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# FRESH GREEN - LEES SUMMIT





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> HIVE DESIGN COLLABORATIVE, INC. 1617 WALNUT ST., KANSAS CITY, MO 64108 816.581.6363

**GENERAL PROJECT NOTES:** 

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE GOVERNING LAWS AND CODES, AND IN ACCORDANCE WITH AUTHORITIES HAVING JURISDICTION.

2. GC TO VERIFY ALL DIMENSIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. CONTRACTOR ACKNOWLEDGES REVIEW OF CONDITIONS AND INTENT OF ALL CONSTRUCTION DOCUMENTS UPON SUBMITTING BID.

3. CALCULATE AND MEASURE REQUIRED DIMENSIONS. DO NOT SCALE DRAWINGS UNLESS OTHERWISE INDICATED. ALL DIMENSIONS TO BE TAKEN FROM DESIGNATED DATUM POINT. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER GRAPHIC REPRESENTATION. DETAIL DIMENSIONS TAKE PRECEDENCE OVER PLAN DIMENSIONS.

4. ALL ITEMS SUPPLIED BY THE OWNER AND INSTALLED BY THE CONTRACTOR WILL BE COORDINATED BY THE CONTRACTOR FROM DELIVERY TO INSTALLATION.

5. DIMENSIONS ON DRAWINGS ARE TO FACE OF STUD AND CENTERLINE OF COLUMNS UNLESS OTHERWISE NOTED.

6. THE GENERAL CONTRACTOR (GC, HEREAFTER) UPON SIGNING THE OWNER/GC AGREEMENT, ACCEPTS THE CD (INCLUDING THESE DRAWINGS W/ THE INCLUDED NOTES & DESCRIPTIVE MATERIAL) & AGREES TO EXECUTE THE NECESSARY WORK IN MANNER DESCRIBED THEREIN. A) UPON EXAMINATION / FAMILIARIZATION OF CD & JOB SITE VISIT, ANY DISCREPANCIES,

OMISSIONS, AMBIGUITIES AND/OR CONFLICTS NOTED, SHALL BE BROUGHT TO THE ATTENTION OF ARCHITECT IN WRITING, FOR CORRECTION. B) ANY ELEMENT, WHATSOEVER, REQUIRED BY BUILDING TO BE INCORPORATED IN CONSTRUCTION BUT NOT SPECIFIED IN CD SHALL BE BROUGHT TO ATTENTION OF ARCHITECT FOR REVIEW/ACTION.

N.I.C.

NTS

N.T.S.

NO. NUM, # Number

Not to Sale

Not to Scale

### **GENERAL NOTES** 4

1" = 1'-0"

	Above Finish Floor
.F.F. COUS	Acoustical Coiling
CT CT	Tile
DJ	Adjacent, Adjustable
/C	Air Conditioning
LT	Alternate
	Aluminum
PPROX	Approximate
RCH	Architect(ural)
D	Area Drain
SPH	Asphalt
SMT	Basement
M	Beam
YND	Beyond
ITUM. IK	Block
LKG	Blocking
D	Board
OT	Bottom
0	Bottom of
.C. OS	Bottom of steel
LDG	Building
0	By Others/Owner
AB	Cabinet
PT	Carpet
.I.P.	Cast-In-Place
.в. IG	Ceiling
EM.	Cement
TR	Center
L	Center Line
/C	Center to Center
LR. T	Ceramic Tile
. OF O.	Certificate of Occupancy
	Channel
.0.	Cleanout
L. I R	Clear
LOS.	Closet
W	Cold Water
OL.	Column
MU	Concrete Masonry Unit
ONF.	Conference
ONST.	Construction
.M.	Construction Manager
ONTR	Contractor
.J.	Control Joint
ONV.	Convector
G	Sarper Guard
R <sup>RR.</sup>	Petriger
B	Degree
EG. EDT	Department
.O.B.	Dept. Of Environmental
.E.P.	Protection
TL.	Detail
IA.	Diameter
	Diffuser
W	Dishwasher
ISP.	Dispenser
R	Door
.U.	Door Opening
N	Down
WG(S)	Drawing, Drawings
.F.	Drinking Fountain
A	Each
VV	Each Way
PDM	Elastomeric Roof Membrane
LECT	Electric, Electrical
LEC.	Electrical
.۲. I	Electrical Panelboard
L. LEV.	Elevator
MER.	Emergency
NCL.	Enclosure
Q. FOUIP	⊏quai Equipment
XIST.	Existing
XP	Expansion
.J. VT	Expansion Joint
IFS	Exterior Insulation Finish System

FOC	Face of Concrete
FOF	Face of Finish
FOS	Face of Studs
FOW	Face of Wall
FV	Field Verify
	FINISN Fire Alarm
F.F.	Fire Extinguisher
F.E.C.	Fire Extinguisher Cabinet
F.R.	Fire Rated, Fire Retardant
F.S.P.	Fire Stand Pipe
F.V.C.	Fire Valve Cabinet
FPSC	Fireproof Self Closing
FIX, FIXT	Fixture
FLÁSH	Flashing
FL, FLR	Floor
F.D.	Floor Drain
FLUOR. FT '	Fludiescent Foot Feet
FTG.	Footing
FDN.	Foundation
F.A.I.	Fresh Air Intake
F.S.	Full Size
FURR.	Furring
GALV.	Galvanize
G.	Gas
GA.	Gauge
G.C.	General Contractor
G.F.R.C	Glass Fiber Reinforced Concrete
G.F.R.G.	Glass Fiber Reinforced Gypsum
GR.	Grade
GSF	Gross Square Feet
GND	Ground
GYP. BD	Gypsum Wallboard
HDWR	Hardware
HDWD	Hardwood
HD	Head
HTR	Heater
HVAC HT	Height
HPC	High Performance Coating
H.P.	High Point
HWY	Highway
H.C.	Hollow Core
HORIZ	Horizontal
H.B.	Hose Bibb
HW	Hot Water
HR	Hour
IN, "	Inside
INC.	Include
I.D. INSLII	Inside Diameter
INT.	Interior
JAN	Janitor
J.C. JT	Joint
JST	Joist
KIT.	Kitchen
K.O.	Knock Out
LS	Life Safety
	Laminate, Laminated
L.H.	Left Hand
L.	Length
LT	Light
L.W.	Lightweight
L.P.	
MH	Manhole
	Manufacturer Masonny Opening
MATL	Material
MAX	Maximum
MECH.	Mechanical
	Mechanical, Electrical, Plumbing, Fire Protection
M.E.K. MDF	Medium Density Fireboard
MEMB.	Membrane
MTL	Metal
MEZZ.	Mezzanine
iviiin. MIR	winimum Mirror
MISC.	Miscellaneous
MTD.	Mounted
MTG.	Mounting
MULI.	
N.R.C.	Noise Reduction Coefficient
NOIVI. N	North
N.A.	Not applicable
NIC	Not in Contact
N.I.C.	Not in Contract

C) NO MODIFICATIONS / REVISIONS / CHANGES SHALL BE UNDERTAKEN UNLESS SPECIFICALLY SO INSTRUCTED AND APPROVED BY OWNER. D) DURING COURSE OF PROJECT, GENERAL CONTRACTOR SHALL MAKE EVERY EFFORT MATERIALS/EQUIPMENT. TO FULLY INFORM ALL CONCERNED PARTIES REGARDING DECISIONS/ACTIONS TAKEN WHICH, IN ANY WAY, MIGHT AFFECT ANY SAID CONSTRUCTION CONDITIONS.

7. ALL EXISTING HOLES/CRACKS IN SLAB AND THOSE RESULTING FROM THE CONSTRUCTION PROCESS SHALL BE FILLED/REPAIRED AND THE SURFACE PATCHED SMOOTH AND LEVEL WITH ADJACENT FLOOR SURFACE, IN A MANNER ACCEPTABLE TO OWNER AND ARCHITECT

8. GC SHALL BE RESPONSIBLE FOR FIELD MEASURING OF EXISTING CONDITIONS PRIOR TO START OF WORK AND DURING CONSTRUCTION, AS NECESSARY, TO ASSURE CONSTRUCTION ADHERENCE TO DRAWINGS. BY ENTERING INTO A CONSTRUCTION CONTRACT FOR THIS WORK, GC SHALL INDICATE HIS FAMILIARITY WITH THE SITE/FIELD CONDITIONS. A) ALL "HOLD" DIMENSIONS SHALL BE MONITORED TO ASSURE CORRECTNESS. B) ANY DIMENSION REVISIONS/MODIFICATIONS ARE TO BE BROUGHT TO ATTENTION OF THE ARCHITECT FOR REVIEW/APPROVAL.

9. ALL VERTICAL DIMENSIONS SHALL BE TAKEN FROM "BENCH MARK" OR OTHER SIMILAR GUIDE ALL DEBRIS IS CLEANED UP. ESTABLISHED PRIOR TO START OF CONSTRUCTION. HIGH POINTS, LOW POINTS, IRREGULARITIES IN FLOOR SLAB, PARTICULARLY, WHICH COULD IN ANY WAY AFFECT FABRICATION/INSTALLATION WORK OF OTHER TRADES OR VENDORS (I.E., CABINET CONTRACTORS), SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. A) VARIATIONS IN FLOOR LEVEL IN EXCESS OF 1/2" FOR EVERY 10'-0" IN EVERY

OFF. 0.C.

OPNG.

OPP.

O.H.

O.D.

OFD

0.R.D.

O.A.

PT

PTD.

PR.

PNL

PERF.

PERP

PLAS

P-LAM

PLYWD.

PREFAB

PL.

PT.

PVC

PSF

PC

PRT

PROJ

PROP

QTY

Q.T.

R., RAD.

RE, REF

REINF.

R.C.P.

REQ.

R.A.

R.H.

RD

R.D.

RM

R.O.

RB SAB SCHED. SEC. SECT.

SHT.

SIM.

S.C.

STC

SPKR.

SPEC. S.F.P.

SQ.

S.F.

S.S.

ST

STD. STA

STL STOR.

STRUCT SUSP.

SYM

TEMP.

T.O. T.O.B. T.O.C. T.O.S. T.O.W.

TYP.

UNFIN

U.N.O.

V.I.F.

VERT.

VEST.

V.C.P.

VWC

VCT

W

W.C.

WR.

WP

WТ WWF

W

W

W.F

WIN

WD.

YD

W, W/O

ΤW

THK T.&G.

TEL. T.V.

ST.

DIRECTION WILL REQUIRE LEVELING OF SLAB BY G.C. LEVELING OF SLAB TO BE DONE AS REQUIRED READY TO RECEIVE FLOOR FINISHES, (I,E, VINYL TILE FLOORS, CARPETING, ETC). G.C. TO VERIFY SLAB CONDITION PRIOR TO BID SUBMISSION AND CONTACT LANDLORD.

Office On Center
Opening
Opposite Opposite Hand
Outer Diameter (Dim.)
Over Flow Drain Overall
Overflow Roof Drain
Paint
Painted Pair
Panel, Panelboard
Perforated Perpendicular
Plaster
Plastic Laminate Plate
Plywood
Point Polyvinyl Chloride
Pounds per Sq. Foot
Prefabricated
Pressure Treated
Property
Quantity
Quarry Tile
Radius
Reinforced
Reinforced Concrete Pipe
Required
Right Hand
Road
Roof Drain
Rough Opening
Rubber Base Sound Attenuation Batt
Schedule
Section
Sheet
Solid Core
Sound Transmission Coefficien
Speaker
Specification Sprav on Fireproofing
Square
Stainless Steel
Stair Standard
Station
Steel Storage
Street
Structural Suspended
Symmetrical
Telephone Television
Temporary
Thick, Thickness Tongue and Groove
Top Of
Top Of Curb
Top Of Sidewalk
Tread
Typical Through wall
Unfinished Unless Noted Otherwise
Vorify in Field
Vertical
Vestibule Vetrified Clay Pipe
Vinyl Composition Tile
Vinyl Wallcovering
Water Water Closet
Water Resistant
vvaterproofing Weight
Welded Wire Fabric
Wide flange
Width
With, Without
Wood
Vard
raro

#### **ABBREVIATIONS** 3

2

10. GC, SUBCONTRACTORS, AND ALL VENDORS ARE TO VERIFY ALL CLEARANCES (CORRIDORS, STAIRS, ELEVATORS, ETC.) REQUIRED FOR DELIVERIES AND PASSAGE OF ALL JOB

11. ALL NECESSARY WOOD BLOCKING / GROUNDS, ETC., ARE TO BE SUPPLIED AS FIREPROOFED ELEMENTS. GC SHALL FULLY COORDINATE SETTING/PLACEMENT OF THESE ELEMENTS AS REQUIRED BY LOCAL CODE/BUILDING OR SURROUNDINGS.

A) GROUND/BLOCKING MAY NOT BE WHOLLY SHOWN ON DRAWINGS AND GOOD CONSTRUCTION PRACTICE SHALL GOVERN/DETERMINE SAID USE WHERE A QUESTION ARISES.

B) GC TO PAY PARTICULAR ATTENTION TO ALL LOCATIONS OF DRYWALL PARTITION CONSTRUCTION THAT ABUT OR RECEIVE MILLWORK OR CABINET WORK CONSTRUCTION. INTERNAL WOOD BLOCKING SHALL BE SUPPLIED FOR STURDY ANCHORAGE AT INTERSECTIONS OF WOOD/GLASS BORROWED LIGHT PARTITIONS AND ADJACENT DRYWALL CONSTRUCTION AS REQUIRED.

12. THE CONTRACTOR SHALL INSTALL DUST PROOF CURTAINS BETWEEN THE AREAS TO BE REMODELED AND THE AREAS TO REMAIN UNTIL ALL DUST PRODUCING WORK IS COMPLETED AND

13. PROTECT THE AREAS OF THE BUILDING NOT BEING REMODELED FROM DAMAGE AT ALL TIMES.

14. KEEP ACCESS TO EMERGENCY EXITS AVAILABLE AT ALL TIMES

15. CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE PROJECT SITE AND DISPOSE IN A LICENSED LANDFILL

DIVISION 0	1: GENERAL	DIVISION	05: METALS
00	DETAIL/ SECTION		STEEL/ IRON (LARGE SCALE)
			ALUMINUM
	000		OTHER METALS
A000	BUILDING SECTION	DIVISION	06: WOOD AND PLASTICS
A000	BUILDING ELEVATION REFERENCE		WOOD (DIMENSION) (THROUGH MEMBER)
A000	INTERIOR ELEVATION		
	ELEVATION DESIGNATION		WOOD (FINISH)
(XXX)	DOOR TAG		HARDBOARD
\$>	INTERIOR PARTITION TYPE		PARTICLE BOARD
ROOM NAME000	ROOM NUMBER DESIGNATION		SOLID SURFACE MATERIAL
1	GENERAL NOTES	DIVISION	07: THERMAL & MOISTURE PROTECTION
			RIGID INSULATION
( <u>1</u> ) (A)	CENTER LINES OF COLUMN GRIDS		FIRE SAFING INSULATION
			BLANKET INSULATION
	2 HR - FIRE RATED ASSEMBLY 2 HOUR SMOKE - FIRE RATED ASSEMBLY 4 HOUR - FIRE RATED ASSEMBLY		LOOSE FILL INSULATION
	SMOKE - FIRE RATED ASSEMBLY		SEALANT W/ BACKER ROD
	NEW WALL		MEMBRANE WATERPROOFING &
	EXISTING WALL	T	DRAINAGE COMPOSITE SPRAY-ON FIREPROOFING
DIVISIO	N 03: CONCRETE		
	CAST-IN-PLACE CONCRETE		GLASS INSULATING
	PRECAST CONCRETE		GLASS ELEVATION
	PRECAST CONCRETE WALL		PLASTIC GLAZING
	PRECAST CONCRETE COLUMN		NEW DOUBLE DOOR
	CAST-IN-PLACE CONCRETE WALL & CAST-IN-PLACE COLUMN		NEW SINGLE DOOR
DIVISIO	N 04: MASONRY		NEW SWINGING DOOR
	BRICK		NEW DOUBLE ACTING DOOR
	CONCRETE MASONRY UNIT		EXISTING DOUBLE DOORS
	CUT STONE		EXISTING SINGLE DOOR
	CAST STONE	DIVISION	09: FINISHES
	BRICK PAVER		LATH AND PLASTER
	LIMESTONE		GYPSUM BOARD
	QUARRY TILE		CERAMIC TILE
	GROUT		CEILING PANEL





APPLICABLE CODES JURISDICTION : THE CITY OF 2018 INTERNATIONAL BUILDING CODE 2018 INTERNATIONAL MECHANICAL CODE 2017 NATIONAL ELECTRICAL CODE 2018 INTERNATIONAL PLUMBING CODE	ELEES SUMMIT, MO.
<b>PROJECT DESCRIPTION</b> FRESH GREEN - LEES SUMMIT IS LOCATED AT 10- SUMMIT, MO. THE EXISTING PROPERTY CONSIST BUILDING. THE CONSTRUCTION TYPE OF THE EXI	41 NE SAM WALTON DR. IN LEES S OF A SINGLE STORY COMMERCIAL STING BUILDING IS <u>II-B</u> .
THE SCOPE OF THE PROJECT INCLUDES DEMOLI BEARING INTERIOR WALLS AND PATCHING, REMO FIXTURES.	TION OF EXISTING NON LOAD- DVAL OF INTERIOR FINISHES AND
THE SCOPE OF THE PROJECT INCLUDES TENANT STORY RETAIL BUILDING.	INTERIOR FINISH OF AN EXISTING 1
<b>LEGAL DESCRIPTION</b> RITTER PLAZA LOT 2 ( EX PT IN ROW)	
GENERAL BUILDING HEIGHTS AND AREAS EXISTING BUILDING IS SINGLE STORY BUILDING -	3,039 GSF
GENERAL BUILDING CODE INFORMATION	
CHAPTER 3 - USE AND OCCUPANCY OCCUPANCY CLASSIFICATION: <u>M</u> (MERCANTILE) OCCUPANCY (SECTION 309) <u>B</u> (BUSINESS) OCCUPANCY (SECTION 304)	
CHAPTER 5 - GENERAL BUILDING HEIGHTS AND A ALLOWABLE BUILDING HEIGHT AND AREAS (SECT 2 STORIES, 12,500 SE PER STORY	AREAS FION 503)
BUILDING HEIGHT MODIFICATIONS (SECTION 504)	
BUILDING AREA MODIFICATIONS (SECTION 506)	
CHAPTER 6 - TYPES OF CONSTRUCTIONFIRE RESISTANT REQUIREMENTS FOR BUILDINGSTRUCTURAL FRAME:2 HBEARING WALLS, EXTERIOR:2 HNON BEARING WALLS:0 HFLOOR CONSTRUCTION:2 HROOF CONSTRUCTION:1 H	<u>ELEMENTS (SECTION 601)</u> OUR OUR OUR OUR OUR OUR
CONSTRUCTION TYPE (SECTION 602) TYPE II-B	
CHAPTER 7 - FIRE AND SMOKE PROTECTION FEA         FIRE RESISTANT REQUIREMENTS FOR BUILDING         FIRE WALLS (SECTION 706):       2 H         FIRE BARRIERS (SECTION 707):       2 H         FIRE PARTITIONS (SECTION 707):       2 H         FIRE PARTITIONS (SECTION 708):       N/A         SMOKE BARRIERS (SECTION 709):       N/A         HORIZONTAL ASSEMBLIES (SECTION 711):       N/A         SHAFT ENCLOSURES (SECTION 713):       2 H         CONCEALED SPACES (SECTION 718):       N/A	TURES ELEMENTS OUR OUR OUR
CHAPTER 9 - FIRE PROTECTION SYSTEM AUTOMATIC SPRINKLER SYSTEM (903.2.11.3) - FIRE ALARM SYSTEM (907.2.2) - FIRE EXTINGUISHERS (906) -	NONE EXISTING <u>REQUIRED</u>
CHAPTER 10 - MEANS OF EGRESSTENANT ALLOWABLE OCCUPANCY (SECTION 100-A-3 (ASSEMBLY)52635	<u>4):</u> // 15 = <u>35</u> OCCUPANTS < 49 = 1 FXIT REQUIRED
TENANT ALLOWABLE OCCUPANCY (SECTION 100-B (BUSINESS)7 <	<u>4):</u> 7/ 100 = <u>7</u> OCCUPANTS 49 = 1 EXIT REQUIRED
TENANT ALLOWABLE OCCUPANCY (SECTION 100- M (MERCANTILE)         1,3         22	<u>4):</u> 7 <u>0</u> / 60 = <u>22</u> OCCUPANTS < 49 = <u>1</u> EXIT REQUIRED
<u>SPACES WITH ONE MEANS OF EGRESS (SECTION</u> <u>B (BUSINESS)</u> <u>49</u> 0	<u>I 1021.2):</u> DCC. MAXIMUM
COMMON PATH OF EGRESS TRAVEL DISTANCE (SOCCUPANCYW/O SPRINKLERB75 FEET	<u>SECTION 1014.3):</u> W/ SPRINKLER <u>100 FEET</u>
EXIT ACCESS TRAVEL DISTANCE (SECTION 1016):OCCUPANCYW/O SPRINKLERB200 FEET	W/ SPRINKLER <u>300 FEET</u>
CORRIDOR RATING REQUIRED (SECTION 1018.1)OCCUPANCYW/O SPRINKLERB1 HOUR	W/ SPRINKLER <u>0 HOURS</u>
DEAD ENDS (SECTION 1018.4) OCCUPANCY W/O SPRINKLER	W/ SPRINKLER
CHAPTER 29 - MINIMUM PLUMBING FACILITIES	<u>50 FEET</u>
1 PER 500	IPANCY M (MERCANTILE) FOR LOADS
LESS THAN 100. BUILDING OCCUPANT LOAD = $64$	
1 RESTROOM REQUIRED <u>PROVIDED</u> = 1 CONFORMING RESTROOM, 1 EXIST	TING NON-CONFORMING RESTROOM
LAVATORY <u>REQUIREMENTS:</u> 1 PER 750	
BUILDING OCCUPANT LOAD = 64 1 RESTROOM REQUIRED <u>PROVIDED</u> = 1 CONFORMING RESTROOM, 1 EXIST	TING NON-CONFORMING RESTROOM
CODE PLAN LEGEND	
ROOM OCCUPANT LOAD	IT WIDTH FACTORS: AIRS: 0.2" PER OCCUPANT SERVED
101<	
	TRAVEL PATH / DISTANCE
XXX A ALLOWABLE NUMBER	
X.X OF OCCUPANTS EXIT WIDTH IN DECIMAL FEET	S FRICINALED WALL
CODE INFORMATIC	N



# 03 VICINITY MAP

N.T.S.

01

1" = 1'-0"





## 02 FLOOR PLAN

1/8" = 1'-0"

