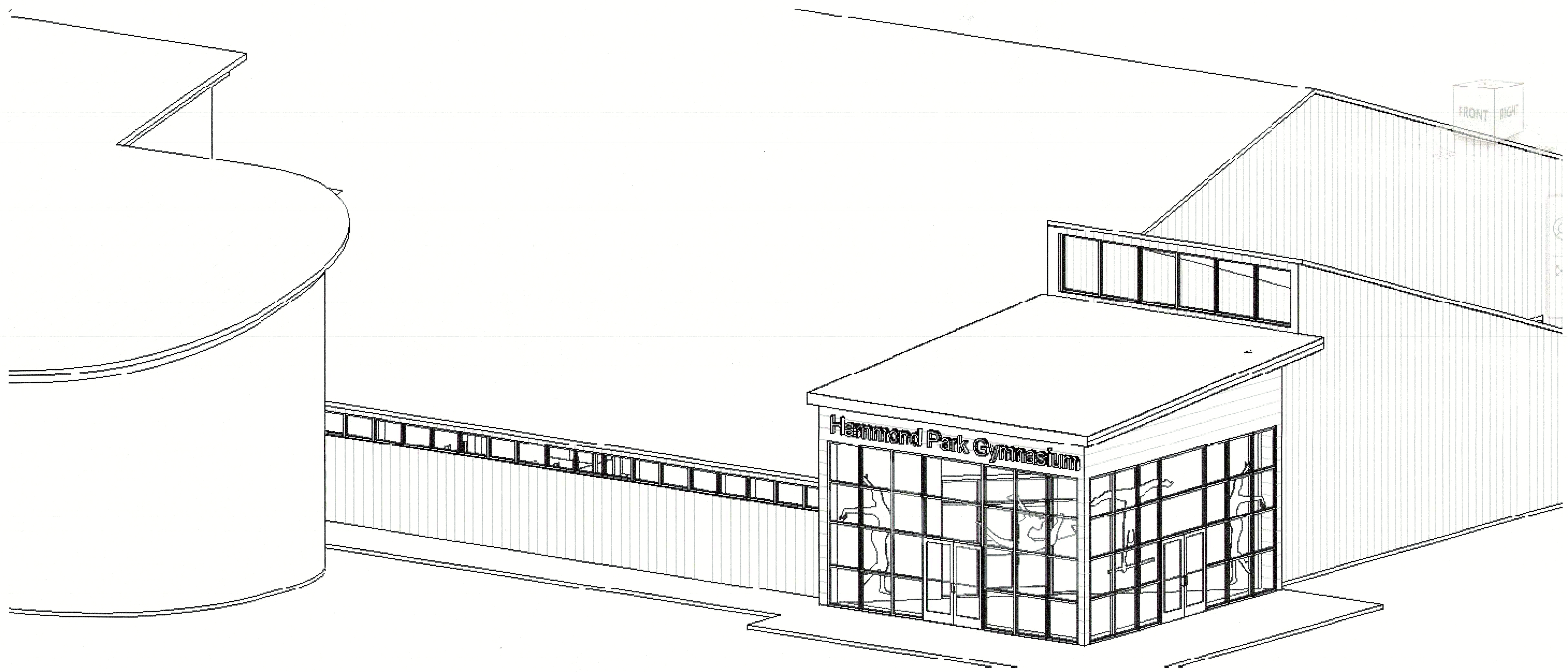

_HAMMOND PARK RECREATION CENTER RENOVATION

705 HAMMOND DRIVE, SANDY SPRINGS, GA 30328

PHASE II

GOODWYN MILLS & CAWOOD, INC — ARCHITECTURE, INTERIORS, CIVIL, LANDSCAPE

PES STRUCTURAL ENGINEERS — STRUCTURAL ENGINEERING

BARRETT WOODYARD & ASSOCIATES — MECHANICAL, ELECTRICAL, & PLUMBING ENGINEERING

PERMITTED
BUILDING PERMIT
SANDY SPRINGS, GA COMMUNITY DEVELOPMENT DEPARTMENT
BY ___ DATE 10 MAY 2019

STATE OF GEORGIA
RA014416
04/10/2019
REGISTERED ARCHITECT

GOODWYN | MILLS | CAWOOD
6120 Powers Ferry Road NW, Suite 350 | Atlanta, GA 30339
Tel 770.952.2481 GMCNETWORK.COM

BC19-00162

ISSUE	DATE
Owner Review Set	12/21/2018
Permit Set / IFC	04/10/2019

RECEIVED PERMITS DEPT APR 17 2019 CITY OF SANDY SPRINGS

drawn by: JT
checked by: NN

Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

705 HAMMOND DRIVE

TITLE SHEET

T1

sheet 1 of 6

4/11/2019 10:00:14 AM

GENERAL NOTES

DIVISION NOTES:

A. DIVISION 1 – GENERAL REQUIREMENTS:

1.01. COMPLETE CONTRACT DOCUMENTS: THE COMPLETE DRAWINGS, SPECIFICATIONS, ADDENDA, AND CLARIFICATIONS ISSUED BY FIELD ORDER OF SIMILAR INSTRUMENTS CONSTITUTE THE CONTRACT DOCUMENTS AND SHALL REMAIN INTACT. THE GENERAL CONTRACTOR IS FULLY RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS INCLUDED, OR REASONABLE INFERRED THEREIN. THE CONSTRUCTION MANAGER OR GENERAL CONTRACTOR (AS APPLICABLE) MUST NOT ISSUE PARTIAL SETS OR OTHERWISE CAUSE INCOMPLETE CONTRACT INFORMATION TO BE PROVIDED TO PARTIES TO THE CONTRACT, INCLUDING ASSOCIATED SUB-CONTRACTORS, OR SUB-SUB-CONTRACTORS.

1.02. MULTI-TRADE COORDINATION: ALL WORK SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES TO AVOID INTERFERENCES AND CONFLICTS. SUB-CONTRACTORS SHALL WORK TOGETHER IN THE REVIEW OF WORK AND COORDINATION OF SYSTEMS IN PLENUM AREAS, AND OTHER LOCATIONS WHERE CAREFUL COORDINATION IS NECESSARY TO ERECT THE WORK IN LIMITED SPACES. **NO ALLOWANCES WILL BE MADE FOR THE FAILURE TO COORDINATION BETWEEN DISCIPLINES, SYSTEMS OR EQUIPMENT. UNCOORDINATED WORK THAT RESULTS IN THE INEFFICIENT USE OF AVAILABLE SPACE MAY BE SUBJECT TO REJECTION OF INSTALLED WORK.** WHERE COMPLEXITY OF THE INSTALLED WORK OR WHERE WORK INSTALLED IN COMPACT SPACES NECESSITATES CAREFUL COORDINATION FOR SUCCESSFUL INSTALLATION, THE GENERAL CONTRACTOR IS STRONGLY ENCOURAGED TO UNDERTAKE A SYSTEMS COORDINATION PROGRAM THAT INCLUDES THREE-DIMENSIONAL MODELING OF THE REQUIRED WORK PRIOR TO INSTALLATION, WHETHER OR NOT REQUIRED ELSEWHERE BY THE CONTRACT DOCUMENTS.

1.03. VERIFICATION: THE GENERAL CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, CONSTRUCTION, MATERIALS, METHODS OF CONSTRUCTION, GRADES AND ELEVATIONS; AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR CONFLICTS WITHIN THE DOCUMENTS PRIOR TO BID, CONSTRUCTION, AND/OR INSTALLATION OF ASSOCIATED WORK. COMMENCEMENT OF WORK CONSTITUTES ACCEPTANCE THAT THE EXISTING CONDITIONS ARE CONSISTENT WITH THOSE OF THE CONTRACT DOCUMENTS. ANY CHANGE ORDER REQUEST ASSOCIATED WITH AN IDENTIFIABLE EXISTING CONDITION, WHETHER IN CONFLICT OR COMPLIANCE WITH THE CONTRACT DOCUMENTS, WILL NOT BE ACCEPTED. THIS PROVISION SHALL NOT APPLY TO WORK PERFORMED UNDER UNIT PRICE OR ALLOWANCE FEE STRUCTURES.

1.04. DISCREPANCIES: THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT PROMPTLY UPON IDENTIFICATION OF ANY DISCREPANCIES OR CONFLICTS IN THE CONTRACT DOCUMENTS, WITH THE OBJECTIVE OF RESOLVING THE CONFLICT OR DISCREPANCY IN A TIMELY MANNER AND PRIOR TO ANY IMPACT TO THE CONTRACT TIME OR PRICE. THE GENERAL CONTRACTOR SHALL INCLUDE THE MORE EXPENSIVE, COMPLEX, AND TIME CONSUMING COMPONENTS OF ANY DISCREPANCIES IN THE BASE BID PRICE. FAILURE TO NOTIFY THE ARCHITECT PROMPTLY OF A KNOWN DISCREPANCY CONSTITUTES ACCEPTANCE OF FULL RESPONSIBILITY FOR THE ASSOCIATED COST AND SCHEDULE IMPACT.

1.05. DRAWING SCALE: REPROGRAPHIC TECHNIQUES MAY RENDER DRAWINGS DIFFERENTLY THAN THE INTENDED PRINTED SCALE. THEREFORE, DO NOT RELY UPON THE SCALE OF ANY PRINTED DRAWINGS. CONTACT THE ARCHITECT FOR REQUIRED DIMENSIONS THAT ARE NOT PROVIDED CLEARLY IN NUMERIC FORM HEREIN. FAILURE TO REQUEST CRITICAL DIMENSIONAL INFORMATION FROM THE ARCHITECT MAY RESULT IN THE REJECTION OF INSTALLED WORK.

1.06. DIMENSIONAL STANDARDS: STANDARD DIMENSION CONVENTIONS UTILIZED HEREIN CALL FOR DIMENSIONS TO FACE OF STUD (MASONRY) OF FINISHED PARTITION, FACE OF FINISH, OR CENTERLINE OF COLUMN LINE OR OTHER REFERENCE LINE, UNLESS OTHERWISE NOTED OR GRAPHICALLY ILLUSTRATED. DIMENSIONS NOTED AS "CLEAR", "MIN", OR "MAX" SHALL BE STRICTLY ENFORCED.

1.07. (PM SOFTWARE)

1.08. PERMITTING: THE GENERAL CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY AND REQUIRED PERMITS AND APPROVALS FROM JURISDICTIONAL AUTHORITIES, PRIOR TO COMMENCING THE WORK. THIS REQUIREMENT SHALL APPLY TO ON-SITE AND OFF-SITE WORK REQUIRED BY THE CONTRACT DOCUMENTS.

1.09. CODE COMPLIANCE: THE WORK SHALL BE PERFORMED IN STRICT COMPLIANCE WITH ALL APPLICABLE LAWS, CODES, AND ORDINANCE. THE GENERAL CONTRACTOR AND SUB-CONTRACTORS SHALL PERFORM THEIR WORK IN COMPLIANCE WITH ALL APPLICABLE BUILDING CODES, LAWS, REGULATIONS, AND ORDINANCES. GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL CAREFULLY READ AND FAMILIARIZE THEMSELVES WITH THE CODE COMPLIANCE DATA INCLUDED IN THE DRAWINGS AND SPECIFICATIONS.

1.10. NON-COMBUSTIBLE CONSTRUCTION TYPES: THE PROPOSED BUILDING STRUCTURE IS NON-COMBUSTIBLE IN ACCORDANCE WITH APPLICABLE CODES, AND THEREFORE REQUIRES NON-COMBUSTIBLE CONSTRUCTION TECHNIQUES. ALL NEW CONSTRUCTION SHALL BE IN COMPLIANCE WITH APPLICABLE REQUIREMENTS, INCLUDING WOOD BLOCKING, FURRING, FRAMING, SHEATHING, BACK-BOARDS, AND RELATED WORK. FIRE RETARDANT TREATED [FRT] IS PERMITTED WHERE ALLOWED BY CODE. SEE CODE COMPLIANCE DRAWINGS FOR DETAILED INFORMATION AND REQUIREMENTS.

1.11. TEMPORARY GUARDS: THE GENERAL CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY GUARDS AT ALL SLAB EDGES, PIT EDGES, ELEVATED PLATFORM EDGES, AND SIMILAR CONDITIONS WHERE REQUIRED BY OSHA, ANY APPLICABLE CODE OR ORDINANCE, AND AT MINIMUM ALL CHANGES IN ELEVATION IN EXCESS OF THIRTY INCHES (30") INCLUDING BOTH SIDES OF STAIRS AND LADDERS. TEMPORARY GUARDS MUST BE MAINTAINED UNTIL THE PERMANENT GUARDS ARE INSTALLED.

1.12. LIFE-SAFETY MEASURES DURING CONSTRUCTION: THE GENERAL CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS REQUIRED BY OSHA, CODE, AND OTHER APPLICABLE REGULATORY AUTHORITIES.

1.13. MEANS OF EGRESS: THE GENERAL CONTRACTOR SHALL MAINTAIN CLEAR AND UNOBSTRUCTED MEANS OF EGRESS AT ALL TIMES DURING CONSTRUCTION, WITHOUT EXCEPTION.

1.14. CONSTRUCTION LOADS: THE GENERAL CONTRACTOR SHALL NEVER LOAD NEW OR EXISTING CONSTRUCTION BEYOND ITS DESIGN CAPACITY WITH STORED MATERIAL, CONSTRUCTION EQUIPMENT, TEMPORARY LOADS ASSOCIATED WITH MATERIAL MOVEMENT, HOISTING, OR STORAGE, OR SIMILAR CONDITIONS.

1.15. GENERAL CLEAN-UP: THE GENERAL CONTRACTOR SHALL INCLUDE ONGOING CLEAN-UP OF THE PROPERTY AND BUILDING, INCLUDING REMOVAL OF TRASH AND WASTE MATERIALS, ON A REGULAR BASIS DURING CONSTRUCTION. RECYCLING OF CONSTRUCTION WASTE IS ENCOURAGED.

1.16. OWNER FURNISHED EQUIPMENT: LOOSE FURNISHINGS, WORKSTATIONS, OFFICE EQUIPMENT, COPIERS, VENDING MACHINES, KITCHEN EQUIPMENT, AND SIMILAR ITEMS THAT ARE BOTH LABELED "OWNER FURNISHED" OR "OFOI", AND SHOWN DASHED OR IN GRAY-TONE SHALL BE CONSIDERED OWNER FURNISHED EQUIPMENT. OWNER FURNISHED EQUIPMENT IS SHOWN FOR THE GENERAL CONTRACTOR'S KNOWLEDGE AND UNDERSTANDING TO FACILITATE COORDINATION WITH THE OWNER'S WORK. THE GENERAL CONTRACTOR SHALL CAREFULLY REVIEW THE SCOPE OF WORK, AND REQUEST CLARIFICATION FROM THE ARCHITECT IN THE EVENT OF ANY UNCERTAINTY ABOUT THE DEFINITION OF OWNER FURNISHED WORK.

1.17. PARTITION DESIGNATION: EXISTING PARTITIONS SCHEDULED TO BE REMOVED ARE ILLUSTRATED AS DASHED LINES ON THE PLANS LABELED "DEMOLITION PLAN(S)". EXISTING PARTITIONS TO REMAIN ARE ILLUSTRATED IN GRAY-TONE (SCREENED). NEW WORK IS ILLUSTRATED IN BLACK-LINE.

1.18. PROTECTION: EXISTING OCCUPIED AREAS, AND WORK TO REMAIN AFTER CONSTRUCTION, SHALL BE PROTECTED DURING CONSTRUCTION ACTIVITIES. PROTECTION SHALL ENCOMPASS CONSTRUCTION OF TEMPORARY BARRIERS, MAINTENANCE OF EXISTING MECHANICAL, FIRE PROTECTION, AND ELECTRICAL SYSTEMS, AND PHYSICAL PROTECTION OF WORK TO REMAIN THAT IS SUBJECT TO DAMAGE FROM CONSTRUCTION ACTIVITIES. THE GENERAL CONTRACTOR SHALL REPAIR OR REPLACE EXISTING WORK SCHEDULED TO REMAIN, THAT IS DAMAGED DURING CONSTRUCTION DUE TO INSUFFICIENT PROTECTION.

1.19. TEMPORARY BRACING: THE GENERAL CONTRACTOR SHALL, PRIOR TO REMOVAL OF ANY EXISTING STRUCTURAL ELEMENTS, TEMPORARILY SHORE AND/OR BRACE EXISTING CONSTRUCTION TO REMAIN AS REQUIRED TO SUPPORT EXISTING LOADS AND/OR LOADS IMPOSED DURING CONSTRUCTION. FURTHER, THE GENERAL CONTRACTOR SHALL DESIGN, INSTALL AND MAINTAIN ANY TEMPORARY BRACING OR SUPPORT FRAMING REQUIRED TO SUPPORT NEW CONSTRUCTION COMPONENTS WHICH ARE NOT FULLY SECURED IN A COMPLETE STRUCTURAL ASSEMBLY, OR ARE OTHERWISE SUBJECTED TO LOADS IN EXCESS OF THE POST-CONSTRUCTION LOADS FOR WHICH THE ELEMENT IS DESIGNED.

B. DIVISION 2 – SITE CONSTRUCTION

2.01. POSITIVE DRAINAGE AT BUILDING: SLOPE EXTERIOR GRADE AWAY FROM THE BUILDING IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.

2.02. SITE PAVING EXPANSION AND CONTROL JOINTS: WHETHER SPECIFICALLY INDICATED OR NOT, FURNISH AND INSTALL CONTROL JOINTS IN ALL SITE CONCRETE PAVING FOR PEDESTRIAN TRAFFIC AT AN INTERVAL OF NO MORE THAN FIVE FEET (5') EACH WAY. IN ADDITION, FURNISH AND INSTALL CONTROL JOINTS AT NO MORE THAN THIRTY FOOT (30') INTERVAL, EACH WAY. ALL EXPANSION JOINTS, INCLUDING THOSE BETWEEN HORIZONTAL PAVING AND VERTICAL ABUTMENTS, SHALL RECEIVE SPECIFIED JOINT FILLER, AS SPECIFIED IN SECTION 07900.

C. DIVISION 3 – CONCRETE

3.01. SLAB-ON-GRADE: SEE SPECIFICATION SECTION 03300 FOR DETAILED REQUIREMENTS OF SLAB-ON-GRADE CONSTRUCTION, INCLUDING REQUIREMENTS FOR REINFORCING, CONCRETE AD-MIXTURES, VAPOR BARRIER, AND SURFACE TREATMENTS [IF ANY]. ALL SLAB-ON-GRADE CONSTRUCTION SHALL BE INSTALLED OVER MINIMUM FOUR INCH (4") THICK COMPACTED POROUS DRAINAGE LAYER.

3.02. SLAB EXPANSION AND CONTROL JOINTS: SEE STRUCTURAL DRAWINGS FOR REQUIRED SLAB EXPANSION AND CONTROL JOINTS. ALL EXPANSION JOINTS AND CONTROL JOINTS IN FLOOR SLABS, AND BETWEEN FLOOR SLABS AND VERTICAL ABUTMENTS SHALL RECEIVE TRAFFIC BEARING SEALANT JOINT MATERIAL.

3.03. CORE DRILLING-BUILDING: THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING OF THE LOCATION AND DIMENSION OF ANY PROPOSED CORES THROUGH STRUCTURAL FLOOR SLABS, PRIOR TO COMMENCING CORING ACTIVITIES. CORE DRILLING IS STRICTLY PROHIBITED (SLEEVES ONLY) IN ANY POST-TENSIONED STRUCTURED FLOOR SLAB ASSEMBLIES.

D. DIVISION 4 – MASONRY

4.01. SEAL VENEER ANCHORS: ALL EXTERIOR VENEER SYSTEM ANCHORS SHALL BE SET IN FULL, FRESH BED OF TROWEL GRADE AIR/MOISTURE BARRIER COATING, OR DOW 795 OR EQUIVALENT AT THE PLANE OF THE AIR/ MOISTURE BARRIER.

E. DIVISION 5 – METALS

5.01. EMBEDDED STEEL: ALL MISCELLANEOUS STEEL ITEMS INCLUDING STEEL EDGE ANGLES, EMBEDDED PLATE, AND SIMILAR WORK SHALL BE GALVANIZED. THIS PROVISION DOES NOT APPLY TO REINFORCING STEEL, WHICH SHALL COMPLY WITH SPECIFICATION DIVISION 03300.

F. DIVISION 6 – WOOD & PLASTIC

6.01. WOOD IN CONTACT WITH CONCRETE/ MASONRY: ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY CONSTRUCTION SHALL BE PRESSURE TREATED [PT].

6.02. FIELD VERIFICATION: THE CASEWORK OR MILLWORK CONTRACTOR SHALL OBTAIN AND VERIFY ALL FIELD MEASUREMENTS AND CONDITIONS AFFECTING HIS WORK AND SHALL BE RESPONSIBLE FOR ALL DETAILS AND DIMENSIONS ASSURING PRECISION AND PROPER ASSEMBLY OF HIS PRODUCTS.

6.03. MILLWORK/ CASEWORK BASE: PROVIDE FINISHED BASE TO MATCH MATERIAL AND FINISH OF ADJACENT SCHEDULED WALL BASE, AT TOE-KICK AT ALL EXPOSED FRONT, SIDE, AND REAR FACES OF MILLWORK OR CASEWORK.

6.04. MILLWORK/ CASEWORK SPLASH: PROVIDE BACKSPLASH AT ALL COUNTERTOPS SCHEDULED TO RECEIVE BACKSPLASH, OF MATERIAL, DIMENSION, AND FINISH INDICATED. WHETHER SCHEDULED OR NOT, FURNISH AND INSTALL SIDESPLASH OF SAME MATERIAL, DIMENSION, AND FINISH EVERYWHERE A BACKSPLASH IS SCHEDULED AND WHERE THE COUNTERTOP ABUTS A VERTICAL WALL SURFACE AT ONE OR MORE OF ITS SIDES.

G. DIVISION 7 – THERMAL & MOISTURE PROTECTION

7.01. GENERAL SEALANTS: CONTINUOUSLY SEAL PERIMETER OF ALL DOOR AND WINDOW FRAMES, MILLWORK AND CASEWORK, TRIM, CABINETS, AND SIMILAR FIXED CONSTRUCTION. ALL VERTICAL SURFACE CONTROL AND EXPANSION JOINTS SHALL BE CONTINUOUSLY SEALED, BOTH SIDES OF JOINT.

7.02. SLOPE TO DRAIN: ALL ROOF SURFACES SHALL BE SLOPED TO DRAIN, WITH MINIMUM PITCH OF 1/4" PER LINEAR FOOT. PROVIDE TAPERED INSULATION, CRICKETS AS NECESSARY TO ASSURE THE MINIMUM SLOPE IS ACHIEVED.

7.03. WALK-PADS: FURNISH AND INSTALL COMPATIBLE ROOF WALK-PADS AT ALL MEMBRANE ROOF SURFACES THAT ARE TRAVELED TO ACCESS SERVICEABLE ROOFTOP EQUIPMENT SUCH AS HVAC UNITS, FANS, ELECTRICAL EQUIPMENT, AND SIMILAR EQUIPMENT REQUIRING SERVICE ACCESS.

7.04. EXPANSION JOINTS COVERS: ALL BUILDING EXPANSION JOINTS EXPOSED TO VIEW IN FLOOR, PARTITION, AND/ OR CEILING ASSEMBLIES SHALL RECEIVE COLOR-COORDINATED PRE-FABRICATED EXPANSION JOINT COVER ASSEMBLY DESIGNED TO ALLOW THE REQUIRED MOVEMENT, AND TO PROVIDE UL APPROVED FIRE RATED ASSEMBLY WHERE REQUIRED.

H. DIVISION 8 – DOORS & WINDOWS

8.01. FIRE DOORS AND FRAMES: ALL FIRE DOORS AND FRAMES SHALL BE LABELED BY AN APPROVED AGENCY PER NFPA 80, AND SHALL BE PERMANENTLY AFFIXED THERETO, AND THE LIFE OF THE LABEL AND THE ATTACHMENT THEREOF CAN REASONABLY BE EXPECTED TO EQUAL THE LIFE OF THE COMPONENT TO WHICH IT IS ATTACHED. LABELS MUST BE PROVIDED BY A MANUFACTURER THAT HAS BEEN APPROVED BY A LABORATORY OR ORGANIZATION TO PROVIDE TESTING AND FOLLOW-UP SERVICES FOR FIRE-RATED OPENING ASSEMBLIES. LABELS SHALL BE RAISED OR EMBOSSED ON METAL LABELS OR STAMPED INTO METAL FRAMES. PLASTIC OR PAPER LABELS ARE UNACCEPTABLE. THE LABEL MUST BE VISIBLE AND LEGIBLE AT ALL TIMES AND SHALL NOT BE PAINTED. FAILURE TO COMPLY WITH THIS REQUIREMENT WILL REQUIRE PAINTER TO REIMBURSE OWNER FOR COSTS OF RE-LABELING RATED DOORS AND FRAMES. ALL LABELS SHALL INDICATE THE FIRE RESISTANCE RATING IN HOURS AND/OR MINUTES. LABELS ON FRAMES WITH TRANSOMS AND/OR SIDELIGHTS MUST IDENTIFY THAT THE OPENING ASSEMBLY INCLUDES SAME.

8.02. TEMPERED GLASS: PROVIDE TEMPERED SAFETY GLASS EVERYWHERE REQUIRED BY APPLICABLE CODE, INCLUDING ANY GLASS IN DOORS, OPERABLE WINDOWS, ADJACENT TO DOORS OR OPERABLE WINDOWS, WITHIN 36" OF THE ADJACENT FLOOR OR GRADE LEVEL, OR OTHERWISE WHERE REQUIRED BY CODE.

8.03. BLOCKING: FURNISH AND INSTALL BLOCKING IN METAL STUD FRAMED WALLS AND PARTITIONS THAT ARE SCHEDULED TO RECEIVE DOOR BUMPERS/ STOPS, MAGNETIC LOCK DEVICES, AND SIMILAR DOOR RELATED DEVICES THAT WILL SUBJECT THE PARTITION TO DOOR MOVEMENT LOADS AND IMPACT.

8.04. HOLLOW METAL FRAMES: COORDINATE THE THROAT DEPTH OF ALL HOLLOW METAL FRAMES WITH THE DEPTH OF THE PARTITION SCHEDULED TO RECEIVE THE DOOR OR WINDOW FRAME.

I. DIVISION 9 – FINISHES

9.01. INDOOR ENVIRONMENTAL CONDITIONS: NO INTERIOR SOFT CONSTRUCTION [IE. DRYWALL, CEILINGS, CARPET, MILLWORK, OR SIMILAR WORK THAT IS SUBJECT TO TEMPERATURE AND HUMIDITY INSTABILITY] SHALL COMMENCE, NOR SHALL MATERIALS BE STORED ON SITE, UNTIL STABLE INTERIOR ENVIRONMENTAL CONDITIONS ACCEPTABLE TO THE PRODUCT MANUFACTURER ARE PROVIDED AND IN PLACE FOR A DURATION SUFFICIENT TO ESTABLISH CONSISTENT AND ACCEPTABLE INDOOR TEMPERATURE AND HUMIDITY LEVELS. FAILURE TO PROVIDE AN INDOOR ENVIRONMENT IN STRICT COMPLIANCE WITH THE PRODUCT MANUFACTURERS PRINTED REQUIREMENTS WILL SUBJECT THE INSTALLING CONTRACTOR TO FULL RESPONSIBILITY FOR ANY COSTS ASSOCIATED WITH RE-WORK DUE TO MOLD OR MILDEW GROWTH, WARPING, CUPPING, DE-LAMINATION, OR SIMILAR DETERIORATION OF THE STORED OR INSTALLED CONSTRUCTION.

9.02. FLOOR & WALL TILE: INSTALL FLOOR AND WALL TILE IN ALL SCHEDULED AREAS IN ACCORDANCE WITH APPLICABLE TILE COUNCIL OF AMERICA (TCA) METHOD.

9.03. FLOOR FINISH TRANSITIONS: UNLESS OTHERWISE INDICATED, TRANSITION FLOOR FINISHES AT CENTERLINE OF DOOR IN CLOSED LOCATION. TRANSITION FLOOR MATERIAL UNDER CENTER OF DOORS & WHERE NOTED. PROVIDE SCHEDULED TRANSITION MATERIALS AT CHANGES IN FLOOR MATERIAL TYPE.

9.04. PARTITIONS: SEE PARTITION NOTES AND SPECIFICATIONS FOR REQUIREMENTS OF PARTITION CONSTRUCTION.

9.05. EQUIPMENT ACCESS DOORS: THE GENERAL CONTRACTOR SHALL PROVIDE PROPOSED LOCATION OF CEILING ACCESS DOORS TO THE ARCHITECT FOR APPROVAL. ACCESS DOORS SHALL BE PAINTED TO MATCH ADJACENT FINISH.

9.06. CASEWORK AND MILLWORK ANCHORAGE: COORDINATE INSTALLATION OF IN-WALL STEEL ANCHORAGE, GROUNDS, AND REQUIRED BLOCKING WITH OTHER TRADES FOR PRECISE LOCATION.

J. DIVISION 10 - SPECIALTIES

K. DIVISION 11 - EQUIPMENT

L. DIVISION 12 - FURNISHINGS

M. DIVISION 13 – SPECIAL CONSTRUCTION (PRE-ENGINEERED METAL BUILDINGS)

N. DIVISION 14 - CONVEYING SYSTEMS

O. DIVISIONS 15/16 – MECHANICAL & ELECTRICAL

15.01. MEP DEVICE/ FIXTURE COORDINATION: COORDINATE LOCATIONS FOR DIFFUSERS, AND RETURN AIR GRILLES TO THE GREATEST EXTENT POSSIBLE IN ORDER TO MAINTAIN LIGHTING LAYOUT INDICATED IN THE DRAWINGS. MEP & FP CONTRACTORS SHALL COORDINATE WORK WITH OTHER DISCIPLINES PRIOR TO INSTALLATION. ALL ELECTRICAL ITEMS INDICATED IN OR ON CABINETRY OR MILLWORK SHALL BE SUPPLIED, INSTALLED AND COORDINATED BY THE ELECTRICAL CONTRACTOR, UNLESS OTHERWISE NOTED.

15.02. CONCEALED PIPING: ALL PIPING, DUCTWORK, ELECTRICAL RACEWAYS AND CONDUITS SHALL BE CONCEALED IN THE BUILDING CONSTRUCTION. THE GENERAL CONTRACTOR SHALL INCLUDE, IN THE BASE BID, REQUIRED FURRING TO CONCEAL THESE SYSTEMS WHETHER OR NOT THE FRAMING AND FURRING IS ILLUSTRATED IN THE DRAWINGS.

15.03. SECURE PIPING: TIE ALL PIPING "HARD" TO STRUCTURE.

15.04. GAS PIPING EXPOSED ON ROOF: WHERE GAS PIPING IS EXPOSED ON THE ROOF, PAINT GAS PIPING "YELLOW".

15.05. CENTER CEILING DEVICES: CENTER LIGHTS, SUPPLY DIFFUSERS, RETURN GRILLES, SPRINKLER HEADS, ETC. IN CEILING PANELS IF NOT OTHERWISE INDICATED.

15.06. FIRE PROTECTION SYSTEMS: WHERE REQUIRED, INSTALL FIRE PROTECTION SYSTEMS IN STRICT ACCORDANCE WITH APPLICABLE CODES AND ORDINANCES, INCLUDING NFPA. ALL EQUIPMENT UTILIZED IN THE FIRE PROTECTION SYSTEM SHALL BE LISTED BY UNDERWRITER'S LABORATORIES [UL].

15.07. FIRE PROTECTION SYSTEM DESIGN: WHERE DESIGN OF THE FIRE PROTECTION SYSTEM IS THE RESPONSIBILITY OF THE CONTRACTOR AS REQUIRED BY A PERFORMANCE SPECIFICATION, THE SYSTEM DESIGN SHALL BE SUPERVISED BY AN INDIVIDUAL WHO IS A REGISTERED FIRE PROTECTION ENGINEER AND/OR IS CERTIFIED AT LEVEL III OR HIGHER IN FIRE PROTECTION ENGINEERING TECHNOLOGY AUTOMATIC SPRINKLER SYSTEM LAYOUT BY THE NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGY (NICET).

15.08. ELECTRICAL BOXES IN RATED PARTITIONS: WHERE ELECTRICAL BOXED ARE INSTALLED IN FIRE-RATED METAL STUD PARTITIONS, INSTALL BOXES NO LARGER THAN SIXTEEN SQUARE INCHES (16 SI) IN AREA, AND DO NOT EXCEED ONE-HUNDRED SQUARE INCHES (100 SI) OF METALLIC BOX PER ONE-HUNDRED SQUARE FEET (100 SF) OF FIRE-RATED WALL AREA. WHERE ELECTRICAL REQUIREMENTS DICTATE A HIGHER RATION, TREAT THE ELECTRICAL BOXES WITH CODE APPROVED METHOD TO ASSURE CONTINUOUS RATING. FURTHER, DO NOT INSTALL ELECTRICAL BOXES BACK-TO-BACK IN THE SAME STUD CAVITY WITHOUT APPROVED FIRE-RATED TREATMENT.

15.09. ELECTRICAL DEVICES IN OR NEAR MILLWORK: CAREFULLY LOCATE ELECTRICAL BOXES FOR DEVICES IN OR NEAR MILLWORK AND/OR CASEWORK TO ASSURE COORDINATED INSTALLATION. LOCATE ELECTRICAL DEVICES ABOVE COUNTERTOP SUCH THAT THE DEVICE COVER PLATE WILL NOT INTERFERE WITH SCHEDULED BACKSPLASH OR SIDESPLASH.

15.10. PLUMBING FIXTURES: CAREFULLY REVIEW THE DIMENSIONAL STANDARDS FOR INSTALLED PLUMBING FIXTURES, AND PLAN THE WORK TO ASSURE FULL COMPLIANCE OF CODE REQUIRED FIXTURE CLEARANCES.

INDEX OF DRAWINGS

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STATE OF GEORGIA REGISTERED ARCHITECT
RA014416
Amy K. H-Belt
04/10/2019

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ISSUE	DATE
Owner Review Set	12/21/2018
Permit Set / IFC	04/10/2019

drawn by: JT
checked by: NN

Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

INDEX & GENERAL INFORMATION

G1.01

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4/11/2019 10:00:10 AM TEMPLATE VERSION: 1

ANNOTATION SYMBOLS

ROOM NAME
101

ROOM REFERENCE SYMBOL:
-- ROOM NAME
1-- FLOOR NUMBER
-- 01: SPACE NUMBER
150 SF: NET SQUARE FOOTAGE

LINES:
2 - CONSECUTIVE NUMBERS ARE USING FOR COLUMN LINES RUNNING NORTH & SOUTH
A - CONSECUTIVE LETTERS ARE USED FOR COLUMN LINES RUNNING EAST & WEST
NOTE: IF A COLUMN LINE IS ADDED, "SUB" NUMBERS/LETTERS ARE USED

2- FACE OF MASONRY OR FACE OF
DATUM SYMBOL (ELEVATION MARK)
677.52 - ELEVATION (FT)

REVISION SYMBOL
USED TO INDICATE SCOPE OF CURRENT REVISION

DOOR SYMBOL:
-DOOR NUMBER 101
-DOOR TYPE A
SEE DOOR SCHEDULE AND FLOOR PLANS

WINDOW SYMBOL:
-WINDOW TYPE A
SEE EXTERIOR ELEVATIONS AND WINDOW SCHEDULE

LOUVER SYMBOL:
-LOUVER TYPE L1
SEE LOUVER SCHEDULE

WALL SYMBOL:
-WALL TYPE 0G
SEE PARTITION LEGEND

SPECIALTY EQUIPMENT TAG:
-SPECIALTY EQUIPMENT TYPE 2
SEE SPECIALTY EQUIPMENT SCHEDULE

PLAN KEYNOTE TAG
- NOTE NUMBER A
SEE PLAN KEYNOTE SCHEDULE

BUILDING SECTION SYMBOL:
SECTION 1 ON SHEET A101

WALL SECTION SYMBOL:
SECTION 1 ON SHEET A101

ENLARGED DETAIL SYMBOL:
DETAIL 1 ON SHEET A101

EXTERIOR ELEVATION SYMBOL:
ELEVATION 1 ON SHEET A101

INTERIOR ELEVATION SYMBOL:
INTERIOR ELEVATION 3 ON SHEET A101

NORTH ARROW

FF&E:
BY OTHERS

ABBREVIATIONS AND ACRONYMS

AC	acre
ACC	accessible
ACI	Amencan Concrete Institute
ACT	acoustical ceiling tile
ADD	addendum
AFF	above finished floor
ALT	alternate
ALUM	aluminum
APPROX	approximate
ARCH	architect (ural)
ADJ	adjacent
B&B	balled and burlapped
B/B	back to back
BC	base of curb
BD	board
BLDG	building
BLKG	blocking
BM	benchmark
BOT	bottom
BRG	beanng
BSMT	basement
BUR	built-up roof
C	bottom of wall channel
CAB	cabinet
CAL	caliper
CB	catch basin
C/C	center to center
CD	core deck
CF	cubic foot
CI	cast iron
CIP	cast iron pipe
CJ	construction or control joint
CLG	ceiling
CLO	closet
CLR	clear (ance)
CMP	corrugated metal pipe
CMU	concrete masonry unit
CO	clean out
COL	column
CONC	concrete
CONN	connection
CONST	construction
CONT	continuous or continue
COORD	coordinate
CPT	carpet (ed)
CS	countersink
CSMU	calcium silicate masonry unit
CT	ceramic tile
CW	curtain wall
CY	cubic yard
D	dryer
DBL	double
DEM	demolish or demolition
DET	detail
DH	double hung
DIA	diameter
DIAG	diagonal
DIM	dimension
DIP	ductile iron pipe
DL	dead load
DS	downspout
DWG	drawing
DF	dnnking fountain
EA	each
EF	each face
EIFS	exterior insulation finish system
EJ	expansion joint
ELEV	elevation/elevator
EOS	edge of slab
EQ	equal
EW	each way
EWC	electnc water cooler
EXH	exhaust
EXIST	existing
EXP	exposed
EXPN	expansion
EXT	exterior
FBO	furnished by others
FD	floor drain
FEC	fire extinguisher and cabinet
FHC	fire hose and cabinet
FFE	finish floor elevation
F/F	face to face
FL	floor
FLG	flange
FND	foundation
FO	face of
FOB	face of bnck
FOC	face of concrete
FOF	face of finish
FOM	face of masonry
FOS	face of stud
FR	frame (ed), (ing)
FRT	fire retardant treated
FT	foot/feet
FTG	footing
GA	gauge
GALV	galvanized
GHM	galvanized hollow metal
GI	galvanized iron
GWB	gypsum wall board
GYP	gypsum
H	height
HC	handicap
HM	hollow metal
HORIZ	horizontal
HP	high point/horse power
HSS	hollow structural steel
HVAC	heating/ventilating/air conditioning
HW	hardware
ID	inside diameter
IE	invert elevation
IJ	isolation joint
IN	inch/inches
INSUL	insulation
JAN	janitor's closet
JG	joist girder
JT	joint
K	thousand
KIP	1000 #
KJ	key joint
KSI	1000 # per sq in
LAM	laminate (d)
LF	linear foot
L	length, angle
LAB	laboratory
LAV	lavatory
LH	left hand
LL	live load
LLH	long leg horizontal
LLV	long leg vertical
LP	low point
LT GA	light gauge
LT	light
MATL	matenal
MAX	maximum
MC	miscellaneous channel
MECH	mechanical
MEZZ	mezzanine
MANUF	manufacture (er)
MH	manhole
MIN	minimum
MO	masonry opening
MULL	mullion
NIC	not in contract
NO	number
NOM	nominal
NTS	not to scale
O/H	overhead
OC	on center (s)
OCC	occupant (s)
OD	outside diameter
PJH	precast joint
PL	property line, plate
PLAM	plastic laminate
PNT	paint (ed)
PREFAB	prefabricated
PREFIN	prefinished
PREMANUF	premanufactured
PSF	pounds per square foot
PSI	pounds per square inch
PT	point/pressure treated/ point of tangency
PVC	polyvinyl chlonde
PVMT	pavement
PWD	plywood
QT	quarry tile
RA	return air
RAD	radius
RB	rubber base
RCP	reflected ceiling plan
RD	roof drain
REBAR	reinforcement bar
REF	refngerator/ reference
REINF	reinforce (d), (ing)
REQ'D	required
RET	retaining
REV	revision (s), revised
RH	right hand
RJ	recessed joint
RM	room
RO	rough opening
ROW	right of way
RTU	roof top unit
SC	sealed concrete
SCHED	scheduled
SD	storm drain
SECT	section
SF	storefront
SIM	similar
SPEC	specification (s)
SQ	square
SS	solid surface
SST	stainless steel
STD	standard
STL	steel
STOR	storage
STRUCT	structural
SY	site hand
TELE	telephone/ yard
TERM	termination
T&G	tongue and groove
TH	thick (ness)
THK	thick (ness)
TO	top of
TOC	top of curb
TOF	top of footing
TOJ	top of joist
TOS	top of slab/top of steel
TOW	top of wall
TYP	typical
TZ	terrazzo
UNO	unless noted otherwise
VB	vinyl base
VCT	vinyl composition tile
VERT	vertical
VWC	vinyl wall covering
W	washer/width/wide flange
WB	wood base
WC	water closet
WD	wood
WH	water heater
WIN	window
WP	work point, waterproofing
WT	weight
W/W	wall to wall
WWF	welded wire fabnc
W/	with
W/O	without

MOUNTING HEIGHT NOTES

01. TYPICAL HEIGHTS: MOUNTING HEIGHTS INDICATED HEREIN ARE TYPICAL MOUNTING HEIGHTS FOR DEVICE INDICATED. HOWEVER, MOUNTING HEIGHTS FOR PRODUCTS MAY VARY BY MANUFACTURER, AND THEREFORE THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT WHERE A DISCREPANCY EXISTS BETWEEN THE INDICATED MOUNTING HEIGHT AND THE MANUFACTURER RECOMMENDED MOUNTING HEIGHT, PRIOR TO INSTALLATION OF THE DEVICE.

02. THE GENERAL CONTRACTOR SHALL REFER TO FLOOR PLANS FOR LOCATIONS OF DEVICES SHOWN HEREIN.

03. ADA DEVICES: ALL DEVICES AND FIXTURES NOTED AS "ADA" OR "ACCESSIBLE" SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND APPLICABLE BUILDING CODES.

