIPMENT INTO FULL OPERATION AND CONTINUE OPERATION OF SAME DURING EACH WORKING DAY OF TESTING AND BALANCING. EVERY SUPPLY OUTLET SHALL BE TESTED AND BALANCED TO WITHIN 10% OF AIR QUANTITIES SHOWN. OUTSIDE AIR AND EXHAUST AIR SHALL SHALL BE BALANCED TO WITHIN 5% OF AIR QUANTITIES SHOWN. CFM OFFSETS WHERE CALLED OUT SHALL BE YET WITHIN 5% OF CFM LISTED.
2. THE TEST AND BALANCE SHALL BE PERFORMED BY AN AABC OR NEBB CERTIFIED TEST AND BALANCE CONTRACTOR THAT MUST BE A DIFFERENT COMPANY THAN THE MECHANICAL CONTRACTOR.
3. SUBMIT A CERTIFIED TEST AND BALANCE REPORT TO THE ENGINEER FOR APPROVAL. REPORT SHALL INCLUDE (AT A MINIMUM) THE FOLLOWING:
   A. NAMEPLATE DATA FOR ALL POWERED DEVICES.
   B. DIFFUSER LAYOUT (DRAWING) DEPICTING ALL DIFFUSERS AND EQUIPMENT. DIFFUSER TAGS SHALL SHOW THE INITIAL AND FINAL READINGS OF ALL DIFFUSERS AND GRILLES.
   C. AIRFLOW AT UNIT SUPPLY, RETURN, AND OUTSIDE AIR (IF APPLICABLE) CONNECTIONS.
   D. AIRFLOW AT ALL SUPPLY AIR DIFFUSERS
   E. AIRFLOW AT ALL EXHAUST GRILLES.
   F. AIRFLOW AT OUTSIDE AIR CONNECTIONS.
   G. AIR TEMPERATURE INLET AND OUTLET AT EACH NEW HEATING OR COOLING COIL. DISCHARGE MAY BE RECORDED AT A DIFFUSER OUTLET.
   H. FINAL DIFFUSER READINGS THAT DIFFER FROM THE DRAWINGS BY MORE THAN THE LIMITS ABOVE SHALL BE NOTED IN THE REPORT.
4. EXISTING EQUIPMENT TO REMAIN: THE MECHANICAL CONTRACTOR SHALL THOROUGHLY INSPECT AND TEST THE OPERATION OF THE EACH EXISTING HEATING/COOLING SYSTEM (PRIOR TO TEST & BALANCE) AND SUBMIT ANY REPAIR/REPLACEMENT RECOMMENDATIONS TO THE ENGINEER. TEST AND BALANCE REPORT SHALL INCLUDE EXISTING DIFFUSERS WITH TAGS SHOWING EXISTING AIRFLOW READINGS.

M. INSULATION
1. ALL INSULATION SHALL BE INSTALLED OVER CLEAN DRY SURFACES. INSULATION MUST BE DRY AND IN GOOD CONDITION. WET OR DAMAGED INSULATION WILL NOT BE ACCEPTABLE. NO INSULATION SHALL BE APPLIED PRIOR TO PRESSURE TEST COMPLETION OF THE RESPECTIVE PIPING SYSTEMS.
2. FIBERGLASS PIPE INSULATION SHALL BE INSTALLED WITH JOINTS BUTTED FIRMLY TOGETHER. JACKET LAPS TO BE SEALED WITH FACTORY APPLIED ADHESIVE. BUTT JOINTS TO BE SEALED WITH BUTT STRIPES, HAVING FACTORY APPLIED ADHESIVE VALVES AND FITTINGS SHALL BE INSULATED USING MITERED SECTIONS OF INSULATION, INSULATION CEMENT, OR PRE-MOLDED FITTING INSULATION. THE INSULATION APPLIED TO THE VALVES AND FITTINGS SHALL BE COVERED WITH THE SAME TYPE OF COVERING AS USED ON THE PIPE INSULATION.
3. PROVIDE THE FOLLOWING INSULATION PRODUCTS AS MANUFACTURED BY OUENS-CORNING. INSULATION PRODUCTS AS MANUFACTURED BY ARMSTRONG, CERTAINTEED OR KNAUF ARE ACCEPTABLE. ADHESIVE SHALL BE BENJAMIN FOSTER OR EQUAL.
4. SUPPLY AND OUTSIDE AIR DUCT SHALL BE MINIMUM R=6.0 OR R=8.0 WHEN INSTALLED UNCONDITIONED SPACE. RETURN AIR SHALL BE INSULATED WHEN INSTALLED IN UNCONDITIONED SPACES, OR AS NOTED. EXHAUST DUCT SHALL BE INSULATED WHERE NOTED.
5. MATERIAL: DOMESTIC HOT WATER: 1/2" THICK ASJ/SSL FIBERGLASS. DOMESTIC COLD WATER: 1/2" THICK ASJ/SSL FIBERGLASS. CONDENSATE: ½" THICK ASJ/SSL FIBERGLASS. SUPPLY DUCT: 2" THICK DUCT WRAP WITH AN INSTALLED R-VALUE OF 6.0, UNLESS IN UNCONDITIONED ATTIC THEN R-VALUE OF 8.0. ALL INSULATION SHALL MEET 25/50 FLAME AND SMOKE SPREAD RATING FOR PLENUM APPLICATIONS.
6. EXISTING & NEW PVC OR NON-COMPLIANT PLENUM RATED MATERIALS SHALL BE WRAPPED WITH 3M FIRE BARRIER OR EQUIVALENT PRODUCT OR CONSTRUCTED WITH PLENUM COMPLIANT MATERIALS.