## **INTERIOR WALL ASSEMBLIES**



SECTION 01 10 00 - SUMMARY	ADJUSTING
<ol> <li>Owner's Name: FRESH GREEN</li> <li>Architect's Name: HIVE Design Collaborative, Inc.</li> </ol>	FINAL CLEANING AND CLOSEOUT PROCEDURES 1. Use cleaning materials that are nonhazardous.
<ol> <li>The Project consists of typical interior Tenant Finish Retail</li> <li>Coordinate with Owner / Tenant on all items to be supplied and installed by Owner.</li> </ol>	<ol> <li>Clean glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.</li> <li>Demove all labels that are not permenent. Do not point or otherwise sover fire test labels or permenentation on the second secon</li></ol>
<ol> <li>Coordinate with Owner / Tenant on occupancy requirements during the construction period.</li> <li>Coordinate with Owner / Tenant to minimize conflict and to facilitate building operations.</li> <li>Coordinate with Owner / Tenant on Utility Outages and Shutdowns</li> </ol>	<ul> <li>Remove all labels that are not permanent. Do not paint or otherwise cover life test labels or nameplates on mechanical and electrical equipment.</li> <li>Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and</li> </ul>
<ol> <li>Provide access to and from spaces as required by law and by Owner.</li> <li>Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are</li> </ol>	material being cleaned. 5. Clean filters of operating equipment.
<ul><li>temporarily altered.</li><li>11. Do not obstruct roadways, sidewalks, or other public ways without permit.</li></ul>	<ol> <li>Remove waste, surplus materials, and trash/rubbish; dispose of in legal manner.</li> <li>Coordinate with Owner / Tenant on project closeout procedures.</li> </ol>
SECTION 01 20 00 - PRICE AND PAYMENT PROCEDURES	SECTION 01 78 00 - CLOSEOUT SUBMITTALS PROJECT RECORD DOCUMENTS
SECTION 01 30 00 - ADMINISTRATIVE REQUIREMENTS	<ol> <li>Maintain on site one set of the following record documents; record actual revisions to the Work: Drawings. Addenda. Change Orders and other modifications to the Contract.</li> </ol>
1. Coordinate requirements with Owner / Tenant for progress meetings, construction schedules, shop drawings and submittals.	<ol> <li>Ensure entries are complete and accurate, enabling future reference by Owner.</li> <li>Store record documents separate from documents used for construction.</li> </ol>
SECTION 01 40 00 - QUALITY REQUIREMENTS 1 Eor products and workmanship specified by reference to a document or documents not included in these	<ol> <li>Record Information concurrent with construction progress.</li> <li>Record Drawings : Legibly mark each item to record actual construction including: Field changes of dimension and detail. Details not on original Contract drawings.</li> </ol>
specifications, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.	OPERATION AND MAINTENANCE DATA 1. For Each Product or System: List names, addresses and telephone numbers of Subcontractors and suppliers,
<ol> <li>Conform to reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.</li> <li>Should enceified reference standards conflict with Contract Documents, request elerification from Architect.</li> </ol>	<ul> <li>including local source of supplies and replacement parts.</li> <li>Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.</li> </ul>
<ul> <li>Should specified reference standards connict with Contract Documents, request clanication from Architect before proceeding.</li> <li>Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect</li> </ul>	<ol> <li>Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.</li> </ol>
<ul> <li>shall be altered from the Contract Documents by mention or inference otherwise in any reference document.</li> <li>Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to</li> </ul>	<ol> <li>Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.</li> </ol>
<ol> <li>Comply with manufacturers' instructions, including each step in sequence.</li> <li>Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before</li> </ol>	<ol> <li>Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and</li> </ol>
<ul> <li>proceeding.</li> <li>8. Comply with specified standards as minimum quality for the Work except where more stringent tolerances,</li> </ul>	maintenance. OPERATION AND MAINTENANCE MANUALS
<ul> <li>codes, or specified requirements indicate higher standards or more precise workmanship.</li> <li>9. Have Work performed by persons qualified to produce required and specified quality.</li> <li>10. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.</li> </ul>	<ol> <li>Prepare instructions and data by personnel experienced in maintenance and operation of described products.</li> <li>Prepare data in the form of an instructional manual.</li> <li>WARRANTIES AND BONDS</li> </ol>
<ol> <li>Verify that need measurements are as indicated on shop drawings of as instructed by the manufacturer.</li> <li>Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.</li> </ol>	<ol> <li>Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use</li> </ol>
12. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.	with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.
<ol> <li>Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.</li> <li>Adjust products to appropriate dimensions: position before securing products in place.</li> </ol>	<ol> <li>Verify that documents are in proper form, contain full information, and are notarized.</li> <li>Co-execute submittals when required.</li> <li>Retain warranties and bonds until time specified for submittal.</li> </ol>
<ol> <li>Replace Work or portions of the Work not conforming to specified requirements.</li> <li>If, in the opinion of the Owner or Architect, it is not practical to remove and replace the Work, the Owner or</li> </ol>	SECTION 02 41 19 - SELECTIVE STRUCTURE DEMOLITION
Architect will direct an appropriate remedy or adjust payment.	<ol> <li>Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.</li> <li>Obtain required permits</li> </ol>
<ol> <li>Coordinate requirements and restrictions with Owner / Tenant on all temporary utilities, facilities, barriers and enclosures as well as security, vehicle access, parking, waste removal and project signs.</li> </ol>	<ol> <li>Comply with applicable requirements of NFPA 241.</li> <li>Provide, erect, and maintain temporary barriers and security devices.</li> </ol>
SECTION 01 60 00 - PRODUCT REQUIREMENTS	<ol> <li>Conduct operations to minimize effects on and interference with adjacent spaces, structures and occupants.</li> <li>Do not close or obstruct roadways or sidewalks without permit.</li> <li>Conduct operations to minimize obstruction of orthline and entropy in the sector of orthline and entropy.</li> </ol>
<ol> <li>Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.</li> </ol>	<ul> <li>Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.</li> <li>B. Do not begin removal until receipt of notification to proceed from Owner.</li> </ul>
<ol> <li>Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.</li> </ol>	<ol> <li>Protect existing structures and other elements that are not to be removed.</li> <li>Provide bracing and shoring.</li> </ol>
3. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.	<ol> <li>Prevent movement or settlement of adjacent structures.</li> <li>Stop work immediately if adjacent structures appear to be in danger.</li> <li>If bazardous materials are discovered during removal operations, stop work and potify Architect and Owner.</li> </ol>
<ul> <li>4. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.</li> <li>5. Provide new products unless specifically required or permitted by the Contract Documents.</li> </ul>	<ol> <li>Perform demolition in a manner that maximizes salvage and recycling of materials.</li> <li>Drawings showing existing construction and utilities are based on casual field observation and existing record</li> </ol>
6. Where all other criteria are met, Contractor shall give preference to products that are extracted, harvested, and/or manufactured closest to the location of the project, have longer documented life span under normal use,	documents only. Verify that construction and utility arrangements are as shown. Report discrepancies to Architect before disturbing existing installation.
<ul> <li>result in less construction waste, and are made of vegetable materials that are rapidly renewable.</li> <li>Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description</li> </ul>	<ol> <li>Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.</li> <li>Maintain weatherproof exterior building enclosure except for interruptions required for replacement or</li> </ol>
<ol> <li>Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.</li> </ol>	<ul> <li>modifications; take care to prevent water and humidity damage.</li> <li>18. Remove existing work as indicated and as required to accomplish new work.</li> </ul>
<ol> <li>Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.</li> <li>Coordinate ashedula of product delivery to designated propagation areas in order to minimize site storage time and</li> </ol>	<ol> <li>Remove existing systems and equipment as indicated.</li> <li>Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.</li> </ol>
<ul> <li>potential damage to stored materials.</li> <li>11. Transport and handle products in accordance with manufacturer's instructions.</li> </ul>	<ul> <li>Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.</li> </ul>
<ol> <li>Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.</li> <li>Arrange for the return of packing materials, such as wood pallets, where economically feasible.</li> </ol>	<ol> <li>Verify that abandoned services serve only abandoned facilities before removal.</li> <li>Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where passible, otherwise can stub and too with identification.</li> </ol>
SECTION 01 70 00 - EXECUTION AND CLOSEOUT REQUIREMENTS	<ol> <li>Protect existing work to remain.</li> <li>Prevent movement of structure; provide shoring and bracing if necessary.</li> </ol>
1. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.	<ol> <li>Perform cutting to accomplish removals neatly and as specified for cutting new work.</li> <li>Repair adjacent construction and finishes damaged during removal work.</li> <li>Betch as apparified for patching new work.</li> </ol>
<ol> <li>Verify that existing substrate is capable of structural support of attachment of new work being applied or attached.</li> <li>Examine and verify specific conditions described in individual specification sections.</li> </ol>	<ol> <li>Patch as specified for patching new work.</li> <li>Remove debris, junk, and trash from site.</li> <li>Leave site in clean condition, ready for subsequent work.</li> </ol>
4. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.	SECTION 06 10 00 - ROUGH CARPENTRY
<ol> <li>Verify that utility services are available, of the correct characteristics, and in the correct locations.</li> <li>Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work assess conditions affecting.</li> </ol>	<ol> <li>Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies. If no species is specified, provide any species graded by any grading agency whose rules are approved by the Board of Review. American Lumber Standard Committee and who provides grading service for the species and grade.</li> </ol>
performance of work. Beginning of cutting or patching means acceptance of existing conditions. PREPARATION	2. Dimension Lumber for Concealed Applications: Nominal sizes as indicated on Drawings, S4S. Moisture Content: S-dry or MC19.
<ol> <li>Clean substrate surfaces prior to applying next material or substance.</li> <li>Seal cracks or openings of substrate prior to applying next material or substance.</li> <li>Apply manufacturar required or recommanded substrate primer, scalar, or conditioner prior to applying any pay.</li> </ol>	<ol> <li>Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring: S4S, No. 2 or Standard Grade Lumber. Standard or No. 3 Boards.</li> <li>Communications and Electrical Room Mounting Boards: PS 1 A-D plywood, or medium density fiberboard: 3/4.</li> </ol>
material or substance in contact or bond. GENERAL INSTALLATION REQUIREMENTS	inch thick; flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84.
<ol> <li>Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.</li> </ol>	<ol> <li>Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.</li> <li>Eira Retardant Treated Wood: Mark each piece of wood with producer's stamp indicating compliance with</li> </ol>
<ol> <li>Make vertical elements plumb and norizontal elements level, unless otherwise indicated.</li> <li>Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.</li> </ol>	specified requirements. Kiln dry wood after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood. Treat rough carpentry items as indicated.
<ol> <li>Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.</li> <li>Make neat transitions between different surfaces, maintaining texture and appearance.</li> </ol>	7. Fire Retardant Treatment: Interior Type A: AWPA U1, Use Category UCFA, Commodity Specification H, low temperature (low hygroscopic) type, chemically treated and pressure impregnated; capable of providing a
ALTERATIONS 1. Adapt existing work to fit new work: Make as neat and smooth transition as possible. 2. Patching: Where the existing surface is not indicated to be refinished, natch to match the surface finish that	<ul> <li>maximum name spread rating or 25 when tested in accordance with ASTM E84, with no evidence of significant combustion when test is extended for an additional 20 minutes.</li> <li>8. Prevent exposure to precipitation during shipping, storage, or installation.</li> </ul>
existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.	<ol> <li>Provide lumber stamped with grade mark unless otherwise indicated.</li> <li>Lumber fabricated from old growth timber is not permitted.</li> </ol>
<ol> <li>Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.</li> <li>Clean existing systems and equipment</li> </ol>	<ol> <li>Select material sizes to minimize waste.</li> <li>Reuse scrap to the greatest extent possible.</li> <li>Provide temporary ventilation during and immediately after installation of treated wood sufficient to remove.</li> </ol>
<ol> <li>Do not begin new construction in alterations areas before demolition is complete.</li> <li>CUTTING AND PATCHING</li> </ol>	<ul> <li>indoor air contaminants.</li> <li>Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items,</li> </ul>
<ol> <li>Whenever possible, execute the work by methods that avoid cutting or patching.</li> <li>Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive notables and finishing. In existing work, minimize damage and rectors to encoding.</li> </ol>	<ul> <li>and trim.</li> <li>15. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more stude or other method of support is explicitly indicated.</li> </ul>
<ol> <li>Employ skilled and experienced installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.</li> </ol>	<ol> <li>Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.</li> </ol>
<ol> <li>Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.</li> <li>Restore work with new products in accordance with requirements of Contract Documents.</li> </ol>	17. Communications and Electrical Room Mounting Boards: Secure with screws to studs with edges over firm bearing; space fasteners at maximum 24 inches on center on all edges and into studs in field of board. At fire-
<ul> <li>b. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.</li> <li>7. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07.84.00, to full thickness of the penetrated element.</li> </ul>	indicated as full floor-to-ceiling height, install with long edge of board parallel to studs. Install adjacent boards without gaps.
<ol> <li>Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit. Match color, texture, and</li> </ol>	<ol> <li>Framing Member Tolerances: 1/4 inch from true position, maximum.</li> <li>Variation from Plane (Other than Floors): 1/4 inch in 10 feet maximum, and 1/4 inch in 30 feet maximum.</li> </ol>
<ul> <li>appearance.</li> <li>9. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defacts are due to condition of substants.</li> </ul>	SECTION 06 20 00 - FINISH CARPENTRY
PROGRESS CLEANING 1. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition	<ol> <li>quality suitable for transparent finish.</li> <li>Hardwood Lumber: As indicated on Drawings, maximum moisture content of 6 percent ; with vertical grain, of</li> </ol>
2. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.	<ul> <li>quality suitable for transparent finish.</li> <li>3. Softwood Plywood Not Exposed to View: Any face species, veneer core; PS 1 Grade A-B; glue type as</li> </ul>
<ul> <li>Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.</li> <li>Collect and remove waste materials, debris, and trach/rubbish from site periodically and dispace off site; do not</li> </ul>	<ul> <li>recommended for application.</li> <li>Softwood Plywood Exposed to View: Face species as indicated, plain sawn, medium density fiberboard core; glue type as recommended for application</li> </ul>
burn or bury. PROTECTION OF INSTALLED WORK	5. Hardwood Plywood: Face species as indicated, plain sawn, book matched, medium density fiberboard core; glue type as recommended for application.
<ol> <li>Protect installed work from damage by construction operations.</li> <li>Provide special protection where specified in individual specification sections.</li> <li>Provide temperature and remember from the function of t</li></ol>	<ol> <li>Particleboard: ANSI A208.1; composed of wood chips, sawdust, or flakes of medium density, made with waterproof resin binders; of grade to suit application; sanded faces.</li> <li>Hardboard: AHA A135 4: Proceed wood fiber with resin binder. Cleas 1. Terms and 414 inch thick area.</li> </ol>
<ul> <li>a. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.</li> <li>4. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.</li> </ul>	<ul> <li>side (S1S).</li> <li>8. Protect work from moisture damage.</li> </ul>
5. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.	<ol> <li>Quality Grade: Unless otherwise indicated provide products of quality specified by AWI//AWMAC/WI Architectural Woodwork Standards for Premium Grade.</li> </ol>
<ul> <li>Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.</li> <li>Remove protective coverings when no longer needed; rouse or roovelo plastic coverings if passible.</li> </ul>	

10. Surface Burning Characteristics: Provide materials having fire and smoke properties as required by authority ent to ensure smooth and unhindered operation. having jurisdiction. Wood fabricated from old growth timber is not permitted. URES Shop assemble work for delivery to site, permitting passage through building openings. ardous. 12. ; remove temporary labels, stains and foreign substances, polish 13. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for um carpeted and soft surfaces. scribing and site cutting. ent. Do not paint or otherwise cover fire test labels or nameplates on 14. Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises. Locate counter butt joints minimum 2 tary condition with cleaning materials appropriate to the surface and feet from sink cut-outs. 15. Install work in accordance with AWI/AWMAC/WI Architectural Woodwork Standards requirements for grade indicated. trash/rubbish; dispose of in legal manner. Set and secure materials and components in place, plumb and level. Carefully scribe work abutting other components, with maximum gaps of 1/32 inch. Do not use additional 17. ject closeout procedures. overlay trim to conceal larger gaps. 18. Maximum Variation from True Position: 1/16 inch. Maximum Offset from True Alignment with Abutting Materials: 1/32 inch. 19. g record documents; record actual revisions to the Work: Drawings. SECTION 06 41 00 - ARCHITECTURAL WOOD CASEWORK odifications to the Contract. Quality Grade: Unless otherwise indicated provide products of quality specified by AWI//AWMAC/WI ate, enabling future reference by Owner. documents used for construction. Architectural Woodwork Standards for Premium Grade. struction progress. Wood Veneer Faced Cabinets: Premium grade. item to record actual construction including: Field changes of dimension Plastic Laminate Faced Cabinets: Custom grade. ract drawings. Protect units from moisture damage. During and after installation of custom cabinets, maintain temperature and humidity conditions in building es, addresses and telephone numbers of Subcontractors and suppliers, spaces at same levels planned for occupancy. Wood fabricated from old growth timber is not permitted. eplacement parts. Irly identify specific products and component parts, and data applicable Adhesive: Type recommended by fabricator to suit application. Grommets: Standard plastic grommets for cut-outs, in color as indicated. illustrate relations of component parts of equipment and systems, to Hardware: BHMA A156.9, types as indicated for quality grade specified. t use Project Record Documents as maintenance drawings. 10. Adjustable Shelf Supports: Standard side-mounted system using recessed metal shelf standards or multiple product data. Provide logical sequence of instructions for each holes for pin supports and coordinated self rests, polished chrome finish, for nominal 1 inch spacing s instructions. adiustments. R MATERIALS AND FINISHES 11. Drawer and Door Pulls: "U" shaped wire pull, steel with chrome finish, 4 inch centers, unless otherwise indicated on Drawings. Manufacturer's recommendations for cleaning agents and methods, Cabinet Locks: Keyed cylinder, two keys per lock, master keyed, steel with chrome finish, unless otherwise 12. g agents and methods, and recommended schedule for cleaning and indicated on Drawings. 13. Catches: Magnetic. 14. Drawer Slides: Full extension, Static load capacity as required by drawer size, side mounted, steel with nnel experienced in maintenance and operation of described products. onal manual. polished finish. 15. Hinges: European style concealed self-closing type, steel with polished finish, unless otherwise indicated on in duplicate by responsible Subcontractors, suppliers, and Drawings npletion of the applicable item of work. Except for items put into use 16. Assembly: Shop assemble cabinets for delivery to site in units easily handled and to permit passage through beginning of time of warranty until the Date of Substantial completion is building openings. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for 17. m, contain full information, and are notarized. any single length. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide 18. specified for submittal. matching trim for scribing and site cutting. E DEMOLITION SECTION 07 84 00 - FIRESTOPPING lations for demolition operations and safety of adjacent structures and Comply with firestopping manufacturer's recommendations for temperature and conditions during and after installation. Firestopping: Any material meeting requirements f NFPA 241. Fire Ratings: See Drawings for required systems and ratings. barriers and security devices. Clean substrate surfaces of dirt, dust, grease, oil, loose material, or other matter that could adversely affect on and interference with adjacent spaces, structures and occupants. bond of firestopping material. idewalks without permit. Remove incompatible materials that could adversely affect bond. Install materials in manner described in fire test report and in accordance with manufacturer's instructions, ction of public and private entrances and exits; do not obstruct required entrances and exits from removal operations. completely closing openings. otification to proceed from Owner. Do not cover installed firestopping until inspected by authority having jurisdiction. ements that are not to be removed. Install labeling required by code. Clean adjacent surfaces of firestopping materials. acent structures. 10. Protect adjacent surfaces from damage by material installation. tures appear to be in danger. luring removal operations, stop work and notify Architect and Owner. SECTION 07 90 05 - JOINT SEALERS aximizes salvage and recycling of materials. General Purpose Interior Sealant for interior wall and ceiling control joints, joints between door and window n and utilities are based on casual field observation and existing record frames and wall surfaces, and other interior joints for which no other type or sealant is indicated: Acrylic on and utility arrangements are as shown. Report discrepancies to emulsion latex; ASTM C834, Type OP, Grade NF single component, paintable. Bathtub/Tile Sealant for joints between plumbing fixtures and floor and wall surfaces and joints between kitchen and bath countertops and wall surfaces. White silicone; ASTM C920, Uses I, M and A; single s acceptance of existing conditions that would be apparent upon component, mildew resistant. enclosure except for interruptions required for replacement or Acoustical Sealant bead between top stud runner and structure and between bottom stud track and floor: er and humidity damage. Permanently tacky non-hardening butyl sealant. as required to accomplish new work. Interior Floor Joint Sealant for use at expansion joints in floors: Polyurethane, self-leveling; ASTM C920, Grade P, Class 25, Uses T, M and A; single component. ent as indicated. re to remain in operation; maintain access to equipment and operational Sealants and Primers - General: Provide only products having lower volatile organic compound (VOC) content than required by South Coast Air Quality Management District Rule No.1168. ccupied facilities but are to be replaced with new services, maintain Sealant colors to be selected by Architect from manufacturer's standard range. stems are complete and ready for service. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation. / abandoned facilities before removal. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material lits, and equipment, including those above accessible ceilings; remove installation instructions. , otherwise cap stub and tag with identification. Perform installation in accordance with ASTM C1193. Perform acoustical sealant application work in accordance with ASTM C919. 10. e shoring and bracing if necessary. 11. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface s neatly and as specified for cutting new work. bond area as recommended by manufacturer es damaged during removal work. 12 Install bond breaker where joint backing is not used. Install sealant free of air pockets, foreign embedded matter, ridges, and sags. 13. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant 14. subsequent work. cannot be applied within these temperature ranges. Tool joints concave. 15. Protect sealants until cured. 16. ) and requirements of specified grading agencies. If no species is SECTION 08 11 13 - HOLLOW METAL DOORS AND FRAMES by any grading agency whose rules are approved by the Board of ommittee and who provides grading service for the species and grade. Steel Door and Frame Manufacturers: Assa Abloy, Steelcraft or equal, unless otherwise indicated on ications: Nominal sizes as indicated on Drawings, S4S. Moisture Drawings Requirements for All Doors and Frames: Comply with ANSI/ICC A117.1, door top closures flush with top of ers, Grounds, and Furring: S4S, No. 2 or Standard Grade Lumber. faces and edges, beveled on both edges, smooth texture, factory primed for field finishing. Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings. Mounting Boards: PS 1 A-D plywood, or medium density fiberboard; 3/4 Hardware Preparation: In accordance with BHMA A156.115, with reinforcement welded in place, in addition to less, smoke developed index of 450 or less, when tested in accordance other requirements specified in door grade standard. Galvanizing for Units in Wet Areas: All components hot-dipped zinc-iron alloy-coated (galvannealed), with requirements of AWPA U1 - Use Category System for wood manufacturer's standard coating thickness. es, expected service conditions, and specific applications. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with all the specified requirements for each type; where two requirements conflict, comply ach piece of wood with producer's stamp indicating compliance with after treatment to a maximum moisture content of 19 percent for lumber with the most stringent. n carpentry items as indicated. Exterior Steel Doors: ANSI A250.8 Level 3, physical performance Level A, Model 2, seamless. All A: AWPA U1, Use Category UCFA, Commodity Specification H, low components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A653/A653M, with emically treated and pressure impregnated; capable of providing a manufacturer's standard coating thickness. en tested in accordance with ASTM E84, with no evidence of significant Interior Steel Doors, Non-Fire-Rated: ANSI A250.8 Level 1, physical performance Level C, Model 2, an additional 20 minutes. seamless, 1-3/4 inches thick. Interior Steel Doors, Fire-Rated: ANSI A250.8 Level 2, physical performance Level B, Model 2, seamless. g shipping, storage, or installation. ark unless otherwise indicated. Fire Rating as indicated on Door and Frame Schedule, tested in accordance with applicable code. Provide per is not permitted. units listed and labeled by UL. Attach fire rating label to each fire rated unit. Interior Steel Doors, Sound-Rated: ANSI A250.8 Level 2, physical performance Level B, Model 2, seamless. 10. STC Rating of Entire Door, Frame, and Hardware Assembly as indicated on Drawings, calculated in nd immediately after installation of treated wood sufficient to remove accordance with ASTM E413, tested in accordance with ASTM E90 or ASTM E1408. 11. Interior Door Frames: Fully welded type complying with the requirements of grade specified for corresponding s as indicated or as required to support finishes, fixtures, specialty items, Frames for Wood Doors: Fully welded type complying with frame requirements specified in ANSI A250.8 for 12.

### SECTION 08 14 16 - FLUSH WOOD DOORS

Level 1, 18 gage

thickness.

ANSI A250.8 for Level 1, 16 gage

unless otherwise indicated on Drawings.

nd 2 on head of pairs without center mullions.

Store in accordance with NAAMM HMMA 840.

Adjust for smooth and balanced door movement.

Removable Stops: Formed sheet steel, mitered corners.

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Wood Veneer Faced Door Manufacturers: Graham Wood Doors, Eggers Industries or equal, unless otherwise indicated on Drawings. All Doors: Premium Grade Quality Level, in accordance with AWI/AWMAC/WI Architectural Woodwork

force to close, latch, and unlatch in accordance with ASTM E1408; adjust as required to comply.

Frames for Sound-Rated Wood Doors: Fully welded type complying with frame requirements specified in

Exterior Door Frames: Face welded, seamless with joints filled. All components hot-dipped zinc-iron alloy-

Frames for Interior Glazing or Borrowed Lights: Construction and face dimensions to match door frames,

Install in accordance with the requirements of the specified door grade standard and NAAMM HMMA 840.

Adjust sound control doors so that seals are fully engaged when door is closed. Test sound control doors for

Silencers: Resilient rubber, fitted into drilled hole; 3 on strike side of single door, 3 on center mullion of pairs,

coated (galvannealed) in accordance with ASTM A653/A653M, with manufacturer's standard coating

Interior Door Frames, Fire-Rated: Fully welded type, fire rating same as door, labeled.

Temporary Frame Spreaders: Provide for all factory- or shop-assembled frames.

In addition, install fire rated units in accordance with all applicable codes.

Primer: Rust-inhibiting, complying with ANSI A250.10, door manufacturer's standard.

Maximum Diagonal Distortion: 1/16 in measured with straight edge, corner to corner.

Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion.

- Standards. 5-ply or 7-ply Wood Veneer Faced Doors, unless otherwise indicated on Drawings.
- Interior Doors: 1-3/4 inches thick unless otherwise indicated; flush construction. Provide solid core doors at all locations

	Fire Rated Doors: Tested to ratings indicated on drawings in accordance with jurisdiction having authority; UL or WH (ITS) labeled without any visible seals when door is open. Sound Retardant Doors: Minimum STC as indicated on drawings, calculated in accordance with ASTM E413, tested in accordance with ASTM E1408.			
	Non-Rated Solid Core and 20 Minute Rated Doors: Particleboard core, Type PC, plies and faces as indicated on Drawings. Fire Rated Doors: Mineral core, Type FD, plies and faces as indicated on Drawings; with core blocking as			
	required to provide adequate anchorage of hardware without through-bolting. Sound Retardant Doors: Equivalent to Type PC construction with core as required to achieve rating specified; plies and faces as indicated on Drawings.			
	Wood Veneer Facing for Transparent Finish: As indicated on Drawings. Hardboard Facing for Opaque Finish: AHA A135.4, Class 1 - Tempered, S2S (smooth two sides) hardboard composition face. 1/8 inch thick			
	Package, deliver and store doors in accordance with specified quality standard. Protect doors with resilient packaging sealed with heat shrunk plastic. Do not store in damp or wet areas; or			
	In areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer if stored more than one week. Break seal on site to permit ventilation. Provide manufacturer's warranty for the life of the installation.			
	Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction. Fabricate doors in accordance with door quality standard specified.			
	Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions. Provide edge clearances in accordance with the quality standard specified.			
	Install doors in accordance with manufacturer's instructions and specified quality standard. Install fire-rated doors in accordance with NFPA 80 requirements. Use machine tools to cut or drill for hardware.			
	Coordinate installation of doors with installation of frames and hardware.			
,	Manufacturers: Acudor Products Inc, Milcor, or equal. Door and Frame Units: Steel factory fabricated, fully assembled units with corner joints welded, filled, and ground flush: square and without rack or wars: coordinate requirements with assemblies units are to be			
	Verify that rough openings are correctly sized and located.			
	Install frames plumb and level in openings. Secure rigidly in place. Position units to provide convenient access to the concealed work requiring access.			
стю	N 08 71 00 - DOOR HARDWARE Coordinate the manufacture, fabrication, and installation of products onto which door hardware will be			
	Installed. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.			
	Convey Owner's keying requirements to manufacturers. Provide all hardware specified or required to make doors fully functional, compliant with applicable codes, and secure to the extent indicated.			
	Provide all items of a single type of the same model by the same manufacturer. Provide products that comply with the following: Applicable provisions of federal, state, and local codes.			
	ANSI/ICC A117.1, American National Standard for Accessible and Usable Buildings and Facilities. Applicable provisions of NFPA 101, Life Safety Code. Fire-Rated Doors: NFPA 80.			
	All Hardware on Fire-Rated Doors : Listed and classified by UL as suitable for the purpose specified and indicated. Hardware for Smoke and Draft Control Doors: Provide bardware that enables door assembly to comply with			108
	air leakage requirements of the applicable code. Products Requiring Electrical Connection: Listed and classified by UL as suitable for the purpose specified and indicated	S		AO 64
	Electrically Operated and/or Controlled Hardware: Provide all power supplies, power transfer hinges, relays, and interfaces required for proper operation; provide wiring between hardware and control components and	μЩ		
	Verify that doors and frames are ready to receive work; labeled, fire-rated doors and frames are present and properly installed, and dimensions are as instructed by the manufacturer.			<b>/E, IN</b> AS C
	Verify that electric power is available to power operated devices and of the correct characteristics. Install hardware in accordance with manufacturer's instructions and applicable codes. Use templates provided by hardware item manufacturer.	Z   山		KANS
	Do not install surface mounted items until finishes applied to substrate are complete. Install hardware on fire-rated doors and frames in accordance with code and NFPA 80. Mounting heights for hardware from finished floor to center line of hardware item:	Ш С	Dr. 086	ABO
	For steel doors and frames: Comply with DHI "Recommended Locations for Architectural Hardware for Steel Doors and Frames." For wood doors: Comply with DHI "Recommended Locations for Architectural Hardware for Wood Flush		Valtor 10 64	<b>COLL</b> STRI
	Doors." Adjust work under provisions of Section 01 70 00. Adjust hardware for smooth operation.	N SH	Sam V nmit, N	SIGN LNUT 3363
стю	Adjust gasketing for complete, continuous seal; replace if unable to make complete seal.	Ш С С С	1 NE s Sun	<b>T DE</b>
_	Single Vision Glazing: Fully tempered float glass, clear tint, ¼ inch thickness. Applications: All interior glazing unless otherwise indicated. Fire-Rated Safety Glazing: Glass-ceramic safety glazing ¼ inch thickness, fire rating as indicated on	E N	104 Lee	HIV 161 816
	Drawings. Applications: Provide this type of glazing in the following locations: NONE Single Safety Glazing: Non-fire-rated fully tempered float glass, clear tint 1/ inch thickness			
	Applications: Provide this type of glazing in the following locations: FULFILLMENT ROOM Glazed lights in doors, except fire doors.	seal/signature		ve, inc.
	Other locations indicated on the drawings.			
	Annealed Type: ASTM C1036, Type I, transparent flat, Class 1 clear, Quality Q3 (glazing select). Heat-Strengthened and Fully Tempered Types: ASTM C1048.	A.S.	OT WIS	CUL I
	Silicone Sealant : Single component; neutral curing; capable of water immersion without loss of properties;		BOWLING, JR NULBER	1×1
	non-bleeding, non-staining; ASTM C920, Type S, Grade NS, Class 25, Uses M, A, and G; cured Shore A hardness of 15 to 25; color as selected. Setting Blocks: Neoprene, 80 to 90 Shore A durometer hardness, ASTM C864 Option I. Length of 0.1 inch	No. of Street,	ARCHITEC	C. Martin
	for each square foot of glazing or minimum 4 inch x width of glazing rabbet space minus 1/16 inch x height to suit glazing method and pane weight and area. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness, ASTM C864 Option I. Minimum 3 inch		05.0	1.2020
	long x one half the height of the glazing stop x thickness to suit application, self adhesive on one face. Glazing Tape: Preformed butyl compound with integral resilient tube spacing device; 10 to 15 Shore A durometer hardness; coiled on release paper; black color.	project num	ıber	2020-017
	Glazing Clips: Manufacturer's standard type. Verify that openings for glazing are correctly sized and within tolerance. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede	date		05.01.2020
	moisture movement, weeps are clear, and ready to receive glazing. Prime surfaces scheduled to receive sealant. Install sealants in accordance with ASTM C1193 and FGMA Sealant Manual.	issued for		PFRMIT
TAL	Install sealant in accordance with manufacturer's instructions. LATION - INTERIOR DRY METHOD (TAPE AND TAPE) Cut glazing tape to length and set against permanent stops, projecting 1/16 inch (1.6 mm) above sight line.	rev date	e de	escription
	Place setting blocks at 1/4 points with edge block no more than 6 inches from corners. Rest glazing on setting blocks and push against tape for full contact at perimeter of pane or unit. Place glazing tape on free perimeter of glazing in same manner described above.			
TAL	Install removable stop without displacement of tape. Exert pressure on tape for full continuous contact. Knife trim protruding tape. LATION - INTERIOR WET METHOD (COMPOUND AND COMPOUND)			
	Install glazing resting on setting blocks. Install applied stop and center pane by use of spacer shims at 24 inch centers, kept 1/4 inch below sight line.			
ΤΑΙ	Fill gaps between glazing and stops with glazing compound until flush with sight line. Tool surface to straight line.			
	Install plastic film with adhesive, applied in accordance with film manufacturer's instructions. Place without air bubbles, creases or visible distortion. Fit tight to glass perimeter with razor cut edge			
ANI	NG AND PROTECTION Remove glazing materials from finish surfaces. Remove labels after Work is complete			
	Clean glass and adjacent surfaces. After installation, mark pane with an 'X' by using removable plastic tape or paste; do not mark heat absorbing or reflective glass units			
стю	N 08 83 00 - MIRRORS Mirror Glass - General: Select materials and/or provide supports on required to limit mirrors distance	SPEC	IFICA	TIONS
	deflection to 1/200 or flexure limit of glass with full recovery of glazing materials, whichever is less. Mirror Glass: ASTM C1036, Type 1 transparent flat, Class 1 clear, Quality Q1 (mirror select); silvering,			
	Install mirrors in accordance with GANA recommendations. Set mirrors plumb and level, free of optical distortion.	sheet number		
	Remove labels after work is complete.			

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Clean mirrors and adjacent surfaces.

After installation, mark pane with an 'X' by using removable plastic tape or paste.

12.