04. ELECTRICAL DEVICES: SEE ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR REQUIRED MOUNTING HEIGHT OF ELECTRICAL DEVICES AND FIXTURES. WHERE CONFLICTS EXIST BETWEEN MOUNTING HEIGHTS INDICATED HEREIN AND THE REQUIREMENTS OF THE ELECTRICAL ENGINEER, THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO ROUGH-IN.

05. MECHANICAL/PLUMBING DEVICES: SEE MECHANICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS FOR REQUIRED MOUNTING HEIGHT OF MECHANICAL AND PLUMBING DEVICES AND FIXTURES. WHERE CONFLICTS EXIST BETWEEN MOUNTING HEIGHTS INDICATED HEREIN AND THE REQUIREMENTS OF THE MECHANICAL ENGINEER, THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO ROUGH-IN.

06. INSTALL ADA / ANSI COMPLIANT UNDER LAVATORY GUARDS ON ALL EXPOSED SINK PIPING.

07. CONTRACTOR MUST MAINTAIN ON THE JOB SIT A COPY OF THE CURRENT ADAAG STANDARDS AND THE IBC CHAPTER 11 ACCESSIBILITY REQUIREMENTS.

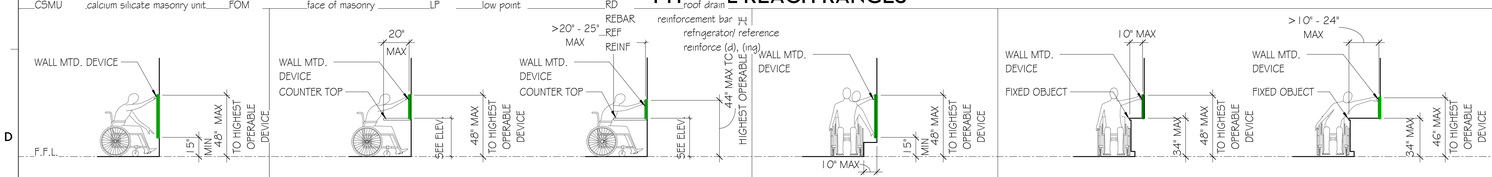
LOCATION MAP

TRUE NORTH

VICINITY MAP

TRUE NORTH

TYPICAL REACH RANGES

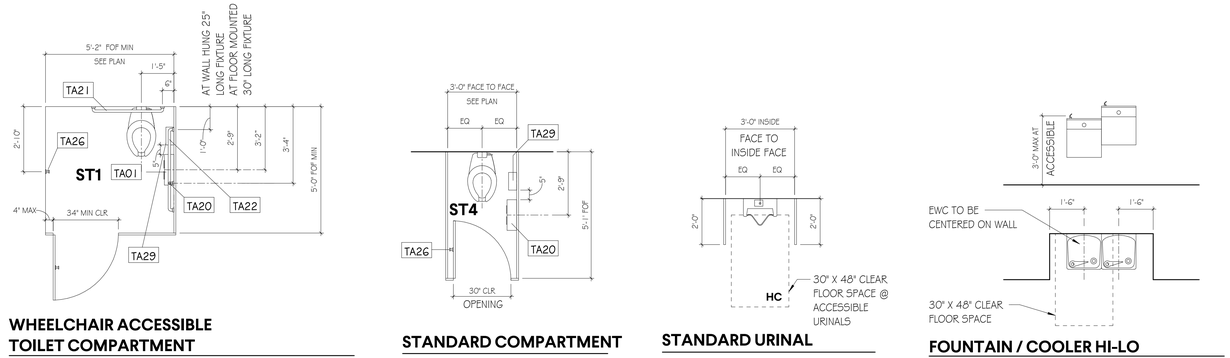


UNOBSTRUCTED FORWARD REACH

OBSTRUCTED HIGH FORWARD REACH

UNOBSTRUCTED SIDE REACH

OBSTRUCTED HIGH SIDE REACH



WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT
PLAN DESIGNATION ST1

STANDARD COMPARTMENT
PLAN DESIGNATION ST4

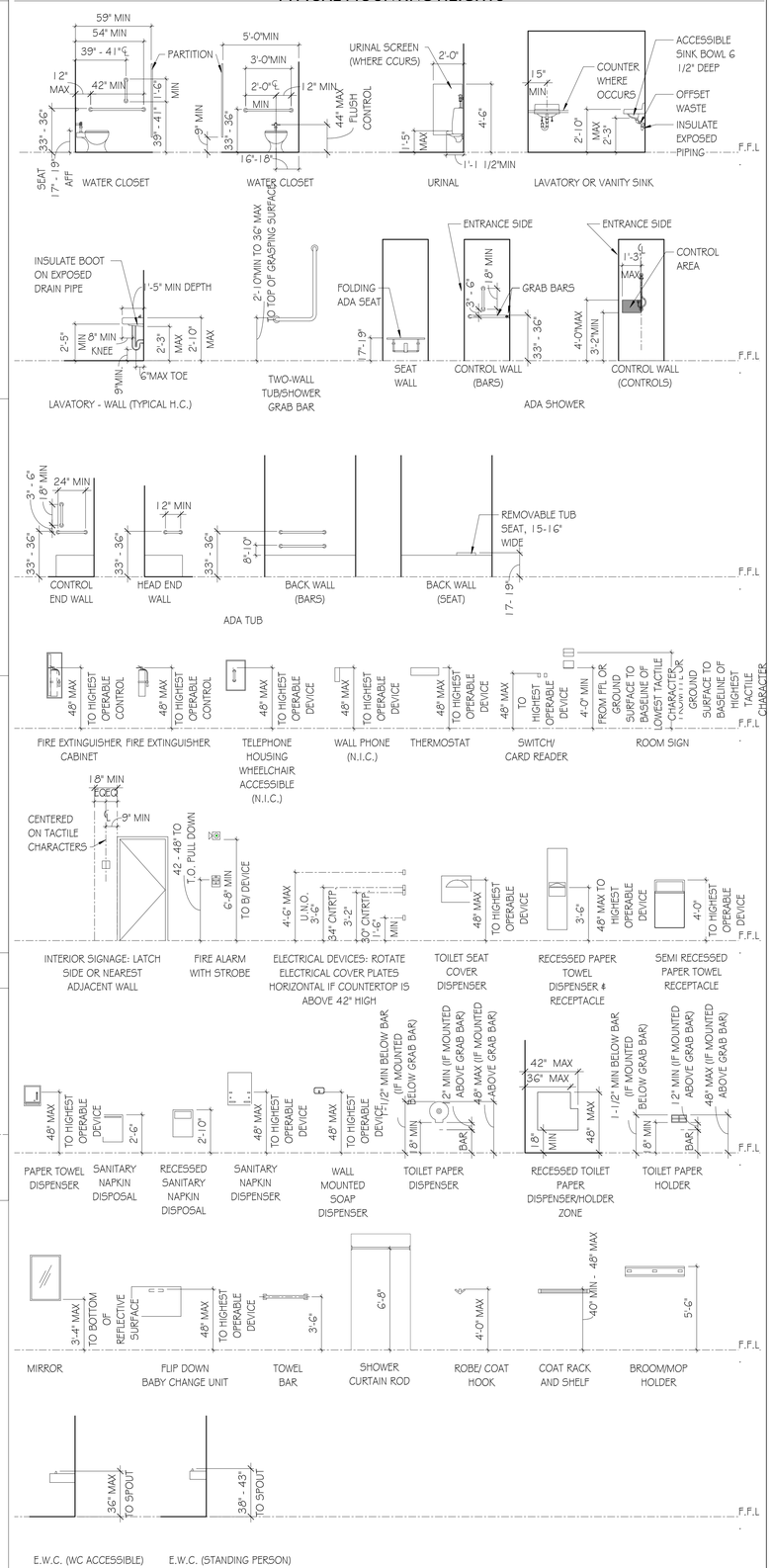
STANDARD URINAL

FOUNTAIN / COOLER HI-LO

STANDARD LAYOUTS - ADAAG / ANSI

NOTES:
1. LOCATE FLUSH ACTIVATION ON WIDE SIDE AT ALL TOILETS - LOCATE FLUSH VALVE BENEATH ADJACENT GRAB BARS.
2. SANITARY NAPKIN DISPENSERS TO BE LOCATED AT ALL FEMALE, UNISEX, & FAMILY TOILETS

TYPICAL MOUNTING HEIGHTS



STATE OF GEORGIA
REGISTERED ARCHITECT
RA014416
04/10/2019

GOODWYN | MILLS | CAWOOD
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ISSUE	DATE
Owner Review Set	12/21/2018
Permit Set / IFC	04/10/2019

drawn by: Author
checked by: MN

Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

GENERAL INFORMATION

G1.11
sheet 1 of 6

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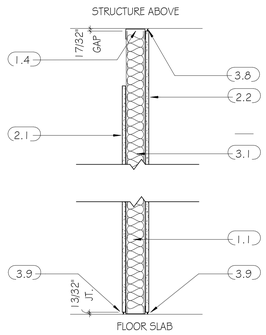
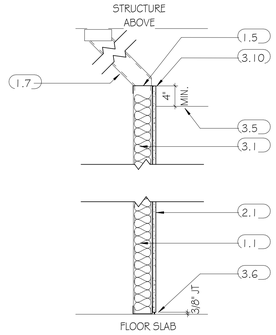


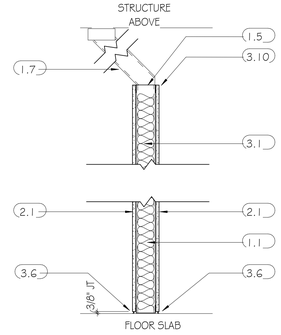
1G_ 1 HR. - GYPSUM

U.L. #	U465
STC	49



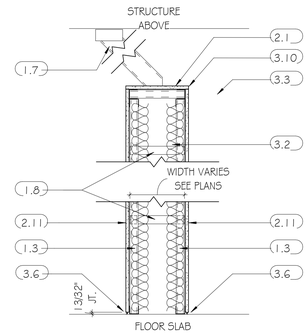
OG1_ 0 HR. - GYPSUM - 1 SIDED

U.L. #	----
STC	--



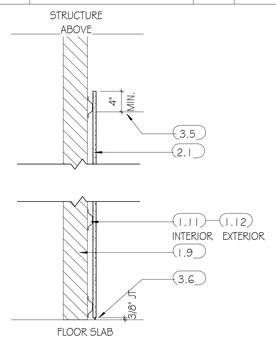
OG2_ 0 HR. - GYPSUM - 2 SIDED

U.L. #	N/A
STC	52



OGC_ 0 HR. - GYPSUM - CHASE

U.L. #	N/A
STC	--



OGF_ 0 HR. - GYPSUM - FURRED - INTERIOR

U.L. #	N/A
STC	N/A

DRAWING MARK DESCRIPTION

GENERAL NOTES - PARTITIONS

1. UL LISTED ASSEMBLIES
   A. WHERE UL ASSEMBLY NUMBERS ARE REFERENCED ABOVE, PARTITIONS SHALL BE CONSTRUCTED IN STRICT COMPLIANCE WITH REQUIREMENTS SET FORTH BY THE UL FIRE RESISTANCE DIRECTORY. NO DEVIATION SHALL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL BY THE ARCHITECT AND/OR BUILDING OFFICIAL.
2. FIRE BARRIERS, FIRE PARTITIONS, & SMOKE BARRIERS [FIRE-RATED]
   A. ALL PERIMETER JOINTS MUST BE PROTECTED BY UL LISTED FIRE-RESISTANT JOINT SYSTEMS.
   B. ALL PENETRATIONS OF RATED ASSEMBLIES MUST BE PROTECTED BY UL LISTED THROUGH-PENETRATION FIRESTOPPING ASSEMBLIES.
   C. FIRE DAMPERS MUST PROTECT HVAC DUCT PENETRATIONS.
   D. IDENTIFY FIRE WALLS, SMOKE BARRIERS, ETC., IN ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING OR ATTIC SPACES, BY STENCILING "X-HOUR FIRE AND /OR SMOKE BARRIER" IN 3-INCH HIGH CONTRASTING LETTERS, 3/8-INCH MINIMUM STROKE. LOCATE WITHIN 15 FEET OF END OF WALL, AND AT INTERVALS NOT EXCEEDING 30 FEET MEASURED HORIZONTALLY ALONG THE WALL OR PARTITION.
3. SMOKE PARTITIONS [NON-RATED]
   A. ALL PERIMETER JOINTS MUST BE SEALED WITH AIRTIGHT SEALANT APPLICATION.
   B. ALL PIPING, ELECTRICAL, AND DUCT PENETRATIONS MUST BE SEALED WITH
4. 'AIRTIGHT SEALANT APPLICATION.
   A. INSULATION THICKNESS SHALL MATCH CAVITY DEPTH UNLESS NOTED OTHERWISE.
   B. INSULATE BEHIND RECESSED ITEMS IN ANY SCHEDULED ACOUSTIC PARTITIONS.
   C. INSULATION MAY BE OMITTED AT CHASES NOT EXCEEDING 10 S.F. IN AREA.
5. ACOUSTICAL SEALANT
   A. AT ALL GYP BOARD AND METAL STUD PARTITIONS: REQUIRED AT BOTTOM AND TOP RUNNERS AND AT WALL ANGLES WHERE DISSIMILAR MATERIALS MEET (SEE DETAILS).
   B. AT SCHEDULED ACOUSTIC PARTITIONS: AIRTIGHT SEAL IS REQUIRED AT ALL PENETRATIONS.
   C. ELECTRICAL AND OTHER BOXES TO BE WRAP-SEALED (SEE DETAILS).
6. PARTITION COORDINATION
   A. COMPLY WITH "PARTITION COORDINATION WITH OTHER TRADES" REQUIREMENTS LOCATED UNDER "GENERAL NOTES" ON PROJECT INFORMATION DRAWING G1.00.
7. ALL EXPOSED CONCRETE WALLS AT THE INTERIOR OF THE BUILDING UNLESS NOTED OTHERWISE ARE TO HAVE OG1/2.5.

NUMBERED NOTES

1.1 Metal studs 16" OC Double-stud jambs full height at all door openings.
1.2 NOT USED
1.3 Plumbing Chase. 1 5/8" metal studs 16" OC in two rows, Width Varies.
1.4 Deflection track (0.0329 in. metal thickness). Maintain min. 1/2" stud gap.
1.5 Continuous top track (0.0329 in. metal thickness)
1.6 NOT USED
1.7 Stud bracing min. 48 in. OC (24" OC at wall-hung cabinets)
1.8 Steel stud or runner bracing, full width of cavity, 48" OC vertical max.
1.9 New or existing substrate.
1.10 NOT USED
1.11 At Intenor furring: provide 7/8 in. hat-shaped metal furring.
1.12 At Exterior (penmeter) furring: provide 2 in. Z-shaped metal furring with min. R-8 board insulation.
2.1 One layer 5/8 in. gyp. bd.
2.11 One layer 5/8" type 'X' gyp. bd. (Gold Bond MR Board) [See finish schedule for ceramic tile locations].
2.12 NOT USED
3.1 Sound attenuation batt insulation. 3.5 in. thick.
3.2 Sound attenuation batt insulation both sides of stud cavity. 3.5 in. thick.
3.3 Sound attenuation batt insulation. 3.5 in. thick. Drape over and extend 4 feet each side of partition.
3.4 Scheduled ceiling. See ceiling plan for types / locations.
3.5 Acoustical ceiling panels. Where ceiling panels with combined NRC/CAC ratings of 0.70/35 (or better) are used, draped insulation may be omitted.
3.6 Acoustical Sealant Joint. Provide continuous bead under each layer gyp bd.
3.7 Acoustical Sealant Joint. At fluted decks, cope gyp. bd. to underside of deck. Fill voids with insulation. Apply acoustical sealant continuous at joint.
3.8 NOT USED
3.9 NOT USED
3.10 Gypsum board shall extend fully to top of track to establish a draft stop assembly. Conduit turnouts and electrical boxes must stand clear of metal studs to allow for application of an uninterrupted gypsum membrane.

PARTITION KEY

1G_ TYPE 1G
6" 6" METAL STUDS
1S_ TYPE 1S
2.5" 2.5" METAL CH STUDS
OM_ TYPE OM
4" 4" CMU

PARTITION TYPE____
FRAMING SIZE IN INCHES

STATE OF GEORGIA · REGISTERED ARCHITECT · RA014416 · Amy R. H. Bell · 04/10/2019

GOODWYN | MILLS | CAWOOD
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ISSUE	DATE
Owner Review Set	12/21/2018
Permit Set / IFC	04/10/2019

drawn by: Author
checked by: NN

Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

PARTITION TYPES - INTERIOR

G1.21
sheet 1 of 6

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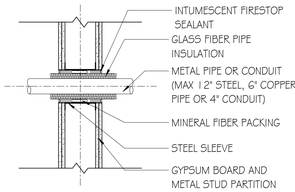
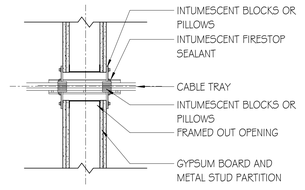


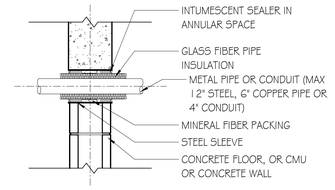
INSULATED METAL PIPE THRU GYPSUM PARTITION

A	W-L-5040
B	W-L-5029
C	W-L-5014



CABLE TRAY THRU GYPSUM PARTITION

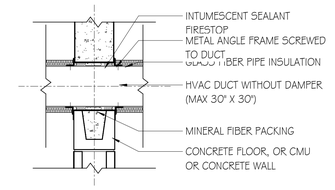
A	W-L-4037
B	W-L-4011
C	W-L-4008



NOTE: FIRESTOP BOTH SIDES AT WALLS; FIRESTOP ONE SIDE AT FLOORS

INSULATED METAL PIPE THRU CMU / CONC WALL OR CONC FLOOR

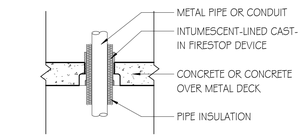
A	C-AJ-5024
B	C-AJ-5096
C	C-AJ-5087



NOTE: FIRESTOP BOTH SIDES AT WALLS; FIRESTOP ONE SIDE AT FLOORS

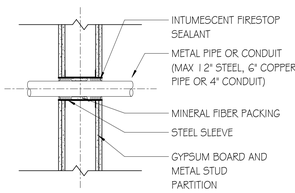
INSULATED HVAC DUCT THRU CMU / CONC WALL OR CONC FLOOR

A	C-AJ-7115
B	WL-7059
C	C-AJ-7143



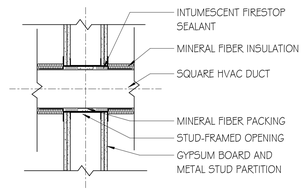
INSULATED METAL PIPE THRU CONC OR CONC ON METAL DECK

A	F-A-5029
B	F-A-5015
C	F-A-5041



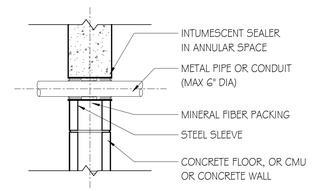
SINGLE UNINSULATED METAL PIPE THRU GYPSUM BOARD PARTITION

A	W-L-1001
B	W-L-1054
C	W-L-1088



INSULATED HVAC DUCT THRU GYPSUM BOARD PARTITION

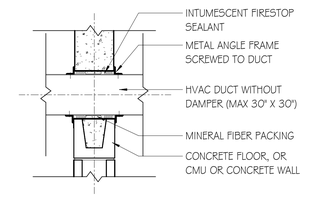
A	W-L-7195
B	W-L-7059
C	W-L-7178



NOTE: FIRESTOP BOTH SIDES AT WALLS; FIRESTOP ONE SIDE AT FLOORS

SINGLE UNINSULATED METAL PIPE THRU CONC FLOOR/WALL OR CMU WALL

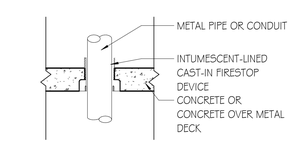
A	C-AJ-1044
B	C-AJ-1226
C	C-AJ-1080



NOTE: FIRESTOP BOTH SIDES AT WALLS; FIRESTOP ONE SIDE AT FLOORS

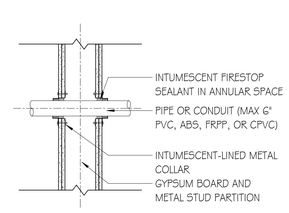
UNINSULATED HVAC DUCT THRU CONC FLOOR / WALL OR CMU WALL

A	C-AJ-7016
B	WL-7109
C	C-AJ-7027



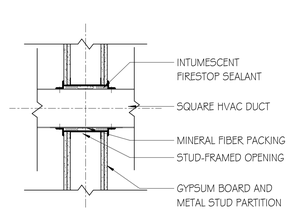
SINGLE UNINSULATED METAL PIPE THRU CONC OVER METAL FLOOR

A	F-A-1067
B	F-A-1017
C	F-A-1110



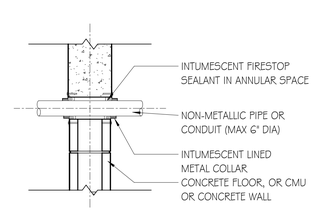
SINGLE NONMETALLIC METAL PIPE THRU GYPSUM BOARD PARTITION

A	W-L-2073
B	W-L-2078
C	W-L-2029



UNINSULATED HVAC DUCT THRU GYPSUM BOARD PARTITION

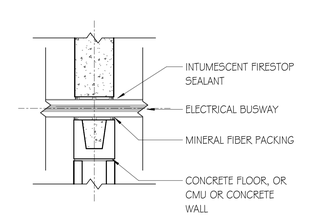
A	W-J-7169
B	W-L-7040
C	W-L-7056



NOTE: FIRESTOP BOTH SIDES AT WALLS; FIRESTOP ONE SIDE AT FLOORS

SINGLE NONMETALLIC PIPE THRU CONC FLOOR / WALL OR CMU WALL

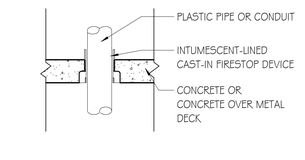
A	C-AJ-2005
B	C-AJ-2109
C	C-AJ-2038



NOTE: FIRESTOP BOTH SIDES AT WALLS; FIRESTOP ONE SIDE AT FLOORS

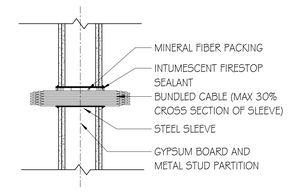
BUSWAY THRU CONC FLOOR / WALL OR CMU WALL

A	C-AJ-6002
B	C-AJ-6017
C	C-AJ-6008



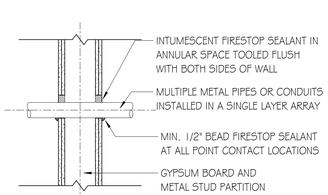
SINGLE NONMETALLIC PIPE THRU CONCRETE OVER METAL FLOOR

A	F-A-2097
B	F-A-2054
C	F-A-2192



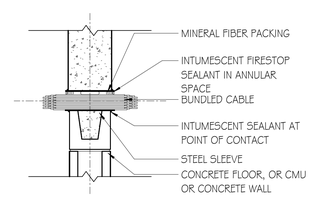
SINGLE OR BUNDLED CABLE THRU GYPSUM BOARD PARTITION

A	W-L-3031
B	W-L-3065
C	W-L-3133



MULTIPLE PENETRATIONS THRU GYPSUM BOARD PARTITION

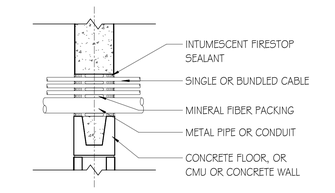
A	W-L-1369
B	W-L-1228
C	W-L-1168



NOTE: FIRESTOP BOTH SIDES AT WALLS; FIRESTOP ONE SIDE AT FLOORS

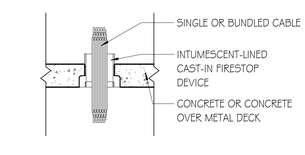
BUNDLED CABLE THRU CONC FLOOR / WALL OR CMU WALL

A	C-AJ-3021
B	C-AJ-3095
C	C-AJ-3043



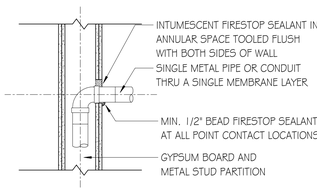
MULTIPLE PENETRATIONS THRU CONC FLOOR /WALL OR CMU WALL

A	C-AJ-8003
B	C-AJ-8143
C	C-AJ-8053



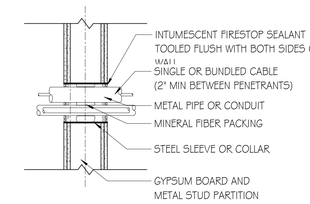
SINGLE OR BUNDLED CABLE THRU CONC OVER METAL FLOOR

A	F-A-3017
B	F-A-3007
C	F-A-3055



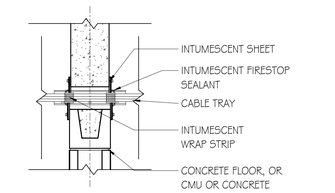
MEMBRANE PENETRATIONS THRU GYPSUM BOARD PARTITION

A	W-L-1410
B	W-L-1353
C	--------



MULTIPLE PENETRATIONS THRU GYPSUM BOARD PARTITION

A	W-L-8010
B	W-L-8079
C	W-L-8026



CABLE TRAY THRU CONC FLOOR / WALL OR CMU WALL

A	C-AJ-4003
B	C-AJ-4035
C	C-AJ-4022

NOT USED

RESERVED

A	--------
B	--------
C	--------

1. THE ILLUSTRATIONS ON THIS DRAWING REPRESENT FREQUENTLY ENCOUNTERED FIRESTOPPING PENETRATION CONDITIONS THROUGH FIRE-RATED FLOOR AND WALL ASSEMBLIES.

2. THE NUMBERS SHOWN BELOW ARE MANUFACTURERS' UL-TEST NUMBERS FOR EACH CONDITION.

3. THE KEY TO MANUFACTURERS (A, B, OR C) IS AS INDICATED BELOW.

PRODUCT / MANUFACTURER LEGEND

A	3M
B	HILTI
C	STI

GENERAL THRU-PENETRATION NOTES

1. GENERAL
   - A. ALL THROUGH-PENETRATION FIRESTOP WORK SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 07841 – THROUGH PENETRATION FIRESTOP SYSTEMS.
   - B. THE DETAILS SHOWN HEREIN ILLUSTRATE FREQUENTLY ENCOUNTERED THROUGH-PENETRATION FIRESTOP CONDITIONS. THEY ARE GENERIC REPRESENTATIONS OF SYSTEMS AVAILABLE FROM SEVERAL MANUFACTURERS.
   - C. SELECTION OF APPROPRIATE SYSTEMS SHALL BE THE RESPONSIBILITY OF THE FIRESTOP CONTRACTOR, AND MUST BE SUBMITTED FOR ARCHITECT'S APPROVAL. EACH SELECTION SHALL BE APPROPRIATE FOR THE PENETRATING ITEM AND SUBSTRATE, AND SHALL COMPLY WITH THE SPECIFIC REQUIREMENTS OF A UL LISTED SYSTEM DESIGN.
   - D. WHERE NO APPLICABLE UL DESIGN IS AVAILABLE FOR A PARTICULAR FIRESTOP CONFIGURATION, SUBMIT AN ENGINEERING JUDGMENT (EJ), OR EQUIVALENT FIRE RESISTANCE RATED ASSEMBLY (EFRRA), PREPARED BY
2. APPLICABILITYOP MANUFACTURER.
   - A.

     PROVIDE THROUGH-PENETRATION FIRESTOP SYSTEMS FOR ALL PENETRATIONS (INCLUDING SINGLE-SIDED MEMBRANE PENETRATIONS) OF FIRE RESISTANCE RATED CONSTRUCTION, WHETHER OR NOT SPECIFICALLY
   - B. DETAILED ON THE DRAWINGS (APPLICABLE TO BOTH EMPTY OPENINGS AND OPENINGS CONTAINING PENETRATING ITEMS).
   - C. ALL PIPING AND DUCTWORK SUBJECT TO MOVEMENT SHALL BE FIRESTOPPED WITH FLEXIBLE FIRE RATED SEALANT.
     - a.) EXTENT THAT APPROPRIATE UL DESIGNS ARE AVAILABLE FOR
     - b.)BSTRATE REQUIRED, USE THE FOLLOWING APPROACH TO SELECTION OF SYSTEMS:
     - c. FOR SIMPLE PENETRATIONS: ONE-PART FIRESTOP SEALANT FOR COMPLEX PENETRATIONS: FOAMED-IN-PLACE FIRESTOP
     - d. SEALANT
     - e. FOR INSULATED METAL PIPE: INTUMESCENT WRAP STRIP AND ONE-PART FIRESTOP SEALANT.
3. SLEEVINGOR DUCTS OR VENTS:
   - A. FOR CABLE TRAYS OR RACEWAYS:
     - a.
     - b.
     - c.IE FOLLOWING PENETRATIONS MUST BE SLEEVED:
     - d. SINGLE ROUND PENETRATIONS IN RATED CMU WALLS
   - B. INSULATED PIPE PENETRATIONS IN RATED GYPSUM BOARD WALLS BUNDLED CABLE PENETRATIONS IN RATED GYPSUM BOARD WALLS ALL PENETRATIONS IN ELEVATED CONCRETE SLABS.
4. QUALITY ASSURANCEL BE METAL. PLASTIC IS NOT PERMITTED. THE
   - A. JUNCTURE OF STEEL SLEEVES AND WALL SHALL BE SEALED WITH FLEXIBLE FIRE RATED SEALANT.

     B.

     COMPLY WITH "INSTALLER QUALIFICATIONS" AND "ON-SITE RESPONSIBLE
   - C. PARTY" PROVISIONS OF SPECIFICATION SECTION 07841 – THROUGH-PENETRATION FIRESTOP SYSTEMS.

     OBTAIN THROUGH-PENETRATION FIRESTOP SYSTEMS THROUGH ONE SOURCE FROM A SINGLE MANUFACTURER.
5. INSTALLATION –FGENERALPING WORK ONLY AFTER SUBMITTALS (INCLUDING
   - A. MOCKUPS WHERE APPLICABLE) ARE APPROVED, AND PRE-INSTALLATION CONFERENCE IS SUCCESSFULLY CONCLUDED.
   - B.

     COMPLY WITH UL SYSTEM REQUIREMENTS AND FIRESTOPPING MANUFACTURERS' PRINTED INSTALLATION INSTRUCTIONS.

     INSTALL FORMING /DAMMING /BACKING MATERIALS AND OTHER
   - C. ACCESSORIES OF TYPES REQUIRED TO SUPPORT FILL MATERIALS DURING
     - a.IEIR APPLICATION AND IN THE POSITION NEEDED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS REQUIRED TO ACHIEVE FIRE RATINGS INDICATED.
     - b.STALL FILL MATERIALS BY PROVEN TECHNIQUES TO PRODUCE THE FOLLOWING RESULTS:
     - c. FILL VOIDS AND CAVITIES FORMED BY OPENINGS, FORMING MATERIALS, ACCESSORIES, AND PENETRATING ITEMS AS REQUIRED TO ACHIEVE FIRE-RESISTANCE RATINGS INDICATED,
   - D. APPLY MATERIALS SO THEY CONTACT AND ADHERE TO SUBSTRATES FORMED BY OPENINGS AND PENETRATING ITEMS,

     FOR FILL MATERIALS THAT WILL REMAIN EXPOSED AFTER COMPLETING
   - E. WORK, FINISH TO PRODUCE SMOOTH UNIFORM SURFACES THAT ARE
   - F. FLUSH WITH ADJOINING FINISHES.

     REMOVE COMBUSTIBLE FORMING MATERIALS, AND OTHER ACCESSORIES, THAT ARE NOT INDICATED AS PERMANENT COMPONENTS OF FIRESTOP
   - G. SYSTEMS.

     REMOVE EXCESS SEALANT FROM ADJOINING SURFACES.

     IDENTIFY THROUGH PENETRATION FIRESTOP SYSTEMS WITH PERMANENTLY ATTACHED, PREPRINTED METAL OR PLASTIC LABELS, AS SPECIFIED.

     INSPECT FILL MATERIALS AFTER 48 HOURS FOR COMPLETE ADHESION AND SEAL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. CORRECT DEFICIENCIES AND RE-INSPECT.

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checked by: INN

Hammond Park Gymnasium

Sandy Springs, GA

GMC # AATL16006

FIRESTOPPING - THRU-PENETRATION SYSTEMS

G1.31

sheet 1 of 6

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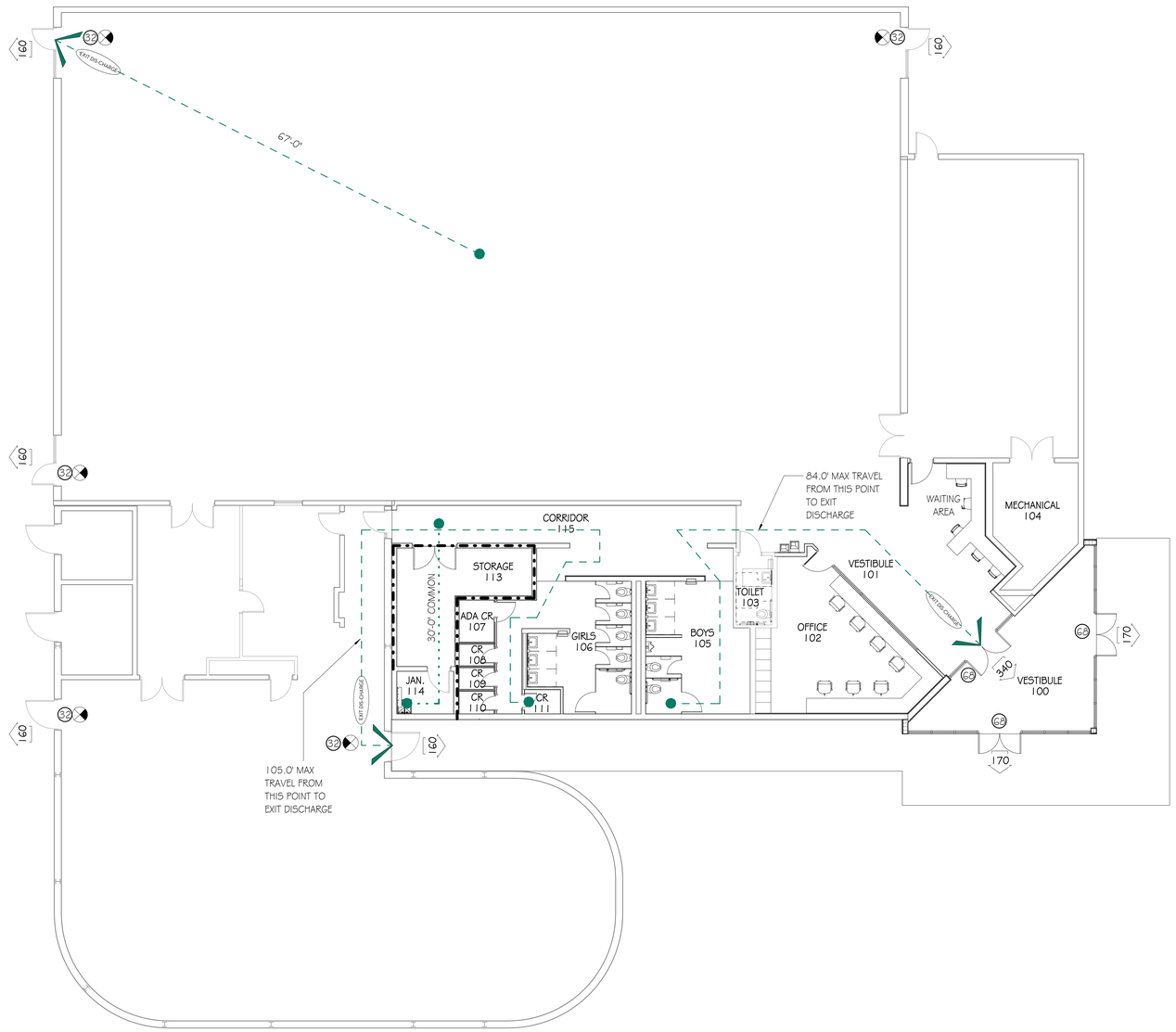

B2 LIFE SAFETY PLAN
SCALE: 1/8" = 1'-0"

APPLICABLE CODES & REGULATIONS

2012	INTERNATIONAL BUILDING CODE (IBC) & LIFE SAFETY CODE
2012	INTERNATIONAL FUEL GAS CODE (IFGC)
2012	INTERNATIONAL MECHANICAL CODE (IMC)
2012	INTERNATIONAL PLUMBING CODE (IPC)
2012	INTERNATIONAL FIRE CODE (IFC)
2014	NATIONAL ELECTRICAL CODE (NEC)
2009	INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
	ANSI/ASHRAE/IESNA STANDARD 90.1-20--
2010	2010 STANDARDS FOR ACCESSIBLE DESIGN: Title II regulations at 28 CFR 35.151; and the 2004 ADAAG at 36 CFR part 1191, appendices B and D

OCCUPANCY CLASSIFICATION

OCCUPANCY	EXISTING ASSEMBLY OCCUPANCY, LSC

CONSTRUCTION CLASSIFICATION

CONSTRUCTION TYPE	TYPE IIIB	
HEIGHT	ALLOWABLE: 55'	ACTUAL: 30'
# OF STORIES	ALLOWABLE: 2	ACTUAL: 1
AREA PER FLOOR	ALLOWABLE: 9,500+7,125	ACTUAL: 16,600 S.F.
HEIGHT MODIFICATIONS	N/A	
AREA MODIFICATIONS	7,125	

MEANS OF EGRESS

MIN. ALLOWABLE	REQ	4	PROVIDED	7
TRAVEL DISTANCE TO EXIT	200 FT		105 FT	
COMMON PATH OF TRAVEL	20 FT / 75 FT for less than 50		30 FT	
DEAD END LENGTH	20 FT			
EGRESS OCCUPANTS	838 PERSON			
EGRESS WIDTH	REQUIRED: 0.22" PER OCCUPANT x OCCUPANTS = 194.48"		PROVIDED: 296 "	

FIRE RESISTANCE-BUILDING ELEMENTS

	IBC TYPE TBL. 601	COMMENTS
PRIMARY STRUCTURAL FRAME	0 HR	
EXTERIOR LOAD BEARING WALLS	2 HR	ASSUMED EXISTING TO REMAIN STRUCTURAL BEARIN WALLS
INTERIOR LOAD BEARING WALLS	0 HR	
EXTERIOR NONBEARING WALLS	0 HR	IF DIST. >=30'
FLOOR CONSTRUCTION	0 HR	
ROOF CONSTRUCTION	0 HR	

PLUMBING FIXTURE TABULATIONS

LEVEL	OCCUPANCY	OCCUPANT LOAD	CALCULATIONS								
			WC			LAV			BATH/ SHOWERS	DRINKING FOUNTAINS	SVC SINKS
			M	F	USX	M	F	USX			
1	ASSEMBLY A-3	748 374M, 374W	2.99	5.76	-	1.87	1.87	-	-	1.496	1
	BUSINESS	11 6M 6W	.24	.24	-	.15	.15	-	-	.11	1
TOTAL	REQUIRED		3.232	6	-	2.02	2.02	-	-	1.6	1
	PROVIDED PHASE II		4	6	1	3	3	1	-	2	1

OVERALL BUILDING AREA

LEVEL	AREA (GROSS SQUARE FEET)
1	16,600 SF GSF
TOTAL	16,600 SF GSF

LIFE SAFETY PLAN LEGEND

- NON-RATED PARTITION
- 1 HR RATED PARTITION
- 2 HR RATED PARTITION / FIRE BARRIER
- FEC — FIRE EXTINGUISHER CABINET
- EEM — EMERGENCY EVACUATION MAP
- DMC — DOOR REQUIRING MANUAL CLOSURE SIGNAGE
- AID — FIRST AID KIT
- H/O — MAGNETIC HOLD-OPEN DEVICE
- EXIT SIGN
- 145' — MAXIMUM TRAVEL DISTANCE TO EXIT
- 65' — COMMON PATH OF TRAVEL
- 32" — CLEAR EXIT WIDTH IN INCHES
- ACC — ADA ACCESSIBLE ROUTE
- 1 HOUR RATED HORIZONTAL SHAFTWALL CEILING ASSEMBLY. COMPLY WITH ALL REQUIREMENTS OF UL #U415.
- 2 HOUR RATED ROOF/CEILING ASSEMBLY AT STORM SHELTER. SPRAY APPLIED FIREPROOFING TO UNDERSIDE OF STRUCTURAL STEEL DECK AND FRAMING.
  DECK PROTECTION PER UL# D779
  JOIST PROTECTION PER UL# N777
- EXIT DIS-CHARGE — EXIT DISCHARGE

STATE OF GEORGIA
AMY K. HUTCH
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Amy K. H. Hutch
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Sandy Springs, GA
GMC # AATL16006