N. DUCTWORK
1. ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN COMPLIANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS (2005 ED. OR LATER).
2. NEW DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL AND INSTALLED AS SHOWN ON THE DRAWINGS. ALL SHEETMETAL DUCT JOINTS & SEAMS (MINIMUM SEAL CLASS B) SHALL BE SEALED WITH TAPES AND MASTICS AS LISTED IN UL STANDARDS 181A AND 181B.
3. LEAKAGE RATE ALLOWANCE SHALL BE THE LESSER OF SMACNA CLASS B LEAKAGE CALCULATION OR 5% OF SYSTEM CFM.
4. LOW PRESSURE FLEXIBLE DUCTWORK SHALL BE LIMITED TO 6' IN LENGTH. FLEXIBLE DUCTS SHALL BE INSTALLED IN A FULLY EXTENDED CONDITION FREE OF SAGS AND KINKS, USING ONLY THE MINIMUM LENGTH REQUIRED TO MAKE THE CONNECTION. FLEXIBLE DUCT SHALL BE LISTED AS A CLASS 1 AIR DUCT AND SHALL COMPLY WITH UL STANDARD 181, NFPA 90A & B. DUCT SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25, A MAXIMUM SMOKE RATING OF 50, SHALL BE RATED FOR POSITIVE PRESSURE OF 10"(W.C.) AND NEGATIVE PRESSURE OF 1/2"(W.G.). INSULATION SHALL BE A MINIMUM OF 2" THICK ¾" PCF DENSITY FIBERGLASS WITH A MINIMUM VALUE OF R=6.0. FLEXIBLE DUCT SHALL BE THERMAFLEX TYPE M-KE, FLEXMASTER TYPE 8M, OR EQUAL.
5. EXISTING FLEXIBLE DUCT: REPAIR TORN OR DAMAGED VAPOR BARRIER/JACKET WITH DUCT TAPES LISTED AND LABELED TO UL 181B. IF INTERNAL CORE IS PENETRATED, REPLACE FLEXIBLE DUCT OR TREAT AS A SPLICE.
6. ELBOWS 45 DEGREES & GREATER IN ALL DUCT SYSTEMS MUST BE EITHER FULL-RADIUS OR MITERED WITH TURNING VANES.

O. MATERIALS
1. PIPE AND FITTINGS DOMESTIC WATER - TYPE "L" HARD COPPER.
2. CONDENSATE PIPING - TYPE "M" OR DWV COPPER TUBING, NO-HUB CAST IRON, OR PVC (EXCEPT IN RETURN AIR PLENUMS)
3. WASTE & DRAIN PIPING (ABOVE GROUND INTERIOR): NO-HUB CAST IRON. BUILDING SEWERS & DRAINS (UNDERGROUND): SANITARY SEWERS SHALL BE SERVICE WEIGHT CAST IRON, BELL & SPIGOT, SOIL PIPE WITH TYLER "TY-SEAL" NEOPRENE PIPE GASKETS.
4. GAS PIPING SHALL BE PAINTED YELLOW, OR AS LANDLORD REQUIRES.

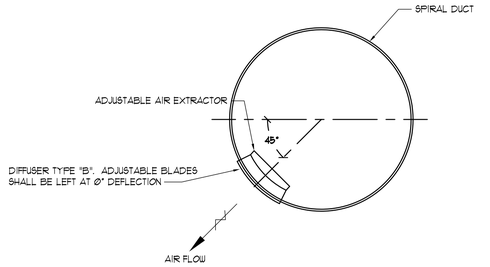
P. WASTE SYSTEMS
1. RUN ALL DRAINAGE PIPING AS DIRECT AS POSSIBLE. ACTUAL LOCATION OF DRAINS AND WASTE PIPING SHALL MEET THE VARIOUS BUILDING CONDITIONS. DO ANY WORK NECESSARY TO CONCEAL PIPING OR CLEAR PIPING OF OTHER TRADES.
2. HUB DRAINS SHALL BE PROVIDED WITH TRAP PRIMER.
3. WASTE PIPING SHALL BE SLOPED AT A MINIMUM OF 1/4" PER FOOT FOR PIPE SIZES 2-1/2" OR LESS, 1/8" PER FOOT FOR PIPE SIZES 3" TO 6" AND 1/16" PER FOOT FOR PIPE SIZES 8" OR GREATER.
4. CONDENSATE PIPING SHALL BE SLOPED AT A MINIMUM OF 1/8" PER FOOT.

Q. VALVES
1. VALVES IN WATER PIPING: BALL VALVES WITH SCREWED ENDS, MIN. 150 LBS, SWP. VALVES USED FOR SHUT-OFF AND BALANCING SHALL BE EQUIPPED WITH MEMORY STOP.

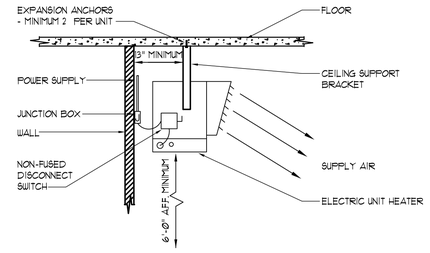
R. WIRING
1. ALL WIRING INCIDENTAL TO THIS TEMPERATURE CONTROL SYSTEM SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR.
2. THE TERM "WIRING" SHALL BE CONSTRUED TO INCLUDE FURNISHING OF WIRE, CONDUIT, MISCELLANEOUS MATERIALS AND LABOR AS REQUIRED FOR MOUNTING AND CONNECTING ELECTRICAL CONTROL DEVICES, AND CONNECTING ELECTRICAL DEVICES, AND PROVIDING ELECTRICAL INTERLOCKS BETWEEN EQUIPMENT.

S. EQUIPMENT
1. SEE SCHEDULES ON DRAWING.
2. THE BASIS OF DESIGN INDICATED ON ALL SCHEDULES CONTAINED ON THESE DRAWINGS INDICATES MINIMUM QUALITY AND CONSTRUCTION STANDARDS. ALTERNATE MANUFACTURERS EQUIPMENT MAY BE USED SO LONG AS THE EQUIPMENT / DEVICE MEETS OR EXCEEDS THE QUALITY OF THE BASIS OF DESIGN. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING SPACE REQUIREMENT FOR ALTERNATE EQUIPMENT.

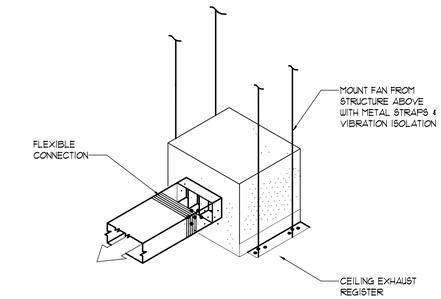
T. CONTROLS
1. SEE SCHEDULE SHEET FOR CONTROLS REQUIREMENTS.
2. THERMOSTATS SHALL BE 7-DAY PROGRAMMABLE.