SECTI	ON 09 21 16 - GYPSUM BOARD ASSEMBLIES Provide completed assemblies complying with ASTM C840 and GA-216.	SECT 1.	ION 09 90 00 - PAINTING AND COATING Scope: Finish all interior and exterior surfac
2.	Interior Partitions Indicated as Sound-Rated: STC as indicated calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.	2.	otherwise indicated. Mechanical and Electrical: In finished areas
	assembly. Provide construction equivalent to that listed for the particular assembly in the current UL Fire Resistance Directory.	3.	unless otherwise indicated on Drawings. Do Not Paint or Finish the Following Items:
	Manufacturers - Metal Framing, Connectors, and Accessories: ClarkDietrich, Scafco, or equal. Non-Loadbearing Framing System Components: ASTM C645; galvanized sheet steel, of size and properties		materials and products having factory-applie receive other finishes. Items indicated to re
	necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf.		capacity labels, and operating parts of equip tiles. Glass. Acoustical materials, unless s
	Studs: "C" shaped with flat or formed webs . Runners: U shaped, sized to match studs.	4. 5.	Deliver products to site in sealed and labele Container Label: Include manufacturer's na
). ).	Ceiling Hangers: Type and size as specified in ASTM C754 for spacing required. Partition Head to Structure Connections: Provide mechanical anchorage devices that accommodate	6.	reducing. Paint Materials: Store at minimum ambient
	deflection using slotted holes, screws and anti-friction bushings, preventing rotation of studs while maintaining structural performance of partition. Maintain lateral load resistance and vertical movement capacity required	7.	ventilated area, and as required by manufac Do not apply materials when surface and an
	by applicable code, when evaluated in accordance with AISI North American Specification for the Design of Cold-Formed Steel Structural Members.	8.	by the paint product manufacturer. Follow manufacturer's recommended proce
	Material: ASTM A653/A653M steel sheet, SS Grade 50/340, with G60/2180 hot dipped galvanized coating. Provide components UL-listed for use in UL-listed fire-rated head of partition joint systems indicated on drawings. Deflection and Eirsten Track: Provide mechanical another and devices as described above that	9. 10	Provide lighting level of 80 ft candles measu Provide lighting level of 80 ft candles measu
	accommodate deflection while maintaining the fire-rating of the wall assembly. Manufacturers - Gypsum-Based Board: National Gypsum Company, USG Corporation or equal.	11.	exceptions. Provide all paint and coating products used
<u>.</u>	Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut. Application: Use for vertical surfaces and ceilings, unless otherwise	12. 13.	Paints and Coatings: Ready mixed, unless Provide paints and coatings of a soft paste
	indicated. At Assemblies Indicated with Fire-Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.	4.4	homogeneous coating, with good flow and b or sags.
	Vertical Surfaces: 5/8 inch. Ceilings: 1/2 inch	14.	run.
	Multi-Layer Assemblies: Thicknesses as indicated on drawings. Impact-Rated Wallboard: Tested to Level 3 soft-body and hard-body impact in accordance with ASTM C1629.	16.	described in manufacturer's product instruct Primers: Where the manufacturer offers op
	Application: High-traffic areas indicated. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.	17.	as "best" by the manufacturer. Volatile Organic Compound (VOC) Content:
	Type: Fire-resistance rated Type X, UL or WH listed. Thickness: 5/8 inch.	18.	Provide coatings that comply with the most s Subpart DNational Volatile Organic Compo
ŀ.	Backing Board For Wet Areas: Application: Surfaces behind tile in wet areas including tub and shower surrounds and shower ceilings. Glass-Mat-Faced Board: Coated glass mat water-resistant gypsum backing	19.	Colors: As indicated on Drawings. In finish
	panel as defined in ASTM C1178. Backing Board For Non-Wet Areas: Water-resistant gypsum backing board as defined in ASTM	20. 21.	Paint for Wood, Opaque: One coat of latex Paint for Wood, Transparent, Varnish, No S
	C1396/C1396M; sizes to minimum joints in place; ends square cut. Application: Vertical surfaces behind thinset tile, except in wet areas.	22.	Paint for Wood, Transparent, Varnish, Stain coat sealer. One coat of varnish.
	i ype. Regular and Type A, in locations indicated. Type X Thickness: 5/8 inch. Regular Board Thickness: 5/8 inch. Edges: Tapered	23. 24. 25	Paint for Ferrous Metals, Unprimed: One concerned to the Paint for Ferrous Metals, Unprimed: Touch up
	Ceiling Board: Special sag-resistant gypsum ceiling board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.	23. 26. 27.	Paint for Gypsum Board/Plaster: One coat Accessory Materials: Provide all primers
	Application: Ceilings, unless otherwise indicated. Thickness: 1/2 inch.		clean-up materials required to achieve the fi quality.
	Edges: Tapered. Acoustical Sound Dampening Wall and Ceiling Board: Two layers of heavy paper faced, high density gypsum	28. 29.	Patching Material: Latex filler. Fastener Head Cover Material: Latex filler.
	stud wall assemblies as calculated in accordance with ASTM E413 and when tested in accordance with ASTM E90.	30. 31.	Prepare surfaces thoroughly and correct defect Prepare surfaces using the methods recoming substrate under the project conditions
	Thickness: 1/2 inch. Long Edges: Tapered.	32.	Remove or mask surface appurtenances, in and fittings, prior to preparing surfaces or fir
	Mold Resistance: Score of 10, when tested in accordance with ASTM D3273. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced.	33. 34.	Seal surfaces that might cause bleed throug Remove mildew from impervious surfaces b
	Thickness: As shown in Drawings Acoustic Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board.	35.	Rinse with clean water and allow surface to Concrete and Unit Masonry Surfaces to be l
	High Build Drywall Surfacer: Vinyl acrylic latex-based coating for spray application, designed to take the place of skim coating and separate paint primer in achieving Level 5 finish		to dry. Remove stains caused by weatherin thoroughly wetting with water Allow to dry
	Screws for Attachment to Steel Members Less Than 0.03 inch In Thickness, to Wood Members, and to Gypsum Board: ASTM C1002; self-piercing tapping type.	36.	Gypsum Board Surfaces to be Painted: Fill repair.
	Screws for Attachment to Steel Members From 0.033 to 0.112 inch in Thickness: ASTM C954; steel drill screws for application of gypsum board to loadbearing steel studs.	37.	Galvanized Surfaces to be Painted: Remov coat of etching primer.
	Suspended Ceilings and Soffits: Space framing and furring members as indicated. Studs: Space studs as indicated. Extend partition framing to structure where indicated and to ceiling in other	ડ૪. ૧૦	SSPC-SP 3 (power tool cleaning) followed b Uncorroded Lincoated Steel and Iron Surface
	locations. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with	J9.	and rust. Where heavy coatings of scale ar sandblasting; clean by washing with solvent
	manufacturer's instructions. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs	40.	joints, bolts, and nuts are similarly cleaned. Shop-Primed Steel Surfaces to be Finish Pa
	and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to		Feather edges to make touch-up patches in surfaces. Re-prime entire shop-primed item
	и аск. Openings: Reinforce openings as required for weight of doors or operable panels, using not less than double studs at iambs.	41.	streaks, and sappy sections with sealer. Fil Back prime concealed surfaces before insta
	Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.	42.	Interior Wood Surfaces to Receive Transpar pitch streaks, and sappy sections with seale
	Acoustic Sealant: Install in accordance with manufacturer's instructions. Place one bead continuously on substrate before installation of perimeter framing members. Place continuous bead at perimeter of each layer	43.	between coats. Prime concealed surfaces wood Doors to be Field-Finished: Seal woo
	ot gypsum board. In non-fire-rated construction, seal around all penetrations by conduit, pipe, ducts, and rough-in boxes.	44.	Remove unfinished louvers, grilles, covers, paint separately.
	end joints, especially in highly visible locations. Install gypsum board parallel to framing, with ends and edges occurring over firm bearing.	45. 46. 47	Apply products in accordance with manufac Do not apply finishes to surfaces that are no Apply each coat to uniform appearance
	Fire-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing. Installation on Metal Framing: Use screws for attachment of all gypsum board .	48. 49.	Sand wood and metal surfaces lightly betwee Vacuum clean surfaces of loose particles.
	Curved Surfaces: Apply gypsum board to curved substrates in accordance with GA-226. Moisture Protection: Treat cut edges and holes in moisture resistant gypsum board with sealant.	50.	next coat. Wood to Receive Transparent Finishes: Tir
	Control Joints: Place control joints not more than 30 feet apart on walls and ceilings over 50 feet long, unless otherwise indicated on Drawings:	51.	Wipe excess from surface. Reinstall electrical cover plates, hardware, li finishing
	Finish gypsum board in accordance with levels defined in ASTM C840. Level 4: Walls and ceilings to receive paint finish or wall coverings unless otherwise indicated	SECT	
	Level 5: Walls and ceilings to receive semi-gloss or gloss paint finish and other areas specifically indicated. Level 2: In utility areas, behind cabinetry, and on backing board to receive tile finish.	1. 2.	Fire Extinguishers, Fire Extinguisher Cabine Fire Extinguishers - General: Comply with a
	Level 1: Fire rated wall areas above finished ceilings, whether or not accessible in the completed construction.	3.	is more stringent. Provide extinguishers lab Extinguisher Brackets: Formed steel, galva
	Level 0: Temporary partitions and surfaces indicated to be finished in later stage of project. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.	4. 5.	Install in accordance with manufacturer's ins Install cabinets plumb and level in wall open
	Where Level 5 finish is indicated, spray apply high build drywall surface over entire surface after joints have been properly treated; achieve a flat and tool mark-free finish	о. 7.	Place extinguishers and accessories in cabi
	Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet in any direction.	SECT 1.	ION 11 31 00 - RESIDENTIAL APPLIANCES Verify utility rough-ins are present and corre
١L	IENT BASE	2. 3.	Install in accordance with manufacturer's ins Anchor built-in equipment in place.
	Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints. Install base on solid backing. Bond tightly to wall and floor surfaces.	4. 5.	Adjust operating equipment to efficient opera Remove packing materials from equipment.
יד;	ON 09 72 00 - WALL COVERINGS	o.	ION 12 36 00 - COUNTERTOPS
- 1	Extra Materials: Deliver to Owner full-width rolls of wall covering equal to 5 percent of amount of each type installed, packaged with protective covering for storage.	1.	Maintain environmental conditions (tempera manufacturer for optimum results. Do not ir
	Adhesive: Type recommended by wall covering manufacturer to suit application to substrate. Substrate Filler, Primer and Sealer: As recommended by adhesive and wall covering manufacturers;	2.	manufacturer's absolute limits. Quality Standard: Premium Grade, in accord
	compatible with substrate. Verify that substrate surfaces are prime painted and ready to receive work, and conform to requirements of	3. 4.	Medium Density Fiberboard for Supporting S Adhesives: Chemical resistant waterproof a
	the wall covering manufacturer. Measure moisture content of surfaces using an electronic moisture meter. Do not apply wall coverings if moisture content of substrate exceeds level recommended by wall covering manufacturer.	5. 6	Joined. Fabricate tops and splashes in the largest s Join lengths of tops using best method reco
	Treat areas as necessary to ensure no pigment bleeding through wall covering. Apply adhesive and wall covering in accordance with manufacturer's instructions.	7.	Prepare all cutouts accurately to size; replace fixture holes.
	Apply wall covering smooth, without wrinkles, gaps or overlaps. Eliminate air pockets and ensure full bond to substrate surface. Butt edges tightly.	8.	Solid Surfacing: Fabricate tops up to 144 in accordance with manufacturer's recommended
	Install seams vertical and plumb. Horizontal seams are not acceptable. Do not seam within 2 inches of internal corners or within 6 inches of external corners.	9. 10.	Wall-Mounted Counters: Provide skirts, apr Do not begin installation until substrates hav
	where wail covering tucks into reveals, or metal wallboard or plaster stops, apply with contact adhesive within 6 inches of wall covering termination. Ensure full contact bond. Remove excess adhesive at finished seams, perimeter edges, and adjacent surfaces using cleaning methods.	11. 12	venity that wall surfaces have been finished proper locations. Clean surfaces thoroughly prior to installation
	recommended by wall covering manufacturer. Clean wall coverings of excess adhesive, dust, dirt, and other contaminants.	12. 13.	Prepare surfaces using the methods recomi substrate under the project conditions.
		14.	Securely attach countertops to cabinets usir required.
		15. 16.	Attach plastic laminate countertops using so Seal joint between back/end splashes and v
		17. 18. 10	Offset From Wall, Countertops: 1/8 inch in 10 fee Field Joints: 1/8 inch wide maximum
		20. 21.	Clean countertops surfaces thoroughly. Protect installed products until completion of
		22	Touch-up, repair or replace damaged produ

surfaces exposed to view, unless fully factory-finished and unless

areas, paint all insulated and exposed pipes, conduit, boxes, insulated collars and supports, mechanical equipment, and electrical equipment,

ems: Items fully factory-finished unless specifically so indicated; applied primers are not considered factory finished. Items indicated to to remain unfinished. Fire rating labels, equipment serial number and equipment. Floors, unless specifically so indicated. Ceramic and other ess specifically so indicated. Concealed pipes, ducts, and conduits. abeled containers; inspect to verify acceptability.

s name, type of paint, brand name, lot number, brand code, coverage, up requirements, color designation, and instructions for mixing and

bient temperature of 45 degrees F and a maximum of 90 degrees F, in nufacturer's instructions. nd ambient temperatures are outside the temperature ranges required

procedures for producing best results, including testing of substrates, nd temperature limitations.

neasured mid-height at substrate surface. used in any individual system from the same manufacturer; no

#### from the same manufacturer to the greatest extent possible. less intended to be a field-catalyzed coating.

aste consistency, capable of being readily and uniformly dispersed to a and brushing properties, and capable of drying or curing free of streaks

y required to complete entire project's work from a single production

r add materials to coatings unless such procedure is specifically

structions. options on primers for a particular substrate, use primer categorized

#### nost stringent requirements specified in the following: 40 CFR 59, ompound Emission Standards for Architectural Coatings. Architectural

ne project is located. finished areas, finish pipes, ducts, conduit, and equipment the same ed on/under.

latex primer sealer. Two coats of latex enamel. No Stain: One coat sealer.

Stain: Filler coat (for open grained wood only). One coat of stain. One

#### One coat of block filler. Two coats of alkyd enamel. ne coat of latex primer. Two coats of latex enamel.

ch-up with latex primer. Two coats of latex enamel. coat of latex primer. Two coats of latex enamel. ers, sealers, cleaning agents, cleaning cloths, sanding materials, and the finishes specified whether specifically indicated or not; commercial

defects prior to coating application. commended by the manufacturer for achieving the best result for the

es, including electrical plates, hardware, light fixture trim, escutcheons, or finishing.

rough or staining of topcoat. ces by scrubbing with solution of tetra-sodium phosphate and bleach.

ce to dry. o be Painted: Remove dirt, loose mortar, scale, salt or alkali powder, and grease with a solution of tri-sodium phosphate; rinse well and allow thering of corroding metals with a solution of sodium metasilicate after

: Fill minor defects with filler compound. Spot prime defects after

emove surface contamination and oils and wash with solvent. Apply

Painted: Prepare using at least SSPC-PC 2 (hand tool cleaning) or wed by SSPC-SP 1 (solvent cleaning). urfaces to be Painted: Remove grease, mill scale, weld splatter, dirt, ale are evident, remove by hand or power tool wire brushing or Ivent. Apply a treatment of phosphoric acid solution, ensuring weld

ned. Prime paint entire surface; spot prime after repairs. sh Painted: Sand and scrape to remove loose primer and rust. es inconspicuous. Clean surfaces with solvent. Prime bare steel

aque Finish: Wipe off dust and grit prior to priming. Seal knots, pitch Fill nail holes and cracks after primer has dried; sand between coats. installation.

nsparent Finish: Wipe off dust and grit prior to sealing, seal knots, sealer. Fill nail holes and cracks after sealer has dried; sand lightly ces with gloss varnish reduced 25 percent with thinner.

I wood door top and bottom edge surfaces with clear sealer. vers, and access panels on mechanical and electrical components and

#### nufacturer's instructions. re not dry. Allow applied coats to dry before next coat is applied.

between coats to achieve required finish. es. Use tack cloth to remove dust and particles just prior to applying

Tint fillers to match wood. Work fillers into the grain before set.

are, light fixture trim, escutcheons, and fittings removed prior to

### CIALTIES

abinets and Accessories: Ansul, Inc, Pyro-Chem, or equal. with product requirements of NFPA 10 and applicable codes, whichever labeled by UL for the purpose specified and indicated.

#### galvanized and enamel finished. r's instructions.

openings, 54 inches from finished floor to inside bottom of cabinet.

### cabinets and on wall brackets.

correctly located. r's instructions.

operation.

nent.

perature, humidity, and ventilation) within limits recommended by not install products under environmental conditions outside

ccordance with AWI/AWMAC/WI Architectural Woodwork Standards. ting Substrate: ANSI A208.2.

roof adhesive as recommended by manufacturer of materials being est sections practicable, with top surface of joints flush.

recommended by manufacturer. replace tops having improperly dimensioned or unnecessary cutouts or

44 inches long in one piece; join pieces with adhesive sealant in

#### mendations and instructions. aprons, brackets, and braces as indicated on drawings.

s have been properly prepared. shed and mechanical and electrical services and outlets are installed in

lation. commended by the manufacturer for achieving the best result for the

s using concealed fasteners. Make flat surfaces level; shim where ng screws with minimum penetration into substrate board of 5/8 inch.

and vertical surfaces. ) feet, maximum. h maximum; 1/16 inch minimum.

ion of project. Touch-up, repair or replace damaged products before Substantial Completion. SECTION 10 28 00 - TOILET, BATH, AND LAUNDRY ACCESSORIES Coordinate the work with the placement of internal wall reinforcement, concealed ceiling supports, and reinforcement of toilet partitions to receive anchor attachments. Grab Bars: Stainless steel, 1-1/4 inches outside diameter, minimum 0.05 inch wall thickness, nonslip grasping surface finish, concealed flange mounting; 1-1/2 inches clearance between wall and inside of grab

Install accessories in accordance with manufacturers' instructions. 3.

- Install plumb and level, securely and rigidly anchored to substrate. 4. Mounting Heights and Locations: As required by accessibility regulations and as indicated on drawings. 5.
- SECTION 12 21 13 HORIZONTAL LOUVER BLINDS
- Install blinds in accordance with manufacturer's instructions. Maximum Variation of Gap at Window Opening Perimeter: 1/4 inch.
- Maximum Offset From Level: 1/8 inch.

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- Adjust blinds for smooth operation.
- Clean blind surfaces just prior to occupancy





### FLOOR PLAN GENERAL NOTES:

- a. <u>U.N.O.</u> ALL WALL DIMENSIONS TO FACE OF STUD.
   b. ALL FURNITURE AND WALL HUNG SHELVING SHOWN FOR REFERENCE
- ONLY. c. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND EXISTING
- d. REFER TO MEP DRAWINGS FOR ALL PLUMBING/HVAC/ELECTRICAL
- e. <u>ALL</u>INTERIOR WALLS TO BE <u>TYPE 1</u> UNLESS OTHERWISE NOTED. SEE
- f. U.N.O., CONTRACTOR TO INSPECT EXISTING SLAB, MACHINE GRIND TO RECEIVE POLISHED FINISHES LEVEL & SMOOTH PRIOR TO
- CONSTRUCTION OF NEW WALLS..
   GYP. BD WALLS NOT TO EXCEED 30 FEET WITHOUT A CONTROL JOINT, UNDIVIDED GYP. BD SURFACES NOT TO EXCEED 900 S.F. OR AS OTHERWISE INDICATED
- h. ALL MISCELLANEOUS CARPENTRY AND WOOD BLOCKING TO BE FIRE
- TREATED.
   PATCH AND REPAIR EXISTING GYP. BD WALLS FOR PAINT READY FINISH.
   CONTRACTOR TO REPAIR ANY EXISTING FIRE RATED ASSEMBLY THAT IS DISTURBED DURING CONSTRUCTION TO ITS ORIGINAL FIRE RATING.
- k. PATCH ALL EXISTING WALLS WHERE ADJACENT WALLS AND/OR CASEWORK, EQUIPMENT, ETC. WERE REMOVED. PREPARE FOR PAINT FINISH.
- I. <u>U.N.O.,</u> ALL NEW WALLS TO ALIGN WITH ADJACENT, EXISTING WALLS TO PROVIDE SEAMLESS TRANSITION.
   m. CLEAN ALL EXISTING STOREFRONT & DOOR HEAD, JAMB, & SILLS.
- n. ALL TOILET ROOMS/BATHROOMS TO PROVIDE BLOCKING FOR GRAB BARS. REFER TO RESTROOM ADA STANDARD ELEVATIONS FOR HEIGHT
- AND LOCATIONS.
   <u>ALL</u> PENETRATIONS INTO FIRE-RATED ASSEMBLIES ARE TO BE FIRESTOPPED WITH UL APPROVED FIRESTOPPING ASSEMBLIES. UL
- INFORMATION SHALL BE PROVIDED BY TRADE RESPONSIBLE FOR PENETRATION.
   PROVIDE FIREBLOCKING AND DRAFTSTOPPING AS REQUIRED AND IN
- ACCORDANCE WITH 2012 IBC, SECTION 717.0.
- q. AT ALL DOORS TO REMAIN, CONTRACTOR TO REPLACE EXISTING HARDWARE WITH HARDWARE SET NOTED IN SPECIFICATIONS.
- r. <u>**U.N.O.,**</u> ALL EXTERIOR GLAZING TO RECEIVE TRANSLUCENT APPLIED FILM RE: SPECIFICATIONS.

#### FLOOR PLAN KEY NOTES:

- GLAZING TO RECEIVE SELF ADHERING TRANSLUCENT FILM APPLIED TO INTERIOR FACE OF GLASS. WINDOW COVERING TO COVER FULL EXTENT OF GLASS OBSCURING ANY VIEWS INTO THE BUILDING.
- 2 BUILT-IN WORK-SURFACE.
- (3) EXISTING PLUMBING FIXTURES TO REMAIN.
- 4 OWNER PROVIDED, CONTRACTOR INSTALLED TV AND BRACKET, BOTTOM OF TV TO BE MOUNTED RE: ELEVATIONS CONTRACTOR TO PROVIDE BLOCKING IN WALL.



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date		05.01.2020
issue	d for	PERMIT
rev	date	description

### FLOOR PLAN

sheet number





**REFLECTED CEILING PLAN GENERAL NOTES:** 

- a. REFER TO THE FINISH SCHEDULE FOR CEILING MATERIAL AND FINISH.
   b. NOTIFY ARCHITECT OF ANY DISCREPANCIES BETWEEN ELECTRICAL LIGHTING PLAN LAYOUT AND REFLECTED CEILING PLAN LAYOUT.
   c. REFER TO ELECTRICAL DRAWINGS FOR LIGHTING, CIRCUITING, AND SPECIFICATIONS. ARCHITECTURAL DRAWINGS GOVERN LIGHTING
- LOCATIONS.
  d. REFER TO MECHANICAL FOR DUCTWORK, DIFFUSERS, ETC.
  e. GC TO VERIFY ANY & ALL LIGHTING, FIRE SPRINKLER AND HVAC CONFLICTS PRIOR TO ANY BIDDING AND GRID MODIFICATIONS. NOTIFY ARCHITECT OF ISSUES.

### CEILING PLAN KEY NOTES:

- EXISTING GYP. BD. CEILING AND LIGHT FIXTURES TO REMAIN, PROTECT AS REQUIRED.
- 2 EXPOSED CEILING & STRUCTURE PAINTED, RE: FINISH SCHED.



FRESH GREEN - LEES SUMMIT	1041 NE Sam Walton Dr. Lees Summit, MO 64086	HIVE DESIGN COLLABORATIVE, INC. 1617 WALNUT STREET, KANSAS CITY, MO 64108 816.581.6363			
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project num	lber	2020-017			
date		05.01.2020			
issued for		PERMIT			
REFLECTED CEILING PLAN					
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, MO 64108 LEES **RATIVE, INC.** KANSAS CITY, I 

 FRESH GREEN

 SUMNT

 1041 NE Sam Walton Dr.

 1041 NE Sam Walton Dr.

 Lees Summit, MO 64086

 HIVE DESIGN COLLABORATIVE,

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 816.581.6363

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HIVE





### 02

### **BUILDING SECTION**

1/4" = 1'-0"



### 01 **BUILDING SECTION**

1/4" = 1'-0"















A50

DETAILS

sheet number

							F	FINISH SCHEDULE	
ROOM		FLOOR	BASE		WALL F	FINISH			
#	ROOM NAME	FINISH	FINISH	NORTH	EAST	SOUTH	WEST	CEILING FINISH	NOTES
001	WAITING	CONC	RB 01	P01 / P02	STOREFRONT	P01 / P02	P01 / P02	P02 - OPEN	
002	RETAIL	CONC	WD 01	P01 - COORD. ART	P02 - OPEN				
003	B.O.H.	CONC	RB 01	P01	P01	P01	P01	P02 - OPEN	
004	OFFICE	CONC	RB 01	P01	P01	P01	P01	P02 - OPEN	
005	FULFILLMENT /	CONC	RB 01	P02	P02	P02	P01 - COORD. ART	P02 - OPEN	
	SORTING / RECEIVING								
005b	VAULT	CONC	RB 01	BY OTHERS	BY OTHERS	BY OTHERS	BY OTHERS	BY OTHERS	
006	RR 1	CONC	RB 01	P01	P01	P04	P04	P01	
007	RR 2	CONC	RB 01	P04	P04	P01	P01	P01	

	FINISH LEGEND											
CODE	MATERIAL	MANUFACTURER	STYLE, COLOR, SIZE	NOTES								
CONC	CONCRETE		TRANSPARENT FINISH	GRIND SMOOTH AND FINISH EXISTING FLOORS								
RB01	RUBBER WALL BASE	ROPPE	4" COVE BASE, 177 STEEL BLUE	ROLL GOODS ONLY								
WD01	WOOD WALL BASE		PAINT TO MATCH WALL	1X4 RE: WALL ASSEMBLIES								
WD02	PLYWOOD		BALTIC BIRCH PLYWOOD									
WD03	MAPLE HARDWOOD		TRANSPARENT FINISH									
P01	PAINT	BENJAMIN MOORE	OC-57 - WHITE HERON	EGGSHELL, TYP. / SEMI-GLOSS IN RESTROOMS								
P02	PAINT	BENJAMIN MOORE	2140-30 - DARK OLIVE	EGGSHELL, TYP.								
P03	PAINT	BENJAMIN MOORE	2703-40 - PURPLE HYACINTH	EGGSHELL, TYP.								
P04	PAINT	BENJAMIN MOORE	2102-70 - FIRST LIGHT	EGGSHELL, TYP. / SEMI-GLOSS IN RESTROOMS								
CMP01	CORRUGATED MTL PANEL	MORIN	C-29 7/8" PANEL, PRE-WEATHERED & CLEAR FINISH	EXPOSED FASTENER								
PL01	LAMINATE	NAVAMAR	S6054T - WROUGHT IRON, TEXTURED	SATIN FINISH								
GRAF	GRAFFITI ART WALL	PER OWNER	PER SELECTED ARTIST	COORDINATE WITH OWNER & SELECTED ARTIST ON HOW TO PREPARE SURFACE								
WF01	VINYL WINDOW FILM	3M	FASARA SH2MLCRX, MILKY CRYSTAL (60" WIDTH - CONFIRM WIDTH)	APPLY TO INTERIOR FACE OF GLASS								

<u>NOTES</u>

REFERENCE ELEVATIONS ON SHEET A20 FOR ADDT'L INFORMATION REFERENCE PLAN & ELEVATIONS ON SHEET A40 FOR POS COUNTER FINISHES

3. PAINT FREESTANDING COLUMNS P03



### **GENERAL FINISH NOTES:**

- a. ALL FINISHES SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURERS LATEST WRITTEN SPECIFICATIONS AND INITIAL MAINTENANCE INSTRUCTIONS.
- b. NEW DRYWALL SURFACES SHALL RECEIVE (1) COAT OF PRIMER AND (2)
- FINISH COATS. INSTALLATION OF NEW FINISHES BY THE CONTRACTOR SHALL INDICATE C. ACCEPTANCE OF WALL AND FLOOR PREPARATION, AND FULL RESPONSIBILITY FOR COMPLETED WORK.
- d. CONTRACTOR SHALL SUBMIT TO TENANT, FOR REVIEW AND APPROVAL, SAMPLES OR DRAW DOWNS OF FINISHES AND MATERIALS SPECIFIED IN "FINISH SCHEDULE".
- EXISTING SUB FLOOR SHALL BE FLASH-PATCHED AT ALL AREAS WHERE e. FLOOR IS NOT LEVEL OR TRUE.
- f. GENERAL CONTRACTOR SHALL VERIFY WITH TENANT THE PLACEMENT OF ALL ATTIC STOCK OF NEW FINISH MATERIALS, I.E.: CARPET, VINYL COMPOSITION TILE, VINYL BASE, ETC. FOR TENANT STORAGE.
- ALL HOLLOW METAL DOOR AND INTERIOR WINDOW FRAMES TO BE PAINTED g. TO MATCH ADJACENT WALL, U.N.O. ALL EXISTING WOOD DOORS & FRAMES TO BE STRIPPED PAINTED h. ALL EXISTING WOOD SILL TRIM TO BE PREPPED AND PAINTED TO MATCH
- COLOR OF ADJACENT WALL NOT ALL FINISHES INDICATED ON FINISH PLAN. REFERENCE FINISH SCHEDULE. FURNITURE SHOWN FOR REFERENCE ONLY. NOT IN CONTRACTORS SCOPE.