LIFE SAFETY PLAN

G2.01
sheet 1 of 6

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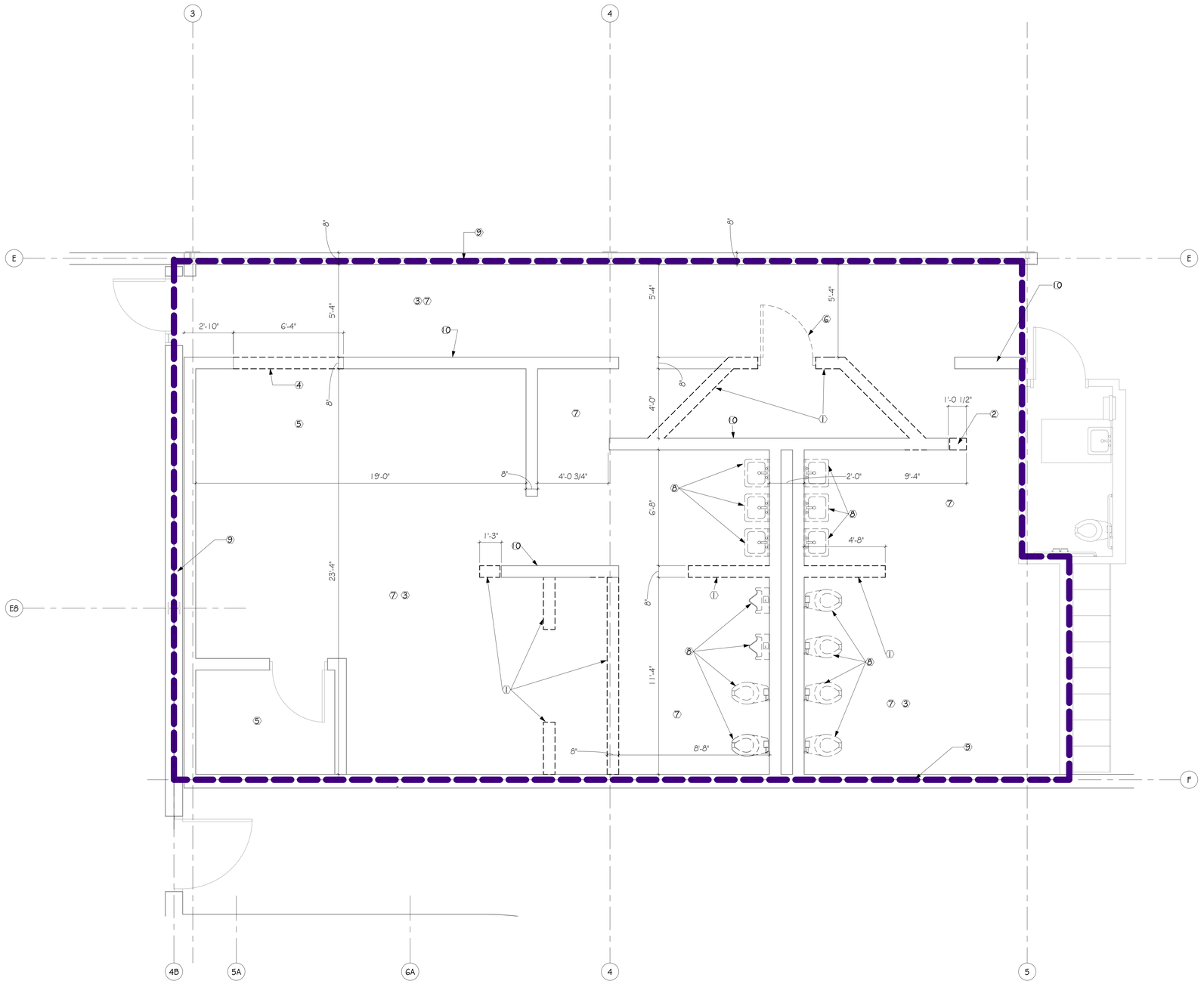

A1 DEMOLITION PLAN
SCALE: 3/8" = 1'-0"

DEMO PLAN NOTES	
NUMBER	DESCRIPTION
1	REMOVE EXISTING WALL
2	REMOVE EXISTING WALL TO THE EXTENT SHOWN
3	REMOVE EXISTING LIGHT FIXTURES
4	REMOVE EXISTING WALL TO EXTENT INDICATED ON PLAN, AND 7'-2" HIGH. PREPARE SURFACE FOR INSTALLATION OF NEW DOOR AND FRAME
5	EXISTING FLOOR FINISH TO REMAIN
6	REMOVE EXISTING HOLLOW METAL DOOR AND FRAME
7	REMOVE EXISTING FLOOR FINISH MATERIALS TO THE EXTENT SHOWN. PATCH AND PREPARE SUBSTRATE TO RECIEVE NEW FLOORING AND WALL BASE
8	EXISTING PLUMBING FIXTURES TO BE DEMOLISHED. CAP OFF PLUMBING BELOW FLOOR AND/OR AS SHOWN ON PLUMBING DRAWINGS.
9	EXTENT OF PHASE II SCOPE OF WORK: RESTROOMS/STORAGE
10	EXISTING CMU WALL TO REMAIN TO THE EXTENT SHOWN

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DEMOLITION PLAN

A0.01
sheet 3 of 6

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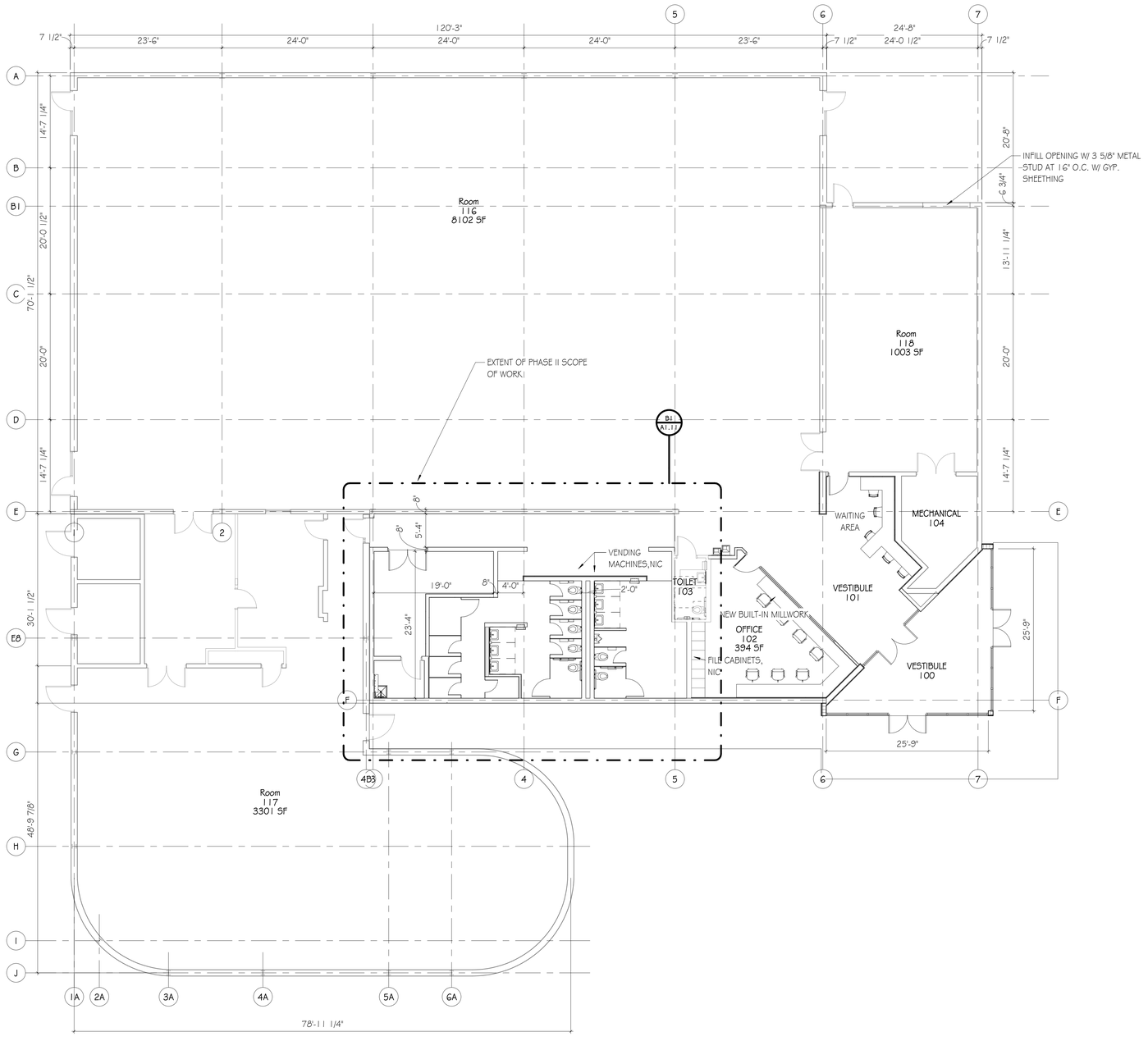

A1 First Floor Plan
SCALE: 1/8" = 1'-0"

TRUE NORTH

GENERAL NOTES

1. REFER TO FINISH LEGEND FOR PAINT COLORS CALLED OUT ON REFLECTED CEILING PLANS AND FINISH PLANS.
2. UNLESS OTHERWISE NOTED, ALL FLOOR TILE SHALL BE CENTERED IN ROOM.
3. UNLESS OTHERWISE NOTED, ALL CEILING GRID AND LIGHT FIXTURES SHALL BE CENTERED IN ROOM/OPENING.
4. CONTRACTOR TO REVIEW WITH ARCHITECT, ON SITE, AREAS WITH MULTIPLE CEILING, WALL, AND FLOOR FINISHES BEFORE FINISH WORK BEGINS.
5. REFER TO RCP LEGEND ON OVERALL REFLECTED CEILING PLANS FOR RCP ABBREVIATIONS AND FINISHES.
6. WALL TILE AND BASE GROUT LINES SHALL ALIGN WITH FLOOR TILE.
7. PROVIDE BLOCKING FOR GRAB BARS AND TOILET ACCESSORIES IN RESTROOMS.

STATE OF GEORGIA
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FLOOR PLAN

A1.01
sheet 4 of 6

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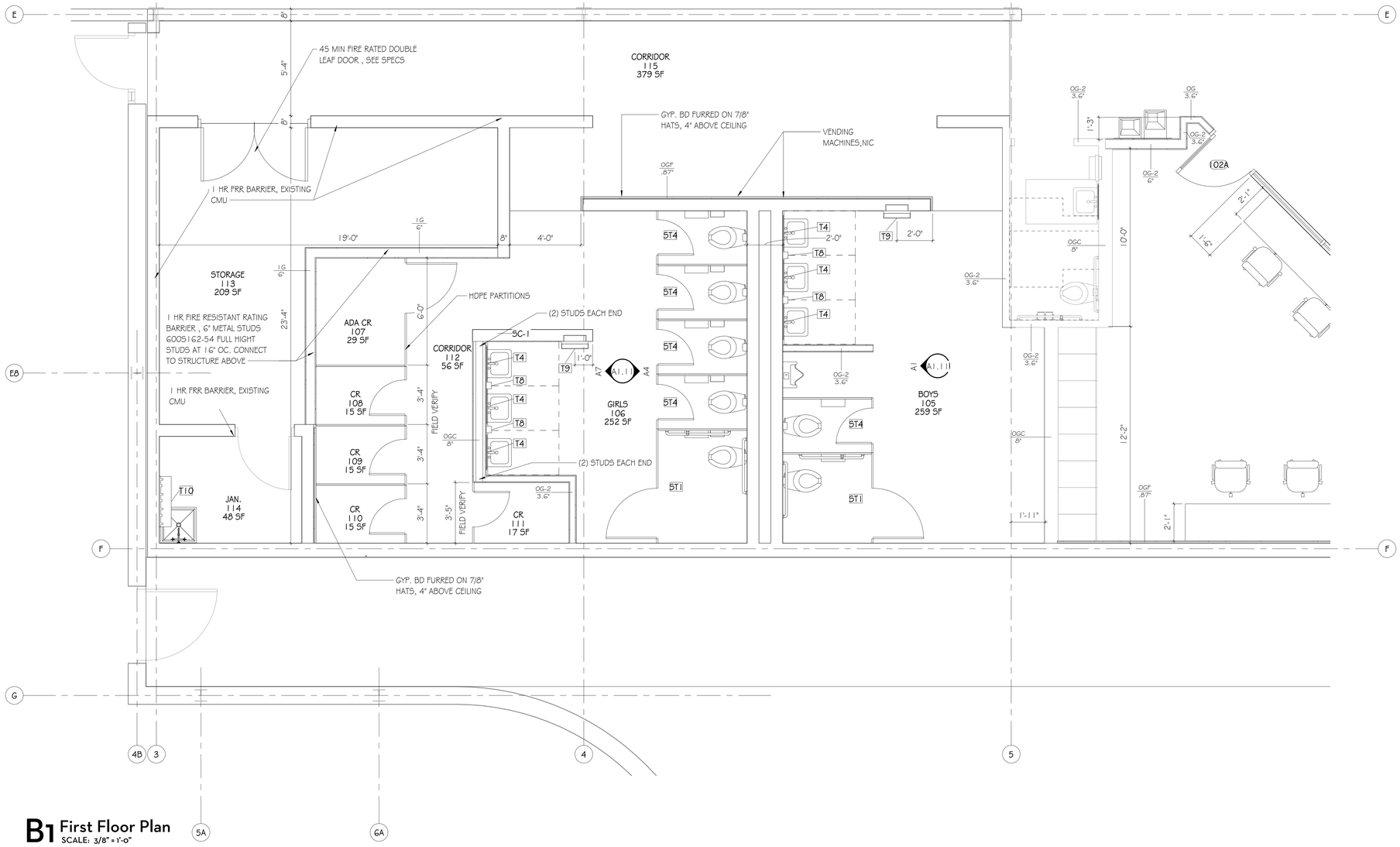
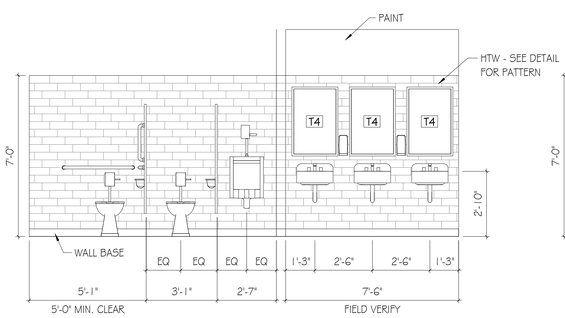
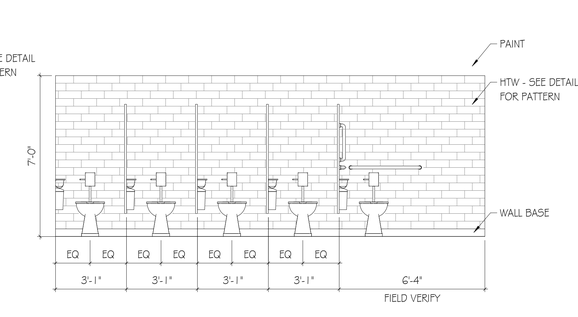


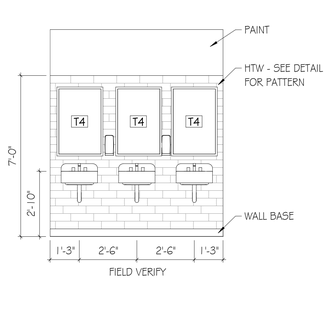
B1 First Floor Plan
SCALE: 3/8" = 1'-0"



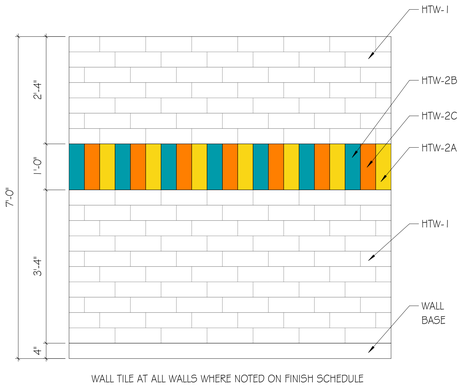
A1 BOYS 105
SCALE: 3/8" = 1'-0"



A4 GIRLS 106 A
SCALE: 3/8" = 1'-0"



A7 GIRLS 106 B
SCALE: 3/8" = 1'-0"



WALL TILE AT ALL WALLS WHERE NOTED ON FINISH SCHEDULE

A9 WALL TILE DETAIL
SCALE: 3/4" = 1'-0"

TOILET ACCESSORY SCHEDULE

#	DESCRIPTION	OFCI/ CFCI
T1	36" HORIZONTAL GRAB BAR	CFCI
T2	18" VERTICAL GRAB BAR	CFCI
T3	42" HORIZONTAL SIDE BAR	CFCI
T4	MIRROR - 36" X 24"	CFCI
T5	TOILET TISSUE DISPENSER	CFCI
T7	SEMI-RECESSED COMBINATION PAPER TOWEL DISPENSER AND WASTE RECEPTACLE	CFCI
T8	WALL MOUNTED SOAP DISPENSER	CFCI
T9	DISPENSER RECEPTACLE COMBINATION UNIT	CFCI
T10	MOP AND BROOM HOLDER	CFCI

GENERAL NOTES

1. REFER TO FINISH LEGEND FOR PAINT COLORS CALLED OUT ON REFLECTED CEILING PLANS AND FINISH PLANS.
2. UNLESS OTHERWISE NOTED, ALL FLOOR TILE SHALL BE CENTERED IN ROOM.
3. UNLESS OTHERWISE NOTED, ALL CEILING GRID AND LIGHT FIXTURES SHALL BE CENTERED IN ROOM/OPENING.
4. CONTRACTOR TO REVIEW WITH ARCHITECT, ON SITE, AREAS WITH MULTIPLE CEILING, WALL, AND FLOOR FINISHES BEFORE FINISH WORK BEGINS.
5. REFER TO RCP LEGEND ON OVERALL REFLECTED CEILING PLANS FOR RCP ABBREVIATIONS AND FINISHES.
6. WALL TILE AND BASE GROUT LINES SHALL ALIGN WITH FLOOR TILE.
7. PROVIDE BLOCKING FOR GRAB BARS AND TOILET ACCESSORIES IN RESTROOMS.

STATE OF GEORGIA · ARKHOUSE · REGISTERED ARCHITECT
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ENLARGED PLANS

A1.11
sheet 5 of 6

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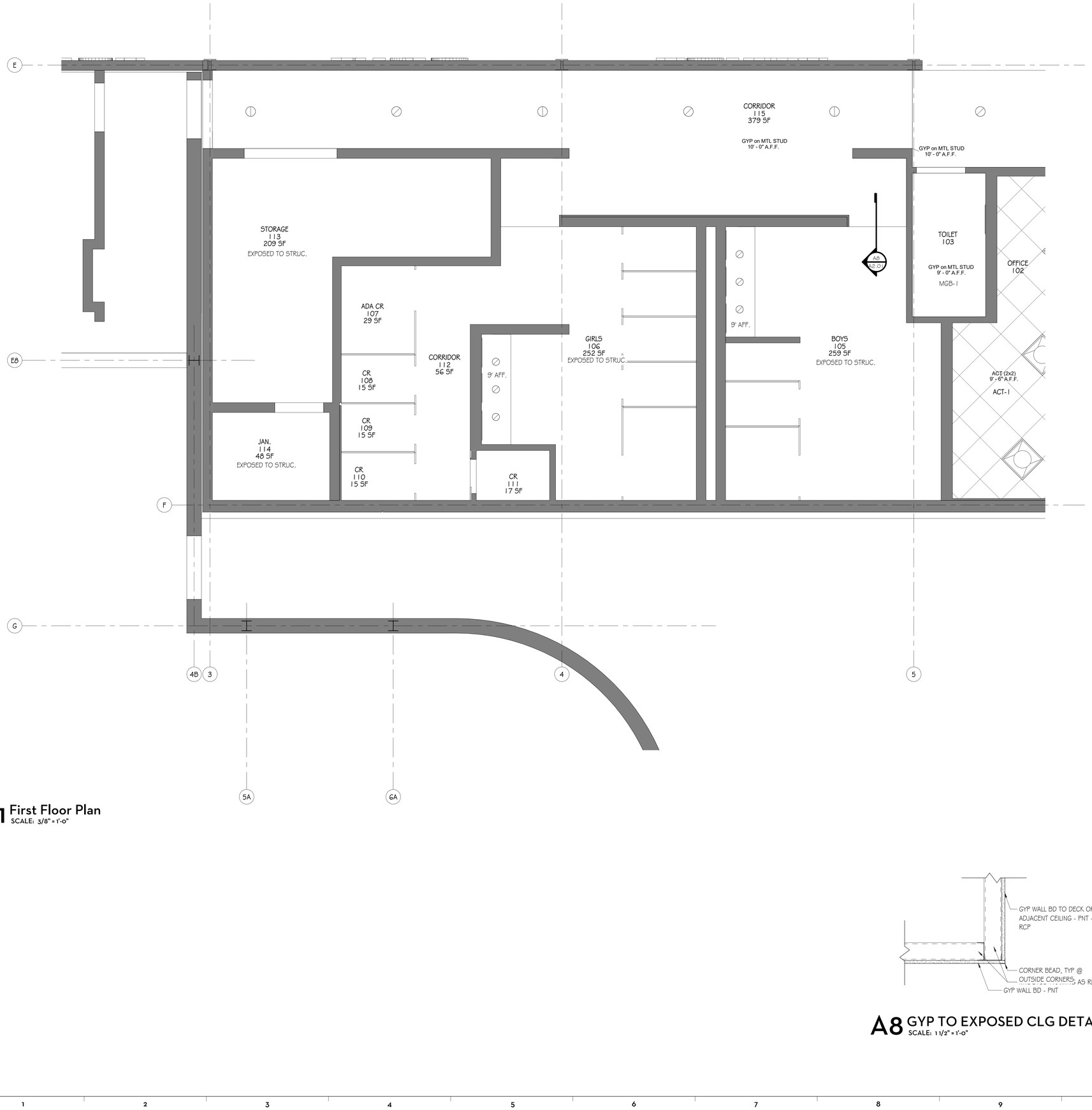


1 First Floor Plan
SCALE: 3/8" = 1'-0"

A8 GYP TO EXPOSED CLG DETAIL
SCALE: 1 1/2" = 1'-0"

REFLECTED CEILING PLAN LEGEND

CEILING FINISHES:

- 2X2' LAY-IN ACOUSTICAL CEILING & GRID SYSTEM
- RECESSED LIGHT POCKET
- GYPSUM BOARD - INTERIOR EIFS SOFFIT - EXTERIOR
- EXPOSED STRUCTURE
- 2X2 LAY-IN METAL CEILING & GRID SYSTEM
- 2X2 LAY-IN WOOD CEILING & GRID SYSTEM

MECHANICAL:

- SUPPLY DIFFUSER
- SUPPLY DIFFUSER
- RETURN AIR GRILLE
- EXHAUST FAN

LIGHTING:

- FIRE ALARM
- EXIT SIGN

LIGHTING:

- 2X4 LIGHT FIXTURE
- 2X2 LIGHT FIXTURE
- LINEAR BOX FIXTURE
- SURFACE MOUNTED STRIP FLUORESCENT
- WALL MOUNTED STRIP FLUORESCENT
- SUSPENDED LINEAR FLUORESCENT FIXTURE
- RECESSED LINEAR LED FIXTURE
- PENDANT MOUNTED INDIRECT LIGHT FIXTURE
- 1X4 RECESSED FLUORESCENT WITH SLOTTED DIFFUSER
- RECESSED LIGHT FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- SURFACE MOUNTED LIGHT FIXTURE
- LARGE PENDANT FIXTURE
- SMALL PENDANTS ON MONORAIL

CEILING FINISH KEY

NUMBER	TYPE	DETAIL DESCRIPTION
ACT-1	ACOUSTICAL CEILING TILE SYSTEM	PRODUCT EQUAL TO: MANUFACTURER: ARMSTRONG STYLE: CIRRUS 589HRC BEVELED TEGULAR (HIGHLY RECYCLED CONTENT COLOR: WHITE SIZE: 24" X 24" X 3/4" SUSPENSION SYSTEM: Suprafine XL 9/16" Exposed Tee. Color: White
GYP-1	GYP BOARD CEILING SYSTEM	PRODUCT EQUAL TO PAINTED GYP BOARD CEILING COLOR: SW 7566 WESTHIGHLAND WHITE U.N.O. ON RCP
MGB-1	MOISTURE RESISTANT GYP BOARD CEILING	PRODUCT EQUAL TO PAINTED GYP BOARD CEILING - MOISTURE RESISTANT COLOR: SW 7566 WESTHIGHLAND WHITE
EXP-1	EXPOSED TO STRUCTURE	EQUAL TO: EXPOSED TO STRUCTURE - WITH NO FINISH

GENERAL NOTES

1. INTERIOR CEILING HEIGHTS AS INDICATED ON THE REFLECTED CEILING PLANS.

2. REFER TO CONSTRUCTION FLOOR PLANS FOR REQUIRED COMPOSITION OF WALL CONSTRUCTION.

3. LOCATION OF LIGHTS, DIFFUSERS, AND RETURN AIR GRILLES TO BE COORDINATED BETWEEN REFLECTED CEILING PLANS, LIGHTING PLANS, AND HVAC PLANS. FINAL LOCATION TO BE APPROVED BY ARCHITECT.

4. COORDINATE WITH OWNER'S A/V CONSULTANT FOR PROJECTION SCREEN AND PROJECTOR LOCATION.

5. SEE SPECIFICATIONS FOR ADDITIONAL CEILING FINISH INFORMATION AND REQUIREMENTS. NOTIFY ARCHITECT WITH ANY DISCREPANCIES BETWEEN SPECIFICATION AND DRAWINGS.

6. WHERE EXIT SIGNS ARE LOCATED ABOVE DOORWAYS, CENTER ABOUT DOOR.

STATE OF GEORGIA
AMY K. HUTCH
RA014416
REGISTERED ARCHITECT
04/10/2019

GOODWYN | MILLS | CAWOOD
6120 Powers Ferry Road NW, Suite 350 | Atlanta, GA 30339
Tel 770.952.2481 GMCNETWORK.COM

ISSUE	DATE
Owner Review Set	12/21/2018
Permit Set / IFC	04/10/2019

drawn by: Author
checked by: NN

Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

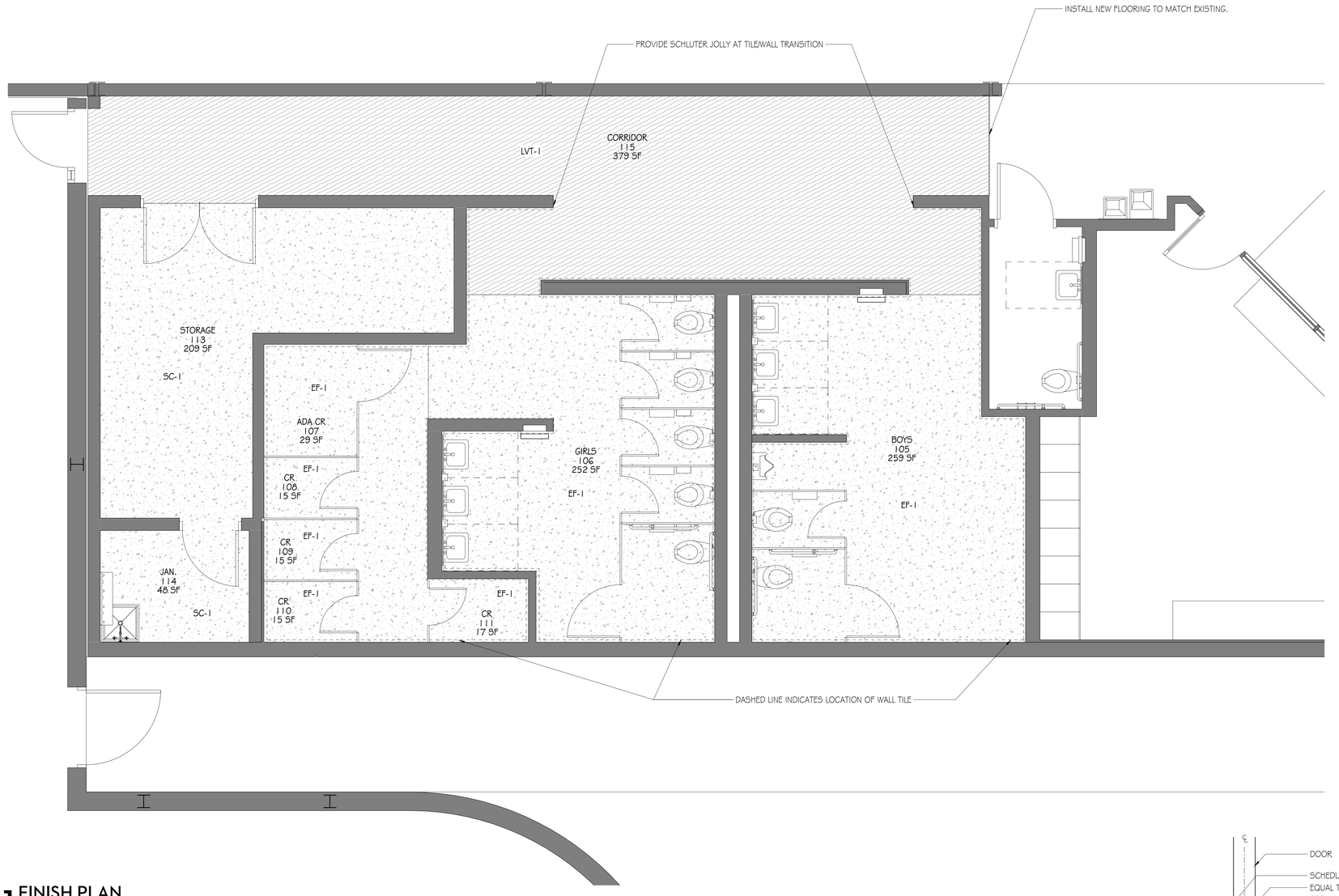
REFLECTED CEILING PLAN AND DETAILS

A2.01
sheet 6 of 6

4/11/2019 10:00:09 AM

ROOM FINISH SCHEDULE

Number	Name	Floor Finish	Base Finish	Wall Finish	Comments
105	BOYS	EF-1	EB-1	PNT-1, HTW-1, HTW-2	SEE WALL TILE DETAIL FOR ACCENT TILE LOCATIONS
106	GIRLS	EF-1	EB-1	PNT-1, HTW-1, HTW-2	SEE WALL TILE DETAIL FOR ACCENT TILE LOCATIONS
107	ADA CR	EF-1	EB-1	PNT-1, HTW-1, HTW-2	SEE WALL TILE DETAIL FOR ACCENT TILE LOCATIONS
108	CR	EF-1	EB-1	PNT-1, HTW-1, HTW-2	SEE WALL TILE DETAIL FOR ACCENT TILE LOCATIONS
109	CR	EF-1	EB-1	PNT-1, HTW-1, HTW-2	SEE WALL TILE DETAIL FOR ACCENT TILE LOCATIONS
110	CR	EF-1	EB-1	PNT-1, HTW-1, HTW-2	SEE WALL TILE DETAIL FOR ACCENT TILE LOCATIONS
111	CR	EF-1	EB-1	PNT-1, HTW-1, HTW-2	SEE WALL TILE DETAIL FOR ACCENT TILE LOCATIONS
112	CORRIDOR	EF-1	EB-1	PNT-1, HTW-1, HTW-2	SEE WALL TILE DETAIL FOR ACCENT TILE LOCATIONS
113	STORAGE	SC-1	RB-1	PNT-1	
114	JAN.	SC-1	RB-1	PNT-1	
115	CORRIDOR	LVT-1	RB-1	PNT-1	



A1 FINISH PLAN
SCALE: 3/8" = 1'-0"

FINISH LEGEND

FLOOR

NUMBER	TYPE	DETAIL DESCRIPTION
LVT-1	LUXURY VINYL TILE	PRODUCT EQUAL TO MANUFACTURER: SHAW STYLE NAME: QUIET COVER COLOR: 00720 MINK SIZE: 7" X 48"
EF-1	EPOXY FLOOR	PRODUCT EQUAL TO MANUFACTURER: KEY RESIN STYLE NAME: KEY QUARTZ COLOR: #B-125
SC-1	SEALED CONCRETE	PRODUCT EQUAL TO MANUFACTURER: SHERWIN WILLIAMS PRODUCT: 2 COATS - ARMOSEAL REXTHANE I WITH ANTI-SLIP ADDITIVE H4C SHARKGRIP LOCATION: WHERE NOTED ON DWGS

BASE

RB-1	RUBBER BASE	PRODUCT EQUAL TO MANUFACTURER: JOHNSONITE COLOR: 283 TOAST SIZE: 4" TRADITIONAL TOELESS
EB-1	EPOXY BASE	PRODUCT EQUAL TO MANUFACTURER: KEY RESIN STYLE NAME: KEY QUARTZ COLOR: #B-125 SIZE: 6" HIGH COVE BASE

WALL

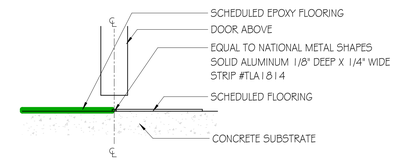
PNT-1	PAINT	PRODUCT EQUAL TO MANUFACTURER: SHERWIN WILLIAMS COLOR: SW7738 CARGO PANTS
HTW-1	DALTILE	PRODUCT EQUAL TO MANUFACTURER: DALTILE COLLECTION: COLOR WHEEL STYLE: LINEAR COLOR: ARTIC WHITE 0190 SIZE: 4"X12" LOCATION: RESTROOM
HTW-2	DALTILE	PRODUCT EQUAL TO MANUFACTURER: DALTILE COLLECTION: COLOR WHEEL STYLE: LINEAR COLORS HTW-2A: MUSTARD 1012 HTW-2B: OCEAN BLUE 1049 HTW-2C: ORANGE BURST 1097 NOTE: SEE FINISH PATTERN DETAIL FOR COLOR LOCATIONS SIZE: 4" X 12" LOCATION: RESTROOMS

MISC

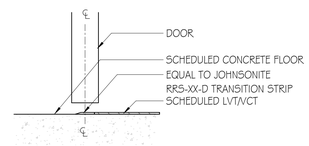
TP-1	TOILET PARTITIONS	PRODUCT EQUAL TO MANUFACTURER: SCRANTON PRODUCTS MATERIAL: HDPE COLOR: TBD

FINISH NOTES

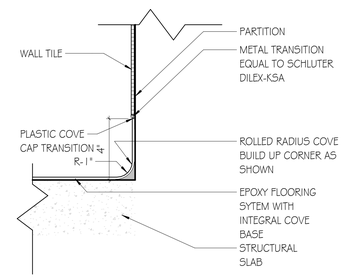
1. WALL TILE AT ALL WALLS WHERE NOTED ON FINISH SCHEDULE. SEE WALL TILE PATTERN DETAIL FOR COLOR LOCATIONS.
2. PROVIDE SCHLUTER FINEC FOR WALL TILE TRANSITION CORNERS. TYPICAL UNLESS OTHERWISE NOTED.



C11 EPX TO LVT
SCALE: 3" = 1'-0"



A9 SC TO LVT
SCALE: 3" = 1'-0"



*NOTE: USE DRY MIX TROWABLE VERSION OF FLOORING SYSTEM TO BUILD COVE BASE

A11 EPX TO HTW DETAIL
SCALE: 3" = 1'-0"

STATE OF GEORGIA
AMY K. HUTCHISON
RA014416
REGISTERED ARCHITECT
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Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

FINISH PLAN, LEGEND AND SCHEDULE

A8.01
sheet of 6

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ABBREVIATIONS

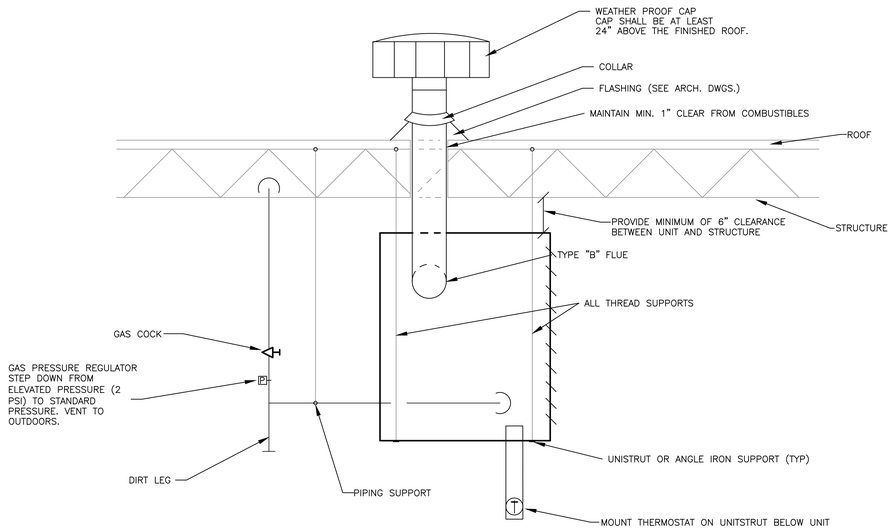
A/C	ABOVE CEILING
AD	ACCESS DOOR
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AUTO	AUTOMATIC
AC	AIR CONDITIONING
AHU	AIR HANDLING UNIT
BAL	BALANCING
BDD	BACKDRAFT DAMPER
B/F	BELOW FLOOR
B/G	BELOW GRADE
B'FLY	BUTTERFLY
BHP	BRAKE HORSEPOWER
BCO	BASE CLEANOUT
CFM	CUBIC FEET PER MINUTE
CBCR	CURVED BLADE CEILING REGISTER
CD	CEILING DIFFUSER
CU	CONDENSING UNIT
CW	COLD WATER (DOMESTIC)
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
CWS	CONDENSER WATER SUPPLY
CWR	CONDENSER WATER RETURN
CON	CONCENTRIC
CO	CLEANOUT
COND	CONDENSATE
db	DRY BULB
DCW	DOMESTIC COLD WATER
DN	DOWN
DR	DRAIN
do	DITTO
dB	DECIBELS
DWG	DRAWING
EA	EACH
EAT	ENTERING AIR TEMPERATURE
ECC	ECCENTRIC
EF	EXHAUST FAN
ER	EXHAUST REGISTER
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
EX	EXISTING
EXH	EXHAUST
EFF	EFFICIENCY
F	FAHRENHEIT
FCO	FLOOR CLEANOUT
FCU	FAN COIL UNIT
FSD	FIRE/SMOKE DAMPER
FD	FIRE DAMPER OR FLOOR DRAIN
FL DR	FLOOR DRAIN (only)
FLR	FLOOR
FOB	FLAT ON BOTTOM
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOT	FLAT ON TOP
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET
ø	FLAT OVAL
G	GATE
GA	GAUGE
GPM	GALLONS PER MINUTE
GL	GLOBE
GCO	GRADE CLEANOUT
HD	HUB DRAIN
HP	HORSEPOWER
HTG	HEATING
HW	HOT WATER (DOMESTIC)
HWR	HOT WATER RETURN
HWRR	HOT WATER REVERSE RETURN
HWS	HOT WATER SUPPLY
Hz	HERTZ
ID	INSIDE DIMENSION
IN	INCHES
KW	KILOWATTS
LAT	LEAVING AIR TEMPERATURE
LB	POUNDS
LG	LINEAR GRILLE
LRG	LINEAR RETURN GRILLE
LWR	LOOP WATER RETURN
LWS	LOOP WATER SUPPLY
MIN	MINIMUM
MAX	MAXIMUM
MD	MANUAL DAMPER
MOD	MOTOR OPERATED DAMPER
MFR	MANUFACTURER
NC	NORMALLY CLOSED
NG	NATURAL GAS
NO	NORMALLY OPEN
NOM	NOMINAL
OA	OUTSIDE AIR
OD	OUTSIDE DIMENSION
OBD	OPPOSED BLADE DAMPER
PIU	POWERED INDUCTION UNIT
PSI	POUNDS PER SQUARE INCH
RA	RETURN AIR
RAD	RADIUS
RAG	RETURN AIR GRILLE
RED	REDUCER
RL	REFRIGERANT LIQUID
RS	REFRIGERANT SUCTION
RTU	ROOFTOP UNIT
RAR	RETURN AIR REGISTER
SP	STATIC PRESSURE
SPS	STATIC PRESSURE SENSOR
SA	SUPPLY AIR
SAN	SANITARY
SD	SLOT DIFFUSER
SEN	SENSIBLE
SQ	SQUARE
SR	SUPPLY REGISTER
ST	STORM
SS	SPLIT SYSTEM
TEMP	TEMPERATURE
TG	TRANSFER GRILLE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VENT
VA	VALVE
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THRU ROOF
wb	WET BULB
WC	WATER COLUMN
WHA	WATER HAMMER ARRESTOR
WP	WEATHER PROOF
WT	WEIGHT
W	WASTE

LEGEND

☒	CEILING DIFFUSER
⧄	CEILING RETURN AIR GRILLE or EXHAUST GRILLE
═	SLOT DIFFUSER
Ⓣ	THERMOSTAT
- - - -	EXISTING WORK
———	NEW WORK
▨	WORK TO BE REMOVED
—— — ——	COLD WATER
—— · ——	HOT WATER
— — —	VENT
———	SANITARY WASTE
FD	FLOOR DRAIN
	NON FREEZE WALL HYDRANT
⊙	FLOOR CLEAN OUT
=	WALL CLEANOUT

GENERAL NOTES

1. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL POSSIBLE CONDITIONS. IT IS INTENDED THAT A COMPLETE TENANT MECHANICAL SYSTEM BE PROVIDED WITH ALL NECESSARY EQUIPMENT, ACCESSORIES, OPTIONS AND CONTROLS, COMPLETELY COORDINATED WITH ALL DISCIPLINES. ALL ITEMS AND LABOR REQUIRED FOR A COMPLETE TENANT MECHANICAL SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS AND THE BASE BUILDING CONTRACT DOCUMENTS SHALL BE FURNISHED WITHOUT INCURRING ADDITIONS TO THE CONTRACT.
2. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT PARTITION LAYOUTS, REFLECTED CEILING PLANS, DIMENSIONS, ETC.
3. VISIT SITE AND CAREFULLY EXAMINE EXISTING CONDITIONS PRIOR TO SUBMITTING BID. THE EXISTING CONDITIONS SHOWN ARE BASED ON DOCUMENTS PROVIDED BY OTHERS AND HAVE NOT BEEN VERIFIED BY THE ENGINEER. IF EXISTING CONDITIONS DIFFER FROM DRAWINGS IN SUCH A MANNER THAT WILL AFFECT PRICING CONTRACTOR WILL NOTIFY OWNER SO THAT A RESOLUTION CAN BE MADE PRIOR TO SUBMITTING BIDS. NO ALLOWANCE WILL BE MADE FOR LACK OF KNOWLEDGE OF EXISTING CONDITIONS.
4. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF ALL CEILING MOUNTED AIR DISTRIBUTION DEVICES. IF ANY ITEMS ARE NOT SHOWN ON THE REFLECTED CEILING PLANS, PREPARE A DRAWING OF THE PROPOSED LOCATION AND PRESENT IT TO THE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION.
5. ALL ROUND AND FLEXIBLE DUCTWORK EXTENDING TO DIFFUSERS SHALL BE SIZED FULL SIZE OF DISTRIBUTION DEVICE INLET, AND TAPS TO THE EXISTING LOW-PRESSURE DUCTWORK SHALL BE MADE WITH SPIN-IN FITTINGS HAVING INTEGRAL SCOOPS AND VOLUME DAMPERS. ALL NEW RECTANGULAR DUCTWORK TAPS SHALL BE MADE WITH SPLITTERS OR EXTRACTORS. ALL DUCTWORK SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SMACNA DUCT STANDARDS.
6. FLEXIBLE DUCTWORK SHALL NOT BE USED IN AREAS WITHOUT A CEILING (OPEN TO STRUCTURE). NEW RUNOUTS SHALL BE ROUND SHEETMETAL DUCT CONNECTED TO THE DIFFUSER. ANY EXISTING FLEXIBLE DUCT SHALL BE REMOVED AND REPLACED WITH ROUND SHEETMETAL.
7. FLEXIBLE DUCTS SHALL BE INSTALLED FREE OF SAGS AND KINKS; SUPPORTED AT NOT MORE THAN 48" O.C.
8. TEST AND BALANCE ALL DIFFUSERS, FANS, ETC. TO THE AIRFLOWS AND CONDITIONS INDICATED. TESTING AND BALANCING OF HVAC SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS OF AABC AND SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF AN AABC CERTIFIED TEST AND BALANCE ENGINEER. SUBMIT 4 COPIES OF THE REPORT TO THE OWNER.
9. ALL CONTROL WIRING AND TUBING INSTALLED ABOVE THE CEILING SHALL BE LOCATED AS HIGH ABOVE THE CEILING AS POSSIBLE AND SHALL FOLLOW THE DESIGNATED GENERAL ROUTING OF THE DUCTWORK. DO NOT HANG WIRING OR TUBING FROM DUCTWORK; RATHER, SUSPEND FROM THE STRUCTURE.
10. THERMOSTATS SHALL BE LOCATED IN EACH ZONE AS SHOWN. THE EXACT LOCATION ON THE WALL INDICATED SHALL BE AS DIRECTED BY THE ARCHITECT. NEW THERMOSTATS SHALL BE SELECTED TO MATCH EXISTING BASE BUILDING THERMOSTATS AND SHALL BE COMPATIBLE WITH EQUIPMENT SERVED.
11. ADJUST ALL DIFFUSERS IN CORRIDORS OR WITHIN 3 FEET OF A WALL TO PROVIDE 2- WAY OR 3-WAY BLOW AWAY FROM OR PARALLEL TO WALLS. ALL LAY-IN DIFFUSERS SHALL HAVE 4-WAY BLOW UNLESS NOTED OTHERWISE.
12. PORTIONS OF DUCTWORK VISIBLE THROUGH GRILLES AND REGISTERS IN FINISHED AREA SHALL BE PAINTED FLAT BLACK.
13. SHEET METAL SUPPLY DUCTWORK SHALL BE INSULATED WITH COMPRESSED 2" THICK FIBERGLASS DUCT INSULATION WITH FOIL VAPOR BARRIER U/L LISTED. EXHAUST DUCTWORK SHALL NOT BE INSULATED UNLESS OTHERWISE NOTED.
14. LOW PRESSURE DUCTWORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS.
15. SPRINKLER HEADS AND ASSOCIATED BRANCH PIPING SHALL BE PROVIDED AND RELOCATED IN ACCORDANCE WITH NFPA 13 AND ALL PREVAILING LOCAL CODES AS REQUIRED TO PROTECT ALL SPACES IN THIS AREA. SPRINKLER HEADS SHALL MATCH BASE BUILDING STANDARD WITHIN PUBLIC CORRIDOR.