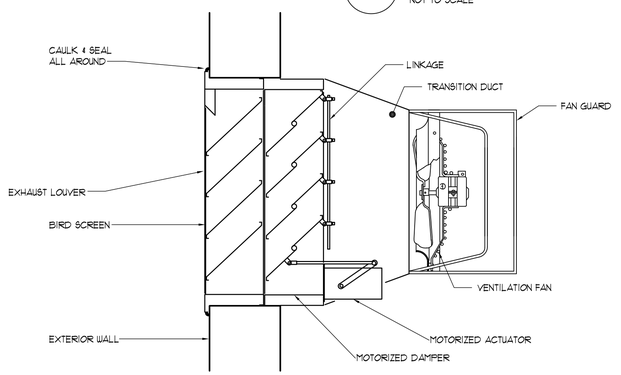
1 TYPICAL SHOP ROOM DIFFUSER DETAIL
NOT TO SCALE



2 ELECTRIC UNIT HEATER MOUNTING DETAIL
NOT TO SCALE



3 CEILING EXHAUST FAN DETAIL
NOT TO SCALE



4 WALL MOUNTED FAN W/ MOTORIZED DAMPER DETAIL
NOT TO SCALE
NOTE: SUPPORT DUCTWORK AND FAN AS NECESSARY

M. DeCARLO
ARCHITECTURE
2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

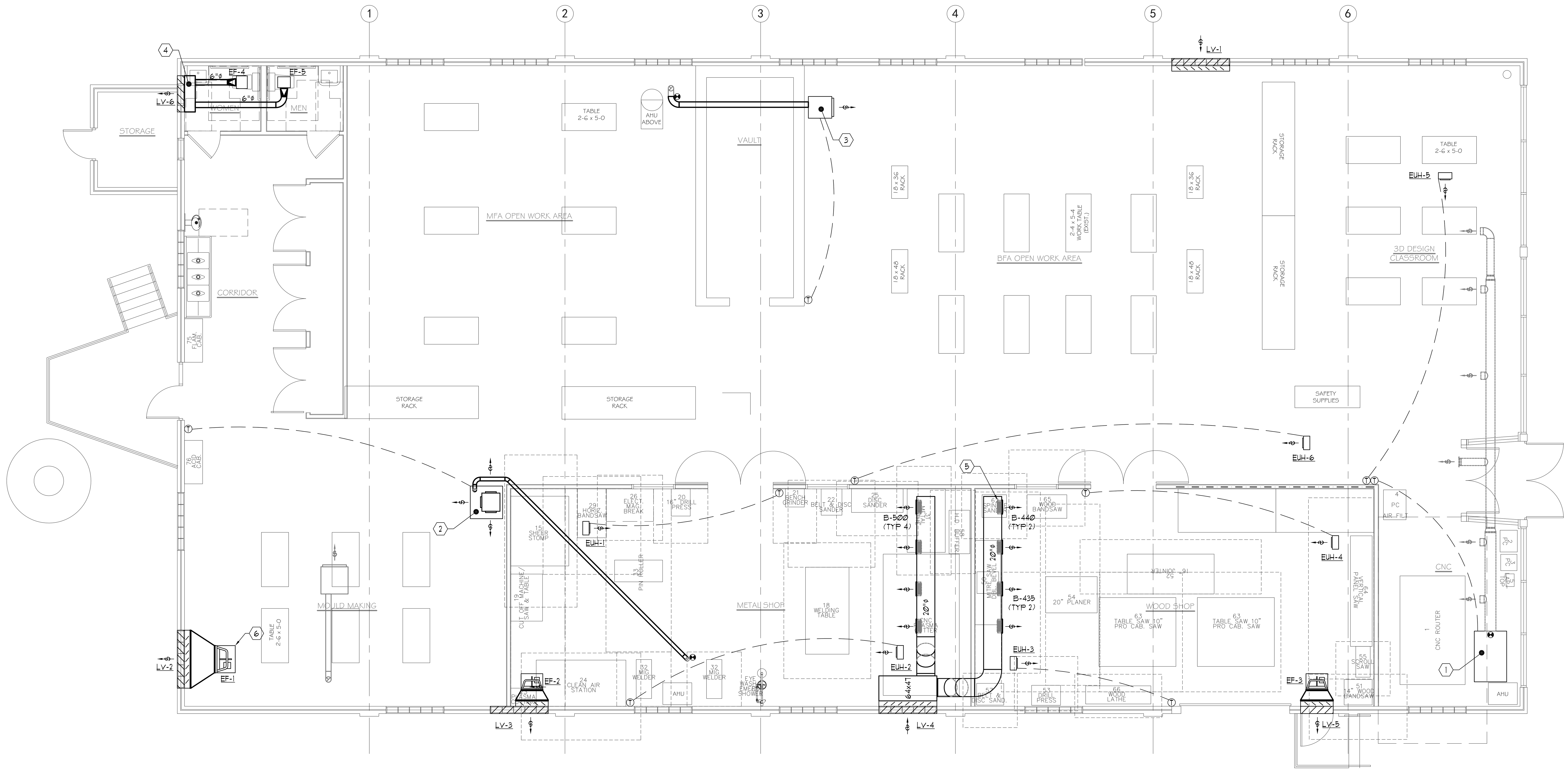
Drawing Record:

DETAILS & SPECIFICATIONS - MECHANICAL

M0.2

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

NOT RELEASED FOR CONSTRUCTION



NORTH

FLOOR PLAN - HVAC

SCALE: 3/16" = 1'-0"

GENERAL NOTES:

- SEE M0.1 FOR MECHANICAL LEGEND, SYMBOLS, & ABBREVIATIONS.
- DETAILS ARE APPLICABLE EVEN IF THEY ARE NOT DIRECTLY REFERENCED.

KEY NOTES:

1. SUSPEND UNIT FROM CEILING. MODIFY REFRIGERANT LINES FOR NEW LOCATION. RELOCATE CONDENSATE PUMP WITH UNIT AND CONNECT TO EXISTING DUCTWORK. RELOCATE UNIT THERMOSTAT AS SHOWN. SEE 1/MD1.0 FOR PREVIOUS LOCATION.
2. RELOCATED AIR HANDLER AND FURNACE. MODIFY REFRIGERANT LINES, FLUE, AND GAS PIPING FOR NEW LOCATION. RELOCATE CONDENSATE PUMP WITH UNIT. RELOCATE UNIT THERMOSTAT AS SHOWN. BUILD 20X20 SUPPLY AIR PLENUM ON COIL BOX DISCHARGE WITH THREE "A" DIFFUSERS. SEE 1/MD1.0 FOR PREVIOUS LOCATION.
3. RELOCATED CEILING SUSPENDED GAS HEATER. MODIFY FLUE AND GAS PIPING TO ACCOMMODATE LOCATION SHOWN. RELOCATE THERMOSTAT AS SHOWN. SEE 1/MD1.0 FOR PREVIOUS LOCATION.
4. 40X20 PLENUM 12" DEEP OFF LV-6. TAP TWO (2) 6"ø EXHAUST DUCTS IN TO PLENUM.
5. SEE DETAIL 1/M0.2 FOR DIFFUSER INSTALLATION DETAIL (TYP).
6. PROVIDE OSHA SAFETY CAGE ROUND PROP FAN MOTOR (TYP).