FRESH GREEN - LEES SUMMIT	1041 NE Sam Walton Dr. Lees Summit, MO 64086	HIVE DESIGN COLLABORATIVE, INC.	1617 WALNUT STREET, KANSAS CITY, MO 64108 816.581.6363				
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#### HARDWARE BASIS OF DESIGN:

- 1. MK McKinney 2. PE - Pemko 3. SA - SARGENT 4. HS - HESv 5. RO - Rockwood 6. RF - Rixson
- 7. OT Other SU - Securitron

e <mark>t: 1.0</mark> pors: E001 escription: Exterior Single, Waiting - CR. R	Remote Release (Existing)			Set: 3.0 Doors: 002, 004 Description: Interior Single, B.O.H CR	3			<u>Set: 5.0</u> Doors: 001 Description: Interior Single, Retail - CF	3		
Hinge (stainless heavy weight)TRim Exit Device, Exit OnlyAElectric Strike9SMART Pac Bridge Rectifier2PullFSurface Closer1Kit5Threshold (thermal)2Rain Guard3Sweep3ElectroLynx Harness (frame)6Request to Exit8Card Reader9Power SupplyARemote Release9Wiring DiagramFDotes: Field verify products specified will fit operation:Door normally closed, latched and locked	T4A3386 NRP (size as required) AD8510 EO 9400-LBSM 2005M3 RM3101-24 Mtg-Type 12HD 1431 CPS 581-1/581-2 (as required) 253x3AFG 346C 3151CN QC-C_ (size as required) By Security DPS-M-BK AQD Series By Security Point to Point Wiring Diagram existing door/frame preps.	US26D MK 0871 US32D SA 0871 630 HS 0871 HS 0871 US32D RO 0871 EN SA 0871 PE 0871 PE 0871 PE 0871 PE 0871 OT OT SU 0871 OT OT SU 0871 OT OT	100 100 100 100 100 100 100 100 100 100	<ul> <li>2 Hinge, Full Mortise</li> <li>1 Hinge, Full Mortise</li> <li>1 Fail Secure Lock</li> <li>1 Surface Closer</li> <li>1 Armor Plate</li> <li>1 Wall Stop</li> <li>1 Gasketing</li> <li>1 ElectroLynx Harness (frame)</li> <li>1 ElectroLynx Harness (door)</li> <li>1 Card Reader</li> <li>1 Position Switch</li> <li>1 Power Supply</li> <li>1 Wiring Diagram</li> <li>Notes: Operation:</li> <li>1. Door normally closed and locked. Act</li> <li>2. Free egress from inside by depressin</li> <li>3. Request to exit switch in lever to sign</li> <li>4. Door position switch to signal door op</li> </ul>	TA2714 NRP (size as required) TA2714 QC12 (size as required) LX RX 8271 LNF 1431 O/P10 (as required) K1050 34" high CSK BEV 406/409 (as required) S88BL QC-C_ (size as required) QC-C_ (size as required) By Security DPS-M-BK AQD Series Point to Point Wiring Diagram	US26D MK US26D MK US26D SA EN SA US32D RO US26D RO PE MK MK OT SU SU OT	087100 087100 087100 087100 087100 087100 087100 087100 087100 087100	<ul> <li>2 Hinge, Full Mortise</li> <li>1 Hinge, Full Mortise</li> <li>1 Fail Secure Lock</li> <li>1 Surface Closer</li> <li>1 Kick Plate</li> <li>1 Gasketing</li> <li>1 Door Bottom</li> <li>1 ElectroLynx Harness (frame)</li> <li>1 ElectroLynx Harness (door)</li> <li>1 Card Reader</li> <li>1 Position Switch</li> <li>1 Power Supply</li> <li>1 Wiring Diagram</li> <li>Notes: Operation:</li> <li>1. Door normally closed and locked. A</li> <li>2. Free egress from inside by depress</li> <li>3. Request to exit switch in lever to sig</li> <li>4. Door position switch to signal door of</li> </ul>	TA2714 NRP (size as required) TA2714 QC12 (size as required) LX RX 8271 LNF 1431 CPS K1050 10" high CSK BEV S88BL 411APKL QC-C_ (size as required) QC-C_ (size as required) By Security DPS-M-BK AQD Series Point to Point Wiring Diagram	US26D MK US26D MK US26D SA EN SA US32D RO PE PE MK MK OT SU SU OT	087100 087100 087100 087100 087100 087100 087100 087100 087100 087100
ont desk. In the event of power failure door Free egress from the interior by depressir Contact switch in electric strike sends pos Request to exit signals authorized egress Door position switch signals door/open clo	r mechanically locks. ng inside push pad. sitive strike and latch status to access s to the access control system. losed to access control system.	control.		<u>Set: 4.0</u> Doors: 005 Description: Interior Single, Fulfillment -	CR, OH Stop			<u>Set: 6.0</u> Doors: 007 Description: Interior Single, B.O.H Res	stroom - Privacy, Indicator		
et: 2.0 pors: E002 escription: Exterior Single, BOH - Exit, CR Hinge (stainless heavy weight) T Rim Exit Device, Exit Only 8 Electric Strike 9 SMART Pac Bridge Rectifier 2 Pull F Surface Closer 1 Armor Plate K Threshold (thermal) 2 Rain Guard 3 Sweep 3	R, Remote Release T4A3386 NRP (size as required) 3810 EO 9400-LBSM 2005M3 RM3101-24 Mtg-Type 1431 CPS K1050 34" high CSK BEV 253x3AFG 346C 3151CN	US26D MK 0871 US32D SA 0871 630 HS 0871 HS 0871 12HD US32D RO EN SA 0871 US32D RO PE 0871 PE 0871 PE 0871	100 100 100 087100 100 087100 100 100	<ul> <li>2 Hinge, Full Mortise</li> <li>1 Hinge, Full Mortise</li> <li>1 Fail Secure Lock</li> <li>1 Conc Overhead Stop</li> <li>1 Surface Closer</li> <li>1 Kick Plate</li> <li>1 Gasketing</li> <li>1 ElectroLynx Harness (frame)</li> <li>1 ElectroLynx Harness (door)</li> <li>1 Card Reader</li> <li>1 Power Supply</li> <li>1 Wiring Diagram</li> </ul> Notes: Operation:	TA2714 NRP (size as required) TA2714 QC12 (size as required) LX RX 8271 LNF 6ADJ-X36 1431 O/P10 (as required) K1050 10" high CSK BEV S88BL QC-C_ (size as required) QC-C_ (size as required) By Security DPS-M-BK AQD Series Point to Point Wiring Diagram	US26D MK US26D MK US26D SA 630 RF EN SA US32D PE MK MK OT SU SU SU OT	087100 087100 087100 087100 087100 087100 087100 087100 087100 087100	<ul> <li>3 Hinge (stainless)</li> <li>1 Privacy Lock</li> <li>1 Surface Closer</li> <li>1 Mop Plate</li> <li>1 Kick Plate</li> <li>1 Wall Stop</li> <li>1 Gasketing</li> </ul> Set: 7.0 Doors: 006 Description: Interior Single, Public Res 3 Hinge (stainless) 1 Institutional Privacy 1 Surface Closer 1 Map Plate	TA2314 (size as required) V21 EMC 8265 LNF 1431 O/P10 (as required) K1050 6" high CSK BEV K1050 10" high CSK BEV 406/409 (as required) S88BL stroom - Keyed Privacy, Indicator TA2314 NRP (size as required) Lock DG1 V21 EMC 8257 LNF 1431 O/P10 (as required)	US26D MK US26D SA EN SA US32D RO US26D RO PE US26D MK US26D SA EN SA	087100 087100 087100 087100 087100 087100 087100 087100 087100
Request to ExitECard ReaderEPosition SwitchDPower SupplyARemote ReleaseEWiring DiagramF	By Security By Security DPS-M-BK AQD Series By Security Point to Point Wiring Diagram	OT OT SU 0871 SU 0871 OT OT	100 100	<ol> <li>Door normally closed and locked. Act</li> <li>Free egress from inside by depressin</li> <li>Request to exit switch in lever to sign</li> <li>Door position switch to signal door op</li> </ol>	cess is obtained by valid credential. Locks ng inside lever. nal authorized egress to the access contro pen/closed to the access control system.	sets mechanically loc ol system.	k during power failure.	Mop Plate     Mop Plate     Kick Plate     Wall Stop     Gasketing     Set: 8.0     Doors: 008	K1050 6" high CSK BEV K1050 10" high CSK BEV 406/409 (as required) S88BL	US32D RO US32D RO US26D RO PE	087100 087100 087100
otes: Field verify products specified will fit	existing door/frame preps.							Description: Vault Door			

	<u>Set: 3.0</u> Doors: 002, 004 Description: Interior Single, B.O.H CR				<u>Set: 5.0</u> Doors: 001 Description: Interior Single, Retail - CR			
US26D MK 087100 US32D SA 087100 630 HS 087100 HS 087100 US32D RO 087100 EN SA 087100 PE 087100 PE 087100 PE 087100 PE 087100 OT OT SU 087100 OT OT SU 087100	<ul> <li>2 Hinge, Full Mortise</li> <li>1 Hinge, Full Mortise</li> <li>1 Fail Secure Lock</li> <li>1 Surface Closer</li> <li>1 Armor Plate</li> <li>1 Wall Stop</li> <li>1 Gasketing</li> <li>1 ElectroLynx Harness (frame)</li> <li>1 ElectroLynx Harness (door)</li> <li>1 Card Reader</li> <li>1 Position Switch</li> <li>1 Power Supply</li> <li>1 Wiring Diagram</li> <li>Notes: Operation:</li> <li>1. Door normally closed and locked. Acce</li> <li>2. Free egress from inside by depressing</li> <li>3. Request to exit switch in lever to signa</li> <li>4. Door position switch to signal door ope</li> </ul>	TA2714 NRP (size as required) TA2714 QC12 (size as required) LX RX 8271 LNF 1431 O/P10 (as required) K1050 34" high CSK BEV 406/409 (as required) S88BL QC-C_ (size as required) QC-C_ (size as required) By Security DPS-M-BK AQD Series Point to Point Wiring Diagram	US26D MK US26D MK US26D SA EN SA US32D RO US26D RO PE MK MK OT SU SU SU OT	087100 087100 087100 087100 087100 087100 087100 087100 087100 087100 087100	<ul> <li>2 Hinge, Full Mortise</li> <li>1 Hinge, Full Mortise</li> <li>1 Fail Secure Lock</li> <li>1 Surface Closer</li> <li>1 Kick Plate</li> <li>1 Gasketing</li> <li>1 Door Bottom</li> <li>1 ElectroLynx Harness (frame)</li> <li>1 ElectroLynx Harness (door)</li> <li>1 Card Reader</li> <li>1 Position Switch</li> <li>1 Power Supply</li> <li>1 Wiring Diagram</li> <li>Notes: Operation:</li> <li>1. Door normally closed and locked. Ac</li> <li>2. Free egress from inside by depressir</li> <li>3. Request to exit switch in lever to sign</li> <li>4. Door position switch to signal door op</li> </ul>	TA2714 NRP (size as required) TA2714 QC12 (size as required) LX RX 8271 LNF 1431 CPS K1050 10" high CSK BEV S88BL 411APKL QC-C_ (size as required) QC-C_ (size as required) By Security DPS-M-BK AQD Series Point to Point Wiring Diagram	US26D MK US26D MK US26D SA EN SA US32D RO PE PE MK MK OT SU SU SU OT	087100 087100 087100 087100 087100 087100 087100 087100 087100 087100
s control.	<u>Set: 4.0</u> Doors: 005 Description: Interior Single, Fulfillment - C	CR, OH Stop			<u>Set: 6.0</u> Doors: 007 Description: Interior Single, B.O.H Rest	room - Privacy, Indicator		
US26D MK 087100 US32D SA 087100 630 HS 087100 HS 087100 12HD US32D RO 087100 EN SA 087100	<ul> <li>2 Hinge, Full Mortise</li> <li>1 Hinge, Full Mortise</li> <li>1 Fail Secure Lock</li> <li>1 Conc Overhead Stop</li> <li>1 Surface Closer</li> <li>1 Kick Plate</li> <li>1 Gasketing</li> <li>1 ElectroLynx Harness (frame)</li> <li>1 ElectroLynx Harness (door)</li> <li>1 Card Reader</li> <li>1 Position Switch</li> <li>1 Power Supply</li> </ul>	TA2714 NRP (size as required) TA2714 QC12 (size as required) LX RX 8271 LNF 6ADJ-X36 1431 O/P10 (as required) K1050 10" high CSK BEV S88BL QC-C_ (size as required) QC-C_ (size as required) By Security DPS-M-BK AQD Series	US26D MK US26D MK US26D SA 630 RF EN SA US32D PE MK MK OT SU SU	087100 087100 087100 087100 087100 087100 087100 087100 087100 087100 087100	<ul> <li>Hinge (stainless)</li> <li>Privacy Lock</li> <li>Surface Closer</li> <li>Mop Plate</li> <li>Kick Plate</li> <li>Wall Stop</li> <li>Gasketing</li> </ul> Set: 7.0 Doors: 006 Description: Interior Single, Public Rest	TA2314 (size as required) V21 EMC 8265 LNF 1431 O/P10 (as required) K1050 6" high CSK BEV K1050 10" high CSK BEV 406/409 (as required) S88BL	US26D MK US26D SA EN SA US32D RO US32D RO US26D RO PE	087100 087100 087100 087100 087100 087100
US32D RO 087100 PE 087100 PE 087100 PE 087100 OT OT SU 087100 SU 087100 SU 087100	<ol> <li>Wiring Diagram</li> <li>Notes: Operation:</li> <li>1. Door normally closed and locked. Acce</li> <li>2. Free egress from inside by depressing</li> <li>3. Request to exit switch in lever to signa</li> <li>4. Door position switch to signal door ope</li> </ol>	Point to Point Wiring Diagram ess is obtained by valid credential. Locks inside lever. I authorized egress to the access contro en/closed to the access control system.	OT sets mechanically loc ol system.	ck during power failure.	<ul> <li>Hinge (stainless)</li> <li>Institutional Privacy</li> <li>Surface Closer</li> <li>Mop Plate</li> <li>Kick Plate</li> <li>Wall Stop</li> <li>Gasketing</li> </ul>	TA2314 NRP (size as required) Lock DG1 V21 EMC 8257 LNF 1431 O/P10 (as required) K1050 6" high CSK BEV K1050 10" high CSK BEV 406/409 (as required) S88BL	US26D MK US26D SA EN SA US32D RO US32D RO US26D RO PE	087100 087100 087100 087100 087100 087100
	US26D MK 087100 G30 HS 087100 HS 087100 US32D RO 087100 EN SA 087100 PE 087100 PE 087100 PE 087100 MK 087100 OT OT SU 087100 OT OT SU 087100 OT OT SU 087100 SU 087100 SU 087100 CT OT SU 087100 OT OT SU 087100 OT OT SU 087100 OT OT SU 087100 OT OT SU 087100 OT OT SU 087100 OT OT SU 087100 OT OT SU 087100 CT OT SU 087100 HS 087100 HS 087100 HS 087100 HS 087100 PE 087100 OT OT SU 087100 OT OT SU 087100 PE 087100 P	Set: 3.0 Doors: 002, 004 Description: Interior Single, B.O.H CRUS26D US32D SA0871002Hinge, Full Mortise 1Hinge, Full Mortise1Fail Secure Lock 1HS0871001Sauface CloserUS32D EN SA0871001Gasketing 1EN SA0871001Gasketing 1EN SA0871001Casketing 1PE OB71001Casketing 1PE OT OT01Casketing 1NK OT OT01Casketing 1NK OT OT01Casketing 1OT OT01Casketing 1Su OS710001Casketing 1NK OT OT01Casketing 1Su OS710001Casketing 1Su OT OT01Doors: 005 Description: Interior Single, Fulfillment - CSec control.1Set: 4.0 Doors: 005 Description: Interior Coser 1US26D Sa OS100087100 11US28D SA OS100087100 11US28D SA OS100087100 11US28D SA OS100087100 11US28D SA OS100087100 11US28D SA OS100087100 11EN SA OS100087100 11EN SA OS100087100 11EN OS200087100 11E	Set: 3.0 Doors: 002, 004 Description: Interior Single, B.O.H CRUS26D MK US32D SA 630 HS HS 0571002Hinge, Full Mortise Fail Secure LockTA2714 NRP (size as required) 11Hinge, Full Mortise Fail Secure LockLX RX 82711 NF 12Hinge, Full Mortise Fail Secure LockLX RX 82714 OC12 (size as required) 12Hinge, Full Mortise Fail Secure LockLX RX 8271 NF 12Name Lock A mor PlateLX RX 8271 NF 12Name Lock A mor PlateLX RX 8271 NF 12Name Lock A mor PlateLX RX 8271 NF 12Name Lock A mor PlateCose of the Access (dorn) 42Name Lock C-C (size as required)12Name Lock A mor PlateSasetting 12Name Lock C-C (size as required)12Name Lock C-C (size as required)13Notes: Operation: 1Door normally closed and locked. Access is obtained by valid credential. Locks 2. Free egress from inside by depressing inside lever. 3. Request to exit switch in lever to signal authorized egress to the access control 4. Door operations: Mich to Bignal door oper/closed to the access control system.as sold by valid credential or remote release from21ss control.Doors: 005 Description: Interior Single, Fulfiliment - CR, OH Stop2Marge, Full Mortise 1TA2714 NRP (size as required) 13Surface Closer 114310/P10 (as required) 14Notes: Operation: 111 <td< td=""><td>Stat 24 Doors: 002, 004 Doors: 002, 004 Description: Interior Single, B.O.H CR         US22D       MK       087100       2       Hinge, Full Motise       TA2714 NPP (size as required)       US22D MK         US32D       NS       087100       1       Fail Secure Look       LX RN erequired)       US22D MK         US32D       NS       087100       1       Fail Secure Look       LX RN Seriel       US32D NS         US32D       NS       087100       1       Fail Secure Look       LX RN Seriel       US32D NS         EN       SA       087100       1       Gasketing       S88BL       US32D NS       US32D NS         EN       SA       087100       1       Gasketing       S88BL       OC-C (size as required)       MK         VMK       087100       1       Electolymx Harness (fram)       OC-C (size as required)       MK         VMK       087100       1       Pestion Switch       DPS-M-4RK       SU         VI       07       1       Power Supply       AQD Series       SU         VI       071       1       Power Supply       AQD Series       SU         VI       087100       1       Request to suit witch inlever to signal authorized gress to the access control system.</td><td>Set: 93 Description: Interior Single, B.O.H CR         US28D MK       087100       2       Hinge, Full Mortise TA2714 NCP (size as required)       US28D MK       087100         US28D MK       087100       1       Hinge, Full Mortise TA2714 ACC12 (size as required)       US28D MK       087100         US28D MK       087100       1       Fail Secure Lock       LX RX 8271 LWT       US28D MK       087100         US28D MK       087100       1       Suface Closer       145100       EN       No.       087100         US28D MK       087100       1       Suface Closer       145100       EN       No.       087100         US28D MK       087100       1       Gastering       Stating       Stating       Stating       Stating       Stating         US28D MK       087100       1       Electrolynk Hamess (frame)       OC-C, (size as required)       MK 087100       MK 087100         OT       1       Postion Swhtch       DFS McH2       Stating       Stating       Stating         OT       1       Postion Swhtch       DFS McH2       Stating       Stating       Stating         OT       1       Postion Swhtch       DFS McH2       Stating       Stating       Stating       Stating     <td>US2D V3500 SN SN SN SN SN SN SN SN SN SN SN SN SN</td><td>US200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS100     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS100     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     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Set: 93 Description: Interior Single, B.O.H CR         US28D MK       087100       2       Hinge, Full Mortise TA2714 NCP (size as required)       US28D MK       087100         US28D MK       087100       1       Hinge, Full Mortise TA2714 ACC12 (size as required)       US28D MK       087100         US28D MK       087100       1       Fail Secure Lock       LX RX 8271 LWT       US28D MK       087100         US28D MK       087100       1       Suface Closer       145100       EN       No.       087100         US28D MK       087100       1       Suface Closer       145100       EN       No.       087100         US28D MK       087100       1       Gastering       Stating       Stating       Stating       Stating       Stating         US28D MK       087100       1       Electrolynk Hamess (frame)       OC-C, (size as required)       MK 087100       MK 087100         OT       1       Postion Swhtch       DFS McH2       Stating       Stating       Stating         OT       1       Postion Swhtch       DFS McH2       Stating       Stating       Stating         OT       1       Postion Swhtch       DFS McH2       Stating       Stating       Stating       Stating <td>US2D V3500 SN SN SN SN SN SN SN SN SN SN SN SN SN</td> <td>US200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS100     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS100     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     Hings, Full Motive Description, Interce Single,</td> <td>US2D US2D EN EXP EN EXP EN EXP EN EXP EN EXP EN EXP EN EXP EN EXP EN EXP EN EXP ENDED EXP E</br></td>	US2D V3500 SN SN SN SN SN SN SN SN SN SN SN SN SN	US200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS100     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     MS200     MS100     0710     1     Hings, Full Motive Description, Interce Single, Rout - Cr.     Hings, Full Motive Description, Interce Single,	US2D US2D 

Operation:

1. Door normally closed, latched and locked. Access is obtained from the secure side by valid credential or remote release from

front desk. In the event of power failure door mechanically locks. 2. Free egress from the interior by depressing inside push pad.

3. Contact switch in electric strike sends positive strike and latch status to access control.

4. Request to exit signals authorized egress to the access control system. 5. Door position switch signals door/open closed to access control system.

## HARDWARE SCHEDULE

1/4" = 1'-0"

DOOR SCHEDULE												
DOOR FRAME DETA		TAILS										
DOOR								HDWR				
TYPE	WIDTH	HEIGHT	FINISH	TYPE	FINISH	HEAD	JAMB	SET	NOTES			
В	3' - 0"	7' - 0"	PAINT	F1	PAINT TO MATCH	3/A65	2/A65	05	CONTROLLED BY CARD ONLY			
В	3' - 0"	7' - 0"	PAINT	F1	PAINT TO MATCH	3/A65	2/A65	03	CONTROLLED BY CARD ONLY			
В	3' - 0"	7' - 0"	PAINT	F1	PAINT TO MATCH	3/A65	2/A65	03	CONTROLLED BY CARD ONLY			
В	3' - 0"	7' - 0"	PAINT	F1	PAINT TO MATCH	3/A65	2/A65	04	CONTROLLED BY CARD ONLY			
EXIST.	3' - 0"	7' - 0"	PAINT	EXIST	PAINT TO MATCH	EXIST.	EXIST.	07	BATHROOM LOCK			
EXIST.	3' - 0"	7' - 0"	PAINT	EXIST	PAINT TO MATCH	EXIST.	EXIST.	06	BATHROOM LOCK			
С	3' - 0"	7' - 0"	N/A	N/A	N/A	<b>BY OWNER</b>	BY OWNER	08	COORDINATE WIRING LOCATION FOR SECURITY DEVICES WITH VAULT MANUFACTURE			
EXIST.	3' - 0"	8' - 0"	N/A	N/A	N/A	STRFNT	STRFRNT	01	CARD ACCESS & VIDEO INTERCOM DOOR RELEASE FROM FRONT DESK			
EXIST.	3' - 0"	7' - 0"	P02	EXIST.	PAINT TO MATCH	EXIST.	EXIST.	02	CARD ACCESS & VIDEO INTERCOM DOOR RELEASE FROM FRONT DESK			
	DOOR TYPE B B B B EXIST. EXIST. EXIST. EXIST.	DOOR TYPE WIDTH B 3'-0" B 3'-0" B 3'-0" B 3'-0" EXIST. 3'-0" EXIST. 3'-0" EXIST. 3'-0" EXIST. 3'-0" EXIST. 3'-0"	DOOR TYPE         WIDTH         HEIGHT           B         3' - 0"         7' - 0"           EXIST.         3' - 0"         7' - 0"           C         3' - 0"         7' - 0"           EXIST.         3' - 0"         8' - 0"           EXIST.         3' - 0"         7' - 0"	DOOR           DOOR         WIDTH         HEIGHT         FINISH           B         3' - 0"         7' - 0"         PAINT           EXIST.         3' - 0"         7' - 0"         PAINT           C         3' - 0"         7' - 0"         PAINT           EXIST.         3' - 0"         7' - 0"         N/A           EXIST.         3' - 0"         8' - 0"         N/A           EXIST.         3' - 0"         8' - 0"         N/A	DOOR         MIDTH         HEIGHT         FINISH         TYPE           B         3' - 0"         7' - 0"         PAINT         F1           B         3' - 0"         7' - 0"         PAINT         F1           B         3' - 0"         7' - 0"         PAINT         F1           B         3' - 0"         7' - 0"         PAINT         F1           B         3' - 0"         7' - 0"         PAINT         F1           B         3' - 0"         7' - 0"         PAINT         F1           B         3' - 0"         7' - 0"         PAINT         F1           EXIST.         3' - 0"         7' - 0"         PAINT         EXIST           C         3' - 0"         7' - 0"         PAINT         EXIST           C         3' - 0"         7' - 0"         N/A         N/A           EXIST.         3' - 0"         8' - 0"         N/A         N/A           EXIST.         3' - 0"         8' - 0"         N/A         N/A	DOOR TYPEFRAMEDOOR TYPEWIDTHHEIGHTFINISHTYPEFINISHB3'-0"7'-0"PAINTF1PAINT TO MATCHB3'-0"7'-0"PAINTF1PAINT TO MATCHB3'-0"7'-0"PAINTF1PAINT TO MATCHB3'-0"7'-0"PAINTF1PAINT TO MATCHB3'-0"7'-0"PAINTF1PAINT TO MATCHB3'-0"7'-0"PAINTEXISTPAINT TO MATCHEXIST.3'-0"7'-0"PAINTEXISTPAINT TO MATCHC3'-0"7'-0"N/AN/AN/AEXIST.3'-0"8'-0"N/AN/AN/AEXIST.3'-0"7'-0"PO2EXIST.PAINTTO MATCH	DOOR TYPEDOOR WIDTHHEIGHTFINISHTYPEFINISHHEADB3'-0"7'-0"PAINTF1PAINT TO MATCH3/A65B3'-0"7'-0"PAINTF1PAINT TO MATCH3/A65B3'-0"7'-0"PAINTF1PAINT TO MATCH3/A65B3'-0"7'-0"PAINTF1PAINT TO MATCH3/A65B3'-0"7'-0"PAINTF1PAINT TO MATCH3/A65EXIST.3'-0"7'-0"PAINTEXISTPAINT TO MATCHEXIST.EXIST.3'-0"7'-0"PAINTEXISTPAINT TO MATCHEXIST.C3'-0"7'-0"N/AN/AN/ABY OWNEREXIST.3'-0"8'-0"N/AN/AN/ASTRFNTEXIST.3'-0"7'-0"PO2EXIST.PAINT TO MATCHEXIST.	DOOR SCHEIRDOOR TYPEWIDTHHEIGHTFINISHTYPEFINISHHEADJAMBB3'-0"7'-0"PAINTF1PAINT TO MATCH3/A652/A65B3'-0"7'-0"PAINTF1PAINT TO MATCH3/A652/A65B3'-0"7'-0"PAINTF1PAINT TO MATCH3/A652/A65B3'-0"7'-0"PAINTF1PAINT TO MATCH3/A652/A65B3'-0"7'-0"PAINTF1PAINT TO MATCH3/A652/A65EXIST.3'-0"7'-0"PAINTF1PAINT TO MATCHEXIST.EXIST.EXIST.3'-0"7'-0"PAINTEXISTPAINT TO MATCHEXIST.EXIST.C3'-0"7'-0"PAINTEXISTPAINT TO MATCHEXIST.EXIST.C3'-0"7'-0"N/AN/AN/ABY OWNERBY OWNEREXIST.3'-0"8'-0"N/AN/AN/ASTRFNTSTRFRNTEXIST.3'-0"7'-0"PO2EXIST.PAINT TO MATCHEXIST.EXIST.	DOOR SCHEDULEDOOR TYPENIDTHHEIGHTFINISHTYPEFRAMEDETLISHBUWR SETB3'-0"7'-0"PAINTTYPEFINISHHEADJAMBNOTB3'-0"7'-0"PAINTF1PAINT TO MATCH3/A652/A6503B3'-0"7'-0"PAINTF1PAINT TO MATCH3/A652/A6503B3'-0"7'-0"PAINTF1PAINT TO MATCH3/A652/A6504B3'-0"7'-0"PAINTF1PAINT TO MATCH3/A652/A6504EXIST.3'-0"7'-0"PAINTF1PAINT TO MATCH3/A652/A6504EXIST.3'-0"7'-0"PAINTF1PAINT TO MATCHSIAST.EXIST.07EXIST.3'-0"7'-0"PAINTEXISTPAINT TO MATCHEXIST.EXIST.06C3'-0"7'-0"PAINTEXISTPAINT TO MATCHEXIST.EXIST.06C3'-0"7'-0"N/AN/AN/ABY OWNERBY OWNER08EXIST.3'-0"8'-0"N/AN/AN/ASTRFNT01EXIST.3'-0"7'-0"PO2EXIST.PAINT TO MATCHEXIST.EXIST.EXIST.02			

b.