1 / MO.1 EXISTING GAS FIRED UNIT HEATER DETAIL
NOT TO SCALE

ELECTRIC HEATER SCHEDULE

I.D. TAG	DESCRIPTION	CAPACITY KW	MIN CFM	FAN HP	S.P. (IN. WG)	VOLTS/ PHASE	BASIS OF DESIGN	REMARKS
EWH-A	WALL HEATER	2.0	245	F	---	208/1	REDDI AFH	①②

① PROVIDE HEATER WITH UNIT MOUNTED THERMOSTAT AND INTEGRAL DISCONNECT.
② COORDINATE MOUNTING WITH WALL TYPE. RECESS MOUNT IN ALL NON-RATED WALL LOCATIONS.

GOODWYN | MILLS | CAWOOD
6120 Powers Ferry Road NW, Suite 350 | Atlanta, GA 30339
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GEORGIA REGISTERED No. PE023870 ENGINEER ROSS W. ROSENTHAL

ISSUE DATE
Owner Review Set 12/21/2018
Permit Set / IFC 04/10/2019
drawn by: T. KLINGER
checked by: R. ROSENTHAL

Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

ABBREVIATIONS, NOTES, LEGEND, SCHEDULES, AND DETAILS - MECHANICAL

MO.1
sheet of

BW&A Barrett, Woodyard & Associates, Inc.
3495 Holcomb Bridge Road
Norcross, GA 30092
Phone (770) 810-8800
Fax (770) 810-8808

TRUE NORTH

7/10/2017 3:02:08 PM

SCHEDULES OF THROUGH PENETRATION FIRESTOP SYSTEMS

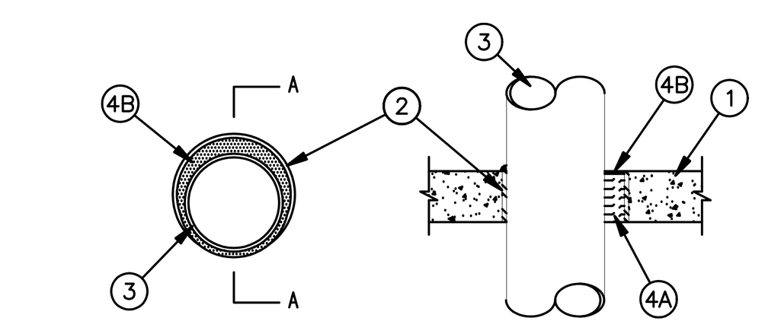
CONCRETE FLOORS			CONCRETE OR BLOCK WALLS		
TYPE OF PENETRANT	F-RATING (HR)	UL-CLASSIFIED SYSTEM	TYPE OF PENETRANT	F-RATING (HR)	UL-CLASSIFIED SYSTEM
SINGLE METAL PIPES OR CONDUIT	1	C-AJ-1226	SINGLE METAL PIPES OR CONDUIT	1	C-AJ-1226
	2	C-AJ-1226		2	C-AJ-1226
	3	C-AJ-1226		3	C-AJ-1226
SINGLE INSULATED PIPES	1	C-AJ-5090, C-AJ-5091	SINGLE INSULATED PIPES	1	C-AJ-5090, C-AJ-5091
	2	C-AJ-5090, C-AJ-5091		2	C-AJ-5090, C-AJ-5091
	3	C-AJ-5090		3	C-AJ-5090
NON-INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	C-AJ-7046	NON-INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	C-AJ-7046
	2	C-AJ-7046		2	C-AJ-7046
	3	C-AJ-7046		3	C-AJ-7046
MIXED PENETRANTS	1	C-AJ-8041	MIXED PENETRANTS	1	C-AJ-8041
	2	C-AJ-8041		2	C-AJ-8041
	3	C-AJ-8041		3	C-AJ-8041

GYPSUM WALLBOARD ASSEMBLIES		
TYPE OF PENETRANT	F-RATING (HR)	UL-CLASSIFIED SYSTEM
METAL PIPES OR CONDUIT	1	W-L-1054, W-L-1164
	2	W-L-1054, W-L-1164
INSULATED PIPES	1	W-L-5029
	2	W-L-5029
NON-INSULATED MECHANICAL DUCTWORK WITHOUT DAMPERS	1	W-L-7040, W-L-7042
	2	W-L-7040, W-L-7042
MIXED PENETRANTS	1	W-L-8013
	2	W-L-8013

NOTES:
1. JOBSITE CONDITIONS OF EACH THROUGH-PENETRATION FIRESTOP SYSTEM MUST MEET ALL DETAILS OF THE UL-CLASSIFIED SYSTEM SELECTED.
2. WHERE MORE THAN ONE APPLICABLE UL-CLASSIFIED SYSTEM IS LISTED IN THE SCHEDULES, CHOOSE THE UL SYSTEM WHICH IS MOST ECONOMICAL FOR EACH THROUGH-PENETRATION FIRESTOP SYSTEM.
3. COORDINATE WORK WITH OTHER TRADES TO ASSURE THE PENETRATION OPENING SIZES ARE APPROPRIATE FOR PENETRANT LOCATIONS, AND VICE VERSA.

System No. C-AJ-1226

F RATING = 3-HR.
T RATING = 0-HR.
L Rating At Ambient – Less than 1 CFM/Sq Ft
L Rating At 400 F – 4 CFM/Sq Ft


SECTION A-A

1. Floor or Wall Assembly -- Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 32 in.

2. Metallic Sleeve -- (Optional) Nom 32 in. diam (or smaller) Schedule 40 (or heavier) steel sleeve cast or grouted into floor or wall assembly, flush with floor or wall surfaces or extending a max of 3 in. above floor or beyond both surfaces of wall.

3. Through-Penetrant -- One metallic pipe, tube or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between penetrant and periphery of opening shall be min 0 in. (point contact) to max 1-7/8 in. Penetrant may be installed with continuous point contact. Penetrant to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic penetrants may be used:

A. Steel Pipe -- Nom 30 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
B. Iron Pipe -- Nom 30 in. diam (or smaller) cast or ductile iron pipe.
C. Copper Pipe -- Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.
D. Copper Tubing -- Nom 6 in. diam (or smaller) Type L (or heavier) copper tubing.
E. Conduit -- Nom 6 in. diam (or smaller) steel conduit.
F. Conduit -- Nom 4 in. diam (or smaller) steel electrical metallic tubing (EMT).

4. Firestop System -- The firestop system shall consist of the following:

A. Packing Material -- Min 4 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or sleeve or from both surfaces of wall or sleeve as required to accommodate the required thickness of fill material.

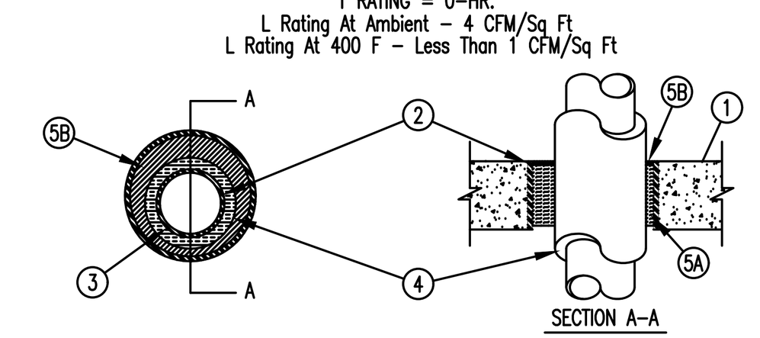
B. Fill, Void or Cavity Material* -- Sealant -- Min 1/4 in. thickness of fill material applied within the annulus, flush with top surface of floor or sleeve or with both surfaces of wall or sleeve. At the point or continuous contact locations between penetrant and concrete or sleeve, a min 1/4 in. diam bead of fill material shall be applied at the concrete or sleeve/ pipe penetrant interface on the top surface of floor and on both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF
HILTI INC -- FS-One Sealant

*Bearing the UL Classification Mark

System No. C-AJ-5090

F RATING = 3-HR.
T RATING = 0-HR.
L Rating At Ambient – 4 CFM/Sq Ft
L Rating At 400 F – Less Than 1 CFM/Sq Ft

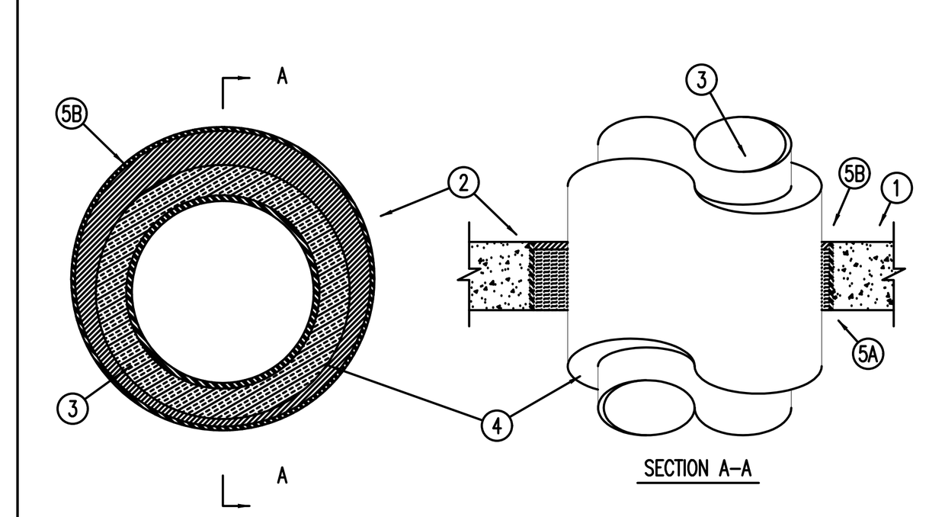

SECTION A-A

1. Floor or Wall Assembly – Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 8 in.
   See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Metallic Sleeve (Optional) – Nom 8 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
3. Through Penetrants – One metallic pipe or tubing to be centered within the firestop system. Pipe or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or tubing may be used:
   A. Steel Pipe – Nom 4 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
   B. Copper Pipe – Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.
   C. Copper Tubing – Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing
4. Tube Insulation-Plastics+ – Nom 3/4 in., thick acrylonitrile butadiene/ polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. Annular space shall be min 1/2 in. to max of 1-1/2 in.
   See Plastics+ (QMFZ2) Category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.
5. Firestop System – The firestop system shall consist of the following:
   A. Packing Material – Min 4 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.
   B. Fill, Void or Cavity Material* – Sealant – Min 1/4 in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall.
   HILTI, Inc. – FS-ONE Sealant

*Bearing the UL Classification Marking

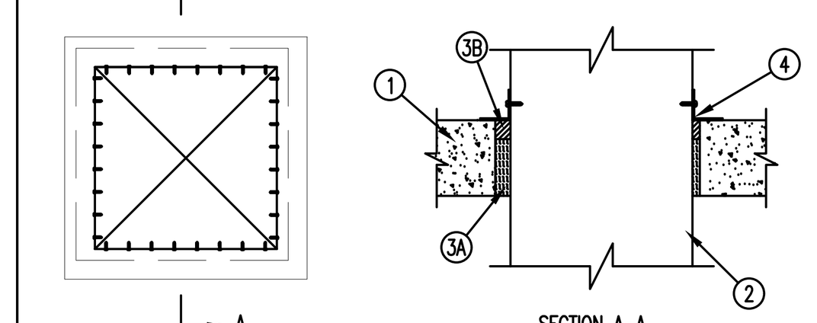
System No. C-AJ-5091

F RATING = 2-HR.
T RATING = 1-HR.
L Rating At Ambient – 4 CFM/Sq Ft
L Rating At 400 F – Less Than 1 CFM/Sq Ft


SECTION A-A

System No. C-AJ-7046

F Rating – 3 Hr
T Rating – 0 Hr

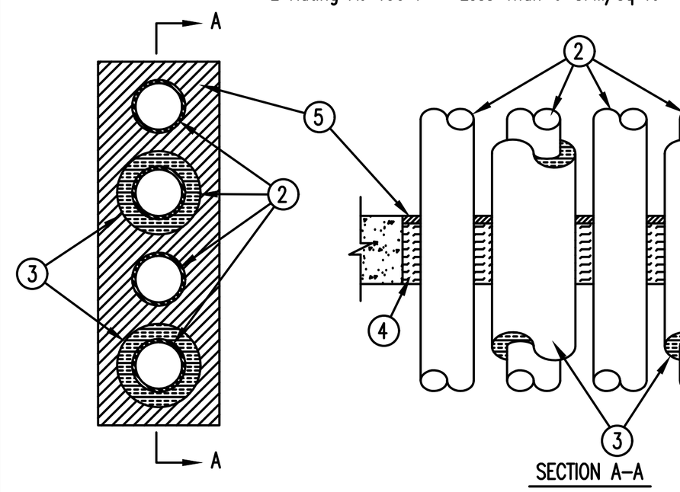

SECTION A-A

1. Floor or Wall Assembly – Min 4-1/2 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete floor or min 5-1/2 in. thick lightweight on normal weight concrete wall. Wall may also be constructed of any UL Classified Concrete Blocks*. Max area of opening is 1139 in. sq with a max dimension of 33-3/4 in.
   See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. Steel Duct – Nom 32 by 32 by No. 24 gauge (or heavier) galv steel duct. One steel duct to be positioned within the firestop system. The annular space shall be min 1/4 in. to max 1-1/2 in. Duct to be rigidly supported on both sides of floor or wall assembly.
3. Firestop System – The firestop system shall consist of the following:
   A. Packing Materials – Min 3-1/2 in. thickness of min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form between the bare steel duct and the periphery of the opening. Packing material to be recessed from top surface of floor or both surfaces of wall as required to accommodate the required thickness of fill material.
   B. Fill, Void or Cavity Material* – Sealant – Min 1 in. thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall.
   HILTI CONSTRUCTION CHEMICALS, DIV OF
   HILTI INC – CP 601S Elasomeric Firestop Sealant
4. Steel Retaining Angle – Nom 2 in. by 2 in. by No. 16 gauge (or heavier) steel angles attached to all four sides of the steel duct on the top surface or both surfaces of the wall. The angles shall be attached with No. 8 (or larger) steel sheet metal screws spaced max of 1 in. from each end and a max of 3 in. OC.

*Bearing the UL Classification Marking

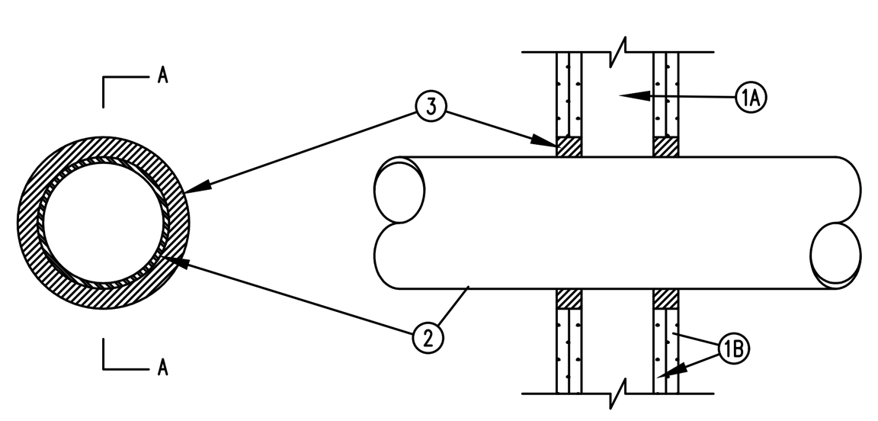
System No. C-AJ-8041

F RATING = 3-HR.
T RATING = 0 and 1 HR.
L Rating At Ambient – 10 CFM/sq ft
L Rating At 400 F – Less Than 6 CFM/sq ft


SECTION A-A

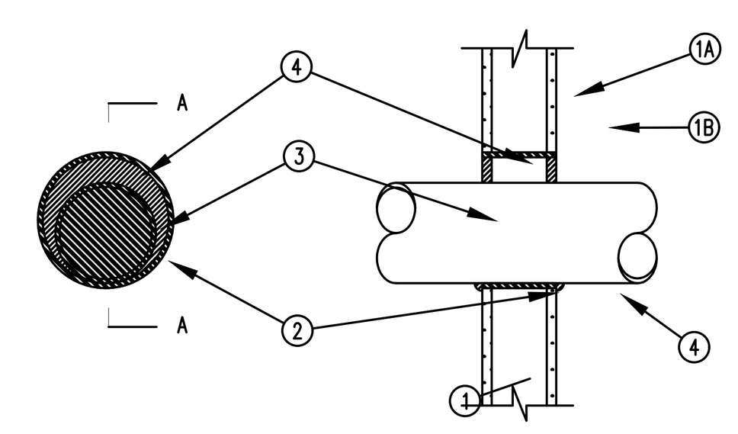
System No. W-L-1054

F Ratings – 1 and 2 Hr (See Items 1 and 3)
T Rating – 0 Hr
L Rating At Ambient – Less Than 1 CFM/Sq Ft
L Rating At 400 F – 4 CFM/Sq Ft


SECTION A-A

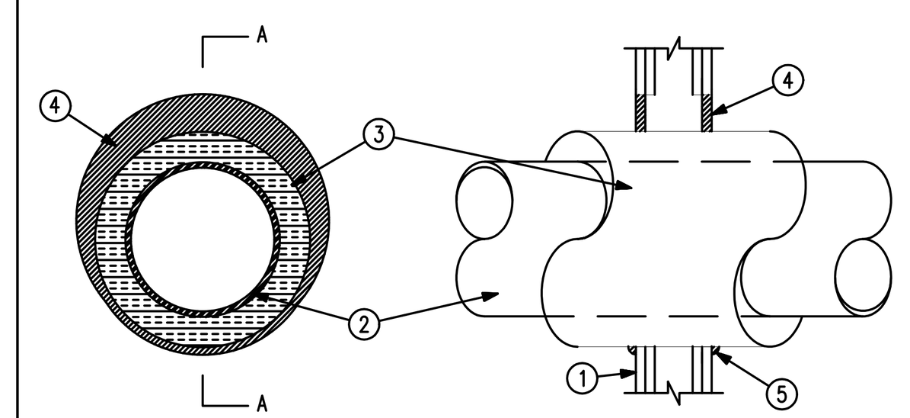
System No. W-L-1164

F Ratings – 1 and 2 Hr (See Items 1 and 4)
T Rating – 0 Hr


SECTION A-A

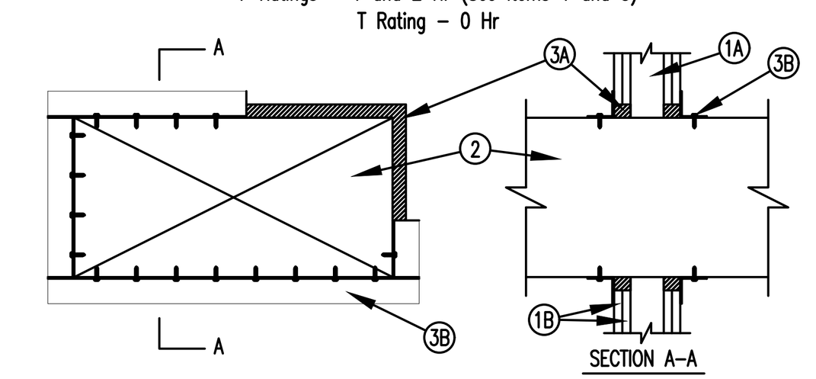
System No. W-L-5029

F Ratings – 1 and 2 Hr (See Item 1)
T Ratings – 1/2, 3/4, 1 and 1-3/4 Hr (See Item 3)
L Rating At Ambient – 4 CFM/Sq Ft
L Rating At 400 F – Less Than 1 CFM/Sq Ft


SECTION A-A

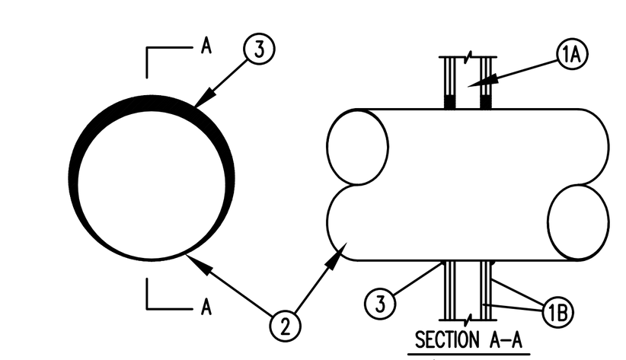
System No. W-L-7040

F Ratings – 1 and 2 Hr (See Items 1 and 3)
T Rating – 0 Hr


SECTION A-A

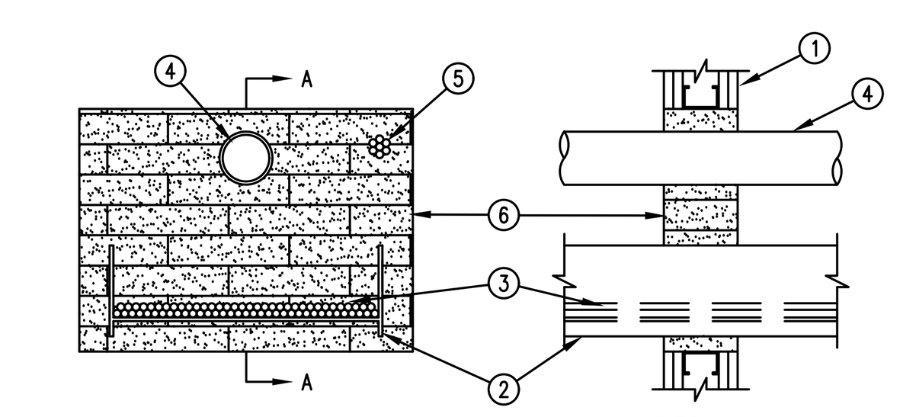
System No. W-L-7042

F Ratings – 1 and 2 Hr (See Items 1 and 3)
T Rating – 0 Hr


SECTION A-A

System No. W-L-8013

F Ratings – 1 and 2 Hr (See Item 1)
T Rating – 0 Hr
L Rating At Ambient – 5 CFM/Sq Ft
L Rating At 400 F – 2 CFM/Sq Ft


SECTION A-A

BW &A Barrett, Woodyard & Associates, Inc.
3495 Holcomb Bridge Road
Norcross, GA 30092
Phone (770) 810-8800
Fax (770) 810-8808

GEORGIA REGISTERED No. PE028790 PROFESSIONAL ENGINEER ROSS W. ROSENTHAL

GOODWYN | MILLS | CAWOOD
6120 Powers Ferry Road NW, Suite 350 | Atlanta, GA 30339
Tel 70.952 GMCNETWORK.COM

ISSUE	DATE
Owner Review Set	12/21/2018
Permit Set / IFC	04/10/2019

drawn by: T. KLINGER
checked by: R. ROSENTHAL

Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

FIRE PENETRATION DETAILS - MECHANICAL

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SECTION 15010

MECHANICAL GENERAL

1.0 GENERAL

1.01 DESCRIPTION

A. This Division 15 and the accompanying drawings cover the provision of all labor, equipment, appliances, and materials and performing all operations in connection with the construction of the air conditioning, ventilating, heating, fire suppression and plumbing systems as specified herein and as shown.

B. The General Provisions and Division 1, including the general, supplementary and other conditions and other Divisions, as appropriate, apply to work specified in this Division.

1.02 EXISTING CONDITIONS

A. Attention is called to the fact that the work is to be performed within an existing, operational facility. Prior to the submission of bids, each bidder shall visit the project site, thoroughly investigate and be familiar with all existing conditions which will affect their work; especially the work to be performed above the existing ceilings.

B. Connect new work to existing work in a neat and workmanlike manner. Where an existing structure must be cut or existing utilities interfere, such obstructions shall be bypassed, removed, replaced or relocated, patched and repaired. Work disturbed or damaged shall be replaced or repaired to its prior condition.

C. Prior to the start of any demolition or construction, secure the services of a qualified, EPA Certified asbestos abatement agency to check the existing insulation, etc. for asbestos. Should asbestos be found, do not proceed with demolition or construction; notify the Architect in any case in writing of the agency's findings.

1.03 INTENT OF DRAWINGS AND SPECIFICATIONS

A. The implied and stated intent of the drawings and specifications is to establish minimum acceptable standards for materials, equipment and workmanship, and to provide operable mechanical systems complete in every respect.

B. The engineering drawings are diagrammatic, intended to show general arrangement and sizes of system components, and shall not be scaled. Rather, the architectural and structural drawings shall govern space constraints, dimensions and finishes. All offsets and fittings which will be necessary to accomplish the finished installation shall be provided at no additional cost or increase in the Contract.

1.04 SPACE PRIORITY

A. Ensure optimum use of available space for materials and equipment installed above ceilings. Allocate space in the order of priority as listed below except as otherwise detailed. Items are listed in the order of priority, with items of equal importance listed under a single priority number.

1. Gravity flow piping systems
2. Vent piping systems
3. Recessed lighting fixtures
4. Concealed HVAC terminals and equipment
5. Air duct systems
6. Sprinkler piping systems
7. Pressurized piping systems
8. Electrical conduit, wiring, control air tubing

B. Order of space priority does not dictate installation sequence. Installation sequence shall be as required to install all affected trades.

C. The work of this Division 15 shall not obstruct access for installation, operation and maintenance of the work of any other Division.

D. All major items of equipment shall be arranged so as to provide a minimum of 28" clear aisle space. Additional space shall be provided between and around equipment for maintenance and proper operation as shown in the equipment manufacturer's literature.

1.05 COORDINATION

A. Coordinate all work under this Division 15 with work under all other Divisions, providing adjustment as necessary.

B. Coordination of space requirements with respect to Division 16 shall be performed such that:

1. No equipment, piping or ductwork, other than electrical, shall be installed within 42" of switchboards or panelboards.

2. No piping or ductwork which ever operates at a temperature in excess of 120 degrees F. shall be installed within 3" of any electrical conductor.

C. All items mounted in or below the ceiling, and all items penetrating the ceiling, shall be coordinated with the architectural reflected ceiling plans. If any items are not shown on these plans, or any items need to be relocated for coordination purposes, prepare a reflected ceiling plan and submit it to the Architect for approval.

1.06 CODE COMPLIANCE

A. All workmanship and materials provided under this Division 15 shall comply with all laws, ordinances, codes and regulations of all Federal, State and Local Authorities having jurisdiction.

B. All fire suppression, plumbing, heating, ventilating, and air conditioning materials and workmanship shall comply with all local, state, and federal standard codes as minimum requirement.

C. Secure and pay all fees associated with all permits and licenses required for execution of the Contract. Arrange for all inspections required by city, county, state and other authorities having jurisdiction, and deliver certificates of approval to the Architect.

D. The code requirements are strictly a minimum and shall be met without incurring additions to the Contract. Where requirements of the drawings or specifications exceed the code requirements, the work shall be provided in accordance with these drawings or specifications. In the event of conflict or ambiguity between the various codes, the most stringent requirement shall govern.

1.07 ELECTRICAL REQUIREMENTS AND INTERFACE

A. All electrical equipment and wiring provided under this Division 15 shall comply with the electrical system characteristics indicated on the electrical drawings and specified in Division 16.

B. Electric controls, contactors, starters, pilot lights, push buttons, etc., shall be provided complete as part of the motor, heater or other equipment which it operates. All electrical components shall be in conformance with the requirements of the National Electrical Code and Division 16. Reference Division 16 and the electrical engineering drawings for those motor starters provided under that Division 16. All starters not shown shall be provided under this Division 15. Unless specified otherwise under other individual equipment Sections, motor starters shall conform to the following minimum requirements:

1. Starters for motors 1/3 horsepower or smaller shall be manual unless remote or automatic starting is required, in which case the starters shall be magnetic, full voltage, non-reversing, single-speed, unless otherwise indicated. All other starters shall be magnetic.

2. Each starter for a three-phase motor shall be furnished with three (3) overload relays sized for the full load running current of the motor actually provided. Provide an external "HAND-OFF-AUTO" selector switch with red "RUNNING" light. Provide a green pilot light to indicate motor "STOPPED". Each pilot light shall have a legend plate indicating reason for signal.

3. Each overload relay shall have a normally open alarm contact which will close only when actuated by an overload (not to be confused with N.O. or N.C. auxiliary contacts). These contacts shall be properly wired to their respective blue pilot light provided on the starter front cover and having a "TRIPPED" legend plate.

4. Individually mounted motor starters shall be in a NEMA Type 1 general purpose enclosure in unfinished areas and shall be flush mounted in all finished areas. All starters mounted in exterior areas shall have a NEMA 3R enclosure. Each starter shall have a laminated nameplate to indicate equipment unit number, function and circuit number.

5. All motor starters, push buttons and pilot lights shall be of the same manufacturer as the switchboard and shall be General Electric, Square D, Siemens I.T.E., or Westinghouse.

C. Motor starters for the following equipment shall be provided under this Division 15 by the manufacturer of the equipment:

1. Packaged air conditioning equipment
2. Water chillers
3. Fire pumps
4. Packaged booster pump systems
5. Other equipment hereinafter specified in other Sections to be provided with integral starters.

D. Unless otherwise noted or specified in individual Sections, all 3-phase motors shall be standard NEMA continuous duty "B" type, with Class B insulation, open drip-proof frame for indoor service, TEFC for outdoor service and a service factor of 1.15. All motors 5 HP and larger shall be U.S. Motors Hi-Efficiency Model or Reliance XE Hi-Efficiency Model.

E. All power wiring and final connections to equipment shall be provided under Division 16.

F. Control components, all interlocks (motor-operated dampers, fire alarm motors, etc.) and control wiring (120 volt, single phase and less) shall be provided under this Division 15 as required to achieve the specified control sequences.

G. All control wiring over 30 volts shall be installed by a licensed electrician working under this Division 15.

1.08 SLEEVES, SEALS AND ESCUTCHEONS

A. Sleeves shall be provided through all pipe penetrations of concrete or masonry walls, elevated floors and roofs, except those plumbing piping penetrations for fixtures, vents, etc.

B. Sleeves shall be fabricated from Schedule 40 steel pipe through 10" and Standard Wall steel pipe for sleeve sizes 12" and larger. All sleeves penetrating exterior walls, underground walls, pit or vault walls shall be provided with a 3" x 3/8" thick waterstop ring welded completely to the midpoint of the sleeve.

C. All sleeves penetrating exterior walls, underground walls, pit or vault walls and elevated floors shall be packed and sealed watertight.

D. Sleeves through roofs shall extend above the roof surface and be flashed watertight.

E. Sleeves through walls shall be cut and finished flush with each surface of the wall in which they are installed.

F. Sleeves shall be sized to provide a minimum of 1/2" clearance between the inside surface of the sleeve and the outside finished surface of the pipe plus any insulation specified.

G. Fire-stops shall be provided as specified herein. All annular spaces between piping and sleeves, which do not require fire-stops, shall be packed with mineral wool and caulked.

H. Provide round, chrome-plated escutcheons on all exposed piping penetrations passing through walls, floors, partitions and ceilings.

1.09 FIRE-STOPS

A. Where ductwork, piping, conduit, etc. pass through fire partitions, fire walls and floors, a fire-stop shall be provided that will ensure an effective barrier against the spread of fire, smoke and gases. Fire-stop material shall be packed tight and completely fill gaps between the ductwork, piping, conduit, etc. and the perimeter of their rough openings.

B. Fire-stopping material shall maintain its dimensions and integrity while preventing the passage of flame, smoke and gases under conditions of installation and use when exposed to the ASTM E119 time-temperature curve for a time period equivalent to the rating of the assembly penetrated. Fire-stopping material shall be noncombustible as defined by ASTM E136; and, for insulation materials, melt point shall be a minimum of 1700 degrees F. for 1-hour protection and 1850 degrees F. for 2-hour protection. Fire-stopping material shall be Dow-Corning RTV Foam or 3M Fire Barrier Products or Sohio Carborundum Fyre Putty.

C. See Section 15400 for fire stopping of PVC piping.

1.10 CORE DRILLING

A. Cutting of holes through concrete and masonry shall be by diamond core or concrete saw. Pneumatic hammer, impact electric and hand or manual hammer type drills will not be allowed, except as permitted by the Architect where required by limited working space. Locate holes such that they will not affect structural sections such as ribs or beams. Holes shall be laid out well in advance of the installation. These layout locations shall be approved by the Architect prior to drilling.

2.0 PRODUCTS

2.01 BID BASIS AND SUBSTITUTION PROCEDURES

A. Manufacturers names, series and model numbers, as noted or specified, are for the purpose of describing type, capacity, and quality of equipment, materials and products to be used. Unless "or equal" is specifically stated, bids shall be based only on the specified "basis of design" manufacturer. The listing of a particular manufacturer as an "equal" or "acceptable substitute" manufacturer shall not be misconstrued as approving nor allowing the substitution of that manufacturer's standard product in place of the basis of design. No consideration will be given to a product, which would require dimensional, spatial or aesthetic changes to the project. "Acceptable substitute" and "equal" manufacturers shall only bid those products, which exactly match the size and other characteristics of the specified basis of design. Any changes to other disciplines and trades of work required by an "or equal" or "substitute" product shall be duly considered and priced accordingly prior to bidding or pricing. The decision as to whether or not a proposed substitute or "equal" product is actually equal to that specified shall rest solely with the Architect.

B. Requests to provide "equal" products in lieu of those specified shall be submitted to the Architect in writing at least ten (10) days prior to final pricing and execution of the Contract. No consideration will be given to substitute products after final pricing and execution of the Contract.

C. Any "or equal" product or proposed product substitution which will cause a change in the appearance, dimensions or design of any part of the building, it structure, electrical system or any other engineered systems shall be accompanied by a scaled drawing and written description of the required change(s) for approval by the Architect. If deemed necessary by the Architect, design changes shall be signed and sealed by a registered Professional Engineer, currently licensed in this State.

2.02 MINIMUM STANDARDS

A. Every piece of energy consuming equipment, all fire suppression products and life safety equipment shall comply with the following standards as applicable; especially in regard to prevailing codes:

1. Factory Mutual Laboratories (FM)
2. Industrial Risk Insurers (IRI)
3. Underwriters Laboratories, Inc. (UL)
4. ADC: Air Diffusion Council
5. AGA: American Gas Association
6. AMCA: Air Moving and Conditioning Association, Inc.
7. ANSI: American National Standards Institute
8. API: American Petroleum Institute
9. ARI: American Refrigeration Institute
10. ASHRAE: American Society of Heating, Refrigerating and Air Conditioning Engineers
11. ASME: American Society of Mechanical Engineers
12. ASTM: American Society of Testing and Materials
13. AWWA: American Water Works Association
14. IBR: Institute of Boiler and Radiator Manufacturers
15. MSS: Manufacturers Standardization Society
16. NBBPVI: National Board of Boiler and Pressure Vessel Inspectors
17. NEMA: National Electrical Manufacturer's Association
18. OSHA: Occupational Safety & Health Administration
19. PDI: Plumbing Drainage Institute
20. PPI: Plastic Pipe Institute
21. SMACNA: Sheet Metal and Air Conditioning Contractors National Association, Inc.

3.0 EXECUTION

3.01 SUBMITTALS

A. Before preparing submittals, study all Contract Drawings and specifications in detail, obtain manufacturer's recommended instructions, and have submittals prepared based on specific equipment and material proposed for installation. An officer of the contracting firm shall sign all shop drawings (certifying conformance with plans and specifications) before submitting to the Architect or releasing to the field.

B. The submittal process shall not be utilized as an avenue to substitute products after the execution of the contract. Should an unspecified or unequal product be submitted, it will be rejected. If a second attempt at substitution is made during the resubmittal of the same product, then no more reviews of that product will be performed without direct compensation to the Engineer being paid for the additional services required for the third review and any further reviews.

C. All submittals shall be submitted electronically and return electronically.

D. Submittals will not be accepted for review unless they:

1. Comply with the requirements of Division 1.

2. Include complete information pertaining to all appurtenances and accessories.

3. Are submitted as complete packages which pertain to all related items in Division 15. Separate packages shall be submitted as follows:

a. All HVAC equipment and components
b. All plumbing equipment, fixtures and components
c. The fire suppression system
d. The automatic controls and EMS

4. Are properly marked with equipment, service or function identification as related to the project and are marked with pertinent specification paragraph number.

E. Submit catalog information, factory assembly drawings, field installation drawings and certifications as required for complete explanation and description of all items of equipment. The submittal data shall provide ample, unquestionable compliance with the Contract Documents.

F. Review of submittals shall not be construed as authorizing any deviations from the plans and specifications unless such deviations are clearly identified and separately submitted in the form of a letter that is enclosed with the submittals.

G. Submittals are required on all manufactured equipment, especially energy consuming equipment.

3.02 EXCAVATION, TRENCHING AND BACKFILLING

A. Perform all excavation, trenching and backfilling for underground work under this Division 15. During excavation, the excavated material shall be piled back from the banks of the trench to avoid overloading, slides or cave-ins. Do not exceed the angle of repose unless written approval is obtained in advance from the Architect for shoring, bracing or other alternate excavation methods. All excavated material not used for backfilling shall be removed from the building and disposed of as indicated or directed by the Architect. Take measures to prevent surface water from flowing into trenches and other excavations and any water accumulating therein shall be removed by pumping. All excavation shall be made by open cut. Tunneling shall not be allowed.

B. The bottom of all trenches shall be evenly graded to provide firm support and an even bearing surface. Pipe shall be laid on firm soil, laid in straight lines and on uniform grades. Provide bell holes so that the barrel of the pipe rests evenly on the bottom of the trench along the entire length of the pipe.

C. Pipe shall be inspected and tested prior to backfilling. Trench shall be handfilled to a minimum of 12" above the top of pipe with suitable earth (free of rocks, trash, large clods and organic material) and compacted to a minimum 95% proctor. After the first layer is completed, subsequent layers shall be filled and compacted the same as the first layer. Settling the backfill with water shall not be permitted.

3.03 INSTALLATION REQUIREMENTS

A. All equipment shall be installed in strict conformance with the recommendations of the equipment manufacturer, as indicated on the Drawings and as specified.

B. Provide installation manuals for each piece of equipment. Submit in separately bound volumes after review of submittals.

C. Provide supplementary steel framing and welded steel equipment support stands as required for proper hanging and support of the mechanical systems. Steel angles, channels and tubing utilized for such framing shall be selected for a maximum deflection of 1/360th of the span.

D. All roof curbs shall be a minimum of 12" high and selected for the various roof pitches. Curbs installed on roofs having pitches of not more than 1/4" per foot may be standard curbs shimmed level with steel channels or Zs to provide suitable support and flashing surfaces.

3.04 CLEANING, LUBRICATION AND ADJUSTMENT

A. The exterior surfaces of all mechanical equipment, piping, ductwork, conduit, etc., shall be cleaned and free of all dirt, grease, oil, paint splatter, and other construction debris.

B. Ducts, plenums, and air unit casings shall be cleaned of all debris and either vacuumed or blown free of all rubbish, dirt, and dust before installing grilles, registers or diffusers.

C. Bearings that require lubrication shall be lubricated in strict accordance with the manufacturers recommendations.

D. All control equipment shall be adjusted to the settings required for the performance specified.

E. Fans shall be adjusted to the speed indicated by the manufacturer to meet the installed final system pressure at the airflows indicated. Any additional sheaves and belts required for final adjustments shall be provided with no increase in the Contract amount.

F. Any fans operated during construction shall have temporary filters. Temporary filters shall be changed regularly to minimize contamination of the equipment and duct systems. Permanent filters shall be installed prior to final inspection.

G. All coils shall be thoroughly cleaned and combed prior to final inspection.

3.05 PAINTING

A. All uncoated and uninsulated steel surfaces exposed to sight inside the building, such as piping, equipment hangers and supports which are not provided with factory prime coat or galvanizing, shall be cleaned and painted with one coat of rust inhibiting primer. In addition, all surfaces in finished spaces shall also be painted with two coats of finish paint in a color selected by the Architect.