M. DeCARLO
ARCHITECTURE

2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678 . 595 . 9002
E-mail: mike@mdecarlo.com

MACALLAN®
CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

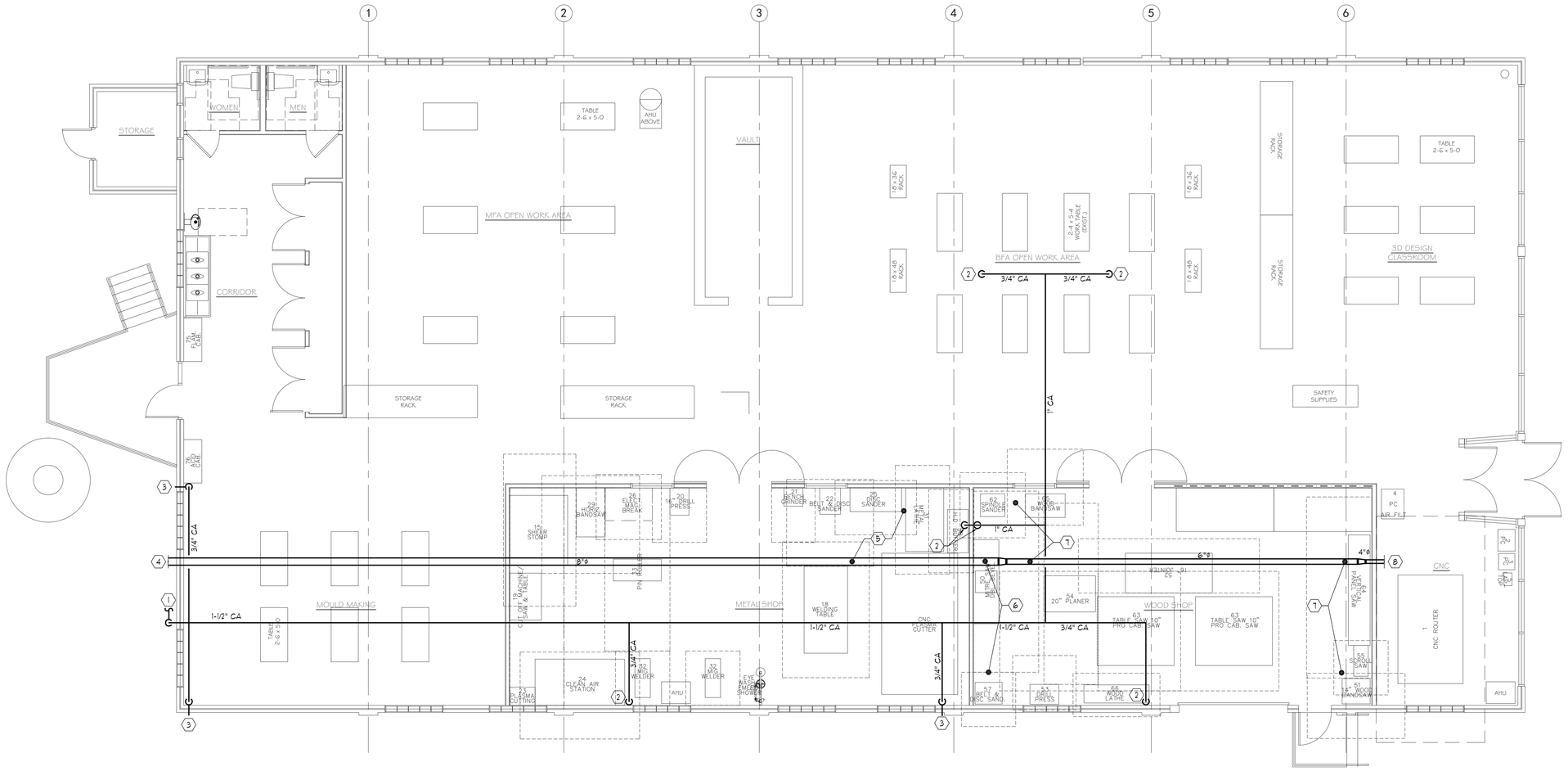
FLOOR PLAN -

HVAC

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

M1.0

NOT RELEASED FOR CONSTRUCTION



NORTH

FLOOR PLAN - COMPRESSED AIR & VACUUM

SCALE: 3/16" = 1'-0"

GENERAL NOTES:

- SEE MØ.1 FOR MECHANICAL LEGEND, SYMBOLS, & ABBREVIATIONS.
- DETAILS ARE APPLICABLE EVEN IF THEY ARE NOT DIRECTLY REFERENCED.

KEY NOTES:

1. 1-1/2" CA TO RELOCATED AIR COMPRESSOR, FILTERS AND DISTRIBUTION HEADER AND VALVES.
2. 3/4" QUICK CONNECT AT CEILING. PROVIDE ISOLATION VALVE IN DROP.
3. EXTERIOR RATED 3/4" QUICK CONNECT. PROVIDE ISOLATION VALVE IN DROP.
4. 8" RD VACUUM TO RELOCATED DUST COLLECTOR. DUCT MATERIAL SHALL MATCH EXISTING TYPE.
5. CONTRACTOR SHALL RELOCATE EXISTING METAL SHOP DUST COLLECTOR DROP AND "Y" FITTINGS AND INTEGRATE TO NEW 8"ø VACUUM MAIN.
6. CONTRACTOR SHALL RELOCATE EXISTING WOOD SHOP DUST COLLECTOR DROP AND "Y" FITTINGS AND INTEGRATE TO NEW 8"ø VACUUM MAIN.
7. CONTRACTOR SHALL RELOCATE EXISTING WOOD SHOP DUST COLLECTOR DROP AND "Y" FITTINGS AND INTEGRATE TO NEW 6"ø VACUUM MAIN.
8. 4"ø VACUUM TO CNC.