 DOOR GENERAL NOTES:

 a.
 ALL NEW WOOD DOORS TO BE PLAIN SLICED RED OAK &

PRIMED FOR PAINT.

ALL EXISTING DOORS NOT INDICATED IN DOOR SCHEDULE BUT SHOWN ON PLANS TO REMAIN ARE TO BE STRIPPED,

FILLED AS NECESSARY, AND FINISHED PER SCHEDULE CONTRACTOR TO COORDINATE KEYING WITH THE BUILDING

MANAGER.





COORD. WITH <sup>1</sup> PARTITION TYPE

RE: ASSEMBLY

1 Hardware

1 - JAMB



1 - HEAD





### DOOR TYPE:





### FRAME TYPE:



### WINDOW TYPE:



power failure.

By Door/Frame Provider

OT

#### SHIM, PAINT TO MATCH WALL

CAULK EA. SIDE 1X EA. SIDE

GLASS DOOR HINGES & PATCH LOCK
(2) CARDIFF HINGES TOP & BOTTOM 3/8" CRL #CAR01
(1) AMR SERIES PATCH LOCK - 3/8" CRL AMR205A

10mm GLAZING

SHIM, PAINT TO MATCH WALL CAULK EA. SIDE 1X EA. SIDE

RUBBER DRYSEAL 1" GLAZING



**JAMB AND HEAD DETAILS** 



FRESH GREEN - LEES SUMMIT	1041 NE Sam Walton Dr. Lees Summit, MO 64086	HIVE DESIGN COLLABORATIVE, INC. 1617 WALNUT STREET, KANSAS CITY, MO 64108 816.581.6363						
COPYRIGHT © 2 HIVE DESIGN CO	019 DLLABORATIV	/E, INC.						
seal/signature								
project numb	per	2020-017						
date		05.01.2020						
issued for		PERMIT						
rev date	de	scription						

### SCHEDULES & DETAILS

sheet number

A65

#### DIVISION 22, 23 AND 26 GENERAL PROVISIONS

- 1.0 DESCRIPTION:
- A. Divisions 21, 22, 23 and 26 shall be governed by all applicable provisions of the Contract Document.
- B. The Contractor shall furnish, install and connect all materials, equipment, apparatuses, and incidentals required for a complete and working installation. For all systems shown and required, the Contractor shall supply all necessary labor, equipment, tools, insurance, and tax services, and shall assume full responsibility for all obligations associated with completion of work as provided by the Contract Documents.
- 2.0 STANDARDS, REGULATIONS AND CODES:
- A. Work shall comply with the edition of the applicable standards, regulations and codes currently in force of all Federal, State and local authorities having jurisdiction. Where quantities, sizes, or other requirements indicated on the drawings or herein specified are in excess of the standard or code requirements, the specifications and/or drawings shall govern. In the absence of other applicable local codes, acceptable to the Architect/Engineer, the International Set of Codes and Uniform Plumbing and the National Electrical Code shall apply to this work.
- B. The Contractor shall comply with rules and regulations of public utilities and municipal departments affected by connections of services. The Contractor shall pay all fees associated there with.
- C. The Contractor shall be licensed to perform associated work in the municipality in which the project is located. D. All products and types of construction shall meet or exceed the latest edition of applicable standards of manufacturer, testing, performance and installation.
- E. Where indicated or required, comply with all provisions of the ADA and/or the ABA Accessibility Guidelines.
- F. Where indicated or required, comply with all applicable provisions of energy and ventilation codes in force at the local jurisdiction.
- 3.0 GRAPHIC REPRESENTATION AND JOB CONDITIONS:
- A. The Contract Documents shall serve as working drawings for the general layout of the various items of equipment; are diagrammatic unless specifically dimensioned, and do not necessarily indicate every required item. The contractor shall include all necessary components and accessories as required for a complete working system whether so specifically indicated or not.
- B. Architectural and Structural drawings take precedence over all other drawings in the representation of the general construction work; any conflicts shall be resolved prior to commencing work. Failure to do so shall not be considered a basis for the granting of additional compensation.
- C. Arrange work in a neat, well organized manner. Coordinate work with other trades involved, prior to commencing work. Sub-contractors shall work together to resolve any conflicts of space or routing.
- 4.0 GUARANTEES/WARRANTY:
- A. The Contractor shall guarantee/warranty all work performed, including labor, materials and equipment furnished under this contract, against defects in materials and workmanship for a minimum period of one year from the date of the Owner's Representative Final Acceptance of the work. Provide extended warranties as noted in each section or specified for specific products.
- 5.0 WORKMANSHIP:
- A. All work performed under this Contract shall provide a neat and "workmanlike" appearance when completed, to the satisfaction of the Owner's Representative. The complete installation shall function as designed and intended with respect to efficiency, capacity, and noise level, etc.
- 6.0 LOCAL CONDITIONS:
- A. The Contractor shall carefully examine and become thoroughly familiar with local conditions, existing installations and all other conditions which may affect associated work. The Contractor shall locate all existing utilities and protect them during the execution of the work
- B. The Contractor shall carefully examine all contract documents including project drawings and specifications to become familiar with the type of construction, materials, and equipment to be used for all work and how it will affect the installation of this contract
- C. By the act of submitting a bid, the Contractor will be deemed to have made such examination, to have accepted such conditions, to have made allowance therefore, and included all costs in his proposal. Failure to determine existing conditions will not be considered a basis for the granting of additional compensation.
- 7.0 OPERATION DURING CONSTRUCTION:
- A. The Contractor is responsible for the installation and operation, service and maintenance of all new equipment during construction and prior to acceptance by the Owner of the completed project. Warranty periods shall not commence until final acceptance by the Owner or Owner Representative.
- B. The Contractor shall provide, at his own expense, all temporary utilities required to provide for and protect the work and as necessary to maintain an adequate work force unless use of existing facilities is specifically permitted.
- 8.0 SAFETY REGULATIONS:
- A. All work shall be performed in compliance with all applicable governing safety regulations, including OSHA regulations. Provide safety lights, guards and signs required.
- 9.0 HOUSEKEEPING:
- A. The Contractor shall be responsible for keeping stocks of material and equipment stored on the premises in a neat and orderly manner.
- B. The Contactor shall clean and maintain their specific portions of the work on a daily basis or as specified in the General Conditions
- C. The Contractor shall remove from the premises all waste material present as a result of his work.
- 10.0 CONNECTION AND ALTERATION TO EXISTING SYSTEMS:
- A. Connection to the existing building systems must be accomplished under this contract. System "downtime" due to connection shall be kept to an absolute minimum. The Owner's Representative shall judge if at what time, and for what length of time a shut-down can be tolerated.
- B. Provide all temporary piping and wiring systems required during construction in order to keep all existing systems functioning.
- C. Demolition, cutting and patching to restore surfaces to original condition as necessitated for access to work performed by the Contractor or his subcontractors shall be the responsibility of the Contractor.
- 11.0 SUBSTITUTIONS:
- A. Materials, products and equipment described in the Bidding Documents established a standard of quality to be met by any proposed substitution.
- B. Contractor's bids shall be based on the material identified or specified in the contract documents. Any proposals for substitution shall be made in writing to the Architect/Engineer with all supporting documentation, allowing adequate time for appropriate action. The products of other manufacturers may be accepted, if in the opinion of the Architect/Engineer, the substitute material is of quality as good or better than the material specified, and will serve with equal efficiency and dependability the purpose for which the items specified were intended. The burden of proof of equality is entirely upon the proposer.
- C. Refer to Division 1 requirements for additional substitution procedures.
- D. Wherever substitutions alter the design or space requirements, the Contractor shall be responsible for and include all associated cost items of the revised design and or construction work required by his or other trades affected by the proposed substitution.
- 12.0 SHOP DRAWINGS AND PRODUCT DATA:
- A. The checking of shop drawings is a gratuitous assistance and in no way relieves the Contractor of responsibility for deviations from the Contract Documents.
- B. Shop drawings and catalog data on all major items of equipment and apparatus, and such other illustrative materials as may be considered necessary by the Owner's Representative shall be submitted by the Contractor in adequate time to prevent delay and changes during construction.
- C. Refer to Architectural Documents for additional shop drawing submission procedures
- 13.0 OPERATING AND MAINTENANCE BROCHURE:
- A. On completion of the project, the Contractor shall provide manuals electronically (PDF format unless otherwise instructed) containing operating, service and lubrication instructions, and parts lists for all major equipment and manufacturer's guaranties or warranties.
- 14.0 RECORD DRAWINGS:
- A. On completion of the project, the Contractor shall provide record drawings electronically in PDF or AutoCAD.dwg format (unless otherwise instructed) with all field changes neatly noted. The original routing and layout shall be clearly marked out.
- B. Refer to Architectural Documents for additional record drawing submission procedures.
- 15.0 FOUNDATIONS AND SUPPORTS:
- A. The Contractor shall provide concrete bases, hangers and foundations for all machinery and equipment specified or shown in this contract, including fans, air conditioning units, water heaters, pumps, motors, electrical gear, etc., unless specifically noted otherwise.
- B. All hangers, brackets, clamps, etc., shall be of standard weight steel. Perforated strap hangers shall not be used in any work. When two (2) or more pipes or conduits are run parallel, or where ducts interfere with the proper location of hangers, they may be supported on trapeze hangers. Other hangers shall be hinged ring malleable iron, by Grinnell or Fee and Mason or approved equal with rods and hanger adjusters for adequate size to carry the loads imposed. All piping, ductwork and conduit systems shall each be independently supported from other systems and from equipment so that no weight is born by equipment.
- C. The Contractor shall take all precautions against excessive noise or vibration by isolating the various items of equipment from the building structure. Provide flexible connectors where indicated and at all rotating equipment and for equipment mounted on vibration isolators.

- 16.0 CUTTING AND PATCHING:
- 17.0 SLEEVES AND ESCUTCHEONS: A. Penetrations thru walls and floors shall be as detailed.
- B. Where not otherwise shown, penetrations shall conform to the following: 1. Where pipes or conduits pass through interior partitions, galvanized steel pipe sleeves or galvanized steel sheet sleeves shall be used.
- 2. Where pipes or conduits pass thru concrete floors and walls, walls below grade or exterior walls and slabs on grade, cast iron or steel pipe sleeves shall be used.

- E. Penetrations of fire rated construction shall be made with a UL listed fire penetration assembly suitable for the rating at each location. Where required, sleeves through fire rated structure shall be fire barrier caulked with putty strip or sheet by 3M, Hilti or acceptable equal.
- F. Provide steel (dry locations) or brass (damp locations) escutcheons to completely cover pipe penetration holes in floors, walls, or ceilings. Provide pipe escutcheons with nickel or chrome finish for occupied areas, prime paint finish for unoccupied areas, brass for exterior.
- 18.0 MOTORS, CONTROLS AND FIRE ALARM INTERFACE: A. All motors furnished under this specification shall be recognized manufacturer and of adequate capacity for the loads involved. All motors shall conform to the standards of manufacturer and performance of the National Electrical Manufacturers Association as shown in their latest publications.
- B. Disconnects and motor starters for equipment shall be by the Electrical Contractor unless furnished integral with the equipment or as otherwise indicated. Installation shall be by the Electrical Contractor except for devices factory installed and shipped with equipment. Provide manual or magnetic starters with necessary auxiliary contacts to accomplish the specified or required sequence of operation.
- C. All temperature controls unless noted otherwise shall be the responsibility of the Mechanical Contractor.
- E. All fire alarm devices including duct smoke detector and shut down/interlock wiring shall be the responsibility of the Electrical or Fire Alarm Contractor otherwise noted.

A. All necessary cutting, drilling and patching shall be provided by this Contractor. Structural members shall not be disturbed without prior approval of the Structural Engineer and/or the Owner's Representative. All areas and surfaces disturbed by work performed under this Contract shall be neatly repaired and refinished to the condition of adjoining surfaces in a manner suitable to the Owner's Representative.

- C. Sleeves through interior non-rated walls, including walls indicated as sound partitions, shall be packed with fiberglass or mineral wool and caulked.
- D. Sleeves below grade, in exterior walls or thru slabs on grade shall have lead and oakum or mechanical link seals, Thunder line or acceptable equivalent.

D. If no sequence of operation is included, submit a proposed sequence to the Engineer for approval.

END OF SECTION

- 1.0 SCOPE:
- A. The work included under this contract consists of providing all labor, materials, tools, transportation, services, etc., necessary to complete the installation of the heating, ventilating, and air conditioning systems and other items herein listed and as described in these specifications, as illustrated in the accompanying drawings or as directed by the Architect/Engineer.
- 2.0 SHEET METAL:
- A. Ductwork shall be new prime grade galvanized steel sheets constructed per ASHRAE and SMACNA Standards. Duct system(s) installation shall be in accordance with SMACNA Duct Construction Standards Manual and industry standards. Provide round or rectangular duct as indicated.
- 1. Provide Duct System(s), including all necessary components such as dampers, turning vanes, offsets and takeoffs, etc. required by the project (whether shown or not), which shall be fabricated and installed for maximum efficiency and to minimize pressure drops and objectionable sound and to provide for complete system balancing.
- 2. All duct sizes shown are free area size and do not include liner.
- B. Fabricate for the pressure and SMACNA seal class required by the application.
- Leakage class minimum requirements are:
- 1. Up thru 2" WG pressure rectangular Class 24, round Class 12.
- Seal class minimum requirements are: 1. Up thru 2" WG pressure - class A for all duct joints.
- C. Duct Sealants
- 1. Duct sealant shall have 25/50 flame and smoke rating with a static pressure class of 10" WG, mold and mildew resistant. Sealant shall be installed per manufacturer instructions. 2. Sealant for concealed ductwork shall be an externally applied solvent or water based joint and seam
- sealant with or without tape.
- 3. Ductwork exposed to view shall be sealed with clear silicone or have gasketed joints. Exposed rectangular flanged duct joints shall have gasketed joints. Exposed round ducts shall have joints with EPDM gaskets in groove, O-ring seals or flanged with neoprene gaskets. Where sealant beads are used, they shall be minimized or concealed, smooth and uniform with any excess sealant trimmed flush with duct and removed.
- 4. Spiral lock seams and gasketed duct joints are exempted from other sealant requirements.
- D. Duct Finishes
- 1. Concealed ductwork shall be manufacturer's standard mill finished.
- 2. Ductwork that is indicated or required to be field painted shall have paint grip finish.
- 3. Ductwork that will remain exposed to view shall be furnished without marks, markers, shipping, identification or other tags located on exterior duct surfaces, no exceptions. Any ductwork so installed shall be removed at contractor expense. Protect exposed ductwork from dents, scratches or other damage during construction. Wipe down and thoroughly clean all exposed duct, fittings and accessories.
- E. Round or oval duct shall be factory built of galvanized steel, suitable for pressure class required or indicated. Snap lock duct and fittings shall be used for low pressure/velocity applications only. Fittings shall have 1.5 times diameter centerline radius. Spiral duct may be used for any pressure/velocity class. Spiral duct shall be Semco or acceptable equal by McGill Airflow or Lindab.
- 1. Single wall, 2.0" WG minimum.
- 2. Round or oval duct joints shall be Ductmate quick sleeve, slip joint, welded or flanged.
- 3.0 DUCTWORK ACCESSORIES.
- A. Provide single thickness turning vanes in all supply duct turns.

B. Provide duct access doors for all internal mounted equipment. Access doors shall be insulated double wall, constructed airtight in accordance with SMACNA standards for the appropriate pressure class where they are installed. They shall have butt or piano hinged with cam latches. Minimum size shall be 12"x12" or 12"x duct depth unless noted otherwise.

- C. Branch take-offs to air terminal units shall be high efficiency type.
- D. All take-offs to diffusers and grilles shall be made with high efficiency take-offs, 45° take-offs or conical fittings unless specifically indicated otherwise on drawings. Provide locking guadrant volume damper at take-offs in accessible ceilings, unless shown otherwise. Extractors and scoops are not permitted
- E. Duct splits, elbows and reducing fittings shall be fabricated per SMACNA standards. "Ductmate" or acceptable equal flanged and gasketed joint systems are approved.
- F. Provide dampers where shown and required. Dampers shall be by Greenheck or acceptable equal by Ruskin, American Warming & Ventilating, Air Balance, Inc., Carnes, Krueger, Nailor, United Enertech.
- 1. Balance and control dampers shall be rated in accordance with AMCA 500D. They shall be opposed blade except air mixing dampers shall be parallel blade.
- a. Manual dampers shall have standoff and locking quadrant.
- 2. Damper Schedule:
- a. Manual Damper Rectangular: Greenheck MBD-15, Galv. Steel formed blade, manual locking quadrant actuator, 4" WG, 2000 fpm.
- b. Manual Damper Round:
- Greenheck MBDR-50, Galv. Steel formed blade, manual locking quadrant actuator, 1" WG, 2000 fpm.
- c. Manual Damper Round: Greenheck VCDR-53, Galv. Steel single formed blade, blade seals, 4" WG, 3000 fpm, 4 CFM/SF leakage at 1" WG.
- 4.0 DUCT SUPPORTS AND ROUTING
- A. Hangers and Supports
- 1. Ductwork shall be supported in accordance with all SMACNA standards including support methods, sizes and spacing.
- 2. All hanger and support parts shall be galvanized steel for non-corrosive environments or stainless steel for corrosive or damp environments.
- 3. Provide sheetmetal straps, adjustable hangers, clamps, channels, rods, flexible connectors, supplementary steel, etc as required for proper support of all ductwork. Trapeze may be used for support of single or multiple ducts. Provide accompanying attachments including bolts and nuts, sheetmetal screws or rivets compatible with duct materials.
- 4. Upper attachments shall be manufactured items specific to the applicable structure. Include concrete inserts, wedge type drilled in inserts, steel beam and joist clamps, plates, rods, clips, straps and brackets as required by the application.
- 5. Cable systems may be used at contractor option. They shall be a complete assembly including cables, adjustable locking fasteners or clips and all upper and lower attachments by Gripple or acceptable equal. B. Routing
- 1. Ductwork shall be routed as shown on drawings, parallel to building lines unless otherwise shown, coordinated with building structure and other trades. Adjust ductwork routing and elevations with necessary offsets to accommodate beams and other obstructions.
- 5.0 GRILLES, REGISTERS, INLETS AND OUTLETS:
- A. All supply, return and exhaust grilles, registers and diffusers shall be as scheduled on the drawings. Commercial quality - E.H. Price or acceptable equal by Titus, Carnes, Krueger or Nailor. 1. All air distribution devices shall be selected for throw and low noise (25 NC or less) performance
- characteristics unless otherwise indicated. 2. Unless otherwise indicated, louvered supply grilles shall be double deflection devices with front blades
- parallel to the long dimension 3. A balancing damper shall be provided for each and every diffuser, register and grille where airflow control is required. Unless otherwise indicated, provide integral volume damper where a duct mounted damper
- would not be accessible 4. Ceiling supply diffuser connection shall be made with hard elbow or flex duct with Thermaflex flex flow
- elbow support
- 6.0 HEATING AND AIR CONDITIONING UNITS: A. Ductless Split System Units:
- 1. Provide wall mounted, indoor units with integral cabinet, fan, grille, washable filter, cooling coil and wireless thermostat coupled with remote DC invertor condensing units with low ambient wind baffle. Provide heat pump configuration where shown. Provide all mounting hardware, refrigerant line set.
- 2. Ductless split systems shall be by Mitsubishi or acceptable equal by LG, Hitachi, Toshiba, or Sanyo.
- B. Provide units with manufacturer's standard control package. Controls to include factory wired terminals with overload devices and transformers as required. Unit safety control to include high-low pressure switches, fan relays, short cycle safety and internal pressure relief, gas controls with hi limit and anti- cycle protection. C. Provide unit accessories as noted on drawings and as required for a complete operating system.
- D. Mount units to provide the required service, access and airflow space.
- 7.0 FANS:
- A. Fans shall be as scheduled with all required accessories including vibration isolators, hangers, rate of rise thermostats, etc. Commercial quality fans shall be AMCA rated by Greenheck or acceptable equal by Cook, Acme, Carnes, Penn Barry.

#### 8.0 FILTERS:

A. Provide filters in air intake to each units A/C system with size and number of filters standard with air unit manufacturer. Provide 1" and/or 2" thick to suit equipment requirements, hi-velocity, throw-a-way MERV 8 filters, Farr 30/30 or acceptable equal by American Air Filter, Airguard, Air Filters, Inc, Purolator. Filters shall be new and clean at time of Owner's acceptance. Supply extra set of filters for each unit.

9.0 CONTROLS AND LOW VOLTAGE SYSTEMS:

A. All temperature controls unless otherwise noted shall be the responsibility of the Mechanical Contractor. B. Controls system shall be electric/electronic with stand alone programmable digital thermostats by Johnson

Controls, Automated Logic, Trane or acceptable equal. C. Provide control installation to accomplish the indicated or required sequence of operation including

thermostats/ sensors, controllers, actuators, wiring, piping and tubing, software, graphics and other components as required for a complete operating system. Where no sequence is indicated, contractor shall submit a proposed sequence for approval.

D. Devices exposed to view and mounted in finished spaces shall be white in color unless otherwise noted or directed.

E. All occupant adjustable devices shall be mounted in accordance with ADA and ADAAG requirements. 10.0 PIPE, FITTINGS AND VALVES:

A. Provide service valves for each item of equipment, at branch piping and elsewhere as indicated or required. Provide control valves, balance valves, strainers, check valves and other valves as indicated or required by the application.

B. Provide a union or flanged connection between each item of equipment and its service valve. Copper to ferrous pipe connections shall have isolation coupling, flange or union.

#### C. Refrigerant:

1. Piping - ASTM B280 type ACR pre-charged copper tube, wrought copper or brass fittings, flared compression or brazed joints. Piping and fittings shall be rated for 700 PSIG at 170F.

2. Brazing material shall be hi silver content AWS A5.8 BAg-35 alloy or acceptable equal.

3. Valves -- Shutoff, check, filters/dryers, sight glasses, expansion and solenoid valves rated for refrigerant

4. All refrigerant piping work and accessories shall be in strict accordance with manufacturer's requirements, including but not limited to compliance with piping slopes, traps and risers, maximum permitted lengths and cleaning and purging

5. All refrigerant piping systems shall be eddy current tested, nitrogen purged during brazing and ends capped. They shall be cleaned and triple evacuated in accordance with manufacturer and industry standards.

6. All systems shall be leak tested prior to insulation installation and prior to refrigerant charging and shall be certified leak free with report provided to the engineer. Contractor is responsible for repair of any system leaks including system evacuation and recharging.

#### **D.** Condensate drain piping:

1. PVC Pipe - Schedule 40 with solvent cement joints. PVC not permitted in plenums used for supply or

2. Provide with plugged tee cleanouts unless otherwise accessible for cleaning. Trap all air unit condensate drains with deep traps

3. Where indicated or where required for positive drainage, provide mechanical units with condensate pump. Condensate drain piping:

a. Indoor units shall discharge indirectly to floor drains or to daylight or as otherwise indicated on drawings and shall be in accordance with local codes.

b. Outdoor units shall discharge indirectly to grade or to primary roof drains or gutters or as otherwise indicated on drawings and shall be in accordance with local codes. Condensate shall not drain to overflow roof drains.

#### 5. Condensate pipe sizing:

a. Minimum condensate pipe size shall be 3/4".

b. Piping for individual units shall be as specified by manufacturer or a minimum of the unit connection c. Install manufacturer supplied condensate lift pumps and pipe discharge adaptors where indicated or

- d. Common or manifold condensate system shall be minimum size as follows:

Equipment Capacity, Tons	Min. Pipe Size,
Up to 3	3/4"
3-1/2 to 20	1"
21-90	1-1/4"
91-125	1-1/2"
126-250	2"

6. Valves. a. Service ·

1) 2" - 2", Nibco 585-70 full port ball, bronze with chrome plated ball'.

7. Provide dielectric fittings at joints of dissimilar metals. 8. Provide valve with stem extensions on all insulated piping systems to accommodate insulation thickness. 11.0 PIPE SUPPORTS AND ROUTING:

### A. Hangers and Supports

1. Piping shall be supported in accordance with industry standards including support methods, sizes and spacing. All supports shall conform to MSS SP58 and Fed Spec WW-H-171E and A-A-1192A. 2. Pipe Slopes: Install hangers and supports to provide indicated or required pipe slopes to provide for

drainage and venting

3. Deflection: Maximum pipe deflections and stresses as allowed by ANSI B31 are not exceeded.

4. Each piping system shall be independently supported with no piping bearing on another and installed such that no weight of piping is borne by the equipment.

5. Space hangers and supports within maximum piping span length indicated in MSS SP-58. Install building attachments at required locations for proper piping support. 6. Provide adjustable hangers, inserts, brackets, rolls, clamps, channels, rods, guides, anchors, flexible

connectors, supplementary steel, etc., as required for proper support of all pipe lines. Trapeze may be used for support of multiple pipes. Provide accompanying attachments including bolts and nuts, sheetmetal screws or rivets suitable for application.

7. Provide copper plated, plastic coated or felt lined hangers where required to prevent electrolysis or abrasion on copper or plastic piping systems. 8. Upper attachments shall be manufactured items specific to the applicable structure. Include concrete

inserts, wedge type drilled in inserts, steel beam and joist clamps, plates, rods, clips, straps and brackets as required by the application

9. Hangers shall be designed to allow for expansion and contraction of pipe lines and shall be of adequate size to permit covering when required. Provide protective saddles and blocking where supporting insulated piping to prevent crushing insulation.

10. All hanger and support parts shall be galvanized steel for non-corrosive environments or stainless steel for corrosive or damp environments.