B. All ductwork surfaces visible through grilles, registers and diffusers in finished areas shall be painted flat black.

C. Steel items exposed outside the building, such as equipment supports, uninsulated piping and hangers, which are not factory painted or galvanized, shall be cleaned and painted with one coat of rust inhibiting primer and two coats of asphaltic base aluminum paint. Insulated steel pipes outside the building shall be cleaned and painted with one coat of rust inhibiting primer before installing insulation.

D. Factory painted equipment that has been scratched or marred shall be repainted to match the original factory color.

3.06 DUCTWORK AND PIPING LEAK TESTING

A. Underground, concealed and insulated ductwork and piping shall be tested for leaks in place before backfilling, concealing or covering. Tests shall be conducted in the presence of the Architect or his designated representative.

B. All low pressure ductwork (design operating pressure of 1.0" W.C. E.S.P. or less) shall be tested by the operation of the system to which it is connected.

C. All medium and high pressure ductwork (operating pressure of more than 1.0" W.C. E.S.P.) shall be tested at 1.5 times the design operating pressure of the system to which it is connected, or at the total fan pressure at shut-off, whichever is greater.

D. All visible and audible air leaks from the ductwork systems shall be repaired.

E. Soil, waste, storm and vent piping shall be tested with water before installing fixtures. Water test shall be applied to the system either in its entirety or to the individual sections. Each opening except the highest opening of the section under test shall be plugged, and the section shall be filled with water and tested with a head of water of at least ten (10) feet above the highest point in the system. The water shall be kept in the portion under test for at least thirty (30) minutes; no drop in the water level will be acceptable.

F. The water piping systems shall be tested at a minimum pressure of 125 psi and proved tight at this pressure for not less than thirty (30) minutes or longer if required to permit inspection of all joints. No loss in pressure will be permitted.

G. All gas piping shall be tested pneumatically and proved tight at a pressure of not less than 100 psi for a period of not less than two (2) hours. No loss in pressure will be permitted.

H. All compressed air piping shall be tested pneumatically and proved tight at a pressure of not less than 100 psi for a period of not less than two (2) hours. No loss in pressure will be permitted.

I. Chilled water, condenser water and hot water supply and return piping shall be hydrostatically tested at a pressure of 100 psig (60 psig for PVC piping) for a minimum of one hour. No loss in pressure shall be permitted.

J. Steam and condensate return piping shall be tested at a test pressure of 100 psig minimum but not less than 1.25 times the system operating pressure for a minimum of one hour. No loss of pressure shall be permitted.

K. All refrigerant piping shall be 100% tested with a halide torch leak detector.

L. All leaks shall be repaired by tightening, remaking joints, or replacing pipe and fittings. Caulking of joints shall not be permitted.

3.07 RECORD (AS-BUILT) DRAWINGS

A. At the completion of the project, provide a set of reproducible sepias to the Architect which reflect all changes, deviations and revisions made to the original design documents. Locations of all underground piping and utilities shall be clearly shown and dimensioned from permanent reference points such as building column lines.

3.08 OPERATING AND MAINTENANCE MANUALS AND INSTRUCTIONS

A. Complete operating and maintenance manuals shall be provided to the Owner. Four copies shall be provided. Each copy shall be bound in a separate 3-ring, loose-leaf notebook. Operating instructions shall be provided for each mechanical system, and shall each include a brief system description, a simple schematic and a sequence of operation. Operating and maintenance instructions shall be provided for each piece of equipment. A control system wiring diagram shall be included in each operating and maintenance manual.

B. Prior to final acceptance or beneficial occupancy, provide the services of a competent technician for not less than two (2) days to instruct the Owner in the operation of the mechanical systems.

3.09 TESTING AND BALANCING

A. Testing and balancing of the HVAC system shall be performed in accordance with the standards of AABC and shall be performed under the direct supervision of a Certified Test and Balance Engineer as specified in Section 15043. Note that this work is to be performed under a separate Contract directly under the General Contractor. Submit four (4) copies of the test and balance report directly to the Architect.

3.10 WARRANTY

A. All work provided under this Division 15 shall be subject to a minimum one year warranty. The warranty shall include prompt repair or replacement of equipment or system failures and shall include all parts and labor. In addition, all reciprocating air conditioning compressors shall carry an additional four year parts-only warranty. Extended warranties shall be provided on all other equipment so specified in other Sections.

END OF SECTION

SECTION 15043

HVAC TEST & BALANCE

1.0 GENERAL

1.01 DESCRIPTION

A. All work specified in this Section is governed by the Mechanical General Section 15010.

B. This Section 15043 and the accompanying drawings cover the provision of all labor, equipment, appliances, and materials and performing all operations in connection with the testing and balancing (T&B) of the heating, ventilating and air conditioning (HVAC) systems as specified herein and as shown. These systems include, but are not limited to, the following:

1. Supply distribution systems
2. Return and exhaust air systems
3. Heating, ventilating and air conditioning equipment (all scheduled equipment as a minimum)
4. Hydronic systems.

1.02 INTENT

A. It is the intent of this Section of the specifications to provide a complete operable and balanced HVAC system as shown and specified which is reasonably airtight, comfortable and free of objectionable noise and vibration.

1.03 SCOPE OF WORK

A. HVAC test and balance shall be performed by an independent agency certified by the Associated Air Balance Council (AABC) or National Environmental Balancing Bureau (NEBB) under direct contract to the General Contractor. All work performed by this agency shall be performed by qualified technicians under the direct supervision of an AABC or NEBB certified test and balance engineer. The agency shall be independent and shall not be associated in any way with the installing HVAC subcontractor.

B. The Test and Balance shall be performed by one (1) of the following companies:

1. Westside Test and Balance
   Contact: Randall Griggs (770) 577-6789
   westsidetesting@aol.com

2. Research Airflow
   Contact: Joel Shannon (770) 452-8292
   joel@researchairflo.com

3. TAB Services
   Contact: Mike Stirling (404) 329-1001
   mstirling@tabservices.com

C. HVAC Test and Balance shall be performed in accordance with the 6th edition of the AABC National Standards, 2002 for Total System Balance or the NEBB Procedural Standards for TAB of Environmental Systems, 7th Edition, 2005 together with the NEBB TAB Manual for Technicians, 2nd Edition.

D. The final Test and Balance report shall serve to substantiate compliance with the intent of the Contract Documents, specifically the HVAC systems.

E. HVAC Test and Balance shall not begin until the systems are substantially complete.

F. Upon the completion of the Test and Balance work, the Agency shall submit four (4) copies of the complete HVAC Test and Balance Report directly to the Architect.

G. The Agency, as a part of its contract with the General Contractor, shall act as an authorized inspection agency, responsible to the General Contractor and the Architect and shall, during the test and balance, list those items which require correction or have not been installed in accordance with the Contract Documents.

H. The Agency shall plainly mark the settings of all valves, dampers and other adjustable devices. If a balancing device is provided with a memory stop, it shall be set, locked and marked.

I. The Agency shall record all of the final set points on all variable speed drives.

1.04 SUBMITTALS

A. The name and certification of the Agency, along with the name and certification of the Certified Test and Balance Engineer, shall be submitted to the Architect for review within 30 days after the award of the general contract.

B. The selected Agency shall submit to the Owner:

1. Procedural Manual
2. Report Forms
3. AABC or NEBB Performance Guaranty
4. Instrument List and Calibration Dates
5. Schedule

C. A reviewed copy of each of the above shall be returned to the Agency before the HVAC Test and Balance begins.

D. If a complete submittal in accordance with these requirements is not received within 60 days from award of the general contract, then the Architect reserves the right to select the Agency.

2.0 PRODUCTS

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ISSUE DATE
Owner Review Set 12/21/2018
Permit Set / IFC 04/10/2019
drawn by: T. KLINGER
checked by: R. ROSENTHAL
Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006
SPECIFICATIONS - MECHANICAL
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2.01 (Not applicable).

3.0 EXECUTION

3.01 GENERAL CONTRACTOR'S DUTIES

A. The General Contractor shall provide the following, within 10 days after his receipt, to the Agency:

1. Contract drawings
2. Contract applicable specification Division 15 (others as applicable)
3. Addenda
4. Change orders
5. Reviewed submittals

B. The General Contractor shall start–up and maintain the HVAC systems and shall continue the operation of the HVAC systems during each day of testing and balancing. Start–up and operation shall include, as a minimum, the following:

1. All equipment operable and in safe condition.
2. Temperature control system complete.
3. Proper thermal overload protection in place for electrical equipment.
4. Ductwork leakage rates not exceeding those specified and all duct systems clean of debris.
5. Air transfer systems shall have:
   a. Correct fan rotation and RPM.
   b. Coil fins cleaned and combed.
   c. Filters clean and in place.
   d. Access doors closed.
   e. All dampers in place and open.
   f. All grilles, registers and diffusers installed.

C. Provide sufficient time before final completion date so that testing and balancing can be accomplished. Coordinate the submitted T&B schedule.

D. Provide immediate labor and tools to make required corrections and repairs without undue delay.

E. The General Contractor and his subcontractors shall cooperate fully with the Agency to provide the following:

1. Access to HVAC system components.
2. The right to adjust the systems.

F. Any conditions which prevent a proper HVAC Test and Balance shall be reported by the Agency to the General Contractor and Architect within 7 days of their discovery.

G. If it is determined by the Agency and confirmed by the Architect that drive changes or additional balancing dampers are required, the Contractor shall obtain and install all necessary components.

H. The Agency shall cooperate with the Architect and the Contractor and all his subcontractors to perform the work in such a manner as to meet the job schedule.

I. The Agency shall verify that all system components are in place and in proper working order prior to leaving the project.

J. All reported, recorded data shall represent true measured conditions.

END OF SECTION

SECTION 15800

AIR DISTRIBUTION DEVICES

1.0 GENERAL

1.01 DESCRIPTION

A. All work specified in this section is governed by the Mechanical General Section 15010.

B. This Section 15800 and the accompanying drawings cover the provisions of all labor, equipment, appliances and materials, and performing all operations in connection with the construction and installation of air distribution devices as specified herein and as shown. These units include, but are not limited to the following:

1. Ceiling Diffusers (CD)
2. Return Air Grilles (RAG)
3. Exhaust Grilles (EG)
4. Supply Grilles (SG)

1.02 INTENT

A. It is the intent of this Section of the specifications to provide complete, operable, adjusted air distribution devices as shown and specified which are free of excessive noise, vibration and airflow fluctuations.

1.03 SELECTION CRITERIA

A. All air distribution devices shall be selected in accordance with the following minimum criteria unless otherwise noted below or on the drawings:

1. Method of mounting shall be compatible with the ceiling, wall or duct surface which it mounts on or in; i.e. lay–in, surface mounting, plaster frame, duct collar, etc. The architectural drawings shall be referenced to determine the mounting method for each device. All flanges on surface mounted devices shall be provided with a gasket.

2. Finish of all ceiling mounted devices shall be selected to match the color of the adjacent ceiling. Finish of all wall mounted devices shall be primer which is compatible with the finish coating specified for the adjacent wall; finish coat will be applied under Division 9.

1.04 BASIS OF DESIGN

A. The basis of design is Titus. Any proposed substitutions shall be proven equal in all respects to the equipment specified as the basis of design. Any modifications to ductwork, controls, ceilings, building structure, etc., that result from any substitution shall be coordinated with all trades. This coordination shall occur before delivery of equipment and any modifications shall be performed without incurring additions to the Contract.

1.05 ACCEPTABLE MANUFACTURERS

A. Acceptable manufacturers are Price, Carnes, Metal Aire, Titus and Nailor Industries, provided that their units, performance, appearance and physical characteristics are equal in all respects for this specific project.

2.0 PRODUCTS

2.01 DESCRIPTION

A. Ceiling Diffuser (CD)

1. Match existing or Ceiling diffusers shall be perforated face diffusers equipped with fully adjustable pattern controls, capable of providing one–way, two–way, two–way corner, three–way, and four–way air patterns; Carnes SPAB. Diffuser performance data shall be in accordance with ADC equipment test code 162R4. The perforated face shall be hinged for easy access to pattern controls and duct accessories. The maximum NC level at design airflow shall not exceed 35 when measured in a direct field 5'–0" from the face of the device.

B. Return Air Grilles (RAG)

1. Return air grilles shall be hollow core, perforated face, lay–in type, selected to match the CDs; Carnes SPRB. Performance data shall be in accordance with ADC 1062R4. All other characteristics shall be equal to the ceiling diffusers.

F. Exhaust Grilles (EG)

1. Exhaust grilles shall be surface mounted, fixed curved blade aluminum grilles with blades at 0.666 to 0.750 inches on center. EGs shall be Carnes RALA (aluminum) sized as indicated.

J. Supply Grilles (SG)

1. Supply grilles shall be surface mounted, steel, adjustable double–deflection type. The outermost set of deflection blades shall be parallel to the long dimension of the SG and the innermost set of deflection blades shall be parallel to the short dimension of the SG. The grilles shall be tested in accordance with ADC standards and shall be selected to provide design airflow at a maximum NC of 35. SGs shall be Carnes RSDB Series, sized as indicated.

3.0 EXECUTION

3.01 INSTALLATION

A. Air distribution devices shall be installed as indicated and in conformance with the manufacturer's recommendations. The color, frame, and border types shall be coordinated with Architectural requirements and shall be selected to install in the finished surface indicated.

B. All air distributions devices to be reused shall be installed the same way as indicated for new devices. All existing color, frame, and border types shall modified as required to match new device requirements.

3.02 ADJUSTMENT

A. Grilles, registers and diffusers shall be tested and adjusted to provide the scheduled air flow capacities.

B. All adjustable air distribution devices located within three feet of any wall shall be set to blow directly away from, or parallel to, the wall.

C. In all slot diffuser applications, the inactive sections of the slot shall be finished with perforated steel, painted flat black, selected to match the CDs. These sections shall be open to the plenum as a return air path.

END OF SECTION

SECTION 15840

DUCTWORK

1.0 GENERAL

1.01 DESCRIPTION

A. All work specified in this Section is governed by the Mechanical General Section 15010.

B. This Section 15840 and the accompanying drawings cover the provisions of all labor, equipment, appliances, and materials and performing all operations in connection with the construction of the ductwork systems as specified herein and as shown. These systems include, but are not limited to, the following:

1. Supply air ductwork
2. Return, transfer and relief air ductwork
3. Exhaust ductwork
4. Outside air ductwork

1.02 INTENT

A. It is the intent of this Section of the specifications to provide a complete operable duct system as shown and specified which is reasonably airtight, free of noise, vibration and sweating, and fabricated so as to fit into the space allotted and to exhibit a minimum resistance to airflow.

1.03 DESIGN AND CONSTRUCTION

A. Ductwork shall be provided in strict accordance with the first edition – 1985 – of the SMACNA HVAC Duct Construction Standards – Metal and Flexible, NFPA No. 90A, 90B, 91 and 96, and UL 181.

B. Ductwork dimensions shown are net, clear, inside dimensions with no allowance shown for duct liner. All ductwork specified to be lined shall be 2" larger than shown in each dimension to compensate for the liner. Ductwork shall be square, rectangular, round, spiral or flat oval as noted. Conversion of duct shapes and sizes shown shall be accomplished without increasing air velocities or friction losses and is subject to prior approval by the Architect.

C. Elbows shall be either full radius type (inside radius equal to duct width), five–gore radiused flat–oval type or, in low pressure systems only, mitered with double–thickness turning vanes.

D. Abrupt changes in duct sizes and shapes shall not be permitted. The total angle of diverging transitions shall be not more than 15 degrees; converging transitions shall be not more than 30 degrees unless otherwise noted or required due to structural constraints.

E. Offsets, transitions, rises and drops are not individually called out on the design drawings. They shall be provided as required to fit the ductwork into the allocated spaces.

F. Transition rectangular ductwork on bottom and sides. Maintain top of ductwork level and as high as possible.

G. Not used

H. Not used

I. Provide the following types of ductwork material for the services indicated:

TYPE OF MATERIAL	SERVICE
1. Galvanized sheetmetal	Supply, return, exhaust and relief of comfort conditioned and outside air.

2.0 PRODUCTS

2.01 GALVANIZED SHEETMETAL

A. Galvanized sheetmetal shall be lock–forming grade G90–ASTM A 525 hot dip galvanized steel sheets. Sheetmetal shall be galvanized on each side with not less than 1.25 ounces of zinc per square foot.

2.02 SPIRAL DUCT

A. Spiral duct shall be utilized for all flat–oval and round ductwork in medium and high–pressure systems.

B. Spiral duct shall be the product of United McGill Corporation, R.V. Money or an approved equal.

C. Spiral ribbed duct is not acceptable.

2.03 FLUES

A. All flues shall be Type "B", double–wall, as manufactured by Metalbestos or an approved equal. Flues shall be complete with storm collars, weatherproof caps and all accessories.

2.04 DAMPERS

A. Manual Volume Dampers

1. Single blade butterfly dampers are acceptable up to 12" round or 12" x 12" square. Dampers larger than these dimensions shall be multi–blade type. Single blade dampers shall be constructed of 16 gauge or heavier galvanized sheetmetal.

2. No multi–blade damper blade shall exceed 8" in width. All multiple blade dampers shall be constructed of 16 gauge galvanized steel or heavier. The damper frame shall be 16 gauge or heavier. The damper action shall be opposed–blade type.

3. Each blade shall pivot on a 1/2" cadmium plated, cold–rolled steel axle which pivots within self–lubricating, oilite bronze bearings.

4. The top and bottom edges of each rectangular damper blade shall be crimped for stiffness.

5. The operating rod for all dampers shall be extended outside the damper frame for attachment of an operator. Each operator shall have a position indicator and locking quadrant.

6. All dampers utilized for introduction of outside air shall have flexible, gasketed edge and end seals. The leakage rate shall be less than 4 CFM per sq. ft. of face area against a 1" W.G. differential pressure, based on a nominal 48" x 48" damper size.

7. Manual volume dampers shall be as manufactured by Louvers & Dampers, Inc. or an approved equal.

B. Control Dampers

1. Control dampers shall be of the same construction as manual volume dampers, except that no manual operator and quadrant is required. The operating rod shall be suitable for operation by an automatic pneumatic or electric operator.

C. Fire Dampers

1. Fire dampers shall be UL–listed and labeled for 1 1/2 hours and shall be provided with 160 degrees F. links. Dampers installed within ducts shall be Type B or Type C with the blades out of the air stream. Areas indicated shall be net, clear, open areas.

D. Smoke Dampers

1. Smoke dampers shall be UL–listed as Class 1 low–leakage smoke dampers and shall be products of Prefco.

2.05 LOW–PRESSURE DUCT BRANCHES

A. Splitter dampers shall be provided at all low–pressure ductwork branches. All low–pressure ductwork branches shall be radiused or 45 degree take–offs; straight taps are unacceptable. The length of the damper blade shall be the same as the width of the widest duct section at the split, but in no case shall blade length be less than 12". Each operator rod shall have a locking swivel joint.

2.06 FLEXIBLE DUCT

A. Flexible ductwork shall be Class 1, UL 181 air duct and meet NFPA 90A and 90B Standards.

B. The internal duct surface shall be acoustically rated, black CPE bonded to a coated steel wire helix. The external jacket shall be a fiberglass, bi–directionally reinforced, metallized vapor barrier with a standing, triple ply seam. Fiberglass insulation shall be provided between the duct surface and the jacket to achieve a maximum thermal conductance of 0.23 BTU/Hr./sq. ft./degree F. at 75 degrees F. mean.

C. Flexible ductwork shall be suitable for 10" W.G. positive pressure and 1" W.G. negative pressure.

D. Flexible ductwork, insulation and insulation cover shall be suitable for ceiling return air plenum installation and shall comply with all applicable codes and standards regarding such ceiling plenum installations.

E. Flexible duct shall be Thermaflex M–KE or an approved equal.

F. The maximum allowable installed length of flexible ductwork shall be as follows:

1. 8'–0" on low–pressure supply air systems limited to short runouts and end of runs connected to round neck supply diffusers and registers.

2. 4'–0" on medium and high–pressure supply air systems limited to the runouts from the sheetmetal ductwork to each terminal unit.

3. 2'–0" on connections from round neck grilles to sheetmetal ductwork on return, exhaust and transfer ductwork.

G. Provide a spin–in fitting with integral scoop and volume damper at all flexible run–out connections in low–pressure supply air ductwork only.

2.07 FLEXIBLE CONNECTIONS

A. Provide flexible duct connections at the inlet and outlet of each belt–driven fan, indoor unit, fan coil unit, air handling unit, etc., and at all other locations indicated. Flexible connections shall be fabricated from a glass fabric coated on both sides with neoprene. Minimum weight shall be 30 oz. per sq. yard.

2.08 DUCT HARDWARE

A. Duct hardware shall be as manufactured by Young Regulator or an approved equal.

2.09 DUCT LINER

A. Duct liner shall be one inch thick, 1 1/2 lb. density (3 lb. density on medium– and high–pressure supply air systems) fibrous glass with one face coated with a black fire retardant compound. The permanent composite fire and smoke hazard rating of the liner shall be stenciled on the liner face and shall be:

1. Maximum flame spread 25
2. Maximum smoke developed 50

2.10 DUCT INSULATION

A. Duct insulation shall be 2" thick, minimum 3/4 lb. density fiberglass with an FSKL 0.00035" thick aluminum foil jacket, reinforced with fiberglass scrim. Thermal conductivity shall be a maximum of K = 0.24 at 75 degrees F. mean temperature.

B. Insulation adhesive shall be Benjamin Foster 85–20. Tape shall be aluminum foil and shall be SMACNA listed and labeled.

C. The composite NFPA 90A and 90B, ASTM E84, UL rating of the installed insulation shall not exceed 25/50.

D. The grease exhaust ductwork shall have zero–clearance to combustibles wrap throughout. Coordinate the insulation with all required access panels, drains, etc as required by NFPA 96.

3.0 EXECUTION

3.01 INSTALLATION

A. Ductwork shall be installed in strict accordance with SMACNA, UL and NFPA standards.

B. Not used

C. Duct liner shall be cut to provide overlapped and compressed longitudinal corner joints. Liner shall be installed with the coated surface facing the air stream. Duct liner shall be adhered to the ductwork with a 100% coverage of the sheet metal surfaces using a fire retardant adhesive applied by spraying. Coat all exposed leading edges and all transverse joints with fire retardant adhesive. The liner shall be additionally secured using metal pins welded to the duct and speed washers. All leading edges shall be secured with sheet metal airfoils.

D. All supply air ductwork which is not lined shall be insulated. All outside air ductwork shall be insulated. Insulation shall be cut slightly longer than circumference of duct to insure full thickness at corners. All insulation shall be applied with edges tightly banded. Insulation shall be adhered to duct with fire resistant adhesive. Adhesive shall be applied so that insulation conforms to duct surfaces uniformly and firmly. In addition to the adhesive, the insulation shall be additionally secured to the bottom of all ducts 18" or wider by means of welded pins and speed clips. The protruding end of the pins shall be cut off flush after the speed clips have been applied. The vapor–barrier facing shall be thoroughly sealed with tape where the pins have pierced through. All joints shall be sealed with 2" wide SMACNA tape. Any cuts or tears shall be sealed with SMACNA tape.

E. Flexible ducts utilized in the low–pressure ductwork systems shall be installed without kinks or bends which are less than a centerline radius equal to or greater than twice the diameter of the flexible duct being installed. Also, in the runouts from the medium or high–pressure ductwork to the terminal units, the flexible ducts shall be installed with a variance of no more than 1" per foot of installed length off a straight and level line from the centerline of the sheetmetal ductwork runout or tap to the centerline of the terminal unit inlet. The size of the flexible ductwork connected to each terminal unit shall be the equivalent size of the larger of the following:

1. The inlet size of the terminal unit.
2. The runout size indicated on the drawings.

Should the runout size indicated on the drawings differ from the inlet size of the terminal unit or where the inlet to the terminal unit is rectangular, the transition shall be made with sheetmetal and shall occur at the inlet to the terminal unit.

F. not used

G. All intersections (crossing) of low–pressure and medium–pressure ductwork shall be made with offsets in the low–pressure ductwork only. The medium pressure ductwork shall be ran straight and level.

H. All ductwork exposed to the outside shall be welded or soldered and insulated with 2" thick, 3 PCF density rigid fiberglass board insulation with foil–kraft facing. Finish with Venture Clad, or equal, vinyl cover with water–proof coating and seams. Cover shall be painted color as selected by the Owner.

END OF SECTION

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ISSUE	DATE
Owner Review Set	12/21/2018
Permit Set / IFC	04/10/2019

drawn by: T. KLINGER
checked by: R. ROSENTHAL

Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

SPECIFICATIONS - MECHANICAL

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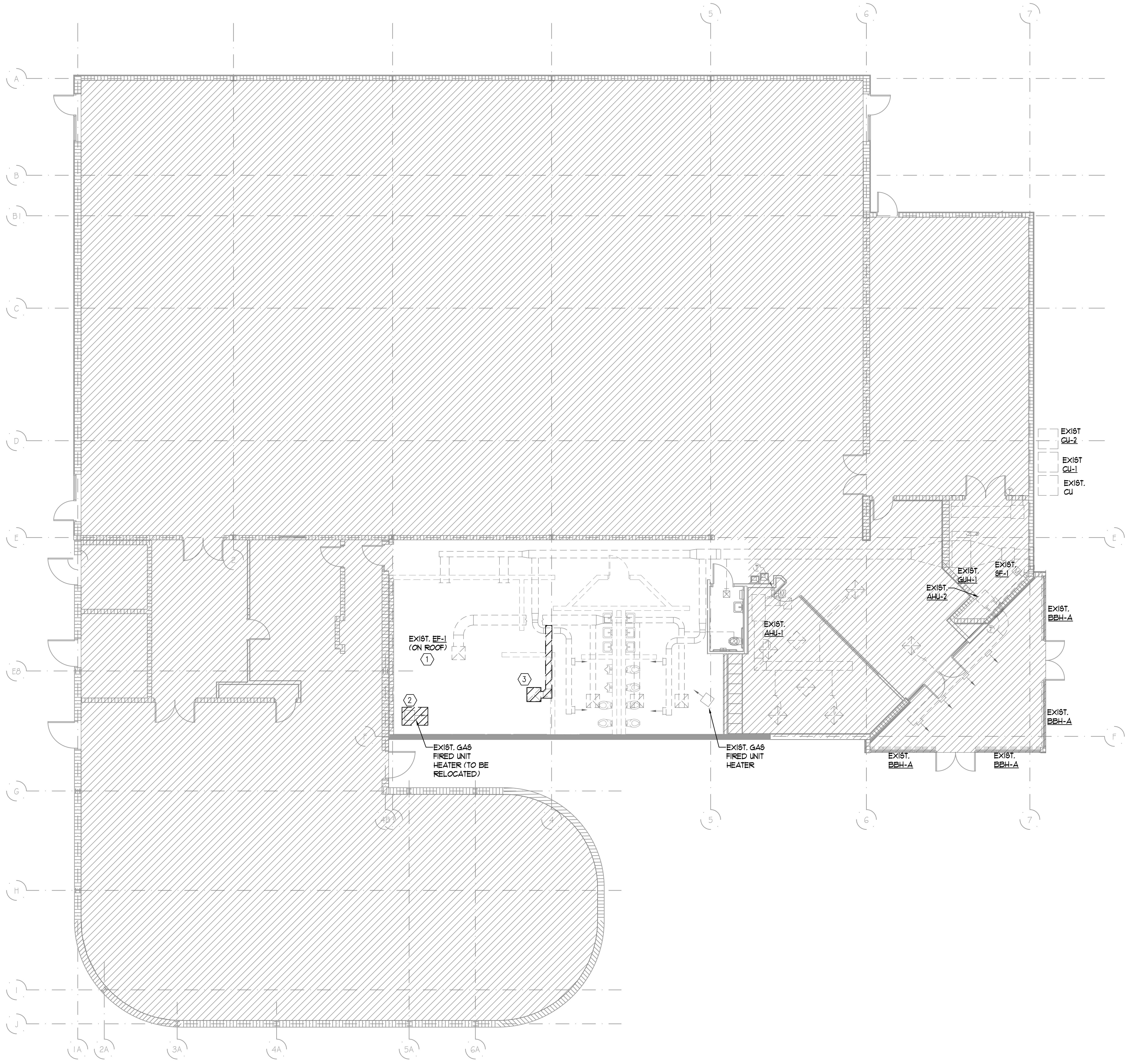

1 / M1.1 DEMO PLAN – MECHANICAL
1/8"=1'-0"

GENERAL NOTES:
(APPLIES TO ALL SHEETS)

1. EXISTING DUCTWORK, DIFFUSERS, GRILLES AND THERMOSTATS MAY BE RE-USED IF THEY ARE IN GOOD WORKING CONDITION AND OF EQUAL OR GREATER NECK SIZE / FREE AREA (IF APPLICABLE).
2. MATERIALS EXPOSED WITHIN THE PLENUM SHALL BE NONCOMBUSTIBLE OR HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPMENT INDEX OF NOT MORE THAN 50 AS DETERMINED IN ACCORDANCE WITH ASTM E 84.
3. FLEXIBLE DUCTWORK SHALL NOT BE USED IN AREAS WITHOUT A CEILING (OPEN TO STRUCTURE). ANY EXISTING FLEXIBLE DUCT SHALL BE REMOVED AND REPLACED WITH ROUND SHEETMETAL.
4. ALL DUCTWORK SHALL BE SEALED AIRTIGHT WITH HARDCAST AND SHEET METAL. COORDINATE WITH BUILDOUT PLANS.
5. ALL FIRE DAMPERS IN EXISTING DUCTWORK SHALL REMAIN.
6. CONTRACTOR SHALL VISIT SITE PRIOR TO BID AND ASCERTAIN ALL EXISTING CONDITIONS. NO ALLOWANCES WILL BE PROVIDED FOR LACK OF KNOWLEDGE OF EXISTING CONDITIONS. CONTRACTOR SHALL DEMO ALL NON-ESSENTIAL DUCTWORK AND PIPING WHICH IS NOT REQUIRED FOR THIS INSTALLATION. COORDINATE ALL DEMO WITH BUILDING REP. BEFORE DEMO WORK COMMENCES.
7. EXISTING WORK SHOWN HERE IS BASED ON SITE VISIT AND/OR PROVIDED INFORMATION. THESE DRAWINGS ARE NOT NECESSARILY ACCURATE FOR EXISTING MATERIALS AND SHOULD NOT BE INTERPRETED TO BE A STRICT REPRESENTATION OF AS-BUILT CONDITIONS.
8. CONTRACTOR SHALL PROVIDE STANDARD PREVENTATIVE MAINTENANCE FOR ALL EXISTING TO REMAIN MECHANICAL EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR SHALL PREPARE A REPORT OF DEFICIENCIES AND ISSUES FOR PROPERTY MANAGEMENT.

KEYNOTES:
(APPLIES TO THIS SHEET ONLY)

1. DEMO ALL EXISTING MECHANICAL EQUIPMENT WITHIN THIS AREA. ALL EXISTING EQUIPMENT ASSOCIATED WITH EXISTING EF-1 AND MAIN TRUNK DUCTWORK SHALL REMAIN. COORDINATE WITH NEW BUILDOUT, EXISTING CONDITIONS, AND DIVISION 16.
2. REMOVE EXISTING GAS FIRE UNIT HEATER AND PREPARE FOR RELOCATION AS SHOWN. REFER TO NEW BUILDOUT PLAN FOR MORE INFORMATION.
3. DEMO EXISTING EXHAUST GRILLE AND ASSOCIATED DUCTWORK BACK TO MAIN TRUNK AND CAP AIRTIGHT WITH SHEETMETAL AND "HARDCAST". COORDINATE WITH EXISTING CONDITIONS AND NEW BUILDOUT.

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GEORGIA REGISTERED No. PE028790 ENGINEER ROSS W. ROSENTHAL

ISSUE	DATE
Owner Review Set	12/21/2018
Permit Set / IFC	04/10/2019

drawn by: T. KLINGER
checked by: R. ROSENTHAL

Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

DEMO PLAN - MECHANICAL

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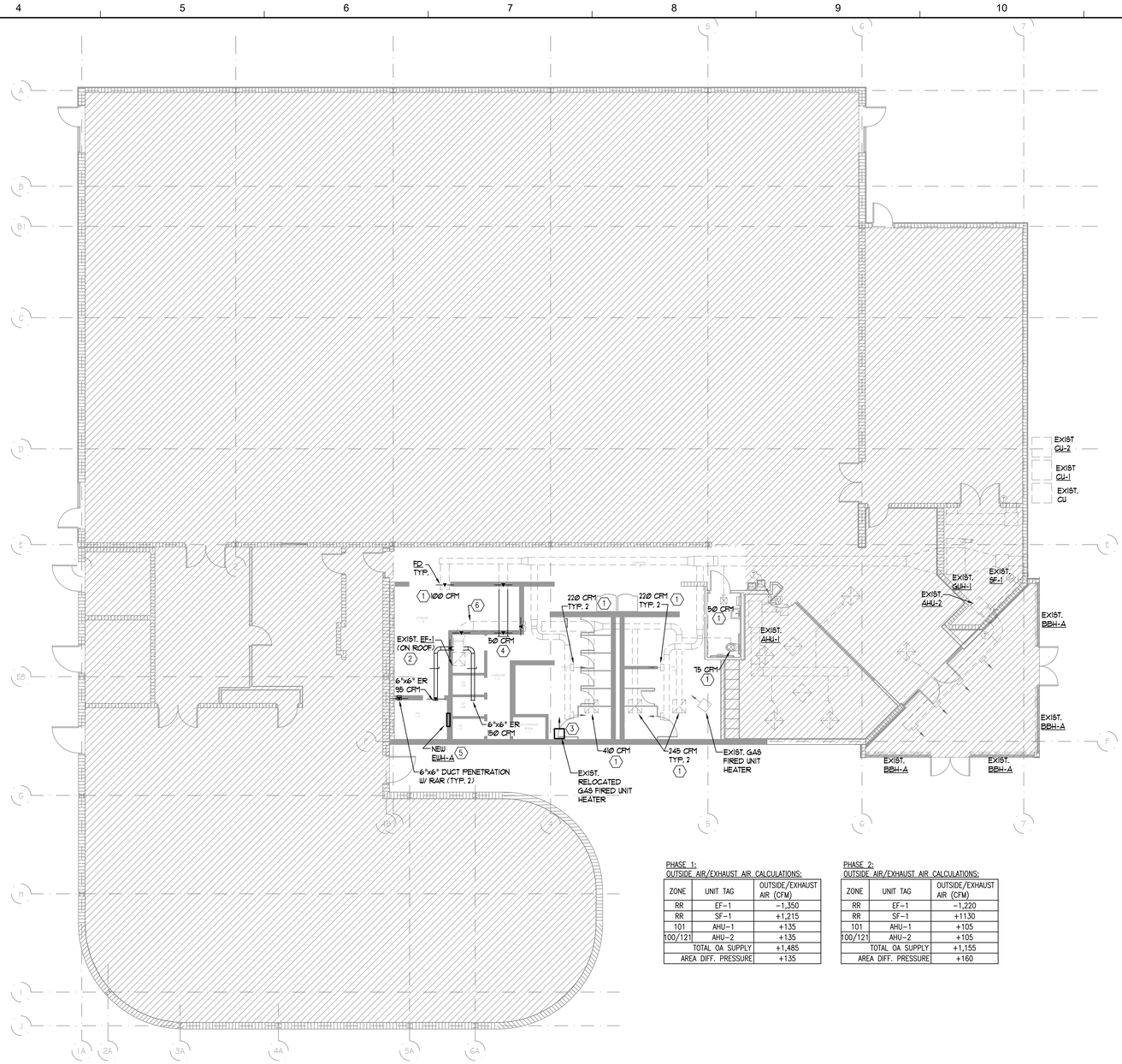

PHASE 1:
OUTSIDE AIR/EXHAUST AIR CALCULATIONS:

ZONE	UNIT TAG	OUTSIDE/EXHAUST AIR (CFM)
RR	EF-1	-1,350
RR	SF-1	+1,215
101	AHU-1	+135
100/121	AHU-2	+135
TOTAL OA SUPPLY		+1,485
AREA DIFF. PRESSURE		+135

PHASE 2:
OUTSIDE AIR/EXHAUST AIR CALCULATIONS:

ZONE	UNIT TAG	OUTSIDE/EXHAUST AIR (CFM)
RR	EF-1	-1,220
RR	SF-1	+1130
101	AHU-1	+105
100/121	AHU-2	+105
TOTAL OA SUPPLY		+1,155
AREA DIFF. PRESSURE		+160

FLOOR PLAN – MECHANICAL

1 / M2.1 — 1/8"=1'-0"

GENERAL NOTES
(APPLIES TO ALL SHEETS)

1. EXACT LOCATION OF ALL AIR DISTRIBUTION SHALL BE COORDINATED WITH THE ARCHITECTURAL RCP.
2. MATERIALS EXPOSED WITHIN THE PLENUM SHALL BE NONCOMBUSTIBLE OR HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPMENT INDEX OF NOT MORE THAN 50 AS DETERMINED IN ACCORDANCE WITH ASTME E 84.
3. COORDINATE ALL WORK IN OTHER TENANT SPACES WITH LANDLORD SO THAT WORK DOES NOT INTERFERE WITH OTHER TENANTS.
4. FLEXIBLE DUCTWORK SHALL NOT BE USED IN AREAS WITHOUT A CEILING (OPEN TO STRUCTURE). NEW RUNOUTS SHALL BE ROUND SHEETMETAL DUCT CONNECTED TO THE DIFFUSER. ANY EXISTING FLEXIBLE DUCT SHALL BE REMOVED AND REPLACED WITH ROUND SHEETMETAL.
5. REPAIR AND REPLACE ANY DUCTWORK THAT DOES NOT MEET SPECIFICATION SECTION 15840. SEAL ANY HOLES IN DUCTWORK AIRTIGHT WITH SHEET METAL AND "HARDCAST".
6. COORDINATE EXACT LOCATION OF ALL THERMOSTATS WITH FINAL FURNITURE LAYOUT, EQUIPMENT LAYOUT, ARCH AND OWNERS REPRESENTATIVE. ALL THERMOSTATS LOCATED ON EXTERIOR WALLS OR COLUMNS SHALL BE PROVIDED WITH INSULATED BACKING.
7. PROVIDE ALL MANUFACTURER AND NEC REQUIRED CLEARANCES FOR ALL EQUIPMENT.
8. AIR QUANTITIES AS SHOWN SHALL BE USED TO BALANCE THE SYSTEM PER NEW LAYOUT. CONTRACTOR SHALL VERIFY ACTUAL CAPACITY (CFMs) OF THE EXISTING UNITS AND DISTRIBUTE THEM PROPORTIONALLY TO ALL DIFFUSERS.

KEYNOTES
(APPLY TO THIS SHEET ONLY)

1. REBALANCE EXISTING AIR DISTRIBUTION DEVICE TO AIRFLOW SHOWN.
2. COORDINATE NEW EXHAUST FAN/RATE (SEE OUTSIDE AIR/EXHAUST CALCULATIONS CHART THIS PAGE) FOR BOTH PHASES WITH EXHAUST DUCTWORK AND BALANCE TO CFM SHOWN. COORDINATE WORK WITH ALL TRADES.
3. PROVIDE FLUE PIPING FROM EXISTING RELOCATED UNIT UP TO ROOF. COORDINATE LOCATION WITH EXISTING ROOF AND AT LEAST 10'-0" FROM ANY OUTSIDE AIR INTAKES. PROVIDE APPROVED WEATHER CAP.
4. EXTEND EXISTING DUCTWORK AND SUPPLY GRILLE TO NEW LOCATION. BALANCE TO AIRFLOW SHOWN. COORDINATE WITH EXISTING CONDITIONS.
5. COORDINATE INSTALLATION OF ELECTRIC WALL HEATER WITH WALL CONSTRUCTION TYPE AND ARCHITECT BEFORE PURCHASE.
6. RELOCATE EXISTING DUCTWORK FOR NEW RATED WALL TO STRUCTURE. COORDINATE WITH EXISTING CONDITIONS AND ARCHITECTURAL DRAWINGS.