M. DeCARLO
ARCHITECTURE

2470 H.L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

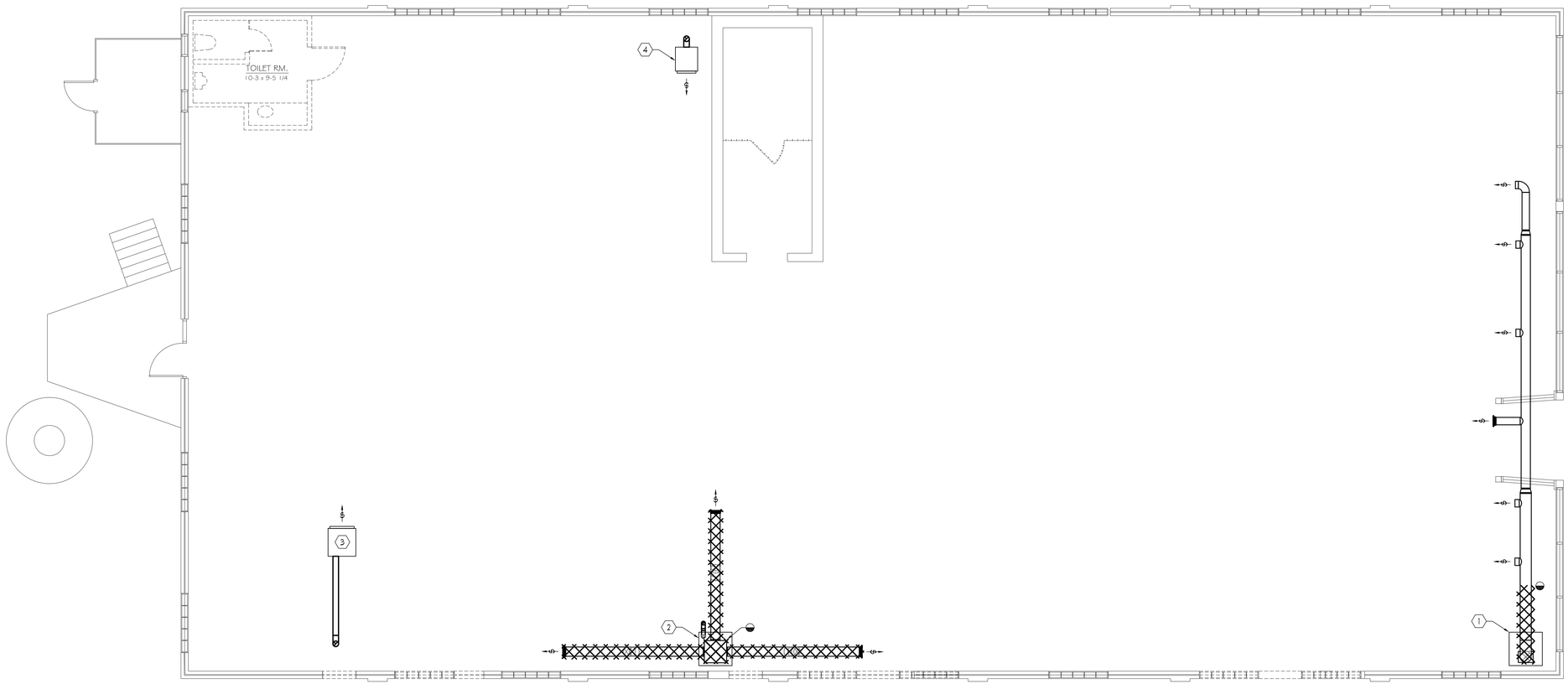
Drawing Record:

FLOOR PLAN - COMPRESSED AIR & VACUUM

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

M2.0

NOT RELEASED FOR CONSTRUCTION



NORTH

DEMOLITION PLAN - HVAC

SCALE: 3/16" = 1'-0"

GENERAL NOTES:

- SEE M0.1 FOR MECHANICAL LEGEND, SYMBOLS, & ABBREVIATIONS.

ITEMS UNDERNEATH HATCHING TO BE DEMOLISHED.

DEMOLITION NOTES:

1. VERTICAL AIR HANDLING UNIT TO BE SUSPENDED FROM CEILING. DEMOLISH DUCT AT UNIT CONNECTION AND RECONNECT TO EXISTING SUPPLY DUCT. SEE 1/M1.0 FOR NEW UNIT LOCATION.
2. UNIT TO BE RELOCATED. DEMOLISH ASSOCIATED DUCTWORK. SEE 1/M1.0 FOR NEW LOCATION.
3. CEILING SUSPENDED GAS FIRED HEATER EXISTING TO REMAIN.
4. CEILING SUSPENDED GAS FIRED HEATER TO BE RELOCATED. SEE 1/M1.0 FOR NEW LOCATION.

M. DeCARLO
ARCHITECTURE

2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN
CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

DEMOLITION PLAN - HVAC

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

MD1.0

NOT RELEASED FOR CONSTRUCTION

LEGEND - PLUMBING

	A/C	ABOVE CEILING
	AD	AREA DRAIN
	AFG	ABOVE FINISHED GRADE
	AFF	ABOVE FINISHED FLOOR
	A/F	ABOVE FLOOR
	BC	BALANCING COCK OR VALVE
	B/F	BELOW FLOOR
	BFF	BELOW FINISHED FLOOR
	BFG	BELOW FINISHED GRADE
	BFP	BACKFLOW PREVENTER ASSEMBLY
	B/G	BELOW GRADE
	CO	CLEANOUT
	CA	COMPRESSED AIR
CW	CW	DOMESTIC COLD WATER
	CV	CHECK VALVE
		CONNECT TO EXISTING
		CONTINUE TO DESIGNATED LOCATION
	DD	DECK DRAIN
		DIRECTION OF FLOW IN PIPE
		DIRECTION OF PITCH OF PIPE
	ERD	EMERGENCY ROOF DRAIN
EST	EST	EMERGENCY STORM WATER
	FA	FRESH AIR
	FAV	FRESH AIR VENT
	FD	FLOOR DRAIN
	FCO	FLOOR CLEANOUT
	FS	FLOOR SINK
G	G	NATURAL GAS PIPING
	GV	GATE VALVE
	HD	HUB DRAIN
	HB	HOSE BIBB OR DRAIN VALVE
HW	HW	DOMESTIC HOT WATER
HWR	HWR	HOT WATER RECIRCULATE
	I.E.	INVERT ELEVATION
	NFWH	NON FREEZE WALL HYDRANT
		P-TRAP
		PIPING UP
		PIPING DOWN
		PIPING STUB OUT / CAPPED
		PIPING TEE
P-1		PLUMBING FIXTURE DESIGNATION
	PRV	PRESSURE REDUCING VALVE
		PRESSURE GAUGE WITH GAUGE COCK
1		REFER TO PLUMBING KEYNOTES
	RD	ROOF DRAIN
	RPZ	REDUCED PRESSURE ZONE (BFP)
S OR W	S OR W	SANITARY OR WASTE PIPING BELOW FLOOR OR GRADE
S OR W	S OR W	SANITARY OR WASTE ABOVE GROUND
ST	ST	STORM WATER
		STRAINER
T & P	T & P	TEMPERATURE AND PRESSUER RELIEF VALVE
	T & B	TEXT & BALANCE
	TMV	THERMOSTATIC MIXING VALVE
TP	TP	TRAP PRIMER
		THERMOMETER
		UNION
V	V	VENT PIPING
VTR	VTR	SANITARY VENT THROUGH ROOF
WHA	WHA	WATER HAMMER ARRESTOR (P.D.I SIZE)
WCO	WCO	WALL CLEANOUT
YCO	YCO	YARD CLEANOUT

ELECTRIC WATER HEATER SCHEDULE

TAG	TANK (GAL.)	NO. OF HEATERS	TOTAL KW	V/Ø	RECOVERY (GPH)	TEMP. RISE (°F)	MINIMUM FLOW (GPM)	SUPPLY (°F)	MANUF. & MODEL NO.	REMARKS
WH-1	50	6	36	208/3	184	80°	N/A	140°	AO SMITH: DRE-52-36	①

① PROVIDE HEATERS WITH SIMULTANEOUS OPERATION.