11. Cable systems may be used at contractor option. They shall be a complete assembly including cables, adjustable locking fasteners or clips and all upper and lower attachments by Gripple or acceptable equal. B. Routing

1. Piping shall be routed as shown on drawings, parallel to building lines unless otherwise shown, coordinated with building structure and other trades. Adjust pipe routing and drop locations with necessary pipe offsets or changes in elevation to accommodate beams and other obstructions. 12.0 FOUNDATIONS AND VIBRATION ISOLATION:

A. Foundations: Provide fabricated supports for all equipment. Mount on 4" concrete housekeeping pads where indicated.

B. Provide flexible connections at all motor driven equipment, where shown and where required to hold transmitted noise and vibration to an acceptable minimum at piping and duct connections. C. Duct flexible connection shall be Durodyne non-combustible, 22 ounce (minimum) polymer coated woven

fabric or acceptable equal D. Equipment Vibration Isolation: All motor driven equipment shall be furnished with isolating mountings. Motors

shall be mounted on resilient bases, spring or rubber supports as recommended by the manufacturer. Isolators shall be Amber Booth or acceptable equal by Kinetics, Mason Industries, Vibration Eliminator Co. 13.0 SLEEVES AND SEALS, FLASHINGS, ROOF PIPE SUPPORTS AND UV PROTECTION:

A. Flash all pipes and vents extending through roof. Flashing details shall be in accordance with roof manufacturer's requirements. B Continuous roof piping penetrations shall be thru a pipe portal assembly with roof curb cap and pipe

+ associates 1730 Walnut Street Kansas City, Missouri 64108 1915 Frederick Avenue, St. Joseph, Missouri 64501 Phone: 816.221.1411 | Fax: 816.221.1429 LANKFORD I FENDLER + ASSOCIATES, CONSULTING ENGINEERS, INC COPYRIGHT 🔘 2020 Project No. 20.6481.00 COA No. 2006001168 S S **(**) Ð S I Ζ Ш Ш Ľ 64 04 C MO C S N S ŝ Ш Su R LL COPYRIGHT © 2019 HIVE DESIGN COLLABORATIVE, INC. seal/signature ---**GREGORY J** FENDLER NUMBER PE-2006037230 ..... SIONAL' 05/01 project number 2020-017 date 05.01.2020 issued for PERMIT date description rev **SPECIFICATIONS** sheet number

- HEATING, VENTILATION AND AIR CONDITIONING CONTINUED
- penetration boot(s), Pate PCA/PCC series or acceptable equal.
- C. Provide sleeves where piping penetrations are required thru partitions, concrete floors, concrete slabs on or below grade or foundation walls. Where penetrations are through fire rated assemblies, sleeves shall be in accordance with UL listing requirements. Sleeves shall be galvanized steel pipe, sheet steel or cast iron. Sleeves are not required for core drilled penetrations of existing concrete slabs above grade. Penetrations of below grade structures and slabs on grade shall be water proofed with mechanical link seal system, Thunder Line or acceptable equivalent.
- D. Provide escutcheons at all penetrations of exposed walls and ceilings. Escutcheons shall be chrome plated brass in occupied areas, prime paint finish for unoccupied areas unless otherwise noted. Escutcheons for exterior or moist areas shall be brass.
- E. Plastic piping without UV inhibiters which is exposed to UV radiation from sunlight shall be protected by coating with a UV resistant paint.
- 14.0 EQUIPMENT AND PIPE LABELS:
- A. Equipment labels shall be provided for all mechanical equipment and shall be self adhesive engraved plastic blue with white lettering, sized, minimum 1-1/2" high, and located for viewing from ground or floor level. Label shall indicate drawing designation or unique equipment number.
- B. Pipe labels for chilled, heating hot water, refrigerant, condenser and condensate piping shall be preprinted, color-coded, with 1-1/2" lettering indicating service, and showing flow direction. Locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and locations as follows:
- 1. Near each valve and control device.
- 2. Near each branch connection, excluding short takeoffs for fixtures and terminal units. Where flow pattern is not obvious, mark each pipe at branch.
- 3. Near penetrations through walls, floors, ceilings, and inaccessible enclosures.
- 4. At access doors, and similar access points that permit view of concealed piping.
- 5. Near major equipment items and other points of origination and termination.
- 6. Spaced at maximum intervals of 50 feet along each run. Reduced intervals to 25 feet in areas of congested piping and equipment.
- C. Warning labels shall be self-adhesive engraved plastic or preprinted plastic as required by application with white lettering on red background provided at locations as required by code or where hazards to personnel exist
- 15.0 VALVE TAGS
- A. Valve Tags: Stamped or engraved with 1/4-inch letters for piping system abbreviation and 1/2-inch numbers. 1. Tag Material: Brass 0.032-inch minimum thickness, and having predrilled or stamped holes for attachment
- 2. Fasteners: Brass wire-link or beaded chain.
- B. Valve Schedules: For each piping system, on 8-1/2 x 11 inch bond paper. Tabulate valve number, piping system, system abbreviation (as shown on valve tag), location of valve (room or space), normal-operating position (open, closed, or modulating), and variations for identification. Mark valves for emergency shutoff and similar special uses
- 1. Valve-tag schedule shall be included in operation and maintenance data.
- 16.0 MISCELLANEOUS
- A. Provide escutcheons at all piping penetrations of finished wall, floor or ceiling construction. Escutcheons shall be chrome plated brass in occupied areas, prime paint finish for unoccupied areas unless otherwise noted. Escutcheons for exterior or moist areas shall be brass.
- B. All cable ties for controls and other cable systems located in plenums utilized for air movement that are not installed in conduit shall be 25/50 flame and smoke rated, Hellermann Tyton T50R2C2UL or equal.
- 17.0 CLEANING: A. New Work
- 1. Clean air system by operating at least three hours prior to final acceptance with temporary filters. Remove all filters and replace with clean.
- 2. Use pre-cleaned, pre-charged refrigerant tube or clean per manufacturer's recommendations.
- 18.0 TESTING AND ADJUSTING
- A. Contractor shall operate and test the air conditioning and ventilation systems and instruct the Owner in its operation. Perform a series of general capacity and operating tests. The tests shall demonstrate the specified capacities of various pieces of equipment.
- B. The entire temperature controls systems shall be adjusted and balanced and put in operating condition to cause the equipment to maintain the temperatures in accordance with the intent of these specifications. Operate and test equipment during summer and winter seasonal startup under this contract.
- C. The test and balance contractor shall perform an initial test and balance noting any mechanical system deficiencies. The mechanical contractor shall review the preliminary report prior to final issue of the test and balance report and work with the test and balance contractor and the engineer as needed to make all system repairs and modifications necessary to achieve the design performance established by the contract document prior to the final reporting. The final test and balance report shall incorporate results of all mechanical system modifications
- D. Test pressure piping system to 1-1/2 times the operating pressure but not less than 50 PSIG for a period of 2 hours with no observable pressure drop.
- E. Test condensate drain piping by filling with water to the drain pan connection(s) for a period of 2 hours with no observable leaks
- F. Submit the complete test and balance report for review to the Architect/Engineer in triplicate. Test procedure and report shall conform to NEBB standards. The report shall be signed by the responsible individual.

END OF SECTION

- 1. Points of connection within the existing building.
- 2.0 PIPING, FITTINGS AND VALVES:
- C. Domestic water, interior, above ground -
- Pipe, copper tube -
- with EPDM O-ring seals Valves -
- a. 1/4 turn Service -

- D. Sanitary sewer, vent, interior --
- 2. Plastic piping shall not be allowed in return air plenums.
- guards. Floor mounted hub drains shall extend 2" above finish floor.
- E. Sanitary sewer, vent, below grade --
- ABS with solvent cement joints.
- 3.0 CLEANOUTS, TEST TEES, TRAPS AND TRAP SEALS: larger pipe unless otherwise noted.

- 4.0 SLEEVES AND SEALS, FLASHINGS, ROOF PIPE SUPPORTS AND UV PROTECTION:
- Line or acceptable equivalent.
- with a UV resistant paint.
- iurisdiction.

### 6.0 INSULATION:

ASSE 1022.

- 2. Hot Water and hot water recirculating piping insulation: 1" fiber glass sectional pipe covering with universal all service jacket.

- D. Seal all joints on cold water insulation to maintain vapor barrier.
- requirements for People with Disabilities.

- 1.0 SCOPE:

#### 220 100 PLUMBING

A. The work included under this contract consists of providing all labor, materials, tools, transportation, services, etc., necessary to complete the installation and to provide complete working systems of the Plumbing Systems, including hot and cold water, waste and vent, storm drainage, fixtures, equipment and other items described in these specifications, as illustrated in the accompanying drawings or as directed by the Architect/Engineer. B. Extend piping systems as indicated on contract documents or to point of connection as follows:

A. Provide service valves for each item of equipment, at branch piping and elsewhere as indicated or required. Provide balance valves, strainers, check valves and other valves as indicated or required by the application. B. Provide a union or flanged connection between each item of equipment and its service valve. Copper to ferrous pipe connections shall have isolation coupling, flange or union.

a. 2-1/2" and Smaller -Type "L" hard temper, wrought or cast copper fittings, Lead free 95/5 or Eagle Hard Silvabrite or "CB" solder joints, or roll grooved mechanical joints or pressure seal joint fittings

1) 1/2" thru 2" - Nibco 585-66-LF bronze lead free, 600 PSIG, full port, stainless steel ball and stem. b. Balance - Bell & Gossett lead free Circuit Setter "RF-S-LF" or "CB-S-LF"

3. Provide valves where indicated on the drawings, where required by code or required for service.

4. Securely anchor and support piping, valves and fittings, with adequate provisions for expansion and contraction. Grade lines, free of traps, to low point at cut-off and drain valve.

5. Hot and cold supply lines to have manufactured pre-charged piston type water hammer arrestors at each and every fixture or group or battery of fixtures to prevent water hammer, sized as shown or per manufacturers recommendation. An arrestor shall also be required at each solenoid actuated quick closing valve. Sioux Chief, JR Smith or equal. Provide access panel where required.

1. Pipe - Standard weight cast iron hubless with no-hub shielded mechanical joints; solid wall schedule 40 PVC, ABS with solvent cement joints; vents may be galvanized malleable iron.

3. Hub drains, where shown, shall be of material compatible with piping system, 2" minimum connection size, top flared out to accept indirect wastes required at each location. Hub drains shall be fitted with trap

4. All gravity drainage shall be graded per code but not less than 1/8" per foot unless noted otherwise. 3" and 4" piping shall be sloped at 1/4" per foot where possible and where required by local codes..

1. Pipe - Standard weight cast iron hubless with no-hub mechanical joint fittings; solid wall schedule 40 PVC,

2. All gravity drainage shall be graded per code but not less than 1/8" per foot unless noted otherwise. 3" and 4" piping shall be sloped at 1/4" per foot where possible and where required by local codes.

A. Provide cleanout at the base of each stack or riser, at ends of runs greater than 10', each 135° aggregate change of direction in horizontal piping, where indicated on the drawings or as required by code. Plugs, extra heavy cast brass, screwed. Scoriated tops in unfinished areas, carpet markets in carpet floors, tile top in tile floors, stainless steel cover in finished walls. Cleanouts same size as pipe up to 4" diameter, 4" cleanouts for

B. Provide test tees at base of risers and elsewhere as required by code.

C. All traps shall be deep seal type with liquid seal not less than specified by code.

D. Where trap primers are not specified provide all floor and hub drains with trap seal with EPDM diaphragm, Provent Proset Series SG22 or TG22, Rectorseal SS series or acceptable equal.

A. Provide sleeves where piping penetrations are required thru partitions, concrete floors, concrete slabs on or below grade or foundation walls. Where penetrations are through fire rated assemblies, sleeves shall be in accordance with UL listing requirements. Sleeves shall be galvanized steel pipe, sheet steel or cast iron. Seeves are not required for core drilled penetrations of existing concrete slabs above grade. Penetrations of

below grade structures and slabs on grade shall be water proofed with mechanical link seal system, Thunder B. Plastic piping without UV inhibiters which is exposed to UV radiation from sunlight shall be protected by coating

5.0 CROSS- CONNECTIONS AND INTERCONNECTIONS:

A. No plumbing device or piping shall be installed which will provide cross-connection or interconnection between a distributing supply or waste so as to make possible the backflow or back-siphonage of polluted water into the potable water supply system. Where the possibility of back-siphonage exists, water supply to the fixture shall be introduced through a suitable backflow preventer device suitable for the hazard protected. Installed backflow preventers must be approved through the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research.

1. They may be an air gap, anti-syphon valve, atmospheric vacuum breaker, pressure vacuum breaker, double check, reduced pressure backflow preventer or as otherwise required by the authority having

2. Where not otherwise indicated, miscellaneous equipment items with direct water connections, shall have backflow devices in accordance with authority having jurisdiction. Where not otherwise indicated, equipment such as coffee and tea makers, shall be equipped with dual check valves, ASSE 1024. Drink or carbonated water systems shall be equipped with stainless steel backpressure or backsiphonage devices,

A. Pipe insulation shall conform to the International Energy Conservation Code.

B. Insulate all cold water, hot water and hot water recirculating piping,, Owens Corning or acceptable equal. 1. Cold water piping insulation: 1" fiber glass sectional pipe covering with universal vapor barrier jacket.

3. Hot water recirculating pump body shall be insulated with 3/4" flexible elastomeric sheet or 1" fiberglass semi-rigid board with FSK jacket. All seams and joints shall be taped or mastic sealed.

C. At Contractor's option, Armacell AP Armaflex unicellular insulation or acceptable equal with 25/50 flame and smoke rating with equal thermal performance may be substituted for fiberglass products.

E. Insulation shall run continuously thru hangers and supports without interruption.

F. Refer to plumbing fixture schedule for insulation of fixture drains and water piping for compliance with ADA

7.0 PIPE SUPPORTS AND ROUTING:

- A. Hangers and Supports
- 1. Piping shall be supported in accordance with industry standards including support methods, sizes and spacing. All supports and installation shall conform to MSS SP58 and 69 and Fed Spec WW-H-171E and A-A-1192A.
- 2. Pipe Slopes: Install hangers and supports to provide indicated or required pipe slopes to provide for drainage and venting
- 3. Deflection: Maximum pipe deflections and stresses as allowed by ANSI B31 are not exceeded.
- 4. Each piping system shall be independently supported with no piping bearing on another and installed such that no weight of piping is borne by the equipment.
- 5. Space hangers and supports within maximum piping span length indicated in MSS SP-58. Install building attachments at required locations for proper piping support. 6. Provide adjustable hangers, inserts, brackets, rolls, clamps, channels, rods, guides, anchors, flexible
- connectors, supplementary steel, etc., as required for proper support of all pipe lines. Trapeze may be used for support of multiple pipes. Provide accompanying attachments including bolts and nuts, sheetmetal screws or rivets suitable for application.
- 7. Provide copper plated, plastic coated or felt lined hangers where required to prevent electrolysis or abrasion on copper or plastic piping systems
- 8. Upper attachments shall be manufactured items specific to the applicable structure. Include concrete inserts, wedge type drilled in inserts, steel beam and joist clamps, plates, rods, clips, straps and brackets as required by the application.
- 9. Hangers shall be designed to allow for expansion and contraction of pipe lines and shall be of adequate size to permit covering when required. Provide protective saddles and blocking where supporting insulated piping to prevent crushing insulation.
- 10. All hanger and support parts shall be galvanized steel for non-corrosive environments or stainless steel for corrosive or damp environments
- 11. Cable systems may be used at contractor option. They shall be a complete assembly including cables, adjustable locking fasteners or clips and all upper and lower attachments by Gripple or acceptable equal.
- B. Routina
- 1. Piping shall be routed as shown on drawings, parallel to building lines unless otherwise shown, coordinated with building structure and other trades. Adjust pipe routing and drop locations with necessary pipe offsets or changes in elevation to accommodate beams and other obstructions.
- 8.0 PIPE LABELS:
- A. Equipment labels shall be provided for all plumbing equipment and shall be self-adhesive engraved plastic, blue with white lettering, sized, minimum 1-1/2" high, and located for viewing from ground or floor level. Label shall indicate drawing designation or unique equipment number.
- B. Pipe labels for domestic water, waste, vent and gas piping shall be preprinted, color-coded, with 1-1/2" lettering indicating service, and showing flow direction, locate pipe labels where piping is exposed or above accessible ceilings in finished spaces; machine rooms; accessible maintenance spaces such as shafts, tunnels, and plenums; and locations as follows:
- 1. Near each valve and control device
- 2. Near each branch connection, excluding short takeoffs for fixtures and terminal units. Where flow pattern is not obvious, mark each pipe at branch.
- 3. Near penetrations through walls, floors, ceilings, and inaccessible enclosures.
- 4. At access doors, and similar access points that permit view of concealed piping.
- 5. Near major equipment items and other points of origination and termination.
- 6. Spaced at maximum intervals of 50 feet along each run. Reduced intervals to 25 feet in areas of congested piping and equipment.
- 7. On piping above removable acoustical ceilings, omit intermediately spaced labels.
- C. Warning labels shall be self-adhesive engraved plastic or preprinted plastic as required by application with white lettering on red background provided at locations as required by code or where hazards to personnel exist.

#### 9.0 MISCELLANEOUS

- A. Indirect wastes shall discharge full size thru an air gap to a floor, equipment drain or sanitary floor sink. The floor or equipment drain grate shall be fitted with a funnel, the sanitary floor sink shall have a partial grate or the grate shall be omitted. Drains shall be located so they are accessible and not a tripping hazard.
- B. Provide escutcheons at all penetrations of exposed walls and ceilings. Escutcheons shall be chrome plated brass in occupied areas, prime paint finish for unoccupied areas unless otherwise noted. Escutcheons for exterior or moist areas shall be brass.
- C. All cable ties for controls and other cable systems located in plenums utilized for air movement that are not installed in conduit shall be 25/50 flame and smoke rated, Hellermann Tyton T50R2C2UL or equal.
- 10.0 PROTECTION OF WORK A. Protection
- 1. Protect and cover piping and fixture waste and water openings to prevent entry of dirt and debris.
- 2. Cover and protect fixtures and plumbing equipment to prevent damage.
- 11.0 TEST, ADJUSTMENTS AND CLEANING:
- A. Soil, waste and vent piping testing:
- 1. Fill with water to the top of the highest point of the system extending through roof, but not less than 10 feet water column, and allow to remain for a period of two hours.
- 2. Where applicable, isolate new portions of the system(s) piping with test tee and Oatey Clean Seal inflatable plug prior to testing.
- B. Water and gas line testing:
- 1. Water piping shall be purged and tested with compressed air or water at 50 PSIG above the operating pressure but not to exceed the pressure rating of piping system materials for a period of 2 hours with no
- measurable pressure drop. 2. Where applicable, isolate new portions of pressure piping from existing piping with valves prior to testing.
- 3. For renovation projects, isolate and protect fixtures, valves and equipment from over pressurization during
- C. After successful testing, sterilize water system with an approved solution in accordance with local health officials.
- D. Contractor to submit all test data and other documentation for record.
- 12.0 FIXTURE BRANCH PIPING:
- A. Fixture branch and connection sizes shall be as shown in the plumbing fixture schedule on the drawings and not less than required by code.
- B. Minimum waste or vent size below slab on grade shall be 2"
- 13.0 PLUMBING FIXTURES:

Drains and Drainage Products

- A. Refer to plumbing fixture schedule for plumbing fixtures and accessories. Include all fittings and accessories as required for a complete working system.
- B. At contractor option, flexible stainless steel braided hose, 125 PSIG rated, with non-toxic liner and compression fittings may be used in lieu of chrome plated brass riser tube.
- 14.0 FIXTURE AND ACCESSORY MANUFACTURERS:
- A. Fixtures, equipment and accessories are specified by manufacturer's numbers as to the type and quality required
- B. Specified manufacturers and approved equal manufacturers are as follows:
- FIXTURE, ITEM OR EQUIPMENT APPROVED EQUAL MANUFACTURERS Vitreous China Fixtures American Standard, Toto, Kohler, Zurn Stainless Steel Sinks Elkay, Just, Kohler, Advance Tabco Supply Faucets & Trim Chicago Faucets, Delta, Elkay, Kohler, Sloan, T & S Brass, Watts, Zurn Stops & Supplies BrassCraft, McGuire, ProFlo, Watts, Jones Stephens Waste Fittings Dearborn Brass, McGuire, ProFlo, Jones Stephens, Watts Trubro, ProFlo, Plumberex ADA Under Lavatory Pipe Covers Water Closet Seats Church, Bemis, Beneke, Olsonite, Toto J R Smith, Josam, Wade, Watts, Zurn Carriers

END OF SECTION

J R Smith, Wade, Watts, Zurn, Josam

B. Motion sensor: contactor shall verify with owner for proper time delay settings.

### 260 100

### ELECTRICAL

A. The work included under this contract consists of the furnishing of all labor, materials, tools, transportation, services, etc., necessary to complete the installation of the electrical systems and other items herein listed all as directed by the Architect or Engineer, which work is comprised of, but not limited to the following principal items:

1. Electrical system for light and power:

- a. Electrical service and distribution system revisions
- b. Switches and panel boards
- c. Systems of conduit, conductors, and boxes.
- d. Receptacles and wiring devices.
- e. Lighting fixtures and lamps. f. Power service to the various motors.
- g. Complete lighting and power systems.
- h. All systems, wiring and conduit as required.

2. Control wiring and electrical installation and connections for items in other contracts as may be listed in the drawings.

3. Empty conduit and boxes for future installation of telephone wiring and miscellaneous systems.

4. Rough-in and final connection to equipment furnished by others. 5. All cable ties for low voltage cable systems located in plenums utilized for air movement that are not

installed in conduit shall be 25/50 flame and smoke rated, Hellermann Tyton T50R2C2UL or equivalent. B. Raceway wiring systems shall be concealed in all finished parts of the building, where possible. Where the raceways are exposed, they shall be run parallel with the building walls in a neat and workmanlike manner. Should it appear necessary to expose any conduit or wiring in finished spaces, it shall be brought to the Architect's attention immediately and this Contractor shall rearrange associated work as directed to facilitate an approved installation. Contractor to coordinate with mechanical trades to avoid ductwork and piping.

#### 2.0 RACEWAYS:

1.0 SCOPE:

A. All electrical conductors are to be installed in metal raceways, unless specifically specified or noted otherwise. Galvanized steel or intermediate steel conduit as permitted by code. No conduit smaller than 3/4" to be used. Use set screw or compression type fittings. Provide flexible conduit connection for final connection to each motor not to exceed 3' in length and recessed lighting fixtures not to exceed 6' in length. Provide pull wires in all empty conduit systems. Identify terminus of each pull wire. All exposed raceways shall be installed with runs parallel and/or perpendicular with building walls. Fasten all rigid/non-flexible conduit every 8' and 2' from each box. Conduit shall be EMT where not subject to mechanical damage as permitted by National Electric Code (N.E.C.). EMT connectors and couplings 4" and smaller shall be compression type. Type MC Cable is not permitted, excluding final connections to motors and lighting fixtures

B. Conduit bushings shall be provided and installed inside all disconnects, pull boxes, panelboards, switchboard or similar type equipment and where permitted by National Electric Code (N.E.C.).

#### 3.0 WIRES AND CABLES:

A. Electrical conductors, soft annealed copper with conductivity 98% of that of pure, stranded copper, 90 degree - 600V insulation and equal to General Cable Company. Wire and cable for all feeders, subfeeders, motor circuits and high ambient location type shall be THHN. All other branch circuit wiring shall be type XHHN or THHN. Minimum wire size shall be #12 gauge AWG. Control wiring may be #14 gauge. B. For conductors #4 or small use the following color-code:

208Y/120V, 3-phase: black, red, blue, white.

Green shall be used for ground wire conductor.

• Contractor shall use the following color designations and be consistent throughout the project. Color designation for switch legs and or travelers: Violet, Pink or Purple may be used. C. Conductor Material Applications:

a. Branch Circuits: Copper. Solid for No. 12 AWG and smaller; stranded for No. 10 AWG and larger. D. Conductor insulation and multi-conductor cable application and wiring methods:

b. Exposed Branch Circuits, Including in Crawlspaces: Type THHN, single conductors in raceway.

c. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN, single conductors in d. Branch Circuits Concealed in Concrete, below Slabs-on-Grade, and Underground: Type THWN-2,

single conductors in raceway.

4.0 GROUNDING:

A. Ground all electrical apparatus in accordance with N.E.C. and as specified herein. Provide a separate grounding conductor for all lighting, receptacle and equipment circuits. All cabinets, switchboards, equipment cases, motor frames, interior metal cold water piping systems, and system neutral conductors shall be effectively grounded. Use solderless pressure type connectors, no perforated strap connectors will be allowed. Ensure continuous bond where flexible conduit is used. Provide bonding jumper inside all flexible conduit. Grounding per N.E.C. 250, and any local requirements.

5.0 SPLICE AND TAPS:

A. Make splices at junction boxes, pull boxes, or outlet boxes only.

6.0 CABINETS, JUNCTION AND PULL BOXES:

A. Flush or surface mounted as indicated on drawings. Provide where shown on drawings and where required by code. Construct of cold gauge steel for flush surface mounting.

7.0 OUTLET BOXES:

A. General Electric, Appleton, Steel City or Raco hot dipped galvanized steel boxes, or equal. Install at terminal of each conduit run, each outlet, or device. Provide size, type and design to suit structural conditions. Adequate to accommodate size and number of raceways, conductors, device or fixture served. Provide plaster rings or covers on boxes where required on exposed work, use approved cast ferrous alloy outlet, junction boxes and fittings. Fixture or device cover shall completely conceal the size outlet box used. Install 3/8" fixture stud for lighting fixtures where required. Locate ceiling outlets to work with architectural features as directed. Switches installed 48" above floor on strike side of door as finally hung. Receptacles and telephone outlets, 18" above finished floor unless otherwise noted. Verify all outlet locations on job with Architect.

#### 8.0 DISCONNECT SWITCHES

A. Heavy duty NEMA type 'HD' - same manufacturer as panelboards. Plastic nameplate properly engraved with name of equipment served, secured to switch cover. Fuses shall be Bussmann of sizes and types scheduled

9.0 MOTOR AND CONTROL WIRING AND CONNECTIONS:

A. This Contractor to provide all necessary conduit, boxes and supports to equipment furnished by Owner and as indicated on drawings. Provide a disconnect switch and starter if required.

#### 10.0 LABELING:

A. Contractor shall label each and every j-box above ceiling with a permanent marker with panel and circuit B. Outlets, adhesive film label, machine printed clear background with black letters, by thermal transfer or

equivalent process. Minimum letter height shall be 1/4 inch. Face plate shall be labeled with panel and circuit number

C. Interior equipment self-adhesive, engraved, laminated acrylic or melamine label: adhesive backed, with white letters on a dark-gray background. Minimum letter height shall be 3/8 inch (10 mm). D. Exterior equipment: Stenciled or engraved, laminated acrylic or melamine label: punched or drilled for screw mounting. White letters on a black background. Minimum letter height shall be 1 inch (25 mm).

11.0 WIRING DEVICES:

A. Duplex receptacles shall be Hubbell #5352-X grounding type, 20A., 125V.; G.F.C.I. shall be Hubbell GF-5352-X. 20A., 125V.; duplex, G.F.C.I. TYPE. Isolated ground receptacles shall be orange in color, Hubbell IG-5352, 20A, 125V, duplex. Isolated ground receptacles shall be equipped with a Hubbell IGP-8 plate, orange in color inscribed "Isolated Ground". Wall toggle switches shall be Hubbell Number 1221-X and Number 1223-X for single pole and three way types respectively. Other switch, receptacle, and outlet device variations shall be by Hubbell of "Spec. Grade" quality. Equivalent devices of P & S or Leviton will be acceptable in lieu of the above listed devices. Contractor to verify color of devices with Architect before purchase. Provide smooth plastic cover plates to mate and match device for each outlet.

12.0 LIGHTING FIXTURES:

A. This Contractor shall furnish and install complete, unless otherwise specified, a lighting fixture on each and every lighting outlet shown on the drawings of each type scheduled by letter and description. All fixtures shall be equipped with lamps as scheduled or specified herein. All fixtures installed in suspended ceilings must be securely fastened to framing members per NEC 410-36b and local seismic code requirements.

END OF SECTION





- 1. DISCONNECT AND REMOVE ALL DUCTWORK, DIFFUSERS, GRILLES, HANGERS, ETC. IN THEIR ENTIRETY THROUGHOUT PROJECT EXTENTS.
- REMOVE EXHAUST DIFFUSERS, DUCTWORK, ASSOCIATED EQUIPMENT AND CONTROLS.
- DISCONNECT AND REMOVE THERMOSTATS AND ASSOCIATED CONTROL WIRING. THERMOSTATS TO BE PROVIDED NEW UNDER NEW WORK PLAN.
- Lankford Fendler + associates 1730 Walnut Street Kansas City, Missouri 64108 1915 Frederick Avenue, St. Joseph, Missouri 64501 Phone: 816.221.1411 | Fax: 816.221.1429 LANKFORD | FENDLER + ASSOCIATES, CONSULTING ENGINEERS, INC. COPYRIGHT 2020 Project No. 20.6481.00 COA No. 2006001168 Summit 08 641 ees MO Ξ CIT) **ORATIVE**, , KANSAS Z Ш GREI Sam Walton Dr. mmit, MO 64086 COLLABC FRESH E DESIGN ( WALNUT 581.6363 NE Sun 1041 | Lees ( **HIVE** 816.5 COPYRIGHT © 2019 HIVE DESIGN COLLABORATIVE, INC. seal/signature GREGORY FENDLER NUMBER PE-2006037230 2020-017 project number 05.01.2020 date PERMIT issued for rev date description FLOOR PLAN MECHANICAL DEMOLITION sheet number M01



- 1. MAIN DUCT UP TO RTU-1 ON ROOF. FIELD VERIFY RTU AND DUCT RISE LOCATION.
- 2. RETURN DUCT UP TO RTU-1 ON ROOF. FIELD VERIFY RTU AND DUCT RISE LOCATION.
- 3. MAIN DUCT UP TO RTU-2 ON ROOF. FIELD VERIFY RTU AND DUCT RISE LOCATION.
- 4. RETURN DUCT UP TO RTU-2 ON ROOF. FIELD VERIFY RTU AND DUCT RISE LOCATION.
- 5. EXHAUST DUCT UP TO NEW EF-1 ON ROOF.
- REFRIGERANT PIPING DOWN FROM CU-1 ON ROOF TO AC-1.
   WALL MOUNTED SPLIT SYSTEM INDOOR UNIT. MOUNT 12" BELOW VAULT CEILING. ROUTE LINESET TO ASSOCIATED OUTDOOR UNIT AND CONNECT PER MANUFACTURERS RECOMMENDATIONS. ROUTE 3/4" CONDENSATE TO ADJACENT MECHANICAL ROOM FLOOR DRAIN AND INDIRECT WASTE.
- 8. WALL MOUNTED HUMIDIFIER. INSTALL PER MANUFACTURERS RECOMMENDATIONS. ROUTE DISPERSION TUBE TO FAN PACK IN VAULT ROOM.
- 9. WALL MOUNTED FAN PACK PROVIDED WITH HUMIDIFIER. INSTALL 12" BELOW VAULT CEILING.
- 10. CONDENSATE DRAINAGE DOWN TO JANITOR'S SINK.
- 11. INSTALL RETURN GRILLE IN ROOM TIGHT TO STRUCTURE. INSTALL OPPOSITE RETURN GRILLE AT SAME HEIGHT. PROVIDE IN WALL SHEETMETAL SLEEVE.
- MOUNT DIFFUSER TIGHT TO STRUCTURE.
   MOUNT SUPPLY DUCTWORK TIGHT TO STRUCTURE.
- 14. INSTALL ROOF MOUNTED CONDENSING UNIT ON 4X4 PRESSURE TREATED LUMBER. ROUTE LINESET THROUGH ROOF PER SPECIFICATIONS. COORDINATE ANY ROOF WARRANTY WITH BUILDING OWNER.
- 15. COORDINATE WITH ELECTRICAL CONTRACTOR TO INTERLOCK FAN WITH RESTROOM MOTION SENSOR.
- 16. MOUNT EXHAUST DIFFUSERS ON BOTTOM OF DUCT.