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ISSUE DATE
Owner Review Set 12/21/2018
Permit Set / IFC 04/10/2019

drawn by: T. KLINGER
checked by: R. ROSENTHAL

Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

FLOOR PLAN - MECHANICAL

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ABBREVIATIONS

A/C	ABOVE CEILING
AD	ACCESS DOOR
ADJ	ADJUSTABLE
AFF	ABOVE FINISHED FLOOR
AUTO	AUTOMATIC
AC	AIR CONDITIONING
AHU	AIR HANDLING UNIT
ARP	ACID RESISTANCE PIPING
BAL	BALANCING
B/F	BELOW FLOOR
B/G	BELOW GRADE
BHP	BRAKE HORSEPOWER
BCO	BASE CLEANOUT
CW	COLD WATER (DOMESTIC)
CO	CLEANOUT
COMB W&V	COMBINATION WASTE AND VENT
DN	DOWN
DR	DRAIN
do	DITTO
DWG	DRAWING
EA	EACH
ECC	ECCENTRIC
EFF	EFFICIENCY
EOD	EMERGENCY OVERFLOW DRAIN
EWT	ENTERING WATER TEMPERATURE
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FLR	FLOOR
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET
G	GATE
GA	GAUGE
GPM	GALLONS PER MINUTE
GL	GLOBE
GCO	GRADE CLEANOUT
HD	HUB DRAIN
HP	HORSEPOWER
HTG	HEATING
HW	HOT WATER (DOMESTIC)
HWR	HOT WATER RETURN
HWRR	HOT WATER REVERSE RETURN
HWS	HOT WATER SUPPLY
ID	INSIDE DIMENSION
IN	INCHES
KW	KILOWATTS
LB	POUNDS
LWR	LOOP WATER RETURN
LWS	LOOP WATER SUPPLY
MIN	MINIMUM
MAX	MAXIMUM
MFR	MANUFACTURER
NC	NORMALLY CLOSED
NG	NATURAL GAS
NFGH	NON-FREEZE GROUND HYDRANT
NFWH	NON-FREEZE WALL HYDRANT
NO	NORMALLY OPEN
NOM	NOMINAL
OD	OVERFLOW DRAIN
PSI	POUNDS PER SQUARE INCH
RAD	RADIUS
RED	REDUCER
RS	REFRIGERANT SUCTION
RTU	ROOFTOP UNIT
SAN	SANITARY
SQ	SQUARE
ST	STORM
TEMP	TEMPERATURE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VENT
VA	VALVE
VTR	VENT THRU ROOF
WC	WATER COLUMN
WHA	WATER HAMMER ARRESTOR
WT	WEIGHT
W	WASTE

LEGEND

——— - ———	COLD WATER
——— - - ———	HOT WATER
——— - - - ———	HOT WATER RETURN
— — —	VENT
———	SANITARY WASTE
———	GAS
⊙	FLOOR CLEAN-OUT
//////	WORK TO BE REMOVED
FD	FLOOR DRAIN
	HOSE BIBB
⊙	FLOOR CLEAN-OUT
=	WALL CLEAN-OUT

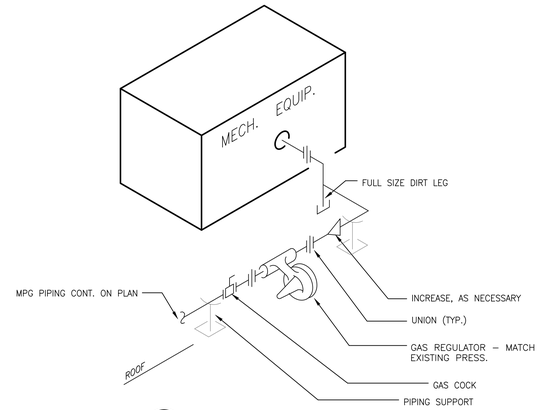
GENERAL NOTES

1. THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL POSSIBLE CONDITIONS. IT IS INTENDED THAT A COMPLETE TENANT MECHANICAL SYSTEM BE PROVIDED WITH ALL NECESSARY EQUIPMENT, ACCESSORIES, OPTIONS AND CONTROLS, COMPLETELY COORDINATED WITH ALL DISCIPLINES. ALL ITEMS AND LABOR REQUIRED FOR A COMPLETE TENANT MECHANICAL SYSTEM IN ACCORDANCE WITH ALL APPLICABLE CODES, STANDARDS AND THE BASE BUILDING CONTRACT DOCUMENTS SHALL BE FURNISHED WITHOUT INCURRING ADDITIONS TO THE CONTRACT.
2. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT PARTITION LAYOUTS, REFLECTED CEILING PLANS, DIMENSIONS, ETC.
3. VISIT SITE AND CAREFULLY EXAMINE EXISTING CONDITIONS PRIOR TO SUBMITTING BID. THE EXISTING CONDITIONS SHOWN ARE BASED ON DOCUMENTS PROVIDED BY OTHERS AND HAVE NOT BEEN VERIFIED BY THE ENGINEER. IF EXISTING CONDITIONS DIFFER FROM DRAWINGS IN SUCH A MANNER THAT WILL AFFECT PRICING CONTRACTOR WILL NOTIFY OWNER SO THAT A RESOLUTION CAN BE MADE PRIOR TO SUBMITTING BIDS. NO ALLOWANCE WILL BE MADE FOR LACK OF KNOWLEDGE OF EXISTING CONDITIONS.

PLUMBING FIXTURE SCHEDULE

TAG	FIXTURE		CW	HW	SAN / WASTE	VENT	NOTES
P-1	WATER CLOSET		1-1/2"	---	4"	2"	1.28 gpf
BASIS OF DESIGN:	Water closet shall be elongated style, 1.28 GPF, siphon jet, American Standard "Madera" #3461.128, bottom outlet style with flush valve, bowl and supply stop. Flush valve shall be a manual lever Sloan 111-1.28. Mounting height shall be as shown on the architectural drawings. Where indicated on architectural plans, fixture shall be installed to meet all ADA Requirements. Provide matching solid, plastic, white, elongated commercial toilet seat with open front and check hinge, Beneke or approved equal.						
P-2	LAVATORY - WALL HUNG		1/2"	1/2"	2"	2"	0.5 gpm
BASIS OF DESIGN:	Fixtures P-2 shall be American Standard "Lucerne" #0356.015, vitreous china, wall hung lavatories with concealed carrier and anchoring screws and 1 1/4" drain. Fittings shall include Delta Series 590, battery powered, electronic faucet set with 0.5 GPM aerator, four (4) "AA" batteries, mixing valve (under counter), chrome-plated tailpieces, chrome grid strainer, P-trap, supply stops and all other trim. Select faucet to match sink hole punching. Wall supply stops, drains and tailpieces shall be offset wheelchair type. Install fixtures per ADA act guidelines and ANSI A117.1.						
P-3	URINAL		1 1/4"	---	3"	2"	
BASIS OF DESIGN:	Urinal shall be American Standard "Washbrook Flowise", vitreous china, 0.5 GPF, wall hung, washout flush with integral flushing rim and ¾" top spud. Flush valve shall be exposed, battery powered, sensor operated Sloan "G2 Optima Plus" #8186-0.5 or appoved equal. Coordinate valve height with Architect.						
P-4	JANITOR'S SINK		3/4"	3/4"	3"	2"	
BASIS OF DESIGN:	Mop sink shall be a Terrazzo floor service sink, 24" x 24" x 12" high, complete with one-piece stainless steel cap all-around top edge, cast brass 3" caulked drain with stainless steel strainer; Stern-Williams "Serviceptor" Model SB-900 or approved equal. Faucet set shall be T-10-VB sink fitting complete with wall brace, hose end, vacuum breaker and chrome finish. Provide two (2) 24" x 36" 20 gauge stainless steel splash panels mounted behind sink.						
FD	FLOOR DRAIN		1/2" TP	--	3"	2"	
HD	HUB DRAIN		1/2" TP	--	3"	2"	

TP: PROVIDE WITH 1/2" TRAP PRIMER



1 / P0.1 GAS CONNECTION DETAIL
NO SCALE

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ISSUE	DATE
Owner Review Set	12/21/2018
Permit Set / IFC	04/10/2019
drawn by:	T. KLINGER
checked by:	R. ROSENTHAL

Hammond Park Gymnasium

Sandy Springs, GA

GMC # AATL16006

ABBREVIATIONS, NOTES, LEGEND, SCHEDULES, AND DETAILS - PLUMBING

P0.1

sheet of

SECTION 15011

PLUMBING GENERAL

PART 1 – GENERAL

1.1 DESCRIPTION

A. This Division 15 and the accompanying drawings cover the provision of all labor, equipment, appliances, and materials and performing all operations in connection with the construction of the plumbing systems as specified herein and as shown.

B. The General Provisions and Division 1, including the general, supplementary and other conditions and other Divisions, as appropriate, apply to work specified in this Division.

1.2 EXISTING CONDITIONS

A. Attention is called to the fact that the work is to be performed within an existing, operational facility. Prior to the submission of bids, each bidder shall visit the project site, thoroughly investigate and be familiar with all existing conditions which will affect their work; especially the work to be performed above the existing ceilings.

B. Connect new work to existing work in a neat and workmanlike manner. Where an existing structure must be cut or existing utilities interfere, such obstructions shall be bypassed, removed, replaced or relocated, patched and repaired. Work disturbed or damaged shall be replaced or repaired to its prior condition.

C. Prior to the start of any demolition or construction, secure the services of a qualified, EPA Certified asbestos abatement agency to check the existing insulation, etc. for asbestos. Should asbestos be found, do not proceed with demolition or construction; notify the Architect in any case in writing of the agency's findings.

1.3 INTENT OF DRAWINGS AND SPECIFICATIONS

A. The implied and stated intent of the drawings and specifications is to establish minimum acceptable standards for materials, equipment and workmanship, and to provide operable mechanical systems complete in every respect.

B. The engineering drawings are diagrammatic, intended to show general arrangement and sizes of system components, and shall not be scaled. Rather, the architectural and structural drawings shall govern space constraints, dimensions and finishes. All offsets and fittings which will be necessary to accomplish the finished installation shall be provided at no additional cost or increase in the Contract.

1.4 SPACE PRIORITY

A. Ensure optimum use of available space for materials and equipment installed above ceilings. Allocate space in the order of priority as listed below except as otherwise detailed. Items are listed in the order of priority, with items of equal importance listed under a single priority number.

1. Gravity flow piping systems
2. Vent piping systems
3. Recessed lighting fixtures
4. Concealed HVAC terminals and equipment
5. Air duct systems
6. Sprinkler piping systems
7. Pressurized piping systems
8. Electrical conduit, wiring, control air tubing

B. Order of space priority does not dictate installation sequence. Installation sequence shall be as required to install all affected trades.

C. The work of this Division 15 shall not obstruct access for installation, operation and maintenance of the work of any other Division.

D. All major items of equipment shall be arranged so as to provide a minimum of 28" clear aisle space. Additional space shall be provided between and around equipment for maintenance and proper operation as shown in the equipment manufacturer's literature.

1.5 COORDINATION

A. Coordinate all work under this Division 15 with work under all other Divisions, providing adjustment as necessary.

B. Coordination of space requirements with respect to Division 16 shall be performed such that:

1. No equipment, piping or ductwork, other than electrical, shall be installed within 42" of switchboards or panelboards.

2. No piping or ductwork which ever operates at a temperature in excess of 120 degrees F. shall be installed within 3" of any electrical conductor.

C. All items mounted in or below the ceiling, and all items penetrating the ceiling, shall be coordinated with the architectural reflected ceiling plans. If any items are not shown on these plans, or any items need to be relocated for coordination purposes, prepare a reflected ceiling plan and submit it to the Architect for approval.

1.6 CODE COMPLIANCE

A. All workmanship and materials provided under this Division 15 shall comply with all laws, ordinances, codes and regulations of all Federal, State and Local Authorities having jurisdiction.

B. All fire suppression, plumbing, heating, ventilating, and air conditioning materials and workmanship shall comply with the following codes and standards as minimum requirements:

1. NEC – 2008 Edition
2. Life Safety Code (NFPA 101) – 2008 Edition
3. All other NFPA Codes and Standards – 2008 Edition
4. North Carolina State Building Code – 2009 Edition
5. North Carolina State Energy Code – 2009 Edition
6. North Carolina State Fire Prevention Code – 2009 Edition
7. North Carolina State Mechanical Code – 2009 Edition
8. North Carolina State Plumbing Code – 2009 Edition
9. North Carolina Accessibility Code – 2009 Edition
10. American with Disabilities Act

C. Secure and pay all fees associated with all permits and licenses required for execution of the Contract. Arrange for all inspections required by city, county, state and other authorities having jurisdiction, and deliver certificates of approval to the Architect.

D. The code requirements are strictly a minimum and shall be met without incurring additions to the Contract. Where requirements of the drawings or specifications exceed the code requirements, the work shall be provided in accordance with these drawings or specifications. In the event of conflict or ambiguity between the various codes, the most stringent requirement shall govern.

1.7 ELECTRICAL REQUIREMENTS AND INTERFACE

A. All electrical equipment and wiring provided under this Division 15 shall comply with the electrical system characteristics indicated on the electrical drawings and specified in Division 16.

B. Electric controls, contactors, starters, pilot lights, push buttons, etc., shall be provided complete as part of the motor, heater or other equipment which it operates. All electrical components shall be in conformance with the requirements of the National Electrical Code and Division 16. Reference Division 16 and the electrical engineering drawings for those motor starters provided under that Division 16. All starters not shown shall be provided under this Division 15. Unless specified otherwise under other individual equipment Sections, motor starters shall conform to the following minimum requirements:

1. Starters for motors 1/3 horsepower or smaller shall be manual unless remote or automatic starting is required, in which case the starters shall be magnetic, full voltage, non–reversing, single–speed, unless otherwise indicated. All other starters shall be magnetic.

2. Each starter for a three–phase motor shall be furnished with three (3) overload relays sized for the full load running current of the motor actually provided. Provide an external "HAND–OFF–AUTO" selector switch with red "RUNNING" light. Provide a green pilot light to indicate motor "STOPPED". Each pilot light shall have a legend plate indicating reason for signal.

3. Each overload relay shall have a normally open alarm contact which will close only when actuated by an overload (not to be confused with N.O. or N.C. auxiliary contacts). These contacts shall be properly wired to their respective blue pilot light provided on the starter front cover and having a "TRIPPED" legend plate.

4. Individually mounted motor starters shall be in a NEMA Type 1 general purpose enclosure in unfinished areas and shall be flush mounted in all finished areas. All starters mounted in exterior areas shall have a NEMA 3R enclosure. Each starter shall have a laminated nameplate to indicate equipment unit number, function and circuit number.

5. All motor starters, push buttons and pilot lights shall be of the same manufacturer as the switchboard and shall be General Electric, Square D, Siemens I.T.E., or Westinghouse.

C. Motor starters for the following equipment shall be provided under this Division 15 by the manufacturer of the equipment:

1. Packaged booster pump systems

2. Other equipment hereinafter specified in other Sections to be provided with integral starters.

D. Unless otherwise noted or specified in individual Sections, all 3–phase motors shall be standard NEMA continuous duty "B" type, with Class B insulation, open drip–proof frame for indoor service, TEFC for outdoor service and a service factor of 1.15. All motors 5 HP and larger shall be U.S. Motors Hi–Efficiency Model or Reliance XE Hi–Efficiency Model.

E. All power wiring and final connections to equipment shall be provided under Division 16.

F. Control components, all interlocks (motor–operated dampers, fire alarm motors, etc.) and control wiring (120 volt, single phase and less) shall be provided under this Division 15 as required to achieve the specified control sequences.

G. All control wiring over 30 volts shall be installed by a Licensed Electrician working under this Division 15.

1.8 SLEEVES, SEALS AND ESCUTCHEONS

A. Sleeves shall be provided through all pipe penetrations of concrete or masonry walls, elevated floors and roofs, except those plumbing piping penetrations for fixtures, vents, etc.

B. Sleeves shall be fabricated from Schedule 40 steel pipe through 10" and Standard Wall steel pipe for sleeve sizes 12" and larger. All sleeves penetrating exterior walls, underground walls, pit or vault walls shall be provided with a 3" x 3/8" thick waterstop ring welded completely to the midpoint of the sleeve.

C. All sleeves penetrating exterior walls, underground walls, pit or vault walls and elevated floors shall be packed and sealed watertight.

D. Sleeves through roofs shall extend above the roof surface and be flashed watertight.

E. Sleeves through walls shall be cut and finished flush with each surface of the wall in which they are installed.

F. Sleeves shall be sized to provide a minimum of 1/2" clearance between the inside surface of the sleeve and the outside finished surface of the pipe plus any insulation specified.

G. Fire–stops shall be provided as specified herein. All annular spaces between piping and sleeves which do not require fire–stops shall be packed with mineral wool and caulked.

H. Provide round, chrome–plated escutcheons on all exposed piping penetrations passing through walls, floors, partitions and ceilings.

1.9 FIRE–STOPS

A. Where ductwork, piping, conduit, etc. pass through fire partitions, fire walls and floors, a fire–stop shall be provided that will ensure an effective barrier against the spread of fire, smoke and gases. Fire–stop material shall be packed tight and completely fill gaps between the ductwork, piping, conduit, etc. and the perimeter of their rough openings.

B. Fire–stopping material shall maintain its dimensions and integrity while preventing the passage of flame, smoke and gases under conditions of installation and use when exposed to the ASTM E119 time–temperature curve for a time period equivalent to the rating of the assembly penetrated. Fire–stopping material shall be noncombustible as defined by ASTM E136; and, for insulation materials, melt point shall be a minimum of 1700 degrees F. for 1–hour protection and 1850 degrees F. for 2–hour protection. Fire–stopping material shall be Dow–Corning RTV Foam or 3M Fire Barrier Products or Sohio Carborundum Fyre Putty.

C. See Section 15400 for fire–stopping of PVC piping.

1.10 CORE DRILLING

A. Cutting of holes through concrete and masonry shall be by diamond core or concrete saw. Pneumatic hammer, impact electric and hand or manual hammer type drills will not be allowed, except as permitted by the Architect where required by limited working space. Locate holes such that they will not affect structural sections such as ribs or beams. Holes shall be laid out well in advance of the installation. These layout locations shall be approved by the Architect prior to drilling.

PART 2 – PRODUCTS

2.1 BID BASIS AND SUBSTITUTION PROCEDURES

A. Manufacturers names, series and model numbers, as noted or specified, are for the purpose of describing type, capacity, and quality of equipment, materials and products to be used. Unless "or equal" is specifically stated, bids shall be based only on the specified "basis of design" manufacturer. The listing of a particular manufacturer as an "equal" or "acceptable substitute" manufacturer shall not be misconstrued as approving nor allowing the substitution of that manufacturer's standard product in place of the basis of design. No consideration will be given to a product which would require dimensional, spatial or aesthetic changes to the project. "Acceptable substitute" and "equal" manufacturers shall only bid those products which exactly match the size and other characteristics of the specified basis of design. Any changes to other disciplines and trades of work required by an "or equal" or "substitute" product shall be duly considered and priced accordingly prior to bidding or pricing. The decision as to whether or not a proposed substitute or "equal" product is actually equal to that specified shall rest solely with the Architect.

B. Requests to provide "equal" products in lieu of those specified shall be submitted to the Architect in writing at least ten (10) days prior to final pricing and execution of the Contract. No consideration will be given to substitute products after final pricing and execution of the Contract.

C. Any "or equal" product or proposed product substitution which will cause a change in the appearance, dimensions or design of any part of the building, it structure, electrical system or any other engineered systems shall be accompanied by a scaled drawing and written description of the required change(s) for approval by the Architect . If deemed necessary by the Architect, design changes shall be signed and sealed by a registered Professional Engineer, currently licensed in this State.

2.2 MINIMUM STANDARDS

A. Every piece of energy consuming equipment, all fire suppression products and life safety equipment shall comply with the following standards as applicable; especially in regard to prevailing codes:

1. Factory Mutual Laboratories (FM)
2. Industrial Risk Insurers (IRI)
3. Underwriters Laboratories, Inc. (UL)
4. ADC: Air Diffusion Council
5. AGA: American Gas Association
6. AMCA: Air Moving and Conditioning Association, Inc.
7. ANSI: American National Standards Institute
8. API: American Petroleum Institute
9. ARI: American Refrigeration Institute
10. ASHRAE: American Society of Heating, Refrigerating and Air Conditioning Engineers
11. ASME: American Society of Mechanical Engineers
12. ASTM: American Society of Testing and Materials
13. AWWA: American Water Works Association
14. IBR: Institute of Boiler and Radiator Manufacturers
15. MSS: Manufacturers Standardization Society
16. NBBPVI: National Board of Boiler and Pressure Vessel Inspectors
17. NEMA: National Electrical Manufacturer's Association
18. OSHA: Occupational Safety & Health Administration
19. PDI: Plumbing Drainage Institute
20. PPI: Plastic Pipe Institute
21. SMACNA: Sheet Metal and Air Conditioning Contractors National Association, Inc.

PART 3 – EXECUTION

3.1 SUBMITTALS

A. Before preparing submittals, study all Contract Drawings and specifications in detail, obtain manufacturer's recommended instructions, and have submittals prepared based on specific equipment and material proposed for installation. An officer of the contracting firm shall sign all shop drawings (certifying conformance with plans and specifications) before submitting to the Architect or releasing to the field.

B. The submittal process shall not be utilized as an avenue to substitute products after the execution of the contract. Should an unspecified or unequal product be submitted, it will be rejected. If a second attempt at substitution is made during the resubmittal of the same product, then no more reviews of that product will be performed without direct compensation to the Engineer being paid for the additional services required for the third review and any further reviews.

C. No more than four (4) copies of submittal data will be reviewed. Any additional copies will be returned unmarked. The responsibility of copying review comments on any additional copies will rest solely with the Contractor.

D. Submittals will not be accepted for review unless they:

1. Comply with the requirements of Division 1.

2. Include complete information pertaining to all appurtenances and accessories.

3. Are submitted as complete packages which pertain to all related items in Division 15. Separate packages shall be submitted as follows:

All plumbing equipment, fixtures and components

4. Are properly marked with equipment, service or function identification as related to the project and are marked with pertinent specification paragraph number.

E. Submit catalog information, factory assembly drawings, field installation drawings and certifications as required for complete explanation and description of all items of equipment. The submittal data shall provide ample, unquestionable compliance with the Contract Documents.

F. Review of submittals shall not be construed as authorizing any deviations from the plans and specifications unless such deviations are clearly identified and separately submitted in the form of a letter that is enclosed with the submittals.

G. Submittals are required on all manufactured equipment, especially energy consuming equipment. Submittals shall include, but are not limited to, the following items of equipment:

1. Piping Specialties
2. Insulation
3. Heat Tracing
4. Water Heaters
5. Plumbing Fixtures

3.2 Not used

3.3 INSTALLATION REQUIREMENTS

A. All equipment shall be installed in strict conformance with the recommendations of the equipment manufacturer, as indicated on the Drawings and as specified.

B. Provide installation manuals for each piece of equipment. Submit in separately bound volumes after review of submittals.

C. Provide supplementary steel framing and welded steel equipment support stands as required for proper hanging and support of the mechanical systems. Steel angles, channels and tubing utilized for such framing shall be selected for a maximum deflection of 1/360th of the span.

D. All roof curbs shall be a minimum of 12" high and selected for the various roof pitches. Curbs installed on roofs having pitches of not more than 1/4" per foot may be standard curbs shimmed level with steel channels or Zs to provide suitable support and flashing surfaces.

3.4 CLEANING, LUBRICATION AND ADJUSTMENT

A. The exterior surfaces of all mechanical equipment, piping, conduit, etc., shall be cleaned and free of all dirt, grease, oil, paint splatter, and other construction debris.

B. Bearings that require lubrication shall be lubricated in strict accordance with the manufacturer's recommendations.

C. All control equipment shall be adjusted to the settings required for the performance specified.

D. All coils shall be thoroughly cleaned and combed prior to final inspection.

3.5 PAINTING

A. All uncoated and uninsulated steel surfaces exposed to sight inside the building, such as piping, equipment hangers and supports which are not provided with factory prime coat or galvanizing, shall be cleaned and painted with one coat of rust inhibiting primer. In addition, all surfaces in finished spaces shall also be painted with two coats of finish paint in a color selected by the Architect.

B. Steel items exposed outside the building, such as equipment supports, uninsulated piping and hangers which are not factory painted or galvanized shall be cleaned and painted with one coat of rust inhibiting primer and two coats of asphaltic base aluminum paint. Insulated steel pipes outside the building shall be cleaned and painted with one coat of rust inhibiting primer before installing insulation.

C. Factory painted equipment that has been scratched or marred shall be repainted to match the original factory color.

3.6 PIPING LEAK TESTING

A. Soil, waste, storm and vent piping shall be tested with water before installing fixtures. Water test shall be applied to the system either in its entirety or to the individual sections. Each opening except the highest opening of the section under test shall be plugged, and the section shall be filled with water and tested with a head of water of at least ten (10) feet above the highest point in the system. The water shall be kept in the portion under test, for at least thirty (30) minutes; no drop in the water level will be acceptable.

B. The water piping systems shall be tested at a minimum pressure of 125 psi and proved tight at this pressure for not less than thirty (30) minutes or longer if required to permit inspection of all joints. No loss in pressure will be permitted.

C. All leaks shall be repaired by tightening, remaking joints, or replacing pipe and fittings. Caulking of joints shall not be permitted.

3.7 RECORD (AS–BUILT) DRAWINGS

A. At the completion of the project, provide a set of reproducible prints to the Architect which reflects all changes, deviations and revisions made to the original design documents. Locations of all underground piping and utilities shall be clearly shown and dimensioned from permanent reference points such as building column lines.

3.8 OPERATING AND MAINTENANCE MANUALS AND INSTRUCTIONS

A. Complete operating and maintenance manuals shall be provided to the Owner. Four copies shall be provided. Each copy shall be bound in a separate 3–ring, loose leaf notebook. Operating instructions shall be provided for each mechanical system, and shall each include a brief system description, a simple schematic and a sequence of operation. Operating and maintenance instructions shall be provided for each piece of equipment. A control system wiring diagram shall be included in each operating and maintenance manual.

B. Prior to final acceptance or beneficial occupancy, provide the services of a competent technician for not less than one (1) day to instruct the Owner in the operation of the mechanical systems.

3.9 WARRANTY

A. All work provided under this Division 15 shall be subject to a minimum one year warranty. The warranty shall include prompt repair or replacement of equipment or system failures and shall include all parts and labor. In addition, all reciprocating air conditioning compressors shall carry an additional four year parts–only warranty. Extended warranties shall be provided on all other equipment so specified in other Sections.

END OF SECTION

SECTION 15400

PLUMBING SYSTEMS

1.0 GENERAL

1.01 DESCRIPTION

A. All work specified in this Section is governed by the Mechanical General Section 15010.

B. This Section 15400 and the accompanying drawings cover the provision of all labor, equipment, appliances, and materials and performing all operations in connection with the construction of the plumbing systems as specified herein and as shown. These systems include, but are not limited to, the following:

1. Sanitary waste and vent systems.
2. Domestic water systems.

C. Provide all final plumbing connections to all equipment furnished by Owner.

D. Provide gate valve and reduced pressure backflow preventer or vacuum breaker at the service entrance and at those connections (especially to kitchen equipment) required by local plumbing code.

1.02 INTENT

A. It is the intent of this Section of the specifications to provide complete and operable plumbing systems as shown and specified which are free of leaks, properly vented, free of unreasonable noise, vibration and sweating, and fabricated so as to fit the space allotted and to exhibit a minimum resistance to fluid flow.

B. The word "piping" is defined to mean all piping, fittings, joints, hangers, coatings, valves, cocks, insulation and accessories necessary for the plumbing systems described, shown and specified.

1.03 GENERAL REQUIREMENTS

A. Provide all reducing fittings, flanges, couplings and unions of the size and type of material to match the piping connections at each fixture, piece of equipment, valve and accessory.

B. Union joints, couplings or flanges shall be provided in each pipe line connected to each piece of equipment, fixture and elsewhere as indicated and specified. Unions shall match the piping system in which they are installed.

1. Unions or flanges shall be provided between all copper to steel connections. These unions shall be dielectric, insulating type.

C. All changes in direction and branches shall be made with manufactured fittings.

D. The use of offset–type reducers is strictly prohibited in any piping system.

E. In all water piping systems, changes in horizontal pipe line sizes shall be made with eccentric reducers installed flat on top for proper air venting. Reducing tees, reducing elbows and concentric reducers shall only be allowed in water piping systems for changing pipe sizes in vertical risers and for making connections to equipment and accessories from vertical risers.

F. All pipe joints shall be cut square and all burrs shall be removed.

G. Open ends of pipe lines not currently being handled shall be plugged during installation to keep dirt, water and foreign material out of the system.

H. Sanitary waste and storm drainage piping shall slope down in the direction of flow as shown on the drawings or as prescribed by Code, but not less than 1 percent.

I. All vents through roof (VTR'S) shall be offset just below the roof such that their termination points are at least 15 ft. from any outside air intake of any HVAC unit; special attention is called to packaged rooftop units.

J. Trap primers shall be provided at all floor drains and hub drains.

1.04 IDENTIFICATION OF PIPING

A. All aboveground plumbing systems piping and valves sized 3/4" and larger which are installed in accessible locations (including piping above removable ceilings and behind access panels) shall be identified in strict conformance with the "Scheme for the Identification of Piping Systems" (ANSI A13.1 – 2007).

B. Each identification marker shall include the following:

1. Proper color–coded background.
2. Proper color of legend in relation to background color.
3. Proper legend letter size.
4. Proper marker length.
5. Direction of flow arrow shall be included on each marker.

C. Locations for pipe markers shall be as follows:

1. Adjacent to each valve and fitting.
2. At each branch and riser take off.
3. At each pipe passage through walls, floors and ceilings.
4. On all straight pipe runs every 25 feet.

D. Identification markers may be stenciled or shall be Setmark Pipe Markers, as manufactured by Seton Name Plate Corporation.

E. All valves shall be identified with the appropriate service designation and valve number brass valve tags. Each valve tag shall be 19 gauge brass with 1/4" black–filled letters over 1/2" black–filled numbers. Tags shall be fastened to valves with brass "S" hooks or brass jack chain. Brass tags and fasteners shall be as manufactured by Seton Name Plate Corporation

F. Provide charts of all valves. Valve charts shall include the following items:

1. Valve identification Number
2. Location
3. Purpose/Material

2.0 PRODUCTS

2.01 SANITARY WASTE AND VENT SYSTEMS

A. Cleanouts shall be provided at the locations indicated and, as a minimum, where required by Code. Floor cleanouts shall be a minimum of 4" and shall be complete with a flush plug and removable, scoriated bronze floor plate. Provide carpet buttons in carpeted areas.

B. Joints on hubless cast iron soil pipe shall be made with neoprene couplings and stainless steel clamps. All couplings shall be manufactured to the CISPI 310 standard, ASTM C 1277, ASTM C 150, FM Standard 1680 Class I and certified by NSF International. Coupling shall be as follows:

1 ½" to 3" Two (2) stainless steel bands
4" to 8" Four (4) stainless steel bands
10" to 15" Heavy duty coupling with six (6) stainless steel bands

All offsets on 8" pipe and larger shall have metal restraining straps by Holdrite or approved equal.

C. Floor drains in toilets and finished areas shall be J. R. Smith 2000 Series with 6" Type B square adjustable strainers finished in satin nickel bronze; or equal products by Josam or Zurn. Provide vandalproof secured tops. All floor drains shall be provided with a trap primer.

2.02 DOMESTIC WATER SYSTEM

A. Underground domestic water service entrance piping 3" and smaller in size shall be Type K hard drawn copper tubing with wrought copper fittings. All joints shall be brazed.

B. All underground copper branch lines (1/2" and 3/4" only) shall be continuous lengths of soft Type K copper tubing with no joints allowed underground.

C. Underground domestic water service entrance piping above 3" in size shall be Class 150 ductile iron pipe with mechanical joints.

D. Aboveground domestic water system piping 3" in size and smaller shall be Type L hard drawn copper tubing with wrought copper fittings and soldered joints.

E. Gate valves 3" or less in size shall be constructed with a bronze body, non–rising stem. Stem to be bronze ASTM B–62 or silicon bronze ASTM B–371 with malleable iron handwheels. Valve shall meet MSS–SP80. Valve shall be manufactured by Milwaukee.

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GEORGIA REGISTERED ENGINEER ROSS W. ROSENTHAL

ISSUE	DATE
Owner Review Set	12/21/2018
Permit Set / IFC	04/10/2019

drawn by: T. KLINGER
checked by: R. ROSENTHAL

Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

SPECIFICATIONS - PLUMBING

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Hammond, Nibco or Stockham.

F. Ball valves 2 inch and smaller:

1. Ball valves shall be two piece bronze body, large port with solid, smooth bore chrome plated brass ball, meeting MSS–SP110. Seats shall be reinforced TFE with Teflon packing ring and threaded adjustable packing nut. Valves on insulated lines will be provided with stem extensions to provide clearance for two inches of pipe insulation. Valves to be Apollo 70, Hammond 8501 or Watts B–6000.

G. All water hammer arresters (WHA) shall be PDI Certified, Size A, B, C, D, E or F, as indicated for the fixture units served; Josam, Jay R. Smith or Zurn.

H. Soldered joints shall be made with tin–antimony/silver solder. Solder containing lead shall not be permitted.

2.03 PLUMBING INSULATION

A. All pipe insulation products shall have a permanent composite insulation, jacket and adhesive fire and smoke hazard rating as tested by procedure ASTM–84, NFPA 255 and UL 723 not exceeding Flame Spread 25 or Smoke Developed 50.

B. Blanket–type insulation shall have an average thermal conductivity not to exceed 0.27 BTU–in. per sq. ft. per degrees F. per hour at a mean temperature of 75 degrees F. Insulation shall have a minimum density of 1 lb./cu.ft. and shall be 2" thick.

C. Preformed insulation for all domestic hot and cold water piping shall be minimum 1" thick preformed fiberglass pipe insulation with white all–service jacket. All longitudinal joints shall be lapped, self–sticking type with all butt joints, tears, etc. sealed with a matching white vapor barrier tape. Elbows shall be mitered or may be Zeston covers filled with equivalent fiberglass insulation. The maximum K value of the insulation shall be 0.23 at 70 degrees F.

2.04 PIPE HANGERS AND SUPPORTS

A. Pipe hangers, hanger rods, trapeze type hangers, upper attachments and other supports shall be selected based on pipe size (plus insulation of pipes specified to be insulated) and the weight of the medium being transported or the medium used for testing, whichever is greater. Provide all hangers and rods, turnbuckles, angles, channels, and other structural supports to support the piping systems. Rods for pipe hangers shall be full size of the hanger manufacturer's catalog listed rod size for each type hanger specified. Hangers and supports shall be Michigan, ITT Grinnell or B–Line.

B. All material utilized for the hanging and support of the piping systems shall be manufactured products which are specifically intended for the purpose of hanging piping systems. The use of wire, steel straps, plastic ties, etc. is strictly prohibited.

C. Pipe hangers selected for supporting horizontal insulated piping shall be sized to fit around the outside of the pipe insulation. Insulated piping shall be supported on galvanized shields.

1. Shields shall be as follows:

a. Pipes 2" and smaller: 18 gauge x 12" long.

b. Pipes 2 1/2" and larger: 16 gauge x 18" long.

2. Shields shall be 180 degrees around the lower half of the pipe at all pipe hangers, except that on trapeze hangers, pipe racks and floor supported horizontal pipes, shields shall be 360 degrees around the entire pipe.

D. Pipe hangers touching copper piping shall be copper plated or the piping shall be dielectrically isolated from any steel hangers or clamps that are used. Note the requirement for domestic water piping requires the hangers to be installed over the insulation.

E. Steel rods, framing and clamps shall be plated or primed to prevent rust formation.

3.0 EXECUTION

3.01 ARRANGEMENT

A. Follow the general piping layout, arrangement, schematics and details. Provide all offsets, vents, drains and connections necessary to accomplish the installation. Fabricate piping accurately to measurements established at the project site to avoid interference with ductwork, other piping, equipment, openings, electrical conduits and light fixtures. Make suitable provision for expansion and contraction with expansion loops and offsets.

B. Water hammer arresters shall be installed at the top of each riser and on each fixture branch in accordance with Plumbing and Drainage Institute Standard WH201.

C. Cleanouts shall be provided at the base of all sanitary and storm risers.

3.02 MINIMUM HANGER SPACING

A. Pipe hangers or supports shall be provided within 18" of each horizontal fitting, equipment connection, valve, etc. and at not more than 10 ft. spacings along horizontal runs of straight, plain piping.

B. Riser clamps shall be provided at each floor penetration.

3.04 FIRESTOPPING PVC PIPING

A. PVC soil, waste and vent stacks penetrating fire–rated floors and walls shall be flamestopped, firestopped, and waterproofed using ProSet Systems, Inc. Series 45 "Firestop" couplings and Series 90 "Code Red" firestop devices. All other PVC drain, waste, and vent piping penetrating fire–rated floors shall be firestopped and waterproofed using ProSet Systems Series 48 closet stubs, tub boxes, floor drains, shower drains, and "E–Z Flex" flexible couplings. All shall be installed in accordance with the manufacturer's instructions.

B. ProSet "Firestop" couplings used in the DWV system shall be of type I PVC conforming to ASTM D2665 standard. ProSet "Code Red" stack fittings shall be of gray cast iron conforming to ASTM A–48 standard. ProSet "E–Z Flex" connector couplings shall be of flexible PVC conforming to ASTM C594 and ASTM F477 performance standards. Band used for compression joint on the "E–Z Flex" coupling shall be #300 stainless steel. IPS P–70 Primer and Weld–on 795 cement or equal shall be used for all solvent welds in the system.

3.05 INSULATION INSTALLATION

A. Provide blanket insulation over all horizontal roof drain piping which is within the building and including the vertical risers to the roof drains and the underbody of the roof drains.

1. Blanket insulation shall be wrapped around the piping and underbodies of roof drains. Ends of insulation shall overlap at least 2" and bottom of insulation shall overlap pipe insulation at pipe connection to roof drain at least 3". Adhere insulation to roof drain underbodies with 100% coverage of fire retardant adhesive and tape all joints with 3" wide foil reinforced kraft tape.

B. Provide insulation over all above ground hot and cold water piping, except that no insulation is required on cold water lines installed inside interior plumbing chases (those chases with no exterior wall).

1. All joints and tears shall be sealed with matching white vapor barrier tape.

3.06 PIPING INSTALLATION ABOVE CEILINGS

A. All domestic hot and cold water piping installed above the insulated ceilings shall be installed just above (within 2") of the top of the finished ceiling with the building insulation over the piping to avoid freeze–up.

3.07 DISINFECTION

A. All domestic water piping installed under this Division shall be disinfected with chlorine before it is placed into operation. The chlorinating material shall be liquid chlorine conforming to Federal Specification BB–C–120 and shall be introduced to the system by experienced operators only. The chlorine solution applied to the piping sections or system shall contain at least fifty parts per million of available chlorine and shall remain in the sections or system for a period of not less than sixteen (16) hours. During the disinfection period, all valves shall be opened and closed at least four times. After the disinfection period, the chlorinated water shall be flushed from the system with clear water until the residual chlorine content is not greater than two–tenths parts per million (0.2 PPM). Submit certification to the Architect that the system was disinfected.

END OF SECTION

PLUMBING FIXTURES AND TRIM

PART 1 – GENERAL

1.1 DESCRIPTION

A. All work specified in this section is governed by the Mechanical General Section 23 01 00.

B. This Section 22 45 00 and the accompanying drawings cover the provisions of all labor, fixtures, equipment, appliances and materials, and performing all operations in connection with the construction and installation of the plumbing fixtures and trim as specified herein and as shown.

C. All exposed piping, valves, stops, P–traps, etc. shall be chrome–plated. Also, all exposed piping penetrations through walls, floors or ceilings shall be provided with chrome–plated cast brass escutcheons.

D. All P–traps shall be minimum 17–gauge brass.

E. Flush valves shall have non–hold open feature, vacuum breakers and cover cap on angle–type stop.

F. Provide all final connections to all equipment and fixtures furnished by Owner.

G. Unless otherwise specified in an individual fixture description, all enameled cast–iron and porcelain fixtures shall be white.

1.2 INTENT

A. It is the intent of this Section of the specifications to provide complete, operable, adjusted, clean plumbing fixtures as shown and specified, which are free of leaks, noise, air, vibration and waterflow fluctuations.

1.3 BASIS OF DESIGN

A. The basis of design is as outlined for each fixture in the PART 2 – PRODUCTS subsection. Any proposed substitutions shall be proven equal in all respects to the equipment specified as the basis of design.

1.4 ACCEPTABLE MANUFACTURERS

A. Acceptable fixture manufacturers are American Standard, Zurn, Falcon and Kohler, provided that their units are equal in all respects for this specific project. Faucets and trim may be equal products as manufactured by Chicago, Delany, Zurn, T&S Bronze, Brass Craft, Speakman and McQuire.

B. Flush valves may be equal products by Sloan, Zurn and Delany. Stainless steel sinks and drinking fountains shall be as manufactured by those companies specified for each specific item outlined under subsection PART 2 – PRODUCTS.

PART 2 – PRODUCTS

2.1 FIXTURES

A. All fixtures are specified within on sheet P–0.1.

PART 3 – EXECUTION

3.1 INSTALLATION

A. Units shall be installed as indicated and in conformance with the manufacturer's recommendations. Coordinate the actual units to be provided with all trades.

B. All plumbing fixtures shall be free of leaks, provided completely finished, trimmed, adjusted, cleaned and ready for use. They shall be properly secured to the structure by the use of thru–bolting, backplates, carriers, expansion shields (for floor mounting only) or toggle bolts.

C. Wall hung fixtures supported on chair carriers shall be bolted to the floor slab. Carefully coordinate space requirements and fixture mounting height requirements with supports being furnished.

D. Fixtures supported with wall hangers on masonry chase walls shall be fastened to the wall with not less than 3/8" bolts which shall pass through the wall and through a 1/4" x 4" wide steel backplate on the unfinished chase wall side.

E. Where fixtures are hung on single masonry walls without a pipe chase behind, they shall be mounted with 3/8" toggle bolts.

F. Fixtures on steel stud walls shall have a 1/4" x 4" wide steel backplate wired with 1/16" steel wire to the studs. Bolts not less than 3/8" shall secure the fixtures through the fixture hanger and the backplate.

G. All mounting holes provided in fixtures shall be used for support. In addition to the main hangers, 1/4" toggle bolts shall secure the bottom of all wall hung fixtures at each drilling provided for this purpose.

H. Mount wall–hung fixtures at the heights indicated on the Architectural Drawings or as prescribed by local code. Special attention is called to the installation requirements of the ANSI Handicap Code.