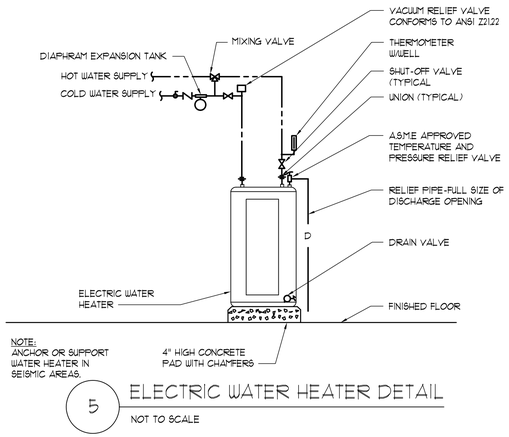
MIXING VALVE SCHEDULE

TAG	MIN. FLOW (GPM)	DESIGN FLOW (GPM)	MAX. PD (PSI)	ENT. WATER TEMP. (°F)	LVG. WATER TEMP. (°F)	MANUF. & MODEL N°.	NOTES
MV-1	3	20	10	140°	80°	LEONARD: TM-850	①②

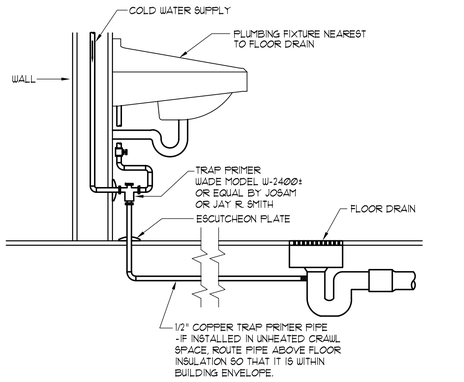
NOTES:
① TRANSITION TO PIPE SIZES SHOWN ON DRAWING @ VALVE INLET/OUTLET
② ANSI Z358.1 COMPLIANT.

PLUMBING FIXTURE SCHEDULE

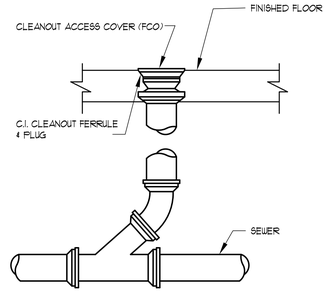
TAG	FIXTURE	CW	HW	WASTE	VENT	SPECIFICATION
P-1	WATER CLOSET	1"	N/A	4"	2"	KOHLER MODEL K-3519, 1.0 GPF, W/ PRESS. ASSIST. FLOOR MTD. W/ SEAT & SUPPLY STOPS. ADA COMPLIANT INSTALLATION.
P-2	LAVATORY - WALL HUNG	1/2"	1/2"	2"	1-1/2"	KOHLER K-7128 WALL MOUNTED LAVATORY W/ MOEN 8422FDS (0.5 GPM) FAUCET, POINT OF USE MIXING VALVE (110°F), GRID STRAINER 1-1/4" X 1-1/2" P-TRAP, INSULATION KIT, SUPPLY STOPS & ADA COMPLIANT INSTALLATION
P-3	DRINKING FOUNTAIN - ADA	1/2"	N/A	1-1/4"	2"	OASIS MODEL PBAC WALL MTD. DRINKING FOUNTAIN. P-TRAP & SUPPLY STOP. W/ ELECTRIC WATER COOLERS. ADA COMPLIANT INSTALLATION.
P-4	3 COMPARTMENT SINK	(2) 1/2"	(2) 1/2"	(4) 1-1/2"	N/A	THREE COMPARTMENT SINK WITH FAUCETS RELOCATED FROM EXISTING BUILDING. POINT OF USE MIXING VALVE (110°F)
P-5	EMERGENCY SHOWER/EYEWASH	1-1/4"	1-1/4"	N/A	N/A	SPEAKMAN SE-1200 FREESTANDING DELUGE SHOWER WITH YELLOW PULL ROD AND EYEWASH/ FACEWASH WITH HAND LEVER. PROVIDE WITH SE-362 TEPID WATER MIXING VALVE, ANSI Z358.1 COMPLIANT, ADA COMPLIANT INSTALLATION.
FD	FLOOR DRAIN	N/A	N/A	3"	N/A	JR SMITH 2000 WITH 6" TYPE B SQUARE ADJUSTABLE STRAINER WITH SATIN NICKEL BRONZE FINISH. PROVIDE WITH VANDAL PROOF SECURED TOP AND TRAP PRIMER
FS	FLOOR SINK	1/4"	N/A	3"	2"	JR SMITH 3000 8" WITH SQUARE REMOVABLE GRATE WITH SATIN STAINLESS STELL FINISH PROVIDE WITH TRAP PRIMER
WCO	WALL CLEAN OUT	N/A	N/A	N/A	N/A	JR SMITH 4710 OR 4715 STAINLESS STEEL SHALLOW COVER OR CHROME PLATED BRONZE DEEP COVER WITH CENTER SCREW.
PT	PLASTER TRAP	N/A	N/A	1-1/2"	N/A	FLOOR MOUNTED PLASTER TRAP. SPILL TO FLOOR SINK W/ AIR GAP. ENDURA 3910PAIS OR SIMILAR.