## features:

FH rating and spaced max 24 in. (610 mm) OC.

assembly. The following types and sizes of metallic pipes or tubing may be used: A. Steel Pipe — Nom 12 in. (305 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe. B. Iron Pipe — Nom 12 in. (305 mm) diam (or smaller) cast or ductile iron pipe. C. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing. When the hourly F or FH Rating of the firestop system is 3 hr, the nom diam of copper tube shall not exceed 4 in. (102 mm). D. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe. When the hourly F or FH Rating of the firestop system is 3 hr, the nom diam of copper pipe shall not exceed 4 in. (102 mm).

3.Pipe Covering\* — Nom 1, 1-1/2 or 2 in. (25, 38 or 51 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m3) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. For 1 and 2 hr F and FH Ratings, the annular space between insulated penetrant and periphery of opening shall be min 0 in. (point contact) to max 1-7/8 in. (48 mm). For 3 hr F and FH Ratings, the annular space shall be min 0 in. (point contact) to max 1-1/4 in. (32 mm). See Pipe and Equipment Covering — Materials (BRGU) category in the Building Material Directory for the names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

The hourly T, FT, FTH Ratings of the firestop system are 1/2 hr for 1 hr rated walls and 1 hr for 2 hr rated walls. For 3 hr rated walls, the hourly T, FT and FTH Ratings when steel and iron pipes are used are 1 hr. For 3 hr rated walls, the hourly T, FT and FTH Ratings when copper penetrants are used are 1-1/4 hr for 2 in. (51 mm) thick pipe covering and 0 hr for pipe covering thickness less than 2 in. (51 mm).

3A. Pipe Covering\* — (Not Shown) — As an alternate to Item 3, max 2 in. (51 mm) thick cylindrical calcium silicate (min 14 pcf) units sized to the outside diam of the pipe or tube may be used. Pipe insulation secured with stainless steel bands or min 18 AWG stainless steel wire spaced max 12 in. (305 mm) OC. When the alternate pipe covering is used, the T and FT Rating shall be as specified in item 3 above. See Pipe and Equipment Covering — Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering

material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used. 4.Fill, Void or Cavity Material\* — Sealant — For 1 and 2 hr F and FH Rating, min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. For 3 hr F and FH Rating, min 1 in. (25 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point contact location between pipe covering and gypsum board, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe covering/gypsum board interface on both surfaces of wall.

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

### System No. W-L-1054

Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings —1 and 2 Hr (See Items 1 and 3)	F Ratings — 1 and 2 Hr (See Items 1 and 3)
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating at Ambient — Less Than 1 CFM/sq ft	FH Ratings —1 and 2 Hr (See Items 1 and 3)
L Rating at 400 F — Less Than 1 CFM/sq ft	FTH Rating — 0 Hr
	L Rating at Ambient — Less Than 1 CFM/sq ft
	L Rating at 400 F — Less Than 1 CFM/sq ft



1. Wall Assembly — The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. When steel studs are used and the diam of opening exceeds the width of stud cavity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and screw-attached to the steel studs at each end. The framed opening in the wall shall be 4 to 6 in. (102 to 152 mm) wider and 4 to 6 in. (102 to 152 mm) higher than the diam of the penetrating item such that, when the penetrating item is installed in the opening, a 2 to 3 in. (51 to 76 mm) clearance is present between the penetrating item and the framing on all four sides.

B. Gypsum Board\* — 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 32-1/4 in. (819 mm) for steel stud walls. Max diam of opening is 14-1/2 in. (368 mm) for wood stud walls.

The F and FH Ratings of the firestop system are equal to the fire rating of the wall assembly. 2. Through-Penetrants — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space shall be min 0 in. to max 2-1/4 in. (57 mm). Pipe may be installed with continuous point contact. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. Steel Pipe — Nom 30 in. (762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe — Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.

C. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or 6 in. (152 mm). diam steel conduit. D. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.

E. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) regular (or heavier) copper pipe.

3.Fill, Void or Cavity Material\* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the point or continuous contact locations between pipe and wall, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe wall interface on both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - FS-One Sealant or FS-ONE MAX Intumescent Sealant

\* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



### System No. W-L-5029

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
ngs — 1, 2 and 3 Hr (See Items 1, 3 and 4)	F Ratings — 1, 2 and 3 Hr (See Items 1, 3 and 4)
ngs — 0, 1/2, 1 and 1-1/4 Hr (See Item 3)	FT Ratings — 0, 1/2, 1 and 1-1/4 Hr (See Item 3)
ng At Ambient — 4 CFM/Sq Ft	FH Ratings — 1, 2 and 3 Hr (See Items 1, 2 and 4)
ng At 400 F — Less Than 1 CFM/Sq Ft	FTH Ratings — 0, 1/2, 1 and 1-1/4 Hr (See Item 3)
	L Rating At Ambient — 4 CFM/Sq Ft
	L Rating At 400 F — Less Than 1 CFM/Sq Ft

1. Wall Assembly — The 1, 2 or 3 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction

Hilti Firestop System

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide for 1 and 2 hr F and FH rating and 3-1/2 in. (89 mm) wide for 3 hr F and

B. Gypsum Board\* — Min 5/8 in. (16 mm) thick with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and

sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 18-5/8 in. (473 mm).

The hourly F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed. 2. Through Penetrants — One metallic pipe or tubing to be installed within the firestop system. Pipe or tubing to be rigidly supported on both sides of wall

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - FS-One Sealant or FS-ONE MAX Intumescent Sealant



NO SCALE





									OUTDOOR UNIT						SYSTEM EFFICIENCY		
	EXT.	FAN	COOLING HEATING-HEAT PUMP								COOLING						
AIRFLOW	S.P.	DRIVE	E.D.B.	E.W.B.	TOTAL	SENS.	E.D.B.	SENS.	MARK	MODEL				EER OR	COP OR	NOTES	
CFM	(IN W.G.)	TYPE	(°F)	(°F)	MBH	MBH	(°F)	MBH	NO.		VOLT	Ø	HZ	SEER	HSPF		
195-370	-	DIRECT	75	63	10.26	8.72	70	6.35	HP-1	MLA009S4S	208-230	1	60	24	10.5	ALL	
RMOSTAT, C	MOSTAT, CONDENSATE DRAIN TRAP, AND DRAIN PAN OVERFLOW SWITCH TO SHUT DOWN UNIT IF DRAIN BECOMES CLOGGED.																
HEATER, 0° F	LOW AMBIE	NT KIT, CC	MPRESSOR	TIME-OFF	CONTRO	L, AND HA	AIL GUARDS	<b>S</b> .									

FAN SCHEDULE													
										ECTRIC	AL		
MARK NO.	MANUFACTURER	MODEL	TYPE	AIRFLOW (CFM)	S.P. (IN W.G.)	FAN TYPE	RPM	DRIVE	VOLT	ø	нz	HP/ WATTS	NOTES
EF-1	GREENHECK	G-095-VG	ROOF	150	0.05	DIRECT	456	DIRECT	120	60	60	1/6	1,2
NOTES:	1. PROVIDE WITH ROOF	CURB, DISCON	INECT SWITCH	I, SPEED CONTF	ROLLER, HING	ED CURB CA	AP, HINGED E	BASE, CURB	SEAL,				
	CURB EXTENSION, BI	RD SCREEN, AI	ND DAMPER.										
	2 INTERLOCK WITH LIGH		) S										

	HUN	M	IDIFIER \$	SCHI	EDUL	.E			
ſ				MODE	HUMIDITY	E	LECTRIC		NOTES
	MARK NO.		MANUFACTURER	MODEL	LOAD (GAL./DAY)	VOLT	ø	нz	NOTES
[	H-1		APRILAIRE	865	11.5	120	1	60	1
	NOTES:	1.	FURNISH AND INSTALL WI	th high limit i	HUMIDISTAT, WA	LL FAN F	PACK UNI	. DUCT PF	RESSURE
			SWITCH, TEMP-R-DRAIN A	ND WALL MOU	NTED HUMIDIST/	<b>Α</b> Τ.			

DIF	DIFFUSER SCHEDULE											
MARK	MANUFACTURER	MODEL	FACE SIZE (IN.)	NECK SIZE (IN.)	FRAME TYPE*	FINISH	NOTES					
SA1	PRICE	SDGE	12x8	10x6	DUCT MOUNTED	WHITE	1,2					
SA2	PRICE	SDGE	18x8	16x6	DUCT MOUNTED	WHITE	1,2					
SB1	PRICE	530	8x7	6x5	SIDEWALL	WHITE	1,2					
RA1	PRICE	530	12x8	10x6	SIDEWALL	WHITE	1,2					
RA2	PRICE	530	24x14	22x12	SIDEWALL	WHITE	1,2					
RA3	PRICE	530	32x16	30x16	SIDEWALL	WHITE	1,2					
EA1	PRICE	530	10	10x6	DUCT MOUNTED	WHITE	1,2					
NOTES:	1. PROVIDE OBD AND L	OUVER RUN	INING WITH LC	ONG SIDE OF	GRILLE.							
	2. APPROVE ALL DIFFU	JSER FINISHE	S WITH ARCH	ITECT.								

### GENERAL NOTES (TYPICAL ALL SHEETS)

- MECHANICAL CONTRACTOR IS RESPONSIBLE TO SEE THAT WORK MEETS AND IS IN A ACCORDANCE WITH ALL REQUIREMENTS OF FEDERAL, STATE, AND LOCAL LAWS AND CODES AND/OR REQUIREMENTS, INCLUDING HEALTH CODES AND BUILDING OWNER.
- B. ALL EXISTING DUCTWORK SHOWN ON DRAWINGS IS SCHEMATIC AND IS BASED ON EXISTING RECORD DRAWINGS PROVIDED BY THE OWNER AND DO NOT REFLECT EXACT EXISTING CONDITIONS. CONTRACTOR TO FIELD VERIFY EXACT DEPTH AND/OR LOCATIONS ON JOB SITE. CONTRACTOR SHALL REROUTE NEW WORK TO ACCOMMODATE EXACT LOCATIONS OF EXISTING UTILITIES, STUBOUTS AND/OR CONNECTIONS.
- CUTTING AND PATCHING OF FLOORS, WALLS, CEILING, ETC., REQUIRED IN STRICT ACCORDANCE WITH THE RULES AND REGULATIONS OF THE ARCHITECT'S AND/OR BUILDING OWNER REQUIREMENTS.
- D. COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION TO AVOID ROUTING CONFLICTS.
- E. ANY MATERIAL REMOVED THAT OWNER DOES NOT WISH TO RETAIN SHALL BE REMOVED FROM PROJECT SITE AND DISPOSED OF BY CONTRACTOR.
- MECHANICAL CONTRACTOR SHALL REMOVE, PATCH AIR TIGHT AND REINSULATE ALL DUCTWORK F. TAPS NOT REUSED WITH SAME MATERIAL AS EXISTING DUCTWORK.
- G. MECHANICAL CONTRACTOR SHALL AIR BALANCE ALL GRILLES TO CFM'S SHOWN ON PLANS. H. ALL THERMOSTATS SHALL BE MOUNTED TO MATCH BUILDING STANDARDS UNLESS OTHERWISE NOTED.
- INSTALL ELASTOMERIC JOINT SEALER AROUND ALL DUCTS, PIPES, ETC. PASSING THRU INTERIOR NON-RATED CONCRETE AND MASONRY WALLS, GYPSUM-BOARD PARTITIONS, AND CONCRETE FLOOR/ROOF SLABS. FOR FIRE RATED INTERIOR CONCRETE AND MASONRY WALLS, GYPSUM-BOARD PARTITIONS, AND CONCRETE FLOOR/ROOF SLABS SEAL ALL DUCTS, PIPES, ETC. INSTALL FIRESTOP MATERIALS IN ALL GAPS PRIOR TO SEALANT APPLICATION. INSTALL SEALER ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.

## MECHANICAL SYMBOLS

	EXISTING DUCTWORK TO BE REMOVED
	EXISTING DUCTWORK TO REMAIN
OR —	NEW DUCTWORK
$\bowtie$	SUPPLY DUCT
	RETURN DUCT
	EXHAUST DUCT
X	SUPPLY DIFFUSER
	RETURN GRILLE
E	EXHAUST GRILLE
R R/D	RISE OR DROP IN DUCT
μ	THERMOSTAT, MOUNT TOP AT 48" AFF.
μ	HUMIDISTAT
<b></b>	MANUAL VOLUME DAMPER
	SUPPLY DUCT DOWN
	SUPPLY DUCT UP
	RETURN DUCT DOWN
	RETURN DUCT UP
	EXHAUST DUCT DOWN
	EXHAUST DUCT UP
_	WALL MOUNTED DIFFUSER/GRILLE
<b>3∼</b> €	FLEXIBLE DUCT CONNECTION
AHU-1	EQUIPMENT TYPE AND DESIGNATION
SA	- MARK NO. SUPPLY (S_), RETURN (R_), EXHAUST (E_) - CFM
	CONNECT TO EXISTING

![](_page_19_Picture_23.jpeg)

sheet number

![](_page_19_Picture_25.jpeg)

![](_page_20_Figure_0.jpeg)

- 1. REMOVE EXISTING PLUMBING FIXTURES AND TRIM. CLEAN AND PREPARE REMAINING
- PIPING FOR RECONNECTION, RE: NEW WORK.2. EXISTING JANITOR'S SINK, TRIM, AND ASSOCIATED PIPING TO REMAIN.
- 3. EXISTING 3/4" COLD WATER SERVICE AND BACKFLOW PREVENTER TO REMAIN.
- EXISTING WATER HEATER, ACCESSORIES, AND ASSOCIATED PIPING TO REMAIN.
- 5. EXISTING FLOOR DRAINS AND ASSOCIATED PIPING TO REMAIN.
- 6. REMOVE EXISTING DRINKING FOUNTAIN AND TRIM. CLEAN AND PREPARE REMAINING PIPING FOR RECONNECTION, RE: NEW WORK.

![](_page_20_Picture_8.jpeg)

![](_page_21_Figure_0.jpeg)

- 1. EXISTING JANITOR'S SINK, TRIM, AND ASSOCIATED PIPING TO REMAIN.
- 2. INSTALL NEW FIXTURES AT EXISTING STUB-OUT LOCATIONS. RECONFIGURE EXISTING WATER, WASTE, AND VENT PIPING TO ACCOMMODATE NEW FIXTURES.
- 3. EXISTING WATER HEATER AND ASSOCIATED PIPING TO REMAIN.
- RECONFIGURE EXISTING WASTE, VENT, AND COLD WATER PIPING TO ACCOMMODATE NEW SINK. ROUTE NEW 1/2" HOT WATER FROM NEAREST EXISTING HOT WATER PIPING DOWN IN WALL.
- 5. PROVIDE DOUBLE CHECK BFP IN SUPPLY LINE TO HUMIDIFIER.
- 6. CONNECT 1/2" COLD WATER TO HUMIDIFIER PER MANUFACTURER'S RECOMMENDATIONS.
- CONNECT TO NEAREST EXISTING VENT PIPING OF EQUAL OR GREATER SIZE. CONTRACTOR TO FIELD VERIFY EXACT SIZE, ELEVATION, AND LOCATION OF EXISTING PIPING.

### GENERAL NOTES (TYPICAL ALL SHEETS)

- A. PLUMBING CONTRACTOR IS RESPONSIBLE TO SEE THAT WORK MEETS AND IS IN ACCORDANCE WITH ALL REQUIREMENTS OF FEDERAL, STATE, AND LOCAL LAWS AND CODES AND/OR REQUIREMENTS, INCLUDING HEALTH CODES AND BUILDING OWNER.
- B. ALL EXISTING PIPING SHOWN ON DRAWINGS IS SCHEMATIC AND IS BASED ON EXISTING RECORD DRAWINGS PROVIDED BY THE OWNER AND DO NOT REFLECT EXACT EXISTING CONDITIONS. CONTRACTOR TO FIELD VERIFY EXACT DEPTH AND/OR LOCATIONS ON JOB SITE. CONTRACTOR SHALL REROUTE NEW WORK TO ACCOMMODATE EXACT LOCATIONS OF EXISTING UTILITIES, STUBOUTS AND/OR CONNECTIONS.
- C. CUTTING AND PATCHING OF FLOORS, WALLS, CEILING, ETC., REQUIRED IN STRICT ACCORDANCE WITH THE RULES AND REGULATIONS OF THE ARCHITECT'S AND/OR BUILDING OWNER REQUIREMENTS.
- D. COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION TO AVOID ROUTING CONFLICTS.
- E. ANY MATERIAL REMOVED THAT OWNER DOES NOT WISH TO RETAIN SHALL BE REMOVED FROM PROJECT SITE AND DISPOSED OF BY CONTRACTOR.
- F. INSTALL ELASTOMERIC JOINT SEALER AROUND ALL PIPES PASSING THRU INTERIOR NON-RATED CONCRETE AND MASONRY WALLS, GYPSUM-BOARD PARTITIONS, AND CONCRETE FLOOR/ROOF SLABS. FOR FIRE RATED INTERIOR CONCRETE AND MASONRY WALLS, GYPSUM-BOARD PARTITIONS, AND CONCRETE FLOOR/ROOF SLABS SEAL ALL PIPES. INSTALL FIRESTOP MATERIALS IN ALL GAPS PRIOR TO SEALANT APPLICATION. INSTALL SEALER ACCORDING TO MANUFACTURER'S WRITTEN INSTRUCTIONS.
- G. PLUMBING CONTRACTOR SHALL MAKE FINAL CONNECTION TO ALL EQUIPMENT BY OTHERS. VERIFY CONNECTIONS SIZES AND REQUIREMENTS.
- H. PIPING ROUTED BELOW COUNTER IN CABINETS SHALL BE ROUTED AS NOTED. NOT TO INTERFERE WITH DRAWERS, SHELVES, EQUIPMENT, ETC., AND SUPPORT FROM BACK WALL OF CABINET.
- I. PLUMBING CONTRACTOR SHALL SCAN FLOOR UTILIZING GROUND PENETRATING RADAR PRIOR TO ANY CORE DRILLING OR SAW CUTTING OF SLAB AND SHALL VERIFY PLACEMENT WITH BUILDING OWNER'S REPRESENTATIVE PRIOR TO DRILLING.
- J. PLUMBING CONTRACTOR SHALL PROVIDE PRO-SET SYSTEMS 'TRAP GUARD' IN ALL FLOOR DRAIN TRAPS WITHIN PROJECT SCOPE OF WORK.
- K. UPON REQUEST FOR ELECTRONIC FILES, CONTRACTOR SHALL FILL OUT, SIGN AND RETURN ELECTRONIC MEDIA RELEASE FORM FROM ENGINEER AND PROVIDE PAYMENT FOR FEES STIPULATED ON ELECTRONIC MEDIA RELEASE FORM. UPON RECEIPT OF COMPLETED RELEASE FORM AND PAYMENT, ELECTRONIC FILES WILL BE RELEASED.
- L. ALL CABLE TIES FOR LOW VOLTAGE SYSTEMS LOCATED IN PLENUMS UTILIZED FOR AIR MOVEMENT THAT ARE NOT INSTALLED IN CONDUIT SHALL BE 25/50 FLAME AND SMOKE RATED, HELLERMANN TYTON T50 R2C2UL OR EQUIVALENT.

## PLUMBING SYMBOLS

	EXISTING TO REMAIN
<del>~                                    </del>	EXISTING TO BE REMOVED
	NEW PIPING
<b>—</b>	FLOW ARROW
CW	COLD WATER
——HW——	HOT WATER
V	SANITARY VENT ABOVE GROUND/FLOOR
— —w— —	SANITARY WASTE BELOW GROUND/FLOOR
——☆——	SHUT OFF VALVE
🛛 OR 🖉	FLOOR DRAIN OR EQMT FLOOR DRAIN
<u> </u>	PIPE DROP/PIPE RISE
<del></del>	BOTTOM OUTLET TEE
<b></b>	TOP OUTLET TEE
<b>O</b> FFCO	FINISHED FLOOR CLEANOUT
$\bigcirc$	PLUMBING FIXTURE DESIGNATION
ETR	EXISTING TO REMAIN
	CONNECT TO EXISTING

	HIVE E	
Lankford 1730 Walnu 1915 Frederiu Phone: 816 Lankford   Fendler COPYRIG	d d d d d d d d d d d d d d d d d d d	Fendler Fendler Missouri 64108 Missouri 64501 c: 816.221.1429 SULTING ENGINEERS, INC. No. 20.6481.00
FRESH GREEN - Lees Summit Cobality of the pession HIVE DESIGN	1041 NE Sam Walton Dr. Lees Summit, MO 64086	HIVE DESIGN COLLABORATIVE, INC. 1617 WALNUT STREET, KANSAS CITY, MO 64108 816.581.6363
	GREGOR FENDLE PE-20060372 S/ONAL	SOUR *
project num	nber	2020-017
		PERMIT
rev dat FLC PL NE	e de DOR F UMBI W WC	scription PLAN NG DRK

sheet number

P10

![](_page_22_Figure_0.jpeg)

- 1. EXISTING PANELBOARDS TO REMAIN.
- 2. EXISTING RECEPTACLE TO BE REMOVED. REMOVE ALL ASSOCIATED WIRING AND CONDUIT BACK TO NEAREST DEVICE TO REMAIN.
- 3. EXISTING DATA DEVICE TO BE REMOVED. REMOVE ALL ASSOCIATED WIRING AND CONDUIT BACK TO NEAREST DEVICE TO REMAIN.
- 4. EXISTING LIGHT FIXTURE TO BE REMOVED. REMOVE ALL ASSOCIATED WIRING AND CONDUIT BACK TO NEAREST DEVICE TO REMAIN.
- EXISTING LIGHT SWITCH TO BE REMOVED. REMOVE ALL ASSOCIATED WIRING AND CONDUIT BACK TO NEAREST DEVICE TO REMAIN.
   EXISTING LIGHT SWITCH TO BE REPLACED. REMOVE DEVICE AND PREP FOR NEW DEVICE
- AND CONNECTION TO NEW LIGHTING AS INDICATED ON NEW WORK PLAN.
  7. REMOVE ALL ABANDONED WIRING, INCLUDING LOW VOLTAGE AND LINE VOLTAGE WIRING, IN AREAS WITH OPEN-TO-STRUCTURE CEILING SCHEME - RE: ARCHITECTURAL PLAN FOR THESE AREAS.
- 8. EXISTING CEILING DEVICE TO BE REMOVED. REMOVE ALL ASSOCIATED WIRING AND CONDUIT BACK TO NEAREST DEVICE TO REMAIN.
- 9. EXISTING EMERGENCY EXIT SIGN TO BE REMOVED. REMOVE ALL ASSOCIATED WIRING AND CONDUIT BACK TO NEAREST DEVICE TO REMAIN.

![](_page_22_Picture_10.jpeg)

![](_page_23_Figure_0.jpeg)

- 1. POWER CONNECTION TO ILLUMINATED SIGNAGE. CONFIRM LOCATION AND CONNECTION REQUIREMENTS WITH ARCHITECT.
- 2. JUNCTION BOX MOUNTED AT STRUCTURE ABOVE DISPLAY TABLES FOR FUTURE USE. ROUTE WIRING TO EACH BOX AND CAP FOR FUTURE USE, PROVIDE BLANK COVERPLATE.
- 3. INTERCONNECT JUNCTION BOXES WITH SWITCH. MOUNT SWITCH NEXT TO LIGHT SWITCHES, RE: LIGHTING PLAN.
- 4. RECEPTACLE FOR ATM. CONFIRM LOCATION OF DEVICE WITH ARCHITECT PRIOR TO ROUGH-IN.
- 5. RECEPTACLE FOR DISHWASHER. COORDINATE LOCATION AND CONNECTION REQUIREMENTS WITH GC PRIOR TO ROUGH-IN.
- 6. RECEPTACLE FOR IT RACK. CONFIRM LOCATION WITH TENANT PRIOR TO ROUGH-IN.
- 7. TV MEDIA BOX. RE: DETAIL FOR ADDITIONAL INFORMATION.
- 8. EXTERIOR CAMERA LOCATION. E.C. TO PROVIDE CONDUIT PATHWAY BACK TO IT CABINET AND WET-RATED J-BOX FOR CAMERA. COORDINATE WITH SECURITY CONSULTANT.
- PROVIDE ROUGH-IN FOR "A-I PHONE" STYLE INTERCOM. COORDINATE WITH SECURITY CONSULTANT.
- 10. MAKE POWER CONNECTION TO EXHAUST FAN WITH INTEGRAL DISCONNECT. INTERLOCK FAN WITH LIGHTING CONTROLS IN RESTROOM - ACTIVATION OF MOTION SENSOR IN EITHER RESTROOM SHALL TRIGGER EXHAUST FAN. RE: LIGHTING PLANS.
- 11. PROVIDE 120V/30A/1P DISCONNECT AT UNIT AND MAKE POWER CONNECTION TO HUMIDIFIER. SYSTEM IS SHIPPED AS MULTI-VOLT; CONNECT TO PROPER TERMINAL BLOCK FOR 120V OPERATION.
- 12. INTERIOR CAMERA LOCATION. E.C. TO PROVIDE CONDUIT PATHWAY BACK TO IT CABINET AND J-BOX FOR CAMERA.
- 13. PROVIDE 250V/20A/2P DISCONNECT AT UNIT AND MAKE POWER CONNECTION TO INDOOR SPLIT SYSTEM. WIRE TO INDOOR UNIT FROM OUTDOOR UNIT.
- PROVIDE 250V/20A/2P/3R DISCONNECT AND MOUNT AT UNIT AND MAKE POWER CONNECTION TO OUTDOOR SPLIT SYSTEM MOUNTED TO ROOF. CONNECT TO INDOOR UNIT.
- PROVIDE AUDIBLE ALARM AND REMOTE TEST SWITCH FOR DUCT DETECTORS MOUNTED IN (2) EXISTING RTU'S. COORDINATE EXACT MAKE/MODEL WITH LANDLORD. MOUNTING HEIGHT PER ARCHITECT.
- 16. PROVIDE (1) ALUMINUM DUAL-SERVICE POLE FOR POWER AND DATA DROPS TO P.O.S. RECEPTACLES, WIREMOLD SERIES 25DTP OR EQUAL. ROUTE WIRING FOR ALL THREE LOCATIONS UP WITHIN THE SAME POLE. POLE LOCATION AND FINISH PER ARCHITECT. EXTEND POLE FROM OVERHEAD STRUCTURE DOWN THROUGH CASEWORK AND ANCHOR AT FLOOR. AT OVERHEAD TERMINATION POINT OF POLE, PROVIDE 1" LOW VOLTAGE CONDUIT BACK TO I.T. RACK.

![](_page_23_Picture_18.jpeg)

![](_page_24_Figure_0.jpeg)

![](_page_24_Figure_1.jpeg)

- DIMMER, LOWER CASE LETTER REPRESENTS ZONE CONTROLLED. RE: LIGHT FIXTURE SCHEDULE FOR DIMMER MAKE/MODEL FOR EACH FIXTURE TYPE CONTROLLED.
- 2. EMERGENCY BUGEYE UNIT MOUNTED UP IN STRUCTURE.
- 3. DUAL TECH WALLBOX OCCUPANCY SENSOR WITH INTEGRAL 0-10V DIMMER. WATTSTOPPER DW-311 OR EQUAL BY ACUITY, LUTRON, LEVITON.
- 4. DUAL TECH WALLBOX OCCUPANCY SENSOR WITH INTEGRAL ON/OFF SWITCH. WATTSTOPPER DW-100 OR EQUAL BY ACUITY, LUTRON, LEVITON.
- 5. RE: LIGHTING CONTROLS DETAILS FOR ADDITIONAL INFORMATION.
- 6. REPLACE EXISTING SWITCH WITH NEW AND RECONNECT TO EXISTING LIGHTING.
- COORDINATE FINAL LOCATION OF PN1-1 (FINISH 1) VS PN1-2 (FINISH 2) FIXTURES AT EACH GROUPING OF THREE WITH ARCHITECT.

![](_page_24_Picture_10.jpeg)

![](_page_25_Figure_0.jpeg)

### TYPICAL SELF-CONTAINED TV MOUNTING DETAIL NO SCALE

![](_page_25_Figure_2.jpeg)

![](_page_25_Figure_3.jpeg)

MOUNTING OUTLET DETAIL NO SCALE

A. Studs — Wall framing may co	nsist of e
16 in. (406 mm) OC. Steel stud	s to be r
opening exceeds the width of s	tud cavit
screw-attached to the steel stu	ds at ead
higher than the diam of the per	etrating
present between the penetratin	g item a
B. Gypsum Board* — 5/8 in. (16	mm) thic
fastener type and sheet orienta	tion sha
opening is 32-1/4 in. (819 mm)	for steel
The F and FH Ratings of the firesto	op syster
2. Through-Penetrants — One metall	ic pipe, c
shall be min 0 in. to max 2-1/4 in. (	57 mm).
of wall assembly. The following typ	es and s
A. Steel Pipe — Nom 30 in. (76	2 mm) di
B. Iron Pipe — Nom 30 in. (762)	mm) dia
C. Conduit — Nom 4 in. (102 m	m) diam
D. Copper Tubing — Nom 6 in.	(152 mm
E. Copper Pipe — Nom 6 in. (15	52 mm) o
3.Fill, Void or Cavity Material* — Sea	lant — N
point or continuous contact location	ns betwe
both surfaces of wall.	
HILTI CONSTRUCTION CHEMICA	ALS, DIV

\* respectively.