3.2 CLEANING AND ADJUSTMENT

A. The units shall be cleaned, tested and field–adjusted to provide optimum flow and drainage.

END OF SECTION

GEORGIA REGISTERED PROFESSIONAL ENGINEER No. PE0287.. ROSS W. ROSENTHAL

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ISSUE	DATE
Owner Review Set	12/21/2018
Permit Set / IFC	04/10/2019

drawn by: T. KLINGER
checked by: R. ROSENTHAL

Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

SPECIFICATIONS - PLUMBING

P0.3

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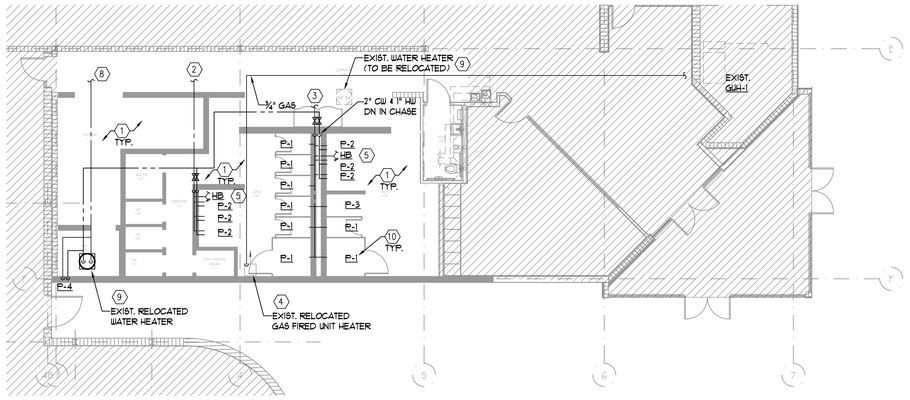
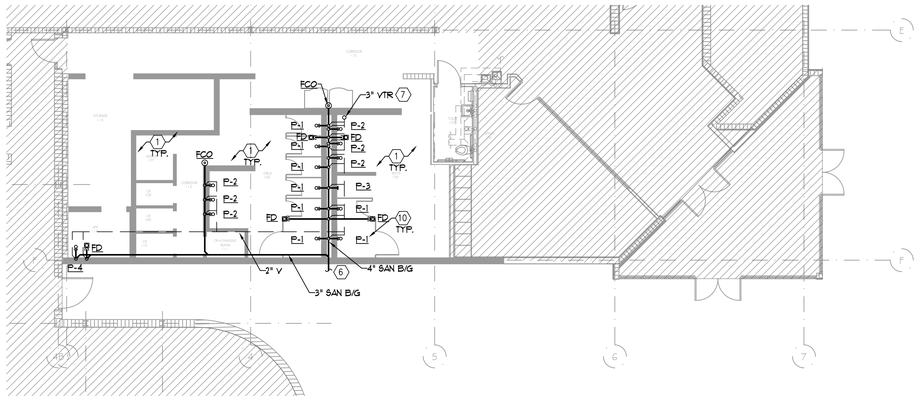


1 P1.1 DOMESTIC WATER AND GAS FLOOR PLAN – PLUMBING
1/8"=1'-0"



2 P1.1 SANITARY AND VENT FLOOR PLAN – PLUMBING
1/8"=1'-0"

GENERAL NOTES
(APPLIES TO ALL SHEETS)

1. FIELD COORDINATE INSTALLATION OF PIPING, EQUIPMENT, ETC. WITH ALL OTHER TRADES.
2. ALL PIPING SHOWN IS SCHEMATIC IN NATURE AND DOES NOT REFLECT ALL OFFSETS, CHANGES IN ELEVATION, ETC. NECESSARY FOR COORDINATION BETWEEN TRADES. OFFSET AS REQUIRED.
3. ALL SANITARY SHALL SLOPE AT 1/8" PER FOOT UNLESS OTHERWISE NOTED.
4. COORDINATE LOCATION OF ALL ABOVE-CEILING EQUIPMENT WITH CEILING TYPES. EQUIPMENT SHALL NOT BE LOCATED ABOVE INACCESSIBLE CEILINGS. SEE ARCHITECTURAL DRAWINGS.
5. ALL TAPS INTO EXISTING PIPING SHALL BE EQUAL OR GREATER IN SIZE. CONTRACTOR SHALL ROUTE AS REQUIRED TO MEET THIS INTENT.
6. EXISTING SANITARY SEWER PIPING WAS NOT LOCATED PER INVESTIGATIVE SITE VISIT. CONTRACTOR SHALL PERFORM REQUIRED DUE DILIGENCE AND ROUTE NEW PIPING AS REQUIRED FOR A COMPLETE INSTALLATION TO MAINTAIN REQUIRED INVERTS ELEVATION. COORDINATE WITH ALL TRADES, LANDLORD, ARCHITECT, AND EXISTING TENANTS.
7. ALL BELOW SLAB SANITARY SEWER PIPING SHALL BE PROVIDED WITH CLEANOUTS AS REQUIRED TO MEET IPC.
8. ALL EXISTING PIPE INSULATION SHALL BE REPLACED, EQUAL TO AS SPECIFIED WITHIN AREA OF PHASE ONE CONSTRUCTION.

KEYNOTES
(APPLY TO THIS SHEET ONLY)

1. DEMO ALL EXISTING PLUMBING FIXTURES, SHOWERS, FLOOR DRAINS, AND ASSOCIATED PIPING BACK TO MAIN LINES WITHIN THIS SCOPE OF CONSTRUCTION. REUSE EXISTING MAIN LINES WHERE POSSIBLE. COORDINATE WITH EXISTING CONDITIONS AND NEW BUILDOUT. CONTRACTOR SHALL VISIT SITE BEFORE PROVIDING BID. REMOVE ALL EXISTING CLEANOUTS AND PROVIDE NEW.
2. CONNECT NEW 1" CW TO EXISTING MAIN OF EQUAL OR GREATER SIZE. FIELD VERIFY EXACT LOCATION.
3. CONNECT NEW 2" CW TO EXISTING MAIN OF EQUAL OR GREATER SIZE. FIELD VERIFY EXACT LOCATION. PROVIDE NEW SHUTOFF VALVES FOR RESTROOM TO ISOLATE FROM MAIN SYSTEM.
4. PROVIDE NEW ¾" GAS LINE TO GAS FIRED UNIT HEATER AS SHOWN. PROVIDE WITH REGULATOR AS REQUIRED, SHUT OFF VALVE, AND DIRT LEG. TIE IN TO EXISTING PIPING OF EQUAL OR GREATER SIZE. SYSTEM TOTAL = 50 CFH AT A DEVELOPED LENGTH OF 100'.
5. PROVIDE VANDAL RESISTANT HOSE BIBB WITHIN MEN'S RESTROOM. COORDINATE EXACT LOCATION WITH ARCHITECT AND ADA CLEARANCES.
6. CONNECT NEW 4" SANITARY SEWER PIPING TO EXISTING OF EQUAL OR GREATER SIZE. FIELD VERIFY EXACT LOCATION. REUSE EXISTING WHERE POSSIBLE.
7. PROVIDE NEW 3" VENT THRU ROOF MINIMUM 10'-0" FROM ANY OUTSIDE AIR INTAKE. REUSE EXISTING PENETRATION WHERE POSSIBLE.
8. CONNECT NEW 1-1/4" CW TO EXISTING MAIN OF EQUAL OR GREATER SIZE. FIELD VERIFY EXACT LOCATION.
9. RELOCATE EXISTING WATER HEATER TO NEW LOCATION (OVER JANITOR'S SINK). ROUTE ALL DRAIN PIPING TO JANITOR'S SINK (WITHIN INDIRECT CONNECTION). DEMO ALL EXISTING PIPING, DRAINS, ETC. BACK TO MAINS. COORDINATE RELOCATION WITH EXISTING CONDITIONS AND DIVISION 16.
10. CONNECT NEW PLUMBING FIXTURES TO EXISTING CARRIERS, PIPING, ETC. WHERE POSSIBLE. COORDINATE WITH EXISTING CONDITIONS. EXISTING PIPING SHALL BE OF EQUAL OR GREATER IN SIZE. TYPICAL FOR ALL NEW FIXTURES.

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ISSUE DATE

Owner Review Set	12/21/2018
Permit Set / IFC	04/10/2019

drawn by: T. KLINGER
checked by: R. ROSENTHAL

Hammond Park Gymnasium

Sandy Springs, GA

GMC # AATL16006

DOMESTIC WATER AND SANITARY FLOOR PLAN - PLUMBING

P1.1

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LIGHTING FIXTURE SCHEDULE

TYPE	SYMBOL	DESCRIPTION
B	Φ	RECESSED, 6" LED DOWNLIGHT FIXTURE. PROVIDE WITH FACTORY INSTALLED LED DRIVER. COORDINATE FINAL FINISH OPTIONS WITH ARCHITECT PRIOR TO PURCHASE. FIXTURE TO MATCH PHASE 1 SUBMITTED MANUFACTURER. LAMPS: LED LAMPS (INCLUDED) MANUF: PRESCOLITE – LF6SL–DM–6LCSL–14L–35K
C	Φ	SURFACE MOUNTED, LED PENDANT LIGHT FIXTURE WITH 6" APERTURE. PROVIDE WITH FACTORY INSTALLED LED DRIVER. COORDINATE FINAL STEM LENGTH AND FINISH OPTIONS WITH ARCHITECT PRIOR TO PURCHASE. FIXTURE TO MATCH PHASE 1 SUBMITTED MANUFACTURER. LAMPS: LED LAMPS (INCLUDED) MANUF: PRESCOLITE – LCC6LED–P–14L–35K–8–WFL45
C1	●	SAME AS TYPE 'C' FIXTURE EXCEPT PROVIDE WITH 90–MINUTE, 1100 LUMEN, EMERGENCY BATTERY BACKUP INVERTER.
H	Φ	SURFACE MOUNTED, LED PENDANT LIGHT FIXTURE WITH 4" APERTURE. PROVIDE WITH FACTORY INSTALLED LED DRIVER. COORDINATE FINAL STEM LENGTH AND FINISH OPTIONS WITH ARCHITECT PRIOR TO PURCHASE. LAMPS: LED LAMPS (INCLUDED) MANUF: PRESCOLITE – LD4–S–P–120–6L–35K–FL30
X	⊗	FLUSH MOUNTED, LED POLYCARBONATE EXIT SIGN RED LETTERS AND CONTINUOUS ILLUMINATION. PROVIDE FACES AND DIRECTIONAL EGRESS ARROWS AS INDICATED ON PLANS. PROVIDE WITH 90–MINUTE EMERGENCY BATTERY BACKUP INVERTER. FIXTURE TO MATCH PHASE 1 SUBMITTED MANUFACTURER. MANUF: HUBBELL – CE SERIES

COMcheck Software Version 4.1.1.0

Interior Lighting Compliance Certificate

Project Information

Energy Code: 90.1 (2007) Standard
Project Title: Hammond Park Gymnasium - Phase 2
Project Type: Alteration

Construction Site:
705 Hammond Drive
Sandy Springs, GA 30328

Owner/Agent:

Designer/Contractor:
Barrett Woodyard & Associates
3495 Holcomb Bridge Road
Norcross, GA 30092
770-810-8800

Allowed Interior Lighting Power

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B X C)
1-Common Space Types:Restrooms	893	0.90	804
2-Common Space Types:Active Storage	293	0.80	234
3-Common Space Types:Corridor/Transition	258	0.50	129
		Total Allowed Watts =	1167

Proposed Interior Lighting Power

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:Restrooms (893 sq.ft.)				
LED 1: B: 4", LED Downlight Fixture: LED PAR 20W:	1	6	20	120
LED 2: C, C1: 6", LED Downlight Fixture: LED A Lamp 25W:	1	13	25	325
LED 3: H: 6", LED Downlight Fixture: LED A Lamp 25W:	1	10	25	250
Common Space Types:Active Storage (293 sq.ft.)				
LED 4: C: 6", LED Downlight Fixture: LED A Lamp 25W:	1	4	25	100
Common Space Types:Corridor/Transition (258 sq.ft.)				
LED 5: C, C1: 6", LED Downlight Fixture: LED A Lamp 25W:	1	5	25	125
		Total Proposed Watts =		920

Interior Lighting PASSES

Interior Lighting Compliance Statement

Compliance Statement: The proposed interior lighting alteration project represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 90.1 (2007) Standard requirements in *COMcheck* Version 4.1.1.0 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Scott Wilkins - Electrical Engineer — Name - Title
Signature
04-10-2019 — Date

Project Title: Hammond Park Gymnasium - Phase 2 Report date: 04/11/19
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ELECTRICAL GENERAL NOTES

1. ALL WORK THIS DIVISION SHALL COMPLY WITH ALL LOCAL BUILDING CODES, LAWS, REGULATIONS, ORDINANCES, AND THE REQUIREMENTS OF THE 2017 NATIONAL ELECTRICAL CODE.
2. THE CONTRACTOR SHALL KEEP A RECORD OF THE CHANGES WHICH ARE IN CONFLICT WITH THESE DRAWINGS AND SPECIFICATIONS. AT THE COMPLETION OF HIS WORK HE SHALL SUBMIT "AS–BUILT" PRINTS TO THE OWNER.
3. DRAWINGS ARE GENERALLY DIAGRAMMATIC AND DO NOT NECESSARILY SHOW EVERY FITTING AND DETAIL. ALL WORK SHALL BE INSTALLED SO THAT JUNCTION BOXES AND COMPONENTS WILL BE ACCESSIBLE FOR SERVICE.
4. ALL SYSTEMS, EQUIPMENT, COMPONENTS, WORK, ETC. PROVIDED UNDER THIS DIVISION SHALL BE COVERED BY A ONE YEAR GUARANTEE STARTING AT THE TIME OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER. ANY DEFECTS IN THE WORK, SYSTEMS, EQUIPMENT, OR COMPONENTS FOUND DURING THIS YEAR SHALL BE CORRECTED AT NO CHARGE. THE GUARANTEE SHALL INCLUDE PROVIDING ALL NECESSARY CUTTING, PATCHWORK, REPAINTING, ETC. TO MAKE THE WORK COMPLETE AND NEW.
5. ALL EXISTING POWER DISTRIBUTION, ETC.,JUNCTION BOXES SHALL BE RELOCATED IF LOCATED OVER A CEILING SCHEDULED TO BE GYPSUM BOARD. ALL EXISTING JUNCTION BOXES SHALL BE RELOCATED IF NECESSARY TO AN ACCESSIBLE LOCATION.
6. ALL CONDUIT MUST BE CONCEALED IN THE WALLS OR ABOVE THE CEILING UNLESS OTHERWISE NOTED. MINIMUM CONDUIT SIZE IS 1/2".
7. ALL CONDUCTORS SHALL BE COPPER WITH TYPE "THW" OR "THHN" INSULATION AND THE MINIMUM WIRE SIZE SHALL BE #12 A.W.G. WITH A 167 DEGREE TEMPERATURE RATING.
8. ALL WORK MUST BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER ACCORDING TO GENERALLY ACCEPTED PRINCIPALS OF FIRST CLASS WORKMANSHIP.
9. ARMORED CABLE MAY BE USED FOR LIGHTING CIRCUITING ABOVE CEILINGS AND MUST BE MC TYPE (WITH GROUND). PROVIDE EMT FOR CIRCUIT HOMERUNS.
10. ALL NEW TELEPHONE AND VOICE DATA CONDUIT SHALL BE STUBBED UP 6" ABOVE CEILING IN NEAREST WALL AT EACH OUTLET LOCATION.
11. FASTEN ALL RECESSED LIGHTING FIXTURES TO STRUCTURE OR GRID PER N.E.C. 410.36
12. RECESSED INCANDESCENT FIXTURES SHALL BE SUPPORTED IN COMPLIANCE WITH N.E.C. 410.115(C).
13. ALL PENETRATIONS THRU RATED WALLS, FLOORS AND CEILINGS SHALL BE FIRE STOPPED PER N.E.C. 300.21.
14. PROVIDE ALL GROUNDING AS REQUIRED BY ARTICLE 250 OF THE N.E.C.
15. DEVICE MOUNTING HEIGHTS ARE TO BE MEASURED TO THE DEVICE CENTERLINE.
16. ALL SWITCHES FOR FANS, LIGHTS, ETC. WHICH ARE SHOWN TO BE MOUNTED IN THE SAME GENERAL AREA SHALL SHARE A MULTI–GANG COVER PLATE AS REQUIRED.
17. REUSE ALL REMOVED, EXISTING UNDAMAGED RECEPTACLES WHERE POSSIBLE.
18. REUSE EXISTING HOMERUNS WHERE APPLICABLE WITHIN THE DESIGN CRITERIA OF THESE DRAWINGS. ALL HOMERUNS ARE TO BE PROTECTED BY 20A/1P BREAKERS UNLESS OTHERWISE NOTED.
19. REMOVE ALL ABANDONED WIRE.
20. WHERE DEMOLITION DISRUPTS ELECTRICAL CONTINUITY OF EXISTING TO REMAIN RECEPTACLES/LIGHTS, AND NO RECONNECTION IS SHOWN, RECONNECT TO ITS EXISTING CIRCUIT.
21. ALL CONDUIT SHALL BE 1/2" EMT WITH 2#12AWG CONDUCTORS UNLESS OTHERWISE NOTED.
22. UPDATE EACH PANEL DIRECTORY NOTING ALL CHANGES AND ADDITIONS.
23. PROVIDE #12AWG GND. FOR ALL MECHANICAL EQUIPMENT UNLESS SHOWN OTHERWISE. ALL EQUIPMENT SHALL BE GROUNDED AT THE PANEL WHICH FEEDS THE EQUIPMENT.
24. COORDINATE RECEPTACLE NEMA TYPE AND VOLTAGE WITH COPIERS AND EQUIPMENT.
25. PROVIDE A NEW DIRECTORY FOR ALL PANELS. CORRECTLY LABEL ALL EXISTING CIRCUITS, NEW CIRCUITS, SPARES AND SPACES.
26. PROVIDE A SEPARATE GREEN, INSULATED, #12AWG EQUIPMENT GROUNDING CONDUCTOR ROUTED WITH THE BRANCH CIRCUIT HOMERUN CONDUCTORS.
27. WHERE RECEPTACLES ARE REMOVED OR MOVED, REUSE EXISTING CIRCUITRY IF POSSIBLE.
28. ROUTE CONDUIT FROM EACH FLOOR COMMUNICATION OUTLET TO NEAREST FULL HEIGHT WALL AND STUB–UP TO NEAREST ACCESSIBLE CEILING.
29. REUSE ALL AVAILABLE AND ABANDONED CIRCUITS AND BREAKERS IN EXISTING PANEL.
30. WHERE WORK BY THE GENERAL CONTRACTOR (WALL REMOVAL, NEW OR RELOCATED WALL OPENING, ETC.) RESULTS IN THE REMOVAL, RELOCATION OR REFEEDING OF ELECTRICAL DEVICES OR LIGHTING FIXTURES, THE ELECTRICAL CONTRACTOR SHALL DISCONNECT OR RECONNECT AS REQUIRED ALL ACTIVE DEVICES REMAINING ON THAT CIRCUIT SYSTEM.
31. RING OUT ALL CIRCUITS IN EXISTING PANEL EFFECTED BY THIS ALTERATION. WHERE ADDITIONAL CIRCUITS ARE NEEDED, REUSE CIRCUITS AVAILABLE FOR REUSE, OR PROVIDE NEW BREAKERS, TAG ALL UNUSED CIRCUITS AS SPARE, REPLACE ALL INOPERATIVE OR DEFECTIVE CIRCUIT BREAKERS. TIGHTEN ALL CONNECTIONS.
32. CONTRACTOR SHALL RELOCATE ALL J–BOXES, ETC. ABOVE NEW HARD CEILING TO ABOVE NEW ACCESSIBLE CEILING.
33. STUB UP 1" EMT CONDUIT 6" ABOVE CEILING IN NEAREST WALL FROM WORKSTATION IN–FEED WALL/FLOOR BOXES FOR VOICE/DATA LOCATIONS.
34. CONTRACTOR SHALL FIELD VERIFY THAT EXISTING ELECTRICAL DEVICES SHOWN ON PLANS ARE IN PROPER WORKING ORDER. IF NOT, ELECTRICAL CONTRACTOR SHALL PROVIDE NEW DEVICES AS REQUIRED.
35. ELECTRICAL CONTRACTOR SHALL PROVIDE/INSTALL PANEL NAME AND CIRCUIT NUMBER ON EACH FACEPLATE FOR CORRESPONDING DEVICE.

(EXISTING) PANEL 'B'

VOLTAGE: 120 / 208 AMP: 150
PHASE: 3 MAIN: MLO

DESCRIPTION	KW	BKR	CK	PH	CK	BKR	KW	DESCRIPTION
GUH-1	0.3	20/1	1	A	2	20/2	1.0	BBH-A
SF-1	0.3	20/1	3	B	4	---	1.0	---
CU-1	1.5	25/2	5	C	6	20/2	1.0	BBH-A
---	1.5	---	7	A	8	---	1.0	---
AHU-1	4.2	50/2	9	B	10	20/1	1.0	OFFICE 102 RECEPT.
---	4.2	---	11	C	12	20/1	1.0	OFFICE 102 RECEPT.
CU-2	1.5	25/2	13	A	14	20/1	1.0	OFFICE 102 RECEPT.
---	1.5	---	15	B	16	20/1	1.0	OFFICE 102 RECEPT.
AHU-2	4.2	50/2	17	C	18	20/1	1.0	OFFICE 102 RECEPT.
---	4.2	---	19	A	20	20/1		EF-1
BBH-A	1.0	20/2	21	B	22	20/1	1.0	WATER FOUNTAIN **
---	1.0	---	23	C	24	20/1	1.0	WATER FOUNTAIN **
BBH-A	1.0	20/2	25	A	26	20/2	1.0	EWH-A **
---	1.0	---	27	B	28	---	1.0	---
WATER FOUNTAIN	1.0	20/1	29	C	30	20/1	0.8	RESTROOM LTS. **

* - INDICATES CIRCUIT ADDED DURING PHASE 1 OF CONSTRUCTION AND SHALL REMAIN AS IS.
** - INDICATES NEW CIRCUIT BREAKER ADDED FOR PHASE 2 CONSTRUCTION

Phase A Load (kVA)	12.4	Connected kVA	41.9	96% A-B Balance
Phase B Load (kVA)	12.9	Dem. kVA	36.3	78% B-C Balance
Phase C Load (kVA)	16.6	Dem. Amps	100.8	75% C-A Balance

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION	ON CENTER MTG. HT.
	CONCEALED CONDUIT IN CEILING OR WALL	
	CONCEALED CONDUIT IN FLOOR OR UNDERGROUND	
	EXPOSED CONDUIT	
	CIRCUIT HOMERUN TO PANEL; EACH ARROWHEAD = 1 CIRCUIT	
	NO. OF CONDUCTORS IN CONDUIT; EACH CROSSHATCH = 1 WIRE	
	NO. OF #10 CONDUCTORS IN CONDUIT WITH ISOLATED GROUND; EACH CROSSHATCH = 1 WIRE	
	FLEXIBLE CONDUIT OR S.O. CORD	
	CONDUIT STUBBED UP OR TURNED DOWN	
	SURFACE MOUNTED RACEWAY	
	MULTI OUTLET SURFACE MOUNTED RACEWAY	
	PLYWOOD BACKBOARD	
	WALL MOUNTED DUPLEX RECEPTACLE OUTLET	18" U.N.O.
	WALL MOUNTED DUPLEX RECEPTACLE OUTLET AND DEDICATED CIRCUIT	18" U.N.O.
	WALL MOUNTED ABOVE COUNTER DUPLEX RECEPTACLE OUTLET	PER ARCH.
	WALL MOUNTED G.F.C.I. DUPLEX RECEPTACLE OUTLET	18" U.N.O.
	WALL MOUNTED ABOVE COUNTER G.F.C.I. DUPLEX RECEPTACLE OUTLET	PER ARCH.
	WALL MOUNTED DOUBLE DUPLEX RECEPTACLE OUTLET	18" U.N.O.
	WALL MOUNTED G.F.C.I. DOUBLE DUPLEX RECEPTACLE OUTLET	18" U.N.O.
	WALL MOUNTED SPECIAL RECEPTACLE OUTLET	18" U.N.O.
	JUNCTION BOX – SIZE AND MOUNTING AS REQUIRED	
	WALL MOUNTED DATA & TELEPHONE COMBINED OUTLET. PROVIDE ONE (1) TELEPHONE JACK WITH OUTLET. PROVIDE 3/4" CONDUIT WITH PULL STRING TO 6" ABOVE ACCESSIBLE CEILING. # – INDICATES NUMBER OF DATA DROPS PROVIDED AT EACH DEVICE.	18" U.N.O.
TV	TELEVISION OUTLET – PROVIDE THREE (3) WALL MOUNTED JUNCTION BOXES (ONE (1) FOR DUPLEX RECEPTACLE, ONE (1) FOR CABLE FEED AND ONE (1) FOR DATA CABLING). JUNCTION BOXES SHALL BE RECESSED "CLOCK BOX" TYPE. COORDINATE EXACT LOCATION, MOUNTING HEIGHT AND ELECTRICAL REQUIREMENTS WITH ARCHITECT AND TENANT AV REPRESENTATIVE PRIOR TO INSTALLATION.	
	277/480 VOLT PANELBOARD	
	120/208 VOLT PANELBOARD	
D	WALL MOUNTED DIMMABLE SWITCH COMPATIBLE WITH LIGHT FIXTURES	48" U.N.O.
FD	WALL MOUNTED FLUORESCENT DIMMABLE SWITCH	48" U.N.O.
S	WALL MOUNTED TOGGLE SWITCH	48" U.N.O.
3	WALL MOUNTED 3–WAY TOGGLE SWITCH	48" U.N.O.
M	MOTOR RATED TOGGLE SWITCH	AS REQ'D.
S (30/3)	DISCONNECT SWITCH (FRAME/POLES/FUSE–IF REQUIRED)	
(2)	MOTOR – NUMBER INDICATES HORSEPOWER (F=FRACTIONAL)	
FA	FIRE ALARM ADA APPROVED COMBINATION AUDIO/VISUAL ALARM – WALL MOUNTED – (*)	SEE NOTE #4
	FIRE ALARM ADA APPROVED VISUAL ALARM – WALL MOUNTED (*)	SEE NOTE #4
S	SMOKE DETECTOR MOUNTED ABOVE CEILING.	
F	FIRE ALARM PULL STATION	SEE NOTE #5
D	DUCT MOUNTED SMOKE DETECTOR IN SUPPLY AIR PATH PER NFPA	
H	FIRE ALARM HEAT DETECTOR	
D	SMOKE DETECTOR OR DUCT MOUNTED SMOKE DETECTOR IN RETURN AIR PATH PER NFPA.	
M	FIRE ALARM MAGNETIC DOOR HOLD. COORD. WITH ARCHITECT	
FSD	FIRE SMOKE DAMPER. PROVIDE INTERCONNECTION WITH THE BASE BUILDING FIRE ALARM SYSTEM. COORDINATE WITH DIVISION 15.	
AFF/AFG	ABOVE FINISHED FLOOR/ABOVE FINISHED GRADE	
OS	WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR LIGHT SWITCH. (SENSORSWITCH WSD PDT OR PRE–APPROVED EQUAL)	48" U.N.O.
	CEILING MOUNTED, LOW VOLTAGE, DUAL TECHNOLOGY 360° OCCUPANCY SENSOR (SENSORSWITCH CM PDT 9 OR PRE–APPROVED EQUAL).	
	POWER PACK FOR LOW–VOLTAGE OCCUPANCY SENSOR (SENORSWITCH PP20 OR PRE–APPROVED EQUAL). LOW VOLTAGE CABLING NOT SHOWN ON PLAN FOR CLARITY. PROVIDE ONLY PLENUM–RATED CABLING FOR OCCUPANCY SENSOR LOW VOLTAGE CONNECTIONS.	
LV	PLENUM RATED LOW–VOLTAGE CABLING FOR OCCUPANCY SENSOR 24 Vdc POWER AND CONTROLS. CONTRACTOR SHALL COORDINATE CABLING SPECIFICATION WITH SENSOR/POWER PACK MANUFACTURER'S DOCUMENTATION.	

FIRE ALARM GENERAL NOTES

1. ALL NEW FIRE ALARM DEVICES SHALL BE ADA APPROVED. COORDINATE COLOR WITH ARCHITECT AND BASE BUILDING. DEVICES TO MATCH BASE BUILDING SYSTEM MANUFACTURER. PROVIDE ANY ADDITIONAL POWER SUPPLIES AND AMPLIFIERS REQUIRED BY ADA APPROVED DEVICES.
2. ALL FIRE ALARM DEVICES, INCLUDING SPEAKERS, VISUALS, SMOKE DETECTORS, ETC. SHALL BE CONNECTED TO THE BASE BUILDING FIRE ALARM SYSTEM BY A LICENSED FIRE ALARM CONTRACTOR. COORDINATE CONNECTIONS WITH SYSTEM MANUFACTURER.
3. COORDINATE DEVICE HEIGHTS WITH ARCHITECT'S PLANS AND ELEVATIONS
4. ALL FIRE ALARM DEVICES SHALL BE SELECTABLE TO 110CD UNLESS NOTED OTHERWISE.
5. ALL FIRE HORNS AND STROBES SHALL BE WHITE UNLESS DIRECTED OTHERWISE BY OWNER AND ARCHITECT.
6. INSTALLATION OF FIRE ALARM HORN/STROBES AND STROBES SHALL BE 80" AFF TO THE BOTTOM OF THE LENS.
7. INSTALLATION OF THE FIRE ALARM PULL STATIONS SHALL BE 48" MINIMUM TO THE BOTTOM OF THE OPERATING MECHANISM.
8. THE AUDIBLE DEVICES SHALL BE INSTALLED TO OBTAIN A MINIMUM 60 dBA THROUGHOUT OR 15 dBA ABOVE AMBIENT, WHICHEVER IS GREATER.
9. COORDINATE FIRE ALARM SYSTEM SHUTDOWNS AND REPROGRAMMING WITH LANDLORD.

BW&A Barrett, Woodyard & Associates, Inc.
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Norcross, GA 30092
Phone (770) 810-8800
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ISSUE DATE
Owner Review Set 12/21/2018
Permit Set / IFC 04/10/2019

drawn by: S. WILKINS
checked by: S. WILKINS

Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

LEGEND, NOTES, DETAILS, SCHEDULES & ENERGY FORM

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SECTION 16010
ELECTRICAL GENERAL

1.0 GENERAL

1.01 SCOPE

A. Division 16 includes all Specifications in the 16000 series and the accompanying Electrical Drawings. Provide all labor, materials and equipment, and all necessary operations to provide the complete scope of the electrical systems intended under this Division. Division 16 is not a stand alone document, but a part of the complete Project Documents.

B. Attention is called to the fact that there are many interfaces between the work required in this Division and the work required in other Divisions. Provide the necessary interface and coordination with other Divisions to provide a complete project.

1.02 EXISTING CONDITIONS

A. Attention is called to the fact that the work is to be performed within an existing, operational facility. Prior to the submission of bids, each bidder shall visit the project site, thoroughly investigate and be familiar with all existing conditions which will affect their work; especially the work to be performed above the existing ceilings.

B. When this project is finished, the work under this Division shall be complete in every respect, completely integrated with all the existing systems, and left in perfect operating condition. The electrical service to the building shall not be interrupted at any time without written coordination of the building's Owner. All existing electrical equipment removed during the project shall be removed from the site after inspection of the building's Owner. All existing electrical systems required to be operating at the project's completion or required to remain in use during the project shall be reconnected, replaced, rerouted or otherwise made to fit with proper workmanship techniques and left in safe working order.

C. Connect new work to existing work in a neat and workmanlike manner. Where an existing structure must be cut or existing utilities interfere, such obstructions shall be bypassed, removed, replaced or relocated, patched and repaired. Work disturbed or damaged shall be replaced or repaired to its prior condition.

1.03 CODES AND REGULATIONS

A. All work under this Division shall comply with all local building codes, laws, regulations, ordinances and the requirements of the 2017 National Electrical Code and no Georgia amendments.

B. Where conflicts of installation requirements occur between the aforementioned codes, regulations or the Contract Documents, the most restrictive shall govern.

C. Obtain all permits and licenses and pay all fees required by local authorities. Arrange for all necessary inspections required by the authorities having jurisdiction and provide written certificates of approval to the project Owner or his designated representative.

1.04 DEFINITIONS

A. Contract Documents: The complete set of project Drawings and Specifications.

B. Provide: Furnish, install and connect.

C. Work: All materials installed, including all labor to provide complete system.

D. Wiring or Wired: All wire or cable installed in conduit from panelboard to equipment and connected at both ends with all required boxes, connectors, couplings, etc.

E. Conduit: Rigid steel conduit intermediate metal conduit (I.M.C.), electrical metallic tubing (EMT) plastic conduit (PVC), electrical non-metal tubing (ENT), or flexible steel conduit.

1.05 DRAWINGS AND SPECIFICATIONS

A. The Drawings and Specifications together are to be considered as the Contract Documents. Any work shown in one and not shown in the other, or implied by either, shall be provided to give a complete project.

B. Should any conflicts exist between the Drawings and Specifications or there is an item shown/called for which is not clearly defined, immediately submit a request for clarification. No additional monies will be granted later when a conflict is resolved or an item is more clearly defined.

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

D. The exact location of equipment requiring electrical connections (mechanical equipment, elevators, lights, etc.) shall be as located by other Divisions of the Contract Documents. Refer to the Architectural, Structural and Mechanical Documents for dimensions and details of building construction and provide work described in this Division so that it conforms to the details of the project. The right is reserved to relocate any receptacle, switch or other outlet a maximum of 10'-0" before it is permanently installed without incurring additions to the Contract amount.

1.06 SITE VISIT

A. Visit the site and become familiar with all aspects of the site and existing conditions before submitting Contract price.

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

1.07 DEVIATIONS

A. No deviations from the Contract Documents shall be made without the full knowledge and written consent of the Architect.

B. If the existing conditions make it desirable to modify the Contract Documents in regard to any item, provide a written request to the Architect.

2.0 PRODUCTS

2.01 STANDARDS FOR MATERIALS AND WORKMANSHIP

A. All materials used shall be new and shall be stamped with the label of Underwriters Laboratories, Inc. (UL).

B. All materials shall meet the standards of the following associations and institutes where applicable:

1. National Fire Protection Association (NFPA)
2. American Society of Testing Materials (ASTM)
3. American National Standards Institute (ANSI)
4. National Electrical Manufacturer's Association (NEMA)
5. Institute of Electrical and Electronic Engineers (IEEE)

C. Manufacturers names and catalog numbers specified herein are intended to describe the material and set the standard of quality. All bids shall be based on material specified. Requests 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 before bid date. All requests shall conform with the provisions of the general and supplementary conditions.

D. Samples of materials requested to be substituted shall be furnished upon the request of the Architect.

2.02 SHOP DRAWINGS AND SUBMITTAL

A. The Engineer's review of shop drawings or submittals is a cursory review to check for general compliances of submittals with the design intent of the Contract Documents. The Engineer's review does not relieve the Contractor of his responsibility of complying with the Contract Documents. All coordination of the work in strict compliance with the Contract Documents is the sole responsibility of the Contractor.

B. The following items shall be submitted for review:

1. Conduit and wire
2. Devices
3. Coverplates
4. Fuses
5. Overcurrent devices
6. Disconnect switches
7. Lighting fixtures
8. Panelboards
9. Motor Starters

C. All shop drawings and submittals shall be submitted in compliance with the requirements of the general and supplementary conditions. No more than four (4) copies of submittal data will be reviewed. Any additional copies will be returned unmarked. The responsibility of copying review comments on any additional copies will rest solely with the contractor.

D. All submittals shall bear the name of the manufacturer to be used.

E. All shop drawings and submittals shall include a stamped indication signifying that the submittal has been reviewed for compliance with the Contract Documents by the Contractor. This stamped indication also represents the fact that the Contractor has checked this submittal for its interaction with all other Divisions and certifies by his signature or initials that all coordination has taken place. The stamp shall include the date, name of the Contracting Firm, the signature of the Contractor, certification of compliance and approval. This stamp shall be on the submittal before the Engineer will review it.

F. The engineer will review an individual submittal not more than twice. If the submittal is rejected again on the second review, the contractor will bare all responsibility for paying for the engineer's time for additional reviews. Such payments to the engineer shall be withheld from the next monthly pay application.

2.03 RECORD (AS-BUILT) DRAWINGS AND MAINTENANCE MANUALS

A. At job completion, submit to the Architect, a set of CAD or PDF files showing all deviations from the Contract Documents. The Drawings shall also have dimensions locating all underground conduits.

B. At job completion, submit to the Architect, three (3) sets of maintenance and instruction manuals for all equipment furnished on the project.

3.0 EXECUTION

3.01 COORDINATION

A. Coordinate all space requirements with all other Divisions before installing any work. Install work such that adequate space will be allotted for all other work from other Divisions to be installed and also will allow room for future access for repair and maintenance.

B. Any work installed without proper coordination shall be relocated at the Architect's direction without increasing the Contract price.

C. During the bidding process or the pricing for a guaranteed maximum price, coordinate with all other Divisions for the total amount of work required in Division 16. Any work shown or implied in another Division requiring work in Division 16 shall be included in the Contract price regardless of whether or not it is addressed in Division 16.

3.02 PROTECTION OF MATERIALS

A. All equipment shall have the original finish when the building is turned over to the Owner.

B. Protect equipment during construction from dirt, water, chemical, mechanical damage, etc. Protect all conduit openings so that no foreign material will enter the conduit.

3.03 TESTS, DEMONSTRATION AND INSTRUCTIONS

A. Test all systems described in this Division in the presence of the Owner or a designated representative upon completion of the work. Demonstrate that the installation is in accordance with Contract Documents.

B. Any work found not to be in compliance with the Contract Documents shall be repaired or replaced without incurring any additions to the Contract price.

C. Provide to the Owner, all instruction on maintenance and operation of all systems and equipment provided under this Division. Provide all necessary tools and personnel to thoroughly present these instructions.

3.04 GUARANTEE

A. All systems, equipment, components, work, etc. provided under this Division shall be covered by a one year guarantee starting at the time of final acceptance of the work by the Owner. Any defects in the work, systems, equipment or components found during this year shall be corrected at no charge. The guarantee shall include providing all necessary cutting, patchwork, repainting, etc. to make the work complete and new.

B. Present this guarantee and any additional warranties or guarantees on furnished equipment or systems to the Architect. All equipment or system guarantees are in addition to the general guarantee.

SECTION 16100
ELECTRICAL BASIC MATERIALS & METHODS

1.0 GENERAL

1.01 DESCRIPTION

A. All work specified in this Section shall comply with the provisions of Section 16010.

B. This Section describes the basic electrical materials and installation methods that are acceptable and applicable to Division 16.

2.0 PRODUCTS

2.01 CONDUIT

A. Galvanized rigid steel conduit shall be low carbon, hot-dipped galvanized both inside and out with threaded joints.

B. Intermediate metal conduit (IMC) shall be steel, galvanized both inside and out with threaded joints.

C. Electrical metallic tubing (EMT) shall be steel, galvanized both inside and out.

D. Plastic conduit (PVC) shall be schedule 40 PVC heavy wall type. A grounding conductor shall be provided.

E. Flexible metal conduit shall be flexible steel conduit tubing and shall meet Underwriters Laboratories Standard for Flexible Steel Conduit.

F. Liquid-tight flexible metal conduit and liquid-tight non-metallic conduits shall be liquid-tight and sunlight resistant.

G. Steel conduit approved manufacturers are Allied, Triangle and Republic.

H. PVC and ENT conduit approved manufacturers are Carlon and Triangle.

2.02 CONDUIT FITTINGS

A. Rigid conduit and IMC conduit fittings shall be zinc-coated, ferrous metal and taper threaded type.

B. EMT fittings shall be zinc-coated steel and hexnut compression or set-screw type. EMT connectors shall have insulated throats.

C. PVC fittings, elbows and cement shall be produced by the same manufacturer. All joints shall be solvent welded in accordance with the manufacturer's recommendations.

D. Conduit connections to switchboards, motor control centers, transformers, panel cabinets, and pull boxes shall have grounding wedge lugs between the bushing and the box or locknuts designed to bite into the metal.

E. Each conduit end shall be provided with either an insulated throat connector or separate locknut and insulated bushing. Bushing shall be installed before any wire is pulled.

F. Conduit fittings approved manufacturers are Raco, Steel City, O.Z. Gedney, Thomas & Betts and Appleton.

G. Expansion fittings shall be provided in all conduit which crosses and expansion joint.

2.03 CONDUCTORS

A. Conductors shall be copper of 98% conductivity, 600 volt insulation. Sizes specified are AWG gauge for No. 4/0 and smaller and circular mils (MCM) for all sizes larger than no. 4/0. Conductors No. 10 and smaller shall be solid and type "THHN" or "THWN" insulation. No. 8 and larger shall be stranded and type "THW" or "XHHW" insulation.

2.04 OUTLETS

A. Outlet boxes and covers shall be of such form and dimensions as to be adapted to their specified usage, locations, size and quantity of conduit, and size and quantity of conductors entering the boxes. In special "Fire Rated" partitions, outlets shall comply with ASTM No. E119.

B. Flush ceiling outlets for surface or pendant mounted lighting fixtures shall be one-piece 4" square or octagonal pressed steel boxes. Boxes for devices in unfinished masonry walls or stud walls shall be pressed steel, square corner, sectional switch boxes, or shall be 4" square box with a square cornered tile wall cover, set flush with masonry construction. Boxes in concrete ceiling slab shall be octagonal, shallow concrete boxes. Welded boxes are not acceptable.

C. All outlet boxes in plaster or masonry walls or ceiling shall be provided with plaster rings.

D. Junction boxes and all outlets not indicated as containing wiring devices or lighting fixtures shall have covers. Covers for outlets in walls shall be as specified for wall switches and receptacles.

E. Outlet boxes exposed to the weather and outlet boxes for vaportight lighting fixtures and devices shall be of cast iron corrosion resistant type.

F. Outlet box approved manufacturers are Appleton, Raco, Steel City or Crouse-Hinds.

2.05 DISCONNECT SWITCHES

A. Disconnect switches shall be "heavy-duty" type, enclosed switches of quick-make, quick-break construction. Switches shall be horsepower rated for 600 volts AC as required. Lugs shall be UL listed for copper and aluminum.

B. Padlocking provisions shall be provided for padlocking in the OFF position.

C. Switches shall be furnished in NEMA 1 General purpose enclosure unless noted otherwise. Switches located on the exterior of the building or in "wet" locations shall have NEMA 3R enclosures.

D. Fused disconnect switches shall have rejection type fuse clips with dual element, current limiting fuses of rating shown.

E. Disconnect switches shall be mounted to structure. Disconnect switches shall not be mounted to mechanical equipment or ductwork.

2.06 NAMEPLATES

A. Nameplates shall have 3/8" high engraved letters.

B. 120 or 208 volts: white core laminated bakelite with black finish.

2.07 WALL SWITCHES

A. Wall switches shall be plastic, totally enclosed, quiet type, self-grounding, 120 volts and 20A rating and shall match existing if possible and equal the following:

Single Pole: Hubbell No. CS1221, or equal by Leviton, P&S or Cooper.

Double Pole: Hubbell No. CS1222, or equal by Leviton, P&S or Cooper.

Three-Way: Hubbell No. CS1223, or equal by Leviton, P&S or Cooper.

Four-Way: Hubbell No. CS1224, or equal by Leviton, P&S or Cooper.

B. Color shall be as selected by architect.

C. Flush motor switches with red pilot light and with overload protection for fractional horsepower motors shall be Hubbell No. HBL1221PL.

D. Key switches shall be Hubbell No. HBL1221L 20A Series or approved equal by P&S or Leviton.

2.08 RECEPTACLES

A. Duplex receptacles shall be plastic, two-pole, three wire, self-grounding, side wired, 125 volts and 15A rating and shall match existing if possible and be equal to the following: Duplex receptacles shall be Hubbell No. CR5262 Series, or equal by Leviton, P&S or Cooper. Isolated ground type shall be Hubbell No. CR5252IG Series, or equal by Leviton, P&S or Cooper.

B. Single receptacles shall be two-pole, three wire, self-grounding, side wired, 125 volts and 20A rating and shall be equal to the following: Single receptacles shall be Hubbell No. HBL5361 Series, or equal by Leviton, P&S or Cooper. Isolated ground type to be Hubbell No. IG-5361 Series, or equal by Leviton, P&S or Cooper.