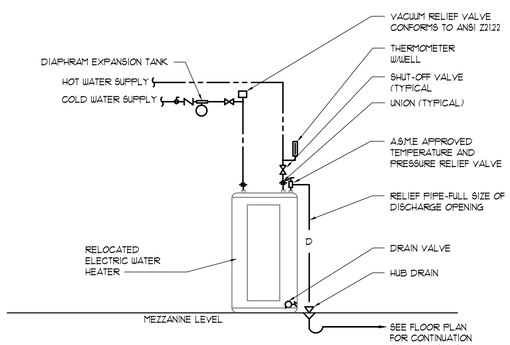
5 ELECTRIC WATER HEATER DETAIL
NOT TO SCALE



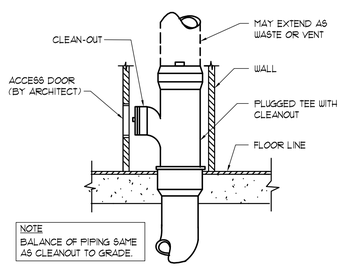
3 FLOOR DRAIN TRAP PRIMER DETAIL
NOT TO SCALE



1 CLEANOUT DETAIL
NOT TO SCALE



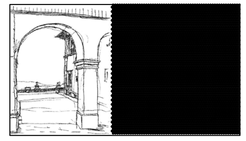
4 ELECTRIC WATER HEATER DETAIL
NOT TO SCALE



2 WALL CLEANOUT DETAIL
NOT TO SCALE

GENERAL NOTES:
SEE MECHANICAL SHEETS FOR GENERAL PLUMBING NOTES & SPECIFICATIONS

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com



M. DeCARLO
ARCHITECTURE
2470 H.L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

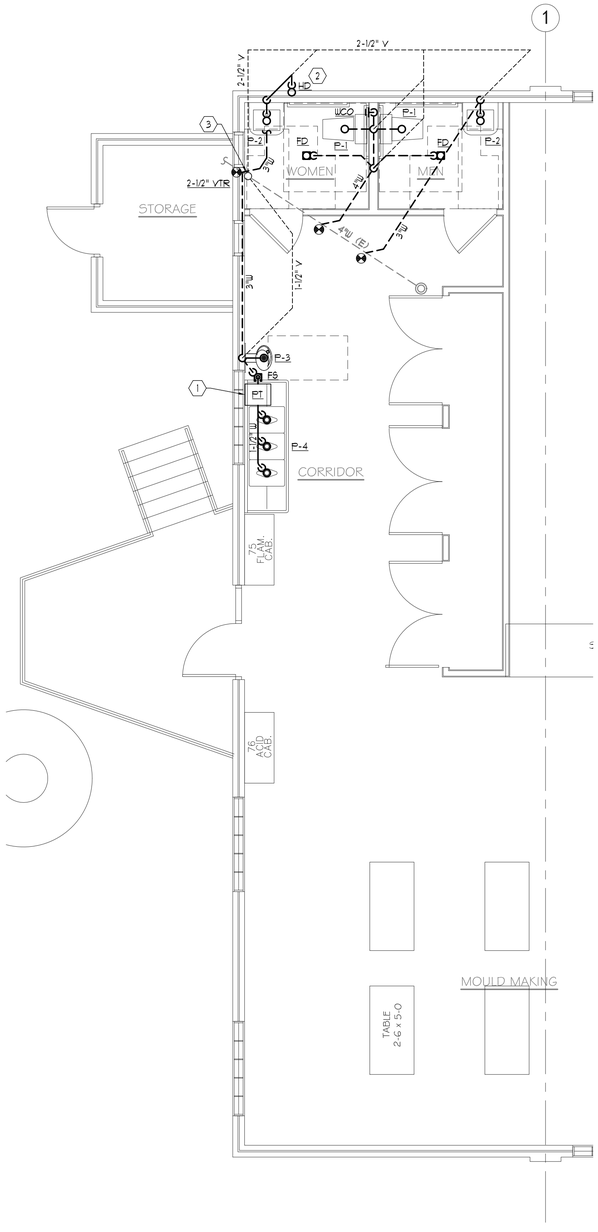
Job Number 1433

Drawing Record:

SCHEDULES, DETAILS & NOTES - PLUMBING

P0.1

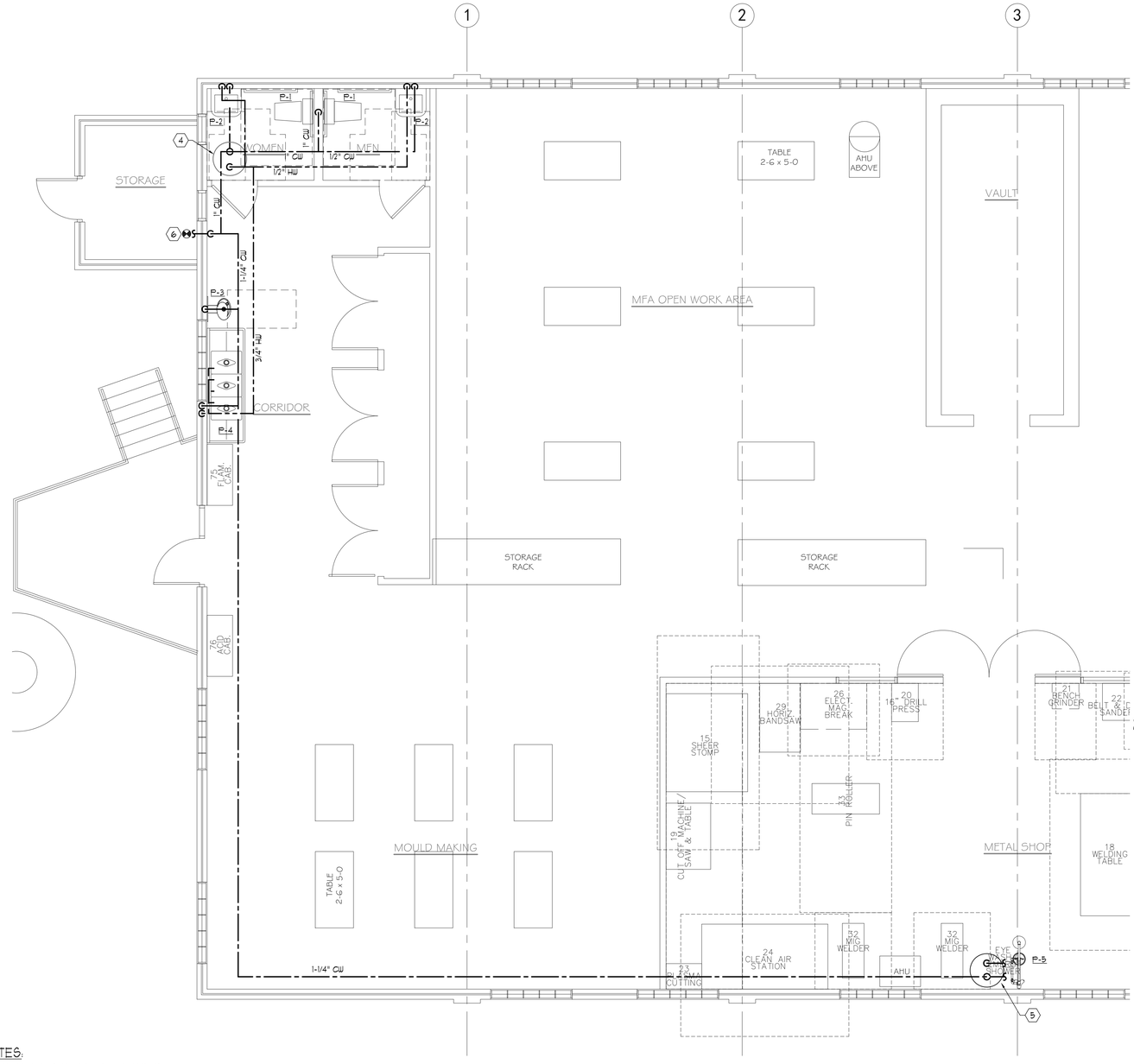
NOT RELEASED FOR CONSTRUCTION



2 FLOOR PLAN - WASTE & VENT

SCALE: 1/4" = 1'-0"