![](_page_25_Picture_7.jpeg)

	BRANC Al	H CIRCUIT C ND CONDUIT	OPPER CC SIZING CH	NDUCTOF IART*	R	
OVERCURRENT PROTECTION DEVICE RATING (AMPS)	REQUIRED CONDUCTOR SIZE	EQUIPMENT GROUNDING CONDUCTOR SIZE	SINGLE PHASE 2 WIRE + GND. CONDUIT SIZE	SINGLE PHASE 3 WIRE + GND. CONDUIT SIZE	THREE PHASE 3 WIRE + GND. CONDUIT SIZE	THREE PHASE 4 WIRE + GND. CONDUIT SIZE
15	12 AWG	12 AWG	3/4"	3/4"	3/4"	3/4"
20	12 AWG	12 AWG	3/4"	3/4"	3/4"	3/4"
25	10 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
30	10 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
35	8 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
40	8 AWG	10 AWG	3/4"	3/4"	3/4"	3/4"
45	6 AWG	10 AWG	3/4"	3/4"	3/4"	1"
50	6 AWG	10 AWG	3/4"	3/4"	3/4"	1"
60	4 AWG	10 AWG	1"	1"	1"	1-1/4"
70	4 AWG	8 AWG	1"	1"	1"	1-1/4"
80	3 AWG	8 AWG	1"	1-1/4"	1-1/4"	1-1/4"
90	2 AWG	8 AWG	1"	1-1/4"	1-1/4"	1-1/4"
100	1 AWG	8 AWG	1-1/4"	1-1/2"	1-1/2"	1-1/2"

\* = UNLESS OTHERWISE NOTED ON THE DRAWINGS.

\* = UNLESS OTHERWISE NOTED ON THE DRAWINGS, ALL BRANCH CIRCUITS AND FEEDERS TO BE PROVIDED WITH A NEUTRAL WIRE. \* = ALL CONDUCTORS SIZED ON THE POWER RISER DIAGRAM OR IN BRANCH CIRCUIT CONDUCTOR TABLE ARE BASED ON 3 CURRENT CARRYING CONDUCTORS IN A RACEWAY OR CABLE. CONDUCTORS SHALL BE DERATED IN ACCORDANCE WITH THE NEC IF 4 OR MORE CONDUCTORS ARE PLACED IN A RACEWAY OR CABLE.

### System No. W-L-1054

AN

SI/UL1479 (ASTM E814)	CAN/ULC S115
and 2 Hr (See Items 1 and 3)	F Ratings — 1 and 2 Hr (See Items 1 and 3)
łr	FT Rating — 0 Hr
bient — Less Than 1 CFM/sq ft	FH Ratings —1 and 2 Hr (See Items 1 and 3)
F — Less Than 1 CFM/sq ft	FTH Rating — 0 Hr
	L Rating at Ambient — Less Than 1 CFM/sq ft
	L Rating at 400 F — Less Than 1 CFM/sq ft

![](_page_25_Figure_13.jpeg)

1. Wall Assembly — The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features: either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. When steel studs are used and the diam of vity, the opening shall be framed on all sides using lengths of steel stud installed between the vertical studs and ach end. The framed opening in the wall shall be 4 to 6 in. (102 to 152 mm) wider and 4 to 6 in. (102 to 152 mm) g item such that, when the penetrating item is installed in the opening, a 2 to 3 in. (51 to 76 mm) clearance is and the framing on all four sides.

ick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, all be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of el stud walls. Max diam of opening is 14-1/2 in. (368 mm) for wood stud walls.

em are equal to the fire rating of the wall assembly.

conduit or tubing to be installed either concentrically or eccentrically within the firestop system. The annular space ). Pipe may be installed with continuous point contact. Pipe, conduit or tubing to be rigidly supported on both sides sizes of metallic pipes, conduits or tubing may be used:

diam (or smaller) Schedule 10 (or heavier) steel pipe.

iam (or smaller) cast or ductile iron pipe. n (or smaller) steel electrical metallic tubing or 6 in. (152 mm) . diam steel conduit.

n) diam (or smaller) Type L (or heavier) copper tubing. diam (or smaller) regular (or heavier) copper pipe.

Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall. At the een pipe and wall, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the pipe wall interface on

V OF HILTI INC — FS-One Sealant or FS-ONE MAX Intumescent Sealant

Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada),

**GYPSUM/STUD WALL** FIRE STOPPING DETAIL

NO SCALE NON-INSULATED METALLIC PIPES

sheet number	EL	issued for rev da	date	project nu	COPYRIGH HIVE DESIG	FRESH GREEN - Lees Summit	Lankford   FENDL COPYI	
r	ECTF DETA	ate		05/ Imber	T © 2019 SN COLLABOR GREGO FEND PE-2006 NUM	1041 NE Sam Walton Dr. Lees Summit, MO 64086	rd + associa Inut Street Kansas Inut Street Kansas	
E3	RICA	PE descriptio	05.01	202	ATIVE, INC.	HIVE DESIGN COLLABORATIVE, INC.	Eity, Missouri 6 Sseph, Missouri 0 Fax: 816.22 CONSULTING EN Ject No. 20.648	
80	 .L	ERMIT	1.2020	20-017		1617 WALNUT STREET, KANSAS CITY, MO 64108 816.581.6363	<b>Inder</b> 108 54501 1.1429 IGINEERS, INC. 1.00	

			EXISTING			PAN	ELBC	ARD	LP1	SCH	IEDULE
	SE	RVICE:	208/120 VOLT , 3 - PHASE , 4 - WIRE								
	AMP F	RAME:	200 AMP								
		MAINS:	MCB / 200 AMP MAIN BREAKER						MOU	NTING:	SURFACE
REV	NOTE		LOAD	BRKF	2		LOAD I	κνa			LOAD
NO.	NO.	CRT#	DESCRIPTION	P	AMP	Α	В	С	3PH	CRT#	DESCRIPTION
		1								2	REC; WAITING 001 NORTH
	E	3	RTU-A	3	30			1	9.3	4	REC; BUILDING SIGNAGE
		5								6	REC; WAITING 001 TV'S
		7								8	REC; WAITING 001 WEST
	E	9	RTU-B	3	30			1	9.3	10	REC; WAITING 001 SOUTH
		11								12	REC; RETAIL 002 NORTH
	1	13	REC; B.O.H. GENERAL	1	20	0.72	1			14	REC; RETAIL 002 EAST
	1	15	REC; BREAK RM DISHWASHER	1	20		1	1		16	REC; RETAIL 002 SOUTH/SOUTHW
	1	17	REC; BREAK RM COUNTERTOP	1	20			0.18		18	REC; RETAIL 002 WEST
	1	19	REC; BREAK RM FRIDGE	1	20	0.8				20	REC; B.O.H. GENERAL
	1	21	REC; RR 006, 007	1	20		0.36	1		22	REC; B.O.H. GENERAL
	1	23	REC; OFFICE 004	1	20			0.54		24	EXHAUST FAN EF-1
	1	25	REC; FULFILLMENT 005	1	20	0.54				26	HUMIDIFIER HU-1
	1	27	REC; VAULT I.T. RACK	1	20		0.36	1		28	CU-1/AC-1
	1	29	REC; VAULT FRIDGE	1	20		L	0.8		30	1
	1	31	REC; VAULT GENERAL	1	20	0.18				32	
	1	33	DISPLAY TABLE CEILING J-BOXES	1	20		1	1		34	
	1	35	REC; RETAIL 002 P.O.S.	1	20			0.18		36	
	1	37	REC; RETAIL 002 P.O.S.	1	20	0.18				38	
	1	39	REC; RETAIL 002 P.O.S.	1	20		0.18	1		40	LTG; FRONT OF HOUSE
	1	41	REC; RETAIL 002 ATM	1	20			0.18		42	LTG; BACK OF HOUSE
				т		2.42	2.0	1 00	19.6		
				1	UTAL.	2.42	2.9	1.00	10.0	Į	
	NOTES	5:									I
	1	PROVI	DE NEW BREAKER WITHIN EXISTING PRO	VISION.							A
											ΤΟΤΑΙ

E = EXISTING BREAKER/INDEX/LOAD (ESTIMATED) REV:

GENERAL NOTE:

CONDUCTOR & CONDUIT SIZING CHART FOR SIZING OF BRANCH CIRCUITS AND OR FEEDERS AT OR BELOW 100 AMPS

YPE	MANUFACTURER	LAMPS	WATTS	DIMMING	DESCRIPTION	NOTES
			VOLTS	PROTOCOL		
DN1	SPECTRUM	LED			DUAL-HEAD AIMABLE FIXTURE WITH MONOPOINT MOUNTING AND INTEGRAL DRIVER. CUSTOM COLOR FINISH,	
	SDT3XT-10L-30HK-MD-DS2W1-1-CP13-CC-HL34	98CRI, 3000K	18.2	1%	RAL COLOR PER ARCHITECT. PROVIDE WITH HEX LOUVER.	
		1,000 LUMENS	120	ELV		
					*USE LUTRON DIVA REVERSE PHASE DIMMER. CONFIRM MAKE/MODEL WITH FACTORY.	
L1-#	PINNACLE	LED			2-3/4" WIDE X 5-1/2" TALL CONTINUOUS LINEAR PENDANT WITH DIRECT LIGHT ONLY, INTEGRAL DRIVER, WHITE	
	EX2D-A-N-930-xx-ACST-U-OL2-1-0-W	90CRI, 3000K	5.9/FT	1%	FINISH WITH STAINLESS STEEL AIRCRAFT CABLE HANGERS, CANOPY COLOR TBD. # INDICATES LENGTH OF	3
		500 LUMENS/FT	120	0-10V	FIXTURE.	
					*USE LUTRON DIVA 0-10V DIMMER.	
L2		LED		1001	4FT LONG STRIPLIGHT WITH DIFFUSE LENS, INTEGRAL DRIVER. PROVIDE WITH SUSPENSION KIT AS	
	ZL1N-L48-5000LM-FST-MVOLT-35K-80CRI-WH	80CRI, 3500K		10%	-   REQUIRED.	1
		5,000 LUMENS	120	0-10V		
FM		L FD			EMERGENCY BUG-EYE UNIT WITH INTEGRAL BATTERY BACKUP BLACK FINISH	
	EV-2-B		2	N/A		2
			120	N/A	-	
PN1-1	COLOR CORD CO	LED SCREW-IN			SUSPENDED DECORATIVE PENDANT WITH MEDIUM BASE SOCKET, FINISHED CANOPY PLATE. SUSPENSION	
	FIXTURE: LF-013-309-719	3000K	10	-	LENGTH PER ARCHITECT. OLIVE AND BRASS FINISH.	3
	LAMP: 776886 BASIC LED BULB		120	ELV		
					^USE LUTRON DIVA LED+ DIMMER. CONFIRM MAKE/MODEL WITH FACTORY.	
PINI-2		SUDOK	85		LENGTH PER ARCHITECT, OUARTZ AND POUSHED COPPER EINISH	3
	LAMP: 776886 BASIC LED BUILB	00001	120	FLV		5
					*USE LUTRON DIVA LED+ DIMMER. CONFIRM MAKE/MODEL WITH FACTORY.	
PN2	COLOR CORD CO	LED SCREW-IN			SUSPENDED DECORATIVE PENDANT FROM COLOR CORD CO KIT OF PARTS WITH CEILING CANOPY, CLOTH	
	CANOPY: BLACK	2700K			CORD, AND MEDIUM BASE SOCKET. FINAL SUSPENSION LENGTH PER ARCHITECT.	3
	CORD: SVT 3-CONDUCTOR CLOTH - QUARTZ	800 LUMENS	7	-		
	SOCKET: AIO SOCKET COVER KIT, MATTE WHITE		120	ELV		
	LAMP: 776611 LED GLOBE - MILK					
	SHADE: GEOMETRIC BULB CAGE - QUARTZ				*USE LUTRON DIVA LED+ DIMMER. CONFIRM MAKE/MODEL WITH FACTORY.	
T1	SPECTRUM	LED		4.04	TRACK-MOUNTED AIMABLE FLOODLIGHT WITH INTEGRAL DRIVER. CUSTOM COLOR FINISH FOR TRACK	
	STT3PC-10L-30HK-WD-DS2W1-GES66-CC-HL34	92CRI, 3000K	8		HEAD AND TRACK, RAL COLOR PER ARCHITECT. PROVIDE WITH HEX LOUVER.	
	1	1,000 LUMENS	120	ELV		
X1					THERMOPLASTIC EXIT SIGN WITH INTEGRAL BATTERY BACKLIP, RED LETTERS	
X1	LITHONIA L QM-S-W-3-R-120/277-ELN	LED	1	N/A	THERMOPLASTIC EXIT SIGN WITH INTEGRAL BATTERY BACKUP, RED LETTERS.	2

SPECIFIC NOTES:

1 FIXTURE WITH 'E' AT END OF TAG = EMERGENCY FIXTURE. PROVIDE WITH INTEGRAL EMERGENCY BATTERY AND CONNECT TO SWITCHED AND UNSWITCHED CONDUCTOR. 2 EMERGENCY/EXIT LIGHT. CONNECT TO UNSWITCHED CONDUCTOR. 3 SUSPENDED FIXTURE, CONFIRM MOUNTING HEIGHT WITH ARCHITECT.

SUBSTITUTION NOTES:

THE LIGHTING DESIGN FOR THIS PROJECT IS BASED UPON THE MANUFACTURERS SPECIFIED. IF AN ADDITIONAL SUBSTITUTION IS DESIRED BY THE CONTRACTOR, A SUBSTITUTION REQUEST SUBMITTAL MUST BE PROVIDED AS FOLLOWS:

- S1. SUBSTITUTION REQUEST MUST BE RECEIVED BY THE ENGINEER IN WRITING 10 DAYS PRIOR TO BID. FAILURE TO SUBMIT CONSTITUTES
- A GUARANTEE TO SUPPLY THE SPECIFIED FIXTURES.
- S2. INFORMATION IS TO BE SUPPLIED COMPARING PHOTOMETRY, (WITH FLOOR PLANS INDICATING POINT BY POINT CALCULATIONS) DIMENSIONS, MATERIAL COMPOSITION, FINISH, VISUAL APPEARANCE AS WELL AS THE "CONTRACTOR NET" PRICING. SAMPLES ARE TO BE PROVIDED UPON REQUEST.
- S3. GREAT CARE, TIME AND EXPENSE HAVE BEEN USED TO PROVIDE OUR CLIENT WITH THE LIGHTING AND CONTROLS SYSTEM. THEREFORE, FOR EACH AND EVERY TYPE OF FIXTURE OFFERED AS AN UNSOLICITED ALTERNATE, A \$500.00 FEE WILL BE CHARGED TO THE CONTRACTOR FOR REVIEW OF THE ALTERNATE FIXTURE. THIS CHARGE IS IN NO WAY A GUARANTEE OF APPROVAL, BUT IS SOLELY TO COMPENSATE THE ENGINEER FOR TIME SPENT VALIDATING EQUALITY AND COMPATIBILITY WITH THE PROJECT REQUIREMENTS. THIS REIMBURSEMENT MUST BE
- RECEIVED BY THE ENGINEER PRIOR TO ANY REVIEW COMMENCING.
- S4. PACKAGING OF LIGHT FIXTURES WILL NOT BE CONSIDERED OR APPROVED. S5. MANUFACTURER'S REPRESENTATIVE AGENTS SHALL BE ALLOWED TO OFFER MINI-LOT PRICING FOR SPECIFIED LIGHTING FIXTURES.

S6. LIGHTING CONTROLS PRICING SHALL BE COMPLETELY SEPARATE OF ANY LIGHT FIXTURE PRICING. ANY LIGHTING CONTROLS PRICING THAT IS SUBMITTED WITH LIGHT FIXTURE PRICING (UNIT OR MINI-LOT) WILL BE IMMEDIATELY REJECTED IN ITS ENTIRETY.

GENERAL NOTE:

- G1. ELECTRICAL CONTRACTOR SHALL VERIFY CEILING TYPE PRIOR TO ORDERING ANY LIGHT FIXTURES.
- G2. ELECTRICAL CONTRACTOR SHALL COORDINATE DIMMING DRIVERS/BALLASTS WITH DIMMING SWITCHES/SYSTEMS AND SHALL INCLUDE ALL REQUIRED CONTROL WIRING.

IEDULE								
				R	ATING:	EXISTI	NG A.I.C	
				LOC	ATION:	B.O.H.		
SURFACE								
LOAD	BRKR			LOAD K	(VA		NOTE	REV
DESCRIPTION	Р	AMP	Α	В	С	3PH	NO.	NO.
REC; WAITING 001 NORTH	1	20	0.54				1	
REC; BUILDING SIGNAGE	1	20		1			1	
REC; WAITING 001 TV'S	1	20			0.36		1	
REC; WAITING 001 WEST	1	20	0.72	ĺ			1	
REC; WAITING 001 SOUTH	1	20		0.54			1	
REC; RETAIL 002 NORTH	1	20			1.08		1	
REC; RETAIL 002 EAST	1	20	1.08	ĺ			1	
REC; RETAIL 002 SOUTH/SOUTHWEST	1	20		0.9			1	
REC; RETAIL 002 WEST	1	20			0.9		1	
REC; B.O.H. GENERAL	1	20	0.54	ĺ			1	
REC; B.O.H. GENERAL	1	20		0.72			1	
EXHAUST FAN EF-1	1	20			0.53		1	
HUMIDIFIER HU-1	1	25	1.38				1	
CU-1/AC-1	2	15		1			1	
					1			
					_			
					-			
LTG; FRONT OF HOUSE	1	20		0.96				
LTG; BACK OF HOUSE	1	20			0.37			
	Т	OTAL:	4.26	5.12	4.24	0.0	1	
			2.42	2.9	1.88	18.6	4	
KVA / PF	HASE I	OTAL:	6.68	8.02	6.12	18.6	]	
AMP / PHASE 1			107.3	118.5	102.6	]		
TOTAL CONNE	CTED	LOAD:		39.42	KVA			
TOTAL CONNECTE	D CUR	RENT:		109.42	AMPS			
LIGHTS @		125%:		1.66	KVA			
RECEPTACLES @		100%:		10.00	KVA			
RECEPTACLES @		50%		1.79	KVA			
LARGEST MOTOR LOAD @		125%:		0.00	KVA			
CONTINUOUS LOAD @		125%:		1.25	KVA			
UTHER AND NON-CONTINUOUS LOADS @				23.51	KVA			
				38.21 0.05	KVA % DE			
		DENIT		111 65				
				CO.111	ANTS			

## GENERAL NOTES (TYPICAL ALL SHEETS)

- A. REFER TO ARCHITECTS REFLECTED CEILING PLANS FOR EXACT PLACEMENT OF LIGHT FIXTURES, SPEAKER AND F.A. DEVICES IN THE CEILING SYSTEM.
- B. REFER TO ARCHITECTURAL DETAILS AND ELEVATIONS FOR COORDINATION OF LOCATION OF ALL WIRING DEVICES BEFORE ROUGH-IN OF J-BOXES.
- C. INSTALL BLANK COVERPLATE ON ALL OPEN OR ABANDONED DEVICE BOXES. VERIFY
- COLOR WITH ARCHITECT. D. ANY MATERIAL REMOVED THAT OWNER DOES NOT WISH TO RETAIN SHALL BE REMOVED FROM PROJECT SITE AND DISPOSED OF BY THE CONTRACTOR.
- E. NEW CIRCUITRY SHOWN FOR NEW/EXISTING POWER AND LIGHTING IS DIAGRAMMATIC AND IS INTENDED TO SHOW WHICH DEVICES ARE TO BE GROUPED ON INDIVIDUAL CIRCUITS. EXISTING WIRING THAT CONFORMS TO THE INTENT OF THE DRAWINGS MAY BE USED.
- F. PROVIDE UPDATED, TYPEWRITTEN PANELBOARD DIRECTORY FOR EACH PANELBOARD WHICH CIRCUITS HAVE BEEN ADDED TO OR MODIFIED.
- G. CONTRACTOR TO REFERENCE BRANCH CIRCUIT COPPER CONDUCTOR AND CONDUIT SIZING CHART FOR SIZING OF BRANCH CIRCUITS AND OR FEEDERS AT OR BELOW 100AMPS.
- H. SUPPORT ALL LIGHT FIXTURES WITH A MINIMUM OF (4) 12 GA. HANGER WIRES TO STRUCTURE ABOVE.
- ALIGN ALL WIRING DEVICES IN VERTICAL ALIGNMENT. IF ANY DEVICE(S) ARE FOUND NOT TO BE INSTALLED PER DETAIL CONTRACTOR SHALL RELOCATE AND PAY ALL ASSOCIATED COSTS ASSOCIATED WITH THE RELOCATION(S).
- J. CONDUIT SHALL BE USED FOR CONDUCTORS WHERE REQUIRED BY N.E.C.
- K. OUTLETS INSTALLED IN FIRE RATED ASSEMBLES SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF NOT LESS THAN 24".
- CONTRACTOR SHALL CALCULATE VOLTAGE DROP AND SIZE WIRE ACCORDINGLY. PER N.E.C.
- M. CONTRACTOR SHALL PROVIDE FIRE RATED ENCLOSURES AROUND ALL ROUGH-IN BOXES, PANELS ETC. THAT ARE LOCATED IN FIRE RATED WALLS AND SHALL FIRE CAULK ALL OPENING IN RATED ASSEMBLES PER MANUFACTURERS RECOMMENDATIONS PER FIRE RATED ASSEMBLES.
- N. WHERE MORE THAN ONE SWITCH IS INDICATED ON DRAWINGS SIDE BY SIDE, CONTRACTOR SHALL INSTALL SWITCHES UNDER ONE COMMON FACE PLATE.
- 0. UPON REQUEST FOR ELECTRONIC FILES, CONTRACTOR SHALL FILL OUT, SIGN AND RETURN ELECTRONIC MEDIA RELEASE FORM FROM ENGINEER AND PROVIDE PAYMENT FOR FEES STIPULATED ON ELECTRONIC MEDIA RELEASE FORM. UPON RECEIPT OF COMPLETED RELEASE FORM AND PAYMENT, ELECTRONIC FILES WILL BE RELEASED.
- CONTRACTOR SHALL PROVIDE HIS/HER OWN SUPPORTING OF CABLING FROM Р STRUCTURE ABOVE, I.E. TEMPERATURE CONTROL WIRING, SECURITY CONTROL WIRING, FIRE ALARM CONTROL WIRING, OR ANY OTHER WIRING CONTAINING VOLTAGE. CONTRACTOR SHALL NOT RUN PARALLEL WITH OR BE SUPPORTED BY ANY UTP, COAX OR VIDEO CABLING (CABLES INDICATED ON TECHNOLOGY DRAWINGS). IF CABLES ARE FOUND TO BE SUPPORTED WITH THESE CABLES, CONTRACTOR SHALL REMOVE CABLES, REROUTE AND RE-SUPPORT AT THEIR OWN EXPENSE. IF UTP CABLES ARE DAMAGED WHILE EITHER INSTALLING OR REMOVING SUCH CABLES, THE CONTRACTOR(S) THAT DID SUCH DAMAGE SHALL COVER COST TO REPLACE CABLES AT THEIR OWN EXPENSE.

ELECTRICAL SYMBOLS		
	BRANCH CIRCUIT CONCEALED IN CEILING OR WALL. ARROWS INDICATE HOMERUNS TO PANEL. ALL CONDUCTORS ARE MINIMUM NO.12 UNLESS NOTED OTHERWISE. PHASE CONDUCTORS NEUTRAL CONDUCTOR SWITCH-LEG AND OR TRAVELER GROUND CONDUCTOR	
LP1-10	PANEL - BREAKER NUMBER (IDENTIFICATION)	
1/3, 1/3/5	INDICATES X/X= 2-POLE C.B., X/X/X = 3-POLE C.B.	
	HOMERUN INDICATED LIKE THIS INDICATED THREE SEPARATE CIRCUITS	
۶ <u> </u>	CONDUIT CONCEALED IN CEILING OR WALL WITH THREE CONDUCTORS: 1-PHASE; 1-NEUTRAL; 1-GROUND WIRE, MINIMUM NO.12 WIRE UNLESS OTHERWISE SPECIFIED ON DRAWINGS.	
	CONDUIT RUN UNDERGROUND OR CONCEALED IN FLOOR SLAB.	

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GROUNDING CONDUCTOR NO.12 WIRE EXCEPT AS NOTED S OR SIGN - SINGLE FACED - ARROWS AS SHOWN ON DRAWING. SHADED SIDE(S) INDICATES FACE SIDE(S) OF EXIT. 100 EXIT SIGN - DOUBLE FACED - ARROWS AS SHOWN ON DRAWING. SHADED

SIDE(S) INDICATES FACE SIDE(S) OF EXIT. OR CEILING OR WALL MOUNTED EMERGENCY LIGHTING UNIT WITH INTEGRAL BATTERY AND UNIT MOUNTED HEADS. OR A 2x4 / 2x2 LIGHT FIXTURE, LETTER DENOTES FIXTURE TYPE, REFER TO SCHEDULE

OR	2x4 / 2x2 LIGHT FIXTURE ON EMERGENCY POWER OR WITH INTEGRAL EMERGENCY BALLAST, LETTER DENOTES FIXTURES TYPE, REFER TO FIXTURE SCHEDULE FOR TYPE
┝━━━┥	STRIP FIXTURE, LETTER DENOTES FIXTURE TYPE, REFER TO SCHEDULE
Ø OR Ø	WALL WASH OR RECESSED CEILING LIGHT FIXTURE
Ø	PENDANT MOUNTED LIGHT FIXTURE, SIZE AND TYPE AS NOTED
	TRACK LIGHTING, SIZE AND TYPE AS NOTED
• •	INDIRECT/DIRECT LIGHT FIXTURE, SIZE AND TYPE AS NOTED
	208Y/120V OR 120/240V PANELBOARD (SURFACE) TOP MOUNTED 6'-0" AFF
	DISCONNECT SWITCH, SIZE AND TYPE AS NOTED TOP MOUNTED 5'-0" AFF
S	SINGLE POLE SWITCH. TOP OF DEVICE BOX AT +4'-0" AFF
S <sup>D</sup>	DIMMER SWITCH. TOP OF DEVICE BOX AT +4'-0" AFF
S <sup>MS</sup>	WALL MOUNTED MOTION SENSOR, TOP OF DEVICE BOX AT +4'-0" AFF, TYPE AS INDICATED
a,b,c,d	SWITCH DESIGNATION
⊢⊙	PUSH BUTTON +4'-0" AFF.
Ф	DUPLEX RECEPTACLE. +1'-6" AFF OR AS NOTED
⇔	DUPLEX RECEPTACLE INSTALLED ABOVE COUNTERTOP
∯GFI	DUPLEX RECEPTACLE W/GROUND FAULT PROTECTION. +1'-6" AFF OR AS NOTED
Щ	DOUBLE DUPLEX RECEPTACLE. +1'-6" AFF OR AS NOTED
曲	DOUBLE DUPLEX RECEPTACLE INSTALLED ABOVE COUNTERTOP.
MS	CEILING MOUNTED MOTION DETECTOR TYPE AS INDICATED
	WALL MOUNTED OR CEILING MOUNTED JUNCTION BOX.
нB	WALL MOUNTED JUNCTION BOX WITH BLANK COVERPLATE.
нт∨	CATV JUNCTION BOX WITH 1-1/4" CONDUIT STUBBED UP OUT OF BOX TO ABOVE ACCESSIBLE CEILING. +1'-6" AFF OR AS NOTED.
∢	LOW VOLTAGE OUTLET, DOUBLE GANG BOX WITH SINGLE GANG PLASTER RING. INSTALL 1" CONDUIT STUBBED UP OUT OF TOP OF BOX TO ABOVE AN ACCESSIBLE CEILING. +1'-6" AFF OR AS NOTED.
CR	CARD READER; PROVIDE DOUBLE-GANG J-BOX WITH SINGLE GANG PLASTER RING WITH 3/4"C STUBBED UP INSIDE WALL AND OUT TO ACCESSIBLE CEILING WITH BUSHING ON THE END,+3'-10" AFF OR AS NOTED
	FIXED CAMERA
	INDICATES WIRING DEVICE ABOVE RE: DRAWING
$\overline{\mathbf{X}}$	MECHANICAL EQUIPMENT CALL OUT BUBBLE

 $\underline{}$ HEIGHT TO CENTERLINE OF OUTLET BOX ABOVE FINISHED FLOOR +4'-0"

AFF ABOVE FINISH FLOOR

ETR EXISTING TO REMAIN

![](_page_26_Picture_45.jpeg)

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