C. Ground fault circuit interrupt (GFI) receptacles shall be Hubbell GFR5352, or equal by P&S, Leviton or Cooper.

D. Color shall be as selected by the Architect.

2.09 COVERPLATES

A. Coverplates for flush mounted devices shall be brushed finished stainless steel standard size, Hubbell "P" Series or equal by Leviton, P&S or Cooper.

B. Telephone outlet coverplates shall have same finish as above and have a bushed hole in the center.

C. Coverplates for exterior devices shall be self closing, die cast aluminum Hubbell WP8M or equal by Leviton, P&S or Cooper.

2.10 SMOKE AND FIRE STOP FITTINGS

A. Smoke and Fire Stop Fittings shall be UL listed for that purpose. The fittings used to seal conduit either on the outside of the conduit, busway or cable or internally shall have heat activated intumescent material which expands to fill all voids. Smoke and fire stop fittings shall be O.Z./Gedney "FIRE-SEAL" or Dow Corning silicone RTV foam with an hourly fire-rating equal to or higher than the rating of the floor, ceiling or wall through which the cable or conduit passes. The seals for conduit shall be of the flanged type.

2.12 FUSES

A. Provide all fuses. All fuses shall be of the same manufacturer. All fuses shall be of the high interrupting rating (200,000 Amps), current limiting type and manufactured by Bussmann. Fuses shall be provided for each fuse cutout and the specified quantity of fuses shall be furnished for spares.

B. Circuits 0 to 600 ampere shall be protected by rejection type, current limiting BUSSMANN LOWPEAK Dual Element Fuses LPN-RK (250 volts) or LPS-RK (600 volts). All dual-element fuses shall have separate overload and short-circuit clearing chamber. The fuse must hold 500% of rated current for a minimum of 10 seconds and be listed by Underwriter's Laboratories, Inc., with an interrupting rating of 200,000 amperes RMS symmetrical. The fuses shall be UL Class RK-1.

C. Circuits 601 to 6000 ampere shall be protected by current limiting BUSSMANN HI-CAP Time-Delay Fuses KRP-C. Fuses shall employ "O" rings as positive seals between the end bells and the glass melamine fuse barrel. The terminals shall be opened. Fuses shall be time-delay and must hold 500% of rated current for a minimum of 4 seconds, clear 20 times rated current in 0.1 seconds or less and be listed by Underwriter's Laboratories, Inc., with an interrupting rating of 200,000 amperes RMS symmetrical. The fuses shall be UL Class L.

D. Furnish and turn over to the Owner a minimum of one (1) set of spare fuses (set consisting of three fuses) for each type and rating of fuse used. When the number of fuse sets of the same type and rating acutally installed exceeds five (5) sets, furnish an additional spare set of fuses for each five (5) or fraction thereof.

E. Provide a cabinet in which to store all spare fuses, Bussman Catalog No. SFC

F. Acceptable manufacturers are Bussman or equal by Littlefuse.

3.0 EXECUTION

3.01 CONDUIT

A. Rigid steel (or IMC) shall be used for service entrance and all feeders and branch circuits where exposed to damage.

B. EMT shall be used for branch circuits, fire alarm and telephone when not underground or in concrete in contact with the earth.

C. Schedule 40 PVC may be used for all underground feeders, service entrance conductors when encased in 4" of concrete on all sides, or under the lowest floor slab.

D. Conduit shall be continuous from outlet to outlet, from outlet to cabinet, junction box and pull box. Conduit shall enter and be secured to all boxes, etc., in such a manner that each system will be electrically continuous from service to all outlets such that a good ground is provided. All conduit from cabinets and junction boxes shall terminate in approved outlet boxes or conduit fittings. Conduit connections to any box which has no threaded hub shall be double locknutted.

E. Provide junction boxes or pull boxes where shown and where necessary to avoid excessive runs or too many bends between outlets. The conduit sizes shown may increase if desired to facilitate the pulling of cables.

F. All conduit shall be concealed unless indicated otherwise. Install exposed conduit parallel with or at right angles to the building walls and support from walls or ceilings at intervals required by Code with approved galvanized iron clamps or hangers. Concealed conduit above the ceiling shall be supported independent of ceiling construction. Where ceilings of lay-in type are used, conduit must be installed high enough to permit removal of ceiling panels and lighting fixtures. Use threaded rods and hangers for supporting single conduit. Use trapeze hangers consisting of double-nutted threaded rods and "Unistrut" channels or angles of 12 gauge minimum steel for supporting multiple conduit.

G. Minimum size conduit for branch circuits shall not be smaller than 1/2". Home runs shall extend from outlets shown to panel designated. Home runs shown shall not be combined. Home run conduit shall not be smaller than 3/4".

H. At couplings, conduit ends shall be threaded so that they meet in the coupling. Right and left hand couplings shall not be used; conduit couplings of the Erikson type shall be used at locations requiring such joints.

I. All conduit for future use, for telephone wire, or for data communication cable, shall be left with No. 16 gauge wire pulled in them or a pull line as manufactured by Ideal, and the ends securely corked or capped.

J. Expansion fittings shall be installed in all conduit which pass through the cross-sectional area of expansion joints.

K. Provide non-hardening elastic type duct seal compound, Neer No. DC., 3M Co. "Scotchfil", or Gardner Bender duct seal, for each conduit entering the building from outside and for each conduit passing from one space into another which is normally at a lower temperature.

L. Provide watertight conduit hubs on conduit terminating in a box or cabinet exposed to the weather.

M. Space in sleeves or around conduit that pass through fire resistive or fire rated walls, partitions, floors or ceilings shall be closed by packing with an unlabelled fire resistive material that will maintain the rating of the barrier penetrated.

3.02 FLEXIBLE CONDUIT

A. PVC extruded cover flexible conduit shall be used in making short flexible connections to rotating or vibrating machinery or equipment. The flexible conduit at these locations shall be as short as possible, but shall have a minimum length of 12".

B. A green stranded bonding jumper shall be installed outside of all flexible conduit that extends directly from a non-flex conduit to a rotating or vibrating machine. Where a junction box is used, the green stranded bonding jumper shall be installed inside the flexible conduit and attached to the junction box and to the machine. When the bonding jumper is installed outside of the flexible conduit, plastic wire straps shall be used 6" o.c. to secure the jumper to the flexible conduit.

C. Flexible metal (MC) conduit system may be utilized where concealed in walls and/or millwork only. MC Cable shall run from point of exit from wall or millwork to nearest structurally support junction box. MC cable will not be permitted to be installed in the above ceiling space and shall not pass through a fire rated partition. Conductor colors of the MC cable shall comply with 16100, 3.04, D.

3.04 WIRING

A. All conductors shall be installed in conduit. No conductors shall be pulled into the conduit until the conduit system is complete and plaster had dried. Wire pulling lubricants shall be Gardner-Bender "Wireaide" or Ideal "Yellow 77".

B. Conductors shall be continuous from outlet to outlet and from outlet to junction box or pull box. All splices and joints shall be carefully and securely made to be mechanically and electrically solid with pressure type connectors, Gardner Bender "Winggard" or Ideal "Wingnut". Tape shall be "Scotch" No. 33 for indoor and No. 88 for outdoor or Gardner Bender No. 85-661. Where connection is made to any terminals of more than 30 amperes capacity and where conductors larger than No. 10 are connected to any terminal, copper terminal lugs shall be bolted to the conductors. Where multiple connections are made to the same terminal, individual lugs for each conductor shall be used.

C. Each conduit shall have a minimum of two (2) conductors pulled in unless that particular conduit is noted as being for systems other than electrical circuitry and/or future use or unless noted otherwise.

D. Conductors for lighting and receptacle circuits shall have color coded jackets. The wiring shall be color coded with the same color used with its respective phase through the entire job as follows:

208/120 Volt System

Phase A – Black
Phase B – Red
Phase C – Blue
Neutral – White
Ground – Green

E. The feeder and service entrance conductors shall be color coded by the use of colored plastic tape applied within 6" of each conductor end.

F. Branch circuit conductors shall not be smaller than No. 12 and where the home run from center of load exceeds 100'-0", the conductors from home run outlet to panel shall be No. 10 minimum.

G. For branch circuits terminating in outlet without device, leave minimum of 12" of slack wire coiled for connection of equipment. All conductors shall be identified with proper circuit numbers at terminals, junction boxes at panelboards within 6" of conductor ends.

3.05 OUTLETS

A. Provide galvanized steel or cast type boxes for all outlets.

B. Where outlet boxes are used to support lighting fixtures, the outlet box shall be anchored to the structural members of the building per NEC 370-13.

C. Outlet boxes shall be flush mounted unless they are specifically shown as being used with exposed conduit or are located above a ceiling.

D. Where outlets are supplied from conduit run in or below floor slabs, the conduit shall be stubbed up at the location shown and the wall built up around the conduit.

E. Cuts for outlet boxes in masonry walls shall be made so that the coverplate will completely cover the cut. The mounting height of switch, receptacle and other outlets may be varied slightly, with the Architects approvals, so that the outlet box, top or bottom, will occur at a masonry joint.

F. The edge of all outlet boxes shall be flush with the surface in which they are recessed. The devices that fit into the outlet boxes shall be screwed tight before the coverplate is installed and the coverplate shall not be used as a means of tightening the devices in place.

G. Where outlets are shown as being adjacent and different mounting heights are specified for each, they shall be mounted one directly over the other, on the centerline of the group.

3.06 NAMEPLATES

A. Provide specified nameplates on the distribution panels feeder switches, feeder breakers, panelboards, disconnect switches, contactors, starters, transformers, start-stop push buttons and motor switches.

B. Provide nameplates on every device in the main switchboard, distribution panels and motor control centers.

C. Nameplates for surface mounted equipment shall be installed on the exterior of equipment with sheetmetal screws. Nameplates for flush or recessed mounted equipment shall be installed on the inside of the panel door or cover with epoxy cement.

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ISSUE DATE
Owner Review Set | 12/21/2018
Permit Set / IFC | 04/10/2019
drawn by: S. WILKINS
checked by: S. WILKINS

Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

ELECTRICAL SPECIFICATIONS

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3.07 WALL SWITCHES AND RECEPTACLES

A. Where more than one device is indicated at a location, the devices shall be gang-mounted in combined multi-gang boxes and covered jointly by a common coverplate. Provide barriers as required by the devices and voltages being used.

3.08 COVERPLATES

A. All junction boxes, outlet boxes, multi-gang switch boxes, utility boxes, etc., shall be covered with a coverplate. The coverplate shall be a finished plate as specified unless designated otherwise.

B. Coverplates shall be mounted vertically unless designated otherwise.

3.09 GROUNDING

A. Ground connections shall be in accordance with the 2017 National Electrical Code.

B. Provide an insulated green bonding jumper from the grounding lug of all receptacles to a Steel City "GEE" clip or a sheet metal screw in the outlet box. The ground wire installed behind the device mounting screws will not be acceptable.

C. Provide 1 #6-3/4" conduit from the system ground to the telephone company main distribution frame or service cabinet and to each telephone backboard.

3.10 TELEPHONE CONDUIT SYSTEM

A. Telephone service shall include wood backboards and equipment cabinets with service entrance conduit as shown.

B. Telephone service entrance cable, all branch cabling and telephone instruments shall be provided by the telephone equipment vendor.

C. Provide an outlet and conduit system for the telephones as shown and leave the same in readiness for wiring by others. Provide pull line in all telephone conduit. Terminate all conduit at a uniform height with smooth insulated bushings at the telephone wood backboards.

D. Telephone wall outlets shall be pressed steel sectional switch boxes, wall mounted at the locations indicated. Coverplate shall have a bushed hole.

E. Telephone floor outlets shall be floor boxes as specified at the locations indicated.

3.11 CONNECTION TO EQUIPMENT

A. Equipment furnished by the Owner or under other Sections, such as mechanical equipment, printer equipment, signs, etc., will be installed by others. Provide electrical service and make the electrical circuit connection to this equipment.

B. Provide PVC insulated flexible cord sets for all cord and plug connected building appliances and equipment. Cords shall be sized in accordance with electrical circuits indicated. Multiple conductor cords shall be "SO" cable with PVC jacket and green insulated ground conductor.

3.12 CORING, CUTTING AND PATCHING

A. Set sleeves for conduit accurately before the concrete floors are poured, or set boxes on the forms so as to leave openings in the floors in which the required sleeves can be subsequently located. Fill in the voids around the sleeves with concrete.

B. Should the performance of this preliminary work be neglected and should cutting be required in order to install conduit, then the expense of the cutting and restoring of surfaces to their original conditions shall be accomplished without incurring additions to the Contract.

3.13 EQUIPMENT ANCHORING

A. All items of electrical equipment, such as switchboards, motor control centers, transformers, standby generator, etc., shall be securely anchored to the building structure. The anchoring shall be accomplished by utilizing a minimum size of 3/8" steel anchor bolts in the structure and to the item of equipment. A minimum of two (2) anchor bolts shall be provided on each side of each item of equipment with the following exceptions:

SECTION 16200
SERVICE AND DISTRIBUTION

1.0 GENERAL

1.01. DESCRIPTION

A. All work specified in this Section shall comply with the provisions of Section 16010.

B. Provide a complete electrical distribution system. The system shall include the feeders, distribution panelboards, remote control switches, contactors, etc. to provide a complete system.

C. All distribution switchgear (branch circuit panelboards, distribution panelboards) shall be the unit responsibility of one manufacturer. All component parts of the above listed items shall be of the same manufacturer except where a written request for deviation from this requirement has been approved prior to bid date.

D. Shop drawings for equipment specified in this Section shall show that all specified requirements have been incorporated.

2.0 PRODUCTS

2.01 BRANCH CIRCUIT PANELBOARDS

A. Panelboards (panels) shall be general purpose enclosures and shall be surface or flush mounted as indicated. Panels shall be of the automatic circuit breaker type, factory assembled by the manufacturer of the circuit breakers. Panels shall be for the voltage indicated with the quantity of poles and ampacity of circuit breakers shown.

B. Boxes and trim shall be made from code gauge steel. Boxes shall be sufficient size to provide a minimum gutter space of 4" on all sides. Boxes shall be minimum 20" width and 5 3/4" depth.

C. Hinged door covering all device handles shall be included in all panel trim. Doors shall have flush-type cylinder lock and catch, except that doors over 48" in height shall have auxiliary fasteners at top and bottom of door in addition to flush-type cylinder lock and catch. Door hinges shall be concealed. All locks shall be keyed alike. Directory frame and card having a transparent cover shall be furnished each panel door.

D. Trims for flush panels shall overlap the box by at least 3/4" all around. Surface trims shall have the same width and height as the box. Trims shall be mountable by a screwdriver without the need for special tools. After installation, trim mounting mechanism or hardware shall not be accessible when panel door is closed and locked.

E. All exterior and interior steel surfaces of the trim shall be cleaned and finished with gray paint over a rust-inhibiting phosphatized coating.

F. All interiors shall be completely factory assembled with protective devices, wire connectors, etc. All wire connectors, except screw terminals, shall be of the anti-turn solderless type and all shall be suitable for copper or aluminum wire.

G. Interiors shall be so designed that devices can be replaced without disturbing adjacent units and without removing the main bus connectors, and shall be so designed that devices may be changed without machining, drilling or tapping.

H. Bus bars for the mains shall be of copper sized in accordance with U.L. standards. Full size bars shall be included. Bus bar taps for panels with single pole branches shall be arranged for sequence phasing of the branch circuit devices.

I. Phase bussing shall be full height without reduction. Cross and center connectors shall be of the same material as the bus.

J. The neutral bus shall utilize set-screws to bond the neutral wire to the neutral bus through holes drilled in the neutral bar. A sheet copper neutral bus utilizing flathead screws to hold the neutral wires will not be acceptable.

K. Spaces for future devices shall be included as indicated and shall be bussed for the maximum rated device that can be fitted into them.

L. All circuit breakers shall be manually operated, thermal-magnetic, automatic, of the ampacity and poles as indicated. They shall be quick-make, quick-break, both on manual and automatic operation. Breakers shall be over-the-center toggle operating type, with the handle going to a position between ON and OFF to indicate automatic tripping. All multi-pole breakers shall have internal common trip. Breakers shall have a minimum of 10,000 RMS symmetrical amperes interrupting capacity unless designated otherwise. The breakers furnished shall be determined by the specifications and by the minimum U.L. labeled RMS symmetrical amperes interrupting capacity at circuit voltage. All circuit breakers shall be bolted on and rigidly braced.

M. Panels having sub-feed lugs for feeding through shall have 8" minimum extra gutter space at the lug end and on one side.

N. Each panel as a complete unit shall have a short-circuit current rating equal to or greater than the equipment rating indicated.

O. Panels shall be as manufactured by General Electric, Square D, or Eaton.

3.0 EXECUTION

3.01 INSTALLATION

A. Provide a typewritten directory under plastic for all panelboards with spares marked in pencil.

B. Provide all necessary hardware to level and secure the switchgear as required by the manufacturer's instructions. Make all electrical connections for supply and load circuits and leave in operating condition.

C. Clean enclosure of all switchgear of all foreign matter, including dust.

D. Remove all rust marks and repaint to leave switchgear in new condition.

3.02 STUDIES

A. Provide a complete short circuit and coordination study for the actual switchgear manufacturer provided from the service entrance to all end devices.

SECTION 16300
LIGHTING

1.0 GENERAL

1.01 DESCRIPTION

A. All work in this Section shall comply with the provisions of Section 16010.

B. Provide all lighting fixtures and lamps as specified herein and as shown.

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

D. Confirm exact locations of all lighting fixtures by coordination with the Architects Reflected Ceiling Plans and mechanical equipment above or on the ceiling.

E. Confirm all ceiling types before ordering lighting fixtures.

F. Each lighting fixture shall have been tested and certified for proper operation by the fixture manufacturer for the type mounting and ceiling on/in, which it is installed.

2.0 PRODUCTS

2.01 LIGHTING FIXTURES

A. Each lighting fixture shall be as specified in the Lighting Fixture Schedule corresponding with its fixture type indication (letter).

B. Most lighting outlets are lettered or groups of outlets are indicated by a letter.

C. Each lighting fixture shall have a manufacturer's label affixed and shall comply with the requirements of all authorities having jurisdiction.

D. The lighting fixtures that are indicated by the letters shall be as indicated on the Lighting Fixture Schedule.

2.02 LAMPS

A. The type lamps shall be as specified for each lighting fixture in the lighting fixture schedule.

B. The lamp catalog number is the catalog number is generally for Sylvania Lighting and is given as a standard of the quality and performance required. Equal lamps by General Electric or Philips will be acceptable. When a lamp manufacturer's name is used along with the catalog number in the lighting fixture schedule, it is considered unequaled by any other lamp and shall not be substituted for. The lamp performance with energy conserving ballasts furnished under this Section shall be certified by a nationally recognized independent testing laboratory.

C. Fluorescent lamps shall be as specified in the Lighting Fixture Schedule.

D. Incandescent lamps shall be as specified in Lighting Fixture Schedule.

E. All incandescent lamps, except quartz tubes, shall be rated for 130 volt operation.

F. High Intensity Discharge (HID) lamps shall be as specified in the Lighting Fixture Schedule.

2.03 BALLASTS

A. Fluorescent ballast shall be electronic type manufactured by Motorola, Magnetek or Advance.

B. Ballast shall operate lamps at a frequency or 25 KHz or higher with less than 2% lamp flicker.

C. Ballast shall operate at an input voltage of 108 – 132 Vac (120V line) or 249 – 305 Vac (277V line) at an input frequency of 60 Hz. Light output shall remain constant for line voltage fluctuation of + 5%.

D. Ballast shall comply with EMI and RFI limits set by the FCC (CFR 47 part 18) for non-residential applications and not interfere with normal electrical equipment.

E. Ballast shall withstand transients as specified by ANSI C.62.41 for location category A3 in the normal mode and location category A1 in the common mode.

F. Ballast shall meet applicable ANSI standards.

G. Ballast shall have a minimum power factor of 0.99.

H. Ballast shall not be potted or weigh more than 1.3 pounds.

I. Ballast shall have less than 10% Total Harmonic Distortion.

J. Ballast shall have less than 6% Third Harmonic Distortion.

K. Ballast height shall be less than or equal to 1.5 inches.

L. Ballast shall have a poke-in wiretrap connector.

M. Ballast shall meet sound rating "A".

N. Ballast must be Underwriters Laboratories (UL) listed Class P, Type 1 Outdoor.

O. Ballast shall provide normal rated lamp life as stated by lamp manufacturers.

P. Rapid start ballast are series wired and shall maintain full cathode heat during operation.

Q. Rapid start ballast shall have less than a 1.5 Lamp Current Crest Factor (LCCF) and instant start ballasts have less than a 1.7 LCCF.

R. Instant start ballast shall have parallel lamp operation.

S. Ballast factor standard is .875+0.025 on all normal light output products.

T. Ballasts for "PL" fluorescent lamps shall be coordinated with lamps and 2-pin or 4-pin configuration ballasts shall be provided to match lamps. Manufacturer for "PL" fluorescent fixtures shall be Advance, Roberson, Lightolier or Lutron.

U. Ballasts for High Intensity Discharge (HID) lamps shall be Constant Wattage Autotransformer (CWA) type or equal type with minimum power factor of 0.9.

2.04 DIFFUSERS

A. Unless specified otherwise, all prismatic diffusers for fluorescent lighting fixtures shall be prismatic acrylic KSH K12 with a thickness of 0.125", measured from the back side to the peak of the prism.

B. All wraparound lenses shall be virgin acrylic, one-piece and injection molded.

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 a 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 tate 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.

B. 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.

C. 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.

D. Battery recharge time shall not exceed 16 hours to fully recharge and shall not exceed 225 milliamperes charging current.

E. The lumen output of the lamp or lamps powered by battery unit shall be not less than 1,100 lumens initially for a four-foot fluorescent lamp.

F. The battery ballast shall meet or exceed all the requirements set fourth 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 fourth in the National Electric Code, Life Safety Code and UL 90-Minute Requirements.

2.06 LIGHT FIXTURE TRIM

A. Each recessed lighting fixture shall have a trim to match the type of ceiling (plaster, exposed grid, concealed spline, exposed panel, etc.) in which it is being installed, regardless of catalog number given. Coordinate with the Architect's reflected ceiling plan to provide the right trim for the type of ceiling the fixture is to be installed in.

B. Each lighting fixture recessed in a plastered ceiling of any type shall have a plaster frame.

2.08 RECESSED INCANDESCENT FIXTURES

A. All recessed incandescent fixtures shall comply with Article 410-65, C of the N.E.C.

3.0 EXECUTION

3.01 SUPPORT OF LIGHTING FIXTURES

A. All lighting shall be supported from the building structure. The fixtures shall be supported in a manner that will insure the fixture weight being equally distributed from each support and the fixture remaining in a level position.

B. Fluorescent fixtures installed recessed in a suspended ceiling system shall be supported from the building structure with two (2) 12 gauge wires on diagonal corners of the fixture. In addition, the fixture shall be clipped to members of the ceiling suspension system.

C. Fluorescent fixtures installed in or on any ceiling other than a suspended ceiling system specifically mentioned above shall be supported with concealed steel rods. Rods shall be 1/4" diameter minimum and shall be located where recommended by the fixture manufacturer. Provide a minimum of two (2) supports for each 4' or 8' fixture chassis. Supports shall be maximum of 48" centers. For incandescent fixtures, steel hanging wire may be used by attaching the wire to the fixture mounting frame.

D. Pendant mounted incandescent fixtures shall be stem supported by a fixture stud mounted in the outlet box. Suspended fluorescent fixtures shall have mounting stems located as per the manufacturer's recommendations, but in no case shall have less than two (2) stems per chassis.

3.02 AIMING OF ADJUSTABLE LIGHT FIXTURES

A. All fixtures with lamp position, tilt, shutters, rotation, or other types of adjustments during the final inspection. Fixtures serving areas where day lighting is predominant will be adjusted after sunset.

3.03 LIGHTING FIXTURES IN MILLWORK

A. Special attention shall be given to lighting fixtures indicated to be mounted within, under, on or otherwise incorporated into millwork or cabinetry.

B. Refer to the Architectural drawings and details for specific dimensions. This coordination shall occur prior to ordering fixtures to assure fixtures will fit the space limitations of the millwork.

C. This requirement is intended to preclude incurring additions to the Contract due to fixtures being too small or too large for the space.

3.04 FINAL PREPARATION

A. All plastic covers shall be removed from fluorescent fixtures.

B. Clean all lens and reflectors from debris, fingerprints, dust, etc.

SECTION 16721
LIFE SAFETY SYSTEMS

1.0 GENERAL

1.01 DESCRIPTION

A. This section of the specification includes the furnishing, installation, connection and testing of the microprocessor controlled, intelligent reporting fire alarm equipment required to form a complete, operative, and coordinated system.

B. The fire alarm system shall comply with requirements of NFPA Standard 72 for Protected Premises Signaling Systems and all local codes and regulations. The system shall be electrically supervised and monitor the integrity of all conductors.

2.03 SYSTEM COMPONENTS

A. Horns/Bells

1. All Horns/Bells shall be installed as shown on drawings and in accordance with NFPA-72 and local codes.

2. Horns in corridors and all public spaces shall produce a nominal sound output of 15dBA above average ambient noise levels with a minimum sound output of 15dBA.

3. Horns shall be UL-464 listed for fie evacuation and operate on 12 Or 24 voltage in a temporal 3-3 pattern.

B. Strobe Lights

1. All Strobe Lights shall meet the requirements of the ADA, UL Standard 1971.

2. Strobe intensity and flash rate shall meet the requirements of UL 1971, ADA and NFPA 72.

3. Combination Horn/Strobe devices shall meet all above requirements as well as horn/bell requirements listed herein.

4. Strobe unit shall mount to a four inch square electrical outlet box. The strobe light shall have a white lens with red "FIRE" imprinted on it. When the unit is combination speaker/strobe, the speaker portion shall comply with the requirements stated in A. above.

5. All strobes shall have selectable output intensities from 15 to 110 cd. The intensity selected shall meet NFPA 72 requirements for the layout shown on the drawings.

6. Strobe spacing shall be as follows:

   a. Strobes shall be spaced a maximum of 100'-0" apart in corridors and within 15'-0" of the end of every corridor to comply with the requirements of NFPA 72.

   b. Strobes in open areas shall be provided to comply with NFPA 72.

   c. Provide strobes in public spaces such as restrooms, kitchens, breakrooms, conference rooms, training rooms and any other space where six or more people are likely to gather.

3.0 EXECUTION

3.01 INSTALLATION

A. Provide all equipment, wiring, conduit and outlet boxes required for the erection of a complete and operating system in accordance with applicable local, state and national codes, the manufacturer's recommendations, these plans and specifications. Color code shall be used throughout.

3.02 TEST

A. The manufacturer's authorized representative shall provide supervision of final system panel connections, perform a complete functional test of the system and submit a written report to the contractor attesting to the proper operation of the system.

3.03 FINAL INSPECTION

A. Upon completion of the installation, the electrical contractor shall provide to the architect, with a copy to the manufacturer's representative, a signed written statement attesting that all system equipment was installed in accordance with these specifications and in accordance with wiring diagrams, instructions and directions provided to the contractor by the manufacturer.

3.05 GUARANTEE

A. All equipment and wiring shall be guaranteed against defects in materials and workmanship for a two year period from the start up and beneficial use of the system.

SECTION 16920
MOTOR CONTROLS AND WIRING

1.0 GENERAL

1.01 SCOPE

A. All work specified in this Section shall comply with the provisions of Section 16010.

B. All motors shall be provided under Division 15.

C. A motor starter shall be provided under this Section for each motor except for those specified in Division 15 to be furnished with integral starters. Motor starters shall be installed separately mounted adjacent to the motor served.

D. Motor power wiring is defined as those conductors between the energy source and the motor. This power wiring shall be terminated at the motor terminals.

E. All control wiring required for automatic starting and stopping of motors shall be provided under Division 15 unless specifically shown on the electrical drawings.

F. Power wiring shall be connected through all line voltage control devices such as firestats and thermostats.

2.0 PRODUCTS

2.01 MOTOR STARTERS

A. Starters for motors 1/3 horsepower or smaller shall be manual unless remote or automatic starting is required, in which case the starters shall be magnetic, full voltage, non-reversing, single-speed, unless otherwise indicated. All other starters shall be magnetic.

B. Each starter for a three-phase motor shall be furnished with three (3) overload relays sized for the full load running current of the motor actually provided. Provide an external "HAND-OFF-AUTO" selector switch with green "RUNNING" light. Provide a red pilot light to indicate motor "STOPPED". Each pilot light shall have a legend plate indicating reason for signal.

C. Each overload relay shall have a normally open alarm contact which will close only when actuated by an overload (not to be confused with N.O. or N.C. auxiliary contacts). These contacts shall be properly wired to their respective blue pilot light provided on the starter front cover and having a "TRIPPED" legend plate.

D. Individually mounted motor starters shall be in a NEMA Type 1 general purpose enclosure in unfinished areas and shall be flush mounted in all finished areas. All starters mounted in exterior areas shall have a NEMA 3R enclosure. Each starter shall have a laminated nameplate to indicate Division 15 unit number, function and circuit number.

E. A control power transformer shall be provided at each motor starter for connection to the to the controls provided under Division 15. The control power transformer shall be mounted inside the motor starter enclosure. All control transformers at 50 VA or greater shall have primary fusing. Coordinate all control equipments with Division 15 and equipment manufacturers.

F. All motor starters, push buttons and pilot lights shall be of the same manufacturer as the switchboard and shall be General Electric, Square D, Siemens, Joslyn Clark Controls or Eaton.

2.02 COMBINATION STARTERS

A. Combination starters shall consist of a circuit breaker and a motor starter mounted in a common NEMA Type 1 general purpose enclosure.

B. The motor starter components shall be as specified in paragraph 2.01 for motor starters.

C. The circuit breaker component shall be a minimum 22,000 RMS interrupting capacity and shall be as required in Section 16200.

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ISSUE	DATE
Owner Review Set	12/21/2018
Permit Set / IFC	04/10/2019
drawn by:	S. WILKINS
checked by:	S. WILKINS

Hammond Park Gymnasium

Sandy Springs, GA

GMC # AATL16006

ELECTRICAL SPECIFICATIONS

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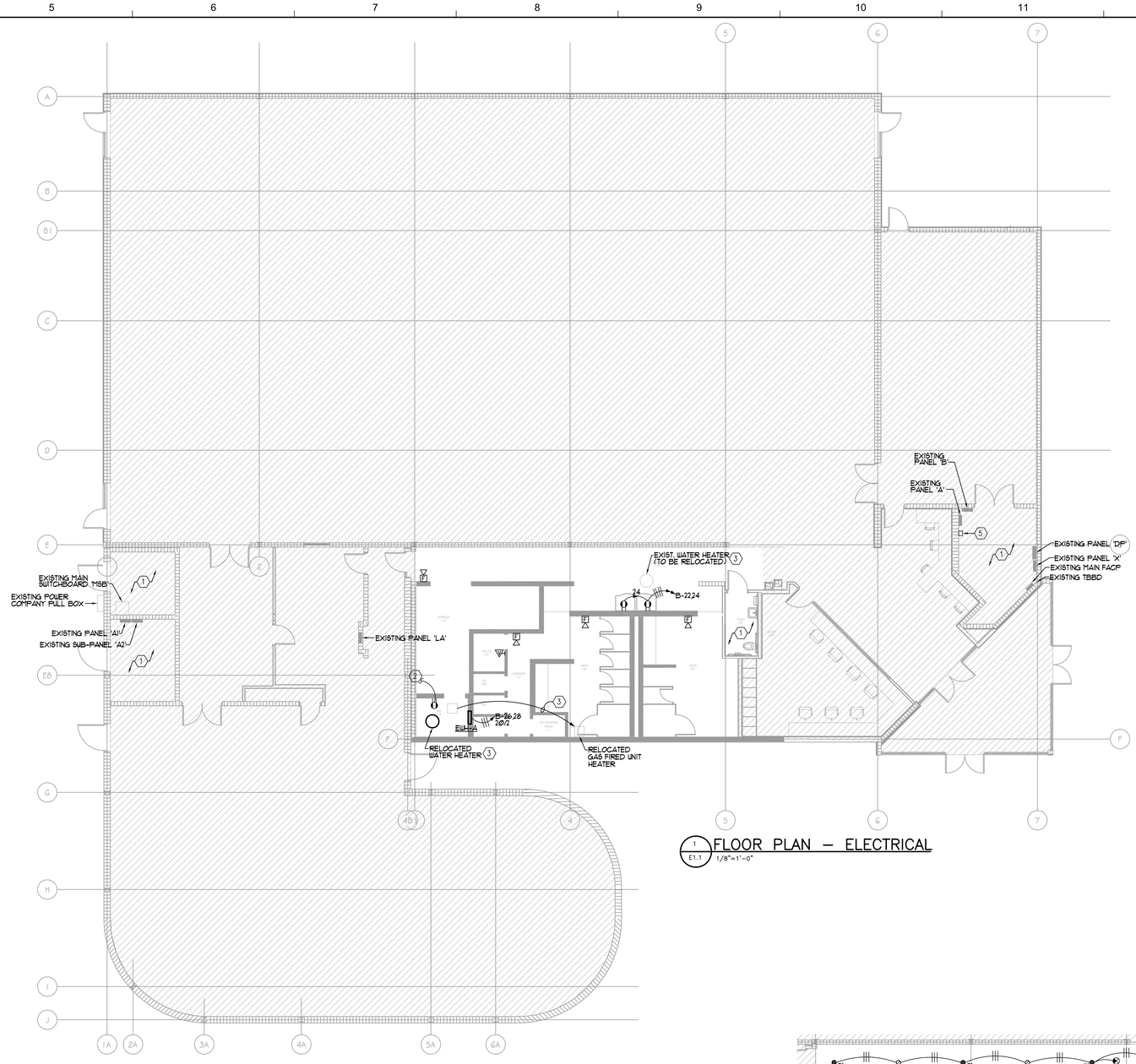
GENERAL NOTES:
(APPLY TO THIS SHEET ONLY)

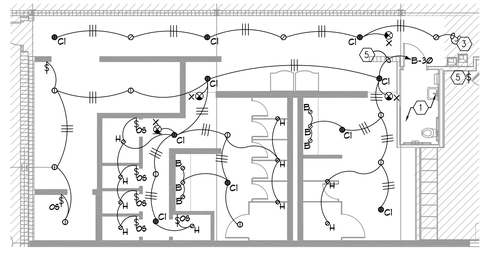
1. COORDINATE EXACT LOCATION OF ALL NEW AND EXISTING ELECTRICAL, LOW VOLTAGE, FIRE ALARM DEVICES AND LIGHT FIXTURES/SWITCHES WITH ARCHITECTURAL PLANS PRIOR TO INSTALLATION. ALL ELECTRICAL DEVICES SHALL COMPLY WITH BASE BUILDING STANDARDS. COORDINATE ANY DISCREPANCIES PRIOR TO ROUGH-IN.
2. PROVIDE PULL STRINGS FOR ALL EMPTY CONDUIT.
3. ALL ELECTRICAL/LIGHTING CIRCUITS SHALL BE PROVIDED WITH A SEPARATE AND DEDICATED NEUTRAL FOR EACH INDIVIDUAL CIRCUIT.
4. ALL ELECTRICAL, FIRE ALARM, LOW VOLTAGE DEVICES AND LIGHT FIXTURES NOT LABELED INDICATES NEW DEVICE/LIGHT FIXTURE TO BE INSTALLED AND CIRCUITED AS INDICATED. ALL ELECTRICAL, FIRE ALARM, LOW VOLTAGE DEVICES AND LIGHT FIXTURES LABELED AS 'E' INDICATES EXISTING DEVICE/LIGHT TO REMAIN LOCATED AS IS UNLESS NOTED OTHERWISE. ALL ELECTRICAL, FIRE ALARM, LOW VOLTAGE DEVICES AND LIGHT FIXTURES LABELED AS 'R' INDICATES EXISTING DEVICE/LIGHT FIXTURE TO BE RELOCATED AND CIRCUITED AS INDICATED.
5. COORDINATE EXACT LOCATION OF ALL HVAC EQUIPMENT WITH DIVISION 15 PRIOR TO INSTALLATION.
6. ALL HVAC EQUIPMENT SHALL BE PROVIDED WITH AN INTERNAL DISCONNECT/SWITCH. IF NOT, PROVIDE EQUIPMENT WITH AN EXTERNAL DISCONNECT/SWITCH AS SHOWN. HVAC EQUIPMENT IS ASSUMED TO BE PROVIDED WITH AN INTERNAL DISCONNECT BY DIVISION 15. COORDINATE WITH DIVISION 15 PRIOR TO PURCHASE OF EQUIPMENT.
7. DIVISION 16 CONTRACTOR SHALL COORDINATE WITH DIVISION 15 TO MAKE SURE RETURN AIR OPENINGS ARE KEPT CLEAR OF ANY CONDUITS.
8. ELECTRICAL CONTRACTOR SHALL COORDINATE FINAL NEMA TYPE REQUIREMENTS FOR ALL ELECTRICAL DEVICES FOR OFFICE EQUIPMENT (i.e. COPIERS, ETC.) PRIOR TO INSTALLATION.
9. REFER TO ARCHITECTURAL DRAWINGS FOR TYPICAL MOUNTING HEIGHT OF ELECTRICAL RECEPTACLES AND VOICE/DATA OUTLETS WITH MILLWORK.
10. PROVIDE A #10 NEUTRAL WIRE FOR ALL MULTI-PHASE HOMERUNS.
11. COORDINATE COLOR AND FINISH OPTIONS FOR ELECTRICAL & FIRE ALARM DEVICES, VOICE/DATA OUTLETS, AND FACEPLATES WITH ARCHITECT PRIOR TO INSTALLATION.
12. ELECTRICAL CONTRACTOR SHALL COORDINATE FINAL NUMBER OF DATA DROPS PER LOW VOLTAGE DEVICE WITH TENANT IT REPRESENTATIVE PRIOR TO PURCHASE AND INSTALLATION.
13. FIELD VERIFICATION WILL DETERMINE BRANCH CIRCUITS AVAILABLE FOR USE BY THIS TENANT. RE-USE EXISTING CIRCUITS THAT "FREE-UP" DURING RENOVATION BEFORE USING AVAILABLE SPARE. PROVIDE AN UPDATED, PRINTED PANELBOARD SCHEDULE FOR ALL PANELS MODIFIED DURING RENOVATION.
14. MAINTAIN INTEGRITY OF CIRCUITS TO EXISTING ELECTRICAL DEVICES AND LIGHT FIXTURES DISRUPTED DURING DEMOLITION.
15. CLEAN AND RE-LAMP ALL EXISTING AND RELOCATED LIGHT FIXTURES. COLOR TEMPERATURE SHALL BE CONSISTENT THROUGHOUT. REPAIR OR REPLACE AS REQUIRED.
16. ALL LIGHT SWITCHES SHALL BE CONSIDERED NEW UNLESS NOTED OTHERWISE.
17. ALL LIGHT FIXTURE SHALL BE TYPE 'A' UNLESS NOTED OTHERWISE.
18. HATCHED AREA INDICATES AREA OUT OF SCOPE OF WORK.

LEGEND NOTES:
(APPLY TO THIS SHEET ONLY)

1. ALL EXISTING ELECTRICAL, LOW VOLTAGE, FIRE ALARM DEVICE(S) AND LIGHT FIXTURES LOCATED WITHIN THIS ROOM/AREA SHALL REMAIN AS IS UNLESS NOTED OTHERWISE.
2. PROVIDE CONNECTION OF NEW 120-VOLT ELECTRICAL DEVICE(S) TO EXISTING 120-VOLT ELECTRICAL CIRCUIT SERVING THIS ROOM/AREA. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY THAT ADDITION OF NEW ELECTRICAL DEVICE(S) DOES NOT EXCEED THE EXISTING CIRCUIT BREAKER CAPACITY. IF SO, ELECTRICAL CONTRACTOR SHALL PROVIDE A NEW 120-VOLT, 20 AMP CIRCUIT AS REQUIRED.
3. EXISTING MECHANICAL EQUIPMENT TO BE RELOCATED AS INDICATED. ELECTRICAL CONTRACTOR SHALL EXTEND/MODIFY ALL EXISTING FEEDERS (CONDUIT & CONDUCTORS) ASSOCIATED WITH EXISTING UNIT TO NEW LOCATION AS REQUIRED. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY WIRING/CONNECTIONS FOR RELOCATED UNIT TO OPERATE AS EXISTING.
4. PROVIDE CONNECTION OF NEW 120-VOLT LIGHT FIXTURES(S) TO EXISTING 120-VOLT LIGHTING CIRCUIT SERVING THIS ROOM/AREA. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY THAT ADDITION OF NEW LIGHT FIXTURE(S) DOES NOT EXCEED THE EXISTING CIRCUIT BREAKER CAPACITY. IF SO, ELECTRICAL CONTRACTOR SHALL PROVIDE A NEW 120-VOLT, 20 AMP CIRCUIT AS REQUIRED.
5. PROVIDE CONNECTION OF NEW LIGHT FIXTURE(S) TO BE ROUTED THROUGH NEW TIMECLOCK CONTROLLED CONTACTOR. NEW TIMECLOCK CONTACTOR BASIS OF DESIGN SHALL BE AN INTERMATIC – ET90125C OR BY APPROVED EQUAL MANUFACTURER. ELECTRICAL CONTRACTOR SHALL PROVIDE WALL MOUNTED OVERRIDE SWITCH FOR CONTROL OF LIGHTS FOR AFTER HOURS USE. ELECTRICAL CONTRACTOR SHALL COORDINATE FINAL TIMING AND SEQUENCING OF LIGHTS WITH ARCHITECT AND TENANT PRIOR TO INSTALLATION. ELECTRICAL CONTRACTOR SHALL COORDINATE FINAL LOCATION OF OVERRIDE SWITCH WITH ARCHITECT AND TENANT PRIOR TO INSTALLATION. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY WIRING/CONNECTIONS FOR A COMPLETE AND OPERABLE SYSTEM.



1 E1.1 FLOOR PLAN – ELECTRICAL
1/8"=1'-0"



2 E1.1 FLOOR PLAN – LIGHTING
1/8"=1'-0"

GOODWYN | MILLS | CAWOOD
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ISSUE	DATE
Owner Review Set	12/21/2018
Permit Set / IFC	04/10/2019
drawn by:	S. WILKINS
checked by:	S. WILKINS

Hammond Park Gymnasium
Sandy Springs, GA
GMC # AATL16006

FLOOR PLAN - ELECTRICAL & LIGHTING

E1.1 sheet of

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