NORTH



1 FLOOR PLAN - DOMESTIC WATER

SCALE: 1/4" = 1'-0"

NORTH

GENERAL NOTES:

- SEE P0.1 FOR PLUMBING LEGEND, SYMBOLS, & ABBREVIATIONS.
- DETAILS ARE APPLICABLE EVEN IF THEY ARE NOT DIRECTLY REFERENCED.

KEY NOTES:

1. PLASTER TRAP LOCATED BELOW SINK. ROUTE TRAP DISCHARGE TO FLOOR SINK W/ AIR GAP.
2. LOCATE HUB DRAIN ABOVE BATHROOM CEILING/AT MEZZANINE FOR RELOCATED WATER HEATER DRAIN. PROVIDE TRAP PRIMER.
3. 2-1/2" VENT THROUGH ROOF. UTILIZE EXISTING VENT PENETRATION FROM PREVIOUS BATHROOM GROUP.
4. RELOCATED WATER HEATER. SEE 1/P0.0 FOR PREVIOUS LOCATION & 4/P0.1 FOR DETAIL.
5. 1-1/4" CW & HW TO P-5. SEE DETAIL 5/P0.2 FOR WH-1 & MV-1 CONNECTION.
6. 1-1/2" CW TO EXISTING BUILDING SUPPLY.

M. DeCARLO
ARCHITECTURE

2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

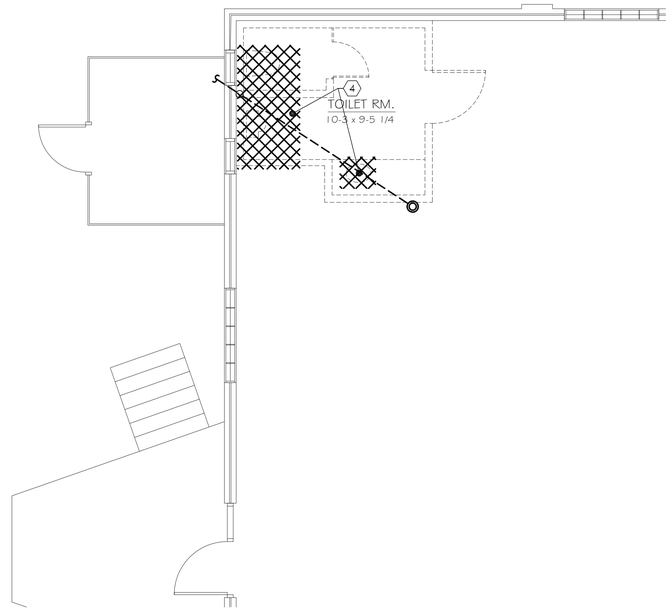
Drawing Record:

FLOOR PLAN - PLUMBING

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

P1.0

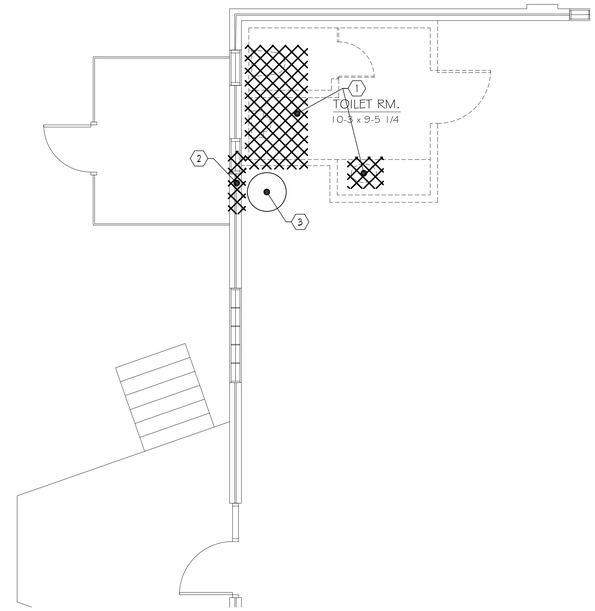
NOT RELEASED FOR CONSTRUCTION



2 DEMOLITION PLAN - WASTE & VENT

SCALE: 1/4" = 1'-0"

NORTH



1 DEMOLITION PLAN - DOMESTIC WATER

SCALE: 1/4" = 1'-0"

NORTH

GENERAL NOTES:

- SEE P0.1 FOR PLUMBING LEGEND, SYMBOLS, & ABBREVIATIONS.

ITEMS UNDERNEATH HATCHING TO BE DEMOLISHED.

DEMOLITION NOTES:

1. DEMOLISH BATHROOM GROUP AND ASSOCIATED PIPING BACK TO WATER HEATER.
2. DEMOLISH DOMESTIC WATER BACK TO BUILDING ENTRANCE INCLUDING HOSE BIBB.
3. WATER HEATER TO BE RELOCATED ON NEW MEZZANINE ABOVE BATHROOMS. SEE 1/P1.0 FOR NEW LOCATION.
4. CONTRACTOR SHALL VERIFY SANITARY ROUTING AND DEMOLISH BATHROOM GROUP TO EXISTING SANITARY MAIN.

M. DeCARLO
ARCHITECTURE

2470 H. L. Williams Drive NE
Atlanta, Georgia 30317
Telephone: 678.595.9002
E-mail: mike@mdecarlo.com

MACALLAN
CONSTRUCTION

Renovation to

Sculpture Building

for

Georgia State University

246 Edgewood Avenue
Atlanta, Georgia

Job Number 1433

Drawing Record:

DEMOLITION PLAN - PLUMBING

CONWAY & OWEN
Mechanical • Electrical • Plumbing
1455 Bluegrass Lakes Pkwy.
Alpharetta, Ga 30004
P: (678)350-9000 F: (678)350-9010
www.Conway-Owen.com

PD1.0

NOT RELEASED FOR CONSTRUCTION